



BIOGRAPHICAL SKETCH

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Dr. Engdahl's career has largely been one of US government service, although he has always maintained close ties to the academic community both nationally and internationally. After completing graduate study in Geophysics at St. Louis University in 1968, he became a Member of the Theoretical Studies Group of ERL/NOAA and fellow of CIRES, a cooperative institute jointly supported by the University of Colorado and ERL/NOAA. As a CIRES Fellow, his research activities included plate dynamics and techniques for earthquake prediction in an active subduction zone, body-wave studies of Earth's interior and major discontinuities, and applications of seismic ray tracing to the study of lateral heterogeneities of the Earth's crust and mantle. In 1977, he joined the U.S. Geological Survey (USGS) Office of Earthquake Studies, as Chief of the Branch of Global Seismology.

In 1983, he returned to full-time research and became involved in projects that included the development of technology to determine the Earth's lateral heterogeneity and account for its effect on earthquake location, syntheses on the fundamental nature and pattern of earthquakes in subduction zone settings, effective utilization of digital seismic data in the study of Earth structure and earthquake source mechanisms, and the development of advanced mathematical analyses of seismic data. In 1995, he formally joined the Physics Department at the University of Colorado as a Lecturer with adjunct status and engaged in collaborative research efforts with members of the Physics faculty. He retired from his government position in 1998 to devote his time entirely to creative research pursuits at the Center for Imaging the Earth's Interior in the Department of Physics at the University of Colorado.

His current research efforts are directed towards providing more accurate earthquake locations, primarily by developing better velocity models of the Earth and improved procedures for hypocenter determination. As a result of these efforts, introduction of newly developed and tested procedures in the routine determination of hypocenters by the USGS NEIS is anticipated. Although one-dimensional reference Earth models are currently used in routine work, his long-term goal is to introduce a realistic fully three-dimensional Earth model and fast non-linear ray tracing techniques for routine earthquake location. Solution of this cutting-edge research problem will not only result in major advances in the characterization of seismic zones globally, but is also highly relevant to the global monitoring of seismic events under the CTBT.