More problems for the 'Oort comet cloud'

Danny Faulkner

Comets are continually being lost through decay, collisions with planets, and ejections from the solar system. If the solar system is billions of years old, then all comets would have long ago ceased to exist if they were not continually being replaced. Thus to sustain long-age thinking, a way is needed to 'resupply' the solar system with comets from time to time.

For years, evolutionary astronomers have believed that long-period comets (those with orbital periods of more than 200 years) come from the so-called 'Oort cloud'. The Oort cloud supposedly contains billions of comet nuclei orbiting the sun thousands of times further from it than the Earth. Astronomers think that the gravity of an occasional passing star or other object, or possibly a galactic tide, causes comets from the Oort cloud to fall into the inner solar system. This mechanism supposedly supplies the influx of comets needed to overcome the conclusion that the solar system is young.

There are problems with the Oort cloud, the greatest being that there is absolutely no evidence that it even exists![1] However, a recent study has revealed a new problem.[2] Evolutionary theories of the origin of the solar system state that comet nuclei came from material left over from the formation of the planets. According to the theory, this icy material was sent out to the Oort cloud in the outer reaches of the solar system by the gravity of the newly formed planets. All of the earlier studies ignored collisions between the comet nuclei during this process.

This new study has considered these collisions and has found that most of the comets would have been destroyed by the collisions. Thus, instead of having a combined mass

Photo by NASA

Halley's Comet

of perhaps 40 Earths, the Oort cloud should have at most the mass of about a single Earth. It is doubtful that this is enough mass to account for the comets that we see. The researchers postulate 'escape valves'[3] that could supply up to 3.5 Earth masses, but this is still 'low compared to recent estimates of the mass of the Oort cloud'. They go on to '**speculate** that a distant source region for Oort cloud comets'[3] could resolve some other problems [emphasis added].

Of course, if the solar system is much younger than most astronomers think, then there is no need for the Oort comet cloud. Since it cannot be detected, the Oort cloud is not a scientific concept. This is not bad science, but non-science masquerading as science. The existence of comets is good evidence that the solar system is only a few thousand years old, just as the recent-creation model suggests.[4]

References

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Ants find their way by advanced mathematics

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The Saharan desert ant, *Cataglyphis fortis*, often travels hundreds of metres in zigzag paths to food, but can find its way to its nest over a different route, despite the near lack of landmarks.

There were several plausible explanations, but researchers from Germany and Switzerland[1] have performed careful experiments that ruled out the use of visual clues, time or energy. For instance, the ants were tested on uniformly grey and smooth surroundings, but the ants unerringly found their way.

The evidence is consistent with ants having a built-in odometer that performs a complicated mathematical operation called *path integration*. That is, the journey is divided into small vectors, each with a certain length and direction, and they are added to give a 'homing' vector that gives the direction and total distance to the nest.

But what about bumps in the terrain, which would be like 'hills' and 'valleys' to the ant, and cause the ants to walk further than on totally flat ground? To find out, the researchers trained groups of 21 ants on trails with many symmetrical tall hills and deep valleys (to an ant's scale) to locate a food source that would take them 8.7 m to walk, but which was only 5.2 m of ground (horizontal) distance away. Then they transformed the intervening terrain to a flat surface. The ants then walked a far shorter distance which was very close to the ground distance.

And vice versa, when 17 ants were trained on flat terrain to find a food source 5.2 m away, and the terrain then transformed into hills and valleys, the ants walked a distance very close to the distance (8.7 m) that equates to the ground distance.

The experimenters ruled out the