

**LSU**College of  
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# Weekly Calendar and News

January 16-20, 2017

## Departmental Colloquium

### “Memories, Symmetries, and Soft Theorems”

**3:30 PM Thursday, January 19, 2017****130 Nicholson Hall****[Sabrina Gonzalez Pasterski](#)**

Harvard University

**Host: Jorge Pullin**

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

Recent work examining a pattern of relationships between spacetime and scattering amplitude descriptions of long time integrated, low energy radiation has led to a new iteration surrounding conformal symmetries of the celestial sphere.

## Nuclear Seminar Series

**Xin Guan** from Liaoning Normal University, China**and Grigor Sargsyan** from LSU P&A Department**3:30-4:30 pm Tuesday, January 17, 2017****Room 435 Nicholson Hall**

Guan will briefly review various mean-field-plus-pairing models that yield exact solutions and which are found to describe remarkably well important ground-state properties of nuclei, such as binding energies, two-neutron (proton) separation energies, odd-even effects, phase transitions, and excitation spectra of both spherical and well-deformed heavy nuclei.

Sargsyan and others examine nucleon-nucleon (NN) realistic interactions, such as JISP16 and N3LO, based on their SU(3) decomposition and identify components of the interactions that are sufficient to describe the structure of low-lying states in nuclei. They observe that many of the interaction components, when expressed as SU(3) tensors, become negligible. Paring the interaction down to its physically relevant terms improves the efficacy of large-scale calculations from first principles (*ab initio*). The work compares spectral properties for low-lying states in Carbon-12 calculated by means of the selected interaction to the results obtained when the full interaction is used and confirms the validity of the method.

# LSU Physics & Astronomy in the News

- LIGO Discovery Named Science's 2016 Breakthrough of the Year  
<http://www.lsu.edu/mediacenter/news/2016/12/22sciencebreakthrough.eb.php>
- GIRL SCOUTS LEARN THE SCIENCE OF CANCER CARE. Joe Steiner, an LSU medical physics graduate student and president of the American Nuclear Society – LSU Chapter, helps Girl Scouts Savannah Tyer and Claire Carroll test everyday items for radioactivity, demonstrating that radiation and radioactivity are a natural part of our world. <https://www.marybird.org/olol/press-releases>
- Gabriela González – People to Watch 2017 from Baton Rouge's 225 Magazine  
<http://www.225batonrouge.com/community/gaby-gonzalez-people-watch-2017>
- LIFT2 Grant awarded to Guang Jia, Joseph Steiner and Kenneth "Kip" Matthews for "Endorectal digital prostate tomosynthesis for high resolution 3D prostate cancer screening and diagnosis"  
[http://www.lsu.edu/mediacenter/news/2016/12/20lift2\\_dec2016.as.php](http://www.lsu.edu/mediacenter/news/2016/12/20lift2_dec2016.as.php)
- Gabriela González received the [APS Physics Jesse W. Beams Award](#) to recognize especially significant or meritorious research in physics

## Events

HRPO Friday Night Lecture Series:

["Star Clusters Clusters of stars, whether "open" or "globular", each have their own unique personality and appeal.](#)

By LSU Physics undergraduate student **Rory Bentley**

**7:30pm, Friday, Jan. 13, 2017 at Highland Rd. Park Observatory**

## Announcement

Due to the Martin Luther King holiday,

the University will be closed on Monday, January 16, 2017.

Classes resume on Tuesday, January 17, 2017 at 7:30 am.