## **PSALTer kinematic panel**

Momentum	Norm	Frame
$k^{\mu}$	$k^2 == k_\mu k^\mu$	$n^{\mu} = \frac{\kappa^{\mu}}{\kappa}$

## **Fundamental fields**

Fields	Symmetries	SO(3)	Sources
$h_{\alpha\beta}$	StrongGenSet[{1,2},GenSet[(1,2)]]	$\frac{1}{3} \ \eta_{\alpha\beta} \ ^{0^{+}}h^{\parallel} - \frac{1}{3} \ \eta_{\alpha} \ \eta_{\beta} \ ^{0^{+}}h^{\parallel} + \ ^{2^{+}}h^{\parallel}_{\alpha\beta} + \ \eta_{\alpha} \ \eta_{\beta} \ ^{0^{+}}h^{\perp} + \ \eta_{\beta} \ ^{1} h^{\perp}_{\alpha} + \ \eta_{\alpha} \ ^{1} h^{\perp}_{\beta}$	$\mathcal{T}_{\alpha\beta}$
$\overline{\mathcal{A}}_{lphaeta\chi}$	StrongGenSet[{1,3},GenSet[(1,3)]]	$\frac{1}{9} \ \eta_{\beta\chi} \ n_{\alpha} \ ^{0^{+}}\mathcal{A}_{S}^{\parallel} + \frac{1}{9} \ \eta_{\alpha\chi} \ n_{\beta} \ ^{0^{+}}\mathcal{A}_{S}^{\parallel} + \frac{1}{9} \ \eta_{\alpha\beta} \ n_{\chi} \ ^{0^{+}}\mathcal{A}_{S}^{\parallel} - \frac{1}{3} \ n_{\alpha} \ n_{\beta} \ n_{\chi} \ ^{0^{+}}\mathcal{A}_{S}^{\parallel} + \frac{1}{2} \ n_{\chi} \ ^{1^{+}}\mathcal{A}_{S}^{\perp}{}_{\alpha\beta} - \frac{1}{2} \ n_{\alpha} \ ^{1^{+}}\mathcal{A}_{S}^{\perp}{}_{\beta\chi} + \ ^{2}\mathcal{A}_{S}^{\parallel}{}_{\alpha\chi\beta} + \frac{1}{3} \ n_{\chi} \ ^{2^{+}}\mathcal{A}_{S}^{\parallel}{}_{\alpha\beta} + \frac{1}{3} \ n_{\beta} \ ^{2^{+}}\mathcal{A}_{S}^{\parallel}{}_{\alpha\beta} + \frac{1}{3} $	$W_{\alpha\beta\chi}$
		$\frac{1}{3} n_{\alpha} {}^{2^{+}} \mathcal{A}_{s} {}^{\parallel}{}_{\beta \chi} + {}^{3} \mathcal{A}_{s} {}^{\parallel}{}_{\alpha \beta \chi} - \frac{1}{6} \eta_{\beta \chi} {}^{1} \mathcal{A}_{s} {}^{\parallel}{}^{\Lambda}_{\alpha} + \frac{1}{6} n_{\beta} n_{\chi} {}^{1} \mathcal{A}_{s} {}^{\parallel}{}^{\Lambda}_{\alpha} + \frac{1}{3} \eta_{\alpha \chi} {}^{1} \mathcal{A}_{s} {}^{\parallel}{}^{\Lambda}_{\beta} - \frac{1}{3} n_{\alpha} n_{\chi} {}^{1} \mathcal{A}_{s} {}^{\parallel}{}^{\Lambda}_{\beta} - \frac{1}{6} n_{\alpha \beta} {}^{1} \mathcal{A}_{s} {}^{\parallel}{}^{\Lambda}_{\chi} + \frac{1}{15} \eta_{\beta \chi} {}^{1} \mathcal{A}_{s} {}^{\parallel}{}^{\Lambda}_{\chi} - \frac{1}{15} \eta_{\beta \chi} {}^{1} \mathcal{A}_{s} {}^{\parallel}{}^{1} \mathcal{A}_{s} {}^{\parallel}{}^{\Lambda}_{\chi} - \frac{1}{15} \eta_{\beta \chi} {}^{1} \mathcal{A}_{s} {}^{\parallel}{}^{\Lambda}_{\chi} - \frac{1}{15} $	
		$\frac{1}{15} \ n_{\beta} \ n_{\chi} \ ^{1} \mathcal{A}_{S}^{\parallel t}{}_{\alpha} + \frac{1}{15} \ n_{\alpha\chi} \ ^{1} \mathcal{A}_{S}^{\parallel t}{}_{\beta} - \frac{1}{15} \ n_{\alpha} \ n_{\chi} \ ^{1} \mathcal{A}_{S}^{\parallel t}{}_{\beta} + \frac{1}{15} \ n_{\alpha\beta} \ ^{1} \mathcal{A}_{S}^{\parallel t}{}_{\chi} - \frac{1}{15} \ n_{\alpha} \ n_{\beta} \ ^{1} \mathcal{A}_{S}^{\parallel t}{}_{\chi} - \frac{1}{3} \ n_{\chi} \ ^{2^{+}} \mathcal{A}_{S}^{\perp}{}_{\alpha\beta} + \frac{2}{3} \ n_{\beta} \ ^{2^{+}} \mathcal{A}_{S}^{\perp}{}_{\alpha\chi} - \frac{1}{3} \ n_{\alpha} \ ^{2^{+}} \mathcal{A}_{S}^{\perp}{}_{\beta\chi} - \frac{1}{9} \ n_{\beta\chi} \ n_{\alpha} \ ^{0^{+}} \mathcal{A}_{S}^{\perp h} + \frac{1}{15} \ n_{\alpha\beta} \ n_{\beta} \ ^{1} \mathcal{A}_{S}^{\perp h}{}_{\chi} + \frac{1}{15} \ n_{\alpha\beta} \ n_{\beta} \ ^{1} \mathcal{A}_{S}^{\perp h}{}_{\chi} + \frac{1}{15} \ n_{\alpha\beta} \ n_{\beta} \ ^{1} \mathcal{A}_{S}^{\perp h}{}_{\chi} + \frac{1}{15} \ n_{\alpha\beta} \ n_{\beta} \ ^{1} \mathcal{A}_{S}^{\perp h}{}_{\chi} + \frac{1}{15} \ n_{\alpha\beta} \ n_{\beta} \ n_{$	
		$\frac{2}{9}  \eta_{\alpha\chi}  n_{\beta}^{}  {}^{0^{+}} \! \mathcal{A}_{s}^{}} - \frac{1}{9}  \eta_{\alpha\beta}  n_{\chi}^{}}  {}^{0^{+}} \! \mathcal{A}_{s}^{}} + \frac{1}{3}  n_{\beta}  n_{\chi}^{}}  {}^{1} \! \mathcal{A}_{s}^{}} + \frac{2}{3}  n_{\alpha}  n_{\chi}^{}}  {}^{1} \! \mathcal{A}_{s}^{}} + n_{\alpha}^{}}  n_{\beta}^{}}  n_{\chi}^{}}  {}^{0^{+}} \! \mathcal{A}_{s}^{}} + \frac{1}{3}  n_{\alpha}^{}}  n_{\chi}^{}}  {}^{1} \! \mathcal{A}_{s}^{}}  n_{\chi}^{}}  n_{\chi}^{}} $	

## SO(3) irreps

SO(3) S	ymmetries	Expansion	Sources
0.+ h <sup>±</sup>	StrongGenSet[{},GenSet[]]	$n^{\alpha} n^{\beta} h_{\alpha\beta}$	$^{0^{+}}\mathcal{T}^{\perp}$
0,+ h	StrongGenSet[{}, GenSet[]] -	$n^{\alpha} n^{\beta} h_{\alpha\beta} + h^{\alpha}_{\alpha}$	<sup>0+</sup> <b>T</b> ∥
$^{1}$ $h^{\perp}{}_{\alpha}$	StrongGenSet[{},GenSet[]]	$n^{\beta} h_{\alpha\beta} - n_{\alpha} n^{\beta} n^{\chi} h_{\beta\chi}$	${}^1\mathcal{T}^{\scriptscriptstyle \perp}{}_{\alpha}$
$^{2^{+}}h^{\parallel}_{\alpha\beta}$	StrongGenSet[{1,2},GenSet[(1,2)]]	$h_{\alpha\beta} - n_{\beta} n^{\chi} h_{\alpha\chi} - n_{\alpha} n^{\chi} h_{\beta\chi} + \frac{1}{3} \eta_{\alpha\beta} n^{\chi} n^{\delta} h_{\chi\delta} + \frac{2}{3} \eta_{\alpha} n_{\beta} n^{\chi} n^{\delta} h_{\chi\delta} - \frac{1}{3} \eta_{\alpha\beta} h^{\chi}_{\chi} + \frac{1}{3} \eta_{\alpha} n_{\beta} h^{\chi}_{\chi}$	$^{2^{+}}\mathcal{T}^{\parallel}{}_{\alpha\beta}$
$^{0^{+}}\mathcal{A}_{s}^{\perp t}$	StrongGenSet[{},GenSet[]]	$n^{\alpha} n^{\beta} n^{\chi} \mathcal{A}_{\alpha\beta\chi}$	$^{0^+}W_s^{\perp t}$
$^{0^{+}}\mathcal{F}_{S}{}^{\parallel}$	StrongGenSet[{}, GenSet[]] -3	$n^{\alpha} n^{\beta} n^{\chi} \mathcal{A}_{\alpha\beta\chi} + 2 n^{\alpha} \mathcal{A}_{\alpha\beta}^{\ \beta} + n^{\alpha} \mathcal{A}_{\alpha\beta}^{\beta}$	0+W <sub>s</sub>
<sup>0+</sup> ℋ <sub>s</sub> <sup>⊥h</sup>	StrongGenSet[{}, GenSet[]] -	$n^{\alpha} \mathcal{A}_{\alpha\beta}^{\ \beta} + n^{\alpha} \mathcal{A}_{\alpha\beta}^{\beta}$	$^{0^+}W_s^{\perp h}$
