

Colloquium

The "Standard" Model of Cosmology and Open Questions



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Abstract: Experiments and observations over the last two and half decades have provided strong support for a "standard" model of cosmology that describes the evolution of the universe from an early epoch of inflation to the complex hierarchy of structure seen today. I review the basic physics, astronomy, and history of ideas, on which this model is based. I describe the data which persuade cosmologists that (as yet not directly detected) dark energy and dark matter are by far the main components of the energy budget of the universe. I conclude with a list of open cosmological questions.