Ground-Based Mission

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Ground-Based Mission

✓ What do I want to do (Science Goals)?
✓ What am I going to do (instrument + telescope)?
✓ Where am I going (Geographical Location)?
✓ How much will it all cost?
✓ How soon can I have it?

Differences from space
✓ Cheaper!!
x Atmosphere Limitations
Ground-Space Comparison

[Image of a graph showing Ground-Space Comparison with various telescopes and their corresponding RMS Error for 100 sec Integration (millimag) against I Magnitude.]
Many Choices

1. Transits
2. Direct imaging
3. Radial velocity
4. Many small telescopes or
5. A few large telescopes or
6. A giant telescope
1. Science goals, mission name (bonus for acronym and logo!!)
2. Define telescope and instrument
3. Choose geographic location
4. Describe major risks
5. Estimate total mission cost
1. Science goals

- Major science goals and relevance to field
- Mission name (and acronym/logo)
2. Define telescope and instrument

- Wavelength
- Size
- Sensitivity
- Spectra Resolution
- Angular Resolution
3. Describe major risks

- Unusual size
- New technologies
10. Estimate total mission cost

- Telescope
- Instrument
- Operations