**Template equation**

    The common or average template for the three logarithmic photopigment optical density spectra, log10[*A*(*x*)], for the log wavelength scale is:

http://www.cvrl.org/database/text/pigments/sstemplate_files/eq0001MP.gifhttp://www.cvrl.org/database/text/pigments/sstemplate_files/empty.gifhttp://www.cvrl.org/database/text/pigments/sstemplate_files/eq0001M.gifhttp://www.cvrl.org/database/text/pigments/sstemplate_files/empty.gif,

 where *x* is log10(nm), *a* = -188862.970810906644, *b* = 90228.966712600282, *c* = -2483.531554344362, *d* = -6675.007923501414, *e* = 1813.525992411163,  *f* = -215.177888526334, *g* = 12.487558618387, and *h* = -0.289541500599.

     The template was derived iteratively by aligning the S-cone and M-cone photopigment with the L-cone photopigment spectra and then finding the best-fitting polynomial to describe the aligned spectra. The mean template has a *λ*max of 558.0 nm.

     For other *λ*max values the template should be shifted along a log wavelength scale. In general, then:  
*x*=log10(*λ*) - log10(*λ*max/558).

     The *λ*max values of the fitted templates that best fits the original Stockman and Sharpe (2000) S-, M- and L-cone photopigment spectra are 420.7, 530.3 and 558.9 nm for the S-, M- and L-cones, respectively;

     The above equation produces a fixed template shape on a log wavelength, log frequency, or normalized frequency scalehttp://www.cvrl.org/database/text/pigments/sstemplate_files/empty.gifhttp://www.cvrl.org/database/text/pigments/sstemplate_files/ch0M.gifhttp://www.cvrl.org/database/text/pigments/sstemplate_files/empty.gifin accordance with Mansfield's (1985) proposal.  See also [Lamb (1995)](http://www.cvrl.org/database/text/pigments/lamb.htm) and Stockman and Sharpe (2000) for further details.

**References**

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