

Eugene Rasmusson, Climate Diagnostician Who Characterized El Niño Structure, Dies at 86



Eugene M. Rasmusson
27 February 1929 – 22 March 2015

Eugene Rasmusson, a member of the National Academy of Engineering and a University of Maryland Research Professor Emeritus of Atmospheric and Oceanic Science is best known for his pioneering study of the observed structure of ocean-atmosphere variations in the tropical Pacific that underpin what is now popularly known as El Niño – a recurrent pattern of year-to-year climate variability centered in the tropical Pacific that affects climate, marine organisms, agricultural production, and financial markets throughout much of the world. Rasmusson’s robust characterization of the evolution of the ocean-atmosphere surface state during the life cycle of El Niño events, based on sparse observational datasets available 30 years ago, set the stage for a major breakthrough in our understanding of the mechanisms that give rise to El Niño events. Modeling of El Niño is a key element in the seasonal hydroclimate forecasts issued by the National Oceanic and Atmospheric Administration (NOAA).

Rasmusson’s skills in gleaning important coherent information from scanty observations were honed during his doctoral studies at the Massachusetts Institute of Technology, under Victor Starr. His seminal analysis of the atmospheric hydrologic cycle over North America was at the intersections of meteorology, atmospheric general circulation, and land-surface hydrology. He was an interdisciplinary scientist long before it was fashionable or necessary to be one. His description of atmospheric transport of water vapor into regions of heavy rainfall presaged contemporary field programs such as the Global Water and Energy Exchanges Project.

Rasmusson started his professional career at NOAA’s Geophysical Fluid Dynamics Laboratory in Princeton, where he and colleague, Abraham Oort, compiled and analyzed the post-war upper-air meteorological observations, providing climate scientists unprecedented access to this dataset through tables, charts, and microfiche archives, all published as NOAA Technical Reports. The Oort-Rasmusson data atlases were no less important than the leading textbooks in graduate training and research on atmospheric general circulation and the hydrologic cycle. Rasmusson moved to the Washington DC area in 1970 and continued working for NOAA until 1986; his last appointment was as Chief of the Diagnostic Branch of NOAA’s Climate Analysis Center. He joined the University of Maryland in 1986 as a Senior Research Associate in the Department of Atmospheric and Oceanic Science (then Department of Meteorology). He was appointed

Research Professor, with an emeritus rank in 2000. During his years at the University of Maryland he played an important role in fostering the growth of the Atmospheric and Oceanic Science department.

Eugene Martin Rasmusson was born in Lindsborg, Kansas on 27 February 1929. Gene grew up on a family farm and retained vivid memories of his first decade of life that coincided with the wrenching depression, drought, and the Dust Bowl conditions of the 1930s. The catastrophic climate events that he witnessed first-hand played a role in stimulating his interest in meteorology, and his farm experiences frequently colored his lectures. Rasmusson earned a BS in civil engineering in 1953 from Kansas State University, an MS in engineering mechanics in 1963 from St. Louis University, and a Ph.D. in meteorology in 1966 from the Massachusetts Institute of Technology (MIT).

Rasmusson was honored with the Victor Starr Lectureship at MIT, the George Benton Lectureship at Johns Hopkins, and the Robert Horton Lectureship at the American Meteorological Society (AMS). He received the Jule Charney award from the AMS in 1989. He was a Fellow of the AMS, American Geophysical Union, and the American Association for Advancement of Science, and was elected a member of the National Academy of Engineering in 1999, and a National Associate of the National Academy of Sciences in 2003.

Rasmusson's community leadership as AMS President (in 1998) and his scientific leadership at the National Research Council (including as Climate Research Committee Chair 2000-2002) and NOAA has advanced climate monitoring, analysis, and prediction activities. The American Meteorological Society honored him with a named symposium in 2007, and University of Maryland's Department of Atmospheric and Oceanic Science launched The Eugene Rasmusson Lectures in his honor in 2011.

Eugene M. Rasmusson died suddenly at his home in Asbury Village, Gaithersburg, MD on 22 March 2015, with his wife of 54 years, Georgene, by his side. He is survived by his wife and four daughters Mary Rasmusson of Oak Park Illinois, Ruth Anne Rasmusson of Guatemala City, Guatemala, Elizabeth Zehner of Bethesda MD, and Kristin Vignaroli of Riverside Illinois; and six grandchildren.

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