### "Portrait" from the Turin Shroud



#### An Artist's Study of the Shroud Image



Three basic forms of interference were addressed using imaging software to clarify the shroud image.

Cloth degradation. This includes anything extraneous to the image that stained or damaged the cloth such as blood stains, water stains, scorch/burn marks, dirt etc.

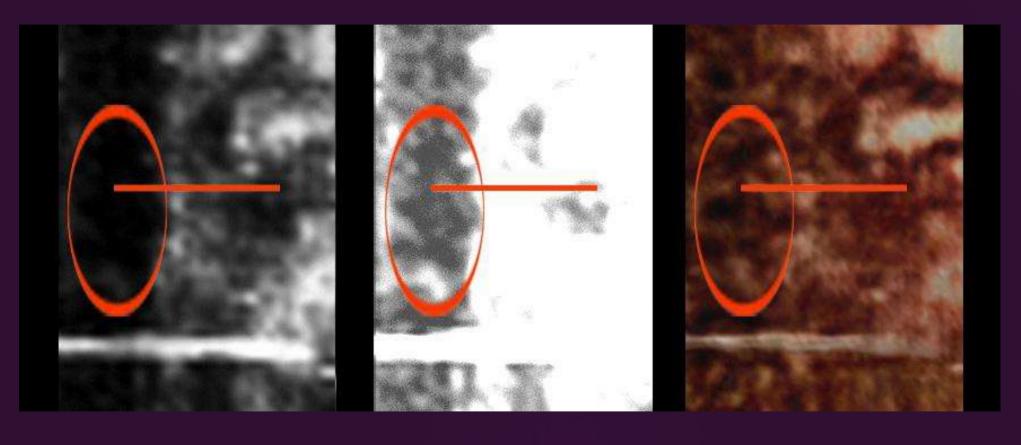
Banding effect. The shroud has both horizontal and vertical bands that modify the appearance of the image.

Variations in cloth topography. During the time of image formation these variations would have affected the body-cloth distance.

### **Technical Challenges**

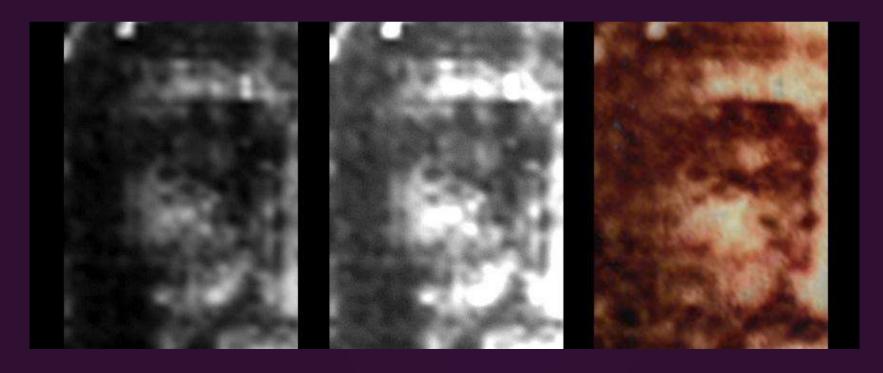
In order to ensure accuracy and truthfulness in clarifying the shroud image certain standards were applied in relation to photographic manipulation and techniques. First and foremost the photographic images of the shroud should not be altered from the reality they represent, that there would be no altering of the essential shapes, only enhancement so they may be seen better.

Adjusting brightness and contrast in areas that appear to be absent of visual data, meaningful data is revealed.



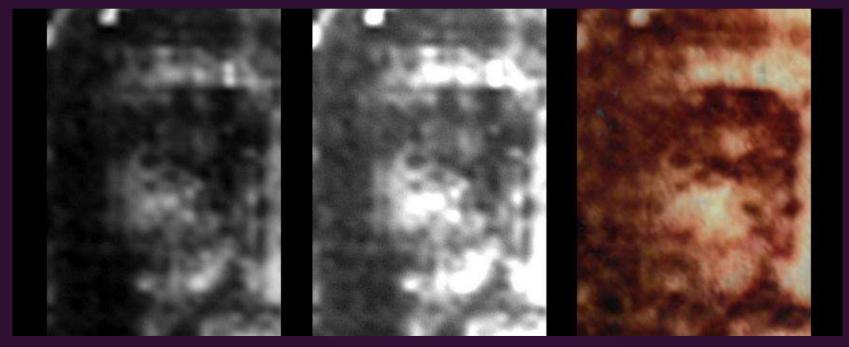
#### **Study of the First Quadrant**

Raising the luminosity, while over-exposing some areas, reveals "essential shapes" within areas of low data pickup caused by banding effects and aberrations in the "body-cloth distance".

