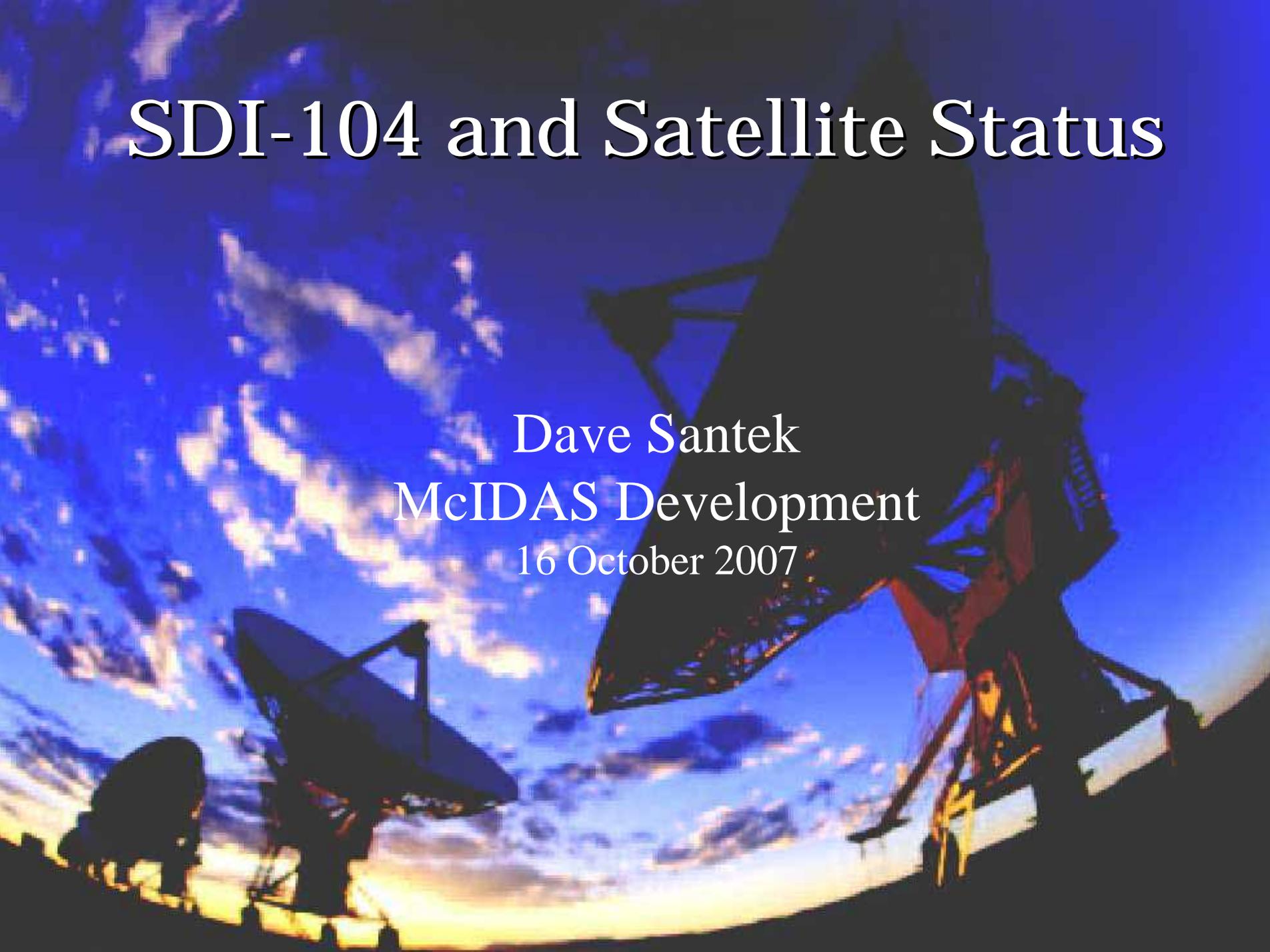# SDI-104 and Satellite Status

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McIDAS Development

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Overview

- SDI Redesign
- Satellites and SDI-104 Status

Why Redesign?

- Previous configuration
  - Based 8 year-old technology
  - Compatible PCs were difficult to find
    - No 5v PCI slots on newer servers
  - Current GOES series will be here until at least 2015
  - Data rate limited to 15 Mbits/s; new satellites will have data rates twice that

New Hardware Configuration

- PC/104-Plus
- 1 GHz CPU
- Boot from compact flash
- Ethernet: 10/100/1000 BaseT
- Connectors for monitor and keyboard
- Mounted in 2U rack box

LittleBoard 800

Software Configuration

- Linux
  - New device driver written
- Ingestor software modified slightly
- Server software is unchanged
- Configured as a standalone ingestor/server or data written to external disk

SDI-104: SSEC Data Ingestor

- Replaces original SDI: over 120 systems built from 1997-2005.
- Data rates up to 40 Mbits/s

SDI-104 Status for Current Satellites

- GOES: no change; adapting servers for future satellites
- POES: no change through NOAA-18
- FY-1D:
  - Polar orbiting satellite from China
  - Has not been tested with SDI-104
- Meteosat-5 and –7: not available

SDI-104 Status for Current Satellites

- DMSP: not available
- MSG: no SDI-104
  - Not rebroadcast in US using CCSDS
- FY-2C: Chinese geostationary
  - Investigating ingesting with SDI-104
- MetOp
  - Transmit using CCSDS
  - SSEC does not have a direct readout station

MTSAT

- HiRID format
  - Not available in US since early October 2007
  - Available from JMA until March 2008
- HRIT format
  - Transmitted using CCSDS standard
  - SDI-104 available now

Future Polar Satellites

We are monitoring the status and data delivery of future polar orbiting satellites NOAA-N', NPP, and NPOESS. We expect these to have a Direct Broadcast mode and are investigating having SDI-104s available.