

October 15, 1962

Dr. J. L. Pawsey
C.S.I.R.O.
Division of Radiophysics
University Grounds
Sydney, Australia

Dear Dr. Pawsey:

This letter is long overdue -- I've been delaying it partly because of the press of things here and partly in the hope I could have definite plans for visiting CSIRO. I still can't say definitely about the visit, but I think now I can get out there in November, and probably bring someone else along.

John wrote you that the 300-ft. is now in operation. I am enclosing some calibration data Cam Wade obtained. The dish looks very good and everyone is pleased with its performance thus far. We have just started using a tunnel diode amplifier at 1400 mc, which about halves our system noise. It also considerably improves the stability, for reasons we don't yet fully understand. The sensitivity limit at 1400 mc is about one flux unit, in one observation.

The observing program at present is exploratory, and includes some supernovae remnants, HII regions, planets, 3C sources, various optical objects not previously detected as radio sources (and in most cases not detected by us either), and some continuum work -- a hodgepodge. The DTM hydrogen line receiver will go on in early November, to look at M31 and M33 (Burke and Tuve), HI cloud structure (Westerhout probably) and various things by the GB people. Then probably normal galaxies after that.

With regard to sending Pauliny-Toth to CSIRO, I don't think we can spare him, or anyone at present, for any extensive visit. Perhaps the same result could be accomplished if someone from CSIRO came here and got programs going that would complement those with the 210-ft. But in any event I do hope I can visit Australia soon, and am looking forward to it; hopefully others from here can also go down from time to time. When we get a few more people, then maybe Ivan or someone can make a longer visit.

The mm wave project is moving along quite well. Frank Low is in residence here now and he and Drake expect to be observing with the 5-ft. in 6 weeks - 2 months. Low is setting up a cryogenics lab in the basement -- he, and it, should also be very helpful for masers. There is

nothing much to report on the very large antenna; small progress in various aspects, but no major developments.

For the rest, things are going pretty well. We have hired Bill Pleasants -- he is the very experienced RCA man, who was project manager on BMEWS among other things -- to be in charge of both engineering and plant maintenance, and to help Small (and be a back-up for him) with the 140-ft. The 140-ft. is doing pretty well. Many problems pop up but Max handles them well, and the job is progressing.

We have heard only occasional second-hand reports of your own activities. I hope you are regaining your physical strength satisfactorily. I will try to write more frequently in the future, and keep you fully informed of all developments here.

With warm personal best wishes.

Sincerely yours,

D. S. Heeschen

Encl.