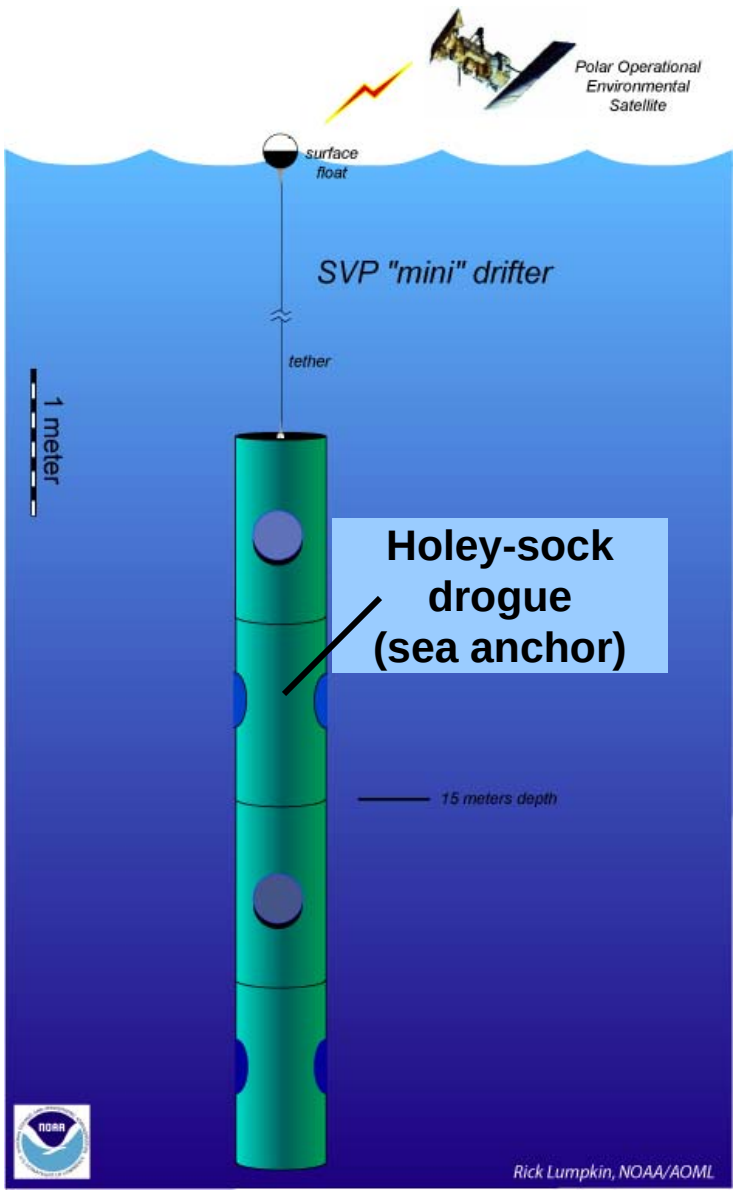
The satellite-tracked drifter



Spherical surface float

Polyurethane impregnated tether

Holey Sock nylon drogue centered at 15-m depth

D-cells batteries inside the float

Sensors:

Drogue: drogue detection by submergence or tether strain sensor

Thermistor: measure SST

Voltage: Indicates batteries' life

Cost: ~$1800

Other Sensors that can be added:

Barometric pressure, wind, subsurface temperatures, salinity

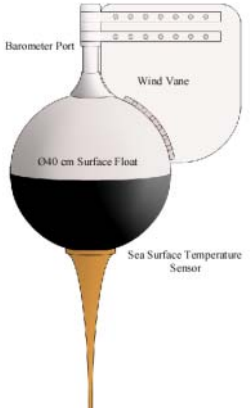
Types of GDP drifters

SVP: “Surface Velocity Program”.
The “basic” drifter: SST and currents.

SVPB: includes barometer on surface float. Data used to improve weather forecasts.

SVPS: includes salinity at base of surface float.

SVPW: includes barometer + wind vane and swivel (direction) + acoustic anemometer (wind speed)

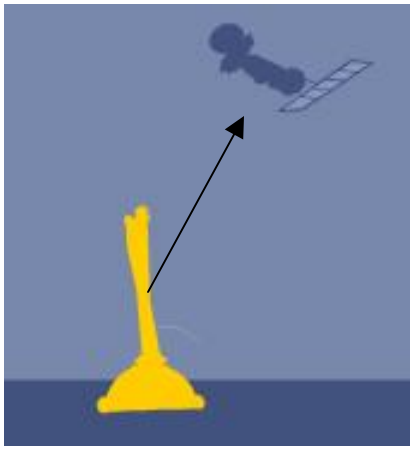


Deploying a drifter

Designed to be easy for one person to deploy from a ship while underway at up to 20 knots.

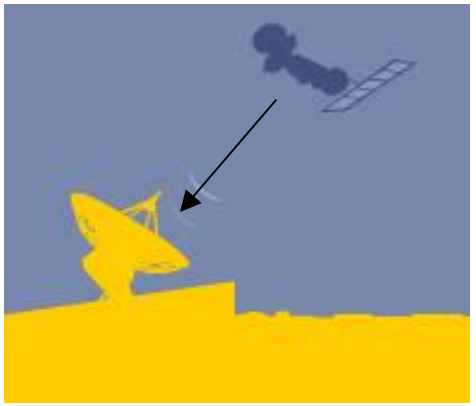
Average lifetime: 450 days.

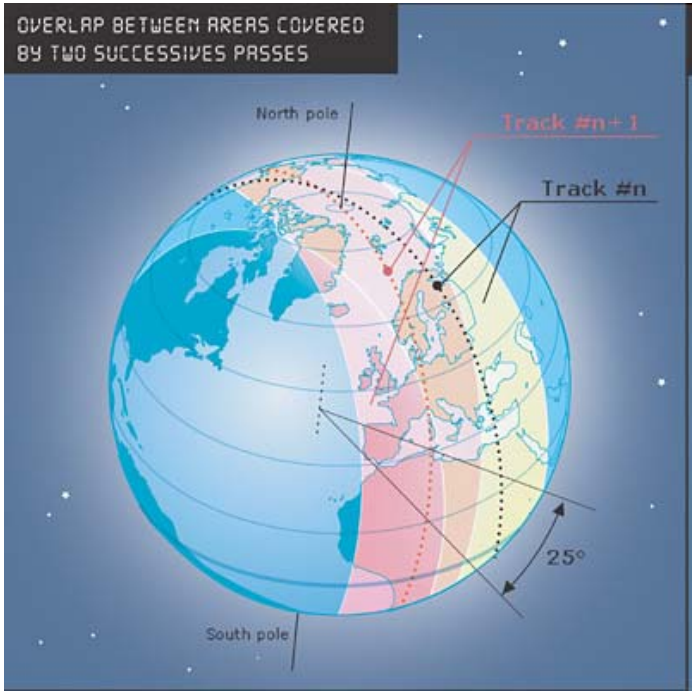
Data transmission: Argos system



Drifters transmit data every 90s, picked up ~once per hour by passing satellite

Polar-orbiting satellites relay data to receiving stations





Left: orbit of NOAA polar-orbiting satellite.
Bottom: locations of receiving stations.

Graphics from Argos Users Manual, CLS