

## **ON EINSTEIN SHIFTS ALLEGIANCE 1952-1954**

**Roger J Anderton**

**R.J.Anderton@btinternet.com**

Einstein changed his point-of-view several times. In general he changed what he thought as a young man to what he thought in old age. So we have what Pentcho Valev calls "Einstein shifts allegiance" - the old Einstein became a dissident against the physics set up by the young Einstein. This left the Einstein followers in a state of confusion as to what was Einstein's relativity; and so they then formed different beliefs as to what it was. I will go through some of the issues raised by this.

Pentcho Valev posts to several Internet forums, and has collected another excellent spread of citations to show the change in Einstein's point-of-view about Relativity [1] which I wish to add my comments to.

[http://www.relativitybook.com/resources/Einstein\\_space.html](http://www.relativitybook.com/resources/Einstein_space.html)

"Relativity and the Problem of Space"

Albert Einstein (1952): "During the second half of the nineteenth century, in connection with the researches of Faraday and Maxwell it became more and more clear that the description of electromagnetic processes in terms of field was vastly superior to a treatment on the basis of the mechanical concepts of material points. By the introduction of the field concept in electrodynamics, Maxwell succeeded in predicting the existence of electromagnetic waves, the essential identity of which with light waves could not be doubted because of the equality of their velocity of propagation. As a result of this, optics was, in principle, absorbed by electrodynamics. One psychological effect of this immense success was that the field concept, as opposed to the mechanistic framework of classical physics, gradually won greater independence. (...) Since the special theory of relativity revealed the physical equivalence of all inertial systems, it proved the untenability of the hypothesis of an aether at rest. It was therefore necessary to renounce the idea that the electromagnetic field is to be regarded as a state of a material carrier. The field thus becomes an irreducible element of physical description..."

me: The sentence “.....that the field concept, as opposed to the mechanistic framework of classical physics” is not clearly written, it should be emphasised that the field concept is a classical idea; so really contrasting two aspects of classical physics.

me: The sentence “Since the special theory of relativity revealed the physical equivalence of all inertial systems,... “is inaccurate it should say “principle of relativity” not “special theory of relativity”. The principle of relativity is the equivalence of inertial frames. While special relativity is the tagging on of the idea of constancy of lightspeed to principle of relativity. The constancy of lightspeed bit can be disputed.

me: Einstein continues the sentence about special relativity with “..... it proved the untenability of the hypothesis of an aether at rest.” Really it should be principle of relativity shows untenability of aether at rest; and that is in the absolute sense of rest. Absolute sense of rest is that there is only one rest frame. But by principle of relativity there is no absolute rest frame; instead lots of relative rest frames – i.e. lots of frames that can be treated as at relative rest. So the sentence should be – by the principle of relativity there is no aether at absolute rest but it can be at relative rest. Einstein has messed up often when he has talked about these things.

me: So when Einstein goes on to say “It was therefore necessary to renounce the idea that the electromagnetic field is to be regarded as a state of a material carrier.” That does not make sense, and really the electromagnetic field can be treated as the aether. But there are provisos with that – namely only dealing with electromagnetic model, if dealt with gravitational field in addition then there is more than just the electromagnetic aether, and instead a unified aether (of gravity and electromagnetism).

<http://www.perimeterinstitute.ca/pdf/files/975547d7-2d00-433a-b7e3-4a09145525ca.pdf>

Albert Einstein (1954): "I consider it entirely possible that physics cannot be based upon the field concept, that is on continuous structures. Then nothing will remain of my whole castle in the air, including the theory of gravitation, but also nothing of the rest of contemporary physics."

me: this is Einstein now considering that the field concept is incorrect, his thinking has led him to this because of his persistence in messing up his talking about aether and electromagnetic field (which he was doing in the last citation).

Valev: Banesh Hoffmann, Einstein's apostle, explains the essential difference between the concept presenting light as a continuous field and the concept presenting light as discontinuous particles.

me: What he means by “Einstein’s apostle” – is a follower of Einstein. The trouble with Einstein followers is—it is often unclear which Einstein they follow – the young Einstein or the old Einstein. And Einstein keep changing his mind does not help. So these Einstein followers have differences of beliefs as to what Einstein’s physics “is”, but they all generally adhere to pretending that they don’t have differences of belief.