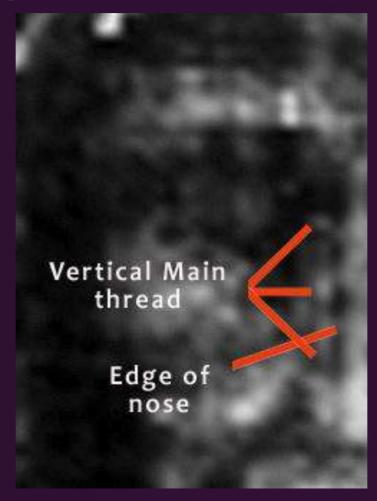


#### **Study of the First Quadrant**

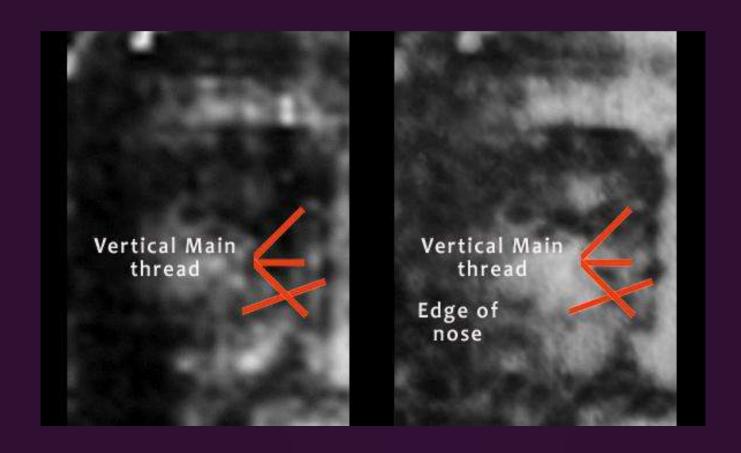
Raising the luminosity, while over-exposing some areas, reveals "essential shapes" within areas of low data pickup caused by banding effects and aberrations in the "body-cloth distance".



There is a vertical main thread running almost tangential to what appears to be the right side of the nose where a turning point would naturally exist.



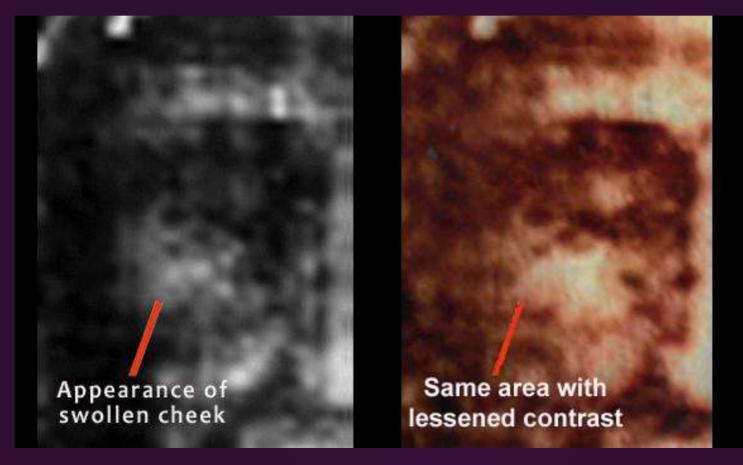
Instead of simply filling in an element of interference like a thread, it was "equalized" by increasing the luminosity of the surrounding areas. In so doing the visual element of the thread is diminished but not eliminated entirely.



Directly under the right cheek and to the side of the nose is a highlighted shape that is conjectured to be either a blood smear or a smear of some kind of fluid that had a high image uptake. As the surrounding areas were adjusted to bring out more detail (raising luminosity), the shape remained but became more neutral due to the decrease in the simultaneous contrast.

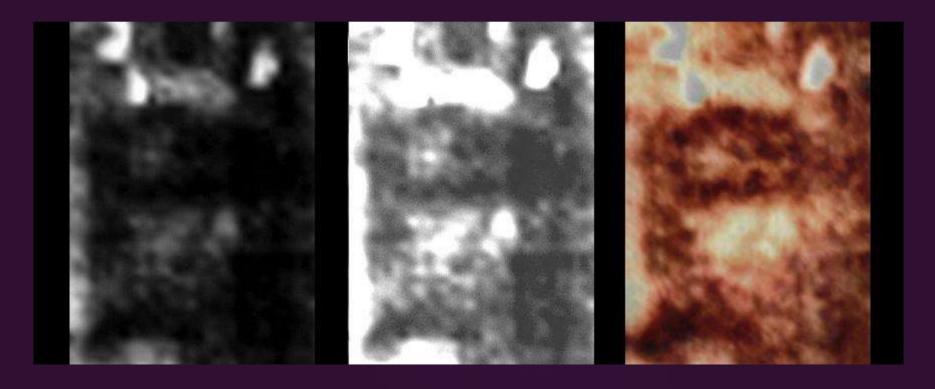


The right cheek of the image (viewers left) appears extremely swollen or bruised. As demonstrated, when the sides of the face are opened up by adjusting for the banding effect the image drop off is lessened and the appearance of a swollen cheek is also decreased due to a decrease in the simultaneous contrast.

