Natural Environment Research Council (NERC) Marine Facilities Report

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NERC Marine Facilities Funding Model

- Changed at start of 2001 in response to falling ship demand
- The new funding model redesigned to:
  - Reduce the overall cost to scientists for days at sea
  - Allow NERC to test the 'actual' science demand for ship-time.
- Features of the new funding model:
  - Capital – funded direct from NERC
  - Infrastructure
    - Scientists who have secured funding for science of international quality (i.e. equivalent to a NERC alpha 3 grade) can bid 'free at the point of use' access to:
      - 450 - 500 operational sea days a year on the *RRS Discovery* and *RRS Charles Darwin*
      - 60-days a year on the *RRS James Clark Ross*
    - UK Ocean Research Service (UKORS) to manage NERC's National Marine Equipment Pool
  - Superstructure - scientists are responsible for covering the UKORS technician and equipment support costs.

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RSU Ship Utilisation

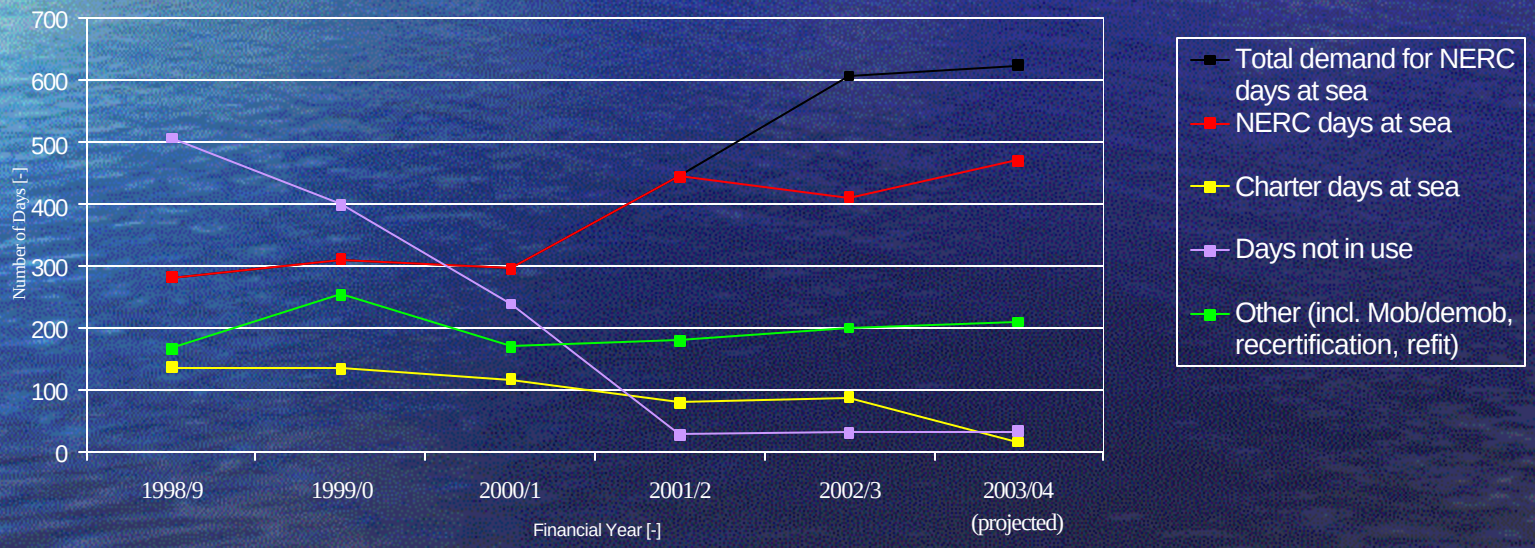
Following the introduction of new funding model:

All available NERC science days allocated in 2001, 2002, and 2003

Increase of 50-60% compared with 1998-2000

Demand increased by ca. 100% (compared with that in the period 1998-2000)

Demand & Utilisation of RSU Ships



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Up-date on the 2001 MFP

- Following 9/11 attack, NERC postponed a 30-day cruise on the *RRS Charles Darwin* scheduled to work to/from Muscat, Oman.

- However it was decided to keep the ship in the Indian Ocean and she was moved into the Southern Indian Ocean for the remainder of the year.

