

Housekeeping Data During Active  
Seismic Mode

Five of the sixteen channels of the analog multiplexer in the Active Seismic data processor have been assigned for central station measurements. These five will be the only telemetry on the central station during Active Seismic operation.

In choosing which 5 items are to be measured it should be noted that in case of operating difficulties during Active Seismic which are not attributable directly to the experiment, the natural procedure would be to switch back to normal mode. This would restore the full telemetry and allow evaluation of the difficulty and possible corrective action.

It seems reasonable then that the 5 items monitored during Active Seismic operation should be in areas which might preclude the natural procedure above. In particular, they should be concerned with a primary power loss or with the threat of such loss. With this line of reasoning, the following list of measurements has been chosen:

- RTG Voltage (PCU input voltage)
- RTG Current (PCU input current)
- RTG Hot Junction Temperature #1
- RTG Cold Junction Temperature #1
- Shunt Regulator Current #1

Each of these measurements is also required in the normal mode. RTG voltage is obtained by a simple divider which directly feeds the 90 channel analog multiplexer. A second similar divider should be provided for the 16 channel multiplexer in the Active Seismic.

The other 4 measurements are made with low level sensors and operational amplifiers. It would not be practical to duplicate these sensors and it would be costly of power to duplicate the amplifiers. It is therefore recommended that these four amplifiers drive the two multiplexers in parallel. It is also recommended that series resistors be placed in each parallel branch for isolation purposes.

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