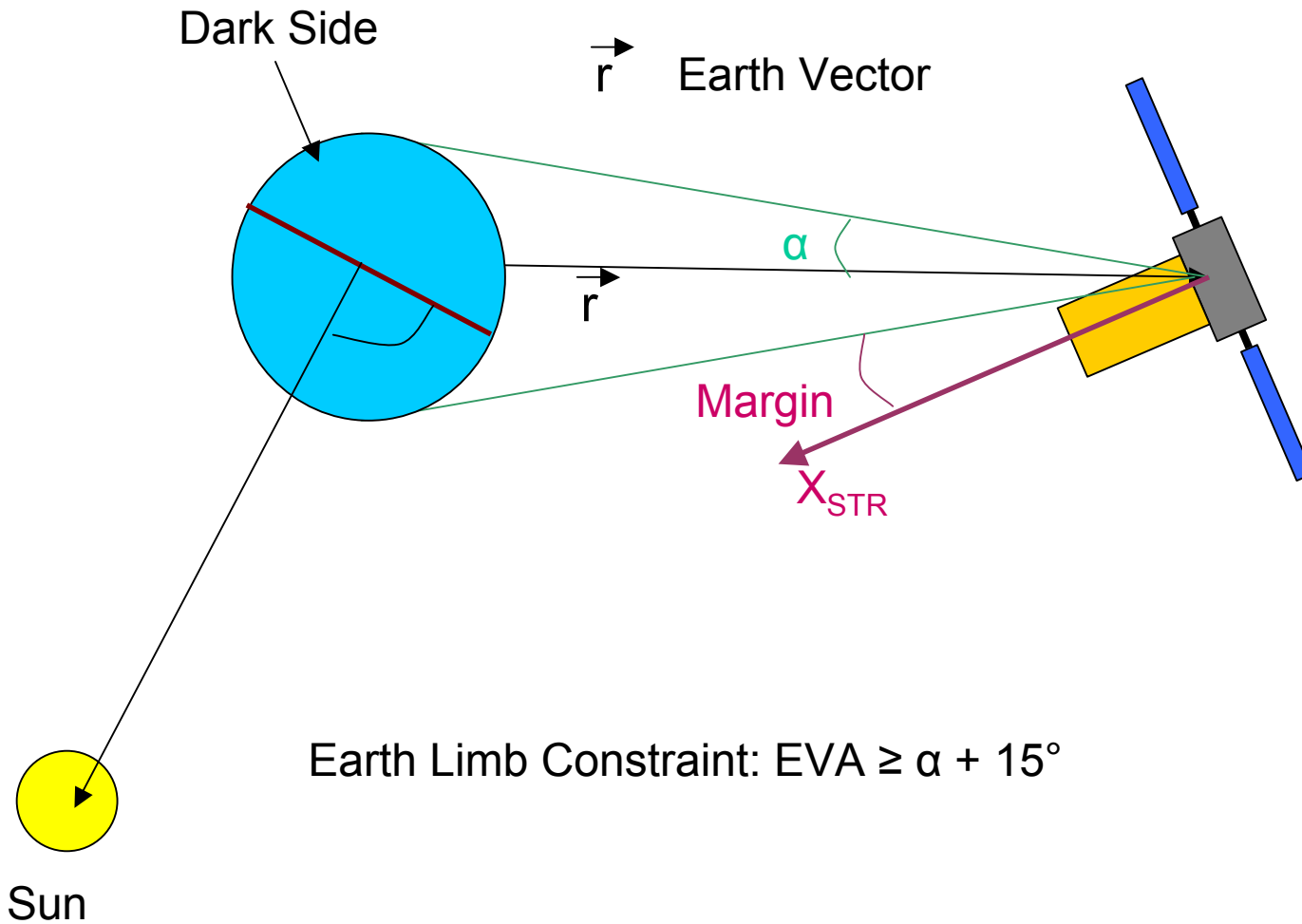


INTEGRAL
Operations Coordination Meeting

