THIS PHOTOGRAPH TAKEN BY MATHESON BEAUMONT OF DUNEDIN, NEW ZEALAND, SHOWS PART OF THE BROOKS SHROUD OF TURIN PHOTOGRAPHIC EXHIBIT ON DISPLAY IN THE OTAGO MUSEUM. THE EXHIBITION TOURED EVERY CAPITAL CITY IN AUSTRALIA DURING 1984 WHERE IT DREW 175,000 VISITORS. IN NEW ZEALAND IT TOURED CHRISTCHURCH, DUNEDIN AND WELLINGTON AND HAD DRAWN 15,000 VISITORS BEFORE IT OPENED IN ITS FINAL NEW ZEALAND VENUE, THE NATIONAL MUSEUM IN AUCKLAND. THE EXCELLENT DISPLAY WORK IN DUNEDIN WAS DONE BY BEAUMONT AND MEMBERS OF THE NEW ZEALAND INSTITUTE FOR PHOTOGRAPHY.
EDITORIAL

The main article in this issue is one I wrote in reply to a full page blast from New Zealand-domiciled American skeptic, Denis Dutton. Dutton has used the opportunity of the publicity gained by the Brooks Exhibit as it tours New Zealand to publish many articles and press releases. At the time of going to press I am unaware of whether my piece has been or will be published. The New Zealand Listener is a prestigious popular weekly journal circulating throughout that country.

This issue also brings to Australian readers the current proposals put to Turin by the Shroud of Turin Research Project. We know that several other organisations, for example the British Society for the Turin Shroud and ASSIST have also prepared proposals but these have not yet been made public. We understand that any of these organisations will welcome proposals from individuals or other groups which could then be assessed for possible inclusion in any programme of testing which may be done in the future. In the meantime it is known that such people as Father Peter Rinaldi are in constant touch with the authorities to try to settle a date for the next scientific examination of the Shroud.

Sr Damian of Salt Lake City has sent me some unique slides of her work on the blood samples held in the USA with some startling results which I hope to report in the next issue.

The New Zealand tour of the Brooks Exhibit has been in Christchurch, Dunedin, Wellington and Auckland, and I shall report final visitor numbers in the next issue. The exhibit will return to Australia and we hope to put it on again in the Sydney area before it goes early next year to Hong Kong. As the exhibit went further north in NZ so the publicity for it got wider and better. Apart from the numerous press pieces and television interviews I did a 45-minute debate with Dutton on New Zealand National Radio.

An extraordinarily comprehensive and well-documented book THE CRUCIFIED by Alfred J O'Rahilly, and published posthumously has arrived in my hands and I hope to review it in Issue 31. It contains one of the most comprehensively illustrated sections in any book on the subject.

Again I have had the problem of sifting the enormous amount of Shroud material for SHROUD NEWS. It's a pity we can't run to fifty pages an issue!

REX MORGAN
THE SHROUD OF TURIN - DUTTON's CLAIM SPURIOUS

A response to Denis Dutton's "Negative Evidence" written for the New Zealand Listener by REX MORGAN

In a carefully orchestrated series of articles and interviews published in various parts of New Zealand recently, Denis Dutton, a lecturer in the philosophy of art at the University of Canterbury has attempted to argue that the Shroud of Turin, the subject of a photographic exhibition currently in this country, is a 'remarkable forgery'. His argument rests on three factors: a medieval letter to the Pope, reported some 80 years ago, from Bishop Pierre d'Arcis in about 1389 claiming that the image was 'cunningly painted'; a piece of research reported in 1980 by Dr Walter McCrone, an American chemical analyst; and a technique of image production by an American stage magician, Joe Nickell.

Dutton has also labelled most of the hundreds of scientists and scholars engaged in studying this unique and fascinating piece of cloth as 'pseudo-scientists' working from religious rather than scientific motivation; he has been critical of the current exhibition in New Zealand because it 'omits important information'; and he has perpetuated a myth by falsely stating that the authorities continue to refuse to allow C14 dating of the cloth.

Dutton is addicted to suggesting that the 'Shroud crowd' ignores the only three pieces of evidence he cites for the painting theory whilst he himself proceeds to ignore the vast amount of scholarly and scientific research into this mystery which has been going on for many years before he heard of the Shroud, or for that matter, the people of New Zealand heard of Dutton. Indeed, after he had written a particularly vitriolic piece in the 'Michigan Quarterly Review' about the work of Dr John Heller, he admitted in a conversation with Heller (which Dutton doesn't seem to tell us about) that he had never read any of the 21 scientific papers cited in Heller's book and that he was unaware of the history of the medieval dispute involving d'Arcis. He further admitted to little knowledge of bloodstains and their chemistry (about which Heller knows a great deal) and finally that he was an agnostic, thus betraying the real point of view from which his vociferous indignation erupts.

