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IRAS 0423+536P03: A Remarkable Galactic Infrared Source

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As part of a program to study preliminary IRAS sources we have found a peculiar galactic source IRAS 0423+536P03 that appears related to a 17th m̄g nebula. We have obtained high resolution images and spectra at visible wavelengths, and 1 to 20 μm photometry and spatial studies at infrared wavelengths. The red and 1 μm images show that the object is double with a separation of 1.6" at position angle ~320°. There is a faint optical nebulosity of 12" diameter surrounding the two point sources. Optical spectroscopy shows that the brighter component has the absorption spectrum of an A star. The infrared properties of the source are similar to those of a galaxy or Galactic H II region/molecular cloud complex, with an energy distribution peaking at 100 μm, and a diameter on the order 10". The nature and evolutionary stage of this object are unknown although it bears some resemblance to a preplanetary nebula.