



Bob Melville, Lou Lanzerotti, Les Medford
Photo by Warren Westura

Plaque Dedication at Jenny Jump Recognizes Life and Work of Lester V. Medford

Dr. Robert Melville, NJIT

Friends, co-workers, and distinguished scientists gathered at the UACNJ facility in Jenny Jump State Forest on Tuesday, September 30 to honor Lester V. Medford.

Now retired from Bell Telephone Laboratories (BTL), Lester's work in communications research and geophysical instrumentation spanned more than forty years. He joined BTL to work on the space radiation experiments for the Telstar satellite and subsequent satellite projects with Walter Brown. He later worked

in physics with Louis J. Lanzerotti and Carol MacLennan. Les installed and maintained numerous geophysical monitoring instruments both at the BTL facility in Murray Hill and in various far-flung corners of the world including Hawaii and Antarctica.

Specifically, Les designed, installed, and maintained numerous sensitive fluxgate magnetometers that measure variations in the Earth's magnetic field to a resolution of a few nanotesla. These data are fed into various theoretical models of the space weather environment and help to predict magnetic storms that can impact terrestrial communications. For example, some of these magnetometers were installed at several AT&T transoceanic telephone cable stations. Monitoring instrumentation was connected to the ground returns of these long undersea cables which simultaneously recorded cable voltage variations induced by geomagnetic field fluctuations. These data aided in the design of cable power systems with protection against cable voltage overloads during major geomagnetic storms.

A bit closer to home, Les also supervised the installation of a three-meter radio telescope on the roof of BTL that was used to observe bursts of radio energy from the sun. This instrument is being relocated to the UACNJ facility at Jenny Jump.

The dedication plaque honoring Les hangs next to an research magnetometer at UACNJ that is administered by the New Jersey Institute of Technology (NJIT). This instrument was previously managed by Les and is now used by NJIT professor Andrew Gerrard and his graduate students as part of a worldwide network of magnetic monitoring stations called *Intermag*.



Les Medford is joined by friends, coworkers, UACNJ members, and staff and graduate students from NJIT at the dedication. *Photo by Warren Westura*

Ted Barker Observatory

Ron Russo, UACNJ President

Ted Barker was a member of UACNJ for 14 years, serving as vice president in 2002-2003 and president in 2004-2005. He served on and chaired many committees during his years with UACNJ and helped with all aspects of the construction of the five observatories at Jenny Jump. To honor Ted who lost his battle with cancer in April 2008, the Board of Directors voted at the fall Board meeting to name the new solar observatory after him. The "Ted Barker Solar Observatory" should be ready for use during the 2009 public season. It will house an 8-inch telescope with H Alpha, Mylar, and Thousand Oaks filters. It will also be used at night as an astronomical telescope. A dedication ceremony is being planned for May 2009.

Observing Teams

Diane Jeffer, Membership Chair

We tried a new way of assigning duty nights in 2008 and by all reports it has been a huge success. Rather than having Observers choose a few nights at random, we set up six teams that rotated duty throughout the season. Two Team Leaders coordinated the Observers on each team, assuring that there were at least four Observers (including at least one Team Leader) available for each of the team's five duty nights throughout the season. We are lining up Team Leaders for 2009. Now we just need YOU to become an Observer and make next year an even bigger success!

The Observer Form will be available at www.uacnj.org in mid-January. Observers are assigned to Teams in the order the forms are received, so return yours promptly to assure your first choice.

Please contact me at jefferfamily@gmail.com if you have any questions, are interested in serving as a Team Leader, or would like to receive an Observer Form via postal mail.

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Club Membership

The 2009 Member Club Form is available now! If your club did not receive a copy, it can be found at www.uacnj.org. Club dues for 2009 are still only \$25!

The deadline to be listed as a Supporting Club on the 2009 Observer Form is **January 15**, so please return the Member Club Form by that date.

Member Clubs can schedule an annual star party at the UACNJ facility in Jenny Jump State Forest.

Supporting Clubs pay an additional \$1 per member and can hold star parties as often as they wish; members of Supporting Clubs can become UACNJ Observers at a reduced rate.

Contact Ron at ron@roned.com or 973-386-1848 if you have any questions.



Email Lists for Astronomers

There are two email lists that have been created at Yahoo!Groups for astronomers affiliated with UACNJ.

UACNJ@yahoogroups.com is for Observers who are paid for the current year, and representatives from each Member Club. To keep the list current, members will be removed if their Observer Form or Club Membership has not been received by April 15 of each year.

A second list, NJAstronomers, is open to anyone interested in astronomy and UACNJ. Send an email to NJAstronomers-subscribe@yahoo.com if you would like to participate.