

The
Ad Astra
Kansas
Foundation

invites
you

Kansas
Cosmosphere
and Space
Center

1100 N. Plum,
Hutchinson,
KS

July 27, 2013

1-3 p.m.

FREE

Space is limited
– contact
jeanettesteinert
@att.net to
reserve a seat

Professional
development
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available

For more info on the Ad
Astra Kansas Foundation
view us online at
www.adastra-ks.org

Galaxy Forum Kansas

21st century education—Get to know our Place in the Universe

The Galaxy Forum Kansas is one of a series of national/international forums looking to enrich 21st century science education by raising awareness of our Milky Way Galaxy and our connection to it.



Intro to the Ad Astra Kansas Foundation—

☆ Sponsor of today's event— its mission and future projects.

☆ **VOYAGER (Are We There Yet?)** We might be—according to Dr. Thomas Armstrong, NASA co-investigator on the Voyager project for its entire 35 years. In this update to last year's presentation, find out from Armstrong the latest information which leads many scientists to think Voyager I has entered interstellar space and what they are finding out.



EXPLORING SPACE WEATHER—The Van Allen Storm Probes



Everyone is familiar with changes in the Earth's weather, but weather also occurs in space. Changes in the Sun's energy flow cause changes in the space environment near Earth. Twin probes launched last August are recording data to quantify the processes that generate the radiation belts and cause them to change. Learn how this affects our space-based and ground-based technologies. Learn what scientists are looking to find out from veteran NASA scientists Dr. Thomas Armstrong and/or Dr. Jerry Manweiler.



FROM UNDERSTANDING BASIC PARTICLE PHYSICS —to exploring the Universe



During the first half of 2013, a number of startling advances in astro-particle physics have been announced. The large magnetic particle spectrometer on the International Space Station has shown us the first clear evidence for Dark Matter. A series of high energy gamma ray observations are starting to expand and change our understanding of how stars end their lives. Two surprising neutrino events from the Ice Cube Neutrino telescope at the South Pole suggest the existence of ultra massive particles yet to be created by man in particle accelerators. In addition to this—the next ultra large cosmic ray experiment is being developed, regions of the world (including southwest Kansas) tested for their suitability to host such an experiment. Scientists are also studying new methods of making ultra high energy measurements.

In this talk you will get a brief introduction of the ideas of particle physics and how they are being transformed into astro-particle measurements to further understand the Universe and the forces within it.

Thank you to:

