```
      SUBROUTINE sigc(sp,x1,x2,ts,sig1,sig2)
      IMPLICIT DOUBLE PRECISION (a-h,o-z)
      DIMENSION icut(44)
      DOUBLE PRECISION rs1(4),rs2(4),sp(NUU),s1(44),s2(44)
      COMMON /wur/ wur,pi
      COMMON /ginrp/ i, k, ilim, klim
      COMMON /KOFTIS/ icut
      COMMON /NUEQ/ NUU
      SAVE cw,cz
      DATA cw,cz /2.d0 , 1.d0/
C
C
       call assvl(sp,g,g2,g3,Yu3,Yd3,Yl3,rM1,rM2,rM3,rmu,
     # sqm3,Au3,Ad3,Al3,sqmq3,sqmq2,sqmq1,sqmuc3,sqmuc2,sqmuc1,
     # sqmdc3,sqmdc2,sqmdc1,sqml3,sqml2,sqml1,sqmec3,sqmec2,
     # sqmec1,sqm1,sqm2,au1,au2,ad1,ad2,al1,al2,yu1,yu2,yd1,
     # yd2,yl1,yl2)
C
      pc=g2*g2
      sco=g*g + g2*g2
C
      if(icut(1).ne.0)
     #call lept(yl1,x1,ts,s1(1),s2(1))

      if(icut(2).ne.0)
     #call lept(yl2,x1,ts,s1(2),s2(2))

      if(icut(3).ne.0)
     #call lept(yl3,x1,ts,s1(3),s2(3))
C----------------------------------------------
      if(icut(4).ne.0)
     #call upq(yu1,x2,ts,s1(4),s2(4))

      if(icut(5).ne.0)
     #call upq(yu2,x2,ts,s1(5),s2(5))

      if(icut(6).ne.0)
     #call upq(yu3,x2,ts,s1(6),s2(6))
C-----------------------------------------------
      if(icut(7).ne.0)
     #call dwq(yd1,x1,ts,s1(7),s2(7))

      if(icut(8).ne.0)
     #call dwq(yd2,x1,ts,s1(8),s2(8))

      if(icut(9).ne.0)
     #call dwq(yd3,x1,ts,s1(9),s2(9))
C-----------------------------------------------
      if(icut(10).ne.0)
     #call gabo(cw,pc,x1,x2,ts,s1(10),s2(10))

      if(icut(11).ne.0)
     #call gabo(cz,sco,x1,x2,ts,s1(11),s2(11))
C-----------------------------------------------
      if(icut(12).ne.0 .or. icut(13).ne.0)
     #call chino(rmu,rm2,g2,x1,x2,ts,s1(12),s1(13),
     # s2(12),s2(13))
C-----------------------------------------------
      if(icut(14).ne.0 .or. icut(15).ne.0 .or.
     #  icut(16).ne.0 .or. icut(17).ne.0)then
C
        call neutr(g,g2,rmu,rm1,rm2,x1,x2,ts,rs1,rs2)
```



```
        do   i1=1,4
          s1(13+i1)=rs1(i1)
          s2(13+i1)=rs2(i1)
        enddo
      endif
C----------------------------------------------
      if(icut(18).ne.0)
     #call snet(sqml1,g,g2,x1,x2,ts,s1(18),s2(18))

      if(icut(19).ne.0)
     #call snet(sqml2,g,g2,x1,x2,ts,s1(19),s2(19))

      if(icut(20).ne.0)
     #call snet(sqml3,g,g2,x1,x2,ts,s1(20),s2(20))
C----------------------------------------------
      if(icut(21).ne.0 .or. icut(22).ne.0)
     #call slept(sqml1,sqmec1,yl1,al1,rmu,g,g2,x1,x2,ts,
     #   s1(21),s1(22),s2(21),s2(22))

      if(icut(23).ne.0 .or. icut(24).ne.0)
     #call slept(sqml2,sqmec2,yl2,al2,rmu,g,g2,x1,x2,ts,
     #   s1(23),s1(24),s2(23),s2(24))

      if(icut(25).ne.0 .or. icut(26).ne.0)
     #call slept(sqml3,sqmec3,yl3,al3,rmu,g,g2,x1,x2,ts,
     #   s1(25),s1(26),s2(25),s2(26))
C----------------------------------------------
      if(icut(27).ne.0 .or. icut(28).ne.0)
     #call squ(sqmq1,sqmuc1,yu1,au1,rmu,g,g2,x1,x2,ts,
     #   s1(27),s1(28),s2(27),s2(28))

      if(icut(29).ne.0 .or. icut(30).ne.0)
     #call squ(sqmq2,sqmuc2,yu2,au2,rmu,g,g2,x1,x2,ts,
     #   s1(29),s1(30),s2(29),s2(30))

      if(icut(31).ne.0 .or. icut(32).ne.0)
     #call squ(sqmq3,sqmuc3,yu3,au3,rmu,g,g2,x1,x2,ts,
     #   s1(31),s1(32),s2(31),s2(32))
C----------------------------------------------
      if(icut(33).ne.0 .or. icut(34).ne.0)
     #call sqd(sqmq1,sqmdc1,yd1,ad1,rmu,g,g2,x1,x2,ts,
     #   s1(33),s1(34),s2(33),s2(34))

      if(icut(35).ne.0 .or. icut(36).ne.0)
     #call sqd(sqmq2,sqmdc2,yd2,ad2,rmu,g,g2,x1,x2,ts,
     #   s1(35),s1(36),s2(35),s2(36))

      if(icut(37).ne.0 .or. icut(38).ne.0)
     #call sqd(sqmq3,sqmdc3,yd3,ad3,rmu,g,g2,x1,x2,ts,
     #   s1(37),s1(38),s2(37),s2(38))
C----------------------------------------------
      if(icut(39).ne.0 .or. icut(40).ne.0)
     #call higa(sqm1,sqm2,sqm3,g,g2,x1,x2,ts,
     #   s1(39),s1(40),s2(39),s2(40))
C----------------------------------------------
      if(icut(41).ne.0 .or. icut(42).ne.0)
     #call higb(sqm1,sqm2,sqm3,g,g2,x1,x2,ts,
     #   s1(41),s1(42),s2(41),s2(42))
C----------------------------------------------
      if(icut(43).ne.0 .or. icut(44).ne.0)
     #call higc(sqm1,sqm2,sqm3,g,g2,x1,x2,ts,
     #   s1(43),s1(44),s2(43),s2(44))
```

```
C
       sig1=0.d0
       sig2=0.d0
        do   mg=1,44
           if(icut(mg).ne.0)then
             sig1=sig1+s1(mg)
             sig2=sig2+s2(mg)
           endif
        enddo
C
       if(i.eq.ilim .and. k.eq.klim)then
         absig1=0.d0
         absig2=0.d0
         do   mr=1,44
            if(icut(mr).ne.0)then
              absig1=absig1+dabs(s1(mr))
              absig2=absig2+dabs(s2(mr))
            endif
         enddo
         write(95,*)'-----------------------------------'
         write(95,*)'sigma1 =',sig1,'  ',absig1
         write(95,*)'sigma2 =',sig2,'  ',absig2
         write(95,*)'-----------------------------------'
         write(95,*)
       endif
C
        return
        END
```