

(860226)

NATIONAL RADIO ASTRONOMY OBSERVATORY  
Charlottesville, Virginia

26 February 1986

## MEMORANDUM

To: Groupleaders, Coordination Committee  
From: H. Hvatum  
Subject: Spares

There are two categories of spares (1) Construction Spares (CS) and (2) Operating Spares (OS).

(1) Construction Spares are the spares considered necessary to be able to bring a system into operation. In the VLBA project I define a system as being what is needed for 10 antennas, and "into operation" as a demonstration of all antennas working at the same time as a telescope. Thus every groupleader is responsible for providing enough Construction Spares to achieve construction, testing, installation and debugging of a working system for all antennas. The cost for this should be part of the construction cost for each group.

(2) Operating Spares consist of an Initial Spares Inventory (ISI) and Replacement Spares (RS). The ISI is provided for in the Spares account of the budget (presently 2.5 M\$) and the RS must be provided for in the operating budget. I expect each groupleader to recommend a spare parts list for the ISI, including costs, as part of the Cost to Complete exercise.

After all is said and done, it will be the responsibility of the Project Manager and Systems Engineer(s) to sort out the complete spares package.