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<b>14. ABSTRACT</b> Major changes in salinity (~14 ppt.) and temperature (~40C) were continuously registered by two prototype NASA DRIFTERS, surface moored floaters, that NASA's Applied Science and Technology Project Office (ASTPO) has developed. The DRIFTER floating sensor module is equipped with an Arduino open-source electronics prototyping platform and programming language ( <a href="http://www.arduino.cc">http://www.arduino.cc</a> ), a GPS (Global Positioning System) module with antenna, a cell phone SIM (Subscriber Identity Module) card and a cellular antenna which is used to transmit data, and a probe to measure temperature and conductivity (from which salinity can be derived). The DRIFTER is powered by a solar cell panel and all the electronic components are mounted and sealed in a waterproof encasement. Position and measurement data are transmitted via short message service (SMS) messaging to a Twitter site (DRIFTER 002@NASADRIFTER_002 and DRIFTER 004@NASADRIFTER_004), which provides a live feed. These data are then imported into a Google spreadsheet where conductivity is converted to salinity, and graphed in real-time. The spreadsheet data will be imported into a webpage maintained by ASTPO, where it will be displayed available for download.					
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