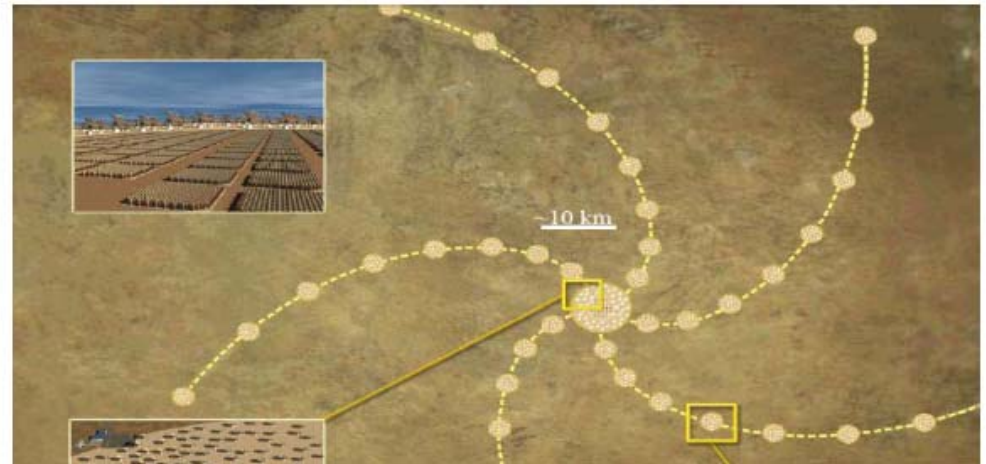
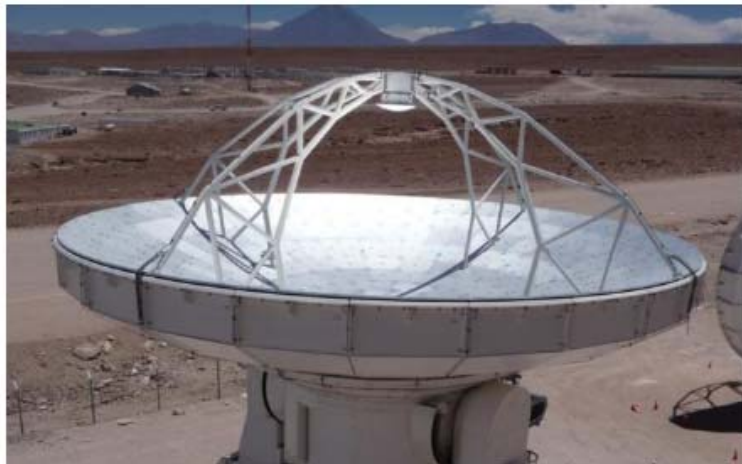


## TC-SKAR (2009 – 2011)

Thermoplastic Composite SKA Reflector



- Develop an industrial automated process to produce composite SKA dishes with a constant high quality
- Cost reduction through:
  - Fully composite reflector and support structure
  - Reflective composites through integration of a metal mesh or a reflective coating.
  - Development of a specific composite based on a thermoplastic polymer
    - Thermal coefficient of expansion of practically zero
    - Low weight, high stiffness.

### Deliverables

- Design of the composite dish must meet the specification of the SKA program.
  - ie. surface accuracy, reflectivity of the dish in all positions and given weather conditions.
- Enough knowledge for building a demonstrator in next project.

### Status

- Two composite based design concepts evaluated.
- First reflectors on scale of combined material (composite + reflective part) ready.
- Material research dielectric and reflectivity nearly finished.
- Material research mechanical ongoing.
- Research for welding of thermoplastic composites ongoing.

### Next

- Material choice
- Final design and production method
- Testing partial prototype