$^{1^{+}}\mathcal{F}_{S}{}^{^{\perp}}{}_{lphaeta}$	StrongGenSet[{1,2},GenSet[-(1,2)]]	$n^{\chi} \mathcal{A}_{\alpha\beta\chi} - n_{\beta} n^{\chi} n^{\delta} \mathcal{A}_{\alpha\chi\delta} - n^{\chi} \mathcal{A}_{\beta\alpha\chi} + n_{\alpha} n^{\chi} n^{\delta} \mathcal{A}_{\beta\chi\delta} + n_{\beta} n^{\chi} n^{\delta} \mathcal{A}_{\chi\alpha\delta} - n_{\alpha} n^{\chi} n^{\delta} \mathcal{A}_{\chi\beta\delta}$	$^{1^+}W_{s}^{\perp}{}_{\alpha\beta}$
${}^1\mathcal{R}_{s}{}^{\mathtt{lt}}{}_{\alpha}$	StrongGenSet[{}, GenSet[]] 2	$n^{\beta} n^{\chi} \mathcal{A}_{\alpha\beta\chi} + n^{\beta} n^{\chi} \mathcal{A}_{\beta\alpha\chi}$ -3 $n_{\alpha} n^{\beta} n^{\chi} n^{\delta} \mathcal{A}_{\beta\chi\delta}$	${}^1\mathcal{W}_{s}{}^{\mathtt{l}t}{}_{\alpha}$
${}^1\mathcal{R}_{s}{}^{\parallel t}{}_{\alpha}$	StrongGenSet[{}, GenSet[]] -2	$n^{\beta} n^{\chi} \mathcal{A}_{\alpha\beta\chi} + 2 \mathcal{A}_{\alpha\beta}^{\ \beta} - n^{\beta} n^{\chi} \mathcal{A}_{\beta\alpha\chi} + 3 n_{\alpha} n^{\beta} n^{\chi} n^{\delta} \mathcal{A}_{\beta\chi\delta} - 2 n_{\alpha} n^{\beta} \mathcal{A}_{\beta\chi}^{\chi} + \mathcal{A}_{\alpha\beta}^{\beta} - n_{\alpha} n^{\beta} \mathcal{A}_{\beta\chi}^{\chi}$	$^{1}\mathcal{W}_{s}^{\hspace{0.1cm} lt}{}_{lpha}$
${}^1\mathcal{A}_{s}{}^{\mathtt{ih}}{}_{\alpha}$	StrongGenSet[{}, GenSet[]] -	$n^{\beta} n^{\chi} \mathcal{A}_{\alpha\beta\chi} + n^{\beta} n^{\chi} \mathcal{A}_{\beta\alpha\chi}$	${}^{1}\mathcal{W}_{s}{}^{\perp h}{}_{\alpha}$
$^{1}\mathcal{A}_{s}^{\parallel h}{}_{\alpha}$	StrongGenSet[{},GenSet[]]	$n^{\beta} n^{\chi} \mathcal{A}_{\alpha\beta\chi} - \mathcal{A}_{\alpha\beta}^{\ \beta} - n^{\beta} n^{\chi} \mathcal{A}_{\beta\alpha\chi} + n_{\alpha} n^{\beta} \mathcal{A}_{\beta\chi}^{\ \chi} + \mathcal{A}_{\alpha\beta}^{\beta} - n_{\alpha} n^{\beta} \mathcal{A}_{\beta\chi}^{\chi}$	${}^{1}\mathcal{W}_{s}{}^{\parallelh}{}_{\alpha}$
${}^{2^{+}}\mathcal{A}_{s}{}^{\parallel}{}_{lphaeta}$	StrongGenSet[{1,2},GenSet[(1,2)]]	$n^{\chi} \mathcal{A}_{\alpha\beta\chi} + n^{\chi} \mathcal{A}_{\alpha\chi\beta} - 2 n_{\beta} n^{\chi} n^{\delta} \mathcal{A}_{\alpha\chi\delta} + n^{\chi} \mathcal{A}_{\beta\alpha\chi} - 2 n_{\alpha} n^{\chi} n^{\delta} \mathcal{A}_{\beta\chi\delta} - n_{\beta} n^{\chi} n^{\delta} \mathcal{A}_{\chi\alpha\delta} - n_{\alpha} n^{\chi} n^{\delta} \mathcal{A}_{\chi\beta\delta} +$	$^{2^{+}}W_{s}^{\parallel}_{\alpha\beta}$
		$\eta_{\alpha\beta} \ n^{\chi} \ n^{\delta} \ n^{\epsilon} \ \mathcal{A}_{\chi\delta\epsilon} + 2 \ n_{\alpha} \ n_{\beta} \ n^{\chi} \ n^{\delta} \ n^{\epsilon} \ \mathcal{A}_{\chi\delta\epsilon} - \frac{2}{3} \ \eta_{\alpha\beta} \ n^{\chi} \ \mathcal{A}_{\chi\delta}^{\delta} + \frac{2}{3} \ n_{\alpha} \ n_{\beta} \ n^{\chi} \ \mathcal{A}_{\chi\delta}^{\delta} - \frac{1}{3} \ \eta_{\alpha\beta} \ n^{\chi} \ \mathcal{A}_{\chi\delta}^{\delta} + \frac{1}{3} \ n_{\alpha} \ n_{\beta} \ n^{\chi} \ \mathcal{A}_{\chi\delta}^{\delta}$	
