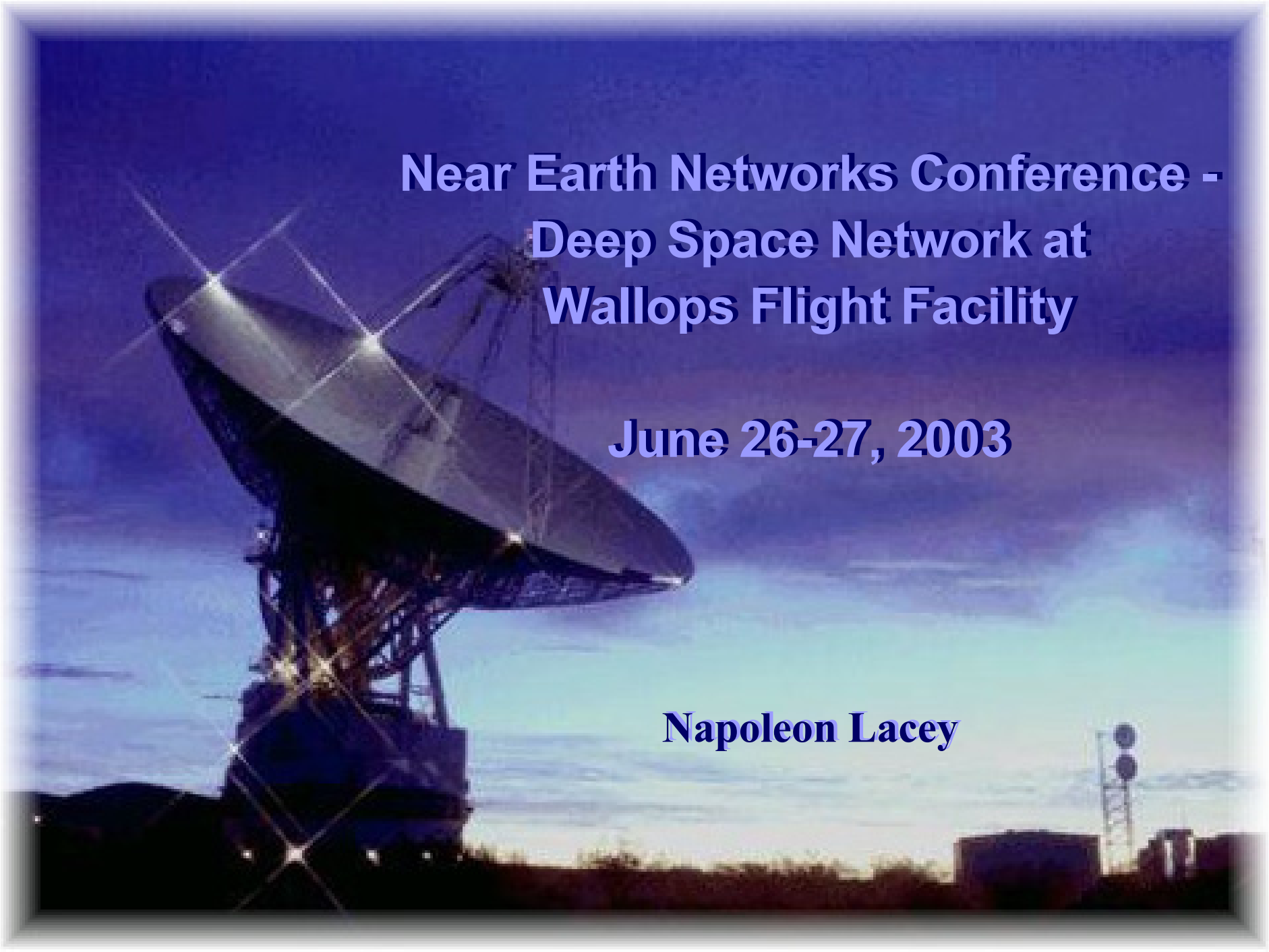
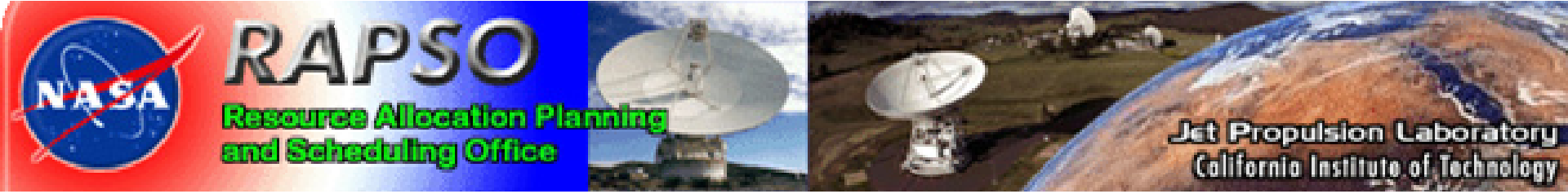


