



# First Results from the Arecibo Galaxy Environment Survey (AGES)

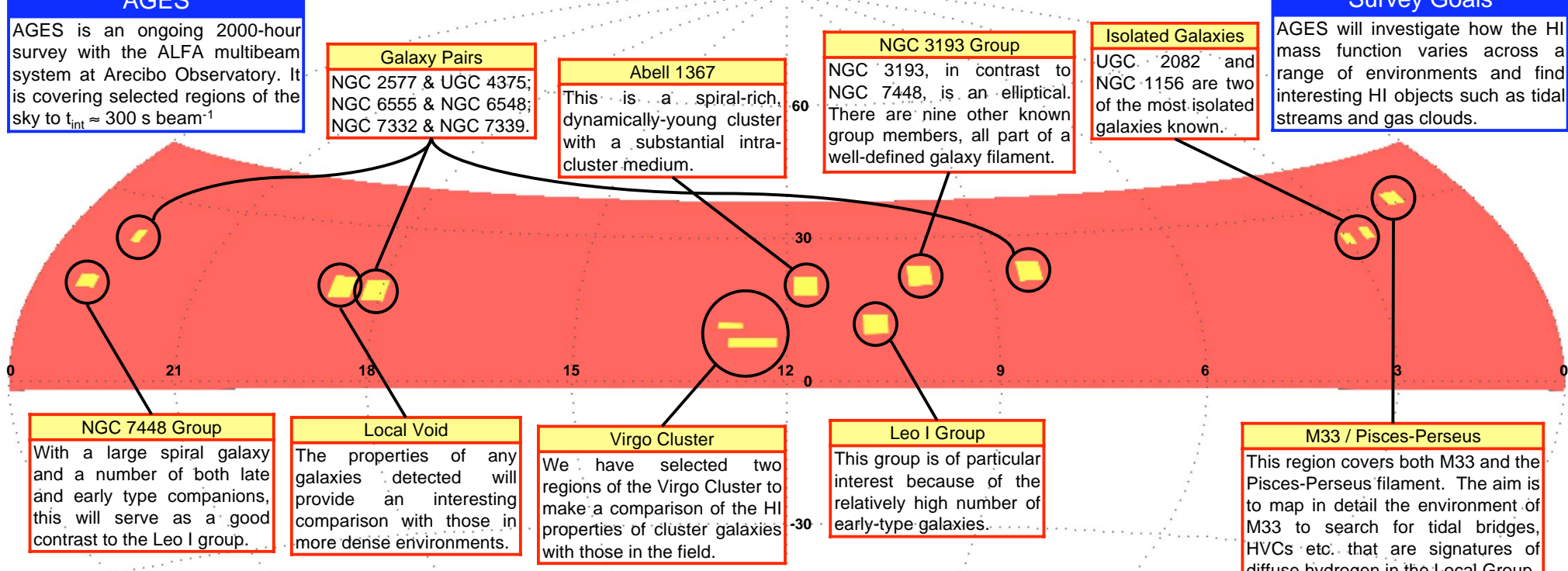


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**AGES**  
AGES is an ongoing 2000-hour survey with the ALFA multibeam system at Arecibo Observatory. It is covering selected regions of the sky to  $t_{\text{int}} \approx 300 \text{ s beam}^{-1}$

**Survey Goals**  
AGES will investigate how the HI mass function varies across a range of environments and find interesting HI objects such as tidal streams and gas clouds.

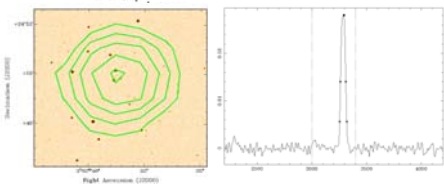
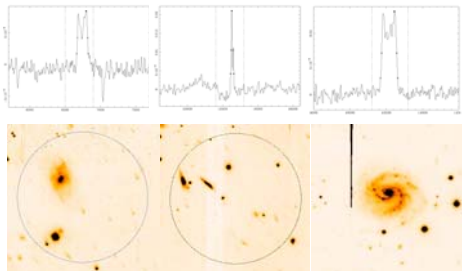


## Objects beyond NGC 1156:

- Cube covers a volume out to  $cz \approx 18,000 \text{ km s}^{-1}$ .
- 51 definite detections, 30 require follow-up.

## Example detections and optical counterparts:

AGES J0302+2449 - an HI detection with no optical counterpart:

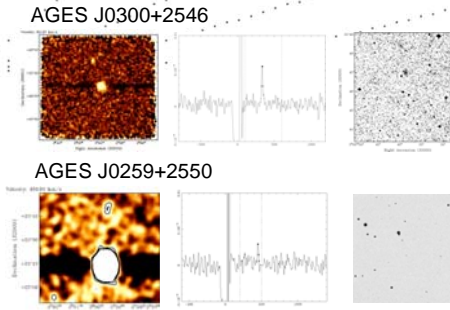


- (HI contours: 3, 5, 10, 15, 20 $\sigma$ )
- A galaxy with  $M_{\text{HI}} \approx 6 \times 10^8 M_{\odot}$  at 50 Mpc.
  - Probably behind a zone of high extinction

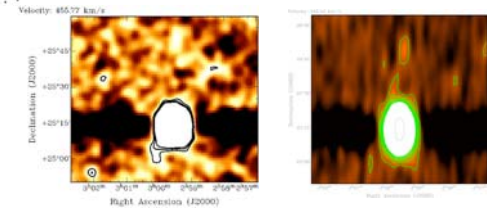
## NGC 1156 - Initial Results:

- Observed in January 2006.
- 5 square degrees covered to 300s beam<sup>-1</sup>.

## New companions to NGC 1156:



## Possible HI streams to the NE and SE:



NGC 1156 is not as isolated as previously thought. It has at least two companions and possibly tidal features.