

Weekly Calendar & News

April 1-7, 2017

Departmental Colloquium

Initial Conditions for Inflation

Sonia Paban

University of Texas at Austin

Host: Ivan Agullo

3:30 PM Thursday, April 6

119 Nicholson Hall

- Refreshments served at 3:10 PM in 232 (Library) Nicholson Hall •

The Cosmic Microwave Background (CMB) radiation is the farthest and earliest thing anyone can possibly see. This radiation was first detected in 1964. Since then several experiments have determined its properties, and new experiments are being designed to do furthest tests in the future. The theory of Inflation explains the known features of the CMB and makes predictions yet to be tested. In this talk I will give a general introduction to the theory of Inflation and I will explore the initial conditions, both classical and quantum, necessary for the universe to enter an inflationary period.

Events

- [Landolt Observatory Public Night](#): Mercury at greatest elongation
Where: Landolt Astronomical Observatory, roof of Nicholson Hall
When: Saturday April 1, 8-9 PM

LSU Physics & Astronomy in the News

- Tune in Friday at 7pm or Sunday at 4:30pm to Louisiana Public Broadcasting "The State We're In" for feature of Gabriela Gonzalez talking about her inspiration to become a physicist & LSU's work with LIGO - Livingston in Louisiana on Gravitational Wave detections. Gonzalez's graduate students will also be appear in the episode. **Don't miss it!** <http://www.lpb.org/index.php/swi/>
- Researchers at LSU and Lund University discover new method of directing X-ray pulses http://www.lsunow.com/daily/researchers-at-lsu-and-lund-university-discover-new-method-of/article_ea32724a-14b0-11e7-835e-dbd3a4173293.html
- LSU partners with BREC for NanoDays event http://www.lsunow.com/daily/lsu-partners-with-brec-for-nanodays-event/article_bf10a4c8-14ac-11e7-8d8a-d375207bd477.html
- John Paul Marceaux nominated for Goldwater Scholarship <https://www.honors.lsu.edu/news/lsu-nominates-four-students-for-goldwater-scholarship>
- [Advice from an Astronaut.](#) Retired U.S. Air Force Col. and NASA Hall of Fame astronaut Fred Gregory visited campus to present Amy LeBleu and Harvey Shows with ASF Scholarships

New Publications

- Jorge Pullin co-edited a book: "[Loop quantum gravity: the first 30 years](#)" It includes eight chapters by young emerging leaders of the field providing a snapshot of its state of the art, including one by LSU's Ivan Agullo and Parampreet Singh.
- "[Uniqueness of the Fock quantization of scalar fields in a Bianchi I cosmology with unitary dynamics](#)" by Jerónimo Cortez, Beatriz Elizaga Navascués, Mercedes Martín-Benito, Guillermo A. Mena Marugán, Javier Olmedo, José M. Velhinho
- "[Delicate competing electronic states in ultrathin manganite films](#)" by Zhaoliang Liao, Rongying Jin, E. W. Plummer, and Jiandi Zhang
- "[Surface phases of the transition-metal dichalcogenide IrTe₂](#)" by Chen Chen, Jisun Kim, Yifan Yang, Guixin Cao, Rongying Jin, E. W. Plummer
- "[Manipulation of entanglement sudden death in an all-optical setup](#)" by A. Singh, S. Pradyumna, A. R. P. Rau, and U. Sinha, J. Opt. Soc. Am. B 34 (3), 681- 690 (2017)
- "[Entanglement dynamics of two nitrogen vacancy centers coupled by a nanomechanical resonator,](#)" Z. Toklikishvili, L. Chotorlishvili, S. K. Mishra, M. Schueler, S. Stagraczynski, A. R. P. Rau, and J. Berakdar), J. Phys. B 50, 055007 (2017)

