
Subject: Re: Plot according to slopes?

Posted by [David Fanning](#) on Mon, 05 May 2008 14:00:35 GMT

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Frank Wang writes:

> I am new with IDL, and recently I was bothered with:
>
> "How to make line plot when you know the slopes(of the lines you are
> going to plot) defined at each grid point"?
>
> Physically, we can draw a short line segment at each grid point, link
> neighboring segments, and then smooth them. But I simply find it too
> tricky to do this with ID(or Matlab). Does anyone have any
> suggestions? I would appreciate your help. Or you can tell me which
> chapter of the IDL manual should I refer to?

I guess if you knew the slopes at each point, you could calculate UV vector pairs that would describe the slope. If so, then you could use something like VELOVECT or PLOT_FIELD to plot them. A lot of people use PARVELVECT from the NASA Astronomy Library to plot this kind of data, too.

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: Plot according to slopes?

Posted by [Frank Wang](#) on Mon, 05 May 2008 14:46:04 GMT

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On May 5, 10:00 pm, David Fanning <n...@dfanning.com> wrote:

> Frank Wang writes:
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>
>> "How to make line plot when you know the slopes(of the lines you are
>> going to plot) defined at each grid point"?
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> PLOT_FIELD to plot them. A lot of people use PARVELVECT
> from the NASA Astronomy Library to plot this kind of data,
> too.
>
> Cheers,
>
> David
> --
> David Fanning, Ph.D.
> Fanning Software Consulting, Inc.
> Coyote's Guide to IDL Programming:<http://www.dfanning.com/>
> Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Thank you, David. But would you tell me where to download PARVELVECT(I
searched it over google, but got no result)?
Thank you again for help.

Cheers,

Frank

Subject: Re: Plot according to slopes?
Posted by [rigby](#) on Mon, 05 May 2008 14:57:15 GMT
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On May 5, 9:43 am, Frank Wang <Muchi0...@gmail.com> wrote:

> "How to make line plot when you know the slopes(of the lines you are
> going to plot) defined at each grid point"?

How about integrating your slopes numerically, then plotting the
integral? It sounds like you've got df/dx on a regular grid. If so,
then $f(x)$ is approximately $dx * \text{total}(df/dx, /cumulative) + \text{constant}$,
where dx is the grid spacing. One value of $f(x)$ gives you the
constant, if you care about it. There are better integration methods,
if you need to get fancier.

--Wayne

Subject: Re: Plot according to slopes?

Posted by [Frank Wang](#) on Mon, 05 May 2008 15:17:45 GMT

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On May 5, 10:57 pm, ri...@crd.ge.com wrote:

> On May 5, 9:43 am, Frank Wang <Muchi0...@gmail.com> wrote:

>

>> "How to make line plot when you know the slopes(of the lines you are

>> going to plot) defined at each grid point"?

>

> How about integrating your slopes numerically, then plotting the

> integral? It sounds like you've got df/dx on a regular grid. If so,

> then $f(x)$ is approximately $dx * \text{total}(df/dx, /cumulative) + \text{constant}$,

> where dx is the grid spacing. One value of $f(x)$ gives you the

> constant, if you care about it. There are better integration methods,

> if you need to get fancier.

>

> --Wayne

Thank you for reply. I think your suggestion is good, and I will try to integrate it. Thank you.

Regards,
Frank

Subject: Re: Plot according to slopes?

Posted by [David Fanning](#) on Mon, 05 May 2008 15:19:45 GMT

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Frank Wang writes:

> Thank you, David. But would you tell me where to download PARVELVECT(I

> searched it over google, but got no result)?

You searched for "NASA IDL Astronomy Library" and got no result!?
Weird.

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: Plot according to slopes?

Posted by [Frank Wang](#) on Mon, 05 May 2008 16:05:34 GMT

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On May 5, 11:19 pm, David Fanning <n...@dfanning.com> wrote:

> Frank Wang writes:

>> Thank you, David. But would you tell me where to download PARVELVECT(I

>> searched it over google, but got no result)?

>

> You searched for "NASA IDL Astronomy Library" and got no result!?

> Weird.

>

> Cheers,

>

> David

> --

> David Fanning, Ph.D.

> Fanning Software Consulting, Inc.

> Coyote's Guide to IDL Programming:<http://www.dfanning.com/>

> Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Thank you for reply, David. But maybe you mean PARTVELVEC, rather than PARVELVECT?

Anyway, thank you for help!

Regards,

Frank

Subject: Re: Plot according to slopes?

Posted by [Frank Wang](#) on Mon, 05 May 2008 16:07:53 GMT

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On May 5, 11:19 pm, David Fanning <n...@dfanning.com> wrote:

> Frank Wang writes:

>> Thank you, David. But would you tell me where to download PARVELVECT(I

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> Weird.

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> Cheers,

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> David

> --

> David Fanning, Ph.D.

> Fanning Software Consulting, Inc.

- > Coyote's Guide to IDL Programming:<http://www.dfanning.com/>
- > Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Thank you for help, David. But I guess what you meant is PARTVELVECT, not PARVELVECT? I found the former in the NASA Lib. Anyway, thank you for help!!!!

Best Regards,

Frank
