Andy Henson NOC
James Cook

- Refit in Santander
- Operations in Pacific/Columbia
- JC 114 Seismics with Sonne
- Winch modifications
- 15-16 Pacific, North sea, Swapps, Mid atlantic
Discovery

- Ongoing winch issues.
- Winch traction unit cracking.
- Azimuth motors.
Discovery

• Winch repair Norway
• Successful trials
• Shelf Seas Biogeochemistry
• Trials – Seismics, piston coring
• RAGNARoCC in US waters
RAGNARoCC North Atlantic Cruises
Subpolar (filled red circle, northern line) 2014
24N (filled red circle, southern line) 2015
Challenges

- Marine staff, deck and Ceng.
- Flat funding, ownership and governance.
- Technician recruiting and retention.
- Dip clear
- Trials are expensive!
Technology

- Autonomy, MARSIC
- Coring, CTD 500+ sea days