

The Alpha- Particle Irradiation Hypothesis: Solving The Mystery Of The Shroud

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Abstract:

The gospel of John has a rather salient theme that Jesus was the master of his own destiny, lifted up and enthroned on the cross (John 19:18-22) drawing all people to himself (12.42). The gospel of John is composed of seven miracles that in sequence manifested the humanity and divinity of Jesus. His first miracle manifested that he was greater than the purification rites of Jewish feasts and he converted Jewish purification water into wine. His second miracle was to heal a royal official's son who was near death but he healed him from twenty miles away. That was an unheard of deed to demonstrate he was not limited by space and time. He cured a man blind from birth by re-enacting the initial creation of mankind by spitting on the ground and rolling it into an ointment for the blind man's eyes to show his pre-existence as Logos (Word) in the creation of the world. He eventually raised Lazarus after he was dead for four days to show that even after four days of bodily decay that he had the power to give him new life without the residual problem of what to do about decay. In the meantime he cleansed the temple and prophesied that if they destroyed this temple that "in three days I will raise it up." He was speaking of the temple of his body after his resurrection the disciples understood what he meant. So it is in keeping with the theme that Jesus was the master of his own destiny during his lifetime, including the passion, death, and resurrection and post-resurrection activities that affects us to this day that we will proceed with resolving the mystery of the Shroud.

Ray Rogers authored a paper entitled "The Shroud of Turin: Radiation Effects and Image Formation." My first visit with Ray was when he asked me for a calibrated alpha-particle source and I provided him with one. In the above paper, his statement concerning alpha-particles stated "the largest amount of natural radiation is alpha-particles that come from radon (Rn). Rn is produced during the radioactive decay of naturally-occurring U238 and Th232 in soil, rocks, and concrete; it is a heavy, colorless, odorless inert gas with a density of 9.2 grams per liter and during atmospheric inversions it collects in low places, basements of houses, buildings and cool or wet places. Alpha particles are emitted from radioactive sources and are extremely effective in causing defects in materials, but they do not penetrate very far in either gases or materials. A flax fiber integrates defects (caused by alpha-particles) as a function of time. As part of Ray's work in Turin, he spearheaded the task of taking sticky-tape samples from different portions of the linen shroud at standardized pressure on the linen with an innovative mechanical device.

In a personal communication with Ray, he related to me that the fibers from the body image areas of the shroud seemed to be removed more easily than those from non-image areas. It was as if whatever process created the body image had in some way slightly weakened the shroud fibers at that point they became more friable. Ray was a physical and thermal chemist and not an analytical or radio chemist. If he had been the latter, he might have recognized that he had stumbled on to what caused the images on the Shroud. This will be discussed in greater depth. Based on results from the Shroud of Turin Research Project scientists, the following pertinent criteria are offered:

1. The body images were straw-yellow colored that did not vary significantly in either shade or depth.
2. The yellow color indicated a series of defects that gave a monochrome color only on the top-most crown on the microfibrils.
3. There was no yellow color on the base of the microfibrils.
4. Where one fibril crossed over another, there was a white spot on the underlying one. Some microfibrils looked like yellow and white candy canes, the white areas resulting from one thread crossing over another and protecting the underlying area from the image making process.
5. There was no image under the blood areas. The blood must have shielded or absorbed the alpha-particles from striking the linen cloth.
6. The image was directionless; this would require very high resolution of < 15 microns or the width of a microfibril.
7. There was no sign of capillary action (no liquids), diffusion or vapors.
8. The images were 3-Dimensional and negative images.
9. There was no adhesion between fibers and no fibers were matted together.
10. There was no meniscus visible in image areas.
11. The shroud cloth had been through the retting process because of the even distribution of very pure Ca, Sr, and Fe due to an ion-exchange process.
12. The two criminals had their legs broken; Jesus' were not! This was to fulfill prophecy.
13. Jesus had been speared (thrust through) on his right side and blood and water flowed out; this was somewhat of a unique occurrence.
14. Jesus had the telltale marks (blood flow) from the crown of thorns; this was also a unique occurrence among those crucified.
15. Jesus had stated after cleansing the temple area that "Destroy this temple and I will raise it up in three days." Jesus made good on this prediction after his resurrection. This is another example of a unique occurrence. His disciples figured this out after the resurrection.
16. With the recognition that he died on the cross, Jesus was lowered from the cross quickly and Joseph of Arimathea and perhaps Nicodemus and others and brought him down Mount Golgotha to a nearby garden tomb that belonged to Joseph and had never been used. He was quickly cleaned and groomed and placed on a stone workbench where they covered him with a single linen cloth and sealed the tomb with a great stone. The extent of the preparation of the body was not revealed. But after about 36 hours later on Sunday morning, the stone was rolled back. But Jesus' body which had attracted much Rn222 that on radioactive decay irradiated the cloth for about 36 hours. The fluency of alpha-particles would have created an image on the cloth of the body of Jesus. The flax and

fluency of alpha-particles from Jesus' body to the linen cloth must have been sufficient to generate the visible image on the cloth. This unique situation makes the shroud image unique to Jesus in placement, timing, and completion. According to radiochemistry this was about the right fluency time for the cloth to body distance was <4cm there was an image formed but when greater than 4 cm there was no image formed. Experiments conducted by the author showed that the mean free path of a 5.49 MeV alpha-particle is about 4-5 cm in air. This is in exact agreement with the Alpha-Particle Irradiation Hypothesis as described in the main paper.

Jesus seemed to have prearranged this entire scenario.