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Title: HI data reduction for the Arecibo Pisces-Perseus Supercluster Survey
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Abstract

The Undergraduate ALFALFA team is currently focusing on the analysis of the Pisces-Perseus Supercluster to test current supercluster formation models. The primary goal of our research is to reduce L-band HI data from the Arecibo telescope. To reduce the data we use IDL programs written by our collaborators to reduce the data and find potential sources whose mass can be estimated by the baryonic Tully-Fisher relation, which relates the luminosity to the rotational velocity profile of spiral galaxies. Thus far we have reduced data and estimated HI masses for several galaxies in the supercluster region. We will give examples of data reduction and preliminary results for both the fall 2015 and 2016 observing seasons. We will also describe the data reduction process and the process of learning the associated software, and the use of virtual observatory tools such as the SDSS databases, Aladin, TOPCAT and others. This research was supported by the NSF grant AST-1211005.

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