

JPL/ UNAVCO Network Operations

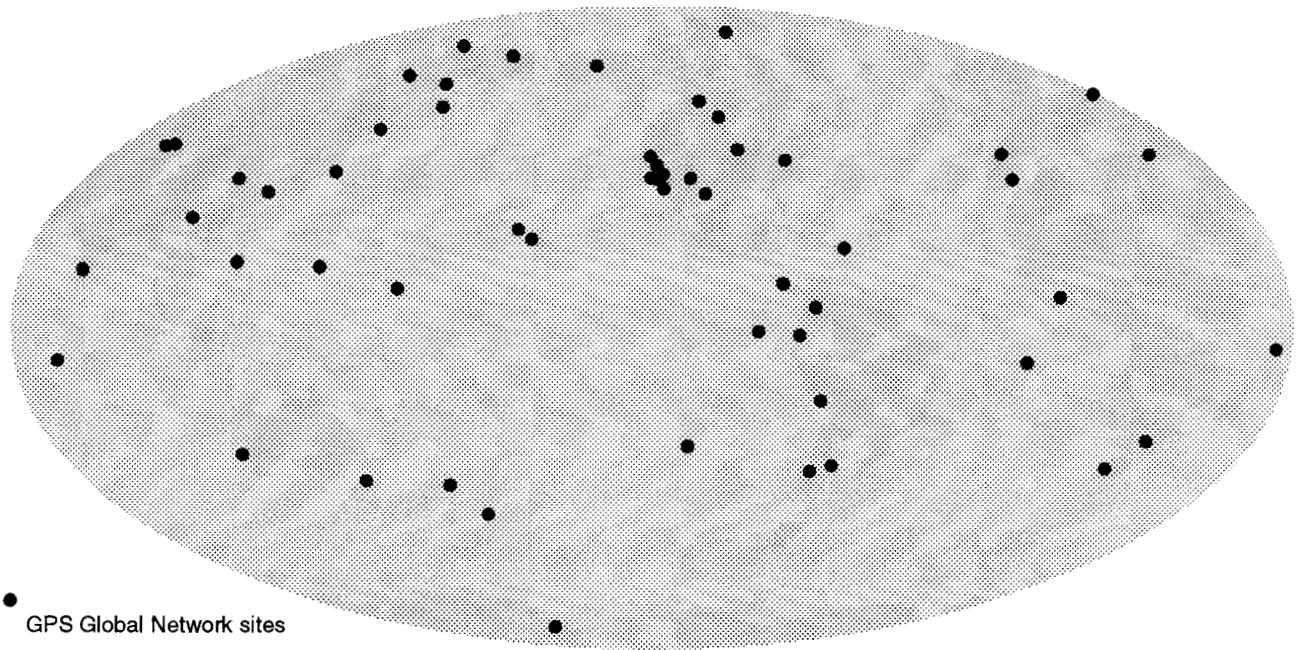
David A Stowers
Michael Jackson

Jet Propulsion Laboratory
