

NATIONAL RADIO ASTRONOMY OBSERVATORY
Charlottesville, Virginia

November 14, 1984

To: B. Peery
From: A. R. Thompson
Subject: Power for Receiving Electronics Required at Each
VLBA Site.

The following are my present best estimates of power requirements for the receiving electronics. I do not include computer equipment. I understand that Alan Rogers has sent you an estimate for the back-end and recording equipment.

Vertex Room

Front Ends	2.3 kW ¹
Electronics in Racks (IF, LO, etc.)	4 kW
Electric tools, winch, etc.	1 kW

Compressor Enclosure

Three CTI model 1020 compressors 3 X 5 kW, 208/230 or 460 V, 3-phase	15 kW ^{1,2}
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Electronics in Building

Maser plus associated electronics	3 kW
1020 compressor (intermittent use)	5 kW

- ¹ These loads include the front-end cryogenics and should be covered by emergency power.
- ² If we use any maser receivers, which is possible but now appears unlikely, the total compressor load could be 20 kW.

Notes on Building Plan

I have two comments on the building design in VLBA CC No.34. First, the maser pad should be large enough to take two masers (each one the size of a rack of electronics). For certain maintenance situations we may wish to bring in a spare maser and set it going before removing the original maser. Second, the wide-door access from the loading dock only allows large loads to be placed in the antenna mechanics' room. I suggest a wide-door connection from there into the electronics and operations room.