

Acoustic Doppler Current Profiler (ADCP)



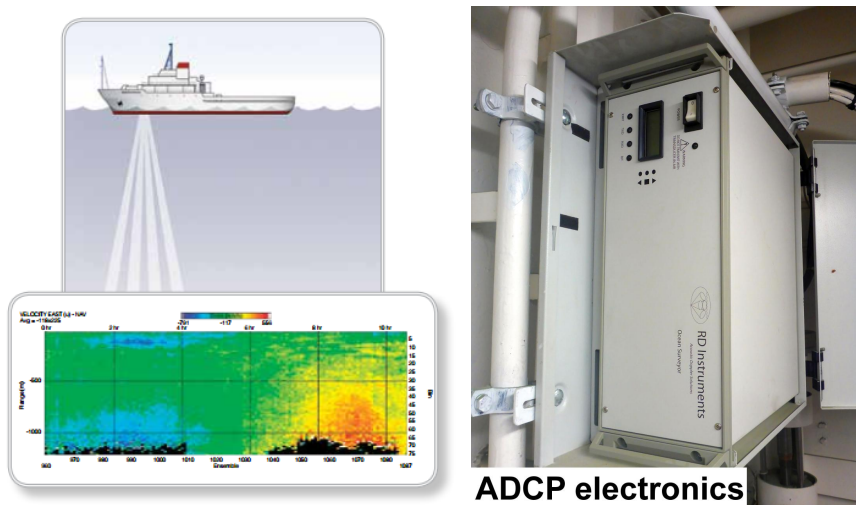
Attention:

Please note that operations of the Acoustic Doppler Current Profiler requires experienced scientific staff on board. The system is not operated by the ship's crew. Announce operations with the Acoustic Doppler Current Profiler to AWI-Logistics prior to the cruise and clarify the data transfer after the cruise.

Summary

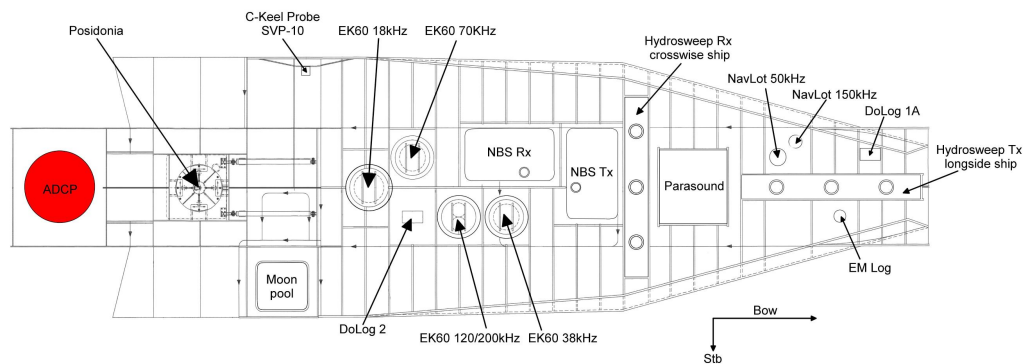
The Acoustic Doppler Current Profiler (ADCP) measures flow rates in the water body below the moving vessel with an operating frequency of 150 kHz. Up to 400m range can be achieved according to the data sheet.

Manufacturer	Teledyne RDI
Model	Teledyne RDI Ocean Surveyor 150kHz vessel-mounted ADCP
Serial No.	transducer 3058, chassis 1518
Type	current profiler
REGISTRY-Link	REGISTRY (625)



