mielke-geometrodynamics — formula report

1794 inline formulas (section omitted; all rendered), 1149 display equations, 5 tables, 18 unrecovered image regions.

Display equations

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ0966 (14.2.7) **[conf 0.024]**	313	■ 0.024 ● W|+1	\begin{aligned} d \hat{s}^{2} & =\frac{1}{4+K} \operatorname{Tr}\left(\hat{\vartheta} \otimes_{s} \hat{ \vartheta}^{T}\right)=\hat{g}_{A B} \hat{\vartheta}^{A} \otimes_{s} \hat{\vartheta}^{B} ; \quad A, B,=0, \ldots, 3+K \\ & =\frac{1}{4+K} \operatorname{Tr}\left[\begin{array}{l|l} \vartheta \otimes \vartheta+\hat{ \ell}^{2} \omega \otimes \omega & \hat{\ell} \omega \otimes \stackrel{\circ}{\vartheta} \\ \hline \hat{\ell} \vartheta \otimes \omega & \ddots \\ \circ & \vartheta \otimes \end{array}\right] . \end{aligned}	$d\hat{s}^2 = \frac{1}{4+K}\operatorname{Tr}\left(\hat{\vartheta}\otimes_s\hat{\vartheta}^T\right) = \hat{g}_{AB}\hat{\vartheta}^A\otimes_s\hat{\vartheta}^B; \quad A,B,=0,\ldots,3+K$ $= \frac{1}{4+K}\operatorname{Tr}\left[\begin{array}{l\|l} \vartheta\otimes\vartheta+\hat{\ell}^2\omega\otimes\omega & \hat{\ell}\omega\otimes\overset{\circ}{\vartheta} \\ \hline \hat{\ell}\vartheta\otimes\omega & \ddots \\ \circ & \vartheta\otimes \end{array}\right].$	$d\hat{s}^2 = \frac{1}{4+K}\operatorname{Tr}(\hat{\vartheta}\otimes_s\hat{\vartheta}^{\mathrm{T}}) = \hat{g}_{AB}\hat{\vartheta}^A\otimes_s\hat{\vartheta}^B; \quad A,B,=0,\ldots,3+K$ $= \frac{1}{4+K}\operatorname{Tr}\left[\begin{array}{l\|l} \vartheta\otimes\vartheta+\hat{\ell}^2\omega\otimes\omega & \hat{\ell}\omega\otimes\overset{\circ}{\vartheta} \\ \hline \hat{\ell}\overset{\circ}{\vartheta}\otimes\omega & \overset{\circ}{\vartheta}\otimes\overset{\circ}{\vartheta} \end{array}\right].$ (1
mielke-geometrodynamics_EQ0403 (6.4.23) **[conf 0.028]**	134	■ 0.028 ● C|+4	\Psi_{\\|}(\vartheta)=\exp \left(-\int_{M_{3}} \stackrel{(\pm)}{C}_{\mathrm{TT}}\right)=\exp \left(\frac{-1}{2 \ell^{2}} \int_{M_{3}}\left[\stackrel{*}{+}_{\underline{\vartheta}_{B}} \wedge \stackrel{*}{T}_{\bar{T}}^{B}\right]\right)	$\Psi_{\|}(\vartheta) = \exp\left(-\int_{M_3}\overset{(\pm)}{C}_{\mathrm{TT}}\right) = \exp\left(\frac{-1}{2\ell^2}\int_{M_3}\left[\overset{*}{+}_{\underline{\vartheta}_B}\wedge\overset{*}{T}_{\bar{T}}^{B}\right]\right)$	$\Psi_{\|}(\vartheta) = \exp\left(-\int_{M_3}\overset{(\pm)}{\underline{C}}_{\mathrm{TT}}\right) = \exp\left(\frac{-1}{2\ell^2}\int_{M_3}\left[\overset{*}{\underline{\vartheta}}_B\wedge\overset{*}{\underline{T}}{}^{(\pm)B}\right]\right)$
mielke-geometrodynamics_EQ0850 (12.3.3) **[conf 0.032]**	275	■ 0.032 ● C|+3	\begin{aligned} \not D^{2} & =-\frac{1}{2} \gamma^{ \alpha} \gamma^{\beta}\left(\left\{D_{\alpha}^{\{ \}}, D_{\beta}^{\{ \}}\right\}+\left[D_{\alpha}^{\{ \}}, D_{\beta}^{\{ \}}\right]\right)-2 i m \not D^{ \}} \\ & -\frac{i}{4} \gamma_{5}\left(\not D^{\{ } \nexists \mathscr{A}\right)+\frac{1}{2} \gamma_{5} \sigma^{\alpha \beta} \mathscr{A}_{\alpha} D_{\beta}^{ \{ \}}+m^{2}-\frac{1}{2} m \gamma_{5} \not \mathscr{A}-\frac{1}{16} \nVdash \mathscr{A} \\ & \cong-\square-\frac{1}{8} \sigma^{\alpha \beta} R_{\alpha \beta \mu \nu}^{\{ } \sigma^{\mu \nu} \\ & -\frac{i}{4} \gamma_{5}\left(\not D^{\{ } \not b\right)+\frac{1}{2} \gamma_{5} \sigma^{\alpha \beta} \mathscr{A}_{\alpha} D_{\beta}^{ \{ \}}-\frac{1}{16} \mathscr{A}_{\alpha} \mathscr{A}^{ \alpha}-m^{2} \end{aligned}	$\not D^2 = -\frac{1}{2}\gamma^\alpha\gamma^\beta\left(\left\{D_\alpha^{\{\}}, D_\beta^{\{\}}\right\} + \left[D_\alpha^{\{\}}, D_\beta^{\{\}}\right]\right) - 2im\not D^{\}}$ $-\frac{i}{4}\gamma_5\left(\not D^{\{}\nexists\mathscr{A}\right) + \frac{1}{2}\gamma_5\sigma^{\alpha\beta}\mathscr{A}_\alpha D_\beta^{\}} + m^2 - \frac{1}{2}m\gamma_5\not\mathscr{A} - \frac{1}{16}\nVdash\mathscr{A}$ $\cong -\square - \frac{1}{8}\sigma^{\alpha\beta}R^{\{}_{\alpha\beta\mu\nu}\sigma^{\mu\nu}$ $-\frac{i}{4}\gamma_5\left(\not D^{\{}\not b\right) + \frac{1}{2}\gamma_5\sigma^{\alpha\beta}\mathscr{A}_\alpha D_\beta^{\}} - \frac{1}{16}\mathscr{A}_\alpha\mathscr{A}^\alpha - m^2$	$\not D^2 = -\frac{1}{2}\gamma^\alpha\gamma^\beta\left(\{D_\alpha^{\{\}}, D_\beta^{\{\}}\} + [D_\alpha^{\{\}}, D_\beta^{\{\}}]\right) - 2im\not D^{\{\}}$ $-\frac{i}{4}\gamma_5(\not D^{\{\}}\not\mathscr{A}) + \frac{1}{2}\gamma_5\sigma^{\alpha\beta}\mathscr{A}_\alpha D_\beta^{\{\}} + m^2 - \frac{1}{2}m\gamma_5\not\mathscr{A} - \frac{1}{16}\not\mathscr{A}\not\mathscr{A}$ $\cong -\square - \frac{1}{8}\sigma^{\alpha\beta}R^{\{\}}_{\alpha\beta\mu\nu}\sigma^{\mu\nu}$ $-\frac{i}{4}\gamma_5(\not D^{\{\}}\not\mathscr{A}) + \frac{1}{2}\gamma_5\sigma^{\alpha\beta}\mathscr{A}_\alpha D_\beta^{\{\}} - \frac{1}{16}\mathscr{A}_\alpha\mathscr{A}^\alpha - m^2$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): ● C component ● W weak ● S stable ● N noise ● K clean ● not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ0402 (6.4.22) **[conf 0.042]**	134	■ 0.042 ● C|+5	`\begin{array}{ll} q: & \underline{*}^{\vartheta^{\beta}} \Psi_{\\|}(\vartheta)=\underline{*}^{\prime}\underline{\vartheta}^{\beta}\Psi_{\\|}(\vartheta), \\ \stackrel{ \pm}{p}: & \stackrel{*}{+}_{\underline{\Pi}} \Psi_{\\|}(\vartheta)=-i \ell^{2} \frac{\delta}{\delta \underline{*}_{\alpha}} \Psi_{\\|}(\vartheta), \end{array}`	$\begin{array}{ll} q: & \underline{*}^{\vartheta^{\beta}} \Psi_{\\|}(\vartheta)=\underline{*}^{\prime}\underline{\vartheta}^{\beta}\Psi_{\\|}(\vartheta), \\ \stackrel{ \pm}{p}: & \stackrel{*}{+}_{\underline{\Pi}} \Psi_{\\|}(\vartheta)=-i \ell^{2} \frac{\delta}{\delta \underline{*}_{\alpha}} \Psi_{\\|}(\vartheta), \end{array}$	$\begin{array}{ll} q: & \underline{*}^{\vartheta^{\beta}} \Psi_{\\|}(\vartheta)=\underline{*}^{\prime}\underline{\vartheta}^{\beta}\Psi_{\\|}(\vartheta), \\ \stackrel{ \pm}{p}: & \stackrel{*}{+}_{\underline{\Pi}} \Psi_{\\|}(\vartheta)=-i \ell^{2} \frac{\delta}{\delta \underline{*}_{\alpha}} \Psi_{\\|}(\vartheta), \end{array}$
mielke-geometrodynamics_EQ0293 (4.5.4) **[conf 0.052]**	101	■ 0.052 ● W|+0	`\xi \downharpoonleft L \equiv\left(\xi \downharpoonleft \vartheta^{\alpha}\right) \wedge \frac{\partial L}{ \partial \vartheta^{\alpha}}+(\xi \downharpoonleft \Psi) \wedge \frac{\partial L}{\partial \Psi}+(\xi \downharpoonleft D \Psi) \wedge \frac{\partial L}{ \partial D \Psi} .`	$\xi \downharpoonleft L \equiv\left(\xi \downharpoonleft \vartheta^{\alpha}\right) \wedge \frac{\partial L}{ \partial \vartheta^{\alpha}}+(\xi \downharpoonleft \Psi) \wedge \frac{\partial L}{\partial \Psi}+(\xi \downharpoonleft D \Psi) \wedge \frac{\partial L}{ \partial D \Psi} .$	$\xi \downharpoonleft L \equiv\left(\xi \downharpoonleft \vartheta^{\alpha}\right) \wedge \frac{\partial L}{ \partial \vartheta^{\alpha}}+(\xi \downharpoonleft \Psi) \wedge \frac{\partial L}{\partial \Psi}+(\xi \downharpoonleft D \Psi) \wedge \frac{\partial L}{ \partial D \Psi} .$
mielke-geometrodynamics_EQ0064 (2.8.6) **[conf 0.054]**	047	■ 0.054 ● N|-2	`\begin{aligned} & \stackrel{*}{\pi}\left(\gamma_{1} \right)=-\frac{1}{2 \pi i} \operatorname{Tr} \Omega \quad(=0) \\ & \stackrel{*}{\pi}\left(\gamma_{2} \right)=-\frac{1}{8 \pi^{2}}\{\operatorname{Tr}(\Omega \wedge \Omega)-\operatorname{Tr}(\Omega) \wedge \operatorname{Tr}(\Omega)\} \\ & \quad\left(=-\frac{1}{32 \pi^{2}} \epsilon^{\alpha \beta \mu \nu} F_{\alpha \beta}{}^{j} F_{\mu \nu j} \sqrt{|g|} d^{4} x\right) \\ & * \pi^{2}\left(\gamma_{k}\right)=0 \text { for } k \geq 3 . \end{aligned}`	$\begin{aligned} & \stackrel{*}{\pi}\left(\gamma_{1} \right)=-\frac{1}{2 \pi i} \operatorname{Tr} \Omega \quad(=0) \\ & \stackrel{*}{\pi}\left(\gamma_{2} \right)=-\frac{1}{8 \pi^{2}}\{\operatorname{Tr}(\Omega \wedge \Omega)-\operatorname{Tr}(\Omega) \wedge \operatorname{Tr}(\Omega)\} \\ & \quad\left(=-\frac{1}{32 \pi^{2}} \epsilon^{\alpha \beta \mu \nu} F_{\alpha \beta}{}^{j} F_{\mu \nu j} \sqrt{\|g\|} d^{4} x\right) \\ & * \pi^{2}\left(\gamma_{k}\right)=0 \text { for } k \geq 3 . \end{aligned}$	$\begin{aligned} & \stackrel{*}{\pi}\left(\gamma_{1} \right)=-\frac{1}{2 \pi i} \operatorname{Tr} \Omega \quad(=0) \\ & \stackrel{*}{\pi}\left(\gamma_{2} \right)=-\frac{1}{8 \pi^{2}}\{\operatorname{Tr}(\Omega \wedge \Omega)-\operatorname{Tr}(\Omega) \wedge \operatorname{Tr}(\Omega)\} \\ & \quad\left(=-\frac{1}{32 \pi^{2}} \epsilon^{\alpha \beta \mu \nu} F_{\alpha \beta}{}^{j} F_{\mu \nu j} \sqrt{\|g\|} d^{4} x\right) \\ & * \pi^{2}\left(\gamma_{k}\right)=0 \text { for } k \geq 3 . \end{aligned}$
mielke-geometrodynamics_EQ0400 (6.4.19) **[conf 0.060]**	133	■ 0.060 ● W|+1	`\stackrel{( \pm)}{\mathscr{G}}_{\alpha}:=\stackrel{( \pm)}{\underline{D}}^{( \pm)} \underline{\Pi}_{\alpha}= \stackrel{( \pm)}{\underline{D}} \stackrel{*}{ }_{ \underline{A}_{\alpha}}^{( \pm)}=0,`	$\stackrel{(\pm)}{\mathscr{G}}_{\alpha}:=\stackrel{(\pm)}{\underline{D}}^{(\pm)} \underline{\Pi}_{\alpha}=\stackrel{(\pm)}{\underline{D}} \stackrel{*}{ }_{ \underline{A}_{\alpha}}^{(\pm)}=0,$	$\stackrel{(\pm)}{\mathscr{G}}_{\alpha}:=\stackrel{(\pm)}{\underline{D}}^{(\pm)} \underline{\Pi}_{\alpha}=\stackrel{(\pm)}{\underline{D}} \stackrel{*}{ }_{ \underline{A}_{\alpha}}^{(\pm)}=0,$
mielke-geometrodynamics_EQ0718 (10.9.4) **[conf 0.066]**	229	■ 0.066 ● N|+0	`\begin{aligned} \Sigma_{\alpha} & \left.\left.:=e_{ \alpha}\right\rfloor L_{\Psi}-\left(e_{\alpha}\right\rfloor \Psi\right) \wedge \frac{\partial L_{\Psi}}{ \partial \Psi}-\left(e_{\alpha} \downharpoonleft \bar{ \Psi}\right) \wedge \frac{\partial L_{\Psi}}{\partial \bar{\Psi}} \\ & \left.-\left(e_{\alpha}\right\rfloor D \Psi\right) \wedge \frac{\partial L_{\Psi}}{\partial D \Psi}-\left(e_{\alpha} \downharpoonleft D \bar{\Psi} \right) \wedge \frac{\partial L_{\Psi}}{\partial D \bar{\Psi}} ; \end{aligned}`	$\begin{aligned} \Sigma_{\alpha} & \left.\left.:=e_{ \alpha}\right\rfloor L_{\Psi}-\left(e_{\alpha}\right\rfloor \Psi\right) \wedge \frac{\partial L_{\Psi}}{ \partial \Psi}-\left(e_{\alpha} \downharpoonleft \bar{ \Psi}\right) \wedge \frac{\partial L_{\Psi}}{\partial \bar{\Psi}} \\ & \left.-\left(e_{\alpha}\right\rfloor D \Psi\right) \wedge \frac{\partial L_{\Psi}}{\partial D \Psi}-\left(e_{\alpha} \downharpoonleft D \bar{\Psi} \right) \wedge \frac{\partial L_{\Psi}}{\partial D \bar{\Psi}} ; \end{aligned}$	$\begin{aligned} \Sigma_{\alpha} & \left.\left.:=e_{ \alpha}\right\rfloor L_{\Psi}-\left(e_{\alpha}\right\rfloor \Psi\right) \wedge \frac{\partial L_{\Psi}}{ \partial \Psi}-\left(e_{\alpha} \downharpoonleft \bar{ \Psi}\right) \wedge \frac{\partial L_{\Psi}}{\partial \bar{\Psi}} \\ & \left.-\left(e_{\alpha}\right\rfloor D \Psi\right) \wedge \frac{\partial L_{\Psi}}{\partial D \Psi}-\left(e_{\alpha} \downharpoonleft D \bar{\Psi} \right) \wedge \frac{\partial L_{\Psi}}{\partial D \bar{\Psi}} ; \end{aligned}$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): ● C component ● W weak ● S stable ● N noise ● K clean ● not measured

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mielke-geometrodynamics_EQ0391 (6.4.6) **[conf 0.066]**	131	■ 0.066 ● W|+0	\begin{aligned} \Sigma_{\alpha}:=\frac{\delta L}{\delta \vartheta^{\alpha}}= & \left.\left.e_{\alpha}\right \rfloor L-\left(e_{\alpha} \downharpoonleft D \Psi\right) \wedge \frac{\partial L}{\partial D \Psi}-\left(e_{ \alpha}\right\rfloor \Psi\right) \wedge \frac{\partial L}{\partial \Psi} \\ & -\left(e_{\alpha} \downharpoonleft T^{\beta}\right) \wedge \frac{\partial L}{\partial T^{\beta}}+D \frac{\partial L}{\partial T^{\alpha}}- \left(e_{\alpha} \downharpoonleft R_{\beta}^{\gamma} \right) \wedge \frac{\partial L}{\partial R_{\beta}^{ \gamma}} . \end{aligned}	$\Sigma_\alpha := \frac{\delta L}{\delta \vartheta^\alpha} = e_\alpha \rfloor L - (e_\alpha \downharpoonleft D\Psi) \wedge \frac{\partial L}{\partial D\Psi} - (e_\alpha \rfloor \Psi\Big) \wedge \frac{\partial L}{\partial \Psi}$ $- \left(e_\alpha \downharpoonleft T^\beta\right) \wedge \frac{\partial L}{\partial T^\beta} + D\frac{\partial L}{\partial T^\alpha} - \left(e_\alpha \downharpoonleft R^\gamma_\beta\right) \wedge \frac{\partial L}{\partial R^\gamma_\beta}.$	$\Sigma_\alpha := \frac{\delta L}{\delta \vartheta^\alpha} = e_\alpha \rfloor L - (e_\alpha \rfloor D\Psi) \wedge \frac{\partial L}{\partial D\Psi} - (e_\alpha \rfloor \Psi) \wedge \frac{\partial L}{\partial \Psi}$ $- (e_\alpha \rfloor T^\beta) \wedge \frac{\partial L}{\partial T^\beta} + D\frac{\partial L}{\partial T^\alpha} - (e_\alpha \rfloor R_\beta{}^\gamma) \wedge \frac{\partial L}{\partial R_\beta{}^\gamma}.$
mielke-geometrodynamics_EQ0528 (7.7.48) **[conf 0.078]**	168	■ 0.078 ● C|+3	\begin{aligned} 2 \ell^{2} d C_{\mathrm{T} \mathrm{~T}^{*}}: & =2 d\left(\vartheta^{\alpha} \wedge{ }^{*} T_{\alpha}\right) \\ & =R^{\{f \alpha \beta} \wedge \eta_{\alpha \beta}-R^{\alpha \beta} \wedge \eta_{\alpha \beta} \\ & \left.\left.-T^{\alpha} *\left[T_{\alpha}- \vartheta_{\alpha} \wedge\left(e_{\beta}\right\rfloor T^{\beta}\right)-\frac{1}{2} e_{\alpha}\right\rfloor \left(T^{\beta} \wedge \vartheta_{\beta}\right)\right] \\ & =R^{\{f \alpha \beta} \wedge \eta_{\alpha \beta}-R^{ \alpha \beta} \wedge \eta_{\alpha \beta}-T^{\alpha} \wedge *\left(-{ }^{(1)} T_{\alpha}+2^{(2)} T_{\alpha}+ \frac{1}{2}{ }^{(3)} T_{\alpha}\right), \end{aligned}	$2\ell^2 dC_{\mathrm{T}\,\mathrm{T}^*} := 2d\left(\vartheta^\alpha \wedge {}^*T_\alpha\right)$ $= R^{\{f\alpha\beta} \wedge \eta_{\alpha\beta} - R^{\alpha\beta} \wedge \eta_{\alpha\beta}$ $-T^\alpha * \left[T_\alpha - \vartheta_\alpha \wedge \left(e_\beta \rfloor T^\beta\right) - \frac{1}{2} e_\alpha \rfloor \left(T^\beta \wedge \vartheta_\beta\right)\right]$ $= R^{\{f\alpha\beta} \wedge \eta_{\alpha\beta} - R^{\alpha\beta} \wedge \eta_{\alpha\beta} - T^\alpha \wedge * \left(-{}^{(1)}T_\alpha + 2\,{}^{(2)}T_\alpha + \frac{1}{2}\,{}^{(3)}T_\alpha\right),$	$2\ell^2\, dC_{\mathrm{TT}^*} := 2d(\vartheta^\alpha \wedge {}^*T_\alpha)$ (7.7.4 $= R^{\{\}\alpha\beta} \wedge \eta_{\alpha\beta} - R^{\alpha\beta} \wedge \eta_{\alpha\beta}$ $- T^\alpha * \left[T_\alpha - \vartheta_\alpha \wedge (e_\beta \rfloor T^\beta) - \frac{1}{2}\, e_\alpha \rfloor (T^\beta \wedge \vartheta_\beta)\right]$ $= R^{\{\}\alpha\beta} \wedge \eta_{\alpha\beta} - R^{\alpha\beta} \wedge \eta_{\alpha\beta} - T^\alpha \wedge {}^*\left(-{}^{(1)}T_\alpha + 2\,{}^{(2)}T_\alpha + \frac{1}{2}\,{}^{(3)}T_\alpha\right),$
mielke-geometrodynamics_EQ0382 (6.2.33) **[conf 0.087]**	129	■ 0.087 ● W|+1	\stackrel{(\pm)}{\Gamma}_{\alpha}{ }^{\beta}:=\Gamma_{ \alpha}{ }^{\beta}+i \stackrel{(\mp)}{A^{\beta}}, \quad \stackrel{(\pm)}{A^{\beta}}{ }^{\beta}:= \pm \frac{1}{2} \ell^{2} e_{\alpha} \downharpoonleft \stackrel{(\pm)}{ \Pi^{\beta}},	$\overset{(\pm)}{\Gamma}{}_\alpha{}^\beta := \Gamma_\alpha{}^\beta + i\,\overset{(\mp)}{A}{}^\beta, \quad \overset{(\pm)}{A}{}^\beta{}_\beta := \pm\frac{1}{2}\ell^2 e_\alpha \downharpoonleft \overset{(\pm)}{\Pi}{}^\beta,$	$\overset{(\pm)}{\Gamma}{}_\alpha{}^\beta := \Gamma_\alpha{}^\beta + i\,\overset{(\mp)}{A}{}_\alpha{}^\beta, \qquad \overset{(\pm)}{A}{}_\alpha{}^\beta := \pm\frac{1}{2}\ell^2\, e_\alpha \rfloor \overset{(\pm)}{\Pi}{}^\beta,$
mielke-geometrodynamics_EQ0405 (6.4.25) **[conf 0.098]**	135	■ 0.098 ● C|+8	-\ell^{2} \underline{D}^{(\pm)}{ }^{*}\left(\frac{ \delta}{\delta \underline{*}_{B}}\right)=\underline{D}^{(\pm)} \underline{T}^{B} \equiv \underline{R}_{C}^{(\pm)}{ }^{B}{ }^{(\pm)}{ }^{C}=0,	$-\ell^2 \underline{D}^{(\pm)*}\left(\frac{\delta}{\delta \underline{*}_B}\right) = \underline{D}^{(\pm)}\underline{T}^B \equiv \underline{R}_C^{(\pm)B}\,{}^{(\pm)}\vartheta^C = 0,$	$-\ell^2 \overset{(\pm)}{\underline{D}}{}^{\underline{*}}\left(\frac{\delta}{\delta\, \underline{*}\underline{\vartheta}_B}\right) = \overset{(\pm)}{\underline{D}}\,\overset{(\pm)}{\underline{T}}{}^B \equiv \overset{(\pm)}{\underline{R}}{}_C{}^B \wedge \overset{(\pm)}{\underline{\vartheta}}{}^C = 0,$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): ● C component ● W weak ● S stable ● N noise ● K clean ● not measured

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mielke-geometrodynamics_EQ0529 (7.7.49) **[conf 0.099]**	168	■ 0.099 ● C|+6	\begin{aligned} L_{\text {Euler }}: & =(-1)^{\text {sig+1 }} \operatorname{Tr}\left\{\Omega \wedge \Omega^{(\star)} \right\}=\frac{(-1)^{\text {sig }}}{2} R^{\alpha \beta} \wedge R_{\alpha \beta}^{(\star)} \\ & =d C_{\mathrm{RR}(\star)}=\frac{(-1)^{\text {sig }}}{2} d\left(\Gamma_{\alpha \beta} \wedge R^{\alpha \beta(\star)}-\frac{1}{3} \Gamma_{\alpha}{ }^{\beta(\star)} \wedge \Gamma_{\beta}{ }^{\gamma} \wedge \Gamma_{\gamma}{ }^{\alpha}\right) \\ & \equiv \frac{1}{2} R_{\alpha \beta} \wedge{ }^{*} R^{ \alpha \beta}-2 \operatorname{Ric}_{\alpha \beta} \wedge{ }^{*} \operatorname{Ric}^{\alpha \beta}+\frac{1}{2} \operatorname{Ric}_{\alpha}{ }^{\alpha} \wedge{ }^{*} \operatorname{Ric}_{\beta}{ }^{\beta} \\ & \equiv-L_{ \mathrm{SKY}} \\ & -2\left(\operatorname{Ric}_{\alpha \beta} \wedge{ }^{*} \operatorname{Ric}^{\alpha \beta}-\frac{1}{4} \operatorname{Ric}_{\alpha}{ }^{\alpha} \wedge{ }^{*} \operatorname{Ric}_{\beta}{ }^{\beta} \right) \end{aligned}	$$\begin{aligned} L_{\text {Euler }}: & =(-1)^{\text {sig+1 }} \operatorname{Tr}\left\{\Omega \wedge \Omega^{(\star)} \right\}=\frac{(-1)^{\text {sig }}}{2} R^{\alpha \beta} \wedge R_{\alpha \beta}^{(\star)} \\ & =d C_{\mathrm{RR}(\star)}=\frac{(-1)^{\text {sig }}}{2} d\left(\Gamma_{\alpha \beta} \wedge R^{\alpha \beta(\star)}-\frac{1}{3} \Gamma_{\alpha}{ }^{\beta(\star)} \wedge \Gamma_{\beta}{ }^{\gamma} \wedge \Gamma_{\gamma}{ }^{\alpha}\right) \\ & \equiv \frac{1}{2} R_{\alpha \beta} \wedge{ }^{*} R^{ \alpha \beta}-2 \operatorname{Ric}_{\alpha \beta} \wedge{ }^{*} \operatorname{Ric}^{\alpha \beta}+\frac{1}{2} \operatorname{Ric}_{\alpha}{ }^{\alpha} \wedge{ }^{*} \operatorname{Ric}_{\beta}{ }^{\beta} \\ & \equiv-L_{ \mathrm{SKY}} \\ & -2\left(\operatorname{Ric}_{\alpha \beta} \wedge{ }^{*} \operatorname{Ric}^{\alpha \beta}-\frac{1}{4} \operatorname{Ric}_{\alpha}{ }^{\alpha} \wedge{ }^{*} \operatorname{Ric}_{\beta}{ }^{\beta} \right) \end{aligned}$$	$$\begin{aligned} L_{\text {Euler }}: & =(-1)^{\text {sig+1 }} \operatorname{Tr}\left\{\Omega \wedge \Omega^{(\star)} \right\}=\frac{(-1)^{\text {sig }}}{2} R^{\alpha \beta} \wedge R_{\alpha \beta}^{(\star)} \\ & =d C_{\mathrm{RR}(\star)}=\frac{(-1)^{\text {sig }}}{2} d\left(\Gamma_{\alpha \beta} \wedge R^{\alpha \beta(\star)}-\frac{1}{3} \Gamma_{\alpha}{ }^{\beta(\star)} \wedge \Gamma_{\beta}{ }^{\gamma} \wedge \Gamma_{\gamma}{ }^{\alpha}\right) \\ & \equiv \frac{1}{2} R_{\alpha \beta} \wedge{ }^{*} R^{ \alpha \beta}-2 \operatorname{Ric}_{\alpha \beta} \wedge{ }^{*} \operatorname{Ric}^{\alpha \beta}+\frac{1}{2} \operatorname{Ric}_{\alpha}{ }^{\alpha} \wedge{ }^{*} \operatorname{Ric}_{\beta}{ }^{\beta} \\ & \equiv-L_{ \mathrm{SKY}} \\ & -2\left(\operatorname{Ric}_{\alpha \beta} \wedge{ }^{*} \operatorname{Ric}^{\alpha \beta}-\frac{1}{4} \operatorname{Ric}_{\alpha}{ }^{\alpha} \wedge{ }^{*} \operatorname{Ric}_{\beta}{ }^{\beta} \right) \end{aligned}$$
mielke-geometrodynamics_EQ0974 (14.2.15) **[conf 0.099]**	315	■ 0.099 ● N|+0	\Theta^{\perp}:=\pi(\hat{\Theta}-[\hat{\alpha}, \hat{ \vartheta}])=\left[\begin{array}{c|} \Theta \\ \hline 0 \end{array} \left\lvert\, \frac{\hat{\ell} \Omega^{ \prime}}{\circ \Theta}=0\right.\right],	$$\Theta^{\perp}:=\pi(\hat{\Theta}-[\hat{\alpha}, \hat{\vartheta}])=\left[\begin{array}{c\|} \Theta \\ \hline 0 \end{array} \left\lvert\, \frac{\hat{\ell} \Omega^{ \prime}}{\circ \Theta}=0\right.\right],$$	$$\Theta^{\perp}:=\pi(\hat{\Theta}-[\hat{\alpha}, \hat{\vartheta}])=\left[\begin{array}{c\|} \Theta \\ \hline 0 \end{array} \left\lvert\, \frac{\hat{\ell} \Omega^{ \prime}}{\circ \Theta}=0\right.\right],$$
mielke-geometrodynamics_EQ0553 (8.4.7)	180	■ 0.100 ● W|+2	\begin{aligned} L_{\mathrm{SKY}}}^{(\star)} & =\frac{1}{2} \operatorname{Tr}\left(\stackrel{\pm}{\Omega}^{g} \wedge{ }^{*} \stackrel{\circ}{\Omega}^{g}\right) \\ & =-\frac{1}{2} R^{\alpha \beta} \wedge{ }^{*} R_{\alpha \beta} \mp \frac{(-1)^{\mathrm{sig}}}{2} R^{\alpha \beta} \wedge R_{\alpha \beta}^{(\star)} \\ & =-\frac{1}{4}\left(R_{\alpha \beta} \pm{ }^{*} R_{\alpha \beta}^{(\star)}\right) \wedge{ }^{*}\left(R^{\alpha \beta} \pm{ }^{*} R^{\alpha \beta(\star)}\right) . \end{aligned}	$$\begin{aligned} L_{\mathrm{SKY}}}^{(\star)} & =\frac{1}{2} \operatorname{Tr}\left(\stackrel{\pm}{\Omega}^{g} \wedge{ }^{*} \stackrel{\circ}{\Omega}^{g}\right) \\ & =-\frac{1}{2} R^{\alpha \beta} \wedge{ }^{*} R_{\alpha \beta} \mp \frac{(-1)^{\mathrm{sig}}}{2} R^{\alpha \beta} \wedge R_{\alpha \beta}^{(\star)} \\ & =-\frac{1}{4}\left(R_{\alpha \beta} \pm{ }^{*} R_{\alpha \beta}^{(\star)}\right) \wedge{ }^{*}\left(R^{\alpha \beta} \pm{ }^{*} R^{\alpha \beta(\star)}\right) . \end{aligned}$$	$$\begin{aligned} L_{\mathrm{SKY}}}^{(\star)} & =\frac{1}{2} \operatorname{Tr}\left(\stackrel{\pm}{\Omega}^{g} \wedge{ }^{*} \stackrel{\circ}{\Omega}^{g}\right) \\ & =-\frac{1}{2} R^{\alpha \beta} \wedge{ }^{*} R_{\alpha \beta} \mp \frac{(-1)^{\mathrm{sig}}}{2} R^{\alpha \beta} \wedge R_{\alpha \beta}^{(\star)} \\ & =-\frac{1}{4}\left(R_{\alpha \beta} \pm{ }^{*} R_{\alpha \beta}^{(\star)}\right) \wedge{ }^{*}\left(R^{\alpha \beta} \pm{ }^{*} R^{\alpha \beta(\star)}\right) . \end{aligned}$$

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Residual render vs scan (inkdrill): ● C component ● W weak ● S stable ● N noise ● K clean ● not measured

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mielke-geometrodynamics_EQ0311 (4.6.3)	104	■ 0.111 ● C|+6	`\begin{aligned} \widetilde{\leftarrow}_{\widetilde{y}} \widetilde{\widetilde{D}} \widetilde{\widetilde{D}} \widetilde{\xi}^{\alpha} & \left.=\widetilde{y}\rfloor\left(\widetilde{ \widetilde{D}} \widetilde{\widetilde{D}} \widetilde{ \xi}^{\alpha}\right)+\widetilde{\widetilde{D}}(\widetilde{\widetilde{y}}\rfloor \widetilde{ \widetilde{D}} \widetilde{\xi}^{\alpha}\right) \\ & =y J\left(D D \xi^{\alpha}+R^{(T) \alpha}\right)=0, \end{aligned}`	$\widetilde{\leftarrow}_{\widetilde{y}} \widetilde{\widetilde{D}} \widetilde{\widetilde{D}} \widetilde{\xi}^{\alpha} = \widetilde{y}\rfloor\left(\widetilde{\widetilde{D}} \widetilde{\widetilde{D}} \widetilde{\xi}^{\alpha}\right) + \widetilde{\widetilde{D}}(\widetilde{\widetilde{y}}\rfloor \widetilde{\widetilde{D}} \widetilde{\xi}^{\alpha}\right)$ $= yJ\left(DD\xi^{\alpha} + R^{(T)\alpha}\right) = 0,$	$\widetilde{\widetilde{\mathrm{L}}}_{\widetilde{\widetilde{y}}} \widetilde{\widetilde{D}} \widetilde{\widetilde{D}} \widetilde{\widetilde{\xi}}^{\alpha} = \widetilde{\widetilde{y}}\rfloor(\widetilde{\widetilde{D}} \widetilde{\widetilde{D}} \widetilde{\widetilde{\xi}}^{\alpha}) + \widetilde{\widetilde{D}}(\widetilde{\widetilde{y}}\rfloor \widetilde{\widetilde{D}} \widetilde{\widetilde{\xi}}^{\alpha})$ $= y\rfloor(DD\xi^{\alpha} + R^{(T)\alpha}) = 0\,,$
mielke-geometrodynamics_EQ0378 (6.2.29)	128	■ 0.136 ● C|+6	`D D \vartheta^{\alpha}=R_{\beta}{ }^{\alpha} \wedge \vartheta^{\beta}=0, \stackrel{(\pm)}{D} \stackrel{(\pm)}{D} \stackrel{(\pm)}{\Pi}_{\alpha}=-\stackrel{(\pm)}{R}_{\alpha}{ }^{\beta} \wedge \stackrel{(\pm)}{ \Pi}_{\beta}= \pm \frac{i}{2} \ell^{2}\left(e_{\alpha} \downharpoonleft \stackrel{(\pm)}{\Pi^{\beta}}\right) \wedge \Sigma_{\beta} \cong 0 .`	$DD\vartheta^{\alpha} = R_{\beta}{}^{\alpha} \wedge \vartheta^{\beta} = 0,\ \overset{(\pm)}{D}\,\overset{(\pm)}{D}\,\overset{(\pm)}{\Pi}_{\alpha} = -\overset{(\pm)}{R}_{\alpha}{}^{\beta} \wedge \overset{(\pm)}{\Pi}_{\beta} = \pm\frac{i}{2}\ell^{2}\left(e_{\alpha} \downharpoonleft \overset{(\pm)}{\Pi^{\beta}}\right) \wedge \Sigma_{\beta} \cong 0.$	$DD\vartheta^{\alpha} = R_{\beta}{}^{\alpha} \wedge \vartheta^{\beta} = 0,\ \overset{(\pm)}{D}\,\overset{(\pm)}{D}\,\overset{(\pm)}{\Pi}_{\alpha} = -\overset{(\pm)}{R}_{\alpha}{}^{\beta} \wedge \overset{(\pm)}{\Pi}_{\beta} = \pm\frac{i}{2}\ell^{2}\,(e_{\alpha}\rfloor\overset{(\pm)}{\Pi}{}^{\beta}) \wedge \Sigma_{\beta} \cong 0.$
mielke-geometrodynamics_EQ1059 (15.2.16)	346	■ 0.147 ● C|+12	`\begin{aligned} \psi= & {\left[\begin{array}{lll|l} \mathcal{P}_{a} & \mathcal{P}_{b} & \mathcal{P}_{c} & \nu_{e} \\ \eta_{a} & \eta_{b} & \eta_{c} & e^{-} \\ \lambda_{a} & \lambda_{b} & \lambda_{c} & \mu^{-} \\ \hline c_{a} & c_{b} & c_{c} & \nu_{\mu} \end{array} \right] \begin{array}{cc} \text { up } & \\ \text { down } & \uparrow \\ \text { strange } & \text { flavors } \\ \text { charm } & \downarrow \end{array} } \\ & \text { red } \quad \begin{array}{l} \text { yellow } \text { blue } \text { lilac } \\ \\ \end{array} . \end{aligned}`	$\psi = \left[\begin{array}{lll\|l} \mathcal{P}_a & \mathcal{P}_b & \mathcal{P}_c & \nu_e \\ \eta_a & \eta_b & \eta_c & e^- \\ \lambda_a & \lambda_b & \lambda_c & \mu^- \\ \hline c_a & c_b & c_c & \nu_\mu \end{array}\right] \begin{array}{c} \text{up} \\ \text{down} \\ \text{strange} \\ \text{charm} \end{array} \quad \begin{array}{c} \uparrow \\ \text{flavors} \\ \downarrow \end{array}$ $\text{red} \quad \begin{array}{l} \text{yellow} \quad \text{blue} \quad \text{lilac} \\ \\ \end{array}.$	$\psi = \left[\begin{array}{lll\|l} \mathcal{P}_a & \mathcal{P}_b & \mathcal{P}_c & \nu_e \\ \eta_a & \eta_b & \eta_c & e^- \\ \lambda_a & \lambda_b & \lambda_c & \mu^- \\ \hline c_a & c_b & c_c & \nu_\mu \end{array}\right] \begin{array}{c} \text{up} \\ \text{down} \\ \text{strange} \\ \text{charm} \end{array} \quad \begin{array}{c} \uparrow \\ \text{flavors} \\ \downarrow \end{array}$ $\text{red} \quad \text{yellow} \quad \text{blue} \quad \text{lilac}$ $\longleftarrow (\text{body}) - \text{colors} \longrightarrow$
mielke-geometrodynamics_EQ0972 (14.2.13)	314	■ 0.153 ● K|+0	`\stackrel{\text { (ɔ) }}{D} \alpha:=\stackrel{\text { (○) }}{d} \alpha-\omega^{g} \wedge \alpha-\alpha \wedge \stackrel{\circ}{\circ}`	$\overset{(ɔ)}{D}\ \alpha := \overset{(○)}{d}\ \alpha - \omega^{g} \wedge \alpha - \alpha \wedge \overset{\circ}{\circ}$	$\overset{(○)}{D}\alpha := \overset{(○)}{d}\alpha - \omega^{g} \wedge \alpha - \alpha \wedge \overset{\circ}{\omega}$
mielke-geometrodynamics_EQ0264 (4.3.29)	095	■ 0.154 ● W|+2	`\Gamma_{i j}^{\cdot{ }^{\prime}}=\left\{\begin{array}{c} \kappa \\ i j \end{array}\right\}-K_{i j}^{\cdot \kappa},`	$\Gamma_{ij}^{\cdot\prime} = \left\{ \begin{array}{c} \kappa \\ ij \end{array} \right\} - K_{ij}^{\cdot\kappa},$	$\Gamma_{ij}^{\cdot\kappa} = \left\{ \begin{array}{c} \kappa \\ ij \end{array} \right\} - K_{ij}^{\cdot\kappa},$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): ● C component ● W weak ● S stable ● N noise ● K clean ● not measured

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mielke-geometrodynamics_EQ0292 (4.5.3)	100	0.165 W|+2	\begin{aligned} £_{\xi} L & =\left(£_{\xi} g_{\alpha \beta}\right) \wedge \frac{\partial L}{\partial g_{ \alpha \beta}}+\left(£_{\xi} \vartheta^{\alpha}\right) \wedge \frac{\partial L}{\partial \vartheta^{\alpha}} \ \ & +\left(£_{\xi} \Psi\right) \wedge \frac{\partial L}{ \partial \Psi}+\left(£_{\xi} D \Psi\right) \wedge \frac{ \partial L}{\partial D \Psi} \\ & \left.\left.=D \left[(\xi\rfloor \vartheta^{\alpha}\right) \wedge \frac{ \partial L}{\partial \vartheta^{\alpha}}+(\xi\rfloor \Psi\right) \wedge \frac{\partial L}{\partial \Psi}+(\xi \rfloor D \Psi\right) \wedge \frac{\partial L}{\partial D \Psi}\right] \\ & \left.\left.-\left(\xi \downharpoonleft \vartheta^{\alpha}\right) D \frac{\partial L}{\partial \vartheta^{\alpha}}+(\xi\rfloor T^{\alpha}\right) \wedge \frac{\partial L}{\partial \vartheta^{\alpha}}+(\xi \lrcorner R_{\beta}^{\gamma}\right) \wedge I^{\beta}{ }_{ \gamma} \Psi \wedge \frac{\partial L}{\partial D \Psi} \\ & \left.+(\xi\rfloor D \Psi) \wedge \frac{\delta L}{ \delta \Psi}+(-1)^{p}(\xi\rfloor \Psi\right) \wedge D \frac{\delta L}{\delta \Psi} \end{aligned}	$$\begin{aligned} £_{\xi} L & =\left(£_{\xi} g_{\alpha \beta}\right) \wedge \frac{\partial L}{\partial g_{ \alpha \beta}}+\left(£_{\xi} \vartheta^{\alpha}\right) \wedge \frac{\partial L}{\partial \vartheta^{\alpha}} \\ & +\left(£_{\xi} \Psi\right) \wedge \frac{\partial L}{\partial \Psi}+\left(£_{\xi} D \Psi\right) \wedge \frac{\partial L}{\partial D \Psi} \\ & =D \left[(\xi\rfloor \vartheta^{\alpha}\right) \wedge \frac{\partial L}{\partial \vartheta^{\alpha}}+(\xi\rfloor \Psi\Big) \wedge \frac{\partial L}{\partial \Psi}+(\xi\rfloor D \Psi\Big) \wedge \frac{\partial L}{\partial D \Psi}\Big] \\ & -\left(\xi \downharpoonleft \vartheta^{\alpha}\right) D \frac{\partial L}{\partial \vartheta^{\alpha}}+(\xi\rfloor T^{\alpha}\Big) \wedge \frac{\partial L}{\partial \vartheta^{\alpha}}+(\xi \lrcorner R_{\beta}^{\gamma}\Big) \wedge I^{\beta}{}_{\gamma} \Psi \wedge \frac{\partial L}{\partial D \Psi} \\ & +(\xi\rfloor D \Psi) \wedge \frac{\delta L}{ \delta \Psi}+(-1)^{p}(\xi\rfloor \Psi\Big) \wedge D \frac{\delta L}{\delta \Psi} \end{aligned}$$	$$\begin{aligned} £_{\xi} L & =\left(£_{\xi} g_{\alpha \beta}\right) \wedge \frac{\partial L}{\partial g_{ \alpha \beta}}+\left(£_{\xi} \vartheta^{\alpha}\right) \wedge \frac{\partial L}{\partial \vartheta^{\alpha}} \\ & +\left(£_{\xi} \Psi\right) \wedge \frac{\partial L}{\partial \Psi}+\left(£_{\xi} D \Psi\right) \wedge \frac{\partial L}{\partial D \Psi} \\ & =D\Big[(\xi\rfloor \vartheta^{\alpha}\big) \wedge \frac{\partial L}{\partial \vartheta^{\alpha}}+(\xi\rfloor \Psi\big) \wedge \frac{\partial L}{\partial \Psi}+(\xi\rfloor D \Psi\big) \wedge \frac{\partial L}{\partial D \Psi}\Big] \\ & -(\xi\rfloor \vartheta^{\alpha}) D \frac{\partial L}{\partial \vartheta^{\alpha}}+(\xi\rfloor T^{\alpha}\big) \wedge \frac{\partial L}{\partial \vartheta^{\alpha}}+(\xi\rfloor R_{\beta}{}^{\gamma}\big) \wedge I^{\beta}{}_{\gamma} \Psi \wedge \frac{\partial L}{\partial D \Psi} \\ & +(\xi\rfloor D \Psi) \wedge \frac{\delta L}{\delta \Psi}+(-1)^{p}(\xi\rfloor \Psi\big) \wedge D \frac{\delta L}{\delta \Psi} . \end{aligned}$$
mielke-geometrodynamics_EQ0734 (11.1.1)	237	0.220 W|+1	\pi_{1}\left(S O_{\circ}(s, n-s), e\right)= \begin{cases} \mathbb{Z}_{2} & n=2 k \\ \mathbb{Z}_{2} & \oplus \mathbb{Z}_{2} \\ \mathbb{Z}_{4} & n=4 k \\ & n=2(2 k+1)\end{cases}	$$\pi_{1}\left(S O_{\circ}(s, n-s), e\right)= \begin{cases} \mathbb{Z}_{2} & n=2 k \\ \mathbb{Z}_{2} & \oplus \mathbb{Z}_{2} \\ \mathbb{Z}_{4} & n=4 k \\ & n=2(2 k+1)\end{cases}$$	$$\pi_{1}(S O_{\circ}(s, n-s), e)= \begin{cases} \mathbb{Z}_{2} & n=2 k \\ \mathbb{Z}_{2} \oplus \mathbb{Z}_{2} & n=4 k \\ \mathbb{Z}_{4} & n=2(2 k+1). \end{cases}$$
mielke-geometrodynamics_EQ0961 (14.2.1)	312	0.220 C|+3	\hat{\vartheta}=\hat{\vartheta}(m, g)=\underbrace{\left[\begin{array}{c|c} \vartheta & \hat{\ell} \omega \\ \hline 0 & \grave{\vartheta} \end{array}\right]}_{4} \begin{aligned} & \} 4 \\ & \} K \end{aligned} .	$$\hat{\vartheta}=\hat{\vartheta}(m, g)=\underbrace{\left[\begin{array}{c\|c} \vartheta & \hat{\ell} \omega \\ \hline 0 & \grave{\vartheta} \end{array}\right]}_{4} \begin{aligned} & \} 4 \\ & \} K \end{aligned} .$$	$$\hat{\vartheta}=\hat{\vartheta}(m, g)=\underbrace{\left[\begin{array}{c\|c} \vartheta & \hat{\ell} \omega \\ \hline 0 & \grave{\vartheta} \end{array}\right]}_{4} \begin{aligned} & \} 4 \\ & \} K \end{aligned} .$$

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mielke-geometrodynamics_EQ0211 (4.2.3)	085	■ 0.223 ● C|+4	`\begin{aligned} * \widetilde{\widetilde{\Omega}} & =\stackrel{*}{\chi}\left(d \widetilde{\widetilde{\omega}}-\frac{1}{2}[\widetilde{\widetilde{\omega}}, \widetilde{\omega}]\right) \\ & =d \omega^{\mathrm{L}}-\omega^{\mathrm{L}} \wedge \omega^{\mathrm{L}}+d \omega^{\mathrm{T}}-\omega^{\mathrm{T}} \wedge \omega^{\mathrm{L}}-\omega^{\mathrm{L}} \wedge \omega^{\mathrm{T}}+\frac{1}{2}\left[\omega^{\mathrm{T}}, \omega^{\mathrm{T}}\right] \\ & =\Omega^{\mathrm{L}}+\Omega^{\mathrm{T}} \end{aligned}`	$$\begin{aligned} *\widetilde{\widetilde{\Omega}} &= \overset{*}{\chi}\left(d\widetilde{\widetilde{\omega}} - \frac{1}{2}[\widetilde{\widetilde{\omega}}, \widetilde{\omega}]\right) \\ &= d\omega^{\mathrm{L}} - \omega^{\mathrm{L}} \wedge \omega^{\mathrm{L}} + d\omega^{\mathrm{T}} - \omega^{\mathrm{T}} \wedge \omega^{\mathrm{L}} - \omega^{\mathrm{L}} \wedge \omega^{\mathrm{T}} + \frac{1}{2}\left[\omega^{\mathrm{T}}, \omega^{\mathrm{T}}\right] \\ &= \Omega^{\mathrm{L}} + \Omega^{\mathrm{T}} \end{aligned}$$	$$\begin{aligned} \overset{*}{\chi}\widetilde{\widetilde{\Omega}} &= \overset{*}{\chi}(d\widetilde{\widetilde{\omega}} - \frac{1}{2}[\widetilde{\widetilde{\omega}}, \widetilde{\widetilde{\omega}}]) \\ &= d\omega^{\mathrm{L}} - \omega^{\mathrm{L}} \wedge \omega^{\mathrm{L}} + d\omega^{\mathrm{T}} - \omega^{\mathrm{T}} \wedge \omega^{\mathrm{L}} - \omega^{\mathrm{L}} \wedge \omega^{\mathrm{T}} + \frac{1}{2}[\omega^{\mathrm{T}}, \omega^{\mathrm{T}}] \\ &= \Omega^{\mathrm{L}} + \Omega^{\mathrm{T}} \end{aligned}$$
mielke-geometrodynamics_EQ0266 (4.3.31)	095	■ 0.227 ● W|-2	`R_{i j c}^{:: d}=R_{i j c}^{\{!\ldots d}-2 D_{[i} K_{j j c}^{\cdot d}+2 K_{[i \mid c}^{\cdot h} K_{i j j h}^{\cdot d} .`	$R_{ijc}^{::d} = R_{ijc}^{\{!\ldots d} - 2D_{[i}K_{jjc}^{\cdot d} + 2K_{[i]c}^{\cdot h}K_{ijjh}^{\cdot d}.$	$R_{ijc}^{\cdot\cdot d} = R_{ijc}^{\{\}\ldots d} - 2D_{[i}K_{j]c}^{\cdot\cdot d} + 2K_{[i]c}^{\cdot\cdot h}K_{[j]h}^{\cdot\cdot d}.$
mielke-geometrodynamics_EQ0286 (4.4.15)	099	■ 0.229 ● K|+0	`D \Pi_{[]}^{\mathrm{T}}-\mathrm{E}_{[]}=\Sigma_{[l}`	$D\Pi_{[]}^{\mathrm{T}} - \mathrm{E}_{[]} = \Sigma_{[l}$	$D\Pi_{[]}^{\mathrm{T}} - \mathrm{E}_{[]} = \Sigma_{[]}$
mielke-geometrodynamics_EQ0337 (5.3.14)	114	■ 0.239 ● C|+4	`\begin{aligned} R^{\{\alpha \beta \beta} \wedge \eta_{\alpha \beta} \equiv & R^{\alpha \beta} \wedge \eta_{\alpha \beta}-K^{\alpha \mu} \wedge K_{\mu}{ }^{\beta} \wedge \eta_{\alpha \beta}+K^{\alpha \beta} \wedge T^{\gamma} \wedge \eta_{\alpha \beta \gamma} \\ & +d \left(K^{\alpha \beta} \wedge \eta_{\alpha \beta}\right) \\ = & R^{\alpha \beta} \wedge \eta_{\alpha \beta}+T^{\alpha} \wedge{ }^{*}\left(-{ }^{(1)} T_{\alpha}+2^{(2)} T_{\alpha}+\frac{1}{2}{ }^{(3)} T_{\alpha}\right)+2 d C_{\mathrm{TT}^{*}} \end{aligned}`	$$\begin{aligned} R^{\{\alpha\beta\beta} \wedge \eta_{\alpha\beta} \equiv & R^{\alpha\beta} \wedge \eta_{\alpha\beta} - K^{\alpha\mu} \wedge K_{\mu}{}^{\beta} \wedge \eta_{\alpha\beta} + K^{\alpha\beta} \wedge T^{\gamma} \wedge \eta_{\alpha\beta\gamma} \\ & + d\left(K^{\alpha\beta} \wedge \eta_{\alpha\beta}\right) \\ = & R^{\alpha\beta} \wedge \eta_{\alpha\beta} + T^{\alpha} \wedge {}^{*}\left(-{}^{(1)}T_{\alpha} + 2\,{}^{(2)}T_{\alpha} + \frac{1}{2}\,{}^{(3)}T_{\alpha}\right) + 2dC_{\mathrm{TT}^{*}} \end{aligned}$$	$$\begin{aligned} R^{\{\}\alpha\beta} \wedge \eta_{\alpha\beta} \equiv & R^{\alpha\beta} \wedge \eta_{\alpha\beta} - K^{\alpha\mu} \wedge K_{\mu}{}^{\beta} \wedge \eta_{\alpha\beta} + K^{\alpha\beta} \wedge T^{\gamma} \wedge \eta_{\alpha\beta\gamma} \\ & + d(K^{\alpha\beta} \wedge \eta_{\alpha\beta}) \qquad (5.3 \\ = & R^{\alpha\beta} \wedge \eta_{\alpha\beta} + T^{\alpha} \wedge {}^{*}\Big(-{}^{(1)}T_{\alpha} + 2\,{}^{(2)}T_{\alpha} + \frac{1}{2}\,{}^{(3)}T_{\alpha}\Big) + 2dC_{\mathrm{TT}^{*}} \end{aligned}$$
mielke-geometrodynamics_EQ0835 (12.2.3)	271	■ 0.247 ● C|-3	`\begin{aligned} L_{\mathrm{D}} & =L\left(\gamma, \psi, D^{(f)} \psi\right)-\frac{i}{2} \bar{\psi}\left({ }^{*} \gamma \wedge K-K \wedge^{*} \gamma\right) \psi+A \wedge j \\ & =L\left(\gamma, \psi, D^{(\dagger} \psi\right)+\frac{1}{4} \mathscr{A} \wedge j_{5}+A \wedge j \\ & =L\left(\gamma, \psi, D^{(i)} \psi\right)-T^{\alpha} \wedge \mu_{\alpha}+A \wedge j . \end{aligned}`	$$\begin{aligned} L_{\mathrm{D}} &= L\left(\gamma, \psi, D^{(f)}\psi\right) - \frac{i}{2}\bar{\psi}\left({}^{*}\gamma \wedge K - K \wedge^{*}\gamma\right)\psi + A \wedge j \\ &= L\left(\gamma, \psi, D^{(\dagger}\psi\right) + \frac{1}{4}\mathscr{A} \wedge j_5 + A \wedge j \\ &= L\left(\gamma, \psi, D^{(i)}\psi\right) - T^{\alpha} \wedge \mu_{\alpha} + A \wedge j. \end{aligned}$$	$$\begin{aligned} L_{\mathrm{D}} &= L(\gamma, \psi, D^{(\}}\psi) - \frac{i}{2}\overline{\psi}\left({}^{*}\gamma \wedge K - K \wedge {}^{*}\gamma\right)\psi + A \wedge j \\ &= L(\gamma, \psi, D^{(\}}\psi) + \frac{1}{4}\mathscr{A} \wedge j_5 + A \wedge j \\ &= L(\gamma, \psi, D^{(\}}\psi) - T^{\alpha} \wedge \mu_{\alpha} + A \wedge j\,. \end{aligned}$$
mielke-geometrodynamics_EQ0787 (11.3.6)	248	■ 0.258 ● C|+3	`i \gamma \wedge^{*} D^{[1} \psi-6 \ell^{* 2} \gamma^{n+1} \gamma \wedge{ }^{*}\left(\bar{\psi} \gamma^{n+1} \gamma \psi\right) \psi-m \psi \eta=0`	$i\gamma \wedge^{*} D^{[1}\psi - 6\ell^{*2}\gamma^{n+1}\gamma \wedge^{*}\left(\bar{\psi}\gamma^{n+1}\gamma\psi\right)\psi - m\psi\eta = 0$	$i\gamma \wedge {}^{*}D^{(\}}\psi - 6\ell^{*2}\gamma^{n+1}\gamma \wedge {}^{*}(\overline{\psi}\gamma^{n+1}\gamma\psi)\psi - m\psi\eta = 0\Big\vert,$

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mielke-geometrodynamics_EQ1078 (A.3)	365	0.258 W|+1	`\begin{aligned} & \left(\sigma^{a}\right)^{ \mathrm{T}}:=\left(\begin{array}{l} \left.\sigma^{0}, \sigma^{k}\right) \quad k=1,2,3 \\ \sigma^{0}:= \left(\begin{array}{ll} 1 & 0 \\ 0 & 1 \end{array} \right) \equiv \mathbb{1}, \quad \sigma^{1}:=\left(\begin{array}{ll} 0 & 1 \\ 1 & 0 \end{array}\right) \\ \sigma^{2}:=\left(\begin{array}{rr} 0 & -i \\ i & 0 \end{array}\right), \quad \sigma^{3}:=\left(\begin{array}{rr} 1 & 0 \\ 0 & -1 \end{array}\right) . \end{array} . .\right. \end{aligned}`	$(\sigma^a)^{\mathrm{T}} := \left(\begin{array}{l} \left.\sigma^{0}, \sigma^{k}\right) \quad k=1,2,3 \\ \sigma^{0}:= \left(\begin{array}{ll} 1 & 0 \\ 0 & 1 \end{array} \right) \equiv \mathbb{1}, \quad \sigma^{1}:=\left(\begin{array}{ll} 0 & 1 \\ 1 & 0 \end{array}\right) \\ \sigma^{2}:=\left(\begin{array}{rr} 0 & -i \\ i & 0 \end{array}\right), \quad \sigma^{3}:=\left(\begin{array}{rr} 1 & 0 \\ 0 & -1 \end{array}\right) . \end{array} \right. ..$	$(\sigma^a)^{\mathrm{T}} := (\sigma^0, \sigma^k) \quad k = 1, 2, 3.$ $\sigma^0 := \begin{pmatrix} 1 & 0 \\ 0 & 1 \end{pmatrix} \equiv \mathbb{1}, \ \sigma^1 := \begin{pmatrix} 0 & 1 \\ 1 & 0 \end{pmatrix},$ $\sigma^2 := \begin{pmatrix} 0 & -i \\ i & 0 \end{pmatrix}, \quad \sigma^3 := \begin{pmatrix} 1 & 0 \\ 0 & -1 \end{pmatrix}.$
mielke-geometrodynamics_EQ0018 (2.3.4)	037	0.261 N|+0	`\delta:\left\{\left.\begin{array}{lll} G \times P & \rightarrow & P \\ w & \psi & \psi \\ g_{p} \cdot & p_{ \circ}=p \end{array} \right\rvert\, e \cdot p_{\circ}=p_{ \circ} \in P\right\} .`	$\delta : \left\{ \begin{array}{lll} G \times P & \rightarrow & P \\ w & \psi & \psi \\ g_p \cdot & p_\circ = p & \end{array} \right\rvert\, e \cdot p_\circ = p_\circ \in P \right\}.$	$\delta : \left\{ \begin{array}{lll} G \times P & \rightarrow & P \\ w & \psi & \psi \\ g_p \cdot & p_\circ = p & \end{array} \right\rvert\, e \cdot p_\circ = p_\circ \in P \right\}.$
mielke-geometrodynamics_EQ0544 (8.3.5)	177	0.261 S|+1	`\left.\left.\left.\exp (\zeta\rfloor):=\mathbf{1}+\zeta \rfloor+\frac{1}{2!} \zeta\right\rfloor \zeta\right \rfloor+\frac{1}{3!} \zeta ⌋ \zeta ⌋ \zeta\right\rfloor+ \cdots .`	$\exp(\zeta\rfloor) := \mathbf{1} + \zeta\rfloor + \frac{1}{2!}\zeta\rfloor\zeta\rfloor + \frac{1}{3!}\zeta\rfloor\zeta\rfloor\zeta\rfloor + \cdots .$	$\exp(\zeta\rfloor) := \mathbf{1} + \zeta\rfloor + \frac{1}{2!}\zeta\rfloor\zeta\rfloor + \frac{1}{3!}\zeta\rfloor\zeta\rfloor\zeta\rfloor + \cdots .$
mielke-geometrodynamics_EQ0605 (9.2.4)	199	0.263 N|+0	`\left.\chi(M):=\sum_{p=0}^{n}(-1)^{p} b_{p}=\int_{M}{ }^{*} \pi^{( } \gamma_{2}^{g}\right)`	$\chi(M) := \sum_{p=0}^{n}(-1)^p b_p = \int_M {}^*\pi^{(}\gamma_2^g\Big)$	$\chi(M) := \sum_{p=0}^{n}(-1)^p b_p = \int_M \overset{*}{\pi}(\gamma_2^g)$
mielke-geometrodynamics_EQ0627 (10.1.15)	211	0.271 N|+0	`E_{\alpha}:=\frac{\partial L}{\partial \vartheta^{ \alpha}}=e_{\alpha} \downharpoonleft L+\left(e_{ \alpha} \downharpoonleft T^{\beta}\right) \wedge H_{ \beta}+2(-1)^{s}\left(e_{\alpha} \downharpoonleft R^{ \star \beta}\right) \wedge H_{\beta}^{\star},`	$E_\alpha := \frac{\partial L}{\partial \vartheta^\alpha} = e_\alpha \downharpoonleft L + \left(e_\alpha \downharpoonleft T^\beta\right) \wedge H_\beta + 2(-1)^s \left(e_\alpha \downharpoonleft R^{\star\beta}\right) \wedge H^\star_\beta,$	$E_\alpha := \frac{\partial L}{\partial \vartheta^\alpha} = e_\alpha\rfloor L + (e_\alpha\rfloor T^\beta) \wedge H_\beta + 2(-1)^s (e_\alpha\rfloor R^{\star\beta}) \wedge H^\star_\beta,$
mielke-geometrodynamics_EQ0979 (14.2.20)	316	0.272 N|+0	`\hat{\ell}=\left({ }^{+}\right) \ell^{*} / \sqrt{ \alpha_{g}}=(\stackrel{+}{-}) \ell^{*} \frac{\sqrt{ \hbar c}}{g}`	$\hat{\ell} = \left({}^{+}\right) \ell^* / \sqrt{\alpha_g} = (\overset{+}{-})\ell^* \frac{\sqrt{\hbar c}}{g}$	$\hat{\ell} = (\overset{+}{-})\ell^* / \sqrt{\alpha_g} = (\overset{+}{-})\ell^* \frac{\sqrt{\hbar c}}{g}$
mielke-geometrodynamics_EQ0654 (10.3.11)	216	0.274 N|+0	`\left.\left.E_{\alpha}=e_{\alpha} \downharpoonleft L+\left[\left(e_{\alpha} \downharpoonleft T^{\beta} \right)+(-1)^{s} 2 \delta \ell\left(e_{\alpha}\right \rfloor R^{\star \beta}\right)\right] \wedge H_{ \beta}+(-1)^{s} \frac{2 \gamma}{\ell}\left(e_{\alpha} \right\rfloor R^{\star \beta}\right) \wedge \vartheta_{ \beta},`	$E_\alpha = e_\alpha \downharpoonleft L + \left[\left(e_\alpha \downharpoonleft T^\beta\right) + (-1)^s 2\delta\ell \left(e_\alpha\rfloor R^{\star\beta}\right)\right] \wedge H_\beta + (-1)^s \frac{2\gamma}{\ell} \left(e_\alpha\rfloor R^{\star\beta}\right) \wedge \vartheta_\beta,$	$E_\alpha = e_\alpha\rfloor L + \left[(e_\alpha\rfloor T^\beta) + (-1)^s 2\delta\ell(e_\alpha\rfloor R^{\star\beta})\right] \wedge H_\beta + (-1)^s \frac{2\gamma}{\ell}(e_\alpha\rfloor R^{\star\beta}) \wedge \vartheta_\beta,$
mielke-geometrodynamics_EQ0268 (4.3.33)	095	0.276 W|-2	`R_{i[j \kappa l]}^{(l)} \equiv 0`	$R^{(l)}_{i[j\kappa l]} \equiv 0$	$R^{()}_{i[j\kappa l]} \equiv 0$
mielke-geometrodynamics_EQ0639 (10.2.10)	213	0.278 N|-1	`R_{\alpha}^{\{i \star}=-\Lambda_{\text {eff }} \eta_{ \alpha},`	$R_\alpha^{\{i\star} = -\Lambda_{\text{eff}}\, \eta_\alpha,$	$R_\alpha^{()\star} = -\Lambda_{\text{eff}}\, \eta_\alpha\,,$

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mielke-geometrodynamics_EQ0527 (7.7.47)	168	0.282 N|-1	\begin{aligned} L_{\mathrm{Pontr}}:= & d C_{\mathrm{RR}}= \frac{1}{2} R_{\alpha}{ }^{\beta} \wedge R_{\beta}{ }^{ \alpha}=-\frac{1}{2} R_{\alpha \beta}^{\{ \}} \wedge R^{ \{j \alpha \beta} \\ & -\frac{1}{12} d\left[{ }^{*} \mathscr{A} \wedge R^{\{ \}}-\frac{1}{3} \mathscr{A} \wedge d \mathscr{A}+\frac{1}{9}{ }^{*} \mathscr{A} \wedge^{*}\left(\mathscr{A} \wedge{ }^{*} \mathscr{A} \right)\right] . \end{aligned}	$$\begin{aligned} L_{\mathrm{Pontr}}:= & d C_{\mathrm{RR}}= \frac{1}{2} R_{\alpha}{ }^{\beta} \wedge R_{\beta}{ }^{ \alpha}=-\frac{1}{2} R_{\alpha \beta}^{\{ \}} \wedge R^{\{j \alpha \beta} \\ & -\frac{1}{12} d\left[{ }^{*} \mathscr{A} \wedge R^{\{ \}}-\frac{1}{3} \mathscr{A} \wedge d \mathscr{A}+\frac{1}{9}{ }^{*} \mathscr{A} \wedge^{*}\left(\mathscr{A} \wedge{ }^{*} \mathscr{A} \right)\right] . \end{aligned}$$	$$L_{\mathrm{Pontr}} := dC_{\mathrm{RR}} = \frac{1}{2} R_{\alpha}{}^{\beta} \wedge R_{\beta}{}^{\alpha} = -\frac{1}{2} R_{\alpha\beta}^{\{\}} \wedge R^{\{\}\alpha\beta} \quad ($$ $$- \frac{1}{12} d \left[{}^{*}\mathscr{A} \wedge R^{\{\}} - \frac{1}{3} \mathscr{A} \wedge d\mathscr{A} + \frac{1}{9} {}^{*}\mathscr{A} \wedge^{*} (\mathscr{A} \wedge {}^{*}\mathscr{A}) \right] .$$
mielke-geometrodynamics_EQ0942 (14.1.23)	306	0.287 W|+0	\xi \wedge{ }^{*} \xi= \pm \frac{\Omega \wedge{ }^{*} \Omega \operatorname{Tr}^{*}\left(\Omega \wedge{ }^{*} \Omega\right)-(-1)^{2 z} \Omega \wedge \Omega \operatorname{Tr}^{*}(\Omega \wedge \Omega)}{\sqrt{\left(\operatorname{Tr}^{*}\left(\Omega \wedge{ }^{*} \Omega \right)\right)^{2}+(-1)^{2 z}\left(\operatorname{Tr}^{*}(\Omega \wedge \Omega)\right)^{2}}} .	$$\xi \wedge{ }^{*} \xi= \pm \frac{\Omega \wedge{ }^{*} \Omega \operatorname{Tr}^{*}\left(\Omega \wedge{ }^{*} \Omega\right)-(-1)^{2 z} \Omega \wedge \Omega \operatorname{Tr}^{*}(\Omega \wedge \Omega)}{\sqrt{\left(\operatorname{Tr}^{*}\left(\Omega \wedge{ }^{*} \Omega \right)\right)^{2}+(-1)^{2 z}\left(\operatorname{Tr}^{*}(\Omega \wedge \Omega)\right)^{2}}} .$$	$$\xi \wedge {}^{*}\xi = \pm \frac{\Omega \wedge {}^{*}\Omega \ \mathrm{Tr}^{*}(\Omega \wedge {}^{*}\Omega) - (-1)^{2z} \ \Omega \wedge \Omega \ \mathrm{Tr}^{*}(\Omega \wedge \Omega)}{\sqrt{(\mathrm{Tr}^{*}(\Omega \wedge {}^{*}\Omega))^{2} + (-1)^{2z} \ (\mathrm{Tr}^{*}(\Omega \wedge \Omega))^{2}}} .$$
mielke-geometrodynamics_EQ0440 (6.8.11)	143	0.288 N|+0	\left.D \Sigma_{\alpha} \cong\left(e_{\alpha} \downharpoonleft T^{\gamma}\right) \wedge \Sigma_{ \gamma}+\left(e_{\alpha}\right\rfloor R^{\gamma \delta} \right) \wedge \tau_{\gamma \delta}	$$D \Sigma_{\alpha} \cong\left(e_{\alpha} \downharpoonleft T^{\gamma}\right) \wedge \Sigma_{ \gamma}+\left(e_{\alpha}\right\rfloor R^{\gamma \delta} \right) \wedge \tau_{\gamma \delta}$$	$$D \Sigma_{\alpha} \cong (e_{\alpha} \rfloor T^{\gamma}) \wedge \Sigma_{\gamma} + (e_{\alpha} \rfloor R^{\gamma\delta}) \wedge \tau_{\gamma\delta}$$
mielke-geometrodynamics_EQ0315 (4.6.7)	105	0.292 N|+1	\Delta \Phi(\widetilde{\widetilde{\Gamma}}, \gamma) \simeq \frac{i}{\hbar} \int_{S}\left(R^{(T) \alpha} P_{ \alpha}+R_{\alpha}^{(L) \beta} L_{\beta}^{\alpha}\right)	$$\Delta \Phi(\widetilde{\widetilde{\Gamma}}, \gamma) \simeq \frac{i}{\hbar} \int_{S}\left(R^{(T) \alpha} P_{ \alpha}+R_{\alpha}^{(L) \beta} L_{\beta}^{\alpha}\right)$$	$$\Delta \Phi(\widetilde{\widetilde{\Gamma}}, \gamma) \simeq \frac{i}{\hbar} \int_{S} (R^{(T)\alpha} P_{\alpha} + R_{\alpha}^{(L)\beta} L^{\alpha}{}_{\beta}).$$
mielke-geometrodynamics_EQ0965 (14.2.5)	313	0.299 N|+0	\begin{aligned} & \stackrel{\circ}{\Theta}:=\dot{d} \stackrel{\circ}{\vartheta}-[\stackrel{\circ}{\omega}, \stackrel{\circ}{\vartheta}]=(1-2 b) \stackrel{\circ}{ \vartheta} \wedge \stackrel{\circ}{\vartheta}, \\ & \stackrel{\circ}{\Omega}:=\dot{d} \stackrel{\circ}{ \omega}-\stackrel{\circ}{\omega} \wedge \stackrel{ \circ}{\omega}=b(1-b) \stackrel{\circ}{\vartheta} \wedge \stackrel{\circ}{\vartheta} . \end{aligned}	$$\begin{aligned} & \stackrel{\circ}{\Theta}:=\dot{d} \stackrel{\circ}{\vartheta}-[\stackrel{\circ}{\omega}, \stackrel{\circ}{\vartheta}]=(1-2 b) \stackrel{\circ}{ \vartheta} \wedge \stackrel{\circ}{\vartheta}, \\ & \stackrel{\circ}{\Omega}:=\dot{d} \stackrel{\circ}{ \omega}-\stackrel{\circ}{\omega} \wedge \stackrel{ \circ}{\omega}=b(1-b) \stackrel{\circ}{\vartheta} \wedge \stackrel{\circ}{\vartheta} . \end{aligned}$$	$$\overset{\circ}{\Theta} := \overset{\circ}{d}\overset{\circ}{\vartheta} - [\overset{\circ}{\omega}, \overset{\circ}{\vartheta}] = (1-2b)\overset{\circ}{\vartheta} \wedge \overset{\circ}{\vartheta},$$ $$\overset{\circ}{\Omega} := \overset{\circ}{d}\overset{\circ}{\omega} - \overset{\circ}{\omega} \wedge \overset{\circ}{\omega} = b(1-b)\overset{\circ}{\vartheta} \wedge \overset{\circ}{\vartheta}.$$
mielke-geometrodynamics_EQ0226 (4.2.19)	087	0.299 C|+4	\begin{aligned} A^{-1} \omega^{\mathrm{T}} & =A^{-1} \widetilde{\vartheta}-G^{-1} D G^{A^{-1}} \widetilde{ \varphi} \\ & =G^{-1} \widetilde{\vartheta}-G^{-1} D \widetilde{\varphi}, \end{aligned}	$$\begin{aligned} A^{-1} \omega^{\mathrm{T}} & =A^{-1} \widetilde{\vartheta}-G^{-1} D G^{A^{-1}} \widetilde{ \varphi} \\ & =G^{-1} \widetilde{\vartheta}-G^{-1} D \widetilde{\varphi}, \end{aligned}$$	$$\begin{aligned} {}^{A^{-1}}\omega^{\mathrm{T}} &= {}^{A^{-1}}\widetilde{\widetilde{\vartheta}} - G^{-1} D G^{A^{-1}} \widetilde{\widetilde{\varphi}} \\ &= G^{-1}\widetilde{\widetilde{\vartheta}} - G^{-1} D \widetilde{\widetilde{\varphi}}, \end{aligned}$$
mielke-geometrodynamics_EQ0407 (6.4.27)	135	0.315 N|+0	\Psi_{\Lambda}(A)=\exp \left(\frac{3}{\Lambda} \int_{M_{3}} \stackrel{(\pm)}{C}_{\mathrm{RR}}(\} \right),	$$\Psi_{\Lambda}(A)=\exp \left(\frac{3}{\Lambda} \int_{M_{3}} \stackrel{(\pm)}{C}_{\mathrm{RR}}(\} \right),$$	$$\Psi_{\Lambda}(A) = \exp \left(\frac{3}{\Lambda} \int_{M_3} \overset{(\pm)}{\underline{C}}_{\mathrm{RR}}{}^{\{\}} \right),$$

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mielke-geometrodynamics_EQ0196 (4.1.8)	082	■ 0.322 ● N|+1	`\begin{aligned} & {\left[P_{\alpha}, P_{\beta}=0\right] \quad\left(P_{\alpha}:=\partial / \partial x^{\alpha} \right),} \\ & {\left[P_{\alpha}, L_{\gamma \delta} \right]=g_{\alpha \delta} P_{\gamma}-g_{\alpha \gamma} P \delta,} \\ & {\left[L_{\alpha \beta}, L_{\gamma \delta}\right]=c_{\alpha \beta \gamma \delta}{ }^{ \varepsilon} L_{\varepsilon \gamma},} \\ & c_{\alpha \beta \delta \gamma \delta}{ }^{ \varepsilon \zeta}:=\delta_{\alpha}^{[\varepsilon} \delta_{\delta}^{\zeta]} \eta_{\beta \gamma)} . \end{aligned}`	$[P_\alpha, P_\beta = 0] \quad (P_\alpha := \partial/\partial x^\alpha)\,,$ $[P_\alpha, L_{\gamma\delta}] = g_{\alpha\delta} P_\gamma - g_{\alpha\gamma} P\delta,$ $[L_{\alpha\beta}, L_{\gamma\delta}] = c_{\alpha\beta\gamma\delta}{}^{\varepsilon}\, L_{\varepsilon\gamma},$ $c_{\alpha\beta\delta\gamma}{}^{\varepsilon\zeta} := \delta_{(\alpha}^{[\varepsilon}\delta_{\delta}^{\zeta]}\eta_{\beta\gamma)}.$	$[P_\alpha, P_\beta = 0] \qquad (P_\alpha := \partial/\partial x^\alpha),$ $[P_\alpha, L_{\gamma\delta}] = g_{\alpha\delta} P_\gamma - g_{\alpha\gamma} P\delta,$ $[L_{\alpha\beta}, L_{\gamma\delta}] = c_{\alpha\beta\gamma\delta}{}^{\varepsilon\ \xi} L_{\varepsilon\gamma},$ $c_{\alpha\beta\delta\gamma}{}^{\varepsilon\zeta} := \delta_{(\alpha}^{[\varepsilon}\delta_{\delta}^{\zeta]}\eta_{\beta\gamma)}.$
mielke-geometrodynamics_EQ0597 (9.1.15)	196	■ 0.323 ● W|+2	`\left[\mathrm{T}_{\alpha \beta}{ }^{\gamma}\right]= \left[\begin{array}{cccc} f & -h & \cdot & \cdot \\ \cdot & \cdot & -k & \cdot \\ \cdot & \cdot & \cdot & -k \\ \cdot & \cdot & \cdot & \cdot \\ \cdot & \cdot & \cdot & -g \\ \cdot & & g & \cdot \\ 0 & 1 & 2 & 3 \end{array} \begin{array}{c} 01 \\ 02 \\ 03 \\ 23 \\ 31 \\ 12 \end{array}\right.`	$\left[\mathrm{T}_{\alpha\beta}{}^{\gamma}\right] = \begin{array}{c} \left[\begin{array}{cccc} f & -h & \cdot & \cdot \\ \cdot & \cdot & -k & \cdot \\ \cdot & \cdot & \cdot & -k \\ \cdot & \cdot & \cdot & \cdot \\ \cdot & \cdot & \cdot & -g \\ \cdot & & g & \cdot \\ 0 & 1 & 2 & 3 \end{array}\right] \end{array} \begin{array}{c} 01 \\ 02 \\ 03 \\ 23 \\ 31 \\ 12 \end{array}$	$\left[\mathrm{T}_{\alpha\beta}{}^{\gamma}\right] = \begin{array}{c} \left[\begin{array}{cccc} f & -h & \cdot & \cdot \\ \cdot & \cdot & -k & \cdot \\ \cdot & \cdot & \cdot & -k \\ \cdot & \cdot & \cdot & \cdot \\ \cdot & \cdot & \cdot & -g \\ \cdot & \cdot & g & \cdot \\ 0 & 1 & 2 & 3 \end{array}\right] \end{array} \begin{array}{c} 01 \\ 02 \\ 03 \\ 23 \\ 31 \\ 12 \end{array}$
mielke-geometrodynamics_EQ0803 (11.4.15)	255	■ 0.324 ● W|+0	`\psi=\frac{4}{\ell}\left(\frac{2 \pi m}{3}\right)^{1 / 2} e^{-\mu / 2-\nu / 4-i \omega m t}\left[\begin{array}{cc} i H(\rho) & x_{\kappa}^{m} \\ F(\rho) & \frac{\vec{ \sigma} \cdot \vec{x}}{|\vec{x}|} x_{\kappa}^{m} \end{array}\right] .`	$\psi = \frac{4}{\ell}\left(\frac{2\pi m}{3}\right)^{1/2} e^{-\mu/2-\nu/4-i\omega m t} \left[\begin{array}{cc} iH(\rho) & x_\kappa^m \\ F(\rho) & \frac{\vec{\sigma}\cdot\vec{x}}{\vert\vec{x}\vert} x_\kappa^m \end{array}\right].$	$\psi = \frac{4}{\ell}\left(\frac{2\pi m}{3}\right)^{1/2} e^{-\mu/2-\nu/4-i\omega m t} \left[\begin{array}{cc} iH(\rho) & x_\kappa^m \\ F(\rho) & \frac{\vec{\sigma}\cdot\vec{x}}{\vert\vec{x}\vert} x_\kappa^m \end{array}\right].$
mielke-geometrodynamics_EQ1082 (A.7)	365	■ 0.326 ● W|+1	`\begin{aligned} & \gamma^{0}:=\left(\begin{array}{cc} \sigma^{0} & 0 \\ 0 & \sigma^{0} \end{array}\right), \quad \gamma^{k}:=\left(\begin{array}{cc} 0 & \sigma^{k} \\ -\sigma^{k} & 0 \end{array}\right) ; \\ & \gamma^{5}:=i \gamma^{\circ} \gamma^{1} \gamma^{2} \gamma^{3}=\left(\begin{array}{cc} 0 & \sigma^{0} \\ \sigma^{0} & 0 \end{array}\right) . \end{aligned}`	$\gamma^0 := \begin{pmatrix} \sigma^0 & 0 \\ 0 & \sigma^0 \end{pmatrix}, \quad \gamma^k := \begin{pmatrix} 0 & \sigma^k \\ -\sigma^k & 0 \end{pmatrix};$ $\gamma^5 := i\gamma^\circ\gamma^1\gamma^2\gamma^3 = \begin{pmatrix} 0 & \sigma^0 \\ \sigma^0 & 0 \end{pmatrix}.$	$\gamma^0 := \begin{pmatrix} \sigma^0 & 0 \\ 0 & \sigma^0 \end{pmatrix}, \quad \gamma^k := \begin{pmatrix} 0 & \sigma^k \\ -\sigma^k & 0 \end{pmatrix};$ $\gamma^5 := i\gamma^\circ\gamma^1\gamma^2\gamma^3 = \begin{pmatrix} 0 & \sigma^0 \\ \sigma^0 & 0 \end{pmatrix}.$

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Residual render vs scan (inkdrill): ● C component ● W weak ● S stable ● N noise ● K clean ● not measured

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mielke-geometrodynamics_EQ0978 (14.2.19)	316	■ 0.331 ● W|-1	`\begin{aligned} \pi \hat{L}_{\\|} & =-\frac{\hat{ \ell}^{2}}{\ell^{* 2}} \operatorname{Tr}(\Omega^{ \prime} \wedge{ }^{*} \Omega^{\prime} \wedge \underbrace{ \stackrel{\circ}{\vartheta} \wedge \cdots \wedge \stackrel{\circ}{\vartheta}}_{\mathrm{K} \text { terms }}) \\ & =-\frac{1}{\alpha_{g}} \operatorname{Tr}\left(\Omega^{\prime} \wedge^{*} \Omega^{\prime}\right) \sqrt{ \operatorname{det} \stackrel{\circ}{g}}=L_{\mathrm{YM}}^{ \prime} d_{\mu}(G) \end{aligned}`	$\pi \hat{L}_{\\|}=-\frac{\hat{\ell}^{2}}{\ell^{* 2}} \operatorname{Tr}(\Omega^{\prime} \wedge{}^{*} \Omega^{\prime} \wedge \underbrace{\overset{\circ}{\vartheta} \wedge \cdots \wedge \overset{\circ}{\vartheta}}_{\mathrm{K} \text { terms }})$ $=-\frac{1}{\alpha_{g}} \operatorname{Tr}\left(\Omega^{\prime} \wedge^{*} \Omega^{\prime}\right) \sqrt{\operatorname{det} \overset{\circ}{g}}=L_{\mathrm{YM}}^{\prime} d_{\mu}(G)$	$\pi \hat{L}_{\\|}=-\frac{\hat{\ell}^{2}}{\ell^{* 2}} \operatorname{Tr}(\Omega^{\prime} \wedge{}^{*} \Omega^{\prime} \wedge \underbrace{\overset{\circ}{\vartheta} \wedge \cdots \wedge \overset{\circ}{\vartheta}}_{\mathrm{K} \text { terms }})$ $=-\frac{1}{\alpha_{g}} \operatorname{Tr}(\Omega^{\prime} \wedge{}^{*} \Omega^{\prime}) \sqrt{\operatorname{det} \overset{\circ}{g}}=L_{\mathrm{YM}}^{\prime} d_{\mu}(G)$
mielke-geometrodynamics_EQ0579 (8.6.17)	186	■ 0.351 ● K|+0	`\left.\left.\left.2 D\left(e^{\beta}\right\rfloor D H_{ \alpha \beta}-\frac{1}{4} \vartheta_{\alpha} \wedge e^{ \gamma}\right\rfloor e^{\delta}\right\lrcorner D H_{ \gamma \delta}\right)-E_{\alpha}=\Sigma_{\alpha}-D \mu_{ \alpha},`	$2 D\left(e^{\beta} \rfloor D H_{\alpha \beta}-\frac{1}{4} \vartheta_{\alpha} \wedge e^{\gamma} \rfloor e^{\delta} \rfloor D H_{\gamma \delta}\right)-E_{\alpha}=\Sigma_{\alpha}-D \mu_{\alpha},$	$2 D\left(e^{\beta} \rfloor D H_{\alpha \beta}-\frac{1}{4} \vartheta_{\alpha} \wedge e^{\gamma} \rfloor e^{\delta} \rfloor D H_{\gamma \delta}\right)-E_{\alpha}=\Sigma_{\alpha}-D \mu_{\alpha},$
mielke-geometrodynamics_EQ0956 (14.1.38)	309	■ 0.353 ● W|-1	`\begin{aligned} d \delta & =(-1)^{-z *} \Sigma_{ \mathrm{YM}}(\Omega) \wedge D \Sigma_{\mathrm{YM}}(\Omega) /{ }^{*}\left({ }^{*} \Sigma_{\mathrm{YM}} \wedge \Sigma_{\mathrm{YM}}\right) \\ & =(-1)^{-z *}\left(\vartheta \wedge^{*} \Omega^{g}\right) \wedge D\left(\vartheta \wedge^{*} \Omega^{g}\right) /{ }^{*}\left(\vartheta \wedge^{*} \Omega^{g} \wedge^{*}\left(\vartheta \wedge^{*} \Omega^{g}\right)\right) . \end{aligned}`	$d \delta=(-1)^{-z *} \Sigma_{\mathrm{YM}}(\Omega) \wedge D \Sigma_{\mathrm{YM}}(\Omega) /{}^{*}\left({}^{*} \Sigma_{\mathrm{YM}} \wedge \Sigma_{\mathrm{YM}}\right)$ $=(-1)^{-z *}\left(\vartheta \wedge^{*} \Omega^{g}\right) \wedge D\left(\vartheta \wedge^{*} \Omega^{g}\right) /{}^{*}\left(\vartheta \wedge^{*} \Omega^{g} \wedge^{*}\left(\vartheta \wedge^{*} \Omega^{g}\right)\right) .$	$d \delta=(-1)^{-z *} \Sigma_{\mathrm{YM}}(\Omega) \wedge D \Sigma_{\mathrm{YM}}(\Omega) /{}^{*}\left({}^{*} \Sigma_{\mathrm{YM}} \wedge \Sigma_{\mathrm{YM}}\right)$ $=(-1)^{-z *}\left(\vartheta \wedge^{*} \Omega^{g}\right) \wedge D\left(\vartheta \wedge^{*} \Omega^{g}\right) /{}^{*}\left(\vartheta \wedge^{*} \Omega^{g} \wedge^{*}\left(\vartheta \wedge^{*} \Omega^{g}\right)\right) .$
mielke-geometrodynamics_EQ0555 (8.4.9)	180	■ 0.371 ● N|+0	`\left.\left.E_{\alpha}=\frac{1}{2} \operatorname{Tr} \left(\stackrel{ \pm}{\Omega}^{g} \wedge e_{\alpha}\right \rfloor^{*} \stackrel{ \pm}{\Omega}^{g}-e_{\alpha}\right \rfloor^{ \pm} \stackrel{ }{\Omega}^{g} \wedge{ }^{*} \stackrel{ \pm}{\Omega}^{g}\right)=0,`	$E_{\alpha}=\frac{1}{2} \operatorname{Tr}\left(\overset{\pm}{\Omega}{}^{g} \wedge e_{\alpha} \rfloor^{*} \overset{\pm}{\Omega}{}^{g}-e_{\alpha} \rfloor \overset{\pm}{\Omega}{}^{g} \wedge{}^{*} \overset{\pm}{\Omega}{}^{g}\right)=0,$	$E_{\alpha}=\frac{1}{2} \operatorname{Tr}\left(\overset{\pm}{\Omega}{}^{g} \wedge e_{\alpha} \rfloor^{*} \overset{\pm}{\Omega}{}^{g}-e_{\alpha} \rfloor \overset{\pm}{\Omega}{}^{g} \wedge{}^{*} \overset{\pm}{\Omega}{}^{g}\right)=0,$
mielke-geometrodynamics_EQ0562 (8.5.5)	182	■ 0.377 ● C|+9	`\begin{aligned} \widetilde{L}_{\mathrm{SKY}}^{(\star)} & =\frac{1}{2} \operatorname{Tr}\left[\left(\mathcal{ \Omega}^{g}-i \frac{\theta_{\mathrm{T}}^{*}}{4 \ell^{2}} \sigma\right) \wedge^{*}\left(\stackrel{t}{\Omega}^{g}-i \frac{\theta_{\mathrm{T}}^{*}}{4 \ell^{2}} \sigma\right) \right] \\ & =-\frac{\theta_{\mathrm{T}}^{*}}{2 \ell^{2}} R^{\alpha \beta} \wedge \eta_{\alpha \beta}+\theta_{ \mathrm{T}}^{*} \Lambda_{\text {eff }} \eta-\frac{1}{2} R^{\alpha \beta} \wedge{ }^{*} R_{\alpha \beta} \mp \frac{(-1)^{\mathrm{sig}}}{2} R^{\alpha \beta} \wedge R_{ \alpha \beta}^{(\star)} \end{aligned}`	$\widetilde{L}_{\mathrm{SKY}}^{(\star)}=\frac{1}{2} \operatorname{Tr}\left[\left(\otimes^{g}-i \frac{\theta_{\mathrm{T}}^{*}}{4 \ell^{2}} \sigma\right) \wedge^{*}\left(\overset{t}{\Omega}{}^{g}-i \frac{\theta_{\mathrm{T}}^{*}}{4 \ell^{2}} \sigma\right)\right]$ $=-\frac{\theta_{\mathrm{T}}^{*}}{2 \ell^{2}} R^{\alpha \beta} \wedge \eta_{\alpha \beta}+\theta_{\mathrm{T}}^{*} \Lambda_{\text{eff}} \eta-\frac{1}{2} R^{\alpha \beta} \wedge{}^{*} R_{\alpha \beta} \mp \frac{(-1)^{\mathrm{sig}}}{2} R^{\alpha \beta} \wedge R_{\alpha \beta}^{(\star)}$	$\widetilde{L}_{\mathrm{SKY}}^{(\star)}=\frac{1}{2} \operatorname{Tr}\left[\left(\overset{\pm}{\Omega}{}^{g}-i \frac{\theta_{\mathrm{T}}^{*}}{4 \ell^{2}} \sigma\right) \wedge{}^{*}\left(\overset{\pm}{\Omega}{}^{g}-i \frac{\theta_{\mathrm{T}}^{*}}{4 \ell^{2}} \sigma\right)\right]$ (8.5 $=-\frac{\theta_{\mathrm{T}}^{*}}{2 \ell^{2}} R^{\alpha \beta} \wedge \eta_{\alpha \beta}+\theta_{\mathrm{T}}^{*} \Lambda_{\text{eff}} \eta-\frac{1}{2} R^{\alpha \beta} \wedge{}^{*} R_{\alpha \beta} \mp \frac{(-1)^{\mathrm{sig}}}{2} R^{\alpha \beta} \wedge R_{\alpha \beta}^{(\star)}.$

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Residual render vs scan (inkdrill): ● C component ● W weak ● S stable ● N noise ● K clean ● not measured

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mielke-geometrodynamics_EQ0393 (6.4.8)	132	0.382 W|+1	\begin{aligned} n^{\alpha} \Sigma_{\alpha} & \left. \left.=n \downharpoonleft L-\left(\mathrm{t}_{n} \Psi \right) \wedge \frac{\partial L}{\partial D \Psi}-(n \rfloor \Psi\right) \wedge \frac{\delta L}{\delta \Psi}+D[(n\rfloor \Psi) \wedge \frac{\partial L}{\partial D \Psi}\right] \\ & \left.\cong n\rfloor L-\left(\ell_{n} \Psi+\Gamma_{\perp}^{\alpha \beta} \rho\left(I_{\alpha \beta}\right) \Psi\right) \wedge \frac{\partial L}{ \partial D \Psi}+D[(n\rfloor \Psi) \wedge \frac{\partial L}{\partial D \Psi}\right] . \end{aligned}	$$\begin{aligned} n^{\alpha} \Sigma_{\alpha} & \left. \left.=n \downharpoonleft L-\left(\mathrm{t}_{n} \Psi \right) \wedge \frac{\partial L}{\partial D \Psi}-(n \rfloor \Psi\right) \wedge \frac{\delta L}{\delta \Psi}+D[(n\rfloor \Psi) \wedge \frac{\partial L}{\partial D \Psi}\right] \\ & \left.\cong n\rfloor L-\left(\ell_{n} \Psi+\Gamma_{\perp}^{\alpha \beta} \rho\left(I_{\alpha \beta}\right) \Psi\right) \wedge \frac{\partial L}{ \partial D \Psi}+D[(n\rfloor \Psi) \wedge \frac{\partial L}{\partial D \Psi}\right] . \end{aligned}$$	$$\begin{aligned} n^{\alpha} \Sigma_{\alpha} & \left. \left.=n \downharpoonleft L-\left(\mathrm{t}_{n} \Psi \right) \wedge \frac{\partial L}{\partial D \Psi}-(n \rfloor \Psi\right) \wedge \frac{\delta L}{\delta \Psi}+D[(n\rfloor \Psi) \wedge \frac{\partial L}{\partial D \Psi}\right] \\ & \left.\cong n\rfloor L-\left(\ell_{n} \Psi+\Gamma_{\perp}^{\alpha \beta} \rho\left(I_{\alpha \beta}\right) \Psi\right) \wedge \frac{\partial L}{ \partial D \Psi}+D[(n\rfloor \Psi) \wedge \frac{\partial L}{\partial D \Psi}\right] . \end{aligned}$$
mielke-geometrodynamics_EQ0261 (4.3.26)	094	0.394 N|+0	K_{. \alpha \beta}^{c}=-\frac{1}{2}\left(T_{. \alpha \beta}^{c}-T_{\alpha, \beta}^{. . c}+T_{\beta . \alpha}^{. c}\right)=-K_{. \beta \alpha}^{c} .	$$K_{. \alpha \beta}^{c}=-\frac{1}{2}\left(T_{. \alpha \beta}^{c}-T_{\alpha, \beta}^{. . c}+T_{\beta . \alpha}^{. c}\right)=-K_{. \beta \alpha}^{c} .$$	$$K_{. \alpha \beta}^{c}=-\frac{1}{2}\left(T_{. \alpha \beta}^{c}-T_{\alpha, \beta}^{. . c}+T_{\beta . \alpha}^{. c}\right)=-K_{. \beta \alpha}^{c} .$$
mielke-geometrodynamics_EQ0377 (6.2.28)	128	0.396 W|+0	\stackrel{(\pm)}{L}_{\\|}=-\frac{1}{2}\left[\vartheta^{ \alpha} \wedge \stackrel{(\pm)(\pm)}{D}_{\alpha}+d \left(\vartheta^{\alpha} \wedge \stackrel{(\pm)}{\Pi}_{ \alpha}\right)\right]=-\frac{1}{2}\left(\stackrel{(\pm)}{D} \vartheta^{\alpha} \wedge \stackrel{(\pm)}{ \Pi}_{\alpha},\right.	$$\stackrel{(\pm)}{L}_{\|}=-\frac{1}{2}\left[\vartheta^{\alpha} \wedge \stackrel{(\pm)(\pm)}{D}_{\alpha}+d\left(\vartheta^{\alpha} \wedge \stackrel{(\pm)}{\Pi}_{\alpha}\right)\right]=-\frac{1}{2}\left(\stackrel{(\pm)}{D} \vartheta^{\alpha} \wedge \stackrel{(\pm)}{\Pi}_{\alpha},\right.$$	$$\stackrel{(\pm)}{L}_{\|}=-\frac{1}{2}\left[\vartheta^{\alpha} \wedge \stackrel{(\pm)(\pm)}{D}_{\alpha}+d\left(\vartheta^{\alpha} \wedge \stackrel{(\pm)}{\Pi}_{\alpha}\right)\right]=-\frac{1}{2}\left(\stackrel{(\pm)}{D} \vartheta^{\alpha} \wedge \stackrel{(\pm)}{\Pi}_{\alpha},\right.$$
mielke-geometrodynamics_EQ0262 (4.3.27)	094	0.399 C|+3	\begin{aligned} \Omega^{g} & =\Omega^{\{ \}}-d K+K \wedge \omega^{\{ \}}+\omega^{\{ } \wedge K-K \wedge K \\ & = \Omega^{\{ \}}-D^{\{ } K-K \wedge K=\Omega^{\{ \}}-D K+K \wedge K \end{aligned}	$$\begin{aligned} \Omega^{g} & =\Omega^{\{ \}}-d K+K \wedge \omega^{\{ \}}+\omega^{\{ } \wedge K-K \wedge K \\ & = \Omega^{\{ \}}-D^{\{ } K-K \wedge K=\Omega^{\{ \}}-D K+K \wedge K \end{aligned}$$	$$\begin{aligned} \Omega^{g} & =\Omega^{\{ \}}-d K+K \wedge \omega^{\{ \}}+\omega^{\{ } \wedge K-K \wedge K \\ & = \Omega^{\{ \}}-D^{\{ } K-K \wedge K=\Omega^{\{ \}}-D K+K \wedge K \end{aligned}$$
mielke-geometrodynamics_EQ0570 (8.6.8)	184	0.403 K|+0	\left.E_{\alpha}:=\partial L / \partial \vartheta^{ \alpha}=e_{\alpha}\right\rfloor L+\left(e_{\alpha} \downharpoonleft T^{\beta}\right) \wedge H_{\beta}+ \left(e_{\alpha} \downharpoonleft R^{\beta \gamma}\right) \wedge H_{\beta \gamma}	$$\left.E_{\alpha}:=\partial L / \partial \vartheta^{ \alpha}=e_{\alpha}\right\rfloor L+\left(e_{\alpha} \downharpoonleft T^{\beta}\right) \wedge H_{\beta}+ \left(e_{\alpha} \downharpoonleft R^{\beta \gamma}\right) \wedge H_{\beta \gamma}$$	$$\left.E_{\alpha}:=\partial L / \partial \vartheta^{ \alpha}=e_{\alpha}\right\rfloor L+\left(e_{\alpha} \downharpoonleft T^{\beta}\right) \wedge H_{\beta}+ \left(e_{\alpha} \downharpoonleft R^{\beta \gamma}\right) \wedge H_{\beta \gamma}$$
mielke-geometrodynamics_EQ0306 (4.5.16)	103	0.406 N|+0	\left.\widetilde{\varepsilon}_{\mathrm{MA}}:= \varepsilon_{\mathrm{RC}}+\xi\right\lrcorner L \cong- \left(\mathscr{L}_{\xi} \Gamma_{\beta}{ }^{\gamma}\right) \wedge H^{\beta}{ }_{\gamma}+d H_{\infty}	$$\left.\widetilde{\varepsilon}_{\mathrm{MA}}:= \varepsilon_{\mathrm{RC}}+\xi\right\lrcorner L \cong- \left(\mathscr{L}_{\xi} \Gamma_{\beta}{ }^{\gamma}\right) \wedge H^{\beta}{ }_{\gamma}+d H_{\infty}$$	$$\left.\widetilde{\varepsilon}_{\mathrm{MA}}:= \varepsilon_{\mathrm{RC}}+\xi\right\lrcorner L \cong- \left(\mathscr{L}_{\xi} \Gamma_{\beta}{ }^{\gamma}\right) \wedge H^{\beta}{ }_{\gamma}+d H_{\infty}$$
mielke-geometrodynamics_EQ0336 (5.3.13)	114	0.407 N|-1	R^{\alpha \beta}=R^{\{j \alpha \beta}-D^{\{ \}} K^{\alpha \beta}-K^{\alpha}{ }_{\mu} \wedge K^{\mu \beta}	$$R^{\alpha \beta}=R^{\{j \alpha \beta}-D^{\{ \}} K^{\alpha \beta}-K^{\alpha}{ }_{\mu} \wedge K^{\mu \beta}$$	$$R^{\alpha \beta}=R^{\{j \alpha \beta}-D^{\{ \}} K^{\alpha \beta}-K^{\alpha}{ }_{\mu} \wedge K^{\mu \beta}$$
mielke-geometrodynamics_EQ1136 (C.4)	375	0.409 N|+0	c_{i j}^{k}=-c_{j i}^{k}	$$c_{i j}^{k}=-c_{j i}^{k}$$	$$c_{i j}^{k}=-c_{j i}^{k}$$
mielke-geometrodynamics_EQ0861 (12.4.8)	279	0.420 N|-1	\begin{aligned} d C_{\mathrm{RR}} & =-\operatorname{Tr}(\Omega \wedge \Omega) \\ & =\frac{1}{2} R_{\alpha \beta}^{\{ \}} \wedge R^{\{\beta \alpha \beta} \\ & + \frac{1}{12} d\left[{ }^{*} \mathcal{A} \wedge R^{\{ \}}- \frac{1}{3} \mathcal{A} \wedge d \mathcal{A}+\frac{1}{9}{ }^{*} \mathcal{A} \wedge{ }^{*}\left(\mathcal{A} \wedge{ }^{*} \mathcal{A}\right)\right] . \end{aligned}	$$\begin{aligned} d C_{\mathrm{RR}} & =-\operatorname{Tr}(\Omega \wedge \Omega) \\ & =\frac{1}{2} R_{\alpha \beta}^{\{ \}} \wedge R^{\beta \alpha \beta} \\ & +\frac{1}{12} d\left[{ }^{*} \mathcal{A} \wedge R^{\{ \}}-\frac{1}{3} \mathcal{A} \wedge d \mathcal{A}+\frac{1}{9}{ }^{*} \mathcal{A} \wedge{ }^{*}(\mathcal{A} \wedge{ }^{*} \mathcal{A})\right] . \end{aligned}$$	$$\begin{aligned} d C_{\mathrm{RR}} & =-\operatorname{Tr}(\Omega \wedge \Omega) \\ & =\frac{1}{2} R_{\alpha \beta}^{\{ \}} \wedge R^{\beta \alpha \beta} \\ & +\frac{1}{12} d\left[{ }^{*} \mathcal{A} \wedge R^{\{ \}}-\frac{1}{3} \mathcal{A} \wedge d \mathcal{A}+\frac{1}{9}{ }^{*} \mathcal{A} \wedge{ }^{*}(\mathcal{A} \wedge{ }^{*} \mathcal{A})\right] . \end{aligned}$$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ0451 (7.2.4)	151	0.424 N|+0	`\stackrel{+}{\Omega}^{g}:=\frac{1}{2}\left(\Omega^{g} \pm{ }^{*} \Omega^{g(\star)}\right),`	$\overset{+}{\Omega}{}^{g} := \frac{1}{2}\left(\Omega^{g} \pm {}^{*}\Omega^{g(\star)}\right),$	$\overset{\pm}{\Omega}{}^{g} := \frac{1}{2}\left(\Omega^{g} \pm {}^{*}\Omega^{g(\star)}\right),$
mielke-geometrodynamics_EQ0372 (6.2.23)	127	0.437 C|-3	`\left.\stackrel{( \pm)( \pm)}{D} \stackrel{(-)}{\Pi}_{ \alpha} \mp \frac{i}{4} \ell^{2} e_{\alpha}\right\rfloor \left(\stackrel{(+)}{\Pi}^{\beta} \wedge \stackrel{(-)}{ \Pi}_{\beta}\right)=\Sigma_{\alpha},`	$\overset{(\pm)(\pm)(-)}{D}\ \Pi_{\alpha} \mp \frac{i}{4}\ell^{2} e_{\alpha}\rfloor\left(\overset{(+)}{\Pi}{}^{\beta} \wedge \overset{(-)}{\Pi}{}_{\beta}\right)=\Sigma_{\alpha},$	$\overset{(\pm)(\pm)}{D}\,\overset{(+)}{\Pi}{}_{\alpha} \mp \frac{i}{4}\ell^{2} e_{\alpha}\rfloor\left(\overset{(+)}{\Pi}{}^{\beta} \wedge \overset{(-)}{\Pi}{}_{\beta}\right)=\Sigma_{\alpha},$
mielke-geometrodynamics_EQ0997 (14.3.10)	322	0.442 N|-1	`D^{(\text {int })}=\stackrel{\circ}{\gamma} \wedge^{*} \stackrel{\circ}{D}=\stackrel{\circ}{\gamma} \wedge^{*}( \stackrel{\circ}{d}+i \stackrel{\circ}{\widetilde{ \omega}})`	$D^{(\text{int})}=\overset{\circ}{\gamma} \wedge^{*} \overset{\circ}{D}=\overset{\circ}{\gamma} \wedge^{*}(\overset{\circ}{d}+i\,\overset{\circ}{\widetilde{\omega}})$	$\not{D}^{(int)}=\overset{\circ}{\gamma} \wedge {}^{*}\overset{\circ}{D}=\overset{\circ}{\gamma} \wedge {}^{*}(\overset{\circ}{d}+i\overset{\circ}{\widetilde{\omega}})$
mielke-geometrodynamics_EQ0474 (7.4.2)	156	0.444 N|-1	`R_{\alpha \beta} \equiv C_{\alpha \beta}+\frac{1}{2} R i^{\tau}{ }_{\alpha \beta}-\frac{R}{12} \vartheta_{ \alpha} \wedge \vartheta_{\beta},`	$R_{\alpha\beta} \equiv C_{\alpha\beta}+\frac{1}{2} R i^{\tau}{}_{\alpha\beta}-\frac{R}{12} \vartheta_{\alpha} \wedge \vartheta_{\beta},$	$R_{\alpha\beta} \equiv C_{\alpha\beta}+\frac{1}{2} R i\not{\tau}_{\alpha\beta}-\frac{R}{12} \vartheta_{\alpha} \wedge \vartheta_{\beta},$
mielke-geometrodynamics_EQ0681 (10.3.38)	221	0.452 C|+4	`\begin{gathered} \chi=\theta_{\mathrm{L}} \varepsilon-\tilde{\theta}_{\mathrm{L}} \tilde{\varepsilon}, \quad \Lambda=\frac{(-1)^{s}}{4 \ell^{2}}\left(\theta_{ \mathrm{L}} \varepsilon^{3}-\tilde{\theta}_{\mathrm{L}} \tilde{\varepsilon}^{3}\right), \quad \theta_{ \mathrm{T}}=\frac{(-1)^{s}}{2}\left(\theta_{\mathrm{L}} \varepsilon^{2}-\tilde{\theta}_{\mathrm{L}} \tilde{ \varepsilon}^{2}\right), \\ \Delta \theta_{\mathrm{L}}= \theta_{\mathrm{L}}-\tilde{\theta}_{\mathrm{L}}, \quad \Delta \theta_{\mathrm{TL}}=\frac{1}{2}\left(\theta_{ \mathrm{L}} \varepsilon-\tilde{\theta}_{\mathrm{L}} \tilde{\varepsilon}\right) . \end{gathered}`	$\begin{gathered} \chi=\theta_{\mathrm{L}} \varepsilon-\tilde{\theta}_{\mathrm{L}} \tilde{\varepsilon}, \quad \Lambda=\frac{(-1)^{s}}{4 \ell^{2}}\left(\theta_{ \mathrm{L}} \varepsilon^{3}-\tilde{\theta}_{\mathrm{L}} \tilde{\varepsilon}^{3}\right), \quad \theta_{ \mathrm{T}}=\frac{(-1)^{s}}{2}\left(\theta_{\mathrm{L}} \varepsilon^{2}-\tilde{\theta}_{\mathrm{L}} \tilde{ \varepsilon}^{2}\right), \\ \Delta \theta_{\mathrm{L}}= \theta_{\mathrm{L}}-\tilde{\theta}_{\mathrm{L}}, \quad \Delta \theta_{\mathrm{TL}}=\frac{1}{2}\left(\theta_{ \mathrm{L}} \varepsilon-\tilde{\theta}_{\mathrm{L}} \tilde{\varepsilon}\right) . \end{gathered}$	$\chi=\theta_{\mathrm{L}}\varepsilon-\tilde{\theta}_{\mathrm{L}}\tilde{\varepsilon}, \quad \Lambda=\frac{(-1)^{s}}{4\ell^{2}}(\theta_{\mathrm{L}}\varepsilon^{3}-\tilde{\theta}_{\mathrm{L}}\tilde{\varepsilon}^{3}), \quad \theta_{\mathrm{T}}=\frac{(-1)^{s}}{2}(\theta_{\mathrm{L}}\varepsilon^{2}-\tilde{\theta}_{\mathrm{L}}\tilde{\varepsilon}^{2}),$ (10.3 $\Delta\theta_{\mathrm{L}}=\theta_{\mathrm{L}}-\tilde{\theta}_{\mathrm{L}}, \quad \Delta\theta_{\mathrm{TL}}=\frac{1}{2}(\theta_{\mathrm{L}}\varepsilon-\tilde{\theta}_{\mathrm{L}}\tilde{\varepsilon}).$ (10.3
mielke-geometrodynamics_EQ0845 (12.2.13)	273	0.457 N|+0	`C_{\mathrm{TT}} \cong \frac{1}{4} j_{5}, \quad \mathscr{A}=2 \ell^{2}{ }^{*} C_{\mathrm{TT}}=\left( \ell^{2} / 2\right) \bar{\psi} \gamma_{5} \gamma \psi .`	$C_{\mathrm{TT}} \cong \frac{1}{4} j_{5}, \quad \mathscr{A}=2\ell^{2}{}^{*}C_{\mathrm{TT}}=\left(\ell^{2}/2\right)\bar{\psi}\gamma_{5}\gamma\psi.$	$C_{\mathrm{TT}} \cong \frac{1}{4} j_{5}, \quad \mathscr{A}=2\ell^{2}{}^{*}C_{\mathrm{TT}}=(\ell^{2}/2)\overline{\psi}\gamma_{5}\gamma\psi .$
mielke-geometrodynamics_EQ0375 (6.2.26)	128	0.466 S|+2	`\stackrel{( \pm)}{L}_{\\|}=\mp \frac{i}{4} \ell^{2} \stackrel{( \pm)}{\Pi}^{\alpha} \wedge \stackrel{( \pm)}{ \Pi}_{\alpha}, \quad \stackrel{\overline{+)}}{L}_{\\|}= \stackrel{(-)}{L}_{\\|}`	$\overset{(\pm)}{L}{}_{\parallel}=\mp\frac{i}{4}\ell^{2}\,\overset{(\pm)}{\Pi}{}^{\alpha} \wedge \overset{(\pm)}{\Pi}{}_{\alpha}, \quad \overline{\overset{(+)}{L}}{}_{\parallel}=\overset{(-)}{L}{}_{\parallel}$	$\overset{(\pm)}{L}{}_{\parallel}=\mp\frac{i}{4}\ell^{2}\,\overset{(\pm)}{\Pi}{}^{\alpha} \wedge \overset{(\pm)}{\Pi}{}_{\alpha}, \quad \overline{\overset{(+)}{L}}{}_{\parallel}=\overset{(-)}{L}{}_{\parallel},$
mielke-geometrodynamics_EQ0222 (4.2.15)	087	0.466 N|+0	`\widetilde{\widetilde{\varphi}}: A(M) \rightarrow C^{ \infty}(\stackrel{\circ}{V})`	$\widetilde{\widetilde{\varphi}}: A(M) \rightarrow C^{\infty}(\overset{\circ}{V})$	$\widetilde{\widetilde{\varphi}}: A(M) \rightarrow C^{\infty}(\overset{\circ}{V})$
mielke-geometrodynamics_EQ0604 (9.2.3)	199	0.474 W|+1	`\begin{aligned} L_{\text {Euler }}, & ={ }^{*} \left(\gamma_{2}^{g}\right)=\frac{1}{(4 \pi)^{2}} \operatorname{Tr}\left(\Omega^{g} \wedge \Omega^{g(*)} \right) \\ & =\frac{(-1)^{s / 4}}{32 \pi^{2}} R^{\alpha \beta \gamma \delta *} R_{\alpha \beta \gamma \delta} \sqrt{|g|} d^{4} x . \end{aligned}`	$\begin{aligned} L_{\text{Euler}}, & ={}^{*}\left(\gamma_{2}^{g}\right)=\frac{1}{(4\pi)^{2}}\operatorname{Tr}\left(\Omega^{g} \wedge \Omega^{g(*)}\right) \\ & =\frac{(-1)^{s/4}}{32\pi^{2}} R^{\alpha\beta\gamma\delta *} R^{*}_{\alpha\beta\gamma\delta}\sqrt{\|g\|}d^{4}x. \end{aligned}$	$\begin{aligned} L_{\text{Euler}}, & ={}^{*}(\gamma_{2}^{g})=\frac{1}{(4\pi)^{2}}\operatorname{Tr}(\Omega^{g} \wedge \Omega^{g(*)}) \\ & =\frac{(-1)^{s/4}}{32\pi^{2}} R^{\alpha\beta\gamma\delta *} R^{*}_{\alpha\beta\gamma\delta}\sqrt{\|g\|}d^{4}x. \end{aligned}$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

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mielke-geometrodynamics_EQ0401 (6.4.20)	133	0.482 W|+1	`\mathscr{H}_{\\|}=\stackrel{( \pm)}{\underline{D}} \stackrel{*}{-\mathscr{A}}_{\hat{0}}^{( \pm)}=0,`	$\mathscr{H}_{\|} = \overset{(\pm)}{\underline{D}} \overset{*}{-} \overset{(\pm)}{\mathscr{A}}_{\hat{0}} = 0,$	$\mathscr{H}_{\|} = \overset{(\pm)}{\underline{D}} \overset{*}{-} \overset{(\pm)}{\underline{\mathscr{A}}}_{\hat{0}} = 0,$
mielke-geometrodynamics_EQ0750 (11.1.17)	241	0.484 U|+23	`D_{\left.\right|_{\overparen{S O}(1,3)} ^{\mathrm{F}}}^{ \mathrm{F}}=\underbrace{D^{\frac{1}{2}} \times \cdots \times D^{\frac{1}{2}}}_{(n-4) / 4} .`	*(not rendered)*	$D^{\mathrm{F}}\|_{\overparen{S O}(1,3)} = \underbrace{D^{\frac{1}{2}} \times \cdots \times D^{\frac{1}{2}}}_{(n-4)/4} .$
mielke-geometrodynamics_EQ0686 (10.3.44)	222	0.497 N|+0	`\left.\left.\left.C_{l}=E_{l}^{\alpha} *\left\{D^{\{ \}}\left[2\left(e^{\beta}\right\lrcorner D^{\{ \}} H_{[ \alpha \beta]}\right)+\frac{1}{2} \vartheta_{\alpha} \wedge\left(e^{\beta}\right\lrcorner e^{\gamma}\right \lrcorner D^{\{ \}} H_{[\beta \gamma]}\right)\right] \right\}`	$C_l = E_l^{\alpha} * \left\{ D^{\{\}} \left[2 \left(e^{\beta} \lrcorner D^{\{\}} H_{[\alpha\beta]} \right) + \frac{1}{2} \vartheta_{\alpha} \wedge \left(e^{\beta} \lrcorner e^{\gamma} \lrcorner D^{\{\}} H_{[\beta\gamma]} \right) \right] \right\}$	$C_l = E_l^{\alpha} * \left\{ D^{\{\}} \left[2 \left(e^{\beta} \lrcorner D^{\{\}} H_{[\alpha\beta]} \right) + \frac{1}{2} \vartheta_{\alpha} \wedge \left(e^{\beta} \lrcorner e^{\gamma} \lrcorner D^{\{\}} H_{[\beta\gamma]} \right) \right] \right\}$
mielke-geometrodynamics_EQ0515 (7.7.33)	166	0.497 N|+0	`\left.\left.T:=\frac{1}{4} \operatorname{Tr}(\check{ \gamma}\rfloor \Theta\right)=e_{\alpha}\right\rfloor T^{\alpha}, \quad \mathscr{A}:=\frac{1}{4}{ }^{*} \operatorname{Tr}(\gamma \wedge \Theta)={ }^{*}\left( \vartheta_{\alpha} \wedge T^{\alpha}\right) .`	$T := \frac{1}{4} \operatorname{Tr}(\check{\gamma} \lrcorner \Theta) = e_{\alpha} \lrcorner T^{\alpha}, \quad \mathscr{A} := \frac{1}{4} {}^{*} \operatorname{Tr}(\gamma \wedge \Theta) = {}^{*}(\vartheta_{\alpha} \wedge T^{\alpha}) .$	$T := \frac{1}{4} \operatorname{Tr}(\check{\gamma} \lrcorner \Theta) = e_{\alpha} \lrcorner T^{\alpha}, \quad \mathscr{A} := \frac{1}{4} {}^{*} \operatorname{Tr}(\gamma \wedge \Theta) = {}^{*}(\vartheta_{\alpha} \wedge T^{\alpha}) .$
mielke-geometrodynamics_EQ0799 (11.4.11)	254	0.505 K|+0	`d s^{2}=\frac{1}{\lambda^{2}}\left(R_{\circ}^{2} d \lambda^{2}-\mathrm{o}_{i j} d y^{i} \otimes_{s} d y^{j} \right) .`	$ds^2 = \frac{1}{\lambda^2} \left(R_{\circ}^2 d\lambda^2 - \mathrm{o}_{ij} dy^i \otimes_s dy^j \right) .$	$ds^2 = \frac{1}{\lambda^2} \left(R_{\circ}^2 d\lambda^2 - \mathrm{o}_{ij} dy^i \otimes_s dy^j \right) .$
mielke-geometrodynamics_EQ0960 (14.1.42)	309	0.508 W|-1	`\xi_{\mu \nu} \xi_{\rho \sigma}=-\frac{1}{2} \bar{R}_{\mu \nu \rho \sigma}^{\{ \}}-\frac{1}{2} \frac{\bar{R}_{\mu \nu \gamma \delta}^{\{ \}} \bar{R}_{\rho \sigma}^{\{ \} \gamma \delta}}{R_{\alpha \beta}^{\{ \}} R^{\{j \alpha \beta}} .`	$\xi_{\mu\nu}\xi_{\rho\sigma} = -\frac{1}{2}\bar{R}^{\{\}}_{\mu\nu\rho\sigma} - \frac{1}{2}\frac{\bar{R}^{\{\}}_{\mu\nu\gamma\delta}\bar{R}^{\{\}\gamma\delta}_{\rho\sigma}}{R^{\{\}}_{\alpha\beta}R^{\{j\alpha\beta}}.$	$\xi_{\mu\nu}\xi_{\rho\sigma} = -\frac{1}{2}\bar{R}^{\{\}}_{\mu\nu\rho\sigma} - \frac{1}{2}\frac{\bar{R}^{\{\}}_{\mu\nu\gamma\delta}\bar{R}^{\{\}\gamma\delta}_{\rho\sigma}}{R^{\{\}}_{\alpha\beta}R^{\{j\alpha\beta}}.$
mielke-geometrodynamics_EQ1131 (B.43)	373	0.509 W|+2	`\langle,\rangle_{M}: \begin{cases}\bigwedge^{p} T^{*}(M) \times & C_{p}(M, \mathbb{R}) \rightarrow \mathbb{R} \\ \left\langle\alpha^{(p)},\right. & \left.c_{p} \right\rangle_{\mathrm{M}} \rightarrow \int_{c_{p}} \alpha^{(p)}\end{cases}`	$\langle,\rangle_M : \begin{cases} \bigwedge^p T^*(M) \times & C_p(M,\mathbb{R}) \to \mathbb{R} \\ \left\langle \alpha^{(p)}, \right. & \left. c_p \right\rangle_{\mathrm{M}} \to \int_{c_p} \alpha^{(p)} \end{cases}$	$\langle\,,\rangle_M : \begin{cases} \bigwedge^p T^*(M) \times & C_p(M,\mathbb{R}) \to \mathbb{R} \\ \rotatebox{90}{$\in$} & \rotatebox{90}{$\in$} \\ \langle \alpha^{(p)}, & c_p \rangle_{\mathrm{M}} \to \int_{c_p} \alpha^{(p)} \end{cases}$
mielke-geometrodynamics_EQ0294 (4.5.5)	101	0.510 N|+0	`\left.\Sigma_{\alpha}=e_{\alpha} \downharpoonleft L-\left(e_{\alpha} \downharpoonleft D \Psi\right) \wedge \frac{\partial L}{\partial D \Psi}-\left(e_{\alpha}\right \lrcorner \Psi\right) \wedge \frac{\partial L}{\partial \Psi} .`	$\Sigma_\alpha = e_\alpha \downharpoonleft L - (e_\alpha \downharpoonleft D\Psi) \wedge \frac{\partial L}{\partial D\Psi} - (e_\alpha \lrcorner \Psi\Big) \wedge \frac{\partial L}{\partial \Psi}.$	$\Sigma_\alpha = e_\alpha \rfloor L - (e_\alpha \rfloor D\Psi) \wedge \frac{\partial L}{\partial D\Psi} - (e_\alpha \rfloor \Psi) \wedge \frac{\partial L}{\partial \Psi} .$
mielke-geometrodynamics_EQ0118 (3.3.19)	059	0.513 N|-1	`L_{\mathrm{Pontr}}:=-\frac{1}{2} F \wedge F=\mathbf{E} \cdot \mathbf{B} \eta .`	$L_{\mathrm{Pontr}} := -\frac{1}{2} F \wedge F = \mathbf{E} \cdot \mathbf{B} \eta.$	$L_{\mathrm{Pontr}} := -\frac{1}{2} F \wedge F = \mathbf{E} \cdot \mathbf{B} \eta .$

