

High Resolution Energy/LSF Calibration Working Group

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Standard Targets

Stars with bright line emission, known velocity structure used to date:

- HR1099 (HETGS, RGS) - [A. Pollock](#)
 - Broad continuum, higher energy lines
- Algol (RGS, XRS) - [J. Cottam](#)
 - Lines to Fe XXV
- Capella (HETGS, LETGS, RGS, XRS) - [R. Smith](#)
 - Low continuum, bright lines, long term variability, known orbital velocities, lines from one source, lines from 2 keV to 0.1 keV.
- Procyon (LETGS, RGS) - [V. Burwitz](#)
 - Isolated, narrow lines, lower energy, lines from 1 keV to 0.1 keV.
- AB Dor (RGS) - [A. Pollock](#)

Other interesting objects:

- GX301 (XRS) - [M. Ishida](#)
 - Fe Ka, Ni Ka lines
- Theta Ori C / Tau Sco
 - Fe XXV lines

Issues for Future Missions

- Sources with high energy line emission?
 - How high do you need to go? Interesting lines are generally below 10 keV: Ni Ly α at 8.10 keV, Fe Ly β 8.211 keV, Ni Ly β at 9.58 keV
- Sources with narrow emission lines?
 - M Dwarf in quiescence: Prox Cen, etc. Dim, but may be bright enough for future missions.
 - Vela X-1 (HMXBs) with fluorescence lines
- Narrow absorption lines?
 - ISM absorption lines (1s-2p O at 0.5keV, 1s-2p N at 0.4keV)
 - AGN/Sy I absorption lines? Must know the velocities.