



The Global Ocean Data Analysis Project version 2 (GLODAPv2) – an internally consistent data product for the world ocean

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Abstract. Version 2 of the Global Ocean Data Analysis Project (GLODAPv2) data product is composed of data from 724 scientific cruises covering the global ocean. It includes data assembled during the previous efforts GLODAPv1.1 (Global Ocean Data Analysis Project version 1.1) in 2004, CARINA (CARbon IN the Atlantic) in 2009/2010, and PACIFICA (PACIFIC ocean Interior CARbon) in 2013, as well as data from an additional 168 cruises. Data for 12 core variables (salinity, oxygen, nitrate, silicate, phosphate, dissolved inorganic carbon, total alkalinity, pH, CFC-11, CFC-12, CFC-113, and CCl₄) have been subjected to extensive quality control, including systematic evaluation of bias. The data are available in two formats: (i) as submitted but updated to WOCE exchange format and (ii) as a merged and internally consistent data product. In the latter, adjustments have been applied to remove significant biases, respecting occurrences of any known or likely time trends or variations. Adjustments applied by previous efforts were re-evaluated. Hence, GLODAPv2 is not a simple merging of previous products with some new data added but a unique, internally consistent data product. This compiled and adjusted data product is believed to be consistent to better than 0.005 in salinity, 1 % in oxygen, 2 % in nitrate, 2 % in silicate, 2 % in phosphate, 4 μmol kg⁻¹ in dissolved inorganic carbon, 6 μmol kg⁻¹ in total alkalinity, 0.005 in pH, and 5 % for the halogenated transient tracers.