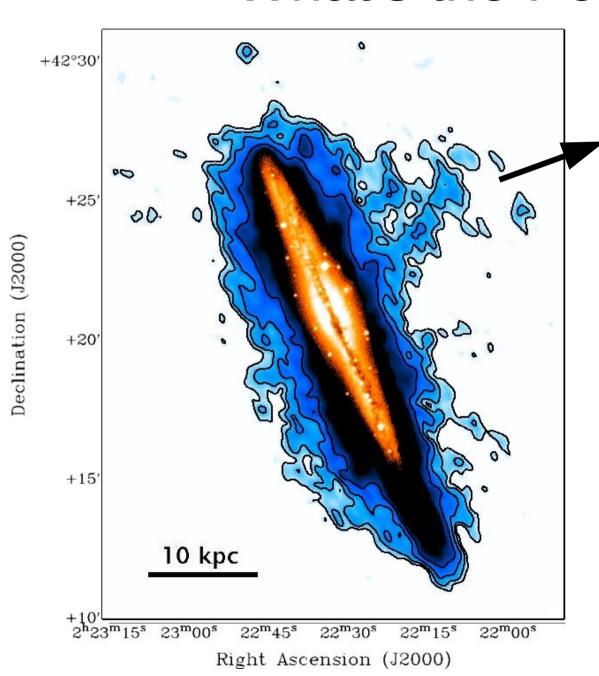
# A Tale of Two Surveys: Disk-Halo Interaction in Nearby Spiral Galaxies

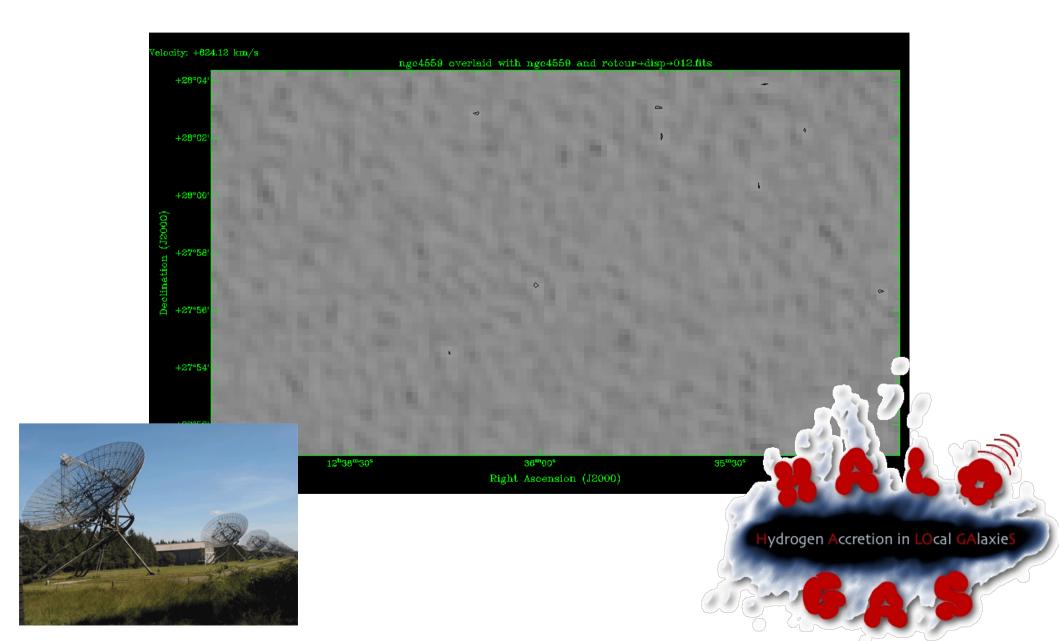
Carlos J. Vargas June 8, 2016

#### What's the Point?????

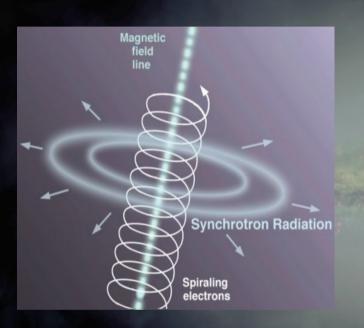


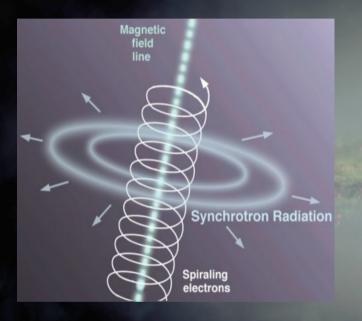
What is this stuff, how did it get there, what is supporting it, and will it form more stars later?

