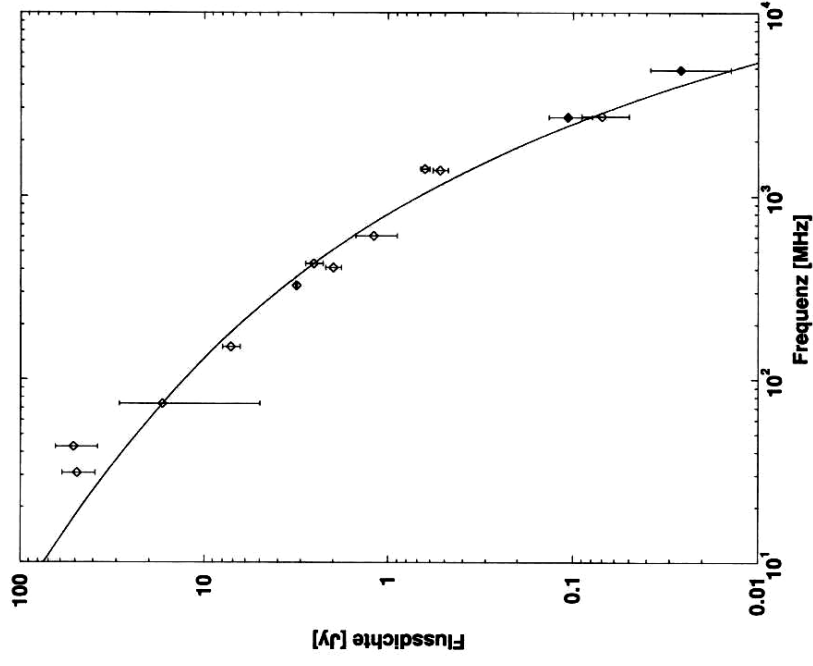
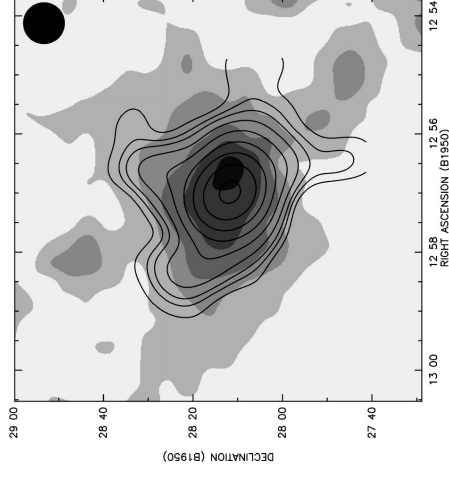
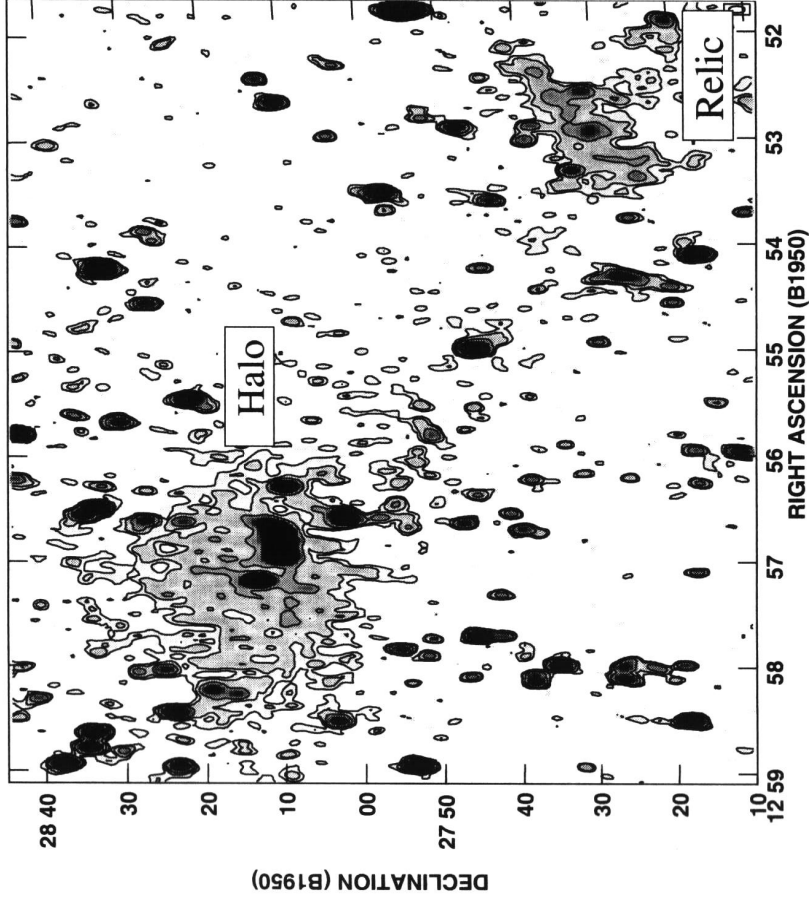


