National Center
for Earth and Space Science Education

Universities Space Research Association

USRA

Visiting Researcher Profile

JOURNEY through the UNIVERSE

Dr. Arthur Poland

Affiliate Professor, Department of Physics and Astronomy, and Department of Computational and Data Sciences, George Mason University.

Research Specialty: The Sun, what happens on the Sun, and how it affects Earth and humanity

Bio

Dr. Arthur (Art) Poland received his Bachelors of Science degree from the University of Massachusetts in 1964 in Astronomy. He then went to Indiana University where he did theoretical computer modeling of stellar atmospheres and received his Ph.D. in 1969. After graduating from Indiana University he became a research scientist at the High Altitude Observatory (HAO) of the National Center for Atmospheric Research. Here his research shifted to studying the atmosphere of our star, the Sun. He became a member of the team that had a coronagraph on Skylab. This gave him the opportunity to work with the astronauts on Skylab and obtain new data about the solar atmosphere. In 1980 he moved to NASA Goddard Space Flight Center where he worked with the Solar Maximum Mission team to study Solar Flares. In the mid 1980s he became the U.S. Project Scientist for the Solar and Heliospheric Observatory (SOHO). During his final years at NASA he was the Senior Project Scientist for the Living With a Star program, NASA's new initiative to study Space Weather. In 2004 he joined the faculty at George Mason University.

Dr. Poland has been heavily involved in education and public presentations over the last decade. He has given many classroom presentations, teacher workshops, and National Science Teacher Association presentations. During his time at NASA he also participated in many television and radio interviews relating to NASA solar research and the SOHO mission. He also participated in some educational television programs including: Live from the Sun, Live from the Aurora, and Space Weather.

Dr. Poland has received many awards during his career. Some of the more notable include:
the NCAR Technology Advancement Award, 1973; the GSFC Exceptional Achievement Award, 1996; the European Space Agency SOHO Award, 1995; and the NASA Exceptional Achievement Medal, 1998.

Example of Classroom Presentations

The Sun, Solar Storms, and Surviving Storms in Space **[Grades: 6-12]**

Life as we know it exists only in a thin shell around a tiny blue planet that circles a small star called the Sun. Most people know that the Sun is critical for sustaining life on Earth, but did you know that the Sun also has storms that make interplanetary space a dangerous place for life? What special aspects of the Earth make it habitable? Could you live on Mars? Could you live on Jupiter? What are the problems that need to be solved to go to Mars and other planets? How can we find out what it is like in other solar systems?