

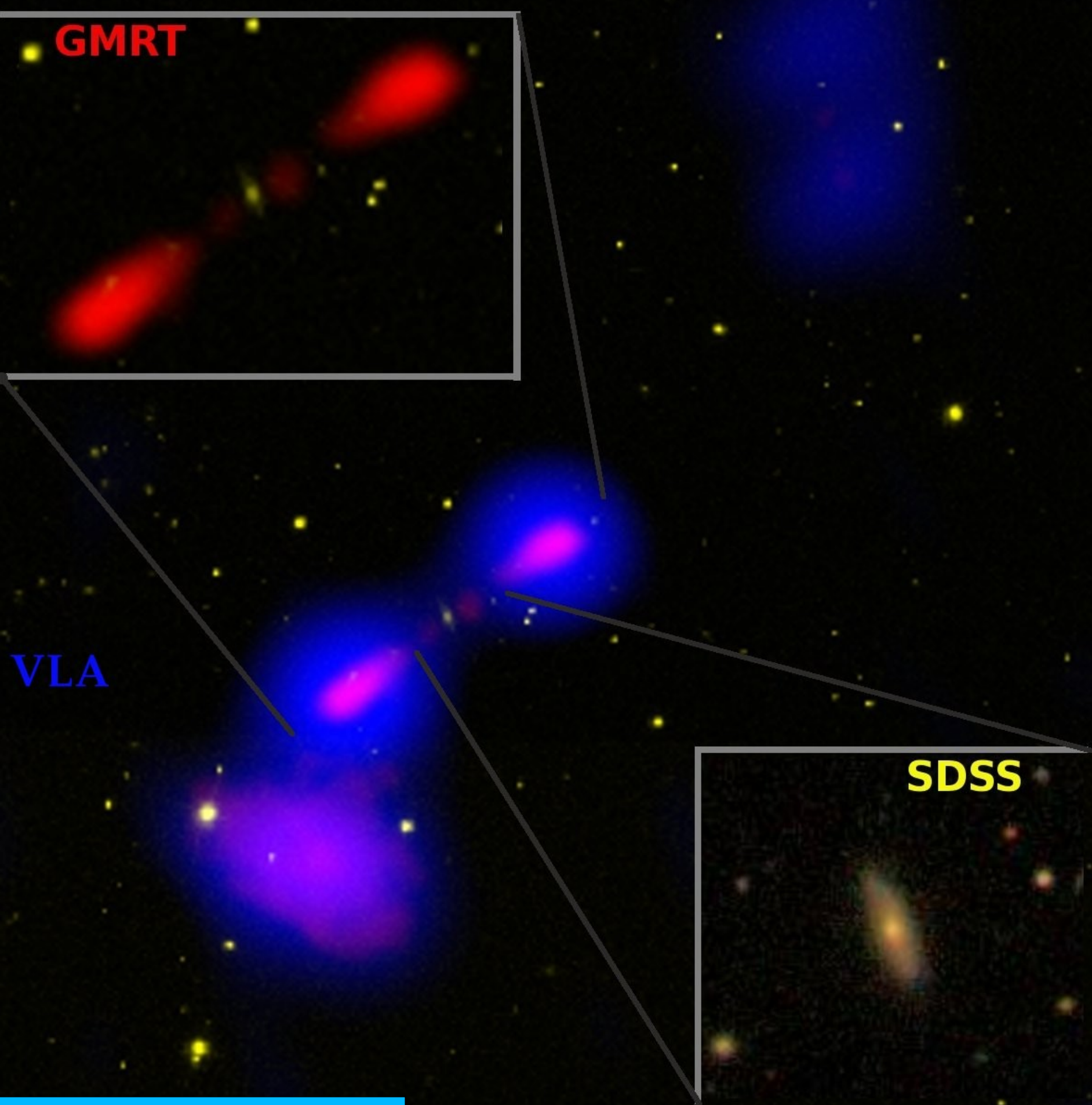


Revisiting the exotic spiral-host radio galaxy Speca with HCT, Subaru, XMM-Newton & GMRT.

