## Particle spectrograph

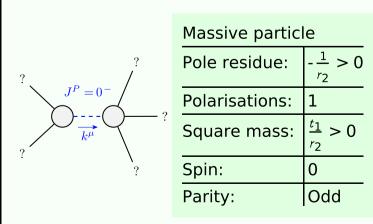
## Wave operator and propagator

fields $t^{\alpha}_{\alpha} + 2 \partial_{x} \partial^{x} \partial_{\beta} \sigma^{\alpha \beta}_{\alpha}$ $3^{x} \partial_{\beta} t^{\alpha \beta} + 2 \partial_{x} \partial^{x} \partial_{\beta} \sigma^{\alpha \beta x}$ $3^{x} \partial_{\beta} t^{\alpha \beta} + 2 \partial_{\delta} \partial^{\delta} \partial_{\lambda} \partial_{\beta} \sigma^{\alpha \beta x}$ $3^{x} \partial_{\beta} t^{\beta \alpha}$ $3^{x} \partial_{\beta} t^{\beta \alpha}$ $3^{x} \partial_{\beta} t^{\alpha x} + 3 \partial_{\delta} \partial^{\beta} \partial^{\alpha} t^{x} \partial_{\delta} \partial^{\alpha} t^{\alpha x} \partial_{\delta} \partial^{\alpha} d^{\alpha} \partial^{\alpha} \partial^{\alpha} d^{\alpha} \partial^{\alpha} \partial^{\alpha}$	Source constraints		
$2ik \ O_{3}^{\#1} = 0$ $2ik \ O_{1}^{\#2} = 0$ $2ik \ O_{1}^{\#2} = 0$ $2ik \ O_{1}^{\#2} = 0$ $3k \partial_{\beta} a^{x} t^{\beta} = 3k \partial^{\beta} t^{\alpha} + 2 \partial_{x} \partial^{\beta} \partial^{\alpha} \theta^{\alpha}$ $0$ $3k \partial_{\beta} a^{x} t^{\beta} = 3k \partial^{\beta} t^{\alpha} + 2 \partial_{\beta} \partial^{\beta} \partial^{\alpha} \theta^{\alpha}$ $0$ $3k \partial_{\beta} a^{x} t^{\beta} + 3k \partial^{\beta} t^{\alpha} + 3k \partial^{\beta} t^{\alpha} + 2 \partial_{\beta} \partial^{\beta} \partial^{\alpha} \theta^{\alpha}$ $0$ $3k \partial_{\beta} a^{x} t^{\beta} + 3k \partial^{\beta} t^{\alpha} + 3k \partial^{\beta} \partial^{\alpha} \theta^{\alpha}$ $2 \partial_{\delta} \partial^{\alpha} a^{\beta} b^{\alpha} + 2 \partial_{\delta} \partial^{\beta} \partial^{\alpha} b^{\alpha}$ $2 \partial_{\delta} \partial^{\alpha} a^{\beta} b^{\alpha} + 2 \partial_{\delta} \partial^{\beta} \partial^{\alpha} b^{\alpha}$ $2 \partial_{\delta} \partial^{\alpha} a^{\beta} b^{\alpha} + 2 \partial_{\delta} \partial^{\beta} \partial^{\alpha} b^{\alpha}$ $3 \partial_{\delta} \partial^{\alpha} a^{\beta} b^{\alpha} b^{\alpha} + 2 \partial_{\delta} \partial^{\beta} \partial^{\alpha} b^{\alpha}$ $3 \partial_{\delta} \partial^{\beta} \partial^{\alpha} t^{\beta} + 3 \partial_{\delta} \partial^{\beta} \partial^{\alpha} t^{\beta} + 3 \partial_{\delta} \partial^{\beta} \partial^{\alpha} t^{\beta} + 3 \partial_{\delta} \partial^{\beta} \partial^{\alpha} b^{\alpha} b^{\alpha} b^{\alpha} b^{\beta} \partial^{\beta} \partial^{\alpha} b^{\alpha} b^{\alpha} b^{\alpha} b^{\alpha} b^{\alpha} b^{\alpha} \partial^{\beta} \partial^{\alpha} b^{\alpha} b^{\alpha} b^{\alpha} b^{\alpha} b^{\alpha} \partial^{\beta} b^{\alpha} b^{\alpha} b^{\alpha} b^{\alpha} \partial^{\beta} b^{\alpha} b^{\alpha} b^{\alpha} b^{\alpha} \partial^{\beta} b^{\alpha} b^{\alpha} b^{\alpha} \partial^{\beta} b^{\alpha} b^{\alpha} b^{\alpha} \partial^{\beta} \partial^{\alpha} b^{\alpha} b^{\alpha} b^{\alpha} \partial^{\beta} \partial^{\beta} b^{\alpha} b^{\alpha} b^{\alpha} \partial^{\beta} \partial^{\beta} b^{\alpha} b^{\alpha} b^{\alpha} \partial^{\beta} \partial^{\beta} b^{\alpha} b^{\alpha} b^{\alpha} \partial^{\beta} b^{\alpha} b^{\alpha} \partial^{\beta} \partial^{\beta} b^{\alpha} b^{\alpha} \partial^{\beta} b^{\alpha} \partial^{\beta} b^{\alpha} b^{\alpha} \partial^{\beta} b^{\alpha} \partial^{\beta} b^{\alpha} \partial^{\beta} b^{\alpha} \partial^{\beta} b^{\alpha} b^{\alpha} \partial^{\beta} \partial^{\beta} b^{\alpha} b^{\alpha} \partial^{\beta} b^{\alpha} \partial^{\beta} b^{\alpha} b^{\alpha} b^{\alpha} \partial^{\beta} b^{\alpha} b^{\alpha} b^{\alpha} b^{\alpha} b^{\alpha} \partial^{\beta} b^{\alpha} b^{\alpha} b^{\alpha} b^{\alpha} b^{\alpha} \partial^{\beta} b^{\alpha} b^{\alpha} b^{\alpha} b^{\alpha} \partial^{\beta} b^{\alpha} b^{\alpha} b^{\alpha} b^{\alpha} b^{\alpha} b^{\alpha} b^{\alpha} b^{\alpha} b^$		idamental fields	Multiplicities
$k \ \sigma_{1}^{\#1} = 0 \qquad \partial_{\beta} \partial_{\alpha} T^{\alpha \beta} = \partial_{\beta} \partial^{\beta} T^{\alpha} + 2 \partial_{\alpha} \partial^{\lambda} \partial_{\beta} \sigma^{\alpha \beta}$ $k \ \sigma_{1}^{\#2} T^{\alpha} = 0 \qquad \partial_{\alpha} \partial_{\beta} \partial^{\alpha} T^{\beta X} = \partial_{\alpha} \partial^{\lambda} \partial_{\beta} T^{\alpha \beta} + 2 \partial_{\delta} \partial^{\beta} \partial_{\alpha} \partial^{\beta} \partial^{\alpha}$ $\delta_{\alpha} \partial_{\beta} \partial^{\alpha} T^{\beta X} = \partial_{\alpha} \partial^{\lambda} \partial_{\beta} T^{\beta \alpha}$ $\delta_{\alpha} \partial_{\beta} \partial^{\alpha} T^{\beta X} + \partial_{\alpha} \partial^{\beta} T^{\alpha X} + \partial_{\alpha} \partial^{\alpha} T^{\alpha \beta} + 2 \partial_{\delta} \partial^{\beta} \partial^{\alpha} T^{\alpha \beta} + 2 \partial_{\delta} \partial^{\alpha} $		$0 = g_{\infty} 1^{\kappa}$	1
