

LHA initialization information

Initialization file written by PYUPIN:

```
      IF(MSTP(161).GT.0) THEN
        WRITE(MSTP(161),5100) IDBMUP(1),IDBMUP(2),EBMUP(1),EBMUP(2),
& PDFGUP(1),PDFGUP(2),PDFSUP(1),PDFSUP(2),IDWTUP,NPRUP
        DO 110 IPR=1,NPRUP
          WRITE(MSTP(161),5200) XSECUP(IPR),XERRUP(IPR),XMAXUP(IPR),
& LPRUP(IPR)
110    CONTINUE
      ENDIF
5100  FORMAT(1P,2I8,2E14.6,6I6)
5200  FORMAT(1P,3E14.6,I6)
```

and read back in by UPINIT:

```
      READ(MSTP(161),*,END=110,ERR=110) IDBMUP(1),IDBMUP(2),EBMUP(1),
& EBMUP(2),PDFGUP(1),PDFGUP(2),PDFSUP(1),PDFSUP(2),IDWTUP,NPRUP
      DO 100 IPR=1,NPRUP
        READ(MSTP(161),*,END=110,ERR=110) XSECUP(IPR),XERRUP(IPR),
& XMAXUP(IPR),LPRUP(IPR)
100    CONTINUE
```

LHA event information

Event file written by PYUPEV:

```
      IF(MSTP(162).GT.0) THEN
        WRITE(MSTP(162),5200) NUP, IDPRUP, XWGTUP, SCALUP, AQEDUP, AQCDUP
        DO 190 I=1, NUP
          WRITE(MSTP(162),5300) IDUP(I), ISTUP(I), MOTHUP(1,I),
&      MOTHUP(2,I), ICOLUP(1,I), ICOLUP(2,I), (PUP(J,I), J=1,5),
&      VTIMUP(I), SPINUP(I)
190    CONTINUE
      ENDIF
5200  FORMAT(1P,2I6,4E14.6)
5300  FORMAT(1P,I8,5I5,5E18.10,E14.6,E12.4)
```

and read back in by UPEVNT:

```
      READ(MSTP(162),*,END=110,ERR=110) NUP, IDPRUP, XWGTUP, SCALUP,
&      AQEDUP, AQCDUP
      DO 100 I=1, NUP
        READ(MSTP(162),*,END=110,ERR=110) IDUP(I), ISTUP(I),
&      MOTHUP(1,I), MOTHUP(2,I), ICOLUP(1,I), ICOLUP(2,I),
&      (PUP(J,I), J=1,5), VTIMUP(I), SPINUP(I)
100    CONTINUE
```

