
Subject: Re: ENVI MTMF scores

Posted by [Peter Mason](#) on Tue, 16 Aug 2005 00:49:03 GMT

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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
