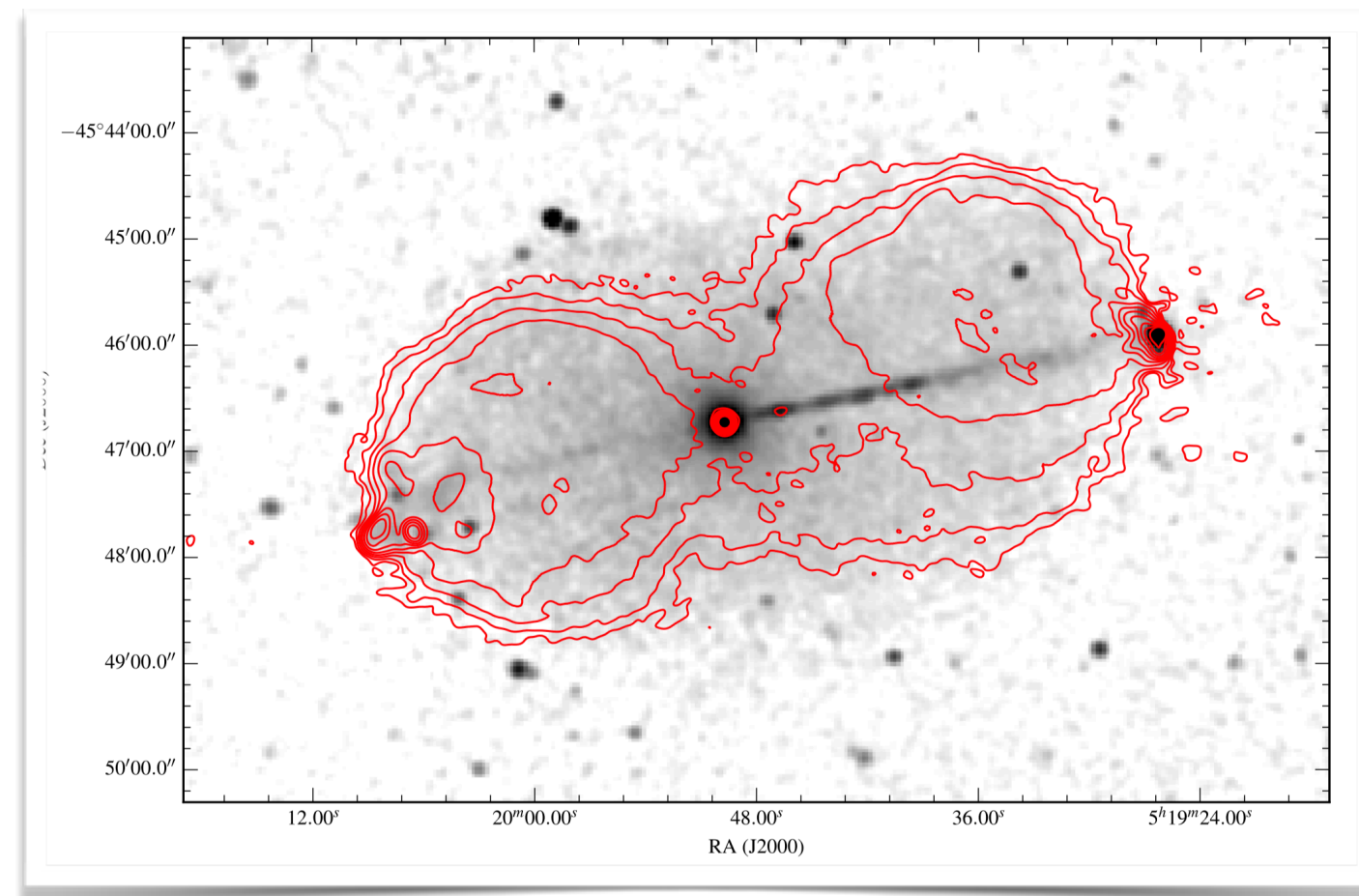
