
Subject: Re: Why this loop does not work?

Posted by [pgrigis](#) on Thu, 20 Nov 2008 20:45:24 GMT

[View Forum Message](#) <> [Reply to Message](#)

Because you are using the same loop variable (i)
in two different loops, one of which happens to be inside the other...

xiao wrote:

> Hi~ everyone, I have a short program like this. But there are some
> bugs in it that I cannot open all the files in the loop. Anyone got an
> idea why is that? Thank you very much :)

>

> pro read_rams,fulnam,vname,nvars,data,kx,ky,kz

>

> vname=['UP','VP','WP','THETA']

> hh=

> ['00','01','02','03','04','05','06','07','08','09','10','11'
> ,'12','13','14','15','16','17','18','19','20','21','22','23']

> mm=['00','15','30','45']

> ss='00'

>

> ; timestep

>

> nvars=4 ; number of variable

>

> dirnm='test8/anal' ;/* print to string 'dirnm' */

> filehd='a-A-A-2005-12-'

> filend='-g4.h5'

>

> for j=0,23 do begin ; -----This loop this loop works

> here, all the file names are correct :(

> for k=0,3 do begin ; -----This loop this loop works

> here, all the file names are correct :(

>

> fulnam=dirnm+filehd+'17-'+hh(j)+mm(k)+ss+filend

>

> openw,3,'data.txt'

>

> file_id = H5F_open(fulnam)

>

> if file_id ge 0 then begin

> for iv=0, nvars-1 do begin

>

>

> dataset_id = H5D_open(file_id, vname(iv)) ;/* Open existing

> dataset. but only open one file*/

> print,file_id

> rdata = H5D_read(dataset_id)

```

>    dataspace_id = H5D_GET_SPACE(dataset_id)
>    dimensions = H5S_GET_SIMPLE_EXTENT_DIMS(dataspace_id)
>    simspc = H5S_IS_SIMPLE(Dataspace_id)
>
>    if iv eq 0 then begin
>        kz=dimensions(0)
>        ky=dimensions(1)
>        kx=dimensions(2)
>        data=fltarr(kx,ky,kz,nvars)
>
>    endif
>
>    ntot=long(kx)*ky*kz
>    a=fltarr(ntot) ;introduce "a" to redistribute the data
>    a(*)=rdata
>
>    ii=-1L
>    for k=0,kz-1 do begin
>        for j=0,ky-1 do begin
>            for i=0,kx-1 do begin
>                ii=ii+1
>                data(i,j,k,iv)=a(ii)
>            endfor
>        endfor
>    endfor
>    print,'processing variable is ',vname(iv)
>    printf,3,data
>
>    H5S_CLOSE, dataspace_id
>    H5D_close,dataset_id      /* Close the dataset. */
>    endfor
>    H5F_close,file_id        /* Close the file. */
>    endif
>    print,'finishing process file ',fulnam
>
>    endfor ; -----This loop does not work, only processed
>    the first file :(
>    endfor ; -----This loop does not work, only processed
>    the first file :(
>
>    close,3
>    a=0.
>    end

```

Subject: Re: Why this loop does not work?
 Posted by [Jeremy Bailin](#) on Thu, 20 Nov 2008 20:55:54 GMT

