

SPACE PHYSICS SEMINAR

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A travelogue of my professional life

Thursday, May 1, 2014 725 Commonwealth Ave. Refreshments at 3:30pm in CAS 500 Talk begins at 4:00pm in CAS 502

Abstract:

As I approach my 75th birthday and begin to contemplate retirement, I would like to offer a retrospective of the programs and projects that have shaped my ideas of the Earth's magnetosphere. Formative years were spent in graduate school at the University of Iowa with a thesis project based on the Injun 3 satellite working for Professor James Van Allen and this was followed by a post doc at the NASA/Goddard Space Flight Center in Greenbelt, MD working on the Explorer 45 (S-cubed) satellite and making the first complete measurement of the energetic ion spectrum in the storm time ring current. This was followed by a move to the NOAA/Space Environment Laboratory in Boulder, CO where my work on the energetic particle instruments on the ISEE 1 and 2 satellites led to an appreciation of the dayside magnetopause and its role in magnetospheric processes. Next came a move to the Los Alamos National Laboratory in New Mexico and the development of energetic composition measuring instruments for the NASA/Polar and the joint NASA/ESA Cluster satellites which have shown that plasma of solar wind origin is rammed into the high altitude polar cusp creating a diamagnetic cavity of large dimensions which are then a source of the energetic particles of the magnetosphere. The "final" phase of this journey has taken me to Boston University where I have worked with students to continue to design and fabricate energetic particle instruments for the Air Force but more importantly have tried to institute a program for students to have the opportunity to work on satellite projects as part of their BU experience in much the way my professional career begin with the opportunities provided by Dr. Van Allen at the University of Iowa.