Argo makes visible large-scale ocean and climate features, properties and processes that were once hidden from scientists. The Argo network has enabled new revelations about ocean properties and dynamics that are transforming our ability to understand and forecast global climate and its changes.


Where can I access Argo data?
The Argo Steering Team website gives information on the Program, its data and how to use it. http://www.argo.ucsd.edu

Where can I access Argo monitoring tools?
The JCOMMOPS Argo Information Centre tracks the array in real time and provides, through its website, a wide range of monitoring tools, including maps and statistics. The innovative website enables the discovery of Argo floats and observations through an advanced search engine. http://argo.jcommops.org

Where can I learn more about Argo data?
The Argo Steering Team website gives information on the Program, its data and how to use it. http://www.argo.ucsd.edu

Argo makes visible large-scale ocean and climate features, properties and processes that were once hidden from scientists. The Argo network has enabled new revelations about ocean properties and dynamics that are transforming our ability to understand and forecast global climate and its changes.
Argo provides an unprecedented dataset which is freely available for researchers studying the temperature, salinity, and circulation of the global oceans and how these change over periods ranging from days to decades. There is an unprecedented opportunity to map the detailed structure of the ocean, at both surface and subsurface levels, and both globally and locally. These estimates allow the development of climate indicators such as the recent changes in ocean heat content and sea level.

Oceans moderate the climate by storing heat and moving it from the tropics to mid-latitudes. More than 90 percent of the heat absorbed by the Earth over the past 50 years is stored in the oceans. Changes in ocean salinity observed by Argo reveal variations in the hydrological cycle – the oceans become fresher where rainfall increases and saltier where it decreases. Observed trends could have global-scale consequences for rainfall and drought patterns.

Argo data are used to study water mass characteristics and ocean variability ranging from mesoscale eddies, to the seasonal cycle, to interannual variability (e.g. El Niño), and climate variations at decadal time scales.

The temperature of the sea surface is the temperature at the base of the atmosphere and determines evaporation and hence the Earth's water cycle. Warming and expansion of sea water accounts for 1/3 of global sea-level rise. Ocean temperature is a fundamental index of the state of climate.

The Argo Program is a global array of 3,800 free-drifting instruments, spaced about every 3° of latitude and longitude, including in the seasonal sea-ice zone and marginal seas. The floats move up and down in the water column from the sea surface to 2,000 meters every 10 days and collect up to 1,000 measurements of temperature, salinity and depth. Argo provides the first ever global-scale, all-weather, all-season subsurface observations of the oceans.

Before Argo, the temperature and salinity of the subsurface oceans could only be measured from ships or fixed point moorings. Since the first Argo float deployments in late 1999, over 1.6 million profiles have been collected which more than doubles the number from research vessels during all of the 20th century. Each year, Argo adds more than 120,000 new profiles. Pilot programs to enhance the core Argo Program are in various stages of development. Some of these enhancements include floats sampling deeper than 2,000 meters, carrying additional sensors to measure biogeochemical parameters, and increased coverage in polar regions and in areas of the ocean with high variability.

Argo and Ocean Research
Argo data are now vital for climate and ocean forecasting services (from days to years), which are used for many applications such as search and rescue, through crop management, and disaster preparedness.

The Value of Argo in Ocean Literacy
High school students, university undergraduates, graduate students, and postdoctoral investigators are using Argo from their desktops to explore the global ocean and its evolution.

The Argo Mission
The Argo Program is a global array of 3,800 free-drifting instruments, spaced about every 3° of latitude and longitude, including in the seasonal sea-ice zone and marginal seas. The floats move up and down in the water column from the sea surface to 2,000 meters every 10 days and collect up to 1,000 measurements of temperature, salinity and depth. Argo provides the first ever global-scale, all-weather, all-season subsurface observations of the oceans.

Before Argo, the temperature and salinity of the subsurface oceans could only be measured from ships or fixed point moorings. Since the first Argo float deployments in late 1999, over 1.6 million profiles have been collected which more than doubles the number from research vessels during all of the 20th century. Each year, Argo adds more than 120,000 new profiles. Pilot programs to enhance the core Argo Program are in various stages of development. Some of these enhancements include floats sampling deeper than 2,000 meters, carrying additional sensors to measure biogeochemical parameters, and increased coverage in polar regions and in areas of the ocean with high variability.