

# DR. SETI'S STARSHIP

Searching For The Ultimate DX

## Remembering John Kraus, W8JK

I am saddened to report the death on 18 July 2004, just three weeks after his 94th birthday, of Dr. John D. Kraus, W8JK, a true renaissance man. John was Professor Emeritus at Ohio State University, where he had taught engineering, physics, and radio astronomy for nearly half a century. Long after his retirement, he was still going to the campus daily to meet with students. Ever the optimist, John had renewed his ham radio license a few days before his death—for a period of ten years.

Prof. Kraus distinguished himself as a prominent physicist, educator, antenna designer, engineer, writer, publisher, radio amateur, and philosopher. His textbooks *Radio Astronomy*, *Antennas*, *Electromagnetics*, and *Our Cosmic Universe* guided a whole generation of astronomers and engineers, including me. His two volumes of memoirs (*Big Ear* and *Big Ear Too*) inspired a whole generation of radio amateurs (again, including me). His short-lived periodical, *Cosmic Search*, was the world's first SETI magazine, its thirteen issues still cherished by those of us involved in the SETI enterprise. His designs (including the legendary Big Ear radio telescope) have expanded humanity's knowledge of the cosmos.

It was at Big Ear that the most tantalizing, elusive, and enigmatic evidence yet of extraterrestrial intelligence was collected. The legendary "Wow!" signal received there on 15 August 1977 remained the greatest mystery of John Kraus's life, a detection that fit exactly the expected profile of intercepted radiation from another intelligent civilization in the cosmos. That the anomaly was observed right around the time of his retirement must have been a disappointment to John, who would have liked to direct the hundreds of repeat observations that followed. Instead, Kraus turned over the effort to a most able lieutenant. Bob Dixon, W8ERD, had come to Ohio State as a grad student, specifically to study under the best antenna engineer of his day. He was studying there when Big Ear was being commissioned, stayed on as a faculty member, became John Kraus's deputy director, and ran the observatory during its final years.

Those final years of Big Ear came too soon, both for Dixon and for Kraus (who remained actively involved in radio astronomy and SETI well beyond his retirement). The land under the antenna's beautiful 3.5-acre ground plane had become just too valuable, and ultimately the university sold it to the developers. Big Ear, John Kraus's brainchild and one of the greatest radio telescopes of all time, was ploughed under in early 1998 to make way for a commercial golf course. Such is progress.

On a personal level, it was John Kraus who ordained me as a radio astronomer. That particular episode occurred a number of years ago at Ohio State University, when Kraus was already a Professor Emeritus. I had just presented a SETI paper to a room full of astrophysicists, and I was justifiably nervous. "After all," I told him afterward, "I'm just an electrical engineer."



*Dr. John D. Kraus, W8JK, Ohio's first and foremost radio astronomer, designed and built Big Ear, the third largest radio telescope in the United States. His basic design has been duplicated at least three times around the world and is now known generically as the Kraus-type telescope. W8JK was prominent in ham circles for inventing several other important antennas, including the 8JK beam (a two-element, wire, end-fire array), the axial-mode helix, and the corner reflector. He is seen here at the site where Big Ear stood for nearly 40 years, giving its eulogy at the dedication of a state historical marker. (N6TX photo)*

"Don't ever say that!" roared Kraus, with a forcefulness that belied his then eight decades. "You are a radio astronomer!"

Right there, I realized I had offended my mentor. (After all, he himself was, first and foremost, an electrical engineer.) "But John..." I started.

"But nothing!" he retorted. "As an engineer, you can very easily learn (and, in fact, have already learned) all the astronomy you need to call yourself a radio astronomer. The converse cannot be said of the physicists."

Over the years, John Kraus remained quick with his wit, frank in his criticism, generous with his praise, and ever supportive of the young upstart with his head in the clouds. I am proud to have been able to call him my friend.

The last time I saw Kraus in person was on 5 November 2000. John and 50 friends gathered on the green at the former Big Ear site to dedicate an historical marker. That ceremony was not only a memorial to Big Ear, but also a tribute to Kraus and his many accomplishments. I know that when Big Ear died, so did a part of John Kraus. That he remained among us, warm, compassionate, and mentally alert for an additional four years, was a gift to all who knew him.

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