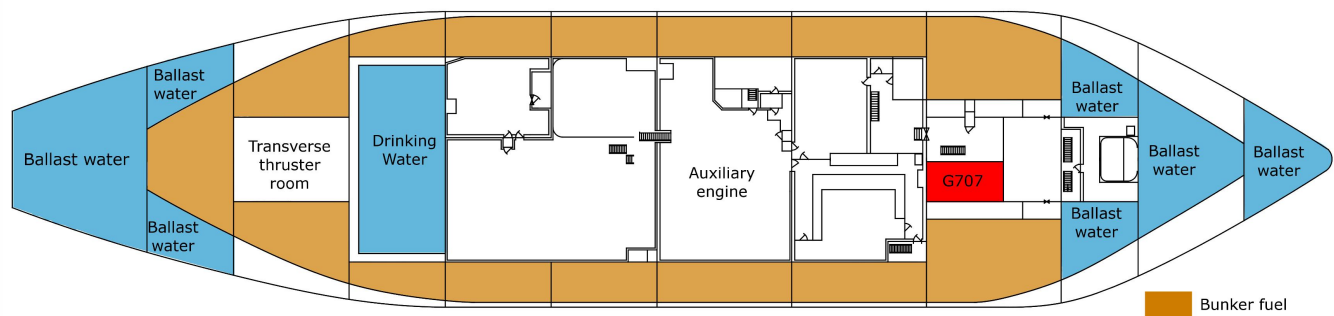
ADCP electronics

Position of Devices in Polarsterns box keel

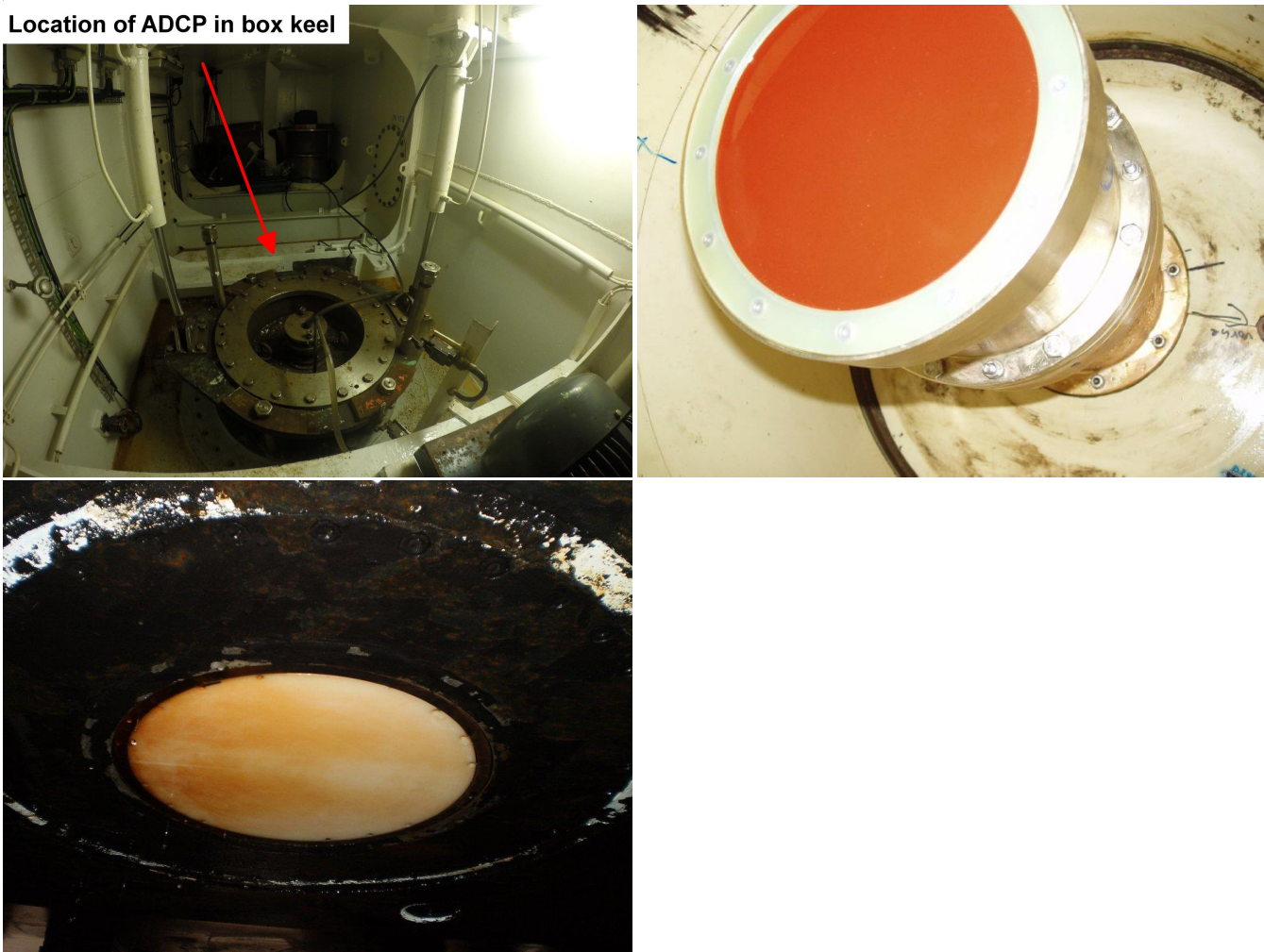


schematic drawing of Polarstern deck G

location of room G707 (General Oceanics and Ocean Pack pCO2 systems, Ferrybox, ADCP electronics)



Location of ADCP in box keel



Transducer Frequency:

Contacts

Name	Institution	Role
Sandra Tippenhauer	Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research	Principal Investigator
Alfred Wegener Institute for Polar and Marine Research	Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research	Owner

Components

Position

Info	xyz-position of transducer from Alignment Survey Report RV Polarstern (June 2016), transducer located in box keel room, electronics in G707, computer in winch control station
X	65.769 m (X-0 is at the center of der rudder (ref. design drawing of the vessel), positive X-axis is forward and along vessel centerline)
Y	0.005 m (Y-0 at centerline, positive Y-axis is portside)
Z	0.03 m (Z-0 is set to the lowest point of the keel, positive Z-axis is upwards)

Data logging, storage and archiving

Logged parameters

Parameter	O2ARegistry Output Type	Unit
average east velocity	current speed	m/s
average north velocity	current speed	m/s
averaging interval	date and time	s
maximum depth for averaging	depth	m
true horizontal velocity	current speed	m/s
true velocity direction	current direction	deg
up velocity	current speed	m/s

Central geographical ship's position and time standard

Rawdata storage on board

Dship

Data archiving on land

Documentation

See also <http://www.rdinstruments.com/>

- [ADCP Ocean Surveyor datasheet \(Factsheet, 319 kB\)](#)