```
In[1] = \mathsf{MMatrix}[\alpha_{-}, \omega_{-}, \mathsf{t}_{-}, \mathsf{MO}_{-}] := \mathsf{MO} * \left\{ \left\{ \mathsf{Cos}[\alpha + \mathsf{t}\omega]^{2} + \mathsf{Sin}[\mathsf{t}\omega]^{2}, -2 \, \mathsf{i} \, \mathsf{Sin}[\alpha] \, \mathsf{Sin}[\mathsf{t}\omega]^{2} \right\},\right\}
                                  \{2 i Sin[\alpha] Sin[t\omega]^2, Cos[\alpha-t\omega]^2 + Sin[t\omega]^2\}\} * Sec[\alpha]^2
                  \mathsf{MMatrixInv}[\alpha\_,\ \omega\_,\ \mathtt{t\_},\ \mathsf{MO\_}] := \Big\{ \Big\{ \frac{\mathsf{Sec}[\alpha]^2 \left( \mathsf{Cos}[\alpha - \mathsf{t} \, \omega]^2 + \mathsf{Sin}[\mathsf{t} \, \omega]^2 \right)}{\mathsf{M} \alpha},
                             \Big\{-\frac{2\,\dot{\mathtt{n}}\,\mathsf{Sec}\,[\alpha]\,\mathsf{Sin}\,[\mathsf{t}\,\omega]^{\,2}\,\mathsf{Tan}\,[\alpha]}{\mathsf{MØ}}\,,\,\,\frac{\mathsf{Sec}\,[\alpha]^{\,2}\,\left(\mathsf{Cos}\,[\alpha+\mathsf{t}\,\omega]^{\,2}+\mathsf{Sin}\,[\mathsf{t}\,\omega]^{\,2}\right)}{\mathsf{MØ}}\Big\}\Big\}
                  Hq11[r_, s_, \theta_] := r * Exp[I * \theta]
                  Hq12[r_{s}, s_{\theta}] := s
                  Hq21[r_{s}, s_{\theta}] := s
                  Hq22[r_{s}, s_{\theta}] := r * Exp[-I * \theta]
                  Hq[r_{,s_{,\theta}}] := \{ \{Hq11[r,s,\theta], Hq12[r,s,\theta]\}, \{Hq21[r,s,\theta], Hq22[r,s,\theta]\} \}
                  Zeta11[\alpha_{-}, \omega_{-}, t_{-}, MO_{-}] :=
                          \left[ \left( -4\,\text{MØ} + 2\,\text{MØ}\,\text{Cos}\,[2\,\text{t}\,\omega] - \text{MØ}\,\text{Cos}\,[2\,\alpha - 2\,\text{t}\,\omega] - \text{MØ}\,\text{Cos}\,[2\,\alpha + 2\,\text{t}\,\omega] + 2\,\text{MØ}\,\text{Cos}\,[\alpha - \text{t}\,\omega]^2\,\text{Sec}\,[\alpha]^2 + \right] \right]
                                                      2 M0 Cos [2 \alpha] Cos [\alpha – t \omega] 2 Sec [\alpha] 2 + 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 +
                                                      2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2 (-6-2 \cos[2 \alpha] +
                                                                                    2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
                                           \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2\,t\,\omega] + \text{M0} \,\cos[2\,\alpha - 2 \,t\,\omega] + \right)}
                                                                    M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] +
                                                                                                   \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]  \sin [\alpha]^2 \sin [t\omega]^2 
                                   \left(8\sqrt{M0^{2}\left(6+2\cos{[2\,\alpha]}-2\cos{[2\,t\,\omega]}+\cos{[2\,\alpha-2\,t\,\omega]}+\cos{[2\,\alpha+2\,t\,\omega]}\right)\sin{[\alpha]^{2}}\sin{[t\,\omega]^{2}}}\right)+
                               \left[ \left( 4\,\text{M0} - 2\,\text{M0}\,\text{Cos}\left[2\,\text{t}\,\omega\right] + \text{M0}\,\text{Cos}\left[2\,\alpha - 2\,\text{t}\,\omega\right] + \text{M0}\,\text{Cos}\left[2\,\alpha + 2\,\text{t}\,\omega\right] - 2\,\text{M0}\,\text{Cos}\left[\alpha - \text{t}\,\omega\right]^2\,\text{Sec}\left[\alpha\right]^2 - \left[ \left( 4\,\text{M0} - 2\,\text{M0}\,\text{Cos}\left[2\,\text{t}\,\omega\right] + \text{M0}\,\text{Cos}\left[\alpha - \text{t}\,\omega\right]^2\,\text{Sec}\left[\alpha\right]^2 - \left[ \left( 4\,\text{M0} - 2\,\text{M0}\,\text{Cos}\left[2\,\text{t}\,\omega\right] + \text{M0}\,\text{Cos}\left[\alpha - \text{t}\,\omega\right]^2\,\text{Sec}\left[\alpha\right]^2 - \left[ \left( 4\,\text{M0}\,\text{cos}\left[2\,\text{t}\,\omega\right] + \text{M0}\,\text{Cos}\left[\alpha - \text{t}\,\omega\right]^2\,\text{Sec}\left[\alpha\right]^2 - \left[ \left( 4\,\text{M0}\,\text{cos}\left[\alpha - \text{t}\,\omega\right] + \text{M0}\,\text{Cos}\left[\alpha - \text{t}\,\omega\right]^2\,\text{Sec}\left[\alpha\right]^2 - \left[ \left( 4\,\text{M0}\,\text{cos}\left[\alpha - \text{t}\,\omega\right] + \text{M0}\,\text{Cos}\left[\alpha - \text{t}\,\omega\right]^2\,\text{Sec}\left[\alpha\right]^2 - \left[ \left( 4\,\text{M0}\,\text{cos}\left[\alpha - \text{t}\,\omega\right] + \text{M0}\,\text{Cos}\left[\alpha\right] + \text{M0}\,\text{Cos}\left[\alpha\right]^2\,\text{Cos}\left[\alpha\right]^2 - \left[ \left( 4\,\text{M0}\,\text{cos}\left[\alpha\right] + \text{M0}\,\text{Cos}\left[\alpha\right] + \text{M0}\,\text{Cos}\left[\alpha\right]^2 + \text
                                                      2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]<sup>2</sup> Sec [\alpha]<sup>2</sup> - 2 M0 Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> -
                                                      2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2 (-6-2 \cos[2 \alpha] +
                                                                                    2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
                                           \sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2 \,t \,\omega] + \text{M0} \,\cos[2\alpha - 2 \,t \,\omega] + \right)}
                                                                    M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                                                   \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]  \sin [\alpha]^2 \sin [t\omega]^2 
                                   \left(8\,\sqrt{\,\text{M0}^{\,2}\,\left(6+2\,\text{Cos}\,[\,2\,\alpha\,]\,-2\,\text{Cos}\,[\,2\,t\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,-\,2\,t\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,+\,2\,t\,\omega\,]\,\right)\,\text{Sin}\,[\,\alpha\,]^{\,2}\,\text{Sin}\,[\,t\,\omega\,]^{\,2}}\right.
                  Zeta12[\alpha_{-}, \omega_{-}, t_{-}, M0_{-}] :=
                         \left[\dot{\mathbf{n}} \cos[\alpha] \cot[\alpha] \csc[\dot{\mathbf{t}} \omega]^2 \left(-4 \,\text{MØ} + 2 \,\text{MØ} \cos[2 \,\dot{\mathbf{t}} \omega] - \text{MØ} \cos[2 \,\alpha - 2 \,\dot{\mathbf{t}} \omega] - \right]\right]
                                                      M0 Cos [2 \alpha + 2 t \omega] + 2 M0 Cos [\alpha - t \omega] 2 Sec [\alpha] 2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega] 2 Sec [\alpha] 2 +
                                                      2 M0 Sec [\alpha]^2 Sin [t\omega]^2 + 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 + 2 \sqrt{2}\sqrt{-M0^2(-6-2\cos[2\alpha]+1)}
                                                                                    2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
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\sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                                                                   M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] +
                                                                                                            \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                                      4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] - 2 \text{ MO Cos} [\alpha - \text{ t} \omega]^2 \text{ Sec} [\alpha]^2 - 2 \text{ MO Cos} [\alpha - \text{ t} \omega]^2 \text{ Sec} [\alpha]^2 - 2 \text{ MO Cos} [\alpha - \text{ t} \omega]^2 \text{ Sec} [\alpha]^2 - 2 \text{ MO Cos} [\alpha - \text{ t} \omega]^2 \text{ Sec} [\alpha]^2 - 2 \text{ MO Cos} [\alpha - \text{ t} \omega]^2 \text{ Sec} [\alpha]^2 - 2 \text{ MO Cos} [\alpha - \text{ t} \omega]^2 \text{ Sec} [\alpha]^2 - 2 \text{ MO Cos} [\alpha - \text{ t} \omega]^2 \text{ Sec} [\alpha]^2 - 2 \text{ MO Cos} [\alpha - \text{ t} \omega]^2 \text{ Sec} [\alpha]^2 - 2 \text{ MO Cos} [\alpha - \text{ t} \omega]^2 \text{ Sec} [\alpha]^2 - 2 \text{ MO Cos} [\alpha - \text{ t} \omega]^2 \text{ Sec} [\alpha]^2 - 2 \text{ MO Cos} [\alpha - \text{ t} \omega]^2 \text{ Sec} [\alpha]^2 - 2 \text{ MO Cos} [\alpha - \text{ t} \omega]^2 \text{ Sec} [\alpha]^2 - 2 \text{ MO Cos} [\alpha - \text{ t} \omega]^2 \text{ Sec} [\alpha]^2 - 2 \text{ MO Cos} [\alpha]^
                                                2 M0 Cos [2 \alpha] Cos [\alpha - t \omega] 2 Sec [\alpha] 2 - 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 -
                                                2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2}
                                                      \sqrt{\,\text{M0}^2\,\left(6+2\,\text{Cos}\,[\,2\,\alpha]\,-\,2\,\text{Cos}\,[\,2\,\text{t}\,\omega]\,+\,\text{Cos}\,[\,2\,\alpha\,-\,2\,\text{t}\,\omega]\,+\,\text{Cos}\,[\,2\,\alpha\,+\,2\,\text{t}\,\omega]\,\right)\,\,\text{Sin}\,[\,\alpha\,]^{\,2}\,\,\text{Sin}\,[\,\text{t}\,\omega\,]^{\,2}}
                                         \bigg| \bigg/ \bigg( 32 \, \mathsf{M0} \, \big( 1 + \mathsf{Cos} \, [2 \, \alpha] \big) \bigg)
                                  \sqrt{\,\text{MO}^2\,\left(6+2\,\text{Cos}\,[2\,\alpha]-2\,\text{Cos}\,[2\,\text{t}\,\omega]+\text{Cos}\,[2\,\alpha-2\,\text{t}\,\omega]+\text{Cos}\,[2\,\alpha+2\,\text{t}\,\omega]\,\right)\,\text{Sin}\,[\alpha]^{\,2}\,\text{Sin}\,[\,\text{t}\,\omega]^{\,2}}\,\,]-\frac{1}{2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,2}\,\,\text{Cos}\,[2\,\alpha]^{\,
                \left[\dot{\mathbf{n}} \cos[\alpha] \cot[\alpha] \csc[\mathsf{t} \,\omega]^2\right] \left(4\,\mathsf{M0} - 2\,\mathsf{M0} \cos[2\,\mathsf{t} \,\omega] + \mathsf{M0} \cos[2\,\alpha - 2\,\mathsf{t} \,\omega] + \mathsf{M0} \cos[2\,\alpha + 2\,\mathsf{t} \,\omega] - \left(4\,\mathsf{M0} - 2\,\mathsf{M0} \cos[2\,\alpha] + \mathsf{M0} \cos[2\,\alpha] + \mathsf{M0} \cos[2\,\alpha]\right)\right]
                                                2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Sec [\alpha]^2 Sin [t \omega]^2 - 2
                                                2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{-M0^2(-6-2\cos[2\alpha]+}
                                                                                         2 \cos [2 \pm \omega] - \cos [2 \alpha - 2 \pm \omega] - \cos [2 \alpha + 2 \pm \omega]) \sin [\alpha]^2 \sin [\pm \omega]^2
                                 \sqrt{\left(\frac{1}{1 + \cos[2\alpha]}\left(-2 + 4 \text{ M0} - 2 \cos[2\alpha] - 2 \text{ M0} \cos[2 t\omega] + \text{M0} \cos[2\alpha - 2 t\omega] + \right)}
                                                                   M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                                                            \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
                                      \left[ -4\,\text{M0} + 2\,\text{M0}\,\text{Cos}\,[2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha - 2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha + 2\,\text{t}\,\omega] + \right]
                                                2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                                                2 M0 Sec [\alpha]^2 Sin [t \omega]^2 + 2 M0 Cos [2 \alpha] Sec [\alpha]^2 Sin [t \omega]^2 + 2\sqrt{2}
                                                       \sqrt{\text{M0}^2 \left(6+2 \cos \left[2 \, \alpha\right]-2 \cos \left[2 \, t \, \omega\right]+\cos \left[2 \, \alpha-2 \, t \, \omega\right]+\cos \left[2 \, \alpha+2 \, t \, \omega\right]\right) \, \sin \left[\alpha\right]^2 \, \sin \left[t \, \omega\right]^2}
                                          \bigg] \bigg/ \bigg( 32 \, \mathsf{M0} \, \big( 1 + \mathsf{Cos} \, [2 \, \alpha] \big) \bigg)
                                   \sqrt{\text{M0}^2 \left(6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega]\right) \sin[\alpha]^2 \sin[t \omega]^2}
Zeta21[\alpha_, \omega_, t__, MO_] := -\left(\frac{1}{2} MO \left(1 + Cos[2 \alpha]\right) Sec[\alpha] Sin[t \omega]^2
                                               \sqrt{\left(\frac{1}{1+\cos[2\alpha]}\left(-2+4\,\text{M0}-2\cos[2\alpha]-2\,\text{M0}\cos[2\,\text{t}\,\omega]+\text{M0}\cos[2\,\alpha-2\,\text{t}\,\omega]+\right)}
                                                                                  M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] +
                                                                                                                        \cos[2\alpha - 2t\omega] + \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2 ) \tan[\alpha]
                                                \sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega]) \sin[\alpha]^2 \sin[t \omega]^2}
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+ \left[iM0\left(1+\cos\left[2\alpha\right]\right)Sec\left[\alpha\right]Sin\left[t\omega\right]^{2}\right]
                      \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2 \,t \,\omega] + \text{M0} \,\cos[2\alpha - 2 \,t \,\omega] + \right)}
                                               M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                          \cos[2\alpha - 2t\omega] + \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2) \arctan[\alpha]
                \left(2\sqrt{M0^{2}\left(6+2\cos{[2\,\alpha]}-2\cos{[2\,t\,\omega]}+\cos{[2\,\alpha-2\,t\,\omega]}+\cos{[2\,\alpha+2\,t\,\omega]}\right)\sin{[\alpha]^{2}}\sin{[t\,\omega]^{2}}}\right)
Zeta22[\alpha_{-}, \omega_{-}, t_{-}, MO_{-}] :=
      \sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2 \,t \,\omega] + \text{M0} \,\cos[2\alpha - 2 \,t \,\omega] + \right.}
                                               M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] +
                                                                          \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
                         4 \text{ MO} - 2 \text{ MO Cos}[2 \text{ t} \omega] + \text{MO Cos}[2 \alpha - 2 \text{ t} \omega] + \text{MO Cos}[2 \alpha + 2 \text{ t} \omega] - 2 \text{ MO Cos}[\alpha - \text{t} \omega]^2 \text{Sec}[\alpha]^2 - 2 \text{ MO Cos}[\alpha - \text{t} \omega]^2 \text{Sec}[\alpha]^2 - 2 \text{ MO Cos}[\alpha - \text{t} \omega]^2 \text{Sec}[\alpha]^2 - 2 \text{ MO Cos}[\alpha - \text{t} \omega]^2 \text{Sec}[\alpha]^2 - 2 \text{ MO Cos}[\alpha - \text{t} \omega]^2 \text{Sec}[\alpha]^2 - 2 \text{ MO Cos}[\alpha - \text{t} \omega]^2 \text{Sec}[\alpha]^2 - 2 \text{ MO Cos}[\alpha - \text{t} \omega]^2 \text{Sec}[\alpha]^2 - 2 \text{ MO Cos}[\alpha - \text{t} \omega]^2 \text{Sec}[\alpha]^2 - 2 \text{ MO Cos}[\alpha - \text{t} \omega]^2 \text{Sec}[\alpha]^2 - 2 \text{ MO Cos}[\alpha - \text{t} \omega]^2 \text{Sec}[\alpha]^2 - 2 \text{ MO Cos}[\alpha - \text{t} \omega]^2 \text{Sec}[\alpha]^2 - 2 \text{ MO Cos}[\alpha - \text{t} \omega]^2 \text{Sec}[\alpha]^2 - 2 \text{ MO Cos}[\alpha - \text{t} \omega]^2 \text{Sec}[\alpha]^2 - 2 \text{ MO Cos}[\alpha - \text{t} \omega]^2 \text{Sec}[\alpha]^2 - 2 \text{ MO Cos}[\alpha - \text{t} \omega]^2 \text{Sec}[\alpha]^2 - 2 \text{ MO Cos}[\alpha]^2 - 2 \text{ MO Cos}[\alpha
                                 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega] 2 Sec [\alpha] 2 - 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 -
                                 2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2}
                                     \sqrt{\,\text{M0}^2\,\left(6+2\,\text{Cos}\,[\,2\,\alpha]\,-\,2\,\text{Cos}\,[\,2\,\text{t}\,\omega]\,+\,\text{Cos}\,[\,2\,\alpha\,-\,2\,\text{t}\,\omega]\,+\,\text{Cos}\,[\,2\,\alpha\,+\,2\,\text{t}\,\omega]\,\right)\,\,\text{Sin}\,[\,\alpha\,]^{\,2}\,\,\text{Sin}\,[\,\text{t}\,\omega\,]^{\,2}}
                        \sqrt{\,\text{MO}^2\,\left(6+2\,\text{Cos}\,[2\,\alpha]\,-2\,\text{Cos}\,[2\,\text{t}\,\omega]\,+\,\text{Cos}\,[2\,\alpha\,-\,2\,\text{t}\,\omega]\,+\,\text{Cos}\,[2\,\alpha\,+\,2\,\text{t}\,\omega]\,\right)\,\,\text{Sin}\,[\alpha]^{\,2}\,\,\text{Sin}\,[\,\text{t}\,\omega]^{\,2}\,}\,\,+\,\,\text{Cos}\,[2\,\alpha\,+\,2\,\text{t}\,\omega]\,\,
          \sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2 \,t \,\omega] + \text{M0} \,\cos[2\alpha - 2 \,t \,\omega] + \right.}
                                               M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] +
                                                                          \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]  \sin [\alpha]^2 \sin [t\omega]^2 
                         \left[-4 \text{ M0} + 2 \text{ M0 Cos} [2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha - 2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha + 2 \text{ t} \omega] + \right]
                                 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                                 2 M0 Sec [\alpha]^2 Sin [t \omega]^2 + 2 M0 Cos [2 \alpha] Sec [\alpha]^2 Sin [t \omega]^2 + 2\sqrt{2}
                                      \sqrt{\text{M0}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega])} \sin[\alpha]^2 \sin[t \omega]^2
                        \sqrt{\mathsf{M0^2}\left(6+2\,\mathsf{Cos}\left[2\,\alpha\right]-2\,\mathsf{Cos}\left[2\,\mathsf{t}\,\omega\right]+\mathsf{Cos}\left[2\,\alpha-2\,\mathsf{t}\,\omega\right]+\mathsf{Cos}\left[2\,\alpha+2\,\mathsf{t}\,\omega\right]\right)\,\mathsf{Sin}\left[\alpha\right]^2\,\mathsf{Sin}\left[\mathsf{t}\,\omega\right]^2}
{Zeta21[\alpha, \omega, t, M0], Zeta22[\alpha, \omega, t, M0]}}
Hq11[r_s, s_\theta] := r * Exp[I * \theta]
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Hq12[r_{s}, s_{\theta}] := s
Hq21[r_{s}, s_{\theta}] := s
\mathsf{Hq22}[\mathsf{r}_{\mathtt{,}}\;\mathsf{s}_{\mathtt{,}}\;\theta_{\mathtt{]}}\;:=\mathsf{r}\;\mathsf{*}\;\mathsf{Exp}\left[-\,\mathsf{I}\;\mathsf{*}\;\theta\right]
\mathsf{Hq}[r_{\tt},s_{\tt},\theta_{\tt}] := \{ \{ \mathsf{Hq11}[r,s,\theta], \mathsf{Hq12}[r,s,\theta] \}, \{ \mathsf{Hq21}[r,s,\theta], \mathsf{Hq22}[r,s,\theta] \} \}
DergMatrix11[\alpha_, \omega_, t_, M0_] :=
      -\left[\left[\left(-4\,\text{M0} + 2\,\text{M0}\,\text{Cos}\,[2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha - 2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha + 2\,\text{t}\,\omega] + 2\,\text{M0}\,\text{Cos}\,[\alpha - \text{t}\,\omega]^2\,\text{Sec}\,[\alpha]^2 + \left(-4\,\text{M0} + 2\,\text{M0}\,\text{Cos}\,[2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha - 2\,\text{t}\,\omega] + 2\,\text{M0}\,\text{Cos}\,[\alpha - \text{t}\,\omega]^2\,\text{Sec}\,[\alpha]^2 + \left(-4\,\text{M0} + 2\,\text{M0}\,\text{Cos}\,[2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha - 2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha - 2\,\text{t}\,\omega] + 2\,\text{M0}\,\text{Cos}\,[\alpha - \text{t}\,\omega]^2\,\text{Sec}\,[\alpha]^2 + \left(-4\,\text{M0} + 2\,\text{M0}\,\text{Cos}\,[2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha - 2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha - 2\,\text{t}\,\omega] + 2\,\text{M0}\,\text{Cos}\,[\alpha - \text{t}\,\omega]^2\,\text{Sec}\,[\alpha]^2 + \left(-4\,\text{M0} + 2\,\text{M0}\,\text{Cos}\,[2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha - 2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha - 2\,\text{t}\,\omega] + 2\,\text{M0}\,\text{Cos}\,[\alpha - \text{t}\,\omega]^2\,\text{Sec}\,[\alpha]^2 + \left(-4\,\text{M0} + 2\,\text{M0}\,\text{Cos}\,[2\,\alpha - 2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha - 2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha - 2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha - 2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha - 2\,\text{t}\,\omega] + 2\,\text{M0}\,\text{Cos}\,[2\,\alpha - 2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha - 2\,\text{t}\,\omega] 
                                                        2 M0 Cos [2 \alpha] Cos [\alpha - t \omega] 2 Sec [\alpha] 2 + 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 +
                                                       2 M0 Cos [2 \alpha] Sec [\alpha] <sup>2</sup> Sin [t \omega] <sup>2</sup> + 2 \sqrt{2} \sqrt{\left(-\text{M0}^2\left(-6-2\cos[2\alpha]+2\right)^2\right)}
                                                                                                   \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                                            \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{MO} - 2 \cos[2\alpha] - 2 \,\text{MO} \cos[2 \,\text{t}\,\omega] + \text{MO} \cos[2\alpha - 2 \,\text{t}\,\omega] + \right)}
                                                                           M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                                                               \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
                                              \left(2\,\mathsf{M0^2}\;\omega\;\mathsf{Cos}\,[\,\mathsf{t}\;\omega\,]\;\left(6+2\,\mathsf{Cos}\,[\,2\,\alpha\,]\,-2\,\mathsf{Cos}\,[\,2\,\mathsf{t}\;\omega\,]\,+\mathsf{Cos}\,[\,2\,\alpha\,-\,2\,\mathsf{t}\;\omega\,]\,+\mathsf{Cos}\,[\,2\,\alpha\,+\,2\,\mathsf{t}\;\omega\,]\,\right)
                                                              Sin[\alpha]^2 Sin[t\omega] + MO^2 Sin[\alpha]^2 Sin[t\omega]^2
                                                                (4 \omega \sin[2t\omega] + 2 \omega \sin[2\alpha - 2t\omega] - 2 \omega \sin[2\alpha + 2t\omega]))
                                 (16 (M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega])
                                                             \operatorname{Sin}[\alpha]^{2} \operatorname{Sin}[\mathsf{t}\,\omega]^{2})^{3/2}
                  (4 \text{ MO} - 2 \text{ MO Cos}[2 \text{ t} \omega] + \text{MO Cos}[2 \alpha - 2 \text{ t} \omega] + \text{MO Cos}[2 \alpha + 2 \text{ t} \omega] - 2 \text{ MO Cos}[\alpha - \text{t} \omega]^2 \text{Sec}[\alpha]^2 - (4 \text{ MO} - 2 \text{ MO Cos}[2 \text{ t} \omega] + (4 \text{ MO} - 2 \text{ MO Cos}[2 \text{ t} \omega]) + (4 \text{ MO Cos}[2 \text{ t} \omega] + (4 \text{ MO Cos}[2 \text{ t} \omega]) + (4 \text{ MO Co
                                            2 M0 Cos [2\alpha] Cos [\alpha - t\omega]^2 Sec [\alpha]^2 - 2 M0 Sec [\alpha]^2 Sin [t\omega]^2 -
                                            2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{-M0^2(-6-2\cos[2\alpha]+
                                                                                  2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^{2} \sin [t \omega]^{2}
                               \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2 \,t \,\omega] + \text{M0} \,\cos[2\alpha - 2 \,t \,\omega] + \right)}
                                                              M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                                                   \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
                                 \left(2\ \text{MO}^{2}\ \omega\ \text{Cos}\ [\ \text{t}\ \omega\ ]\ \left(6+2\ \text{Cos}\ [\ 2\ \alpha\ ]\ -2\ \text{Cos}\ [\ 2\ t\ \omega\ ]\ +\ \text{Cos}\ [\ 2\ \alpha\ -2\ t\ \omega\ ]\ +\ \text{Cos}\ [\ 2\ \alpha\ +\ 2\ t\ \omega\ ]\ \right)
                                                  Sin[\alpha]^2 Sin[t\omega] + M0^2 Sin[\alpha]^2 Sin[t\omega]^2
                                                  (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega]))
                                  (M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)^{3/2} +
               \left( -4 \text{ MO} + 2 \text{ MO} \cos [2 \text{ t} \omega] - \text{MO} \cos [2 \alpha - 2 \text{ t} \omega] - \text{MO} \cos [2 \alpha + 2 \text{ t} \omega] + \right)
                                            2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                                            2 M0 Sec [\alpha]^2 Sin [t\omega]^2 + 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                                            2\sqrt{2}\sqrt{(-M0^2(-6-2\cos[2\alpha]+2\cos[2t\omega]-\cos[2\alpha-2t\omega]-\cos[2\alpha+2t\omega])}
                                                                     Sin[\alpha]^2 Sin[t\omega]^2
                                    ig( 4\,\text{M0}\,\omega\,	ext{Sin} \,[\,2\,	ext{t}\,\omega\,] \,+\, 2\,\text{M0}\,\omega\,	ext{Sin} \,[\,2\,lpha\,-\,2\,	ext{t}\,\omega\,] \,-\, 2\,\text{M0}\,\omega\,	ext{Sin} \,[\,2\,lpha\,+\,2\,	ext{t}\,\omega\,] \,-\, \Big( \sqrt{\,2\,}\,\,ig( 2\,\text{M0}^2\,\omega\,	ext{Cos} \,[\,	ext{t}\,\omega\,] \,
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\left(6 + 2 \cos \left[2 \, \alpha\right] - 2 \cos \left[2 \, t \, \omega\right] + \cos \left[2 \, \alpha - 2 \, t \, \omega\right] + \cos \left[2 \, \alpha + 2 \, t \, \omega\right]\right) \, \sin \left[\alpha\right]^2 \, \sin \left[t \, \omega\right] + \cos \left[2 \, \alpha + 2 \, t \, \omega\right]
                                                                                 M0^2 \sin[\alpha]^2 \sin[t\omega]^2 \left(4\omega \sin[2t\omega] + 2\omega \sin[2\alpha - 2t\omega] - 2\omega \sin[2\alpha + 2t\omega]\right)\right)
                                                   \left( \sqrt{\,\text{M0}^2 \, \left( 6 + 2 \, \text{Cos} \, [\, 2 \, \alpha \, ] \, - 2 \, \text{Cos} \, [\, 2 \, \text{t} \, \omega \, ] \, + \, \text{Cos} \, [\, 2 \, \alpha \, - \, 2 \, \text{t} \, \omega \, ] \, + \, \text{Cos} \, [\, 2 \, \alpha \, + \, 2 \, \text{t} \, \omega \, ] \, \right) \, \, \text{Sin} \, [\, \alpha \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} \, [\, \text{t} \, \omega \, ]^{\, 2} \, \, \text{Sin} 
                                                       ))) / \left(16\left(1+\cos\left[2\alpha\right]\right)
                      \sqrt{\text{MO}^2 \left(6+2 \cos \left[2 \alpha\right]-2 \cos \left[2 t \omega\right]+\cos \left[2 \alpha-2 t \omega\right]+\cos \left[2 \alpha+2 t \omega\right]\right) \sin \left[\alpha\right]^2 \sin \left[t \omega\right]^2}
                     \sqrt{\left(\frac{1}{1 + \cos{[2\,\alpha]}} \left(-2 + 4\,\text{M0} - 2\,\cos{[2\,\alpha]} - 2\,\text{M0}\,\cos{[2\,\text{t}\,\omega]} + \text{M0}\,\cos{[2\,\alpha - 2\,\text{t}\,\omega]} + \right)}
                                                               M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                                                                   \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
\left( \left( 4\,\text{M0} - 2\,\text{M0}\,\text{Cos}\left[2\,\text{t}\,\omega\right] + \text{M0}\,\text{Cos}\left[2\,\alpha - 2\,\text{t}\,\omega\right] + \text{M0}\,\text{Cos}\left[2\,\alpha + 2\,\text{t}\,\omega\right] - 2\,\text{M0}\,\text{Cos}\left[\alpha - \text{t}\,\omega\right]^2\,\text{Sec}\left[\alpha\right]^2 - \left( 4\,\text{M0} - 2\,\text{M0}\,\text{Cos}\left[2\,\text{t}\,\omega\right] + \text{M0}\,\text{Cos}\left[2\,\alpha - 2\,\text{t}\,\omega\right]^2 - 2\,\text{M0}\,\text{Cos}\left[2\,\alpha - 2\,\text{t}\,\omega\right]^2 + \left( 4\,\text{M0} - 2\,\text{M0}\,\text{Cos}\left[2\,\alpha - 2\,\text{t}\,\omega\right] + \text{M0}\,\text{Cos}\left[2\,\alpha - 2\,\text{t}\,\omega\right]^2 - 2\,\text{M0}\,\text{Cos}\left[2\,\alpha - 2\,\text{t}\,\omega\right]^2 + \left( 4\,\text{M0} - 2\,\text{M0}\,\text{Cos}\left[2\,\alpha - 2\,\text{t}\,\omega\right] + \text{M0}\,\text{Cos}\left[2\,\alpha - 2\,\text{t}\,\omega\right]^2 + \left( 4\,\text{M0} - 2\,\text{M0}\,\text{Cos}\left[2\,\alpha - 2\,\text{t}\,\omega\right] + \text{M0}\,\text{Cos}\left[2\,\alpha - 2\,\text{t}\,\omega\right]^2 + \left( 4\,\text{M0} - 2\,\text{M0}\,\text{Cos}\left[2\,\alpha - 2\,\text{t}\,\omega\right] + \text{M0}\,\text{Cos}\left[2\,\alpha - 2\,\text{t}\,\omega\right]^2 + \left( 4\,\text{M0} - 2\,\text{M0}\,\text{Cos}\left[2\,\alpha - 2\,\text{t}\,\omega\right] + \text{M0}\,\text{Cos}\left[2\,\alpha - 2\,\text{t}\,\omega\right]^2 + \left( 4\,\text{M0} - 2\,\text{M0}\,\text{Cos}\left[2\,\alpha - 2\,\text{t}\,\omega\right] + \text{M0}\,\text{Cos}\left[2\,\alpha - 2\,\text{t}\,\omega\right]^2 + \left( 4\,\text{M0} - 2\,\text{M0}\,\text{Cos}\left[2\,\alpha - 2\,\text{t}\,\omega\right] + \text{M0}\,\text{Cos}\left[2\,\alpha - 2\,\text{t}\,\omega\right] + \text{M0}\,\text{Cos}\left[2\,\alpha - 2\,\text{t}\,\omega\right] + \left( 4\,\text{M0} - 2\,\text{M0}\,\text{Cos}\left[2\,\alpha - 2\,\text{t}\,\omega\right] + \text{M0}\,\text{Cos}\left[2\,\alpha -
                                       2 M0 Cos [2 \alpha] Cos [\alpha - t \omega] 2 Sec [\alpha] 2 - 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 -
                                       2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2 (-6 - 2 \cos [2 \alpha] +
                                                                                         2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^{2} \sin [t \omega]^{2})
                           \left(4\,\text{M0}\,\omega\,\text{Sin}\,[2\,\text{t}\,\omega]\,+2\,\text{M0}\,\omega\,\text{Sin}\,[2\,\alpha\,-\,2\,\text{t}\,\omega]\,-\,2\,\text{M0}\,\omega\,\text{Sin}\,[2\,\alpha\,+\,2\,\text{t}\,\omega]\,+\,\left(\sqrt{2}\,\left(2\,\text{M0}^2\,\omega\,\text{Cos}\,[\text{t}\,\omega]\right)\right)\right)
                                                                                             \left(6 + 2 \cos \left[2 \, \alpha\right] - 2 \cos \left[2 \, t \, \omega\right] + \cos \left[2 \, \alpha - 2 \, t \, \omega\right] + \cos \left[2 \, \alpha + 2 \, t \, \omega\right]\right) \, \sin \left[\alpha\right]^2 \, \sin \left[t \, \omega\right] + \cos \left[2 \, \alpha + 2 \, t \, \omega\right]
                                                                                 M0^2 \sin[\alpha]^2 \sin[t \omega]^2 \left(4 \omega \sin[2t \omega] + 2 \omega \sin[2 \alpha - 2t \omega] - 2 \omega \sin[2 \alpha + 2t \omega]\right)\right)
                                                   \left( \sqrt{\,\text{M0}^2 \, \left( 6 + 2 \, \text{Cos} \, [\, 2 \, \alpha ] \, - 2 \, \text{Cos} \, [\, 2 \, \text{t} \, \omega ] \, + \, \text{Cos} \, [\, 2 \, \alpha - 2 \, \text{t} \, \omega ] \, + \, \text{Cos} \, [\, 2 \, \alpha + 2 \, \text{t} \, \omega ] \, \right) \, \text{Sin} \, [\alpha]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^
                                                       ))) / (16 (1 + \cos [2 \alpha])
                      \sqrt{\mathsf{M0^2}\left(6+2\cos\left[2\,\alpha\right]-2\cos\left[2\,t\,\omega\right]+\cos\left[2\,\alpha-2\,t\,\omega\right]+\cos\left[2\,\alpha+2\,t\,\omega\right]\right)\,\sin\left[\alpha\right]^2\,\sin\left[t\,\omega\right]^2}
                     \sqrt{\left(\frac{1}{1 + \cos[2\alpha]}\left(-2 + 4 \text{ M0} - 2 \cos[2\alpha] - 2 \text{ M0} \cos[2 t\omega] + \text{M0} \cos[2\alpha - 2 t\omega] + \right)}
                                                               M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                                                                   \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
\sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2 \,t \,\omega] + \text{M0} \,\cos[2\alpha - 2 \,t \,\omega] + \right)}
                                                               M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                                                                  \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
                          \left(-4\,\text{M0}\,\omega\,\text{Cos}\,[\,\text{t}\,\omega]\,\,\text{Sec}\,[\,\alpha]^{\,2}\,\text{Sin}\,[\,\text{t}\,\omega]\,\,-4\,\text{M0}\,\omega\,\,\text{Cos}\,[\,2\,\alpha]\,\,\text{Cos}\,[\,\text{t}\,\omega]\,\,\text{Sec}\,[\,\alpha]^{\,2}\,\,\text{Sin}\,[\,\text{t}\,\omega]\,\,+
                                       4 M0 \omega Sin[2 t \omega] + 2 M0 \omega Sin[2 \alpha - 2 t \omega] - 4 M0 \omega Cos[\alpha - t \omega] Sec[\alpha] ^2 Sin[\alpha - t \omega] -
                                       4 M0 \omega Cos [2 \alpha] Cos [\alpha - t \omega] Sec [\alpha] <sup>2</sup> Sin [\alpha - t \omega] - 2 M0 \omega Sin [2 \alpha + 2 t \omega] +
                                           (\sqrt{2} (-2 \,\text{M0}^2 \,\omega \,\text{Cos}\,[\,\text{t}\,\omega\,] (-6 - 2 \,\text{Cos}\,[\,2\,\alpha\,] + 2 \,\text{Cos}\,[\,2\,\text{t}\,\omega\,] - \text{Cos}\,[\,2\,\alpha - 2\,\text{t}\,\omega\,] - \text{Cos}\,[\,2\,\alpha + 2\,\text{t}\,\omega\,])
                                                                                          Sin[\alpha]^2 Sin[t\omega] - M0^2 Sin[\alpha]^2 Sin[t\omega]^2
                                                                                             \left(-4 \omega \operatorname{Sin}[2 \operatorname{t} \omega] - 2 \omega \operatorname{Sin}[2 \alpha - 2 \operatorname{t} \omega] + 2 \omega \operatorname{Sin}[2 \alpha + 2 \operatorname{t} \omega]\right)\right)
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(\sqrt{-M0^2 (-6-2 \cos [2 \alpha] + 2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega])}
                                                   Sin[\alpha]^2 Sin[t \omega]^2)))
              \left(8\,\sqrt{\,\text{MO}^{\,2}\,\left(6+2\,\text{Cos}\,[\,2\,\alpha\,]\,-2\,\text{Cos}\,[\,2\,t\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,-\,2\,t\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,+\,2\,t\,\omega\,]\,\right)\,\,\text{Sin}\,[\,\alpha\,]^{\,2}\,\,\text{Sin}\,[\,t\,\omega\,]^{\,2}}\,\right)\,+\,
         \sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2 \,\text{t} \,\omega] + \text{M0} \,\cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                                          M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                    \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
                       (4 \text{ M0 } \omega \text{ Cos}[t \omega] \text{ Sec}[\alpha]^2 \text{ Sin}[t \omega] + 4 \text{ M0 } \omega \text{ Cos}[2 \alpha] \text{ Cos}[t \omega] \text{ Sec}[\alpha]^2 \text{ Sin}[t \omega] -
                              4 \text{ MO } \omega \text{ Sin}[2 \text{ t} \omega] - 2 \text{ MO } \omega \text{ Sin}[2 \alpha - 2 \text{ t} \omega] + 4 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] \text{ Sec}[\alpha]^2 \text{ Sin}[\alpha - \text{ t} \omega] + 4 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] + 2 \text{ MO } \omega \text
                              4 M0 \omega Cos [2 \alpha] Cos [\alpha – t\omega] Sec [\alpha] 2 Sin [\alpha – t\omega] + 2 M0 \omega Sin [2 \alpha + 2 t\omega] +
                               (\sqrt{2} (-2 M0^2 \omega \cos[t \omega] (-6 - 2 \cos[2 \alpha] + 2 \cos[2 t \omega] - \cos[2 \alpha - 2 t \omega] - \cos[2 \alpha + 2 t \omega])
                                                        Sin[\alpha]^2 Sin[t\omega] - M0^2 Sin[\alpha]^2 Sin[t\omega]^2
                                                         \left(-4 \omega \operatorname{Sin}[2 t \omega] - 2 \omega \operatorname{Sin}[2 \alpha - 2 t \omega] + 2 \omega \operatorname{Sin}[2 \alpha + 2 t \omega]\right)\right)
                                   (\sqrt{-M0^2 (-6-2 \cos [2 \alpha] + 2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega])}
                                                   \operatorname{Sin}[\alpha]^{2} \operatorname{Sin}[\mathsf{t}\,\omega]^{2})))
               DergMatrix12[\alpha_, \omega_, t_, M0_] :=
    -\left(\left[\dot{\mathbf{n}}\ \omega\ \mathsf{Cos}\ [\alpha]\ \mathsf{Cot}\ [\mathbf{t}\ \omega]\ \mathsf{Csc}\ [\mathbf{t}\ \omega]^{2}\ \left(-4\ \mathsf{M0}+2\ \mathsf{M0}\ \mathsf{Cos}\ [2\ \mathsf{t}\ \omega]\ -\ \mathsf{M0}\ \mathsf{Cos}\ [2\ \alpha-2\ \mathsf{t}\ \omega]\ -\right.\right.\right.
                                      M0 Cos [2 \alpha + 2 t \omega] + 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                                      2 M0 Sec [\alpha]^2 Sin [t\omega]^2 + 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 + 2\sqrt{2}\sqrt{-M0^2(-6-2)}
                                                                     \cos[2\alpha] + 2\cos[2t\omega] - \cos[2\alpha - 2t\omega] - \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2
                              \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2 \,t \,\omega] + \text{M0} \,\cos[2\alpha - 2 \,t \,\omega] + \right)}
                                                    M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] +
                                                                            \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]  \sin [\alpha]^2 \sin [t\omega]^2 
                                (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
                                      2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                                      2 M0 Sec [\alpha]^2 Sin [t\omega]^2 – 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                                      2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega])}
                                                       \operatorname{Sin}[\alpha]^{2} \operatorname{Sin}[\mathsf{t} \omega]^{2})) \bigg) \bigg/ \bigg( 16 \, \mathsf{M0} \, \big( 1 + \operatorname{Cos}[2 \, \alpha] \big) \bigg)
                              \sqrt{M0^2 \left(6 + 2 \cos \left[2 \alpha\right] - 2 \cos \left[2 t \omega\right] + \cos \left[2 \alpha - 2 t \omega\right] + \cos \left[2 \alpha + 2 t \omega\right]\right) \sin \left[\alpha\right]^2 \sin \left[t \omega\right]^2}\right)
                 + \left[\dot{\mathbf{1}}\omega\cos[\alpha]\cot[\alpha]\cot[t\omega]\csc[t\omega]^2\right] \left(4\,\text{MO}-2\,\text{MO}\cos[2\,t\omega]+\text{MO}\cos[2\,\alpha-2\,t\omega]\right] +
                              M0 Cos [2 \alpha + 2 t \omega] - 2 M0 Cos [\alpha - t \omega] 2 Sec [\alpha] 2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega] 2 Sec [\alpha] 2 -
                              2 M0 Sec [\alpha]^2 Sin [t\omega]^2 - 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 + 2 \sqrt{2}\sqrt{-M0^2(-6-2\cos[2\alpha]+1)}
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2 \cos [2 \pm \omega] - \cos [2 \alpha - 2 \pm \omega] - \cos [2 \alpha + 2 \pm \omega]) \sin [\alpha]^{2} \sin [\pm \omega]^{2}
      \sqrt{\frac{1}{1 + \cos[2\alpha]}} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2 \,t \,\omega] + \text{M0} \,\cos[2 \,\alpha - 2 \,t \,\omega] + \right.
                  M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] +
                                \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
        – 4 M0 + 2 M0 Cos [2 t \omega] – M0 Cos [2 \alpha – 2 t \omega] – M0 Cos [2 \alpha + 2 t \omega] +
           2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
           2 M0 Sec [\alpha]^2 Sin [t\omega]^2 + 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 + 2 \sqrt{2}
             \sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega])} \sin[\alpha]^2 \sin[t \omega]^2
         \bigg| \bigg/ \bigg( 16 \, \mathsf{M0} \, \big( 1 + \mathsf{Cos} \, [\, 2 \, \alpha ] \, \big) \bigg)
      \sqrt{\text{M0}^2 \left(6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega]\right) \sin[\alpha]^2 \sin[t \omega]^2}
|\dot{\mathbf{n}} \cos[\alpha] \cot[\alpha] \csc[\dot{\mathbf{t}} \omega]^2 \left(-4 \,\text{MO} + 2 \,\text{MO} \cos[2 \,\dot{\mathbf{t}} \omega] - \text{MO} \cos[2 \,\alpha - 2 \,\dot{\mathbf{t}} \omega] - \text{MO} \cos[2 \,\alpha - 2 \,\dot{\mathbf{t}} \omega] \right)
           M0 Cos [2 \alpha + 2 t \omega] + 2 M0 Cos [\alpha - t \omega] 2 Sec [\alpha] 2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega] 2 Sec [\alpha] 2 +
           2 M0 Sec [\alpha]^2 Sin [t\omega]^2 + 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 + 2 \sqrt{2}\sqrt{(-M0^2(-6-2\cos[2\alpha]+
                         2 Cos [2 t \omega] - Cos [2 \alpha - 2 t \omega] - Cos [2 \alpha + 2 t \omega]) Sin [\alpha] 2 Sin [t \omega] 2)
      \sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                  M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] +
                                \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
       [4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] - 2 \text{ MO Cos} [\alpha - \text{t} \omega]^2 \text{ Sec} [\alpha]^2 - (\alpha + 2 \text{ t} \omega)]
           2 M0 Cos [2 \alpha] Cos [\alpha – t \omega] ^2 Sec [\alpha] ^2 – 2 M0 Sec [\alpha] ^2 Sin [t \omega] ^2 –
           2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2}
             \sqrt{\text{M0}^2 \left(6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega]\right) \sin[\alpha]^2 \sin[t \omega]^2}
          (2 MO^2 \omega Cos[t \omega] (6 + 2 Cos[2 \alpha] - 2 Cos[2 t \omega] + Cos[2 \alpha - 2 t \omega] + Cos[2 \alpha + 2 t \omega])
             Sin[\alpha]^2 Sin[t\omega] + MO^2 Sin[\alpha]^2 Sin[t\omega]^2
              (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])) \left(64 MO \left(1 + \cos[2 \alpha]\right)\right)
       (M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega]) \sin[\alpha]^2 \sin[t \omega]^2)^{3/2} +
\left[\dot{\mathbf{n}} \cos{[\alpha]} \cot{[\alpha]} \csc{[\mathbf{t} \, \omega]}^2 \left(4\,\mathrm{M0} - 2\,\mathrm{M0} \cos{[2\,\mathbf{t} \, \omega]} + \mathrm{M0} \cos{[2\,\alpha - 2\,\mathbf{t} \, \omega]} + \mathrm{M0} \cos{[2\,\alpha + 2\,\mathbf{t} \, \omega]} - \right]\right]
           2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Sec [\alpha]^2 Sin [t \omega]^2 - 2
           2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{-M0^2(-6-2\cos[2\alpha]+
                          2 Cos [2 t \omega] - Cos [2 \alpha - 2 t \omega] - Cos [2 \alpha + 2 t \omega]) Sin [\alpha] 2 Sin [t \omega] 2)
      \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2 \,t \,\omega] + \text{M0} \,\cos[2\alpha - 2 \,t \,\omega] + \right)}
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M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] +
                                                              \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]  \sin [\alpha]^2 \sin [t\omega]^2 
                 - 4 M0 + 2 M0 Cos [2 t \omega] - M0 Cos [2 \alpha - 2 t \omega] - M0 Cos [2 \alpha + 2 t \omega] +
                     2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                     2 M0 Sec [\alpha]^2 Sin [t \omega]^2 + 2 M0 Cos [2 \alpha] Sec [\alpha]^2 Sin [t \omega]^2 + 2\sqrt{2}
                          \sqrt{\text{M0}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega])} \sin[\alpha]^2 \sin[t \omega]^2
                    (2 MO^2 \omega Cos[t \omega] (6 + 2 Cos[2 \alpha] - 2 Cos[2 t \omega] + Cos[2 \alpha - 2 t \omega] + Cos[2 \alpha + 2 t \omega])
                          Sin[\alpha]^2 Sin[t\omega] + MO^2 Sin[\alpha]^2 Sin[t\omega]^2
                          (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])) \left(64 MO (1 + \cos[2 \alpha])\right)
              (M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)^{3/2} +
\left[\dot{\mathbf{n}} \cos[\alpha] \cot[\alpha] \csc[\mathsf{t} \,\omega]^2 \left(-4\,\mathsf{M0} + 2\,\mathsf{M0} \cos[2\,\mathsf{t} \,\omega] - \mathsf{M0} \cos[2\,\alpha - 2\,\mathsf{t} \,\omega] - \mathsf{M0}\right]\right]
                     M0 Cos [2 \alpha + 2 t \omega] + 2 M0 Cos [\alpha - t \omega] 2 Sec [\alpha] 2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega] 2 Sec [\alpha] 2 +
                     2 M0 Sec [\alpha]^2 Sin [t\omega]^2 + 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                     2\,\sqrt{2}\,\,\sqrt{\,\left(\,-\,\mathsf{M0}^2\,\left(\,-\,\mathsf{6}\,-\,2\,\mathsf{Cos}\,[\,2\,\alpha\,]\,+\,2\,\mathsf{Cos}\,[\,2\,\mathsf{t}\,\omega\,]\,-\,\mathsf{Cos}\,[\,2\,\alpha\,-\,2\,\mathsf{t}\,\omega\,]\,\,-\,\mathsf{Cos}\,[\,2\,\alpha\,+\,2\,\mathsf{t}\,\omega\,]\,\right)}
                                       Sin[\alpha]^2 Sin[t\omega]^2) \left(4 MO - 2 MO Cos[2 t\omega] + MO Cos[2 \alpha - 2 t\omega] +
                     M0 Cos [2 \alpha + 2 t \omega] - 2 M0 Cos [\alpha - t \omega] 2 Sec [\alpha] 2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega] 2 Sec [\alpha] 2 -
                     2 M0 Sec [\alpha]^2 Sin [t \omega]^2 – 2 M0 Cos [2 \alpha] Sec [\alpha]^2 Sin [t \omega]^2 + 2 \sqrt{2}
                          \sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega])} \sin[\alpha]^2 \sin[t \omega]^2
                    4 \text{ MO } \omega \text{ Sin}[2 \text{ t} \omega] + 2 \text{ MO } \omega \text{ Sin}[2 \alpha - 2 \text{ t} \omega] - 2 \text{ MO } \omega \text{ Sin}[2 \alpha + 2 \text{ t} \omega] -
                        \left(\sqrt{2} \left(2 \, \mathsf{M0^2} \, \omega \, \mathsf{Cos} \, [\mathsf{t} \, \omega] \, \left(6 + 2 \, \mathsf{Cos} \, [2 \, \alpha] - 2 \, \mathsf{Cos} \, [2 \, \mathsf{t} \, \omega] + \mathsf{Cos} \, [2 \, \alpha - 2 \, \mathsf{t} \, \omega] + \mathsf{Cos} \, [2 \, \alpha + 2 \, \mathsf{t} \, \omega]\right)\right)
                                                Sin[\alpha]^2 Sin[t\omega] + MO^2 Sin[\alpha]^2 Sin[t\omega]^2
                                                  (4 \omega \sin[2t\omega] + 2 \omega \sin[2\alpha - 2t\omega] - 2 \omega \sin[2\alpha + 2t\omega]))
                            \left( \sqrt{\,\text{M0}^2 \, \left( 6 + 2 \, \text{Cos} \, [2 \, \alpha] \, - 2 \, \text{Cos} \, [2 \, \text{t} \, \omega] \, + \, \text{Cos} \, [2 \, \alpha - 2 \, \text{t} \, \omega] \, + \, \text{Cos} \, [2 \, \alpha + 2 \, \text{t} \, \omega] \, \right) \, \text{Sin} \, [\alpha]^{\, 2} \, \text{Sin} \, [\text{t} \, \omega]^{\, 2}} \right.
                              )))/\left(64\,\text{M0}\,\left(1+\cos\left[2\,\alpha\right]\right)^{2}\right)
            \sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega])} \sin[\alpha]^2 \sin[t \omega]^2
            \sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                                  M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                              \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
\left[\dot{\mathbf{n}} \cos[\alpha] \cot[\alpha] \csc[\mathsf{t} \,\omega]^2\right] \left(4\,\mathsf{M0} - 2\,\mathsf{M0} \cos[2\,\mathsf{t} \,\omega] + \mathsf{M0} \cos[2\,\alpha - 2\,\mathsf{t} \,\omega] + \mathsf{M0} \cos[2\,\alpha + 2\,\mathsf{t} \,\omega] - \left(4\,\mathsf{M0} - 2\,\mathsf{M0} \cos[2\,\alpha] + \mathsf{M0} \cos[2\,\alpha] + \mathsf
                     2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                     2 M0 Sec [\alpha]^2 Sin [t\omega]^2 – 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                     2\sqrt{2}\sqrt{(-M0^2(-6-2\cos[2\alpha]+2\cos[2t\omega]-\cos[2\alpha-2t\omega]-\cos[2\alpha+2t\omega])}
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\operatorname{Sin}[\alpha]^2 \operatorname{Sin}[\mathsf{t}\,\omega]^2) \left(-4\,\mathrm{M0} + 2\,\mathrm{M0}\,\operatorname{Cos}[2\,\mathsf{t}\,\omega] - \mathrm{M0}\,\operatorname{Cos}[2\,\alpha - 2\,\mathsf{t}\,\omega] - \mathrm{M0}\,\operatorname{M0}[2\,\alpha]^2\right)
                      M0 Cos [2 \alpha + 2 t \omega] + 2 M0 Cos [\alpha - t \omega] 2 Sec [\alpha] 2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega] 2 Sec [\alpha] 2 +
                      2 M0 Sec [\alpha]^2 Sin [t \omega]^2 + 2 M0 Cos [2 \alpha] Sec [\alpha]^2 Sin [t \omega]^2 + 2\sqrt{2}
                           \sqrt{\text{M0}^2 \left(6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega]\right) \sin[\alpha]^2 \sin[t \omega]^2}
                      \left(4\,\text{M0}\,\omega\,\text{Sin}\left[2\,\text{t}\,\omega\right]\,+\,2\,\text{M0}\,\omega\,\text{Sin}\left[2\,\alpha\,-\,2\,\text{t}\,\omega\right]\,-\,2\,\text{M0}\,\omega\,\text{Sin}\left[2\,\alpha\,+\,2\,\text{t}\,\omega\right]\,+\,
                       \left(\sqrt{2} \ \left(2 \ \text{M0}^2 \ \omega \ \text{Cos} \ [\text{t} \ \omega] \ \left(6 + 2 \ \text{Cos} \ [\text{2} \ \alpha] \ - 2 \ \text{Cos} \ [\text{2} \ \text{t} \ \omega] \ + \ \text{Cos} \ [\text{2} \ \alpha - 2 \ \text{t} \ \omega] \ + \ \text{Cos} \ [\text{2} \ \alpha + 2 \ \text{t} \ \omega] \right) \right)
                                                   Sin[\alpha]^2 Sin[t\omega] + M0^2 Sin[\alpha]^2 Sin[t\omega]^2
                                                   (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])))
                            \left( \sqrt{ \, \mathsf{M0^2} \, \left( 6 + 2 \, \mathsf{Cos} \, [\, 2 \, \alpha ] \, - 2 \, \mathsf{Cos} \, [\, 2 \, \mathsf{t} \, \omega ] \, + \mathsf{Cos} \, [\, 2 \, \alpha - 2 \, \mathsf{t} \, \omega ] \, + \, \mathsf{Cos} \, [\, 2 \, \alpha + 2 \, \mathsf{t} \, \omega ] \, \right) \, \mathsf{Sin} \, [\, \alpha \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega \, ]^{\, 2} \,
                               )))/\left(64\,\text{MØ}\,\left(1+\cos\left[2\,\alpha\right]\right)^2\right)
            \sqrt{\text{MO}^2 \left(6 + 2 \cos \left[2 \alpha\right] - 2 \cos \left[2 t \omega\right] + \cos \left[2 \alpha - 2 t \omega\right] + \cos \left[2 \alpha + 2 t \omega\right]\right) \sin \left[\alpha\right]^2 \sin \left[t \omega\right]^2}
            \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2\,t\,\omega] + \text{M0} \,\cos[2\,\alpha - 2 \,t\,\omega] + \right)}
                                   M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
|\dot{\mathbf{n}} \cos[\alpha] \cot[\alpha] \csc[\dot{\mathbf{t}} \omega]^2 \left(-4 \,\text{M0} + 2 \,\text{M0} \cos[2 \,\dot{\mathbf{t}} \omega] - \text{M0} \cos[2 \,\alpha - 2 \,\dot{\mathbf{t}} \omega] - \text{M0} \cos[2 \,\alpha + 2 \,\dot{\mathbf{t}} \omega] + (-4 \,\text{M0} + 2 \,\text{M0} \cos[2 \,\dot{\mathbf{t}} \omega] - (-4 \,\text{M0} + 2 \,\text{M0} \cos[2 \,\dot{\mathbf{t}} \omega]) \right)
                      2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Sec [\alpha]^2 Sin [t \omega]^2 + 2
                     2 M0 Cos [2 \alpha] Sec [\alpha] ^{2} Sin [t \omega] ^{2} + 2 \sqrt{2} \sqrt{\left(-\text{M0}^{2}\left(-6-2\cos{[2\,\alpha]}\right.+\right)}
                                                   2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
            \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{MO} - 2 \,\cos[2\alpha] - 2 \,\text{MO} \,\cos[2 \,t \,\omega] + \text{MO} \,\cos[2\,\alpha - 2 \,t \,\omega] + \right)}
                                    M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 2 \cos [2 \alpha])}
                                                                \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                -4 \, MO \, \omega \, Cos[t \, \omega] \, Sec[\alpha]^2 \, Sin[t \, \omega] \, -4 \, MO \, \omega \, Cos[2 \, \alpha] \, Cos[t \, \omega] \, Sec[\alpha]^2 \, Sin[t \, \omega] \, +
                      4 \text{ MO } \omega \text{ Sin}[2 \text{ t} \omega] + 2 \text{ MO } \omega \text{ Sin}[2 \alpha - 2 \text{ t} \omega] - 4 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] \text{ Sec}[\alpha]^2 \text{ Sin}[\alpha - \text{t} \omega] - 4 \text{ MO}[\alpha - \text{t} \omega] = 0
                      4 M0 \omega Cos [2 \alpha] Cos [\alpha – t\omega] Sec [\alpha] <sup>2</sup> Sin [\alpha – t\omega] –
                      2 M0 ω Sin [2 α + 2 t ω] + (\sqrt{2} (2 M0^2 ω Cos [t ω])
                                                    (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega]) \sin[\alpha]^2 \sin[t \omega] +
                                             MO^2 Sin[\alpha]^2 Sin[t\omega]^2 (4 \omega Sin[2t\omega] + 2 \omega Sin[2\alpha - 2t\omega] - 2 \omega Sin[2\alpha + 2t\omega])))
                            \left( \sqrt{\,\text{M0}^2 \, \left( 6 + 2 \, \text{Cos} \, [\, 2 \, \alpha ] \, - \, 2 \, \text{Cos} \, [\, 2 \, \text{t} \, \omega ] \, + \, \text{Cos} \, [\, 2 \, \alpha - \, 2 \, \text{t} \, \omega ] \, + \, \text{Cos} \, [\, 2 \, \alpha + \, 2 \, \text{t} \, \omega ] \, \right) \, \text{Sin} \, [\alpha]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2}}
                                )) \bigg] \bigg/ \bigg( 32 \, M0 \, \big( 1 + \cos \left[ 2 \, \alpha \right] \big)
             \sqrt{\text{M0}^2 \left(6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega]\right) \sin[\alpha]^2 \sin[t \omega]^2}
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\dot{\mathbb{L}} Cos[\alpha] Cot[\alpha] Csc[t\omega]<sup>2</sup> \left(4\,\text{M0}-2\,\text{M0}\,\text{Cos}[2\,t\,\omega]+\text{M0}\,\text{Cos}[2\,\alpha-2\,t\,\omega]+\text{M0}\,\text{Cos}[2\,\alpha+2\,t\,\omega]-\right)
                               2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Sec [\alpha]^2 Sin [t \omega]^2 - 2
                               2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{-M0^2(-6-2\cos[2\alpha]+}
                                                                      2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
                  \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                                                 M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                                         \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
                       4 M0 \omega Cos[t \omega] Sec[\alpha]<sup>2</sup> Sin[t \omega] + 4 M0 \omega Cos[2 \alpha] Cos[t \omega] Sec[\alpha]<sup>2</sup> Sin[t \omega] -
                               4 \text{ MO } \omega \text{ Sin}[2 \text{ t} \omega] - 2 \text{ MO } \omega \text{ Sin}[2 \alpha - 2 \text{ t} \omega] + 4 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] \text{ Sec}[\alpha]^2 \text{ Sin}[\alpha - \text{t} \omega] + 4 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2 \text{ MO } \omega \text{ Cos}[\alpha - \text{t} \omega] + 2
                               4 M0 \omega Cos [2 \alpha] Cos [\alpha – t\omega] Sec [\alpha]<sup>2</sup> Sin [\alpha – t\omega] +
                               2 M0 \omega Sin [2 \alpha + 2 t \omega] + (\sqrt{2} (2 \text{ MO}^2 \omega \text{ Cos} [\text{t } \omega])
                                                                       (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega]) \sin[\alpha]^2 \sin[t \omega] +
                                                              MO^2 Sin[\alpha]^2 Sin[t\omega]^2 (4\omega Sin[2t\omega] + 2\omega Sin[2\alpha - 2t\omega] - 2\omega Sin[2\alpha + 2t\omega])))
                                       \left( \sqrt{\,\text{M0}^2 \, \left( 6 + 2 \, \text{Cos} \, [\, 2 \, \alpha ] \, - \, 2 \, \text{Cos} \, [\, 2 \, \text{t} \, \omega ] \, + \, \text{Cos} \, [\, 2 \, \alpha - \, 2 \, \text{t} \, \omega ] \, + \, \text{Cos} \, [\, 2 \, \alpha + \, 2 \, \text{t} \, \omega ] \, \right) \, \text{Sin} \, [\alpha]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega ]^{\, 2}}
                                             )))/(32 M0 (1 + Cos [2 \alpha])
                   \sqrt{\text{M0}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega]) \sin[\alpha]^2 \sin[t \omega]^2}
\left( \text{i } \mathsf{Cos}\left[\alpha\right] \, \mathsf{Cot}\left[\alpha\right] \, \mathsf{Csc}\left[\mathsf{t} \, \omega\right]^2 \, \sqrt{\, \left( \frac{1}{1 + \mathsf{Cos}\left[2 \, \alpha\right]} \, \left(-\, 2 + 4 \, \mathsf{M0} \, - \, 2 \, \mathsf{Cos}\left[2 \, \alpha\right] \, - \, 2 \, \mathsf{M0} \, \mathsf{Cos}\left[2 \, \mathsf{t} \, \omega\right] \, + \, \right)^2 \, \left( \frac{1}{1 + \mathsf{Cos}\left[2 \, \alpha\right]} \, \left(-\, 2 + \, 4 \, \mathsf{M0} \, - \, 2 \, \mathsf{Cos}\left[2 \, \alpha\right] \, - \, 2 \, \mathsf{M0} \, \mathsf{Cos}\left[2 \, \mathsf{t} \, \omega\right] \, + \, \right)^2 \, \left( \frac{1}{1 + \mathsf{Cos}\left[2 \, \alpha\right]} \, \left(-\, 2 + \, 4 \, \mathsf{M0} \, - \, 2 \, \mathsf{Cos}\left[2 \, \alpha\right] \, - \, 2 \, \mathsf{M0} \, \mathsf{Cos}\left[2 \, \mathsf{t} \, \omega\right] \, + \, \right)^2 \, \left( \frac{1}{1 + \mathsf{Cos}\left[2 \, \alpha\right]} \, \left(-\, 2 + \, 4 \, \mathsf{M0} \, - \, 2 \, \mathsf{Cos}\left[2 \, \alpha\right] \, - \, 2 \, \mathsf{M0} \, \mathsf{Cos}\left[2 \, \mathsf{t} \, \omega\right] \, + \, \right)^2 \, \left(-\, 2 + \, 4 \, \mathsf{M0} \, - \, 2 \, \mathsf{Cos}\left[2 \, \alpha\right] \, - \, 2 \, \mathsf{M0} \, \mathsf{Cos}\left[2 \, \mathsf{t} \, \omega\right] \, + \, \right)^2 \, \left(-\, 2 + \, 4 \, \mathsf{M0} \, - \, 2 \, \mathsf{Cos}\left[2 \, \alpha\right] \, - \, 2 \, \mathsf{M0} \, \mathsf{Cos}\left[2 \, \mathsf{t} \, \omega\right] \, + \, \right)^2 \, \left(-\, 2 + \, 4 \, \mathsf{M0} \, - \, 2 \, \mathsf{Cos}\left[2 \, \alpha\right] \, - \, 2 \, \mathsf{M0} \, \mathsf{Cos}\left[2 \, \mathsf{t} \, \omega\right] \, + \, \right)^2 \, \left(-\, 2 + \, 4 \, \mathsf{M0} \, - \, 2 \, \mathsf{Cos}\left[2 \, \alpha\right] \, - \, 2 \, \mathsf{M0} \, \mathsf{Cos}\left[2 \, \mathsf{t} \, \omega\right] \, + \, \right)^2 \, \left(-\, 2 + \, 4 \, \mathsf{M0} \, - \, 2 \, \mathsf{Cos}\left[2 \, \alpha\right] \, - \, 2 \, \mathsf{M0} \, \mathsf{Cos}\left[2 \, \mathsf{t} \, \omega\right] \, + \, \right)^2 \, \left(-\, 2 + \, 4 \, \mathsf{M0} \, - \, 2 \, \mathsf{Cos}\left[2 \, \alpha\right] \, - \, 2 \, \mathsf{M0} \, \mathsf{Cos}\left[2 \, \mathsf{t} \, \omega\right] \, + \, \right)^2 \, \left(-\, 2 + \, 4 \, \mathsf{M0} \, - \, 2 \, \mathsf{Cos}\left[2 \, \alpha\right] \, - \, 2 \, \mathsf{M0} \, \mathsf{Cos}\left[2 \, \mathsf{t} \, \omega\right] \, + \, \right)^2 \, \left(-\, 2 + \, 4 \, \mathsf{M0} \, - \, 2 \, \mathsf{Cos}\left[2 \, \alpha\right] \, - \, 2 \, \mathsf{M0} \, \mathsf{Cos}\left[2 \, \mathsf{t} \, \omega\right] \, + \, \right)^2 \, \left(-\, 2 + \, 4 \, \mathsf{M0} \, - \, 2 \, \mathsf{Cos}\left[2 \, \alpha\right] \, - \, 2 \, \mathsf{M0} \, \mathsf{Cos}\left[2 \, \alpha\right] \, + \, \right)^2 \, \left(-\, 2 + \, 4 \, \mathsf{M0} \, - \, 2 \, \mathsf{Cos}\left[2 \, \alpha\right] \, - \, 2 \, \mathsf{M0} \, \mathsf{Cos}\left[2 \, \alpha\right] \, + \, \left(-\, 2 + \, 4 \, \mathsf{M0} \, - \, 2 \, \mathsf{Cos}\left[2 \, \alpha\right] \, - \, 2 \, \mathsf{M0} \, \mathsf{Cos}\left[2 \, \alpha\right] \, + \, \right)^2 \, \left(-\, 2 + \, 4 \, \mathsf{M0} \, - \, 2 \, \mathsf{Cos}\left[2 \, \alpha\right] \, + \, \left(-\, 2 + \, 4 \, \mathsf{M0} \, - \, 2 \, \mathsf{Cos}\left[2 \, \alpha\right] \, - \, 2 \, \mathsf{M0} \, + \, \right)^2 \, \left(-\, 2 + \, 4 \, \mathsf{M0} \, - \, 2 \, \mathsf{Cos}\left[2 \, \alpha\right] \, + \, \right)^2 \, \left(-\, 2 + \, 4 \, \mathsf{M0} \, - \, 2 \, \mathsf{Cos}\left[2 \, \alpha\right] \, + \, \right)^2 \, \left(-\, 2 + \, 4 \, \mathsf{M0} \, - \, 2 \, \mathsf{Cos}\left[2 \, \alpha\right] \, + \, \right)^2 \, \left(-\, 2 + \, 4 \, \mathsf{M0} \, - \, 2 \, \mathsf{Cos}\left[2 \, \alpha\right] \, + \, \right)^2 \, \left(
                                                 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]  \sin [\alpha]^2 \sin [t \omega]^2 
                      \left( -4\,\text{M0} + 2\,\text{M0}\,\text{Cos}\,[2\,\text{t}\,\omega] \,-\,\text{M0}\,\text{Cos}\,[2\,lpha - 2\,\text{t}\,\omega] \,-\,\text{M0}\,\text{Cos}\,[2\,lpha + 2\,\text{t}\,\omega] \,+\,
                               2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                               2 M0 Sec [\alpha]^2 Sin [t \omega]^2 + 2 M0 Cos [2 \alpha] Sec [\alpha]^2 Sin [t \omega]^2 + 2\sqrt{2}
                                      \sqrt{\text{M0}^2 \left(6+2 \cos \left[2 \, \alpha\right]-2 \cos \left[2 \, \text{t} \, \omega\right]+\cos \left[2 \, \alpha-2 \, \text{t} \, \omega\right]+\cos \left[2 \, \alpha+2 \, \text{t} \, \omega\right]\right)} \, \sin \left[\alpha\right]^2 \sin \left[\text{t} \, \omega\right]^2
                             \left(-4\,\text{M0}\,\omega\,\text{Cos}\,[\text{t}\,\omega]\,\text{Sec}\,[\alpha]^2\,\text{Sin}\,[\text{t}\,\omega]\,-4\,\text{M0}\,\omega\,\text{Cos}\,[2\,\alpha]\,\,\text{Cos}\,[\text{t}\,\omega]\,\,\text{Sec}\,[\alpha]^2\,\text{Sin}\,[\text{t}\,\omega]\,+
                               4 M0 \omega Sin[2 t \omega] + 2 M0 \omega Sin[2 \alpha - 2 t \omega] - 4 M0 \omega Cos[\alpha - t \omega] Sec[\alpha] ^2 Sin[\alpha - t \omega] -
                               4 \text{ M0 } \omega \text{ Cos}[2 \alpha] \text{ Cos}[\alpha - t \omega] \text{ Sec}[\alpha]^2 \text{ Sin}[\alpha - t \omega] - 2 \text{ M0 } \omega \text{ Sin}[2 \alpha + 2 t \omega] +
                                 (\sqrt{2} (-2 \,\text{M0}^2 \,\omega \,\text{Cos}\,[\,\text{t}\,\omega\,] (-6 - 2 \,\text{Cos}\,[\,2\,\alpha\,] + 2 \,\text{Cos}\,[\,2\,\,\text{t}\,\omega\,] - \text{Cos}\,[\,2\,\alpha - 2\,\text{t}\,\omega\,] - \text{Cos}\,[\,2\,\alpha + 2\,\text{t}\,\omega\,])
                                                                      Sin[\alpha]^2 Sin[t\omega] - M0^2 Sin[\alpha]^2 Sin[t\omega]^2
                                                                       (-4 \omega \sin[2 t \omega] - 2 \omega \sin[2 \alpha - 2 t \omega] + 2 \omega \sin[2 \alpha + 2 t \omega])))
                                       (\sqrt{-M0^2 (-6-2 \cos [2 \alpha] + 2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega])}
                                                               \operatorname{Sin}[\alpha]^{2} \operatorname{Sin}[\mathsf{t} \omega]^{2})) \bigg| \bigg/ \bigg( 32 \, \mathsf{M0} \, \big( 1 + \operatorname{Cos}[2 \, \alpha] \big) \bigg)
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\sqrt{\text{M0}^2 \left(6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega]\right) \sin[\alpha]^2 \sin[t \omega]^2} +
                     \left( \dot{\mathtt{n}} \, \mathsf{Cos} \, [\alpha] \, \mathsf{Cot} \, [\alpha] \, \mathsf{Csc} \, [\mathsf{t} \, \omega]^{\, 2} \, \sqrt{\, \left( \frac{\mathtt{1}}{\mathtt{1} + \mathsf{Cos} \, [\mathsf{2} \, \alpha]} \, \left( -\, \mathsf{2} + \mathsf{4} \, \mathsf{M0} \, -\, \mathsf{2} \, \mathsf{Cos} \, [\mathsf{2} \, \alpha] \, -\, \mathsf{2} \, \mathsf{M0} \, \mathsf{Cos} \, [\mathsf{2} \, \mathsf{t} \, \omega] \, +\, \mathsf{M0} \, \mathsf{
                                                                                        M0 Cos [2 \alpha – 2 t \omega] + M0 Cos [2 \alpha + 2 t \omega] – 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - \cos (2 \alpha))^2)}
                                                                                                                                                2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]  \sin [\alpha]^2 \sin [t \omega]^2 
                                                  4 \text{ M0} - 2 \text{ M0 Cos} [2 \text{ t} \omega] + \text{M0 Cos} [2 \alpha - 2 \text{ t} \omega] + \text{M0 Cos} [2 \alpha + 2 \text{ t} \omega] - 2 \text{ M0 Cos} [\alpha - \text{ t} \omega]^2
                                                                         Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                                                               2 M0 Sec [\alpha]^2 Sin [t \omega]^2 - 2 M0 Cos [2 \alpha] Sec [\alpha]^2 Sin [t \omega]^2 + 2\sqrt{2}
                                                                         \sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega]) \sin[\alpha]^2 \sin[t \omega]^2}
                                                              (4 \text{ MO } \omega \text{ Cos}[\text{t } \omega] \text{ Sec}[\alpha]^2 \text{ Sin}[\text{t } \omega] + 4 \text{ MO } \omega \text{ Cos}[2 \alpha] \text{ Cos}[\text{t } \omega] \text{ Sec}[\alpha]^2 \text{ Sin}[\text{t } \omega] -
                                                               4 M0 \omega Sin[2 t \omega] - 2 M0 \omega Sin[2 \alpha - 2 t \omega] + 4 M0 \omega Cos[\alpha - t \omega] Sec[\alpha] 2 Sin[\alpha - t \omega] +
                                                               4 M0 \omega Cos [2 \alpha] Cos [\alpha – t \omega] Sec [\alpha] <sup>2</sup> Sin [\alpha – t \omega] + 2 M0 \omega Sin [2 \alpha + 2 t \omega] +
                                                                  (\sqrt{2} (-2 \text{ MO}^2 \omega \cos[t \omega] (-6 - 2 \cos[2 \alpha] + 2 \cos[2 t \omega] - \cos[2 \alpha - 2 t \omega] - \cos[2 \alpha + 2 t \omega])
                                                                                                                    Sin[\alpha]^2 Sin[t\omega] - MO^2 Sin[\alpha]^2 Sin[t\omega]^2
                                                                                                                        (-4 \omega \sin[2 t \omega] - 2 \omega \sin[2 \alpha - 2 t \omega] + 2 \omega \sin[2 \alpha + 2 t \omega])))
                                                                          (\sqrt{-M0^2 (-6-2 \cos [2 \alpha] + 2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega])}
                                                                                                           \operatorname{Sin}[\alpha]^2 \operatorname{Sin}[\mathsf{t} \omega]^2))) \bigg/\bigg(32 \operatorname{M0} (1 + \operatorname{Cos}[2 \alpha])\bigg)
                                               \sqrt{\text{M0}^2 \left(6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega]\right) \sin[\alpha]^2 \sin[t \omega]^2}
\mathsf{DergMatrix21}[\alpha\_, \, \omega\_, \, \mathsf{t}\_, \, \mathsf{MO}\_] \, := \, - \, \bigg[ \bigg[ \, \dot{\mathtt{i}} \, \, \mathsf{MO} \, \omega \, \, \big( \, \mathsf{1} + \mathsf{Cos} \, [\, \mathsf{2} \, \alpha] \, \big) \, \, \mathsf{Cos} \, [\, \mathsf{t} \, \omega] \, \, \mathsf{Sec} \, [\, \alpha] \, \, \mathsf{Sin} \, [\, \mathsf{t} \, \omega] \bigg] \bigg] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf{Cos} \, [\, \mathsf{mo} \, \omega] \, + \, \, \mathsf
                                                               \sqrt{\frac{1}{1 + \cos[2\alpha]}} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t}\,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t}\,\omega] + \frac{1}{2} \cos[2\alpha] + \frac{1}{2} \cos[2
                                                                                                            M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                                                                                                               \cos[2\alpha - 2t\omega] + \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2) \arctan[\alpha]
                                                     \sqrt{M0^2 \left(6+2 \cos \left[2 \alpha\right]-2 \cos \left[2 t \omega\right]+\cos \left[2 \alpha-2 t \omega\right]+\cos \left[2 \alpha+2 t \omega\right]\right) \sin \left[\alpha\right]^2 \sin \left[t \omega\right]^2}
                                     + \left| i M0 \omega \left( 1 + Cos[2 \alpha] \right) Cos[t \omega] Sec[\alpha] Sin[t \omega] \right|
                                            \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \,\cos[2 \,\text{t} \,\omega] + \text{M0} \,\cos[2\,\alpha - 2 \,\text{t} \,\omega] + \right)}
                                                                                        M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                                                                                             \cos[2\alpha - 2t\omega] + \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2) \arctan[\alpha]
                               \left(\sqrt{\text{M0}^2 \left(6+2\cos{[2\,\alpha]}-2\cos{[2\,t\,\omega]}+\cos{[2\,\alpha-2\,t\,\omega]}+\cos{[2\,\alpha+2\,t\,\omega]}\right)}\,\sin{[\alpha]}^2\sin{[t\,\omega]}^2\right)+
                       \left[\dot{\mathbf{1}}\ \mathsf{M0}\ \left(\mathbf{1}+\mathsf{Cos}\left[2\ \alpha\right]\right)\ \mathsf{Sec}\left[\alpha\right]\ \mathsf{Sin}\left[\mathsf{t}\ \omega\right]^{2}\right]
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\sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t}\,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t}\,\omega] + \right)}
                                                                           M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                                                                                        \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                              (2 M0^2 \omega \cos[t \omega] (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega])
                                                          Sin[\alpha]^2 Sin[t\omega] + M0^2 Sin[\alpha]^2 Sin[t\omega]^2
                                                          (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])) \tan[\alpha]
                              \left(\text{M0}^{2} \, \left(6 + 2 \, \text{Cos} \, [2 \, \alpha] \, - 2 \, \text{Cos} \, [2 \, \text{t} \, \omega] \, + \, \text{Cos} \, [2 \, \alpha - 2 \, \text{t} \, \omega] \, + \, \text{Cos} \, [2 \, \alpha + 2 \, \text{t} \, \omega] \, \right) \, \text{Sin} \, [\alpha]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega]^{\, 2} \right)^{\, 3/2} \right) \, - \, 2 \, \text{Cos} \, [2 \, \text{t} \, \omega] \, + \, \text{Cos} \, [2 \, \alpha - 2 \, \text{t} \, \omega] \, + \, \text{Cos} \, [2 \, \alpha + 2 \, \text{t} \, \omega] \, \right) \, \text{Sin} \, [\alpha]^{\, 2} \, \text{Sin} \, [\, \text{t} \, \omega]^{\, 2} \, \right) \, - \, 2 \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, \text{t} \, \omega]^{\, 2} \, + \, \text{Cos} \, [\, 
\left(\frac{1}{1 + \cos[2\alpha]}\right) \operatorname{Sec}[\alpha] \operatorname{Sin}[t\omega]^2 \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \operatorname{MO} - 2 \operatorname{Cos}[2\alpha] - \frac{1}{1 + \cos[2\alpha]}\right)\right)}
                                                                           2 \ \text{M0 Cos} \ [2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha + 2 \ \text{t} \ \omega] \ + \ 2 \ \sqrt{2} \ \sqrt{\left(\text{M0}^2 \ \left(6 + 2 \ \text{Cos} \ [2 \ \alpha] - 2 \ \text{t} \ \omega\right) + 2 \ \text{M0}^2 \right)} \ - \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha + 2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t} \ \omega] \ - \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t} \ \omega] \ + \ \text{M0 Cos} \ [2 \ \alpha - 2 \ \text{t
                                                                                                                                        2 \cos [2 \pm \omega] + \cos [2 \alpha - 2 \pm \omega] + \cos [2 \alpha + 2 \pm \omega]) \sin [\alpha]^{2} \sin [\pm \omega]^{2})
                              (2 MO^2 \omega Cos[t \omega] (6 + 2 Cos[2 \alpha] - 2 Cos[2 t \omega] + Cos[2 \alpha - 2 t \omega] + Cos[2 \alpha + 2 t \omega])
                                                          Sin[\alpha]^2 Sin[t\omega] + M0^2 Sin[\alpha]^2 Sin[t\omega]^2
                                                          (4 \omega \operatorname{Sin}[2 t \omega] + 2 \omega \operatorname{Sin}[2 \alpha - 2 t \omega] - 2 \omega \operatorname{Sin}[2 \alpha + 2 t \omega])) \operatorname{Tan}[\alpha] / (4 \omega \operatorname{Sin}[2 t \omega] + 2 \omega \operatorname{Sin}[2 \alpha - 2 t \omega])
                              (M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)^{3/2})
\left(i \text{ MO Sec}\left[\alpha\right] \text{Sin}\left[\text{t}\,\omega\right]^{2} \left(4 \text{ MO}\,\omega \, \text{Sin}\left[2 \, \text{t}\,\omega\right] + 2 \, \text{MO}\,\omega \, \text{Sin}\left[2 \, \alpha - 2 \, \text{t}\,\omega\right] - \right)
                                              2 M0 \omega Sin [2 \alpha + 2 t \omega] – \left(\sqrt{2} \left(2 \text{ MO}^2 \ \omega \text{ Cos} \left[\text{t} \ \omega\right]\right.\right)
                                                                                                            (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega]) \sin[\alpha]^2 \sin[t \omega] +
                                                                                               \mathsf{M0^2\,Sin}[\alpha]^2\,\mathsf{Sin}[\mathsf{t}\,\omega]^2\,\left(4\,\omega\,\mathsf{Sin}[2\,\mathsf{t}\,\omega]\,+2\,\omega\,\mathsf{Sin}[2\,\alpha\,-\,2\,\mathsf{t}\,\omega]\,-\,2\,\omega\,\mathsf{Sin}[2\,\alpha\,+\,2\,\mathsf{t}\,\omega]\,\right)\right)\bigg/
                                                          \left( \sqrt{\,\text{M0}^2 \, \left( 6 + 2 \, \text{Cos} \, [\, 2 \, \alpha \, ] \, - 2 \, \text{Cos} \, [\, 2 \, \text{t} \, \omega \, ] \, + \, \text{Cos} \, [\, 2 \, \alpha \, - \, 2 \, \text{t} \, \omega \, ] \, + \, \text{Cos} \, [\, 2 \, \alpha \, + \, 2 \, \text{t} \, \omega \, ] \, \right) \, \, \text{Sin} \, [\, \alpha \, ] \, ^2 \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^2 \, \, \text{Sin} \, [\, \text{t} \, \omega \, ] \, ^
                                                               ] Tan [α] | /
          \left(4\,\sqrt{\,\text{M0}^2\,\left(6+2\,\text{Cos}\,[2\,\alpha]\,-2\,\text{Cos}\,[2\,\text{t}\,\omega]\,+\,\text{Cos}\,[2\,\alpha\,-\,2\,\text{t}\,\omega]\,+\,\text{Cos}\,[2\,\alpha\,+\,2\,\text{t}\,\omega]\,\right)\,\,\text{Sin}\,[\alpha]^{\,2}\,\,\text{Sin}\,[\,\text{t}\,\omega]^{\,2}}\right.
                          \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \text{ M0} - 2 \cos[2\alpha] - 2 \text{ M0} \cos[2 \text{ t}\omega] + \text{M0} \cos[2\alpha - 2 \text{ t}\omega] + \right)}
                                                                           M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{\left(\text{M0}^2\left(6 + 2\cos{[2\,\alpha]} - 2\cos{[2\,\text{t}\,\omega]}\right.\right)} +
                                                                                                                                       \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
 \left( i \, MO \, Sec \left[ \alpha \right] \, Sin \left[ t \, \omega \right]^{2} \, \left( 4 \, MO \, \omega \, Sin \left[ 2 \, t \, \omega \right] \, + \, 2 \, MO \, \omega \, Sin \left[ 2 \, \alpha \, - \, 2 \, t \, \omega \right] \, - \, 2 \, MO \, \omega \, Sin \left[ 2 \, \alpha \, + \, 2 \, t \, \omega \right] \, + \, 2 \, MO \, \omega \, Sin \left[ 2 \, \alpha \, + \, 2 \, t \, \omega \right] \, + \, 2 \, MO \, \omega \, Sin \left[ 2 \, \alpha \, + \, 2 \, t \, \omega \right] \, + \, 2 \, MO \, \omega \, Sin \left[ 2 \, \alpha \, + \, 2 \, t \, \omega \right] \, + \, 2 \, MO \, \omega \, Sin \left[ 2 \, \alpha \, + \, 2 \, t \, \omega \right] \, + \, 2 \, MO \, \omega \, Sin \left[ 2 \, \alpha \, + \, 2 \, t \, \omega \right] \, + \, 2 \, MO \, \omega \, Sin \left[ 2 \, \alpha \, + \, 2 \, t \, \omega \right] \, + \, 2 \, MO \, \omega \, Sin \left[ 2 \, \alpha \, + \, 2 \, t \, \omega \right] \, + \, 2 \, MO \, \omega \, Sin \left[ 2 \, \alpha \, + \, 2 \, t \, \omega \right] \, + \, 2 \, MO \, \omega \, Sin \left[ 2 \, \alpha \, + \, 2 \, t \, \omega \right] \, + \, 2 \, MO \, \omega \, Sin \left[ 2 \, \alpha \, + \, 2 \, t \, \omega \right] \, + \, 2 \, MO \, \omega \, Sin \left[ 2 \, \alpha \, + \, 2 \, t \, \omega \right] \, + \, 2 \, MO \, \omega \, Sin \left[ 2 \, \alpha \, + \, 2 \, t \, \omega \right] \, + \, 2 \, MO \, \omega \, Sin \left[ 2 \, \alpha \, + \, 2 \, t \, \omega \right] \, + \, 2 \, MO \, \omega \, Sin \left[ 2 \, \alpha \, + \, 2 \, t \, \omega \right] \, + \, 2 \, MO \, \omega \, Sin \left[ 2 \, \alpha \, + \, 2 \, t \, \omega \right] \, + \, 2 \, MO \, \omega \, Sin \left[ 2 \, \alpha \, + \, 2 \, t \, \omega \right] \, + \, 2 \, MO \, \omega \, Sin \left[ 2 \, \alpha \, + \, 2 \, t \, \omega \right] \, + \, 2 \, MO \, \omega \, Sin \left[ 2 \, \alpha \, + \, 2 \, t \, \omega \right] \, + \, 2 \, MO \, \omega \, Sin \left[ 2 \, \alpha \, + \, 2 \, t \, \omega \right] \, + \, 2 \, MO \, \omega \, Sin \left[ 2 \, \alpha \, + \, 2 \, t \, \omega \right] \, + \, 2 \, MO \, \omega \, Sin \left[ 2 \, \alpha \, + \, 2 \, t \, \omega \right] \, + \, 2 \, MO \, \omega \, Sin \left[ 2 \, \alpha \, + \, 2 \, t \, \omega \right] \, + \, 2 \, MO \, \omega \, Sin \left[ 2 \, \alpha \, + \, 2 \, t \, \omega \right] \, + \, 2 \, MO \, \omega \, Sin \left[ 2 \, \alpha \, + \, 2 \, t \, \omega \right] \, + \, 2 \, MO \, \omega \, Sin \left[ 2 \, \alpha \, + \, 2 \, t \, \omega \right] \, + \, 2 \, MO \, \omega \, Sin \left[ 2 \, \alpha \, + \, 2 \, t \, \omega \right] \, + \, 2 \, MO \, \omega \, Sin \left[ 2 \, \alpha \, + \, 2 \, t \, \omega \right] \, + \, 2 \, MO \, \omega \, Sin \left[ 2 \, \alpha \, + \, 2 \, t \, \omega \right] \, + \, 2 \, MO \, \omega \, Sin \left[ 2 \, \alpha \, + \, 2 \, t \, \omega \right] \, + \, 2 \, MO \, \omega \, Sin \left[ 2 \, \alpha \, + \, 2 \, t \, \omega \right] \, + \, 2 \, MO \, \omega \, Sin \left[ 2 \, \alpha \, + \, 2 \, t \, \omega \right] \, + \, 2 \, MO \, \omega \, Sin \left[ 2 \, \alpha \, + \, 2 \, t \, \omega \right] \, + \, 2 \, MO \, \omega \, Sin \left[ 2 \, \alpha \, + \, 2 \, t \, \omega \right] \, + \, 2 \, MO \, \omega \, Sin \left[ 2 \, \alpha \, + \, 2 \, t \, \omega \right] \, + \, 2 \, MO \, \omega \, Sin \left[ 2 \, \alpha \, + \, 2 \, t \, \omega \right] \, + \, 2 \, MO \, \omega \, Sin \left[ 2 \, \alpha \, + \, 2 \, t \, \omega \right] \, + \, 2 \, MO \, \omega \, Sin
                                                  (\sqrt{2} (2 M0^2 \omega \cos[t \omega] (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega])
                                                                                                         Sin[\alpha]^2 Sin[t\omega] + MO^2 Sin[\alpha]^2 Sin[t\omega]^2
                                                                                                            (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])))
                                                            \left(\sqrt{\,\text{M0}^{2}\,\left(6+2\,\text{Cos}\,[2\,\alpha]\,-2\,\text{Cos}\,[2\,\text{t}\,\omega]\,+\,\text{Cos}\,[2\,\alpha\,-\,2\,\text{t}\,\omega]\,+\,\text{Cos}\,[2\,\alpha\,+\,2\,\text{t}\,\omega]\,\right)\,\,\text{Sin}\,[\alpha]^{\,2}\,\,\text{Sin}\,[\,\text{t}\,\omega]^{\,2}}\right.
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\left|\right| Tan \left[\alpha\right]
                \left(4\,\sqrt{\,\text{MO}^{2}\,\left(6+2\,\text{Cos}\,[2\,\alpha]\,-2\,\text{Cos}\,[2\,\text{t}\,\omega]\,+\,\text{Cos}\,[2\,\alpha\,-2\,\text{t}\,\omega]\,+\,\text{Cos}\,[2\,\alpha+2\,\text{t}\,\omega]\,\right)\,\text{Sin}\,[\alpha]^{\,2}\,\text{Sin}\,[\,\text{t}\,\omega]^{\,2}}\right.
                       \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                                               M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                          \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
 \text{DergMatrix22[$\alpha_{-}$, $\omega_{-}$, $t_{-}$, $M0_{-}$] := - \left( \left( \sqrt{\frac{1}{1 + \cos{[2\,\alpha]}}} \left( -2 + 4\,M0 - 2\,\cos{[2\,\alpha]} - 2\,M0\,\cos{[2\,t\,\omega]} + 2\,M0\,\cos{[2\,t\,\omega]} \right) \right) \right) \right) 
                                                       M0 Cos [2 \alpha - 2 t \omega] + M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 
                                                                                    2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]  \sin [\alpha]^2 \sin [t \omega]^2 
                                   (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] - 2 \text{ MO Cos} [\alpha - \text{ t} \omega]^2
                                               Sec[\alpha]^2 - 2 MO Cos[2 \alpha] Cos[\alpha - t \omega]^2 Sec[\alpha]^2 - 2 MO Sec[\alpha]^2 Sin[t \omega]^2 -
                                          2 M0 Cos [2 \alpha] Sec [\alpha] <sup>2</sup> Sin [t \omega] <sup>2</sup> + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2)^2)}
                                                                           \cos[2t\omega] + \cos[2\alpha - 2t\omega] + \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2
                                   (2 MO^2 \omega Cos[t \omega] (6 + 2 Cos[2 \alpha] - 2 Cos[2 t \omega] + Cos[2 \alpha - 2 t \omega] + Cos[2 \alpha + 2 t \omega])
                                               Sin[\alpha]^2 Sin[t\omega] + M0^2 Sin[\alpha]^2 Sin[t\omega]^2
                                                (4 \omega \sin[2t\omega] + 2 \omega \sin[2\alpha - 2t\omega] - 2 \omega \sin[2\alpha + 2t\omega]))
                          (16 (M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega])
                                              \operatorname{Sin}[\alpha]^{2} \operatorname{Sin}[\mathsf{t}\,\omega]^{2})^{3/2}
           \sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2 \,t \,\omega] + \text{M0} \,\cos[2\alpha - 2 \,t \,\omega] + \right.}
                                              M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                          \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
                          \left[ -4 \, \text{M0} + 2 \, \text{M0} \, \text{Cos} \, [2 \, \text{t} \, \omega] \, - \, \text{M0} \, \text{Cos} \, [2 \, \alpha - 2 \, \text{t} \, \omega] \, - \, \text{M0} \, \text{Cos} \, [2 \, \alpha + 2 \, \text{t} \, \omega] \, + \right]
                                 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2
                                 2 M0 Sec [\alpha]^2 \sin[t \omega]^2 + 2 M0 \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2}
                                      \sqrt{\text{M0}^2 \left(6 + 2 \cos[2 \, \alpha] - 2 \cos[2 \, t \, \omega] + \cos[2 \, \alpha - 2 \, t \, \omega] + \cos[2 \, \alpha + 2 \, t \, \omega]\right) \, \sin[\alpha]^2 \, \sin[t \, \omega]^2}
                               (2 MO^2 \omega Cos[t \omega] (6 + 2 Cos[2 \alpha] - 2 Cos[2 t \omega] + Cos[2 \alpha - 2 t \omega] + Cos[2 \alpha + 2 t \omega])
                                      Sin[\alpha]^2 Sin[t\omega] + MO^2 Sin[\alpha]^2 Sin[t\omega]^2
                                      (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega]))
                         (M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega]) \sin[\alpha]^2 \sin[t \omega]^2)^{3/2} + \cos[2 \alpha] 
           [4 M0 - 2 M0 Cos [2 t \omega] + M0 Cos [2 \alpha - 2 t \omega] + M0 Cos [2 \alpha + 2 t \omega] -
                                2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
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\cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
                                       -4 \, MO \, \omega \, Cos[t \, \omega] \, Sec[\alpha]^2 \, Sin[t \, \omega] \, -4 \, MO \, \omega \, Cos[2 \, \alpha] \, Cos[t \, \omega] \, Sec[\alpha]^2 \, Sin[t \, \omega] \, +
                                             4 \text{ MO } \omega \text{ Sin}[2 \text{ t} \omega] + 2 \text{ MO } \omega \text{ Sin}[2 \alpha - 2 \text{ t} \omega] - 4 \text{ MO } \omega \text{ Cos}[\alpha - \text{ t} \omega] \text{ Sec}[\alpha]^2 \text{ Sin}[\alpha - \text{ t} \omega] - 4 \text{ MO } \omega \text{ Cos}[\alpha]^2 \text{ Sin}[\alpha - \text{ t} \omega] - 4 \text{ MO } \omega \text{ Cos}[\alpha]^2 \text{ Sin}[\alpha - \text{ t} \omega] - 4 \text{ MO } \omega \text{ Cos}[\alpha]^2 \text{ Sin}[\alpha]^2 \text{ Sin}[\alpha]^2 - 4 \text{ MO } \omega \text{ Cos}[\alpha]^2 -
                                             4 M0 \omega Cos [2 \alpha] Cos [\alpha – t\omega] Sec [\alpha] <sup>2</sup> Sin [\alpha – t\omega] –
                                             2 M0 \omega Sin [2 \alpha + 2 t \omega] + (\sqrt{2} (2 \text{ M0}^2 \omega \text{ Cos} [\text{t } \omega]
                                                                                     (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega]) \sin[\alpha]^2 \sin[t \omega] +
                                                                            M0^2 \sin[\alpha]^2 \sin[t \omega]^2 (4 \omega \sin[2t\omega] + 2 \omega \sin[2\alpha - 2t\omega] - 2 \omega \sin[2\alpha + 2t\omega]))
                                                         \sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega])} \sin[\alpha]^2 \sin[t \omega]^2
                      8
                                 \sqrt{\mathsf{M0^2}\left(6+2\cos\left[2\,\alpha\right]-2\cos\left[2\,t\,\omega\right]+\cos\left[2\,\alpha-2\,t\,\omega\right]+\cos\left[2\,\alpha+2\,t\,\omega\right]\right)\,\sin\left[\alpha\right]^2\,\sin\left[t\,\omega\right]^2}\right)+
                                       \frac{1}{1 + \cos[2\alpha]} \left( -2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2 \,t \,\omega] + \text{M0} \,\cos[2\alpha - 2 \,t \,\omega] + \right.
                                                               M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                                                      \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]  \sin [\alpha]^2 \sin [t \omega]^2 
                                    4 \text{ MO } \omega \text{ Cos}[t \omega] \text{ Sec}[\alpha]^2 \text{ Sin}[t \omega] + 4 \text{ MO } \omega \text{ Cos}[2 \alpha] \text{ Cos}[t \omega] \text{ Sec}[\alpha]^2 \text{ Sin}[t \omega] -
                                             4 M0 \omega Sin[2 t \omega] - 2 M0 \omega Sin[2 \alpha - 2 t \omega] + 4 M0 \omega Cos[\alpha - t \omega] Sec[\alpha] ^2 Sin[\alpha - t \omega] +
                                             4 M0 \omega Cos [2 \alpha] Cos [\alpha – t\omega] Sec [\alpha] <sup>2</sup> Sin [\alpha – t\omega] +
                                             2 M0 \omega Sin [2 \alpha + 2 t \omega] + (\sqrt{2} (2 \text{ MO}^2 \omega \text{ Cos} [\text{t } \omega])
                                                                                     \left(6 + 2 \cos [2 \, \alpha] - 2 \cos [2 \, t \, \omega] + \cos [2 \, \alpha - 2 \, t \, \omega] + \cos [2 \, \alpha + 2 \, t \, \omega]\right) \, \sin [\alpha]^{2} \, \sin [t \, \omega] \, + \, \cos [2 \, \alpha + 2 \, t \, \omega] + \, \cos [2 \, \alpha + 2 \, t \, \omega]
                                                                             M0^2 \sin[\alpha]^2 \sin[t\omega]^2 (4\omega \sin[2t\omega] + 2\omega \sin[2\alpha - 2t\omega] - 2\omega \sin[2\alpha + 2t\omega]))
                                                        \sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega])} \sin[\alpha]^2 \sin[t \omega]^2
                      8
                                 \sqrt{\text{M0}^2 \left(6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega]\right) \sin[\alpha]^2 \sin[t \omega]^2}
\texttt{DergMatrix}[\alpha\_, \, \omega\_, \, \texttt{t\_}, \, \texttt{M0}\_] := \{ \{ \texttt{DergMatrix} \texttt{11}[\alpha, \, \omega, \, \texttt{t}, \, \texttt{M0}], \, \texttt{DergMatrix} \texttt{12}[\alpha, \, \omega, \, \texttt{t}, \, \texttt{M0}] \},
               {DergMatrix21[\alpha, \omega, t, M0], DergMatrix22[\alpha, \omega, t, M0]}}
L11[\alpha_, \omega_, t_, M0_, s_, r_, \theta_] :=
      -\frac{1}{M0} 2 i Sec[\alpha] Sin[t \omega]^{2} \left(s + \left(\left(\sqrt{\frac{1}{1 + Cos[2 \alpha]}} \left(-2 + 4 M0 - 2 Cos[2 \alpha] - 2 M0 Cos[2 t \omega] + \frac{1}{M0} Cos[2 \alpha] + \frac{1}{M0} Cos[
                                                                                                      M0 Cos [2 \alpha – 2 t \omega] + M0 Cos [2 \alpha + 2 t \omega] – 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - \cos (2 \alpha))^2)}
                                                                                                                                             2 Cos [2 t \omega] + Cos [2 \alpha - 2 t \omega] + Cos [2 \alpha + 2 t \omega]) Sin [\alpha] 2 Sin [t \omega] 2))
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(4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
               2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Sec [\alpha]^2
                 \sin[t \omega]^2 - 2 M0 \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 1)^2}
                             2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega] \sin[\alpha]^2 \sin[t \omega]^2
       (8\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
                  Sin[\alpha]^2 Sin[t\omega]^2) +
    \sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2 \,t \,\omega] + \text{M0} \,\cos[2\alpha - 2 \,t \,\omega] + \right.}
                      M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                    \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
            (-4 \text{ M0} + 2 \text{ M0 Cos} [2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha - 2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha + 2 \text{ t} \omega] +
                2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Sec [\alpha]^2
                 \sin[t \omega]^2 + 2 M0 \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 1)^2}
                             2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega] \sin[\alpha]^2 \sin[t \omega]^2
      \left(8\,\sqrt{\,\left(\text{M0}^{2}\,\left(\text{6}+2\,\text{Cos}\,[\,2\,\alpha\,]\,-2\,\text{Cos}\,[\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,-\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,+\,2\,\text{t}\,\omega\,]\,\right)}\right.
                 Sin[\alpha]^2 Sin[t\omega]^2))
s = (-4 \text{ MO} + 2 \text{ MO} \cos [2 \text{ t} \omega] - \text{MO} \cos [2 \alpha - 2 \text{ t} \omega] - \text{MO} \cos [2 \alpha + 2 \text{ t} \omega] + 2 \text{ MO} \cos [\alpha - \text{t} \omega]^2
                         Sec[\alpha]^2 + 2 M0 Cos[2 \alpha] Cos[\alpha - t \omega]^2 Sec[\alpha]^2 + 2 M0 Sec[\alpha]^2 Sin[t \omega]^2 +
                      2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{-M0^2(-6-2\cos[2\alpha]+
                                    2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
                  \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2\,t\,\omega] + \text{M0} \,\cos[2\,\alpha - 2\,t\,\omega] + \right)}
                             M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 1)^2)}
                                           \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)))
             (8\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
                         Sin[\alpha]^2 Sin[t\omega]^2) +
            \left( 4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] - \right)
                       2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Sec [\alpha]^2
                         \sin[t \omega]^2 - 2 M0 \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{-M0^2 (-6 - 2 \cos[2 \alpha] + 2 \cos[2 \alpha])}
                                    2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
                  \sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right.}
                             M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                           \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]  \sin [\alpha]^2 \sin [t\omega]^2 
              \left(8\,\sqrt{\,\left(\text{M0}^{2}\,\left(\text{6}+2\,\text{Cos}\,[\,2\,\alpha\,]\,-2\,\text{Cos}\,[\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,-\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,+\,2\,\text{t}\,\omega\,]\,\right)}\right.
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Sin[\alpha]^2 Sin[t\omega]^2)) +
    e^{-i\theta}r \left[\left(i\cos[\alpha]\cos[\alpha]\cos[t\omega]^2\left(-4\,M\theta+2\,M\theta\cos[2\,t\omega]-M\theta\cos[2\,\alpha-2\,t\omega]\right)\right]
                         M0 Cos [2 \alpha + 2 t \omega] + 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                         2 M0 Cos [2 \alpha] Cos [\alpha - t \omega] 2 Sec [\alpha] 2 + 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 +
                         2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2\sqrt{2} \sqrt{(-M0^2 (-6-2 \cos[2 \alpha] +
                                         2 \cos [2 \pm \omega] - \cos [2 \alpha - 2 \pm \omega] - \cos [2 \alpha + 2 \pm \omega]) \sin [\alpha]^2 \sin [\pm \omega]^2
                    \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{MØ} - 2 \cos[2\alpha] - 2 \,\text{MØ} \cos[2 \,\text{t}\,\omega] + \text{MØ} \cos[2\alpha - 2 \,\text{t}\,\omega] + \right)}
                                M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                Cos [2\alpha - 2t\omega] + Cos [2\alpha + 2t\omega]) Sin [\alpha]^2 Sin [t\omega]^2)
                     (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
                         2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Sec [\alpha]^2
                           \sin[t \, \omega]^2 - 2 \, MO \, \cos[2 \, \alpha] \, \sec[\alpha]^2 \, \sin[t \, \omega]^2 + 2 \, \sqrt{2} \, \sqrt{\left(MO^2 \, \left(6 + 2 \, \cos[2 \, \alpha] - 1 \, \cos[2 \, \alpha] \right)^2 + 2 \, \cos[2 \, \alpha] \right)}
                                        2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega] \sin[\alpha]^2 \sin[t \omega]^2
                (32 \text{ M0} (1 + \cos[2 \alpha]) \sqrt{(\text{M0}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                                \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2) -
              \left| \dot{\mathbf{n}} \cos \left[ \alpha \right] \cot \left[ \alpha \right] \csc \left[ \dot{\mathbf{t}} \omega \right]^2 \left( 4 \, \mathsf{M0} - 2 \, \mathsf{M0} \cos \left[ 2 \, \dot{\mathbf{t}} \omega \right] + \mathsf{M0} \cos \left[ 2 \, \alpha - 2 \, \dot{\mathbf{t}} \omega \right] + \right|
                         M0 Cos [2 \alpha + 2 t \omega] - 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                         2 M0 Cos [2 \alpha] Cos [\alpha – t \omega] 2 Sec [\alpha] 2 – 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 –
                         2 M0 Cos [2 \alpha] Sec [\alpha] ^{2} Sin [t \omega] ^{2} + 2 \sqrt{2} \sqrt{(-M0^{2}(-6-2\cos[2\alpha]+
                                        2 Cos [2 t \omega] - Cos [2 \alpha - 2 t \omega] - Cos [2 \alpha + 2 t \omega]) Sin[\alpha]<sup>2</sup> Sin[t \omega]<sup>2</sup>)
                    \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2\,t\,\omega] + \text{M0} \,\cos[2\,\alpha - 2\,t\,\omega] + \right)}
                                M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                     [-4 \text{ MO} + 2 \text{ MO Cos} [2 \text{ t} \omega] - \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] - \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] +
                         2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Sec [\alpha]^2
                            \sin[t \, \omega]^2 + 2 \, MO \, \cos[2 \, \alpha] \, \sec[\alpha]^2 \, \sin[t \, \omega]^2 + 2 \, \sqrt{2} \, \sqrt{\left(MO^2 \, \left(6 + 2 \, \cos[2 \, \alpha] - 1 \, \cos[2 \, \alpha] + 2 \, \cos[2 \, \alpha] - 1 \, \cos[2 \, \alpha] \right)} \right)
                                        2 \cos[2t\omega] + \cos[2\alpha - 2t\omega] + \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2
               (32 \, MO \, (1 + Cos \, [2 \, \alpha]) \, \sqrt{(MO^2 \, (6 + 2 \, Cos \, [2 \, \alpha] - 2 \, Cos \, [2 \, t \, \omega] + Cos \, [2 \, \alpha - 2 \, t \, \omega] + Cos \, [2 \, \alpha])}
                                \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2)
\left[\dot{\mathbf{n}} \cos[\alpha] \cot[\alpha] \csc[\mathsf{t} \omega]^2 \left(-4 \,\mathsf{M0} + 2 \,\mathsf{M0} \cos[2 \,\mathsf{t} \omega] - \mathsf{M0} \cos[2 \,\alpha - 2 \,\mathsf{t} \omega] - \mathsf{M0} \cos[2 \,\alpha] \right]
                  M0 Cos [2 \alpha + 2 t \omega] + 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                  2 M0 Cos [2 \alpha] Cos [\alpha – t \omega]<sup>2</sup> Sec [\alpha]<sup>2</sup> + 2 M0 Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> +
                  2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2(-6-2\cos[2\alpha]+
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2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^{2} \sin [t \omega]^{2})
           \sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right]}
                       M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                    \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]  \sin [\alpha]^2 \sin [t\omega]^2 
            (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
                2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                2 M0 Sec [\alpha]^2 Sin [t \omega]^2 - 2 M0 Cos [2 \alpha] Sec [\alpha]^2 Sin [t \omega]^2 +
                2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+
                             \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2
       (32 \text{ M0} (1 + \cos[2 \alpha]) \sqrt{(\text{M0}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                      \cos[2\alpha + 2t\omega]) \sin[\alpha]^2 \sin[t\omega]^2) -
     |\dot{\mathbf{n}} \cos[\alpha] \cot[\alpha] \csc[\mathsf{t} \omega]^2 \left(4\,\mathsf{M0} - 2\,\mathsf{M0} \cos[2\,\mathsf{t} \omega] + \mathsf{M0} \cos[2\,\alpha - 2\,\mathsf{t} \omega] + \mathsf{M0} \cos[2\,\alpha] \right)
                M0 Cos [2 \alpha + 2 t \omega] - 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                2 M0 Cos [2 \alpha] Cos [\alpha - t \omega] 2 Sec [\alpha] 2 - 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 -
                2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{-M0^2 (-6-2 \cos[2 \alpha] + \cos[2 \alpha])}
                              2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
          \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2\,t\,\omega] + \text{M0} \,\cos[2\,\alpha - 2 \,t\,\omega] + \right)}
                      M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                    \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
            (-4 \, MO + 2 \, MO \, Cos \, [2 \, t \, \omega] \, - MO \, Cos \, [2 \, \alpha - 2 \, t \, \omega] \, - MO \, Cos \, [2 \, \alpha + 2 \, t \, \omega] \, +
                2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                2 M0 Sec [\alpha]^2 Sin [t \omega]^2 + 2 M0 Cos [2 \alpha] Sec [\alpha]^2 Sin [t \omega]^2 +
                2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+
                             \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
       (32 \text{ M0} (1 + \cos[2 \alpha]) \sqrt{(\text{M0}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                      Cos[2\alpha + 2t\omega] Sin[\alpha]^2 Sin[t\omega]^2)
e^{i\theta} r \left[ \left[ \left( -4 \, \text{M0} + 2 \, \text{M0} \, \text{Cos} \, [2 \, \text{t} \, \omega] - \text{M0} \, \text{Cos} \, [2 \, \alpha - 2 \, \text{t} \, \omega] - \text{M0} \, \text{Cos} \, [2 \, \alpha + 2 \, \text{t} \, \omega] + \right] \right]
                       2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Sec [\alpha]^2
                         \sin[t \omega]^2 + 2 M0 \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{-M0^2 (-6 - 2 \cos[2 \alpha] + 2 \cos[2 \alpha])}
                                     2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
                  \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t}\,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t}\,\omega] + \right)}
                              M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
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\cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2))
          (8\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
                       Sin[\alpha]^2 Sin[t\omega]^2) +
         \left(4 \text{ MO} - 2 \text{ MO Cos}[2 \text{ t}\omega] + \text{MO Cos}[2 \alpha - 2 \text{ t}\omega] + \text{MO Cos}[2 \alpha + 2 \text{ t}\omega] - \right)
                    2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Sec [\alpha]^2
                      \sin[t \omega]^2 - 2 \text{ M0 } \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{-\text{M0}^2 (-6 - 2 \cos[2 \alpha] + 2 \cos[2 \alpha])}
                                   2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
               \sqrt{\left(\frac{1}{1 + \cos{[2\,\alpha]}} \left(-2 + 4\,\text{M0} - 2\,\cos{[2\,\alpha]} - 2\,\text{M0}\cos{[2\,\text{t}\,\omega]} + \text{M0}\cos{[2\,\alpha - 2\,\text{t}\,\omega]} + \right.\right)}
                           M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 2 \cos [2 \alpha])}
                                           \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
          \left( 8\,\sqrt{\,\left( \text{M0}^2\,\left( 6+2\,\text{Cos}\,[\,2\,\alpha\,]\,-2\,\text{Cos}\,[\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,-\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,+\,2\,\text{t}\,\omega\,]\,\right) }\right.
                      Sin[\alpha]^2 Sin[t\omega]^2)) +
s \left[ \left[ \dot{\mathbf{n}} \cos \left[ \alpha \right] \cot \left[ \alpha \right] \csc \left[ \dot{\mathbf{t}} \omega \right]^2 \right] - 4 \, \mathsf{M0} + 2 \, \mathsf{M0} \cos \left[ 2 \, \dot{\mathbf{t}} \omega \right] - \mathsf{M0} \cos \left[ 2 \, \alpha - 2 \, \dot{\mathbf{t}} \omega \right] - \mathsf{M0} \cos \left[ 2 \, \alpha - 2 \, \dot{\mathbf{t}} \omega \right] \right] \right]
                    M0 Cos [2 \alpha + 2 t \omega] + 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                    2 M0 Cos [2 \alpha] Cos [\alpha - t \omega] 2 Sec [\alpha] 2 + 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 +
                    2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2(-6-2\cos[2\alpha]+
                                   2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
               \sqrt{\left(\frac{1}{1 + \cos[2\alpha]}\left(-2 + 4 \,\text{MØ} - 2 \cos[2\alpha] - 2 \,\text{MØ} \cos[2 \,\text{t}\,\omega] + \text{MØ} \cos[2\alpha - 2 \,\text{t}\,\omega] + \right)}
                           M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 2 \cos [2 \alpha])}
                                           \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
                    2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Sec [\alpha]^2
                       \sin[t \omega]^2 - 2 \text{ M0 } \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{\text{M0}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 \alpha]^2)}
                                   2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega]  \sin[\alpha]^2 \sin[t \omega]^2)
           (32 \text{ M0} (1 + \cos[2 \alpha]) \sqrt{(\text{M0}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                           \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2) -
         \left[\dot{\mathbf{n}} \cos[\alpha] \cot[\alpha] \csc[\mathsf{t} \omega]^2\right] (4 \, \mathsf{M0} - 2 \, \mathsf{M0} \cos[2 \, \mathsf{t} \omega] + \mathsf{M0} \cos[2 \, \alpha - 2 \, \mathsf{t} \omega] +
                    M0 Cos [2 \alpha + 2 t \omega] - 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                    2 M0 Cos [2 \alpha] Cos [\alpha - t \omega] 2 Sec [\alpha] 2 - 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 -
                    2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2(-6-2\cos[2\alpha]+
                                    2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
               \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
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M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                 \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                       (-4 \text{ M0} + 2 \text{ M0 Cos} [2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha - 2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha + 2 \text{ t} \omega] +
                           2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Sec [\alpha]^2
                             \sin[t \omega]^2 + 2 M0 \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 1)^2}
                                         2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega] \sin[\alpha]^2 \sin[t \omega]^2
                  (32 \text{ MO} (1 + \cos[2 \alpha]) \sqrt{(\text{MO}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                                  \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2)
\dot{\mathbb{I}}\left[\left[\dot{\mathbb{I}}\cos\left[\alpha\right]\cot\left[\alpha\right]\csc\left[\mathsf{T}\omega\right]^{2}\left(-4\,\mathsf{M0}+2\,\mathsf{M0}\cos\left[2\,\mathsf{T}\omega\right]-\mathsf{M0}\cos\left[2\,\alpha-2\,\mathsf{T}\omega\right]-\right]\right]
                           M0 Cos [2 \alpha + 2 t \omega] + 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                           2 M0 Cos [2 \alpha] Cos [\alpha – t \omega] 2 Sec [\alpha] 2 + 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 +
                           2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2(-6-2\cos[2\alpha]+
                                          2 \cos [2 \pm \omega] - \cos [2 \alpha - 2 \pm \omega] - \cos [2 \alpha + 2 \pm \omega]) \sin [\alpha]^2 \sin [\pm \omega]^2
                      \sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                                  M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                \cos \left[2\alpha - 2t\omega\right] + \cos \left[2\alpha + 2t\omega\right] \sin \left[\alpha\right]^{2} \sin \left[t\omega\right]^{2}
                       (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
                           2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Sec [\alpha]^2
                             \sin [\text{t}\,\omega]^{\,2} - 2\,\text{M0}\,\cos [\text{2}\,\alpha]\,\sec [\alpha]^{\,2}\,\sin [\text{t}\,\omega]^{\,2} + 2\,\sqrt{2}\,\,\sqrt{\,\left(\text{M0}^{\,2}\,\left(\text{6} + 2\,\cos [\text{2}\,\alpha] - \text{10}\,\cos (\text{2}\,\alpha)\right)\right)}
                                         2 \cos[2t\omega] + \cos[2\alpha - 2t\omega] + \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2
                  (32 \text{ MO} (1 + \cos[2 \alpha]) \sqrt{(\text{MO}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                                  \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2) -
                \dot{\mathbf{L}} Cos[\alpha] Cot[\alpha] Csc[\mathbf{L} \omega] \dot{\mathbf{L}} (4 M0 – 2 M0 Cos[2 \mathbf{L} \omega] + M0 Cos[2 \alpha – 2 \mathbf{L} \omega] +
                           M0 Cos [2 \alpha + 2 t \omega] - 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                           2 M0 Cos [2 \alpha] Cos [\alpha – t \omega] <sup>2</sup> Sec [\alpha] <sup>2</sup> – 2 M0 Sec [\alpha] <sup>2</sup> Sin [t \omega] <sup>2</sup> –
                           2 M0 Cos [2 \alpha] Sec [\alpha] ^{2} Sin [t \omega] ^{2} + 2 \sqrt{2} \sqrt{(-M0^{2}(-6-2\cos[2\alpha]+
                                          2 Cos [2 t \omega] - Cos [2 \alpha - 2 t \omega] - Cos [2 \alpha + 2 t \omega]) Sin [\alpha] 2 Sin [t \omega] 2)
                      \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                                  M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                \cos \left[2\alpha - 2t\omega\right] + \cos \left[2\alpha + 2t\omega\right] \sin \left[\alpha\right]^{2} \sin \left[t\omega\right]^{2}
                       (-4 \text{ MO} + 2 \text{ MO} \cos [2 \text{ t} \omega] - \text{MO} \cos [2 \alpha - 2 \text{ t} \omega] - \text{MO} \cos [2 \alpha + 2 \text{ t} \omega] +
                           2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Sec [\alpha]^2
                             \sin[t \omega]^2 + 2 MO \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{MO^2(6 + 2 \cos[2 \alpha] - 1)^2}
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2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega] \sin[\alpha]^2 \sin[t \omega]^2
       \left(32\,\text{M0}\,\left(1+\cos{[2\,\alpha]}\,\right)\,\sqrt{\,\left(\text{M0}^2\,\left(6+2\cos{[2\,\alpha]}\,-2\cos{[2\,\text{t}\,\omega]}\,+\cos{[2\,\alpha-2\,\text{t}\,\omega]}\,+\right.\right.}\right.
                        \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2)
\left[-\left[\left(-4\,\text{M0} + 2\,\text{M0}\,\text{Cos}\,[2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha - 2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha + 2\,\text{t}\,\omega] + \right]\right]
                     2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Sec [\alpha]^2
                        \sin[t \omega]^2 + 2 M0 \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{-M0^2 (-6 - 2 \cos[2 \alpha] + 2 \cos[2 \alpha])^2}
                                     2 Cos [2 t \omega] - Cos [2 \alpha - 2 t \omega] - Cos [2 \alpha + 2 t \omega]) Sin[\alpha]<sup>2</sup> Sin[t \omega]<sup>2</sup>)
                \sqrt{\left(\frac{1}{1 + \cos{[2\,\alpha]}} \left(-2 + 4\,\text{M0} - 2\,\cos{[2\,\alpha]} - 2\,\text{M0}\,\cos{[2\,t\,\omega]} + \text{M0}\,\cos{[2\,\alpha - 2\,t\,\omega]} + \right)}
                             M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 2 \cos [2 \alpha])}
                                            \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                  \left( 2\ \mathsf{MO^2}\ \omega\ \mathsf{Cos}\ [\mathsf{t}\ \omega]\ \left( 6+2\ \mathsf{Cos}\ [2\ \alpha]\ -2\ \mathsf{Cos}\ [2\ \mathsf{t}\ \omega]\ + \ \mathsf{Cos}\ [2\ \alpha-2\ \mathsf{t}\ \omega]\ + \right. \right.
                             \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega] + M0^2 \sin [\alpha]^2 \sin [t \omega]^2
                         (4 \omega \sin[2t\omega] + 2 \omega \sin[2\alpha - 2t\omega] - 2 \omega \sin[2\alpha + 2t\omega]))
            (16 (M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega])
                       \operatorname{Sin}[\alpha]^{2} \operatorname{Sin}[\mathsf{t}\,\omega]^{2})^{3/2}
     \left( 4\,\text{M0} - 2\,\text{M0}\,\text{Cos}\,[2\,\text{t}\,\omega] + \text{M0}\,\text{Cos}\,[2\,\alpha - 2\,\text{t}\,\omega] + \text{M0}\,\text{Cos}\,[2\,\alpha + 2\,\text{t}\,\omega] - \right)
                 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Sec [\alpha]^2
                   \sin[t \omega]^2 - 2 M0 \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{-M0^2 (-6 - 2 \cos[2 \alpha] + 2 \cos[2 \alpha])}
                                2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
           \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{MØ} - 2 \cos[2\alpha] - 2 \,\text{MØ} \cos[2 \,\text{t}\,\omega] + \text{MØ} \cos[2\alpha - 2 \,\text{t}\,\omega] + \right)}
                        M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 2 \cos [2 \alpha])}
                                       \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^{2} \sin [t \omega]^{2})
            (2 MO^2 \omega Cos[t \omega] (6 + 2 Cos[2 \alpha] - 2 Cos[2 t \omega] + Cos[2 \alpha - 2 t \omega] +
                        \cos[2\alpha + 2t\omega]) \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2
                   (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega]))
       \left(16 \, \left( M0^2 \, \left( 6 + 2 \, \text{Cos} \, [2 \, \alpha] \, - 2 \, \text{Cos} \, [2 \, \text{t} \, \omega] \, + \text{Cos} \, [2 \, \alpha - 2 \, \text{t} \, \omega] \, + \text{Cos} \, [2 \, \alpha + 2 \, \text{t} \, \omega] \right) \right)
                   Sin[\alpha]^2 Sin[t\omega]^2)^{3/2} +
     (-4 \text{ MO} + 2 \text{ MO} \cos [2 \text{ t} \omega] - \text{MO} \cos [2 \alpha - 2 \text{ t} \omega] - \text{MO} \cos [2 \alpha + 2 \text{ t} \omega] +
                 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Sec [\alpha]^2
                   \sin[t \omega]^2 + 2 M0 \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{-M0^2 (-6 - 2 \cos[2 \alpha] + 2 \cos[2 \alpha])}
                                2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
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(4 \text{ MO } \omega \text{ Sin}[2 \text{ t} \omega] + 2 \text{ MO } \omega \text{ Sin}[2 \alpha - 2 \text{ t} \omega] - 2 \text{ MO } \omega \text{ Sin}[2 \alpha + 2 \text{ t} \omega] -
                          \left(\sqrt{2}\ \left(2\ \text{MO}^2\ \omega\ \text{Cos}\ [\text{t}\ \omega]\ \left(6+2\ \text{Cos}\ [\text{2}\ \alpha]\ -2\ \text{Cos}\ [\text{2}\ t\ \omega]\ +\ \text{Cos}\ [\text{2}\ \alpha-2\ t\ \omega]\ +\right.\right.\right.
                                                                 \mathsf{Cos}\left[2\,\alpha+2\,\mathsf{t}\,\omega\right]\big)\,\mathsf{Sin}\left[\alpha\right]^{2}\,\mathsf{Sin}\left[\mathsf{t}\,\omega\right]\,+\,\mathsf{M0}^{2}\,\mathsf{Sin}\left[\alpha\right]^{2}\,\mathsf{Sin}\left[\mathsf{t}\,\omega\right]^{2}
                                                        (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])))
                               (\sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                                                            \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)))
      16 (1 + \cos[2 \alpha]) \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha] + \cos[2 \alpha] + \cos[2 \alpha]}
                                        Cos[2\alpha + 2t\omega]) Sin[\alpha]^2 Sin[t\omega]^2)
             \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t}\,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t}\,\omega] + \right)}
                                       M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + (6 + 2 \cos [2 \alpha]))}
                                                                      \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
\left(\,\left(\,4\;\text{MO}\,-\,2\;\text{MO}\,\,\text{Cos}\,\left[\,2\;\text{t}\,\,\omega\,\right]\,+\,\text{MO}\,\,\text{Cos}\,\left[\,2\;\alpha\,-\,2\;\text{t}\,\,\omega\,\right]\,+\,\text{MO}\,\,\text{Cos}\,\left[\,2\;\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text{MO}\,\,\text{Cos}\,\left[\,2\,\alpha\,+\,2\;\text{t}\,\,\omega\,\right]\,-\,2\;\text
                              \cos [\alpha - t \omega]^2 \sec [\alpha]^2 - 2 \operatorname{MO} \cos [2 \alpha] \cos [\alpha - t \omega]^2 \sec [\alpha]^2 - 2 \operatorname{MO} \sec [\alpha]^2
                             \sin[t \omega]^2 - 2 M0 \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{-M0^2 (-6 - 2 \cos[2 \alpha] + 2 \cos[2 \alpha])}
                                                       2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                (4 \text{ MO } \omega \text{ Sin}[2 \text{ t} \omega] + 2 \text{ MO } \omega \text{ Sin}[2 \alpha - 2 \text{ t} \omega] - 2 \text{ MO } \omega \text{ Sin}[2 \alpha + 2 \text{ t} \omega] +
                          (\sqrt{2} (2 \text{ M})^2 \omega \cos[t \omega] (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                                                                 \cos[2\alpha + 2t\omega]) \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2
                                                        (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])))
                               (\sqrt{M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] +
                                                            \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)))
      \left(16 \left(1 + \cos[2 \alpha]\right) \sqrt{\left(\text{M0}^2 \left(6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha]\right)}\right)
                                        \cos [2\alpha + 2t\omega] \sin [\alpha]^2 \sin [t\omega]^2
             \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{MO} - 2 \cos[2\alpha] - 2 \,\text{MO} \cos[2 \,\text{t}\,\omega] + \text{MO} \cos[2\alpha - 2 \,\text{t}\,\omega] + \right)}
                                       M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 2 \cos [2 \alpha])}
                                                                       \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
\sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2 \,t \,\omega] + \text{M0} \,\cos[2\alpha - 2 \,t \,\omega] + \right.}
                                       M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                      \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
                \left(-4\,\text{M0}\,\omega\,\text{Cos}\,[\,\text{t}\,\omega]\,\,\text{Sec}\,[\,\alpha]^{\,2}\,\,\text{Sin}\,[\,\text{t}\,\omega]\,\,-\,4\,\text{M0}\,\omega\,\,\text{Cos}\,[\,2\,\alpha]\,\,\text{Cos}\,[\,\text{t}\,\omega]\,\,\text{Sec}\,[\,\alpha]^{\,2}
                              Sin[t\omega] + 4M0\omega Sin[2t\omega] + 2M0\omega Sin[2\alpha - 2t\omega] -
                         4 \text{ MO } \omega \text{ Cos} [\alpha - t \omega] \text{ Sec} [\alpha]^2 \text{ Sin} [\alpha - t \omega] - 4 \text{ MO } \omega \text{ Cos} [2 \alpha]
                              \cos [\alpha - t \omega] \operatorname{Sec} [\alpha]^2 \sin [\alpha - t \omega] - 2 \operatorname{MO} \omega \sin [2 \alpha + 2 t \omega] +
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(\sqrt{2} (-2 \, \text{M}0^2 \, \omega \, \text{Cos} [\text{t} \, \omega] (-6 - 2 \, \text{Cos} [2 \, \alpha] + 2 \, \text{Cos} [2 \, \text{t} \, \omega] - \text{Cos} [2 \, \alpha - 2 \, \text{t} \, \omega] -
                                                                     \cos[2\alpha + 2t\omega]) \sin[\alpha]^2 \sin[t\omega] - M0^2 \sin[\alpha]^2 \sin[t\omega]^2
                                                             (-4 \omega \sin[2 t \omega] - 2 \omega \sin[2 \alpha - 2 t \omega] + 2 \omega \sin[2 \alpha + 2 t \omega])))
                                       (\sqrt{-M0^2 (-6-2 \cos [2 \alpha] + 2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha] + 2 \cos [2 \alpha] + 2 \cos [2 \alpha] - \cos [2 \alpha] + 2 \cos [2 \alpha] + 2 \cos [2 \alpha] - \cos [2 \alpha] + 2 \cos [2 \alpha] + 2
                                                                \cos[2\alpha + 2 t \omega] \sin[\alpha]^2 \sin[t \omega]^2))
                  (8\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
                                       Sin[\alpha]^2 Sin[t\omega]^2) +
              \sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2 \,t \,\omega] + \text{M0} \,\cos[2\alpha - 2 \,t \,\omega] + \right.}
                                               M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                          \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]  \sin [\alpha]^2 \sin [t\omega]^2 
                           (4 \text{ MO } \omega \text{ Cos} [t \omega] \text{ Sec} [\alpha]^2 \text{ Sin} [t \omega] + 4 \text{ MO } \omega \text{ Cos} [2 \alpha] \text{ Cos} [t \omega] \text{ Sec} [\alpha]^2
                                       Sin[t\omega] - 4M0\omega Sin[2t\omega] - 2M0\omega Sin[2\alpha - 2t\omega] +
                                   4 \text{ MO } \omega \text{ Cos} [\alpha - t \omega] \text{ Sec} [\alpha]^2 \text{ Sin} [\alpha - t \omega] + 4 \text{ MO } \omega \text{ Cos} [2 \alpha]
                                       \cos [\alpha - t \omega] \operatorname{Sec} [\alpha]^2 \sin [\alpha - t \omega] + 2 \operatorname{MO} \omega \sin [2 \alpha + 2 t \omega] +
                                    (\sqrt{2} (-2 M0^2 \omega \cos[t \omega] (-6 - 2 \cos[2 \alpha] + 2 \cos[2 t \omega] - \cos[2 \alpha - 2 t \omega] -
                                                                      \cos[2\alpha + 2t\omega]) \sin[\alpha]^2 \sin[t\omega] - M0^2 \sin[\alpha]^2 \sin[t\omega]^2
                                                             (-4 \omega \sin[2 t \omega] - 2 \omega \sin[2 \alpha - 2 t \omega] + 2 \omega \sin[2 \alpha + 2 t \omega])))
                                        (\sqrt{-M0^2 (-6-2 \cos[2 \alpha] + 2 \cos[2 t \omega] - \cos[2 \alpha - 2 t \omega]} -
                                                                \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)))
                  (8 \sqrt{M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega])}
                                     Sin[\alpha]^2 Sin[t\omega]^2) +
\left( \sqrt{\frac{1}{1 + \cos[2\alpha]}} \left( -2 + 4 \, \text{M0} - 2 \, \cos[2\alpha] - 2 \, \text{M0} \, \cos[2 \, t \, \omega] + \text{M0} \, \cos[2\alpha - 2 \, t \, \omega] + \right) \right)
                                               M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 2 \cos [2 \alpha])}
                                                                          \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
                           (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
                                   2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Sec [\alpha]^2
                                      \sin[t \, \omega]^2 - 2 \, MO \, \cos[2 \, \alpha] \, \sec[\alpha]^2 \, \sin[t \, \omega]^2 + 2 \, \sqrt{2} \, \sqrt{\left(MO^2 \, \left(6 + 2 \, \cos[2 \, \alpha] - 1 \, \cos[2 \, \alpha] \right)^2 + 2 \, \cos[2 \, \alpha] \right)}
                                                            2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]  ) \sin [\alpha]^{2} \sin [t \omega]^{2} ) 
                  (8\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
                                       Sin[\alpha]^2 Sin[t\omega]^2) +
               \left(\sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2 \,t \,\omega] + \text{M0} \,\cos[2\alpha - 2 \,t \,\omega] + \right)}\right)
                                               M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                          \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
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\left( - 4 M0 + 2 M0 Cos [2 t \omega] - M0 Cos [2 \alpha - 2 t \omega] - M0 Cos [2 \alpha + 2 t \omega] +
                                   2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Sec [\alpha]^2
                                        \sin[t \omega]^2 + 2 M0 \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 1)^2}
                                                                  2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega] \sin[\alpha]^2 \sin[t \omega]^2
                (8\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
                                       Sin[\alpha]^2 Sin[t\omega]^2)
\left[-\left[\dot{\mathbf{1}}\omega \cos[\alpha] \cot[\alpha] \cot[\mathbf{t}\omega] \csc[\mathbf{t}\omega]^2 \left(-4 \,\mathrm{M0} + 2 \,\mathrm{M0} \cos[2 \,\mathrm{t}\omega] - \right]\right]
                                             M0 Cos [2 \alpha - 2 t \omega] - M0 Cos [2 \alpha + 2 t \omega] + 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                                             2 M0 Cos [2 \alpha] Cos [\alpha – t \omega] 2 Sec [\alpha] 2 + 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 +
                                             2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2 (-6-2 \cos[2 \alpha] +
                                                                             2 \cos [2 \pm \omega] - \cos [2 \alpha - 2 \pm \omega] - \cos [2 \alpha + 2 \pm \omega]) \sin [\alpha]^2 \sin [\pm \omega]^2
                                   \sqrt{\frac{1}{1 + \cos[2\alpha]}} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2 \,t \,\omega] + \text{M0} \,\cos[2 \,\alpha - 2 \,t \,\omega] + \right.
                                                              M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                                            \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]  \sin [\alpha]^2 \sin [t \omega]^2 
                                     (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
                                              2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                                             2 M0 Sec [\alpha]^2 Sin [t\omega]^2 – 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                                              2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega])}
                                                                 \left. \operatorname{Sin}\left[\alpha\right]^{2} \operatorname{Sin}\left[\operatorname{t}\omega\right]^{2}\right) \right) \bigg/ \left( \operatorname{16\,M0} \left( \operatorname{1+\,Cos}\left[2\,\alpha\right] \right) \sqrt{\left(\operatorname{M0}^{2}\left(6+2\,\operatorname{Cos}\left[2\,\alpha\right]-\operatorname{Cos}\left[2\,\alpha\right]\right) \right)} \right) \bigg| \left( \operatorname{16\,M0} \left( \operatorname{1+\,Cos}\left[2\,\alpha\right] \right) \sqrt{\left(\operatorname{M0}^{2}\left(6+2\,\operatorname{Cos}\left[2\,\alpha\right]-\operatorname{Cos}\left[2\,\alpha\right]\right) \right)} \right) \bigg| \left( \operatorname{16\,M0} \left( \operatorname{1+\,Cos}\left[2\,\alpha\right] \right) \right) \bigg| \left( \operatorname{M0}^{2}\left(6+2\,\operatorname{Cos}\left[2\,\alpha\right]-\operatorname{Cos}\left[2\,\alpha\right] \right) \bigg| \left( \operatorname{M0}^{2}\left(6+2\,\operatorname{Cos}\left[2\,\alpha\right]-\operatorname{Cos}\left[2\,\alpha\right] \right) \bigg| \left( \operatorname{M0}^{2}\left(6+2\,\operatorname{Cos}\left[2\,\alpha\right] \right) \bigg| \left( \operatorname{M0}^{2}\left(6+2\,\operatorname{Cos}\left[2\,\alpha\right] \right) \right) \bigg| \left( \operatorname{M0}^{2}\left(6+2\,\operatorname{Cos}\left[2\,\alpha\right] \right) 
                                                              2 \cos[2 \pm \omega] + \cos[2 \alpha - 2 \pm \omega] + \cos[2 \alpha + 2 \pm \omega]) \sin[\alpha]^2 \sin[\pm \omega]^2
           \left[\dot{\mathbf{n}}\,\omega\,\mathsf{Cos}\,[\alpha]\,\mathsf{Cot}\,[\alpha]\,\mathsf{Cot}\,[\mathsf{t}\,\omega]\,\mathsf{Csc}\,[\mathsf{t}\,\omega]^2\,\left(4\,\mathsf{M0}-2\,\mathsf{M0}\,\mathsf{Cos}\,[2\,\mathsf{t}\,\omega]\right.\right]
                                   M0 Cos [2 \alpha - 2 t \omega] + M0 Cos [2 \alpha + 2 t \omega] - 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                                  2 M0 Cos [2 \alpha] Cos [\alpha - t \omega] 2 Sec [\alpha] 2 - 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 -
                                  2 M0 Cos [2 \alpha] Sec [\alpha] ^{2} Sin [t \omega] ^{2} + 2 \sqrt{2} \sqrt{(-M0^{2}(-6-2\cos[2\alpha]+
                                                                  2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                         \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                                                  M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                                  \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^{2} \sin [t \omega]^{2})
                          [-4 \text{ MO} + 2 \text{ MO Cos} [2 \text{ t} \omega] - \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] - \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] +
                                   2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                                   2 M0 Sec [\alpha]^2 Sin [t\omega]^2 + 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                                   2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+}
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\cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2)
  (16 \text{ MO} (1 + \cos[2 \alpha]) \sqrt{(\text{MO}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                           \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2) -
\left[\dot{\mathbf{n}} \cos[\alpha] \cot[\alpha] \csc[\mathsf{t} \omega]^2 \left(-4\,\mathsf{M0} + 2\,\mathsf{M0} \cos[2\,\mathsf{t} \omega] - \mathsf{M0} \cos[2\,\alpha - 2\,\mathsf{t} \omega] - \right]\right]
                M0 Cos [2 \alpha + 2 t \omega] + 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                2 M0 Cos [2 \alpha] Cos [\alpha - t \omega] 2 Sec [\alpha] 2 + 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 +
                2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2\sqrt{2} \sqrt{(-M0^2 (-6-2 \cos[2 \alpha] +
                                       2 \cos [2 \pm \omega] - \cos [2 \alpha - 2 \pm \omega] - \cos [2 \alpha + 2 \pm \omega]) \sin [\alpha]^2 \sin [\pm \omega]^2)
        \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2 \,t \,\omega] + \text{M0} \,\cos[2\alpha - 2 \,t \,\omega] + \right)}
                           M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] +
                                                \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
          (4 \text{ MO} - 2 \text{ MO} \cos [2 \text{ t} \omega] + \text{MO} \cos [2 \alpha - 2 \text{ t} \omega] + \text{MO} \cos [2 \alpha + 2 \text{ t} \omega] -
                2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                2 M0 Sec [\alpha]^2 Sin [t\omega]^2 – 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega])}
                              Sin[\alpha]^2 Sin[t\omega]^2) (2M0^2 \omega Cos[t\omega] (6 + 2Cos[2\alpha] - 2Cos[2t\omega] +
                           \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] \sin [\alpha]^2 \sin [t\omega] + M0^2 \sin [\alpha]^2
                   \sin[t\omega]^2 \left(4\omega \sin[2t\omega] + 2\omega \sin[2\alpha - 2t\omega] - 2\omega \sin[2\alpha + 2t\omega]\right)\right)
  (64 \text{ MØ } (1 + \cos[2 \alpha]) (\text{MØ}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])
                           \cos [2\alpha + 2t\omega] \sin [\alpha]^2 \sin [t\omega]^2 +
\left[\dot{\mathbf{n}} \cos[\alpha] \cot[\alpha] \csc[\mathsf{t} \omega]^2\right] \left(4\,\mathsf{M0} - 2\,\mathsf{M0} \cos[2\,\mathsf{t} \omega] + \mathsf{M0} \cos[2\,\alpha - 2\,\mathsf{t} \omega] + \right]
                M0 Cos [2 \alpha + 2 t \omega] - 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                2 M0 Cos [2 \alpha] Cos [\alpha - t \omega] 2 Sec [\alpha] 2 - 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 -
                2 M0 Cos [2 \alpha] Sec [\alpha] <sup>2</sup> Sin [t \omega] <sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2 (-6 - 2 \cos [2 \alpha] + \cos (-6 - 2 \cos (-6 + 2
                                      2 \cos [2 \pm \omega] - \cos [2 \alpha - 2 \pm \omega] - \cos [2 \alpha + 2 \pm \omega]) \sin [\alpha]^{2} \sin [\pm \omega]^{2}
        \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                           M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]  \sin [\alpha]^2 \sin [t\omega]^2 
          (-4 \text{ MO} + 2 \text{ MO} \cos [2 \text{ t} \omega] - \text{MO} \cos [2 \alpha - 2 \text{ t} \omega] - \text{MO} \cos [2 \alpha + 2 \text{ t} \omega] +
                2 M0 Cos [\alpha - t\omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2\alpha] Cos [\alpha - t\omega]^2 Sec [\alpha]^2 +
                2 M0 Sec [\alpha]^2 Sin [t\omega]^2 + 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega])}
                               Sin[\alpha]^2 Sin[t\omega]^2) (2 M0^2 \omega Cos[t\omega] (6 + 2 Cos[2\alpha] - 2 Cos[2t\omega] +
                           \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega] + M0^2 \sin [\alpha]^2
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Sin[t\omega]^2 (4\omega Sin[2t\omega] + 2\omega Sin[2\alpha - 2t\omega] - 2\omega Sin[2\alpha + 2t\omega]))
  (64 \text{ M0 } (1 + \cos[2 \alpha]) (\text{M0}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])
                  \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2) +
(i \cos[\alpha] \cot[\alpha] \csc[t \omega]^2 (-4 MO + 2 MO \cos[2 t \omega] - MO \cos[2 \alpha - 2 t \omega] -
           M0 Cos [2 \alpha + 2 t \omega] + 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
           2 M0 Cos [2 \alpha] Cos [\alpha – t \omega] 2 Sec [\alpha] 2 + 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 +
           2 M0 Cos [2 \alpha] Sec [\alpha] <sup>2</sup> Sin [t \omega] <sup>2</sup> + 2 \sqrt{2} \sqrt{-M0^2 (-6-2 \cos[2 \alpha] + 2 \cos[2 \alpha])}
                          2 \cos [2 \pm \omega] - \cos [2 \alpha - 2 \pm \omega] - \cos [2 \alpha + 2 \pm \omega]) \sin [\alpha]^2 \sin [\pm \omega]^2
       (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
           2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Sec [\alpha]^2
             \sin[t \omega]^2 - 2 MO \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{MO^2 (6 + 2 \cos[2 \alpha] - 1)^2}
                         2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]  \sin [\alpha]^2 \sin [t \omega]^2 
       (4 \text{ MO } \omega \text{ Sin}[2 \text{ t} \omega] + 2 \text{ MO } \omega \text{ Sin}[2 \alpha - 2 \text{ t} \omega] - 2 \text{ MO } \omega \text{ Sin}[2 \alpha + 2 \text{ t} \omega] -
           \left(\sqrt{2} \ \left(2\ \text{MO}^2\ \omega\ \text{Cos}\ [\text{t}\ \omega]\ \left(6+2\ \text{Cos}\ [\text{2}\ \alpha]\ -2\ \text{Cos}\ [\text{2}\ t\ \omega]\ +\ \text{Cos}\ [\text{2}\ \alpha-2\ t\ \omega]\ +\right.\right.\right.
                              \cos[2\alpha + 2t\omega]) \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2
                          (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])))
              (\sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                           \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2))))
  \left[64\,\text{M0}\,\left(1+\cos\left[2\,\alpha\right]\right)^{2}\,\sqrt{\,\left(\text{M0}^{2}\,\left(6+2\cos\left[2\,\alpha\right]-2\cos\left[2\,t\,\omega\right]+\cos\left[4\cos\left[2\,\alpha\right]\right]\right)^{2}}\right]
                     2\alpha - 2t\omega] + Cos [2\alpha + 2t\omega]) Sin [\alpha]^2 Sin [t\omega]^2)
      \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t}\,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t}\,\omega] + \right)}
                  M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
(\dot{\mathbf{n}} \cos[\alpha] \cot[\alpha] \csc[\mathsf{t} \omega]^2 (4 \,\mathsf{M0} - 2 \,\mathsf{M0} \cos[2 \,\mathsf{t} \omega] + \mathsf{M0} \cos[2 \,\alpha - 2 \,\mathsf{t} \omega] +
           M0 Cos [2 \alpha + 2 t \omega] - 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
           2 M0 Cos [2 \alpha] Cos [\alpha – t \omega] <sup>2</sup> Sec [\alpha] <sup>2</sup> – 2 M0 Sec [\alpha] <sup>2</sup> Sin [t \omega] <sup>2</sup> –
           2 M0 Cos [2 \alpha] Sec [\alpha] ^{2} Sin [t \omega] ^{2} + 2 \sqrt{2} \sqrt{-M0^{2}(-6-2\cos[2\alpha]+}
                         2 \cos [2 \pm \omega] - \cos [2 \alpha - 2 \pm \omega] - \cos [2 \alpha + 2 \pm \omega]) \sin [\alpha]^2 \sin [\pm \omega]^2
       (-4 \text{ M0} + 2 \text{ M0} \cos [2 \text{ t} \omega] - \text{M0} \cos [2 \alpha - 2 \text{ t} \omega] - \text{M0} \cos [2 \alpha + 2 \text{ t} \omega] +
           2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
           2 M0 Sec [\alpha]^2 Sin [t\omega]^2 + 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
           2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+
                         \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
       (4 \text{ MO } \omega \text{ Sin}[2 \text{ t} \omega] + 2 \text{ MO } \omega \text{ Sin}[2 \alpha - 2 \text{ t} \omega] - 2 \text{ MO } \omega \text{ Sin}[2 \alpha + 2 \text{ t} \omega] +
           (\sqrt{2} (2 M0^2 \omega \cos[t \omega] (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                              \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega] + M0^2 \sin [\alpha]^2 \sin [t \omega]^2
                          (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])))
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(\sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha]}
                                                    \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2))))
    64 M0 (1 + Cos [2 \alpha])<sup>2</sup> \sqrt{\text{(M0}^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha])}
                                       2\,\alpha - 2\,t\,\omega]\, + \mathsf{Cos}\,[2\,\alpha + 2\,t\,\omega]\,\big)\,\,\mathsf{Sin}\,[\alpha]^{\,2}\,\mathsf{Sin}\,[\,t\,\omega\,]^{\,2}\big)
            \sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right.}
                                   M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] +
                                                             \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
\dot{\mathbf{L}} Cos[\alpha] Cot[\alpha] Csc[\mathbf{L} \omega]<sup>2</sup> \left(-4\,\text{MØ} + 2\,\text{MØ}\,\text{Cos}\,[2\,\text{L}\,\omega] - \text{MØ}\,\text{Cos}\,[2\,\alpha - 2\,\text{L}\,\omega] - \text{MØ}\,\text{MØ}\,
                     M0 Cos [2 \alpha + 2 t \omega] + 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                     2 M0 Cos [2 \alpha] Cos [\alpha - t \omega] 2 Sec [\alpha] 2 + 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 +
                     2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2(-6-2\cos[2\alpha]+
                                                2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
            \sqrt{\frac{1}{1 + \cos[2\alpha]}} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t}\,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t}\,\omega] + \frac{1}{2} \cos[2\alpha] + \frac{1}{2} \cos[2
                                   M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                             \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
             \left(-4\,\text{M0}\,\omega\,\text{Cos}\,[\,\text{t}\,\omega\,]\,\,\text{Sec}\,[\,\alpha\,]^{\,2}\,\,\text{Sin}\,[\,\text{t}\,\omega\,]\,-4\,\text{M0}\,\omega\,\,\text{Cos}\,[\,2\,\alpha\,]\,\,\text{Cos}\,[\,\text{t}\,\omega\,]\,\,\text{Sec}\,[\,\alpha\,]^{\,2}
                          Sin[t\omega] + 4M0\omega Sin[2t\omega] + 2M0\omega Sin[2\alpha - 2t\omega] -
                     4 \text{ MO } \omega \text{ Cos} [\alpha - t \omega] \text{ Sec} [\alpha]^2 \text{ Sin} [\alpha - t \omega] - 4 \text{ MO } \omega \text{ Cos} [2 \alpha]
                          Cos[\alpha - t\omega] Sec[\alpha]^2 Sin[\alpha - t\omega] - 2 M0 \omega Sin[2 \alpha + 2 t\omega] +
                      (\sqrt{2} (2 \text{ M})^2 \omega \cos[t \omega] (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                                                          \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2
                                                 (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])))
                           (\sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                                                    \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)))
    (32 \text{ M0} (1 + \cos[2 \alpha]) \sqrt{(\text{M0}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                                  \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2) -
\left[\dot{\mathbf{n}} \cos[\alpha] \cot[\alpha] \csc[\mathsf{t}\omega]^2\right] \left(4\,\mathsf{M0} - 2\,\mathsf{M0} \cos[2\,\mathsf{t}\omega] + \mathsf{M0} \cos[2\,\alpha - 2\,\mathsf{t}\omega] + \mathsf{M0}\cos[2\,\alpha]\right]
                     M0 Cos [2 \alpha + 2 t \omega] - 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                     2 M0 Cos [2 \alpha] Cos [\alpha - t \omega] 2 Sec [\alpha] 2 - 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 -
                     2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2\sqrt{2} \sqrt{(-M0^2 (-6-2 \cos[2 \alpha] +
                                                 2 \cos [2 \pm \omega] - \cos [2 \alpha - 2 \pm \omega] - \cos [2 \alpha + 2 \pm \omega]) \sin [\alpha]^2 \sin [\pm \omega]^2)
            \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t}\,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t}\,\omega] + \right)}
                                   M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] +
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\cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
      (4 \text{ MO } \omega \text{ Cos} [t \omega] \text{ Sec} [\alpha]^2 \text{ Sin} [t \omega] + 4 \text{ MO } \omega \text{ Cos} [2 \alpha] \text{ Cos} [t \omega] \text{ Sec} [\alpha]^2
             Sin[t\omega] - 4M0\omega Sin[2t\omega] - 2M0\omega Sin[2\alpha - 2t\omega] +
           4 \text{ MO } \omega \text{ Cos} [\alpha - \text{t} \omega] \text{ Sec} [\alpha]^2 \text{ Sin} [\alpha - \text{t} \omega] + 4 \text{ MO } \omega \text{ Cos} [2 \alpha]
             Cos[\alpha - t\omega] Sec[\alpha]^2 Sin[\alpha - t\omega] + 2 MO \omega Sin[2 \alpha + 2 t\omega] +
           (\sqrt{2} (2 M0^2 \omega \cos[t \omega] (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                              \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2
                          (4 \omega \sin[2t\omega] + 2 \omega \sin[2\alpha - 2t\omega] - 2 \omega \sin[2\alpha + 2t\omega]))
             (\sqrt{M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] +
                           \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2))
  (32 \text{ M0} (1 + \cos[2 \alpha]) \sqrt{(\text{M0}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                  \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2) -
\left[ i \cos[\alpha] \cot[\alpha] \csc[t \omega]^2 \sqrt{\left( \frac{1}{1 + \cos[2 \alpha]} \left( -2 + 4 M0 - 2 \cos[2 \alpha] - \frac{1}{1 + \cos[2 \alpha]} \right) \right]} \right]
                  2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] +
                  2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+
                                \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
      (-4 \text{ MO} + 2 \text{ MO} \cos [2 \text{ t} \omega] - \text{MO} \cos [2 \alpha - 2 \text{ t} \omega] - \text{MO} \cos [2 \alpha + 2 \text{ t} \omega] +
           2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2
           2 M0 Sec [\alpha]^2 Sin [t \omega]^2 + 2 M0 Cos [2 \alpha] Sec [\alpha]^2 Sin [t \omega]^2 +
           2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega])}
                    Sin[\alpha]^2 Sin[t\omega]^2) \left(-4 M0 \omega Cos[t\omega] Sec[\alpha]^2 Sin[t\omega] -
           4 \text{ MO } \omega \text{ Cos} [2 \alpha] \text{ Cos} [t \omega] \text{ Sec} [\alpha]^2 \text{ Sin} [t \omega] + 4 \text{ MO } \omega \text{ Sin} [2 t \omega] +
           2 M0 \omega Sin[2 \alpha – 2 t \omega] – 4 M0 \omega Cos[\alpha – t \omega] Sec[\alpha]<sup>2</sup> Sin[\alpha – t \omega] –
           4 M0 \omega Cos [2 \alpha] Cos [\alpha - t \omega] Sec [\alpha] <sup>2</sup> Sin [\alpha - t \omega] - 2 M0 \omega Sin [2 \alpha + 2 t \omega] +
           (\sqrt{2} (-2 \text{ M})^2 \omega \cos[t \omega] (-6 - 2 \cos[2 \alpha] + 2 \cos[2 t \omega] - \cos[2 \alpha - 2 t \omega] -
                             \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega] - M0^2 \sin [\alpha]^2 \sin [t \omega]^2
                         \left(-4 \omega \operatorname{Sin}[2 \operatorname{t} \omega] - 2 \omega \operatorname{Sin}[2 \alpha - 2 \operatorname{t} \omega] + 2 \omega \operatorname{Sin}[2 \alpha + 2 \operatorname{t} \omega]\right)\right)
             (\sqrt{-M0^2 (-6-2 \cos[2 \alpha] + 2 \cos[2 t \omega] - \cos[2 \alpha - 2 t \omega]} -
                           \cos [2\alpha + 2t\omega] \sin [\alpha]^2 \sin [t\omega]^2))
  (32 \text{ M0} (1 + \cos[2 \alpha]) \sqrt{(\text{M0}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                 \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2) +
\left( i \cos \left[ \alpha \right] \cot \left[ \alpha \right] \csc \left[ t \omega \right]^{2} \sqrt{\left( \frac{1}{1 + \cos \left[ 2 \alpha \right]} \left( -2 + 4 M0 - 2 \cos \left[ 2 \alpha \right] - 4 M0 \right) \right)} \right)
                  2 M0 Cos [2 t \omega] + M0 Cos [2 \alpha - 2 t \omega] + M0 Cos [2 \alpha + 2 t \omega] -
                 2\sqrt{2}\sqrt{(\text{M0}^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+}
                               \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
      (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
          2 M0 Cos [\alpha - t\omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2\alpha] Cos [\alpha - t\omega]^2 Sec [\alpha]^2 -
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2 M0 Sec [\alpha]^2 Sin [t\omega]^2 – 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                                2\sqrt{2}\sqrt{\left(\text{M0}^2\left(6+2\cos{[2\,\alpha]}-2\cos{[2\,t\,\omega]}+\cos{[2\,\alpha-2\,t\,\omega]}+\cos{[2\,\alpha+2\,t\,\omega]}\right)}
                                         Sin[\alpha]^2 Sin[t\omega]^2) (4 M0 \omega Cos[t\omega] Sec[\alpha]^2 Sin[t\omega] +
                                4 M0 \omega Cos[2 \alpha] Cos[t \omega] Sec[\alpha] ^2 Sin[t \omega] - 4 M0 \omega Sin[2 t \omega] -
                                2 M0 \omega Sin[2 \alpha - 2 t \omega] + 4 M0 \omega Cos[\alpha - t \omega] Sec[\alpha]<sup>2</sup> Sin[\alpha - t \omega] +
                                4 M0 \omega Cos [2 \alpha] Cos [\alpha - t \omega] Sec [\alpha] <sup>2</sup> Sin [\alpha - t \omega] + 2 M0 \omega Sin [2 \alpha + 2 t \omega] +
                                 (\sqrt{2} (-2 \,\text{M}0^2 \,\omega \,\text{Cos}\,[\,\text{t}\,\omega\,] (-6 - 2 \,\text{Cos}\,[\,2\,\alpha\,] + 2 \,\text{Cos}\,[\,2\,\text{t}\,\omega\,] - \text{Cos}\,[\,2\,\alpha - 2\,\text{t}\,\omega\,] -
                                                   \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega] - M0^2 \sin [\alpha]^2 \sin [t \omega]^2
                                               \left(-4\omega \operatorname{Sin}[2 \operatorname{t} \omega] - 2\omega \operatorname{Sin}[2\alpha - 2 \operatorname{t} \omega] + 2\omega \operatorname{Sin}[2\alpha + 2 \operatorname{t} \omega]\right)\right)
                                   (\sqrt{-M0^2 (-6-2 \cos[2 \alpha] + 2 \cos[2 t \omega] - \cos[2 \alpha - 2 t \omega]} -
                                                 \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)))
                       (32 \text{ MO} (1 + \cos[2 \alpha]) \sqrt{(\text{MO}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                                       Cos[2\alpha + 2t\omega] Sin[\alpha]^2 Sin[t\omega]^2)
Tan[\alpha] + \frac{1}{M0} Sec[\alpha]^2 \left( Cos[\alpha - t\omega]^2 + Sin[t\omega]^2 \right) \left( e^{i\theta} \right)
      \left[ \left( -4\,\text{M0} + 2\,\text{M0}\,\text{Cos}\,[2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha - 2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha + 2\,\text{t}\,\omega] \right. + \right.
                         2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2
                        2 M0 Sec [\alpha]^2 Sin [t\omega]^2 + 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                         2\sqrt{2} \sqrt{(-M0^2 (-6-2 \cos[2 \alpha] + 2 \cos[2 t \omega] -
                                       \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
                    \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                                M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                              \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2))
               \left(8\,\sqrt{\,\left(\text{M0}^{2}\,\left(\text{6}+2\,\text{Cos}\,[\,2\,\alpha\,]\,-2\,\text{Cos}\,[\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,-\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,+\,2\,\text{t}\,\omega\,]\,\right)}\right.
                           Sin[\alpha]^2 Sin[t\omega]^2) +
             \left(4 \text{ MO} - 2 \text{ MO Cos}[2 \text{ t}\omega] + \text{MO Cos}[2 \alpha - 2 \text{ t}\omega] + \text{MO Cos}[2 \alpha + 2 \text{ t}\omega] - \right)
                         2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                         2 M0 Sec [\alpha]^2 Sin [t \omega]^2 - 2 M0 Cos [2 \alpha] Sec [\alpha]^2 Sin [t \omega]^2 +
                         2\sqrt{2}\sqrt{(-M0^2(-6-2\cos[2\alpha]+2\cos[2t\omega]-
                                       \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                    \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                                M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 2 \cos [2 \alpha])}
                                              \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2))
               (8 \sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega]})
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Sin[\alpha]^2 Sin[t \omega]^2)
e^{i\theta} r \left[ \left( -4 \, \text{M0} + 2 \, \text{M0} \, \text{Cos} \, [2 \, \text{t} \, \omega] - \text{M0} \, \text{Cos} \, [2 \, \alpha - 2 \, \text{t} \, \omega] - \text{M0} \, \text{Cos} \, [2 \, \alpha + 2 \, \text{t} \, \omega] + \right] \right]
                        2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                        2 M0 Sec [\alpha]^2 Sin [t\omega]^2 + 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                        2\sqrt{2}\sqrt{(-M0^2(-6-2\cos[2\alpha]+2\cos[2t\omega]-
                                        \mathsf{Cos}\left[2\,\alpha-2\,\mathsf{t}\,\omega\right]\,-\,\mathsf{Cos}\left[2\,\alpha+2\,\mathsf{t}\,\omega\right]\big)\,\mathsf{Sin}\left[\alpha\right]^{2}\,\mathsf{Sin}\left[\mathsf{t}\,\omega\right]^{2}\big)\,\Big)
                   \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t}\,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t}\,\omega] + \right)}
                               M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                               \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2))
               (8\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
                           Sin[\alpha]^2 Sin[t\omega]^2) +
             \int \left(4\,\text{MO} - 2\,\text{MO}\,\text{Cos}\,[2\,\text{t}\,\omega] + \text{MO}\,\text{Cos}\,[2\,lpha - 2\,\text{t}\,\omega] + \text{MO}\,\text{Cos}\,[2\,lpha + 2\,\text{t}\,\omega] - \right)
                        2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                        2 M0 Sec [\alpha]^2 Sin [t\omega]^2 – 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                        2\sqrt{2}\sqrt{(-M0^2(-6-2\cos[2\alpha]+2\cos[2t\omega]-
                                       Cos[2\alpha - 2t\omega] - Cos[2\alpha + 2t\omega]) Sin[\alpha]^2 Sin[t\omega]^2)
                   \sqrt{\left(\frac{1}{1+\cos[2\alpha]}\left(-2+4\,\text{M0}-2\cos[2\,\alpha]-2\,\text{M0}\cos[2\,\text{t}\,\omega]+\text{M0}\cos[2\,\alpha-2\,\text{t}\,\omega]+\right)}
                                M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] +
                                              \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
               \left(8\,\sqrt{\,\left(\text{MO}^2\,\left(\text{6}+2\,\text{Cos}\,[\,2\,\alpha\,]\,-2\,\text{Cos}\,[\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,-\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,+\,2\,\text{t}\,\omega\,]\,\right)}\right.
                          Sin[\alpha]^2 Sin[t\omega]^2) +
    s \left[\dot{\mathbf{n}} \cos[\alpha] \cot[\alpha] \csc[\mathsf{t} \omega]^2 \left(-4 \,\mathrm{M0} + 2 \,\mathrm{M0} \cos[2 \,\mathrm{t} \omega] - \mathrm{M0} \cos[2 \,\alpha - 2 \,\mathrm{t} \omega] - \mathrm{M0} \cos[2 \,\alpha] \right]
                        M0 Cos [2\alpha + 2t\omega] + 2 M0 Cos [\alpha - t\omega]^2 Sec [\alpha]^2 +
                        2 M0 Cos [2 \alpha] Cos [\alpha - t \omega] 2 Sec [\alpha] 2 + 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 +
                        2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2 (-6 - 2 \cos[2 \alpha] +
                                        2 \cos [2 \pm \omega] - \cos [2 \alpha - 2 \pm \omega] - \cos [2 \alpha + 2 \pm \omega]) \sin [\alpha]^2 \sin [\pm \omega]^2
                   \sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2 \,t \,\omega] + \text{M0} \,\cos[2\alpha - 2 \,t \,\omega] + \right)}
                                M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] +
                                              \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
                    (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
                        2 M0 Cos [\alpha - t\omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2\alpha] Cos [\alpha - t\omega]^2 Sec [\alpha]^2 -
                        2 M0 Sec [\alpha]^2 Sin [t\omega]^2 – 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
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2\sqrt{2}\sqrt{(\text{M0}^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+}
                                                                                    \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2)
                                    \left(32\ \text{M0}\ \left(1 + \cos\left[2\ \alpha\right]\right)\ \sqrt{\ \left(\text{M0}^2\ \left(6 + 2\cos\left[2\ \alpha\right] - 2\cos\left[2\ t\ \omega\right] + \cos\left[2\ \alpha - 2\ t\ \omega\right] + \cos\left[2\ \alpha\right] + \cos\left[2\ \alpha
                                                                     Cos[2\alpha + 2t\omega]) Sin[\alpha]^2 Sin[t\omega]^2) -
                               |\dot{\mathbf{n}} \cos[\alpha] \cot[\alpha] \csc[\mathsf{t} \omega]^2 (4 \,\mathsf{M0} - 2 \,\mathsf{M0} \cos[2 \,\mathsf{t} \omega] + \mathsf{M0} \cos[2 \,\alpha - 2 \,\mathsf{t} \omega] +
                                                      M0 Cos [2 \alpha + 2 t \omega] - 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                                                      2 M0 Cos [2 \alpha] Cos [\alpha - t \omega] 2 Sec [\alpha] 2 - 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 -
                                                      2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2(-6-2\cos[2\alpha]+
                                                                                     2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
                                           \sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                                                                     M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                                                   \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
                                              (-4 \text{ M0} + 2 \text{ M0} \cos [2 \text{ t} \omega] - \text{M0} \cos [2 \alpha - 2 \text{ t} \omega] - \text{M0} \cos [2 \alpha + 2 \text{ t} \omega] +
                                                      2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                                                      2 M0 Sec [\alpha]^2 Sin [t\omega]^2 + 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                                                      2\sqrt{2}\sqrt{(\text{M0}^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+}
                                                                                    \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2
                                   (32 \text{ M0 } (1 + \cos[2 \alpha]) \sqrt{(\text{M0}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                                                                    \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2)
s = (-4 \text{ M0} + 2 \text{ M0 Cos} [2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha - 2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha + 2 \text{ t} \omega] + 2 \text{ M0 Cos} [\alpha - \text{t} \omega]^2
                                                           Sec[\alpha]^2 + 2 MO Cos[2 \alpha] Cos[\alpha - t \omega]^2 Sec[\alpha]^2 + 2 MO Sec[\alpha]^2 Sin[t \omega]^2 +
                                                      2 M0 Cos [2 \alpha] Sec [\alpha] ^{2} Sin [t \omega] ^{2} + 2 \sqrt{2} \sqrt{(-M0^{2}(-6-2\cos[2\alpha]+
                                                                                    2 Cos [2 t \omega] - Cos [2 \alpha - 2 t \omega] - Cos [2 \alpha + 2 t \omega]) Sin [\alpha] 2 Sin [t \omega] 2)
                                           \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{MØ} - 2 \cos[2\alpha] - 2 \,\text{MØ} \cos[2 \,\text{t}\,\omega] + \text{MØ} \cos[2\alpha - 2 \,\text{t}\,\omega] + \right)}
                                                                     M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                                                    \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2))
                                   (8\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
                                                          Sin[\alpha]^2 Sin[t\omega]^2) +
                                 (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
                                                      2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                                                      2 M0 Sec [\alpha]^2 Sin [t\omega]^2 – 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                                                      2\sqrt{2}\sqrt{(-M0^2(-6-2\cos[2\alpha]+2\cos[2t\omega]-
                                                                                    \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
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\sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t}\,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t}\,\omega] + \right)}
                         M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] +
                                      \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
          (8 \sqrt{M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega])}
                   Sin[\alpha]^2 Sin[t\omega]^2)) +
e^{-i\theta}r \left[i\cos[\alpha] \cot[\alpha] \csc[t\omega]^2 \left(-4M0 + 2M0\cos[2t\omega] - M0\cos[2\alpha - 2t\omega] - M0\cos[2\alpha] \right]
                  M0 Cos [2 \alpha + 2 t \omega] + 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                  2 M0 Cos [2 \alpha] Cos [\alpha – t \omega] <sup>2</sup> Sec [\alpha] <sup>2</sup> + 2 M0 Sec [\alpha] <sup>2</sup> Sin [t \omega] <sup>2</sup> +
                  2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2(-6-2\cos[2\alpha]+
                               2 Cos [2 t \omega] - Cos [2 \alpha - 2 t \omega] - Cos [2 \alpha + 2 t \omega]) Sin [\alpha] 2 Sin [t \omega] 2)
             \sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                        M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                      \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
              (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
                  2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                  2 M0 Sec [\alpha]^2 Sin [t\omega]^2 – 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                  2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+
                               \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2)
          (32 \text{ MO} (1 + \cos[2 \alpha]) \sqrt{(\text{MO}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                        Cos[2\alpha + 2t\omega]) Sin[\alpha]^2 Sin[t\omega]^2) -
        \dot{\mathbf{n}} Cos[\alpha] Cot[\alpha] Csc[\mathbf{t} \omega]<sup>2</sup> (4 M0 – 2 M0 Cos[2 \mathbf{t} \omega] + M0 Cos[2 \alpha – 2 \mathbf{t} \omega] +
                  M0 Cos [2 \alpha + 2 t \omega] - 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                  2 M0 Cos [2 \alpha] Cos [\alpha - t \omega] 2 Sec [\alpha] 2 - 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 -
                  2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2\sqrt{2} \sqrt{(-M0^2 (-6-2 \cos[2 \alpha] +
                               2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
             \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2\,t\,\omega] + \text{M0} \,\cos[2\,\alpha - 2 \,t\,\omega] + \right)}
                        M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 2 \cos [2 \alpha])}
                                      \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
              (-4 \text{ M0} + 2 \text{ M0 Cos} [2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha - 2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha + 2 \text{ t} \omega] +
                  2 M0 Cos [\alpha - t\omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2\alpha] Cos [\alpha - t\omega]^2 Sec [\alpha]^2 +
                  2 M0 Sec [\alpha]^2 Sin [t \omega]^2 + 2 M0 Cos [2 \alpha] Sec [\alpha]^2 Sin [t \omega]^2 +
                  2\sqrt{2}\sqrt{(\text{M0}^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+}
                               \cos [2\alpha + 2t\omega] \sin [\alpha]^2 \sin [t\omega]^2)
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$$\left(32\,\text{M0}\left(1+\cos[2\,\alpha]\right)\,\sqrt{\,(\text{M0}^2\,\left(6+2\cos[2\,\alpha]-2\cos[2\,t\,\omega]+\cos[2\,\alpha-2\,t\,\omega]+\cos[2\,\alpha-2\,t\,\omega]+\cos[2\,\alpha-2\,t\,\omega]+\cos[2\,\alpha-2\,t\,\omega]+\cos[2\,\alpha-2\,t\,\omega]+\cos[2\,\alpha-2\,t\,\omega]+\cos[2\,\alpha-2\,t\,\omega]+\cos[2\,\alpha-2\,t\,\omega]+\cos[2\,\alpha]-\cos[2\,\alpha]$$

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\cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2))
      (8\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
                Sin[\alpha]^2 Sin[t \omega]^2))
\left[-\right]\left[\left(-4 \text{ MØ} + 2 \text{ MØ Cos}\left[2 \text{ t} \omega\right] - \text{MØ Cos}\left[2 \alpha - 2 \text{ t} \omega\right] - \text{MØ Cos}\left[2 \alpha + 2 \text{ t} \omega\right] + \right]
                   2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Sec [\alpha]^2
                      \sin[t \omega]^2 + 2 M0 \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{-M0^2 (-6 - 2 \cos[2 \alpha] + 2 \cos[2 \alpha])^2}
                                 2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
               \sqrt{\left(\frac{1}{1 + \cos{[2\,\alpha]}} \left(-2 + 4\,\text{M0} - 2\,\cos{[2\,\alpha]} - 2\,\text{M0}\,\cos{[2\,\text{t}\,\omega]} + \text{M0}\,\cos{[2\,\alpha - 2\,\text{t}\,\omega]} + \right.\right.}
                          M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 2 \cos [2 \alpha])}
                                       \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega] \right) \sin [\alpha]^2 \sin [t \omega]^2
                (2 M0^2 \omega \cos[t \omega] (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                          \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega] + M0^2 \sin [\alpha]^2 \sin [t \omega]^2
                      (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega]))
           \left(16 \left(M0^{2} \left(6+2 \cos \left[2 \alpha\right]-2 \cos \left[2 t \omega\right]+\cos \left[2 \alpha-2 t \omega\right]+\cos \left[2 \alpha+2 t \omega\right]\right)\right)
                     \operatorname{Sin}[\alpha]^{2} \operatorname{Sin}[\mathsf{t}\,\omega]^{2})^{3/2}
     (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
               2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
               2 M0 Sec [\alpha]^2 Sin [t\omega]^2 – 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
               2\sqrt{2}\sqrt{(-M0^2(-6-2\cos[2\alpha]+2\cos[2t\omega]-
                             Cos[2\alpha - 2t\omega] - Cos[2\alpha + 2t\omega]) Sin[\alpha]^{2} Sin[t\omega]^{2})
          \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                      M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] +
                                   \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
           (2 MO^2 \omega Cos[t \omega] (6 + 2 Cos[2 \alpha] - 2 Cos[2 t \omega] + Cos[2 \alpha - 2 t \omega] +
                      \cos[2\alpha + 2t\omega]) \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2
                 (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega]))
      (16 (M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega])
                 Sin[\alpha]^2 Sin[t\omega]^2 +
    (-4 \text{ MO} + 2 \text{ MO Cos} [2 \text{ t} \omega] - \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] - \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] +
               2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
               2 M0 Sec [\alpha]^2 Sin [t\omega]^2 + 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
               2\sqrt{2}\sqrt{(-M0^2(-6-2\cos[2\alpha]+2\cos[2t\omega]-
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\cos [2\alpha - 2t\omega] - \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
                (4 \text{ MO } \omega \text{ Sin}[2 \text{ t} \omega] + 2 \text{ MO } \omega \text{ Sin}[2 \alpha - 2 \text{ t} \omega] - 2 \text{ MO } \omega \text{ Sin}[2 \alpha + 2 \text{ t} \omega] -
                         (\sqrt{2} (2 M0^2 \omega \cos[t \omega] (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                                                                \cos[2\alpha + 2t\omega]) \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2
                                                       (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])))
                              (\sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                                                          \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)))
      \left(16 \left(1 + \cos[2 \alpha]\right) \sqrt{\left(\text{M0}^2 \left(6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha]\right)}\right)
                                       \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
             \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t}\,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t}\,\omega] + \right)}
                                      M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{\left(\text{M0}^2\left(\text{6 + 2 Cos}\left[\text{2 }\alpha\right]\text{ - 2 Cos}\left[\text{2 t }\omega\right]\text{ + }\text{1}\right)\right)}
                                                                    \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
(4 MO - 2 MO Cos [2 t \omega] + MO Cos [2 \alpha - 2 t \omega] + MO Cos [2 \alpha + 2 t \omega] - 2 MO
                             \cos [\alpha - t \omega]^2 \operatorname{Sec} [\alpha]^2 - 2 \operatorname{MO} \cos [2 \alpha] \cos [\alpha - t \omega]^2 \operatorname{Sec} [\alpha]^2 -
                        2 M0 Sec [\alpha]^2 Sin [t \omega]^2 – 2 M0 Cos [2 \alpha] Sec [\alpha]^2 Sin [t \omega]^2 +
                        2\sqrt{2}\sqrt{-M0^2(-6-2\cos[2\alpha]+2\cos[2t\omega]}
                                                      \cos [2\alpha - 2t\omega] - \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
                (4 \text{ MO } \omega \text{ Sin}[2 \text{ t} \omega] + 2 \text{ MO } \omega \text{ Sin}[2 \alpha - 2 \text{ t} \omega] - 2 \text{ MO } \omega \text{ Sin}[2 \alpha + 2 \text{ t} \omega] +
                          (\sqrt{2} (2 M0^2 \omega \cos[t \omega] (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                                                                \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2
                                                       (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])))
                              \left(\sqrt{\left(\text{M0}^2\,\left(\text{6}+\text{2}\,\text{Cos}\,[\text{2}\,\alpha]\,-\text{2}\,\text{Cos}\,[\text{2}\,\text{t}\,\omega]\,+\text{Cos}\,[\text{2}\,\alpha-\text{2}\,\text{t}\,\omega]\,+\right.}\right.
                                                          \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)))
      \left| 16 \left( 1 + \cos \left[ 2 \, \alpha \right] \right) \, \sqrt{\, \left( \text{M0}^2 \, \left( 6 + 2 \, \cos \left[ 2 \, \alpha \right] \, - 2 \, \cos \left[ 2 \, \text{t} \, \omega \right] \, + \cos \left[ 2 \, \alpha - 2 \, \text{t} \, \omega \right] \, + \right. \right.} \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \text{t} \, \omega \right] + \left| \cos \left[ 2 \, \alpha - 2 \, \text{t} \, \omega \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \text{t} \, \omega \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \text{t} \, \omega \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \text{t} \, \omega \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \text{t} \, \omega \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \text{t} \, \omega \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \text{t} \, \omega \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \text{t} \, \omega \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \text{t} \, \omega \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \text{t} \, \omega \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \text{t} \, \omega \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \text{t} \, \omega \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \text{t} \, \omega \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \text{t} \, \omega \right] + \left| \cos \left[ 2 \, \alpha - 2 \, \text{t} \, \omega \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \text{t} \, \omega \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \text{t} \, \omega \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \text{t} \, \omega \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \text{t} \, \omega \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \text{t} \, \omega \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \text{t} \, \omega \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \text{t} \, \omega \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \text{t} \, \omega \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \text{t} \, \omega \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \text{t} \, \omega \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \text{t} \, \omega \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \text{t} \, \omega \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \text{t} \, \omega \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \text{t} \, \omega \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \text{t} \, \omega \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \alpha - 2 \, \alpha \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \alpha - 2 \, \alpha \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \alpha - 2 \, \alpha \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \alpha - 2 \, \alpha \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \alpha - 2 \, \alpha \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \alpha - 2 \, \alpha \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \alpha - 2 \, \alpha - 2 \, \alpha \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \alpha - 2 \, \alpha - 2 \, \alpha \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \alpha - 2 \, \alpha - 2 \, \alpha \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \alpha - 2 \, \alpha - 2 \, \alpha \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \alpha - 2 \, \alpha - 2 \, \alpha \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \alpha - 2 \, \alpha - 2 \, \alpha \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \alpha - 2 \, \alpha - 2 \, \alpha \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \alpha - 2 \, \alpha - 2 \, \alpha \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \alpha - 2 \, \alpha - 2 \, \alpha \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \alpha - 2 \, \alpha - 2 \, \alpha \right] \right| + \left| \cos \left[ 2 \, \alpha - 2 \, \alpha - 2 \, \alpha - 2 \, \alpha \right] \right| + \left| \cos \left[ 2 \, \alpha - 2
                                      \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
             \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2\,t\,\omega] + \text{M0} \,\cos[2\,\alpha - 2\,t\,\omega] + \right)}
                                      M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                    \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
\sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2 \,t \,\omega] + \text{M0} \,\cos[2\alpha - 2 \,t \,\omega] + \right.}
                                      M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                    \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
               \left(-4\,\text{M0}\,\omega\,\text{Cos}\,[\,\text{t}\,\omega\,]\,\,\text{Sec}\,[\,\alpha\,]^{\,2}\,\,\text{Sin}\,[\,\text{t}\,\omega\,]\,\,-\,4\,\,\text{M0}\,\omega\,\,\text{Cos}\,[\,2\,\,\alpha\,]\,\,\,\text{Cos}\,[\,\text{t}\,\omega\,]\,\,\,\text{Sec}\,[\,\alpha\,]^{\,2}
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Sin[t\omega] + 4M0\omega Sin[2t\omega] + 2M0\omega Sin[2\alpha - 2t\omega] -
                    4 \text{ MO } \omega \text{ Cos} [\alpha - t \omega] \text{ Sec} [\alpha]^2 \text{ Sin} [\alpha - t \omega] - 4 \text{ MO } \omega \text{ Cos} [2 \alpha]
                       Cos[\alpha - t\omega] Sec[\alpha]^2 Sin[\alpha - t\omega] - 2 M0 \omega Sin[2\alpha + 2 t\omega] +
                     (\sqrt{2} (-2 \text{ M})^2 \omega \cos[t \omega] (-6 - 2 \cos[2 \alpha] + 2 \cos[2 t \omega] - \cos[2 \alpha - 2 t \omega] -
                                         \cos[2\alpha + 2t\omega]) \sin[\alpha]^2 \sin[t\omega] - M0^2 \sin[\alpha]^2 \sin[t\omega]^2
                                    \left(-4\omega \operatorname{Sin}[2 \operatorname{t} \omega] - 2\omega \operatorname{Sin}[2\alpha - 2 \operatorname{t} \omega] + 2\omega \operatorname{Sin}[2\alpha + 2 \operatorname{t} \omega]\right)\right)
                       (\sqrt{-M0^2 (-6-2 \cos[2 \alpha] + 2 \cos[2 t \omega] - \cos[2 \alpha - 2 t \omega]} -
                                      \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)))
          (8\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
                       Sin[\alpha]^2 Sin[t\omega]^2) +
        \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \text{ MO} - 2 \cos[2\alpha] - 2 \text{ MO} \cos[2 \text{ t} \omega] + \text{MO} \cos[2\alpha - 2 \text{ t} \omega] + \right)}
                           M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                           \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
                (4 \text{ MO } \omega \text{ Cos}[t \omega] \text{ Sec}[\alpha]^2 \text{ Sin}[t \omega] + 4 \text{ MO } \omega \text{ Cos}[2 \alpha] \text{ Cos}[t \omega] \text{ Sec}[\alpha]^2
                       Sin[t\omega] - 4M0\omega Sin[2t\omega] - 2M0\omega Sin[2\alpha - 2t\omega] +
                    4 \text{ MO } \omega \text{ Cos} [\alpha - t \omega] \text{ Sec} [\alpha]^2 \text{ Sin} [\alpha - t \omega] + 4 \text{ MO } \omega \text{ Cos} [2 \alpha]
                       Cos[\alpha - t\omega] Sec[\alpha]^2 Sin[\alpha - t\omega] + 2 MO \omega Sin[2 \alpha + 2 t\omega] +
                     (\sqrt{2} (-2 \, \text{MO}^2 \, \omega \, \text{Cos} \, [\, \text{t} \, \omega] (-6 - 2 \, \text{Cos} \, [\, 2 \, \alpha] + 2 \, \text{Cos} \, [\, 2 \, \text{t} \, \omega] - \text{Cos} \, [\, 2 \, \alpha - 2 \, \text{t} \, \omega] -
                                         \cos[2\alpha + 2t\omega]) \sin[\alpha]^2 \sin[t\omega] - M0^2 \sin[\alpha]^2 \sin[t\omega]^2
                                    \left(-4\omega \operatorname{Sin}[2 \operatorname{t} \omega] - 2\omega \operatorname{Sin}[2\alpha - 2 \operatorname{t} \omega] + 2\omega \operatorname{Sin}[2\alpha + 2 \operatorname{t} \omega]\right)\right)
                       (\sqrt{-M0^2 (-6-2 \cos[2 \alpha] + 2 \cos[2 t \omega] - \cos[2 \alpha - 2 t \omega]} - \cos[2 \alpha - 2 t \omega] - \cos[2 \alpha - 2 t \omega]
                                      \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2))
          \left(8\,\sqrt{\,\left(\text{M0}^{2}\,\left(\text{6}+2\,\text{Cos}\,[\,2\,\alpha\,]\,-2\,\text{Cos}\,[\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,-\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,+\,2\,\text{t}\,\omega\,]\,\right)}\right.
                      \operatorname{Sin}[\alpha]^2 \operatorname{Sin}[\mathsf{t}\,\omega]^2)) +
 \left( -\left( \left[ \pm \omega \cos \left[ \alpha \right] \cot \left[ \alpha \right] \cot \left[ \pm \omega \right] \right] \csc \left[ \pm \omega \right]^{2} \right) \left( -4 \, \text{M0} + 2 \, \text{M0} \cos \left[ 2 \, \pm \omega \right] \right) - \left( -4 \, \text{M0} + 2 \, \text{M0} \cos \left[ 2 \, \pm \omega \right] \right) \right) 
                         M0 Cos [2 \alpha - 2 t \omega] - M0 Cos [2 \alpha + 2 t \omega] + 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                         2 M0 Cos [2 \alpha] Cos [\alpha – t \omega] 2 Sec [\alpha] 2 + 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 +
                         2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{-M0^2(-6-2\cos[2\alpha]+
                                         2 Cos [2 t \omega] - Cos [2 \alpha - 2 t \omega] - Cos [2 \alpha + 2 t \omega]) Sin [\alpha] 2 Sin [t \omega] 2)
                    \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2\,t\,\omega] + \text{M0} \,\cos[2\,\alpha - 2 \,t\,\omega] + \right)}
                                 M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 2 \cos [2 \alpha])}
                                                \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                     (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
                         2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                         2 M0 Sec [\alpha]^2 Sin [t \omega]^2 – 2 M0 Cos [2 \alpha] Sec [\alpha]^2 Sin [t \omega]^2 +
                         2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega])}
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\operatorname{Sin}[\alpha]^{2} \operatorname{Sin}[\operatorname{t}\omega]^{2})) \bigg) \bigg/ \left(16 \operatorname{M0} \left(1 + \operatorname{Cos}[2 \alpha]\right) \sqrt{\left(\operatorname{M0}^{2} \left(6 + 2 \operatorname{Cos}[2 \alpha] - \operatorname{Cos}[2 \alpha]\right)\right)} \right) \bigg) \bigg) \bigg/ \left(16 \operatorname{M0} \left(1 + \operatorname{Cos}[2 \alpha]\right) \sqrt{\left(\operatorname{M0}^{2}\left(6 + 2 \operatorname{Cos}[2 \alpha] - \operatorname{Cos}[2 \alpha]\right)\right)} \right) \bigg) \bigg) \bigg) \bigg) \bigg) \bigg) \bigg) \bigg) \bigg) \bigg( 16 \operatorname{M0} \left(1 + \operatorname{Cos}[2 \alpha]\right) + \operatorname{Cos}[2 \alpha] \bigg) \bigg) \bigg) \bigg) \bigg) \bigg) \bigg( 16 \operatorname{M0} \left(1 + \operatorname{Cos}[2 \alpha]\right) + \operatorname{Cos}[2 \alpha] \bigg) \bigg) \bigg) \bigg) \bigg) \bigg) \bigg) \bigg) \bigg) \bigg( 16 \operatorname{M0} \left(1 + \operatorname{Cos}[2 \alpha]\right) + \operatorname{Cos}[2 \alpha] \bigg) \bigg) \bigg) \bigg) \bigg( 16 \operatorname{M0} \left(1 + \operatorname{Cos}[2 \alpha]\right) + \operatorname{Cos}[2 \alpha] \bigg) \bigg) \bigg) \bigg) \bigg) \bigg( 16 \operatorname{M0} \left(1 + \operatorname{Cos}[2 \alpha]\right) + \operatorname{Cos}[2 \alpha] \bigg) \bigg) \bigg) \bigg( 16 \operatorname{M0} \left(1 + \operatorname{Cos}[2 \alpha]\right) \bigg) \bigg) \bigg( 16 \operatorname{M0} \left(1 + \operatorname{Cos}[2 \alpha]\right) \bigg) \bigg) \bigg( 16 \operatorname{M0} \left(1 + \operatorname{Cos}[2 \alpha]\right) \bigg) \bigg) \bigg( 16 \operatorname{M0} \left(1 + \operatorname{Cos}[2 \alpha]\right) \bigg) \bigg) \bigg( 16 \operatorname{M0} \left(1 + \operatorname{Cos}[2 \alpha]\right) \bigg) \bigg) \bigg( 16 \operatorname{M0} \left(1 + \operatorname{Cos}[2 \alpha]\right) \bigg) \bigg) \bigg( 16 \operatorname{M0} \bigg( 16 \operatorname{M0} \bigg) \bigg( 16 \operatorname{M0} \bigg) \bigg( 16 \operatorname{M0} \bigg) \bigg( 16 \operatorname{M0} \bigg( 16 \operatorname{M0} \bigg) \bigg( 16 \operatorname{M0} \bigg( 16 \operatorname{M0} \bigg) \bigg( 16 \operatorname{M0} \bigg( 16 \operatorname{M0} \bigg) \bigg( 16 \operatorname{M0} \bigg( 16 \operatorname{M0} \bigg) \bigg( 16 \operatorname{M0} \bigg) \bigg( 16 \operatorname{M0} \bigg) \bigg( 16 \operatorname{M0} \bigg) \bigg( 16 \operatorname{M0} \bigg( 16 \operatorname{M0} \bigg) \bigg( 16 \operatorname{M0} \bigg) \bigg( 16 \operatorname{M0} \bigg) \bigg( 16 \operatorname{M0} \bigg( 16 \operatorname{M0} \bigg) \bigg( 16 \operatorname{M0} \bigg( 16 \operatorname{M0} \bigg) \bigg( 16 \operatorname{M0} \bigg( 16 \operatorname{M0} \bigg) \bigg( 16 \operatorname{
                                                 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega] \right) \sin [\alpha]^2 \sin [t \omega]^2 \right) +
\left[\dot{\mathbf{n}}\,\omega\,\mathsf{Cos}\,[\alpha]\,\mathsf{Cot}\,[\alpha]\,\mathsf{Cot}\,[\mathsf{t}\,\omega]\,\mathsf{Csc}\,[\mathsf{t}\,\omega]^2\,\left(4\,\mathsf{M0}-2\,\mathsf{M0}\,\mathsf{Cos}\,[2\,\mathsf{t}\,\omega]\right.\right]
                       M0 Cos [2 \alpha - 2 t \omega] + M0 Cos [2 \alpha + 2 t \omega] - 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                       2 M0 Cos [2 \alpha] Cos [\alpha – t \omega] 2 Sec [\alpha] 2 – 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 –
                       2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2(-6-2\cos[2\alpha]+
                                                      2 \cos [2 \pm \omega] - \cos [2 \alpha - 2 \pm \omega] - \cos [2 \alpha + 2 \pm \omega]) \sin [\alpha]^2 \sin [\pm \omega]^2
            \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                                      M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                     \cos \left[2\alpha - 2t\omega\right] + \cos \left[2\alpha + 2t\omega\right] \right) \sin \left[\alpha\right]^{2} \sin \left[t\omega\right]^{2} 
               \left(-4\,\text{M0} + 2\,\text{M0}\,\text{Cos}\,[2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha - 2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha + 2\,\text{t}\,\omega] + \right)
                       2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                       2 M0 Sec [\alpha]^2 Sin [t\omega]^2 + 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                       2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+
                                                      \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2)
    (16 \text{ MO} (1 + \cos[2 \alpha]) \sqrt{(\text{MO}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                                      \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2) -
|\dot{\mathbf{n}} \cos[\alpha] \cot[\alpha] \csc[\dot{\mathbf{t}} \omega]^2 \left(-4 \,\text{MO} + 2 \,\text{MO} \cos[2 \,\dot{\mathbf{t}} \omega] - \text{MO} \cos[2 \,\alpha - 2 \,\dot{\mathbf{t}} \omega] - \text{MO} \cos[2 \,\alpha - 2 \,\dot{\mathbf{t}} \omega] \right)
                       M0 Cos [2 \alpha + 2 t \omega] + 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                       2 M0 Cos [2 \alpha] Cos [\alpha - t \omega] 2 Sec [\alpha] 2 + 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 +
                       2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2(-6-2\cos[2\alpha]+
                                                      2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
            \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{MØ} - 2 \cos[2\alpha] - 2 \,\text{MØ} \cos[2 \,\text{t}\,\omega] + \text{MØ} \cos[2\alpha - 2 \,\text{t}\,\omega] + \right)}
                                      M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                     \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
               (4 MO - 2 MO Cos [2 t \omega] + MO Cos [2 \alpha - 2 t \omega] + MO Cos [2 \alpha + 2 t \omega] -
                       2 M0 Cos [\alpha – t \omega] <sup>2</sup> Sec [\alpha] <sup>2</sup> – 2 M0 Cos [2\alpha] Cos [\alpha – t \omega] <sup>2</sup> Sec [\alpha] <sup>2</sup> –
                       2 M0 Sec [\alpha]^2 Sin [t\omega]^2 – 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                       2\sqrt{2}\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]}
                                           \operatorname{Sin}[\alpha]^2 \operatorname{Sin}[\mathsf{t}\,\omega]^2) \left(2\,\mathsf{M0}^2\,\omega\,\operatorname{Cos}[\mathsf{t}\,\omega]\,\left(6+2\,\operatorname{Cos}[2\,\alpha]-2\,\operatorname{Cos}[2\,\mathsf{t}\,\omega]+\right)\right)
                                      \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega] + M0^2 \sin [\alpha]^2
                            Sin[t\omega]^2 (4\omega Sin[2t\omega] + 2\omega Sin[2\alpha - 2t\omega] - 2\omega Sin[2\alpha + 2t\omega]))
     (64 \text{ M0 } (1 + \cos[2 \alpha]) (\text{M0}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
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\cos [2\alpha + 2t\omega] \sin [\alpha]^2 \sin [t\omega]^2 +
\left[\dot{\mathbf{1}} \cos[\alpha] \cot[\alpha] \csc[\mathsf{t} \omega]^2\right] (4 \, \mathsf{M0} - 2 \, \mathsf{M0} \cos[2 \, \mathsf{t} \omega] + \mathsf{M0} \cos[2 \, \alpha - 2 \, \mathsf{t} \omega] +
          M0 Cos [2 \alpha + 2 t \omega] - 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
          2 M0 Cos [2 \alpha] Cos [\alpha - t\omega]<sup>2</sup> Sec [\alpha]<sup>2</sup> - 2 M0 Sec [\alpha]<sup>2</sup> Sin [t\omega]<sup>2</sup> -
          2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2(-6-2\cos[2\alpha]+
                       2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^{2} \sin [t \omega]^{2}
     \sqrt{\left(\frac{1}{1 + \cos{[2\,\alpha]}} \left(-2 + 4\,\text{M0} - 2\,\cos{[2\,\alpha]} - 2\,\text{M0}\,\cos{[2\,\text{t}\,\omega]} + \text{M0}\,\cos{[2\,\alpha - 2\,\text{t}\,\omega]} + \right)}
                M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                              \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
      \left( - 4 M0 + 2 M0 Cos [2 t \omega] - M0 Cos [2 \alpha - 2 t \omega] - M0 Cos [2 \alpha + 2 t \omega] +
          2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
          2 M0 Sec [\alpha]^2 Sin [t\omega]^2 + 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
          2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega])}
                   Sin[\alpha]^2 Sin[t\omega]^2) (2M0^2 \omega Cos[t\omega] (6 + 2Cos[2\alpha] - 2Cos[2t\omega] +
                \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega] + M0^2 \sin [\alpha]^2
            Sin[t\omega]^2 (4\omega Sin[2t\omega] + 2\omega Sin[2\alpha - 2t\omega] - 2\omega Sin[2\alpha + 2t\omega]))
