Set Parameter

Band ID: "1"
Parameter: Band Center
Valid Range: (0.001, 1e6)
Unit: [GHz]
Description: Band central frequency
Trumps: ['Fractional BW']
Trumped By: None (Required)

File Name: Cam_1.txt

A channel's band center is used to define its band $B(\nu)$, or equivalently its detector efficiency vs frequency. If this parameter is "BAND," then a custom input band is assumed, and the ± value can be used to define band-center uncertainty. If this parameter is not "BAND," then a top-hat band is assumed

$$B(\nu) = \begin{cases} 0 & \text{if } \nu < \nu_{\rm lo} \\ \eta_{\rm det} & \text{if } \nu_{\rm lo} \le \nu \le \nu_{\rm hi} \\ 0 & \text{if } \nu > \nu_{\rm hi} \end{cases}$$

$$\nu_{\rm lo} = \nu_c \left(1 - \frac{f_{\rm BW}}{2}\right)$$

$$\nu_{\rm hi} = \nu_c \left(1 + \frac{f_{\rm BW}}{2}\right),$$

where $\eta_{\rm det}$ is detector efficiency, ν_c is the band center frequency, and $f_{\rm BW}$ is fractional bandwidth.

FLOAT | PDF | BAND

BAND

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Figure 4