

National Radio Astronomy Observatory
Charlottesville, Virginia

The 12-m Telescope
Measuring and Setting at Green Bank

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1. Introduction

This is a first shot to outline the tasks I foresee being done at Green Bank. Timing cannot be decided until:

- (a) The back-up design is chosen.
- (b) Necessary engineering design on the reference jig, template, and measuring system is started.

However, I do note (without exact reference to PERT at present) the sort of timing I would hope for.

2. The Reference Jig (RJ)

See Memo No. 36 of May 14. I have had no comments on this, so I assume I have got everything right. I know J. Ralston is working on 6(a). So as soon as 1(a) above is done, I need:

Task No. 1 - Design and fabricate a RJ.

Design the RJ--2 weeks. Procure materials and fabricate--6 weeks. (To be made in Green Bank shops.) Start, say, July 14. Complete by September 1. Set up in warehouse and commence testing mine and JR's measuring methods. Jig will be about 20 feet long and look like a telescope rib, i.e., about 2 feet high at the center end and about 8-9 feet at the outer end. JR will need N-III space around it for his measuring programs. I shall need a 9825A for my measurements.

I suspect that we shall need 4 weeks for our first RJ measurements--ending October 1. (Note--PERT does not call for any BUS work in Green Bank until October '81 at earliest.)

3. The Template and N-III Mount

Design on this should start soon after 1(a) above. It may be a difficult design task. Shall we say 3 months? So:

Task No. 2 - Design template and N-III mount.

Start August 1; end November 1. Fabricate in GB shop. Start November 1; end January 1, 1982. Integrate with BUS assembly at GB January 1 through February 15, 1982 (this fits with PERT). Test template against RJ at the same time.

4. Set the Surface

Panels may arrive at GB as early as January '82 and will have to be stored until BUS is ready. However, the setting could be:

Task No. 3 - Measure the BUS. Check thermal and other effects. Measure positions of panel support points. Start February 15; end March 15.

PERT shows surface measuring starts March 8. So this may all fit OK.

5. Leave Green Bank

I can only assume PERT is right, and we should be out of Green Bank by the end of May, 1982.

6. Manpower and Its Use

Task No. 1 - 1 engineer, 2 weeks
 1 designer/draftsman, 2 weeks
 Material procurement (?)
 Green Bank Shop time: 1 welder for ? weeks.
 *Engineering supervision, 8 weeks

Task No. 2 - 1 engineer, ^{W4W²} 12 weeks
 1 designer/draftsman, 6 weeks
 Material procurement
 Green Bank Shop time, ? weeks
 *Engineering supervision, 12 weeks

Task No. 3 - Measuring the BUS, setting and measuring panels
 *1 engineer throughout
 2 mechanics throughout
 Computer engineer (Lee King) part-time.

Notes: (a) JWF will supervise all the above engineering tasks directly. He will also be responsible directly for all measuring tasks.

(b) The engineer tasks marked (*) may perhaps all be carried out by one man--they are not full-time.