



News

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Dr. Tom Clark, First non-Russian Awarded Gold Medal for Lifetime Achievement by Russian Academy of Sciences

COLUMBIA, MD. March 24, 2005 . . . The Institute of Applied Astronomy (IAA) of the Russian Academy of Sciences has awarded a Gold Medal to Dr. Thomas A. Clark for his lifetime contributions to development of Very Long Baseline Interferometry (VLBI). IAA's director, Professor Andrey Finkelstein, presented the medal during a ceremony held on February 10th at the IAA in St. Petersburg. This was the first time the medal has been presented to a non-Russian scientist.

Clark began the VLBI program at NASA Goddard Spaceflight Center in 1968. VLBI is an astronomical technique that observes Quasars with multiple radio telescopes separated by thousands of kilometers on the Earth. Signals are time-tagged with highly stable clocks and recorded. The recordings from all stations are sent to a central facility where the signals are compared. VLBI was originally developed by astronomers to study Quasars, the most distant visible objects in the universe.

Clark and his colleagues at MIT, the Haystack Observatory, and NASA applied VLBI to geophysics by measuring the distances between the radio telescopes with accuracies better than one centimeter. With these measurements they were able to measure tectonic motions (sometime called Continental Drift) between North America, Europe, Africa, the Pacific Basin, Asia and Australia. In California these motions amount to about 2-1/2 inches per year along the San Andreas Fault, while North America and Europe are separating by about 1/2 inch per year. Before VLBI, these motions had only been observed by geological techniques over time scales of thousands to millions of years. VLBI was able to map the motions with higher accuracy over time scales of a few years.

Tom and his wife Elizabeth traveled to St. Petersburg as the guests of the IAA. Activities included a trip to the IAA's 32 meter radio telescope at Svetloe, about 50 miles northwest of St. Petersburg. During their one week visit, they also visited many historical sites including the Hermitage, Katrina Palace, the Amber Room, several churches and the opera Samson and Delilah at the Marinsky Theater.

Tom is a 28-year resident of Clarksville, MD and directed NASA's VLBI program until his retirement from Goddard in 2001. Since that time, he has been the Chief Scientist at Syntonics

LLC in Columbia. Syntonics is a specialty defense electronics company that produces the FORAX RF-over-fiber communication systems for military radios and develops innovative antennas for specialty military applications. For more information on Syntonics and its products, please see the company's website at www.SyntonicsCorp.com.

(Clockwise from upper left) Receiving award from Professor Finkelstein in St. Petersburg; Dr. Clark with plaque standing in front of picture of radio telescope; the Gold Medal

