



MARUM vehicle schedules

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QUEST System aboard german vessels

Adapted
to german science vessels:
RV Meteor
RV Polarstern
2008: *RV Sonne*
2009: *RV M. S. Merian*

„only“ 45t gross weight

deployed in free flying mode

Operational Team:
8 Persons

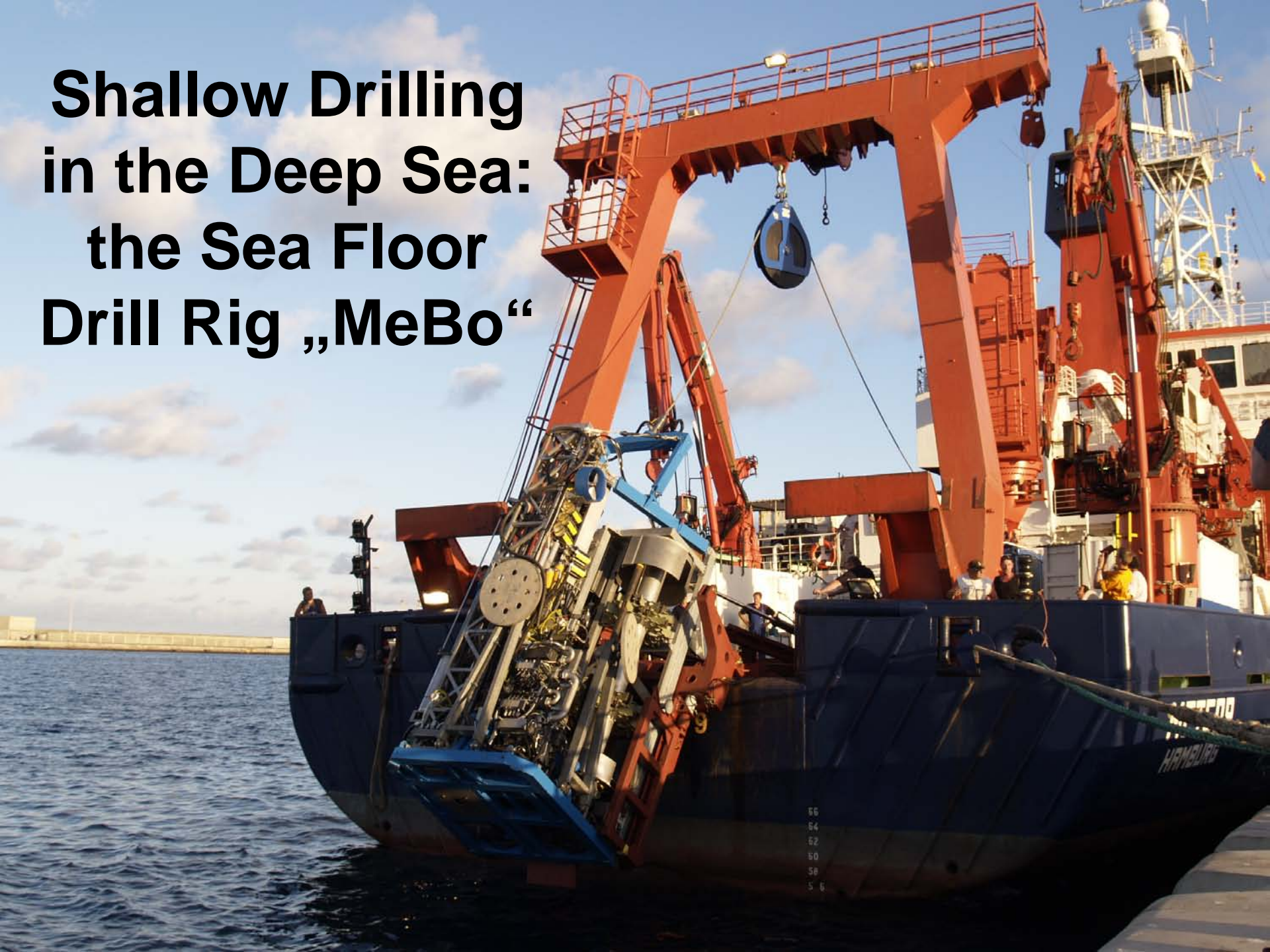








Shallow Drilling in the Deep Sea: the Sea Floor Drill Rig „MeBo“