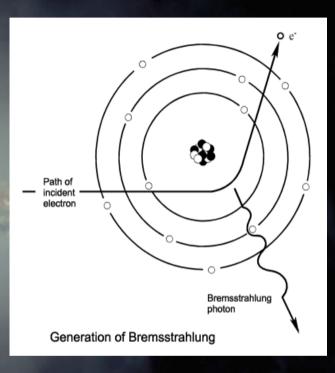
## Plentiful Neutral Hydrogen NGC 4559

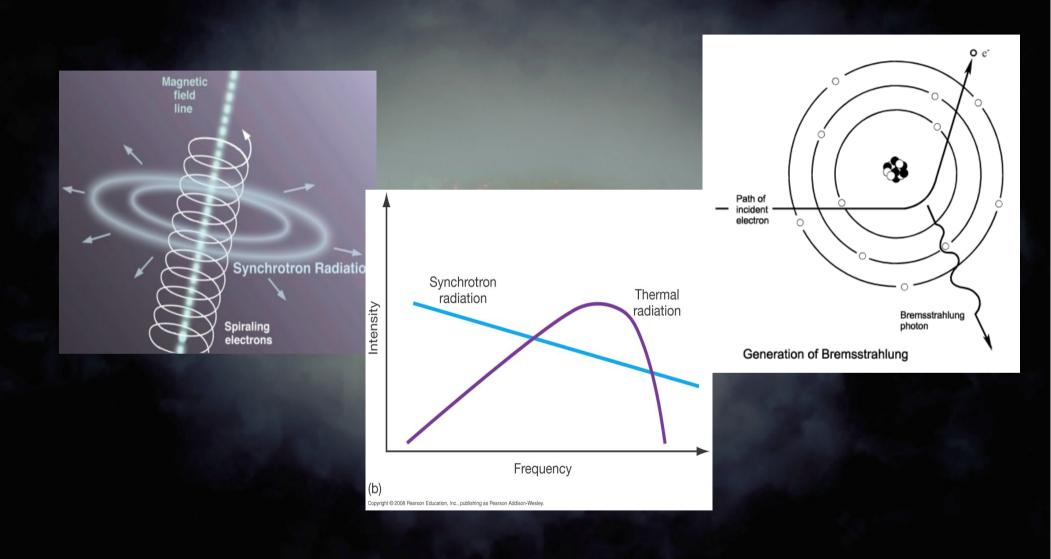






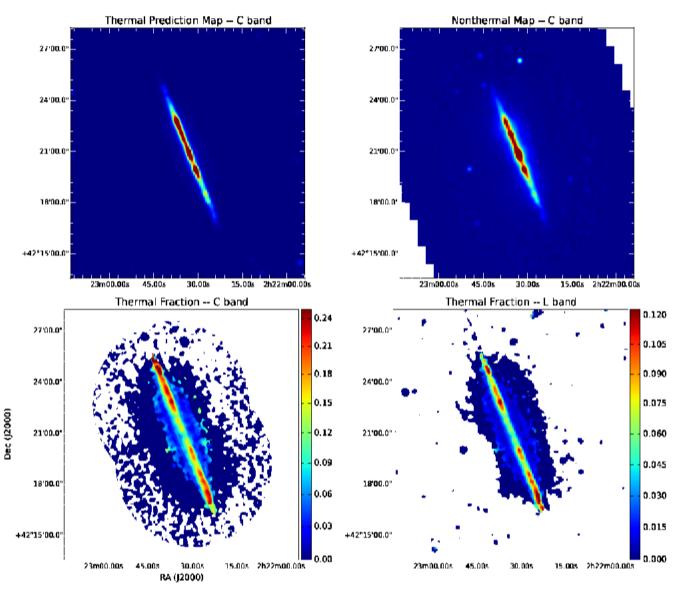






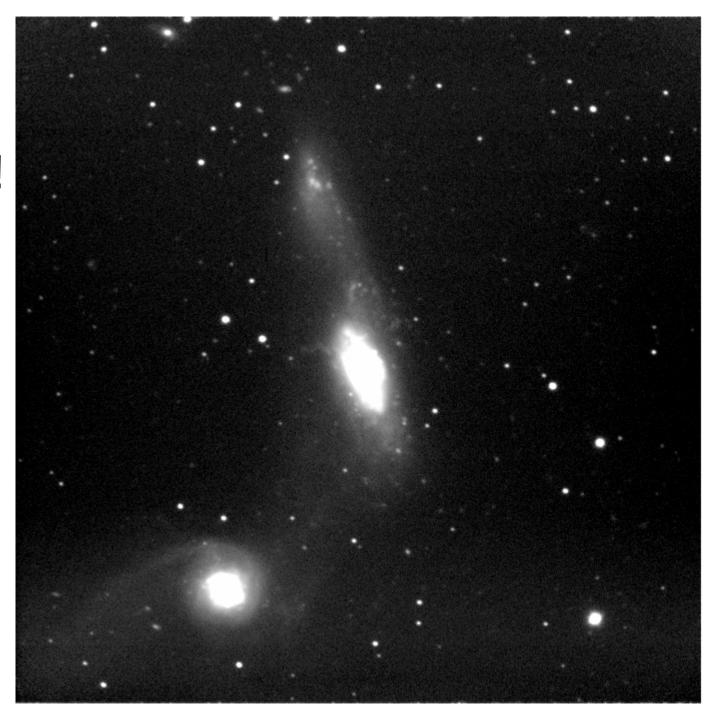
Magnetic We need to separate these!!!! Path of incident electron Synchrotron Radiatio Synchrotron Thermal radiation Intensity radiation Bremsstrahlung Spiraling photon electrons Generation of Bremsstrahlung Frequency Copyright @ 2008 Pearson Education, Inc., publishing as Pearson Addison-Wesley

