

## THE VLA LOW-FREQUENCY SKY SURVEY

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We present an overview of the ongoing VLA Low-frequency Sky Survey (VLSS, formerly known as 4MASS). The VLSS will map an area of 9.1 sr covering the entire sky above a declination of -30 degrees, at a frequency of 74 MHz or 4 meter wavelength, with an unprecedented combination of sensitivity and resolution at this low frequency. The observational challenges at this wavelength include radio frequency interference (RFI), ionospheric phase distortions and a large field of view filled with sources. These challenges have been surmounted by a variety of new algorithms. The principle data products from the survey will be a set of publicly available images along with a source catalog of approximately 80,000 objects. Thus we will create an on-line virtual observatory at this previously unexplored frequency which will complement other major surveys at higher frequencies such as the NVSS. From these data, statistically useful samples of extra-galactic and Galactic objects, such as high redshift radio galaxies, galaxy clusters, supernova remnants and pulsars can be assembled for further study. In addition to the many scientific benefits of this survey, creating a sky model at this low frequency will help in the use and design of the planned next-generation of large low frequency telescopes such as LWA and LOFAR. The observations are now roughly 50% complete, and we expect to observe the majority of the remaining fields by spring 2005 with an anticipated public data release in the latter half of 2005. Data products and more information are available on our website (URL:<http://lwa.nrl.navy.mil/VLSS/>).

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