On Nov 20, 3:45 pm, Paolo <pgri...@gmail.com> wrote:

```
> Because you are using the same loop variable (i)
> in two different loops, one of which happens to be inside the other...
>
> xiao wrote:
>> Hi~ everyone, I have a short program like this. But there are some
>> bugs in it that I cannot open all the files in the loop. Anyone got an
>> idea why is that? Thank you very much :)
>
>> pro read_rams,fulnam,vname,nvars,data,kx,ky,kz
>
>> vname=['UP','VP','WP','THETA']
>> hh=
>> ['00','01','02','03','04','05','06','07','08','09','10','11'
>> ,'12','13','14','15','16','17','18','19','20','21','22','23' ]
>> mm=['00','15','30','45']
>> ss='00'
>
>> ; timestep
>
>> nvars=4 ; number of variable
>
>> dirnm='test8/anal/' ;/* print to string 'dirnm' */
>> filehd='a-A-A-2005-12-'
>> filend='-g4.h5'
>
>> for j=0,23 do begin ; -----This loop this loop works
>> here, all the file names are correct :(
>> for k=0,3 do begin ; -----This loop this loop works
>> here, all the file names are correct :(
>
>> fulnam=dirnm+filehd+'17-'+hh(j)+mm(k)+ss+filend
>
>> openw,3,'data.txt'
>
>> file_id = H5F_open(fulnam)
>
>> if file_id ge 0 then begin
>> for iv=0, nvars-1 do begin
>
>> dataset_id = H5D_open(file_id, vname(iv)) ;/* Open existing
>> dataset. but only open one file*/
>> print,file_id
>> rdata = H5D_read(dataset_id)
>> dataspace_id = H5D_GET_SPACE(dataset_id)
>> dimensions = H5S_GET_SIMPLE_EXTENT_DIMS(dataspace_id)
>> simspc = H5S_IS_SIMPLE(Dataspace_id)
```

```

>
>> if iv eq 0 then begin
>>     kz=dimensions(0)
>>     ky=dimensions(1)
>>     kx=dimensions(2)
>>     data=fltarr(kx,ky,kz,nvars)
>
>> endif
>
>> ntot=long(kx)*ky*kz
>> a=fltarr(ntot) ;introduce "a" to redistribute the data
>> a(*)=rdata
>
>> ii=-1L
>> for k=0,kz-1 do begin
>>     for j=0,ky-1 do begin
>>         for i=0,kx-1 do begin
>>             ii=ii+1
>>             data(i,j,k,iv)=a(ii)
>>         endfor
>>     endfor
>> endfor
>> print,'processing variable is ',vname(iv)
>> printf,3,data
>
>> H5S_CLOSE, dataspace_id
>> H5D_close,dataset_id      ;/* Close the dataset. */
>> endfor
>> H5F_close,file_id        ;/* Close the file. */
>> endif
>> print,'finishing process file ',fulnam
>
>> endfor ; -----This loop does not work, only processed
>> the first file :(
>> endfor ; -----This loop does not work, only processed
>> the first file :(
>
>> close,3
>> a=0.
>> end
>
>

```

Actually, i is fine, it's j and k that duplicated. :-)=

Subject: Re: Why this loop does not work?

On Nov 20, 2:55 pm, Jeremy Bailin <astroco...@gmail.com> wrote:

> On Nov 20, 3:45 pm, Paolo <pgri...@gmail.com> wrote:

>

>

>

>> Because you are using the same loop variable (i)

>> in two different loops, one of which happens to be inside the other...

>

>> xiao wrote:

>>> Hi~ everyone, I have a short program like this. But there are some

>>> bugs in it that I cannot open all the files in the loop. Anyone got an

>>> idea why is that? Thank you very much :)

>

>>> pro read_rams,fulnam,vname,nvars,data,kx,ky,kz

>

>>> vname=['UP','VP','WP','THETA']

>>> hh=

>>> ['00','01','02','03','04','05','06','07','08','09','10','11'
, '12','13','14','15','16','17','18','19','20','21','22','23']

>>> mm=['00','15','30','45']

>>> ss='00'

>

>>> ; timestep

>

>>> nvars=4 ; number of variable

>

>>> dirnm='test8/anal/' ;/* print to string 'dirnm' */

>>> filehd='a-A-A-2005-12-'

>>> filend='-g4.h5'

>

>>> for j=0,23 do begin ; -----This loop this loop works

>>> here, all the file names are correct :(

>>> for k=0,3 do begin ; -----This loop this loop works

>>> here, all the file names are correct :(

>

>>> fulnam=dirnm+filehd+'17-'+hh(j)+mm(k)+ss+filend

>

>>> openw,3,'data.txt'

>

>>> file_id = H5F_open(fulnam)

