Subject: Re: Empirical orthogonal function in IDL
Posted by David Fanning on Thu, 20 Dec 2012 23:06:30 GMT
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mkmvarma@gmail.com writes:

> Does any one know how to calculate EOF in IDL? I have a 3D temperature data set (lon, lat, time) that I am trying to use it to calculate EOF.

http://www.idlcoyote.com/code_tips/eof_analysis.html

Cheers,

David

--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.idlcoyote.com/
Sepore ma de ni thue. ("Perhaps thou speakest truth.")

Subject: Re: Empirical orthogonal function in IDL
Posted by mkmvarma on Fri, 21 Dec 2012 22:21:18 GMT
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Thanks, David. I looked it up and understand your code except the last part of the code where PC of mode 1. The array 'pc[mode-1,*]' has elements 2592 but the array 'years' has only 21 elements. Could you please explain me how we can plot a timeseries plot using the principal component array.
Thanks,
Mahesh

Subject: Re: Empirical orthogonal function in IDL
Posted by David Fanning on Fri, 21 Dec 2012 22:43:48 GMT
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mkmvarma@gmail.com writes:

> Thanks, David. I looked it up and understand your code except the last part of the code where PC of mode 1. The array 'pc[mode-1,*]' has elements 2592 but the array 'years' has only 21 elements. Could you please explain me how we can plot a timeseries plot using the principal component array.

Well, that is the Wilks trick I mention in the article. I probably didn't understand it well enough four years ago when I wrote the article to explain it any better than I did. I certainly don't remember the trick now! I would, however, get over to the library and find that book. It is a good one!

To prove to myself it worked, I programmed up the example the slow way (25 minutes or so) and the fast way (half a second). I do remember that the results were identical, so I guess I trusted the result, even if I didn't understand it completely. :-)

Cheers,

David

--
David Fanning, Ph.D.
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Subject: Re: Empirical orthogonal function in IDL
Posted by mkmvarma on Sat, 22 Dec 2012 00:35:37 GMT
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Thanks, David. I will try to find the book. And one more question. Did you try to remove missing values from the data set?
Thanks,
Mahesh

On Friday, December 21, 2012 2:43:48 PM UTC-8, David Fanning wrote:
> mkmvarma@gmail.com writes:
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> David
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> David Fanning, Ph.D.
>
> Fanning Software Consulting, Inc.
>
> Coyote's Guide to IDL Programming: http://www.idlcoyote.com/
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> Sepore ma de ni thue. ("Perhaps thou speakest truth.")

Subject: Re: Empirical orthogonal function in IDL
Posted by David Fanning on Sat, 22 Dec 2012 01:00:37 GMT
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mkmvarma@gmail.com writes:

> Thanks, David. I will try to find the book. And one more question. Did you try to remove missing values from the data set?

I didn't have any missing data, since I was using
reanalysis data, but, yes, I would have removed it.

Cheers,

David

--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
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