  (64 \text{ M0} (1 + \cos[2 \alpha]) (\text{M0}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                \cos [2\alpha + 2t\omega] \sin [\alpha]^2 \sin [t\omega]^2 +
(i \cos[\alpha] \cot[\alpha] \csc[t \omega]^2 (-4 MO + 2 MO \cos[2 t \omega] - MO \cos[2 \alpha - 2 t \omega] -
          M0 Cos [2 \alpha + 2 t \omega] + 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
          2 M0 Cos [2 \alpha] Cos [\alpha - t \omega] 2 Sec [\alpha] 2 + 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 +
          2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2(-6-2\cos[2\alpha]+
                        2 \cos [2 \pm \omega] - \cos [2 \alpha - 2 \pm \omega] - \cos [2 \alpha + 2 \pm \omega]) \sin [\alpha]^2 \sin [\pm \omega]^2
      (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
          2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
          2 M0 Sec [\alpha]^2 Sin [t\omega]^2 – 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
          2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+
                       Cos[2\alpha + 2t\omega] Sin[\alpha]^2 Sin[t\omega]^2)
      (4 \text{ MO } \omega \text{ Sin}[2 \text{ t} \omega] + 2 \text{ MO } \omega \text{ Sin}[2 \alpha - 2 \text{ t} \omega] - 2 \text{ MO } \omega \text{ Sin}[2 \alpha + 2 \text{ t} \omega] -
          (\sqrt{2} (2 M0^2 \omega \cos[t \omega] (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                            \cos[2\alpha + 2t\omega]) \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2
                        (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])))
             (\sqrt{M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] +
                         \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2)))/
  64 \, MO \, (1 + Cos[2 \, \alpha])^2 \, \sqrt{(MO^2 \, (6 + 2 \, Cos[2 \, \alpha] - 2 \, Cos[2 \, t \, \omega] + Cos[2 \, t \, \omega])}
                   2\,\alpha - 2\,t\,\omega]\, + \mathsf{Cos}\,[2\,\alpha + 2\,t\,\omega]\,\big)\,\,\mathsf{Sin}\,[\alpha]^{\,2}\,\mathsf{Sin}\,[\,t\,\omega\,]^{\,2}\big)
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\sqrt{\frac{1}{1 + \cos[2\alpha]}} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t}\,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t}\,\omega] + \frac{1}{2} \cos[2\alpha] + \frac{1}{2} \cos[2
                                 M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] +
                                                           \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
(i \cos[\alpha] \cot[\alpha] \csc[t \omega]^2 (4 MO - 2 MO \cos[2 t \omega] + MO \cos[2 \alpha - 2 t \omega] +
                    M0 Cos [2 \alpha + 2 t \omega] - 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                    2 M0 Cos [2 \alpha] Cos [\alpha – t \omega] 2 Sec [\alpha] 2 – 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 –
                    2 M0 Cos [2 \alpha] Sec [\alpha] <sup>2</sup> Sin [t \omega] <sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2 (-6-2 \cos[2 \alpha] +
                                              2 Cos [2 t \omega] - Cos [2 \alpha - 2 t \omega] - Cos [2 \alpha + 2 t \omega]) Sin [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup>)
            (-4 \text{ M0} + 2 \text{ M0} \cos [2 \text{ t} \omega] - \text{M0} \cos [2 \alpha - 2 \text{ t} \omega] - \text{M0} \cos [2 \alpha + 2 \text{ t} \omega] +
                    2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                    2 M0 Sec [\alpha]^2 Sin [t\omega]^2 + 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                    2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+
                                              Cos[2\alpha + 2t\omega] Sin[\alpha]^2 Sin[t\omega]^2)
            (4 \text{ MO } \omega \text{ Sin}[2 \text{ t} \omega] + 2 \text{ MO } \omega \text{ Sin}[2 \alpha - 2 \text{ t} \omega] - 2 \text{ MO } \omega \text{ Sin}[2 \alpha + 2 \text{ t} \omega] +
                     (\sqrt{2} (2 M0^2 \omega \cos[t \omega] (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                                                      \cos[2\alpha + 2t\omega]) \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2
                                               (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])))
                         (\sqrt{M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] +
                                                  \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2))))
    \left[64\,\text{M0}\,\left(1+\cos{[2\,\alpha]}\right)^2\,\sqrt{\,\left(\text{M0}^2\,\left(6+2\cos{[2\,\alpha]}-2\cos{[2\,t\,\omega]}\right)+\cos{[2\,\omega]}\right)}\right]
                                     2 \alpha - 2 t \omega] + Cos [2 \alpha + 2 t \alpha]) Sin [\alpha]^2 Sin [t \alpha]^2)
           \sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                                M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{\left(\text{M0}^2\left(\text{6 + 2 Cos}\left[\text{2 }\alpha\right]\text{ - 2 Cos}\left[\text{2 t }\omega\right]\right.\right)} +
                                                          \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
\left[\dot{\mathbf{1}} \cos[\alpha] \cot[\alpha] \csc[\dot{\mathbf{1}} \omega]^2 \left(-4 \,\text{MØ} + 2 \,\text{MØ} \cos[2 \,\dot{\mathbf{1}} \omega] - \text{MØ} \cos[2 \,\alpha - 2 \,\dot{\mathbf{1}} \omega] - \right]\right]
                    M0 Cos [2 \alpha + 2 t \omega] + 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                    2 M0 Cos [2 \alpha] Cos [\alpha – t \omega] 2 Sec [\alpha] 2 + 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 +
                    2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2(-6-2\cos[2\alpha]+
                                              2 \cos [2 \pm \omega] - \cos [2 \alpha - 2 \pm \omega] - \cos [2 \alpha + 2 \pm \omega]) \sin [\alpha]^{2} \sin [\pm \omega]^{2}
            \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                                 M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                          \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
            [-4 \text{ M0 } \omega \text{ Cos}[t \omega] \text{ Sec}[\alpha]^2 \text{ Sin}[t \omega] - 4 \text{ M0 } \omega \text{ Cos}[2 \alpha] \text{ Cos}[t \omega] \text{ Sec}[\alpha]^2
                         Sin[t\omega] + 4 M0 \omega Sin[2 t\omega] + 2 M0 \omega Sin[2 \alpha - 2 t\omega] -
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4 \text{ MO } \omega \text{ Cos} [\alpha - t \omega] \text{ Sec} [\alpha]^2 \text{ Sin} [\alpha - t \omega] - 4 \text{ MO } \omega \text{ Cos} [2 \alpha]
              Cos[\alpha - t\omega] Sec[\alpha]^2 Sin[\alpha - t\omega] - 2 MO \omega Sin[2 \alpha + 2 t\omega] +
            (\sqrt{2} (2 \text{ M})^2 \omega \cos[t \omega] (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                               \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2
                           (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega]))
              (\sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha]}
                            \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)))
  (32 \text{ MO} (1 + \cos[2 \alpha]) \sqrt{(\text{MO}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                  \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2) -
|\dot{\mathbf{n}} \cos[\alpha] \cot[\alpha] \csc[\mathsf{t} \omega]^2 \left(4 \, \mathsf{M0} - 2 \, \mathsf{M0} \cos[2 \, \mathsf{t} \omega] + \mathsf{M0} \cos[2 \, \alpha - 2 \, \mathsf{t} \omega] + \mathsf{M0} \cos[2 \, \alpha] \right)
           M0 Cos [2 \alpha + 2 t \omega] - 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
           2 M0 Cos [2 \alpha] Cos [\alpha - t \omega] 2 Sec [\alpha] 2 - 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 -
           2 M0 Cos [2 \alpha] Sec [\alpha] ^{2} Sin [t \omega] ^{2} + 2 \sqrt{2} \sqrt{-M0^{2}(-6-2\cos[2\alpha]+}
                          2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
      \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                  M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{ (M0^2 (6 + 2 Cos [2 <math>\alpha] - 2 Cos [2 t \omega] +
                                 \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
       (4 \text{ M0 } \omega \text{ Cos} [t \omega] \text{ Sec} [\alpha]^2 \text{ Sin} [t \omega] + 4 \text{ M0 } \omega \text{ Cos} [2 \alpha] \text{ Cos} [t \omega] \text{ Sec} [\alpha]^2
              Sin[t\omega] - 4M0\omega Sin[2t\omega] - 2M0\omega Sin[2\alpha - 2t\omega] +
           4 M0 \omega Cos [\alpha – t \omega] Sec [\alpha]<sup>2</sup> Sin [\alpha – t \omega] + 4 M0 \omega Cos [2 \alpha]
              Cos[\alpha - t\omega] Sec[\alpha]^2 Sin[\alpha - t\omega] + 2 MO \omega Sin[2 \alpha + 2 t\omega] +
            (\sqrt{2} (2 M0^2 \omega \cos[t \omega] (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                              \mathsf{Cos}\left[2\,\alpha+2\,\mathsf{t}\,\omega\right]\big)\,\mathsf{Sin}\left[\alpha\right]^{2}\,\mathsf{Sin}\left[\mathsf{t}\,\omega\right]\,+\,\mathsf{M0}^{2}\,\mathsf{Sin}\left[\alpha\right]^{2}\,\mathsf{Sin}\left[\mathsf{t}\,\omega\right]^{2}
                           (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])))
              (\sqrt{M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] +
                            \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)))
  (32 \text{ MO} (1 + \cos[2 \alpha]) \sqrt{(\text{MO}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                  \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2) -
\left[ i \cos \left[ \alpha \right] \cot \left[ \alpha \right] \csc \left[ t \omega \right]^{2} \sqrt{\left( \frac{1}{1 + \cos \left[ 2 \alpha \right]} \left( -2 + 4 M0 - 2 \cos \left[ 2 \alpha \right] - 4 M0 \right) \right]} \right]
                  2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] +
                  2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+
                                \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
       \left(-4\,\text{M0} + 2\,\text{M0}\,\text{Cos}\,[2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha - 2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha + 2\,\text{t}\,\omega] + \right)
           2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
           2 M0 Sec [\alpha]^2 Sin [t\omega]^2 + 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
           2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega])}
                     Sin[\alpha]^2 Sin[t\omega]^2) \left(-4 M0 \omega Cos[t\omega] Sec[\alpha]^2 Sin[t\omega] -
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4 M0 \omega Cos [2 \alpha] Cos [t \omega] Sec [\alpha]<sup>2</sup> Sin [t \omega] + 4 M0 \omega Sin [2 t \omega] +
                               2 M0 \omega Sin[2 \alpha - 2 t \omega] - 4 M0 \omega Cos[\alpha - t \omega] Sec[\alpha]<sup>2</sup> Sin[\alpha - t \omega] -
                               4 M0 \omega Cos [2 \alpha] Cos [\alpha – t \omega] Sec [\alpha] <sup>2</sup> Sin [\alpha – t \omega] – 2 M0 \omega Sin [2 \alpha + 2 t \omega] +
                                (\sqrt{2} (-2 \, \text{M}0^2 \, \omega \, \text{Cos} \, [\text{t} \, \omega] (-6 - 2 \, \text{Cos} \, [\text{2} \, \alpha] + 2 \, \text{Cos} \, [\text{2} \, \text{t} \, \omega] - \text{Cos} \, [\text{2} \, \alpha - 2 \, \text{t} \, \omega] -
                                                                   \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega] - M0^2 \sin[\alpha]^2 \sin[t\omega]^2
                                                           \left(-4\omega \operatorname{Sin}[2 \operatorname{t} \omega] - 2\omega \operatorname{Sin}[2\alpha - 2 \operatorname{t} \omega] + 2\omega \operatorname{Sin}[2\alpha + 2 \operatorname{t} \omega]\right)\right)
                                    (\sqrt{-M0^2 (-6-2 \cos[2 \alpha] + 2 \cos[2 t \omega] - \cos[2 \alpha - 2 t \omega]} - \cos[2 \alpha - 2 t \omega] - 
                                                              \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2))
             (32 \text{ MO} (1 + \cos[2 \alpha]) \sqrt{(\text{MO}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                                            \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2) +
          \left[ i \cos \left[ \alpha \right] \cot \left[ \alpha \right] \csc \left[ t \omega \right]^{2} \sqrt{\left( \frac{1}{1 + \cos \left[ 2 \alpha \right]} \left( -2 + 4 M0 - 2 \cos \left[ 2 \alpha \right] - 4 M0 \right) \right]} \right]
                                            2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
                                            2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+
                                                                       \cos [2\alpha + 2t\omega] \sin [\alpha]^2 \sin [t\omega]^2
                       (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
                               2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                               2 M0 Sec [\alpha]^2 Sin [t \omega]^2 – 2 M0 Cos [2 \alpha] Sec [\alpha]^2 Sin [t \omega]^2 +
                               2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega])}
                                                Sin[\alpha]^2 Sin[t\omega]^2) (4 M0 \omega Cos[t\omega] Sec[\alpha]^2 Sin[t\omega] +
                               4 \text{ MO } \omega \text{ Cos} [2 \alpha] \text{ Cos} [\text{t} \omega] \text{ Sec} [\alpha]^2 \text{ Sin} [\text{t} \omega] - 4 \text{ MO} \omega \text{ Sin} [2 \text{t} \omega] -
                               2 M0 \omega Sin[2 \alpha – 2 t \omega] + 4 M0 \omega Cos[\alpha – t \omega] Sec[\alpha]<sup>2</sup> Sin[\alpha – t \omega] +
                               4 M0 \omega Cos [2 \alpha] Cos [\alpha - t \omega] Sec [\alpha] <sup>2</sup> Sin [\alpha - t \omega] + 2 M0 \omega Sin [2 \alpha + 2 t \omega] +
                                (\sqrt{2} (-2 \, \text{M}0^2 \, \omega \, \text{Cos} \, [\text{t} \, \omega] (-6 - 2 \, \text{Cos} \, [\text{2} \, \alpha] + 2 \, \text{Cos} \, [\text{2} \, \text{t} \, \omega] - \text{Cos} \, [\text{2} \, \alpha - 2 \, \text{t} \, \omega] -
                                                                   \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega] - M0^2 \sin [\alpha]^2 \sin [t \omega]^2
                                                           (-4 \omega \sin[2 t \omega] - 2 \omega \sin[2 \alpha - 2 t \omega] + 2 \omega \sin[2 \alpha + 2 t \omega])))
                                    (\sqrt{-M0^2 (-6-2 \cos[2 \alpha] + 2 \cos[2 t \omega] - \cos[2 \alpha - 2 t \omega]} -
                                                              \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2))
             (32 \text{ MO } (1 + \cos[2 \alpha]) \sqrt{(\text{MO}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                                            Cos[2\alpha + 2t\omega] Sin[\alpha]^2 Sin[t\omega]^2)
\left(-\left(\left[\pm M0\left(1+\cos\left[2\,\alpha\right]\right)\,\operatorname{Sec}\left[\alpha\right]\,\operatorname{Sin}\left[\pm\,\omega\right]^{\,2}\,\sqrt{\left(\frac{1}{1+\cos\left[2\,\alpha\right]}\,\left(-2+4\,M0-12\right)^{\,2}\right)}\right)\right)
                                                     2 \cos [2 \alpha] - 2 M0 \cos [2 t \omega] + M0 \cos [2 \alpha - 2 t \omega] +
                                                     M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 2 \cos [2 \alpha])}
                                                                                \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                              Tan[\alpha] / (2\sqrt{M0^2(6+2Cos[2\alpha]-2Cos[2t\omega]+Cos[2\alpha-2t\omega]+}
                                                    \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
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\left( i \, MO \, \left( 1 + Cos \left[ 2 \, \alpha \right] \right) \, Sec \left[ \alpha \right] \, Sin \left[ t \, \omega \right]^{2} \, \sqrt{ \left( \frac{1}{1 + Cos \left[ 2 \, \alpha \right]} \, \left( -2 + 4 \, MO - 1 \right) \right) } \right) 
                                                                                     2 \cos [2 \alpha] - 2 M0 \cos [2 t \omega] + M0 \cos [2 \alpha - 2 t \omega] + M0 \cos [2 \alpha + 2 t \omega] +
                                                                                    2\sqrt{2}\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]}
                                                                                                              \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2) \arctan[\alpha]
                                                      (2\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
                                                                           Sin[\alpha]^2 Sin[t \omega]^2))
L12[\alpha_{-}, \omega_{-}, t_{-}, M0_{-}, s_{-}, r_{-}, \theta_{-}] := \frac{1}{MQ} Sec[\alpha]^{2} (Cos[\alpha + t\omega]^{2} + Sin[t\omega]^{2})
               s + \left( \sqrt{\frac{1}{1 + \cos[2\alpha]}} \left( -2 + 4 \, \text{M0} - 2 \, \cos[2\alpha] - 2 \, \text{M0} \, \cos[2 \, \text{t} \, \omega] + \text{M0} \, \cos[2\alpha - 2 \, \text{t} \, \omega] + \right) \right)
                                                                       M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                                                 \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
                                                  (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
                                                          2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Sec [\alpha]^2
                                                             2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]  \sin [\alpha]^2 \sin [t \omega]^2 
                                         (8 \sqrt{M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega])}
                                                              Sin[\alpha]^2 Sin[t\omega]^2) +
                                    \sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2\,t\,\omega] + \text{M0} \,\cos[2\,\alpha - 2\,t\,\omega] + \frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2\,t\,\omega] + \frac{1}{1 + \cos[2\alpha]} + \frac{1}{1 + \cos[2\alpha]
                                                                       M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                                                 \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                                                  (-4 \text{ M0} + 2 \text{ M0 Cos} [2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha - 2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha + 2 \text{ t} \omega] +
                                                          2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Sec [\alpha]^2
                                                              \sin[t \omega]^2 + 2 M0 \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 1)^2}
                                                                                   2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega] \sin[\alpha]^2 \sin[t \omega]^2
                                         \left(8\,\sqrt{\,\left(\text{M0}^{2}\,\left(\text{6}+2\,\text{Cos}\,[\,2\,\alpha\,]\,-2\,\text{Cos}\,[\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,-\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,+\,2\,\text{t}\,\omega\,]\,\right)}\right.
                                                             Sin[\alpha]^2 Sin[t \omega]^2)
                            s = (-4 \text{ M0} + 2 \text{ M0} \cos[2 t \omega] - \text{M0} \cos[2 \alpha - 2 t \omega] - \text{M0} \cos[2 \alpha + 2 t \omega] + 2 \text{M0} \cos[\alpha - t \omega]^2
                                                                           \operatorname{Sec}[\alpha]^2 + 2 \operatorname{M0} \operatorname{Cos}[2 \alpha] \operatorname{Cos}[\alpha - t \omega]^2 \operatorname{Sec}[\alpha]^2 + 2 \operatorname{M0} \operatorname{Sec}[\alpha]^2 \operatorname{Sin}[t \omega]^2 +
                                                                       2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2(-6-2\cos[2\alpha]+
                                                                                                 2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
                                                              \sqrt{\left(\frac{1}{1+\cos[2\alpha]}\left(-2+4\,\text{M0}-2\cos[2\alpha]-2\,\text{M0}\cos[2\,\text{t}\,\omega]+\text{M0}\cos[2\,\alpha-2\,\text{t}\,\omega]+\right.\right.}
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M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                        \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2))
          (8\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
                     Sin[\alpha]^2 Sin[t\omega]^2) +
         \left(4\,\text{MO}-2\,\text{MO}\,\text{Cos}\,[2\,	ext{t}\,\omega]+\text{MO}\,\text{Cos}\,[2\,lpha-2\,	ext{t}\,\omega]+\text{MO}\,\text{Cos}\,[2\,lpha+2\,	ext{t}\,\omega]-
ight.
                   2 M0 Cos [\alpha – t \omega] <sup>2</sup> Sec [\alpha] <sup>2</sup> – 2 M0 Cos [2 \alpha] Cos [\alpha – t \omega] <sup>2</sup> Sec [\alpha] <sup>2</sup> – 2 M0 Sec [\alpha] <sup>2</sup>
                     \sin[t \omega]^2 - 2 M0 \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{-M0^2 (-6 - 2 \cos[2 \alpha] + 2 \cos[2 \alpha])}
                                 2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
              \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\,\alpha] - 2 \,\text{M0} \,\cos[2\,t\,\omega] + \text{M0} \,\cos[2\,\alpha - 2 \,t\,\omega] + \right)}
                          M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                        \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2))
          \left(8\,\sqrt{\,\left(\text{M0}^{2}\,\left(\text{6}+2\,\text{Cos}\,[\,2\,\alpha\,]\,-2\,\text{Cos}\,[\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,-\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,+\,2\,\text{t}\,\omega\,]\,\right)}\right.
                     Sin[\alpha]^2 Sin[t\omega]^2) +
e^{-i\theta}r \left[\left(i\cos[\alpha]\cos[\alpha]\cos[t\omega]^2\left(-4\,\text{M0}+2\,\text{M0}\cos[2\,t\omega]-\text{M0}\cos[2\,\alpha-2\,t\omega]-\right)\right]
                   M0 Cos [2 \alpha + 2 t \omega] + 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                   2 M0 Cos [2 \alpha] Cos [\alpha – t \omega] <sup>2</sup> Sec [\alpha] <sup>2</sup> + 2 M0 Sec [\alpha] <sup>2</sup> Sin [t \omega] <sup>2</sup> +
                   2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2(-6-2\cos[2\alpha]+
                                 2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
              \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \,\cos[2 \,\text{t}\,\omega] + \text{M0} \,\cos[2\alpha - 2 \,\text{t}\,\omega] + \right)}
                          M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 2 \cos [2 \alpha])}
                                        \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
               (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
                   2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Sec [\alpha]^2
                     \sin[t \omega]^2 - 2 MO \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{MO^2 (6 + 2 \cos[2 \alpha] - 1)^2}
                                 2 \cos[2t\omega] + \cos[2\alpha - 2t\omega] + \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2
          (32 \text{ M0 } (1 + \cos[2 \alpha]) \sqrt{(\text{M0}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                          \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2) -
         \dot{\mathbf{n}} Cos[\alpha] Cot[\alpha] Csc[t\omega]<sup>2</sup> (4 M0 – 2 M0 Cos[2 t\omega] + M0 Cos[2 \alpha – 2 t\omega] +
                   M0 Cos [2 \alpha + 2 t \omega] - 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                   2 M0 Cos [2 \alpha] Cos [\alpha – t \omega] 2 Sec [\alpha] 2 – 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 –
                   2 M0 Cos [2 \alpha] Sec [\alpha] <sup>2</sup> Sin [t \omega] <sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2 (-6-2 \cos[2 \alpha] +
                                 2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
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\sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t}\,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t}\,\omega] + \right)}
                               M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                             \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                    (-4 \text{ M0} + 2 \text{ M0 Cos} [2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha - 2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha + 2 \text{ t} \omega] +
                        2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Sec [\alpha]^2
                          \sin[t \, \omega]^2 + 2 \, MO \, \cos[2 \, \alpha] \, \sec[\alpha]^2 \, \sin[t \, \omega]^2 + 2 \, \sqrt{2} \, \sqrt{\left(MO^2 \, \left(6 + 2 \, \cos[2 \, \alpha] - 1 \, \cos[2 \, \alpha] \right)^2 + 2 \, MO^2 \, \left(6 + 2 \, \cos[2 \, \alpha] - 1 \, \cos[2 \, \alpha] \right)^2}
                                      2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega] \sin[\alpha]^{2} \sin[t \omega]^{2}
               \left(32\,\text{M0}\,\left(1+\cos{[2\,\alpha]}\,\right)\,\sqrt{\,\left(\text{M0}^2\,\left(6+2\cos{[2\,\alpha]}\,-2\cos{[2\,\text{t}\,\omega]}\,+\cos{[2\,\alpha-2\,\text{t}\,\omega]}\,+\right.\right.\right.}
                               \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2)
\left[\dot{\mathbf{L}}\cos[\alpha]\cos[\alpha]\cos[t\omega]^2\right] \left(-4\,\text{M0}+2\,\text{M0}\cos[2\,t\omega]-\text{M0}\cos[2\,\alpha-2\,t\omega]\right]
                 M0 Cos [2 \alpha + 2 t \omega] + 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                 2 M0 Cos [2 \alpha] Cos [\alpha – t \omega] 2 Sec [\alpha] 2 + 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 +
                 2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2 (-6-2 \cos[2 \alpha] +
                               2 Cos [2 t \omega] - Cos [2 \alpha - 2 t \omega] - Cos [2 \alpha + 2 t \omega]) Sin [\alpha] 2 Sin [t \omega] 2)
            \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                        M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 2 \cos [2 \alpha])}
                                      \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
             (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
                 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                 2 M0 Sec [\alpha]^2 Sin [t\omega]^2 – 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                 2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+
                               \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2)
        (32 \text{ M0} (1 + \cos[2 \alpha]) \sqrt{(\text{M0}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                        \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2) -
      \dot{\mathbf{n}} Cos[\alpha] Cot[\alpha] Csc[t\omega]<sup>2</sup> (4 M0 – 2 M0 Cos[2 t\omega] + M0 Cos[2 \alpha – 2 t\omega] +
                 M0 Cos [2 \alpha + 2 t \omega] - 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                 2 M0 Cos [2 \alpha] Cos [\alpha – t \omega]<sup>2</sup> Sec [\alpha]<sup>2</sup> – 2 M0 Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> –
                 2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2(-6-2\cos[2\alpha]+
                               2 Cos [2 t \omega] - Cos [2 \alpha - 2 t \omega] - Cos [2 \alpha + 2 t \omega]) Sin [\alpha] <sup>2</sup> Sin [t \omega] <sup>2</sup>)
            \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2\,t\,\omega] + \text{M0} \,\cos[2\,\alpha - 2 \,t\,\omega] + \right)}
                        M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                      \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
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(-4 \text{ M0} + 2 \text{ M0 Cos} [2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha - 2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha + 2 \text{ t} \omega] +
                 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                 2 M0 Sec [\alpha]^2 Sin [t \omega]^2 + 2 M0 Cos [2 \alpha] Sec [\alpha]^2 Sin [t \omega]^2 +
                 2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+}
                                \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2
       \left(32\,\text{M0}\,\left(1+\cos{[2\,\alpha]}\right)\,\sqrt{\,\left(\text{M0}^2\,\left(6+2\cos{[2\,\alpha]}\,-2\cos{[2\,t\,\omega]}\,+\cos{[2\,\alpha\,-2\,t\,\omega]}\,+\right.\right.\right.}
                        Cos[2\alpha + 2t\omega] Sin[\alpha]^2 Sin[t\omega]^2)
\left[e^{i\Theta} r\left[\left(-4 M \theta + 2 M \theta \cos \left[2 t \omega\right] - M \theta \cos \left[2 \alpha - 2 t \omega\right] - M \theta \cos \left[2 \alpha + 2 t \omega\right] + M \theta \cos \left[2 \alpha + 2 t \omega\right] + M \theta \cos \left[2 \alpha + 2 t \omega\right] + M \theta \cos \left[2 \alpha + 2 t \omega\right]\right]\right]
                         2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Sec [\alpha]^2
                           \sin[t \omega]^2 + 2 M0 \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{-M0^2 (-6 - 2 \cos[2 \alpha] + 2 \cos[2 \alpha])}
                                        2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
                   \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                                M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                               \cos[2\alpha - 2t\omega] + \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2
               \left(8\,\sqrt{\,\left(\text{M0}^{2}\,\left(\text{6}+2\,\text{Cos}\,[\,2\,\alpha\,]\,-2\,\text{Cos}\,[\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,-\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,+\,2\,\text{t}\,\omega\,]\,\right)}\right.
                           Sin[\alpha]^2 Sin[t\omega]^2) +
             \left(4 \text{ MO} - 2 \text{ MO Cos}[2 \text{ t}\omega] + \text{MO Cos}[2 \alpha - 2 \text{ t}\omega] + \text{MO Cos}[2 \alpha + 2 \text{ t}\omega] - \right)
                         2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Sec [\alpha]^2
                           \sin[t \omega]^2 - 2 M0 \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{-M0^2 (-6 - 2 \cos[2 \alpha] + 2 \cos[2 \alpha])}
                                        2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
                   \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t}\,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t}\,\omega] + \right)}
                                M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                               \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]  \sin [\alpha]^2 \sin [t\omega]^2 
               \left(8\,\sqrt{\,\left(\text{M0}^{2}\,\left(\text{6}+2\,\text{Cos}\,[\,2\,\alpha\,]\,-2\,\text{Cos}\,[\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,-\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,+\,2\,\text{t}\,\omega\,]\,\right)}\right.
                           Sin[\alpha]^2 Sin[t\omega]^2) +
    s \left[\left[\dot{\mathbf{n}} \cos[\alpha] \cot[\alpha] \csc[t\omega]^2 \left(-4 \,\mathrm{M0} + 2 \,\mathrm{M0} \cos[2 \,t\omega] - \mathrm{M0} \cos[2 \,\alpha - 2 \,t\omega] - \right]\right]
                        M0 Cos [2 \alpha + 2 t \omega] + 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                         2 M0 Cos [2 \alpha] Cos [\alpha – t \omega] 2 Sec [\alpha] 2 + 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 +
                         2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2\sqrt{2} \sqrt{(-M0^2 (-6-2 \cos[2 \alpha] +
                                        2 Cos [2 t \omega] - Cos [2 \alpha - 2 t \omega] - Cos [2 \alpha + 2 t \omega]) Sin [\alpha] 2 Sin [t \omega] 2)
                   \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                                M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
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\cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
                      (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
                          2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Sec [\alpha]^2
                            \sin[t \omega]^2 - 2 M0 \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 1)^2}
                                        2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]  \sin [\alpha]^2 \sin [t \omega]^2 
                 (32 \text{ MO} (1 + \cos[2 \alpha]) \sqrt{(\text{MO}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                                 \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2) -
               |\dot{\mathbf{n}} \cos[\alpha] \cot[\alpha] \csc[\mathsf{t} \omega]^2 \left(4 \, \mathsf{M0} - 2 \, \mathsf{M0} \cos[2 \, \mathsf{t} \omega] + \mathsf{M0} \cos[2 \, \alpha - 2 \, \mathsf{t} \omega] + \mathsf{M0} \cos[2 \, \alpha] \right)
                          M0 Cos [2 \alpha + 2 t \omega] - 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                          2 M0 Cos [2 \alpha] Cos [\alpha – t \omega] 2 Sec [\alpha] 2 – 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 –
                          2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2(-6-2\cos[2\alpha]+
                                         2 Cos [2 t \omega] - Cos [2 \alpha - 2 t \omega] - Cos [2 \alpha + 2 t \omega]) Sin [\alpha] <sup>2</sup> Sin [t \omega] <sup>2</sup>)
                     \sqrt{\left(\frac{1}{1 + \cos{[2\,\alpha]}} \left(-2 + 4\,\text{M0} - 2\,\cos{[2\,\alpha]} - 2\,\text{M0}\cos{[2\,\text{t}\,\omega]} + \text{M0}\cos{[2\,\alpha - 2\,\text{t}\,\omega]} + \right.\right.}
                                 M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 2 \cos [2 \alpha])}
                                                \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                      (-4 \text{ M0} + 2 \text{ M0 Cos} [2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha - 2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha + 2 \text{ t} \omega] +
                          2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Sec [\alpha]^2
                            \sin[t \omega]^2 + 2 M0 \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 1)^2}
                                        2 \cos[2t\omega] + \cos[2\alpha - 2t\omega] + \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2)
                 (32 \text{ M0} (1 + \cos[2 \alpha]) \sqrt{(\text{M0}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                                Cos[2\alpha + 2t\omega]) Sin[\alpha]^2 Sin[t\omega]^2))
\dot{\mathbb{1}}\left[\left[\dot{\mathbb{1}}\cos\left[\alpha\right]\cot\left[\alpha\right]\csc\left[\mathsf{t}\,\omega\right]^{2}\left(-4\,\mathsf{M0}+2\,\mathsf{M0}\cos\left[2\,\mathsf{t}\,\omega\right]-\mathsf{M0}\cos\left[2\,\alpha-2\,\mathsf{t}\,\omega\right]-\right]\right]
                          M0 Cos [2 \alpha + 2 t \omega] + 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                          2 M0 Cos [2 \alpha] Cos [\alpha – t \omega] 2 Sec [\alpha] 2 + 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 +
                          2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2\sqrt{2} \sqrt{(-M0^2 (-6-2 \cos[2 \alpha] +
                                         2 \cos [2 \pm \omega] - \cos [2 \alpha - 2 \pm \omega] - \cos [2 \alpha + 2 \pm \omega]) \sin [\alpha]^{2} \sin [\pm \omega]^{2}
                     \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2\,t\,\omega] + \text{M0} \,\cos[2\,\alpha - 2\,t\,\omega] + \right)}
                                 M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] +
                                               Cos [2\alpha - 2t\omega] + Cos [2\alpha + 2t\omega]) Sin [\alpha]^2 Sin [t\omega]^2)
                      (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
                          2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Sec [\alpha]^2
                            \sin[t \omega]^2 - 2 \text{ MO } \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{\text{MO}^2 (6 + 2 \cos[2 \alpha] - 1)^2}
                                        2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega] \sin[\alpha]^{2} \sin[t \omega]^{2}
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(32 \text{ M0 } (1 + \cos[2 \alpha]) \sqrt{(\text{M0}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                      \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2) -
     \dot{\mathbf{n}} Cos[\alpha] Cot[\alpha] Csc[\mathbf{t} \omega] ^2 (4 M0 – 2 M0 Cos[2 \mathbf{t} \omega] + M0 Cos[2 \alpha – 2 \mathbf{t} \omega] +
               M0 Cos [2 \alpha + 2 t \omega] - 2 M0 Cos [\alpha - t \omega] 2 Sec [\alpha] 2 -
               2 M0 Cos [2\alpha] Cos [\alpha - t\omega]^2 Sec [\alpha]^2 - 2 M0 Sec [\alpha]^2 Sin [t\omega]^2 -
               2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2\sqrt{2} \sqrt{(-M0^2 (-6-2 \cos[2 \alpha] +
                              2 \cos [2 \pm \omega] - \cos [2 \alpha - 2 \pm \omega] - \cos [2 \alpha + 2 \pm \omega]) \sin [\alpha]^2 \sin [\pm \omega]^2
          \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{MO} - 2 \,\cos[2\alpha] - 2 \,\text{MO} \,\cos[2 \,t \,\omega] + \text{MO} \,\cos[2\alpha - 2 \,t \,\omega] + \right)}
                      M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                    \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
           (-4 \text{ M0} + 2 \text{ M0 Cos} [2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha - 2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha + 2 \text{ t} \omega] +
               2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Sec [\alpha]^2
                 \sin[t \, \omega]^2 + 2 \, MO \, \cos[2 \, \alpha] \, \sec[\alpha]^2 \, \sin[t \, \omega]^2 + 2 \, \sqrt{2} \, \sqrt{MO^2 \, (6 + 2 \, \cos[2 \, \alpha] - 1)^2}
                             2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega] \sin[\alpha]^2 \sin[t \omega]^2
       \left(32\,\text{M0}\,\left(1+\cos{[2\,\alpha]}\right)\,\sqrt{\,\left(\text{M0}^2\,\left(6+2\cos{[2\,\alpha]}\,-2\cos{[2\,t\,\omega]}\,+\cos{[2\,\alpha\,-2\,t\,\omega]}\,+\right)\right)}\right.
                      Cos[2\alpha + 2t\omega] Sin[\alpha]^2 Sin[t\omega]^2)
2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Sec [\alpha]^2
                      \sin[t \omega]^2 + 2 M0 \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{-M0^2 (-6 - 2 \cos[2 \alpha] + 2 \cos[2 \alpha])}
                                  2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
               \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2 \,t \,\omega] + \text{M0} \,\cos[2 \,\alpha - 2 \,t \,\omega] + \right)}
                           M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 2 \cos [2 \alpha])}
                                        \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega] \right) \sin [\alpha]^2 \sin [t \omega]^2 
                \left(2\ \text{MO}^2\ \omega\ \text{Cos}\ [\text{t}\ \omega]\ \left(6+2\ \text{Cos}\ [\text{2}\ \alpha]\ -2\ \text{Cos}\ [\text{2}\ \text{t}\ \omega]\ +\ \text{Cos}\ [\text{2}\ \alpha-2\ \text{t}\ \omega]\ +\right.
                          \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega] + M0^2 \sin [\alpha]^2 \sin [t \omega]^2
                       (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega]))
           (16 (M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega])
                      \operatorname{Sin}[\alpha]^{2} \operatorname{Sin}[\mathsf{t} \omega]^{2})^{3/2}
     \left[ (4 \, MO - 2 \, MO \, Cos \, [2 \, t \, \omega] + MO \, Cos \, [2 \, \alpha - 2 \, t \, \omega] + MO \, Cos \, [2 \, \alpha + 2 \, t \, \omega] - \right]
               2 M0 Cos [\alpha - t\omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2\alpha] Cos [\alpha - t\omega]^2 Sec [\alpha]^2 - 2 M0 Sec [\alpha]^2
                 \sin[t \omega]^2 - 2 MO \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{-MO^2 (-6 - 2 \cos[2 \alpha] + 2 \cos[2 \alpha])}
                             2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
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\sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2\,t\,\omega] + \text{M0} \,\cos[2\,\alpha - 2 \,t\,\omega] + \right)}
                  M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
       (2 MO^2 \omega Cos[t \omega] (6 + 2 Cos[2 \alpha] - 2 Cos[2 t \omega] + Cos[2 \alpha - 2 t \omega] +
                  \cos [2 \alpha + 2 \dot{t} \omega]) \sin [\alpha]^2 \sin [t \omega] + M0^2 \sin [\alpha]^2 \sin [t \omega]^2
              (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega]))
  \left(16 \, \left(\text{M0}^2 \, \left(6 + 2 \, \text{Cos} \, [\, 2 \, \alpha] \, - 2 \, \text{Cos} \, [\, 2 \, \text{t} \, \omega] \, + \, \text{Cos} \, [\, 2 \, \alpha - 2 \, \text{t} \, \omega] \, + \, \text{Cos} \, [\, 2 \, \alpha + 2 \, \text{t} \, \omega] \, \right)\right)
             Sin[\alpha]^2 Sin[t\omega]^2)^{3/2} +
(-4 \text{ MO} + 2 \text{ MO} \cos [2 \text{ t} \omega] - \text{MO} \cos [2 \alpha - 2 \text{ t} \omega] - \text{MO} \cos [2 \alpha + 2 \text{ t} \omega] +
           2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Sec [\alpha]^2
             \sin[t \omega]^2 + 2 M0 \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{(-M0^2 (-6 - 2 \cos[2 \alpha] + 2 \cos[2 \alpha])^2 + 2 \cos[2 \alpha])}
                         2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
       (4 \text{ MO } \omega \text{ Sin}[2 \text{ t} \omega] + 2 \text{ MO } \omega \text{ Sin}[2 \alpha - 2 \text{ t} \omega] - 2 \text{ MO } \omega \text{ Sin}[2 \alpha + 2 \text{ t} \omega] - 2 \text{ MO } \omega
           (\sqrt{2} (2 M0^2 \omega Cos[t \omega] (6 + 2 Cos[2 \alpha] - 2 Cos[2 t \omega] + Cos[2 \alpha - 2 t \omega] +
                              \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2
                          (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])))
              (\sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                           \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)))
  16 (1 + \cos[2 \alpha]) \sqrt{(M0^2 (6 + 2\cos[2 \alpha] - 2\cos[2 t \omega] + \cos[2 \alpha - 2t \omega] + \cos[2 \alpha] + \cos[2 \alpha]}
                  \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
      \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                  M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{\left(\text{M0}^2\left(6 + 2\cos\left[2\,\alpha\right] - 2\cos\left[2\,\text{t}\,\omega\right]\right.} +
                                \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
(4 MO - 2 MO Cos [2 t \omega] + MO Cos [2 \alpha - 2 t \omega] + MO Cos [2 \alpha + 2 t \omega] - 2 MO
             \cos [\alpha - t \omega]^2 \sec [\alpha]^2 - 2 \operatorname{MO} \cos [2 \alpha] \cos [\alpha - t \omega]^2 \sec [\alpha]^2 - 2 \operatorname{MO} \sec [\alpha]^2
             \sin[t \omega]^2 - 2 \text{ MO } \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{-\text{MO}^2 (-6 - 2 \cos[2 \alpha] + 2 \cos[2 \alpha])}
                         2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
       (4 \text{ MO } \omega \text{ Sin}[2 \text{ t} \omega] + 2 \text{ MO } \omega \text{ Sin}[2 \alpha - 2 \text{ t} \omega] - 2 \text{ MO } \omega \text{ Sin}[2 \alpha + 2 \text{ t} \omega] +
            (\sqrt{2} (2 M0^2 \omega \cos[t \omega] (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                              \cos[2\alpha + 2t\omega]) \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2
                          (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])))
              (\sqrt{M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] +
                           \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2)))/
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16 (1 + \cos[2 \alpha]) \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                                   \cos [2\alpha + 2t\omega] \sin [\alpha]^2 \sin [t\omega]^2
           \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{MØ} - 2 \cos[2\alpha] - 2 \,\text{MØ} \cos[2 \,\text{t}\,\omega] + \text{MØ} \cos[2\alpha - 2 \,\text{t}\,\omega] + \right)}
                                   M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                               \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
\sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{MØ} - 2 \,\cos[2\alpha] - 2 \,\text{MØ} \,\cos[2 \,t \,\omega] + \text{MØ} \,\cos[2\,\alpha - 2 \,t \,\omega] + \right)}
                                   M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                               \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]  \sin [\alpha]^2 \sin [t\omega]^2 
             \left( -4\,\text{M0}\,\omega\,\text{Cos}\,[\text{t}\,\omega]\,\,\text{Sec}\,[\alpha]^{\,2}\,\text{Sin}\,[\text{t}\,\omega]\,\,-\,4\,\text{M0}\,\omega\,\,\text{Cos}\,[2\,\alpha]\,\,\text{Cos}\,[\text{t}\,\omega]\,\,\text{Sec}\,[\alpha]^{\,2}\,
                          Sin[t\omega] + 4M0\omega Sin[2t\omega] + 2M0\omega Sin[2\alpha - 2t\omega] -
                     4 \text{ MO } \omega \text{ Cos} [\alpha - t \omega] \text{ Sec} [\alpha]^2 \text{ Sin} [\alpha - t \omega] - 4 \text{ MO } \omega \text{ Cos} [2 \alpha]
                          Cos[\alpha - t\omega] Sec[\alpha]^2 Sin[\alpha - t\omega] - 2 M0 \omega Sin[2\alpha + 2 t\omega] +
                       (\sqrt{2} (-2 \text{ M})^2 \omega \cos[t \omega] (-6 - 2 \cos[2 \alpha] + 2 \cos[2 t \omega] - \cos[2 \alpha - 2 t \omega] -
                                                           \cos[2\alpha + 2t\omega]) \sin[\alpha]^2 \sin[t\omega] - M0^2 \sin[\alpha]^2 \sin[t\omega]^2
                                                  (-4 \omega \sin[2 t \omega] - 2 \omega \sin[2 \alpha - 2 t \omega] + 2 \omega \sin[2 \alpha + 2 t \omega])))
                           (\sqrt{-M0^2 (-6-2 \cos[2 \alpha] + 2 \cos[2 t \omega] - \cos[2 \alpha - 2 t \omega]} -
                                                     \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)))
   (8\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
                          Sin[\alpha]^2 Sin[t\omega]^2) +
\sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2 \,t \,\omega] + \text{M0} \,\cos[2\alpha - 2 \,t \,\omega] + \right.}
                                   M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                               \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^{2} \sin [t\omega]^{2})
             (4 \text{ MO } \omega \text{ Cos}[t \omega] \text{ Sec}[\alpha]^2 \text{ Sin}[t \omega] + 4 \text{ MO } \omega \text{ Cos}[2 \alpha] \text{ Cos}[t \omega] \text{ Sec}[\alpha]^2
                          Sin[t\omega] - 4M0\omega Sin[2t\omega] - 2M0\omega Sin[2\alpha - 2t\omega] +
                     4 M0 \omega Cos [\alpha – t \omega] Sec [\alpha]<sup>2</sup> Sin [\alpha – t \omega] + 4 M0 \omega Cos [2 \alpha]
                          \cos [\alpha - t \omega] \operatorname{Sec} [\alpha]^2 \sin [\alpha - t \omega] + 2 \operatorname{MO} \omega \sin [2 \alpha + 2 t \omega] +
                       (\sqrt{2} (-2 \,\text{M0}^2 \,\omega \,\text{Cos}\,[\text{t}\,\omega] (-6 - 2 \,\text{Cos}\,[2\,\alpha] + 2 \,\text{Cos}\,[2\,\text{t}\,\omega] - \text{Cos}\,[2\,\alpha - 2\,\text{t}\,\omega] -
                                                          \mathsf{Cos}\left[2\,\alpha + 2\,\mathsf{t}\,\omega\right]\big)\,\mathsf{Sin}\left[\alpha\right]^2\,\mathsf{Sin}\left[\mathsf{t}\,\omega\right] - \mathsf{M0}^2\,\mathsf{Sin}\left[\alpha\right]^2\,\mathsf{Sin}\left[\mathsf{t}\,\omega\right]^2
                                                  \left(-4 \omega \operatorname{Sin}[2 \operatorname{t} \omega] - 2 \omega \operatorname{Sin}[2 \alpha - 2 \operatorname{t} \omega] + 2 \omega \operatorname{Sin}[2 \alpha + 2 \operatorname{t} \omega]\right)\right)
                          (\sqrt{-M0^2 (-6-2 \cos [2 \alpha] + 2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha] + 2 \cos [2 \omega] - \cos [2 \alpha] + 2 \cos [2 \omega] - \cos [2 \alpha] + 2 \cos [2 \omega] - \cos
                                                     \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2))
    (8\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
                         Sin[\alpha]^2 Sin[t\omega]^2) +
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\left( \sqrt{\frac{1}{1 + \cos[2\alpha]}} \left( -2 + 4 \, \text{M0} - 2 \, \cos[2\alpha] - 2 \, \text{M0} \, \cos[2 \, t \, \omega] + \text{M0} \, \cos[2\alpha - 2 \, t \, \omega] + \right) \right)
                          M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                         \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
               (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
                   2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Sec [\alpha]^2
                      \sin[t \omega]^2 - 2 \text{ M0 } \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{(\text{M0}^2 (6 + 2 \cos[2 \alpha] - 1)^2)}
                                  2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^{2} \sin [t \omega]^{2})
          (8\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
                      Sin[\alpha]^2 Sin[t\omega]^2) +
       \sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2\,t\,\omega] + \text{M0} \,\cos[2\,\alpha - 2\,t\,\omega] + \right.}
                          M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                         \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
               (-4 \text{ M0} + 2 \text{ M0} \cos [2 \text{ t} \omega] - \text{M0} \cos [2 \alpha - 2 \text{ t} \omega] - \text{M0} \cos [2 \alpha + 2 \text{ t} \omega] +
                   2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Sec [\alpha]^2
                     \sin[t \, \omega]^2 + 2 \, MO \, \cos[2 \, \alpha] \, \sec[\alpha]^2 \, \sin[t \, \omega]^2 + 2 \, \sqrt{2} \, \sqrt{\left(MO^2 \, \left(6 + 2 \, \cos[2 \, \alpha] - 1 \, \cos[2 \, \alpha] \right)^2 + 2 \, MO^2 \, \left(6 + 2 \, \cos[2 \, \alpha] - 1 \, \cos[2 \, \alpha] \right)^2}
                                  2 Cos [2 t \omega] + Cos [2 \alpha - 2 t \omega] + Cos [2 \alpha + 2 t \omega]) Sin [\alpha] <sup>2</sup> Sin [t \omega] <sup>2</sup>))
          (8\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
                     Sin[\alpha]^2 Sin[t \omega]^2))
  \left[-\left(\left[\pm\omega \cos\left[\alpha\right] \cot\left[\alpha\right] \cot\left[\pm\omega\right] \csc\left[\pm\omega\right]^{2}\right) - 4\,\text{M0} + 2\,\text{M0}\cos\left[2\,\pm\omega\right] - 4\,\text{M0}\right] + 2\,\text{M0}\cos\left[2\,\pm\omega\right] \right]
                        M0 Cos [2 \alpha – 2 t \omega] – M0 Cos [2 \alpha + 2 t \omega] + 2 M0 Cos [\alpha – t \omega] <sup>2</sup> Sec [\alpha] <sup>2</sup> +
                        2 M0 Cos [2 \alpha] Cos [\alpha – t \omega] <sup>2</sup> Sec [\alpha] <sup>2</sup> + 2 M0 Sec [\alpha] <sup>2</sup> Sin [t \omega] <sup>2</sup> +
                        2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2(-6-2\cos[2\alpha]+
                                       2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                   \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                                M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                              \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                    (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
                        2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                        2 M0 Sec [\alpha]^2 Sin [t\omega]^2 – 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                        2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega])}
                                  \operatorname{Sin}[\alpha]^2 \operatorname{Sin}[\mathsf{t}\,\omega]^2) \rightarrow \left(16 M0 \left(1 + \cos[2 \alpha]\right) \sqrt{\left(M0^2 \left(6 + 2 \cos[2 \alpha] - \cos[2 \alpha])}
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2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
\dot{\mathbf{n}} \omega \mathsf{Cos}[\alpha] \mathsf{Cot}[\alpha] \mathsf{Cot}[\mathsf{t} \omega] \mathsf{Csc}[\mathsf{t} \omega]^2 \left(4 \,\mathsf{M0} - 2 \,\mathsf{M0} \,\mathsf{Cos}[2 \,\mathsf{t} \omega] + \right)
          M0 Cos [2\alpha - 2t\omega] + M0 Cos [2\alpha + 2t\omega] - 2M0 Cos [\alpha - t\omega]^2 Sec [\alpha]^2 -
         2 M0 Cos [2 \alpha] Cos [\alpha - t \omega] 2 Sec [\alpha] 2 - 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 -
          2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2 (-6 - 2 \cos[2 \alpha] +
                       2 \cos [2 \pm \omega] - \cos [2 \alpha - 2 \pm \omega] - \cos [2 \alpha + 2 \pm \omega]) \sin [\alpha]^2 \sin [\pm \omega]^2
     \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] +
                              \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
      (-4 \text{ MO} + 2 \text{ MO} \cos [2 \text{ t} \omega] - \text{MO} \cos [2 \alpha - 2 \text{ t} \omega] - \text{MO} \cos [2 \alpha + 2 \text{ t} \omega] +
          2 M0 Cos [\alpha - t\omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2\alpha] Cos [\alpha - t\omega]^2 Sec [\alpha]^2 +
          2 M0 Sec [\alpha]^2 Sin [t\omega]^2 + 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
          2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+}
                       \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2
 (16 \text{ MO} (1 + \cos[2 \alpha]) \sqrt{(\text{MO}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2) -
\left[\dot{\mathbf{n}} \cos[\alpha] \cot[\alpha] \csc[\mathsf{t} \omega]^2 \left(-4\,\mathsf{M0} + 2\,\mathsf{M0} \cos[2\,\mathsf{t} \omega] - \mathsf{M0} \cos[2\,\alpha - 2\,\mathsf{t} \omega] - \right]\right]
          M0 Cos [2 \alpha + 2 t \omega] + 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
          2 M0 Cos [2 \alpha] Cos [\alpha – t \omega] 2 Sec [\alpha] 2 + 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 +
          2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2(-6-2\cos[2\alpha]+
                       2 \cos [2 \pm \omega] - \cos [2 \alpha - 2 \pm \omega] - \cos [2 \alpha + 2 \pm \omega]) \sin [\alpha]^2 \sin [\pm \omega]^2
      \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{MO} - 2 \cos[2\alpha] - 2 \,\text{MO} \cos[2 \,\text{t} \,\omega] + \text{MO} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] +
                              \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
      (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
         2 M0 Cos [\alpha - t\omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2\alpha] Cos [\alpha - t\omega]^2 Sec [\alpha]^2 -
          2 M0 Sec [\alpha]^2 Sin [t\omega]^2 – 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
          2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega])}
                  Sin[\alpha]^2 Sin[t\omega]^2) (2 M0<sup>2</sup> \omega Cos[t\omega] (6 + 2 Cos[2\alpha] - 2 Cos[2 t\omega] +
                \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega] + M0^2 \sin [\alpha]^2
            Sin[t\omega]^2 (4\omega Sin[2t\omega] + 2\omega Sin[2\alpha - 2t\omega] - 2\omega Sin[2\alpha + 2t\omega]))
 (64 \text{ MO} (1 + \cos[2 \alpha]) (\text{MO}^2 (6 + 2\cos[2 \alpha] - 2\cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                \cos [2\alpha + 2t\omega] \sin [\alpha]^2 \sin [t\omega]^2 +
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M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                                     \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
(i \cos[\alpha] \cot[\alpha] \csc[t \omega]^2 (4 MO - 2 MO \cos[2 t \omega] + MO \cos[2 \alpha - 2 t \omega] +
                              M0 Cos [2 \alpha + 2 t \omega] - 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                              2 M0 Cos [2 \alpha] Cos [\alpha - t \omega] 2 Sec [\alpha] 2 - 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 -
                              2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{-M0^2 (-6-2 \cos[2 \alpha] + \cos[2 \alpha])}
                                                                   2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
                   (-4 \text{ MO} + 2 \text{ MO} \cos [2 \text{ t} \omega] - \text{MO} \cos [2 \alpha - 2 \text{ t} \omega] - \text{MO} \cos [2 \alpha + 2 \text{ t} \omega] +
                              2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                              2 M0 Sec [\alpha]^2 Sin [t \omega]^2 + 2 M0 Cos [2 \alpha] Sec [\alpha]^2 Sin [t \omega]^2 +
                              2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+}
                                                                  \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                   \Big(4\ \mathsf{MO}\ \omega\ \mathsf{Sin} \, [\, 2\ \mathsf{t}\ \omega\, ]\ +\ 2\ \mathsf{MO}\ \omega\ \mathsf{Sin} \, [\, 2\ \alpha\ -\ 2\ \mathsf{t}\ \omega\, ]\ -\ 2\ \mathsf{MO}\ \omega\ \mathsf{Sin} \, [\, 2\ \alpha\ +\ 2\ \mathsf{t}\ \omega\, ]\ +\ 2\ \mathsf{MO}\ \omega\ \mathsf{Sin} \, [\, 2\ \alpha\ +\ 2\ \mathsf{t}\ \omega\, ]\ +\ 2\ \mathsf{MO}\ \omega\ \mathsf{Sin} \, [\, 2\ \alpha\ +\ 2\ \mathsf{t}\ \omega\, ]\ +\ 2\ \mathsf{MO}\ \omega\ \mathsf{Sin} \, [\, 2\ \alpha\ +\ 2\ \mathsf{t}\ \omega\, ]\ +\ 2\ \mathsf{MO}\ \omega\ \mathsf{Sin} \, [\, 2\ \alpha\ +\ 2\ \mathsf{t}\ \omega\, ]\ +\ 2\ \mathsf{MO}\ \omega\ \mathsf{Sin} \, [\, 2\ \alpha\ +\ 2\ \mathsf{t}\ \omega\, ]\ +\ 2\ \mathsf{MO}\ \omega\ \mathsf{Sin} \, [\, 2\ \alpha\ +\ 2\ \mathsf{t}\ \omega\, ]\ +\ 2\ \mathsf{MO}\ \omega\ \mathsf{Sin} \, [\, 2\ \alpha\ +\ 2\ \mathsf{t}\ \omega\, ]\ +\ 2\ \mathsf{MO}\ \omega\ \mathsf{Sin} \, [\, 2\ \alpha\ +\ 2\ \mathsf{t}\ \omega\, ]\ +\ 2\ \mathsf{MO}\ \omega\ \mathsf{Sin} \, [\, 2\ \alpha\ +\ 2\ \mathsf{t}\ \omega\, ]\ +\ 2\ \mathsf{MO}\ \omega\ \mathsf{Sin} \, [\, 2\ \alpha\ +\ 2\ \mathsf{t}\ \omega\, ]\ +\ 2\ \mathsf{MO}\ \omega\ \mathsf{Sin} \, [\, 2\ \alpha\ +\ 2\ \mathsf{t}\ \omega\, ]\ +\ 2\ \mathsf{MO}\ \omega\ \mathsf{Sin} \, [\, 2\ \alpha\ +\ 2\ \mathsf{t}\ \omega\, ]\ +\ 2\ \mathsf{MO}\ \omega\ \mathsf{Sin} \, [\, 2\ \alpha\ +\ 2\ \mathsf{t}\ \omega\, ]\ +\ 2\ \mathsf{MO}\ \omega\ \mathsf{Sin} \, [\, 2\ \alpha\ +\ 2\ \mathsf{t}\ \omega\, ]\ +\ 2\ \mathsf{MO}\ \omega\ \mathsf{Sin} \, [\, 2\ \alpha\ +\ 2\ \mathsf{t}\ \omega\, ]\ +\ 2\ \mathsf{MO}\ \omega\ \mathsf{Sin} \, [\, 2\ \alpha\ +\ 2\ \mathsf{t}\ \omega\, ]\ +\ 2\ \mathsf{MO}\ \omega\ \mathsf{Sin} \, [\, 2\ \alpha\ +\ 2\ \mathsf{t}\ \omega\, ]\ +\ 2\ \mathsf{MO}\ \omega\ \mathsf{Sin} \, [\, 2\ \alpha\ +\ 2\ \mathsf{t}\ \omega\, ]\ +\ 2\ \mathsf{MO}\ \omega\ \mathsf{Sin} \, [\, 2\ \alpha\ +\ 2\ \mathsf{t}\ \omega\, ]\ +\ 2\ \mathsf{MO}\ \omega\ \mathsf{Sin} \, [\, 2\ \alpha\ +\ 2\ \mathsf{t}\ \omega\, ]\ +\ 2\ \mathsf{MO}\ \omega\ \mathsf{Sin} \, [\, 2\ \alpha\ +\ 2\ \mathsf{t}\ \omega\, ]\ +\ 2\ \mathsf{MO}\ \omega\ \mathsf{Sin} \, [\, 2\ \alpha\ +\ 2\ \mathsf{t}\ \omega\, ]\ +\ 2\ \mathsf{MO}\ \omega\ \mathsf{Sin} \, [\, 2\ \alpha\ +\ 2\ \mathsf{t}\ \omega\, ]\ +\ 2\ \mathsf{MO}\ \omega\ \mathsf{Sin} \, [\, 2\ \alpha\ +\ 2\ \mathsf{t}\ \omega\, ]\ +\ 2\ \mathsf{MO}\ \omega\ \mathsf{Sin} \, [\, 2\ \alpha\ +\ 2\ \mathsf{t}\ \omega\, ]\ +\ 2\ \mathsf{MO}\ \omega\ \mathsf{Sin} \, [\, 2\ \alpha\ +\ 2\ \mathsf{t}\ \omega\, ]\ +\ 2\ \mathsf{MO}\ \omega\ \mathsf{Sin} \, [\, 2\ \alpha\ +\ 2\ \mathsf{t}\ \omega\, ]\ +\ 2\ \mathsf{MO}\ \omega\ \mathsf{Sin} \, [\, 2\ \alpha\ +\ 2\ \mathsf{t}\ \omega\, ]\ +\ 2\ \mathsf{MO}\ \omega\ \mathsf{Sin} \, [\, 2\ \alpha\ +\ 2\ \mathsf{t}\ \omega\, ]\ +\ 2\ \mathsf{MO}\ \omega\ \mathsf{MO}\ \omega\ \mathsf{Sin} \, [\, 2\ \alpha\ +\ 2\ \mathsf{t}\ \omega\, ]\ +\ 2\ \mathsf{MO}\ \omega\ \mathsf{Sin} \, [\, 2\ \alpha\ +\ 2\ \mathsf{t}\ \omega\, ]\ +\ 2\ \mathsf{MO}\ \omega\ 
                              (\sqrt{2} (2 M0^2 \omega Cos[t \omega] (6 + 2 Cos[2 \alpha] - 2 Cos[2 t \omega] + Cos[2 \alpha - 2 t \omega] +
                                                                               \cos[2\alpha + 2t\omega]) \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2
                                                                     (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])))
                                    (\sqrt{M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] +
                                                                        \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2))))
       64 M0 (1 + \cos[2 \alpha])^2 \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha])^2}
                                                       2\alpha - 2t\omega] + Cos [2\alpha + 2t\omega]) Sin [\alpha]^2 Sin [t\omega]^2)
                \sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \frac{1}{2} \cos[2\alpha] + \frac{1}{2} \cos[
                                               M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                                     \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
|\dot{\mathbf{n}} \cos[\alpha] \cot[\alpha] \csc[\dot{\mathbf{t}} \omega]^2 \left(-4 \,\text{M0} + 2 \,\text{M0} \cos[2 \,\dot{\mathbf{t}} \omega] - \text{M0} \cos[2 \,\alpha - 2 \,\dot{\mathbf{t}} \omega] - \text{M0} \cos[2 \,\alpha - 2 \,\dot{\mathbf{t}} \omega] \right)
                             M0 Cos [2 \alpha + 2 t \omega] + 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                              2 M0 Cos [2 \alpha] Cos [\alpha - t \omega] 2 Sec [\alpha] 2 + 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 +
                              2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{-M0^2 (-6-2 \cos[2 \alpha] + \cos[2 \alpha])}
                                                                   2 Cos [2 t \omega] - Cos [2 \alpha - 2 t \omega] - Cos [2 \alpha + 2 t \omega]) Sin [\alpha] 2 Sin [t \omega] 2)
                \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{MØ} - 2 \cos[2\alpha] - 2 \,\text{MØ} \cos[2 \,\text{t}\,\omega] + \text{MØ} \cos[2\alpha - 2 \,\text{t}\,\omega] + \right)}
                                               M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 2 \cos [2 \alpha])}
                                                                                     \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
                   \left(-4\,\text{M0}\,\omega\,\text{Cos}\,[\,\text{t}\,\omega\,]\,\,\text{Sec}\,[\,\alpha\,]^{\,2}\,\,\text{Sin}\,[\,\text{t}\,\omega\,]\,\,-\,4\,\,\text{M0}\,\omega\,\,\text{Cos}\,[\,2\,\,\alpha\,]\,\,\,\text{Cos}\,[\,\text{t}\,\omega\,]\,\,\,\text{Sec}\,[\,\alpha\,]^{\,2}
                                    Sin[t\omega] + 4 M0 \omega Sin[2 t\omega] + 2 M0 \omega Sin[2 \alpha - 2 t\omega] -
                             4 M0 \omega Cos [\alpha - t \omega] Sec [\alpha]^2 Sin [\alpha - t \omega] - 4 M0 \omega Cos [2 \alpha]
                                   \cos [\alpha - t \omega] \sec [\alpha]^2 \sin [\alpha - t \omega] - 2 M0 \omega \sin [2 \alpha + 2 t \omega] +
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(\sqrt{2} (2 M0^2 \omega \cos [t \omega] (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] +
                              \mathsf{Cos}\left[2\,\alpha+2\,\mathsf{t}\,\omega\right]\big)\,\mathsf{Sin}\left[\alpha\right]^{2}\mathsf{Sin}\left[\mathsf{t}\,\omega\right]+\mathsf{M}\mathsf{O}^{2}\,\mathsf{Sin}\left[\alpha\right]^{2}\mathsf{Sin}\left[\mathsf{t}\,\omega\right]^{2}
                          (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])))
              (\sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                            \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2))
  (32 \text{ M0} (1 + \cos[2 \alpha]) \sqrt{(\text{M0}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                  \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2) -
\left[\dot{\mathbf{n}} \cos[\alpha] \cot[\alpha] \csc[\mathsf{t}\omega]^2\right] (4\,\mathsf{M0} - 2\,\mathsf{M0} \cos[2\,\mathsf{t}\omega] + \mathsf{M0} \cos[2\,\alpha - 2\,\mathsf{t}\omega] +
           M0 Cos [2 \alpha + 2 t \omega] - 2 M0 Cos [\alpha - t \omega] 2 Sec [\alpha] 2 -
           2 M0 Cos [2 \alpha] Cos [\alpha – t \omega] <sup>2</sup> Sec [\alpha] <sup>2</sup> – 2 M0 Sec [\alpha] <sup>2</sup> Sin [t \omega] <sup>2</sup> –
           2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{-M0^2 (-6-2 \cos[2 \alpha] + \cos[2 \alpha])}
                          2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
      \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{MØ} - 2 \cos[2\alpha] - 2 \,\text{MØ} \cos[2 \,\text{t}\,\omega] + \text{MØ} \cos[2\alpha - 2 \,\text{t}\,\omega] + \right)}
                  M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
       (4 \text{ MO } \omega \text{ Cos}[t \omega] \text{ Sec}[\alpha]^2 \text{ Sin}[t \omega] + 4 \text{ MO } \omega \text{ Cos}[2 \alpha] \text{ Cos}[t \omega] \text{ Sec}[\alpha]^2
              Sin[t\omega] - 4M0\omega Sin[2t\omega] - 2M0\omega Sin[2\alpha - 2t\omega] +
           4 \text{ MO } \omega \text{ Cos} [\alpha - t \omega] \text{ Sec} [\alpha]^2 \text{ Sin} [\alpha - t \omega] + 4 \text{ MO } \omega \text{ Cos} [2 \alpha]
              \cos [\alpha - t \omega] \operatorname{Sec} [\alpha]^2 \sin [\alpha - t \omega] + 2 \operatorname{MO} \omega \sin [2 \alpha + 2 t \omega] +
            (\sqrt{2} (2 M0^2 \omega \cos[t \omega] (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                              \cos[2\alpha + 2t\omega]) \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2
                          (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])))
              (\sqrt{M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] +
                            \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2))
  (32 \text{ M0} (1 + \cos[2 \alpha]) \sqrt{(\text{M0}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                  \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2) -
\left( i \cos \left[ \alpha \right] \cot \left[ \alpha \right] \csc \left[ t \omega \right]^{2} \sqrt{\left( \frac{1}{1 + \cos \left[ 2 \alpha \right]} \left( -2 + 4 M0 - 2 \cos \left[ 2 \alpha \right] - 4 M0 \right) \right)} \right)
                  2 M0 Cos [2 t \omega] + M0 Cos [2 \alpha – 2 t \omega] + M0 Cos [2 \alpha + 2 t \omega] +
                  2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+
                                 Cos[2\alpha + 2t\omega] Sin[\alpha]^2 Sin[t\omega]^2
       \left(-4\,\text{M0} + 2\,\text{M0}\,\text{Cos}\,[2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha - 2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha + 2\,\text{t}\,\omega] + \right)
           2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
           2 M0 Sec [\alpha]^2 Sin [t \omega]^2 + 2 M0 Cos [2 \alpha] Sec [\alpha]^2 Sin [t \omega]^2 +
           2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega])}
                     Sin[\alpha]^2 Sin[t\omega]^2) \left(-4 M0 \omega Cos[t\omega] Sec[\alpha]^2 Sin[t\omega] -
           4 \text{ MO } \omega \text{ Cos} [2 \alpha] \text{ Cos} [\text{t} \omega] \text{ Sec} [\alpha]^2 \text{ Sin} [\text{t} \omega] + 4 \text{ MO } \omega \text{ Sin} [2 \text{t} \omega] +
           2 M0 \omega Sin[2 \alpha – 2 t \omega] – 4 M0 \omega Cos[\alpha – t \omega] Sec[\alpha]<sup>2</sup> Sin[\alpha – t \omega] –
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4 M0 \omega Cos [2 \alpha] Cos [\alpha – t \omega] Sec [\alpha] <sup>2</sup> Sin [\alpha – t \omega] – 2 M0 \omega Sin [2 \alpha + 2 t \omega] +
                                                                                          (\sqrt{2} (-2 M0^2 \omega \cos[t \omega] (-6 - 2 \cos[2 \alpha] + 2 \cos[2 t \omega] - \cos[2 \alpha - 2 t \omega] -
                                                                                                                                           \mathsf{Cos}\left[2\,\alpha+2\,\mathsf{t}\,\omega\right]\big)\,\mathsf{Sin}\left[\alpha\right]^{2}\,\mathsf{Sin}\left[\mathsf{t}\,\omega\right]\,-\,\mathsf{M0}^{2}\,\mathsf{Sin}\left[\alpha\right]^{2}\,\mathsf{Sin}\left[\mathsf{t}\,\omega\right]^{2}
                                                                                                                                \left(-4 \omega \operatorname{Sin}[2 t \omega] - 2 \omega \operatorname{Sin}[2 \alpha - 2 t \omega] + 2 \omega \operatorname{Sin}[2 \alpha + 2 t \omega]\right)\right)
                                                                                                (\sqrt{-M0^2 (-6-2 \cos [2 \alpha] + 2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha] + 2 \cos [2 \alpha] + 2 \cos [2 \alpha] - \cos [2 \alpha] + 2 \cos [2 \alpha] + 2 \cos [2 \alpha] - \cos [2 \alpha] + 2 \cos [2 \alpha] + 2
                                                                                                                                     \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)))
                                                                  (32 \text{ M0} (1 + \cos[2 \alpha]) \sqrt{(\text{M0}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                                                                                                            Cos[2\alpha + 2t\omega]) Sin[\alpha]^2 Sin[t\omega]^2) +
                                                             \left[i \cos[\alpha] \cot[\alpha] \csc[t \omega]^2 \sqrt{\left(\frac{1}{1 + \cos[2 \alpha]} \left(-2 + 4 MO - 2 \cos[2 \alpha] - \frac{1}{1 + \cos[2 \alpha]}\right)\right]}\right]
                                                                                                            2 M0 Cos [2 t \omega] + M0 Cos [2 \alpha – 2 t \omega] + M0 Cos [2 \alpha + 2 t \omega] –
                                                                                                            2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+
                                                                                                                                                 Cos[2\alpha + 2t\omega] Sin[\alpha]^2 Sin[t\omega]^2
                                                                              (4 \text{ M0} - 2 \text{ M0 Cos} [2 \text{ t} \omega] + \text{M0 Cos} [2 \alpha - 2 \text{ t} \omega] + \text{M0 Cos} [2 \alpha + 2 \text{ t} \omega] -
                                                                                         2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                                                                                         2 M0 Sec [\alpha]^2 Sin [t\omega]^2 – 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                                                                                         2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega])}
                                                                                                                  Sin[\alpha]^2 Sin[t\omega]^2) (4 M0 \omega Cos[t\omega] Sec[\alpha]^2 Sin[t\omega] +
                                                                                         4 M0 \omega Cos [2 \alpha] Cos [t \omega] Sec [\alpha]<sup>2</sup> Sin [t \omega] - 4 M0 \omega Sin [2 t \omega] -
                                                                                         2 M0 \omega Sin[2 \alpha – 2 t \omega] + 4 M0 \omega Cos[\alpha – t \omega] Sec[\alpha]<sup>2</sup> Sin[\alpha – t \omega] +
                                                                                         4 M0 \omega Cos [2 \alpha] Cos [\alpha – t \omega] Sec [\alpha] <sup>2</sup> Sin [\alpha – t \omega] + 2 M0 \omega Sin [2 \alpha + 2 t \omega] +
                                                                                           (\sqrt{2} (-2 \, \text{M}0^2 \, \omega \, \text{Cos} \, [\text{t} \, \omega] (-6 - 2 \, \text{Cos} \, [\text{2} \, \alpha] + 2 \, \text{Cos} \, [\text{2} \, \text{t} \, \omega] - \text{Cos} \, [\text{2} \, \alpha - 2 \, \text{t} \, \omega] -
                                                                                                                                           \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega] - M0^2 \sin [\alpha]^2 \sin [t \omega]^2
                                                                                                                                \left(-4\omega \operatorname{Sin}[2 \operatorname{t} \omega] - 2\omega \operatorname{Sin}[2\alpha - 2 \operatorname{t} \omega] + 2\omega \operatorname{Sin}[2\alpha + 2 \operatorname{t} \omega]\right)\right)
                                                                                                 (\sqrt{-M0^2 (-6-2 \cos[2 \alpha] + 2 \cos[2 t \omega] - \cos[2 \alpha - 2 t \omega]} - \cos[2 \alpha - 2 t \omega] - 
                                                                                                                                     \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)))
                                                                  (32 \text{ M0} (1 + \cos[2 \alpha]) \sqrt{(\text{M0}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                                                                                                          \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2))
\frac{1}{M0} 2 i \operatorname{Sec}[\alpha] \operatorname{Sin}[\mathsf{t}\,\omega]^2 \operatorname{Tan}[\alpha] \left( e^{i\theta} r + \left( \left( -4\,\mathrm{M0} + 2\,\mathrm{M0}\,\operatorname{Cos}[2\,\mathsf{t}\,\omega] - \mathrm{M0}\,\operatorname{Cos}[2\,\alpha - 2\,\mathsf{t}\,\omega] - \right) \right) \right) \right)
                                                                     M0 Cos [2 \alpha + 2 t \omega] + 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                                                                      2 M0 Cos [2 \alpha] Cos [\alpha – t \omega]<sup>2</sup> Sec [\alpha]<sup>2</sup> + 2 M0 Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> +
                                                                       2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{-M0^2(-6-2\cos[2\alpha]+}
                                                                                                             2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^{2} \sin [t \omega]^{2}
                                                        \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \,\cos[2 \,\text{t}\,\omega] + \text{M0} \,\cos[2\alpha - 2 \,\text{t}\,\omega] + \right)}
                                                                                         M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                                                                              \cos[2\alpha - 2t\omega] + \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2
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(8\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
                 Sin[\alpha]^2 Sin[t\omega]^2) +
     \int (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
               2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
               2 M0 Sec [\alpha]^2 Sin [t\omega]^2 – 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
               2\sqrt{2}\sqrt{(-M0^2(-6-2\cos[2\alpha]+2\cos[2t\omega]-
                            \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
          \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2\,t\,\omega] + \text{M0} \,\cos[2\,\alpha - 2 \,t\,\omega] + \right)}
                     M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                  \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2))
      \left(8\,\sqrt{\,\left(\text{M0}^{2}\,\left(\text{6}+2\,\text{Cos}\,[\,2\,\alpha\,]\,-2\,\text{Cos}\,[\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,-\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,+\,2\,\text{t}\,\omega\,]\,\right)}\right.
                Sin[\alpha]^2 Sin[t \omega]^2))
e^{i\theta} r \left(\left(-4\,\text{M0} + 2\,\text{M0}\,\text{Cos}\,[2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha - 2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha + 2\,\text{t}\,\omega] + \right)
                     2 M0 Cos [\alpha - t\omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2\alpha] Cos [\alpha - t\omega]^2 Sec [\alpha]^2 +
                     2 M0 Sec [\alpha]^2 Sin [t\omega]^2 + 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                     2\sqrt{2}\sqrt{(-M0^2(-6-2\cos[2\alpha]+2\cos[2t\omega]-
                                   Cos[2\alpha - 2t\omega] - Cos[2\alpha + 2t\omega]) Sin[\alpha]^{2} Sin[t\omega]^{2})
                \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \text{ M0} - 2 \cos[2\alpha] - 2 \text{ M0} \cos[2 \text{ t}\omega] + \text{M0} \cos[2\alpha - 2 \text{ t}\omega] + \right)}
                            M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                         \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
             (8\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
                        Sin[\alpha]^2 Sin[t\omega]^2) +
           \int (4 \text{ MO} - 2 \text{ MO Cos}[2 \text{ t} \omega] + \text{MO Cos}[2 \alpha - 2 \text{ t} \omega] + \text{MO Cos}[2 \alpha + 2 \text{ t} \omega] -
                     2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                     2 M0 Sec [\alpha]^2 Sin [t\omega]^2 – 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                     2\sqrt{2}\sqrt{(-M0^2(-6-2\cos[2\alpha]+2\cos[2t\omega]-
                                   \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                 \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                            M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] +
                                         \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2))
             (8\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
                       Sin[\alpha]^2 Sin[t\omega]^2) +
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s \left[\left[\dot{\mathbf{n}} \cos[\alpha] \cot[\alpha] \csc[t\omega]^2 \left(-4 \,\mathrm{M0} + 2 \,\mathrm{M0} \cos[2 \,t\omega] - \mathrm{M0} \cos[2 \,\alpha - 2 \,t\omega]\right]\right]
                                                M0 Cos [2 \alpha + 2 t \omega] + 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                                                2 M0 Cos [2 \alpha] Cos [\alpha - t \omega] 2 Sec [\alpha] 2 + 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 +
                                                2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{-M0^2 (-6-2 \cos[2 \alpha] + \cos[2 \alpha])}
                                                                           2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
                                       \sqrt{\left(\frac{1}{1 + \cos{[2\,\alpha]}} \left(-2 + 4\,\text{M0} - 2\,\cos{[2\,\alpha]} - 2\,\text{M0}\cos{[2\,\text{t}\,\omega]} + \text{M0}\cos{[2\,\alpha - 2\,\text{t}\,\omega]} + \right.\right.}
                                                             M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 2 \cos [2 \alpha])}
                                                                                         \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
                                        (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
                                                2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                                                2 M0 Sec [\alpha]^2 Sin [t\omega]^2 – 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                                                2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+}
                                                                           \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2)
                                \left(32\,\text{M0}\,\left(1+\cos{[2\,\alpha]}\right)\,\sqrt{\,\left(\text{M0}^2\,\left(6+2\cos{[2\,\alpha]}\,-2\cos{[2\,t\,\omega]}\,+\cos{[2\,\alpha\,-2\,t\,\omega]}\,+\right)\right)}\right. 
                                                             \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2) -
                           \left| \dot{\mathbf{n}} \, \mathsf{Cos}[\alpha] \, \mathsf{Cot}[\alpha] \, \mathsf{Csc}[\mathsf{t} \, \omega]^2 \right| \left( 4 \, \mathsf{M0} - 2 \, \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] + \mathsf{M0} \, \mathsf{Cos}[2 \, \alpha - 2 \, \mathsf{t} \, \omega] + \left( 4 \, \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] + \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] \right) + \left( 4 \, \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] + \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] \right) + \left( 4 \, \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] + \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] \right) + \left( 4 \, \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] + \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] \right) + \left( 4 \, \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] + \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] \right) + \left( 4 \, \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] + \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] \right) + \left( 4 \, \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] \right) + \left( 4 \, \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] \right) + \left( 4 \, \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] \right) + \left( 4 \, \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] \right) + \left( 4 \, \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] \right) + \left( 4 \, \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] \right) + \left( 4 \, \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] \right) + \left( 4 \, \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] \right) + \left( 4 \, \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] \right) + \left( 4 \, \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] \right) + \left( 4 \, \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] \right) + \left( 4 \, \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] \right) + \left( 4 \, \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] \right) + \left( 4 \, \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] \right) + \left( 4 \, \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] \right) + \left( 4 \, \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] \right) + \left( 4 \, \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] \right) + \left( 4 \, \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] \right) + \left( 4 \, \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] \right) + \left( 4 \, \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] \right) + \left( 4 \, \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] \right) + \left( 4 \, \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] \right) + \left( 4 \, \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] \right) + \left( 4 \, \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] \right) + \left( 4 \, \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] \right) + \left( 4 \, \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] \right) + \left( 4 \, \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] \right) + \left( 4 \, \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] \right) + \left( 4 \, \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] \right) + \left( 4 \, \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] \right) + \left( 4 \, \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] \right) + \left( 4 \, \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] \right) + \left( 4 \, \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] \right) + \left( 4 \, \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] \right) + \left( 4 \, \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t} \, \omega] \right) + \left( 4 \, \mathsf{M0} \, \mathsf{Cos}[2 \, \mathsf{t
                                                M0 Cos [2 \alpha + 2 t \omega] - 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                                                2 M0 Cos [2 \alpha] Cos [\alpha – t \omega] <sup>2</sup> Sec [\alpha] <sup>2</sup> – 2 M0 Sec [\alpha] <sup>2</sup> Sin [t \omega] <sup>2</sup> –
                                                2 M0 Cos [2 \alpha] Sec [\alpha] <sup>2</sup> Sin [t \omega] <sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2 (-6-2 \cos[2 \alpha] +
                                                                           2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                                       \sqrt{\left(\frac{1}{1 + \cos{[2\,\alpha]}} \left(-2 + 4\,\text{M0} - 2\,\cos{[2\,\alpha]} - 2\,\text{M0}\cos{[2\,\text{t}\,\omega]} + \text{M0}\cos{[2\,\alpha - 2\,\text{t}\,\omega]} + \right)\right)}
                                                             M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 2 \cos [2 \alpha])}
                                                                                        \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
                                        \left(-4\,\text{M0} + 2\,\text{M0}\,\text{Cos}\,[2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha - 2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha + 2\,\text{t}\,\omega] + \right)
                                                2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                                                2 M0 Sec [\alpha]^2 Sin [t\omega]^2 + 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                                                2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+
                                                                           \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2)
                               (32 \, MO \, (1 + Cos \, [2 \, \alpha]) \, \sqrt{(MO^2 \, (6 + 2 \, Cos \, [2 \, \alpha] - 2 \, Cos \, [2 \, t \, \omega] + Cos \, [2 \, \alpha - 2 \, t \, \omega] + Cos \, [2 \, \alpha])}
                                                             \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2))
s = (-4 \text{ M0} + 2 \text{ M0 Cos} [2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha - 2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha + 2 \text{ t} \omega] + 2 \text{ M0 Cos} [\alpha - \text{t} \omega]^2
                                                    Sec[\alpha]^2 + 2 M0 Cos[2 \alpha] Cos[\alpha - t \omega]^2 Sec[\alpha]^2 + 2 M0 Sec[\alpha]^2 Sin[t \omega]^2 +
                                                2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2(-6-2\cos[2\alpha]+
                                                                           2 Cos [2 t \omega] - Cos [2 \alpha - 2 t \omega] - Cos [2 \alpha + 2 t \omega]) Sin [\alpha] 2 Sin [t \omega] 2)
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\sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                          M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] +
                                         \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
          (8 \sqrt{M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega])}
                      Sin[\alpha]^2 Sin[t\omega]^2) +
         (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
                   2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                   2 M0 Sec [\alpha]^2 Sin [t\omega]^2 - 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                   2\sqrt{2}\sqrt{(-M0^2(-6-2\cos[2\alpha]+2\cos[2t\omega]-
                                  \cos [2\alpha - 2t\omega] - \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
              \sqrt{\left(\frac{1}{1 + \cos{[2\,\alpha]}} \left(-2 + 4\,\text{M0} - 2\,\cos{[2\,\alpha]} - 2\,\text{M0}\,\cos{[2\,\text{t}\,\omega]} + \text{M0}\,\cos{[2\,\alpha - 2\,\text{t}\,\omega]} + \right)}
                          M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{\left(\text{M0}^2\left(\text{6 + 2 Cos}\left[\text{2 }\alpha\right] - \text{2 Cos}\left[\text{2 t }\omega\right]\right.\right)} +
                                         \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
          \left(8\,\sqrt{\,\left(\text{M0}^{2}\,\left(\text{6}+2\,\text{Cos}\,[\,2\,\alpha\,]\,-2\,\text{Cos}\,[\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,-\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,+\,2\,\text{t}\,\omega\,]\,\right)}\right.
                     Sin[\alpha]^2 Sin[t\omega]^2) +
e^{-i\theta}r \left[\left(i\cos[\alpha]\cos[\alpha]\cos[t\omega]^2\left(-4\,M0+2\,M0\cos[2\,t\omega]-M0\cos[2\,\alpha-2\,t\omega]-M0\cos[2\,\alpha-2\,t\omega]\right)\right]
                   M0 Cos [2 \alpha + 2 t \omega] + 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                   2 M0 Cos [2 \alpha] Cos [\alpha - t \omega] 2 Sec [\alpha] 2 + 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 +
                   2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2\sqrt{2} \sqrt{(-M0^2 (-6-2 \cos[2 \alpha] +
                                  2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
              \sqrt{\left(\frac{1}{1 + \cos{[2\,\alpha]}} \left(-2 + 4\,\text{M0} - 2\,\cos{[2\,\alpha]} - 2\,\text{M0}\cos{[2\,\text{t}\,\omega]} + \text{M0}\cos{[2\,\alpha - 2\,\text{t}\,\omega]} + \right.\right.}
                          M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 2 \cos [2 \alpha])}
                                         \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
               (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
                   2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                   2 M0 Sec [\alpha]^2 Sin [t \omega]^2 - 2 M0 Cos [2 \alpha] Sec [\alpha]^2 Sin [t \omega]^2 +
                   2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+
                                  \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2
          (32 \text{ M0} (1 + \cos[2 \alpha]) \sqrt{(\text{M0}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                          \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2) -
        \left[\dot{\mathbf{n}} \cos[\alpha] \cot[\alpha] \csc[\mathsf{t} \omega]^2\right] \left(4\,\mathsf{M0} - 2\,\mathsf{M0} \cos[2\,\mathsf{t} \omega] + \mathsf{M0} \cos[2\,\alpha - 2\,\mathsf{t} \omega] + \right]
                   M0 Cos [2 \alpha + 2 t \omega] - 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                   2 M0 Cos [2 \alpha] Cos [\alpha - t \omega] 2 Sec [\alpha] 2 - 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 -
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2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2(-6-2\cos[2\alpha]+
                                                                                  2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
                                           \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                                                                   M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                                                \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                                             (-4 \text{ M0} + 2 \text{ M0 Cos} [2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha - 2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha + 2 \text{ t} \omega] +
                                                     2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                                                     2 M0 Sec [\alpha]^2 Sin [t\omega]^2 + 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                                                     2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+}
                                                                                 \cos[2\alpha + 2 \pm \omega] \sin[\alpha]^2 \sin[\pm \omega]^2
                                   \left(32\,\text{M0}\,\left(1+\cos{[2\,\alpha]}\right)\,\sqrt{\,\left(\text{M0}^2\,\left(6+2\cos{[2\,\alpha]}\,-2\cos{[2\,t\,\omega]}\,+\cos{[2\,\alpha\,-2\,t\,\omega]}\,+\right.\right.\right)}
                                                                  \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2))
      \left(-\left(\left[\pm M0\left(1+\cos\left[2\,\alpha\right]\right)\,\operatorname{Sec}\left[\alpha\right]\,\operatorname{Sin}\left[\pm\,\omega\right]^{\,2}\,\sqrt{\left(\frac{1}{1+\cos\left[2\,\alpha\right]}\,\left(-\,2+4\,M0\,-\,2\,\cos\left[2\,\alpha\right]\,-\,4\,M0\,-\,2\,\cos\left[2\,\alpha\right]\,\right)}\right)\right)
                                                              2 M0 Cos [2 t \omega] + M0 Cos [2 \alpha - 2 t \omega] + M0 Cos [2 \alpha + 2 t \omega] -
                                                              2 \sqrt{2} \sqrt{\left(\text{M0}^2\left(\text{6}+\text{2}\cos\left[\text{2}\,\alpha\right]-\text{2}\cos\left[\text{2}\,\text{t}\,\omega\right]+\cos\left[\text{2}\,\alpha-\text{2}\,\text{t}\,\omega\right]+\right.}
                                                                                           \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2) \arctan[\alpha]
                               (2\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
                                                    Sin[\alpha]^2 Sin[t\omega]^2)) +
                 \left( \text{i M0 } \left( 1 + \cos \left[ 2 \, \alpha \right] \right) \, \text{Sec} \left[ \alpha \right] \, \text{Sin} \left[ \text{t} \, \omega \right]^{\, 2} \, \sqrt{\, \left( \frac{1}{1 + \cos \left[ 2 \, \alpha \right]} \, \left( - \, 2 + 4 \, \text{M0} \, - \, 2 \, \cos \left[ 2 \, \alpha \right] \, - \right) \, \right)} \right) \, \left( - \, 2 + 4 \, \text{M0} \, - \, 2 \, \cos \left[ 2 \, \alpha \right] \, - \left( - \, 2 + 4 \, \text{M0} \, - \, 2 \, \cos \left[ 2 \, \alpha \right] \, - \right) \, \left( - \, 2 + 4 \, \text{M0} \, - \, 2 \, \cos \left[ 2 \, \alpha \right] \, - \right) \, \left( - \, 2 + 4 \, \text{M0} \, - \, 2 \, \cos \left[ 2 \, \alpha \right] \, - \right) \, \left( - \, 2 + 4 \, \text{M0} \, - \, 2 \, \cos \left[ 2 \, \alpha \right] \, - \right) \, \left( - \, 2 + 4 \, \text{M0} \, - \, 2 \, \cos \left[ 2 \, \alpha \right] \, - \right) \, \left( - \, 2 + 4 \, \text{M0} \, - \, 2 \, \cos \left[ 2 \, \alpha \right] \, - \right) \, \left( - \, 2 + 4 \, \text{M0} \, - \, 2 \, \cos \left[ 2 \, \alpha \right] \, - \right) \, \left( - \, 2 + 4 \, \text{M0} \, - \, 2 \, \cos \left[ 2 \, \alpha \right] \, - \right) \, \left( - \, 2 + 4 \, \text{M0} \, - \, 2 \, \cos \left[ 2 \, \alpha \right] \, - \right) \, \left( - \, 2 + 4 \, \text{M0} \, - \, 2 \, \cos \left[ 2 \, \alpha \right] \, - \right) \, \left( - \, 2 + 4 \, \text{M0} \, - \, 2 \, \cos \left[ 2 \, \alpha \right] \, - \right) \, \left( - \, 2 + 4 \, \text{M0} \, - \, 2 \, \cos \left[ 2 \, \alpha \right] \, - \right) \, \left( - \, 2 + 4 \, \text{M0} \, - \, 2 \, \cos \left[ 2 \, \alpha \right] \, - \right) \, \left( - \, 2 + 4 \, \text{M0} \, - \, 2 \, \cos \left[ 2 \, \alpha \right] \, - \right) \, \left( - \, 2 + 4 \, \text{M0} \, - \, 2 \, \cos \left[ 2 \, \alpha \right] \, - \right) \, \left( - \, 2 + 4 \, \text{M0} \, - \, 2 \, \cos \left[ 2 \, \alpha \right] \, - \right) \, \left( - \, 2 + 4 \, \text{M0} \, - \, 2 \, \cos \left[ 2 \, \alpha \right] \, - \right) \, \left( - \, 2 + 4 \, \text{M0} \, - \, 2 \, \cos \left[ 2 \, \alpha \right] \, - \right) \, \left( - \, 2 + 4 \, \text{M0} \, - \, 2 \, \cos \left[ 2 \, \alpha \right] \, - \right) \, \left( - \, 2 + 4 \, \text{M0} \, - \, 2 \, \cos \left[ 2 \, \alpha \right] \, - \right) \, \left( - \, 2 + 4 \, \text{M0} \, - \, 2 \, \cos \left[ 2 \, \alpha \right] \, - \right) \, \left( - \, 2 + 4 \, \text{M0} \, - \, 2 \, \cos \left[ 2 \, \alpha \right] \, - \right) \, \left( - \, 2 + 4 \, \text{M0} \, - \, 2 \, \cos \left[ 2 \, \alpha \right] \, - \right) \, \left( - \, 2 + 4 \, \text{M0} \, - \, 2 \, \cos \left[ 2 \, \alpha \right] \, - \right) \, \left( - \, 2 + 4 \, \text{M0} \, - \, 2 \, \cos \left[ 2 \, \alpha \right] \, - \right) \, \left( - \, 2 + 4 \, \text{M0} \, - \, 2 \, \cos \left[ 2 \, \alpha \right] \, - \right) \, \left( - \, 2 + 4 \, \text{M0} \, - \, 2 \, \cos \left[ 2 \, \alpha \right] \, - \right) \, \left( - \, 2 + 4 \, \text{M0} \, - \, 2 \, \cos \left[ 2 \, \alpha \right] \, \right) \, \left( - \, 2 + 4 \, \text{M0} \, - \, 2 \, \cos \left[ 2 \, \alpha \right] \, \right) \, \left( - \, 2 + 4 \, \text{M0} \, - \, 2 \, \cos \left[ 2 \, \alpha \right] \, \right) \, \left( - \, 2 + 4 \, \text{M0} \, - \, 2 \, \cos \left[ 2 \, \alpha \right] \, \right) \, \left( - \, 2 + 4 \, \text{M0} \, - \, 2 \, \cos \left[ 2 \, \alpha \right] \, \right) \, \left( - \, 2 + 4 \, \text{M0} \, - \, 2 \, \cos \left[ 2 \, \alpha \right] \, \right) \, \left( - \, 2 + 4 \, \text{M0} \, - \, 2 \, \cos \left[ 2 \, \alpha \right]
                                                     2 M0 Cos [2 t \omega] + M0 Cos [2 \alpha - 2 t \omega] + M0 Cos [2 \alpha + 2 t \omega] +
                                                     2\sqrt{2}\sqrt{(\text{M0}^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha])}
                                                                                 \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2) \arctan[\alpha]
                    \left(2\,\sqrt{\,\left(\text{M0}^{2}\,\left(\text{6}+2\,\text{Cos}\,[\,2\,\alpha\,]\,-2\,\text{Cos}\,[\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,-\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,+\,2\,\text{t}\,\omega\,]\,\right)}\right.
                                           Sin[\alpha]^2 Sin[t\omega]^2)) +
\dot{\mathbb{1}} \left[ \left[ \left[ -4\,\text{M0} + 2\,\text{M0}\,\text{Cos}\,[2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha - 2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha + 2\,\text{t}\,\omega] + 2\,\text{M0}\,\text{Cos}\,[\alpha - \text{t}\,\omega]^2 \right] \right] = 0
                                                         Sec [\alpha]^2 + 2 M0 Cos [2\alpha] Cos [\alpha - t\omega]^2 Sec [\alpha]^2 + 2 M0 Sec [\alpha]^2 Sin [t\omega]^2 +
                                                     2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2\sqrt{2} \sqrt{(-M0^2 (-6-2 \cos[2 \alpha] +
                                                                                  2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
                                           \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                                                                   M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] +
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\cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2))
      (8\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
                 Sin[\alpha]^2 Sin[t\omega]^2) +
     \left[ (4 \, \text{M0} - 2 \, \text{M0} \, \text{Cos} \, [2 \, \text{t} \, \omega] + \text{M0} \, \text{Cos} \, [2 \, \alpha - 2 \, \text{t} \, \omega] + \text{M0} \, \text{Cos} \, [2 \, \alpha + 2 \, \text{t} \, \omega] - \right]
              2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
              2 M0 Sec [\alpha]^2 Sin [t\omega]^2 – 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
              2\sqrt{2}\sqrt{(-M0^2(-6-2\cos[2\alpha]+2\cos[2t\omega]-
                           \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
          \sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t}\,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t}\,\omega] + \right)}
                     M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] +
                                 \cos[2\alpha - 2t\omega] + \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2
      (8\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
                Sin[\alpha]^2 Sin[t \omega]^2)
2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Sec [\alpha]^2
                    \sin[t \omega]^2 + 2 M0 \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{-M0^2 (-6 - 2 \cos[2 \alpha] + 2 \cos[2 \alpha])}
                               2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
              \sqrt{\frac{1}{1 + \cos[2\alpha]}} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2 \,t \,\omega] + \text{M0} \,\cos[2\alpha - 2 \,t \,\omega] + \right.
                         M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                     \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]  \sin [\alpha]^2 \sin [t \omega]^2 
               (2 MO^2 \omega Cos[t \omega] (6 + 2 Cos[2 \alpha] - 2 Cos[2 t \omega] + Cos[2 \alpha - 2 t \omega] +
                         \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega] + M0^2 \sin [\alpha]^2 \sin [t \omega]^2
                     (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega]))
           (16 (M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega])
                    \operatorname{Sin}[\alpha]^{2} \operatorname{Sin}[\mathsf{t} \omega]^{2})^{3/2}
    \left[ (4 \text{ M0} - 2 \text{ M0 Cos} [2 \text{ t} \omega] + \text{M0 Cos} [2 \alpha - 2 \text{ t} \omega] + \text{M0 Cos} [2 \alpha + 2 \text{ t} \omega] - \right]
              2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
              2 M0 Sec [\alpha]^2 Sin [t\omega]^2 – 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
              2\sqrt{2}\sqrt{(-M0^2(-6-2\cos[2\alpha]+2\cos[2t\omega]-
                           \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
          \sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
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M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{\left(\text{M0}^2\left(6 + 2\cos{[2\,\alpha]} - 2\cos{[2\,\text{t}\,\omega]}\right.\right)} +
                                                            \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
             (2 MO^2 \omega Cos[t \omega] (6 + 2 Cos[2 \alpha] - 2 Cos[2 t \omega] + Cos[2 \alpha - 2 t \omega] +
                                  \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2
                         (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega]))
    (16 (M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega])
                        Sin[\alpha]^2 Sin[t\omega]^2)^{3/2} +
(-4 \text{ MO} + 2 \text{ MO} \cos [2 \text{ t} \omega] - \text{MO} \cos [2 \alpha - 2 \text{ t} \omega] - \text{MO} \cos [2 \alpha + 2 \text{ t} \omega] +
                     2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                     2 M0 Sec [\alpha]^2 Sin [t\omega]^2 + 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                     2\sqrt{2}\sqrt{-M0^2(-6-2\cos[2\alpha]+2\cos[2t\omega]}
                                               \cos [2\alpha - 2t\omega] - \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
             (4 \text{ MO } \omega \text{ Sin}[2 \text{ t} \omega] + 2 \text{ MO } \omega \text{ Sin}[2 \alpha - 2 \text{ t} \omega] - 2 \text{ MO } \omega \text{ Sin}[2 \alpha + 2 \text{ t} \omega] -
                     (\sqrt{2} (2 M0^2 \omega Cos[t \omega] (6 + 2 Cos[2 \alpha] - 2 Cos[2 t \omega] + Cos[2 \alpha - 2 t \omega] +
                                                        \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2
                                                (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])))
                         (\sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                                                   \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2)))/
    16 (1 + Cos [2 \alpha]) \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] +
                                  Cos[2\alpha + 2t\omega] Sin[\alpha]^2 Sin[t\omega]^2
           \sqrt{\left(\frac{1}{1 + \cos{[2\,\alpha]}} \left(-2 + 4\,\text{M0} - 2\,\cos{[2\,\alpha]} - 2\,\text{M0}\,\cos{[2\,t\,\omega]} + \text{M0}\,\cos{[2\,\alpha - 2\,t\,\omega]} + \right)}
                                 M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                            \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
(4 MO - 2 MO Cos [2 t \omega] + MO Cos [2 \alpha - 2 t \omega] + MO Cos [2 \alpha + 2 t \omega] - 2 MO
                         \cos \left[\alpha - t \omega\right]^2 \operatorname{Sec}\left[\alpha\right]^2 - 2 \operatorname{MO} \cos \left[2 \alpha\right] \cos \left[\alpha - t \omega\right]^2 \operatorname{Sec}\left[\alpha\right]^2 -
                     2 M0 Sec [\alpha]^2 Sin [t\omega]^2 – 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                     2\sqrt{2}\sqrt{-M0^2(-6-2\cos[2\alpha]+2\cos[2t\omega]}
                                               \cos [2\alpha - 2t\omega] - \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
             (4 \text{ MO } \omega \text{ Sin}[2 \text{ t} \omega] + 2 \text{ MO } \omega \text{ Sin}[2 \alpha - 2 \text{ t} \omega] - 2 \text{ MO } \omega \text{ Sin}[2 \alpha + 2 \text{ t} \omega] +
                     (\sqrt{2} (2 M0^2 \omega Cos[t \omega] (6 + 2 Cos[2 \alpha] - 2 Cos[2 t \omega] + Cos[2 \alpha - 2 t \omega] +
                                                        \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2
                                                (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])))
                         (\sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha] + \cos
                                                   \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2)))/
     16 (1 + Cos [2 \alpha]) \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] +
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M0 Cos [2\alpha - 2t\omega] - M0 Cos [2\alpha + 2t\omega] + 2M0 Cos [\alpha - t\omega]^2 Sec [\alpha]^2 +
                                                 2 M0 Cos [2 \alpha] Cos [\alpha – t \omega] 2 Sec [\alpha] 2 + 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 +
                                                 2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2(-6-2\cos[2\alpha]+
                                                                                               2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                                   \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2\,t\,\omega] + \text{M0} \,\cos[2\,\alpha - 2\,t\,\omega] + \right)}
                                                                         M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                                                                    \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]  \sin [\alpha]^2 \sin [t \omega]^2 
                                      (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
                                                  2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                                                 2 M0 Sec [\alpha]^2 Sin [t\omega]^2 – 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                                                  2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega])}
                                                                              \operatorname{Sin}[\alpha]^{2}\operatorname{Sin}[\operatorname{t}\omega]^{2})\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\,\sqrt{\left(\operatorname{M0}^{2}\,\left(6+2\operatorname{Cos}[2\,\alpha]-\operatorname{Cos}[2\,\alpha]\right)^{2}}\big)\bigg)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg/\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg)\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big)\bigg(16\operatorname{M0}\big(1+\operatorname{Cos}[2\,\alpha]\big
                                                                        2 \cos[2t\omega] + \cos[2\alpha - 2t\omega] + \cos[2\alpha + 2t\omega] ) <math>\sin[\alpha]^2 \sin[t\omega]^2 ) + \cos[2\omega] + \cos[2\omega]
  \left[\dot{\mathbf{1}}\,\omega\,\mathsf{Cos}\,[\alpha]\,\mathsf{Cot}\,[\alpha]\,\mathsf{Cot}\,[\mathsf{t}\,\omega]\,\mathsf{Csc}\,[\mathsf{t}\,\omega]^{\,2}\,\left(4\,\mathsf{M0}-2\,\mathsf{M0}\,\mathsf{Cos}\,[2\,\mathsf{t}\,\omega]\right.\right]
                                  M0 Cos [2 \alpha - 2 t \omega] + M0 Cos [2 \alpha + 2 t \omega] - 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                                   2 M0 Cos [2 \alpha] Cos [\alpha – t \omega] 2 Sec [\alpha] 2 – 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 –
                                   2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2(-6-2\cos[2\alpha]+
                                                                               2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
                   \sqrt{\left(\frac{1}{1 + \cos{[2\,\alpha]}} \left(-2 + 4\,\text{M0} - 2\,\cos{[2\,\alpha]} - 2\,\text{M0}\cos{[2\,\text{t}\,\omega]} + \text{M0}\cos{[2\,\alpha - 2\,\text{t}\,\omega]} + \right.\right.}
                                                        M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{ (M0<sup>2</sup> (6 + 2 Cos [2 \alpha] - 2 Cos [2 t \omega] +
                                                                                                     \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                      \left(-4\,\text{M0} + 2\,\text{M0}\,\text{Cos}\,[2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha - 2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha + 2\,\text{t}\,\omega] + \right)
                                   2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                                   2 M0 Sec [\alpha]^2 Sin [t\omega]^2 + 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                                   2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+}
                                                                               \cos[2\alpha + 2 t \omega] \sin[\alpha]^2 \sin[t \omega]^2)
       (16 \text{ MO} (1 + \cos[2 \alpha]) \sqrt{(\text{MO}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                                                        \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2) -
|\dot{\mathbf{n}} \cos[\alpha] \cot[\alpha] \csc[\dot{\mathbf{t}} \omega]^2 \left(-4 \,\text{MO} + 2 \,\text{MO} \cos[2 \,\dot{\mathbf{t}} \omega] - \text{MO} \cos[2 \,\alpha - 2 \,\dot{\mathbf{t}} \omega] - \text{MO} \cos[2 \,\alpha - 2 \,\dot{\mathbf{t}} \omega] \right)
                                  M0 Cos [2 \alpha + 2 t \omega] + 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                                   2 M0 Cos [2 \alpha] Cos [\alpha – t \omega] 2 Sec [\alpha] 2 + 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 +
                                   2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2(-6-2\cos[2\alpha]+
                                                                                2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
                    \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
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M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                           \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
             (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
                    2 M0 Cos [\alpha - t\omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2\alpha] Cos [\alpha - t\omega]^2 Sec [\alpha]^2 -
                    2 M0 Sec [\alpha]^2 Sin [t\omega]^2 – 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                    2\sqrt{2}\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]}
                                     Sin[\alpha]^2 Sin[t\omega]^2) (2 M0<sup>2</sup> \omega Cos[t\omega] (6 + 2 Cos[2\alpha] - 2 Cos[2 t\omega] +
                                 \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega] + M0^2 \sin [\alpha]^2
                        Sin[t\omega]^2 (4\omega Sin[2t\omega] + 2\omega Sin[2\alpha - 2t\omega] - 2\omega Sin[2\alpha + 2t\omega]))
    (64 \text{ M0} (1 + \cos[2 \alpha]) (\text{M0}^2 (6 + 2\cos[2 \alpha] - 2\cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                                 \cos [2\alpha + 2t\omega] \sin [\alpha]^2 \sin [t\omega]^2 +
 \dot{\mathbf{n}} Cos[\alpha] Cot[\alpha] Csc[\mathbf{t} \omega] ^2 (4 M0 – 2 M0 Cos[2 \mathbf{t} \omega] + M0 Cos[2 \alpha – 2 \mathbf{t} \omega] +
                    M0 Cos [2 \alpha + 2 t \omega] - 2 M0 Cos [\alpha - t \omega] 2 Sec [\alpha] 2 -
                    2 M0 Cos [2 \alpha] Cos [\alpha – t \omega] 2 Sec [\alpha] 2 – 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 –
                    2 M0 Cos [2 \alpha] Sec [\alpha] <sup>2</sup> Sin [t \omega] <sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2 (-6-2 \cos[2 \alpha] +
                                               2 \cos [2 \pm \omega] - \cos [2 \alpha - 2 \pm \omega] - \cos [2 \alpha + 2 \pm \omega]) \sin [\alpha]^{2} \sin [\pm \omega]^{2}
           \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t}\,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t}\,\omega] + \right)}
                                 M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                           Cos [2\alpha - 2t\omega] + Cos [2\alpha + 2t\omega]) Sin [\alpha]^2 Sin [t\omega]^2)
             \left(-4\,\text{M0} + 2\,\text{M0}\,\text{Cos}\,[2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha - 2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha + 2\,\text{t}\,\omega] + \right)
                    2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                    2 M0 Sec [\alpha]^2 Sin [t\omega]^2 + 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                    2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega])}
                                     Sin[\alpha]^2 Sin[t\omega]^2) (2 M0<sup>2</sup> \omega Cos[t \omega] (6 + 2 Cos[2 \alpha] - 2 Cos[2 t \omega] +
                                 \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega] + M0^2 \sin [\alpha]^2
                        Sin[t \omega]^2 (4 \omega Sin[2t\omega] + 2 \omega Sin[2\alpha - 2t\omega] - 2 \omega Sin[2\alpha + 2t\omega]))
    (64 \text{ MO } (1 + \cos[2 \alpha]) (\text{MO}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                                 \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)^{3/2} +
(i \cos[\alpha] \cot[\alpha] \csc[t \omega]^2 (-4 M0 + 2 M0 \cos[2 t \omega] - M0 \cos[2 \alpha - 2 t \omega] - M0 \cos[2 \alpha] 
                    M0 Cos [2 \alpha + 2 t \omega] + 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                    2 M0 Cos [2 \alpha] Cos [\alpha – t \omega] <sup>2</sup> Sec [\alpha] <sup>2</sup> + 2 M0 Sec [\alpha] <sup>2</sup> Sin [t \omega] <sup>2</sup> +
                    2 M0 Cos [2 \alpha] Sec [\alpha] ^{2} Sin [t \omega] ^{2} + 2 \sqrt{2} \sqrt{-M0^{2}(-6-2\cos[2\alpha]+}
                                               2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
             (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
                    2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                    2 M0 Sec [\alpha]^2 Sin [t\omega]^2 – 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                    2\sqrt{2} \sqrt{(M0^2 (6 + 2 \cos[2\alpha] - 2 \cos[2t\omega] + \cos[2\alpha - 2t\omega] +
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Cos[2\alpha + 2t\omega] Sin[\alpha]^2 Sin[t\omega]^2)
       (4 \text{ MO } \omega \text{ Sin}[2 \text{ t} \omega] + 2 \text{ MO } \omega \text{ Sin}[2 \alpha - 2 \text{ t} \omega] - 2 \text{ MO } \omega \text{ Sin}[2 \alpha + 2 \text{ t} \omega] -
           (\sqrt{2} (2 M0^2 \omega Cos[t \omega] (6 + 2 Cos[2 \alpha] - 2 Cos[2 t \omega] + Cos[2 \alpha - 2 t \omega] +
                             \cos[2\alpha + 2t\omega]) \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2
                         (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])))
             (\sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                          \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)))
  \left[64\,\text{M0}\,\left(1+\cos\left[2\,\alpha\right]\right)^{2}\,\sqrt{\,\left(\text{M0}^{2}\,\left(6+2\cos\left[2\,\alpha\right]-2\cos\left[2\,t\,\omega\right]+\cos\left[4\cos\left[2\,\alpha\right]\right]\right)^{2}}\right]
                    2 \alpha - 2 t \omega] + Cos [2 \alpha + 2 t \omega]) Sin [\alpha] ^2 Sin [t \omega] ^2)
     \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                 M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                               \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
(i \cos[\alpha] \cot[\alpha] \csc[t \omega]^2 (4 MO - 2 MO \cos[2 t \omega] + MO \cos[2 \alpha - 2 t \omega] +
          M0 Cos [2 \alpha + 2 t \omega] - 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
           2 M0 Cos [2 \alpha] Cos [\alpha - t \omega] 2 Sec [\alpha] 2 - 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 -
           2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{-M0^2(-6-2\cos[2\alpha]+
                        2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
       (-4 \text{ M0} + 2 \text{ M0} \cos [2 \text{ t} \omega] - \text{M0} \cos [2 \alpha - 2 \text{ t} \omega] - \text{M0} \cos [2 \alpha + 2 \text{ t} \omega] +
           2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
           2 M0 Sec [\alpha]^2 Sin [t \omega]^2 + 2 M0 Cos [2 \alpha] Sec [\alpha]^2 Sin [t \omega]^2 +
           2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+
                        \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
       (4 \text{ MO } \omega \text{ Sin}[2 \text{ t} \omega] + 2 \text{ MO } \omega \text{ Sin}[2 \alpha - 2 \text{ t} \omega] - 2 \text{ MO } \omega \text{ Sin}[2 \alpha + 2 \text{ t} \omega] +
           (\sqrt{2} (2 M0^2 \omega Cos[t \omega] (6 + 2 Cos[2 \alpha] - 2 Cos[2 t \omega] + Cos[2 \alpha - 2 t \omega] +
                             \cos[2\alpha + 2t\omega]) \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2
                         (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])))
             (\sqrt{M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] +
                          \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)))
  \left[64\,\text{M0}\,\left(1+\cos{[2\,\alpha]}\right)^2\,\sqrt{\,\left(\text{M0}^2\,\left(6+2\cos{[2\,\alpha]}-2\cos{[2\,t\,\omega]}\right)+\cos{[2\,\omega]}\right)}\right]
                    2\alpha - 2t\omega] + Cos [2\alpha + 2t\omega]) Sin [\alpha]^2 Sin [t\omega]^2)
      \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2\,t\,\omega] + \text{M0} \,\cos[2\,\alpha - 2\,t\,\omega] + \right)}
                 M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                               \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
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\left[\dot{\mathbf{n}} \cos[\alpha] \cot[\alpha] \csc[\mathsf{t}\omega]^2 \left(-4\,\mathsf{M0} + 2\,\mathsf{M0} \cos[2\,\mathsf{t}\omega] - \mathsf{M0} \cos[2\,\alpha - 2\,\mathsf{t}\omega] - \right]\right]
                      M0 Cos [2 \alpha + 2 t \omega] + 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                      2 M0 Cos [2 \alpha] Cos [\alpha – t \omega] 2 Sec [\alpha] 2 + 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 +
                     2 M0 Cos [2 \alpha] Sec [\alpha] <sup>2</sup> Sin [t \omega] <sup>2</sup> + 2 \sqrt{2} \sqrt{-M0^2(-6-2\cos[2\alpha]+
                                                 2 Cos [2 t \omega] - Cos [2 \alpha - 2 t \omega] - Cos [2 \alpha + 2 t \omega]) Sin[\alpha]<sup>2</sup> Sin[t \omega]<sup>2</sup>)
            \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{MØ} - 2 \cos[2\alpha] - 2 \,\text{MØ} \cos[2 \,\text{t}\,\omega] + \text{MØ} \cos[2\alpha - 2 \,\text{t}\,\omega] + \right)}
                                   M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 2 \cos [2 \alpha])}
                                                               \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
              \left(-4\,\text{M0}\,\omega\,\text{Cos}\,[\,\text{t}\,\omega]\,\,\text{Sec}\,[\,lpha\,]^{\,2}\,\,\text{Sin}\,[\,\text{t}\,\omega]\,\,-\,4\,\text{M0}\,\omega\,\,\text{Cos}\,[\,2\,lpha]\,\,\,\text{Cos}\,[\,\text{t}\,\omega]\,\,\,\text{Sec}\,[\,lpha\,]^{\,2}
                           Sin[t\omega] + 4M0\omega Sin[2t\omega] + 2M0\omega Sin[2\alpha - 2t\omega] -
                      4 \text{ MO } \omega \text{ Cos} [\alpha - t \omega] \text{ Sec} [\alpha]^2 \text{ Sin} [\alpha - t \omega] - 4 \text{ MO } \omega \text{ Cos} [2 \alpha]
                          \cos [\alpha - t \omega] \operatorname{Sec} [\alpha]^2 \sin [\alpha - t \omega] - 2 \operatorname{MO} \omega \sin [2 \alpha + 2 t \omega] +
                       (\sqrt{2} (2 M0^2 \omega \cos [t \omega] (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] +
                                                          \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2
                                                   (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])))
                           (\sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha] + \cos
                                                     \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2))
     \left(32\,\text{M0}\,\left(1+\cos{[2\,\alpha]}\right)\,\sqrt{\,\left(\text{M0}^2\,\left(6+2\cos{[2\,\alpha]}\,-2\cos{[2\,t\,\omega]}\,+\cos{[2\,\alpha\,-2\,t\,\omega]}\,+\right)\right)}\right. 
                                   \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2) -
\left[\dot{\mathbf{n}} \cos[\alpha] \cot[\alpha] \csc[\mathsf{t} \omega]^2 \left(4\,\mathsf{M0} - 2\,\mathsf{M0} \cos[2\,\mathsf{t} \omega] + \mathsf{M0} \cos[2\,\alpha - 2\,\mathsf{t} \omega] + \right]\right]
                     M0 Cos [2 \alpha + 2 t \omega] - 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                     2 M0 Cos [2 \alpha] Cos [\alpha – t \omega] 2 Sec [\alpha] 2 – 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 –
                     2 M0 Cos [2 \alpha] Sec [\alpha] ^{2} Sin [t \omega] ^{2} + 2 \sqrt{2} \sqrt{(-M0^{2}(-6-2\cos[2\alpha]+
                                                 2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
            \sqrt{\left(\frac{1}{1 + \cos{[2\,\alpha]}} \left(-2 + 4\,\text{M0} - 2\,\cos{[2\,\alpha]} - 2\,\text{M0}\cos{[2\,\text{t}\,\omega]} + \text{M0}\cos{[2\,\alpha - 2\,\text{t}\,\omega]} + \right)}
                                   M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 2 \cos [2 \alpha])}
                                                               \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
              (4 \text{ MO } \omega \text{ Cos} [t \omega] \text{ Sec} [\alpha]^2 \text{ Sin} [t \omega] + 4 \text{ MO } \omega \text{ Cos} [2 \alpha] \text{ Cos} [t \omega] \text{ Sec} [\alpha]^2
                           Sin[t\omega] - 4M0\omega Sin[2t\omega] - 2M0\omega Sin[2\alpha - 2t\omega] +
                      4 \text{ MO } \omega \text{ Cos} [\alpha - t \omega] \text{ Sec} [\alpha]^2 \text{ Sin} [\alpha - t \omega] + 4 \text{ MO } \omega \text{ Cos} [2 \alpha]
                          \cos [\alpha - t \omega] \sec [\alpha]^2 \sin [\alpha - t \omega] + 2 MO \omega \sin [2 \alpha + 2 t \omega] +
                       (\sqrt{2} (2 M0^2 \omega \cos[t \omega] (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                                                          \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2
                                                   (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])))
                           (\sqrt{M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] +
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\cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)))
    (32 \text{ MO} (1 + \cos[2 \alpha]) \sqrt{(\text{MO}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                                \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2) -
\left( i \cos \left[ \alpha \right] \cot \left[ \alpha \right] \csc \left[ t \omega \right]^{2} \sqrt{\left( \frac{1}{1 + \cos \left[ 2 \alpha \right]} \left( -2 + 4 M0 - 2 \cos \left[ 2 \alpha \right] - 4 M0 \right) \right)} \right)
                                2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] +
                                2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+
                                                         Cos[2\alpha + 2t\omega] Sin[\alpha]^2 Sin[t\omega]^2
            \left(-4\,\text{M0} + 2\,\text{M0}\,\text{Cos}\,[2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha - 2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha + 2\,\text{t}\,\omega] + \right)
                    2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                    2 M0 Sec [\alpha]^2 Sin [t\omega]^2 + 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                    2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega])}
                                    Sin[\alpha]^2 Sin[t\omega]^2) (-4 M0 \omega Cos[t\omega] Sec[\alpha]^2 Sin[t\omega] -
                    4 \text{ MO } \omega \text{ Cos} [2 \alpha] \text{ Cos} [\text{t} \omega] \text{ Sec} [\alpha]^2 \text{ Sin} [\text{t} \omega] + 4 \text{ MO } \omega \text{ Sin} [2 \text{t} \omega] +
                    2 M0 \omega Sin[2 \alpha – 2 t \omega] – 4 M0 \omega Cos[\alpha – t \omega] Sec[\alpha]<sup>2</sup> Sin[\alpha – t \omega] –
                    4 M0 \omega Cos [2 \alpha] Cos [\alpha – t \omega] Sec [\alpha] <sup>2</sup> Sin [\alpha – t \omega] – 2 M0 \omega Sin [2 \alpha + 2 t \omega] +
                     (\sqrt{2} (-2 \, \text{M}0^2 \, \omega \, \text{Cos} \, [\text{t} \, \omega] (-6 - 2 \, \text{Cos} \, [\text{2} \, \alpha] + 2 \, \text{Cos} \, [\text{2} \, \text{t} \, \omega] - \text{Cos} \, [\text{2} \, \alpha - 2 \, \text{t} \, \omega] -
                                                     \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega] - M0^2 \sin [\alpha]^2 \sin [t \omega]^2
                                             (-4 \omega \sin[2t\omega] - 2 \omega \sin[2\alpha - 2t\omega] + 2 \omega \sin[2\alpha + 2t\omega])))
                        (\sqrt{-M0^2 (-6-2 \cos [2 \alpha] + 2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha] + 2 \cos [2 \alpha] + 2 \cos [2 \alpha] - \cos [2 \alpha] + 2 \cos [2 \alpha] + 2 \cos [2 \alpha] - \cos [2 \alpha] + 2 \cos [2 \alpha] + 2
                                                \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2))
   \left(32\,\text{M0}\,\left(1+\cos{[2\,\alpha]}\right)\,\sqrt{\,\left(\text{M0}^2\,\left(6+2\cos{[2\,\alpha]}\,-2\cos{[2\,t\,\omega]}\,+\cos{[2\,\alpha\,-2\,t\,\omega]}\,+\right)\right)}\right)
                                \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2) +
\left( i \cos \left[ \alpha \right] \cot \left[ \alpha \right] \csc \left[ t \omega \right]^{2} \sqrt{\left( \frac{1}{1 + \cos \left[ 2 \alpha \right]} \left( -2 + 4 M0 - 2 \cos \left[ 2 \alpha \right] - 4 M0 \right) \right)} \right)
                                2 M0 Cos [2 t \omega] + M0 Cos [2 \alpha - 2 t \omega] + M0 Cos [2 \alpha + 2 t \omega] -
                                2\sqrt{2} \sqrt{(M0^2 (6+2 \cos[2\alpha]-2 \cos[2t\omega]+\cos[2\alpha-2t\omega]+}
                                                        Cos[2\alpha + 2t\omega] Sin[\alpha]^2 Sin[t\omega]^2
            (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
                    2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                    2 M0 Sec [\alpha]^2 Sin [t\omega]^2 – 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                    2\sqrt{2}\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega])}
                                    Sin[\alpha]^2 Sin[t\omega]^2) (4 M0 \omega Cos[t\omega] Sec[\alpha]^2 Sin[t\omega] +
                    4 \text{ MO } \omega \text{ Cos} [2 \alpha] \text{ Cos} [\text{t} \omega] \text{ Sec} [\alpha]^2 \text{ Sin} [\text{t} \omega] - 4 \text{ MO} \omega \text{ Sin} [2 \text{t} \omega] -
                    2 M0 \omega Sin[2 \alpha - 2 t \omega] + 4 M0 \omega Cos[\alpha - t \omega] Sec[\alpha]<sup>2</sup> Sin[\alpha - t \omega] +
                   4 M0 \omega Cos [2 \alpha] Cos [\alpha - t \omega] Sec [\alpha] <sup>2</sup> Sin [\alpha - t \omega] + 2 M0 \omega Sin [2 \alpha + 2 t \omega] +
                     (\sqrt{2} (-2 M0^2 \omega \cos[t \omega] (-6 - 2 \cos[2 \alpha] + 2 \cos[2 t \omega] - \cos[2 \alpha - 2 t \omega] -
                                                     \cos[2\alpha + 2t\omega]) \sin[\alpha]^2 \sin[t\omega] - M0^2 \sin[\alpha]^2 \sin[t\omega]^2
                                             \left(-4 \omega \operatorname{Sin}[2 t \omega] - 2 \omega \operatorname{Sin}[2 \alpha - 2 t \omega] + 2 \omega \operatorname{Sin}[2 \alpha + 2 t \omega]\right)\right)
                         (\sqrt{-M0^2 (-6-2 \cos[2 \alpha] + 2 \cos[2 t \omega] - \cos[2 \alpha - 2 t \omega]} -
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$$\cos[2\,\alpha + 2\,t\,\omega]) \sin[\alpha]^2 \sin[t\,\omega]^2))) \bigg / \bigg (32\,M\Theta \left(1 + \cos[2\,\alpha]\right) \sqrt{\left(M\Theta^2 \left(6 + 2\cos[2\,\alpha] - 2\cos[2\,t\,\omega] + \cos[2\,\alpha - 2\,t\,\omega] + \cos[2\,\alpha - 2\,t\,\omega] + \cos[2\,\alpha - 2\,t\,\omega]\right)} \bigg) \bigg) \bigg) \bigg) \bigg (-\left(\left(\frac{1}{2}\,M\Theta \left(1 + \cos[2\,\alpha]\right) \sec[\alpha] \sin[t\,\omega]^2 \sqrt{\left(\frac{1}{1 + \cos[2\,\alpha]} \left(-2 + 4\,M\Theta - 2\cos[2\,\alpha] - 2\,M\Theta \cos[2\,t\,\omega] + M\Theta \cos[2\,\alpha - 2\,t\,\omega] + M\Theta \cos[2$$

$$\sqrt{\left(\frac{1}{1+\cos[2\alpha]}\left(-2+4\,\text{MO}-2\cos[2\alpha]-2\,\text{MO}\cos[2\alpha]+\text{MO}\cos[2\alpha-2\,\text{t}\,\omega]+\right.}\\ \text{MO}\cos[2\alpha+2\,\text{t}\,\omega]+2\,\sqrt{2}\,\sqrt{\left(\text{MO}^2\left(6+2\cos[2\alpha]-2\cos[2\,\text{t}\,\omega]+\cos[2\alpha]+\right.}\\ \cos[2\alpha-2\,\text{t}\,\omega]+\cos[2\alpha+2\,\text{t}\,\omega]\right)\,\sin[\alpha]^2\sin[\,\text{t}\,\omega]^2\right)\right)\right)}/\left(8\,\sqrt{\left(\text{MO}^2\left(6+2\cos[2\alpha]-2\cos[2\,\text{t}\,\omega]+\cos[2\alpha+2\,\text{t}\,\omega]\right)}\right.}\\ \sin[\alpha]^2\sin[\,\text{t}\,\omega]^2\right)\right)}$$

$$\left\{8\,\sqrt{\left(\text{MO}^2\left(6+2\cos[2\alpha]-2\cos[2\,\text{t}\,\omega]+\cos[2\alpha-2\,\text{t}\,\omega]+\cos[2\alpha+2\,\text{t}\,\omega]\right)}\right.\\ \sin[\alpha]^2\sin[\,\text{t}\,\omega]^2\right)\right)}\right\}$$

$$\left\{8\,\sqrt{\left(\frac{1}{1+\cos[2\alpha]}\left(-2+4\,\text{MO}-2\cos[2\,\alpha]-2\,\text{MO}\cos[2\,\text{t}\,\omega]+\text{MO}\cos[2\,\alpha-2\,\text{t}\,\omega]+\right.}\\ \cos[2\alpha-2\,\text{t}\,\omega]+\cos[2\alpha+2\,\text{t}\,\omega]-2\,\sqrt{2}\,\sqrt{\left(\text{MO}^2\left(6+2\cos[2\alpha]-2\cos[2\,\text{t}\,\omega]+\right.}\\ \cos[2\alpha-2\,\text{t}\,\omega]+\cos[2\alpha+2\,\text{t}\,\omega]\right)}\right.\\ \sin[\alpha]^2\sin[\,\text{t}\,\omega]^2\right)\right)\right\}}$$

$$\left\{4\,\text{MO}-2\,\text{MO}\cos[2\,\text{t}\,\omega]+\text{MO}\cos[2\,\alpha-2\,\text{t}\,\omega]+\text{MO}\cos[2\,\alpha+2\,\text{t}\,\omega]-2\,\text{MO}\cos[\alpha+1\,\omega]^2+2\,\sqrt{2}\,\sqrt{\left(\text{MO}^2\left(6+2\cos[2\alpha]-2\cos[\alpha^2-2\,\text{t}\,\omega]+\cos[\alpha^2$$

 $(-4 \text{ MO} + 2 \text{ MO} \cos [2 \text{ t} \omega] - \text{MO} \cos [2 \alpha - 2 \text{ t} \omega] - \text{MO} \cos [2 \alpha + 2 \text{ t} \omega] +$

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\cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
       (-4 \text{ MO} + 2 \text{ MO} \cos [2 \text{ t} \omega] - \text{MO} \cos [2 \alpha - 2 \text{ t} \omega] - \text{MO} \cos [2 \alpha + 2 \text{ t} \omega] +
           2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
           2 M0 Sec [\alpha]^2 Sin [t\omega]^2 + 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
           2\,\sqrt{2}\,\,\sqrt{\,\left(\text{M0}^2\,\left(\text{6}+2\,\text{Cos}\,[\,2\,\alpha\,]\,-2\,\text{Cos}\,[\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,-\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,+\,2\,\text{t}\,\omega\,]\,\right)}
                    \operatorname{Sin}[\alpha]^2 \operatorname{Sin}[\mathsf{t}\,\omega]^2) \left(2\,\mathsf{M0}^2\,\omega\,\operatorname{Cos}[\mathsf{t}\,\omega]\,\left(6+2\,\operatorname{Cos}[2\,\alpha]-2\,\operatorname{Cos}[2\,\mathsf{t}\,\omega]+\right)\right)
                  \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega] + M0^2 \sin [\alpha]^2
             Sin[t\omega]^2 (4\omega Sin[2t\omega] + 2\omega Sin[2\alpha - 2t\omega] - 2\omega Sin[2\alpha + 2t\omega]))
  \left(16\,\left(\text{M0}^2\,\left(6+2\,\text{Cos}\,[2\,\alpha]\,-2\,\text{Cos}\,[2\,\text{t}\,\omega]\,+\text{Cos}\,[2\,\alpha-2\,\text{t}\,\omega]\,+\text{Cos}\,[2\,\alpha+2\,\text{t}\,\omega]\right)\right)
             Sin[\alpha]^2 Sin[t\omega]^2)^{3/2} +
(4 M0 - 2 M0 Cos [2 t \omega] + M0 Cos [2 \alpha - 2 t \omega] + M0 Cos [2 \alpha + 2 t \omega] -
           2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Sec [\alpha]^2
             \sin[t \omega]^2 - 2 MO \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{MO^2 (6 + 2 \cos[2 \alpha] - 1)^2}
                         2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
       (4 \text{ MO } \omega \text{ Sin}[2 \text{ t} \omega] + 2 \text{ MO } \omega \text{ Sin}[2 \alpha - 2 \text{ t} \omega] - 2 \text{ MO } \omega \text{ Sin}[2 \alpha + 2 \text{ t} \omega] -
           (\sqrt{2} (2 M0^2 \omega Cos[t \omega] (6 + 2 Cos[2 \alpha] - 2 Cos[2 t \omega] + Cos[2 \alpha - 2 t \omega] +
                              \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2
                          (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])))
             (\sqrt{M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] +
                           \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)))
  16 (1 + Cos [2 \alpha]) \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] +
                  \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
      \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                  M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
(-4 \text{ MO} + 2 \text{ MO} \cos [2 \text{ t} \omega] - \text{MO} \cos [2 \alpha - 2 \text{ t} \omega] - \text{MO} \cos [2 \alpha + 2 \text{ t} \omega] +
           2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Sec [\alpha]^2
             \sin[t \omega]^2 + 2 MO \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{MO^2 (6 + 2 \cos[2 \alpha] - 1)^2}
                         2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]  \sin [\alpha]^2 \sin [t \omega]^2 
       (4 \text{ MO } \omega \text{ Sin}[2 \text{ t} \omega] + 2 \text{ MO } \omega \text{ Sin}[2 \alpha - 2 \text{ t} \omega] - 2 \text{ MO } \omega \text{ Sin}[2 \alpha + 2 \text{ t} \omega] +
           (\sqrt{2} (2 M0^2 \omega \cos[t \omega] (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                              \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2
                          (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])))
              (\sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                           \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)))
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16 (1 + \cos[2 \alpha]) \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                         \cos [2\alpha + 2t\omega] \sin [\alpha]^2 \sin [t\omega]^2
            \sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                         M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 2 \cos [2 \alpha])}
                                         \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
     \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \text{ MO} - 2 \cos[2\alpha] - 2 \text{ MO} \cos[2 \text{ t} \omega] + \text{MO} \cos[2\alpha - 2 \text{ t} \omega] + \right)}
                         M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                         \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]  \sin [\alpha]^2 \sin [t\omega]^2 
             \left(-4\,\text{M0}\,\omega\,\text{Cos}\,[\text{t}\,\omega]\,\,\text{Sec}\,[\alpha]^{\,2}\,\,\text{Sin}\,[\text{t}\,\omega]\,-4\,\text{M0}\,\omega\,\,\text{Cos}\,[2\,\alpha]\,\,\text{Cos}\,[\text{t}\,\omega]\,\,\text{Sec}\,[\alpha]^{\,2}\right)
                     Sin[t\omega] + 4 M0 \omega Sin[2 t\omega] + 2 M0 \omega Sin[2 \alpha - 2 t\omega] - 4 M0 \omega Cos[\alpha - t\omega]
                     Sec[\alpha]^2 Sin[\alpha - t\omega] - 4 M0 \omega Cos[2\alpha] Cos[\alpha - t\omega] Sec[\alpha]^2 Sin[\alpha - t\omega] -
                  2 M0 \omega Sin [2 \alpha + 2 t \omega] + (\sqrt{2} (2 \text{ M0}^2 \omega \text{ Cos} [\text{t} \omega] (6 + 2 \text{ Cos} [2 \alpha] - 2 \text{ Cos} [2 \text{ t} \omega] +
                                      \mathsf{Cos}\left[2\,\alpha-2\,\mathsf{t}\,\omega\right]\,+\,\mathsf{Cos}\left[2\,\alpha+2\,\mathsf{t}\,\omega\right]\left)\,\mathsf{Sin}\left[\alpha\right]^{2}\,\mathsf{Sin}\left[\mathsf{t}\,\omega\right]\,+\,\mathsf{M0}^{2}\,\mathsf{Sin}\left[\alpha\right]^{2}
                                  Sin[t\omega]^2 (4\omega Sin[2t\omega] + 2\omega Sin[2\alpha - 2t\omega] - 2\omega Sin[2\alpha + 2t\omega])))
                     \left(\sqrt{\,\left(\text{M0}^2\,\left(\text{6}+\text{2}\,\text{Cos}\,[\text{2}\,\alpha]\,-\text{2}\,\text{Cos}\,[\text{2}\,\text{t}\,\omega]\,+\text{Cos}\,[\text{2}\,\alpha\,-\text{2}\,\text{t}\,\omega]\,\right.\right.}\right.
                                    \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)))
        \left(8\,\sqrt{\,\left(\text{M0}^{2}\,\left(\text{6}+2\,\text{Cos}\,[\,2\,\alpha\,]\,-2\,\text{Cos}\,[\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,-\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,+\,2\,\text{t}\,\omega\,]\,\right)}\right.
                     Sin[\alpha]^2 Sin[t\omega]^2) +
     \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \text{ MO} - 2 \cos[2\alpha] - 2 \text{ MO} \cos[2 \text{ t} \omega] + \text{MO} \cos[2\alpha - 2 \text{ t} \omega] + \right)}
                         M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{ (M0<sup>2</sup> (6 + 2 Cos [2 \alpha] - 2 Cos [2 t \omega] +
                                         \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
             (4 \text{ MO } \omega \text{ Cos} [t \omega] \text{ Sec} [\alpha]^2 \text{ Sin} [t \omega] + 4 \text{ MO } \omega \text{ Cos} [2 \alpha] \text{ Cos} [t \omega] \text{ Sec} [\alpha]^2
                     Sin[t\omega] - 4M0\omega Sin[2t\omega] - 2M0\omega Sin[2\alpha - 2t\omega] + 4M0\omega Cos[\alpha - t\omega]
                     Sec[\alpha]^2 Sin[\alpha - t\omega] + 4 M0 \omega Cos[2\alpha] Cos[\alpha - t\omega] Sec[\alpha]^2 Sin[\alpha - t\omega] +
                  2 M0 \omega Sin [2 \alpha + 2 t \omega] + (\sqrt{2} (2 \text{ M0}^2 \omega \text{ Cos} [\text{t } \omega] (6 + 2 \text{ Cos} [\text{2 } \alpha] - 2 \text{ Cos} [\text{2 t } \omega] +
                                       \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega] + M0^2 \sin [\alpha]^2
                                 Sin[t\omega]^2 (4\omega Sin[2t\omega] + 2\omega Sin[2\alpha - 2t\omega] - 2\omega Sin[2\alpha + 2t\omega])))
                     (\sqrt{M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] +
                                    \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2))
        (8\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
                    Sin[\alpha]^2 Sin[t\omega]^2)
\left(-\left(\left[\pm M0\left(1+\cos\left[2\,\alpha\right]\right)\,\operatorname{Sec}\left[\alpha\right]\,\operatorname{Sin}\left[\pm\,\omega\right]^{\,2}\,\sqrt{\left(\frac{1}{1+\cos\left[2\,\alpha\right]}\,\left(-2+4\,M0-1\right)^{\,2}\right)}\right)\right)
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 $\left[-\left(\left[\pm M0\ \omega\ \left(1+\cos\left[2\ \alpha\right]\right)\ \cos\left[\pm\omega\right]\ \sec\left[\alpha\right]\ \sin\left[\pm\omega\right]\right.\right] \sqrt{\left(\frac{1}{1+\cos\left[2\ \alpha\right]}\right)}\right]$

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\cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega] + M0^2 \sin [\alpha]^2
                                                                                        \sin[t\omega]^2 (4\omega \sin[2t\omega] + 2\omega \sin[2\alpha - 2t\omega] - 2\omega \sin[2\alpha + 2t\omega]))
                                                                   \left( \sqrt{\ \left( \text{M0}^2 \ \left( \text{6 + 2 Cos} \left[ \text{2} \ \alpha \right] \ - \, \text{2 Cos} \left[ \text{2 t} \ \omega \right] \ + \, \text{Cos} \left[ \text{2} \ \alpha \ - \, \text{2 t} \ \omega \right] \ + \, \text{Cos} \left[ \text{2 cos} \left[ \text{2 t} \ \omega \right] \ + \, \text{Cos} \left[ \text{2 cos} \left[ \text{2 t} \ \omega \right] \ + \, \text{Cos} \left[ \text{2 cos} \left[ \text{2 cos} \left[ \text{2 t} \ \omega \right] \ + \, \text{Cos} \left[ \text{2 cos} \left
                                                                                                 2\alpha + 2t\omega) Sin[\alpha]^2 Sin[t\omega]^2)) Tan[\alpha]
                                              4 \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega])}
                                                                 \sin[\alpha]^2 \sin[t \omega]^2 \sqrt{\left(\frac{1}{1 + \cos[2 \alpha]} \left(-2 + 4 \text{ MO} - 2 \cos[2 \alpha] - 2 \text{ MO} \cos[2 t \omega] + \frac{1}{1 + \cos[2 \alpha]} \right)}
                                                                           M0 Cos [2 \alpha – 2 t \omega] + M0 Cos [2 \alpha + 2 t \omega] – 2 \sqrt{2} \sqrt{\left(\text{M0}^2\left(6 + 2\cos\left[2\,\alpha\right] - 2\cos\left[2\,\alpha\right]\right)}
                                                                                                              2 \pm \omega] + Cos [2 \alpha - 2 \pm \omega] + Cos [2 \alpha + 2 \pm \omega]) Sin [\alpha]^2 Sin [\pm \omega]^2)) | +
                                         \left( \verb"i" M0 Sec" [\alpha] \; \verb"Sin" [\verb"t" \omega"]"^2 \; \left( 4 \; \verb"M0" \omega \; \verb"Sin" [2 \; \verb"t" \omega"] \; + \; 2 \; \verb"M0" \omega \; \verb"Sin" [2 \; \alpha \; - \; 2 \; \verb"t" \omega"] \; - \; 2 \; \verb"M0" \; \omega \; \right) \right.
                                                                  \sin[2\alpha + 2t\omega] + (\sqrt{2}(2M0^2\omega \cos[t\omega](6 + 2\cos[2\alpha] - 2\cos[2t\omega] +
                                                                                                 \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega] + M0^2 \sin [\alpha]^2
                                                                                        \sin[t\omega]^2 (4\omega \sin[2t\omega] + 2\omega \sin[2\alpha - 2t\omega] - 2\omega \sin[2\alpha + 2t\omega]))
                                                                   (\sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha]})
                                                                                                 2\alpha + 2t\omega) Sin[\alpha]<sup>2</sup> Sin[t\omega]<sup>2</sup>)) Tan[\alpha])
                                              4 \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega])}
                                                                 \operatorname{Sin}[\alpha]^{2} \operatorname{Sin}[\mathsf{t}\,\omega]^{2} \sqrt{\frac{1}{1 + \operatorname{Cos}[2\,\alpha]}}
                                                                   \left( - 2 + 4 M0 - 2 Cos [2 \alpha] - 2 M0 Cos [2 t \omega] + M0 Cos [2 \alpha - 2 t \omega] +
                                                                           M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                                                     \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]  \sin [\alpha]^2 \sin [t\omega]^2)))
\frac{1}{M\Theta} 2 i \operatorname{Sec}[\alpha] \operatorname{Sin}[\mathsf{t} \, \omega]^2 \operatorname{Tan}[\alpha] \left( e^{-i \, \Theta} \, r + \left( \left( i \operatorname{Cos}[\alpha] \operatorname{Cot}[\alpha] \operatorname{Csc}[\mathsf{t} \, \omega]^2 \right) \right) \right) \right)
                                         \left(-4 \text{ MO} + 2 \text{ MO Cos} [2 \text{ t} \omega] - \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] - \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] + \right)
                                                  2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                                                  2 M0 Sec [\alpha]^2 Sin [t \omega]^2 + 2 M0 Cos [2 \alpha] Sec [\alpha]^2 Sin [t \omega]^2 +
                                                  2\sqrt{2}\sqrt{(-M0^2(-6-2\cos[2\alpha]+2\cos[2t\omega]-
                                                                           \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                                        \sqrt{\left(\frac{1}{1 + \cos{[2\,\alpha]}} \left(-2 + 4\,\text{M0} - 2\,\cos{[2\,\alpha]} - 2\,\text{M0}\,\cos{[2\,\text{t}\,\omega]} + \text{M0}\,\cos{[2\,\alpha - 2\,\text{t}\,\omega]} + \right)}
                                                               M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                                        \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
                                          (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
                                                  2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                                                  2 M0 Sec [\alpha]^2 Sin [t\omega]^2 – 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                                                 2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+}
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\cos [2 \alpha + 2 t \omega] \sin [\alpha]^2 \sin [t \omega]^2)
      (32 \text{ M0} (1 + \cos[2 \alpha]) \sqrt{(\text{M0}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                     \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2) -
     \dot{\mathbf{n}} Cos[\alpha] Cot[\alpha] Csc[t\omega]<sup>2</sup> (4 M0 – 2 M0 Cos[2 t\omega] + M0 Cos[2 \alpha – 2 t\omega] +
              M0 Cos [2 \alpha + 2 t \omega] - 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
              2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]<sup>2</sup> Sec [\alpha]<sup>2</sup> - 2 M0 Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> -
               2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2 (-6-2 \cos [2 \alpha] +
                            2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
          \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2\,t\,\omega] + \text{M0} \,\cos[2\,\alpha - 2 \,t\,\omega] + \right)}
                     M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                  \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]  \sin [\alpha]^2 \sin [t\omega]^2 
           (-4 \, MO + 2 \, MO \, Cos \, [2 \, t \, \omega] \, - MO \, Cos \, [2 \, \alpha - 2 \, t \, \omega] \, - MO \, Cos \, [2 \, \alpha + 2 \, t \, \omega] \, +
               2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
               2 M0 Sec [\alpha]^2 Sin [t \omega]^2 + 2 M0 Cos [2 \alpha] Sec [\alpha]^2 Sin [t \omega]^2 +
               2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+}
                           \cos [2\alpha + 2t\omega] \sin [\alpha]^2 \sin [t\omega]^2
      (32 \text{ M0} (1 + \cos[2 \alpha]) \sqrt{(\text{M0}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                     Cos[2\alpha + 2t\omega] Sin[\alpha]^2 Sin[t\omega]^2)
 \left( s \left( \sqrt{\frac{1}{1 + \cos[2\alpha]}} \left( -2 + 4 \, M0 - 2 \, \cos[2\alpha] - 2 \, M0 \, \cos[2 \, t \, \omega] + M0 \, \cos[2\alpha - 2 \, t \, \omega] + \right) \right) 
                            M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] +
                                        \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
                 (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
                     2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                     2 M0 Sec [\alpha]^2 Sin [t\omega]^2 – 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                     2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+}
                                  \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2
             (8\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
                       Sin[\alpha]^2 Sin[t\omega]^2) +
           \sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2 \,t \,\omega] + \text{M0} \,\cos[2\alpha - 2 \,t \,\omega] + \right.}
                            M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                        \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
                 (-4 \text{ MO} + 2 \text{ MO} \cos [2 \text{ t} \omega] - \text{MO} \cos [2 \alpha - 2 \text{ t} \omega] - \text{MO} \cos [2 \alpha + 2 \text{ t} \omega] +
                     2 M0 Cos [\alpha - t\omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2\alpha] Cos [\alpha - t\omega]^2 Sec [\alpha]^2 +
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$$2 \ MOS \ \text{ecc}(\alpha)^2 \ \text{Sin}(\text{tw})^2 + 2 \ MOCOS(2 \ \alpha) = \text{Sco}(\alpha)^2 \ \text{Sin}(\text{tw})^2 + 2 \ \sqrt{2} \ \sqrt{(\text{MO}^2 (6+2 \text{CoS}(2 \ \alpha) - 2 \text{CoS}(2 \ \text{tw}) + \text{CoS}(2 \ \alpha - 2 \text{tw}) + \text{MO} \text{CoS}(2 \ \alpha - 2 \text{tw}) + \text{CoS}(2 \ \alpha - 2 \text{tw}) + \text{CoS}(2 \ \alpha - 2 \text{tw}) + \text{MO} \text{CoS}(2 \ \alpha - 2 \text{tw}) + \text{MO} \text{CoS}(2 \ \alpha - 2 \text{tw}) + \text{MO} \text{CoS}(2 \ \alpha - 2 \text{tw}) + \text{CoS}(2 \ \alpha -$$

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2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                2 M0 Sec [\alpha]^2 Sin [t\omega]^2 + 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                2\sqrt{2}\sqrt{(M\theta^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+}
                              \cos [2 \alpha + 2 t \omega] \sin [\alpha]^2 \sin [t \omega]^2)
       (8\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
                  Sin[\alpha]^2 Sin[t \omega]^2)
e^{-i\theta} r \left( \sqrt{\frac{1}{1 + \cos[2\alpha]}} \left( -2 + 4 M0 - 2 \cos[2\alpha] - 2 M0 \cos[2 t \omega] + M0 \cos[2\alpha - 2 t \omega] + \frac{1}{1 + \cos[2\alpha]} \right) \right)
                              M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{\left(\text{M0}^2\left(6 + 2 \cos\left[2 \, \alpha\right] - 2 \cos\left[2 \, \text{t} \, \omega\right]\right. + \right)}
                                             \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
                   (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
                       2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Sec [\alpha]^2
                         \sin[t \omega]^2 - 2 MO \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{MO^2 (6 + 2 \cos[2 \alpha] - 1)^2}
                                      2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega] ) \sin [\alpha]^{2} \sin [t \omega]^{2})) \bigg| \bigg/
               (8\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
                          Sin[\alpha]^2 Sin[t\omega]^2) +
            \sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right]}
                               M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                            \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
                   (-4 \text{ M0} + 2 \text{ M0 Cos} [2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha - 2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha + 2 \text{ t} \omega] +
                       2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Sec [\alpha]^2
                         {\rm Sin} \, [\, t \, \omega \, ]^{\, 2} \, + \, 2 \, \, \text{M0} \, \, {\rm Cos} \, [\, 2 \, \alpha \, ] \, \, {\rm Sec} \, [\, \alpha \, ]^{\, 2} \, \, {\rm Sin} \, [\, t \, \omega \, ]^{\, 2} \, + \, 2 \, \, \sqrt{2} \, \, \, \sqrt{\, \left( \text{M0}^{\, 2} \, \left( \text{6} \, + \, 2 \, \, \text{Cos} \, [\, 2 \, \alpha \, ] \, \, - \, \, \right) \, \right) \, } \, \, 
                                      2 \cos [2 \pm \omega] + \cos [2 \alpha - 2 \pm \omega] + \cos [2 \alpha + 2 \pm \omega]) \sin [\alpha]^2 \sin [\pm \omega]^2)
               (8 \sqrt{M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega])}
                         Sin[\alpha]^2 Sin[t\omega]^2) +
    S \left(-\left(\left[\dot{n} M0 \left(1 + Cos[2 \alpha]\right) Sec[\alpha] Sin[t \omega]^2 \sqrt{\left(\frac{1}{1 + Cos[2 \alpha]} \left(-2 + 4 M0 - Cos[\alpha]\right)\right)^2}\right)\right)
                                    2 Cos [2 \alpha] – 2 M0 Cos [2 t \omega] + M0 Cos [2 \alpha – 2 t \omega] + M0 Cos [2 \alpha + 2 t \omega] –
                                    2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+
                                                 \cos [2 \alpha + 2 t \omega] \sin [\alpha]^2 \sin [t \omega]^2 ) ) \tan [\alpha]
                   (2\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
                              \operatorname{Sin}[\alpha]^{2} \operatorname{Sin}[t \omega]^{2})) + \left(i \operatorname{M0} \left(1 + \operatorname{Cos}[2 \alpha]\right) \operatorname{Sec}[\alpha] \operatorname{Sin}[t \omega]^{2}\right)
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\sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \text{ M0} - 2 \cos[2\alpha] - 2 \text{ M0} \cos[2 t \omega] + \text{M0} \cos[2\alpha - 2 t \omega] + \right)}
                               M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                            \cos[2\alpha - 2t\omega] + \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2) \arctan[\alpha]
                (2\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
                          Sin[\alpha]^2 Sin[t \omega]^2))
\dot{\mathbb{I}}\left[\left[\sqrt{\frac{1}{1+\cos[2\alpha]}}\left(-2+4\,\text{M0}-2\,\cos[2\,\alpha]-2\,\text{M0}\,\cos[2\,t\,\omega]+\text{M0}\,\cos[2\,\alpha-2\,t\,\omega]+\right]\right]
                               M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] +
                                             \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                     (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
                         2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                         2 M0 Sec [\alpha]^2 Sin [t\omega]^2 – 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                         2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+}
                                     \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2
                (8\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
                           Sin[\alpha]^2 Sin[t\omega]^2) +
              \sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2 \,t \,\omega] + \text{M0} \,\cos[2\alpha - 2 \,t \,\omega] + \right.}
                               M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] +
                                            \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                     (-4 \text{ M0} + 2 \text{ M0 Cos} [2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha - 2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha + 2 \text{ t} \omega] +
                         2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                         2 M0 Sec [\alpha]^2 Sin [t\omega]^2 + 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                         2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+
                                     \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2)
                (8 \sqrt{M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega])}
                          Sin[\alpha]^2 Sin[t \omega]^2))
         \left(-\left(\left(\sqrt{\frac{1}{1+\cos{[2\,\alpha]}}}\left(-2+4\,\text{M0}-2\,\cos{[2\,\alpha]}-2\,\text{M0}\cos{[2\,\text{t}\,\omega]}+\text{M0}\cos{[2\,\alpha-2\,\text{t}\,\omega]}+\right)\right)\right)
                                    M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] +
                                                 \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                          (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
                             2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Sec [\alpha]^2
                               \sin[t \, \omega]^2 - 2 \, MO \, \cos[2 \, \alpha] \, \sec[\alpha]^2 \, \sin[t \, \omega]^2 + 2 \, \sqrt{2} \, \sqrt{\left(MO^2 \, \left(6 + 2 \, \cos[2 \, \alpha] - 1 \, \cos[2 \, \alpha] \right)^2 + 2 \, \cos[2 \, \alpha] \right)}
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2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
                                         (2 MO^2 \omega Cos[t \omega] (6 + 2 Cos[2 \alpha] - 2 Cos[2 t \omega] + Cos[2 \alpha - 2 t \omega] +
                                                                                \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega] + M0^2 \sin [\alpha]^2 \sin [t \omega]^2
                                                                  (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega]))
                        (16 (M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega])
                                                              \operatorname{Sin}[\alpha]^{2} \operatorname{Sin}[\mathsf{t}\,\omega]^{2})^{3/2}
\sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \text{ M0} - 2 \cos[2\alpha] - 2 \text{ M0} \cos[2 t\omega] + \text{M0} \cos[2\alpha - 2 t\omega] + \frac{1}{2} \cos[2\alpha] + \frac{1}{2
                                                                M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                                                                 \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^{2} \sin [t \omega]^{2}))
                        (-4 \text{ M0} + 2 \text{ M0 Cos} [2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha - 2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha + 2 \text{ t} \omega] +
                                       2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                                       2 M0 Sec [\alpha]^2 Sin [t\omega]^2 + 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                                       2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega])}
                                                                       Sin[\alpha]^2 Sin[t\omega]^2) (2 M0<sup>2</sup> \omega Cos[t \omega] (6 + 2 Cos[2 \alpha] - 2 Cos[2 t \omega] +
                                                              \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega] + M0^2 \sin [\alpha]^2
                                               Sin[t\omega]^2 (4\omega Sin[2t\omega] + 2\omega Sin[2\alpha - 2t\omega] - 2\omega Sin[2\alpha + 2t\omega]))
       (16 (M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega])
                                                Sin[\alpha]^2 Sin[t\omega]^2)^{3/2} +
(4 M0 - 2 M0 Cos [2 t \omega] + M0 Cos [2 \alpha - 2 t \omega] + M0 Cos [2 \alpha + 2 t \omega] -
                                       2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Sec [\alpha]^2
                                               \sin[t \, \omega]^2 - 2 \, MO \, \cos[2 \, \alpha] \, \sec[\alpha]^2 \, \sin[t \, \omega]^2 + 2 \, \sqrt{2} \, \sqrt{\left(MO^2 \, \left(6 + 2 \, \cos[2 \, \alpha] - 1 \, \cos[2 \, \alpha] + 1 \, \cos[2 \, \alpha] \right)\right)}
                                                                                        2 Cos [2 t \omega] + Cos [2 \alpha - 2 t \omega] + Cos [2 \alpha + 2 t \omega]) Sin[\alpha]<sup>2</sup> Sin[t \omega]<sup>2</sup>)
                        (4 \text{ MO } \omega \text{ Sin}[2 \text{ t} \omega] + 2 \text{ MO } \omega \text{ Sin}[2 \alpha - 2 \text{ t} \omega] - 2 \text{ MO } \omega \text{ Sin}[2 \alpha + 2 \text{ t} \omega] -
                                        (\sqrt{2} (2 M0^2 \omega Cos[t \omega] (6 + 2 Cos[2 \alpha] - 2 Cos[2 t \omega] + Cos[2 \alpha - 2 t \omega] +
                                                                                                         \cos[2\alpha + 2t\omega]) \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2
                                                                                            (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])))
                                                (\sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha] + \cos
                                                                                                \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)))
       16 (1 + Cos [2 \alpha]) \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] +
                                                              \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
                     \sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \frac{1}{1 + \cos[2\alpha]} + \frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \frac{1}{1 + \cos[2\alpha]} + \frac{1}{1 +
                                                              M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{\left(\text{M0}^2\left(\text{6 + 2 Cos}\left[\text{2 }\alpha\right]\right.} - \text{2 Cos}\left[\text{2 t }\omega\right]\right.} +
                                                                                                                  \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
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(-4 \text{ MO} + 2 \text{ MO} \cos [2 \text{ t} \omega] - \text{MO} \cos [2 \alpha - 2 \text{ t} \omega] - \text{MO} \cos [2 \alpha + 2 \text{ t} \omega] +
                      2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Sec [\alpha]^2
                          \sin[t \omega]^2 + 2 MO \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{(MO^2 (6 + 2 \cos[2 \alpha] - 1))^2 + (MO^2 (6 + 2 \cos[2 \alpha] - 1))^2}
                                                 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]  \sin [\alpha]^2 \sin [t \omega]^2 
             (4 \text{ MO } \omega \text{ Sin}[2 \text{ t} \omega] + 2 \text{ MO } \omega \text{ Sin}[2 \alpha - 2 \text{ t} \omega] - 2 \text{ MO } \omega \text{ Sin}[2 \alpha + 2 \text{ t} \omega] +
                       (\sqrt{2} (2 M0^2 \omega \cos [t \omega] (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] +
                                                          \cos[2\alpha + 2t\omega]) \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2
                                                  (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])))
                           (\sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                                                     \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2)))/
    16 (1 + \cos[2 \alpha]) \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha] + \cos[2 \alpha] + \cos[2 \alpha]}
                                   \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
           \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t}\,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t}\,\omega] + \right)}
                                  M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{\left(\text{M0}^2\left(6 + 2\cos\left[2\,\alpha\right] - 2\cos\left[2\,\text{t}\,\omega\right]\right.} +
                                                              \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
\sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2 \,t \,\omega] + \text{M0} \,\cos[2\alpha - 2 \,t \,\omega] + \right)}
                                  M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                              \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
              \left(-4\,\text{M0}\,\omega\,\text{Cos}\,[\,\text{t}\,\omega\,]\,\,\text{Sec}\,[\,\alpha\,]^{\,2}\,\,\text{Sin}\,[\,\text{t}\,\omega\,]\,\,-\,4\,\,\text{M0}\,\omega\,\,\text{Cos}\,[\,2\,\,\alpha\,]\,\,\,\text{Cos}\,[\,\text{t}\,\omega\,]\,\,\,\text{Sec}\,[\,\alpha\,]^{\,2}
                          Sin[t\omega] + 4M0\omega Sin[2t\omega] + 2M0\omega Sin[2\alpha - 2t\omega] -
                      4 M0 \omega Cos [\alpha – t \omega] Sec [\alpha]<sup>2</sup> Sin [\alpha – t \omega] – 4 M0 \omega Cos [2 \alpha]
                          \cos [\alpha - t \omega] \sec [\alpha]^2 \sin [\alpha - t \omega] - 2 MO \omega \sin [2 \alpha + 2 t \omega] +
                       (\sqrt{2} (2 M0^2 \omega \cos[t \omega] (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                                                          \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega] + M0^2 \sin [\alpha]^2 \sin [t \omega]^2
                                                  (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])))
                          (\sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha] + \cos
                                                     \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)))
    (8\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
                          Sin[\alpha]^2 Sin[t\omega]^2) +
\sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \text{ MO} - 2 \cos[2\alpha] - 2 \text{ MO} \cos[2 \text{ t} \omega] + \text{MO} \cos[2\alpha - 2 \text{ t} \omega] + \right)}
                                  M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(\text{M0}^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 \text{ t} \omega] +
                                                              \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
              (4 \text{ MO } \omega \text{ Cos}[t \omega] \text{ Sec}[\alpha]^2 \text{ Sin}[t \omega] + 4 \text{ MO } \omega \text{ Cos}[2 \alpha] \text{ Cos}[t \omega] \text{ Sec}[\alpha]^2
                          Sin[t\omega] - 4M0\omega Sin[2t\omega] - 2M0\omega Sin[2\alpha - 2t\omega] +
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4 \text{ MO } \omega \text{ Cos} [\alpha - t \omega] \text{ Sec} [\alpha]^2 \text{ Sin} [\alpha - t \omega] + 4 \text{ MO } \omega \text{ Cos} [2 \alpha]
                                                                Cos[\alpha - t\omega] Sec[\alpha]^2 Sin[\alpha - t\omega] + 2 MO \omega Sin[2\alpha + 2 t\omega] +
                                                            (\sqrt{2} (2 M0^2 \omega \cos[t \omega] (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                                                                                                                  \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega] + M0^2 \sin [\alpha]^2 \sin [t \omega]^2
                                                                                                      (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])))
                                                                (\sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha] + \cos
                                                                                                          \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)))
                              (8 \sqrt{M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega])}
                                                              \operatorname{Sin}[\alpha]^2 \operatorname{Sin}[\mathsf{t}\,\omega]^2)) +
\left[\dot{\mathbf{1}} \cos[\alpha] \cot[\alpha] \csc[\mathsf{t} \omega]^2 \left(-4\,\mathrm{M0} + 2\,\mathrm{M0} \cos[2\,\mathsf{t} \omega] - \mathrm{M0} \cos[2\,\alpha - 2\,\mathsf{t} \omega] - \mathrm{M0} \cos[2\,\alpha]\right]\right]
                                                         M0 Cos [2 \alpha + 2 t \omega] + 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                                                         2 M0 Cos [2 \alpha] Cos [\alpha – t \omega] 2 Sec [\alpha] 2 + 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 +
                                                         2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2(-6-2\cos[2\alpha]+
                                                                                                     2 \cos [2 \pm \omega] - \cos [2 \alpha - 2 \pm \omega] - \cos [2 \alpha + 2 \pm \omega]) \sin [\alpha]^2 \sin [\pm \omega]^2
                                         \sqrt{\left(\frac{1}{1 + \cos[2\alpha]}\left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t}\,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t}\,\omega] + \right)}
                                                                             M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                                                                         \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
                                            (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
                                                         2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                                                         2 M0 Sec [\alpha]^2 Sin [t\omega]^2 – 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                                                         2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+}
                                                                                                   \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2)
                               \left(32\ \text{M0}\ \left(1 + \cos\left[2\ \alpha\right]\right)\ \sqrt{\ \left(\text{M0}^2\ \left(6 + 2\cos\left[2\ \alpha\right] - 2\cos\left[2\ t\ \omega\right] + \cos\left[2\ \alpha - 2\ t\ \omega\right] + \cos\left[2\ \alpha\right] + \cos\left[2\ \alpha
                                                                             \cos[2\alpha + 2t\omega]) \sin[\alpha]^2 \sin[t\omega]^2) -
                         \pm \cos[\alpha] \cot[\alpha] \csc[\pm \omega]^2 \left(4 \,\text{M0} - 2 \,\text{M0} \cos[2 \pm \omega] + \text{M0} \cos[2 \,\alpha - 2 \pm \omega] + \right)
                                                         M0 Cos [2 \alpha + 2 t \omega] - 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                                                         2 M0 Cos [2\alpha] Cos [\alpha - t\omega]^2 Sec [\alpha]^2 - 2 M0 Sec [\alpha]^2 Sin [t\omega]^2 -
                                                         2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{-M0^2 (-6-2 \cos[2 \alpha] + \cos[2 \alpha])}
                                                                                                   2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
                                         \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                                                                             M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{ (M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 2 \cos [2 \alpha])}
                                                                                                                          \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                                            (-4 \text{ M0} + 2 \text{ M0} \cos [2 \text{ t} \omega] - \text{M0} \cos [2 \alpha - 2 \text{ t} \omega] - \text{M0} \cos [2 \alpha + 2 \text{ t} \omega] +
                                                         2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                                                         2 M0 Sec [\alpha]^2 Sin [t \omega]^2 + 2 M0 Cos [2 \alpha] Sec [\alpha]^2 Sin [t \omega]^2 +
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$$2\sqrt{2} \sqrt{\left(\text{MO}^2\left(6+2\cos[2\alpha]-2\cos[2\pm\omega]+\cos[2\alpha-2\pm\omega]+\cos[2\alpha-2\pm\omega]+\cos[2\alpha+2\pm\omega]\right)}\right) / \\ \cos[2\alpha+2\pm\omega]\right) \sin[\alpha]^2\sin[\pm\omega]^2\right)\right) / \\ \left(32\,\text{MO}\left(1+\cos[2\alpha]\right) \sqrt{\left(\text{MO}^2\left(6+2\cos[2\alpha]-2\cos[2\pm\omega]+\cos[2\alpha-2\pm\omega]+\cos[2\alpha-2\pm\omega]+\cos[2\alpha+2\pm\omega]\right)}\right) \\ \cos[2\alpha+2\pm\omega]\right) \sin[\alpha]^2\sin[\pm\omega]^2\right)\right) \\ \left(-\left(\left[\pm\text{MO}\,\omega\left(1+\cos[2\alpha]\right)\cos[\pm\omega]\sec[\alpha]\sin[\pm\omega]\right.\right)\right) \left(\frac{1}{1+\cos[2\alpha]}\left(-2+4\,\text{MO}-2\cos[2\alpha]-2\,\text{MO}\cos[2\pm\omega]+\text{MO}\cos[2\alpha-2\pm\omega]+\cos[2\alpha-2\pm\omega]+\cos[2\alpha-2\pm\omega]+\cos[2\alpha-2\pm\omega]+\cos[2\alpha-2\pm\omega]\right)}\right) \\ \cos[2\alpha+2\pm\omega]+\cos[2\alpha+2\pm\omega]\right) \sin[\alpha]^2\sin[\pm\omega]^2\right)\right) \\ \tan[\alpha]\right) / \left(\sqrt{\left(\text{MO}^2\left(6+2\cos[2\alpha]-2\cos[2\pm\omega]+\cos[2\alpha-2\pm\omega]+\cos[2\alpha-2\pm\omega]+\cos[2\alpha-2\pm\omega]+\cos[2\alpha-2\pm\omega]\right)}\right) \\ \cos[2\alpha+2\pm\omega]\right) \sin[\alpha]^2\sin[\pm\omega]^2\right)\right) + \\ \left(\pm\text{MO}\,\omega\left(1+\cos[2\alpha]\right)\cos[\pm\omega]\cdot\sec[\alpha]\sin[\pm\omega]^2\right)\right) + \\ \left(\pm\text{MO}\,\omega\left(1+\cos[2\alpha]\right)\cos[\pm\omega]\cdot\sec[\alpha]\sin[\pm\omega]^2\right)\right) + \\ \cos[2\alpha+2\pm\omega]+2\sqrt{2}\,\sqrt{\left(\text{MO}^2\left(6+2\cos[2\alpha]-2\cos[2\pm\omega]+\cos[2\alpha-2\pm\omega]+\cos[2\alpha-2\pm\omega]+\cos[2\alpha-2\pm\omega]+\cos[2\alpha-2\pm\omega]\right)}\right)} \\ \sin[\alpha]^2\sin[\pm\omega]^2\right) + \left(\pm\text{MO}\,\left(1+\cos[2\alpha]\right)\sin[\alpha]^2\sin[\pm\omega]^2\right)\right) + \\ \left(\sqrt{\left(\text{MO}^2\left(6+2\cos[2\alpha]-2\cos[2\pm\omega]+\cos[2\alpha-2\pm\omega]+\cos[2\alpha+2\pm\omega]\right)}\right)} \\ \sin[\alpha]^2\sin[\pm\omega]^2\right)\right) + \left(\pm\text{MO}\,\left(1+\cos[2\alpha]\right)\sec[\alpha]\sin[\pm\omega]^2\right) \\ \sqrt{\left(\frac{1}{1+\cos[2\alpha]}\left(-2+4\,\text{MO}-2\cos[2\alpha]-2\,\text{MO}\cos[2\pm\omega]+\text{MO}\cos[2\alpha-2\pm\omega]+\cos[$$

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\cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega] + M0^2 \sin [\alpha]^2 \sin [t \omega]^2
                                                                        (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])) \tan[\alpha]
                                                   \left(4\,\left(\text{M0}^2\,\left(6+2\,\text{Cos}\,[\,2\,\alpha\,]\,-2\,\text{Cos}\,[\,2\,t\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,-\,2\,t\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,+\,2\,t\,\omega\,]\,\right)\right)
                                                                       \operatorname{Sin}[\alpha]^{2} \operatorname{Sin}[\mathsf{t}\,\omega]^{2})^{3/2} -
                                               (i M0 Sec [\alpha] Sin[t \omega]^2 (4 M0 \omega Sin[2 t \omega] + 2 M0 \omega Sin[2 \alpha - 2 t \omega] -
                                                                   2 M0 \omega Sin [2 \alpha + 2 t \omega] - (\sqrt{2} (2 \text{ M0}^2 \omega \text{ Cos} [\text{t } \omega] (6 + 2 \text{ Cos} [\text{2 } \alpha] - 2 \text{ Cos} [\text{2 t } \omega] +
                                                                                                    \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega] + M0^2 \sin [\alpha]^2
                                                                                           \sin[t\omega]^2 \left(4\omega \sin[2t\omega] + 2\omega \sin[2\alpha - 2t\omega] - 2\omega \sin[2\alpha + 2t\omega]\right)\right)
                                                                       (\sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha]})
                                                                                                    2\alpha + 2t\omega) Sin[\alpha]<sup>2</sup> Sin[t\omega]<sup>2</sup>)) Tan[\alpha])
                                                    \left[4\sqrt{\left(\text{M0}^{2}\left(6+2\cos\left[2\,\alpha\right]-2\cos\left[2\,t\,\omega\right]+\cos\left[2\,\alpha-2\,t\,\omega\right]+\cos\left[2\,\alpha+2\,t\,\omega\right]\right)}\right]
                                                                      \sin[\alpha]^2 \sin[t \omega]^2 \sqrt{\left(\frac{1}{1 + \cos[2 \alpha]} \left(-2 + 4 M0 - 2 \cos[2 \alpha] - 2 M0 \cos[2 t \omega] + \frac{1}{1 + \cos[2 \alpha]} \right)\right)}
                                                                               M0 Cos [2 \alpha – 2 t \omega] + M0 Cos [2 \alpha + 2 t \omega] – 2 \sqrt{2} \sqrt{\left(\text{M0}^2\left(6 + 2\cos\left[2\,\alpha\right] - 2\cos\left[2\,\alpha\right]\right)}
                                                                                                                2 \pm \omega] + Cos [2 \alpha - 2 \pm \omega] + Cos [2 \alpha + 2 \pm \omega]) Sin [\alpha]^2 Sin [\pm \omega]^2)) +
                                               \sin[2\alpha + 2t\omega] + (\sqrt{2}(2M0^2\omega \cos[t\omega](6 + 2\cos[2\alpha] - 2\cos[2t\omega] + \sqrt{2})]
                                                                                                    \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega] + M0^2 \sin [\alpha]^2
                                                                                           Sin[t\omega]^2 (4\omega Sin[2t\omega] + 2\omega Sin[2\alpha - 2t\omega] - 2\omega Sin[2\alpha + 2t\omega])))
                                                                       (\sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha]})
                                                                                                    2\alpha + 2t\omega) Sin[\alpha]^2 Sin[t\omega]^2) Tan[\alpha]
                                                    \left(4\sqrt{\left(\text{M0}^{2}\left(6+2\cos\left[2\,\alpha\right]-2\cos\left[2\,t\,\omega\right]+\cos\left[2\,\alpha-2\,t\,\omega\right]+\cos\left[2\,\alpha+2\,t\,\omega\right]\right)}\right)
                                                                      \operatorname{Sin}[\alpha]^{2}\operatorname{Sin}[\operatorname{t}\omega]^{2}\Big)\sqrt{\left(rac{1}{1+\operatorname{Cos}[2\alpha]}\right)}
                                                                       (-2 + 4 MO - 2 Cos [2 \alpha] - 2 MO Cos [2 t \omega] + MO Cos [2 \alpha - 2 t \omega] +
                                                                               M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{\left(\text{M0}^2\left(\text{6 + 2 Cos}\left[\text{2 }\alpha\right] - \text{2 Cos}\left[\text{2 t }\omega\right]\right.\right)} +
                                                                                                        \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2))
 \mathsf{L22}[\alpha_{\_},\,\omega_{\_},\,\mathsf{t}_{\_},\,\mathsf{M0}_{\_},\,\mathsf{s}_{\_},\,\mathsf{r}_{\_},\,\theta_{\_}] := \frac{1}{^{\mathsf{M}\alpha}}\,2\,\dot{\mathtt{n}}\,\mathsf{Sec}[\alpha]\,\mathsf{Sin}[\mathsf{t}\,\omega]^{\,2}\,\mathsf{Tan}[\alpha] 
              \left[ s + \left[ \left[ \left( -4\,\text{M0} + 2\,\text{M0}\,\text{Cos}\,[2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha - 2\,\text{t}\,\omega] \right. \right. \right. \right. \\ \left. - \text{M0}\,\text{Cos}\,[2\,\alpha + 2\,\text{t}\,\omega] + 2\,\text{M0}\,\text{Cos}\,[\alpha - \text{t}\,\omega]^2 \right] \right] 
                                                          Sec[\alpha]^2 + 2 MO Cos[2 \alpha] Cos[\alpha - t \omega]^2 Sec[\alpha]^2 + 2 MO Sec[\alpha]^2 Sin[t \omega]^2 +
                                                       2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2 (-6 - 2 \cos [2 \alpha] + \cos (-6 - 2 \cos (-6 + 2 \cos
                                                                               2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
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\sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                      M0 Cos [2\alpha + 2t\omega] - 2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha] - 2\cos[2t\omega] +
                                   \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2))
      (8\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
                 Sin[\alpha]^2 Sin[t\omega]^2) +
     \left[ \left( 4\,\text{M0} - 2\,\text{M0}\,\text{Cos}\,[2\,\text{t}\,\omega] + \text{M0}\,\text{Cos}\,[2\,\alpha - 2\,\text{t}\,\omega] + \text{M0}\,\text{Cos}\,[2\,\alpha + 2\,\text{t}\,\omega] - 2\,\text{M0}\,\text{Cos}\,[\alpha - \text{t}\,\omega]^2 \right] \right]
                 Sec[\alpha]^2 - 2 MO Cos[2 \alpha] Cos[\alpha - t \omega]^2 Sec[\alpha]^2 - 2 MO Sec[\alpha]^2 Sin[t \omega]^2 -
               2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{-M0^2(-6-2\cos[2\alpha]+}
                            2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
          \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2\,t\,\omega] + \text{M0} \,\cos[2\,\alpha - 2 \,t\,\omega] + \right)}
                     M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 2 \cos [2 \alpha])}
                                   \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2))
      (8\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
                 Sin[\alpha]^2 Sin[t \omega]^2))
 \left( s \left( \left| \sqrt{\left( \frac{1}{1 + \cos[2\alpha]} \left( -2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2 \,t \,\omega] + \text{M0} \,\cos[2 \,\alpha - 2 \,t \,\omega] + \right) \right) \right) \right) 
                            M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 2 \cos [2 \alpha])}
                                         \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                  (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
                      2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Sec [\alpha]^2
                       \sin[t \omega]^2 - 2 MO \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{MO^2 (6 + 2 \cos[2 \alpha] - 1)^2}
                                   2 \cos[2t\omega] + \cos[2\alpha - 2t\omega] + \cos[2\alpha + 2t\omega]  \sin[\alpha]^2 \sin[t\omega]^2 )
             (8\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
                        Sin[\alpha]^2 Sin[t\omega]^2) +
           \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2 \,t \,\omega] + \text{M0} \,\cos[2\alpha - 2 \,t \,\omega] + \right)}
                            M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                         \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
                  (-4 \text{ MO} + 2 \text{ MO} \cos [2 \text{ t} \omega] - \text{MO} \cos [2 \alpha - 2 \text{ t} \omega] - \text{MO} \cos [2 \alpha + 2 \text{ t} \omega] +
                      2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Sec [\alpha]^2
                        \sin[t \omega]^2 + 2 MO \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{MO^2 (6 + 2 \cos[2 \alpha] - 1)^2}
                                   2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega] \sin[\alpha]^2 \sin[t \omega]^2
             (8\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
```

