

## Heliacal rising of Sirius and flooding of the Nile

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Among historians of astronomy it is widely believed that in Ancient Egypt the astronomical observations were carried out as early as the Early Kingdom (3120 to 2649 BC). This view is based on the interpretation of the text, dating from the I Dynasty, which is the only documental source of that time describing the connection of the first morning visibility (heliacal sunrise) of Sirius ( $\alpha$  Canis Major) with the flooding of the Nile River. Modern interpretations of this text are based on the loose interpretation of the original source, and often contradict each other. In fact it appears that the original text is formulated very vaguely, and it is nearly impossible to derive a reliable astronomical information from it. The time of observation before the 15th century BC does not match dates of any version. The results of dating should be considered unsatisfactory, as they are all based on the erroneous assumption that the summer solstice and the rising of Sirius coincides with the flooding of the Nile. Modern observations of the early 20<sup>th</sup> century and Pliny's data refute this point of view. According to historical evidence of ancient Greek authors and Egyptian texts of the Greco-Roman era, the flooding of the Nile could be predicted by heliacal rising of Sirius in the later times, i.e. at the beginning of the I millennium AD. This fact is confirmed by astronomical calculations.

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