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P50 - Lost image recovery for stained glass panels from the Rosslyn Chapel

Friday, 11 July 2014 13:00 (1 hour)

Rosslyn Chapel, built in 1446, is both a place of Episcopalian worship and an ancient monument of international significance. Having survived both the Protestant Reformation and the English Civil War, the chapel is now one of Britain's most important sites for romantic tourism; displaying suspected Templar ritual within its mediaeval carving and influences of Scottish Tractarianism within its stained glass. The iconography of both stone and glass continues to be hotly debated, but there is no doubt that the glass imagery was intended to have sacred significance.

Manufactured by Clayton and Bell of London between 1867 and 1887 with a "grisaille" technique, many panels have suffered extreme image loss due to an aggressive internal environment. Grisailles are the Fe-rich monochrome paints fired into the glass and used for shading or outlining the image. This work aims to uncover the lost imagery by revealing the original artists' paint strokes.

Using Total-IBA methods we have demonstrated that the lost grisaille leaves an invisible residue in the glass in the form of a surface enrichment of Fe. The Fe concentration is low, but can be detected and mapped using PIXE at a high spatial resolution.

New external microbeam facilities at the Surrey Ion Beam Centre incorporate a large-range motorised sample manipulator and a high count-rate spectrometry system for both particle and X-ray detectors. Using this we have analysed deteriorated stained glass from Rosslyn chapel; we show that the lost image can efficiently be recovered by PIXE with high acuity, which provides invaluable guidance for the restorers and conservators.

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Session Classification: Poster Session with Cheese and Wine