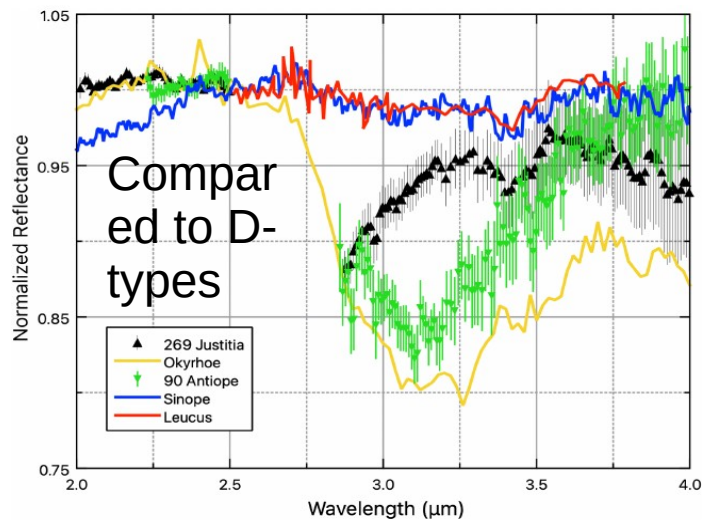


# “Captured Trans-Neptunian Objects” Justitia+Pompeja

- The **reddest** main belt asteroids (D-type) are thought to be organic and ice-rich, similar to **objects in the outer solar system**.
- It was thought that D-type asteroids are Trans-Neptunian Objects **transported inward**.
- IRTF/SpEx-LXD spectra of D-type asteroids Justitia and Pompeja, **reddest known** in asteroid belt.



**Left:** Justitia does not show expected ice or flat 3  $\mu\text{m}$  spectrum. **Not ice-rich.**

**Right:** Justitia similar to **C-type asteroids** (phyllosilicates)

**Conclusions:**

- 1) **No need** for D-type asteroids to be formed in **outer solar system**.
- 2) Spectral slope **not a good indicator of composition**.

*Rivkin+, ApJL 1001, L10, 2026*

