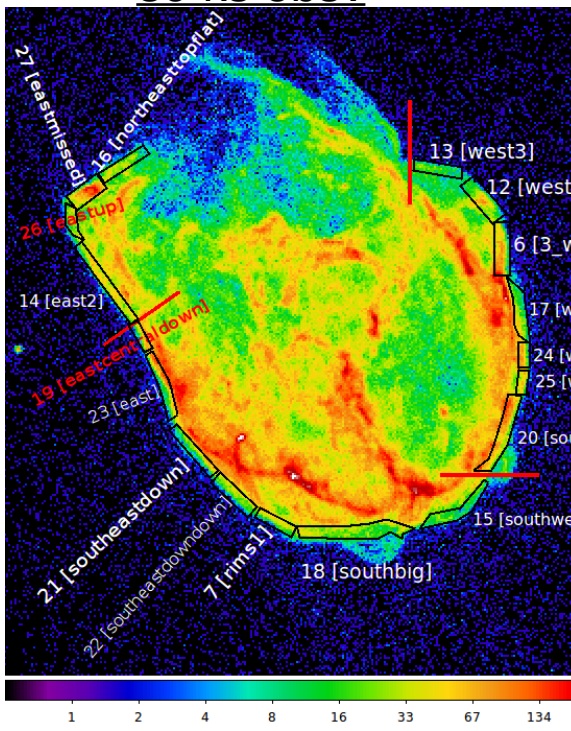
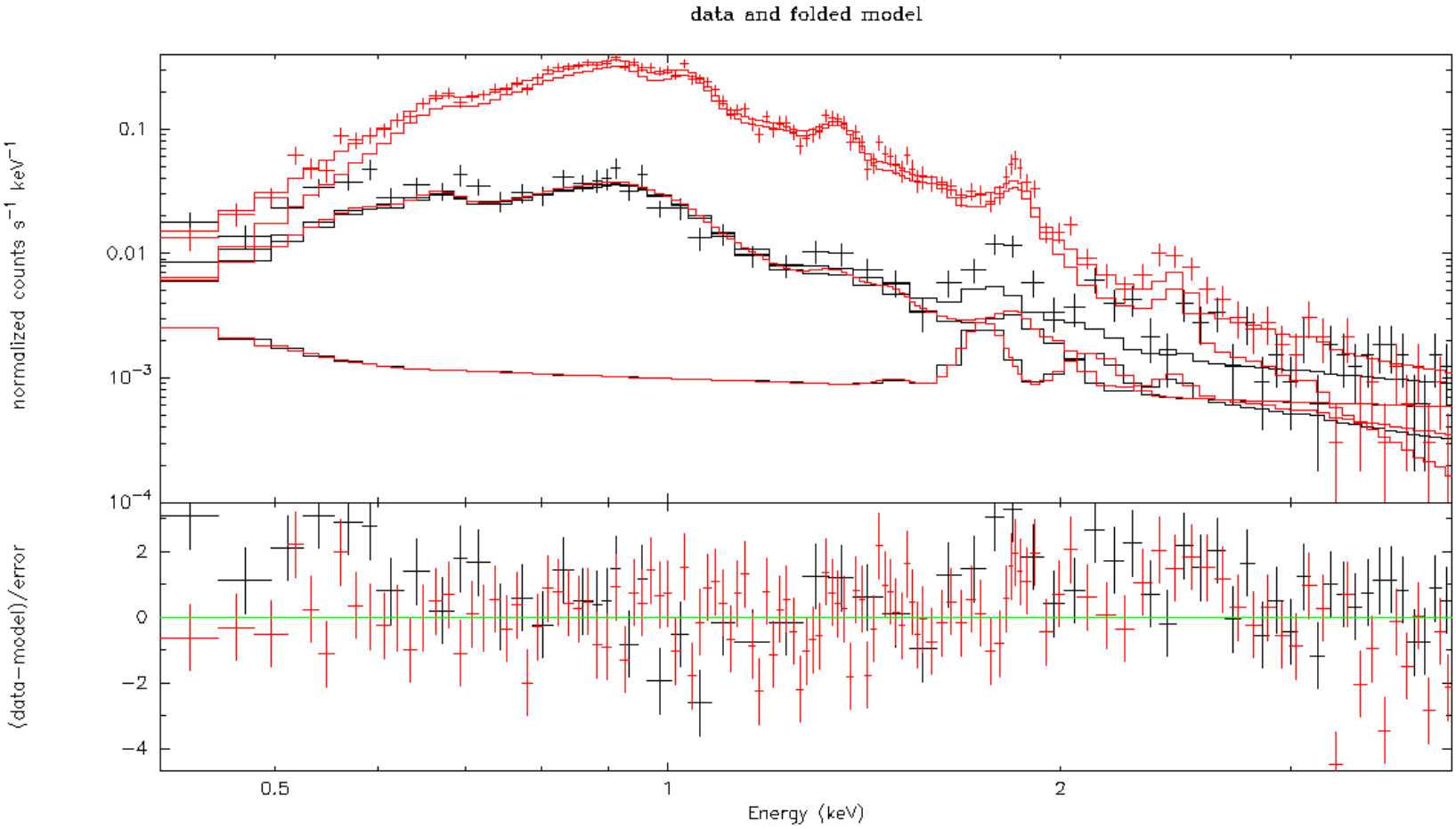
CURRENT WORK

- Spectral Analysis of N132D's rim to look for signatures of O VIII, O VII, Fe L, Fe K, Mg, Si, S, Ne and Ar lines in 0.3-7.0keV, using Xspec 12.9.1i.
- Plane-parallel shock integrating over ionization times and a non ionization equilibrium component used to model the spectra.

89 ks obsv



- Fits show plasma is in non ionizational equilibirum.
- Remnant age around 3000 years, as found from ionization timescales for various regions. Mass of progenitor??
- A colder plasma (0.25keV) runs behind a hotter one (0.7-1.2keV) as the shock moves into ambivalent material in the LMC. Suggests adiabatic expansion (Sedov Phase??)
- Faint Fe K line visible (6.7keV).
- Western regions show a low value of Hydrogen column density, in accordance with low absorption in that area.
- Southern regions show a high value. O VIII and Fe L rich spectra.
- Southern region thought to move into a cavity of lower density (accounted due to higher absorption) whose origin is linked to a WR star.
- Evidence of O in the rim regions, indicating the ejecta has shooted all the way out near the blast wave. Lines from Fe suggest a strong reverse shock has already developed. Reverse shock radius and velocity??



Major Lines: O VII [0.57], O VIII [0.65], Fe L [0.7-1.1], Ne [1.1], Mg [1.5], Si [2], S [2.5], Ar [3].

Technical Challenges – High Chip Contamination, Goodness Malfunction, Detector Effective Area, Silicon Interference, Scattering.
Scientific Challenges – Blobs on southern rim, Filaments in northern region, reverse shock position, Fe K diagnosis (absence of 6.4keV), the ‘Void’.