7. Galaxy Clusters



Radio continuum spectrum of the Coma Cluster

Coma Cluster at $\lambda = 90$ cm

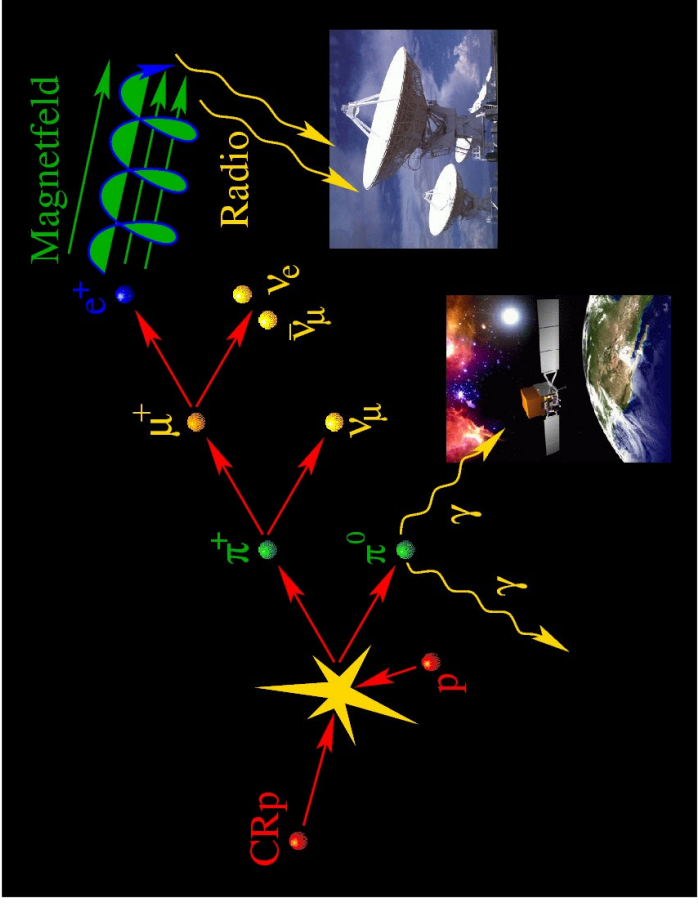


central halo at

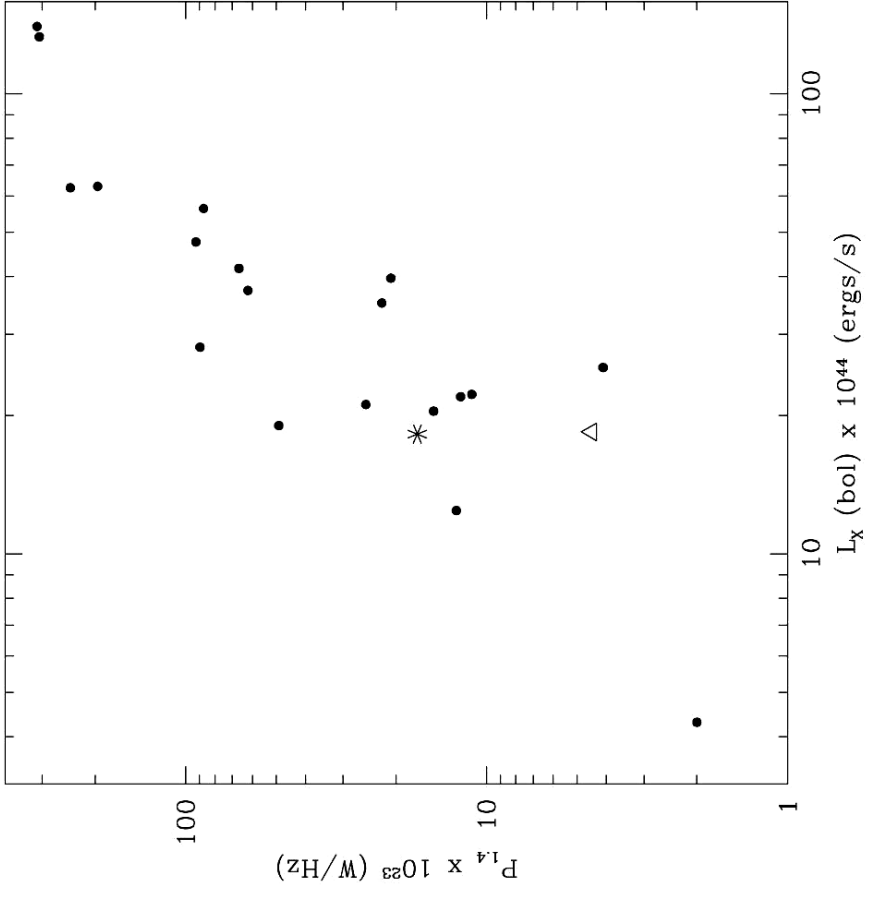
$\lambda = 20$ cm

$\lambda = 11$ cm

hadronic collisions



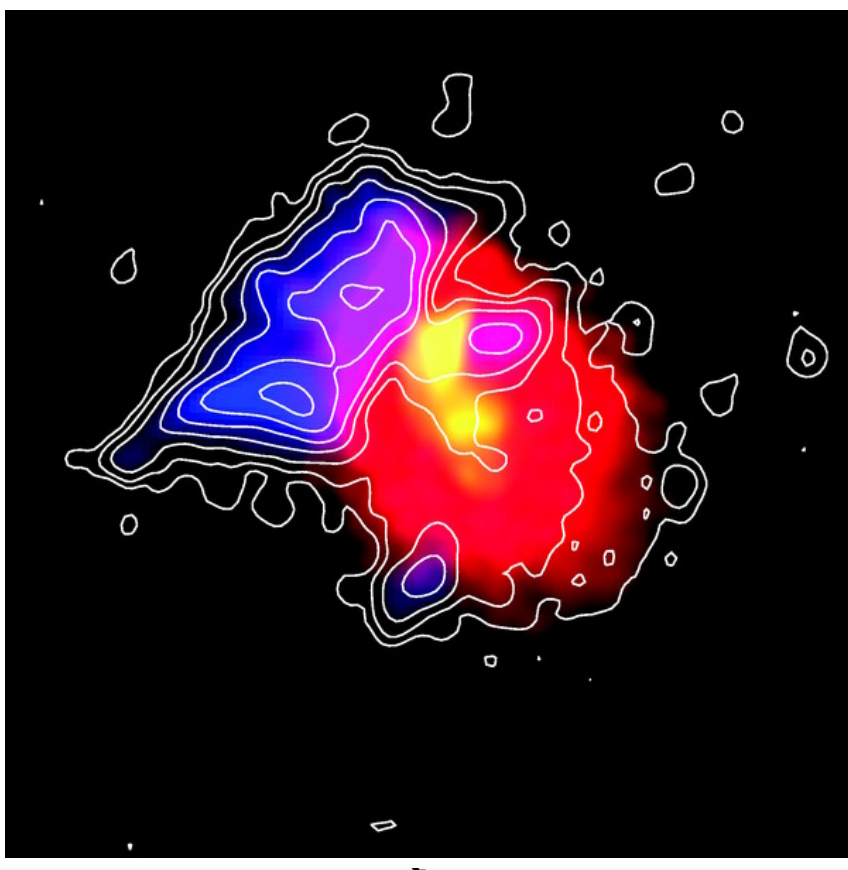
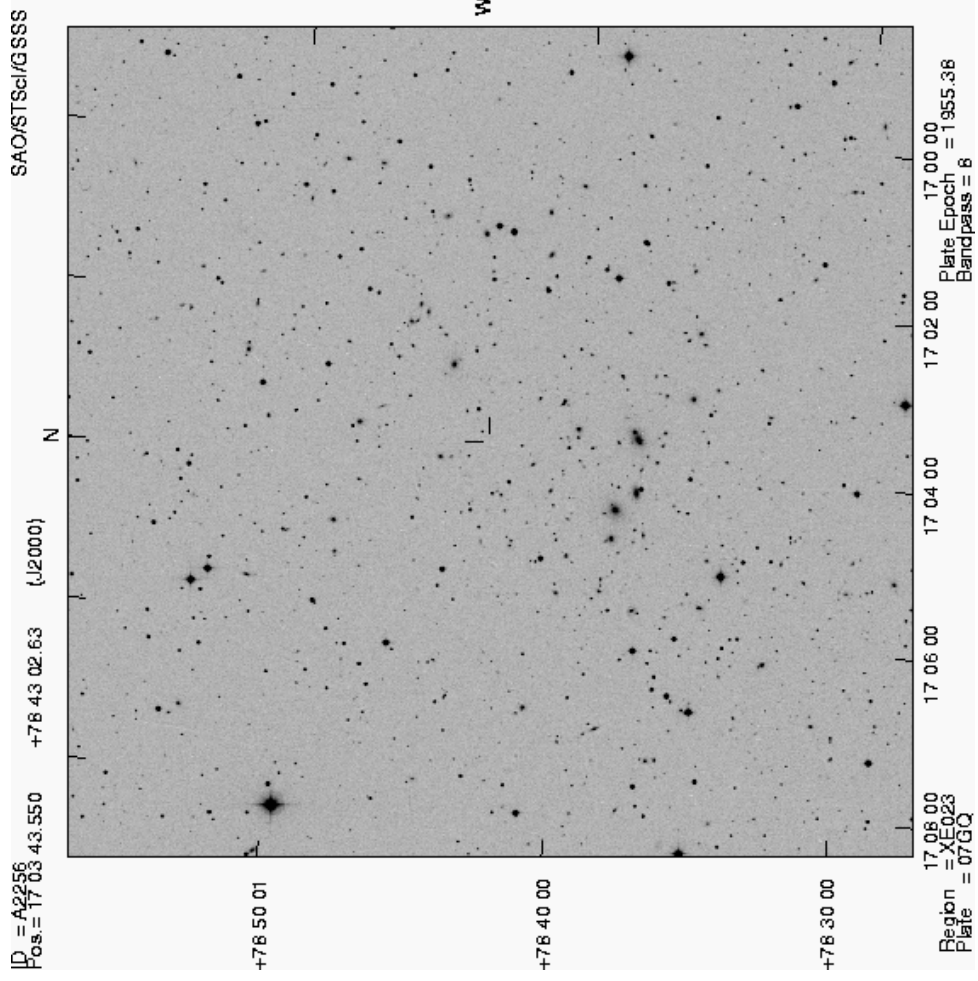
radio-X-ray correlation



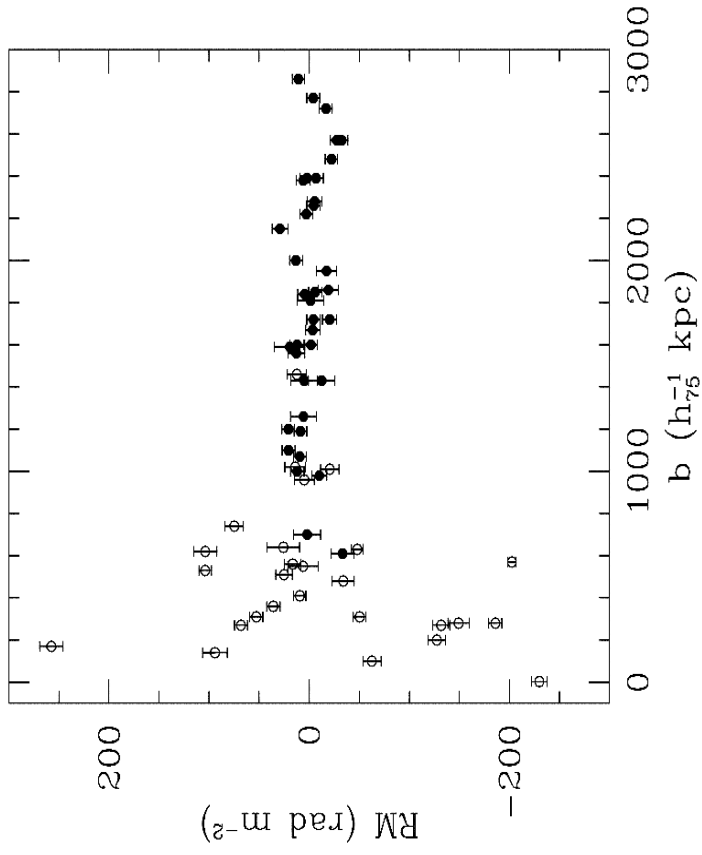
A 2256:

X-rays (red)
radio (blue + contours)