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mielke-geometrodynamics_EQ0533 (7.7.53)	169	0.513 C|+5	`\begin{aligned} G & :=\frac{1}{2} R^{\beta \gamma} \wedge \eta_{\alpha \beta \gamma} \gamma^{\alpha} \\ & \left.\left.=G^{(\beta)}+\frac{(-1)^{\mathrm{sig}}}{12} \left(e_{\alpha}\right\rfloor \mathscr{A} \wedge{ }^{*} \mathscr{A}-\frac{1}{3} \mathscr{A} \wedge e_{\alpha} \right\rfloor^{*} \mathscr{A}\right) \gamma^{\alpha}+ \frac{(-1)^{\mathrm{sig}}}{6} \gamma \wedge d \mathscr{A} \end{aligned}`	$G:=\frac{1}{2} R^{\beta \gamma} \wedge \eta_{\alpha \beta \gamma} \gamma^{\alpha}$ $=G^{(\beta)}+\frac{(-1)^{\mathrm{sig}}}{12}\left(e_{\alpha}\rfloor \mathscr{A} \wedge{ }^{*} \mathscr{A}-\frac{1}{3} \mathscr{A} \wedge e_{\alpha}\rfloor{ }^{*} \mathscr{A}\right) \gamma^{\alpha}+\frac{(-1)^{\mathrm{sig}}}{6} \gamma \wedge d \mathscr{A}$	$G:=\frac{1}{2} R^{\beta \gamma} \wedge \eta_{\alpha \beta \gamma} \gamma^{\alpha}$ (7.7.5 $=G^{()}+\frac{(-1)^{\mathrm{sig}}}{12}\left(e_{\alpha}\rfloor \mathscr{A} \wedge{ }^{*} \mathscr{A}-\frac{1}{3} \mathscr{A} \wedge e_{\alpha}\rfloor{ }^{*} \mathscr{A}\right) \gamma^{\alpha}+\frac{(-1)^{\mathrm{sig}}}{6} \gamma \wedge d \mathscr{A}$
mielke-geometrodynamics_EQ0898 (13.5.3)	288	0.515 N|+0	`\hat{B}:=B_{A}{ }^{B}{ }^{A}{ }^{A}{ }_{B}=\left(b_{ \alpha} P_{*}^{\alpha}+\hat{b}^{\alpha} P_{\alpha}\right) \ell^{2}+B_{A}{ }^{\beta} L^{\alpha}{ }_{\beta}`	$\hat{B}:=B_{A}{}^{BAA}{}_{B}=\left(b_{\alpha} P_{*}^{\alpha}+\hat{b}^{\alpha} P_{\alpha}\right) \ell^{2}+B_{A}{}^{\beta} L^{\alpha}{}_{\beta}$	$\hat{B}:=B_{A}{}^{B} \not{L}^{A}{}_{B}=(b_{\alpha} P_{*}^{\alpha}+\hat{b}^{\alpha} P_{\alpha}) \ell^{2}+B_{A}{}^{\beta} L^{\alpha}{}_{\beta}$
mielke-geometrodynamics_EQ0045 (2.6.8)	043	0.516 N|+0	`(d b)_{\mathrm{hor}}=D b=\omega \otimes b`	$(db)_{\mathrm{hor}}=Db=\omega \otimes b$	$(db)_{\mathrm{hor}}=Db=\omega \otimes b$
mielke-geometrodynamics_EQ0876 (13.3.5)	285	0.518 W|-1	`\begin{aligned} {\left[P_{\alpha}, P_{\beta}\right]=0, } & {\left[P_{*}^{\alpha}, P_{*}^{\beta}\right]=0, } \\ {\left[L_{\beta}^{\alpha}, P_{\gamma}\right]=\delta_{ \gamma}^{\alpha} P_{\beta}, } & {\left[L_{\beta}^{ \alpha}, P_{*}^{\gamma}\right]=-\delta_{\beta}^{\gamma} P_{*}^{\alpha} . } \end{aligned}`	$\left[P_{\alpha}, P_{\beta}\right]=0,\left[P_{*}^{\alpha}, P_{*}^{\beta}\right]=0,$ $\left[L_{\beta}^{\alpha}, P_{\gamma}\right]=\delta_{\gamma}^{\alpha} P_{\beta},\left[L_{\beta}^{\alpha}, P_{*}^{\gamma}\right]=-\delta_{\beta}^{\gamma} P_{*}^{\alpha}.$	$\left[P_{\alpha}, P_{\beta}\right]=0, \quad \left[P_{*}^{\alpha}, P_{*}^{\beta}\right]=0,$ $\left[L^{\alpha}{}_{\beta}, P_{\gamma}\right]=\delta_{\gamma}^{\alpha} P_{\beta}, \quad \left[L^{\alpha}{}_{\beta}, P_{*}^{\gamma}\right]=-\delta_{\beta}^{\gamma} P_{*}^{\alpha}.$
mielke-geometrodynamics_EQ0990 (14.3.3)	320	0.526 W|+0	`\begin{aligned} \hat{L}_{\mathrm{D} .} & =\frac{i}{2} \left(\overline{\hat{\psi}} \hat{\gamma} \wedge^{*} \hat{D}^{g+\circ} \hat{\psi}+\left(\overline{\hat{D}^{g+ \circ} \hat{\psi}}\right) \wedge^{*} \hat{\gamma} \hat{ \psi}\right)-\hat{m} \overline{\hat{\psi}} \hat{\psi} \eta \\ & +\frac{1}{2} \overline{\hat{\psi}}\left[\hat{\alpha},{ }^{*} \hat{\gamma}\right] \hat{\psi} . \end{aligned}`	$\hat{L}_{\mathrm{D} .}=\frac{i}{2}\left(\overline{\hat{\psi}} \hat{\gamma} \wedge^{*} \hat{D}^{g+\circ} \hat{\psi}+\left(\overline{\hat{D}^{g+\circ} \hat{\psi}}\right) \wedge^{*} \hat{\gamma} \hat{\psi}\right)-\hat{m} \overline{\hat{\psi}} \hat{\psi} \eta$ $+\frac{1}{2} \overline{\hat{\psi}}\left[\hat{\alpha},{ }^{*} \hat{\gamma}\right] \hat{\psi}.$	$\hat{L}_{\mathrm{D} .}=\frac{i}{2}(\overline{\hat{\psi}} \hat{\gamma} \wedge{ }^{*} \hat{D}^{g+\circ} \hat{\psi}+(\overline{\hat{D}^{g+\circ} \hat{\psi}}) \wedge{ }^{*} \hat{\gamma} \hat{\psi})-\hat{m} \overline{\hat{\psi}} \hat{\psi} \eta$ $+\frac{1}{2} \overline{\hat{\psi}}[\hat{\alpha},{ }^{*} \hat{\gamma}] \hat{\psi}.$
mielke-geometrodynamics_EQ0456 (7.2.8)	152	0.527 W|+0	`\bar{R}_{. . c d}^{a b}=2 R_{.[c}^{[a} \delta_{d]}^{b]} ; \quad R_{. b}^{a}:=R_{. b}^{a}-\frac{1}{4} \delta_{b}^{a} R,`	$\bar{R}_{..cd}^{ab}=2R_{.[c}^{[a}\delta_{d]}^{b]}; \quad R_{.b}^{a}:=R_{.b}^{a}-\frac{1}{4}\delta_{b}^{a}R,$	$\bar{R}_{..cd}{}^{ab}=2\not{R}_{.[c}^{[a}\delta_{d]}^{b]}; \quad \not{R}_{.b}^{a}:=R_{.b}^{a}-\frac{1}{4}\delta_{b}^{a}R,$
mielke-geometrodynamics_EQ0360 (6.2.11)	125	0.531 N|+0	`L_{\\|} \equiv L_{\mathrm{HE}}+\frac{1}{2 \kappa} R_{ \alpha \beta} \wedge^{*}\left(\vartheta^{\alpha} \wedge \vartheta^{\beta}\right)+\frac{2 \ell^{2}}{\kappa} d C_{ \mathrm{TT}^{*}},`	$L_{\parallel} \equiv L_{\mathrm{HE}}+\frac{1}{2\kappa} R_{\alpha\beta} \wedge^{*}\left(\vartheta^{\alpha} \wedge \vartheta^{\beta}\right)+\frac{2\ell^{2}}{\kappa} dC_{\mathrm{TT}^{*}},$	$L_{\parallel} \equiv L_{\mathrm{HE}}+\frac{1}{2\kappa} R_{\alpha\beta} \wedge{ }^{*}(\vartheta^{\alpha} \wedge \vartheta^{\beta})+\frac{2\ell^{2}}{\kappa} dC_{\mathrm{TT}^{*}},$
mielke-geometrodynamics_EQ0437 (6.8.8)	142	0.532 N|+0	`E_{\alpha}:=\frac{\partial L_{g}}{\partial \vartheta^{ \alpha}}=e_{\alpha} \downharpoonleft L_{g}+\left(e_{ \alpha} \downharpoonleft T^{\beta}\right) \wedge H_{ \beta}+\left(e_{\alpha} \downharpoonleft R^{\beta \gamma} \right) \wedge H_{\beta \gamma},`	$E_{\alpha}:=\frac{\partial L_{g}}{\partial \vartheta^{\alpha}}=e_{\alpha} \downharpoonleft L_{g}+\left(e_{\alpha} \downharpoonleft T^{\beta}\right) \wedge H_{\beta}+\left(e_{\alpha} \downharpoonleft R^{\beta \gamma}\right) \wedge H_{\beta \gamma},$	$E_{\alpha}:=\frac{\partial L_{g}}{\partial \vartheta^{\alpha}}=e_{\alpha}\rfloor L_{g}+(e_{\alpha}\rfloor T^{\beta}) \wedge H_{\beta}+(e_{\alpha}\rfloor R^{\beta \gamma}) \wedge H_{\beta \gamma},$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

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mielke-geometrodynamics_EQ0198 (4.1.11)	082	0.533 W|+0	`\begin{aligned} e_{\alpha}(m) \rightarrow & e_{\alpha}{ }^{\prime}(m)=g_{\alpha}{ }^{\beta} e_{\beta}(m), \\ & g= \left[g_{\alpha}{ }^{\beta}\right] \in G L(n, \mathbb{R}) . \end{aligned}`	$e_\alpha(m) \rightarrow e_\alpha{}'(m) = g_\alpha{}^\beta e_\beta(m),$ $g = \left[g_\alpha{}^\beta\right] \in GL(n, \mathbb{R}).$	$e_\alpha(m) \rightarrow e_\alpha{}'(m) = g_\alpha{}^\beta e_\beta(m),$ $g = [g_\alpha{}^\beta] \in GL(n, \mathbb{R}).$
mielke-geometrodynamics_EQ0599 (9.1.17)	196	0.534 W|+2	`\begin{aligned} & f=-\frac{1}{r}\left(1+\frac{\kappa}{2 \ell^{* 2}} r^{2}\right) e^{-\nu / 2}, g=\frac{1}{r} e^{\nu / 2} \\ & h=-\frac{1}{(+) \ell *} \frac{\sqrt{-\kappa}}{3}, \quad k=+\frac{1}{(-) 2 \ell *} \sqrt{-3 \kappa} \end{aligned}`	$f=-\frac{1}{r}\left(1+\frac{\kappa}{2 \ell^{* 2}} r^{2}\right) e^{-\nu / 2}, g=\frac{1}{r} e^{\nu / 2}$ $h=-\frac{1}{(+) \ell *} \frac{\sqrt{-\kappa}}{3}, \quad k=+\frac{1}{(-) 2 \ell *} \sqrt{-3 \kappa}$	$f=-\frac{1}{r}\left(1+\frac{\kappa}{2 \ell^{* 2}} r^{2}\right) e^{-\nu / 2}, g=\frac{1}{r} e^{\nu / 2}$ $h=-\frac{1}{(+) \ell *} \frac{\sqrt{-\kappa}}{3}, \quad k=+\frac{1}{(-) 2 \ell *} \sqrt{-3 \kappa}.$
mielke-geometrodynamics_EQ0752 (11.1.19)	241	0.535 K|+0	`\Psi=\Psi \otimes \tilde{b} \in C^{\infty}\left(V^{ \frac{1}{2}}\right) .`	$\Psi=\Psi \otimes \tilde{b} \in C^{\infty}\left(V^{\frac{1}{2}}\right) .$	$\Psi=\psi \otimes \tilde{b} \in C^{\infty}(V^{\frac{1}{2}}).$
mielke-geometrodynamics_EQ1047 (15.2.4)	344	0.536 W|+0	`\begin{aligned} \bar{E}_{i}= & \frac{1}{2}\left \{E_{i \alpha}^{(f) j} \gamma^{\alpha}+i{ }^{*} E_{i \alpha}^{(f) j} \gamma^{\alpha} \gamma^{5}\right \} \lambda_{j}^{(f)} \\ & \oplus \frac{1}{2}\left \{E_{i \alpha}^{(c) j} \gamma^{\alpha}+i{ }^{*} E_{i \alpha}^{(c) j} \gamma^{\alpha} \gamma^{5}\right\} \lambda_{j}^{(c)} \end{aligned}`	$\bar{E}_i = \frac{1}{2}\left\{E_{i\alpha}^{(f)j}\gamma^\alpha + i^* E_{i\alpha}^{(f)j}\gamma^\alpha\gamma^5\right\}\lambda_j^{(f)}$ $\oplus \frac{1}{2}\left\{E_{i\alpha}^{(c)j}\gamma^\alpha + i^* E_{i\alpha}^{(c)j}\gamma^\alpha\gamma^5\right\}\lambda_j^{(c)}$	$\overline{E}_i = \frac{1}{2}\left\{E_{i\alpha}^{(f)j}\gamma^\alpha + i\ {}^*E_{i\alpha}^{(f)j}\gamma^\alpha\gamma^5\right\}\lambda_j^{(f)}$ $\oplus \frac{1}{2}\left\{E_{i\alpha}^{(c)j}\gamma^\alpha + i\ {}^*E_{i\alpha}^{(c)j}\gamma^\alpha\gamma^5\right\}\lambda_j^{(c)}$
mielke-geometrodynamics_EQ0982 (14.2.23)	317	0.537 N|+0	`\int_{G} \pi \hat{L}_{\mathrm{E} .}=\frac{1}{\ell^{* 2}} L_{\mathrm{W} .}+L_{\mathrm{YM}}^{\prime}+\frac{1}{2 \ell^{* 2}} \vartheta \wedge \vartheta \wedge \vartheta \wedge \vartheta \int_{G}^{\circ} \stackrel{\circ}{R} d \mu(G) .`	$\int_G \pi \hat{L}_{\mathrm{E.}} = \frac{1}{\ell^{*2}} L_{\mathrm{W.}} + L'_{\mathrm{YM}} + \frac{1}{2\ell^{*2}}\vartheta\wedge\vartheta\wedge\vartheta\wedge\vartheta \int_G^\circ \overset{\circ}{R}\, d\mu(G).$	$\int_G \pi \hat{L}_{\mathrm{E.}} = \frac{1}{\ell^{*2}} L_{\mathrm{W.}} + L'_{\mathrm{YM}} + \frac{1}{2\ell^{*2}}\vartheta\wedge\vartheta\wedge\vartheta\wedge\vartheta \int_G \overset{\circ}{R} d\mu(G).$
mielke-geometrodynamics_EQ1134 (C.2)	375	0.539 K|+0	`\exp : \mathfrak{g} \rightarrow G \ni g=\exp \left(\iota \xi^{j} I_{j}\right)`	$\exp : \mathfrak{g} \rightarrow G \ni g=\exp\left(\iota \xi^{j} I_{j}\right)$	$\exp : \mathfrak{g} \rightarrow G \ni g=\exp(\iota \xi^{j} I_{j})$
mielke-geometrodynamics_EQ1002 (14.3.15)	323	0.541 N|+0	`(i \not D)^{2}=(-1)^{3 n-1+s} \operatorname{Tr}\left\{ \gamma \wedge \gamma \wedge^{*}(D D)-\gamma \wedge(D \gamma) \wedge^{*} D\right\}`	$(i \not{D})^2 = (-1)^{3n-1+s}\operatorname{Tr}\left\{\gamma\wedge\gamma\wedge^*(DD) - \gamma\wedge(D\gamma)\wedge^* D\right\}$	$(i \not{D})^2 = (-1)^{3n-1+s}\ \operatorname{Tr}\{\gamma\wedge\gamma\wedge{}^*(D\,D) - \gamma\wedge(D\gamma)\wedge{}^*D\}$
mielke-geometrodynamics_EQ1085 (A.11)	365	0.541 K|+0	`\begin{aligned} & \mathrm{C}(0,1)=\mathbb{C} \quad(\text { field of complex numbers }), \\ & \mathrm{C}(1,0)= \mathbb{R} \oplus \mathbb{R}, \end{aligned}`	$\mathrm{C}(0,1)=\mathbb{C} \quad(\text{ field of complex numbers }),$ $\mathrm{C}(1,0)=\mathbb{R}\oplus\mathbb{R},$	$\mathrm{C}(0,1)=\mathbb{C} \qquad\qquad (\text{field of complex numbers}),$ $\mathrm{C}(1,0)=\mathbb{R}\oplus\mathbb{R},$
mielke-geometrodynamics_EQ0004 (2.1.3)	033	0.543 N|+0	`e_{\alpha}(m)=e_{, \alpha}^{i}(m) \partial_{i} .`	$e_\alpha(m) = e^i_{,\alpha}(m)\partial_i.$	$e_\alpha(m) = e^i_{.\alpha}(m)\,\partial_i.$
mielke-geometrodynamics_EQ0558 (8.5.1)	181	0.544 N|+0	`\Delta L_{\mathrm{FP}}=s \operatorname{Tr}\left\{\frac{ \theta_{\mathrm{T}}^{*} i}{4 \ell^{2}} \bar{\chi} \wedge^{*} \sigma-\bar{c} d^{*} \gamma\right\}`	$\Delta L_{\mathrm{FP}} = s\operatorname{Tr}\left\{\frac{\theta_{\mathrm{T}}^* i}{4\ell^2}\bar{\chi}\wedge^*\sigma - \bar{c}d^*\gamma\right\}$	$\Delta L_{\mathrm{FP}} = s\operatorname{Tr}\left\{\frac{\theta_{\mathrm{T}}^* i}{4\ell^2}\overline{\chi}\wedge{}^*\sigma - \bar{c}d{}^*\gamma\right\}$
mielke-geometrodynamics_EQ0304 (4.5.14)	102	0.545 N|+1	`\begin{gathered} D \Sigma_{\alpha} \simeq 0 \\ D\left( \tau_{\alpha \beta}+x_{[\alpha} \wedge \Sigma_{\beta]} \right) \simeq 0 . \end{gathered}`	$D\Sigma_\alpha \simeq 0$ $D\left(\tau_{\alpha\beta} + x_{[\alpha}\wedge\Sigma_{\beta]}\right) \simeq 0.$	$D\Sigma_\alpha \simeq 0\,,$ $D(\tau_{\alpha\beta} + x_{[\alpha}\wedge\Sigma_{\beta]}) \simeq 0\,.$

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Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

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mielke-geometrodynamics_EQ0270 (4.3.35)	095	0.546 N|+0	R:=R_{\mu}^{\cdot \mu}=R_{\alpha \mu}^{\cdot \cdot \mu \alpha}={ }^{*}\left(\Omega^{g} \wedge \vartheta \wedge \vartheta\right) .	$R:=R_{\mu}^{\cdot \mu}=R_{\alpha \mu}^{\cdot \cdot \mu \alpha}={ }^{*}\left(\Omega^{g} \wedge \vartheta \wedge \vartheta\right) .$	$R:=R_{\mu}^{\cdot \mu}=R_{\alpha \mu}^{\cdot \cdot \mu \alpha}={ }^{*}(\Omega^{g} \wedge \vartheta \wedge \vartheta).$
mielke-geometrodynamics_EQ0174 (3.7.2)	071	0.550 N|+2	\begin{aligned} D^{*} \Theta^{(1)} & =\frac{\lambda}{2} \left(\frac{\mu^{2}}{\lambda}-\bar{\varphi} \cdot \varphi \right) \varphi \eta \\ \Theta^{(1)} & =D \phi^{(0)} \end{aligned}	$\begin{aligned} D^{*} \Theta^{(1)} & =\frac{\lambda}{2} \left(\frac{\mu^{2}}{\lambda}-\bar{\varphi} \cdot \varphi \right) \varphi \eta \\ \Theta^{(1)} & =D \phi^{(0)} \end{aligned}$	$\begin{aligned} D^{*} \Theta^{(1)} & =\frac{\lambda}{2} \left(\frac{\mu^{2}}{\lambda}-\bar{\varphi} \cdot \varphi \right) \varphi \eta, \\ \Theta^{(1)} & =D \phi^{(0)}. \end{aligned}$
mielke-geometrodynamics_EQ0404 (6.4.24)	134	0.551 S|+2	-\ell^{2} \frac{\delta}{\delta \underline{*}_{ \underline{0}}} \Psi_{\\|}(\vartheta)=\stackrel{*}{ \underline{T}}^{(\pm)}{ }^{B} \Psi_{\\|}(\vartheta) .	$-\ell^{2} \frac{\delta}{\delta \underline{*}_{ \underline{0}}} \Psi_{\\|}(\vartheta)=\stackrel{*}{ \underline{T}}^{(\pm)}{ }^{B} \Psi_{\\|}(\vartheta) .$	$-\ell^{2} \frac{\delta}{\delta \underline{*}_{ \underline{0}}} \Psi_{\\|}(\vartheta)=\stackrel{*}{ \underline{T}}^{(\pm)}{ }^{B} \Psi_{\\|}(\vartheta).$
mielke-geometrodynamics_EQ0392 (6.4.7)	132	0.552 N|+0	\left.\left.n^{\alpha} \Sigma_{\alpha}=n \downharpoonleft L-(n\rfloor D \Psi\right) \wedge \frac{\partial L}{ \partial D \Psi}-(n\rfloor \Psi\right) \wedge \frac{ \partial L}{\partial \Psi} .	$n^{\alpha} \Sigma_{\alpha}=n \downharpoonleft L-(n\rfloor D \Psi\right) \wedge \frac{\partial L}{ \partial D \Psi}-(n\rfloor \Psi\right) \wedge \frac{ \partial L}{\partial \Psi} .$	$n^{\alpha} \Sigma_{\alpha}=n\rfloor L-(n\rfloor D \Psi) \wedge \frac{\partial L}{ \partial D \Psi}-(n\rfloor \Psi) \wedge \frac{ \partial L}{\partial \Psi}.$
mielke-geometrodynamics_EQ0879 (13.3.4)	285	0.553 N|-1	\stackrel{\circ}{L}_{A B}:=\hat{g}_{[A \mid C} C^{C}{ }_{ \mid B]}=-\stackrel{\circ}{L}_{B A}	$\stackrel{\circ}{L}_{A B}:=\hat{g}_{[A \mid C} C^{C}{ }_{ \mid B]}=-\stackrel{\circ}{L}_{B A}$	$\stackrel{\circ}{L}_{A B}:=\hat{g}_{[A \mid C} C^{C}{ }_{ \mid B]}=-\stackrel{\circ}{L}_{B A}$
mielke-geometrodynamics_EQ0013 (2.2.8)	034	0.554 N|+1	d s^{2}=g_{i j} d x^{i} \otimes_{s} d x^{j} \stackrel{(*)}{=}-\sum_{i=1}^{s}\left(\stackrel{ \circ}{\vartheta^{i}}\right)^{2}+\sum_{j=s+1}^{n}\left(\stackrel{\circ}{\vartheta}^{j}\right)^{2} .	$d s^{2}=g_{i j} d x^{i} \otimes_{s} d x^{j} \stackrel{(*)}{=}-\sum_{i=1}^{s}\left(\stackrel{ \circ}{\vartheta}^{i}\right)^{2}+\sum_{j=s+1}^{n}\left(\stackrel{\circ}{\vartheta}^{j}\right)^{2} .$	$d s^{2}=g_{i j} d x^{i} \otimes_{s} d x^{j} \stackrel{(*)}{=}-\sum_{i=1}^{s}(\stackrel{ \circ}{\vartheta}^{i})^{2}+\sum_{j=s+1}^{n}(\stackrel{\circ}{\vartheta}^{j})^{2}.$
mielke-geometrodynamics_EQ1011 (14.4.6)	325	0.554 N|+0	r_{(-)}^{+}=\frac{\hbar}{M^{* 2} c}\left(M \underset{(-)}{+} \sqrt{M^{2}-J(J+1) \frac{M^{* 4}}{M^{2}}-\alpha_{e} M^{* 2} \operatorname{Tr}} \bar{Q}^{2}\right)	$r_{(-)}^{+}=\frac{\hbar}{M^{* 2} c}\left(M \underset{(-)}{+} \sqrt{M^{2}-J(J+1) \frac{M^{* 4}}{M^{2}}-\alpha_{e} M^{* 2} \operatorname{Tr}} \bar{Q}^{2}\right)$	$r_{(-)}^{+}=\frac{\hbar}{M^{* 2} c}\left(M \underset{(-)}{+} \sqrt{M^{2}-J(J+1) \frac{M^{* 4}}{M^{2}}-\alpha_{e} M^{* 2} \operatorname{Tr}} \overline{Q}^{2}\right)$
mielke-geometrodynamics_EQ0385 (6.3.3)	130	0.561 W|+2	\stackrel{(\pm)}{S}_{\alpha}:=\stackrel{(\pm)}{ \Gamma}_{\alpha} \beta \wedge \stackrel{(\pm)}{\Pi}_{ \beta}+\Sigma_{\alpha} \cong d \stackrel{(\pm)}{\Pi}_{ \alpha}, \quad \stackrel{(\mathrm{A}}{S}_{\alpha}= \stackrel{(\mp)}{S}_{\alpha}	$\stackrel{(\pm)}{S}_{\alpha}:=\stackrel{(\pm)}{\Gamma}_{\alpha} \beta \wedge \stackrel{(\pm)}{\Pi}_{\beta}+\Sigma_{\alpha} \cong d \stackrel{(\pm)}{\Pi}_{\alpha}, \quad \stackrel{(\mathrm{A}}{S}_{\alpha}= \stackrel{(\mp)}{S}_{\alpha}$	$\stackrel{(\pm)}{S}_{\alpha}:=\stackrel{(\pm)}{\Gamma}_{\alpha} \beta \wedge \stackrel{(\pm)}{\Pi}_{\beta}+\Sigma_{\alpha} \cong d \stackrel{(\pm)}{\Pi}_{\alpha}, \quad \overline{\stackrel{(\pm)}{S}}_{\alpha}= \stackrel{(\mp)}{S}_{\alpha}$
mielke-geometrodynamics_EQ0596 (9.1.14)	195	0.564 N|+0	(\stackrel{+}{D} K)-K \wedge K=\stackrel{+}{\Omega}_{ \mathrm{C}}\{ \} .	$(\stackrel{+}{D} K)-K \wedge K=\stackrel{+}{\Omega}_{\mathrm{C}}\{\}.$	$(\stackrel{+}{D} K)-K \wedge K=\stackrel{+}{\Omega}_{\mathrm{C}}\{\}.$
mielke-geometrodynamics_EQ0169 (3.6.4)	070	0.570 W|+1	D_{ \pm}\left(F^{ \pm}-\frac{1}{2} \bar{\psi} \sigma_{ \pm} \psi\right)=\mp \frac{i}{2} \bar{\psi}^{*} D_{ \pm} \psi=\mp \frac{1}{2} \bar{\psi}^{*} \gamma \wedge{ }^{*} \left(i^{*} \gamma \wedge D_{ \pm} \psi\right) .	$D_{ \pm}\left(F^{ \pm}-\frac{1}{2} \bar{\psi} \sigma_{ \pm} \psi\right)=\mp \frac{i}{2} \bar{\psi}^{*} D_{ \pm} \psi=\mp \frac{1}{2} \bar{\psi}^{*} \gamma \wedge{ }^{*} \left(i^{*} \gamma \wedge D_{ \pm} \psi\right) .$	$D_{ \pm}\left(F^{ \pm}-\frac{1}{2} \overline{\psi} \sigma_{ \pm} \psi\right)=\mp \frac{i}{2} \overline{\psi}^{*} D_{ \pm} \psi=\mp \frac{1}{2} \overline{\psi}^{*} \gamma \wedge{ }^{*} \left(i^{*} \gamma \wedge D_{ \pm} \psi\right) .$

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mielke-geometrodynamics_EQ0889 (13.4.8)	286	0.576 N|+0	`\begin{aligned} & \Gamma^{(T) \xrightarrow{A^{-1}(x)}} \Gamma^{(T)^{\prime}}=\Lambda^{-1}(x)\left[ \Gamma^{(T)}+D \tau(x)\right], \\ & \Gamma_{*}^{(T)} \xrightarrow{A^{-1}(x)} \Gamma_{*}^{(T)\prime}=\left[ \Gamma_{*}^{(T)}+D \tau_{*}(x)\right] \Lambda(x) ; \end{aligned}`	$\Gamma^{(T)} \xrightarrow{A^{-1}(x)} \Gamma^{(T)\prime} = \Lambda^{-1}(x)\left[\Gamma^{(T)} + D\tau(x)\right],$ $\Gamma_*^{(T)} \xrightarrow{A^{-1}(x)} \Gamma_*^{(T)\prime} = \left[\Gamma_*^{(T)} + D\tau_*(x)\right]\Lambda(x);$	$\Gamma^{(T)} \xrightarrow{A^{-1}(x)} \Gamma^{(T)\prime} = \Lambda^{-1}(x)\left[\Gamma^{(T)} + D\tau(x)\right],$ $\Gamma_*^{(T)} \xrightarrow{A^{-1}(x)} \Gamma_*^{(T)\prime} = \left[\Gamma_*^{(T)} + D\tau_*(x)\right]\Lambda(x);$
mielke-geometrodynamics_EQ0116 (3.3.17)	059	0.585 N|+0	`d H=j\left\{\begin{array}{l} \boldsymbol{\nabla} \times \mathbf{B}-\frac{\partial \mathbf{E}}{c^{2} \partial t}= \mu \mathbf{J} \\ \boldsymbol{\nabla} \cdot \mathbf{E}= \rho / \varepsilon . \end{array}\right.`	$dH = j \begin{cases} \boldsymbol{\nabla} \times \mathbf{B} - \frac{\partial \mathbf{E}}{c^2 \partial t} = \mu \mathbf{J} \\ \boldsymbol{\nabla} \cdot \mathbf{E} = \rho/\varepsilon . \end{array}$	$dH = j \begin{cases} \boldsymbol{\nabla} \times \mathbf{B} - \frac{\partial \mathbf{E}}{c^2 \partial t} = \mu \mathbf{J} \\ \boldsymbol{\nabla} \cdot \mathbf{E} = \rho/\varepsilon . \end{array}$
mielke-geometrodynamics_EQ0381 (6.2.32)	129	0.588 W|+1	`\stackrel{( \pm)( \pm)}{D} \Pi_{\alpha}:=D \stackrel{( \pm)}{\Pi}_{\alpha} \pm \frac{i}{2} \ell^{2}\left(e_{ \alpha} \downharpoonleft \stackrel{(\mp)}{\Pi}\right) \wedge \stackrel{( \pm)}{\Pi}_{\beta},`	$\overset{(\pm)(\pm)}{D}\Pi_\alpha := D\overset{(\pm)}{\Pi}_\alpha \pm \frac{i}{2}\ell^2\left(e_\alpha \downharpoonleft \overset{(\mp)}{\Pi}\right) \wedge \overset{(\pm)}{\Pi}_\beta,$	$\overset{(\pm)(\pm)}{D}\Pi_\alpha := D\overset{(\pm)}{\Pi}_\alpha \pm \frac{i}{2}\ell^2\left(e_\alpha \downharpoonleft \overset{(\mp)}{\Pi}^\beta\right) \wedge \overset{(\pm)}{\Pi}_\beta,$
mielke-geometrodynamics_EQ0056 (2.7.6)	045	0.592 N|+0	`\phi=\varphi \otimes b={G^{-1}} \varphi \otimes^{G} b \quad \in C^{\infty}\left(V^{\rho}\right) .`	$\phi = \varphi \otimes b = G^{-1}\varphi \otimes^G b \quad \in C^\infty(V^\rho).$	$\phi = \varphi \otimes b = {}^{G^{-1}}\varphi \otimes {}^G b \quad \in C^\infty(V^\rho).$
mielke-geometrodynamics_EQ0187 (3.7.17)	074	0.593 N|+0	`\begin{aligned} \left(D^{*} \Omega\right) & =\vec{D}^{*} \vec{\Omega}+\left[\omega_{0}, \Omega_{0}\right] \\ & = \vec{D}^{*} \vec{\Omega}+\left[\omega_{0}, \Theta^{\perp} \right]=0 . \end{aligned}`	$(D^*\Omega) = \vec{D}^*\vec{\Omega} + [\omega_0, \Omega_0]$ $= \vec{D}^*\vec{\Omega} + [\omega_0, \Theta^\perp] = 0.$	$(D^*\Omega) = \vec{D}^*\vec{\Omega} + [\omega_0, \Omega_0]$ $= \vec{D}^*\vec{\Omega} + [\omega_0, \Theta^\perp] = 0.$
mielke-geometrodynamics_EQ0581 (8.6.19)	186	0.593 K|+0	`\widehat{\Sigma}_{\alpha}:=\Sigma_{\alpha}-D^{\{ \}} \mu_{\alpha},`	$\widehat{\Sigma}_\alpha := \Sigma_\alpha - D^{\{\}}\mu_\alpha,$	$\widehat{\Sigma}_\alpha := \Sigma_\alpha - D^{\{\}}\mu_\alpha,$
mielke-geometrodynamics_EQ0948 (14.1.29)	307	0.593 N|+0	`\begin{aligned} D^{*} \Omega & =\left(D^{*} \xi-(-1)^{z} \xi \wedge D \delta\right) \cos \delta \\ & -(-1)^{z} \left(D \xi+(-1)^{z *} \xi \wedge D \delta\right) \sin \delta=\tau_{e} \end{aligned}`	$D^*\Omega = (D^*\xi - (-1)^z\xi \wedge D\delta)\cos\delta$ $-(-1)^z(D\xi + (-1)^z {}^*\xi \wedge D\delta)\sin\delta = \tau_e$	$D^*\Omega = (D^*\xi - (-1)^z\xi \wedge D\delta)\cos\delta$ $-(-1)^z(D\xi + (-1)^z {}^*\xi \wedge D\delta)\sin\delta = \tau_e$
mielke-geometrodynamics_EQ0357 (6.2.8)	125	0.600 N|+0	`L_{\mathrm{HE}}=-\frac{1}{2 \kappa} R_{\alpha \beta}^{\{ \}} \wedge^{*}\left(\vartheta^{\alpha} \wedge \vartheta^{ \beta}\right)`	$L_{\mathrm{HE}} = -\frac{1}{2\kappa}R_{\alpha\beta}^{\{\}} \wedge {}^*\left(\vartheta^\alpha \wedge \vartheta^\beta\right)$	$L_{\mathrm{HE}} = -\frac{1}{2\kappa}R_{\alpha\beta}^{\{\}} \wedge {}^*(\vartheta^\alpha \wedge \vartheta^\beta)$
mielke-geometrodynamics_EQ0704 (10.6.3)	225	0.601 N|+0	`\square F-m_{\text {photon }}^{2} F=0,`	$\square F - m_{\text{photon}}^2 F = 0,$	$\square F - m_{\text{photon}}^2 F = 0,$
mielke-geometrodynamics_EQ0927 (14.1.8)	303	0.604 W|-1	`\begin{aligned} \Sigma_{\mathrm{YM}} & =\frac{(-1)^{s}}{2 \alpha_{g}} \operatorname{Tr}\left\{\Omega \wedge^{*} \left(\vartheta \wedge{ }^{*} \Omega\right)+{ }^{*} \vartheta \wedge^{*}\left(\Omega \wedge^{*} \Omega \right)\right\} \\ & =\frac{(-1)^{s}}{4 \alpha_{g}} \operatorname{Tr}\left\{\Omega \wedge^{*}\left(\vartheta \wedge{ }^{*} \Omega\right)-{ }^{*} \Omega \wedge^{*}(\vartheta \wedge \Omega)\right\} . \end{aligned}`	$\Sigma_{\mathrm{YM}} = \frac{(-1)^s}{2\alpha_g}\operatorname{Tr}\left\{\Omega \wedge {}^*(\vartheta \wedge {}^*\Omega) + {}^*\vartheta \wedge {}^*(\Omega \wedge {}^*\Omega)\right\}$ $= \frac{(-1)^s}{4\alpha_g}\operatorname{Tr}\left\{\Omega \wedge {}^*(\vartheta \wedge {}^*\Omega) - {}^*\Omega \wedge {}^*(\vartheta \wedge \Omega)\right\}.$	$\Sigma_{\mathrm{YM}} = \frac{(-1)^s}{2\alpha_g}\operatorname{Tr}\left\{\Omega \wedge {}^*(\vartheta \wedge {}^*\Omega) + {}^*\vartheta \wedge {}^*(\Omega \wedge {}^*\Omega)\right\}$ $= \frac{(-1)^s}{4\alpha_g}\operatorname{Tr}\left\{\Omega \wedge {}^*(\vartheta \wedge {}^*\Omega) - {}^*\Omega \wedge {}^*(\vartheta \wedge \Omega)\right\}.$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

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mielke-geometrodynamics_EQ0326 (5.3.3)	112	0.613 N|+0	`\left.\widehat{D} G_{\alpha} \equiv \frac{1}{2}\left(e_{ \alpha}\right\rfloor R^{\beta \gamma}\right) \wedge \eta_{\beta \gamma \mu} \wedge T^{\mu}`	$\widehat{D} G_{\alpha} \equiv \frac{1}{2}\left(e_{\alpha}\rfloor R^{\beta \gamma}\right) \wedge \eta_{\beta \gamma \mu} \wedge T^{\mu}$	$\widehat{D} G_{\alpha} \equiv \frac{1}{2}(e_{\alpha}\rfloor R^{\beta\gamma}) \wedge \eta_{\beta\gamma\mu} \wedge T^{\mu}$
mielke-geometrodynamics_EQ0758 (11.1.25)	242	0.615 N|+0	`\gamma=E_{\cdot j}^{\alpha}(m) \gamma_{\alpha} \otimes d x^{j}=\gamma_{j} d x^{j} \in C^{\infty}\left(T_{ \mathbb{C}}^{*}(M) \times C V\right)`	$\gamma=E_{\cdot j}^{\alpha}(m) \gamma_{\alpha} \otimes d x^{j}=\gamma_{j} d x^{j} \in C^{\infty}\left(T_{\mathbb{C}}^{*}(M) \times C V\right)$	$\gamma=E_{\cdot j}^{\alpha}(m)\gamma_{\alpha} \otimes d x^{j}=\gamma_{j} d x^{j} \in C^{\infty}(T_{\mathbb{C}}^{*}(M) \times C V)$
mielke-geometrodynamics_EQ0953 (14.1.35)	308	0.616 C|+7	`\begin{aligned} & (-1)^{z} \operatorname{Tr}\left \{\vartheta \wedge{ }^{*} \xi \wedge{ }^{*} \xi- \vartheta \wedge \xi \wedge \xi\right\} \wedge d \delta= \operatorname{Tr}\left\{\xi \wedge \vartheta \wedge D^{*} \xi+{ }^{*} \xi \wedge \vartheta \wedge D \xi\right\} \ \ & =\frac{1}{2} D \operatorname{Tr}\left\{{ }^{*}\left(\xi \wedge^{*}\left(\vartheta \wedge{ }^{*} \xi\right)-{ }^{*} \xi \wedge^{*}(\vartheta \wedge \xi)\right)\right \} \\ & =(-1)^{s} 2 \alpha_{g} D \Sigma_{\mathrm{YM}}= \frac{\alpha_{g}}{\ell^{* 2}} D\left(\vartheta \wedge^{*} \Omega^{g}\right) \equiv 2 \frac{\alpha_{g}}{\ell^{* 2}} \Theta \wedge^{*} \Omega^{g} . \end{aligned}`	$\begin{aligned} & (-1)^{z} \operatorname{Tr}\left \{\vartheta \wedge{ }^{*} \xi \wedge{ }^{*} \xi- \vartheta \wedge \xi \wedge \xi\right\} \wedge d \delta= \operatorname{Tr}\left\{\xi \wedge \vartheta \wedge D^{*} \xi+{ }^{*} \xi \wedge \vartheta \wedge D \xi\right\} \ \ & =\frac{1}{2} D \operatorname{Tr}\left\{{ }^{*}\left(\xi \wedge^{*}\left(\vartheta \wedge{ }^{*} \xi\right)-{ }^{*} \xi \wedge^{*}(\vartheta \wedge \xi)\right)\right \} \\ & =(-1)^{s} 2 \alpha_{g} D \Sigma_{\mathrm{YM}}= \frac{\alpha_{g}}{\ell^{* 2}} D\left(\vartheta \wedge^{*} \Omega^{g}\right) \equiv 2 \frac{\alpha_{g}}{\ell^{* 2}} \Theta \wedge^{*} \Omega^{g} . \end{aligned}$	$\begin{aligned} & (-1)^{z} \operatorname{Tr}\left \{\vartheta \wedge{ }^{*} \xi \wedge{ }^{*} \xi- \vartheta \wedge \xi \wedge \xi\right\} \wedge d \delta= \operatorname{Tr}\left\{\xi \wedge \vartheta \wedge D^{*} \xi+{ }^{*} \xi \wedge \vartheta \wedge D \xi\right\} \ \ & =\frac{1}{2} D \operatorname{Tr}\left\{{ }^{*}\left(\xi \wedge^{*}\left(\vartheta \wedge{ }^{*} \xi\right)-{ }^{*} \xi \wedge^{*}(\vartheta \wedge \xi)\right)\right \} \\ & =(-1)^{s} 2 \alpha_{g} D \Sigma_{\mathrm{YM}}= \frac{\alpha_{g}}{\ell^{* 2}} D\left(\vartheta \wedge^{*} \Omega^{g}\right) \equiv 2 \frac{\alpha_{g}}{\ell^{* 2}} \Theta \wedge^{*} \Omega^{g} . \end{aligned}$
mielke-geometrodynamics_EQ0998 (14.3.11)	322	0.619 S|+0	`\begin{array}{lll} \psi_{\mathrm{L}}: & \gamma^{5}=+1, & \stackrel{\circ}{\gamma}{ }^{K+1}=+\widehat{\gamma}^{n+1} \\ \psi_{\mathrm{R}}: & \gamma^{5}=-1, & \stackrel{ \circ}{\gamma}^{K+1}=-\widehat{\gamma}^{n+1} \end{array}`	$\begin{array}{lll} \psi_{\mathrm{L}}: & \gamma^{5}=+1, & \stackrel{\circ}{\gamma}{ }^{K+1}=+\widehat{\gamma}^{n+1} \\ \psi_{\mathrm{R}}: & \gamma^{5}=-1, & \stackrel{\circ}{\gamma}^{K+1}=-\widehat{\gamma}^{n+1} \end{array}$	$\begin{array}{lll} \psi_{\mathrm{L}}: & \gamma^{5}=+1, & \stackrel{\circ}{\gamma}{ }^{K+1}=+\widehat{\gamma}^{n+1} \\ \psi_{\mathrm{R}}: & \gamma^{5}=-1, & \stackrel{\circ}{\gamma}^{K+1}=-\widehat{\gamma}^{n+1} \end{array}$
mielke-geometrodynamics_EQ0525 (7.7.44)	167	0.623 N|+0	`\begin{aligned} C_{\mathrm{TT}} & :=\frac{1}{8 \ell^{2}} \operatorname{Tr}(\gamma \wedge \Theta)=\frac{1}{2 \ell^{2}} \vartheta^{\alpha} \wedge T_{\alpha}=- \frac{(-1)^{\mathrm{sig}}}{2 \ell^{2}} * \mathscr{A}, \\ C_{\mathrm{RR}} & :=\operatorname{Tr}\left(\Gamma \wedge \Omega^{g}-\frac{1}{3} \Gamma \wedge \Gamma \wedge \Gamma\right), \end{aligned}`	$\begin{aligned} C_{\mathrm{TT}} & :=\frac{1}{8 \ell^{2}} \operatorname{Tr}(\gamma \wedge \Theta)=\frac{1}{2 \ell^{2}} \vartheta^{\alpha} \wedge T_{\alpha}=-\frac{(-1)^{\mathrm{sig}}}{2 \ell^{2}} * \mathscr{A}, \\ C_{\mathrm{RR}} & :=\operatorname{Tr}\left(\Gamma \wedge \Omega^{g}-\frac{1}{3} \Gamma \wedge \Gamma \wedge \Gamma\right), \end{aligned}$	$\begin{aligned} C_{\mathrm{TT}} & :=\frac{1}{8 \ell^{2}} \operatorname{Tr}(\gamma \wedge \Theta)=\frac{1}{2 \ell^{2}} \vartheta^{\alpha} \wedge T_{\alpha}=-\frac{(-1)^{\mathrm{sig}}}{2 \ell^{2}} * \mathscr{A}, \\ C_{\mathrm{RR}} & :=\operatorname{Tr}\left(\Gamma \wedge \Omega^{g}-\frac{1}{3} \Gamma \wedge \Gamma \wedge \Gamma\right), \end{aligned}$
mielke-geometrodynamics_EQ0050 (2.6.13)	044	0.626 W|+2	`\begin{aligned} D D D b= & D(\Omega \otimes b)=(d \Omega+[\Omega, \omega]) \otimes b \\ = & (d \Omega+ \Omega \wedge \omega-\omega \wedge \Omega) \otimes b \\ = & (d d \omega-d \omega \wedge \omega+\omega \wedge d \omega \\ & \quad+d \omega \wedge \omega-\omega \wedge \omega \wedge \omega \\ & \quad+\omega \wedge \omega \wedge \omega-\omega \wedge d \omega) \otimes b \equiv 0 . \end{aligned}`	$\begin{aligned} D D D b= & D(\Omega \otimes b)=(d \Omega+[\Omega, \omega]) \otimes b \\ = & (d \Omega+ \Omega \wedge \omega-\omega \wedge \Omega) \otimes b \\ = & (d d \omega-d \omega \wedge \omega+\omega \wedge d \omega \\ & \quad+d \omega \wedge \omega-\omega \wedge \omega \wedge \omega \\ & \quad+\omega \wedge \omega \wedge \omega-\omega \wedge d \omega) \otimes b \equiv 0 . \end{aligned}$	$\begin{aligned} D D D b= & D(\Omega \otimes b)=(d \Omega+[\Omega, \omega]) \otimes b \\ = & (d \Omega+ \Omega \wedge \omega-\omega \wedge \Omega) \otimes b \\ = & (d d \omega-d \omega \wedge \omega+\omega \wedge d \omega \\ & \quad+d \omega \wedge \omega-\omega \wedge \omega \wedge \omega \\ & \quad+\omega \wedge \omega \wedge \omega-\omega \wedge d \omega) \otimes b \equiv 0 . \end{aligned}$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ0115 (3.3.16)	059	■ 0.630 ● N|+1	`d F \equiv 0 \quad\left\{\begin{array}{l} \nabla \times \mathbf{E}+\frac{\partial \mathbf{B}}{\partial t} \equiv 0 \\ \nabla \cdot \mathbf{B} \equiv 0 \end{array}\right.`	$dF \equiv 0 \quad \left\{ \begin{array}{l} \nabla \times \mathbf{E}+\frac{\partial \mathbf{B}}{\partial t} \equiv 0 \\ \nabla \cdot \mathbf{B} \equiv 0 \end{array}\right.$	$dF \equiv 0 \quad \left\{ \begin{array}{l} \nabla \times \mathbf{E}+\frac{\partial \mathbf{B}}{\partial t} \equiv 0 \\ \nabla \cdot \mathbf{B} \equiv 0 \,. \end{array}\right.$
mielke-geometrodynamics_EQ0171 (3.6.6)	070	■ 0.630 ● N|+0	`i^{*} \gamma \wedge D_{ \pm} \psi=0 \quad \text { and } \quad F^{ \pm}=\frac{1}{2} \bar{\psi} \sigma_{ \pm} \psi=m \mathscr{P}_{ \pm},`	$i^{*} \gamma \wedge D_{ \pm} \psi=0 \quad \text { and } \quad F^{ \pm}=\frac{1}{2} \bar{\psi} \sigma_{ \pm} \psi=m \mathscr{P}_{ \pm},$	$i^{*} \gamma \wedge D_{ \pm} \psi=0 \quad \text { and } \quad F^{ \pm}=\frac{1}{2} \overline{\psi} \sigma_{ \pm} \psi=m \mathscr{P}_{ \pm}\,,$
mielke-geometrodynamics_EQ0189 (3.7.19)	074	■ 0.631 ● N|+0	`{ }^{*} \Omega=(\stackrel{+}{-}) \Omega \text {. }`	${}^{*} \Omega=(\stackrel{+}{-}) \Omega \text {. }$	${}^{*} \Omega=(\stackrel{+}{-}) \Omega \text {. }$
mielke-geometrodynamics_EQ0788 (11.3.7)	249	■ 0.635 ● W|+0	`\left\{i \gamma^{\kappa} \nabla_{\kappa}^{()}-\frac{6}{n^{2}} \ell^{* 2} \gamma^{n+1} \gamma^{\mu} \bar{\psi} \gamma^{n+1} \gamma_{\mu} \psi-m\right\} \psi=0 .`	$\left\{i \gamma^{\kappa} \nabla_{\kappa}^{()}-\frac{6}{n^{2}} \ell^{* 2} \gamma^{n+1} \gamma^{\mu} \bar{\psi} \gamma^{n+1} \gamma_{\mu} \psi-m\right\} \psi=0 .$	$\left\{i \gamma^{\kappa} \nabla_{\kappa}^{()}-\frac{6}{n^{2}} \ell^{* 2} \gamma^{n+1} \gamma^{\mu} \overline{\psi} \gamma^{n+1} \gamma_{\mu} \psi-m\right\} \psi=0 .$
mielke-geometrodynamics_EQ0164 (3.5.12)	068	■ 0.636 ● N|+0	`L_{\mathrm{YM}}+L_{\infty}=(\stackrel{+}{-}) \frac{1}{2 \alpha_{g}} \operatorname{Tr}\left({ }^{*} \Omega \stackrel{-}{(+)} \Omega\right)^{2} \geq 0`	$L_{\mathrm{YM}}+L_{\infty}=(\stackrel{+}{-}) \frac{1}{2 \alpha_{g}} \operatorname{Tr}\left({ }^{*} \Omega \stackrel{-}{(+)} \Omega\right)^{2} \geq 0$	$L_{\mathrm{YM}}+L_{\infty}=(\stackrel{+}{-}) \frac{1}{2 \alpha_{g}} \operatorname{Tr}({ }^{*} \Omega \stackrel{-}{(+)} \Omega)^{2} \geq 0$
mielke-geometrodynamics_EQ0549 (8.4.3)	179	■ 0.637 ● W|+2	`\begin{aligned} L_{\mathrm{FP}} & :=-s \operatorname{Tr} \left\{\bar{\chi} \wedge^{*} \stackrel{ }{\Omega}^{g}+\bar{\Phi} D^{*} \Psi+\frac{1}{2} \rho \bar{\chi} \wedge^{*} \beta+\bar{C} d^{*} \Gamma+\frac{1}{2} \bar{C} \wedge{ }^{*} \mathbb{B}\right\} \\ & =\frac{1}{2} s \left[\bar{\chi}^{\alpha \beta} \wedge{ }^{*} R_{\alpha \beta}^{(\pm)}+\bar{\Phi}_{\alpha \beta} D^{*} \Psi^{\alpha \beta}+\frac{1}{2} \rho \bar{\chi}^{\alpha \beta} \wedge{ }^{*} b_{\alpha \beta}+\widetilde{\Psi}_{\mathrm{F}}\right] \end{aligned}`	$\begin{aligned} L_{\mathrm{FP}} & :=-s \operatorname{Tr} \left\{\bar{\chi} \wedge^{*} \stackrel{ }{\Omega}^{g}+\bar{\Phi} D^{*} \Psi+\frac{1}{2} \rho \bar{\chi} \wedge^{*} \beta+\bar{C} d^{*} \Gamma+\frac{1}{2} \bar{C} \wedge{ }^{*} \mathbb{B}\right\} \\ & =\frac{1}{2} s \left[\bar{\chi}^{\alpha \beta} \wedge{ }^{*} R_{\alpha \beta}^{(\pm)}+\bar{\Phi}_{\alpha \beta} D^{*} \Psi^{\alpha \beta}+\frac{1}{2} \rho \bar{\chi}^{\alpha \beta} \wedge{ }^{*} b_{\alpha \beta}+\widetilde{\Psi}_{\mathrm{F}}\right] \end{aligned}$	$\begin{aligned} L_{\mathrm{FP}} & :=-s \operatorname{Tr} \left\{\overline{\chi} \wedge{ }^{*} \stackrel{\pm}{\Omega}^{g}+\overline{\Phi} D^{*} \Psi+\frac{1}{2} \rho \overline{\chi} \wedge{ }^{*} \beta+\overline{C} d^{*} \Gamma+\frac{1}{2} \overline{C} \wedge{ }^{*} \mathbb{B}\right\} \\ & =\frac{1}{2} s \left[\overline{\chi}^{\alpha \beta} \wedge{ }^{*} R_{\alpha \beta}^{(\pm)}+\overline{\Phi}_{\alpha \beta} D^{*} \Psi^{\alpha \beta}+\frac{1}{2} \rho \overline{\chi}^{\alpha \beta} \wedge{ }^{*} b_{\alpha \beta}+\widetilde{\Psi}_{\mathrm{F}}\right] . \end{aligned} \quad (8$
mielke-geometrodynamics_EQ1058 (15.2.15)	346	■ 0.638 ● K|+0	`\bar{D}^{\{ \}}:=d+i \bar{\omega}^{\{ \}}`	$\bar{D}^{\{\}}:=d+i \bar{\omega}^{\{\}}$	$\overline{D}^{\{\}}:=d+i \overline{\omega}^{\{\}}$
mielke-geometrodynamics_EQ1008 (14.4.3)	325	■ 0.640 ● N|+1	`\begin{aligned} d s^{2} & =-\frac{\Delta}{\rho^{2}} \left[c d t-J_{3} \frac{\hbar}{M} \sin ^{2} \vartheta d \phi\right]^{2}+\frac{\rho^{2}}{\Delta} d r+\rho^{2} d \vartheta^{2} \\ & +\frac{\sin ^{2} \vartheta}{\rho^{2}} \left\{\left[r^{2}+J(J+1) \frac{\hbar^{2}}{M^{2} c^{2}}\right] d \phi-J_{3} \frac{\hbar}{M} d t\right\}^{2} \end{aligned}`	$\begin{aligned} d s^{2} & =-\frac{\Delta}{\rho^{2}} \left[c d t-J_{3} \frac{\hbar}{M} \sin ^{2} \vartheta d \phi\right]^{2}+\frac{\rho^{2}}{\Delta} d r+\rho^{2} d \vartheta^{2} \\ & +\frac{\sin ^{2} \vartheta}{\rho^{2}} \left\{\left[r^{2}+J(J+1) \frac{\hbar^{2}}{M^{2} c^{2}}\right] d \phi-J_{3} \frac{\hbar}{M} d t\right\}^{2} \end{aligned}$	$\begin{aligned} d s^{2} & =-\frac{\Delta}{\rho^{2}} \left[c d t-J_{3} \frac{\hbar}{M} \sin ^{2} \vartheta d \phi\right]^{2}+\frac{\rho^{2}}{\Delta} d r+\rho^{2} d \vartheta^{2} \\ & +\frac{\sin ^{2} \vartheta}{\rho^{2}} \left\{\left[r^{2}+J(J+1) \frac{\hbar^{2}}{M^{2} c^{2}}\right] d \phi-J_{3} \frac{\hbar}{M} d t\right\}^{2} . \end{aligned}$
mielke-geometrodynamics_EQ0255 (4.3.20)	093	■ 0.642 ● N|+0	`\stackrel{*}{\sigma} \Omega^{g}=\frac{1}{4} R_{\alpha \beta}^{. . c d} L_{c d} \otimes \vartheta^{\alpha} \wedge \vartheta^{\beta} .`	$\stackrel{*}{\sigma} \Omega^{g}=\frac{1}{4} R_{\alpha \beta}^{. . c d} L_{c d} \otimes \vartheta^{\alpha} \wedge \vartheta^{\beta} .$	$\stackrel{*}{\sigma} \Omega^{g}=\frac{1}{4} R_{\alpha \beta}^{. . c d} L_{c d} \otimes \vartheta^{\alpha} \wedge \vartheta^{\beta} .$
mielke-geometrodynamics_EQ1015 (14.4.10)	327	■ 0.646 ● N|+1	`A={ }^{*} \omega=A^{(\circ)} \lambda_{3} .`	$A={}^{*} \omega=A^{(\circ)} \lambda_{3} .$	$A=\stackrel{*}{\sigma} \omega=A^{(\circ)} \lambda_{3} .$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): ● C component ● W weak ● S stable ● N noise ● K clean ● not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ0119 (3.3.20)	059	0.646 N|+0	`\begin{aligned} \Sigma_{\alpha} & \left.\left.:=e_{ \alpha}\right\rfloor L-\left(e_{\alpha}\right\rfloor d A\right) \wedge \frac{\partial L}{\partial(d A)} \\ & \left.\left.=\frac{1}{2}\left[\left(e_{\alpha}\right\rfloor F\right) \wedge H-F \wedge\left(e_{\alpha}\right\rfloor H\right)\right] \end{aligned}`	$\Sigma_\alpha := e_\alpha\rfloor L - (e_\alpha\rfloor dA)\wedge\frac{\partial L}{\partial(dA)}$ $= \frac{1}{2}\left[(e_\alpha\rfloor F)\wedge H - F\wedge(e_\alpha\rfloor H)\right)\Big]$	$\Sigma_\alpha := e_\alpha\rfloor L - (e_\alpha\rfloor dA)\wedge\frac{\partial L}{\partial(dA)}$ $= \frac{1}{2}[(e_\alpha\rfloor F)\wedge H - F\wedge(e_\alpha\rfloor H)]$
mielke-geometrodynamics_EQ0120 (3.3.21)	060	0.651 K|+0	`d \Sigma_{\alpha} \simeq\left(e_{\alpha} \downharpoonleft F\right) \wedge j`	$d\Sigma_\alpha \simeq (e_\alpha \downharpoonleft F)\wedge j$	$d\Sigma_\alpha \simeq (e_\alpha\rfloor F)\wedge j$
mielke-geometrodynamics_EQ0497 (7.7.15)	163	0.653 C|-4	`d s^{2}=o_{\alpha \beta} \vartheta^{\alpha} \otimes \vartheta^{\beta}=g_{i j} d x^{i} \otimes d x^{j}, \quad o_{\alpha \beta}:=\operatorname{diag}\{1, \underbrace{-1, \cdots,-1}_{\text {sig }}\},`	$ds^2 = o_{\alpha\beta}\vartheta^\alpha\otimes\vartheta^\beta = g_{ij}dx^i\otimes dx^j, \quad o_{\alpha\beta} := \operatorname{diag}\{1, \underbrace{-1,\cdots,-1}_{\text{sig}}\},$	$ds^2 = o_{\alpha\beta}\vartheta^\alpha\otimes\vartheta^\beta = g_{ij}dx^i\otimes dx^j, \quad o_{\alpha\beta} := \operatorname{diag}\{1, \underbrace{-1,\cdots,-1}_{\text{sig}}\},$
mielke-geometrodynamics_EQ0800 (11.4.12)	254	0.658 N|+0	`\left\{i \gamma^{k} \partial_{k}-\frac{3 i}{2 R_{\circ} \lambda} \gamma^{0}-\frac{m}{\lambda}\right\} \psi=0,`	$\left\{i\gamma^k\partial_k - \frac{3i}{2R_\circ\lambda}\gamma^0 - \frac{m}{\lambda}\right\}\psi = 0,$	$\left\{i\gamma^k\partial_k - \frac{3i}{2R_\circ\lambda}\gamma^0 - \frac{m}{\lambda}\right\}\psi = 0,$
mielke-geometrodynamics_EQ0316 (4.6.8)	105	0.664 N|+0	`\Phi(\widetilde{\widetilde{\Gamma}}, \gamma)=\left(2 \pi \hbar \mathscr{M}_{n} G / \hbar \ell c^{2}\right)=2 \pi n`	$\Phi(\widetilde{\widetilde{\Gamma}}, \gamma) = \left(2\pi\hbar\mathscr{M}_n G/\hbar\ell c^2\right) = 2\pi n$	$\Phi(\widetilde{\widetilde{\Gamma}}, \gamma) = (2\pi\hbar\mathscr{M}_n G/\hbar\ell c^2) = 2\pi n,$
mielke-geometrodynamics_EQ0335 (5.3.12)	113	0.665 W|+0	`\begin{aligned} \widetilde{T}_{\mu \nu} & =T_{\mu \nu}+ \ell^{* 2}\left\{-4 \tau_{\mu \cdot[\lambda]}^{\cdot \kappa} \tau_{\nu \cdot \mid \kappa]}^{\cdot \lambda}-2 \tau_{\mu}^{\cdot \kappa \lambda} \tau_{\nu \kappa \lambda}+\tau_{\cdot, \mu}^{\kappa \lambda} \tau_{\kappa \lambda \nu}\right. \\ & \left.+\frac{1}{2} g_{\mu \nu}\left(4 \tau_{\delta \cdot[\lambda}^{\cdot \kappa} \tau_{\cdot, \kappa]}^{\delta \lambda}+\tau^{\delta \kappa \lambda} \tau_{\delta \kappa \lambda}\right)\right\} . \end{aligned}`	$\widetilde{T}_{\mu\nu} = T_{\mu\nu} + \ell^{*2}\Big\{-4\tau_{\mu\cdot[\lambda]}^{\cdot\kappa}\tau_{\nu\cdot\mid\kappa]}^{\cdot\lambda} - 2\tau_\mu^{\cdot\kappa\lambda}\tau_{\nu\kappa\lambda} + \tau_{\cdot,\mu}^{\kappa\lambda}\tau_{\kappa\lambda\nu}$ $+\frac{1}{2}g_{\mu\nu}\left(4\tau_{\delta\cdot[\lambda}^{\cdot\kappa}\tau_{\cdot,\kappa]}^{\delta\lambda} + \tau^{\delta\kappa\lambda}\tau_{\delta\kappa\lambda}\right)\Big\}.$	$\widetilde{T}_{\mu\nu} = T_{\mu\nu} + \ell^{*2}\Big\{-4\tau_{\mu\cdot[\lambda\mid}^{\cdot\kappa}\tau_{\nu\cdot\mid\kappa]}^{\cdot\lambda} - 2\tau_\mu^{\cdot\kappa\lambda}\tau_{\nu\kappa\lambda} + \tau_{\cdot,\mu}^{\kappa\lambda}\tau_{\kappa\lambda\nu}$ $+ \frac{1}{2}g_{\mu\nu}(4\tau_{\delta\cdot[\lambda}^{\cdot\kappa}\tau_{\cdot,\kappa]}^{\delta\lambda} + \tau^{\delta\kappa\lambda}\tau_{\delta\kappa\lambda})\Big\}.$
mielke-geometrodynamics_EQ1055 (15.2.12)	345	0.665 N|+0	`\bar{L}_{\mathrm{w} .}(f)=\frac{i}{8} \operatorname{Tr} \left(\bar{\gamma} \wedge \bar{\gamma} \wedge^{*} \bar{ \Omega}\right) .`	$\bar{L}_{\mathrm{w}.}(f) = \frac{i}{8}\operatorname{Tr}\left(\bar{\gamma}\wedge\bar{\gamma}\wedge^*\bar{\Omega}\right).$	$\bar{L}_{\mathrm{w}.}(f) = \frac{i}{8}\operatorname{Tr}(\bar{\gamma}\wedge\bar{\gamma}\wedge^*\bar{\Omega}).$
mielke-geometrodynamics_EQ1145 (C.13)	377	0.667 N|+0	`\stackrel{\circ}{g}_{l m}:=c_{l k}{ }^{i} c_{m i}{ }^{k}`	$\overset{\circ}{g}_{lm} := c_{lk}{}^i c_{mi}{}^k$	$\overset{\circ}{g}_{lm} := c_{lk}{}^i\ c_{mi}{}^k$
mielke-geometrodynamics_EQ0450 (7.2.3)	151	0.676 N|+0	`\Omega^{g}=\stackrel{+}{\Omega}^{g}+\bar{\Omega}^{g}`	$\Omega^g = \overset{+}{\Omega}{}^g + \bar{\Omega}^g$	$\Omega^g = \overset{+}{\Omega}{}^g + \bar{\Omega}^g$
mielke-geometrodynamics_EQ0143 (3.4.14)	064	0.679 N|+0	`\operatorname{div} \iota:=(-1)^{1+s *} d^{*} \iota=0`	$\operatorname{div}\iota := (-1)^{1+s*}d^*\iota = 0$	$\operatorname{div}\iota := (-1)^{1+s\,*}d^*\,\iota = 0$
mielke-geometrodynamics_EQ0472 (7.3.11)	155	0.682 U|+23	`\stackrel{+}{\Omega}^{(t)}=0 \Longleftrightarrow R_{i j}^{\{ \}}=0 \Longleftrightarrow R_{i j}^{\{ \}}= \Lambda^{\prime} g_{i j} .`	*(not rendered)*	$\overset{+}{\Omega}{}^{(t)} = 0 \Longleftrightarrow R_{ij}^{(t)} = 0 \Longleftrightarrow R_{ij}^{(t)} = \Lambda' g_{ij}.$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ0812 (11.4.24)	256	■ 0.686 ● C|+8	`\begin{aligned} & \partial_{\rho^{*}} H+\frac{1+\kappa}{\rho} e^{(\nu-\mu) / 2} H=\frac{1}{\beta}\left[\omega+e^{\nu / 2}-\varepsilon e^{-\mu}\left(H^{2}-F^{2}-\frac{2}{3} \mathrm{a} H^{2}\right)\right] F, \\ & \partial_{\rho^{*}} F+\frac{1-\kappa}{\rho} e^{(\nu-\mu) / 2} F=\frac{1}{\beta}\left[-\omega+e^{\nu / 2}-\varepsilon e^{-\mu}\left(H^{2}-F^{2}+\frac{2}{3} \mathrm{a} F^{2}\right)\right] H . \end{aligned}`	$\partial_{\rho^*} H+\frac{1+\kappa}{\rho} e^{(\nu-\mu)/2} H=\frac{1}{\beta}\left[\omega+e^{\nu/2}-\varepsilon e^{-\mu}\left(H^2-F^2-\frac{2}{3}\mathrm{a}H^2\right)\right] F,$ $\partial_{\rho^*} F+\frac{1-\kappa}{\rho} e^{(\nu-\mu)/2} F=\frac{1}{\beta}\left[-\omega+e^{\nu/2}-\varepsilon e^{-\mu}\left(H^2-F^2+\frac{2}{3}\mathrm{a}F^2\right)\right] H.$	$\partial_{\rho^*} H+\frac{1+\kappa}{\rho} e^{(\nu-\mu)/2} H=\frac{1}{\beta}\left[\omega+e^{\nu/2}-\varepsilon e^{-\mu}\left(H^2-F^2-\frac{2}{3}\mathrm{a}H^2\right)\right] F,$ (11.4.: $\partial_{\rho^*} F+\frac{1-\kappa}{\rho} e^{(\nu-\mu)/2} F=\frac{1}{\beta}\left[-\omega+e^{\nu/2}-\varepsilon e^{-\mu}\left(H^2-F^2+\frac{2}{3}\mathrm{a}F^2\right)\right] H.$
mielke-geometrodynamics_EQ0321 (5.2.5)	111	■ 0.686 ● W|+0	`\tau_{\alpha \beta}:=\frac{\partial L_{\mathrm{D}}}{ \partial \Gamma^{\alpha \beta}}=\frac{1}{8} \bar{\Psi} \left({ }^{*} \gamma \sigma_{\alpha \beta}+\sigma_{\alpha \beta}{ }^{*} \gamma\right) \Psi=\frac{1}{4} \eta_{ \alpha \beta \gamma \delta} \bar{\Psi} \gamma^{\delta} \gamma_{5} \Psi \eta^{\gamma}=\tau_{\alpha \beta \gamma} \eta^{\gamma}`	$\tau_{\alpha\beta} := \frac{\partial L_{\mathrm{D}}}{\partial \Gamma^{\alpha\beta}} = \frac{1}{8}\bar{\Psi}\left({}^*\gamma\sigma_{\alpha\beta}+\sigma_{\alpha\beta}{}^*\gamma\right)\Psi = \frac{1}{4}\eta_{\alpha\beta\gamma\delta}\bar{\Psi}\gamma^\delta\gamma_5\Psi\eta^\gamma = \tau_{\alpha\beta\gamma}\eta^\gamma$	$\tau_{\alpha\beta} := \frac{\partial L_{\mathrm{D}}}{\partial \Gamma^{\alpha\beta}} = \frac{1}{8}\overline{\Psi}\left({}^*\gamma\sigma_{\alpha\beta}+\sigma_{\alpha\beta}{}^*\gamma\right)\Psi = \frac{1}{4}\eta_{\alpha\beta\gamma\delta}\overline{\Psi}\gamma^\delta\gamma_5\Psi\eta^\gamma = \tau_{\alpha\beta\gamma}\eta^\gamma$
mielke-geometrodynamics_EQ0389 (6.4.4)	131	■ 0.688 ● W|+2	`\mathscr{H}=\mathscr{K}-\dot{\Psi} \wedge\left(\frac{ \partial \mathscr{K}}{\partial \dot{\Psi}}\right),`	$\mathscr{H} = \mathscr{K} - \dot{\Psi} \wedge \left(\frac{\partial \mathscr{K}}{\partial \dot{\Psi}}\right),$	$\mathscr{H} = \mathscr{K} - \underline{\dot{\Psi}} \wedge \left(\frac{\partial \mathscr{K}}{\partial \underline{\dot{\Psi}}}\right),$
mielke-geometrodynamics_EQ0949 (14.1.30)	307	■ 0.688 ● N|+0	`\begin{aligned} D \Omega & =\left(D \xi+(-1)^{z} * \xi \wedge D \delta\right) \cos \delta \\ & +(-1)^{z} \left(D^{*} \xi-(-1)^{z} \xi \wedge D \delta\right) \sin \delta=0 . \end{aligned}`	$D\Omega = (D\xi + (-1)^z * \xi \wedge D\delta)\cos\delta$ $+ (-1)^z (D^*\xi - (-1)^z \xi \wedge D\delta)\sin\delta = 0.$	$D\Omega = (D\xi + (-1)^z {}^*\xi \wedge D\delta)\cos\delta$ $+ (-1)^z (D^*\xi - (-1)^z \xi \wedge D\delta)\sin\delta = 0.$
mielke-geometrodynamics_EQ0696 (10.5.7)	224	■ 0.694 ● N|+0	`\left.D^{*} \gamma={ }^{*} \gamma \wedge T, \quad T:=e_{ \alpha}\right\rfloor T^{\alpha},`	$D^*\gamma = {}^*\gamma \wedge T, \quad T := e_\alpha \rfloor T^\alpha,$	$D^*\gamma = {}^*\gamma \wedge T, \qquad T := e_\alpha \rfloor T^\alpha,$
mielke-geometrodynamics_EQ0534 (8.2.1)	175	■ 0.699 ● C|+5	`\begin{aligned} s \Gamma & =\Psi-D C \\ s C & =\Phi-\frac{1}{2}[C, C] \\ s \Omega^{g} & =-D \Psi-\left[C, \Omega^{g}\right] \\ s \Psi & =-D \Phi-[C, \Psi] \\ s \Phi & =-[C, \Phi] \end{aligned}`	$s\Gamma = \Psi - DC$ $sC = \Phi - \frac{1}{2}[C, C]$ $s\Omega^g = -D\Psi - [C, \Omega^g]$ $s\Psi = -D\Phi - [C, \Psi]$ $s\Phi = -[C, \Phi]$	$s\Gamma = \Psi - DC\,,$ $sC = \Phi - \frac{1}{2}[C, C]\,,$ $s\Omega^g = -D\Psi - [C, \Omega^g]\,,$ $s\Psi = -D\Phi - [C, \Psi]\,,$ $s\Phi = -[C, \Phi]\,.$
mielke-geometrodynamics_EQ0329 (5.3.6)	112	■ 0.699 ● N|+0	`D \Theta \equiv\left[\Omega^{g}, \gamma\right], \quad D \Omega^{g} \equiv 0,`	$D\Theta \equiv [\Omega^g, \gamma], \quad D\Omega^g \equiv 0,$	$D\Theta \equiv [\Omega^g, \gamma], \qquad D\Omega^g \equiv 0\,,$
mielke-geometrodynamics_EQ0471 (7.3.10)	155	■ 0.706 ● N|+0	`\bar{\Omega}^{\{ \}}=0 \Longleftrightarrow \Omega_{ \mathrm{C}}^{\{ \}}=0 \text { and } R^{\{ \}}=0 .`	$\bar{\Omega}^{\{\}} = 0 \Longleftrightarrow \Omega_{\mathrm{C}}^{\{\}} = 0 \text{ and } R^{\{\}} = 0.$	$\overline{\Omega}^{\{\}} = 0 \Longleftrightarrow \Omega_{\mathrm{C}}^{\{\}} = 0 \quad \text{and} \quad R^{\{\}} = 0.$
mielke-geometrodynamics_EQ0747 (11.1.14)	240	■ 0.706 ● N|+0	`M=\mathbb{R} \times S^{3} \#^{v} W^{3} .`	$M = \mathbb{R} \times S^3 \#^v W^3.$	$M = \mathbb{R} \times S^3 \#^v W^3.$
mielke-geometrodynamics_EQ0314 (4.6.6)	105	■ 0.710 ● N|+0	`\Phi(\stackrel{\widetilde{\Gamma}}{\Gamma}, \gamma)=P \exp \left[(i / \hbar) \oint\left(\Gamma^{(T) \alpha} P_{ \alpha}+\Gamma_{\alpha}^{(L) \beta} L^{\alpha}{ }_{\beta} \right)\right]`	$\Phi(\overset{\widetilde{\Gamma}}{\Gamma}, \gamma) = P \exp\left[(i/\hbar)\oint\left(\Gamma^{(T)\alpha} P_\alpha + \Gamma_\alpha^{(L)\beta} L^\alpha{}_\beta\right)\right]$	$\Phi(\overset{\approx}{\Gamma}, \gamma) = P \exp\left[(i/\hbar)\oint(\Gamma^{(T)\alpha} P_\alpha + \Gamma_\alpha^{(L)\beta} L^\alpha{}_\beta)\right]$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): ● C component ● W weak ● S stable ● N noise ● K clean ● not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ0108 (3.3.9)	058	0.711 N|-1	`L_{\mathrm{Pontr}}=-\frac{1}{2} F \wedge F=-\frac{1}{2} d C,`	$L_{\mathrm{Pontr}}=-\frac{1}{2} F \wedge F=-\frac{1}{2} d C,$	$L_{\mathrm{Pontr}}=-\frac{1}{2} F \wedge F=-\frac{1}{2} d C\,,$
mielke-geometrodynamics_EQ0545 (8.3.6)	177	0.711 N|+0	`d \rightarrow \exp (\zeta\rfloor) d \exp (-\zeta\rfloor) .`	$d \rightarrow \exp(\zeta\rfloor) d \exp(-\zeta\rfloor).$	$d \quad \rightarrow \quad \exp(\zeta\rfloor) d \exp(-\zeta\rfloor)\,.$
mielke-geometrodynamics_EQ0583 (9.1.1)	192	0.712 N|+0	`d s^{2}=-e^{v} d t^{2}+e^{\lambda} d r^{2}+r^{2} d \Omega^{n-2}`	$ds^{2}=-e^{v} d t^{2}+e^{\lambda} d r^{2}+r^{2} d \Omega^{n-2}$	$ds^{2}=-e^{v} d t^{2}+e^{\lambda} d r^{2}+r^{2} d \Omega^{n-2}$
mielke-geometrodynamics_EQ0260 (4.3.25)	094	0.718 N|+0	`\stackrel{*}{\sigma} K=\frac{1}{2} K_{\alpha}^{. \beta c} L_{\beta c} \otimes \vartheta^{\alpha} .`	$\overset{*}{\sigma} K=\frac{1}{2} K_{\alpha}^{. \beta c} L_{\beta c} \otimes \vartheta^{\alpha} .$	$\overset{*}{\sigma} K=\frac{1}{2} K_{\alpha}^{. \beta c} L_{\beta c} \otimes \vartheta^{\alpha} .$
mielke-geometrodynamics_EQ0878 (13.3.7)	285	0.722 N|+0	`\mathrm{SL}(n+1, \mathbb{R}) \approx \mathrm{A}_{*}(n, \mathbb{R}):=\mathbb{R}^{n} \otimes \mathrm{GL}(n, \mathbb{R}) \otimes \mathbb{R}_{*}^{n} .`	$\mathrm{SL}(n+1, \mathbb{R}) \approx \mathrm{A}_{*}(n, \mathbb{R}):=\mathbb{R}^{n} \otimes \mathrm{GL}(n, \mathbb{R}) \otimes \mathbb{R}_{*}^{n} .$	$\mathrm{SL}(n+1, \mathbb{R}) \approx \mathrm{A}_{*}(n, \mathbb{R}):=\mathbb{R}^{n} \otimes \mathrm{GL}(n, \mathbb{R}) \otimes \mathbb{R}_{*}^{n} .$
mielke-geometrodynamics_EQ0041 (2.6.4)	042	0.725 N|+0	`\stackrel{*}{\sigma} \Omega=\frac{1}{2} F_{\alpha} \beta^{j} L_{j} \otimes \vartheta^{\alpha} \wedge \vartheta^{\beta}`	$\overset{*}{\sigma} \Omega=\frac{1}{2} F_{\alpha} \beta^{j} L_{j} \otimes \vartheta^{\alpha} \wedge \vartheta^{\beta}$	$\overset{*}{\sigma} \Omega=\frac{1}{2} F_{\alpha} \beta^{j} L_{j} \otimes \vartheta^{\alpha} \wedge \vartheta^{\beta}$
mielke-geometrodynamics_EQ0574 (8.6.12)	185	0.725 W|-2	`L_{\mathrm{eff}}:=L_{\mathrm{qPG}}(* *)-d C_{\theta}=-\frac{\theta_{\mathrm{T}}^{*}}{2 \ell^{2}} R^{\{ \} \alpha \beta} \wedge \eta_{\alpha \beta}+\frac{\theta_{ \mathrm{T}}^{*} \Lambda_{\mathrm{eff}}}{\ell^{2}} \eta .`	$L_{\mathrm{eff}}:=L_{\mathrm{qPG}}(* *)-d C_{\theta}=-\frac{\theta_{\mathrm{T}}^{*}}{2 \ell^{2}} R^{\{ \} \alpha \beta} \wedge \eta_{\alpha \beta}+\frac{\theta_{ \mathrm{T}}^{*} \Lambda_{\mathrm{eff}}}{\ell^{2}} \eta .$	$L_{\mathrm{eff}}:=L_{\mathrm{qPG}}(* *)-d C_{\theta}=-\frac{\theta_{\mathrm{T}}^{*}}{2 \ell^{2}} R^{\{ \} \alpha \beta} \wedge \eta_{\alpha \beta}+\frac{\theta_{ \mathrm{T}}^{*} \Lambda_{\mathrm{eff}}}{\ell^{2}} \eta .$
mielke-geometrodynamics_EQ0366 (6.2.13)	126	0.725 N|-1	`\stackrel{( \pm)}{L}_{\mathrm{EC}}:=L_{\mathrm{EC}} \pm i d C_{\mathrm{TT}}=-\frac{1}{2 \ell^{2}} \stackrel{( \pm)}{R}_{\alpha \beta} \wedge *^{*}\left(\vartheta^{ \alpha} \wedge \vartheta^{\beta}\right)+\frac{\Lambda}{ \ell^{2}} \eta .`	$\overset{(\pm)}{L}_{\mathrm{EC}}:=L_{\mathrm{EC}} \pm i d C_{\mathrm{TT}}=-\frac{1}{2 \ell^{2}} \overset{(\pm)}{R}_{\alpha \beta} \wedge *^{*}\left(\vartheta^{\alpha} \wedge \vartheta^{\beta}\right)+\frac{\Lambda}{ \ell^{2}} \eta .$	$\overset{(\pm)}{L}_{\mathrm{EC}}:=L_{\mathrm{EC}} \pm i d C_{\mathrm{TT}}=-\frac{1}{2 \ell^{2}} \overset{(\pm)}{R}_{\alpha \beta} \wedge *^{*}\left(\vartheta^{\alpha} \wedge \vartheta^{\beta}\right)+\frac{\Lambda}{ \ell^{2}} \eta .$
mielke-geometrodynamics_EQ0585 (9.1.3)	193	0.725 S|+0	`d s^{2}=\frac{n-2}{2 \Lambda_{\text {eff }}} t^{2}} \left(-d t^{2}+d r^{2}\right)+\frac{(n-2)(n-3)}{2 \Lambda_{\text {eff. }}}} d \Omega^{n-2}`	$ds^{2}=\frac{n-2}{2 \Lambda_{\text {eff }}} t^{2}} \left(-d t^{2}+d r^{2}\right)+\frac{(n-2)(n-3)}{2 \Lambda_{\text {eff. }}}} d \Omega^{n-2}$	$ds^{2}=\frac{n-2}{2 \Lambda_{\text {eff }}} t^{2}} \left(-d t^{2}+d r^{2}\right)+\frac{(n-2)(n-3)}{2 \Lambda_{\text {eff. }}}} d \Omega^{n-2}$
mielke-geometrodynamics_EQ0021 (2.4.3)	038	0.726 N|-2	`\phi^{(p)}:=\varphi^{p} \otimes b \in C^{\infty}\left( \wedge^{p} T_{\mathbb{C}^{*}}(M) \otimes V^{\rho}\right), \quad b \in C^{\infty}\left(V^{\rho}\right) .`	$\phi^{(p)}:=\varphi^{p} \otimes b \in C^{\infty}\left(\wedge^{p} T_{\mathbb{C}^{*}}(M) \otimes V^{\rho}\right), \quad b \in C^{\infty}\left(V^{\rho}\right) .$	$\phi^{(p)}:=\varphi^{p} \otimes b \in C^{\infty}\left(\wedge^{p} T_{\mathbb{C}^{*}}(M) \otimes V^{\rho}\right), \quad b \in C^{\infty}\left(V^{\rho}\right) .$
mielke-geometrodynamics_EQ0209 (4.2.1)	085	0.728 N|+0	`\stackrel{*}{\chi} \widetilde{\widetilde{\omega}}= \omega^{\mathrm{L}} \otimes \omega^{\mathrm{T}},`	$\overset{*}{\chi} \widetilde{\widetilde{\omega}}= \omega^{\mathrm{L}} \otimes \omega^{\mathrm{T}},$	$\overset{*}{\chi} \widetilde{\widetilde{\omega}}= \omega^{\mathrm{L}} \otimes \omega^{\mathrm{T}},$
mielke-geometrodynamics_EQ0309 (4.6.1)	104	0.728 N|+0	`\widetilde{\widetilde{\Gamma}}:=\Gamma^{(T) \alpha} P_{ \alpha}+\Gamma_{\alpha}^{(L) \beta} L^{\alpha}{ }_{\beta}`	$\widetilde{\widetilde{\Gamma}}:=\Gamma^{(T) \alpha} P_{ \alpha}+\Gamma_{\alpha}^{(L) \beta} L^{\alpha}{ }_{\beta}$	$\widetilde{\widetilde{\Gamma}}:=\Gamma^{(T) \alpha} P_{ \alpha}+\Gamma_{\alpha}^{(L) \beta} L^{\alpha}{ }_{\beta}$
mielke-geometrodynamics_EQ0009 (2.2.4)	034	0.729 N|+1	`E_{i}^{\alpha} e^{i}{ }_{\beta}=\delta^{\alpha}{ }_{ \beta} .`	$E_{i}^{\alpha} e^{i}{ }_{\beta}=\delta^{\alpha}{ }_{ \beta} .$	$E_{i}^{\alpha} e^{i}{ }_{\beta}=\delta^{\alpha}{ }_{ \beta} .$
mielke-geometrodynamics_EQ0384 (6.3.2)	130	0.730 C|+3	`H_{\alpha}^{\\|}=\frac{1}{\ell^{2}}\left[\vartheta^{\beta} \wedge{ }^{*}\left(d \vartheta_{\beta} \wedge \vartheta_{ \alpha}\right)-\frac{1}{2} \vartheta_{\alpha} \wedge{ }^{*}\left(d \vartheta^{\beta} \wedge \vartheta_{\beta} \right)\right]=\frac{1}{2 \ell^{2}} \Gamma^{\{ \} \beta \gamma} \wedge \eta_{\alpha \beta \gamma}`	$H_{\alpha}^{\\|}=\frac{1}{\ell^{2}}\left[\vartheta^{\beta} \wedge{ }^{*}\left(d \vartheta_{\beta} \wedge \vartheta_{ \alpha}\right)-\frac{1}{2} \vartheta_{\alpha} \wedge{ }^{*}\left(d \vartheta^{\beta} \wedge \vartheta_{\beta} \right)\right]=\frac{1}{2 \ell^{2}} \Gamma^{\{ \} \beta \gamma} \wedge \eta_{\alpha \beta \gamma}$	$H_{\alpha}^{\\|}=\frac{1}{\ell^{2}}\left[\vartheta^{\beta} \wedge{ }^{*}\left(d \vartheta_{\beta} \wedge \vartheta_{ \alpha}\right)-\frac{1}{2} \vartheta_{\alpha} \wedge{ }^{*}\left(d \vartheta^{\beta} \wedge \vartheta_{\beta} \right)\right]=\frac{1}{2 \ell^{2}} \Gamma^{\{ \} \beta \gamma} \wedge \eta_{\alpha \beta \gamma}$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ0689 (10.3.47)	222	0.731 N|+0	`\tilde{\Lambda}=(-1)^{s}{ }^{*} L(\star)+\frac{1}{3 \ell} \left[4 \gamma+(-1)^{s} \ell\right] *\left(R^{(\{ \} \star \alpha} \wedge \vartheta_{\alpha}\right),`	$\tilde{\Lambda}=(-1)^{s}{}^{*}L(\star)+\frac{1}{3\ell}\left[4\gamma+(-1)^{s}\ell\right]*\left(R^{(\{\star\alpha}\wedge\vartheta_{\alpha}\right),$	$\tilde{\Lambda}=(-1)^{s}{}^{*}L(\star)+\frac{1}{3\ell}\left[4\gamma+(-1)^{s}\ell\right]{}^{*}\left(R^{(\{\star\alpha}\wedge\vartheta_{\alpha}\right),$
mielke-geometrodynamics_EQ0662 (10.3.19)	217	0.733 N|-1	`\square:=(-1)^{p n+s}\left[{ }^{*} D{ }^{*} D+(-1)^{n} D^{*} D^{*}\right]`	$\square:=(-1)^{pn+s}\left[{}^{*}D\,{}^{*}D+(-1)^{n}D^{*}D^{*}\right]$	$\square:=(-1)^{pn+s}\left[{}^{*}D\,{}^{*}D+(-1)^{n}D\,{}^{*}D^{*}\right]$
mielke-geometrodynamics_EQ1128 (B.40)	373	0.735 N|+0	`\text { д ∂ } c \equiv 0,`	$\text{д ∂}\, c \equiv 0,$	$\partial\,\partial\, c \equiv 0,$
mielke-geometrodynamics_EQ0374 (6.2.25)	127	0.742 W|+0	`\begin{aligned} \stackrel{(\pm)}{L}= & -\frac{i}{4} \ell^{2}\left[\stackrel{(+)}{\Pi}^{\alpha}-\stackrel{(-)}{\Pi^{\alpha}}\right] \wedge \stackrel{(\pm)}{\Pi}_{\alpha} \\ & -\frac{i}{4}\left[\stackrel{(+)}{\Pi}^{\alpha \beta}-\stackrel{(-)}{\Pi}^{ \alpha \beta}\right] \wedge\left(\stackrel{(\pm)}{\Pi}_{ \alpha \beta} \mp \frac{i}{\ell^{2}} \vartheta_{\alpha} \wedge \vartheta_{\beta}-\frac{a_{0}}{2 \ell^{2}} \eta_{ \alpha \beta}\right) \end{aligned}`	$\begin{aligned} \overset{(\pm)}{L}= & -\frac{i}{4} \ell^{2}\left[\overset{(+)}{\Pi}{}^{\alpha}-\overset{(-)}{\Pi}{}^{\alpha}\right] \wedge \overset{(\pm)}{\Pi}{}_{\alpha} \\ & -\frac{i}{4}\left[\overset{(+)}{\Pi}{}^{\alpha \beta}-\overset{(-)}{\Pi}{}^{\alpha \beta}\right] \wedge\left(\overset{(\pm)}{\Pi}{}_{\alpha \beta} \mp \frac{i}{\ell^{2}} \vartheta_{\alpha} \wedge \vartheta_{\beta}-\frac{a_{0}}{2 \ell^{2}} \eta_{\alpha \beta}\right) \end{aligned}$	$\begin{aligned} \overset{(\pm)}{L}= & -\frac{i}{4} \ell^{2}\left[\overset{(+)}{\Pi}{}^{\alpha}-\overset{(-)}{\Pi}{}^{\alpha}\right] \wedge \overset{(\pm)}{\Pi}{}_{\alpha} \\ & -\frac{i}{4}\left[\overset{(+)}{\Pi}{}^{\alpha \beta}-\overset{(-)}{\Pi}{}^{\alpha \beta}\right] \wedge\left(\overset{(\pm)}{\Pi}{}_{\alpha \beta} \mp \frac{i}{\ell^{2}} \vartheta_{\alpha} \wedge \vartheta_{\beta}-\frac{a_{0}}{2 \ell^{2}} \eta_{\alpha \beta}\right) \end{aligned}$
mielke-geometrodynamics_EQ0524 (7.7.43)	167	0.743 C|+6	`\Theta^{ \pm}:=\frac{1}{2}\left(\Theta \pm{ }^{*} \Theta\right), \quad \Omega^{g \pm}:=\frac{1}{2}\left( \Omega^{g} \pm{ }^{*} \Omega^{g}\right), \quad \Omega^{( \pm)}:=\frac{1}{2}\left(\Omega^{g} \pm \Omega^{g(\star)} \right),`	$\Theta^{\pm}:=\frac{1}{2}\left(\Theta \pm{}^{*}\Theta\right), \quad \Omega^{g\pm}:=\frac{1}{2}\left(\Omega^{g} \pm{}^{*}\Omega^{g}\right), \quad \Omega^{(\pm)}:=\frac{1}{2}\left(\Omega^{g} \pm \Omega^{g(\star)} \right),$	$\Theta^{\pm}:=\frac{1}{2}\left(\Theta \pm{}^{*}\Theta\right), \quad \Omega^{g\pm}:=\frac{1}{2}\left(\Omega^{g} \pm{}^{*}\Omega^{g}\right), \quad \Omega^{(\pm)}:=\frac{1}{2}\left(\Omega^{g} \pm \Omega^{g(\star)} \right),$
mielke-geometrodynamics_EQ0157 (3.5.5)	067	0.746 K|+0	`{ }^{*} F_{\alpha \beta \mu \nu}^{*}=(\stackrel{+}{-}) F_{\alpha \beta \mu \nu}`	${}^{*}F^{*}_{\alpha\beta\mu\nu}=(\overset{+}{-})F_{\alpha\beta\mu\nu}$	${}^{*}F^{*}_{\alpha\beta\mu\nu}=(\overset{+}{-})F_{\alpha\beta\mu\nu}$
mielke-geometrodynamics_EQ1099 (B.10)	369	0.746 C|+3	`\begin{aligned} \sigma_{*}\left(\alpha^{(p)}+\beta^{(p)} \right) & =\sigma_{*}\left(\alpha^{(p)}\right)+\sigma_{*} \left(\beta^{(p)}\right) \\ \sigma_{*}\left(\alpha^{(p)} \wedge \beta^{(q)}\right) & =\sigma_{*}\left(\alpha^{(p)} \right) \wedge \sigma_{*}\left(\beta^{(q)}\right) \\ d \left(\sigma_{*}\alpha^{(p)} \right) & =\sigma_{*}\left(d\alpha^{(p)}\right) \end{aligned}`	$\begin{aligned} \sigma_{*}\left(\alpha^{(p)}+\beta^{(p)}\right) & =\sigma_{*}\left(\alpha^{(p)}\right)+\sigma_{*}\left(\beta^{(p)}\right) \\ \sigma_{*}\left(\alpha^{(p)} \wedge \beta^{(q)}\right) & =\sigma_{*}\left(\alpha^{(p)}\right) \wedge \sigma_{*}\left(\beta^{(q)}\right) \\ d \left(\sigma_{*}\alpha^{(p)}\right) & =\sigma_{*}\left(d\alpha^{(p)}\right) \end{aligned}$	$\begin{aligned} \sigma_{*}(\alpha^{(p)}+\beta^{(p)}) & =\sigma_{*}(\alpha^{(p)})+\sigma_{*}(\beta^{(p)}), \\ \sigma_{*}(\alpha^{(p)} \wedge \beta^{(q)}) & =\sigma_{*}(\alpha^{(p)}) \wedge \sigma_{*}(\beta^{(q)}), \\ d(\sigma_{*}\alpha^{(p)}) & =\sigma_{*}(d\alpha^{(p)}). \end{aligned}$
mielke-geometrodynamics_EQ0655 (10.3.12)	216	0.746 N|+0	`\left.\left.E_{\alpha}=e_{\alpha}\right\rfloor L(\star)-\frac{2 \gamma \varepsilon^{2}}{\ell^{3}(1+\delta \varepsilon)} \eta_{\alpha}+(-1)^{s} \frac{2 \gamma}{ \ell(1+\delta \varepsilon)}\left[\left(e_{\alpha}\right. \rfloor R^{\star \beta}\right) \wedge \vartheta_{\beta} \right] \text {, }`	$E_{\alpha}=e_{\alpha}\rfloor L(\star)-\frac{2\gamma\varepsilon^{2}}{\ell^{3}(1+\delta\varepsilon)}\eta_{\alpha}+(-1)^{s}\frac{2\gamma}{\ell(1+\delta\varepsilon)}\left[\left(e_{\alpha}\rfloor R^{\star\beta}\right)\wedge\vartheta_{\beta}\right],$	$E_{\alpha}=e_{\alpha}\rfloor L(\star)-\frac{2\gamma\varepsilon^{2}}{\ell^{3}(1+\delta\varepsilon)}\eta_{\alpha}+(-1)^{s}\frac{2\gamma}{\ell(1+\delta\varepsilon)}\left[\left(e_{\alpha}\rfloor R^{\star\beta}\right)\wedge\vartheta_{\beta}\right],$
mielke-geometrodynamics_EQ0477 (7.4.5)	156	0.748 N|+0	`g_{i j}=\Omega^{2} o_{i j}^{\mathrm{Mink}}`	$g_{ij}=\Omega^{2}o_{ij}^{\mathrm{Mink}}$	$g_{ij}=\Omega^{2}o_{ij}^{\mathrm{Mink}},$
mielke-geometrodynamics_EQ0963 (14.2.3)	312	0.750 N|+1	`\stackrel{\circ}{d} \stackrel{\circ}{\mathcal{U}}= \stackrel{\circ}{\vartheta} \wedge \stackrel{\circ}{ \vartheta} .`	$\overset{\circ}{d}\overset{\circ}{\mathcal{U}}=\overset{\circ}{\vartheta}\wedge\overset{\circ}{\vartheta}.$	$\overset{\circ}{d}\overset{\circ}{\vartheta}=\overset{\circ}{\vartheta}\wedge\overset{\circ}{\vartheta}.$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ0687 (10.3.45)	222	0.753 N|+0	`\left.\left.-E_{\alpha}=-e_{\alpha}\right\rfloor L(\star)-(-1)^{s} \frac{2 \gamma}{\ell}\left(e_{\alpha}\right\rfloor R^{\{ \} \star \beta}\right) \wedge \vartheta_{\beta}=\ell \widetilde{\Sigma}_{\alpha}`	$-E_{\alpha}=-e_{\alpha}\rfloor L(\star)-(-1)^{s} \frac{2 \gamma}{\ell}\left(e_{\alpha}\rfloor R^{\{ \} \star \beta}\right) \wedge \vartheta_{\beta}=\ell \widetilde{\Sigma}_{\alpha}$	$-E_{\alpha}=-e_{\alpha}\rfloor L(\star)-(-1)^{s} \frac{2 \gamma}{\ell}(e_{\alpha}\rfloor R^{\{ \} \star \beta}) \wedge \vartheta_{\beta}=\ell \widetilde{\Sigma}_{\alpha}$
mielke-geometrodynamics_EQ0606 (9.2.5)	199	0.753 N|+1	`\chi(M)=\int_{M}{ }^{*}\left(\gamma_{2}^{g}\right)-\frac{1}{(4 \pi)^{2}} \int_{\partial M}\left\{\alpha \wedge \Omega^{g(\star)}+\frac{2}{3} \alpha \wedge(\alpha \wedge \alpha)^{(\star)}\right\} .`	$\chi(M)=\int_{M}{}^{*}\left(\gamma_{2}^{g}\right)-\frac{1}{(4 \pi)^{2}} \int_{\partial M}\left\{\alpha \wedge \Omega^{g(\star)}+\frac{2}{3} \alpha \wedge(\alpha \wedge \alpha)^{(\star)}\right\} .$	$\chi(M)=\int_{M}\overset{*}{\pi}(\gamma_{2}^{g})-\frac{1}{(4 \pi)^{2}} \int_{\partial M}\left\{\alpha \wedge \Omega^{g(\star)}+\frac{2}{3} \alpha \wedge(\alpha \wedge \alpha)^{(\star)}\right\} .$
mielke-geometrodynamics_EQ0992 (14.3.5)	320	0.754 N|+0	`\stackrel{\circ}{\gamma}^{K+1} \chi_{\rho F}^{ \pm}(\xi)=\pm \chi_{\rho F}^{ \pm}(\xi)`	$\overset{\circ}{\gamma}{}^{K+1} \chi_{\rho F}^{ \pm}(\xi)=\pm \chi_{\rho F}^{ \pm}(\xi)$	$\overset{\circ}{\gamma}{}^{K+1} \chi_{\rho F}^{ \pm}(\xi)=\pm \chi_{\rho F}^{ \pm}(\xi)$
mielke-geometrodynamics_EQ0249 (4.3.14)	092	0.755 N|+0	`D_{k} g_{i j}=E_{\cdot k}^{\alpha} \nabla_{\alpha} g_{i j}=0`	$D_{k} g_{i j}=E_{\cdot k}^{\alpha} \nabla_{\alpha} g_{i j}=0$	$D_{k} g_{i j}=E_{\cdot k}^{\alpha} \nabla_{\alpha} g_{i j}=0$
mielke-geometrodynamics_EQ0399 (6.4.17)	133	0.755 W|+0	`\begin{aligned} {\left[D_{\alpha}, D_{\beta}\right] } & =-T_{\alpha \beta}{ }^{\gamma}(x) D_{\gamma}+R_{\alpha \beta \gamma}{ }^{\delta}(x) L^{\gamma}{ }_{\delta}, \ \ {\left[L^{\alpha}{ }_{\beta}, D_{\gamma}\right] } & =\delta_{\gamma}^{\alpha} D_{\beta}, \\ {\left[L^{\alpha}{ }_{\beta}, L^{\gamma}{ }_{\delta}\right] } & =\delta_{\delta}^{\alpha} L^{\gamma}{ }_{\beta}-\delta_{\beta}^{\gamma} L^{\alpha}{ }_{\delta}, \end{aligned}`	$\begin{aligned} {\left[D_{\alpha}, D_{\beta}\right] } & =-T_{\alpha \beta}{ }^{\gamma}(x) D_{\gamma}+R_{\alpha \beta \gamma}{ }^{\delta}(x) L^{\gamma}{ }_{\delta}, \ \ {\left[L^{\alpha}{ }_{\beta}, D_{\gamma}\right] } & =\delta_{\gamma}^{\alpha} D_{\beta}, \\ {\left[L^{\alpha}{ }_{\beta}, L^{\gamma}{ }_{\delta}\right] } & =\delta_{\delta}^{\alpha} L^{\gamma}{ }_{\beta}-\delta_{\beta}^{\gamma} L^{\alpha}{ }_{\delta}, \end{aligned}$	$\begin{aligned} {\left[D_{\alpha}, D_{\beta}\right] } & =-T_{\alpha \beta}{ }^{\gamma}(x) D_{\gamma}+R_{\alpha \beta \gamma}{ }^{\delta}(x) L^{\gamma}{ }_{\delta}, \ \ {\left[L^{\alpha}{ }_{\beta}, D_{\gamma}\right] } & =\delta_{\gamma}^{\alpha} D_{\beta}, \\ {\left[L^{\alpha}{ }_{\beta}, L^{\gamma}{ }_{\delta}\right] } & =\delta_{\delta}^{\alpha} L^{\gamma}{ }_{\beta}-\delta_{\beta}^{\gamma} L^{\alpha}{ }_{\delta}, \end{aligned}$
mielke-geometrodynamics_EQ0957 (14.1.39)	309	0.756 N|+0	`\partial_{\kappa} \delta=\sqrt{|g|} \varepsilon_{\kappa \lambda \rho \sigma} R^{\{ \} \sigma}{ }_{. \nu} \nabla^{\rho} R^{\{ \} \nu \lambda} /\left(R_{\alpha \beta}^{\{ \}} R^{\{ \} \alpha \beta}\right) .`	$\partial_{\kappa} \delta=\sqrt{\|g\|} \varepsilon_{\kappa \lambda \rho \sigma} R^{\{ \} \sigma}{ }_{. \nu} \nabla^{\rho} R^{\{ \} \nu \lambda} /\left(R_{\alpha \beta}^{\{ \}} R^{\{ \} \alpha \beta}\right) .$	$\partial_{\kappa} \delta=\sqrt{\|g\|} \varepsilon_{\kappa \lambda \rho \sigma} R^{\{ \} \sigma}{ }_{. \nu} \nabla^{\rho} R^{\{ \} \nu \lambda} /(R_{\alpha \beta}^{\{ \}} R^{\{ \} \alpha \beta}) .$
mielke-geometrodynamics_EQ0970 (14.2.11)	314	0.758 C|+6	`\hat{\Omega}=\hat{d} \hat{\omega}-\hat{\omega}-\hat{\omega} \wedge \hat{\omega}=\left[\begin{array}{l|l} \Omega^{g}+\alpha \wedge \alpha^{\mathrm{T}} & -D \alpha \\ \hline \circ & \stackrel{\circ}{\Omega}+\alpha^{\mathrm{T}} \wedge \alpha \end{array}\right] .`	$\hat{\Omega}=\hat{d} \hat{\omega}-\hat{\omega}-\hat{\omega} \wedge \hat{\omega}=\left[\begin{array}{l\|l} \Omega^{g}+\alpha \wedge \alpha^{\mathrm{T}} & -D \alpha \\ \hline \circ & \stackrel{\circ}{\Omega}+\alpha^{\mathrm{T}} \wedge \alpha \end{array}\right] .$	$\hat{\Omega}=\hat{d} \hat{\omega}-\hat{\omega}-\hat{\omega} \wedge \hat{\omega}=\left[\begin{array}{l\|l} \Omega^{g}+\alpha \wedge \alpha^{\mathrm{T}} & -D \alpha \\ \hline (\overset{\circ}{D} \alpha)^{\mathrm{T}} & \overset{\circ}{\Omega}+\alpha^{\mathrm{T}} \wedge \alpha \end{array}\right] .$
mielke-geometrodynamics_EQ1016 (14.4.11)	327	0.758 N|+0	`d s^{2}=-\left(1-\left(\frac{r_{\circ}}{r}\right)^{4} \right) \frac{\Delta}{r^{2}} d t^{2}+\frac{r^{2}}{\Delta} d r^{2}+r^{2} d \Omega^{2} .`	$d s^{2}=-\left(1-\left(\frac{r_{\circ}}{r}\right)^{4} \right) \frac{\Delta}{r^{2}} d t^{2}+\frac{r^{2}}{\Delta} d r^{2}+r^{2} d \Omega^{2} .$	$d s^{2}=-\left(1-\left(\frac{r_{\circ}}{r}\right)^{4} \right) \frac{\Delta}{r^{2}} d t^{2}+\frac{r^{2}}{\Delta} d r^{2}+r^{2} d \Omega^{2} .$
mielke-geometrodynamics_EQ0310 (4.6.2)	104	0.760 W|+2	`\begin{aligned} \widetilde{\widetilde{D}} \widetilde{ \xi}^{\alpha} & =d \xi^{\alpha}+\Gamma_{\beta}^{(L) \alpha} \wedge \xi^{\beta}+\Gamma^{(T) \alpha} \\ & =D \xi^{\alpha}+\Gamma^{(T) \alpha}=0 \end{aligned}`	$\begin{aligned} \widetilde{\widetilde{D}} \widetilde{ \xi}^{\alpha} & =d \xi^{\alpha}+\Gamma_{\beta}^{(L) \alpha} \wedge \xi^{\beta}+\Gamma^{(T) \alpha} \\ & =D \xi^{\alpha}+\Gamma^{(T) \alpha}=0 . \end{aligned}$	$\begin{aligned} \widetilde{\widetilde{D}} \widetilde{ \xi}^{\alpha} & =d \xi^{\alpha}+\Gamma_{\beta}^{(L) \alpha} \wedge \xi^{\beta}+\Gamma^{(T) \alpha} \\ & =D \xi^{\alpha}+\Gamma^{(T) \alpha}=0 . \end{aligned}$
mielke-geometrodynamics_EQ0832 (12.1.4)	270	0.763 N|+0	`\left\langle d \widetilde{j_{5}}\right\rangle=0,`	$\left\langle d \widetilde{j_{5}}\right\rangle=0,$	$\langle d \widetilde{j_{5}}\rangle=0 ,$
mielke-geometrodynamics_EQ0231 (4.2.24)	088	0.766 N|+2	`T_{\alpha \beta}^{. . c}=2 D_{[\alpha} E_{\cdot \mid \beta]}^{c}=2\left(\partial_{[\alpha} E_{\cdot \mid \beta]}^{c}+\Gamma_{[\alpha \mid d}^{c} E_{\cdot \mid \beta]}^{d}\right) .`	$T_{\alpha \beta}^{. . c}=2 D_{[\alpha} E_{\cdot \mid \beta]}^{c}=2\left(\partial_{[\alpha} E_{\cdot \mid \beta]}^{c}+\Gamma_{[\alpha \mid d}^{c} E_{\cdot \mid \beta]}^{d}\right) .$	$T_{\alpha \beta}^{. . c}=2 D_{[\alpha} E_{\cdot \mid \beta]}^{c}=2\left(\partial_{[\alpha} E_{\cdot \mid \beta]}^{c}+\Gamma_{[\alpha \mid d}^{c} E_{\cdot \mid \beta]}^{d}\right) .$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ1079 (A.4)	365	0.766 N|+0	`\left[\sigma^{i}, \sigma^{j}\right]=\varepsilon^{i j}{ }_{k} \sigma^{k}`	$\left[\sigma^{i}, \sigma^{j}\right]=\varepsilon^{i j}{}_{k} \sigma^{k}$	$[\sigma^{i}, \sigma^{j}]=\varepsilon^{ij}{}_{k}\,\sigma^{k}$
mielke-geometrodynamics_EQ0276 (4.4.4)	097	0.767 W|+0	`\begin{aligned} & \delta L_{g}=\delta \vartheta \wedge E-\delta \vartheta \wedge D \Pi^{\mathrm{T}}+d\left(\delta \vartheta \wedge \Pi^{\mathrm{T}}\right) \\ & -\left[\delta \omega^{g}, \vartheta\right] \wedge\left[\Pi_{[]}^{\mathrm{T}}, \vartheta\right]-\delta \omega^{g} \wedge D \Pi^{\mathrm{L}}+d\left(\delta \omega^{g} \wedge \Pi^{\mathrm{L}}\right), \end{aligned}`	$\begin{aligned} & \delta L_{g}=\delta \vartheta \wedge E-\delta \vartheta \wedge D \Pi^{\mathrm{T}}+d\left(\delta \vartheta \wedge \Pi^{\mathrm{T}}\right) \\ & -\left[\delta \omega^{g}, \vartheta\right] \wedge\left[\Pi_{[]}^{\mathrm{T}}, \vartheta\right]-\delta \omega^{g} \wedge D \Pi^{\mathrm{L}}+d\left(\delta \omega^{g} \wedge \Pi^{\mathrm{L}}\right), \end{aligned}$	$\begin{aligned} \delta L_{g} &= \delta\vartheta \wedge E - \delta\vartheta \wedge D\Pi^{\mathrm{T}} + d(\delta\vartheta \wedge \Pi^{\mathrm{T}}) \\ &- [\delta\omega^{g}, \vartheta] \wedge [\Pi^{\mathrm{T}}_{[\,]}, \vartheta] - \delta\omega^{g} \wedge D\Pi^{\mathrm{L}} + d(\delta\omega^{g} \wedge \Pi^{\mathrm{L}}), \end{aligned}$
mielke-geometrodynamics_EQ0613 (10.1.1)	209	0.769 N|+0	`\vartheta^{\alpha}=E_{i}^{\alpha} d x^{i} \quad \text { and } \quad \Gamma_{\alpha}^{\star}:=\frac{1}{2} \eta_{ \alpha \beta \gamma} \Gamma^{\beta \gamma} .`	$\vartheta^{\alpha}=E_{i}^{\alpha} d x^{i} \quad \text { and } \quad \Gamma_{\alpha}^{\star}:=\frac{1}{2} \eta_{\alpha \beta \gamma} \Gamma^{\beta \gamma} .$	$\vartheta^{\alpha}=E_{i}{}^{\alpha} dx^{i} \quad \text{and} \quad \Gamma_{\alpha}^{\star}:=\frac{1}{2} \eta_{\alpha \beta \gamma} \Gamma^{\beta \gamma} .$
mielke-geometrodynamics_EQ1066 (16.2.5)	355	0.770 C|-3	`\rho^{*}=\int_{o}^{\rho} \frac{d x}{1 \pm x^{2}}=\left\{ \begin{array}{l} \operatorname{artan} \rho, \kappa>0 \\ \operatorname{Arth} \rho, \kappa<0) \end{array}\right.`	$\rho^{*}=\int_{o}^{\rho} \frac{d x}{1 \pm x^{2}}=\left\{ \begin{array}{l} \operatorname{artan} \rho, \kappa>0 \\ \operatorname{Arth} \rho, \kappa<0) \end{array}\right.$	$\rho^{*}=\int_{o}^{\rho} \frac{dx}{1 \pm x^{2}}=\left\{ \begin{array}{l} \operatorname{artan} \rho,\ \kappa>0 \\ \operatorname{Arth} \rho,\ \kappa<0). \end{array}\right.$
mielke-geometrodynamics_EQ1030 (15.1.6)	337	0.771 W|-1	`\begin{aligned} & \frac{1}{2} \vartheta^{g} \wedge^{*} \Omega^{g}+\Lambda^{*} \vartheta_{g}=\ell^{* 2}\left \{\Sigma_{\mathrm{m}}(\text { leptons })+\Sigma^{ \mathrm{g}}\right\}, \\ & \frac{1}{2} \vartheta^{f} \wedge^{*} \Omega^{f}=\ell^{2}\left\{\Sigma_{\mathrm{m}} \text { (hadrons) }+\Sigma^{\mathrm{f}}\right\} . \end{aligned}`	$\begin{aligned} & \frac{1}{2} \vartheta^{g} \wedge^{*} \Omega^{g}+\Lambda^{*} \vartheta_{g}=\ell^{* 2}\left \{\Sigma_{\mathrm{m}}(\text { leptons })+\Sigma^{ \mathrm{g}}\right\}, \\ & \frac{1}{2} \vartheta^{f} \wedge^{*} \Omega^{f}=\ell^{2}\left\{\Sigma_{\mathrm{m}} \text { (hadrons) }+\Sigma^{\mathrm{f}}\right\} . \end{aligned}$	$\begin{aligned} & \frac{1}{2}\,\vartheta^{g} \wedge^{*} \Omega^{g}+\Lambda^{*} \vartheta_{g}=\ell^{* 2}\left\{\Sigma_{\mathrm{m}}(\text{leptons})+\Sigma^{\mathrm{g}}\right\}, \\ & \frac{1}{2}\,\vartheta^{f} \wedge^{*} \Omega^{f}=\ell^{2}\left\{\Sigma_{\mathrm{m}}(\text{hadrons})+\Sigma^{\mathrm{f}}\right\}. \end{aligned}$
mielke-geometrodynamics_EQ0112 (3.3.13)	059	0.772 W|-2	`\begin{aligned} j:= & -\mathscr{J} \wedge d t+\hat{\rho} \\ = & -\left(J_{x} d y \wedge d z+J_{y} d z \wedge d x+J_{z} d x \wedge d y\right) \wedge d t \\ & +\rho d x \wedge d y \wedge d z \end{aligned}`	$\begin{aligned} j:= & -\mathscr{J} \wedge d t+\hat{\rho} \\ = & -\left(J_{x} d y \wedge d z+J_{y} d z \wedge d x+J_{z} d x \wedge d y\right) \wedge d t \\ & +\rho d x \wedge d y \wedge d z \end{aligned}$	$\begin{aligned} j &:= -\mathscr{J} \wedge dt + \hat{\rho} \\ &= -(J_x dy \wedge dz + J_y dz \wedge dx + J_z dx \wedge dy) \wedge dt \\ &\quad + \rho dx \wedge dy \wedge dz\,. \end{aligned}$
mielke-geometrodynamics_EQ0130 (3.4.1)	062	0.780 N|-1	`\mathscr{F}:=\frac{1}{\alpha_{g}} \operatorname{Tr}\left \{{ }^{*}\left(\Omega \wedge{ }^{*} \Omega\right)\right \}=\frac{1}{4 \alpha_{g}} F_{\alpha \beta}{ }^{j} F^{ \alpha \beta}{ }_{j}`	$\mathscr{F}:=\frac{1}{\alpha_{g}} \operatorname{Tr}\left \{{ }^{*}\left(\Omega \wedge{ }^{*} \Omega\right)\right \}=\frac{1}{4 \alpha_{g}} F_{\alpha \beta}{ }^{j} F^{ \alpha \beta}{ }_{j}$	$\mathscr{F}:=\frac{1}{\alpha_{g}} \operatorname{Tr}\left \{{ }^{*}\left(\Omega \wedge{ }^{*} \Omega\right)\right \}=\frac{1}{4 \alpha_{g}} F_{\alpha \beta}{ }^{j} F^{ \alpha \beta}{ }_{j}$
mielke-geometrodynamics_EQ0470 (7.3.9)	155	0.782 N|+0	`{ }^{*} \Omega^{g(*)}=\zeta \Omega^{g},`	${ }^{*} \Omega^{g(*)}=\zeta \Omega^{g},$	${ }^{*} \Omega^{g(*)}=\zeta \Omega^{g},$
mielke-geometrodynamics_EQ0046 (2.6.9)	043	0.783 N|+0	`\begin{aligned} \Delta b & =\int_{\partial U} \omega \otimes b=\int_{U} d(\omega \otimes b)_{\mathrm{hor}}= \int_{U} D(\omega \otimes b) \\ & =\int_{U} \Omega \otimes b \simeq \Omega \otimes b \end{aligned}`	$\begin{aligned} \Delta b & =\int_{\partial U} \omega \otimes b=\int_{U} d(\omega \otimes b)_{\mathrm{hor}}= \int_{U} D(\omega \otimes b) \\ & =\int_{U} \Omega \otimes b \simeq \Omega \otimes b \end{aligned}$	$\begin{aligned} \Delta b &= \int_{\partial U} \omega \otimes b = \int_{U} d(\omega \otimes b)_{\mathrm{hor}} = \int_{U} D(\omega \otimes b) \\ &= \int_{U} \Omega \otimes b \simeq \Omega \otimes b \end{aligned}$
mielke-geometrodynamics_EQ1049 (15.2.6)	344	0.785 N|+1	`{ }^{*} \bar{\omega}=\bar{\omega}_{i}^{j} \bar{L}_{j} \otimes d x^{i}=\bar{\omega}_{i} d x^{i}`	${ }^{*} \bar{\omega}=\bar{\omega}_{i}^{j} \bar{L}_{j} \otimes d x^{i}=\bar{\omega}_{i} d x^{i}$	$\overset{*}{\sigma}\overline{\omega}=\overline{\omega}_{i}{}^{j}\ \overline{L}_{j}\ \otimes\ dx^{i}=\overline{\omega}_{i}\,dx^{i}$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ0133 (3.4.4)	063	0.785 N|-2	`L_{\omega}=L\left(\mathscr{F},{ }^{*} \mathscr{F}\right) \eta .`	$L_{\omega}=L\left(\mathscr{F},{}^{*}\mathscr{F}\right)\eta.$	$L_{\omega}=L(\mathscr{F},{}^{*}\mathscr{F})\eta.$
mielke-geometrodynamics_EQ0312 (4.6.4)	104	0.786 W|+0	`\begin{aligned} \Delta \xi^{\alpha} & \left.\left.=-\oint_{C} y\right\rfloor\left(D D \xi^{\alpha}\right)=\oint_{C} y\right\rfloor R^{(T) \alpha}=\int_{S} R^{(T) \alpha} \\ & \simeq \frac{1}{2}\left(T_{i j}^{\alpha}-R_{i j \beta}^{\alpha} \xi^{\beta}\right) \int_{S} d y^{i} \wedge d y^{j} \end{aligned}`	$\begin{aligned} \Delta \xi^{\alpha} & =-\oint_{C} y\rfloor\left(D D \xi^{\alpha}\right)=\oint_{C} y\rfloor R^{(T) \alpha}=\int_{S} R^{(T) \alpha} \\ & \simeq \frac{1}{2}\left(T_{i j}^{\alpha}-R_{i j \beta}^{\alpha} \xi^{\beta}\right) \int_{S} d y^{i} \wedge d y^{j} \end{aligned}$	$\begin{aligned} \Delta \xi^{\alpha} & =-\oint_{C} y\rfloor\left(D D \xi^{\alpha}\right)=\oint_{C} y\rfloor R^{(T) \alpha}=\int_{S} R^{(T) \alpha} \\ & \simeq \frac{1}{2}\left(T_{i j}^{\alpha}-R_{i j \beta}^{\alpha} \xi^{\beta}\right) \int_{S} d y^{i} \wedge d y^{j} . \end{aligned}$
mielke-geometrodynamics_EQ0224 (4.2.17)	087	0.787 N|+0	`\widetilde{\widetilde{\varphi}} \rightarrow A^{-1} \widetilde{\widetilde{\varphi}}=G^{-1}(\widetilde{ \widetilde{\varphi}}-T) .`	$\widetilde{\widetilde{\varphi}} \rightarrow A^{-1} \widetilde{\widetilde{\varphi}}=G^{-1}(\widetilde{ \widetilde{\varphi}}-T) .$	$\widetilde{\widetilde{\varphi}} \rightarrow A^{-1} \widetilde{\widetilde{\varphi}}=G^{-1}(\widetilde{ \widetilde{\varphi}}-T) .$
mielke-geometrodynamics_EQ0941 (14.1.22)	306	0.788 N|+0	`\tan 2 \delta=(-1)^{z} \frac{\operatorname{Tr}^{*}(\Omega \wedge \Omega)}{\operatorname{Tr}^{*}(\Omega \wedge * \Omega)} .`	$\tan 2 \delta=(-1)^{z} \frac{\operatorname{Tr}^{*}(\Omega \wedge \Omega)}{\operatorname{Tr}^{*}(\Omega \wedge * \Omega)} .$	$\tan 2 \delta=(-1)^{z} \frac{\operatorname{Tr}^{*}(\Omega \wedge \Omega)}{\operatorname{Tr}^{*}(\Omega \wedge * \Omega)} .$
mielke-geometrodynamics_EQ0760 (11.1.27)	242	0.791 N|+0	`\left(\gamma^{n+1}\right)^{2}=\mp \mathbb{1} .`	$\left(\gamma^{n+1}\right)^{2}=\mp \mathbb{1} .$	$\left(\gamma^{n+1}\right)^{2}=\mp \mathbb{1} .$
mielke-geometrodynamics_EQ0725 (10.10.5)	230	0.793 N|+0	`\delta_{\text {susy }} L \cong \bar{\sigma}\left(i \gamma^{\alpha} \Psi \wedge \frac{\delta L}{\delta \vartheta^{\alpha}}-2 D \frac{\delta L}{\delta \bar{ \Psi}}+c \gamma \wedge \frac{\delta L}{\delta \bar{\Psi}} \right)+2 d\left(\bar{\sigma} \wedge \frac{\delta L}{ \delta \Psi}\right) .`	$\delta_{\text {susy }} L \cong \bar{\sigma}\left(i \gamma^{\alpha} \Psi \wedge \frac{\delta L}{\delta \vartheta^{\alpha}}-2 D \frac{\delta L}{\delta \bar{ \Psi}}+c \gamma \wedge \frac{\delta L}{\delta \bar{\Psi}} \right)+2 d\left(\bar{\sigma} \wedge \frac{\delta L}{ \delta \Psi}\right) .$	$\delta_{\text {susy }} L \cong \bar{\sigma}\left(i \gamma^{\alpha} \Psi \wedge \frac{\delta L}{\delta \vartheta^{\alpha}}-2 D \frac{\delta L}{\delta \bar{ \Psi}}+c \gamma \wedge \frac{\delta L}{\delta \bar{\Psi}} \right)+2 d\left(\bar{\sigma} \wedge \frac{\delta L}{ \delta \Psi}\right) .$
mielke-geometrodynamics_EQ0810 (11.4.22)	256	0.793 N|+0	`\frac{3}{8} \ell^{2} \bar{\psi} \psi=4 \pi m e^{-\mu-\nu / 2}\left(H^{2}-F^{2}\right)\left|Y_{|\kappa|-1}^{| \kappa|-1}(\vartheta, \phi)\right|^{2}`	$\frac{3}{8} \ell^{2} \bar{\psi} \psi=4 \pi m e^{-\mu-\nu / 2}\left(H^{2}-F^{2}\right)\left\|Y_{\|\kappa\|-1}^{\| \kappa\|-1}(\vartheta, \phi)\right\|^{2}$	$\frac{3}{8} \ell^{2} \bar{\psi} \psi=4 \pi m e^{-\mu-\nu / 2}\left(H^{2}-F^{2}\right)\left\|Y_{\|\kappa\|-1}^{\| \kappa\|-1}(\vartheta, \phi)\right\|^{2}$
mielke-geometrodynamics_EQ1032 (15.1.9)	338	0.793 N|+0	`\frac{1}{2} *\left(\vartheta^{g} \wedge^{*} \Omega^{g} \right)+\Lambda \vartheta^{g}=0,`	$\frac{1}{2} *\left(\vartheta^{g} \wedge^{*} \Omega^{g} \right)+\Lambda \vartheta^{g}=0,$	$\frac{1}{2} *\left(\vartheta^{g} \wedge^{*} \Omega^{g} \right)+\Lambda \vartheta^{g}=0,$
mielke-geometrodynamics_EQ0305 (4.5.15)	103	0.793 U|+12	`\varepsilon_{\mathrm{RC}}:=\xi^{\alpha} \Sigma_{\alpha}+ \left(e_{\beta} \downharpoonleft \overparen{D} \xi^{ \gamma}\right) \tau^{\beta}{ }_{\gamma},`	*(not rendered)*	$\varepsilon_{\mathrm{RC}}:=\xi^{\alpha} \Sigma_{\alpha}+ \left(e_{\beta} \downharpoonleft \overparen{D} \xi^{ \gamma}\right) \tau^{\beta}{ }_{\gamma},$
mielke-geometrodynamics_EQ0848 (12.3.1)	274	0.794 C|+5	`\left\langle d j_{5}\right\rangle=2 i m\left\langle \bar{\psi} \gamma_{5} \psi\right\rangle \eta-\frac{1}{4 \pi^{2}} \operatorname{Tr}(G \wedge G)-\frac{1}{96 \pi^{2}}\left[2 R_{\alpha \beta}^{\{ \}} \wedge R^{\{ \beta \alpha \beta}+d \mathscr{A} \wedge d \mathscr{A} \right]`	$\left\langle d j_{5}\right\rangle=2 i m\left\langle \bar{\psi} \gamma_{5} \psi\right\rangle \eta-\frac{1}{4 \pi^{2}} \operatorname{Tr}(G \wedge G)-\frac{1}{96 \pi^{2}}\left[2 R_{\alpha \beta}^{\{ \}} \wedge R^{\{ \beta \alpha \beta}+d \mathscr{A} \wedge d \mathscr{A} \right]$	$\left\langle d j_{5}\right\rangle=2 i m\left\langle \bar{\psi} \gamma_{5} \psi\right\rangle \eta-\frac{1}{4 \pi^{2}} \operatorname{Tr}(G \wedge G)-\frac{1}{96 \pi^{2}}\left[2 R_{\alpha \beta}^{\{ \}} \wedge R^{\{ \beta \alpha \beta}+d \mathscr{A} \wedge d \mathscr{A} \right]$
mielke-geometrodynamics_EQ0319 (5.2.3)	110	0.795 N|+1	`\begin{aligned} L_{\mathrm{D}} & =L\left(\gamma, \psi, D^{\{ \}} \psi\right)-\frac{i}{2} \bar{\psi}\left({ }^{*} \gamma \wedge K-K \wedge^{*} \gamma\right) \psi \\ & =L \left(\gamma, \psi, D^{\{ } \psi\right)+\frac{1}{4} \mathscr{A} \wedge j_{5} . \end{aligned}`	$\begin{aligned} L_{\mathrm{D}} & =L\left(\gamma, \psi, D^{\{ \}} \psi\right)-\frac{i}{2} \bar{\psi}\left({ }^{*} \gamma \wedge K-K \wedge^{*} \gamma\right) \psi \\ & =L \left(\gamma, \psi, D^{\{ } \psi\right)+\frac{1}{4} \mathscr{A} \wedge j_{5} . \end{aligned}$	$\begin{aligned} L_{\mathrm{D}} & =L\left(\gamma, \psi, D^{\{ \}} \psi\right)-\frac{i}{2} \bar{\psi}\left({ }^{*} \gamma \wedge K-K \wedge^{*} \gamma\right) \psi \\ & =L \left(\gamma, \psi, D^{\{ } \psi\right)+\frac{1}{4} \mathscr{A} \wedge j_{5} . \end{aligned}$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

