Subject: Re: ENVI MTMF scores
Posted by Peter Mason on Tue, 16 Aug 2005 00:49:03 GMT

msauer@calpoly.edu wrote:
> I thought ENVI's MTMatched Filter scores were scaled from 0-1,
> indicating 0-100% abundance. At least that is what the manual said.
> why are values greater than 1 posted. Hard to have more than 100%
> abundance within the pixel. The pixels greater than 1 have low
> infeasibility and correspond to the image spectral endmembers which I
> thought would be the baseline for 100% purity for a pixel. Are these
> absolute scores instead of scaled?

It's been a while since I looked at MTMF but IIRC it's usually driven by an
endmember *cluster* containing several individual spectra that you decided
are "pure" examples of the endmember in question.   (By providing a cluster
you overcome - to some extent - the noise and other peculiarities any single
spectrum might have.)
It then goes and computes a cluster mean spectrum, which it uses in its
matching.   The 1.0 score pertains to this mean spectrum.
Invariably there are some individual cluster endmember spectra that are
further out in the direction of purity than the cluster mean, and these
individuals get scores greater than 1.

Having said all that...   Bear in mind that MTMF does not really give you
abundance.   Like many other spectral matching algorithms, it gives you a
similarity score.

Peter Mason