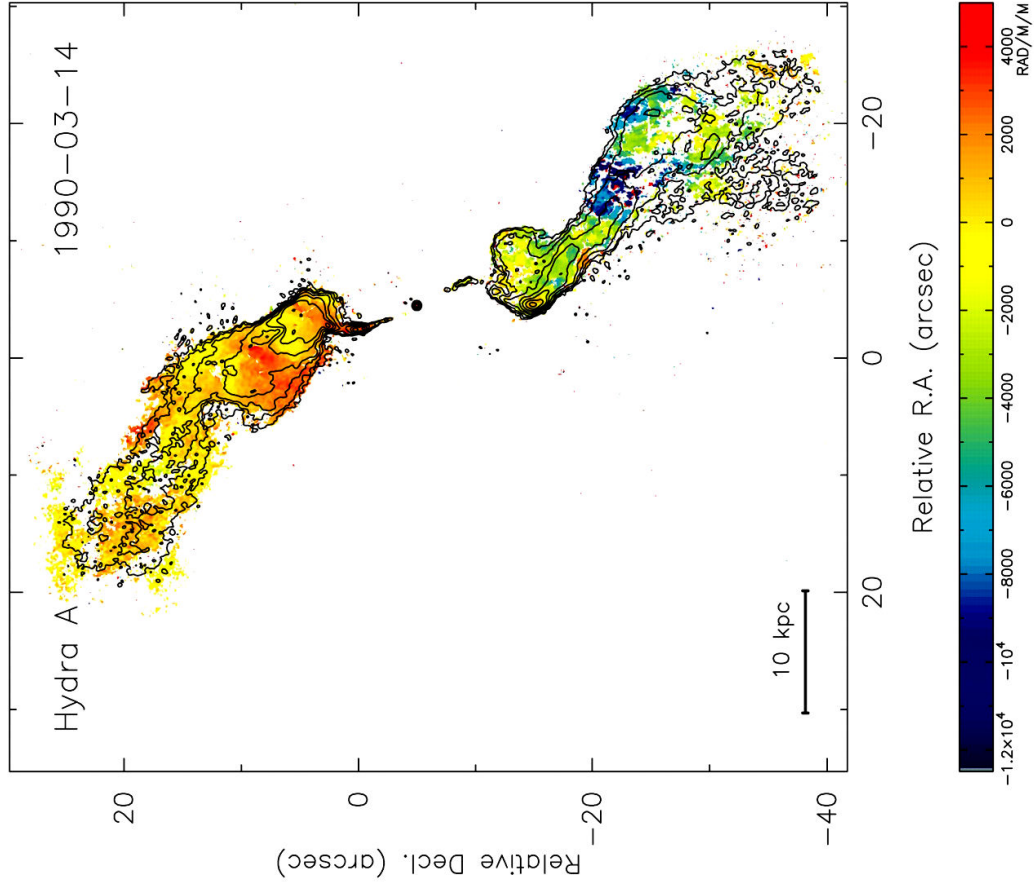
optical

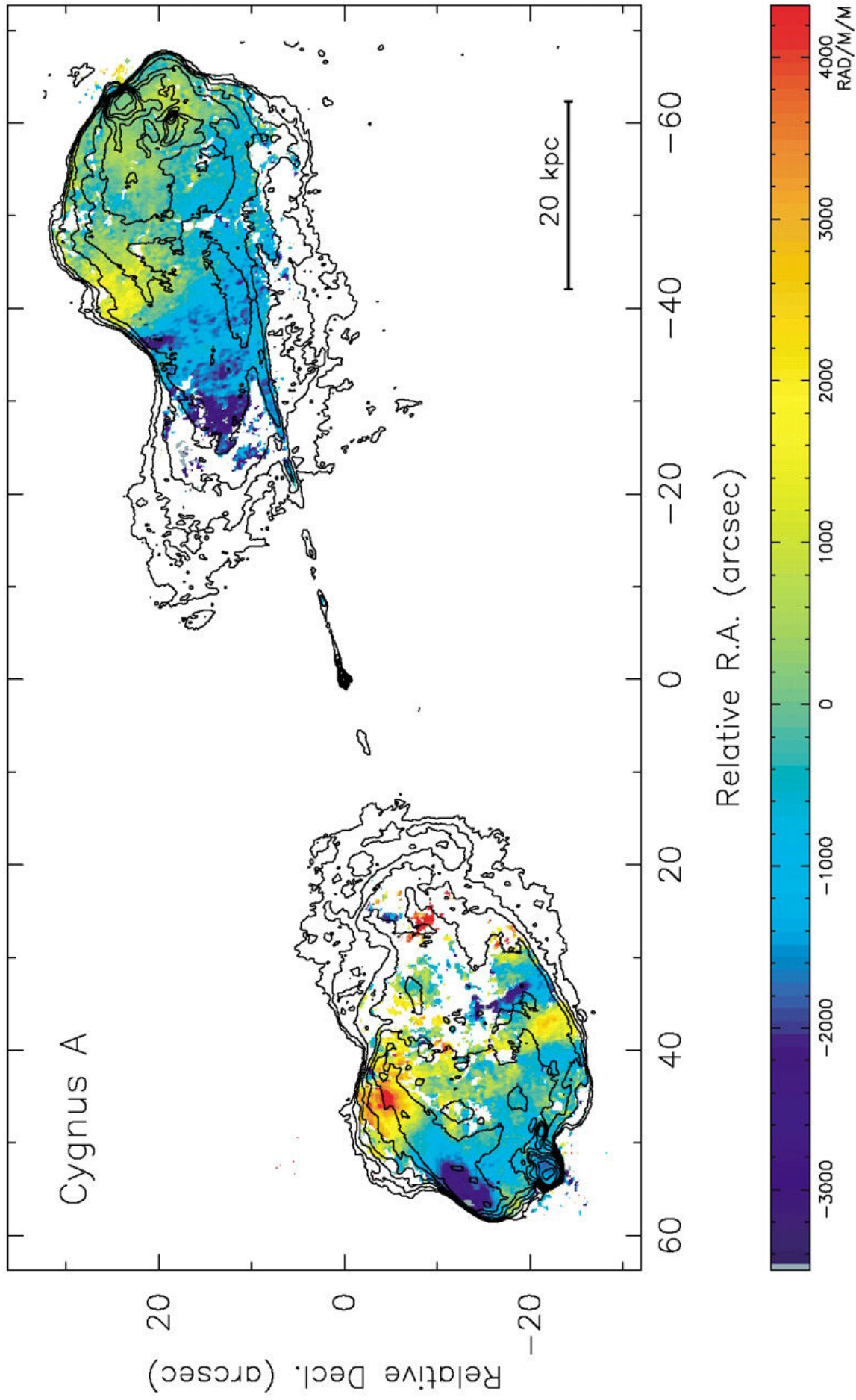


Cluster RMs



Clarke et al. (2001)