$$\begin{split} \sin[\alpha]^2 \sin[t\omega]^2)) + \\ e^{\frac{1}{\alpha}} r \left(-\left(\left[\frac{1}{\alpha} M\Theta \left(1 + \cos[2\alpha] \right) \sec[\alpha] \sin[t\omega]^2 \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 M\Theta - 2\cos[2\alpha] - 2 M\Theta \cos[2\alpha] + M\Theta \cos[2\alpha - 2 t\omega] + M\Theta \cos[2\alpha - 2 t\omega] + 2 M$$

$$\begin{split} & \operatorname{Sin}[\mathsf{t}\omega]^2 - 2\operatorname{NO} \operatorname{Cos}[2\alpha] \operatorname{Sec}[\alpha]^2 \operatorname{Sin}[\mathsf{t}\omega]^2 + 2\sqrt{2} \ \sqrt{\left(\operatorname{MO}^2\left(6 + 2\operatorname{Cos}[2\alpha] - 2\operatorname{Cos}[2+\omega] + \operatorname{Cos}[2\alpha - 2\pm\omega] + \operatorname{Cos}[2\alpha + 2\pm\omega]\right) \operatorname{Sin}[\alpha]^2 \operatorname{Sin}[\mathsf{t}\omega]^2\right)} \right) / \\ & \left(8\sqrt{\left(\operatorname{MO}^2\left(6 + 2\operatorname{Cos}[2\alpha] - 2\operatorname{Cos}[2\pm\omega] + \operatorname{Cos}[2\alpha - 2\pm\omega] + \operatorname{Cos}[2\alpha + 2\pm\omega]\right)} \right) \\ & \operatorname{Sin}[\alpha]^2 \operatorname{Sin}[\mathsf{t}\omega]^2\right) \right) + \\ & \left(\sqrt{\left(\frac{1}{1+\operatorname{Cos}[2\alpha]} \left(-2 + 4\operatorname{MO} - 2\operatorname{Cos}[2+\omega] + \operatorname{Cos}[2\alpha] - 2\operatorname{MO}\operatorname{Cos}[2\pm\omega] + \operatorname{MO}\operatorname{Cos}[2\alpha - 2\pm\omega] + \operatorname{MO}\operatorname{Cos}[2\alpha + 2\pm\omega] + 2\operatorname{MO}\operatorname{Cos}[2\alpha + 2\pm\omega] + 2\operatorname{MO}\operatorname{Cos}[2\alpha] + 2\operatorname{Los}] + \operatorname{MO}\operatorname{Cos}[2\alpha - 2\pm\omega] + \operatorname{Cos}[2\alpha - 2\pm\omega] + \operatorname{Cos}[2\alpha - 2\pm\omega] + \operatorname{Cos}[2\alpha - 2\pm\omega] + \operatorname{Cos}[2\alpha - 2\pm\omega] + \operatorname{MO}\operatorname{Cos}[2+2\pm\omega] + 2\operatorname{MO}\operatorname{Cos}[2+2\pm\omega] + 2\operatorname{MO}\operatorname{Cos}[2+2\pm\omega] + 2\operatorname{MO}\operatorname{Cos}[2+2\pm\omega] + 2\operatorname{MO}\operatorname{Cos}[2+2\pm\omega] + 2\operatorname{MO}\operatorname{Cos}[2\alpha] + 2\operatorname{Los}[2\alpha] + 2\operatorname{MO}\operatorname{Cos}[2\alpha] + 2\operatorname{Los}[2\alpha] + 2\operatorname{Los}[2$$