>

>>> if file_id ge 0 then begin

>>> for iv=0, nvars-1 do begin

>

>>> dataset_id = H5D_open(file_id, vname(iv)) ;/* Open existing

>>> dataset. but only open one file*/

```

>>> print,file_id
>>> rdata = H5D_read(dataset_id)
>>> dataspace_id = H5D_GET_SPACE(dataset_id)
>>> dimensions = H5S_GET_SIMPLE_EXTENT_DIMS(dataspace_id)
>>> simspc = H5S_IS_SIMPLE(Dataspace_id)
>
>>> if iv eq 0 then begin
>>>     kz=dimensions(0)
>>>     ky=dimensions(1)
>>>     kx=dimensions(2)
>>>     data=fltarr(kx,ky,kz,nvars)
>
>>> endif
>
>>> ntot=long(kx)*ky*kz
>>> a=fltarr(ntot) ;introduce "a" to redistribute the data
>>> a(*)=rdata
>
>>> ii=-1L
>>> for k=0,kz-1 do begin
>>>     for j=0,ky-1 do begin
>>>         for i=0,kx-1 do begin
>>>             ii=ii+1
>>>             data(i,j,k,iv)=a(ii)
>>>         endfor
>>>     endfor
>>> endfor
>>> print,'processing variable is ',vname(iv)
>>> printf,3,data
>
>>> H5S_CLOSE, dataspace_id
>>> H5D_close,dataset_id ;/* Close the dataset. */
>>> endfor
>>> H5F_close,file_id ;/* Close the file. */
>>> endif
>>> print,'finishing process file ',fulnam
>
>>> endfor ; -----This loop does not work, only processed
>>> the first file :(
>>> endfor ; -----This loop does not work, only processed
>>> the first file :(
>
>>> close,3
>>> a=0.
>>> end
>
> Actually, i is fine, it's j and k that duplicated. :-)=

```

I changed the j,k to a,b at the beginning but it still does not work.And the error changed to :

H5F_OPEN: Expression must be a scalar or 1 element array in this context: FULNAM.

% Execution halted at: READ_RAM\$ 34 /nas/rstor6/xzhang/

read_rams.pro

% \$MAIN\$

:(

Subject: Re: Why this loop does not work?

Posted by [pgrigis](#) on Thu, 20 Nov 2008 21:46:28 GMT

[View Forum Message](#) <> [Reply to Message](#)

Because you are giving an array to something that want a scalar...
You know, actually *reading* the error message may be useful...

Paolo

xiao wrote:

>>

>>

>>

>>> Because you are using the same loop variable (i)

>>> in two different loops, one of which happens to be inside the other...

>>

>>> xiao wrote:

>>>> Hi~ everyone, I have a short program like this. But there are some

>>>> bugs in it that I cannot open all the files in the loop. Anyone got an

>>>> idea why is that? Thank you very much :)

>>

>>

>>>> ['00','01','02','03','04','05','06','07','08','09','10','11'
, '12','13','14','15','16','17','18','19','20','21','22','23']

>>

>>>> ; timestep

>>

>>

>>

>>>> here, all the file names are correct :(

>>>> here, all the file names are correct :(

>>

>>

>>

>>

>>

>>

>>

>>

>>

>>

>>

>>>> the first file :(

>>>> the first file :(

>>

>>>> a=0.

>>>> end

>>

>> Actually, i is fine, it's j and k that duplicated. :-)=

>

> I changed the j,k to a,b at the beginning but it still does not

> work.And the error changed to :

>

> H5F_OPEN: Expression must be a scalar or 1 element array in this

> context: FULNAM.

> % Execution halted at: READ_RAM\$ 34 /nas/rstor6/xzhang/

> read_rams.pro

> % \$MAIN\$

> :(

Subject: Re: Why this loop does not work?

Posted by [Vince Hradil](#) on Thu, 20 Nov 2008 21:50:14 GMT

[View Forum Message](#) <> [Reply to Message](#)

On Nov 20, 3:30 pm, xiao <littledd...@gmail.com> wrote:

> On Nov 20, 2:55 pm, Jeremy Bailin <astroco...@gmail.com> wrote:

>

>

>

>> On Nov 20, 3:45 pm, Paolo <pgri...@gmail.com> wrote:

>

>>> Because you are using the same loop variable (i)

>>> in two different loops, one of which happens to be inside the other...

