Contribution ID: **28** Type: **Oral Presentation**

Properties of the Interstellar medium in nearby galaxies

Thursday, 14 July 2011 12:00 (15 minutes)

<p>We use the HI velocity profiles of The HI Nearby Galaxy Survey (THINGS) to study the phase structure of the ISM and its relation to galaxy properties and morphology. To construct high S/N profiles, we use a method analogous to the stacking method sometimes used in high redshift HI observations. We call these high S/N profiles super profiles. By decomposing the super profiles into Gaussian components, we found broad and narrow components which are evidence of the presence of Cold Neutral Medium (CNM) and Warm Neutral Medium (WNM). We also derive radial super profiles of the THINGS galaxies and we found some correspondance between the shapes of the super profiles and their location within the galaxies. We found that the narrrow components dominate inside the optical radius r25. We also analyze the shapes of the super profiles in low, moderate and high star formation rate (SFR) regions and we found that the narrow component dominates in high SFR regions. The profiles also tend to be more asymmetric and broader in high SFR regions.

Level (Hons, MSc,
   PhD, other)?

PHD

Consider for a student
   award (Yes / No)?

Yes

Would you like to <br> submit a short paper <br> for the Conference
 Proceedings (Yes / No)?

No

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