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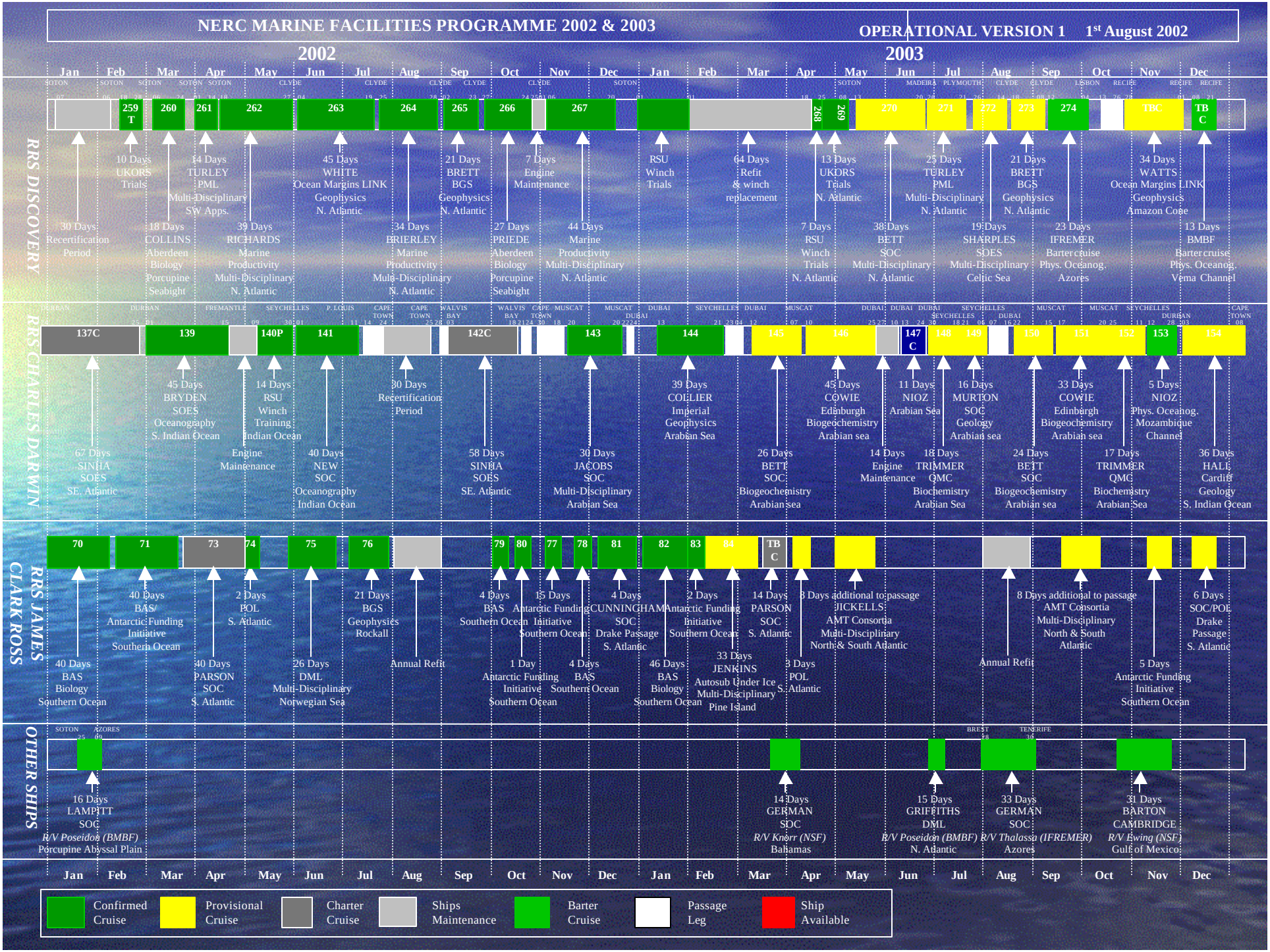
NERC MARINE FACILITIES PROGRAMME 2002 & 2003
OPERATIONAL VERSION 1 1st August 2002
2002
2003
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
RRS DISCOVERY
259 T
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TBC
TB C
30 Days Recertification Period
10 Days UKORS Trials
18 Days COLLINS Aberdeen Biology Porcupine Seabight
14 Days TURLEY PML Multi-Disciplinary SW Apps.
39 Days RICHARDS Marine Productivity Multi-Disciplinary N. Atlantic
45 Days WHITE Ocean Margins LINK Geophysics N. Atlantic
34 Days BRIERLEY Marine Productivity Multi-Disciplinary N. Atlantic
21 Days BRETT BGS Geophysics N. Atlantic
27 Days PRIEDE Aberdeen Biology Porcupine Seabight
7 Days Engine Maintenance
44 Days Marine Productivity Multi-Disciplinary N. Atlantic
RSU Winch Trials
64 Days Refit & winch replacement
7 Days RSU Winch Trials N. Atlantic
13 Days UKORS Trials N. Atlantic
38 Days BETT SOC Multi-Disciplinary N. Atlantic
25 Days TURLEY PML Multi-Disciplinary N. Atlantic
19 Days SHARPLES SOES Multi-Disciplinary Celtic Sea
21 Days BRETT BGS Geophysics N. Atlantic
23 Days IFREMER Barter cruise Phys. Oceanog. Azores
34 Days WATTS Ocean Margins LINK Geophysics Amazon Cone
13 Days BMBF Barter cruise Phys. Oceanog. Vema Channel
RRS CHARLES DARWIN
137C
139
140P
141
142C
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147 C
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67 Days SINHA SOES SE. Atlantic
45 Days BRYDEN SOES Oceanography S. Indian Ocean
Engine Maintenance
14 Days RSU Winch Training Indian Ocean
40 Days NEW SOC Oceanography Indian Ocean
30 Days Recertification Period
58 Days SINHA SOES SE. Atlantic
30 Days JACOBS SOC Multi-Disciplinary Arabian Sea
39 Days COLLIER Imperial Geophysics Arabian Sea
26 Days BETT SOC Biogeochemistry Arabian sea
