

The Shroud and the Resurrection

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1. Real Reason of the abnormal C 14

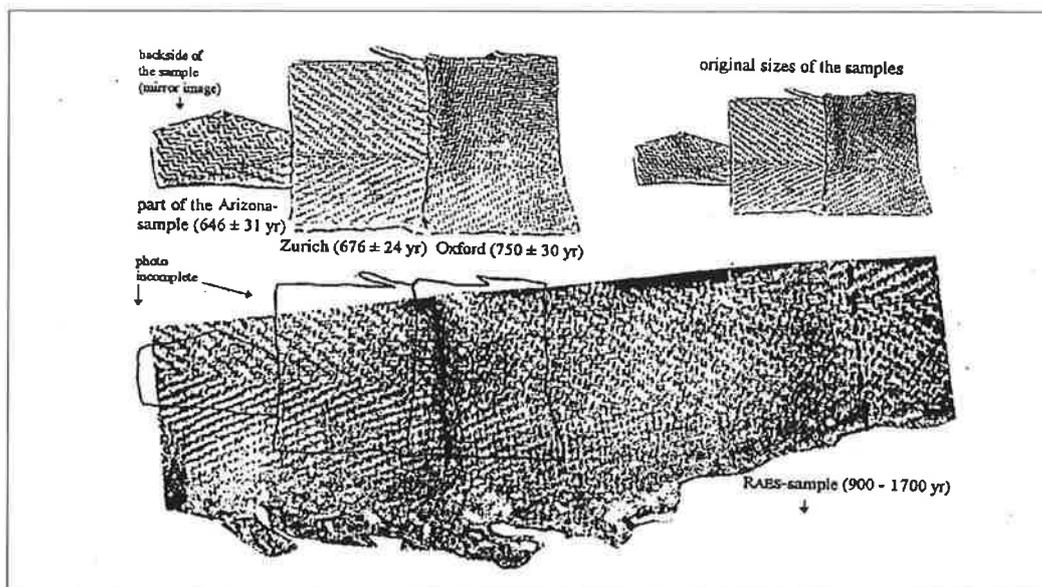
A neutron flux has increased the C 14 content! Sign: already in 1988 an inhomogeneity was analysed!

Table 1: Refutation of all hypotheses Concerning the Abnormal C14

| Hypotheses | Contradictions |
|---|---|
| contaminations with recent material | contamination of 55% with <i>recent</i> material seems to be impossible |
| mistakes of measuring, random wrong results | 12 samples in 3 institutes correspond to each other |
| carboxylation during the fire of 1532 | the C 14 - content in the aire of the silver shrine was too small |
| fraud to the Shroud | refutation by photos; 1988: a systematic <i>inhomogeneity</i> of C 14 |

