



SPRING '08 Colloquia

Refreshments at 3:15 PM, Talks at 3:30 PM in the John N. Bahcall Auditorium

www.stsci.edu/institute/sd/talks/Colloquia for updates

Wednesday May 28, 2008

Virginia Trimble, UC Irvine

Science Discovery of the Cosmic Backgrounds: How Empty Space Got Filled with Photons

The sky, even the extraterrestrial sky, is not dark at any wavelength. This was a gradual discovery, beginning with an early 20th century measurement of about one 5th magnitude star per square degree by Simon Newcomb, and continuing with both particles and radio, X-ray, gamma ray, UV, and IR photon bands. Some of these are clearly the sums of sources, others truly diffuse and "cosmic," and establishing which is which has not always been straightforward. The talk will review these discoveries, with special focus on a large number of pre-discoveries of what we now call the CMB, but was at one time the isotropic, microwave, 3K, relict radiation, some of them associated with unhappy stories and the occasional happy one. There have also been some remarkable cases of misunderstanding of one scientist's work by others.