45 Days COWIE Edinburgh Biogeochemistry Arabian sea
14 Days Engine Maintenance
11 Days NIOZ Arabian Sea
18 Days TRIMMER QMC Biochemistry Arabian Sea
16 Days MURTON SOC Geology Arabian sea
24 Days BETT SOC Biogeochemistry Arabian sea
33 Days COWIE Edinburgh Biogeochemistry Arabian sea
17 Days TRIMMER QMC Biochemistry Arabian Sea
5 Days NIOZ Phys. Oceanog. Mozambique Channel
36 Days HALL Cardiff Geology S. Indian Ocean
RRS JAMES CLARK ROSS
70
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83
84
TB C
40 Days BAS Biology Southern Ocean
40 Days BAS/ Antarctic Funding Initiative Southern Ocean
40 Days PARSON SOC S. Atlantic
2 Days POL S. Atlantic
26 Days DML Multi-Disciplinary Norwegian Sea
21 Days BGS Geophysics Rockall
Annual Refit
4 Days BAS Southern Ocean
1 Day Antarctic Funding Initiative Southern Ocean
15 Days Antarctic Funding Initiative Southern Ocean
4 Days BAS Southern Ocean
4 Days CUNNINGHAM SOC Drake Passage S. Atlantic
46 Days BAS Biology Southern Ocean
2 Days Antarctic Funding Initiative Southern Ocean
33 Days JENKINS Autosub Under Ice Multi-Disciplinary Pine Island
14 Days PARSON SOC S. Atlantic
3 Days POL S. Atlantic
3 Days additional to passage JICKELLS AMT Consortia Multi-Disciplinary North & South Atlantic
Annual Refit
8 Days additional to passage AMT Consortia Multi-Disciplinary North & South Atlantic
5 Days Antarctic Funding Initiative Southern Ocean
6 Days SOC/POE Drake Passage S. Atlantic
OTHER SHIPS
16 Days LAMPITT SOC
R/V Poseidon (BMBF)
Porcupine Abyssal Plain
14 Days GERMAN SOC
R/V Knorr (NSF)
Bahamas
15 Days GRIFFITHS DML
R/V Poseidon (BMBF)
N. Atlantic
33 Days GERMAN SOC
R/V Thalassa (IFREMER)
Azores
31 Days BARTON CAMBRIDGE
R/V Ewing (NSF)
Gulf of Mexico
Confirmed Cruise
Provisional Cruise
Charter Cruise
Ships Maintenance
Barter Cruise
Passage Leg
Ship Available