>

>>> xiao wrote:

>>>> Hi~ everyone, I have a short program like this. But there are some

>>>> bugs in it that I cannot open all the files in the loop. Anyone got an

>>>> idea why is that? Thank you very much :)

```

>
>>>> pro read_rams,fulnam,vname,nvars,data,kx,ky,kz
>
>>>> vname=['UP','VP','WP','THETA']
>>>> hh=
>>>> ['00','01','02','03','04','05','06','07','08','09','10','11'
>>>> ,'12','13','14','15','16','17','18','19','20','21','22','23' ]
>>>> mm=['00','15','30','45']
>>>> ss='00'
>
>>>> ; timestep
>
>>>> nvars=4 ; number of variable
>
>>>> dirnm='test8/anal/' ;/* print to string 'dirnm' */
>>>> filehd='a-A-A-2005-12-'
>>>> filend='-g4.h5'
>
>>>> for j=0,23 do begin ; -----This loop this loop works
>>>> here, all the file names are correct :(
>>>> for k=0,3 do begin ; -----This loop this loop works
>>>> here, all the file names are correct :(
>
>>>> fulnam=dirnm+filehd+'17-'+hh(j)+mm(k)+ss+filend
>
>>>> openw,3,'data.txt'
>
>>>> file_id = H5F_open(fulnam)
>
>>>> if file_id ge 0 then begin
>>>> for iv=0, nvars-1 do begin
>
>>>> dataset_id = H5D_open(file_id, vname(iv)) ;/* Open existing
>>>> dataset. but only open one file*/
>>>> print,file_id
>>>> rdata = H5D_read(dataset_id)
>>>> dataspace_id = H5D_GET_SPACE(dataset_id)
>>>> dimensions = H5S_GET_SIMPLE_EXTENT_DIMS(dataspace_id)
>>>> simspc = H5S_IS_SIMPLE(Dataspace_id)
>
>>>> if iv eq 0 then begin
>>>> kz=dimensions(0)
>>>> ky=dimensions(1)
>>>> kx=dimensions(2)
>>>> data=fltarr(kx,ky,kz,nvars)
>
>>>> endif
>

```

```

>>>>  ntot=long(kx)*ky*kz
>>>>  a=fltarr(ntot) ;introduce "a" to redistribute the data
>>>>  a(*)=rdata
>
>>>>  ii=-1L
>>>>  for k=0,kz-1 do begin
>>>>      for j=0,ky-1 do begin
>>>>          for i=0,kx-1 do begin
>>>>              ii=ii+1
>>>>              data(i,j,k,iv)=a(ii)
>>>>          endfor
>>>>      endfor
>>>>  endfor
>>>>  print,'processing variable is ',vname(iv)
>>>>  printf,3,data
>
>>>>  H5S_CLOSE, dataspace_id
>>>>  H5D_close,dataset_id      /* Close the dataset. */
>>>>  endfor
>>>>  H5F_close,file_id      /* Close the file. */
>>>>  endif
>>>>  print,'finishing process file ',fulnam
>
>>>>  endfor ; -----This loop does not work, only processed
>>>>  the first file :(
>>>>  endfor ; -----This loop does not work, only processed
>>>>  the first file :(
>
>>>>  close,3
>>>>  a=0.
>>>>  end
>
>>  Actually, i is fine, it's j and k that duplicated. :-)=
>
>  I changed the j,k to a,b at the beginning but it still does not
>  work.And the error changed to :
>
>  H5F_OPEN: Expression must be a scalar or 1 element array in this
>  context: FULNAM.
>  % Execution halted at: READ_RAM$      34 /nas/rstor6/xzhang/
>  read_rams.pro
>  %      $MAIN$
>  :(

```

You use a later on in the code, too... a=fltarr()

Subject: Re: Why this loop does not work?

Posted by [xiao zhang](#) on Thu, 20 Nov 2008 22:34:33 GMT

[View Forum Message](#) <> [Reply to Message](#)

On Nov 20, 3:50 pm, Vince Hradil <vincehra...@gmail.com> wrote:

> On Nov 20, 3:30 pm, xiao <littledd...@gmail.com> wrote:

>

>

>

>> On Nov 20, 2:55 pm, Jeremy Bailin <astroco...@gmail.com> wrote:

>

>>> On Nov 20, 3:45 pm, Paolo <pgri...@gmail.com> wrote:

>

>>>> Because you are using the same loop variable (i)

>>>> in two different loops, one of which happens to be inside the other...

