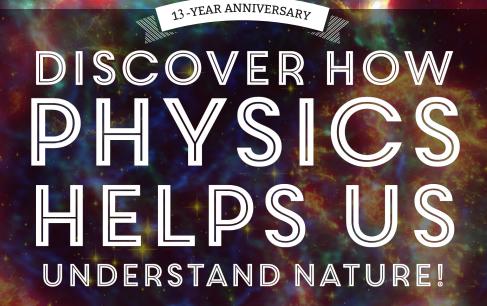


SATURDAY MORNING PHYSICS



AN EVENT SERIES FOR TEXAS HIGH-SCHOOL STUDENTS TO LEARN ABOUT THE NEWEST DEVELOPMENTS IN MODERN PHYSICS

nuclear synthesis, the elements, and the age of the universe; black holes, galaxies, and basic instruments for astronomical instrumentation; quantum forces, the physics behind smart phones, and much more!*

* WIN PRIZES (AND EARN A CERTIFICATE!)

ORGANIZERS & CONTACT: Prof. Ralf Rapp (rapp@comp.tamu.edu), Prof. Rainer Fries (rifries@comp.tamu.edu),
Prof. Jeremy Holt (holt@comp.tamu.edu), Cyclotron Institute and Department of Physics & Astronomy at Texas A&M University

www.cyclotron.tamu.edu/smp



PHYSICS: THE SCIENCE OF OF MATTER AND ENERGY AND THEIR INTERACTIONS

WHY?

Physics is a fundamental science to unravel the laws of nature so that we improve our understanding and appreciation of the world around us, from the smallest to the largest scales. For the 13th year running, you are cordially invited to attend and have fun while finding out how scientists are pushing the frontiers of our knowledge of fundamental particles, the phases of matter, the universe, and applications to address outstanding challenges of our future. Listen to and discuss with world-renowned scientists working at Texas A&M University who have agreed to share their newest insights and knowledge first-hand in an entertaining and understandable way.

HOW?

The format of each Saturday Morning Physics (SMP event is as follows:

9:30 Registration and Welcome

10:00 Presentation

11:00 Discussion/Q&A

11:30-12:00 Quiz, Prizes, Hands-on Experiments, and Facility Tours

* CERTIFICATE & PRIZES: To be awarded a final "diploma" certificate, you need to complete at least 5 out of 7 events. Because there is a common thread through the event sequence, regular attendance is most beneficial. Prizes are given out at each event (except the first) based on the quizzes of the previous event.

WHERE?

PRE-REGISTRATION: Please visit http://cyclotron.tamu.edu/smp/ to register for free. If you register before Jan. 15, 2019, you are guaranteed to receive the SMP-19 equipment (kit), including backpack and "discovery folder." Also check back for possible schedule updates or modifications.

LOCATION: Hawking Auditorium, Mitchell Institute for Fundamental Physics and Astronomy, Texas A&M University, College Station, TX 77843-4242 Tel. 979-845-1411 (Ask for Ralf Rapp, Rainer Fries or Jeremy Holt)

WHAT & WHEN?

Join us in 2019 to learn about the following topics:

- nuclear synthesis and the elements
- DIY astronomical instruments and how-tos
- supermassive black holes and galaxies
- quantum forces and the early universe
- physics behind solar cells and smart phones

Saturday, January 19
Professor Greg Christian
Sunshine and the Periodic Table:
How Nuclear Fusion Causes Stars
to Burn and Creates the Elements
Around Us

Saturday, January 26
Professor Kevin Krisciunas
Making Astronomical Measurements
With \$7 Instruments

Saturday, February 2
Professor John Hardy
How Weird is the Weak Force?

Saturday, February 9
Professor Jonelle Walsh
Supermassive Black Holes
in Nearby Galaxies

Saturday, February 16
Professor Joe Ross
Physics of Devices From
Solar Cells to Smart Phones

Saturday, February 23
Professor Marlan Scully

Ouantum Weirdness

Saturday, March 2
Professor Bhaskar Dutta
The Very Early
Universe

No prerequisites necessary (except for your curiosity)!