ALFALFA at Ithaca June '06

Friday Open Discussion
Notes by Martha

ALFALFA

Open discussion 1.

- Discussion of the issue of first data release strategy. Consider that the sources can be divided into three categories:
    1. Very high probability detections at fixed SNR, ~ 6-6.5
    2. Sources of somewhat lower SNR (~4.5) but with coincidence in position and velocity with object of known redshift ("prior"); likely to be real.
    3. All sources of low SNR (to ~4-4.5) many of which will not be real.

    - RG: proposes to publish 1) and 2) but in separate tables. 3) will await confirming observations. Is this the right strategy for the early data releases?
    - Slaz: A lot of the new science done at SNR 4,5,6
    - RG: Low SNR sources need some verification (See Precursor paper)
    - Slaz: How many sources between 6-6.5 SNR or 5-6 that need to be followed up? The disadvantage of not publishing is that you leave out the objects which may be of most interest; so we need to balance. We may want to do some followup asap, before end of ALFALFA at least down to some SNR.
    - Martha: Probably NAIC will impose a cap on total hours (survey plus followup).
    - RG: As discussed in the precursor paper, the most efficient mode of followup (little observing overhead, requires a high density of sources (>2 source per square degree). We may reach this a year from now, at least in the spring sky.

Open discussion 2.

- Issues of strategy for publishing (continued…)
  - RG: Should we put out first list of 1) & 2) right away or should we wait until we have 3) also? This means 3) remains within team for some period.
  - Liese: Very important that the first data release has high quality.
  - Lyle: Since consortium membership is open, people can still join who are interested; so keep lowest SNR within team at first. If people want to join, they still can.
  - RG: what lessions learned from HIPASS?
    - Robert: data release delayed for a long time.
  - RG: Suppose we put out 1) and 2) separately. Certainly want to separate priors vs blind. But make known that 3) exists, and invite people to join, with all associated caveats.
  - Slaz: Survey really needs the followup to get to the science, so a year from now we should consider spending some time to do the followup.
  - RG: The disadvantage of that is that it will take away momentum from survey, requiring different software and lots of effort. How to we handle that.
  - Jessica: How much time is needed for followup?
  - RG: Followup will take ~2min point X 10000 sources ~ 350 hours. Compared to the whole survey, that is not so much! As we discussed in the precursor paper, we can maintain a high "open shutter" efficiency if the source density is high enough, so we spend little time moving, and use all pointings as "OFF's" for others.
  - Slaz: Can followup be done in daytime?
  - RG: Not within a couple of hours of sunrise, noon and sunset.

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Open discussion 3.

- –Kristine: We are mapping sources; are there plans for extended sources?
- –RG: There really isn't any plan for dealing with anything sophisticated. Anybody interested? ALFALFA is a detection experiment first. Also we have data cubes, but there isn't yet a protocol for dealing with spectral cubes. We are involved in discussions of a major cyberinfrastructure initiative with folks at the Cornell Theory Center (CTC). NAIC has been talking about long term management of VO archive for all ALFA surveys handed through NAIC.
- –Martha: The PALFA group already is archiving at CTC. There are also several other groups on campus interesting in "data intensive" computing initiatives, and we are "interesting" to them. We'd like to have web-based tools that would enable anyone to extract a spectrum from a cube at an arbitrary position, or examine its projection along some axis. No one can do this yet, but we provide a good example of what is needed.
- –Barbara: If you release cubes, how do you protect thesis projects?
- –RG: First, you may public what projects are being done; and, if the students are involved, they should be way ahead of everyone else.
- –Amélie: Yes, I don't really feel threatened at this point.
- –Sarah: How much is right amount of time to spend followup?