

Mark Antonacci's Reply To Ray Rogers' Review of His Book

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A fuller account of the scientific experiments involving particle radiation and linen cloth that explains the medieval dating of the Shroud along with all the known chemical and molecular effects of the Shroud's body image can be found on the proposal on my website www.resurrectionoftheshroud.com/Information/proposal11.html. These scientific experiments along with numerous other scientific, medical and archaeological findings also provide the basis for the Historically Consistent Method, which is also discussed more fully in the above proposal. This method not only explains the Shroud's medieval carbon dating and its known chemical and molecular features, but also its unprecedented physical body image features, its unique blood marks, its secondary body image features, its coin and flower (if any) and skeletal features, as well as the excellent condition of this ancient cloth. Moreover, this proposal explains the various tests that can be done on cloth, blood and pollen samples already removed from the cloth that can provide the most startling results yet derived from the Shroud, and prove that a spectacular miraculous event happened—that particle radiation coming from Jesus' dead crucified body irradiated the Shroud, its blood and pollens, in the 1st century, while inside his burial tomb.

The proposal itself substantially and scientifically answers most of Rogers' substantive comments. For logistical reasons, it was not possible to place it on this website at this time, but I urge the readers to go to it. I was allowed to place here the following remarks specifically addressing Rogers' specific comments:

I originally contacted Ray Rogers several months ago to discuss the possibility of testing small fragments of any of the 12 Shroud threads taken from the Raes sample and given to STURP by Luigi Gonella in the 1980's, and which reportedly are in the possession of Mr. Rogers. I was also hoping he might have fragments of cloth or blood samples taken from the Shroud in 1978. He hadn't attended any of the numerous Shroud conferences or exhibitions in the last twenty years, so we had never met, but we soon started talking at length about the Shroud and my book, a copy of which I sent to him. Many times he wrote or told me how my book had reawakened or, in his words, "resurrected" his interest in the Shroud, a study that he had long ago abandoned, and on which he hadn't published an article in almost 20 years. Thereafter, I literally could not keep up with his emails and correspondences about numerous new matters in my book. I kept telling him that while I'd answer all his questions and concerns, future testing of Shroud samples was the original and main point that I wanted to discuss. In many of my answers and replies, I informed him that he was confusing Dr. Rinaudo's image formation method with the Historically Consistent Method, and that he was incorrect in several other matters. Furthermore, before I could even answer all of his questions and concerns, he informed me "I have been put in the position where I have to write a review of your book for the Shroud web site", all to my amazement and surprise. I answered all

his questions, but unfortunately, he is still in error on a number of matters that he has forced me to respond to publicly.

Early in his comments (p. 2) he states:

“Unfortunately, some statements are made in the book that were not adequately researched. For example, on p. 6 the author reports the things STURP proved were not the case. The source of this information is not clear, but two of the items were not part of the STURP consensus: 1) It was not made by any natural means of draping a cloth over a human body, and 2) It was not a scorch. There is no “scientific” proof for either of those statements.”

I suppose Mr. Rogers is referring to p. 9 of my book, where in the introductory chapter while generally discussing STURP’s research, I state, “Little by little, the team found out what the Shroud was not.” Among eight different items that I mention can be found the two that Rogers complains “There is no ‘scientific’ proof for either of those statements.” Yet, naturalistic and scorch methods were among the numerous methods tested by STURP scientists John Jackson, Eric Jumper and William Ercoline in two scientific papers published in 1982 and 1984 showing that such methods clearly fail to duplicate numerous aspects of the Shroud’s body image. These two methods were also ruled out by subsequent naturalistic method experiments performed in Israeli burial tombs by Dr. Eugenia Nitowski and her associates in 1986, as well as by subsequent vertical directionality findings published by Dr. Jackson in 1989. Moreover, if he had studied Chapter 5 of my book, numerous reasons based on scientific findings from the Shroud, as well as scientific experiments with these two methods, would be apparent why both methods fail to duplicate several aspects of the Shroud’s body images and blood marks.

