with distance. But because they do not, this

'. . . leaves an uncomfortably short time for galaxies to form after the origin of the universe itself"

I thank Ray Strom of Calgary, Alberta, Canada, for calling my attention to the significance of the Hubble Deep Field and for reviewing an earlier draft.

REFERENCES

1. Appenzeller, T., 1996. A familiar face for a distant galaxy? **Science, 271:754.**
2. Chown, M., 1995. Trouble at the edge of time. **New Scientist, 148(2000):** 19.
3. Chown, Ref. 2.
4. Parker, S. and Roth, J., 1996. The Hubble Deep Field. **Sky and Telescope, 91(5):48.**
5. Cowen, R., 1996. Hubble's deep view of the universe. **Science News, 149:36.**
6. Parker and Roth, Ref. **4, p.** 50.
7. Parker and Roth, Ref. 4, p. 50.
8. Glanz, J., 1996. Galactic building blocks found? **Science, 271:756.**
9. Goldsmith, D., 1996. Digging deeply in galaxies' pasts. **Science, 271:450.**
10. Cowen, R., 1996. Found: primeval galaxies — an abundance of ancestral galaxies revealed. **Science News, 149:120-**121, 127.
11. Goldsmith, Ref. 9.

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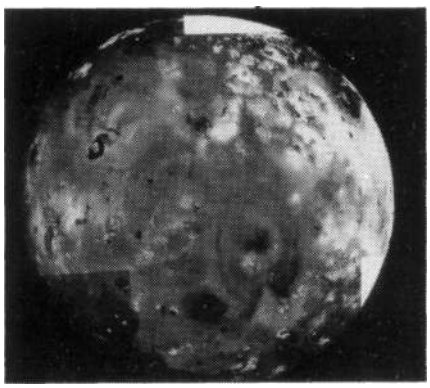
Jupiter's Moons Fascinating

Evolutionists believe that the Solar System is billions of years old. Even after all this alleged time, our own planet Earth still has not cooled. Its internal heat is evidenced by volcanic activity and the existence of a molten core. Electric currents circulate in this core, causing a magnetic field. This is already a problem for vast-age theories, and doubt exists about whether long-agers' appeal to radioactive heating is sufficient to keep the Earth from cooling down for more than a few hundred million years at the most.[1]

When it comes to smaller astronomical objects like planetary moons, which should lose their heat much more quickly, there is even less reason for long-agers to expect any heat still in their interiors.



Jupiter's enigmatic moon Io is covered by extensive volcanism, a lot of it in the past two decades (photo from NASA).

Io, one of Jupiter's moons, has long been enigmatic in this regard, as Earth telescopes have seen evidence of volcanic activity on its surface. Evolutionists eventually responded with theories of 'gravitational pumping' by Jupiter's huge mass to try to explain why there was still heat inside Io.

Now that explanation may be stretched to the limit by the discovery that Io's volcanism is far more extensive than previously imagined. Comparing the pictures of Io taken by the Voyager fly-by in 1979 with those of the Galileo craft, it looks as if most of Io's surface has been 'transformed' by its volcanoes spewing out sulphur-rich materials in the 17 scant years between the two missions.[2]

Possibly even more potentially significant for the young age of the Solar System is the discovery that another of Jupiter's moons, Ganymede, has a magnetic field.[3] At 835 km from the surface, the strength of magnetism detected was five times as large as if the moon was picking up Jupiter's magnetism. An outside possibility exists that the field is externally produced, from charged particles streaming past the jovian satellite.

In due course, the Galileo probe will come past Ganymede several times more, which will determine if it has a north and south pole. If it does, it will be conclusive evidence that the field is coming from inside the planet, which is more consistent with a young age.

REFERENCES

1. Slusher,H. S. andGamwell,T. P., 1984. **Age of the Earth,** Technical Monograph No. 7, Institute for Creation Research, Santee, California.
2. Wilford, J. N., 1996. Volcanoes in outer space give moon of Jupiter a new face. **The Sydney Morning Herald,** July 20, 1996.
3. Anonymous, 1996. Magnetic moon. **New Scientist, 151(2039):13.**

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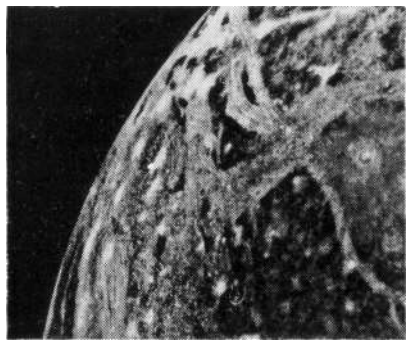

Jupiter's moon Ganymede has a magnetic field which has so far proven difficult to explain (photo from NASA).