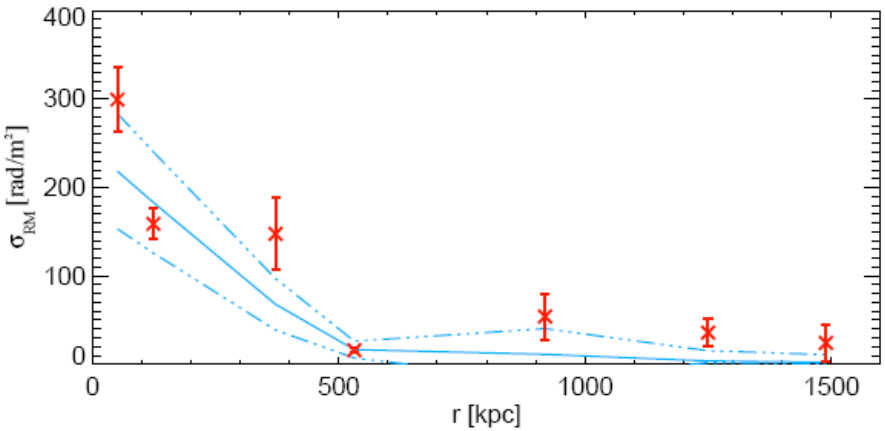
## THE COMA CLUSTER (BONAFEDE ET AL. 2010)

*RM observations of 7 sources in the field - magnetic field numerical simulations*




$$< B > (r) = B_0 \left( \frac{n_e}{n_0} \right)^{\eta}$$

Best model:
B0=4.7 $\mu G$, $\eta$=0.5

$B_0$>7 μG or <3μG
$\eta$>1 or < 0.2
excluded at 99%
confidence level

→ *Implications for radio halos formation models*

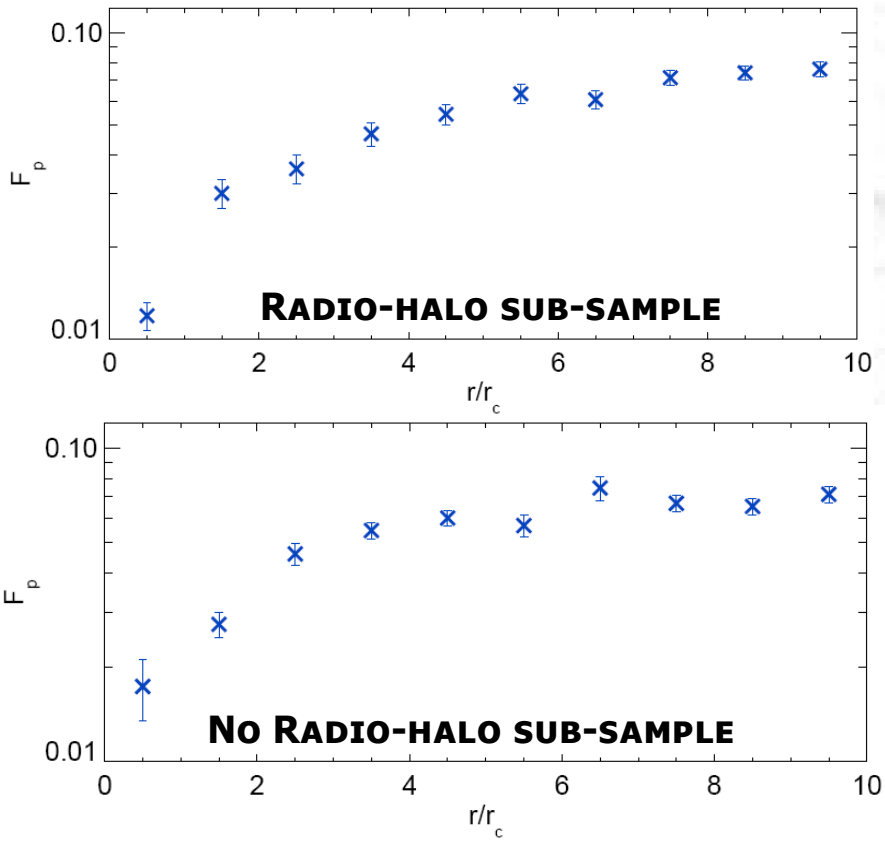
# MAGNETIC FIELDS IN THE ICM

## FROM DEPOLARIZATION OF RADIO SOURCES

33 clusters
from HIFLUGCS catalog

8 host radio halos

Cluster center
→ higher B and gas density
→ higher RM
→ lower fractional polarization




K S test: P = 0.97 No significant difference from this analysis for clusters with and without radio halo

→ *Hadronic (secondary) models disfavored*