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Russell Humphreys replies:

I'm glad Robert Herrmann has found a new way to derive my metric. This gives me more confidence in it, and should do so for everybody else, too. It is also helpful, because I'm building a new cosmology upon this metric, and it is very important to have a solid foundation.

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On interpreting deep sea data as evidence of Milankovitch cycles

Some of the implications following from the article entitled “On interpreting deep sea data as evidence of Milankovitch cycles”¹ should be noted. If the 1/20th subharmonic of the Duffing equation is the cause of the anomalous, supposedly 400,000-year cycle in the original paper by Hayes *et al.*,² then its appearance elsewhere in the stratigraphic record should herald either a quick catastrophic event or a global event of short duration on

the spinning earth. Its appearance anywhere would speak against a Milankovitch cycle interpretation of the stratigraphic layers under examination; its appearance should help pinpoint catastrophic events in a creationist model.

Interestingly, Late Triassic to Middle Cretaceous cycles interpreted as being approximately 400,000 years long do seem to exist in data from eastern North America³, central Italy⁴ and Hungary⁵. Even though such cycles are asserted to also exist at the Permian/Triassic⁶ and Cretaceous/Tertiary⁷ mass extinction boundaries, the “bundling of ~ 100 k.y. eccentricity cycles”⁷ seems at present to be wishful thinking lacking the rigor of a real signal processing analysis. Certainly the hypothesized enhanced “sensitivity of the oceans to orbital forcing for almost 1 m.y. [million years]”⁷ due to a single hypothesized extraterrestrial impact must strain the incredulity of even evolutionists (and lend support to the alternative Deccan Trap volcanism explanation).

If the article's conjecture about modal coupling of physical systems being the cause of the dominance of the 100,000-year cycle over the 40,000-year cycle is correct, then the so-called transition problem of having no explanation for the 100,000-year cycle being dominant over the last one million years when the 40,000-year cycle was dominant for the previous two million years does not exist. Instead such a transition marks the onset of modal coupling, the evidence for the physical progression of a catastrophic event into a new region. It is probable that further data on such transition problems for stratigraphically older layers will help elucidate and refine a creationist model. Indeed, just an examination of the relative amplitudes of the 1/20th subharmonic at various localities to other orders of harmonics at the same places may reveal the progression of the physical phenomenon responsible for the stratigraphic layers. Different rates of attenuation for these different frequency components are expected.

Many other tests revealing details of the physical process could be applied if the data were available.

From our research⁸ it appears that recovering the catastrophic tell-tale 400,000-unit anomalous Milankovitch cycle from Pennsylvanian strata has the potential to be fraught with a great deal of difficulty due to diagenetic separation of floating forest layers (unless, of course, the application of a low pass filter to the raw data proves effective). Anyway, further finds of supposedly 400,000-year stratigraphic cycles can only help hasten the demise of the Milankovitch cycle paradigm.

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