

# Physics Colloquium

Monday October 23rd, 2006

4:15 PM 428 Pupin Hall

## “Connecting the cosmos with quarks: the promise of precision cosmology”

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Cosmology has recently made the transition from a data starved scienceto a data driven science. Cosmological parameters are today known withunprecedented precision, making "precision cosmology" possible.

The decadal survey "Astronomy and Astrophysics in the New Millennium"published by NAS in 2002 was entitled "connecting quarks with thecosmos". It presented 11 fundamental questions to be addressed, andrecognized that physics and astronomy are inextricably tied togetherin both the answering and the answers to these questions.

The ultimate goal of precision cosmology is to connect the cosmoswith quarks. I will review some recent advances in this direction,brought about by new data sets, and will outline some forthcoming andfuture prospects.

