

Greetings!

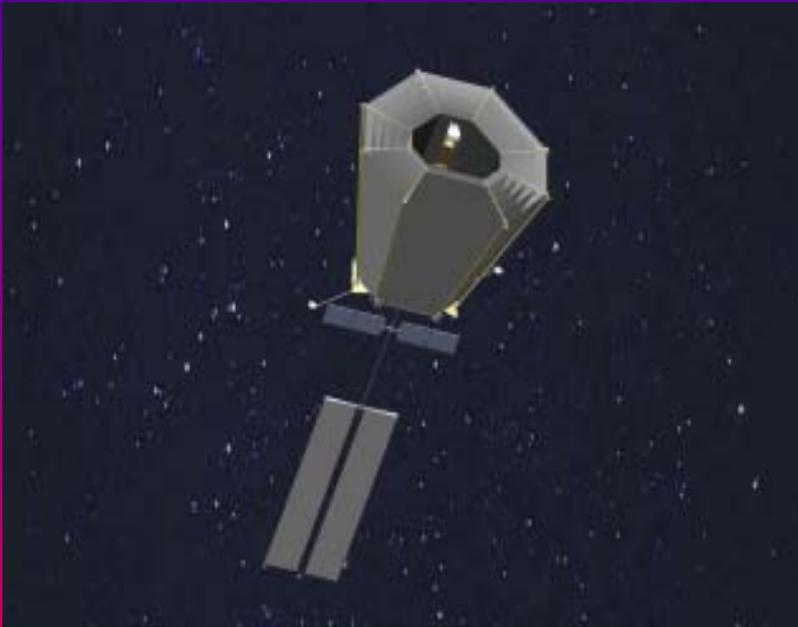
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NASA and ESA Are Pursuing Two Missions for Finding Terrestrial Planets



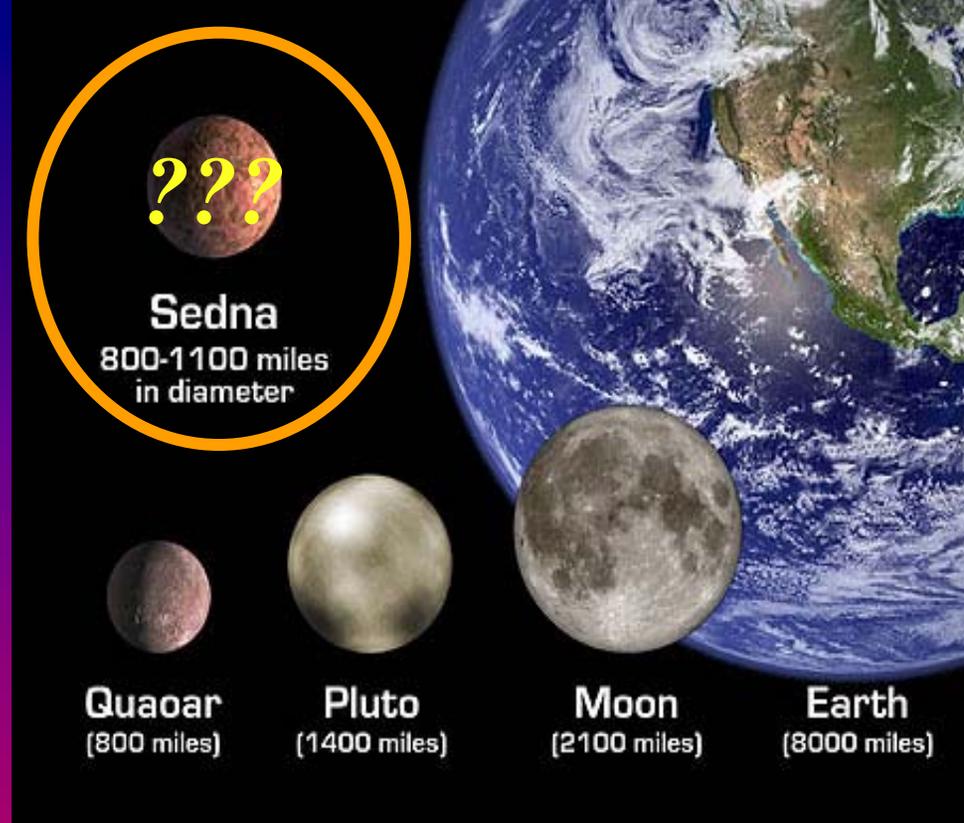
Visible Coronagraph
(NASA)



