Quasars again defy a big bang explanation

John Hartnett

On 8 April 2010, Marcus Chown writes in an article entitled "*Time waits for no quasar—even though it should*"[1] for *New Scientist* online "Why do distant galaxies seem to age at the same rate as those closer to us when big bang theory predicts that time should appear to slow down at greater distances from Earth? *No one can yet answer this new question* [emphasis added] … ."

He says no one can answer this question. But this question has already been answered before it was even asked. To understand this we need some background. Quasars are assumed to be supermassive black holes with the mass of a galaxy[2] that are the early progenitors of the mature galaxies we see around us today. They nearly all have extremely large redshifts and the big bang community believes that these redshifts are nearly entirely due to cosmological expansion. Therefore it follows that these massive objects are extremely bright and are being observed at some stage only several billion years after the big bang. Hence it also follows from Einstein's general theory that the greater the redshift the greater the effect of the distortion of time on the quasar. That is, local clocks on quasars at the greatest redshifts should run slower than local clocks on quasars closer to us.

No time dilation

But that is where the problem comes in. Mike Hawkins of the Royal Observatory in Edinburgh, UK, looked at light from quasars and he found no time dilation. He used observations of nearly 900 quasars made over periods of up to 28 years. According to the article, he "compared patterns in the light between quasars about 6 billion light years from us with those at 10 billion light years away." But the distances assigned here are actually derived from the assumed cosmology and the Hubble law. What was really measured was the redshifts of those quasars. However the problem arises because quasars scintillate or their brightness varies. This scintillation can have periods of as little as a week, even a day. That tells us something about the size of the object at the core, because that time should be of the scale of the light travel time across the light emitting region.[2]

Chown writes,

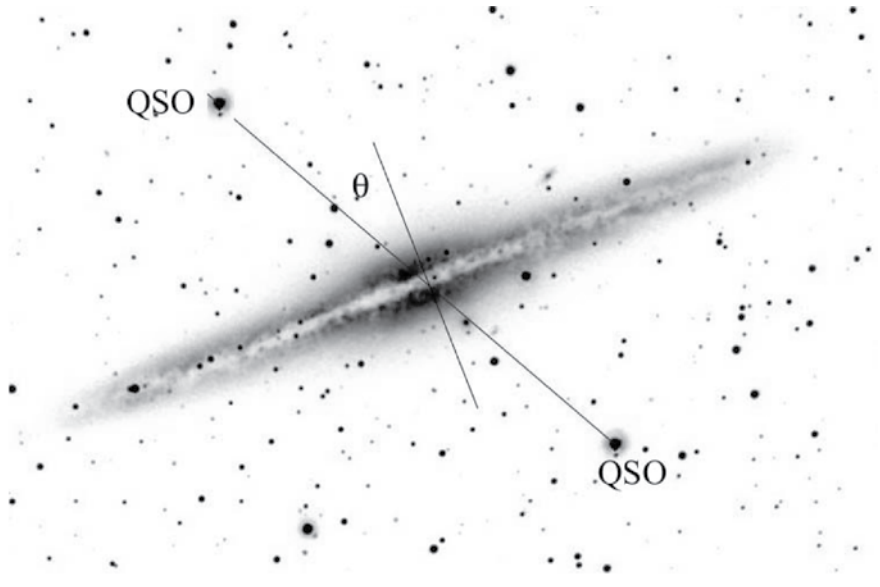
> "All quasars are broadly similar, and their light is powered by matter heating up as it swirls into the giant black holes at the galaxies' cores. So one would expect that a brightness variation on the scale of, say, a month in the closer group would be stretched to two months in the more distant group."

Then he goes on to quote Hawkins: "To my amazement, the [light signatures] were exactly the same … There was no time dilation in the more distant objects." But according to Einstein there should be if they are at their cosmological distances due to the big bang.

Possible explanations

In the article, Chown says that Hawkins classes possible explanations as either "wacky" or "not so wacky". The wacky ideas include the obvious that the quasars are not so far away after all and that their redshifts are not indicators of distance at all. Chown claims that this idea has been "discredited". It may have been discredited by the big bang believers but only by circular reasoning, not by robust science.

The edifice of the big bang hangs on the interpretation that the quasar redshifts are cosmological (that is due to the big bang). If they are not: a) it brings into question the origin of quasars, and, b) it means the quasars may be nearby. This latter idea is linked to the work of Halton Arp[3] and others that showed strong correlation between parent galaxies that have ejected quasars from their active cores. The origin of all matter was not at the big bang but over time in a grand ongoing creation scenario. This has very interesting creationist interpretations.[4] Certainly the notions are poison to the big bang, else why would Prof. Joseph Silk have written,



Background photo by NASA

Arp cites many examples of quasars found aligned within ± 20 degrees of the minor axis of the active nucleus of a galaxy. The minor axis is perpendicular to the plane of rotation of the galaxy. They are often seen within a few arcminutes of a parent galaxy, in pairs, on opposite sides as though they were ejected from the active nucleus. Their redshifts are large compared to the parent but they have a higher probability than the background average of being near the putative parent. This suggests physical association and that their redshifts are intrinsic, of an unknown orgin, but not cosmological nor due to Doppler motion.