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mielke-geometrodynamics_EQ0552 (8.4.6)	179	■ 0.797 ● N|+0	`\stackrel{+}{\Omega}^{g}:=\frac{1}{2}\left(\Omega^{g} \pm{ }^{*} \Omega^{g(\star)}\right)=0`	$\overset{+}{\Omega}{}^{g} := \frac{1}{2}\left(\Omega^{g} \pm {}^{*}\Omega^{g(\star)}\right) = 0$	$\overset{\pm}{\Omega}{}^{g} := \frac{1}{2}\left(\Omega^{g} \pm {}^{*}\Omega^{g(\star)}\right) = 0$
mielke-geometrodynamics_EQ1001 (14.3.14)	323	■ 0.798 ● N|-1	`(i \not D)^{2}:=-\operatorname{Tr}\left\{\gamma \wedge{ }^{*} D^{*}\left(\gamma \wedge{ }^{*} D\right)\right\} .`	$(i \not{D})^{2} := -\operatorname{Tr}\left\{\gamma \wedge {}^{*}D^{*}\left(\gamma \wedge {}^{*}D\right)\right\} .$	$(i \not{D})^{2} := -\operatorname{Tr}\left\{\gamma \wedge {}^{*}D^{*}\left(\gamma \wedge {}^{*}D\right)\right\} .$
mielke-geometrodynamics_EQ0065 (2.8.8)	047	■ 0.803 ● N|+0	`c_{2}(M)=-\int_{M}^{*} \pi\left(\gamma_{2}\right)= \frac{1}{8 \pi^{2}} \int_{M} \operatorname{Tr}(\Omega \wedge \Omega) .`	$c_{2}(M)=-\int_{M}^{*} \pi\left(\gamma_{2}\right)=\frac{1}{8 \pi^{2}} \int_{M} \operatorname{Tr}(\Omega \wedge \Omega).$	$c_{2}(M)=-\int_{M}^{*} \pi\left(\gamma_{2}\right)=\frac{1}{8 \pi^{2}} \int_{M} \operatorname{Tr}(\Omega \wedge \Omega).$
mielke-geometrodynamics_EQ0652 (10.3.9)	216	■ 0.803 ● K|+0	`H_{\alpha}=-\frac{\gamma \varepsilon}{\ell^{2}(1+\delta \varepsilon)} \vartheta_{\alpha} \quad \Leftrightarrow \quad T_{\alpha}=\frac{\varepsilon}{\ell} \eta_{\alpha},`	$H_{\alpha}=-\frac{\gamma \varepsilon}{\ell^{2}(1+\delta \varepsilon)} \vartheta_{\alpha} \quad \Leftrightarrow \quad T_{\alpha}=\frac{\varepsilon}{\ell} \eta_{\alpha},$	$H_{\alpha}=-\frac{\gamma \varepsilon}{\ell^{2}(1+\delta \varepsilon)} \vartheta_{\alpha} \quad \Leftrightarrow \quad T_{\alpha}=\frac{\varepsilon}{\ell} \eta_{\alpha},$
mielke-geometrodynamics_EQ1065 (16.2.4)	355	■ 0.803 ● N|+0	`\rho:=\sqrt{\frac{1}{3} \Lambda_{\text {eff }}} r, \quad r=|\mathbf{x}|`	$\rho:=\sqrt{\frac{1}{3} \Lambda_{\text {eff }}} r, \quad r=\|\mathbf{x}\|$	$\rho:=\sqrt{\frac{1}{3} \Lambda_{\text {eff }}} r, \quad r=\|\mathbf{x}\|$
mielke-geometrodynamics_EQ0166 (3.6.1)	069	■ 0.806 ● W|+0	`\begin{aligned} L_{\mathrm{SW}}= & \frac{1}{2} \overline{D_{ \pm} \psi} \wedge^{*} D_{ \pm} \psi \mp i\left(F^{ \pm}-\frac{1}{2} \bar{\psi} \sigma_{ \pm} \psi \right)^{2} \\ = & \mp i \operatorname{Tr}\left(F^{ \pm} \wedge F^{ \pm}\right)+\frac{1}{2} \overline{D_{ \pm} \psi} \wedge{ }^{*} D_{ \pm} \psi \\ & \pm i \bar{\psi} \sigma_{ \pm} \psi \wedge F^{ \pm} \mp \frac{i}{4} \bar{ \psi} \sigma_{ \pm} \psi \wedge \bar{\psi} \sigma_{ \pm} \psi ; \end{aligned}`	$\begin{aligned} L_{\mathrm{SW}}= & \frac{1}{2} \overline{D_{ \pm} \psi} \wedge^{*} D_{ \pm} \psi \mp i\left(F^{ \pm}-\frac{1}{2} \bar{\psi} \sigma_{ \pm} \psi \right)^{2} \\ = & \mp i \operatorname{Tr}\left(F^{ \pm} \wedge F^{ \pm}\right)+\frac{1}{2} \overline{D_{ \pm} \psi} \wedge{ }^{*} D_{ \pm} \psi \\ & \pm i \bar{\psi} \sigma_{ \pm} \psi \wedge F^{ \pm} \mp \frac{i}{4} \bar{ \psi} \sigma_{ \pm} \psi \wedge \bar{\psi} \sigma_{ \pm} \psi ; \end{aligned}$
mielke-geometrodynamics_EQ1070 (16.2.9)	356	■ 0.806 ● N|-1	`V_{\mathrm{eff}}^{o}\left(\rho^{*}\right)=\left(\frac{1}{{ \beta^{2}}-2\right)\left[1+\tan ^{2} \rho^{*}\right]`	$V_{\mathrm{eff}}^{o}\left(\rho^{*}\right)=\left(\frac{1}{{ \beta^{2}}-2\right)\left[1+\tan ^{2} \rho^{*}\right]$	$V_{\mathrm{eff}}^{o}\left(\rho^{*}\right)=\left(\frac{1}{{ \beta^{2}}-2\right)\left[1+\tan ^{2} \rho^{*}\right]$
mielke-geometrodynamics_EQ0446 (6.9.2)	144	■ 0.806 ● W|+0	`\begin{aligned} \stackrel{\theta}{L} & =\frac{1}{2 \ell}\left[T^{\alpha} \wedge{ }^{*} T_{\alpha}+\theta_{ \mathrm{T}}\left(T^{\alpha} \wedge T_{\alpha}+R_{\alpha \beta} \wedge \vartheta^{\alpha} \wedge \vartheta^{ \beta}\right)\right] \\ & +\frac{1}{2}\left[R^{\alpha \beta} \wedge{ }^{*} R_{\alpha \beta}+\theta_{\mathrm{L}} R^{\alpha \beta} \wedge R_{\alpha \beta}\right] . \end{aligned}`	$\begin{aligned} \overset{\theta}{L} & =\frac{1}{2 \ell}\left[T^{\alpha} \wedge {}^{*} T_{\alpha}+\theta_{\mathrm{T}}\left(T^{\alpha} \wedge T_{\alpha}+R_{\alpha \beta} \wedge \vartheta^{\alpha} \wedge \vartheta^{ \beta}\right)\right] \\ & +\frac{1}{2}\left[R^{\alpha \beta} \wedge {}^{*} R_{\alpha \beta}+\theta_{\mathrm{L}} R^{\alpha \beta} \wedge R_{\alpha \beta}\right] . \end{aligned}$	$\begin{aligned} \overset{\theta}{L} & =\frac{1}{2 \ell}\left[T^{\alpha} \wedge {}^{*} T_{\alpha}+\theta_{\mathrm{T}}\left(T^{\alpha} \wedge T_{\alpha}+R_{\alpha \beta} \wedge \vartheta^{\alpha} \wedge \vartheta^{ \beta}\right)\right] \\ & +\frac{1}{2}\left[R^{\alpha \beta} \wedge {}^{*} R_{\alpha \beta}+\theta_{\mathrm{L}} R^{\alpha \beta} \wedge R_{\alpha \beta}\right] . \end{aligned}$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): ● C component ● W weak ● S stable ● N noise ● K clean ● not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ0610 (9.3.1)	202	0.806 N|+0	\begin{aligned} d C_{\mathrm{RR}^{(\star)}} & := \frac{1}{2} d\left(\Gamma_{\alpha \beta} \wedge R^{ \alpha \beta(\star)}-\frac{1}{3} \Gamma_{\alpha}{ }^{ \beta(\star)} \wedge \Gamma_{\beta}{ }^{\gamma} \wedge \Gamma_{\gamma}{ }^{\alpha}\right) \\ & \equiv-L_{ \mathrm{SKY}}-2 \operatorname{Ric}_{\alpha \beta} \wedge{ }^{*} \operatorname{Ric}^{\alpha \beta}+\frac{1}{2} \operatorname{Ric}_{\alpha}{ }^{\alpha} \wedge{ }^{*} \operatorname{Ric}_{\beta}{ }^{\beta} \end{aligned}	$$\begin{aligned} dC_{\mathrm{RR}^{(\star)}} &:= \frac{1}{2} d\left(\Gamma_{\alpha\beta} \wedge R^{\alpha\beta(\star)} - \frac{1}{3}\Gamma_{\alpha}{}^{\beta(\star)} \wedge \Gamma_{\beta}{}^{\gamma} \wedge \Gamma_{\gamma}{}^{\alpha}\right) \\ &\equiv -L_{\mathrm{SKY}} - 2\operatorname{Ric}_{\alpha\beta} \wedge {}^{*}\operatorname{Ric}^{\alpha\beta} + \frac{1}{2}\operatorname{Ric}_{\alpha}{}^{\alpha} \wedge {}^{*}\operatorname{Ric}_{\beta}{}^{\beta} \end{aligned}$$	$$\begin{aligned} dC_{\mathrm{RR}^{(\star)}} &:= \frac{1}{2} d\left(\Gamma_{\alpha\beta} \wedge R^{\alpha\beta(\star)} - \frac{1}{3}\Gamma_{\alpha}{}^{\beta(\star)} \wedge \Gamma_{\beta}{}^{\gamma} \wedge \Gamma_{\gamma}{}^{\alpha}\right) \\ &\equiv -L_{\mathrm{SKY}} - 2\operatorname{Ric}_{\alpha\beta} \wedge {}^{*}\operatorname{Ric}^{\alpha\beta} + \frac{1}{2}\operatorname{Ric}_{\alpha}{}^{\alpha} \wedge {}^{*}\operatorname{Ric}_{\beta}{}^{\beta} \end{aligned}$$
mielke-geometrodynamics_EQ0767 (11.1.34)	244	0.807 N|+0	\psi \longrightarrow S^{-1} \psi=S^{-1} \psi	$\psi \longrightarrow S^{-1}\psi = S^{-1}\psi$	$\psi \longrightarrow {}^{S^{-1}}\psi = S^{-1}\psi$
mielke-geometrodynamics_EQ0267 (4.3.32)	095	0.808 W|+2	\begin{aligned} & R_{(i j) \kappa l}^{\{ \}}=R_{i j(\kappa l)}^{\{ \}}=0 \\ & R_{i j \kappa l}^{\}}=R_{\kappa l i j}^{\}} . \end{aligned}	$$\begin{aligned} & R_{(ij)\kappa l}^{\{\}}=R_{ij(\kappa l)}^{\{\}}=0 \\ & R_{ij\kappa l}^{\}}=R_{\kappa lij}^{\}} . \end{aligned}$$	$$\begin{aligned} & R_{(ij)\kappa l}^{\{\}}=R_{ij(\kappa l)}^{\{\}}=0 \\ & R_{ij\kappa l}^{\}}=R_{\kappa lij}^{\}} . \end{aligned}$$
mielke-geometrodynamics_EQ0298 (4.5.8)	101	0.811 N|+1	\begin{aligned} \delta L & =\delta g_{\alpha \beta} \wedge \frac{\partial L}{\partial g_{\alpha \beta}}+ \delta \vartheta^{\alpha} \wedge \frac{\partial L}{ \partial \vartheta^{\alpha}} \\ & +\delta \Gamma_{ \alpha}{ }^{\beta} \wedge I^{\alpha}{ }_{\beta} \Psi \wedge \frac{\partial L}{\partial D \Psi}+\delta \Psi \wedge \frac{\delta L}{\delta \Psi}+D\left(\delta \Psi \wedge \frac{\partial L}{\partial D \Psi}\right) \end{aligned}	$$\begin{aligned} \delta L &= \delta g_{\alpha\beta} \wedge \frac{\partial L}{\partial g_{\alpha\beta}} + \delta\vartheta^{\alpha} \wedge \frac{\partial L}{\partial \vartheta^{\alpha}} \\ &+ \delta\Gamma_{\alpha}{}^{\beta} \wedge I^{\alpha}{}_{\beta}\Psi \wedge \frac{\partial L}{\partial D\Psi} + \delta\Psi \wedge \frac{\delta L}{\delta\Psi} + D\left(\delta\Psi \wedge \frac{\partial L}{\partial D\Psi}\right) \end{aligned}$$	$$\begin{aligned} \delta L &= \delta g_{\alpha\beta} \wedge \frac{\partial L}{\partial g_{\alpha\beta}} + \delta\vartheta^{\alpha} \wedge \frac{\partial L}{\partial \vartheta^{\alpha}} \\ &+ \delta\Gamma_{\alpha}{}^{\beta} \wedge I^{\alpha}{}_{\beta}\Psi \wedge \frac{\partial L}{\partial D\Psi} + \delta\Psi \wedge \frac{\delta L}{\delta\Psi} + D\left(\delta\Psi \wedge \frac{\partial L}{\partial D\Psi}\right). \end{aligned}$$
mielke-geometrodynamics_EQ0919 (13.8.5)	295	0.811 N|+0	D T^{\alpha} \equiv R_{\beta}{ }^{\alpha} \wedge \vartheta^{\beta}	$DT^{\alpha} \equiv R_{\beta}{}^{\alpha} \wedge \vartheta^{\beta}$	$DT^{\alpha} \equiv R_{\beta}{}^{\alpha} \wedge \vartheta^{\beta}$
mielke-geometrodynamics_EQ0802 (11.4.14)	254	0.812 W|+0	\begin{aligned} & \left\{i \gamma^{0} \partial_{0}-e^{(\nu-\mu) / 2}\left[i \vec{\gamma} \cdot \vec{\partial}+i \gamma^{1} \partial_{r}\left(\frac{\mu}{2}+\frac{\nu}{4} \right)\right]\right. \\ & \left.+\frac{3 \varepsilon}{8} \ell^{2} e^{\nu / 2}\left(\bar{\psi} \psi-\mathrm{a} \bar{\psi} \gamma^{5} \psi \gamma^{5}\right)-e^{\nu / 2} m\right\} \psi=0 \end{aligned}	$$\begin{aligned} & \left\{i\gamma^{0}\partial_{0} - e^{(\nu-\mu)/2}\left[i\vec{\gamma}\cdot\vec{\partial} + i\gamma^{1}\partial_{r}\left(\frac{\mu}{2}+\frac{\nu}{4}\right)\right]\right. \\ & \left. + \frac{3\varepsilon}{8}\ell^{2}e^{\nu/2}\left(\bar{\psi}\psi - \mathrm{a}\bar{\psi}\gamma^{5}\psi\gamma^{5}\right) - e^{\nu/2}m\right\}\psi = 0 \end{aligned}$$	$$\begin{aligned} & \left\{i\gamma^{0}\partial_{0} - e^{(\nu-\mu)/2}\left[i\vec{\gamma}\cdot\vec{\partial} + i\gamma^{1}\partial_{r}\left(\frac{\mu}{2}+\frac{\nu}{4}\right)\right]\right. \\ & \left. + \frac{3\varepsilon}{8}\ell^{2}e^{\nu/2}(\overline{\psi}\psi - \mathrm{a}\overline{\psi}\gamma^{5}\psi\gamma^{5}) - e^{\nu/2}m\right\}\psi = 0 \end{aligned}$$
mielke-geometrodynamics_EQ0807 (11.4.19)	255	0.812 N|+0	\vec{\sigma} \cdot \vec{L} \chi_{\kappa}^{m}=-(\kappa+1) \chi_{\kappa}^{m} .	$\vec{\sigma} \cdot \vec{L} \chi_{\kappa}^{m} = -(\kappa+1)\chi_{\kappa}^{m}.$	$\vec{\sigma} \cdot \vec{L} \chi_{\kappa}^{m} = -(\kappa+1)\chi_{\kappa}^{m}.$
mielke-geometrodynamics_EQ0397 (6.4.12)	132	0.813 N|+0	\mathscr{H} \cong n^{\alpha} \mathscr{G}_{\alpha}+ \Gamma_{\perp}{ }^{\alpha \beta} \mathscr{G}_{\alpha \beta},	$\mathscr{H} \cong n^{\alpha}\mathscr{G}_{\alpha} + \Gamma_{\perp}{}^{\alpha\beta}\mathscr{G}_{\alpha\beta},$	$\mathscr{H} \cong n^{\alpha}\mathscr{G}_{\alpha} + \Gamma_{\perp}{}^{\alpha\beta}\mathscr{G}_{\alpha\beta},$
mielke-geometrodynamics_EQ0709 (10.7.5)	227	0.813 N|+0	R_{\beta}{ }^{\alpha} \wedge \vartheta^{\beta}=\frac{ \ell^{2}}{2} \varepsilon\left(x^{\alpha} Y \wedge X \wedge Y-y^{\alpha} X \wedge X \wedge Y\right)=0 .	$R_{\beta}{}^{\alpha} \wedge \vartheta^{\beta} = \frac{\ell^2}{2}\varepsilon\left(x^{\alpha}Y \wedge X \wedge Y - y^{\alpha}X \wedge X \wedge Y\right) = 0.$	$R_{\beta}{}^{\alpha} \wedge \vartheta^{\beta} = \frac{\ell^2}{2}\varepsilon(x^{\alpha}Y \wedge X \wedge Y - y^{\alpha}X \wedge X \wedge Y) = 0.$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ0210 (4.2.2)	085	0.814 N|+1	`\stackrel{* \approx}{\chi}=\left[\begin{array}{c|c} \omega^{\mathrm{L}} & \omega^{\mathrm{T}} \\ \hline 0 & 0 \end{array}\right] .`	$\overset{*\approx}{\chi}=\left[\begin{array}{c\|c} \omega^{\mathrm{L}} & \omega^{\mathrm{T}} \\ \hline 0 & 0 \end{array}\right] .$	$\overset{*\approx}{\chi}\omega=\left[\begin{array}{c\|c} \omega^{\mathrm{L}} & \omega^{\mathrm{T}} \\ \hline 0 & 0 \end{array}\right] .$
mielke-geometrodynamics_EQ0769 (11.1.36)	244	0.817 N|+0	`\widetilde{\omega} \longrightarrow{ }^{S} \tilde{ \omega}=S \tilde{\omega} S^{-1}+(d S) S^{-1}`	$\widetilde{\omega} \longrightarrow{ }^{S} \tilde{\omega}=S \tilde{\omega} S^{-1}+(d S) S^{-1}$	$\widetilde{\omega} \longrightarrow{ }^{S} \tilde{\omega}=S \widetilde{\omega} S^{-1}+(d S) S^{-1}$
mielke-geometrodynamics_EQ0398 (6.4.14)	133	0.820 W|+0	`\begin{aligned} \left\{\mathscr{G}_{\alpha}(t, \mathbf{x}), \mathscr{G}_{\beta}(t, \mathbf{y})\right\} & =\left(-T_{\alpha \beta}{ }^{\gamma} \mathscr{G}_{ \gamma}+R_{\alpha \beta \gamma}{ }^{\delta} \mathscr{G}^{ \gamma}{ }_{\delta}\right) \cdot \delta(\mathbf{x}- \mathbf{y}), \\ \left\{\mathscr{G}^{\alpha}{ }_{\beta}(t, \mathbf{x}), \mathscr{G}_{\gamma}(t, \mathbf{y})\right\} & =\delta_{\beta}^{\gamma} \mathscr{G}_{\beta} \delta(\mathbf{x}- \mathbf{y}), \\ \left\{\mathscr{G}^{\alpha}{ }_{\beta}(t, \mathbf{x}), \mathscr{G}^{\gamma}{ }_{\delta}(t, \mathbf{y})\right\} & =\left(\delta_{\delta}^{\alpha} \mathscr{G}^{\gamma}{ }_{\beta}-\delta_{\beta}^{\gamma} \mathscr{G}^{\alpha}{ }_{\delta}\right) \cdot \delta(\mathbf{x}- \mathbf{y}) . \end{aligned}`	$\begin{aligned} \left\{\mathscr{G}_{\alpha}(t, \mathbf{x}), \mathscr{G}_{\beta}(t, \mathbf{y})\right\} & =\left(-T_{\alpha \beta}{ }^{\gamma} \mathscr{G}_{ \gamma}+R_{\alpha \beta \gamma}{ }^{\delta} \mathscr{G}^{ \gamma}{ }_{\delta}\right) \cdot \delta(\mathbf{x}- \mathbf{y}), \\ \left\{\mathscr{G}^{\alpha}{ }_{\beta}(t, \mathbf{x}), \mathscr{G}_{\gamma}(t, \mathbf{y})\right\} & =\delta_{\beta}^{\gamma} \mathscr{G}_{\beta} \delta(\mathbf{x}- \mathbf{y}), \\ \left\{\mathscr{G}^{\alpha}{ }_{\beta}(t, \mathbf{x}), \mathscr{G}^{\gamma}{ }_{\delta}(t, \mathbf{y})\right\} & =\left(\delta_{\delta}^{\alpha} \mathscr{G}^{\gamma}{ }_{\beta}-\delta_{\beta}^{\gamma} \mathscr{G}^{\alpha}{ }_{\delta}\right) \cdot \delta(\mathbf{x}- \mathbf{y}) . \end{aligned}$	$\begin{aligned} \left\{\mathscr{G}_{\alpha}(t, \mathbf{x}), \mathscr{G}_{\beta}(t, \mathbf{y})\right\} & =\left(-T_{\alpha \beta}{ }^{\gamma} \mathscr{G}_{ \gamma}+R_{\alpha \beta \gamma}{ }^{\delta} \mathscr{G}^{ \gamma}{ }_{\delta}\right) \cdot \delta(\mathbf{x}- \mathbf{y}), \\ \left\{\mathscr{G}^{\alpha}{ }_{\beta}(t, \mathbf{x}), \mathscr{G}_{\gamma}(t, \mathbf{y})\right\} & =\delta_{\beta}^{\gamma} \mathscr{G}_{\beta} \delta(\mathbf{x}- \mathbf{y}), \\ \left\{\mathscr{G}^{\alpha}{ }_{\beta}(t, \mathbf{x}), \mathscr{G}^{\gamma}{ }_{\delta}(t, \mathbf{y})\right\} & =(\delta_{\delta}^{\alpha} \mathscr{G}^{\gamma}{ }_{\beta}-\delta_{\beta}^{\gamma} \mathscr{G}^{\alpha}{ }_{\delta}) \cdot \delta(\mathbf{x}- \mathbf{y}) . \end{aligned}$
mielke-geometrodynamics_EQ0059 (2.7.9)	045	0.820 K|+0	`\bar{\varphi} \rightarrow{ }^{G^{-1}} \bar{\varphi}:= \bar{\varphi} G \quad \in C^{\infty}\left(V^{\bar{s}} \right) .`	$\bar{\varphi} \rightarrow{ }^{G^{-1}} \bar{\varphi}:= \bar{\varphi} G \quad \in C^{\infty}\left(V^{\bar{s}} \right) .$	$\bar{\varphi} \rightarrow{ }^{G^{-1}} \bar{\varphi}:= \bar{\varphi} G \quad \in C^{\infty}(V^{\bar{s}}) .$
mielke-geometrodynamics_EQ0993 (14.3.6)	320	0.822 W|+0	`\begin{aligned} \int_{G} \pi \hat{L}_{\mathrm{D} .} & =\frac{i}{2}\left(\bar{\psi} \gamma \wedge{*} D^{g+ \omega} \psi+\left(\overline{D^{g+\omega} \psi}\right) \wedge^{*} \gamma \psi\right) \\ & +\frac{\hat{\ell}}{2} \bar{\psi} \gamma \wedge \gamma \wedge{ }^{*} \Omega \psi-\widehat{m} \bar{\psi} \psi \eta, \end{aligned}`	$\begin{aligned} \int_{G} \pi \hat{L}_{\mathrm{D} .} & =\frac{i}{2}\left(\bar{\psi} \gamma \wedge{*} D^{g+ \omega} \psi+\left(\overline{D^{g+\omega} \psi}\right) \wedge^{*} \gamma \psi\right) \\ & +\frac{\hat{\ell}}{2} \bar{\psi} \gamma \wedge \gamma \wedge{ }^{*} \Omega \psi-\widehat{m} \bar{\psi} \psi \eta, \end{aligned}$	$\begin{aligned} \int_{G} \pi \hat{L}_{\mathrm{D} .} & =\frac{i}{2}\left(\bar{\psi} \gamma \wedge{*} D^{g+ \omega} \psi+\left(\overline{D^{g+\omega} \psi}\right) \wedge^{*} \gamma \psi\right) \\ & +\frac{\hat{\ell}}{2} \bar{\psi} \gamma \wedge \gamma \wedge{ }^{*} \Omega \psi-\widehat{m} \bar{\psi} \psi \eta, \end{aligned}$
mielke-geometrodynamics_EQ0844 (12.2.12)	273	0.831 N|+0	`\mathrm{L}=\frac{\mathrm{i}}{2 \ell^{2}} \operatorname{Tr}\left(\Omega \wedge^{*} \sigma\right)+ \mathrm{L}_{\mathrm{D}}=\frac{1}{2 \ell^{2}} \mathrm{R}^{ \alpha \beta} \wedge \eta_{\alpha \beta}+\mathrm{L}_{ \mathrm{D}},`	$\mathrm{L}=\frac{\mathrm{i}}{2 \ell^{2}} \operatorname{Tr}\left(\Omega \wedge^{*} \sigma\right)+ \mathrm{L}_{\mathrm{D}}=\frac{1}{2 \ell^{2}} \mathrm{R}^{ \alpha \beta} \wedge \eta_{\alpha \beta}+\mathrm{L}_{ \mathrm{D}},$	$\mathrm{L}=\frac{\mathrm{i}}{2 \ell^{2}} \operatorname{Tr}\left(\Omega \wedge{ }^{*} \sigma\right)+ \mathrm{L}_{\mathrm{D}}=\frac{1}{2 \ell^{2}} \mathrm{R}^{ \alpha \beta} \wedge \eta_{\alpha \beta}+\mathrm{L}_{ \mathrm{D}},$
mielke-geometrodynamics_EQ0218 (4.2.10)	086	0.836 N|+0	`\begin{aligned} & \omega^{\mathrm{L}} \rightarrow{ }^{A^{-1}} \omega^{\mathrm{L}}=G^{-1} \omega^{ \mathrm{L}} G-G^{-1} d G, \\ & \omega^{\mathrm{T}} \rightarrow{ }^{A^{-1}} \omega^{\mathrm{T}}=G^{-1} \omega^{\mathrm{T}}-G^{-1} D T . \end{aligned}`	$\begin{aligned} & \omega^{\mathrm{L}} \rightarrow{ }^{A^{-1}} \omega^{\mathrm{L}}=G^{-1} \omega^{\mathrm{L}} G-G^{-1} d G, \\ & \omega^{\mathrm{T}} \rightarrow{ }^{A^{-1}} \omega^{\mathrm{T}}=G^{-1} \omega^{\mathrm{T}}-G^{-1} D T . \end{aligned}$	$\begin{aligned} & \omega^{\mathrm{L}} \rightarrow{ }^{A^{-1}} \omega^{\mathrm{L}}=G^{-1} \omega^{\mathrm{L}} G-G^{-1} d G, \\ & \omega^{\mathrm{T}} \rightarrow{ }^{A^{-1}} \omega^{\mathrm{T}}=G^{-1} \omega^{\mathrm{T}}-G^{-1} D T . \end{aligned}$
mielke-geometrodynamics_EQ0240 (4.3.5)	090	0.836 S|-1	`\begin{aligned} & F(m, f \vartheta)=|f| F(m, \vartheta), \\ & F(m, \vartheta)>0 \quad \text { if } \quad \vartheta \neq 0 . \end{aligned}`	$\begin{aligned} & F(m, f \vartheta)=\|f\| F(m, \vartheta), \\ & F(m, \vartheta)>0 \quad \text { if } \quad \vartheta \neq 0 . \end{aligned}$	$\begin{aligned} & F(m, f \vartheta)=\|f\| F(m, \vartheta), \\ & F(m, \vartheta)>0 \quad \text { if } \quad \vartheta \neq 0 . \end{aligned}$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

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mielke-geometrodynamics_EQ0445 (6.9.1)	144	0.837 N|+0	d s^{2}=-\left(1-\frac{2 M}{r}+\frac{Q^{2}}{r^{2}} \right) d t^{2}+\left(1-\frac{2 M}{r}+\frac{Q^{2}}{r^{2}} \right)^{-1} d r^{2}+r^{2} d \Omega^{2},	$ds^2 = -\left(1-\frac{2M}{r}+\frac{Q^2}{r^2}\right)dt^2+\left(1-\frac{2M}{r}+\frac{Q^2}{r^2}\right)^{-1}dr^2+r^2d\Omega^2,$	$ds^2 = -\left(1-\frac{2M}{r}+\frac{Q^2}{r^2}\right)dt^2+\left(1-\frac{2M}{r}+\frac{Q^2}{r^2}\right)^{-1}dr^2+r^2d\Omega^2,$
mielke-geometrodynamics_EQ0227 (4.2.20)	088	0.839 N|+1	\widetilde{\widetilde{\vartheta}} \rightarrow^{A^{-1}} \widetilde{\widetilde{\vartheta}}=G^{-1} \widetilde{ \vartheta} .	$\widetilde{\widetilde{\vartheta}} \rightarrow^{A^{-1}} \widetilde{\widetilde{\vartheta}}=G^{-1}\widetilde{\vartheta}.$	$\widetilde{\widetilde{\vartheta}} \rightarrow^{A^{-1}} \widetilde{\widetilde{\vartheta}}=G^{-1}\widetilde{\vartheta}.$
mielke-geometrodynamics_EQ0773 (11.2.2)	245	0.840 N|+0	i \gamma \wedge^{*} D \psi-\frac{i}{2}\left(D \wedge{ }^{*} \gamma\right) \psi-m \psi \eta=0	$i\gamma\wedge^{*}D\psi-\frac{i}{2}\left(D\wedge{}^{*}\gamma\right)\psi-m\psi\eta=0$	$i\gamma\wedge^{*}D\psi-\frac{i}{2}(D\wedge{}^{*}\gamma)\psi-m\psi\eta=0$
mielke-geometrodynamics_EQ0811 (11.4.23)	256	0.840 N|+0	\frac{3}{8} \ell^{2} \bar{\psi} \gamma^{5} \psi=4 \pi m e^{-\mu-v / 2} \frac{2}{3} H F\left|Y_{|\kappa|-1}^{| \kappa|-1}(\vartheta, \phi)\right|^{2}	$\frac{3}{8}\ell^2\bar{\psi}\gamma^5\psi=4\pi m e^{-\mu-v/2}\frac{2}{3}HF\left\|Y_{\|\kappa\|-1}^{\|\kappa\|-1}(\vartheta,\phi)\right\|^2$	$\frac{3}{8}\ell^2\overline{\psi}\gamma^5\psi=4\pi m e^{-\mu-v/2}\frac{2}{3}HF\left\|Y_{\|\kappa\|-1}^{\|\kappa\|-1}(\vartheta,\phi)\right\|^2$
mielke-geometrodynamics_EQ0584 (9.1.2)	192	0.843 N|+0	\begin{aligned} e^{\nu}=e^{-\lambda} & =1-\left(\frac{2 \mu}{r}\right)^{n-3}-\frac{2 \Lambda_{\text {eff. }}}{(n-1)(n-2)} r^{2} \\ \mu & =\frac{M}{m^{* 2}} ; \quad d \Omega^{2}:=d \vartheta^{2}+\sin ^{2} \vartheta d \phi^{2} \end{aligned}	$e^{\nu}=e^{-\lambda}=1-\left(\frac{2\mu}{r}\right)^{n-3}-\frac{2\Lambda_{\text{eff.}}}{(n-1)(n-2)}r^2$ $\mu=\frac{M}{m^{*2}};\quad d\Omega^2:=d\vartheta^2+\sin^2\vartheta d\phi^2$	$e^{\nu}=e^{-\lambda}=1-\left(\frac{2\mu}{r}\right)^{n-3}-\frac{2\Lambda_{\text{eff.}}}{(n-1)(n-2)}r^2$ $\mu=\frac{M}{m^{*2}};\quad d\Omega^2:=d\vartheta^2+\sin^2\vartheta d\phi^2$
mielke-geometrodynamics_EQ0349 (5.4.7)	117	0.845 N|+0	\left\langle d j_{5}\right\rangle=2 i m\left\langle\bar{ \psi} \gamma_{5} \psi\right\rangle \eta-\frac{1}{96 \pi^{2}}\left[2 R_{\alpha \beta}^{\{ \}} \wedge R^{\{ \beta \alpha \beta}+d \mathscr{A} \wedge d \mathscr{A} \right]	$\langle dj_5\rangle=2im\langle\bar{\psi}\gamma_5\psi\rangle\eta-\frac{1}{96\pi^2}\left[2R_{\alpha\beta}^{\{\}}\wedge R^{\{\beta\alpha\beta}+d\mathscr{A}\wedge d\mathscr{A}\right]$	$\langle dj_5\rangle=2im\langle\overline{\psi}\gamma_5\psi\rangle\eta-\frac{1}{96\pi^2}\left[2R_{\alpha\beta}^{\{\}}\wedge R^{\{\beta\alpha\beta}+d\mathscr{A}\wedge d\mathscr{A}\right]$
mielke-geometrodynamics_EQ0792 (11.4.4)	253	0.845 N|+0	\begin{aligned} d s^{2} & =g_{k l} d x^{k} \otimes_{s} d x^{l} \\ & =e^{v} d t^{2}-e^{\mu}\left(d r^{2}+r^{2} d \vartheta^{2}+r^{2} \sin ^{2} \vartheta d \phi^{2}\right) . \end{aligned}	$ds^2=g_{kl}dx^k\otimes_s dx^l$ $=e^v dt^2-e^{\mu}\left(dr^2+r^2d\vartheta^2+r^2\sin^2\vartheta d\phi^2\right).$	$ds^2=g_{kl}dx^k\otimes_s dx^l$ $=e^v dt^2-e^{\mu}(dr^2+r^2d\vartheta^2+r^2\sin^2\vartheta d\phi^2).$
mielke-geometrodynamics_EQ0742 (11.1.9)	238	0.846 W|+1	\Lambda:\left\{\begin{array}{cl} \widetilde{S O}_{ \circ}(s, n-s) & \longrightarrow S O_{\circ}(s, n-s), \\ \stackrel{\Psi}{\Psi} & \longrightarrow g^{\alpha}{ }_{\beta}=-\frac{i}{N} \operatorname{Tr}\left(\gamma^{ \alpha} \operatorname{Si} \gamma_{\beta} S^{-1}\right), \end{array}\right.	$\Lambda:\left\{\begin{array}{cl}\widetilde{SO}_{\circ}(s,n-s) & \longrightarrow SO_{\circ}(s,n-s),\\ \overset{\Psi}{\Psi} & \longrightarrow g^{\alpha}{}_{\beta}=-\frac{i}{N}\operatorname{Tr}\left(\gamma^{\alpha}\operatorname{Si}\gamma_{\beta}S^{-1}\right),\end{array}\right.$	$\Lambda:\left\{\begin{array}{cl}\widetilde{SO}_{\circ}(s,n-s) & \longrightarrow SO_{\circ}(s,n-s),\\ \overset{\Psi}{S} & \longrightarrow g^{\alpha}{}_{\beta}=-\frac{i}{N}\operatorname{Tr}(\gamma^{\alpha}Si\gamma_{\beta}S^{-1}),\end{array}\right.$
mielke-geometrodynamics_EQ0897 (13.5.2)	288	0.846 W|+1	\begin{aligned} \hat{R} & :=R_{A}{ }^{B} E^{A}{ }_{B}:= \left[d \Gamma_{A}{ }^{B}-\Gamma_{A}{ }^{C} \wedge \Gamma_{C}{ }^{B}\right] E^{A}{ }_{B} \\ & =\left[R_{ \alpha}{ }^{\beta}-\frac{\Lambda}{3} \theta_{\alpha} \wedge \vartheta^{\beta}\right] L^{\alpha}{ }_{\beta}+T^{ \beta} P_{\beta}+D \theta_{\alpha} P_{*}^{\alpha} \end{aligned}	$\hat{R}:=R_A{}^B E^A{}_B:=\left[d\Gamma_A{}^B-\Gamma_A{}^C\wedge\Gamma_C{}^B\right]E^A{}_B$ $=\left[R_\alpha{}^\beta-\frac{\Lambda}{3}\theta_\alpha\wedge\vartheta^\beta\right]L^\alpha{}_\beta+T^\beta P_\beta+D\theta_\alpha P_*^\alpha$	$\hat{R}:=R_A{}^B E^A{}_B:=\left[d\Gamma_A{}^B-\Gamma_A{}^C\wedge\Gamma_C{}^B\right]E^A{}_B$ $=\left[R_\alpha{}^\beta-\frac{\Lambda}{3}\theta_\alpha\wedge\vartheta^\beta\right]L^\alpha{}_\beta+T^\beta P_\beta+D\theta_\alpha P_*^\alpha,$

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Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

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mielke-geometrodynamics_EQ0296 (4.5.7)	101	0.847 N|+0	F_{\alpha}=\left(e_{\alpha} \downharpoonleft D \Psi \right) \frac{\delta L}{\delta \Psi}+(-1)^{p}\left(e_{ \alpha} \downharpoonleft \Psi\right) \wedge D \frac{ \delta L}{\delta \Psi}	$F_\alpha = (e_\alpha \lrcorner D\Psi)\,\frac{\delta L}{\delta \Psi} + (-1)^p\,(e_\alpha \lrcorner \Psi) \wedge D\frac{\delta L}{\delta \Psi}$	$F_\alpha = (e_\alpha \lrcorner D\Psi)\,\frac{\delta L}{\delta \Psi} + (-1)^p (e_\alpha \lrcorner \Psi) \wedge D\frac{\delta L}{\delta \Psi}$
mielke-geometrodynamics_EQ0241 (4.3.6)	091	0.848 N|+0	g_{\alpha \beta}(m, \vartheta):=\frac{1}{2} \frac{ \partial^{2} F^{2}(m, \vartheta)}{\partial \vartheta^{ \alpha} \otimes_{s} \partial \vartheta^{\beta}} .	$g_{\alpha\beta}(m,\vartheta) := \frac{1}{2}\frac{\partial^2 F^2(m,\vartheta)}{\partial\vartheta^\alpha \otimes_s \partial\vartheta^\beta}.$	$g_{\alpha\beta}(m,\vartheta) := \frac{1}{2}\frac{\partial^2 F^2(m,\vartheta)}{\partial\vartheta^\alpha \otimes_s \partial\vartheta^\beta}.$
mielke-geometrodynamics_EQ0478 (7.4.6)	157	0.849 N|-1	\operatorname{Ric}_{\alpha \beta}:=\operatorname{Ric}_{ \alpha \beta}-\frac{1}{4} \operatorname{Rg}_{\alpha \beta}=0 .	$\operatorname{Ric}_{\alpha\beta} := \operatorname{Ric}_{\alpha\beta} - \frac{1}{4}\operatorname{Rg}_{\alpha\beta} = 0.$	$\operatorname{Ric}_{\alpha\beta} := \operatorname{Ric}_{\alpha\beta} - \frac{1}{4}\operatorname{Rg}_{\alpha\beta} = 0.$
mielke-geometrodynamics_EQ0295 (4.5.6)	101	0.850 N|+0	\begin{aligned} D \Sigma_{\alpha} & \left.\left.= \left(e_{\alpha}\right\rfloor T^{\beta}\right) \wedge \Sigma_{\beta}+\left(e_{\alpha}\right\rfloor R^{\beta \gamma}\right) \wedge \tau_{\beta \gamma}+F_{\alpha} \ \ & \left.\left.\simeq\left(e_{\alpha}\right\rfloor T^{ \beta}\right) \wedge \Sigma_{\beta}+\left(e_{\alpha} \right\rfloor R^{\beta \gamma}\right) \wedge \tau_{\beta \gamma} . \end{aligned}	$\begin{aligned} D\Sigma_\alpha &= (e_\alpha \lrcorner T^\beta) \wedge \Sigma_\beta + (e_\alpha \lrcorner R^{\beta\gamma}) \wedge \tau_{\beta\gamma} + F_\alpha \\ &\simeq (e_\alpha \lrcorner T^\beta) \wedge \Sigma_\beta + (e_\alpha \lrcorner R^{\beta\gamma}) \wedge \tau_{\beta\gamma}. \end{aligned}$	$\begin{aligned} D\Sigma_\alpha &= (e_\alpha \lrcorner T^\beta) \wedge \Sigma_\beta + (e_\alpha \lrcorner R^{\beta\gamma}) \wedge \tau_{\beta\gamma} + F_\alpha \\ &\simeq (e_\alpha \lrcorner T^\beta) \wedge \Sigma_\beta + (e_\alpha \lrcorner R^{\beta\gamma}) \wedge \tau_{\beta\gamma}. \end{aligned}$
mielke-geometrodynamics_EQ0842 (12.2.10)	272	0.852 N|+0	\mu:=e_{\alpha} \downharpoonleft \mu^{\alpha}= \frac{3}{4}{ }^{*} j_{5}	$\mu := e_\alpha \lrcorner \mu^\alpha = \frac{3}{4}{}^* j_5$	$\mu := e_\alpha \lrcorner \mu^\alpha = \frac{3}{4}{}^* j_5$
mielke-geometrodynamics_EQ0506 (7.7.24)	164	0.852 K|+0	\gamma_{5}:=(i / 4!)^{*}(\gamma \wedge \gamma \wedge \gamma \wedge \gamma)	$\gamma_5 := (i/4!)^*(\gamma \wedge \gamma \wedge \gamma \wedge \gamma)$	$\gamma_5 := (i/4!)\,{}^*(\gamma \wedge \gamma \wedge \gamma \wedge \gamma)$
mielke-geometrodynamics_EQ1014 (14.4.9)	326	0.856 N|+0	M^{2}=\left(M_{\mathrm{ir}}+\frac{\alpha_{e} M^{* 2}}{4 M_{\mathrm{ir}}} \operatorname{Tr} \bar{Q}^{2} \right)^{2}+\frac{1}{4} J(J+1) \frac{M^{* 4}}{M_{ \mathrm{ir}}^{2}},	$M^2 = \left(M_{\mathrm{ir}} + \frac{\alpha_e M^{*2}}{4M_{\mathrm{ir}}}\operatorname{Tr}\bar{Q}^2\right)^2 + \frac{1}{4}J(J+1)\frac{M^{*4}}{M_{\mathrm{ir}}^2},$	$M^2 = \left(M_{\mathrm{ir}} + \frac{\alpha_e M^{*2}}{4M_{\mathrm{ir}}}\operatorname{Tr}\bar{Q}^2\right)^2 + \frac{1}{4}J(J+1)\frac{M^{*4}}{M_{\mathrm{ir}}^2},$
mielke-geometrodynamics_EQ0753 (11.1.20)	241	0.859 U|+17	\hat{\Psi}_{\mid \overparen{S O} \circ(1,3)}=\left[\begin{array}{l} \Psi_{1} \\ \Psi_{2} \\ \vdots \\ \Psi_{ \left[\frac{n}{4}\right]} \end{array}\right] .	*(not rendered)*	$\hat{\Psi}_{\mid \widehat{SO}_\circ(1,3)} = \begin{bmatrix} \Psi_1 \\ \Psi_2 \\ \vdots \\ \Psi_{[\frac{n}{4}]} \end{bmatrix}.$
mielke-geometrodynamics_EQ0783 (11.3.2)	247	0.862 N|+0	\begin{aligned} L_{\mathrm{D}} & =\frac{i}{2}\left(\bar{\psi} \gamma \wedge^{*} D^{\{ \}} \psi+\left(\overline{D^{\{ \}} \psi}\right) \wedge^{*} \gamma \psi \right)-m \bar{\psi} \psi \eta \ \ & +\frac{1}{2} \bar{ \psi}\left[\widetilde{K},{ }^{*} \gamma\right] \psi=: L_{ \mathrm{D}}^{\{ \}}+L_{\mathrm{NL}} . \end{aligned}	$\begin{aligned} L_{\mathrm{D}} &= \frac{i}{2}\left(\bar{\psi}\gamma \wedge^* D^{\{\}}\psi + \left(\overline{D^{\{\}}\psi}\right) \wedge^* \gamma\psi\right) - m\bar{\psi}\psi\eta \\ &+ \frac{1}{2}\bar{\psi}\left[\widetilde{K}, {}^*\gamma\right]\psi =: L_{\mathrm{D}}^{\{\}} + L_{\mathrm{NL}}. \end{aligned}$	$\begin{aligned} L_{\mathrm{D}} &= \frac{i}{2}\left(\overline{\psi}\gamma \wedge {}^*D^{\{\}}\psi + (\overline{D^{\{\}}\psi}) \wedge {}^*\gamma\psi\right) - m\overline{\psi}\psi\eta \\ &+ \frac{1}{2}\overline{\psi}[\widetilde{K}, {}^*\gamma]\psi =: L_{\mathrm{D}}^{\{\}} + L_{\mathrm{NL}}. \end{aligned}$

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mielke-geometrodynamics_EQ1100 (B.12)	369	0.864 N|+0	`\begin{aligned} { }^{*} \alpha^{(p)}:=\frac{1}{(n-p)! \cdot(p!)} & \sqrt{\left|\operatorname{det} g_{ \mathrm{ij}}\right|} \varepsilon_{\alpha_{1} \cdots \alpha_{p} \beta_{1} \cdots \beta_{n-p}} \\ & \times A^{ \alpha_{1} \cdots \alpha_{p}} \vartheta^{\beta_{1}} \wedge \cdots \wedge \vartheta^{\beta_{n-p}} . \end{aligned}`	$^*\alpha^{(p)} := \frac{1}{(n-p)!\cdot(p!)}\sqrt{\lvert\det g_{\mathrm{ij}}\rvert}\,\varepsilon_{\alpha_1\cdots\alpha_p\beta_1\cdots\beta_{n-p}} \times A^{\alpha_1\cdots\alpha_p}\vartheta^{\beta_1}\wedge\cdots\wedge\vartheta^{\beta_{n-p}}.$	$^*\alpha^{(p)} := \frac{1}{(n-p)!\cdot(p!)}\sqrt{\lvert\det g_{\mathrm{ij}}\rvert}\,\varepsilon_{\alpha_1\cdots\alpha_p\beta_1\cdots\beta_{n-p}} \times A^{\alpha_1\cdots\alpha_p}\vartheta^{\beta_1}\wedge\cdots\wedge\vartheta^{\beta_{n-p}}.$
mielke-geometrodynamics_EQ0184 (3.7.14)	074	0.864 C|+16	`\vec{\Omega}=d \vec{\omega}-(\overrightarrow{\omega \wedge}`	$\vec{\Omega}=d\vec{\omega}-(\overrightarrow{\omega\wedge}$	$\vec{\Omega}=d\vec{\omega}-(\overrightarrow{\omega\wedge\vec{\omega}})=d\vec{\omega}-\vec{\omega}\wedge\vec{\omega}.$
mielke-geometrodynamics_EQ0165 (3.5.13)	069	0.865 N|+0	`{ }^{*} \Omega=(\stackrel{+}{-}) \Omega ;`	$^*\Omega=(\overset{+}{-})\Omega;$	$^*\Omega=(\overset{+}{-})\Omega\,;$
mielke-geometrodynamics_EQ0737 (11.1.4)	238	0.867 N|+0	`x^{\alpha} \rightarrow x^{\prime \alpha}=g_{\beta}^{ \alpha} \quad x^{\beta},\left[g_{\beta}^{\alpha}\right] \in S O(s, n-s), \quad x^{\alpha} \in \mathbf{E}^{n} .`	$x^\alpha\rightarrow x'^\alpha=g^\alpha_\beta\quad x^\beta,\left[g^\alpha_\beta\right]\in SO(s,n-s),\quad x^\alpha\in\mathbf{E}^n.$	$x^\alpha\rightarrow x'^\alpha=g^\alpha_\beta\ \ x^\beta,[g^\alpha_\beta]\in SO(s,n-s),\ \ x^\alpha\in\mathbf{E}^n.$
mielke-geometrodynamics_EQ0853 (12.3.6)	276	0.868 C|+3	`\left\langle\vartheta^{\alpha} \wedge \sigma_{\alpha} \right\rangle=-\frac{1}{3 \pi^{2}}\left[\operatorname{Tr} \left(G \wedge{ }^{*} G\right)+\frac{1}{24}\left(2 R^{ \alpha \beta\{ \}} \wedge R_{\alpha \beta}^{\{j(\star)}+d \mathscr{A} \wedge^{*} d \mathscr{A}\right)\right],`	$\langle\vartheta^\alpha\wedge\sigma_\alpha\rangle=-\frac{1}{3\pi^2}\left[\mathrm{Tr}\,(G\wedge{}^*G)+\frac{1}{24}\left(2R^{\alpha\beta\{\}}\wedge R^{\{j(\star)}_{\alpha\beta}+d\mathscr{A}\wedge{}^*d\mathscr{A}\right)\right],$	$\langle\vartheta^\alpha\wedge\sigma_\alpha\rangle=-\frac{1}{3\pi^2}\left[Tr(G\wedge{}^*G)+\frac{1}{24}\left(2R^{\alpha\beta\{\}}\wedge R^{\{j(\star)}_{\alpha\beta}+d\mathscr{A}\wedge{}^*d\mathscr{A}\right)\right],$
mielke-geometrodynamics_EQ0774 (11.2.3)	245	0.868 N|+0	`i(\overline{D \psi}) \wedge^{*} \gamma+\frac{i}{2} \bar{ \psi} D \wedge^{*} \gamma+m \bar{\psi} \eta=0,`	$i(\overline{D\psi})\wedge^*\gamma+\frac{i}{2}\bar{\psi}D\wedge^*\gamma+m\bar{\psi}\eta=0,$	$i(\overline{D\psi})\wedge{}^*\gamma+\frac{i}{2}\overline{\psi}D\wedge{}^*\gamma+m\overline{\psi}\eta=0,$
mielke-geometrodynamics_EQ0548 (8.4.2)	178	0.871 N|-1	`s L_{\text {Pontr }}=-2 d \operatorname{Tr}\left\{\Psi \wedge \Omega^{g}\right\}=-d\left(\Psi_{\alpha}{ }^{ \beta} \wedge R_{\beta}{ }^{\alpha}\right) .`	$sL_{\text{Pontr}}=-2d\,\mathrm{Tr}\left\{\Psi\wedge\Omega^g\right\}=-d\left({\Psi_\alpha}^\beta\wedge{R_\beta}^\alpha\right).$	$sL_{\text{Pontr}}=-2d\mathrm{Tr}\{\Psi\wedge\Omega^g\}=-d({\Psi_\alpha}^\beta\wedge{R_\beta}^\alpha).$
mielke-geometrodynamics_EQ0244 (4.3.9)	091	0.873 N|+1	`g_{i j} e_{\alpha}^{\cdot i} e_{\beta}^{j}=g_{\alpha \beta} .`	$g_{ij}e^{\cdot i}_\alpha e^j_\beta=g_{\alpha\beta}.$	$g_{ij}e^{\cdot i}_\alpha e^j_\beta=g_{\alpha\beta}.$
mielke-geometrodynamics_EQ0890 (13.4.9)	287	0.876 N|+0	`\hat{\xi}=\binom{\xi}{1}=\binom{\xi^{\alpha} P_{ \alpha}}{1}, \quad \hat{\xi_{*}}=\left(\xi_{*}, 1\right)= \left(\xi_{\beta}^{*} P_{*}^{\beta}, 1\right)`	$\hat{\xi}=\binom{\xi}{1}=\binom{\xi^\alpha P_\alpha}{1},\quad \hat{\xi_*}=(\xi_*,1)=(\xi^*_\beta P^\beta_*,1)$	$\hat{\xi}=\binom{\xi}{1}=\binom{\xi^\alpha P_\alpha}{1},\quad \hat{\xi_*}=(\xi_*,1)=(\xi^*_\beta P^\beta_*,1)$
mielke-geometrodynamics_EQ1007 (14.4.2)	325	0.877 N|+1	`\begin{aligned} A^{(\circ)} & =\stackrel{*}{\sigma} \omega^{(\circ)}=-\frac{r^{2}}{\rho^{2}}\left[d t-J_{3} \frac{\hbar}{M c} \sin ^{2} \vartheta d \phi\right] Q^{(\circ)} \cos \delta \\ & -\frac{\cos \vartheta}{\rho^{2}}\left[\left(r^{2}+J(J+1) \frac{\hbar^{2}}{M^{2} c^{2}}\right) d \phi-J_{3} \frac{\hbar}{M} d t\right] P^{(\circ)} \sin \delta \end{aligned}`	$A^{(\circ)}=\overset{*}{\sigma}\omega^{(\circ)}=-\frac{r^2}{\rho^2}\left[dt-J_3\frac{\hbar}{Mc}\sin^2\vartheta\,d\phi\right]Q^{(\circ)}\cos\delta -\frac{\cos\vartheta}{\rho^2}\left[\left(r^2+J(J+1)\frac{\hbar^2}{M^2c^2}\right)d\phi-J_3\frac{\hbar}{M}dt\right]P^{(\circ)}\sin\delta$	$A^{(\circ)}=\overset{*}{\sigma}\omega^{(\circ)}=-\frac{r^2}{\rho^2}\left[dt-J_3\frac{\hbar}{Mc}\sin^2\vartheta\,d\phi\right]Q^{(\circ)}\cos\delta -\frac{\cos\vartheta}{\rho^2}\left[\left(r^2+J(J+1)\frac{\hbar^2}{M^2c^2}\right)d\phi-J_3\frac{\hbar}{M}dt\right]P^{(\circ)}\sin\delta.$
mielke-geometrodynamics_EQ1062 (16.2.1)	355	0.877 N|+0	`\left[\square-(\mathrm{mc} / \hbar)^{2}\right] \varphi=0`	$\left[\square-(\mathrm{mc}/\hbar)^2\right]\varphi=0$	$[\square-(mc/\hbar)^2]\varphi=0$
mielke-geometrodynamics_EQ0051 (2.7.1)	044	0.881 N|-2	`G(p): P \rightarrow P, \quad G(p) \in \mathscr{G}_{p}`	$G(p):P\rightarrow P,\quad G(p)\in\mathscr{G}_p$	$G(p):P\rightarrow P,\ \ G(p)\in\mathscr{G}_p$
mielke-geometrodynamics_EQ0178 (3.7.8)	072	0.881 K|+0	`\left\langle\left. O\right|^{\lambda} \varphi \mid O \right\rangle=\mu / \sqrt{\lambda}`	$\left\langle O\right\|^\lambda\varphi\mid O\rangle=\mu/\sqrt{\lambda}$	$\langle O\,\|^\lambda\varphi\,\|\,O\rangle=\mu/\sqrt{\lambda}$

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mielke-geometrodynamics_EQ0028 (2.5.1)	040	0.885 N|+0	`V_{p}^{*}=T_{p}^{*}\left(F_{m}(M)\right),`	$V_p^* = T_p^*\left(F_m(M)\right),$	$V_p{}^* = T_p{}^*(F_m(M)),$
mielke-geometrodynamics_EQ0920 (13.8.6)	295	0.888 N|-2	`\begin{aligned} d C_{\mathrm{RR}(\star)} & :=\frac{1}{2} d\left(\Gamma_{\alpha \beta} \wedge R^{\alpha \beta(\star)}-\frac{1}{3} \Gamma_{\alpha}{ }^{\beta(\star)} \wedge \Gamma_{\beta}{ }^{\gamma} \wedge \Gamma_{\gamma}{ }^{\alpha}\right) \\ & \equiv-L_{\mathrm{SKY}}-2 \operatorname{Ric}_{\alpha \beta} \wedge{ }^{*} \operatorname{Ric}^{\alpha \beta}+\frac{1}{2} \operatorname{Ric}_{\alpha}{ }^{\alpha} \wedge{ }^{*} \operatorname{Ric}_{\beta}{ }^{\beta} \end{aligned}`	$\begin{aligned} dC_{\mathrm{RR}(\star)} &:=\frac{1}{2} d\left(\Gamma_{\alpha \beta} \wedge R^{\alpha \beta(\star)}-\frac{1}{3} \Gamma_{\alpha}{ }^{\beta(\star)} \wedge \Gamma_{\beta}{ }^{\gamma} \wedge \Gamma_{\gamma}{ }^{\alpha}\right) \\ & \equiv-L_{\mathrm{SKY}}-2 \operatorname{Ric}_{\alpha \beta} \wedge{ }^{*} \operatorname{Ric}^{\alpha \beta}+\frac{1}{2} \operatorname{Ric}_{\alpha}{ }^{\alpha} \wedge{ }^{*} \operatorname{Ric}_{\beta}{ }^{\beta} \end{aligned}$	$\begin{aligned} dC_{\mathrm{RR}(\star)} &:=\frac{1}{2} d\left(\Gamma_{\alpha \beta} \wedge R^{\alpha \beta(\star)}-\frac{1}{3} \Gamma_{\alpha}{ }^{\beta(\star)} \wedge \Gamma_{\beta}{ }^{\gamma} \wedge \Gamma_{\gamma}{ }^{\alpha}\right) \\ & \equiv-L_{\mathrm{SKY}}-2 \operatorname{Ric}_{\alpha \beta} \wedge{ }^{*} \operatorname{Ric}^{\alpha \beta}+\frac{1}{2} \operatorname{Ric}_{\alpha}{ }^{\alpha} \wedge{ }^{*} \operatorname{Ric}_{\beta}{ }^{\beta} \end{aligned}$
mielke-geometrodynamics_EQ0674 (10.3.31)	220	0.890 C|-5	`\check{\mathscr{E}}_{\alpha}=-\frac{\theta_{\mathrm{T}} \theta_{\mathrm{TL}}}{2 \ell^{2}}\left(\frac{1}{\theta_{ \mathrm{TL}}} d \vartheta_{\alpha}-\frac{4 \ell}{\theta_{ \mathrm{T}} \theta_{\mathrm{L}}} \check{\mathscr{J}}_{\alpha}^{\star}\right),`	$\check{\mathscr{E}}_\alpha = -\frac{\theta_{\mathrm{T}}\theta_{\mathrm{TL}}}{2\ell^2}\left(\frac{1}{\theta_{\mathrm{TL}}} d\vartheta_\alpha - \frac{4\ell}{\theta_{\mathrm{T}}\theta_{\mathrm{L}}}\check{\mathscr{J}}_\alpha^\star\right),$	$\check{\mathscr{E}}_\alpha = -\frac{\theta_{\mathrm{T}}\theta_{\mathrm{TL}}}{2\ell^2}\left(\frac{1}{\theta_{\mathrm{TL}}} d\vartheta_\alpha - \frac{4\ell}{\theta_{\mathrm{T}}\theta_{\mathrm{L}}}\check{\mathscr{J}}_\alpha^\star\right),$
mielke-geometrodynamics_EQ0531 (7.7.51)	169	0.890 N|+0	`\left.\left.R:=e_{\beta}\right\rfloor e_{\alpha}\right \rfloor R^{\alpha \beta}, \quad{ }^{*} R^{\alpha \beta} \wedge \vartheta_{\alpha} \wedge \vartheta_{\beta} \equiv R^{\alpha \beta} \wedge \eta_{\alpha \beta} \equiv-R \eta,`	$R:=e_\beta\rfloor e_\alpha\rfloor R^{\alpha\beta}, \quad {}^*R^{\alpha\beta}\wedge\vartheta_\alpha\wedge\vartheta_\beta \equiv R^{\alpha\beta}\wedge\eta_{\alpha\beta}\equiv -R\eta,$	$R:=e_\beta\rfloor e_\alpha\rfloor R^{\alpha\beta}, \quad {}^*R^{\alpha\beta}\wedge\vartheta_\alpha\wedge\vartheta_\beta \equiv R^{\alpha\beta}\wedge\eta_{\alpha\beta}\equiv -R\eta,$
mielke-geometrodynamics_EQ0540 (8.3.1)	176	0.891 N|+2	`\begin{aligned} (d \oplus s) \gamma+[\widetilde{\Gamma}, \gamma] & =\widetilde{\Theta} \\ (d \oplus s) \widetilde{ \Theta}+[\widetilde{\Gamma}, \widetilde{\Theta}] & \equiv \left[\widetilde{\Omega}^{g}, \gamma\right] \end{aligned}`	$\begin{aligned} (d\oplus s)\gamma + [\widetilde{\Gamma},\gamma] &= \widetilde{\Theta} \\ (d\oplus s)\widetilde{\Theta} + [\widetilde{\Gamma},\widetilde{\Theta}] &\equiv \left[\widetilde{\Omega}^g,\gamma\right] \end{aligned}$	$\begin{aligned} (d\oplus s)\gamma + [\widetilde{\Gamma},\gamma] &= \widetilde{\Theta}, \\ (d\oplus s)\widetilde{\Theta} + [\widetilde{\Gamma},\widetilde{\Theta}] &\equiv [\widetilde{\Omega}^g,\gamma], \end{aligned}$
mielke-geometrodynamics_EQ0925 (14.1.5)	303	0.892 N|+0	`\begin{aligned} & D^{*} \Omega=\tau_{e}, \\ & D \Omega \equiv 0, \\ & \frac{1}{2} *\left(\vartheta \wedge^{*} \Omega^{g}\right)=\ell^{* 2}\left(\Sigma_{\mathrm{YM}}+ \Sigma_{\mathrm{mat}}\right), \end{aligned}`	$\begin{aligned} & D^*\Omega = \tau_e, \\ & D\Omega \equiv 0, \\ & \frac{1}{2} *(\vartheta \wedge^* \Omega^g) = \ell^{*2}\left(\Sigma_{\mathrm{YM}} + \Sigma_{\mathrm{mat}}\right), \end{aligned}$	$\begin{aligned} & D^*\Omega = \tau_e, \\ & D\Omega \equiv 0, \\ & \frac{1}{2} *(\vartheta \wedge^* \Omega^g) = \ell^{*2}(\Sigma_{\mathrm{YM}} + \Sigma_{\mathrm{mat}}), \end{aligned}$
mielke-geometrodynamics_EQ0867 (13.2.3)	283	0.893 N|+0	`B \cong d A, \quad d B \cong d F \equiv 0,`	$B \cong dA, \quad dB \cong dF \equiv 0,$	$B \cong dA, \quad dB \cong dF \equiv 0,$
mielke-geometrodynamics_EQ0609 (9.2.11)	201	0.894 N|+1	`\begin{aligned} & \left(1+\zeta^{2}\right) \int_{M^{4}} L_{\mathrm{SKY}}-(-1)^{s} \zeta(4 \pi)^{2} \cdot \chi \left(M^{4}\right) \\ & =\frac{1}{4} \int_{M^{4}}\left( \Omega^{g}-\zeta^{*} \Omega^{g(\star)}\right) \wedge^{*}\left(\Omega^{g}-\zeta^{*} \Omega^{g(\star)}\right) \geq 0, \end{aligned}`	$\begin{aligned} & \left(1+\zeta^2\right)\int_{M^4} L_{\mathrm{SKY}} - (-1)^s\zeta(4\pi)^2\cdot\chi\left(M^4\right) \\ & = \frac{1}{4}\int_{M^4}\left(\Omega^g - \zeta^*\Omega^{g(\star)}\right)\wedge^*\left(\Omega^g - \zeta^*\Omega^{g(\star)}\right) \geq 0, \end{aligned}$	$\begin{aligned} & (1+\zeta^2)\int_{M^4} L_{\mathrm{SKY}} - (-1)^s\zeta(4\pi)^2\cdot\chi(M^4) \\ & = \frac{1}{4}\int_{M^4}(\Omega^g - \zeta^*\Omega^{g(\star)})\wedge^*(\Omega^g - \zeta^*\Omega^{g(\star)}) \geq 0, \end{aligned}$
mielke-geometrodynamics_EQ0959 (14.1.41)	309	0.894 N|+0	`\oint d \delta=2 \pi b_{1}=2 \pi v`	$\oint d\delta = 2\pi b_1 = 2\pi v$	$\oint d\delta = 2\pi b_1 = 2\pi v$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ0299 (4.5.10)	102	0.896 N|+1	`\begin{aligned} & \delta g_{\alpha \beta}=2 \varepsilon_{(\alpha}{ }^{\gamma} g_{\beta) \gamma}, \quad \delta \vartheta^{\alpha}=-\vartheta^{\beta} \varepsilon_{\beta}{ }^{\alpha}, \\ & \delta \Gamma_{ \alpha}{ }^{\beta}=D \varepsilon_{\alpha}{ }^{\beta}, \quad \delta \Psi=-\varepsilon_{\alpha}{ }^{\beta} I^{ \alpha}{ }_{\beta} \Psi . \end{aligned}`	$\begin{aligned} & \delta g_{\alpha \beta}=2 \varepsilon_{(\alpha}{ }^{\gamma} g_{\beta) \gamma}, \quad \delta \vartheta^{\alpha}=-\vartheta^{\beta} \varepsilon_{\beta}{ }^{\alpha}, \\ & \delta \Gamma_{ \alpha}{ }^{\beta}=D \varepsilon_{\alpha}{ }^{\beta}, \quad \delta \Psi=-\varepsilon_{\alpha}{ }^{\beta} I^{ \alpha}{ }_{\beta} \Psi . \end{aligned}$	$\delta g_{\alpha\beta} = 2\varepsilon_{(\alpha}{}^{\gamma}\, g_{\beta)\gamma}\,, \qquad \delta\vartheta^{\alpha} = -\vartheta^{\beta}\,\varepsilon_{\beta}{}^{\alpha}\,,$ $\delta\Gamma_{\alpha}{}^{\beta} = D\varepsilon_{\alpha}{}^{\beta}, \qquad \delta\Psi = -\varepsilon_{\alpha}{}^{\beta} I^{\alpha}{}_{\beta}\Psi\,.$
mielke-geometrodynamics_EQ0236 (4.3.1)	090	0.896 N|+0	`\begin{aligned} (\Delta s)^{2} & =-c^{2}(\Delta t)^{2}+( \Delta x)^{2}+(\Delta y)^{2}+(\Delta z)^{2} \\ & =g_{i j} \Delta x^{i} \Delta x^{j} . \end{aligned}`	$\begin{aligned} (\Delta s)^{2} & =-c^{2}(\Delta t)^{2}+(\Delta x)^{2}+(\Delta y)^{2}+(\Delta z)^{2} \\ & =g_{i j} \Delta x^{i} \Delta x^{j} . \end{aligned}$	$\begin{aligned} (\Delta s)^{2} & =-c^{2}(\Delta t)^{2}+(\Delta x)^{2}+(\Delta y)^{2}+(\Delta z)^{2} \\ & =g_{i j} \Delta x^{i} \Delta x^{j} . \end{aligned}$
mielke-geometrodynamics_EQ1005 (14.3.18)	323	0.896 N|-1	`\begin{aligned} \not D^{2} & =\operatorname{Tr}\left(\frac{1}{2} \gamma \wedge \gamma \wedge{ }^{*}\{D, D\}+ \frac{1}{2} \gamma \wedge \gamma \wedge^{*} \widetilde{ \Omega}-\gamma \wedge \widetilde{\Theta} \wedge^{*} D \right) \\ & =\left(\square^{g}+\frac{1}{4} R\right) \eta-\vartheta \wedge \Theta \wedge^{*} D \end{aligned}`	$\begin{aligned} \not D^{2} & =\operatorname{Tr}\left(\frac{1}{2} \gamma \wedge \gamma \wedge{ }^{*}\{D, D\}+ \frac{1}{2} \gamma \wedge \gamma \wedge^{*} \widetilde{ \Omega}-\gamma \wedge \widetilde{\Theta} \wedge^{*} D \right) \\ & =\left(\square^{g}+\frac{1}{4} R\right) \eta-\vartheta \wedge \Theta \wedge^{*} D \end{aligned}$	$\begin{aligned} \not D^{2} & =\operatorname{Tr}\left(\frac{1}{2} \gamma \wedge \gamma \wedge{ }^{*}\{D, D\}+ \frac{1}{2} \gamma \wedge \gamma \wedge^{*} \widetilde{ \Omega}-\gamma \wedge \widetilde{\Theta} \wedge^{*} D \right) \\ & =(\square^{g}+\frac{1}{4} R) \eta-\vartheta \wedge \Theta \wedge^{*} D \end{aligned}$
mielke-geometrodynamics_EQ0230 (4.2.23)	088	0.899 N|+0	`\stackrel{*}{\sigma} \Theta=\frac{1}{2} T_{\alpha \beta}^{. c} P_{c} \otimes \vartheta^{\alpha} \wedge \vartheta^{\beta}=\frac{1}{2} T_{i j}^{. c} P_{c} \otimes d x^{i} \wedge d x^{j},`	$\stackrel{*}{\sigma} \Theta=\frac{1}{2} T_{\alpha \beta}^{. c} P_{c} \otimes \vartheta^{\alpha} \wedge \vartheta^{\beta}=\frac{1}{2} T_{i j}^{. c} P_{c} \otimes d x^{i} \wedge d x^{j},$	$\stackrel{*}{\sigma}\Theta = \frac{1}{2} T_{\alpha\beta}^{..c} P_c \otimes \vartheta^{\alpha} \wedge \vartheta^{\beta} = \frac{1}{2} T_{ij}^{..c} P_c \otimes dx^i \wedge dx^j,$
mielke-geometrodynamics_EQ0723 (10.10.3)	230	0.900 C|+4	`\begin{aligned} \delta_{\text {susy }} \vartheta^{\alpha} & \left.=i \bar{\sigma} \Psi \gamma^{\alpha}, \quad \delta_{\text {susy }} \Gamma_{\alpha}^{\star}=i \bar{ \sigma} \gamma_{\alpha}^{*} D \Psi+i c \bar{\sigma}\left(\gamma_{\alpha} \Psi+e_{\alpha}\right\rfloor^{*} \Psi \right) \\ \delta_{\text {susy }} \Psi & =2 D \sigma+c \gamma \sigma, \end{aligned}`	$\begin{aligned} \delta_{\text {susy }} \vartheta^{\alpha} & \left.=i \bar{\sigma} \Psi \gamma^{\alpha}, \quad \delta_{\text {susy }} \Gamma_{\alpha}^{\star}=i \bar{ \sigma} \gamma_{\alpha}^{*} D \Psi+i c \bar{\sigma}\left(\gamma_{\alpha} \Psi+e_{\alpha}\right\rfloor^{*} \Psi \right) \\ \delta_{\text {susy }} \Psi & =2 D \sigma+c \gamma \sigma, \end{aligned}$	$\begin{aligned} \delta_{\text{susy}}\vartheta^{\alpha} & = i\overline{\sigma}\,\Psi\,\gamma^{\alpha}, \qquad \delta_{\text{susy}}\Gamma^{\star}_{\alpha} = i\overline{\sigma}\,\gamma^{*}_{\alpha} D\Psi + ic\overline{\sigma}\,(\gamma_{\alpha}\Psi + e_{\alpha}\rfloor^{*}\Psi), \\ \delta_{\text{susy}}\Psi & = 2D\sigma + c\gamma\sigma, \end{aligned}$ (1
mielke-geometrodynamics_EQ0216 (4.2.8)	086	0.902 N|+0	`\widetilde{\widetilde{\omega}} \rightarrow^{A^{-1}} \widetilde{\widetilde{\omega}}=A^{-1} \widetilde{ \widetilde{\omega}} A-A^{-1} d A, \quad A \in \mathscr{A}_{p} .`	$\widetilde{\widetilde{\omega}} \rightarrow^{A^{-1}} \widetilde{\widetilde{\omega}}=A^{-1} \widetilde{ \widetilde{\omega}} A-A^{-1} d A, \quad A \in \mathscr{A}_{p} .$	$\widetilde{\widetilde{\omega}} \rightarrow^{A^{-1}} \widetilde{\widetilde{\omega}}=A^{-1} \widetilde{ \widetilde{\omega}} A-A^{-1} d A, \quad A \in \mathscr{A}_{p} .$
mielke-geometrodynamics_EQ1042 (15.1.19)	340	0.902 K|+0	`\Gamma_{\mu \alpha \beta}:\left(2^{+}\right) \oplus 2\left(1^{-}\right) \oplus\left(0^{+}\right) \oplus \left(2^{-}\right) \oplus 2\left(1^{+}\right) \oplus \left(0^{-}\right),`	$\Gamma_{\mu \alpha \beta}:\left(2^{+}\right) \oplus 2\left(1^{-}\right) \oplus\left(0^{+}\right) \oplus \left(2^{-}\right) \oplus 2\left(1^{+}\right) \oplus \left(0^{-}\right),$	$\Gamma_{\mu \alpha \beta}:\left(2^{+}\right) \oplus 2\left(1^{-}\right) \oplus\left(0^{+}\right) \oplus \left(2^{-}\right) \oplus 2\left(1^{+}\right) \oplus \left(0^{-}\right),$
mielke-geometrodynamics_EQ0481 (7.5.2)	157	0.903 S|-1	`\square^{c} g_{i j}=\square^{c}\left(\Omega^{2} o_{i j}^{ \text {Mink }}\right)=\Omega^{6} \square^{c} o_{i j}^{ \text {Mink }}=0`	$\square^{c} g_{i j}=\square^{c}\left(\Omega^{2} o_{i j}^{ \text {Mink }}\right)=\Omega^{6} \square^{c} o_{i j}^{ \text {Mink }}=0$	$\square^{c} g_{i j}=\square^{c}(\Omega^{2} o_{i j}^{ \text {Mink }})=\Omega^{6} \square^{c} o_{i j}^{ \text {Mink }}=0$
mielke-geometrodynamics_EQ0117 (3.3.18)	059	0.905 N|-1	`L_{\mathrm{Max}}:=-\frac{1}{2} F \wedge^{*} F=\frac{1}{2} \left(\mathbf{E}^{2}-\mathbf{B}^{2}\right) \eta,`	$L_{\mathrm{Max}}:=-\frac{1}{2} F \wedge^{*} F=\frac{1}{2}\left(\mathbf{E}^{2}-\mathbf{B}^{2}\right) \eta,$	$L_{\mathrm{Max}}:=-\frac{1}{2} F \wedge^{*} F=\frac{1}{2}(\mathbf{E}^{2}-\mathbf{B}^{2}) \eta\,,$
mielke-geometrodynamics_EQ1110 (B.22)	371	0.905 K|+0	`\square \alpha=0,`	$\square \alpha=0,$	$\square \alpha=0,$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

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mielke-geometrodynamics_EQ0831 (12.1.3)	270	0.907 N|+0	`\tilde{j}_{5}:=j_{5}+\left(1 / 96 \pi^{2}\right) A \wedge d A`	$\tilde{j}_5 := j_5 + \left(1/96\pi^2\right) A \wedge dA$	$\widetilde{j}_5 := j_5 + (1/96\pi^2) A \wedge dA$
mielke-geometrodynamics_EQ0409 (6.4.29)	136	0.907 C|+5	`T^{A}=\frac{1}{f}\left(d f \wedge \vartheta^{A}-2 \eta^{0 A \beta \gamma} \vartheta_{\beta} \wedge \vartheta_{ \gamma}\right)=-\frac{2}{f} \eta^{A}{ }_{\mu \nu} \vartheta^{\mu} \wedge \vartheta^{\nu}= \pm{ }^{*} T^{A}, \quad T^{\hat{0}}=0,`	$T^A = \frac{1}{f}\left(df \wedge \vartheta^A - 2\eta^{0A\beta\gamma}\vartheta_\beta \wedge \vartheta_\gamma\right) = -\frac{2}{f}\eta^A{}_{\mu\nu}\vartheta^\mu \wedge \vartheta^\nu = \pm {}^*T^A, \quad T^{\hat{0}} = 0,$	$T^A = \frac{1}{f}\left(df \wedge \vartheta^A - 2\eta^{0A\beta\gamma}\vartheta_\beta \wedge \vartheta_\gamma\right) = -\frac{2}{f}\eta^A{}_{\mu\nu}\vartheta^\mu \wedge \vartheta^\nu = \pm {}^*T^A, \quad T^{\hat{0}} = 0,$
mielke-geometrodynamics_EQ0657 (10.3.14)	217	0.907 N|+0	`\left.E_{\alpha}=e_{\alpha}\right\rfloor L(\star)-\frac{2 \gamma}{\delta \ell^{2}} T_{\alpha},`	$E_\alpha = e_\alpha \rfloor L(\star) - \frac{2\gamma}{\delta\ell^2} T_\alpha,$	$E_\alpha = e_\alpha \rfloor L(\star) - \frac{2\gamma}{\delta\ell^2} T_\alpha,$
mielke-geometrodynamics_EQ0396 (6.4.11)	132	0.909 W|+1	`\begin{aligned} \mathscr{H} \cong & n^{\alpha} \frac{ \delta L}{\frac{\delta \vartheta^{\alpha}}{}}+\Gamma_{ \perp}^{\alpha \beta} \frac{\delta L}{\frac{\delta \Gamma^{\alpha \beta}}{}} \\ & \left.- \underline{d}[(n\rfloor \Psi) \wedge \frac{\partial L}{\partial D \Psi}+n^{\alpha} \frac{\partial L}{\partial T^{\alpha}}+\Gamma_{\perp}^{\alpha \beta} \frac{\partial L}{\partial R^{\alpha \beta}}\right] . \end{aligned}`	$\begin{aligned} \mathscr{H} \cong & n^\alpha \frac{\delta L}{\underline{\delta\vartheta^\alpha}} + \Gamma_\perp^{\alpha\beta} \frac{\delta L}{\underline{\frac{\delta L}{\delta\Gamma^{\alpha\beta}}}} \\ & \left. - \underline{d}[(n\rfloor\Psi) \wedge \frac{\partial L}{\underline{\partial D\Psi}} + n^\alpha \frac{\partial L}{\underline{\partial T^\alpha}} + \Gamma_\perp^{\alpha\beta} \frac{\partial L}{\underline{\partial R^{\alpha\beta}}}\right]. \end{aligned}$	$\begin{aligned} \mathscr{H} \cong & n^\alpha \frac{\delta L}{\underline{\delta\vartheta^\alpha}} + \Gamma_\perp^{\alpha\beta} \frac{\delta L}{\underline{\frac{\delta L}{\delta\Gamma^{\alpha\beta}}}} \\ & \left. - \underline{d}[(n\rfloor\Psi) \wedge \frac{\partial L}{\underline{\partial D\Psi}} + n^\alpha \frac{\partial L}{\underline{\partial T^\alpha}} + \Gamma_\perp^{\alpha\beta} \frac{\partial L}{\underline{\partial R^{\alpha\beta}}}\right]. \end{aligned}$
mielke-geometrodynamics_EQ0641 (10.2.12)	213	0.909 N|+0	`d s^{2}=-\left(1-\Lambda_{\text {eff }} r^{2}\right) d t^{2}+\left(1-\Lambda_{\text {eff }} r^{2}\right)^{-1} d r^{2}+r^{2} d \phi^{2}`	$ds^2 = -\left(1 - \Lambda_{\text{eff}}\, r^2\right) dt^2 + \left(1 - \Lambda_{\text{eff}}\, r^2\right)^{-1} dr^2 + r^2 d\phi^2$	$ds^2 = -(1 - \Lambda_{\text{eff}}\, r^2) dt^2 + (1 - \Lambda_{\text{eff}}\, r^2)^{-1} dr^2 + r^2\, d\phi^2$
mielke-geometrodynamics_EQ0263 (4.3.28)	094	0.912 N|+0	`\Gamma_{i j}^{. . k}=e_{b}^{. \kappa} \Gamma_{i \alpha}^{. . b} E_{. j}^{\alpha}+e_{\beta}^{. \kappa} \partial_{i} E_{. j}^{\beta}`	$\Gamma_{ij}^{\cdot\cdot k} = e_b^{\cdot\kappa} \Gamma_{i\alpha}^{\cdot\cdot b} E_{\cdot j}^{\alpha} + e_\beta^{\cdot\kappa} \partial_i E_{\cdot j}^{\beta}$	$\Gamma_{ij}^{\cdot\cdot\kappa} = e_b^{\cdot\kappa} \Gamma_{i\alpha}^{\cdot\cdot b} E_{\cdot j}^{\alpha} + e_\beta^{\cdot\kappa} \partial_i E_{\cdot j}^{\beta}$
mielke-geometrodynamics_EQ0364 (6.2.16)	126	0.912 N|+0	`D D \lambda_{\alpha \beta}=-2 R_{[\alpha \mid}{ }^{ \gamma} \wedge \lambda_{\gamma \mid \beta]}=0`	$DD\lambda_{\alpha\beta} = -2R_{[\alpha\|}{}^\gamma \wedge \lambda_{\gamma\|\beta]} = 0$	$DD\lambda_{\alpha\beta} = -2R_{[\alpha\|}{}^\gamma \wedge \lambda_{\gamma\|\beta]} = 0$
mielke-geometrodynamics_EQ0840 (12.2.8)	272	0.916 N|+1	`\begin{aligned} \tau_{\alpha \beta} & :=\frac{\partial L_{\mathrm{D}}}{\partial \Gamma^{\alpha \beta}}= \frac{1}{8} \bar{\psi}\left({ }^{*} \gamma \sigma_{ \alpha \beta}+\sigma_{\alpha \beta}{ }^{*} \gamma\right) \psi \\ & =\frac{1}{4} \eta_{\alpha \beta \gamma \delta} \bar{\psi} \gamma^{\delta} \gamma_{5} \psi \eta^{\gamma}= \tau_{\alpha \beta \gamma} \eta^{\gamma}=\vartheta_{[\alpha} \wedge \mu_{\beta]} \end{aligned}`	$\begin{aligned} \tau_{\alpha\beta} & := \frac{\partial L_{\mathrm{D}}}{\partial \Gamma^{\alpha\beta}} = \frac{1}{8}\bar{\psi}\left({}^*\gamma\sigma_{\alpha\beta} + \sigma_{\alpha\beta}{}^*\gamma\right)\psi \\ & = \frac{1}{4}\eta_{\alpha\beta\gamma\delta}\bar{\psi}\gamma^\delta\gamma_5\psi\eta^\gamma = \tau_{\alpha\beta\gamma}\eta^\gamma = \vartheta_{[\alpha} \wedge \mu_{\beta]} \end{aligned}$	$\begin{aligned} \tau_{\alpha\beta} & := \frac{\partial L_{\mathrm{D}}}{\partial \Gamma^{\alpha\beta}} = \frac{1}{8}\overline{\psi}\left({}^*\gamma\sigma_{\alpha\beta} + \sigma_{\alpha\beta}{}^*\gamma\right)\psi \\ & = \frac{1}{4}\eta_{\alpha\beta\gamma\delta}\overline{\psi}\gamma^\delta\gamma_5\psi\eta^\gamma = \tau_{\alpha\beta\gamma}\eta^\gamma = \vartheta_{[\alpha} \wedge \mu_{\beta]}. \end{aligned}$
mielke-geometrodynamics_EQ0232 (4.2.25)	088	0.917 K|+0	`\Theta \rightarrow{ }^{A^{-1}} \Theta=G^{-1} \Theta,`	$\Theta \rightarrow {}^{A^{-1}}\Theta = G^{-1}\Theta,$	$\Theta \rightarrow {}^{A^{-1}}\Theta = G^{-1}\Theta,$
mielke-geometrodynamics_EQ0577 (8.6.15)	185	0.920 U|+25	`-E_{\alpha}=\frac{\theta_{\mathrm{T}}^{*}}{2} R^{\{ \} \beta \gamma} \wedge \eta_{\alpha \beta \gamma}-\theta_{ \mathrm{T}}^{*} \Lambda_{\mathrm{eff}} \eta_{\alpha}= \ell^{2} \overparen{\Sigma}_{\alpha} .`	*(not rendered)*	$-E_\alpha = \frac{\theta_{\mathrm{T}}^*}{2} R^{\{\}\beta\gamma} \wedge \eta_{\alpha\beta\gamma} - \theta_{\mathrm{T}}^* \Lambda_{\text{eff}} \eta_\alpha = \ell^2\, \widehat{\Sigma}_\alpha\,.$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

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mielke-geometrodynamics_EQ1031 (15.1.8)	337	0.920 W|-1	\begin{aligned} & \frac{1}{2} *\left(\vartheta^{f} \wedge^{*} \Omega^{f}\right)-a \ell^{2} \vartheta^{f} \wedge^{*}\left\{2 L_{f g}-\frac{1}{2 b \ell^{* 2}}\left(\Omega^{g} \wedge \vartheta^{g} \wedge \vartheta^{g}+2 \Lambda \eta\right)\right\} \\ & =\ell^{2} *\left\{ \Sigma_{\mathrm{m}}(\text { hadrons })+\frac{\mathrm{a}}{ \mathrm{~b}}{ }^{*}\left(\vartheta^{\mathrm{g}} \wedge^{*} \Sigma_{\mathrm{m}}(\text { leptons })\right) \wedge \vartheta^{\mathrm{f}}\right\} \end{aligned}	$\frac{1}{2} *\left(\vartheta^{f} \wedge^{*} \Omega^{f}\right)-a \ell^{2} \vartheta^{f} \wedge^{*}\left\{2 L_{f g}-\frac{1}{2 b \ell^{* 2}}\left(\Omega^{g} \wedge \vartheta^{g} \wedge \vartheta^{g}+2 \Lambda \eta\right)\right\}$ $=\ell^{2} *\left\{ \Sigma_{\mathrm{m}}(\text { hadrons })+\frac{\mathrm{a}}{ \mathrm{~b}}{ }^{*}\left(\vartheta^{\mathrm{g}} \wedge^{*} \Sigma_{\mathrm{m}}(\text { leptons })\right) \wedge \vartheta^{\mathrm{f}}\right\}$	$\frac{1}{2} *\left(\vartheta^{f} \wedge^{*} \Omega^{f}\right)-a \ell^{2} \vartheta^{f} \wedge^{*}\left\{2 L_{f g}-\frac{1}{2 b \ell^{* 2}}\left(\Omega^{g} \wedge \vartheta^{g} \wedge \vartheta^{g}+2 \Lambda \eta\right)\right\}$ $=\ell^{2} *\left\{ \Sigma_{\mathrm{m}}(\text { hadrons })+\frac{\mathrm{a}}{ \mathrm{~b}}{ }^{*}\left(\vartheta^{\mathrm{g}} \wedge^{*} \Sigma_{\mathrm{m}}(\text { leptons })\right) \wedge \vartheta^{\mathrm{f}}\right\}$
mielke-geometrodynamics_EQ0473 (7.4.1)	156	0.921 N|+1	\begin{aligned} & \int \mathscr{D} \Gamma \exp \left[\int L_{\mathrm{SKY}}{}^{(\star)} / \hbar\right] \\ = & \int \mathscr{D} \Gamma \exp \left[-\int\left(R_{\alpha \beta}+{ }^{*} R_{\alpha \beta}{}^{(\star)}\right) \wedge{ }^{*}\left(R^{\alpha \beta}+{ }^{*} R^{\alpha \beta(\star)}\right) / 4 \hbar\right] \end{aligned}	$\int \mathscr{D} \Gamma \exp \left[\int L_{\mathrm{SKY}}{}^{(\star)} / \hbar\right]$ $=\int \mathscr{D} \Gamma \exp \left[-\int\left(R_{\alpha \beta}+{ }^{*} R_{\alpha \beta}{}^{(\star)}\right) \wedge{ }^{*}\left(R^{\alpha \beta}+{ }^{*} R^{\alpha \beta(\star)}\right) / 4 \hbar\right]$	$\int \mathscr{D} \Gamma \exp \left[\int L_{\mathrm{SKY}}{}^{(\star)} / \hbar\right]$ $=\int \mathscr{D} \Gamma \exp \left[-\int\left(R_{\alpha \beta}+{ }^{*} R_{\alpha \beta}{}^{(\star)}\right) \wedge{ }^{*}\left(R^{\alpha \beta}+{ }^{*} R^{\alpha \beta(\star)}\right) / 4 \hbar\right]$
mielke-geometrodynamics_EQ0343 (5.4.1)	115	0.922 N|+0	k \partial_{k} \Gamma_{k}=\frac{1}{2} \mathrm{~S} \operatorname{Tr}\left\{\left[\Gamma_{k}^{(2)}+R_{k} \right]^{-1}\left(k \partial_{k} R_{k}\right)\right\},	$k \partial_{k} \Gamma_{k}=\frac{1}{2} \mathrm{~S} \operatorname{Tr}\left\{\left[\Gamma_{k}^{(2)}+R_{k} \right]^{-1}\left(k \partial_{k} R_{k}\right)\right\},$	$k \partial_{k} \Gamma_{k}=\frac{1}{2} \mathrm{~S} \operatorname{Tr}\left\{\left[\Gamma_{k}^{(2)}+R_{k} \right]^{-1}\left(k \partial_{k} R_{k}\right)\right\},$
mielke-geometrodynamics_EQ0829 (12.1.1)	269	0.922 W|+0	\bar{\psi}(x) \gamma_{5}^{*} \gamma \psi(x+\varepsilon) \rightarrow \bar{\psi}(x) \gamma_{5}^{*} \gamma \psi(x+ \varepsilon) \mathbf{P} \exp \left\{i \int_{x}^{x+ \varepsilon} A\right\} .	$\bar{\psi}(x) \gamma_{5}^{*} \gamma \psi(x+\varepsilon) \rightarrow \bar{\psi}(x) \gamma_{5}^{*} \gamma \psi(x+\varepsilon) \mathbf{P} \exp \left\{i \int_{x}^{x+\varepsilon} A\right\} .$	$\bar{\psi}(x) \gamma_{5}^{*} \gamma \psi(x+\varepsilon) \rightarrow \bar{\psi}(x) \gamma_{5}^{*} \gamma \psi(x+\varepsilon) \mathbf{P} \exp \left\{i \int_{x}^{x+\varepsilon} A\right\} .$
mielke-geometrodynamics_EQ0736 (11.1.3)	238	0.922 N|+0	\gamma^{0}:=\left(\begin{array}{rr} \mathbb{1} & 0 \\ 0 & -\mathbb{1} \end{array}\right), \quad \gamma^{k}:= \left(\begin{array}{ll} 0 & \sigma^{k} \\ -\sigma^{k} & 0 \end{array}\right), \quad \sigma^{k}: \text { Pauli matrices. }	$\gamma^{0}:=\left(\begin{array}{rr} \mathbb{1} & 0 \\ 0 & -\mathbb{1} \end{array}\right), \quad \gamma^{k}:= \left(\begin{array}{ll} 0 & \sigma^{k} \\ -\sigma^{k} & 0 \end{array}\right), \quad \sigma^{k}: \text { Pauli matrices. }$	$\gamma^{0}:=\left(\begin{array}{rr} \mathbb{1} & 0 \\ 0 & -\mathbb{1} \end{array}\right), \quad \gamma^{k}:= \left(\begin{array}{ll} 0 & \sigma^{k} \\ -\sigma^{k} & 0 \end{array}\right), \quad \sigma^{k}: \text { Pauli matrices. }$
mielke-geometrodynamics_EQ0661 (10.3.18)	217	0.923 N|+0	\square H-(-1)^{s}{ }^{*} D^{*} D H=d t+\frac{\gamma}{ \delta \ell^{2}} d \mathscr{A}+\frac{1}{\delta \ell} d h,	$\square H-(-1)^{s}{ }^{*} D^{*} D H=d t+\frac{\gamma}{ \delta \ell^{2}} d \mathscr{A}+\frac{1}{\delta \ell} d h,$	$\square H-(-1)^{s}{ }^{*} D^{*} D H=d t+\frac{\gamma}{ \delta \ell^{2}} d \mathscr{A}+\frac{1}{\delta \ell} d h,$
mielke-geometrodynamics_EQ0685 (10.3.43)	222	0.923 K|+0	C_{\alpha}-E_{\alpha}=\Sigma_{\alpha}-D^{\{ \}} \mu_{ \alpha},	$C_{\alpha}-E_{\alpha}=\Sigma_{\alpha}-D^{\{\} } \mu_{\alpha},$	$C_{\alpha}-E_{\alpha}=\Sigma_{\alpha}-D^{\{\} } \mu_{\alpha},$
mielke-geometrodynamics_EQ0702 (10.6.1)	225	0.924 N|-1	L_{A}=\frac{1}{2}\left(F \wedge{ }^{*} F+m_{\text {photon }} F \wedge A\right) .	$L_{A}=\frac{1}{2}\left(F \wedge{ }^{*} F+m_{\text {photon }} F \wedge A\right) .$	$L_{A}=\frac{1}{2}\left(F \wedge{ }^{*} F+m_{\text {photon }} F \wedge A\right) .$
mielke-geometrodynamics_EQ0221 (4.2.14)	087	0.924 K|+0	\Omega^{\mathrm{T}} \rightarrow{ }^{A^{-1}} \Omega^{ \mathrm{T}}=G^{-1}\left(\Omega^{\mathrm{T}}-D D T \right)=G^{-1} \Omega^{\mathrm{T}}-G^{-1} \Omega^{ \mathrm{L}} \otimes T .	$\Omega^{\mathrm{T}} \rightarrow{ }^{A^{-1}} \Omega^{\mathrm{T}}=G^{-1}\left(\Omega^{\mathrm{T}}-D D T \right)=G^{-1} \Omega^{\mathrm{T}}-G^{-1} \Omega^{ \mathrm{L}} \otimes T .$	$\Omega^{\mathrm{T}} \rightarrow{ }^{A^{-1}} \Omega^{\mathrm{T}}=G^{-1}\left(\Omega^{\mathrm{T}}-D D T \right)=G^{-1} \Omega^{\mathrm{T}}-G^{-1} \Omega^{ \mathrm{L}} \otimes T .$
mielke-geometrodynamics_EQ0443 (6.8.14)	143	0.924 N|-1	H_{\alpha}=-\frac{1}{\ell^{2}} *\left(\sum_{i=1}^{3} a_{i}{ }^{(i)} T_{\alpha}\right),	$H_{\alpha}=-\frac{1}{\ell^{2}} *\left(\sum_{i=1}^{3} a_{i}{ }^{(i)} T_{\alpha}\right),$	$H_{\alpha}=-\frac{1}{\ell^{2}} *\left(\sum_{i=1}^{3} a_{i}{ }^{(i)} T_{\alpha}\right),$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ0192 (4.1.2)	081	0.924 N|+0	a:=\left[\begin{array}{c|c} g & \mathrm{a} \\ \hline 0 & 1 \end{array}\right]=\left[\begin{array}{c|c} \mathbb{1}_{n} & \mathrm{a} \\ \hline 0 & 1 \end{array}\right]\left[\begin{array}{c|c} g & 0 \\ \hline 0 & 1 \end{array}\right]=a^{\mathrm{T}} \cdot a^{\mathrm{L}} \in A(n, \mathbb{R}) .	$a:=\left[\begin{array}{c\|c} g & \mathrm{a} \\ \hline 0 & 1 \end{array}\right]=\left[\begin{array}{c\|c} \mathbb{1}_{n} & \mathrm{a} \\ \hline 0 & 1 \end{array}\right]\left[\begin{array}{c\|c} g & 0 \\ \hline 0 & 1 \end{array}\right]=a^{\mathrm{T}} \cdot a^{\mathrm{L}} \in A(n, \mathbb{R}) .$	$a:=\left[\begin{array}{c\|c} g & \mathrm{a} \\ \hline 0 & 1 \end{array}\right]=\left[\begin{array}{c\|c} \mathbb{1}_{n} & \mathrm{a} \\ \hline 0 & 1 \end{array}\right]\left[\begin{array}{c\|c} g & 0 \\ \hline 0 & 1 \end{array}\right]=a^{\mathrm{T}} \cdot a^{\mathrm{L}} \in A(n, \mathbb{R}) .$
mielke-geometrodynamics_EQ0857 (12.4.4)	278	0.925 U|+3	\left.\mathbf{Ł}_{n} \mathscr{G}^{A} \cong n\right \rfloor\left(D \underline{\tau}^{A}\right),	*(not rendered)*	$\text{Ł}_{n} \mathscr{G}^{A} \cong n\rfloor\left(D \underline{\tau}^{A}\right),$
mielke-geometrodynamics_EQ1025 (15.1.1)	336	0.926 W|-1	\begin{aligned} L_{f-g}= & \frac{1}{\ell^{2}} L_{\mathrm{W}}(f)+\frac{1}{\ell^{* 2}} L_{ \mathrm{W}}(g)+L_{f g}+\frac{\Lambda}{\ell^{* 2}} \vartheta^{g} \wedge \vartheta^{g} \wedge \vartheta^{g} \wedge \vartheta^{g} \\ & +L_{\mathrm{m}} \text { (hadrons, f) }+\mathrm{L}_{\mathrm{m}} \text { (leptons, g). } \end{aligned}	$\begin{aligned} L_{f-g}= & \frac{1}{\ell^{2}} L_{\mathrm{W}}(f)+\frac{1}{\ell^{* 2}} L_{ \mathrm{W}}(g)+L_{f g}+\frac{\Lambda}{\ell^{* 2}} \vartheta^{g} \wedge \vartheta^{g} \wedge \vartheta^{g} \wedge \vartheta^{g} \\ & +L_{\mathrm{m}} \text { (hadrons, f) }+\mathrm{L}_{\mathrm{m}} \text { (leptons, g). } \end{aligned}$	$\begin{aligned} L_{f-g}= & \frac{1}{\ell^{2}} L_{\mathrm{W}}(f)+\frac{1}{\ell^{* 2}} L_{ \mathrm{W}}(g)+L_{f g}+\frac{\Lambda}{\ell^{* 2}} \vartheta^{g} \wedge \vartheta^{g} \wedge \vartheta^{g} \wedge \vartheta^{g} \\ & +L_{\mathrm{m}} \text { (hadrons, f) }+\mathrm{L}_{\mathrm{m}} \text { (leptons, g). } \end{aligned}$
mielke-geometrodynamics_EQ0109 (3.3.10)	058	0.927 N|-1	L_{\mathrm{Max}}=-\frac{1}{2} F \wedge{ }^{*} F,	$L_{\mathrm{Max}}=-\frac{1}{2} F \wedge{ }^{*} F,$	$L_{\mathrm{Max}}=-\frac{1}{2} F \wedge{ }^{*} F,$
mielke-geometrodynamics_EQ0587 (9.1.5)	194	0.928 N|+0	d r^{*}:=e^{(\lambda-v) / 2)} d r .	$dr^{*}:=e^{(\lambda-v) / 2)} dr .$	$dr^{*}:=e^{(\lambda-v) / 2)} dr .$
mielke-geometrodynamics_EQ1101 (B.13)	370	0.929 W|-1	*(\underbrace{\vartheta \wedge \cdots \wedge \vartheta}_{ \mathrm{p} \text { products }})=\frac{p!}{(n-p!)} \underbrace{\vartheta \wedge \cdots \wedge \vartheta}_{ \mathrm{n}-\mathrm{p} \text { products }}(\star),	$*(\underbrace{\vartheta \wedge \cdots \wedge \vartheta}_{\text{p products}})=\frac{p!}{(n-p!)} \underbrace{\vartheta \wedge \cdots \wedge \vartheta}_{\text{n−p products}}(\star),$	$*(\underbrace{\vartheta \wedge \cdots \wedge \vartheta}_{\text{p products}})=\frac{p!}{(n-p!)} \underbrace{\vartheta \wedge \cdots \wedge \vartheta}_{\text{n−p products}}(\star),$
mielke-geometrodynamics_EQ0413 (6.5.1)	137	0.929 N|+0	W(A, \gamma)=\operatorname{Tr} \mathbf{P} \exp \oint A=\operatorname{Tr} \mathbf{P} \exp \oint d s \dot{ \gamma}^{i}(s) A_{i}^{J}(\gamma(s)) \lambda_{J},	$W(A, \gamma)=\operatorname{Tr} \mathbf{P} \exp \oint A=\operatorname{Tr} \mathbf{P} \exp \oint d s \dot{\gamma}^{i}(s) A_{i}^{J}(\gamma(s)) \lambda_{J},$	$W(A, \gamma)=\operatorname{Tr} \mathbf{P} \exp \oint A=\operatorname{Tr} \mathbf{P} \exp \oint d s \dot{\gamma}^{i}(s) A_{i}{}^{J}(\gamma(s)) \lambda_{J},$
mielke-geometrodynamics_EQ0465 (7.3.4)	153	0.929 N|+1	\left.\left.E_{\alpha}:=\partial L_{\mathrm{SKY}} / \partial \vartheta^{\alpha}=\frac{1}{2}\left(e_{\alpha} \right\rfloor R^{\mu \nu} \wedge{ }^{*} R_{\mu \nu}-R^{ \mu \nu} \wedge e_{\alpha}\right\rfloor{ }^{*} R_{\mu \nu}\right)=0	$\left.\left.E_{\alpha}:=\partial L_{\mathrm{SKY}} / \partial \vartheta^{\alpha}=\frac{1}{2}\left(e_{\alpha} \right\rfloor R^{\mu \nu} \wedge{ }^{*} R_{\mu \nu}-R^{ \mu \nu} \wedge e_{\alpha}\right\rfloor{ }^{*} R_{\mu \nu}\right)=0$	$\left.\left.E_{\alpha}:=\partial L_{\mathrm{SKY}} / \partial \vartheta^{\alpha}=\frac{1}{2}\left(e_{\alpha} \right\rfloor R^{\mu \nu} \wedge{ }^{*} R_{\mu \nu}-R^{ \mu \nu} \wedge e_{\alpha}\right\rfloor{ }^{*} R_{\mu \nu}\right)=0$
mielke-geometrodynamics_EQ1034 (15.1.11)	338	0.930 N|+0	\Lambda_{\text {eff. }}^{f}=\frac{2 a}{\kappa b} \Lambda-2 a \ell^{2 *} L_{f g}	$\Lambda_{\text {eff. }}^{f}=\frac{2 a}{\kappa b} \Lambda-2 a \ell^{2 *} L_{f g}$	$\Lambda_{\text {eff. }}^{f}=\frac{2 a}{\kappa b} \Lambda-2 a \ell^{2 *} L_{f g}$
mielke-geometrodynamics_EQ0512 (7.7.30)	165	0.931 W|-1	\begin{aligned} \Omega^{g}:=d \Gamma+\Gamma \wedge \Gamma & =\frac{i}{4}\left(d \Gamma_{\alpha}{ }^{\beta}-\Gamma_{ \alpha}{ }^{\gamma} \wedge \Gamma_{\gamma}{ }^{\beta} \right) \sigma^{\alpha}{ }_{\beta} \\ & =\frac{i}{4} R^{ \alpha \beta} \sigma_{\alpha \beta}=\frac{i}{8} R_{i j}{ }^{\alpha \beta} \sigma_{\alpha \beta} d x^{i} \wedge d x^{j}, \end{aligned}	$\begin{aligned} \Omega^{g}:=d \Gamma+\Gamma \wedge \Gamma & =\frac{i}{4}\left(d \Gamma_{\alpha}{ }^{\beta}-\Gamma_{ \alpha}{ }^{\gamma} \wedge \Gamma_{\gamma}{ }^{\beta}\right) \sigma^{\alpha}{ }_{\beta} \\ & =\frac{i}{4} R^{ \alpha \beta} \sigma_{\alpha \beta}=\frac{i}{8} R_{i j}{ }^{\alpha \beta} \sigma_{\alpha \beta} d x^{i} \wedge d x^{j}, \end{aligned}$	$\begin{aligned} \Omega^{g}:=d \Gamma+\Gamma \wedge \Gamma & =\frac{i}{4}\left(d \Gamma_{\alpha}{ }^{\beta}-\Gamma_{ \alpha}{ }^{\gamma} \wedge \Gamma_{\gamma}{ }^{\beta}\right) \sigma^{\alpha}{ }_{\beta} \\ & =\frac{i}{4} R^{ \alpha \beta} \sigma_{\alpha \beta}=\frac{i}{8} R_{i j}{ }^{\alpha \beta} \sigma_{\alpha \beta} d x^{i} \wedge d x^{j}, \end{aligned}$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