<http://books.google.com/books?id=JokgnS1JtmMC>

"Relativity and Its Roots" By Banesh Hoffmann

"Moreover, if light consists of particles, as Einstein had suggested in his paper submitted just thirteen weeks before this one, the second principle seems absurd: A stone thrown from a speeding train can do far more damage than one thrown from a train at rest; the speed of the particle is not independent of the motion of the object emitting it. And if we take light to consist of particles and assume that these particles obey Newton's laws, they will conform to Newtonian relativity and thus automatically account for the null result of the Michelson-Morley experiment without recourse to contracting lengths, local time, or Lorentz transformations. Yet, as we have seen, Einstein resisted the temptation to account for the null result in terms of particles of light and simple, familiar Newtonian ideas, and introduced as his second postulate something that was more or less obvious when thought of in terms of waves in an ether."

me: “if light consists of particles, as Einstein had suggested in his paper submitted just thirteen weeks before this one, the second principle seems absurd.” – What this is referring to is the papers of Einstein in 1905. In one paper – Einstein proposes that light is particles – photons. In his Special relativity paper he proposes lightspeed constancy. So Banesh is pointing out that there is a seeming contradiction between these two papers. Because if the lightspeed constancy is correct then the light is not behaving how we would expect a normal particle to behave. Of course Einstein has messed all of this up, hence why the older Einstein was coming back to these issues and trying to make sense of them. I have dealt with these mistakes in various articles but I will go through them again-

“A stone thrown from a speeding train can do far more damage than one thrown from a train at rest; the speed of the particle is not independent of the motion of the object emitting it. “

me: Correct from the frame of the surroundings which we can take as a frame at relative rest with respect to the moving train, the stone thrown from the train is faster than a stone thrown from the surroundings frame. If the speed of the stone is  $u$  when thrown from the rest frame of the surrounding frame and still  $u$  from the rest frame of

the train and the train has velocity  $v$  in same direction, then from the surroundings frame the stone thrown on the train has velocity  $u+v$ .

“And if we take light to consist of particles and assume that these particles obey Newton's laws, they will conform to Newtonian relativity and thus automatically account for the null result of the Michelson-Morley experiment without recourse to contracting lengths, local time, or Lorentz transformations.”

me: Exactly so Newtonian physic still works

“ Yet, as we have seen, Einstein resisted the temptation to account for the null result in terms of particles of light and simple, familiar Newtonian ideas, and introduced as his second postulate something that was more or less obvious when thought of in terms of waves in an ether.” “

me: In other words Einstein got confused.

Valev: Intensive exercises in crimestop in the era of Postscientism:

<http://philsci-archive.pitt.edu/archive/00001743/02/Norton.pdf>

John Norton: "How could we ignore the possibility of a connection between Einstein's reflections on an emission theory of light and his 1905 postulation of the light quantum hypothesis? But what might that connection be?"

<http://www.liferesearchuniversal.com/1984-17.html#seventeen>

George Orwell: "Crimestop means the faculty of stopping short, as though by instinct, at the threshold of any dangerous thought. It includes the power of not grasping analogies, of failing to perceive logical errors, of misunderstanding the simplest arguments if they are inimical to Ingsoc, and of being bored or repelled by any train of thought which is capable of leading in a heretical direction. Crimestop, in short, means protective stupidity."

me: Valev likes to point out that Einstein followers contradict themselves.

Sometimes John Norton does not exercise himself in crimestop so intensively:

[http://www.pitt.edu/~jdnorton/Goodies/rel\\_of\\_sim/index.html](http://www.pitt.edu/~jdnorton/Goodies/rel_of_sim/index.html)

John Norton: "But an emission theory is precluded in special relativity by the part of the light postulate that asserts that the velocity of light is independent of the velocity of the emitter."

Me: Norton in other words has trouble making sense of Einstein's physics.

Valev: Newton's emission theory of light became Einsteiniana's nightmare in 1909:

[http://en.wikisource.org/wiki/The\\_Development\\_of\\_Our\\_Views\\_on\\_the\\_Compositio](http://en.wikisource.org/wiki/The_Development_of_Our_Views_on_the_Compositio)

## n and Essence of Radiation

"The Development of Our Views on the Composition and Essence of Radiation"

Albert Einstein, 1909

"A large body of facts shows undeniably that light has certain fundamental properties that are better explained by Newton's emission theory of light than by the oscillation theory. For this reason, I believe that the next phase in the development of theoretical physics will bring us a theory of light that can be considered a fusion of the oscillation and emission theories."

me: I would like to point out that Newton's theory of light is a wave particle duality theory, this is contrary to how some people represent it as a purely particle theory. I have dealt with in one of my articles.

