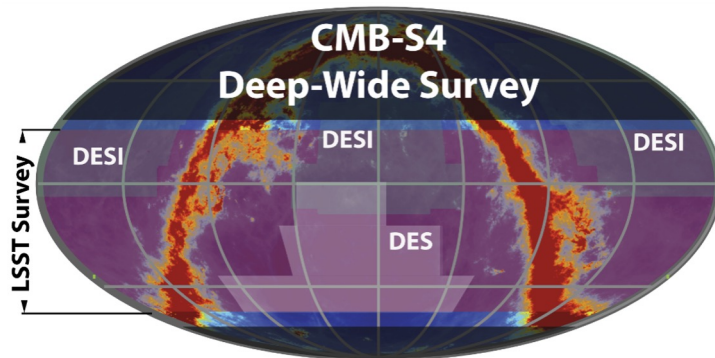
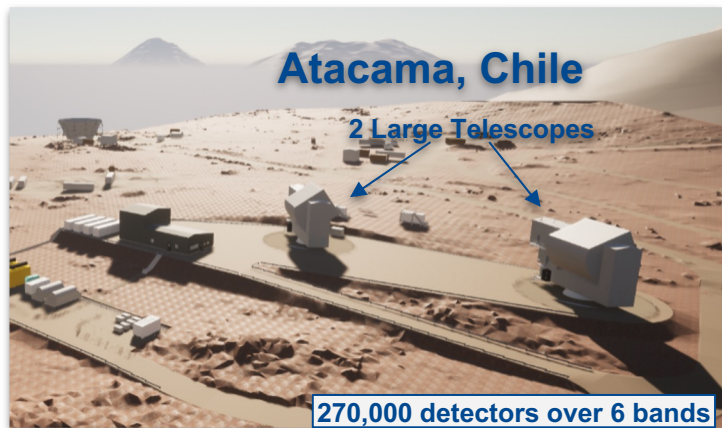
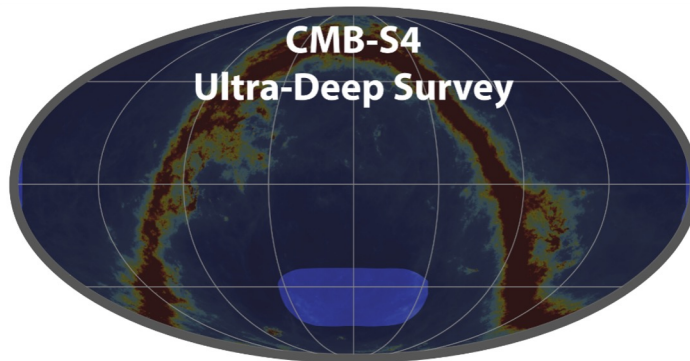
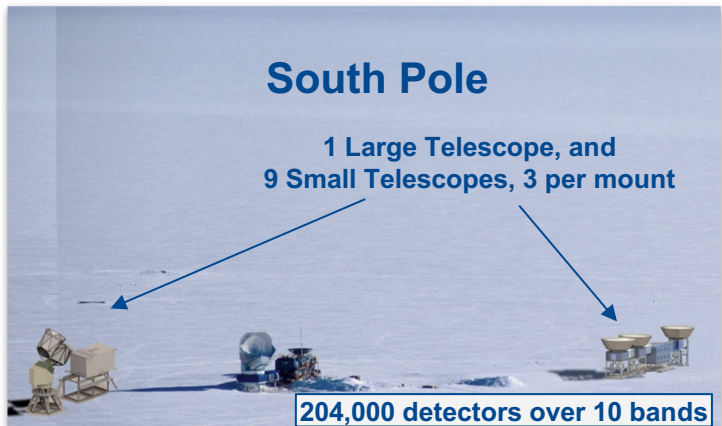


# CMB-S4: Two Nested Surveys from Chile and South Pole



Deep-Wide survey for precision measurements, enabled by the mid-latitude Chilean site.

