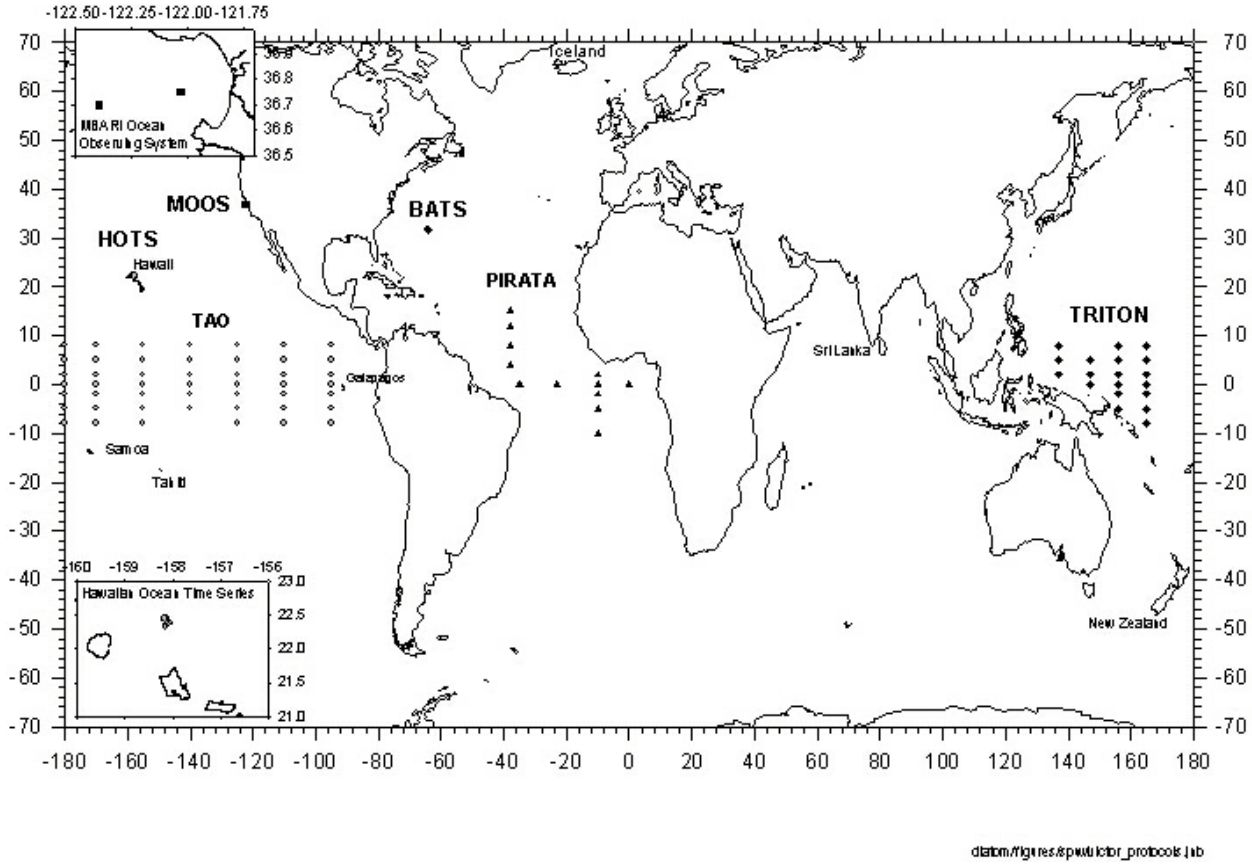

Figure 3.2: Map of selected currently deployed mooring platform projects around the world. Other planned and currently running mooring projects (not shown) can be found in Send *et al*. (2001)

3.2 BIO-OPTICAL MOORING NETWORKS AND DRIFTING BUOY EXPERIMENTS: STRATEGIC PRINCIPLES

The configuration of a mooring, or drifter, is dependent upon the objective and strategy of the respective projects. Ideally, the combination of the two types of instrumented buoys, shipboard oceanographic surveys, and satellite remote sensing measurements will result in a four-dimensional observation system that encompasses time and space scales, ranging from seconds to decades and meters to global proportions, respectively (*e.g.*, Dickey, 1991, 2003; Dickey *et al*., 2003). Careful planning is critical if the desired results, products and benefits are to be realized. The configuration of an ocean observatory must consider the following factors:

- ***Scientific Objectives:*** such as satellite sensor validation, studies of biogeochemical cycling and temporal variability in bio-optical properties of the upper ocean, and biological responses to physical forcing.
- ***Space Scales of Processes:*** water mass formation, transformation, or advection
- ***Time Scales of Processes:*** diurnal, seasonal, episodic, or decadal
- ***Location:*** coastal, equatorial, or central gyre oceanographic regimes
- ***Array Type:*** drifter, single instrumented mooring, or a geographic array of moorings.
- ***Coordination with Other Sampling Methods:*** such as shipboard measurements and satellite remote sensing
- ***Regional Issues and Users Needs:*** Regional ocean observatories may not be strictly science driven. GoMOOS is an excellent example of an observatory maintained to serve the broader public good through