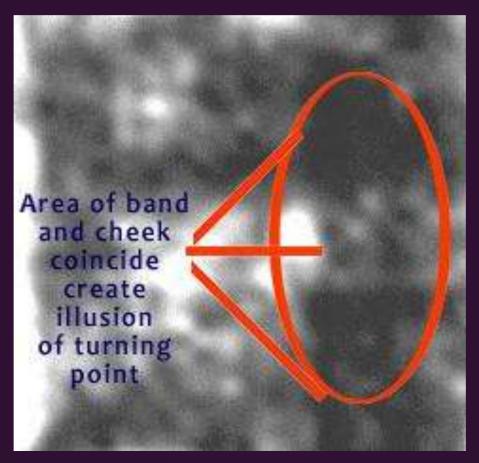


#### Study of the Second Quadrant

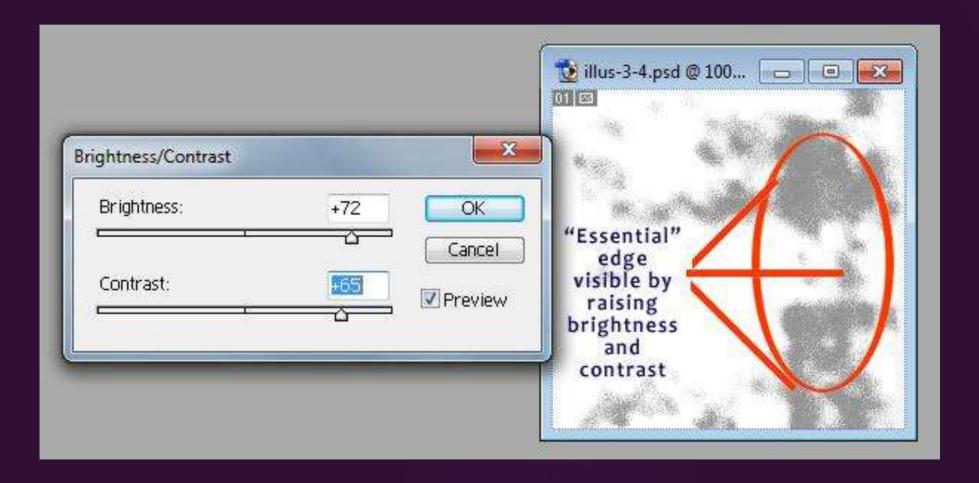
Example of shapes normally difficult to perceive due to variance in image data pickup.



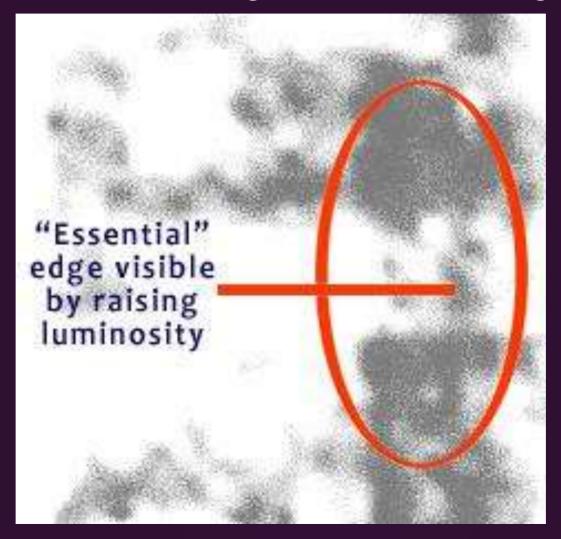
The banding effect is also evident in the second quadrant creating a false edge of the face. The area of the cheek bone in this quadrant lacks the swollen appearance of the cheek in the 1st quadrant. Instead there is what appears to be a sharply defined turning point or edge to what appears to be the area of the left cheek bone.



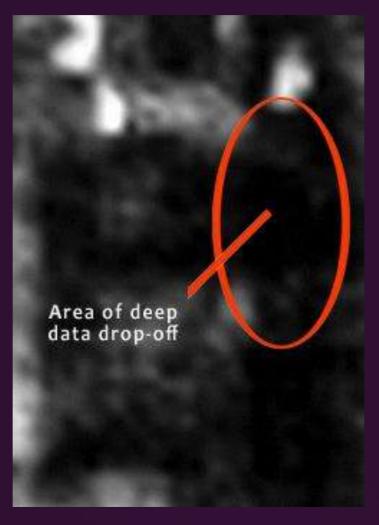
# Raising the brightness and contrast reveals "essential" edges normally hidden from the banding effect.



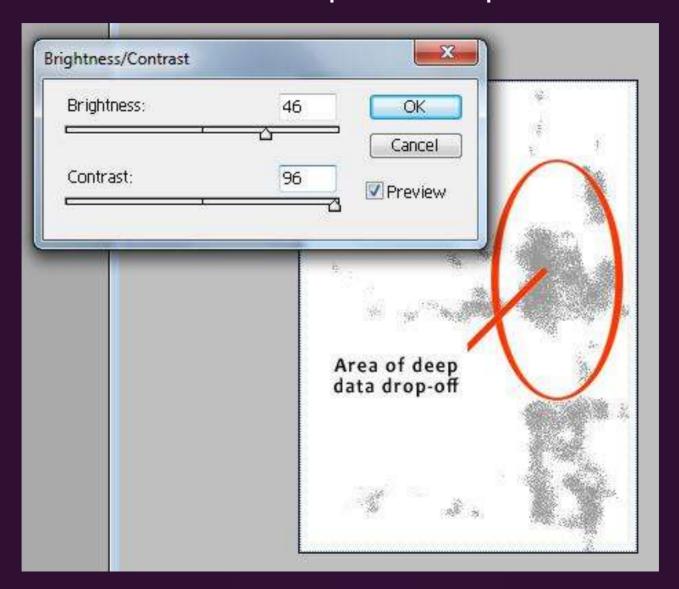
As a result of raising luminosity, other essential shapes are deleted leaving the essential edge.



