

**References and Web Links for Society for Astronomical Sciences workshop on
Scientific Analysis of Amateur Spectra
David Boyd, 30th May 2019**

Effect of atmospheric dispersion on star images

<http://www.astrosurf.com/buil/dispersion/atmo.htm>

ARAS Forum

<http://www.spectro-aras.com/forum>

Identification of calibration lamp lines

https://physics.nist.gov/PhysRefData/ASD/lines_form.html

Optical telescope transmission

<http://www.spectro-aras.com/forum/viewtopic.php?f=45&t=2277#p12402>

Slit transmission calculator

http://www.caha.es/pedraz/RS/refract_slit.html

C. W. Stubbs et al., *Towards More Precise Survey Photometry for PanSTARRS and LSST: Measuring Directly the Optical Transmission Spectrum of the Atmosphere*, PASP, 119, 1163 (2007)

C. W. Stubbs et al., *Preliminary Results from Detector-Based Throughput Calibration of the CTIO Mosaic Imager and Blanco Telescope Using a Tunable Laser*, ASP Conference Series, 364, 373 (2007)

Modelling atmospheric extinction

<http://www.astrosurf.com/buil/atmosphere/transmission.htm>

http://www.astrosurf.com/buil/instrument_response_us/

MILES Library

P. Sanchez-Blazquez et al., *Medium-resolution Isaac Newton Telescope library of empirical spectra*

Monthly Notices of the Royal Astronomical Society, 371, 2, 703 (2006)

J. Falcon-Barroso et al., *An updated MILES stellar library and stellar population models* Astronomy & Astrophysics, 532, A95 (2011)

Berardi and Leonardi's Excel spreadsheet

<http://www.spectro-aras.com/forum/viewtopic.php?f=8&t=941>

Pickles Stellar Spectral Flux Library

http://www.stsci.edu/hst/observatory/crds/pickles_atlas.html

STELIB stellar library:

<http://www.ast.obs-mip.fr/article181.html>

Jacoby-Hunter-Christian Atlas

<http://www.stsci.edu/hst/observatory/crds/jc.html>

ELODIE archive of high resolution spectra

<http://atlas.obs-hp.fr/elodie/>

Catalogue of Stellar Spectral Classifications (Skiff, 2009-2016)

<http://vizier.u-strasbg.fr/viz-bin/VizieR?-source=B/mk>

Francois Teyssier's graph showing variation of precision with altitude

http://www.astronomie-amateur.fr/Documents%20Spectro/Ref_013.pdf

Description of professional spectral reduction

<https://arxiv.org/abs/1903.07629v3>

DER_SNR algorithm

F. Stoehr et al., *DER SNR: A Simple & General Spectroscopic Signal-to-Noise Measurement Algorithm*

ASP Conference Series, Vol. XXX, 2008

http://www.stecf.org/software/ASTROsoft/DER_SNR/

Calculating signal to noise in ISIS

[http://www.spectro-
aras.com/forum/viewtopic.php?f=8&t=1564&p=7468&hilit=+SNR+ISIS#p7177](http://www.spectro-
aras.com/forum/viewtopic.php?f=8&t=1564&p=7468&hilit=+SNR+ISIS#p7177)

CALSPEC archive

<http://www.stsci.edu/hst/observatory/crds/calspec.html>

New spectrophotometric standards

Narayan et al., *Sub-percent Photometry: Faint DA White Dwarf Spectrophotometric Standards for Astrophysical Observatories* (2018)

<https://arxiv.org/pdf/1811.12534.pdf>

Calamida et al., *Photometry and spectroscopy of faint candidate spectrophotometric standard DA white dwarfs* (2018)

<https://arxiv.org/pdf/1812.00034.pdf>

Review of the issues involved in absolute flux calibration

R. C. Bohlin et al., *Techniques and Review of Absolute Flux Calibration from the Ultraviolet to the Mid-Infrared*, PASP, 126, 711 (2014)

Christian Bui's method of absolute flux calibration

http://www.astrosurf.com/buil/calibration2/absolute_calibration_en.htm

V magnitude method of absolute flux calibration

<http://www.spectro-aras.com/forum/viewtopic.php?f=8&t=897#p4044>

Methods for calculating and applying magnitude transformations

Boyd, *An Alternative Approach for Finding and Applying Extinction-corrected Magnitude Transformations*

Society for Astronomical Sciences, 30th Annual Symposium on Telescope Science (2011)

<http://adsabs.harvard.edu/abs/2011SASS...30..127B>

Boyd, *A practical approach to transforming magnitudes onto a standard photometric system*

Journal of the AAVSO, 40.2, 990 (2012)

<http://adsabs.harvard.edu/abs/2012JAVSO..40..990B>

Measuring equivalent widths

Stetson & Pancino, *DAOSPEC: An Automatic Code for Measuring Equivalent Widths in High-Resolution Stellar Spectra*, PASP, 120, 874, 1332 (2008)

<http://iopscience.iop.org/article/10.1086/596126/pdf>

fityk

<http://fityk.nieto.pl>

Interstellar extinction law

J. A. Cardelli et al., *The relationship between infrared, optical, and ultraviolet extinction*

Astrophysical Journal, 345, 245 (1989)

http://articles.adsabs.harvard.edu/cgi-bin/nph-iarticle_query?1989ApJ...345..245C&data_type=PDF_HIGH&whole_paper=YES&type=PRINTER&filetype=.pdf

Spatial models of galactic interstellar extinction

D.J. Schlegel, D.P. Finkbeiner, & M. Davis, ApJ, 500, 525 (1998)

Schlafly and Finkbeiner, ApJ, 737, 103 (2011)

G. M. Green et al., <https://arxiv.org/pdf/1905.02734.pdf>

Online 3D dust maps

Schlegel, Finkbeiner & Davis: <https://irsa.ipac.caltech.edu/applications/DUST/>

G. M. Green et al.: <http://argonaut.skymaps.info>

3D models of extinction in the galaxy

E. B. Amôres & J. R. D. Lépine, Astronomical Journal, 130, 650 (2005)

<http://www.galextn.org/modextin.html>

Gray's Digital Spectral Classification Atlas

https://ned.ipac.caltech.edu/level5/Gray/Gray_contents.html

E. E. Mamajek, *A Modern Mean Dwarf Stellar Color and Effective Temperature Sequence*

<http://iopscience.iop.org/article/10.1088/0067-0049/208/1/9/pdf>

http://www.pas.rochester.edu/~emamajek/EEM_dwarf_UBVIJHK_colors_Teff.txt