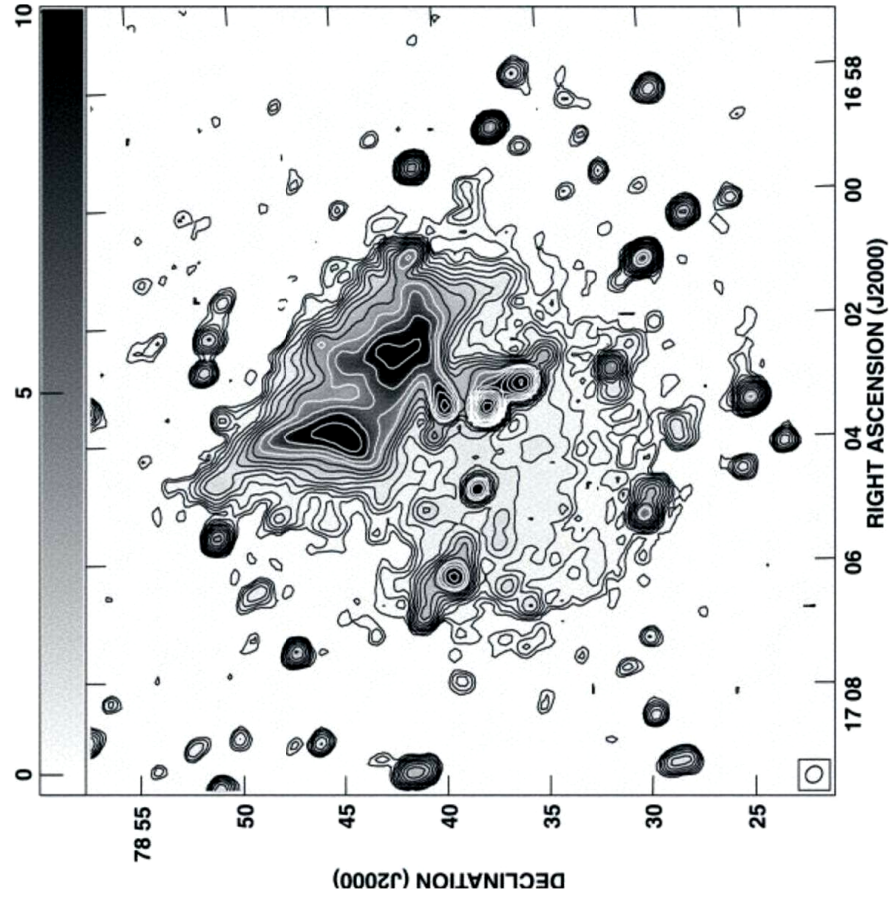




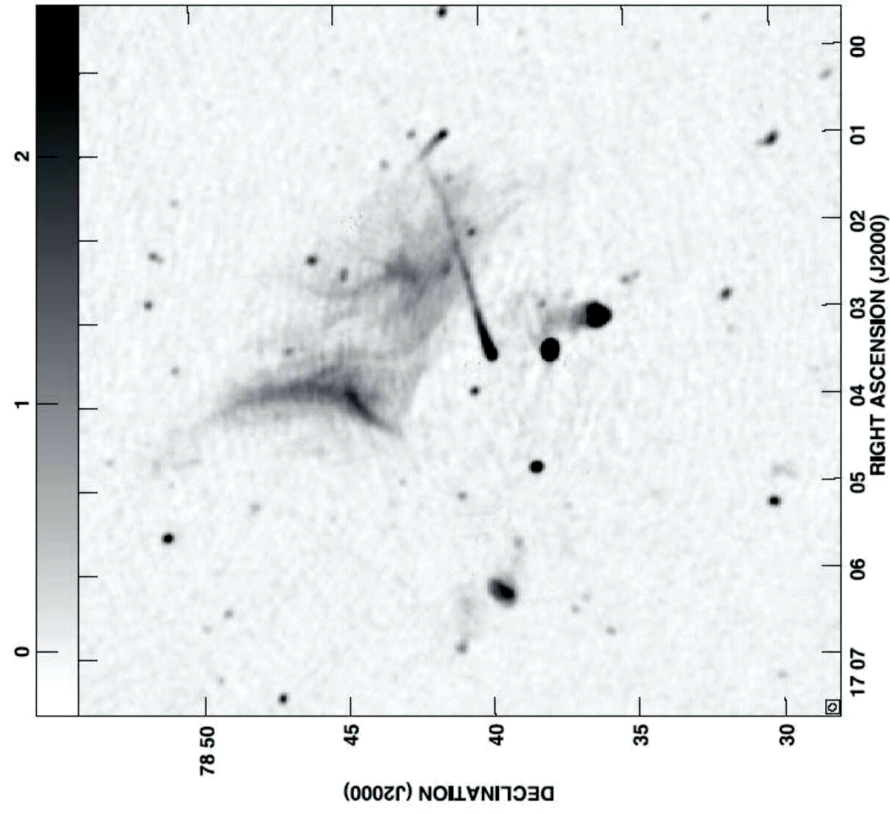
relics

A 2256: radio emission at $\lambda = 20$ cm

low-resolution



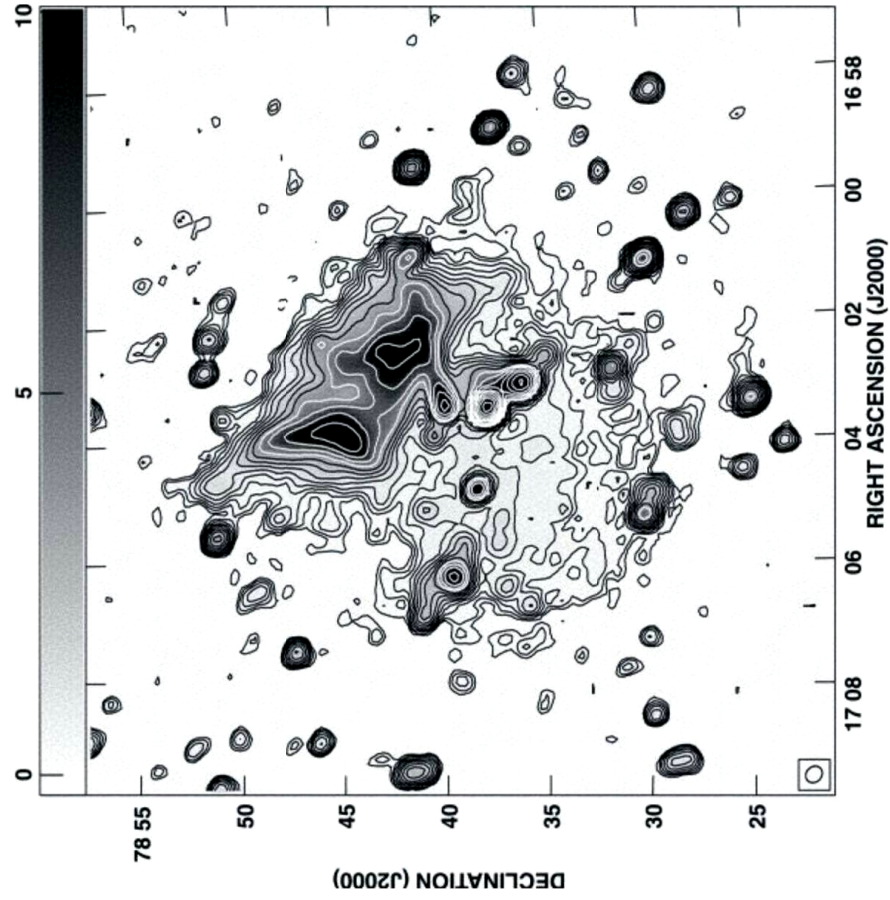
high-resolution



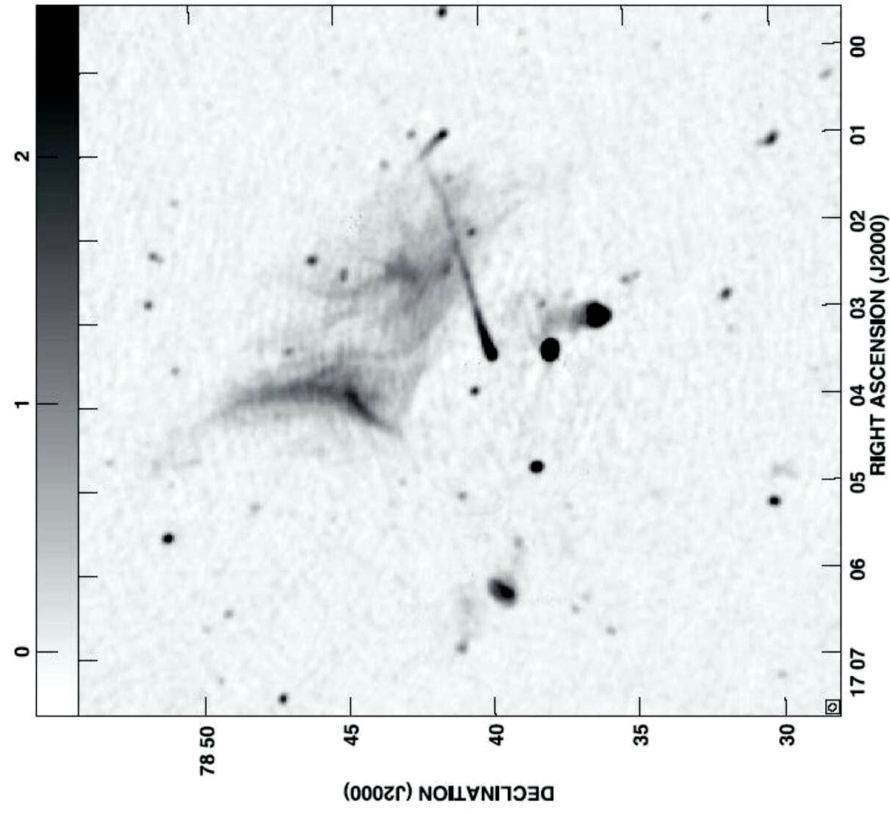
relics

A 2256: radio emission at $\lambda = 20$ cm

low-resolution



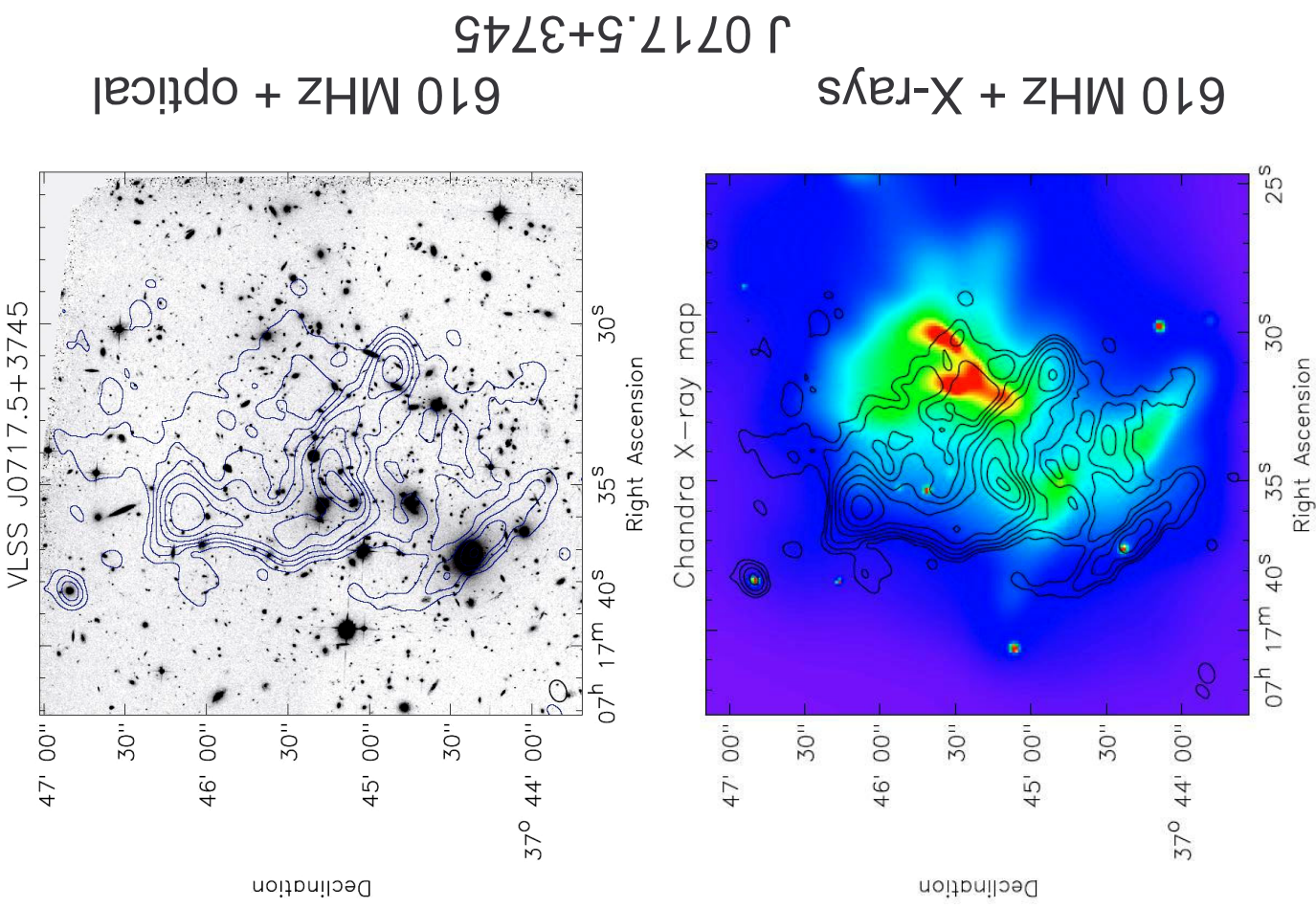
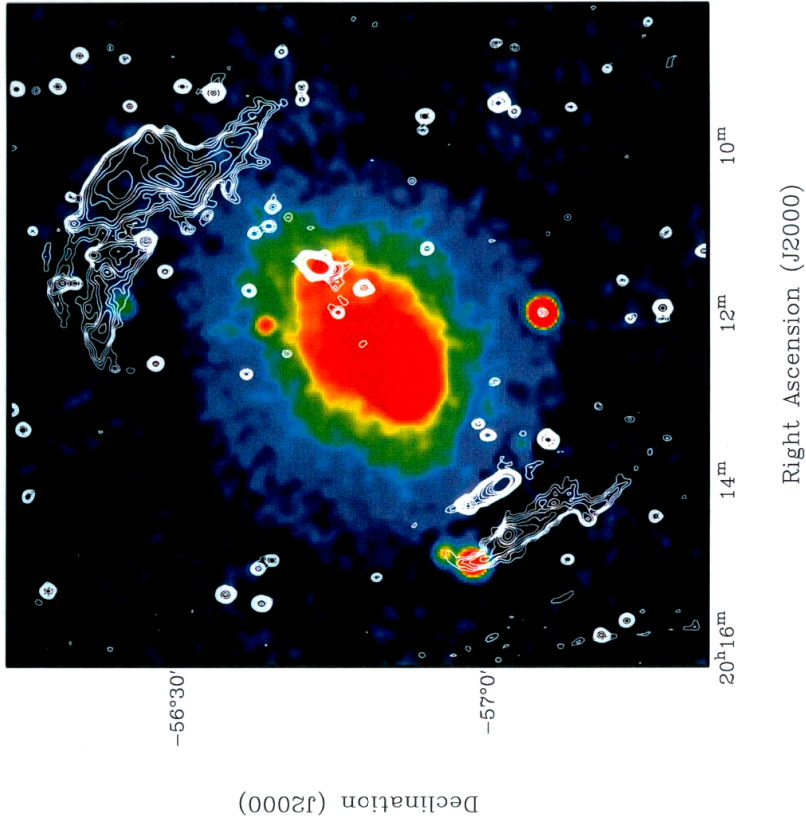
high-resolution