Manjit Kumar casually notices that Newton's theory of light was wave particle duality, he says: "Newton's particle theory of light, though in truth a strange hybrid of particle and wave, was accepted as orthodoxy." [2]

me: So there are people who falsely represent Newtonian light theory being a solely particle theory, replaced by a wave theory of light, replaced by Einstein (and his followers) theory of light wave particle duality. What follows is a complicated messed up line of thinking believing the wave particle duality theory of light is a new idea when its not.

Einstein: "The purpose of the following remarks is to justify this belief and to show that a profound change in our views on the composition and essence of light is imperative.....Then the electromagnetic fields that make up light no longer appear as a state of a hypothetical medium, but rather as independent entities that the light source gives off, just as in Newton's emission theory of light.....Relativity theory has changed our views on light. Light is conceived not as a manifestation of the state of some hypothetical medium, but rather as an independent entity like matter. Moreover, this theory shares with the corpuscular theory of light the unusual property that light carries inertial mass from the emitting to the absorbing object."

me: in this mess he really has a wave particle duality theory of light where the wave's medium is the particles of light. Of course this particle wave duality theory of light has the mess with special relativity (of the confusion - the stone thrown on and off the train scenario) added to it.

<http://www.bartleby.com/173/22.html>

Albert Einstein (1920): "In the second place our result shows that, according to the general theory of relativity, the law of the constancy of the velocity of light in vacuo, which constitutes one of the two fundamental assumptions in the special theory of

relativity and to which we have already frequently referred, cannot claim any unlimited validity. A curvature of rays of light can only take place when the velocity of propagation of light varies with position.”

me: Now Einstein is changing his mind and saying that lightspeed is variable after all, despite what he dealt with in Special relativity. He continues:

“Now we might think that as a consequence of this, the special theory of relativity and with it the whole theory of relativity would be laid in the dust.”

me: He means by “theory of relativity” his “special relativity”, and indeed if eh is now saying lightspeed is not constant then ideally he is abandoning special relativity (if special relativity is stating that lightspeed is constant—proviso here that –if measured without adjusting lighspeed to be constant.—dealt with by me in other articles). But now he attempts to save special relativity and this makes things into a more confused mess.

“But in reality this is not the case. We can only conclude that the special theory of relativity cannot claim an unlimited domain of validity; its result hold only so long as we are able to disregard the influences of gravitational fields on the phenomena (e.g. of light).”

me: So now he has modified things – lightspeed is constant so long as there is no gravity. If we look at this proposal it does not really make sense. It turns out special relativity really deals with adjusting lightspeed so that it sis constant- dealt with in other articles.

“ Since it has often been contended by opponents of the theory of relativity that the special theory of relativity is overthrown by the general theory of relativity, it is perhaps advisable to make the facts of the case clearer by means of an appropriate comparison.”

me: Ideally Einstein should have said his special relativity was wrong and that the theory should really be general relativity. But he did not take that route. Instead he made things more complicated and messed up. So that for special relativity it must now mean that observations are being adjusted to fix lightspeed constant. If lightspeed was not being fixed and left free to be any value then it should be observed as variable.

“Before the development of electrodynamics the laws of electrostatics and the laws of electricity were regarded indiscriminately. At the present time we know that electric fields can be derived correctly from electrostatic considerations only for the case, which is never strictly realised, in which the electrical masses are quite at rest relatively to each other, and to the co-ordinate system. Should we be justified in saying that for this reason electrostatics is overthrown by the field-equations of Maxwell in electrodynamics? Not in the least. Electrostatics is contained in electrodynamics as a limiting case; the laws of the latter lead directly to those of the former for the case in which the fields are invariable with regard to time. No fairer

destiny could be allotted to any physical theory, than that it should of itself point out the way to the introduction of a more comprehensive theory, in which it lives on as a limiting case."

me: So he is saying that special relativity is a special case of general relativity. However Valev thinks Einstein is wrong -

Valev: The analogy with electrostatics is incorrect - it can easily be proved that:

If the speed of light varies with the gravitational potential, then it varies with the speed of the light source as well, that is, Einstein's 1905 light postulate is false.

me: ok. But this causes the Einstein followers to get even more messed up as Valev notes.