MeBo specifications

- Drilling depth 70 m
- Coring of soft sediments and hard rocks
- Core diameter 55 – 84 mm
- Deployment depth 0 – 2000 m
- MeBo weight about 10 tonnes
- Total system weight about 75 tonnes
- Transport within six 20' containers

Ponton, June 2005



CELTIC EXPLORER
December 2005
July 2006
August 2008



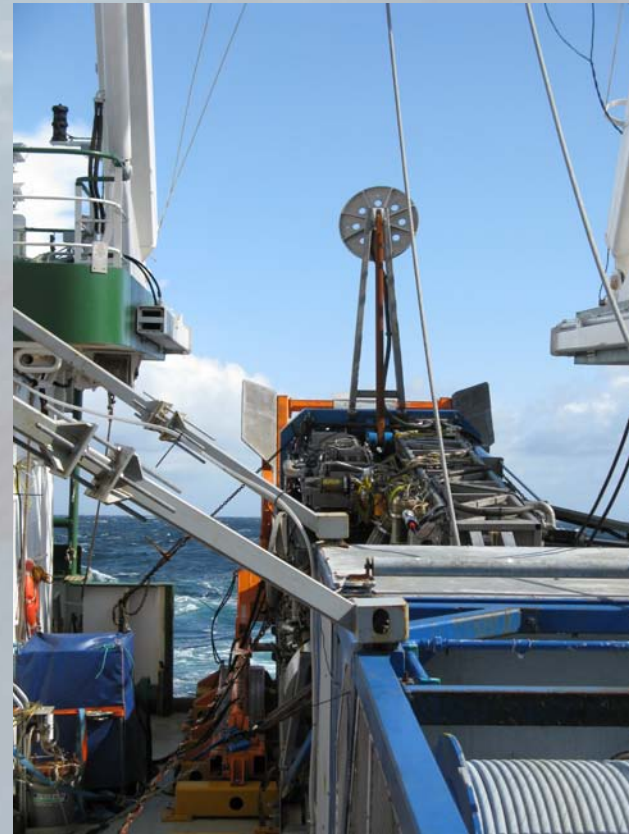
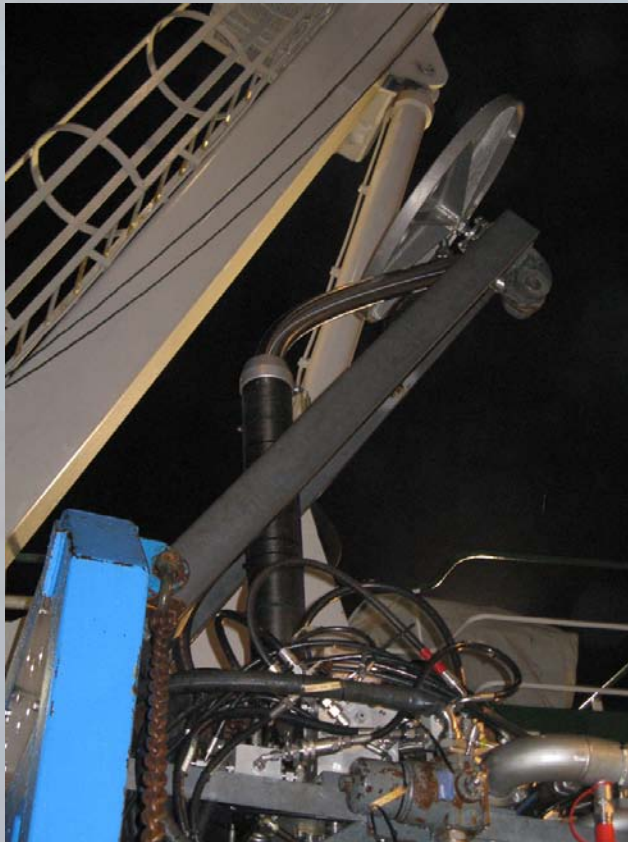
METEOR, August 2005

