

ASTRON VO Data Collections

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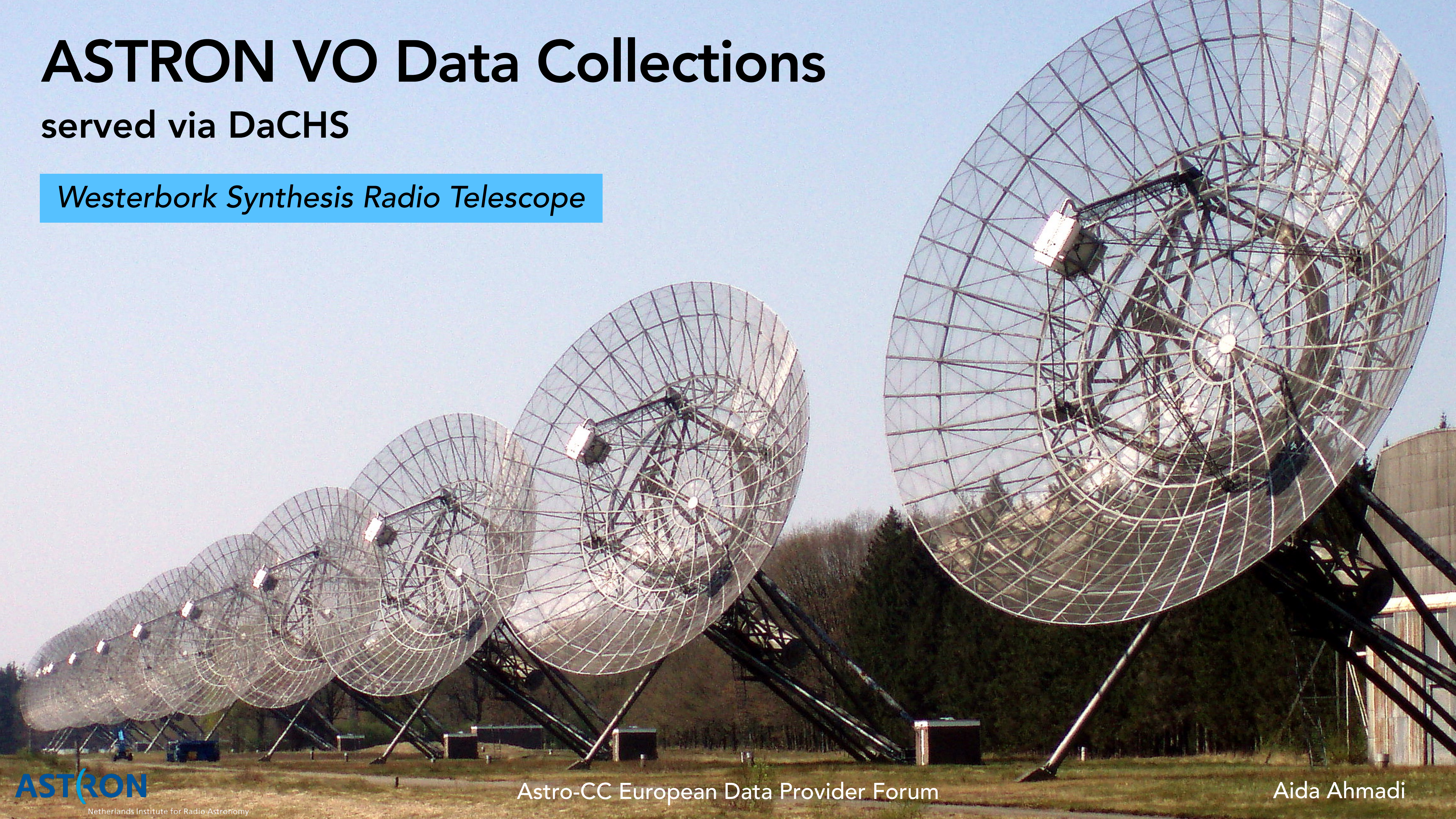
ASTRON

