```fortran
      program read_CIRC_input

c     Reads CIRC input files

      parameter (maxlev=200, ncm_1=49180)

      real albsfc(ncm_1), albsfc_w(ncm_1)
      real cf(maxlev), totwp(maxlev), icefra(maxlev), deice(maxlev),
     &     reliq(maxlev), reice(maxlev), lwp(maxlev), iwp(maxlev)
      real t(maxlev), z(maxlev), dz(maxlev), p(maxlev), pres(maxlev)
      real aer_beta(maxlev), waer(maxlev), gaer(maxlev)
      real pm(maxlev), tm(maxlev), h2o(maxlev), o3(maxlev)
      real co2(maxlev), n2o(maxlev), co(maxlev), ch4(maxlev),
     &     o2(maxlev), ccl4(maxlev), f11(maxlev), f12(maxlev)
      real wavn(ncm_1), ssf(ncm_1)


c     Open the files

      open (11, file='Tsfc_sza_nlev_case1.txt', status='old')
      open (12, file='level_input_case1.txt', status='old')
      open (13, file='layer_input_case1.txt', status='old')
      open (14, file='aerosol_input_case1.txt', status='old')
      open (15, file='cloud_input_case1.txt', status='old')
      open (16, file='sfcalbedo_input_case1.txt', status='old')

c     Read scalar information
      do iskip=1,5
         read (11, *)
      enddo
      read (11, '(i8)') nlev
      read (11, '(f10.2)') tsfc
      read (11, '(f10.2)') sza
      read (11, '(f10.4)') sw_dn_toa
      close(11)

c     Read level information
      read (12, *)
      do il=1,nlev
         read (12, 302) ilev, z(il), p(il), t(il)
      enddo
302   format (i8, f8.3, 2f9.2)
      close(12)

c     Read layer information (midpoint values)
      do iskip=1,3
         read (13, *)
      enddo
      do il=1,nlev-1
         read (13, 303) ilev,pm(il),tm(il),h2o(il),co2(il),o3(il),
```

```fortran
     &                          n2o(il),co(il),ch4(il),o2(il),ccl4(il),
     &                          f11(il),f12(il)
      enddo
303   format (i8, 2f9.2, 10(2x,e13.7))
      close(13)

c     Read aerosol layer information
      do iskip=1,3
         read (14, *)
      enddo
      read (14, '(f10.2)') aer_alpha
      read (14, *)
      read (14, *)
      do il=1,nlev-1
         read (14, 304) ilev, aer_beta(il), waer(il), gaer(il)
      enddo
304   format (i8, f9.5, 2f8.3)
      close(14)

c     Read cloud information
      do iskip=1,3
         read (15, *)
      enddo
      do il=1,nlev-1
         read (15, 305) ilev, cf(il), lwp(il), iwp(il), reliq(il),
     &                  reice(il)
      enddo
305   format (i8, f8.3, 4f9.2)
      close(15)

c     Read surface albedo (weighted & unweighted) and spectral solar
irradiance
      do iskip=1,6
         read (16, *)
      enddo
      do icm_1=1,ncm_1
         read (16, 306) wavn(icm_1), albsfc(icm_1), albsfc_w(icm_1),
     &                  ssf(icm_1)
      enddo
306   format(f10.1, 2f12.5, f14.8)
      close(16)

      stop

      end
```