$k \ O_{1}^{\#2} \alpha = 0 $ $ \partial_{x} \partial_{\beta} \partial^{\alpha} t^{\beta X} == \partial_{x} \partial^{x} \partial_{\beta} t^{\alpha \beta} + 2 \partial_{c} \partial^{5} \partial_{x} \partial_{\beta} \sigma^{\alpha \beta X} $ $ \partial_{x} \partial_{\beta} \partial^{\alpha} t^{\beta X} == \partial_{x} \partial^{x} \partial_{\beta} t^{\beta \alpha} $ $ \partial_{x} \partial_{\beta} \partial^{\alpha} t^{\beta X} + \partial_{x} \partial^{\beta} t^{\alpha X} + \partial_{x} \partial^{x} t^{\alpha \beta} + $ $ 2 \partial_{5} \partial_{x} \partial^{\alpha} \sigma^{\beta X} + \partial_{x} \partial^{\beta} t^{\alpha X} + $ $ 2 \partial_{5} \partial_{x} \partial^{\alpha} \sigma^{\beta X} + 2 \partial_{5} \partial^{5} \partial_{x} \sigma^{\alpha \beta X} = $ $ \partial_{x} \partial^{\alpha} t^{X\beta} + \partial_{x} \partial^{\beta} t^{\alpha X} + 2 \partial_{5} \partial^{5} \partial^{\alpha} \sigma^{\alpha X} = $ $ \partial_{x} \partial^{\alpha} t^{X\beta} + \partial_{x} \partial^{\beta} t^{\alpha X} + 2 \partial_{5} \partial^{5} \partial^{\alpha} \sigma^{\alpha X} = $ $ \partial_{x} \partial^{\alpha} t^{X\beta} + \partial_{x} \partial^{\beta} t^{\alpha X} + 2 \partial_{5} \partial^{5} \partial^{\alpha} \sigma^{\alpha X} = $ $ \partial_{x} \partial^{\alpha} t^{X\beta} + 2 \partial_{5} \partial^{\alpha} \partial^{\beta} \sigma^{\alpha X} = $ $ \partial_{x} \partial^{\alpha} t^{X\beta} + 2 \partial_{5} \partial^{\alpha} \partial^{\beta} \sigma^{\alpha X} = $ $ \partial_{x} \partial^{\alpha} t^{X\beta} + 2 \partial_{5} \partial^{\alpha} \partial^{\beta} \sigma^{\alpha X} = $ $ \partial_{x} \partial^{\alpha} t^{X\beta} + 2 \partial_{5} \partial^{\alpha} \partial^{\beta} \sigma^{\alpha X} = $ $ \partial_{x} \partial^{\alpha} t^{X\beta} + 2 \partial_{5} \partial^{\alpha} \partial^{\beta} \sigma^{\alpha X} = $ $ \partial_{x} \partial^{\alpha} t^{X\beta} + 2 \partial_{5} \partial^{\alpha} \partial^{\beta} \sigma^{\alpha X} = $ $ \partial_{x} \partial^{\alpha} t^{X\beta} + 2 \partial_{5} \partial^{\alpha} \partial^{\beta} \sigma^{\alpha X} = $ $ \partial_{x} \partial^{\alpha} t^{X\beta} + 2 \partial_{5} \partial^{\alpha} \partial^{\beta} \sigma^{\alpha X} = $ $ \partial_{x} \partial^{\alpha} t^{X\beta} + 2 \partial_{5} \partial^{\alpha} \partial^{\beta} \sigma^{\alpha X} = $ $ \partial_{x} \partial^{\alpha} t^{X\beta} + 2 \partial_{5} \partial^{\alpha} \partial^{\beta} \sigma^{\alpha X} = $ $ \partial_{x} \partial^{\alpha} t^{X\beta} + 2 \partial_{5} \partial^{\alpha} \partial^{\beta} \sigma^{\alpha X} = $ $ \partial_{x} \partial^{\alpha} t^{X\beta} + 2 \partial_{5} \partial^{\alpha} \partial^{\beta} \sigma^{\alpha X} = $ $ \partial_{x} \partial^{\beta} \partial^{\alpha} t^{X\beta} + 2 \partial_{5} \partial^{\alpha} \partial^{\beta} \sigma^{\alpha X} = $ $ \partial_{x} \partial^{\beta} \partial^{\alpha} t^{X\beta} + 2 \partial_{5} \partial^{\alpha} \partial^{\beta} \sigma^{\alpha X} = $ $ \partial_{x} \partial^{\beta} \partial^{\alpha} t^{X\beta} + 2 \partial_{5} \partial^{\alpha} \partial^{\beta} \sigma^{\alpha X} = $ $ \partial_{x} \partial^{\beta} \partial^{\alpha} d^{\alpha} t^{X\beta} + 2 \partial_{5} \partial^{\alpha} \partial^{\beta} \partial^{\alpha} \sigma^{\alpha X} = $ $ \partial_{x} \partial^{\beta} \partial^{\alpha} \partial^{\alpha} t^{X\beta} + 2 \partial_{5} \partial^{\alpha} \partial^{\beta} \partial^{\alpha} \sigma^{\alpha X} = $ $ \partial_{x} \partial^{\beta} \partial^{\alpha} \partial^{\alpha} d^{\alpha} \partial^{\beta} \partial^{\alpha} d^{\alpha} \partial^{\beta} \partial^{\alpha} \partial^{\alpha} \partial^{\alpha} \partial^{\beta} \partial^{\alpha} \partial$		$_{\alpha}\tau^{\alpha\beta} == \partial_{\beta}\partial^{\beta}\tau^{\alpha}_{\alpha} + 2\partial_{\chi}\partial^{\chi}\partial_{\beta}\sigma^{\alpha\beta}_{\alpha}$	1
$ \begin{array}{ll}                                    $	0 ==	${}_{\beta}\partial^{\alpha}t^{\beta\chi} == \partial_{\chi}\partial^{\chi}\partial_{\beta}t^{\alpha\beta} + 2\partial_{\delta}\partial_{\delta}\partial_{\chi}\partial_{\beta}\sigma^{\alpha\beta\chi}$	ĸ
