Jason-1 orbit change

Proposed scenario
• Stay on flight formation configuration until the end of cycle 20 (i.e. January 26th, 2009)
• From this date, move Jason-1 to interleaved orbit as soon as possible, depending on project constraints (e.g. operational orbitography center availability)
• Start moving Jason-1 no later than mid-February
• Orbit phasing: 5 days (162°)
Option 162° (aka 5-day option)

Offline use of altimetry (data from the future can be used) → Lag with the future and in the past

NRT use of altimetry (data from the future cannot be used, T0=End of cycle N) → Lag with the past only

2-day lag  →  5-day lag  →  8-day lag
Option 162° (a.k.a 5-day option)

Mesoscale

1000km / 1 day

« Push-away » scanning pattern associated to the 5-day lag (each new track seems to push the neighbour away)

Sampling is visually not as regular as the 4-day option for signals with dt>10 days

Dark areas are not coherent: split evenly in 2 days (tandem better than TP/JA1)

Sampling of both satellites is evenly distributed (1500km in 1 day, 750 in 2 days, 500km in 3 days)

Minimal blind spots until a full sub-cycle is complete

Instantaneous observing capability
(best correlation between snapshots grid points and along-track data from the past)
• Important to detect drifts in measurement early

• Need more than a year of data at an absolute calibration site (or tide gauges) to detect drift of 1 mm/year or smaller

• Need only 20 cycles of cal/val phase to reach similar precision

  n With 4 months, can only detect drift of > 2 mm/year