

# The AMS Payload Operations Control Center (POCC)



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# The POCC (Payload Operations Control Center)

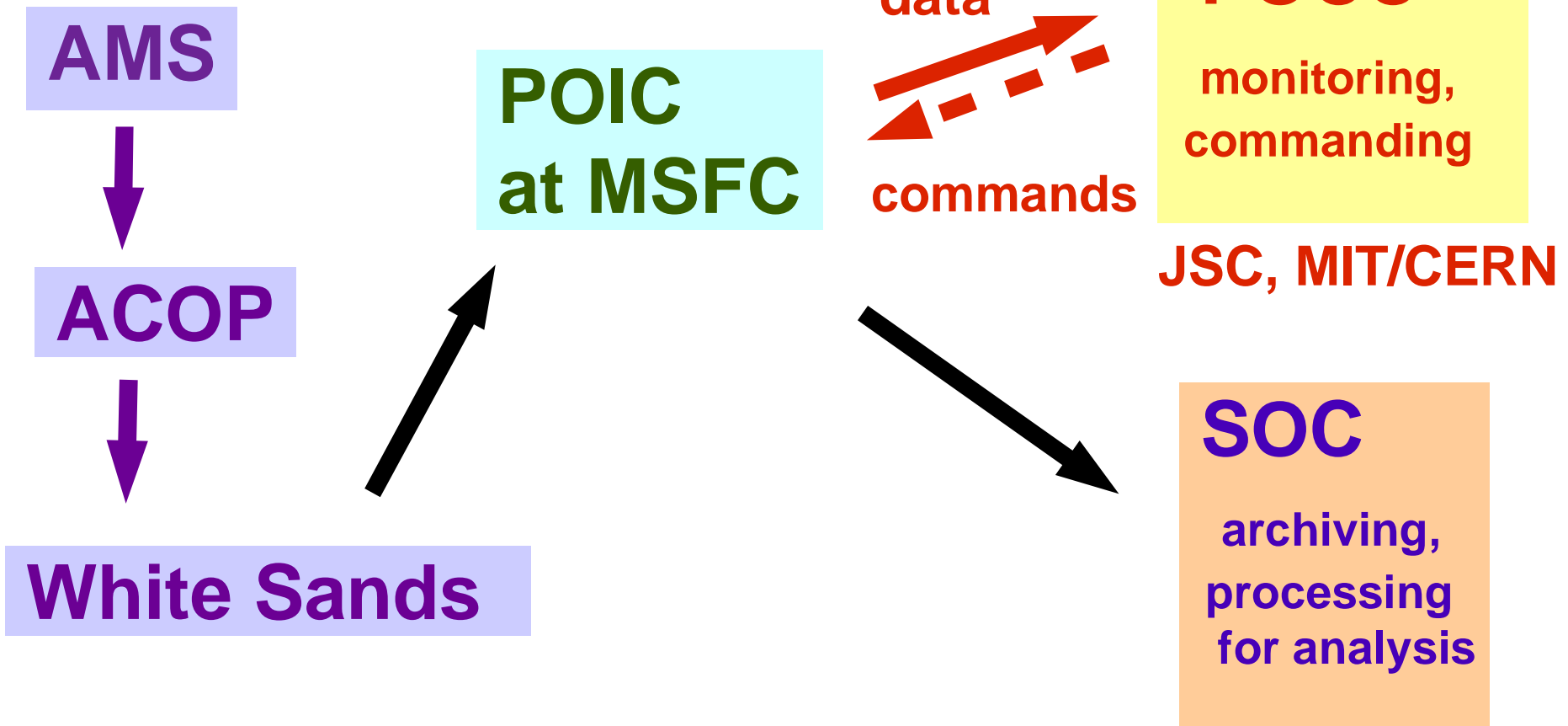
In HEP-speak: "POCC"="Control room"

## Commanding and monitoring

- place where shiftworkers work
- receives all data from POIC at MSFC  
(H&S, monitoring, NASA, some science data)
- use **TReK** (Telescience Resource Kit) on Windows PC's
- data quality monitoring w/ ~10% of the data
- not responsible for archiving (-> SOC)
- **only one active POCC for commanding at a time**

# AMS-02 Data Flow for ISS

(from A. Klimentov)



**Where will the POCC be located?**

**How many shiftworkers are needed?**

**What resources are needed?**

**Other issues?**

# Where will the POCC be located?

**Before launch and  
~1 month after launch, at JSC**

**Then, move to "permanent" POCC:  
CERN and/or MIT**

**Also: backup POCC with minimal  
setup for commanding at JSC**

# How many shiftworkers will be needed?

**For first weeks at JSC: >~20  
need experts for each subsystem**

**For later stable ISS running: ~3-5  
(Monitoring can be done from other  
remote sites; but commanding only at POCC)**

**Will evolve as needed**

# What resources are required?

**Bandwidth:** (see A. Klimentov)

**orbit average 2 Mb/s, >~5 Mb/s in bursts**

## Computers:

- 2 workstations for commanding (primary+backup) -> Windows
- ~5-10 workstations for monitoring (AMS status, slow control, subdetectors) -> Linux
- 5 nodes for real-time processing of data + disks -> same as SOC

**Real estate for computers and workers (~100 m<sup>2</sup>), + racks, tables etc.**

# Other Issues

**Security requirements: Security Plan must be approved by Security Boards at JSC and MSFC before remote POCC may be deployed (computer and physical security must be addressed)**

**Voice and video? Under discussion**

# Rough Timeline

**L-12 months: Security Plan approval**

**L-8 months: first minimal**

**POCC at JSC for ACOP**

**L-6 months: ACOP tests**

**L-1 month: POCC ready at JSC**

**L+1 month: POCC moves to MIT/CERN**