
Subject: Re: Is there a good procedure for Minimum Variance Analysis?

Posted by duxiyu@gmail.com on Fri, 01 Feb 2008 03:03:30 GMT

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Thanks very much.

It is very helpful.

Du

On Jan 29, 9:56 pm, Wox <nom...@hotmail.com> wrote:

> On Mon, 28 Jan 2008 17:54:58 -0800 (PST), "dux...@gmail.com"

>

> <dux...@gmail.com> wrote:

>> I want to perform the Minimum Variance Analysis on a set of magnetic
>> field data.

>> Is there a good procedure in IDL for this analysis?

>

>> Best regards,

>> Du

>

> Don't know what it is, but in chapter 8 in this

document http://www.issibern.ch/PDF-Files/analysis_methods_1_1a.pdf

> it looks like you have to make a (co)variance matrix from the X, Y and

> Z components of the field data

>

> cov(X,X) cov(X,Y) cov(X,Z)

> M= cov(Y,X) cov(Y,Y) cov(Y,Z)

> cov(Z,X) cov(Z,Y) cov(Z,Z)

>

> Then get the eigenvectors with `tried/triql` (because M is symmetric).

> The eigenvector with the smallest eigenvalue is the boundary normal.
