



OCO-2 Status November 14, 2017



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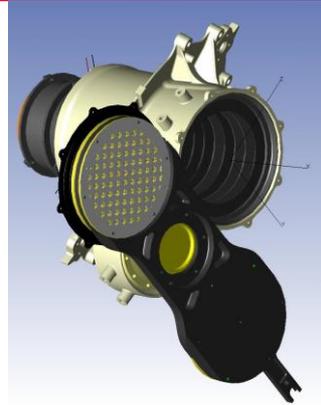
Overview

- **Observatory Status: Nominal**
- **Instrument Status: Nominal**
- **A quick look back at the Opportunistic Science data**
- **Overview of near-term plans for L2 algorithm evolution**
- **Upcoming Events**
 - **Fall AGU: 11-15 December 2017 in New Orleans**
 - **GOSAT/OCO-2 Technical Interface Meeting at AGU**
 - **Tuesday, December 12 from 11 to 1:30, Location TBD near New Orleans Convention Center**
 - **98th Annual AMS Meeting: 8-12 January in Austin Texas**



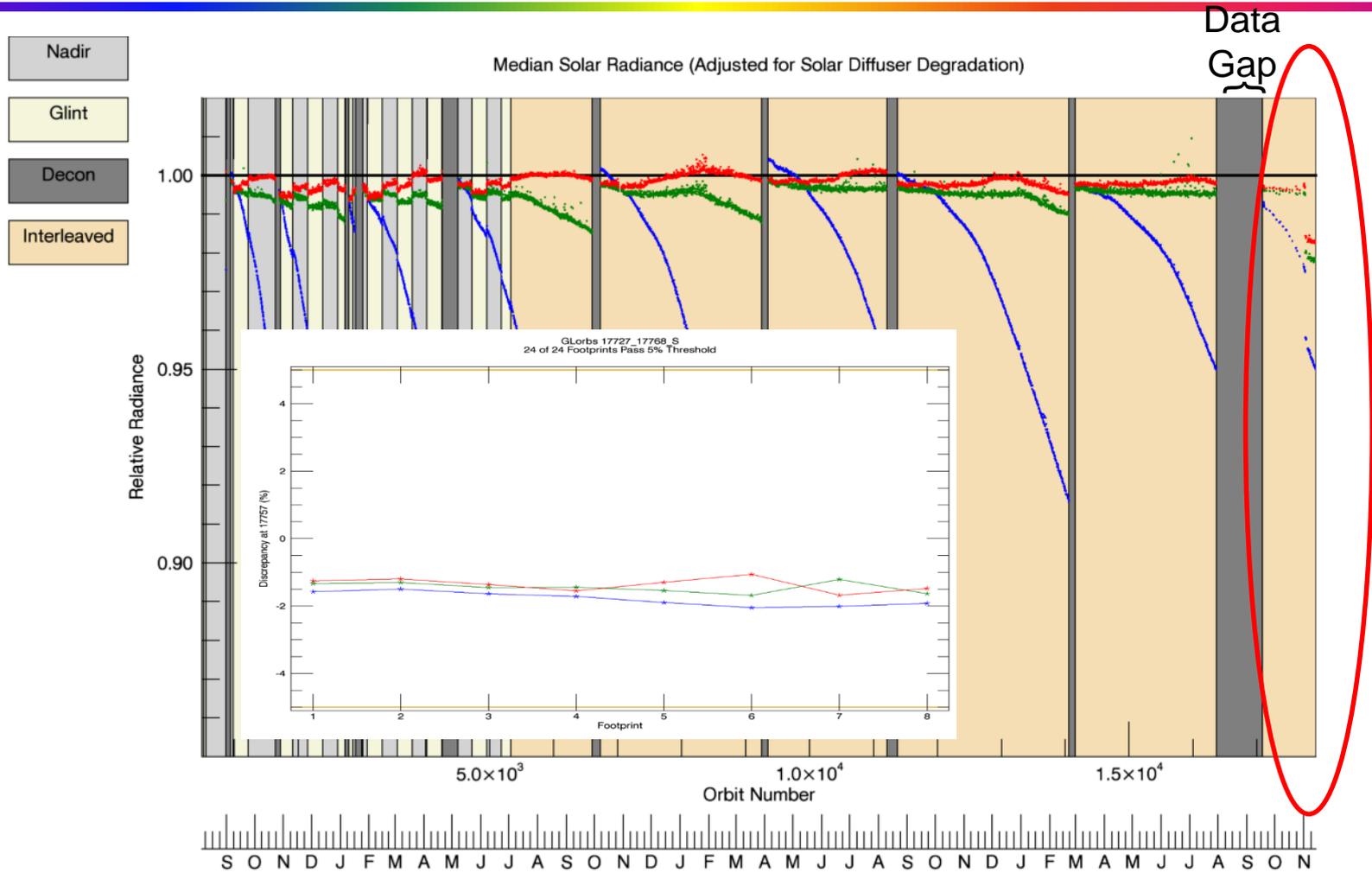
A Quick Look Back at Opportunistic Science