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mielke-geometrodynamics_EQ0854 (12.4.1)	277	■ 0.931 ● C|+4	`\stackrel{(\pm)}{V}_{\mathrm{EC}}:=V_{\mathrm{EC}} \pm i d C_{\mathrm{TT}}= \pm \frac{1}{2 \ell^{2}} \operatorname{Tr}\left\{\left(1 \mp \gamma_{5}\right) \Omega \wedge \sigma\right\}=-\frac{1}{2 \ell^{2}} \stackrel{(\pm)}{R}{ }^{\alpha \beta} \wedge \eta_{ \alpha \beta}+\frac{\Lambda}{\ell^{2}} \eta`	$\overset{(\pm)}{V}_{\mathrm{EC}}:=V_{\mathrm{EC}} \pm i d C_{\mathrm{TT}}= \pm \frac{1}{2 \ell^{2}} \operatorname{Tr}\left\{\left(1 \mp \gamma_{5}\right) \Omega \wedge \sigma\right\}=-\frac{1}{2 \ell^{2}} \overset{(\pm)}{R}{ }^{\alpha \beta} \wedge \eta_{ \alpha \beta}+\frac{\Lambda}{\ell^{2}} \eta$	$\overset{(\pm)}{V}_{\mathrm{EC}}:=V_{\mathrm{EC}} \pm i d C_{\mathrm{TT}}= \pm \frac{1}{2 \ell^{2}} \operatorname{Tr}\left\{\left(1 \mp \gamma_{5}\right) \Omega \wedge \sigma\right\}=-\frac{1}{2 \ell^{2}} \overset{(\pm)}{R}{ }^{\alpha \beta} \wedge \eta_{ \alpha \beta}+\frac{\Lambda}{\ell^{2}} \eta$
mielke-geometrodynamics_EQ0530 (7.7.50)	169	■ 0.931 ● N|+1	`\left.{ }^{*} R_{\alpha \beta}^{(\star)} \equiv(-1)^{ \mathrm{sig}} R_{\alpha \beta}+e_{[\alpha}\right\rfloor G_{\beta]}+\frac{1}{4} R \eta_{\alpha \beta}+(-1)^{ \mathrm{sig}+1} D_{[\alpha} T_{\beta]}`	$\left.{}^{*} R_{\alpha \beta}^{(\star)} \equiv(-1)^{ \mathrm{sig}} R_{\alpha \beta}+e_{[\alpha}\right\rfloor G_{\beta]}+\frac{1}{4} R \eta_{\alpha \beta}+(-1)^{ \mathrm{sig}+1} D_{[\alpha} T_{\beta]}$	$\left.{}^{*} R_{\alpha \beta}^{(\star)} \equiv(-1)^{ \mathrm{sig}} R_{\alpha \beta}+e_{[\alpha}\right\rfloor G_{\beta]}+\frac{1}{4} R \eta_{\alpha \beta}+(-1)^{ \mathrm{sig}+1} D_{[\alpha} T_{\beta]}$
mielke-geometrodynamics_EQ0556 (8.4.10)	180	■ 0.933 ● N|+0	`R_{\alpha \beta}=\mp{ }^{*} R_{\alpha \beta}^{(\star)}`	$R_{\alpha \beta}=\mp{}^{*} R_{\alpha \beta}^{(\star)}$	$R_{\alpha \beta}=\mp{}^{*} R_{\alpha \beta}^{(\star)}$
mielke-geometrodynamics_EQ0547 (8.4.1)	178	■ 0.935 ● N|+0	`\begin{aligned} L_{\mathrm{Pontr}} & :=d C_{\mathrm{RR}}= \operatorname{Tr}\left\{\Omega^{g} \wedge \Omega^{g} \right\}=\frac{1}{2} R_{\alpha}{ }^{\beta} \wedge R_{ \beta}{ }^{\alpha} \\ & =\frac{1}{2} d\left(\Gamma_{ \alpha}{ }^{\beta} \wedge R_{\beta}{ }^{\alpha}- \frac{1}{3} \Gamma_{\alpha}{ }^{\beta} \wedge \Gamma_{ \beta}{ }^{\gamma} \wedge \Gamma_{\gamma}{ }^{\alpha} \right) \end{aligned}`	$\begin{aligned} L_{\mathrm{Pontr}} & :=d C_{\mathrm{RR}}= \operatorname{Tr}\left\{\Omega^{g} \wedge \Omega^{g} \right\}=\frac{1}{2} R_{\alpha}{ }^{\beta} \wedge R_{ \beta}{ }^{\alpha} \\ & =\frac{1}{2} d\left(\Gamma_{ \alpha}{ }^{\beta} \wedge R_{\beta}{ }^{\alpha}- \frac{1}{3} \Gamma_{\alpha}{ }^{\beta} \wedge \Gamma_{ \beta}{ }^{\gamma} \wedge \Gamma_{\gamma}{ }^{\alpha} \right) \end{aligned}$	$\begin{aligned} L_{\mathrm{Pontr}} & :=d C_{\mathrm{RR}}= \operatorname{Tr}\left\{\Omega^{g} \wedge \Omega^{g} \right\}=\frac{1}{2} R_{\alpha}{ }^{\beta} \wedge R_{ \beta}{ }^{\alpha} \\ & =\frac{1}{2} d\left(\Gamma_{ \alpha}{ }^{\beta} \wedge R_{\beta}{ }^{\alpha}- \frac{1}{3} \Gamma_{\alpha}{ }^{\beta} \wedge \Gamma_{ \beta}{ }^{\gamma} \wedge \Gamma_{\gamma}{ }^{\alpha} \right) \end{aligned}$
mielke-geometrodynamics_EQ0824 (11.4.38)	259	■ 0.935 ● W|+0	`\left.\left.r_{s} \equiv\langle | \vec{x}\right|^{2} \right\rangle_{\psi}^{1 / 2}:=\left(\frac{\int_{H^{3}}| \vec{x}|^{2} \bar{\psi}^{*} \gamma \psi}{\int_{H^{3}} \bar{\psi}^{*} \gamma \psi}\right)^{1 / 2} .`	$r_{s} \equiv\left\langle\left\|\vec{x}\right\|^{2}\right\rangle_{\psi}^{1 / 2}:=\left(\frac{\int_{H^{3}}\left\|\vec{x}\right\|^{2} \bar{\psi}^{*} \gamma \psi}{\int_{H^{3}} \bar{\psi}^{*} \gamma \psi}\right)^{1 / 2} .$	$r_{s} \equiv\left\langle\left\|\vec{x}\right\|^{2}\right\rangle_{\psi}^{1 / 2}:=\left(\frac{\int_{H^{3}}\left\|\vec{x}\right\|^{2} \bar{\psi}^{*} \gamma \psi}{\int_{H^{3}} \bar{\psi}^{*} \gamma \psi}\right)^{1 / 2} .$
mielke-geometrodynamics_EQ0288 (4.4.17)	099	■ 0.936 ● N|+0	`\left[\Omega^{g}, \Pi^{\mathrm{L}}\right]+ \mathrm{E}_{[]}=D \tau_{s}-\Sigma_{[]} .`	$\left[\Omega^{g}, \Pi^{\mathrm{L}}\right]+\mathrm{E}_{[]}=D \tau_{s}-\Sigma_{[]} .$	$\left[\Omega^{g}, \Pi^{\mathrm{L}}\right]+\mathrm{E}_{[]}=D \tau_{s}-\Sigma_{[]} .$
mielke-geometrodynamics_EQ0598 (9.1.16)	196	■ 0.936 ● S|+0	`f=-h=g=k=-\frac{\mu}{r^{2}} e^{-\nu / 2} .`	$f=-h=g=k=-\frac{\mu}{r^{2}} e^{-\nu / 2} .$	$f=-h=g=k=-\frac{\mu}{r^{2}} e^{-\nu / 2} .$
mielke-geometrodynamics_EQ0203 (4.1.17)	083	■ 0.937 ● N|-2	`\stackrel{*}{\sigma}^{*} \vartheta^{\beta}=E_{j}^{\beta} d x^{j}`	$\overset{*}{\sigma}{}^{*} \vartheta^{\beta}=E_{j}^{\beta} d x^{j}$	$\overset{*}{\sigma}{}^{*} \vartheta^{\beta}=E_{j}^{\beta} d x^{j}$
mielke-geometrodynamics_EQ0987 (14.2.28)	319	■ 0.938 ● K|+0	`{ }^{(4)} R=-\frac{8}{3} R_{\circ}^{-2}, \quad{ }^{(7)} \stackrel{\circ}{R}=\frac{7}{3} R_{\circ}^{-2}`	${}^{(4)} R=-\frac{8}{3} R_{\circ}^{-2}, \quad{}^{(7)} \overset{\circ}{R}=\frac{7}{3} R_{\circ}^{-2}$	${}^{(4)} R=-\frac{8}{3} R_{\circ}^{-2}, \quad{}^{(7)} \overset{\circ}{R}=\frac{7}{3} R_{\circ}^{-2}$
mielke-geometrodynamics_EQ0946 (14.1.27)	306	■ 0.939 ● N|+0	`\left(\vartheta \wedge{ }^{*} \Omega^{g}\right) \wedge \left(\vartheta \wedge{ }^{*} \Omega^{g}\right)=\vartheta \wedge \vartheta \wedge{ }^{*}\left(\vartheta \wedge{ }^{*} \Omega^{g} \wedge{ }^{*}\left(\vartheta \wedge{ }^{*} \Omega^{g}\right)\right)`	$\left(\vartheta \wedge{}^{*} \Omega^{g}\right) \wedge\left(\vartheta \wedge{}^{*} \Omega^{g}\right)=\vartheta \wedge \vartheta \wedge{}^{*}\left(\vartheta \wedge{}^{*} \Omega^{g} \wedge{}^{*}\left(\vartheta \wedge{}^{*} \Omega^{g}\right)\right)$	$\left(\vartheta \wedge{}^{*} \Omega^{g}\right) \wedge\left(\vartheta \wedge{}^{*} \Omega^{g}\right)=\vartheta \wedge \vartheta \wedge{}^{*}\left(\vartheta \wedge{}^{*} \Omega^{g} \wedge{}^{*}\left(\vartheta \wedge{}^{*} \Omega^{g}\right)\right)$
mielke-geometrodynamics_EQ0837 (12.2.5)	271	■ 0.939 ● N|+0	`j=\bar{\psi}^{*} \gamma \psi=j^{\mu} \eta_{\mu}, \quad j_{5}:=\bar{\psi} \gamma_{5}{ }^{*} \gamma \psi= \frac{1}{3} \bar{\psi} \sigma \wedge \gamma \psi=j_{5}^{ \mu} \eta_{\mu} .`	$j=\bar{\psi}^{*} \gamma \psi=j^{\mu} \eta_{\mu}, \quad j_{5}:=\bar{\psi} \gamma_{5}{}^{*} \gamma \psi=\frac{1}{3} \bar{\psi} \sigma \wedge \gamma \psi=j_{5}^{\mu} \eta_{\mu} .$	$j=\bar{\psi}^{*} \gamma \psi=j^{\mu} \eta_{\mu}, \quad j_{5}:=\bar{\psi} \gamma_{5}{}^{*} \gamma \psi=\frac{1}{3} \bar{\psi} \sigma \wedge \gamma \psi=j_{5}^{\mu} \eta_{\mu} .$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): ● C component ● W weak ● S stable ● N noise ● K clean ● not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ0135 (3.4.6)	063	0.940 N|-1	`\Pi^{\Omega}=\frac{2}{\alpha_{g}}\left(\frac{\partial L}{ \partial \mathscr{F}}{ }^{*} \Omega+\frac{\partial L}{ \partial^{*} \mathscr{F}} \Omega\right)`	$\Pi^{\Omega}=\frac{2}{\alpha_{g}}\left(\frac{\partial L}{\partial \mathscr{F}}{}^{*}\Omega+\frac{\partial L}{\partial^{*} \mathscr{F}} \Omega\right)$	$\Pi^{\Omega}=\frac{2}{\alpha_{g}}\left(\frac{\partial L}{\partial \mathscr{F}}{}^{*}\Omega+\frac{\partial L}{\partial^{*} \mathscr{F}} \Omega\right)$
mielke-geometrodynamics_EQ0772 (11.2.1)	245	0.943 N|+0	`L_{\mathrm{D}}=\frac{i}{2}\left(\bar{\psi} \gamma \wedge^{*} D \psi+(\overline{D \psi}) \wedge^{*} \gamma \psi\right)-m \bar{\psi} \psi \eta .`	$L_{\mathrm{D}}=\frac{i}{2}\left(\bar{\psi} \gamma \wedge^{*} D \psi+(\overline{D \psi}) \wedge^{*} \gamma \psi\right)-m \bar{\psi} \psi \eta .$	$L_{\mathrm{D}}=\frac{i}{2}\left(\bar{\psi} \gamma \wedge^{*} D \psi+(\overline{D \psi}) \wedge^{*} \gamma \psi\right)-m \bar{\psi} \psi \eta .$
mielke-geometrodynamics_EQ0551 (8.4.5)	179	0.945 W|-2	`\begin{aligned} L_{\mathrm{FP}}= & -\operatorname{Tr}\left\{\beta \wedge{ }^{*} \bar{\Omega}^{g}-\bar{\chi} \wedge^{*} D \Psi^{(\pm)}-\bar{\chi} \wedge^{*}\left[C, \stackrel{ \pm}{\Omega}^{g}\right]\right. \\ & +\bar{ \eta} D^{*} \Psi+\bar{\Phi} D^{*} D \Phi+\bar{\Phi}[\Psi,{ }^{*} \Psi]+\mathbb{B} d^{*} \Gamma \\ & \left.-\bar{C} d^{*} \Psi+\bar{C} d^{*}(D C)+\frac{1}{2} \rho \beta \wedge^{*} \beta+\frac{1}{2} \mathbb{B} \wedge^{*} \mathbb{B}\right\} . \end{aligned}`	$\begin{aligned} L_{\mathrm{FP}}= & -\operatorname{Tr}\left\{\beta \wedge{ }^{*} \bar{\Omega}^{g}-\bar{\chi} \wedge^{*} D \Psi^{(\pm)}-\bar{\chi} \wedge^{*}\left[C, \stackrel{ \pm}{\Omega}^{g}\right]\right. \\ & +\bar{ \eta} D^{*} \Psi+\bar{\Phi} D^{*} D \Phi+\bar{\Phi}[\Psi,{ }^{*} \Psi]+\mathbb{B} d^{*} \Gamma \\ & \left.-\bar{C} d^{*} \Psi+\bar{C} d^{*}(D C)+\frac{1}{2} \rho \beta \wedge^{*} \beta+\frac{1}{2} \mathbb{B} \wedge^{*} \mathbb{B}\right\} . \end{aligned}$	$\begin{aligned} L_{\mathrm{FP}}= & -\operatorname{Tr}\left\{\beta \wedge{ }^{*} \bar{\Omega}^{g}-\bar{\chi} \wedge^{*} D \Psi^{(\pm)}-\bar{\chi} \wedge^{*}\left[C, \stackrel{ \pm}{\Omega}^{g}\right]\right. \\ & +\bar{ \eta} D^{*} \Psi+\bar{\Phi} D^{*} D \Phi+\bar{\Phi}[\Psi,{ }^{*} \Psi]+\mathbb{B} d^{*} \Gamma \\ & \left.-\bar{C} d^{*} \Psi+\bar{C} d^{*}(D C)+\frac{1}{2} \rho \beta \wedge^{*} \beta+\frac{1}{2} \mathbb{B} \wedge^{*} \mathbb{B}\right\} . \end{aligned}$
mielke-geometrodynamics_EQ1069 (16.2.8)	356	0.945 N|+0	`V_{\text {eff }}^{\iota}\left(\rho^{*}\right)=\frac{1 \pm \rho^{2}}{\rho^{2}}\left[\iota(\iota+1)-\left(2-\frac{1}{\beta}\right) \rho^{2}\right], \begin{aligned} & \kappa>0 \\ & (\kappa<0) . \end{aligned}`	$V_{\text {eff }}^{\iota}\left(\rho^{*}\right)=\frac{1 \pm \rho^{2}}{\rho^{2}}\left[\iota(\iota+1)-\left(2-\frac{1}{\beta}\right) \rho^{2}\right], \begin{aligned} & \kappa>0 \\ & (\kappa<0) . \end{aligned}$	$V_{\text {eff }}^{\iota}\left(\rho^{*}\right)=\frac{1 \pm \rho^{2}}{\rho^{2}}\left[\iota(\iota+1)-\left(2-\frac{1}{\beta}\right) \rho^{2}\right], \begin{aligned} & \kappa>0 \\ & (\kappa<0) . \end{aligned}$
mielke-geometrodynamics_EQ0593 (9.1.11)	195	0.945 N|+0	`R={ }^{*}\left(\Omega^{g} \wedge \vartheta \wedge \vartheta\right)=-\frac{6 \kappa \gamma}{\ell^{* 2}}=4 \Lambda_{\text {eff }} .`	$R={ }^{*}\left(\Omega^{g} \wedge \vartheta \wedge \vartheta\right)=-\frac{6 \kappa \gamma}{\ell^{* 2}}=4 \Lambda_{\text {eff }} .$	$R={ }^{*}\left(\Omega^{g} \wedge \vartheta \wedge \vartheta\right)=-\frac{6 \kappa \gamma}{\ell^{* 2}}=4 \Lambda_{\text {eff }} .$
mielke-geometrodynamics_EQ0851 (12.3.4)	276	0.946 N|+1	`\begin{aligned} & \operatorname{Tr}\left(\gamma_{5} K_{2}\right)=-d^{*} \mathscr{A} \\ & \operatorname{Tr}\left(\gamma_{5} K_{4}\right)=\frac{1}{6}\left[\operatorname{Tr}\left(R^{\{ \}} \wedge R^{\{ \}}\right)-\frac{1}{4} d \mathscr{A} \wedge d \mathscr{A}+d \mathscr{K}\right], \end{aligned}`	$\begin{aligned} & \operatorname{Tr}\left(\gamma_{5} K_{2}\right)=-d^{*} \mathscr{A} \\ & \operatorname{Tr}\left(\gamma_{5} K_{4}\right)=\frac{1}{6}\left[\operatorname{Tr}\left(R^{\{ \}} \wedge R^{\{ \}}\right)-\frac{1}{4} d \mathscr{A} \wedge d \mathscr{A}+d \mathscr{K}\right], \end{aligned}$	$\begin{aligned} & \operatorname{Tr}\left(\gamma_{5} K_{2}\right)=-d^{*} \mathscr{A} \\ & \operatorname{Tr}\left(\gamma_{5} K_{4}\right)=\frac{1}{6}\left[\operatorname{Tr}\left(R^{\{ \}} \wedge R^{\{ \}}\right)-\frac{1}{4} d \mathscr{A} \wedge d \mathscr{A}+d \mathscr{K}\right], \end{aligned}$
mielke-geometrodynamics_EQ0815 (11.4.29)	257	0.946 N|+2	`\begin{aligned} & H^{\prime} \simeq \frac{1+\omega}{ \beta} F \\ & F^{\prime}+\frac{2}{\rho} F \simeq \frac{1-\omega}{\beta} H \end{aligned}`	$\begin{aligned} & H^{\prime} \simeq \frac{1+\omega}{ \beta} F \\ & F^{\prime}+\frac{2}{\rho} F \simeq \frac{1-\omega}{\beta} H \end{aligned}$	$\begin{aligned} & H^{\prime} \simeq \frac{1+\omega}{ \beta} F, \\ & F^{\prime}+\frac{2}{\rho} F \simeq \frac{1-\omega}{\beta} H . \end{aligned}$
mielke-geometrodynamics_EQ1021 (14.4.16)	328	0.947 N|-1	`S_{\mathrm{A}}:=4 \pi r_{+}^{2}=16 \pi M_{ \mathrm{ir}}^{2} \frac{\hbar^{2}}{M^{* 4} c^{2}},`	$S_{\mathrm{A}}:=4 \pi r_{+}^{2}=16 \pi M_{\mathrm{ir}}^{2} \frac{\hbar^{2}}{M^{* 4} c^{2}},$	$S_{\mathrm{A}}:=4 \pi r_{+}^{2}=16 \pi M_{\mathrm{ir}}^{2} \frac{\hbar^{2}}{M^{* 4} c^{2}},$
mielke-geometrodynamics_EQ0855 (12.4.2)	277	0.947 N|+0	`\mathscr{H}_{\Lambda} \Psi(\underline{\stackrel{(1)}{ \Gamma}})=0`	$\mathscr{H}_{\Lambda} \Psi(\underline{\stackrel{(1)}{ \Gamma}})=0$	$\mathscr{H}_{\Lambda} \Psi(\underline{\stackrel{(\pm)}{ \Gamma}})=0$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ0452 (7.2.5)	151	0.948 W|+0	`C_{. . c d}^{a b}=R_{. . c d}^{a b}-2 R_{.[c}^{[a \cdot} \delta_{d]}^{b]}+\frac{R}{6} \delta_{[c}^{a} \delta_{d]}^{b} .`	$C^{ab}_{..cd} = R^{ab}_{..cd} - 2R^{[a\cdot}_{\cdot[c}\delta^{b]}_{d]} + \frac{R}{6}\delta^{a}_{[c}\delta^{b}_{d]}.$	$C^{ab}_{..cd} = R^{ab}_{..cd} - 2R^{[a\cdot}_{\cdot[c}\delta^{b]}_{d]} + \frac{R}{6}\delta^{a}_{[c}\delta^{b}_{d]}.$
mielke-geometrodynamics_EQ0061 (2.8.2)	046	0.949 N|+1	`{ }^{*}\left(\gamma_{k}\right)=\frac{(-1)^{k}}{(2 \pi i)^{k} k!} \operatorname{Tr}(\Omega \wedge \cdots \wedge \Omega) .`	${}^{*}(\gamma_k) = \frac{(-1)^k}{(2\pi i)^k k!}\operatorname{Tr}(\Omega \wedge \cdots \wedge \Omega).$	$\overset{*}{\pi}(\gamma_k) = \frac{(-1)^k}{(2\pi i)^k k!}\operatorname{Tr}(\Omega \wedge \cdots \wedge \Omega).$
mielke-geometrodynamics_EQ0756 (11.1.23)	242	0.950 W|+1	`\begin{aligned} S(p) & =\exp \imath \theta_{\alpha \beta}(m) \Lambda^{-1}\left(L^{\alpha \beta}\right)=\exp \imath \theta_{\alpha \beta}(m) \sigma^{\alpha \beta} \\ & =\exp \left(-\frac{1}{4} \theta_{\alpha \beta}(m) \left[\gamma^{\alpha}, \gamma^{\beta}\right]\right) . \end{aligned}`	$\begin{aligned} S(p) & =\exp \imath \theta_{\alpha \beta}(m) \Lambda^{-1}\left(L^{\alpha \beta}\right)=\exp \imath \theta_{\alpha \beta}(m) \sigma^{\alpha \beta} \\ & =\exp \left(-\frac{1}{4} \theta_{\alpha \beta}(m) \left[\gamma^{\alpha}, \gamma^{\beta}\right]\right) . \end{aligned}$	$\begin{aligned} S(p) & =\exp \imath \theta_{\alpha \beta}(m) \Lambda^{-1}\left(L^{\alpha \beta}\right)=\exp \imath \theta_{\alpha \beta}(m) \sigma^{\alpha \beta} \\ & =\exp \left(-\frac{1}{4} \theta_{\alpha \beta}(m) \left[\gamma^{\alpha}, \gamma^{\beta}\right]\right) . \end{aligned}$
mielke-geometrodynamics_EQ0939 (14.1.20)	305	0.950 N|+0	`\xi \wedge \xi=0 \quad(=2 \vec{E} \cdot \vec{B} \text { in 3-dimensional vector notation })`	$\xi \wedge \xi = 0 \quad (= 2\vec{E}\cdot\vec{B}$ in 3-dimensional vector notation)	$\xi \wedge \xi = 0 \quad (= 2\vec{E}\cdot\vec{B}$ in 3-dimensional vector notation)
mielke-geometrodynamics_EQ0568 (8.6.5)	183	0.950 C|-4	`L_{\theta}:=\theta_{\mathrm{T}} d C_{\mathrm{TT}}+ \theta_{\mathrm{T}}^{*} d C_{\mathrm{TT}^{*}}+\theta_{ \mathrm{L}} d C_{\mathrm{RR}}+\theta_{\mathrm{L}}^{ \star}(-1)^{\mathrm{sig}+1} d C_{\mathrm{RR}^{*}}=d C_{ \theta} .`	$L_\theta := \theta_{\mathrm{T}} dC_{\mathrm{TT}} + \theta^*_{\mathrm{T}} dC_{\mathrm{TT}^*} + \theta_{\mathrm{L}} dC_{\mathrm{RR}} + \theta^\star_{\mathrm{L}}(-1)^{\mathrm{sig}+1} dC_{\mathrm{RR}^*} = dC_\theta.$	$L_\theta := \theta_{\mathrm{T}} dC_{\mathrm{TT}} + \theta^*_{\mathrm{T}} dC_{\mathrm{TT}^*} + \theta_{\mathrm{L}} dC_{\mathrm{RR}} + \theta^\star_{\mathrm{L}}(-1)^{\mathrm{sig}+1} dC_{\mathrm{RR}^*} = dC_\theta .$
mielke-geometrodynamics_EQ0234 (4.2.27)	088	0.950 N|+0	`\widetilde{\widetilde{D}} \widetilde{\widetilde{ \varphi}}=D \widetilde{\widetilde{\varphi}}=0`	$\widetilde{\widetilde{D}}\widetilde{\widetilde{\varphi}} = D\widetilde{\widetilde{\varphi}} = 0$	$\widetilde{\widetilde{D}}\widetilde{\widetilde{\varphi}} = D\widetilde{\widetilde{\varphi}} = 0$
mielke-geometrodynamics_EQ0302 (4.5.9)	102	0.950 W|+0	`\begin{aligned} \widehat{D} \Sigma_{\alpha} & \left.\cong \left(e_{\alpha}\right\rfloor R_{\beta}^{\gamma}\right) \wedge \Delta^{\beta} \gamma \\ & \left.-\frac{1}{2} \left(e_{\alpha}\right\rfloor Q_{\beta \gamma}\right) \wedge \sigma^{\beta \gamma} \end{aligned}`	$\begin{aligned} \widehat{D} \Sigma_{\alpha} & \left.\cong \left(e_{\alpha}\right\rfloor R_{\beta}^{\gamma}\right) \wedge \Delta^{\beta} \gamma \\ & \left.-\frac{1}{2} \left(e_{\alpha}\right\rfloor Q_{\beta \gamma}\right) \wedge \sigma^{\beta \gamma} \end{aligned}$	$\begin{aligned} \widehat{D} \Sigma_{\alpha} & \left.\cong \left(e_{\alpha}\right\rfloor R_{\beta}^{\gamma}\right) \wedge \Delta^{\beta} \gamma \\ & \left.-\frac{1}{2} \left(e_{\alpha}\right\rfloor Q_{\beta \gamma}\right) \wedge \sigma^{\beta \gamma} \end{aligned}$
mielke-geometrodynamics_EQ0151 (3.4.22)	066	0.951 C|-4	`L_{\text {Mills }}\left(\mathscr{F},{ }^{*} \mathscr{F} \right)=\mathscr{F}\left[1-\left(1+\frac{1}{b^{2}} \mathscr{F}^{2}\right)^{-1}\right]`	$L_{\text{Mills}}\left(\mathscr{F},{}^{*}\mathscr{F}\right) = \mathscr{F}\left[1-\left(1+\frac{1}{b^2}\mathscr{F}^2\right)^{-1}\right]$	$L_{\text{Mills}}\left(\mathscr{F},{}^{*}\mathscr{F}\right) = \mathscr{F}\left[1-\left(1+\frac{1}{b^2}\mathscr{F}^2\right)^{-1}\right]$
mielke-geometrodynamics_EQ0560 (8.5.3)	181	0.953 N|+0	`\stackrel{ \pm}{\Omega^{g}}=i \frac{\theta_{ \mathrm{T}}^{*}}{4 \ell^{2}} \sigma`	$\overset{\pm}{\Omega}{}^{g} = i\frac{\theta^*_{\mathrm{T}}}{4\ell^2}\sigma$	$\overset{\pm}{\Omega}{}^{g} = i\frac{\theta^*_{\mathrm{T}}}{4\ell^2}\sigma$
mielke-geometrodynamics_EQ1106 (B.18)	370	0.953 N|+0	`\delta \alpha^{(p)}:=(-1)^{p n+n+1+s *} d^{*} \alpha^{(p)} .`	$\delta\alpha^{(p)} := (-1)^{pn+n+1+s*} d^*\alpha^{(p)}.$	$\delta\alpha^{(p)} := (-1)^{pn+n+1+s\,*} d^*\alpha^{(p)}.$
mielke-geometrodynamics_EQ0786 (11.3.5)	248	0.954 W|+1	`\begin{aligned} L_{\mathrm{NL}} & =-3 \ell^{* 2} \tau_{s} \wedge^{*} \tau_{s}=3 \ell^{* 2} \bar{\psi}^{*} \gamma \psi \wedge^{*}\left(\bar{\psi}^{*} \gamma \psi\right) \\ & =3 \ell^{* 2} \bar{\psi} \gamma^{n+1} \gamma \psi \wedge^{*}\left(\bar{\psi} \gamma^{n+1} \gamma \psi\right) . \end{aligned}`	$\begin{aligned} L_{\mathrm{NL}} & =-3 \ell^{* 2} \tau_{s} \wedge^{*} \tau_{s}=3 \ell^{* 2} \bar{\psi}^{*} \gamma \psi \wedge^{*}\left(\bar{\psi}^{*} \gamma \psi\right) \\ & =3 \ell^{* 2} \bar{\psi} \gamma^{n+1} \gamma \psi \wedge^{*}\left(\bar{\psi} \gamma^{n+1} \gamma \psi\right) . \end{aligned}$	$\begin{aligned} L_{\mathrm{NL}} & =-3 \ell^{* 2} \tau_{s} \wedge^{*} \tau_{s}=3 \ell^{* 2} \bar{\psi}^{*} \gamma \psi \wedge^{*}\left(\bar{\psi}^{*} \gamma \psi\right) \\ & =3 \ell^{* 2} \bar{\psi} \gamma^{n+1} \gamma \psi \wedge^{*}\left(\bar{\psi} \gamma^{n+1} \gamma \psi\right) . \end{aligned}$

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Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

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mielke-geometrodynamics_EQ0727 (10.10.7)	231	0.955 W|+2	\begin{aligned} i \gamma^{\alpha} \Psi \wedge \frac{ \delta L}{\delta \vartheta^{\alpha}}+ & c \gamma \wedge \frac{\delta L}{\delta \bar{\Psi}}-2 D \frac{\delta L}{\delta \bar{\Psi}} \\ \cong & i \gamma^{\alpha} \Psi \wedge\left(\frac{\theta_{\mathrm{TL}}}{\ell} R_{ \alpha}^{\star}+\frac{\theta_{\mathrm{T}}}{\ell^{2}} T_{ \alpha}+\Sigma_{\alpha}\right) \\ & +c \gamma \wedge \left(\frac{i}{2} D \Psi+\frac{i}{4} m \gamma \wedge \Psi\right)-D\left(i D \Psi+\frac{i}{2} m \gamma \wedge \Psi\right) \\ = & i \gamma^{\alpha} \Psi \wedge\left(\frac{\theta_{\mathrm{TL}}}{\ell} R_{\alpha}^{\star}+ \frac{\theta_{\mathrm{T}}}{\ell^{2}} T_{\alpha}\right)+ \gamma^{\alpha} \Psi \wedge\left(\frac{1}{4} m \bar{ \Psi} \gamma_{\alpha} \Psi\right) \\ & +c \gamma \wedge \left(\frac{i}{2} D \Psi+\frac{i}{4} m \gamma \wedge \Psi\right)-i R_{\alpha}^{\star} \gamma^{\alpha} \Psi- \frac{i}{2} m T_{\alpha} \gamma^{\alpha} \Psi \\ & + \frac{i}{2} m \gamma \wedge D \Psi . \end{aligned}	$$\begin{aligned} i\gamma^{\alpha}\Psi \wedge \frac{\delta L}{\delta \vartheta^{\alpha}}+c\gamma \wedge \frac{\delta L}{\delta \bar{\Psi}} - 2D\frac{\delta L}{\delta \bar{\Psi}} \\ \cong & i\gamma^{\alpha}\Psi \wedge \left(\frac{\theta_{\mathrm{TL}}}{\ell} R^{\star}_{\alpha} + \frac{\theta_{\mathrm{T}}}{\ell^2} T_{\alpha} + \Sigma_{\alpha}\right) \\ & + c\gamma \wedge \left(\frac{i}{2} D\Psi + \frac{i}{4} m\gamma \wedge \Psi\right) - D\left(iD\Psi + \frac{i}{2} m\gamma \wedge \Psi\right) \\ = & i\gamma^{\alpha}\Psi \wedge \left(\frac{\theta_{\mathrm{TL}}}{\ell} R^{\star}_{\alpha} + \frac{\theta_{\mathrm{T}}}{\ell^2} T_{\alpha}\right) + \gamma^{\alpha}\Psi \wedge \left(\frac{1}{4} m\bar{\Psi}\gamma_{\alpha}\Psi\right) \\ & + c\gamma \wedge \left(\frac{i}{2} D\Psi + \frac{i}{4} m\gamma \wedge \Psi\right) - iR^{\star}_{\alpha}\gamma^{\alpha}\Psi - \frac{i}{2} mT_{\alpha}\gamma^{\alpha}\Psi \\ & + \frac{i}{2} m\gamma \wedge D\Psi. \end{aligned}$$	$$\begin{aligned} i\gamma^{\alpha}\Psi \wedge \frac{\delta L}{\delta \vartheta^{\alpha}} + c\gamma \wedge \frac{\delta L}{\delta \overline{\Psi}} - 2D\frac{\delta L}{\delta \overline{\Psi}} \\ \cong & i\gamma^{\alpha}\Psi \wedge \left(\frac{\theta_{\mathrm{TL}}}{\ell} R^{\star}_{\alpha} + \frac{\theta_{\mathrm{T}}}{\ell^2} T_{\alpha} + \Sigma_{\alpha}\right) \\ & + c\gamma \wedge \left(\frac{i}{2} D\Psi + \frac{i}{4} m\gamma \wedge \Psi\right) - D\left(iD\Psi + \frac{i}{2} m\gamma \wedge \Psi\right) \\ = & i\gamma^{\alpha}\Psi \wedge \left(\frac{\theta_{\mathrm{TL}}}{\ell} R^{\star}_{\alpha} + \frac{\theta_{\mathrm{T}}}{\ell^2} T_{\alpha}\right) + \gamma^{\alpha}\Psi \wedge \left(\frac{1}{4} m\overline{\Psi\gamma_{\alpha}}\Psi\right) \\ & + c\gamma \wedge \left(\frac{i}{2} D\Psi + \frac{i}{4} m\gamma \wedge \Psi\right) - iR^{\star}_{\alpha}\gamma^{\alpha}\Psi - \frac{i}{2} mT_{\alpha}\gamma^{\alpha}\Psi \\ & + \frac{i}{2} m\gamma \wedge D\Psi. \end{aligned} \quad (10.$$
mielke-geometrodynamics_EQ0768 (11.1.35)	244	0.956 N|+0	\bar{\psi} \longrightarrow{ }^{S^{-1}} \bar{\psi}=\bar{ \psi} S,	$\bar{\psi} \longrightarrow^{S^{-1}} \bar{\psi} = \bar{\psi} S,$	$\overline{\psi} \longrightarrow^{S^{-1}} \overline{\psi} = \overline{\psi} S,$
mielke-geometrodynamics_EQ0973 (14.2.14)	315	0.956 C|+4	\begin{aligned} \hat{\Theta} & :=\hat{D} \hat{\vartheta}= \hat{d} \hat{\vartheta}-[\hat{\omega}, \hat{\vartheta}] \\ & =\left[\begin{array}{l|l} \Theta-\hat{\ell} \omega \wedge \alpha^{\mathrm{T}} & \hat{\ell}\left(d \omega-\omega^{g} \wedge \omega-\omega \wedge \stackrel{\circ}{ \omega}\right)+\vartheta \wedge \alpha+\alpha \wedge \stackrel{\circ}{\vartheta} \\ \hline -\alpha^{\mathrm{T}} \wedge \vartheta-\vartheta \wedge \alpha^{\mathrm{T}} & \stackrel{\circ}{\Theta}-\hat{\ell} \alpha^{\mathrm{T}} \wedge \omega \end{array}\right] . \end{aligned}	$$\begin{aligned} \hat{\Theta} &:= \hat{D}\hat{\vartheta} = \hat{d}\hat{\vartheta} - [\hat{\omega}, \hat{\vartheta}] \\ &= \left[\begin{array}{c\|c} \Theta - \hat{\ell}\,\omega \wedge \alpha^{\mathrm{T}} & \hat{\ell}\left(d\omega - \omega^{g} \wedge \omega - \omega \wedge \overset{\circ}{\omega}\right) + \vartheta \wedge \alpha + \alpha \wedge \overset{\circ}{\vartheta} \\ \hline -\alpha^{\mathrm{T}} \wedge \vartheta - \overset{\circ}{\vartheta} \wedge \alpha^{\mathrm{T}} & \overset{\circ}{\Theta} - \hat{\ell}\,\alpha^{\mathrm{T}} \wedge \omega \end{array}\right]. \end{aligned}$$	$$\begin{aligned} \hat{\Theta} &:= \hat{D}\hat{\vartheta} = \hat{d}\hat{\vartheta} - [\hat{\omega}, \hat{\vartheta}] \\ &= \left[\begin{array}{c\|c} \Theta - \hat{\ell}\,\omega \wedge \alpha^{\mathrm{T}} & \hat{\ell}(d\omega - \omega^{g} \wedge \omega - \omega \wedge \overset{\circ}{\omega}) + \vartheta \wedge \alpha + \alpha \wedge \overset{\circ}{\vartheta} \\ \hline -\alpha^{\mathrm{T}} \wedge \vartheta - \overset{\circ}{\vartheta} \wedge \alpha^{\mathrm{T}} & \overset{\circ}{\Theta} - \hat{\ell}\,\alpha^{\mathrm{T}} \wedge \omega \end{array}\right]. \end{aligned}$$
mielke-geometrodynamics_EQ0761 (11.1.28)	243	0.957 N|+0	\frac{1}{N} \operatorname{Tr}\left(\gamma \otimes_{s} \gamma\right)=d s^{2}=g_{i j}(m) d x^{i} \otimes_{s} d x^{j} .	$\frac{1}{N}\operatorname{Tr}(\gamma \otimes_s \gamma) = ds^2 = g_{ij}(m) dx^i \otimes_s dx^j.$	$\frac{1}{N}\mathrm{Tr}(\gamma \otimes_s \gamma) = ds^2 = g_{ij}(m) dx^i \otimes_s dx^j.$

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mielke-geometrodynamics_EQ0486 (7.7.2)	160	0.957 N|+0	`\begin{aligned} \vartheta^{\alpha} & \left.\rightarrow \widetilde{\vartheta}^{\alpha}:=\vartheta^{\alpha}+ \ell^{2} e_{\beta}\right\rfloor^{*} H^{\alpha \beta}, \\ \Gamma_{\alpha}{ }^{\beta} & \left.\rightarrow \widetilde{\Gamma}_{\alpha}{ }^{\beta}:=\Gamma_{\alpha}{ }^{\beta}+\ell^{2} e_{\alpha}\right\rfloor^{*} H^{\beta} . \end{aligned}`	$\vartheta^{\alpha} \rightarrow \widetilde{\vartheta}^{\alpha}:=\vartheta^{\alpha}+\ell^{2} e_{\beta}\Big\rfloor^{*} H^{\alpha \beta},$ $\Gamma_{\alpha}{}^{\beta} \rightarrow \widetilde{\Gamma}_{\alpha}{}^{\beta}:=\Gamma_{\alpha}{}^{\beta}+\ell^{2} e_{\alpha}\Big\rfloor^{*} H^{\beta}.$	$\vartheta^{\alpha} \rightarrow \widetilde{\vartheta}^{\alpha}:=\vartheta^{\alpha}+\ell^{2} e_{\beta}\rfloor{}^{*} H^{\alpha \beta},$ $\Gamma_{\alpha}{}^{\beta} \rightarrow \widetilde{\Gamma}_{\alpha}{}^{\beta}:=\Gamma_{\alpha}{}^{\beta}+\ell^{2} e_{\alpha}\rfloor{}^{*} H^{\beta}.$
mielke-geometrodynamics_EQ1104 (B.16)	370	0.957 N|+0	`\begin{aligned} \left\langle\alpha^{(p)}, \beta^{(p)} \right\rangle & :=\alpha^{(p)} \wedge^{*} \beta^{(p)}= \beta^{(p)} \wedge^{*} \alpha^{(p)} \\ & =(-1)^{s *} \left(\alpha^{(p)} \wedge^{*} \beta^{(p)}\right) \eta \\ & =\frac{(-1)^{s}}{p!} A^{\alpha_{1} \cdots \alpha_{p}} B_{\alpha_{1} \cdots \alpha_{p}} d \mu(M) \in C^{\infty} \left(\wedge^{n} T^{*}(M)\right) \end{aligned}`	$\left\langle\alpha^{(p)}, \beta^{(p)}\right\rangle := \alpha^{(p)} \wedge^{*} \beta^{(p)}= \beta^{(p)} \wedge^{*} \alpha^{(p)}$ $= (-1)^{s *}\left(\alpha^{(p)} \wedge^{*} \beta^{(p)}\right) \eta$ $= \frac{(-1)^{s}}{p!} A^{\alpha_{1} \cdots \alpha_{p}} B_{\alpha_{1} \cdots \alpha_{p}} d \mu(M) \in C^{\infty}\left(\wedge^{n} T^{*}(M)\right)$	$\langle\alpha^{(p)}, \beta^{(p)}\rangle := \alpha^{(p)} \wedge {}^{*}\beta^{(p)}= \beta^{(p)} \wedge {}^{*}\alpha^{(p)}$ $= (-1)^{s *}(\alpha^{(p)} \wedge {}^{*}\beta^{(p)})\eta$ $= \frac{(-1)^{s}}{p!} A^{\alpha_{1} \cdots \alpha_{p}} B_{\alpha_{1} \cdots \alpha_{p}} d \mu(M) \in C^{\infty}(\wedge^{n} T^{*}(M))$
mielke-geometrodynamics_EQ0537 (8.2.4)	176	0.958 W|+1	`\begin{array}{ll} s \bar{C}=\mathbb{B}, & s \mathbb{B}=0, \\ s \bar{\chi}=\beta, & s \beta=0, \\ s \bar{\Phi}=\bar{ \eta}, & s \bar{\eta}=0 . \end{array}`	$s\bar{C} = \mathbb{B}, \quad s\mathbb{B} = 0,$ $s\bar{\chi} = \beta, \quad s\beta = 0,$ $s\bar{\Phi} = \bar{\eta}, \quad s\bar{\eta} = 0.$	$s\overline{C} = \mathbb{B}, \quad s\mathbb{B} = 0,$ $s\overline{\chi} = \beta, \quad s\beta = 0,$ $s\overline{\Phi} = \overline{\eta}, \quad s\overline{\eta} = 0.$
mielke-geometrodynamics_EQ0269 (4.3.34)	095	0.958 N|+0	`R_{i j}:=R_{\alpha i j}^{\cdots \alpha}`	$R_{ij} := R_{\alpha ij}^{\cdots\alpha}$	$R_{ij} := R_{\alpha ij}^{\cdots\alpha}$
mielke-geometrodynamics_EQ0394 (6.4.9)	132	0.958 W|+2	`\left.\mathscr{H} \cong n^{\alpha} \underline{\Sigma}_{ \alpha}+\Gamma_{\perp}^{\alpha \beta} \rho\left(I_{\alpha \beta}\right) \underline{\Psi} \wedge \frac{\partial L}{ \partial D \Psi}-\underline{d}[(n\rfloor \Psi) \wedge \frac{\partial L}{\partial D \Psi}\right] .`	$\mathscr{H} \cong n^{\alpha} \underline{\Sigma}_{\alpha}+\Gamma_{\perp}^{\alpha \beta} \rho\left(I_{\alpha \beta}\right) \underline{\Psi} \wedge \frac{\partial L}{\partial D \Psi}-\underline{d}[(n\rfloor \Psi) \wedge \frac{\partial L}{\partial D \Psi}\Big].$	$\mathscr{H} \cong n^{\alpha} \underline{\Sigma}_{\alpha}+\Gamma_{\perp}{}^{\alpha \beta} \rho(I_{\alpha \beta})\underline{\Psi} \wedge \underline{\frac{\partial L}{\partial D \Psi}}-\underline{d}\Big[(n\rfloor \Psi) \wedge \underline{\frac{\partial L}{\partial D \Psi}}\Big].$
mielke-geometrodynamics_EQ0406 (6.4.26)	135	0.959 N|-1	`\stackrel{( \pm)( \pm)}{\underline{D}}^{B} \underline{T}^{B}=0`	$\overset{(\pm)(\pm)}{\underline{D}}{}^{B} \underline{T}^{B}=0$	$\overset{(\pm)(\pm)}{\underline{D}}\,\underline{T}^{B}=0$
mielke-geometrodynamics_EQ0458 (7.2.10)	152	0.959 K|+0	`\mathfrak{s o}(4) \approx \mathfrak{s o}(3) \times \mathfrak{s o}(3) \approx \mathfrak{s u}(2) \times \mathfrak{s u}(2) .`	$\mathfrak{so}(4) \approx \mathfrak{so}(3) \times \mathfrak{so}(3) \approx \mathfrak{su}(2) \times \mathfrak{su}(2).$	$\mathfrak{so}(4) \approx \mathfrak{so}(3) \times \mathfrak{so}(3) \approx \mathfrak{su}(2) \times \mathfrak{su}(2).$
mielke-geometrodynamics_EQ0954 (14.1.36)	308	0.959 W|+0	`\begin{aligned} & \left.(-1)^{z} \operatorname{Tr}_{ \{ }{ }^{*} \xi \wedge \vartheta \wedge \xi-\xi \wedge \vartheta \wedge{ }^{*} \xi\right\} \wedge d \delta \\ & \left.=\operatorname{Tr}_{\{ }{ }^{*} \xi \wedge \vartheta \wedge D^{*} \xi+\xi \wedge \vartheta \wedge D \xi\right\} \\ & \left.=-\frac{1}{2} D \operatorname{Tr}_{\{ }{ }^{*} \xi \wedge \vartheta \wedge{ }^{*} \xi-\xi \wedge \vartheta \wedge \xi\right\} . \end{aligned}`	$(-1)^{z} \operatorname{Tr}_{\{ }{ }^{*} \xi \wedge \vartheta \wedge \xi-\xi \wedge \vartheta \wedge{ }^{*} \xi\Big\} \wedge d \delta$ $=\operatorname{Tr}_{\{ }{ }^{*} \xi \wedge \vartheta \wedge D^{*} \xi+\xi \wedge \vartheta \wedge D \xi\Big\}$ $=-\frac{1}{2} D \operatorname{Tr}_{\{ }{ }^{*} \xi \wedge \vartheta \wedge{ }^{*} \xi-\xi \wedge \vartheta \wedge \xi\Big\}.$	$(-1)^{z} \operatorname{Tr}\{{}^{*}\xi \wedge \vartheta \wedge \xi-\xi \wedge \vartheta \wedge{}^{*}\xi\} \wedge d \delta$ $=\operatorname{Tr}\{{}^{*}\xi \wedge \vartheta \wedge D{}^{*}\xi+\xi \wedge \vartheta \wedge D \xi\}$ $=-\frac{1}{2} D \operatorname{Tr}\{{}^{*}\xi \wedge \vartheta \wedge{}^{*}\xi-\xi \wedge \vartheta \wedge \xi\}.$

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Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

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mielke-geometrodynamics_EQ0330 (5.3.7)	112	0.960 C|+3	G:=G_{\alpha} \gamma^{\alpha}:=\frac{1}{2} R^{\mu \nu} \wedge \eta_{\mu \nu \lambda} \gamma^{\lambda}=-i \gamma_{5}\left(\Omega^{g} \wedge \gamma+\gamma \wedge \Omega^{g}\right)=i\left[\gamma, \gamma_{5} \Omega^{g} \right] .	$G := G_\alpha \gamma^\alpha := \frac{1}{2} R^{\mu\nu} \wedge \eta_{\mu\nu\lambda} \gamma^\lambda = -i\gamma_5 \left(\Omega^g \wedge \gamma + \gamma \wedge \Omega^g\right) = i\left[\gamma, \gamma_5 \Omega^g\right].$	$G := G_\alpha \gamma^\alpha := \frac{1}{2} R^{\mu\nu} \wedge \eta_{\mu\nu\lambda} \gamma^\lambda = -i\,\gamma_5 (\Omega^g \wedge \gamma + \gamma \wedge \Omega^g) = i\,[\gamma, \gamma_5 \Omega^g]\,.$
mielke-geometrodynamics_EQ0926 (14.1.7)	303	0.960 N|+0	D\left(\vartheta \wedge^{*} \Omega^{g}\right) \equiv \Theta \wedge^{*} \Omega^{g} .	$D\left(\vartheta \wedge^* \Omega^g\right) \equiv \Theta \wedge^* \Omega^g.$	$D(\vartheta \wedge {}^*\Omega^g) \equiv \Theta \wedge {}^*\Omega^g.$
mielke-geometrodynamics_EQ0248 (4.3.13)	092	0.961 N|+0	D \phi^{(\circ)}=\vartheta^{\alpha} \nabla_{\alpha} \phi^{(\circ)} .	$D\phi^{(\circ)} = \vartheta^\alpha \nabla_\alpha \phi^{(\circ)}.$	$D\,\phi^{(\circ)} = \vartheta^\alpha \nabla_\alpha \phi^{(\circ)}.$
mielke-geometrodynamics_EQ0282 (4.4.11)	098	0.961 N|+1	\begin{aligned} d \Theta & =d d \vartheta-d\left[\omega^{ \mathrm{L}}, \vartheta\right] \\ & =-\left[d \omega^{ \mathrm{L}}, \vartheta\right]+\left[\omega^{\mathrm{L}}, d \vartheta\right] \\ & =-\left[\Omega^{\mathrm{L}}, \vartheta\right]-\left[\omega^{\mathrm{L}} \wedge \omega^{\mathrm{L}}, \vartheta\right]+\left[\omega^{ \mathrm{L}}, \Theta\right]+\left[\omega^{\mathrm{L}}, \left[\omega^{\mathrm{L}}, \vartheta\right]\right] \\ & = \left[\omega^{\mathrm{L}}, \Theta\right]+\left[\vartheta, \Omega^{\mathrm{L}}\right] \end{aligned}	$\begin{aligned} d\Theta &= dd\vartheta - d\left[\omega^{\mathrm{L}}, \vartheta\right] \\ &= -\left[d\omega^{\mathrm{L}}, \vartheta\right] + \left[\omega^{\mathrm{L}}, d\vartheta\right] \\ &= -\left[\Omega^{\mathrm{L}}, \vartheta\right] - \left[\omega^{\mathrm{L}} \wedge \omega^{\mathrm{L}}, \vartheta\right] + \left[\omega^{\mathrm{L}}, \Theta\right] + \left[\omega^{\mathrm{L}}, \left[\omega^{\mathrm{L}}, \vartheta\right]\right] \\ &= \left[\omega^{\mathrm{L}}, \Theta\right] + \left[\vartheta, \Omega^{\mathrm{L}}\right] \end{aligned}$	$\begin{aligned} d\Theta &= dd\vartheta - d[\omega^{\mathrm{L}}, \vartheta] \\ &= -[d\omega^{\mathrm{L}}, \vartheta] + [\omega^{\mathrm{L}}, d\vartheta] \\ &= -[\Omega^{\mathrm{L}}, \vartheta] - [\omega^{\mathrm{L}} \wedge \omega^{\mathrm{L}}, \vartheta] + [\omega^{\mathrm{L}}, \Theta] + [\omega^{\mathrm{L}}, [\omega^{\mathrm{L}}, \vartheta]] \\ &= [\omega^{\mathrm{L}}, \Theta] + [\vartheta, \Omega^{\mathrm{L}}]. \end{aligned}$
mielke-geometrodynamics_EQ0010 (2.2.5)	034	0.962 N|+0	T_{p}^{q}(M):=\bigcup_{m \in M} \otimes^{p} T_{m}^{*}(M) \otimes^{q} T_{m}(M) .	$T_p^q(M) := \bigcup_{m \in M} \otimes^p T_m^*(M) \otimes^q T_m(M).$	$T_p^q(M) := \bigcup_{m \in M} \otimes^p\, T_m^*(M)\, \otimes^q\, T_m(M).$
mielke-geometrodynamics_EQ0340 (5.3.17)	115	0.962 C|+4	\begin{aligned} G_{\alpha} & :=\frac{1}{2} R^{\beta \gamma} \wedge \eta_{\alpha \beta \gamma} \\ & \left.\left.=G_{\alpha}^{\{ \}}+\frac{(-1)^{s}}{12} \left(e_{\alpha}\right\rfloor \mathscr{A} \wedge{ }^{*} \mathscr{A}-\frac{1}{3} \mathscr{A} \wedge e_{\alpha} \right\rfloor^{*} \mathscr{A}\right)+\frac{(-1)^{s}}{6} \vartheta_{\alpha} \wedge d \mathscr{A} \end{aligned}	$\begin{aligned} G_\alpha &:= \frac{1}{2} R^{\beta\gamma} \wedge \eta_{\alpha\beta\gamma} \\ &= G_\alpha^{\{\}} + \frac{(-1)^s}{12} \left(e_\alpha \rfloor \mathscr{A} \wedge {}^*\mathscr{A} - \frac{1}{3} \mathscr{A} \wedge e_\alpha \rfloor {}^*\mathscr{A}\right) + \frac{(-1)^s}{6} \vartheta_\alpha \wedge d\mathscr{A} \end{aligned}$	$\begin{aligned} G_\alpha &:= \frac{1}{2} R^{\beta\gamma} \wedge \eta_{\alpha\beta\gamma} \qquad (5.3 \\ &= G_\alpha^{\{\}} + \frac{(-1)^s}{12} \left(e_\alpha \rfloor \mathscr{A} \wedge {}^*\mathscr{A} - \frac{1}{3} \mathscr{A} \wedge e_\alpha \rfloor {}^*\mathscr{A}\right) + \frac{(-1)^s}{6} \vartheta_\alpha \wedge d\mathscr{A} \end{aligned}$
mielke-geometrodynamics_EQ0424 (6.7.6)	140	0.962 N|+0	\begin{aligned} \frac{1}{2 \kappa} T^{\gamma} \wedge \eta_{\alpha \beta \gamma} & -\frac{D \theta_{ \mathrm{T}}}{2 \ell^{2}} \wedge \vartheta_{\alpha} \wedge \vartheta_{\beta}+D \theta_{\mathrm{L}} \wedge R_{ \alpha \beta}=\vartheta_{[\alpha} \wedge \mu_{\beta]} \ \ & =\frac{1}{4} \vartheta_{\alpha} \wedge \vartheta_{ \beta} \wedge{ }^{*} j_{5} . \end{aligned}	$\begin{aligned} \frac{1}{2\kappa} T^\gamma \wedge \eta_{\alpha\beta\gamma} - \frac{D\theta_{\mathrm{T}}}{2\ell^2} \wedge \vartheta_\alpha \wedge \vartheta_\beta + D\theta_{\mathrm{L}} \wedge R_{\alpha\beta} &= \vartheta_{[\alpha} \wedge \mu_{\beta]} \\ &= \frac{1}{4} \vartheta_\alpha \wedge \vartheta_\beta \wedge^* j_5. \end{aligned}$	$\begin{aligned} \frac{1}{2\kappa} T^\gamma \wedge \eta_{\alpha\beta\gamma} - \frac{D\theta_{\mathrm{T}}}{2\ell^2} \wedge \vartheta_\alpha \wedge \vartheta_\beta + D\theta_{\mathrm{L}} \wedge R_{\alpha\beta} &= \vartheta_{[\alpha} \wedge \mu_{\beta]} \\ &= \frac{1}{4} \vartheta_\alpha \wedge \vartheta_\beta \wedge {}^* j_5. \end{aligned}$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value

Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ0809 (11.4.21)	255	0.962 W|+0	`i \gamma^{0} \vec{\gamma} \cdot \vec{\partial}\left[\begin{array}{cc} i H(\rho) & \chi_{\kappa}^{m} \\ -F(\rho) & \chi_{-\kappa}^{m} \end{array}\right]=\frac{\vec{\sigma} \cdot \vec{x}}{|\vec{x}|}\left(\partial_{r}-\frac{\vec{\sigma} \cdot \vec{L}}{r}\right)\left[\begin{array}{cc} i F(\rho) & \chi_{-\kappa}^{m} \\ H(\rho) & \chi_{\kappa}^{m} \end{array}\right] .`	$i\gamma^0\vec{\gamma}\cdot\vec{\partial}\left[\begin{array}{cc} iH(\rho) & \chi_\kappa^m \\ -F(\rho) & \chi_{-\kappa}^m \end{array}\right]=\frac{\vec{\sigma}\cdot\vec{x}}{\|\vec{x}\|}\left(\partial_r-\frac{\vec{\sigma}\cdot\vec{L}}{r}\right)\left[\begin{array}{cc} iF(\rho) & \chi_{-\kappa}^m \\ H(\rho) & \chi_\kappa^m \end{array}\right].$	$i\gamma^0\vec{\gamma}\cdot\vec{\partial}\left[\begin{array}{cc} iH(\rho) & \chi_\kappa^m \\ -F(\rho) & \chi_{-\kappa}^m \end{array}\right]=\frac{\vec{\sigma}\cdot\vec{x}}{\|\vec{x}\|}\left(\partial_r-\frac{\vec{\sigma}\cdot\vec{L}}{r}\right)\left[\begin{array}{cc} iF(\rho) & \chi_{-\kappa}^m \\ H(\rho) & \chi_\kappa^m \end{array}\right].$
mielke-geometrodynamics_EQ0475 (7.4.3)	156	0.963 N|-1	`{ }^{*} R_{\alpha \beta}^{(\star)}=-C_{\alpha \beta}+ \frac{1}{2} R i^{\tau}{ }_{\alpha \beta}+\frac{R}{12} \vartheta_{\alpha} \wedge \vartheta_{\beta} .`	${}^*R_{\alpha\beta}^{(\star)}=-C_{\alpha\beta}+\frac{1}{2}Ri^{\tau}{}_{\alpha\beta}+\frac{R}{12}\vartheta_\alpha\wedge\vartheta_\beta.$	${}^*R_{\alpha\beta}^{(\star)}=-C_{\alpha\beta}+\frac{1}{2}Ri^{\tau}{}_{\alpha\beta}+\frac{R}{12}\vartheta_\alpha\wedge\vartheta_\beta.$
mielke-geometrodynamics_EQ0485 (7.7.1)	159	0.963 W|-1	`g_{i j} \rightarrow \widetilde{g}_{i j}=g_{i j}+a \operatorname{Ric}_{i j}+b g_{i j} \operatorname{Ric}_{k}^{k}`	$g_{ij}\rightarrow\widetilde{g}_{ij}=g_{ij}+a\operatorname{Ric}_{ij}+bg_{ij}\operatorname{Ric}_k^k$	$g_{ij}\rightarrow\widetilde{g}_{ij}=g_{ij}+a\operatorname{Ric}_{ij}+bg_{ij}\operatorname{Ric}_k{}^k$
mielke-geometrodynamics_EQ1143 (C.11)	376	0.963 N|+0	`(A, B):=\operatorname{Tr}(\operatorname{Ad} A \operatorname{Ad} B)=c_{\iota k}^{i} c_{s i}^{k} A^{\iota} B^{s}=: \stackrel{\circ}{g}_{\iota s} A^{\iota} B^{s}`	$(A,B):=\operatorname{Tr}(\operatorname{Ad}A\operatorname{Ad}B)=c_{\iota k}^i c_{si}^k A^\iota B^s=:\overset{\circ}{g}_{\iota s}A^\iota B^s$	$(A,B):=\operatorname{Tr}(\operatorname{Ad}A\operatorname{Ad}B)=c_{\iota k}^i c_{si}^k A^\iota B^s=:\overset{\circ}{g}_{\iota s}A^\iota B^s$
mielke-geometrodynamics_EQ1122 (B.34)	372	0.963 K|+0	`H^{p}\left(S^{n}\right)=0 \quad \text { for } \quad 1 \leq p \leq n-1 .`	$H^p(S^n)=0\quad\text{for}\quad 1\leq p\leq n-1.$	$H^p(S^n)=0\quad\text{for}\quad 1\leq p\leq n-1.$
mielke-geometrodynamics_EQ0791 (11.4.3)	252	0.964 N|+1	`\left\{i \gamma^{k} \nabla_{k}^{(t)}+\frac{3 \varepsilon}{8} \ell^{2}\left(\bar{\psi} \psi-a \bar{ \psi} \gamma^{5} \psi \gamma^{5}\right)-m\right\} \psi=0`	$\left\{i\gamma^k\nabla_k^{(t)}+\frac{3\varepsilon}{8}\ell^2\left(\bar{\psi}\psi-a\bar{\psi}\gamma^5\psi\gamma^5\right)-m\right\}\psi=0$	$\left\{i\gamma^k\nabla_k^{(t)}+\frac{3\varepsilon}{8}\ell^2(\bar{\psi}\psi-a\bar{\psi}\gamma^5\psi\gamma^5)-m\right\}\psi=0$
mielke-geometrodynamics_EQ0575 (8.6.13)	185	0.964 N|-1	`\left.\left.R:=e_{\beta}\right\rfloor e_{\alpha} \right\rfloor R^{\alpha \beta}=\frac{6\left(\theta_{ \mathrm{T}}}^{*}-a_{0}\right)}{\ell^{2}\left(\theta_{ \mathrm{L}}}^{\star}-b_{6}\right)}`	$R:=e_\beta\rfloor e_\alpha\rfloor R^{\alpha\beta}=\frac{6\left(\theta_{\mathrm{T}}^*-a_0\right)}{\ell^2\left(\theta_{\mathrm{L}}^\star-b_6\right)}$	$R:=e_\beta\rfloor e_\alpha\rfloor R^{\alpha\beta}=\frac{6(\theta_{\mathrm{T}}^*-a_0)}{\ell^2(\theta_{\mathrm{L}}^\star-b_6)}$
mielke-geometrodynamics_EQ0996 (14.3.9)	321	0.965 W|-2	`i \widehat{D} \widehat{\psi}:=i \widehat{\gamma} \wedge^{*} \widehat{D} \widehat{\psi}=i \gamma \wedge{ }^{*} D \widehat{\psi}+i \not D^{(i n t)} \widehat{ \psi}=0,`	$i\widehat{D}\widehat{\psi}:=i\widehat{\gamma}\wedge^*\widehat{D}\widehat{\psi}=i\gamma\wedge^*D\widehat{\psi}+i\not{D}^{(int)}\widehat{\psi}=0,$	$i\widehat{D}\widehat{\psi}:=i\widehat{\gamma}\wedge^*\widehat{D}\widehat{\psi}=i\gamma\wedge^*D\widehat{\psi}+i\not{D}^{(int)}\widehat{\psi}=0,$
mielke-geometrodynamics_EQ0131 (3.4.2)	062	0.966 N|-1	`{ }^{*} \mathscr{F}:=\frac{1}{\alpha_{g}} \operatorname{Tr}\left\{{ }^{*}(\Omega \wedge \Omega) \right\}=\frac{1}{4 \alpha_{g}} F_{\alpha \beta}{ }^{j *} F^{\alpha \beta}{ }_{j} .`	${}^*\mathscr{F}:=\frac{1}{\alpha_g}\operatorname{Tr}\left\{{}^*(\Omega\wedge\Omega)\right\}=\frac{1}{4\alpha_g}F_{\alpha\beta}{}^{j*}F^{\alpha\beta}{}_j.$	${}^*\mathscr{F}:=\frac{1}{\alpha_g}\operatorname{Tr}\left\{{}^*(\Omega\wedge\Omega)\right\}=\frac{1}{4\alpha_g}F_{\alpha\beta}{}^{j}{}^*F^{\alpha\beta}{}_j.$

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Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

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mielke-geometrodynamics_EQ1089 (A.16)	366	0.967 N|+0	`\begin{aligned} & \left(\widehat{\gamma}^{A}\right)^{ \mathrm{T}}:=\left(\widehat{\gamma}^{\mu}, \widehat{ \gamma}^{2 p+1}, \widehat{\gamma}^{2 p+2}\right), \\ & \widehat{\gamma}^{\mu}:=\gamma^{\mu} \otimes\left[\bigotimes_{i=1}^{\left[\frac{n-2}{2}\right]} \sigma^{1} \right], \\ & \widehat{\gamma}^{2 p+1}:=i \mathbb{1} \otimes\left(\bigotimes_{i=1}^{p-2} \sigma^{0}\right) \otimes \sigma^{3} \otimes\left(\bigotimes_{j=1}^{l-p+1} \sigma^{1}\right), \\ & \widehat{\gamma}^{2 p+2}:=i \mathbb{1} \otimes\left(\bigotimes_{i=1}^{p-2} \sigma^{0}\right) \otimes \sigma^{2} \otimes\left(\bigotimes_{j=1}^{l-p+2} \sigma^{1}\right), \end{aligned}`	$\left(\widehat{\gamma}^{A}\right)^{\mathrm{T}} := \left(\widehat{\gamma}^{\mu}, \widehat{\gamma}^{2p+1}, \widehat{\gamma}^{2p+2}\right),$ $\widehat{\gamma}^{\mu} := \gamma^{\mu} \otimes \left[\bigotimes_{i=1}^{\left[\frac{n-2}{2}\right]} \sigma^{1}\right],$ $\widehat{\gamma}^{2p+1} := i\mathbb{1} \otimes \left(\bigotimes_{i=1}^{p-2} \sigma^{0}\right) \otimes \sigma^{3} \otimes \left(\bigotimes_{j=1}^{l-p+1} \sigma^{1}\right),$ $\widehat{\gamma}^{2p+2} := i\mathbb{1} \otimes \left(\bigotimes_{i=1}^{p-2} \sigma^{0}\right) \otimes \sigma^{2} \otimes \left(\bigotimes_{j=1}^{l-p+2} \sigma^{1}\right),$	$(\widehat{\gamma}^{A})^{\mathrm{T}} := (\widehat{\gamma}^{\mu}, \widehat{\gamma}^{2p+1}, \widehat{\gamma}^{2p+2}),$ $\widehat{\gamma}^{\mu} := \gamma^{\mu} \otimes \left[\bigotimes_{i=1}^{[\frac{n-2}{2}]} \sigma^{1}\right],$ $\widehat{\gamma}^{2p+1} := i\mathbb{1} \otimes \left(\bigotimes_{i=1}^{p-2} \sigma^{0}\right) \otimes \sigma^{3} \otimes \left(\bigotimes_{j=1}^{l-p+1} \sigma^{1}\right),$ $\widehat{\gamma}^{2p+2} := i\mathbb{1} \otimes \left(\bigotimes_{i=1}^{p-2} \sigma^{0}\right) \otimes \sigma^{2} \otimes \left(\bigotimes_{j=1}^{l-p+2} \sigma^{1}\right),$
mielke-geometrodynamics_EQ1090 (A.17)	367	0.967 N|+0	`\stackrel{*}{\sigma} \alpha\left(e_{\alpha_{1}}, \ldots, e_{\alpha_{p}}\right):=\alpha\left(\sigma_{*} e_{\alpha_{1}}, \ldots, \sigma_{*} e_{\alpha_{p}}\right) .`	$\overset{*}{\sigma}\,\alpha\left(e_{\alpha_1}, \ldots, e_{\alpha_p}\right) := \alpha\left(\sigma_* e_{\alpha_1}, \ldots, \sigma_* e_{\alpha_p}\right).$	$\overset{*}{\sigma}\alpha(e_{\alpha_1}, \ldots, e_{\alpha_p}) := \alpha(\sigma_* e_{\alpha_1}, \ldots, \sigma_* e_{\alpha_p}).$
mielke-geometrodynamics_EQ0592 (9.1.10)	195	0.968 N|+0	`\stackrel{+}{\Omega}^{g}=\frac{\gamma \kappa}{\ell^{* 2}} \vartheta \wedge \vartheta .`	$\overset{+}{\Omega}{}^{g} = \frac{\gamma\kappa}{\ell^{*2}} \vartheta \wedge \vartheta.$	$\overset{+}{\Omega}{}^{g} = \frac{\gamma\kappa}{\ell^{*2}} \vartheta \wedge \vartheta.$
mielke-geometrodynamics_EQ0611 (9.3.2)	202	0.968 N|+1	`L_{\mathrm{SKY}}:=-\frac{1}{2} R_{\alpha \beta} \wedge{ }^{*} R^{\alpha \beta},`	$L_{\mathrm{SKY}} := -\frac{1}{2} R_{\alpha\beta} \wedge {}^{*}R^{\alpha\beta},$	$L_{\mathrm{SKY}} := -\frac{1}{2} R_{\alpha\beta} \wedge {}^{*}R^{\alpha\beta},$
mielke-geometrodynamics_EQ0841 (12.2.9)	272	0.968 K|+0	`\mu_{\alpha}=\frac{1}{4} \vartheta_{\alpha} \wedge{ }^{*} j_{5} .`	$\mu_\alpha = \frac{1}{4}\vartheta_\alpha \wedge {}^{*}j_5.$	$\mu_\alpha = \frac{1}{4}\vartheta_\alpha \wedge {}^{*}j_5.$
mielke-geometrodynamics_EQ0636 (10.2.7)	212	0.970 K|+0	`T_{\alpha}=\frac{\varepsilon}{\ell} \eta_{\alpha}, \quad R_{\alpha}^{\star}=\frac{\rho}{\ell^{2}} \eta_{\alpha},`	$T_\alpha = \frac{\varepsilon}{\ell}\eta_\alpha, \quad R^\star_\alpha = \frac{\rho}{\ell^2}\eta_\alpha,$	$T_\alpha = \frac{\varepsilon}{\ell}\eta_\alpha, \quad R^\star_\alpha = \frac{\rho}{\ell^2}\eta_\alpha,$
mielke-geometrodynamics_EQ1137 (C.5)	376	0.970 N|+0	`3 c_{[i \mid s}{ }^{p} c_{\mid j k]}{ }^{s}:=c_{i s}{ }^{p} c_{j k}{ }^{s}+c_{j s}{ }^{p} c_{k i}{ }^{s}+c_{k s}{ }^{p} c_{i j}{ }^{s} \equiv 0 .`	$3c_{[i\|s}{}^{p}c_{\|jk]}{}^{s} := c_{is}{}^{p}c_{jk}{}^{s} + c_{js}{}^{p}c_{ki}{}^{s} + c_{ks}{}^{p}c_{ij}{}^{s} \equiv 0.$	$3c_{[i\|s}{}^{p}c_{\|jk]}{}^{s} := c_{is}{}^{p}c_{jk}{}^{s} + c_{js}{}^{p}c_{ki}{}^{s} + c_{ks}{}^{p}c_{ij}{}^{s} \equiv 0.$
mielke-geometrodynamics_EQ0415 (6.5.3)	137	0.970 N|+0	`\begin{aligned} \langle 0| W(\gamma)|0\rangle^{(1)} & =\int_{\mathscr{C} \mid \mathscr{G}} \mathscr{D} A e^{i C} W(A, \gamma) \\ & =\frac{1}{4 \pi} \oint d s \oint d t \dot{\gamma}^{\mu}(s) \dot{\gamma}^{\nu}(t) \eta_{0 \mu \nu \kappa} \frac{\gamma^{\kappa}(s)-\gamma^{ \kappa}(t)}{|\gamma(s)-\gamma(t)|^{3}} \end{aligned}`	$\begin{aligned} \langle 0\|W(\gamma)\|0\rangle^{(1)} &= \int_{\mathscr{C}/\mathscr{G}} \mathscr{D}A\, e^{iC} W(A,\gamma) \\ &= \frac{1}{4\pi}\oint ds \oint dt \dot{\gamma}^{\mu}(s)\dot{\gamma}^{\nu}(t)\eta_{0\mu\nu\kappa}\frac{\gamma^{\kappa}(s)-\gamma^{\kappa}(t)}{\|\gamma(s)-\gamma(t)\|^3} \end{aligned}$	$\begin{aligned} \langle 0\|W(\gamma)\|0\rangle^{(1)} &= \int_{\mathscr{C}/\mathscr{G}} \mathscr{D}A\, e^{iC} W(A,\gamma) \\ &= \frac{1}{4\pi}\oint ds \oint dt \dot{\gamma}^{\mu}(s)\dot{\gamma}^{\nu}(t)\eta_{0\mu\nu\kappa}\frac{\gamma^{\kappa}(s)-\gamma^{\kappa}(t)}{\|\gamma(s)-\gamma(t)\|^3} \end{aligned}$

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Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

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mielke-geometrodynamics_EQ0495 (7.7.13)	162	0.971 N|+0	{ }^{*}\left(\vartheta^{\alpha} \wedge \vartheta^{\beta} \wedge \vartheta^{\gamma} \wedge \vartheta^{\delta} \right)=\eta^{\alpha \beta \gamma \delta}, \text { where } \eta_{\alpha \beta \gamma \delta}:=+\delta_{\alpha \beta \gamma \delta}^{0123},	$^*\left(\vartheta^\alpha \wedge \vartheta^\beta \wedge \vartheta^\gamma \wedge \vartheta^\delta\right)=\eta^{\alpha\beta\gamma\delta}, \text{ where } \eta_{\alpha\beta\gamma\delta}:=+\delta^{0123}_{\alpha\beta\gamma\delta},$	$^*(\vartheta^\alpha \wedge \vartheta^\beta \wedge \vartheta^\gamma \wedge \vartheta^\delta)=\eta^{\alpha\beta\gamma\delta}, \text{ where } \eta_{\alpha\beta\gamma\delta}:=+\delta^{0123}_{\alpha\beta\gamma\delta},$
mielke-geometrodynamics_EQ1147 (C.16)	377	0.971 W|+1	\begin{aligned} {\left[\lambda_{i}, \lambda_{j}\right] } & =2 i \mathrm{f}_{i j}^{k} \lambda_{k} \quad\left(c_{i j}^{k}=2 i f_{i g}^{k}\right), \\ \left\{\lambda_{i}, \lambda_{j}\right\}_{+} & =\frac{4}{N} \delta_{i j}+2 d_{i j}^{k} \lambda_{k} . \end{aligned}	$\begin{aligned} {\left[\lambda_{i}, \lambda_{j}\right] } & =2 i \mathrm{f}_{i j}^{k} \lambda_{k} \quad\left(c_{i j}^{k}=2 i f_{i g}^{k}\right), \\ \left\{\lambda_{i}, \lambda_{j}\right\}_{+} & =\frac{4}{N} \delta_{i j}+2 d_{i j}^{k} \lambda_{k} . \end{aligned}$	$\begin{aligned} {\left[\lambda_{i}, \lambda_{j}\right] } & =2 i \mathrm{f}_{i j}{}^{k} \lambda_{k} \quad\left(c_{i j}{}^{k}=2 i f_{i g}{}^{k}\right), \\ \left\{\lambda_{i}, \lambda_{j}\right\}_{+} & =\frac{4}{N} \delta_{i j}+2 d_{i j}{}^{k} \lambda_{k} . \end{aligned}$
mielke-geometrodynamics_EQ0129 (3.3.30)	061	0.972 C|-6	\begin{aligned} j:=\frac{\delta L_{\mathrm{matter}}}{ \delta A} & =\frac{\partial L_{\mathrm{matter}}}{\partial A}+d \frac{\partial L_{\mathrm{matter}}}{\partial d A} \\ & =\Psi \wedge \frac{\partial L_{\mathrm{matter}}}{ \partial D \Psi}+D \frac{\partial L_{\mathrm{matter}}}{ \partial B}, \end{aligned}	$\begin{aligned} j:=\frac{\delta L_{\mathrm{matter}}}{ \delta A} & =\frac{\partial L_{\mathrm{matter}}}{\partial A}+d \frac{\partial L_{\mathrm{matter}}}{\partial d A} \\ & =\Psi \wedge \frac{\partial L_{\mathrm{matter}}}{ \partial D \Psi}+D \frac{\partial L_{\mathrm{matter}}}{ \partial B}, \end{aligned}$	$\begin{aligned} j:=\frac{\delta L_{\mathrm{matter}}}{ \delta A} & =\frac{\partial L_{\mathrm{matter}}}{\partial A}+d \frac{\partial L_{\mathrm{matter}}}{\partial d A} \\ & =\Psi \wedge \frac{\partial L_{\mathrm{matter}}}{ \partial D \Psi}+D \frac{\partial L_{\mathrm{matter}}}{ \partial B}, \end{aligned}$
mielke-geometrodynamics_EQ0784 (11.3.3)	248	0.972 N|+0	\begin{aligned} L_{\mathrm{NL}}=\frac{1}{2} \bar{\psi} \left[\widetilde{K},{ }^{*} \gamma\right] \psi & =-3 i^{*}[\Theta, \vartheta] \wedge\left(\bar{\psi}^{*} \gamma \psi\right) \\ & =-3 \tau_{s} \wedge[\Theta, \vartheta] . \end{aligned}	$\begin{aligned} L_{\mathrm{NL}}=\frac{1}{2} \bar{\psi} \left[\widetilde{K},{ }^{*} \gamma\right] \psi & =-3 i^{*}[\Theta, \vartheta] \wedge\left(\bar{\psi}^{*} \gamma \psi\right) \\ & =-3 \tau_{s} \wedge[\Theta, \vartheta] . \end{aligned}$	$\begin{aligned} L_{\mathrm{NL}}=\frac{1}{2} \bar{\psi} \left[\widetilde{K},{ }^{*} \gamma\right] \psi & =-3 i^{*}[\Theta, \vartheta] \wedge\left(\bar{\psi}^{*} \gamma \psi\right) \\ & =-3 \tau_{s} \wedge[\Theta, \vartheta] . \end{aligned}$
mielke-geometrodynamics_EQ0666 (10.3.23)	218	0.972 N|+0	\square \vartheta_{\alpha}+\frac{\ell}{\gamma}{ }^{*} D^{*}\left(\delta \ell E_{\alpha}+S_{\alpha}\right)=0,	$\square \vartheta_{\alpha}+\frac{\ell}{\gamma}{ }^{*} D^{*}\left(\delta \ell E_{\alpha}+S_{\alpha}\right)=0,$	$\square \vartheta_{\alpha}+\frac{\ell}{\gamma}{ }^{*} D^{*}\left(\delta \ell E_{\alpha}+S_{\alpha}\right)=0,$
mielke-geometrodynamics_EQ0945 (14.1.26)	306	0.972 N|+0	\begin{aligned} \Sigma_{\mathrm{YM}}(\Omega) \wedge \Sigma_{\mathrm{YM}}(\Omega) & =\frac{1}{4 \alpha_{g}} \operatorname{Tr}\left\{-\xi \wedge \xi \wedge\left(\vartheta \wedge^{*} \xi\right) \wedge\left(\vartheta \wedge^{*} \xi\right)\right. \\ & +\vartheta \wedge \vartheta \wedge^{*}\left(\xi \wedge^{*} \xi\right)^{2} \\ & \left.-\vartheta \wedge^{*} \xi \wedge^{*}\left(\vartheta \wedge^{*} \xi\right) \wedge^{*}\left(\xi \wedge^{*} \xi\right)\right\} \\ & =\vartheta \wedge \vartheta \wedge^{*}\left(\Sigma_{\mathrm{YM}}(\xi) \wedge^{*} \Sigma_{\mathrm{YM}}(\xi)\right) \end{aligned}	$\begin{aligned} \Sigma_{\mathrm{YM}}(\Omega) \wedge \Sigma_{\mathrm{YM}}(\Omega) & =\frac{1}{4 \alpha_{g}} \operatorname{Tr}\left\{-\xi \wedge \xi \wedge\left(\vartheta \wedge^{*} \xi\right) \wedge\left(\vartheta \wedge^{*} \xi\right)\right. \\ & +\vartheta \wedge \vartheta \wedge^{*}\left(\xi \wedge^{*} \xi\right)^{2} \\ & \left.-\vartheta \wedge^{*} \xi \wedge^{*}\left(\vartheta \wedge^{*} \xi\right) \wedge^{*}\left(\xi \wedge^{*} \xi\right)\right\} \\ & =\vartheta \wedge \vartheta \wedge^{*}\left(\Sigma_{\mathrm{YM}}(\xi) \wedge^{*} \Sigma_{\mathrm{YM}}(\xi)\right) \end{aligned}$	$\begin{aligned} \Sigma_{\mathrm{YM}}(\Omega) \wedge \Sigma_{\mathrm{YM}}(\Omega) & =\frac{1}{4 \alpha_{g}} \operatorname{Tr}\left\{-\xi \wedge \xi \wedge\left(\vartheta \wedge^{*} \xi\right) \wedge\left(\vartheta \wedge^{*} \xi\right)\right. \\ & +\vartheta \wedge \vartheta \wedge^{*}\left(\xi \wedge^{*} \xi\right)^{2} \\ & \left.-\vartheta \wedge^{*} \xi \wedge^{*}\left(\vartheta \wedge^{*} \xi\right) \wedge^{*}\left(\xi \wedge^{*} \xi\right)\right\} \\ & =\vartheta \wedge \vartheta \wedge^{*}\left(\Sigma_{\mathrm{YM}}(\xi) \wedge^{*} \Sigma_{\mathrm{YM}}(\xi)\right) \end{aligned}$
mielke-geometrodynamics_EQ0462 (7.3.1)	153	0.973 N|+1	L_{\mathrm{SKY}}=\operatorname{Tr}\left(\Omega^{g} \wedge^{*} \Omega^{g}\right)=-\frac{1}{2} R^{\alpha \beta} \wedge{ }^{*} R_{\alpha \beta},	$L_{\mathrm{SKY}}=\operatorname{Tr}\left(\Omega^{g} \wedge^{*} \Omega^{g}\right)=-\frac{1}{2} R^{\alpha \beta} \wedge{ }^{*} R_{\alpha \beta},$	$L_{\mathrm{SKY}}=\operatorname{Tr}\left(\Omega^{g} \wedge^{*} \Omega^{g}\right)=-\frac{1}{2} R^{\alpha \beta} \wedge{ }^{*} R_{\alpha \beta},$
mielke-geometrodynamics_EQ0356 (6.2.7)	124	0.974 N|+0	D T^{\alpha} \equiv R_{\beta}{ }^{\alpha} \wedge \vartheta^{\beta}	$D T^{\alpha} \equiv R_{\beta}{ }^{\alpha} \wedge \vartheta^{\beta}$	$D T^{\alpha} \equiv R_{\beta}{ }^{\alpha} \wedge \vartheta^{\beta}$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ0712 (10.8.1)	228	0.975 K|+0	`\Psi=\Psi_{i} d x^{i}=\Psi_{\alpha} \vartheta^{\alpha}`	$\Psi = \Psi_i dx^i = \Psi_\alpha \vartheta^\alpha$	$\Psi = \Psi_i dx^i = \Psi_\alpha \vartheta^\alpha$
mielke-geometrodynamics_EQ0971 (14.2.12)	314	0.975 N|+0	`\hat{d}:=\left[\begin{array}{c|c} d & 0 \\ \hline 0 & \stackrel{\circ}{d} \end{array}\right],`	$\hat{d} := \left[\begin{array}{c\|c} d & 0 \\ \hline 0 & \stackrel{\circ}{d} \end{array}\right],$	$\hat{d} := \left[\begin{array}{c\|c} d & 0 \\ \hline 0 & \stackrel{\circ}{d} \end{array}\right],$
mielke-geometrodynamics_EQ0557 (8.4.11)	181	0.975 N|+0	`\left\langle d j_{5}\right\rangle=2 i^{*} m\left\langle \bar{\psi} \gamma_{5} \psi\right\rangle-\frac{1}{48 \pi^{2}}\left(R_{\alpha \beta}^{\{ \}} \wedge R^{\{ \beta \alpha \beta}+\frac{1}{2} d \mathscr{A} \wedge d \mathscr{A}\right),`	$\left\langle d j_5\right\rangle = 2i\,{}^*m\left\langle \bar{\psi} \gamma_5 \psi\right\rangle - \frac{1}{48\pi^2}\left(R_{\alpha\beta}^{\{\}} \wedge R^{\{\}\alpha\beta} + \frac{1}{2} d\mathscr{A} \wedge d\mathscr{A}\right),$	$\left\langle d j_5\right\rangle = 2i\,{}^*m\left\langle \bar{\psi} \gamma_5 \psi\right\rangle - \frac{1}{48\pi^2}\left(R_{\alpha\beta}^{\{\}} \wedge R^{\{\}\alpha\beta} + \frac{1}{2} d\mathscr{A} \wedge d\mathscr{A}\right),$
mielke-geometrodynamics_EQ0487 (7.7.4)	160	0.977 N|+0	`\left.\left.\left.\eta_{\alpha \beta} \quad \rightarrow \quad \tilde{\eta}_{\alpha \beta}=\eta_{\alpha \beta}+ \ell^{2} \eta_{\alpha \beta \gamma} \wedge e_{\mu} \right\rfloor^{*} H^{\mu \gamma}+\frac{\ell^{4}}{2} \eta_{\alpha \beta \gamma \delta}\left(e_{\mu}\right\rfloor^{*} H^{\gamma \mu}\right) \wedge\left(e_{\nu}\right\rfloor^{*} H^{\delta \nu}\right) .`	$\eta_{\alpha\beta} \quad \rightarrow \quad \tilde{\eta}_{\alpha\beta} = \eta_{\alpha\beta} + \ell^2 \eta_{\alpha\beta\gamma} \wedge e_\mu\rfloor^* H^{\mu\gamma} + \frac{\ell^4}{2}\eta_{\alpha\beta\gamma\delta}\left(e_\mu\rfloor^* H^{\gamma\mu}\right) \wedge \left(e_\nu\rfloor^* H^{\delta\nu}\right).$	$\eta_{\alpha\beta} \quad \rightarrow \quad \tilde{\eta}_{\alpha\beta} = \eta_{\alpha\beta} + \ell^2 \eta_{\alpha\beta\gamma} \wedge e_\mu\rfloor^* H^{\mu\gamma} + \frac{\ell^4}{2}\eta_{\alpha\beta\gamma\delta}(e_\mu\rfloor^* H^{\gamma\mu}) \wedge (e_\nu\rfloor^* H^{\delta\nu}).$
mielke-geometrodynamics_EQ1068 (16.2.7)	355	0.978 N|-1	`\left[\partial_{\rho^{*}}^{2}-V_{\mathrm{eff}}^{\iota} \left(\rho^{*}\right)+\frac{\omega^{2}}{\beta^{2}}\right] F=0`	$\left[\partial_{\rho^*}^2 - V_{\mathrm{eff}}^{\iota}(\rho^*) + \frac{\omega^2}{\beta^2}\right] F = 0$	$\left[\partial_{\rho^*}^2 - V_{\mathrm{eff}}^{\iota}(\rho^*) + \frac{\omega^2}{\beta^2}\right] F = 0$
mielke-geometrodynamics_EQ1114 (B.26)	371	0.979 N|+0	`H^{p}(M)=0 \text { for } p>n,`	$H^p(M) = 0 \text{ for } p > n,$	$H^p(M) = 0 \quad \text{for} \quad p > n,$
mielke-geometrodynamics_EQ0007 (2.2.2)	033	0.980 K|+0	`\vartheta=\vartheta^{\alpha} P_{\alpha} \in C^{\infty} \left(T^{*}(M)\right),`	$\vartheta = \vartheta^\alpha P_\alpha \in C^\infty\left(T^*(M)\right),$	$\vartheta = \vartheta^\alpha P_\alpha \quad \in \quad C^\infty(T^*(M)),$
mielke-geometrodynamics_EQ0908 (13.5.13)	291	0.980 N|+0	`D g_{\alpha \beta}=0,`	$Dg_{\alpha\beta} = 0,$	$Dg_{\alpha\beta} = 0,$
mielke-geometrodynamics_EQ0536 (8.2.3)	175	0.980 W|+2	`\begin{aligned} (d \oplus s) \tilde{\Gamma}+\frac{1}{2}[ \widetilde{\Gamma}, \widetilde{\Gamma}] & =\widetilde{ \Omega}^{g} \\ (d \oplus s) \widetilde{\Omega}^{g}+\left[ \widetilde{\Gamma}, \widetilde{\Omega}^{g}\right] & \equiv 0 \end{aligned}`	$\begin{aligned} (d \oplus s)\tilde{\Gamma} + \frac{1}{2}[\widetilde{\Gamma}, \widetilde{\Gamma}] &= \widetilde{\Omega}^g \\ (d \oplus s)\widetilde{\Omega}^g + \left[\widetilde{\Gamma}, \widetilde{\Omega}^g\right] &\equiv 0 \end{aligned}$	$\begin{aligned} (d \oplus s)\widetilde{\Gamma} + \frac{1}{2}[\widetilde{\Gamma}, \widetilde{\Gamma}] &= \widetilde{\Omega}^g, \\ (d \oplus s)\widetilde{\Omega}^g + [\widetilde{\Gamma}, \widetilde{\Omega}^g] &\equiv 0, \end{aligned}$
mielke-geometrodynamics_EQ0911 (13.6.1)	292	0.980 N|+1	`\begin{aligned} d s^{2} & :=\frac{\ell^{2}}{\mu^{2}} \left\langle\hat{D} \Phi^{A} \otimes_{\mathrm{s}} \hat{D} \Phi_{A}\right\rangle=\frac{\ell^{2}}{\mu^{2}} \hat{D} \Phi_{0}^{A} \otimes_{\mathrm{s}} \hat{D} \Phi_{A 0} \\ & =\ell^{2} \Gamma_{4}^{\alpha} \otimes_{ \mathrm{s}} \Gamma_{\alpha}^{4}=\left(\vartheta^{ \alpha}-D \xi^{\alpha}\right) \otimes_{\mathrm{s}} \left(\theta_{\alpha}-D \xi_{\alpha}^{*}\right) \\ & \stackrel{*}{=} \vartheta^{\alpha} \otimes_{\mathrm{s}} \theta_{\alpha}=g_{i j} d x^{i} \otimes_{\mathrm{s}} d x^{j} \end{aligned}`	$\begin{aligned} ds^2 &:= \frac{\ell^2}{\mu^2}\left\langle \hat{D}\Phi^A \otimes_{\mathrm{s}} \hat{D}\Phi_A\right\rangle = \frac{\ell^2}{\mu^2}\hat{D}\Phi_0^A \otimes_{\mathrm{s}} \hat{D}\Phi_{A0} \\ &= \ell^2 \Gamma_4{}^\alpha \otimes_{\mathrm{s}} \Gamma_\alpha{}^4 = (\vartheta^\alpha - D\xi^\alpha) \otimes_{\mathrm{s}} (\theta_\alpha - D\xi_\alpha^*) \\ &\stackrel{*}{=} \vartheta^\alpha \otimes_{\mathrm{s}} \theta_\alpha = g_{ij} dx^i \otimes_{\mathrm{s}} dx^j \end{aligned}$	$\begin{aligned} ds^2 &:= \frac{\ell^2}{\mu^2}\langle \hat{D}\Phi^A \otimes_{\mathrm{s}} \hat{D}\Phi_A\rangle = \frac{\ell^2}{\mu^2}\hat{D}\Phi_0^A \otimes_{\mathrm{s}} \hat{D}\Phi_{A0} \\ &= \ell^2 \Gamma_4{}^\alpha \otimes_{\mathrm{s}} \Gamma_\alpha{}^4 = (\vartheta^\alpha - D\xi^\alpha) \otimes_{\mathrm{s}} (\theta_\alpha - D\xi_\alpha^*) \\ &\stackrel{*}{=} \vartheta^\alpha \otimes_{\mathrm{s}} \theta_\alpha = g_{ij} dx^i \otimes_{\mathrm{s}} dx^j . \end{aligned}$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): ● C component ● W weak ● S stable ● N noise ● K clean ● not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ0931 (14.1.12)	304	0.981 N|+0	`\Omega \rightarrow e^{* \delta} \Omega:=\Omega \cos \delta+(-1)^{z *} \Omega \sin \delta .`	$\Omega \rightarrow e^{*\delta}\Omega := \Omega \cos \delta + (-1)^{z*}\Omega \sin \delta.$	$\Omega \rightarrow e^{*\delta}\Omega := \Omega \cos \delta + (-1)^{z\ *}\Omega \sin \delta.$
mielke-geometrodynamics_EQ0671 (10.3.28)	219	0.982 N|+0	`\check{\mathscr{J}}_{\alpha}^{\star}:=d H_{\alpha}^{ \star} \cong \tau_{\alpha}^{\star}+E_{\alpha}^{ \star}-(-1)^{s} \eta_{\alpha \beta \gamma} \Gamma^{ \star \beta} \wedge H^{\star \gamma},`	$\check{\mathscr{J}}_{\alpha}^{\star} := dH_{\alpha}^{\star} \cong \tau_{\alpha}^{\star} + E_{\alpha}^{\star} - (-1)^{s}\eta_{\alpha\beta\gamma}\Gamma^{\star\beta} \wedge H^{\star\gamma},$	$\check{\mathscr{J}}_{\alpha}^{\star} := dH_{\alpha}^{\star} \cong \tau_{\alpha}^{\star} + E_{\alpha}^{\star} - (-1)^{s}\eta_{\alpha\beta\gamma}\Gamma^{\star\beta} \wedge H^{\star\gamma},$
mielke-geometrodynamics_EQ1086 (A.12)	366	0.982 W|-1	`\begin{aligned} & \mathrm{C}(1,1)=\mathrm{C}(2,0)= \mathrm{GL}(2, \mathbb{R}), \\ & \mathrm{C}(0,2)= \mathbb{H} \quad \text { (field of quaternions) }, \end{aligned}`	$\mathrm{C}(1,1) = \mathrm{C}(2,0) = \mathrm{GL}(2,\mathbb{R}),$ $\mathrm{C}(0,2) = \mathbb{H} \quad \text{(field of quaternions)},$	$\mathrm{C}(1,1) = \mathrm{C}(2,0) = \mathrm{GL}(2,\mathbb{R}),$ $\mathrm{C}(0,2) = \mathbb{H} \qquad \text{(field of quaternions)},$
mielke-geometrodynamics_EQ0229 (4.2.22)	088	0.982 K|+0	`\Theta:=D \vartheta=d \vartheta-\left[\omega^{ \mathrm{L}}, \vartheta\right]`	$\Theta := D\vartheta = d\vartheta - \left[\omega^{\mathrm{L}}, \vartheta\right]$	$\Theta := D\vartheta = d\vartheta - [\omega^{\mathrm{L}}, \vartheta]$
mielke-geometrodynamics_EQ0836 (12.2.4)	271	0.983 N|+0	`\mathscr{A}:=\frac{1}{4}{ }^{*} \operatorname{Tr}(\gamma \wedge D \gamma)={ }^{*}\left(\vartheta^{\alpha} \wedge T_{\alpha}\right)=\frac{1}{2} T^{[\alpha \beta \gamma]} \eta_{\alpha \beta \gamma}=\mathscr{A}_{i} d x^{i},`	$\mathscr{A} := \frac{1}{4}{}^{*}\mathrm{Tr}(\gamma \wedge D\gamma) = {}^{*}(\vartheta^{\alpha} \wedge T_{\alpha}) = \frac{1}{2}T^{[\alpha\beta\gamma]}\eta_{\alpha\beta\gamma} = \mathscr{A}_{i}dx^{i},$	$\mathscr{A} := \frac{1}{4}{}^{*}Tr(\gamma \wedge D\gamma) = {}^{*}(\vartheta^{\alpha} \wedge T_{\alpha}) = \frac{1}{2}T^{[\alpha\beta\gamma]}\eta_{\alpha\beta\gamma} = \mathscr{A}_{i}\, dx^{i}\ ,$
mielke-geometrodynamics_EQ0511 (7.7.29)	165	0.983 W|-1	`\begin{aligned} \Theta:=D \gamma=d \gamma+[\Gamma, \gamma] & =\left(d \vartheta^{\alpha}+\Gamma_{\beta}^{ \alpha} \wedge \vartheta^{\beta}\right) \gamma_{\alpha} \\ & =T^{\alpha} \gamma_{\alpha}=\frac{1}{2} T_{i j}^{\alpha} \gamma_{\alpha} d x^{i} \wedge d x^{j} \end{aligned}`	$\Theta := D\gamma = d\gamma + [\Gamma,\gamma] = \left(d\vartheta^{\alpha} + \Gamma_{\beta}^{\alpha} \wedge \vartheta^{\beta}\right)\gamma_{\alpha}$ $= T^{\alpha}\gamma_{\alpha} = \frac{1}{2}T_{ij}^{\alpha}\gamma_{\alpha}dx^{i} \wedge dx^{j}$	$\Theta := D\gamma = d\gamma + [\Gamma,\gamma] = (d\vartheta^{\alpha} + \Gamma_{\beta}{}^{\alpha} \wedge \vartheta^{\beta})\gamma_{\alpha}$ $= T^{\alpha}\gamma_{\alpha} = \frac{1}{2}\, T_{ij}{}^{\alpha}\gamma_{\alpha}\, dx^{i} \wedge dx^{j}\ ,$
mielke-geometrodynamics_EQ0637 (10.2.8)	212	0.983 N|+0	`\Gamma_{\alpha}^{\star}=\Gamma_{\alpha}^{\{ \} \star}-K_{ \alpha}^{\star}`	$\Gamma_{\alpha}^{\star} = \Gamma_{\alpha}^{\{\}\star} - K_{\alpha}^{\star}$	$\Gamma_{\alpha}^{\star} = \Gamma_{\alpha}^{\{\}\star} - K_{\alpha}^{\star}$
mielke-geometrodynamics_EQ0271 (4.3.36)	096	0.983 N|+0	`\left[D_{\alpha}, D_{\beta}\right]=R_{\alpha \beta}^{. . c d} L_{c d}-T_{\alpha \beta}^{. . c} D_{c},`	$[D_{\alpha}, D_{\beta}] = R_{\alpha\beta}^{..cd}L_{cd} - T_{\alpha\beta}^{..c}D_{c},$	$[D_{\alpha}, D_{\beta}] = R_{\alpha\beta}^{..cd}L_{cd} - T_{\alpha\beta}^{..c}D_{c},$
mielke-geometrodynamics_EQ0561 (8.5.4)	181	0.984 N|+0	`{ }^{*} \sigma^{(\star)}=(-1)^{\mathrm{sig}} \sigma,`	${}^{*}\sigma^{(\star)} = (-1)^{\mathrm{sig}}\sigma,$	${}^{*}\sigma^{(\star)} = (-1)^{\mathrm{sig}}\sigma\ ,$
mielke-geometrodynamics_EQ0097 (3.2.7)	056	0.985 K|+0	`D \rightarrow{ }^{G^{-1}} D=G^{-1} D G .`	$D \rightarrow {}^{G^{-1}}D = G^{-1}DG.$	$D \rightarrow {}^{G^{-1}}D = G^{-1}D\, G.$
mielke-geometrodynamics_EQ0459 (7.2.11)	152	0.985 N|+0	`\Omega_{\mathrm{C}}=\stackrel{(+)}{\Omega}_{\mathrm{C}}+ \stackrel{(-)}{\Omega}_{\mathrm{C}}, \quad \stackrel{( \pm)}{\Omega}_{\mathrm{C}}:=\frac{1}{2}\left(\Omega_{ \mathrm{C}} \pm \Omega_{\mathrm{C}}^{(*)}\right)`	$\Omega_{\mathrm{C}} = \overset{(+)}{\Omega}_{\mathrm{C}} + \overset{(-)}{\Omega}_{\mathrm{C}}, \quad \overset{(\pm)}{\Omega}_{\mathrm{C}} := \frac{1}{2}\left(\Omega_{\mathrm{C}} \pm \Omega_{\mathrm{C}}^{(*)}\right)$	$\Omega_{\mathrm{C}} = \overset{(+)}{\Omega}_{\mathrm{C}} + \overset{(-)}{\Omega}_{\mathrm{C}}, \qquad \overset{(\pm)}{\Omega}_{\mathrm{C}} := \frac{1}{2}\left(\Omega_{\mathrm{C}} \pm \Omega_{\mathrm{C}}^{(*)}\right)$
mielke-geometrodynamics_EQ1051 (15.2.8)	344	0.985 N|+0	`\begin{aligned} A_{i} & =\frac{1}{2}\left\{A_{i}^{(f) j}+{ }^{*} A_{i}^{(f) j} \gamma^{5}\right\} \lambda_{j}^{(f)} \\ & \oplus \frac{1}{2}\left \{A_{i}^{(c) j}+{ }^{*} A_{i}^{(c) j} \gamma^{5}\right\} \lambda_{j}^{(c)}, \end{aligned}`	$A_{i} = \frac{1}{2}\left\{A_{i}^{(f)j} + {}^{*}A_{i}^{(f)j}\gamma^{5}\right\}\lambda_{j}^{(f)}$ $\oplus \frac{1}{2}\left\{A_{i}^{(c)j} + {}^{*}A_{i}^{(c)j}\gamma^{5}\right\}\lambda_{j}^{(c)},$	$A_{i} = \frac{1}{2}\left\{A_{i}^{(f)j} + {}^{*}A_{i}^{(f)j}\,\gamma^{5}\right\}\lambda_{j}^{(f)}$ $\oplus \frac{1}{2}\left\{A_{i}^{(c)j} + {}^{*}A_{i}^{(c)j}\,\gamma^{5}\right\}\lambda_{j}^{(c)},$
mielke-geometrodynamics_EQ1096 (B.6)	369	0.985 N|+0	`d d \alpha^{(p)} \equiv 0 .`	$dd\alpha^{(p)} \equiv 0.$	$d\, d\alpha^{(p)} \equiv 0.$
mielke-geometrodynamics_EQ0191 (4.1.1)	081	0.985 N|+0	`x \rightarrow x^{\prime}=g x+\mathrm{a}, \quad g \in G L(n, \mathbb{R}), a \in \mathbb{R}^{n} .`	$x \rightarrow x' = gx + \mathrm{a}, \quad g \in GL(n,\mathbb{R}), a \in \mathbb{R}^{n}.$	$x \rightarrow x' = gx + \mathrm{a}, \quad g \in GL(n,\mathbb{R}),\ a \in \mathbb{R}^{n}.$

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Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

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mielke-geometrodynamics_EQ0694 (10.5.5)	224	0.985 W|+0	`\begin{aligned} L_{\mathrm{D}} & =\frac{i}{2}\left(\bar{\psi}^{*} \gamma \wedge D \psi+D \bar{\psi} \wedge^{*} \gamma \psi\right)-m \bar{\psi} \psi \eta \\ & =\bar{\psi}\left(i^{*} \gamma \wedge D-m \eta\right) \psi+d \left(\frac{i}{2} \bar{\psi}^{*} \gamma \psi\right), \end{aligned}`	$\begin{aligned} L_{\mathrm{D}} & =\frac{i}{2}\left(\bar{\psi}^{*} \gamma \wedge D \psi+D \bar{\psi} \wedge^{*} \gamma \psi\right)-m \bar{\psi} \psi \eta \\ & =\bar{\psi}\left(i^{*} \gamma \wedge D-m \eta\right) \psi+d \left(\frac{i}{2} \bar{\psi}^{*} \gamma \psi\right), \end{aligned}$	$\begin{aligned} L_{\mathrm{D}} & =\frac{i}{2}\left(\bar{\psi}^{*} \gamma \wedge D \psi+D \bar{\psi} \wedge^{*} \gamma \psi\right)-m \bar{\psi} \psi \eta \\ & =\bar{\psi}\left(i^{*} \gamma \wedge D-m \eta\right) \psi+d \left(\frac{i}{2} \bar{\psi}^{*} \gamma \psi\right), \end{aligned}$
mielke-geometrodynamics_EQ0554 (8.4.8)	180	0.986 N|+0	`D^{*} \stackrel{ \pm}{\Omega}^{g}=0`	$D^{*} \stackrel{\pm}{\Omega}^{g}=0$	$D^{*} \stackrel{\pm}{\Omega}^{g}=0$
mielke-geometrodynamics_EQ0058 (2.7.8)	045	0.987 K|+0	`b \rightarrow^{G} b:=G b \quad \in C^{\infty}\left(V^{ \rho}\right) .`	$b \rightarrow^{G} b:=G b \quad \in C^{\infty}\left(V^{\rho}\right) .$	$b \rightarrow^{G} b:=G b \quad \in C^{\infty}\left(V^{\rho}\right) .$
mielke-geometrodynamics_EQ0285 (4.4.14)	099	0.987 N|+0	`D\left(\vartheta \wedge^{*} \Omega^{g}\right)=\Theta \wedge^{*} \Omega^{g}`	$D\left(\vartheta \wedge^{*} \Omega^{g}\right)=\Theta \wedge^{*} \Omega^{g}$	$D\left(\vartheta \wedge^{*} \Omega^{g}\right)=\Theta \wedge^{*} \Omega^{g}$
mielke-geometrodynamics_EQ0834 (12.2.2)	271	0.988 N|+0	`i^{*} \gamma \wedge\left(\mathscr{D}+\frac{i}{4} m \gamma-\frac{1}{2} T\right) \psi=0,`	$i^{*} \gamma \wedge\left(\mathscr{D}+\frac{i}{4} m \gamma-\frac{1}{2} T\right) \psi=0,$	$i^{*} \gamma \wedge\left(\mathscr{D}+\frac{i}{4} m \gamma-\frac{1}{2} T\right) \psi=0,$
mielke-geometrodynamics_EQ0002 (2.1.1)	031	0.989 N|+0	`x_{2} \circ \stackrel{-1}{x}_{1}: \mathbb{R} \rightarrow \mathbb{R}`	$x_{2} \circ \stackrel{-1}{x}_{1}: \mathbb{R} \rightarrow \mathbb{R}$	$x_{2} \circ \stackrel{-1}{x}_{1}: \mathbb{R} \rightarrow \mathbb{R}$
mielke-geometrodynamics_EQ0339 (5.3.16)	114	0.989 N|+0	`L_{\mathrm{EC}}:=-\frac{1}{2 \kappa} R^{\alpha \beta} \wedge \eta_{\alpha \beta}=L_{\mathrm{HE}}+\frac{1}{12 \kappa} \mathscr{A}^{*} \mathscr{A}`	$L_{\mathrm{EC}}:=-\frac{1}{2 \kappa} R^{\alpha \beta} \wedge \eta_{\alpha \beta}=L_{\mathrm{HE}}+\frac{1}{12 \kappa} \mathscr{A}^{*} \mathscr{A}$	$L_{\mathrm{EC}}:=-\frac{1}{2 \kappa} R^{\alpha \beta} \wedge \eta_{\alpha \beta}=L_{\mathrm{HE}}+\frac{1}{12 \kappa} \mathscr{A}^{*} \mathscr{A}$
mielke-geometrodynamics_EQ0024 (2.4.6)	039	0.990 N|+0	`\left[L_{i}, L_{j}\right]=c_{i j}{ }^{k} L_{k} .`	$\left[L_{i}, L_{j}\right]=c_{i j}{}^{k} L_{k} .$	$\left[L_{i}, L_{j}\right]=c_{i j}{}^{k} L_{k} .$
mielke-geometrodynamics_EQ0507 (7.7.25)	164	0.990 N|+1	`\sigma_{ \pm}:=\left(\sigma \pm i^{*} \sigma\right) / 2= \frac{1}{2}\left(1 \mp \gamma_{5}\right) \sigma, \quad \text { with } \quad i^{*} \sigma_{ \pm}= \pm \sigma_{ \pm}`	$\sigma_{\pm}:=\left(\sigma \pm i^{*} \sigma\right) / 2=\frac{1}{2}\left(1 \mp \gamma_{5}\right) \sigma, \quad \text { with } \quad i^{*} \sigma_{\pm}=\pm \sigma_{\pm}$	$\sigma_{\pm}:=\left(\sigma \pm i^{*} \sigma\right) / 2=\frac{1}{2}\left(1 \mp \gamma_{5}\right) \sigma, \quad \text { with } \quad i^{*} \sigma_{\pm}=\pm \sigma_{\pm}$
mielke-geometrodynamics_EQ0572 (8.6.10)	184	0.990 W|-2	`\begin{aligned} H_{\alpha}(* *) & =\frac{\theta_{ \mathrm{T}}^{*}}{2 \ell^{2}} K^{\beta \gamma} \wedge \eta_{\alpha \beta \gamma}-\frac{\theta_{\mathrm{T}}}{ \ell^{2}} T_{\alpha}=\frac{1}{\ell^{2}}\left[\theta_{ \mathrm{T}}^{*} K_{\alpha}^{(\star)}-\theta_{\mathrm{T}} T_{\alpha}\right] \\ & \left.\left.=\frac{\theta_{ \mathrm{T}}^{*}}{\ell^{2}} *\left[T_{\alpha}-\vartheta_{ \alpha} \wedge\left(e_{\beta}\right\rfloor T^{\beta} \right)-\frac{1}{2} e_{\alpha}\right\rfloor\left(T^{ \beta} \wedge \vartheta_{\beta}\right)\right]-\frac{ \theta_{\mathrm{T}}}{\ell^{2}} T_{\alpha} \\ & \simeq- \partial L_{\theta} / \partial T^{\alpha} . \end{aligned}`	$\begin{aligned} H_{\alpha}(* *) & =\frac{\theta_{ \mathrm{T}}^{*}}{2 \ell^{2}} K^{\beta \gamma} \wedge \eta_{\alpha \beta \gamma}-\frac{\theta_{\mathrm{T}}}{ \ell^{2}} T_{\alpha}=\frac{1}{\ell^{2}}\left[\theta_{ \mathrm{T}}^{*} K_{\alpha}^{(\star)}-\theta_{\mathrm{T}} T_{\alpha}\right] \\ & =\frac{\theta_{ \mathrm{T}}^{*}}{\ell^{2}} *\left[T_{\alpha}-\vartheta_{ \alpha} \wedge\left(e_{\beta}\right\rfloor T^{\beta}\right)-\frac{1}{2} e_{\alpha}\right\rfloor\left(T^{\beta} \wedge \vartheta_{\beta}\right)\right]-\frac{\theta_{\mathrm{T}}}{ \ell^{2}} T_{\alpha} \\ & \simeq- \partial L_{\theta} / \partial T^{\alpha} . \end{aligned}$	$\begin{aligned} H_{\alpha}(* *) & =\frac{\theta_{ \mathrm{T}}^{*}}{2 \ell^{2}} K^{\beta \gamma} \wedge \eta_{\alpha \beta \gamma}-\frac{\theta_{\mathrm{T}}}{ \ell^{2}} T_{\alpha}=\frac{1}{\ell^{2}}\left[\theta_{ \mathrm{T}}^{*} K_{\alpha}^{(\star)}-\theta_{\mathrm{T}} T_{\alpha}\right] \\ & =\frac{\theta_{ \mathrm{T}}^{*}}{\ell^{2}} *\left[T_{\alpha}-\vartheta_{ \alpha} \wedge\left(e_{\beta}\right\rfloor T^{\beta}\right)-\frac{1}{2} e_{\alpha}\right\rfloor\left(T^{\beta} \wedge \vartheta_{\beta}\right)\right]-\frac{\theta_{\mathrm{T}}}{ \ell^{2}} T_{\alpha} \\ & \simeq- \partial L_{\theta} / \partial T^{\alpha} . \end{aligned}$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ0110 (3.3.11)	058	■ 0.990 ● C|-3	`\begin{aligned} F:= & E \wedge d t+B \\ = & \left(E_{x} d x+E_{y} d y+E_{z} d z\right) \wedge d t \\ & +B_{x} d y \wedge d z+B_{y} d z \wedge d x+B_{z} d x \wedge d y . \end{aligned}`	$F := E \wedge dt + B$ $= (E_x dx + E_y dy + E_z dz) \wedge dt$ $+ B_x dy \wedge dz + B_y dz \wedge dx + B_z dx \wedge dy.$	$F := E \wedge dt + B$ $= (E_x dx + E_y dy + E_z dz) \wedge dt$ $+B_x dy \wedge dz + B_y dz \wedge dx + B_z dx \wedge dy.$
mielke-geometrodynamics_EQ0142 (3.4.13)	064	■ 0.990 ● W|-2	`\begin{aligned} D \tau & =D D \Pi^{\Omega}=\left[\Omega, \Pi^{\Omega}\right] \\ & =\frac{2}{\alpha_{g}}\left\{ \left[\Omega,{ }^{*} \Omega\right] \frac{\partial L}{ \partial \mathscr{F}}+(-1)^{s}[\Omega, \Omega] \frac{ \partial L}{\partial^{*} \mathscr{F}}\right\}=0 . \end{aligned}`	$D\tau = DD\Pi^{\Omega} = \left[\Omega, \Pi^{\Omega}\right]$ $= \frac{2}{\alpha_g}\left\{[\Omega, {}^*\Omega]\frac{\partial L}{\partial \mathscr{F}} + (-1)^s[\Omega, \Omega]\frac{\partial L}{\partial^* \mathscr{F}}\right\} = 0.$	$D\tau = DD\Pi^{\Omega} = [\Omega, \Pi^{\Omega}]$ $= \frac{2}{\alpha_g}\left\{[\Omega, {}^*\Omega]\frac{\partial L}{\partial \mathscr{F}} + (-1)^s[\Omega, \Omega]\frac{\partial L}{\partial^* \mathscr{F}}\right\} = 0.$
mielke-geometrodynamics_EQ0155 (3.5.3)	067	■ 0.990 ● K|+0	`\stackrel{*}{\sigma} \Omega=\frac{1}{4} F_{\alpha \beta \mu \nu} \sigma^{\mu \nu} \otimes \vartheta^{\alpha} \wedge \vartheta^{\beta}`	$\overset{*}{\sigma}\,\Omega = \frac{1}{4} F_{\alpha\beta\mu\nu}\sigma^{\mu\nu} \otimes \vartheta^{\alpha} \wedge \vartheta^{\beta}$	$\overset{*}{\sigma}\,\Omega = \frac{1}{4} F_{\alpha\beta\mu\nu}\sigma^{\mu\nu} \otimes \vartheta^{\alpha} \wedge \vartheta^{\beta}$
mielke-geometrodynamics_EQ0682 (10.3.40)	221	■ 0.990 ● C|-3	`\theta_{\mathrm{L}} C_{\mathrm{L}}-\tilde{\theta}_{ \mathrm{L}} \widetilde{C}_{\mathrm{L}}=L_{\mathrm{MB}}+ \frac{\Delta \theta_{\mathrm{TL}}}{\ell} d\left(\Gamma^{ \star \alpha} \wedge \vartheta_{\alpha}\right),`	$\theta_{\mathrm{L}} C_{\mathrm{L}} - \tilde{\theta}_{\mathrm{L}} \widetilde{C}_{\mathrm{L}} = L_{\mathrm{MB}} + \frac{\Delta\theta_{\mathrm{TL}}}{\ell} d\left(\Gamma^{\star\alpha} \wedge \vartheta_{\alpha}\right),$	$\theta_{\mathrm{L}} C_{\mathrm{L}} - \tilde{\theta}_{\mathrm{L}} \widetilde{C}_{\mathrm{L}} = L_{\mathrm{MB}} + \frac{\Delta\theta_{\mathrm{TL}}}{\ell} d\left(\Gamma^{\star\alpha} \wedge \vartheta_{\alpha}\right),$
mielke-geometrodynamics_EQ0874 (13.3.2)	284	■ 0.990 ● S|-2	`\left[Z^{A}{ }_{B}, Z^{C}{ }_{D}\right]=\delta_{D}^{A} Z^{C}{ }_{B}-\delta_{B}^{C} Z^{A}{ }_{D}`	$\left[Z^{A}{}_{B}, Z^{C}{}_{D}\right] = \delta^{A}_{D} Z^{C}{}_{B} - \delta^{C}_{B} Z^{A}{}_{D}$	$[Z^{A}{}_{B}, Z^{C}{}_{D}] = \delta^{A}_{D} Z^{C}{}_{B} - \delta^{C}_{B} Z^{A}{}_{D}$
mielke-geometrodynamics_EQ0042 (2.6.5)	042	■ 0.991 ● C|-3	`F_{\alpha \beta}{ }^{j}=\partial_{\alpha} \Gamma_{\beta}{ }^{j}-\partial_{\beta} \Gamma_{\alpha}{ }^{j}-c_{k l}{ }^{j} \Gamma_{\alpha}{ }^{k} \Gamma_{\beta}{ }^{l},`	$F_{\alpha\beta}{}^{j} = \partial_\alpha \Gamma_\beta{}^j - \partial_\beta \Gamma_\alpha{}^j - c_{kl}{}^j \Gamma_\alpha{}^k \Gamma_\beta{}^l,$	$F_{\alpha\beta}{}^{j} = \partial_\alpha \Gamma_\beta{}^j - \partial_\beta \Gamma_\alpha{}^j - c_{kl}{}^j \Gamma_\alpha{}^k \Gamma_\beta{}^l,$
mielke-geometrodynamics_EQ0233 (4.2.26)	088	■ 0.991 ● K|+0	`\Omega^{\mathrm{T}}=f \Theta+d f \wedge \vartheta- \Omega^{\mathrm{L}} \otimes \widetilde{\widetilde{ \varphi}}`	$\Omega^{\mathrm{T}} = f\Theta + df \wedge \vartheta - \Omega^{\mathrm{L}} \otimes \widetilde{\widetilde{\varphi}}$	$\Omega^{\mathrm{T}} = f\Theta + df \wedge \vartheta - \Omega^{\mathrm{L}} \otimes \widetilde{\widetilde{\varphi}}$
mielke-geometrodynamics_EQ0778	246	■ 0.991 ● N|+0	`\langle-\infty| D \tau_{A}|\infty\rangle^{ \stackrel{(+)}{-}}=\frac{1}{(4 .) 8 \pi^{2}} \operatorname{Tr}\left(\Omega^{g} \wedge \Omega^{g(*)} \right) .`	$\langle -\infty \| D\tau_A \| \infty\rangle^{\overset{(+)}{-}} = \frac{1}{(4.)8\pi^2} \operatorname{Tr}\left(\Omega^g \wedge \Omega^{g(*)}\right).$	$\langle -\infty \| D\tau_A \| \infty\rangle^{\overset{(+)}{-}} = \frac{1}{(4.)8\pi^2} \operatorname{Tr}(\Omega^g \wedge \Omega^{g(*)}).$
mielke-geometrodynamics_EQ0644 (10.3.1)	214	■ 0.991 ● N|+0	`\widetilde{\Gamma}_{\alpha}^{\star}=\Gamma_{\alpha}^{ \star}-(-1)^{s} \frac{\varepsilon}{2 \ell} \vartheta_{ \alpha},`	$\widetilde{\Gamma}^{\star}_{\alpha} = \Gamma^{\star}_{\alpha} - (-1)^s \frac{\varepsilon}{2\ell}\vartheta_\alpha,$	$\widetilde{\Gamma}^{\star}_{\alpha} = \Gamma^{\star}_{\alpha} - (-1)^s \frac{\varepsilon}{2\ell}\vartheta_\alpha,$
mielke-geometrodynamics_EQ0149 (3.4.20)	065	■ 0.992 ● C|-3	`L\left(\mathscr{F},{ }^{*} \mathscr{F}\right)=- \mathscr{F} .`	$L\left(\mathscr{F}, {}^*\mathscr{F}\right) = -\mathscr{F}.$	$L\left(\mathscr{F}, {}^*\mathscr{F}\right) = -\mathscr{F}.$
mielke-geometrodynamics_EQ0368 (6.2.19)	127	■ 0.992 ● N|+0	`\stackrel{( \pm)}{L}_{\\\|}:=L_{\\\|} \pm i \frac{2 \ell^{2}}{\kappa} d C_{\mathrm{TT}}=L_{\mathrm{HE}}-L_{ \mathrm{EC}} \pm i \frac{2 \ell^{2}}{\kappa} d \stackrel{(\mp)}{C}_{\mathrm{TT}} .`	$\overset{(\pm)}{L}_{\parallel} := L_{\parallel} \pm i\frac{2\ell^2}{\kappa} dC_{\mathrm{TT}} = L_{\mathrm{HE}} - L_{\mathrm{EC}} \pm i\frac{2\ell^2}{\kappa} d\,\overset{(\mp)}{C}_{\mathrm{TT}}.$	$\overset{(\pm)}{L}_{\parallel} := L_{\parallel} \pm i\frac{2\ell^2}{\kappa} dC_{\mathrm{TT}} = L_{\mathrm{HE}} - L_{\mathrm{EC}} \pm i\frac{2\ell^2}{\kappa} d\,\overset{(\mp)}{C}_{\mathrm{TT}}.$
mielke-geometrodynamics_EQ0449 (7.2.2)	151	■ 0.992 ● N|+0	`{ }^{*} \Omega^{g(\star)}:=\frac{1}{4}{ }^{*} R_{\alpha \beta}^{(\star) c d} L_{c d} \otimes \vartheta^{\alpha} \wedge \vartheta^{\beta},`	${}^*\Omega^{g(\star)} := \frac{1}{4}{}^*R^{(\star)cd}_{\alpha\beta} L_{cd} \otimes \vartheta^\alpha \wedge \vartheta^\beta,$	${}^*\Omega^{g(\star)} := \frac{1}{4}{}^*R^{(\star)cd}_{\alpha\beta} L_{cd} \otimes \vartheta^\alpha \wedge \vartheta^\beta,$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): ● C component ● W weak ● S stable ● N noise ● K clean ● not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ1050 (15.2.7)	344	0.992 N|+0	`\left\{\bar{L}_{j}=\sigma^{\alpha \beta} \otimes \lambda_{i}, \quad \lambda_{i}, \quad i \gamma^{5} \lambda_{i} \mid j=1, \ldots 8 N^{2}-1\right\},`	$\left\{\bar{L}_j = \sigma^{\alpha\beta} \otimes \lambda_i, \quad \lambda_i, \quad i\gamma^5\lambda_i \mid j = 1, \ldots 8N^2 - 1\right\},$	$\left\{\bar{L}_j = \sigma^{\alpha\beta} \otimes \lambda_i\,, \;\; \lambda_i\,, \;\; i\,\gamma^5\lambda_i \mid j = 1, \ldots 8N^2 - 1\right\},$
mielke-geometrodynamics_EQ0964 (14.2.4)	313	0.992 N|+0	`\stackrel{\circ}{\omega}=b \stackrel{\circ}{\vartheta} .`	$\overset{\circ}{\omega} = b\,\overset{\circ}{\vartheta}\,.$	$\overset{\circ}{\omega} = b\overset{\circ}{\vartheta}.$
mielke-geometrodynamics_EQ0256 (4.3.21)	093	0.992 W|+0	`R_{\alpha \beta c}^{. . . d}=2\left\{\partial_{[\alpha} \Gamma_{\beta] c}^{. . d}+\Gamma_{[\alpha \mid h}^{. . d} \Gamma_{\mid \beta] c}^{. . h}\right\}`	$R_{\alpha\beta c}^{\cdot\cdot\cdot d} = 2\left\{\partial_{[\alpha}\Gamma_{\beta]c}^{\cdot\cdot d} + \Gamma_{[\alpha\vert h}^{\cdot\cdot d}\Gamma_{\vert\beta]c}^{\cdot\cdot h}\right\}$	$R_{\alpha\,\beta\,c}^{\cdot\cdot\cdot d} = 2\left\{\partial_{[\alpha}\Gamma_{\beta]c}^{\cdot\cdot d} + \Gamma_{[\alpha\vert h}^{\cdot\cdot d}\Gamma_{\vert\beta]c}^{\cdot\cdot h}\right\}$
mielke-geometrodynamics_EQ0245 (4.3.10)	091	0.992 N|+0	`\vartheta \wedge^{*} \vartheta=\eta .`	$\vartheta \wedge^* \vartheta = \eta.$	$\vartheta \wedge {}^*\vartheta = \eta.$
mielke-geometrodynamics_EQ0633 (10.2.4)	212	0.992 N|+0	`-(-1)^{s} \theta_{\mathrm{TL}} T_{\alpha}-\frac{1}{2 \ell} \theta_{\mathrm{T}} \eta_{\alpha}-\theta_{ \mathrm{L}} \ell R_{\alpha}^{\star}=\ell \tau_{\alpha}^{ \star} ;`	$-(-1)^s\theta_{\mathrm{TL}}\,T_\alpha - \frac{1}{2\ell}\theta_{\mathrm{T}}\eta_\alpha - \theta_{\mathrm{L}}\ell R_\alpha^\star = \ell\tau_\alpha^\star;$	$-\,(-1)^s\theta_{\mathrm{TL}}\,T_\alpha - \frac{1}{2\ell}\theta_{\mathrm{T}}\,\eta_\alpha - \theta_{\mathrm{L}}\ell\,R_\alpha^\star = \ell\,\tau_\alpha^\star\,;$
mielke-geometrodynamics_EQ0701 (10.5.12)	225	0.992 N|+0	`\hat{D}^{*} \hat{D} \psi-m^{2} \eta \psi+i^{*} \sigma \wedge\left(\hat{R}+T^{\alpha} \hat{D}_{\alpha}\right) \psi=0,`	$\hat{D}^*\hat{D}\psi - m^2\eta\psi + i^*\sigma \wedge \left(\hat{R} + T^\alpha\hat{D}_\alpha\right)\psi = 0,$	$\hat{D}^*\hat{D}\psi - m^2\eta\psi + i^*\sigma \wedge \left(\hat{R} + T^\alpha\hat{D}_\alpha\right)\psi = 0\,,$
mielke-geometrodynamics_EQ0847 (12.2.15)	273	0.992 N|+0	`\mathscr{A}_{\alpha} \mathscr{A}^{\alpha} \eta= \mathscr{A} \wedge{ }^{*} \mathscr{A} \cong\left(\ell^{4} / 4\right)^{*} j_{5} \wedge j_{5}=0 .`	$\mathscr{A}_\alpha\mathscr{A}^\alpha\eta = \mathscr{A} \wedge {}^*\mathscr{A} \cong \left(\ell^4/4\right)^* j_5 \wedge j_5 = 0.$	$\mathscr{A}_\alpha\mathscr{A}^\alpha\eta = \mathscr{A} \wedge {}^*\mathscr{A} \cong (\ell^4/4)^* j_5 \wedge j_5 = 0.$
mielke-geometrodynamics_EQ0388 (6.4.3)	130	0.993 N|+0	`\left.\underline{\Psi}:=n\rfloor(d t \wedge \Psi)= \left(1-{ }^{\perp}\right) \Psi, \quad n\right\rfloor \underline{\Psi} \equiv 0 .`	$\underline{\Psi} := n\rfloor(dt \wedge \Psi) = \left(1 - {}^\perp\right)\Psi, \quad n\rfloor\underline{\Psi} \equiv 0.$	$\underline{\Psi} := n\rfloor(dt \wedge \Psi) = (1 \;-\; {}^\perp)\Psi, \qquad n\rfloor\underline{\Psi} \equiv 0.$
mielke-geometrodynamics_EQ0228 (4.2.21)	088	0.993 N|+0	`\widetilde{\widetilde{\vartheta}}=f \vartheta .`	$\widetilde{\widetilde{\vartheta}} = f\vartheta.$	$\overset{\approx}{\vartheta} = f\vartheta.$
mielke-geometrodynamics_EQ0287 (4.4.16)	099	0.993 K|+0	`D D \Pi^{\mathrm{L}}+D \Pi_{[]}^{\mathrm{T}}=D \tau_{s} .`	$DD\Pi^{\mathrm{L}} + D\Pi_{[]}^{\mathrm{T}} = D\tau_s.$	$D\,D\Pi^{\mathrm{L}} + D\Pi_{[\,]}^{\mathrm{T}} = D\tau_s.$
mielke-geometrodynamics_EQ0320 (5.2.4)	111	0.993 N|+0	`\mathscr{A}:=\frac{1}{4}{ }^{*} \operatorname{Tr}(\gamma \wedge D \gamma)={ }^{*}\left(\vartheta^{\alpha} \wedge T_{\alpha}\right)=\frac{1}{2} T^{[\alpha \beta \gamma]} \eta_{\alpha \beta \gamma}=\mathscr{A}_{i} d x^{i},`	$\mathscr{A} := \frac{1}{4}{}^*\mathrm{Tr}(\gamma \wedge D\gamma) = {}^*(\vartheta^\alpha \wedge T_\alpha) = \frac{1}{2}T^{[\alpha\beta\gamma]}\eta_{\alpha\beta\gamma} = \mathscr{A}_i dx^i,$	$\mathscr{A} := \frac{1}{4}{}^*Tr(\gamma \wedge D\gamma) = {}^*(\vartheta^\alpha \wedge T_\alpha) = \frac{1}{2}T^{[\alpha\beta\gamma]}\eta_{\alpha\beta\gamma} = \mathscr{A}_i\,dx^i\,,$
mielke-geometrodynamics_EQ0100 (3.3.1)	056	0.994 N|-2	`F:=d A=\frac{1}{2} F_{i j} d x^{i} \wedge d x^{j} .`	$F := dA = \frac{1}{2}F_{ij}dx^i \wedge dx^j.$	$F := dA = \frac{1}{2}F_{ij}dx^i \wedge dx^j\,.$
mielke-geometrodynamics_EQ1102 (B.14)	370	0.994 N|+1	`\begin{aligned} d_{\mu}(M) & :={ }^{*} 1=\sqrt{\left| \operatorname{det} g_{\alpha \beta}\right|} \vartheta^{1} \wedge \cdots \wedge \vartheta^{n}=\eta \\ & =\sqrt{ \left|\operatorname{det} g_{i j}\right|} d x^{1} \wedge \cdots \wedge d x^{n}=\frac{1}{n} \vartheta \wedge^{*} \vartheta . \end{aligned}`	$\begin{aligned} d_\mu(M) &:= {}^*1 = \sqrt{\vert\det g_{\alpha\beta}\vert}\,\vartheta^1 \wedge \cdots \wedge \vartheta^n = \eta \\ &= \sqrt{\vert\det g_{ij}\vert}\,dx^1 \wedge \cdots \wedge dx^n = \frac{1}{n}\vartheta \wedge^* \vartheta. \end{aligned}$	$\begin{aligned} d_\mu(M) &:= {}^*1 = \sqrt{\vert\det g_{\alpha\beta}\vert}\;\vartheta^1 \wedge \cdots \wedge \vartheta^n = \eta \\ &= \sqrt{\vert\det\;g_{ij}\vert}\;dx^1 \wedge \cdots \wedge dx^n = \frac{1}{n}\vartheta \wedge {}^*\vartheta. \end{aligned}$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