Valev: The availability of the proof has forced Einsteinians to develop additional camouflage..

me: the additional camouflage is now that the lightspeed should be adjusted to be constant. Not all Einstein followers realise that the lightspeed adjustment is what some Einstein followers are doing, and the confusion among them continues to get to be a bigger mess. Valev continues:

Valev: putting into believers' heads the conviction that Einstein's 1905 light postulate is obsolete, that is, Einstein's special relativity is valid, whether the speed of light varies with the speed of the light source or not.

me: Exactly. Einstein followers are now so confused that some believe lightspeed is constant as per Einstein's relativity and others believing lightspeed variable still conforms to Einstein's relativity. Einstein followers believe different things.

me: Now onto the issue of the mass of the photon. Einstein has it that photon has zero rest mass, this causes problems-

[http://www.hep.princeton.edu/~mcdonald/examples/mechanics/levy-leblond\\_ajp\\_44\\_271\\_76.pdf](http://www.hep.princeton.edu/~mcdonald/examples/mechanics/levy-leblond_ajp_44_271_76.pdf)

Jean-Marc Levy-Leblond: "This is the point of view from which I intend to criticize the overemphasized role of the speed of light in the foundations of the special relativity, and to propose an approach to these foundations that dispenses with the hypothesis of the invariance of  $c$ . (...) We believe that special relativity at the present time stands as a universal theory describing the structure of a common space-time arena in which all fundamental processes take place. (...) The evidence of the nonzero mass of the photon would not, as such, shake in any way the validity of the special relativity. It would, however, nullify all its derivations which are based on the invariance of the photon velocity."

me: When he says “special relativity at the present time stands as a universal theory describing the structure of a common space-time arena” – he might not realise that lightspeed is being adjusted to be constant in special relativity scenario.

me: the next bit is interesting- “The evidence of the nonzero mass of the photon would not, as such, shake in any way the validity of the special relativity. It would, however, nullify all its derivations which are based on the invariance of the photon velocity.” So he is saying if photon is not zero rest mass then this does not upset special relativity, but if photon is non zero rest mass then it messes up a lot o derivations based on assuming photon is zero rest mass. Better explained by -

<http://groups.google.ca/group/sci.physics.relativity/msg/dc1ebdf49c012de2>

Tom Roberts: "If it is ultimately discovered that the photon has a nonzero mass (i.e. light in vacuum does not travel at the invariant speed of the Lorentz transform), SR would be unaffected but both Maxwell's equations and QED would be refuted (or rather, their domains of applicability would be reduced)."

me: So Special relativity would supposedly survive nonzero rest mass of photon, but theories like QED would be messed up. Actually Special relativity would have to be modified slightly – instead of putting zero into the equations for light’s mass, it would have to be put another value.

<http://www.amazon.com/Einsteins-Relativity-Beyond-Approaches-Theoretical/dp/9810238886>

Jong-Ping Hsu: "The fundamentally new ideas of the first purpose are developed on the basis of the term paper of a Harvard physics undergraduate. They lead to an unexpected affirmative answer to the long-standing question of whether it is possible to construct a relativity theory without postulating the constancy of the speed of light and retaining only the first postulate of special relativity. This question was discussed in the early years following the discovery of special relativity by many physicists, including Ritz, Tolman, Kunz, Comstock and Pauli, all of whom obtained negative answers."

me: So some Einstein followers are talking about trying to change special relativity so that it does not deal with constant lightspeed.

<http://www.newscientist.com/article/mg20026801.500-why-einstein-was-wrong->

[about-relativity.html](#)

Why Einstein was wrong about relativity

29 October 2008, Mark Buchanan, NEW SCIENTIST

"This "second postulate" is the source of all Einstein's eccentric physics of shrinking space and haywire clocks. And with a little further thought, it leads to the equivalence of mass and energy embodied in the iconic equation  $E = mc^2$ .

me: and lightspeed is being adjusted to be constant!!

The argument is not about the physics, which countless experiments have confirmed. It is about whether we can reach the same conclusions without hoisting light onto its highly irregular pedestal. (...) But in fact, says Feigenbaum, both Galileo and Einstein missed a surprising subtlety in the maths - one that renders Einstein's second postulate superfluous. (...) The idea that Einstein's relativity has nothing to do with light could actually come in rather handy. For one thing, it rules out a nasty shock if anyone were ever to prove that photons, the particles of light, have mass. We know that the photon's mass is very small - less than  $10^{-49}$  grams. A photon with any mass at all would imply that our understanding of electricity and magnetism is wrong, and that electric charge might not be conserved. That would be problem enough, but a massive photon would also spell deep trouble for the second postulate, as a photon with mass would not necessarily always travel at the same speed. Feigenbaum's work shows how, contrary to many physicists' beliefs, this need not be a problem for relativity."

