

Probing galaxies and the Cosmos with the Giant Metrewave Radio Telescope

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The Giant Meterwave Radio Telescope (GMRT), built and operated by NCRA-TIFR is one of the most sensitive radio telescopes in the world at many of its frequencies of operation. Its recently completed upgrade ensures that the telescope will continue to maintain its international competitiveness for the immediate future. I will present some of the recent work done with the upgraded GMRT (uGMRT), with particular emphasis on the contributions that uGMRT observations have made to our understanding of how star forming galaxies evolve over cosmic time. Another area that has been of growing interest to the radio astronomy community is the study of transient sources, i.e. sources whose emission lasts for periods as short as a few milliseconds. These sources are of interest not only in themselves, but also as probes of the tenuous inter-galactic medium. I will also discuss some ongoing instrumentation work at the uGMRT aimed at providing the capability to do cutting edge transient studies.