



Università di Pisa
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"Conformal Cyclic Cosmology: New Ideas and Observational Analysis"

According to currently accepted cosmology, the universe originated from the Big Bang, followed by a period of inflationary expansion. This then converted to a more sedate expansion, but the presence of so-called "dark energy" is now causing a further accelerated expansion.

Conformal Cyclic Cosmology (CCC) provides a new, radically different picture. The very special nature of the Big Bang (required by the second law of thermodynamics) is not explained by inflation, but accounted by a requirement that the conformal geometry extends smoothly to a pre-Big-Bang phase (similar, in some respects to an earlier proposal of Veneziano). CCC proposes that this pre-Big-Bang phase was a previous "aeon", similar to our own aeon (the currently observed "universe") in an endlessly successive sequence of aeons, where the remote, exponentially expanded future of each aeon matches smoothly to a big bang for the next.

CCC predicts some remarkable features in the cosmic microwave background. The present observational situation will be reported in the talk."

Mercoledì 24 Settembre 2008 - ore 12:00
Sala Gerace - Dipartimento di Informatica
II piano - Ed. C