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Mr. VARDANYAN, Mihran (University of Oxford): How big is the Universe?

Monday, 13 September 2010 15:45 (15 minutes)

One of the most important questions of cosmology is to determine whether the Universe is spatially finite or infinite. We use Bayesian model averaging to derive new constraints on the minimum size of the Universe. Our procedure accounts for the model

uncertainty between the three different possibilities for the geometry of the Universe in the context of a Friedmann-Robertson-Walker metric (flat, open or closed) as well as for the possibility of an evolving dark energy component.

We use recent cosmological observations to set tighter limits on the curvature parameter. I'll report our results from most conservative prior choice as well as discuss the dependency of our results on the choice of priors.

Session Classification: 6 talks (Chair: Athanasios LAHANAS)