<http://groups.google.com/group/sci.physics.research/msg/44d3ebf3b94d89ad>

Tom Roberts, Aug 16, 2010: "As I said before, Special Relativity would not be affected by a non-zero photon mass, as Einstein's second postulate is not required in a modern derivation (using group theory one obtains three related theories, two of which are solidly refuted experimentally and the third is SR). So today's foundations of modern physics would not be threatened.

[http://arxiv.org/PS\\_cache/arxiv/pdf/0806/0806.1234v1.pdf](http://arxiv.org/PS_cache/arxiv/pdf/0806/0806.1234v1.pdf)

Mitchell J. Feigenbaum: "In this paper, not only do I show that the constant speed of light is unnecessary for the construction of the theories of relativity, but overwhelmingly more, there is no room for it in the theory. (...) We can make a few guesses. There is a "villain" in the story, who, of course, is Newton."

me: no, the villain is Einstein.

me: there are special relativity Einstein believers that believe light speed should be adjusted to make it constant, and there are Einstein believers that think it should not be adjusted.

me: Paul Davies seems to be an Einstein believer that thinks lightspeed should not be adjusted, and from that belief he finds out that lightspeed is variable. This is some of things he then says-

[http://www.prospect-magazine.co.uk/article\\_details.php?id=5538](http://www.prospect-magazine.co.uk/article_details.php?id=5538)

Paul Davies: "Was Einstein wrong? Einstein's famous equation  $E=mc^2$  is the only scientific formula known to just about everyone. The "c" here stands for the speed of

light. It is one of the most fundamental of the basic constants of physics. Or is it? In recent years a few maverick scientists have claimed that the speed of light might not be constant at all. Shock, horror! Does this mean the next Great Revolution in Science is just around the corner?"

<http://www.megapremium.info/reference-and-education/science/relativity-idea-fails-since-light-is-not-constant-according-to-arizonas-paul-davies-part-2/>

"Data collected from distant galactic sources challenged the constancy of light speed and as a consequence  $E=mc^2$  was in doubt; the team brought in Professor Paul Davies of Arizona State to evaluate the results. His analytical acumen were necessary to show that light from distant objects would work well with the most famous equation in physics and that Albert Einstein's Relativity theory would escape unscathed. No matter how he manipulated the data, Davies was left with no way to make the stellar observations correspond with scientific norms. The evidence forced an unexpected finale and that was that Einstein's Special Relativity would have to be invalidated since light could not be constant speed 'c' - a declaration that goes against everything that science has known about modern physics. Ever faithful to precedent, Professor Davies reacted with abject disgust that the German Jewish scientist might have made a profound error, he spoke some time ago on a radio network located in the great nation of Australia:

"It's one of the basic laws of physics" meaning that the light moves at a constant speed and: "yet the evidence seems to suggest that it might be varying."

And there you have it, a team of reputable scientists providing evidence that one of the basic assumptions of the laws of physics, the constancy of light speed, as mankind has understood it for over a century, is now in doubt. It turns out that the constancy of the speed of light is not so constant after all. Davies, a well-known scientist and Royal Society award winner is not someone to easily discount on the fringe of scientific thought."

me: Paul Davies being an Einstein follower, who does not believe lightspeed should be adjusted to constant, finds that lightspeed is variable and that makes him think special relativity is wrong or needs amending, but that is only his version of what he believes special relativity to be. Other Einstein believers are happy to adjust lightspeed and carry on believing that is what special relativity "is."

me: It has further knock-on-

<http://www.freerepublic.com/focus/f-news/519406/posts>

"A GROUP of astronomers and cosmologists has warned that the laws thought to govern the universe, including Albert Einstein's theory of relativity, must be rewritten. The group, which includes Professor Stephen Hawking and Sir Martin Rees, the astronomer royal, say such laws may only work for our universe but not in others that are now also thought to exist. "It is becoming increasingly likely that the rules we had thought were fundamental through time and space are actually just bylaws for our bit of it," said Rees, whose new book, *Our Cosmic Habitat*, is published next month. "Creation is emerging as even stranger than we thought." Among the ideas facing revision is Einstein's belief that the speed of light must always be the same - 186,000 miles a second in a vacuum. There is growing evidence that light moved much faster during the early stages of our universe. Rees, Hawking and others are so concerned at

the impact of such ideas that they recently organised a private conference in Cambridge for more than 30 leading cosmologists."

