

# LOW FREQUENCY RADIO ASTRONOMY FROM EARTH ORBIT

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**Abstract.** Low frequency radio astronomy for the purpose of this discussion is defined as frequencies  $\lesssim 100$  MHz. Since the technology is fairly simple at these frequencies and even Jansky's original observations were made at 20.5 MHz, there have been many years of research at these wavelengths. However, though radio astronomers have been working at low frequencies since the first days of science, the observing limitations and the move of much of the effort to ever shorter wavelengths has meant that most areas still remain to be fully exploited with modern techniques and instruments. In particular, the possibilities for pursuing the very lowest frequencies by interferometry of ground to space, in Earth orbit, or from the Moon promises a rebirth of work in this wavelength range.

We present concepts for space-ground VLBI and a fully space-based array in high Earth orbit to pursue the astrophysics which can only be probed at these frequencies. An Orbiting Low Frequency Radio Astronomy Satellite (OLFRAS) and a Low Frequency Space Array (LFSA) are two concepts which will open this last, poorly explored area of astronomy at relatively low cost and well within the limits of current technology.