Andrew Hutton
Associate Director, Accelerators, Thomas Jefferson National Accelerator Facility
Thursday, September 20, 2012 - CEBAF Center, Jefferson Lab

Jefferson Lab - who are we, what do we do, and why should you care?

Jefferson Lab was founded over 25 years ago as a DOE-funded National Lab dedicated to forefront research in Nuclear Physics. We operate as a User facility driven by twin recirculating superconducting linear accelerators in a racetrack configuration. The Users come from around the world (~1300 per year) to carry out experiments in one of three experimental Halls. We are in the middle of a $330M upgrade that will double the maximum energy to 12 GeV and will add an additional experimental Hall. In addition, we have used our core expertise to build the world's highest power free electron laser (FEL) that operates in the infrared and ultraviolet regions.

Operating, maintaining and improving these accelerators requires world-leading, specialized facilities for superconducting radiofrequency cavities. We are in the middle of a significant upgrade to these facilities, which will enable us to become partners in superconducting accelerator projects around the world.

These facilities lead naturally to an interest in Accelerator Driven Systems and we are actively seeking collaborations in this area.

Andrew Hutton: Associate Director, Accelerators; Jefferson Lab, Newport News, VA; B.A. and M.A., Cambridge, 1966 And 1969, Ph.D., London University, 1970. Presently, Andrew leads a Division that built and now operates CEBAF, a superconducting recirculating linear electron accelerator that provides 6 GeV, megawatt beams to nuclear physics users, and currently being upgraded to double the energy. The Accelerator Division also built the superconducting proton linac at the Spallation Neutron Source in Oak Ridge, the world's most powerful proton accelerator delivering megawatt beams for neutron science users.

Over the last few years, Andrew has focused on applying the core technology of these accelerators, superconducting radiofrequency linacs, to a variety of applications, which not only include leading-edge science projects (FRIB, Project X, APS-U) but also Accelerator Driven Systems. Andrew is convinced a marriage of accelerator and nuclear technologies will lead to improvements in nuclear fuel cycles and nuclear waste management, and also lead to the commercial production of medical radioisotopes.

Andrew is involved in creating a consortium of Virginia universities, laboratories and industries that propose to build an ADS test-bed in collaboration with India, and working towards US participation in MYRRHA, the ADS project in Belgium.

Andrew is a member of the American Nuclear Society and serves on the Executive Committee of the Accelerator Applications Division.

TIMES:

- 3:30 PM - VIP Tour of the JLab Accelerator Facility **(Limited to the first 30 people signing up)**
- 5:30 PM - Social Mixer
- 6:00 PM - Dinner at the CEBAF Center
- 7:00 PM - Speaker Presentation
- 8:00 PM - On the road

COST: $30 (Students $15)

IMPORTANT TOUR INFORMATION:

- Closed-toe shoes, long pants and a government-issued photo ID are a must.
- Everyone must be 18 years-old or older.
- **Important Notice for JLab visitors who were born outside the United States:** U.S. Department of Energy headquarters' approval is required before any persons, not of U.S. citizenship, whose country of birth is Cuba, Iran, Sudan or Syria can enter DOE facilities, including Jefferson Lab. Visitors from these countries may not be on site or tour Jefferson Lab without first going through this formal approval process that requires appropriate justification. This process may take up to six (6) months.