

# Key Points to be Discussed

## 1. Jason-2/Jason-3 transition:

- DIODE/DEM mode for J-2 &/or J-3 during formation phase
- Jason-2 interleaved orbit at end of formation flight

## 2. Jason-2 Extension of Life:

- Needs for geodesy vs. operational oceanography
- Protection of reference & interleaved orbits

## 3. Other topics:

- LRM/SAR
- Jason-1 GDR-E updates: orbits, JMR,...
- Jason-3 Numerical Retracker

**Round tables** for each splinter are organized **Thursday 30th from 1:45pm to 3:45pm**  
**Plenary discussion and recommendations will take place on Friday morning**

# Jason-2/Jason-3 transition

- **DEM mode during the Jason-2/3 formation phase:**
  - The proposed strategy from the project:
    - Jason-2 remains in nominal median tracking throughout
    - Jason-3 alternates median/DEM cycles (after validation of DEM mode)
  - Three cycles (34, 209, and 220) are available from Jason-2 to evaluate the impacts of DEM mode; feedback is welcome
  - Visit 2 posters at IP (retracking) poster session:
    - Martin-Puig et al. - Jason-2 POSEIDON3 DIODE/DEM tracking mode performance impact over oceans and coastal areas
    - Cancet et al. - DIODE/DEM (OLTC) tracking mode performances over inland waters
- **Draft Jason-3 CalVal Plan has been distributed**
  - Input and comments are invited

# Jason-2/Jason-3 transition

- **Jason-2 interleaved orbit**

- The planned scenario is to move Jason-2 to the interleaved orbit with a 5-day delay (as for Jason-1) after 6 months of Formation Flight
- This scenario proved valuable for Jason-1/Jason-2, so if anyone knows any reason to not do so, please speak now or forever hold your peace
- **An official recommendation must be agreed upon by the end of the meeting**

# Jason-2 Extension of Life

- Some basics, as agreed upon with the CNES project manager:
  - The **EoL phase is planned to occur only *after* the interleaved phase**, when the risk of losing control of the satellite becomes high. The chosen orbit will serve as graveyard orbit.
  - In contrast to Jason-1, **we are not starting from scratch**. A lot of possibilities were explored, and we should propose the best possible choices to the community: see *Dibarboure et al., Marine Geodesy Third Special Issue on Jason-2, Dec. 2012*.
  - There are **constraints at the project level** that must be taken into consideration: health of the satellite, quantity of propellant remaining, orbit occupied by Jason-1, French space operations act...

# Jason-2 Extension of Life

- A compromise between scientific and operational objectives:
  - **Geodesy, Altimetric Bathymetry, MSS improvement:**
    - “New global marine gravity model from CryoSat-2 and Jason-1 reveals buried tectonic structure”, Sandwell et al., Science **346** (6205): 65-67, 3-Oct-2014 (and Geoid/MSS poster session)
    - Low inclination Jason orbit provides improved E-W component of gravity field
    - Jason-2 uncompressed waveforms should provide additional precision
  - **Operational Oceanography:**
    - Interleaved orbit provides optimal Jason-2 + Jason-3 sampling
    - Non-interleaved EoL orbit will have periods of data redundancy = reduced sampling
  - **Best candidate orbits from Dibarboure study (both ~ 50 km below the reference orbit):**
    - Geodetic orbit: 12+341/419 (revolutions/day; 419-day repeat)
    - Repeat orbit: 12+9/11
    - The Jason-1 EoL orbit is not a possibility:
      - neither the planned one, 12+297/406, nor the actual one, 12+299/410 at -12 km
      - the Jason-2 EoL orbit must not be too close to the current Jason-1 graveyard orbit
  - **SWOT preparation?**
- The identified needs will be addressed by a dedicated J2-EoL team, who will find the best possible choice of orbit in coordination with the Jason-2 project team.

# Other items

- **Lessons learned from SAR altimetry**
  - What is needed to insure LRM/SAR continuity?
- **Jason-1: GDR-E**
  - JMR updates will be available as a “delta product” soon
  - See closing plenary talk on Friday by N. Picot
- **Numerical Retracker for Jason-3**
  - Available later as a “delta product” as well
  - Several iterations may be needed
  - Input/validation from OSTST members welcome (notably from Instrument Processing splinter)
  - See talk by F. Boy in IP (retracking) splinter session