Most of the hundreds of Shroud scholars and scientists are well aware of the d'Arcis letter, the only recorded statement prior to
Dutton's Claim Spurious  (contd)

the 20th century which has suggested that the Shroud is a painting. What Dutton does not appear to understand is that research since the report made by Chevalier early this century throws considerable doubt on whether the d'Arcis document was any more than an unsigned, undated and unsent memorandum, not even written by the said bishop. There are several authentic papal documents concerning the exhibition of the cloth at Lirey in France in the 1300s which reveal a dispute between d'Arcis and his predecessor and its then owners, the de Charny family and there is authoritative and well researched current opinion that the d'Arcis document represents no more than a hasty judgement jotted down during the heat of a debate.

Whether d'Arcis wrote the document or not, and whether it is genuine or not, really doesn't matter because there is so much more to be considered before one can say whether or not the Shroud is a forgery. It is quite ludicrous for Dutton (and, I note, Trevor Hooper and his pathetic Christchurch rationalists) to quote from an unsigned, undated, unauthenticated document written six hundred years ago and say this proves that the Shroud is a forgery. Perhaps one of the most amazing and amusing pieces of recent Hooper-instigated press gullibility is the headline in the Christchurch Press of 3rd May 1985, 'Top Scientist Agrees with Medieval Bishop that Shroud is a Fake". Is this not exactly the same as taking a medieval letter stating that the earth is flat and ignoring any information gathered on the shape of the earth since, claiming in 1985 that it must be flat today?

Dutton and his agnostic and rationalist friends have also taken the work of Dr Walter McCrone and continue to quote liberally from it. McCrone was asked to examine samples taken from the cloth during the 1978 investigation of it in Turin. He gave the opinion, having looked at the samples only through an optical microscope, and having conducted no chemical tests on those samples, that he could see large quantities of iron oxide on the cloth and signs of a protein binder and therefore the image was painted by a medieval forger using red paint. Dutton fails to tell us that Dr McCrone's work has never been published in an independent scientific journal (unlike the papers of numerous other scientists on Shroud matters which have) and, far more importantly, that immense amounts of chemical analysis have since been carried out on the same samples taken from the cloth which show conclusively that McCrone was wrong.

To begin with you cannot determine the nature of the iron oxide optically at all because the tape on which the samples were placed
Dutton's Claim Spurious (contd)

is birefringent. This means that whilst the samples are on the tape with which they were removed from the cloth they give the incorrect refractive index when examined optically. When examined off the tape, as they have been since McCrone's examination, it has been shown by more than a thousand chemical tests that the iron oxide derives from blood on the cloth and not paint, that the blood is clotted and came from a severely injured human body and this also accounts for the presence of albumen from the same serum exudate which acts as a bilirubin binder and has nothing to do with pigment binders. Iron oxide on the Shroud is also derived from water stains on the cloth and from dirt on the foot image area. Further there is iron oxide covalently bound in the cellulose structure of the minute fibres of the cloth which come from water used in the retting process of actually making linen from flax.

Not only does this show that there is no pigment on the cloth but it has also been shown that the colour of the image is only 20 - 50 microns deep and the optical density of colour on each fibril is the same. Only the number of fibrils per unit area determines the relative visibility and density of the colour and the microscopic size of these fibrils excludes the possibility of the image having been applied to the cloth by any means of paint.

So subsequent research has demonstrated that McCrone was mistaken in his observations and for the same chemical reasons as above, any process of a rubbing technique like Nickell's is equally inconsistent with what is actually on the Turin Shroud. Joe Nickell is not the first to propose a theory of image formation; there have been several over the years and all have been documented and examined just as Nickell's has, but what Dutton and others cannot seem to get into their prejudiced minds is that no process of application to the cloth caused the image. This is by no means to say: therefore it must have been miraculous. And the very problem which all the 'Shroud Crowd' are trying to solve is what natural process could have caused it. This is what the 1978 investigation was all about. It is an ongoing mystery simply because there is not yet a satisfactory explanation.

There is no doubt that Nickell's process, like a number of others, produced an image with some visible characteristics which appear to be like that on the Shroud but it clearly cannot be the same process since, apart from the anatomical precision of the Shroud image and
Dutton's Claim Spurious (contd)

minute details (currently subject to further investigation) such as indications of coins over the eyes, a Jewish prayer pouch on the forehead and many other fascinating items of current research and discussion of which Dutton obviously has no knowledge, there is no way the image could have got there by manual application.

