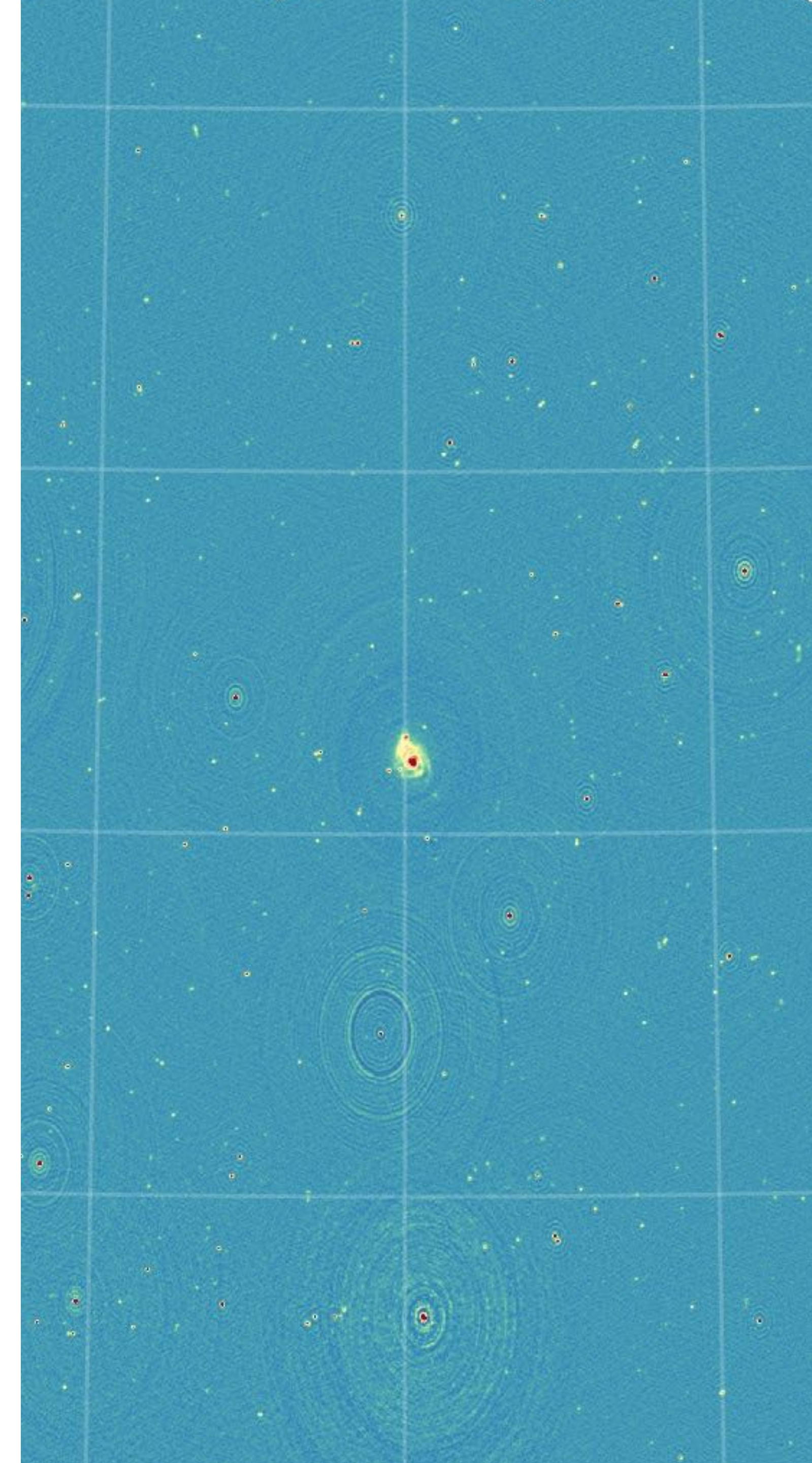


Role of Reference Fields in HI Surveys Latest plans for Apertif/ASKAP

Betsey Adams
Apertif imaging commissioning lead
Head of Apertif Science Operations
8 May 2019



Reference fields and HI surveys

Discussion on reference fields at PHISCC meeting in February:
what is role and utility?

- Validation of data
 - Flux scales
 - Positions
 - etc...
- Scientific utility/comparison of data
 - HI detections
 - HI properties (size, maps, rotation curves)
 - etc...

Reference fields and HI surveys

Discussion on reference fields at PHISCC meeting in February:
what is role and utility?

Continuum data

- Validation of data
 - Flux scales
 - Positions
 - etc...

