

Baryon Acoustic Oscillation (BAO)

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To study cosmic expansion history, we need to precisely measure distance to the universe at a past epoch. The Baryon Acoustic Oscillation (BAO) is an essential “standard ruler” for this purpose. The BAO scale, set by the speed of sound in the photon-baryon plasma of the very early universe, is very precisely measured by the experiments of the Cosmic Microwave Background such as Planck. The Sloan Digital Sky Survey or Prime Focus Spectrograph in the SuMIRe project has investigated or plans to investigate the mystery of dark energy by precisely measuring the cosmic expansion history via the BAO scale.