There is also a vast amount of research into the similarities of early depictions of Christ in art (which Dutton just might be qualified to comment on) suggesting very strongly that this piece of cloth with this image on it was around very much earlier than the fourteenth century to be copied by artists. Just one interesting aspect of this is the presence of facial features in some early depictions which incorporate what are known to be crease-marks in the cloth in Turin thus mitigating against the obvious alternative suggestion that a genius Shroud painter copied from traditional likenesses of Christ, most of which have exhibited similar characteristics for two millennia.

It is obvious, then, that Dutton's only three factors, which he repeats with tedious frequency, are no argument at all for the Shroud image being a painting. Dutton's charge that the numerous scientists and scholars involved in Shroud study are 'pseudo-scientists' motivated by religious bias is even more naive than his main arguments. He is quite happy to argue himself from the skeptical bias of an agnostic and yet seems to suggest that all scientists should be atheists or they are not scientists. That some of them happen to be Christians of various denominations has no bearing on their objective attitude to their scientific research. I doubt that laboratory experiments give different data depending on the religious persuasion of the researcher performing them. As it happens a number of the supporters of the view that the Shroud is no kind of forgery are Jewish.

Dutton's implication that the Catholic Church is involved in some sinister plot to advance the cause of the Shroud is equally without foundation; that church takes no official position on the status of the Shroud nor does it make any effort to commercialise its influence. If it did one would wonder why the Shroud is not on frequent or even permanent exhibition rather than two or three times a century. That many Shroud researchers happen to be Catholic scholars is also no surprise since the Catholic church has been the cloth's custodian for 600 years and should therefore take great
Dutton's Claim Spurious (contd)

interest in it, not to mention that one would expect Christian theologians to have a better knowledge of matters relating to Christ than trendy American art lecturers pontificating from their armchairs in the comfort of remote New Zealand's halls of academe.

His criticism of the current photographic exhibition because it 'omits important information' is equally offensive. The exhibition is simply one which displays, for the first time, the excellent photographs (at least Denis concedes that point) taken during 1978 and attempts to show some of the scientific testing programme in progress. There is a mass of material about all the other scientific and scholarly evidence not in this particular exhibition simply because that isn't what the exhibition is about. (And I'm glad it's not because the work involved in organising, transporting and displaying what we do have from Brooks Institute of Photography is a gargantuan task as it is, I can assure you - and no-one is being paid to do it).

Dutton may be interested to know, though, that as soon as his first article and photo hit the front page of The Christchurch Press I immediately included it in the exhibition. People were quick to compare the laughable image produced by Nickell - and held up by Dutton - with what the exhibition shows as the reality.

The carbon dating question currently stands thus: For some years after Libby invented the C14 process in 1947 a piece of cloth about the size of a handkerchief would have been needed in the destructive test to date the Shroud. It is obvious therefore why the authorities refused to give up such a piece of what just might be the most priceless relic in Christendom. Carbon dating techniques have recently become so sophisticated that accurate dating can be achieved with a few fibres of cloth. I can assure Mr Dutton that the authorities have agreed to the principle of the cloth being thus dated as soon as several independent laboratories can be organised to do the same double-blind tests simultaneously. The authorities are interested only in getting the right result whatever that may be. I have no doubt at all that the cloth will date to around the time of Christ because there is already so much other evidence that the Shroud of Turin has been around for 2,000 years and even a C14 confirmation of its age has little to do with the central problem of how the image got there. But the church doesn't need to rely on the Shroud for any religious reasons - Christianity will not change whether the Shroud is genuine or not and to imply that the
Dutton's Claim Spurious (contd)

authorities might fear the outcome is arrant nonsense. If, in fact, the C14 test were to place the cloth at any date later than the time of Christ, it will raise far more questions than it answers.

So I'm afraid the people of New Zealand are being conned by Mr Dutton since all the arguments he raises have already been carefully considered by the 'Shroud Crowd' long before he read about them in the 'Skeptical Inquirer' and similar journals. The fact that serious scholars and scientists do not say that the Shroud is that of Christ, because this can never be proved, but rather present objective evidence for various areas of research, contrasts markedly with Dutton's arrogant headlines that it must be a forgery because he says so. What credibility can one assign to an art lecturer who claims the Shroud to be a remarkable forgery (and if it were it would surely be the most remarkable forgery of all time) and yet has the gall to describe it so gratuitously and childishly as 'this old rag'? One wonders, incidentally, how one so steeped in art as a lecturer on it ought to be, can be an agnostic when the vast majority of the world's greatest works of art and architecture in every culture have been inspired by religious activity. But I digress...

