```
      program read_CIRC_output
c     Read in the output of the CIRC RT calculations, namely from
c     LBLRTM and CHARTS runs

      parameter (maxlev=200, ncm_1=49180)
      parameter (nch=3240)

      real pres(maxlev)
      real flx_up_ir(maxlev), flx_dn_ir(maxlev), hr_ir(maxlev)
      real flx_toa_ir(nch), flx_sfc_ir(nch)
      real flx_dn_sfc(ncm_1)
      real flx_dn_dir(ncm_1), flx_dn_tot(ncm_1), flx_up_toa(ncm_1),
     &     flx_up_sfc(ncm_1)
      real wavn(ncm_1), wavnir(nch)


c     Read in spectral IR results at the boundaries of the atmospheric
column
      open (11, file='LW_lblrtm_1cm-1_case1.txt', status='old')
c     Skip a couple of lines
      read (11, *)
      read (11, *)
      do ich=1,nch
          read (11, '(f10.1, 2f14.7)') wavnir(ich), flx_toa_ir(ich),
     &                                 flx_sfc_ir(ich)
      enddo
      close(11)

c     Read in profiles of BB LW fluxes and heating rates from LBLRTM
      open (12, file='LW_lblrtm_bb_case1.txt', status='old')
c     Skip a few lines
      do iskip=1,4
          read (12, *)
      enddo
      do il=nlev,1,-1
          read (12, 401) ilev, pres(il), flx_up_ir(il), flx_dn_ir(il),
     &                   hr_ir(il)
      enddo
401   format (i8, f8.2, 3f10.2)
      close(12)

c     Read in CHARTS results at surface and TOA
      open (13, file='SW_charts_1cm-1_case1.txt', status='old')
      read (13, *)
      read (13, *)
      read (13, '(10x, 4f14.2)') bb_flx_dn_tot, bb_flx_dn_dir,
     &                           bb_flx_up_toa, bb_flx_up_sfc
      read (13, *)
      read (13, *)
      do icm_1=1,ncm_1
```

```fortran
      read (13, '(f10.1, 4f14.10)') wavn(icm_1), flx_dn_tot(icm_1),
     &                              flx_dn_dir(icm_1),
flx_up_toa(icm_1),
     &                              flx_up_sfc(icm_1)
   enddo
   close(13)

   stop

   end
```