

Earthquake Theory Comments
By Jeff Williams
February 13, 2014

I read the journal article in *Meccanica* about neutron flux from Earthquakes and the shroud and here are some quick comments:

The article is very intriguing and introduced something I was unaware of; i.e. that neutron flux from brittle fracture of rocks could leave isotopic clues about the magnitude of an earthquake. This is in the realm of the author's expertise and may be legit. However, there is some faulty analysis regarding earthquakes. The primary fault is the authors appear to have conflated an earthquake from 29 AD in northern Anatolia (modern day Turkey) with one in Judea in, they presume, 33 AD to come up with an 8.2 magnitude earthquake.

The 29 AD earthquake was apparently associated with a solar eclipse and this was reported to be the earthquake of the crucifixion in ancient Christian apologetic literature as various gospel accounts report 3 hours of midday darkness and an earthquake on the day of the crucifixion. However, the crucifixion occurred on the day of a full moon (14 or 15 Nisan in the Jewish calendar) when a solar eclipse is not possible. Further, it is very unlikely an earthquake from modern day northern Turkey would have been felt in Jerusalem. So, this was not an earthquake which occurred during the crucifixion.

Williams, et. al. (2011) dated a M 6.0 – M 6.5 earthquake to have caused a deformation layer in the Dead Sea sediments between 26 and 36 AD. Such an earthquake would have produced moderate shaking in Jerusalem (MMI scale VI to VII) but nothing close to the 15 minutes of intense shaking described in the *Meccanica* paper for an 8.2 magnitude earthquake.

As to whether there is some reason for a highly localized source of proton and/or neutron flux, I don't know enough to comment but I am certain there was not an 8.2 magnitude earthquake in Judea between 26 and 36 AD.

Reference: Williams, J. B., et al. (2011). "An early first-century earthquake in the Dead Sea." *International Geology Review* 54(10): 1219-1228.

This article examines a report in the 27th chapter of the Gospel of Matthew in the New Testament that an earthquake was felt in Jerusalem on the day of the crucifixion of Jesus of Nazareth. We have tabulated a varved chronology from a core from Ein Gedi on the western shore of the Dead Sea between deformed sediments due to a widespread earthquake in 31 BC and deformed sediments due to an early first-century earthquake. The early first-century seismic event has been tentatively assigned a date of 31 AD with an accuracy of ± 5 years. Plausible candidates include the earthquake reported in the Gospel of Matthew, an earthquake that occurred sometime before or after the crucifixion and was in effect ?borrowed? by the author of the Gospel of Matthew, and a local earthquake between 26 and 36 AD that was sufficiently energetic to deform the sediments at Ein Gedi but not energetic enough to produce a still extant and extra-biblical historical record. If the last possibility is true, this would mean that the report of an earthquake in the Gospel of Matthew is a type of allegory.

Here is a link to Jeff's [Earthquake Article](#) and a link to his website that explains the research to non Geologists at www.DeadSeaQuake.info.