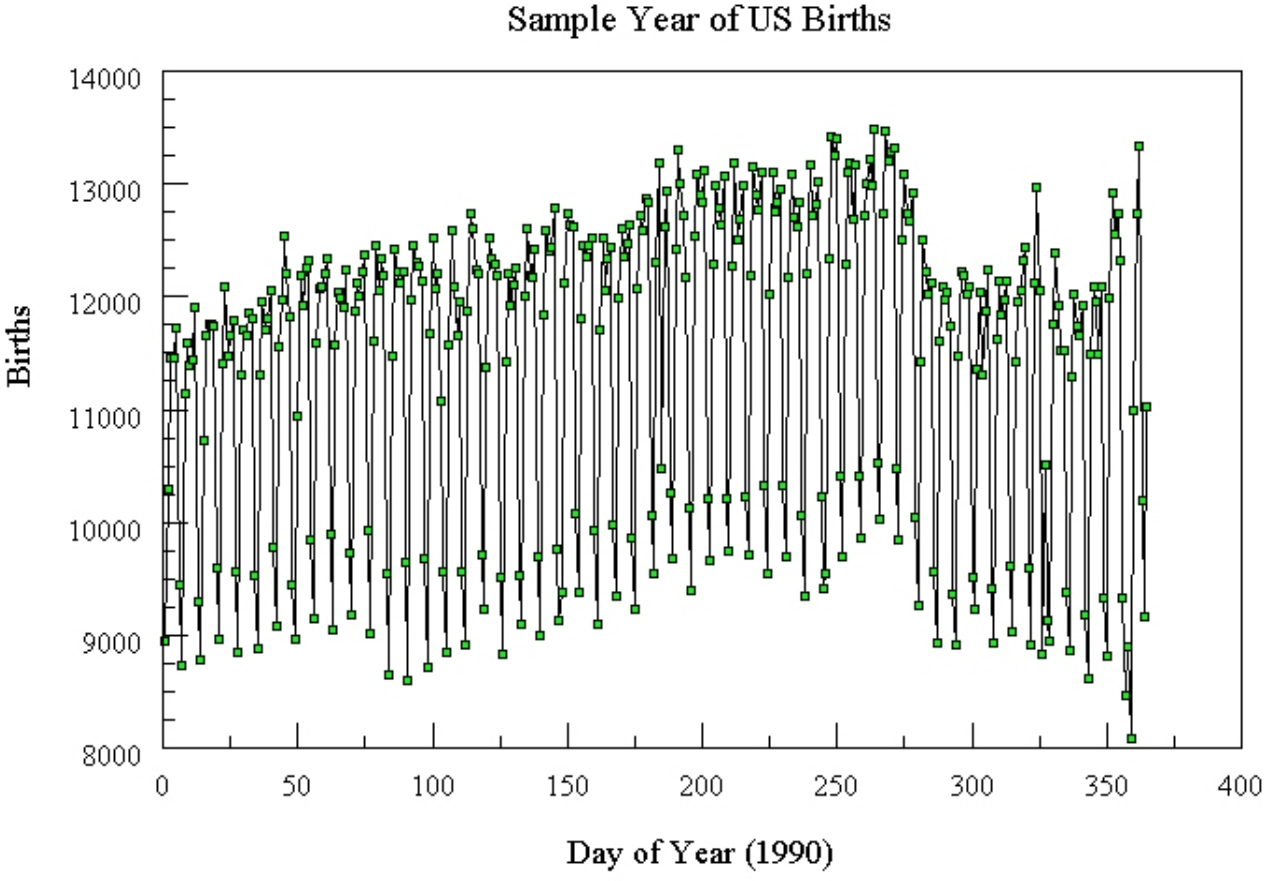
This Study

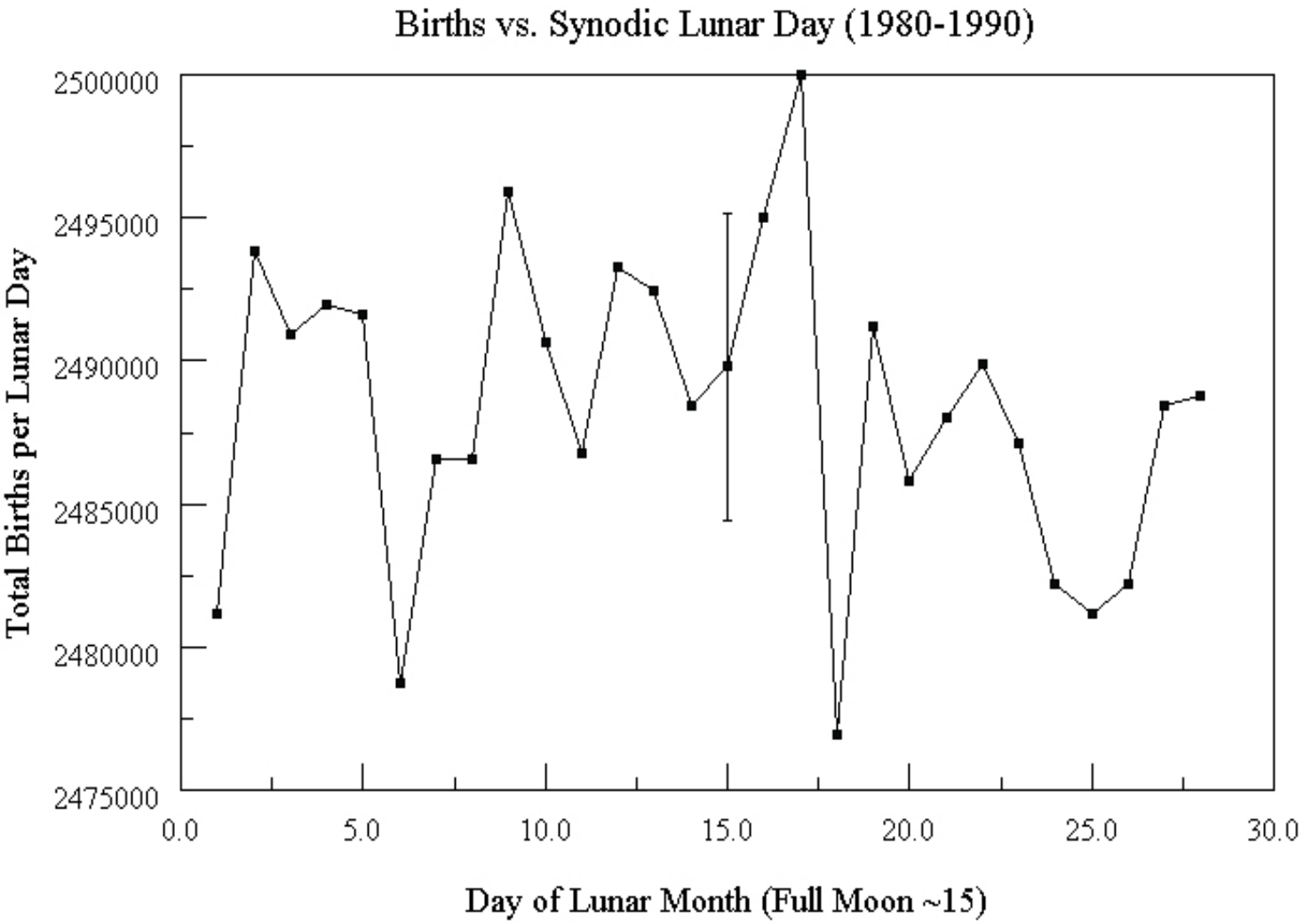
In our study we used printed data provided by the Natality Statistics Branch of the National Center for Health Statistics. These were provided in the form of tables produced for other studies and reports generated at the Center. Each year's table had the number of live births for each day of the year. Our work here used births data for twenty years, totaling about 70 million live births in the U.S. This is 1.5 times the number of births of the largest of the previous studies (Caton and Wheatley, 1994), and indeed allowed enough reduction in the "noise" to better reveal any correlations.

The plot below shows a typical annual birth cycle for the U.S., and shows a peak in August and drop off afterward due to social effects (vestigial agrarian calendar, dangers of winter births in the past, and longer winter nights). The weekly pattern is also obvious–a minimum on the weekend and a maximum on Tuesdays, no doubt due to induced and Caesarean births. These are not separable from natural births in the data base and are assumed to be random with respect to any lunar effects when averaged over a 20-year span. Indeed in our earlier study no changes were found when the data were normalized to the mean rate per day of the week.



These data were entered into files and then analyzed with programs written in Basic. The basic program scans through the data, computing the Julian date, day of week, and "age" of the Moon (number of days past new), using the Moon's synodic period (29.530589 days) and the date of a new moon before 1980. Data are then binned as births on each of 29 days from day 0.5 to 29.5. Data before 0.5 and after 29.50 have not been incorporated.

The plot below shows the result for all 20 years, about 70 million births. The standard deviation for this set of 28 points is about 5360 and is shown as an error bar at the data point for day 15.



Most of the points lie with one standard deviation of the mean, and all but one lie within two sigmas.