Summer Institute

LASSO is a teacher enhancement program that involves teachers from the grades 4-12 in the process of designing and creating space science activities for inclusion in an on-line Solar System Activity book. Selected teachers will be involved in a 15-day summer institute (July 14 – Aug 1, 2008). All institute workshops will be held at Los Alamos National Laboratory.

This is an exciting opportunity for dedicated teachers to work collaboratively in the development of new skills that can expand their students' horizons.

Gain new skills in technology, expand your scientific knowledge while developing and creating exciting space science activities.

Application materials can be found at:
http://education.lanl.gov/programs/lasso

Michelle Thompson instructing how to analyze space weather data

Strengthen your Science Basics

Expand your knowledge about the Solar System

Tour the Planets

Learn more about Space Science Instrumentation

Analyze Solar and Planetary data

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A Teaching & Learning Enhancement Program For Science & Math Teachers

Explore the Solar System

Tour the Planets

Analyze Solar and Planetary data

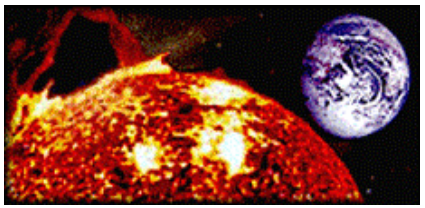
Los Alamos Space Science

The Earth is constantly bombarded with high speed particles coming not only from the sun, but also from outside of the solar system. A number of NASA projects are designed to study these energetic particles to help us understand the origin, composition, and evolution of our solar system and the universe.

Information learned from these projects help scientists better understand phenomena such as solar flares, the auroras, and communication disruptions. Project results will help us design better warning system for encroaching geomagnetic storms that not only disrupt communications, but are hazardous to astronauts and can cause pipeline corrosion.

Learning the differences in composition between the solar wind and the Sun will help answer questions about how the solar corona is formed and how solar wind is accelerated. Solar wind particles also help us compare the compositions of the other planets. Examining the interactions of the magnetosphere parts will help us learn to protect our power systems and communication satellites.

All of these interesting problems are part of the larger question "Where did we come from?"



Institute Topics

LASSO participants will expand their space science knowledge base in the following areas (not inclusive):

BASIC SCIENCE

Introduction to space science

LANL Space Science involvement

The Basics (physical sciences)

Distance and Time scales

SOLAR SYSTEM

The Sun

Solar Wind

Magnetospheres

Space Weather

PLANETARY STUDIES

Tour of the Planets

Remote sensing on Mars

The Moon

INSTRUMENTATION

Space Science Instrumentation

MPA Instruments

Micro-systems

DATA PROCESSING & ANALYSIS

Data processing

Data analysis

Modeling and simulation

In addition, participants will be involved in the following educational endeavors:

ACTIVITY DEVELOPMENT

Activity format

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Teachers analyzing Space Weather data

Who among us has not asked, "Where did I come from?"

This question is usually one about life, but behind it are scientific questions about the material of which we are made, the elements in the atoms and molecules of our bodies. The answer to the question "Where did the matter we are made of come from?" is not so easy to find. Some could be satisfied with an answer such as "We are made of the same elements that are found on the Earth we live on." But where did that material come from? The Earth is but one planet in the solar system, and most of the solar system material is inside the Sun.

"Science is more than a body of knowledge and a way of accumulating and validating that knowledge. It is also a social activity that incorporates certain human values. Students should experience science as a process for extending understanding, not as unalterable truth."

Rutherford and Ahlgren
Science for all Americans