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mielke-geometrodynamics_EQ0467 (7.3.6)	154	■ 0.994 ● N|+0	`\begin{aligned} L_{\mathrm{SKY}}^{(\star)} & =-\frac{1}{2} R^{\alpha \beta} \wedge{ }^{*} R_{\alpha \beta}-\frac{(-1)^{s}}{2} R^{\alpha \beta} \wedge R_{\alpha \beta}^{(\star)} \\ & =-\frac{1}{4}\left(R_{\alpha \beta}+{ }^{*} R_{\alpha \beta}^{(\star)}\right) \wedge{ }^{*}\left(R^{\alpha \beta}+{ }^{*} R^{\alpha \beta(\star)}\right) \\ & =\frac{1}{2} \operatorname{Tr}\left(\bar{\Omega}^{g} \wedge{ }^{\star} \bar{\Omega}^{g}\right) . \end{aligned}`	$\begin{aligned} L_{\mathrm{SKY}}^{(\star)} & =-\frac{1}{2} R^{\alpha \beta} \wedge{ }^{*} R_{\alpha \beta}-\frac{(-1)^{s}}{2} R^{\alpha \beta} \wedge R_{\alpha \beta}^{(\star)} \\ & =-\frac{1}{4}\left(R_{\alpha \beta}+{ }^{*} R_{\alpha \beta}^{(\star)}\right) \wedge{ }^{*}\left(R^{\alpha \beta}+{ }^{*} R^{\alpha \beta(\star)}\right) \\ & =\frac{1}{2} \operatorname{Tr}\left(\bar{\Omega}^{g} \wedge{ }^{\star} \bar{\Omega}^{g}\right) . \end{aligned}$	$\begin{aligned} L_{\mathrm{SKY}}^{(\star)} & =-\frac{1}{2} R^{\alpha \beta} \wedge{ }^{*} R_{\alpha \beta}-\frac{(-1)^{s}}{2} R^{\alpha \beta} \wedge R_{\alpha \beta}^{(\star)} \\ & =-\frac{1}{4}\left(R_{\alpha \beta}+{ }^{*} R_{\alpha \beta}^{(\star)}\right) \wedge{ }^{*}\left(R^{\alpha \beta}+{ }^{*} R^{\alpha \beta(\star)}\right) \\ & =\frac{1}{2} \operatorname{Tr}\left(\bar{\Omega}^{g} \wedge{ }^{\star} \bar{\Omega}^{g}\right) . \end{aligned}$
mielke-geometrodynamics_EQ0498 (7.7.16)	163	■ 0.994 ● N|+0	`{ }^{*} \Phi:=\frac{1}{(4-p!) p!} \sqrt{ \operatorname{det} g_{i j}} \varepsilon^{i_{1} \cdots i_{p}}{ }_{j_{1} \cdots j_{4-p}} \Phi_{i_{1} \cdots i_{p}} d x^{j_{1}} \wedge \cdots \wedge d x^{j_{4-p}}`	$^{*}\Phi:=\frac{1}{(4-p!) p!} \sqrt{\operatorname{det} g_{i j}} \varepsilon^{i_{1} \cdots i_{p}}{ }_{j_{1} \cdots j_{4-p}} \Phi_{i_{1} \cdots i_{p}} d x^{j_{1}} \wedge \cdots \wedge d x^{j_{4-p}}$	$^{*}\Phi:=\frac{1}{(4-p!) p!} \sqrt{\operatorname{det} g_{i j}} \varepsilon^{i_{1} \cdots i_{p}}{ }_{j_{1} \cdots j_{4-p}} \Phi_{i_{1} \cdots i_{p}} d x^{j_{1}} \wedge \cdots \wedge d x^{j_{4-p}},$
mielke-geometrodynamics_EQ0724 (10.10.4)	230	■ 0.994 ● N|+0	`\delta_{\mathrm{susy}} L=i \bar{\sigma} \Psi \gamma^{ \alpha} \wedge \frac{\delta L}{\delta \vartheta^{ \alpha}}+\delta_{\mathrm{susy}} \Gamma_{\alpha}^{\star} \wedge \frac{\delta L}{\delta \Gamma_{\alpha}^{\star}}+(2 \overline{D \sigma}+c \bar{\sigma} \gamma) \wedge \frac{ \delta L}{\delta \bar{\Psi}},`	$\delta_{\mathrm{susy}} L=i \bar{\sigma} \Psi \gamma^{\alpha} \wedge \frac{\delta L}{\delta \vartheta^{\alpha}}+\delta_{\mathrm{susy}} \Gamma_{\alpha}^{\star} \wedge \frac{\delta L}{\delta \Gamma_{\alpha}^{\star}}+(2 \overline{D \sigma}+c \bar{\sigma} \gamma) \wedge \frac{\delta L}{\delta \bar{\Psi}},$	$\delta_{\mathrm{susy}} L=i \bar{\sigma} \Psi \gamma^{\alpha} \wedge \frac{\delta L}{\delta \vartheta^{\alpha}}+\delta_{\mathrm{susy}} \Gamma_{\alpha}^{\star} \wedge \frac{\delta L}{\delta \Gamma_{\alpha}^{\star}}+(2 \overline{D \sigma}+c \bar{\sigma} \gamma) \wedge \frac{\delta L}{\delta \bar{\Psi}},$
mielke-geometrodynamics_EQ0081 (3.1.6)	053	■ 0.994 ● N|+0	`\begin{aligned} \delta L & =\delta \varphi \wedge^{*} L_{\varphi}+\delta(d \varphi) \wedge \pi \\ & =\delta \varphi \wedge^{*} L_{\varphi}+d(\delta \varphi) \wedge \pi \\ & =\delta \varphi \wedge\left({ }^{*} L_{\varphi}+d \pi\right)+d(\delta \varphi \wedge \pi), \end{aligned}`	$\begin{aligned} \delta L & =\delta \varphi \wedge^{*} L_{\varphi}+\delta(d \varphi) \wedge \pi \\ & =\delta \varphi \wedge^{*} L_{\varphi}+d(\delta \varphi) \wedge \pi \\ & =\delta \varphi \wedge\left({ }^{*} L_{\varphi}+d \pi\right)+d(\delta \varphi \wedge \pi), \end{aligned}$	$\begin{aligned} \delta L & =\delta \varphi \wedge^{*} L_{\varphi}+\delta(d \varphi) \wedge \pi \\ & =\delta \varphi \wedge^{*} L_{\varphi}+d(\delta \varphi) \wedge \pi \\ & =\delta \varphi \wedge\left({ }^{*} L_{\varphi}+d \pi\right)+d(\delta \varphi \wedge \pi), \end{aligned}$
mielke-geometrodynamics_EQ0509 (7.7.27)	165	■ 0.994 ● K|+0	`D=d+[\Gamma, \quad]`	$D=d+[\Gamma, \quad]$	$D=d+[\Gamma, \quad]$
mielke-geometrodynamics_EQ0387 (6.4.2)	130	■ 0.994 ● K|+0	`\left.{ }^{\perp} \Psi:=d t \wedge \Psi_{\perp} ; \quad \Psi_{\perp}:=n\right\rfloor \Psi,`	${}^{\perp}\Psi:=d t \wedge \Psi_{\perp} ; \quad \Psi_{\perp}:=n\rfloor \Psi,$	${}^{\perp}\Psi:=d t \wedge \Psi_{\perp} ; \quad \Psi_{\perp}:=n\rfloor \Psi,$
mielke-geometrodynamics_EQ0646 (10.3.3)	214	■ 0.995 ● N|+0	`\Gamma_{\alpha}^{\star}=(-1)^{s} \frac{\varepsilon}{2 \ell} \vartheta_{\alpha},`	$\Gamma_{\alpha}^{\star}=(-1)^{s} \frac{\varepsilon}{2 \ell} \vartheta_{\alpha},$	$\Gamma_{\alpha}^{\star}=(-1)^{s} \frac{\varepsilon}{2 \ell} \vartheta_{\alpha},$
mielke-geometrodynamics_EQ0806 (11.4.18)	255	■ 0.995 ● W|+1	`\overrightarrow{J^{2}} \chi_{\kappa}^{m}=j(j+1) \chi_{ \kappa}^{m}`	$\overrightarrow{J^{2}} \chi_{\kappa}^{m}=j(j+1) \chi_{\kappa}^{m}$	$\overrightarrow{J^{2}} \chi_{\kappa}^{m}=j(j+1) \chi_{\kappa}^{m}$
mielke-geometrodynamics_EQ0995 (14.3.8)	321	■ 0.995 ● W|-1	`L_{\text {anom. }}=\frac{\widehat{\ell}}{2} \bar{\psi} \gamma \wedge \gamma \wedge{ }^{*} \Omega \psi=\frac{ \ell^{*}}{4 \sqrt{\alpha_{g}}} \bar{\psi} F_{\mu \nu} \gamma^{5}\left[\gamma^{\mu}, \gamma^{\nu}\right] \psi \eta .`	$L_{\text {anom. }}=\frac{\widehat{\ell}}{2} \bar{\psi} \gamma \wedge \gamma \wedge{ }^{*} \Omega \psi=\frac{\ell^{*}}{4 \sqrt{\alpha_{g}}} \bar{\psi} F_{\mu \nu} \gamma^{5}\left[\gamma^{\mu}, \gamma^{\nu}\right] \psi \eta .$	$L_{\text {anom. }}=\frac{\widehat{\ell}}{2} \bar{\psi} \gamma \wedge \gamma \wedge{ }^{*} \Omega \psi=\frac{\ell^{*}}{4 \sqrt{\alpha_{g}}} \bar{\psi} F_{\mu \nu} \gamma^{5}\left[\gamma^{\mu}, \gamma^{\nu}\right] \psi \eta .$
mielke-geometrodynamics_EQ0098 (3.2.8)	056	■ 0.995 ● K|+0	`\Omega \rightarrow{ }^{G^{-1}} \Omega=G^{-1} \Omega G .`	$\Omega \rightarrow{ }^{G^{-1}} \Omega=G^{-1} \Omega G .$	$\Omega \rightarrow{ }^{G^{-1}} \Omega=G^{-1} \Omega G .$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): ● C component ● W weak ● S stable ● N noise ● K clean ● not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ0930 (14.1.11)	304	0.995 N|+0	`\mathrm{R}={ }^{*}\left(\Omega^{g} \wedge \vartheta \wedge \vartheta\right)=0`	$\mathrm{R}={}^{*}\left(\Omega^{g} \wedge \vartheta \wedge \vartheta\right)=0$	$\mathrm{R}={}^{*}(\Omega^{g} \wedge \vartheta \wedge \vartheta)=0$
mielke-geometrodynamics_EQ1033 (15.1.10)	338	0.995 N|-1	`\frac{1}{2}{ }^{*}\left(\vartheta^{f} \wedge^{*} \Omega^{f}\right)+\Lambda_{\mathrm{eff}}}^{f} \vartheta^{f}=0`	$\frac{1}{2}{}^{*}\left(\vartheta^{f} \wedge^{*} \Omega^{f}\right)+\Lambda_{\mathrm{eff}}}^{f} \vartheta^{f}=0$	$\frac{1}{2}{}^{*}(\vartheta^{f} \wedge^{*} \Omega^{f})+\Lambda_{\mathrm{eff}}}^{f} \vartheta^{f}=0$
mielke-geometrodynamics_EQ0207 (4.1.21)	083	0.995 N|+0	`\delta:\left\{\begin{array}{llll} A(n, \mathbb{R}) & \times A(M) & \longrightarrow & A(M) \\ \downarrow & \downarrow & & \downarrow \\ (g, a) & (e(m), x) & =\left( \text { g.e }(m), g^{-1}(x-a)\right) . \end{array}\right.`	$\delta:\left\{\begin{array}{llll} A(n, \mathbb{R}) & \times A(M) & \longrightarrow & A(M) \\ \downarrow & \downarrow & & \downarrow \\ (g, a) & (e(m), x) & =\left(\text { g.e }(m), g^{-1}(x-a)\right) . \end{array}\right.$	$\delta:\left\{\begin{array}{llll} A(n, \mathbb{R}) & \times A(M) & \longrightarrow & A(M) \\ \downarrow & \downarrow & & \downarrow \\ (g, a) & (e(m), x) & =(g.e(m), g^{-1}(x-a)). \end{array}\right.$
mielke-geometrodynamics_EQ0658 (10.3.15)	217	0.995 N|+0	`{ }^{*} D\left(\vartheta^{\alpha} \wedge H_{\alpha} \right)-{ }^{*}\left(T^{\alpha} \wedge H_{\alpha}\right)= \frac{\gamma}{\delta \ell^{2}}{ }^{*}\left(\vartheta^{\alpha} \wedge T_{\alpha}\right)+\frac{1}{\delta \ell}{ }^{*}\left(\eta^{\alpha} \wedge H_{\alpha}\right) .`	${}^{*} D\left(\vartheta^{\alpha} \wedge H_{\alpha}\right)-{}^{*}\left(T^{\alpha} \wedge H_{\alpha}\right)=\frac{\gamma}{\delta \ell^{2}}{}^{*}\left(\vartheta^{\alpha} \wedge T_{\alpha}\right)+\frac{1}{\delta \ell}{}^{*}\left(\eta^{\alpha} \wedge H_{\alpha}\right) .$	${}^{*}D(\vartheta^{\alpha} \wedge H_{\alpha})-{}^{*}(T^{\alpha} \wedge H_{\alpha})=\frac{\gamma}{\delta \ell^{2}}{}^{*}(\vartheta^{\alpha} \wedge T_{\alpha})+\frac{1}{\delta \ell}{}^{*}(\eta^{\alpha} \wedge H_{\alpha}) .$
mielke-geometrodynamics_EQ0154 (3.5.2)	066	0.995 N|+0	`\stackrel{(-)}{\sigma} \mu \nu:=\left\{\left. \begin{array}{l} \sigma^{i j}=\frac{1}{2} \varepsilon^{i j k} \sigma_{k} \\ \sigma^{i 0}=(-) \frac{1}{2} \sigma^{i} \end{array} \right\rvert\, i, j, k=1,2,3 \right\}`	$\stackrel{(-)}{\sigma}{}_{\mu \nu}:=\left\{\left.\begin{array}{l} \sigma^{i j}=\frac{1}{2} \varepsilon^{i j k} \sigma_{k} \\ \sigma^{i 0}=(-) \frac{1}{2} \sigma^{i} \end{array}\right\rvert\, i, j, k=1,2,3\right\}$	$\stackrel{(-)}{\sigma}{}_{\mu \nu}:=\left\{\left.\begin{array}{l} \sigma^{i j}=\frac{1}{2} \varepsilon^{i j k} \sigma_{k} \\ \sigma^{i 0}=(-) \frac{1}{2} \sigma^{i} \end{array}\right\rvert\, i, j, k=1,2,3\right\}$
mielke-geometrodynamics_EQ0928 (14.1.9)	304	0.995 W|-1	`\begin{aligned} \Sigma_{\mu \nu}^{\mathrm{YM}} & = \frac{1}{\alpha_{g}} \operatorname{Tr}\left(F_{\mu \alpha} F_{\nu}^{\cdot \alpha}-\frac{1}{4} g_{\mu \nu} F_{\alpha \beta} F^{\alpha \beta}\right) \\ & =\frac{1}{2 \alpha_{g}} \operatorname{Tr}\left(F_{\mu \alpha} F_{ \nu}^{\cdot \alpha}-(-1)^{s}{ }^{*} F_{\mu \alpha}{ }^{*} F_{\nu}^{\cdot \alpha}\right), \end{aligned}`	$\begin{aligned} \Sigma_{\mu \nu}^{\mathrm{YM}} & = \frac{1}{\alpha_{g}} \operatorname{Tr}\left(F_{\mu \alpha} F_{\nu}^{\cdot \alpha}-\frac{1}{4} g_{\mu \nu} F_{\alpha \beta} F^{\alpha \beta}\right) \\ & =\frac{1}{2 \alpha_{g}} \operatorname{Tr}\left(F_{\mu \alpha} F_{ \nu}^{\cdot \alpha}-(-1)^{s}{}^{*} F_{\mu \alpha}{}^{*} F_{\nu}^{\cdot \alpha}\right), \end{aligned}$	$\begin{aligned} \Sigma_{\mu \nu}^{\mathrm{YM}} & = \frac{1}{\alpha_{g}} \operatorname{Tr}(F_{\mu \alpha} F_{\nu}^{\cdot \alpha}-\frac{1}{4} g_{\mu \nu} F_{\alpha \beta} F^{\alpha \beta}) \\ & =\frac{1}{2 \alpha_{g}} \operatorname{Tr}(F_{\mu \alpha} F_{ \nu}^{\cdot \alpha}-(-1)^{s}{}^{*} F_{\mu \alpha}{}^{*} F_{\nu}^{\cdot \alpha}), \end{aligned}$
mielke-geometrodynamics_EQ0006 (2.2.1)	033	0.996 K|+0	`\left.e_{\beta}\right\rfloor \vartheta^{\alpha}=\delta^{ \alpha}{ }_{\beta} .`	$\left.e_{\beta}\right\rfloor \vartheta^{\alpha}=\delta^{ \alpha}{ }_{\beta} .$	$\left.e_{\beta}\right\rfloor \vartheta^{\alpha}=\delta^{ \alpha}{ }_{\beta} .$
mielke-geometrodynamics_EQ0284 (4.4.13)	099	0.996 W|+2	`\begin{aligned} D[\Theta, \vartheta] & =[D \Theta, \vartheta]+[\Theta, D \vartheta] \\ & =\left[\left[\vartheta, \Omega^{g}\right], \vartheta\right]+[\Theta, \Theta] \\ & =\vartheta \wedge \Omega^{g} \wedge \vartheta-\Omega^{g} \wedge \vartheta \wedge \vartheta+\vartheta \wedge \vartheta \wedge \Omega^{g}-\vartheta \wedge \Omega^{g} \wedge \vartheta \\ & =\left[\vartheta \wedge \vartheta, \Omega^{g}\right] . \end{aligned}`	$\begin{aligned} D[\Theta, \vartheta] & =[D \Theta, \vartheta]+[\Theta, D \vartheta] \\ & =\left[\left[\vartheta, \Omega^{g}\right], \vartheta\right]+[\Theta, \Theta] \\ & =\vartheta \wedge \Omega^{g} \wedge \vartheta-\Omega^{g} \wedge \vartheta \wedge \vartheta+\vartheta \wedge \vartheta \wedge \Omega^{g}-\vartheta \wedge \Omega^{g} \wedge \vartheta \\ & =\left[\vartheta \wedge \vartheta, \Omega^{g}\right] . \end{aligned}$	$\begin{aligned} D[\Theta, \vartheta] & =[D \Theta, \vartheta]+[\Theta, D \vartheta] \\ & =[[\vartheta, \Omega^{g}], \vartheta]+[\Theta, \Theta] \\ & =\vartheta \wedge \Omega^{g} \wedge \vartheta-\Omega^{g} \wedge \vartheta \wedge \vartheta+\vartheta \wedge \vartheta \wedge \Omega^{g}-\vartheta \wedge \Omega^{g} \wedge \vartheta \\ & =[\vartheta \wedge \vartheta, \Omega^{g}]. \end{aligned}$ (4
mielke-geometrodynamics_EQ0308 (4.5.18)	103	0.996 N|+0	`C_{\mathrm{AdS}}=\hat{M}^{2}+\frac{\Lambda}{3} \hat{J}^{2}`	$C_{\mathrm{AdS}}=\hat{M}^{2}+\frac{\Lambda}{3} \hat{J}^{2}$	$C_{\mathrm{AdS}}=\hat{M}^{2}+\frac{\Lambda}{3} \hat{J}^{2}$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ0623 (10.1.11)	210	0.996 S|-2	`\frac{\delta C_{\mathrm{TL}}}{\delta \vartheta^{\alpha}}= \frac{1}{\ell} R_{\alpha}^{\star} \quad \text { and } \quad \frac{\delta C_{\mathrm{TL}}}{\delta \Gamma^{\star \alpha}}=\frac{1}{\ell} T_{\alpha},`	$\frac{\delta C_{\mathrm{TL}}}{\delta \vartheta^{\alpha}}=\frac{1}{\ell} R_{\alpha}^{\star} \quad \text { and } \quad \frac{\delta C_{\mathrm{TL}}}{\delta \Gamma^{\star \alpha}}=\frac{1}{\ell} T_{\alpha},$	$\frac{\delta C_{\mathrm{TL}}}{\delta \vartheta^{\alpha}}=\frac{1}{\ell} R_{\alpha}^{\star} \quad \text { and } \quad \frac{\delta C_{\mathrm{TL}}}{\delta \Gamma^{\star \alpha}}=\frac{1}{\ell} T_{\alpha},$
mielke-geometrodynamics_EQ0915 (13.8.1)	295	0.996 K|+0	`\hat{C}:=-\frac{1}{2}\left(\Gamma_{A}{ }^{B} \wedge d \Gamma_{B}{ }^{A}-\frac{2}{3} \Gamma_{A}{ }^{B} \wedge \Gamma_{B}{ }^{C} \wedge \Gamma_{C}{ }^{A}\right)`	$\hat{C}:=-\frac{1}{2}\left(\Gamma_{A}{ }^{B} \wedge d \Gamma_{B}{ }^{A}-\frac{2}{3} \Gamma_{A}{ }^{B} \wedge \Gamma_{B}{ }^{C} \wedge \Gamma_{C}{ }^{A}\right)$	$\hat{C}:=-\frac{1}{2}\left(\Gamma_{A}{ }^{B} \wedge d \Gamma_{B}{ }^{A}-\frac{2}{3} \Gamma_{A}{ }^{B} \wedge \Gamma_{B}{ }^{C} \wedge \Gamma_{C}{ }^{A}\right)$
mielke-geometrodynamics_EQ1071 (16.2.10)	357	0.996 N|+0	`E_{n}=\beta m c^{2}\left(2 n+\iota+\frac{3}{2}+\sqrt{ \frac{g}{4}+\frac{1}{\beta^{2}}}\right), n=0,1,2 \ldots .`	$E_{n}=\beta m c^{2}\left(2 n+\iota+\frac{3}{2}+\sqrt{ \frac{g}{4}+\frac{1}{\beta^{2}}}\right), n=0,1,2 \ldots .$	$E_{n}=\beta m c^{2}\left(2 n+\iota+\frac{3}{2}+\sqrt{ \frac{g}{4}+\frac{1}{\beta^{2}}}\right), n=0,1,2 \ldots .$
mielke-geometrodynamics_EQ0490 (7.7.7)	161	0.996 K|+0	`\begin{gathered} \left.\left.-\widetilde{E}_{ \alpha}:=-e_{\alpha}\right\rfloor \widetilde{L}-\left(e_{ \alpha}\right\rfloor R^{\beta \gamma}\right) \wedge \widetilde{H}_{\beta \gamma}=\Sigma_{\alpha}, \\ D \widetilde{H}_{\alpha \beta}=\tau_{\alpha \beta} . \end{gathered}`	$-\widetilde{E}_{\alpha}:=-e_{\alpha}\left\rfloor \widetilde{L}-\left(e_{\alpha}\right\rfloor R^{\beta \gamma}\right) \wedge \widetilde{H}_{\beta \gamma}=\Sigma_{\alpha}, \\ D \widetilde{H}_{\alpha \beta}=\tau_{\alpha \beta} .$	$-\widetilde{E}_{\alpha}:=-e_{\alpha}\left\rfloor \widetilde{L}-\left(e_{\alpha}\right\rfloor R^{\beta \gamma}\right) \wedge \widetilde{H}_{\beta \gamma}=\Sigma_{\alpha}, \\ D \widetilde{H}_{\alpha \beta}=\tau_{\alpha \beta} .$
mielke-geometrodynamics_EQ0220 (4.2.13)	086	0.996 K|+0	`\Omega^{\mathrm{L}} \rightarrow^{A^{-1}} \Omega^{ \mathrm{L}}=G^{-1} \Omega^{\mathrm{L}} G`	$\Omega^{\mathrm{L}} \rightarrow^{A^{-1}} \Omega^{\mathrm{L}}=G^{-1} \Omega^{\mathrm{L}} G$	$\Omega^{\mathrm{L}} \rightarrow^{A^{-1}} \Omega^{\mathrm{L}}=G^{-1} \Omega^{\mathrm{L}} G$
mielke-geometrodynamics_EQ0460 (7.2.12)	152	0.996 W|+0	`g_{i j} \rightarrow \bar{g}_{i j}=\phi^{L} g_{i j},`	$g_{ij} \rightarrow \bar{g}_{ij}=\phi^{L} g_{ij},$	$g_{ij} \rightarrow \bar{g}_{ij}=\phi^{L} g_{ij},$
mielke-geometrodynamics_EQ0664 (10.3.21)	218	0.996 N|+0	`\square \vartheta_{\alpha}=\frac{\ell}{\gamma}{ }^{*} D^{*}\left[\tau_{\alpha}^{\star}-S_{\alpha}-\delta \ell \left(\Sigma_{\alpha}+E_{\alpha}\right)\right]+\frac{ \ell}{\gamma} D^{*}\left(D^{*} H_{\alpha}^{\star}-\delta \ell D^{*} H_{\alpha}\right) .`	$\square \vartheta_{\alpha}=\frac{\ell}{\gamma}{ }^{*} D^{*}\left[\tau_{\alpha}^{\star}-S_{\alpha}-\delta \ell \left(\Sigma_{\alpha}+E_{\alpha}\right)\right]+\frac{ \ell}{\gamma} D^{*}\left(D^{*} H_{\alpha}^{\star}-\delta \ell D^{*} H_{\alpha}\right) .$	$\square \vartheta_{\alpha}=\frac{\ell}{\gamma}{ }^{*} D^{*}\left[\tau_{\alpha}^{\star}-S_{\alpha}-\delta \ell \left(\Sigma_{\alpha}+E_{\alpha}\right)\right]+\frac{ \ell}{\gamma} D^{*}\left(D^{*} H_{\alpha}^{\star}-\delta \ell D^{*} H_{\alpha}\right) .$
mielke-geometrodynamics_EQ0977 (14.2.18)	315	0.996 N|+0	`\hat{L}_{\\|}=-\frac{1}{2 \ell^{* 2}} \operatorname{Tr}[ \hat{\alpha} \wedge \hat{\alpha}, \quad \hat{\vartheta} \wedge \cdots \wedge \hat{\vartheta}]`	$\hat{L}_{\\|}=-\frac{1}{2 \ell^{* 2}} \operatorname{Tr}[\hat{\alpha} \wedge \hat{\alpha}, \quad \hat{\vartheta} \wedge \cdots \wedge \hat{\vartheta}]$	$\hat{L}_{\\|}=-\frac{1}{2 \ell^{* 2}} \operatorname{Tr}[\hat{\alpha} \wedge \hat{\alpha}, \quad \hat{\vartheta} \wedge \cdots \wedge \hat{\vartheta}]$
mielke-geometrodynamics_EQ0152 (3.4.23)	066	0.996 C|-4	`L_{\mathrm{BI}}\left(\mathscr{F},{ }^{*} \mathscr{F} \right)=\sqrt{1-2 \mathscr{F}-\left({ }^{*} \mathscr{F} \right)^{2}}-1 .`	$L_{\mathrm{BI}}\left(\mathscr{F},{ }^{*} \mathscr{F} \right)=\sqrt{1-2 \mathscr{F}-\left({ }^{*} \mathscr{F} \right)^{2}}-1 .$	$L_{\mathrm{BI}}\left(\mathscr{F},{ }^{*} \mathscr{F} \right)=\sqrt{1-2 \mathscr{F}-\left({ }^{*} \mathscr{F} \right)^{2}}-1 .$
mielke-geometrodynamics_EQ0250 (4.3.15)	092	0.996 N|+0	`{ }^{*} \omega^{g}=\frac{1}{2} \omega^{\alpha \beta} L_{ \alpha \beta}=\frac{1}{2} \Gamma_{i}^{\cdot \alpha \beta} L_{\alpha \beta} \otimes d x^{i},`	${ }^{*} \omega^{g}=\frac{1}{2} \omega^{\alpha \beta} L_{\alpha \beta}=\frac{1}{2} \Gamma_{i}^{\cdot \alpha \beta} L_{\alpha \beta} \otimes d x^{i},$	${ }^{*} \omega^{g}=\frac{1}{2} \omega^{\alpha \beta} L_{\alpha \beta}=\frac{1}{2} \Gamma_{i}^{\cdot \alpha \beta} L_{\alpha \beta} \otimes d x^{i},$
mielke-geometrodynamics_EQ0376 (6.2.27)	128	0.996 N|+0	`\stackrel{( \pm)}{D} \vartheta^{\alpha}= \pm \frac{i}{2} \ell^{2} g^{\alpha \beta} \stackrel{( \pm)}{\Pi}_{\beta},`	$\overset{(\pm)}{D} \vartheta^{\alpha}=\pm \frac{i}{2} \ell^{2} g^{\alpha \beta} \overset{(\pm)}{\Pi}_{\beta},$	$\overset{(\pm)}{D} \vartheta^{\alpha}=\pm \frac{i}{2} \ell^{2} g^{\alpha \beta} \overset{(\pm)}{\Pi}_{\beta},$
mielke-geometrodynamics_EQ0367 (6.2.18)	126	0.997 N|+0	`R_{\alpha \beta}=\xi^{*} R_{\alpha \beta}^{(\star)}+ \left(\gamma / \ell^{2}\right)\left[\vartheta_{\alpha} \wedge \vartheta_{\beta} \pm i^{*}\left(\vartheta_{ \alpha} \wedge \vartheta_{\beta}\right)\right],`	$R_{\alpha \beta}=\xi^{*} R_{\alpha \beta}^{(\star)}+\left(\gamma / \ell^{2}\right)\left[\vartheta_{\alpha} \wedge \vartheta_{\beta} \pm i^{*}\left(\vartheta_{\alpha} \wedge \vartheta_{\beta}\right)\right],$	$R_{\alpha \beta}=\xi^{*} R_{\alpha \beta}^{(\star)}+\left(\gamma / \ell^{2}\right)\left[\vartheta_{\alpha} \wedge \vartheta_{\beta} \pm i^{*}\left(\vartheta_{\alpha} \wedge \vartheta_{\beta}\right)\right],$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ0371 (6.2.22)	127	0.997 W|+0	`\stackrel{(+)}{\Pi}^{\beta} \wedge \stackrel{(-)}{\Pi}_{ \beta}=H^{\beta} \wedge H_{\beta}+\ell^{-4} T^{\beta} \wedge T_{\beta}=0 .`	$\overset{(+)}{\Pi}{}^{\beta} \wedge \overset{(-)}{\Pi}{}_{\beta}= H^{\beta} \wedge H_{\beta}+\ell^{-4} T^{\beta} \wedge T_{\beta}=0 .$	$\overset{(+)}{\Pi}{}^{\beta} \wedge \overset{(-)}{\Pi}{}_{\beta}= H^{\beta} \wedge H_{\beta}+\ell^{-4} T^{\beta} \wedge T_{\beta}=0 .$
mielke-geometrodynamics_EQ0602 (9.2.1)	198	0.997 W|+0	`\begin{aligned} p_{1}\left(M^{4}\right) & =\frac{1}{2(2 \pi)^{2}} \int_{M^{4}} \operatorname{Tr}\left(\Omega^{ \mathrm{L}} \wedge \Omega^{\mathrm{L}}\right) \\ & = \frac{(-1)^{s / 2}}{(4 \pi)^{2}} \int_{M^{4}} R_{\alpha \beta \gamma \delta}{ }^{*} R^{\alpha \beta \gamma \delta} \sqrt{|g|} d^{4} x \end{aligned}`	$\begin{aligned} p_{1}\left(M^{4}\right) & =\frac{1}{2(2 \pi)^{2}} \int_{M^{4}} \operatorname{Tr}\left(\Omega^{ \mathrm{L}} \wedge \Omega^{\mathrm{L}}\right) \\ & = \frac{(-1)^{s / 2}}{(4 \pi)^{2}} \int_{M^{4}} R_{\alpha \beta \gamma \delta}{ }^{*} R^{\alpha \beta \gamma \delta} \sqrt{\|g\|} d^{4} x \end{aligned}$	$\begin{aligned} p_{1}(M^{4}) &= \frac{1}{2(2\pi)^{2}} \int_{M^{4}} \operatorname{Tr}(\Omega^{\mathrm{L}} \wedge \Omega^{\mathrm{L}}) \\ &= \frac{(-1)^{s/2}}{(4\pi)^{2}} \int_{M^{4}} R_{\alpha\beta\gamma\delta}{}^{*} R^{\alpha\beta\gamma\delta} \sqrt{\|g\|} d^{4}x \end{aligned}$
mielke-geometrodynamics_EQ0717 (10.9.3)	229	0.997 N|+0	`\Sigma_{\alpha}:=\frac{\delta L_{\Psi}}{\delta \vartheta^{\alpha}}=\frac{\partial L_{\Psi}}{\partial \vartheta_{\alpha}}+D \frac{\partial L_{\Psi}}{\partial T^{\alpha}},`	$\Sigma_{\alpha}:=\frac{\delta L_{\Psi}}{\delta \vartheta^{\alpha}}=\frac{\partial L_{\Psi}}{\partial \vartheta_{\alpha}}+D \frac{\partial L_{\Psi}}{\partial T^{\alpha}},$	$\Sigma_{\alpha}:=\frac{\delta L_{\Psi}}{\delta \vartheta^{\alpha}}=\frac{\partial L_{\Psi}}{\partial \vartheta_{\alpha}}+D \frac{\partial L_{\Psi}}{\partial T^{\alpha}},$
mielke-geometrodynamics_EQ0766 (11.1.33)	243	0.997 N|+0	`\stackrel{*}{\sigma} \tilde{\omega}=\frac{1}{2} \omega^{ \alpha \beta} \sigma_{\alpha \beta}=\frac{1}{2} \Gamma_{i}^{\cdot \alpha \beta} \sigma_{\alpha \beta} \otimes d x^{i}=: \Gamma_{i} d x^{i} .`	$\stackrel{*}{\sigma} \tilde{\omega}=\frac{1}{2} \omega^{ \alpha \beta} \sigma_{\alpha \beta}=\frac{1}{2} \Gamma_{i}^{\cdot \alpha \beta} \sigma_{\alpha \beta} \otimes d x^{i}=: \Gamma_{i} d x^{i} .$	$\stackrel{*}{\sigma} \tilde{\omega}=\frac{1}{2} \omega^{ \alpha \beta} \sigma_{\alpha \beta}=\frac{1}{2} \Gamma_{i}^{\cdot \alpha \beta} \sigma_{\alpha \beta} \otimes d x^{i}=: \Gamma_{i} d x^{i} .$
mielke-geometrodynamics_EQ1003 (14.3.16)	323	0.997 K|+0	`D D=\frac{1}{2}\{D, D\}+\frac{1}{2}[D, D]=\frac{1}{2}\{D, D\}+\frac{1}{2} \widetilde{\Omega}`	$D D=\frac{1}{2}\{D, D\}+\frac{1}{2}[D, D]=\frac{1}{2}\{D, D\}+\frac{1}{2} \widetilde{\Omega}$	$D D=\frac{1}{2}\{D, D\}+\frac{1}{2}[D, D]=\frac{1}{2}\{D, D\}+\frac{1}{2} \widetilde{\Omega}$
mielke-geometrodynamics_EQ0225 (4.2.18)	087	0.997 N|+0	`\omega^{\mathrm{T}}=\widetilde{\widetilde{\vartheta}}-D \widetilde{\widetilde{\varphi}}`	$\omega^{\mathrm{T}}=\widetilde{\widetilde{\vartheta}}-D \widetilde{\widetilde{\varphi}}$	$\omega^{\mathrm{T}}=\widetilde{\widetilde{\vartheta}}-D \widetilde{\widetilde{\varphi}}$
mielke-geometrodynamics_EQ0048 (2.6.11)	043	0.997 N|+0	`D D D b \equiv 0 .`	$D D D b \equiv 0 .$	$D D D b \equiv 0 .$
mielke-geometrodynamics_EQ0099 (3.2.9)	056	0.997 K|+0	`\begin{aligned} { }^{\Delta} \omega:={ }^{G^{-1}} \omega- \omega & =G^{-1}[\omega, G]-G^{-1} d G \\ & =-G^{-1} D G=-G^{-1} D . \end{aligned}`	$\begin{aligned} {}^{\Delta} \omega:={ }^{G^{-1}} \omega- \omega & =G^{-1}[\omega, G]-G^{-1} d G \\ & =-G^{-1} D G=-G^{-1} D . \end{aligned}$	$\begin{aligned} {}^{\Delta} \omega:={ }^{G^{-1}} \omega- \omega & =G^{-1}[\omega, G]-G^{-1} d G \\ & =-G^{-1} D G=-G^{-1} D . \end{aligned}$
mielke-geometrodynamics_EQ0219 (4.2.12)	086	0.997 N|+0	`\widetilde{\widetilde{\Omega}} \rightarrow^{A^{-1}} \widetilde{\widetilde{\Omega}}=A^{-1} \widetilde{ \widetilde{\Omega}} A`	$\widetilde{\widetilde{\Omega}} \rightarrow^{A^{-1}} \widetilde{\widetilde{\Omega}}=A^{-1} \widetilde{ \widetilde{\Omega}} A$	$\widetilde{\widetilde{\Omega}} \rightarrow^{A^{-1}} \widetilde{\widetilde{\Omega}}=A^{-1} \widetilde{ \widetilde{\Omega}} A$
mielke-geometrodynamics_EQ0411 (6.4.31)	136	0.997 W|+0	`n_{\mathrm{NY}}:=\int_{R^{4}} d C_{\mathrm{TT}}= \int_{S_{\infty}^{3}} \underline{C}_{\mathrm{TT}}=3 \operatorname{Vol}\left(S^{3}\right) k=6 \pi^{2} k .`	$n_{\mathrm{NY}}:=\int_{R^{4}} d C_{\mathrm{TT}}= \int_{S_{\infty}^{3}} \underline{C}_{\mathrm{TT}}=3 \operatorname{Vol}\left(S^{3}\right) k=6 \pi^{2} k .$	$n_{\mathrm{NY}}:=\int_{R^{4}} d C_{\mathrm{TT}}= \int_{S_{\infty}^{3}} \underline{C}_{\mathrm{TT}}=3 \operatorname{Vol}\left(S^{3}\right) k=6 \pi^{2} k .$
mielke-geometrodynamics_EQ0492 (7.7.10)	161	0.997 N|-1	`H_{\alpha \beta}:=-\frac{\partial L}{\partial R^{\alpha \beta}}=\widetilde{H}_{\alpha \beta}+\frac{1}{2} R^{ \mu \nu} \wedge\left(\partial \widetilde{H}_{\mu \nu} / \partial R^{\alpha \beta}\right)`	$H_{\alpha \beta}:=-\frac{\partial L}{\partial R^{\alpha \beta}}=\widetilde{H}_{\alpha \beta}+\frac{1}{2} R^{ \mu \nu} \wedge\left(\partial \widetilde{H}_{\mu \nu} / \partial R^{\alpha \beta}\right)$	$H_{\alpha \beta}:=-\frac{\partial L}{\partial R^{\alpha \beta}}=\widetilde{H}_{\alpha \beta}+\frac{1}{2} R^{ \mu \nu} \wedge\left(\partial \widetilde{H}_{\mu \nu} / \partial R^{\alpha \beta}\right)$
mielke-geometrodynamics_EQ0877 (13.3.6)	285	0.997 N|+0	`\left[P_{\alpha}, P_{*}^{\beta}\right]=\frac{1}{\ell^{2}} L^{\beta}{ }_{\alpha} .`	$\left[P_{\alpha}, P_{*}^{\beta}\right]=\frac{1}{\ell^{2}} L^{\beta}{ }_{\alpha} .$	$\left[P_{\alpha}, P_{*}^{\beta}\right]=\frac{1}{\ell^{2}} L^{\beta}{ }_{\alpha} .$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ0962 (14.2.2)	312	0.997 N|+0	`\stackrel{\circ}{\vartheta}=\varphi_{j} d \xi^{j},`	$\overset{\circ}{\vartheta}=\varphi_{j} d \xi^{j},$	$\overset{\circ}{\vartheta}=\varphi_{j} d \xi^{j},$
mielke-geometrodynamics_EQ1060 (16.1.1)	354	0.997 N|-1	`R_{i j}^{\mathrm{f}}-\frac{1}{2} \mathrm{f}_{i j} \left(R^{\mathrm{f}}-2 \Lambda_{\mathrm{eff}}\right)= \ell^{2} \mathrm{~T}_{i j}`	$R_{i j}^{\mathrm{f}}-\frac{1}{2} \mathrm{f}_{i j} \left(R^{\mathrm{f}}-2 \Lambda_{\mathrm{eff}}\right)= \ell^{2} \mathrm{~T}_{i j}$	$R_{i j}^{\mathrm{f}}-\frac{1}{2} \mathrm{f}_{i j} \left(R^{\mathrm{f}}-2 \Lambda_{\mathrm{eff}}\right)= \ell^{2} \mathrm{~T}_{i j}$
mielke-geometrodynamics_EQ0976 (14.2.17)	315	0.997 W|-2	`\begin{aligned} \hat{L}_{\mathrm{W} .} & =\frac{1}{2} \operatorname{Tr}(\hat{\Omega} \wedge \underbrace{\hat{ \vartheta} \wedge \ldots \wedge \hat{\vartheta}}_{2+ \mathrm{K} \text { termms }}) \\ & =\hat{L}_{\mathrm{W} .}^{g}+\hat{L}_{\mathrm{W} .}^{G}+\ell^{* 2} \hat{L}_{ \\|}-\frac{1}{2} d \operatorname{Tr}(\hat{\alpha} \wedge \hat{\vartheta} \wedge \cdots \wedge \hat{\vartheta}) \end{aligned}`	$\begin{aligned} \hat{L}_{\mathrm{W} .} & =\frac{1}{2} \operatorname{Tr}(\hat{\Omega} \wedge \underbrace{\hat{ \vartheta} \wedge \ldots \wedge \hat{\vartheta}}_{2+ \mathrm{K} \text { termms }}) \\ & =\hat{L}_{\mathrm{W} .}^{g}+\hat{L}_{\mathrm{W} .}^{G}+\ell^{* 2} \hat{L}_{ \\|}-\frac{1}{2} d \operatorname{Tr}(\hat{\alpha} \wedge \hat{\vartheta} \wedge \cdots \wedge \hat{\vartheta}) \end{aligned}$	$\begin{aligned} \hat{L}_{\mathrm{W} .} & =\frac{1}{2} \operatorname{Tr}(\hat{\Omega} \wedge \underbrace{\hat{ \vartheta} \wedge \ldots \wedge \hat{\vartheta}}_{2+ \mathrm{K} \text { termms }}) \\ & =\hat{L}_{\mathrm{W} .}^{g}+\hat{L}_{\mathrm{W} .}^{G}+\ell^{* 2} \hat{L}_{ \\|}-\frac{1}{2} d \operatorname{Tr}(\hat{\alpha} \wedge \hat{\vartheta} \wedge \cdots \wedge \hat{\vartheta}) \end{aligned}$
mielke-geometrodynamics_EQ0466 (7.3.5)	153	0.997 W|+0	`G_{\alpha}^{\{ \}}:=\frac{1}{2} R^{\{ \} \beta \gamma} \wedge \eta_{\alpha \beta \gamma}, \quad G_{i j}:= \operatorname{Ric}_{i j}^{\{ \}}-\frac{1}{2} g_{i j},`	$G_{\alpha}^{\{ \}}:=\frac{1}{2} R^{\{ \} \beta \gamma} \wedge \eta_{\alpha \beta \gamma}, \quad G_{i j}:= \operatorname{Ric}_{i j}^{\{ \}}-\frac{1}{2} g_{i j},$	$G_{\alpha}^{\{ \}}:=\frac{1}{2} R^{\{ \} \beta \gamma} \wedge \eta_{\alpha \beta \gamma}, \quad G_{i j}:= \operatorname{Ric}_{i j}^{\{ \}}-\frac{1}{2} g_{i j},$
mielke-geometrodynamics_EQ0105 (3.3.6)	058	0.998 W|-1	`H:=-\frac{\partial L}{\partial d A}=-\frac{\partial L}{ \partial F} \quad \text { and } \quad j:=\frac{\delta L_{ \mathrm{mat}}}{\delta A},`	$H:=-\frac{\partial L}{\partial d A}=-\frac{\partial L}{ \partial F} \quad \text { and } \quad j:=\frac{\delta L_{ \mathrm{mat}}}{\delta A},$	$H:=-\frac{\partial L}{\partial d A}=-\frac{\partial L}{ \partial F} \quad \text { and } \quad j:=\frac{\delta L_{ \mathrm{mat}}}{\delta A},$
mielke-geometrodynamics_EQ0136 (3.4.7)	063	0.998 N|+2	`\begin{aligned} \delta \Omega & =\delta(d \omega-\omega \wedge \omega)=\delta d \omega-\delta \omega \wedge \omega-\omega \wedge \delta \omega \\ & =d \delta \omega-[\omega, \delta \omega]=D \delta \omega . \end{aligned}`	$\begin{aligned} \delta \Omega & =\delta(d \omega-\omega \wedge \omega)=\delta d \omega-\delta \omega \wedge \omega-\omega \wedge \delta \omega \\ & =d \delta \omega-[\omega, \delta \omega]=D \delta \omega . \end{aligned}$	$\begin{aligned} \delta \Omega & =\delta(d \omega-\omega \wedge \omega)=\delta d \omega-\delta \omega \wedge \omega-\omega \wedge \delta \omega \\ & =d \delta \omega-[\omega, \delta \omega]=D \delta \omega . \end{aligned}$
mielke-geometrodynamics_EQ0390 (6.4.5)	131	0.998 W|+1	`\mathscr{H}=n\rfloor L-\ell_{n} \underline{\Psi} \wedge \left(\frac{\partial L}{\partial d \Psi}\right) .`	$\mathscr{H}=n\rfloor L-\ell_{n} \underline{\Psi} \wedge \left(\frac{\partial L}{\partial d \Psi}\right) .$	$\mathscr{H}=n\rfloor L-\ell_{n} \underline{\Psi} \wedge \left(\frac{\partial L}{\partial d \Psi}\right) .$
mielke-geometrodynamics_EQ0594 (9.1.12)	195	0.998 K|+0	`\bar{\Omega}^{\{ \}}=0 .`	$\bar{\Omega}^{\{ \}}=0 .$	$\bar{\Omega}^{\{ \}}=0 .$
mielke-geometrodynamics_EQ1012 (14.4.7)	326	0.998 W|-1	`\begin{aligned} S_{\mathrm{A}} & :=4 \pi\left(r_{+}^{2}+ \frac{J(J+1) \hbar^{2}}{M^{2} c^{2}}\right) \\ & = \frac{8 \pi \hbar^{2}}{M^{* 4} c^{2}}\left(M^{2}+\frac{ \alpha_{e}}{2} M^{* 2} \operatorname{Tr} \bar{Q}^{2}+M \sqrt{M^{2}-J(J+1) \frac{M^{* 4}}{M^{2}}-\alpha_{e} M^{* 2} \operatorname{Tr} \bar{Q}^{2}}\right) \end{aligned}`	$\begin{aligned} S_{\mathrm{A}} & :=4 \pi\left(r_{+}^{2}+ \frac{J(J+1) \hbar^{2}}{M^{2} c^{2}}\right) \\ & = \frac{8 \pi \hbar^{2}}{M^{* 4} c^{2}}\left(M^{2}+\frac{ \alpha_{e}}{2} M^{* 2} \operatorname{Tr} \bar{Q}^{2}+M \sqrt{M^{2}-J(J+1) \frac{M^{* 4}}{M^{2}}-\alpha_{e} M^{* 2} \operatorname{Tr} \bar{Q}^{2}}\right) \end{aligned}$	$\begin{aligned} S_{\mathrm{A}} & :=4 \pi\left(r_{+}^{2}+ \frac{J(J+1) \hbar^{2}}{M^{2} c^{2}}\right) \\ & = \frac{8 \pi \hbar^{2}}{M^{* 4} c^{2}}\left(M^{2}+\frac{ \alpha_{e}}{2} M^{* 2} \operatorname{Tr} \bar{Q}^{2}+M \sqrt{M^{2}-J(J+1) \frac{M^{* 4}}{M^{2}}-\alpha_{e} M^{* 2} \operatorname{Tr} \bar{Q}^{2}}\right) \end{aligned}$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ0073 (2.8.16)	049	■ 0.998 ● N|+0	`\begin{aligned} & d \stackrel{\infty}{\omega}-\stackrel{\infty}{\omega} \wedge \stackrel{\infty}{\omega} \\ & =-d \left(G^{-1}\right) \wedge d G-G^{-1} d d G-\left(G^{-1} d G\right) \wedge\left(G^{-1} d G\right) \\ & =-d \left(G^{-1}\right) \wedge d G+G^{-1} G d\left(G^{-1} \right) \wedge d G=0 \end{aligned}`	$\begin{aligned} & d \stackrel{\infty}{\omega}-\stackrel{\infty}{\omega} \wedge \stackrel{\infty}{\omega} \\ & =-d \left(G^{-1}\right) \wedge d G-G^{-1} d d G-\left(G^{-1} d G\right) \wedge\left(G^{-1} d G\right) \\ & =-d \left(G^{-1}\right) \wedge d G+G^{-1} G d\left(G^{-1}\right) \wedge d G=0 \end{aligned}$	$\begin{aligned} & d \stackrel{\infty}{\omega}-\stackrel{\infty}{\omega} \wedge \stackrel{\infty}{\omega} \\ & =-d(G^{-1}) \wedge dG-G^{-1} d d G-(G^{-1} d G) \wedge(G^{-1} d G) \\ & =-d(G^{-1}) \wedge dG+G^{-1} G d(G^{-1}) \wedge dG=0 \end{aligned}$
mielke-geometrodynamics_EQ0214 (4.2.6)	086	■ 0.998 ● N|+0	`\mathscr{G}(n, \mathbb{R}):=C^{\infty}\left(A(M) \times_{ \mathrm{Ad}} G L(n, \mathbb{R})\right)`	$\mathscr{G}(n, \mathbb{R}):=C^{\infty}\left(A(M) \times_{ \mathrm{Ad}} G L(n, \mathbb{R})\right)$	$\mathscr{G}(n, \mathbb{R}):=C^{\infty}(A(M) \times_{ \mathrm{Ad}} G L(n, \mathbb{R}))$
mielke-geometrodynamics_EQ0656 (10.3.13)	216	■ 0.998 ● N|+0	`\left.\left.E_{\alpha}=e_{\alpha}\right\rfloor L( \star)+(-1)^{s} \frac{2 \gamma}{\ell}\left[\left(e_{ \alpha}\right\rfloor R^{\star \beta}\right) \wedge \vartheta_{\beta}\right]`	$E_{\alpha}=e_{\alpha}\rfloor L(\star)+(-1)^{s} \frac{2 \gamma}{\ell}\left[\left(e_{\alpha}\right\rfloor R^{\star \beta}\right) \wedge \vartheta_{\beta}\right]$	$E_{\alpha}=e_{\alpha}\rfloor L(\star)+(-1)^{s} \frac{2 \gamma}{\ell}\left[(e_{\alpha}\rfloor R^{\star \beta}) \wedge \vartheta_{\beta}\right]$
mielke-geometrodynamics_EQ0813 (11.4.26)	256	■ 0.998 ● K|+0	`d \rho^{*}:=e^{(\mu-\nu) / 2} d \rho .`	$d \rho^{*}:=e^{(\mu-\nu) / 2} d \rho .$	$d \rho^{*}:=e^{(\mu-\nu) / 2} d \rho .$
mielke-geometrodynamics_EQ0062 (2.8.3)	046	■ 0.998 ● W|+1	`\begin{aligned} & *\left(d \gamma_{k}\right)=d \pi^{*} \left(\gamma_{k}\right)=D \pi^{*}\left(\gamma_{k} \right) \\ & =\frac{(-1)^{k}}{(2 \pi i)^{k}(k-1)!} \operatorname{Tr}(D \Omega \wedge \Omega \wedge \cdots \wedge \Omega)=0 . \end{aligned}`	$\begin{aligned} & *\left(d \gamma_{k}\right)=d \pi^{*}\left(\gamma_{k}\right)=D \pi^{*}\left(\gamma_{k} \right) \\ & =\frac{(-1)^{k}}{(2 \pi i)^{k}(k-1)!} \operatorname{Tr}(D \Omega \wedge \Omega \wedge \cdots \wedge \Omega)=0 . \end{aligned}$	$\begin{aligned} & *\left(d \gamma_{k}\right)=d \pi^{*}\left(\gamma_{k}\right)=D \pi^{*}\left(\gamma_{k} \right) \\ & =\frac{(-1)^{k}}{(2 \pi i)^{k}(k-1)!} \operatorname{Tr}(D \Omega \wedge \Omega \wedge \cdots \wedge \Omega)=0 . \end{aligned}$
mielke-geometrodynamics_EQ0426 (6.7.8)	141	■ 0.998 ● K|+0	`\mu_{\alpha}=\frac{1}{4} \vartheta_{\alpha} \wedge{ }^{*} j_{5},`	$\mu_{\alpha}=\frac{1}{4} \vartheta_{\alpha} \wedge{ }^{*} j_{5},$	$\mu_{\alpha}=\frac{1}{4} \vartheta_{\alpha} \wedge{ }^{*} j_{5},$
mielke-geometrodynamics_EQ0069 (2.8.12)	048	■ 0.998 ● N|+0	`\begin{aligned} c_{2}(M) & =\frac{1}{8 \pi^{2}} \int_{M} d \operatorname{Tr}\left(\omega \wedge \Omega+\frac{1}{3} \omega \wedge \omega \wedge \omega\right) \\ & = \frac{1}{8 \pi^{2}} \int_{\partial M} \operatorname{Tr}\left(\omega \wedge d \omega-\frac{2}{3} \omega \wedge \omega \wedge \omega\right) . \end{aligned}`	$\begin{aligned} c_{2}(M) & =\frac{1}{8 \pi^{2}} \int_{M} d \operatorname{Tr}\left(\omega \wedge \Omega+\frac{1}{3} \omega \wedge \omega \wedge \omega\right) \\ & =\frac{1}{8 \pi^{2}} \int_{\partial M} \operatorname{Tr}\left(\omega \wedge d \omega-\frac{2}{3} \omega \wedge \omega \wedge \omega\right) . \end{aligned}$	$\begin{aligned} c_{2}(M) & =\frac{1}{8 \pi^{2}} \int_{M} d \operatorname{Tr}\left(\omega \wedge \Omega+\frac{1}{3} \omega \wedge \omega \wedge \omega\right) \\ & =\frac{1}{8 \pi^{2}} \int_{\partial M} \operatorname{Tr}\left(\omega \wedge d \omega-\frac{2}{3} \omega \wedge \omega \wedge \omega\right) . \end{aligned}$
mielke-geometrodynamics_EQ0144 (3.4.15)	064	■ 0.998 ● N|+0	`\iota:=\tau+(-1)^{n+s} *\left[\omega, \Pi^{\Omega}\right]`	$\iota:=\tau+(-1)^{n+s} *\left[\omega, \Pi^{\Omega}\right]$	$\iota:=\tau+(-1)^{n+s} *[\omega, \Pi^{\Omega}]$
mielke-geometrodynamics_EQ0318 (5.2.2)	110	■ 0.998 ● N|-1	`j:=\bar{\psi}^{*} \gamma \psi=j^{\mu} \eta_{\mu} \quad \text { and } \quad j_{5}:=\bar{\psi}^{*} \gamma \gamma_{5} \psi=j_{5}^{\mu} \eta_{\mu},`	$j:=\bar{\psi}^{*} \gamma \psi=j^{\mu} \eta_{\mu} \quad \text{ and } \quad j_{5}:=\bar{\psi}^{*} \gamma \gamma_{5} \psi=j_{5}^{\mu} \eta_{\mu},$	$j:=\overline{\psi}^{*} \gamma \psi=j^{\mu} \eta_{\mu} \quad \text{ and } \quad j_{5}:=\overline{\psi}^{*} \gamma \gamma_{5} \psi=j_{5}^{\mu} \eta_{\mu},$
mielke-geometrodynamics_EQ0347 (5.4.5)	116	■ 0.998 ● N|+0	`\mu=\frac{4}{3} \kappa \Lambda=\frac{1}{3}(2 \kappa)^{2} \rho_{\Lambda} \leq \frac{4}{3} g_{\mathrm{N} *} \lambda_{*} \simeq 0.2`	$\mu=\frac{4}{3} \kappa \Lambda=\frac{1}{3}(2 \kappa)^{2} \rho_{\Lambda} \leq \frac{4}{3} g_{\mathrm{N} *} \lambda_{*} \simeq 0.2$	$\mu=\frac{4}{3} \kappa \Lambda=\frac{1}{3}(2 \kappa)^{2} \rho_{\Lambda} \leq \frac{4}{3} g_{\mathrm{N} *} \lambda_{*} \simeq 0.2$
mielke-geometrodynamics_EQ0500 (7.7.18)	163	■ 0.998 ● K|+0	`{ }^{*} \sigma=\frac{1}{2} \sigma_{\alpha \beta}{ }^{*} \left(\vartheta^{\alpha} \wedge \vartheta^{\beta}\right)= \frac{1}{2} \sigma_{\alpha \beta} \eta^{\alpha \beta}=: \sigma^{(\star)}=i \gamma_{5} \sigma .`	${ }^{*} \sigma=\frac{1}{2} \sigma_{\alpha \beta}{ }^{*} \left(\vartheta^{\alpha} \wedge \vartheta^{\beta}\right)=\frac{1}{2} \sigma_{\alpha \beta} \eta^{\alpha \beta}=: \sigma^{(\star)}=i \gamma_{5} \sigma .$	${ }^{*} \sigma=\frac{1}{2} \sigma_{\alpha \beta}{ }^{*} (\vartheta^{\alpha} \wedge \vartheta^{\beta})=\frac{1}{2} \sigma_{\alpha \beta} \eta^{\alpha \beta}=: \sigma^{(\star)}=i \gamma_{5} \sigma .$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): ● C component ● W weak ● S stable ● N noise ● K clean ● not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ0670 (10.3.27)	219	0.998 N|+0	`\check{\mathscr{E}}_{\alpha}:=d H_{\alpha} \cong \Sigma_{ \alpha}+E_{\alpha}-(-1)^{s} \eta_{\alpha \beta \gamma} \Gamma^{\star \beta} \wedge H^{\gamma}`	$\check{\mathscr{E}}_{\alpha} := dH_{\alpha} \cong \Sigma_{\alpha} + E_{\alpha} - (-1)^{s} \eta_{\alpha\beta\gamma} \Gamma^{\star\beta} \wedge H^{\gamma}$	$\check{\mathscr{E}}_{\alpha} := dH_{\alpha} \cong \Sigma_{\alpha} + E_{\alpha} - (-1)^{s} \eta_{\alpha\beta\gamma} \Gamma^{\star\beta} \wedge H^{\gamma}$
mielke-geometrodynamics_EQ0680 (10.3.37)	221	0.998 W|+1	`\theta_{\mathrm{L}} C_{\mathrm{L}}-\tilde{\theta}_{ \mathrm{L}} \widetilde{C}_{\mathrm{L}}=-\frac{\chi}{ \ell} \vartheta^{\alpha} \wedge R_{\alpha}^{\star}- \frac{\Lambda}{\ell} \eta+\frac{\theta_{\mathrm{T}}}{2 \ell} \vartheta^{\alpha} \wedge T_{\alpha}+\Delta \theta_{\mathrm{L}} C_{\mathrm{L}}+\frac{\Delta \theta_{ \mathrm{TL}}}{\ell} d\left(\Gamma^{\star \alpha} \wedge \vartheta_{\alpha}\right)`	$\theta_{\mathrm{L}} C_{\mathrm{L}} - \tilde{\theta}_{\mathrm{L}} \widetilde{C}_{\mathrm{L}} = -\frac{\chi}{\ell} \vartheta^{\alpha} \wedge R_{\alpha}^{\star} - \frac{\Lambda}{\ell} \eta + \frac{\theta_{\mathrm{T}}}{2\ell} \vartheta^{\alpha} \wedge T_{\alpha} + \Delta\theta_{\mathrm{L}} C_{\mathrm{L}} + \frac{\Delta\theta_{\mathrm{TL}}}{\ell} d\left(\Gamma^{\star\alpha} \wedge \vartheta_{\alpha}\right)$	$\theta_{\mathrm{L}} C_{\mathrm{L}} - \tilde{\theta}_{\mathrm{L}} \widetilde{C}_{\mathrm{L}} = -\frac{\chi}{\ell} \vartheta^{\alpha} \wedge R_{\alpha}^{\star} - \frac{\Lambda}{\ell} \eta + \frac{\theta_{\mathrm{T}}}{2\ell} \vartheta^{\alpha} \wedge T_{\alpha} + \Delta\theta_{\mathrm{L}} C_{\mathrm{L}} + \frac{\Delta\theta_{\mathrm{TL}}}{\ell} d(\Gamma^{\star\alpha} \wedge \vartheta_{\alpha})$
mielke-geometrodynamics_EQ0700 (10.5.11)	225	0.998 K|+0	`[\hat{D}, \hat{D}]=\hat{R}+T^{\alpha} \hat{D}_{\alpha} .`	$[\hat{D}, \hat{D}] = \hat{R} + T^{\alpha} \hat{D}_{\alpha}.$	$[\hat{D}, \hat{D}] = \hat{R} + T^{\alpha} \hat{D}_{\alpha}\,.$
mielke-geometrodynamics_EQ0820 (11.4.34)	258	0.998 N|-1	`f^{l}(\rho)=\bar{\rho}^{l}\left(1+\bar{e}^{4 l+2} \right)^{-1 / 2}`	$f^{l}(\rho) = \bar{\rho}^{l} \left(1 + \bar{e}^{4l+2}\right)^{-1/2}$	$f^{l}(\rho) = \overline{\rho}^{l}(1 + \overline{e}^{4l+2})^{-1/2}$
mielke-geometrodynamics_EQ1126 (B.38)	373	0.998 N|+0	`\partial: C_{p}(M, \mathbb{R}) \rightarrow C_{p-1}(M, \mathbb{R}),`	$\partial : C_{p}(M, \mathbb{R}) \rightarrow C_{p-1}(M, \mathbb{R}),$	$\partial : C_{p}(M, \mathbb{R}) \rightarrow C_{p-1}(M, \mathbb{R}),$
mielke-geometrodynamics_EQ0516 (7.7.34)	166	0.998 N|+0	`\widetilde{T}=T-3 d \varphi, \quad \mathscr{A}^{\theta}= \mathscr{A}-i d \theta .`	$\widetilde{T} = T - 3d\varphi, \quad \mathscr{A}^{\theta} = \mathscr{A} - id\theta.$	$\widetilde{T} = T - 3d\varphi\,, \qquad \mathscr{A}^{\theta} = \mathscr{A} - id\theta\,.$
mielke-geometrodynamics_EQ0967 (14.2.8)	313	0.998 N|+1	`d \stackrel{\circ}{s}^{2}=\stackrel{\circ}{g}_{i j} d \xi^{i} \otimes_{s} d \xi^{j}`	$d\,\overset{\circ}{s}{}^{2} = \overset{\circ}{g}_{ij}\, d\xi^{i} \otimes_{s} d\xi^{j}$	$d\overset{\circ}{s}{}^{2} = \overset{\circ}{g}_{ij} d\xi^{i} \otimes_{s} d\xi^{j},$
mielke-geometrodynamics_EQ0060 (2.8.1)	046	0.999 K|+0	`\operatorname{det}\left(1+\frac{i}{2 \pi} \Omega\right)= \stackrel{*}{\pi}\left(1+\gamma_{1}+\cdots+\gamma_{m} \right)`	$\operatorname{det}\left(1 + \frac{i}{2\pi}\Omega\right) = \overset{*}{\pi}\left(1 + \gamma_1 + \cdots + \gamma_m\right)$	$\operatorname{det}\left(1 + \frac{i}{2\pi}\Omega\right) = \overset{*}{\pi}(1 + \gamma_1 + \cdots + \gamma_m)$
mielke-geometrodynamics_EQ0071 (2.8.14)	048	0.999 K|+0	`\stackrel{\infty}{\omega}:=-G^{-1} d G,`	$\overset{\infty}{\omega} := -G^{-1} dG,$	$\overset{\infty}{\omega} := -G^{-1} dG,$
mielke-geometrodynamics_EQ0235 (4.2.28)	089	0.999 K|+0	`Q_{\kappa \mu \nu}:=-D_{\kappa} g_{\mu \nu}`	$Q_{\kappa\mu\nu} := -D_{\kappa} g_{\mu\nu}$	$Q_{\kappa\mu\nu} := -D_{\kappa}\, g_{\mu\nu}$
mielke-geometrodynamics_EQ0278 (4.4.6)	097	0.999 W|+0	`\begin{aligned} & D \Pi^{\mathrm{T}}-E=\Sigma \\ & D \Pi^{\mathrm{L}}+\Pi_{[]}^{\mathrm{T}}=\tau_{\mathrm{s}} \end{aligned}`	$D\Pi^{\mathrm{T}} - E = \Sigma$ $D\Pi^{\mathrm{L}} + \Pi^{\mathrm{T}}_{[]} = \tau_{\mathrm{s}}$	$D\Pi^{\mathrm{T}} - E = \Sigma$ $D\Pi^{\mathrm{L}} + \Pi^{\mathrm{T}}_{[]} = \tau_{\mathrm{s}}$
mielke-geometrodynamics_EQ0313 (4.6.5)	105	0.999 N|+0	`\Phi(A, \gamma)=P \exp [(i / \hbar) \oint A],`	$\Phi(A, \gamma) = P \exp[(i/\hbar) \oint A],$	$\Phi(A, \gamma) = P\, \exp\big[(i/\hbar) \oint A\big]\,,$
mielke-geometrodynamics_EQ0358 (6.2.9)	125	0.999 N|+0	`L_{\\|}:=-\frac{1}{2 \kappa} T^{\alpha} \wedge{ }^{*} \left({ }^{(1)} T_{\alpha}-2^{(2)} T_{\alpha}- \frac{1}{2}{ }^{(3)} T_{\alpha}\right),`	$L_{\|} := -\frac{1}{2\kappa} T^{\alpha} \wedge {}^{*}\left({}^{(1)}T_{\alpha} - 2\,{}^{(2)}T_{\alpha} - \frac{1}{2}\,{}^{(3)}T_{\alpha}\right),$	$L_{\|} := -\frac{1}{2\kappa} T^{\alpha} \wedge {}^{*}\Big({}^{(1)}T_{\alpha} - 2\,{}^{(2)}T_{\alpha} - \frac{1}{2}\,{}^{(3)}T_{\alpha}\Big),$
mielke-geometrodynamics_EQ0461 (7.2.13)	152	0.999 N|+0	`\stackrel{(\mp)}{\Omega}_{\mathrm{C}}=0`	$\overset{(\mp)}{\Omega}_{\mathrm{C}} = 0$	$\overset{(\mp)}{\Omega}_{\mathrm{C}} = 0$
mielke-geometrodynamics_EQ0620 (10.1.8)	209	0.999 N|+0	`\frac{\delta C_{\mathrm{T}}}{\delta \vartheta^{\alpha}}= \frac{1}{\ell^{2}} T_{\alpha} \quad \text { and } \quad \frac{\delta C_{\mathrm{T}}}{\delta \Gamma^{\star \alpha}}=\frac{(-1)^{s}}{\ell^{2}} \eta_{\alpha},`	$\frac{\delta C_{\mathrm{T}}}{\delta \vartheta^{\alpha}} = \frac{1}{\ell^2} T_{\alpha} \quad \text{and} \quad \frac{\delta C_{\mathrm{T}}}{\delta \Gamma^{\star\alpha}} = \frac{(-1)^{s}}{\ell^2} \eta_{\alpha},$	$\frac{\delta C_{\mathrm{T}}}{\delta \vartheta^{\alpha}} = \frac{1}{\ell^2} T_{\alpha} \quad \text{and} \quad \frac{\delta C_{\mathrm{T}}}{\delta \Gamma^{\star\alpha}} = \frac{(-1)^{s}}{\ell^2} \eta_{\alpha}\,,$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ0667 (10.3.24)	218	0.999 N|+0	`\left[\square+(-1)^{s} m^{2}\right] \vartheta^{\alpha} \cong 0,`	$\left[\square+(-1)^{s} m^{2}\right] \vartheta^{\alpha} \cong 0,$	$\left[\square+(-1)^{s} m^{2}\right] \vartheta^{\alpha} \cong 0,$
mielke-geometrodynamics_EQ0678 (10.3.35)	220	0.999 N|-2	`\check{\mathscr{E}}_{\alpha}^{\mathrm{MB}}-\check{ \mathscr{E}}_{\alpha}=\frac{\theta_{\mathrm{TL}}}{\ell} d \Gamma_{\alpha}^{\star},`	$\check{\mathscr{E}}_{\alpha}^{\mathrm{MB}}-\check{\mathscr{E}}_{\alpha}=\frac{\theta_{\mathrm{TL}}}{\ell} d \Gamma_{\alpha}^{\star},$	$\check{\mathscr{E}}_{\alpha}^{\mathrm{MB}}-\check{\mathscr{E}}_{\alpha}=\frac{\theta_{\mathrm{TL}}}{\ell} d \Gamma_{\alpha}^{\star},$
mielke-geometrodynamics_EQ0740 (11.1.7)	238	0.999 N|+0	`\mathrm{XX}=-\mathrm{o}_{\alpha \beta} x^{\alpha} x^{ \beta} \mathbb{1}`	$\mathrm{XX}=-\mathrm{o}_{\alpha \beta} x^{\alpha} x^{ \beta} \mathbb{1}$	$\mathrm{XX}=-\mathrm{o}_{\alpha \beta} x^{\alpha} x^{ \beta} \mathbb{1}$
mielke-geometrodynamics_EQ0776 (11.2.5)	246	0.999 S|+0	`L_{\mathrm{D}}=\frac{i}{2}\left(\bar{\psi} \gamma \wedge^{*} d \psi+d \bar{\psi} \wedge^{*} \gamma \psi \right)-m \bar{\psi} \psi \eta-\frac{1}{2} \bar{\psi} \left[\widetilde{\omega},{ }^{*} \gamma\right] \psi,`	$L_{\mathrm{D}}=\frac{i}{2}\left(\bar{\psi} \gamma \wedge^{*} d \psi+d \bar{\psi} \wedge^{*} \gamma \psi \right)-m \bar{\psi} \psi \eta-\frac{1}{2} \bar{\psi} \left[\widetilde{\omega},{ }^{*} \gamma\right] \psi,$	$L_{\mathrm{D}}=\frac{i}{2}\left(\bar{\psi} \gamma \wedge^{*} d \psi+d \bar{\psi} \wedge^{*} \gamma \psi \right)-m \bar{\psi} \psi \eta-\frac{1}{2} \bar{\psi} \left[\widetilde{\omega},{ }^{*} \gamma\right] \psi,$
mielke-geometrodynamics_EQ0805 (11.4.17)	255	0.999 N|+1	`\kappa=\mp\left(j+\frac{1}{2}\right) \quad \text { for } \quad j=l \pm \frac{1}{2} .`	$\kappa=\mp\left(j+\frac{1}{2}\right) \quad \text { for } \quad j=l \pm \frac{1}{2} .$	$\kappa=\mp\left(j+\frac{1}{2}\right) \quad \text { for } \quad j=l \pm \frac{1}{2} .$
mielke-geometrodynamics_EQ0989 (14.3.2)	320	0.999 W|+0	`\hat{L}_{\mathrm{D} .}=\frac{i}{2}\left(\overline{\hat{ \psi}} \hat{\gamma} \wedge^{*} \hat{D} \hat{\psi}+( \overline{\hat{D} \hat{\psi}}) \wedge^{*} \hat{\gamma} \hat{\psi}\right)-\hat{m} \overline{\hat{\psi}} \hat{ \psi} \eta`	$\hat{L}_{\mathrm{D} .}=\frac{i}{2}\left(\overline{\hat{\psi}} \hat{\gamma} \wedge^{*} \hat{D} \hat{\psi}+(\overline{\hat{D} \hat{\psi}}) \wedge^{*} \hat{\gamma} \hat{\psi}\right)-\hat{m} \overline{\hat{\psi}} \hat{ \psi} \eta$	$\hat{L}_{\mathrm{D} .}=\frac{i}{2}\left(\overline{\hat{\psi}} \hat{\gamma} \wedge^{*} \hat{D} \hat{\psi}+(\overline{\hat{D} \hat{\psi}}) \wedge^{*} \hat{\gamma} \hat{\psi}\right)-\hat{m} \overline{\hat{\psi}} \hat{ \psi} \eta$
mielke-geometrodynamics_EQ1057 (15.2.14)	346	0.999 N|+0	`i \bar{\gamma} \wedge^{*} \bar{D}^{\{ \}} \psi-6 \ell^{2} \bar{\gamma}^{5} \bar{\gamma} \wedge^{*}\left(\bar{\psi} \bar{\gamma}^{5} \bar{\gamma} \psi\right) \psi-m \psi \eta=0`	$i \bar{\gamma} \wedge^{*} \bar{D}^{\{\}} \psi-6 \ell^{2} \bar{\gamma}^{5} \bar{\gamma} \wedge^{*}\left(\bar{\psi} \bar{\gamma}^{5} \bar{\gamma} \psi\right) \psi-m \psi \eta=0$	$i \bar{\gamma} \wedge^{*} \bar{D}^{\{\}} \psi-6 \ell^{2} \bar{\gamma}^{5} \bar{\gamma} \wedge^{*}\left(\bar{\psi} \bar{\gamma}^{5} \bar{\gamma} \psi\right) \psi-m \psi \eta=0$
mielke-geometrodynamics_EQ0669 (10.3.26)	219	0.999 C|-12	`m=\frac{\theta_{\mathrm{T}} \theta_{\mathrm{TL}}}{2\left(\theta_{\mathrm{TL}}^{2}+\theta_{\mathrm{T}} \theta_{ \mathrm{L}}\right) \ell}, \quad \Lambda_{\mathrm{ind}}= \frac{\theta_{\mathrm{T}}^{2}\left[-(-1)^{s} 3 \theta_{\mathrm{TL}}^{2}+8 \theta_{\mathrm{T}} \theta_{\mathrm{L}}\right]}{4\left[(-1)^{s} \theta_{ \mathrm{TL}}^{2}-2 \theta_{\mathrm{T}} \theta_{ \mathrm{L}}\right]^{2} \ell^{2}},`	$m=\frac{\theta_{\mathrm{T}} \theta_{\mathrm{TL}}}{2\left(\theta_{\mathrm{TL}}^{2}+\theta_{\mathrm{T}} \theta_{\mathrm{L}}\right) \ell}, \quad \Lambda_{\mathrm{ind}}=\frac{\theta_{\mathrm{T}}^{2}\left[-(-1)^{s} 3 \theta_{\mathrm{TL}}^{2}+8 \theta_{\mathrm{T}} \theta_{\mathrm{L}}\right]}{4\left[(-1)^{s} \theta_{\mathrm{TL}}^{2}-2 \theta_{\mathrm{T}} \theta_{\mathrm{L}}\right]^{2} \ell^{2}},$	$m=\frac{\theta_{\mathrm{T}} \theta_{\mathrm{TL}}}{2\left(\theta_{\mathrm{TL}}^{2}+\theta_{\mathrm{T}} \theta_{\mathrm{L}}\right) \ell}, \quad \Lambda_{\mathrm{ind}}=\frac{\theta_{\mathrm{T}}^{2}\left[-(-1)^{s} 3 \theta_{\mathrm{TL}}^{2}+8 \theta_{\mathrm{T}} \theta_{\mathrm{L}}\right]}{4\left[(-1)^{s} \theta_{\mathrm{TL}}^{2}-2 \theta_{\mathrm{T}} \theta_{\mathrm{L}}\right]^{2} \ell^{2}},$
mielke-geometrodynamics_EQ0929 (14.1.10)	304	0.999 N|+0	`\begin{aligned} & \operatorname{Tr}\left(\Sigma_{ \mathrm{YM}} \wedge^{*} \vartheta\right)= \operatorname{Tr}\left(\vartheta \wedge^{*} \Sigma_{ \mathrm{YM}}\right) \\ & =\frac{1}{2 \alpha_{g}} \operatorname{Tr}\left\{\vartheta \wedge \Omega \wedge^{*}\left(\vartheta \wedge^{*} \Omega\right)+ \vartheta \wedge^{*} \vartheta \wedge^{*}\left(\Omega \wedge^{*} \Omega\right)\right\}=0 \end{aligned}`	$\begin{aligned} & \operatorname{Tr}\left(\Sigma_{\mathrm{YM}} \wedge^{*} \vartheta\right)=\operatorname{Tr}\left(\vartheta \wedge^{*} \Sigma_{\mathrm{YM}}\right) \\ & =\frac{1}{2 \alpha_{g}} \operatorname{Tr}\left\{\vartheta \wedge \Omega \wedge^{*}\left(\vartheta \wedge^{*} \Omega\right)+\vartheta \wedge^{*} \vartheta \wedge^{*}\left(\Omega \wedge^{*} \Omega\right)\right\}=0 \end{aligned}$	$\begin{aligned} & \operatorname{Tr}\left(\Sigma_{\mathrm{YM}} \wedge^{*} \vartheta\right)=\operatorname{Tr}\left(\vartheta \wedge^{*} \Sigma_{\mathrm{YM}}\right) \\ & =\frac{1}{2 \alpha_{g}} \operatorname{Tr}\left\{\vartheta \wedge \Omega \wedge^{*}\left(\vartheta \wedge^{*} \Omega\right)+\vartheta \wedge^{*} \vartheta \wedge^{*}\left(\Omega \wedge^{*} \Omega\right)\right\}=0 \end{aligned}$
mielke-geometrodynamics_EQ0093 (3.2.3)	055	0.999 K|+0	`\omega^{\prime} \rightarrow{ }^{G^{-1}} \omega^{ \prime}=G^{-1} \omega^{\prime} G+\left(d G^{-1}\right) G`	$\omega^{\prime} \rightarrow{}^{G^{-1}} \omega^{\prime}=G^{-1} \omega^{\prime} G+\left(d G^{-1}\right) G$	$\omega^{\prime} \rightarrow{}^{G^{-1}} \omega^{\prime}=G^{-1} \omega^{\prime} G+\left(d G^{-1}\right) G$
mielke-geometrodynamics_EQ0113 (3.3.14)	059	0.999 N|+0	`H={ }^{*} F .`	$H={}^{*} F .$	$H={}^{*} F .$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ0173 (3.7.1)	071	0.999 N|+0	`L_{\mathrm{H}}=-\bar{\Theta}^{(1)} \wedge{ }^{*} D \phi^{0}+\bar{\Theta}^{(1)} \wedge{ }^{*} \Theta^{(1)}+ \frac{\lambda}{4}\left(\frac{\mu^{2}}{\lambda}-\bar{ \varphi} \cdot \varphi\right)^{2} \eta .`	$L_{\mathrm{H}}=-\bar{\Theta}^{(1)} \wedge{ }^{*} D \phi^{0}+\bar{\Theta}^{(1)} \wedge{ }^{*} \Theta^{(1)}+ \frac{\lambda}{4}\left(\frac{\mu^{2}}{\lambda}-\bar{ \varphi} \cdot \varphi\right)^{2} \eta .$	$L_{\mathrm{H}}=-\bar{\Theta}^{(1)} \wedge{ }^{*} D \phi^{0}+\bar{\Theta}^{(1)} \wedge{ }^{*} \Theta^{(1)}+ \frac{\lambda}{4}\left(\frac{\mu^{2}}{\lambda}-\bar{ \varphi} \cdot \varphi\right)^{2} \eta .$
mielke-geometrodynamics_EQ0201 (4.1.15)	083	0.999 N|+0	`\delta_{g}^{*} \vartheta=g^{-1} \vartheta, \quad g \in G L(n, \mathbb{R}),`	$\delta_{g}^{*} \vartheta=g^{-1} \vartheta, \quad g \in G L(n, \mathbb{R}),$	$\delta_{g}^{*} \vartheta=g^{-1} \vartheta, \quad g \in G L(n, \mathbb{R}),$
mielke-geometrodynamics_EQ0275 (4.4.3)	097	0.999 W|+1	`\begin{aligned} & =d(\delta \vartheta)-\left[\omega^{ \mathrm{L}}, \delta \vartheta\right]-\left[\delta \omega^{\mathrm{L}}, \vartheta\right] \\ & =D(\delta \vartheta)-\left[\delta \omega^{\mathrm{L}}, \vartheta\right] . \end{aligned}`	$\begin{aligned} & =d(\delta \vartheta)-\left[\omega^{ \mathrm{L}}, \delta \vartheta\right]-\left[\delta \omega^{\mathrm{L}}, \vartheta\right] \\ & =D(\delta \vartheta)-\left[\delta \omega^{\mathrm{L}}, \vartheta\right] . \end{aligned}$	$\begin{aligned} & =d(\delta \vartheta)-\left[\omega^{ \mathrm{L}}, \delta \vartheta\right]-\left[\delta \omega^{\mathrm{L}}, \vartheta\right] \\ & =D(\delta \vartheta)-\left[\delta \omega^{\mathrm{L}}, \vartheta\right] . \end{aligned}$
mielke-geometrodynamics_EQ0341 (5.3.18)	115	0.999 K|+0	`{ }^{*} \mathscr{A}=\frac{\kappa}{2} j_{5},`	${ }^{*} \mathscr{A}=\frac{\kappa}{2} j_{5},$	${ }^{*} \mathscr{A}=\frac{\kappa}{2} j_{5},$
mielke-geometrodynamics_EQ0441 (6.8.12)	143	0.999 N|+0	`D \tau_{\alpha \beta}+\vartheta_{[\alpha} \wedge \Sigma_{ \beta]} \cong 0,`	$D \tau_{\alpha \beta}+\vartheta_{[\alpha} \wedge \Sigma_{ \beta]} \cong 0,$	$D \tau_{\alpha \beta}+\vartheta_{[\alpha} \wedge \Sigma_{ \beta]} \cong 0,$
mielke-geometrodynamics_EQ0476 (7.4.4)	156	0.999 K|+0	`C_{\alpha \beta}=0 \quad \text { and } \quad R=0,`	$C_{\alpha \beta}=0 \quad \text { and } \quad R=0,$	$C_{\alpha \beta}=0 \quad \text { and } \quad R=0,$
mielke-geometrodynamics_EQ0519 (7.7.37)	166	0.999 N|+0	`D \Theta \equiv\left[\Omega^{g}, \gamma\right], \quad D \Omega^{g} \equiv 0,`	$D \Theta \equiv\left[\Omega^{g}, \gamma\right], \quad D \Omega^{g} \equiv 0,$	$D \Theta \equiv\left[\Omega^{g}, \gamma\right], \quad D \Omega^{g} \equiv 0,$
mielke-geometrodynamics_EQ0567 (8.6.4)	183	0.999 N|+1	`\begin{aligned} H_{\alpha \beta}(* *) & =\theta_{ \mathrm{L}} R_{\alpha \beta}+\theta_{\mathrm{L}}^{ \star} R_{\alpha \beta}^{(\star)}+\frac{\theta_{ \mathrm{T}}^{*}}{2 \ell^{2}} \eta_{\alpha \beta}-\frac{ \theta_{\mathrm{T}}}{2 \ell^{2}} \vartheta_{\alpha} \wedge \vartheta_{\beta} \\ & \simeq-\partial L_{\theta} / \partial R^{\alpha \beta} \end{aligned}`	$\begin{aligned} H_{\alpha \beta}(* *) & =\theta_{ \mathrm{L}} R_{\alpha \beta}+\theta_{\mathrm{L}}^{ \star} R_{\alpha \beta}^{(\star)}+\frac{\theta_{ \mathrm{T}}^{*}}{2 \ell^{2}} \eta_{\alpha \beta}-\frac{ \theta_{\mathrm{T}}}{2 \ell^{2}} \vartheta_{\alpha} \wedge \vartheta_{\beta} \\ & \simeq-\partial L_{\theta} / \partial R^{\alpha \beta} \end{aligned}$	$\begin{aligned} H_{\alpha \beta}(* *) & =\theta_{ \mathrm{L}} R_{\alpha \beta}+\theta_{\mathrm{L}}^{ \star} R_{\alpha \beta}^{(\star)}+\frac{\theta_{ \mathrm{T}}^{*}}{2 \ell^{2}} \eta_{\alpha \beta}-\frac{ \theta_{\mathrm{T}}}{2 \ell^{2}} \vartheta_{\alpha} \wedge \vartheta_{\beta} \\ & \simeq-\partial L_{\theta} / \partial R^{\alpha \beta} \end{aligned}$
mielke-geometrodynamics_EQ0624 (10.1.12)	210	0.999 K|+0	`D H_{\alpha}-E_{\alpha}=\Sigma_{\alpha},`	$D H_{\alpha}-E_{\alpha}=\Sigma_{\alpha},$	$D H_{\alpha}-E_{\alpha}=\Sigma_{\alpha},$
mielke-geometrodynamics_EQ0673 (10.3.30)	220	0.999 C|-4	`H_{\alpha}=-\frac{\theta_{\mathrm{T}}}{2 \ell^{2}} \vartheta_{\alpha}-\frac{\theta_{\mathrm{TL}}}{\ell} \Gamma_{\alpha}^{\star}, \quad H_{\alpha}^{\star}=-\frac{ \theta_{\mathrm{L}}}{2} \Gamma_{\alpha}^{\star},`	$H_{\alpha}=-\frac{\theta_{\mathrm{T}}}{2 \ell^{2}} \vartheta_{\alpha}-\frac{\theta_{\mathrm{TL}}}{\ell} \Gamma_{\alpha}^{\star}, \quad H_{\alpha}^{\star}=-\frac{ \theta_{\mathrm{L}}}{2} \Gamma_{\alpha}^{\star},$	$H_{\alpha}=-\frac{\theta_{\mathrm{T}}}{2 \ell^{2}} \vartheta_{\alpha}-\frac{\theta_{\mathrm{TL}}}{\ell} \Gamma_{\alpha}^{\star}, \quad H_{\alpha}^{\star}=-\frac{ \theta_{\mathrm{L}}}{2} \Gamma_{\alpha}^{\star},$
mielke-geometrodynamics_EQ0722 (10.10.2)	230	0.999 N|+0	`\delta L=\delta \vartheta^{\alpha} \wedge \frac{\delta L}{\delta \vartheta^{\alpha}}+\delta \Gamma_{\alpha}^{ \star} \wedge \frac{\delta L}{\delta \Gamma_{\alpha}^{ \star}}+\delta \bar{\Psi} \wedge \frac{\delta L}{\delta \bar{\Psi}},`	$\delta L=\delta \vartheta^{\alpha} \wedge \frac{\delta L}{\delta \vartheta^{\alpha}}+\delta \Gamma_{\alpha}^{ \star} \wedge \frac{\delta L}{\delta \Gamma_{\alpha}^{ \star}}+\delta \bar{\Psi} \wedge \frac{\delta L}{\delta \bar{\Psi}},$	$\delta L=\delta \vartheta^{\alpha} \wedge \frac{\delta L}{\delta \vartheta^{\alpha}}+\delta \Gamma_{\alpha}^{ \star} \wedge \frac{\delta L}{\delta \Gamma_{\alpha}^{ \star}}+\delta \bar{\Psi} \wedge \frac{\delta L}{\delta \bar{\Psi}},$
mielke-geometrodynamics_EQ0759 (11.1.26)	242	0.999 N|+0	`{ }^{*}(\underbrace{\gamma \wedge \cdots \wedge \gamma}_{p})=\frac{p!}{(n-p)!} \gamma^{n+1} \underbrace{ \gamma \wedge \cdots \wedge \gamma}_{n-p} .`	${ }^{*}(\underbrace{\gamma \wedge \cdots \wedge \gamma}_{p})=\frac{p!}{(n-p)!} \gamma^{n+1} \underbrace{\gamma \wedge \cdots \wedge \gamma}_{n-p} .$	${ }^{*}(\underbrace{\gamma \wedge \cdots \wedge \gamma}_{p})=\frac{p!}{(n-p)!} \gamma^{n+1} \underbrace{\gamma \wedge \cdots \wedge \gamma}_{n-p} .$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ0780 (11.2.8)	247	■ 0.999 ● K|+0	`(\psi, \chi):=\int_{H^{n-1}} \tau_{s}(\psi, \chi)=i \int_{H^{n-1}} \psi^{*} \gamma \chi`	$(\psi, \chi) := \int_{H^{n-1}} \tau_s(\psi, \chi) = i \int_{H^{n-1}} \psi^{*} \gamma \chi$	$(\psi, \chi) := \int_{H^{n-1}} \tau_s(\psi, \chi) = i \int_{H^{n-1}} \psi^{*} \gamma \chi$
mielke-geometrodynamics_EQ0789 (11.4.1)	251	■ 0.999 ● N|+0	`E_{r}=\sqrt{\alpha} r_{\circ}^{2}\left[1+\left( \frac{r}{r_{\circ}}\right)^{4}\right]^{-1 / 2} \sim \sqrt{\alpha} \frac{1}{r^{2}}`	$E_r = \sqrt{\alpha} r_\circ^2 \left[1+\left(\frac{r}{r_\circ}\right)^4\right]^{-1/2} \sim \sqrt{\alpha} \frac{1}{r^2}$	$E_r = \sqrt{\alpha} r_\circ^2 \left[1+\left(\frac{r}{r_\circ}\right)^4\right]^{-1/2} \sim \sqrt{\alpha} \frac{1}{r^2}$
mielke-geometrodynamics_EQ0825 (11.4.39)	259	■ 0.999 ● N|+0	`m_{\pi}=\sqrt{1-\omega^{2}} m`	$m_\pi = \sqrt{1-\omega^2} m$	$m_\pi = \sqrt{1-\omega^2}\ m$
mielke-geometrodynamics_EQ0892 (13.4.11)	287	■ 0.999 ● N|+0	`\vartheta \xrightarrow{A^{-1}(x)} \vartheta^{ \prime}=\Lambda^{-1}(x) \vartheta, \quad \theta \xrightarrow{A^{-1}(x)} \theta^{\prime}=\theta \Lambda^{-1}(x) .`	$\vartheta \xrightarrow{A^{-1}(x)} \vartheta' = \Lambda^{-1}(x)\vartheta, \quad \theta \xrightarrow{A^{-1}(x)} \theta' = \theta\Lambda^{-1}(x).$	$\vartheta \xrightarrow{A^{-1}(x)} \vartheta' = \Lambda^{-1}(x)\,\vartheta\ , \qquad \theta \xrightarrow{A^{-1}(x)} \theta' = \theta\,\Lambda^{-1}(x)\ .$
mielke-geometrodynamics_EQ0932 (14.1.13)	304	■ 0.999 ● N|+0	`e^{* \delta} \circ e^{* \varepsilon}=e^{* \varepsilon} \circ e^{* \delta}=e^{*(\delta+\varepsilon)},`	$e^{*\delta} \circ e^{*\varepsilon} = e^{*\varepsilon} \circ e^{*\delta} = e^{*(\delta+\varepsilon)},$	$e^{*\delta} \circ e^{*\varepsilon} = e^{*\varepsilon} \circ e^{*\delta} = e^{*(\delta+\varepsilon)},$
mielke-geometrodynamics_EQ0940 (14.1.21)	305	■ 0.999 ● N|+0	`\xi \wedge \xi=\xi \wedge^{*} \xi=0`	$\xi \wedge \xi = \xi \wedge^* \xi = 0$	$\xi \wedge \xi = \xi \wedge {}^*\xi = 0$
mielke-geometrodynamics_EQ0951 (14.1.33)	307	■ 0.999 ● W|+2	`\begin{aligned} & D^{*} \xi-(-1)^{z} \xi \wedge D \delta= \bar{\tau}_{e} \\ & D \xi+(-1)^{z *} \xi \wedge D \delta= \bar{\tau}_{p} \end{aligned}`	$D^*\xi - (-1)^z \xi \wedge D\delta = \bar{\tau}_e$ $D\xi + (-1)^{z*}\xi \wedge D\delta = \bar{\tau}_p$	$D\,{}^*\xi - (-1)^z \xi \wedge D\delta = \overline{\tau}_e,$ $D\,\xi + (-1)^{z}\,{}^*\xi \wedge D\delta = \overline{\tau}_p.$
mielke-geometrodynamics_EQ0968 (14.2.9)	314	■ 0.999 ● N|+2	`\hat{\omega}=\left[\begin{array}{c|c} \omega^{g} & -\alpha \\ \hline \alpha^{\mathrm{T}} & \grave{\omega} \end{array}\right]=: \omega^{g} \oplus \stackrel{ \circ}{\omega}-\hat{\alpha} ; \quad \hat{\alpha}= \left[\begin{array}{c|c} 0 & \alpha \\ \hline-\alpha^{ \mathrm{T}} & 0 \end{array}\right]`	$\hat{\omega} = \left[\begin{array}{c\|c} \omega^g & -\alpha \\ \hline \alpha^{\mathrm{T}} & \grave{\omega} \end{array}\right] =: \omega^g \oplus \overset{\circ}{\omega} - \hat{\alpha}; \quad \hat{\alpha} = \left[\begin{array}{c\|c} 0 & \alpha \\ \hline -\alpha^{\mathrm{T}} & 0 \end{array}\right]$	$\hat{\omega} = \left[\begin{array}{c\|c} \omega^g & -\alpha \\ \hline \alpha^{\mathrm{T}} & \grave{\omega} \end{array}\right] =: \omega^g \oplus \overset{\circ}{\omega} - \hat{\alpha}; \quad \hat{\alpha} = \left[\begin{array}{c\|c} 0 & \alpha \\ \hline -\alpha^{\mathrm{T}} & 0 \end{array}\right]$
mielke-geometrodynamics_EQ1039 (15.1.16)	339	■ 0.999 ● C|+9	`\begin{aligned} d s_{f}^{2}= & f_{i j} d x^{i} \otimes_{s} d x^{j} \\ = & -\frac{3 \gamma}{2} e^{- \lambda^{f}} d t^{2}+2\left[\gamma\left\{1-\left(1+ \frac{9 \gamma}{4}\right) e^{\lambda^{f}-\lambda^{g}}+ \frac{9 \gamma}{4} e^{2\left(\lambda^{f}-\lambda^{g} \right)}\right\}\right]^{1 / 2} d t d r \\ & +e^{ \lambda^{g}}\left\{\frac{2}{3}+\frac{3 \gamma}{2} \left(1-e^{\lambda^{g}-\lambda^{f}}\right)\right\} d r^{2}+\frac{2}{3} r^{2} d \Omega^{2} \end{aligned}`	$ds_f^2 = f_{ij}\, dx^i \otimes_s dx^j$ $= -\frac{3\gamma}{2} e^{-\lambda^f} dt^2 + 2\left[\gamma\left\{1-\left(1+\frac{9\gamma}{4}\right) e^{\lambda^f-\lambda^g} + \frac{9\gamma}{4} e^{2(\lambda^f-\lambda^g)}\right\}\right]^{1/2} dt dr$ $+ e^{\lambda^g}\left\{\frac{2}{3}+\frac{3\gamma}{2}\left(1-e^{\lambda^g-\lambda^f}\right)\right\} dr^2 + \frac{2}{3} r^2 d\Omega^2$	$ds_f^2 = f_{ij}\, dx^i \otimes_s dx^j$ $= -\frac{3\gamma}{2} e^{-\lambda^f} dt^2 + 2\left[\gamma\left\{1-\left(1+\frac{9\gamma}{4}\right) e^{\lambda^f-\lambda^g} + \frac{9\gamma}{4} e^{2(\lambda^f-\lambda^g)}\right\}\right]^{1/2} dt\, dr$ (15.1.16) $+ e^{\lambda^g}\left\{\frac{2}{3}+\frac{3\gamma}{2}(1-e^{\lambda^g-\lambda^f})\right\} dr^2 + \frac{2}{3} r^2 d\Omega^2$
mielke-geometrodynamics_EQ1088 (A.15)	366	■ 0.999 ● N|+0	`C(1, n-1)=\left[\bigotimes_{i=1}^{\left[\frac{n-2}{2} \right]} C(0,2)\right] \otimes C(1,1) .`	$C(1, n-1) = \left[\bigotimes_{i=1}^{\left[\frac{n-2}{2}\right]} C(0,2)\right] \otimes C(1,1).$	$C(1, n-1) = \left[\bigotimes_{i=1}^{\left[\frac{n-2}{2}\right]} C(0,2)\right] \otimes C(1,1).$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): ● C component ● W weak ● S stable ● N noise ● K clean ● not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ0434 (6.8.5)	142	0.999 N|-1	H_{\alpha}:=-\frac{\partial L_{g}}{\partial d \vartheta^{\alpha}}=-\frac{\partial L_{g}}{\partial T^{\alpha}}, \quad \text { and } \quad H_{\alpha \beta}:=-\frac{\partial L_{g}}{\partial d \Gamma^{\alpha \beta}}=-\frac{\partial L_{g}}{\partial R^{\alpha \beta}} .	$H_{\alpha}:=-\frac{\partial L_{g}}{\partial d \vartheta^{\alpha}}=-\frac{\partial L_{g}}{\partial T^{\alpha}}, \quad \text { and } \quad H_{\alpha \beta}:=-\frac{\partial L_{g}}{\partial d \Gamma^{\alpha \beta}}=-\frac{\partial L_{g}}{\partial R^{\alpha \beta}} .$	$H_{\alpha}:=-\frac{\partial L_{g}}{\partial d \vartheta^{\alpha}}=-\frac{\partial L_{g}}{\partial T^{\alpha}}, \quad \text { and } \quad H_{\alpha \beta}:=-\frac{\partial L_{g}}{\partial d \Gamma^{\alpha \beta}}=-\frac{\partial L_{g}}{\partial R^{\alpha \beta}} .$
mielke-geometrodynamics_EQ0566 (8.6.3)	183	0.999 N|+0	H_{\alpha \beta}:=-\partial L_{\mathrm{qPG}} / \partial R^{\alpha \beta}=\frac{a_{0}}{2 \ell^{2}} \eta_{\alpha \beta}+{ }^{*}\left(\sum_{N=1}^{6} b_{(N)}{ }^{(N)} R_{ \alpha \beta}\right)	$H_{\alpha \beta}:=-\partial L_{\mathrm{qPG}} / \partial R^{\alpha \beta}=\frac{a_{0}}{2 \ell^{2}} \eta_{\alpha \beta}+{ }^{*}\left(\sum_{N=1}^{6} b_{(N)}{ }^{(N)} R_{ \alpha \beta}\right)$	$H_{\alpha \beta}:=-\partial L_{\mathrm{qPG}} / \partial R^{\alpha \beta}=\frac{a_{0}}{2 \ell^{2}} \eta_{\alpha \beta}+{ }^{*}\left(\sum_{N=1}^{6} b_{(N)}{ }^{(N)} R_{ \alpha \beta}\right)$
mielke-geometrodynamics_EQ0798 (11.4.10)	254	0.999 W|+0	\begin{aligned} & \left\{i \bar{\gamma}^{k}\left(\partial_{k}+i \bar{\Gamma}_{k}+\frac{3}{4} \partial_{k} \mu\right)\right. \\ & \left.+\frac{3 \varepsilon}{8} \ell^{2} e^{\mu / 2}\left(\bar{\psi} \psi-\mathrm{a} \bar{\psi} \gamma^{5} \psi \gamma^{5}\right)-e^{\mu / 2} m\right\} \psi=0 . \end{aligned}	$\begin{aligned} & \left\{i \bar{\gamma}^{k}\left(\partial_{k}+i \bar{\Gamma}_{k}+\frac{3}{4} \partial_{k} \mu\right)\right. \\ & \left.+\frac{3 \varepsilon}{8} \ell^{2} e^{\mu / 2}\left(\bar{\psi} \psi-\mathrm{a} \bar{\psi} \gamma^{5} \psi \gamma^{5}\right)-e^{\mu / 2} m\right\} \psi=0 . \end{aligned}$	$\begin{aligned} & \left\{i \bar{\gamma}^{k}\left(\partial_{k}+i \bar{\Gamma}_{k}+\frac{3}{4} \partial_{k} \mu\right)\right. \\ & \left.+\frac{3 \varepsilon}{8} \ell^{2} e^{\mu / 2}\left(\bar{\psi} \psi-\mathrm{a} \bar{\psi} \gamma^{5} \psi \gamma^{5}\right)-e^{\mu / 2} m\right\} \psi=0 . \end{aligned}$
mielke-geometrodynamics_EQ0833 (12.2.1)	270	0.999 N|+0	L_{\mathrm{D}}=L(\gamma, \psi, \mathscr{D} \psi)= \frac{i}{2}\left\{\bar{\psi}^{*} \gamma \wedge \mathscr{D} \psi+\overline{\mathscr{D} \psi} \wedge^{*} \gamma \psi\right\}-m \bar{\psi} \psi \eta,	$L_{\mathrm{D}}=L(\gamma, \psi, \mathscr{D} \psi)=\frac{i}{2}\left\{\bar{\psi}^{*} \gamma \wedge \mathscr{D} \psi+\overline{\mathscr{D} \psi} \wedge^{*} \gamma \psi\right\}-m \bar{\psi} \psi \eta,$	$L_{\mathrm{D}}=L(\gamma, \psi, \mathscr{D} \psi)=\frac{i}{2}\left\{\bar{\psi}^{*} \gamma \wedge \mathscr{D} \psi+\overline{\mathscr{D} \psi} \wedge^{*} \gamma \psi\right\}-m \bar{\psi} \psi \eta,$
mielke-geometrodynamics_EQ0020 (2.4.2)	038	1.000 N|+0	V^{\rho}:=V^{\rho}\left(M, \mathbb{C}^{N}, \rho(G) \subseteq G L(N, \mathbb{C}), P\right),	$V^{\rho}:=V^{\rho}\left(M, \mathbb{C}^{N}, \rho(G) \subseteq G L(N, \mathbb{C}), P\right),$	$V^{\rho}:=V^{\rho}\left(M, \mathbb{C}^{N}, \rho(G) \subseteq G L(N, \mathbb{C}), P\right),$
mielke-geometrodynamics_EQ0091 (3.2.1)	055	1.000 S|+0	\mathscr{O} \rightarrow{ }^{G^{-1}} \mathscr{O}=G^{-1} \mathscr{O} G .	$\mathscr{O} \rightarrow{ }^{G^{-1}} \mathscr{O}=G^{-1} \mathscr{O} G .$	$\mathscr{O} \rightarrow{ }^{G^{-1}} \mathscr{O}=G^{-1} \mathscr{O} G .$
mielke-geometrodynamics_EQ0101 (3.3.2)	057	1.000 N|-1	A \rightarrow A+d \theta(x) \quad \Rightarrow \quad F \rightarrow d A+d d \theta=d A=F .	$A \rightarrow A+d \theta(x) \quad \Rightarrow \quad F \rightarrow d A+d d \theta=d A=F .$	$A \rightarrow A+d \theta(x) \quad \Rightarrow \quad F \rightarrow d A+d d \theta=d A=F .$
mielke-geometrodynamics_EQ0137 (3.4.8)	063	1.000 W|+0	\begin{aligned} \delta L_{\omega} & =\delta \Omega \wedge \Pi^{\Omega}=D(\delta \omega) \wedge \Pi^{\Omega} \\ & =-\delta \omega \wedge D \Pi^{\Omega}+d\left(\delta \omega \wedge \Pi^{\Omega}\right) . \end{aligned}	$\begin{aligned} \delta L_{\omega} & =\delta \Omega \wedge \Pi^{\Omega}=D(\delta \omega) \wedge \Pi^{\Omega} \\ & =-\delta \omega \wedge D \Pi^{\Omega}+d\left(\delta \omega \wedge \Pi^{\Omega}\right) . \end{aligned}$	$\begin{aligned} \delta L_{\omega} & =\delta \Omega \wedge \Pi^{\Omega}=D(\delta \omega) \wedge \Pi^{\Omega} \\ & =-\delta \omega \wedge D \Pi^{\Omega}+d\left(\delta \omega \wedge \Pi^{\Omega}\right) . \end{aligned}$
mielke-geometrodynamics_EQ0146 (3.4.17)	065	1.000 N|+0	Q=Q^{(i)} I_{i}:=\int_{H^{3}} \iota=\int_{\partial H^{3}} \Pi^{\Omega},	$Q=Q^{(i)} I_{i}:=\int_{H^{3}} \iota=\int_{\partial H^{3}} \Pi^{\Omega},$	$Q=Q^{(i)} I_{i}:=\int_{H^{3}} \iota=\int_{\partial H^{3}} \Pi^{\Omega},$
mielke-geometrodynamics_EQ0175 (3.7.4)	072	1.000 N|+0	\tau_{\mathrm{H}}=-\left[\phi^{(0)},{ }^{*} \Theta^{(1)} \right]	$\tau_{\mathrm{H}}=-\left[\phi^{(0)},{ }^{*} \Theta^{(1)} \right]$	$\tau_{\mathrm{H}}=-\left[\phi^{(0)},{ }^{*} \Theta^{(1)} \right]$
mielke-geometrodynamics_EQ0195 (4.1.5)	082	1.000 N|+0	\mathfrak{a}(n, \mathbb{R})=\mathbb{R}^{n} \otimes \mathfrak{g} l(n, \mathbb{R})	$\mathfrak{a}(n, \mathbb{R})=\mathbb{R}^{n} \otimes \mathfrak{g} l(n, \mathbb{R})$	$\mathfrak{a}(n, \mathbb{R})=\mathbb{R}^{n} \otimes \mathfrak{g} l(n, \mathbb{R})$
mielke-geometrodynamics_EQ0208 (4.1.22)	084	1.000 N|+0	T_{\mathrm{A}}(M)=\stackrel{\circ}{V}(M, \mathbb{R}^{n}, A(n, \mathbb{R}), A(M)) \subset V^{\mathrm{id}}	$T_{\mathrm{A}}(M)=\stackrel{\circ}{V}(M, \mathbb{R}^{n}, A(n, \mathbb{R}), A(M)) \subset V^{\mathrm{id}}$	$T_{\mathrm{A}}(M)=\stackrel{\circ}{V}(M, \mathbb{R}^{n}, A(n, \mathbb{R}), A(M)) \subset V^{\mathrm{id}}$
mielke-geometrodynamics_EQ0212 (4.2.4)	085	1.000 K|+0	\Omega^{\mathrm{T}}:=D \omega^{\mathrm{T}}=d \omega^{ \mathrm{T}}-\left[\omega^{\mathrm{T}}, \omega^{ \mathrm{L}}\right],	$\Omega^{\mathrm{T}}:=D \omega^{\mathrm{T}}=d \omega^{\mathrm{T}}-\left[\omega^{\mathrm{T}}, \omega^{\mathrm{L}}\right],$	$\Omega^{\mathrm{T}}:=D \omega^{\mathrm{T}}=d \omega^{\mathrm{T}}-\left[\omega^{\mathrm{T}}, \omega^{\mathrm{L}}\right],$

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mielke-geometrodynamics_EQ0215 (4.2.7)	086	1.000 N|+0	`\mathscr{T}(n, \mathbb{R}):=C^{\infty}\left(A(M) \times_{ \mathrm{Ad}} \mathbb{R}^{n}\right)`	$\mathscr{T}(n,\mathbb{R}) := C^{\infty}\left(A(M) \times_{\mathrm{Ad}} \mathbb{R}^{n}\right)$	$\mathscr{T}(n,\ \mathbb{R}) := C^{\infty}(A(M) \times_{\mathrm{Ad}}\ \mathbb{R}^{n})$
mielke-geometrodynamics_EQ0217 (4.2.9)	086	1.000 N|+0	`A=\left[\begin{array}{c|c} G & T \\ \hline 0 & 1 \end{array}\right] \in \mathscr{A}_{p}, \quad G \in \mathscr{G}_{p}, T \in \mathscr{T}_{p}`	$A=\left[\begin{array}{c\|c} G & T \\ \hline 0 & 1 \end{array}\right] \in \mathscr{A}_{p}, \quad G \in \mathscr{G}_{p}, T \in \mathscr{T}_{p}$	$A=\left[\begin{array}{c\|c} G & T \\ \hline 0 & 1 \end{array}\right] \in \mathscr{A}_{p}, \quad G \in \mathscr{G}_{p}, T \in \mathscr{T}_{p}$
mielke-geometrodynamics_EQ0243 (4.3.8)	091	1.000 W|+2	`\cos \phi=\frac{g_{\mu \nu} d V^{\mu} d W^{\nu}}{ \sqrt{g_{\alpha \beta} d V^{\alpha} d V^{\beta}} \sqrt{g_{\alpha \beta} d W^{\alpha} d W^{\beta}}}`	$\cos \phi=\frac{g_{\mu \nu} d V^{\mu} d W^{\nu}}{ \sqrt{g_{\alpha \beta} d V^{\alpha} d V^{\beta}} \sqrt{g_{\alpha \beta} d W^{\alpha} d W^{\beta}}}$	$\cos \phi=\frac{g_{\mu \nu} d V^{\mu} d W^{\nu}}{ \sqrt{g_{\alpha \beta} d V^{\alpha} d V^{\beta}} \sqrt{g_{\alpha \beta} d W^{\alpha} d W^{\beta}}}.$
mielke-geometrodynamics_EQ0323 (5.2.7)	111	1.000 N|+0	`\begin{aligned} \Sigma_{\alpha} \rightarrow \sigma_{ \alpha} & \left.:=\Sigma_{\alpha}-D \mu_{\alpha}+e_{ \beta}\right\rfloor\left(T^{\beta} \wedge \mu_{\alpha} \right), \\ \tau_{\alpha \beta} \rightarrow \hat{\tau}_{ \alpha \beta} & :=\tau_{\alpha \beta}-\vartheta_{[\alpha} \wedge \mu_{\beta]}=0 \end{aligned}`	$\begin{aligned} \Sigma_{\alpha} \rightarrow \sigma_{ \alpha} & \left.:=\Sigma_{\alpha}-D \mu_{\alpha}+e_{ \beta}\right\rfloor\left(T^{\beta} \wedge \mu_{\alpha} \right), \\ \tau_{\alpha \beta} \rightarrow \hat{\tau}_{ \alpha \beta} & :=\tau_{\alpha \beta}-\vartheta_{[\alpha} \wedge \mu_{\beta]}=0 \end{aligned}$	$\begin{aligned} \Sigma_{\alpha} \rightarrow \sigma_{ \alpha} & \left.:=\Sigma_{\alpha}-D \mu_{\alpha}+e_{ \beta}\right\rfloor\left(T^{\beta} \wedge \mu_{\alpha} \right), \\ \tau_{\alpha \beta} \rightarrow \hat{\tau}_{ \alpha \beta} & :=\tau_{\alpha \beta}-\vartheta_{[\alpha} \wedge \mu_{\beta]}=0 \end{aligned}$
mielke-geometrodynamics_EQ0328 (5.3.5)	112	1.000 N|+0	`\Theta:=D \gamma \quad \text { and } \quad \Omega^{g}:=d \Gamma+\Gamma \wedge \Gamma .`	$\Theta:=D \gamma \quad \text { and } \quad \Omega^{g}:=d \Gamma+\Gamma \wedge \Gamma .$	$\Theta:=D \gamma \quad \text { and } \quad \Omega^{g}:=d \Gamma+\Gamma \wedge \Gamma .$
mielke-geometrodynamics_EQ0370 (6.2.21)	127	1.000 N|+0	`\stackrel{( \pm)}{\Pi}_{\alpha}=-\partial \stackrel{( \pm)}{L} / \partial T^{\alpha}=H_{\alpha}^{\\|} \mp(i / \kappa) T_{\alpha}`	$\stackrel{(\pm)}{\Pi}_{\alpha}=-\partial \stackrel{(\pm)}{L} / \partial T^{\alpha}=H_{\alpha}^{\\|} \mp(i / \kappa) T_{\alpha}$	$\stackrel{(\pm)}{\Pi}_{\alpha}=-\partial \stackrel{(\pm)}{L} / \partial T^{\alpha}=H_{\alpha}^{\\|} \mp(i / \kappa) T_{\alpha}$
mielke-geometrodynamics_EQ0380 (6.2.31)	129	1.000 N|+0	`\stackrel{( \pm)( \pm)}{D} \Pi_{\alpha}=0,`	$\stackrel{(\pm)(\pm)}{D} \Pi_{\alpha}=0,$	$\stackrel{(\pm)(\pm)}{D} \Pi_{\alpha}=0,$
mielke-geometrodynamics_EQ0428 (6.7.10)	141	1.000 N|+0	`\kappa D \theta_{\mathrm{L}} \wedge D T_{\beta}=-T \wedge \eta_{\beta}=D \eta_{\beta},`	$\kappa D \theta_{\mathrm{L}} \wedge D T_{\beta}=-T \wedge \eta_{\beta}=D \eta_{\beta},$	$\kappa D \theta_{\mathrm{L}} \wedge D T_{\beta}=-T \wedge \eta_{\beta}=D \eta_{\beta},$
mielke-geometrodynamics_EQ0522 (7.7.41)	167	1.000 N|+1	`\begin{gathered} K^{(\star)}:=\eta_{\alpha \beta \gamma} \wedge K^{\beta \gamma} \gamma^{\alpha}, \\ \Omega^{g(\star)}:=\frac{i}{8} R_{\alpha \beta} \eta^{\alpha \beta \gamma \delta} \sigma_{\gamma \delta}=-\frac{1}{4} R^{\alpha \beta} \gamma_{5} \sigma_{\alpha \beta}=i \gamma_{5} \Omega^{g} . \end{gathered}`	$\begin{gathered} K^{(\star)}:=\eta_{\alpha \beta \gamma} \wedge K^{\beta \gamma} \gamma^{\alpha}, \\ \Omega^{g(\star)}:=\frac{i}{8} R_{\alpha \beta} \eta^{\alpha \beta \gamma \delta} \sigma_{\gamma \delta}=-\frac{1}{4} R^{\alpha \beta} \gamma_{5} \sigma_{\alpha \beta}=i \gamma_{5} \Omega^{g} . \end{gathered}$	$\begin{gathered} K^{(\star)}:=\eta_{\alpha \beta \gamma} \wedge K^{\beta \gamma} \gamma^{\alpha}, \\ \Omega^{g(\star)}:=\frac{i}{8} R_{\alpha \beta} \eta^{\alpha \beta \gamma \delta} \sigma_{\gamma \delta}=-\frac{1}{4} R^{\alpha \beta} \gamma_{5} \sigma_{\alpha \beta}=i \gamma_{5} \Omega^{g} . \end{gathered}$
mielke-geometrodynamics_EQ0526 (7.7.46)	168	1.000 N|-1	`L_{\mathrm{NY}}:=d C_{\mathrm{TT}}=\frac{1}{2 \ell^{2}} \left(T^{\alpha} \wedge T_{\alpha}+R_{\alpha \beta} \wedge \vartheta^{\alpha} \wedge \vartheta^{\beta} \right),`	$L_{\mathrm{NY}}:=d C_{\mathrm{TT}}=\frac{1}{2 \ell^{2}} \left(T^{\alpha} \wedge T_{\alpha}+R_{\alpha \beta} \wedge \vartheta^{\alpha} \wedge \vartheta^{\beta} \right),$	$L_{\mathrm{NY}}:=d C_{\mathrm{TT}}=\frac{1}{2 \ell^{2}} \left(T^{\alpha} \wedge T_{\alpha}+R_{\alpha \beta} \wedge \vartheta^{\alpha} \wedge \vartheta^{\beta} \right),$
mielke-geometrodynamics_EQ0535 (8.2.2)	175	1.000 N|+0	`\widetilde{\Gamma}:=\Gamma \oplus C, \quad \widetilde{ \Omega}^{g}:=\Omega^{g} \oplus \Psi \oplus \Phi .`	$\widetilde{\Gamma}:=\Gamma \oplus C, \quad \widetilde{\Omega}^{g}:=\Omega^{g} \oplus \Psi \oplus \Phi .$	$\widetilde{\Gamma}:=\Gamma \oplus C, \quad \widetilde{\Omega}^{g}:=\Omega^{g} \oplus \Psi \oplus \Phi .$
mielke-geometrodynamics_EQ0538 (8.2.5)	176	1.000 K|+0	`s_{\mathrm{loc}}(\alpha+\lambda)=-d \lambda, \quad s_{ \mathrm{loc}} \lambda=0`	$s_{\mathrm{loc}}(\alpha+\lambda)=-d \lambda, \quad s_{\mathrm{loc}} \lambda=0$	$s_{\mathrm{loc}}(\alpha+\lambda)=-d \lambda, \quad s_{\mathrm{loc}} \lambda=0$
mielke-geometrodynamics_EQ0539 (8.2.6)	176	1.000 K|+0	`\left(d \oplus s_{\mathrm{loc}}\right)(\alpha+\lambda)=d \alpha .`	$\left(d \oplus s_{\mathrm{loc}}\right)(\alpha+\lambda)=d \alpha .$	$\left(d \oplus s_{\mathrm{loc}}\right)(\alpha+\lambda)=d \alpha .$

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mielke-geometrodynamics_EQ0573 (8.6.11)	185	1.000 W|+2	\begin{aligned} L_{\mathrm{qPG}}(* *)= & \frac{\Lambda}{ \ell^{2}} \eta-\frac{a_{0}}{4 \ell^{2}} R^{\alpha \beta} \wedge \eta_{\alpha \beta}-\frac{1}{2} T^{\alpha} \wedge H_{\alpha}(* *)-\frac{1}{2} R^{\alpha \beta} \wedge H_{\alpha \beta}(* *) \\ = & \frac{\Lambda}{ \ell^{2}} \eta-\frac{\theta_{\mathrm{T}}^{*}+a_{0}}{4 \ell^{2}} R^{\alpha \beta} \wedge \eta_{\alpha \beta}-\frac{1}{2 \ell^{2}} T^{\alpha} \wedge\left[\theta_{ \mathrm{T}}^{*} K_{\alpha}^{(\star)}-\theta_{\mathrm{T}} T_{\alpha}\right] \\ & -\frac{1}{2} R^{\alpha \beta} \wedge\left[\theta_{\mathrm{L}} R_{\alpha \beta}+\theta_{\mathrm{L}}^{\star} R_{\alpha \beta}^{(\star)}-\frac{ \theta_{\mathrm{T}}}{2 \ell^{2}} \vartheta_{\alpha} \wedge \vartheta_{\beta}\right] . \end{aligned}	$$\begin{aligned} L_{\mathrm{qPG}}(**) = & \frac{\Lambda}{\ell^2}\eta - \frac{a_0}{4\ell^2} R^{\alpha\beta} \wedge \eta_{\alpha\beta} - \frac{1}{2} T^{\alpha} \wedge H_{\alpha}(**) - \frac{1}{2} R^{\alpha\beta} \wedge H_{\alpha\beta}(**) \\ = & \frac{\Lambda}{\ell^2}\eta - \frac{\theta_{\mathrm{T}}^{*}+a_0}{4\ell^2} R^{\alpha\beta} \wedge \eta_{\alpha\beta} - \frac{1}{2\ell^2} T^{\alpha} \wedge \left[\theta_{\mathrm{T}}^{*} K_{\alpha}^{(\star)} - \theta_{\mathrm{T}} T_{\alpha}\right] \\ & - \frac{1}{2} R^{\alpha\beta} \wedge \left[\theta_{\mathrm{L}} R_{\alpha\beta} + \theta_{\mathrm{L}}^{\star} R_{\alpha\beta}^{(\star)} - \frac{\theta_{\mathrm{T}}}{2\ell^2} \vartheta_{\alpha} \wedge \vartheta_{\beta}\right] . \end{aligned}$$
mielke-geometrodynamics_EQ0580 (8.6.18)	186	1.000 U|+6	G_{\alpha}^{\{ \}}-\Lambda_{\text {eff }} \eta_{\alpha}= \kappa_{\text {eff }} \overparen{\Sigma}_{\alpha} .	*(not rendered)*	$G_{\alpha}^{\{\}} - \Lambda_{\text{eff}}\, \eta_{\alpha} = \kappa_{\text{eff}}\, \overparen{\Sigma}_{\alpha}\,.$
mielke-geometrodynamics_EQ0595 (9.1.13)	195	1.000 N|+0	R^{\{ \}}=-\frac{6 \kappa \gamma}{\ell^{* 2}} .	$R^{\{\} = -\frac{6\kappa\gamma}{\ell^{*2}}.$	$R^{\{\} = -\frac{6\kappa\gamma}{\ell^{*2}}.$
mielke-geometrodynamics_EQ0645 (10.3.2)	214	1.000 K|+0	\widetilde{T}_{\alpha}=T_{\alpha}-\frac{\varepsilon}{ \ell} \eta_{\alpha}, \quad \widetilde{R}_{\alpha}^{ \star}=R_{\alpha}^{\star}-(-1)^{s} \frac{\varepsilon}{2 \ell} T_{\alpha}+(-1)^{s} \frac{\varepsilon^{2}}{4 \ell^{2}} \eta_{\alpha}	$\widetilde{T}_\alpha = T_\alpha - \frac{\varepsilon}{\ell}\eta_\alpha, \quad \widetilde{R}_\alpha^\star = R_\alpha^\star - (-1)^s \frac{\varepsilon}{2\ell} T_\alpha + (-1)^s \frac{\varepsilon^2}{4\ell^2}\eta_\alpha$	$\widetilde{T}_\alpha = T_\alpha - \frac{\varepsilon}{\ell}\eta_\alpha, \qquad \widetilde{R}_\alpha^\star = R_\alpha^\star - (-1)^s \frac{\varepsilon}{2\ell} T_\alpha + (-1)^s \frac{\varepsilon^2}{4\ell^2}\eta_\alpha$
mielke-geometrodynamics_EQ0676 (10.3.33)	220	1.000 W|-2	\check{\mathscr{E}}_{\alpha}^{\mathrm{MB}}=-(-1)^{s} \frac{\theta_{\mathrm{T}} \theta_{\mathrm{L}}}{2 \chi \ell}\left(d \Gamma_{\alpha}^{\star}+\frac{2}{\theta_{ \mathrm{L}}} \check{\mathscr{J}}_{\alpha}^{\mathrm{MB} \star}\right),	$\check{\mathscr{E}}_\alpha^{\mathrm{MB}} = -(-1)^s \frac{\theta_{\mathrm{T}}\theta_{\mathrm{L}}}{2\chi\ell}\left(d\Gamma_\alpha^\star + \frac{2}{\theta_{\mathrm{L}}}\check{\mathscr{J}}_\alpha^{\mathrm{MB}\star}\right),$	$\check{\mathscr{E}}_\alpha^{\mathrm{MB}} = -(-1)^s \frac{\theta_{\mathrm{T}}\theta_{\mathrm{L}}}{2\chi\ell}\left(d\Gamma_\alpha^\star + \frac{2}{\theta_{\mathrm{L}}}\check{\mathscr{J}}_\alpha^{\mathrm{MB}\star}\right),$
mielke-geometrodynamics_EQ0688 (10.3.46)	222	1.000 N|+0	G_{\alpha}^{\{ \}}-\tilde{\Lambda} \eta_{\alpha}=\ell \widetilde{\Sigma}_{\alpha},	$G_\alpha^{\{\} - \tilde{\Lambda}\eta_\alpha = \ell\widetilde{\Sigma}_\alpha,$	$G_\alpha^{\{\} - \tilde{\Lambda}\eta_\alpha = \ell\,\widetilde{\Sigma}_\alpha,$
mielke-geometrodynamics_EQ0690 (10.5.1)	223	1.000 K|+0	\sigma^{1}=\left(\begin{array}{ll} 0 & 1 \\ 1 & 0 \end{array}\right), \quad \sigma^{2}=\left(\begin{array}{cc} 0 & -i \\ i & 0 \end{array}\right), \quad \sigma^{3}=\left(\begin{array}{cc} 1 & 0 \\ 0 & -1 \end{array}\right) .	$\sigma^1 = \begin{pmatrix} 0 & 1 \\ 1 & 0 \end{pmatrix}, \quad \sigma^2 = \begin{pmatrix} 0 & -i \\ i & 0 \end{pmatrix}, \quad \sigma^3 = \begin{pmatrix} 1 & 0 \\ 0 & -1 \end{pmatrix}.$	$\sigma^1 = \begin{pmatrix} 0 & 1 \\ 1 & 0 \end{pmatrix}, \qquad \sigma^2 = \begin{pmatrix} 0 & -i \\ i & 0 \end{pmatrix}, \qquad \sigma^3 = \begin{pmatrix} 1 & 0 \\ 0 & -1 \end{pmatrix}.$