"Only by *disputing the interpretation of quasar redshifts* as a cosmological distance indicator can this conclusion be avoided [emphasis added]."[5] The conclusion he was talking about is Arp's ejection of quasars from the active cores of relatively nearby galaxies.

Green elephants

I sent the weblink to this article to the amateur astronomer/professional physicist and author Hilton Ratcliffe[6] to get his comment and he replied, "It's the old green elephant story—if it doesn't fit the model, then a green elephant caused it. Not falsifiable."[7] He is quite correct, as the 'not-so-wacky' solution suggested uses circular reasoning—the big bang theory is true, quasars are at their cosmological distances—therefore it is massive black holes eclipsing the quasars that mitigate against us observing time dilation in their light variations. But this by their own admission introduces other big problems, including too much dark matter in the universe due these black holes.

Ratcliffe's green elephants are starting to sound like a good explanation.

References

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3. For a good introduction see Oard, M.J., Doppler Toppler?" *J. of Creation* **14**(3):39–45, 2000; Worraker, B.J. and McIntosh, A.C., A different view of the universe, *J. of Creation* **14**(3):46–50, 2000; and Arp, H., *Seeing Red: Redshifts, Cosmology and Academic Science*, Apeiron, Montreal, 1998.
4. Hartnett, J.G., The heavens declare a different story! *J. of Creation* **17**(2):94–97, 2003.
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7. Private email communication 8 April 2010.

Australopithecus sediba—no human ancestor

Peter Line

The media has once more been abuzz about a new alleged 'apeman', *Australopithecus sediba*, found in a cave at Malapa, near Sterkfontein in the vicinity of Johannesburg, South Africa.[1] Not surprisingly, those interpreting these fossils do so with the presumption that evolution is true. Yet there is considerable disagreement over these fossils and their alleged role in human evolution. It also becomes clear that the discoverer, Lee Berger, does not exactly endear himself to many of his fellow paleoanthropologists. As one newspaper stated:

> "Renowned University of California paleoanthropologist Tim White savaged Berger on the release of his subsequent book, *The Official Field Guide to the Cradle of Humankind*, calling it 'in many ways worse than useless, given the astonishing density of errors and misleading statements'. He added that it showed a disturbing 'pattern of fabrication'.
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> "White wrote in the *South African Journal of Science*. 'Berger's rise to prominence signals a new era: one of smoke and mirrors, in which style triumphs over substance. In his short career, Berger has not in fact found very much but shows a remarkable ability to inject himself, via funding and publicity, into discoveries made by others.' In case anyone missed the point, White branded Berger an enthusiastically ambitious but inexperienced American 'more fascinated with fame and fortune than with serious science'."[2]

In the world of paleoanthropology, Tim White is definitely no lightweight[3], so it makes one feel even warier than usual about this particular find.

The fossil find consists of a nearly complete skull (see illustration) and a partial postcranial skeleton of a juvenile male (MH1), estimated to be 11 to 12 years old, as well as maxillary (upper) teeth, a partial mandible (lower jaw), and a partial postcranial skeleton[4] of an adult female (MH2).[1,5] Bones from at least two other individuals have also been found, including an infant and adult female, but these finds have yet to be published.[6] The authors of the study assigned the fossils to the genus *Australopithecus*, and believe that the "age and overall morphology of *Au. sediba* imply that it most likely descended from *Au. africanus,* and appears more derived toward *Homo* than do *Au. afarensis, Au. garhi, and Au. africanus*."[7]

Australopithecus, not *Homo*

Note that creationists regard all 'australopiths' as extinct ape-like creatures that had nothing to do with human evolution.[8] Evolutionists have created many more genera of alleged hominids outside the genus *Homo* in addition to the original genus *Australopithecus*, and all these supposed hominids are sometimes informally referred to as 'australopiths', regardless of the genus they have been placed in.[9] Hence, collectively they are referred to as australopiths. The term 'australopithecine' refers specifically to members of the genus *Australopithecus*.

There are certainly good reasons why *Australopithecus sediba* belongs in the genus *Australopithecus*, and not *Homo*. Its estimated cranial capacity of 420 cm^3 is in the ape/australopithecine range, as is the maximum estimated height of 1.3 meters and the relatively long arms.[10]

In his weblog John Hawks points out similarities between the *Australopithecus sediba* cranium and that of *Australopithecus africanus* crania (Sts 71 and Sts 52) from Sterkfontein, and states that "it's my impression that the postcrania of the Malapa skeletons fit within *A. africanus*."[11]

As reported by Kate Wong, Fred Spoor "observes that whereas it has *Australopithecus*-like brain size and molar shape, it calls to mind *Homo* in