

NEUTRON FLUX AND THE RESURRECTION

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We have to recognize above all, when we consider the interaction between the Turin Shroud and the body once wrapped in it, that we are dealing with two extremely complex systems, one of which—the body—is almost totally unpredictable as a purely physical system. Consequently we cannot attach to this interaction well-defined and controlled laboratory condition.

We also have to realize that, the fact that only the surface of the fibrils of the Shroud is lightly scorched, probably should not be interpreted to mean that the thermal energy of whatever caused the scorch was weak. This fact, rather, indicates a built-in time element: the scorch happened too fast to have taken more effect. Fast removal of the source might be indicated, and also a lack of thermal equilibrium.

IN OTHER WORDS WE MAY BE DEALING WITH A TOTALLY UNFINISHED PHENOMENON.

The unknown elements reasonably described above put a terrific strain on scientific descriptions of the interaction between the Turin Shroud and source X (the only way we can name the body in scientific terms), in Y time length, with Z intensity, since most part of the potential intensity may have been removed and rendered beyond measurement.

To this we have to add that we may not rely on any instruments generating energy, particles, velocity etc. No generators, no detectors, no accelerators, no nuclear reactors, no electrodes, no emulsions, nothing we can think of to introduce a control. We are up against unknown, raw nature.

If atoms are falling apart in source X it can only happen through radioactive decay if we want to involve only the laws of science. A

radioactive decay means that unstable atomic nuclei spontaneously give forth excess energy by emitting a particle or a photon, by capturing an electron, or by fissioning. Nuclear fission means the dividing of atomic nucleus into parts of pretty much the same mass. This is usually restricted to heavier nuclei. When whole atoms are involved, it means at least fission, but more likely atomic explosion, if we don't want to take fission barriers into account.

Now we may have free protons, free neutrons and free electrons available. We still don't know and so it seems cannot know the time element involved, but we cannot talk about a slow nuclear disintegration. Rather the opposite: a very fast nuclear disintegration. We may have fast protons, neutrons and electrons at hand.

Incredibly strict, pre-planned laboratory conditions would have to exist to cause the free neutrons to neatly join the C-12 nuclei and step them up to C-14. All other interactions would have to be neatly eliminated.

Since it has a half-life of 12-13 minutes, a lot of different reactions can take place. This, of course, depends also from the kinetic energy the neutron has upon formation. If it does not decay first into a proton, electron and anti-neutrino, most likely it will join the nucleus of hydrogen atoms. This is a likely happening between source X in our case and the Shroud, in the humid atmosphere which must have existed there. If it is some other, more complex atom which the free neutron may join, a charged particle may be ejected, a proton or an alpha particle most likely. Even fission may be caused by the intruding neutron. Then again, because of its long half-life, with proper kinetic energy, it may just go through the cloth of the Shroud without an interaction and disintegrate into the proton, electron and anti-neutrino.

Some of the free neutrons may join carbon nuclei, it cannot be excluded. But in order that this phenomenon would exist through the entire substance of the Shroud even in non-uniform degree, an enormous amount of free neutrons would have to be available, a small percentage of which would assist in the making of the C-14 isotopes. How could one check that without destroying the entire Shroud and subject it to the doubtful carbon testing? A well controlled neutron flux belongs into the lab only.

Free protons, or alpha particles, create powerful radiation. Since protons have an indefinite lifetime, they either would just go through the cloth and react somewhere else, or they would cause fission, ejecting neutrons or ejecting electrons and cause ionization. Since we have to assume that a great number of free protons are present, either there would

be a massive fissioning phenomenon or a very heavy ionization of the Shroud. As for free electrons, their mass is very small compared to the proton and neutron and electron tracks show a lot of scattering. They quickly lose energy in collisions and are scattered out of the beam of mono-energetic electrons, their range is small.

Free electrons absorb and emit virtual photons. Orbital electrons absorb and eject real photons when they change quantum states. In order for electron radiation to design a whole frontal and dorsal image of a full grown man (I doubt they would do that anyhow) an enormous amount of uniform photons would have to exist at once.

Even though the basic building blocks of matter, the protons and electrons are subject to indistinguishability, which means that all protons and all electrons look the same, we have to still consider that some of the protons and electron, which have indefinite lifetimes, may still be around out of Source X if the neutron flux hypothesis holds.

Would the neutron flux hypothesis hold? The laws of particle physics indicate that probably it would not hold, but we cannot know it for sure unless we substitute source X with its value, its true identity, which is the rising Body of Christ. Then we are up against the whole theology of the Resurrection, up against it momentarily, but helped by it actually.

It would react as an equation when it is finally solved. We said before, "If atoms are falling apart in source X it can only happen through radioactive disintegration." How else would protons, neutrons and electrons separate?