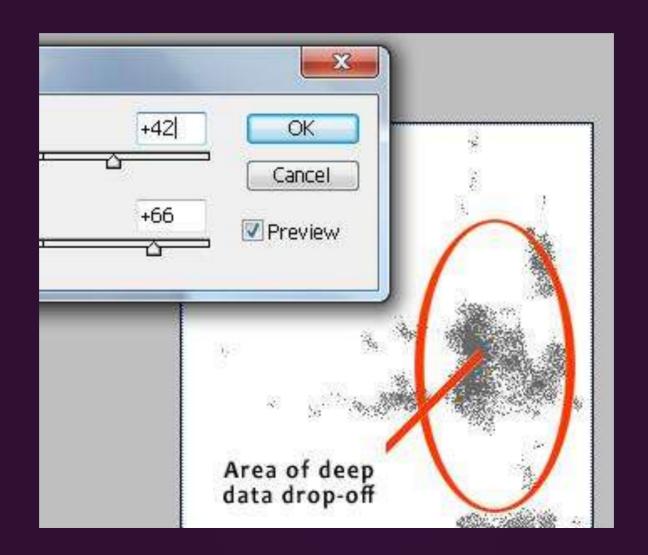
The area to the viewers right in the second quadrant is an area of deep data drop-off where at first glance there appears to be no data at all.

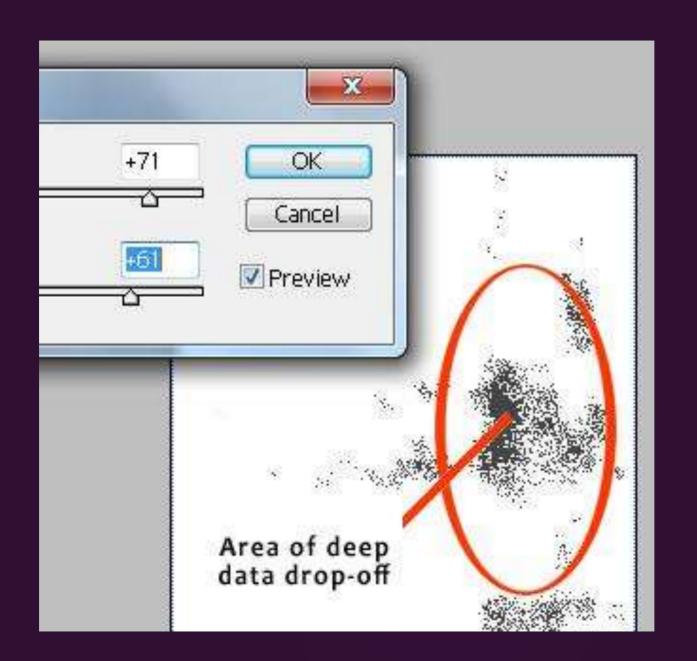


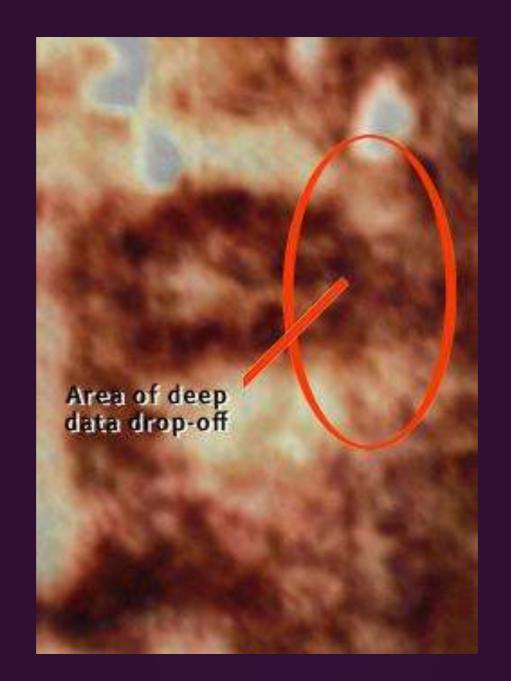
Adjusting brightness and contrast allows for better visibility in the area of deep data drop-off.