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mielke-geometrodynamics_EQ0710 (10.7.6)	227	1.000 W|+2	\begin{aligned} \vartheta^{\hat{0}} & =d t+\ell^{2} \sigma \rho^{* 2}\left[1-\cos \left(\rho / \rho^{*} \right)\right] d \phi \\ \vartheta^{\hat{1}} & =d \rho, \quad \vartheta^{\hat{2}}=\rho^{*} \sin \left(\rho / \rho^{*}\right) d \phi \\ \Gamma^{\hat{1} \hat{2}} & = \cos \left(\rho / \rho^{*}\right) d \phi=-\Gamma^{\hat{2} \hat{1}} \end{aligned}	$\begin{aligned} \vartheta^{\hat{0}} & =d t+\ell^{2} \sigma \rho^{* 2}\left[1-\cos \left(\rho / \rho^{*}\right)\right] d \phi \\ \vartheta^{\hat{1}} & =d \rho, \quad \vartheta^{\hat{2}}=\rho^{*} \sin \left(\rho / \rho^{*}\right) d \phi \\ \Gamma^{\hat{1} \hat{2}} & = \cos \left(\rho / \rho^{*}\right) d \phi=-\Gamma^{\hat{2} \hat{1}} \end{aligned}$	$\begin{aligned} \vartheta^{\hat{0}} & =d t+\ell^{2} \sigma \rho^{* 2}\left[1-\cos \left(\rho / \rho^{*}\right)\right] d \phi \\ \vartheta^{\hat{1}} & =d \rho, \quad \vartheta^{\hat{2}}=\rho^{*} \sin \left(\rho / \rho^{*}\right) d \phi, \\ \Gamma^{\hat{1} \hat{2}} & = \cos \left(\rho / \rho^{*}\right) d \phi=-\Gamma^{\hat{2} \hat{1}}. \end{aligned}$
mielke-geometrodynamics_EQ0716 (10.9.2)	229	1.000 K|+0	D \Psi=d \Psi-\frac{1}{2} \gamma_{\alpha} \Gamma^{\star \alpha} \wedge \Psi,	$D \Psi=d \Psi-\frac{1}{2} \gamma_{\alpha} \Gamma^{\star \alpha} \wedge \Psi,$	$D \Psi=d \Psi-\frac{1}{2} \gamma_{\alpha} \Gamma^{\star \alpha} \wedge \Psi,$
mielke-geometrodynamics_EQ0720 (10.9.6)	229	1.000 N|+0	\tau_{\alpha}^{\star}:=\frac{1}{2} \eta_{\alpha \beta \gamma} \tau^{\beta \gamma}=\frac{(-1)^{s}}{2} \frac{ \delta L_{\Psi}}{\delta \Gamma_{\alpha}^{\star}}= \frac{(-1)^{s}}{2} \frac{i}{4} \bar{\Psi} \wedge \gamma_{ \alpha} \Psi .	$\tau_{\alpha}^{\star}:=\frac{1}{2} \eta_{\alpha \beta \gamma} \tau^{\beta \gamma}=\frac{(-1)^{s}}{2} \frac{ \delta L_{\Psi}}{\delta \Gamma_{\alpha}^{\star}}= \frac{(-1)^{s}}{2} \frac{i}{4} \bar{\Psi} \wedge \gamma_{ \alpha} \Psi .$	$\tau_{\alpha}^{\star}:=\frac{1}{2} \eta_{\alpha \beta \gamma} \tau^{\beta \gamma}=\frac{(-1)^{s}}{2} \frac{ \delta L_{\Psi}}{\delta \Gamma_{\alpha}^{\star}}= \frac{(-1)^{s}}{2} \frac{i}{4} \overline{\Psi} \wedge \gamma_{ \alpha} \Psi .$
mielke-geometrodynamics_EQ0728 (10.10.8)	231	1.000 K|+0	\gamma^{\alpha} \Psi \wedge \bar{\Psi} \gamma_{\alpha} \Psi=0,	$\gamma^{\alpha} \Psi \wedge \bar{\Psi} \gamma_{\alpha} \Psi=0,$	$\gamma^{\alpha} \Psi \wedge \overline{\Psi} \gamma_{\alpha} \Psi=0,$
mielke-geometrodynamics_EQ0770 (11.1.37)	244	1.000 N|+0	D \longrightarrow{ }^{S^{-1}} D=S^{-1} D S .	$D \longrightarrow{ }^{S^{-1}} D=S^{-1} D S .$	$D \longrightarrow{ }^{S^{-1}} D=S^{-1} D S .$
mielke-geometrodynamics_EQ0839 (12.2.7)	272	1.000 N|+0	j_{ \pm}:=\frac{1}{2} \bar{\psi}\left(1 \pm \gamma_{5} \right)^{*} \gamma \psi=\bar{\psi}_{\mathrm{L}, \mathrm{R}}{ }^{*} \gamma \psi_{\mathrm{L}, \mathrm{R}} .	$j_{ \pm}:=\frac{1}{2} \bar{\psi}\left(1 \pm \gamma_{5} \right)^{*} \gamma \psi=\bar{\psi}_{\mathrm{L}, \mathrm{R}}{ }^{*} \gamma \psi_{\mathrm{L}, \mathrm{R}} .$	$j_{ \pm}:=\frac{1}{2} \overline{\psi}\left(1 \pm \gamma_{5} \right)^{*} \gamma \psi=\overline{\psi}_{\mathrm{L}, \mathrm{R}}{ }^{*} \gamma \psi_{\mathrm{L}, \mathrm{R}} .$
mielke-geometrodynamics_EQ0873 (13.3.1)	284	1.000 N|+0	\nvdash^{A}{ }_{B}:=L^{A}{ }_{B}-\frac{1}{n} \delta_{B}^{A} L^{C}{ }_{C} .	$\nvdash^{A}{ }_{B}:=L^{A}{ }_{B}-\frac{1}{n} \delta_{B}^{A} L^{C}{ }_{C} .$	$\nvdash^{A}{ }_{B}:=L^{A}{ }_{B}-\frac{1}{n} \delta_{B}^{A} L^{C}{ }_{C} .$
mielke-geometrodynamics_EQ0893 (13.4.12)	287	1.000 N|+0	\mathrm{A}_{*}(n, \mathbb{R}) / \operatorname{GL}(n, \mathbb{R}) \approx \mathbb{R}^{n} \otimes \mathbb{R}_{*}^{n},	$\mathrm{A}_{*}(n, \mathbb{R}) / \operatorname{GL}(n, \mathbb{R}) \approx \mathbb{R}^{n} \otimes \mathbb{R}_{*}^{n},$	$\mathrm{A}_{*}(n, \mathbb{R}) / \operatorname{GL}(n, \mathbb{R}) \approx \mathbb{R}^{n} \otimes \mathbb{R}_{*}^{n},$
mielke-geometrodynamics_EQ0907 (13.5.12)	290	1.000 N|+0	\tilde{L}_{\mathrm{SSB}}+d \hat{C} \cong \frac{1}{2 \mu} \eta_{\alpha \beta \gamma \delta}\left[R^{\alpha \beta}-\frac{\Lambda}{3} \vartheta^{\alpha} \wedge \vartheta^{\beta}\right] \wedge\left[R^{\gamma \delta}- \frac{\Lambda}{3} \vartheta^{\gamma} \wedge \vartheta^{ \delta}\right] .	$\tilde{L}_{\mathrm{SSB}}+d \hat{C} \cong \frac{1}{2 \mu} \eta_{\alpha \beta \gamma \delta}\left[R^{\alpha \beta}-\frac{\Lambda}{3} \vartheta^{\alpha} \wedge \vartheta^{\beta}\right] \wedge\left[R^{\gamma \delta}- \frac{\Lambda}{3} \vartheta^{\gamma} \wedge \vartheta^{ \delta}\right] .$	$\tilde{L}_{\mathrm{SSB}}+d \hat{C} \cong \frac{1}{2 \mu} \eta_{\alpha \beta \gamma \delta}\left[R^{\alpha \beta}-\frac{\Lambda}{3} \vartheta^{\alpha} \wedge \vartheta^{\beta}\right] \wedge\left[R^{\gamma \delta}- \frac{\Lambda}{3} \vartheta^{\gamma} \wedge \vartheta^{ \delta}\right] .$
mielke-geometrodynamics_EQ0947 (14.1.28)	307	1.000 N|+0	R_{i \alpha}^{\{ \}} R_{\cdot j}^{\{ \} \alpha}= \frac{1}{4} g_{i j} R_{\alpha \beta}^{\{ \}} R^{\{ \} \alpha \beta}	$R_{i \alpha}^{\{ \}} R_{\cdot j}^{\{ \} \alpha}= \frac{1}{4} g_{i j} R_{\alpha \beta}^{\{ \}} R^{\{ \} \alpha \beta}$	$R_{i \alpha}^{\{ \}} R_{\cdot j}^{\{ \} \alpha}= \frac{1}{4} g_{i j} R_{\alpha \beta}^{\{ \}} R^{\{ \} \alpha \beta}$
mielke-geometrodynamics_EQ1004 (14.3.17)	323	1.000 W|+0	\widetilde{\Theta}:=D \gamma=\frac{1}{2} T_{\alpha \beta}^{. . c} \gamma_{c} \otimes \vartheta^{\alpha} \wedge \vartheta^{\beta}	$\widetilde{\Theta}:=D \gamma=\frac{1}{2} T_{\alpha \beta}^{. . c} \gamma_{c} \otimes \vartheta^{\alpha} \wedge \vartheta^{\beta}$	$\widetilde{\Theta}:=D \gamma=\frac{1}{2} T_{\alpha \beta}^{. . c} \gamma_{c} \otimes \vartheta^{\alpha} \wedge \vartheta^{\beta}$
mielke-geometrodynamics_EQ1013 (14.4.8)	326	1.000 N|+0	M_{\mathrm{ir}}^{2}:=\frac{S_{\mathrm{A}}}{16 \pi} \frac{M^{* 4} c^{2}}{\hbar^{2}}	$M_{\mathrm{ir}}^{2}:=\frac{S_{\mathrm{A}}}{16 \pi} \frac{M^{* 4} c^{2}}{\hbar^{2}}$	$M_{\mathrm{ir}}^{2}:=\frac{S_{\mathrm{A}}}{16 \pi} \frac{M^{* 4} c^{2}}{\hbar^{2}}$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

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mielke-geometrodynamics_EQ1135 (C.3)	375	1.000 N|+0	`\left[I_{i}, I_{j}\right]=c_{i j}{ }^{k} I_{k} .`	$[I_i, I_j] = c_{ij}{}^k I_k.$	$[I_i, I_j] = c_{ij}{}^k I_k.$
mielke-geometrodynamics_EQ0001 (1.1)	024	1.000 N|+0	`\ell^{*}:=\sqrt{8 \pi \hbar G_{N} / c^{3}} \simeq 8 \times 10^{-33} \mathrm{~cm},`	$\ell^* := \sqrt{8\pi\hbar G_N/c^3} \simeq 8 \times 10^{-33}\,\mathrm{cm},$	$\ell^* := \sqrt{8\pi\hbar G_N/c^3} \simeq 8 \times 10^{-33}\mathrm{cm},$
mielke-geometrodynamics_EQ0003 (2.1.2)	032	1.000 N|-1	`e^{\mathrm{f}}:=\left.\frac{d f(s(t))}{d t} \right|_{t_{o}=s^{-1}(m)}=\frac{\partial \mathrm{f}}{ \partial x^{i}} \cdot \frac{d x^{i}(s(t))}{d t}`	$e^{\mathrm{f}} := \left.\frac{df(s(t))}{dt}\right\|_{t_o=s^{-1}(m)} = \frac{\partial \mathrm{f}}{\partial x^i} \cdot \frac{dx^i(s(t))}{dt}$	$e^{\mathrm{f}} := \left.\frac{df(s(t))}{dt}\right\|_{t_o=s^{-1}(m)} = \frac{\partial \mathrm{f}}{\partial x^i} \cdot \frac{dx^i(s(t))}{dt}$
mielke-geometrodynamics_EQ0005 (2.1.4)	033	1.000 N|+1	`T(M)=\bigcup_{m \in M} T_{m}(M)`	$T(M) = \bigcup_{m\in M} T_m(M)$	$T(M) = \bigcup_{m\in M} T_m(M).$
mielke-geometrodynamics_EQ0008 (2.2.3)	034	1.000 N|-1	`\vartheta^{\alpha}=\mathrm{E}_{j}^{\alpha}(m) d x^{j} .`	$\vartheta^\alpha = \mathrm{E}^\alpha_j(m) dx^j.$	$\vartheta^\alpha = \mathrm{E}^\alpha_j(m)\, dx^j.$
mielke-geometrodynamics_EQ0011 (2.2.6)	034	1.000 W|+2	`T=T_{\alpha_{1} \cdots \alpha_{p}}^{\beta_{1} \cdots \beta_{q}}(m) \vartheta^{\alpha_{1}} \otimes \cdots \otimes \vartheta^{\alpha_{p}} \otimes e_{\beta_{1}} \otimes \cdots \otimes e_{\beta_{q}} \in C^{\infty} \left(T_{p}^{q}(M)\right) .`	$T = T^{\beta_1\cdots\beta_q}_{\alpha_1\cdots\alpha_p}(m)\vartheta^{\alpha_1} \otimes \cdots \otimes \vartheta^{\alpha_p} \otimes e_{\beta_1} \otimes \cdots \otimes e_{\beta_q} \in C^\infty\left(T^q_p(M)\right).$	$T = T^{\beta_1\cdots\beta_q}_{\alpha_1\cdots\alpha_p}(m)\vartheta^{\alpha_1} \otimes \cdots \otimes \vartheta^{\alpha_p} \otimes e_{\beta_1} \otimes \cdots \otimes e_{\beta_q} \in C^\infty(T^q_p(M)).$
mielke-geometrodynamics_EQ0012 (2.2.7)	034	1.000 N|-2	`d s^{2}=g_{\alpha \beta} \vartheta^{\alpha} \otimes_{s} \vartheta^{\beta}=: g_{i j} d x^{i} \otimes_{s} d x^{j} .`	$ds^2 = g_{\alpha\beta}\vartheta^\alpha \otimes_s \vartheta^\beta =: g_{ij} dx^i \otimes_s dx^j.$	$ds^2 = g_{\alpha\beta}\vartheta^\alpha \otimes_s \vartheta^\beta =: g_{ij}\, dx^i \otimes_s\, dx^j.$
mielke-geometrodynamics_EQ0014 (2.2.9)	035	1.000 N|-1	`\alpha^{(p)}=\frac{1}{p!} A_{\alpha_{1} \cdots \alpha_{p}} \vartheta^{\alpha_{1}} \wedge \cdots \wedge \vartheta^{\alpha_{p}} \in C^{\infty}\left(\wedge^{p} T^{*}(M)\right) .`	$\alpha^{(p)} = \frac{1}{p!} A_{\alpha_1\cdots\alpha_p}\vartheta^{\alpha_1} \wedge \cdots \wedge \vartheta^{\alpha_p} \in C^\infty\left(\wedge^p T^*(M)\right).$	$\alpha^{(p)} = \frac{1}{p!} A_{\alpha_1\cdots\alpha_p}\vartheta^{\alpha_1} \wedge \cdots \wedge \vartheta^{\alpha_p} \in C^\infty(\wedge^p T^*(M)).$
mielke-geometrodynamics_EQ0015 (2.3.1)	036	1.000 N|+0	`\pi: F \rightarrow M .`	$\pi : F \to M.$	$\pi : F \to M.$
mielke-geometrodynamics_EQ0016 (2.3.2)	037	1.000 K|+0	`\sigma: U \rightarrow F \quad \text { where } \quad \pi \circ \sigma=\mathrm{id}`	$\sigma : U \to F \quad \text{where} \quad \pi \circ \sigma = \mathrm{id}$	$\sigma : U \to F \quad \text{where} \quad \pi \circ \sigma = \mathrm{id}$
mielke-geometrodynamics_EQ0017 (2.3.3)	037	1.000 S|+0	`\iota\left(m, g_{1} g_{2}\right)=\iota\left(m, g_{1} \right) \cdot g_{2}, \quad m \in U, g \in G .`	$\iota(m, g_1 g_2) = \iota(m, g_1)\cdot g_2, \quad m \in U, g \in G.$	$\iota(m, g_1 g_2) = \iota(m, g_1)\cdot g_2, \quad m \in U, g \in G.$
mielke-geometrodynamics_EQ0019 (2.4.1)	038	1.000 N|-2	`\delta_{g}(p, \zeta):=\left(p g, g^{-1} \zeta\right) \subset P \times F, \quad g \in G .`	$\delta_g(p,\zeta) := \left(pg, g^{-1}\zeta\right) \subset P \times F, \quad g \in G.$	$\delta_g(p,\zeta) := (pg, g^{-1}\zeta) \subset P \times F, \quad g \in G.$
mielke-geometrodynamics_EQ0022 (2.4.4)	038	1.000 N|-2	`\varphi^{(p)}=\left\{\varphi^{(p) A} \mid A=1, \ldots, N \right\} .`	$\varphi^{(p)} = \left\{\varphi^{(p)A} \mid A = 1, \ldots, N\right\}.$	$\varphi^{(p)} = \left\{\varphi^{(p)A} \mid A = 1, \ldots, N\right\}.$
mielke-geometrodynamics_EQ0023 (2.4.5)	039	1.000 N|+0	`L_{j}:=\left[\left.\frac{\partial \rho_{A}{ }^{B}(g( \xi))}{\partial \xi^{j}}\right|_{g=e}\right] \in T_{e}( \rho(G))`	$L_j := \left[\left.\frac{\partial \rho_A{}^B(g(\xi))}{\partial \xi^j}\right\|_{g=e}\right] \in T_e(\rho(G))$	$L_j := \left[\frac{\partial \rho_A{}^B(g(\xi))}{\partial \xi^j}\|_{g=e}\right] \in T_e(\rho(G))$
mielke-geometrodynamics_EQ0025 (2.4.7)	039	1.000 W|-2	`\phi^{(p)}=\frac{1}{p!} \phi_{\alpha_{1} \ldots \alpha_{p}}^{j} L_{j} \otimes \vartheta^{\alpha_{1}} \wedge \cdots \wedge \vartheta^{\alpha_{p}} \in C^{ \infty}\left(\wedge^{p} T_{\mathbb{C}}^{*}(M) \otimes V^{A d}\right) .`	$\phi^{(p)} = \frac{1}{p!}\phi^j_{\alpha_1\ldots\alpha_p} L_j \otimes \vartheta^{\alpha_1} \wedge \cdots \wedge \vartheta^{\alpha_p} \in C^\infty\left(\wedge^p T^*_{\mathbb{C}}(M) \otimes V^{Ad}\right).$	$\phi^{(p)} = \frac{1}{p!}\phi^j_{\alpha_1\ldots\alpha_p} L_j \otimes \vartheta^{\alpha_1} \wedge \cdots \wedge \vartheta^{\alpha_p} \in C^\infty\left(\wedge^p T^*_{\mathbb{C}}(M) \otimes V^{Ad}\right).$
mielke-geometrodynamics_EQ0026 (2.4.8)	039	1.000 C|-5	`\left[\phi^{(p)}, \psi^{(q)}\right]:=\phi^{(p)} \wedge \psi^{(q)}-(-1)^{p q} \psi^{(q)} \wedge \phi^{(p)}=(-1)^{p q+1}\left[\psi^{(q)}, \phi^{(p)} \right]`	$\left[\phi^{(p)}, \psi^{(q)}\right] := \phi^{(p)} \wedge \psi^{(q)} - (-1)^{pq}\psi^{(q)} \wedge \phi^{(p)} = (-1)^{pq+1}\left[\psi^{(q)}, \phi^{(p)}\right]$	$\left[\phi^{(p)}, \psi^{(q)}\right] := \phi^{(p)} \wedge \psi^{(q)} - (-1)^{pq}\psi^{(q)} \wedge \phi^{(p)} = (-1)^{pq+1}\left[\psi^{(q)}, \phi^{(p)}\right]$

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Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

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mielke-geometrodynamics_EQ0027 (2.4.9)	039	1.000 N|+0	`\left[\phi^{(2 k)}, \phi^{(2 k)}\right]=-\left[\phi^{(2 k)}, \phi^{(2 k)}\right]=0 .`	$\left[\phi^{(2k)}, \phi^{(2k)}\right] = -\left[\phi^{(2k)}, \phi^{(2k)}\right] = 0.$	$\left[\phi^{(2k)}, \phi^{(2k)}\right] = -\left[\phi^{(2k)}, \phi^{(2k)}\right] = 0.$
mielke-geometrodynamics_EQ0029 (2.5.2)	040	1.000 N|+0	`\omega(e g)=g^{-1} \omega(e) g, \quad e \in T(P) .`	$\omega(eg) = g^{-1}\omega(e)g, \quad e \in T(P).$	$\omega(eg) = g^{-1}\omega(e)g, \qquad e \in T(P).$
mielke-geometrodynamics_EQ0030 (2.5.3)	040	1.000 N|-1	`\omega(p d g)=g^{-1} d g \quad \in \quad T_{e}(G) \approx \mathfrak{g}`	$\omega(pdg) = g^{-1}dg \quad \in \quad T_e(G) \approx \mathfrak{g}$	$\omega(p\, dg) = g^{-1}dg \qquad \in \quad T_e(G) \approx \mathfrak{g}$
mielke-geometrodynamics_EQ0031 (2.5.4)	040	1.000 N|+0	`D: C^{\infty}\left(V^{\rho}\right) \longrightarrow C^{\infty}\left(T_{\mathbb{C}}^{*}(M) \otimes V^{\rho}\right)`	$D : C^{\infty}\left(V^{\rho}\right) \longrightarrow C^{\infty}\left(T_{\mathbb{C}}^{*}(M) \otimes V^{\rho}\right)$	$D : C^{\infty}(V^{\rho}) \longrightarrow C^{\infty}(T_{\mathbb{C}}^{*}(M) \otimes V^{\rho})$
mielke-geometrodynamics_EQ0032 (2.5.6)	041	1.000 N|+0	`D b=\omega \otimes b, \quad b \in C^{\infty}\left(V^{\rho}\right) .`	$Db = \omega \otimes b, \quad b \in C^{\infty}\left(V^{\rho}\right).$	$Db = \omega \otimes b, \quad b \in C^{\infty}(V^{\rho}).$
mielke-geometrodynamics_EQ0033 (2.5.7)	041	1.000 C|-3	`D\left(\varphi^{(p)} \otimes b\right)=d \varphi^{(p)} \otimes b+(-1)^{p} \varphi^{(p)} \otimes D b .`	$D\left(\varphi^{(p)} \otimes b\right) = d\varphi^{(p)} \otimes b + (-1)^p \varphi^{(p)} \otimes Db.$	$D(\varphi^{(p)} \otimes b) = d\varphi^{(p)} \otimes b + (-1)^p \varphi^{(p)} \otimes Db.$
mielke-geometrodynamics_EQ0034 (2.5.8)	041	1.000 C|-3	`D\left(\varphi^{(p)} \otimes b\right)=\left\{d \varphi^{p}+(-1)^{p}\left[\varphi^{(p)}, \omega\right] \right\} \otimes b .`	$D\left(\varphi^{(p)} \otimes b\right) = \left\{d\varphi^p + (-1)^p \left[\varphi^{(p)}, \omega\right]\right\} \otimes b.$	$D(\varphi^{(p)} \otimes b) = \left\{d\varphi^p + (-1)^p [\varphi^{(p)}, \omega]\right\} \otimes b.$
mielke-geometrodynamics_EQ0035 (2.5.9)	041	1.000 K|+0	`D b_{A}=\omega_{A}{ }^{B} b_{B}, A, B=1, \ldots, N .`	$Db_A = \omega_A{}^B b_B, A, B = 1, \ldots, N.$	$Db_A = \omega_A{}^B b_B, A, B = 1, \ldots, N.$
mielke-geometrodynamics_EQ0036 (2.5.10)	041	1.000 N|+0	`\Gamma:=\stackrel{*}{\sigma} \omega=\Gamma_{\alpha}{ }^{j} L_{j} \otimes \vartheta^{\alpha}, \quad j=1, \ldots, \operatorname{dim} G,`	$\Gamma := \overset{*}{\sigma}\, \omega = \Gamma_\alpha{}^j L_j \otimes \vartheta^\alpha, \quad j = 1, \ldots, \operatorname{dim} G,$	$\Gamma := \overset{*}{\sigma}\omega = \Gamma_\alpha{}^j L_j \otimes \vartheta^\alpha, \quad j = 1, \ldots, \operatorname{dim} G,$
mielke-geometrodynamics_EQ0037 (2.5.11)	041	1.000 N|-1	`A_{\alpha}{ }^{j}(m):=\Gamma_{\alpha}{ }^{j}(m)_{\mid G=U(f)}`	$A_\alpha{}^j(m) := \Gamma_\alpha{}^j(m)_{\mid G=U(f)}$	$A_\alpha{}^j(m) := \Gamma_\alpha{}^j(m)_{\mid G=U(f)}$
mielke-geometrodynamics_EQ0038 (2.6.1)	042	1.000 N|+0	`D D b=: \Omega \otimes b .`	$DDb =: \Omega \otimes b.$	$D\,Db =: \Omega \otimes b.$
mielke-geometrodynamics_EQ0039 (2.6.2)	042	1.000 N|+1	`\begin{aligned} D D b=D(\omega \otimes b) & =d \omega \otimes b-\omega \wedge D b \\ & =(d \omega-\omega \wedge \omega) \otimes b \end{aligned}`	$\begin{aligned} DDb = D(\omega \otimes b) &= d\omega \otimes b - \omega \wedge Db \\ &= (d\omega - \omega \wedge \omega) \otimes b \end{aligned}$	$\begin{aligned} D\,Db = D(\omega \otimes b) &= d\omega \otimes b - \omega \wedge Db \\ &= (d\omega - \omega \wedge \omega) \otimes b \end{aligned}$
mielke-geometrodynamics_EQ0040 (2.6.3)	042	1.000 C|+3	`\Omega=d \omega-\omega \wedge \omega=d \omega-\frac{1}{2}[\omega, \omega]`	$\Omega = d\omega - \omega \wedge \omega = d\omega - \frac{1}{2}[\omega, \omega]$	$\Omega = d\omega - \omega \wedge \omega = d\omega - \frac{1}{2}[\omega, \omega]\Big\vert.$
mielke-geometrodynamics_EQ0043 (2.6.6)	042	1.000 N|+0	`F_{i j}=\partial_{i} A_{j}-\partial_{j} A_{i}`	$F_{ij} = \partial_i A_j - \partial_j A_i$	$F_{ij} = \partial_i A_j - \partial_j A_i$
mielke-geometrodynamics_EQ0044 (2.6.7)	042	1.000 N|+1	`\Delta b=b-b(\circ)=\oint(d b)_{\mathrm{hor}}`	$\Delta b = b - b(\circ) = \oint (db)_{\mathrm{hor}}$	$\Delta b = b - b(\circ) = \oint (db)_{\mathrm{hor}},$
mielke-geometrodynamics_EQ0047 (2.6.10)	043	1.000 N|+0	`K=\lim _{U \rightarrow 0}\left(\int_{U} \Omega \otimes b \right) /\left(\int_{U} 1 \otimes b\right)`	$K = \lim_{U \to 0} \left(\int_U \Omega \otimes b\right) / \left(\int_U 1 \otimes b\right)$	$K = \lim_{U \to 0} \left(\int_U \Omega \otimes b\right) \Big/ \left(\int_U 1 \otimes b\right)$
mielke-geometrodynamics_EQ0049 (2.6.12)	043	1.000 N|+0	`D \Omega \equiv 0`	$D\Omega \equiv 0$	$D\Omega \equiv 0$
mielke-geometrodynamics_EQ0052 (2.7.2)	044	1.000 N|-1	`G(g p)=g G(p), \quad g \in G, \quad p \in P ;`	$G(gp) = gG(p), \quad g \in G, \quad p \in P;$	$G(g\,p) = g\,G(p), \quad g \in G, \quad p \in P;$
mielke-geometrodynamics_EQ0053 (2.7.3)	044	1.000 K|+0	`\pi \circ G=\pi .`	$\pi \circ G = \pi.$	$\pi \circ G = \pi.$
mielke-geometrodynamics_EQ0054 (2.7.4)	045	1.000 N|+0	`\mathscr{G}_{p} \approx C^{\infty}\left(P \times_{ \mathrm{Ad}} G\right) .`	$\mathscr{G}_p \approx C^{\infty}\left(P \times_{\mathrm{Ad}} G\right).$	$\mathscr{G}_p \approx C^{\infty}(P \times_{\mathrm{Ad}} G).$

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mielke-geometrodynamics_EQ0055 (2.7.5)	045	1.000 N|-1	`G(p)=\exp i \theta^{k}(m) L_{k} \in \mathscr{G}_{p} .`	$G(p)=\exp i\theta^{k}(m)L_{k}\in\mathscr{G}_{p}.$	$G(p)=\exp i\,\theta^{k}(m)L_{k}\ \in\ \mathscr{G}_{p}.$
mielke-geometrodynamics_EQ0057 (2.7.7)	045	1.000 K|+0	`\varphi \rightarrow^{G^{-1}} \varphi:=G^{-1} \varphi \quad \in C^{\infty}(M, \mathbb{C}), G \in \mathscr{G}_{V},`	$\varphi\rightarrow^{G^{-1}}\varphi:=G^{-1}\varphi\quad\in C^{\infty}(M,\mathbb{C}),G\in\mathscr{G}_{V},$	$\varphi\rightarrow^{G^{-1}}\varphi:=G^{-1}\varphi\qquad\in C^{\infty}(M,\mathbb{C}),G\in\mathscr{G}_{V},$
mielke-geometrodynamics_EQ0063 (2.8.4)	046	1.000 N|+0	`p_{k}\left(V^{\mathbb{R}}\right)=(-1)^{k} c_{2 k}(V) .`	$p_{k}\left(V^{\mathbb{R}}\right)=(-1)^{k}c_{2k}(V).$	$p_{k}(V^{\mathbb{R}})=(-1)^{k}c_{2k}(V).$
mielke-geometrodynamics_EQ0066 (2.8.9)	047	1.000 N|+0	`\operatorname{Tr}(\Omega \wedge \Omega)=d \operatorname{Tr}\left(\omega \wedge \Omega+\frac{1}{3} \omega \wedge \omega \wedge \omega\right)`	$\operatorname{Tr}(\Omega\wedge\Omega)=d\operatorname{Tr}\left(\omega\wedge\Omega+\frac{1}{3}\omega\wedge\omega\wedge\omega\right)$	$\operatorname{Tr}(\Omega\wedge\Omega)=d\operatorname{Tr}\left(\omega\wedge\Omega+\frac{1}{3}\omega\wedge\omega\wedge\omega\right)$
mielke-geometrodynamics_EQ0067 (2.8.10)	048	1.000 C|+7	`\begin{aligned} & \operatorname{Tr}\left\{d\left(\omega \wedge d \omega-\frac{2}{3} \omega \wedge \omega \wedge \omega\right)\right\}=\operatorname{Tr}\{d \omega \wedge d \omega-\omega \wedge d d \omega \\ & \left.-\frac{2}{3} d \omega \wedge \omega \wedge \omega+\frac{2}{3} \omega \wedge d \omega \wedge \omega-\frac{2}{3} \omega \wedge \omega \wedge d \omega\right\} \\ & =\operatorname{Tr}\{d \omega \wedge d \omega-d \omega \wedge \omega \wedge \omega-\omega \wedge \omega \wedge d \omega\} \\ & =\operatorname{Tr}\{(d \omega-\omega \wedge \omega) \wedge(d \omega-\omega \wedge \omega)\}=\operatorname{Tr}(\Omega \wedge \Omega) \end{aligned}`	$\begin{aligned} & \operatorname{Tr}\left\{d\left(\omega\wedge d\omega-\frac{2}{3}\omega\wedge\omega\wedge\omega\right)\right\}=\operatorname{Tr}\{d\omega\wedge d\omega-\omega\wedge dd\omega \\ & \left.-\frac{2}{3}d\omega\wedge\omega\wedge\omega+\frac{2}{3}\omega\wedge d\omega\wedge\omega-\frac{2}{3}\omega\wedge\omega\wedge d\omega\right\} \\ & =\operatorname{Tr}\{d\omega\wedge d\omega-d\omega\wedge\omega\wedge\omega-\omega\wedge\omega\wedge d\omega\} \\ & =\operatorname{Tr}\{(d\omega-\omega\wedge\omega)\wedge(d\omega-\omega\wedge\omega)\}=\operatorname{Tr}(\Omega\wedge\Omega) \end{aligned}$	$\begin{aligned} & \operatorname{Tr}\left\{d\left(\omega\wedge d\omega-\frac{2}{3}\omega\wedge\omega\wedge\omega\right)\right\}=\operatorname{Tr}\{d\omega\wedge d\omega-\omega\wedge dd\omega \\ & -\frac{2}{3}d\omega\wedge\omega\wedge\omega+\frac{2}{3}\omega\wedge d\omega\wedge\omega-\frac{2}{3}\omega\wedge\omega\wedge d\omega\} \\ & =\operatorname{Tr}\{d\omega\wedge d\omega-d\omega\wedge\omega\wedge\omega-\omega\wedge\omega\wedge d\omega\} \\ & =\operatorname{Tr}\{(d\omega-\omega\wedge\omega)\wedge(d\omega-\omega\wedge\omega)\}=\operatorname{Tr}(\Omega\wedge\Omega). \end{aligned}$
mielke-geometrodynamics_EQ0068 (2.8.11)	048	1.000 K|+0	`\operatorname{Tr}\{\omega \wedge(\omega \wedge \omega \wedge \omega)\}=-\operatorname{Tr}\{(\omega \wedge \omega \wedge \omega) \wedge \omega\}=0 .`	$\operatorname{Tr}\{\omega\wedge(\omega\wedge\omega\wedge\omega)\}=-\operatorname{Tr}\{(\omega\wedge\omega\wedge\omega)\wedge\omega\}=0.$	$\operatorname{Tr}\{\omega\wedge(\omega\wedge\omega\wedge\omega)\}=-\operatorname{Tr}\{(\omega\wedge\omega\wedge\omega)\wedge\omega\}=0.$
mielke-geometrodynamics_EQ0070 (2.8.13)	048	1.000 N|-1	`S_{\mathrm{YM}}=\int_{M} L_{\mathrm{YM}}`	$S_{\mathrm{YM}}=\int_{M}L_{\mathrm{YM}}$	$S_{\mathrm{YM}}=\int\limits_{M}L_{\mathrm{YM}}$
mielke-geometrodynamics_EQ0072 (2.8.15)	048	1.000 K|+0	`\omega \sim \stackrel{\infty}{\omega}`	$\omega\sim\stackrel{\infty}{\omega}$	$\omega\sim\stackrel{\infty}{\omega}$
mielke-geometrodynamics_EQ0074 (2.8.17)	049	1.000 K|+0	`\Omega(\stackrel{\infty}{\omega})=0 .`	$\Omega(\stackrel{\infty}{\omega})=0.$	$\Omega(\stackrel{\infty}{\omega})=0.$
mielke-geometrodynamics_EQ0075 (2.8.18)	049	1.000 N|+0	`c_{2}(M)=\frac{1}{24 \pi^{2}} \int_{\partial M} \operatorname{Tr}(\stackrel{\infty}{\omega} \wedge \stackrel{\infty}{\omega} \wedge \stackrel{\infty}{\omega}),`	$c_{2}(M)=\frac{1}{24\pi^{2}}\int_{\partial M}\operatorname{Tr}(\stackrel{\infty}{\omega}\wedge\stackrel{\infty}{\omega}\wedge\stackrel{\infty}{\omega}),$	$c_{2}(M)=\frac{1}{24\pi^{2}}\int_{\partial M}\operatorname{Tr}(\stackrel{\infty}{\omega}\wedge\stackrel{\infty}{\omega}\wedge\stackrel{\infty}{\omega}),$
mielke-geometrodynamics_EQ0076 (3.1.1)	052	1.000 K|+0	`L=L(\varphi, d \varphi) \eta`	$L=L(\varphi,d\varphi)\eta$	$L=L(\varphi,d\varphi)\eta$
mielke-geometrodynamics_EQ0077 (3.1.2)	052	1.000 N|+0	`\delta \int_{M} L=0`	$\delta\int_{M}L=0$	$\delta\int\limits_{M}L=0$
mielke-geometrodynamics_EQ0078 (3.1.3)	052	1.000 N|-1	`\delta \varphi=0 \quad \text { at the boundary } \partial \mathrm{M} \text { of } \mathrm{M}`	$\delta\varphi=0\quad\text{ at the boundary }\partial\mathrm{M}\text{ of }\mathrm{M}$	$\delta\varphi=0\qquad\text{ at the boundary }\partial\mathrm{M}\text{ of }\mathrm{M}$

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mielke-geometrodynamics_EQ0079 (3.1.4)	052	1.000 K|+0	`\delta(d \varphi):=d(\varphi+\delta \varphi)-d \varphi=d \delta \varphi`	$\delta(d\varphi) := d(\varphi + \delta\varphi) - d\varphi = d\delta\varphi$	$\delta(d\varphi) := d(\varphi + \delta\varphi) - d\varphi = d\delta\varphi$
mielke-geometrodynamics_EQ0080 (3.1.5)	052	1.000 K|+0	`\pi:=\frac{\partial L}{\partial\left(\partial_{\alpha} \varphi\right)} \vartheta^{\alpha}`	$\pi := \frac{\partial L}{\partial\left(\partial_{\alpha}\varphi\right)}\vartheta^{\alpha}$	$\pi := \frac{\partial L}{\partial(\partial_{\alpha}\varphi)}\vartheta^{\alpha}$
mielke-geometrodynamics_EQ0082 (3.1.7)	053	1.000 N|+1	`\int_{M} d(\delta \varphi \wedge \pi)=\int_{\partial M} \delta \varphi \wedge \pi`	$\int_{M} d(\delta\varphi \wedge \pi) = \int_{\partial M} \delta\varphi \wedge \pi$	$\int\limits_{M} d(\delta\varphi \wedge \pi) = \int\limits_{\partial M} \delta\varphi \wedge \pi.$
mielke-geometrodynamics_EQ0083 (3.1.9)	053	1.000 N|+0	`\lambda^{\varphi}:=(-1)^{s} L_{\varphi}+{ }^{*} d \pi=0,`	$\lambda^{\varphi} := (-1)^{s} L_{\varphi} + {}^{*}d\pi = 0,$	$\lambda^{\varphi} := (-1)^{s} L_{\varphi} + {}^{*}d\pi = 0,$
mielke-geometrodynamics_EQ0084 (3.1.10)	053	1.000 N|+0	`\frac{\partial L}{\partial \varphi}-\partial_{\alpha} \frac{\partial L}{\partial\left(\partial_{\alpha} \varphi \right)}=0 .`	$\frac{\partial L}{\partial\varphi} - \partial_{\alpha}\frac{\partial L}{\partial\left(\partial_{\alpha}\varphi\right)} = 0.$	$\frac{\partial L}{\partial\varphi} - \partial_{\alpha}\frac{\partial L}{\partial(\partial_{\alpha}\varphi)} = 0.$
mielke-geometrodynamics_EQ0085 (3.1.11)	053	1.000 K|+0	`{ }^{*} H:=L-d \varphi \wedge \pi`	${}^{*}H := L - d\varphi \wedge \pi$	${}^{*}H := L - d\varphi \wedge \pi$
mielke-geometrodynamics_EQ0086 (3.1.12)	053	1.000 N|+0	`d^{*} H=d L+d \varphi \wedge^{*} L_{\varphi}+d \varphi \wedge d \pi-d d \varphi \wedge \pi`	$d^{*}H = dL + d\varphi \wedge^{*} L_{\varphi} + d\varphi \wedge d\pi - dd\varphi \wedge \pi$	$d^{*}H = dL + d\varphi \wedge {}^{*}L_{\varphi} + d\varphi \wedge d\pi - d\,d\varphi \wedge \pi$
mielke-geometrodynamics_EQ0087 (3.1.13)	053	1.000 K|+0	`d^{*} H \simeq 0`	$d^{*}H \simeq 0$	$d\,{}^{*}H \simeq 0$
mielke-geometrodynamics_EQ0088 (3.1.14)	054	1.000 N|+0	`\beta \wedge^{*} D \psi=m \psi \eta .`	$\beta \wedge^{*} D\psi = m\psi\eta.$	$\beta \wedge^{*} D\psi = m\psi\eta.$
mielke-geometrodynamics_EQ0089 (3.1.15)	054	1.000 N|+0	`\square \varphi+m^{2} \varphi=0`	$\Box\varphi + m^{2}\varphi = 0$	$\Box\varphi + m^{2}\varphi = 0$
mielke-geometrodynamics_EQ0090 (3.1.16)	054	1.000 S|-1	`\overline{\bar{L}}_{\mathrm{mat}}=\overline{\bar{L}}_{ \mathrm{mat}}(\bar{\psi} \psi, \bar{\psi} \beta \cdot d \psi) \eta=\bar{\psi} \beta \wedge^{*} d \psi-m \bar{ \psi} \psi \eta .`	$\overline{\bar{L}}_{\mathrm{mat}} = \overline{\bar{L}}_{\mathrm{mat}}(\bar{\psi}\psi, \bar{\psi}\beta \cdot d\psi)\eta = \bar{\psi}\beta \wedge^{*} d\psi - m\bar{\psi}\psi\eta.$	$\overline{\bar{L}}_{\mathrm{mat}} = \overline{\bar{L}}_{\mathrm{mat}}(\overline{\psi}\psi, \overline{\psi}\beta \cdot d\psi)\eta = \overline{\psi}\beta \wedge {}^{*}d\psi - m\overline{\psi}\psi\eta.$
mielke-geometrodynamics_EQ0092 (3.2.2)	055	1.000 N|-1	`L_{\mathrm{mat}}=L\left(\bar{\varphi} \varphi, \bar{ \varphi} \beta \cdot\left(d+\omega^{\prime}\right) \varphi\right) \eta=L\left(\bar{\varphi} \varphi, \bar{ \varphi} \beta \cdot D^{\prime} \varphi\right) \eta`	$L_{\mathrm{mat}} = L\left(\bar{\varphi}\varphi, \bar{\varphi}\beta \cdot (d + \omega')\,\varphi\right)\eta = L\left(\bar{\varphi}\varphi, \bar{\varphi}\beta \cdot D'\varphi\right)\eta$	$L_{\mathrm{mat}} = L(\overline{\varphi}\varphi, \overline{\varphi}\beta \cdot (d + \omega')\varphi)\eta = L(\overline{\varphi}\varphi, \overline{\varphi}\beta \cdot D'\varphi)\eta$
mielke-geometrodynamics_EQ0094 (3.2.4)	055	1.000 K|+0	`D\left({ }^{G} b\right)={ }^{G} \omega \otimes{ }^{G} b .`	$D\left({}^{G}b\right) = {}^{G}\omega \otimes {}^{G}b.$	$D({}^{G}b) = {}^{G}\omega \otimes {}^{G}b.$
mielke-geometrodynamics_EQ0095 (3.2.5)	055	1.000 S|+0	`\begin{aligned} D\left({ }^{G} b\right) & =d G \otimes b+G \omega \otimes b \\ & =\left\{d G G^{-1}+G \omega G^{-1}\right\} \otimes^{G} b . \end{aligned}`	$\begin{aligned} D\left({}^{G}b\right) &= dG \otimes b + G\omega \otimes b \\ &= \left\{dGG^{-1} + G\omega G^{-1}\right\} \otimes^{G} b. \end{aligned}$	$\begin{aligned} D({}^{G}b) &= dG \otimes b + G\omega \otimes b \\ &= \left\{dGG^{-1} + G\omega G^{-1}\right\} \otimes {}^{G}b. \end{aligned}$
mielke-geometrodynamics_EQ0096 (3.2.6)	055	1.000 N|+0	`\omega \rightarrow{ }^{G} \omega=G \omega G^{-1}+d G G^{-1} .`	$\omega \rightarrow {}^{G}\omega = G\omega G^{-1} + dG\,G^{-1}.$	$\omega \rightarrow {}^{G}\omega = G\omega G^{-1} + dG\,G^{-1}.$
mielke-geometrodynamics_EQ0102 (3.3.3)	057	1.000 N|+1	`\theta=-\frac{e}{\hbar} \int \mathbf{A} \cdot d \mathbf{l}`	$\theta = -\frac{e}{\hbar}\int \mathbf{A} \cdot d\mathbf{l}$	$\theta = -\frac{e}{\hbar}\int \mathbf{A} \cdot d\mathbf{l}.$
mielke-geometrodynamics_EQ0103 (3.3.4)	057	1.000 N|-2	`L=L(A, d A)+L_{\mathrm{mat}}(A, d A, \Psi, d \Psi) .`	$L = L(A, dA) + L_{\mathrm{mat}}(A, dA, \Psi, d\Psi).$	$L = L(A, dA) + L_{\mathrm{mat}}(A, dA, \Psi, d\Psi).$
mielke-geometrodynamics_EQ0104 (3.3.5)	057	1.000 N|-1	`\frac{\delta L}{\delta A}:=\frac{\partial L}{\partial A}+d \frac{\partial L}{\partial d A}=0,`	$\frac{\delta L}{\delta A} := \frac{\partial L}{\partial A} + d\frac{\partial L}{\partial dA} = 0,$	$\frac{\delta L}{\delta A} := \frac{\partial L}{\partial A} + d\frac{\partial L}{\partial dA} = 0\,,$

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mielke-geometrodynamics_EQ0106 (3.3.7)	058	1.000 N|+1	`d F \equiv 0, \quad d H=j`	$dF \equiv 0, \quad dH = j$	$dF \equiv 0, \quad dH = j\,.$
mielke-geometrodynamics_EQ0107 (3.3.8)	058	1.000 K|+0	`d j \simeq 0 .`	$dj \simeq 0.$	$dj \simeq 0\,.$
mielke-geometrodynamics_EQ0111 (3.3.12)	058	1.000 N|-1	`H:=-\mathfrak{H} \wedge d t+\mathfrak{D}=\frac{1}{2} H_{i j} d x^{i} \wedge d x^{j}`	$H := -\mathfrak{H} \wedge dt + \mathfrak{D} = \frac{1}{2} H_{ij} dx^i \wedge dx^j$	$H := -\mathfrak{H} \wedge dt + \mathfrak{D} = \frac{1}{2} H_{ij} dx^i \wedge dx^j\,,$
mielke-geometrodynamics_EQ0114 (3.3.15)	059	1.000 W|+1	`H_{m n}=\frac{\sqrt{|g|}}{2} \varepsilon_{m n k l} g^{k i} g^{l j} F_{i j} .`	$H_{mn} = \frac{\sqrt{\|g\|}}{2} \varepsilon_{mnkl} g^{ki} g^{lj} F_{ij}.$	$H_{mn} = \frac{\sqrt{\|g\|}}{2} \varepsilon_{mnkl} g^{ki} g^{lj} F_{ij}\,.$
mielke-geometrodynamics_EQ0121 (3.3.22)	060	1.000 K|+0	`L_{\mathrm{BF}}=-B \wedge F=-B \wedge d A .`	$L_{\mathrm{BF}} = -B \wedge F = -B \wedge dA.$	$L_{\mathrm{BF}} = -B \wedge F = -B \wedge dA\,.$
mielke-geometrodynamics_EQ0122 (3.3.23)	060	1.000 N|-1	`\begin{aligned} \tilde{L}_{\mathrm{BF}} & :=-B \wedge d A+\frac{1}{2} B \wedge B \\ & \cong-B \wedge d A+d C \end{aligned}`	$\begin{aligned} \tilde{L}_{\mathrm{BF}} & := -B \wedge dA + \frac{1}{2} B \wedge B \\ & \cong -B \wedge dA + dC \end{aligned}$	$\begin{aligned} \tilde{L}_{\mathrm{BF}} & := -B \wedge dA + \frac{1}{2} B \wedge B \\ & \cong -B \wedge dA + dC\,. \end{aligned}$
mielke-geometrodynamics_EQ0123 (3.3.24)	060	1.000 N|+0	`B \cong d A, \quad d B \cong d F \equiv 0`	$B \cong dA, \quad dB \cong dF \equiv 0$	$B \cong dA\,, \quad dB \cong dF \equiv 0\,,$
mielke-geometrodynamics_EQ0124 (3.3.25)	060	1.000 K|+0	`C=\frac{1}{2} A \wedge F, \quad d C=\frac{1}{2} F \wedge F,`	$C = \frac{1}{2} A \wedge F, \quad dC = \frac{1}{2} F \wedge F,$	$C = \frac{1}{2} A \wedge F, \quad dC = \frac{1}{2} F \wedge F\,,$
mielke-geometrodynamics_EQ0125 (3.3.26)	061	1.000 K|+0	`A \rightarrow A^{\prime}=A+d \theta(x) .`	$A \rightarrow A' = A + d\theta(x).$	$A \rightarrow A' = A + d\theta(x).$
mielke-geometrodynamics_EQ0126 (3.3.27)	061	1.000 N|+0	`A \rightarrow \widetilde{A}=A+\psi, \quad B \rightarrow \widetilde{B}=B+d \psi,`	$A \rightarrow \widetilde{A} = A + \psi, \quad B \rightarrow \widetilde{B} = B + d\psi,$	$A \rightarrow \widetilde{A} = A + \psi, \quad B \rightarrow \widetilde{B} = B + d\psi\,,$
mielke-geometrodynamics_EQ0127 (3.3.28)	061	1.000 K|+0	`L_{\mathrm{Max}}=-B \wedge d A+\frac{1}{2} B \wedge{ }^{*} B+L_{\mathrm{matter}},`	$L_{\mathrm{Max}} = -B \wedge dA + \frac{1}{2} B \wedge {}^*B + L_{\mathrm{matter}},$	$L_{\mathrm{Max}} = -B \wedge dA + \frac{1}{2} B \wedge {}^*B + L_{\mathrm{matter}},$
mielke-geometrodynamics_EQ0128 (3.3.29)	061	1.000 N|+0	`-d B=d^{*} F \cong j,`	$-dB = d^*F \cong j,$	$-dB = d^*F \cong j,$
mielke-geometrodynamics_EQ0132 (3.4.3)	063	1.000 N|+0	`\alpha_{g}:=g^{2} / \hbar c`	$\alpha_g := g^2/\hbar c$	$\alpha_g := g^2/\hbar c$
mielke-geometrodynamics_EQ0134 (3.4.5)	063	1.000 K|+0	`\delta L_{\omega}=: \delta \Omega \wedge \Pi^{\Omega} .`	$\delta L_\omega =: \delta\Omega \wedge \Pi^\Omega.$	$\delta L_\omega =: \delta\Omega \wedge \Pi^\Omega.$
mielke-geometrodynamics_EQ0138 (3.4.9)	063	1.000 N|-1	`L=L_{\mathrm{mat}}+L_{\omega},`	$L = L_{\mathrm{mat}} + L_\omega,$	$L = L_{\mathrm{mat}} + L_\omega,$
mielke-geometrodynamics_EQ0139 (3.4.10)	063	1.000 K|+0	`\delta L_{\mathrm{mat}}=: \delta \omega \wedge \tau .`	$\delta L_{\mathrm{mat}} =: \delta\omega \wedge \tau.$	$\delta L_{\mathrm{mat}} =: \delta\omega \wedge \tau.$
mielke-geometrodynamics_EQ0140 (3.4.11)	064	1.000 N|+2	`D \Pi^{\Omega}=\tau`	$D\Pi^\Omega = \tau$	$\boxed{D\Pi^\Omega = \tau}.$
mielke-geometrodynamics_EQ0141 (3.4.12)	064	1.000 N|+0	`D \Omega \equiv 0 .`	$D\Omega \equiv 0.$	$D\Omega \equiv 0.$
mielke-geometrodynamics_EQ0145 (3.4.16)	064	1.000 N|+0	`d \Pi^{\Omega}+\left[\omega, \Pi^{\Omega}\right]=\tau .`	$d\Pi^\Omega + \left[\omega, \Pi^\Omega\right] = \tau.$	$d\,\Pi^\Omega + \left[\omega, \Pi^\Omega\right] = \tau.$
mielke-geometrodynamics_EQ0147 (3.4.18)	065	1.000 N|+0	`Q_{e}=\frac{1}{2} Y+I_{3} .`	$Q_e = \frac{1}{2} Y + I_3.$	$Q_e = \frac{1}{2} Y + I_3.$

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mielke-geometrodynamics_EQ0148 (3.4.19)	065	1.000 N|+0	`L_{\mathrm{YM}}=-\frac{1}{\alpha_{g}} \operatorname{Tr} \left(\Omega \wedge^{*} \Omega\right) .`	$L_{\mathrm{YM}}=-\frac{1}{\alpha_{g}} \operatorname{Tr}\left(\Omega \wedge^{*} \Omega\right) .$	$L_{\mathrm{YM}}=-\frac{1}{\alpha_{g}} \operatorname{Tr}(\Omega \wedge{}^{*} \Omega).$
mielke-geometrodynamics_EQ0150 (3.4.21)	065	1.000 N|+1	`\Pi^{\Omega}=-\frac{2}{\alpha_{g}}{ }^{*} \Omega`	$\Pi^{\Omega}=-\frac{2}{\alpha_{g}}{}^{*} \Omega$	$\Pi^{\Omega}=-\frac{2}{\alpha_{g}}{}^{*} \Omega.$
mielke-geometrodynamics_EQ0153 (3.5.1)	066	1.000 N|+1	`\Pi^{\Omega}=\zeta \Omega .`	$\Pi^{\Omega}=\zeta \Omega .$	$\Pi^{\Omega}=\zeta \Omega.$
mielke-geometrodynamics_EQ0156 (3.5.4)	067	1.000 N|+0	`{ }^{*} \sigma^{\mu \nu}=\sigma^{\mu \nu}, \quad{ }^{*} \bar{\sigma}^{\mu \nu}=-\bar{\sigma}^{\mu \nu},`	${}^{*} \sigma^{\mu \nu}=\sigma^{\mu \nu}, \quad{}^{*} \bar{\sigma}^{\mu \nu}=-\bar{\sigma}^{\mu \nu},$	${}^{*} \sigma^{\mu \nu}=\sigma^{\mu \nu}, \quad{}^{*} \bar{\sigma}^{\mu \nu}=-\bar{\sigma}^{\mu \nu},$
mielke-geometrodynamics_EQ0158 (3.5.6)	067	1.000 N|+0	`A_{\mu}=i \sigma_{\mu i} \partial^{i} \ln h .`	$A_{\mu}=i \sigma_{\mu i} \partial^{i} \ln h .$	$A_{\mu}=i \sigma_{\mu i} \partial^{i} \ln h .$
mielke-geometrodynamics_EQ0159 (3.5.7)	067	1.000 N|+0	`\square h-h^{-1} \partial_{i} h \partial^{i} h=h^{3}`	$\square h-h^{-1} \partial_{i} h \partial^{i} h=h^{3}$	$\square h-h^{-1} \partial_{i} h \partial^{i} h=h^{3}$
mielke-geometrodynamics_EQ0160 (3.5.8)	067	1.000 W|+0	`h=\sum_{i=1}^{k+1} \frac{l_{(i)}^{2}}{\left(x-x_{(i)} \right)^{2}},`	$h=\sum_{i=1}^{k+1} \frac{l_{(i)}^{2}}{\left(x-x_{(i)} \right)^{2}},$	$h=\sum_{i=1}^{k+1} \frac{l_{(i)}^{2}}{(x-x_{(i)})^{2}},$
mielke-geometrodynamics_EQ0161 (3.5.9)	067	1.000 K|+0	`p_{1}(M)=k .`	$p_{1}(M)=k .$	$p_{1}(M)=k.$
mielke-geometrodynamics_EQ0162 (3.5.10)	068	1.000 N|+2	`\langle\infty \mid-\infty\rangle=Z \int_{\mathscr{M}_{ \omega}} d \omega \mu[\omega] \exp i \int_{M}\left(L_{ \omega}+L_{\infty}\right)`	$\langle\infty \mid-\infty\rangle=Z \int_{\mathscr{M}_{ \omega}} d \omega \mu[\omega] \exp i \int_{M}\left(L_{ \omega}+L_{\infty}\right)$	$\langle\infty \mid-\infty\rangle=Z \int_{\mathscr{M}_{ \omega}} d \omega \mu[\omega] \exp i \int_{M}(L_{ \omega}+L_{\infty}).$
mielke-geometrodynamics_EQ0163 (3.5.11)	068	1.000 N|+0	`L_{\infty}=(\stackrel{+}{-}) \frac{1}{\alpha_{g}} \operatorname{Tr}(\Omega \wedge \Omega)`	$L_{\infty}=(\stackrel{+}{-}) \frac{1}{\alpha_{g}} \operatorname{Tr}(\Omega \wedge \Omega)$	$L_{\infty}=(\stackrel{+}{-}) \frac{1}{\alpha_{g}} \operatorname{Tr}(\Omega \wedge \Omega)$
mielke-geometrodynamics_EQ0167 (3.6.2)	070	1.000 N|+0	`\mathscr{P}_{ \pm}:=\bar{\psi} \sigma_{ \pm} \psi / 2 m,`	$\mathscr{P}_{ \pm}:=\bar{\psi} \sigma_{ \pm} \psi / 2 m,$	$\mathscr{P}_{ \pm}:=\overline{\psi} \sigma_{ \pm} \psi / 2 m,$
mielke-geometrodynamics_EQ0168 (3.6.3)	070	1.000 N|+0	`D_{ \pm}{ }^{*} D_{ \pm} \psi \mp i\left(F^{ \pm}-\frac{1}{2} \bar{\psi} \sigma_{ \pm} \psi\right) \wedge \sigma_{ \pm} \psi=0`	$D_{ \pm}{}^{*} D_{ \pm} \psi \mp i\left(F^{ \pm}-\frac{1}{2} \bar{\psi} \sigma_{ \pm} \psi\right) \wedge \sigma_{ \pm} \psi=0$	$D_{ \pm}{}^{*} D_{ \pm} \psi \mp i\left(F^{ \pm}-\frac{1}{2} \overline{\psi} \sigma_{ \pm} \psi\right) \wedge \sigma_{ \pm} \psi=0$
mielke-geometrodynamics_EQ0170 (3.6.5)	070	1.000 N|+0	`D^{*} D \psi=\left(\nabla^{*} \nabla+\frac{1}{4} R+\frac{1}{2} F^{+}\right) \psi .`	$D^{*} D \psi=\left(\nabla^{*} \nabla+\frac{1}{4} R+\frac{1}{2} F^{+}\right) \psi .$	$D^{*} D \psi=\left(\nabla^{*} \nabla+\frac{1}{4} R+\frac{1}{2} F^{+}\right) \psi.$
mielke-geometrodynamics_EQ0172 (3.6.7)	070	1.000 N|+0	`\Omega_{ \pm}^{g}=\frac{1}{2 \ell^{2}} \sigma_{ \pm},`	$\Omega_{ \pm}^{g}=\frac{1}{2 \ell^{2}} \sigma_{ \pm},$	$\Omega_{ \pm}^{g}=\frac{1}{2 \ell^{2}} \sigma_{ \pm},$
mielke-geometrodynamics_EQ0176 (3.7.5)	072	1.000 N|+0	`\begin{aligned} & D^{*} \Theta^{(1)}-\frac{\lambda}{2} \left(\frac{\mu^{2}}{\lambda}-\bar{\varphi} \cdot \varphi\right) \varphi \eta=0, \\ & D \Pi^{\Omega}+\left[ \phi^{(0)},{ }^{*} \Theta^{(1)}\right]=0 . \end{aligned}`	$\begin{aligned} & D^{*} \Theta^{(1)}-\frac{\lambda}{2} \left(\frac{\mu^{2}}{\lambda}-\bar{\varphi} \cdot \varphi\right) \varphi \eta=0, \\ & D \Pi^{\Omega}+\left[\phi^{(0)},{}^{*} \Theta^{(1)}\right]=0 . \end{aligned}$	$\begin{aligned} & D^{*} \Theta^{(1)}-\frac{\lambda}{2} \left(\frac{\mu^{2}}{\lambda}-\overline{\varphi} \cdot \varphi\right) \varphi \eta=0, \\ & D \Pi^{\Omega}+[\phi^{(0)},{}^{*} \Theta^{(1)}]=0. \end{aligned}$
mielke-geometrodynamics_EQ0177 (3.7.7)	072	1.000 N|+0	`\bar{\varphi} \cdot \varphi:=\varphi^{* j} \varphi_{j}= \frac{\mu^{2}}{\lambda} .`	$\bar{\varphi} \cdot \varphi:=\varphi^{* j} \varphi_{j}=\frac{\mu^{2}}{\lambda} .$	$\overline{\varphi} \cdot \varphi:=\varphi^{* j} \varphi_{j}=\frac{\mu^{2}}{\lambda}.$

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mielke-geometrodynamics_EQ0179 (3.7.9)	072	1.000 N|-1	`\varphi_{\min }: P \rightarrow C^{\infty}\left(\stackrel{\circ}{V}(M, \rho(G / H), \rho(G), P) \subset V^{\rho} \right) .`	$\varphi_{\min}: P \rightarrow C^{\infty}\left(\stackrel{\circ}{V}(M, \rho(G / H), \rho(G), P) \subset V^{\rho}\right).$	$\varphi_{\min}: P \rightarrow C^{\infty}\left(\stackrel{\circ}{V}(M, \rho(G/H), \rho(G), P) \subset V^{\rho}\right).$
mielke-geometrodynamics_EQ0180 (3.7.10)	073	1.000 N|+0	`H:=\left\{h \in G \mid \rho(h) \mathrm{v}_{0}= \mathrm{v}_{0}\right\},`	$H:=\{h \in G \mid \rho(h) \mathrm{v}_{0}=\mathrm{v}_{0}\},$	$H:=\{h \in G \mid \rho(h) \mathrm{v}_{0}=\mathrm{v}_{0}\},$
mielke-geometrodynamics_EQ0181 (3.7.11)	073	1.000 N|-2	`Q=\left\{p \in P \mid \varphi(p)=\sigma\left( \mathrm{v}_{0}\right)\right\}`	$Q=\{p \in P \mid \varphi(p)=\sigma(\mathrm{v}_{0})\}$	$Q=\{p \in P \mid \varphi(p)=\sigma(\mathrm{v}_{0})\}$
mielke-geometrodynamics_EQ0182 (3.7.12)	073	1.000 N|+0	`D \phi^{(0)}=0 .`	$D \phi^{(0)}=0.$	$D \phi^{(0)}=0.$
mielke-geometrodynamics_EQ0183 (3.7.13)	073	1.000 K|+0	`\begin{aligned} \Theta^{\perp}:=\Omega_{0} & =d \omega_{0}-(\omega \wedge \omega)_{0}=d \omega_{0}- \omega_{0} \wedge \omega-\omega \wedge \omega_{0} \\ & =d \omega_{0}-\left[\omega_{0}, \omega\right]=D \omega_{0} \end{aligned}`	$\begin{aligned} \Theta^{\perp}:=\Omega_{0} & =d \omega_{0}-(\omega \wedge \omega)_{0}=d \omega_{0}- \omega_{0} \wedge \omega-\omega \wedge \omega_{0} \\ & =d \omega_{0}-\left[\omega_{0}, \omega\right]=D \omega_{0} \end{aligned}$	$\begin{aligned} \Theta^{\perp}:=\Omega_{0} & =d \omega_{0}-(\omega \wedge \omega)_{0}=d \omega_{0}- \omega_{0} \wedge \omega-\omega \wedge \omega_{0} \\ & =d \omega_{0}-\left[\omega_{0}, \omega\right]=D \omega_{0} \end{aligned}$
mielke-geometrodynamics_EQ0185 (3.7.15)	074	1.000 K|+0	`d_{0}{ }^{*} \Omega_{0}=0 .`	$d_{0}{}^{*} \Omega_{0}=0.$	$d_{0}{}^{*} \Omega_{0}=0.$
mielke-geometrodynamics_EQ0186 (3.7.16)	074	1.000 N|+0	`\left(D^{*} \Omega\right)_{0}=\vec{D}^{*} \Omega_{0}= \vec{D}^{*} \Theta^{\perp}=0`	$\left(D^{*} \Omega\right)_{0}=\vec{D}^{*} \Omega_{0}=\vec{D}^{*} \Theta^{\perp}=0$	$\left(D^{*} \Omega\right)_{0}=\vec{D}^{*} \Omega_{0}=\vec{D}^{*} \Theta^{\perp}=0$
mielke-geometrodynamics_EQ0188 (3.7.18)	074	1.000 N|-1	`\omega_{0}=\varphi^{j} L_{j} \otimes \vartheta_{0} .`	$\omega_{0}=\varphi^{j} L_{j} \otimes \vartheta_{0}.$	$\omega_{0}=\varphi^{j} L_{j} \otimes \vartheta_{0}.$
mielke-geometrodynamics_EQ0190	080	1.000 U|+23	`\[ T_{G}: \quad T_{g} \psi(m)=D\left(g_{m}^{-1} g g_{g^{-1} m}, m_{0}\right) \psi\left(g^{-1} m\right) . \] }`	*(not rendered)*	$T_{G}: \quad T_{g} \psi(m)=D\left(g_{m}^{-1} g g_{g^{-1} m}, m_{0}\right) \psi\left(g^{-1} m\right).$
mielke-geometrodynamics_EQ0193 (4.1.3)	081	1.000 N|+0	`A(n, \mathbb{R})=\mathbb{R}^{n} \otimes G L(n, \mathbb{R})`	$A(n, \mathbb{R})=\mathbb{R}^{n} \otimes G L(n, \mathbb{R})$	$A(n, \mathbb{R})=\mathbb{R}^{n} \otimes G L(n, \mathbb{R})$
mielke-geometrodynamics_EQ0194 (4.1.4)	081	1.000 N|+0	`P:=\mathbb{R}^{n} \otimes 0(1, n-1) \subset A(n, \mathbb{R}),`	$P:=\mathbb{R}^{n} \otimes 0(1, n-1) \subset A(n, \mathbb{R}),$	$P:=\mathbb{R}^{n} \otimes 0(1, n-1) \subset A(n, \mathbb{R}),$
mielke-geometrodynamics_EQ0197 (4.1.10)	082	1.000 N|+0	`e_{\alpha}(m)=e_{\alpha}^{i} \partial_{i}`	$e_{\alpha}(m)=e_{\alpha}^{i} \partial_{i}$	$e_{\alpha}(m)=e_{\alpha}^{i} \partial_{i}$
mielke-geometrodynamics_EQ0199 (4.1.13)	082	1.000 N|+0	`L(M)=\bigcup_{m \in M} L_{m}(M)`	$L(M)=\bigcup_{m \in M} L_{m}(M)$	$L(M)=\bigcup_{m \in M} L_{m}(M)$
mielke-geometrodynamics_EQ0200 (4.1.14)	083	1.000 K|+0	`L(M)=P(M, G L(n, \mathbb{R}), \pi, \delta)`	$L(M)=P(M, G L(n, \mathbb{R}), \pi, \delta)$	$L(M)=P(M, G L(n, \mathbb{R}), \pi, \delta)$
mielke-geometrodynamics_EQ0202 (4.1.16)	083	1.000 K|+0	`\vartheta(e)=0 \Leftrightarrow \pi(e)=0, e \in T_{p}(P),`	$\vartheta(e)=0 \Leftrightarrow \pi(e)=0, e \in T_{p}(P),$	$\vartheta(e)=0 \Leftrightarrow \pi(e)=0, e \in T_{p}(P),$
mielke-geometrodynamics_EQ0204 (4.1.18)	083	1.000 N|+0	`T(M)=V\left(M, \mathbb{R}^{n}, G L(n, \mathbb{R}), L(M) \right)`	$T(M)=V\left(M, \mathbb{R}^{n}, G L(n, \mathbb{R}), L(M)\right)$	$T(M)=V\left(M, \mathbb{R}^{n}, G L(n, \mathbb{R}), L(M)\right)$
mielke-geometrodynamics_EQ0205 (4.1.19)	083	1.000 N|+0	`A(M):=P(M, A(n, \mathbb{R}), \pi, \delta)=L(M) \times \mathbb{R}^{n} .`	$A(M):=P(M, A(n, \mathbb{R}), \pi, \delta)=L(M) \times \mathbb{R}^{n}.$	$A(M):=P(M, A(n, \mathbb{R}), \pi, \delta)=L(M) \times \mathbb{R}^{n}.$
mielke-geometrodynamics_EQ0206 (4.1.20)	083	1.000 N|+0	`\beta: A(n, \mathbb{R}) \rightarrow G L(n, \mathbb{R})=A(n, \mathbb{R}) / \mathbb{R}^{n} .`	$\beta: A(n, \mathbb{R}) \rightarrow G L(n, \mathbb{R})=A(n, \mathbb{R}) / \mathbb{R}^{n}.$	$\beta: A(n, \mathbb{R}) \rightarrow G L(n, \mathbb{R})=A(n, \mathbb{R}) / \mathbb{R}^{n}.$
mielke-geometrodynamics_EQ0213 (4.2.5)	086	1.000 N|+0	`\mathscr{A}(n, \mathbb{R}):=C^{\infty}\left(A(M) \times_{ \mathrm{Ad}} A(n, \mathbb{R})\right) .`	$\mathscr{A}(n, \mathbb{R}):=C^{\infty}\left(A(M) \times_{\mathrm{Ad}} A(n, \mathbb{R})\right).$	$\mathscr{A}(n, \mathbb{R}):=C^{\infty}\left(A(M) \times_{\mathrm{Ad}} A(n, \mathbb{R})\right).$
mielke-geometrodynamics_EQ0223 (4.2.16)	087	1.000 N|-2	`Q_{A}=\left\{p \in A(M) \mid \widetilde{\widetilde{ \varphi}}(p)=\sigma\left(0_{m}\right)\right\}=L(M)`	$Q_{A}=\left\{p \in A(M) \mid \widetilde{\widetilde{\varphi}}(p)=\sigma\left(0_{m}\right)\right\}=L(M)$	$Q_{A}=\left\{p \in A(M) \mid \widetilde{\widetilde{\varphi}}(p)=\sigma\left(0_{m}\right)\right\}=L(M)$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value

Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ0237 (4.3.2)	090	1.000 S|+0	`\ell(\mathscr{C}):=\int_{t_{0}}^{t_{1}} d s(t)`	$\ell(\mathscr{C}) := \int_{t_0}^{t_1} ds(t)$	$\ell(\mathscr{C}) := \int_{t_0}^{t_1} ds(t)$
mielke-geometrodynamics_EQ0238 (4.3.3)	090	1.000 K|+0	`\ell\left(\mathscr{C}_{1}+\mathscr{C}_{2}\right)=\ell \left(\mathscr{C}_{1}\right)+\ell\left(\mathscr{C}_{2} \right)`	$\ell\left(\mathscr{C}_1+\mathscr{C}_2\right)=\ell\left(\mathscr{C}_1\right)+\ell\left(\mathscr{C}_2\right)$	$\ell(\mathscr{C}_1+\mathscr{C}_2)=\ell(\mathscr{C}_1)+\ell(\mathscr{C}_2)$
mielke-geometrodynamics_EQ0239 (4.3.4)	090	1.000 K|+0	`d s=F(m, \vartheta) d t,`	$ds=F(m, \vartheta) dt,$	$ds=F(m, \vartheta) dt,$
mielke-geometrodynamics_EQ0242 (4.3.7)	091	1.000 C|-3	`d s^{2}=(F(m, \vartheta) d t)^{2}=g_{\alpha \beta} \vartheta^{\alpha} \otimes \vartheta^{\beta}=g_{i j}(m) d x^{i} \otimes_{s} d x^{j} ;`	$ds^2=(F(m, \vartheta) dt)^2=g_{\alpha \beta} \vartheta^{\alpha} \otimes \vartheta^{\beta}=g_{i j}(m) d x^{i} \otimes_{s} d x^{j} ;$	$ds^2=(F(m, \vartheta) dt)^2=g_{\alpha \beta} \vartheta^{\alpha} \otimes \vartheta^{\beta}=g_{i j}(m) d x^{i} \otimes_{s} d x^{j} ;$
mielke-geometrodynamics_EQ0246 (4.3.11)	092	1.000 N|+0	`L^{g}(M):=P(M, O(s, n-s), \pi, \delta) .`	$L^g(M) := P(M, O(s, n-s), \pi, \delta).$	$L^g(M) := P(M, O(s, n-s), \pi, \delta).$
mielke-geometrodynamics_EQ0247 (4.3.12)	092	1.000 N|+0	`D e_{\alpha}^{\cdot i}=0`	$De_{\alpha}^{\cdot i}=0$	$D e_{\alpha}^{\cdot i}=0$
mielke-geometrodynamics_EQ0251 (4.3.16)	092	1.000 N|+0	`\Gamma_{i}^{\cdot \alpha \beta}=-\Gamma_{i}^{\cdot \beta \alpha}`	$\Gamma_{i}^{\cdot \alpha \beta}=-\Gamma_{i}^{\cdot \beta \alpha}$	$\Gamma_{i}^{\cdot \alpha \beta}=-\Gamma_{i}^{\cdot \beta \alpha}$
mielke-geometrodynamics_EQ0252 (4.3.17)	093	1.000 W|+0	`g_{i j} \stackrel{(*)}{=} o_{i j}`	$g_{i j} \stackrel{(*)}{=} o_{i j}$	$g_{i j} \stackrel{(*)}{=} o_{i j}$
mielke-geometrodynamics_EQ0253 (4.3.18)	093	1.000 N|+0	`\partial_{k} g_{i j} \stackrel{(*)}{=} 0 .`	$\partial_{k} g_{i j} \stackrel{(*)}{=} 0.$	$\partial_{k} g_{i j} \stackrel{(*)}{=} 0.$
mielke-geometrodynamics_EQ0254 (4.3.19)	093	1.000 N|+1	`\Omega^{g}=d \omega^{g}-\omega^{g} \wedge \omega^{g}`	$\Omega^g=d \omega^g-\omega^g \wedge \omega^g$	$\Omega^g=d \omega^g-\omega^g \wedge \omega^g$
mielke-geometrodynamics_EQ0257 (4.3.22)	094	1.000 K|+0	`\omega^{g}=\omega^{\{ \}}-K .`	$\omega^g=\omega^{\{\}}-K.$	$\omega^g=\omega^{\{\}}-K.$
mielke-geometrodynamics_EQ0258 (4.3.23)	094	1.000 K|+0	`d \vartheta-\left[\omega^{\{ \}}, \vartheta\right]=0`	$d \vartheta-\left[\omega^{\{\}}, \vartheta\right]=0$	$d \vartheta-[\omega^{\{\}}, \vartheta]=0$
mielke-geometrodynamics_EQ0259 (4.3.24)	094	1.000 N|+0	`\Theta=[K, \vartheta]`	$\Theta=[K, \vartheta]$	$\Theta=[K, \vartheta]$
mielke-geometrodynamics_EQ0265 (4.3.30)	095	1.000 W|+0	`\left\{\begin{array}{c} \kappa \\ i j \end{array}\right \}=\frac{1}{2} g^{\kappa l}\left(\partial_{i} g_{j l}+ \partial_{j} g_{i l}-\partial_{l} g_{i j}\right)`	$\left\{\begin{array}{c} \kappa \\ i j \end{array}\right\}=\frac{1}{2} g^{\kappa l}\left(\partial_{i} g_{j l}+ \partial_{j} g_{i l}-\partial_{l} g_{i j}\right)$	$\left\{\begin{array}{c} \kappa \\ i j \end{array}\right\}=\frac{1}{2} g^{\kappa l}\left(\partial_{i} g_{j l}+ \partial_{j} g_{i l}-\partial_{l} g_{i j}\right)$
mielke-geometrodynamics_EQ0272 (4.4.1)	096	1.000 N|-1	`L_{g}=L\left(g_{\alpha \beta} ; \vartheta,\left( \omega^{g}\right), \Theta, \Omega^{g}\right) .`	$L_g=L\left(g_{\alpha \beta} ; \vartheta,\left(\omega^g\right), \Theta, \Omega^g\right).$	$L_g=L\left(g_{\alpha \beta} ; \vartheta,\left(\omega^g\right), \Theta, \Omega^g\right).$
mielke-geometrodynamics_EQ0273 (4.4.2)	097	1.000 N|+0	`\delta L_{g}=: \delta \vartheta \wedge E+\delta \Theta \wedge \Pi^{\mathrm{T}}+\delta \Omega^{g} \wedge \Pi^{ \mathrm{L}},`	$\delta L_g=: \delta \vartheta \wedge E+\delta \Theta \wedge \Pi^{\mathrm{T}}+\delta \Omega^g \wedge \Pi^{\mathrm{L}},$	$\delta L_g=: \delta \vartheta \wedge E+\delta \Theta \wedge \Pi^{\mathrm{T}}+\delta \Omega^g \wedge \Pi^{\mathrm{L}},$
mielke-geometrodynamics_EQ0274 (4.4.7)	097	1.000 K|+0	`\delta \Theta=\delta\left(d \vartheta-\left[\omega^{ \mathrm{L}}, \vartheta\right]\right)`	$\delta \Theta=\delta\left(d \vartheta-\left[\omega^{\mathrm{L}}, \vartheta\right]\right)$	$\delta \Theta=\delta\left(d \vartheta-\left[\omega^{\mathrm{L}}, \vartheta\right]\right)$
mielke-geometrodynamics_EQ0277 (4.4.5)	097	1.000 N|+0	`S=\int_{M}\left(L_{g}+L_{\mathrm{mat}}\right)`	$S=\int_M\left(L_g+L_{\mathrm{mat}}\right)$	$S=\int_M\left(L_g+L_{\mathrm{mat}}\right)$
mielke-geometrodynamics_EQ0279 (4.4.8)	098	1.000 N|+0	`\delta L_{\text {matter }}=: \delta \vartheta \wedge \Sigma+\delta \omega^{g} \wedge \tau_{s}+\delta_{\varphi} \wedge \lambda^{\varphi}`	$\delta L_{\text {matter }}=: \delta \vartheta \wedge \Sigma+\delta \omega^g \wedge \tau_s+\delta_\varphi \wedge \lambda^\varphi$	$\delta L_{\text {matter }}=: \delta \vartheta \wedge \Sigma+\delta \omega^g \wedge \tau_s+\delta_\varphi \wedge \lambda^\varphi$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

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mielke-geometrodynamics_EQ0280 (4.4.9)	098	1.000 N|+0	`D \Theta \equiv\left[\vartheta, \Omega^{\mathrm{L}} \right]`	$D\Theta \equiv \left[\vartheta, \Omega^{\mathrm{L}}\right]$	$D\Theta \equiv [\vartheta, \Omega^{\mathrm{L}}]$
mielke-geometrodynamics_EQ0281 (4.4.10)	098	1.000 N|+0	`D \Omega^{g} \equiv 0,`	$D\Omega^{g} \equiv 0,$	$D\Omega^{g} \equiv 0,$
mielke-geometrodynamics_EQ0283 (4.4.12)	099	1.000 N|+0	`D[\Theta, \vartheta] \equiv\left[\vartheta \wedge \vartheta, \Omega^{g}\right]`	$D[\Theta, \vartheta] \equiv [\vartheta \wedge \vartheta, \Omega^{g}]$	$D[\Theta, \vartheta] \equiv [\vartheta \wedge \vartheta, \Omega^{g}]$
mielke-geometrodynamics_EQ0289 (4.4.18)	100	1.000 N|+0	`\left[\Omega^{g}, \Pi^{L}\right]+\mathrm{E}_{[]}=0`	$\left[\Omega^{g}, \Pi^{L}\right]+\mathrm{E}_{[]}=0$	$[\Omega^{g}, \Pi^{L}]+\mathrm{E}_{[]}=0$
mielke-geometrodynamics_EQ0290 (4.5.1)	100	1.000 N|+0	`L_{\mathrm{mat}}=L\left(g_{\alpha \beta}, \vartheta^{ \alpha}, \Psi, D \Psi\right) .`	$L_{\mathrm{mat}}=L\left(g_{\alpha \beta}, \vartheta^{\alpha}, \Psi, D \Psi\right) .$	$L_{\mathrm{mat}}=L(g_{\alpha \beta}, \vartheta^{\alpha}, \Psi, D \Psi) .$
mielke-geometrodynamics_EQ0291 (4.5.2)	100	1.000 W|-1	`\Sigma_{\alpha}:=\frac{\partial L}{\partial \vartheta^{ \alpha}}, \quad \sigma^{\alpha \beta}:=2 \frac{\partial L}{\partial g_{\alpha \beta}}, \quad \text { and } \quad \tau_{\alpha \beta}:=\frac{\partial L}{\partial \Gamma^{\alpha \beta}}=I_{\alpha \beta} \Psi \wedge \frac{\partial L}{\partial D \Psi}`	$\Sigma_{\alpha}:=\frac{\partial L}{\partial \vartheta^{\alpha}}, \quad \sigma^{\alpha \beta}:=2 \frac{\partial L}{\partial g_{\alpha \beta}}, \quad \text { and } \quad \tau_{\alpha \beta}:=\frac{\partial L}{\partial \Gamma^{\alpha \beta}}=I_{\alpha \beta} \Psi \wedge \frac{\partial L}{\partial D \Psi}$	$\Sigma_{\alpha}:=\frac{\partial L}{\partial \vartheta^{\alpha}}, \quad \sigma^{\alpha \beta}:=2 \frac{\partial L}{\partial g_{\alpha \beta}}, \quad \text { and } \quad \tau_{\alpha \beta}:=\frac{\partial L}{\partial \Gamma^{\alpha \beta}}=I_{\alpha \beta} \Psi \wedge \frac{\partial L}{\partial D \Psi}$
mielke-geometrodynamics_EQ0297 (8.10)	101	1.000 N|+0	`\delta L=\delta g_{\alpha \beta} \wedge \frac{\partial L}{\partial g_{\alpha \beta}}+\delta \vartheta^{\alpha} \wedge \frac{\partial L}{\partial \vartheta^{\alpha}}+ \delta \Psi \wedge \frac{\partial L}{\partial \Psi}+ \delta(D \Psi) \wedge \frac{\partial L}{\partial D \Psi} .`	$\delta L=\delta g_{\alpha \beta} \wedge \frac{\partial L}{\partial g_{\alpha \beta}}+\delta \vartheta^{\alpha} \wedge \frac{\partial L}{\partial \vartheta^{\alpha}}+\delta \Psi \wedge \frac{\partial L}{\partial \Psi}+\delta(D \Psi) \wedge \frac{\partial L}{\partial D \Psi} .$	$\delta L=\delta g_{\alpha \beta} \wedge \frac{\partial L}{\partial g_{\alpha \beta}}+\delta \vartheta^{\alpha} \wedge \frac{\partial L}{\partial \vartheta^{\alpha}}+\delta \Psi \wedge \frac{\partial L}{\partial \Psi}+\delta(D \Psi) \wedge \frac{\partial L}{\partial D \Psi} .$
mielke-geometrodynamics_EQ0300 (4.5.11)	102	1.000 N|+0	`\delta L=-\varepsilon_{\alpha}{ }^{\beta}\left[-\sigma^{ \alpha \gamma} g_{\gamma \beta}+\vartheta^{\alpha} \wedge \frac{\partial L}{\partial \vartheta^{\beta}}+D \frac{ \partial L}{\partial \Gamma_{\alpha}{ }^{\beta}}+I^{ \alpha}{ }_{\beta} \Psi \wedge \frac{\delta L}{\delta \Psi}\right] .`	$\delta L=-\varepsilon_{\alpha}{}^{\beta}\left[-\sigma^{\alpha \gamma} g_{\gamma \beta}+\vartheta^{\alpha} \wedge \frac{\partial L}{\partial \vartheta^{\beta}}+D \frac{\partial L}{\partial \Gamma_{\alpha}{}^{\beta}}+I^{\alpha}{}_{\beta} \Psi \wedge \frac{\delta L}{\delta \Psi}\right] .$	$\delta L=-\varepsilon_{\alpha}{}^{\beta}\left[-\sigma^{\alpha \gamma} g_{\gamma \beta}+\vartheta^{\alpha} \wedge \frac{\partial L}{\partial \vartheta^{\beta}}+D \frac{\partial L}{\partial \Gamma_{\alpha}{}^{\beta}}+I^{\alpha}{}_{\beta} \Psi \wedge \frac{\delta L}{\delta \Psi}\right] .$
mielke-geometrodynamics_EQ0301 (4.5.12)	102	1.000 N|+1	`D \tau_{\alpha \beta}+\vartheta_{[\alpha} \wedge \Sigma_{ \beta]}=-I_{\alpha \beta} \Psi \wedge \frac{\delta L}{ \delta \Psi} \simeq 0 .`	$D \tau_{\alpha \beta}+\vartheta_{[\alpha} \wedge \Sigma_{\beta]}=-I_{\alpha \beta} \Psi \wedge \frac{\delta L}{\delta \Psi} \simeq 0 .$	$D \tau_{\alpha \beta}+\vartheta_{[\alpha} \wedge \Sigma_{\beta]}=-I_{\alpha \beta} \Psi \wedge \frac{\delta L}{\delta \Psi} \simeq 0 .$
mielke-geometrodynamics_EQ0303 (4.5.13)	102	1.000 W|-1	`\begin{aligned} & R_{\alpha}{ }^{\beta}=d \Gamma_{ \alpha}{ }^{\beta} \\ & -\Gamma_{\alpha}{ }^{\gamma} \wedge \Gamma_{\gamma}{ }^{\beta} \end{aligned}`	$\begin{aligned} & R_{\alpha}{}^{\beta}=d \Gamma_{\alpha}{}^{\beta} \\ & -\Gamma_{\alpha}{}^{\gamma} \wedge \Gamma_{\gamma}{}^{\beta} \end{aligned}$	$\begin{aligned} & R_{\alpha}{}^{\beta}=d \Gamma_{\alpha}{}^{\beta} \\ & -\Gamma_{\alpha}{}^{\gamma} \wedge \Gamma_{\gamma}{}^{\beta} \end{aligned}$
mielke-geometrodynamics_EQ0307 (4.5.17)	103	1.000 N|+0	`\hat{M}:=M^{3} /\left[M^{2}+\frac{\Lambda}{3} J^{2} \right], \quad \hat{J}:=J M^{2} /\left[M^{2}+\frac{ \Lambda}{3} J^{2}\right],`	$\hat{M}:=M^{3} /\left[M^{2}+\frac{\Lambda}{3} J^{2} \right], \quad \hat{J}:=J M^{2} /\left[M^{2}+\frac{\Lambda}{3} J^{2}\right],$	$\hat{M}:=M^{3} /\left[M^{2}+\frac{\Lambda}{3} J^{2} \right], \quad \hat{J}:=J M^{2} /\left[M^{2}+\frac{\Lambda}{3} J^{2}\right],$
mielke-geometrodynamics_EQ0317 (5.2.1)	110	1.000 W|+0	`L_{\mathrm{D}}=L(\gamma, \psi, D \psi)=\frac{i}{2}\left \{\bar{\psi}^{*} \gamma \wedge D \psi+\overline{D \psi} \wedge^{*} \gamma \psi\right\}-m \bar{\psi} \psi \eta,`	$L_{\mathrm{D}}=L(\gamma, \psi, D \psi)=\frac{i}{2}\left\{\bar{\psi}^{*} \gamma \wedge D \psi+\overline{D \psi} \wedge^{*} \gamma \psi\right\}-m \bar{\psi} \psi \eta,$	$L_{\mathrm{D}}=L(\gamma, \psi, D \psi)=\frac{i}{2}\left\{\overline{\psi}^{*} \gamma \wedge D \psi+\overline{D \psi} \wedge^{*} \gamma \psi\right\}-m \overline{\psi} \psi \eta,$
mielke-geometrodynamics_EQ0322 (5.2.6)	111	1.000 K|+0	`\left.d U=T^{\alpha} \wedge \mu_{\alpha}-\vartheta^{ \alpha} \wedge D \mu_{\alpha}=\vartheta^{\alpha} \wedge \left[e_{\beta}\right\rfloor\left(T^{\beta} \wedge \mu_{ \alpha}\right)-D \mu_{\alpha}\right]`	$d U=T^{\alpha} \wedge \mu_{\alpha}-\vartheta^{\alpha} \wedge D \mu_{\alpha}=\vartheta^{\alpha} \wedge\left[e_{\beta}\right\rfloor\left(T^{\beta} \wedge \mu_{\alpha}\right)-D \mu_{\alpha}\right]$	$d U=T^{\alpha} \wedge \mu_{\alpha}-\vartheta^{\alpha} \wedge D \mu_{\alpha}=\vartheta^{\alpha} \wedge\left[e_{\beta}\right\rfloor\left(T^{\beta} \wedge \mu_{\alpha}\right)-D \mu_{\alpha}\right]$

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mielke-geometrodynamics_EQ0324 (5.3.1)	111	1.000 K|+0	L_{\mathrm{EC}}:=-\frac{1}{2 \kappa} R^{\alpha \beta} \wedge \eta_{\alpha \beta},	$L_{\mathrm{EC}} := -\frac{1}{2\kappa} R^{\alpha\beta} \wedge \eta_{\alpha\beta},$	$L_{\mathrm{EC}} := -\frac{1}{2\kappa} R^{\alpha\beta} \wedge \eta_{\alpha\beta},$
mielke-geometrodynamics_EQ0325 (5.3.2)	112	1.000 K|+0	G_{\alpha}:=\frac{1}{2} R^{\beta \gamma} \wedge \eta_{ \alpha \beta \gamma}=\kappa \Sigma_{\alpha},	$G_{\alpha} := \frac{1}{2} R^{\beta\gamma} \wedge \eta_{\alpha\beta\gamma} = \kappa \Sigma_{\alpha},$	$G_{\alpha} := \frac{1}{2} R^{\beta\gamma} \wedge \eta_{\alpha\beta\gamma} = \kappa \Sigma_{\alpha},$
mielke-geometrodynamics_EQ0327 (5.3.4)	112	1.000 N|+0	D^{\{ \}} G_{\alpha}^{\{ \}} \equiv 0	$D^{\{\}} G_{\alpha}^{\{\}} \equiv 0$	$D^{\{\}} G_{\alpha}^{\{\}} \equiv 0$
mielke-geometrodynamics_EQ0331 (5.3.8)	112	1.000 N|+0	D[\gamma, \Theta] \equiv 2 i\left[\sigma, \Omega^{g} \right], \quad D\left[\gamma, \Omega^{g}\right] \equiv \left[\Theta, \Omega^{g}\right],	$D[\gamma, \Theta] \equiv 2i\left[\sigma, \Omega^{g}\right], \quad D\left[\gamma, \Omega^{g}\right] \equiv \left[\Theta, \Omega^{g}\right],$	$D[\gamma, \Theta] \equiv 2i[\sigma, \Omega^{g}], \quad D[\gamma, \Omega^{g}] \equiv [\Theta, \Omega^{g}],$
mielke-geometrodynamics_EQ0332 (5.3.9)	113	1.000 N|+0	D G \equiv i\left[\Theta, \gamma_{5} \Omega^{g}\right]	$DG \equiv i\left[\Theta, \gamma_{5} \Omega^{g}\right]$	$DG \equiv i[\Theta, \gamma_{5} \Omega^{g}]$
mielke-geometrodynamics_EQ0333 (5.3.10)	113	1.000 K|+0	\eta_{\alpha \beta \gamma} \wedge T^{\gamma}=2 \kappa \tau_{\alpha \beta}	$\eta_{\alpha\beta\gamma} \wedge T^{\gamma} = 2\kappa\tau_{\alpha\beta}$	$\eta_{\alpha\beta\gamma} \wedge T^{\gamma} = 2\kappa\tau_{\alpha\beta}$
mielke-geometrodynamics_EQ0334 (5.3.11)	113	1.000 N|+0	\mathrm{T}_{\mu \nu}:=\frac{2}{\sqrt{g}} \frac{\delta L}{ \delta g_{\mu \nu}}	$\mathrm{T}_{\mu\nu} := \frac{2}{\sqrt{g}} \frac{\delta L}{\delta g_{\mu\nu}}$	$\mathrm{T}_{\mu\nu} := \frac{2}{\sqrt{g}} \frac{\delta L}{\delta g_{\mu\nu}}$
mielke-geometrodynamics_EQ0338 (5.3.15)	114	1.000 N|+0	{ }^{(3)} T_{\alpha}=\frac{(-1)^{s}}{3} *\left(\vartheta_{\alpha} \wedge \mathscr{A}\right)	${}^{(3)}T_{\alpha} = \frac{(-1)^{s}}{3} * (\vartheta_{\alpha} \wedge \mathscr{A})$	${}^{(3)}T_{\alpha} = \frac{(-1)^{s}}{3} * (\vartheta_{\alpha} \wedge \mathscr{A})$
mielke-geometrodynamics_EQ0342 (5.3.19)	115	1.000 N|-1	\Delta \widetilde{L}:=\kappa\left(L_{\mathrm{EC}}-L_{ \mathrm{HE}}\right) \simeq \frac{\kappa^{2}}{48} j_{5} \wedge^{*} j_{5}=4 f^{2} j_{5} \wedge^{*} j_{5},	$\Delta\widetilde{L} := \kappa\left(L_{\mathrm{EC}} - L_{\mathrm{HE}}\right) \simeq \frac{\kappa^{2}}{48} j_{5} \wedge^{*} j_{5} = 4 f^{2} j_{5} \wedge^{*} j_{5},$	$\Delta\widetilde{L} := \kappa(L_{\mathrm{EC}} - L_{\mathrm{HE}}) \simeq \frac{\kappa^{2}}{48} j_{5} \wedge {}^{*}j_{5} = 4 f^{2} j_{5} \wedge {}^{*}j_{5},$
mielke-geometrodynamics_EQ0344 (5.4.2)	116	1.000 N|-1	L_{\mathrm{HE}}:=L_{\mathrm{HE}}+\frac{\Lambda}{\kappa} \eta	$L_{\mathrm{HE}} := L_{\mathrm{HE}} + \frac{\Lambda}{\kappa} \eta$	$L_{\mathrm{HE}} := L_{\mathrm{HE}} + \frac{\Lambda}{\kappa} \eta$
mielke-geometrodynamics_EQ0345 (5.4.3)	116	1.000 N|+0	g_{\mathrm{N}}:=\kappa k^{2}, \quad \lambda:=\Lambda / k^{2},	$g_{\mathrm{N}} := \kappa k^{2}, \quad \lambda := \Lambda / k^{2},$	$g_{\mathrm{N}} := \kappa k^{2}, \quad \lambda := \Lambda / k^{2},$
mielke-geometrodynamics_EQ0346 (5.4.4)	116	1.000 N|+0	k \frac{\partial}{\partial k} g_{\mathrm{N}}=\beta_{1} \left(g_{\mathrm{N}}, \lambda\right)=\left(2+d_{ \mathrm{N}}\right) g_{\mathrm{N}}, \quad k \frac{ \partial}{\partial k} \lambda=\beta_{2}\left(g_{ \mathrm{N}}, \lambda\right),	$k \frac{\partial}{\partial k} g_{\mathrm{N}} = \beta_{1}\left(g_{\mathrm{N}}, \lambda\right) = \left(2 + d_{\mathrm{N}}\right) g_{\mathrm{N}}, \quad k \frac{\partial}{\partial k} \lambda = \beta_{2}\left(g_{\mathrm{N}}, \lambda\right),$	$k \frac{\partial}{\partial k} g_{\mathrm{N}} = \beta_{1}(g_{\mathrm{N}}, \lambda) = (2 + d_{\mathrm{N}}) g_{\mathrm{N}}, \quad k \frac{\partial}{\partial k} \lambda = \beta_{2}(g_{\mathrm{N}}, \lambda),$
mielke-geometrodynamics_EQ0348 (5.4.6)	117	1.000 N|+0	f^{2}=\frac{1}{192} \kappa^{2}=3 \times 2^{-10}\left(\frac{\mu}{\Lambda}\right)^{2}=2^{-8} \frac{\mu}{\rho_{ \Lambda}}	$f^{2} = \frac{1}{192} \kappa^{2} = 3 \times 2^{-10} \left(\frac{\mu}{\Lambda}\right)^{2} = 2^{-8} \frac{\mu}{\rho_{\Lambda}}$	$f^{2} = \frac{1}{192} \kappa^{2} = 3 \times 2^{-10} \left(\frac{\mu}{\Lambda}\right)^{2} = 2^{-8} \frac{\mu}{\rho_{\Lambda}}$
mielke-geometrodynamics_EQ0350 (6.2.1)	123	1.000 N|+0	C_{\mathrm{TT}}:=\frac{1}{2 \ell^{2}}\left(\vartheta^{ \alpha} \wedge T_{\alpha}\right)=-\frac{(-1)^{ \mathrm{sig}}}{2 \ell^{2}} * \mathscr{A},	$C_{\mathrm{TT}} := \frac{1}{2\ell^{2}} \left(\vartheta^{\alpha} \wedge T_{\alpha}\right) = -\frac{(-1)^{\mathrm{sig}}}{2\ell^{2}} * \mathscr{A},$	$C_{\mathrm{TT}} := \frac{1}{2\ell^{2}} \left(\vartheta^{\alpha} \wedge T_{\alpha}\right) = -\frac{(-1)^{\mathrm{sig}}}{2\ell^{2}} * \mathscr{A},$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ0351 (6.2.2)	124	■ 1.000 ● W|-1	`\begin{aligned} C_{\mathrm{RR}} & :=-\operatorname{Tr} \left(\Gamma \wedge \Omega-\frac{1}{3} \Gamma \wedge \Gamma \wedge \Gamma\right) \\ & =-\frac{1}{2}\left(\Gamma_{\alpha}{ }^{\beta} \wedge R_{\beta}{ }^{\alpha}+ \frac{1}{3} \Gamma_{\alpha}{ }^{\beta} \wedge \Gamma_{ \beta}{ }^{\gamma} \wedge \Gamma_{\gamma}{ }^{\alpha} \right) . \end{aligned}`	$C_{\mathrm{RR}} := -\operatorname{Tr}\left(\Gamma \wedge \Omega - \frac{1}{3}\Gamma \wedge \Gamma \wedge \Gamma\right) \\ = -\frac{1}{2}\left(\Gamma_{\alpha}{}^{\beta} \wedge R_{\beta}{}^{\alpha} + \frac{1}{3}\Gamma_{\alpha}{}^{\beta} \wedge \Gamma_{\beta}{}^{\gamma} \wedge \Gamma_{\gamma}{}^{\alpha}\right) .$	$C_{\mathrm{RR}} := -\operatorname{Tr}\left(\Gamma \wedge \Omega - \frac{1}{3}\Gamma \wedge \Gamma \wedge \Gamma\right) \\ = -\frac{1}{2}\left(\Gamma_{\alpha}{}^{\beta} \wedge R_{\beta}{}^{\alpha} + \frac{1}{3}\Gamma_{\alpha}{}^{\beta} \wedge \Gamma_{\beta}{}^{\gamma} \wedge \Gamma_{\gamma}{}^{\alpha}\right) .$
mielke-geometrodynamics_EQ0352 (6.2.3)	124	■ 1.000 ● N|-1	`\hat{C}=C_{\mathrm{RR}}-2 C_{\mathrm{TT}}`	$\hat{C} = C_{\mathrm{RR}} - 2C_{\mathrm{TT}}$	$\hat{C} = C_{\mathrm{RR}} - 2C_{\mathrm{TT}}$
mielke-geometrodynamics_EQ0353 (6.2.4)	124	■ 1.000 ● N|-1	`d C_{\mathrm{TT}} \equiv \frac{1}{2 \ell^{2}}\left(T^{ \alpha} \wedge T_{\alpha}+R_{\alpha \beta} \wedge \vartheta^{\alpha} \wedge \vartheta^{\beta}\right),`	$dC_{\mathrm{TT}} \equiv \frac{1}{2\ell^2}\left(T^{\alpha} \wedge T_{\alpha} + R_{\alpha\beta} \wedge \vartheta^{\alpha} \wedge \vartheta^{\beta}\right),$	$dC_{\mathrm{TT}} \equiv \frac{1}{2\ell^2}\left(T^{\alpha} \wedge T_{\alpha} + R_{\alpha\beta} \wedge \vartheta^{\alpha} \wedge \vartheta^{\beta}\right),$
mielke-geometrodynamics_EQ0354 (6.2.5)	124	■ 1.000 ● N|-1	`d C_{\mathrm{RR}}=-\operatorname{Tr}(\Omega \wedge \Omega)=\frac{1}{2} R^{\alpha \beta} \wedge R_{\alpha \beta}`	$dC_{\mathrm{RR}} = -\operatorname{Tr}(\Omega \wedge \Omega) = \frac{1}{2} R^{\alpha\beta} \wedge R_{\alpha\beta}$	$dC_{\mathrm{RR}} = -\operatorname{Tr}\,(\Omega \wedge \Omega) = \frac{1}{2}\, R^{\alpha\beta} \wedge R_{\alpha\beta}$
mielke-geometrodynamics_EQ0355 (6.2.6)	124	■ 1.000 ● N|+0	`D R_{\alpha \beta} \equiv 0,`	$DR_{\alpha\beta} \equiv 0,$	$DR_{\alpha\beta} \equiv 0,$
mielke-geometrodynamics_EQ0359 (6.2.10)	125	■ 1.000 ● N|+0	`H_{\alpha}^{\\|}:=-\partial L_{\\|} / \partial T^{ \alpha}=(1 / \kappa) \eta_{\alpha \beta \gamma} \wedge K^{\beta \gamma}`	$H_{\alpha}^{\parallel} := -\partial L_{\parallel}/\partial T^{\alpha} = (1/\kappa)\eta_{\alpha\beta\gamma} \wedge K^{\beta\gamma}$	$H_{\alpha}^{\parallel} := -\partial L_{\parallel}/\partial T^{\alpha} = (1/\kappa)\eta_{\alpha\beta\gamma} \wedge K^{\beta\gamma}$
mielke-geometrodynamics_EQ0361 (6.2.12)	126	■ 1.000 ● N|+0	`\tilde{L}_{\\|}=L_{\\|}-R^{\alpha \beta} \wedge \lambda_{ \alpha \beta} .`	$\tilde{L}_{\parallel} = L_{\parallel} - R^{\alpha\beta} \wedge \lambda_{\alpha\beta}.$	$\tilde{L}_{\parallel} = L_{\parallel} - R^{\alpha\beta} \wedge \lambda_{\alpha\beta}.$
mielke-geometrodynamics_EQ0362 (6.2.14)	126	■ 1.000 ● W|+0	`\begin{gathered} D H_{\alpha}^{\\|}-E_{\alpha}^{\\|}= \Sigma_{\alpha}, \\ D \lambda_{\alpha \beta}+\vartheta_{[ \alpha} \wedge H_{\beta]}^{\\|}=\tau_{\alpha \beta}, \end{gathered}`	$DH_{\alpha}^{\parallel} - E_{\alpha}^{\parallel} = \Sigma_{\alpha}, \\ D\lambda_{\alpha\beta} + \vartheta_{[\alpha} \wedge H_{\beta]}^{\parallel} = \tau_{\alpha\beta},$	$DH_{\alpha}^{\parallel} - E_{\alpha}^{\parallel} = \Sigma_{\alpha}, \\ D\lambda_{\alpha\beta} + \vartheta_{[\alpha} \wedge H_{\beta]}^{\parallel} = \tau_{\alpha\beta},$
mielke-geometrodynamics_EQ0363 (6.2.15)	126	■ 1.000 ● N|+1	`R^{\alpha \beta}=0 .`	$R^{\alpha\beta} = 0.$	$R^{\alpha\beta} = 0.$
mielke-geometrodynamics_EQ0365 (6.2.17)	126	■ 1.000 ● N|+0	`D\left(\tau_{\alpha \beta}-\vartheta_{[\alpha} \wedge H_{ \beta]}^{\\|}\right)=0`	$D\left(\tau_{\alpha\beta} - \vartheta_{[\alpha} \wedge H_{\beta]}^{\parallel}\right) = 0$	$D(\tau_{\alpha\beta} - \vartheta_{[\alpha} \wedge H_{\beta]}^{\parallel}) = 0$
mielke-geometrodynamics_EQ0369 (6.2.20)	127	■ 1.000 ● N|+1	`\stackrel{( \pm)}{C}_{\mathrm{TT}}:=\frac{1}{2 \ell^{2}} \left(\vartheta^{\alpha} \wedge \stackrel{( \pm)}{T}_{ \alpha}\right),`	$\overset{(\pm)}{C}{}_{\mathrm{TT}} := \frac{1}{2\ell^2}\left(\vartheta^{\alpha} \wedge \overset{(\pm)}{T}{}_{\alpha}\right),$	$\overset{(\pm)}{C}{}_{\mathrm{TT}} := \frac{1}{2\ell^2}\left(\vartheta^{\alpha} \wedge \overset{(\pm)}{T}{}_{\alpha}\right),$
mielke-geometrodynamics_EQ0373 (6.2.24)	127	■ 1.000 ● N|+0	`\stackrel{( \pm)( \pm)}{D} \Pi_{\alpha}=\Sigma_{\alpha} .`	$\overset{(\pm)(\pm)}{D}{}\,\Pi_{\alpha} = \Sigma_{\alpha}.$	$\overset{(\pm)(\pm)}{D}{}\,\Pi_{\alpha} = \Sigma_{\alpha}.$
mielke-geometrodynamics_EQ0379 (6.2.30)	128	■ 1.000 ● K|+0	`\stackrel{( \pm)}{L}_{\mathrm{YM}}=\mp(1 / 4) \operatorname{Tr}(\stackrel{( \pm)}{F} \wedge \stackrel{( \pm)}{F})`	$\overset{(\pm)}{L}{}_{\mathrm{YM}} = \mp(1/4)\operatorname{Tr}(\overset{(\pm)}{F} \wedge \overset{(\pm)}{F})$	$\overset{(\pm)}{L}{}_{\mathrm{YM}} = \mp(1/4)\operatorname{Tr}\left(\overset{(\pm)}{F} \wedge \overset{(\pm)}{F}\right)$
mielke-geometrodynamics_EQ0383 (6.3.1)	129	■ 1.000 ● N|+0	`\check{E}_{\alpha}:=E_{\alpha}+\Gamma_{\alpha}{ }^{\beta} \wedge H_{\beta}+\Sigma_{\alpha} \cong d H_{\alpha},`	$\check{E}_{\alpha} := E_{\alpha} + \Gamma_{\alpha}{}^{\beta} \wedge H_{\beta} + \Sigma_{\alpha} \cong dH_{\alpha},$	$\check{E}_{\alpha} := E_{\alpha} + \Gamma_{\alpha}{}^{\beta} \wedge H_{\beta} + \Sigma_{\alpha} \cong dH_{\alpha},$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): ● C component ● W weak ● S stable ● N noise ● K clean ● not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ0386 (6.4.1)	130	1.000 N|+0	n:=\partial_{t}-N^{A} \partial / \partial x^{A}, \quad A=1,2,3,	$n := \partial_t - N^A \partial/\partial x^A, \quad A = 1, 2, 3,$	$n := \partial_t - N^A \partial/\partial x^A, \qquad A = 1, 2, 3,$
mielke-geometrodynamics_EQ0395 (6.4.10)	132	1.000 W|+0	\Sigma_{\alpha}:=\frac{\partial L}{\partial \vartheta^{\alpha}}, \quad \tau_{\alpha \beta}:=\frac{\partial L}{\partial \Gamma^{\alpha \beta}}=\rho\left(I_{\alpha \beta}\right) \Psi \wedge \frac{\partial L}{\partial D \Psi}	$\Sigma_\alpha := \frac{\partial L}{\partial \vartheta^\alpha}, \quad \tau_{\alpha\beta} := \frac{\partial L}{\partial \Gamma^{\alpha\beta}} = \rho\left(I_{\alpha\beta}\right) \Psi \wedge \frac{\partial L}{\partial D\Psi}$	$\Sigma_\alpha := \frac{\partial L}{\partial \vartheta^\alpha}, \qquad \tau_{\alpha\beta} := \frac{\partial L}{\partial \Gamma^{\alpha\beta}} = \rho(I_{\alpha\beta})\Psi \wedge \frac{\partial L}{\partial D\Psi}$
mielke-geometrodynamics_EQ0408 (6.4.28)	136	1.000 N|+0	d s^{2}=h^{2} d r^{2}+f^{2}\left[d \psi^{2}+\sin ^{2} \psi\left(d \theta^{2}+\sin ^{2} \theta d \phi^{2}\right) \right],	$ds^2 = h^2 dr^2 + f^2 \left[d\psi^2 + \sin^2\psi \left(d\theta^2 + \sin^2\theta d\phi^2\right)\right],$	$ds^2 = h^2 dr^2 + f^2 \left[d\psi^2 + \sin^2\psi \left(d\theta^2 + \sin^2\theta d\phi^2\right)\right],$
mielke-geometrodynamics_EQ0410 (6.4.30)	136	1.000 N|-1	\ell^{2} \underline{C}_{\mathrm{TT}}=\frac{1}{2} \underline{\vartheta}^{\alpha} \wedge d \underline{ \vartheta}_{\alpha}=\frac{1}{2} \underline{\vartheta}^{A} \wedge d \underline{\vartheta}_{A}=3 \underline{ \vartheta}^{\hat{1}} \wedge \underline{\vartheta}^{ \hat{2}} \wedge \underline{\vartheta}^{\hat{3}}	$\ell^2 \underline{C}_{\mathrm{TT}} = \frac{1}{2}\underline{\vartheta}^\alpha \wedge d\underline{\vartheta}_\alpha = \frac{1}{2}\underline{\vartheta}^A \wedge d\underline{\vartheta}_A = 3\underline{\vartheta}^{\hat{1}} \wedge \underline{\vartheta}^{\hat{2}} \wedge \underline{\vartheta}^{\hat{3}}$	$\ell^2 \underline{C}_{\mathrm{TT}} = \frac{1}{2}\underline{\vartheta}^\alpha \wedge d\underline{\vartheta}_\alpha = \frac{1}{2}\underline{\vartheta}^A \wedge d\underline{\vartheta}_A = 3\,\underline{\vartheta}^{\hat{1}} \wedge \underline{\vartheta}^{\hat{2}} \wedge \underline{\vartheta}^{\hat{3}}$
mielke-geometrodynamics_EQ0412 (6.4.32)	136	1.000 N|+1	f=\frac{a r^{2}}{r^{2}+c^{2}}	$f = \frac{ar^2}{r^2 + c^2}$	$f = \frac{ar^2}{r^2 + c^2}$
mielke-geometrodynamics_EQ0414 (6.5.2)	137	1.000 N|+0	\Psi(\gamma)=\int_{\mathscr{C} / \mathscr{G}} \mathscr{D} A W(A, \gamma) \Psi(A) .	$\Psi(\gamma) = \int_{\mathscr{C}/\mathscr{G}} \mathscr{D}A\, W(A,\gamma)\Psi(A).$	$\Psi(\gamma) = \int_{\mathscr{C}/\mathscr{G}} \mathscr{D}A\; W(A,\gamma)\Psi(A).$
mielke-geometrodynamics_EQ0416 (6.5.4)	137	1.000 K|+0	\langle 0| W(\gamma)|0\rangle e^{\Lambda G(\gamma)} V(\gamma),	$\langle 0\|W(\gamma)\|0\rangle e^{\Lambda G(\gamma)} V(\gamma),$	$\langle 0\|W(\gamma)\|0\rangle e^{\Lambda G(\gamma)} V(\gamma),$
mielke-geometrodynamics_EQ0417 (6.6.1)	138	1.000 N|+1	\int T=\int d \sigma=2 \pi N	$\int T = \int d\sigma = 2\pi N$	$\int T = \int d\sigma = 2\pi N,$
mielke-geometrodynamics_EQ0418 (6.6.2)	139	1.000 K|+0	W^{N}:=S^{3} \#^{N}\left(S^{1} \times S^{2}\right) .	$W^N := S^3 \#^N \left(S^1 \times S^2\right).$	$W^N := S^3 \#^N (S^1 \times S^2).$
mielke-geometrodynamics_EQ0419 (6.7.1)	140	1.000 K|+0	L:=L_{\mathrm{EC}}+L_{\theta}+L_{\mathrm{D}},	$L := L_{\mathrm{EC}} + L_\theta + L_{\mathrm{D}},$	$L := L_{\mathrm{EC}} + L_\theta + L_{\mathrm{D}},$
mielke-geometrodynamics_EQ0420 (6.7.2)	140	1.000 N|+1	L_{\theta}=\theta_{\mathrm{T}} d C_{\mathrm{TT}}+\theta_{ \mathrm{L}} d C_{\mathrm{RR}}	$L_\theta = \theta_{\mathrm{T}} dC_{\mathrm{TT}} + \theta_{\mathrm{L}} dC_{\mathrm{RR}}$	$L_\theta = \theta_{\mathrm{T}} dC_{\mathrm{TT}} + \theta_{\mathrm{L}} dC_{\mathrm{RR}}$
mielke-geometrodynamics_EQ0421 (6.7.3)	140	1.000 K|+0	H_{\alpha}:=-\frac{\partial L}{\partial T^{\alpha}}=- \frac{\theta_{\mathrm{T}}}{\ell^{2}} T_{\alpha},	$H_\alpha := -\frac{\partial L}{\partial T^\alpha} = -\frac{\theta_{\mathrm{T}}}{\ell^2} T_\alpha,$	$H_\alpha := -\frac{\partial L}{\partial T^\alpha} = -\frac{\theta_{\mathrm{T}}}{\ell^2} T_\alpha,$
mielke-geometrodynamics_EQ0422 (6.7.4)	140	1.000 N|+0	H_{\alpha \beta}:=-\frac{\partial L}{\partial R^{\alpha \beta}}=\frac{1}{2 \kappa} \eta_{\alpha \beta}-\frac{ \theta_{\mathrm{T}}}{2 \ell^{2}} \vartheta_{\alpha} \wedge \vartheta_{\beta}-\theta_{\mathrm{L}} R_{\alpha \beta}	$H_{\alpha\beta} := -\frac{\partial L}{\partial R^{\alpha\beta}} = \frac{1}{2\kappa}\eta_{\alpha\beta} - \frac{\theta_{\mathrm{T}}}{2\ell^2}\vartheta_\alpha \wedge \vartheta_\beta - \theta_{\mathrm{L}} R_{\alpha\beta}$	$H_{\alpha\beta} := -\frac{\partial L}{\partial R^{\alpha\beta}} = \frac{1}{2\kappa}\eta_{\alpha\beta} - \frac{\theta_{\mathrm{T}}}{2\ell^2}\vartheta_\alpha \wedge \vartheta_\beta - \theta_{\mathrm{L}} R_{\alpha\beta}$
mielke-geometrodynamics_EQ0423 (6.7.5)	140	1.000 N|+0	D \theta_{\mathrm{T}} \wedge T_{\alpha}+\theta_{ \mathrm{T}} D T_{\alpha}+\ell^{2} E_{\alpha}=-\ell^{2} \Sigma_{\alpha} .	$D\theta_{\mathrm{T}} \wedge T_\alpha + \theta_{\mathrm{T}} DT_\alpha + \ell^2 E_\alpha = -\ell^2 \Sigma_\alpha.$	$D\theta_{\mathrm{T}} \wedge T_\alpha + \theta_{\mathrm{T}} DT_\alpha + \ell^2 E_\alpha = -\ell^2 \Sigma_\alpha.$
mielke-geometrodynamics_EQ0425 (6.7.7)	140	1.000 N|+0	C_{\mathrm{TT}} \cong \frac{\kappa}{4 \ell^{2}} j_{5}	$C_{\mathrm{TT}} \cong \frac{\kappa}{4\ell^2} j_5$	$C_{\mathrm{TT}} \cong \frac{\kappa}{4\ell^2} j_5$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ0427 (6.7.9)	141	1.000 N|+0	`T^{\gamma} \wedge \eta_{\gamma \beta}+\kappa D \theta_{ \mathrm{L}} \wedge D T_{\beta}=0 .`	$T^{\gamma} \wedge \eta_{\gamma \beta}+\kappa D \theta_{ \mathrm{L}} \wedge D T_{\beta}=0 .$	$T^{\gamma} \wedge \eta_{\gamma \beta}+\kappa D \theta_{ \mathrm{L}} \wedge D T_{\beta}=0 .$
mielke-geometrodynamics_EQ0429 (6.7.11)	141	1.000 N|+0	`\kappa d \theta_{\mathrm{L}} \wedge T_{\beta}=-\eta_{ \beta}`	$\kappa d \theta_{ \mathrm{L}} \wedge T_{\beta}=-\eta_{ \beta}$	$\kappa d \theta_{ \mathrm{L}} \wedge T_{\beta}=-\eta_{ \beta}$
mielke-geometrodynamics_EQ0430 (6.7.12)	141	1.000 N|-1	`\kappa \ell^{2} d \theta_{\mathrm{L}} \wedge C_{ \mathrm{TT}}=2 \eta .`	$\kappa \ell^{2} d \theta_{ \mathrm{L}} \wedge C_{ \mathrm{TT}}=2 \eta .$	$\kappa \ell^{2} d \theta_{ \mathrm{L}} \wedge C_{ \mathrm{TT}}=2 \eta .$
mielke-geometrodynamics_EQ0431 (6.7.13)	141	1.000 N|+0	`D T^{\gamma} \wedge \eta_{\alpha \beta \gamma}+\kappa D \theta_{\mathrm{T}} \wedge T_{[\alpha} \wedge \vartheta_{ \beta]} / \ell^{2}=2 \kappa\left(T_{[\alpha} \wedge \mu_{ \beta]}-\vartheta_{[\alpha} \wedge D \mu_{\beta]}\right) .`	$D T^{\gamma} \wedge \eta_{\alpha \beta \gamma}+\kappa D \theta_{\mathrm{T}} \wedge T_{[\alpha} \wedge \vartheta_{ \beta]} / \ell^{2}=2 \kappa\left(T_{[\alpha} \wedge \mu_{ \beta]}-\vartheta_{[\alpha} \wedge D \mu_{\beta]}\right) .$	$D T^{\gamma} \wedge \eta_{\alpha \beta \gamma}+\kappa D \theta_{\mathrm{T}} \wedge T_{[\alpha} \wedge \vartheta_{ \beta]} / \ell^{2}=2 \kappa\left(T_{[\alpha} \wedge \mu_{ \beta]}-\vartheta_{[\alpha} \wedge D \mu_{\beta]}\right) .$
mielke-geometrodynamics_EQ0432 (6.8.1)	142	1.000 N|+0	`W=\int\left[L\left(\vartheta^{\alpha}, T^{\alpha}, R^{ \alpha \beta}, \Psi, D \Psi\right)+L_{g}\left(\vartheta^{ \alpha}, T^{\alpha}, R^{\alpha \beta}\right)\right] .`	$W=\int\left[L\left(\vartheta^{\alpha}, T^{\alpha}, R^{ \alpha \beta}, \Psi, D \Psi\right)+L_{g}\left(\vartheta^{ \alpha}, T^{\alpha}, R^{\alpha \beta}\right)\right] .$	$W=\int\left[L\left(\vartheta^{\alpha}, T^{\alpha}, R^{ \alpha \beta}, \Psi, D \Psi\right)+L_{g}\left(\vartheta^{ \alpha}, T^{\alpha}, R^{\alpha \beta}\right)\right] .$
mielke-geometrodynamics_EQ0433 (6.8.3)	142	1.000 C|-3	`\begin{gathered} \frac{\delta L}{\delta \Psi}=\frac{ \partial L}{\partial \Psi}-(-1)^{p} D \frac{\partial L}{ \partial D \Psi}=0, \quad \text { (MATTER) } \\ D H_{ \alpha}-E_{\alpha}=\Sigma_{\alpha}, \quad \text { (FIRST) } \\ D H_{\alpha \beta}-E_{\alpha \beta}=\tau_{\alpha \beta} . \quad \text { (SECOND) } \end{gathered}`	$\begin{gathered} \frac{\delta L}{\delta \Psi}=\frac{ \partial L}{\partial \Psi}-(-1)^{p} D \frac{\partial L}{ \partial D \Psi}=0, \quad \text { (MATTER) } \\ D H_{ \alpha}-E_{\alpha}=\Sigma_{\alpha}, \quad \text { (FIRST) } \\ D H_{\alpha \beta}-E_{\alpha \beta}=\tau_{\alpha \beta} . \quad \text { (SECOND) } \end{gathered}$	$\begin{gathered} \frac{\delta L}{\delta \Psi}=\frac{ \partial L}{\partial \Psi}-(-1)^{p} D \frac{\partial L}{ \partial D \Psi}=0, \quad \text { (MATTER) } \\ D H_{ \alpha}-E_{\alpha}=\Sigma_{\alpha}, \quad \text { (FIRST) } \\ D H_{\alpha \beta}-E_{\alpha \beta}=\tau_{\alpha \beta} . \quad \text { (SECOND) } \end{gathered}$
mielke-geometrodynamics_EQ0435 (6.8.6)	142	1.000 N|+1	`\Sigma_{\alpha}:=\frac{\delta L}{\delta \vartheta^{ \alpha}}=\frac{\partial L}{\partial \vartheta^{\alpha}}+D \frac{\partial L}{\partial T^{\alpha}}`	$\Sigma_{\alpha}:=\frac{\delta L}{\delta \vartheta^{\alpha}}=\frac{\partial L}{\partial \vartheta^{\alpha}}+D \frac{\partial L}{\partial T^{\alpha}}$	$\Sigma_{\alpha}:=\frac{\delta L}{\delta \vartheta^{\alpha}}=\frac{\partial L}{\partial \vartheta^{\alpha}}+D \frac{\partial L}{\partial T^{\alpha}}$
mielke-geometrodynamics_EQ0436 (6.8.7)	142	1.000 W|+0	`\tau_{\alpha \beta}:=\frac{\delta L}{\delta \Gamma^{ \alpha \beta}}=\rho\left(I_{\alpha \beta}\right) \Psi \wedge \frac{\partial L}{\partial(D \Psi)}+\vartheta_{[ \alpha} \wedge \frac{\partial L}{\partial T^{\beta]}}+D \frac{\partial L}{\partial R^{\alpha \beta}},`	$\tau_{\alpha \beta}:=\frac{\delta L}{\delta \Gamma^{\alpha \beta}}=\rho\left(I_{\alpha \beta}\right) \Psi \wedge \frac{\partial L}{\partial(D \Psi)}+\vartheta_{[\alpha} \wedge \frac{\partial L}{\partial T^{\beta]}}+D \frac{\partial L}{\partial R^{\alpha \beta}},$	$\tau_{\alpha \beta}:=\frac{\delta L}{\delta \Gamma^{\alpha \beta}}=\rho\left(I_{\alpha \beta}\right) \Psi \wedge \frac{\partial L}{\partial(D \Psi)}+\vartheta_{[\alpha} \wedge \frac{\partial L}{\partial T^{\beta]}}+D \frac{\partial L}{\partial R^{\alpha \beta}},$
mielke-geometrodynamics_EQ0438 (6.8.9)	142	1.000 N|+0	`E_{\alpha \beta}:=-\vartheta_{[\alpha} \wedge H_{\beta]}`	$E_{\alpha \beta}:=-\vartheta_{[\alpha} \wedge H_{\beta]}$	$E_{\alpha \beta}:=-\vartheta_{[\alpha} \wedge H_{\beta]}$
mielke-geometrodynamics_EQ0439 (6.8.10)	143	1.000 N|+0	`\vartheta^{\alpha} \wedge E_{\alpha}=4 L_{g}+2 T^{\alpha} \wedge H_{\alpha}+2 R^{\alpha \beta} \wedge H_{\alpha \beta} .`	$\vartheta^{\alpha} \wedge E_{\alpha}=4 L_{g}+2 T^{\alpha} \wedge H_{\alpha}+2 R^{\alpha \beta} \wedge H_{\alpha \beta} .$	$\vartheta^{\alpha} \wedge E_{\alpha}=4 L_{g}+2 T^{\alpha} \wedge H_{\alpha}+2 R^{\alpha \beta} \wedge H_{\alpha \beta} .$
mielke-geometrodynamics_EQ0442 (6.8.13)	143	1.000 N|+0	`L_{\mathrm{qPG}}=-\frac{1}{2} T^{\alpha} \wedge H_{ \alpha}-\frac{1}{2} R^{\alpha \beta} \wedge\left(H_{ \alpha \beta}-\frac{a_{0}}{2 \ell^{2}} \eta_{\alpha \beta}\right),`	$L_{\mathrm{qPG}}=-\frac{1}{2} T^{\alpha} \wedge H_{\alpha}-\frac{1}{2} R^{\alpha \beta} \wedge\left(H_{ \alpha \beta}-\frac{a_{0}}{2 \ell^{2}} \eta_{\alpha \beta}\right),$	$L_{\mathrm{qPG}}=-\frac{1}{2} T^{\alpha} \wedge H_{\alpha}-\frac{1}{2} R^{\alpha \beta} \wedge\left(H_{ \alpha \beta}-\frac{a_{0}}{2 \ell^{2}} \eta_{\alpha \beta}\right),$
mielke-geometrodynamics_EQ0444 (6.8.15)	143	1.000 N|+0	`H_{\alpha \beta}=-\frac{a_{0}}{2 \ell^{2}} \eta_{\alpha \beta}-\frac{1}{\kappa} *\left(\sum_{j=1}^{6} b_{j}{ }^{(j)} R_{\alpha \beta}\right) .`	$H_{\alpha \beta}=-\frac{a_{0}}{2 \ell^{2}} \eta_{\alpha \beta}-\frac{1}{\kappa} *\left(\sum_{j=1}^{6} b_{j}{ }^{(j)} R_{\alpha \beta}\right) .$	$H_{\alpha \beta}=-\frac{a_{0}}{2 \ell^{2}} \eta_{\alpha \beta}-\frac{1}{\kappa} *\left(\sum_{j=1}^{6} b_{j}{ }^{(j)} R_{\alpha \beta}\right) .$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): ● C component ● W weak ● S stable ● N noise ● K clean ● not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ0447 (6.9.3)	144	■ 1.000 ● N|+0	`\eta={ }^{*} 1=\frac{1}{4!} \eta_{\alpha \beta \gamma \delta} \vartheta^{\alpha} \wedge \vartheta^{\beta} \wedge \vartheta^{\gamma} \wedge \vartheta^{\delta},`	$\eta = {}^{*}1 = \frac{1}{4!}\eta_{\alpha\beta\gamma\delta}\vartheta^{\alpha} \wedge \vartheta^{\beta} \wedge \vartheta^{\gamma} \wedge \vartheta^{\delta},$	$\eta = {}^{*}1 = \frac{1}{4!}\eta_{\alpha\beta\gamma\delta}\vartheta^{\alpha} \wedge \vartheta^{\beta} \wedge \vartheta^{\gamma} \wedge \vartheta^{\delta},$
mielke-geometrodynamics_EQ0448 (6.9.4)	145	■ 1.000 ● N|+0	`p=\frac{1}{8 \pi^{2}} \int R_{\alpha}{ }^{\beta} \wedge R_{\beta}{ }^{\alpha} .`	$p = \frac{1}{8\pi^{2}} \int R_{\alpha}{}^{\beta} \wedge R_{\beta}{}^{\alpha}.$	$p = \frac{1}{8\pi^{2}} \int R_{\alpha}{}^{\beta} \wedge R_{\beta}{}^{\alpha}.$
mielke-geometrodynamics_EQ0453 (7.2.1)	151	■ 1.000 ● U|+14	`\[ L_{a b}^{(\star)}:=\frac{1}{2} \varepsilon_{a b c d} L^{c d}=L_{a b} . \] }`	*(not rendered)*	$L_{ab}^{(\star)} := \frac{1}{2}\varepsilon_{abcd}L^{cd} = L_{ab}.$
mielke-geometrodynamics_EQ0454 (7.2.6)	152	■ 1.000 ● N|+0	`\Omega^{g}=\Omega_{\mathrm{C}}+\bar{\Omega}^{g}-\frac{1}{6} \vartheta \wedge \vartheta R .`	$\Omega^{g} = \Omega_{\mathrm{C}} + \bar{\Omega}^{g} - \frac{1}{6}\vartheta \wedge \vartheta R.$	$\Omega^{g} = \Omega_{\mathrm{C}} + \bar{\Omega}^{g} - \frac{1}{6}\vartheta \wedge \vartheta R.$
mielke-geometrodynamics_EQ0455 (7.2.7)	152	■ 1.000 ● N|+0	`\bar{\Omega}^{g}=\vartheta \wedge^{*}\left(\vartheta \wedge \Omega^{g}\right)-\frac{1}{4} \vartheta \wedge \vartheta R,`	$\bar{\Omega}^{g} = \vartheta \wedge^{*} \left(\vartheta \wedge \Omega^{g}\right) - \frac{1}{4}\vartheta \wedge \vartheta R,$	$\bar{\Omega}^{g} = \vartheta \wedge {}^{*}(\vartheta \wedge \Omega^{g}) - \frac{1}{4}\vartheta \wedge \vartheta R,$
mielke-geometrodynamics_EQ0457 (7.2.9)	152	■ 1.000 ● N|+0	`\operatorname{Tr}\left(\vartheta \wedge \vartheta \wedge \Omega_{\mathrm{C}}\right)=\operatorname{Tr}\left(\vartheta \wedge \vartheta \wedge \bar{\Omega}^{g}\right)=0`	$\operatorname{Tr}\left(\vartheta \wedge \vartheta \wedge \Omega_{\mathrm{C}}\right) = \operatorname{Tr}\left(\vartheta \wedge \vartheta \wedge \bar{\Omega}^{g}\right) = 0$	$\operatorname{Tr}(\vartheta \wedge \vartheta \wedge \Omega_{\mathrm{C}}) = \operatorname{Tr}(\vartheta \wedge \vartheta \wedge \bar{\Omega}^{g}) = 0$
mielke-geometrodynamics_EQ0463 (7.3.2)	153	■ 1.000 ● N|+0	`D^{*} \Omega^{g}=0,`	$D^{*}\Omega^{g} = 0,$	$D^{*}\Omega^{g} = 0,$
mielke-geometrodynamics_EQ0464 (7.3.3)	153	■ 1.000 ● K|+0	`D^{*} R_{\alpha \beta}=0,`	$D^{*}R_{\alpha\beta} = 0,$	$D^{*}R_{\alpha\beta} = 0,$
mielke-geometrodynamics_EQ0468 (7.3.7)	154	■ 1.000 ● N|+0	`R_{\alpha \beta}=-{ }^{*} R_{\alpha \beta}^{(\star)},`	$R_{\alpha\beta} = -{}^{*}R_{\alpha\beta}^{(\star)},$	$R_{\alpha\beta} = -{}^{*}R_{\alpha\beta}^{(\star)},$
mielke-geometrodynamics_EQ0469 (7.3.8)	154	■ 1.000 ● N|+0	`R_{\alpha \beta}={ }^{*} R_{\alpha \beta}^{(\star)},`	$R_{\alpha\beta} = {}^{*}R_{\alpha\beta}^{(\star)},$	$R_{\alpha\beta} = {}^{*}R_{\alpha\beta}^{(\star)},$
mielke-geometrodynamics_EQ0479 (7.4.7)	157	■ 1.000 ● K|+0	`G_{\alpha}-\Lambda \eta_{\alpha}=0`	$G_{\alpha} - \Lambda\eta_{\alpha} = 0$	$G_{\alpha} - \Lambda\,\eta_{\alpha} = 0$
mielke-geometrodynamics_EQ0480 (7.5.1)	157	■ 1.000 ● N|-1	`\square^{c}:=\square-\frac{1}{6} R, \quad \square:=(1 / \sqrt{g}) \partial_{i}\left(\sqrt{g} g^{i j} \partial_{j} \right) .`	$\square^{c} := \square - \frac{1}{6}R, \quad \square := (1/\sqrt{g})\partial_{i}\left(\sqrt{g}g^{ij}\partial_{j}\right).$	$\square^{c} := \square - \frac{1}{6}R, \quad \square := (1/\sqrt{g})\partial_{i}(\sqrt{g}g^{ij}\partial_{j}).$
mielke-geometrodynamics_EQ0482 (7.5.3)	157	■ 1.000 ● N|+0	`\left(\square-\frac{2}{3} \Lambda\right) h_{i j}=0`	$\left(\square - \frac{2}{3}\Lambda\right) h_{ij} = 0$	$\left(\square - \frac{2}{3}\Lambda\right) h_{ij} = 0$
mielke-geometrodynamics_EQ0483 (7.5.4)	158	■ 1.000 ● N|+0	`\partial^{i} h_{i j}-\partial_{j} h=0`	$\partial^{i}h_{ij} - \partial_{j}h = 0$	$\partial^{i}h_{ij} - \partial_{j}h = 0$
mielke-geometrodynamics_EQ0484 (7.5.5)	158	■ 1.000 ● K|+0	`\Delta m=\sqrt{2 \Lambda / 3}>0`	$\Delta m = \sqrt{2\Lambda/3} > 0$	$\Delta m = \sqrt{2\Lambda/3} > 0$
mielke-geometrodynamics_EQ0488 (7.7.5)	160	■ 1.000 ● K|+0	`L_{\mathrm{EC}}=-\frac{1}{2 \kappa^{2}} R^{\alpha \beta} \wedge \eta_{\alpha \beta}`	$L_{\mathrm{EC}} = -\frac{1}{2\kappa^{2}}R^{\alpha\beta} \wedge \eta_{\alpha\beta}$	$L_{\mathrm{EC}} = -\frac{1}{2\kappa^{2}}R^{\alpha\beta} \wedge \eta_{\alpha\beta}$
mielke-geometrodynamics_EQ0489 (7.7.6)	160	■ 1.000 ● N|+0	`\widetilde{L}=-\sum_{k=0}^{K}(1 / 2 k) R^{\alpha \beta} \wedge \stackrel{(2 k)}{H}_{\alpha \beta}+L_{\theta},`	$\widetilde{L} = -\sum_{k=0}^{K}(1/2k)R^{\alpha\beta} \wedge \overset{(2k)}{H}{}_{\alpha\beta} + L_{\theta},$	$\widetilde{L} = -\sum_{k=0}^{K}(1/2k)\,R^{\alpha\beta} \wedge \overset{(2k)}{H}{}_{\alpha\beta} + L_{\theta}\,,$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): ● C component ● W weak ● S stable ● N noise ● K clean ● not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ0491 (7.7.9)	161	1.000 K|+0	`\widetilde{L} \rightarrow L=-\frac{1}{2}\left(R^{\alpha \beta} \wedge \widetilde{H}_{\alpha \beta}-\widetilde{L} \right)`	$\widetilde{L} \rightarrow L=-\frac{1}{2}\left(R^{\alpha \beta} \wedge \widetilde{H}_{\alpha \beta}-\widetilde{L}\right)$	$\widetilde{L} \rightarrow L=-\frac{1}{2}\left(R^{\alpha \beta} \wedge \widetilde{H}_{\alpha \beta}-\widetilde{L}\right)$
mielke-geometrodynamics_EQ0493 (7.7.11)	161	1.000 N|+0	`\widetilde{H}_{\alpha \beta \mu \nu}:=\frac{\partial^{2} \widetilde{L}}{\partial R^{\mu \nu} \partial R^{\alpha \beta}}=-\frac{\partial \widetilde{H}_{\mu \nu}}{\partial R^{\alpha \beta}}`	$\widetilde{H}_{\alpha \beta \mu \nu}:=\frac{\partial^{2} \widetilde{L}}{\partial R^{\mu \nu} \partial R^{\alpha \beta}}=-\frac{\partial \widetilde{H}_{\mu \nu}}{\partial R^{\alpha \beta}}$	$\widetilde{H}_{\alpha \beta \mu \nu}:=\frac{\partial^{2} \widetilde{L}}{\partial R^{\mu \nu} \partial R^{\alpha \beta}}=-\frac{\partial \widetilde{H}_{\mu \nu}}{\partial R^{\alpha \beta}}$
mielke-geometrodynamics_EQ0494 (7.7.12)	161	1.000 N|-1	`\widetilde{\eta}_{\alpha \beta}:=\frac{\theta_{ \mathrm{T}}^{*}}{2} \eta_{\alpha \beta}-\frac{\theta_{ \mathrm{T}}}{2} \vartheta_{\alpha} \wedge \vartheta_{ \beta}-\ell^{2} \widetilde{H}_{\alpha \beta}=0`	$\widetilde{\eta}_{\alpha \beta}:=\frac{\theta_{\mathrm{T}}^{*}}{2} \eta_{\alpha \beta}-\frac{\theta_{\mathrm{T}}}{2} \vartheta_{\alpha} \wedge \vartheta_{\beta}-\ell^{2} \widetilde{H}_{\alpha \beta}=0$	$\widetilde{\eta}_{\alpha \beta}:=\frac{\theta_{\mathrm{T}}^{*}}{2} \eta_{\alpha \beta}-\frac{\theta_{\mathrm{T}}}{2} \vartheta_{\alpha} \wedge \vartheta_{\beta}-\ell^{2} \widetilde{H}_{\alpha \beta}=0$
mielke-geometrodynamics_EQ0496 (7.7.14)	162	1.000 K|+0	`\eta:=\eta_{\alpha \beta \gamma \delta} \vartheta^{ \alpha} \wedge \vartheta^{\beta} \wedge \vartheta^{ \gamma} \wedge \vartheta^{\delta} / 4!`	$\eta:=\eta_{\alpha \beta \gamma \delta} \vartheta^{\alpha} \wedge \vartheta^{\beta} \wedge \vartheta^{\gamma} \wedge \vartheta^{\delta} / 4!$	$\eta:=\eta_{\alpha \beta \gamma \delta} \vartheta^{\alpha} \wedge \vartheta^{\beta} \wedge \vartheta^{\gamma} \wedge \vartheta^{\delta} / 4!$
mielke-geometrodynamics_EQ0499 (7.7.17)	163	1.000 K|+0	`\gamma_{\alpha} \gamma_{\beta}+\gamma_{\beta} \gamma_{ \alpha}=2 o_{\alpha \beta} \mathbf{1}_{4} .`	$\gamma_{\alpha} \gamma_{\beta}+\gamma_{\beta} \gamma_{\alpha}=2 o_{\alpha \beta} \mathbf{1}_{4} .$	$\gamma_{\alpha} \gamma_{\beta}+\gamma_{\beta} \gamma_{\alpha}=2 o_{\alpha \beta} \mathbf{1}_{4} .$
mielke-geometrodynamics_EQ0501 (7.7.19)	163	1.000 K|+0	`\gamma:=\gamma^{\alpha} \vartheta_{\alpha}`	$\gamma:=\gamma^{\alpha} \vartheta_{\alpha}$	$\gamma:=\gamma^{\alpha} \vartheta_{\alpha}$
mielke-geometrodynamics_EQ0502 (7.7.20)	163	1.000 N|+0	`{ }^{*} \gamma=\gamma^{\alpha} \eta_{\alpha}=\frac{i}{6} \gamma_{5} \gamma \wedge \gamma \wedge \gamma,`	${}^{*}\gamma=\gamma^{\alpha} \eta_{\alpha}=\frac{i}{6} \gamma_{5} \gamma \wedge \gamma \wedge \gamma,$	${}^{*}\gamma=\gamma^{\alpha} \eta_{\alpha}=\frac{i}{6} \gamma_{5} \gamma \wedge \gamma \wedge \gamma,$
mielke-geometrodynamics_EQ0503 (7.7.21)	164	1.000 N|+1	`\sigma:=\frac{1}{2} \sigma_{\alpha \beta} \vartheta^{ \alpha} \wedge \vartheta^{\beta}=\frac{i}{2} \gamma \wedge \gamma, \quad{ }^{*} \sigma=\frac{1}{2} \sigma_{ \alpha \beta} \eta^{\alpha \beta}=: \sigma^{(\star)}=i \gamma_{5} \sigma .`	$\sigma:=\frac{1}{2} \sigma_{\alpha \beta} \vartheta^{\alpha} \wedge \vartheta^{\beta}=\frac{i}{2} \gamma \wedge \gamma, \quad{}^{*} \sigma=\frac{1}{2} \sigma_{\alpha \beta} \eta^{\alpha \beta}=: \sigma^{(\star)}=i \gamma_{5} \sigma .$	$\sigma:=\frac{1}{2} \sigma_{\alpha \beta} \vartheta^{\alpha} \wedge \vartheta^{\beta}=\frac{i}{2} \gamma \wedge \gamma, \quad{}^{*} \sigma=\frac{1}{2} \sigma_{\alpha \beta} \eta^{\alpha \beta}=: \sigma^{(\star)}=i \gamma_{5} \sigma .$
mielke-geometrodynamics_EQ0504 (7.7.22)	164	1.000 N|+0	`\sigma^{(\star)}:=i \gamma_{5} \sigma, \quad \sigma^{( \star \star)}=i^{2} \gamma_{5}^{2} \sigma=-\sigma .`	$\sigma^{(\star)}:=i \gamma_{5} \sigma, \quad \sigma^{(\star \star)}=i^{2} \gamma_{5}^{2} \sigma=-\sigma .$	$\sigma^{(\star)}:=i \gamma_{5} \sigma, \quad \sigma^{(\star \star)}=i^{2} \gamma_{5}^{2} \sigma=-\sigma .$
mielke-geometrodynamics_EQ0505 (7.7.23)	164	1.000 N|+0	`\left[\gamma, \sigma^{(\star)}\right]=\gamma \wedge i \gamma_{5} \sigma-i \gamma_{5} \sigma \wedge \gamma=-i \gamma_{5}(\gamma \wedge \sigma+\sigma \wedge \gamma)=2 \gamma_{5} \gamma \wedge \gamma \wedge \gamma`	$\left[\gamma, \sigma^{(\star)}\right]=\gamma \wedge i \gamma_{5} \sigma-i \gamma_{5} \sigma \wedge \gamma=-i \gamma_{5}(\gamma \wedge \sigma+\sigma \wedge \gamma)=2 \gamma_{5} \gamma \wedge \gamma \wedge \gamma$	$\left[\gamma, \sigma^{(\star)}\right]=\gamma \wedge i \gamma_{5} \sigma-i \gamma_{5} \sigma \wedge \gamma=-i \gamma_{5}(\gamma \wedge \sigma+\sigma \wedge \gamma)=2 \gamma_{5} \gamma \wedge \gamma \wedge \gamma$
mielke-geometrodynamics_EQ0508 (7.7.26)	165	1.000 N|+0	`\gamma \rightarrow \gamma^{\theta}=e^{i \gamma^{5} \theta} \gamma e^{-i \gamma^{5} \theta}`	$\gamma \rightarrow \gamma^{\theta}=e^{i \gamma^{5} \theta} \gamma e^{-i \gamma^{5} \theta}$	$\gamma \rightarrow \gamma^{\theta}=e^{i \gamma^{5} \theta} \gamma e^{-i \gamma^{5} \theta}$
mielke-geometrodynamics_EQ0510 (7.7.28)	165	1.000 K|+0	`\gamma:=\vartheta^{\alpha} \gamma_{\alpha}, \quad \Gamma:=\frac{i}{4} \Gamma^{\alpha \beta} \sigma_{\alpha \beta}=\Gamma^{\{ \}}-K,`	$\gamma:=\vartheta^{\alpha} \gamma_{\alpha}, \quad \Gamma:=\frac{i}{4} \Gamma^{\alpha \beta} \sigma_{\alpha \beta}=\Gamma^{\{\}}-K,$	$\gamma:=\vartheta^{\alpha} \gamma_{\alpha}, \quad \Gamma:=\frac{i}{4} \Gamma^{\alpha \beta} \sigma_{\alpha \beta}=\Gamma^{\{\}}-K,$
mielke-geometrodynamics_EQ0513 (7.7.31)	166	1.000 N|+0	`\Omega^{(\star)}=\frac{1}{4} R_{\alpha \beta}^{(\star)} \sigma^{\alpha \beta}, \quad R_{\alpha \beta}^{(\star)}:= \frac{1}{2} \eta_{\alpha \beta \gamma \delta} R^{\gamma \delta} .`	$\Omega^{(\star)}=\frac{1}{4} R_{\alpha \beta}^{(\star)} \sigma^{\alpha \beta}, \quad R_{\alpha \beta}^{(\star)}:=\frac{1}{2} \eta_{\alpha \beta \gamma \delta} R^{\gamma \delta} .$	$\Omega^{(\star)}=\frac{1}{4} R_{\alpha \beta}^{(\star)} \sigma^{\alpha \beta}, \quad R_{\alpha \beta}^{(\star)}:=\frac{1}{2} \eta_{\alpha \beta \gamma \delta} R^{\gamma \delta} .$
mielke-geometrodynamics_EQ0514 (7.7.32)	166	1.000 K|+0	`D \sigma=\frac{i}{2}[\Theta, \gamma]`	$D \sigma=\frac{i}{2}[\Theta, \gamma]$	$D \sigma=\frac{i}{2}[\Theta, \gamma]$
mielke-geometrodynamics_EQ0517 (7.7.35)	166	1.000 N|+0	`d^{*} \gamma=0, \quad d^{*} \Gamma=0`	$d^{*} \gamma=0, \quad d^{*} \Gamma=0$	$d^{*} \gamma=0, \quad d^{*} \Gamma=0$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

