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## Letters

### Cycles of the moon

"News from the center of our galaxy" (SN: 1/10/87, p. 24) perpetuates a common error about lunar cycles. The Saros, a word derived from the Akkadian meaning 3,600 years, today is used to describe the interval of 18 years and 11 days in which eclipses recur. Dates of eclipses in a series lasting hundreds of years can confidently be predicted using this interval (strictly 6,585.32 days).

The period of rotation of the nodes of the moon's orbit is 18.61 years, and it is at this spacing, not the Saros, that the same celestial features are occulted by the moon. Thus in 1968-69 the Pleiades were occulted, and a new series starts in 1987. This is the period your article should have cited.

Neither of these is the same as the Metonic cycle of 19 years, in which lunar phases recur on the same calendar dates. This is a rather unreliable empirical eclipse predictor, never valid for a span of more than 60 years. It is, however, the basis of the algorithm on which

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Cover: This striking computer-generated image is the result of applying Newton's method, a technique for solving equations, to the equation  $z^4 - 1 = 0$ . By studying such pictures, mathematicians are beginning to understand when Newton's method works well and when it fails. In some cases, the method yields unpredictable, chaotic results. (Illustration: Burns, Benzinger & Palmore/Univ. of Illinois)

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the date of Easter (first Sunday after the first full moon after the vernal equinox) is calculated.

David S. Evans  
Professor Emeritus, Astronomy Department  
University of Texas  
Austin, Tex.

### Seasonal susceptibility

The recent group of letters regarding possible co-factors in the seasonal variation of cholesterol, melatonin, etc. (SN: 1/31/87, p.67) caught my interest.

It may not be so surprising that men in cities with the least change in day length have the greatest change in any index of seasonal variation. It seems possible that those most reactive to such changes might, over generations, be most susceptible to moving to a less environmentally varying section of the country, or perhaps be more "fit" than those with similar reactions in more northern latitudes and, as a product of their "fitness," be more numerous in the lower areas.

The area of research is quite exciting and certainly relates to the work of Norman Rosenthal, et al., concerning seasonal affective disorder.

Steven Brown  
San Francisco, Calif.

### Affiliation clarification

In "A more complex solar cycle" (SN: 1/17/87, p. 39), D.E. Thomsen did an excellent job of understanding and interpreting the ideas that were presented at the American Astronomical Society meeting. Unfortunately, he made a major error in my affiliation. The press release that was handed out at the press conference clearly stated that I work for the Air Force Geophysics Laboratory, and the first three words of the title of the press release are "Air Force Astronomer." Our group is a tenant at the National Solar Observatory.

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FEBRUARY 28, 1987

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