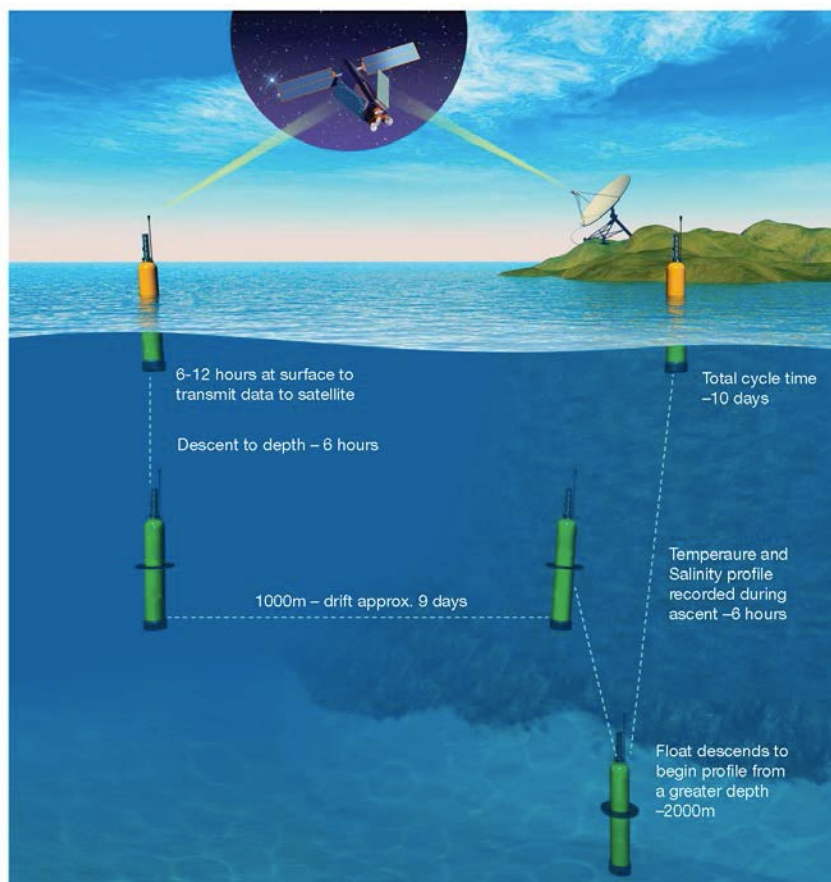# Argo Profiling Floats

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Argo is an international program designed to deploy and maintain an array of 3,000 profiling floats to monitor the upper 2 km of the global ocean. Argo is an international program designed to monitor quantitative changes in the state of the upper-ocean and patterns of ocean climate variability from months to decades using an array of more than 3,000 profiling floats. Argo data is used to initialize and assimilate into ocean-atmospheric forecast models, model testing and verification as well as direct quantitative estimates of oceanic heat and freshwater storage and transport. AOML uses this data to examine water circulation pathways and diagnose the dynamics of the circulation in order to better understand the processes of air-sea interaction and climate variability. AOML plays several roles in the Argo project: a) AOML is the US Argo Data Assembly Center (DAC); b) AOML contributes to logistical efforts related to the deployment of Argo floats in the Atlantic Ocean, and c) AOML performs the last stage of the scientific quality control. The DAC collects all the US Argo data, processes them in real-time and makes them available to the operational centers and scientists in real-time through Global Telecommunication System (GTS) and the two Argo Global DACs. To achieve this, the US DAC has developed and maintained an automatic system for decoding, quality control, and distribution of data obtained from the US Argo floats, which runs in a 24/7 mode. The US DAC participates in the International Argo Data Management Team, which is in charge of issues related to developing standards for ensuring a high quality of the data, and in the International Argo Steering Team.



6-12 hours at surface to transmit data to satellite

Descent to depth – 6 hours

Total cycle time ~10 days

1000m – drift approx. 9 days

Temperaure and Salinity profile recorded during ascent ~6 hours

Float descends to begin profile from a greater depth ~2000m

*In the cycle typical of an Argo float, a float starts at the surface and dives to a depth of 1000 meters (the parking depth) where it rests for 9 to 10 days. After 9 days at rest it dives to a depth of 2000 m, turns on its sampling equipment and measures ocean properties as it rises to the surface where it rests for sufficient time to transmit the data collected to Argos or Iridium satellite systems. It then returns to the parking depth to start another cycle, the typical duration of a complete cycle is 10 days.*