Among other things, the above experiments show that scorch hypotheses have been unable to duplicate the Shroud’s three-dimensional information, or its high resolution, or encode the image in a straight-line vertical direction from the cloth to the body, or duplicate the fluorescence absorption feature of the Shroud’s body image. Moreover, since STURP concluded that the blood marks were on the Shroud before the body images, a simple scorch method would have altered or damaged the Shroud’s pristine appearing blood marks. Ironically, Rogers seems to forget one of the things he admonishes against on p. 4 of his comments. “The most damaging things (sic) a ‘scientist’ can do at this stage in the development of a ‘scientific’ study are to include speculations on an equal basis with tested facts and exclude observations he does not like.” On p.14 of his own comments Rogers further states, “When we used a natural-gas/oxygen torch to ‘paint’ a scorch...the torch burned fibril ends that were sticking up from the surface, producing little carbon balls on the ends. We could not see any carbon balls on the Shroud.”

Immediately after Rogers complains there is no scientific proof that the Shroud’s images were not caused by a scorch, he further states “We could not rule out...all possible ways the cloth could have been draped or been bound to the body.” For the Shroud to contain the front and back images of a dead body that contains three

dimensional information along its entire length and width that is correlated to the distances each part of the cloth was when it was draped over the underlying body seems to eliminate all but one draping configuration of the cloth over the body. When one further factors in that the Shroud's frontal body image is also encoded in a vertical straight-line direction from the draped cloth to the body lying underneath it; that both images are highly resolved and detailed negative images; and that the cloth contains extensive blood-stains in the same shape and form as when they flowed and coagulated from wounds inflicted on the body which are precisely correlated to the body image; there does not seem to be more than one way that the cloth could have been draped over the body except the draping configuration proposed by Dr. John Jackson and other STURP scientists, which has been illustrated in various publications. In fact, this point has not even been debated by STURP scientists or other Shroud researchers.

In his comments, Rogers also admonishes me to adhere to rigorous scientific methods and not to publish any hypothesis without such adherence and testing. I would like to point out that I not only have so adhered and based my hypothesis on scientific tests and experiments, but I call for further direct testing of this or similar hypotheses. Moreover, Rogers not only refuses to do such testing for my hypothesis, he doesn't adhere to his own advice for his own offered hypotheses

For example, in my book I state that part of the radiation within the Historically Consistent Method could have accounted for the soft, pliable and excellent condition of the Shroud (a condition confirmed by STURP), and quote Dr. Kitty Little as a source. In Rogers' comments on p. 8 he states, "The author did not search for alternative hypotheses for the presumed abnormal preservation, accepting the assumed preserving effects of radiation at face value to help support his 'theory' ". While I never said it was the only possible explanation, no one has provided any other scientific explanation for the excellent condition of the Shroud that has been offered or published. Instead of commenting on the validity of Little's remarks, Rogers offers the possible hypothesis that the Shroud was washed with Saponaria to explain the excellent condition of the Shroud. Two sentences after complaining of a lack of alternative hypothesis for the Shroud's condition, Rogers then amazingly states, "STURP personnel made some preliminary tests on this 'Saponaria hypothesis'. Very little confirmatory evidence was found on the Shroud." Evidently, there were very good reasons STURP has never offered this hypothesis or why it can't be found in any of the Shroud scientific publications. If this or another hypothesis had been published I would have discussed it in my book.

Despite STURP finding very little confirmatory evidence for Saponaria on the Shroud, Rogers devotes considerable space to, in his own words, "circumstantial bits of evidence that Saponaria might have been present early in the history of the cloth..." Here again his circumstantial evidence not only consists of bits, but he admits "we have not studied how Saponaria fluorescence changes with age" and, further, "we certainly would not call it a theory." (pages 8 & 9) His fairly lengthy discussion merely confirms that it should not have been discussed as an alternative hypothesis.

