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ICTP-SAIFR/IFT-UNESP PHYSICS DISCUSSIONS

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Eiichiro Komatsu (Max Planck I. for Astrophysics, Garching)

Finding Gravitational Waves from the Early Universe

The Cosmic Microwave Background (CMB) gives a photographic image of the Universe when it was still an "infant". Its detailed measurements suggest that galaxies, stars, planets, and eventually ourselves originated from tiny quantum fluctuations in the early Universe. But is this picture true? To answer this question, we are now trying to find a signature in the CMB of the "primordial gravitational waves" generated from the earliest moment of the Universe. This colloquium will review the physics of CMB and key results from recent experiments, while discussing future prospects of the quest to find out about our origins.

Eiichiro Komatsu uses theoretical physics and experimental data to study the origin, evolution and constituents of our universe. Since 2012, Prof. Komatsu is Director of the Department of Physical Cosmology at the Max Planck Institute for Astrophysics in Germany. He has received numerous awards, including the American Astronomical Society's Lancelot Berkeley Prize in 2013.

More information: ictp-saifr.org/physicsdiscussions