

Credit: NASA/JPL-Caltech/F. Lahuis (Leiden Observatory).

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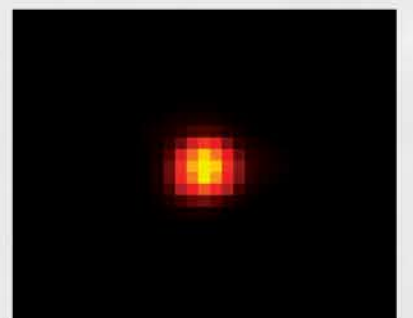


SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
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3	4	5	6	7	☾ 8	9
10	11	12	13	14	15	○ 16
17	18	19	20	21	22	☾ 23
24	25	26	27	28	29	● 30
31						

Dusty Young Solar System

This image is an artist's concept of a solar system that is a much younger version of our own. Dusty disks, like the one shown here circling the star, are thought to be the breeding grounds of planets, including rocky ones like Earth. The graph, or spectrum, superimposed on the image is from real data taken by the infrared spectrograph on the Spitzer space Telescope. The spectrum shows the composition of one such dusty disk belonging to a young, sun-like star called IRS 46. An infrared image of this star and its dusty disk (right) yields only a point of light, while the spectrograph reveals much more information.

The spectrum reveals the presence of some of the most basic ingredients of DNA and protein. Spectral data also indicate that the ingredients—molecular gases called acetylene and hydrogen cyanide, as well as carbon dioxide gas—are located in the star's terrestrial planet zone, the region where scientists believe Earth-like planets would be most likely to form. All three gases are termed "organic" because they contain carbon, and the first two, mixed together in water, yield a slew of organic compounds, including many of the 20 essential amino acids that make up DNA.



Credit: 2MASS/UMass/IPAC-Caltech/NASA/NSF