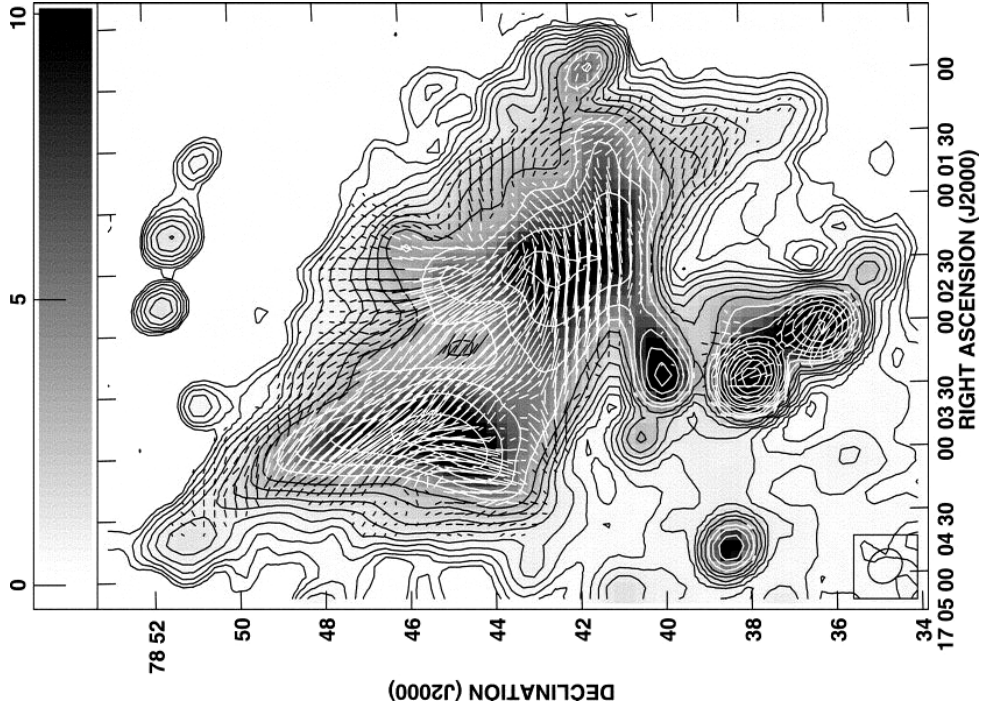
A 3667

X-rays + 843 MHz

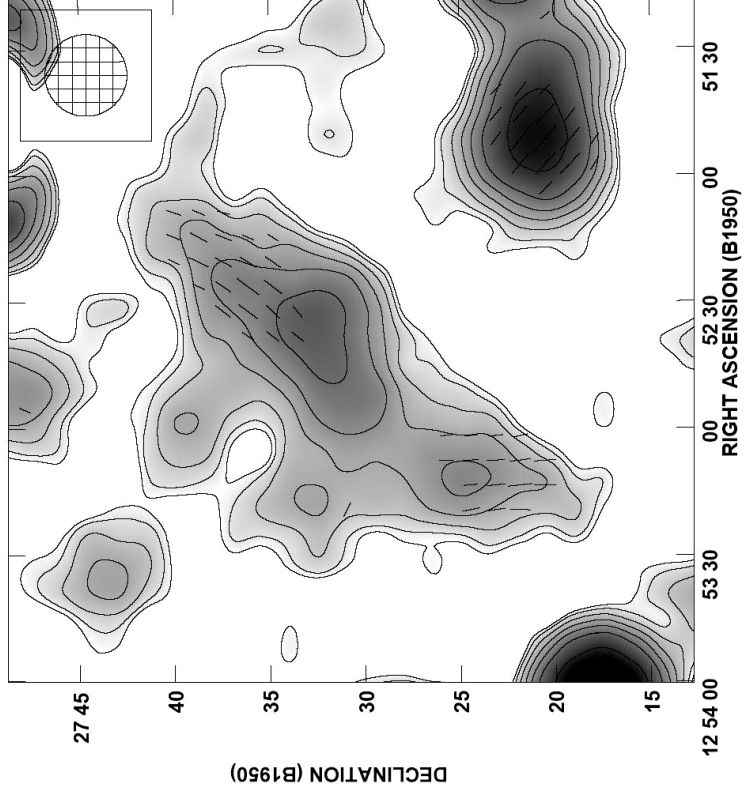
A3667: ROSAT PSPC overlaid with MOST sum



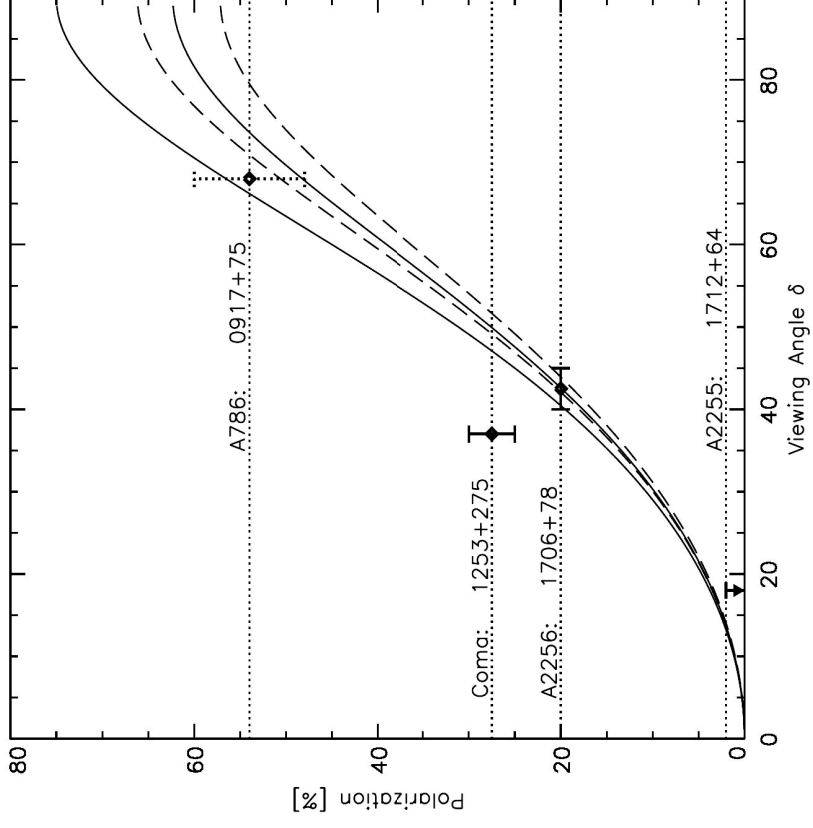
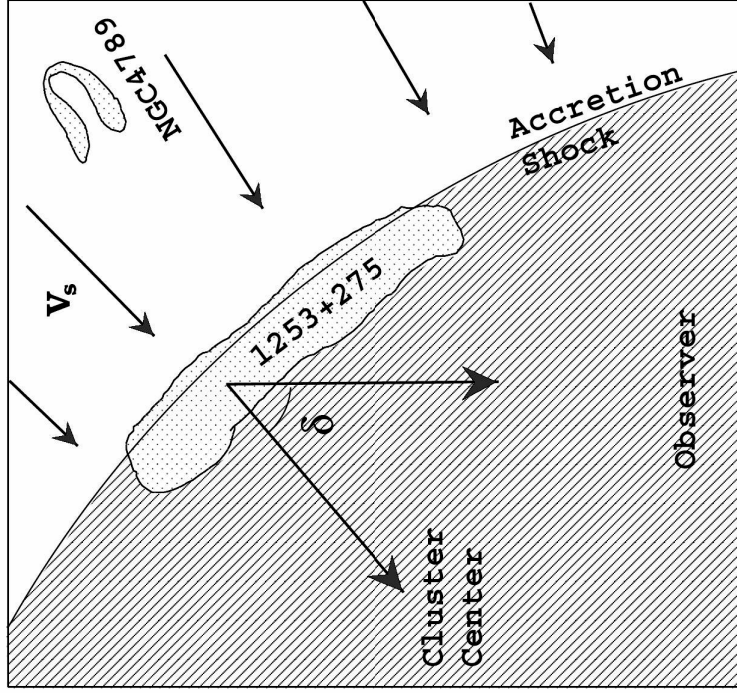
A 2256: $\lambda = 20$ cm



