

Systems Safety Office

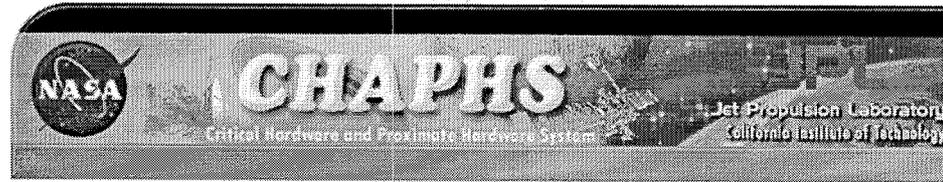
Karan L'Heureux (818-354-6108)

Assurance Technology and Programs Office

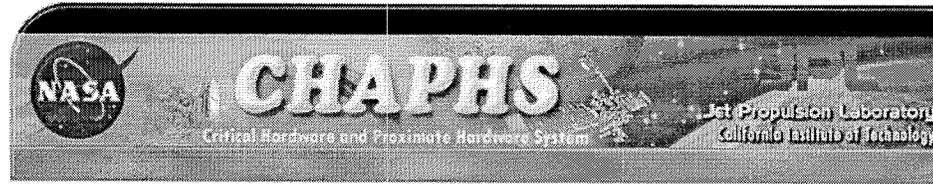
Kelly Moran (818-393-0423)

May 29-30, 2002

NASA OSMS Assurance Technology
Conference

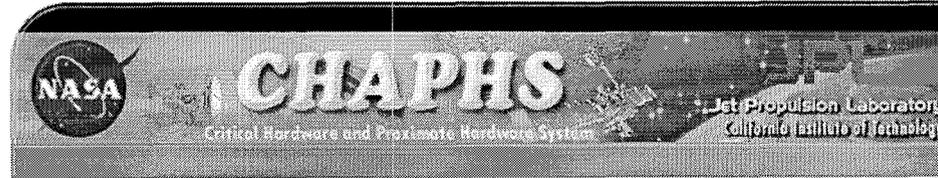


- **Background**
- **Original CHAPHS Vision**
- **CHAPHS Vision FY01**
- **CHAPHS Vision FY02**
- **CHAPHS Vision FY03**
- **Future Plans**



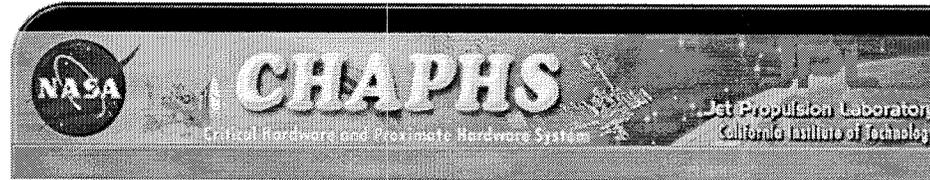
Background

- JPL Facts
 - Large facility (177 acres; 130+ buildings; 5000+ employees)
 - Dozens of flight projects/tasks; millions of dollars worth of equipment
 - Small fire department, security guard force
- Incidents endangering personnel and flight hardware
 - Carbon monoxide release
 - Hydrocarbon vapors from road asphalt application contaminate optics
 - Power shutdown on weekends unknowingly shutdown critical testing labs