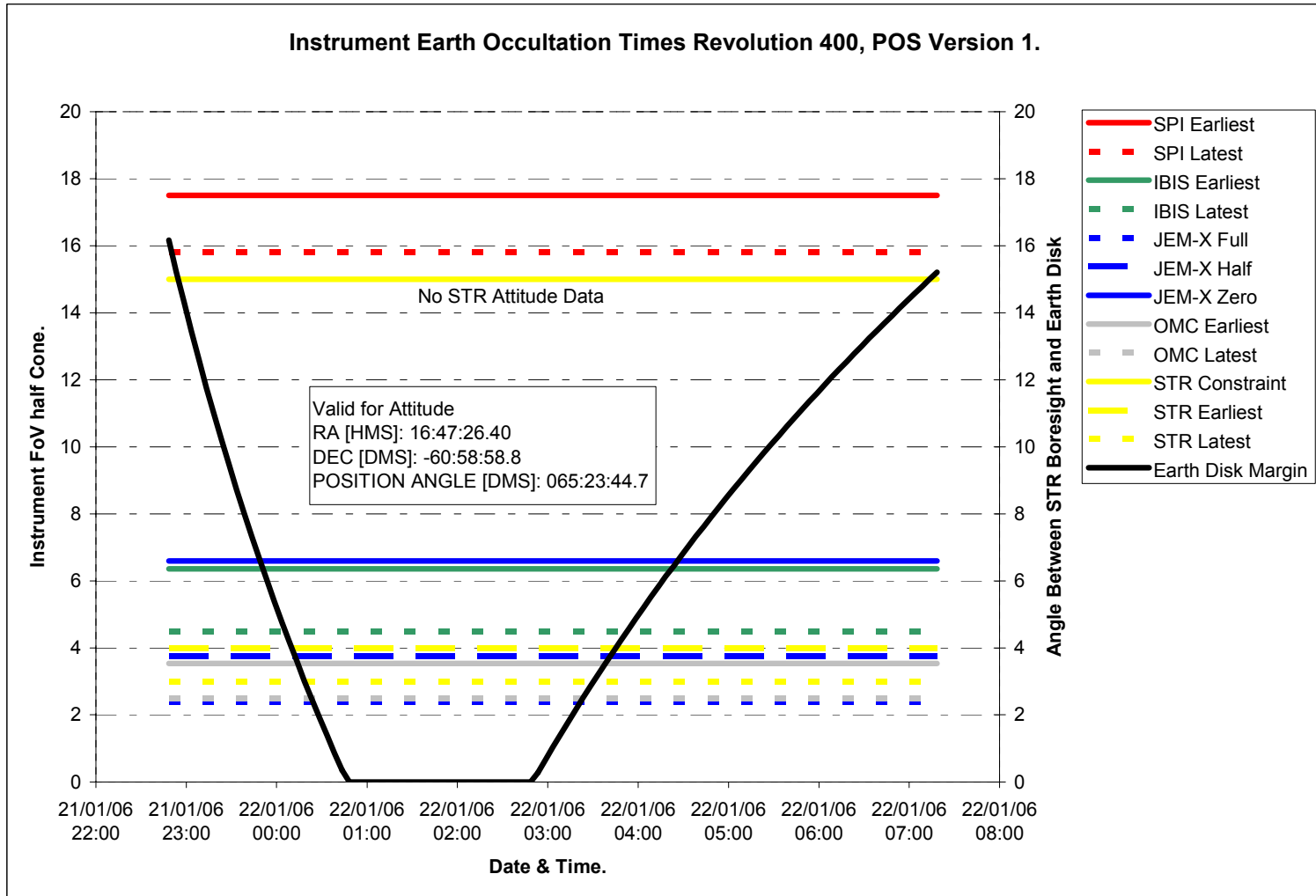
ESAC
15 December 2005

Earth Observation