California Institute of Technology

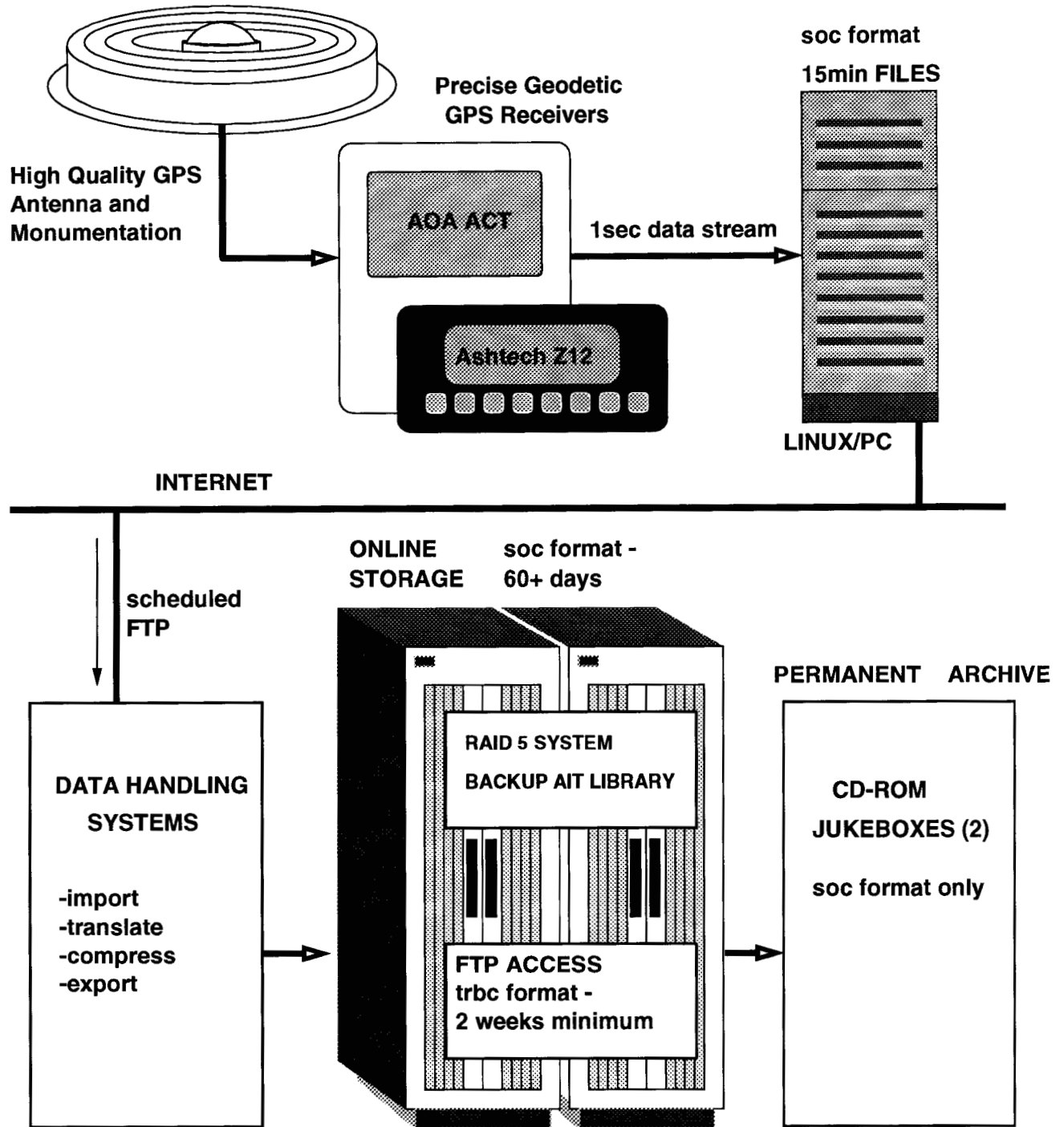
University NAVSTAR Consortium
University Corporation for Atmospheric Research

