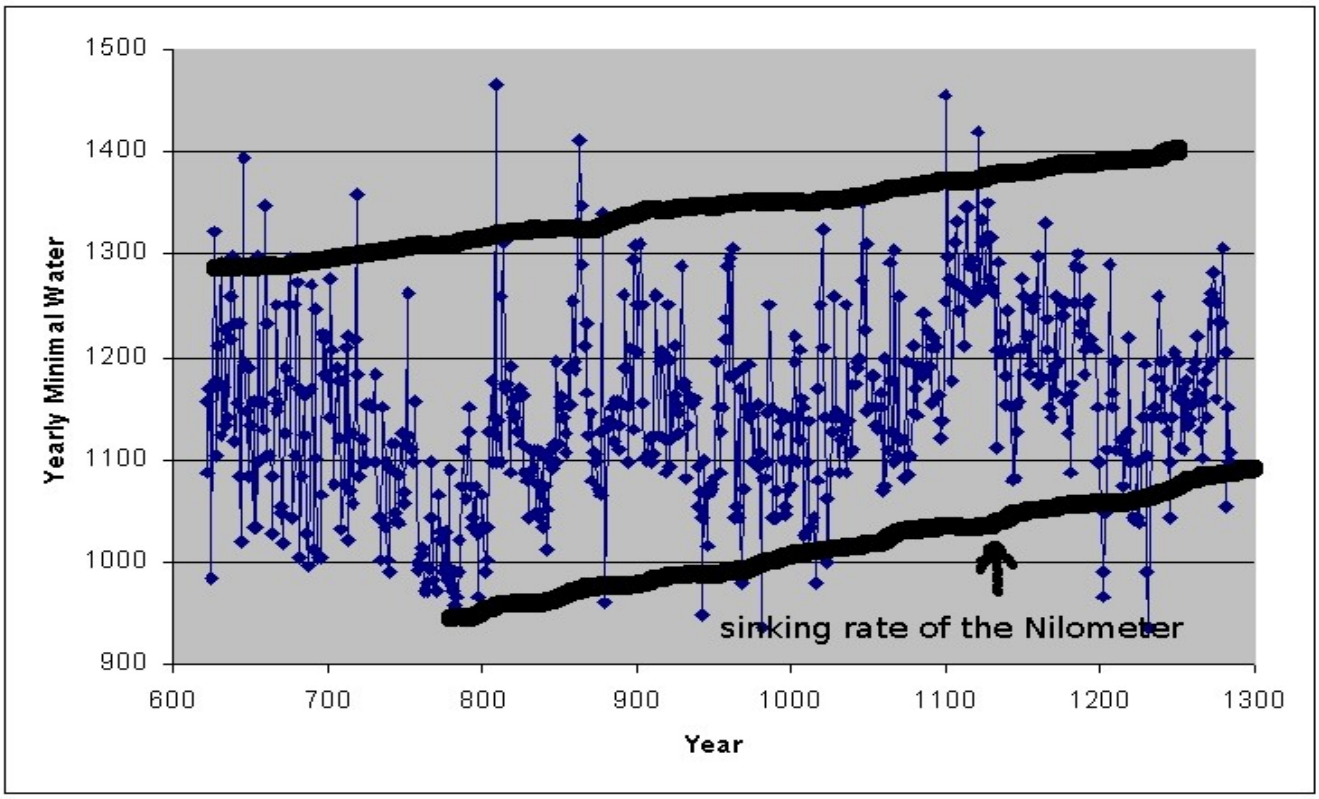
Correction of the Nilometer measurements

