

Paper 1. Dark Energy & the Complete American Quantum hf-r

Today: two new 'spanners in the works of modern physics' which a century ago rejected the idea of any physical content in space & worked for a century with ideas gained from an incomplete quantum packet of energy/action ...the Planck hf.

New spanners in the works... Astronomers: Newton's Giants: have done it again.

All I did was to put the new spanners to best uses I could find.

Adams (UK) 2014.

Dark (vacuum) Energy: "We have no clue as to what is causing it and it *doesn't fit into current physics theories... develop new approaches to explain it. That's exciting. It's rare that we get to do this."

Saul Perlmutter. Lawrence Berkley National Laboratory. USA1

*Everyone today knows current physics theories are incomplete.

The problem as nearly always is one of ...where to start.

Most of 20th century new science, technology, & economies started from the incomplete Planck quantum (symbol hf) emitted from a 'hot oven' on Earth 1900 AD.

The Complete American or Original quantum (symbol hf-r) was emitted, started from the hottest possible oven...the Big Bang Universal Fireball of Origin billions of years ago in time & distance before the Earth, planets, stars, galaxies or light bulbs ever physically existed.

Today the complete American/Original quantum hf-r, in its countless numbers, forms the earliest part of the Universal Microwave Background Radiation first discovered 1965 AD.

Today millions of smart kids & intelligent people know that each of these 'original packets' started at 1,000s of degrees Kelvin and each has 'lost' most of its thermal heat energy en route so now their average temperature is slightly below 3 degrees Kelvin above absolute zero.

Question: where has all the thermal heat energy gone?

It cannot be physically lost (conservation of energy the First Law of Thermodynamics) only some (-r) physically transferred to hotter part or colder external environment (the Second Law of Thermodynamics).

There is only one colder destination for this quantity of transferred thermal heat energy ... new space vacuums, atomic, solar, inter stellar, inter galactic created by the continuous Universal expansion in total space volume.

Big Question ... the mind at first boggles ...but are these new space vacuums completely empty (current theories) or are they full of Dark (thermal) Energy at a calculated minimum zero point energy, just a few billionths above absolute zero?

A few billionths of a degree above absolute zero ...the same average temperature as the atoms of Bose – Einstein Condensates.

***You do the sums & look at the experimental evidence & predict the existence of a Universal Dark Energy Continuum at a whisker above absolute Zero...primary cause the constant transfer over time & space of thermal heat energy –r from all quantum packets of energy to the new vacuums & voids continuously created by the expanding Universal volume.

The constant transfer –r gains the cause & nature of the cosmological constant missing from all the current (modern) physics theories, laws & computer models.

Current, modern physics, the physics of entry to Universities of higher learning ...works on the assumption that space vacuums inside & outside of us are completely empty of any material content. An assumption already contradicted by calculations & the prediction that there must be an unknown undiscovered minimum material content at .zero energy.

Lesson from history ... neither the incomplete Planck quantum packet of energy hf nor Einstein's relativities of time & motion 'fitted into current theories of 1900 AD'.

Question: did Einstein & the quantum pioneers who gave us the foundation of much of 20th century science & technology continue to progress along the paths that 'fitted in' or did they wander off to discover some new ones?

Today experimental physics, the only form of science that can validated a theory is stuck at the Planck hf Barrier .

Planck Barrier hf where the American Quantum hf-r begins.

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On every occasion a new source or form of energy has been identified, sooner or later, a minor or major revolution in human affairs has followed.

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Here while sitting on a chair I often let my mind wander off the beaten paths. Click on paper 5
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