<http://roychristopher.com/joao-magueijo-frontier-cosmology>

"Likewise, Joao Magueijo has radical ideas, but his ideas intend to turn that Einsteinian dogma on its head. Magueijo is trying to pick apart one of Einstein's most impenetrable tenets, the constancy of the speed of light. This idea of a constant speed (about  $3 \times 10^8$  meters/second) is familiar to anyone who is remotely acquainted with modern physics. It is known as the universal speed limit. Nothing can, has, or ever will travel faster than light. Magueijo doesn't buy it. His VSL (Varying Speed of Light) presupposes a speed of light that can be energy or time-space dependent. Before you declare that he's out of his mind, understand that this man received his doctorate from Cambridge, has been a faculty member at Princeton and Cambridge, and is currently a professor at Imperial College, London. He's a MAINSTREAM SCIENTIST WHOSE MIND IS BEGINNING TO WANDER."

<http://www.cs.unc.edu/~plaisted/ce/redshift.html>

David A. Plaisted: "This suggests that the red shift may be caused by something other than the expansion of the universe, at least in part. This could be a loss of energy of light rays as they travel, or A DECREASE IN THE SPEED OF LIGHT..."

<http://www.sciscoop.com/2008/10>

"Does the apparently constant speed of light change over the vast stretches of the universe? Would our understanding of black holes, ancient supernovae, dark matter, dark energy, the origins of the universe and its ultimate fate be different if the speed of light were not constant?.....Couldn't it be that the supposed vacuum of space is acting as an interstellar medium to lower the speed of light like some cosmic swimming pool? If so, wouldn't a stick plunged into the pool appear bent as the light is refracted and won't that affect all our observations about the universe. I asked theoretical physicist Leonard Susskind, author of The Black Hole War, recently reviewed in Science Books to explain this apparent anomaly....."You are entirely right," he told me, "there are all sorts of effects on the propagation of light that astronomers and astrophysicists must account for. The point of course is that they (not me) do take these effects into account and correct for them." "In a way this work is very heroic but unheralded," adds Susskind, "An immense amount of extremely brilliant analysis has gone into the detailed corrections that are needed to eliminate these 'spurious' effects so that people like me can just say 'light travels with the speed of light.' So, there you have it. My concern about cosmic swimming pools and bent sticks does indeed apply, but physicists have taken the deviations into account so that other physicists, such as Susskind, who once proved Stephen Hawking wrong, can battle their way to a better understanding of the universe."

Valev: In fact, Einstein had already shifted allegiance as early as in 1909

me: In other words the young Einstein said one thing and then as he got older he said something else.

me: Valev accuses Einstein of being a liar and plagiarist. But really the liar aspect can be summed up as Einstein kept changing his mind. And the plagiarist aspect – Einstein did not bother with references in his 1905 paper on SR, so does not make it clear what he was working from.

<http://philsci-archive.pitt.edu/1743/2/Norton.pdf>

John Norton: "Later Einstein (1909, p. 487) remarked that the abandoning of the ether led naturally to an emission theory of light: "Then the electromagnetic fields that constitute light no longer appear as states of a hypothetical medium, but as independent structures, which are emitted by light sources, just as in Newton's emission theory of light." - and it is impossible for modern readers to fail to connect this remark to Einstein's work on light quanta."

me: so that part sounds like a return to Newton light theory, and if we remember as noted earlier it was a wave particle duality theory.

me: Einstein struggled to understand physics and kept changing his mind. Modern physics basing itself on Einstein latched onto a muddle of different ideas leading people to believe different things as to what Einstein's relativity was.

## **References**

[1] Pentcho Valev EINSTEIN SHIFTS ALLEGIANCE 1952-1954 at :  
<http://www.network54.com/Forum/304711/thread/1285683557/last-1286872514/EINSTEIN+SHIFTS+ALLEGIANCE+1952-1954>

[2] Quantum, Manjit Kumar, isbn 978-184831-035-3 p 54

c.RJAnderton2011-01-10