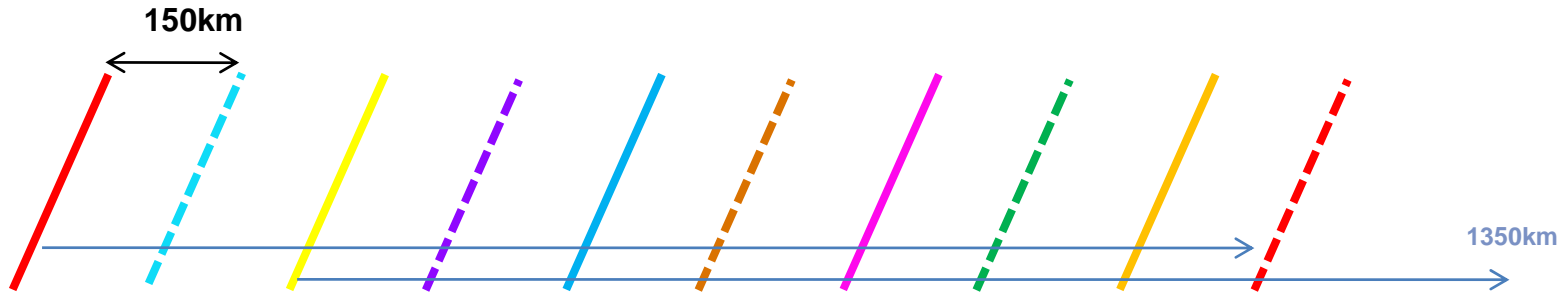


Jason-1 orbit change

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)



| | | | | | | | | | | | | | | | | | | | |
|----|---|----|---|----|---|----|---|----|---|----|---|----|---|----|---|----|---|----|---------------------|
| 1 | ➡ | 6 | ➡ | 4 | ➡ | 9 | ➡ | 7 | ➡ | 2 | ➡ | 10 | ➡ | 5 | ➡ | 3 | ➡ | 1 | Day # for cycle N |
| 11 | ➡ | 16 | ➡ | 14 | ➡ | 19 | ➡ | 17 | ➡ | 12 | ➡ | 20 | ➡ | 15 | ➡ | 13 | ➡ | 11 | Day # for cycle N+1 |

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

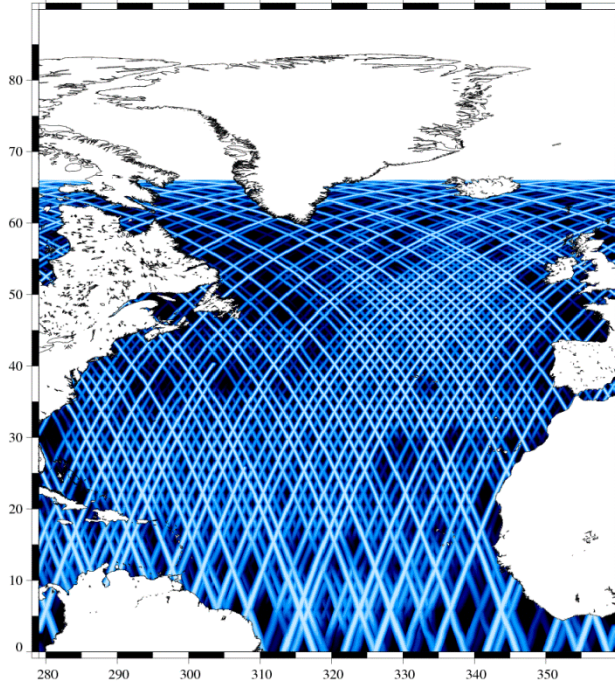
| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|----|---|---|---|---|---|---|-------------------|
| 1 | ➡ | 6 | ➡ | 4 | ➡ | 9 | ➡ | 7 | ➡ | 2 | ➡ | 10 | ➡ | 5 | ➡ | 3 | ➡ | 1 | Day # for cycle N |
|---|---|---|---|---|---|---|---|---|---|---|---|----|---|---|---|---|---|---|-------------------|

➡ 2-day lag ➡ 5-day lag ➡ 8-day lag

Option 162° (a.k.a 5-day option)

