

# Chapter 22

## Earth's Variable Clock

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**Abstract** Ancient Babylonian clay tablets buried for centuries beneath the sands of the desert are part of an extensive historical archive that contains vital information about the Earth's rotation from 720 BC to the present. These historical observations of solar and lunar eclipses and occultations of stars are reanalyzed to determine the error in the Earth's clock by the parameter  $\Delta T$ .

**Keywords** Earth rotation • Length of day • Delta T

### Summary

The poster showed various diagrams displaying the individual results for  $\Delta T$ , together with the best-fitting curve through these data, leading to the derivation of the changes in the length of day (lod) 720 BC to the present. This analysis is part of a paper that has been submitted to the Proc. R.S. (Lond.). The results, tables of  $\Delta T$ , length of day, polynomial coefficients, etc. are available from H.M. Nautical Almanac's website at [astro.ukho.gov.uk/nao/lvm](http://astro.ukho.gov.uk/nao/lvm).

**Acknowledgments** We are grateful to all those who over the centuries have made and recorded these observations, to Herald and Gault for their modern reanalysis of the data held at the Centre de Données Astronomiques de Strasbourg, and also to DID at the UK Hydrographic Office for printing the poster.

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