Netherlands Institute for Radio Astronomy

ASTRON VO Data Collections

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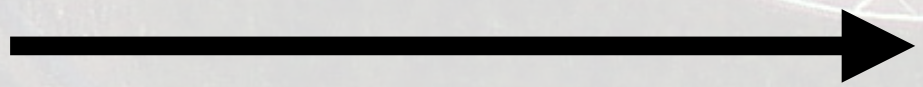
Westerbork Synthesis Radio Telescope



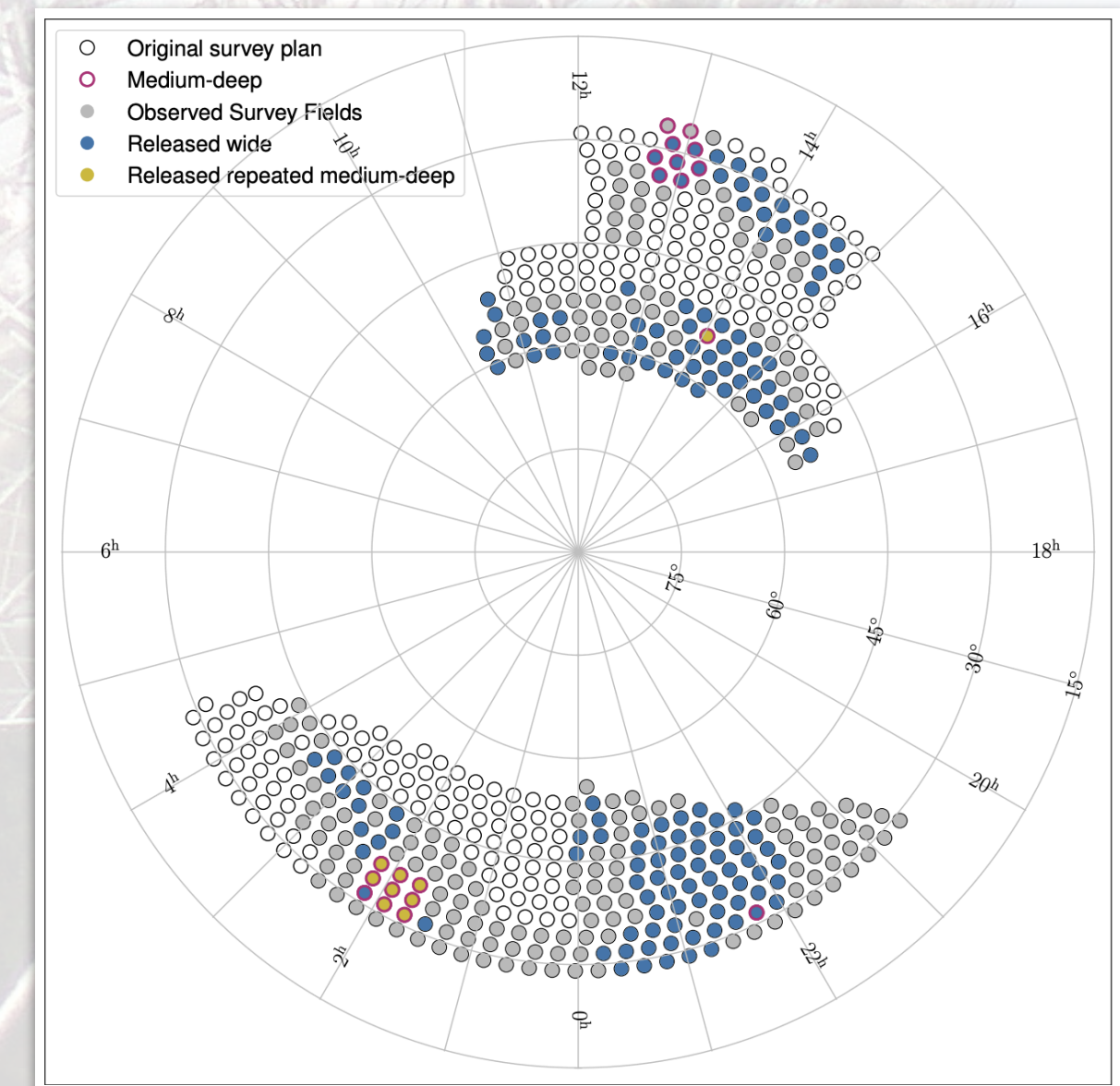
ASTRON VO Data Collections <https://vo.astron.nl/>