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2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
           (2 MO^2 \omega Cos[t \omega] (6 + 2 Cos[2 \alpha] - 2 Cos[2 t \omega] + Cos[2 \alpha - 2 t \omega] +
                      \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega] + M0^2 \sin [\alpha]^2 \sin [t \omega]^2
                  (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega]))
      (16 (M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega])
                 \operatorname{Sin}[\alpha]^{2} \operatorname{Sin}[\mathsf{t}\,\omega]^{2})^{3/2}
\sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2 \,t \,\omega] + \text{M0} \,\cos[2\alpha - 2 \,t \,\omega] + \right.}
                  M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                               \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^{2} \sin [t \omega]^{2}))
      \left(-4\,\text{M0} + 2\,\text{M0}\,\text{Cos}\,[2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha - 2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha + 2\,\text{t}\,\omega] + \right)
           2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
           2 M0 Sec [\alpha]^2 Sin [t\omega]^2 + 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
           2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega])}
                    Sin[\alpha]^2 Sin[t\omega]^2) (2 M0<sup>2</sup> \omega Cos[t \omega] (6 + 2 Cos[2 \alpha] - 2 Cos[2 t \omega] +
                 \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega] + M0^2 \sin [\alpha]^2
             Sin[t\omega]^2 (4\omega Sin[2t\omega] + 2\omega Sin[2\alpha - 2t\omega] - 2\omega Sin[2\alpha + 2t\omega]))
  (16 (M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega])
             Sin[\alpha]^2 Sin[t\omega]^2 +
(4 M0 - 2 M0 Cos [2 t \omega] + M0 Cos [2 \alpha - 2 t \omega] + M0 Cos [2 \alpha + 2 t \omega] -
           2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Sec [\alpha]^2
             \sin[t \, \omega]^2 - 2 \, MO \, \cos[2 \, \alpha] \, \sec[\alpha]^2 \, \sin[t \, \omega]^2 + 2 \, \sqrt{2} \, \sqrt{\left(MO^2 \, \left(6 + 2 \, \cos[2 \, \alpha] - 1 \, \cos[2 \, \alpha] + 1 \, \cos[2 \, \alpha] \right)\right)}
                         2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]  \sin [\alpha]^2 \sin [t \omega]^2 
      (4 \text{ MO } \omega \text{ Sin}[2 \text{ t} \omega] + 2 \text{ MO } \omega \text{ Sin}[2 \alpha - 2 \text{ t} \omega] - 2 \text{ MO } \omega \text{ Sin}[2 \alpha + 2 \text{ t} \omega] -
           (\sqrt{2} (2 M0^2 \omega Cos[t \omega] (6 + 2 Cos[2 \alpha] - 2 Cos[2 t \omega] + Cos[2 \alpha - 2 t \omega] +
                             \mathsf{Cos}\left[2\,\alpha+2\,\mathsf{t}\,\omega\right]\big)\,\mathsf{Sin}\left[\alpha\right]^{2}\,\mathsf{Sin}\left[\mathsf{t}\,\omega\right]\,+\,\mathsf{M0}^{2}\,\mathsf{Sin}\left[\alpha\right]^{2}\,\mathsf{Sin}\left[\mathsf{t}\,\omega\right]^{2}
                         (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])))
             (\sqrt{M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] +
                           \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)))
  16 (1 + Cos [2 \alpha]) \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] +
                 \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
      \sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                 M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{\left(\text{M0}^2\left(\text{6 + 2 Cos}\left[\text{2 }\alpha\right]\right.} - \text{2 Cos}\left[\text{2 t }\omega\right]\right.} +
                                \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
```

