

Samedi 22 mars 2014, reçu message de Bonnor,

http://en.wikipedia.org/wiki/William_B._Bonnor

après lui avoir envoyé un long mail pour le briefer sur mes travaux.

Dear Jean-Pierre,

Thank you for this fascinating account of your achievements. I
admire your versatility and fertility of ideas.

I wish I had your breadth of knowledge of physics, but quite
early in my career I perceived that the only way I could
achieve any success was to specialise narrowly.

Nearly everything I have done has been on general relativity,
However, I do see the attraction of your theory of positive and
negative masses, and I hope you will keep me informed of
your progress.

Best wishes,
Yours sincerely,

Bill

Pertuis, 2014, april 28

Dear Bill,

As you may have seen in a paper I sent to you, developping time-dependent solution I have explained the "dark energy effect" : The two sets follow different solutions. The negative species obeys Friedman, whil the positive species obeys Bonnor's equation, so that it accelerates.

But, now, I feel really really discouraged. Since four months I fail to publish my works in a peer reviewed journals.

- Physical Review D just refused to submit it to a referee.
- Classical and Quantum Gravity pretended that such structure should be unstable, by creation of pairs ($+m$; $-m$), on quantum gravity grounds. But, as you know, gravitation has not been quantized, so that such argument has no solid basis.
- Nature rapidly answered " in order to help me to send quickly this to another journal "
- Astrophysical Journal answered that such material should be submitted eslewhere
- Same answer from Astronomy and Astrophysics
- Les Annales de l'institut Henri Poincaré refused to submit the paper to a referee.
- Recently I received a negative answer from General relativity and Gravitation, the Journal where you published a paper in 1998 (mentioned in the references). I hoped they would send the paper to you. But they didn't.

Joined : three months after, the arguments of the two referees.

The problem of whether and how negative masses may be incorporated into GR has, e.g., been dealt with by Bondi (1957) and Bonnor (1989).

As far as the classification of orbit types of particles of mixed moduli of masses is concerned, the essential message is that so-called runaway solutions are generic and hard, if not impossible, to avoid.

The present paper claims a solution this "problem" by introducing a bi-metric theory in which negative masses can be accommodated without runaway solutions.

The essential idea is that matter of positive/negative energy acts as source for two different Lorentzian metrics according to Einstein's

equation, with an extra minus-sign on the right-hand side in case of negative-energy matter.

Matter (including light) of positive/negative energy follow geodesics in the respective metrics and are assumed to not interact. For example, in Section 2 on page 3 we can read: "It is assumed that positive structures, made of positive masses, can emit or absorb positive energy photons only, while negative structures, made of negative masses, can emit and absorb negative energy photons only."

Moreover: "Opposite energy particles cannot encounter, for they cruise on distinct geodesic families." **This last statement sounds even absurd, for the geodesics lie in the same spacetime and can clearly encounter.**

I do not consider this a serious attempt to extend the discussions on the issues raised by Bondi, Bonnor, and others. In fact, any discussion of negative mass in GR should at least be backed up by a discussion making clear which of the hypotheses of the various positive-mass theorems are violated and how this violation is to be seen in a wider physical context (...). This is not done at all in the present paper, which does not even mention any of the positive-mass theorems (...).

The offered "solution" is entirely ad hoc and presumably (...) not even self consistent. I therefore judge this paper to be unsuitable for publication in GRG.

Reviewer #2: This paper addresses the question whether negative masses can be considered in general relativity (GR). The authors first review earlier approaches which face a fundamental problem - the runaway effect. They then elaborate on an alternative approach to GR, a bimetric theory, for which they claim that this runaway effect can be avoided.

In my opinion, this paper is not suitable for publication.

Here are my arguments.

First, I do not see any motivation at all why negative masses - something very hostile to GR - should be considered (...).

GR and some straightforward extensions (such as scalar-tensor theories) seem to be sufficient to explain the structure at large scales.

Second, this modification of GR is ad hoc; it does not follow from fundamental principles, nor does it seem to lead to new falsifiable predictions (...).

Third, it is not obvious to me that the equations are consistent. For example, the two equations in Eq. (4) both fulfill the contracted Bianchi identity, but with different metrics. So in the general case the sources should be different, too, which is not the case here.

Fourth, the paper is not well written; for example, the content of the Conclusion is not much different from the content of the abstract.

I think, aged 77, I will give up research. It is just endless. No future.

In 1988-1989 I published paper presenting cosmological model with “variable constants”, including variable speed of light.

No echo.

In 1994 I published a long paper in *Nuevo Cimento*, the first presenting a bimetric description of the universe.

No echo.

Same for a synthesis paper in *Astrophysics and Space Science*.

To be published I had to do 48 trials (...). The most common answer being :

- *Sorry, we don't publish speculative works.*

Anyway I completely failed to publish my fascinating results about stable barred spiral structure, obtained by 2D simulation.

The problem is the following. Today's astrophysics and cosmology are now fully based on cold dark matter, which is nothing by fantasy. Same for dark energy and superstrings, and so on...

Introducing negative matter challenges dark matter, completely, explains ... everything, including observed strong gravitational lensing effects (then due to ... negative lensing).

If I am right, thousands papers and hundreds phd thesis become obsolete.

Variable constants model challenges inflation theory. Same stuff.

Alone against thousands researchers.

Ten years ago it was feasible. Now, it is not.

- I am blacklisted in arXiv (...)

- The doors of seminars (Institut des Hautes Etudes, Institut d'Astrophysique de Paris, Ecole Normale Supérieure, Centre de Physique Théorique, and so on) are kept closed. They simply don't answer my demands.

Now my hope has evaporated. I will just try to "publish" my works in "new journals", as fast as possible, and give up.

Perhaps you could send a letter to General Relativity and Gravitation, recommending to publish my work. But, even with such recommendation I remain sceptical about the result.

Now cosmology entered some sort of "new age". Today's works are based on fantasy. For example, if you type " Google scholar " and " bigravity theory " you will find a lot of papers based on bimetric approach. But, then, the second metric is supposed to describe the movements of massive gravitons (...)

Anyway, it's OK and Physical Review has published a lot of them.

I think there is no place for me in such "scientific" field, with so much modern concepts like dark matter, astroparticles, dark energy, quantum gravity, strings, inflation, magnetic monopoles, baby universes, bald black holes, and so on.

Sincerely yours

Jean-Pierre Petit