

**Name:** APSUSA614V01**Description:****Type:** Space station, Receiving and Transmitting

Space station antenna pattern submitted by USA for USASAT-NGSO-8B network for TGA2 and RGA2 beams.

**Required Input Parameters:**

gain

**Validation Warnings/Errors:**

Type	Message
Error	Gmax () is less than 29.6 (). Gmax is too low.

**Co-Polar Component:**

$$G = G_{\max} - 3 \left(\frac{\varphi}{\varphi_0}\right)^2 \quad \text{for } 0^\circ \leq \varphi \leq \varphi_1$$

$$G = 34 - 25 \log \varphi \quad \text{for } \varphi_1 < \varphi \leq 20^\circ$$

$$G = 1.5 \quad \text{for } 20^\circ < \varphi \leq 180^\circ$$

where

$$\varphi_1 = 4.54^\circ$$

$$\varphi_0 = 2.27^\circ$$