Not only does he criticize my book for not publishing non-existent or, at best, premature hypotheses, but he described his inadequate hypothesis one year after *The Resurrection of the Shroud* was published. He also adds on page 12, “There is a huge amount of information on cloth technology through time, it is pertinent to studies on the Shroud, and it should have been discussed in the book.” This statement is made in the context of another possible hypothesis published just this year by Rogers in his comments on my book from last year, and as will be discussed below, has also not received the proper scientific attention or experimentation to advocate or propose such a hypothesis or theory. Moreover, Chapter 6 of my book does contain a discussion of cloth technology and techniques that are quite relevant to Shroud studies, which Rogers fails to notice or comment upon.

Rogers devotes considerable space in his comments on my book to the possibility that impurities on the surface of the Shroud’s fibrils such as starch and sugars accounted for at least part of the color of the Shroud. He infers that Saponaria and starch could have become part of the Shroud linen as part of, or subsequent to, common ancient linen manufacturing processes. Yet, he does not even address the question of why this effect (s) wasn’t found on many other ancient cloths for which this common procedure would also have occurred. As a further testament to his rigorous scientific methodology and to the need for scientific findings to support his hypotheses, both of which he admonishes others to seek, he amazingly states on page 13, “We expected to find starch on the Shroud, so we did not specifically look for it.” On page 14, he further confesses, “In retrospect, I am embarrassed to point out that most of STURP’s attempts to produce an image on linen used modern linen. As the author [Antonacci] stated, all failed.... We should attempt to produce an image with primitive-technology linen that has been stabilized with starch during weaving and washed in Saponaria to make it supple.”

What is even more ironic about the above quote is that Rogers does not even comment upon the extremely important scientific experiments that were done with ancient linen by Mario Moroni and his associates, and which are contained in my book. These scientists experimented with linen cloth that was not only historically ascribed to about 160 B.C., but was also carbon dated to this period. They irradiated samples from this ancient cloth with the amount of neutron radiation equal to the amount of protons that some scientists think caused the images on the Shroud. As shown in my book, neutrons will create additional C-14 from some of the N-14 in the air within and surrounding the porous cellulose of the linen cloth, and from some of the N-14 and C-13 on and within the cellulose itself. Moreover, when this neutron irradiated cloth was then artificially aged and/or subjected to simulated fire conditions, and given the same pretreatment cleaning that was given the Shroud samples in 1988, it carbon dated 1120 to 1390 years younger. Instead of commenting on the fact that these scientists may have been experimentally duplicating the Shroud’s unique history, or commenting on the potentially enormous implications of the Shroud’s age, or its authenticity, or that a truly unique historical event occurred with or to the Shroud, Rogers dryly comments on page 9, “There is no discussion of nuclear cross sections or probabilities of reaction in the book. There is no presentation of real elemental analysis of ancient linens to support the

supposition there was sufficient N-14 in the Shroud to account for the assumed increase in C-14.”

There is discussion of nuclear cross sections and probabilities in my book. Moreover, the experiments themselves would provide the basis for more detailed calculations. Rogers was not even interested in reading the scientific papers of these experiments by Moroni, and of similar experiments by Rinaudo, all of which I offered to send to him. He is further unaware that in 1989 Dr. Robert Hedges of Oxford University first pointed out the presence and approximate amount of N-14 in linen that would be converted to C-14 by a neutron flux.

In his comments, Rogers accurately quotes parts of my book which states:

(p.30), “---the bloodstains could not have been encoded on the Shroud simply by direct contact between a bloody body and a linen cloth surrounding it.” And on page 225: “These unique blood marks have never been displayed so realistically on cloth, canvas, or any other surface; they appear on the cloth exactly as they would appear on a real human being with extensive wounds.” And: “No scientists, physicians, artists or others have ever been able to convey such anatomically precise and complete blood marks onto cloth by direct contact or by any means, or portray them on any kind of surface.”