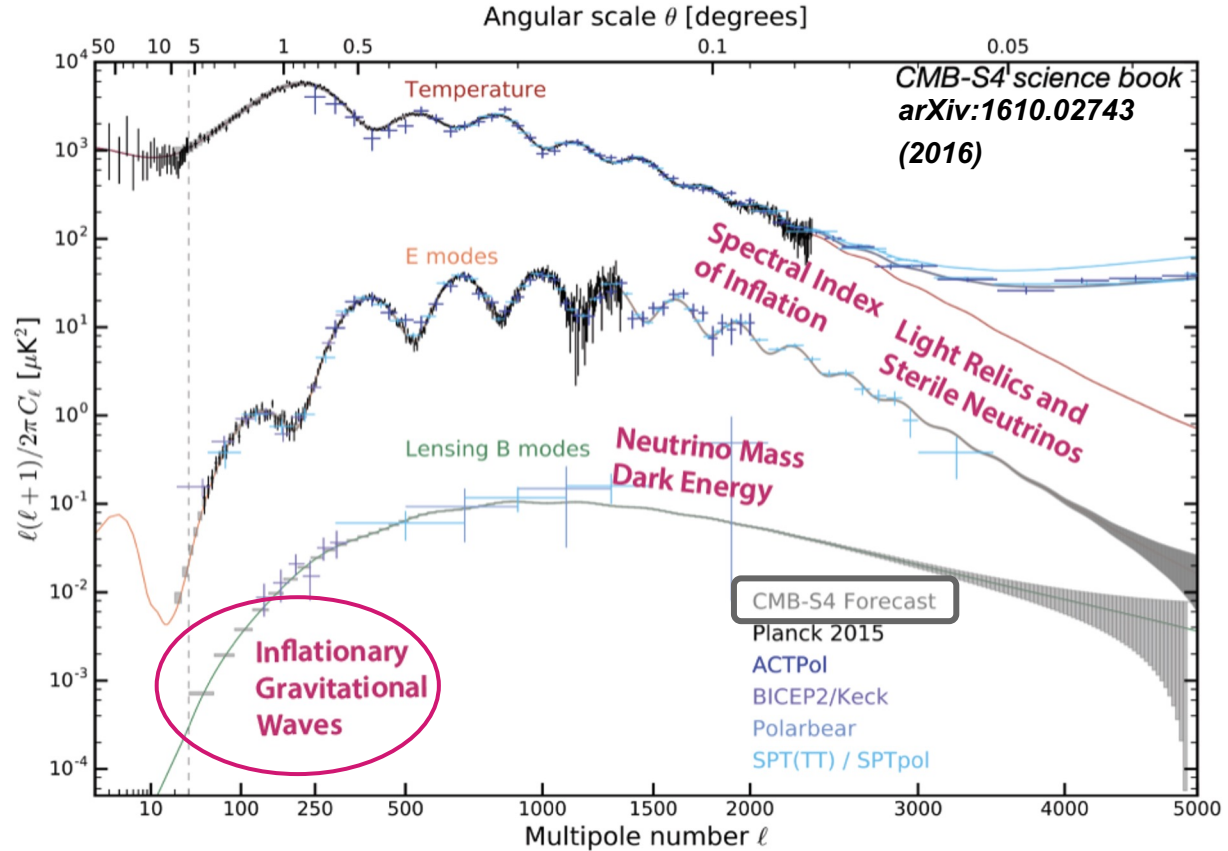


Ultra-Deep survey for detection of B-mode inflationary gravitational wave signal, taking advantage of 24/7 sky availability and stable atmosphere at South Pole.

# CMB-S4

Designed to make transformative measurements of the CMB temperature and polarization in order to cross critical thresholds in key cosmological parameters.

A precision dataset with which any model for the origin of the primordial fluctuations and their evolution to the structure seen in the Universe today must be consistent.



**CMB-S4 Req't:** If  $r > 0.003$ : measure at  $5\sigma$   
If  $r = 0$ : set  $r \leq 0.001$  at 95% C.L.