

Radio astronomy

Rohlfs, *Tools of radio astronomy* 4th rev. and enl. ed., Springer, 2004

Lilley, A.E. & Palmer, P., *Tables of Radio-Frequency Recombination Lines* ApJS 16, 143, 1968

Data calibration

General flux calibration

Baars et al., *The absolute spectrum of CAS A - an accurate flux density scale and a set of secondary calibrators*, A&A 61, 99, 1977

Ott et al., *An updated list of radio flux density calibrators*, A&A 284, 331, 1994

Perley & Butler, *An accurate flux density scale from 1 to 50 GHz*, ApJS 204, 19, 2013

Kraus, *Calibration of the Effelsberg 100m telescope*, tech. memo, 2009

Lilley & Palmer, *Tables of Radio-Frequency Recombination Lines*, ApJS 16, 143, 1968

Spectroscopic flux and bandpass calibration

Winkel et al., *Unbiased flux calibration methods for spectral-line radio observations*, A&A 540, A140, 2012

Heiles, *A New Technique for Heterodyne Spectroscopy: Least-Squares Frequency Switching (LSFS)*, PASP 119, 643, 2007

Sources suitable for spectroscopy/line pointing can be found in the ATNF SiO maser database.

Opacity correction/determination

Pardo et al., *Atmospheric Transmission at Microwaves (ATM): An Improved Model for mm/submm applications*, IEEE Trans. on Antennas and Propagation 49, 1683, 2001

ITU-R, *Attenuation by atmospheric gases*, P.676-9, 2012

Lay, *The temporal power spectrum of atmospheric fluctuations due to water vapor*, A&A 122, 535, 1997

Spectral lines catalogs

Database for astronomical spectroscopy [Splatatalogue](#).

The Cologne Database for Molecular Spectroscopy [CDMS](#).

Atomic Spectra Database [NIST](#) & [LOVAS](#).

Backends

FFT spectrometer

Klein et al., *High-resolution wide-band Fast Fourier Transform spectrometers*, [A&A 542, 3, 2012](#)

Klein et al., *The APEX digital Fast Fourier Transform Spectrometer*, [A&A 454, 29, 2006](#)

Radio frequency interference (RFI)

Gary et al., *A Wideband Spectrometer with RFI Detection*, [PASP 112, 560, 2010](#)

Flöer et al., *RFI mitigation for the Effelsberg Bonn HI Survey (EBHIS)*, [Conference proceedings of "RFI 2010"](#), POS, 2010

Fridman, *Statistically Stable Estimates of Variance in Radio-Astronomy Observations as Tools for Radio-Frequency Interference Mitigation*, [AJ 135, 1810, 2008](#)

See also:

[Conference proceedings: RFI mitigation workshop \(RFI 2010\)](#)

[Frequency allocation \(German\)](#)

[ITU-R registered radio telescopes \(and frequency bands\)](#)

Polarization measurements

Zeeman

Robishaw, *Magnetic fields near and far: Galactic and extragalactic single-dish radio observations of the Zeeman effect*, [Ph.D. thesis, Berkeley, 2008](#)

From:
<https://eff100mwiki.mpifr-bonn.mpg.de/> - **Effelsberg 100m Teleskop**

Permanent link:
https://eff100mwiki.mpifr-bonn.mpg.de/doku.php?id=information_for_astronomers:user_guide:further_material_papers_tech_memos_etc

Last update: **2019/02/28 15:21**