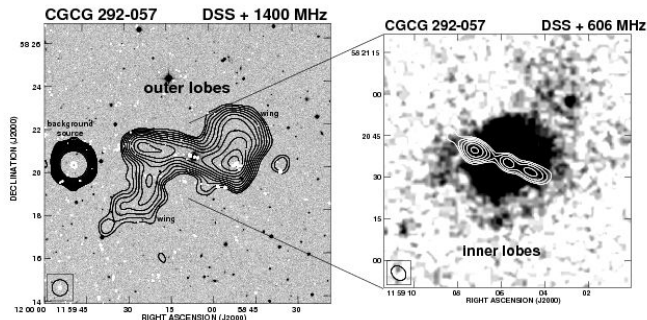


Evidence for JET-ISM Synergy from the *Chandra* data of CGCG 292-057

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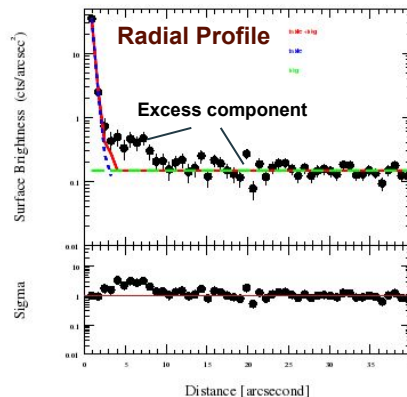
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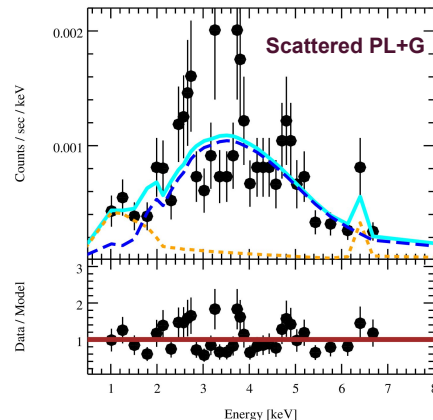
DSS optical image overlaid with 1.4 GHz radio contours from NVSS (black; beam size ~ 45'')

-> new GMRT 606 MHz image of the inner source. The NVSS map of the target reveals extended radio lobes of the "X-shape morphology". (Koziel-Wierzbowska et al. 2012)

-> We identify this feature as a diffuse phase of the ISM compressed, heated and mixed by the expanding jets/lobes, affecting the properties and structure of the hosts (e.g. Fabian 2012; Morganti et al. 2013).



-> Surface Brightness profile centred on the CGCG 292-057 nucleus is fit including the table model for the PSF (based on the merged simulated PSF images) and a constant background.



-> Chandra spectrum of the CGCG 292-057 nucleus, fitted with the model $zphabs1*(1-fsc)*PL+zphabs2*(fsc*PL+zgauss)$, with the scattered PL fraction $fsc = 0.025$.

-> Ionized iron lines have been also detected in the X-ray spectra of two other CSO's namely 0710+439 (Siemiginowska et al. 2016), and PMN J1603-4904 (Krauss et al. 2018)

->The ionized gas responsible for the FeKalpha line production may be present within the dense clouds of the ISM, engulfed in the expanding lobes.

->To constrain the nH (ionized), compared with total and neutral (constrained via HI absorption radio features) nH 's (see Ostorero et al. 2017).

