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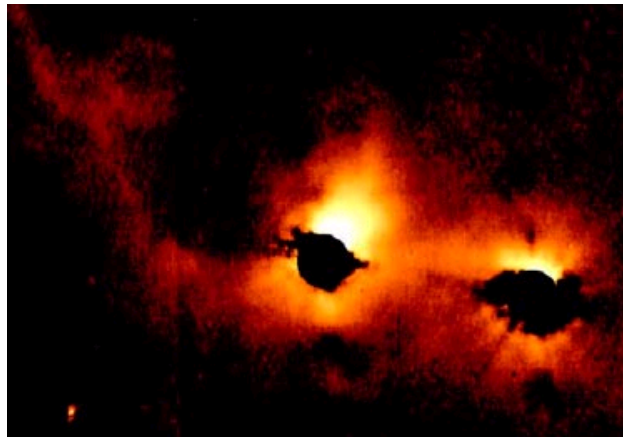
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Binary systems share stardust

Nov 19, 2009 [2 comments](#)**Twin birth** Binary star systems share the seeds of planets

Telescopes now routinely yield detailed images of the cosmos, and in the process help unravel some of the mysteries surrounding our own existence. But one big unanswered question is how the Earth and our planetary neighbours were created from the primordial dust surrounding the young Sun.

In the past two decades we have come to understand that stars form "protoplanetary disks" with radii that can reach up to several hundred times the mean distance between the Sun and the Earth. Astrophysicists have studied the structure of such disks at several radiation wavelengths, which has led to a growing understanding of the star-formation process.

However, most stars form in pairs (and sometimes more complex groups) and numerical models produce conflicting results because of the complex dynamical interaction of two cosmological bodies. Our understanding has also been held back by a lack of direct observations of such systems.

This image reveals a rare glimpse of a young multiple protoplanetary disk encircling a two-star system located 160 ps away in the Ophiuchus constellation around the celestial equator. Having pinpointed the binary system, the researchers led by Satoshi Mayama of the Graduate University for Advanced Studies, Japan, placed a coronagraph over the Subaru Telescope in Hawaii. This enabled them to filter out the direct light from the twin stars and reveal two individual protoplanetary disks bridged by a complex interaction.

Comparison with numerical models suggests that there could be a channelling of debris from one disk to the other – a finding that the researchers say might reveal where planets can form in binary systems (*Science* 10.1126/science.1179679).

As the International Year of Astronomy (IYA2009) draws to a close, its organisers must be delighted at the huge attention given over the last 12 months to a field that has come so far since Galileo turned his primitive instrument to the Moon 400 years ago.

About the author

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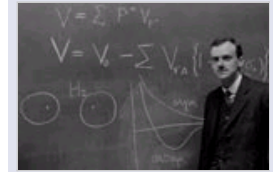
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eugenesittampalam

Nov 21, 2009 8:00 AM
Jaffna, Sri Lanka

Members of any multiple-star system share the same stardust as a general rule. It is for the simple reason that the primordial dust, debris, trails, bridges, and the like, are the result of the explosive fragmentation of a large chunk of stellar matter that once constituted the twins, triplets, quadruplets, and so on. (The fragments that fell short in size for star billing are generally the planets that we may now see in any such gravitationally closely-bound system, including that of our Sun, the loner.)

Please see at least the figures in www.sittampalam.net/TheSunII.htm and www.sittampalam.net/TheQuaternary.htm for a glimpse of this now all too obvious formation process. For the overall and ultimate picture, the pages linked therein should also provide answers even to the diehard sceptics of our times.

Thus, every minute detail, as typically reported in this "rare glimpse of a young multiple protoplanetary disk encircling a two-star system ...around the celestial equator," will be the norm, never the exception - and it's a prediction readers here may do well to have in mind as the deluge of such data are now bound to come in through those telescopes in the coming months and years!

And, thanks to today's advanced telescopes like Subaru and observational techniques of the calibre of Satoshi and group, "the huge attention given over the last 12 months to a field that has come so far since Galileo" is about to change even more dramatically and drastically our present notions on the order and nature of things.

Cheers!

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socratus

Nov 25, 2009 8:04 AM

Religion tells us nothing but fables and fantasies

Religion tells us nothing but fables and fantasies!

That is the truth.

So, what is Religion?

Religion is the poor man's philosophy.

Modern Physics tells us nothing but fables and fantasies!

That is the truth.

For example: One Galaxy can eat another Galaxy.

#

Cosmic cannibalising:

Images show one galaxy engulfing another

www.independent.co.uk/...another-1780652.html

#

The Discovery of one Galaxy "Attacking" Another

www.astronomyexpert....tacking-another.html

... etc

So, what is Physics?

Physics is the poor man's philosophy.

== .

What to do?

I think we must answer to the simple classic question:

what did come first the chicken or the egg ?

If somebody didn't understand this question, I will ask it simpler:

What was before Vacuum or Gravity ?

Does Gravity exist in Vacuum or vice versa?

Why I ask these questions.

Because the Universe (as a whole) is Two- Measured,

there are two Worlds: Vacuum and Gravity.

=== .

Israel Socratus.

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