$x^{\alpha} + \partial_{\chi} \partial^{\chi} r^{\alpha \beta} +$ $x^{\beta} + 2 \partial_{\delta} \partial^{\delta} \partial_{\chi} \sigma^{\alpha \beta \chi} = =$ $y^{\beta} r^{\alpha \chi} +$ $2 \partial_{\delta} \partial_{\chi} \partial^{\beta} \sigma^{\alpha \chi \delta}$ $2 \partial_{\delta} \partial_{\chi} \partial^{\beta} \sigma^{\alpha \chi \delta} +$ $2 \partial_{\delta} \partial_{\chi} \partial^{\beta} \sigma^{\alpha \chi \delta} +$ $2 \partial_{\delta} \partial_{\chi} \partial^{\beta} \sigma^{\alpha \chi \delta} +$ $2 \partial_{\delta} \partial_{\lambda} \partial^{\beta} \sigma^{\alpha \delta} +$ $2 \partial_{\delta} \partial_{\lambda} \partial^{\beta} \sigma^{\alpha \delta} +$ $2 \partial_{\delta} \partial_{\delta} \partial_{\lambda} \partial^{\beta} \partial^{\beta} \sigma^{\alpha \delta} +$ $2 \partial_{\delta} \partial_{\delta} \partial_{\lambda} \partial^{\beta} \partial^$		${}_{\beta}\partial^{\alpha}t^{\beta\chi} == \partial_{\chi}\partial^{\chi}\partial_{\beta}t^{\beta\alpha}$	Е
$x^{5} + 2 \partial_{\sigma} \partial^{\delta} \partial_{\chi} \sigma^{\alpha \beta \chi} = $ $y^{6} t^{\alpha \chi} + $ $2 \partial_{\sigma} \partial_{\chi} \partial^{\beta} \sigma^{\alpha \chi \delta}$ $x^{5} + 2 \partial_{\sigma} \partial^{\delta} \partial^{\beta} \partial^{\alpha} t^{\chi} - $ $x^{5} + 2 \partial_{\sigma} \partial^{\delta} \partial^{\beta} \partial^{\alpha} t^{\chi} - $ $\partial_{\chi} \partial^{\alpha} t^{\beta \chi} - 3 \partial_{\sigma} \partial^{\delta} \partial_{\chi} \partial^{\alpha} t^{\chi \beta} - $ $\partial_{\chi} \partial^{\beta} t^{\alpha \chi} - 3 \partial_{\sigma} \partial^{\delta} \partial_{\chi} \partial^{\alpha} t^{\chi \beta} + $ $\partial_{\chi} \partial^{\beta} t^{\alpha \chi} - 3 \partial_{\sigma} \partial^{\delta} \partial_{\chi} \partial^{\alpha} t^{\chi \beta} + $ $\partial_{\sigma} \partial^{\beta} t^{\alpha \chi} - 3 \partial_{\sigma} \partial^{\delta} \partial_{\chi} \partial^{\alpha} t^{\chi \beta} + $ $\partial_{\sigma} \partial^{\beta} \partial^{\alpha} \partial^{\beta} \partial^{\alpha} \partial^{\delta} \partial^{\epsilon} - $ $\partial_{\sigma} \partial_{\sigma} \partial^{\beta} \partial^{\alpha} \partial^{\beta} \partial^{\epsilon} - $ $\partial_{\sigma} \partial_{\sigma} \partial_{\lambda} \partial^{\beta} \partial^{\alpha} \partial^{\beta} \partial^{\epsilon} - $ $\partial_{\sigma} \partial_{\sigma} \partial_{\sigma} \partial^{\beta} \partial^{\alpha} \partial^{\beta} \partial^{\epsilon} - $ $\partial_{\sigma} \partial_{\sigma} \partial_{\sigma} \partial^{\beta} \partial^{\alpha} \partial^{\beta} \partial^{\epsilon} - $ $\partial_{\sigma} \partial_{\sigma} \partial_{\sigma} \partial^{\beta} \partial^{\alpha} \partial^{\beta} \partial^{\beta} \partial^{\alpha} \partial^{\beta} \partial^{\beta} \partial^{\alpha} \partial^{\beta} \partial^{\beta} \partial^{\alpha} \partial^{\beta} \partial$		$^{\alpha} _{I}^{\beta \chi} + \partial_{\chi} \partial^{\beta} _{I}^{\chi \alpha} + \partial_{\chi} \partial^{\chi} _{I}^{\alpha \beta} +$	3
$9^{\beta} t^{\alpha \chi} +$ $2 \partial_{5} \partial_{\chi} \partial^{\beta} \sigma^{\alpha \chi \delta}$ $(^{5} + 2 \partial_{5} \partial^{5} \partial^{\beta} \partial^{\alpha} t^{\chi} -$ $(^{5} + 2 \partial_{5} \partial^{5} \partial^{\beta} \partial^{\alpha} t^{\chi} -$ $(^{5} + 2 \partial_{5} \partial^{5} \partial^{\beta} \partial^{\alpha} t^{\chi} -$ $(^{5} + 2 \partial_{5} \partial^{5} \partial^{\beta} \partial^{\alpha} t^{\chi} -$ $(^{5} + 2 \partial_{5} \partial^{5} \partial^{\beta} \partial^{\alpha} t^{\chi} -$ $(^{5} + 2 \partial_{5} \partial^{5} \partial^{\beta} \partial^{\alpha} t^{\chi} -$ $(^{5} + 2 \partial_{5} \partial^{5} \partial^{\beta} \partial^{\alpha} t^{\chi} -$ $(^{5} \partial_{5} \partial^{\alpha} t^{\beta} + 3 \partial_{5} \partial^{5} \partial^{\alpha} t^{\gamma} +$ $(^{5} \partial_{5} \partial_{\chi} \partial^{\beta} \partial^{\alpha} d^{\beta} -$ $(^{5} \partial_{5} \partial_{\chi} \partial^{\beta} \partial^{\alpha} d^{\beta} -$ $(^{5} \partial_{5} \partial_{\chi} \partial^{\beta} \partial^{\alpha} d^{\beta} -$ $(^{5} \partial_{5} \partial_{\lambda} \partial^{\beta} \partial^{\alpha} d^{\beta} +$ $(^{5} \partial_{5} \partial_{5} \partial_{\chi} d^{\alpha} +$ $(^{5} \partial_{5} \partial_{5} \partial_{\chi} d^{\beta} +$ $(^{5} \partial_{5} \partial_{5} \partial_{\gamma} d^{\beta} \partial_{\gamma} d^{\beta} \partial_{\gamma} d^{\beta} -$ $(^{5} \partial_{5} \partial_{\gamma} \partial_{\gamma} \partial_{\gamma} \partial_{\gamma} \partial_{\gamma} d^{\beta} -$ $(^{5} \partial_{5} \partial_{\gamma} \partial_$		$2 \partial_{\delta} \partial_{\chi} \partial^{\alpha} \sigma^{\beta \chi \delta} + 2 \partial_{\delta} \partial^{\delta} \partial_{\chi} \sigma^{\alpha \beta \chi} = =$	