```
( ( - 4 M0 + 2 M0 Cos [2 t \omega] - M0 Cos [2 \alpha - 2 t \omega] - M0 Cos [2 \alpha + 2 t \omega] +
                    2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Sec [\alpha]^2
                         \sin[t \omega]^2 + 2 MO \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{(MO^2 (6 + 2 \cos[2 \alpha] - 1))^2 + (MO^2 (6 + 2 \cos[2 \alpha] - 1))^2}
                                               2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]  \sin [\alpha]^2 \sin [t \omega]^2 
             (4 \text{ MO } \omega \text{ Sin}[2 \text{ t} \omega] + 2 \text{ MO } \omega \text{ Sin}[2 \alpha - 2 \text{ t} \omega] - 2 \text{ MO } \omega \text{ Sin}[2 \alpha + 2 \text{ t} \omega] +
                      \left(\sqrt{2}\ \left(2\ \text{M0}^2\ \omega\ \text{Cos}\ [\text{t}\ \omega]\ \left(6+2\ \text{Cos}\ [\text{2}\ \alpha]\ -2\ \text{Cos}\ [\text{2}\ \text{t}\ \omega]\ +\ \text{Cos}\ [\text{2}\ \alpha-2\ \text{t}\ \omega]\ +\right.\right.
                                                       \cos[2\alpha + 2t\omega]) \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2
                                               (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])))
                          (\sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                                                  \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2)))/
    16 (1 + \cos[2 \alpha]) \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha] + \cos[2 \alpha] + \cos[2 \alpha]}
                                 \cos [2\alpha + 2t\omega] \sin [\alpha]^2 \sin [t\omega]^2
           \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{MO} - 2 \,\cos[2\alpha] - 2 \,\text{MO} \,\cos[2 \,t \,\omega] + \text{MO} \,\cos[2\alpha - 2 \,t \,\omega] + \right)}
                                 M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{ (M0^2 (6 + 2 Cos [2 \alpha] - 2 Cos [2 t \omega] +
                                                           \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
\sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2\,t\,\omega] + \text{M0} \,\cos[2\,\alpha - 2\,t\,\omega] + \right)}
                                 M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                           \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
             \left(-4\,\text{M0}\,\omega\,\text{Cos}\,[\,\text{t}\,\omega]\,\,\text{Sec}\,[\,\alpha]^{\,2}\,\,\text{Sin}\,[\,\text{t}\,\omega]\,\,-\,4\,\text{M0}\,\omega\,\,\text{Cos}\,[\,2\,\alpha]\,\,\text{Cos}\,[\,\text{t}\,\omega]\,\,\text{Sec}\,[\,\alpha]^{\,2}
                         Sin[t\omega] + 4M0\omega Sin[2t\omega] + 2M0\omega Sin[2\alpha - 2t\omega] - 4M0\omega Cos[\alpha - t\omega]
                         Sec[\alpha]^2 Sin[\alpha - t\omega] - 4 M0 \omega Cos[2 \alpha] Cos[\alpha - t\omega] Sec[\alpha]^2 Sin[\alpha - t\omega] -
                    2 M0 \omega Sin[2 \alpha + 2 t \omega] + (\sqrt{2} (2 \text{ M0}^2 \omega \text{ Cos}[\text{t } \omega] (6 + 2 \text{ Cos}[2 \alpha] - 2 \text{ Cos}[2 \text{ t } \omega] +
                                                       \mathsf{Cos}\left[2\,\alpha - 2\,\mathsf{t}\,\omega\right] + \mathsf{Cos}\left[2\,\alpha + 2\,\mathsf{t}\,\omega\right] \Big)\,\,\mathsf{Sin}\left[\alpha\right]^2\,\mathsf{Sin}\left[\mathsf{t}\,\omega\right] + \mathsf{M0}^2\,\mathsf{Sin}\left[\alpha\right]^2
                                               Sin[t\omega]^2 (4\omega Sin[2t\omega] + 2\omega Sin[2\alpha - 2t\omega] - 2\omega Sin[2\alpha + 2t\omega])))
                         (\sqrt{M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] +
                                                  \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)))
    (8\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
                         Sin[\alpha]^2 Sin[t\omega]^2) +
\sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \text{ M0} - 2 \cos[2\alpha] - 2 \text{ M0} \cos[2 t \omega] + \text{M0} \cos[2\alpha - 2 t \omega] + \frac{1}{2} \cos[2\alpha] + \frac{1}
                                 M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 2 \cos [2 \alpha])}
                                                            \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
             (4 \text{ MO } \omega \text{ Cos} [t \omega] \text{ Sec} [\alpha]^2 \text{ Sin} [t \omega] + 4 \text{ MO } \omega \text{ Cos} [2 \alpha] \text{ Cos} [t \omega] \text{ Sec} [\alpha]^2
                         Sin[t\omega] - 4 M0 \omega Sin[2 t\omega] - 2 M0 \omega Sin[2 \alpha - 2 t\omega] + 4 M0 \omega Cos[\alpha - t\omega]
                         Sec [\alpha]^2 Sin [\alpha - t\omega] + 4 M0 \omega Cos [2\alpha] Cos [\alpha - t\omega] Sec [\alpha]^2 Sin [\alpha - t\omega] +
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2 M0 \omega Sin [2 \alpha + 2 t \omega] + (\sqrt{2} (2 \text{ M0}^2 \omega \text{ Cos} [\text{t } \omega] (6 + 2 \text{ Cos} [\text{2 } \alpha] - 2 \text{ Cos} [\text{2 t } \omega] +
                                       \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega] + M0^2 \sin [\alpha]^2
                                  Sin[t\omega]^2 (4\omega Sin[2t\omega] + 2\omega Sin[2\alpha - 2t\omega] - 2\omega Sin[2\alpha + 2t\omega])))
                      (\sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                                     \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2))
          (8\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
                     Sin[\alpha]^2 Sin[t \omega]^2))
  \left(-\left(\left[\pm M0\left(1+\cos\left[2\,\alpha\right]\right)\,\operatorname{Sec}\left[\alpha\right]\,\operatorname{Sin}\left[\pm\,\omega\right]^{\,2}\,\sqrt{\left(\frac{1}{1+\cos\left[2\,\alpha\right]}\,\left(-2+4\,M0-1\right)^{\,2}\right)}\right)\right)
                                2 \cos [2 \alpha] - 2 MO \cos [2 t \omega] + MO \cos [2 \alpha - 2 t \omega] + MO \cos [2 \alpha + 2 t \omega] -
                                2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+
                                               \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2) \arctan[\alpha]
              \left(2\,\sqrt{\,\left(\text{M0}^{2}\,\left(\text{6}+2\,\text{Cos}\,[\,2\,\alpha\,]\,-2\,\text{Cos}\,[\,2\,\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,-\,2\,\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,+\,2\,\,\text{t}\,\omega\,]\,\right)}\right.
                           \operatorname{Sin}[\alpha]^{2} \operatorname{Sin}[\mathsf{t} \,\omega]^{2})) + \left(\operatorname{i} M0 \left(1 + \operatorname{Cos}[2 \,\alpha]\right) \operatorname{Sec}[\alpha] \operatorname{Sin}[\mathsf{t} \,\omega]^{2}\right)
              \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \text{ M0} - 2 \cos[2\alpha] - 2 \text{ M0} \cos[2 t \omega] + \text{M0} \cos[2\alpha - 2 t \omega] + \right)}
                           M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                         \cos[2\alpha - 2t\omega] + \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2) \arctan[\alpha]
          \left(2\,\sqrt{\,\left(\text{M0}^{2}\,\left(\text{6}+2\,\text{Cos}\,[\,2\,\alpha\,]\,-2\,\text{Cos}\,[\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,-\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,+\,2\,\text{t}\,\omega\,]\,\right)}\right.
                     Sin[\alpha]^2 Sin[t\omega]^2) +
\left[ \left[ \left( -4\,\text{M0} + 2\,\text{M0}\,\text{Cos}\,[2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha - 2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha + 2\,\text{t}\,\omega] + 2\,\text{M0}\,\text{Cos}\,[\alpha - \text{t}\,\omega]^2 \right] \right]
                     Sec [\alpha]^2 + 2 \text{ M0 Cos } [2 \alpha] \text{ Cos } [\alpha - t \omega]^2 \text{ Sec } [\alpha]^2 + 2 \text{ M0 Sec } [\alpha]^2 \text{ Sin } [t \omega]^2 +
                   2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2(-6-2\cos[2\alpha]+
                                  2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
              \sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                           M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                          \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega] ) \sin [\alpha]^2 \sin [t \omega]^2))
          (8\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
                      Sin[\alpha]^2 Sin[t\omega]^2) +
        \int (4 \, MO - 2 \, MO \, Cos[2 \, t \, \omega] + MO \, Cos[2 \, \alpha - 2 \, t \, \omega] + MO \, Cos[2 \, \alpha + 2 \, t \, \omega] -
                   2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Sec [\alpha]^2
                     \sin[t \omega]^2 - 2 MO \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{-MO^2 (-6 - 2 \cos[2 \alpha] + 2 \cos[2 \alpha])}
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M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{\left(\text{M0}^2\left(6 + 2\cos{[2\,\alpha]} - 2\cos{[2\,\text{t}\,\omega]}\right.\right)} +
                                                                                                                                                                                 \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
                                                                                                (2 MO^2 \omega Cos[t \omega] (6 + 2 Cos[2 \alpha] - 2 Cos[2 t \omega] + Cos[2 \alpha - 2 t \omega] +
                                                                                                                                   \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2
                                                                                                                     (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])) \tan[\alpha]
                                                                               4 \left( M0^{2} \left( 6 + 2 \cos \left[ 2 \alpha \right] - 2 \cos \left[ 2 t \omega \right] + \cos \left[ 2 \alpha - 2 t \omega \right] + \cos \left[ 2 \alpha + 2 t \omega \right] \right)
                                                                                                                   Sin[\alpha]^2 Sin[t\omega]^2
                                                                        (i M0 Sec [\alpha] Sin[t \omega]^2 (4 M0 \omega Sin[2 t \omega] + 2 M0 \omega Sin[2 \alpha - 2 t \omega] -
                                                                                                            2 M0 \omega Sin [2 \alpha + 2 t \omega] - (\sqrt{2} (2 \text{ MO}^2 \omega \text{ Cos} [\text{t } \omega] (6 + 2 \text{ Cos} [\text{2 } \alpha] - 2 \text{ Cos} [\text{2 t } \omega] +
                                                                                                                                                                         \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega] + M0^2 \sin [\alpha]^2
                                                                                                                                                          \sin[t\omega]^2 (4\omega \sin[2t\omega] + 2\omega \sin[2\alpha - 2t\omega] - 2\omega \sin[2\alpha + 2t\omega]))
                                                                                                                     (\sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha]})
                                                                                                                                                                         2\alpha + 2t\omega) Sin[\alpha]<sup>2</sup> Sin[t\omega]<sup>2</sup>)) Tan[\alpha])
                                                                               \left(4\,\sqrt{\,\left(\text{M0}^{2}\,\left(\text{6}+2\,\text{Cos}\,[\,2\,\alpha\,]\,-\,2\,\text{Cos}\,[\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,-\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,+\,2\,\text{t}\,\omega\,]\,\right)}\right.
                                                                                                                  \operatorname{Sin}[\alpha]^2 \operatorname{Sin}[\mathsf{t}\,\omega]^2 \sqrt{\left(\frac{1}{1+\operatorname{Cos}[2\,\alpha]}\left(-2+4\,\mathrm{M0}-2\,\operatorname{Cos}[2\,\alpha]-2\,\mathrm{M0}\,\operatorname{Cos}[2\,\mathsf{t}\,\omega]+\right)\right)}
                                                                                                                                  M0 Cos [2 \alpha – 2 t \omega] + M0 Cos [2 \alpha + 2 t \omega] – 2 \sqrt{2} \sqrt{\left(\text{M0}^2\left(6 + 2\cos\left[2\,\alpha\right] - 2\cos\left[2\,\alpha\right]\right)}
                                                                                                                                                                                                 2 \pm \omega] + Cos [2 \alpha - 2 \pm \omega] + Cos [2 \alpha + 2 \pm \omega]) Sin [\alpha]^2 Sin [\pm \omega]^2)) +
                                                                        \left( \verb"i M0 Sec" [\alpha] \; \verb"Sin" [\verb"t" $\omega$] \; ^2 \; \left( 4 \; \verb"M0 $\omega \; \verb"Sin" [2 \; \verb"t" $\omega] \; + \; 2 \; \verb"M0 $\omega \; \verb"Sin" [2 \; \alpha \; - \; 2 \; \verb"t" $\omega] \; - \; 2 \; \verb"M0 $\omega \; \end{substitute} \right.
                                                                                                                   \sin[2\alpha + 2t\omega] + (\sqrt{2}(2M0^2\omega \cos[t\omega](6 + 2\cos[2\alpha] - 2\cos[2t\omega] +
                                                                                                                                                                         \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega] + M0^2 \sin [\alpha]^2
                                                                                                                                                          \sin[t\omega]^2 \left(4\omega \sin[2t\omega] + 2\omega \sin[2\alpha - 2t\omega] - 2\omega \sin[2\alpha + 2t\omega]\right)\right)
                                                                                                                     \left(\sqrt{\;\left(\text{M0}^2\;\left(\text{6}+2\;\text{Cos}\,[\text{2}\;\alpha]\;-\text{2}\;\text{Cos}\,[\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\text{t}\;\omega]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\alpha\;-\text{2}\;\alpha\;-\text{2}\;\alpha]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\alpha\;-\text{2}\;\alpha\;-\text{2}\;\alpha]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\alpha\;-\text{2}\;\alpha\;-\text{2}\;\alpha]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\alpha\;-\text{2}\;\alpha\;-\text{2}\;\alpha]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\alpha\;-\text{2}\;\alpha\;-\text{2}\;\alpha]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\alpha\;-\text{2}\;\alpha\;-\text{2}\;\alpha]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\alpha\;-\text{2}\;\alpha\;-\text{2}\;\alpha]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\alpha\;-\text{2}\;\alpha\;-\text{2}\;\alpha]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\alpha\;-\text{2}\;\alpha\;-\text{2}\;\alpha]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\alpha\;-\text{2}\;\alpha\;-\text{2}\;\alpha]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\alpha\;-\text{2}\;\alpha\;-\text{2}\;\alpha\;-\text{2}\;\alpha]\;+\text{Cos}\,[\text{2}\;\alpha\;-\text{2}\;\alpha\;-\text{2}\;\alpha\;-\text{2}\;\alpha]\;+\text{Cos}
                                                                                                                                                                         2\alpha + 2t\omega) Sin[\alpha]<sup>2</sup> Sin[t\omega]<sup>2</sup>)) Tan[\alpha])
                                                                               4 \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega])}
                                                                                                                  \operatorname{Sin}[\alpha]^{2} \operatorname{Sin}[\mathsf{t}\,\omega]^{2} \sqrt{\left(\frac{\mathsf{1}}{\mathsf{1} + \operatorname{Cos}[2\,\alpha]}\right)}
                                                                                                                      (-2 + 4 MO - 2 Cos [2 \alpha] - 2 MO Cos [2 t \omega] + MO Cos [2 \alpha - 2 t \omega] +
                                                                                                                                  M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                                                                                                                               \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)))))))) +
\frac{1}{M0} \operatorname{Sec}[\alpha]^{2} \left( \operatorname{Cos}[\alpha + t \omega]^{2} + \operatorname{Sin}[t \omega]^{2} \right) \left( e^{-i \theta} r + \left( \left[ i \operatorname{Cos}[\alpha] \operatorname{Cot}[\alpha] \operatorname{Csc}[t \omega]^{2} \right] \right) \right) \left( e^{-i \theta} r + \left( \left[ i \operatorname{Cos}[\alpha] \operatorname{Cot}[\alpha] \operatorname{Csc}[t \omega]^{2} \right] \right) \right) \right) \left( e^{-i \theta} r + \left( \left[ i \operatorname{Cos}[\alpha] \operatorname{Cot}[\alpha] \operatorname{Csc}[t \omega]^{2} \right] \right) \right) \left( e^{-i \theta} r + \left( \left[ i \operatorname{Cos}[\alpha] \operatorname{Cot}[\alpha] \operatorname{Csc}[t \omega]^{2} \right] \right) \right) \right) \left( e^{-i \theta} r + \left( \left[ i \operatorname{Cos}[\alpha] \operatorname{Cot}[\alpha] \operatorname{Cot}[\alpha] \operatorname{Cot}[\alpha] \right] \right) \right) \left( e^{-i \theta} r + \left( \left[ i \operatorname{Cos}[\alpha] \operatorname{Cot}[\alpha] \operatorname{Cot}[\alpha] \right] \right) \right) \right) \left( e^{-i \theta} r + \left( \left[ i \operatorname{Cos}[\alpha] \operatorname{Cot}[\alpha] \operatorname{Cot}[\alpha] \right] \right) \right) \right) \left( e^{-i \theta} r + \left( \left[ i \operatorname{Cos}[\alpha] \operatorname{Cot}[\alpha] \operatorname{Cot}[\alpha] \right] \right) \right) \right) \left( e^{-i \theta} r + \left( \left[ i \operatorname{Cos}[\alpha] \operatorname{Cot}[\alpha] \operatorname{Cot}[\alpha] \right] \right) \right) \right) \left( e^{-i \theta} r + \left( \left[ i \operatorname{Cos}[\alpha] \operatorname{Cot}[\alpha] \operatorname{Cot}[\alpha] \right] \right) \right) \right) \left( e^{-i \theta} r + \left( \left[ i \operatorname{Cos}[\alpha] \operatorname{Cot}[\alpha] \operatorname{Cot}[\alpha] \right] \right) \right) \right) \left( e^{-i \theta} r + \left( \left[ i \operatorname{Cos}[\alpha] \operatorname{Cot}[\alpha] \right] \right) \right) \right) \left( e^{-i \theta} r + \left( \left[ i \operatorname{Cos}[\alpha] \operatorname{Cot}[\alpha] \right] \right) \right) \right) \left( e^{-i \theta} r + \left[ i \operatorname{Cos}[\alpha] \operatorname{Cot}[\alpha] \right] \right) \right) \left( e^{-i \theta} r + \left[ i \operatorname{Cos}[\alpha] \operatorname{Cot}[\alpha] \right] \right) \right) \left( e^{-i \theta} r + \left[ i \operatorname{Cos}[\alpha] \operatorname{Cot}[\alpha] \right] \right) \right) \left( e^{-i \theta} r + \left[ i \operatorname{Cos}[\alpha] \operatorname{Cot}[\alpha] \right] \right) \right) \left( e^{-i \theta} r + \left[ i \operatorname{Cos}[\alpha] \operatorname{Cot}[\alpha] \right] \right) \right) \left( e^{-i \theta} r + \left[ i \operatorname{Cos}[\alpha] \operatorname{Cot}[\alpha] \right] \right) \right) \left( e^{-i \theta} r + \left[ i \operatorname{Cos}[\alpha] \operatorname{Cot}[\alpha] \right] \right) \right) \left( e^{-i \theta} r + \left[ i \operatorname{Cos}[\alpha] \right] \right) \right) \left( e^{-i \theta} r + \left[ i \operatorname{Cos}[\alpha] \operatorname{Cot}[\alpha] \right] \right) \right) \left( e^{-i \theta} r + \left[ i \operatorname{Cos}[\alpha] \operatorname{Cot}[\alpha] \right] \right) \right) \left( e^{-i \theta} r + \left[ i \operatorname{Cos}[\alpha] \right] \right) \left( e^{-i \theta} r + \left[ i \operatorname{Cos}[\alpha] \operatorname{Cot}[\alpha] \right] \right) \right) \left( e^{-i \theta} r + \left[ i \operatorname{Cos}[\alpha] \operatorname{Cot}[\alpha] \right] \right) \left( e^{-i \theta} r + \left[ i \operatorname{Cos}[\alpha] \right] \right) \left( e^{-i \theta} r + \left[ i \operatorname{Cos}[\alpha] \operatorname{Cot}[\alpha] \right] \right) \right) \left( e^{-i \theta} r + \left[ i \operatorname{Cos}[\alpha] \right) \right) \left( e^{-i \theta} r + \left[ i \operatorname{Cos}[\alpha] \right] \right) \left( e^{-i \theta} r + \left[ i \operatorname{Cos}[\alpha] \right] \right) \left( e^{-i \theta} r + \left[ i \operatorname{Cos}[\alpha] \right] \right) \left( e^{-i \theta} r + \left[ i \operatorname{Cos}[\alpha] \right] \right) \left( e^{-i \theta} r + \left[ i \operatorname{Cos}[\alpha] \right] \right)
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2 M0 Sec [\alpha]^2 Sin [t \omega]^2 + 2 M0 Cos [2 \alpha] Sec [\alpha]^2 Sin [t \omega]^2 +
               2\sqrt{2}\sqrt{(-M0^2(-6-2\cos[2\alpha]+2\cos[2t\omega]-
                             \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
          \sqrt{\left(\frac{1}{1 + \cos{[2\,\alpha]}} \left(-2 + 4\,\text{M0} - 2\,\cos{[2\,\alpha]} - 2\,\text{M0}\,\cos{[2\,\text{t}\,\omega]} + \text{M0}\,\cos{[2\,\alpha - 2\,\text{t}\,\omega]} + \right)}
                      M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                    \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
           (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
               2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
               2 M0 Sec [\alpha]^2 Sin [t\omega]^2 – 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
               2\sqrt{2}\sqrt{(M\theta^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+}
                             \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2)
       (32 \text{ M0} (1 + \cos[2 \alpha]) \sqrt{(\text{M0}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                      Cos[2\alpha + 2t\omega]) Sin[\alpha]^2 Sin[t\omega]^2) -
     |i \cos[\alpha] \cot[\alpha] \csc[t \omega]^2 (4 MO - 2 MO \cos[2 t \omega] + MO \cos[2 \alpha - 2 t \omega] +
               M0 Cos [2 \alpha + 2 t \omega] - 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
               2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]<sup>2</sup> Sec [\alpha]<sup>2</sup> - 2 M0 Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> -
               2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2 (-6 - 2 \cos[2 \alpha] +
                             2 Cos [2 t \omega] - Cos [2 \alpha - 2 t \omega] - Cos [2 \alpha + 2 t \omega]) Sin [\alpha] <sup>2</sup> Sin [t \omega] <sup>2</sup>)
          \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2\,t\,\omega] + \text{M0} \,\cos[2\,\alpha - 2 \,t\,\omega] + \right)}
                      M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 2 \cos [2 \alpha])}
                                    \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
           \left(-4\,\text{M0} + 2\,\text{M0}\,\text{Cos}\,[2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha - 2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha + 2\,\text{t}\,\omega] + \right)
               2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
               2 M0 Sec [\alpha]^2 Sin [t\omega]^2 + 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
               2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+}
                             \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
       \left(32\,\text{M0}\,\left(1+\cos{[2\,\alpha]}\right)\,\sqrt{\,\left(\text{M0}^2\,\left(6+2\cos{[2\,\alpha]}\,-2\cos{[2\,t\,\omega]}\,+\cos{[2\,\alpha-2\,t\,\omega]}\,+\right.\right.\right.}
                      Cos[2\alpha + 2t\omega]) Sin[\alpha]^2 Sin[t\omega]^2))
 \left( s \left( \sqrt{\frac{1}{1 + \cos[2\alpha]}} \left( -2 + 4 \, M0 - 2 \, \cos[2\alpha] - 2 \, M0 \, \cos[2 \, t \, \omega] + M0 \, \cos[2\alpha - 2 \, t \, \omega] + \right) \right) 
                             M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{ (M0<sup>2</sup> (6 + 2 Cos [2 \alpha] - 2 Cos [2 t \omega] +
                                           \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                  (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
                      2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                      2 M0 Sec [\alpha]^2 Sin [t \omega]^2 – 2 M0 Cos [2 \alpha] Sec [\alpha]^2 Sin [t \omega]^2 +
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$$2\sqrt{2} \sqrt{\left(M0^{2} \left(6+2\cos[2\alpha]-2\cos[2\pm\omega]+\cos[2\alpha-2\pm\omega]+\cos[2\alpha-2\pm\omega]\right)} \right)} / \\ \cos[2\alpha+2\pm\omega] \right) \sin[\alpha]^{2} \sin[\pm\omega]^{2} \right) \right) / \\ \left(8\sqrt{\left(M0^{2} \left(6+2\cos[2\alpha]-2\cos[2\pm\omega]+\cos[2\alpha-2\pm\omega]+\cos[2\alpha+2\pm\omega]\right)} \right)} \right) / \\ \sin[\alpha]^{2} \sin[\pm\omega]^{2} \right) \right) + \\ \left(\sqrt{\left(\frac{1}{1+\cos[2\alpha]} \left(-2+4M0-2\cos[2\alpha]-2M0\cos[2\pm\omega]+M0\cos[2\alpha-2\pm\omega]+\frac{1}{2}\cos[2\alpha-2\pm\omega]+\cos[2\alpha]+\cos[2\alpha]+2\cos[2\alpha]+\frac{1}{2}\cos[2\alpha]+2\cos[2\alpha]+\cos[2$$

