Seismology Education Programs at the University of Portland

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Seismology is a cornerstone of three education programs at the University of Portland. IRIS software and teaching resources are used extensively in all these educational programs.

University courses have been developed for non-science majors. Three courses (Earth Systems Science; Natural Hazards of the Pacific Northwest; Introduction to Marine Science) include seismology as a fundamental component. The Earth Systems Science course is required for undergraduate majors in the College of Education and we seek to inform these students about ways to include seismology in their future K-12 teaching. Seismicity and earthquake hazards in the Pacific Northwest are a particular focus in the Natural Hazards of the Pacific Northwest course.

A public seismology display is being constructed in the lobby of the largest classroom building on campus. This display will feature the AS-1 seismometer as well as real-time displays of world and Pacific Northwest seismicity and earthquake information.

Seismology education programs have been constructed for K-12 teachers. A one-day workshop on Earthquakes and Tsunami for teachers in Portland Public Schools was organized for June 20, 2005. This workshop will capitalize on heightened public awareness about earthquakes and tsunami in the wake of the Indian Ocean tsunami and the tsunami hazard in the Pacific Northwest. “Teachers on the Leading Edge” is an NSF-sponsored field-based teacher professional development program designed by a collaboration of university Earth scientists and science education specialists, USGS scientists, and K-12 science educators. The inaugural August 5 – 20, 2005 program will feature a field-based and problem solving investigation of active continental margin geology to provide a regional geologic sense of place and an understanding of how plate tectonic processes have shaped Pacific Northwest geology. Program themes include: (1) Convergent margin processes from great earthquakes to continent building through volcanism and accretion; (2) Earth System Science using the John Day Fossil Beds to investigate the 30 million year record of faunal and floral succession and paleoclimate changes; (3) Geophysical studies that illuminate the geology beneath the tree-covered landscape and provide an introduction to anticipated EarthScope discoveries of continents in motion; and (4) Geologic hazards as wondrous but not mysterious aspects of living on the leading edge of our continent. Seismology is a critical framework member for three of these four program themes.