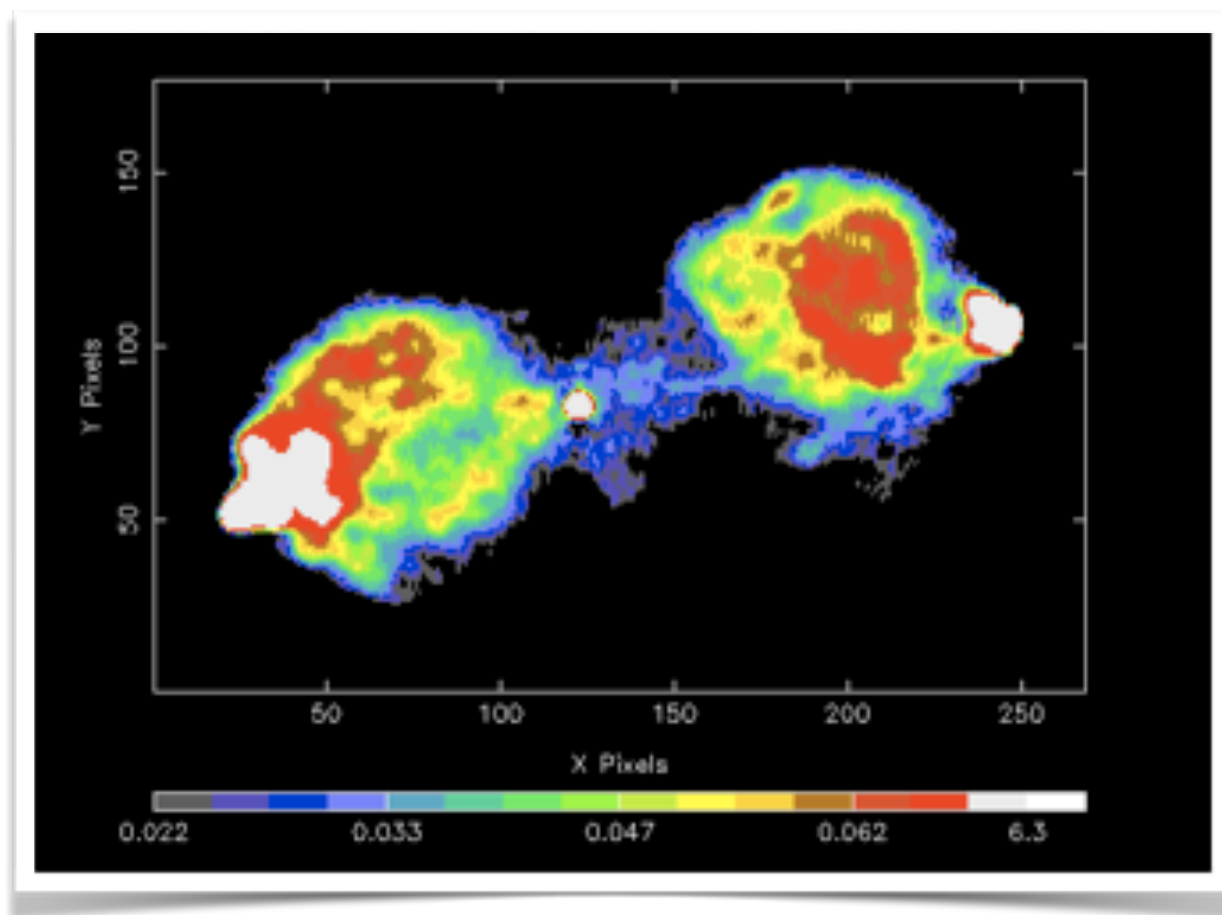