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2 M0 Sec [\alpha]^2 Sin [t\omega]^2 – 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                            2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+
                                                   \cos [2\alpha + 2t\omega] \sin [\alpha]^2 \sin [t\omega]^2)
            (8\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
                               Sin[\alpha]^2 Sin[t\omega]^2) +
        \sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2\,t\,\omega] + \text{M0} \,\cos[2\,\alpha - 2\,t\,\omega] + \right.}
                                       M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{\left(\text{M0}^2\left(6 + 2\cos\left[2\,\alpha\right] - 2\cos\left[2\,\text{t}\,\omega\right]\right)} +
                                                               \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
                      (-4 \, MO + 2 \, MO \, Cos \, [2 \, t \, \omega] \, - MO \, Cos \, [2 \, \alpha - 2 \, t \, \omega] \, - MO \, Cos \, [2 \, \alpha + 2 \, t \, \omega] \, +
                            2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                            2 M0 Sec [\alpha]^2 Sin [t\omega]^2 + 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                            2\sqrt{2}\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]}
                                                   \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2
            (8 \sqrt{M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega])}
                               Sin[\alpha]^2 Sin[t \omega]^2))
\left(e^{-i \theta} r \left( \sqrt{\frac{1}{1 + \cos{[2 \alpha]}}} \left(-2 + 4 M0 - 2 \cos{[2 \alpha]} - 2 M0 \cos{[2 t \omega]} + M0 \cos{[2 \alpha - 2 t \omega]} + M0 
                                                    M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                           \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                                 (4 \text{ MO} - 2 \text{ MO} \cos [2 \text{ t} \omega] + \text{MO} \cos [2 \alpha - 2 \text{ t} \omega] + \text{MO} \cos [2 \alpha + 2 \text{ t} \omega] -
                                        2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Sec [\alpha]^2
                                            \sin[t \omega]^2 - 2 \text{ MO } \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{\text{MO}^2 (6 + 2 \cos[2 \alpha] - 1)^2}
                                                               2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega] \sin[\alpha]^{2} \sin[t \omega]^{2}
                        (8\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
                                            Sin[\alpha]^2 Sin[t\omega]^2) +
                    \sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2\,t\,\omega] + \text{M0} \,\cos[2\,\alpha - 2\,t\,\omega] + \right.}
                                                   M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 2 \cos [2 \alpha])}
                                                                            \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
                                 [-4 \text{ MO} + 2 \text{ MO Cos} [2 \text{ t} \omega] - \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] - \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] +
                                        2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Sec [\alpha]^2
                                            \sin[t \omega]^2 + 2 M0 \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 1)^2}
                                                               2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega] \sin[\alpha]^{2} \sin[t \omega]^{2}
                         (8\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
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$$\begin{split} \sin(\alpha)^2 \sin(t\omega)^2) \bigg) + \\ s \left(-\left(\left(\text{inM0} \left(1 + \cos(2\alpha) \right) \sec(\alpha) \sin(t\omega)^2 \sqrt{\left(\frac{1}{1 + \cos(2\alpha)} \left(-2 + 4 \, \text{MO} - 2 \cos(2\alpha) - 2 \, \text{MO} \cos(2\alpha) \cos(2\alpha) - 2 \cos(2\alpha) - 2 \cos(2\alpha) + \text{MO} \cos(2\alpha - 2 \, \text{tw}) + \text{MO} \cos(2\alpha + 2 \, \text{tw}) - 2 \, \sqrt{2} \, \sqrt{\left(\text{MO}^2 \left(6 + 2 \cos(2\alpha) - 2 \cos(2 \, \text{tw}) + \cos(2\alpha - 2 \, \text{tw}) + \cos(2\alpha - 2 \, \text{tw}) + \cos(2\alpha - 2 \, \text{tw}) + \cos(2\alpha + 2 \, \text{tw}) \right)} \right) \\ - \left(2 \sqrt{\left(\text{MO}^2 \left(6 + 2 \cos(2\alpha) - 2 \cos(2 \, \text{tw}) + \cos(2\alpha - 2 \, \text{tw}) + \cos(2\alpha + 2 \, \text{tw}) \right)} \right)} \right) \left(2 \sqrt{\left(\text{MO}^2 \left(6 + 2 \cos(2\alpha) - 2 \cos(2 \, \text{tw}) + \cos(2\alpha - 2 \, \text{tw}) + \cos(2\alpha + 2 \, \text{tw}) \right)} \right)} \right) \right) \left(2 \sqrt{\left(\text{MO}^2 \left(6 + 2 \cos(2\alpha) - 2 \cos(2 \, \text{tw}) + \cos(2\alpha) + 2 \, \text{tw} \right)} \right)} \right) + \left(\frac{1}{1 + \cos(2\alpha)} \left(-2 + 4 \, \text{MO} - 2 \cos(2\alpha) - 2 \, \text{MO} \cos(2\alpha) + \text{MO} \cos(2\alpha - 2 \, \text{tw}) + \cos(2\alpha - 2 \, \text{tw}) \right)} \right) \right) \right) \\ - \left(2 \sqrt{\left(\text{MO}^2 \left(6 + 2 \cos(2\alpha) - 2 \cos(2\alpha) + \cos(2\alpha + 2 \, \text{tw}) \right) \right)} \right) \left(2 \sqrt{\left(\text{MO}^2 \left(6 + 2 \cos(2\alpha) - 2 \cos(2\alpha) + \cos(2\alpha - 2 \, \text{tw}) + \cos(2\alpha - 2 \, \text{tw}) \right)} \right)} \right) \right) \right) \\ - \frac{1}{1 + \cos(2\alpha)} \left(-2 + 4 \, \text{MO} - 2 \cos(2\alpha) + \cos(2\alpha - 2 \, \text{tw}) \right)} \right) \\ - \left(4 \, \text{MO} - 2 \, \text{MO} \cos(2\alpha + 2 \, \text{tw}) - 2 \, \sqrt{\left(\text{MO}^2 \left(6 + 2 \cos(2\alpha) - 2 \cos(2\alpha) - 2 \cos(2\alpha) + \cos(2\alpha - 2 \, \text{tw}) \right)} \right) \\ - \left(4 \, \text{MO} - 2 \, \text{MO} \cos(2\alpha) + \text{MO} \cos(2\alpha - 2 \, \text{tw} + \cos(2\alpha) + \cos($$

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(8\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
                   Sin[\alpha]^2 Sin[t\omega]^2))
 \left[ -\left[ \sqrt{\left( \frac{1}{1 + \cos[2\alpha]} \left( -2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2 \,t \,\omega] + \text{M0} \,\cos[2\alpha - 2 \,t \,\omega] + \right] \right] \right] 
                             M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{\left(\text{M0}^2\left(\text{6 + 2} \cos\left[\text{2} \, \alpha\right]\right.} - \text{2} \cos\left[\text{2} \, \text{t} \, \omega\right]\right.} +
                                            \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                  (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
                      2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Sec [\alpha]^2
                        \sin[t\,\omega]^2 - 2\,\text{M0}\,\cos[2\,\alpha]\,\sec[\alpha]^2\,\sin[t\,\omega]^2 + 2\,\sqrt{2}\,\,\sqrt{\,\left(\text{M0}^2\,\left(6+2\,\cos[2\,\alpha]-1\right)^2\right)}
                                     2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
                  \left(2\ \mathsf{MO^2}\ \omega\ \mathsf{Cos}\ [\mathsf{t}\ \omega]\ \left(6+2\ \mathsf{Cos}\ [\mathsf{2}\ \alpha]\ -2\ \mathsf{Cos}\ [\mathsf{2}\ \mathsf{t}\ \omega]\ +\ \mathsf{Cos}\ [\mathsf{2}\ \alpha-2\ \mathsf{t}\ \omega]\ +\right.
                             \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega] + M0^2 \sin [\alpha]^2 \sin [t \omega]^2
                         (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega]))
             (16 (M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega])
                        \operatorname{Sin}[\alpha]^{2} \operatorname{Sin}[\mathsf{t} \omega]^{2})^{3/2}
     \sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2 \,t \,\omega] + \text{M0} \,\cos[2\alpha - 2 \,t \,\omega] + \right.}
                        M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                       \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
             (-4 \text{ M0} + 2 \text{ M0 Cos} [2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha - 2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha + 2 \text{ t} \omega] +
                 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                 2 M0 Sec [\alpha]^2 Sin [t\omega]^2 + 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                 2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega])}
                           Sin[\alpha]^2 Sin[t\omega]^2) (2 M0<sup>2</sup> \omega Cos[t \omega] (6 + 2 Cos[2 \alpha] - 2 Cos[2 t \omega] +
                        \mathsf{Cos}\left[2\,\alpha-2\,\mathsf{t}\,\omega\right]\,+\,\mathsf{Cos}\left[2\,\alpha+2\,\mathsf{t}\,\omega\right]\left)\,\mathsf{Sin}\left[\alpha\right]^{2}\,\mathsf{Sin}\left[\mathsf{t}\,\omega\right]\,+\,\mathsf{M0}^{2}\,\mathsf{Sin}\left[\alpha\right]^{2}
                   Sin[t\omega]^2 (4\omega Sin[2t\omega] + 2\omega Sin[2\alpha - 2t\omega] - 2\omega Sin[2\alpha + 2t\omega]))
       (16 (M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega])
                   \operatorname{Sin}[\alpha]^{2}\operatorname{Sin}[t\omega]^{2})^{3/2} +
     (4 MO - 2 MO Cos [2 t \omega] + MO Cos [2 \alpha - 2 t \omega] + MO Cos [2 \alpha + 2 t \omega] -
                 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Sec [\alpha]^2
                   \sin[t \, \omega]^2 - 2 \, MO \, \cos[2 \, \alpha] \, \sec[\alpha]^2 \, \sin[t \, \omega]^2 + 2 \, \sqrt{2} \, \sqrt{\left(MO^2 \, \left(6 + 2 \, \cos[2 \, \alpha] - 1 \, \cos[2 \, \alpha] + 1 \, \cos[2 \, \alpha] \right)\right)}
                                2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
            (4 \text{ MO } \omega \text{ Sin}[2 \text{ t} \omega] + 2 \text{ MO } \omega \text{ Sin}[2 \alpha - 2 \text{ t} \omega] - 2 \text{ MO } \omega \text{ Sin}[2 \alpha + 2 \text{ t} \omega] - 2 \text{ MO } \omega
                 (\sqrt{2} (2 M0^2 \omega \cos[t \omega] (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                                     \cos[2\alpha + 2t\omega]) \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2
                                 (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])))
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(\sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                             \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)))
  16 (1 + \cos[2 \alpha]) \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha] + \cos[2 \alpha] + \cos[2 \alpha]}
                   \cos [2\alpha + 2t\omega] \sin [\alpha]^2 \sin [t\omega]^2
      \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t}\,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t}\,\omega] + \right)}
                   M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] +
                                  \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
(-4 \text{ MO} + 2 \text{ MO} \cos [2 \text{ t} \omega] - \text{MO} \cos [2 \alpha - 2 \text{ t} \omega] - \text{MO} \cos [2 \alpha + 2 \text{ t} \omega] +
            2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Sec [\alpha]^2
              2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
       (4 \text{ MO } \omega \text{ Sin}[2 \text{ t} \omega] + 2 \text{ MO } \omega \text{ Sin}[2 \alpha - 2 \text{ t} \omega] - 2 \text{ MO } \omega \text{ Sin}[2 \alpha + 2 \text{ t} \omega] +
            (\sqrt{2} (2 M0^2 \omega Cos[t \omega] (6 + 2 Cos[2 \alpha] - 2 Cos[2 t \omega] + Cos[2 \alpha - 2 t \omega] +
                                \mathsf{Cos}\left[2\,\alpha+2\,\mathsf{t}\,\omega\right]\big)\,\mathsf{Sin}\left[\alpha\right]^2\,\mathsf{Sin}\left[\mathsf{t}\,\omega\right]\,+\,\mathsf{M0}^2\,\mathsf{Sin}\left[\alpha\right]^2\,\mathsf{Sin}\left[\mathsf{t}\,\omega\right]^2
                            (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])))
               \left(\sqrt{\left(\text{M0}^2\left(\text{6}+2\cos\left[2\,\alpha\right]-2\cos\left[2\,\text{t}\,\omega\right]+\cos\left[2\,\alpha-2\,\text{t}\,\omega\right]\right.}\right.
                             \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)))
  16 (1 + \cos[2 \alpha]) \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha] + \cos[2 \alpha] + \cos[2 \alpha]}
                   \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
      \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{MO} - 2 \,\cos[2\alpha] - 2 \,\text{MO} \,\cos[2\,t\,\omega] + \text{MO} \,\cos[2\,\alpha - 2\,t\,\omega] + \right)}
                   M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 2 \cos [2 \alpha])}
                                   \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
\sqrt{\left(\frac{1}{1 + \cos{[2\,\alpha]}} \left(-2 + 4\,\text{M0} - 2\,\cos{[2\,\alpha]} - 2\,\text{M0}\,\cos{[2\,\text{t}\,\omega]} + \text{M0}\,\cos{[2\,\alpha - 2\,\text{t}\,\omega]} + \right)}
                   M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 2 \cos [2 \alpha])}
                                  \cos \left[2\alpha - 2t\omega\right] + \cos \left[2\alpha + 2t\omega\right] \sin \left[\alpha\right]^{2} \sin \left[t\omega\right]^{2}
       \left(-4\,\text{M0}\,\omega\,\text{Cos}\,[\,\text{t}\,\omega\,]\,\,\text{Sec}\,[\,\alpha\,]^{\,2}\,\,\text{Sin}\,[\,\text{t}\,\omega\,]\,\,-\,4\,\text{M0}\,\omega\,\,\text{Cos}\,[\,2\,\alpha\,]\,\,\,\text{Cos}\,[\,\text{t}\,\omega\,]\,\,\,\text{Sec}\,[\,\alpha\,]^{\,2}
               Sin[t\omega] + 4 M0 \omega Sin[2 t\omega] + 2 M0 \omega Sin[2 \alpha - 2 t\omega] -
            4 M0 \omega Cos [\alpha – t \omega] Sec [\alpha]<sup>2</sup> Sin [\alpha – t \omega] – 4 M0 \omega Cos [2 \alpha]
               Cos[\alpha - t\omega] Sec[\alpha]^2 Sin[\alpha - t\omega] - 2 M0 \omega Sin[2 \alpha + 2 t\omega] +
            (\sqrt{2} (2 M0^2 \omega \cos[t \omega] (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                                \mathsf{Cos}\left[\mathsf{2}\,\alpha+\mathsf{2}\,\mathsf{t}\,\omega\right]\big)\,\mathsf{Sin}\left[\alpha\right]^{2}\mathsf{Sin}\left[\mathsf{t}\,\omega\right]\,+\,\mathsf{M0}^{2}\,\mathsf{Sin}\left[\alpha\right]^{2}\mathsf{Sin}\left[\mathsf{t}\,\omega\right]^{2}
                            (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])))
               (\sqrt{M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] +
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\cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)))
                    (8\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
                                               Sin[\alpha]^2 Sin[t\omega]^2) +
                \sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{MØ} - 2 \,\cos[2\alpha] - 2 \,\text{MØ} \,\cos[2 \,\text{t}\,\omega] + \text{MØ} \,\cos[2\alpha - 2 \,\text{t}\,\omega] + \right]}
                                                         M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                                         \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]  \sin [\alpha]^2 \sin [t\omega]^2 
                                (4 \text{ MO } \omega \text{ Cos}[t \omega] \text{ Sec}[\alpha]^2 \text{ Sin}[t \omega] + 4 \text{ MO } \omega \text{ Cos}[2 \alpha] \text{ Cos}[t \omega] \text{ Sec}[\alpha]^2
                                               Sin[t\omega] - 4M0\omega Sin[2t\omega] - 2M0\omega Sin[2\alpha - 2t\omega] +
                                         4 \text{ MO } \omega \text{ Cos} [\alpha - t \omega] \text{ Sec} [\alpha]^2 \text{ Sin} [\alpha - t \omega] + 4 \text{ MO } \omega \text{ Cos} [2 \alpha]
                                              \cos [\alpha - t\omega] \sec [\alpha]^2 \sin [\alpha - t\omega] + 2 MO \omega \sin [2 \alpha + 2 t\omega] +
                                          (\sqrt{2} (2 M0^2 \omega \cos [t \omega] (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] +
                                                                                    \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2
                                                                          (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])))
                                               \left(\sqrt{\left(\text{M0}^2\,\left(\text{6}+\text{2}\,\text{Cos}\,[\,2\,\alpha\,]\,-\text{2}\,\text{Cos}\,[\,2\,\text{t}\,\omega\,]\,+\text{Cos}\,[\,2\,\alpha\,-\,2\,\text{t}\,\omega\,]\,+\,\right.}\right.
                                                                              \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)))
                    (8\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
                                             \operatorname{Sin}[\alpha]^2 \operatorname{Sin}[\mathsf{t}\,\omega]^2)) +
\left[ \left[ \dot{\mathbf{n}} \cos \left[ \alpha \right] \cot \left[ \alpha \right] \right] \cos \left[ t \omega \right]^2 \right] - 4 \, \text{M0} + 2 \, \text{M0} \cos \left[ 2 \, t \omega \right] - \text{M0} \cos \left[ 2 \, \alpha - 2 \, t \omega \right] - \text{M0} \cos \left[ 2 \, \alpha - 2 \, t \omega \right] \right]
                                        M0 Cos [2 \alpha + 2 t \omega] + 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                                         2 M0 Cos [2 \alpha] Cos [\alpha - t \omega] 2 Sec [\alpha] 2 + 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 +
                                         2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2(-6-2\cos[2\alpha]+
                                                                          2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
                              \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t}\,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t}\,\omega] + \right)}
                                                        M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                                        \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^{2} \sin [t \omega]^{2})
                                (4 \text{ M0} - 2 \text{ M0 Cos} [2 \text{ t} \omega] + \text{M0 Cos} [2 \alpha - 2 \text{ t} \omega] + \text{M0 Cos} [2 \alpha + 2 \text{ t} \omega] -
                                         2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                                         2 M0 Sec [\alpha]^2 Sin [t\omega]^2 – 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                                         2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+}
                                                                        \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2
                      \left(32\ \text{M0}\ \left(1 + \cos\left[2\ \alpha\right]\right)\ \sqrt{\ \left(\text{M0}^2\ \left(6 + 2\cos\left[2\ \alpha\right] - 2\cos\left[2\ t\ \omega\right] + \cos\left[2\ \alpha - 2\ t\ \omega\right] + \cos\left[2\ \alpha\right] + \cos\left[2\ \alpha
                                                        \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2) -
                \left[\dot{\mathbf{n}} \cos[\alpha] \cot[\alpha] \csc[\mathsf{t}\omega]^2 \left(4\,\mathsf{M0} - 2\,\mathsf{M0} \cos[2\,\mathsf{t}\omega] + \mathsf{M0} \cos[2\,\alpha - 2\,\mathsf{t}\omega] + \right]\right]
                                         M0 Cos [2 \alpha + 2 t \omega] - 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
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2 M0 Cos [2 \alpha] Cos [\alpha – t \omega] 2 Sec [\alpha] 2 – 2 M0 Sec [\alpha] 2 Sin [t \omega] 2 –
                 2 M0 Cos [2 \alpha] Sec [\alpha] ^{2} Sin [t \omega] ^{2} + 2 \sqrt{2} \sqrt{\left(-\text{M0}^{2}\left(-6-2\cos{[2\,\alpha]}\right.+\right)}
                                2 Cos [2 t \omega] - Cos [2 \alpha - 2 t \omega] - Cos [2 \alpha + 2 t \omega]) Sin [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup>)
           \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2\,t\,\omega] + \text{M0} \,\cos[2\,\alpha - 2\,t\,\omega] + \right)}
                        M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 2 \cos [2 \alpha])}
                                       \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
             (-4 \text{ M0} + 2 \text{ M0 Cos} [2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha - 2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha + 2 \text{ t} \omega] +
                 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 +
                 2 M0 Sec [\alpha]^2 Sin [t\omega]^2 + 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                 2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+}
                                \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
       \left(32\,\text{M0}\,\left(1+\cos{[2\,\alpha]}\right)\,\sqrt{\,\left(\text{M0}^2\,\left(6+2\cos{[2\,\alpha]}\,-2\cos{[2\,t\,\omega]}\,+\cos{[2\,\alpha\,-2\,t\,\omega]}\,+\right.\right.\right)}
                        Cos[2\alpha + 2t\omega] Sin[\alpha]^2 Sin[t\omega]^2)
\left(-\left(\left[\pm\operatorname{MO}\omega\left(1+\operatorname{Cos}\left[2\,\alpha\right]\right)\operatorname{Cos}\left[\pm\omega\right]\operatorname{Sec}\left[\alpha\right]\operatorname{Sin}\left[\pm\omega\right]\right.\sqrt{\left(\frac{1}{1+\operatorname{Cos}\left[2\,\alpha\right]}\right)}\right.
                         (-2 + 4 M0 - 2 Cos [2 \alpha] - 2 M0 Cos [2 t \omega] + M0 Cos [2 \alpha - 2 t \omega] +
                             M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                            \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                \mathsf{Tan}[\alpha] \bigg) \bigg/ \bigg( \sqrt{ \big( \mathsf{MO}^2 \big( 6 + 2 \mathsf{Cos}[2 \, \alpha] - 2 \mathsf{Cos}[2 \, \mathsf{t} \, \omega] + \mathsf{Cos}[2 \, \alpha - 2 \, \mathsf{t} \, \omega] } + 
                           \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2)
     \left( i M0 \omega \left( 1 + \cos \left[ 2 \alpha \right] \right) \cos \left[ t \omega \right]   Sec \left[ \alpha \right]   Sin \left[ t \omega \right]   \sqrt{\left( \frac{1}{1 + \cos \left[ 2 \alpha \right]} \right)} 
                    (-2 + 4 MO - 2 Cos [2 \alpha] - 2 MO Cos [2 t \omega] + MO Cos [2 \alpha - 2 t \omega] +
                        M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                       \cos[2\alpha - 2t\omega] + \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2) \arctan[\alpha]
       \left(\sqrt{\,\left(\text{M0}^2\,\left(\text{6}+\text{2}\,\text{Cos}\,[\text{2}\,\alpha]\,-\text{2}\,\text{Cos}\,[\text{2}\,\text{t}\,\omega]\,+\text{Cos}\,[\text{2}\,\alpha-\text{2}\,\text{t}\,\omega]\,+\text{Cos}\,[\text{2}\,\alpha+\text{2}\,\text{t}\,\omega]\,\right)}\right.
                 Sin[\alpha]^2 Sin[t\omega]^2) + \left[iM0\left(1+Cos[2\alpha]\right)Sec[\alpha]Sin[t\omega]^2\right]
           \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \text{ M0} - 2 \cos[2\alpha] - 2 \text{ M0} \cos[2 t \omega] + \text{M0} \cos[2\alpha - 2 t \omega] + \right)}
                        M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                       \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]  \sin [\alpha]^2 \sin [t\omega]^2 
             (2 M0^2 \omega \cos[t \omega] (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                        \cos[2\alpha + 2t\omega]) \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2
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M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                                                       \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
 \Sigma [\alpha_{-}, \omega_{-}, t_{-}, MO_{-}, s_{-}, r_{-}, \theta_{-}] := \{ \{L11[\alpha, \omega, t, MO, s, r, \theta], L12[\alpha, \omega, t, MO, s, r, \theta] \},
         \{L21[\alpha, \omega, t, M0, s, r, \theta], L22[\alpha, \omega, t, M0, s, r, \theta]\}
v11[\alpha_{-}, \omega_{-}, t_{-}, M0_{-}, s_{-}, r_{-}, \theta_{-}] := i \left(-\frac{1}{M0} 2 i \operatorname{Sec}[\alpha] \operatorname{Sin}[t \omega]^{2}\right)
                       \left[ -s \left[ \left( -4\,\text{M0} + 2\,\text{M0}\,\text{Cos}\,[2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha - 2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha + 2\,\text{t}\,\omega] + 2\,\text{M0}\,\text{Cos}\,[\alpha - \text{t}\,\omega]^2 \right] \right] 
                                                                  Sec[\alpha]^2 + 2 MO Cos[2 \alpha] Cos[\alpha - t \omega]^2 Sec[\alpha]^2 + 2 MO Sec[\alpha]^2 Sin[t \omega]^2 + 2
                                                                   M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2 (-6 - 2 \cos [2 \alpha] + \cos (-6 - 2 \cos (-6 + 2 \cos (
                                                                                        2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
                                                     \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2\,t\,\omega] + \text{M0} \,\cos[2\,\alpha - 2 \,t\,\omega] + \right)}
                                                                          M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 2 \cos [2 \alpha])}
                                                                                                   \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2))
                                               \left(8\,\sqrt{\,\left(\text{M0}^{2}\,\left(\text{6}+2\,\text{Cos}\,[\,2\,\alpha\,]\,-2\,\text{Cos}\,[\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,-\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,+\,2\,\text{t}\,\omega\,]\,\right)}\right.
                                                                   Sin[\alpha]^2 Sin[t\omega]^2) +
                                           \left[ (4 \text{ M0} - 2 \text{ M0 Cos} [2 \text{ t} \omega] + \text{M0 Cos} [2 \alpha - 2 \text{ t} \omega] + \text{M0 Cos} [2 \alpha + 2 \text{ t} \omega] - 2 \text{ M0} \right]
                                                                  \cos \left[\alpha - \mathsf{t} \; \omega\right]^2 \sec \left[\alpha\right]^2 - 2 \; \mathsf{M0} \; \cos \left[2 \; \alpha\right] \; \cos \left[\alpha - \mathsf{t} \; \omega\right]^2 \\ \sec \left[\alpha\right]^2 - 2 \; \mathsf{M0} \; \sec \left[\alpha\right]^2
                                                                  \sin[t \omega]^2 - 2 MO \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{-MO^2 (-6 - 2 \cos[2 \alpha] + 2 \cos[2 \alpha])}
                                                                                        2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^{2} \sin [t \omega]^{2})
                                                     \sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                                                                          M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{\left(\text{M0}^2\left(6+2\cos\left[2\,\alpha\right]-2\cos\left[2\,\text{t}\,\omega\right]\right.}\right)}
                                                                                                   \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2))
                                               (8 \sqrt{M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega])}
                                                                  Sin[\alpha]^2 Sin[t \omega]^2)) +
                             s \left( \sqrt{\frac{1}{1 + \cos[2\alpha]}} \left( -2 + 4 M0 - 2 \cos[2\alpha] - 2 M0 \cos[2 t \omega] + M0 \cos[2\alpha - 2 t \omega] + \frac{1}{1 + \cos[2\alpha]} \right) \right)
                                                                          M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                                                   \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
                                                        (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] - 2 \text{ MO}
                                                                   \cos [\alpha - t \omega]^2 \operatorname{Sec}[\alpha]^2 - 2 \operatorname{MO} \cos [2 \alpha] \cos [\alpha - t \omega]^2 \operatorname{Sec}[\alpha]^2 - 2 \operatorname{MO} \operatorname{Sec}[\alpha]^2
                                                                  \sin[t \, \omega]^2 - 2 \, MO \, \cos[2 \, \alpha] \, \sec[\alpha]^2 \, \sin[t \, \omega]^2 + 2 \, \sqrt{2} \, \sqrt{\left(MO^2 \, \left(6 + 2 \, \cos[2 \, \alpha] - 1 \, \cos[2 \, \alpha] \right)^2 + 2 \, \cos[2 \, \alpha] \right)}
                                                                                        2 \cos [2 \pm \omega] + \cos [2 \alpha - 2 \pm \omega] + \cos [2 \alpha + 2 \pm \omega]) \sin [\alpha]^2 \sin [\pm \omega]^2)
                                               (8 \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega])}
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 $\cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)$