$2 \partial_{\delta} \partial_{\chi} \partial^{\beta} \sigma^{\alpha \chi \delta}$ $(\delta^{2} + 2 \partial_{\delta} \partial^{\delta} \partial^{\beta} \partial^{\alpha} T^{\chi} - \delta^{2} \partial^{\delta} \partial^{\beta} \partial^{\alpha} T^{\chi} - \delta^{2} \partial^{\delta} \partial^{\beta} \partial^{\alpha} T^{\chi} + \delta^{2} \partial^{\delta} \partial^{\beta} \partial^{\alpha} \partial^{\beta} \nabla^{\alpha} + \delta^{2} \partial^{\beta} \partial^{\alpha} \nabla^{\beta} \nabla^{\beta} + \delta^{2} \partial^{\beta} \partial^{\alpha} \partial^{\beta} \nabla^{\beta} \nabla^{\beta} - \delta^{2} \partial^{\beta} \partial^{\alpha} \partial^{\beta} \nabla^{\beta} \nabla^{$	o v	$+ \alpha^{\alpha} t^{\chi \beta} + \partial_{\chi} \partial^{\beta} t^{\alpha \chi} +$	
${}^{(\delta} + 2 \partial_{\delta} \partial^{\delta} \partial^{\beta} \alpha^{\tau X}_{X} -$ ${}^{(\delta} + 2 \partial_{\delta} \partial^{\delta} \partial^{\beta} \partial^{\alpha} \tau^{X}_{X} -$ ${}^{(\delta} \partial_{\chi} \partial^{\alpha} \tau^{\beta X}_{X} - 3 \partial_{\delta} \partial^{\delta} \partial_{\chi} \partial^{\alpha} \tau^{\chi \beta}_{X} -$ ${}^{(\delta} \partial_{\lambda} \partial^{\beta} \tau^{\alpha X}_{X} - 3 \partial_{\delta} \partial^{\delta} \partial_{\chi} \partial^{\beta} \tau^{\chi \alpha}_{X} +$ ${}^{(\delta)} \partial_{\lambda} \partial^{\beta} \tau^{\alpha X}_{X} + 3 \partial_{\delta} \partial^{\delta} \partial_{\lambda} \partial^{\alpha} \tau^{\beta \alpha}_{X} +$ ${}^{(\delta)} \partial_{\delta} \partial_{\lambda} \partial^{\beta} \partial^{\alpha} \partial^{\delta} \partial^{\delta}_{\xi} -$ ${}^{(\delta)} \partial_{\delta} \partial_{\lambda} \partial^{\beta} \partial^{\alpha} \partial^{\delta} \partial^{\delta}_{\xi} -$ ${}^{(\delta)} \partial_{\delta} \partial_{\lambda} \partial^{\beta} \partial^{\alpha} \partial^{\delta} \partial^{\delta}_{\xi} +$ ${}^{(\delta)} \partial_{\delta} \partial_{\lambda} \partial^{\beta} \partial^{\alpha} \partial^{\delta} \partial^{\delta}_{\xi} +$ ${}^{(\delta)} \partial_{\delta} \partial_{\lambda} \partial^{\beta} \partial^{\alpha} \partial^{\beta} \partial^{\beta$		$\partial_{\chi}\partial^{\chi}\tau^{\beta\alpha} + 2\partial_{\delta}\partial_{\chi}\partial^{\beta}\sigma^{\alpha\chi\delta}$	
$\partial_{\chi} \partial^{\alpha} \tau^{\beta \chi} - 3 \partial_{\delta} \partial^{\delta} \partial_{\chi} \partial^{\alpha} \tau^{\chi \beta} -$ $\partial_{\chi} \partial^{\beta} \tau^{\alpha \chi} - 3 \partial_{\delta} \partial^{\delta} \partial_{\chi} \partial^{\beta} \tau^{\chi \beta} +$ $\partial_{\chi} \partial^{\beta} \tau^{\alpha \chi} - 3 \partial_{\delta} \partial^{\delta} \partial_{\chi} \partial^{\beta} \tau^{\chi \alpha} +$ $\partial_{\epsilon} \partial_{\chi} \partial^{\beta} \partial^{\alpha} \sigma^{\delta \epsilon} -$ $\partial_{\epsilon} \partial_{\lambda} \partial^{\beta} \partial^{\alpha} \sigma^{\delta \epsilon} -$ $\partial_{\epsilon} \partial_{\delta} \partial_{\chi} \partial^{\beta} \partial^{\alpha} \sigma^{\delta \epsilon} -$ $\partial_{\epsilon} \partial_{\delta} \partial_{\chi} \partial^{\beta} \partial^{\alpha} \sigma^{\delta \epsilon} +$ $\partial_{\epsilon} \partial_{\epsilon} \partial_{\delta} \partial_{\chi} \nabla^{\lambda} \partial_{\epsilon} +$ $\partial_{\epsilon} \partial_{\epsilon} \partial_{\delta} \partial_{\chi} \tau^{\chi \delta} +$ $\partial_{\epsilon} \partial^{\epsilon} \partial_{\delta} \partial_{\lambda} \tau^{\chi \delta} +$ $\partial_{\epsilon} \partial^{\epsilon} \partial_{\delta} \partial_{\lambda} \tau^{\chi \delta} -$ $\partial_{\epsilon} \partial^{\epsilon} \partial_{\delta} \partial_{\lambda} \nabla^{\lambda} \partial_{\delta} \partial_{\epsilon} \partial_{\lambda} \nabla^{\delta} \partial_{\epsilon} \partial_{\lambda} \partial_{\delta} \partial_{\epsilon} \partial_{\lambda} \partial_{\delta} \partial_{\epsilon} \partial_{\lambda} \partial_{\delta} $	$\int_{2^{+}}^{\pi^{+} \alpha \beta} - 2  i  k  \sigma_{2^{+}}^{\# 1 \alpha \beta} = 0  -i  (4)$	$1 \partial_{\delta} \partial_{\chi} \partial^{\beta} \partial^{\alpha} \iota^{\chi \delta} + 2 \partial_{\delta} \partial^{\delta} \partial^{\beta} \partial^{\alpha} \iota^{\chi}_{\chi}$	2
