Telescopes

- We want to cover a large frequency range
- Ideally, we want the same angular resolution at all frequencies
- We need multiple telescopes to accomodate all the detectors anyway

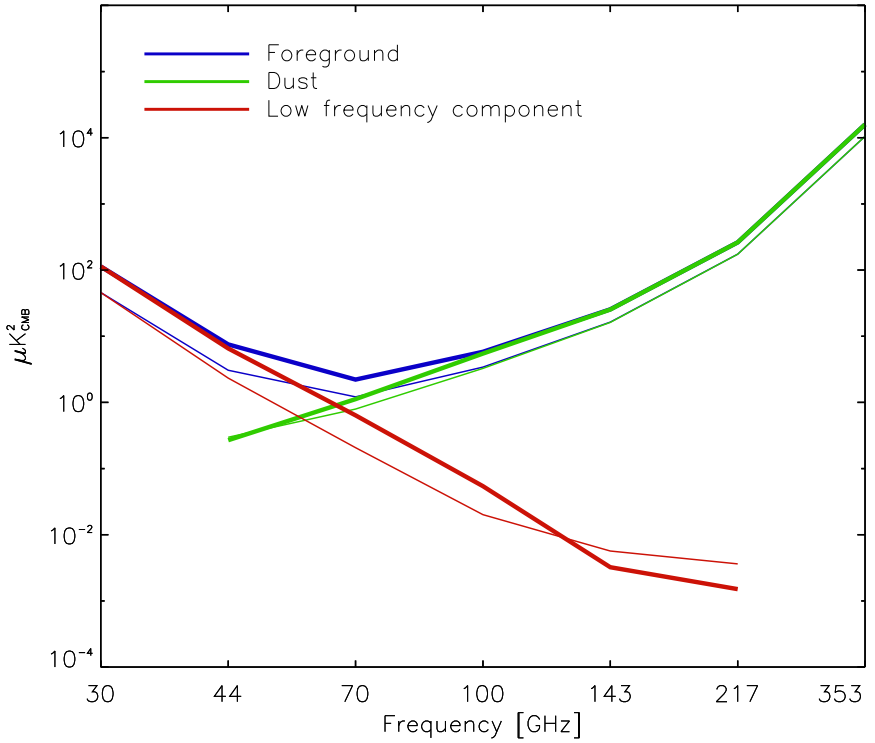
$\Longrightarrow$ Build telescopes of two different sizes

- For example, say we cover frequencies from 25 to 250 GHz

  Large $\rightarrow$ 25–79 GHz, $\quad D = \sqrt{10}\,x$

  Small $\rightarrow$ 79–250 GHz, $\quad D = x$

- Under-illumination could give further control on the "small beam" end, but smoothing the data can do that as well or better if data rate is not an issue. It's the "large beam" end that drives.
- Adjust for atmospheric windows, detectors, etc. E.g., run large telescope up to 100 GHz and overlap with small.
- Just scale the telescope design, including surface accuracy, pointing, etc. requirements.



Polarized foregrounds. Thick — EE; thin — BB. $f_{\rm sky} = 71\%$.