

heavens takes place about the poles of the ecliptic, and not about those of the equator. The care with which he collected this motion from the stars themselves, may be judged of from this, that having made his first observations for this purpose on Spica and Regulus, zodiacal stars, his first suspicion was that the stars of the zodiac alone changed their longitude, which suspicion he disproved by the examination of other stars. By his processes, the idea of the nature of the motion, and the evidence of its existence, the two conditions of a discovery, were fully brought into view. The scale of the facts which Hipparchus was thus able to reduce to law, may be in some measure judged of, by recollecting that the precession, from his time to ours, has only carried the stars through one sign of the zodiac; and that, to complete one revolution of the sky by the motion thus discovered, would require a period of 25,000 years. Thus this discovery connected the various aspects of the heavens at the most remote periods of human history; and, accordingly, the novel and ingenious views which Newton published in his chronology, are founded on this single astronomical fact, the Precession of the Equinoxes.

The two discoveries which have been described, the mode of constructing Solar and Lunar Tables, and the Precession, were advances of the greatest importance in astronomy, not only in themselves, but in the new objects and undertakings which they suggested to astronomers. The one discovery detected a constant law and order in the midst of perpetual change and apparent disorder; the other disclosed mutation and movement perpetually operating where every thing had been supposed fixed and stationary. Such discoveries were well adapted to call up many questionings in the minds of speculative men; for, after this, nothing could be supposed constant till it had been ascertained to be so by close examination; and no apparent complexity or confusion could justify the philosopher in turning away in despair from the task of simplification. To answer the inquiries thus suggested, new methods of observing the facts were requisite, more exact and uniform than those hitherto employed. Moreover, the discoveries which were made, and others which could not fail to follow in their train, led to many consequences, required to be reasoned upon, systematized, completed, enlarged. In short, the *Epoch of Induction* led, as we have stated that such epochs must always lead, to a *Period of Development, of Verification, Application, and Extension*.