

Edwin X Berry, PhD, Physics

Dr. Edwin X Berry is a physicist and [Certified Consulting Meteorologist](#) (#180) for the American Meteorological Society. His consulting expertise is in physics, atmospheric physics, meteorology, climatology, and numerical models.

Dr. Berry has been an expert witness in many legal trials. Since moving to Bigfork, Montana, in 2008, he assisted in legal cases in Montana, Idaho, and Washington. He has published over 42 professional scientific papers.

Dr. Berry received his BS degree in Engineering from the *California Institute of Technology* (Caltech) in 1957, where he studied under teachers like Dr. Linus Pauling. Berry served four years in USAF ROTC as a pilot trainee. The USAF gave him an honorable discharge in 1957 because Congress lowered its quota for pilots. After graduating from Caltech, he worked as a physics instructor while he studied math at Sacramento State University in 1958-59.

In 1959, *Dartmouth College* awarded Berry a teaching fellowship in physics. In addition to physics, Berry studied math and philosophy under Dr. John Kemeny, a student of Albert Einstein and the inventor of Basic computer language. Berry's master's thesis, under Professor Millet Morgan, concerned the effect of the polarization of high-frequency radio waves beamed into the earth's ionosphere. Berry received his MA degree in Physics from Dartmouth in 1960.

In 1961, Berry became the first research assistant for the new *Desert Research Institute* at the University of Nevada, Reno, where he studied meteorology under Professor Wendell Mordy and physics under [Dr. Friedwardt Winterberg](#), top student of Nobel Laureate Heisenberg in Germany, and Dr. William Scott. Berry received his PhD in Physics in 1965, with a focus on atmospheric physics.

Dr. Berry's theoretical PhD thesis is recognized as a breakthrough in the science of rain formation and in the use of computer-based numerical models. His model of the microphysics of rain formation is summarized in cloud physics textbooks and taught in university courses.

Following his graduation, Dr. Berry became chief scientist of the Nevada *Desert Research Institute* airborne research facility. He designed and his team built the first low cost, airborne, earth-referenced radar display. NOAA adapted Berry's design for hurricane research. He led pioneering research flights inside Alberta hailstorms and Sierra Nevada mountain effect storms. He participated in meteorological research experiments in South Africa, Puerto Rico, and St. Croix.

In 1969, Dr. Pierre St. Amand of the *Naval Weapons Center* invited Berry to be the only civilian consultant in DOD's *Top-Secret Operation Popeye*. Berry and St. Amand taught USAF pilots how to produce rain from tropical clouds near the Philippines. USAF pilots used these methods to wash out the Ho Chi Min trail and other targets in Laos and North Vietnam.

In 1973, the *National Science Foundation*, Research Applied to National Needs (RANN), in Washington, DC, invited Dr. Berry to be its Program Manager for Weather Modification. He managed NSF's leading edge national weather research projects, including the *Metropolitan Meteorological Experiment* (METROMEX) and the *National Hail Research Experiment* (NHRE).

In 1976, Dr. Berry founded *Edwin X Berry & Associates* in Sacramento. He developed numerical models to calculate and reduce aircraft accidents due to wind shear. He proposed a method for reducing such accidents that is in use today at major airports. He performed the southern California desert wind-energy study for the *California Energy Commission* and performed wind-energy evaluations for wind-energy companies. He identified Altamont Pass and Tehachapi Pass as excellent wind energy resources in 1980. He designed and manufactured the first low-cost, electronic remote data instruments for wind energy using then state-of-the-art electronics.

From 1989 through 1992, Dr. Berry managed his meteorological team to provide 24-hour weather forecasting for the US Customs Aerostat project along the southern U.S. border.

In 1992, Dr. Berry made courtroom history by developing and defending the first computer model to generate new evidence in a criminal trial. His custom software application, written in Microsoft Visual Basic, modeled human body physiological responses to changing weather and environmental conditions. This model and Berry's testimony was a key element in the successful defense in a high-profile murder trial. Computerworld and Microsoft selected his model as one of 24 finalists out of 1300 entries for the 1993 Windows World Open where it won the overall "*People's Choice Award*." Microsoft nominated Dr. Berry for a *Smithsonian Award*.

In 1992, he developed software that used historical annual streamflow data to estimate future annual steamflow for the Sacramento River Index. His software accurately predicted California would recover from its 1993 drought but drought would reoccur in 2013.

From 1994 through 2000, Dr. Berry applied mathematical artificial intelligence methods developed for weather forecasting to the valuation of single-family homes. Bank of America performed side-by-side tests of Berry's model against other home valuation methods, Berry's method proved significantly superior. Berry is an expert in *Automated Valuation Models* (AVMs) for property valuations.

In 1996, the University of Nevada Alumni Association presented Dr. Berry with its *Professional Achievement Award*, after he was nominated by his physics mentor, [Dr. Winterberg](#).

Since 2001, Dr. Berry has focused on the global warming problem, which is intimately tied to his expertise in cloud physics, numerical modeling, and government-sponsored research. Like 1000's of other atmospheric scientists, Berry concludes human carbon dioxide emissions are insignificant to climate change.

During his professional career, Dr. Berry has been very active in athletic competitions.

While a graduate student at the University of Nevada, Berry qualified for membership in the elite Sigma Delta Psi national athletic honorary. Very few people have achieved this level of athletic performance. Sigma Delta Psi members include [Astronaut Ed White](#), [Dr. Hatfield](#), super-athlete [Norm Hoffman](#), [Harvey Wray](#), Dr. Robert Gordon, [Scott Hurley](#), [Bill Ruschel](#), and [Thomas Cureton](#).

As a competitive small-boat sailor, Dr. Berry and his wife, Valerie, as crew, won Gold Medals in the 1974 *Canadian Olympic-Training Regatta* in Kingston, Ontario. They beat Olympic sailors

and Valerie became the first woman ever to win such high-caliber sailing competition. They won North American and US National Championships.

In the 1990's, Berry placed in top 10 USA age-group running and run-bike-run events. In 2013, at age 78, he [rowed 500 meters](#) on a Concept 2 in 1:46.3 to earn a 2014 world fourth place in the 70-79 age group. In February 2016, he set Concept 2 world records for [500 meters](#) and [100 meters](#) for the 80-89 age group.

Dr. Berry is a pilot, with glider, power, and instrument ratings.