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mielke-geometrodynamics_EQ0518 (7.7.36)	166	1.000 N|+0	`D D \Phi=\left[\Omega^{g}, \Phi\right],`	$DD\Phi = [\Omega^g, \Phi]\,,$	$DD\Phi = [\Omega^g, \Phi]\,,$
mielke-geometrodynamics_EQ0520 (7.7.38)	166	1.000 C|+3	`G:=G_{\alpha} \gamma^{\alpha}:=\frac{1}{2} R^{\mu \nu} \wedge \eta_{\mu \nu \lambda} \gamma^{\lambda}=-i \gamma_{5}\left(\Omega^{g} \wedge \gamma+\gamma \wedge \Omega^{g}\right)=i\left[\gamma, \gamma_{5} \Omega^{g} \right] .`	$G := G_\alpha\gamma^\alpha := \frac{1}{2}R^{\mu\nu} \wedge \eta_{\mu\nu\lambda}\gamma^\lambda = -i\,\gamma_5(\Omega^g \wedge \gamma + \gamma \wedge \Omega^g) = i\,[\gamma, \gamma_5\Omega^g]\,.$	$G := G_\alpha\gamma^\alpha := \frac{1}{2}R^{\mu\nu} \wedge \eta_{\mu\nu\lambda}\gamma^\lambda = -i\,\gamma_5(\Omega^g \wedge \gamma + \gamma \wedge \Omega^g) = i[\gamma, \gamma_5\Omega^g]\,.$
mielke-geometrodynamics_EQ0521 (7.7.39)	167	1.000 W|+0	`D[\gamma, \Theta] \equiv 2 i\left[\sigma, \Omega^{g} \right], \quad D\left[\gamma, \Omega^{g}\right] \equiv \left[\Theta, \Omega^{g}\right], \quad D G \equiv i\left[ \Theta, \gamma_{5} \Omega^{g}\right],`	$D[\gamma, \Theta] \equiv 2i\,[\sigma, \Omega^g]\,, \quad D\,[\gamma, \Omega^g] \equiv [\Theta, \Omega^g]\,, \quad DG \equiv i\,[\Theta, \gamma_5\Omega^g]\,,$	$D[\gamma\,, \Theta] \equiv 2i[\sigma\,, \Omega^g]\,, \quad D[\gamma\,, \Omega^g] \equiv [\Theta\,, \Omega^g]\,, \quad DG \equiv i[\Theta, \gamma_5\Omega^g]\,,$
mielke-geometrodynamics_EQ0523 (7.7.42)	167	1.000 N|+0	`D R_{\alpha \beta}^{(\star)} \equiv 0,`	$DR^{(\star)}_{\alpha\beta} \equiv 0,$	$DR^{(\star)}_{\alpha\beta} \equiv 0,$
mielke-geometrodynamics_EQ0532 (7.7.52)	169	1.000 K|+0	`{ }^{(6)} R^{\alpha \beta}=-\frac{1}{12} R \vartheta^{ \alpha} \wedge \vartheta^{\beta}`	${}^{(6)}R^{\alpha\beta} = -\frac{1}{12}R\vartheta^\alpha \wedge \vartheta^\beta$	${}^{(6)}R^{\alpha\beta} = -\frac{1}{12}R\vartheta^\alpha \wedge \vartheta^\beta$
mielke-geometrodynamics_EQ0541 (8.3.2)	177	1.000 N|+0	`s \gamma=\psi-[C, \gamma]`	$s\gamma = \psi - [C, \gamma]$	$s\gamma = \psi - [C, \gamma]$
mielke-geometrodynamics_EQ0542 (8.3.3)	177	1.000 K|+0	`s \sigma:=\frac{i}{2} s(\gamma \wedge \gamma)= \frac{i}{2}([\psi, \gamma]-[[C, \gamma], \gamma])= \frac{i}{2}[\psi, \gamma]-[C, \sigma] .`	$s\sigma := \frac{i}{2}s(\gamma \wedge \gamma) = \frac{i}{2}([\psi, \gamma] - [[C, \gamma], \gamma]) = \frac{i}{2}[\psi, \gamma] - [C, \sigma].$	$s\sigma := \frac{i}{2}s(\gamma \wedge \gamma) = \frac{i}{2}\,([\psi, \gamma] - [[C, \gamma], \gamma]) = \frac{i}{2}[\psi, \gamma] - [C, \sigma]\,.$
mielke-geometrodynamics_EQ0543 (8.3.4)	177	1.000 N|+0	`s \bar{c}=b, \quad s b=0 .`	$s\bar{c} = b, \quad sb = 0.$	$s\bar{c} = b\,, \quad sb = 0\,.$
mielke-geometrodynamics_EQ0546 (8.3.7)	178	1.000 N|+0	`d s^{2}=\frac{1}{4} \operatorname{Tr}\{\gamma \otimes \gamma\} \stackrel{*}{=} o_{\alpha \beta} D \xi^{\alpha} \otimes D \xi^{\beta}`	$ds^2 = \frac{1}{4}\,\mathrm{Tr}\{\gamma \otimes \gamma\} \stackrel{*}{=} o_{\alpha\beta}D\xi^\alpha \otimes D\xi^\beta$	$ds^2 = \frac{1}{4}\mathrm{Tr}\{\gamma \otimes \gamma\} \stackrel{*}{=} o_{\alpha\beta}D\xi^\alpha \otimes D\xi^\beta$
mielke-geometrodynamics_EQ0550 (8.4.4)	179	1.000 N|-1	`L_{\mathrm{TG}}=d C_{\mathrm{RR}}+L_{\mathrm{FP}}=d C_{ \mathrm{RR}}+s\{\cdots\}`	$L_{\mathrm{TG}} = dC_{\mathrm{RR}} + L_{\mathrm{FP}} = dC_{\mathrm{RR}} + s\{\cdots\}$	$L_{\mathrm{TG}} = dC_{\mathrm{RR}} + L_{\mathrm{FP}} = dC_{\mathrm{RR}} + s\{\cdots\}$
mielke-geometrodynamics_EQ0559 (8.5.2)	181	1.000 N|+0	`\sigma:=\frac{i}{2} \gamma \wedge \gamma .`	$\sigma := \frac{i}{2}\gamma \wedge \gamma.$	$\sigma := \frac{i}{2}\gamma \wedge \gamma.$
mielke-geometrodynamics_EQ0563 (8.5.6)	182	1.000 N|+0	`\Omega^{g(\theta)}:=\sqrt{2}\left(\Omega^{g} \sin \theta+{ }^{*} \Omega^{g(\star)} \cos \theta\right)`	$\Omega^{g(\theta)} := \sqrt{2}\left(\Omega^g \sin\theta + {}^*\Omega^{g(\star)} \cos\theta\right)$	$\Omega^{g(\theta)} := \sqrt{2}\left(\Omega^g \sin\theta + {}^*\Omega^{g(\star)} \cos\theta\right)$
mielke-geometrodynamics_EQ0564 (8.6.1)	183	1.000 K|+0	`L_{\mathrm{qPG}}=\frac{\Lambda}{\ell^{2}} \eta-\frac{a_{0}}{4 \ell^{2}} R^{\alpha \beta} \wedge \eta_{ \alpha \beta}-\frac{1}{2} T^{\alpha} \wedge H_{\alpha}-\frac{1}{2} R^{\alpha \beta} \wedge H_{\alpha \beta} .`	$L_{\mathrm{qPG}} = \frac{\Lambda}{\ell^2}\eta - \frac{a_0}{4\ell^2}R^{\alpha\beta} \wedge \eta_{\alpha\beta} - \frac{1}{2}T^\alpha \wedge H_\alpha - \frac{1}{2}R^{\alpha\beta} \wedge H_{\alpha\beta}.$	$L_{\mathrm{qPG}} = \frac{\Lambda}{\ell^2}\,\eta - \frac{a_0}{4\ell^2}R^{\alpha\beta} \wedge \eta_{\alpha\beta} - \frac{1}{2}T^\alpha \wedge H_\alpha - \frac{1}{2}R^{\alpha\beta} \wedge H_{\alpha\beta}\,.$
mielke-geometrodynamics_EQ0565 (8.6.2)	183	1.000 N|+1	`H_{\alpha}:=-\partial L_{\mathrm{qPG}} / \partial T^{ \alpha}=\frac{1}{\ell^{2}} *\left(\sum_{M=1}^{3} a_{(M)}{ }^{(M)} T_{\alpha}\right),`	$H_\alpha := -\partial L_{\mathrm{qPG}}/\partial T^\alpha = \frac{1}{\ell^2} * \left(\sum_{M=1}^{3} a_{(M)}{}^{(M)}T_\alpha\right),$	$H_\alpha := -\,\partial L_{\mathrm{qPG}}/\partial T^\alpha = \frac{1}{\ell^2} * \left(\sum_{M=1}^{3} a_{(M)}{}^{(M)}T_\alpha\right),$
mielke-geometrodynamics_EQ0569 (8.6.7)	184	1.000 N|+0	`\begin{aligned} D H_{\alpha}-E_{\alpha} & =\Sigma_{ \alpha}, \\ D H_{\alpha \beta}+\vartheta_{[\alpha} \wedge H_{\beta]} & =\tau_{\alpha \beta}, \end{aligned}`	$\begin{aligned} DH_\alpha - E_\alpha &= \Sigma_\alpha, \\ DH_{\alpha\beta} + \vartheta_{[\alpha} \wedge H_{\beta]} &= \tau_{\alpha\beta}, \end{aligned}$	$\begin{aligned} DH_\alpha - E_\alpha &= \Sigma_\alpha, \\ DH_{\alpha\beta} + \vartheta_{[\alpha} \wedge H_{\beta]} &= \tau_{\alpha\beta}\,, \end{aligned}$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ0571 (8.6.9)	184	1.000 N|-1	`\frac{\theta_{\mathrm{T}}^{*}}{2 \ell^{2}} \eta_{\alpha \beta \gamma} T^{\gamma}+\frac{\theta_{\mathrm{T}}}{ \ell^{2}} \vartheta_{[\alpha} \wedge T_{\beta]}+ \vartheta_{[\alpha} \wedge H_{\beta]}(* *)=\tau_{\alpha \beta} .`	$\frac{\theta_{\mathrm{T}}^{*}}{2\ell^{2}}\eta_{\alpha\beta\gamma}T^{\gamma}+\frac{\theta_{\mathrm{T}}}{\ell^{2}}\vartheta_{[\alpha}\wedge T_{\beta]}+\vartheta_{[\alpha}\wedge H_{\beta]}(**)=\tau_{\alpha\beta}\,.$	$\frac{\theta_{\mathrm{T}}^{*}}{2\ell^{2}}\eta_{\alpha\beta\gamma}T^{\gamma}+\frac{\theta_{\mathrm{T}}}{\ell^{2}}\vartheta_{[\alpha}\wedge T_{\beta]}+\vartheta_{[\alpha}\wedge H_{\beta]}(**)=\tau_{\alpha\beta}\,.$
mielke-geometrodynamics_EQ0576 (8.6.14)	185	1.000 N|-1	`\Lambda_{\mathrm{eff}}=\frac{1}{\theta_{ \mathrm{T}}^{*}}\left[\Lambda-\frac{1}{4}\left(\theta_{ \mathrm{T}}^{*}-a_{0}\right) R\right]=\frac{\Lambda}{ \theta_{\mathrm{T}}^{*}}-\Lambda_{\theta}`	$\Lambda_{\mathrm{eff}}=\frac{1}{\theta_{\mathrm{T}}^{*}}\left[\Lambda-\frac{1}{4}\left(\theta_{\mathrm{T}}^{*}-a_{0}\right)R\right]=\frac{\Lambda}{\theta_{\mathrm{T}}^{*}}-\Lambda_{\theta}$	$\Lambda_{\mathrm{eff}}=\frac{1}{\theta_{\mathrm{T}}^{*}}\left[\Lambda-\frac{1}{4}(\theta_{\mathrm{T}}^{*}-a_{0})R\right]=\frac{\Lambda}{\theta_{\mathrm{T}}^{*}}-\Lambda_{\theta}$
mielke-geometrodynamics_EQ0578 (8.6.16)	186	1.000 K|+0	`\widetilde{L}_{\mathrm{qPG}}=L_{\mathrm{qPG}}+\lambda_{ \alpha} \wedge T^{\alpha} .`	$\widetilde{L}_{\mathrm{qPG}}=L_{\mathrm{qPG}}+\lambda_{\alpha}\wedge T^{\alpha}.$	$\widetilde{L}_{\mathrm{qPG}}=L_{\mathrm{qPG}}+\lambda_{\alpha}\wedge T^{\alpha}\,.$
mielke-geometrodynamics_EQ0582 (8.6.20)	188	1.000 N|+0	`\Lambda_{\theta}=\frac{3\left(\theta_{ \mathrm{T}}^{*}-a_{0}\right)^{2}}{2 \ell^{2}\left( \theta_{\mathrm{L}}^{\star}-b_{6}\right) \theta_{ \mathrm{T}}^{*}}`	$\Lambda_{\theta}=\frac{3\left(\theta_{\mathrm{T}}^{*}-a_{0}\right)^{2}}{2\ell^{2}\left(\theta_{\mathrm{L}}^{\star}-b_{6}\right)\theta_{\mathrm{T}}^{*}}$	$\Lambda_{\theta}=\frac{3(\theta_{\mathrm{T}}^{*}-a_{0})^{2}}{2\ell^{2}(\theta_{\mathrm{L}}^{\star}-b_{6})\theta_{\mathrm{T}}^{*}}$
mielke-geometrodynamics_EQ0586 (9.1.4)	193	1.000 N|+0	`d s^{2}=\left(\frac{N(r \pm t)}{r}\right)^{2}\left(-d t^{2}+d r^{2}+r^{2} d \Omega^{2}\right),`	$ds^{2}=\left(\frac{N(r\pm t)}{r}\right)^{2}\left(-dt^{2}+dr^{2}+r^{2}d\Omega^{2}\right),$	$ds^{2}=\left(\frac{N(r\pm t)}{r}\right)^{2}(-dt^{2}+dr^{2}+r^{2}d\Omega^{2}),$
mielke-geometrodynamics_EQ0588 (9.1.6)	194	1.000 N|+0	`u^{2}-v^{2}=e^{r * / 4 \mu}`	$u^{2}-v^{2}=e^{r*/4\mu}$	$u^{2}-v^{2}=e^{r*/4\mu}$
mielke-geometrodynamics_EQ0589 (9.1.7)	194	1.000 N|+0	`(u+v) /(u-v)=e^{t / 2 \mu},`	$(u+v)/(u-v)=e^{t/2\mu},$	$(u+v)/(u-v)=e^{t/2\mu},$
mielke-geometrodynamics_EQ0590 (9.1.8)	194	1.000 N|+0	`d s^{2}=16 \mu^{2} e^{\nu-r^{* / 2 \mu}}\left(-d \nu^{2}+d u^{2}\right)+r^{2} d \Omega^{2},`	$ds^{2}=16\mu^{2}e^{\nu-r^{*/2\mu}}\left(-d\nu^{2}+du^{2}\right)+r^{2}d\Omega^{2},$	$ds^{2}=16\mu^{2}e^{\nu-r^{*/2\mu}}(-d\nu^{2}+du^{2})+r^{2}d\Omega^{2},$
mielke-geometrodynamics_EQ0591 (9.1.9)	195	1.000 N|+0	`\Omega^{\{ \}}=\Omega_{\mathrm{C}}^{\{ \}}+\bar{\Omega}^{ \{ \}}-\frac{1}{6} R^{\{ \}} \vartheta \wedge \vartheta,`	$\Omega^{\{\}}=\Omega_{\mathrm{C}}^{\{\}}+\bar{\Omega}^{\{\}}-\frac{1}{6}R^{\{\}}\vartheta\wedge\vartheta,$	$\Omega^{\{\}}=\Omega_{\mathrm{C}}^{\{\}}+\overline{\Omega}^{\{\}}-\frac{1}{6}R^{\{\}}\vartheta\wedge\vartheta,$
mielke-geometrodynamics_EQ0600 (9.1.18)	197	1.000 W|+1	`\begin{aligned} d s_{\mathrm{Sds}}^{2} & =\left(1-\frac{2 \mu}{r}+\frac{\kappa}{4 \ell^{* 2}}\right) d \tau^{2} \ \ & +\left(1-\frac{2 \mu}{r}+\frac{\kappa}{4 \ell^{* 2}} \right)^{-1} d r^{2}+r^{2} d \Omega^{2} \end{aligned}`	$\begin{aligned} ds_{\mathrm{Sds}}^{2} &= \left(1-\frac{2\mu}{r}+\frac{\kappa}{4\ell^{*2}}\right)d\tau^{2} \\ &\quad+\left(1-\frac{2\mu}{r}+\frac{\kappa}{4\ell^{*2}}\right)^{-1}dr^{2}+r^{2}d\Omega^{2} \end{aligned}$	$\begin{aligned} ds_{\mathrm{Sds}}^{2} &= \left(1-\frac{2\mu}{r}+\frac{\kappa}{4\ell^{*2}}\right)d\tau^{2} \\ &\quad+\left(1-\frac{2\mu}{r}+\frac{\kappa}{4\ell^{*2}}\right)^{-1}dr^{2}+r^{2}d\Omega^{2}, \end{aligned}$
mielke-geometrodynamics_EQ0601 (9.1.19)	197	1.000 N|+0	`\begin{aligned} & f=\frac{2 \mu}{r^{2}}\left(1-\frac{2 \mu}{r}+\frac{\kappa}{4 \ell^{* 2}}\right)^{-1 / 2} \\ & g=h=k=0 \end{aligned}`	$\begin{aligned} & f=\frac{2\mu}{r^{2}}\left(1-\frac{2\mu}{r}+\frac{\kappa}{4\ell^{*2}}\right)^{-1/2} \\ & g=h=k=0 \end{aligned}$	$\begin{aligned} & f=\frac{2\mu}{r^{2}}\left(1-\frac{2\mu}{r}+\frac{\kappa}{4\ell^{*2}}\right)^{-1/2} \\ & g=h=k=0 \end{aligned}$
mielke-geometrodynamics_EQ0603 (9.2.2)	198	1.000 K|+0	`p_{1}\left(M^{4}\right)=-3 \tau`	$p_{1}\left(M^{4}\right)=-3\tau$	$p_{1}(M^{4})=-3\tau$

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mielke-geometrodynamics_EQ0607 (9.2.8)	200	1.000 W|+0	\begin{aligned} \chi(M \# N) & =\chi(M)+\chi(N)-\chi \left(S^{n}\right), \\ \chi(M \times N) & =\chi(M) \cdot \chi(N), \\ \chi\left(M^{2}\right) & =2(g-1), \\ \chi \left(\mathbb{C} P^{2}\right) & =3 \end{aligned}	$\begin{aligned} \chi(M \# N) & =\chi(M)+\chi(N)-\chi \left(S^{n}\right), \\ \chi(M \times N) & =\chi(M) \cdot \chi(N), \\ \chi\left(M^{2}\right) & =2(g-1), \\ \chi \left(\mathbb{C} P^{2}\right) & =3 \end{aligned}$	$\begin{aligned} \chi(M \# N) & =\chi(M)+\chi(N)-\chi \left(S^{n}\right), \\ \chi(M \times N) & =\chi(M) \cdot \chi(N), \\ \chi\left(M^{2}\right) & =2(g-1), \\ \chi \left(\mathbb{C} P^{2}\right) & =3 \end{aligned}$
mielke-geometrodynamics_EQ0608 (9.2.10)	201	1.000 K|+0	\chi\left(M^{2 k+1}\right)=0	$\chi\left(M^{2 k+1}\right)=0$	$\chi\left(M^{2 k+1}\right)=0$
mielke-geometrodynamics_EQ0612 (10.0.1)	208	1.000 N|+0	L_{\mathrm{EC}}=-\frac{\chi}{\ell} \vartheta^{\alpha} \wedge R_{\alpha}^{\star}	$L_{\mathrm{EC}}=-\frac{\chi}{\ell} \vartheta^{\alpha} \wedge R_{\alpha}^{\star}$	$L_{\mathrm{EC}}=-\frac{\chi}{\ell} \vartheta^{\alpha} \wedge R_{\alpha}^{\star}$
mielke-geometrodynamics_EQ0614 (10.1.2)	209	1.000 N|+0	T^{\alpha}:=d \vartheta^{\alpha}-(-1)^{s} \eta^{\alpha \beta} \wedge \Gamma_{\beta}^{\star}	$T^{\alpha}:=d \vartheta^{\alpha}-(-1)^{s} \eta^{\alpha \beta} \wedge \Gamma_{\beta}^{\star}$	$T^{\alpha}:=d \vartheta^{\alpha}-(-1)^{s} \eta^{\alpha \beta} \wedge \Gamma_{\beta}^{\star}$
mielke-geometrodynamics_EQ0615 (10.1.3)	209	1.000 W|+0	R_{\alpha}^{\star}=\frac{1}{2} \eta_{\alpha \beta \gamma} R^{\beta \gamma}:=d \Gamma_{\alpha}^{\star}+ \frac{(-1)^{s}}{2} \eta_{\alpha}^{\beta \gamma} \Gamma_{ \beta}^{\star} \wedge \Gamma_{\gamma}^{\star},	$R_{\alpha}^{\star}=\frac{1}{2} \eta_{\alpha \beta \gamma} R^{\beta \gamma}:=d \Gamma_{\alpha}^{\star}+ \frac{(-1)^{s}}{2} \eta_{\alpha}^{\beta \gamma} \Gamma_{ \beta}^{\star} \wedge \Gamma_{\gamma}^{\star},$	$R_{\alpha}^{\star}=\frac{1}{2} \eta_{\alpha \beta \gamma} R^{\beta \gamma}:=d \Gamma_{\alpha}^{\star}+ \frac{(-1)^{s}}{2} \eta_{\alpha}^{\beta \gamma} \Gamma_{ \beta}^{\star} \wedge \Gamma_{\gamma}^{\star},$
mielke-geometrodynamics_EQ0616 (10.1.4)	209	1.000 N|+0	D T^{\alpha} \equiv(-1)^{s} \eta^{\alpha \beta} \wedge R_{\beta}^{\star}	$D T^{\alpha} \equiv(-1)^{s} \eta^{\alpha \beta} \wedge R_{\beta}^{\star}$	$D T^{\alpha} \equiv(-1)^{s} \eta^{\alpha \beta} \wedge R_{\beta}^{\star}$
mielke-geometrodynamics_EQ0617 (10.1.5)	209	1.000 N|+0	D R_{\alpha}^{\star} \equiv 0 .	$D R_{\alpha}^{\star} \equiv 0 .$	$D R_{\alpha}^{\star} \equiv 0 .$
mielke-geometrodynamics_EQ0618 (10.1.6)	209	1.000 N|+0	C_{\mathrm{T}}:=\frac{1}{2 \ell^{2}} \vartheta^{\alpha} \wedge T_{\alpha}=-\frac{(-1)^{s}}{\ell^{2}} \eta^{ \alpha} \wedge K_{\alpha}^{\star},	$C_{\mathrm{T}}:=\frac{1}{2 \ell^{2}} \vartheta^{\alpha} \wedge T_{\alpha}=-\frac{(-1)^{s}}{\ell^{2}} \eta^{ \alpha} \wedge K_{\alpha}^{\star},$	$C_{\mathrm{T}}:=\frac{1}{2 \ell^{2}} \vartheta^{\alpha} \wedge T_{\alpha}=-\frac{(-1)^{s}}{\ell^{2}} \eta^{ \alpha} \wedge K_{\alpha}^{\star},$
mielke-geometrodynamics_EQ0619 (10.1.7)	209	1.000 K|+0	C_{\mathrm{L}}:=(-1)^{s} \Gamma^{\star \alpha} \wedge R_{ \alpha}^{\star}-\frac{1}{3!} \eta_{\alpha \beta \gamma} \Gamma^{\star \alpha} \wedge \Gamma^{\star \beta} \wedge \Gamma^{\star \gamma} .	$C_{\mathrm{L}}:=(-1)^{s} \Gamma^{\star \alpha} \wedge R_{\alpha}^{\star}-\frac{1}{3!} \eta_{\alpha \beta \gamma} \Gamma^{\star \alpha} \wedge \Gamma^{\star \beta} \wedge \Gamma^{\star \gamma} .$	$C_{\mathrm{L}}:=(-1)^{s} \Gamma^{\star \alpha} \wedge R_{\alpha}^{\star}-\frac{1}{3!} \eta_{\alpha \beta \gamma} \Gamma^{\star \alpha} \wedge \Gamma^{\star \beta} \wedge \Gamma^{\star \gamma} .$
mielke-geometrodynamics_EQ0621 (10.1.9)	209	1.000 N|-2	\frac{\delta C_{\mathrm{L}}}{\delta \vartheta^{\alpha}}=0 \quad \text { and } \quad \frac{\delta C_{\mathrm{L}}}{ \delta \Gamma^{\star \alpha}}=(-1)^{s} 2 R_{\alpha}^{ \star},	$\frac{\delta C_{\mathrm{L}}}{\delta \vartheta^{\alpha}}=0 \quad \text { and } \quad \frac{\delta C_{\mathrm{L}}}{ \delta \Gamma^{\star \alpha}}=(-1)^{s} 2 R_{\alpha}^{ \star},$	$\frac{\delta C_{\mathrm{L}}}{\delta \vartheta^{\alpha}}=0 \quad \text { and } \quad \frac{\delta C_{\mathrm{L}}}{ \delta \Gamma^{\star \alpha}}=(-1)^{s} 2 R_{\alpha}^{ \star},$
mielke-geometrodynamics_EQ0622 (10.1.10)	210	1.000 N|-1	C_{\mathrm{TL}}:=\frac{1}{\ell}\left(\Gamma^{\star \alpha} \wedge T_{\alpha}-\frac{(-1)^{s}}{2} \eta_{\alpha \beta \gamma} \Gamma^{\star \alpha} \wedge \Gamma^{\star \beta} \wedge \vartheta^{\gamma}\right) .	$C_{\mathrm{TL}}:=\frac{1}{\ell}\left(\Gamma^{\star \alpha} \wedge T_{\alpha}-\frac{(-1)^{s}}{2} \eta_{\alpha \beta \gamma} \Gamma^{\star \alpha} \wedge \Gamma^{\star \beta} \wedge \vartheta^{\gamma}\right) .$	$C_{\mathrm{TL}}:=\frac{1}{\ell}\left(\Gamma^{\star \alpha} \wedge T_{\alpha}-\frac{(-1)^{s}}{2} \eta_{\alpha \beta \gamma} \Gamma^{\star \alpha} \wedge \Gamma^{\star \beta} \wedge \vartheta^{\gamma}\right) .$
mielke-geometrodynamics_EQ0625 (10.1.13)	210	1.000 N|+0	D H_{\alpha}^{\star}-S_{\alpha}=\tau_{\alpha}^{\star},	$D H_{\alpha}^{\star}-S_{\alpha}=\tau_{\alpha}^{\star},$	$D H_{\alpha}^{\star}-S_{\alpha}=\tau_{\alpha}^{\star},$
mielke-geometrodynamics_EQ0626 (10.1.14)	211	1.000 N|+0	H_{\alpha}:=-\frac{\partial L}{\partial T^{\alpha}}, \quad H_{\alpha}^{\star}:=-\frac{(-1)^{s}}{2} \frac{ \partial L}{\partial R^{\star \alpha}},	$H_{\alpha}:=-\frac{\partial L}{\partial T^{\alpha}}, \quad H_{\alpha}^{\star}:=-\frac{(-1)^{s}}{2} \frac{ \partial L}{\partial R^{\star \alpha}},$	$H_{\alpha}:=-\frac{\partial L}{\partial T^{\alpha}}, \quad H_{\alpha}^{\star}:=-\frac{(-1)^{s}}{2} \frac{ \partial L}{\partial R^{\star \alpha}},$

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mielke-geometrodynamics_EQ0628 (10.1.16)	211	1.000 N|+0	S_{\alpha}:=\frac{(-1)^{s}}{2} \frac{\partial L}{\partial \Gamma^{\star \alpha}}=\frac{1}{2} \eta_{\alpha \beta} \wedge H^{\beta} .	$S_\alpha := \frac{(-1)^s}{2}\frac{\partial L}{\partial \Gamma^{\star\alpha}} = \frac{1}{2}\eta_{\alpha\beta}\wedge H^\beta.$	$S_\alpha := \frac{(-1)^s}{2}\frac{\partial L}{\partial \Gamma^{\star\alpha}} = \frac{1}{2}\eta_{\alpha\beta}\wedge H^\beta.$
mielke-geometrodynamics_EQ0629 (10.1.17)	211	1.000 N|+0	\Sigma_{\alpha}:=\frac{\delta L_{\mathrm{MAT}}}{\delta \vartheta^{\alpha}}, \quad \tau_{\alpha}^{\star}:= \frac{(-1)^{s}}{2} \frac{\delta L_{\mathrm{MAT}}}{\delta \Gamma^{\star \alpha}},	$\Sigma_\alpha := \frac{\delta L_{\mathrm{MAT}}}{\delta \vartheta^\alpha}, \quad \tau_\alpha^\star := \frac{(-1)^s}{2}\frac{\delta L_{\mathrm{MAT}}}{\delta \Gamma^{\star\alpha}},$	$\Sigma_\alpha := \frac{\delta L_{\mathrm{MAT}}}{\delta \vartheta^\alpha}, \quad \tau_\alpha^\star := \frac{(-1)^s}{2}\frac{\delta L_{\mathrm{MAT}}}{\delta \Gamma^{\star\alpha}},$
mielke-geometrodynamics_EQ0630 (10.2.1)	211	1.000 N|-1	L_{\mathrm{EC}}:=-\frac{\chi}{\ell} \vartheta^{\alpha} \wedge R_{\alpha}^{\star} \equiv-\chi C_{\mathrm{TL}}- \frac{\chi}{\ell} d\left(\Gamma_{\alpha}^{\star} \wedge \vartheta^{\alpha}\right)	$L_{\mathrm{EC}} := -\frac{\chi}{\ell}\vartheta^\alpha\wedge R_\alpha^\star \equiv -\chi C_{\mathrm{TL}} - \frac{\chi}{\ell} d\left(\Gamma_\alpha^\star\wedge\vartheta^\alpha\right)$	$L_{\mathrm{EC}} := -\frac{\chi}{\ell}\vartheta^\alpha\wedge R_\alpha^\star \equiv -\chi\, C_{\mathrm{TL}} - \frac{\chi}{\ell}\, d(\Gamma_\alpha^\star\wedge\vartheta^\alpha)$
mielke-geometrodynamics_EQ0631 (10.2.2)	211	1.000 C|-5	L_{\mathrm{MB}}\left(\vartheta^{\alpha}, \Gamma_{ \alpha}^{\star}\right)=\theta_{\mathrm{T}} C_{ \mathrm{T}}+\theta_{\mathrm{L}} C_{\mathrm{L}}+\theta_{ \mathrm{TL}} C_{\mathrm{TL}},	$L_{\mathrm{MB}}\left(\vartheta^\alpha, \Gamma_\alpha^\star\right) = \theta_{\mathrm{T}} C_{\mathrm{T}} + \theta_{\mathrm{L}} C_{\mathrm{L}} + \theta_{\mathrm{TL}} C_{\mathrm{TL}},$	$L_{\mathrm{MB}}(\vartheta^\alpha, \Gamma_\alpha^\star) = \theta_{\mathrm{T}} C_{\mathrm{T}} + \theta_{\mathrm{L}} C_{\mathrm{L}} + \theta_{\mathrm{TL}} C_{\mathrm{TL}}\,,$
mielke-geometrodynamics_EQ0632 (10.2.3)	212	1.000 C|-3	-\theta_{\mathrm{TL}} R_{\alpha}^{\star}-\frac{1}{\ell} \theta_{\mathrm{T}} T_{\alpha}=\ell \Sigma_{\alpha}	$-\theta_{\mathrm{TL}} R_\alpha^\star - \frac{1}{\ell}\theta_{\mathrm{T}} T_\alpha = \ell\Sigma_\alpha$	$-\theta_{\mathrm{TL}} R_\alpha^\star - \frac{1}{\ell}\theta_{\mathrm{T}} T_\alpha = \ell\, \Sigma_\alpha$
mielke-geometrodynamics_EQ0634 (10.2.5)	212	1.000 N|-2	T_{\alpha}-\frac{\varepsilon}{\ell} \eta_{\alpha}= \frac{2}{A} \ell\left(\theta_{\mathrm{TL}} \tau_{ \alpha}^{\star}-\theta_{\mathrm{L}} \ell \Sigma_{\alpha} \right)	$T_\alpha - \frac{\varepsilon}{\ell}\eta_\alpha = \frac{2}{A}\ell\left(\theta_{\mathrm{TL}}\tau_\alpha^\star - \theta_{\mathrm{L}}\ell\Sigma_\alpha\right)$	$T_\alpha - \frac{\varepsilon}{\ell}\eta_\alpha = \frac{2}{A}\ell\left(\theta_{\mathrm{TL}}\tau_\alpha^\star - \theta_{\mathrm{L}}\ell\,\Sigma_\alpha\right)$
mielke-geometrodynamics_EQ0635 (10.2.6)	212	1.000 C|-3	R_{\alpha}^{\star}-\frac{\rho}{\ell^{2}} \eta_{\alpha}= \frac{2}{A}\left(\theta_{\mathrm{TL}} \ell \Sigma_{ \alpha}-\theta_{\mathrm{T}} \tau_{\alpha}^{\star}\right)	$R_\alpha^\star - \frac{\rho}{\ell^2}\eta_\alpha = \frac{2}{A}\left(\theta_{\mathrm{TL}}\ell\Sigma_\alpha - \theta_{\mathrm{T}}\tau_\alpha^\star\right)$	$R_\alpha^\star - \frac{\rho}{\ell^2}\eta_\alpha = \frac{2}{A}\left(\theta_{\mathrm{TL}}\ell\,\Sigma_\alpha - \theta_{\mathrm{T}}\tau_\alpha^\star\right)$
mielke-geometrodynamics_EQ0638 (10.2.9)	213	1.000 N|+0	R_{\alpha}^{\star} \equiv R_{\alpha}^{\{ \} \star}-D K_{ \alpha}^{\star}+\frac{1}{2} \eta_{\alpha \beta \gamma} K^{\star \beta} \wedge K^{\star \gamma}	$R_\alpha^\star \equiv R_\alpha^{\{\}\star} - DK_\alpha^\star + \frac{1}{2}\eta_{\alpha\beta\gamma}K^{\star\beta}\wedge K^{\star\gamma}$	$R_\alpha^\star \equiv R_\alpha^{\{\}\star} - DK_\alpha^\star + \frac{1}{2}\eta_{\alpha\beta\gamma}K^{\star\beta}\wedge K^{\star\gamma}$
mielke-geometrodynamics_EQ0640 (10.2.11)	213	1.000 C|-4	\Lambda_{\mathrm{eff}}=-\left[4 \rho-\left(1+2(-1)^{s} \right) \varepsilon^{2}\right] / 4 \ell^{2}=\theta_{ \mathrm{T}}^{2}\left[\left(9+2(-1)^{s}\right) \theta_{ \mathrm{TL}}^{2}+8 \theta_{\mathrm{T}} \theta_{ \mathrm{L}}\right] /(2 A \ell)^{2}	$\Lambda_{\mathrm{eff}} = -\left[4\rho - (1+2(-1)^s)\varepsilon^2\right]/4\ell^2 = \theta_{\mathrm{T}}^2\left[(9+2(-1)^s)\theta_{\mathrm{TL}}^2 + 8\theta_{\mathrm{T}}\theta_{\mathrm{L}}\right]/(2A\ell)^2$	$\Lambda_{\mathrm{eff}} = -[4\rho - (1+2(-1)^s)\varepsilon^2]/4\ell^2 = \theta_{\mathrm{T}}^2\,[(9+2(-1)^s)\theta_{\mathrm{TL}}^2 + 8\theta_{\mathrm{T}}\theta_{\mathrm{L}}]/(2A\ell)^2$
mielke-geometrodynamics_EQ0642 (10.2.13)	213	1.000 N|+0	d s^{2}=-N^{2}(r) d t^{2}+N^{-2}(r) d r^{2}+r^{2}\left[d \phi+N^{\phi}(r) d t\right]^{2}	$ds^2 = -N^2(r)dt^2 + N^{-2}(r)dr^2 + r^2\left[d\phi + N^\phi(r)dt\right]^2$	$ds^2 = -N^2(r)dt^2 + N^{-2}(r)dr^2 + r^2\,[d\phi + N^\phi(r)dt]^2$
mielke-geometrodynamics_EQ0643 (10.2.14)	213	1.000 N|-1	N^{2}(r)=-M-\Lambda_{\mathrm{eff}} r^{2}+\frac{J^{2}}{4 r^{2}}, \quad N^{\phi}(r)=-\frac{J}{2 r^{2}},	$N^2(r) = -M - \Lambda_{\mathrm{eff}} r^2 + \frac{J^2}{4r^2}, \quad N^\phi(r) = -\frac{J}{2r^2},$	$N^2(r) = -M - \Lambda_{\mathrm{eff}}\, r^2 + \frac{J^2}{4r^2}\,, \quad N^\phi(r) = -\frac{J}{2r^2}\,,$
mielke-geometrodynamics_EQ0647 (10.3.4)	214	1.000 K|+0	S_{\alpha}=\frac{\ell}{\varepsilon} E_{\alpha}	$S_\alpha = \frac{\ell}{\varepsilon}E_\alpha$	$S_\alpha = \frac{\ell}{\varepsilon}E_\alpha$
mielke-geometrodynamics_EQ0648 (10.3.5)	215	1.000 N|+0	H_{\alpha}^{\star}=\frac{\ell}{\varepsilon} H_{\alpha}	$H_\alpha^\star = \frac{\ell}{\varepsilon}H_\alpha$	$H_\alpha^\star = \frac{\ell}{\varepsilon}H_\alpha$
mielke-geometrodynamics_EQ0649 (10.3.6)	215	1.000 N|+1	T_{\alpha}=\frac{\varepsilon}{\ell} \eta_{\alpha}, \quad R_{\alpha}^{\star}=\frac{\rho}{\ell^{2}} \eta_{\alpha}	$T_\alpha = \frac{\varepsilon}{\ell}\eta_\alpha, \quad R_\alpha^\star = \frac{\rho}{\ell^2}\eta_\alpha$	$T_\alpha = \frac{\varepsilon}{\ell}\,\eta_\alpha, \quad R_\alpha^\star = \frac{\rho}{\ell^2}\,\eta_\alpha,$

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mielke-geometrodynamics_EQ0650 (10.3.7)	215	1.000 N|+0	H_{\alpha}^{\star}=\delta \ell H_{\alpha}+\frac{\gamma}{\ell} \vartheta_{\alpha}	$H_{\alpha}^{\star}=\delta \ell H_{\alpha}+\frac{\gamma}{\ell} \vartheta_{\alpha}$	$H_{\alpha}^{\star}=\delta \ell H_{\alpha}+\frac{\gamma}{\ell} \vartheta_{\alpha}$
mielke-geometrodynamics_EQ0651 (10.3.8)	215	1.000 N|+1	\delta \ell D H_{\alpha}+\frac{\gamma}{\ell} T_{\alpha}-\frac{1}{2} \eta_{\alpha \beta} \wedge H^{\beta}=\tau_{\alpha}^{\star}	$\delta \ell D H_{\alpha}+\frac{\gamma}{\ell} T_{\alpha}-\frac{1}{2} \eta_{\alpha \beta} \wedge H^{\beta}=\tau_{\alpha}^{\star}$	$\delta \ell D H_{\alpha}+\frac{\gamma}{\ell} T_{\alpha}-\frac{1}{2} \eta_{\alpha \beta} \wedge H^{\beta}=\tau_{\alpha}^{\star}$
mielke-geometrodynamics_EQ0653 (10.3.10)	216	1.000 K|+0	H_{\alpha}^{\star}=\frac{\gamma}{\ell(1+\delta \varepsilon)} \vartheta_{\alpha}=-\frac{\ell}{\varepsilon} H_{\alpha},	$H_{\alpha}^{\star}=\frac{\gamma}{\ell(1+\delta \varepsilon)} \vartheta_{\alpha}=-\frac{\ell}{\varepsilon} H_{\alpha},$	$H_{\alpha}^{\star}=\frac{\gamma}{\ell(1+\delta \varepsilon)} \vartheta_{\alpha}=-\frac{\ell}{\varepsilon} H_{\alpha},$
mielke-geometrodynamics_EQ0659 (10.3.16)	217	1.000 K|+0	H={ }^{*}\left(\vartheta^{\alpha} \wedge H_{\alpha} \right),	$H={ }^{*}\left(\vartheta^{\alpha} \wedge H_{\alpha} \right),$	$H={ }^{*}\left(\vartheta^{\alpha} \wedge H_{\alpha} \right),$
mielke-geometrodynamics_EQ0660 (10.3.17)	217	1.000 N|+0	t={ }^{*}\left(T^{\alpha} \wedge H_{\alpha}\right), \quad \mathscr{A}:={ }^{*}\left(\vartheta^{\alpha} \wedge T_{\alpha}\right), \quad h={ }^{*}\left(\eta^{\alpha} \wedge H_{\alpha}\right),	$t={ }^{*}\left(T^{\alpha} \wedge H_{\alpha}\right), \quad \mathscr{A}:={ }^{*}\left(\vartheta^{\alpha} \wedge T_{\alpha}\right), \quad h={ }^{*}\left(\eta^{\alpha} \wedge H_{\alpha}\right),$	$t={ }^{*}\left(T^{\alpha} \wedge H_{\alpha}\right), \quad \mathscr{A}:={ }^{*}\left(\vartheta^{\alpha} \wedge T_{\alpha}\right), \quad h={ }^{*}\left(\eta^{\alpha} \wedge H_{\alpha}\right),$
mielke-geometrodynamics_EQ0663 (10.3.20)	217	1.000 N|+2	d s^{2}=(-1)^{s} d t^{2}+d \mathscr{A}^{2}+d h^{2}	$d s^{2}=(-1)^{s} d t^{2}+d \mathscr{A}^{2}+d h^{2}$	$d s^{2}=(-1)^{s} d t^{2}+d \mathscr{A}^{2}+d h^{2}$
mielke-geometrodynamics_EQ0665 (10.3.22)	218	1.000 N|+0	D^{*} \vartheta_{\alpha}:=\frac{\ell}{\gamma}\left[D^{*} H_{\alpha}^{\star}-\delta \ell D^{*} H_{\alpha}\right]	$D^{*} \vartheta_{\alpha}:=\frac{\ell}{\gamma}\left[D^{*} H_{\alpha}^{\star}-\delta \ell D^{*} H_{\alpha}\right]$	$D^{*} \vartheta_{\alpha}:=\frac{\ell}{\gamma}\left[D^{*} H_{\alpha}^{\star}-\delta \ell D^{*} H_{\alpha}\right]$
mielke-geometrodynamics_EQ0668 (10.3.25)	219	1.000 N|+0	D^{*} \vartheta^{\alpha} \cong 0,	$D^{*} \vartheta^{\alpha} \cong 0,$	$D^{*} \vartheta^{\alpha} \cong 0,$
mielke-geometrodynamics_EQ0672 (10.3.29)	220	1.000 N|+0	P_{\alpha}=\int \check{\mathscr{E}}_{\alpha}, \quad J_{\alpha}=\int \check{\mathscr{J}}_{\alpha}^{\star} .	$P_{\alpha}=\int \check{\mathscr{E}}_{\alpha}, \quad J_{\alpha}=\int \check{\mathscr{J}}_{\alpha}^{\star} .$	$P_{\alpha}=\int \check{\mathscr{E}}_{\alpha}, \quad J_{\alpha}=\int \check{\mathscr{J}}_{\alpha}^{\star} .$
mielke-geometrodynamics_EQ0675 (10.3.32)	220	1.000 N|-1	\check{\mathscr{J}}_{\alpha}^{\star}=-\frac{\theta_{\mathrm{L}}}{2} d \Gamma_{\alpha}^{\star}	$\check{\mathscr{J}}_{\alpha}^{\star}=-\frac{\theta_{\mathrm{L}}}{2} d \Gamma_{\alpha}^{\star}$	$\check{\mathscr{J}}_{\alpha}^{\star}=-\frac{\theta_{\mathrm{L}}}{2} d \Gamma_{\alpha}^{\star}$
mielke-geometrodynamics_EQ0677 (10.3.34)	220	1.000 N|-1	\check{\mathscr{J}}_{\alpha}^{\mathrm{MB} \star}=(-1)^{s} \frac{\chi}{2 \ell} d \vartheta_{\alpha}-\frac{\theta_{\mathrm{L}}}{2} d \Gamma_{\alpha}^{\star}	$\check{\mathscr{J}}_{\alpha}^{\mathrm{MB} \star}=(-1)^{s} \frac{\chi}{2 \ell} d \vartheta_{\alpha}-\frac{\theta_{\mathrm{L}}}{2} d \Gamma_{\alpha}^{\star}$	$\check{\mathscr{J}}_{\alpha}^{\mathrm{MB} \star}=(-1)^{s} \frac{\chi}{2 \ell} d \vartheta_{\alpha}-\frac{\theta_{\mathrm{L}}}{2} d \Gamma_{\alpha}^{\star}$
mielke-geometrodynamics_EQ0679 (10.3.36)	221	1.000 K|+0	\widetilde{C}_{\mathrm{L}}=(-1)^{s} \widetilde{\Gamma}^{\star \alpha} \wedge \widetilde{R}_{\alpha}^{\star}-\frac{1}{3!} \eta_{\alpha \beta \gamma} \widetilde{\Gamma}^{\star \alpha} \wedge \widetilde{\Gamma}^{\star \beta} \wedge \widetilde{\Gamma}^{\star \gamma},	$\widetilde{C}_{\mathrm{L}}=(-1)^{s} \widetilde{\Gamma}^{\star \alpha} \wedge \widetilde{R}_{\alpha}^{\star}-\frac{1}{3!} \eta_{\alpha \beta \gamma} \widetilde{\Gamma}^{\star \alpha} \wedge \widetilde{\Gamma}^{\star \beta} \wedge \widetilde{\Gamma}^{\star \gamma},$	$\widetilde{C}_{\mathrm{L}}=(-1)^{s} \widetilde{\Gamma}^{\star \alpha} \wedge \widetilde{R}_{\alpha}^{\star}-\frac{1}{3!} \eta_{\alpha \beta \gamma} \widetilde{\Gamma}^{\star \alpha} \wedge \widetilde{\Gamma}^{\star \beta} \wedge \widetilde{\Gamma}^{\star \gamma},$
mielke-geometrodynamics_EQ0683 (10.3.41)	221	1.000 N|-1	c=12 \cdot 4 \pi \theta_{\mathrm{L}}, \quad \tilde{c}=12 \cdot 4 \pi \tilde{\theta}_{\mathrm{L}},	$c=12 \cdot 4 \pi \theta_{\mathrm{L}}, \quad \tilde{c}=12 \cdot 4 \pi \tilde{\theta}_{\mathrm{L}},$	$c=12 \cdot 4 \pi \theta_{\mathrm{L}}, \quad \tilde{c}=12 \cdot 4 \pi \tilde{\theta}_{\mathrm{L}},$
mielke-geometrodynamics_EQ0684 (10.3.42)	222	1.000 K|+0	\widetilde{L}=L+\lambda_{\alpha} \wedge T^{\alpha} .	$\widetilde{L}=L+\lambda_{\alpha} \wedge T^{\alpha}.$	$\widetilde{L}=L+\lambda_{\alpha} \wedge T^{\alpha}.$
mielke-geometrodynamics_EQ0691 (10.5.2)	223	1.000 K|+0	\left[\sigma^{\alpha}, \sigma^{\beta}\right]=2 i \eta^{\alpha \beta \gamma} \sigma_{\gamma} .	$\left[\sigma^{\alpha}, \sigma^{\beta}\right]=2 i \eta^{\alpha \beta \gamma} \sigma_{\gamma}.$	$\left[\sigma^{\alpha}, \sigma^{\beta}\right]=2 i \eta^{\alpha \beta \gamma} \sigma_{\gamma}.$
mielke-geometrodynamics_EQ0692 (10.5.3)	224	1.000 K|+0	\gamma_{0}=i \sigma^{2}, \quad \gamma_{1}=\sigma^{1}, \quad \gamma_{2}=\sigma^{3} .	$\gamma_{0}=i \sigma^{2}, \quad \gamma_{1}=\sigma^{1}, \quad \gamma_{2}=\sigma^{3}.$	$\gamma_{0}=i \sigma^{2}, \quad \gamma_{1}=\sigma^{1}, \quad \gamma_{2}=\sigma^{3}.$
mielke-geometrodynamics_EQ0693 (10.5.4)	224	1.000 N|+0	\gamma_{\alpha} \gamma_{\beta}=g_{\alpha \beta} \mathbf{1}+\eta_{\alpha \beta \nu} \gamma^{\nu},	$\gamma_{\alpha} \gamma_{\beta}=g_{\alpha \beta} \mathbf{1}+\eta_{\alpha \beta \nu} \gamma^{\nu},$	$\gamma_{\alpha} \gamma_{\beta}=g_{\alpha \beta} \mathbf{1}+\eta_{\alpha \beta \nu} \gamma^{\nu},$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ0695 (10.5.6)	224	1.000 N|+0	`i^{*} \gamma \wedge D \psi-m \psi \eta-\frac{i}{2} \left(D^{*} \gamma\right) \psi=0`	$i^{*} \gamma \wedge D \psi-m \psi \eta-\frac{i}{2}\left(D^{*} \gamma\right) \psi=0$	$i^{*} \gamma \wedge D \psi-m \psi \eta-\frac{i}{2}\left(D^{*} \gamma\right) \psi=0$
mielke-geometrodynamics_EQ0697 (10.5.8)	224	1.000 K|+0	`\hat{D}:=D-\frac{1}{2} T,`	$\hat{D}:=D-\frac{1}{2} T,$	$\hat{D}:=D-\frac{1}{2} T,$
mielke-geometrodynamics_EQ0698 (10.5.9)	224	1.000 N|+0	`i^{*} \gamma \wedge \hat{D} \psi-m \eta \psi=0,`	$i^{*} \gamma \wedge \hat{D} \psi-m \eta \psi=0,$	$i^{*} \gamma \wedge \hat{D} \psi-m \eta \psi=0,$
mielke-geometrodynamics_EQ0699 (10.5.10)	224	1.000 K|+0	`\hat{R}=R-\frac{1}{2} d T=\frac{i}{4} R^{\alpha \beta} \sigma_{\alpha \beta}-\frac{1}{2} d T`	$\hat{R}=R-\frac{1}{2} d T=\frac{i}{4} R^{\alpha \beta} \sigma_{\alpha \beta}-\frac{1}{2} d T$	$\hat{R}=R-\frac{1}{2} d T=\frac{i}{4} R^{\alpha \beta} \sigma_{\alpha \beta}-\frac{1}{2} d T$
mielke-geometrodynamics_EQ0703 (10.6.2)	225	1.000 N|+0	`d^{*} F-m_{\text {photon }} F=0`	$d^{*} F-m_{\text {photon }} F=0$	$d^{*} F-m_{\text {photon }} F=0$
mielke-geometrodynamics_EQ0705 (10.7.1)	226	1.000 N|+0	`X:=x_{\alpha} \vartheta^{\alpha}, \quad Y:=y_{\alpha} \vartheta^{\alpha} .`	$X:=x_{\alpha} \vartheta^{\alpha}, \quad Y:=y_{\alpha} \vartheta^{\alpha} .$	$X:=x_{\alpha} \vartheta^{\alpha}, \quad Y:=y_{\alpha} \vartheta^{\alpha} .$
mielke-geometrodynamics_EQ0706 (10.7.2)	226	1.000 N|+0	`\Sigma_{\alpha}=\varepsilon x_{\alpha} X \wedge Y, \quad \tau_{\alpha}^{\star}=\sigma y_{\alpha} X \wedge Y,`	$\Sigma_{\alpha}=\varepsilon x_{\alpha} X \wedge Y, \quad \tau_{\alpha}^{\star}=\sigma y_{\alpha} X \wedge Y,$	$\Sigma_{\alpha}=\varepsilon x_{\alpha} X \wedge Y, \quad \tau_{\alpha}^{\star}=\sigma y_{\alpha} X \wedge Y,$
mielke-geometrodynamics_EQ0707 (10.7.3)	226	1.000 N|+0	`\vartheta^{\alpha} \wedge \Sigma_{\alpha}=0, \quad \vartheta^{\alpha} \wedge \tau_{\alpha}^{\star}=0`	$\vartheta^{\alpha} \wedge \Sigma_{\alpha}=0, \quad \vartheta^{\alpha} \wedge \tau_{\alpha}^{\star}=0$	$\vartheta^{\alpha} \wedge \Sigma_{\alpha}=0, \quad \vartheta^{\alpha} \wedge \tau_{\alpha}^{\star}=0$
mielke-geometrodynamics_EQ0708 (10.7.4)	227	1.000 N|+0	`R^{\alpha \beta}=\varepsilon \ell^{2} x^{[\alpha} y^{ \beta]} X \wedge Y,`	$R^{\alpha \beta}=\varepsilon \ell^{2} x^{[\alpha} y^{ \beta]} X \wedge Y,$	$R^{\alpha \beta}=\varepsilon \ell^{2} x^{[\alpha} y^{ \beta]} X \wedge Y,$
mielke-geometrodynamics_EQ0711 (10.7.7)	228	1.000 N|+0	`\mathscr{A}:={ }^{*}\left(\vartheta^{\alpha} \wedge T_{ \alpha}\right)=-(-1)^{s} \frac{\varepsilon}{\ell^{2}}`	$\mathscr{A}:={ }^{*}\left(\vartheta^{\alpha} \wedge T_{ \alpha}\right)=-(-1)^{s} \frac{\varepsilon}{\ell^{2}}$	$\mathscr{A}:={ }^{*}\left(\vartheta^{\alpha} \wedge T_{ \alpha}\right)=-(-1)^{s} \frac{\varepsilon}{\ell^{2}}$
mielke-geometrodynamics_EQ0713 (10.8.2)	228	1.000 K|+0	`\gamma=\gamma_{\alpha} \vartheta^{\alpha} .`	$\gamma=\gamma_{\alpha} \vartheta^{\alpha} .$	$\gamma=\gamma_{\alpha} \vartheta^{\alpha} .$
mielke-geometrodynamics_EQ0714	228	1.000 K|+0	`\bar{\Psi} \wedge \Psi=0, \quad \bar{\Psi} \wedge \gamma_{5} \gamma^{\alpha} \Psi=0, \quad \bar{\Psi} \wedge \gamma_{5} \Psi=0 .`	$\bar{\Psi} \wedge \Psi=0, \quad \bar{\Psi} \wedge \gamma_{5} \gamma^{\alpha} \Psi=0, \quad \bar{\Psi} \wedge \gamma_{5} \Psi=0 .$	$\bar{\Psi} \wedge \Psi=0, \quad \bar{\Psi} \wedge \gamma_{5} \gamma^{\alpha} \Psi=0, \quad \bar{\Psi} \wedge \gamma_{5} \Psi=0 .$
mielke-geometrodynamics_EQ0715 (10.9.1)	229	1.000 N|-1	`L_{\mathrm{RS}}=\frac{i}{4}(\bar{\Psi} \wedge D \Psi-\Psi \wedge \overline{D \Psi})+\frac{i}{4} m \bar{\Psi} \wedge \gamma \wedge \Psi,`	$L_{\mathrm{RS}}=\frac{i}{4}(\bar{\Psi} \wedge D \Psi-\Psi \wedge \overline{D \Psi})+\frac{i}{4} m \bar{\Psi} \wedge \gamma \wedge \Psi,$	$L_{\mathrm{RS}}=\frac{i}{4}(\bar{\Psi} \wedge D \Psi-\Psi \wedge \overline{D \Psi})+\frac{i}{4} m \bar{\Psi} \wedge \gamma \wedge \Psi,$
mielke-geometrodynamics_EQ0719 (10.9.5)	229	1.000 N|+1	`\Sigma_{\alpha}=-\frac{i}{4} m \bar{\Psi} \wedge \gamma_{ \alpha} \Psi=-(-1)^{s} 2 m \tau_{\alpha}^{\star}`	$\Sigma_{\alpha}=-\frac{i}{4} m \bar{\Psi} \wedge \gamma_{\alpha} \Psi=-(-1)^{s} 2 m \tau_{\alpha}^{\star}$	$\Sigma_{\alpha}=-\frac{i}{4} m \bar{\Psi} \wedge \gamma_{\alpha} \Psi=-(-1)^{s} 2 m \tau_{\alpha}^{\star}$
mielke-geometrodynamics_EQ0721 (10.10.1)	230	1.000 N|+0	`L=L_{\infty}\left(\vartheta^{\alpha}, \Gamma_{\alpha}^{ \star}, \Psi\right)=L_{\mathrm{MB}}+L_{\Psi}`	$L=L_{\infty}\left(\vartheta^{\alpha}, \Gamma_{\alpha}^{\star}, \Psi\right)=L_{\mathrm{MB}}+L_{\Psi}$	$L=L_{\infty}\left(\vartheta^{\alpha}, \Gamma_{\alpha}^{\star}, \Psi\right)=L_{\mathrm{MB}}+L_{\Psi}$
mielke-geometrodynamics_EQ0726 (10.10.6)	230	1.000 N|+0	`\frac{2}{i} \frac{\delta L}{\delta \Psi}=D \Psi+ \frac{1}{2} m \gamma \wedge \Psi \cong 0`	$\frac{2}{i} \frac{\delta L}{\delta \Psi}=D \Psi+\frac{1}{2} m \gamma \wedge \Psi \cong 0$	$\frac{2}{i} \frac{\delta L}{\delta \Psi}=D \Psi+\frac{1}{2} m \gamma \wedge \Psi \cong 0$
mielke-geometrodynamics_EQ0729 (10.10.9)	231	1.000 N|+0	`\gamma \wedge \gamma=-2 \gamma^{\alpha} \eta_{\alpha}`	$\gamma \wedge \gamma=-2 \gamma^{\alpha} \eta_{\alpha}$	$\gamma \wedge \gamma=-2 \gamma^{\alpha} \eta_{\alpha}$
mielke-geometrodynamics_EQ0730 (10.10.10)	231	1.000 W|-2	`i\left[\left(\frac{\theta_{\mathrm{TL}}}{\ell}-1\right) R_{\alpha}^{\star}+\left(\frac{\theta_{\mathrm{T}}}{ \ell^{2}}-\frac{m}{2}\right) T_{\alpha}+\frac{m^{2}}{2} \eta_{\alpha}\right] \wedge \gamma^{\alpha} \Psi=0,`	$i\left[\left(\frac{\theta_{\mathrm{TL}}}{\ell}-1\right) R_{\alpha}^{\star}+\left(\frac{\theta_{\mathrm{T}}}{ \ell^{2}}-\frac{m}{2}\right) T_{\alpha}+\frac{m^{2}}{2} \eta_{\alpha}\right] \wedge \gamma^{\alpha} \Psi=0,$	$i\left[\left(\frac{\theta_{\mathrm{TL}}}{\ell}-1\right) R_{\alpha}^{\star}+\left(\frac{\theta_{\mathrm{T}}}{ \ell^{2}}-\frac{m}{2}\right) T_{\alpha}+\frac{m^{2}}{2} \eta_{\alpha}\right] \wedge \gamma^{\alpha} \Psi=0,$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

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mielke-geometrodynamics_EQ0731 (10.10.11)	231	1.000 W|+0	\begin{aligned} i\left[\left(\theta_{\mathrm{L}}+\frac{\theta_{\mathrm{TL}}}{\ell}-1\right) R_{\alpha}^{\star}\right. & +\left((-1)^{s} \frac{\theta_{\mathrm{TL}}}{\ell}+\frac{\theta_{\mathrm{T}}}{\ell^{2}}-\frac{m}{2}\right) T_{\alpha}+\frac{1}{2}\left(\frac{\theta_{\mathrm{T}}}{\ell^{2}}+m^{2}\right) \eta_{\alpha} \\ & \left.+\tau_{\alpha}^{\star}\right] \wedge \gamma^{\alpha} \Psi \simeq 0 \end{aligned}	$$\begin{aligned} i\left[\left(\theta_{\mathrm{L}}+\frac{\theta_{\mathrm{TL}}}{\ell}-1\right) R_{\alpha}^{\star}\right. & +\left((-1)^{s} \frac{\theta_{\mathrm{TL}}}{\ell}+\frac{\theta_{\mathrm{T}}}{\ell^{2}}-\frac{m}{2}\right) T_{\alpha}+\frac{1}{2}\left(\frac{\theta_{\mathrm{T}}}{\ell^{2}}+m^{2}\right) \eta_{\alpha} \\ & \left.+\tau_{\alpha}^{\star}\right] \wedge \gamma^{\alpha} \Psi \simeq 0 \end{aligned}$$	$$\begin{aligned} i\left[\left(\theta_{\mathrm{L}}+\frac{\theta_{\mathrm{TL}}}{\ell}-1\right) R_{\alpha}^{\star}\right. & +\left((-1)^{s} \frac{\theta_{\mathrm{TL}}}{\ell}+\frac{\theta_{\mathrm{T}}}{\ell^{2}}-\frac{m}{2}\right) T_{\alpha}+\frac{1}{2}\left(\frac{\theta_{\mathrm{T}}}{\ell^{2}}+m^{2}\right) \eta_{\alpha} \\ & \left.+\tau_{\alpha}^{\star}\right] \wedge \gamma^{\alpha} \Psi \simeq 0 , \end{aligned} \tag{10.10}
mielke-geometrodynamics_EQ0732 (10.10.12)	232	1.000 W|+2	\theta_{\mathrm{T}} \simeq-m^{2} \ell^{2}, \theta_{\mathrm{TL}} \simeq \frac{(-1)^{s}}{2} m(2 m+1) \ell, \theta_{\mathrm{L}} \simeq 1-\frac{\theta_{\mathrm{TL}}}{\ell}=1-\frac{(-1)^{s}}{2} m(2 m+1)	$\theta_{\mathrm{T}} \simeq-m^{2} \ell^{2}, \theta_{\mathrm{TL}} \simeq \frac{(-1)^{s}}{2} m(2 m+1) \ell, \theta_{\mathrm{L}} \simeq 1-\frac{\theta_{\mathrm{TL}}}{\ell}=1-\frac{(-1)^{s}}{2} m(2 m+1)$	$\theta_{\mathrm{T}} \simeq-m^{2} \ell^{2},\ \theta_{\mathrm{TL}} \simeq \frac{(-1)^{s}}{2} m(2 m+1) \ell,\ \theta_{\mathrm{L}} \simeq 1-\frac{\theta_{\mathrm{TL}}}{\ell}=1-\frac{(-1)^{s}}{2} m(2 m+1)$
mielke-geometrodynamics_EQ0733 (10.10.13)	232	1.000 N|+0	\vartheta_{\alpha}=(-1)^{s} \ell \Gamma_{\alpha}^{\star}+\bar{\sigma} \gamma_{\alpha} \Psi .	$\vartheta_{\alpha}=(-1)^{s} \ell \Gamma_{\alpha}^{\star}+\bar{\sigma} \gamma_{\alpha} \Psi .$	$\vartheta_{\alpha}=(-1)^{s} \ell \Gamma_{\alpha}^{\star}+\bar{\sigma} \gamma_{\alpha} \Psi .$
mielke-geometrodynamics_EQ0735 (11.1.2)	238	1.000 N|+0	\gamma_{\alpha} \gamma_{\beta}+\gamma_{\beta} \gamma_{\alpha}=2 \mathrm{o}_{\alpha \beta} \mathbb{1}	$\gamma_{\alpha} \gamma_{\beta}+\gamma_{\beta} \gamma_{\alpha}=2 \mathrm{o}_{\alpha \beta} \mathbb{1}$	$\gamma_{\alpha} \gamma_{\beta}+\gamma_{\beta} \gamma_{\alpha}=2 \mathrm{o}_{\alpha \beta} \mathbb{1}$
mielke-geometrodynamics_EQ0738 (11.1.5)	238	1.000 N|+0	\mathrm{X}:=\imath x^{\alpha} \gamma_{\alpha} \longleftrightarrow x^{\alpha}=-\frac{l}{N} \operatorname{Tr}\left(\gamma^{\alpha} X\right) .	$\mathrm{X}:=\imath x^{\alpha} \gamma_{\alpha} \longleftrightarrow x^{\alpha}=-\frac{l}{N} \operatorname{Tr}\left(\gamma^{\alpha} X\right) .$	$\mathrm{X}:=\imath x^{\alpha} \gamma_{\alpha} \longleftrightarrow x^{\alpha}=-\frac{\imath}{N} \operatorname{Tr}(\gamma^{\alpha} X).$
mielke-geometrodynamics_EQ0739 (11.1.6)	238	1.000 K|+0	\operatorname{det} \mathrm{X}=-\mathrm{o}_{\alpha \beta} x^{\alpha} x^{\beta},	$\operatorname{det} \mathrm{X}=-\mathrm{o}_{\alpha \beta} x^{\alpha} x^{\beta},$	$\operatorname{det} \mathrm{X}=-\mathrm{o}_{\alpha \beta} x^{\alpha} x^{\beta},$
mielke-geometrodynamics_EQ0741 (11.1.8)	238	1.000 N|+0	\mathrm{X}-\mathrm{X}^{\prime}=S X S^{-1}, \quad S \in \widetilde{SO}_{\circ}(s, n-s) .	$\mathrm{X}-\mathrm{X}^{\prime}=S X S^{-1}, \quad S \in \widetilde{SO}_{\circ}(s, n-s).$	$\mathrm{X}-\mathrm{X}^{\prime}=S X S^{-1}, \quad S \in \widetilde{SO}_{\circ}(s, n-s).$
mielke-geometrodynamics_EQ0743 (11.1.10)	239	1.000 N|+0	\sigma^{\alpha \beta}:=\frac{i}{4}\left[\gamma^{\alpha}, \gamma^{\beta}\right], \quad \Lambda\left(\sigma^{\alpha \beta}\right)=L^{\alpha \beta},	$\sigma^{\alpha \beta}:=\frac{i}{4}\left[\gamma^{\alpha}, \gamma^{\beta}\right], \quad \Lambda\left(\sigma^{\alpha \beta}\right)=L^{\alpha \beta},$	$\sigma^{\alpha \beta}:=\frac{i}{4}[\gamma^{\alpha}, \gamma^{\beta}], \quad \Lambda(\sigma^{\alpha \beta})=L^{\alpha \beta},$
mielke-geometrodynamics_EQ0744 (11.1.11)	239	1.000 N|+0	L_{\circ}^{g}(M):=P\left(M, S O_{\circ}(s, n-s), \pi, \delta\right)	$L_{\circ}^{g}(M):=P\left(M, S O_{\circ}(s, n-s), \pi, \delta\right)$	$L_{\circ}^{g}(M):=P(M, S O_{\circ}(s, n-s), \pi, \delta)$
mielke-geometrodynamics_EQ0745 (11.1.12)	239	1.000 N|+0	\widetilde{L}(M):=P\left(M, \widetilde{S O}_{\circ}(s, n-2), \tilde{\pi}, \tilde{\delta}\right) \ni \tilde{p}	$\widetilde{L}(M):=P\left(M, \widetilde{S O}_{\circ}(s, n-2), \tilde{\pi}, \tilde{\delta}\right) \ni \tilde{p}$	$\widetilde{L}(M):=P(M, \widetilde{S O}_{\circ}(s, n-2), \tilde{\pi}, \tilde{\delta}) \ni \tilde{p}$
mielke-geometrodynamics_EQ0746 (11.1.13)	239	1.000 N|+0	f(\tilde{p} S)=f(\tilde{p}) \Lambda(S), S \in \widetilde{S O}_{\circ}(s, n-2) .	$f(\tilde{p} S)=f(\tilde{p}) \Lambda(S), S \in \widetilde{S O}_{\circ}(s, n-2).$	$f(\tilde{p} S)=f(\tilde{p}) \Lambda(S), S \in \widetilde{S O}_{\circ}(s, n-2).$
mielke-geometrodynamics_EQ0748 (11.1.15)	240	1.000 N|+0	\tilde{L}\left(M^{4}\right)=M^{4} \times S L(2, \mathbb{C})	$\tilde{L}\left(M^{4}\right)=M^{4} \times S L(2, \mathbb{C})$	$\tilde{L}(M^{4})=M^{4} \times S L(2, \mathbb{C})$
mielke-geometrodynamics_EQ0749 (11.1.16)	241	1.000 N|+0	V^{\bar{s}}:=V\left(M, \mathbb{C}^{N}, \rho^{\bar{s}}\left(\widetilde{S O}_{\circ}(s, n-s)\right) \subset G L(N, \mathbb{C}), \tilde{L}(M)\right)	$V^{\bar{s}}:=V\left(M, \mathbb{C}^{N}, \rho^{\bar{s}}\left(\widetilde{S O}_{\circ}(s, n-s)\right) \subset G L(N, \mathbb{C}), \tilde{L}(M)\right)$	$V^{\bar{s}}:=V(M, \mathbb{C}^{N}, \rho^{\bar{s}}(\widetilde{S O}_{\circ}(s, n-s)) \subset G L(N, \mathbb{C}), \tilde{L}(M))$
mielke-geometrodynamics_EQ0751 (11.1.18)	241	1.000 K|+0	D^{\frac{1}{2}}:=D^{\left(-\frac{1}{2}, \frac{3}{2}\right)} \oplus D^{\left(\frac{1}{2}, \frac{3}{2}\right)} \left(\widetilde{S O}_{\circ}(1,3)\right)	$D^{\frac{1}{2}}:=D^{\left(-\frac{1}{2}, \frac{3}{2}\right)} \oplus D^{\left(\frac{1}{2}, \frac{3}{2}\right)} \left(\widetilde{S O}_{\circ}(1,3)\right)$	$D^{\frac{1}{2}}:=D^{\left(-\frac{1}{2}, \frac{3}{2}\right)} \oplus D^{\left(\frac{1}{2}, \frac{3}{2}\right)} \left(\widetilde{S O}_{\circ}(1,3)\right)$
mielke-geometrodynamics_EQ0754 (11.1.21)	241	1.000 N|+0	\psi \rightarrow^{S^{-1}} \psi:=S^{-1} \psi	$\psi \rightarrow^{S^{-1}} \psi:=S^{-1} \psi$	$\psi \rightarrow^{S^{-1}} \psi:=S^{-1} \psi$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

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mielke-geometrodynamics_EQ0755 (11.1.22)	242	1.000 W|+0	`\begin{gathered} S(p) \in \mathscr{G}_{S} \approx C^{\infty}\left(\tilde{L}(M) \times_{\mathrm{Ad}} \widetilde{S O}_{\circ}(s, n-s)\right) \\ \Lambda \left(S_{(p)}\right)=G(p) \in \mathscr{G}_{p} \end{gathered}`	$S(p) \in \mathscr{G}_{S} \approx C^{\infty}\left(\tilde{L}(M) \times_{\mathrm{Ad}} \widetilde{S O}_{\circ}(s, n-s)\right)$ $\Lambda \left(S_{(p)}\right)=G(p) \in \mathscr{G}_{p}$	$S(p) \in \mathscr{G}_{S} \approx C^{\infty}(\tilde{L}(M) \times_{\mathrm{Ad}} \widetilde{S O}_{\circ}(s, n-s))$ $\Lambda(S_{(p)})=G(p) \in \mathscr{G}_{p}$
mielke-geometrodynamics_EQ0757 (11.1.24)	242	1.000 N|+0	`S^{-1}(p) \gamma_{\alpha} S(p)=\gamma_{\beta} G_{\alpha}{ }^{\beta}(p), \quad\left[G_{\alpha}{ }^{\beta}(p)\right] \in \mathscr{G}_{p} .`	$S^{-1}(p) \gamma_{\alpha} S(p)=\gamma_{\beta} G_{\alpha}{ }^{\beta}(p), \quad\left[G_{\alpha}{ }^{\beta}(p)\right] \in \mathscr{G}_{p}$.	$S^{-1}(p) \gamma_{\alpha} S(p)=\gamma_{\beta} G_{\alpha}{ }^{\beta}(p), \quad[G_{\alpha}{ }^{\beta}(p)] \in \mathscr{G}_{p}$.
mielke-geometrodynamics_EQ0762 (11.1.29)	243	1.000 N|+0	`\bar{\psi}:=\psi^{+} \gamma^{0},`	$\bar{\psi}:=\psi^{+} \gamma^{0},$	$\overline{\psi}:=\psi^{+} \gamma^{0},$
mielke-geometrodynamics_EQ0763 (11.1.30)	243	1.000 W|-2	`\bar{\sigma}^{\alpha \beta}:=\gamma^{0} \sigma^{\alpha \beta+} \gamma^{0}=\sigma^{\alpha \beta}, \quad \bar{ \gamma}^{\alpha}:=\gamma^{0} \gamma^{\alpha+} \gamma^{0}= \gamma^{\alpha} .`	$\bar{\sigma}^{\alpha \beta}:=\gamma^{0} \sigma^{\alpha \beta+} \gamma^{0}=\sigma^{\alpha \beta}, \quad \bar{\gamma}^{\alpha}:=\gamma^{0} \gamma^{\alpha+} \gamma^{0}=\gamma^{\alpha}$.	$\overline{\sigma}^{\alpha \beta}:=\gamma^{0} \sigma^{\alpha \beta+} \gamma^{0}=\sigma^{\alpha \beta}, \quad \overline{\gamma}^{\alpha}:=\gamma^{0} \gamma^{\alpha+} \gamma^{0}=\gamma^{\alpha}$.
mielke-geometrodynamics_EQ0764 (11.1.31)	243	1.000 N|+0	`D \psi=d \psi+i \widetilde{\omega} \psi,`	$D \psi=d \psi+i \widetilde{\omega} \psi,$	$D \psi=d \psi+i \widetilde{\omega} \psi,$
mielke-geometrodynamics_EQ0765 (11.1.32)	243	1.000 N|+0	`\Lambda(i \widetilde{\omega})=\omega^{\mathrm{g}}`	$\Lambda(i \widetilde{\omega})=\omega^{\mathrm{g}}$	$\Lambda(i \widetilde{\omega})=\omega^{\mathrm{g}}$
mielke-geometrodynamics_EQ0771 (11.1.38)	244	1.000 K|+0	`\gamma \longrightarrow{ }^{S^{-1}} \gamma=S^{-1} \gamma S`	$\gamma \longrightarrow{}^{S^{-1}} \gamma=S^{-1} \gamma S$	$\gamma \longrightarrow{}^{S^{-1}} \gamma=S^{-1} \gamma S$
mielke-geometrodynamics_EQ0775 (11.2.4)	246	1.000 K|+0	`\overline{\widetilde{\omega}}=\gamma^{0} \widetilde{ \omega}^{+} \gamma^{0}=\widetilde{\omega}`	$\overline{\widetilde{\omega}}=\gamma^{0} \widetilde{\omega}^{+} \gamma^{0}=\widetilde{\omega}$	$\overline{\widetilde{\omega}}=\gamma^{0} \widetilde{\omega}^{+} \gamma^{0}=\widetilde{\omega}$
mielke-geometrodynamics_EQ0777 (11.2.6)	246	1.000 N|+0	`\tau_{s}=i\left(\bar{\psi}^{*} \gamma \psi\right) .`	$\tau_{s}=i\left(\bar{\psi}^{*} \gamma \psi\right)$.	$\tau_{s}=i(\overline{\psi}^{*} \gamma \psi)$.
mielke-geometrodynamics_EQ0779 (11.2.7)	247	1.000 K|+0	`d \tau_{s}=0`	$d \tau_{s}=0$	$d \tau_{s}=0$
mielke-geometrodynamics_EQ0781 (11.2.9)	247	1.000 N|+1	`(\psi, \chi)=i \int_{H^{n-1}} \psi^{+} \chi d^{n-1} x`	$(\psi, \chi)=i \int_{H^{n-1}} \psi^{+} \chi d^{n-1} x$	$(\psi, \chi)=i \int_{H^{n-1}} \psi^{+} \chi d^{n-1} x$.
mielke-geometrodynamics_EQ0782 (11.3.1)	247	1.000 N|+0	`\widetilde{\omega}=\widetilde{\omega}^{\{ \}}- \widetilde{K}, \quad \Lambda(i \widetilde{K})=K`	$\widetilde{\omega}=\widetilde{\omega}^{\{\}}-\widetilde{K}, \quad \Lambda(i \widetilde{K})=K$	$\widetilde{\omega}=\widetilde{\omega}^{\{\}}-\widetilde{K}, \quad \Lambda(i \widetilde{K})=K$
mielke-geometrodynamics_EQ0785 (11.3.4)	248	1.000 N|+0	`[\Theta, \vartheta]=\ell^{* 2} \tau_{s} .`	$[\Theta, \vartheta]=\ell^{* 2} \tau_{s}$.	$[\Theta, \vartheta]=\ell^{* 2} \tau_{s}$.
mielke-geometrodynamics_EQ0790 (11.4.2)	252	1.000 S|+0	`\begin{aligned} \left(\bar{\psi} i \gamma^{5} \gamma_{ \mu} \psi\right)\left(\bar{\psi} i \gamma^{5} \gamma^{ \mu} \psi\right) & =\left(\bar{\psi} \gamma_{\mu} \psi \right)\left(\bar{\psi} \gamma^{\mu} \psi\right) \\ & =(\bar{\psi} \psi)^{2}-\left(\bar{\psi} \gamma^{5} \psi \right)^{2} . \end{aligned}`	$\left(\bar{\psi} i \gamma^{5} \gamma_{\mu} \psi\right)\left(\bar{\psi} i \gamma^{5} \gamma^{\mu} \psi\right)=\left(\bar{\psi} \gamma_{\mu} \psi\right)\left(\bar{\psi} \gamma^{\mu} \psi\right) =(\bar{\psi} \psi)^{2}-\left(\bar{\psi} \gamma^{5} \psi\right)^{2}$.	$(\overline{\psi} i \gamma^{5} \gamma_{\mu} \psi)(\overline{\psi} i \gamma^{5} \gamma^{\mu} \psi)=(\overline{\psi} \gamma_{\mu} \psi)(\overline{\psi} \gamma^{\mu} \psi) =(\overline{\psi} \psi)^{2}-(\overline{\psi} \gamma^{5} \psi)^{2}$.
mielke-geometrodynamics_EQ0793 (11.4.5)	253	1.000 N|+0	`\rho:=\frac{\sqrt{2 \pi}}{\ell^{*}} r,`	$\rho:=\frac{\sqrt{2 \pi}}{\ell^{*}} r,$	$\rho:=\frac{\sqrt{2 \pi}}{\ell^{*}} r,$
mielke-geometrodynamics_EQ0794 (11.4.6)	253	1.000 N|+0	`\bar{g}_{k l} \longleftarrow g_{k l}=e^{\mu} \bar{g}_{k l} .`	$\bar{g}_{k l} \longleftarrow g_{k l}=e^{\mu} \bar{g}_{k l}$.	$\overline{g}_{k l} \longleftarrow g_{k l}=e^{\mu} \overline{g}_{k l}$.
mielke-geometrodynamics_EQ0795 (11.4.7)	253	1.000 N|-2	`\bar{E}_{\cdot k}^{\alpha} \longleftarrow E_{\cdot k}^{ \alpha}=e^{\mu / 2} \bar{E}_{\cdot k}^{\alpha}`	$\bar{E}_{\cdot k}^{\alpha} \longleftarrow E_{\cdot k}^{\alpha}=e^{\mu / 2} \bar{E}_{\cdot k}^{\alpha}$	$\overline{E}_{\cdot k}^{\alpha} \longleftarrow E_{\cdot k}^{\alpha}=e^{\mu / 2} \overline{E}_{\cdot k}^{\alpha}$

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Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ0796 (11.4.8)	253	1.000 N|+0	`\left\{\begin{array}{c} \alpha \\ k l \end{array}\right \}=\overline{\left\{\begin{array}{c} \alpha \\ k l \end{array}\right\}}+\frac{1}{2}\left(\delta_{k}^{\alpha} \partial_{l}+\delta_{l}^{\alpha} \partial_{k}-g_{k l} \partial^{\alpha}\right) \mu`	$\left\{ \begin{array}{c} \alpha \\ kl \end{array} \right\} = \overline{\left\{ \begin{array}{c} \alpha \\ kl \end{array} \right\}} + \frac{1}{2} \left(\delta_{k}^{\alpha} \partial_{l} + \delta_{l}^{\alpha} \partial_{k} - g_{kl} \partial^{\alpha}\right) \mu$	$\left\{ \begin{array}{c} \alpha \\ kl \end{array} \right\} = \overline{\left\{ \begin{array}{c} \alpha \\ kl \end{array} \right\}} + \frac{1}{2} \left(\delta_{k}^{\alpha} \partial_{l} + \delta_{l}^{\alpha} \partial_{k} - g_{kl} \partial^{\alpha}\right) \mu$
mielke-geometrodynamics_EQ0797 (11.4.9)	253	1.000 K|+0	`\Gamma_{k}=\bar{\Gamma}_{k}-\frac{1}{4} \delta_{k}^{[ \alpha} \partial^{\beta]} \mu \sigma_{\alpha \beta} .`	$\Gamma_{k} = \bar{\Gamma}_{k} - \frac{1}{4} \delta_{k}^{[\alpha} \partial^{\beta]} \mu \sigma_{\alpha \beta} .$	$\overline{\Gamma}_{k} = \overline{\Gamma}_{k} - \frac{1}{4} \delta_{k}^{[\alpha} \partial^{\beta]} \mu \sigma_{\alpha \beta} .$
mielke-geometrodynamics_EQ0801 (11.4.13)	254	1.000 N|+1	`\begin{aligned} & \bar{\Gamma}_{0}=\frac{i}{4} e^{(\nu-\mu) / 2} \partial_{r}(\nu-\mu) \gamma_{0} \gamma_{1} \\ & \bar{\Gamma}_{1}=0, \quad \bar{\Gamma}_{2}=\frac{i}{2} \gamma_{2} \gamma_{1} \\ & \bar{\Gamma}_{3}=\frac{i}{2} \left(\sin \vartheta \gamma_{3} \gamma_{1}+\cos \vartheta \gamma_{3} \gamma_{2}\right) \end{aligned}`	$\begin{aligned} & \bar{\Gamma}_{0} = \frac{i}{4} e^{(\nu-\mu)/2} \partial_{r}(\nu-\mu) \gamma_{0} \gamma_{1} \\ & \bar{\Gamma}_{1} = 0, \quad \bar{\Gamma}_{2} = \frac{i}{2} \gamma_{2} \gamma_{1} \\ & \bar{\Gamma}_{3} = \frac{i}{2} \left(\sin \vartheta \gamma_{3} \gamma_{1} + \cos \vartheta \gamma_{3} \gamma_{2}\right) \end{aligned}$	$\begin{aligned} & \overline{\Gamma}_{0} = \frac{i}{4} e^{(\nu-\mu)/2} \partial_{r}(\nu-\mu) \gamma_{0} \gamma_{1} \\ & \overline{\Gamma}_{1} = 0, \quad \overline{\Gamma}_{2} = \frac{i}{2} \gamma_{2} \gamma_{1} \\ & \overline{\Gamma}_{3} = \frac{i}{2} (\sin \vartheta \gamma_{3} \gamma_{1} + \cos \vartheta \gamma_{3} \gamma_{2}) \end{aligned}$
mielke-geometrodynamics_EQ0804 (11.4.16)	255	1.000 N|+0	`\chi_{\kappa}^{m}=\sum_{\bar{m}= \pm 1 / 2} C\left(l \frac{1}{2} j ; m-\bar{m}, \bar{m}\right) Y_{l}^{m-\bar{m}}(\vartheta, \phi) \chi^{\bar{m}} .`	$\chi_{\kappa}^{m} = \sum_{\bar{m}=\pm 1/2} C \left(l \frac{1}{2} j ; m-\bar{m}, \bar{m}\right) Y_{l}^{m-\bar{m}}(\vartheta, \phi) \chi^{\bar{m}} .$	$\chi_{\kappa}^{m} = \sum_{\overline{m}=\pm 1/2} C \left(l \frac{1}{2} j ; m-\overline{m}, \overline{m}\right) Y_{l}^{m-\overline{m}}(\vartheta, \phi) \chi^{\overline{m}} .$
mielke-geometrodynamics_EQ0808 (11.4.20)	255	1.000 W|+0	`\frac{\vec{\sigma} \cdot \vec{x}}{|\vec{x}|} \chi_{ \kappa}^{m}=-\chi_{-\kappa}^{m}`	$\frac{\vec{\sigma} \cdot \vec{x}}{|\vec{x}|} \chi_{\kappa}^{m} = -\chi_{-\kappa}^{m}$	$\frac{\vec{\sigma} \cdot \vec{x}}{|\vec{x}|} \chi_{\kappa}^{m} = -\chi_{-\kappa}^{m}$
mielke-geometrodynamics_EQ0814 (11.4.27)	257	1.000 W|+1	`\beta=\frac{M^{*}}{2 m}, \quad M^{*}:=\frac{\sqrt{8 \pi} \hbar}{c \ell^{*}} .`	$\beta = \frac{M^{*}}{2m}, \quad M^{*} := \frac{\sqrt{8\pi} \hbar}{c \ell^{*}} .$	$\beta = \frac{M^{*}}{2m}, \quad M^{*} := \frac{\sqrt{8\pi} \hbar}{c \ell^{*}} .$
mielke-geometrodynamics_EQ0816 (11.4.30)	257	1.000 K|+0	`F^{\prime \prime}+\frac{2}{\rho} F^{\prime}-\frac{2}{ \rho^{2}} F \simeq \frac{1-\omega^{2}}{\beta^{2}} F`	$F'' + \frac{2}{\rho} F' - \frac{2}{\rho^{2}} F \simeq \frac{1-\omega^{2}}{\beta^{2}} F$	$F'' + \frac{2}{\rho} F' - \frac{2}{\rho^{2}} F \simeq \frac{1-\omega^{2}}{\beta^{2}} F$
mielke-geometrodynamics_EQ0817 (11.4.31)	257	1.000 N|+0	`F \sim C_{\infty}\left(\frac{1}{\bar{\rho}}+\frac{1}{ \bar{\rho}^{2}}\right) e^{-\bar{\rho}}`	$F \sim C_{\infty} \left(\frac{1}{\bar{\rho}} + \frac{1}{\bar{\rho}^{2}}\right) e^{-\bar{\rho}}$	$F \sim C_{\infty} \left(\frac{1}{\bar{\rho}} + \frac{1}{\bar{\rho}^{2}}\right) e^{-\bar{\rho}}$
mielke-geometrodynamics_EQ0818 (11.4.32)	257	1.000 N|+0	`H \sim C_{\infty} \sqrt{\frac{1+\omega}{1-\omega}} \frac{1}{\bar{\rho}} e^{-\bar{\rho}}`	$H \sim C_{\infty} \sqrt{\frac{1+\omega}{1-\omega}} \frac{1}{\bar{\rho}} e^{-\bar{\rho}}$	$H \sim C_{\infty} \sqrt{\frac{1+\omega}{1-\omega}} \frac{1}{\bar{\rho}} e^{-\bar{\rho}}$
mielke-geometrodynamics_EQ0819 (11.4.33)	257	1.000 N|+0	`\bar{\rho}:=\frac{1}{\beta} \sqrt{1-\omega^{2}} \rho`	$\bar{\rho} := \frac{1}{\beta} \sqrt{1-\omega^{2}} \rho$	$\bar{\rho} := \frac{1}{\beta} \sqrt{1-\omega^{2}} \rho$
mielke-geometrodynamics_EQ0821 (11.4.35)	258	1.000 N|+0	`F(\rho) \simeq C_{0} f^{1}(\bar{\rho}) \frac{1}{\cosh \bar{\rho}}`	$F(\rho) \simeq C_{0} f^{1}(\bar{\rho}) \frac{1}{\cosh \bar{\rho}}$	$F(\rho) \simeq C_{0} f^{1}(\bar{\rho}) \frac{1}{\cosh \bar{\rho}}$
mielke-geometrodynamics_EQ0822 (11.4.36)	258	1.000 N|+0	`H(\rho) \simeq C_{0} \sqrt{\frac{1+\omega}{1-\omega}} f^{0}(\bar{\rho}) \frac{1}{\cosh \bar{\rho}}`	$H(\rho) \simeq C_{0} \sqrt{\frac{1+\omega}{1-\omega}} f^{0}(\bar{\rho}) \frac{1}{\cosh \bar{\rho}}$	$H(\rho) \simeq C_{0} \sqrt{\frac{1+\omega}{1-\omega}} f^{0}(\bar{\rho}) \frac{1}{\cosh \bar{\rho}}$

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Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

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mielke-geometrodynamics_EQ0823 (11.4.37)	258	1.000 K|+0	`C_{0}=(1-\omega) \sqrt{\frac{-2}{\varepsilon(\omega+1)}}`	$C_0 = (1-\omega)\sqrt{\frac{-2}{\varepsilon(\omega+1)}}$	$C_0 = (1-\omega)\sqrt{\frac{-2}{\varepsilon(\omega+1)}}$
mielke-geometrodynamics_EQ0826 (11.4.40)	259	1.000 N|+0	`m_{s}=\frac{1}{c} \int_{H^{3}} \Sigma_{\mathrm{D}}^{0}`	$m_s = \frac{1}{c}\int_{H^3} \Sigma_{\mathrm{D}}^{0}$	$m_s = \frac{1}{c}\int_{H^3} \Sigma_{\mathrm{D}}^{0}$
mielke-geometrodynamics_EQ0827 (11.5.1)	262	1.000 N|+1	`Q:=i e \int_{H^{3}} \bar{\psi}^{*} \gamma \psi=k e, \quad k=0,1,2, \ldots`	$Q := ie\int_{H^3} \bar{\psi}^{*}\gamma\psi = ke, \quad k=0,1,2,\ldots$	$Q := ie\int_{H^3} \overline{\psi}^{*}\gamma\psi = ke, \quad k=0,1,2,\ldots.$
mielke-geometrodynamics_EQ0828 (11.5.2)	263	1.000 N|+0	`i \gamma \wedge^{*} d \psi(x)+e^{2} \int_{y \in M} \bar{\psi}(y) \gamma \psi(y) D_{\mathrm{F}}(y-x) \wedge^{*} \gamma \psi(x)=m \psi(x) \eta`	$i\gamma \wedge^{*} d\psi(x) + e^2 \int_{y\in M} \bar{\psi}(y)\gamma\psi(y) D_{\mathrm{F}}(y-x) \wedge^{*} \gamma\psi(x) = m\psi(x)\eta$	$i\gamma \wedge^{*} d\psi(x) + e^2 \int\limits_{y\in M} \overline{\psi}(y)\gamma\psi(y) D_{\mathrm{F}}(y-x) \wedge^{*} \gamma\psi(x) = m\psi(x)\eta$
mielke-geometrodynamics_EQ0830 (12.1.2)	269	1.000 N|+0	`\left\langle d j_{5}(x)\right\rangle=2 i m\langle P \rangle-\left(1 / 96 \pi^{2}\right) F \wedge F`	$\left\langle dj_5(x)\right\rangle = 2im\langle P\rangle - \left(1/96\pi^2\right) F\wedge F$	$\left\langle dj_5(x)\right\rangle = 2im\langle P\rangle - (1/96\pi^2) F\wedge F$
mielke-geometrodynamics_EQ0838 (12.2.6)	271	1.000 N|+0	`d j_{5}=2 i m P=2 i m \bar{\psi} \gamma_{5} \psi \eta`	$dj_5 = 2imP = 2im\bar{\psi}\gamma_5\psi\eta$	$dj_5 = 2imP = 2im\overline{\psi}\gamma_5\psi\eta$
mielke-geometrodynamics_EQ0843 (12.2.11)	272	1.000 N|+0	`L_{a \psi \psi}=\frac{1}{2} d \theta \wedge j_{5}= \frac{1}{2 f_{a}} d a \wedge \bar{\psi}^{*} \gamma \gamma_{5} \psi,`	$L_{a\psi\psi} = \frac{1}{2}d\theta\wedge j_5 = \frac{1}{2f_a} da\wedge\bar{\psi}^{*}\gamma\gamma_5\psi,$	$L_{a\psi\psi} = \frac{1}{2}d\theta\wedge j_5 = \frac{1}{2f_a} da\wedge\overline{\psi}^{*}\gamma\gamma_5\psi,$
mielke-geometrodynamics_EQ0846 (12.2.14)	273	1.000 N|-1	`d j_{5} \cong 4 d C_{\mathrm{TT}}=\frac{2}{\ell^{2}} \left(T^{\alpha} \wedge T_{\alpha}+R_{\alpha \beta} \wedge \vartheta^{\alpha} \wedge \vartheta^{\beta}\right)`	$dj_5 \cong 4dC_{\mathrm{TT}} = \frac{2}{\ell^2}\left(T^\alpha\wedge T_\alpha + R_{\alpha\beta}\wedge\vartheta^\alpha\wedge\vartheta^\beta\right)$	$dj_5 \cong 4dC_{\mathrm{TT}} = \frac{2}{\ell^2}\left(T^\alpha\wedge T_\alpha + R_{\alpha\beta}\wedge\vartheta^\alpha\wedge\vartheta^\beta\right)$
mielke-geometrodynamics_EQ0849 (12.3.2)	275	1.000 N|+0	`K\left(t, x, \not D^{2}\right)=(4 \pi)^{-n / 2} \sum_{k=0}^{\infty} t^{(k-n) / 2} K_{k}\left(x, \not D^{2}\right)`	$K\left(t,x,\not{D}^2\right) = (4\pi)^{-n/2}\sum_{k=0}^{\infty} t^{(k-n)/2} K_k\left(x,\not{D}^2\right)$	$K\left(t,x,\not{D}^2\right) = (4\pi)^{-n/2}\sum_{k=0}^{\infty} t^{(k-n)/2} K_k\left(x,\not{D}^2\right)$
mielke-geometrodynamics_EQ0852 (12.3.5)	276	1.000 N|-1	`-K_{2} / t=\left(2 \ell^{2} / t\right) d C_{\mathrm{TT}} \cong\left(\ell^{2} / 2 t\right) d j_{5}=\left(i m \ell^{2} / t\right) \bar{\psi} \gamma_{5} \psi \sim \ell^{2} M^{2} m^{4} \rightarrow 0 .`	$-K_2/t = \left(2\ell^2/t\right) dC_{\mathrm{TT}} \cong \left(\ell^2/2t\right) dj_5 = \left(im\ell^2/t\right)\bar{\psi}\gamma_5\psi \sim \ell^2M^2m^4 \rightarrow 0.$	$-K_2/t = (2\ell^2/t) dC_{\mathrm{TT}} \cong (\ell^2/2t) dj_5 = (im\ell^2/t)\overline{\psi}\gamma_5\psi \sim \ell^2M^2m^4 \rightarrow 0.$
mielke-geometrodynamics_EQ0856 (12.4.3)	277	1.000 N|+0	`\mathscr{G}^{A} \cong 0, \quad A=1,2,3`	$\mathscr{G}^A \cong 0, \quad A=1,2,3$	$\mathscr{G}^A \cong 0, \quad A=1,2,3$
mielke-geometrodynamics_EQ0858 (12.4.5)	278	1.000 K|+0	`\gamma:=\gamma_{\alpha} \vartheta^{\alpha}, \quad{ }^{*} \gamma=\gamma^{\alpha} \eta_{\alpha} .`	$\gamma := \gamma_\alpha\vartheta^\alpha, \quad {}^{*}\gamma = \gamma^\alpha\eta_\alpha.$	$\gamma := \gamma_\alpha\vartheta^\alpha, \quad {}^{*}\gamma = \gamma^\alpha\eta_\alpha.$
mielke-geometrodynamics_EQ0859 (12.4.6)	278	1.000 N|+0	`\Theta:=D \gamma=T^{\alpha} \gamma_{\alpha}, \quad \Omega:=d \Gamma+\Gamma \wedge \Gamma=\frac{i}{4} R^{ \alpha \beta} \sigma_{\alpha \beta}`	$\Theta := D\gamma = T^\alpha\gamma_\alpha, \quad \Omega := d\Gamma + \Gamma\wedge\Gamma = \frac{i}{4}R^{\alpha\beta}\sigma_{\alpha\beta}$	$\Theta := D\gamma = T^\alpha\gamma_\alpha, \quad \Omega := d\Gamma + \Gamma\wedge\Gamma = \frac{i}{4}R^{\alpha\beta}\sigma_{\alpha\beta}$
mielke-geometrodynamics_EQ0860 (12.4.7)	278	1.000 N|-1	`C_{\mathrm{RR}}:=-\operatorname{Tr}\left(\Gamma \wedge \Omega-\frac{1}{3} \Gamma \wedge \Gamma \wedge \Gamma \right) .`	$C_{\mathrm{RR}} := -\operatorname{Tr}\left(\Gamma\wedge\Omega - \frac{1}{3}\Gamma\wedge\Gamma\wedge\Gamma\right).$	$C_{\mathrm{RR}} := -\operatorname{Tr}\left(\Gamma\wedge\Omega - \frac{1}{3}\Gamma\wedge\Gamma\wedge\Gamma\right).$
mielke-geometrodynamics_EQ0862 (12.4.9)	279	1.000 N|+1	`C_{\mathrm{TT}}:=\frac{1}{8 \ell^{2}} \operatorname{Tr}( \gamma \wedge \Theta)=\frac{1}{2 \ell^{2}} \vartheta^{ \alpha} \wedge T_{\alpha} .`	$C_{\mathrm{TT}} := \frac{1}{8\ell^2}\operatorname{Tr}(\gamma\wedge\Theta) = \frac{1}{2\ell^2}\vartheta^\alpha\wedge T_\alpha.$	$C_{\mathrm{TT}} := \frac{1}{8\ell^2}\operatorname{Tr}(\gamma\wedge\Theta) = \frac{1}{2\ell^2}\vartheta^\alpha\wedge T_\alpha.$

