Reference	Frequency (GHz)	Ang. Scale	$\Delta T(\mu\mathrm{K})$	(CL)
Penzias & Wilson (1965)	4.0	–	10^5	95%
Nanos (1979)	9.3	15° beam	2×10^3	90%
Caderni et al. (1978)	100-600	$0.5^\circ \lesssim \theta \lesssim 40^\circ$	$2\times10^3(40^\circ/\theta)^{1/2}$	65%
Lubin & Smoot (1981)	33	$\ell \lesssim 3$	200	95%
Partridge et al. (1988)	5	$1' \lesssim \theta \lesssim 3'$	100	95%
Wollack et al. (1993)	26-36	$50 \lesssim \ell \lesssim 100$	25	95%
Netterfield et al. (1993)	26-36	$50 \lesssim \ell \lesssim 100$	16	95%

Table 1: Experimental upper limits on the polarization of the CMB. The values are converted from the quoted $\Delta T/T$ by multiplying by $T = 2.728$K, thus these numbers only approximate the bandpowers used in Tab. 2.

states on the same patch of sky instead of physically chopping between different angles on the sky since atmospheric emission is thought to be nearly unpolarized (see §5.2). However, to be successful an experiment must overcome a number of systematic effects, many of which are discussed in Keating et al. (1997). It must at least balance the sensitivity of the instrument to the orthogonal polarization channels (including the far side lobes) to nearly 8 orders of magnitude. Multiple levels of switching and a very careful design are minimum requirements.

To date the experimental upper limits on polarization of the CMB have been at least an order of magnitude larger than the theoretical expectations. The original polarization limits go back to Penzias & Wilson (1965) who set a limit of 10% on the polarization of the CMB. There have been several subsequent upper limits which have now reached the level of $\sim 20\mu$K (see Tab. 1), about a factor of 5–10 above the predicted levels for popular models (see Tab. 2).