UNIVERSITY of WISCONSIN
LA CROSSE

Distinguished Lecture Series in PHYSICS

October 8–9, 2009

2002 Nobel Laureate

Riccardo Giacconi

Riccardo Giacconi is a University Professor at Johns Hopkins University in Baltimore, Md. He was born in Genoa, Italy, Oct. 6, 1931. He grew up in Milano and received his Dottorato from the University of Milano in 1956 with a thesis on cosmic ray astronomy, confirming one of Enrico Fermi's models of nuclear interactions. He held postdocs in high energy physics at Indiana University (on a Fulbright Fellowhip) and at Princeton University before joining American Science and Engineering in 1959. He started a group to do space science, proposed the first X-Ray telescopes and designed and built x-ray instruments for rocket flights to search for X-ray stars. In 1962 his group flew a rocket that discovered the first X-ray star, Sco X-1. That discovery was the beginning of X-ray astronomy, leading to the X-ray satellites UHURU, Einstein and Chandra. He discovered the cosmic X-ray background, many binary X-ray stars that contain neutron stars or black holes and the massive X-ray halos of clusters of galaxies. For this initial work in X-ray astronomy, he received one half the 2002 Nobel Prize, along with Ray Davis and Masatoshi Koshiba (for the detection of astrophysical neutrinos).

He was appointed a professor at Harvard University in 1973. There, Giacconi and his team developed the "Einstein" satellite and sophisticated data management techniques to allow X-ray observatories to produce standard data products for use by astronomers world-wide. In 1982, he became the first director of the Space Telescope Science Institute, applying the techniques developed for "Einstein" to create the operations planning and data reduction and archiving system for the Hubble Space Telescope. In 1990, he became the director general of ESO and led the successful development of the four, 8-meter optical telescopes that make up the Very Large Telescope. In 1999, he returned to the U.S. as President of the Associated Universities Inc., the consortium responsible for developing the Atacama Large Millimeter Array, due to be finished in 2012.

Giacconi thus had a leading role in developing the largest telescopes in four areas of astronomy: X-ray, ultraviolet, optical and radio. He has played an unparalleled role in the development of observational capabilities in the modern era.

Schedule of Events

Thursday, October 8, 2009

4:30 p.m. **Reception**
260 Graff Main Hall
Refreshments served

5 p.m. **Public Lecture**
260 Graff Main Hall

A New Revolution in Astronomy 400 years after Galileo

We live in a new heroic period of astronomical discoveries comparable for its impact on human understanding of the universe to that which occurred from Copernicus to Newton. New observatories in space and on the ground have opened up the study of the entire range of wavelengths emitted by celestial bodies reaching Earth from the farthest reaches of the cosmos. These studies have revealed the crucial role played by explosive events in the formation and development of the structures we now see. They also reveal the prevalence of unknown forms of matter and energy in our universe, where normal matter made of nucleons provides only 3% of the total. These discoveries require new physics, just as it happened 400 years ago.

Friday, October 9, 2009

3 p.m. **Reception**
Strzelczyk Great Hall
Cleary Alumni & Friends Center
Refreshments served

3:20 p.m. **Physics Colloquium**
Strzelczyk Great Hall
Cleary Alumni & Friends Center

X-Ray Astronomy 2009

It has been 10 years since the launch of the Chandra X-Ray Observatory, still in full operation today. Chandra has reached greater sensitivity and finer angular resolution than any other X-ray astronomy mission to date. Its sensitivity is some 10 billion times greater than the one necessary to discover the first X-ray star Sco X-1 in 1962. Its angular resolution of 0.5 arc seconds is comparable to that of ground based optical telescopes. X-ray observations play a unique role in the study of some of the objects of greatest current astrophysical interest and their grasp rivals that available with the most powerful observatories in space and on the ground at all wavelengths.

For further information about the lecture contact:

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