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# A comparative analysis of HI morphologies in Ursa Major and Perseus-Pisces galaxies

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## Motivation

- Galaxies evolve through interaction with neighboring galaxies, IGM/ICM.
- Extended HI disks are fragile, thus excellent tracers of these interactions.



• Need blind HI imaging surveys of adequate column density sensitivity for unbiased statistics across all cosmic environments





- 44 VLA-C pointings in the Perseus-Pisces filament
- At distance of 65.5 Mpc
- $2.5\sigma$  NHI sensitivity of  $1.5 \times 10^{20}$
- Total 67 HI detections





- 54 VLA-C pointings in the Ursa Major group
- At distance of 17 Mpc
- 2.5 $\sigma$  NHI sensitivity of 8.4 x 10<sup>18</sup>
- Total 40 HI detections + 40 WSRT targeted observations



- At distance of 65.5 Mpc
- 2.5 $\sigma$  NHI sensitivity of 1.5 x 10<sup>20</sup>
- Total 67 HI detections







### Compared to UMa, galaxies in PP appear more asymmetric

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Work in progress...

### **Compared to UMa, galaxies in PP appear more asymmetric**



#### Work in progress...

- Determining 3D asymmetries
- Characterizing local and global environment
- Determining star formation rates and other global properties