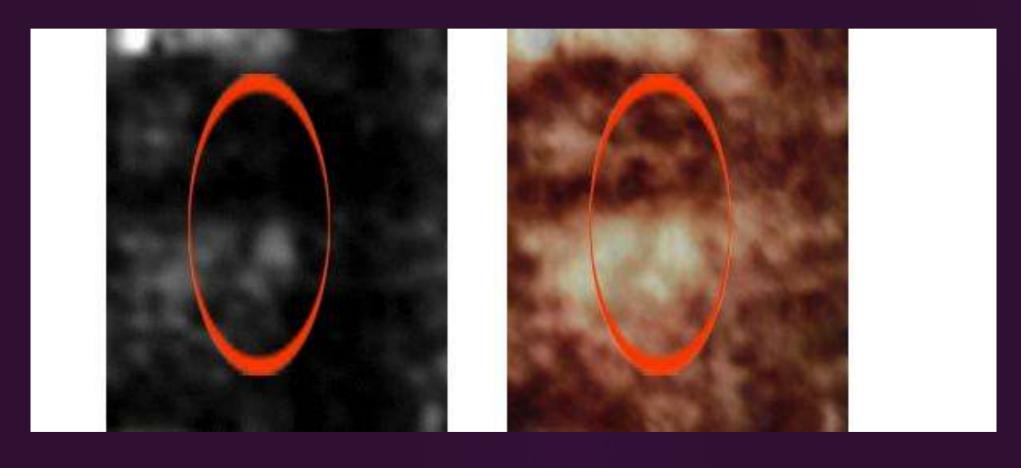
Repeating the process refines the blurred mass into more distinct shapes.





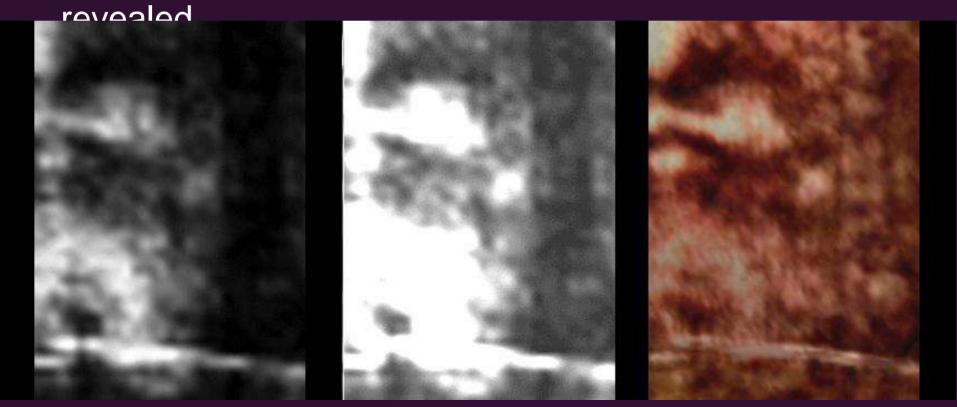


Adjusting the area of deep data drop off reveals the essential shape that also runs tangential with the false edge created by the banding effect.

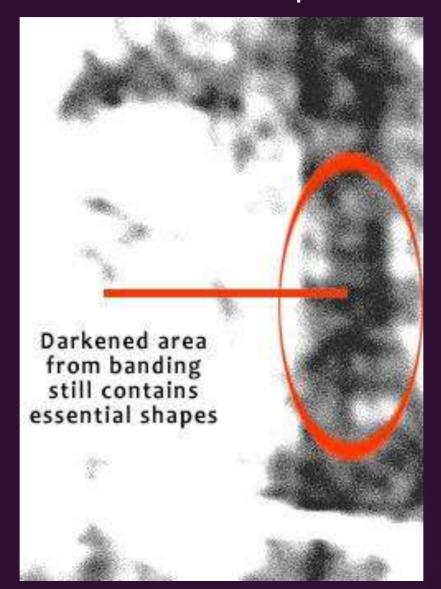


#### **Study of the Third Quadrant**

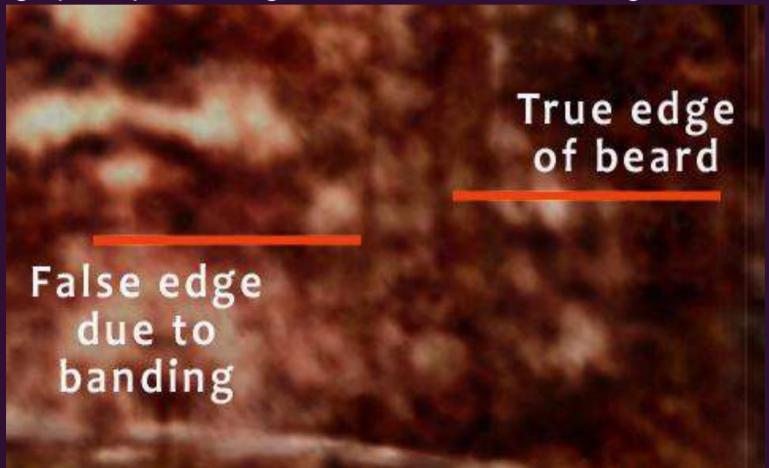
The darkened area in the third quadrant coincides with an area of banding and initially appears as a solid dark mass. By adjusting the brightness and contrast levels the essential shapes and true turning points are



By repeating the process of adjusting brightness and contrast the essential shapes are revealed.