Instead of commenting on the uniqueness of the Shroud’s blood marks or the accuracy of the above observation, Rogers displays his unwillingness to test new hypotheses by stating three lines after the above quote, “Such negative evidence should not be used to test scientific hypotheses.” Such evidence certainly can and certainly should be part of the reasons to test scientific hypotheses, especially the only hypotheses that has ever accounted for the Shroud’s blood marks, a fact Rogers conveniently omits or fails to even dispute.

Two lines later, Rogers further states, “Although the author repeatedly referenced Dr. Robert Bucklin, a forensic pathologist who worked with STURP, he did not mention Bucklin’s discussions on mechanisms for transferring bloodstains to cloth.” Dr. Bucklin never published any mechanisms for transferring bloodstains to cloth. Moreover, I can also say that I sent several drafts of the parts of my manuscript concerning the blood marks on the Shroud, as well as all other medical evidence, to Dr. Bucklin for his review and comment while my book was being researched and written over a course of almost twenty years. Dr. Bucklin agreed with all of the above observations about the blood. Mr. Rogers was completely aware of this before he published his comments. Interestingly, the quote that Rogers uses that suggests the blood marks resulted from direct contact is not from Bucklin, or any other practicing physicians or pathologists. It is an 18 year old quote by those who seemed unaware of Vignon and Barbets’ unsuccessful attempts to transfer blood marks to linen by direct contact, and was made before Lavoie’s and Notowski’s unsuccessful attempts to transfer and embed blood into linen cloths with the unique realism that is found on the Shroud. Rogers was also made aware of all these

experiments and their results, however, he simply ignores experimental results that he does not like, yet admonishes others not to do so.

(Rogers then goes on to say that direct contact can give a fair or partial transfer onto cloth, however, that would not duplicate the blood marks on the Shroud. Rogers knew from our earlier correspondence that my book states that direct contact can give a partial transfer, but states that direct contact alone cannot encode and embed into cloth the full complete blood marks as they appeared when they formed and coagulated on the body.)

After I had explained my entire image-forming hypothesis in the text of the book, I then wrote in small print, in the endnotes, in the back of the book, that one possible explanation for the disappearance and reappearance of the body in my hypothesis first appeared in an article by Albert Einstein and Nathan Rosen in 1935. Curiously, Rogers states on p. 9 of his comments that, “This statement is apparently meant to be misleading.” No one has ever thought that Einstein and Rosen wrote about the Shroud, or the man in the Shroud, or my Historically Consistent Method. Rogers never indicated that he was confused by my statement in all of our phone conversations or correspondences, nor has anyone else. He even took the quote out of context from the endnotes, for his own purposes, in his comments. I have not only taken the entire quote from the endnotes, but also and placed it in the text of my above proposal; however, no one was misled by it, including Rogers.

Rogers’s comments contain further outright inaccuracies. On p. 9 of his comments he states, “The assumptions of C-14 production requires three series ‘special assumptions’ ... that sufficient neutrons were produced from deuterium for a significant nuclear transmutation of nitrogen....” A simple reading of the hypothesis in my proposal, or its discussion in my book, will show that this special assumption is not contained within the Historically Consistent Method. Rogers has confused my image-forming hypothesis with Rinaudo’s. I explained numerous times in correspondence and in conversations with Mr. Rogers that while I was impressed with Dr. Rinaudo’s experiments, I do not agree with his image forming “protonic theory”, and, in fact, point out its flaws in Chapter 10 of my book before discussing my hypothesis. Curiously, Rogers states on p. 9, “The author accepts this ‘protonic theory’ as the basis for his image forming theory.” Ironically, it is Rogers who knows that this statement, along with many of his other ones, is false or misleading; or he is so forgetful, or uninformed about the two theories, or recent Shroud studies, that he still continues to confuse them.