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\left(-4\,\text{M0} + 2\,\text{M0}\,\text{Cos}\,[2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha - 2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha + 2\,\text{t}\,\omega] + 2\,\text{M0}\right)
                           \cos [\alpha - t \omega]^2 \operatorname{Sec}[\alpha]^2 + 2 \operatorname{MO} \cos [2 \alpha] \cos [\alpha - t \omega]^2 \operatorname{Sec}[\alpha]^2 + 2 \operatorname{MO} \operatorname{Sec}[\alpha]^2
                           {\rm Sin} \, [\, t \, \omega \, ]^{\, 2} \, + \, 2 \, \, \text{M0} \, \, \text{Cos} \, [\, 2 \, \alpha \, ] \, \, \text{Sec} \, [\, \alpha \, ]^{\, 2} \, \, \text{Sin} \, [\, t \, \omega \, ]^{\, 2} \, + \, 2 \, \, \sqrt{2} \, \, \, \sqrt{\, \left( \text{M0}^{\, 2} \, \left( \text{6} \, + \, 2 \, \, \text{Cos} \, [\, 2 \, \alpha \, ] \, \, - \, \, \right) \,} \right) \,} \, \, + \, 2 \, \, \sqrt{\, \left( \text{M0}^{\, 2} \, \left( \text{6} \, + \, 2 \, \, \, \text{Cos} \, [\, 2 \, \alpha \, ] \, \, - \, \, \, \, \right) \,} \right) \,} \, \, + \, 2 \, \, \sqrt{\, \left( \text{M0}^{\, 2} \, \left( \text{6} \, + \, 2 \, \, \, \, \, \text{Cos} \, [\, 2 \, \alpha \, ] \, \, - \, \, \, \, \right) \,} \right) \,} \,
                                          2 \cos [2 \pm \omega] + \cos [2 \alpha - 2 \pm \omega] + \cos [2 \alpha + 2 \pm \omega]) \sin [\alpha]^2 \sin [\pm \omega]^2)
             (32 \text{ M0} (1 + \cos[2 \alpha]) \sqrt{(\text{M0}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                                \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
e^{i\Theta}r\left(\left[iCos[\alpha]Cot[\alpha]Csc[t\omega]^2\left(-4M0+2M0Cos[2t\omega]-M0Cos[2\alpha-2t\omega]-M0Cos[2\omega]\right)\right]\right)
                        M0 Cos [2 \alpha + 2 t \omega] + 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha]
                           \cos [\alpha - t \omega]^2 \sec [\alpha]^2 + 2 MO \sec [\alpha]^2 \sin [t \omega]^2 + 2 MO \cos [2 \alpha]
                           Sec[\alpha]^2 Sin[t\omega]^2 + 2\sqrt{2}\sqrt{(-M0^2(-6-2Cos[2\alpha]+2Cos[2t\omega]-
                                          \cos [2\alpha - 2t\omega] - \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
                  \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                                 M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{\left(\text{M0}^2\left(6 + 2\cos\left[2\,\alpha\right] - 2\cos\left[2\,\text{t}\,\omega\right]\right.} +
                                                  \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                   (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] - 2 \text{ MO}
                           \cos [\alpha - t \omega]^2 \operatorname{Sec}[\alpha]^2 - 2 \operatorname{MO} \cos [2 \alpha] \cos [\alpha - t \omega]^2 \operatorname{Sec}[\alpha]^2 - 2 \operatorname{MO} \operatorname{Sec}[\alpha]^2
                           \sin[t \omega]^2 - 2 M0 \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 1)^2}
                                          2 \cos[2t\omega] + \cos[2\alpha - 2t\omega] + \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2
              \left(32\,\text{M0}\,\left(1+\cos{[2\,\alpha]}\right)\,\sqrt{\,\left(\text{M0}^2\,\left(6+2\cos{[2\,\alpha]}\,-2\cos{[2\,t\,\omega]}\,+\cos{[2\,\alpha\,-2\,t\,\omega]}\,+\right)\right)}\right. 
                                 \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2) -
           \dot{\mathbf{n}} Cos[\alpha] Cot[\alpha] Csc[\mathbf{t} \omega]<sup>2</sup> (4 M0 – 2 M0 Cos[2 \mathbf{t} \omega] + M0 Cos[2 \alpha – 2 \mathbf{t} \omega] + M0
                           \cos [2 \alpha + 2 t \omega] - 2 M0 \cos [\alpha - t \omega]^2 \sec [\alpha]^2 - 2 M0 \cos [2 \alpha]
                           \cos [\alpha - t \omega]^2 \operatorname{Sec} [\alpha]^2 - 2 \operatorname{MO} \operatorname{Sec} [\alpha]^2 \operatorname{Sin} [t \omega]^2 - 2 \operatorname{MO} \operatorname{Cos} [2 \alpha]
                           Sec[\alpha]^2 Sin[t\omega]^2 + 2\sqrt{2} \sqrt{(-M0^2(-6-2Cos[2\alpha]+2Cos[2t\omega]-
                                          \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^{2} \sin [t \omega]^{2})
                  \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                                 M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                  \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
                   \left( -4\,\text{M0} + 2\,\text{M0}\,\text{Cos}\,[2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha - 2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha + 2\,\text{t}\,\omega] + 2\,\text{M0} \right)
                           \cos [\alpha - t \omega]^2 \sec [\alpha]^2 + 2 M0 \cos [2 \alpha] \cos [\alpha - t \omega]^2 \sec [\alpha]^2 + 2 M0 \sec [\alpha]^2
                           {\rm Sin} \, [\, t \, \omega \, ]^{\, 2} \, + \, 2 \, \, \text{M0} \, \, \text{Cos} \, [\, 2 \, \alpha \, ] \, \, \text{Sec} \, [\, \alpha \, ]^{\, 2} \, \, \text{Sin} \, [\, t \, \omega \, ]^{\, 2} \, + \, 2 \, \, \sqrt{2} \, \, \, \sqrt{\, \left( \text{M0}^{\, 2} \, \left( 6 \, + \, 2 \, \, \text{Cos} \, [\, 2 \, \alpha \, ] \, \, - \, \, \text{Cos} \, [\, 2 \, \alpha \, ] \, \, \right) \, } \, \, \, 
                                          2 \cos[2t\omega] + \cos[2\alpha - 2t\omega] + \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2
             (32 \text{ MO } (1 + \cos[2 \alpha]) \sqrt{(\text{MO}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
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\cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
\dot{\mathbb{I}} \left[ -\left[ \dot{\mathbb{I}} \omega \cos[\alpha] \cot[\alpha] \cot[t \omega] \csc[t \omega]^2 \left( -4 \,\text{M0} + 2 \,\text{M0} \cos[2 \,t \omega] - 4 \,\text{M0} \right) \right] \right]
                          M0 Cos [2 \alpha – 2 t \omega] – M0 Cos [2 \alpha + 2 t \omega] + 2 M0 Cos [\alpha – t \omega] <sup>2</sup> Sec [\alpha] <sup>2</sup> +
                          2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]<sup>2</sup> Sec [\alpha]<sup>2</sup> + 2 M0 Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> +
                          2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{-M0^2(-6-2\cos[2\alpha]+}
                                          2 \cos [2 \pm \omega] - \cos [2 \alpha - 2 \pm \omega] - \cos [2 \alpha + 2 \pm \omega]) \sin [\alpha]^{2} \sin [\pm \omega]^{2}
                     \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                                  M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 2 \cos [2 \alpha])}
                                                 \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]  \sin [\alpha]^2 \sin [t\omega]^2 
                      (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
                          2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Sec [\alpha]^2
                             \sin[t \, \omega]^2 - 2 \, \text{MO} \, \cos[2 \, \alpha] \, \sec[\alpha]^2 \, \sin[t \, \omega]^2 + 2 \, \sqrt{2} \, \sqrt{\left(\text{MO}^2 \, \left(6 + 2 \, \cos[2 \, \alpha] - 1 \, \cos[2 \, \alpha] \, \right)\right)}
                                          2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega] \sin[\alpha]^2 \sin[t \omega]^2
                 (16 \text{ M0} (1 + \cos[2 \alpha]) \sqrt{(\text{M0}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha])})
                                    2\alpha - 2t\omega] + Cos [2\alpha + 2t\omega]) Sin [\alpha]^2 Sin [t\omega]^2) +
         \dot{\mathbb{L}} \omega \cos[\alpha] \cot[\alpha] \cot[t \omega] \csc[t \omega]^2 \left(4 \text{ M0} - 2 \text{ M0} \cos[2 t \omega] + \text{M0} \cos[2 t \omega]\right)
                          2\alpha - 2t\omega] + M0 Cos [2\alpha + 2t\omega] - 2 M0 Cos [\alpha - t\omega]^2 Sec [\alpha]^2 - 2 M0
                       \cos [2 \alpha] \cos [\alpha - t \omega]^2 \operatorname{Sec} [\alpha]^2 - 2 \operatorname{MO} \operatorname{Sec} [\alpha]^2 \operatorname{Sin} [t \omega]^2 - 2 \operatorname{MO} \operatorname{Cos} [2 \alpha]
                       Sec[\alpha]^2 Sin[t \omega]^2 + 2 \sqrt{2} \sqrt{(-M0^2 (-6 - 2 Cos[2 \alpha] + 2 Cos[2 t \omega] - (-6 - 2 Cos[2 \alpha])^2 + 2 Cos[2 \alpha])^2}
                                    \cos [2\alpha - 2t\omega] - \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
                \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                             M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{\left(\text{M0}^2\left(6 + 2\cos\left[2\,\alpha\right] - 2\cos\left[2\,\text{t}\,\omega\right]\right)} +
                                            \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                 (-4 \text{ M0} + 2 \text{ M0 Cos} [2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha - 2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha + 2 \text{ t} \omega] + 2 \text{ M0}
                        \cos [\alpha - t \omega]^2 \operatorname{Sec} [\alpha]^2 + 2 \operatorname{MO} \cos [2 \alpha] \cos [\alpha - t \omega]^2 \operatorname{Sec} [\alpha]^2 + 2 \operatorname{MO} \operatorname{Sec} [\alpha]^2
                        \sin[t \omega]^2 + 2 M0 \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 1)^2}
                                    2 \cos[2t\omega] + \cos[2\alpha - 2t\omega] + \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2
            (16 \text{ MO } (1 + \cos[2 \alpha]) \sqrt{(\text{MO}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                             \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2) -
          \left[\dot{\mathbf{1}} \cos{[\alpha]} \cot{[\alpha]} \csc{[\mathbf{1}\omega]^2}\right] \left(-4\,\text{M0} + 2\,\text{M0} \cos{[2\,\mathbf{1}\omega]} - \text{M0} \cos{[2\,\alpha - 2\,\mathbf{1}\omega]}\right)
                     M0 Cos [2 \alpha + 2 t \omega] + 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha]
                       \cos [\alpha - t \omega]^2 \operatorname{Sec} [\alpha]^2 + 2 \operatorname{MO} \operatorname{Sec} [\alpha]^2 \operatorname{Sin} [t \omega]^2 + 2 \operatorname{MO} \operatorname{Cos} [2 \alpha]
                        Sec[\alpha]^2 Sin[t\omega]^2 + 2\sqrt{2}\sqrt{(-M0^2(-6-2Cos[2\alpha]+2Cos[2t\omega]-
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\cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
      \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                  M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] +
                                \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
       (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] - 2 \text{ MO}
             \cos [\alpha - t \omega]^2 \sec [\alpha]^2 - 2 M0 \cos [2 \alpha] \cos [\alpha - t \omega]^2 \sec [\alpha]^2 - 2 M0 \sec [\alpha]^2
             \sin[t \omega]^2 - 2 M0 \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 1)^2}
                          2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]  \sin [\alpha]^2 \sin [t \omega]^2 
       (2 MO^2 \omega Cos[t \omega] (6 + 2 Cos[2 \alpha] - 2 Cos[2 t \omega] + Cos[2 \alpha - 2 t \omega] +
                  \cos[2\alpha + 2t\omega]) \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2
              (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega]))
  \left(64\,\text{M0}\,\left(1+\cos{[2\,\alpha]}\right)\,\left(\text{M0}^2\,\left(6+2\cos{[2\,\alpha]}-2\cos{[2\,t\,\omega]}+\cos{[2\,\alpha-2\,t\,\omega]}+\right)\right)
                  \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2 +
\pm \cos[\alpha] \cot[\alpha] \csc[\pm \omega]^2 \left(4 \text{ M0} - 2 \text{ M0} \cos[2 \pm \omega] + \text{M0} \cos[2 \alpha - 2 \pm \omega] + \text{M0}\right)
             \cos [2 \alpha + 2 t \omega] - 2 M0 \cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 \cos [2 \alpha]
             \cos [\alpha - t \omega]^2 \operatorname{Sec} [\alpha]^2 - 2 \operatorname{MO} \operatorname{Sec} [\alpha]^2 \operatorname{Sin} [t \omega]^2 - 2 \operatorname{MO} \operatorname{Cos} [2 \alpha]
             Sec[\alpha]^2 Sin[t\omega]^2 + 2\sqrt{2} \sqrt{(-M0^2 (-6 - 2 Cos[2\alpha] + 2 Cos[2t\omega] - (-6 - 2 Cos[2\alpha] + 2 Cos[2\alpha])}
                         \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
      \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                  M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
       \left(-4\,\text{M0} + 2\,\text{M0}\,\text{Cos}\,[2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha - 2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha + 2\,\text{t}\,\omega] + 2\,\text{M0}\right)
             \cos{\left[\alpha-\mathsf{t}\,\omega\right]^{2}}\,\sec{\left[\alpha\right]^{2}}+2\,\mathsf{M0}\,\cos{\left[2\,\alpha\right]}\,\cos{\left[\alpha-\mathsf{t}\,\omega\right]^{2}}\,\sec{\left[\alpha\right]^{2}}+2\,\mathsf{M0}\,\sec{\left[\alpha\right]^{2}}
             \sin[t \omega]^2 + 2 M0 \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 1)^2}
                          2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
       (2 M0^2 \omega Cos[t \omega] (6 + 2 Cos[2 \alpha] - 2 Cos[2 t \omega] + Cos[2 \alpha - 2 t \omega] +
                  \cos[2\alpha + 2t\omega]) \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2
              (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega]))
  (64 \, MO \, (1 + Cos[2 \, \alpha]) \, (MO^2 \, (6 + 2 \, Cos[2 \, \alpha] - 2 \, Cos[2 \, t \, \omega] + Cos[2 \, \alpha - 2 \, t \, \omega] +
                  \cos [2\alpha + 2t\omega] \sin [\alpha]^2 \sin [t\omega]^2 +
(i \cos[\alpha] \cot[\alpha] \csc[t \omega]^2 (-4 MO + 2 MO \cos[2 t \omega] - MO \cos[2 \alpha - 2 t \omega] -
           M0 Cos [2 \alpha + 2 t \omega] + 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha]
             \cos [\alpha - t \omega]^2 \operatorname{Sec} [\alpha]^2 + 2 \operatorname{MO} \operatorname{Sec} [\alpha]^2 \operatorname{Sin} [t \omega]^2 + 2 \operatorname{MO} \operatorname{Cos} [2 \alpha]
             Sec[\alpha]^2 Sin[t \omega]^2 + 2\sqrt{2} \sqrt{(-M0^2 (-6 - 2 Cos[2 \alpha] + 2 Cos[2 t \omega] - 2 Cos[2 \alpha])}
                         \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
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\cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
\dot{\mathbf{n}} Cos[\alpha] Cot[\alpha] Csc[t\omega]<sup>2</sup> \left(-4\,\text{M0} + 2\,\text{M0}\,\text{Cos}[2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}[2\,\alpha - 2\,\text{t}\,\omega] - \text{M0}\,\text{M0}\right)
           M0 Cos [2 \alpha + 2 t \omega] + 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha]
              \cos [\alpha - t \omega]^2 \operatorname{Sec} [\alpha]^2 + 2 \operatorname{MO} \operatorname{Sec} [\alpha]^2 \operatorname{Sin} [t \omega]^2 + 2 \operatorname{MO} \operatorname{Cos} [2 \alpha]
              Sec[\alpha]^2 Sin[t\omega]^2 + 2\sqrt{2} \sqrt{(-M0^2(-6-2Cos[2\alpha]+2Cos[2t\omega]-
                          \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
      \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                  M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                  \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
       \left(-4\,\text{M0}\,\omega\,\text{Cos}\,[\text{t}\,\omega]\,\,\text{Sec}\,[\alpha]^2\,\,\text{Sin}\,[\text{t}\,\omega]\,-4\,\text{M0}\,\omega\,\,\text{Cos}\,[2\,\alpha]\,\,\text{Cos}\,[\text{t}\,\omega]\,\,\text{Sec}\,[\alpha]^2
              Sin[t\omega] + 4 M0 \omega Sin[2 t\omega] + 2 M0 \omega Sin[2 \alpha - 2 t\omega] - 4 M0 \omega Cos[\alpha - t\omega]
              Sec[\alpha]^2 Sin[\alpha - t\omega] - 4 M0 \omega Cos[2\alpha] Cos[\alpha - t\omega] Sec[\alpha]^2 Sin[\alpha - t\omega] - 2
             M0 \omega Sin[2 \alpha + 2 t \omega] + \left(\sqrt{2} \left(2 \text{ M0}^2 \omega \text{ Cos} [\text{t } \omega] \left(6 + 2 \text{ Cos} [2 \alpha] - 2 \text{ Cos} [2 \text{ t } \omega] + \right)\right)
                               \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] \sin [\alpha]^2 \sin [t\omega] + M0^2 \sin [\alpha]^2
                           Sin[t\omega]^2 (4\omega Sin[2t\omega] + 2\omega Sin[2\alpha - 2t\omega] - 2\omega Sin[2\alpha + 2t\omega])))
              (\sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha]}
                               2\alpha + 2t\omega]) Sin[\alpha]<sup>2</sup> Sin[t\omega]<sup>2</sup>)))
  (32 \text{ MO } (1 + \cos[2 \alpha]) \sqrt{(\text{MO}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                  \cos[2\alpha + 2t\omega]) \sin[\alpha]^2 \sin[t\omega]^2) -
i \cos [\alpha] \cot [\alpha] \csc [t \omega]^2 \left(4 \text{ MO} - 2 \text{ MO} \cos [2 \text{ t} \omega] + \text{MO} \cos [2 \text{ } \alpha - 2 \text{ } t \omega] + \text{MO} \right)
              \cos [2 \alpha + 2 t \omega] - 2 M0 \cos [\alpha - t \omega]^2 \sec [\alpha]^2 - 2 M0 \cos [2 \alpha]
              \cos [\alpha - t \omega]^2 \operatorname{Sec} [\alpha]^2 - 2 \operatorname{MO} \operatorname{Sec} [\alpha]^2 \operatorname{Sin} [t \omega]^2 - 2 \operatorname{MO} \operatorname{Cos} [2 \alpha]
              Sec[\alpha]^2 Sin[t \omega]^2 + 2 \sqrt{2} \sqrt{-M0^2 (-6 - 2 Cos[2 \alpha] + 2 Cos[2 t \omega] - (-6 - 2 Cos[2 \alpha])^2}
                          \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
      \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                  M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{\left(\text{M0}^2\left(6 + 2\cos{[2\,\alpha]} - 2\cos{[2\,\text{t}\,\omega]}\right.\right)} +
                                  \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
       (4 \text{ MO } \omega \text{ Cos} [\text{t } \omega] \text{ Sec} [\alpha]^2 \text{ Sin} [\text{t } \omega] + 4 \text{ MO } \omega \text{ Cos} [2 \alpha] \text{ Cos} [\text{t } \omega] \text{ Sec} [\alpha]^2
              Sin[t \omega] - 4 M0 \omega Sin[2 t \omega] - 2 M0 \omega Sin[2 \alpha - 2 t \omega] + 4 M0 \omega Cos[\alpha - t \omega]
              Sec[\alpha]^2 Sin[\alpha - t\omega] + 4 M0 \omega Cos[2\alpha] Cos[\alpha - t\omega] Sec[\alpha]^2 Sin[\alpha - t\omega] + 2
             \mathsf{M0}\;\omega\;\mathsf{Sin}\left[2\;\alpha+2\;\mathsf{t}\;\omega\right]\;+\;\left(\sqrt{2}\;\left(2\;\mathsf{M0}^2\;\omega\;\mathsf{Cos}\left[\mathsf{t}\;\omega\right]\;\left(6+2\;\mathsf{Cos}\left[2\;\alpha\right]\;-2\;\mathsf{Cos}\left[2\;\mathsf{t}\;\omega\right]\;+\right)\right)
                               \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] \sin [\alpha]^2 \sin [t\omega] + M0^2 \sin [\alpha]^2
                          Sin[t \omega]^2 (4 \omega Sin[2t\omega] + 2 \omega Sin[2\alpha - 2t\omega] - 2 \omega Sin[2\alpha + 2t\omega])))
              (\sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha]}
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2\alpha + 2t\omega) Sin[\alpha]<sup>2</sup> Sin[t\omega]<sup>2</sup>)))
         (32 \text{ MO} (1 + \cos[2 \alpha]) \sqrt{(\text{MO}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                                                                       \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2) -
 \left( i \cos \left[ \alpha \right] \cot \left[ \alpha \right] \csc \left[ t \omega \right]^{2} \sqrt{\left( \frac{1}{1 + \cos \left[ 2 \alpha \right]} \left( -2 + 4 M0 - 2 \cos \left[ 2 \alpha \right] - 2 M0 \cos \left[ 2 t \omega \right] + \right) \right)} \right)
                                                                       M0 Cos [2 \alpha - 2 t \omega] + M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 6 \cos [2 \alpha])^2 + (M0^2 (6 + 2 \cos [2
                                                                                                                               2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]  \sin [\alpha]^2 \sin [t \omega]^2 
                            (-4 \text{ M0} + 2 \text{ M0 Cos} [2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha - 2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha + 2 \text{ t} \omega] + 2 \text{ M0})
                                                     \cos [\alpha - t \omega]^2 \operatorname{Sec} [\alpha]^2 + 2 \operatorname{MO} \cos [2 \alpha] \cos [\alpha - t \omega]^2 \operatorname{Sec} [\alpha]^2 + 2 \operatorname{MO} \operatorname{Sec} [\alpha]^2
                                                     \sin[t \omega]^2 + 2 M0 \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 1)^2}
                                                                                                   2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^{2} \sin [t \omega]^{2}
                            \left(-4\,\text{M0}\,\omega\,\text{Cos}\,[\,\text{t}\,\omega]\,\,\text{Sec}\,[\,lpha\,]^{\,2}\,\,\text{Sin}\,[\,\text{t}\,\omega]\,\,-\,4\,\text{M0}\,\omega\,\,\text{Cos}\,[\,2\,lpha]\,\,\,\text{Cos}\,[\,\text{t}\,\omega]\,\,\,\text{Sec}\,[\,lpha\,]^{\,2}
                                                     Sin[t \omega] + 4 M0 \omega Sin[2 t \omega] + 2 M0 \omega Sin[2 \alpha - 2 t \omega] - 4 M0 \omega Cos[\alpha - t \omega]
                                                     Sec[\alpha]^2 Sin[\alpha - t\omega] - 4 M0 \omega Cos[2\alpha] Cos[\alpha - t\omega] Sec[\alpha]^2 Sin[\alpha - t\omega] - 2 M0
                                                    \omega \sin[2\alpha + 2t\omega] + \left(\sqrt{2}\left(-2M0^2\omega\cos[t\omega]\left(-6 - 2\cos[2\alpha] + 2\cos[2t\omega] - \omega\cos[2\alpha]\right)\right)\right)
                                                                                                                      \cos [2\alpha - 2t\omega] - \cos [2\alpha + 2t\omega]  \sin [\alpha]^2 \sin [t\omega] - M0^2 \sin [\alpha]^2
                                                                                                   \sin[t \omega]^2 \left(-4 \omega \sin[2t \omega] - 2 \omega \sin[2 \alpha - 2t \omega] + 2 \omega \sin[2 \alpha + 2t \omega]\right)\right)
                                                     (\sqrt{-M0^2 (-6-2 \cos [2 \alpha] + 2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha] + 2 \cos [2 \alpha] + 2 \cos [2 \alpha] - \cos [2 \alpha] + 2 \cos [2 \alpha] + 2 \cos [2 \alpha] - \cos [2 \alpha] + 2 \cos [2 \alpha] + 2
                                                                                                            \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)))
         (32 \text{ MO} (1 + \cos[2 \alpha]) \sqrt{(\text{MO}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                                                                       \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2) +
\left[ \dot{\mathtt{n}} \, \mathsf{Cos} \, [\alpha] \, \mathsf{Cot} \, [\alpha] \, \mathsf{Csc} \, [\mathsf{t} \, \omega]^{\, 2} \, \sqrt{\, \left( \frac{\mathtt{1}}{\mathtt{1} + \mathsf{Cos} \, [\mathsf{2} \, \alpha]} \, \left( -\, \mathsf{2} + \mathsf{4} \, \mathsf{M0} - \mathsf{2} \, \mathsf{Cos} \, [\mathsf{2} \, \alpha] \, - \mathsf{2} \, \mathsf{M0} \, \mathsf{Cos} \, [\mathsf{2} \, \mathsf{t} \, \omega] \, + \right) \right]} \, + \, \left[ \frac{\mathtt{1}}{\mathtt{1} + \mathsf{Cos} \, [\mathsf{2} \, \alpha]} \, \left( -\, \mathsf{2} + \mathsf{4} \, \mathsf{M0} - \mathsf{2} \, \mathsf{Cos} \, [\mathsf{2} \, \alpha] \, - \mathsf{2} \, \mathsf{M0} \, \mathsf{Cos} \, [\mathsf{2} \, \mathsf{t} \, \omega] \, + \right) \right] + \, \left[ \frac{\mathtt{1}}{\mathtt{1} + \mathsf{Cos} \, [\mathsf{2} \, \alpha]} \, \left( -\, \mathsf{2} + \mathsf{4} \, \mathsf{M0} - \mathsf{2} \, \mathsf{Cos} \, [\mathsf{2} \, \alpha] \, - \mathsf{2} \, \mathsf{M0} \, \mathsf{Cos} \, [\mathsf{2} \, \mathsf{t} \, \omega] \, + \right) \right] + \, \left[ \frac{\mathtt{1}}{\mathtt{1} + \mathsf{Cos} \, [\mathsf{2} \, \alpha]} \, \left( -\, \mathsf{2} + \mathsf{4} \, \mathsf{M0} - \mathsf{2} \, \mathsf{Cos} \, [\mathsf{2} \, \alpha] \, - \mathsf{2} \, \mathsf{M0} \, \mathsf{Cos} \, [\mathsf{2} \, \mathsf{t} \, \omega] \, + \right) \right] + \, \left[ \frac{\mathtt{1}}{\mathtt{1} + \mathsf{Cos} \, [\mathsf{2} \, \alpha]} \, \left( -\, \mathsf{2} + \mathsf{4} \, \mathsf{M0} - \mathsf{2} \, \mathsf{Cos} \, [\mathsf{2} \, \alpha] \, - \mathsf{2} \, \mathsf{M0} \, \mathsf{Cos} \, [\mathsf{2} \, \mathsf{t} \, \omega] \, + \right) \right] + \, \left[ \frac{\mathtt{1}}{\mathtt{1} + \mathsf{Cos} \, [\mathsf{2} \, \alpha]} \, \left( -\, \mathsf{2} + \mathsf{4} \, \mathsf{M0} - \mathsf{2} \, \mathsf{Cos} \, [\mathsf{2} \, \alpha] \, - \mathsf{2} \, \mathsf{M0} \, \mathsf{Cos} \, [\mathsf{2} \, \mathsf{t} \, \omega] \, + \right) \right] + \, \left[ \frac{\mathtt{1}}{\mathtt{1} + \mathsf{Cos} \, [\mathsf{2} \, \alpha]} \, \left( -\, \mathsf{2} + \mathsf{4} \, \mathsf{M0} - \mathsf{2} \, \mathsf{Cos} \, [\mathsf{2} \, \alpha] \, - \mathsf{2} \, \mathsf{M0} \, \mathsf{Cos} \, [\mathsf{2} \, \mathsf{t} \, \omega] \, + \right) \right] + \, \left[ \frac{\mathtt{1}}{\mathtt{1} + \mathsf{Cos} \, [\mathsf{2} \, \alpha]} \, + \right] + \, \left[ \frac{\mathtt{1}}{\mathtt{1} + \mathsf{Cos} \, [\mathsf{2} \, \alpha]} \, + \right] + \, \left[ \frac{\mathtt{1}}{\mathtt{1} + \mathsf{Cos} \, [\mathsf{2} \, \alpha]} \, + \right] + \, \left[ \frac{\mathtt{1}}{\mathtt{1} + \mathsf{Cos} \, [\mathsf{2} \, \alpha]} \, + \right] + \, \left[ \frac{\mathtt{1}}{\mathtt{1} + \mathsf{Cos} \, [\mathsf{2} \, \alpha]} \, + \right] + \, \left[ \frac{\mathtt{1}}{\mathtt{1} + \mathsf{Cos} \, [\mathsf{2} \, \alpha]} \, + \right] + \, \left[ \frac{\mathtt{1}}{\mathtt{1} + \mathsf{Cos} \, [\mathsf{2} \, \alpha]} \, + \right] + \, \left[ \frac{\mathtt{1}}{\mathtt{1} + \mathsf{Cos} \, [\mathsf{2} \, \alpha]} \, + \right] + \, \left[ \frac{\mathtt{1}}{\mathtt{1} + \mathsf{Cos} \, [\mathsf{2} \, \alpha]} \, + \right] + \, \left[ \frac{\mathtt{1}}{\mathtt{1} + \mathsf{Cos} \, [\mathsf{2} \, \alpha]} \, + \right] + \, \left[ \frac{\mathtt{1}}{\mathtt{1} + \mathsf{Cos} \, [\mathsf{2} \, \alpha]} \, + \right] + \, \left[ \frac{\mathtt{1}}{\mathtt{1} + \mathsf{Cos} \, [\mathsf{2} \, \alpha]} \, + \right] + \, \left[ \frac{\mathtt{1}}{\mathtt{1} + \mathsf{Cos} \, [\mathsf{2} \, \alpha]} \, + \right] + \, \left[ \frac{\mathtt{1}}{\mathtt{1} + \mathsf{Cos} \, [\mathsf{2} \, \alpha]} \, + \right] + \, \left[ \frac{\mathtt{1}}{\mathtt{1} + \mathsf{Cos} \, [\mathsf{2} \, \alpha]} \, + \right] + \, \left[ \frac{\mathtt{1}}{\mathtt{1} + \mathsf{Cos} \, [\mathsf{2} \, \alpha]} \, + \right] + \, \left[ \frac{\mathtt{1}}{\mathtt{1} + \mathsf{Cos} \, [\mathsf{2} \, \alpha]} \, + \right] + \, \left[ \frac{\mathtt{1}}{\mathtt{1} + \mathsf{Cos}
                                                                     M0 Cos [2 \alpha – 2 t \omega] + M0 Cos [2 \alpha + 2 t \omega] – 2 \sqrt{2} \sqrt{\left(\text{M0}^2\left(6 + 2\cos\left[2\,\alpha\right] - \cos\left[2\,\alpha\right]\right)}
                                                                                                                               2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]  \sin [\alpha]^2 \sin [t \omega]^2 
                            (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] - 2 \text{ MO}
                                                     \cos [\alpha - t \omega]^2 \operatorname{Sec} [\alpha]^2 - 2 \operatorname{MO} \cos [2 \alpha] \cos [\alpha - t \omega]^2 \operatorname{Sec} [\alpha]^2 - 2 \operatorname{MO} \operatorname{Sec} [\alpha]^2
                                                    \sin[t \, \omega]^2 - 2 \, \text{M0} \, \cos[2 \, \alpha] \, \sec[\alpha]^2 \, \sin[t \, \omega]^2 + 2 \, \sqrt{2} \, \sqrt{\left(\text{M0}^2 \, \left(6 + 2 \, \text{Cos} \, [2 \, \alpha] - 1 \, \text{Cos} \, [2 \, \alpha] \, \right)\right)}
                                                                                                    2 \cos [2 \pm \omega] + \cos [2 \alpha - 2 \pm \omega] + \cos [2 \alpha + 2 \pm \omega]) \sin [\alpha]^2 \sin [\pm \omega]^2
                            (4 \text{ MO } \omega \text{ Cos} [t \omega] \text{ Sec} [\alpha]^2 \text{ Sin} [t \omega] + 4 \text{ MO } \omega \text{ Cos} [2 \alpha] \text{ Cos} [t \omega] \text{ Sec} [\alpha]^2
                                                     Sin[t \omega] - 4 M0 \omega Sin[2 t \omega] - 2 M0 \omega Sin[2 \alpha - 2 t \omega] + 4 M0 \omega Cos[\alpha - t \omega]
                                                     Sec[\alpha]^2 Sin[\alpha - t\omega] + 4 M0 \omega Cos[2\alpha] Cos[\alpha - t\omega] Sec[\alpha]^2 Sin[\alpha - t\omega] + 2 M0
                                                    \omega \, \text{Sin} \, [\, 2 \, \alpha \, + \, 2 \, \text{t} \, \omega \, ] \, + \, \left( \sqrt{\, 2 \,} \, \left( - \, 2 \, \text{M0}^2 \, \omega \, \text{Cos} \, [\, \text{t} \, \omega \, ] \, \left( - \, 6 \, - \, 2 \, \text{Cos} \, [\, 2 \, \alpha \, ] \, + \, 2 \, \text{Cos} \, [\, 2 \, \text{t} \, \omega \, ] \, \right. \right. - \left. \left( - \, 2 \, \text{M0}^2 \, \omega \, \text{Cos} \, [\, \text{t} \, \omega \, ] \, \right) \, \left( - \, 6 \, - \, 2 \, \text{Cos} \, [\, 2 \, \alpha \, ] \, + \, 2 \, \text{Cos} \, [\, 2 \, \text{t} \, \omega \, ] \, \right) \, \right] \, .
                                                                                                                      \cos [2\alpha - 2t\omega] - \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega] - M0^2 \sin [\alpha]^2
                                                                                                   Sin[t\omega]^2 \left(-4\omega Sin[2t\omega] - 2\omega Sin[2\alpha - 2t\omega] + 2\omega Sin[2\alpha + 2t\omega]\right)\right)
                                                     (\sqrt{-M0^2 (-6-2 \cos [2 \alpha] + 2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha 
                                                                                                            \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)))
         (32 \text{ MO} (1 + \cos[2\alpha]) \sqrt{(\text{MO}^2 (6 + 2\cos[2\alpha] - 2\cos[2t\omega] + \cos[2\alpha - 2t\omega] + \cos[2\alpha])}
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2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
                             \sqrt{\frac{1}{1 + \cos[2\alpha]}} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right.
                                                              M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                                                    \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                                (2 MO^2 \omega Cos[t \omega] (6 + 2 Cos[2 \alpha] - 2 Cos[2 t \omega] + Cos[2 \alpha - 2 t \omega] +
                                                             \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2
                                                  (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega]))
                  \left( 16 \, \left( \text{M0}^2 \, \left( 6 + 2 \, \text{Cos} \, [\, 2 \, \alpha ] \, - 2 \, \text{Cos} \, [\, 2 \, \text{t} \, \omega ] \right. \right. \\ \left. + \, \text{Cos} \, [\, 2 \, \alpha - 2 \, \text{t} \, \omega ] \right. \\ \left. + \, \text{Cos} \, [\, 2 \, \alpha + 2 \, \text{t} \, \omega ] \right. \\ \left. + \, \text{Cos} \, [\, 2 \, \alpha + 2 \, \text{t} \, \omega ] \right. \\ \left. + \, \text{Cos} \, [\, 2 \, \alpha - 2 \, \text{t} \, \omega ] \right. \\ \left. + \, \text{Cos} \, [\, 2 \, \alpha - 2 \, \text{t} \, \omega ] \right. \\ \left. + \, \text{Cos} \, [\, 2 \, \alpha - 2 \, \text{t} \, \omega ] \right. \\ \left. + \, \text{Cos} \, [\, 2 \, \alpha - 2 \, \text{t} \, \omega ] \right. \\ \left. + \, \text{Cos} \, [\, 2 \, \alpha - 2 \, \text{t} \, \omega ] \right. \\ \left. + \, \text{Cos} \, [\, 2 \, \alpha - 2 \, \text{t} \, \omega ] \right. \\ \left. + \, \text{Cos} \, [\, 2 \, \alpha - 2 \, \text{t} \, \omega ] \right. \\ \left. + \, \text{Cos} \, [\, 2 \, \alpha - 2 \, \text{t} \, \omega ] \right. \\ \left. + \, \text{Cos} \, [\, 2 \, \alpha - 2 \, \text{t} \, \omega ] \right. \\ \left. + \, \text{Cos} \, [\, 2 \, \alpha - 2 \, \text{t} \, \omega ] \right. \\ \left. + \, \text{Cos} \, [\, 2 \, \alpha - 2 \, \text{t} \, \omega ] \right. \\ \left. + \, \text{Cos} \, [\, 2 \, \alpha - 2 \, \text{t} \, \omega ] \right. \\ \left. + \, \text{Cos} \, [\, 2 \, \alpha - 2 \, \text{t} \, \omega ] \right. \\ \left. + \, \text{Cos} \, [\, 2 \, \alpha - 2 \, \text{t} \, \omega ] \right. \\ \left. + \, \text{Cos} \, [\, 2 \, \alpha - 2 \, \text{t} \, \omega ] \right. \\ \left. + \, \text{Cos} \, [\, 2 \, \alpha - 2 \, \text{t} \, \omega ] \right. \\ \left. + \, \text{Cos} \, [\, 2 \, \alpha - 2 \, \text{t} \, \omega ] \right. \\ \left. + \, \text{Cos} \, [\, 2 \, \alpha - 2 \, \text{t} \, \omega ] \right. \\ \left. + \, \text{Cos} \, [\, 2 \, \alpha - 2 \, \text{t} \, \omega ] \right. \\ \left. + \, \text{Cos} \, [\, 2 \, \alpha - 2 \, \text{t} \, \omega ] \right. \\ \left. + \, \text{Cos} \, [\, 2 \, \alpha - 2 \, \text{t} \, \omega ] \right. \\ \left. + \, \text{Cos} \, [\, 2 \, \alpha - 2 \, \text{t} \, \omega ] \right. \\ \left. + \, \text{Cos} \, [\, 2 \, \alpha - 2 \, \text{t} \, \omega ] \right. \\ \left. + \, \text{Cos} \, [\, 2 \, \alpha - 2 \, \text{t} \, \omega ] \right. \\ \left. + \, \text{Cos} \, [\, 2 \, \alpha - 2 \, \text{t} \, \omega ] \right. \\ \left. + \, \text{Cos} \, [\, 2 \, \alpha - 2 \, \text{t} \, \omega ] \right. \\ \left. + \, \text{Cos} \, [\, 2 \, \alpha - 2 \, \text{t} \, \omega ] \right. \\ \left. + \, \text{Cos} \, [\, 2 \, \alpha - 2 \, \text{t} \, \omega ] \right. \\ \left. + \, \text{Cos} \, [\, 2 \, \alpha - 2 \, \text{t} \, \omega ] \right. \\ \left. + \, \text{Cos} \, [\, 2 \, \alpha - 2 \, \text{t} \, \omega ] \right. \\ \left. + \, \text{Cos} \, [\, 2 \, \alpha - 2 \, \text{t} \, \omega ] \right. \\ \left. + \, \text{Cos} \, [\, 2 \, \alpha - 2 \, \text{t} \, \omega ] \right. \\ \left. + \, \text{Cos} \, [\, 2 \, \alpha - 2 \, \text{t} \, \omega ] \right. \\ \left. + \, \text{Cos} \, [\, 2 \, \alpha - 2 \, \text{t} \, \omega ] \right. \\ \left. + \, \text{Cos} \, [\, 2 \, \alpha - 2 \, \text{t} \, \omega ] \right. \\ \left. + \, \text{Cos} \, [\, 2 \, \alpha - 2 \, \text{t} \, \omega ] \right. \\ \left. + \, \text{Cos} \, [\, 2 \, \alpha - 2 \, \text{t} \, \omega ] \right. \\ \left. + \, \text{Cos} \, [\, 2 \, \alpha - 2 \, \text{t} \, \omega ] \right. \\ \left. + \, \text{Cos} \, [\, 2 \,
                                               \operatorname{Sin}[\alpha]^{2} \operatorname{Sin}[\mathsf{t}\,\omega]^{2})^{3/2}
\left[ (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] - 2 \text{ MO} \right]
                                    \cos [\alpha - t \omega]^2 \sec [\alpha]^2 - 2 M0 \cos [2 \alpha] \cos [\alpha - t \omega]^2 \sec [\alpha]^2 - 2 M0 \sec [\alpha]^2
                                    \sin[t \omega]^2 - 2 \text{ M0 } \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{-\text{M0}^2 (-6 - 2 \cos[2 \alpha] + 2 \cos[2 \alpha])}
                                                                     2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
                \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2\,t\,\omega] + \text{M0} \,\cos[2\,\alpha - 2 \,t\,\omega] + \right)}
                                                M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{\left(\text{M0}^2\left(6 + 2\cos{[2\,\alpha]} - 2\cos{[2\,\text{t}\,\omega]}\right.\right)} +
                                                                                       \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
                  (2 M\Theta^2 \omega Cos[t \omega] (6 + 2 Cos[2 \alpha] - 2 Cos[2 t \omega] + Cos[2 \alpha - 2 t \omega] +
                                                 \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2
                                      (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega]))
      (16 (M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega])
                                   Sin[\alpha]^2 Sin[t\omega]^2 +
(-4 \text{ MO} + 2 \text{ MO Cos} [2 \text{ t} \omega] - \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] - \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] + 2 \text{ MO})
                                    \cos [\alpha - t \omega]^2 \sec [\alpha]^2 + 2 M0 \cos [2 \alpha] \cos [\alpha - t \omega]^2 \sec [\alpha]^2 + 2 M0 \sec [\alpha]^2
                                   \sin[t \, \omega]^2 + 2 \, MO \, \cos[2 \, \alpha] \, \sec[\alpha]^2 \, \sin[t \, \omega]^2 + 2 \, \sqrt{2} \, \sqrt{\left(-MO^2 \, \left(-6 - 2 \, \cos[2 \, \alpha] + 2 \, \cos[2 \,
                                                                     2 \cos [2 \pm \omega] - \cos [2 \alpha - 2 \pm \omega] - \cos [2 \alpha + 2 \pm \omega]) \sin [\alpha]^{2} \sin [\pm \omega]^{2}
                  (4 \text{ MO } \omega \text{ Sin}[2 \text{ t} \omega] + 2 \text{ MO } \omega \text{ Sin}[2 \alpha - 2 \text{ t} \omega] - 2 \text{ MO } \omega \text{ Sin}[2 \alpha + 2 \text{ t} \omega] -
                              (\sqrt{2} (2 M0^2 \omega \cos[t \omega] (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                                                                                \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega] + M0^2 \sin [\alpha]^2 \sin [t \omega]^2
                                                                     (4 \omega \sin[2t\omega] + 2 \omega \sin[2\alpha - 2t\omega] - 2 \omega \sin[2\alpha + 2t\omega]))
                                    \left(\sqrt{\,\left(\text{M0}^2\,\left(\text{6}+\text{2}\,\text{Cos}\,[\text{2}\,\alpha]\,-\text{2}\,\text{Cos}\,[\text{2}\,\text{t}\,\omega]\,+\text{Cos}\,[\text{2}\,\alpha-\text{2}\,\text{t}\,\omega]\,+\text{Cos}\,[\text{2}\,\alpha-\text{2}\,\text{t}\,\omega]\,\right.}\right.
                                                                                2\alpha + 2t\omega) Sin[\alpha]<sup>2</sup> Sin[t\omega]<sup>2</sup>)))/
      16 (1 + Cos [2 \alpha]) \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] +
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\cos [2\alpha + 2t\omega] \sin [\alpha]^2 \sin [t\omega]^2
                         \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                                                                   M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                                                                        \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
(4 M0 - 2 M0 Cos [2 t \omega] + M0 Cos [2 \alpha - 2 t \omega] + M0 Cos [2 \alpha + 2 t \omega] - 2 M0
                                                  \cos [\alpha - t \omega]^2 \operatorname{Sec} [\alpha]^2 - 2 \operatorname{MO} \cos [2 \alpha] \cos [\alpha - t \omega]^2 \operatorname{Sec} [\alpha]^2 - 2 \operatorname{MO} \operatorname{Sec} [\alpha]^2
                                                  \sin[t \omega]^2 - 2 \, MO \, \cos[2 \, \alpha] \, \sec[\alpha]^2 \, \sin[t \, \omega]^2 + 2 \, \sqrt{2} \, \sqrt{(-MO^2 \, (-6 - 2 \, \cos[2 \, \alpha] + 2 \, \cos[2 \, \alpha])^2} 
                                                                                              2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
                          \left(4\ \text{MO}\ \omega\ \text{Sin}\left[2\ \text{t}\ \omega\right]\ +\ 2\ \text{MO}\ \omega\ \text{Sin}\left[2\ \alpha\ -\ 2\ \text{t}\ \omega\right]\ -\ 2\ \text{MO}\ \omega\ \text{Sin}\left[2\ \alpha\ +\ 2\ \text{t}\ \omega\right]\ +\ 2\ \text{MO}\ \omega\ \text{Sin}\left[2\ \alpha\ +\ 2\ \text{t}\ \omega\right]\ +\ 2\ \text{MO}\ \omega\ \text{Sin}\left[2\ \alpha\ +\ 2\ \text{t}\ \omega\right]\ +\ 2\ \text{MO}\ \omega\ \text{Sin}\left[2\ \alpha\ +\ 2\ \text{t}\ \omega\right]\ +\ 2\ \text{MO}\ \omega\ \text{Sin}\left[2\ \alpha\ +\ 2\ \text{t}\ \omega\right]\ +\ 2\ \text{MO}\ \omega\ \text{Sin}\left[2\ \alpha\ +\ 2\ \text{t}\ \omega\right]\ +\ 2\ \text{MO}\ \omega\ \text{Sin}\left[2\ \alpha\ +\ 2\ \text{t}\ \omega\right]\ +\ 2\ \text{MO}\ \omega\ \text{Sin}\left[2\ \alpha\ +\ 2\ \text{t}\ \omega\right]\ +\ 2\ \text{MO}\ \omega\ \text{Sin}\left[2\ \alpha\ +\ 2\ \text{t}\ \omega\right]\ +\ 2\ \text{MO}\ \omega\ \text{Sin}\left[2\ \alpha\ +\ 2\ \text{t}\ \omega\right]\ +\ 2\ \text{MO}\ \omega\ \text{Sin}\left[2\ \alpha\ +\ 2\ \text{t}\ \omega\right]\ +\ 2\ \text{MO}\ \omega\ \text{Sin}\left[2\ \alpha\ +\ 2\ \text{t}\ \omega\right]\ +\ 2\ \text{MO}\ \omega\ \text{Sin}\left[2\ \alpha\ +\ 2\ \text{t}\ \omega\right]\ +\ 2\ \text{MO}\ \omega\ \text{Sin}\left[2\ \alpha\ +\ 2\ \text{t}\ \omega\right]\ +\ 2\ \text{MO}\ \omega\ \text{Sin}\left[2\ \alpha\ +\ 2\ \text{t}\ \omega\right]\ +\ 2\ \text{MO}\ \omega\ \text{Sin}\left[2\ \alpha\ +\ 2\ \text{t}\ \omega\right]\ +\ 2\ \text{MO}\ \omega\ \text{Sin}\left[2\ \alpha\ +\ 2\ \text{t}\ \omega\right]\ +\ 2\ \text{MO}\ \omega\ \text{Sin}\left[2\ \alpha\ +\ 2\ \text{t}\ \omega\right]\ +\ 2\ \text{MO}\ \omega\ \text{Sin}\left[2\ \alpha\ +\ 2\ \text{t}\ \omega\right]\ +\ 2\ \text{MO}\ \omega\ \text{Sin}\left[2\ \alpha\ +\ 2\ \text{t}\ \omega\right]\ +\ 2\ \text{MO}\ \omega\ \text{Sin}\left[2\ \alpha\ +\ 2\ \text{t}\ \omega\right]\ +\ 2\ \text{MO}\ \omega\ \text{Sin}\left[2\ \alpha\ +\ 2\ \text{t}\ \omega\right]\ +\ 2\ \text{MO}\ \omega\ \text{Sin}\left[2\ \alpha\ +\ 2\ \text{t}\ \omega\right]\ +\ 2\ \text{MO}\ \omega\ \text{Sin}\left[2\ \alpha\ +\ 2\ \text{t}\ \omega\right]\ +\ 2\ \text{MO}\ \omega\ \text{Sin}\left[2\ \alpha\ +\ 2\ \text{t}\ \omega\right]\ +\ 2\ \text{MO}\ \omega\ \text{Sin}\left[2\ \alpha\ +\ 2\ \text{t}\ \omega\right]\ +\ 2\ \text{MO}\ \omega\ \text{Sin}\left[2\ \alpha\ +\ 2\ \text{t}\ \omega\right]\ +\ 2\ \text{MO}\ \omega\ \text{Sin}\left[2\ \alpha\ +\ 2\ \text{t}\ \omega\right]\ +\ 2\ \text{MO}\ \omega\ \text{Sin}\left[2\ \alpha\ +\ 2\ \text{t}\ \omega\right]\ +\ 2\ \text{MO}\ \omega\ \text{Sin}\left[2\ \alpha\ +\ 2\ \text{t}\ \omega\right]\ +\ 2\ \text{MO}\ \omega\ \text{Sin}\left[2\ \alpha\ +\ 2\ \text{MO}\ \omega\ +\ 2\ \text{MO}\ \omega\ \text{Sin}\left[2\ \alpha\ +\ 2\ \text{MO}\ \omega\ +\ 2\ \text{MO
                                           (\sqrt{2} (2 M0^2 \omega \cos[t \omega] (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                                                                                                              \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega] + M0^2 \sin [\alpha]^2 \sin [t\omega]^2
                                                                                                (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])))
                                                   (\sqrt{M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha] + \cos [2 \alpha]
                                                                                                              2\alpha + 2t\omega]) Sin[\alpha]<sup>2</sup> Sin[t\omega]<sup>2</sup>))))/
          16 (1 + \cos[2 \alpha]) \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                                                                   \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
                       \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                                                                   M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                                                                        \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
\sqrt{\left(\frac{1}{1 + \cos{[2\,\alpha]}} \left(-2 + 4\,\text{M0} - 2\,\cos{[2\,\alpha]} - 2\,\text{M0}\cos{[2\,\text{t}\,\omega]} + \text{M0}\cos{[2\,\alpha - 2\,\text{t}\,\omega]} + \right)}
                                                                   M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                                                                        \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                           \left(-4\,\text{M0}\,\omega\,\text{Cos}\,[\,\text{t}\,\omega\,]\,\,\text{Sec}\,[\,\alpha\,]^{\,2}\,\,\text{Sin}\,[\,\text{t}\,\omega\,]\,-4\,\text{M0}\,\omega\,\,\text{Cos}\,[\,2\,\alpha\,]\,\,\,\text{Cos}\,[\,\text{t}\,\omega\,]\,\,\,\text{Sec}\,[\,\alpha\,]^{\,2}
                                                  Sin[t \omega] + 4 MO \omega Sin[2 t \omega] + 2 MO \omega Sin[2 \alpha - 2 t \omega] - 4 MO \omega Cos[\alpha - t \omega]
                                                   \operatorname{Sec}[\alpha]^2 \operatorname{Sin}[\alpha - \operatorname{t} \omega] - 4 \operatorname{MO} \omega \operatorname{Cos}[2 \alpha] \operatorname{Cos}[\alpha - \operatorname{t} \omega] \operatorname{Sec}[\alpha]^2 \operatorname{Sin}[\alpha - \operatorname{t} \omega] - 2 \operatorname{MO}
                                                   \omega \sin[2\alpha + 2t\omega] + (\sqrt{2}(-2M0^2\omega \cos[t\omega](-6 - 2\cos[2\alpha] + 2\cos[2t\omega] -
                                                                                                              \mathsf{Cos}\left[2\,\alpha-2\,\mathsf{t}\,\omega\right]\,-\,\mathsf{Cos}\left[2\,\alpha+2\,\mathsf{t}\,\omega\right]\big)\,\,\mathsf{Sin}\left[\alpha\right]^2\,\mathsf{Sin}\left[\mathsf{t}\,\omega\right]\,-\,\mathsf{M0}^2\,\mathsf{Sin}\left[\alpha\right]^2
                                                                                              Sin[t\omega]^2 \left(-4\omega Sin[2t\omega] - 2\omega Sin[2\alpha - 2t\omega] + 2\omega Sin[2\alpha + 2t\omega]\right)\right)
                                                   (\sqrt{-M0^2 (-6-2 \cos [2 \alpha] + 2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha] + 2 \cos [2 \alpha] + 2 \cos [2 \alpha] - \cos [2 \alpha] + 2 \cos [2 \alpha] + 2 \cos [2 \alpha] - \cos [2 \alpha] + 2 \cos [2 \alpha] + 2
                                                                                                     \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2))
          (8 \sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega]})
                                                   Sin[\alpha]^2 Sin[t\omega]^2) +
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\sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2 \,t \,\omega] + \text{M0} \,\cos[2\alpha - 2 \,t \,\omega] + \right]}
                                                                                    M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] +
                                                                                                                \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                                                               (4 \text{ MO } \omega \text{ Cos}[t \omega] \text{ Sec}[\alpha]^2 \text{ Sin}[t \omega] + 4 \text{ MO } \omega \text{ Cos}[2 \alpha] \text{ Cos}[t \omega] \text{ Sec}[\alpha]^2
                                                                           Sin[t \omega] - 4 M0 \omega Sin[2 t \omega] - 2 M0 \omega Sin[2 \alpha - 2 t \omega] + 4 M0 \omega Cos[\alpha - t \omega]
                                                                           Sec[\alpha]^2 Sin[\alpha - t\omega] + 4 M0 \omega Cos[2\alpha] Cos[\alpha - t\omega] Sec[\alpha]^2 Sin[\alpha - t\omega] + 2 M0
                                                                           \omega\,\mathsf{Sin}\,[\,2\,\alpha\,+\,2\,\mathsf{t}\,\omega\,]\,+\,\left(\sqrt{\,2\,}\,\left(\,-\,2\,\mathsf{M}\!\partial^2\,\omega\,\mathsf{Cos}\,[\,\mathsf{t}\,\omega\,]\,\left(\,-\,6\,-\,2\,\mathsf{Cos}\,[\,2\,\alpha\,]\,+\,2\,\mathsf{Cos}\,[\,2\,\mathsf{t}\,\omega\,]\,-\,4\,\mathsf{Cos}\,[\,2\,\mathsf{t}\,\omega\,]\,\right)\right)
                                                                                                            \cos [2\alpha - 2t\omega] - \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega] - M0^2 \sin [\alpha]^2
                                                                                                   Sin[t\omega]^2(-4\omega Sin[2t\omega] - 2\omega Sin[2\alpha - 2t\omega] + 2\omega Sin[2\alpha + 2t\omega])))
                                                                           (\sqrt{-M0^2 (-6-2 \cos [2 \alpha] + 2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha] + 2 \cos [2 \alpha] - \cos [2 \alpha] + 2 \cos [2 \alpha] - \cos [2 \alpha] + 2 \cos [2 \alpha] + 2
                                                                                                       \cos [2\alpha + 2t\omega] \sin [\alpha]^2 \sin [t\omega]^2))
                                                      (8\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
                                                                           Sin[\alpha]^2 Sin[t\omega]^2) +
                                 s \left( -\left( \left[ i M0 \left( 1 + Cos[2 \alpha] \right) Sec[\alpha] Sin[t \omega]^2 \sqrt{\left( \frac{1}{1 + Cos[2 \alpha]} \left( -2 + 4 M0 - Cos[2 \alpha] \right) \right) \right) \right) \right) 
                                                                                              2 \cos [2 \alpha] - 2 MO \cos [2 t \omega] + MO \cos [2 \alpha - 2 t \omega] + MO \cos [2 \alpha + 2 t \omega] -
                                                                                              2\sqrt{2}\sqrt{(M\Theta^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+}
                                                                                                                          \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2) \arctan[\alpha]
                                                              \left(2\,\sqrt{\,\left(\text{MO}^{2}\,\left(\text{6}+2\,\text{Cos}\,[\,2\,\alpha\,]\,-2\,\text{Cos}\,[\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,-\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,+\,2\,\text{t}\,\omega\,]\,\right)}\right.
                                                                                    Sin[\alpha]^2 Sin[t\omega]^2)) +
                                                \left(i M0 \left(1 + \cos\left[2 \alpha\right]\right) \operatorname{Sec}\left[\alpha\right] \operatorname{Sin}\left[t \omega\right]^{2} \sqrt{\left(\frac{1}{1 + \cos\left[2 \alpha\right]} \left(-2 + 4 M0 - 2 \cos\left[2 \alpha\right] - 4 M0\right)\right)}\right)
                                                                                    2 M0 Cos [2 t \omega] + M0 Cos [2 \alpha - 2 t \omega] + M0 Cos [2 \alpha + 2 t \omega] +
                                                                                    2\sqrt{2}\sqrt{(\text{M0}^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha])}
                                                                                                                \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2) \arctan[\alpha]
                                                     (2\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
                                                                          Sin[\alpha]^2 Sin[t \omega]^2))
v12[\alpha_{-}, \omega_{-}, t_{-}, MO_{-}, s_{-}, r_{-}, \Theta_{-}] := i \left(\frac{1}{MO} Sec[\alpha]^{2} \left(Cos[\alpha + t\omega]^{2} + Sin[t\omega]^{2}\right)\right)
                         \left[ -s \left[ \left( -4 \, \text{M0} + 2 \, \text{M0} \, \text{Cos} \, [2 \, \text{t} \, \omega] - \text{M0} \, \text{Cos} \, [2 \, \alpha - 2 \, \text{t} \, \omega] - \text{M0} \, \text{Cos} \, [2 \, \alpha + 2 \, \text{t} \, \omega] + 2 \, \text{M0} \, \text{Cos} \, [\alpha - \text{t} \, \omega]^2 \right] \right] 
                                                                           Sec[\alpha]^2 + 2 MO Cos[2 \alpha] Cos[\alpha - t \omega]^2 Sec[\alpha]^2 + 2 MO Sec[\alpha]^2 Sin[t \omega]^2 + 2
                                                                           M0 Cos [2 \alpha] Sec [\alpha] <sup>2</sup> Sin [t \omega] <sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2(-6-2\cos[2\alpha]+
                                                                                                   2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
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\sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2\,t\,\omega] + \text{M0} \,\cos[2\,\alpha - 2 \,t\,\omega] + \right)}
                            M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] +
                                            \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2))
           (8 \sqrt{M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega])}
                       Sin[\alpha]^2 Sin[t\omega]^2) +
          (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] - 2 \text{ MO}
                        \cos [\alpha - t \omega]^2 \sec [\alpha]^2 - 2 MO \cos [2 \alpha] \cos [\alpha - t \omega]^2 \sec [\alpha]^2 - 2 MO \sec [\alpha]^2
                       \sin[t \omega]^2 - 2 \, MO \, \cos[2 \, \alpha] \, \sec[\alpha]^2 \, \sin[t \, \omega]^2 + 2 \, \sqrt{2} \, \sqrt{(-MO^2 \, (-6 - 2 \, \cos[2 \, \alpha] + 2 \, \cos[2 \, \alpha])^2} 
                                     2 \cos [2 \pm \omega] - \cos [2 \alpha - 2 \pm \omega] - \cos [2 \alpha + 2 \pm \omega]) \sin [\alpha]^{2} \sin [\pm \omega]^{2}
                \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                            M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                            \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2))
           \left(8\,\sqrt{\,\left(\text{M0}^{2}\,\left(\text{6}+2\,\text{Cos}\,[\,2\,\alpha\,]\,-2\,\text{Cos}\,[\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,-\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,+\,2\,\text{t}\,\omega\,]\,\right)}\right.
                       Sin[\alpha]^2 Sin[t\omega]^2) +
s \left( \sqrt{\frac{1}{1 + \cos[2\alpha]}} \left( -2 + 4 M0 - 2 \cos[2\alpha] - 2 M0 \cos[2 t \omega] + M0 \cos[2\alpha - 2 t \omega] + \frac{1}{1 + \cos[2\alpha]} \right) \right)
                            M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 2 \cos [2 \alpha])}
                                            \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]  \sin [\alpha]^2 \sin [t\omega]^2 
                 (4 \text{ M0} - 2 \text{ M0 Cos} [2 \text{ t} \omega] + \text{M0 Cos} [2 \alpha - 2 \text{ t} \omega] + \text{M0 Cos} [2 \alpha + 2 \text{ t} \omega] - 2 \text{ M0}
                        \cos [\alpha - t \omega]^2 \sec [\alpha]^2 - 2 M0 \cos [2 \alpha] \cos [\alpha - t \omega]^2 \sec [\alpha]^2 - 2 M0 \sec [\alpha]^2
                       {\rm Sin} \, [\, t \, \omega \, ]^{\, 2} \, - \, 2 \, \, \text{M0} \, \, \text{Cos} \, [\, 2 \, \alpha \, ] \, \, \text{Sec} \, [\, \alpha \, ]^{\, 2} \, \, \text{Sin} \, [\, t \, \omega \, ]^{\, 2} \, + \, 2 \, \, \sqrt{2} \, \, \, \sqrt{\, \left( \text{M0}^{\, 2} \, \left( \text{6} \, + \, 2 \, \, \text{Cos} \, [\, 2 \, \alpha \, ] \, \, - \, \text{Cos} \, [\, 2 \, \alpha \, ] \, \, \right) \, \right)} \, \, 
                                    2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega] \sin[\alpha]^{2} \sin[t \omega]^{2}
            (8 \sqrt{M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega])}
                        Sin[\alpha]^2 Sin[t\omega]^2) +
         \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \text{ MO} - 2 \cos[2\alpha] - 2 \text{ MO} \cos[2 \text{ t} \omega] + \text{MO} \cos[2\alpha - 2 \text{ t} \omega] + \right)}
                            M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] +
                                            \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
                 (-4 \text{ M0} + 2 \text{ M0} \cos [2 \text{ t} \omega] - \text{M0} \cos [2 \alpha - 2 \text{ t} \omega] - \text{M0} \cos [2 \alpha + 2 \text{ t} \omega] + 2 \text{ M0})
                        \cos [\alpha - t \omega]^2 \operatorname{Sec} [\alpha]^2 + 2 \operatorname{MO} \cos [2 \alpha] \cos [\alpha - t \omega]^2 \operatorname{Sec} [\alpha]^2 + 2 \operatorname{MO} \operatorname{Sec} [\alpha]^2
                        \sin[t \omega]^2 + 2 M0 \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 1)^2}
                                     2 \cos [2 \pm \omega] + \cos [2 \alpha - 2 \pm \omega] + \cos [2 \alpha + 2 \pm \omega]) \sin [\alpha]^2 \sin [\pm \omega]^2)
            (8\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
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\operatorname{Sin}[\alpha]^2 \operatorname{Sin}[\mathsf{t}\,\omega]^2)
e^{-i\theta}r \left(\left[i\cos[\alpha]\cos[\alpha]\cos[t\omega]^2\left(-4\,M\theta+2\,M\theta\cos[2\,t\omega]-M\theta\cos[2\,\alpha-2\,t\omega]-i\cos[\alpha]\cos[\alpha]\cos[\alpha]\cos[\alpha]\right]\right)
                     M0 Cos [2 \alpha + 2 t \omega] + 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha]
                       \cos [\alpha - t \omega]^2 \operatorname{Sec} [\alpha]^2 + 2 \operatorname{MO} \operatorname{Sec} [\alpha]^2 \operatorname{Sin} [t \omega]^2 + 2 \operatorname{MO} \operatorname{Cos} [2 \alpha]
                       Sec[\alpha]^2 Sin[t\omega]^2 + 2\sqrt{2} \sqrt{(-M0^2(-6-2Cos[2\alpha]+2Cos[2t\omega]-
                                   \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                \sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                            M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                           \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
                 (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] - 2 \text{ MO}
                       \cos [\alpha - t \omega]^2 \sec [\alpha]^2 - 2 M0 \cos [2 \alpha] \cos [\alpha - t \omega]^2 \sec [\alpha]^2 - 2 M0 \sec [\alpha]^2
                       \sin[t \, \omega]^2 - 2 \, MO \, \cos[2 \, \alpha] \, \sec[\alpha]^2 \, \sin[t \, \omega]^2 + 2 \, \sqrt{2} \, \sqrt{\left(MO^2 \, \left(6 + 2 \, \cos[2 \, \alpha] - 1 \, \cos[2 \, \alpha] \right)^2 + 2 \, \cos[2 \, \alpha] \right)}
                                    2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega] \sin[\alpha]^2 \sin[t \omega]^2
            (32 \text{ M0} (1 + \cos[2 \alpha]) \sqrt{(\text{M0}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                            \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2) -
          \dot{\mathbf{n}} Cos[\alpha] Cot[\alpha] Csc[t\omega]<sup>2</sup> (4 M0 – 2 M0 Cos[2 t\omega] + M0 Cos[2 \alpha – 2 t\omega] + M0
                       \cos [2 \alpha + 2 t \omega] - 2 MO \cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 MO \cos [2 \alpha]
                       \cos [\alpha - t \omega]^2 \sec [\alpha]^2 - 2 \text{ MO Sec} [\alpha]^2 \sin [t \omega]^2 - 2 \text{ MO Cos} [2 \alpha]
                       Sec[\alpha]^2 Sin[t\omega]^2 + 2\sqrt{2} \sqrt{(-M0^2(-6-2Cos[2\alpha]+2Cos[2t\omega]-
                                   \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                            M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{\left(\text{M0}^2\left(6 + 2\cos\left[2\,\alpha\right] - 2\cos\left[2\,\text{t}\,\omega\right]\right)} +
                                           \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                 (-4 \text{ M0} + 2 \text{ M0 Cos} [2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha - 2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha + 2 \text{ t} \omega] + 2 \text{ M0}
                       \cos [\alpha - t \omega]^2 \sec [\alpha]^2 + 2 M0 \cos [2 \alpha] \cos [\alpha - t \omega]^2 \sec [\alpha]^2 + 2 M0 \sec [\alpha]^2
                       \sin[t \, \omega]^2 + 2 \, MO \, \cos[2 \, \alpha] \, \sec[\alpha]^2 \, \sin[t \, \omega]^2 + 2 \, \sqrt{2} \, \sqrt{\left(MO^2 \, \left(6 + 2 \, \cos[2 \, \alpha] - 1 \, \cos[2 \, \alpha] + 1 \, \cos[2 \, \alpha] - 1 \, \cos[2 \, \alpha] \right)} \right)
                                    2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega] \sin[\alpha]^{2} \sin[t \omega]^{2}
            (32 \,\text{M0} \,(1 + \cos[2\,\alpha]) \,\sqrt{\,(\text{M0}^2\,(6 + 2\cos[2\,\alpha] - 2\cos[2\,t\,\omega] + \cos[2\,\alpha - 2\,t\,\omega] + }
                           \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2)
e^{i\Theta}r\left(\left[iCos[\alpha]Cot[\alpha]Csc[t\omega]^2\left(-4M0+2M0Cos[2t\omega]-M0Cos[2\alpha-2t\omega]-M0Cos[2\omega]\right)\right]\right)
                     M0 Cos [2 \alpha + 2 t \omega] + 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha]
                       \cos [\alpha - t \omega]^2 \operatorname{Sec} [\alpha]^2 + 2 \operatorname{MO} \operatorname{Sec} [\alpha]^2 \operatorname{Sin} [t \omega]^2 + 2 \operatorname{MO} \operatorname{Cos} [2 \alpha]
                       Sec[\alpha]^2 Sin[t\omega]^2 + 2\sqrt{2}\sqrt{(-M0^2(-6-2Cos[2\alpha]+2Cos[2t\omega]-
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\cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
                                   \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                                                             M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] +
                                                                                               \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
                                    (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] - 2 \text{ MO}
                                                   \cos [\alpha - t \omega]^2 \operatorname{Sec} [\alpha]^2 - 2 \operatorname{MO} \cos [2 \alpha] \cos [\alpha - t \omega]^2 \operatorname{Sec} [\alpha]^2 - 2 \operatorname{MO} \operatorname{Sec} [\alpha]^2
                                                   \sin[t \omega]^2 - 2 M0 \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 1)^2}
                                                                               2 \cos [2 \pm \omega] + \cos [2 \alpha - 2 \pm \omega] + \cos [2 \alpha + 2 \pm \omega]) \sin [\alpha]^2 \sin [\pm \omega]^2)
                         (32 \, MO \, (1 + Cos \, [2 \, \alpha]) \, \sqrt{(MO^2 \, (6 + 2 \, Cos \, [2 \, \alpha] - 2 \, Cos \, [2 \, t \, \omega] + Cos \, [2 \, \alpha - 2 \, t \, \omega] + Cos \, [2 \, \alpha] + Cos 
                                                             \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2) -
                    \dot{\mathbf{n}} Cos[\alpha] Cot[\alpha] Csc[t\omega]<sup>2</sup> (4 M0 – 2 M0 Cos[2 t\omega] + M0 Cos[2 \alpha – 2 t\omega] + M0
                                                   Cos [2 \alpha + 2 t \omega] - 2 M0 Cos [\alpha - t \omega] 2 Sec [\alpha] 2 - 2 M0 Cos [2 \alpha]
                                                   \cos [\alpha - t \omega]^2 \operatorname{Sec} [\alpha]^2 - 2 \operatorname{MO} \operatorname{Sec} [\alpha]^2 \operatorname{Sin} [t \omega]^2 - 2 \operatorname{MO} \operatorname{Cos} [2 \alpha]
                                                   Sec[\alpha]^2 Sin[t\omega]^2 + 2\sqrt{2} \sqrt{(-M0^2 (-6 - 2 Cos[2\alpha] + 2 Cos[2t\omega] - (-6 - 2 Cos[2\alpha] + 2 Cos[2\alpha])}
                                                                              \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                                 \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                                                             M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{\left(\text{M0}^2\left(6 + 2\cos\left[2\,\alpha\right] - 2\cos\left[2\,\text{t}\,\omega\right]\right)} +
                                                                                               \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
                                    \left( -4\,\text{M0} + 2\,\text{M0}\,\text{Cos}\,[2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,lpha - 2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,lpha + 2\,\text{t}\,\omega] + 2\,\text{M0} \right)
                                                   \cos [\alpha - t \omega]^2 \sec [\alpha]^2 + 2 M0 \cos [2 \alpha] \cos [\alpha - t \omega]^2 \sec [\alpha]^2 + 2 M0 \sec [\alpha]^2
                                                  \sin[t \omega]^2 + 2 M0 \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 1)^2}
                                                                              2 \cos[2t\omega] + \cos[2\alpha - 2t\omega] + \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2
                         (32 \text{ M0} (1 + \cos[2 \alpha]) \sqrt{(\text{M0}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                                                             \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
\dot{\mathbb{I}} \left[ - \left[ \dot{\mathbb{I}} \omega \cos[\alpha] \cot[\alpha] \cot[t \omega] \csc[t \omega]^2 \left( -4 \,\text{M0} + 2 \,\text{M0} \cos[2 \,t \omega] - 4 \,\text{M0} \right) \right] \right]
                                                       M0 Cos [2\alpha - 2t\omega] - M0 Cos [2\alpha + 2t\omega] + 2M0 Cos [\alpha - t\omega]^2 Sec [\alpha]^2 +
                                                       2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]<sup>2</sup> Sec [\alpha]<sup>2</sup> + 2 M0 Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> +
                                                        2 M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2 (-6 - 2 \cos [2 \alpha] + \cos (-6 - 2 \cos
                                                                                          2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
                                              \sqrt{\left(\frac{1}{1+\cos[2\alpha]}\left(-2+4\,\text{M0}-2\cos[2\,\alpha]-2\,\text{M0}\cos[2\,\text{t}\,\omega]+\text{M0}\cos[2\,\alpha-2\,\text{t}\,\omega]+\right)}
                                                                         M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] +
                                                                                                          \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
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(4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
                 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Sec [\alpha]^2
                   \sin[t \, \omega]^2 - 2 \, \text{MO} \, \cos[2 \, \alpha] \, \sec[\alpha]^2 \, \sin[t \, \omega]^2 + 2 \, \sqrt{2} \, \sqrt{\left(\text{MO}^2 \, \left(6 + 2 \, \cos[2 \, \alpha] - 1 \, \cos[2 \, \alpha] \, \right)\right)}
                               2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega] \sin[\alpha]^2 \sin[t \omega]^2
       (16 \text{ M0} (1 + \cos[2 \alpha]) \sqrt{(\text{M0}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha])})
                          2\alpha - 2t\omega] + Cos[2\alpha + 2t\omega]) Sin[\alpha]<sup>2</sup> Sin[t\omega]<sup>2</sup>)) +
\dot{\mathbb{L}} \omega \cos[\alpha] \cot[\alpha] \cot[t \omega] \csc[t \omega]^2 \left(4 \text{ M0} - 2 \text{ M0} \cos[2 t \omega] + \text{M0} \cos[2 t \omega]\right)
                 2\alpha - 2t\omega] + M0 Cos [2\alpha + 2t\omega] - 2 M0 Cos [\alpha - t\omega]^2 Sec [\alpha]^2 - 2 M0
              \cos [2 \alpha] \cos [\alpha - t \omega]^2 \sec [\alpha]^2 - 2 \text{ MO Sec} [\alpha]^2 \sin [t \omega]^2 - 2 \text{ MO Cos} [2 \alpha]
              Sec[\alpha]^2 Sin[t\omega]^2 + 2\sqrt{2} \sqrt{(-M0^2(-6-2Cos[2\alpha]+2Cos[2t\omega]-
                          \cos [2\alpha - 2t\omega] - \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
       \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                   M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] +
                                  \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
       (-4 \text{ M0} + 2 \text{ M0 Cos} [2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha - 2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha + 2 \text{ t} \omega] + 2 \text{ M0}
              \cos [\alpha - t \omega]^2 \operatorname{Sec}[\alpha]^2 + 2 \operatorname{MO} \cos [2 \alpha] \cos [\alpha - t \omega]^2 \operatorname{Sec}[\alpha]^2 + 2 \operatorname{MO} \operatorname{Sec}[\alpha]^2
              \sin[t \omega]^2 + 2 M0 \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 1)^2}
                           2 \cos [2 \pm \omega] + \cos [2 \alpha - 2 \pm \omega] + \cos [2 \alpha + 2 \pm \omega]) \sin [\alpha]^2 \sin [\pm \omega]^2)
  \left(16\,\text{M0}\,\left(1+\cos{[2\,\alpha]}\right)\,\sqrt{\,\left(\text{M0}^2\,\left(6+2\cos{[2\,\alpha]}\,-2\cos{[2\,t\,\omega]}\,+\cos{[2\,\alpha\,-2\,t\,\omega]}\,+\right)\right)}
                   \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2) -
 \dot{\mathbf{n}} Cos [\alpha] Cot [\alpha] Csc [\mathbf{t} \omega] ^2 \left(-4\,\text{M0} + 2\,\text{M0}\,\text{Cos}\,[2\,\mathbf{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha - 2\,\mathbf{t}\,\omega] - \text{M0}\,\text{M0}\,
           M0 Cos [2 \alpha + 2 t \omega] + 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha]
              \cos [\alpha - t \omega]^2 \operatorname{Sec} [\alpha]^2 + 2 \operatorname{MO} \operatorname{Sec} [\alpha]^2 \operatorname{Sin} [t \omega]^2 + 2 \operatorname{MO} \operatorname{Cos} [2 \alpha]
              Sec[\alpha]^2 Sin[t\omega]^2 + 2\sqrt{2}\sqrt{(-M0^2(-6-2Cos[2\alpha]+2Cos[2t\omega]-
                          Cos [2 \alpha - 2 t \omega] - Cos [2 \alpha + 2 t \omega]) Sin [\alpha] <sup>2</sup> Sin [t \omega] <sup>2</sup>)
      \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{MØ} - 2 \cos[2\alpha] - 2 \,\text{MØ} \cos[2 \,\text{t}\,\omega] + \text{MØ} \cos[2\alpha - 2 \,\text{t}\,\omega] + \right)}
                   M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] +
                                  \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
       (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] - 2 \text{ MO}
              \cos [\alpha - t \omega]^2 \sec [\alpha]^2 - 2 M0 \cos [2 \alpha] \cos [\alpha - t \omega]^2 \sec [\alpha]^2 - 2 M0 \sec [\alpha]^2
              \sin[t \, \omega]^2 - 2 \, MO \, \cos[2 \, \alpha] \, \sec[\alpha]^2 \, \sin[t \, \omega]^2 + 2 \, \sqrt{2} \, \sqrt{\left(MO^2 \, \left(6 + 2 \, \cos[2 \, \alpha] - 1 \, \cos[2 \, \alpha] + 1 \, \cos[2 \, \alpha] \right)\right)}
                           2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]  \sin [\alpha]^2 \sin [t \omega]^2 
       (2 MO^2 \omega Cos[t \omega] (6 + 2 Cos[2 \alpha] - 2 Cos[2 t \omega] + Cos[2 \alpha - 2 t \omega] +
                   \cos[2\alpha + 2t\omega]) \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2
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(4 \omega \sin[2t\omega] + 2 \omega \sin[2\alpha - 2t\omega] - 2 \omega \sin[2\alpha + 2t\omega]))
    (64 \text{ M0} (1 + \cos[2 \alpha]) (\text{M0}^2 (6 + 2\cos[2 \alpha] - 2\cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                                \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2 +
\dot{\mathbf{L}} Cos[\alpha] Cot[\alpha] Csc[\mathbf{L} \omega] \dot{\mathbf{L}} (4 M0 – 2 M0 Cos[2 \mathbf{L} \omega] + M0 Cos[2 \alpha – 2 \mathbf{L} \omega] + M0
                        \cos [2 \alpha + 2 t \omega] - 2 M0 \cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 \cos [2 \alpha]
                       \cos [\alpha - t \omega]^2 \sec [\alpha]^2 - 2 \text{ MO Sec} [\alpha]^2 \sin [t \omega]^2 - 2 \text{ MO Cos} [2 \alpha]
                        Sec[\alpha]^2 Sin[t\omega]^2 + 2\sqrt{2} \sqrt{(-M0^2 (-6-2 Cos[2\alpha] + 2 Cos[2t\omega] - (-6-2 Cos[2\alpha] + 2 Cos[2\alpha] + 2 Cos[2\alpha] + (-6-2\alpha) (-6
                                            \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
           \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2\,t\,\omega] + \text{M0} \,\cos[2\,\alpha - 2 \,t\,\omega] + \right)}
                                M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 2 \cos [2 \alpha])}
                                                         \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
            (-4 \text{ M0} + 2 \text{ M0 Cos} [2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha - 2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha + 2 \text{ t} \omega] + 2 \text{ M0}
                        \cos [\alpha - t \omega]^2 \operatorname{Sec} [\alpha]^2 + 2 \operatorname{MO} \cos [2 \alpha] \cos [\alpha - t \omega]^2 \operatorname{Sec} [\alpha]^2 + 2 \operatorname{MO} \operatorname{Sec} [\alpha]^2
                        \sin[t \omega]^2 + 2 M0 \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 1)^2}
                                             2 \cos [2 \pm \omega] + \cos [2 \alpha - 2 \pm \omega] + \cos [2 \alpha + 2 \pm \omega]) \sin [\alpha]^{2} \sin [\pm \omega]^{2}
            (2 MO^2 \omega Cos[t \omega] (6 + 2 Cos[2 \alpha] - 2 Cos[2 t \omega] + Cos[2 \alpha - 2 t \omega] +
                                \cos[2\alpha + 2\dot{t}\omega]) \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2
                         (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega]))
    (64 \text{ M0} (1 + \cos[2 \alpha]) (\text{M0}^2 (6 + 2\cos[2 \alpha] - 2\cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                                \cos [2\alpha + 2t\omega] \sin [\alpha]^2 \sin [t\omega]^2 +
\left(\dot{\mathbf{n}} \cos[\alpha] \cot[\alpha] \csc[\mathsf{t} \omega]^2 \left(-4\,\mathsf{M0} + 2\,\mathsf{M0} \cos[2\,\mathsf{t} \omega] - \mathsf{M0} \cos[2\,\alpha - 2\,\mathsf{t} \omega] - \right)\right)
                   M0 Cos [2 \alpha + 2 t \omega] + 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha]
                        \cos [\alpha - t \omega]^2 \operatorname{Sec} [\alpha]^2 + 2 \operatorname{MO} \operatorname{Sec} [\alpha]^2 \operatorname{Sin} [t \omega]^2 + 2 \operatorname{MO} \operatorname{Cos} [2 \alpha]
                       Sec[\alpha]^2 Sin[t \omega]^2 + 2\sqrt{2} \sqrt{-M0^2(-6-2Cos[2\alpha]+2Cos[2t\omega]-
                                            \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
            (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] - 2 \text{ MO}
                        \cos [\alpha - t \omega]^2 \operatorname{Sec} [\alpha]^2 - 2 \operatorname{MO} \cos [2 \alpha] \cos [\alpha - t \omega]^2 \operatorname{Sec} [\alpha]^2 - 2 \operatorname{MO} \operatorname{Sec} [\alpha]^2
                        \sin[t \omega]^2 - 2 M0 \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 1)^2}
                                             2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^{2} \sin [t \omega]^{2})
            (4 \text{ MO } \omega \text{ Sin}[2 \text{ t} \omega] + 2 \text{ MO } \omega \text{ Sin}[2 \alpha - 2 \text{ t} \omega] - 2 \text{ MO } \omega \text{ Sin}[2 \alpha + 2 \text{ t} \omega] -
                    \left(\sqrt{2}\ \left(2\ \text{M0}^2\ \omega\ \text{Cos}\ [\text{t}\ \omega]\ \left(6+2\ \text{Cos}\ [\text{2}\ \alpha]\ -2\ \text{Cos}\ [\text{2}\ t\ \omega]\ +\ \text{Cos}\ [\text{2}\ \alpha-2\ t\ \omega]\ +\right.\right.\right.
                                                     \cos[2\alpha + 2t\omega]) \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2
                                              (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])))
                        (\sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha]}
                                                     2\alpha + 2t\omega) Sin[\alpha]^2 Sin[t\omega]^2))))
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\left[64\,\text{M0}\,\left(1+\cos\left[2\,\alpha\right]\right)^{2}\,\sqrt{\,\left(\text{M0}^{2}\,\left(6+2\cos\left[2\,\alpha\right]-2\cos\left[2\,t\,\omega\right]+\cos\left[2\,\alpha-2\,t\,\omega\right]\right.\right.}\right.
                                                   Cos[2\alpha + 2t\omega]) Sin[\alpha]^2 Sin[t\omega]^2)
                \sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                                                  M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 1)^2)}
                                                                                           \cos[2\alpha - 2t\omega] + \cos[2\alpha + 2t\omega]) \sin[\alpha]^2 \sin[t\omega]^2)
\left( \mathtt{i} \, \mathsf{Cos} \, [\alpha] \, \mathsf{Cot} \, [\alpha] \, \mathsf{Csc} \, [\mathsf{t} \, \omega]^{\, 2} \, \left( 4 \, \mathsf{M0} - 2 \, \mathsf{M0} \, \mathsf{Cos} \, [2 \, \mathsf{t} \, \omega] \, + \, \mathsf{M0} \, \mathsf{Cos} \, [2 \, \alpha - 2 \, \mathsf{t} \, \omega] \, + \, \mathsf{M0} \, \mathsf{M0} \, \right) \right) \, + \, \mathsf{M0} \, \mathsf{M0}
                                      \cos [2 \alpha + 2 t \omega] - 2 M0 \cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 \cos [2 \alpha]
                                      \cos [\alpha - t \omega]^2 \operatorname{Sec} [\alpha]^2 - 2 \operatorname{MO} \operatorname{Sec} [\alpha]^2 \operatorname{Sin} [t \omega]^2 - 2 \operatorname{MO} \operatorname{Cos} [2 \alpha]
                                      Sec[\alpha]^2 Sin[t\omega]^2 + 2\sqrt{2}\sqrt{-M0^2(-6-2Cos[2\alpha]+2Cos[2t\omega]-}
                                                                       \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                   \left(-4\,\text{M0} + 2\,\text{M0}\,\text{Cos}\,[2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha - 2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha + 2\,\text{t}\,\omega] + 2\,\text{M0}\right)
                                      \cos [\alpha - t \omega]^2 \sec [\alpha]^2 + 2 M0 \cos [2 \alpha] \cos [\alpha - t \omega]^2 \sec [\alpha]^2 + 2 M0 \sec [\alpha]^2
                                      \sin[t \omega]^2 + 2 MO \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{MO^2(6 + 2 \cos[2 \alpha] - 1)^2}
                                                                        2 \cos [2 \pm \omega] + \cos [2 \alpha - 2 \pm \omega] + \cos [2 \alpha + 2 \pm \omega]) \sin [\alpha]^2 \sin [\pm \omega]^2
                    (4 \text{ MO } \omega \text{ Sin}[2 \text{ t} \omega] + 2 \text{ MO } \omega \text{ Sin}[2 \alpha - 2 \text{ t} \omega] - 2 \text{ MO } \omega \text{ Sin}[2 \alpha + 2 \text{ t} \omega] +
                                 (\sqrt{2} (2 M0^2 \omega \cos[t \omega] (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                                                                                    \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega] + M0^2 \sin [\alpha]^2 \sin [t\omega]^2
                                                                         (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])))
                                      (\sqrt{M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha] + \cos [2 \alpha]
                                                                                   2\alpha + 2t\omega) Sin[\alpha]<sup>2</sup> Sin[t\omega]<sup>2</sup>))))/
        64 \, MO \, \left(1 + \cos\left[2\,\alpha\right]\right)^2 \, \sqrt{\, \left(MO^2 \, \left(6 + 2\cos\left[2\,\alpha\right] - 2\cos\left[2\,t\,\omega\right] + \cos\left[2\,\alpha - 2\,t\,\omega\right] + \right)}
                                                  \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
                \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t}\,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t}\,\omega] + \right)}
                                                  M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                                           \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
|i \cos[\alpha] \cot[\alpha] \csc[i \omega]^2 (-4 MO + 2 MO \cos[2 i \omega] - MO \cos[2 \alpha - 2 i \omega] -
                               M0 Cos [2 \alpha + 2 t \omega] + 2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha]
                                      \cos [\alpha - t \omega]^2 \operatorname{Sec} [\alpha]^2 + 2 \operatorname{MO} \operatorname{Sec} [\alpha]^2 \operatorname{Sin} [t \omega]^2 + 2 \operatorname{MO} \operatorname{Cos} [2 \alpha]
                                      Sec [\alpha]^2 Sin [t\omega]^2 + 2\sqrt{2}\sqrt{(-M0^2(-6-2\cos[2\alpha]+2\cos[2t\omega]-
                                                                       \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^{2} \sin [t \omega]^{2})
                 \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                                                   M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] +
                                                                                           \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
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\left(-4\,\text{M0}\,\omega\,\text{Cos}\,[\,\text{t}\,\omega]\,\,\text{Sec}\,[\,lpha\,]^{\,2}\,\,\text{Sin}\,[\,\text{t}\,\omega]\,\,-\,4\,\text{M0}\,\omega\,\,\text{Cos}\,[\,2\,lpha]\,\,\,\text{Cos}\,[\,\text{t}\,\omega]\,\,\,\text{Sec}\,[\,lpha\,]^{\,2}
               Sin[t \omega] + 4 M0 \omega Sin[2 t \omega] + 2 M0 \omega Sin[2 \alpha - 2 t \omega] - 4 M0 \omega Cos[\alpha - t \omega]
               Sec[\alpha]^2 Sin[\alpha - t\omega] - 4 M0 \omega Cos[2\alpha] Cos[\alpha - t\omega] Sec[\alpha]^2 Sin[\alpha - t\omega] - 2
               M0 ω Sin [2 α + 2 t ω] + (\sqrt{2} (2 M0^2 ω Cos [t ω] (6 + 2 Cos [2 α] - 2 Cos [2 t ω] + (2 M0^2 ω Cos [2 ω] (6 + 2 M0^2 ω) (6 + 2 M0^2 ω)))
                                   \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]  \sin [\alpha]^2 \sin [t\omega] + M0^2 \sin [\alpha]^2
                             Sin[t \omega]^2 (4 \omega Sin[2t\omega] + 2 \omega Sin[2\alpha - 2t\omega] - 2 \omega Sin[2\alpha + 2t\omega])))
                (\sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha]}
                                  2\alpha + 2t\omega) Sin[\alpha]<sup>2</sup> Sin[t\omega]<sup>2</sup>)))
  (32 \text{ MO} (1 + \cos[2 \alpha]) \sqrt{(\text{MO}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                    \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2) -
 \pm \cos[\alpha] \cot[\alpha] \csc[\pm \omega]^2 \left(4 \text{ M0} - 2 \text{ M0} \cos[2 \pm \omega] + \text{M0} \cos[2 \alpha - 2 \pm \omega] + \text{M0}\right)
               Cos [2 \alpha + 2 t \omega] - 2 M0 Cos [\alpha - t \omega] 2 Sec [\alpha] 2 - 2 M0 Cos [2 \alpha]
               \cos [\alpha - t \omega]^2 \operatorname{Sec} [\alpha]^2 - 2 \operatorname{MO} \operatorname{Sec} [\alpha]^2 \operatorname{Sin} [t \omega]^2 - 2 \operatorname{MO} \operatorname{Cos} [2 \alpha]
               Sec[\alpha]^2 Sin[t\omega]^2 + 2\sqrt{2} \sqrt{-M0^2(-6-2Cos[2\alpha]+2Cos[2t\omega]-}
                             \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^{2} \sin [t \omega]^{2})
       \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                    M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{ (M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 2 \cos [2 \alpha])}
                                     \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
        (4 \text{ MO } \omega \text{ Cos} [\text{t } \omega] \text{ Sec} [\alpha]^2 \text{ Sin} [\text{t } \omega] + 4 \text{ MO } \omega \text{ Cos} [2 \alpha] \text{ Cos} [\text{t } \omega] \text{ Sec} [\alpha]^2
               Sin[t\omega] - 4 M0 \omega Sin[2 t\omega] - 2 M0 \omega Sin[2 \alpha - 2 t\omega] + 4 M0 \omega Cos[\alpha - t\omega]
               Sec [\alpha]^2 Sin [\alpha - t\omega] + 4 M0 \omega Cos [2\alpha] Cos [\alpha - t\omega] Sec [\alpha]^2 Sin [\alpha - t\omega] + 2
               M0 \omega Sin[2 \alpha + 2 t \omega] + \left(\sqrt{2} \left(2 \text{ M0}^2 \omega \text{ Cos} [\text{t } \omega] \left(6 + 2 \text{ Cos} [2 \alpha] - 2 \text{ Cos} [2 \text{ t } \omega] + \right)\right)
                                  \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]  \sin [\alpha]^2 \sin [t\omega] + M0^2 \sin [\alpha]^2
                             Sin[t \omega]^2 (4 \omega Sin[2t\omega] + 2 \omega Sin[2\alpha - 2t\omega] - 2 \omega Sin[2\alpha + 2t\omega])))
                \left(\sqrt{\,\left(\text{M0}^2\,\left(\text{6}+2\,\text{Cos}\,[\,2\,\alpha\,]\,-2\,\text{Cos}\,[\,2\,\text{t}\,\omega\,]\,+\text{Cos}\,[\,2\,\alpha\,-\,2\,\text{t}\,\omega\,]\,+\text{Cos}\,[\,4\,\alpha\,]\,\right)}\right.
                                  2\alpha + 2t\omega Sin[\alpha]<sup>2</sup> Sin[t\omega]<sup>2</sup>)))
  (32 \text{ MO} (1 + \cos[2 \alpha]) \sqrt{(\text{MO}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                    \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2) -
\left| \dot{\text{i}} \, \text{Cos} \, [\alpha] \, \, \text{Cot} \, [\alpha] \, \, \text{Csc} \, [\text{t} \, \omega]^{\, 2} \, \sqrt{\, \left( \frac{1}{1 + \text{Cos} \, [\text{2} \, \alpha]} \, \left( -\, 2 + 4 \, \text{M0} - 2 \, \text{Cos} \, [\text{2} \, \alpha] \, - 2 \, \text{M0} \, \text{Cos} \, [\text{2} \, \text{t} \, \omega] \, + \right) \right) } \, \right.
                    M0 Cos [2 \alpha – 2 t \omega] + M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 6 \cos (2 \alpha))^2)}
                                     2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega]  \sin[\alpha]^2 \sin[t \omega]^2 
        (-4 \text{ M0} + 2 \text{ M0 Cos} [2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha - 2 \text{ t} \omega] - \text{M0 Cos} [2 \alpha + 2 \text{ t} \omega] + 2 \text{ M0})
               \cos [\alpha - t \omega]^2 \operatorname{Sec} [\alpha]^2 + 2 \operatorname{MO} \cos [2 \alpha] \cos [\alpha - t \omega]^2 \operatorname{Sec} [\alpha]^2 + 2 \operatorname{MO} \operatorname{Sec} [\alpha]^2
               \sin[t \, \omega]^2 + 2 \, MO \, \cos[2 \, \alpha] \, \sec[\alpha]^2 \, \sin[t \, \omega]^2 + 2 \, \sqrt{2} \, \sqrt{\left(MO^2 \, \left(6 + 2 \, \cos[2 \, \alpha] - 1 \, \cos[2 \, \alpha] \right)^2 + 2 \, MO^2 \, \left(6 + 2 \, \cos[2 \, \alpha] - 1 \, \cos[2 \, \alpha] \right)^2}
                             2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^{2} \sin [t \omega]^{2}
        \left(-4\,\text{M0}\,\omega\,\text{Cos}\,[\text{t}\,\omega]\,\,\text{Sec}\,[\alpha]^2\,\,\text{Sin}\,[\text{t}\,\omega]\,-4\,\text{M0}\,\omega\,\,\text{Cos}\,[2\,\alpha]\,\,\,\text{Cos}\,[\text{t}\,\omega]\,\,\,\text{Sec}\,[\alpha]^2
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Sin[t \omega] + 4 M0 \omega Sin[2 t \omega] + 2 M0 \omega Sin[2 \alpha - 2 t \omega] - 4 M0 \omega Cos[\alpha - t \omega]
                               Sec [\alpha]^2 Sin [\alpha - t\omega] - 4 M0 \omega Cos [2\alpha] Cos [\alpha - t\omega] Sec [\alpha]^2 Sin [\alpha - t\omega] - 2 M0
                               \omega \sin[2\alpha + 2t\omega] + (\sqrt{2}(-2M0^2\omega \cos[t\omega](-6 - 2\cos[2\alpha] + 2\cos[2t\omega] - 6 - 2\cos[2\alpha])
                                                 \mathsf{Cos}\left[2\,\alpha - 2\,\mathsf{t}\,\omega\right] - \mathsf{Cos}\left[2\,\alpha + 2\,\mathsf{t}\,\omega\right] \big)\,\,\mathsf{Sin}\left[\alpha\right]^2\,\mathsf{Sin}\left[\mathsf{t}\,\omega\right] - \mathsf{M0}^2\,\mathsf{Sin}\left[\alpha\right]^2
                                             Sin[t\omega]^2(-4\omega Sin[2t\omega] - 2\omega Sin[2\alpha - 2t\omega] + 2\omega Sin[2\alpha + 2t\omega])))
                               \left(\sqrt{\;\left(\,\text{-M0}^{2}\,\left(\,\text{-6}\,\text{-2}\,\text{Cos}\,[\,2\,\alpha\,]\,\,+\,2\,\text{Cos}\,[\,2\,t\,\omega\,]\,\,\text{-Cos}\,[\,2\,\alpha\,\text{-2}\,t\,\omega\,]\,\,\text{-}\right.}\right.\right.
                                              \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2))
                   (32 \text{ M0} (1 + \cos[2 \alpha]) \sqrt{(\text{M0}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                                    \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2) +
                \left( i \cos \left[ \alpha \right] \cot \left[ \alpha \right] \csc \left[ t \omega \right]^{2} \sqrt{\left( \frac{1}{1 + \cos \left[ 2 \alpha \right]} \left( -2 + 4 \text{ MØ} - 2 \cos \left[ 2 \alpha \right] - 2 \text{ MØ} \cos \left[ 2 t \omega \right] + \right) \right)} \right)
                                    M0 Cos [2 \alpha - 2 t \omega] + M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{M0^2} (6 + 2 Cos [2 \alpha] -
                                                    2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega] \sin[\alpha]^{2} \sin[t \omega]^{2}
                        (4 \text{ MO} - 2 \text{ MO Cos}[2 \text{ t} \omega] + \text{MO Cos}[2 \alpha - 2 \text{ t} \omega] + \text{MO Cos}[2 \alpha + 2 \text{ t} \omega] - 2 \text{ MO}
                               \cos [\alpha - t \omega]^2 \operatorname{Sec}[\alpha]^2 - 2 \operatorname{MO} \cos [2 \alpha] \cos [\alpha - t \omega]^2 \operatorname{Sec}[\alpha]^2 - 2 \operatorname{MO} \operatorname{Sec}[\alpha]^2
                               \sin[t \omega]^2 - 2 \text{ MO } \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{\text{MO}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 \alpha])}
                                            2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega] ) \sin [\alpha]^{2} \sin [t \omega]^{2})
                        (4 \text{ MO } \omega \text{ Cos} [t \omega] \text{ Sec} [\alpha]^2 \text{ Sin} [t \omega] + 4 \text{ MO } \omega \text{ Cos} [2 \alpha] \text{ Cos} [t \omega] \text{ Sec} [\alpha]^2
                               Sin[t\omega] - 4M0\omega Sin[2t\omega] - 2M0\omega Sin[2\alpha - 2t\omega] + 4M0\omega Cos[\alpha - t\omega]
                               Sec [\alpha]^2 Sin [\alpha - t\omega] + 4 M0 \omega Cos [2\alpha] Cos [\alpha - t\omega] Sec [\alpha]^2 Sin [\alpha - t\omega] + 2 M0
                               \omega\,\text{Sin}\,[\,2\,\alpha\,+\,2\,\text{t}\,\omega\,]\,+\,\left(\sqrt{\,2\,}\,\left(\,-\,2\,\text{M}\Theta^2\,\omega\,\,\text{Cos}\,[\,\text{t}\,\omega\,]\,\,\left(\,-\,6\,-\,2\,\text{Cos}\,[\,2\,\,\alpha\,]\,+\,2\,\text{Cos}\,[\,2\,\,\text{t}\,\omega\,]\,\,-\,9\,\text{Cos}\,[\,2\,\,\text{t}\,\omega\,]\,\right)\right)
                                                 \cos [2\alpha - 2t\omega] - \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega] - M0^2 \sin [\alpha]^2
                                            Sin[t\omega]^2 \left(-4\omega Sin[2t\omega] - 2\omega Sin[2\alpha - 2t\omega] + 2\omega Sin[2\alpha + 2t\omega]\right)\right)
                                (\sqrt{-M0^2(-6-2\cos[2\alpha]+2\cos[2t\omega]-\cos[2\alpha-2t\omega]}
                                               \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2))
                   \left(32\,\text{M0}\,\left(1+\cos{[2\,\alpha]}\right)\,\sqrt{\,\left(\text{M0}^2\,\left(6+2\cos{[2\,\alpha]}\,-2\cos{[2\,t\,\omega]}\,+\cos{[2\,\alpha\,-2\,t\,\omega]}\,+\right)\right)}\right)
                                    \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2))
\frac{1}{M\Theta} 2 i Sec[\alpha] Sin[t\omega]<sup>2</sup> Tan[\alpha] \left(-s\left(\left(i\cos[\alpha]\cos[\alpha]\cos[\alpha]\cos[t\omega]\right)^2\right)^2\right)
                               \cos [2 \pm \omega] - M0 \cos [2 \alpha - 2 \pm \omega] - M0 \cos [2 \alpha + 2 \pm \omega] + 2 M0 \cos [\alpha - \pm \omega]^2
                               Sec[\alpha]^2 + 2 MO Cos[2 \alpha] Cos[\alpha - t \omega]^2 Sec[\alpha]^2 + 2 MO Sec[\alpha]^2 Sin[t \omega]^2 + 2
                               M0 Cos [2 \alpha] Sec [\alpha]<sup>2</sup> Sin [t \omega]<sup>2</sup> + 2 \sqrt{2} \sqrt{(-M0^2 (-6 - 2 \cos [2 \alpha] +
                                            2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
                       \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                                    M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{\left(\text{M0}^2\left(6 + 2\cos{[2\,\alpha]} - 2\cos{[2\,\text{t}\,\omega]}\right) + \cos{[2\,\alpha]}\right)}
                                                    \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]  \sin [\alpha]^2 \sin [t\omega]^2 
                        ig( 4\,\text{MO} - 2\,\text{MO}\,\text{Cos}\,[2\,	ext{t}\,\omega] + \text{MO}\,\text{Cos}\,[2\,lpha - 2\,	ext{t}\,\omega] + \text{MO}\,\text{Cos}\,[2\,lpha + 2\,	ext{t}\,\omega] - 2\,\text{MO} ig)
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\cos [\alpha - t \omega]^2 \sec [\alpha]^2 - 2 M0 \cos [2 \alpha] \cos [\alpha - t \omega]^2 \sec [\alpha]^2 - 2 M0 \sec [\alpha]^2
                        \sin[t \omega]^2 - 2 MO \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{MO^2 (6 + 2 \cos[2 \alpha] - 1)^2}
                                       2 \cos[2 \pm \omega] + \cos[2 \alpha - 2 \pm \omega] + \cos[2 \alpha + 2 \pm \omega] \sin[\alpha]^2 \sin[\pm \omega]^2
             \left(32\,\text{M0}\,\left(1+\cos{[2\,\alpha]}\right)\,\sqrt{\,\left(\text{M0}^2\,\left(6+2\cos{[2\,\alpha]}\,-2\cos{[2\,t\,\omega]}\,+\cos{[2\,\alpha-2\,t\,\omega]}\,+\cos{[2\,\alpha-2\,t\,\omega]}\,+\cos{[2\,\alpha+2\,t\,\omega]}\right)\,\sin{[\alpha]}^2\,\sin{[t\,\omega]}^2\right)\right)} \,-
         \left[\dot{\mathbf{1}} \cos[\alpha] \cot[\alpha] \csc[\dot{\mathbf{1}} \omega]^2\right] \left(4 \,\text{MO} - 2 \,\text{MO} \cos[2\,\dot{\mathbf{1}} \omega] + \text{MO} \cos[2\,\alpha - 2\,\dot{\mathbf{1}} \omega] + \text{MO}\right]
                         Cos [2 \alpha + 2 t \omega] - 2 M0 Cos [\alpha - t \omega] <sup>2</sup> Sec [\alpha] <sup>2</sup> - 2 M0 Cos [2 \alpha]
                         \cos [\alpha - t \omega]^2 \sec [\alpha]^2 - 2 \text{ MO Sec} [\alpha]^2 \sin [t \omega]^2 - 2 \text{ MO Cos} [2 \alpha]
                        Sec[\alpha]^2 Sin[t \omega]^2 + 2 \sqrt{2} \sqrt{-M0^2 (-6 - 2 Cos[2 \alpha] + 2 Cos[2 t \omega] - (-6 - 2 Cos[2 \alpha])^2}
                                      \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2\,t\,\omega] + \text{M0} \,\cos[2\,\alpha - 2 \,t\,\omega] + \right)}
                              M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{\left(\text{M0}^2\left(6 + 2\cos\left[2\,\alpha\right] - 2\cos\left[2\,\text{t}\,\omega\right]\right.} +
                                              \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                  \left( -4\,\text{M0} + 2\,\text{M0}\,\text{Cos}\,[2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,lpha - 2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,lpha + 2\,\text{t}\,\omega] + 2\,\text{M0} \right)
                         \cos [\alpha - t \omega]^2 \sec [\alpha]^2 + 2 M0 \cos [2 \alpha] \cos [\alpha - t \omega]^2 \sec [\alpha]^2 + 2 M0 \sec [\alpha]^2
                         \sin[t \omega]^2 + 2 M0 \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 1)^2}
                                      2 \cos[2t\omega] + \cos[2\alpha - 2t\omega] + \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2
            (32 \text{ MO } (1 + \cos[2 \alpha]) \sqrt{(\text{MO}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                              \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
\dot{\mathbb{I}} = \left[ -\left[ \left( -4 \text{ MO} + 2 \text{ MO Cos} \left[ 2 \text{ t} \omega \right] - \text{MO Cos} \left[ 2 \alpha - 2 \text{ t} \omega \right] - \text{MO Cos} \left[ 2 \alpha + 2 \text{ t} \omega \right] + \right] \right]
                            2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 + 2 M0 Sec [\alpha]^2
                              \sin[t \omega]^2 + 2 M0 \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{-M0^2 (-6 - 2 \cos[2 \alpha] + 2 \cos[2 \alpha])}
                                            2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
                      \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2\,t\,\omega] + \text{M0} \,\cos[2\,\alpha - 2 \,t\,\omega] + \right)}
                                   M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 2 \cos [2 \alpha])}
                                                    \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                       \left(2\ \mathsf{MO^2}\ \omega\ \mathsf{Cos}\ [\mathsf{t}\ \omega]\ \left(6+2\ \mathsf{Cos}\ [\mathsf{2}\ \alpha]\ -2\ \mathsf{Cos}\ [\mathsf{2}\ \mathsf{t}\ \omega]\ +\mathsf{Cos}\ [\mathsf{2}\ \alpha-2\ \mathsf{t}\ \omega]\ +\right.
                                   \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega] + M0^2 \sin [\alpha]^2 \sin [t \omega]^2
                               (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega]))
                 \left(16 \, \left(\text{M0}^2 \, \left(6 + 2 \, \text{Cos} \, [2 \, \alpha] \, - 2 \, \text{Cos} \, [2 \, \text{t} \, \omega] \, + \text{Cos} \, [2 \, \alpha - 2 \, \text{t} \, \omega] \right. + \text{Cos} \, [2 \, \alpha + 2 \, \text{t} \, \omega] \right) \right)
                              \operatorname{Sin}[\alpha]^{2} \operatorname{Sin}[\mathsf{t} \omega]^{2})^{3/2}
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\left[ (4 \text{ M0} - 2 \text{ M0 Cos} [2 \text{ t} \omega] + \text{M0 Cos} [2 \alpha - 2 \text{ t} \omega] + \text{M0 Cos} [2 \alpha + 2 \text{ t} \omega] - 2 \text{ M0} \right]
               \cos [\alpha - t \omega]^2 \operatorname{Sec} [\alpha]^2 - 2 \operatorname{MO} \cos [2 \alpha] \cos [\alpha - t \omega]^2 \operatorname{Sec} [\alpha]^2 - 2 \operatorname{MO} \operatorname{Sec} [\alpha]^2
               \sin[t \omega]^2 - 2 M0 \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{-M0^2 (-6 - 2 \cos[2 \alpha] + 2 \cos[2 \alpha])}
                           2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
       \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                   M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{\left(\text{M0}^2\left(6+2\cos\left[2\,\alpha\right]-2\cos\left[2\,\text{t}\,\omega\right]\right.} +
                                   \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
        (2 MO^2 \omega Cos[t \omega] (6 + 2 Cos[2 \alpha] - 2 Cos[2 t \omega] + Cos[2 \alpha - 2 t \omega] +
                   \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2
               (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega]))
  (16 (M0^2 (6 + 2 Cos [2 \alpha] - 2 Cos [2 t \omega] + Cos [2 \alpha - 2 t \omega] + Cos [2 \alpha + 2 t \omega])
              Sin[\alpha]^2 Sin[t\omega]^2 +
(-4 \text{ MO} + 2 \text{ MO} \cos [2 \text{ t} \omega] - \text{MO} \cos [2 \alpha - 2 \text{ t} \omega] - \text{MO} \cos [2 \alpha + 2 \text{ t} \omega] + 2 \text{ MO}
              \cos [\alpha - t \omega]^2 \operatorname{Sec} [\alpha]^2 + 2 \operatorname{MO} \cos [2 \alpha] \cos [\alpha - t \omega]^2 \operatorname{Sec} [\alpha]^2 + 2 \operatorname{MO} \operatorname{Sec} [\alpha]^2
              \sin[t \, \omega]^2 + 2 \, MO \, \cos[2 \, \alpha] \, \sec[\alpha]^2 \, \sin[t \, \omega]^2 + 2 \, \sqrt{2} \, \sqrt{(-MO^2 \, (-6 - 2 \, \cos[2 \, \alpha] + 2 \, \cos[2 \, \alpha])^2 + 2 \, \cos[2 \, \alpha])}
                           2 \cos [2 t \omega] - \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
       (4 \text{ MO } \omega \text{ Sin}[2 \text{ t} \omega] + 2 \text{ MO } \omega \text{ Sin}[2 \alpha - 2 \text{ t} \omega] - 2 \text{ MO } \omega \text{ Sin}[2 \alpha + 2 \text{ t} \omega] -
            (\sqrt{2} (2 M0^2 \omega Cos[t \omega] (6 + 2 Cos[2 \alpha] - 2 Cos[2 t \omega] + Cos[2 \alpha - 2 t \omega] +
                                \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega] + M0^2 \sin [\alpha]^2 \sin [t \omega]^2
                            (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])))
               \left(\sqrt{\,\left(\text{M0}^2\,\left(\text{6}+2\,\text{Cos}\,[\text{2}\,\alpha]\,-2\,\text{Cos}\,[\text{2}\,\text{t}\,\omega]\,+\text{Cos}\,[\text{2}\,\alpha-2\,\text{t}\,\omega]\,+\text{Cos}\,[\text{2}\,\alpha-2\,\text{t}\,\omega]\,\right.\right.}\right.
                                2\alpha + 2t\omega) Sin[\alpha]^2 Sin[t\omega]^2)))
   16 (1 + \cos[2 \alpha]) \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha] + \cos[2 \alpha] + \cos[2 \alpha]}
                   \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
      \sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                   M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] +
                                   \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
(4 MO - 2 MO Cos [2 t \omega] + MO Cos [2 \alpha - 2 t \omega] + MO Cos [2 \alpha + 2 t \omega] - 2 MO
               \cos [\alpha - t \omega]^2 \operatorname{Sec} [\alpha]^2 - 2 \operatorname{MO} \cos [2 \alpha] \cos [\alpha - t \omega]^2 \operatorname{Sec} [\alpha]^2 - 2 \operatorname{MO} \operatorname{Sec} [\alpha]^2
               \sin[t \omega]^2 - 2 M0 \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{-M0^2 (-6 - 2 \cos[2 \alpha] + 2 \cos[2 \alpha])}
                           2 \cos [2 \pm \omega] - \cos [2 \alpha - 2 \pm \omega] - \cos [2 \alpha + 2 \pm \omega]) \sin [\alpha]^2 \sin [\pm \omega]^2
       (4 \text{ MO } \omega \text{ Sin}[2 \text{ t} \omega] + 2 \text{ MO } \omega \text{ Sin}[2 \alpha - 2 \text{ t} \omega] - 2 \text{ MO } \omega \text{ Sin}[2 \alpha + 2 \text{ t} \omega] +
            (\sqrt{2} (2 M0^2 \omega \cos[t \omega] (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                                \cos[2\alpha + 2t\omega]) \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2
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(4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])))
              (\sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha]})
                             2\alpha + 2t\omega) Sin[\alpha]<sup>2</sup> Sin[t\omega]<sup>2</sup>))))/
  16 (1 + \cos[2 \alpha]) \sqrt{(M0^2 (6 + 2\cos[2 \alpha] - 2\cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                  \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
      \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t}\,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t}\,\omega] + \right)}
                  M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
\sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2 \,t \,\omega] + \text{M0} \,\cos[2\alpha - 2 \,t \,\omega] + \right.}
                  M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
       \left(-4\,\text{M0}\,\omega\,\text{Cos}\,[\,\text{t}\,\omega\,]\,\,\text{Sec}\,[\,\alpha\,]^{\,2}\,\,\text{Sin}\,[\,\text{t}\,\omega\,]\,-4\,\text{M0}\,\omega\,\,\text{Cos}\,[\,2\,\alpha\,]\,\,\,\text{Cos}\,[\,\text{t}\,\omega\,]\,\,\,\text{Sec}\,[\,\alpha\,]^{\,2}
             Sin[t \omega] + 4 M0 \omega Sin[2 t \omega] + 2 M0 \omega Sin[2 \alpha - 2 t \omega] - 4 M0 \omega Cos[\alpha - t \omega]
             Sec[\alpha]^2 Sin[\alpha - t\omega] - 4 M0 \omega Cos[2\alpha] Cos[\alpha - t\omega] Sec[\alpha]^2 Sin[\alpha - t\omega] - 2 M0
             \omega \sin[2\alpha + 2t\omega] + (\sqrt{2}(-2M0^2\omega \cos[t\omega](-6 - 2\cos[2\alpha] + 2\cos[2t\omega] -
                             \mathsf{Cos}\left[2\,\alpha - 2\,\mathsf{t}\,\omega\right] - \mathsf{Cos}\left[2\,\alpha + 2\,\mathsf{t}\,\omega\right] \Big)\,\,\mathsf{Sin}\left[\alpha\right]^2\,\mathsf{Sin}\left[\mathsf{t}\,\omega\right] - \mathsf{M0}^2\,\mathsf{Sin}\left[\alpha\right]^2
                         Sin[t\omega]^2(-4\omega Sin[2t\omega] - 2\omega Sin[2\alpha - 2t\omega] + 2\omega Sin[2\alpha + 2t\omega])))
             (\sqrt{-M0^2 (-6-2 \cos[2 \alpha] + 2 \cos[2 t \omega] - \cos[2 \alpha - 2 t \omega]} -
                           \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2))
  (8 \sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega]})
             Sin[\alpha]^2 Sin[t\omega]^2)) +
\sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                  M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
       (4 \text{ MO } \omega \text{ Cos} [t \omega] \text{ Sec} [\alpha]^2 \text{ Sin} [t \omega] + 4 \text{ MO } \omega \text{ Cos} [2 \alpha] \text{ Cos} [t \omega] \text{ Sec} [\alpha]^2
             Sin[t \omega] - 4 M0 \omega Sin[2 t \omega] - 2 M0 \omega Sin[2 \alpha - 2 t \omega] + 4 M0 \omega Cos[\alpha - t \omega]
             Sec[\alpha]^2 Sin[\alpha - t\omega] + 4 M0 \omega Cos[2\alpha] Cos[\alpha - t\omega] Sec[\alpha]^2 Sin[\alpha - t\omega] + 2 M0
             \omega \sin[2\alpha + 2t\omega] + (\sqrt{2}(-2M0^2\omega \cos[t\omega](-6 - 2\cos[2\alpha] + 2\cos[2t\omega] -
                              \cos [2\alpha - 2t\omega] - \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega] - M0^2 \sin [\alpha]^2
                         Sin[t\omega]^2(-4\omega Sin[2t\omega] - 2\omega Sin[2\alpha - 2t\omega] + 2\omega Sin[2\alpha + 2t\omega])))
             \left(\sqrt{\;\left(\,\text{-M0}^{2}\,\left(\,\text{-6}\,\text{-2}\,\text{Cos}\,[\,2\,\alpha\,]\,+\,2\,\text{Cos}\,[\,2\,t\,\omega\,]\,\,\text{-Cos}\,[\,2\,\alpha\,\text{-2}\,t\,\omega\,]\,\,\text{-}\right.}\right.\right.
                           \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)))
  (8\sqrt{M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega]})
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\cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
              \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                         M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] +
                                      \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
               \left( -4\,\text{M0} + 2\,\text{M0}\,\text{Cos}\,[2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,lpha - 2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,lpha + 2\,\text{t}\,\omega] + 2\,\text{M0} \right)
                     \cos [\alpha - t \omega]^2 \sec [\alpha]^2 + 2 M0 \cos [2 \alpha] \cos [\alpha - t \omega]^2 \sec [\alpha]^2 + 2 M0 \sec [\alpha]^2
                    \sin[t \omega]^2 + 2 M0 \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 1)^2}
                                2 \cos [2 \pm \omega] + \cos [2 \alpha - 2 \pm \omega] + \cos [2 \alpha + 2 \pm \omega]) \sin [\alpha]^2 \sin [\pm \omega]^2)
          \left(32\,\text{M0}\,\left(1+\cos{[2\,\alpha]}\right)\,\sqrt{\,\left(\text{M0}^2\,\left(6+2\cos{[2\,\alpha]}\,-2\cos{[2\,t\,\omega]}\,+\cos{[2\,\alpha\,-2\,t\,\omega]}\,+\right)\right)}\right)
                         \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2)
i \left(-\left(\sqrt{\frac{1}{1+\cos{[2\,\alpha]}}}\left(-2+4\,\text{M0}-2\,\cos{[2\,\alpha]}-2\,\text{M0}\cos{[2\,\text{t}\,\omega]}+\text{M0}\cos{[2\,\alpha-2\,\text{t}\,\omega]}+\right)\right)
                             M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                           \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                   (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
                       2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                       2 M0 Sec [\alpha]^2 Sin [t\omega]^2 – 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                       2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega])}
                                Sin[\alpha]^2 Sin[t\omega]^2) (2M0^2 \omega Cos[t\omega] (6 + 2Cos[2\alpha] - 2Cos[2t\omega] +
                             \cos[2\alpha - 2t\omega] + \cos[2\alpha + 2t\omega]) \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2
                         Sin[t\omega]^2 (4\omega Sin[2t\omega] + 2\omega Sin[2\alpha - 2t\omega] - 2\omega Sin[2\alpha + 2t\omega]))
               (16 (M0^2 (6 + 2 Cos [2 \alpha] - 2 Cos [2 t \omega] + Cos [2 \alpha - 2 t \omega] + Cos [2 \alpha + 2 t \omega])
                         \operatorname{Sin}[\alpha]^{2} \operatorname{Sin}[\mathsf{t} \omega]^{2})^{3/2}
        \sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2 \,\text{t}\,\omega] + \text{M0} \,\cos[2\alpha - 2 \,\text{t}\,\omega] + \right)}
                         M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] +
                                      \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
               \left( - 4 M0 + 2 M0 Cos [2 t \omega] - M0 Cos [2 \alpha - 2 t \omega] - M0 Cos [2 \alpha + 2 t \omega] + 2 M0
                     \cos [\alpha - t \omega]^2 \sec [\alpha]^2 + 2 M0 \cos [2 \alpha] \cos [\alpha - t \omega]^2 \sec [\alpha]^2 + 2 M0 \sec [\alpha]^2
                     \sin[t \omega]^2 + 2 M0 \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 1)^2}
                                2 Cos [2 t \omega] + Cos [2 \alpha - 2 t \omega] + Cos [2 \alpha + 2 t \omega]) Sin [\alpha] 2 Sin [t \omega] 2)
               (2 MO^2 \omega Cos[t \omega] (6 + 2 Cos[2 \alpha] - 2 Cos[2 t \omega] + Cos[2 \alpha - 2 t \omega] +
                         \cos[2\alpha + 2t\omega]) \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2
                     (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega]))
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(16 (M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega])
                                       Sin[\alpha]^2 Sin[t\omega]^2 +
(4 MO - 2 MO Cos [2 t \omega] + MO Cos [2 \alpha - 2 t \omega] + MO Cos [2 \alpha + 2 t \omega] - 2 MO
                                        \cos [\alpha - t \omega]^2 \sec [\alpha]^2 - 2 M0 \cos [2 \alpha] \cos [\alpha - t \omega]^2 \sec [\alpha]^2 - 2 M0 \sec [\alpha]^2
                                        \sin[t \omega]^2 - 2 \text{ MO } \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{\text{MO}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 \alpha])}
                                                                          2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]  \sin [\alpha]^2 \sin [t \omega]^2 
                     (4 \text{ MO } \omega \text{ Sin}[2 \text{ t} \omega] + 2 \text{ MO } \omega \text{ Sin}[2 \alpha - 2 \text{ t} \omega] - 2 \text{ MO } \omega \text{ Sin}[2 \alpha + 2 \text{ t} \omega] -
                                 (\sqrt{2} (2 M0^2 \omega \cos[t \omega] (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])
                                                                                              2\alpha + 2t\omega) \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2 (4\omega \sin[2t\omega] +
                                                                                      2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])) / (\sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 \alpha])})
                                                                                2 \cos [2 \, t \, \omega] \, + \cos [2 \, \alpha - 2 \, t \, \omega] \, + \cos [2 \, \alpha + 2 \, t \, \omega] \, \big) \, \text{Sin} [\alpha]^{\, 2} \, \text{Sin} [t \, \omega]^{\, 2} \big) \big) \Big) \Big/
      16 (1 + \cos[2\alpha]) \sqrt{(M0^2 (6 + 2\cos[2\alpha] - 2\cos[2t\omega] + \cos[2\alpha - 2t\omega] + \cos[2\alpha] +
                                                    \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
                  \sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right.}
                                                    M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 1)^2)}
                                                                                              \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
(-4 \text{ MO} + 2 \text{ MO} \cos [2 \text{ t} \omega] - \text{MO} \cos [2 \alpha - 2 \text{ t} \omega] - \text{MO} \cos [2 \alpha + 2 \text{ t} \omega] + 2 \text{ MO}
                                       \cos \left[\alpha - \mathsf{t} \; \omega\right]^2 \sec \left[\alpha\right]^2 + 2 \; \mathsf{M0} \; \cos \left[2 \; \alpha\right] \; \cos \left[\alpha - \mathsf{t} \; \omega\right]^2 \\ \sec \left[\alpha\right]^2 + 2 \; \mathsf{M0} \; \sec \left[\alpha\right]^2
                                        \sin[t \omega]^2 + 2 M0 \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 1)^2}
                                                                         2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
                     (4 \text{ MO } \omega \text{ Sin}[2 \text{ t} \omega] + 2 \text{ MO } \omega \text{ Sin}[2 \alpha - 2 \text{ t} \omega] - 2 \text{ MO } \omega \text{ Sin}[2 \alpha + 2 \text{ t} \omega] +
                                 (\sqrt{2} (2 M0^2 \omega \cos[t \omega] (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                                                                                      \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega] + M0^2 \sin [\alpha]^2 \sin [t \omega]^2
                                                                           (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])))
                                        (\sqrt{M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha] + \cos [2 \alpha]
                                                                                     2\alpha + 2t\omega) Sin[\alpha]<sup>2</sup> Sin[t\omega]<sup>2</sup>))))/
        16 (1 + Cos [2 \alpha]) \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] +
                                                     Cos[2\alpha + 2t\omega] Sin[\alpha]^2 Sin[t\omega]^2
                  \sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right]}
                                                    M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 2 \cos [2 \alpha])}
                                                                                              \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
\sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2\,t\,\omega] + \text{M0} \,\cos[2\,\alpha - 2\,t\,\omega] + \right)}
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M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                               \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
                  \left(-4\,\text{M0}\,\omega\,\text{Cos}\,[\,\text{t}\,\omega\,]\,\,\text{Sec}\,[\,\alpha\,]^{\,2}\,\,\text{Sin}\,[\,\text{t}\,\omega\,]\,-4\,\text{M0}\,\omega\,\,\text{Cos}\,[\,2\,\alpha\,]\,\,\,\text{Cos}\,[\,\text{t}\,\omega\,]\,\,\,\text{Sec}\,[\,\alpha\,]^{\,2}
                         Sin[t\omega] + 4 M0 \omega Sin[2t\omega] + 2 M0 \omega Sin[2\alpha - 2t\omega] - 4 M0 \omega Cos[\alpha - t\omega]
                         Sec[\alpha]^2 Sin[\alpha - t\omega] - 4 M0 \omega Cos[2\alpha] Cos[\alpha - t\omega] Sec[\alpha]^2 Sin[\alpha - t\omega] - 2
                         M0 \omega Sin [2 \alpha + 2 t \omega] + \left(\sqrt{2} \left(2 \text{ M0}^2 \omega \text{ Cos} [\text{t } \omega] \left(6 + 2 \text{ Cos} [2 \alpha] - 2 \text{ Cos} [2 \text{ t } \omega] + \right)\right)
                                            \mathsf{Cos}\left[2\,\alpha\,-\,2\,\mathsf{t}\,\omega\right]\,+\,\mathsf{Cos}\left[2\,\alpha\,+\,2\,\mathsf{t}\,\omega\right]\big)\,\,\mathsf{Sin}\left[\alpha\right]^{\,2}\,\mathsf{Sin}\left[\mathsf{t}\,\omega\right]\,+\,\mathsf{M0}^{2}\,\mathsf{Sin}\left[\alpha\right]^{\,2}
                                       Sin[t\omega]^2 (4\omega Sin[2t\omega] + 2\omega Sin[2\alpha - 2t\omega] - 2\omega Sin[2\alpha + 2t\omega])))
                          (\sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha]}
                                            2\alpha + 2t\omega) Sin[\alpha]<sup>2</sup> Sin[t\omega]<sup>2</sup>)))
            (8 \sqrt{M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega])}
                         Sin[\alpha]^2 Sin[t\omega]^2) +
         \sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2 \,\text{t}\,\omega] + \text{M0} \,\cos[2\alpha - 2 \,\text{t}\,\omega] + \right]}
                              M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] +
                                               \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]  \sin [\alpha]^2 \sin [t\omega]^2 
                  (4 \text{ M0 } \omega \text{ Cos}[t \omega] \text{ Sec}[\alpha]^2 \text{ Sin}[t \omega] + 4 \text{ M0 } \omega \text{ Cos}[2 \alpha] \text{ Cos}[t \omega] \text{ Sec}[\alpha]^2
                         Sin[t \omega] - 4 M0 \omega Sin[2 t \omega] - 2 M0 \omega Sin[2 \alpha - 2 t \omega] + 4 M0 \omega Cos[\alpha - t \omega]
                         Sec [\alpha]^2 Sin [\alpha - t\omega] + 4 M0 \omega Cos [2\alpha] Cos [\alpha - t\omega] Sec [\alpha]^2 Sin [\alpha - t\omega] + 2
                         M0 \omega Sin[2 \alpha + 2 t \omega] + \left(\sqrt{2} \left(2 \text{ M0}^2 \omega \text{ Cos} [\text{t} \omega] \left(6 + 2 \text{ Cos} [2 \alpha] - 2 \text{ Cos} [2 \text{ t} \omega] + 2 \omega\right)\right)
                                             \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] \sin [\alpha]^2 \sin [t\omega] + M0^2 \sin [\alpha]^2
                                       Sin[t\omega]^2 (4\omega Sin[2t\omega] + 2\omega Sin[2\alpha - 2t\omega] - 2\omega Sin[2\alpha + 2t\omega])))
                         \left(\sqrt{\left(\text{M0}^2\,\left(\text{6}+2\,\text{Cos}\,[\text{2}\,\alpha]\,-2\,\text{Cos}\,[\text{2}\,\text{t}\,\omega]\,+\text{Cos}\,[\text{2}\,\alpha\,-\,\text{2}\,\text{t}\,\omega]\,+\text{Cos}\,[\text{2}\,\alpha]}\right.\right.
                                            2\alpha + 2t\omega) Sin[\alpha]<sup>2</sup> Sin[t\omega]<sup>2</sup>)))
            \left(8\,\sqrt{\,\left(\text{M0}^{2}\,\left(\text{6}+2\,\text{Cos}\,[\,2\,\alpha\,]\,-2\,\text{Cos}\,[\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,-\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,+\,2\,\text{t}\,\omega\,]\,\right)}\right.
                        Sin[\alpha]^2 Sin[t\omega]^2)
 s \left( -\left( \left[ i \, M0 \, \left( 1 + Cos \left[ 2 \, \alpha \right] \right) \, Sec \left[ \alpha \right] \, Sin \left[ t \, \omega \right]^2 \, \sqrt{\left( \frac{1}{1 + Cos \left[ 2 \, \alpha \right]} \, \left( -2 + 4 \, M0 - 1 \right) \right)^2 \, d \right)} \right) 
                                    2 \cos [2 \alpha] - 2 M0 \cos [2 t \omega] + M0 \cos [2 \alpha - 2 t \omega] + M0 \cos [2 \alpha + 2 t \omega] -
                                    2\sqrt{2}\sqrt{(\text{M0}^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+}
                                                    \cos [2 \alpha + 2 t \omega] \sin [\alpha]^2 \sin [t \omega]^2 ) ) \tan [\alpha]
                 \left(2\,\sqrt{\,\left(\text{M}0^2\,\left(\text{6}+2\,\text{Cos}\,[\,2\,\alpha\,]\,-2\,\text{Cos}\,[\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,-\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,+\,2\,\text{t}\,\omega\,]\,\right)}\right.
                              \operatorname{Sin}[\alpha]^{2} \operatorname{Sin}[\mathsf{t} \omega]^{2})) + \left(\operatorname{im} MO\left(1 + \operatorname{Cos}[2 \alpha]\right) \operatorname{Sec}[\alpha] \operatorname{Sin}[\mathsf{t} \omega]^{2}\right)
                 \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2\,t\,\omega] + \text{M0} \,\cos[2\,\alpha - 2 \,t\,\omega] + \right)}
                               M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
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(4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])) \tan[\alpha]
                               \left(4\,\left(\text{M0}^2\,\left(6+2\,\text{Cos}\,[\,2\,\alpha\,]\,-2\,\text{Cos}\,[\,2\,t\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,-\,2\,t\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,+\,2\,t\,\omega\,]\,\right)\right.
                                            Sin[\alpha]^2 Sin[t\omega]^2 -
                            \left( \verb"i M0 Sec" [\alpha] | \verb"Sin" [t $\omega$] |^2 \right. \left( 4 \, \verb"M0 $\omega$ | \verb"Sin" [2 \, t $\omega$] + 2 \, \verb"M0 $\omega$ | \verb"Sin" [2 \, \alpha - 2 \, t $\omega$] - 2 \, \verb"M0 $\omega$ | ... \right)
                                            Sin[2\alpha + 2t\omega] - (\sqrt{2}(2M0^2\omega Cos[t\omega](6 + 2Cos[2\alpha] - 2Cos[2t\omega] +
                                                               \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega] + M0^2 \sin [\alpha]^2
                                                         \sin[t\omega]^2 \left(4\omega \sin[2t\omega] + 2\omega \sin[2\alpha - 2t\omega] - 2\omega \sin[2\alpha + 2t\omega]\right)\right)
                                            (\sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega]})
                                                       Sin[\alpha]^2 Sin[t\omega]^2))) Tan[\alpha])
                               \left[4\sqrt{\left(\text{MO}^{2}\left(6+2\cos\left[2\,\alpha\right]-2\cos\left[2\,t\,\omega\right]+\cos\left[2\,\alpha-2\,t\,\omega\right]+\cos\left[2\,\alpha+2\,t\,\omega\right]\right)}\right]
                                           \operatorname{Sin}[\alpha]^2 \operatorname{Sin}[\mathsf{t}\,\omega]^2 \sqrt{\left(\frac{1}{1+\operatorname{Cos}[2\,\alpha]}\left(-2+4\,\mathrm{M0}-2\,\operatorname{Cos}[2\,\alpha]-2\,\mathrm{M0}\,\operatorname{Cos}[2\,\mathsf{t}\,\omega]+\right)\right)}
                                                 M0 Cos [2 \alpha – 2 t \omega] + M0 Cos [2 \alpha + 2 t \omega] – 2 \sqrt{2} \sqrt{M0^2} (6 + 2 Cos [2 \alpha] – 2 Cos [
                                                                       2 \pm \omega] + Cos [2 \alpha - 2 \pm \omega] + Cos [2 \alpha + 2 \pm \omega]) Sin [\alpha]^2 Sin [\pm \omega]^2)
                            \left( \verb"i M0 Sec" [\alpha] | \verb"Sin" [\verb"t" \omega"]"^2 \right. \left( 4 \, \verb"M0" \omega | \verb"Sin" [2 \, \verb"t" \omega"] + 2 \, \verb"M0" \omega | \verb"Sin" [2 \, \alpha - 2 \, \verb"t" \omega"] - 2 \, \verb"M0" \omega | \end{supplies} \right)
                                            Sin[2\alpha + 2t\omega] + \left(\sqrt{2}\left(2M0^2\omega Cos[t\omega]\left(6 + 2Cos[2\alpha] - 2Cos[2t\omega] + Cos[2\alpha]\right)\right)\right)
                                                               \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega] + M0^2 \sin [\alpha]^2
                                                          Sin[t \omega]^2 (4 \omega Sin[2t\omega] + 2 \omega Sin[2\alpha - 2t\omega] - 2 \omega Sin[2\alpha + 2t\omega])))
                                            \left(\sqrt{\,\left(\text{M0}^{2}\,\left(\text{6}+\text{2}\,\text{Cos}\,[\text{2}\,\alpha]\,-\text{2}\,\text{Cos}\,[\text{2}\,\text{t}\,\omega]\,+\text{Cos}\,[\text{2}\,\alpha-\text{2}\,\text{t}\,\omega]\,+\text{Cos}\,[\text{2}\,\alpha+\text{2}\,\text{t}\,\omega]\,\right)}\right.
                                                      Sin[\alpha]^2 Sin[t \omega]^2))) Tan[\alpha])
                               \left[4\,\sqrt{\,\left(\text{M0}^{2}\,\left(\text{6}+2\,\text{Cos}\,[\,2\,\alpha\,]\,-2\,\text{Cos}\,[\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,-\,2\,\text{t}\,\omega\,]\,+\,\text{Cos}\,[\,2\,\alpha\,+\,2\,\text{t}\,\omega\,]\,\right)}\right]
                                            Sin[\alpha]^2 Sin[t\omega]^2
                                   \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \text{ M0} - 2 \cos[2\alpha] - 2 \text{ M0} \cos[2 \text{ t}\omega] + \text{M0} \cos[2\alpha - 2 \text{ t}\omega] + \right)}
                                                 M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                                 \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
v22[\alpha_{-}, \omega_{-}, t_{-}, M0_{-}, s_{-}, r_{-}, \theta_{-}] := i \left(\frac{1}{M0} Sec[\alpha]^{2} \left(Cos[\alpha + t\omega]^{2} + Sin[t\omega]^{2}\right)\right)
              \int s \left[ \left( i \cos \alpha \right) \cot \alpha \right] \cot \alpha \right]  \cos \left[ t \omega \right]^{2} \left( -4 \, M0 + 2 \, M0 \cos \left[ 2 \, t \omega \right] - M0 \cos \left[ 2 \, \alpha - 2 \, t \omega \right] - M0 \right] 
                                            \cos[2\alpha + 2t\omega] + 2M0\cos[\alpha - t\omega]^{2}Sec[\alpha]^{2} + 2M0\cos[2\alpha]Cos[\alpha - t\omega]^{2}
                                            Sec[\alpha]^2 + 2 MO Sec[\alpha]^2 Sin[t \omega]^2 + 2 MO Cos[2 \alpha] Sec[\alpha]^2 Sin[t \omega]^2 + 2 \sqrt{2}
                                            \sqrt{(-M0^2 (-6-2 \cos[2 \alpha] + 2 \cos[2 t \omega] - \cos[2 \alpha - 2 t \omega] - \cos[2 \alpha + 2 t \omega])}
                                                    \operatorname{Sin}[\alpha]^2 \operatorname{Sin}[\mathsf{t} \,\omega]^2) \sqrt{\left(\frac{1}{1+\operatorname{Cos}[2\,\alpha]}\left(-2+4\,\mathrm{M0}-2\,\operatorname{Cos}[2\,\alpha]-2\,\mathrm{M0}\,\operatorname{Cos}[2\,\mathsf{t}]\right)\right)}
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\omega\,]\,\,+\,\,\text{MO}\,\,\text{Cos}\,\,[\,2\,\,\alpha\,-\,2\,\,t\,\,\omega\,]\,\,+\,\,\text{MO}\,\,\text{Cos}\,\,[\,2\,\,\alpha\,+\,2\,\,t\,\,\omega\,]\,\,-\,2\,\,\sqrt{\,2\,}\,\,\sqrt{\,\left(\,\text{MO}^{2}\,\,\left(\,6\,+\,2\,\,\text{Cos}\,\,[\,2\,\,\alpha\,]\,\,-\,2\,\,\text{Los}\,\,(\,2\,\,\alpha\,)\,\,\right)}
                                                                               2 \cos [2 \pm \omega] + \cos [2 \alpha - 2 \pm \omega] + \cos [2 \alpha + 2 \pm \omega]) \sin [\alpha]^{2} \sin [\pm \omega]^{2})
                              (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] - 2 \text{ MO}
                                           \cos [\alpha - t \omega]^2 \sec [\alpha]^2 - 2 M0 \cos [2 \alpha] \cos [\alpha - t \omega]^2 \sec [\alpha]^2 - 2 M0 \sec [\alpha]^2
                                          \sin[t \, \omega]^2 - 2 \, MO \, \cos[2 \, \alpha] \, \sec[\alpha]^2 \, \sin[t \, \omega]^2 + 2 \, \sqrt{2} \, \sqrt{\left(MO^2 \, \left(6 + 2 \, \cos[2 \, \alpha] - 1 \, \cos[2 \, \alpha] \right)^2 + 2 \, \cos[2 \, \alpha] \right)}
                                                                  2 \cos [2 \pm \omega] + \cos [2 \alpha - 2 \pm \omega] + \cos [2 \alpha + 2 \pm \omega]) \sin [\alpha]^2 \sin [\pm \omega]^2)
                     (32 \text{ MO} (1 + \cos[2 \alpha]) \sqrt{(\text{MO}^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])}
                                                   \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2) -
                  i \cos[\alpha] \cot[\alpha] \csc[t \omega]^2 \left(4 \,\text{M0} - 2 \,\text{M0} \cos[2 \,t \,\omega] + \text{M0} \cos[2 \,\alpha - 2 \,t \,\omega] + \text{M0}\right)
                                           \cos [2 \alpha + 2 t \omega] - 2 MO \cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 MO \cos [2 \alpha]
                                          \cos [\alpha - t \omega]^2 \sec [\alpha]^2 - 2 \text{ MO Sec} [\alpha]^2 \sin [t \omega]^2 - 2 \text{ MO Cos} [2 \alpha]
                                           Sec[\alpha]^2 Sin[t \omega]^2 + 2\sqrt{2} \sqrt{-M0^2(-6-2 Cos[2 \alpha] + 2 Cos[2 t \omega] - (-6-2 cos[2 \alpha])^2}
                                                                 \cos [2 \alpha - 2 t \omega] - \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
                            \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{MØ} - 2 \,\cos[2\alpha] - 2 \,\text{MØ} \,\cos[2 \,t \,\omega] + \text{MØ} \,\cos[2\alpha - 2 \,t \,\omega] + \right)}
                                                   M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 2 \cos [2 \alpha])}
                                                                               \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
                              \left(-4\,\text{M0} + 2\,\text{M0}\,\text{Cos}\,[2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha - 2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha + 2\,\text{t}\,\omega] + 2\,\text{M0}\right)
                                           \cos [\alpha - t \omega]^2 \sec [\alpha]^2 + 2 M0 \cos [2 \alpha] \cos [\alpha - t \omega]^2 \sec [\alpha]^2 + 2 M0 \sec [\alpha]^2
                                          \sin[t \, \omega]^2 + 2 \, MO \, \cos[2 \, \alpha] \, \sec[\alpha]^2 \, \sin[t \, \omega]^2 + 2 \, \sqrt{2} \, \sqrt{\left(MO^2 \, \left(6 + 2 \, \cos[2 \, \alpha] - 1 \, \cos[2 \, \alpha] \right)^2 + 2 \, MO^2 \, \left(6 + 2 \, \cos[2 \, \alpha] - 1 \, \cos[2 \, \alpha] \right)^2}
                                                                  2 \cos[2t\omega] + \cos[2\alpha - 2t\omega] + \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega]^2
                    (32 \, MO \, (1 + Cos \, [2 \, \alpha]) \, \sqrt{(MO^2 \, (6 + 2 \, Cos \, [2 \, \alpha] - 2 \, Cos \, [2 \, t \, \omega] + Cos \, [2 \, \alpha - 2 \, t \, \omega] + Cos \, [2 \, \alpha])}
                                                   \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
\dot{\mathbb{I}} \left( -\left( \sqrt{\left( \frac{1}{1 + \cos[2\alpha]} \left( -2 + 4\,\text{M0} - 2\,\cos[2\,\alpha] - 2\,\text{M0}\,\cos[2\,t\,\omega] + \text{M0}\,\cos[2\,\alpha - 2\,t\,\omega] + \right) \right) \right) \right) \right) + \left( -\left( \sqrt{\left( \frac{1}{1 + \cos[2\alpha]} \left( -2 + 4\,\text{M0} - 2\,\cos[2\,\alpha] - 2\,\text{M0}\,\cos[2\,t\,\omega] + \text{M0}\,\cos[2\,\alpha - 2\,t\,\omega] + \right) \right) \right) \right) \right) + \left( -\left( \sqrt{\left( \frac{1}{1 + \cos[2\alpha]} \left( -2 + 4\,\text{M0} - 2\,\cos[2\,\alpha] - 2\,\text{M0}\,\cos[2\,t\,\omega] + \text{M0}\,\cos[2\,\alpha - 2\,t\,\omega] + \right) \right) \right) \right) \right) \right) + \left( -\left( \sqrt{\left( \frac{1}{1 + \cos[2\alpha]} \left( -2 + 4\,\text{M0} - 2\,\cos[2\,\alpha] - 2\,\text{M0}\,\cos[2\,t\,\omega] + \text{M0}\,\cos[2\,\alpha - 2\,t\,\omega] + \right) \right) \right) \right) \right) \right) + \left( -\left( \sqrt{\left( \frac{1}{1 + \cos[2\alpha]} \left( -2 + 4\,\text{M0} - 2\,\cos[2\alpha] - 2\,\text{M0}\,\cos[2\alpha] + \text{M0}\,\cos[2\alpha] + \text{M0}\,\cos[2\alpha
                                                             M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 2 \cos [2 \alpha])}
                                                                                        \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
                                        (4 \text{ MO} - 2 \text{ MO Cos} [2 \text{ t} \omega] + \text{MO Cos} [2 \alpha - 2 \text{ t} \omega] + \text{MO Cos} [2 \alpha + 2 \text{ t} \omega] -
                                                2 M0 Cos [\alpha - t \omega]^2 Sec [\alpha]^2 - 2 M0 Cos [2 \alpha] Cos [\alpha - t \omega]^2 Sec [\alpha]^2 -
                                                2 M0 Sec [\alpha]^2 Sin [t\omega]^2 – 2 M0 Cos [2\alpha] Sec [\alpha]^2 Sin [t\omega]^2 +
                                                2\sqrt{2}\sqrt{(M0^2(6+2\cos[2\alpha]-2\cos[2t\omega]+\cos[2\alpha-2t\omega]+\cos[2\alpha+2t\omega])}
                                                                  Sin[\alpha]^2 Sin[t\omega]^2) (2M0^2 \omega Cos[t\omega] (6 + 2Cos[2\alpha] - 2Cos[2t\omega] +
                                                             \cos[2\alpha - 2t\omega] + \cos[2\alpha + 2t\omega]) \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2
                                                   Sin[t\omega]^2 (4\omega Sin[2t\omega] + 2\omega Sin[2\alpha - 2t\omega] - 2\omega Sin[2\alpha + 2t\omega]))
                              (16 (M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega])
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\operatorname{Sin}[\alpha]^{2}\operatorname{Sin}[\mathsf{t}\,\omega]^{2})^{3/2}
\sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2 \,t \,\omega] + \text{M0} \,\cos[2\alpha - 2 \,t \,\omega] + \right.}
                   M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{\left(\text{M0}^2\left(6 + 2\cos\left[2\,\alpha\right] - 2\cos\left[2\,\text{t}\,\omega\right]\right.} +
                                   \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega] ) \sin [\alpha]^2 \sin [t\omega]^2)
        \left(-4\,\text{M0} + 2\,\text{M0}\,\text{Cos}\,[2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha - 2\,\text{t}\,\omega] - \text{M0}\,\text{Cos}\,[2\,\alpha + 2\,\text{t}\,\omega] + 2\,\text{M0}\right)
               \cos [\alpha - t \omega]^2 \sec [\alpha]^2 + 2 M0 \cos [2 \alpha] \cos [\alpha - t \omega]^2 \sec [\alpha]^2 + 2 M0 \sec [\alpha]^2
              \sin[t\,\omega]^2 + 2\,\text{M0}\,\cos[2\,\alpha]\,\sec[\alpha]^2\,\sin[t\,\omega]^2 + 2\,\sqrt{2}\,\,\sqrt{\,\left(\text{M0}^2\,\left(6+2\,\cos[2\,\alpha]-100\,\cos[2\,\alpha]\right)^2\right)}
                           2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
        \left(2\ \mathsf{MO^2}\ \omega\ \mathsf{Cos}\ [\mathsf{t}\ \omega]\ \left(6+2\ \mathsf{Cos}\ [\mathsf{2}\ \alpha]\ -2\ \mathsf{Cos}\ [\mathsf{2}\ \mathsf{t}\ \omega]\ +\mathsf{Cos}\ [\mathsf{2}\ \alpha-2\ \mathsf{t}\ \omega]\ +\right.
                   \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2
               (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega]))
   (16 (M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega])
              Sin[\alpha]^2 Sin[t\omega]^2 +
(4 MO - 2 MO Cos [2 t \omega] + MO Cos [2 \alpha - 2 t \omega] + MO Cos [2 \alpha + 2 t \omega] - 2 MO
               \cos [\alpha - t \omega]^2 \sec [\alpha]^2 - 2 M0 \cos [2 \alpha] \cos [\alpha - t \omega]^2 \sec [\alpha]^2 - 2 M0 \sec [\alpha]^2
              \sin[t \omega]^2 - 2 \text{ MO } \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{(\text{MO}^2 (6 + 2 \cos[2 \alpha] - 1)^2)}
                           2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
        (4 \text{ MO } \omega \text{ Sin}[2 \text{ t} \omega] + 2 \text{ MO } \omega \text{ Sin}[2 \alpha - 2 \text{ t} \omega] - 2 \text{ MO } \omega \text{ Sin}[2 \alpha + 2 \text{ t} \omega] -
            (\sqrt{2} (2 M0^2 \omega \cos[t \omega] (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha])
                                   2\alpha + 2t\omega]) Sin[\alpha]^2 Sin[t\omega] + M0^2 Sin[\alpha]^2 Sin[t\omega]^2 (4\omega Sin[2t\omega] +
                                2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega]))) / (\sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 \alpha])}
                             2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2))))
   \left(16 \left(1 + \cos[2 \alpha]\right) \sqrt{\left(\text{M0}^2 \left(6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha]\right)}\right)
                    Cos[2\alpha + 2t\omega] Sin[\alpha]^2 Sin[t\omega]^2
       \sqrt{\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \cos[2\alpha] - 2 \,\text{M0} \cos[2 \,\text{t} \,\omega] + \text{M0} \cos[2\alpha - 2 \,\text{t} \,\omega] + \right)}
                   M0 Cos [2 \alpha + 2 t \omega] - 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                   \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega]^2)
(-4 \text{ MO} + 2 \text{ MO} \cos [2 \text{ t} \omega] - \text{MO} \cos [2 \alpha - 2 \text{ t} \omega] - \text{MO} \cos [2 \alpha + 2 \text{ t} \omega] + 2 \text{ MO}
              \cos \left[\alpha - \mathsf{t} \, \omega\right]^2 \sec \left[\alpha\right]^2 + 2 \, \mathsf{M0} \, \cos \left[2 \, \alpha\right] \, \cos \left[\alpha - \mathsf{t} \, \omega\right]^2 \sec \left[\alpha\right]^2 + 2 \, \mathsf{M0} \, \sec \left[\alpha\right]^2
               \sin[t \omega]^2 + 2 M0 \cos[2 \alpha] \sec[\alpha]^2 \sin[t \omega]^2 + 2 \sqrt{2} \sqrt{M0^2 (6 + 2 \cos[2 \alpha] - 1)^2}
                           2 \cos [2 t \omega] + \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2
        (4 \text{ MO } \omega \text{ Sin}[2 \text{ t} \omega] + 2 \text{ MO } \omega \text{ Sin}[2 \alpha - 2 \text{ t} \omega] - 2 \text{ MO } \omega \text{ Sin}[2 \alpha + 2 \text{ t} \omega] +
             (\sqrt{2} (2 M0^2 \omega \cos[t \omega] (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                                \cos[2\alpha + 2t\omega]) \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2
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$$\begin{split} & \sin(\alpha)^2 \sin(\pm \omega)^2) \Big) - \\ & s \left(- \left(\left(i \, \mathsf{MO} \left(1 + \mathsf{Cos} \left[2 \, \alpha \right] \right) \, \mathsf{Sec} \left[\alpha \right] \, \mathsf{Sin} \left[t \, \omega \right]^2 \, \sqrt{ \left(\frac{1}{1 + \mathsf{Cos} \left[2 \, \alpha \right]} \left(-2 + 4 \, \mathsf{MO} - 2 \, \mathsf{Cos} \left[2 \, \alpha \right] - 2 \, \mathsf{MO} \, \mathsf{Cos} \left[2 \, \alpha \right] + \mathsf{MO} \, \mathsf{Cos} \left[2 \, \alpha - 2 \, t \, \omega \right] + \mathsf{MO} \, \mathsf{Cos} \left[2 \, \alpha + 2 \, t \, \omega \right] - 2 \, \mathsf{VO} \left[2 \, \alpha + 2 \, t \, \omega \right] - 2 \, \mathsf{VOS} \left[2 \, \alpha - 2 \, t \, \omega \right] + \mathsf{MO} \, \mathsf{Cos} \left[2 \, \alpha - 2 \, t \, \omega \right] + \mathsf{MO} \, \mathsf{Cos} \left[2 \, \alpha - 2 \, t \, \omega \right] + \mathsf{MO} \, \mathsf{Cos} \left[2 \, \alpha - 2 \, t \, \omega \right] + \mathsf{Cos} \left[2 \, \alpha - 2 \, t \, \omega \right] + \mathsf{Cos} \left[2 \, \alpha - 2 \, t \, \omega \right] + \mathsf{Cos} \left[2 \, \alpha - 2 \, t \, \omega \right] \right) \right) + \left[\mathsf{ci} \, \, \mathsf{MO} \, \left(1 + \mathsf{Cos} \left[2 \, \alpha \right] \right) \, \mathsf{Son} \left[\alpha \right]^2 \, \mathsf{Sin} \left[t \, \omega \right]^2 \right) \right) + \left[\mathsf{ci} \, \, \mathsf{MO} \, \left(1 + \mathsf{Cos} \left[2 \, \alpha \right] \right) \, \mathsf{Son} \left[\alpha \right]^2 \, \mathsf{Sin} \left[t \, \omega \right]^2 \right) \right) + \left[\mathsf{ci} \, \, \mathsf{MO} \, \left(1 + \mathsf{Cos} \left[2 \, \alpha \right] \right) \, \mathsf{Son} \left[\alpha \right]^2 \, \mathsf{Sin} \left[t \, \omega \right]^2 \right) \right) + \left[\mathsf{ci} \, \, \mathsf{MO} \, \left(1 + \mathsf{Cos} \left[2 \, \alpha \right] \right) \, \mathsf{Son} \left[\alpha \right]^2 \, \mathsf{Sin} \left[t \, \omega \right]^2 \right) \right) + \left[\mathsf{ci} \, \, \mathsf{MO} \, \left(1 + \mathsf{Cos} \left[2 \, \alpha \right] \right) \, \mathsf{Son} \left[\alpha \right] \, \mathsf{Sin} \left[\alpha \right]^2 \, \mathsf{Sin} \left[t \, \omega \right]^2 \right) \right) + \left[\mathsf{ci} \, \, \, \mathsf{MO} \, \mathsf{Cos} \left[2 \, \alpha - 2 \, t \, \omega \right] + \mathsf{MO} \, \mathsf{Cos} \left[2 \, \alpha - 2 \, t \, \omega \right] \right) + \mathsf{MO} \, \mathsf{Cos} \left[2 \, \alpha - 2 \, t \, \omega \right] + \mathsf{MO} \, \mathsf{Cos} \left[2 \, \alpha - 2 \, t \, \omega \right] \right) + \mathsf{MO} \, \mathsf{Cos} \left[2 \, \alpha - 2 \, t \, \omega \right] + \mathsf{MO} \, \mathsf{Cos} \left[2 \, \alpha - 2 \, t \, \omega \right] \right) \right) + \left[\mathsf{mO} \, \mathsf{MO} \, \mathsf{Cos} \left[2 \, \alpha - 2 \, t \, \omega \right] + \mathsf{MO} \, \mathsf{Cos} \left[2 \, \alpha - 2 \, t \, \omega \right] \right) + \mathsf{MO} \, \mathsf{Cos} \left[2 \, \alpha - 2 \, t \, \omega \right] + \mathsf{MO} \, \mathsf{Cos} \left[2 \, \alpha - 2 \, t \, \omega \right] \right) \right] + \frac{\mathsf{MO} \, \mathsf{Cos} \left[2 \, \alpha - 2 \, t \, \omega \right] + \mathsf{MO} \, \mathsf{Cos} \left[2 \, \alpha - 2 \, t \, \omega \right] \right) + \mathsf{MO} \, \mathsf{Cos} \left[2 \, \alpha - 2 \, t \, \omega \right] \right) + \mathsf{MO} \, \mathsf{Cos} \left[2 \, \alpha - 2 \, t \, \omega \right] \right) + \mathsf{MO} \, \mathsf{Cos} \left[2 \, \alpha - 2 \, t \, \omega \right] \right) + \mathsf{MO} \, \mathsf{Cos} \left[2 \, \alpha - 2 \, t \, \omega \right] \right) + \mathsf{MO} \, \mathsf{Cos} \left[2 \, \alpha - 2 \, t \, \omega \right] \right) + \mathsf{MO} \, \mathsf{Cos} \left[2 \, \alpha - 2 \, t \, \omega \right] \right) + \mathsf{MO} \, \mathsf{Cos} \left[2 \, \alpha - 2 \, t \, \omega \right] \right) + \mathsf{MO} \, \mathsf{Cos} \left[2 \, \alpha - 2 \, t \, \omega \right] \right) + \mathsf{MO} \, \mathsf{C$$

