

# Letters to the Editor

## An electrically charged Shroud?

*From Dr. John Jackson of the Turin Shroud Center, Colorado*

I feel some comments are needed on Tony Fleming's article 'Could carbon dating be erroneous if the Shroud was kept in a metallic container for a significant period between AD30-2000?' as published in Newsletter No.51.

The hypothesis that charge build-up within a closed metal environment will retard or even halt radioactive decay from the nucleus assumes that this charge will remain trapped within the closed system indefinitely. Common experience says that this will simply not happen (e.g. batteries discharge, etc.) Nature does not want to remain in a condition of charge separation and wants to seek electrical neutrality.

There are many electrical pathways that permit this to occur. For example, air has an intrinsic electrical conductivity. This will allow any charges, initially separated by radioactive decay, to achieve charge neutrality within the box by electrical currents through the air. When a C-14 decay occurs, the carbon nucleus is converted to N-14 (nitrogen), while its electron cloud is still that of carbon. This situation remains only for a moment and the electron cloud quickly finds the needed electron from its surroundings to cause neutralization of the atom.

Now suppose that a D.C. electric field is present (the author assumes this is due to many radiocarbon decays). It is likely that the electron cloud surrounding the C-14 nucleus will readjust itself so as to repel the D.C. field away from the nucleus. This is what happens when a charge is placed upon an electric conductor, like metal. The charges rearrange themselves on an equipotential surface. The result is that the electric field inside the conductor is absolutely zero. This phenomenon is well-known in any elementary course in electrostatics.

A common assumption in the theory of chemical bonding, called the Born-Oppenheimer approximation, is that electrons adjust themselves within the atom on a time scale much shorter than those of atomic motions. Accordingly, I think that electrons surrounding the nucleus, when subjected to a static electric field, will quickly arrange themselves so as to counter that field and thereby repel it from the nucleus. It is well-known that molecules can become polarized when placed in an electric field and this is due to electronic readjustments. In addition, electric fields are known to cause shifts and splitting in atomic spectra, which is due to electronic rearrangements. Accordingly, I think that a nucleus will be protected by its own electronic cloud from any exterior electrostatic fields.

In fact, if Mr.Fleming's hypothesis is correct, then we would have solved the problem of radioactive waste. All we have to do is to seal the waste in a metallic chamber, electric fields would build by radioactive decay, and the dangerous decay process would stop. I know of no Los Alamos type studies that suggest this happens, and it will not happen because leakage currents will unavoidably dissipate charge into the external environment (as it would for the Shroud). Finally, if electrostatic charges were to build as envisioned by the author, on the order of several tens of kilovolts according to my calculations, it would be like opening the power supply on a television set, something that could be fatal.

Dr. John Jackson, Turin Shroud Center of Colorado,  
P.O.Box 25326, Colorado Springs, CO 80918, USA



forehead from the centre parting is also present and this we know to be quite possibly expressive of the figure 3 bloodstain observable on the Shroud

Peter Leitch, 17 Church Avenue, Dunmurry  
Belfast, Northern Ireland BT17 9RS

## Sleuth's Corner

### Missing piece of the Shroud in Prague?

*Following the blank drawn with tracing Margaret of Austria's 16<sup>th</sup> century snippet of the Shroud (Newsletter 51, p.42), on July 20 out of the blue came an e-mail message from Jana Souflova, a correspondent in the Czech republic. This suggested that a small portion of the Turin Shroud (potentially, one of those missing from the so-called side-strip) may be preserved unrecognised in the Treasury of St. Vitus Cathedral, Prague.*

As became learned from Jana, who was acting as English speaking intermediary for others in the Czech republic, item K202 in St. Vitus's Treasury, bears the ancient inscription 'De sudario et panno cruentato , quo Christus usus est in Passione et Sepultura'. This certainly suggests a relic from Christ's burial cloth. It is preserved under glass in a very small Gothic frame, and it appears to measure 20 cm x 10 cm, though apparently it has never been properly investigated. As yet there exists no photograph, and as Jana comments 'of course there is no money to do anything'.

While the dimensions as given don't suggest an exact match to one of the Shroud's missing portions, they are not so wide of the mark to be impossible given the paucity of present information. Furthermore particularly interesting is the information that the relic was apparently a gift made in 1353 by Pope Innocent VI to King Charles IV of Bohemia, who did much to enhance Prague, including founding St. Vitus Cathedral. Not only is 1353 within the very half-decade that our Shroud so mysteriously comes to light in the hands of Geoffrey de Charny, Pope Innocent VI, who had assumed the papacy only the previous year, had some tantalisingly close de Charny connections.

In 1347, when he was Cardinal Etienne d'Aubert, he was one of the two cardinals sent to Calais to broker peace with King Edward III of England (then besieging the town), Geoffrey de Charny having been one of the four key lay negotiators sent a few days earlier. So there can be absolutely no doubt that Innocent and Geoffrey would have known each other. Furthermore it was also he who in January 1354, when he was Pope, issued the Bull that officially recognized Geoffrey de Charny's Lirey collegiate church in which expositions of the Shroud would be held, and that same August granted indulgences to those who came to visit this. As for Charles IV, his father, the blind King John of Bohemia, had sent him to be educated at the French court. There his tutor was the very gifted Pierre-Roger of Rouen who as Clement VI (1342-52) was Innocent VI's immediate predecessor and the Pope to whom Geoffrey de Charny, in 1349, had first addressed his petition for the building of the Lirey church.

Furthermore blind King John, Charles' father, had a reputation for chivalry that can only have deeply impressed Geoffrey de Charny. At the battle of Crecy in 1346 he took the French side, and when the French nobles began to lose and quit the field it was he who, despite his disability, insisted on being guided to the thick of the battle where he died fighting to his last breath, in much the same manner that Geoffrey would do ten years later on the field of Poitiers. As King John's son, Charles IV is very much the sort of individual on whom Geoffrey de Charny might have bestowed a piece of the Shroud at Pope Innocent's behest.

None of this proves that the relic in St. Vitus Cathedral came from our Shroud. But the trail is certainly worth investigating. Prague Castle has an Internet site at <http://www.hrad.cz/castle/> This lists every key contact, including individuals who specifically work in the Treasury. Jana Souflova suggests Milena Bramermanova at Milena.Bravermanova@hrad.cz tel: +420 2 24373292; fax +420 2 24372341.  
Good sleuthing!

## Forthcoming Events

Following the recent Orvieto Symposium Rex Morgan of Australia has announced a deferral of the International Shroud Conference that he had been planning to hold in Bathurst, Australia in October 2001. His intention is now to hold this sometime in 2002.

In the meantime Fr. Fred Brinkmann and the American Shroud group AMSTAR are planning a Symposium next year at Canandaigua in New York State. The date has yet to be announced but is expected to be summer or early autumn.

