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Tri-band receiver for Onsala Space Observatory

Onsala Space Observatory (OSO), the Swedish National Facility for Radio Astronomy, operates a 20 m-diameter millimetre-wave telescope a 25 m-diameter cm-wave telescope two 13.2 m-diameter VGOS antennas as well as a LOFAR station at Onsala. Furthermore, OSO is involved in several international projects such as European VLBI Network (EVN), International VLBI Service (IVS) for Geodesy and Astrometry, Atacama Large Millimeter/submillimetre Array (ALMA) and Square Kilometre Array (SKA). OSO has developed and built receivers for both the submm/mm wavelength ALMA array and for the cm/m wavelength SKA array which is unique amongst radio observatories across the world. In this talk we will describe the plan to build a tri-band receiver for the 20-m telescope at Onsala. The receiver will be able to simultaneously observe at 1.3 cm, 7 mm and 3 mm wavelengths and uses its long wavelength data to remove atmospheric effects at short wavelengths, dramatically increasing the number of sources in which black holes and jet formation regions can be imaged.

Author: LINDQVIST, Michael (Chalmers)

Presenter: LINDQVIST, Michael (Chalmers)