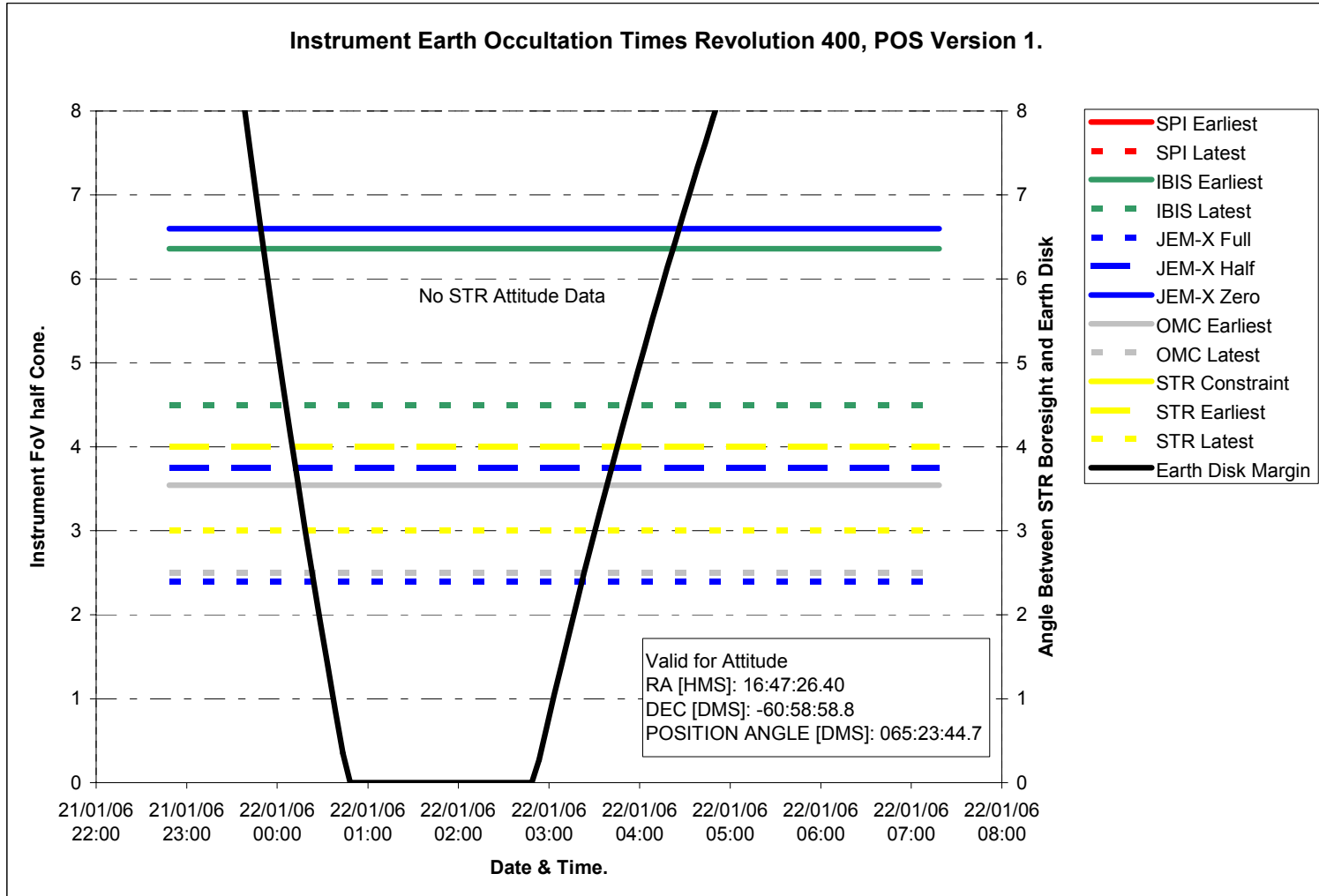
Presented by: M. Schmidt (ESOC – OPS/OFI)



