Name: APENST807V01

Type: Earth station, Receiving and Transmitting

Region(s): 123

Description:

Non-standard generic earth station antenna pattern described by 4 main coefficients: A, B, C, D and angle phi1.

Required Input Parameters:

gain,coefa,coefb,coefc,coefd,phi1

Validation Warnings/Errors:

Type	Message
Error	CoefA () is out of limits [18:47].
Error	CoefC () is out of limits [18:47].
Error	CoefD () is out of limits [10:50].
Error	Phi1 () is out of limits [1:180].
Error	CoefB () is out of limits [10:50].

Pattern Information:

Pattern is equal to maximum antenna gain in the main-lobe range (for off-axis angles less than 1 degree).
Minimum antenna gain Gmin is -10 dB.

Co-Polar Component:

$G = G_{max}$ for $0° \leq \varphi < 1°$

$G = CoefA - CoefB * \log \varphi$ for $1° \leq \varphi \leq Phi1$

$G = Max(Min(G(Phi1), CoefC - CoefD * \log \varphi), -10)$

for $Phi1 < \varphi \leq 180°$

If $G > G_{max}$: $G = G_{max}$

If $G < -10$: $G = -10$