We have provided accompanying Mathematica and Maple files containing expressions for most of the primitive amplitudes in this paper. Here we explain the notation we have used in these files.

The expressions in the accompanying files all assume a 'canonical' labelling of momenta, as in the text; other permutations must be obtained by relabelling the indices appearing inside the kinematic functions. We do not include formulæ for the master functions of section 7; these have been expanded out where they appear in the amplitudes. In addition, the various flips and exchanges have already been applied to the formulæ appearing in the computer-readable files. We use a more limited set of kinematic invariants than in the text,

Text Form	Mathematica	Maple
$\langle a\, b\rangle$	`spa[a,b]`	`Spa(a,b)`
$[a\, b]$	`spb[a,b]`	`Spb(a,b)`
s_{ab}	`s[a,b]`	`S(a,b)`
t_{abc}	`t[a,b,c]`	`T(a,b,c)`

All other objects, such as $\langle a^-|\,(b+c)\,|d^-\rangle$, have been expanded out. The expressions in the computer files are thus numerically equivalent to those in the paper, but not textually so.

The integral functions are denoted as follows,

Text Form	Mathematica	Maple
$\ln\left(\frac{-s_1}{-s_2}\right)$	Ln[s_1/s_2]	ln(s_1/s_2)
$\mathrm{L}_0\left(\frac{-s_1}{-s_2}\right)$	L0[s_1/s_2]	lzero(s_1/s_2)
$\mathrm{L}_1\left(\frac{-s_1}{-s_2}\right)$	L1[s_1/s_2]	lone(s_1/s_2)
$I_3^{3\mathrm{m}}(s_1,s_2,s_3)$	I3m[s_1,s_2,s_3]	I3_3m(s_1,s_2,s_3)
$\mathrm{Ls}_{-1}\left(\frac{-s_1}{-s_3},\frac{-s_2}{-s_3}\right)$	Lsm1[s_1/s_3,s_2/s_3]	lsmone(s_1/s_3,s_2/s_3)
$\mathrm{Ls}_{1}\left(\frac{-s_1}{-s_3},\frac{-s_2}{-s_3}\right)$	Ls1[s_1/s_3,s_2/s_3]	lsone(s_1/s_3,s_2/s_3)
$\mathrm{Ls}_{-1}^{2\mathrm{m}e}(s_1,s_2;s_3,s_4)$	Lsm1$2me[$s_1$,$s_2$,$s_3$,$s_4$]	lsmone2me(s_1,s_2,s_3,s_4)
$\mathrm{Ls}_{-1}^{2\mathrm{m}h}(s_1,s_2;s_3,s_4)$	Lsm1$2mh[$s_1$,$s_2$,$s_3$,$s_4$]	lsmone2mh(s_1,s_2,s_3,s_4)
$\widetilde{\mathrm{Ls}}_{-1}^{2\mathrm{m}h}(s_1,s_2;s_3,s_4)$	Lsm1$2mht[$s_1$,$s_2$,$s_3$,$s_4$]	lsmone2mhnew(s_1,s_2,s_3,s_4)

In these expressions, the helicities are denoted by strings,

Text Form	Mathematica	Maple
$q^+\,g^+\,g^+\,\bar{q}^-$	‘q+g+g+qb-‘	‘q+g+g+qb-‘
$q^+\,g^+\,g^-\,\bar{q}^-$	‘q+g+g-qb-‘	‘q+g+g-qb-‘
$q^+\,g^-\,g^+\,\bar{q}^-$	‘q+g-g+qb-‘	‘q+g-g+qb-‘
$q^+\,g^+\,\bar{q}^-\,g^+$	‘q+g+qb-g+‘	‘q+g+qb-g+‘
$q^+\,g^+\,\bar{q}^-\,g^-$	‘q+g+qb-g-‘	‘q+g+qb-g-‘
$q^+\,\bar{q}^-\,g^+\,g^+$	‘q+qb-g+g+‘	‘q+qb-g+g+‘
$q^+\,\bar{q}^-\,g^-\,g^+$	‘q+qb-g-g+‘	‘q+qb-g-g+‘
$q^+\,\bar{q}^-\,g^+\,g^-$	‘q+qb-g+g-‘	‘q+qb-g+g-‘
$q^+\,\bar{Q}^+\,Q^-\,\bar{q}^-$	‘q+Qb+Q-qb-‘	‘q+Qb+Q-qb-‘
$q^+\,\bar{Q}^-\,Q^+\,\bar{q}^-$	‘q+Qb-Q+qb-‘	‘q+Qb-Q+qb-‘

The components of the two-quark two-gluon loop amplitudes are denoted as follows,

Text Form	Mathematica *or* Maple
$A_6^{\rm tree}$	`Atree`
V^{cc}	`Vcc`
F^{cc}	`Fcc`
V^{sc}	`Vsc`
F^{sc}	`Fsc`
$F^{{\rm v}s}$	`Fvs`
$F^{{\rm v}f}$	`Fvf`
$F^{\rm ax}$	`Fax`
$F^{\rm ax,sl}$	`Faxsl`

while those for the four-quark loop amplitudes are denoted as follows,

Text Form	Mathematica *or* Maple
$A_6^{\rm tree}$	`Atree`
V	`V`
F	`F`
$A_6^{\rm tree,sl}$	`Atreesl`
$V^{\rm sl}$	`Vsl`
$F^{\rm sl}$	`Fsl`

A component for a specific helicity is given by an appropriately subscripted expression, for example F^{cc} for the $q^+ g^+ g^+ \bar{q}^-$ helicity configuration is given by `Fcc['q+g+g+qb-']` in Mathematica, and by `Fcc['q+g+g+qb-']` in Maple. The subleading-color contributions to the four-quark amplitudes are not subscripted, however.

Finally, the dimensional regularization parameter ϵ is denoted by `e`, the scale μ is denoted by `mu`, and the top quark mass squared m_t^2 is denoted by `mtsq`.

We used Mathematica 3.0, and Maple V Release 3, to construct these expressions.