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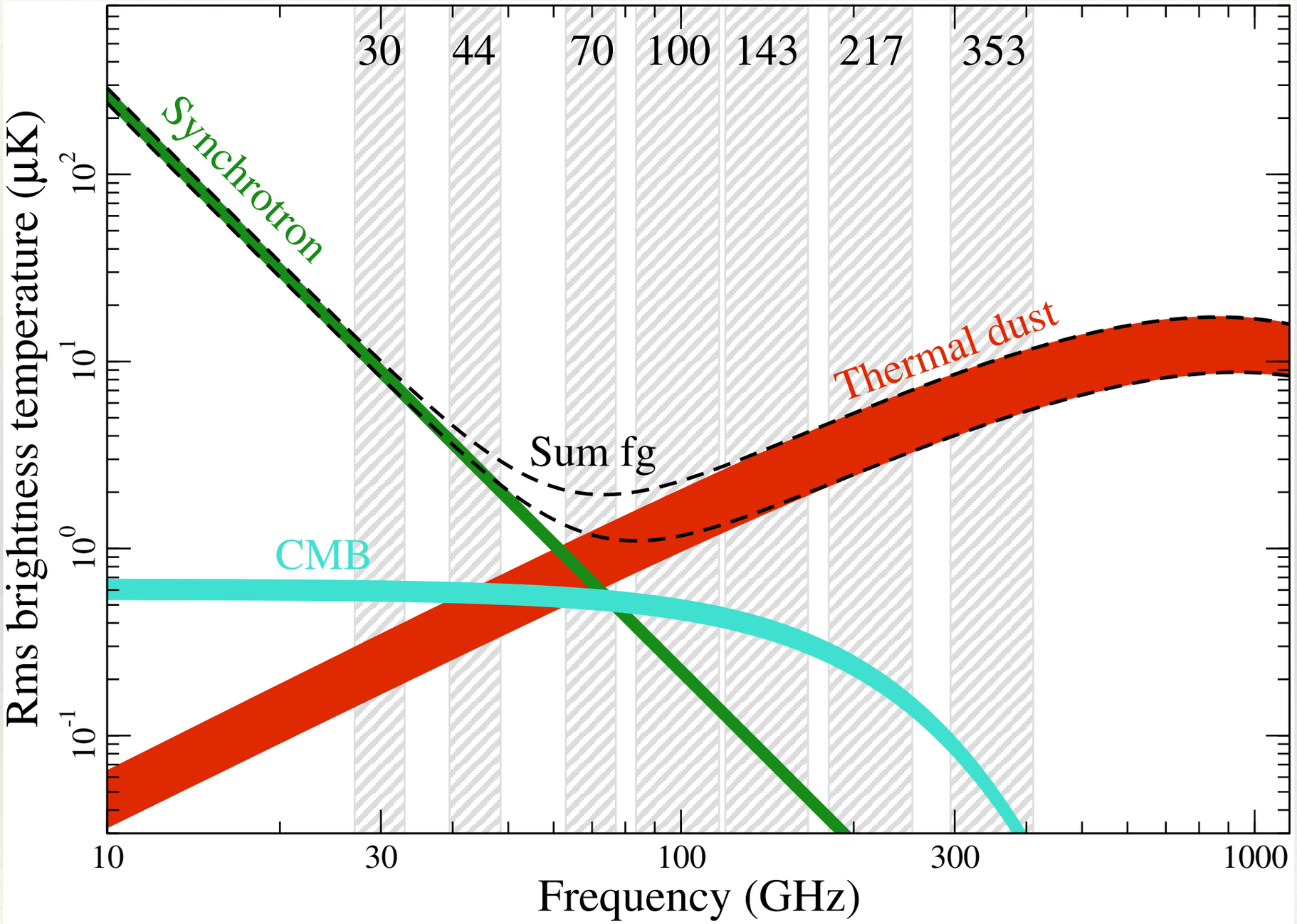
Maximize redundancy

