Dear chemistry-climate modelers,   02/05/2007

In the SCOUT-O3 project one task of Activity 4 (UV radiation) is to calculate past and future surface UV radiation levels based on the CCM model results of Activity 1 (Ozone, climate and UV predictions). This request describes the needed input data for UV calculations, and has been prepared by Activity 4 participants. We hope that modellers in Activity 1 make a swift response to this request because the time is soon running short in the SCOUT-O3 project.

The daily variables requested should be available from most models, and they are available e.g. from the ERA-40 archive; see pages 13 and 14 in the ERA-40 archive document:
http://www.ecmwf.int/publications/library/ecpublications/_pdf/era40/ERA40_PRS17.pdf

Estimating cloud effects on surface UV is particularly challenging. The use of total solar radiation on the surface has proven to be a useful and practical way for this purpose. It is probably much better than the use of total cloud cover. Therefore, we encourage CCM modelers to provide total solar radiation on the surface as a primary source of cloud related information. However, for specific studies total cloud cover is of interest as well.

In case of questions related to this suggestion you may either contact us or Jussi Kaurola (jussi.kaurola@fmi.fi)

Best regards,
Alkis Bais and Gunther Seckmeyer
SCOUT-O3 Activity 4 leaders

Daily variables requested (*):
-total ozone (TOZ)
-surface solar radiation (*accum*) (SSR)
-surface solar radiation clear sky (*accum*) (SSRC)
-total cloud cover (TCC)
-snow depth (SD)
-total snow cover

Static fields requested:
-surface elevation (orography)

Important:
1)_we assume that the daily data will be provided and time is reported as described below
2)_while extracting the data, please follow the format described below, which is a modified version of cases 2C and 2D in the Interface Control Document (ICD) at
http://www.pa.op.dlr.de/CCMVal/InterfaceControlDocument.html

DAILYLYTOZ_${Startyear}to${Endyear}_LATLON_${MODEL}_${ENSEMBLE}
DAILYSSR_${Startyear}to${Endyear}_LATLON_${MODEL}_${ENSEMBLE}
DAILYSSRC_${Startyear}to${Endyear}_LATLON_${MODEL}_${ENSEMBLE}
DAILYSD_${Startyear}to${Endyear}_LATLON_${MODEL}_${ENSEMBLE}
DAILYTCC_${Startyear}to${Endyear}_LATLON_${MODEL}_${ENSEMBLE}

Continuous 2D Daily Fields (*) for the period ${Startyear} to ${Endyear}.

e.g. ${Startyear} = 1960, ${Endyear} =2050; ${Ensemble} =1,2,…,N = number of simulation in your ensemble (from 1 to N, where N is the number of available simulations in your ensemble). ASCII format. The proposed CCMVal simulations should be assigned with REF1, REF2, SCN1 or   SCN2 (e.g. ${Ensemble} =1_REF1, 2_REF1, …, N_REF1)

```
    integer nlon,nlat,i,j
    integer iyear,nyears,iday,ndays
    real field(nlat,nlon)

c  grid information
    write(unit,*) 'Number of Longitudes=',nlon
    write(unit,*) 'Number of Latitudes=',nlat
    write(unit,*) (lon(i),i=1,nlon)
    write(unit,*) (lat(j),j=1,nlat)

    write(unit,*) 'Number of Years=',nyears

c ndays = number of days in each year

    do iyear=1,nyears
    ndays = daysinyear(iyear)
    do iday = 1,ndays
      write(unit,*)iyear,iday
      do j=1,nlat
        write(unit,*)(field(i,j),i=1,nlon)
      enddo
    enddo
enddo
```

Latitudes: From North to South
Longitudes: Start with longitude > 0 (e.g. 3.75)
              Do not list longitudes twice (e.g. 0.0° and 360.0°)