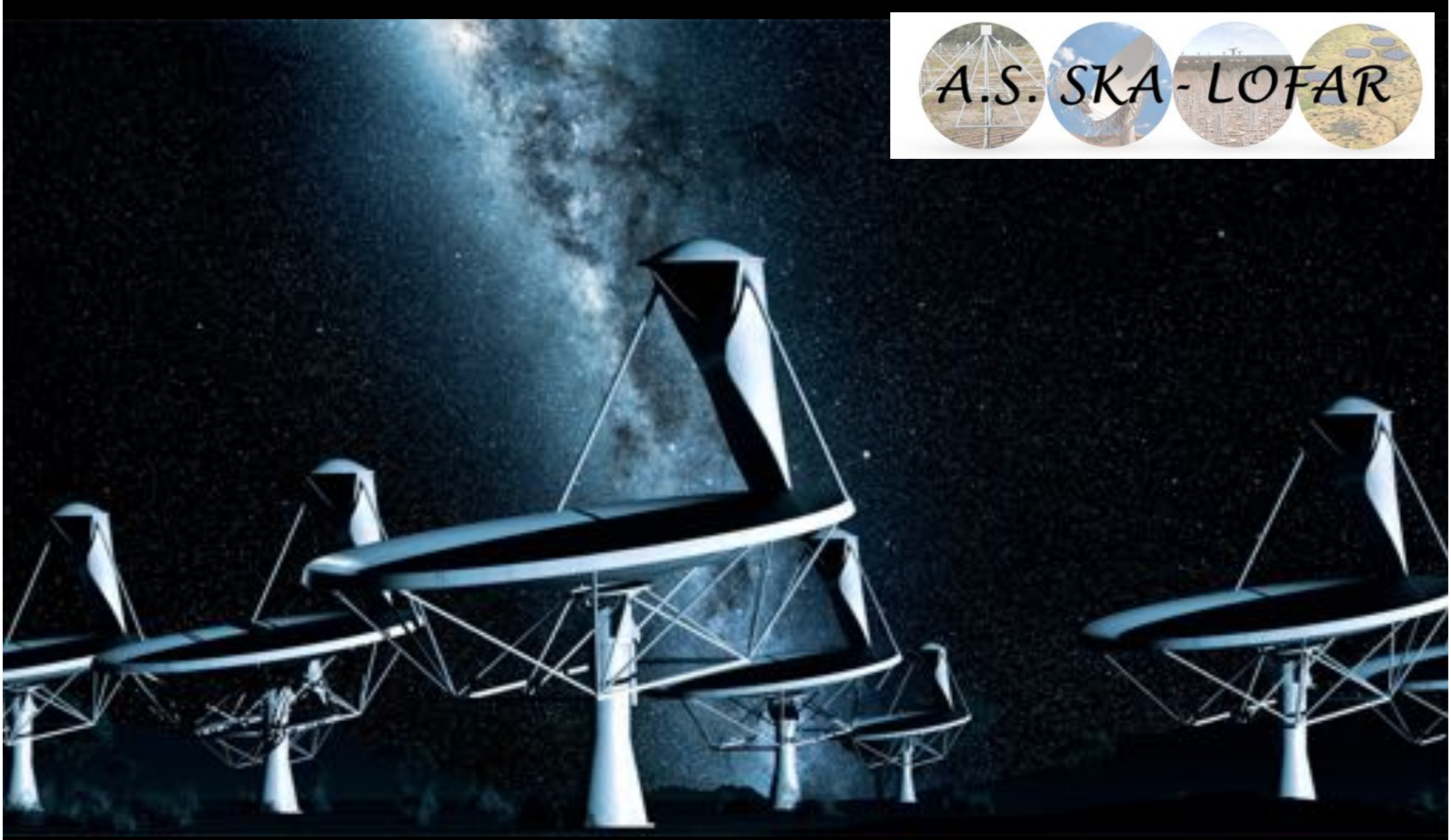