Pictor A with Chandra

Pic A is a nearby ($z = 0.035$) FR II radio galaxy optically classified as HERG (broad-line radio galaxy).

It is an isolated source.

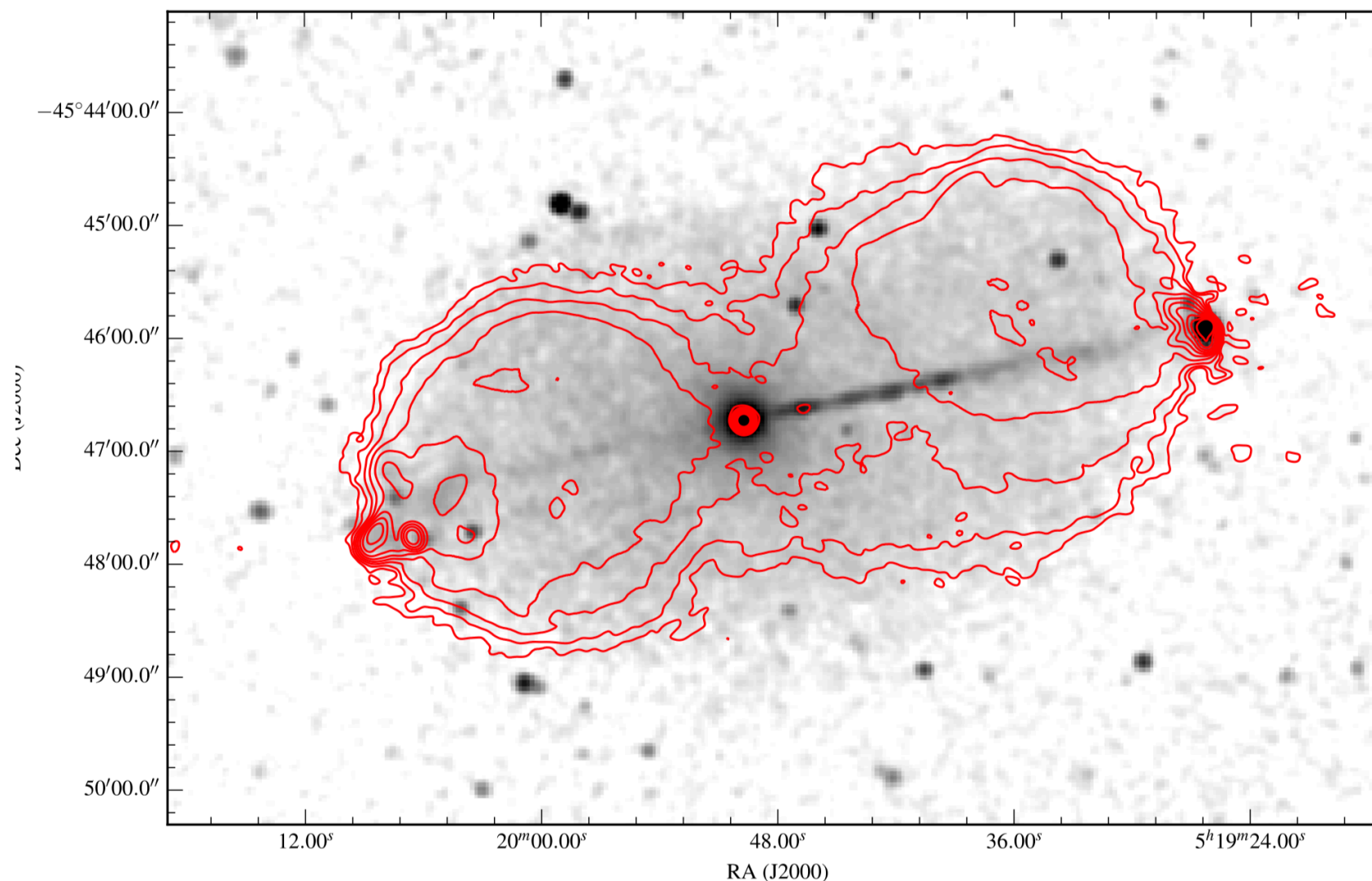


Analysis of the Chandra Observation: jet and western hot spot

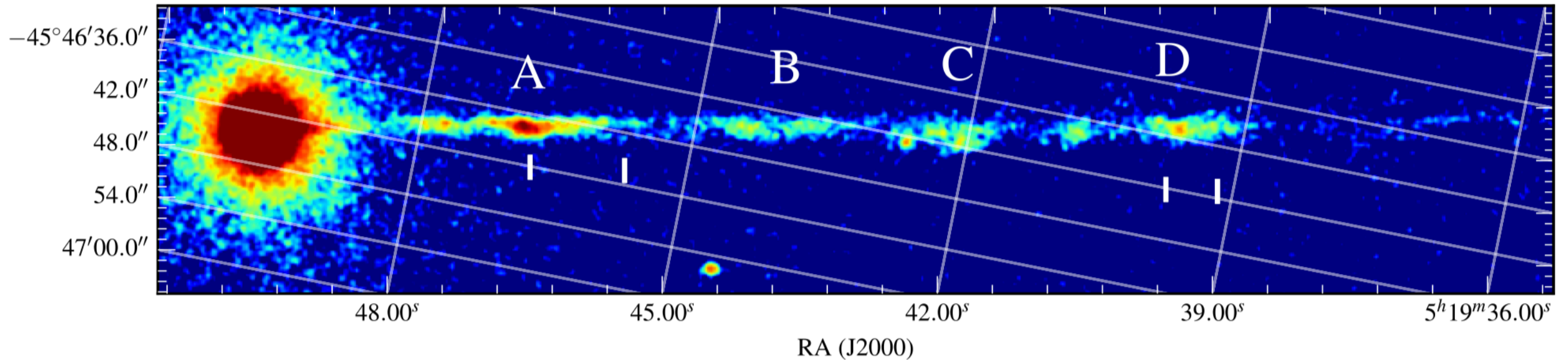
Merged Observation: morphological study

Datasets: merged file of 15 Chandra observations from 1999 to 2015, 466 ks exposure time.

Superposition of the X-ray mosaic and radio images (DS9) to identify the regions for the X-ray analysis.