>

>>>> xiao wrote:

>>>> > Hi~ everyone, I have a short program like this. But there are some

>>>> > bugs in it that I cannot open all the files in the loop. Anyone got an

>>>> > idea why is that? Thank you very much :)

>

>>>> > pro read_rams,fulnam,vname,nvars,data,kx,ky,kz

>

>>>> > vname=['UP','VP','WP','THETA']

>>>> > hh=

>>>> > ['00','01','02','03','04','05','06','07','08','09','10','11',
>>>> > '12','13','14','15','16','17','18','19','20','21','22','23']

>>>> > mm=['00','15','30','45']

>>>> > ss='00'

>

>>>> > ; timestep

>

>>>> > nvars=4 ; number of variable

>

>>>> > dirnm='test8/anal/' ;/* print to string 'dirnm' */

>>>> > filehd='a-A-A-2005-12-'

>>>> > filend='-g4.h5'

>

>>>> > for j=0,23 do begin ; -----This loop this loop works

>>>> > here, all the file names are correct :(

>>>> > for k=0,3 do begin ; -----This loop this loop works

>>>> > here, all the file names are correct :(

>

>>>> > fulnam=dirnm+filehd+'17-'+hh(j)+mm(k)+ss+filend

>

>>>> > openw,3,'data.txt'

>

>>>> > file_id = H5F_open(fulnam)

>

```

>>>> > if file_id ge 0 then begin
>>>> >   for iv=0, nvars-1 do begin
>>>> >
>>>> >     dataset_id = H5D_open(file_id, vname(iv)) ;/* Open existing
>>>> > dataset. but only open one file*/
>>>> >     print,file_id
>>>> >     rdata = H5D_read(dataset_id)
>>>> >     dataspace_id = H5D_GET_SPACE(dataset_id)
>>>> >     dimensions = H5S_GET_SIMPLE_EXTENT_DIMS(dataspace_id)
>>>> >     simspc = H5S_IS_SIMPLE(Dataspace_id)
>>>> >
>>>> >     if iv eq 0 then begin
>>>> >       kz=dimensions(0)
>>>> >       ky=dimensions(1)
>>>> >       kx=dimensions(2)
>>>> >       data=fltarr(kx,ky,kz,nvars)
>>>> >
>>>> >     endif
>>>> >
>>>> >     ntot=long(kx)*ky*kz
>>>> >     a=fltarr(ntot);introduce "a" to redistribute the data
>>>> >     a(*)=rdata
>>>> >
>>>> >     ii=-1L
>>>> >     for k=0,kz-1 do begin
>>>> >       for j=0,ky-1 do begin
>>>> >         for i=0,kx-1 do begin
>>>> >           ii=ii+1
>>>> >           data(i,j,k,iv)=a(ii)
>>>> >         endfor
>>>> >       endfor
>>>> >     endfor
>>>> >     print,'processing variable is ',vname(iv)
>>>> >     printf,3,data
>>>> >
>>>> >     H5S_CLOSE, dataspace_id
>>>> >     H5D_close,dataset_id ;/* Close the dataset. */
>>>> >   endfor
>>>> >   H5F_close,file_id ;/* Close the file. */
>>>> >   endif
>>>> >   print,'finishing process file ',fulnam
>>>> >
>>>> > endfor ; -----This loop does not work, only processed
>>>> > the first file :(
>>>> > endfor ; -----This loop does not work, only processed
>>>> > the first file :(
>>>> >
>>>> > close,3

```

```
>>>> > a=0.  
>>>> > end  
>  
>>> Actually, i is fine, it's j and k that duplicated. :-)=  
>  
>> I changed the j,k to a,b at the beginning but it still does not  
>> work.And the error changed to :  
>  
>> H5F_OPEN: Expression must be a scalar or 1 element array in this  
>> context: FULNAM.  
>> % Execution halted at: READ_RAM$      34 /nas/rstor6/xzhang/  
>> read_rams.pro  
>> %          $MAIN$  
>> :(  
>  
> You use a later on in the code, too... a=fltarr()
```

THANKS ALL ~ IT WORKS NOW~~ :)