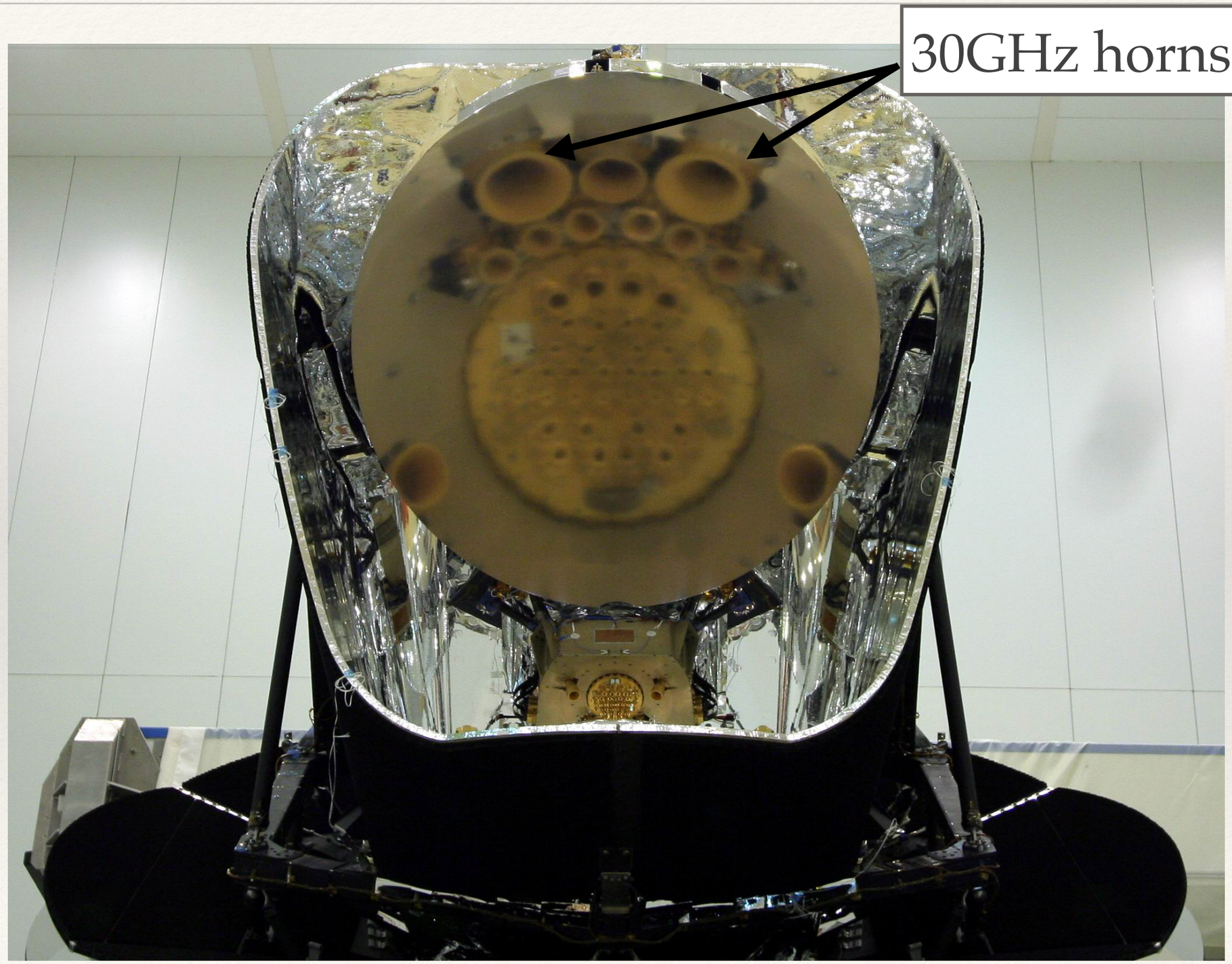
A lesson learned from Planck data analysis

The case of Planck synchrotron channel(s)

