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THE SMALL ISOLATED GAS-RICH IRREGULAR DWARF (SIGRID) GALAXY SAMPLE: DESCRIPTION AND FIRST RESULTS

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Abstract

Using an optically unbiased selection process based on the HIPASS neutral hydrogen survey, we have selected a sample of 83 spatially isolated, gas-rich dwarf galaxies in the southern hemisphere with *cz* between 350 and 1650 km s^{-1}, and with *R*-band luminosities and H I masses less than that of the Small Magellanic Cloud. The sample is an important population of dwarf galaxies in the local universe, all with ongoing star formation, and most of which have no existing spectroscopic data. We are measuring the chemical abundances of these galaxies, using the integral-field spectrograph on the Australian National University 2.3 m telescope, the Wide-Field Spectrograph. This paper describes our survey criteria and procedures, lists the survey sample, and reports on initial observations.

Keywords
galaxies: dwarf; galaxies: irregular; galaxies: statistics; H II regions; ISM: abundances

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