

northern California continental margin. *Geology, geol. Soc. Am.*, 14(6):536-538. Dept. of Geol. Sci., Calif. State Univ., Hayward, CA 94542, USA.

D340. Manganese nodules, etc.

86:6972

Chave, K.E., C.L. Morgan and W.J. Green, 1986. A **geochemical comparison of manganese oxide deposits of the Hawaiian Archipelago and the deep sea.** *Appl. Geochem.*, 1(2):233-240.

Data are presented on the composition of manganese crusts collected within the Hawaiian Exclusive Economic Zone (HEEZ). Shallow crusts (<1500 m) are composed of five distinct phases (silicate, apatite, iron oxide, manganese oxide, and non-associated copper), whereas the deep crusts display no obvious inter-elemental organization based on dendrograms. The mean composition of HEEZ crusts differs from that of eastern Tropical Pacific nodules in that crusts are comparatively rich in As, Pb, Co, Ce, Fe, and Ti, whereas nodules have comparatively more Cu, Ni, and Sr. Compositional differences between shallow crusts and nodules are discussed in terms of (1) element source; (2) Mn-oxide mineralogy; and (3) redox conditions in the adjacent seawater. It is concluded that the major difference between crust and nodules is due to metal sources; water column for crusts, sediments for nodules. Dept. of Oceanogr., Univ. of Hawaii, Honolulu, HI 96822, USA.

D360. Books, collections (general)

86:6973

Biju-Duval, Bernard (organizer), 1986. [**New research in geological oceanography.**] [Special Session, Geological Society of France, Paris, 3-4 December 1984.] *Bull. Soc. géol. Fr.*, (8)II(3):359-460; 12 papers. (In French, English abstracts.)

A broad cross-section of topics are discussed in these papers including morphologic and sedimentary variations in the Clarion-Clipperton Fracture Zone; new data on the northern Red Sea axial valley; morphology and evolution of seamounts of the northern Portuguese margin; the altimetric geoid on the southwest Indian Ridge; preliminary cruise results of the northern Mozambique margin; Late

Quaternary bottom currents on the Faro Drift; Mississippi Fan fine-grained turbidites; sidescan sonar in the study of cartography and sedimentary dynamics; correlations of Quaternary deposits on the Hellenic margin; and mytilids as natural traps for hydrothermal phases on the EPR. (msg)

D370. Miscellaneous

86:6974

Saull, V.A., 1986. Opinion. **Wanted: alternatives to plate tectonics.** *Geology, geol. Soc. Am.*, 14(6): p.536.

'If plate tectonics remains the only well-known, plausible global tectonic model, the pressure on the individual investigator to interpret his or her observations to suit it will continue to be nearly irresistible. The subsequent publication of this interpretation then will seem to constitute additional evidence that all is well with this remarkable model, and that we are truly fortunate to be living during a time when geologic processes are so completely understood.' Unfortunately, application of plate tectonics to regional geology does not provide determinate histories, nor is regional geologic history uniquely interpretable by applying plate models. There could be a better global tectonic model, but few seem interested in finding one. Dept. of Geol. Sci., McGill Univ., Montreal, PQ H3A 2A7, Canada. (fcs)

86:6975

Webb, S.C. and C.S. Cox, 1986. **Observations and modeling of seafloor microseisms.** *J. geophys. Res.*, 91(B7):7343-7358.

While extensive programs of short-period ocean bottom seismology have been established for more than 20 years, long-period instruments are much more difficult to deploy; the level of seismic noise at the deep seafloor is essentially unknown at periods >10 sec and poorly known at shorter periods. Long-period instruments require precise leveling and a firm foundation. Two new types of seafloor instrumentation circumvent these problems and provide useful, although indirect, measurements of seafloor seismic noise. In this paper we describe the results of three experiments with two emphases: to describe the spectra of seafloor noise observed with these transducers, and to explain the physical processes involved and model the amplitude of the noise. WHOI, Woods Hole, MA 02543, USA.