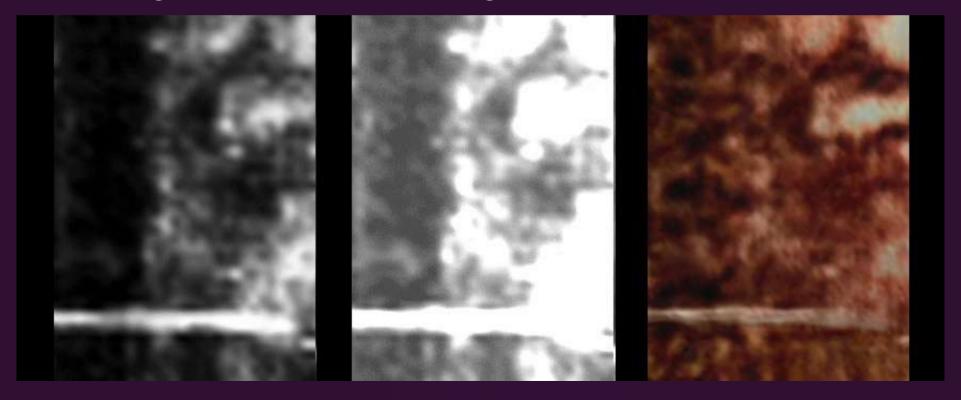


One of the effects of the interference is the recognition of "false" edges or turning points to the form. For example, the banding effect on the left side of the face, seen in the third quadrant, obscures the true edge of the beard in the dark regions of lesser image pickup, creating the illusion of a false edge.



#### Study of the Fourth Quadrant.

The effects of the banding create the illusion of "false" edges or turning points to the form. For example, the banding effect on the right side of the face, seen in the fourth quadrant, obscures the true edge of the beard in the dark regions of lesser image pickup, creating the illusion of a false edge.



The areas to the side of the face drop off abruptly creating the illusion of a much narrower beard and elongated face proportionately.



Gradually the visual data within the areas of extreme image drop-off are made more visible by adjusting the luminosity.



The narrow look to the face resolves itself as the areas of image drop-off are "equalized" to become a seamless transition into the other areas of the facial anatomy.



## The "Portrait" from the Turin Shroud – A New "Vera Icon"

Images of Jesus have in common a number of traits which are now almost universally associated with his depiction. The shroud image not only contains all of the major traits, but the enhanced image provides much more. It is rich in detail commensurate with an age of scientific accuracy. The clarified image provides a likeness that is both familiar and authoritatively updated consistent with a post-photographic world view of reality.

The resulting image is unmistakeably that of the shroud, but the flat mask-like quality of the original image on the left has been replaced by a dimensionality which is not only more "acceptable" to the eye but also revealing of detail and form not easily perceptible in the original. The sides of the face that were previously hidden in the "banded" regions are now rich in detail and form consistent with the rest of the face. The beard now appears much broader than in the original.

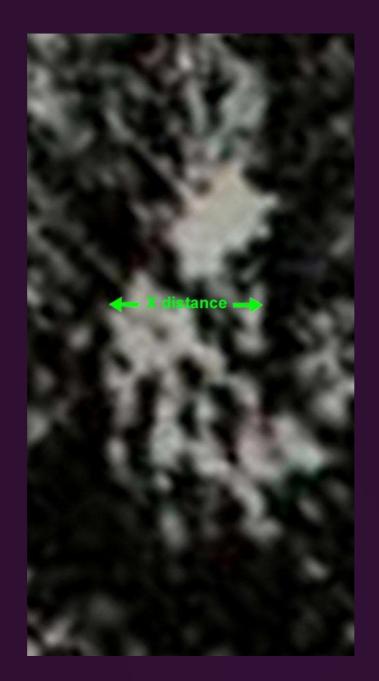


The overall size of the face in the enhanced version seems to be in better proportion to the rest of the body than the original, especially relative to the hands.

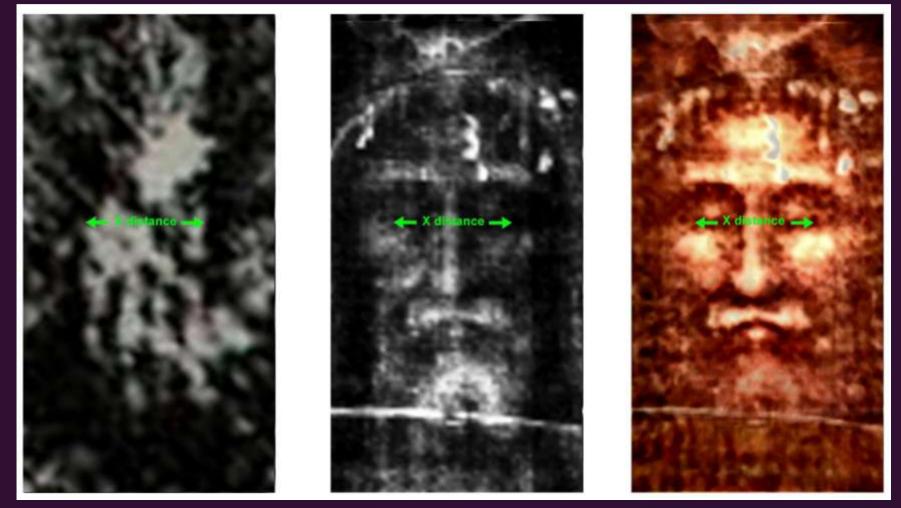


A study of the hand area of the shroud image showing the estimated width of the hand may prove helpful as it is assumed that this particular area of the shroud image contains little or no anamorphic distortion and is therefore useful as an anatomical constant with which to compare with.