### Hα – Thermal Prediction



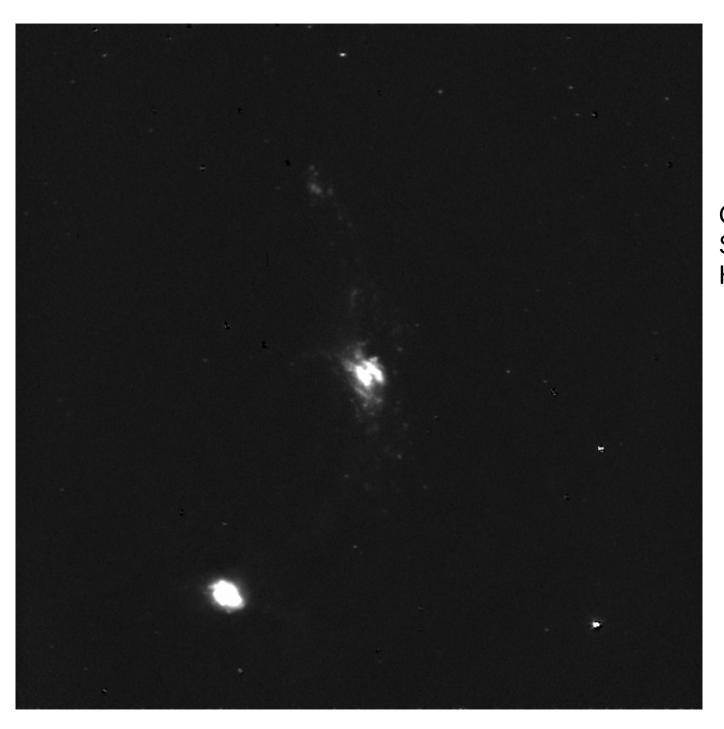
Empirical relations brought to you by: Kennicutt+, Tabatabei+, Murphy+

My Images!



NGC 2992

Hα+R



Continuum Subtracted Hα

### What do I do again???

- 3D modeling of neutral hydrogen in nearby galaxies
- Prediction of thermal component in CHANG-ES galaxies

Hα observations of 27 edge-on galaxies for

**CHANG-ES at APO** 