He is simply attempting to promote himself out of his insignificant expatriate obscurity by riding on the back of the current exhibition which drew 175,000 visitors in Australia alone and is creating great interest in New Zealand. His plaintive and petulant cries smack of the great fear of all non-believers and skeptics that this piece of cloth just might turn out to be the actual Shroud of Christ and that most of the thousands of ordinary people who see the exhibition, who have personal beliefs, just might have those beliefs strengthened and those who do not just might have their non-religious beliefs challenged.

REX MORGAN

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JOHN SIMONS, a SHROUD NEWS subscriber, advised on 18th April 1985 that the Eucharistic miracle host of Lanciano has the same blood group AB as established on the Shroud by Italian scientist Bollone

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HOLY FACE SHRINE IN AUSTRALIA SINCE 1950s

An extraordinary piece of Shroud-associated history came the way of SHROUD NEWS recently when Father Adam Otterbein, President of the Holy Shroud Guild of New York sent us several pictures of a Shroud Shrine in the Roman Catholic Cathedral in Armidale, NSW. These pictures had been in his archives since October 1955 when the then Bishop of Armidale, E. J. Doody, wrote to him sending the photos and describing the Shrine which Otterbein had helped him with. The Bishop said: "The Shrine has been generally accepted as excellent. A good deal of experimenting was needed to get the correct site, satisfactory lighting, etc. It may interest you to know some details. We found that very little light gives the best result. I had a stained glass (sepia) mask made to block out the edges and throw up the face. The front is covered with plate glass. The lighting is from two 12" (10 watt) fluorescent tubes, one above and one below the face. This gives an excellent effect in daylight as well as at night. The lights are left burning continuously." SHROUD NEWS spies report that the Holy Face Shrine is still in Armidale Cathedral. There is also a leadlight window in the oratory of the Bishop's House, specially commissioned by Bishop Doody at that time. A reader might be able to confirm that it is still extant.
NEW SCIENTIFIC PROPOSALS

The Shroud of Turin Research Project (STURP) has presented a list of 85 questions to be addressed next time the Shroud is available for scientific study. These proposals were published in SHROUD SPECTRUM INTERNATIONAL No 13, December 1984, which we reproduce with permission:

Questions Addressed by Proposal

STURP recognizes that other groups or individuals may wish to submit proposals of their own to the church authorities. A detailed discussion of the technical aspects of the STURP proposal is beyond the scope of this paper; however, in order to provide some input to those who may be planning such proposals or who may wish to collaborate with STURP, we think it most meaningful to provide a list of questions which the STURP proposal has been designed to address. It is not suggested that these questions exhaust all those which may be asked about the Shroud in light of current knowledge, but they do represent those which STURP thinks are fundamental in a physical/chemical sense and which STURP believes it has the resources (personnel and experimental) to address.

The 85 questions can be arranged in three broad categories: conservation, authenticity, and image formation. At the beginning of each question is a code, based on the first letter of each category, which designates the category(s) to which the question belongs.

Of the 85 questions, 32 (38%) have conservation implications, 39 (46%) authenticity, and 51 (60%) image formation. It is likely that additional questions which can be addressed by the data would become apparent after the proposed examination is conducted. It should be noted that many of the questions are addressed by more than one examination procedure, thereby providing an internal corroboration character to the proposed studies. It should be further noted that many of the proposed examination techniques are different from those used during the 1978 examination.

1. C What is the pH of the Shroud and how does it affect aging of the Shroud?
2. C What is the tensile strength of the Shroud threads?
3. C What effect do the old mends, patches, have on the state of the Shroud?
4. C What effect do the charred regions have on catalyzing further cellulose degradation?
5. C How adequate are the current storage conditions for the Shroud?
6. C What are the effects of humidity on the Shroud?
7. C What are the degradation effects in the waterstain regions?
8. C What are the effects of Turin’s urban industrial air pollution environment upon the Shroud and image?
New Scientific Proposals (contd)

9. C  What are the effects of inorganic elements, known since 1978 to exist on the Shroud, upon the degradation rate of the Shroud cloth?

10. C  What are the effects of creases on the integrity of the blood images?

11. C  What is (are) the cause(s) of the wrinkle structures on the Shroud?

12. C  What is the temperature distribution of the Shroud while it is stored and being unrolled?

13. C  Are there any conservation issues regarding possible microbiological degradation of the Shroud fabric?

14. C  What varieties of dust (including pollens) and small animalicula exist on the Shroud?

15. C  Can the Shroud image be restored by computer analysis to the original state?

16. C  How do chemical/physical environments — past, present, and future — influence the spectra of the body image?

17. C  What predictions can be made from the spectra relative to conservation issues?

18. C  Can we obtain absolute spectra on defined areas to serve as reference data to track temporal degradation effects in the future?

