INTERNATIONAL 2007 2008 POLAR YEAR

German involvement in observatory systems for the IPY and beyond

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Contribution to icebreaker capability

Polarstern

- Bipolar vessel
- biological, geological, geophysical, glaciological, chemical, oceanographic and meteorological research
- International and interdisciplinary expeditions

Aurora Borealis

- Operates autonomously (no additional icebreaker support needed)
- Year-round deployment: Polar Areas and open ocean
- Location of deployment: Central Arctic, Arctic basins, Antarctic Shelf Seas
- Drilling of approx. 1000 m long sediment cores
- International and interdisciplinary expeditions

German stations – a contribution to INFRAPOLAR

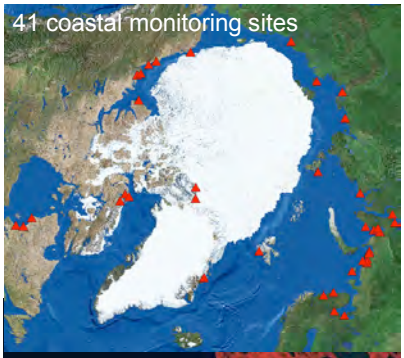
Coasts

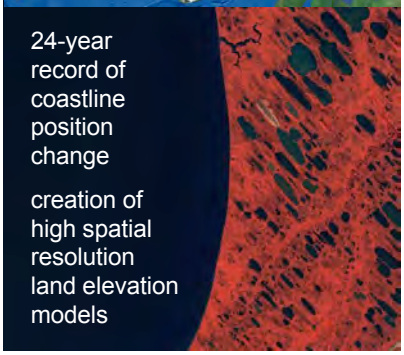
ACCO-Net: Arctic Circumpolar Coastal Observatory Network

IPY lead project for network of coastal observatory sites for monitoring and detecting change in the coastal zone, including:

- coastal erosion and nutrient and sediment flux
- land-based sea ice observations
- coastal change and socio-economical activity
- changes to ground ice
- Biodiversity inventories, land-ocean biological links

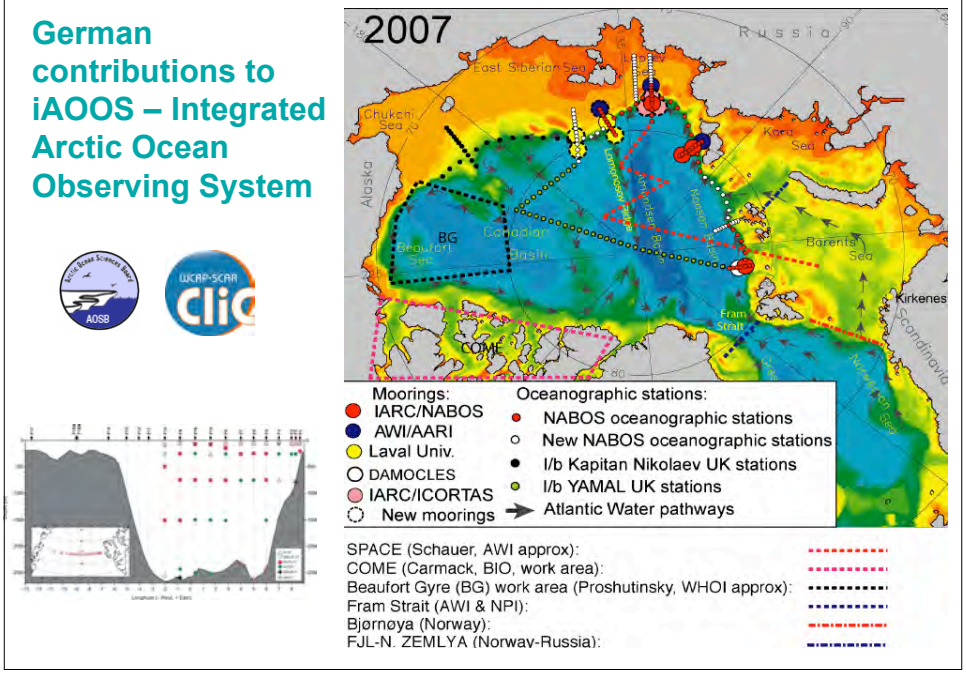
ESA IPY program provides multi-temporal satellite images for ACCO-Net sites :
- SPOT 1-4, ALOS AVNIR & PRISM
- time frame: 1986 – IPY





Ocean and ice research

German contributions to iAOOS – Integrated Arctic Ocean Observing System

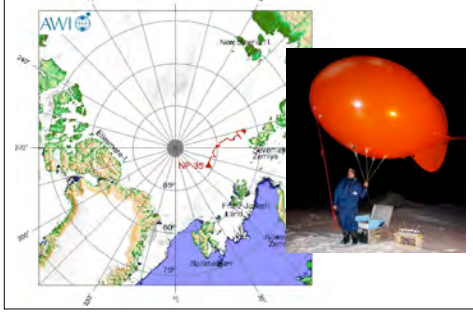


Atmospheric research

Atmospheric Investigations on drifting stations

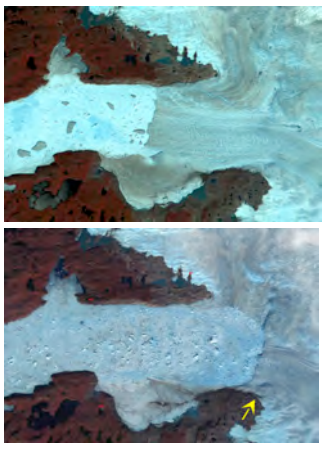
Joint German-Russian program
AWI-AARI

Tethered balloon and
ozone measurements
Interpretation by regional
climate model simulations



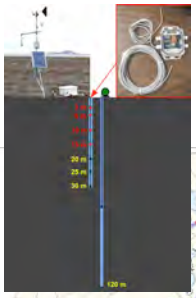
Glaciology

- focus on ongoing rapid change of outlet glaciers, including acceleration, thinning, and retreat of ice front
- providing an enhanced model on ice discharge from Greenland



Permafrost

CALM, TSP (G-TNP), CAPP ➡ INPO



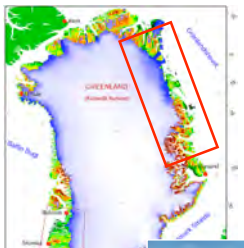
CAPP
carbon pools in permafrost regions

GTN-P
Global Terrestrial Network for Permafrost

Geodynamics

German contributions to the Polar Earth Observing Network (POLENET)

deployment of autonomous observatories at remote sites: GPS, seismics, gravity, tide gauges, ..., to investigate polar geodynamics



GPS observations in Greenland

Germany's wishlist (non exhaustive)

- **Streamline access to the Arctic (logistics, licensing…)**
- **Strengthen the role of IASC as the platform for international collaboration within the Arctic research realm (and ultimately as the SAON watchdog)**
- **Support initiatives aiming at coordinating and facilitatingpolar station access and logistics (e.g. INFRAPOLAR)**
- **Embed SAON into a bipolar framework (e.g. SAON and PANTOS through the SCAR/IASC partnership)**

Thank you