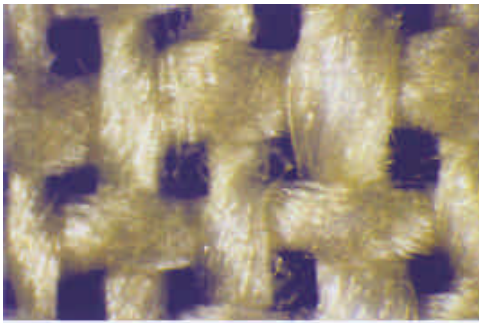
Rogers further lists sixteen assumptions that he thinks I make in my image-forming hypothesis. Some of these assumptions are repetitive, while others are not necessary parts of the hypothesis. Some of the assumptions I do make, yet several are based on published scientific experiments that can be repeated. Whether one calls these facts or assumptions may be a matter of whether one is familiar with the published scientific experiments or completely understands them. I question whether Rogers is familiar with or understands them because some of his other assumptions apply to Rinaudo’s image forming method, but not to mine. On the whole, his comments ramble

on for fifteen pages, containing numerous inaccuracies, false assumptions and accusations, along with inadequate, premature and heretofore unpublished hypotheses, that have not been developed with any of the scientific rigor that he admonishes others to follow.

Rogers further claims on page 11 of his comments that, “Rinaudo’s proton-irradiated samples do not resemble the Shroud image. The outstanding characteristics of the Shroud image are the discontinuous distribution of the color on the surface.” In the next paragraph on page 12, Rogers adds, “Rinaudo’s images clearly show color on all upper surfaces of his samples.”

To give the reader an objective basis to determine the accuracy of Rogers’ comments, I have displayed Rinaudo’s photomicrograph of his proton-irradiated threads next to photomicrographs of the Shroud body image. It is quite apparent that Rinaudo’s sample clearly matches the discontinuance nature of the Shroud’s images, and that his resulting image is not found on all upper surfaces of his sample.

The similarly encoded characteristics on Rinaudo’s basic linen weave sample (below left) can be seen with the Shroud’s more refined herringbone twill body image samples (below right and bottom).



Rinaudo’s proton-irradiated samples look more like the photomicrographs of the Shroud’s body image than anything produced to date. I have spent countless hours studying Rinaudo’s impressive experiments and results, however, without any basis whatsoever, Rogers asserts: “His [Rinaudo’s] claims were accepted by the author without any apparent attempt to reconcile the appearance with authentic photomicrographs.”

Ironically, the accusation made by Rogers about me is not only false, but it quite accurately refers to Rogers' own efforts. Ironically, I was the person who first sent him a copy of Rinaudo's above photomicrograph, which Rogers failed to display in his inaccurate comments.

It is actually difficult to tell if part of the explanation for the discontinuous appearance on both the Shroud image samples and proton-irradiated samples is from the reflected light inherent with microphotography. Part of the explanation could also be that proton irradiated linen fibers become friable and corroded like the image fibers on the Shroud. The cloth will be less encoded in some areas than others to begin with, and fibers that broke away could also help explain the discontinuance appearance on cloth. This was evident on some other proton irradiated cloth samples that Dr. Rinaudo sent to me. The repeated handling and rolling of the Shroud over many centuries had to have also caused some of the corroded and friable body image fibers to break and fall away. Whether there is one or several explanations, the proton irradiated cloth samples greatly resemble the body image samples of the Shroud in all known microphotographic, chemical and molecular respects.

Rogers is correct when he states that Al Adler reported that the centers of the Shroud fibers are clear or optically transparent. Imaging specialist Kevin Moran, who examined Shroud image and non-image fibers with Dr. Adler, reports that both kinds of fibers are clear or optically transparent. Moran illustrates this point with photomicrographs of Shroud image fibers at approximately 400x magnification (the above photomicrographs are only 32-64x magnification). While I was preparing this reply, I observed that Rogers published similar 400x magnification photomicrographs in the last issue of the British Society for the Turin Shroud Newsletter (Issue No. 54). These photos along with Moran's clearly demonstrate that while the Shroud's image fibers are tinted straw yellow, they were still optically transparent or clear. Proton irradiated fibers also clearly reproduced this effect. In fact, even when Rinaudo irradiated his samples with 100x the amount of protons needed to irradiate them, although they became darker, the fibers were still clear and transparent.