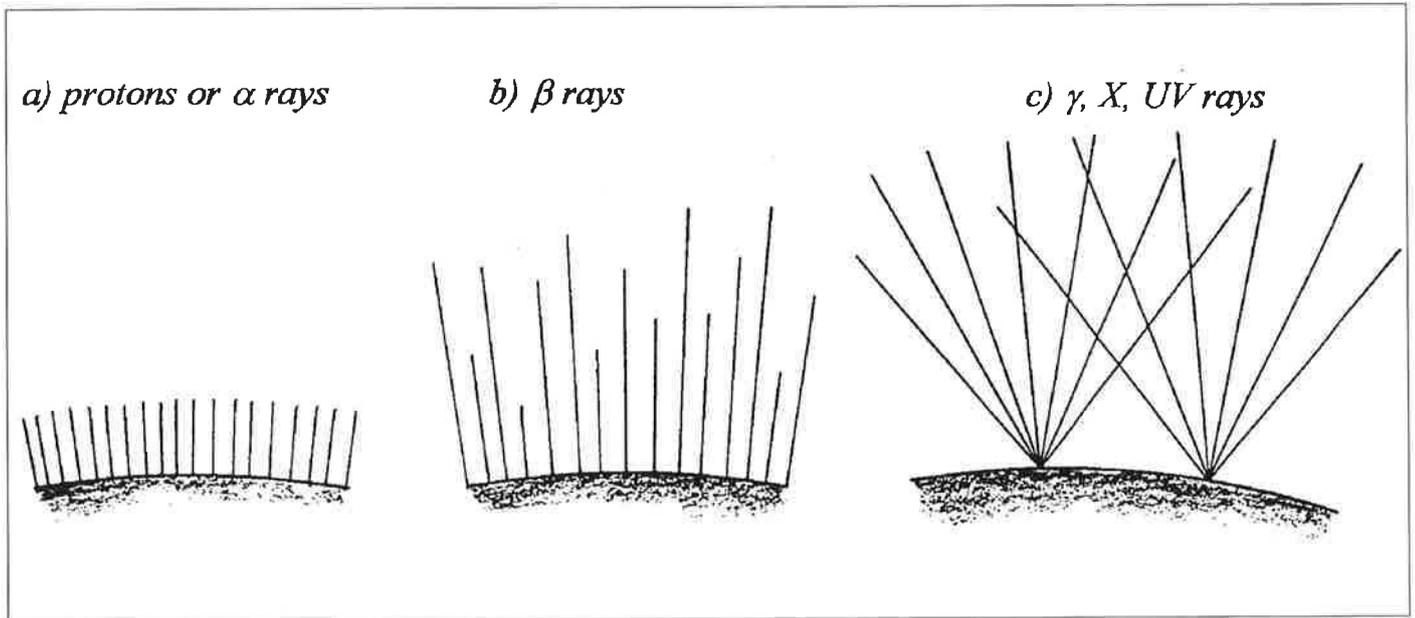


Fig. 1: Photos of the Samples taken in Turin and analysed in the Three Laboratories



2. Real Origin of the Body Image

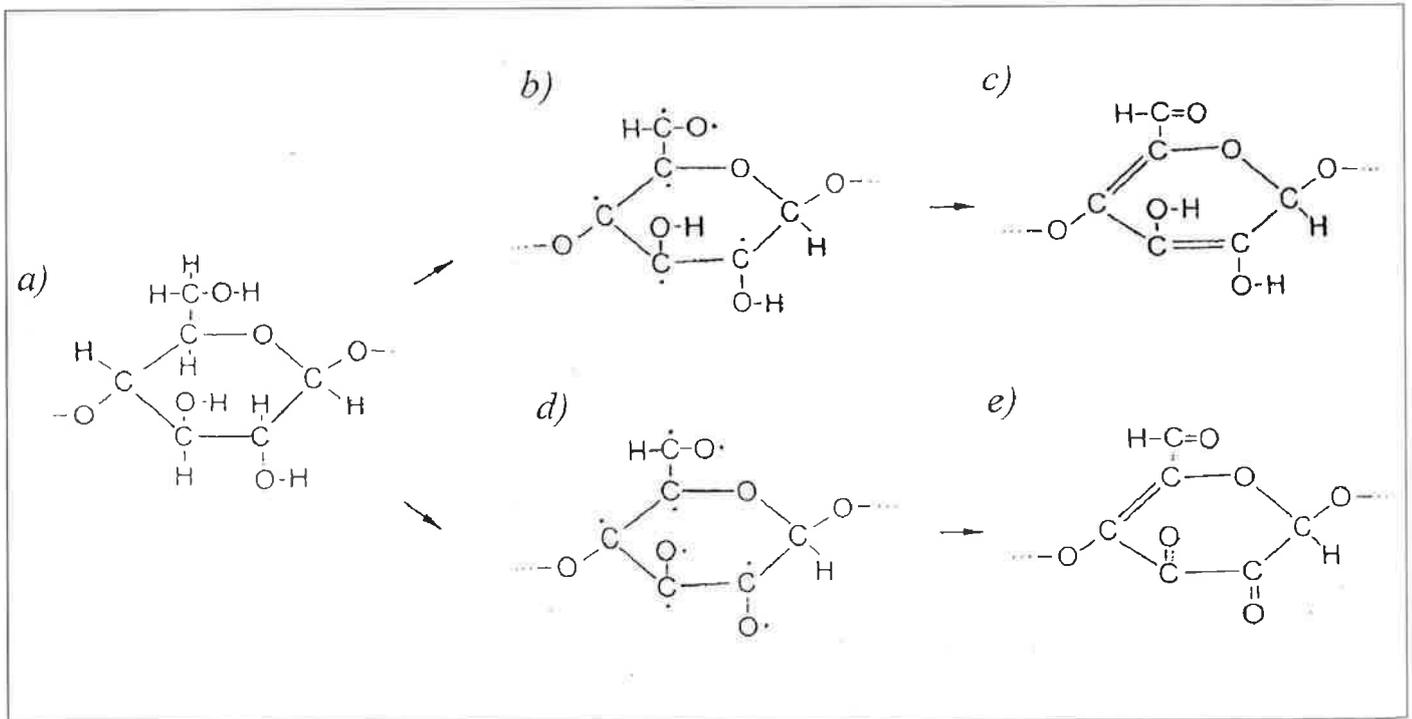
Fig. 2: Characteristics of different Types of Rays



