I-GALFA: The Inner-Galaxy ALFA Low-Latitude H I Survey

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Abstract. The I-GALFA survey is mapping HI 21 cm emission in the inner parts of our Milky Way Galaxy using the Arecibo L-band Feed Array (ALFA). Examples of various H I features such as supershells and chimneys are shown.

The I-GALFA survey is mapping all the H I in the inner Galactic disk visible to the Arecibo 305m telescope within 10 degrees of the Galactic plane ($\ell=32^{\circ} < l < 77^{\circ}$ at $b=0^{\circ}$). The survey, which will obtain $\sim 1.3 \times 10^{6}$ independent spectra, uses the 7-beam Arecibo L-Band Feed Array (ALFA) receiver and will be completed in September 2009. The survey data have a resolution of 3.4, an RMS noise of ~ 0.25 K in 0.184 km s⁻¹ channels covering LSR velocities of -750 to +750 km s⁻¹. Details of the observing and data reduction can be found in Peek & Heiles (2008). The data will be made publicly available when the calibrated and gridded cubes are completed. Further information on the I-GALFA project may be found at www.naic.edu/ \sim igalfa.

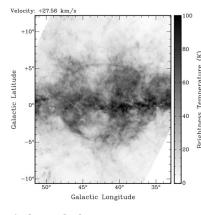
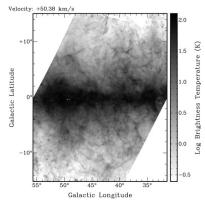


Figure 1: Partial I-GALFA H I line channel maps; more data are being added.

Left: Supershell in the Sagittarius spiral arm.

Right: Disk-halo clouds, chimneys, and worms.



Acknowledgements

We thank all members of the AO staff for the support of the I-GALFA survey. B.-C. K. is supported by the Korean Research Foundation under grant KRF-2008-313-0409. K. D. was supported by a Marie Curie fellowship. The Arecibo Observatory is part of the National Astronomy and Ionosphere Center, which is operated by Cornell University under a cooperative agreement with the U.S. National Science Foundation.

References

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