Moran states the interior of cellulose fibers are porous to hollow, and are only thick at the lignin growth joints. If the Shroud's fibers were irradiated with protons, deuterium and/or alpha particles (as explained in the Historically Consistent Method) they would color the sparse material inside the cellulose fiber while still allowing them to be clear or optically transparent, as found on the Shroud's image fibers. Interestingly, on page 33 of the BSTS article, Rogers speculates that, "The bands of different color on the Shroud are the result of different amounts of lignin left from the bleaching process. The tape samples reflect this variation as an observed differences (sic) among quantitative measurements of lignin on the fibrils." Yet the bleaching process applied to the Shroud's image and non-image fibrils would have been identical or very similar. (Rogers' color photomicrographs can be found on the back cover of BSTS issue no. 54). He displays photomicrographs of cotton fibers along with Shroud body image and non-image fibers to imply that the radiocarbon samples from 1988 were repair pieces, however, his photomicrographs may actually suggest that the real point of distinction is found between

the Shroud's body image and non-image fibers. The reader can plainly see that the bands of color are not only found at the thicker lignin growth joints, but are much more obvious in photos 2,3, & 5 which are photomicrographs of various body image samples taken from the Shroud. The banded appearance is largely absent from the various cotton and non-image Shroud fibrils. Rogers' photomicrographs are actually quite consistent with what protons, deuterium and alpha particles would produce. They would color the insides of the fibrils where thick material, like lignin growth joints, can be found. Rogers not only misses this important point, but also fails to realize that particle radiation of this type provides the only image forming explanation to this imaging observation.

Just prior to this part on his comments, Rogers questions the legitimacy of Fr. Filas' observations of coin features on the Shroud, which is fair commentary. However, immediately thereafter he states, "It is dangerous to build a scientific theory on such shaky foundations." As I also stated to Rogers in our correspondence, and in my proposal, my theory or hypothesis is not at all dependent upon the coin or flower images. However, if these features are present on the Shroud, the Historically Consistent Method can account for or explain their faint subtle appearance. Their absence would not refute any part of the hypothesis or method.

Throughout his comments Rogers continues to misrepresent my hypothesis. On pages 15 and 16, he takes a quote from Prof. Wesley McDonald that is found in the part of my book leading up to the discussion of the Historically Consistent Method. Rogers then incorrectly attributes it to my method, and states this would cause a huge explosion. In much of our earlier correspondence he used to do the same incorrect attribution and misrepresentation with other methods, while arriving at the same result. The only difference is that now he's found a new person with whom he can misrepresent my hypothesis. I have explained numerous times to Rogers that there is not a huge explosion under the Historically Consistent Method and why, just as I stated it in the proposal. Interestingly, after I repeatedly explain this, he just finds a new concept to confuse or misrepresent my hypothesis with. Rogers either knowingly does this, or is simply unable to understand Shroud hypotheses and research of more recent vintage.

Since protons, neutrons and alpha particles are basic building blocks of matter, Jesus' body could have left a small fraction of them behind on his burial shroud as he suddenly dematerialized or disappeared at his resurrection. Beginning with Jesus' resurrection, the Gospels state that similar disappearances occurred to Jesus' body on several other occasions, without causing explosions. One possible explanation is a shortcut in space-time travel based on Einstein's theory of general relativity that allows a person or object to pass through a bridge or "wormhole" in space and time. According to modern physicists, mathematical theories of space-time travel are not only possible under Einstein's theory of general relativity, but these wormholes are completely consistent with tested theories of gravity and would allow travel between two points in different universes or two points within the same universe. NASA, famous physicists such as Einstein and Steven Hawking, and experts in this field have studied this concept since 1935. Physicist, Matt Visser, an expert in this field states, "...the theoretical analysis of

Lortenzian wormholes is ‘merely’ an extension of *known physics*--no new physical principles of fundamentally new physical theories are involved.”

