

Information on the DCPI transponder on GOES-13 (and expected for GOES O/P)

Peak EIRP is 48.75 dBm at the sub-satellite point.

(This was not measured at Wallops due to a calibration problem at UHF, but is based on factory measurements. If you have the capability and inclination to want to measure the downlink power, let me know and I will try and get NOAA to put up a carrier.)

Transmit antenna peak gain = 13.55 dBi.

Gain at earth elevation of 5 degrees = 13.0 to 13.2 dBi.

The transponder filters have 3 dB passbands of 468.799 MHz to 468.847 MHz under all measurement conditions. At a fixed temperature there is only about 2 kHz more.

The uplink transmit level from Wallops is planned to be about 77 dBm which produces a C/No for the uplink of approx 68 dB.

The receiver has an AGC circuit that will prevent changes in the uplink level from having any effect on the downlink power.

However, after the AGC, there is an attenuator with 15 steps of about 1 dB each that is intended to reduce the PFD of the downlink signal to comply with the NTIA maximum of -152 dBW/m²/4 kHz at the sub-satellite point.

Notification of the Availability of the DCPR transponder on GOES 13

NOAA has arranged for the DCPR transponder to be made available to manufacturers for monitoring and use of the manufacturer's test channels through this satellite. This access is expected to start on August 1, 2006 and continue until December 1, 2006; except it is possible NOAA may need to preempt the transponder for a few hours or days at some time in that period for additional NOAA tests.

NOAA does NOT guarantee access to GOES 13 at any time.

Any manufacturer that may wish to transmit to GOES 13 is reminded that GOES East is less than 15 degrees away, and that GOES East is much more vulnerable to potential overload than GOES 13. Your use of good engineering judgment will be appreciated by all users of GOES East.

The GOES 13 satellite is located at a nominal longitude of 89.5 degrees West and currently has an inclination of about 0.4 degrees.

The orbital elements for GOES 13 may be obtained by:

Go to <http://www.oso.noaa.gov/goes/index.htm> and scroll down to click on the link GOES Two-Line Orbital Elements. On Friday July 28, 2006, GOES 13 was still listed as GOES N.

NESDIS requests any information you wish to share be sent to James.Wydick@noaa.gov