19. C  What are the microscopic effects of stress on the Shroud fabric, particularly on the foldmarks?

20. C  Is sodium chloride responsible for helping to preserve the Shroud from deterioration?

21. CA  What was the relative effect of the 1532 fire with respect to natural aging discolorations?

22. CA  What further discoloration (degradation) effects can be expected on the Shroud?

23. CA  What is the fibre content of the Shroud (e.g. linen, cotton, etc.)?

24. CA  How old is the Shroud?

25. CA  What is the structure of the edges of the Shroud?

26. A  What is the nature of the features in the eye region which have been suggested to be Pilate Lepton coin inscriptions?

27. A  Are there any subtle discoloration features which might be associated with historical display or storage configurations (e.g. an oval around the face as suggested in the Mandylion hypothesis)?

28. A  Are there foldmarks on the Shroud which are consistent with its being once folded as the Mandylion?

29. A  What folding patterns can be seen on the Shroud?

30. A  Is the hypothesis that the image is that of Jesus consistent with what is observed on the Shroud?
New Scientific Proposals (contd)

31. A In what climate was the flax for the Shroud grown (i.e. Europe or Middle East)?
32. A What is the structure of the seam joining-the alleged "side-strip" to the Shroud?
33. A Does the side-strip represent a separate piece of material sewn onto the Shroud or a continuation of the Shroud with a seam being an added artifact?
34. A What is the three-dimensional structure of various foldmarks found on the Shroud?
35. AI Has the body image always been visible or did it develop with time against a more slowly developing cloth background discoloration?
36. AI In what temporal order did the blood and body images physically appear on the Shroud?
37. AI Are there materials present on the Shroud that can further confirm the forensic hypothesis that the cloth covered a wounded human body?
38. AI Are there artist's materials present on the Shroud and can they be accounted for?
39. AI Can novel materials be discovered that in themselves suggest new ideas concerning the nature of the Turin Shroud?
40. AI From a forensic point of view, what is the probable sequence of events which led to the image structures (i.e. body and blood) on the Shroud?
41. AI Can the weave structure be eliminated from the eye region in such a way as to not disturb the image (possibly that of a coin) in that area?
42. AI Can the inorganic pigment hypotheses (e.g. Fe₂O₃) be quantitatively tested by x-radiography, which can be performed more sensitively today than in 1978?
43. AI What does the "serum"/blood interface look like?
44. AI Can greater detail in the body-only image be observed?
45. AI Can blood density variation, serum, and waterfront zones (from 1532 fire) be documented?
46. AI What do body, scorch, cloth, blood, waterstain fibrils look like at high magnifications?
47. AI How do the spectra of bloodstains compare with those of various pigments that have been suggested (Fe₂O₃, HgS, etc.)?
48. AI Are there pigments in the blood regions?
49. AI Is there a correlation between image shading and iron (or other inorganic) concentration in the body image?
50. AI Is there mercuric sulfide in the bloodstain regions?
51. AI What is the elemental composition of the scourge-mark areas compared with blood, halo, body-image, and background areas?
New Scientific Proposals  (contd)

52. AI  Do the areas of the shoulder and calves (leg) contain deposits of dirt or dust similar to the heel area?

53. AI  Can more detail in the skin wounds, eyes, etc. be observed?

54. I  Can any of the various proposed image hypothesis mechanisms (e.g. scorch, ionization, photolytic, chemical, etc.) be tested?

55. I  Can previous image analysis studies pertaining to image resolution, enhancement, and three-dimensional interpretation be improved?

56. I  What is the relative reflectance of the dorsal body image to the frontal (at presumed contact points)?

57. I  Does the shading structure of the dorsal body image permit a three-dimensional interpretation as does the frontal image?

58. I  What are the spatial limits of the detectable body image?

59. I  What is the thermal diffusivity of the Shroud both longitudinally and transversely?

60. I  Can spectral data in the infrared be obtained which provides chemical information concerning the image?

61. I  What does the entire Shroud look like in the infrared while being illuminated with visible light?

62. I  Can particulate material be seen in the waterfront zones?

63. I  What are the visible fluorescent characteristics of various areas on the Shroud (e.g. body, blood, waterstain, cloth, scorch, etc.)?

64. I  How does the "serum"/blood transition zone fluoresce visibly?

65. I  Can differences between scorch and body image be recorded for later quantification and comparison with photoelectric spectrometry?