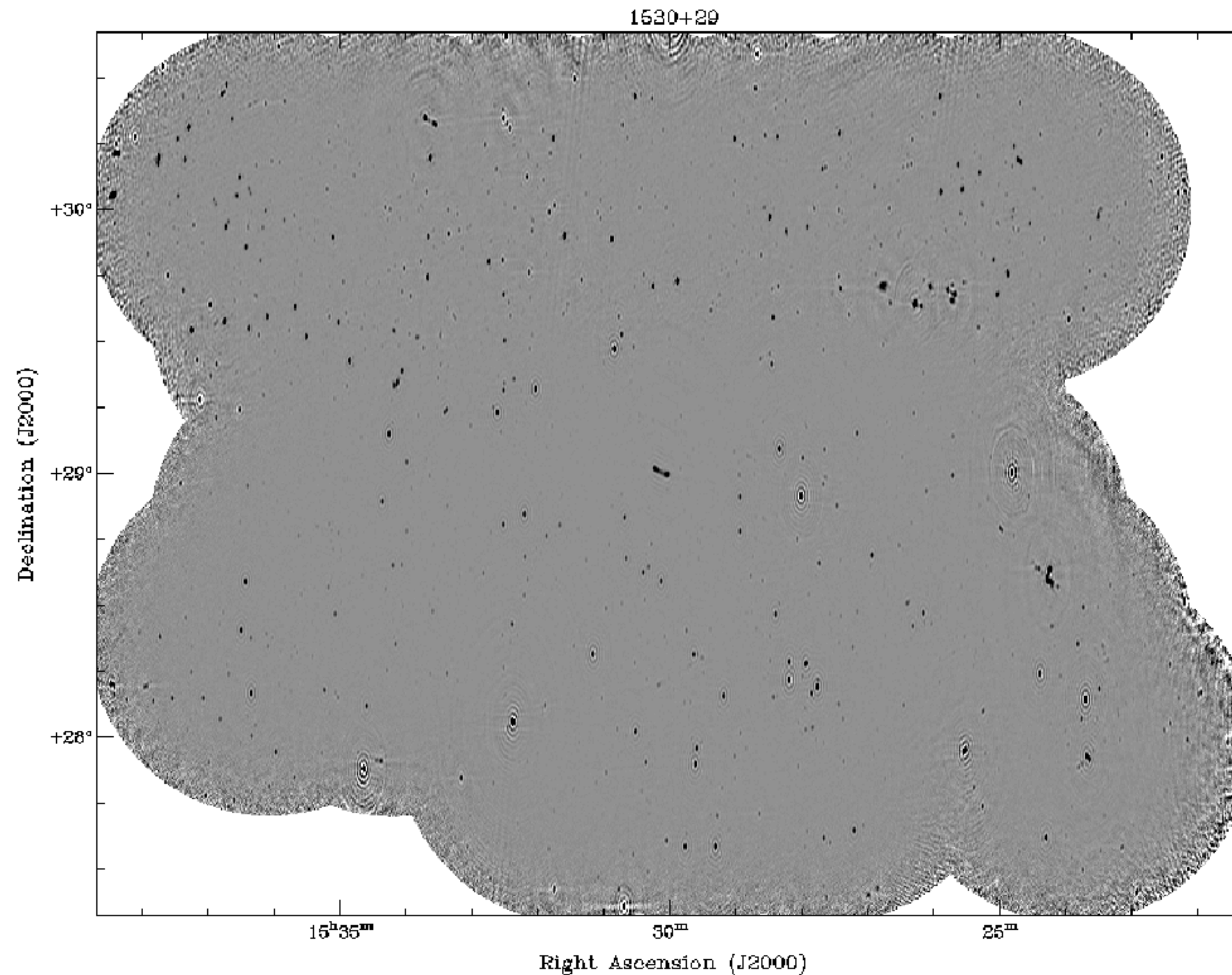
HI data

- Scientific utility/comparison of data
 - HI detections
 - HI properties (size, maps, rotation curves)
 - etc...

Natural synergy between Apertif & ASKAP

- Both phased array feeds with wide field of views and similar angular resolution
 - Aspiration: to eventually connect data from two facilities
- ASKAP can validate with MeerKAT also - link three new facilities
- Emphasis on continuum validation between two facilities
 - Observe northern SPARCS reference field
 - Assume HI validation follows directly
 - People involved: Betsey Adams, Elizabeth Mahony, Emil Lanc, Andrew O'Brien

SPARCS Reference Field w/ Apertif



2 of 12 dishes bad

Issues with image quality

Pipeline updates needed

Next steps

- ASKAP data observed, Andrew O'Brien will start processing
- Update reduction of Apertif data
- Obtain (at least) one more observation (all dishes) with Apertif
- Potential for an additional HI-based field

- Connecting PHISCC & SPARCS
 - HI data relies on continuum for calibration/validation
 - Don't duplicate effort, combine resources