

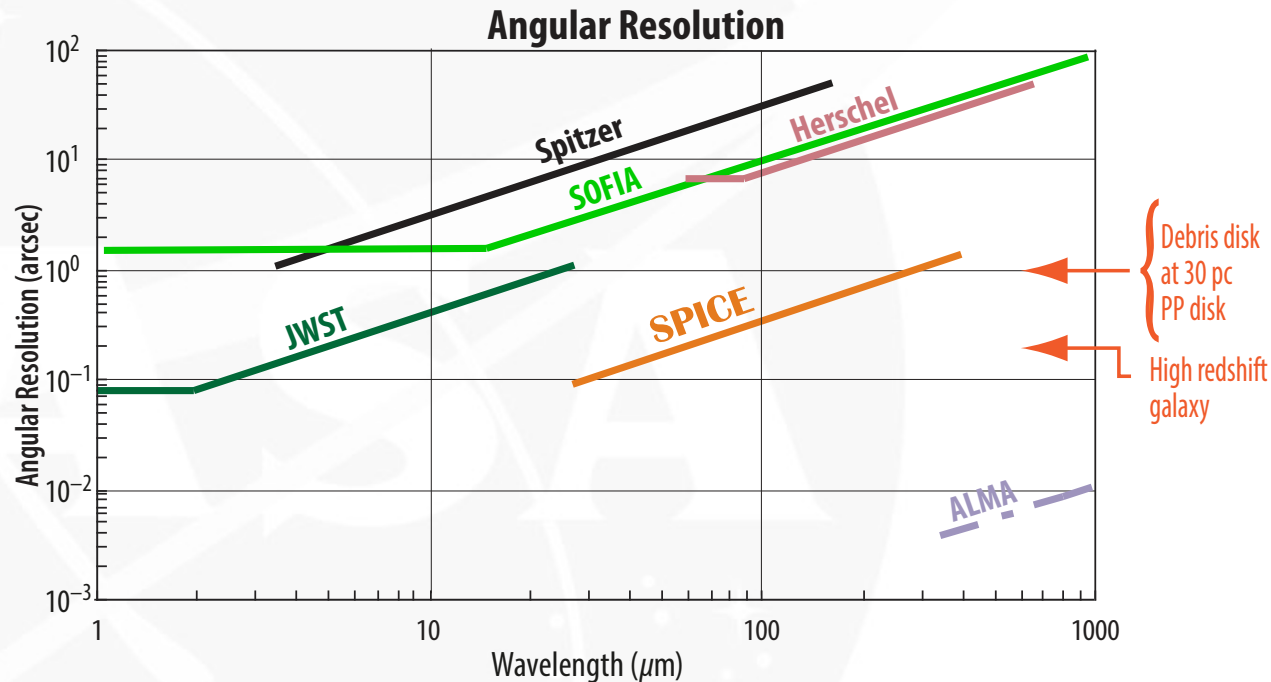
The background of the slide features a large, faded NASA logo. The logo consists of the word "NASA" in its characteristic serif font, with a white swoosh that loops around the letters. The entire logo is set against a light gray circular backdrop that contains several small, white, four-pointed starburst patterns. The text "SPICE's measurement capabilities" is centered over the logo in a blue, sans-serif font.

SPICE's measurement capabilities



What makes SPICE unique?

- ❑ SPICE addresses the Decadal goals for a Far-IR Probe as no other mission can: with **image resolution sufficient to resolve the objects of interest and penetrate extragalactic confusion**, and with **a spectrum in every resolution element**.
- ❑ A **single science instrument** provides these capabilities



In the far-infrared we penetrate dust to study obscured star and planet formation, but **SPICE's sub-arcsecond resolution and sensitivity are essential for transformational science. No other Probe concept can do this.**

