

Presented to:

The American Astronautical Society (AIAA)

# JPL RAPSO LONG-RANGE FORECASTING

AAS 02-223

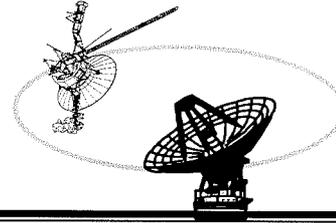
N. Lacey

Jet Propulsion Laboratory

30 January 2002



InterPlanetary Network and Information Systems Directorate (IPN-ISD)  
Deep Space Mission Systems (DSMS)

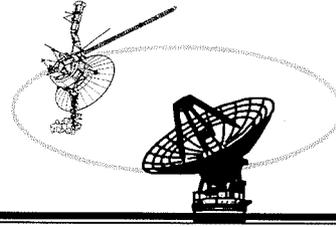


Resource Allocation Planning & Scheduling Office (RAPSO)

**JPL**

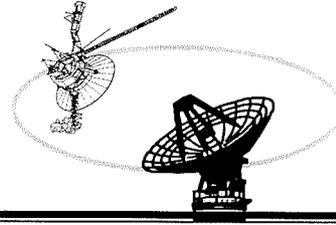
# JPL RAPSO LONG-RANGE FORECASTING

- INTRODUCTION TO RAPSO LONG-RANGE FORECASTING
  
- BACKGROUND

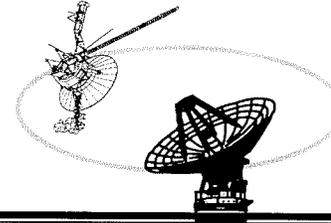


## □ PURPOSE OF RAPSO LONG-RANGE FORECASTING

- EARLY RESOLUTION OF CONFLICTS FOR RESOURCES
- NETWORK DESIGN, IMPLEMENTATION, AND UPGRADES
- MISSION PROPOSAL AND DESIGN
- SPACECRAFT AND DESIGN
- MISSION EVENT TIMING AND PRIORITIES
- WINDOW OF OPPORTUNITY FOR MAJOR DOWNTIME



- SCOPE OF RAPSO LONG-RANGE FORECASTING**
  
- GUIDELINES USED FOR RAPSO LONG-RANGE FORECASTING PROCESS**
  - **USER/MISSION PLANNING SET**
    - **ONGOING/PLANNED PLANETS**
    - **ADVANCED PLANNING PROJECTS**
  - **RESOURCE IMPLEMENTATION PLANNING MATRIX**

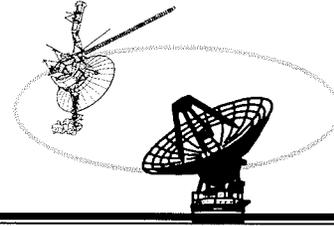


## ❑ METHODOLOGY OF RAPSO LONG-RANGE FORECASTING PROCESS

- RESOURCE ANALYSIS TEAM
  - CONTENTION FOR JANUARY 2004
- SOFTWARE TOOLS

## ❑ COMPLEXITY OF LONG-RANGE FORECASTING

- DSN ANTENNAS
- OVERLAPPING VIEWPERIODS
- TRENDS FOR THE DSN
- NASA DISCOVERY PROGRAM
- DSN OVERSUBSCRIPTION



## RESULTS OF LONG-RANGE FORECASTING

- SPECIAL STUDIES
- DSN ADDS A 34-METER BEAM WAVEGUIDE ANTENNA IN MADRID, SPAIN
- 20kW X-BAND UPLINK CAPABILITIES ADDED

## RAPSO JPL DSN LONG-RANGE ALLOCATION PLAN

- EXECUTIVE SUMMARY

## SUMMARY