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c      +-----+
c      + datalib :                               +
c      +-----+

c      ----- subroutine getfld : get analysis -----
      subroutine getfld(nx,ny,fld,lunin)
      integer nx,ny,lunin
      character*50 nam
      real fld(nx,ny)
      read(lunin,'(a)') nam
      write(6,'(a)') nam
      do j=1,ny
         read(lunin,*) (fld(i,j),i=1,nx)
      enddo
      end

c      ----- subroutine getobs : get observations -----
      subroutine getobs(lunobs,npar,mobs,nobs,
+         iiiobs,nrobs,latobs,lonobs,oriobs,flgobs)
      integer lunobs,npar,nobs,
+         iiiobs(mobs),nrobs(mobs),flgobs(mobs,npar)
      real   oriobs(mobs,npar),latobs(mobs),lonobs(mobs)
      integer n,ii,iii,ilat,ilon
      real   par(2)
      nobs = 0
      do while (nobs.le.mobs)
         read(lunobs,*,end=999,err=200) ii,iii,ilat,ilon,par
         nobs=nobs+1
         iiiobs(nobs)=ii*10000+iii
         nrobs(nobs)=nobs
         latobs(nobs)=float(ilat)/1000.
         lonobs(nobs)=float(ilon)/1000.
      do n=1,npar
         oriobs(nobs,n)=par(n)
         if(par(n).lt.0)flgobs(nobs,n)=3
      enddo
      enddo
      stop ' mobs underdimensionerad in nart_box!'
200 stop ' read-error on input-file. nart_box'
999 continue
      if(nobs.eq.0) stop 'no observation at all'
      write(6,'(3x,a,4x,i5)') ' nobs in all:',nobs
      return
      end

c      ----- subroutine putfld : store analysis -----
      subroutine putfld(nam,lunut,nx,ny,fld,nxp,nyp)
      integer lunut,nx,ny,nxp,nyp
      character*(*) nam
      real fld(nx,ny)
      write(lunut,*) nam
      do j=1,nyp
         write(lunut,*) (fld(i,j),i=1,nxp)
      enddo
      end

c      ----- subroutine putobs : store observations -----
      subroutine putobs(nam,mobs,npar,nobs,lunut
+         , iiiobs,latobs,lonobs,valobs,flgobs)
      character*(*) nam
      integer mobs,npar,nobs,lunut,iiiobs(nobs),flgobs(mobs,npar)
      real latobs(nobs),lonobs(nobs),valobs(mobs,npar)
      write(lunut,*) nam
      do k=1,nobs
         ii=iiiobs(k)/10000
         iii=iiiobs(k)-ii*10000
         ilat=int(latobs(k)*1000)
         ilon=int(lonobs(k)*1000)
         write(lunut,'(1x,2i4,2i8,2x,2f8.1,2i3)')
+         ii,iii,ilat,ilon,
+         (valobs(k,j),j=1,npar),(flgobs(k,j),j=1,npar)
      enddo
      end

c      ----- subroutine saveres : ?? -----
      subroutine saveres(mobs,npar,nana,ipar,nrana,flag,flgobs)
      integer mobs,npar,nana,ipar
      integer nrana(npar),flag(mobs,npar),flgobs(npar)
      do i=1,nana
         flag(nrana(i),ipar)=flgobs(i)
      enddo
      end

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