MARIA S. MERIAN
March 2007





Safe landing



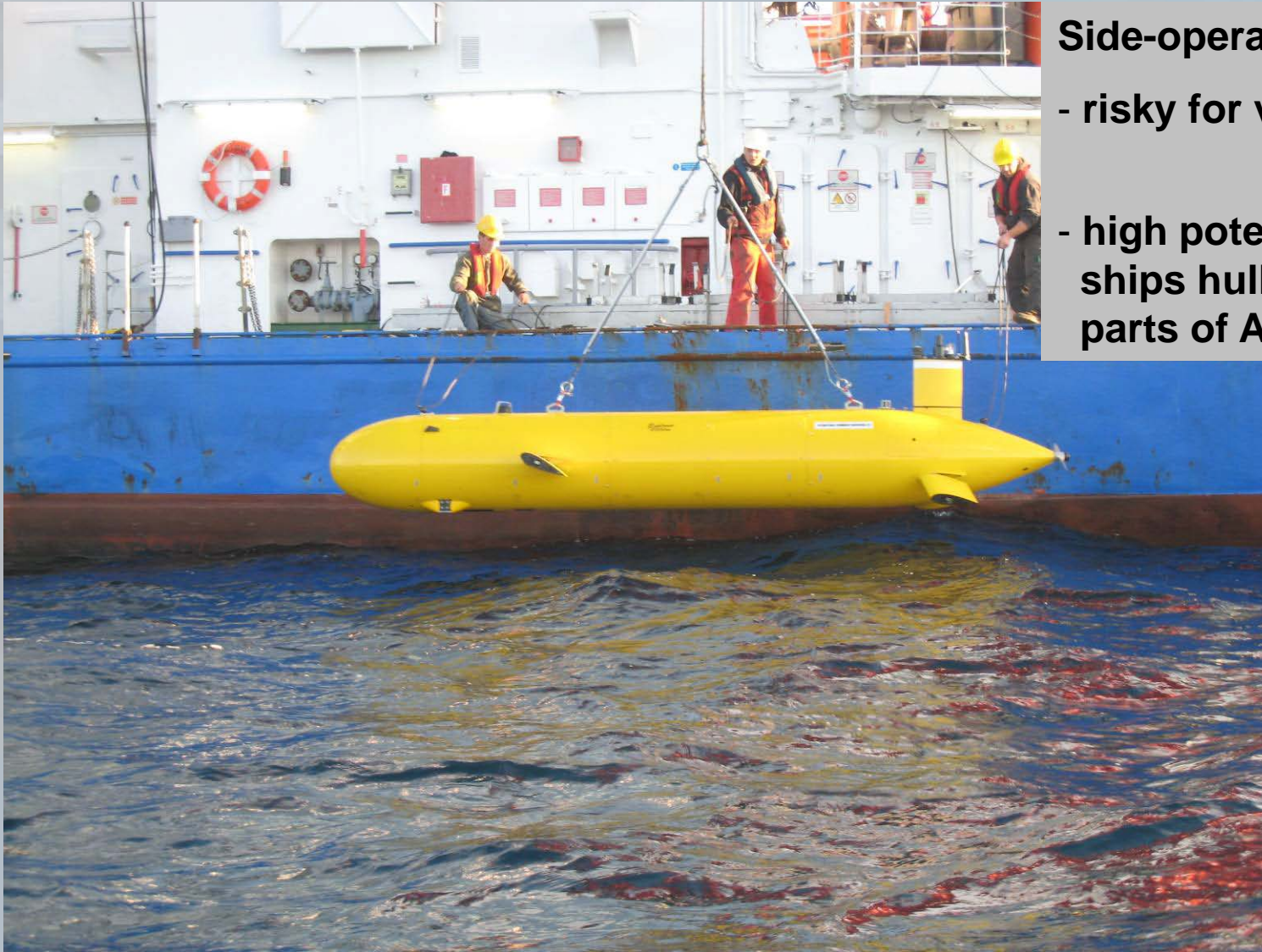
Sea Exploring Autonomous Vehicle SEAL 5000