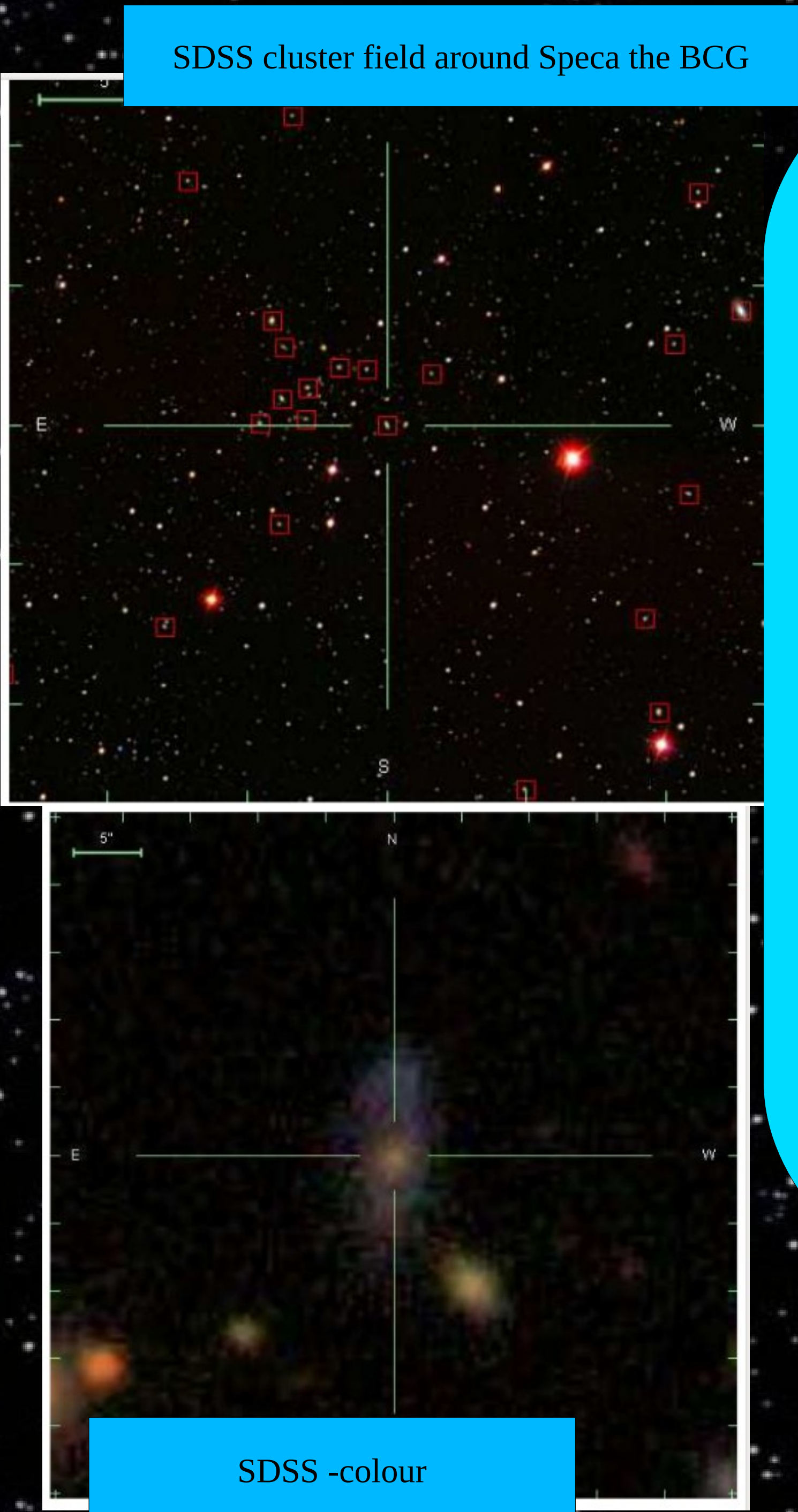


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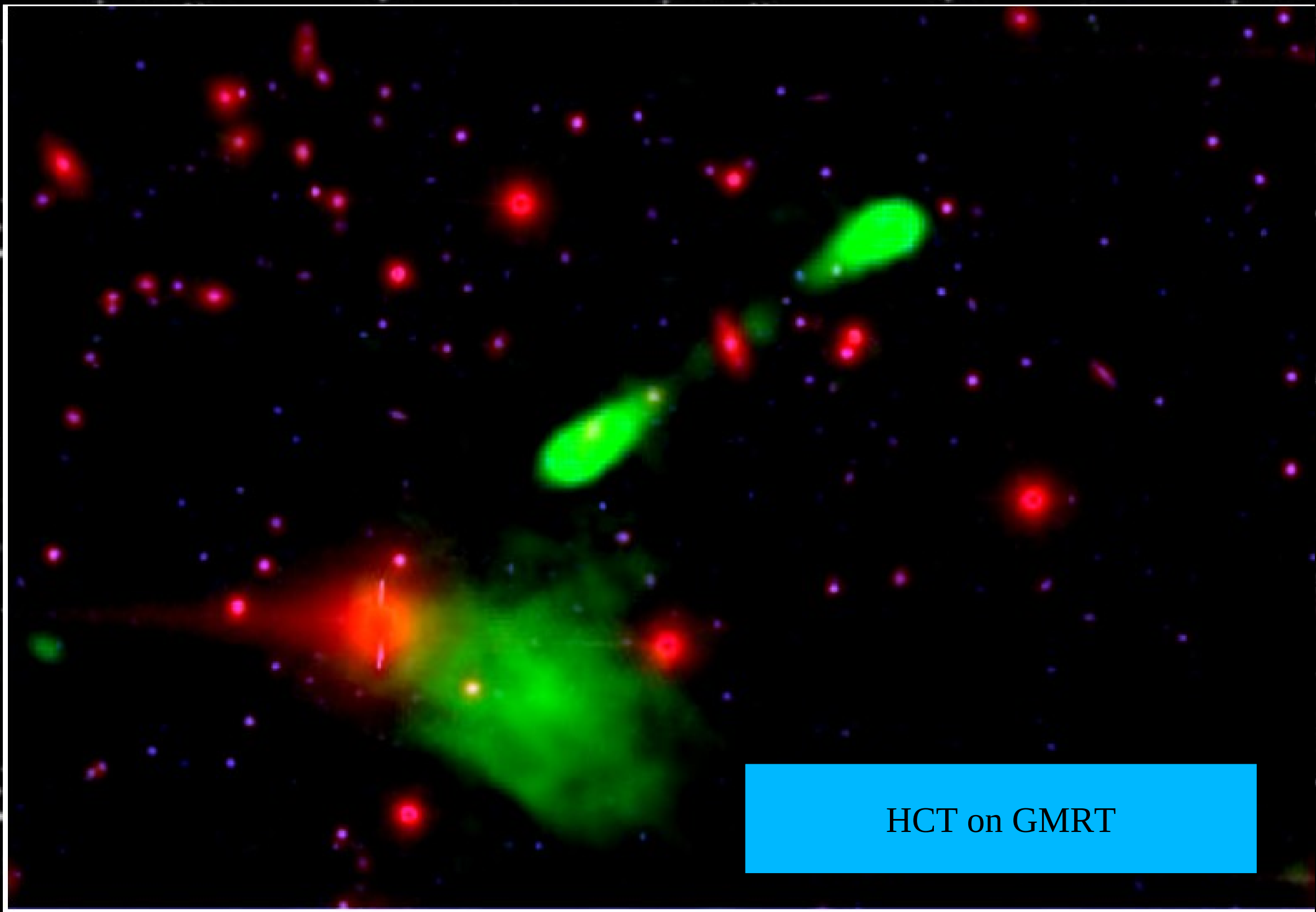
Discovery of an exotic galaxy, Speca



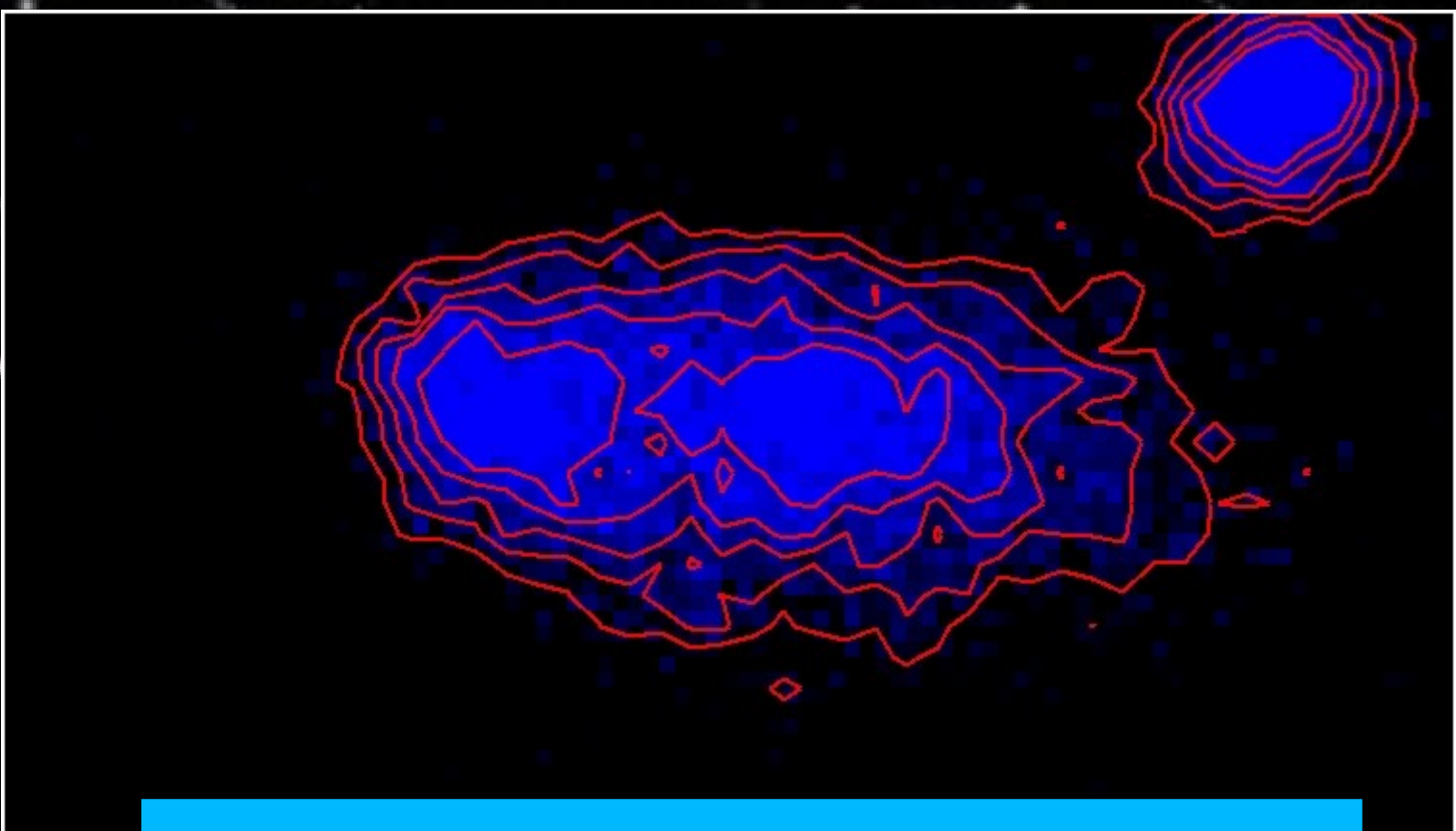
Hota et al. 2011



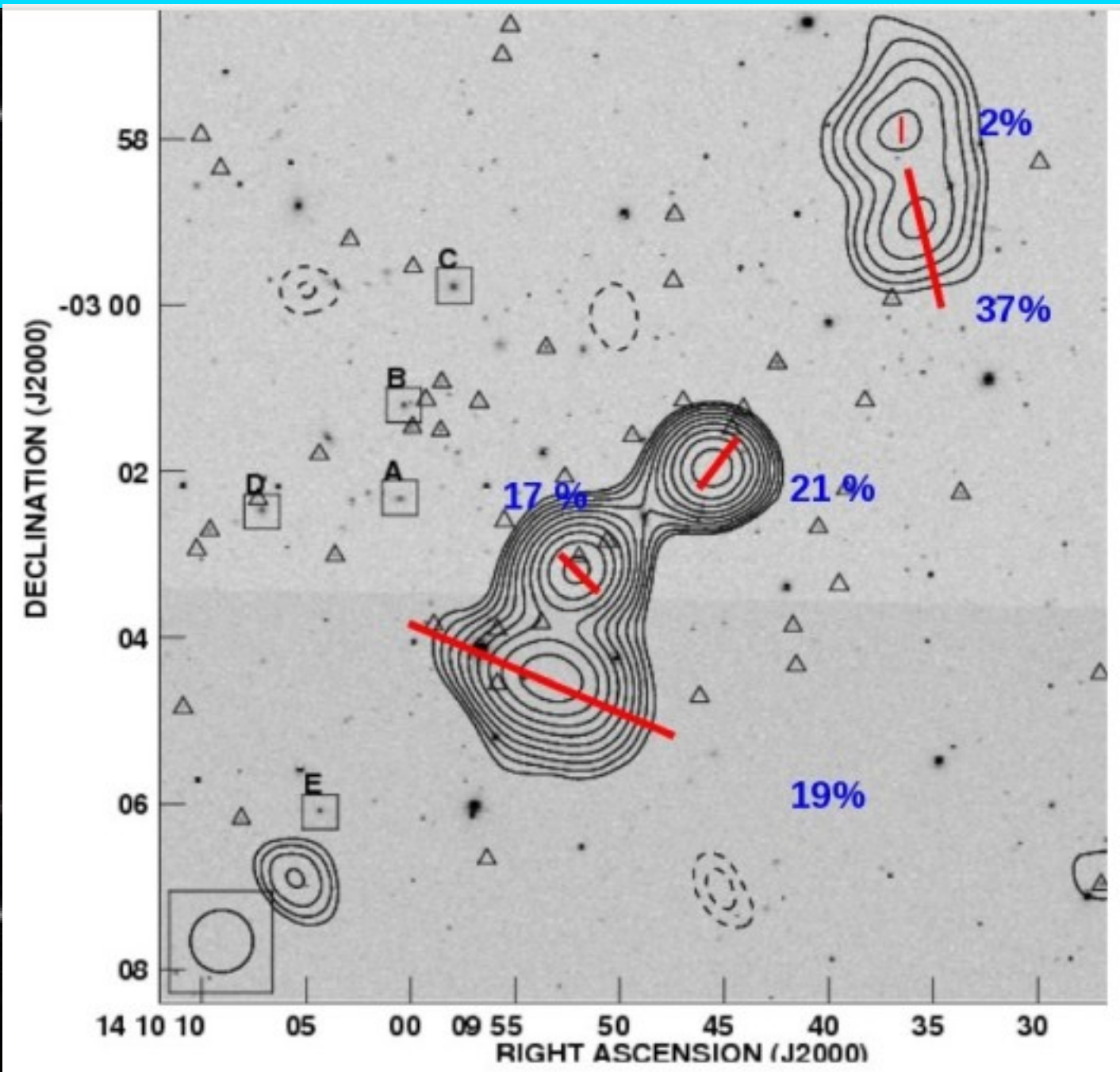
After our discovery of the first confirmed spiral-host large radio galaxy Speca in 2011 the sample has grown to five only with many targeted searches and serendipitous discoveries. We have followed up Speca with Himalayan Chandra Telescope (HCT) imaging, Subaru spectroscopy, XMM-Newton imaging and new data from GMRT. HCT images show signs of ram pressure from the intra-cluster medium in which Speca is residing. Although Speca is the brightest cluster galaxy (BCG) and supported by Subaru spectroscopy to be one of the most massive spirals, X-ray image demonstrate it not to be at the centre of the cluster potential or peak of diffuse emission from the Intra-cluster medium. Deeper GMRT imaging did confirm the diffuse/remnant nature of the relic lobes separated by Mpc away without any structural sign of cluster-merger or accretion. We speculate Speca the farthest such object known to be a new entrant to the cluster at $z=0.137$ and was growing passively, by passing any major merger, at the outskirts during most of its evolutionary history. We shall present results from all these new data on this exotic black-hole galaxy system and present it in the contexts of the sample of this rare objects, the general radio galaxy population and high-z radio sources.