- History of Opportunistic Science (OS)
 - Last good pre-OS orbit: July 30th, 2017, orbit 16365
 - **Data Gap: July 30 – September 18th**
 - First OS orbit: September 19th, 2017, orbit 17115
 - Last OS orbit: November 4th, 2017, orbit 17784
 - Return to Nominal Operations, 4 November 2017, Orbit 17785
- The 2.5 degree solar pointing offset produced a 1-2% change in the illumination level for solar calibration
 - More than expected from cosine effects alone (<1%)
 - Thought to be associated with non-uniform illumination of instrument pupil by solar calibrator
 - Less than the Go/No-Go requirement for return to nominal operations (5%)





Degradation Trending during OS



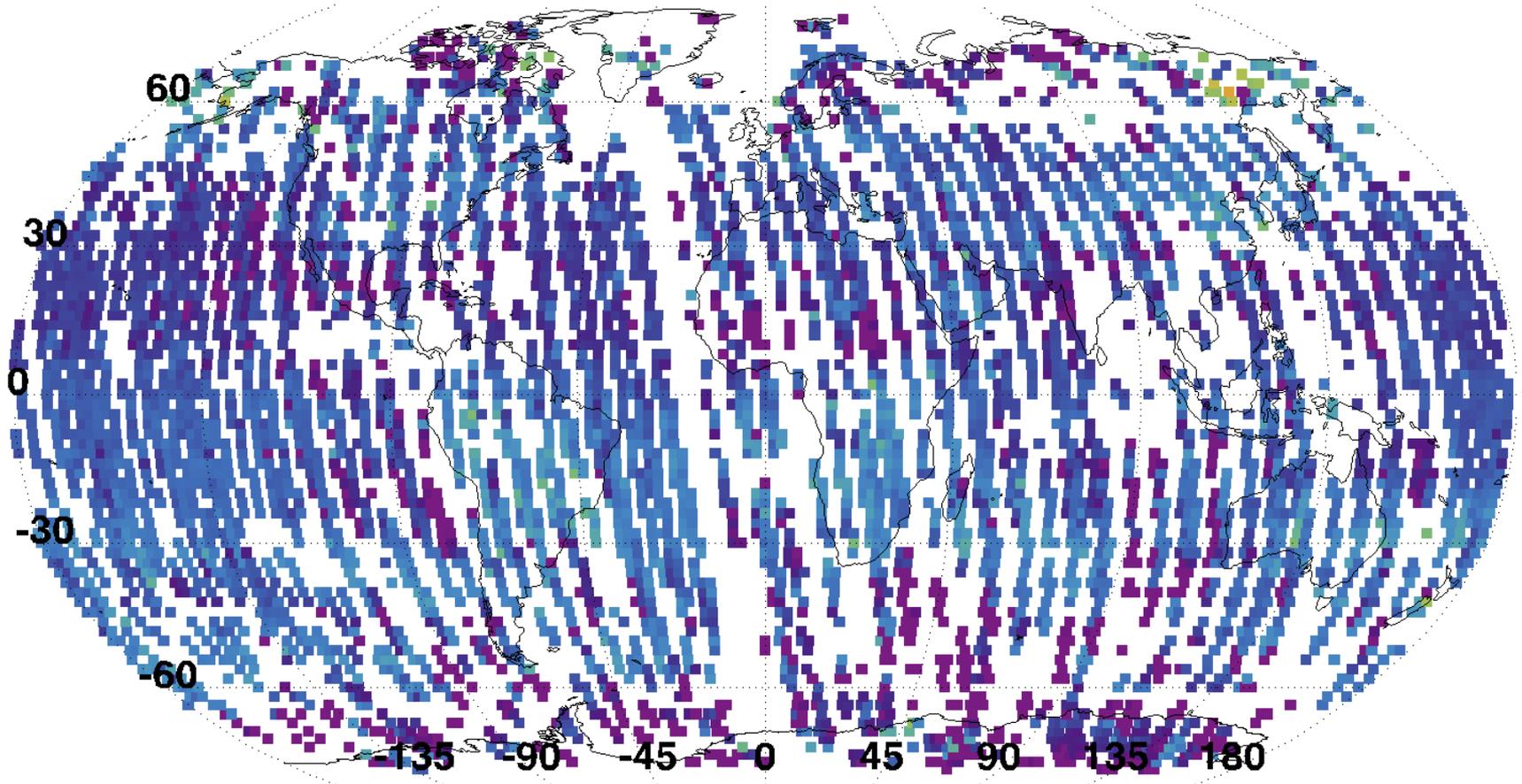
Changes in the solar pointing, and a possible small change in the diffuser door position are being accommodated in calibration process.





