

**Name:** APSREC413V01**Description:****Type:** Space station, Receiving and TransmittingRecommendation ITU-R S.672-4 space station antenna pattern for use as a design objective in the FSS employing geostationary satellites. For  $L_s = -15$  dB.**Region(s):** 123**Required Input Parameters:**

gain,maj\_axis,min\_axis,orient

**Validation Warnings/Errors:** None**Pattern Information:**

Single feed circular beams.

 $L_s = -15$  dB.**Co-Polar Component:**

$$G = G_{\max} - 12 \left(\frac{\varphi}{\varphi_0}\right)^2 \quad \text{for } 0 \leq \left(\frac{\varphi}{\varphi_0}\right) \leq a/2$$

$$G = G_{\max} + L_s \quad \text{for } a/2 < \left(\frac{\varphi}{\varphi_0}\right) \leq b/2$$

$$G = G_{\max} + L_s + 20 - 25 \log(2\varphi/\varphi_0) \quad \text{for } b/2 < \left(\frac{\varphi}{\varphi_0}\right)$$

where:

$$L_s = -15 \text{ dB}$$

$$a = 2.24$$

$$b = 6.32$$