Calibration

- Lesson from LOFAR: astroparticle physicists and astronomers **think differently!**
  - for ns pulse detection it is impossible to calibrate on sources in the sky. Good calibration of antennas needed!

- Near field imaging: **directional gain pattern** must be known

- **Nanosecond relative timing** required (LOFAR has single clock in core + uses RFI source for small corrections)

- **Frequency band pass** critical for spectrum analysis.

- **Absolute calibration.** LOFAR uses galactic background (possible for SKA-low above 50 MHz?) & reference source.

- What is the calibration strategy? In situ?

- Note: looking at raw time-series data has brought to light various issues at LOFAR, and help to improve general data quality!