DECLARATION OF THE SCIENTIFIC COMMITTEE OF THE PARIS INTERNATIONAL SCIENTIFIC SYMPOSIUM

1. The Committee was gratified that two scientists who had taken an active part in the recent dating of the Shroud by Carbon 14 attended the Symposium and presented papers:

- Professor Luigi Gonella of Turin Polytechnic,
- Doctor Mike S. Tite, director of the British Museum Research Laboratory.

It will be remembered that Dr. Tite was coordinator of the Shroud dating project and it is he who certified the samples, coordinated the results obtained by the three laboratories (Arizona, Oxford, Zurich), and interpreted them.

Dr. Tite is also one of the signatories of the article that appeared in the British scientific periodical, *Nature*, 16 February 1989, the only document giving an account of the dating operations carried out on the three samples prepared from the strip removed from the Shroud; operations which led to the conclusion that the Shroud fabric dates from the XIIIth or XIVth century.

2. Even before the Symposium took place, the Scientific Committee had been informed that professional statisticians, (among them Bourcier de Carbon, Symposium moderator) had expressed strong reserves about the manner in which the results obtained by the three laboratories had been statistically analyzed.

According to these statisticians, it would appear from the results entered in Table 2 of Nature (p. 613, second column) and especially the values given by the X^2 test for the three samples (6,4 in column 1) that the samples are not homogeneous in radiocarbon dates. This allows the affirmation, lacking more information, that the ensuing statistical estimates are devoid of value.*

The hypothesis that the percentage of Carbon 14 with reference to total Carbon (from whence one deduces the radiocarbon date) is not the same in every part of the Shroud is rejected, for theoretical reasons, by almost every specialist in C14 if the object under consideration has not been heavily contaminated — which is the case of the Shroud.

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* Therefore the Committee requests the publication of the comments made by Prof. Bray, of the G. Colonetti Institute, concerning this specific point. His comments are alluded to in *Nature*, p. 614, column 2. Also requested is the publication of all the raw results obtained by the three laboratories.

3. While the Scientific Committee leans toward the opinion of the specialists, it does not intend to take sides. But it believes that one needs only to examine the February 16 article in Nature, the only document relating to the results obtained by the carbon dating tests, to see the anomaly. This by itself is sufficient reason to justify the request formulated by many for a new dating of the Shroud by the same method.

4. However, because of the unparalleled value of the Shroud, historical as well as religious, one cannot go on indefinitely removing samples; therefore, the Committee believes that before proceeding to a new dating by C14, it is indispensable to elucidate the serious question raised by the divergence of the results obtained by the Oxford laboratory on the one hand and those obtained by Arizona and Zurich on the other.

The Committee believes that to accomplish the above, it would be necessary:

a. To conduct dating tests by the C14 method on several fabrics of different ages with solid guarantees of non-contamination, and taking from each one several samples *from different areas*.

b. If, contrary to what the Carbon 14 specialists and the Scientific Committee believe, these tests reveal, in a significant manner, a heterogeneity in the distribution of the proportion of C14 to total C within these fabrics, it would be desirable that physicists expert in nuclear physics attempt to work out a coherent explanatory theory.

The Committee recalls that numerous hypotheses have already been proposed to explain the anomalies in the distribution of C14 in an object (radiation, particle flux, etc.). But all these hypotheses have run up against grave theoretical objections.

c. A new dating by C14 therefore should not be undertaken until after it is established in definitive manner that in the distribution of the C14 percentage, there is no heterogeneity that cannot be explained by reasonable natural causes.

The Committee recalls that every explanation given for a variation in C14 caused by the Resurrection of the Man of the Shroud can neither be demonstrated nor invalidated by Science.

d. Given the inestimable value of the Shroud, the Committee requests, if it is decided to proceed to a new dating, that this be done on samples on which *non-destructive* tests had been *previously* conducted; in particular, the chemical study of the threads that numerous scientists have called for.

5. In case a new carbon dating test were to be decided, the Scientific Committee requests:

a. That a precise procedure of operations be established with the cooperation of the British Museum, the Pontifical Academy of Sciences, and STURP.

b. That the procedure be entirely controllable.

c. That the delegates of the three organizations (and eventually others to be decided upon) be charged to verify at every moment that the defined procedure is exactly followed.

d. That no person be granted a monopoly in the interpretation of the measurements made by the designated laboratories. For this reason, the Committee requests that the laboratories publish immediately and without any correction *all the raw results* obtained by their apparatus: that is, the percentages of C14 to the total C, according to the international standard, i.e., the standard of the atmosphere of A.D. 1950.

Of course, the laboratories would be free at the same time to publish the corrections deemed necessary and their interpretation of their results. But every physicist and every statistician ought to find in the reports *everything* he would need to make his own interpretation of the raw results obtained. No monopoly of interpretation should be conceded to anyone at all, particularly in the statistical calculations.

The present Declaration was unanimously adopted by the Scientific Committee and signed by all members at the meeting of 29 September 1989, in Paris.