2002 MFP

- NERC has continued to fully utilize all available sea days:
  - *RRS Discovery* - North Atlantic
  - *RRS Charles Darwin* - Indian Ocean
  - *RRS James Clark Ross* – (ca. 60 days) for two summer cruises in the North Atlantic
- *R/V Poseidon* - Opportunistic Barter
  - to recover & re-deploy moorings on the Porcupine Abyssal Plain
  - Unfortunately cancelled due to poor weather

Cruise No.	Institution	PI	Discipline	Days at Sea
CD137C	ExxonMobil		Geophysics	67
CD 139	SOES	Bryden	Oceanography	45
CD141	SOC	New	Oceanography	40
CD142C	Active EM		Geophysics	58
CD143	SOC	Jacobs	Multi	30
				240

Cruise No.	Institution	PI	Discipline	Days at Sea
D259T	UKORS	West	Trials	10
D260	Aberdeen	Collins	Biology	18
D261	PML	Turley	Multi	14
D262	MARPROD	Richards	Multi	39
D263	Cambridge	White	Geophysics	45
D264	MARPROD	Brierley	Multi	34
D265	BGS	Brett	Geophysics	21
D266	Aberdeen	Priede	Biology	27
D267	MARPROD	Allen	Multi	44
				252

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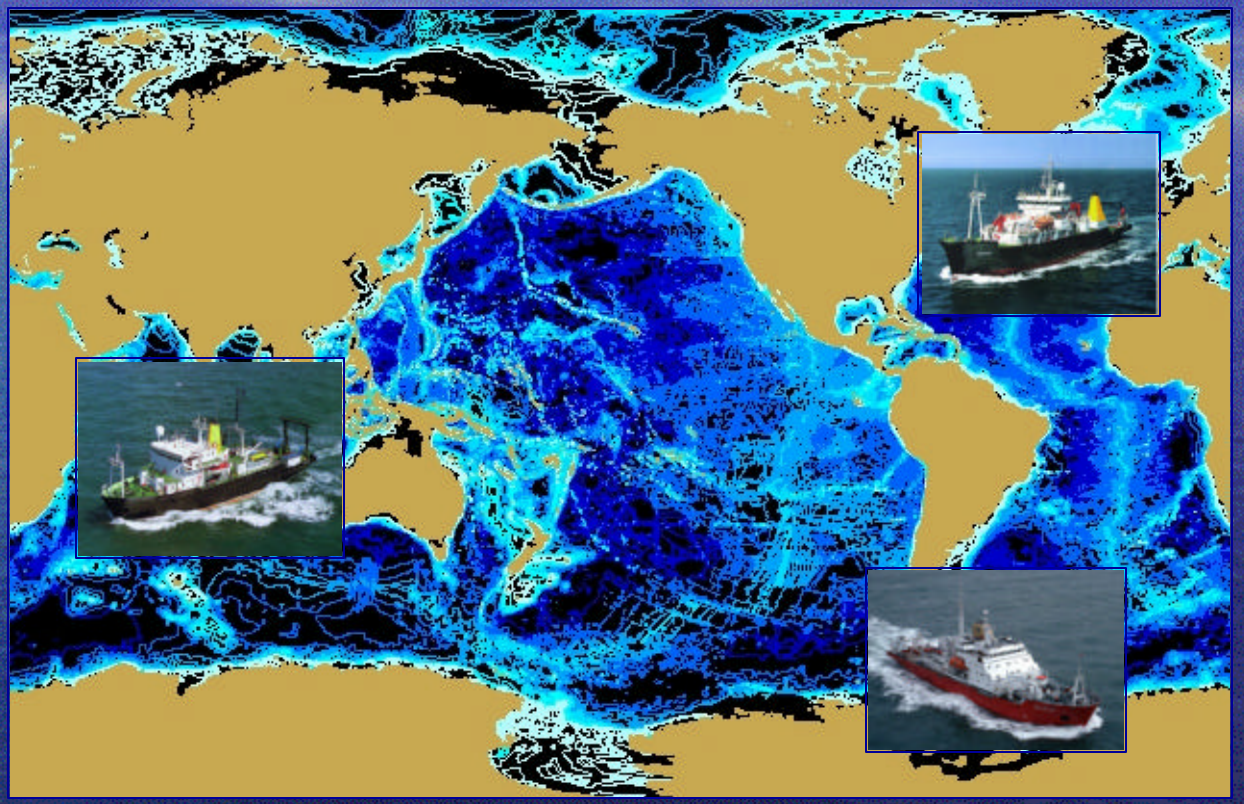
2003 MFP

- All available sea days utilised:
  - *RRS Discovery* - North Atlantic
  - *RRS Charles Darwin* - Indian Ocean
  - *RRS James Clark Ross* – Autosub Under Ice and Atlantic Meridional Transect