$^{2^{+}}\mathcal{F}_{s^{\perp}\alpha\beta}$	StrongGenSet[{1, 2}, GenSet[(1,2)]] -	$ \frac{1}{2} n^{\chi} \mathcal{A}_{\alpha\beta\chi} + n^{\chi} \mathcal{A}_{\alpha\chi\beta} - \frac{1}{2} n_{\beta} n^{\chi} n^{\delta} \mathcal{A}_{\alpha\chi\delta} - \frac{1}{2} n^{\chi} \mathcal{A}_{\beta\alpha\chi} - \frac{1}{2} n_{\alpha} n^{\chi} n^{\delta} \mathcal{A}_{\beta\chi\delta} + $	$^{2^+}W_{s}^{\perp}{}_{\alpha\beta}$
		$\frac{1}{2} n_{\beta} n^{\chi} n^{\delta} \mathcal{A}_{\chi\alpha\delta} + \frac{1}{2} n_{\alpha} n^{\chi} n^{\delta} \mathcal{A}_{\chi\beta\delta} + \frac{1}{3} \eta_{\alpha\beta} n^{\chi} \mathcal{A}_{\chi\delta}^{\delta} - \frac{1}{3} n_{\alpha} n_{\beta} n^{\chi} \mathcal{A}_{\chi\delta}^{\delta} - \frac{1}{3} \eta_{\alpha\beta} n^{\chi} \mathcal{A}_{\chi\delta}^{\delta} + \frac{1}{3} n_{\alpha} n_{\beta} n^{\chi} \mathcal{A}_{\chi\delta}^{\delta}$	
$^{2}\mathcal{A}_{s}^{\parallel}_{\alpha\beta\chi}$	StrongGenSet[{1, 2}, GenSet[(1,2)]] -	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$^{2}\mathcal{W}_{s}^{\parallel}_{\alpha\beta\chi}$
		$ \frac{1}{6} n_{\beta} n_{\chi} \mathcal{A}_{\alpha \delta}^{\delta} - \frac{1}{3} \mathcal{A}_{\beta \alpha \chi} + \frac{1}{3} n_{\chi} n^{\delta} \mathcal{A}_{\beta \alpha \delta} - \frac{2}{3} n_{\alpha} n^{\delta} \mathcal{A}_{\beta \chi \delta} + \frac{1}{3} n_{\alpha} n^{\delta} \mathcal{A}_{\beta \delta \chi} + \frac{1}{6} n_{\alpha \chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\beta \delta \epsilon} + \frac{1}{6} n_{\alpha} n_{\chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\beta \delta \epsilon} + \frac{1}{6} n_{\alpha \chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\beta \delta \epsilon} + \frac{1}{6} n_{\alpha \chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\beta \delta \epsilon} + \frac{1}{6} n_{\alpha \chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\beta \delta \epsilon} + \frac{1}{6} n_{\alpha \chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\beta \delta \epsilon} + \frac{1}{6} n_{\alpha \chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\beta \delta \epsilon} + \frac{1}{6} n_{\alpha \chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\beta \delta \epsilon} + \frac{1}{6} n_{\alpha \chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\beta \delta \epsilon} + \frac{1}{6} n_{\alpha \chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\beta \delta \epsilon} + \frac{1}{6} n_{\alpha \chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\beta \delta \epsilon} + \frac{1}{6} n_{\alpha \chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\beta \delta \epsilon} + \frac{1}{6} n_{\alpha \chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\beta \delta \epsilon} + \frac{1}{6} n_{\alpha \chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\beta \delta \epsilon} + \frac{1}{6} n_{\alpha \chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\beta \delta \epsilon} + \frac{1}{6} n_{\alpha \chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\beta \delta \epsilon} + \frac{1}{6} n_{\alpha \chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\beta \delta \epsilon} + \frac{1}{6} n_{\alpha \chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\beta \delta \epsilon} + \frac{1}{6} n_{\alpha \chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\beta \delta \epsilon} + \frac{1}{6} n_{\alpha \chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\beta \delta \epsilon} + \frac{1}{6} n_{\alpha \chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\beta \delta \epsilon} + \frac{1}{6} n_{\alpha \chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\beta \delta \epsilon} + \frac{1}{6} n_{\alpha \chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\beta \delta \epsilon} + \frac{1}{6} n_{\alpha \chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\beta \delta \epsilon} + \frac{1}{6} n_{\alpha \chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\beta \delta \epsilon} + \frac{1}{6} n_{\alpha \chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\beta \delta \epsilon} + \frac{1}{6} n_{\alpha \chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\beta \delta \epsilon} + \frac{1}{6} n_{\alpha \chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\beta \delta \epsilon} + \frac{1}{6} n_{\alpha \chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\beta \delta \epsilon} + \frac{1}{6} n_{\alpha \chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\beta \delta \epsilon} + \frac{1}{6} n_{\alpha \chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\beta \delta \epsilon} + \frac{1}{6} n_{\alpha \chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\beta \delta \epsilon} + \frac{1}{6} n_{\alpha \chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\delta \delta \epsilon} + \frac{1}{6} n_{\alpha \chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\delta \delta \epsilon} + \frac{1}{6} n_{\alpha \chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\delta \delta \epsilon} + \frac{1}{6} n_{\alpha \chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\delta \delta \epsilon} + \frac{1}{6} n_{\alpha \chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\delta \delta \epsilon} + \frac{1}{6} n_{\alpha \chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\delta \delta \epsilon} + \frac{1}{6} n_{\alpha \chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\delta \delta \delta} + \frac{1}{6} n_{\alpha \chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\delta \delta \delta} + \frac{1}{6} n_{\alpha \chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\delta \delta \delta} + \frac{1}{6} n_{\alpha \chi} n^{\delta} n^{\delta}$	