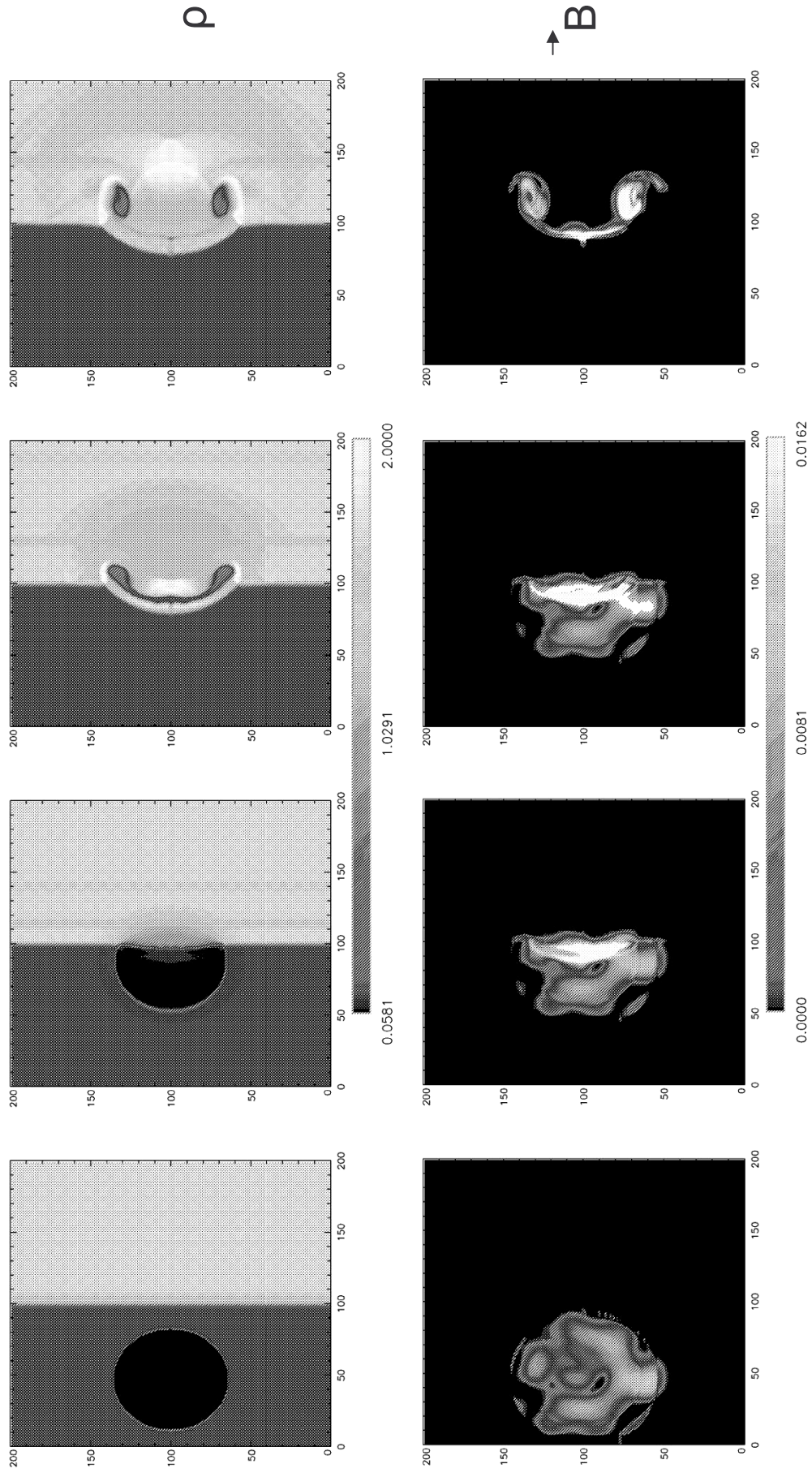
1253+275: $\lambda = 11$ cm



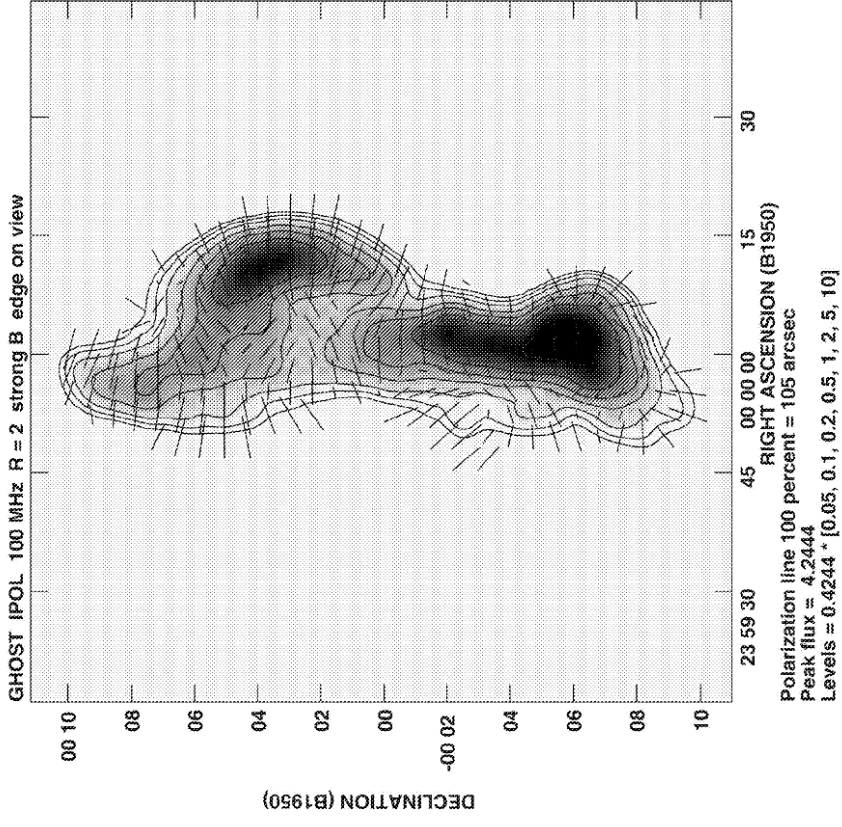
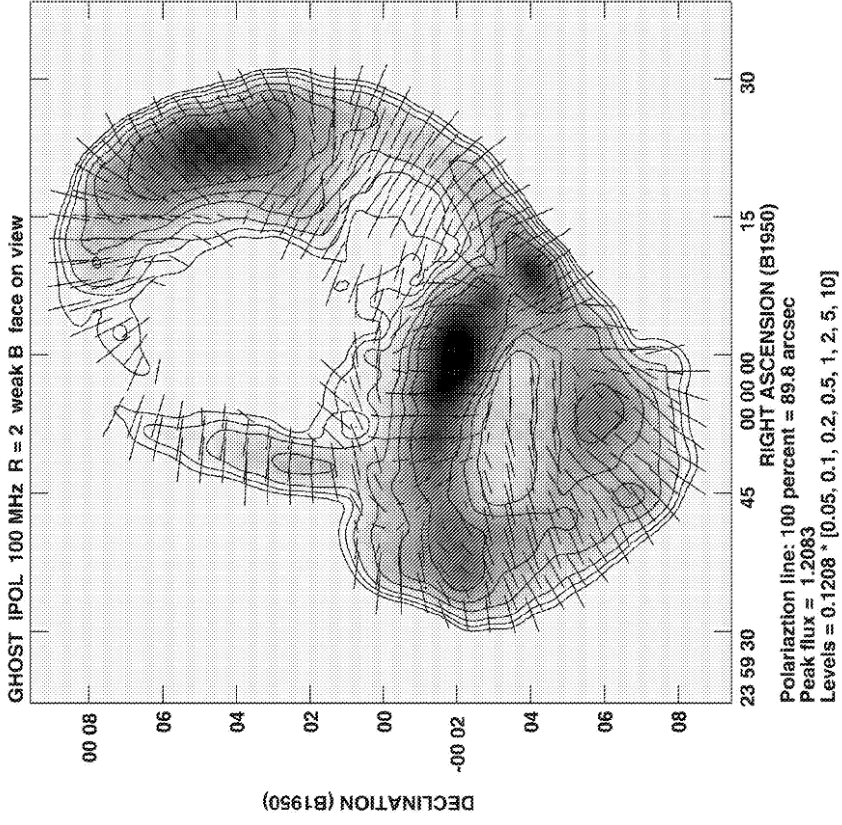
Coma relic: degree of polarization



3-D MHD simulations (Enßlin & Brüggen, 2002)

