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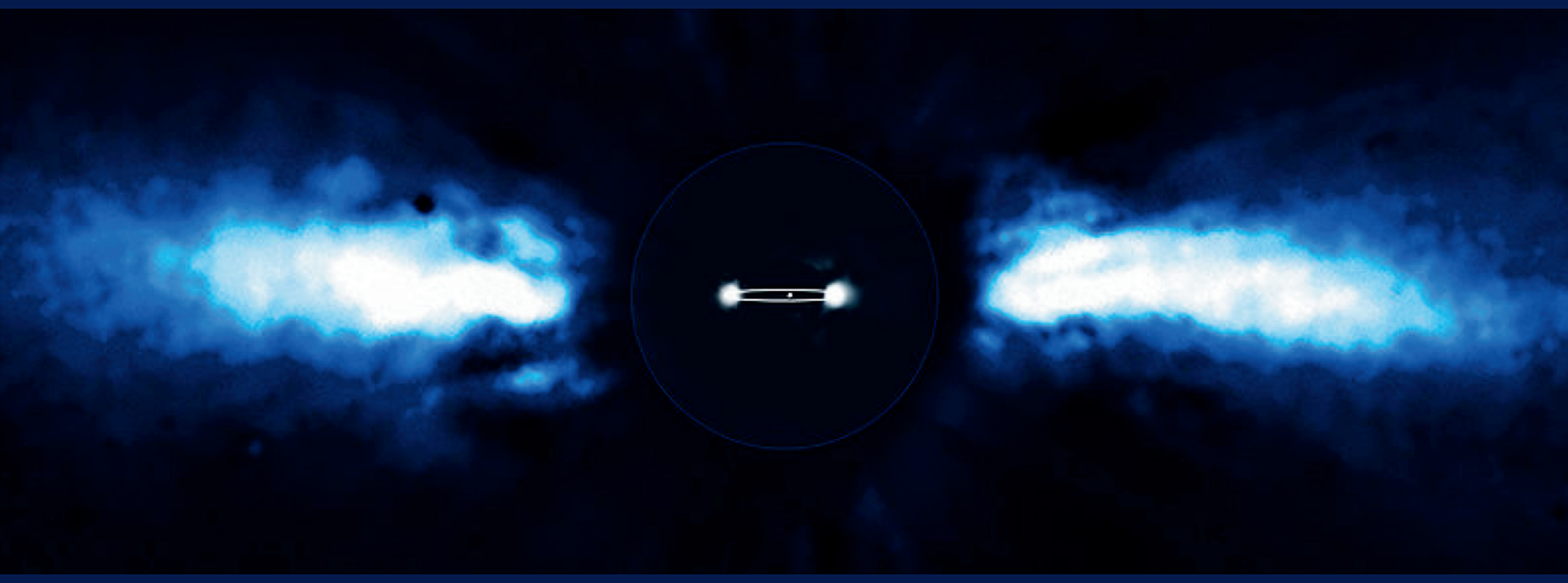

EXPLORING THE ENVIRONMENTS OF YOUNG PLANETARY SYSTEMS

Christine Chen | Space Telescope Science Institute

Observations of debris disks provide unique insight into the environments in which planetary systems form and evolve. Debris disks are planetary systems containing planets, planetesimals, and dust. Collisions among these bodies produce observable secondary gas and dust which act as tracers for a host of processes with in the disk. JWST is revolutionizing our understanding of debris disks through exquisitely sensitive, high angular resolution near- to mid-infrared observations. I will present highlights from Cycle 1 programs including the discovery of (1) large, recent collisions in the archetypal beta Pic debris disk, (2) water ice in exo-Kuiper Belts, and (3) hot, florescent CO gas in young (<50 Myr old) debris disks. Together, these observations illustrate that debris disks are often dynamic environments that influence their planetary inhabitants and that observations of gas and dust inform our understanding of planetary and minor bodies within them.

16-APR-2024 **3:30 PM ET** **BELL ROOM**