served via DaCHS

Westerbork Synthesis Radio Telescope

- ◆ Apertif Radio Transient System (ARTS) DR1 & DR2: Time-domain observations at 1370 MHz covering 2019 - 2022 (PSRFITS images)
- ◆ Observations of 23 FRB detections are accessible
- ◆ Remaining non-detection observations kept on tape: custom page instructions for users access
- ◆ Apertif DR1: Raw observational data (1130-1430 MHz) from the first year of the survey ($\sim 1000 \text{ deg}^2$) + a subset of processed quality-assessed data products 
- ◆ Continuum images, HI spectral cubes, polarization cubes, source catalogue, visibilities (on tape)

Adams et al. 2022



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Low Frequency Array (LOFAR): LBA 10-90 MHz, HBA 110-240 MHz

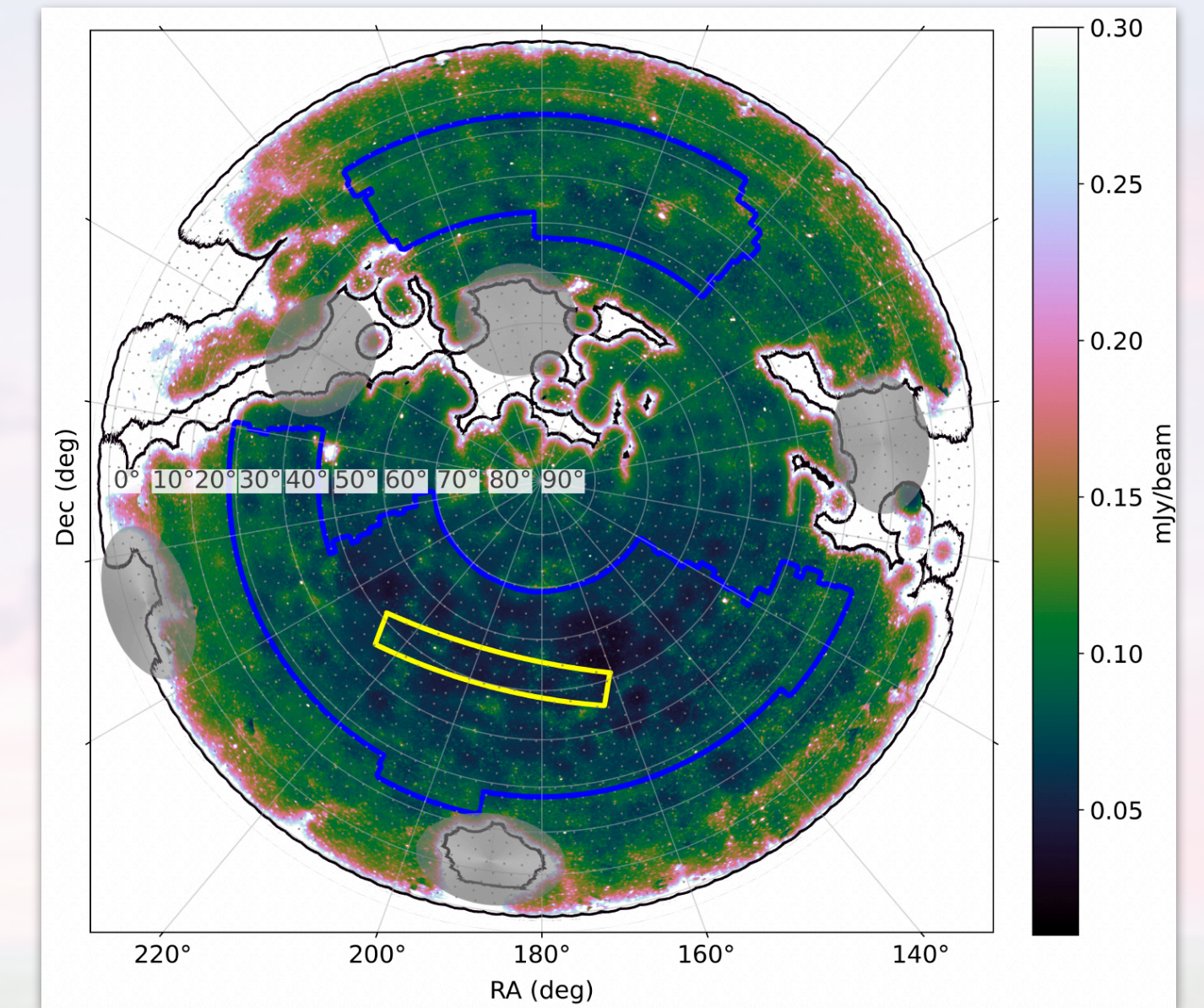
- ◆ Multifrequency Snapshot Sky Survey: image and source catalogues from LOFAR commissioning phase (100 deg²)
- ◆ LOFAR Long-Baseline Calibrator Survey (LBCS): catalog of calibrators used in the LOFAR VLBI (long baseline) pipeline
- ◆ LOFAR LBA Sky Survey (LoLSS): source catalogue and a mosaic image with a cutout service
- ◆ LOFAR Two-metre Sky Survey (LoTSS) PDR, DR1, DR2, DR3
 - ◆ Mosaics (incl. cutout services), source & Gaussian catalogues
 - ◆ >36,000 DR2 file downloads (2 yrs), >400 publications and >1,600 citations!

