PSALTer kinematic panel

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

Fundamental fields

Fields	Symmetries	SO(3)	Sources
$\mathcal{A}^{\alpha\beta}{}_\chi$	StrongGenSet[{1, 2}, GenSet[-(1,2)]]	$\frac{4}{3}\ \overset{2^-}{\cdot\cdot}\mathcal{A}^{\parallel\alpha\beta}{}_\chi + \frac{1}{2}\ \overset{1^-}{\cdot\cdot}\mathcal{A}^{\parallel\beta}\ \delta^\alpha{}_\chi - \frac{1}{2}\ \overset{1^-}{\cdot\cdot}\mathcal{A}^{\parallel\alpha}\ \delta^\beta{}_\chi + \overset{1^+}{\cdot\cdot}\mathcal{A}^{\parallel\beta}{}_\chi\ n^\alpha + \overset{2^+}{\cdot\cdot}\mathcal{A}^{\parallel\beta}{}_\chi\ n^\alpha + \frac{1}{3}\ \overset{0^+}{\cdot\cdot}\mathcal{A}^{\parallel}\ \delta^\beta{}_\chi\ n^\alpha - \overset{1^+}{\cdot\cdot}\mathcal{A}^{\parallel\alpha}{}_\chi\ n^\beta -$ $\overset{2^+}{\cdot\cdot}\mathcal{A}^{\parallel\alpha}{}_\chi\ n^\beta - \frac{1}{3}\ \overset{0^+}{\cdot\cdot}\mathcal{A}^{\parallel}\ \delta^\alpha{}_\chi\ n^\beta + \overset{1^+}{\cdot\cdot}\mathcal{A}^{\perp\alpha\beta}\ n_\chi - \frac{1}{2}\ \overset{1^-}{\cdot\cdot}\mathcal{A}^{\parallel\beta}\ n^\alpha\ n_\chi - \overset{1^-}{\cdot\cdot}\mathcal{A}^{\perp\beta}\ n^\alpha\ n_\chi + \frac{1}{2}\ \overset{1^-}{\cdot\cdot}\mathcal{A}^{\parallel\alpha}\ n^\beta\ n_\chi + \overset{1^-}{\cdot\cdot}\mathcal{A}^{\perp\alpha}\ n^\beta\ n_\chi - \frac{1}{6}\ \overset{0^-}{\cdot\cdot}\mathcal{A}^{\parallel}\ \epsilon\eta^{\alpha\beta}{}_{\chi\delta}\ n^\delta$	$\sigma_{\alpha\beta\chi}$
$f_{\alpha\beta}$	StrongGenSet[{}, GenSet[]]	$\overset{1^+}{\cdot\cdot}f^\parallel{}_{\alpha\beta} + \overset{2^+}{\cdot\cdot}f^\parallel{}_{\alpha\beta} + \frac{1}{3}\ \overset{0^+}{\cdot\cdot}f^\parallel\ \eta_{\alpha\beta} + \overset{1^-}{\cdot\cdot}f^\parallel{}_\beta\ n_\alpha + \overset{1^-}{\cdot\cdot}f^\perp{}_\alpha\ n_\beta - \frac{1}{3}\ \overset{0^+}{\cdot\cdot}f^\parallel\ n_\alpha\ n_\beta + \overset{0^+}{\cdot\cdot}f^\perp\ n_\alpha\ n_\beta$	$\tau\,(\Delta+\mathcal{K})_{\alpha\beta}$

