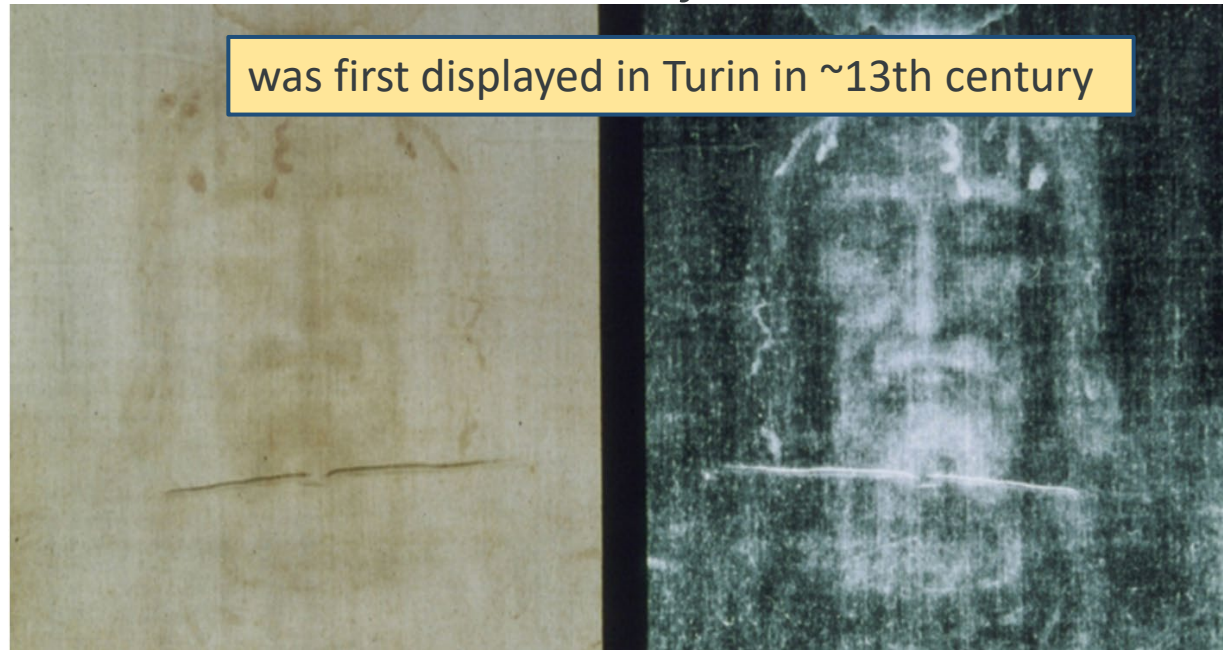


# Mystery of the Shroud of Turin

*..burial shroud of Jesus?*



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The imprint of an apparently crucified body resembles the image of Jesus

**The shroud remained controversial over the centuries**

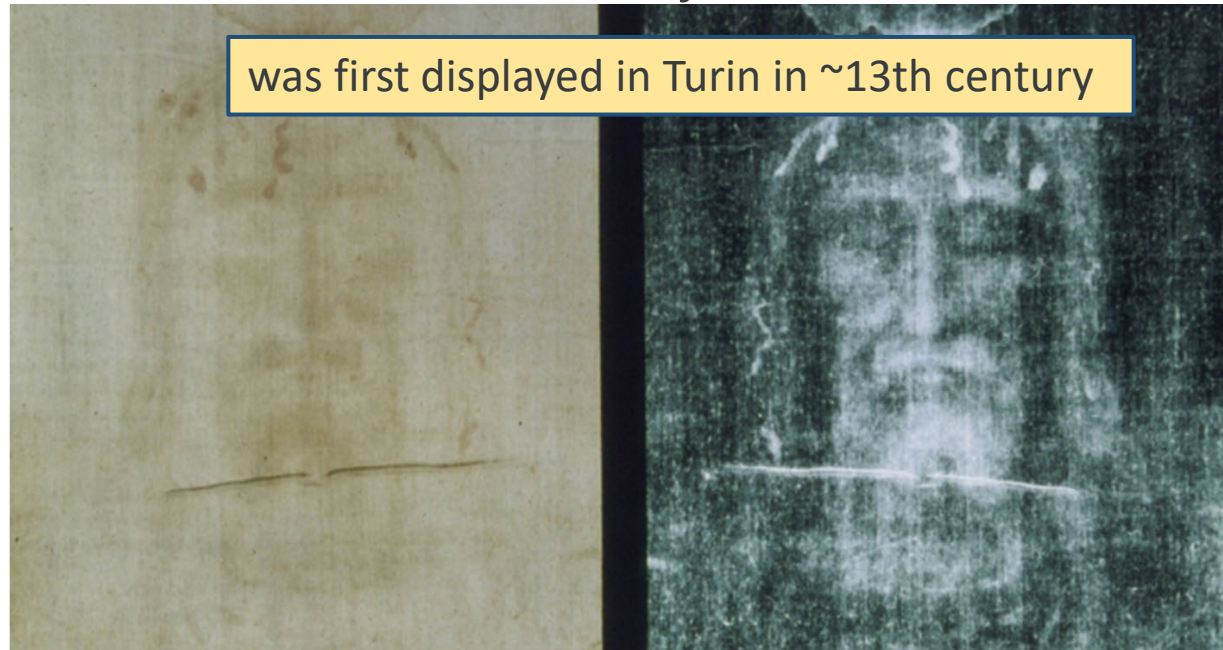
Only in 1988 the carbon dating was performed by three independent laboratories with the result:

➤ **The shroud samples contain 92% of the  $^{14}\text{C}$  found in living tissues**

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# Mystery of the Shroud of Turin

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was first displayed in Turin in ~13th century

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**How old is the shroud? 😊**

# Powerful law of radioactive decay



$$N = N_0 e^{-\lambda t}$$

$$\frac{N}{N_0} = 0.92$$

$$T_{1/2} = 5730 \text{ y}$$

$$\lambda = \frac{\ln 2}{T_{1/2}}$$

$$\frac{N}{N_0} = 0.92 = e^{-\lambda t} \rightarrow \ln 0.92 = -\lambda t \rightarrow -0.0834 = -\lambda t$$

$$\rightarrow t = \frac{0.0834}{\lambda} = \frac{0.0834}{\lambda \frac{\ln 2}{T_{1/2}}} = 690 \text{ y}$$

$$1988 - 690 = \text{AD } 1298$$

The date order is consistent with the first record of shroud existence..  
However, it is inconsistent with the period in which Jesus lived 😊