Mesoscale

12 days



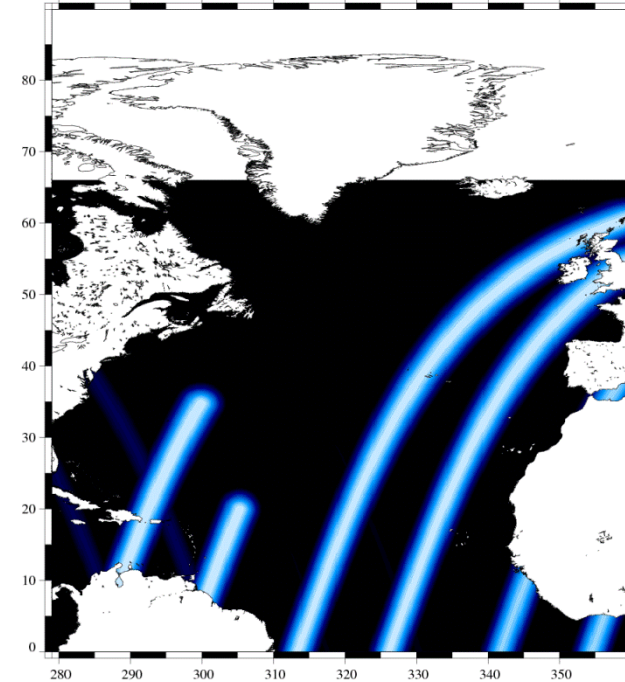
« Push-away » scanning pattern associated to the 5-day lag (each new track seems to push the neighbour away)

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)

1000km / 1day

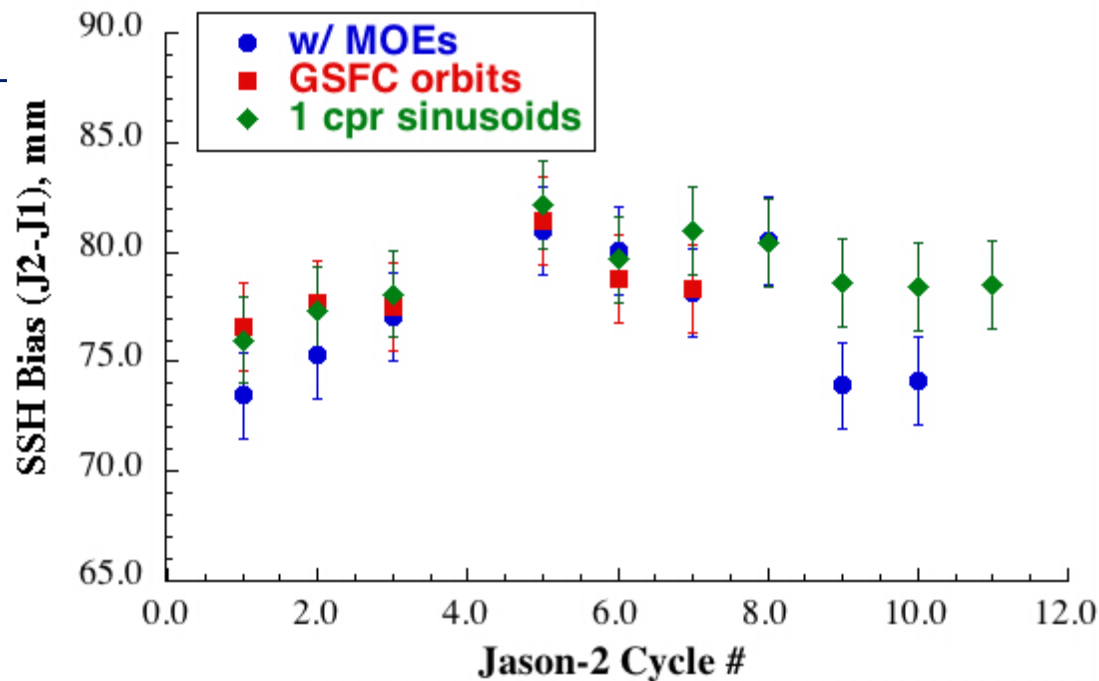
49 hours



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