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;*****
; ex04.ncl by Wenting
;*****
load "$NCARG_ROOT/lib/ncarg/nclscripts/csm/gsn_code.ncl"
load "$NCARG_ROOT/lib/ncarg/nclscripts/csm/gsn_csm.ncl"

begin
;*****
;read in data
;*****
nlat = 37
ntime = 12
data = asciiread("result",(/nlat,ntime/),"float") ;data
;*****
; manipulate data for plotting
;*****
lat = new((/nlat/),float)
do i=0,nlat-1
  lat(i) = 90.-i*5.
end do
time = new((/ntime/),float)
do i=0,ntime-1
  time(i) = i+1
end do

data!0 = "lat"
data!1 = "time"
data&time = time
data&lat = lat
data&lat@units = "degrees_north"
data@_FillValue = -999
data@long_name = "daily mean"
data@units = "Wm-2"
;dat = smooth92d (data,0.5, 0.25) ; 2D smoother

;*****
; plotting parameters
;*****
wks = gsn_open_wks("pdf","ex04") ;open workstation
gsn_define_colormap(wks,"BlueDarkRed18") ;choose color map

res = True
res@cnFillOn = True ;color on
res@gsnSpreadColors = True ;automatically choose the fill colors
res@gsnDraw = False ; don't draw yet
res@gsnFrame = False ; don't advance frame yet
res@tmXBMode = "Explicit"
res@tmXBValues = ispan(1, 12, 1)
res@tmXBLLabels = ("/Jan", "Feb", "Mar", "Apr", "May", "Jun", \

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"Jul", "Aug", "Sep", "Oct", "Nov", "Dec"/>)
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res@tiMainString = ":F26:Solar Radiation At Top Of Atmosphere" ;title
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res@vpXF = 0.12 ; default is 0.2 (aspect ratio)
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res@vpYF = 0.85 ; default is 0.8
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res@vpHeightF = 0.4 ; default is 0.6
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```
res@vpWidthF = 0.7 ; default is 0.6
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```
res@cnLinesOn = True ;turn on contour lines
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```
res@cnLevelSelectionMode = "ManualLevels" ;manual levels
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```
res@cnMinLevelValF = 50 ;min level
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res@cnMaxLevelValF = 500 ;max level
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res@cnLevelSpacingF = 50 ;contout spacing
```

```
res@cnLineLabelsOn = True ; turn on line labels
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```
res@lbLabelStride = 2 ; every other label
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```
res@lbOrientation = "Vertical" ; vertical label bar
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```
res@pmLabelBarOrthogonalPosF = 0.001 ; move label bar closer to axis
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res@pmLabelBarWidthF = 0.15
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plot = gsn_csm_lat_time(wks,data,res)
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draw (plot) ; draw the contour object
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```
frame (wks) ; advance frame
```

```
end
```