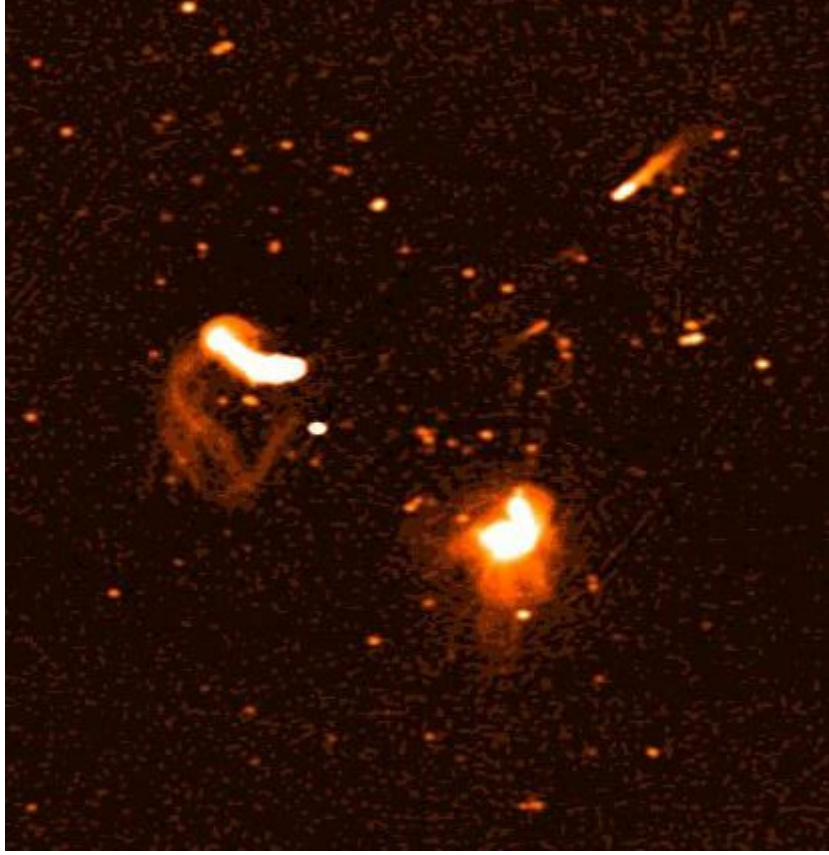


3-D MHD simulations: synchrotron brightness and linear polarization

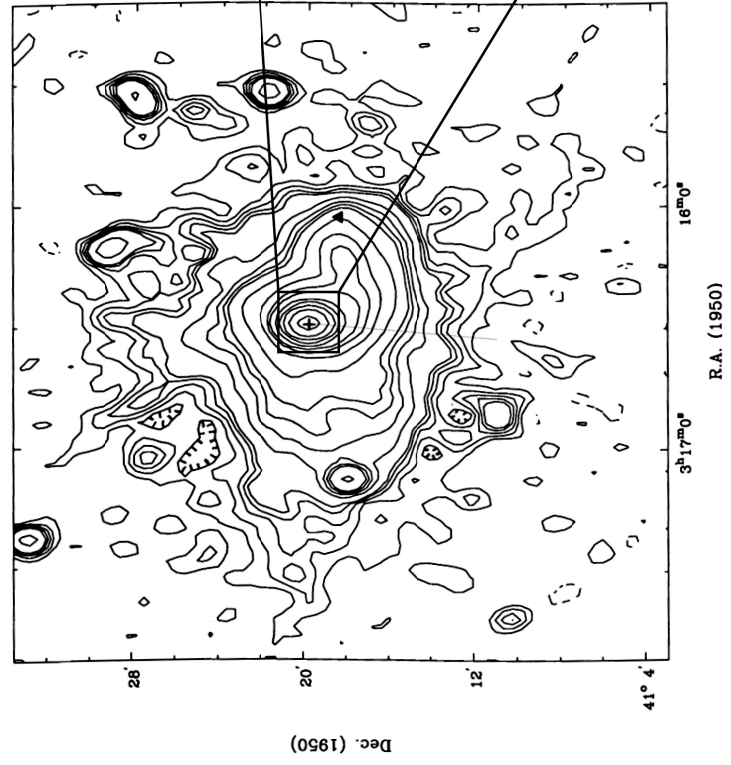


central 'mini haloes:

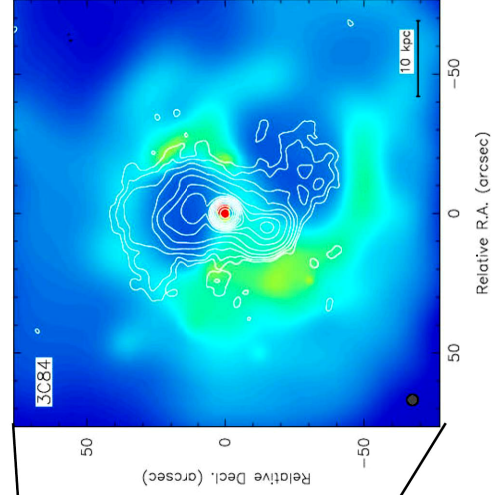
Perseus Cluster



Sijbring (1993)

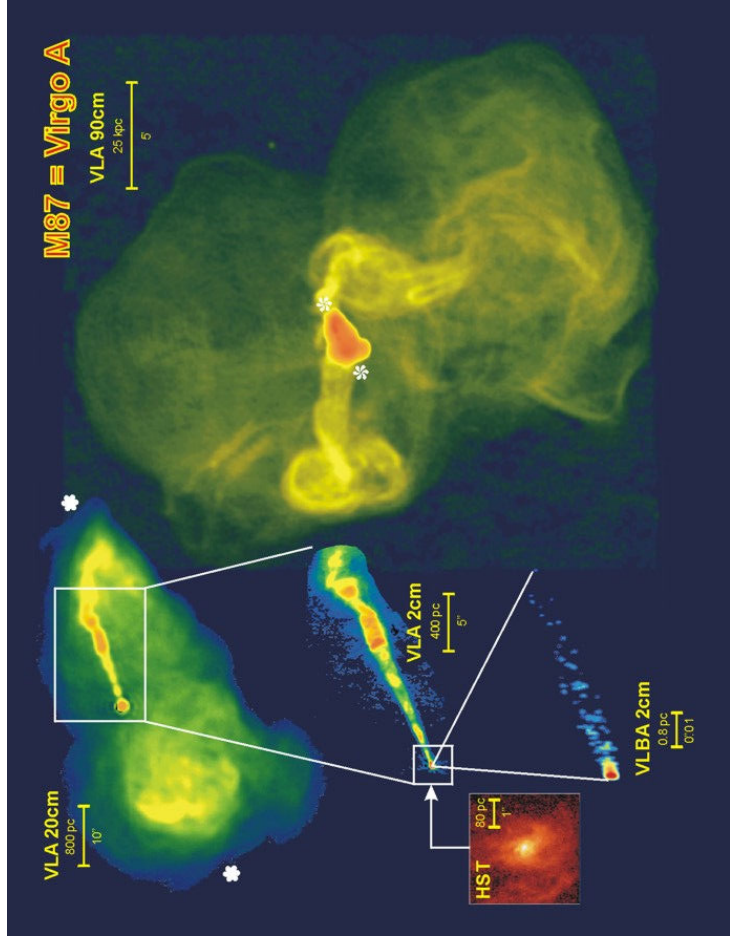
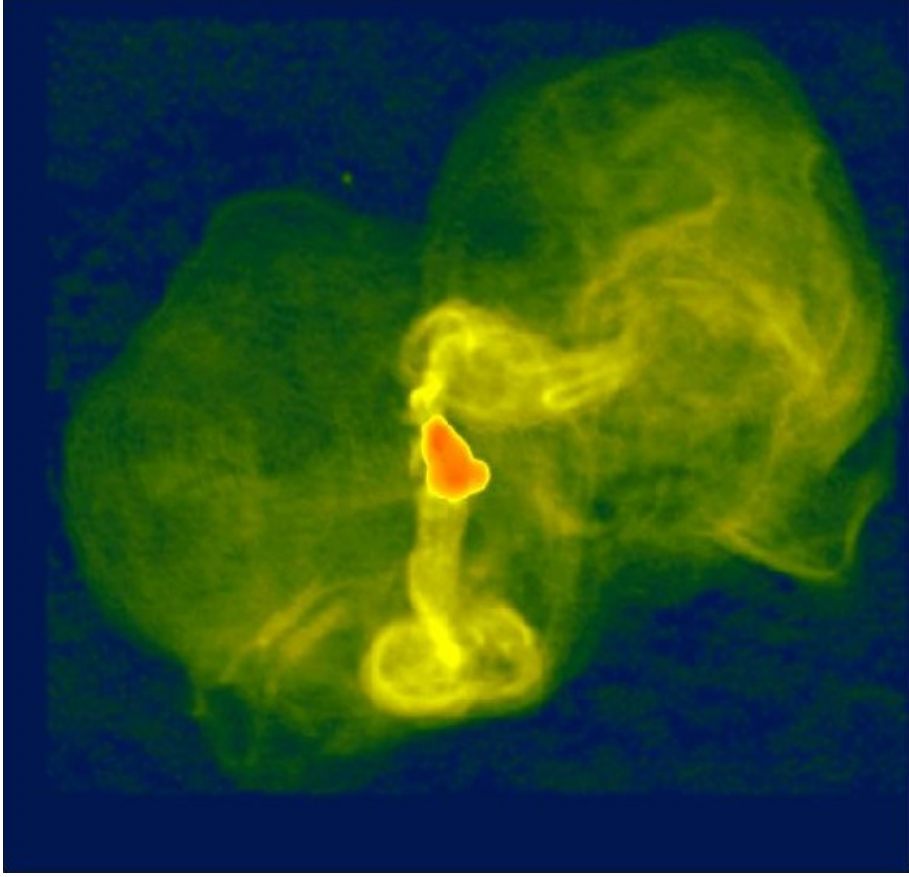


Fabian et al. (2000)

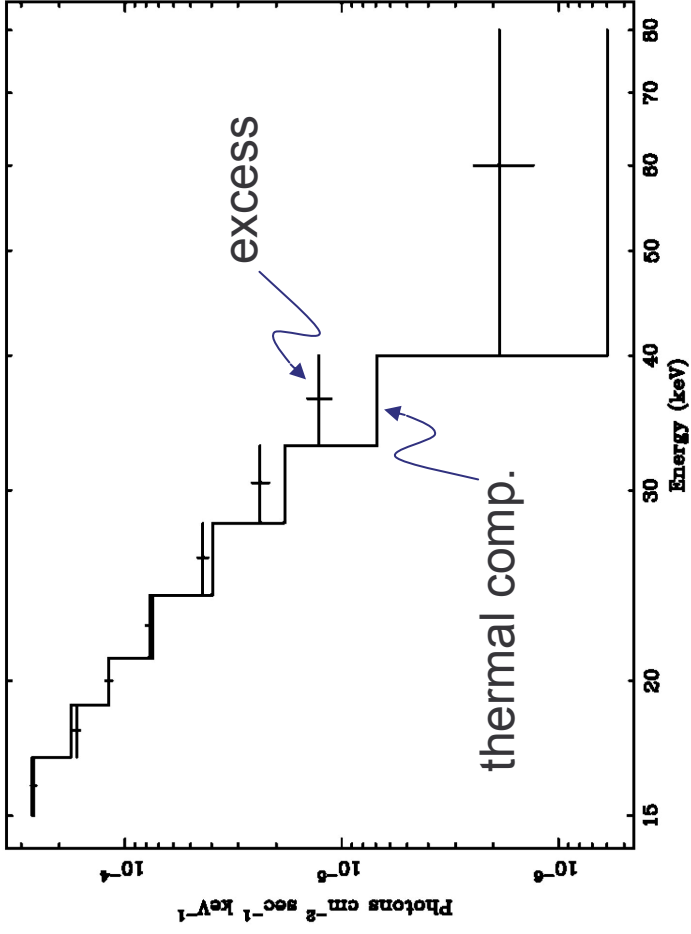


central 'mini haloes:

Virgo Cluster

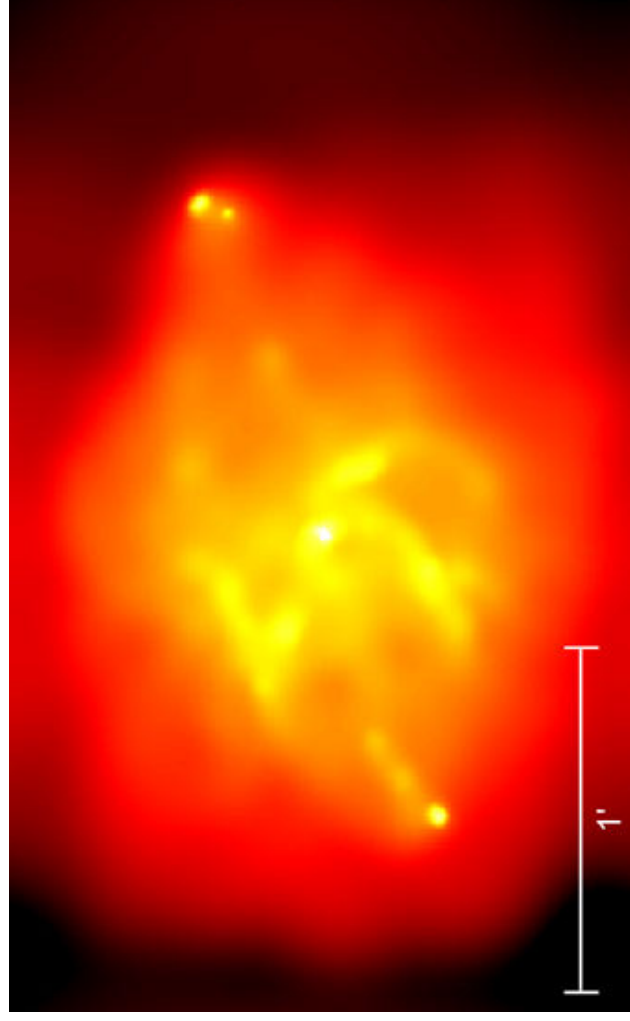
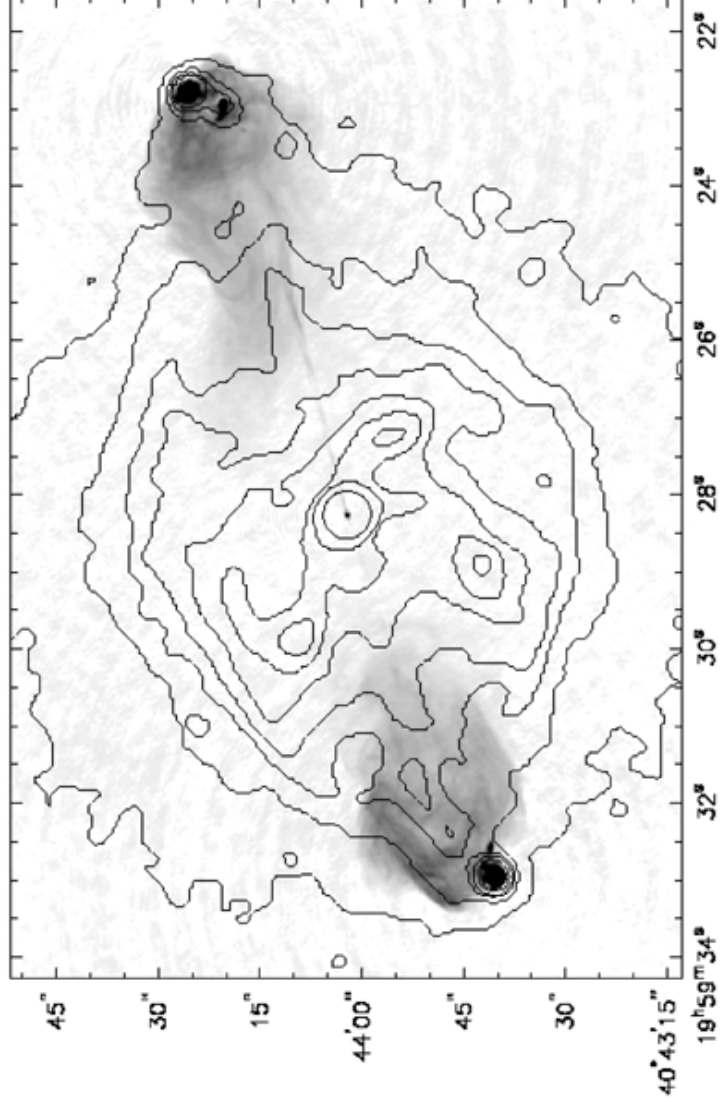


nonthermal hard X-rays: IC emission



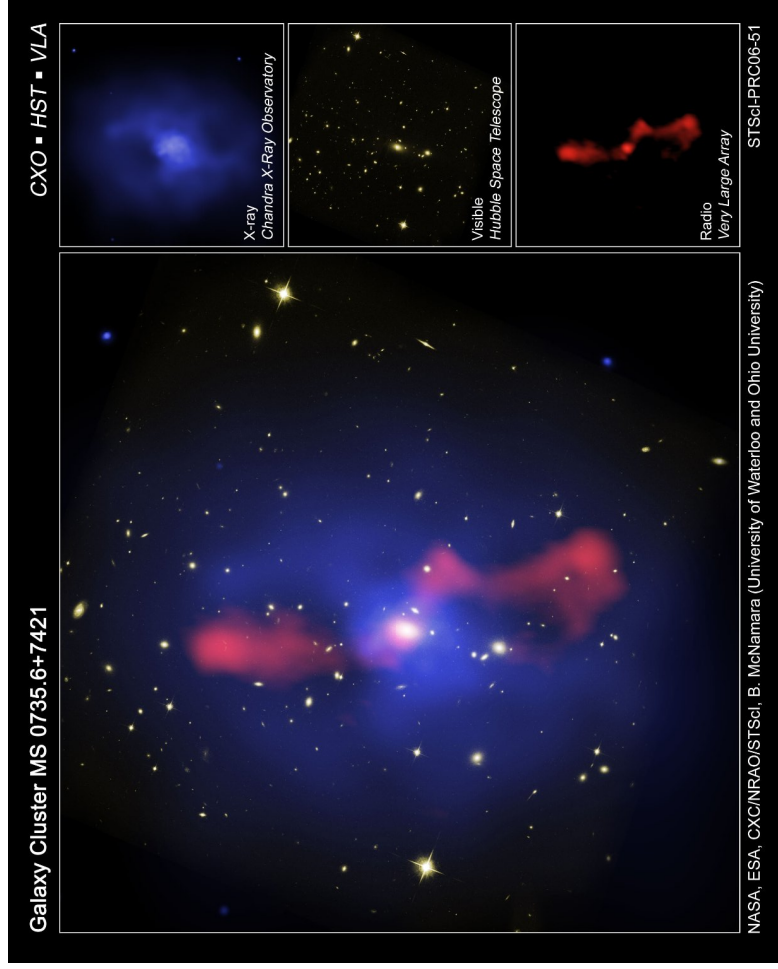
injection of radio plasma
into the ICM:

Cygnus A

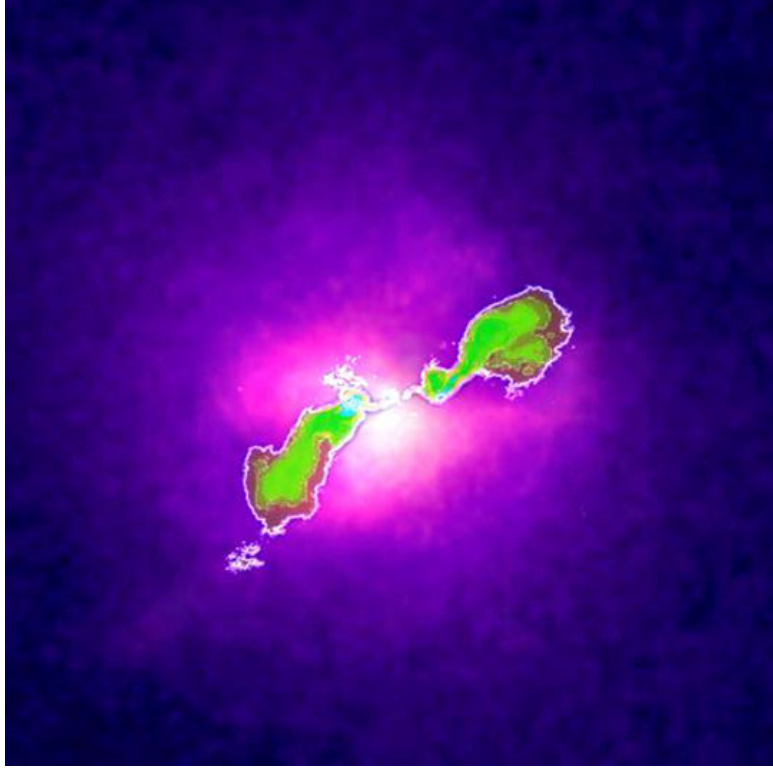


injection of radio plasma into the ICM:

MS 0735.6+7421



Hydra A



the potential of LOFAR