Only electron rays could cause a clear, undistorted image: in the case of great radiation densities the preading must be parallel, being sufficiently absorbed by the air. They must have had sufficient energy to remove atoms from the cellulose, as shown in fig. 3.

Fig. 3: The Chemical Nature of the Body Image

First, from the cellulose molecules (a) atoms are separated, the resulting free electrons (points in figure b or d) form conjugated double bonds ($-C=C-C=C-$) or carbonyl groups ($C=O$), shown in (c), or they form conjugated carbonyl groups ($C=O-C=O$), as shown in (e).



Refutation of all other Hypotheses of the Body Image

Table 2: Contradictions of the Analytical Results

| Assumed origin | Contradictions of the analytical result |
|--|--|
| vaporographic hypothese: image caused by aloe, myrrh or odours | such substances are not in the body image, but only spread overall in the whole Shroud |
| medieval, "camera obscura" | no silver is detectable |
| artificial painting | no pigment is detectable |
| direct imprint of the body | dorsal traces are fainter than the frontal ones; 3D-character of the traces |
| manufacture with help of a heated statue | spots of direct contact should be darker (heat transfer is greater by direct contact than by radiation); there are no pyrolytic residues |

3 D = three-dimensional

Table 3: Contradictions of the Natural Laws

| Supposed origin | Contradictions | Consequences |
|------------------------------|--------------------------------|--------------------------|
| γ , X-rays, UV, light | insufficient absorption by air | 3 D - image not possible |
| α or proton rays | approximately uniform range | 3 D - image not possible |
| soft X rays | no parallel rays; | only a blurred image |
| natural beta rays | the dose is too small | gives no body image |

3 D = three-dimensional

3. Simultaneity of a neutron flux and electron rays

Sign: the traces of hair: by dematerializing the protons, the chemical bonds also disappeared (therefore, the hair could not «stand on end» from electrical charge): so that the electrons push themselves off the neutrons and radiated against the Shroud.

4. Proposals for New C 14 Analyses

My theory could be confirmed incontestably by new analyses of C 14 content. The following illustration shows some predicted values of C 14 content from my calculations. Each sample (shown to scale) is sufficient for a double analysis (two parallel analyses).

By scorching *no isotope shifting occurs*; this is proved by investigations of the Zurich «Institut für Mittelenergiephysik» and shown by the following considerations of plausibility. A fibre of linen (see the photo beside) is oxidized from the surface; and therefore, a partial oxidation of the different isotopes cannot be possible. The photo shows also some contaminations. But even when such *recent matter* combines with the scorched linen and is not washed out, a radiocarbon age which lies in the future can never be reached! Therefore, a sampling on the scorched spots with values of *negative ages* (i. e. which lie in the future) must be very significant for new radiocarbon analyses.