Formation Flying
Infrared Interferometer
(ESA/NASA)

Why Fly Two Missions?

- *Most compelling science*
 - Data from *both* visible and mid-IR wavelength regions will provide *complete* planet characterization, *definitive* assessment of habitability, and *unambiguous* biomarkers



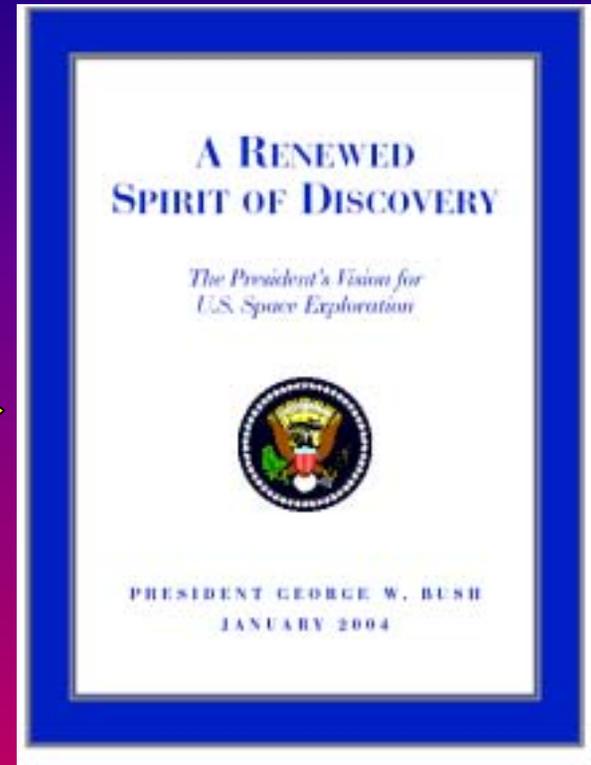
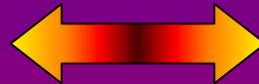
- Technology for starlight suppression has matured to enable a robust approach (technical, programmatic, scientific) with two *complementary* missions in the next decade
 - *Deliver results as rapidly as possible* --- A moderate-sized, visible light coronagraph by 2014
 - *Provide confirming, complementary, expanded results later*--- a formation-flying, mid-infrared interferometer jointly with ESA shortly thereafter

Strong Scientific & Political Backing for TPF



The 2000 NRC Decadal Review

*“Search for life beyond Earth,
and if it is found, determine its
nature and its distribution”*



Vision for Space Exploration

*“Conduct advanced telescope searches
for Earth-like planets and habitable
environments around other stars”*

Goals for 2nd TPF/Darwin Conference

- Discuss and refine common TPF/Darwin science goals
 - Search for Earth-like planets in the habitable zone around nearby stars
 - Characterize planets, their atmospheres, and search for signatures of life
 - Carry out a program of comparative planetology
 - Enable a program of “revolutionary” astrophysics
- Make progress in critical precursor science areas
 - What is the frequency of solar systems hospitable to terrestrial planets and of Earths?
 - What are suitable targets for TPF?
 - Suitable stellar properties
 - Hospitable planetary dynamics
 - *Low levels of zodiacal emission*
 - What are astrobiological signposts of life
- Focus on science (mostly), missions and technology (a bit), and programmatics (as little as possible)
- Build our community (and have some fun)