On Oct 3, 2:37 am, RussellGrew <russell.g...@gmail.com> wrote:
> Hi Nicola,
>
> Firstly, John Samson's polarization papers generally scare me.
> However, in this instance the DOP doesn't look too hard to code.
> Assuming you are talking about eqn (17) you just make the spectral
> matrix S from your signals and find the trace of it etc.
>
> Which aspect of it is giving you grief?
>
> Assuming you have a 3 component signal with components, x, y and z,
> take FFT of each component then calculate spectral matrix terms, eg:
> Sxy = X(w) * conjugate(Y(w)). Obviously there is a bit more to it in
> terms of windowing (& window compensation) and time averaging of data
> and/or smoothing.
>
> There are other less mathematical approaches to polarization (eg:
> equation 5 in Fowler et al., JGR 1967) that might be useful. Also
> Section 10.8 in Born & Wolf, Principles of Optics gives good
> background on the spectral matrix and details on using the Stokes
> parameters for the polarization analysis (as opposed to the Spectral
> matrix).
>
> Good luck!
>
> Russell.

Thank you very much for the further bibliographic references. Actually
my question arises much more because laziness than difficulties. In
any case I found another good paper (according to my opinion) from
Zanandrea (Computer & Geoscience 2004) based on SVD and multitaper.
But here I found another lack of IDL, i.e. there is any built in
routine for multitaper spectral analysis. I made a search on the
usenet group but didn't find anything and so I'm trying to translate
from Matlab code where this analysis exists on the signal processing
toolbox.
I will give a look to you suggestion
thank you very much
n