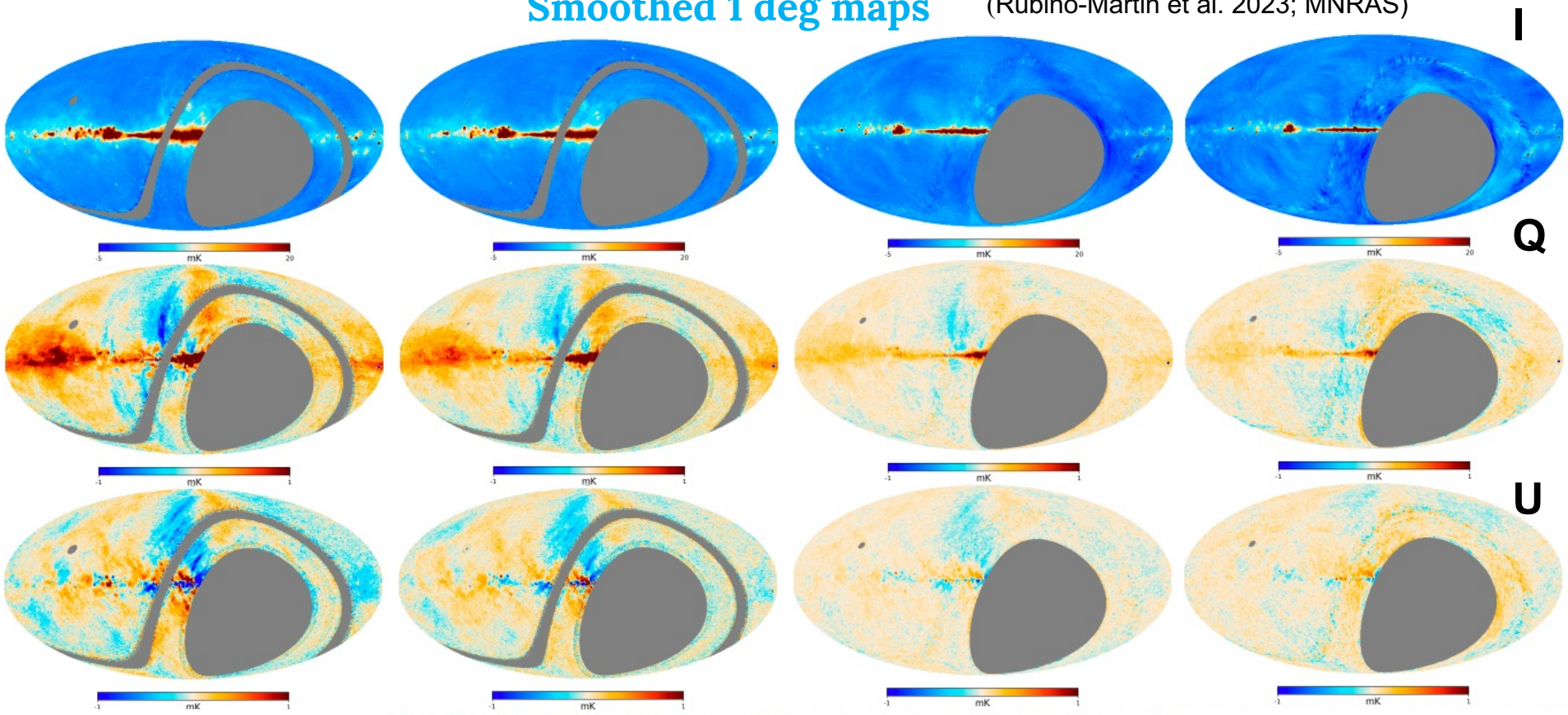
CMB Polarization.

Detection of B-modes requires a better understanding of the synchrotron polarization and potential AME polarization. High sensitivity polarization measurements in the 10-20 GHz range are feasible from ground. Key complement to available WMAP and Planck maps to trace synchrotron

Smoothed 1 deg maps

(Rubino-Martin et al. 2023; MNRAS)



QUIJOTE 11GHz **QUIJOTE 13GHz** **QUIJOTE 17GHz** **QUIJOTE 19GHz**

(Data release Jan 12th, 2023)

Approx. 29,000 deg^2. About 10,000 h of observations with a 2.3 m telescope. Sensitivities in polarization (Q,U): ~35-40 μK/deg → equivalent to 2.4 μK.arcmin @ 100GHz with β=-3.

The future of Polarization at low frequencies (10-20GHz, possibly extended to 5-30 GHz):

Full sky coverage, more sensitive receivers with improved acquisition systems to remove geo-satellite RFI.

Larger telescopes (7-8 m aperture) to provide <20 arcmin resolution polarization measurements in both hemispheres.