My response to Peter Schumacher about halo study

By O.K.
Background: The presence, or not, of the halo around the Shroud face is one of the arguments raised for or against the identity of the Shroud with Mandylion, moved from Edessa to Constantinople in 944.

Following Wilson’s hypothesis it has been argued, that the Shroud was folded in Edessa in four, the way showing only face through the circular hole in the cover. Thus, as this area would have been the only one exposed to air, dust and light, we should have expected accelerated ageing of this part –thus it should have been darker than the rest of the cloth. It must be added however, that whether this effect would have been significant depends on how often and for how much long time the Shroud-Mandylion would have been exposed for viewing.
Argument against Shroud being kept permanently in this form:

From César Barta presentation, *What the Shroud is and it is not*, I Congreso Internacional de la Sábana Santa, Valencia 2012, pg. 8:

If we accept that the Shroud of Turin was kept in Edessa folded and showing only the face through a circular opening, the effect of the environment on the exposed part would have made a difference to the underside of the cloth, clearly visible to the naked eye. The circle around the face and the exposed area would be darker than the areas protected from the environment and it would be distinguished today on the Shroud of Turin (Figure 8). This is not just a conjecture because; we found this observable fact in the copy of the Shroud kept in Sanlucar de Barrameda. This copy was exposed for decades in a secondary altar in the church of Our Lady of Charity. It showed only the face and now the rectangle that was exposed is obvious when the whole cloth is deployed (Figure 9). The Shroud of Turin itself showed the difference between the exposed and the area protected from the environment in the reinforcement fabric, also called "the Holland cloth", after cutting the piece that was delivered to the Belgian textile expert Gilbert Raes after trimming the sample for the C14 dating (Figure 10). Therefore, nobody can argue that the Shroud today in Turin was exposed at Edessa in that way.
Argument for Shroud being kept permanently in this form:

In the recent paper from 2014 St.Louis conference (Study of Shroud Feature Evidence Using Video and Photogrammetric Analysis Methods, a.k.a. “The Halo Study”, see also Halo Study Presentation), Peter Schumacher claims (boldings mine):

“Using several Shroud images of different types and dates; various image analysis and measurement techniques; and, employing graphic overlays to compare extracted features to various artworks and Icons, it is my conclusion that the statements made by Dr. Soons are demonstrated to be accurate beyond reasonable doubt. Thus, the Mandylion and the Shroud of Turin are on and the same. Therefore, the Shroud of Turin existed at a time in accord with the known history of the Mandylion.”[...]While it is true that not everyone has a VP-8 Image Analyzer system available to them; and, while they may not have all the images available to them that I used in this study; I am convinced that this evidence is conclusive and can be readily duplicated by anyone reasonably capable in the disciplines applied while using a variety of easily accessible tools and even some readily accessible images.

A bold conclusion – but the question is whether justified?
The halo area, according to the Schumacher’s presentation (pg.19)
To verify this claim, I used image scanned from Gino Moretto’s *Całun: Przewodnik*, Wydawnictwo Salezjańskie 1998. I extracted the face area + several other background areas as controls.

Note: Those two pictures are only representations of the original, much larger images that I used.
Using ImageJ I converted extracted image into 32-bit greyscale.
Then I applied median filter with 6 pixel radius – it eliminated most of the locally extreme bright or dim points.
Then using statistics from previous image, I divided image by the value of 28.4, obtaining the final image in pseudo-significance scale (with mean of about 4.6)
The 3D plots of the final result
With narrower scale.
With postulated circle.
Conclusions

Contrary to Peter Schumacher claims, after analysing BW photos of the Shroud I see no compelling evidence (and definitively not „beyond any reasonable doubt”) for the presence of the postulated halo around Shroud face. According to my analysis there are no significant differences of intensity in the region around the face, compared to other non-image, non-burn areas (even if some regions around the face appear minimally darker than average background), not to say about any circular-shape „halo” around the face. In my opinion the postulated and fitted halo is more a result of wishful thinking, than careful, meticulous and objective analysis without preconceived ideas.

This does not mean that I reject Wilson and others theory that the Mandylion transferred to Constantinople in 944 was actually the Shroud. In my view, the analysis of documentary evidence created after the transfer leaves practically no room for other conclusion. This is another topic, however. Yet also I think that the history of the Mandylion, as both concept and physical object(s), and its relation to the Shroud is far more complex than most researchers assume and current theories do not give full answers for all questions and issues.