## 2010 ASTRONOMY PROGRAMS

our 22nd season on the Mountain

#### APRIL 17 8:00pm

EMMY NOETHER AND THE FABRIC OF REALITY

Noether's Theorem ties the laws of nature – from Newton's laws to thermodynamics to charge conservation – directly to the geometry of space and time, the very fabric of reality.

Ransom W. Stephens, Ph.D. author of The God Patent

## MAY 22 8:30pm

### DARK ENERGY AND THE RUNAWAY UNIVERSE

Observations of very distant exploding stars (supernovae) show that the expansion of the Universe is now speeding up, rather than slowing down due to gravity as expected.

John Dillon, Randall Museum-San Francisco

### JUNE 19 8:30pm

### WHY WE NEED TO COLONIZE SPACE

Everyone talks about colonizing space, but is it just a pipe dream? If at least some of us aren't off this planet within a half-century or so, our lifestyles are going to be less than commodious!

Dr. Seth Shostak, Seti Institute

### JULY 17 8:30pm

# GALILEO, TELESCOPES AND THE BEGINNING OF MODERN SCIENCE

Review of the history of science and an exploration of the subtle, complex relationship between Galileo, telescopes, Science and the Church.

Dr. Alex Filippenko, University of California Berkeley

# **AUGUST 14 8:30pm**

# THE MANY MYSTERIES OF ANTIMATTER

How and when the imbalance of matter over antimatter developed is one of the great mysteries to unravel to understand the underlying properties of the universe.

Dr. Helen Quinn, SLAC-Stanford University

## SEPTEMBER 11 8:30pm

### THE GLOBE AT NIGHT: HOW AND WHY TO PRESERVE THE NIGHT SKY

Saving our Dark Skies is a Global Problem. Find out how light pollution is measured and what you can do to understand and help preserve this natural resource locally.

Kenneth Frank, Astronomical Society of the Pacific-Dark Sky Network

### **OCTOBER 9 8:00pm**

TERRAFORMING THE SECOND HOME FOR HUMANITY The ultimate development of a planet as a second home for Earth life is terraforming. Why is Mars the most productive next place to settle and how can it be terraformed.

Jim Brown, The Mars Society