		$ \frac{1}{3} n_{\beta} n^{\delta} \mathcal{A}_{\chi\alpha\delta} + \frac{1}{3} n_{\alpha} n^{\delta} \mathcal{A}_{\chi\beta\delta} - \frac{1}{3} \eta_{\alpha\beta} n^{\delta} n^{\epsilon} \mathcal{A}_{\chi\delta\epsilon} - \frac{1}{3} n_{\alpha} n_{\beta} n^{\delta} n^{\epsilon} \mathcal{A}_{\chi\delta\epsilon} + \frac{1}{3} \eta_{\alpha\beta} \mathcal{A}_{\chi\delta} - \frac{1}{3} n_{\alpha} n_{\beta} \mathcal{A}_{\chi\delta} - \frac{1}{6} \eta_{\beta\chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\delta\alpha\epsilon} - \frac{1}{6} n_{\beta} n_{\chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\delta\alpha\epsilon} - \frac{1}{6} n_{\alpha} n_{\alpha} n^{\delta} n^{\epsilon} \mathcal{A}_{$	
		$ \frac{1}{6} \eta_{\alpha\chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\delta\beta\epsilon} - \frac{1}{6} n_{\alpha} n_{\chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\delta\beta\epsilon} + \frac{1}{3} \eta_{\alpha\beta} n^{\delta} n^{\epsilon} \mathcal{A}_{\delta\chi\epsilon} + \frac{1}{3} n_{\alpha} n_{\beta} n^{\delta} n^{\epsilon} \mathcal{A}_{\delta\chi\epsilon} + \frac{1}{6} \eta_{\beta\chi} n_{\alpha} n^{\delta} \mathcal{A}_{\delta\epsilon} + \frac{1}{6} \eta_{\alpha\chi} n_{\beta} n^{\delta} \mathcal{A}_{\delta\epsilon} - \frac{1}{3} \eta_{\alpha\beta} n_{\chi} n^{\delta} \mathcal{A}_{\delta\epsilon} + \frac{1}{6} \eta_{\alpha\chi} n_{\beta} n^{\delta} \mathcal{A}_{\delta\epsilon} + \frac$	
-		$ \frac{1}{6} \eta_{\beta \chi}  \mathcal{A}^{\delta}_{\alpha \delta} - \frac{1}{6} \eta_{\beta}  \eta_{\chi}  \mathcal{A}^{\delta}_{\alpha \delta} + \frac{1}{6} \eta_{\alpha \chi}  \mathcal{A}^{\delta}_{\beta \delta} - \frac{1}{6} \eta_{\alpha}  \eta_{\chi}  \mathcal{A}^{\delta}_{\beta \delta} - \frac{1}{3} \eta_{\alpha \beta}  \mathcal{A}^{\delta}_{\chi \delta} + \frac{1}{3} \eta_{\alpha}  \eta_{\beta}  \mathcal{A}^{\delta}_{\chi \delta} - \frac{1}{6} \eta_{\beta \chi}  \eta_{\alpha}  \eta^{\delta}  \mathcal{A}^{\epsilon}_{\delta \epsilon} - \frac{1}{6} \eta_{\alpha \chi}  \eta_{\beta}  \eta^{\delta}  \mathcal{A}^{\epsilon}_{\delta \epsilon} + \frac{1}{3} \eta_{\alpha \beta}  \eta_{\chi}  \eta^{\delta}  \mathcal{A}^{\epsilon}_{\delta \epsilon} $	
${}^{3}\mathcal{F}_{s}{}^{\parallel}{}_{\alpha\beta\chi}$	StrongGenSet[{1, 2, 3}, GenSet[(1,2), (2,3)]]	