66. I  Do waterfront zones show different fluorescence?

67. I  What is the fluorescent pattern of the cloth weave?

68. I  Is the Shroud body image the result of a thermal scorch?

69. I  Why are there color differences among and within bloodstain regions?

70. I  What is the spectrum of the skin wound stains? Is it like blood?

71. I  Based on different blood spectra; can age, chemistry, microbiology, exposure, etc., account for the spectral features?
New Scientific Proposals  (contd)

72.  I  Are there detectable differences in spectral absorption (or reflectivity) of widely separated or specific body image areas?

73.  I  Quantitatively, can subtle differences between scorch and body image be defined?

74.  I  Are there differences in the degree of cellulose crystallinity on either side of the "chinband" image discontinuity that might correlate with the discontinuous shading in this region?

75.  I  Are there variations in elemental concentrations in the "chinband" area which might correlate with the discontinuous image shading in this region?

76.  I  What is the elemental composition of the body image areas compared with background areas?

77.  I  What is the elemental composition of the finger areas compared with that of body-image and background areas?

78.  I  What is the variation, if any, of the elemental composition of the background?

79.  IC  What is the penetration depth of the body image into the cloth?

80.  ICA  What is the discoloration (degradation) rate of the Shroud cellulose as a function of temperature, oxygen availability, and UV radiation flux?

81.  ICA  Does the body image contain any dried pigmentation which might produce a detectable irregularity in the random crease and wrinkle structure of the Shroud?

82.  ICA  Can microbiological activity explain the presence of iron oxide on the Shroud and/or the coloring of the bloodstains?

83.  ICA  Where are particles (dust) found and can these be used to locate the Shroud in specific geographical locations?

84.  ICA  What is the elemental composition of the area between the dorsal hips compared with blood, halo, and body image areas? Is there feces contamination there?

85.  ICA  Are blood images human blood?

Collaboration
In the STURP proposal, we indicate an interest in collaboration with other well-qualified Shroud groups and/or individuals. In this, our goal is not simply to seek collaboration for collaboration's sake, but rather to use collaboration as a tool to effectively investigate the scientific complexities of the Shroud (and thereby optimize scientific knowledge concerning it). Accordingly, we are not suggesting unrestrained collaborative investigations of the Shroud, but rather responsible collaboration which provides the best conditions and potential for illuminating critical scientific issues.
LETTER TO THE EDITOR FROM Dr VAUGHAN DAVIS, SYDNEY

In previous correspondence I mentioned this time since 1830 as the Marian age in the history of Catholicism. In your editorial obituary to Francis L. Filas, SJ, (SN 28, April 1985) you mention his membership of the Mariological Society of America and the fact that, as a result of his work, scientists are considering the possibility of image-formation in terms of electrical discharge.

Between May and October, 1917, the Blessed Virgin Mary appeared to three children at Fatima, Portugal. The Magisterium of the Roman Catholic Church has approved the supernatural character of the events. Two recent Popes, Paul VI (1967) and John Paul II (1982) respectively, have visited Fatima.

Eyewitnesses recorded observations of events which seemed to be of an electromagnetic nature associated with the apparitions:

1. "... perceived in the form of an indistinct whispering, or the loud humming of a bee, the sound of the Lady's answer alternating regularly with the girl's (Lucia) voice."

2. "At the end of the apparition, there was heard near the tree, a loud report, which the witnesses compared to the explosion of a rocket, and Lucy cried: 'There! She is going away'."

3. "... the topmost branches of the tree were bent in the form of a parasol, and remained thus as if an invisible weight had come to rest upon them."

4. "Further, at the Lady's departure, the upper branches of the tree, without losing the curved shape of a parasol, leaned towards the East ... the branches remained like this for long hours, and only slowly resumed their normal position."

5. A globe of light was seen to glide slowly from East to West to the site of the apparition and back again at its conclusion. Eyewitnesses believed "it was the vehicle that carried her."

Catholic Doctrine teaches the Assumption of Mary, body and soul, into supernatural life. Her presence at Fatima seems to point scientifically to an electro-magnetic influence of the supernatural. The Resurrection of Jesus resulted from the same supernatural energy and Fatima, therefore, lends support to the electromagnetic theory of the image formation of the Shroud of Turin.

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ELECTRICAL DISCHARGE

The various theories being aired in several places at the moment concerning the possibility of electrical discharge as the cause of image formation include those of Scheuermann (Germany), Bensen (ball lightning) (USA); Coote (earthquake) (New Zealand) all reported, in recent issues of SHROUD NEWS. These are added to by another comment I was given in Durham, North Carolina, at Duke University August 1984. It is written by Mr Darryl Junk, a graduate of Duke.