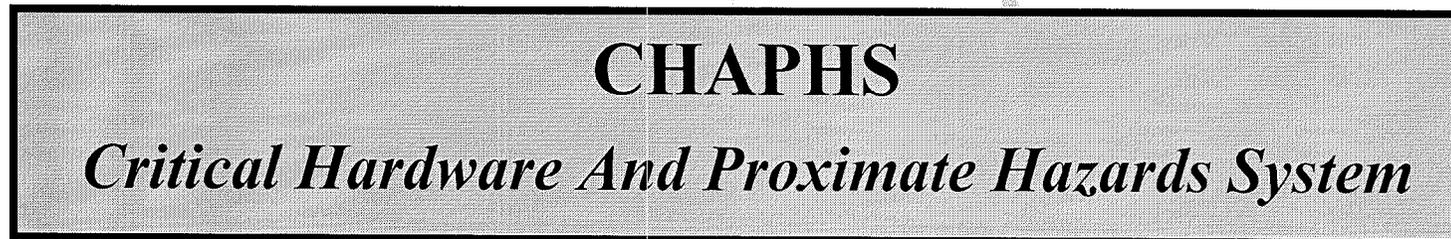
Background

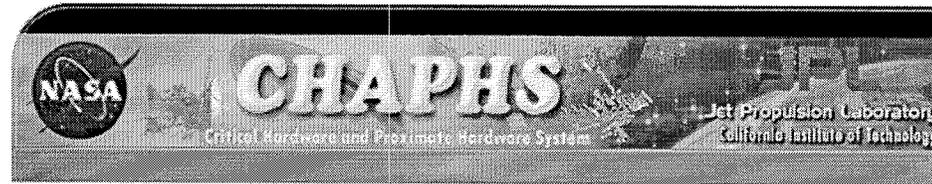
- Developed the Flight Hardware Location Summary (FHLS)
 - Database of information on facilities and flight hardware within those facilities (contact names and numbers; potential hazards [for hardware and personnel]; status of safety inspections)
 - Paper reports distributed monthly
 - Information used by facility/project personnel, emergency services and facility planning
- FHLS in use for 7 - 8 years
- By year 2000, needed to upgrade FHLS program



Original CHAPHS Vision

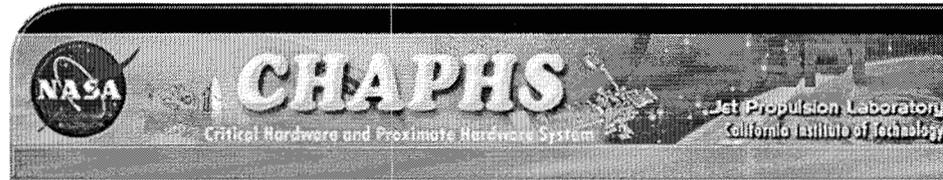
- Code Q RTOP Proposal for FHLS Upgrade
 - Upgrade software
 - Develop web based system; use email for communication with users
 - Link FHLS data to pertinent JPL institutional data
 - Demonstrate upgrade's usefulness to emergency services organizations
- RTOP approved, funded by Code Q as





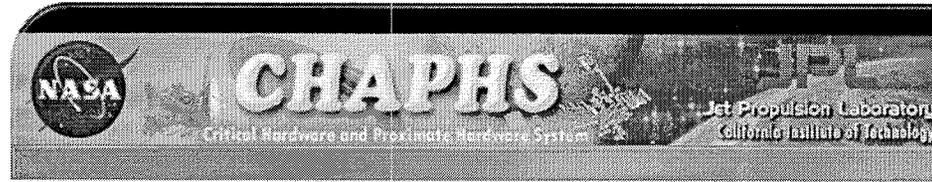
CHAPHS Vision FY01

- Upgraded old FHLS program
 - Newer database
 - User interface is now web-based
 - Email communications with users
- Received very positive response from users
- On-line FHLS/CHAPHS program has completely replaced older paper-based version
- Proposed expanded capabilities for next version



CHAPHS Vision FY02

- Decided to implement expanded CHAPHS (Version 2.0)
 - Make program compatible with JPL institutional computing systems
 - Incorporate automated access controls for security
 - Access on-line data maintained by other organizations
- Current status of CHAPHS
 - New web page created with interactive maps/floor plans
 - Database is compatible with institutional systems
 - Demonstrations of initial program given to JPL emergency services
- FY02 work to be completed:
 - Complete transfer of Version 1.0 data to Version 2.0
 - Implement institutional security controls



CHAPHS Vision FY03

- Expand Version 2.0 capabilities
 - Link to other databases with critical safety, facility and hardware information
 - Use direct part marking for permanent identification of hardware
 - Use part marking with portable scanners to retrieve data
 - Use wireless PDAs or laptop computers to update databases
 - Expand facility data files
- Establish contacts with other interested NASA centers