Third LoTSS data release

<https://doi.org/10.25606/SURF.lotss-dr3>

- ◆ 88% of the northern sky at 144 MHz
- ◆ Two collections at SURF Data Repository: 
- ◆ Stokes I mosaic images at 6" & 20" resolutions
→ 1580 mosaics (4740 files) on disk
- ◆ All data associated with individual pointings: I, Q, U, V maps + uv-data + calibration solutions
→ 2551 pointings (>20,000 files) on tape
- ◆ Source catalogues of >13 million radio sources & the corresponding ~17 million Gaussian components
- ◆ In total ~600 TB of storage needed
- ◆ Exposed via ASTRON VO → <https://vo.astron.nl/>

Shimwell et al. 2026



Where?	Description	What?
Link (994.97 MiB)	The high (6") resolution Stokes I 120-168MHz continuum mosaic image (fits format)	#this ivo://astron.nl/~?LoTSS-DR3/HP-0
Link (117.2 kiB)	Preview of the observed area	#preview ivo://astron.nl/~?LoTSS-DR3/HP-0
Link (71.53 MiB)	The low (20") resolution Stokes I 120-168MHz continuum mosaic image (fits format)	#coderived ivo://astron.nl/~?LoTSS-DR3/HP-0
Link (6.01 GiB)	The high (6") resolution Stokes I 120-168MHz continuum mosaic PyBDSF image products (source mask, source model, residual and rms). The high (6") and low (20") resolution Stokes I mosaic weight images showing the weights of the mosaiced pointings as a function of position. (tarred fits format; on tape) [HP-misc-0.tar]	#auxiliary ivo://astron.nl/~?LoTSS-DR3/HP-0
Link (19.5 kiB)	Raw data in the Lofar Long-Term Archive	#progenitor ivo://astron.nl/~?LoTSS-DR3/HP-0