$$\begin{split} \sin(\alpha)^2 \sin(t\omega)^2) \Big) - \\ e^{\pm \alpha} r \left(-\left(\left(\frac{i}{m} \, \text{M0} \, \left(1 + \cos[2\alpha] \right) \, \text{Sec}[\alpha] \, \text{Sin}[t\omega]^2 \, \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \, \left(-2 + 4 \, \text{M0} - 2 \, \cos[2\alpha] - 2 \, \text{M0} \cos[2\beta] + \text{M0} \cos[2\alpha - 2 \, t\omega] + \text{M0} \cos[2\alpha + 2 \, t\omega] - 2 \, \sqrt{2} \, \sqrt{\left(\text{M0}^2 \, \left(6 + 2 \cos[2\alpha] - 2 \cos[2\tau\omega] + \cos[2\alpha - 2 \, t\omega] + \cos[2\alpha + 2 \, t\omega] - 2 \, \sqrt{2} \, \sqrt{\left(\text{M0}^2 \, \left(6 + 2 \cos[2\alpha] - 2 \cos[2\tau\omega] + \cos[2\alpha - 2 \, t\omega] + \cos[2\alpha + 2 \, t\omega] \right)} \right)} \\ \cos[2\alpha + 2 \, t\omega] \Big) \sin[\alpha]^2 \sin[t\omega]^2 \Big) \Big) + \left(\frac{1}{m} \, \text{M0} \, \left(1 + \cos[2\alpha] \right) \, \text{Sec}[\alpha] \, \sin[t\omega]^2 \right) \right) \\ \sin[\alpha]^2 \sin[t\omega]^2 \Big) \Big) + \left(\frac{1}{m} \, \text{M0} \, \left(1 + \cos[2\alpha] \right) \, \text{Sec}[\alpha] \, \sin[t\omega]^2 \right) \Big) \\ - \left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \, \text{M0} - 2 \cos[2\alpha] - 2 \, \text{M0} \, \cos[2\tau\omega] + \text{M0} \cos[2\alpha - 2 \, t\omega] + \cos[2\alpha - 2 \, t\omega] \Big) \Big) \\ \sin[\alpha]^2 \sin[\alpha]^2 \Big) \Big) - \\ \frac{i}{\pi} \left(-\left(\left(\frac{i}{m} \, \text{M0} \, \omega \, \left(1 + \cos[2\alpha] \right) \, \cos[\tau\omega] \, \text{Sec}[\alpha] \, \sin[\tau\omega] \, \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \, \left(-2 + 4 \, \text{M0} - 2 \cos[2\alpha] - 2 \, \text{M0} \, \cos[2\tau\omega] + \text{M0} \, \cos[2\alpha - 2 \, t\omega] + \cos[2\alpha - 2 \, t\omega] \right) \right) \\ \sin[\alpha]^2 \sin[\tau\omega]^2 \Big) \Big) + \\ \left(\frac{i}{m} \, \text{M0} \, \omega \, \left(1 + \cos[2\alpha] - 2 \cos[2\tau\omega] - 2 \cos[2\tau\omega] + \cos[2\alpha - 2 \, t\omega] + \cos[2\alpha - 2 \, t$$

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(2 M0^2 \omega \cos[t \omega] (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] +
                              \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega] + M0^2 \sin [\alpha]^2 \sin [t \omega]^2
                        (4 \omega \sin[2 t \omega] + 2 \omega \sin[2 \alpha - 2 t \omega] - 2 \omega \sin[2 \alpha + 2 t \omega])) \tan[\alpha]
    \left(4\,\left(\text{M0}^2\,\left(6+2\,\text{Cos}\,[\,2\,\alpha\,]\,-2\,\text{Cos}\,[\,2\,\text{t}\,\omega\,]\,+\text{Cos}\,[\,2\,\alpha\,-\,2\,\text{t}\,\omega\,]\,+\text{Cos}\,[\,2\,\alpha\,+\,2\,\text{t}\,\omega\,]\,\right)\right.
                      \operatorname{Sin}[\alpha]^{2} \operatorname{Sin}[\mathsf{t}\,\omega]^{2})^{3/2} - \left( i \operatorname{M0} \left( 1 + \operatorname{Cos}[2\,\alpha] \right) \operatorname{Sec}[\alpha] \operatorname{Sin}[\mathsf{t}\,\omega]^{2} \right)
          \sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{MO} - 2 \,\cos[2\alpha] - 2 \,\text{MO} \,\cos[2 \,t \,\omega] + \text{MO} \,\cos[2\alpha - 2 \,t \,\omega] + \right)}
                              M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] + 2 \cos [2 \alpha])}
                                                      \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2)
            (2 MO^2 \omega Cos[t \omega] (6 + 2 Cos[2 \alpha] - 2 Cos[2 t \omega] + Cos[2 \alpha - 2 t \omega] +
                              \cos[2\alpha + 2t\omega] \sin[\alpha]^2 \sin[t\omega] + M0^2 \sin[\alpha]^2 \sin[t\omega]^2
                       (4 \omega \sin[2t\omega] + 2 \omega \sin[2\alpha - 2t\omega] - 2 \omega \sin[2\alpha + 2t\omega])) \tan[\alpha]
    (4 (M0^2 (6 + 2 \cos[2 \alpha] - 2 \cos[2 t \omega] + \cos[2 \alpha - 2 t \omega] + \cos[2 \alpha + 2 t \omega])
                      Sin[\alpha]^2 Sin[t\omega]^2
Sin[2\alpha + 2t\omega] - (\sqrt{2}(2M0^2\omega Cos[t\omega](6 + 2Cos[2\alpha] - 2Cos[2t\omega] +
                                                  \cos [2\alpha - 2t\omega] + \cos [2\alpha + 2t\omega]) \sin [\alpha]^2 \sin [t\omega] + M0^2 \sin [\alpha]^2
                                          Sin[t \omega]^2 (4 \omega Sin[2t\omega] + 2 \omega Sin[2\alpha - 2t\omega] - 2 \omega Sin[2\alpha + 2t\omega])))
                       \left(\sqrt{\,\left(\text{M0}^{2}\,\left(\text{6}+2\,\text{Cos}\,[\text{2}\,\alpha]\,-2\,\text{Cos}\,[\text{2}\,\text{t}\,\omega]\,+\text{Cos}\,[\text{2}\,\alpha-2\,\text{t}\,\omega]\,+\text{Cos}\,[\text{2}\,\alpha+2\,\text{t}\,\omega]\,\right)}\right.
                                      Sin[\alpha]^2 Sin[t \omega]^2)) Tan[\alpha]
    \left(4\sqrt{\left(\text{MO}^{2}\left(6+2\cos\left[2\,\alpha\right]-2\cos\left[2\,t\,\omega\right]+\cos\left[2\,\alpha-2\,t\,\omega\right]+\cos\left[2\,\alpha+2\,t\,\omega\right]\right)}\right)
                      \sin[\alpha]^2 \sin[t \omega]^2 \sqrt{\left(\frac{1}{1 + \cos[2 \alpha]} \left(-2 + 4 \text{ MO} - 2 \cos[2 \alpha] - 2 \text{ MO} \cos[2 t \omega] + \frac{1}{1 + \cos[2 \alpha]} \right)}
                              \mbox{M0 Cos} \left[ \mbox{2} \mbox{$\alpha$} - \mbox{2} \mbox{$t$} \mbox{$\omega$} \right] \ + \mbox{M0 Cos} \left[ \mbox{2} \mbox{$\alpha$} + \mbox{2} \mbox{$t$} \mbox{$\omega$} \right] \ - \mbox{2} \mbox{$t$} \mbox{$\omega$} \left[ \mbox{2} \mbox{$\alpha$} + \mbox{2} \mbox{$t$} \mbox{$\omega$} \right] \ - \mbox{2} \mbox{Cos} \left[ \mbox{2} \mbox{$\alpha$} + \mbox{2} \mbox{$t$} \mbox{$\omega$} \right] \ - \mbox{2} \mbox{Cos} \left[ \mbox{2} \mbox{$\alpha$} + \mbox{2} \mbox{$t$} \mbox{$\omega$} \right] \ - \mbox{2} \mbox{Cos} \left[ \mbox{2} \mbox{$\alpha$} + \mbox{2} \mbox{$t$} \mbox{$\omega$} \right] \ - \mbox{2} \mbox{Cos} \left[ \mbox{2} \mbox{$\alpha$} + \mbox{2} \mbox{$t$} \mbox{$\omega$} \right] \ - \mbox{2} \mbox{Cos} \left[ \mbox{2} \mbox{$\omega$} + \mbox{2} \mbox{$t$} \mbox{$\omega$} \right] \ - \mbox{2} \mbox{Cos} \left[ \mbox{2} \mbox{$\omega$} + \mbox{2} \mbox{$t$} \mbox{$\omega$} \right] \ - \mbox{2} \mbox{Cos} \left[ \mbox{2} \mbox{$\omega$} + \mbox{2} \mbox{$\omega$} \mbox{$\omega$} + \mbox{2} \mbox{$\omega$} \mbox{$\omega$} \right] \ - \mbox{2} \mbox{Cos} \left[ \mbox{2} \mbox{$\omega$} + \mbox{2} \mbox{$\omega$} \mbox{$\omega$} + \mbox{2} \mbox{$\omega$} \mbox{$\omega$} \right] \ - \mbox{2} \mbox{2} \mbox{$\omega$} + \mbox{2} \mbox{\omega} + \mbox{2} \mbox{$\omega$} + \mbox{2} \mbox{2} \mbox{$\omega$} + \mbox{2} \mbox
                                                             2 \pm \omega] + Cos [2 \alpha - 2 \pm \omega] + Cos [2 \alpha + 2 \pm \omega]) Sin [\alpha]^2 Sin [\pm \omega]^2)) +
\left( \verb"i M0 Sec" [\alpha] | \verb"Sin" [t $\omega$] |^2 \right. \left( 4 \, \verb"M0 $\omega$ | \verb"Sin" [2 \, t $\omega$] + 2 \, \verb"M0 $\omega$ | \verb"Sin" [2 \, \alpha - 2 \, t $\omega$] - 2 \, \verb"M0 $\omega$ | ... \right)
                      Sin[2\alpha + 2t\omega] + \left(\sqrt{2}\left(2M0^2\omega Cos[t\omega]\left(6 + 2Cos[2\alpha] - 2Cos[2t\omega] + Cos[2\alpha]\right)\right)\right)
                                                  \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega] \sin [\alpha]^2 \sin [t \omega] + M0^2 \sin [\alpha]^2
                                          Sin[t \omega]^{2} (4 \omega Sin[2 t \omega] + 2 \omega Sin[2 \alpha - 2 t \omega] - 2 \omega Sin[2 \alpha + 2 t \omega])))
                       \left(\sqrt{\,\left(\text{M0}^2\,\left(\text{6}+2\,\text{Cos}\,[\text{2}\,\alpha]\,-2\,\text{Cos}\,[\text{2}\,\text{t}\,\omega]\,+\text{Cos}\,[\text{2}\,\alpha-2\,\text{t}\,\omega]\,+\text{Cos}\,[\text{2}\,\alpha+2\,\text{t}\,\omega]\,\right)}\right.
                                      Sin[\alpha]^2 Sin[t\omega]^2))) Tan[\alpha])
    \left(4\sqrt{\left(\text{M0}^{2}\left(6+2\cos\left[2\,\alpha\right]-2\cos\left[2\,t\,\omega\right]+\cos\left[2\,\alpha-2\,t\,\omega\right]+\cos\left[2\,\alpha+2\,t\,\omega\right]\right)}\right)
                      Sin[\alpha]^2 Sin[t\omega]^2
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\sqrt{\left(\frac{1}{1 + \cos[2\alpha]} \left(-2 + 4 \,\text{M0} - 2 \,\cos[2\alpha] - 2 \,\text{M0} \,\cos[2\,t\,\omega] + \text{M0} \,\cos[2\,\alpha - 2\,t\,\omega] + \right)}
                                               M0 Cos [2 \alpha + 2 t \omega] + 2 \sqrt{2} \sqrt{(M0^2 (6 + 2 \cos [2 \alpha] - 2 \cos [2 t \omega] +
                                                           \cos [2 \alpha - 2 t \omega] + \cos [2 \alpha + 2 t \omega]) \sin [\alpha]^2 \sin [t \omega]^2))
         vMatrix[\alpha_, \omega_, t_, M0_, s_, r_, \theta_] := {{v11[\alpha, \omega, t, M0, s, r, \theta],
                \upsilon 12[\alpha, \omega, \mathsf{t}, \mathsf{M0}, \mathsf{s}, \mathsf{r}, \theta]\}, \{\upsilon 21[\alpha, \omega, \mathsf{t}, \mathsf{M0}, \mathsf{s}, \mathsf{r}, \theta], \upsilon 22[\alpha, \omega, \mathsf{t}, \mathsf{M0}, \mathsf{s}, \mathsf{r}, \theta]\}\}
         Unit = \{\{1,0\},\{0,1\}\}
         \sigma y = \{\{0, -I\}, \{I, 0\}\}
Out[33]= \{\{1,0\},\{0,1\}\}
Out[34]= \{ \{ 0, -i \}, \{ i, 0 \} \}
In [35]: Htotal [\alpha_, \omega_, t_, M0_, s_, r_, \theta_] := KroneckerProduct[Unit, \Sigma[\alpha, \omega, t, M0, s, r, \theta]] +
              KroneckerProduct[\sigmay, \upsilonMatrix[\alpha, \omega, t, M0, s, r, \theta]]
In[36]:=
ln[37] = ArcSin[Sec[2*\pi/3] - Tan[2*\pi/3]]
Out[37]= -ArcSin[2-\sqrt{3}]
In[38]:=
In[39]:=
```

In[40]:=
$$M\Theta = 1.733$$

 $r = 1$
 $s = 1$
 $\Theta = -ArcSin[2 - \sqrt{3}]$
 $\sigma = 2\pi/3$
 $\omega = \sqrt{s^2 - r^2 Sin[\Theta]^2}$
 $\alpha = ArcSin[(r/s) * Sin[\Theta]]$

$$\frac{ArcSin[\sqrt{\frac{Cos[\alpha]^2 Cos[\sigma]}{2 Sin[\alpha] - 2 Cos[\sigma] Sin[\alpha]^2}}]}{rPerp = N[}$$

```
Out[40]= 1.733
Out[41]= 1
Out[42]= 1
Out[43]= -ArcSin[2-\sqrt{3}]
Out[44]= \frac{2 \pi}{3}
Out[45]= \sqrt{1-\left(-2+\sqrt{3}\right)^2}
Out[46]= -ArcSin[2-\sqrt{3}]
Out[47]= 1.63042
 In[48] = Min[Table[Eigenvalues[MMatrix[<math>\alpha, \omega, (k/1000) * \tauPerp, M0]], {k, 1, 1000}]]
Out[48]= 1.00055
 In[49]:=
 In[50]:=
 In[51]:= Eqn1[t_] := Transpose[
             -I * Htotal[\alpha, \omega, t, M0, s, r, \theta]. Transpose[\{\{\psi 1[t], \psi 2[t], \psi 3[t], \psi 4[t]\}\}]][[1]][[1]]
       Eqn2[t_] := Transpose[-I * Htotal[\alpha, \omega, t, M0, s, r, \theta].
                Transpose [\{\{\psi 1[t], \psi 2[t], \psi 3[t], \psi 4[t]\}\}]] [[1]] [[2]]
       Eqn3[t_] := Transpose[-I * Htotal[\alpha, \omega, t, M0, s, r, \theta].
                Transpose [\{\{\psi 1[t], \psi 2[t], \psi 3[t], \psi 4[t]\}\}]] [[1]] [[3]]
        Eqn4[t] := Transpose[-I * Htotal[\alpha, \omega, t, M0, s, r, \theta].
                Transpose[\{\{\psi 1[t], \psi 2[t], \psi 3[t], \psi 4[t]\}\}\}]][[1]][[4]]
 In[55]:= Needs["DifferentialEquations`NDSolveProblems`"];
       Needs["DifferentialEquations`NDSolveUtilities`"];
```

```
ln[57] = y1 = NDSolve[\{\psi1'[t] == Eqn1[t], \psi2'[t] == Eqn2[t], \psi3'[t] == Eqn3[t],
                                                                   \psi 4'[t] = \text{Eqn4}[t], \ \psi 1[10^{-12}] = 1, \ \psi 2[10^{-12}] = 0, \ \psi 3[10^{-12}] = 0, \ \psi 4[10^{-12}] = 0
                                                            \{\psi 1, \psi 2, \psi 3, \psi 4\}, \{t, 10^{-12}, \tau Perp + 0.1\}, MaxSteps \rightarrow 2 * 10^6, AccuracyGoal \rightarrow Automatic,
                                                           WorkingPrecision → MachinePrecision, Method → "ExplicitRungeKutta"]
\texttt{Out} \texttt{[57]=} \ \left\{ \left\{ \psi \mathbf{1} \to \mathbf{InterpolatingFunction} \left[ \quad \blacksquare \quad \boxed{ } \quad \boxed{ 
                                                         \psi2 \rightarrow InterpolatingFunction Domain: \{\{1. \times 10^{-12}, 1.73\}\} Output: scalar
                                                           \psi3 \rightarrow InterpolatingFunction Domain: \{\{1. \times 10^{-12}, 1.73\}\} Output: scalar
                                                          \psi4 \rightarrow InterpolatingFunction Domain: \{\{1. \times 10^{-12}, 1.73\}\} Output: scalar
     log_{\infty} = 0 OneOne = Evaluate[\{\psi 1[\tau Perp], \psi 2[\tau Perp], \psi 3[\tau Perp], \psi 4[\tau Perp]\} /. y1]
  Out[58]= \left\{ \left\{ -6.34762 \times 10^{-7} - 0.0973861 \, \text{i} , -0.872153 - 1.90788 \times 10^{-7} \, \text{i} , \right\} \right\}
                                                           \left\{-8.75372\times10^{-7}-0.438595\ \text{i},\ 0.193658-1.97455\times10^{-7}\ \text{i}\right\}\right\}
     In[59]:=
     In[60]:=
```

```
\psi 4'[t] == \text{Eqn4}[t], \ \psi 1[10^{-12}] == 0, \ \psi 2[10^{-12}] == 1, \ \psi 3[10^{-12}] == 0, \ \psi 4[10^{-12}] == 0
            \{\psi 1, \psi 2, \psi 3, \psi 4\}, \{t, 10^{-12}, \tau Perp + 0.1\}, MaxSteps \rightarrow 2 * 10^8, AccuracyGoal \rightarrow Automatic,
            PrecisionGoal → 50, WorkingPrecision → MachinePrecision, Method → "ExplicitRungeKutta"
                                                             Domain: {{1.×10<sup>-12</sup>, 1.73}}
Output: scalar
Out[61]= \{ \{ \psi \mathbf{1} \rightarrow \text{InterpolatingFunction} | \}
                                                        Data not in notebook; Store now »
                                                             Domain: {{1.×10<sup>-12</sup>, 1.73}}
Output: scalar
            \psi 2 \rightarrow InterpolatingFunction
                                                        Data not in notebook; Store now »
                                                                  Domain: \{\{1. \times 10^{-12}, 1.73\}\}
Output: scalar
            \psi3 \rightarrow InterpolatingFunction
                                                        Data not in notebook; Store now »
                                                                  Domain: \{\{1. \times 10^{-12}, 1.73\}\}
Output: scalar
            \psi \mathbf{4} \rightarrow \text{InterpolatingFunction}
                                                        Data not in notebook; Store now »
log_{2}=0 OneTwo = Evaluate[\{\psi 1[\tau Perp], \psi 2[\tau Perp], \psi 3[\tau Perp], \psi 4[\tau Perp]\} /. y2]
Out[62]= \left\{ \left\{ -0.872144 - 6.97989 \times 10^{-8} \ \dot{\mathbb{1}} \text{ , } -3.44975 \times 10^{-7} + 0.0973951 \ \dot{\mathbb{1}} \text{ , } \right. \right\}
            0.193669 - 5.60179 \times 10^{-8} i, -5.27585 \times 10^{-7} + 0.438606 i}
```

```
ln[63]:= y3 = NDSolve[\{\psi1'[t] == Eqn1[t], \psi2'[t] == Eqn2[t], \psi3'[t] == Eqn3[t],
              \psi 4'[t] = \text{Eqn4}[t], \ \psi 1[10^{-12}] = 0, \ \psi 2[10^{-12}] = 0, \ \psi 3[10^{-12}] = 1, \ \psi 4[10^{-12}] = 0
             \{\psi 1, \psi 2, \psi 3, \psi 4\}, \{t, 10^{-12}, \tau Perp + 0.1\}, MaxSteps \rightarrow 2 * 10^6, AccuracyGoal \rightarrow Automatic,
             PrecisionGoal → 50, WorkingPrecision → MachinePrecision, Method → "ExplicitRungeKutta"]
 \text{Out}_{[63]=} \ \left\{ \left\{ \psi \mathbf{1} \rightarrow \text{InterpolatingFunction} \left[ \right. \right] \right. \\ \left. \left\{ \left\{ 1. \times 10^{-12}, \ 1.73 \right\} \right\} \right. \\ \left. \left\{ \left\{ 0. \times 10^{-12}, \ 1.73 \right\} \right\} \right\} \right\} 
            \psi2 \rightarrow InterpolatingFunction Domain: \{\{1. \times 10^{-12}, 1.73\}\} Output: scalar
            \psi3 \rightarrow InterpolatingFunction [ Domain: {{1.×10<sup>-12</sup>, 1.73}} Output: scalar ],
            ln[64]:= TwoOne = Evaluate[\{\psi 1[\tau Perp], \psi 2[\tau Perp], \psi 3[\tau Perp], \psi 4[\tau Perp]\} /. y3]
Out[64]= \left\{ -4.61287 \times 10^{-7} + 0.438657 \, \text{i}, -0.193721 - 5.80156 \times 10^{-7} \, \text{i}, \right\}
            4.11858 \times 10^{-7} - 0.0974387 \text{ i}, -0.8721 + 4.74197 \times 10^{-7} \text{ i} \}
```

```
ln[65] = y4 = NDSolve[\{\psi1'[t] == Eqn1[t], \psi2'[t] == Eqn2[t], \psi3'[t] == Eqn3[t],
             \psi 4'[t] == \text{Eqn4}[t], \ \psi 1[10^{-12}] == 0, \ \psi 2[10^{-12}] == 0, \ \psi 3[10^{-12}] == 0, \ \psi 4[10^{-12}] == 1\},
           \{\psi 1, \psi 2, \psi 3, \psi 4\}, \{t, 10^{-12}, \tau Perp + 0.1\}, MaxSteps \rightarrow 2 * 10^8, AccuracyGoal \rightarrow Automatic,
           WorkingPrecision → MachinePrecision, Method → "ExplicitRungeKutta"]
                                                                 Domain: \{\{1. \times 10^{-12}, 1.73\}\}
Output: scalar
Out[65]= \{ \{ \psi \mathbf{1} \rightarrow \text{InterpolatingFunction} | \}
                                                      Data not in notebook; Store now »
                                                                  Domain: \{\{1. \times 10^{-12}, 1.73\}\}
           \psi 2 \rightarrow InterpolatingFunction
                                                       Data not in notebook; Store now »
                                                                  Domain: \{\{1. \times 10^{-12}, 1.73\}\}
           \psi3 \rightarrow InterpolatingFunction
                                                                  Output: scalar
                                                       Data not in notebook; Store now »
                                                                  Domain: \{\{1. \times 10^{-12}, 1.73\}\}
Output: scalar
           \psi 4 \rightarrow InterpolatingFunction
                                                      Data not in notebook; Store now »
ln[66]: TwoTwo = Evaluate[\{\psi 1[\tau Perp], \psi 2[\tau Perp], \psi 3[\tau Perp], \psi 4[\tau Perp]\} /. y4]
Out[66]= \left\{ \left\{ -0.193699 - 2.40768 \times 10^{-8} \text{ i}, 3.2985 \times 10^{-7} - 0.438635 \text{ i}, \right\} \right\}
           -0.872119 - 1.28 \times 10^{-9} i, -2.25667 \times 10^{-7} + 0.0974204 i}
In[67]:=
In[68]:= OneOneStart = KroneckerProduct[{{1, 0}}, {{1, 0}}]
Out[68]= \{ \{ 1, 0, 0, 0 \} \}
In [69]:= One Two Start = Kronecker Product [\{1, 0\}\}, \{\{0, 1\}\}]
Out[69]= \{ \{ 0, 1, 0, 0 \} \}
In[70]:= TwoOneStart = KroneckerProduct[{{0, 1}}, {{1, 0}}]
Out[70]= \{ \{ 0, 0, 1, 0 \} \}
In[71]:= TwoTwoStart = KroneckerProduct[{{0, 1}}}, {{0, 1}}]
Out[71]= \{ \{ 0, 0, 0, 1 \} \}
```

```
In[72]:= U = Transpose[OneOne] .OneOneStart + Transpose[OneTwo] .OneTwoStart +
        Transpose [TwoOne] . TwoOneStart + Transpose [TwoTwo] . TwoTwoStart
```

$$\begin{array}{l} \text{Out} [72] = \left. \left\{ \left\{ -6.34762 \times 10^{-7} - 0.0973861\,\,\dot{\text{i}}\,\,,\, -0.872144 - 6.97989 \times 10^{-8}\,\,\dot{\text{i}}\,\,, \right. \right. \\ \left. -4.61287 \times 10^{-7} + 0.438657\,\,\dot{\text{i}}\,\,,\, -0.193699 - 2.40768 \times 10^{-8}\,\,\dot{\text{i}}\,\,\right\}, \\ \left\{ -0.872153 - 1.90788 \times 10^{-7}\,\,\dot{\text{i}}\,\,,\, -3.44975 \times 10^{-7} + 0.0973951\,\,\dot{\text{i}}\,\,,\, -0.193721 - 5.80156 \times 10^{-7}\,\,\dot{\text{i}}\,\,, \right. \\ \left. 3.2985 \times 10^{-7} - 0.438635\,\,\dot{\text{i}}\,\,\right\}, \,\, \left\{ -8.75372 \times 10^{-7} - 0.438595\,\,\dot{\text{i}}\,\,,\, 0.193669 - 5.60179 \times 10^{-8}\,\,\dot{\text{i}}\,\,, \right. \\ \left. 4.11858 \times 10^{-7} - 0.0974387\,\,\dot{\text{i}}\,\,,\, -0.872119 - 1.28 \times 10^{-9}\,\,\dot{\text{i}}\,\,\right\}, \,\, \left\{ 0.193658 - 1.97455 \times 10^{-7}\,\,\dot{\text{i}}\,\,,\, -5.27585 \times 10^{-7} + 0.438606\,\,\dot{\text{i}}\,\,,\, -0.87211 + 4.74197 \times 10^{-7}\,\,\dot{\text{i}}\,\,,\, -2.25667 \times 10^{-7} + 0.0974204\,\,\dot{\text{i}}\,\,\right\} \right\} \end{array}$$

In[73]:= U.Transpose[OneTwoStart]

$$\begin{array}{ll} \text{Out} [73] = & \left\{ \left\{ -\,0.872144 - 6.97989 \times 10^{-8} \,\,\dot{\mathbb{1}} \right\} \text{, } \left\{ -\,3.44975 \times 10^{-7} \, + 0.0973951 \,\,\dot{\mathbb{1}} \right\} \text{,} \\ & \left\{ 0.193669 - 5.60179 \times 10^{-8} \,\,\dot{\mathbb{1}} \right\} \text{, } \left\{ -\,5.27585 \times 10^{-7} \, + 0.438606 \,\,\dot{\mathbb{1}} \right\} \right\} \end{array}$$

In[74]:= OneTwo

Out[74]=
$$\left\{ \left\{ -0.872144 - 6.97989 \times 10^{-8} \ \dot{\mathbb{1}} \ , \ -3.44975 \times 10^{-7} + 0.0973951 \ \dot{\mathbb{1}} \ , \right. \right. \\ \left. 0.193669 - 5.60179 \times 10^{-8} \ \dot{\mathbb{1}} \ , \ -5.27585 \times 10^{-7} + 0.438606 \ \dot{\mathbb{1}} \ \right\} \right\}$$

In[75]:= MatrixForm[U]

Out[75]//MatrixForm=

```
-6.34762 \times 10^{-7} - 0.0973861 \ \text{i} \ -0.872144 - 6.97989 \times 10^{-8} \ \text{i} \ -4.61287 \times 10^{-7} + 0.438657 \ \text{i} \ -0.1936 = 0.1936 \times 10^{-8} \ \text{i} \ -0.1936 \times 10^{-8} \ \text{i} \ 
        -0.872153 - 1.90788 \times 10^{-7} \; \text{i} \quad -3.44975 \times 10^{-7} + 0.0973951 \; \text{i} \quad -0.193721 - 5.80156 \times 10^{-7} \; \text{i} \qquad 3.29851 \times 10^{-7} \times 10^{-7
-8.75372 \times 10^{-7} - 0.438595 \, \text{i} \qquad 0.193669 - 5.60179 \times 10^{-8} \, \text{i} \qquad 4.11858 \times 10^{-7} - 0.0974387 \, \text{i} \qquad -0.8720 + 0.193658 - 1.97455 \times 10^{-7} \, \text{i} \qquad -5.27585 \times 10^{-7} + 0.438606 \, \text{i} \qquad -0.8721 + 4.74197 \times 10^{-7} \, \text{i} \qquad -2.25661 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.19361 + 0.1
```

In[76]:= MatrixForm[U.Conjugate[Transpose[U]]]

Out[76]//MatrixForm=

In[77]:=

In[78]:= (*In ideal life, it has to be a unit matrix*)

In[79]:=

$$\begin{aligned} &\text{In[80]:= V1Ref } &= \left\{ \left\{ \text{Cos} \left[\frac{1}{4} \left(\pi - 2 \, \sigma \right) \right], \, - \dot{\textbf{n}} \, \text{Sin} \left[\frac{1}{4} \left(\pi - 2 \, \sigma \right) \right] \right\} \right\} \\ &\text{V2Ref } &= \left\{ \left\{ \text{Cos} \left[\frac{1}{4} \left(\pi + 2 \, \sigma \right) \right], \, - \dot{\textbf{n}} \, \text{Sin} \left[\frac{1}{4} \left(\pi + 2 \, \sigma \right) \right] \right\} \right\} \end{aligned}$$

Out[80]=
$$\left\{ \left\{ \frac{1+\sqrt{3}}{2\sqrt{2}}, \frac{i(-1+\sqrt{3})}{2\sqrt{2}} \right\} \right\}$$

Out[81]=
$$\left\{ \left\{ -\frac{-1+\sqrt{3}}{2\sqrt{2}}, -\frac{i(1+\sqrt{3})}{2\sqrt{2}} \right\} \right\}$$

In[82]:=

```
ln[83] = \Theta 1 = 2 * ArcTan[(M0 - 1)^(1/2)]
                    Rrot = MatrixExp\left[-I * \theta 1 * \sigma y / 2\right]
Out[83]= 1.41611
Out[84]= { \{0.759628 + 0.i, -0.650358 + 0.i\}}, \{0.650358 + 0.i, 0.759628 + 0.i\}}
 In[85]:= Ancilla = N[Rrot.Transpose[{{1, 0}}]]
Out[85]= \{\{0.759628 + 0. i\}, \{0.650358 + 0. i\}\}
 In[86]:= ArrayReshape[Ancilla, {2, 1}]
Out[86]= \{\{0.759628 + 0. i\}, \{0.650358 + 0. i\}\}
 InitialFirst = ArrayReshape[KroneckerProduct[ArrayReshape[Ancilla, {2, 1}], v1Ref], {4}]
Out[87]= \{0.733744 + 0. i, 0. + 0.196606 i, 0.628198 + 0. i, 0. + 0.168325 i\}
  InitialSecond = ArrayReshape[KroneckerProduct[ArrayReshape[Ancilla, {2, 1}], v2Ref], {4}]
Out[88]= \{-0.196606 + 0.1, 0.-0.733744 i, -0.168325 + 0.1, 0.-0.628198 i\}
  In[89]:= U.Transpose[{InitialFirst}]
Out[89]= \left\{ \left\{ -7.37757 \times 10^{-7} + 0.000033663 \, \dot{\mathbb{1}} \right\} , \, \left\{ -0.706947 - 5.16744 \times 10^{-7} \, \dot{\mathbb{1}} \right\} \right\}
                          \left\{-3.72341\times10^{-7}-0.49175~\text{i}\right\}\text{, }\left\{-0.508387+1.12968\times10^{-8}~\text{i}\right\}\right\}
 In[90]:= U.Transpose[{InitialSecond}]
\text{Out} [90] = \left. \left. \left\{ \textbf{1.36105} \times \textbf{10}^{-7} + \textbf{0.706921} \ \dot{\textbf{1}} \right. \right\} \text{, } \left\{ -8.05074 \times \textbf{10}^{-6} + \textbf{1.81077} \times \textbf{10}^{-7} \ \dot{\textbf{1}} \right. \right\} \text{, } \left\{ -8.05074 \times \textbf{10}^{-6} + \textbf{1.81077} \times \textbf{10}^{-7} \ \dot{\textbf{1}} \right. \right\} \text{, } \left\{ -8.05074 \times \textbf{10}^{-6} + \textbf{1.81077} \times \textbf{10}^{-7} \ \dot{\textbf{1}} \right. \right\} \text{, } \left\{ -8.05074 \times \textbf{10}^{-6} + \textbf{1.81077} \times \textbf{10}^{-7} \right. \right\} \text{, } \left\{ -8.05074 \times \textbf{10}^{-6} + \textbf{1.81077} \times \textbf{10}^{-7} \right. \right\} \text{, } \left\{ -8.05074 \times \textbf{10}^{-6} + \textbf{1.81077} \times \textbf{10}^{-7} \right. \right\} \text{, } \left\{ -8.05074 \times \textbf{10}^{-6} + \textbf{1.81077} \times \textbf{10}^{-7} \right. \right\} \text{, } \left\{ -8.05074 \times \textbf{10}^{-6} + \textbf{1.81077} \times \textbf{10}^{-7} \right. \right\} \text{, } \left\{ -8.05074 \times \textbf{10}^{-6} + \textbf{1.81077} \times \textbf{10}^{-7} \right. \right\} \text{, } \left\{ -8.05074 \times \textbf{10}^{-6} + \textbf{1.81077} \times \textbf{10}^{-7} \right. \right\} \text{, } \left\{ -8.05074 \times \textbf{10}^{-6} + \textbf{1.81077} \times \textbf{10}^{-7} \right. \right\} \text{, } \left\{ -8.05074 \times \textbf{10}^{-6} + \textbf{1.81077} \times \textbf{10}^{-7} \right. \right\} \text{, } \left\{ -8.05074 \times \textbf{10}^{-6} + \textbf{1.81077} \times \textbf{10}^{-7} \right. \right\} \text{, } \left\{ -8.05074 \times \textbf{10}^{-6} + \textbf{1.81077} \times \textbf{10}^{-7} \right. \right\} \text{, } \left\{ -8.05074 \times \textbf{10}^{-6} + \textbf{1.81077} \times \textbf{10}^{-7} \right. \right\} \text{, } \left\{ -8.05074 \times \textbf{10}^{-6} + \textbf{1.81077} \times \textbf{10}^{-7} \right. \right\} \text{, } \left\{ -8.05074 \times \textbf{10}^{-6} + \textbf{1.81077} \times \textbf{10}^{-7} \right. \right\} \text{, } \left\{ -8.05074 \times \textbf{10}^{-6} + \textbf{1.81077} \times \textbf{10}^{-7} \right. \right\} \text{, } \left\{ -8.05074 \times \textbf{10}^{-6} + \textbf{1.81077} \times \textbf{10}^{-7} \right. \right\} \text{, } \left\{ -8.05074 \times \textbf{10}^{-6} + \textbf{1.81077} \times \textbf{10}^{-7} \right. \right\} \text{, } \left\{ -8.05074 \times \textbf{10}^{-6} + \textbf{1.81077} \times \textbf{10}^{-7} \right. \right\} \text{, } \left\{ -8.05074 \times \textbf{10}^{-6} + \textbf{1.81077} \times \textbf{10}^{-7} \right. \right\} \text{, } \left\{ -8.05074 \times \textbf{10}^{-6} + \textbf{1.81077} \times \textbf{10}^{-7} \right. \right\} \text{, } \left\{ -8.05074 \times \textbf{10}^{-7} + \textbf{10}^{-7} \right\} \text{, } \left\{ -8.05074 \times \textbf{10}^{-7} + \textbf{10}^{-7} + \textbf{10}^{-7} \right\} \text{, } \left\{ -8.05074 \times \textbf{10}^{-7} + \textbf{10}^{-7}
                          \left\{6.08704 \times 10^{-8} + 0.508392 \ \dot{\mathbb{1}} \right\}, \left\{0.491746 + 4.87877 \times 10^{-7} \ \dot{\mathbb{1}} \right\} \right\}
  In[91]:= Output1 = ArrayReshape
                              { (U.Transpose[{InitialFirst}])[[3]], (U.Transpose[{InitialFirst}])[[4]]}, {2}]
Out[91]= \left\{-3.72341 \times 10^{-7} - 0.49175 \,\dot{\mathbb{1}}, -0.508387 + 1.12968 \times 10^{-8} \,\dot{\mathbb{1}}\right\}
 In[92]:= Output2 = ArrayReshape
                             {(U.Transpose[{InitialSecond}])[[3]], (U.Transpose[{InitialSecond}])[[4]]}, {2}]
Out[92]= \left\{6.08704 \times 10^{-8} + 0.508392 \,\dot{\mathbb{1}}, \, 0.491746 + 4.87877 \times 10^{-7} \,\dot{\mathbb{1}}\right\}
 In[93]:=
                    a12 = Abs[{Output1}.Transpose[Conjugate[{Output2}]]]^2
Out[93]= \{ \{ 0.249999 \} \}
 In[94]:= (*May be! It is a mixed state!*)
```

```
In[95]:= U
      Out[95]= \left\{ \left\{ -6.34762 \times 10^{-7} - 0.0973861 \, \text{i}, -0.872144 - 6.97989 \times 10^{-8} \, \text{i}, \right\} \right\}
                                                              -4.61287\times 10^{-7} + 0.438657~\mbox{i} , -0.193699 - 2.40768\times 10^{-8}~\mbox{i} } ,
                                                      \{-0.872153 - 1.90788 \times 10^{-7} \text{ i}, -3.44975 \times 10^{-7} + 0.0973951 \text{ i}, -0.193721 - 5.80156 \times 10^{-7} \text{ i}, -0.193721 - 5.8016 \times 10^{-7} \text{ i}, -0.19372
                                                             \textbf{4.11858} \times \textbf{10}^{-7} - \textbf{0.0974387} \; \dot{\textbf{1}} \, , \; -\textbf{0.872119} - \textbf{1.28} \times \textbf{10}^{-9} \; \dot{\textbf{1}} \, \big\} \, , \; \big\{ \textbf{0.193658} - \textbf{1.97455} \times \textbf{10}^{-7} \; \dot{\textbf{1}} \, , \; -\textbf{0.872119} - \textbf{1.28} \times \textbf{10}^{-9} \; \dot{\textbf{1}} \, \big\} \, , \; \big\{ \textbf{0.193658} - \textbf{1.97455} \times \textbf{10}^{-7} \; \dot{\textbf{1}} \, \big\} \, , \; \big\{ \textbf{0.193658} - \textbf{1.97455} \times \textbf{10}^{-7} \; \dot{\textbf{1}} \, \big\} \, , \; \big\{ \textbf{0.193658} - \textbf{1.97455} \times \textbf{10}^{-7} \; \dot{\textbf{1}} \, \big\} \, , \; \big\{ \textbf{0.193658} - \textbf{1.97455} \times \textbf{10}^{-7} \; \dot{\textbf{1}} \, \big\} \, , \; \big\{ \textbf{0.193658} - \textbf{1.97455} \times \textbf{10}^{-7} \; \dot{\textbf{1}} \, \big\} \, , \; \big\{ \textbf{0.193658} - \textbf{1.97455} \times \textbf{10}^{-7} \; \dot{\textbf{1}} \, \big\} \, , \; \big\{ \textbf{0.193658} - \textbf{1.97455} \times \textbf{10}^{-7} \; \dot{\textbf{1}} \, \big\} \, , \; \big\{ \textbf{0.193658} - \textbf{1.97455} \times \textbf{10}^{-7} \; \dot{\textbf{1}} \, \big\} \, , \; \big\{ \textbf{0.193658} - \textbf{1.97455} \times \textbf{10}^{-7} \; \dot{\textbf{1}} \, \big\} \, , \; \big\{ \textbf{0.193658} - \textbf{1.97455} \times \textbf{10}^{-7} \; \dot{\textbf{1}} \, \big\} \, , \; \big\{ \textbf{0.193658} - \textbf{1.97455} \times \textbf{10}^{-7} \; \dot{\textbf{1}} \, \big\} \, , \; \big\{ \textbf{0.193658} - \textbf{1.97455} \times \textbf{10}^{-7} \; \dot{\textbf{1}} \, \big\} \, , \; \big\{ \textbf{0.193658} - \textbf{1.97455} \times \textbf{10}^{-7} \; \dot{\textbf{1}} \, \big\} \, , \; \big\{ \textbf{0.193658} - \textbf{1.97455} \times \textbf{10}^{-7} \; \dot{\textbf{1}} \, \big\} \, , \; \big\{ \textbf{0.193658} - \textbf{1.97455} \times \textbf{10}^{-7} \; \dot{\textbf{1}} \, \big\} \, , \; \big\{ \textbf{0.193658} - \textbf{1.97455} \times \textbf{10}^{-7} \; \dot{\textbf{1}} \, \big\} \, , \; \big\{ \textbf{0.193658} - \textbf{1.97455} \times \textbf{10}^{-7} \; \dot{\textbf{1}} \, \big\} \, , \; \big\{ \textbf{0.193658} - \textbf{1.97455} \times \textbf{10}^{-7} \; \dot{\textbf{1}} \, \big\} \, , \; \big\{ \textbf{0.193658} - \textbf{1.97455} \times \textbf{10}^{-7} \; \dot{\textbf{1}} \, \big\} \, , \; \big\{ \textbf{0.193658} - \textbf{1.97455} \times \textbf{10}^{-7} \; \dot{\textbf{1}} \, \big\} \, , \; \big\{ \textbf{0.193658} - \textbf{1.97455} \times \textbf{10}^{-7} \; \dot{\textbf{1}} \, \big\} \, , \; \big\{ \textbf{0.193658} - \textbf{0.193658} + \textbf{0.19365} \times \textbf{0.19365} + \textbf{0.
                                                             -5.27585 \times 10^{-7} + 0.438606 \, i, -0.8721 + 4.74197 \times 10^{-7} \, i, -2.25667 \times 10^{-7} + 0.0974204 \, i}
         In[96]:=
         In[97]:=
         Out[98]= 0.0000722275
         In[99]:=
      In[100]:=
     In[101]:=
    ln[102] = (1/2)^{(1/2)}
Out[102]= \frac{1}{\sqrt{2}}
     In[103]:=
    In[104]:= AncillaAdjuster = \left\{ \left\{ \frac{1}{\sqrt{2}}, \frac{1}{\sqrt{2}} \right\}, \left\{ \frac{1}{\sqrt{2}}, -\frac{1}{\sqrt{2}} \right\} \right\}
Out[104]= \left\{ \left\{ \frac{1}{\sqrt{2}}, \frac{1}{\sqrt{2}} \right\}, \left\{ \frac{1}{\sqrt{2}}, -\frac{1}{\sqrt{2}} \right\} \right\}
     In[105]:=
     In[106]:= AncillaAdjuster.Transpose[{{1, 0}}]
Out[106]= \left\{ \left\{ \frac{1}{\sqrt{2}} \right\}, \left\{ \frac{1}{\sqrt{2}} \right\} \right\}
     In[107]:= AncillaAdjuster.ConjugateTranspose[AncillaAdjuster]
 Out[107]= \{\{1,0\},\{0,1\}\}
    In[108]:= Ancilla
 Out[108]= \{ \{ 0.759628 + 0. i \}, \{ 0.650358 + 0. i \} \}
    In[109]:= AncillaAdjuster.Transpose[{{1, 0}}] - Ancilla
  Out[109]= \{ \{ -0.0525208 + 0. i \}, \{ 0.0567485 + 0. i \} \}
```

```
In[110]:= Adjuster65 = { {-0.5686136473872213`, 0.8226047167412797` i },
         \{-0.8226047167412797\ i, 0.5686136473872213\ \}\}
Out[110]= \{\{-0.568614, 0.+0.822605 i\}, \{0.-0.822605 i, 0.568614\}\}
```