

Reliability of TheSky Software

Introduction: Until late in the 20th century, few options were available for making comparisons between modern computed positions and the observations recorded in the Diaries. The mathematics was wearisome, as each observation required a separate computation. Tuckerman's tables, *Planetary, Lunar and Solar Positions, 601 B.C. to A.D 1, At Five-Day and Ten-Day Intervals*, were the most helpful references available at the time they were published in 1962. Houlden & Stephenson, *A Supplement to the Tuckerman Tables* (1986), improved the data but not the tedious calculations needed to check a Babylonian record.

TheSky computer software reduces astronomical computations to a few mouse clicks. The number crunching of former times has been eliminated, but the end results have not changed much. *TheSky's* output is in line with the numbers in Tuckerman's Tables and the Supplement. Modern software, for all its radical capabilities, fits within the ongoing evolution of historical astronomy.

As the following comparison shows, there is no significant difference between Tuckerman's ecliptic longitudes, those obtainable from *The Sky* software and from Simon and Bretagnon. The results are given below to two decimal places in keeping with Tuckerman's Tables.

TEST Dates	Tuckerman 1962	The SKY 2001	S and B 1986
11 Sept, -6	228.58	228.57	228.52
21 Sept, -6	235.87	235.86	235.81
01 Oct, -6	243.29	243.27	243.81
11 Oct, -6	250.81	250.80	250.76
21 Oct, -6	258.43	258.42	258.38
31 Oct, -6	266.12	266.12	266.07
10 Nov, -6	273.86	273.53	273.81
20 Nov, -6	281.64	281.62	281.59

Ecliptic Longitudes, September 6 to November 20, -6 (7 BCE)