

White Paper Part A outline/structure:

- 1) **Introduction** (1/2 page): **T.Knap**
the challenge, the unknowns, the setting, etc (role of ocean in climate, impacts of climate variability, human influences, understand/detect/predict changes, etc), need for an integrated ocean observing system (benefits/users, components), work under way to implement it (take from OceanObs, Carbon planning, etc)
- 2) **Rationale for timeseries sites/data** (1 page): **R.Lukas**
amplify the timeseries element of the integrated ocean observing system, unique contributions, scientific needs and goals, science issues that can be uniquely addressed, operational issues, technological issues
- 3) **Rationale for a global network** (1 page): **F.Chavez**
role in the global ocean/climate observing system, complementing its other elements, benefit of having a global network rather than assembly of individual sites (thermohaline pathways, CO2 flux extrema, biological provinces, ecosystem shifts), minimum set of common variables and standards?, why are the TS stations the next logical step (readiness, technology, funding, timeliness, ...), need to assure long timeseries that last longer than individual PI's or programs, pool resources across nations, open&rapid access to data, etc
- 4) **Showcase examples** (3 pages, i.e. per example 1-2 figures and 1 paragraph of text):
 - a) TAO El Nino **M.McPhaden**
 - b) Air-sea flux reference example **R.Weller**
 - c) CO2 curve (HOT or BATS, comparison with Mauna Loa) **L.Merlivat**
 - d) Lab Sea deep water formation and signal propagation (convection&deep changes, signal at Bermuda ?, tracer signal at Abaco) **U.Send**
 - e) boundary current variability (Gulf Stream index, or Florida current) **R.Weller ⇒ J.Toole/N.Hogg (?)**
 - f) zooplankton and NAO in N.Atlantic (continuous plankton recorder data) **R.Lampitt**
- 5) **Benefits and users of timeseries data** (1/2 page) **M.McPhaden**
benefits to scientific community (incl.links to many/different scientific communities) and society, operational users, etc (e.g. improved understanding of oceans in climate, detect changes, predict changes, short-term forecasting of ocean conditions, navigation,biology, fisheries, resource management, examples of relevance to daily life), promotion of multidisciplinary observations/studies/cooperation, economic impacts ?
- 6) **Where have we come since OceanObs99** (1 page): **ALL PLEASE CONTRIBUTE TO THIS**
new sites implemented, new projects funded/new national programs, new technologies available (incl. deep ocean cables), new results, new international coordination and activities, new links with/needs of other communities (mention feeding of GEO plans into OOI mooring plans and into NRC observatory study)
- 7) **The Science Team** (1 page) **R.Lampitt**
lead over from OceanObs...what are we doing (include data management), scope/bounds, why is it needed, who are the members (countries and expertises) , can address needs of various communities&programs (carbon, OCEANS, SOLAS, geophysics, acoustic, CLIVAR), lead over to Pilot Project
- 8) **The Pilot Project** (1 page) **R.Weller**
benefit of having the project/system, benefit of joining it, CLIVAR/GOOS/POGO interest and sponsorship, initiate the global network and data access
- 9) **Definition of a timeseries site in the pilot project** (1/2 page) **U.Send**
- 10) **Status of the Global System** (1/2 page plus map, plus tables as appendix) **U.Send**

11) The vision, plan forward, and call to action (1/2 page) **T.Dickey**

stepwise pragmatic approach, relation with other efforts (NSF OOI, NOAA Climate Obs, CLIVAR, Carbon programs), plan for longevity (institutional commitments ?), funding for time series programme, role of sponsors (GOOS, CLIVAR, POGO), recruit additional international participants, contribute data to an international central repository, recruit users of data

12) Contact info