When we substitute X with its value, it reads: "If atoms are falling apart in the rising Body of Christ it can only happen through radioactive disintegration."

The Body of Christ, according to Biblical evidence and according to the medical evidence of the very Shroud, was saved from the breaking of any of his bones. It also was saved from putrefaction even to the slightest degree, as again medical science testifies, examining the Shroud image. Now, however, we say that is underwent radioactive disintegration.

Again, the Shroud itself testifies that the body must have left it with speed, judging by the untouched blood-marks, etc. Considering this, we have to admit that the radioactive disintegration was not and could not have been a slow disintegration, but a very fast one, which qualifies it for fissioning or even nuclear explosion. Do we see that on the calm man on the Shroud?

The theology of the Resurrection, identifying Christ, tells us, that there cannot be a resurrection, unless it means the returning to the fullness of life, the fullness of power, death ending in life, vivification, entropy turned around.

"By an extraordinary working of power, Christ rises up clothed in infinite Power." (Durrwell) Even about the bodies of risen man St. Paul says, "*sown in weakness, shall rise in power.*" (1 Cor. 15:43)

"Gone is all subjection to any law other than that which belongs to his own new life." (Durrwell)

"The fullness of life is restored (to Christ) and this totality does not leave anything behind." (A.M. Henry)

The total restoration and coming into full power is the essence of a resurrection. Unless radioactive disintegration would be given an unlikely new twist, I doubt it can possibly describe the process of the Resurrection, but rather exactly the opposite.

One is free, of course, to dismiss the Resurrection of Christ, but then source X will remain the forever unknown value in an unsolvable equation. I would rather believe that the methods of C14 testing are not valid, not only in the case of the Shroud, but simply not valid in general and valid only in certain specific cases.

The neutron flux hypothesis is one example, when the Shroud selects its own science and cancels an imperfect match.

The theology of the Resurrection will select for us its own science. It will read:

Gamma radiation would originate out of the Body of Christ due to radioactive decay. If these would be absorbed by nuclei in the Shroud, particles would be ejected out of atoms and the nuclei could be split.

X-rays would be produced by the Body of Christ if electrons would be ejected out from the inner orbits of atoms within the Body of Christ and electrons from the outer orbits would fall into the vacated inner orbits. The Body of Christ would be ionized. The X-rays would hit the Shroud and cause ionization there too.

Ultraviolet radiation would originate out of the Body of Christ if, in its atoms, electrons would be jolted from a close in to a far orbit. This would leave those atoms in an excited and chemically highly reactive state. Higher frequency ultraviolet rays out of the Body of Christ would cause burns and irradiation of the Shroud, the lower frequency ones would cause certain surfaces of the Shroud fluoresce or emit visible light.

Visible light waves would proceed out of the Body of Christ if electrons within its atoms would be jolted a few orbits out and thus would emit photons of the wavelength of visible light. High intensity visible rays would burn the Shroud. If a stupendous amount of uniform photons would be created at once there is a slim chance of image formation, but not by light itself alone.

Infrared radiation would be generated by the Body of Christ due to thermal agitation generated by vibrational oscillations within the molecules and the atoms of the Body. In excess, this would be harmful to the Body of Christ and it would burn the Shroud. If the infrared radiation is not in excess, its radiation would spread evenly all around and it is doubtful that it would create an image with distinguishable details.

Micro and radio waves would be created by the Body of Christ by excitation of molecular rotations—and by thermal agitation respectively. No image making properties there.

If we again expose these statements to the scrutiny of theology, namely that there cannot be a resurrection described by the scientific statement unless they also describe a "coming into power," a vivification, a "fullness of life," a "return to life" and, therefore, entropy turned around, then we can see if there is a match between the scientific statements and the theology of the Resurrection.

We can immediately see that gamma radiation, X-ray, micro and radio waves can be disregarded.

The Infrared range should present some degree of match, but in its present form it just does not. The low frequency Ultraviolet rays and Visible Light rays lend a vague match, but they are an imperfect match, leaving many insurmountable difficulties indicating that, in their present form and unaided, they could not create the image.

All the particulate radiations, electron, beta, alpha, proton, neutron, and ion are produced by source X only through radioactive disintegration. If we again substitute for X, the Body of Christ, the Body would have had to go through radioactive disintegration. This theory is on a direct collision course with the properties of a resurrection.

The conclusion we can draw, is that some kind of radiation resembling the electromagnetic type from the low ultraviolet to the high infrared radiation frequencies, must have been at work. However, this process cannot be described very well through the physics of the baryon-oriented universe. Another structure of the cosmos and physics is needed to describe it.