Near Earth Networks Conference - Deep Space Network at Wallops Flight Facility

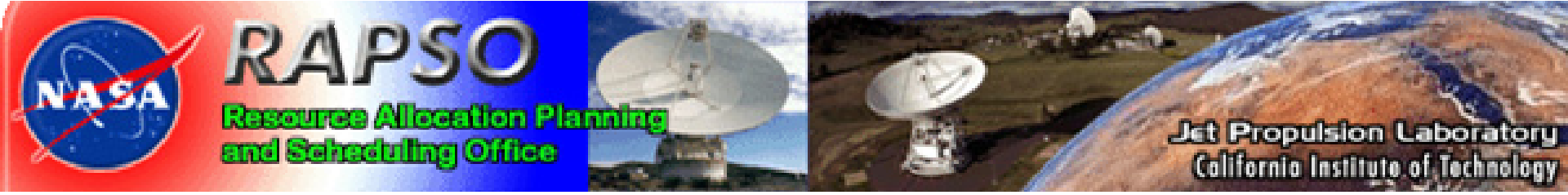
June 26-27, 2003

Napoleon Lacey



AGENDA

- DSN Downtime Process
- Special Studies
  - New Business
  - Capacity
    - Downtimes
    - Potential Closure

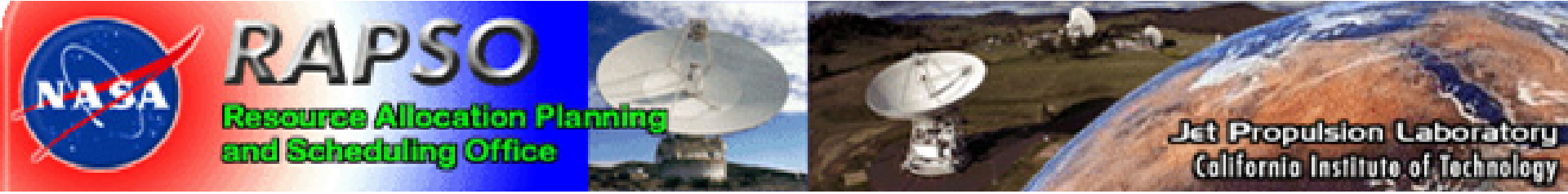


DSN DOWNTIME PROCESS

- Ideal Process: (Non-Emergency Repair)
  - Engineering (SSM) Submit Task, Work Window and Duration to Ken Kimball (Office 940)
    - Coordinate Non-Conflicting Tasks into Single Downtime?
  - Resource Analysis Team Suggests Placement
    - Consider Impact on Network Loading and the Projects
    - DSN Operations Concerns
    - Detailed Analysis of Impact and Recommended Changes to Projects' Requirements Provided at RARB or JURAP
  - Resource Allocation Planning Team Coordinates Schedule
  - DSN Scheduling Coordinates Schedule Changes Within Near-term Period (<8 Weeks)

DSN DOWNTIME

- Downtime Definition
  - Types:
    - Engineering Implementations and Ensuing Tests
      - NSP, 20kW X-Band Transmitters
    - Repairs
      - Recent Azimuth Axle Repair (34m BWG)
  - Duration
    - Time Periods of = or > 24 Hours
    - Shorter Periods (<24 Hours) are Planned Within the Resource Allocation Planning Team or DSN Scheduling



SPECIAL STUDY

- DSN Impact Analysis for the Potential Closure of the 34m High Speed Beam-Waveguide Located at Goldstone CA
  - Deep Space Station (DSS-27)
    - S-Band XMIT/RCV Antenna with 200 Watt TXR
    - Provides S-Band Tracking Overflow for the 26m and 34m Beam-Waveguide Antennas

SPECIAL STUDY

- Supports High Earth Orbiter (HEO)
  - Advance Composition Explorer (ACE)
  - Chandra
- International Solar-Terrestrial Physics Program
  - Cluster II
  - GEOTAIL
  - POLAR
  - SOHO
  - WIND (When Close to Earth)

SPECIAL STUDY

- Conclusions and Recommendations
  - Increase of 15% Unsupportable Time on the 26m Subnet
  - Some ISTP Missions will be Greatly Impacted if DSS-27 is Not Available
    - SOHO HSO (60 Days of Continuous Coverage) and TSO (5 days of continuous coverage) Would be in Jeopardy
    - SOHO HSO and TSO Experiments are Forecast to Have Greater than 30% Unsupportable Time