$\frac{1}{3}\mathcal{S}_{\alpha\beta\chi}-\frac{1}{3}n_\chin^\delta\mathcal{S}_{\alpha\beta\delta}+\frac{1}{3}\mathcal{S}_{\alpha\chi\beta}-\frac{1}{3}n_\betan^\delta\mathcal{S}_{\alpha\chi\delta}-\frac{1}{3}n_\chin^\delta\mathcal{S}_{\alpha\delta\beta}-\frac{1}{3}n_\betan^\delta\mathcal{S}_{\alpha\delta\chi}+\frac{2}{15}\eta_{\beta\chi}n^\deltan^\epsilon\mathcal{S}_{\alpha\delta\epsilon}+\frac{8}{15}n_\betan_\chin^\deltan^\epsilon\mathcal{S}_{\alpha\delta\epsilon}-\frac{2}{15}\eta_{\beta\chi}\mathcal{S}_{\alpha\delta}^{\delta}+\frac{2}{15}n_\betan_\chi\mathcal{S}_{\alpha\delta}^{\delta}+\frac{2}{15}n_\betan_\chin^\deltan^\epsilon\mathcal{S}_{\alpha\delta\delta}^{\delta}+\frac{2}{15}n_\betan_\chin^\deltan^\epsilon\mathcal{S}_{\alpha\delta\delta}^{\delta}+\frac{2}{15}n_\betan_\chin^\deltan^\epsilon\mathcal{S}_{\alpha\delta\delta}^{\delta}+\frac{2}{15}n_\betan_\chin^\deltan^\epsilonn^\epsilonn^\epsilonn^\epsilonn^\epsilonn^\epsilonn^\epsilon$	${}^{3}\mathcal{W}_{s}{}^{\parallel}{}_{\alpha\beta\chi}$
		$ \frac{1}{3} \mathcal{A}_{\beta\alpha\chi} - \frac{1}{3} n_{\chi} n^{\delta} \mathcal{A}_{\beta\alpha\delta} - \frac{1}{3} n_{\alpha} n^{\delta} \mathcal{A}_{\beta\chi\delta} - \frac{1}{3} n_{\alpha} n^{\delta} \mathcal{A}_{\beta\delta\chi} + \frac{2}{15} \eta_{\alpha\chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\beta\delta\epsilon} + \frac{8}{15} n_{\alpha} n_{\chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\beta\delta\epsilon} - \frac{2}{15} \eta_{\alpha\chi} \mathcal{A}_{\beta\delta}^{\delta} - \frac{1}{3} n_{\beta} n^{\delta} \mathcal{A}_{\chi\alpha\delta} - \frac{1}{3} n_{\beta} n^{\delta} \mathcal{A}_{\gamma\alpha\delta} - \frac{1}{3} n_{\beta} n^{\delta} $	
		$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	
		$\frac{4}{15} n_{\alpha} n_{\chi} n^{\delta} n^{\epsilon} \mathcal{A}_{\delta\beta\epsilon} + \frac{1}{15} \eta_{\alpha\beta} n^{\delta} n^{\epsilon} \mathcal{A}_{\delta\chi\epsilon} + \frac{4}{15} n_{\alpha} n_{\beta} n^{\delta} n^{\epsilon} \mathcal{A}_{\delta\chi\epsilon} - \frac{1}{5} \eta_{\beta\chi} n_{\alpha} n^{\delta} n^{\epsilon} n^{\phi} \mathcal{A}_{\delta\epsilon\phi} - \frac{1}{5} \eta_{\alpha\chi} n_{\beta} n^{\delta} n^{\epsilon} n^{\phi} \mathcal{A}_{\delta\epsilon\phi} - \frac{1}{5} \eta_{\alpha\beta} n_{\chi} n^{\delta} n^{\epsilon} n^{\phi} \mathcal{A}_{\delta\epsilon\phi} - \frac{1}{5} \eta_{\alpha\beta} n^{\delta} n^{\epsilon} n^{\phi} $	
		$\begin{bmatrix} \frac{2}{5} n_{\alpha} n_{\beta} n_{\chi} n^{\delta} n^{\epsilon} n^{\phi} \mathcal{R}_{\delta\epsilon\phi} + \frac{2}{15} \eta_{\beta\chi} n_{\alpha} n^{\delta} \mathcal{R}_{\delta\epsilon}^{\epsilon} + \frac{2}{15} \eta_{\alpha\chi} n_{\beta} n^{\delta} \mathcal{R}_{\delta\epsilon}^{\epsilon} + \frac{2}{15} \eta_{\alpha\beta} n_{\chi} n^{\delta} \mathcal{R}_{\delta\epsilon}^{\epsilon} - \frac{2}{5} n_{\alpha} n_{\beta} n_{\chi} n^{\delta} \mathcal{R}_{\delta\epsilon}^{\epsilon} - \frac{1}{15} \eta_{\beta\chi} \mathcal{R}_{\alpha\delta}^{\delta} + \frac{1}{15} n_{\beta} n_{\chi} \mathcal{R}_{\alpha\delta}^{\delta} - \frac{1}{15} n_{\gamma} n_{\gamma} \mathcal{R}_{\alpha\delta}^{\delta}$	