$\partial_{\chi}\partial^{\beta} \tau^{\alpha\chi} - 3 \partial_{\sigma}\partial^{\delta}\partial_{\chi}\partial^{\beta} \tau^{\chi\alpha} +$ $\partial_{\chi}\partial^{\chi} \tau^{\alpha\beta} + 3 \partial_{\sigma}\partial^{\delta}\partial_{\chi}\partial^{\chi} \tau^{\beta\alpha} +$ $\partial_{\varepsilon}\partial_{\chi}\partial^{\beta}\partial^{\alpha}\sigma^{\delta\varepsilon} -$ $\partial_{\varepsilon}\partial_{\chi}\partial^{\beta}\partial^{\alpha}\sigma^{\delta\varepsilon} -$ $\partial_{\varepsilon}\partial_{\sigma}\partial_{\chi}\partial^{\alpha}\sigma^{\delta\varepsilon} +$ $\partial_{\varepsilon}\partial_{\varepsilon}\partial_{\chi}\partial^{\beta}\sigma^{\alpha}\varepsilon +$ $\partial_{\varepsilon}\partial_{\varepsilon}\partial_{\chi}\partial^{\beta}\sigma^{\alpha}\varepsilon +$ $\partial_{\varepsilon}\partial_{\varepsilon}\partial_{\lambda}\partial^{\beta}\sigma^{\alpha}\varepsilon +$ $\partial_{\varepsilon}\partial_{\varepsilon}\partial_{\sigma}\partial_{\chi}\tau^{\chi\delta} +$ $\partial_{\varepsilon}\partial^{\varepsilon}\partial_{\sigma}\partial_{\chi}\tau^{\chi\delta} +$ $\partial_{\varepsilon}\partial^{\varepsilon}\partial_{\sigma}\partial_{\chi}\tau^{\chi\delta} +$ $\partial_{\varepsilon}\partial^{\varepsilon}\partial_{\sigma}\partial_{\chi}\tau^{\chi\delta} -$ $\partial_{\varepsilon}\partial^{\varepsilon}\partial_{\sigma}\partial_{\chi}\tau^{\chi} -$ $\partial_{\varepsilon}\partial^{\varepsilon}\partial_{\sigma}\partial_{\tau}\tau^{\chi} -$ $\partial_{\varepsilon}\partial^{\varepsilon}\partial_{\sigma}\partial_{\tau}\tau^{\chi} -$ $\partial_{\varepsilon}\partial^{\varepsilon}\partial_{\sigma}\partial_{\tau}\tau^{\chi} -$ $\partial_{\varepsilon}\partial^{\varepsilon}\partial_{\sigma}\partial_{\tau}\partial_{\tau}\partial_{\tau}\partial_{\tau}\partial_{\tau}\partial_{\tau}\partial_{\tau}\partial_{\tau$		$3 \partial_{\delta} \partial_{\chi} \partial^{\alpha} t^{\beta \chi} - 3 \partial_{\delta} \partial^{\delta} \partial_{\chi} \partial^{\alpha} t^{\chi \beta} -$	
$\begin{aligned} \partial_{\chi} \partial^{\chi} \tau^{\alpha \beta} + 3  \partial_{\sigma} \partial^{\sigma} \partial_{\chi} \partial^{\chi} \tau^{\beta \alpha} + \\ \partial_{\varepsilon} \partial_{\chi} \partial^{\beta} \partial^{\alpha} \sigma^{\delta \varepsilon} - \\ \partial_{\varepsilon} \partial_{\lambda} \partial^{\beta} \partial^{\alpha} \sigma^{\beta \varepsilon} - \\ \partial_{\varepsilon} \partial_{\delta} \partial_{\chi} \partial^{\beta} \sigma^{\alpha \delta \varepsilon} + \\ \partial_{\varepsilon} \partial_{\delta} \partial_{\chi} \partial^{\beta} \sigma^{\alpha \delta \varepsilon} + \\ \partial_{\varepsilon} \partial_{\varepsilon} \partial_{\lambda} \partial^{\beta} \sigma^{\alpha \delta \varepsilon} + \\ \partial_{\varepsilon} \partial_{\varepsilon} \partial_{\delta} \partial_{\chi} \tau^{\chi \delta} + \\ \partial_{\varepsilon} \partial_{\varepsilon} \partial_{\delta} \partial_{\chi} \tau^{\chi \delta} + \\ \partial_{\varepsilon} \partial_{\varepsilon} \partial_{\delta} \partial_{\lambda} \sigma^{\beta \delta} - \\ \partial_{\varepsilon} \partial_{\varepsilon} \partial_{\delta} \partial_{\lambda} \sigma^{\beta \delta \alpha} - \\ \partial_{\varepsilon} \partial_{\varepsilon} \partial_{\delta} \partial_{\delta} \tau^{\chi} - \\ \partial_{\varepsilon} \partial_{\varepsilon} \partial_{\delta} \partial_{\delta} \partial_{\varepsilon} \partial_{\chi} \partial_{\varepsilon} $		$3 \partial_{\delta} \partial^{\delta} \partial_{\chi} \partial^{\beta} t^{\alpha \chi} - 3 \partial_{\delta} \partial^{\delta} \partial_{\chi} \partial^{\beta} t^{\chi \alpha} +$	
$\begin{aligned} \partial_{\varepsilon} \partial_{\chi} \partial^{\beta} \partial^{\alpha} \sigma^{\delta \varepsilon} &- \\ \partial_{\varepsilon} \partial_{\chi} \partial^{\beta} \partial^{\alpha} \sigma^{\delta \varepsilon} &- \\ \partial_{\varepsilon} \partial_{\delta} \partial_{\chi} \partial^{\alpha} \sigma^{\beta \delta \varepsilon} &- \\ \partial_{\varepsilon} \partial_{\delta} \partial_{\chi} \partial^{\beta} \sigma^{\alpha \delta \varepsilon} &+ \\ \partial_{\varepsilon} \partial_{\varepsilon} \partial_{\delta} \partial_{\chi} \tau^{\chi \delta} &+ \\ \partial_{\varepsilon} \partial^{\varepsilon} \partial_{\delta} \partial_{\chi} \tau^{\chi \delta} &+ \\ \partial_{\varepsilon} \partial^{\varepsilon} \partial_{\delta} \partial_{\chi} \sigma^{\alpha \delta \beta} &+ \\ \partial_{\varepsilon} \partial^{\varepsilon} \partial_{\delta} \partial_{\chi} \sigma^{\alpha \delta \beta} &+ \\ \partial_{\varepsilon} \partial^{\varepsilon} \partial_{\delta} \partial_{\lambda} \sigma^{\beta \delta \alpha} &- \\ \partial_{\varepsilon} \partial^{\varepsilon} \partial_{\delta} \partial_{\lambda} \sigma^{\beta \delta \alpha} &- \\ \partial_{\varepsilon} \partial^{\varepsilon} \partial_{\delta} \partial_{\lambda} \sigma^{\beta \delta \alpha} &- \\ \partial_{\varepsilon} \partial^{\varepsilon} \partial_{\delta} \partial_{\lambda} \partial^{\delta \delta} \partial_{\lambda} \partial^{\delta \varepsilon} &- \\ \partial_{\varepsilon} \partial^{\varepsilon} \partial_{\delta} \partial_{\lambda} \partial^{\delta} \partial_{\lambda} \partial^{\delta \varepsilon} &- \\ \partial_{\varepsilon} \partial^{\varepsilon} \partial_{\delta} \partial_{\lambda} \partial^{\delta} \partial^{$		$3 \partial_{\delta} \partial^{\delta} \partial_{\chi} \partial^{\chi} t^{\alpha\beta} + 3 \partial_{\delta} \partial^{\delta} \partial_{\chi} \partial^{\chi} t^{\beta\alpha} +$	
