

# First Image of the disk

Brad Smith\*

## Abstract

In 1983 IRAS detected significant infrared excess around four relatively nearby stars:  $\alpha$  Lyrae,  $\alpha$  Piscis Austrini,  $\epsilon$  Eridani, and  $\beta$  Pictoris. Before the IRAS results had been officially released, Frank Low asked me if the LPL coronagraph (used in the 1980 Saturn ring-plane crossing) might be able to detect the source of the infrared excess. Of the four stars, all but  $\beta$  Pictoris were easily observable from Tucson. I told Frank I would give it a try. Ultimately, the coronagraphic observations failed to reveal anything around the three stars that were observable from Tucson.

In April 1984 Rich Terrile and I had an observing run on the 2.5-m du Pont telescope at the Las Campanas Observatory in Chile. We were using the LPL coronagraph and a Caltech CCD camera to examine the close environment around Uranus and Neptune in preparation for the upcoming *Voyager 2* encounters with the two planets. I used this opportunity to observe the fourth IRAS star,  $\beta$  Pictoris. A small window was available for me to observe  $\beta$  Pictoris each night before our observations of the planets could begin. In those days image processing capability did not exist at Las Campanas, and so the circumstellar disk around the star was not seen until we returned home and processed the images at LPL and JPL.

During follow-up observations the following year I was able to see the disk visually in the coronagraph's eyepiece. I've sometimes wondered how many astronomers have actually seen a circumstellar disk at the eyepiece of a telescope.

\* Speaker