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2011 Jansky Lecturer

Dr. Sander Weinreb Awarded the 2011 Jansky Lectureship



Dr. Sander Weinreb

The 46th Annual Jansky Lecture will be given by Dr. Sander Weinreb of NASA's Jet Propulsion Laboratory and the California Institute of Technology and is entitled "**Radio Astronomy from Jansky to the Future - An Engineer's Point of View**". Dr. Weinreb is being honored for his pioneering developments of novel techniques and instrumentation over nearly half a century which have helped to define modern radio astronomy.

The first lecture will take place in Charlottesville on **Tuesday, September 20, at 7:00 pm** at Cramer Auditorium at the NRAO Technology Center (NTC) with an informal reception held at 6 pm prior to the lecture.

Green Bank will host Dr. Weinreb on **Wednesday, September 21 at 3:30 pm** in the Green Bank

Science Center Auditorium.

The final Lecture of the series will be held in Socorro on **Friday, October 14, 2011 at 8:00 pm** at the Workman Center on campus at New Mexico Tech.

Weinreb received his PhD degree in electrical engineering from the Massachusetts Institute of Technology in 1963. While he was still a graduate

student at MIT, he developed the world's first digital autocorrelation spectrometer which he then used to place a new upper limit to the Galactic deuterium to hydrogen ratio, and with Al Barrett, Lit Meeks, and J. C. Henry, he detected the OH ion, which was the first radio observation of an interstellar molecule. His autocorrelation spectrometer technique is now in use at virtually every major radio observatory throughout the world and has been crucial in the subsequent explosive growth of interstellar molecular spectroscopy.

In 1965 Weinreb came to NRAO where he became Head of the Electronics Division and later Assistant Director. During his 23 years at NRAO, he pioneered the use of low noise cryogenically cooled solid state amplifiers in radio astronomy. He was the architect for the electronic systems design for the NRAO Very Large Array in New Mexico and led the group which developed the novel front ends and the data transmission, acquisition, and monitor and control systems for the VLA.

Subsequently Sandy worked at first at Lockheed Martin Laboratories and then at the University of Massachusetts where he developed MMIC amplifiers and other millimeter wave devices. He has also been a Visiting Professor at the University of Virginia. Most recently he has been a Senior Faculty Associate at Caltech and Senior Principal Scientist at JPL where he has continued his work on MMIC devices and played a leading role in the electronics design for a new DSN space tracking array. He has been active in developing wideband feeds and front ends as well as investigating cost effective designs for modest size antennas, all of which will be important for the next generation of radio telescopes such the SKA. In addition he has been working with the Goldstone Apple Valley Radio Telescope (GAVRT) program to develop a 34 m radio telescope at Goldstone for use with schools around the globe.

We are pleased to have a scientist of Dr. Weinreb's stature for the 2011 Jansky Lectureship, and we look forward to his visit and presentation this fall.

Fred K.Y. Lo
NRAO Director

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