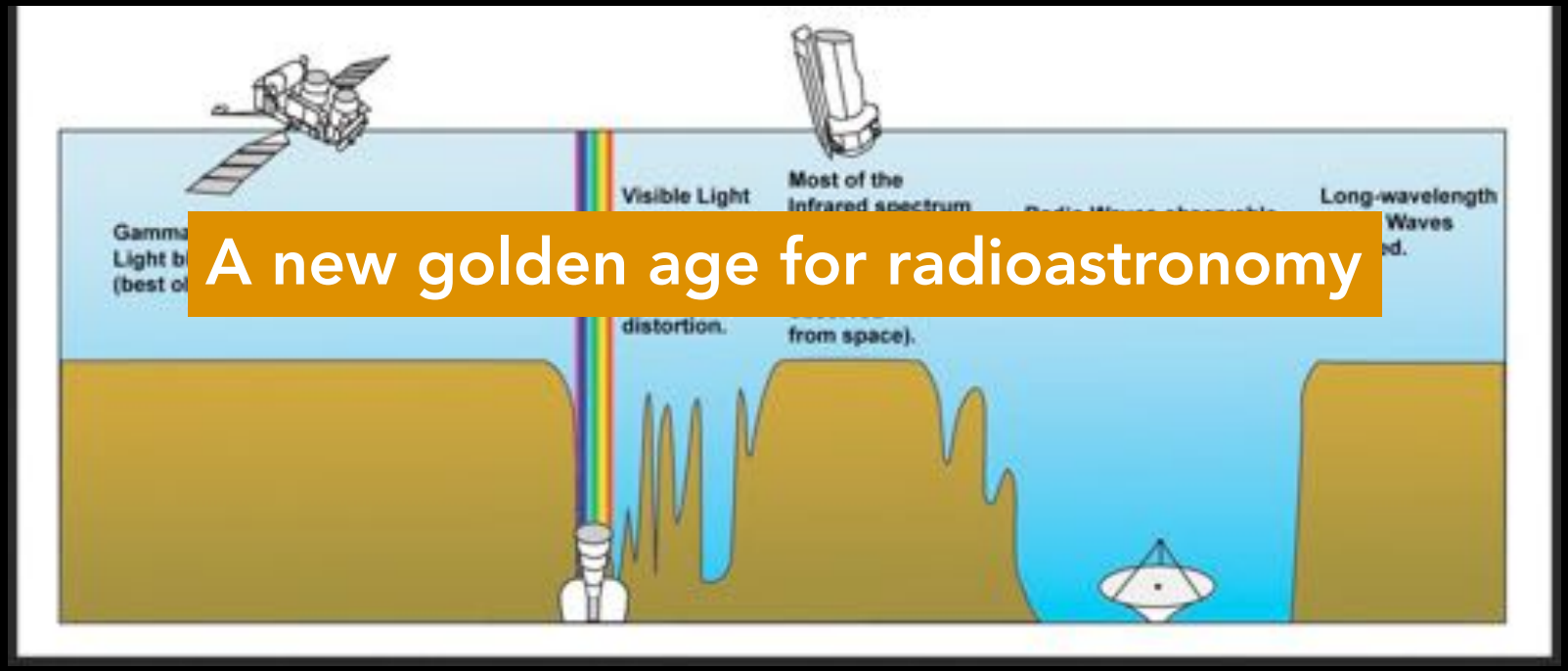