SO(3) irreps

SO(3)	Symmetries	Expansion	Sources
$\overset{0^+}{\cdot\cdot}\mathcal{A}^\parallel$	StrongGenSet[{},GenSet[]]	$\mathcal{A}_\alpha{}^\beta{}_\beta\ n^\alpha$	$\overset{0^+}{\cdot\cdot}\sigma^\parallel$
$\overset{0^-}{\cdot\cdot}\mathcal{A}^\parallel$	StrongGenSet[{}, GenSet[]] -	$\mathcal{A}^{\beta\chi\delta}\ \epsilon\eta_{\alpha\beta\chi\delta}\ n^\alpha$	$\overset{0^-}{\cdot\cdot}\sigma^\parallel$
$\overset{1^+}{\cdot\cdot}\mathcal{A}^\parallel{}_{\alpha\beta}$	StrongGenSet[{1, 2}, GenSet[-(1,2)]] -	$\frac{1}{2}\ \mathcal{A}_{\alpha\chi\beta}\ n^\chi + \frac{1}{2}\ \mathcal{A}_{\beta\chi\alpha}\ n^\chi - \frac{1}{2}\ \mathcal{A}_{\beta\chi\delta}\ n_\alpha\ n^\chi\ n^\delta + \frac{1}{2}\ \mathcal{A}_{\alpha\chi\delta}\ n_\beta\ n^\chi\ n^\delta$	$\overset{1^+}{\cdot\cdot}\sigma^\parallel{}_{\alpha\beta}$
$\overset{1^+}{\cdot\cdot}\mathcal{A}^\perp{}_{\alpha\beta}$	StrongGenSet[{1, 2}, GenSet[-(1,2)]]	$\mathcal{A}_{\alpha\beta\chi}\ n^\chi + \mathcal{A}_{\beta\chi\delta}\ n_\alpha\ n^\chi\ n^\delta - \mathcal{A}_{\alpha\chi\delta}\ n_\beta\ n^\chi\ n^\delta$	$\overset{1^+}{\cdot\cdot}\sigma^\perp{}_{\alpha\beta}$
$\overset{1^-}{\cdot\cdot}\mathcal{A}^\parallel{}_\alpha$	StrongGenSet[{}, GenSet[]] -	$\mathcal{A}_\alpha{}^\beta{}_\beta + \mathcal{A}_\beta{}^\chi{}_\chi\ n_\alpha\ n^\beta + \mathcal{A}_{\alpha\beta\chi}\ n^\beta\ n^\chi$	$\overset{1^-}{\cdot\cdot}\sigma^\parallel{}_\alpha$
$\overset{1^-}{\cdot\cdot}\mathcal{A}^\perp{}_\alpha$	StrongGenSet[{},GenSet[]]	$\mathcal{A}_{\alpha\beta\chi}\ n^\beta\ n^\chi$	$\overset{1^-}{\cdot\cdot}\sigma^\perp{}_\alpha$
$\overset{2^+}{\cdot\cdot}\mathcal{A}^\parallel{}_{\alpha\beta}$	StrongGenSet[{1,2 }, GenSet[(1,2)]] -	$\frac{1}{2}\ \mathcal{A}_{\alpha\chi\beta}\ n^\chi - \frac{1}{2}\ \mathcal{A}_{\beta\chi\alpha}\ n^\chi - \frac{1}{3}\ \mathcal{A}_\chi{}^\delta{}_\delta\ \eta_{\alpha\beta}\ n^\chi + \frac{1}{3}\ \mathcal{A}_\chi{}^\delta{}_\delta\ n_\alpha\ n_\beta\ n^\chi + \frac{1}{2}\ \mathcal{A}_{\beta\chi\delta}\ n_\alpha\ n^\chi\ n^\delta + \frac{1}{2}\ \mathcal{A}_{\alpha\chi\delta}\ n_\beta\ n^\chi\ n^\delta$	$\overset{2^+}{\cdot\cdot}\sigma^\parallel{}_{\alpha\beta}$
$\overset{2^-}{\cdot\cdot}\mathcal{A}^\parallel{}_{\alpha\beta\chi}$	StrongGenSet[{1, 2}, GenSet[-(1,2)]]	$\frac{1}{2}\ \mathcal{A}_{\alpha\beta\chi} + \frac{1}{4}\ \mathcal{A}_{\alpha\chi\beta} - \frac{1}{4}\ \mathcal{A}_{\beta\chi\alpha} + \frac{3}{8}\ \mathcal{A}_\beta{}^\delta{}_\delta\ \eta_{\alpha\chi} - \frac{3}{8}\ \mathcal{A}_\alpha{}^\delta{}_\delta\ \eta_{\beta\chi} - \frac{3}{8}\ \mathcal{A}_\beta{}^\delta{}_\delta\ n_\alpha\ n_\chi + \frac{3}{8}\ \mathcal{A}_\alpha{}^\delta{}_\delta\ n_\beta\ n_\chi + \frac{1}{4}\ \mathcal{A}_{\beta\chi\delta}\ n_\alpha\ n^\delta +$ $\frac{1}{2}\ \mathcal{A}_{\beta\delta\chi}\ n_\alpha\ n^\delta + \frac{1}{4}\ \mathcal{A}_{\chi\delta\beta}\ n_\alpha\ n^\delta + \frac{3}{8}\ \mathcal{A}_\delta{}^\epsilon{}_\epsilon\ \eta_{\beta\chi}\ n_\alpha\ n^\delta - \frac{1}{4}\ \mathcal{A}_{\alpha\chi\delta}\ n_\beta\ n^\delta - \frac{1}{2}\ \mathcal{A}_{\alpha\delta\chi}\ n_\beta\ n^\delta - \frac{1}{4}\ \mathcal{A}_{\chi\delta\alpha}\ n_\beta\ n^\delta - \frac{3}{8}\ \mathcal{A}_\delta{}^\epsilon{}_\epsilon\ \eta_{\alpha\chi}\ n_\beta\ n^\delta -$ $\frac{1}{2}\ \mathcal{A}_{\alpha\beta\delta}\ n_\chi\ n^\delta - \frac{1}{4}\ \mathcal{A}_{\alpha\delta\beta}\ n_\chi\ n^\delta + \frac{1}{4}\ \mathcal{A}_{\beta\delta\alpha}\ n_\chi\ n^\delta - \frac{3}{8}\ \mathcal{A}_{\beta\delta\epsilon}\ \eta_{\alpha\chi}\ n^\delta\ n^\epsilon + \frac{3}{8}\ \mathcal{A}_{\alpha\delta\epsilon}\ \eta_{\beta\chi}\ n^\delta\ n^\epsilon - \frac{3}{8}\ \mathcal{A}_{\beta\delta\epsilon}\ n_\alpha\ n_\chi\ n^\delta\ n^\epsilon + \frac{3}{8}\ \mathcal{A}_{\alpha\delta\epsilon}\ n_\beta\ n_\chi\ n^\delta\ n^\epsilon$	$\overset{2^-}{\cdot\cdot}\sigma^\parallel{}_{\alpha\beta\chi}$
$\overset{0^+}{\cdot\cdot}f^\parallel$	StrongGenSet[{},GenSet[]]	$f^\alpha{}_\alpha - f^{\alpha\beta}\ n_\alpha\ n_\beta$	$\overset{0^+}{\cdot\cdot}\tau^\parallel$
$\overset{0^+}{\cdot\cdot}f^\perp$	StrongGenSet[{},GenSet[]]	$f^{\alpha\beta}\ n_\alpha\ n_\beta$	$\overset{0^+}{\cdot\cdot}\tau^\perp$
$\overset{1^+}{\cdot\cdot}f^\parallel{}_{\alpha\beta}$	StrongGenSet[{1, 2}, GenSet[-(1,2)]]	$\frac{f_{\alpha\beta}}{2} - \frac{f_{\beta\alpha}}{2} + \frac{1}{2}\ f_\beta{}^\chi\ n_\alpha\ n_\chi - \frac{1}{2}\ f^\chi{}_\beta\ n_\alpha\ n_\chi - \frac{1}{2}\ f_\alpha{}^\chi\ n_\beta\ n_\chi + \frac{1}{2}\ f^\chi{}_\alpha\ n_\beta\ n_\chi$	$\overset{1^+}{\cdot\cdot}\tau^\parallel{}_{\alpha\beta}$
$\overset{1^-}{\cdot\cdot}f^\parallel{}_\alpha$	StrongGenSet[{},GenSet[]]	$f^\beta{}_\alpha\ n_\beta - f^{\beta\chi}\ n_\alpha\ n_\beta\ n_\chi$	$\overset{1^-}{\cdot\cdot}\tau^\parallel{}_\alpha$
$\overset{1^-}{\cdot\cdot}f^\perp{}_\alpha$	StrongGenSet[{},GenSet[]]	$f_\alpha{}^\beta\ n_\beta - f^{\beta\chi}\ n_\alpha\ n_\beta\ n_\chi$	$\overset{1^-}{\cdot\cdot}\tau^\perp{}_\alpha$
$\overset{2^+}{\cdot\cdot}f^\parallel{}_{\alpha\beta}$	StrongGenSet[{1, 2}, GenSet[(1,2)]]	$\frac{f_{\alpha\beta}}{2} + \frac{f_{\beta\alpha}}{2} - \frac{1}{3}\ f^\chi{}_\chi\ \eta_{\alpha\beta} + \frac{1}{3}\ f^\chi{}_\chi\ n_\alpha\ n_\beta - \frac{1}{2}\ f_\beta{}^\chi\ n_\alpha\ n_\chi - \frac{1}{2}\ f^\chi{}_\beta\ n_\alpha\ n_\chi - \frac{1}{2}\ f_\alpha{}^\chi\ n_\beta\ n_\chi - \frac{1}{2}\ f^\chi{}_\alpha\ n_\beta\ n_\chi + \frac{1}{3}\ f^{\chi\delta}\ \eta_{\alpha\beta}\ n_\chi\ n_\delta + \frac{2}{3}\ f^{\chi\delta}\ n_\alpha\ n_\beta\ n_\chi\ n_\delta$	$\overset{2^+}{\cdot\cdot}\tau^\parallel{}_{\alpha\beta}$