6 (TBC) Barter cruises provisionally programmed

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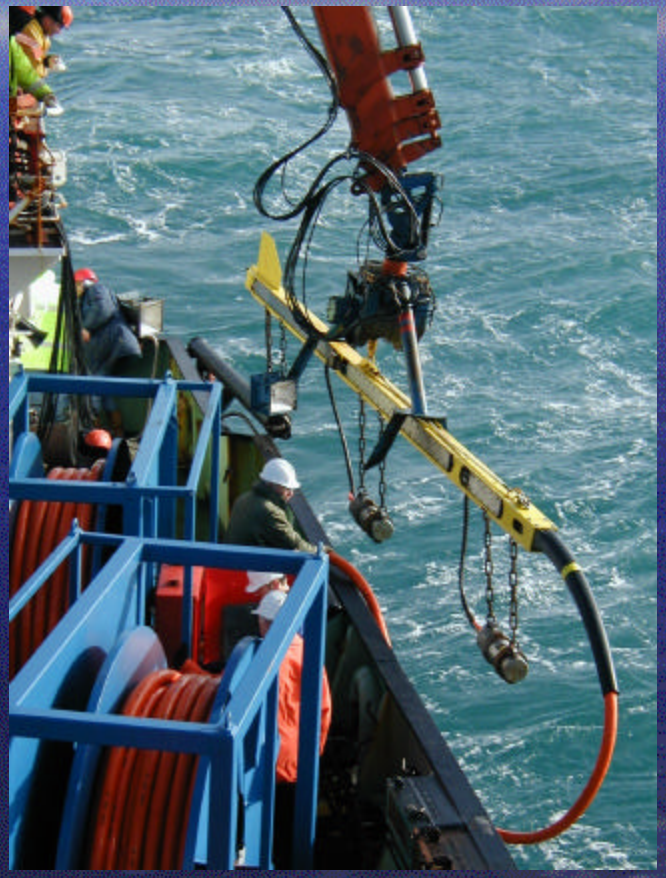
Equipment

- Increased (stable) investment in the NMEP
  - *ca*. £0.5M pa from NERC
  - *ca*. £0.2M pa from charter/hire.
- New scientific winch for the *RRS Discovery*
  - *ca.*£3M
  - Will be fitted in February-April 2003.
- New Seismic Airgun Suite
  - *ca.*£300k)
  - Trialled in early 2002
  - Used in June-July for a 45-day geophysics cruise in the N. Atlantic.
- Jason II derivative ROV
  - Trials first half of 2003
  - Operational on IFREMER barter cruise late 2003



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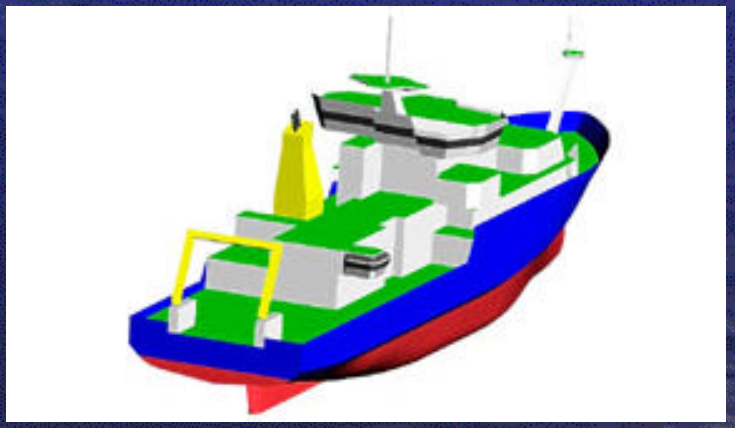
Darwin Replacement

- *RRS Charles Darwin* will reach the end of its scientifically useful life in early-2006
- Project Management Board set up to oversee provision of a replacement ship
- NERC Council approved science case in late 2001, since been submitted to the UK Government as part of a NERC bid to the 2002 Spending Review.
- Total cost projected to be £35M:
  - ca.£10M from NERC baseline.
- Final decision on the funding in November 2002.



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Projected ship programme for 2004

- Currently anticipate:
  - *RRS Discovery* - primarily N. Atlantic
  - *RRS Charles Darwin* - return to UK for refit e. 2004, then primarily N. Atlantic
    - Depending on the science demand one may return to the S. Atlantic &/or S. Indian Ocean in the second half of 2004.
  - *RRS James Clark Ross* and *RRS Ernest Shackleton*, will operate in the Antarctic/Southern Ocean, Arctic Ocean and the Atlantic.
    - Majority of available NERC-funded time in 2004 will be allocated to two cruises (one in the Antarctic & one in the Arctic) for the '*Autosub-Under-Ice*' thematic programme.

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Marine Facilities Tripartite Group (MFTG)

- Currently examining opportunities to share a greater variety of its marine equipment (incl. smaller equipment & equipment spares) and calibration facilities.
- Anticipate RNIOZ joining this year and possibly Spain.

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