











$$\sigma_{\text{psw}}^{\text{track}} = \frac{2 T_{\text{sys}}}{\eta_{\text{spec}} \sqrt{d\nu} n_{\text{pol}} \eta_{\text{tel}} t_{\text{tel}}}, \quad \text{and} \quad \sigma_{\text{fsw}}^{\text{track}} = \frac{\sqrt{2} T_{\text{sys}}}{\eta_{\text{spec}} \sqrt{d\nu} n_{\text{pol}} \eta_{\text{tel}} t_{\text{tel}}}.$$

$$\sigma_{\text{psw}}^{\text{otf}} = \frac{(\sqrt{n_{\text{beam}}} + \sqrt{n_{\text{submap}}}) T_{\text{sys}}}{\eta_{\text{spec}} \sqrt{d\nu} n_{\text{pol}} \eta_{\text{tel}} t_{\text{tel}}}, \quad \text{and} \quad \sigma_{\text{fsw}}^{\text{otf}} = \frac{\sqrt{2} n_{\text{beam}} T_{\text{sys}}}{\eta_{\text{spec}} \sqrt{d\nu} n_{\text{pol}} \eta_{\text{tel}} t_{\text{tel}}}.$$













$$T_{sys} = \frac{(1 + G_{im}) \exp \{ \tau_s A \}}{F_{eff}} [F_{eff} T_{atm} (1 - \exp \{ -\tau_s A \}) + (1 - F_{eff}) T_{cab} + T_{rec}] ,$$





Adrianus









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spiral







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W = 102

W E R E D

