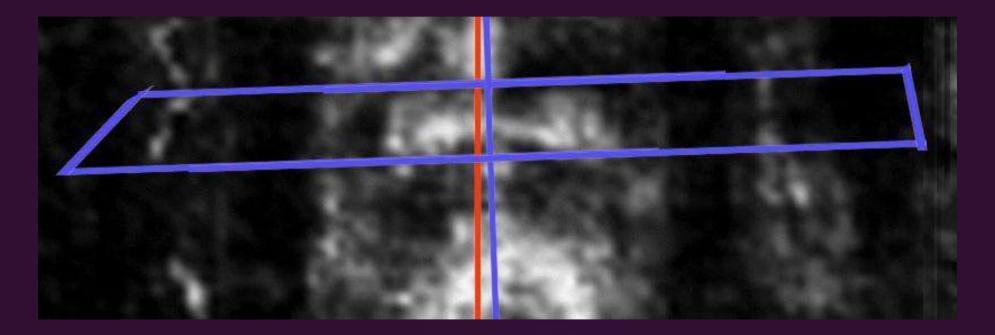




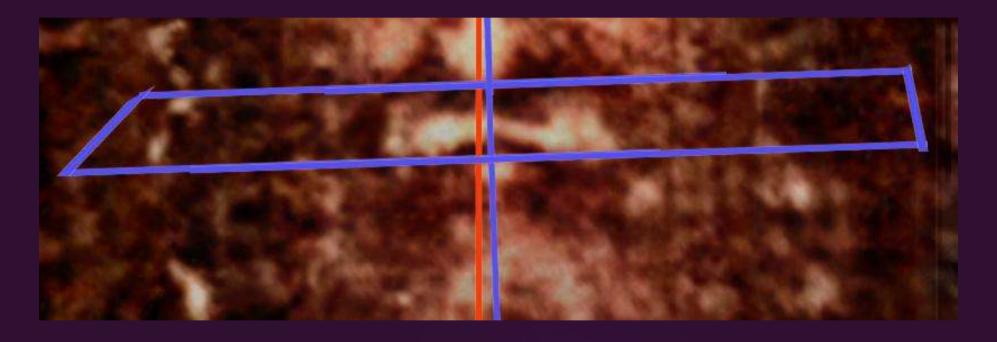
A comparison of the hand area with the original photo-negative suggests that what appears as the side of the face is really the front of the face. The actual sides of the face are in the area of extreme image drop-off continuing into the area of the hair as shown in the adjusted image.



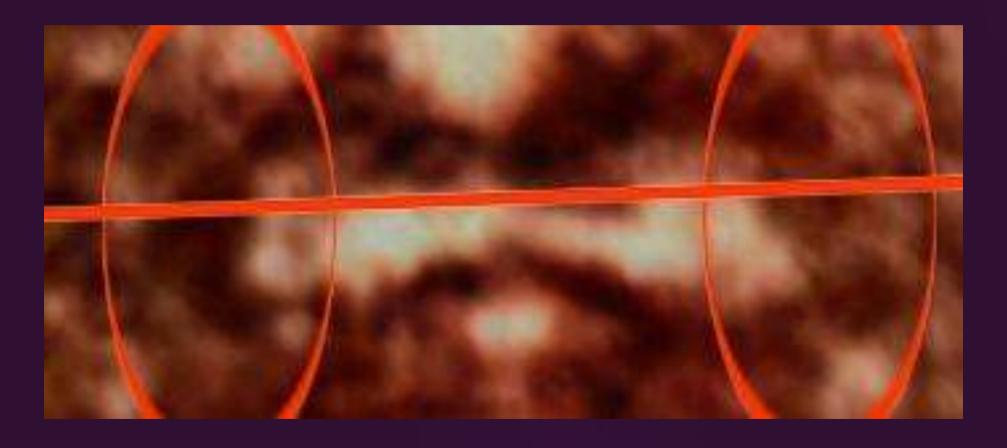
Certain nuances become quite clear in the enhanced version. For example, the head is not perfectly frontal facing but rather slightly tilted downward and to its right. The head appears to be tilted very slightly, approximately 2 degrees to its right side.