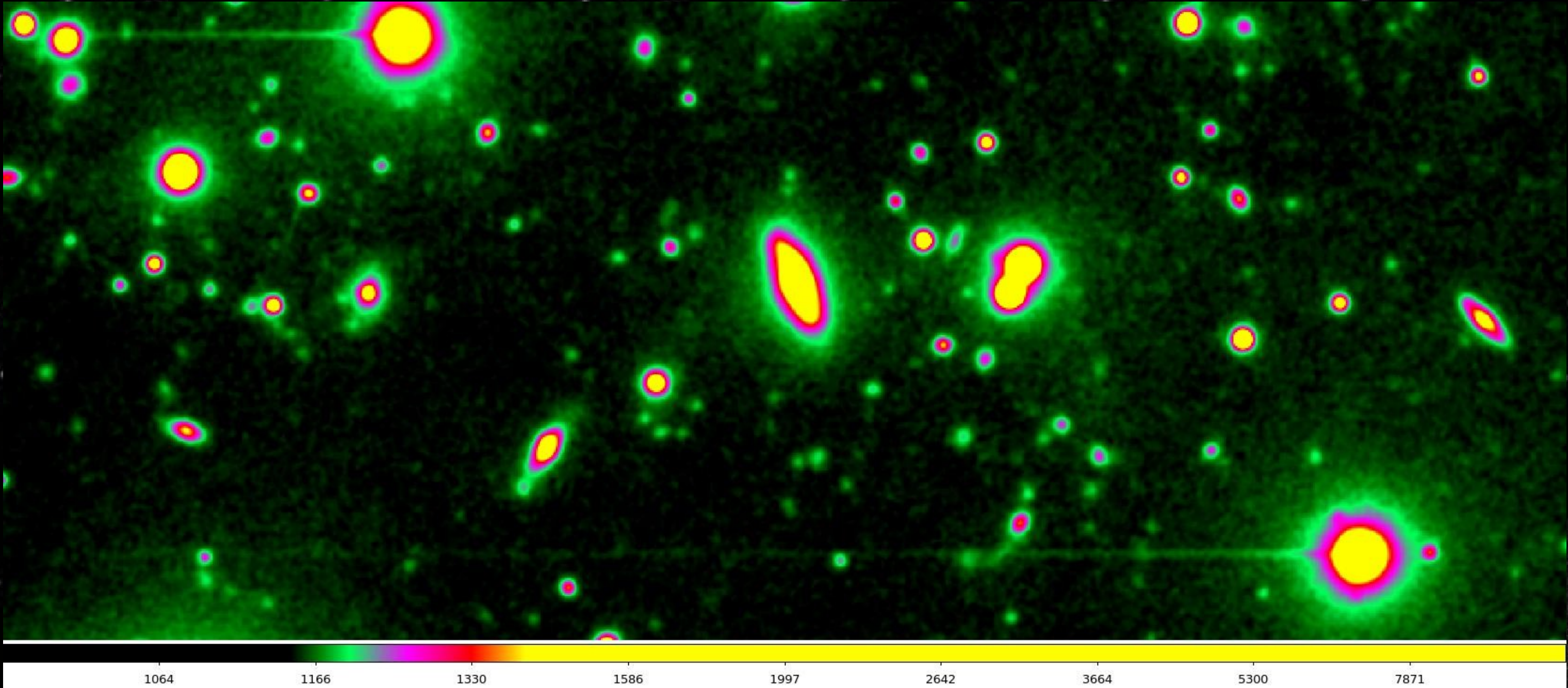
HCT on GMRT



HCT B-band asymmetric infalling galaxy ?



Notice the B-field of relic lobes, sign of cluster-accretion ? Radio data from VLA (NVSS) and SDSS galaxy location



HCT no sign of merger/interaction of Speca, so far !

