

texts, that are anterior, by any reckoning, to the eras of astronomical advance in Babylonia or in Greece is that astronomical ideas developed in India in stages and these stages can be seen in the different layers of the Vedic texts, the Brāhmaṇas, and the Vedāṅga Jyotiṣa.

The evidence from the design of the altar of Figure 1 confirms that the year was divided into two parts: winter solstice to summer solstice being equal to 181 days, and midsummer-to-midwinter of 184 or 185 days. This means that the Brāhmaṇa rites could not belong to the 1st millennium BC. This conclusion is of the greatest significance for the chronology of the Vedic texts and it invalidates the chronology popularized by Max Müller. This work supports the thesis²⁴ that the Vedic and the Harappan periods were identical.

1. Müller, Max, *A History of Ancient Sanskrit Literature*, Williams and Norgate, London, 1860; Eggeling, J. (tr.), *The Satapatha Brāhmaṇa*, Motilal Banarsidass, Delhi, 1988 (1882–1900). For an important view which ascribes a much greater antiquity to the Vedic literature see Winternitz, M., *A*

- History of Indian Literature*, Oriental Books, New Delhi, 1927 (1907).
2. Kuppanna Sastry, T. S., *Vedāṅga Jyotiṣa of Lagadha*, Indian National Science Academy, New Delhi, 1985.
3. E.g., Kramrisch, S., *The Presence of Śiva*, Princeton University Press, Princeton, 1981, pp. 42–43.
4. de Santillana, G. and von Dechend, H., *Hamlet's Mill: An Essay on Myth and the Frame of Time*, Gambit, Boston, 1969.
5. Frawley, D., *Indian J. History Sci.*, 1994, **29**, 495–506.
6. Kak, S. C., *Mankind Q.*, 1992, **33**, 43–55.
7. Kak, S. C., *Vistas Astron.*, 1993, **36**, 117–140.
8. Kak, S. C., *Indian J. History Sci.*, 1993, **28**, 15–34.
9. Kak, S. C., *Curr. Sci.*, 1994, **66**, 323–326.
10. Kak, S. C., *The Astronomical Code of the Ṛigveda*, Aditya, New Delhi, 1994.
11. Kak, S. C., *Puratattva: Bull. Indian Archaeol. Soc.*, 1994–95, **25**, 1–21.
12. Kak, S. C., *Q. J. R. Astron. Soc.*, 1995, **36**, 385–396.
13. Kak, S. C., *Q. J. R. Astron. Soc.*, 1996, **37**, 709–715.
14. Bakliwal, P. C. and Grover, A. K., *Rec. Geol. Surv. India*, 1988, **116**, 77–86.
15. Possehl, G. and Raval, M. H., *Harappan Civilization and Rojdi*, E. J. Brill, Leiden, 1989.

16. Francfort, H.-P., *Eastern Anthropol.*, 1992, **45**, 87–103.
17. O'Neil, W. M., *Early Astronomy*, Sydney University Press, Sydney, 1986, pp. 56–57.
18. Feuerstein, G., Kak, S. C. and Frawley, D., *In Search of the Cradle of Civilization*, Quest Books, Wheaton, 1995.
19. Burgess, E. (tr.), *The Śūrya Siddhānta*, Motilal Banarsidass, Delhi, 1989 (1860); see also *Indian J. History Sci.*, 1985, **20**; and van der Waerden, B. L., *J. History Astron.*, 1980, **11**, 50–58.
20. Billard, R., *L'Astronomie Indienne*, Ecole Francaise d'Extreme Orient, Paris, 1971.
21. van der Waerden, B. L., *Centaurus*, 1980, **24**, 117–131.
22. Thurston, H., *Early Astronomy*, Springer, New York, 1994, p. 188.
23. See ref. 3.
24. Kak, S. C., *Mankind Q.*, 1992, **32**, 195–213; Singh, B., *The Vedic Harappans*, Aditya, New Delhi, 1995. For a review of the problem of identity see Lal, B. B., *The Earliest Civilization of South Asia*, Aryan Books International, New Delhi, 1997, pp. 281–287.

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