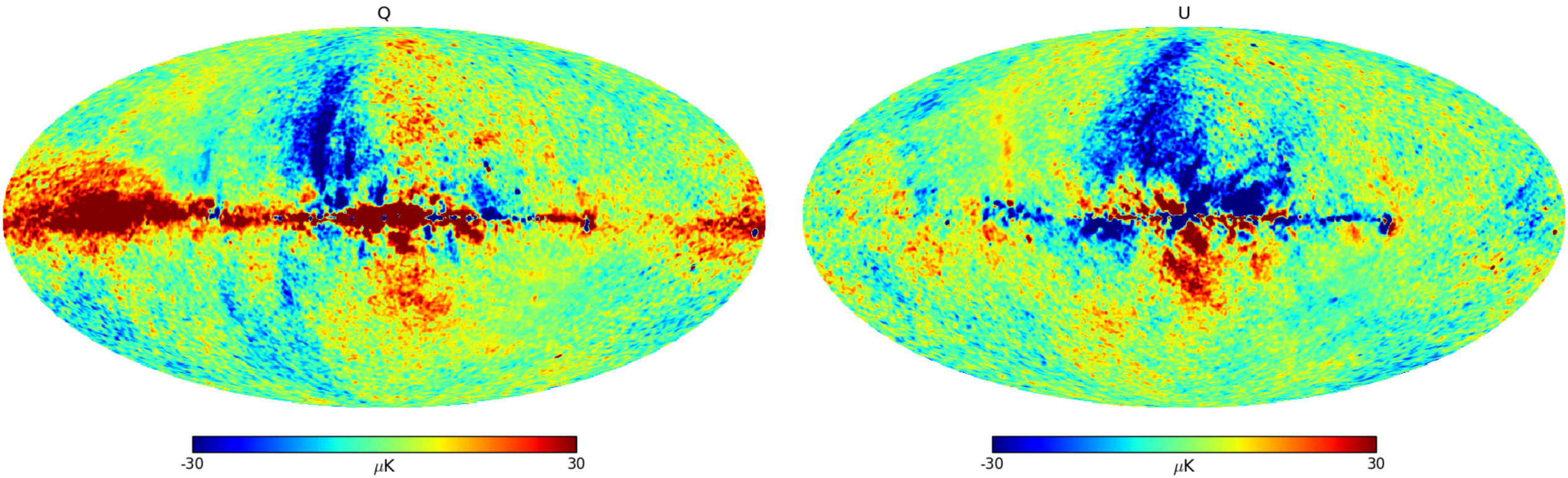


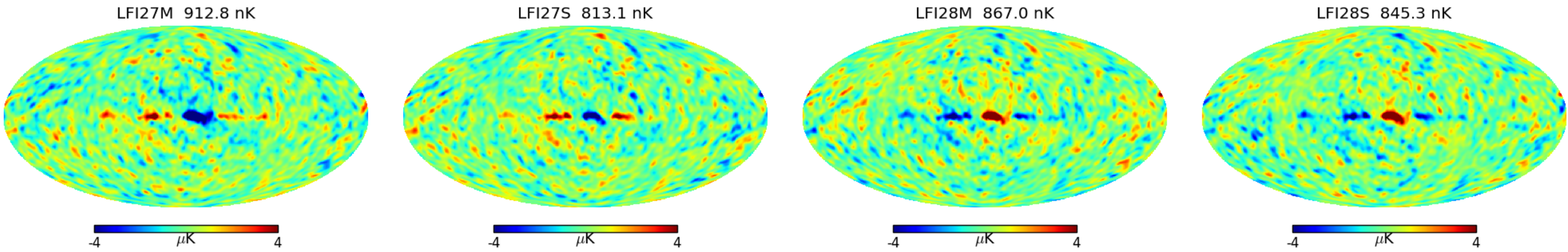
Planck bands and polarized foregrounds from A&A 594 (2016) A10

