Data Products and Public Access

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ALFALFA Precursor: A1946 Giovanelli *et al.* 2005 AstroJ <u>130</u>, 2598 " 2613

* 36 hours of ALFA science data

166 confirmed HI sources :

- 25 with HI mass > 10^{10} M $_{\odot}$
- 4 with HI mass < 107 M $_{\odot}$ (more than all of HIPASS)
- high positional accuracy:

we can centroid with a median accuracy of 34"
virtually all optical counterparts ID'd; median difference position between HI centroid and optical source 33"
slightly better detection rate than expected (high side), i.e. our ability to reliably dig in low S/N territory is high
system hardware performance, "hands-off" bandpass calibration and baselining (IDL processing pipeline) gave excellent results.



ALFALFA Data Products

Precursor data available

- SQL database
- PHP interface
- Download catalog in XML/VOTable format
- Spectra

Cross
 reference with
 DSS, 2MASS
 and SDSS
 images



NVO work led by Brian Kent

SQL Query



VOTable



Done

ALFALFA & NVO



Using VO Tools





Project Status

-Survey Proposal submitted in Fall 2004

- Project approved and observations started Feb05
- Midterm report submitted Jul05
- Request to NAIC that "ALFALFA fiscal year" initiate June 1, rather than Feb 1, for more natural scheduling exercise (we pause observations in Summer); request approved by NAIC

- First year report and second year proposal submitted at 01Feb05 deadline

- Verbal confirmation of project confirmation approval received Jun06

Data Release Plans

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Currently Ongoing:

signal extraction from → ~180 grids covering ~ 650 sq deg

which will produce first release catalog containing some 2000 HI sources





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Three-level Catalog:

1. Sources detected at high confidence level

2. Sources confidently detected because of additional info available (optical counterpart match in pos and cz) → "priors"

3. Marginal detections (to be corroborated by large-scale follow-up observations)

Two types of HI follow-up at Arecibo:

 objects of exceptional potential interest
 → limited additional time required (hours to 10s of hours) SHORT TERM

2. large-scale corroboration runs, with target lists of 100s to 1000s of objects (will require high sky density of candidates, on order of few per square deg.)
→ significant time required (100s of hours) LONG TERM