Robin D. Muench, IUGG Fellow

USA

Dr. Muench received his PhD in oceanography from the University of Washington in 1970. Following graduation he was Assistant, then Associate, Professor at the University of Alaska in Fairbanks. He left Alaska in 1976 to serve as a Research Oceanographer with the NOAA Pacific Marine Environmental Laboratory. He left NOAA in 1979 to take a Senior Scientist position with Science Applications International Corporation where he remained until 1995 when he left to co-found a non-profit organization, Earth & Space Research (ESR), dedicated to basic oceanographic research. He has worked at ESR as Senior Scientist, except for a two-year period from 2000-2002 when he took leave to fill a joint program management position with the Office of Naval Research and the National Science Foundation, until his 2007 retirement. He presently occupies a Senior Scientist Emeritus position with ESR in Seattle, USA.

Dr. Muench's research has focused on physical oceanographic processes in the high latitude oceans. Early interests in the Canadian Arctic Archipelago and Baffin Bay regions soon extended into the more accessible Bering Sea and northern Gulf of Alaska, where the focus was on mesoscale processes and the impacts of sea ice, winds and tides on ocean stratification and circulation. He participated during the 1980's in both the western and eastern Marginal Ice Zone Experiments, where he focused on mesoscale circulation associated with the northern marginal ice zones. Over the same period he became involved in research in the Antarctic, where he participated in a major field program addressing the ecosystems associated with the Weddell Sea marginal ice zones. Shortly following, he participated in a joint US-Soviet drifting ice station in the western Weddell Sea and used observations to better characterize the little documented regional circulation. Over this same period he participated in a field program to investigate upper ocean processes associated with lead formation and refreezing. During the mid-1990s he participated in several field expeditions to the eastern Arctic Ocean that provided new information on circulation and water mass properties of that region. Since the late 1990s he has focused on the Antarctic, participating in field programs in the eastern and western Weddell Sea that examined physical processes with an emphasis on smaller scales. Following this, he participated in a major multi-year field program that addressed physics associated with the shelf break in the Ross Sea region and the dynamics of the associated down-slope flows that contribute to Antarctic Bottom Water. His interests just prior to and since retirement have included ocean influences on tidewater glaciers, with an emphasis on the Amundsen Sea, and turbulent mixing processes as they apply to the mesoscale.

Dr. Muench has throughout his career taken on lead organizational roles including participation in project organization committees and organizing special journal issues or meetings. He became involved in international organizational activities in the 1980s when he served on the International Council on Snow and Ice, chairing a subgroup within that organization and later presiding over an IAPSO Commission on Sea Ice. He subsequently served as President of IAPSO from 1991-1995. From 2001-2004 he organized and chaired an IAPSO-SCOR working group on ocean mixing and, more recently, was appointed to serve as a physical oceanographer on the US National Committee for IUGG and as a US Delegate/Correspondent to IAPSO. He has over the same period served as elected Secretary for Physical Oceanography of the AGU Ocean Sciences Section, and has remained actively involved in coordination of international research efforts focused on the high latitude oceans, with an emphasis on the Antarctic.