OS coverage for September 2017

Mean XCO₂ - Sep 2017



Mean XCO₂ (ppm)



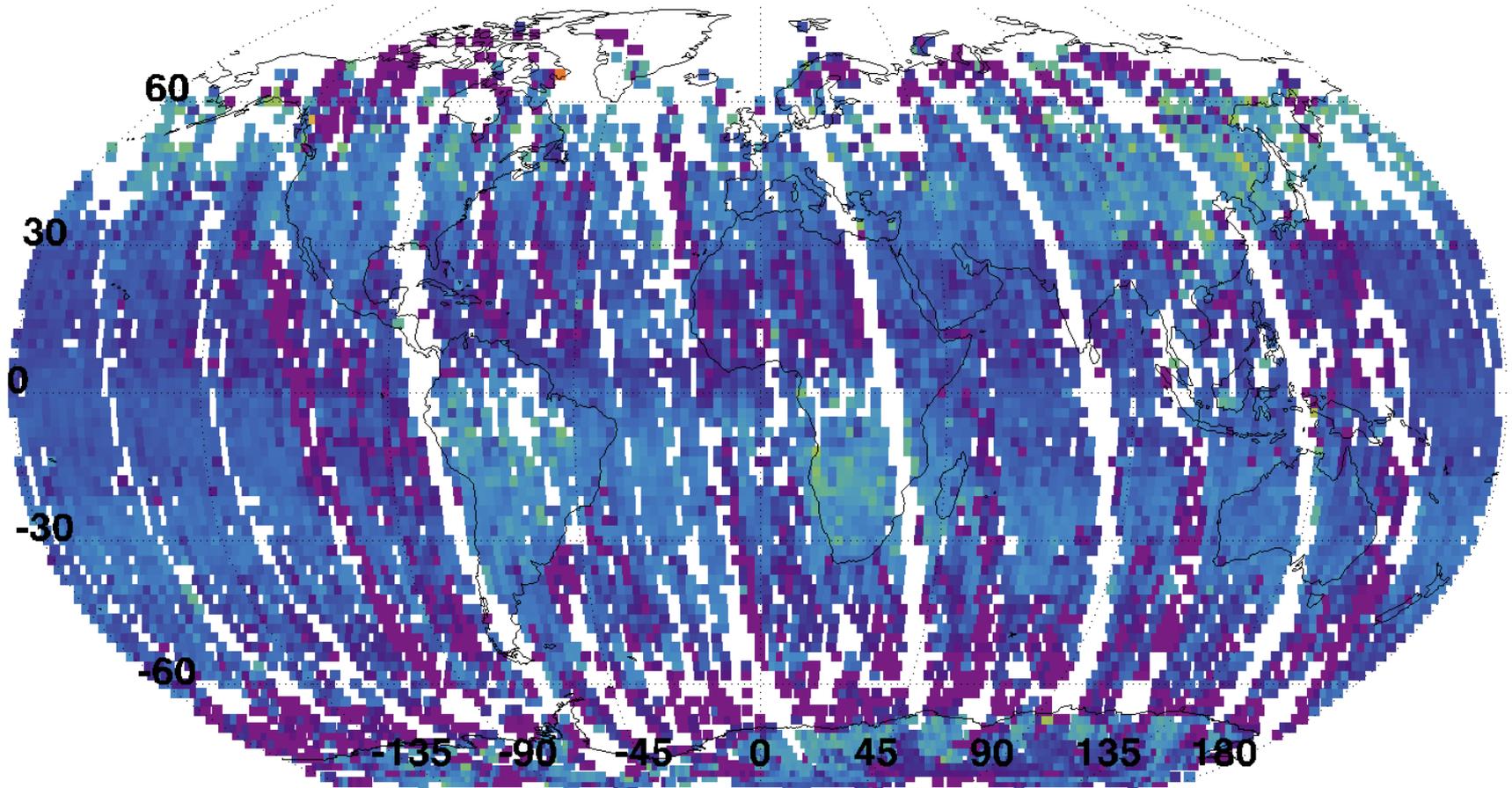
20 Oct 2017
Ops_B8100_r0x





OS Coverage for October 2017

Mean XCO₂ - Oct 2017



Mean XCO₂ (ppm)



9 Nov 2017
Ops_B8100_r0x





Moving Forward – back to normal operations

- **Observatory operations are once-again commanded via a weekly Absolute Time Sequence running onboard the spacecraft. This sequence autonomously controls BCA operations without the need for daily commanding from the ground**
- **The mission operations and calibration team are monitoring the actual performance of the 2.5 degree solar pointing offset**
- **Version 8 L2 processing for forward stream restarted on Friday November 10**
- **Once resumed, it will take a few days to create the L2 products covering the initial portion (Nov. 1-9, 2017) of the revised solar polar calibration era.**