

## SHROUD CARBON DATING TO GO AHEAD

Despite the serious doubts raised concerning the choice of three laboratories representing only one of the two available carbon dating methods [see *Newsletter* no. 18], it seems that samples for carbon dating will be removed from the Shroud very shortly, almost certainly before the end of this month.

An official release of the exact procedures to be adopted has been published in the 7 April issue of the scientific journal *Nature*, in the form of a letter by Dr. Michael Tite of the British Museum Laboratory, who will act in a supervisory capacity. According to Dr. Tite's letter:

...I am now able to provide an outline of the procedures that have been finally agreed for the radiocarbon dating of the Shroud of Turin. Of the seven original offers to undertake the dating of the Shroud, three have been accepted by Cardinal Ballestrero, Archbishop of Turin and Pontifical Custodian of the Shroud. The radiocarbon laboratories concerned are the University of Arizona, the University of Oxford, and the Federal Institute of Technology in Zurich, and each has now agreed to proceed with the project.

Each laboratory will be provided with a sample from the shroud, together with two known-age control samples, one of which will have been independently dated by conventional radiocarbon dating. The shroud samples will be taken from a single site on the main body of the shroud away from any patches or charred areas. In order to ensure that ample carbon for dating survives after pretreatment, the weight of each cloth sample (that is, shroud and controls) will be 40 mg. All the samples will be given to the laboratories as whole pieces of cloth without being unravelled or shredded. A blind test procedure will be adopted in that the three samples given to each laboratory will be labelled 1, 2 and 3 and the laboratories will not be told which sample comes from the shroud. Even if the samples were shredded, it would still be possible for a laboratory to distinguish the shroud sample from the others. It is therefore accepted that the blind test depends ultimately on the good faith of the laboratories.

The removal of the samples from the shroud will be undertaken under the supervision of a qualified textile expert. These samples will be weighed, wrapped in aluminium foil and sealed in numbered stainless steel containers. The control samples will be similarly treated. All these operations will be watched over and certified by Cardinal Ballestrero in collaboration with myself. After they have been packaged, we will immediately hand over three samples (shroud and two controls) to representatives of each of the three radiocarbon dating laboratories who will be in Turin for this purpose. In addition, all stages will be fully documented by video film and photography.

On completion of their measurements, the laboratories will send their data for the three samples to both myself at the British Museum and to the Institute of Metrology "G. Colonetti" in Turin for preliminary statistical analysis. The laboratories have agreed not to discuss their results with each other until after they have deposited their data for statistical analysis. A final discussion of the measurement data will be made at a subsequent meeting in Turin between representatives of these two institutions and representatives of the three laboratories at which the identity of the three samples will be revealed. The results as finalized at this meeting will form a basis for both a scientific paper and for communication to the public. The timetable for the operations has not yet been fully established but it is hoped that a radiocarbon date for the Shroud of Turin will be released by the end of 1988.

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