

Practices of Precision: Timekeeping in XVIIIth-Century Observatories

In XVIIIth-century astronomy, the precision of timekeeping was an essential prerequisite to successfully accomplish a variety of pressing tasks. In fact, the invention of the pendulum clock alongside other instruments such as telescope and micrometer substantially altered astronomical practices by facilitating a degree of precision that was formerly unknown. However, in order to realize the precision potential of these new instruments, astronomers needed to develop and define appropriate ways of dealing with them: clocks only perform correctly when treated properly. Rather than exclusively focusing on the technological development of clocks, the paper explores the conditions and manners of their use and control in 18th-century observatories. It shows the diversity that characterizes observatory timekeeping practices for most of the period, and studies incipient processes of standardization. The paper argues that by these processes of learning rather than technology alone, the pendulum clock first became a precision instrument. Thus, the notion of the 'precision clock,' as it emerged in the XVIIIth century, did not simply refer to a particular type of object, but to a complex entity of object and associated practices.

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