$\begin{aligned} \partial_{\xi} \partial_{\delta} \partial_{\chi} \partial^{\alpha} \sigma^{\beta \delta \xi} - \\ \partial_{\xi} \partial_{\delta} \partial_{\chi} \partial^{\beta} \sigma^{\alpha \delta \xi} + \\ \partial_{\xi} \partial_{\delta} \partial_{\chi} \partial^{\beta} \sigma^{\alpha \delta \xi} + \\ \partial_{\xi} \partial^{\xi} \partial_{\delta} \partial_{\chi} r^{\chi \delta} + \\ \partial_{\xi} \partial^{\xi} \partial_{\delta} \partial_{\chi} \sigma^{\alpha \delta \beta} + \\ \partial_{\xi} \partial^{\xi} \partial_{\delta} \partial_{\chi} \sigma^{\alpha \delta \beta} + \\ \partial_{\xi} \partial^{\xi} \partial_{\delta} \partial_{\chi} \sigma^{\beta \delta \alpha} - \\ \partial_{\xi} \partial^{\xi} \partial_{\delta} \partial_{\delta} r^{\chi} - \\ \partial_{\xi} \partial^{\xi} \partial_{\delta} \partial_{\delta} \partial_{\xi} \partial_{\chi} \sigma^{\delta \xi} \right) = 0 \end{aligned}$		$4\ ar{\imath}\ k^{\chi}\ \partial_{\epsilon}\partial_{\chi}\partial^{eta}\partial^{lpha}\sigma^{\delta arepsilon}_{\ \ \delta}$ -	
$\begin{aligned} \partial_{\varepsilon} \partial_{\delta} \partial_{\chi} \partial^{\beta} \sigma^{\alpha \delta \varepsilon} + \\ \partial_{\varepsilon} \partial_{\varepsilon} \partial_{\lambda} T^{X^{\delta}} + \\ \partial_{\varepsilon} \partial^{\varepsilon} \partial_{\delta} \partial_{\chi} T^{X^{\delta}} + \\ \partial_{\varepsilon} \partial^{\varepsilon} \partial_{\delta} \partial_{\chi} \sigma^{\alpha \delta \beta} + \\ \partial_{\varepsilon} \partial^{\varepsilon} \partial_{\delta} \partial_{\chi} \sigma^{\beta \delta \alpha} - \\ \partial_{\varepsilon} \partial^{\varepsilon} \partial_{\delta} \partial_{\delta} T^{X}_{\chi} - \\ \partial_{\varepsilon} \partial^{\varepsilon} \partial_{\delta} \partial_{\delta} \partial_{\varepsilon} \partial_{\chi} \nabla^{\delta \varepsilon} \right) = 0 \end{aligned}$		$6$ i $k^{\chi}$ $\partial_{\epsilon}\partial_{\delta}\partial_{\chi}\partial^{\alpha}\sigma^{eta\deltaarepsilon}$ -	
$\begin{aligned} \partial_{\varepsilon} \partial^{\varepsilon} \partial_{\delta} \partial_{\chi} r^{\chi \delta} + \\ \partial_{\varepsilon} \partial^{\varepsilon} \partial_{\delta} \partial_{\chi} \sigma^{\alpha \delta \beta} + \\ \partial_{\varepsilon} \partial^{\varepsilon} \partial_{\delta} \partial_{\chi} \sigma^{\beta \delta \alpha} - \\ \partial_{\varepsilon} \partial^{\varepsilon} \partial_{\delta} \partial_{\delta} r^{\chi} - \\ \partial_{\varepsilon} \partial^{\varepsilon} \partial_{\delta} \partial_{\delta} r^{\chi} - \\ \partial_{\varepsilon} \partial^{\varepsilon} \partial_{\delta} \partial_{\delta} \partial_{\varepsilon} \partial_{\chi} \partial_{\varepsilon} \partial_$		$6 i k^{\chi} \partial_{\epsilon} \partial_{\delta} \partial_{\chi} \partial^{\beta} \sigma^{\alpha \delta \epsilon} +$	
$\begin{aligned} \partial_{\varepsilon} \partial^{\varepsilon} \partial_{\delta} \partial_{\chi} \sigma^{\alpha \delta \beta} + \\ \partial_{\varepsilon} \partial^{\varepsilon} \partial_{\delta} \partial_{\chi} \sigma^{\beta \delta \alpha} - \\ \partial_{\varepsilon} \partial^{\varepsilon} \partial_{\delta} \partial^{\delta} r^{\chi}_{\chi} - \\ ^{3} k^{\chi} \partial_{\phi} \partial^{\phi} \partial_{\varepsilon} \partial_{\chi} \sigma^{\delta \varepsilon}_{\delta} ) &= 0 \end{aligned}$		$2 \eta^{\alpha\beta} \partial_{\epsilon} \partial^{\epsilon} \partial_{\delta} \partial_{\chi} \tau^{\chi\delta} +$	
$\partial_{\epsilon} \partial^{\epsilon} \partial_{\delta} \partial_{\chi} \sigma^{\beta \delta \alpha} -$ $\partial_{\epsilon} \partial^{\epsilon} \partial_{\delta} \partial_{\delta} \tau^{X}_{\chi} -$ $^{3} k^{X} \partial_{\phi} \partial^{\phi} \partial_{\epsilon} \partial_{\chi} \sigma^{\delta \epsilon}_{\delta}) == 0$		$6 i k^{\chi} \partial_{\epsilon} \partial^{\epsilon} \partial_{\delta} \partial_{\chi} \sigma^{\alpha \delta \beta} +$	
$\partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial^{\delta}\tau_{\chi}^{\chi} - \frac{1}{\lambda^{\chi}}\partial_{\phi}\partial^{\phi}\partial_{\epsilon}\partial_{\chi}\sigma^{\delta\epsilon} = 0$		$6$ i $k^{\chi}$ $\partial_{\epsilon}\partial^{\epsilon}\partial_{\delta}\partial_{\chi}\sigma^{eta\deltalpha}$ -	