"What I want to share with you is an alternate explanation drawing on what I have read about the Catholic stigmatist, Therese Neumann. Though some people remain unconvinced of it, I believe that she demonstrated the ability to live without food or water for decades. This means that she was able to materialize out of the air the blood and nutrients that her body needed, and she lost ten pounds of blood a week every Friday. If you ignore the equally large loss of water through breath vapors and perspiration, you can use the figure of 10 lbs/week to find out how much power that one person was putting out. I figure that if she could materialize body mass, Jesus's spirit could have de-materialized his dead body and re-materialized it at will. Using Einstein's formula E = mc^2, the 10 lbs per week required 4.08 x 10^{17} joules/week, which is equivalent to 67 billion watts of constant output - assuming that she spread her recovery throughout the week. Since she regained her weight within a couple of days, the figure should be two of three times as high - if I've done my arithmetic correctly. Her yearly output, then, was at least 587 billion kilowatt hours, which is equal to over one-fourth of the total electric power used by the United States in 1975. The image on the Shroud could have been caused by coronal discharge caused by Jesus dematerializing his body instead of by a ball of lightning. The only other resurrection dematerialization I've heard about is in Yogananda's AUTOBIOGRAPHY OF A YOGI and involves no mention of coronal discharge, but instead a "peculiar rumbling sound".

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IN BRIEF

The long series of excellent articles on sindonology by Italian Professor Emanuela Marinelli of Rome continues to appear in the monthly journal GIO.
THE SHROUD AND NAMES

SHROUD NEWS drew attention (No. 12) to the use of the girl's first name SIDONIE or SIDONY which, according to the Oxford Dictionary of Christian Names, was often used to allude to the Shroud. A recent letter from Father Jack Mooney of Bowral, NSW, reflects on this matter and also draws attention to the possibility of the male name SYDNEY or SIDNEY being similarly derived. The city of Sydney in New South Wales was named after Thomas, 1st Viscount Sydney, (1733 - 1800) who was the Secretary of State at the time and "the least able of the ministers in Pitt's cabinet at the time." Thus Sydney, Australia may be able to claim this, at least etymological, connection with the Holy Shroud and perhaps, therefore, it is not surprising that dissemination of most Shroud information in Australia emanates at the moment from Sydney.

IN BRIEF

The latest edition of Dorothy Crispino's excellent SHROUD SPECTRUM INTERNATIONAL (June 1985) contains a further article by Professor GIOVANNI TAMBURELLI of Turin on his computer work in reconstructing the face of the man in the Shroud. There is also an important description of the background to the commemorative postage stamp issued in Italy in 1978 to coincide with the exposition in that year as well as an article documenting in English the extraordinary exposition of the Shroud to the monks at the Benedictine Monastery of Montevergine, where it was taken during World War II. A most interesting account by Father Charles Foley of Devon, England (who has also written for SHROUD NEWS) describes the whole matter of Josephine Woollam who was taken to the Shroud by Group Captain Leonard Cheshire, VC, in 1955. This is the only real claim of any kind of "cure" being attributed to the Shroud in modern times. Josie was dying in 1955 but survived until May 1981 a few weeks before Cheshire was in Australia and described Josie's funeral to Rex Morgan. She was also able to see the Shroud again in 1978.

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The most recent issue of the British Society for the Turin Shroud Newsletter reports that the British testing proposals were to be presented at Turin in July. It also reports on Ian Wilson's visit to the Atlanta Center where he met several American sindonologists and toured the exhibits.

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Rex Morgan was invited from several sources to attend a recent Radio-Carbon dating Conference at Trondheim in Norway. Unable to go at short notice it is good to know that Kim Dreisbach (Atlanta) and Dr Robert Dinegar (STURP) were there and no doubt we shall receive reports.
DONALD M. SMITH

Since our publication of Donald M. Smith's THESIS OF OBLIGATION we have received the following notes of clarification which amend the information we presented and correct some typographical errors of ours:

NOTES OF CLARIFICATION

Re: THESIS OF OBLIGATION presented in SHROUD NEWS, issue no. 28, published by the Runciman Press and edited by Mr. Rex Morgan.

While it is true I am indeed grateful to Mr. Rex Morgan and SHROUD NEWS for publishing the THESIS OF OBLIGATION there are certain points of information I wish to clarify:

SHROUD NEWS states I was widely reported in the world press in 1984 when I published my book THE LETTER.

THE LETTER was actually published in 1983, which I delivered to the Vatican's representative of the secretariat of state, Monsignor Carlo Maria Vigano in December of 1983 at the Apostolic Palace, Vatican City State. THE LETTER was also delivered to the Vatican by the United States Ambassador to the Holy See, the Honorable William Wilson. There was in fact very little news coverage of this event.