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mielke-geometrodynamics_EQ0863 (12.4.10)	279	■ 1.000 ● C|+5	d C_{\mathrm{TT}}=\frac{1}{8 \ell^{2}} \operatorname{Tr}(\Theta \wedge \Theta-4 i \Omega \wedge \sigma)=\frac{1}{2 \ell^{2}}\left(T^{\alpha} \wedge T_{\alpha}+R_{\alpha \beta} \wedge \vartheta^{\alpha} \wedge \vartheta^{\beta} \right) .	$dC_{\mathrm{TT}} = \frac{1}{8\ell^2}\operatorname{Tr}(\Theta \wedge \Theta - 4i\Omega \wedge \sigma) = \frac{1}{2\ell^2}\left(T^{\alpha} \wedge T_{\alpha} + R_{\alpha\beta} \wedge \vartheta^{\alpha} \wedge \vartheta^{\beta}\right).$	$dC_{\mathrm{TT}} = \frac{1}{8\ell^2}\operatorname{Tr}(\Theta \wedge \Theta - 4i\Omega \wedge \sigma) = \frac{1}{2\ell^2}\left(T^{\alpha} \wedge T_{\alpha} + R_{\alpha\beta} \wedge \vartheta^{\alpha} \wedge \vartheta^{\beta}\right).$
mielke-geometrodynamics_EQ0864 (12.4.11)	279	■ 1.000 ● N|-2	\hat{C}_{\mathrm{RR}}=C_{\mathrm{RR}}-2 C_{\mathrm{TT}}	$\hat{C}_{\mathrm{RR}} = C_{\mathrm{RR}} - 2C_{\mathrm{TT}}$	$\hat{C}_{\mathrm{RR}} = C_{\mathrm{RR}} - 2C_{\mathrm{TT}}$
mielke-geometrodynamics_EQ0865 (13.2.1)	283	■ 1.000 ● N|-1	L_{\mathrm{BF}}=-B \wedge F=-B \wedge d A .	$L_{\mathrm{BF}} = -B \wedge F = -B \wedge dA.$	$L_{\mathrm{BF}} = -B \wedge F = -B \wedge dA.$
mielke-geometrodynamics_EQ0866 (13.2.2)	283	■ 1.000 ● N|+1	\tilde{L}_{\mathrm{BF}}:=-B \wedge d A+\frac{1}{2} B \wedge B \cong-B \wedge d A+d C	$\tilde{L}_{\mathrm{BF}} := -B \wedge dA + \frac{1}{2}B \wedge B \cong -B \wedge dA + dC$	$\tilde{L}_{\mathrm{BF}} := -B \wedge dA + \frac{1}{2}B \wedge B \cong -B \wedge dA + dC.$
mielke-geometrodynamics_EQ0868 (13.2.4)	283	■ 1.000 ● N|+0	C=\frac{1}{2} A \wedge F, \quad d C=\frac{1}{2} F \wedge F,	$C = \frac{1}{2}A \wedge F, \quad dC = \frac{1}{2}F \wedge F,$	$C = \frac{1}{2}A \wedge F, \quad dC = \frac{1}{2}F \wedge F,$
mielke-geometrodynamics_EQ0869 (13.2.5)	283	■ 1.000 ● K|+0	A \rightarrow A^{\prime}=A+d \theta(x),	$A \rightarrow A' = A + d\theta(x),$	$A \rightarrow A' = A + d\theta(x),$
mielke-geometrodynamics_EQ0870 (13.2.6)	284	■ 1.000 ● N|+0	A \rightarrow \widetilde{A}=A+\sigma, \quad B \rightarrow \widetilde{B}=B+d \sigma,	$A \rightarrow \widetilde{A} = A + \sigma, \quad B \rightarrow \widetilde{B} = B + d\sigma,$	$A \rightarrow \widetilde{A} = A + \sigma, \quad B \rightarrow \widetilde{B} = B + d\sigma,$
mielke-geometrodynamics_EQ0871 (13.2.7)	284	■ 1.000 ● K|+0	L_{\mathrm{Max}}=-B \wedge d A+\frac{1}{2} B \wedge{ }^{*} B+L_{\mathrm{matter}},	$L_{\mathrm{Max}} = -B \wedge dA + \frac{1}{2}B \wedge {}^{*}B + L_{\mathrm{matter}},$	$L_{\mathrm{Max}} = -B \wedge dA + \frac{1}{2}B \wedge {}^{*}B + L_{\mathrm{matter}},$
mielke-geometrodynamics_EQ0872 (13.2.8)	284	■ 1.000 ● N|+1	-d B=d^{*} F \cong j,	$-dB = d^{*}F \cong j,$	$-dB = d^{*}F \cong j,$
mielke-geometrodynamics_EQ0875 (13.3.3)	284	■ 1.000 ● N|+0	\left[L^{\alpha}{ }_{\beta}, L^{\gamma}{ }_{\delta} \right]=\delta_{\delta}^{\alpha} L^{\gamma}{ }_{\beta}-\delta_{\beta}^{\gamma} L^{\alpha}{ }_{\delta},	$[L^{\alpha}{}_{\beta}, L^{\gamma}{}_{\delta}] = \delta^{\alpha}_{\delta} L^{\gamma}{}_{\beta} - \delta^{\gamma}_{\beta} L^{\alpha}{}_{\delta},$	$[L^{\alpha}{}_{\beta}, L^{\gamma}{}_{\delta}] = \delta^{\alpha}_{\delta} L^{\gamma}{}_{\beta} - \delta^{\gamma}_{\beta} L^{\alpha}{}_{\delta},$
mielke-geometrodynamics_EQ0880 (13.4.1)	285	■ 1.000 ● N|+0	A(x):=\left\{\begin{array}{cc} \Lambda(x) & \tau(x) \\ \tau_{*}(x) & 1 \end{array}\right\},	$A(x) := \left\{ \begin{array}{cc} \Lambda(x) & \tau(x) \\ \tau_{*}(x) & 1 \end{array} \right\},$	$A(x) := \left\{ \begin{array}{cc} \Lambda(x) & \tau(x) \\ \tau_{*}(x) & 1 \end{array} \right\},$
mielke-geometrodynamics_EQ0881 (13.4.2)	285	■ 1.000 ● N|+0	\hat{\Gamma}=\left(\begin{array}{cc} \Gamma^{(L)} & \Gamma^{(T)} \\ \Gamma_{*}^{(T)} & 0 \end{array}\right)= \left(\begin{array}{cc} \Gamma_{\alpha}^{(L) \beta} L_{\beta}^{\alpha} & \Gamma^{(T) \alpha} \ell P_{\alpha} \\ \ \Gamma_{\beta}^{*(T)} & \ell P_{*}^{\beta} \end{array} \right)	$\hat{\Gamma} = \begin{pmatrix} \Gamma^{(L)} & \Gamma^{(T)} \\ \Gamma_{*}^{(T)} & 0 \end{pmatrix} = \begin{pmatrix} \Gamma_{\alpha}^{(L)\beta} L_{\beta}^{\alpha} & \Gamma^{(T)\alpha}\ell P_{\alpha} \\ \Gamma_{\beta}^{*(T)} & \ell P_{*}^{\beta} \end{pmatrix}$	$\hat{\Gamma} = \begin{pmatrix} \Gamma^{(L)} & \Gamma^{(T)} \\ \Gamma_{*}^{(T)} & 0 \end{pmatrix} = \begin{pmatrix} \Gamma_{\alpha}^{(L)\beta} L_{\beta}^{\alpha} & \Gamma^{(T)\alpha}\ell P_{\alpha} \\ \Gamma_{\beta}^{*(T)} & \ell P_{*}^{\beta} \end{pmatrix}$
mielke-geometrodynamics_EQ0882 (13.4.3)	286	■ 1.000 ● N|+1	\hat{\Gamma} \xrightarrow{A^{-1}(x)} \hat{\Gamma}^{ \prime}=A^{-1}(x) \hat{\Gamma} A(x)+A^{-1}(x) d A(x) .	$\hat{\Gamma} \xrightarrow{A^{-1}(x)} \hat{\Gamma}' = A^{-1}(x)\hat{\Gamma}A(x) + A^{-1}(x)dA(x).$	$\hat{\Gamma} \xrightarrow{A^{-1}(x)} \hat{\Gamma}' = A^{-1}(x)\,\hat{\Gamma}\,A(x) + A^{-1}(x)dA(x).$
mielke-geometrodynamics_EQ0883	286	■ 1.000 ● N|+0	\tau \tau_{*}=-\Lambda \tau_{*} \Lambda^{-1} \tau .	$\tau\tau_{*} = -\Lambda\tau_{*}\Lambda^{-1}\tau.$	$\tau\tau_{*} = -\Lambda\tau_{*}\Lambda^{-1}\tau.$
mielke-geometrodynamics_EQ0884 (13.4.4)	286	■ 1.000 ● S|+1	\hat{R}:=d \hat{\Gamma}+\hat{\Gamma} \wedge \hat{\Gamma}= \left(\begin{array}{cc} R^{(L)}+\Gamma^{(L)} \wedge \Gamma_{*}^{(L)} & d \Gamma^{(T)}+\Gamma^{(L)} \wedge \Gamma^{(T)} \\ d \Gamma_{*}^{(T)}+\Gamma_{*}^{(T)} \wedge \Gamma^{(L)} & 0 \end{array}\right)	$\hat{R} := d\hat{\Gamma} + \hat{\Gamma} \wedge \hat{\Gamma} = \begin{pmatrix} R^{(L)} + \Gamma^{(L)} \wedge \Gamma_{*}^{(L)} & d\Gamma^{(T)} + \Gamma^{(L)} \wedge \Gamma^{(T)} \\ d\Gamma_{*}^{(T)} + \Gamma_{*}^{(T)} \wedge \Gamma^{(L)} & 0 \end{pmatrix}$	$\hat{R} := d\hat{\Gamma} + \hat{\Gamma} \wedge \hat{\Gamma} = \begin{pmatrix} R^{(L)} + \Gamma^{(L)} \wedge \Gamma_{*}^{(L)} & d\Gamma^{(T)} + \Gamma^{(L)} \wedge \Gamma^{(T)} \\ d\Gamma_{*}^{(T)} + \Gamma_{*}^{(T)} \wedge \Gamma^{(L)} & 0 \end{pmatrix},$
mielke-geometrodynamics_EQ0885	286	■ 1.000 ● K|+0	R^{(L)}:=d \Gamma^{(L)}+\Gamma^{(L)} \wedge \Gamma^{(L)}	$R^{(L)} := d\Gamma^{(L)} + \Gamma^{(L)} \wedge \Gamma^{(L)}$	$R^{(L)} := d\Gamma^{(L)} + \Gamma^{(L)} \wedge \Gamma^{(L)}$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): ● C component ● W weak ● S stable ● N noise ● K clean ● not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ0886 (13.4.5)	286	1.000 N|+0	R^{(T)}:=d \Gamma^{(T)}+\Gamma^{(L)} \wedge \Gamma^{(T)}= \left(T^{\beta}-R_{\alpha}{ }^{\beta} \xi^{\alpha}\right) \ell P_{\beta}	$R^{(T)} := d\Gamma^{(T)} + \Gamma^{(L)} \wedge \Gamma^{(T)} = \left(T^{\beta} - R_{\alpha}{}^{\beta}\xi^{\alpha}\right) \ell P_{\beta}$	$R^{(T)} := d\Gamma^{(T)} + \Gamma^{(L)} \wedge \Gamma^{(T)} = (T^{\beta} - R_{\alpha}{}^{\beta}\xi^{\alpha})\ell P_{\beta}$
mielke-geometrodynamics_EQ0887 (13.4.6)	286	1.000 N|+1	\hat{R} \xrightarrow{A^{-1}(x)} \hat{R}^{ \prime}=A^{-1}(x) \hat{R} A(x) .	$\hat{R} \xrightarrow{A^{-1}(x)} \hat{R}' = A^{-1}(x)\hat{R}A(x).$	$\hat{R} \xrightarrow{A^{-1}(x)} \hat{R}' = A^{-1}(x)\,\hat{R}\,A(x)\,.$
mielke-geometrodynamics_EQ0888 (13.4.7)	286	1.000 N|+0	\Gamma^{(L)} \xrightarrow{A^{-1}(x)} \Gamma^{(L)\prime}= \Lambda^{-1}(x) \Gamma^{(L)} \Lambda(x)+\Lambda^{-1}(x) d \Lambda(x)	$\Gamma^{(L)} \xrightarrow{A^{-1}(x)} \Gamma^{(L)\prime} = \Lambda^{-1}(x)\Gamma^{(L)}\Lambda(x) + \Lambda^{-1}(x)d\Lambda(x)$	$\Gamma^{(L)} \xrightarrow{A^{-1}(x)} \Gamma^{(L)\prime} = \Lambda^{-1}(x)\,\Gamma^{(L)}\,\Lambda(x) + \Lambda^{-1}(x)d\Lambda(x)$
mielke-geometrodynamics_EQ0891 (13.4.10)	287	1.000 N|+0	\vartheta:=\Gamma^{(T)}+D \xi:=\vartheta^{\alpha} P_{ \alpha}, \quad \theta:=\Gamma_{*}^{(T)}+D \xi_{*}:= \theta_{\beta} P_{*}^{\beta},	$\vartheta := \Gamma^{(T)} + D\xi := \vartheta^{\alpha} P_{\alpha}, \quad \theta := \Gamma_{*}^{(T)} + D\xi_{*} := \theta_{\beta} P_{*}^{\beta},$	$\vartheta := \Gamma^{(T)} + D\xi := \vartheta^{\alpha}\,P_{\alpha}\,, \qquad \theta := \Gamma_{*}^{(T)} + D\xi_{*} := \theta_{\beta}\,P_{*}^{\beta}\,,$
mielke-geometrodynamics_EQ0894 (13.4.13)	287	1.000 N|+0	D \xi \stackrel{*}{=} 0, \quad D \xi_{*} \stackrel{*}{=} 0,	$D\xi \stackrel{*}{=} 0, \quad D\xi_{*} \stackrel{*}{=} 0,$	$D\xi \stackrel{*}{=} 0\,, \qquad D\xi_{*} \stackrel{*}{=} 0\,,$
mielke-geometrodynamics_EQ0895 (13.4.14)	287	1.000 N|+1	\overline{\bar{\Gamma}}=\left(\begin{array}{cc} \Gamma^{(L)} & \vartheta \\ \theta & 0 \end{array} \right),	$\overline{\bar{\Gamma}} = \begin{pmatrix} \Gamma^{(L)} & \vartheta \\ \theta & 0 \end{pmatrix},$	$\overline{\bar{\Gamma}} = \begin{pmatrix} \Gamma^{(L)} & \vartheta \\ \theta & 0 \end{pmatrix},$
mielke-geometrodynamics_EQ0896 (13.5.1)	288	1.000 N|+0	\hat{\Gamma}=\Gamma_{\alpha}{ }^{\beta} L^{\alpha}{ }_{ \beta}+\vartheta^{\alpha} P_{\alpha}+\theta_{\beta} P_{*}^{\beta},	$\hat{\Gamma} = \Gamma_{\alpha}{}^{\beta} L^{\alpha}{}_{\beta} + \vartheta^{\alpha} P_{\alpha} + \theta_{\beta} P_{*}^{\beta},$	$\hat{\Gamma} = \Gamma_{\alpha}{}^{\beta}\,L^{\alpha}{}_{\beta} + \vartheta^{\alpha}\,P_{\alpha} + \theta_{\beta}\,P_{*}^{\beta}\,,$
mielke-geometrodynamics_EQ0899 (13.5.4)	288	1.000 K|+0	\tilde{L}_{\mathrm{SL}(5, \mathbb{R})}=-\operatorname{Tr}\{\hat{B} \wedge \hat{R}\}-d \hat{C} .	$\tilde{L}_{\mathrm{SL}(5,\mathbb{R})} = -\operatorname{Tr}\{\hat{B} \wedge \hat{R}\} - d\hat{C}.$	$\tilde{L}_{\mathrm{SL}(5,\mathbb{R})} = -\mathrm{Tr}\{\hat{B} \wedge \hat{R}\} - d\hat{C}\,.$
mielke-geometrodynamics_EQ0900 (13.5.5)	289	1.000 N|+0	\hat{D} B_{A}{ }^{B} \cong \hat{D} \hat{R}_{A}{ }^{B} \equiv 0 .	$\hat{D}B_{A}{}^{B} \cong \hat{D}\hat{R}_{A}{}^{B} \equiv 0.$	$\hat{D}B_{A}{}^{B} \cong \hat{D}\hat{R}_{A}{}^{B} \equiv 0.$
mielke-geometrodynamics_EQ0901 (13.5.6)	289	1.000 N|-1	\tilde{L}_{\mathrm{SSB}}=\tilde{L}_{\mathrm{SL}(5, \mathbb{R})}+\frac{1}{2} \eta_{A B C D E} B^{A B} \wedge B^{C D} \Phi^{E} .	$\tilde{L}_{\mathrm{SSB}} = \tilde{L}_{\mathrm{SL}(5,\mathbb{R})} + \frac{1}{2}\eta_{ABCDE}B^{AB} \wedge B^{CD}\Phi^{E}.$	$\tilde{L}_{\mathrm{SSB}} = \tilde{L}_{\mathrm{SL}(5,\mathbb{R})} + \frac{1}{2}\eta_{ABCDE}\,B^{AB} \wedge B^{CD}\Phi^{E}\,.$
mielke-geometrodynamics_EQ0902 (13.5.7)	289	1.000 N|+0	\hat{g}_{A B} \Phi^{A} \Phi^{B}=\mu^{2}, \quad \Phi_{E} \hat{D} \Phi^{E}=0	$\hat{g}_{AB}\Phi^{A}\Phi^{B} = \mu^{2}, \quad \Phi_{E}\hat{D}\Phi^{E} = 0$	$\hat{g}_{AB}\Phi^{A}\Phi^{B} = \mu^{2}\,, \qquad \Phi_{E}\hat{D}\Phi^{E} = 0\,,$
mielke-geometrodynamics_EQ0903 (13.5.8)	289	1.000 K|+0	\left\langle\Phi^{E}\right\rangle=\Phi_{0}^{E}=(0,0,0,0, \mu)^{T}	$\left\langle\Phi^{E}\right\rangle = \Phi_{0}^{E} = (0,0,0,0,\mu)^{T}$	$\langle\Phi^{E}\rangle = \Phi_{0}^{E} = (0,0,0,0,\mu)^{T}$
mielke-geometrodynamics_EQ0904 (13.5.9)	289	1.000 K|+0	\tilde{L}_{\mathrm{SSB}}=-\operatorname{Tr}\{\hat{B} \wedge \hat{R}\}+\frac{\mu}{2} \eta_{\alpha \beta \gamma \delta} B^{\alpha \beta} \wedge B^{\gamma \delta}-d C_{ \mathrm{RR}}+2 d C_{\mathrm{TT}}	$\tilde{L}_{\mathrm{SSB}} = -\operatorname{Tr}\{\hat{B} \wedge \hat{R}\} + \frac{\mu}{2}\eta_{\alpha\beta\gamma\delta}B^{\alpha\beta} \wedge B^{\gamma\delta} - dC_{\mathrm{RR}} + 2dC_{\mathrm{TT}}$	$\tilde{L}_{\mathrm{SSB}} = -\mathrm{Tr}\{\hat{B} \wedge \hat{R}\} + \frac{\mu}{2}\eta_{\alpha\beta\gamma\delta}B^{\alpha\beta} \wedge B^{\gamma\delta} - dC_{\mathrm{RR}} + 2dC_{\mathrm{TT}}$
mielke-geometrodynamics_EQ0905 (13.5.10)	290	1.000 N|+1	d \hat{C}=d C_{\mathrm{RR}}-2 d C_{\mathrm{TT}},	$d\hat{C} = dC_{\mathrm{RR}} - 2dC_{\mathrm{TT}},$	$d\hat{C} = dC_{\mathrm{RR}} - 2dC_{\mathrm{TT}},$
mielke-geometrodynamics_EQ0906 (13.5.11)	290	1.000 N|+0	B_{\alpha \beta} \cong \frac{1}{\mu} \eta_{\alpha \beta \gamma \delta}\left[R^{\gamma \delta}-\frac{\Lambda}{3} \theta^{\gamma} \wedge \vartheta^{\delta}\right]	$B_{\alpha\beta} \cong \frac{1}{\mu}\eta_{\alpha\beta\gamma\delta}\left[R^{\gamma\delta} - \frac{\Lambda}{3}\theta^{\gamma} \wedge \vartheta^{\delta}\right]$	$B_{\alpha\beta} \cong \frac{1}{\mu}\eta_{\alpha\beta\gamma\delta}\left[R^{\gamma\delta} - \frac{\Lambda}{3}\,\theta^{\gamma} \wedge \vartheta^{\delta}\right]$
mielke-geometrodynamics_EQ0909 (13.5.14)	291	1.000 N|-1	\tilde{L}_{\mathrm{SSB}} \cong-\frac{1}{2 \kappa} R^{ \alpha \beta} \wedge \eta_{\alpha \beta}+\frac{\Lambda}{ \kappa} \eta	$\tilde{L}_{\mathrm{SSB}} \cong -\frac{1}{2\kappa}R^{\alpha\beta} \wedge \eta_{\alpha\beta} + \frac{\Lambda}{\kappa}\eta$	$\tilde{L}_{\mathrm{SSB}} \cong -\frac{1}{2\kappa}R^{\alpha\beta} \wedge \eta_{\alpha\beta} + \frac{\Lambda}{\kappa}\,\eta$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ0910 (13.5.15)	291	1.000 N|+0	`\mu=\frac{4}{3} \kappa \Lambda=\frac{1}{3}(2 \kappa)^{2} \rho_{\Lambda} .`	$\mu=\frac{4}{3} \kappa \Lambda=\frac{1}{3}(2 \kappa)^{2} \rho_{\Lambda}$.	$\mu=\frac{4}{3} \kappa \Lambda=\frac{1}{3}(2 \kappa)^{2} \rho_{\Lambda}$.
mielke-geometrodynamics_EQ0912 (13.7.1)	293	1.000 N|+0	`g_{\mathrm{N}}:=\kappa k^{2}, \quad \lambda:=\Lambda / k^{2},`	$g_{\mathrm{N}}:=\kappa k^{2}, \quad \lambda:=\Lambda / k^{2},$	$g_{\mathrm{N}}:=\kappa k^{2}, \quad \lambda:=\Lambda / k^{2},$
mielke-geometrodynamics_EQ0913 (13.7.2)	293	1.000 S|+0	`k \frac{\partial}{\partial k} g_{\mathrm{N}}=\beta_{1} \left(g_{\mathrm{N}}, \lambda\right)=\left(2+d_{ \mathrm{N}}\right) g_{\mathrm{N}}, \quad k \frac{ \partial}{\partial k} \lambda=\beta_{2}\left(g_{ \mathrm{N}}, \lambda\right),`	$k \frac{\partial}{\partial k} g_{\mathrm{N}}=\beta_{1}\left(g_{\mathrm{N}}, \lambda\right)=\left(2+d_{\mathrm{N}}\right) g_{\mathrm{N}}, \quad k \frac{\partial}{\partial k} \lambda=\beta_{2}\left(g_{\mathrm{N}}, \lambda\right),$	$k \frac{\partial}{\partial k} g_{\mathrm{N}}=\beta_{1}(g_{\mathrm{N}}, \lambda)=(2+d_{\mathrm{N}}) g_{\mathrm{N}}, \quad k \frac{\partial}{\partial k} \lambda=\beta_{2}(g_{\mathrm{N}}, \lambda),$
mielke-geometrodynamics_EQ0914 (13.7.3)	293	1.000 N|+0	`\mu_{*} \leq \frac{4}{3} g_{\mathrm{N} *} \lambda_{*} \simeq 0.2`	$\mu_{*} \leq \frac{4}{3} g_{\mathrm{N} *} \lambda_{*} \simeq 0.2$	$\mu_{*} \leq \frac{4}{3} g_{\mathrm{N} *} \lambda_{*} \simeq 0.2$
mielke-geometrodynamics_EQ0916 (13.8.2)	295	1.000 N|-1	`d C_{\mathrm{TT}}=\frac{1}{2 \ell^{2}}\left(T^{\alpha} \wedge T_{\alpha}+R_{\alpha \beta} \wedge \vartheta^{ \alpha} \wedge \vartheta^{\beta}\right)`	$d C_{\mathrm{TT}}=\frac{1}{2 \ell^{2}}\left(T^{\alpha} \wedge T_{\alpha}+R_{\alpha \beta} \wedge \vartheta^{\alpha} \wedge \vartheta^{\beta}\right)$	$d C_{\mathrm{TT}}=\frac{1}{2 \ell^{2}}\left(T^{\alpha} \wedge T_{\alpha}+R_{\alpha \beta} \wedge \vartheta^{\alpha} \wedge \vartheta^{\beta}\right)$
mielke-geometrodynamics_EQ0917 (13.8.3)	295	1.000 K|+0	`d C_{\mathrm{RR}}=-\frac{1}{2} R_{\alpha}{ }^{\beta} \wedge R_{\beta}{ }^{\alpha}`	$d C_{\mathrm{RR}}=-\frac{1}{2} R_{\alpha}{}^{\beta} \wedge R_{\beta}{}^{\alpha}$	$d C_{\mathrm{RR}}=-\frac{1}{2} R_{\alpha}{}^{\beta} \wedge R_{\beta}{}^{\alpha}$
mielke-geometrodynamics_EQ0918 (13.8.4)	295	1.000 N|+0	`D R_{\alpha}{ }^{\beta} \equiv 0,`	$D R_{\alpha}{}^{\beta} \equiv 0,$	$D R_{\alpha}{}^{\beta} \equiv 0,$
mielke-geometrodynamics_EQ0921 (13.8.7)	296	1.000 N|+1	`L_{\mathrm{SKY}}:=-\frac{1}{2} R_{\alpha \beta} \wedge{ }^{*} R^{\alpha \beta},`	$L_{\mathrm{SKY}}:=-\frac{1}{2} R_{\alpha \beta} \wedge{}^{*} R^{\alpha \beta},$	$L_{\mathrm{SKY}}:=-\frac{1}{2} R_{\alpha \beta} \wedge{}^{*} R^{\alpha \beta},$
mielke-geometrodynamics_EQ0922 (14.1.1)	302	1.000 N|+0	`L=L_{g}+L_{\omega}+L_{\mathrm{mat}}`	$L=L_{g}+L_{\omega}+L_{\mathrm{mat}}$	$L=L_{g}+L_{\omega}+L_{\mathrm{mat}}$
mielke-geometrodynamics_EQ0923 (14.1.2)	302	1.000 N|+1	`L_{\omega-g}=\operatorname{Tr}\left\{\wedge^{*}\left( \vartheta \wedge \Omega^{g}\right) \wedge^{*}(\vartheta \wedge \Omega)\right\}`	$L_{\omega-g}=\operatorname{Tr}\left\{\wedge^{*}\left(\vartheta \wedge \Omega^{g}\right) \wedge^{*}(\vartheta \wedge \Omega)\right\}$	$L_{\omega-g}=\operatorname{Tr}\left\{\wedge^{*}\left(\vartheta \wedge \Omega^{g}\right) \wedge^{*}(\vartheta \wedge \Omega)\right\}$
mielke-geometrodynamics_EQ0924 (14.1.3)	303	1.000 N|-1	`L_{\mathrm{GMD} .}=\frac{1}{\ell^{* 2}} L_{\mathrm{W} .}+L_{\mathrm{YM}}+L_{\mathrm{mat}}`	$L_{\mathrm{GMD} .}=\frac{1}{\ell^{* 2}} L_{\mathrm{W} .}+L_{\mathrm{YM}}+L_{\mathrm{mat}}$	$L_{\mathrm{GMD} .}=\frac{1}{\ell^{* 2}} L_{\mathrm{W} .}+L_{\mathrm{YM}}+L_{\mathrm{mat}}$
mielke-geometrodynamics_EQ0933 (14.1.14)	305	1.000 N|+0	`e^{* \pi / 2}=(-1)^{z} *, \quad z:=\frac{s-1}{2} .`	$e^{* \pi / 2}=(-1)^{z} *, \quad z:=\frac{s-1}{2}$.	$e^{* \pi / 2}=(-1)^{z} *, \quad z:=\frac{s-1}{2}$.
mielke-geometrodynamics_EQ0934 (14.1.15)	305	1.000 K|+0	`\xi:=e^{*(-\delta)} \Omega`	$\xi:=e^{*(-\delta)} \Omega$	$\xi:=e^{*(-\delta)} \Omega$
mielke-geometrodynamics_EQ0935 (14.1.16)	305	1.000 N|+0	`\Omega \wedge^{*} \Omega \rightarrow \xi \wedge^{*} \xi= \Omega \wedge^{*} \Omega \cos 2 \delta-(-1)^{z} \Omega \wedge \Omega \sin 2 \delta`	$\Omega \wedge^{*} \Omega \rightarrow \xi \wedge^{*} \xi=\Omega \wedge^{*} \Omega \cos 2 \delta-(-1)^{z} \Omega \wedge \Omega \sin 2 \delta$	$\Omega \wedge^{*} \Omega \rightarrow \xi \wedge^{*} \xi=\Omega \wedge^{*} \Omega \cos 2 \delta-(-1)^{z} \Omega \wedge \Omega \sin 2 \delta$
mielke-geometrodynamics_EQ0936 (14.1.17)	305	1.000 N|+0	`\Omega \wedge \Omega \rightarrow \xi \wedge \xi=\Omega \wedge \Omega \cos 2 \delta-(-1)^{z} \Omega \wedge^{*} \Omega \sin 2 \delta .`	$\Omega \wedge \Omega \rightarrow \xi \wedge \xi=\Omega \wedge \Omega \cos 2 \delta-(-1)^{z} \Omega \wedge^{*} \Omega \sin 2 \delta$.	$\Omega \wedge \Omega \rightarrow \xi \wedge \xi=\Omega \wedge \Omega \cos 2 \delta-(-1)^{z} \Omega \wedge^{*} \Omega \sin 2 \delta$.
mielke-geometrodynamics_EQ0937 (14.1.18)	305	1.000 N|+0	`\vec{E}=\left\{E_{j}:=F_{j 0} \mid j=1,2,3\right\}`	$\vec{E}=\left\{E_{j}:=F_{j 0} \mid j=1,2,3\right\}$	$\vec{E}=\left\{E_{j}:=F_{j 0} \mid j=1,2,3\right\}$
mielke-geometrodynamics_EQ0938 (14.1.19)	305	1.000 N|+0	`\vec{B}=\left\{B_{j}: \left.=\frac{1}{2} \epsilon_{i j k} F^{j k} \right\rvert\, i, j, k=1,2,3\right\}`	$\vec{B}=\left\{B_{j}:\left.=\frac{1}{2} \epsilon_{i j k} F^{j k}\right\rvert\, i, j, k=1,2,3\right\}$	$\vec{B}=\left\{B_{j}:\left.=\frac{1}{2} \epsilon_{i j k} F^{j k}\right\rvert\, i, j, k=1,2,3\right\}$

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Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ0943 (14.1.24)	306	1.000 N|+1	`\Omega=e^{* \delta} \xi .`	$\Omega = e^{*\delta}\xi.$	$\Omega = e^{*\delta}\xi.$
mielke-geometrodynamics_EQ0944 (14.1.25)	306	1.000 N|-1	`\Sigma_{\mathrm{YM}}(\Omega)=\Sigma_{\mathrm{YM}}(\xi)`	$\Sigma_{\mathrm{YM}}(\Omega) = \Sigma_{\mathrm{YM}}(\xi)$	$\Sigma_{\mathrm{YM}}(\Omega) = \Sigma_{\mathrm{YM}}(\xi)$
mielke-geometrodynamics_EQ0950 (14.1.31)	307	1.000 K|+0	`\tau_{e}=\bar{\tau}_{e} \cos \delta-(-1)^{z} \bar{ \tau}_{p} \sin \delta`	$\tau_e = \bar{\tau}_e \cos\delta - (-1)^z \bar{\tau}_p \sin\delta$	$\tau_e = \bar{\tau}_e \cos\delta - (-1)^z \bar{\tau}_p \sin\delta$
mielke-geometrodynamics_EQ0952 (14.1.34)	307	1.000 N|+0	`D \delta=d \delta=0,`	$D\delta = d\delta = 0,$	$D\delta = d\delta = 0,$
mielke-geometrodynamics_EQ0955 (14.1.37)	308	1.000 N|+0	`(-1)^{z} \Sigma_{\mathrm{YM}}(\xi) \wedge d \delta=D \Sigma_{\mathrm{YM}}(\xi) .`	$(-1)^z \Sigma_{\mathrm{YM}}(\xi) \wedge d\delta = D\Sigma_{\mathrm{YM}}(\xi).$	$(-1)^z \Sigma_{\mathrm{YM}}(\xi) \wedge d\delta = D\Sigma_{\mathrm{YM}}(\xi).$
mielke-geometrodynamics_EQ0958 (14.1.40)	309	1.000 N|+1	`\delta=\int_{c_{1}} d \delta+\delta_{0}`	$\delta = \int_{c_1} d\delta + \delta_0$	$\delta = \int_{c_1} d\delta + \delta_0.$
mielke-geometrodynamics_EQ0969 (14.2.10)	314	1.000 N|+1	`\hat{\omega}^{A B}=-\hat{\omega}^{B A}, \quad A, B=0, \ldots, 3+K`	$\hat{\omega}^{AB} = -\hat{\omega}^{BA}, \quad A, B = 0, \ldots, 3+K$	$\hat{\omega}^{AB} = -\hat{\omega}^{BA}, \quad A, B = 0, \ldots, 3+K$
mielke-geometrodynamics_EQ0975 (14.2.16)	315	1.000 N|+1	`\Omega^{\prime}:=\pi\left(d \omega-\omega \wedge \stackrel{\circ}{\omega}-\omega^{g} \wedge \omega\right)= \Omega-\omega^{g} \wedge \omega .`	$\Omega' := \pi\left(d\omega - \omega\wedge \overset{\circ}{\omega} - \omega^g \wedge \omega\right) = \Omega - \omega^g \wedge \omega.$	$\Omega' := \pi(d\omega - \omega \wedge \overset{\circ}{\omega} - \omega^g \wedge \omega) = \Omega - \omega^g \wedge \omega.$
mielke-geometrodynamics_EQ0980 (14.2.21)	316	1.000 N|+0	`\hat{g}_{A B}\left(x, \xi^{j}\right)=\sum_{n=-\infty}^{+ \infty} g_{A B}^{(n)}(x) Y_{n}\left(\xi^{j}\right)`	$\hat{g}_{AB}\left(x, \xi^j\right) = \sum_{n=-\infty}^{+\infty} g_{AB}^{(n)}(x) Y_n\left(\xi^j\right)$	$\hat{g}_{AB}(x, \xi^j) = \sum_{n=-\infty}^{+\infty} g_{AB}^{(n)}(x) Y_n(\xi^j)$
mielke-geometrodynamics_EQ0981 (14.2.22)	317	1.000 N|-1	`M^{*}=\sqrt{\hbar c / G_{\mathrm{N}}} \simeq 10^{19} \mathrm{GeV} / c^{2} .`	$M^* = \sqrt{\hbar c / G_{\mathrm{N}}} \simeq 10^{19}\mathrm{GeV}/c^2.$	$M^* = \sqrt{\hbar c / G_{\mathrm{N}}} \simeq 10^{19}\mathrm{GeV}/c^2.$
mielke-geometrodynamics_EQ0983 (14.2.24)	318	1.000 K|+0	`G=S U(3) \times S U(2) \times U(1)`	$G = SU(3) \times SU(2) \times U(1)$	$G = SU(3) \times SU(2) \times U(1)$
mielke-geometrodynamics_EQ0984 (14.2.25)	318	1.000 N|+0	`B=\mathbb{C} P^{2} \times S^{2} \times S^{1},`	$B = \mathbb{C}P^2 \times S^2 \times S^1,$	$B = \mathbb{C}P^2 \times S^2 \times S^1,$
mielke-geometrodynamics_EQ0985 (14.2.26)	318	1.000 N|+1	`G / H=\frac{S U(3) \times S U(2) \times U(1)}{S U(2) \times U(1) \times U(1)},`	$G/H = \frac{SU(3) \times SU(2) \times U(1)}{SU(2) \times U(1) \times U(1)},$	$G/H = \frac{SU(3) \times SU(2) \times U(1)}{SU(2) \times U(1) \times U(1)},$
mielke-geometrodynamics_EQ0986 (14.2.27)	318	1.000 K|+0	`\widetilde{S}^{7}:=\frac{S O(5) \times S O(3)}{S O(3) \times S O(3)} .`	$\widetilde{S}^7 := \frac{SO(5) \times SO(3)}{SO(3) \times SO(3)}.$	$\widetilde{S}^7 := \frac{SO(5) \times SO(3)}{SO(3) \times SO(3)}.$
mielke-geometrodynamics_EQ0988 (14.3.1)	319	1.000 K|+0	`\varphi \rightarrow \varphi^{\mathrm{C}}:=\bar{\varphi}`	$\varphi \rightarrow \varphi^{\mathrm{C}} := \bar{\varphi}$	$\varphi \rightarrow \varphi^{\mathrm{C}} := \bar{\varphi}$
mielke-geometrodynamics_EQ0991 (14.3.4)	320	1.000 N|+0	`\hat{\psi}=\sum_{F=1}^{\operatorname{dim} \rho(G)}\left( \psi_{-}^{F}(x) \chi_{\rho F}^{-}(\xi)+\psi_{+}^{F}(x) \chi_{\rho F}^{+}(\xi)\right) .`	$\hat{\psi} = \sum_{F=1}^{\dim \rho(G)} \left(\psi_-^F(x)\chi_{\rho F}^-(\xi) + \psi_+^F(x)\chi_{\rho F}^+(\xi)\right).$	$\hat{\psi} = \sum_{F=1}^{\dim \rho(G)} (\psi_-^F(x)\chi_{\rho F}^-(\xi) + \psi_+^F(x)\chi_{\rho F}^+(\xi)).$
mielke-geometrodynamics_EQ0994 (14.3.7)	321	1.000 N|+0	`D^{g+\omega}:=d+i \widetilde{\omega}^{g} \otimes i \omega`	$D^{g+\omega} := d + i\widetilde{\omega}^g \otimes i\omega$	$D^{g+\omega} := d + i\widetilde{\omega}^g \otimes i\omega$
mielke-geometrodynamics_EQ0999 (14.3.12)	322	1.000 N|+0	`\left(\widehat{\gamma}^{n+1}\right)^{2}=-1 \Rightarrow \widehat{\gamma}^{n+1} \widehat{\psi}=\mp i \widehat{ \psi} .`	$\left(\widehat{\gamma}^{n+1}\right)^2 = -1 \Rightarrow \widehat{\gamma}^{n+1}\widehat{\psi} = \mp i\widehat{\psi}.$	$(\widehat{\gamma}^{n+1})^2 = -1 \quad \Rightarrow \quad \widehat{\gamma}^{n+1}\widehat{\psi} = \mp i\widehat{\psi}.$
mielke-geometrodynamics_EQ1000 (14.3.13)	322	1.000 N|+0	`\left(\widehat{\gamma}^{n+1}\right)^{2}=+1 \Rightarrow \widehat{\gamma}^{n+1} \widehat{\psi}=\mp \widehat{\psi} .`	$\left(\widehat{\gamma}^{n+1}\right)^2 = +1 \Rightarrow \widehat{\gamma}^{n+1}\widehat{\psi} = \mp\widehat{\psi}.$	$(\widehat{\gamma}^{n+1})^2 = +1 \quad \Rightarrow \quad \widehat{\gamma}^{n+1}\widehat{\psi} = \mp\widehat{\psi}.$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ1006 (14.4.1)	324	1.000 N|+0	`\bar{Q}^{(i)}=Q^{(i)} \cos \delta+P^{(i)} \sin \delta, \quad Q^{(\circ)} \equiv Q_{e} .`	$\bar{Q}^{(i)} = Q^{(i)} \cos \delta + P^{(i)} \sin \delta, \quad Q^{(\circ)} \equiv Q_{e}.$	$\bar{Q}^{(i)} = Q^{(i)} \cos \delta + P^{(i)} \sin \delta, \quad Q^{(\circ)} \equiv Q_{e}.$
mielke-geometrodynamics_EQ1009 (14.4.4)	325	1.000 N|+0	`\rho^{2}:=r^{2}+\frac{J(J+1) \hbar^{2}}{M^{2} c^{2}} \cos ^{2} \vartheta`	$\rho^{2} := r^{2}+\frac{J(J+1) \hbar^{2}}{M^{2} c^{2}} \cos ^{2} \vartheta$	$\rho^{2} := r^{2}+\frac{J(J+1) \hbar^{2}}{M^{2} c^{2}} \cos ^{2} \vartheta$
mielke-geometrodynamics_EQ1010 (14.4.5)	325	1.000 W|+0	`\Delta:=r^{2}-\frac{2 M \hbar}{M^{* 2} c} r+\frac{J(J+1) \hbar^{2}}{M^{2} c^{2}}+\frac{\alpha_{e} \hbar^{2}}{M^{* 2} c^{2}} \operatorname{Tr} \bar{Q}^{2}`	$\Delta := r^{2}-\frac{2 M \hbar}{M^{*2} c} r+\frac{J(J+1) \hbar^{2}}{M^{2} c^{2}}+\frac{\alpha_{e} \hbar^{2}}{M^{*2} c^{2}} \operatorname{Tr} \bar{Q}^{2}$	$\Delta := r^{2}-\frac{2 M \hbar}{M^{*2} c} r+\frac{J(J+1) \hbar^{2}}{M^{2} c^{2}}+\frac{\alpha_{e} \hbar^{2}}{M^{*2} c^{2}} \operatorname{Tr} \bar{Q}^{2}$
mielke-geometrodynamics_EQ1017 (14.4.12)	327	1.000 N|+0	`d s^{2}=-\frac{\bar{\Delta}}{\bar{\rho}^{2}}\left(\frac{4 N \hbar}{M c} \sin ^{2}\left(\frac{\vartheta}{2}\right) d \phi+c d t\right)^{2}+\frac{\bar{\rho}^{2}}{\bar{\Delta}} \left(d r^{2}+\bar{\Delta} d \Omega^{2}\right),`	$d s^{2}=-\frac{\bar{\Delta}}{\bar{\rho}^{2}}\left(\frac{4 N \hbar}{M c} \sin ^{2}\left(\frac{\vartheta}{2}\right) d \phi+c d t\right)^{2}+\frac{\bar{\rho}^{2}}{\bar{\Delta}} \left(d r^{2}+\bar{\Delta} d \Omega^{2}\right),$	$d s^{2}=-\frac{\bar{\Delta}}{\bar{\rho}^{2}}\left(\frac{4 N \hbar}{M c} \sin ^{2}\left(\frac{\vartheta}{2}\right) d \phi+c d t\right)^{2}+\frac{\bar{\rho}^{2}}{\bar{\Delta}} \left(d r^{2}+\bar{\Delta} d \Omega^{2}\right),$
mielke-geometrodynamics_EQ1018 (14.4.13)	328	1.000 N|+0	`\bar{\Delta}:=r^{2}-\frac{2 M \hbar}{M^{* 2} c} r-\frac{N^{2} \hbar^{2}}{M^{2} c^{2}}+\frac{\alpha_{e} \hbar^{2}}{M^{* 2} c^{2}} \operatorname{Tr} \bar{Q}^{2}`	$\bar{\Delta} := r^{2}-\frac{2 M \hbar}{M^{*2} c} r-\frac{N^{2} \hbar^{2}}{M^{2} c^{2}}+\frac{\alpha_{e} \hbar^{2}}{M^{*2} c^{2}} \operatorname{Tr} \bar{Q}^{2}$	$\bar{\Delta} := r^{2}-\frac{2 M \hbar}{M^{*2} c} r-\frac{N^{2} \hbar^{2}}{M^{2} c^{2}}+\frac{\alpha_{e} \hbar^{2}}{M^{*2} c^{2}} \operatorname{Tr} \bar{Q}^{2}$
mielke-geometrodynamics_EQ1019 (14.4.14)	328	1.000 N|+0	`\bar{\rho}^{2}:=r^{2}+\frac{N^{2} \hbar^{2}}{M^{2} c^{2}}`	$\bar{\rho}^{2} := r^{2}+\frac{N^{2} \hbar^{2}}{M^{2} c^{2}}$	$\bar{\rho}^{2} := r^{2}+\frac{N^{2} \hbar^{2}}{M^{2} c^{2}}$
mielke-geometrodynamics_EQ1020 (14.4.15)	328	1.000 W|+1	`\begin{aligned} A= & -\frac{1}{\bar{\rho}^{2}}(\bar{Q} \cos \delta+N \bar{Q} \sin \delta) c d t \\ & +\frac{1-\cos \vartheta}{\bar{\rho}^{2}} \bar{Q}\left[-\bar{\rho}^{2} \sin \delta+2 r \frac{N \hbar}{M c} \cos \delta \right] d \phi \end{aligned}`	$\begin{aligned} A= & -\frac{1}{\bar{\rho}^{2}}(\bar{Q} \cos \delta+N \bar{Q} \sin \delta) c d t \\ & +\frac{1-\cos \vartheta}{\bar{\rho}^{2}} \bar{Q}\left[-\bar{\rho}^{2} \sin \delta+2 r \frac{N \hbar}{M c} \cos \delta \right] d \phi \end{aligned}$	$\begin{aligned} A= & -\frac{1}{\bar{\rho}^{2}}(\bar{Q} \cos \delta+N \bar{Q} \sin \delta) c d t \\ & +\frac{1-\cos \vartheta}{\bar{\rho}^{2}} \bar{Q}\left[-\bar{\rho}^{2} \sin \delta+2 r \frac{N \hbar}{M c} \cos \delta \right] d \phi \end{aligned}$
mielke-geometrodynamics_EQ1022 (14.4.17)	328	1.000 W|+0	`M^{2} / M_{\mathrm{ir}}^{2}=\frac{\left[1+\frac{1}{4} \left(\alpha_{e}^{2} \operatorname{Tr} \bar{Q}^{2}-2 N^{2}\right)\left(M^{*} / M_{\mathrm{ir}}\right)^{4} \right]^{2}}{1-\frac{1}{4} N^{2}\left(M^{*} / M_{ \mathrm{ir}}\right)^{4}},`	$M^{2} / M_{\mathrm{ir}}^{2}=\frac{\left[1+\frac{1}{4} \left(\alpha_{e}^{2} \operatorname{Tr} \bar{Q}^{2}-2 N^{2}\right)\left(M^{*} / M_{\mathrm{ir}}\right)^{4} \right]^{2}}{1-\frac{1}{4} N^{2}\left(M^{*} / M_{ \mathrm{ir}}\right)^{4}},$	$M^{2} / M_{\mathrm{ir}}^{2}=\frac{\left[1+\frac{1}{4} \left(\alpha_{e}^{2} \operatorname{Tr} \bar{Q}^{2}-2 N^{2}\right)\left(M^{*} / M_{\mathrm{ir}}\right)^{4} \right]^{2}}{1-\frac{1}{4} N^{2}\left(M^{*} / M_{ \mathrm{ir}}\right)^{4}},$
mielke-geometrodynamics_EQ1023 (15.0.1)	335	1.000 N|+0	`\ell:=2 \pi \hbar /\left(M_{P} c\right)=\ell^{*} / \sqrt{ \kappa} \simeq 1.3 \times 10^{-13} \mathrm{~cm}`	$\ell := 2 \pi \hbar /\left(M_{P} c\right)=\ell^{*} / \sqrt{ \kappa} \simeq 1.3 \times 10^{-13} \mathrm{~cm}$	$\ell := 2 \pi \hbar /\left(M_{P} c\right)=\ell^{*} / \sqrt{ \kappa} \simeq 1.3 \times 10^{-13} \mathrm{~cm}$
mielke-geometrodynamics_EQ1024 (15.0.2)	335	1.000 N|+0	`V_{\mathrm{Yu}}(r) \sim \frac{1}{r} e^{-r m_{\pi} c / \hbar},`	$V_{\mathrm{Yu}}(r) \sim \frac{1}{r} e^{-r m_{\pi} c / \hbar},$	$V_{\mathrm{Yu}}(r) \sim \frac{1}{r} e^{-r m_{\pi} c / \hbar},$
mielke-geometrodynamics_EQ1026 (15.1.2)	336	1.000 N|+0	`L_{f g}=P\left(\vartheta^{f}, \vartheta^{g}\right) \eta,`	$L_{f g}=P\left(\vartheta^{f}, \vartheta^{g}\right) \eta,$	$L_{f g}=P\left(\vartheta^{f}, \vartheta^{g}\right) \eta,$
mielke-geometrodynamics_EQ1027 (15.1.3)	337	1.000 N|+0	`\delta L_{f g}=: \delta \vartheta^{f} \wedge \Sigma^{f}+ \delta \vartheta^{g} \wedge \Sigma^{g} .`	$\delta L_{f g}=: \delta \vartheta^{f} \wedge \Sigma^{f}+ \delta \vartheta^{g} \wedge \Sigma^{g} .$	$\delta L_{f g}=: \delta \vartheta^{f} \wedge \Sigma^{f}+ \delta \vartheta^{g} \wedge \Sigma^{g} .$
mielke-geometrodynamics_EQ1028 (15.1.4)	337	1.000 N|+0	`\frac{1}{a} \vartheta^{f} \wedge \Sigma^{f}+\frac{1}{b} \vartheta^{g} \wedge \Sigma^{g}=2 L_{f g} .`	$\frac{1}{a} \vartheta^{f} \wedge \Sigma^{f}+\frac{1}{b} \vartheta^{g} \wedge \Sigma^{g}=2 L_{f g} .$	$\frac{1}{a} \vartheta^{f} \wedge \Sigma^{f}+\frac{1}{b} \vartheta^{g} \wedge \Sigma^{g}=2 L_{f g} .$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ1029 (15.1.5)	337	■ 1.000 ● W|+0	`L_{f g}^{\prime}=\frac{m_{f}^{2}}{\ell^{2}}\left| \operatorname{det} g_{i j}\right|^{u}\left| \operatorname{det} f_{i j}\right|^{1 / 2-u}\left( \vartheta^{f}-\vartheta^{g}\right) \wedge\left( \vartheta^{f}-\vartheta^{g}\right) \wedge \vartheta^{g} \wedge \vartheta^{g}`	$L'_{fg} = \frac{m_f^2}{\ell^2} \left\|\det g_{ij}\right\|^u \left\|\det f_{ij}\right\|^{1/2-u} \left(\vartheta^f - \vartheta^g\right) \wedge \left(\vartheta^f - \vartheta^g\right) \wedge \vartheta^g \wedge \vartheta^g$	$L'_{fg} = \frac{m_f^2}{\ell^2} \left\|\det g_{ij}\right\|^u \left\| \det f_{ij}\right\|^{1/2-u} (\vartheta^f - \vartheta^g) \wedge (\vartheta^f - \vartheta^g) \wedge \vartheta^g \wedge \vartheta^g$
mielke-geometrodynamics_EQ1035 (15.1.12)	338	■ 1.000 ● N|+1	`\vartheta^{m_{f}}:=\vartheta^{f}-\vartheta^{g}`	$\vartheta^{m_f} := \vartheta^f - \vartheta^g$	$\vartheta^{m_f} := \vartheta^f - \vartheta^g$
mielke-geometrodynamics_EQ1036 (15.1.13)	338	■ 1.000 ● W|+1	`\begin{aligned} d s^{2} & =\frac{1}{1+\kappa} g^{ \alpha \beta}\left(\vartheta_{\alpha}^{g} \otimes_{s} \vartheta_{\beta}^{g}+\kappa \vartheta_{\alpha}^{f} \otimes \vartheta_{\beta}^{f}\right) \\ & =\frac{1}{1+ \kappa}\left(g_{i j}+\kappa f_{i j}\right) d x^{i} \otimes_{s} d x^{j} \end{aligned}`	$\begin{aligned} ds^2 &= \frac{1}{1+\kappa} g^{\alpha\beta} \left(\vartheta^g_\alpha \otimes_s \vartheta^g_\beta + \kappa \vartheta^f_\alpha \otimes \vartheta^f_\beta\right) \\ &= \frac{1}{1+\kappa} \left(g_{ij} + \kappa f_{ij}\right) dx^i \otimes_s dx^j \end{aligned}$	$\begin{aligned} ds^2 &= \frac{1}{1+\kappa} g^{\alpha\beta} \left(\vartheta^g_\alpha \otimes_s \vartheta^g_\beta + \kappa \vartheta^f_\alpha \otimes \vartheta^f_\beta\right) \\ &= \frac{1}{1+\kappa} \left(g_{ij} + \kappa\ f_{ij}\right) dx^i \otimes_s dx^j. \end{aligned}$
mielke-geometrodynamics_EQ1037 (15.1.14)	338	■ 1.000 ● N|+0	`\kappa=\ell^{* 2} / \ell^{2}=G_{\mathrm{N}} / G_{ \mathrm{S}}=0.38 \times 10^{-38}`	$\kappa = \ell^{*2}/\ell^2 = G_\mathrm{N}/G_\mathrm{S} = 0.38 \times 10^{-38}$	$\kappa = \ell^{*2}/\ell^2 = G_\mathrm{N}/G_\mathrm{S} = 0.38 \times 10^{-38}$
mielke-geometrodynamics_EQ1038 (15.1.15)	339	■ 1.000 ● W|+1	`e^{-\lambda^{g, f}}:=1-\frac{2 \mu^{g, f}}{r}-\frac{1}{3} \Lambda^{g, f} r^{2},`	$e^{-\lambda^{g,f}} := 1 - \frac{2\mu^{g,f}}{r} - \frac{1}{3}\Lambda^{g,f} r^2,$	$e^{-\lambda^{g,f}} := 1 - \frac{2\mu^{g,f}}{r} - \frac{1}{3}\Lambda^{g,f} r^2,$
mielke-geometrodynamics_EQ1040 (15.1.17)	339	■ 1.000 ● N|+0	`e^{-\lambda^{f}} \simeq 1-\frac{2 \mu^{f}}{r} \exp \left(-r m_{f} c / \hbar\right) .`	$e^{-\lambda^f} \simeq 1 - \frac{2\mu^f}{r} \exp\left(-r m_f c/\hbar\right).$	$e^{-\lambda^f} \simeq 1 - \frac{2\mu^f}{r} \exp\left(-r\, m_f\, c/\hbar\right).$
mielke-geometrodynamics_EQ1041 (15.1.18)	340	■ 1.000 ● K|+0	`E_{\alpha \beta}:\left(2^{+}\right) \oplus 2\left(1^{-} \right) \oplus 2\left(0^{+}\right) \oplus\left(1^{+} \right)`	$E_{\alpha\beta} : \left(2^+\right) \oplus 2\left(1^-\right) \oplus 2\left(0^+\right) \oplus \left(1^+\right)$	$E_{\alpha\beta} : (2^+) \oplus 2(1^-) \oplus 2(0^+) \oplus (1^+)$
mielke-geometrodynamics_EQ1043 (15.1.20)	342	■ 1.000 ● N|+0	`\frac{M_{\mathrm{U}}}{M_{\mathrm{P}}}=\frac{\ell_{ \mathrm{H}}}{\ell^{*}} \cdot \frac{\ell}{\ell^{*}}= \frac{1}{\kappa} \frac{\ell_{\mathrm{H}}}{\ell} \simeq 10^{80}`	$\frac{M_\mathrm{U}}{M_\mathrm{P}} = \frac{\ell_\mathrm{H}}{\ell^*} \cdot \frac{\ell}{\ell^*} = \frac{1}{\kappa}\frac{\ell_\mathrm{H}}{\ell} \simeq 10^{80}$	$\frac{M_\mathrm{U}}{M_\mathrm{P}} = \frac{\ell_\mathrm{H}}{\ell^*} \cdot \frac{\ell}{\ell^*} = \frac{1}{\kappa}\frac{\ell_\mathrm{H}}{\ell} \simeq 10^{80}$
mielke-geometrodynamics_EQ1044 (15.2.1)	343	■ 1.000 ● W|+0	`\begin{aligned} \bar{G} & =S L(2 f, \mathbb{C}) \otimes S L(2 c, \mathbb{C}) \\ & \supset S U(f)_{\mathrm{L}} \otimes S U(f)_{\mathrm{R}} \otimes S U(c)_{\mathrm{L}} \otimes S U(c)_{\mathrm{R}} \end{aligned}`	$\begin{aligned} \bar{G} &= SL(2f,\mathbb{C}) \otimes SL(2c,\mathbb{C}) \\ &\supset SU(f)_\mathrm{L} \otimes SU(f)_\mathrm{R} \otimes SU(c)_\mathrm{L} \otimes SU(c)_\mathrm{R} \end{aligned}$	$\begin{aligned} \overline{G} &= SL(2f,\mathbb{C}) \otimes SL(2c,\mathbb{C}) \\ &\supset SU(f)_\mathrm{L} \otimes SU(f)_\mathrm{R} \otimes SU(c)_\mathrm{L} \otimes SU(c)_\mathrm{R} \end{aligned}$
mielke-geometrodynamics_EQ1045 (15.2.2)	343	■ 1.000 ● N|+0	`\bar{L}(M):=M^{4} \times \bar{G} \supset M^{4} \times S L(2, \mathbb{C})`	$\bar{L}(M) := M^4 \times \bar{G} \supset M^4 \times SL(2,\mathbb{C})$	$\overline{L}(M) := M^4 \times \overline{G} \supset M^4 \times SL(2,\mathbb{C})$
mielke-geometrodynamics_EQ1046 (15.2.3)	344	■ 1.000 ● N|-1	`\bar{\gamma}=\bar{E}_{j}^{\alpha}(m) \gamma_{\alpha} \otimes d x^{j}=\bar{E}_{j} d x^{j}`	$\bar{\gamma} = \bar{E}^\alpha_j(m)\gamma_\alpha \otimes dx^j = \bar{E}_j dx^j$	$\overline{\gamma} = \overline{E}^\alpha_j(m)\gamma_\alpha \otimes dx^j = \overline{E}_j\, dx^j$
mielke-geometrodynamics_EQ1048 (15.2.5)	344	■ 1.000 ● K|+0	`\frac{1}{4} \operatorname{Tr}\left(\bar{\gamma} \otimes_{s} \bar{\gamma}\right)=f_{i j} d x^{i} \otimes_{s} d x^{j}`	$\frac{1}{4}\operatorname{Tr}\left(\bar{\gamma} \otimes_s \bar{\gamma}\right) = f_{ij} dx^i \otimes_s dx^j$	$\frac{1}{4}\mathrm{Tr}(\overline{\gamma} \otimes_s \overline{\gamma}) = f_{ij}\, dx^i \otimes_s dx^j$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): ● C component ● W weak ● S stable ● N noise ● K clean ● not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ1052 (15.2.9)	345	1.000 N|+0	`\bar{\omega}_{i}=\frac{1}{2} \Gamma_{i}^{(f) \alpha \beta j} \sigma_{\alpha \beta} \lambda_{j}^{(f)} \oplus \frac{1}{2} \Gamma_{i}^{(c) \alpha \beta j} \sigma_{ \alpha \beta} \lambda_{j}^{(c)} \oplus A_{i} .`	$\bar{\omega}_i = \frac{1}{2}\Gamma_i^{(f)\alpha\beta j}\sigma_{\alpha\beta}\lambda_j^{(f)} \oplus \frac{1}{2}\Gamma_i^{(c)\alpha\beta j}\sigma_{\alpha\beta}\lambda_j^{(c)} \oplus A_i.$	$\overline{\omega}_i = \frac{1}{2}\Gamma_i^{(f)\alpha\beta j}\sigma_{\alpha\beta}\lambda_j^{(f)} \oplus \frac{1}{2}\Gamma_i^{(c)\alpha\beta j}\sigma_{\alpha\beta}\lambda_j^{(c)} \oplus A_i.$
mielke-geometrodynamics_EQ1053 (15.2.10)	345	1.000 N|+0	`\bar{\Theta}:=\bar{D} \bar{\gamma}=d \bar{\gamma}-[\bar{ \omega}, \bar{\gamma}]`	$\bar{\Theta} := \bar{D}\bar{\gamma} = d\bar{\gamma} - [\bar{\omega}, \bar{\gamma}]$	$\overline{\Theta} := \overline{D}\overline{\gamma} = d\overline{\gamma} - [\overline{\omega}, \overline{\gamma}]$
mielke-geometrodynamics_EQ1054 (15.2.11)	345	1.000 W|+1	`\bar{\Omega}=d \bar{\omega}-\bar{\omega} \wedge \bar{ \omega}`	$\bar{\Omega} = d\bar{\omega} - \bar{\omega} \wedge \bar{\omega}$	$\overline{\Omega} = d\overline{\omega} - \overline{\omega} \wedge \overline{\omega}$
mielke-geometrodynamics_EQ1056 (15.2.13)	346	1.000 N|+0	`\psi=\left\{\psi^{\left(q_{f}, q_{c}\right)} \mid q_{f}=1, \ldots, f ; q_{c}=1, \ldots, c\right\} .`	$\psi = \left\{\psi^{(q_f, q_c)} \mid q_f = 1, \ldots, f; q_c = 1, \ldots, c\right\}.$	$\psi = \{\psi^{(q_f, q_c)} \mid q_f = 1, \ldots, f\,;\; q_c = 1, \ldots, c\}.$
mielke-geometrodynamics_EQ1061 (16.1.2)	354	1.000 C|-3	`B=\frac{2 \hbar c}{\ell^{* 2}} \Lambda_{\mathrm{eff}}=- \frac{3 \kappa}{2} \frac{\hbar c}{\ell^{* 4}}`	$B = \frac{2\hbar c}{\ell^{*2}}\Lambda_{\text{eff}} = -\frac{3\kappa}{2}\frac{\hbar c}{\ell^{*4}}$	$B = \frac{2\hbar c}{\ell^{*2}}\Lambda_{\text{eff}} = -\frac{3\kappa}{2}\frac{\hbar c}{\ell^{*4}}$
mielke-geometrodynamics_EQ1063 (16.2.2)	355	1.000 N|+0	`\square=\frac{1}{\sqrt{|f|}} \partial_{i}\left(f^{i j} \sqrt{|f|} \partial_{j}\right)`	$\square = \frac{1}{\sqrt{\|f\|}}\partial_i\left(f^{ij}\sqrt{\|f\|}\partial_j\right)$	$\square = \frac{1}{\sqrt{\|f\|}}\partial_i(f^{ij}\sqrt{\|f\|}\partial_j)$
mielke-geometrodynamics_EQ1064 (16.2.3)	355	1.000 N|+0	`\varphi=m \frac{c}{\hbar} \frac{1}{\rho} F_{n m}^{\iota} \left(\rho^{*}\right) Y_{\iota}^{m}(\vartheta, \phi) e^{-i t \omega m c^{2 / \hbar}} .`	$\varphi = m\frac{c}{\hbar}\frac{1}{\rho}F_{nm}^{\iota}\left(\rho^*\right)Y_\iota^m(\vartheta,\phi)e^{-it\omega mc^{2/\hbar}}.$	$\varphi = m\frac{c}{\hbar}\frac{1}{\rho}F_{nm}^{\iota}(\rho^*)Y_\iota^m(\vartheta,\phi)e^{-it\omega mc^{2/\hbar}}.$
mielke-geometrodynamics_EQ1067 (16.2.6)	355	1.000 K|+0	`\beta=\frac{\sqrt{2 \pi \kappa}}{\ell^{*}} / \frac{m c}{ \hbar}=\frac{\ell_{m}}{\ell} .`	$\beta = \frac{\sqrt{2\pi\kappa}}{\ell^*}/\frac{mc}{\hbar} = \frac{\ell_m}{\ell}.$	$\beta = \frac{\sqrt{2\pi\kappa}}{\ell^*}\Big/\frac{mc}{\hbar} = \frac{\ell_m}{\ell}.$
mielke-geometrodynamics_EQ1072 (16.3.1)	358	1.000 K|+0	`\operatorname{Tr} \bar{Q}^{2}=-\frac{4 b}{\alpha_{e}} Y+I(I+1)-\frac{1}{4} Y^{2} .`	$\operatorname{Tr}\bar{Q}^2 = -\frac{4b}{\alpha_e}Y + I(I+1) - \frac{1}{4}Y^2.$	$\operatorname{Tr}\overline{Q}^2 = -\frac{4b}{\alpha_e}Y + I(I+1) - \frac{1}{4}Y^2.$
mielke-geometrodynamics_EQ1073 (16.3.2)	358	1.000 N|+0	`Q_{e}=I_{3}+\frac{1}{2} Y-\frac{2}{3} C .`	$Q_e = I_3 + \frac{1}{2}Y - \frac{2}{3}C.$	$Q_e = I_3 + \frac{1}{2}Y - \frac{2}{3}C.$
mielke-geometrodynamics_EQ1074 (16.3.3)	359	1.000 N|+0	`\frac{M^{2}}{M^{* 2}}=\left\{1-b Y+\frac{\alpha_{e}}{4} \left[I(I+1)-\frac{1}{4} Y^{2}\right]\right\}^{2}+ \frac{1}{4} J(J+1)`	$\frac{M^2}{M^{*2}} = \left\{1 - bY + \frac{\alpha_e}{4}\left[I(I+1) - \frac{1}{4}Y^2\right]\right\}^2 + \frac{1}{4}J(J+1)$	$\frac{M^2}{M^{*2}} = \left\{1 - bY + \frac{\alpha_e}{4}[I(I+1) - \frac{1}{4}Y^2]\right\}^2 + \frac{1}{4}J(J+1)$
mielke-geometrodynamics_EQ1075 (16.3.4)	360	1.000 N|+0	`T_{\bullet}=\frac{2 \hbar c}{S_{A} k_{B}}\left(r_{+}- \frac{M}{M^{* 2}} \frac{\hbar}{c}\right) .`	$T_\bullet = \frac{2\hbar c}{S_A k_B}\left(r_+ - \frac{M}{M^{*2}}\frac{\hbar}{c}\right).$	$T_\bullet = \frac{2\hbar c}{S_A k_B}\left(r_+ - \frac{M}{M^{*2}}\frac{\hbar}{c}\right).$
mielke-geometrodynamics_EQ1076 (A.1)	364	1.000 N|+0	`x^{A} y_{A}:=\sum_{A=0}^{n} \sum_{B=0}^{n} x^{A} y^{B} g_{A B} .`	$x^A y_A := \sum_{A=0}^{n}\sum_{B=0}^{n} x^A y^B g_{AB}.$	$x^A y_A := \sum_{A=0}^{n}\sum_{B=0}^{n} x^A y^B g_{AB}.$
mielke-geometrodynamics_EQ1077 (A.2)	364	1.000 N|+0	`c=\hbar=1 .`	$c = \hbar = 1.$	$c = \hbar = 1.$
mielke-geometrodynamics_EQ1080 (A.5)	365	1.000 W|+1	`\left\{\sigma^{i}, \sigma^{j}\right\}=g^{i j}`	$\left\{\sigma^i, \sigma^j\right\} = g^{ij}$	$\{\sigma^i, \sigma^j\} = g^{ij}$
mielke-geometrodynamics_EQ1081 (A.6)	365	1.000 K|+0	`\left(\gamma^{\alpha}\right)^{\mathrm{T}}:=\left( \gamma^{0}, \gamma^{k}\right),`	$\left(\gamma^\alpha\right)^{\mathrm{T}} := \left(\gamma^0, \gamma^k\right),$	$(\gamma^\alpha)^{\mathrm{T}} := (\gamma^0, \gamma^k),$
mielke-geometrodynamics_EQ1083 (A.8)	365	1.000 N|+0	`\gamma^{\alpha} \gamma^{\beta}+\gamma^{\beta} \gamma^{ \alpha}=2 g^{\alpha \beta}`	$\gamma^\alpha\gamma^\beta + \gamma^\beta\gamma^\alpha = 2g^{\alpha\beta}$	$\gamma^\alpha\gamma^\beta + \gamma^\beta\gamma^\alpha = 2g^{\alpha\beta}$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ1084 (A.9)	365	1.000 N|+0	`\gamma^{0+}=\gamma^{0}, \quad \gamma^{k+}=-\gamma^{k}, \quad \gamma^{5+}=\gamma^{5} .`	$\gamma^{0+}=\gamma^{0}, \quad \gamma^{k+}=-\gamma^{k}, \quad \gamma^{5+}=\gamma^{5}$.	$\gamma^{0+}=\gamma^{0}, \quad \gamma^{k+}=-\gamma^{k}, \quad \gamma^{5+}=\gamma^{5}$.
mielke-geometrodynamics_EQ1087 (A.14)	366	1.000 K|+0	`C(1,3)=C(0,2) \otimes C(1,1) .`	$C(1,3)=C(0,2) \otimes C(1,1)$.	$C(1,3)=C(0,2) \otimes C(1,1)$.
mielke-geometrodynamics_EQ1091 (B.1)	368	1.000 N|+0	`\alpha^{(p)}=\frac{1}{p!} A_{\alpha_{1} \cdots \alpha_{p}} \vartheta^{\alpha_{1}} \wedge \cdots \wedge \vartheta^{\alpha_{p}} \in C^{\infty}\left(\wedge^{p} T^{*}(M)\right) .`	$\alpha^{(p)}=\frac{1}{p!} A_{\alpha_{1} \cdots \alpha_{p}} \vartheta^{\alpha_{1}} \wedge \cdots \wedge \vartheta^{\alpha_{p}} \in C^{\infty}\left(\wedge^{p} T^{*}(M)\right)$.	$\alpha^{(p)}=\frac{1}{p!} A_{\alpha_{1} \cdots \alpha_{p}} \vartheta^{\alpha_{1}} \wedge \cdots \wedge \vartheta^{\alpha_{p}} \in C^{\infty}\left(\wedge^{p} T^{*}(M)\right)$.
mielke-geometrodynamics_EQ1092 (B.2)	368	1.000 W|+0	`\begin{gathered} \alpha^{(p)} \wedge \beta^{(q)}:= \frac{1}{(p!) \cdot(q!)} A_{\alpha_{1} \cdots \alpha_{p}} \cdot B_{\beta_{1} \cdots \beta_{q}} \vartheta^{ \alpha_{1}} \wedge \cdots \wedge \vartheta^{\alpha_{p}} \\ \wedge \vartheta^{\beta_{1}} \wedge \cdots \wedge \vartheta^{\beta_{q}} \end{gathered}`	$\begin{gathered} \alpha^{(p)} \wedge \beta^{(q)}:= \frac{1}{(p!) \cdot(q!)} A_{\alpha_{1} \cdots \alpha_{p}} \cdot B_{\beta_{1} \cdots \beta_{q}} \vartheta^{ \alpha_{1}} \wedge \cdots \wedge \vartheta^{\alpha_{p}} \\ \wedge \vartheta^{\beta_{1}} \wedge \cdots \wedge \vartheta^{\beta_{q}} \end{gathered}$	$\begin{gathered} \alpha^{(p)} \wedge \beta^{(q)}:= \frac{1}{(p!) \cdot(q!)} A_{\alpha_{1} \cdots \alpha_{p}} \cdot B_{\beta_{1} \cdots \beta_{q}} \vartheta^{ \alpha_{1}} \wedge \cdots \wedge \vartheta^{\alpha_{p}} \\ \wedge \vartheta^{\beta_{1}} \wedge \cdots \wedge \vartheta^{\beta_{q}} \end{gathered}$
mielke-geometrodynamics_EQ1093 (B.3)	368	1.000 N|+0	`\alpha^{(p)} \wedge \beta^{(q)}=(-1)^{p q} \beta^{(q)} \wedge \alpha^{(p)},`	$\alpha^{(p)} \wedge \beta^{(q)}=(-1)^{p q} \beta^{(q)} \wedge \alpha^{(p)},$	$\alpha^{(p)} \wedge \beta^{(q)}=(-1)^{p q} \beta^{(q)} \wedge \alpha^{(p)},$
mielke-geometrodynamics_EQ1094 (B.4)	368	1.000 N|+0	`D(M):=\sum_{p=0}^{n} \wedge^{p} T^{*}(M)`	$D(M):=\sum_{p=0}^{n} \wedge^{p} T^{*}(M)$	$D(M):=\sum_{p=0}^{n} \wedge^{p} T^{*}(M)$
mielke-geometrodynamics_EQ1095 (B.5)	369	1.000 N|+1	`d\left(\alpha^{(p)} \wedge \beta^{(q)}\right)=d \alpha^{(p)} \wedge \beta^{(q)}+(-1)^{p} \alpha^{(p)} \wedge d \beta^{(q)}`	$d\left(\alpha^{(p)} \wedge \beta^{(q)}\right)=d \alpha^{(p)} \wedge \beta^{(q)}+(-1)^{p} \alpha^{(p)} \wedge d \beta^{(q)}$	$d\left(\alpha^{(p)} \wedge \beta^{(q)}\right)=d \alpha^{(p)} \wedge \beta^{(q)}+(-1)^{p} \alpha^{(p)} \wedge d \beta^{(q)}$
mielke-geometrodynamics_EQ1097 (B.7)	369	1.000 N|+0	`\sigma: M \rightarrow N, \quad \sigma \in \mathscr{D}(M)`	$\sigma: M \rightarrow N, \quad \sigma \in \mathscr{D}(M)$	$\sigma: M \rightarrow N, \quad \sigma \in \mathscr{D}(M)$
mielke-geometrodynamics_EQ1098 (B.8)	369	1.000 N|+0	`\sigma_{*}: \wedge^{p} T^{*}(N) \rightarrow \wedge^{p} T^{*}(M)`	$\sigma_{*}: \wedge^{p} T^{*}(N) \rightarrow \wedge^{p} T^{*}(M)$	$\sigma_{*}: \wedge^{p} T^{*}(N) \rightarrow \wedge^{p} T^{*}(M)$
mielke-geometrodynamics_EQ1103 (B.15)	370	1.000 K|+0	`{ }^{* *} \alpha^{(p)}=(-1)^{p(n+1)+s} \alpha^{(p)} .`	${}^{**}\alpha^{(p)}=(-1)^{p(n+1)+s} \alpha^{(p)}$.	${}^{**}\alpha^{(p)}=(-1)^{p(n+1)+s} \alpha^{(p)}$.
mielke-geometrodynamics_EQ1105 (B.17)	370	1.000 N|+0	`(\alpha, \beta):=\int_{M} \alpha^{(p)} \wedge^{*} \beta^{(p)}=(\beta, \alpha)`	$(\alpha, \beta):=\int_{M} \alpha^{(p)} \wedge^{*} \beta^{(p)}=(\beta, \alpha)$	$(\alpha, \beta):=\int_{M} \alpha^{(p)} \wedge^{*} \beta^{(p)}=(\beta, \alpha)$
mielke-geometrodynamics_EQ1107 (B.19)	370	1.000 N|+0	`\square \alpha^{(p)}:=d \delta \alpha^{(p)}+\delta d \alpha^{(p)} .`	$\square \alpha^{(p)}:=d \delta \alpha^{(p)}+\delta d \alpha^{(p)}$.	$\square \alpha^{(p)}:=d \delta \alpha^{(p)}+\delta d \alpha^{(p)}$.
mielke-geometrodynamics_EQ1108 (B.20)	371	1.000 N|+0	`\begin{aligned} (\alpha, \square \alpha) & =(\alpha, d \delta \alpha)+(\alpha, \delta d \alpha) \\ & =( \delta \alpha, \delta \alpha)+(d \alpha, d \alpha) . \end{aligned}`	$\begin{aligned} (\alpha, \square \alpha) & =(\alpha, d \delta \alpha)+(\alpha, \delta d \alpha) \\ & =(\delta \alpha, \delta \alpha)+(d \alpha, d \alpha) . \end{aligned}$	$\begin{aligned} (\alpha, \square \alpha) & =(\alpha, d \delta \alpha)+(\alpha, \delta d \alpha) \\ & =(\delta \alpha, \delta \alpha)+(d \alpha, d \alpha) . \end{aligned}$
mielke-geometrodynamics_EQ1109 (B.21)	371	1.000 K|+0	`d \alpha=0 .`	$d \alpha=0$.	$d \alpha=0$.
mielke-geometrodynamics_EQ1111 (B.23)	371	1.000 N|+0	`\beta^{(p)}=d \alpha^{(p-1)} \in C^{\infty}(B(M))`	$\beta^{(p)}=d \alpha^{(p-1)} \in C^{\infty}(B(M))$	$\beta^{(p)}=d \alpha^{(p-1)} \in C^{\infty}(B(M))$
mielke-geometrodynamics_EQ1112 (B.24)	371	1.000 N|+0	`H(M):=Z(M) / B(M)`	$H(M):=Z(M) / B(M)$	$H(M):=Z(M) / B(M)$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ1113 (B.25)	371	1.000 N|+0	`H(M)=\sum_{p=0}^{n} H^{p}(M):=\sum_{p=0}^{n} Z^{p}(M) / B^{p}(M) .`	$H(M)=\sum_{p=0}^{n} H^{p}(M):=\sum_{p=0}^{n} Z^{p}(M)/B^{p}(M).$	$H(M)=\sum_{p=0}^{n} H^{p}(M):=\sum_{p=0}^{n} Z^{p}(M)/B^{p}(M).$
mielke-geometrodynamics_EQ1115 (B.27)	371	1.000 N|+0	`H^{n}(M)=\wedge^{n} T^{*}(M) / B^{n}(M) .`	$H^{n}(M)=\wedge^{n} T^{*}(M)/B^{n}(M).$	$H^{n}(M)=\wedge^{n} T^{*}(M)/B^{n}(M).$
mielke-geometrodynamics_EQ1116 (B.28)	371	1.000 N|+0	`H^{0}(M)=Z^{0}(M)`	$H^{0}(M)=Z^{0}(M)$	$H^{0}(M)=Z^{0}(M)$
mielke-geometrodynamics_EQ1117 (B.29)	372	1.000 N|+0	`H^{0}(M) \approx \mathbb{R}`	$H^{0}(M) \approx \mathbb{R}$	$H^{0}(M) \approx \mathbb{R}$
mielke-geometrodynamics_EQ1118 (B.30)	372	1.000 N|-1	`b_{p}:=\operatorname{dim} H^{p}(M)`	$b_{p}:=\operatorname{dim} H^{p}(M)$	$b_{p}:=\operatorname{dim} H^{p}(M)$
mielke-geometrodynamics_EQ1119 (B.31)	372	1.000 N|+1	`\mathrm{f}_{\mathrm{M}}(t)=\sum_{p=0}^{n} b_{p} t^{p}`	$\mathrm{f}_{\mathrm{M}}(t)=\sum_{p=0}^{n} b_{p} t^{p}$	$\mathrm{f}_{\mathrm{M}}(t)=\sum_{p=0}^{n} b_{p} t^{p},$
mielke-geometrodynamics_EQ1120 (B.32)	372	1.000 N|+0	`\chi(M):=\mathrm{f}_{\mathrm{M}}(-1)= \sum_{p=0}^{n}(-1)^{p} b_{p},`	$\chi(M):=\mathrm{f}_{\mathrm{M}}(-1)=\sum_{p=0}^{n}(-1)^{p} b_{p},$	$\chi(M):=\mathrm{f}_{\mathrm{M}}(-1)=\sum_{p=0}^{n}(-1)^{p} b_{p},$
mielke-geometrodynamics_EQ1121 (B.33)	372	1.000 N|+0	`\mathrm{H}^{0}\left(S^{n}\right)=H^{n}\left(S^{n}\right) \approx \mathbb{R}`	$\mathrm{H}^{0}\left(S^{n}\right)=H^{n}\left(S^{n}\right) \approx \mathbb{R}$	$\mathrm{H}^{0}(S^{n})=H^{n}(S^{n}) \approx \mathbb{R}$
mielke-geometrodynamics_EQ1123 (B.35)	372	1.000 N|+0	`\mathrm{f}_{S^{n}}(t)=1+t^{n},`	$\mathrm{f}_{S^{n}}(t)=1+t^{n},$	$\mathrm{f}_{S^{n}}(t)=1+t^{n},$
mielke-geometrodynamics_EQ1124 (B.36)	372	1.000 N|+0	`\chi\left(S^{n}\right)=\left\{\begin{array}{l} 0 \text { for } n=2 k+1, \\ 2 \text { for } n=2 k, \end{array} \right.`	$\chi\left(S^{n}\right)=\left\{\begin{array}{l} 0 \text { for } n=2 k+1, \\ 2 \text { for } n=2 k, \end{array} \right.$	$\chi(S^{n})=\left\{\begin{array}{l} 0 \text { for } n=2 k+1, \\ 2 \text { for } n=2 k, \end{array} \right.$
mielke-geometrodynamics_EQ1125 (B.37)	372	1.000 N|+0	`\Delta_{p}:=\left\{x \in E^{n} \mid x=\sum_{i=0}^{p} \lambda^{i} \eta_{i}, \lambda^{i} \geq 0, \sum_{i=0}^{p} \lambda^{i}=1\right\} .`	$\Delta_{p}:=\left\{x \in E^{n} \mid x=\sum_{i=0}^{p} \lambda^{i} \eta_{i}, \lambda^{i} \geq 0, \sum_{i=0}^{p} \lambda^{i}=1\right\} .$	$\Delta_{p}:=\left\{x \in E^{n} \mid x=\sum_{i=0}^{p} \lambda^{i} \eta_{i}, \lambda^{i} \geq 0, \sum_{i=0}^{p} \lambda^{i}=1\right\} .$
mielke-geometrodynamics_EQ1127 (B.39)	373	1.000 N|+0	`\partial c=\sum_{i=0}^{p}(-1)^{i} c\left(\sum_{j=0}^{i-1} \lambda^{j} \eta_{j}+\sum_{j=i}^{p-1} \lambda^{j} \eta_{j+1}\right) .`	$\partial c=\sum_{i=0}^{p}(-1)^{i} c\left(\sum_{j=0}^{i-1} \lambda^{j} \eta_{j}+\sum_{j=i}^{p-1} \lambda^{j} \eta_{j+1}\right) .$	$\partial c=\sum_{i=0}^{p}(-1)^{i} c\left(\sum_{j=0}^{i-1} \lambda^{j} \eta_{j}+\sum_{j=i}^{p-1} \lambda^{j} \eta_{j+1}\right) .$
mielke-geometrodynamics_EQ1129 (B.41)	373	1.000 N|+0	`H_{\mathrm{p}}(M, \mathbb{R}):=Z_{\mathrm{p}}(M, \mathbb{R}) / B_{\mathrm{p}}(M, \mathbb{R})`	$H_{\mathrm{p}}(M, \mathbb{R}):=Z_{\mathrm{p}}(M, \mathbb{R}) / B_{\mathrm{p}}(M, \mathbb{R})$	$H_{\mathrm{p}}(M, \mathbb{R}):=Z_{\mathrm{p}}(M, \mathbb{R}) / B_{\mathrm{p}}(M, \mathbb{R})$
mielke-geometrodynamics_EQ1130 (B.42)	373	1.000 N|+1	`\int_{c_{p+1}} d \alpha^{(p)}=\int_{\partial c_{p+1}} \alpha^{(p)}`	$\int_{c_{p+1}} d \alpha^{(p)}=\int_{\partial c_{p+1}} \alpha^{(p)}$	$\int_{c_{p+1}} d \alpha^{(p)}=\int_{\partial c_{p+1}} \alpha^{(p)}.$
mielke-geometrodynamics_EQ1132 (B.44)	373	1.000 K|+0	`\langle d \alpha, c\rangle_{\mathrm{M}}=\langle\alpha, \partial c\rangle_{\mathrm{M}}`	$\langle d \alpha, c\rangle_{\mathrm{M}}=\langle\alpha, \partial c\rangle_{\mathrm{M}}$	$\langle d \alpha, c\rangle_{\mathrm{M}}=\langle\alpha, \partial c\rangle_{\mathrm{M}}$
mielke-geometrodynamics_EQ1133 (C.1)	375	1.000 N|+0	`I_{j}:=\left.\frac{\partial g(\xi)}{\partial \xi^{j}} \right|_{g=e} \in T_{e}(G) \approx \mathfrak{g}`	$I_{j}:=\left.\frac{\partial g(\xi)}{\partial \xi^{j}}\right\|_{g=e} \in T_{e}(G) \approx \mathfrak{g}$	$I_{j}:=\frac{\partial g(\xi)}{\partial \xi^{j}}\|_{g=e} \in T_{e}(G) \approx \mathfrak{g}$
mielke-geometrodynamics_EQ1138 (C.6)	376	1.000 N|+0	`[\mathrm{AB}]:=\mathrm{A}^{\mathrm{i}} \mathrm{~B}^{ \mathrm{j}} \mathrm{c}_{\mathrm{ij}}^{\mathrm{k}} \mathrm{I}_{\mathrm{k}} .`	$[\mathrm{AB}]:=\mathrm{A}^{\mathrm{i}} \mathrm{~B}^{\mathrm{j}} \mathrm{c}_{\mathrm{ij}}^{\mathrm{k}} \mathrm{I}_{\mathrm{k}} .$	$[\mathrm{AB}]:=\mathrm{A}^{\mathrm{i}} \mathrm{~B}^{\mathrm{j}} \mathrm{c}_{\mathrm{ij}}^{\mathrm{k}} \mathrm{I}_{\mathrm{k}} .$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_EQ1139 (C.7)	376	■ 1.000 ● W|+0	`\rho_{A}^{C}\left(g_{1}\right) \rho_{C}^{B}\left(g_{2}\right)=\rho_{A}^{B}\left(g_{1} g_{2}\right)`	$\rho_{A}^{C}\left(g_{1}\right) \rho_{C}^{B}\left(g_{2}\right)=\rho_{A}^{B}\left(g_{1} g_{2}\right)$	$\rho_{A}^{C}(g_1)\rho_{C}^{B}(g_2)=\rho_{A}^{B}(g_1 g_2)$
mielke-geometrodynamics_EQ1140 (C.8)	376	■ 1.000 ● K|+0	`[A, B] \longrightarrow \rho([A, B])=[\rho(A), \rho(B)] .`	$[A, B] \longrightarrow \rho([A, B])=[\rho(A), \rho(B)]$.	$[A, B] \longrightarrow \rho([A, B])=[\rho(A), \rho(B)]$.
mielke-geometrodynamics_EQ1141 (C.9)	376	■ 1.000 ● K|+0	`\operatorname{Ad} A(B):=[A, B] ; \quad A, B \in \mathfrak{g},`	$\operatorname{Ad} A(B):=[A, B] ; \quad A, B \in \mathfrak{g},$	$\operatorname{Ad} A(B):=[A, B] ; \quad A, B \in \mathfrak{g},$
mielke-geometrodynamics_EQ1142 (C.10)	376	■ 1.000 ● N|+0	`(\operatorname{Ad} A)_{j}{ }^{k}=c_{i j}{ }^{k} A^{i} .`	$(\operatorname{Ad} A)_{j}{ }^{k}=c_{i j}{ }^{k} A^{i} .$	$(\operatorname{Ad} A)_{j}{ }^{k}=c_{i j}{ }^{k} A^{i} .$
mielke-geometrodynamics_EQ1144 (C.12)	376	■ 1.000 ● K|+0	`(A, B)=2 N \operatorname{Tr}(A B)-2 \operatorname{Tr}(A) \operatorname{Tr}(B)`	$(A, B)=2 N \operatorname{Tr}(A B)-2 \operatorname{Tr}(A) \operatorname{Tr}(B)$	$(A, B)=2 N \operatorname{Tr}(A B)-2 \operatorname{Tr}(A) \operatorname{Tr}(B)$
mielke-geometrodynamics_EQ1146 (C.14)	377	■ 1.000 ● N|+1	`g=\exp ^{\left(-\frac{i}{2} \xi^{j} \lambda_{j}\right)} \in S U(N), j=1, \ldots, N^{2}-1 .`	$g=\exp ^{\left(-\frac{i}{2} \xi^{j} \lambda_{j}\right)} \in S U(N), j=1, \ldots, N^{2}-1 .$	$g=\exp ^{\left(-\frac{i}{2} \xi^{j} \lambda_{j}\right)} \in S U(N), j=1, \ldots, N^{2}-1 .$
mielke-geometrodynamics_EQ1148 (C.17)	377	■ 1.000 ● W|+0	`\lambda_{i} \lambda_{j}=\frac{2}{N} \delta_{i j}+ \left(d_{i j}^{k}+i f_{i j}^{k}\right) \lambda_{k} .`	$\lambda_{i} \lambda_{j}=\frac{2}{N} \delta_{i j}+\left(d_{i j}^{k}+i f_{i j}^{k}\right) \lambda_{k} .$	$\lambda_{i} \lambda_{j}=\frac{2}{N} \delta_{i j}+\left(d_{i j}^{k}+i f_{i j}^{k}\right) \lambda_{k} .$
mielke-geometrodynamics_EQ1149 (C.18)	377	■ 1.000 ● N|+0	`\operatorname{Tr}\left(\lambda_{i} \lambda_{j}\right)=2 \delta_{i j} .`	$\operatorname{Tr}\left(\lambda_{i} \lambda_{j}\right)=2 \delta_{i j} .$	$\operatorname{Tr}\left(\lambda_{i} \lambda_{j}\right)=2 \delta_{i j} .$

Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value
Residual render vs scan (inkdrill): ● C component ● W weak ● S stable ● N noise ● K clean ● not measured

Tables

Identifier	Page	Conf.	LaTeX source	Rendered	Scan image
mielke-geometrodynamics_table_001	075	—	(no LaTeX source; 1111 × 569 px region)	—	
mielke-geometrodynamics_table_002	102	—	(no LaTeX source; 902 × 202 px region)	—	
mielke-geometrodynamics_table_003	210	—	(no LaTeX source; 1159 × 360 px region)	—	
mielke-geometrodynamics_table_004	275	—	(no LaTeX source; 441 × 116 px region)	—	
mielke-geometrodynamics_table_005	364	—	(no LaTeX source; 1058 × 670 px region)	—	

Gauge Field Terminology	Fiber Bundle Terminology
spacetime	base space
space of phase factors	bundle space
symmetry or gauge group	structure group
gauge transformations	inner automorphisms of the bundle
gauge principle	G-equivalence principle
classical fields	cross section of a vector bundle
gauge potential	connection 1-form
gauge field strength	curvature 2-form
electromagnetism	dynamical theory with a connection in a U(1)-bundle
electromagnetism with monopoles	connection in a nontrivial U(1)-bundle over $\mathbb{R}^2 \times S^2$
Dirac's monopole quantization	classification of U(1)-bundles according to the first Chern class
Yang–Mills theory	dynamical theory with a connection in a SU(2)-bundle
instanton number	classification of SU(2)-bundles over S^4 according to the second Chern class

potential	field strength	Bianchi identity	Noether identity
ϑ^α	$T^\alpha = D\vartheta^\alpha$	$DT^\alpha \equiv R_\gamma{}^\alpha \wedge \vartheta^\gamma$	$\widehat{D}\,\Sigma_\alpha \cong (e_\alpha \rfloor R_\beta{}^\gamma) \wedge \Delta^\beta{}_\gamma - \frac{1}{2}(e_\alpha \rfloor Q_{\beta\gamma}) \wedge \sigma^{\beta\gamma}$
$\Gamma_\alpha{}^\beta$	$R_\alpha{}^\beta = d\Gamma_\alpha{}^\beta - \Gamma_\alpha{}^\gamma \wedge \Gamma_\gamma{}^\beta$	$DR_\alpha{}^\beta \equiv 0$	$D\Delta^\alpha{}_\beta + \vartheta^\alpha \wedge \Sigma_\beta \cong \sigma^\alpha{}_\beta$

	Objects	p-form	Components	n = 4	3	2
ϑ^α	Vector	1	n^2	16	9	1
$\Gamma^\star_\alpha$	Vector	1	n^2	16	9	1
T^α	Vector	2	$n^2(n-1)/2$	24	9	2
$R^{\alpha\beta}$	Bivector	2	$n^2(n-1)^2/4$	36	9	1
Σ_α	Vector	$n-1$	n^2	16	9	4
$\tau_{\alpha\beta}$	Bivector	$n-1$	$n^2(n-1)/2$	24	9	2
η_α	Vector	$n-1$	n^2	16	9	4

Spin	Gravitational	YM anomaly
1/2	1	1
3/2	−21	3

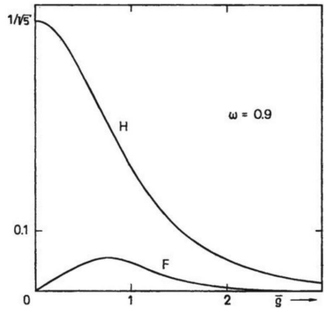
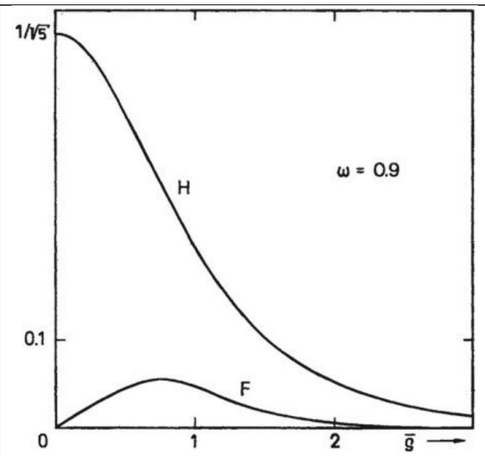
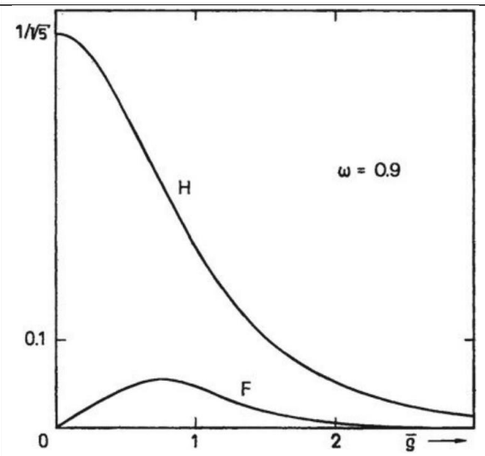
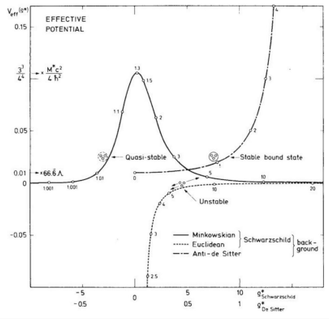
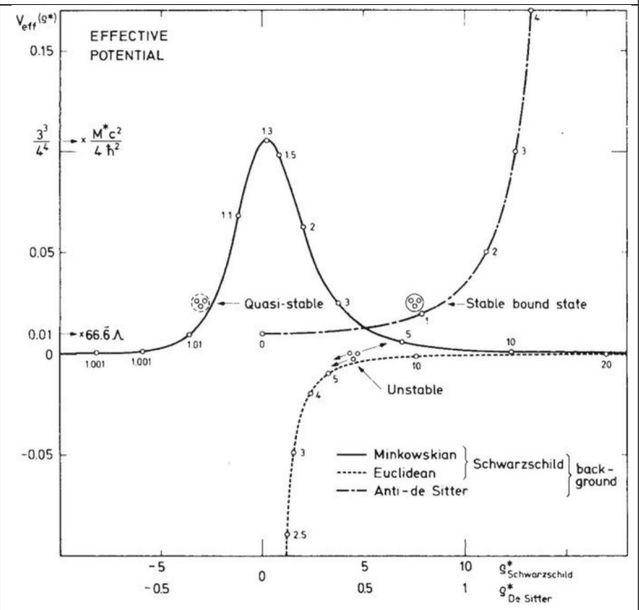
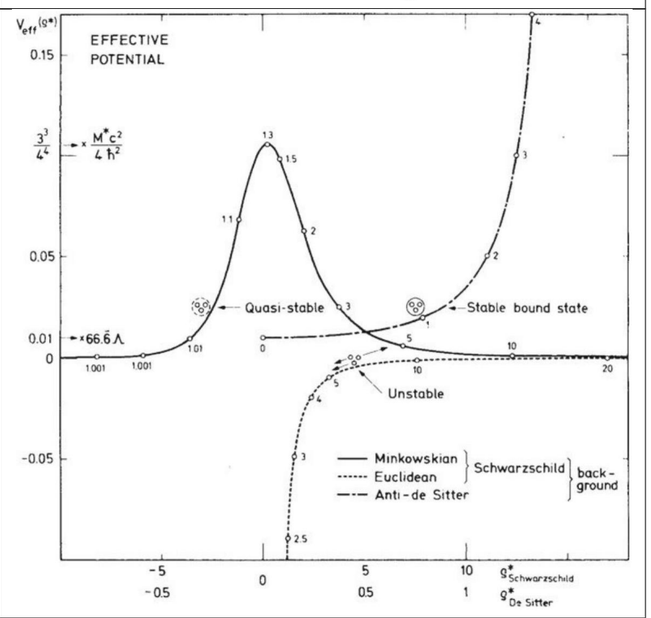
$:=$	: Equal by definition
$\equiv$	: Identically equal
$\approx$	: Isomorphic
$\simeq$	: Approximately equal
$\sim$	: Asymptotic expansion
$\times$	: Topological product
$\otimes$	: Direct product
$\oplus$	: Direct sum
$\ltimes$	: Semidirect product
$G_\circ$	: Connected component of the group
$\tilde{G}$	: Simply connected covering group
$[A, B] := AB - BA$	: Commutator
$\{A, B\} := AB + BA$	: Anticommutator
$A^* = C\,A$	: Complex-conjugate matrix
$A^+ = A^{*T}$	: Hermitian adjoint matrix
$\overset{-1}{\pi}(N)$	: Original domain of N with respect to the mapping $\pi : M \to N$
$T_{(\mu\nu)} := \frac{1}{2}(T_{\mu\nu} + T_{\nu\mu})$	: Symmetrized second-rank tensor
$T_{[\mu\nu]} := \frac{1}{2}(T_{\mu\nu} - T_{\nu\mu})$	: Antisymmetrized second-rank tensor

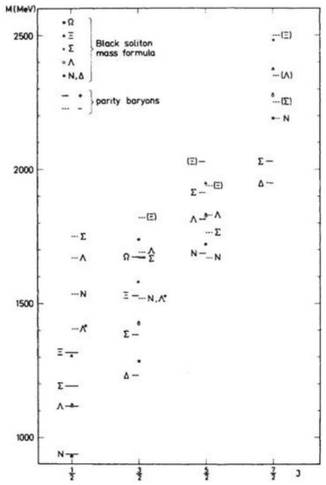
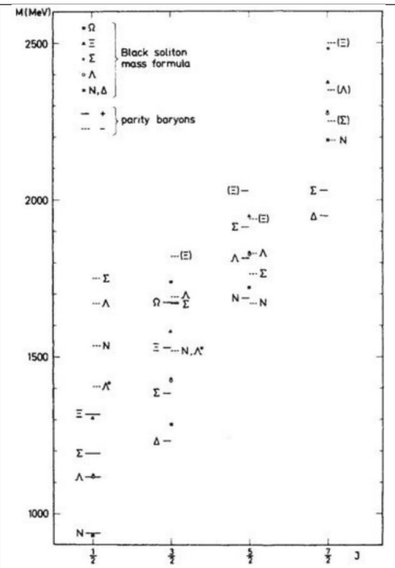
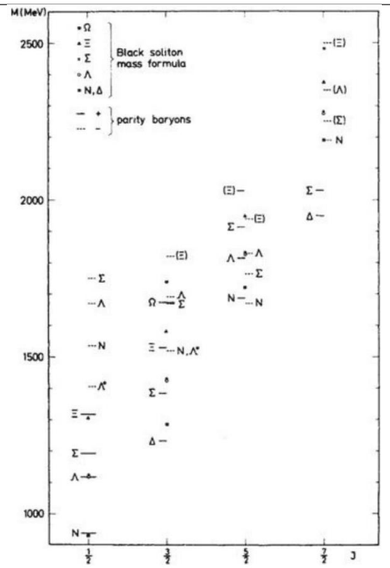
Conf. MathPix confidence: ■ ≥0.9 ■ 0.5–0.9 ■ <0.5 — no value

Residual render vs scan (inkdrill): • C component • W weak • S stable • N noise • K clean • not measured

Image regions — rendered against scan

Two comparable cells per row. **Rendered**: the region's own LaTeX compiled as its OWN document, or — where no LaTeX exists — the scan again, so every row has two cells and the ink difference reads as a floor rather than as missing-versus-present. A duplicated row is marked *(dup)* and its distance is a SELF-comparison, not agreement between two sources. **Scan**: the `tex.zip` image whose filename region 5-tuple matches this row, else the CDN crop. The Class column carries the residual class beside MathPix's confidence, as the equation rows do. Setting a region's LaTeX does NOT say it renders to what is on the page — that is what the two columns are for, and 281 is the open question they exist to let a reader answer. A region with no LaTeX can be reconstructed with `pdfdrill vision`; verify any LLM result against the real ink with inkdrill.

Identifier	Page	Class	Source	Author source	Rendered	Scan
mielke-geometrodynamics_R0_p001	258	— *(dup)*	b173365e-9184-4902-bd66-732270e80db9-258_719_748_1319_592.jpg			
mielke-geometrodynamics_R0_p002	356	— *(dup)*	b173365e-9184-4902-bd66-732270e80db9-356_1111_1146_196_186.jpg			

mielke-geometrodynamics_002_0003	359	— *(dup)*	b173365e-9184-4902-bd66-732270e80db9-359_902_600_206_737.jpg			
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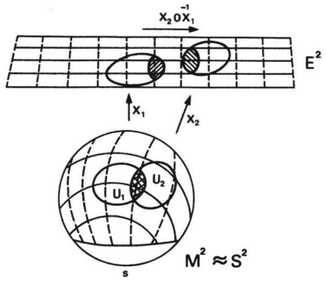
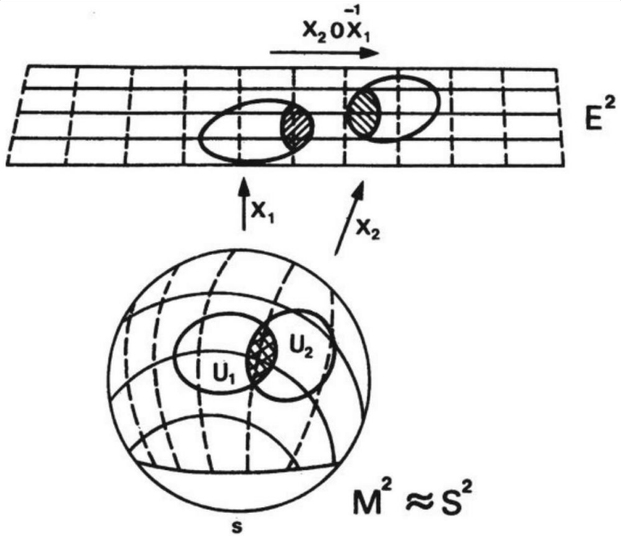
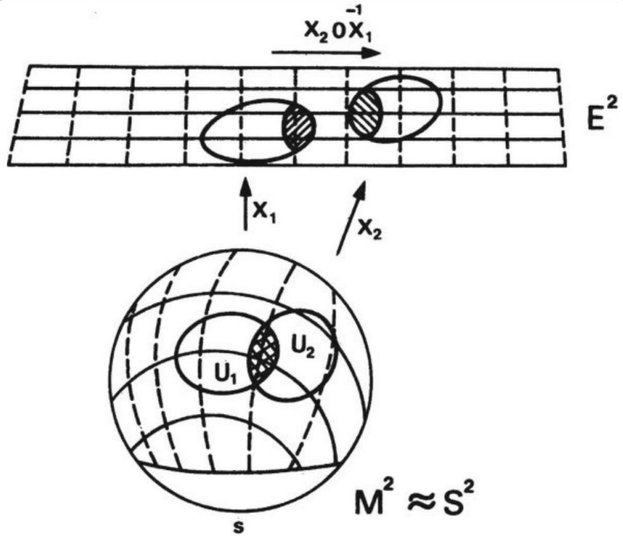
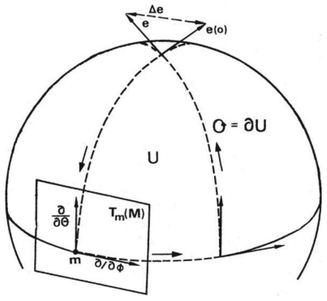
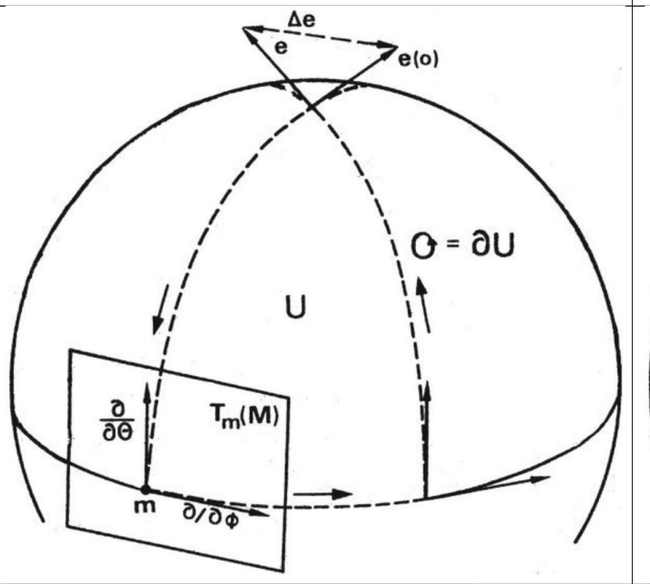
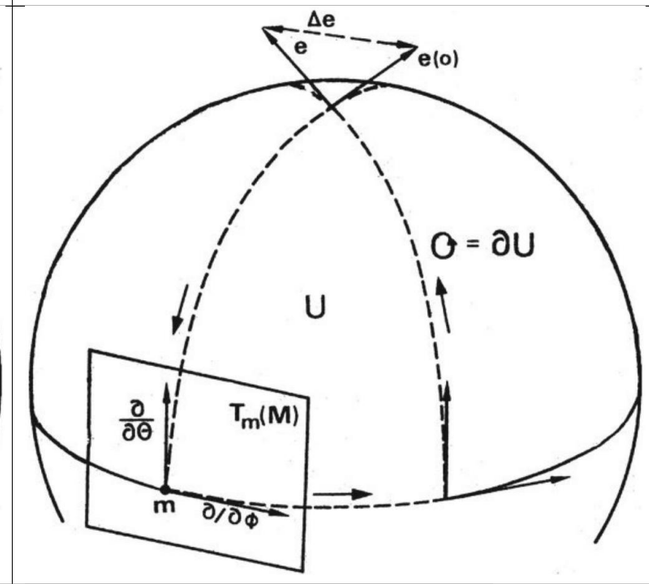
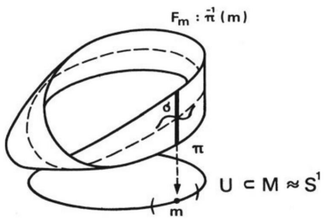
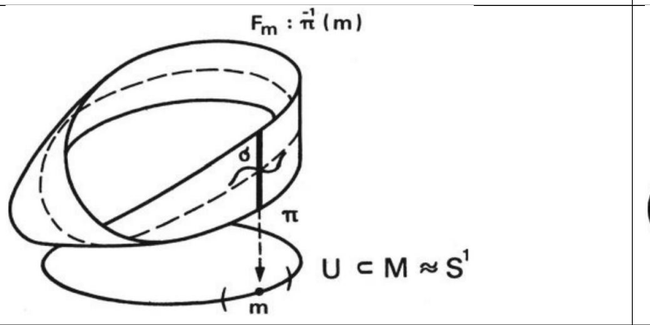
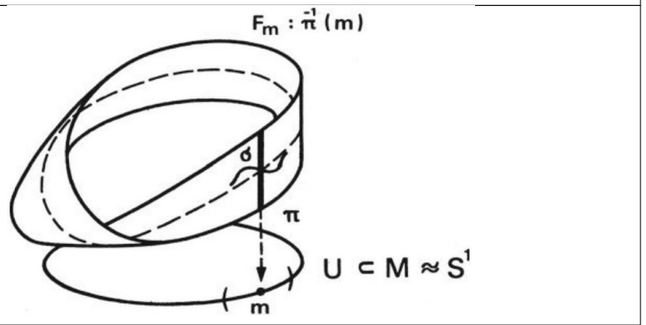
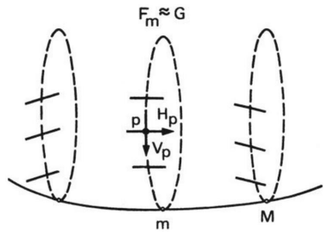
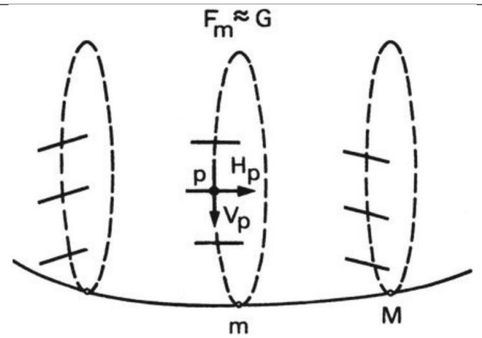
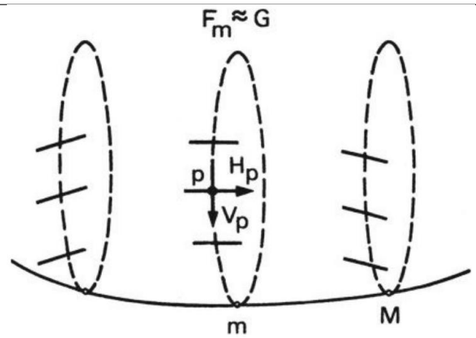
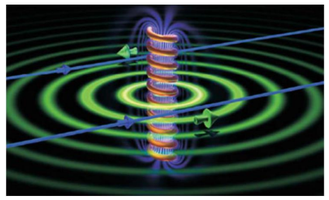
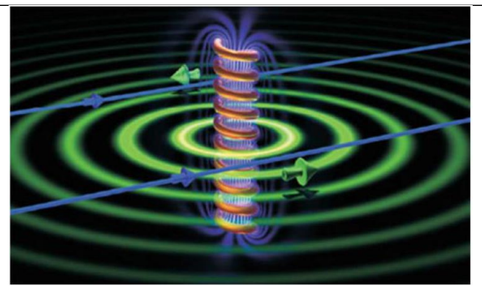
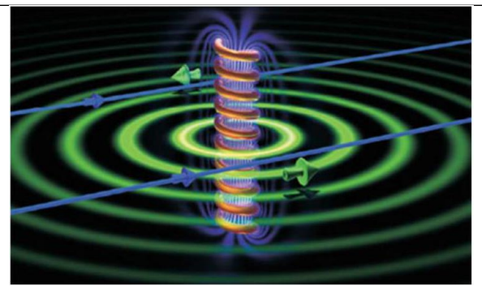
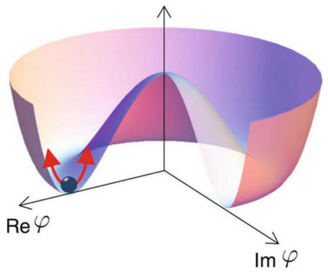
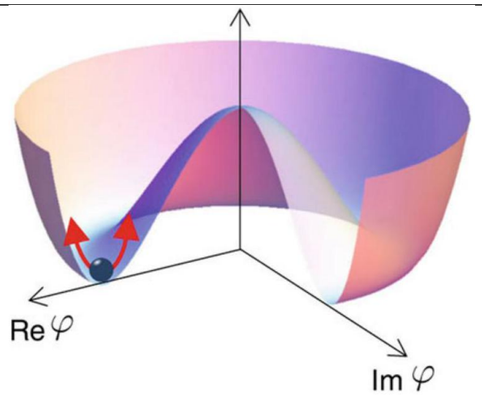
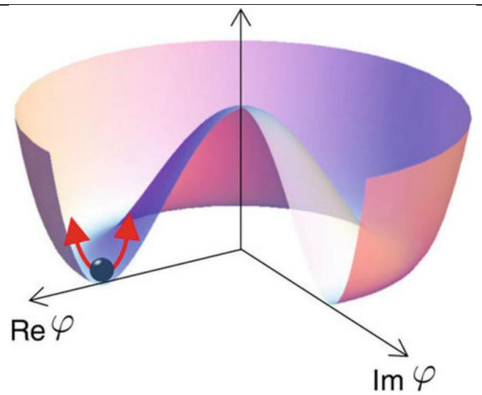
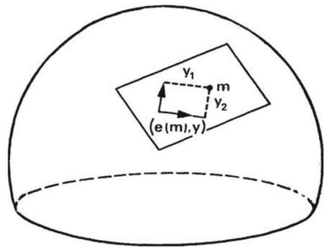
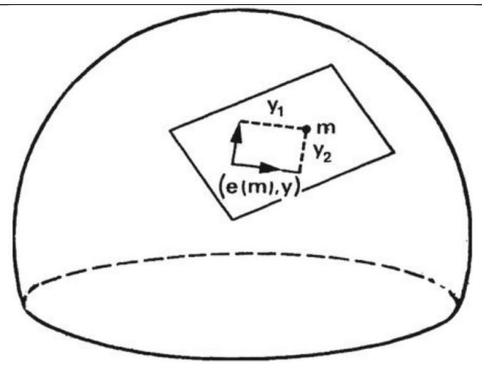
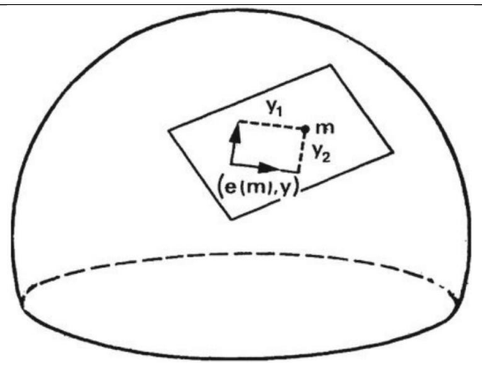
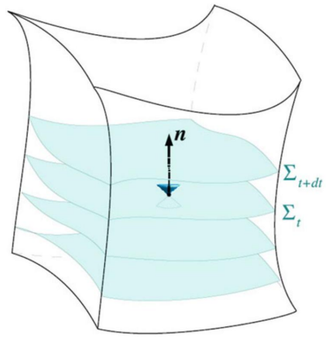
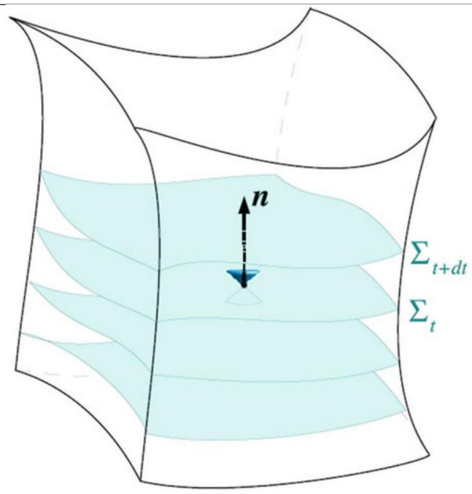
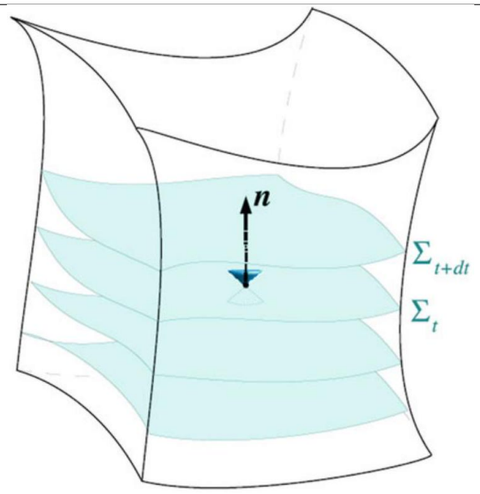
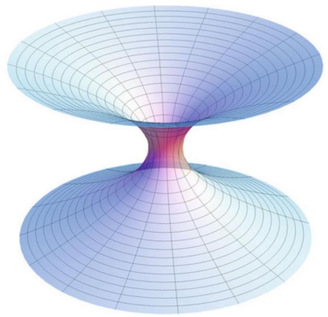
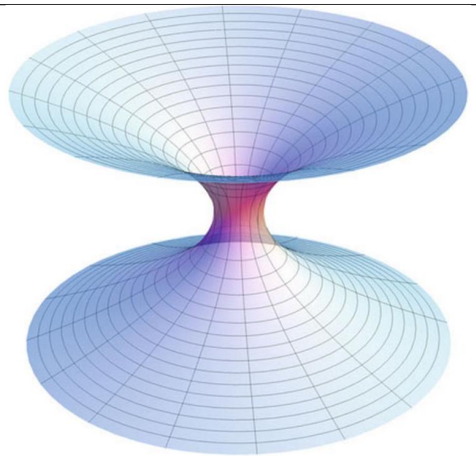
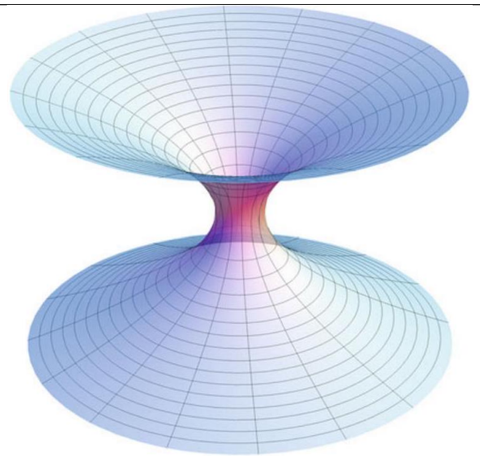
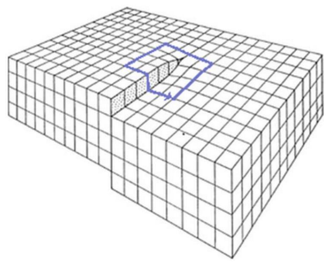
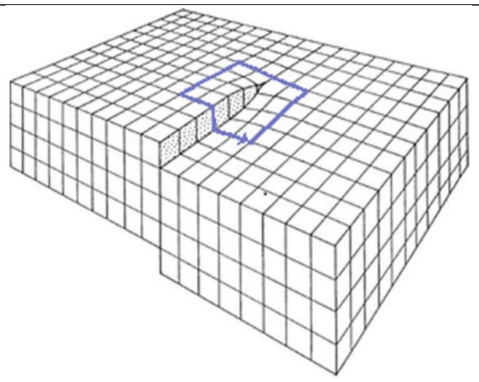
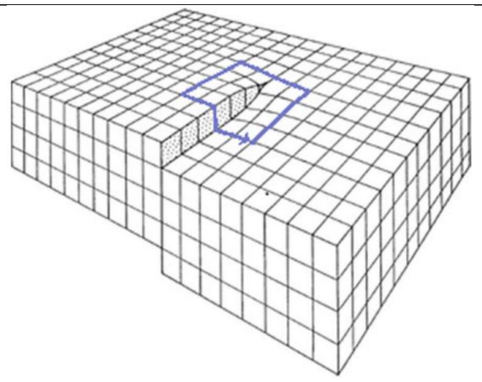
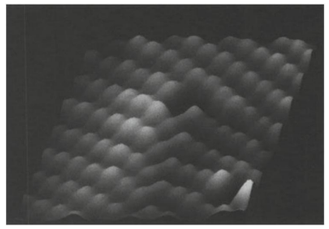
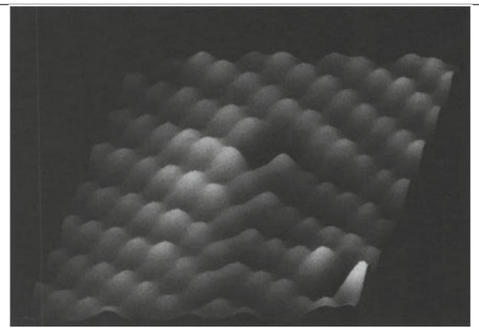
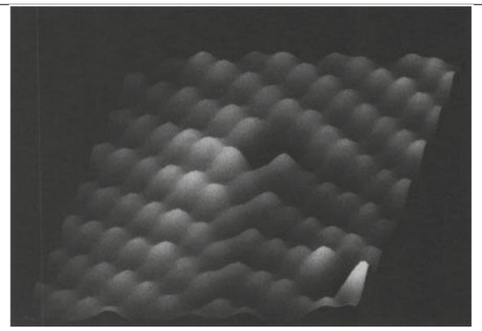
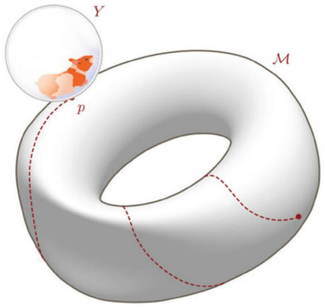
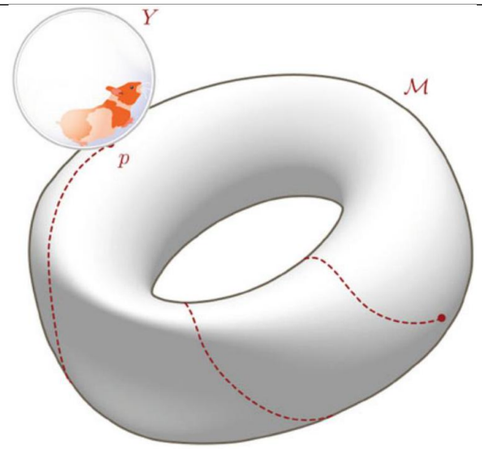
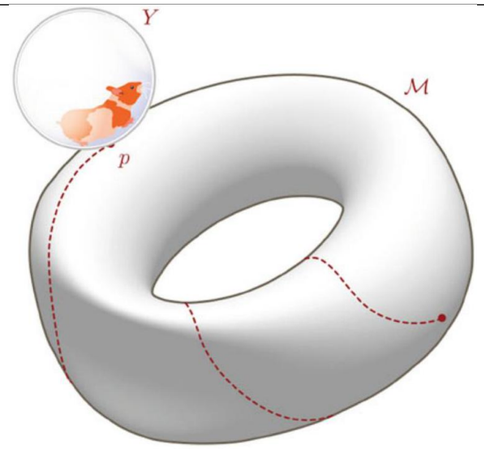
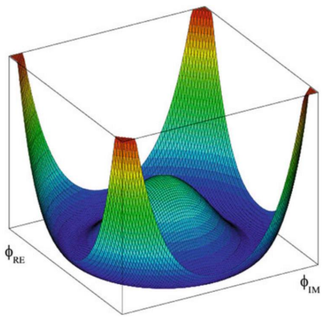
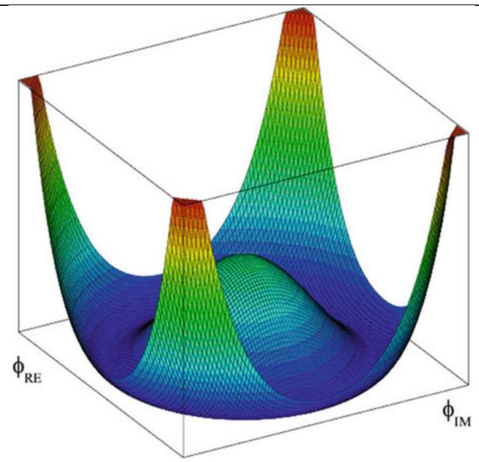
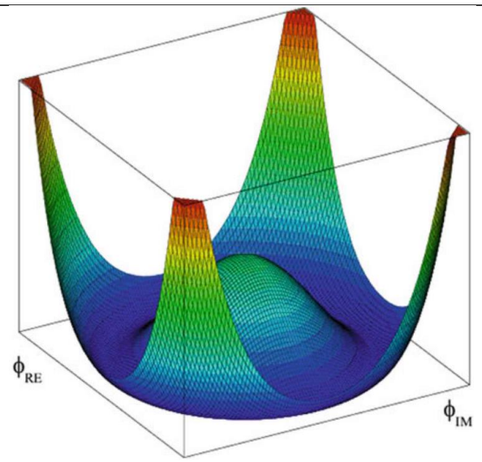
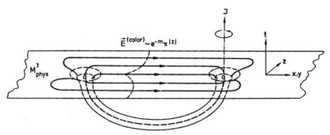
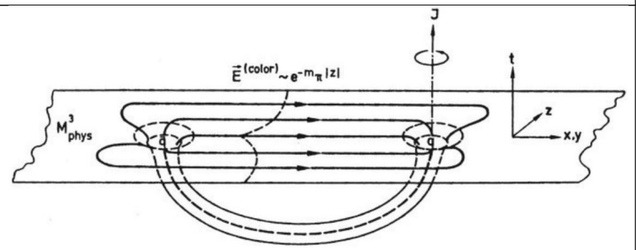
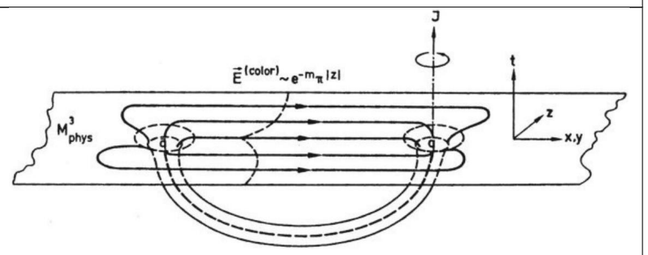
mielke-geometrodynamics_031_0002	031	— *(dup)*	b173365e-9184-4902-bd66-732270e80db9-031_864_999_194_261.jpg			
mielke-geometrodynamics_031_0003	032	— *(dup)*	b173365e-9184-4902-bd66-732270e80db9-032_915_995_1064_263.jpg			
mielke-geometrodynamics_031_0004	036	— *(dup)*	b173365e-9184-4902-bd66-732270e80db9-036_499_750_1538_594.jpg			

mielke-geometrodynamics_DUP_0005	040	— *(dup)*	b173365e-9184-4902-bd66-732270e80db9-040_533_750_204_592.jpg			
mielke-geometrodynamics_DUP_0006	057	— *(dup)*	b173365e-9184-4902-bd66-732270e80db9-057_449_744_206_596.jpg			
mielke-geometrodynamics_DUP_0007	073	— *(dup)*	b173365e-9184-4902-bd66-732270e80db9-073_626_748_206_594.jpg			
mielke-geometrodynamics_DUP_0008	084	— *(dup)*	b173365e-9184-4902-bd66-732270e80db9-084_573_748_207_592.jpg			

mielke-geometrodynamics_DLA_0009	131	— *(dup)*	b173365e-9184-4902-bd66-732270e80db9-131_782_748_204_594.jpg			
mielke-geometrodynamics_DLA_0010	200	— *(dup)*	b173365e-9184-4902-bd66-732270e80db9-200_723_746_209_594.jpg			
mielke-geometrodynamics_DLA_0011	226	— *(dup)*	b173365e-9184-4902-bd66-732270e80db9-226_599_748_1382_592.jpg			

mielke-geometrodynamics_DVD_0012	227	— *(dup)*	b173365e-9184-4902-bd66-732270e80db9-227_516_744_1522_596.jpg				
mielke-geometrodynamics_DVD_0013	288	— *(dup)*	b173365e-9184-4902-bd66-732270e80db9-288_712_750_206_590.jpg				
mielke-geometrodynamics_DVD_0014	290	— *(dup)*	b173365e-9184-4902-bd66-732270e80db9-290_729_748_207_592.jpg				
mielke-geometrodynamics_DVD_0015	347	— *(dup)*	b173365e-9184-4902-bd66-732270e80db9-347_445_1138_1351_192.jpg