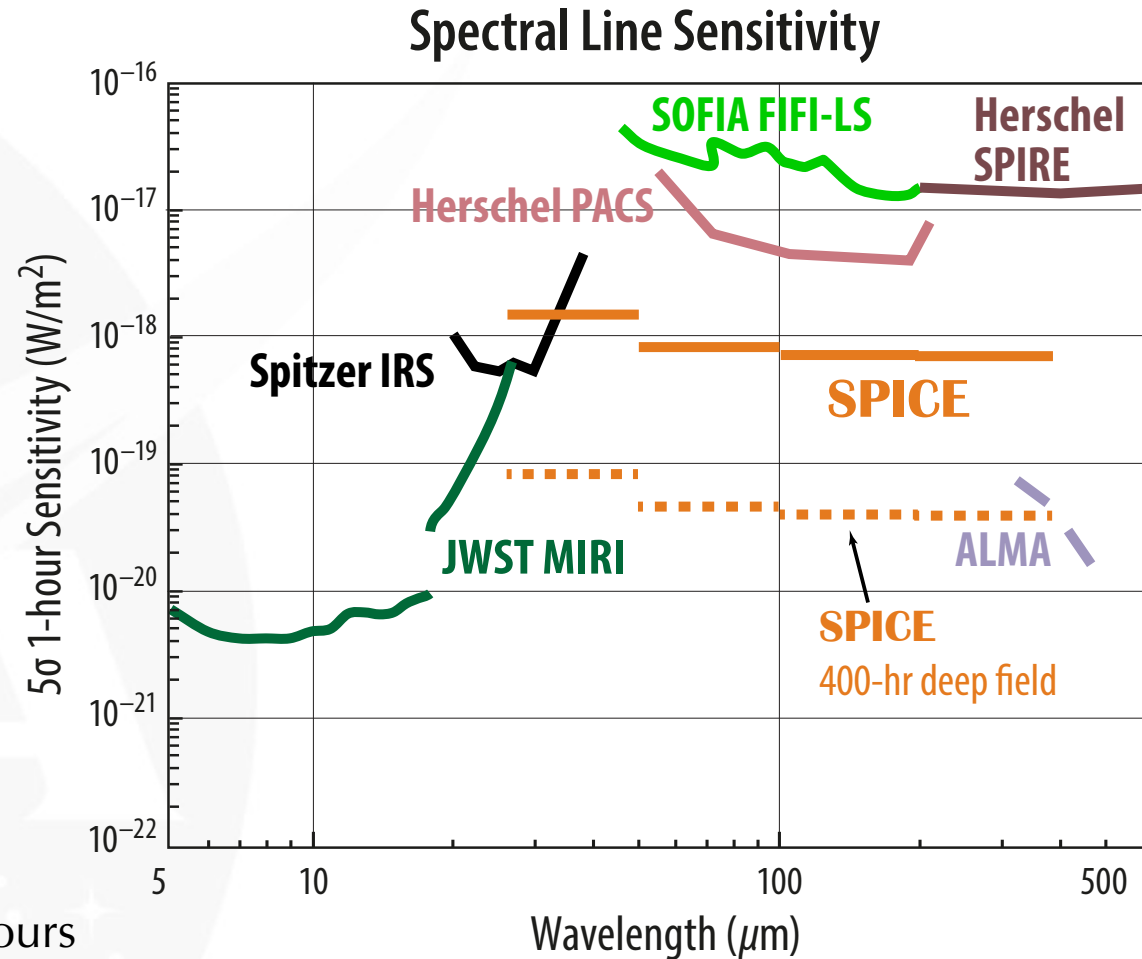


SPICE sensitivity

SPICE offers an order of magnitude improvement in sensitivity over Herschel, the largest far-IR telescope flown to date.

- Cryo-cooled optical system
- State-of-the-art detectors

Continuum sensitivity is a few tens of μJy in 10 hours





SPICE spectral resolving power

SPICE measures a spectrum in every spatial pixel.

- Spectral resolving power >3000 at all wavelengths.
- Comparable to the resolving power of the mid-infrared instrument, MIRI, on JWST and two of Herschel's instruments, PACS and SPIRE
- Enables SPICE to achieve its scientific objectives.

