



# Sagan Summer Workshop Group Mission Projects



#### **Outline**



- 1. Science goals, mission name (bonus for acronym and logo!!)
- 2. Define telescope and instrument
- 3. Choose orbit
- 4. Calculate data volume, rate and downlink
- 5. Calculate pointing requirements
- 6. Select spacecraft bus
- 7. Determine launch mass
- 8. Select launch vehicle
- 9. Describe major risks
- 10. Estimate total mission cost



## **Mission Types**



#### What type of mission are you interested in?

- Combined Light
  - Science Proponent: Mark Swain (swain@s383.jpl.nasa.gov)
- Coronography
  - Science Proponent: John Trauger (john.trauger@jpl.nasa.gov)
- Interferometry
  - Science Proponent: Rachel Akeson (rla@ipac.caltech.edu)
- Ground-based
  - Science Proponent: Sara Seager (seager@mit.edu)
- Transits
  - Science Proponent: Chas Beichman (chas@ipac.caltech.edu)
- Technical Proponent for all mission types:
  - Keith Warfield (keith.r.warfield@jpl.nasa.gov)
    - Lead Concurrent Engineer JPL's Team X



### **Group Meeting Schedules**



- Sign up for your preferred group during lunch today!
- Meet up with your group and science proponent tomorrow (Tuesday) at the lunch break
  - Discuss science goals while eating lunch as a group
- Attend Keith Warfield's talk immediately following lunch on Tuesday
  - Keith will be available for questions during the workshop
- Meet up with your group and science proponent Thursday at the lunch break
  - Answer last minute questions and go over presentation while eating lunch as a group
- Give final presentations (based on provided template slides)
  Friday afternoon
  - Prizes will be awarded in various categories!
- **▼ HAVE FUN!!**