

Re: Quintessence and Curvature

Source: <http://sci.tech-archive.net/Archive/sci.physics.research/2005-03/0517.html>

From: Oz (*Oz_at_farmeroz.port995.com*)

Date: 03/22/05

Date: Tue, 22 Mar 2005 08:22:57 +0000 (UTC)

Phillip Helbig---remove CLOTHES to reply <helbig@astro.multiCLOTHESvax.d
e> writes

>In article <jKZn6lFX4oOCFwGe@farmeroz.port995.com>, Oz

><Oz@farmeroz.port995.com> writes:

>

>> >The age of the universe is inversely proportional to the Hubble

>> >constant. The Hubble constant is essentially a distance measurement;

>> >one has to measure distance and redshift, but the latter is quite easy.

>>

>> OK. What if (OK humour me) the redshift gives an incorrect figure for

>> the velocity on galactic scales. What if the redshift is twice the

>> velocity? Then galaxies will be going more slowly than you think, or

>> more accurately the universe is expanding more slowly than we thought.

>

>What do you mean by "galactic scales"?

Er, 'really long distances'?

>Of course, objects have a

>so-called peculiar motion, which has nothing to do with the expansion of

>the universe.

Yes.

>At small scales, this dominates (for example, the

>Andromeda galaxy is approaching us). To see the "Hubble flow", one has

>to get out to a rather large distance, compared to "galactic scales".

Yes.

>Keep in mind that traditional cosmology predicts, when we are talking

>about observable relations, some specific relationship between redshift

>and some type of distance measurement. No-one said anything about

>velocity.

Indeed.

I am always being taken to task over my lax use of language.

In this context surely we assign the redshift as a measure of the

expansion of the universe between emission and detection.

Now I am from time to time in discussion with someone pursuing a variant of teleparallelism. Of course my level of knowledge is such that I cannot follow the details, but he obtains to first order an additional term for expansion in time. This means that the measured redshift is (in effect) being misinterpreted, and the actual spatial expansion is only half the figure normally assigned to any given redshift.

This (roughly) makes the universe twice as old (from the BB) and (he claims) removes the need for dark stuff.

Unfortunately this doesn't explain galaxy rotation curves or pioneer, although it does do it quite well over a narrower range.

*>Speaking a bit more generally, if you say "what if the relation between
>redshift and distance is not what we assume", then this is tantamount to
>saying "what if our theoretical basis of cosmology is not what we think
>it is". That might be a valid line of argument, but without specifying
>what this new theoretical basis for cosmology might be, there is little
>point in asking such questions.*

I take your point, but I do not completely agree.
MOND is of course precisely such a procedure.
It has a use, it might even offer guidance.

*>As an example, many people question the origin of cosmological
>redshifts, claiming that they have nothing to do with the expansion of
>the universe. One can't just assume this is true then work out the
>consequences within the standard theory, since the standard theory says
>that the cosmological redshift has something to do with the expansion of
>the universe.*

Of course. Its never straightforward.

*>> My problem is that we need to hand-fit each galaxy.
>> If we just set a universal figure and hey presto,
>> then it would be a lot more convincing.
>
>This is one of the main arguments in favour of MOND, a modification of
>gravity as an alternative to dark matter. There is just ONE free
>parameter and it seems to give a good fit everywhere, even to things
>which weren't even known when its value was determined. Of all the
>possible things dark matter could do, it apparently does the one thing
>which is consistent with MOND.*

I know. Very irritating of it for (some) theorists.
I suspect quite a few spend the odd hour (when nobody is looking)
playing about with it.

sci.physics.research: Re: Quintessence and Curvature

- >Note that one of the world's leading experts in galactic dynamics,
- >Oxford professor James Binney
- >
- ><http://www-thphys.physics.ox.ac.uk/users/JamesBinney/>
- >
- >is at least very interested in MOND:
- >
- ><http://www-thphys.physics.ox.ac.uk/users/JamesBinney/MOND.ppt>

Looks like it...

--

Oz

This post is worth absolutely nothing and is probably fallacious.
Use oz@farmeroz.port995.com [ozacoohdb@despammed.com functions].
BTOPEWORLD address has ceased. DEMON address has ceased.