$^{3}$ $k^{\chi}$ $\partial_{\phi}\partial^{\phi}\partial_{\epsilon}\partial_{\chi}\sigma^{\delta\epsilon}_{\delta}$ ) == 0		$2 \eta^{\alpha\beta} \partial_{\epsilon} \partial^{\epsilon} \partial_{\delta} \partial^{\delta} \tau^{\chi}_{\chi}$	
		$4  i  \eta^{\alpha\beta}  k^{\chi}  \partial_{\phi} \partial^{\phi} \partial_{\epsilon} \partial_{\chi} \sigma^{\delta\epsilon}_{\delta}) == 0$	
Total constraints/gauge generators:	Fotal constraints/gauge g	enerators:	16

					$\frac{-t_1}{2}$		디스	]					
$\tau_{1}^{\#2}{}_{\alpha}$	0	0	0	$\frac{2ik}{t_1 + 2k^2t_1}$	$-\frac{i\sqrt{2}k(2k^2r_5-t_1)}{(t_1+2k^2t_1)^2}$	0	$\frac{-4 k^4 r_5 + 2 k^2 t_1}{(t_1 + 2 k^2 t_1)^2}$				$\partial_{lpha} f_{ ,   heta}$	+ ,,,	
$\tau_{1^{-}\alpha}^{\#1}$	0	0	0	0	0	0	0			α, α	$f_{,\theta}^{\theta}$ -2	$_{\alpha '}^{} g_{\theta}^{} f_{\alpha}^{}$	+
$\sigma_{1}^{\#2}{}_{\alpha}$	0	0	0	$\frac{\sqrt{2}}{t_1 + 2 k^2 t_1}$	$\frac{-2k^2r_5+t_1}{(t_1+2k^2t_1)^2}$	0	$\frac{i\sqrt{2} k(2k^2 r_5 t_1)}{(t_1 + 2k^2 t_1)^2}$			$\frac{1}{2}t_1(2\mathcal{A}^{\alpha\prime}_{\alpha}\mathcal{A}^{\theta}_{\beta}-4\mathcal{A}^{\theta}_{\beta}\partial_{f}^{\sigma\prime}+4\mathcal{A}^{\theta}_{\beta}\partial^{\prime}f^{\alpha}_{\sigma}-$	$2 \partial_i f^{\theta}_{\ \ \ } \partial^i f^{\alpha}_{\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	$\partial^{\theta}f^{\alpha\prime} - \partial_{\alpha}f_{\theta\prime}\partial^{\theta}f^{\alpha\prime} + \partial_{\prime}f_{\alpha\theta}\partial^{\theta}f^{\alpha\prime} + \partial_{\theta}f_{\alpha\prime}\partial^{\theta}f^{\alpha\prime} +$	$\partial_{\theta} f_{,\alpha} \partial^{\theta} f^{\alpha \prime} + 2 \mathcal{A}_{\alpha \theta \prime} (\mathcal{A}^{\alpha \prime \theta} + 2 \partial^{\theta} f^{\alpha \prime})) +$
$\sigma_{1}^{\#1}{}_{\alpha}$	0	0	0	0	$\frac{\sqrt{2}}{t_1 + 2 k^2 t_1}$	0	$-\frac{2ik}{t_1+2k^2t_1}$			$\mathcal{A}_{\alpha}^{\ \ \ \ }\partial_{\alpha}f'$	$2 \partial_i f^{\alpha i} \partial_{\theta} f$	$\partial^{\theta} f^{\alpha \prime} + \partial_{\prime} f$	$\mathcal{A}_{\alpha\theta_{I}}(\mathcal{A})$
$\tau_1^{\#1}{}_+\alpha\beta$	$-\frac{i\sqrt{2}k}{t_1+k^2t_1}$	$-\frac{i(2k^3r_5-kt_1)}{(1+k^2)^2t_1^2}$	$\frac{-2k^4r_5+k^2t_1}{(1+k^2)^2t_1^2}$	0	0	0	0		$\sigma_{\alpha \beta \chi}$ +	$\mathcal{A}^{\alpha'}_{\alpha} \mathcal{A}^{\theta}_{\beta}$ -4	$\partial_{,}f^{\theta}_{\theta}\partial^{\prime}f^{\alpha}_{\alpha}-$	$\partial^{\theta} f^{\alpha \prime} - \partial_{\alpha} f_{\theta \prime}$	$_{\theta}f_{\prime\alpha}\partial^{\theta}f^{\alpha\prime}+2$
$\sigma_{1}^{\#2}{}_{+}\alpha\beta$	$-\frac{\sqrt{2}}{t_1+k^2t_1}$	$\frac{-2k^2r_5+t_1}{(1+k^2)^2t_1^2}$	$\frac{i(2k^3r_5-kt_1)}{(1+k^2)^2t_1^2}$	0	0	0	0	e) action	$S == \iiint (f^{\alpha\beta} \tau_{\alpha\beta} + \mathcal{A}^{\alpha\beta\chi} \sigma_{\alpha\beta\chi} +$	$\frac{1}{2}t_{1}$ (2 §	2		0
$\sigma_{1}^{\#1}{}_{+}\alpha\beta$	0	$-\frac{\sqrt{2}}{t_1+k^2t_1}$	$\frac{i\sqrt{2}k}{t_1+k^2t_1}$	0	0	0	0	Quadratic (free) action	$\iiint (f^{\alpha\beta} t)$				
	$\sigma_{1}^{\#1} + \alpha \beta$	$\sigma_{1}^{#2} + \alpha \beta$	$\tau_{1}^{\#1} + \alpha \beta$	$\sigma_{1^{-}}^{\#1} +^{\alpha}$	$\sigma_{1}^{\#2} +^{lpha}$	$t_{1}^{\#1} \dagger^{lpha}$	$\tau_{1}^{\#2} + ^{\alpha}$	Quadr	S == [				

$(t_1+2k^2t_1)^2$											${\mathcal A}_{0}^{\#1}$	0
$(t_1+2)$				$f_{I\theta}$	_							
'				$2 \partial_{\alpha}$	$f_{\alpha i}$				$\mathcal{A}^{\alpha\prime}$	1t	$f_{0}^{#2}$	0
o 			$\partial' f^{\alpha}$ -	$\partial_{\theta} f_{ \theta}^{ \theta}$	$\theta f_{\alpha l} \partial^{\epsilon}$	+ ((,	+ 0		-20 <sup>0</sup> 3	ש <i>מא</i> מ	$f_{0}^{\#1}$ $f_{0}^{\#2}$	12 kt1
$(2t_1)^2$			θ', θ'	$f^{\alpha}_{\alpha}$	" + d	$g_{ heta} f_{lpha}$	$\mathcal{R}_{lphaeta}$		$\mathcal{A}^{\alpha l \theta}$	Jz d		ı̈́ν
$(t_1 + 2 k)$			x' + 4 3	$^{\theta}$ + 4 $^{\theta}$	$\alpha_{\theta} \partial_{\theta} f^{a}$	$^{\alpha l\theta}$ + 2	$\mathcal{A}_{, hetalpha}$ - $\partial_{,}$	+ '8	$^{\prime\prime}{}_{\alpha}$ - $(\partial_{\alpha}$	', y, z](	$\mathcal{A}_{0^+}^{\#1}$	$-t_1$ $i\sqrt{2} kt_1$ 0
$t_1+2k^2t_1$ $(t_1+2k^2t_1)^2$			$\mathcal{A}_{\alpha}^{\ \ \ \ }\partial_{\alpha}f^{\ \ \ }$	$2 \partial_i f^{\alpha i} \partial_{\theta} f_i$	$\partial_{\theta} f^{\alpha \prime} + \partial_{\iota} f$	$\mathcal{A}_{\alpha\theta\prime}$ (A'	$A_{\alpha\theta_l} + 2\partial_{\beta}\zeta$	$(_{lpha_{ecta}eta})\partial^{ heta}\mathcal{F}^{lphaeta}$	34 K 38 A	$\mathcal{A}_{\theta^{(\prime)}}^{(\prime)}))[t, \chi$		$\mathcal{A}^{\#1}_{0^+}+$