SKA PATHFINDERS & PRECURSORS

S. CORBEL (UNIV. P. DIDEROT & CEA SACLAY & OBS. PARIS)

MINUTE BREAK: RADIOASTRONOMY



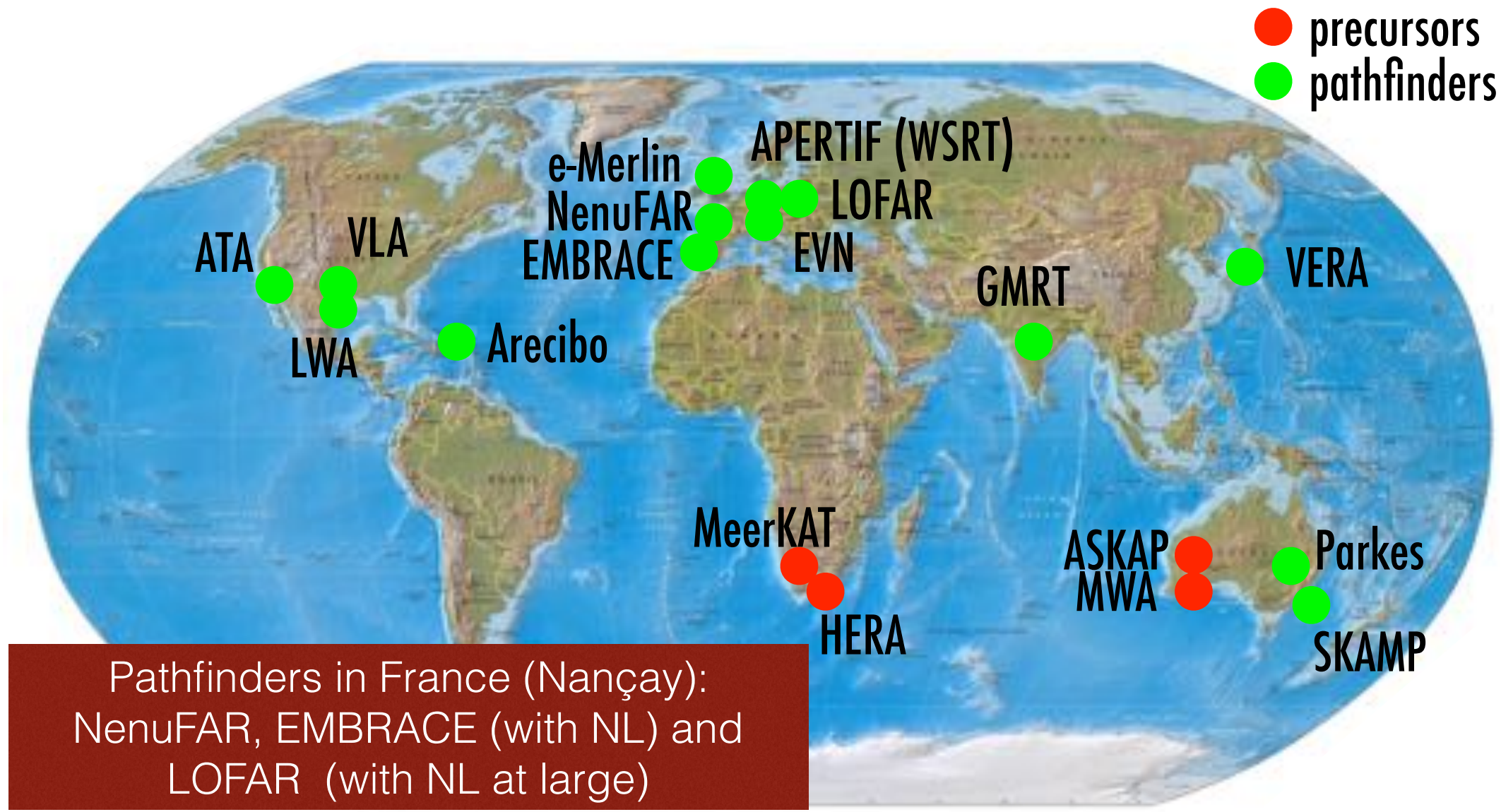
A new golden age for radioastronomy

Phased arrays v.s. **pointed telescope**

SKA pathfinders & precursors

- **Precursor**: A telescope on one of the two construction sites
- **Pathfinder**: SKA-related technology, science and operations activity
- To apply for a designation, **an "SKA Contribution" must satisfy** one or more of the **following criteria** in the areas of technology, science and operations:
  - it contains **new technical elements** that have not been tried before on the scale of a large telescope and which are part of the SKA Baseline Design – **technology**;
  - it will carry out **observational tests**, both simulated and real, that explore **new capabilities** at flux density and dynamic range levels similar to or scalable to the full SKA – **science**;
  - it tests **methods of scheduling and allocating** time similar, or scalable to, that needed for the SKA – **operations**.

SKA pathfinders/precursors



Pathfinders in France (Nançay): NenuFAR, EMBRACE (with NL) and LOFAR (with NL at large)

SKA PRECURSORS: ASKAP

- Location: Australia
- Max Baseline : 6 km
- Frequency coverage: 0.7-1.8 GHz
- 36 antennas (12 m) with PAF (30 deg^2 FOV), 16 avail. —> 24 now integrated.
- Full ASKAP operational early 2019 at shared risk.

Large FOV —> Surveys

SKA PRECURSORS: MEERKAT

- Location: South Africa
- 64 antennas (13.5 m) over an 8-km baseline
- Frequency coverage: 0.5-10 GHz
- FOV: 1.69 deg^2 @ 1 GHz
- Fully deployed in March 2018 (32 in march 2017)
- Inauguration next week