Observing Proposal WHISP 10 September 1994

Herewith we wish to re-activate our WHISP proposal, requesting 100 times 12 hours observing time for the year 1995: 50 times 12 hours in the first semester and 50 times 12 hours in the second semester. Below we give an overview of progress made so far. It is important to note that suitable candidates for WHISP in the RA ranges 18 - 24 and 0 - 6 hours have now nearly all been observed. Thus, it is no longer possible to plan the observations sequentially, and from now on only a single full synthesis observation can be done per 24 hours, leaving a hole in the schedule of about 10 hours. In a seperate proposal we argue that interesting work on highly inclined galaxies can be done with incomplete synthesis observations. Such observations can be scheduled in combination with WHISP observations.

Survey progress:

- Our primary sample of galaxies that we wish to observe with the WSRT consists of 409 galaxies. All of these have flux densities in excess of 100 mJy and they can be done with the present front ends. No attempt has been made yet to define a sample for observation with the new MFFE's, but such a sample would be similar in size. We expect that by the end of the present 21-cm run 149 galaxies will have been observed. This leaves 260 galaxies to be observed in the next few years. As some of these require multiple base lines, we expect that some 300 times 12 hours will be needed. In addition we will submit separate proposals for detailed studies of special objects.
- About 7 galaxies with first priority assignments for the present 21-cm period will not be observed because the WSRT calender that has been made up for this year does not allow it.

Data reduction:

- For 30 galaxies the NEWSTAR phase of the data reduction has been completed according to the procedures described in the WHISP Data Reduction Document Part 1. This phase of the data reduction can be done by an experienced person at a (sustained) rate of one galaxy per day.

- After a period of extensive testing, using galaxies for which the NEWSTAR phase has been completed, the procedures for the GIPSY phase of the data reduction have now been defined. A draft document describing this GIPSY phase is available; the final version will be available at the PC meeting in October. The 'pipe-line' data reduction for WHISP will start this fall and we expect that rapid progress will be made.
- The short observations, of a few hours each, that were done in the holes of the schedule for the full synthesis observations, have all been reduced, resulting in global HI profiles for 42 galaxies without previous HI data. Several of these galaxies are interesting candidates for WHISP. A paper is in preparation.

WHISP Database:

Work on the design of the WHISP database is continuing.

PhD Students:

The first WHISP PhD student, R. Swaters (AIO at Kapteyn Institute), is finishing a paper on the detection of a thick HI layer in NGC 891 (work started as 'groot onderzoek').

A second PhD student, R.H.M. Schoenmakers, will start working on the analysis of WHISP data on November 1 this year, also as AIO at the Kapteyn Institute.

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