Dark energy 9 (appendix 8)

Compare the cosmological constant to the Hubble constant

The cosmological constant is proportional to the variation of the constant

Hubble proof:

The cosmological constant in the theory of relativity 'General Albert

Einstein represents the dark energy that is linked to the gravitational inverse, in

the following equations, E represents the cosmological constant, due

it represents the dark energy.

Let us write H for the constant Habble and write v for the expansion velocity

of the universe.

For an expansion velocity of the universe constant, the Hubble constant is

constant, as the expansion rate of the Universe is currently accelerating,

This expansion velocity is variable, then:

d(v) = d(H) (equation 1),

For an acceleration of the expansion of the Universe Current constant, the constant

cosmological constant is E, then:

E is proportional to d(v) or:

E = (constant) [d (v)] (Equation 2),

according to equation 1 and equation 2, we deduce that:

E = (constant) [d (H)] (equation 3),

The cosmological constant is proportional to the variation of the constant Hubble.

In fact one might consider the variation with time, but it gives

when even a good idea of the link between the cosmological constant and Hubble constant.

First discussion and discovery of the equation linking the two constant (Hubble and cosmological):

1 edition (February 6, 2012):

Now I know that the constant in equation 3 is equal to the mean radius R_M

a super cluster of galaxies (I help the values that I obtained in

Energy sombre8 my article, I will give a link later), but as I had specified, must be taken into account the variation with time,

Equation 1 becomes:

$d (v) / d (t) = d (H) / d (t)$,

and E is proportional cosmological constant ad (v) d (t), and equation 3 becomes:

$E = (\text{constant}) [d (H) / d (t)]$,

we know that $H = v / r$, v for speed and distance r, then as I

already find an expression for the cosmological constant is E:

$G (M_O) / [(r_o) (R_M)]$ = cosmological constant to the observable Universe,

$G (M_o) / [(r_o) (R_M)] = (\text{constant}) [d (H) / d (t)]$,

$G (M_o) / [(r_o) (R_M)] = (\text{constant}) [d (v / r) / d (t)]$,

deriving v / r and considering that d (v) / d (t) = acceleration of the expansion of

the universe and that is:

$d (v) / d (t) = [(N_o)^2] [G (M_o) / [(r_o)^2] = (A_r)$,

$(N_o) = (r_o) / (R_M)$, (r_o) = radius of the observable Universe,

A_r being the acceleration gravitational repulsion of the observable Universe, this

which is accelerating the expansion of the observable Universe,

I obtained by simplifying a value for the constant in equation 3, which is

(R_M) and as I get the same result by considering r (in v / r) as

constant, meaning that in this equation 3, we can consider r and R_M

as constant, and both the ratio $r / (R_M) = (N_o)$, here r worth r_o.

In my article sombre8 energy, comparing the cosmological constant has

repulsive acceleration of gravity (which is the acceleration of the Universe

observable), I get this equation:

$E = G (M_o) / [(r_o) (R_M)] = (N_o) G (M_o) / [(r_o)^2] = [1 / (N_o)] [d (v) d (t)] = [1 / (N_o)] (A_r)$,

I could make this comparison by comparing equations 9b and 10b of my

Article sombre8 energy, which here is the link:

http://www3.sympatico.ca/pierrejsavard/energiesombre8.html

Write new equation 3:

$$E = G (M_o) / [(r_o) (R_M)] = (N_o) G (M_o) / [(r_o)^2] = (R_M) [d (H) / d (t)],$$

$$= (R_M) [d (v / r) / d / (t)],$$

$$= (R_M) [d (v) / d (t)] / r$$

$$= (R_M) (A_r) / r$$

$$= (A_r) / [r / (R_m)]$$

$$= (A_r) / [(r_o) / (R_M)],$$

$$E = G (M_o) / [r_o) (R_M) = (N_o) G (M_o) / [(r_o)^2] = [1 / (N_o)] (A_r),$$

That is consistent with the equations that I had already got in my

Article 8 Dark energy.

Let's not forget here that the cosmological constant E, represents the dark energy

and per unit mass per unit length for the observable universe, as

I mentioned in my article Dark Energy 8.