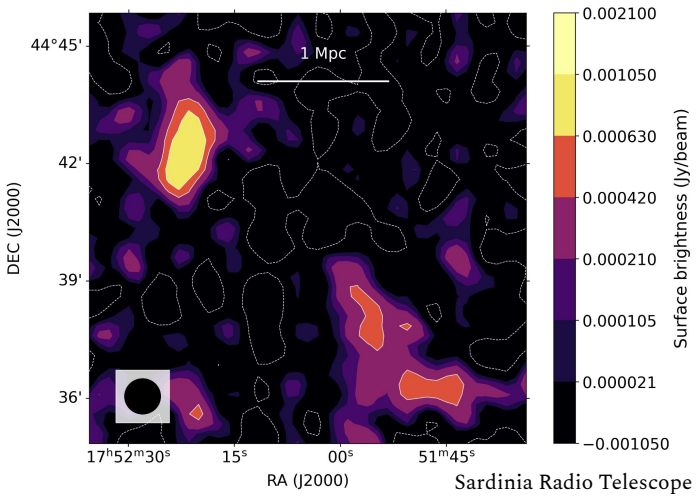
MACS J1752+4440 across the spectrum: from SZ signatures to radio polarization

S. Cocchi [1,2,3], F .Loi[3], M. Murgia[3], V. Vacca[3], F. Govoni[3], P. Marchegiani[3], F. Gandossi[1,2,3]

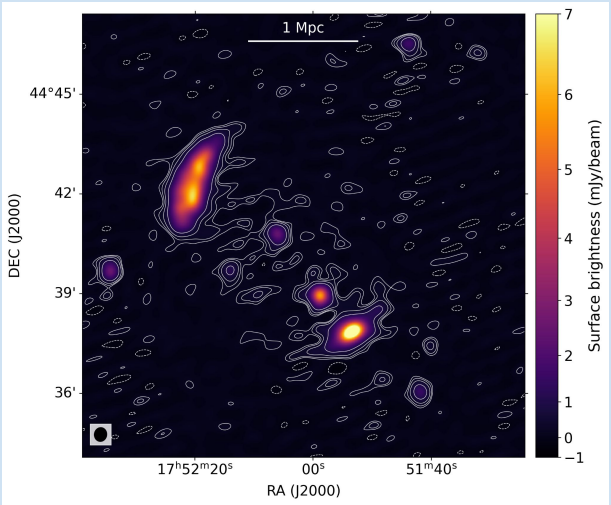
1. Dipartimento di Fisica e Astronomia, Università di Bologna - 2. INAF, Istituto di Radio Astronomia, Bologna - 3. INAF, Osservatorio Astronomico di Cagliari

Galaxy clusters

X-ray + Sunyaev Zeldovich + Radio + Optical



SRT DATA 18.6 GHz



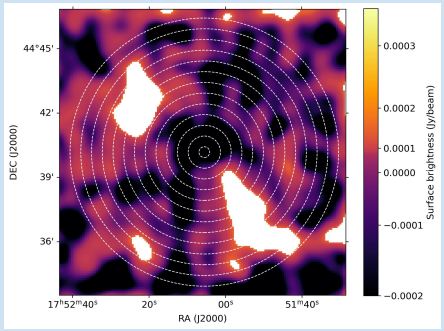
JVLA DATA 1.6 GHz

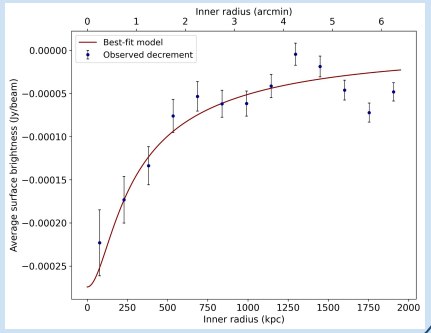
MACS J1752+4440 across the spectrum: from SZ signatures to radio polarization

S. Cocchi [1,2,3], F .Loi[3], M. Murgia[3], V. Vacca[3], F. Govoni[3], P. Marchegiani[3], F. Gandossi[1,2,3]

1. Dipartimento di Fisica e Astronomia, Università di Bologna - 2. INAF, Istituto di Radio Astronomia, Bologna - 3. INAF, Osservatorio Astronomico di Cagliari

First detection of Sunyaev' Zeldovich effect with SRT DATA at 18.6 GHz





Parameter	Median	$-\sigma$	σ
r_c [kpc]	160	−30	+30
$\log n_0$ [cm^{-3}]	-2.6	−0.1	+0.1
β	0.6	−0.1	+0.1

$$\sigma_{\rm RM}(r) = K\, B_0^{1/2}\, \Lambda_c^{0.5}\, n_0\, r_c^{1/2} \left(1+\frac{r^2}{r_c^2}\right)^{-\frac{6\beta(1+\eta)-1}{4}} \sqrt{\frac{\Gamma(3\beta(1+\eta)-0.5)}{\Gamma(3\beta(1+\eta))}}$$

B_0~2 μG

Radio polarization with JVLA DATA at 1.6 GHz