Los Alamos Dynamics
Summer School Program 2014

Speaker: Bill Priedhorsky,

Bio: Dr. Priedhorsky has been on the staff of Los Alamos National Laboratory since 1978, and was a Laboratory Fellow in 1997. He is Program Director for the Science Resource Office, which oversees Laboratory-directed Research and Development program, a $140M/annum investment in flagship Laboratory research, the Research Library, and other components of the Laboratory's knowledge generation and stewardship mission. Dr. Priedhorsky received a B.A. in Physics *summa cum laude* and Phi Beta Kappa from Whitman College in 1973, and a Ph. D. in physics, specializing in x-ray astronomy, from Cal-Tech in 1978. After joining Los Alamos as a staff member in 1978, he developed x-ray diagnostics for laser fusion research, and discovered copious hard x-rays from CO_2 laser-plasma interaction. He joined the Space Astronomy and Astrophysics group, and discovered a wealth of eruptions and long-term cycles in cosmic neutron stars and black holes using data from the Los Alamos Vela 5B satellite, as well as developing instrumentation for the detection of nuclear materials in space. He discovered what was then the closest double star in the sky, and the novel phenomenon of quasi-periodic oscillations in the brightest x-ray star in the sky, Scorpius X-1. Notably, he led the development of photon-counting optical imagers for remote ultralow light imaging, a project that continues to this day as "Remote Ultralow Light Imaging". He conceived and led the development of ALEXIS, Los Alamos' first small satellite, launched in 1993, and the MOXE x-ray all sky monitor, which sadly never went to space, because of the collapse of the Russian space program after the fall of the USSR. From 1995 to 1999, he was Lead Project Leader for Proliferation Detection Technology, responsible for the Lab's projects in active and passive remote sensing, as well as Laboratory's efforts in Hard and Deeply Buried Target Defeat. From 1999 to 2007 he was Chief Scientist in the Nonproliferation and International Security Division, the International, Space, and Response Divisions, and the Threat Reduction Directorate. With Chris Morris of Physics division, he originated the idea of using cosmic-ray muons to detect nuclear material. In 2005, he received the Leo Szilard Award of the American Physical Society for his part in their study of boost-phase missile defense, and was named a Fellow of the Society in 2006. Whitman College awarded him their Alumnus of the year award in 1995. He has been a Max Planck Fellow, a visiting scientist at the Danish Space Research Institute, a Lyle Fellow at the University of Melbourne, Australia, and coordinator (elected

head) of the Los Alamos National Laboratory Fellows. Priedhorsky is an avid outdoorsman and past president of the Los Alamos Mountaineers.