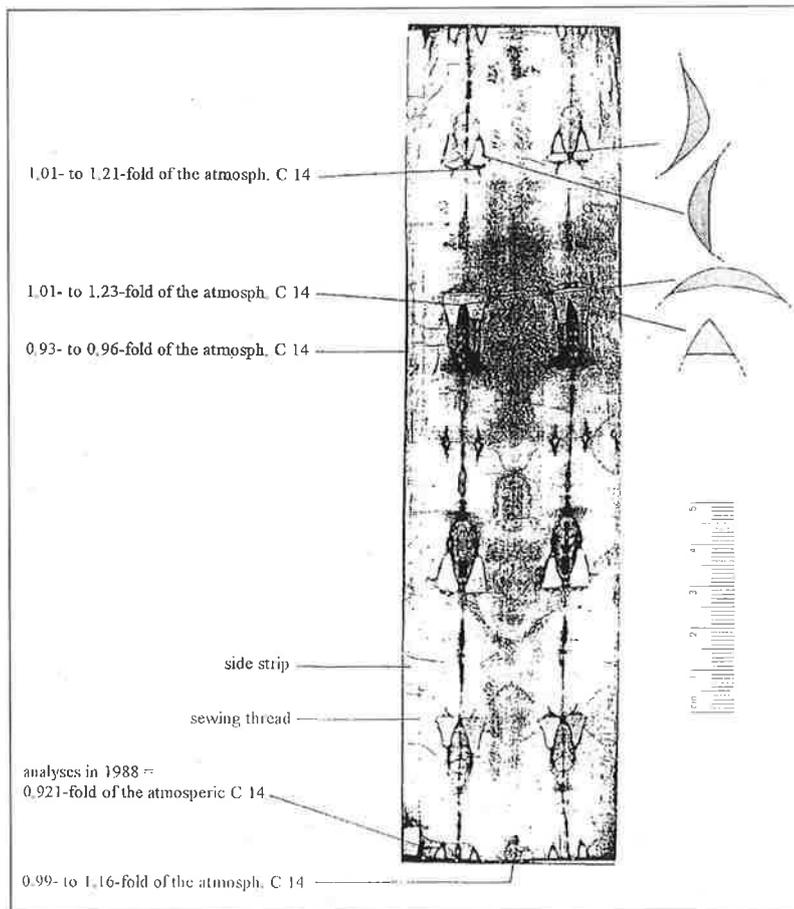


Fig. 4: Results of Calculations of the Supposed C 14 Content Sampling from the Scorched Spots

5. Description of my Experiments

5.1 Irradiation of Linen with Thermal Neutrons

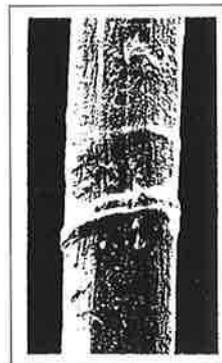
C 14 content in linen can be raised by the two following reaction mechanisms:



Table 4: Calculated Neutron Flux on the Spot Analysed in 1988

| Isotope | Content in the linen | Capture cross section | Required neutron flux |
|---------|----------------------|-----------------------|-----------------------------------|
| N 14 | 1% | 1.75 barn | $1.25 \times 10^{14}/\text{cm}^2$ |
| C 13 | 1.1% | 0.0009 barn | $2.2 \times 10^{16}/\text{cm}^2$ |

Fig. 5: A Flax Fibre: enlargement 1000 : 1



Result of the calculations: The quantity of C 14 from N 14 is about 200 times greater than that originating from C 13. **The experiments could confirm the following aspects:**

- C 14 could be obtained from N 14 and from C 13 in the calculated amounts.

- C 14 originating from N 14 disappeared from the flax because of the chemically reactive radicals (by the changing of N - atoms into C - atoms. It is possible that C 14 compounds originating from N 14 are stiff in the Shroud. But they must have been washed out during the cleaning operations. This could be verified by analyses with the **unwashed** samples of the Shroud.

In 1988 only C 14 originating from C 13 was analysed

Result: The experiments could confirm my theory that a neutron flux is the true cause of the abnormal C 14 result in 1988.

5.2 Irradiation of linen with Electrons

It is supposed that in the grave about 10^{16} electrons/cm² were set free during a single moment of the Resurrection (analogous to the quantity of neutrons). Such high

electron sources are not experimentally available. Nevertheless, I have made some experiments to expose linen to β rays and to sparking discharges. I could attain a jaunissement of the linen like in the Shroud. Some details I have published in my brochure «Facing Reality», available by the author.

6. General Remarks

The mysteries of the Shroud can only be solved by combining scientific questions with the real foundations of Christianity. It would be a serious mistake and a **methodical fault to ignore the reality of Jesus Christ's Resurrection**. By ignoring this, the unexpected results of the radiocarbon analyses in 1988 and the origin of the body image would remain inexplicable, and **one can never ever find a solution for this mystery!** But the properties of the elementary particles left by this singularity must react as components of the material world according to the chemical and nuclearphysical laws of nature, and therefore can be detected. ■