IGS Network Workshop
July 12-14, 2000
Oslo, Norway

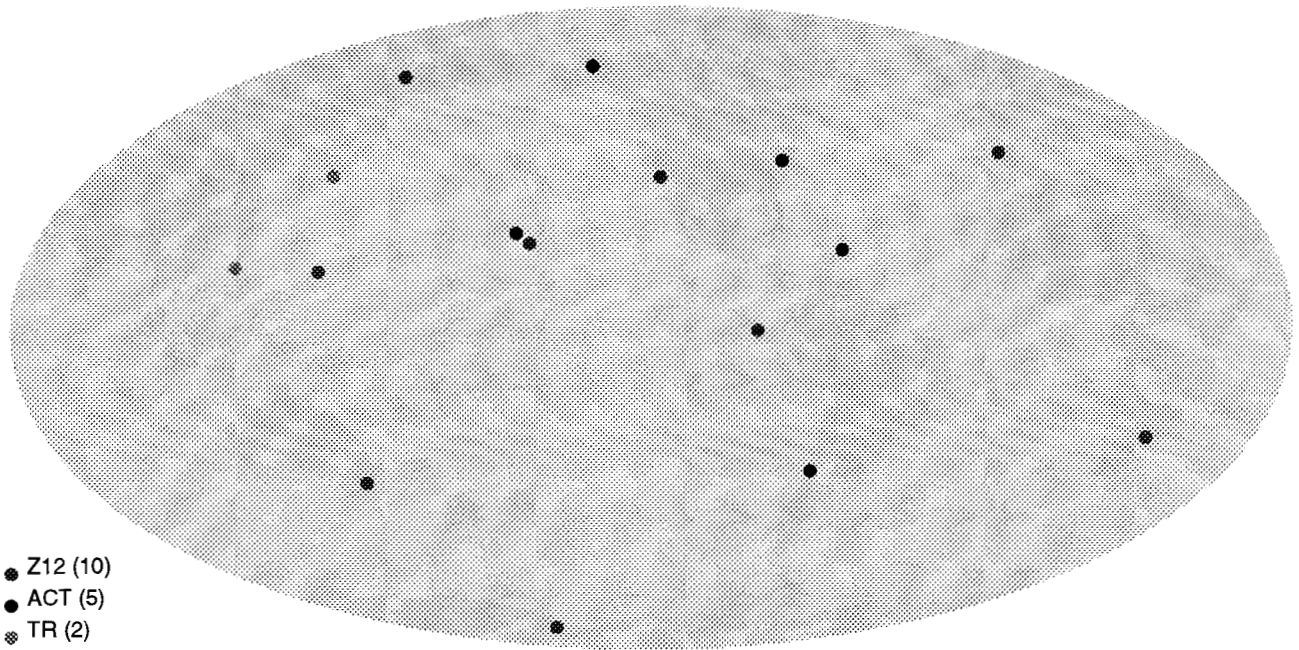
NASA/JPL Contribution to IGS (International GPS Service)



GPS High Rate Data Flow



NASA/JPL Sites for LEO Support



- Z12 (10)
- ACT (5)
- ⊗ TR (2)

St. Croix	U.S. Virgin Islands	ACT		H maser
Fairbanks	Alaska	ACT		H maser
Galapagos	Pacific Ocean		Z12	†Rubidium
Greenbelt	Maryland	ACT	Z12	H maser
Goldstone	California		Z12	H maser
Guam	Pacific Ocean		Z12	†Rubidium
Hartebeesthoek	South Africa		Z12	H maser
Kokee Park	Hawaii	ACT		H maser
Madrid	Spain		Z12	H maser
Manila	Philippines	TR		internal
McMurdo	Antarctica		Z12	Rubidium
Mauna Kea	Hawaii		Z12	H maser
Santiago	Chile	ACT		Cesium
Tidbinbilla	Australia		Z12	H maser
Usuda	Japan	TR		Cesium
†Yakutsk	Russia		Z12	Cesium

† *not yet deployed*

Data Handling

- Availability
 - JPL data publicly available (FTP)
 - * Hourly data availability considered
 - Hourly and Daily RINEX pushed to CDDIS
 - UNAVCO backup capability
 - * Raw Data collection from sites
 - * Translation to 30s RINEX
 - * Hourly and Daily RINEX push to CDDIS

- Communication Implementations

- Telephone/modem, daily and hourly
- Internet, hourly, subhourly, streaming
 - * VSAT extends internet to remote sites
 - * line driver or wireless modem extends serial link from data offload computer to receiver location

- Persistence

- raw and RINEX files archived on CD-ROM
- online locally for 60+ days
- H/R TurboBinary files removed after two weeks

HR Ground Data Applications

- HR Ground Data already in use
 - Occultation processing of Oersted data
 - Real Time generation of Clocks and Orbits for instantaneous positioning at the 10cm level

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