ı-T		tβχ +	$\frac{1}{2}t_{1}(2\mathcal{A}^{\alpha\prime}_{}\mathcal{A}^{\theta}_{}^{}-4\mathcal{A}^{\theta}_{\alpha}^{\theta}\partial_{,}f^{\alpha\prime}+4\mathcal{A}^{\theta}_{\beta}^{}\partial^{\prime}f^{\alpha}_{\alpha}-$	$2\partial_{i}f^{\theta}_{}\partial^{\prime}f^{\alpha}_{}-2\partial_{i}f^{\alpha \prime}\partial_{\theta}f^{}_{}+4\partial^{\prime}f^{\alpha}_{}\partial_{\theta}f^{}_{}-2\partial_{\alpha}f_{\prime\theta}$	$\partial^{\theta}f^{\alpha\prime} - \partial_{\alpha}f_{\theta\prime}\partial^{\theta}f^{\alpha\prime} + \partial_{\imath}f_{\alpha\theta}\partial^{\theta}f^{\alpha\prime} + \partial_{\theta}f_{\alpha\prime}\partial^{\theta}f^{\alpha\prime} +$	$\partial_{\theta} f_{,\alpha} \partial^{\theta} f^{\alpha \prime} + 2  \mathcal{A}_{\alpha \theta \prime}  (\mathcal{A}^{\alpha \prime \theta} + 2  \partial^{\theta} f^{\alpha \prime})) +$	$\frac{1}{3}r_2\left(4\partial_{\beta}\mathcal{A}_{\alpha\prime\theta}-2\partial_{\beta}\mathcal{A}_{\alpha\theta\prime}+2\partial_{\beta}\mathcal{A}_{\prime\theta\alpha}-\partial_{\prime}\mathcal{A}_{\alpha\beta\theta}+\right.$	$\partial_\theta \mathcal{A}_{\alpha\beta i} - 2\partial_\theta \mathcal{A}_{\alpha i\beta})\partial^\theta \mathcal{A}^{\alpha\beta i} +$	$r_{5}\left(\partial_{i}\mathcal{A}_{\theta}^{k}\partial^{\theta}\mathcal{A}^{\alpha_{l}}_{}-\partial_{\theta}\mathcal{A}_{l}^{k}\partial^{\theta}\mathcal{A}^{\alpha_{l}}_{}-\left(\partial_{\alpha}\mathcal{A}^{\alpha_{l}\theta}-2\partial^{\theta}\mathcal{A}^{\alpha_{l}}_{}\right)$	$(\partial_{\kappa}\mathcal{A}_{,\;\;\theta}^{\;\;\kappa}-\partial_{\kappa}\mathcal{A}_{\theta\;\;,}^{\;\;\kappa})))[t,\;\kappa,\;y,\;z]dzdyd\kappa dt$	${\mathscr R}_1^{\sharp}$	‡1 † <sup>α</sup>
		$\frac{3}{\alpha}$	2 B	2 9	Ô	$\partial_{\theta} f$	$4 \partial_{\beta}$	$\partial_{ heta} S$	$\mathcal{R}_{\lambda}$		${\cal F}_1^{\sharp}$	<sup>‡2</sup> † <sup>α</sup>
)	(free) action	$S == \iiint (f^{\alpha\beta} \tau_{\alpha\beta} + \mathcal{A}^{\alpha\beta\chi} \sigma_{\alpha\beta\chi} + \mathcal{A}^{\alpha\gamma} \sigma_{\alpha\gamma\chi} + \mathcal{A}^{\alpha\gamma} \sigma_{\alpha\gamma} + \mathcal{A}^{\alpha\gamma} \sigma_{\alpha\gamma\chi} + \mathcal{A}^{\alpha\gamma} \sigma_{\alpha\gamma\chi} + \mathcal{A}^{\alpha\gamma} \sigma_{\alpha\gamma\chi}$	$\frac{1}{2}t_{1}$ (				$\frac{1}{3}r_{2}$		r <sub>5</sub> (0,		$f_1^{\sharp}$	*** † † † ***  *** † † **  *** † **  *** † **  *** † **  *** † **  *** † **  *** † **  **
	ee)	$\tau_{\alpha\beta}$									$\mathcal{F}$	(# <u>1</u> +
<b>O</b>	tic (fr	$\int (f_{\alpha eta})$									${\mathcal F}$	(#2 †
_	adra	= [[[									f	#1 †'
<u></u>	n N	"										-#2 . (

				,							_					
$r_{0}^{"+} r_{0}^{"+}$	$\sqrt{2} kt_1   0$	$2 k^2 t_1 \qquad 0$	0 0	0 0			#1	-#1	<i>u</i> 1		$\tau_{2}^{\#1}_{2}$	$-\frac{2i\sqrt{2}k}{(1+2k^2)^2t_1}$	$\frac{4k^2}{(1+2k^2)^2t_1}$	0		
$\mathcal{H}_0^{\sharp \pm}$	$-t_1$ $ i $	$i\sqrt{2} kt_1$ -3	0	0		$^{\sharp 1}_{+} + ^{\alpha \beta}$ $^{\sharp 1}_{+} + ^{\alpha \beta}$	$\mathcal{A}_{2}^{\sharp 1}_{\alpha\beta}$ $\frac{t_1}{2}$ $i \times t_1$	$-\frac{ikt_1}{\sqrt{2}}$	0	X	$\sigma_{2}^{\#1}_{\alpha\beta}$	$\frac{2}{(1+2k^2)^2t_1}$	$\frac{2i\sqrt{2}k}{(1+2k^2)^2t_1}$	0		
	$\mathcal{A}_{0}^{\#1}$ †	$f_{0}^{#1} + -$		${\mathcal A}_{0^-}^{\#1} +$	<i>A</i> (2 <sup>±</sup> -	$^{1}$ $^{\alpha \beta \chi}$	$\frac{ikt_1}{\sqrt{2}}$	$k^2 t_1$	0 <u>t</u> 1 2		٠	$\sigma_2^{\#1} + ^{lphaeta}$	$\tau_{2+}^{\#1} + \alpha \beta$	$\sigma_2^{\#1} +^{lphaeta\chi}$		
.A.#	‡1 + <sup>α</sup>		$r_{1}^{+1} = \frac{t}{\alpha_{1}}$		$\frac{t_1^{\#2}}{1+\alpha\beta}$	$f_{1}^{\#1}_{\alpha\beta}$ $-\frac{ikt_{1}}{\sqrt{2}}$	$\mathcal{A}_{1^{-}\alpha}^{\sharp 1}$	$\frac{\mathcal{A}_1^{\#2}}{0}$	$\frac{\alpha f_1^{\#1}\alpha}{0}$	$f_1^{\#2}\alpha$	$\sigma_{0}^{\#1}$	0	0	0	$\frac{1}{k^2 r_2 - t_1}$	
	.' ' ‡2 †α .+ †			2							$ au_0^{\#2}$	0	0	0	0	
			$-\frac{t_1}{\sqrt{2}}$		0	0	0	0	0	0		$\frac{k}{3^2t_1}$	$\frac{2}{3t_1}$			
$f_1^{\pi}$	$^{*1}_{+}$ † $^{\alpha}_{-}$		$\frac{i k t_1}{\sqrt{2}}$		0	0	0	0	0	0	$\tau_0^{\#1}$	$i \sqrt{2} k $ (1+2 k <sup>2</sup> ) <sup>2</sup> t <sub>1</sub>	$\frac{2k^2}{(1+2k^2)^2t_1}$	0	0	
$\mathcal{F}$	(# <u>1</u> †	α	0		0	0	$k^2 r_5 - \frac{t_1}{2}$	$\frac{1}{2}$ $\frac{t_1}{\sqrt{2}}$	0	ikt <sub>1</sub>			i			
	(# <u>-</u> 2 †		0		0	0	$\frac{t_1}{\sqrt{2}}$	0	0	0	$\sigma_{0}^{\#1}$	$\frac{1}{(1+2k^2)^2t_1}$	$i\sqrt{2} k$ $(1+2k^2)^2 t_1$	0	0	
f	7#1+	α	0		0	0	0	0	0	0		i	i			
f	<sup>#2</sup> †	α	0		0	0	$-ikt_1$	0	0	0		$\sigma_{0}^{\#1}$ †	$\tau_{0}^{\#1}$ †	$\tau_{0}^{\#2}$ †	$\sigma_{0}^{\#1}$ †	
																107



(No massless particles)

## Unitarity conditions

 $r_2 < 0 \&\& t_1 < 0$