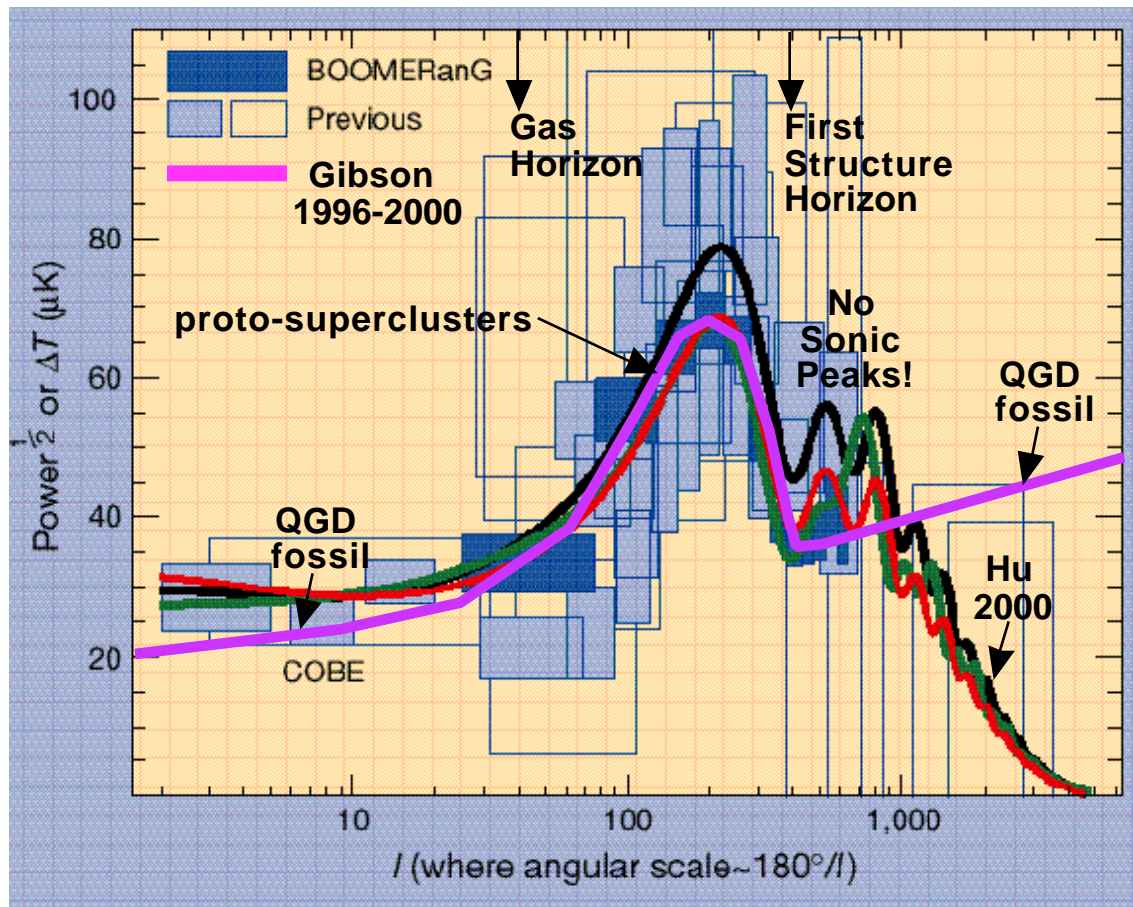


Sound or Structure?



Adapted from Figure by Wayne Hu 2000, Nature 404, p 939

The BOOMERANG balloon temperature map of the microwave sky over Antarctica shows no secondary "sonic" peaks, calling into question whether the primary peak is a sound wave or the fossil of first structure formation predicted by the Gibson 1996-2000 hydro-gravitational theory: proto-superclusters formed in the plasma epoch about 10^{12} seconds (30,000 years) after the Big Bang from inflated fossils of the quantum-gravitational-dynamics (QGD) epoch. The primary peak is at a scale about 10^{-1} the horizon scale at the time of plasma-gas transition 10^{13} seconds (300,000 years). The QGD fossil spectrum covers 8 decades $\sim l^{1/6}$ between the QGD horizon and the Planck scale, and assumes an inflation factor 10^{50} .