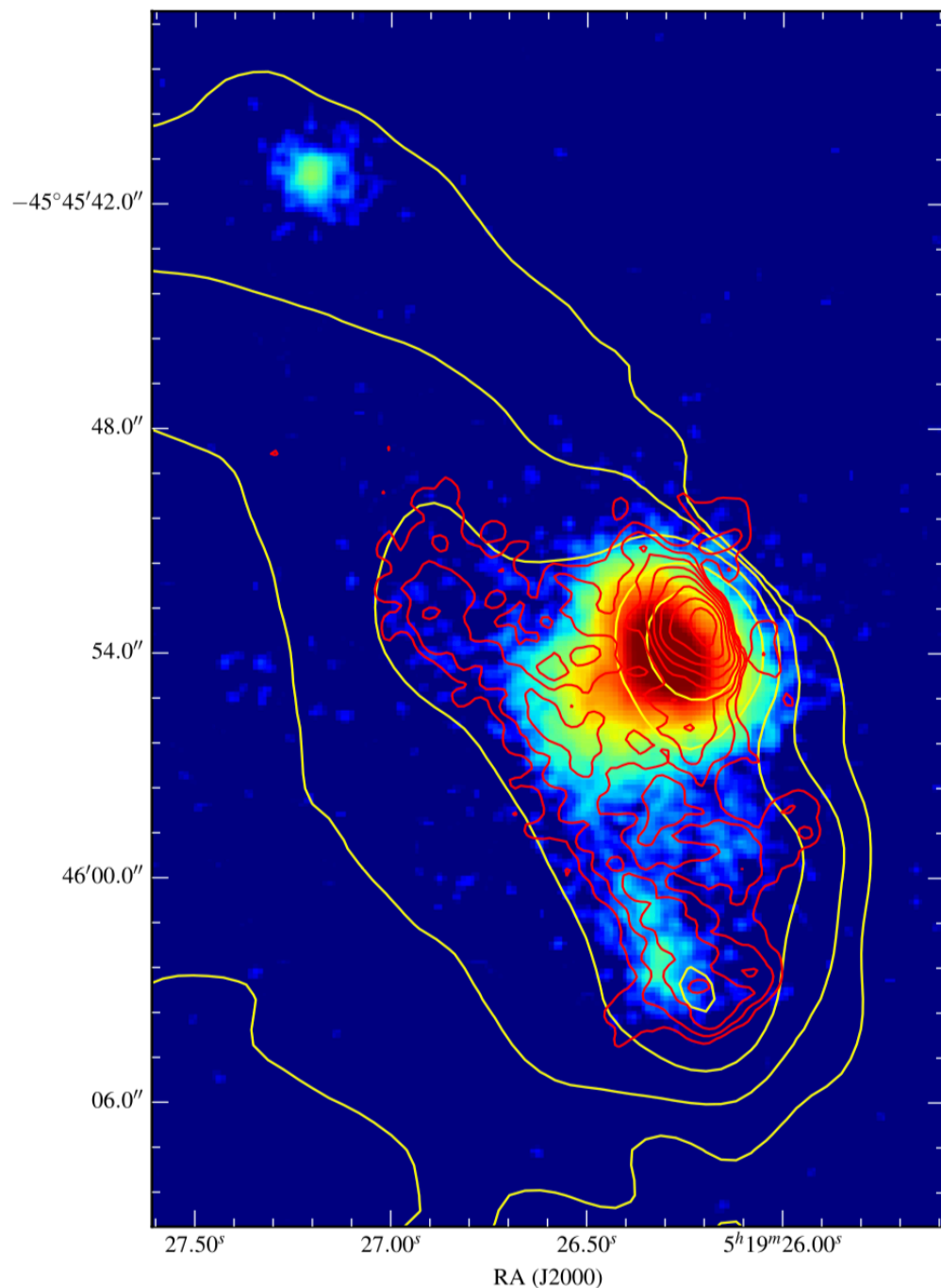


Jet knot



- Extraction of the spectrum of the entire jet using the longest observation, OBSID=14223;
- Spectral analysis with XSPEC. Definition of the best data model: parameter uncertainties, confidence (68%, 90%, 99%) contour plots, flux and luminosity;
- Localization of knots A, B, C, D using the x-ray mosaic;
- Extraction of the spectrum of each knot from the observation OBSID=14223 and spectral analysis with XSPEC (see above);
- Optional 1: spectral analysis of the western hot spot;
- Optional 2: Instrumental Lab (IV floor).

1) Optional: western hot spot



- extraction of the spectrum/spectra and production of the .rmf and .arf files (CIAO) of the Western hotspot from OBSID=14223 observation;
- Spectral analysis with XSPEC. Definition of the best data model: parameter uncertainties, confidence (68%, 90%, 99%) contour plots, flux and luminosity;

see <http://adsabs.harvard.edu/abs/2016MNRAS.455.3526H>

References

- Wilson et al. 2001, *ApJ* 547, 740
- Marshall et al. 2010, *ApJL* 714, 213
- Hardcastle et al. 2016, *MNRAS* 455, 3526