Side-operation:

- risky for vehicle
- high potential to hit ships hull with delicate parts of AUV



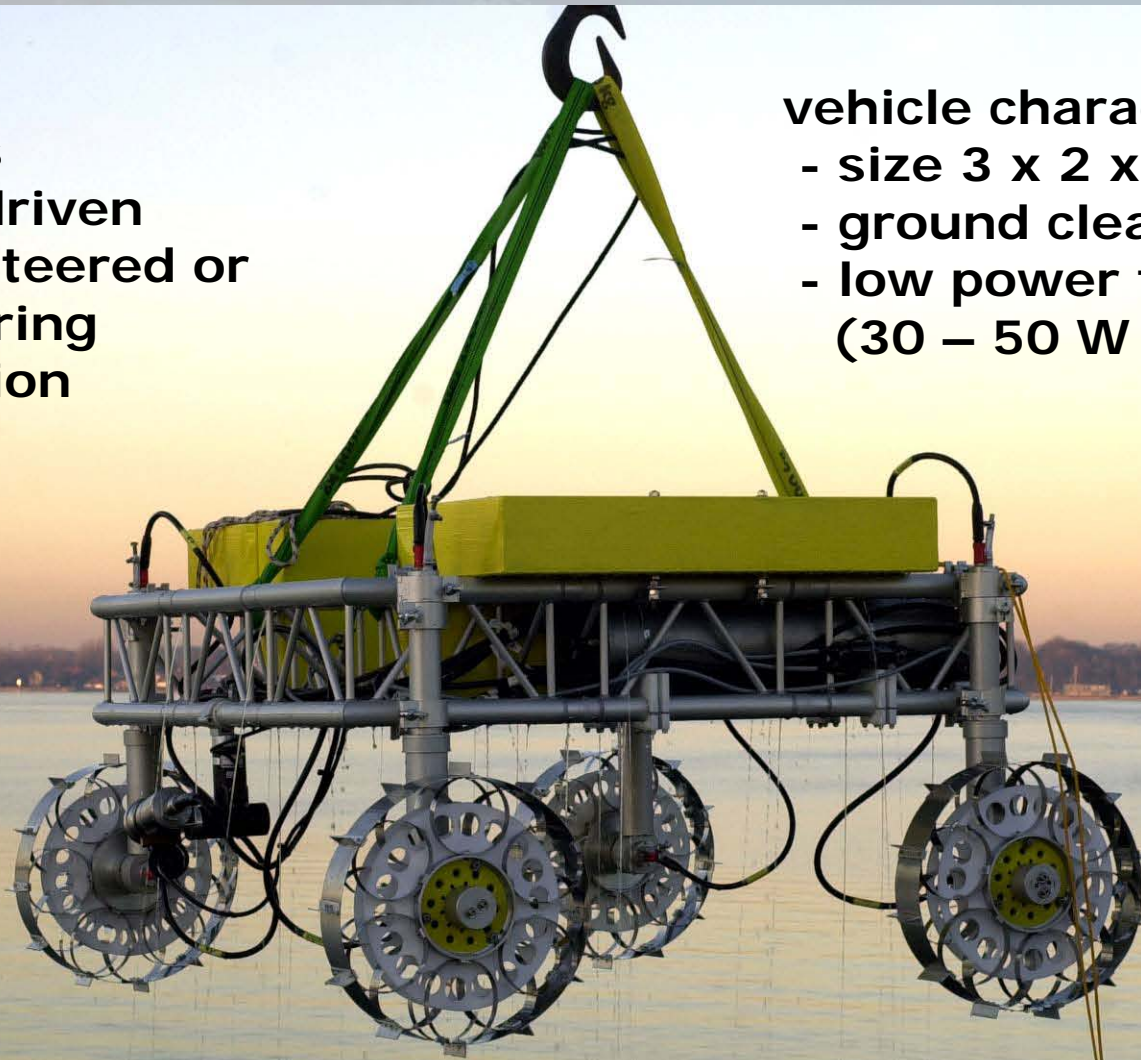
A-frame operation:

- even on large vessels
„turn of AUV necessary, due
to lack of A-frame high“
- more security for AUV instead
side-operation

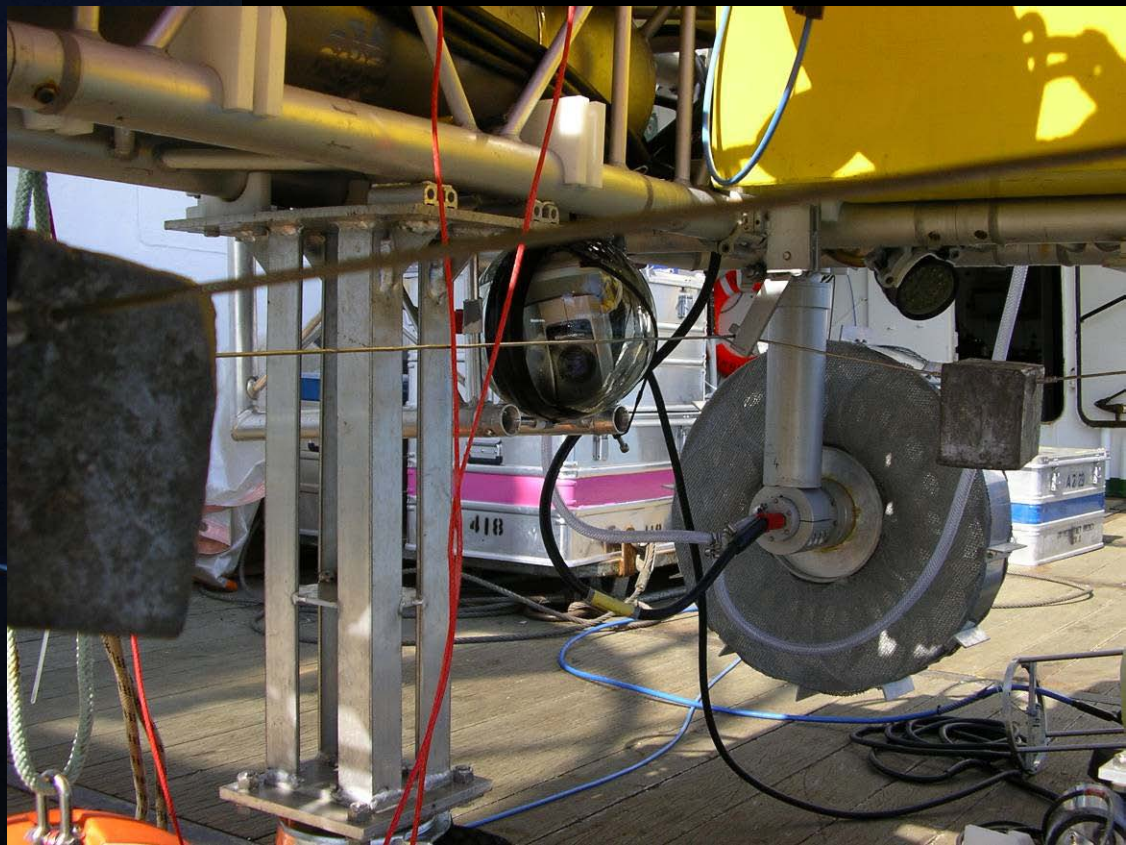
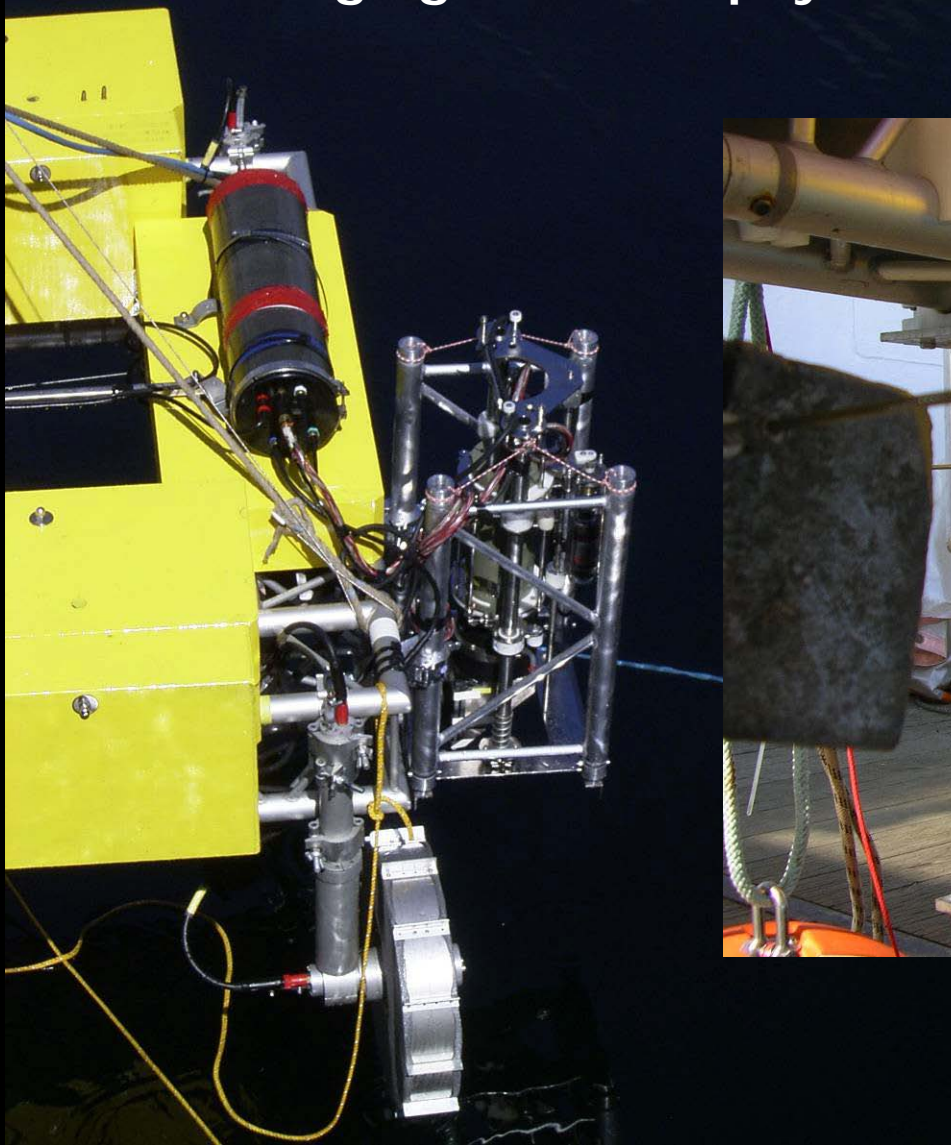
- four wheels
- all wheels driven
- all wheels steered or hinged steering
- no suspension

vehicle characteristics

- size 3 x 2 x 2 m
- ground clearance 70 cm
- low power for prop.
(30 – 50 W @ 5 cm/s)



changing scientific payloads



**video controlled sampling
with light and
communication**