Program Status
CNES

Eric Thouvenot
Philippe Escudier
CNES Strategy in Oceanography

• Contribute to operational outcome of altimetry:
  TOPEX/POSEIDON => JASON1 => JASON2/OSTM => ?
  ERS 1 & 2 => ENVISAT => ?
  + CORIOLIS, MERCATOR/COO/ECOMF, ...

• Continue research activities for future altimetry missions/instruments (AltiKa, WSOA, …)

• Contribute to space measurements of other ocean physical parameters:
  - salinity: SMOS, CNES contribution to ESA project
  - directional wave spectrum (SWIMSAT)
  - ocean colour (VGT1 & 2, POLDER1 & 2, …)

• Prepare ocean applications of ORFEO (Cosmo SkyMed/Pleiades): mainly coastal applications
Status of altimetry missions/activities

- **TOPEX/POSEIDON**: more than 11 years of ocean observations: total success
- **Jason/TOPEX tandem mission**: success!
- **ENVISAT**: excellent synergy with Jason1, (T/P and ERS complementarity further improved)
- **DORIS**: 6 DORIS receivers simultaneously in flight: earth reference system strengthened
- **MERCATOR**: internal Agency structure for the implementation of an oceanographic forecasting center in Europe in the mid term
  - next step: C2O (Center for Operational Oceanography) in 2006
- **AltiKa**: Preliminary Design Review in July 2003
- **Next Step**: O³ = Operational Ocean Observer (phase A planned in 2004/2005)
Jason 1

- Qualified in orbit
- Ready for research and application use
  - operational mission begun
  - products distributed routinely
- CNES operations funded through the SALP, Altimetry service, project
  - required lifetime: 3 years
  - expected lifetime: > 5 years
Jason2 European side

- Cooperative Framework: letter co-signed by NOAA/NASA/EUMETSAT/CNES
  - basic mission, continuation of Jason1: core mission
  - Major new feature under analysis: Wide Swath Ocean Altimeter
  - 4-party MOU is being prepared

- CNES
  - anticipated procurement phase
    - anticipated procurement for Doris and the Altimeter
    - Platform already funded through PROTEUS multi satellite contract with Alcatel Space
    - Complement to WSOA accommodation study
  - Phase B/C/D to start begin of 2004

- EUMETSAT
  - program approved in June, 2003
  - CNES/EUMETSAT agreement submitted to EUMETSAT Council on November, 2003
Mercator, towards operational oceanography

Modelisation & Assimilation

Observation: Satellite & In situ

2002
1/3°

2003
1/15°
2°

2004
1/15°
1/4°
Future altimetry missions

• What Mission to complement JASON-2?

  Example: AltiKa
  (cooperation CNES/SHOM/UK/JPL/...)

• Post-2010 missions: to be decided/approved by operational agencies
  - NPOESS (IPO)
  - OCEANWATCH (EUMETSAT/ESA ??)
  - JASON3 (EUMETSAT/CNES ??)

(note: some of those missions might merge into a single one…)