Two 30GHz horns, 4 polarized radiometers

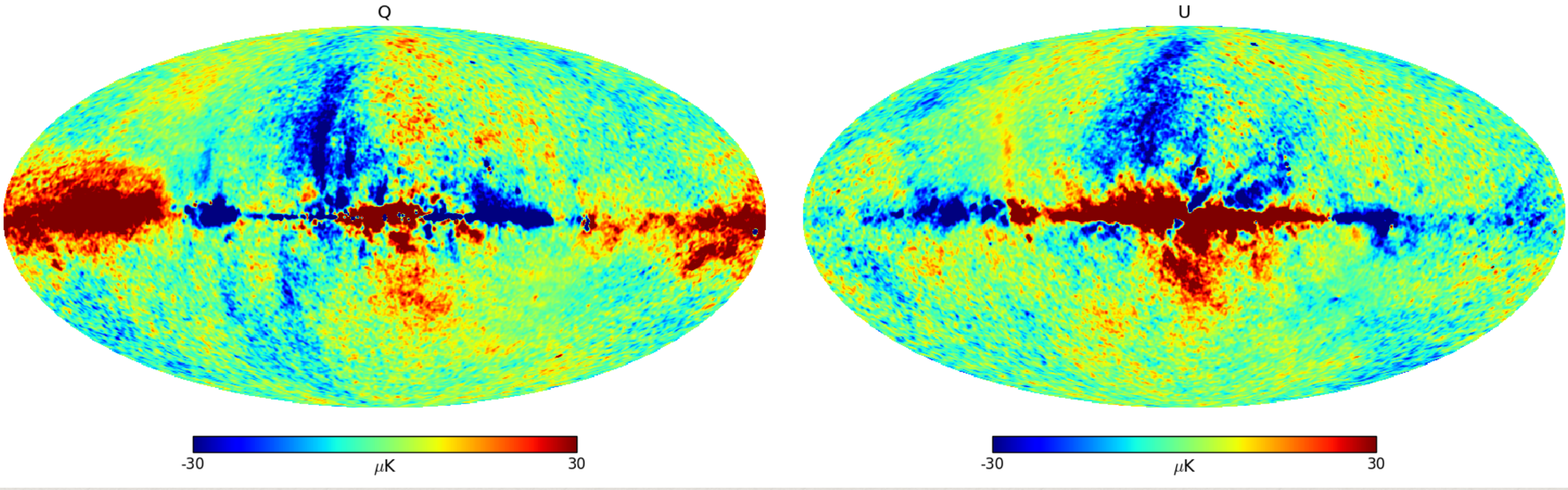


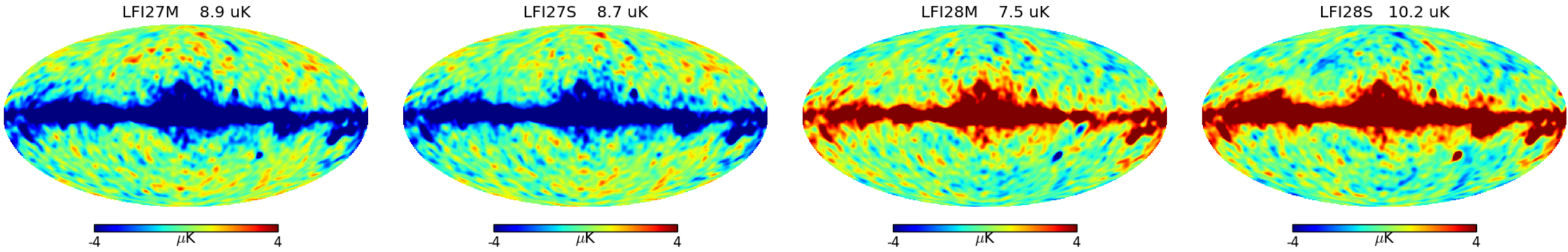
Simulated processing: calibration and bandpass mismatch





Ignore bandpass mismatch





The lesson

Design for redundancy: make the experiment up from independent units.

- detector sets, horns, individual detectors
- years, surveys and sub-survey maps