A key element of this theory is that, as matter passes through the wormhole, the entrance and exit mouths of the hole gain and lose mass. An object could even traverse the wormhole as energy and return to its former mass upon its exit. If the unexplained disappearance of the man in the Shroud, or the historical Jesus Christ, was connected or related to this theory, the entrance to the wormhole would be the point of the body’s departure. The Shroud itself would have been right at the mouth of the entrance and may have received some of the increase in mass in the form of the basic building blocks of matter---protons, neutrons, deuterium and alpha particles. Many experts in this field think space-time travel is possible without the traveling object being harmed as it enters and exits the wormhole. Space-time travel could even be said to be a possible means for Jesus to have traveled between heaven and earth (and even Hades).

Rogers responds to this on page 10 by saying it is “extremely improbable.” However, while humans are incapable of such travel, along with many other things, that doesn’t mean it would violate the laws of science. Rogers also overlooks or ignores the fact that if such space-time travel did occur, it likely only occurred to the historical Jesus Christ. No other historical sources have ever factually described a body’s disappearance and reappearance that I am aware of. Mr. Rogers states that he sent me a dissertation on relativity, but was disappointed with my response. Yet, Rogers is not an expert in this field. I don’t think he has a Ph.D in Physics, or any other field of science, even though he has allowed himself to be held out as a Ph.D. on a number of occasions over the years. Furthermore, he doesn’t contest that this part of the hypothesis would account for the disappearance and reappearance of Jesus, or the man in the Shroud, or the comments of the experts in the field that such travel is possible. He merely says that such a concept of travel is not “mature” despite the fact it has been studied by some of the most famous physicists and organizations in the world for the last 65 years.

Interestingly, the superficial and small amount of protons, deuterium and alpha particles that would be absorbed on the Shroud under this method would not cause an explosion, however, the small amount of penetrating neutrons and gamma rays also left behind would distribute their energy between the surface of and several feet within the limestone walls and ceiling of the tomb. While this would not cause an explosion or a hole in the tomb, this distributed compressionable shock might cause something analogous to an earthquake. While the accounts at the end of Matthew 27 and the beginning of 28 are vaguely worded, they do indicate that an earthquake may have occurred at Jesus’ resurrection.

The numerous consistencies between the historical accounts of Jesus’ crucifixion, burial and resurrection with those of the Historically Consistent Method are unprecedented. These similarities are discussed more extensively in the proposal and are also real strengths of the method. For example, it’s clear the body of the man in the Shroud left the cloth, and appears to have done so within two or three days, as was the case with the historical Jesus Christ. If the man in the Shroud was Jesus, (and there are a

great number of similarities whose frequency continues to increase with time), than accounting for the body's disappearance and subsequent reappearance would be a definite strength for any method that attempts to explain the Shroud's images and various other features. The same could be said if the method accounts for how the unique and realistic blood marks become encoded and embedded in the Shroud in the same shape and form as when they coagulated on the body; or if the method accounts for the possible earthquake; or the body's skeletal features, and possible coin and flower images; or how it accounts for the excellent condition of the Shroud. Moreover, the method accounts for all the unique primary and secondary body image features.

If you read Rogers' comments he fails to argue against the detailed explanations of any of the above features. He only attacks them indirectly, often with inaccurate characterizations or by confusing them with other hypotheses. In my book, I discuss every published theory on the Shroud, and Rogers acknowledges this on the first page of his comments when, describing the book's contents, he states, "Descriptions and reports of studies and beliefs involving the Shroud are massively researched and well written." Moreover, there are a good number of books and hypotheses or image forming methods that aren't nearly as comprehensive or explanatory as mine, yet Rogers has been silent about those for close to twenty years.

