# Investigating particle acceleration in Abell 2256 at the lowest frequencies

Sneak preview

Erik Osinga, Reinout van Weeren, et al.

LBA mini symposium 09-03-2021



z=0.058 (Struble and Rood, 1999)

☆



Mass

☆

쇼

# Abell 2256

#### Dynamically disturbed

Various substructures in X-ray Briel+1991, Ge+2020, Breuer+2020 ☆



Halo, Relic, Tails, Fossil plasma,

ন্দ্র

### Extensive multi-freq

#### coverage

公

ជ

F3

SDSS G Do G3 G2

> 200 kpc 3 arcmin

VLA 1.4 GHz (Owen et al. 2014), SDSS r-band (Aguado et al. 2019), Chandra 0.7–2.0 keV (Ge+2020), Composite: Ge+2020

### Extensive multi-freq

 $\hat{\mathbf{x}}$ 

coverage

ጎጉ

☆ except below 100 MHz

SDSS F3 200 kpc 3 arcmin

VLA 1.4 GHz (Owen et al. 2014), SDSS r-band (Aguado et al. 2019), Chandra 0.7–2.0 keV (Ge+2020)

## Cycle 15: 16 hours observations from 16-64 MHZ \*

1. Particle acceleration mechanism in the radio halo

#### 2. Investigate the nature of the relic

First spectral index map <100 MHz by combining LBA-HBA

#### 3. Characterise role of AGN fossil plasma Steepest sources are expected at only the lowest frequencies

公

Î

# Preliminary results: 4 hours of observations 30-64 MHz \$



☆

#### Preliminary results: 4 hours of observations 30-64 MHz ☆



**rms noise** 2.6mJy/beam

> ☆ |\_\_.

 শ্ব

resolution 15″x15″



 $\mathbf{\hat{\omega}}$ 

公

Thanks

Stay tuned for 16-30 MHz and the full 16 hour observation

ជ

Credits: This presentation template was created by Slidesgo, including icons by Flaticon and infographics & images by Freepik