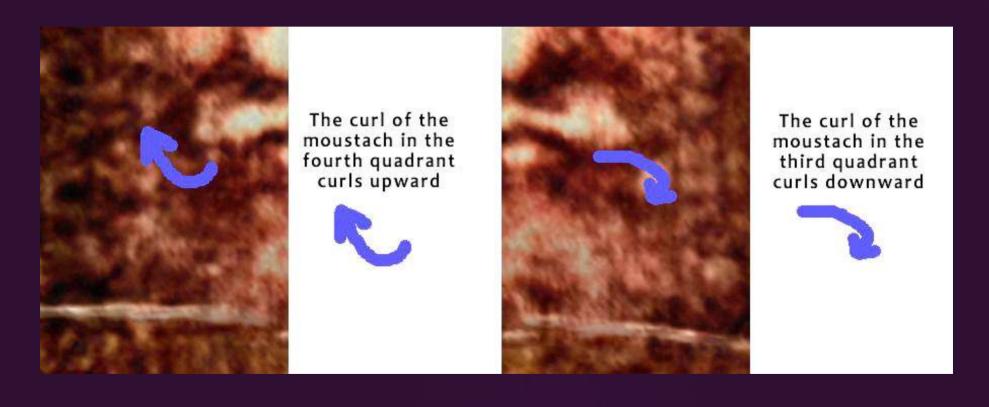
The tilt of the head, not easily recognized in the original unadjusted image (above), combined with the other elements of interference, also contributes to both a misunderstanding of the images features and the appearance of distortion. The tilt of the head appears to be present on all three axis x, y and z as shown below.

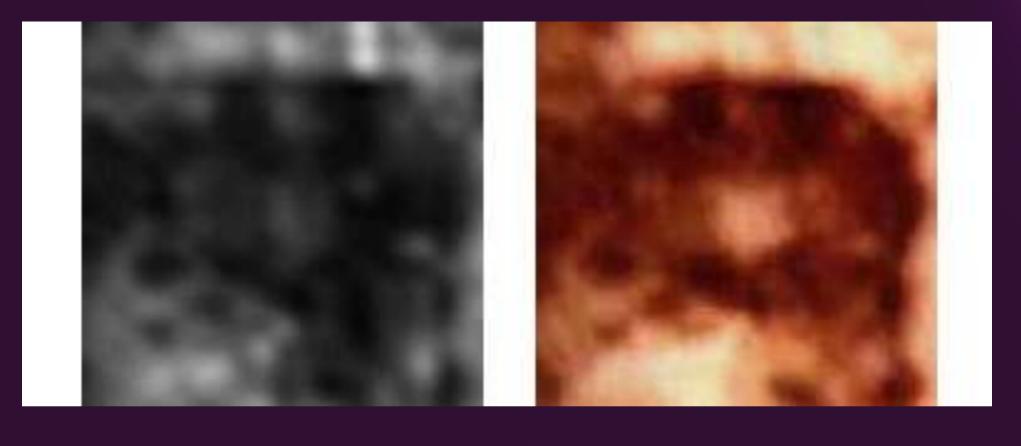


A comparison of the two sides of the area around the mouth and nose reveals the uniqueness of the shapes, each side is distinctly different from the other.

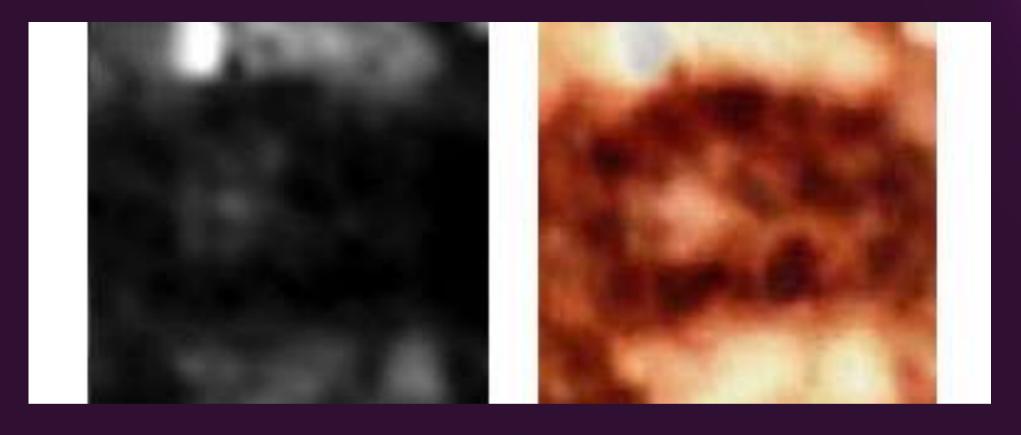


Obvious differences between the third and fourth quadrant beard sections include the distinctly different curl to the extension of the mustache. The curl in the fourth quadrant curls upward and the curl in the third quadrant curls downward.





A close-up of the eye in the 1<sup>st</sup> quadrant. It appears the eyes are almost oriental in the upward slant and shape where the upper and lower eyelids meet, small and in close proximity to one another in proportion to the very broad and well developed cheek bones.



A close-up of the eye in the 2nd quadrant. The same upward slant and shape where the upper and lower eyelids meet, small and in close proximity to one another in proportion to the very broad and well developed cheek bones.





The hair is long and definitely not straight. It appears to be made up of small ringlets that collectively create curls, similar to the hair of certain North African Nubian races.



Though the mouth and lips are also small, even delicate, they are set within the frame of a strong jaw area. The right side of the face below the cheek appears to have a deep set "dimple" that coincides with the edge of one of the bands. The beard and the mustache are very full.