OPERATIONS COORDINATION MEETING - DEC 2005

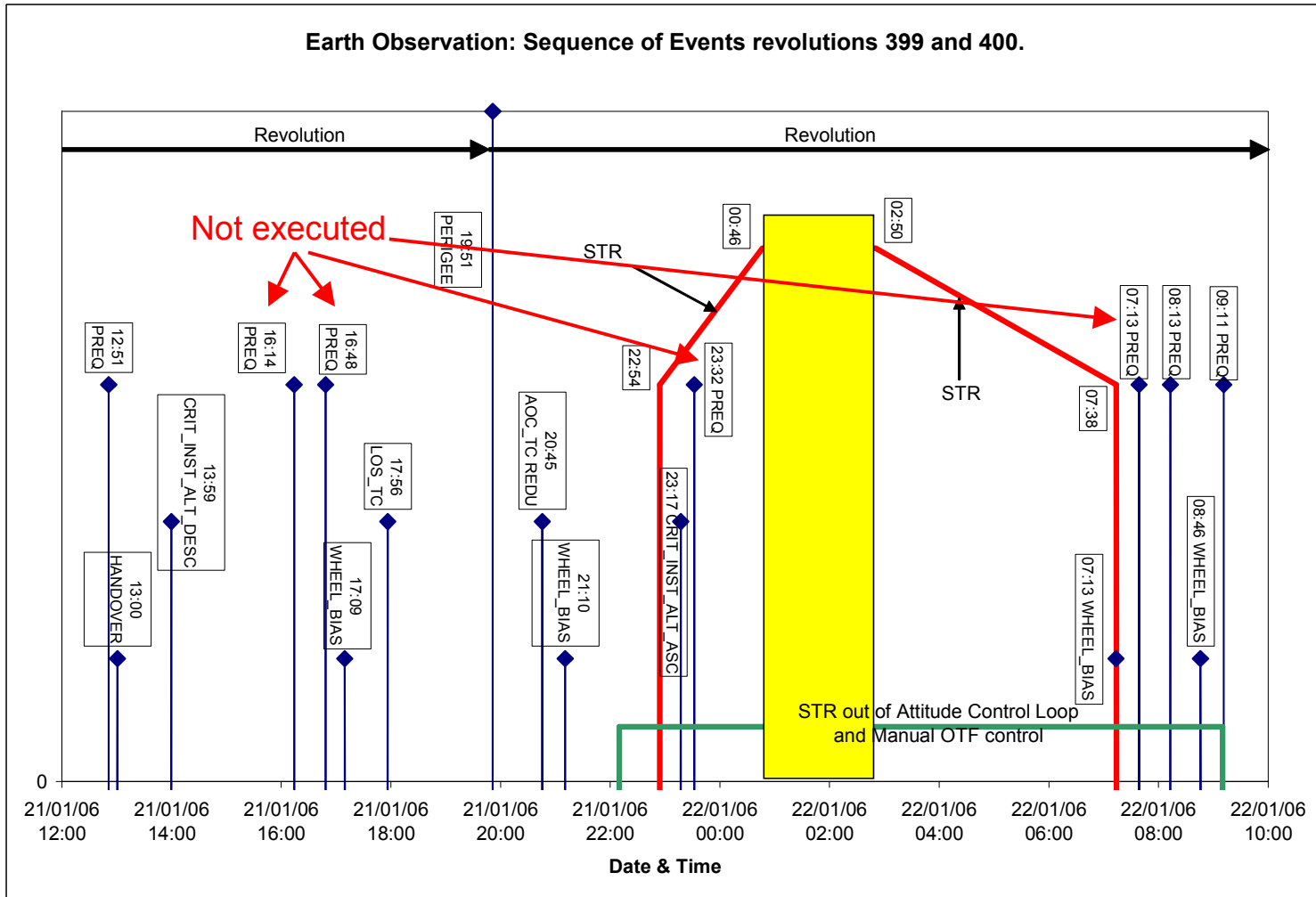


OPERATIONS COORDINATION MEETING - DEC 2005



OPERATIONS COORDINATION MEETING - DEC 2005

Earth Observation: Sequence of Events revolutions 399 and 400.



Problem Areas (1/2)

➤ STR Blinding

→ different attitude control mode based on IMU's

➤ Broadcast Packet Information

→ Manual setting of OTF flag

→ other information to be set by ISOC in POS

➤ Mission Planning Constraints

→ Introduction of a few fictitious slews that are not executed

Problem Areas (2/2)

➤ Attitude Reconstruction

→ STR mapping will be commanded

→ IMU drift will be calibrated

→ interpolation between start and end attitude required

ISDC TBC

Required Inputs (1/2)

- ✓ PREQ for EO attitude in revolution n-1

 - Inside science window (planning system constraint)

- ✓ Slew away from EO → not to be executed

 - Needed wrt planning system constraint (Earth Blinding)

- ✓ CSL to trigger proper settings

 - BCPKT, Instrument modes settings

 - CSL will not be executed

- ✓ Slew back to EO attitude → not to be executed

 - Needed to maintain mission planning consistency

Required Inputs (2/2)

- ✓ Gap of 2 hours before next scientific pointing

Reconfiguration of SVM (AOCS & RWB)

- ✓ Mission Planning Products to be available 10 working days before

Verification of all constraints

- ✓ Definition and introduction of new ED's

To configure OMC

- ✓ TOO Replanning ???

Testing Approach

Test Activities:

- ✓ Manual inspection of procedures
- ✓ Procedures to be tested using the Simulator
- ✓ Sequence of operations using Mission Planning Products
to be tested with the Simulator

Test Constraints:

- Test Environment not fully representative
 - Simulator
 - IMCS test bed

Risk Assessment (1/3)

➤ Risk to Mission

- ✓ little, because procedure basically applied during Commissioning
- ✓ significant loss of science time

➤ Risk to SVM Units

- ✓ none,
 - STR Head same as SAX
 - no Thermal effects as time too short

➤ Risk to PLM Units

- ✓ none according to PI's

Risk Assessment (2/3)

Risk Sources

- wrong procedure → small
 - procedure used during Commissioning
 - procedure tested with Simulator
- problems overlooked → small
 - operation executed the first time in this way
- operational mistake → small

Risk Assessment (3/3)

Risk Mitigation

- Escape manoeuvre prepared

to get satellite away from Earth pointing attitude

- No double ground station coverage scheduled

Villafranca can be called up in case of emergency

- Relevant Manpower at MOC

Flight Control Team (SPACON, SOM, 2 SOE's)

Instrument representatives (recommended)

Conclusion

- No risk identified that forces a NO GO
- Planning approach identified
- Execution Approach identified