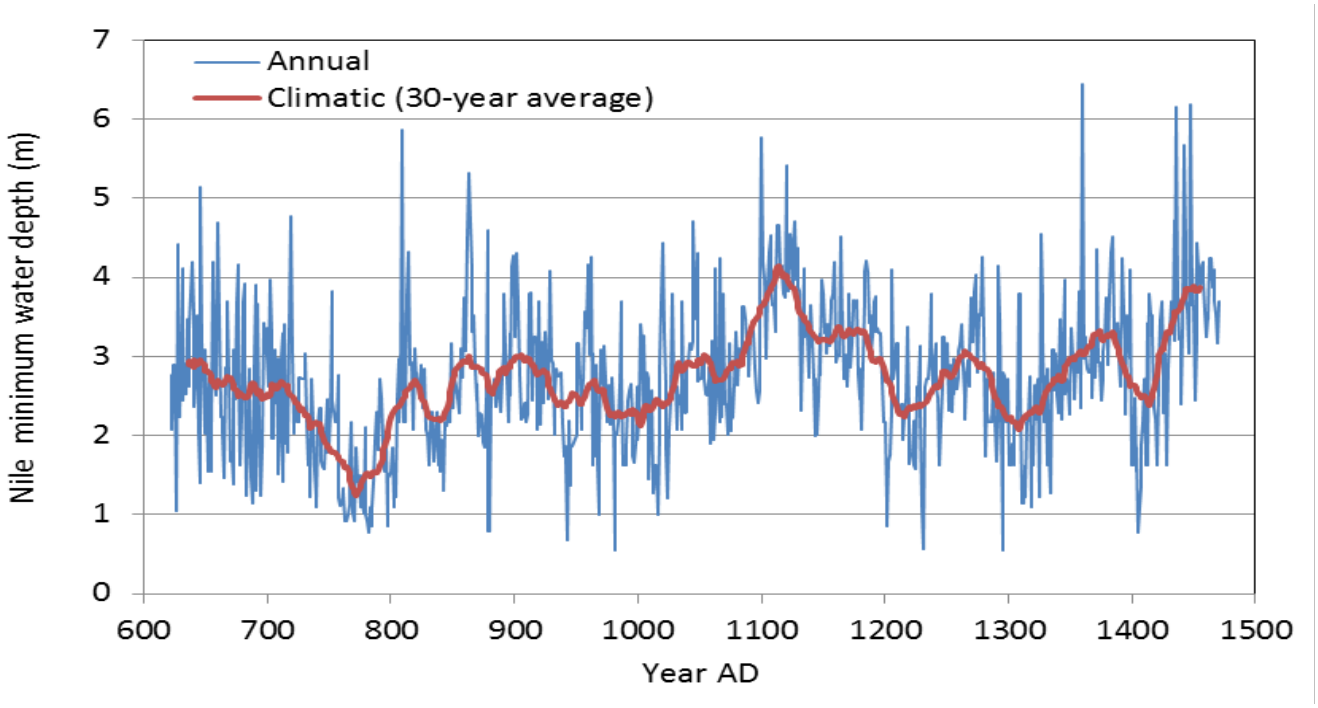
Dimitris Poulos, Feb 2015

The Nilometer is sinking. This is proved by the parallel movement upwards of both the minimums and maximums values as have been recorded. The calculated sinking is at a rate of 1m/650years. That's completely normal and within the expected boundaries.
The first continuous record of measurements spans at 662-1284 AD. At graph 1 we mark the sinking rate on the graph of this record.
(record graph obtained from http://www.waterhistory.org/histories/cairo/)



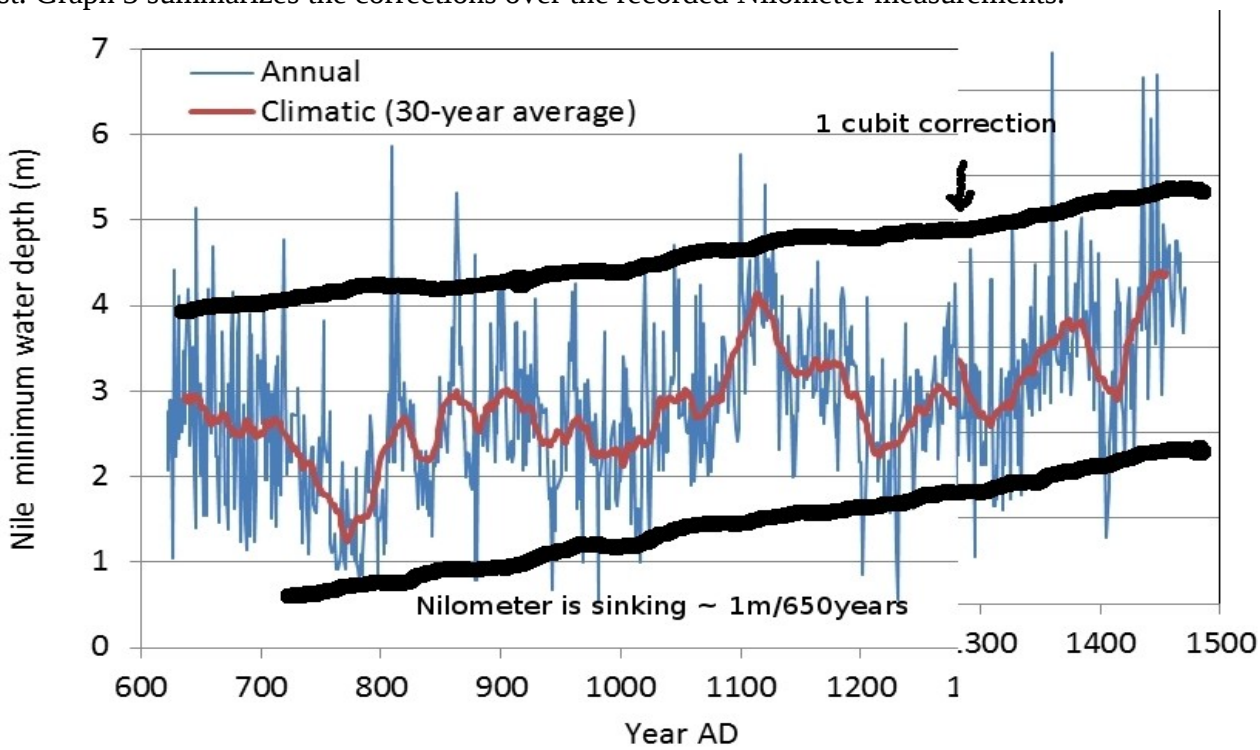
Graph1. Depicting the sinking rate of the Nilometer

As noted on the above mentioned site, http://www.waterhistory.org/histories/cairo/ , there used to be festivals in Egypt when the Nilometer would reach the 16 cubit mark (~8m), as this would impose that the Nile river level was high enough to bring prosperity.
Because of the sinking of the Nilometer the 16 cubit mark lost it's importance over time. This implied the need to correct the measurements of it. At graph 2 another 200 years have been added to the Nilometer record. (graph obtained from Koutsogiannis D., http://www.climatedialogue.org/long-term-persistence-and-trend-significance/)



Graph 2. The recorded values of the Nilometer at Toussoun 1925, as of Koutsoyiannis D.

After the first compact record of 662-1284 AD, there should have been certain corrections over the recorded measurements of the Nilometer, in order to depict the true water level of the Nile. The following the after the 1284 AD record measurements, have been under 1 cubit correction in total in the past. Graph 3 summarizes the corrections over the recorded Nilometer measurements.



Graph 3. Depicting the corrections over the recorded Nilometer measurements.