

SKA: astrophysics acquisition

- Acquire uvw visibility (Fourier freq), not on a grid, then reconstruct image
- Large stream of data (1Tb/s), not preserved on the observatory
- Limited computational power (peak 2MW)

Astronomers reluctant to use AI for image reconstruction

Simulator of SKA:

- Python library: [Oskar](#)

AI use-cases: SKA

- Identifying events and anomalies, monitoring the pipeline
 - Classification of the constant sources (image or fourier domain)
- Categorizing transient element, which can be artefact (fourier domain)
 - Possible to generate some data
- Image reconstruction: potentially for dynamic imaging

Work plan: Find representative instances of SKA's workflows

- Inference:
 - Run an AI model on a large image (image reconstruction)
 - Run an AI model on a stream of many images
- Training:
 - Train a model on online data (compression of uvw plan)