THE LETTER is a shroud book of VII parts addressed to H.H. Pope John Paul II and reviewed in both SINDON Quaderno N. 33 and SHROUD SPECTRUM INTERNATIONAL issue no. 11, and replied to by letter dated February 14, 1984 from His Excellency Archbishop Eduardo Martinez Somalo, the Vatican's deputy secretary of state, which reads as follows:

'Dear Mr. Smith,

His Holiness Pope John Paul II has received your letter, in book form, and he has directed me to reply in his name.

His Holiness wishes you to know that he appreciates the sentiments which prompted you to write to him and he invokes God's blessings upon you.

Sincerely yours,
E. Martinez
Substitute*

On June 26, 1984, I delivered a Letter Of Salutation accompanied by the THESIS OF OBLIGATION to the above mentioned Monsignor Vigano at the Apostolic Palace, Vatican City State. Both the Letter Of Salutation and THESIS OF OBLIGATION was also delivered to the Vatican by Ambassador William Wilson and acknowledged by letter dated July 10, 1984.

The original THESIS OF OBLIGATION actually contains thirteen pages of footnotes and references to published works of authority, supporting the individual points of fact.

Because of typographical errors appearing in the SHROUD NEWS' publication, three portions of the original are herewith reproduced:

1. Preamble Page:

   OBLIGATION TO DATE THE SHROUD OF TURIN

   RESPECTFULLY SUBMITTED TO HIS HOLINESS,
   POPE JOHN PAUL II, THIS TWENTY-NINTH DAY
   OF JUNE IN THE NINETEEN HUNDRED AND EIGHTY-
   FOURTH YEAR OF OUR LORD AND SAVIOR,
   JESUS CHRIST.

2. That portion appearing under the subtitle CRUCIAL:

   CRUCIAL

   Therefore (even if there is only a reasonable possibility a real human corpse was once enwrapped in the Holy Shroud¹²), I can't help but believe how crucial it should be for those in the highest authority to determine the truth concerning the age of the linen of the Holy Shroud of Turin.

3. That portion appearing under the subtitle THEREFORE:

   THEREFORE:

   I hereby petition, entreat and beg Your Holiness to grant permission for the commencement Of this most crucial dating procedure — thereby resolving the origin of the HOLY SHROUD.

   Respectfully submitted,

   Donald M. Smith

Although that portion of the original Thesis shown above under the subtitle THEREFORE uses the word 'hereby', I do indeed wish I had used the word 'humbly' as shown in the SHROUD NEWS' publication.

Again, I wish to express my deep gratitude to SHROUD NEWS and Mr. Rex Morgan for publishing the THESIS OF OBLIGATION.

Sincerely,

Donald M. Smith
SHROUD NEWS

SHROUD NEWS began in 1980 when Rex Morgan, author of PERPETUAL MIRACLE-SECRETS OF THE HOLY SHROUD OF TURIN started putting together a few notes about current developments in sindonology (the study of the Shroud of Turin) for a small circle of interested people in Australia. He didn't expect it to go beyond a few issues.

The bulletin now reaches subscribers all over the world and because of its relatively simple method of production it can be written and produced and the information disseminated more quickly than most news-sheets of a similar kind. It contains information, news, articles and illustrations gathered from sources of Shroud study worldwide through Rex Morgan's extensive personal connections with what has been described as the "Shroud Crowd".

Morgan is a frequent overseas traveller and thus has the opportunity to keep abreast of latest developments in Shroud study and research. He was present at the world media preview of the Shroud itself in August 1978 in Turin, Italy and has since met with numerous Shroud researchers in many countries. His quest for information about the Shroud has become, as he describes it, a "passionate hobby" and he has since written the best-selling SHROUD GUIDE (December 1983) and is working on another major book about the Shroud. He is currently Honorary Director of the Brooks Institute Photographic Exhibition on the Shroud which is touring Australia, New Zealand and parts of the Far East. Morgan has been appointed to the Board of Directors of the USA based Association of Scientists and Scholars International for the Shroud of Turin (ASSIST).

Our list of SHROUD NEWS subscribers continues to increase. We request a subscription in Australia of $6 for six issues posted. SHROUD NEWS comes out approximately 6 times per year. USA subscription for 6 issues is SUS 6 (posted surface mail) or SUS 12 (posted airmail). Postage to other countries varies. All back issues are available at $1 (US or AUS) each plus postage charges.

Please encourage those of your acquaintance to take out their own subscription. The more we have the more we can improve the bulletin.

All information and opinion published in this newsletter is given in good faith. It is edited (and mainly written) by Rex Morgan and published by

THE RUNCIMAN PRESS, Box 86, P.O., MANLY, 2095, N.S.W., AUSTRALIA