Interestingly, the one book or method, which argues from scientific, medical, archaeological and historical evidence that the resurrection of Jesus Christ caused the Shroud's images and various other features, is the book that he feels compelled to attack, however inconsistently or inadequately. If you notice on page 3 of his comments, he also complains that a minister in Connecticut was glad or hoping that STURP scientists were going to prove the resurrection. In his correspondence with me, and in our phone conversations, he made similar complaints, as well as complained that the Christian beliefs of some STURP scientists could be ascertained in their remarks to him and approaches to the subject. He even told me that was part of the reason he left STURP. He complains that the Connecticut minister's goal was to prove the resurrection. Elsewhere on page 8 of his comments, where he complains that I did not offer his unpublished and incomplete alternative hypotheses, that this illustrated "goal directed 'science.'" I doubt if any Christian minister would deny that he would welcome proof of Jesus' resurrection, nor should he. I make no apology for this myself, although I can say, as the book clearly demonstrates in the preface, I began my study of the Shroud as an agnostic. I can also say that I did not realize all of the consistencies between my method and the Gospels until after the method was developed from years of scientific findings, observations and analysis. One could just as easily accuse Rogers of having the goal of attacking any scientific research or image forming methods relating to the resurrection of Jesus, which is precisely what he has done, however, inadequately and inaccurately. This is not only indicated by his comments and the photomicrographs, but also by his failure to examine the numerous papers and experiments concerning particle radiation and linen.

The Historically Consistent Method is based upon scientific experiments conducted by Rinaudo, Little, Moroni and their associates, their published articles, and on a cloth collapse model first published by Dr. John Jackson in 1989. It was developed with

Dr. Art Lind, a retired physicist and distinguished Fellow from the Boeing Company and McDonnell Douglas Aerospace. It has adhered to as much testing and scientific rigor that can be applied to it to date. Moreover, it seeks and deserves further testing, not only to continue to follow far more rigorous scientific methodology than Rogers displays, but to further test and examine the method itself, the cause of the Shroud's features, and the resurrection of the historical Jesus Christ. (This testing would not be at the expense of future testing for the repair hypothesis, or any other future testing of or concerning the Shroud, all of which this author encourages.)

Immediately after I explained to Rogers' wife, Joan, that the various tests described in my book and proposal for determining whether particle radiation irradiated the Shroud, and, if so, whether this occurred in the first century, could be performed on the Shroud samples in Rogers' possession, he broke off any consideration of performing any tests on these samples. Furthermore, these tests can be performed without destroying any of the Shroud threads or fibers. I hereby openly challenge Rogers to loan fragments of any Shroud cloth or blood samples in his possession to Dr. David Elmore of Purdue University who operates an accelerator mass spectrometer that can test for the presence of Ca-41 and Cl-36 in the Shroud samples. I'll be happy to acquire the funding for these tests. The inaccuracy of and explanation for the controversial carbon dating of the Shroud could be shown, along with providing evidence for the cause of its image. Moreover, the first scientific evidence of the resurrection of the historical Jesus Christ could be shown by these scientific tests. These tests have relevance and significance for the entire world. The Raes samples do not exclusively belong to nor are they owned by Ray Rogers. Rogers has called for the application of rigorous scientific methodology to the Shroud and to the Historically Consistent Method. Here is the perfect opportunity for Rogers to donate a fragment of the 12 Raes threads and any Shroud blood fragments in his possession to a qualified AMS laboratory, and have rigorous scientific methodology applied to the samples and the hypothesis. Furthermore, Rogers concludes his BSTS article with the statement, "and the [Shroud] samples should be characterized by elemental analysis and trace element analysis." That is precisely the type of testing that I have been calling for in my book, my proposal, and in my requests to him.