mined to pose no significant risk or for specific risk assessment studies could be granted by the secretary.

The secretary of HEW would also have authority for inspection (which he may delegate to local biohazard committees) and enforcement. Violations could result in loss of NIH grants or in fines of $5,000 in the case of investigators not supported by NIH funds.

The most controversial area of the bill is the provision limiting the ability of local legislatures to preempt the federal rules. Like the earlier House bills, the proposal limits local regulations to those both more stringent than the comparable federal provisions and judged "necessary" by the secretary of HEW after hearings. Environmental and public interest groups have argued for allowing stricter local rules, while university administrators demand a single standard that would apply across the country. □

Sun temperature drop recorded

Researchers at Kitt Peak National Observatory in Tucson, Ariz., have recorded a drop of 6°K in the sun's temperature during the last year. This drop, which they say may be cyclical and related to sunspot activity, is the first recorded since researchers began monitoring the sun's temperature in 1975. It represents a change of one-tenth of one percent of the sun's constant 5,700°K, said William C. Livingston, one of the researchers. The change also represents a 0.5 percent decrease in the solar constant or energy output, he said.

Taking about six measurements per month, researchers first noticed the decline in January 1977, when the sunspot activity passed its minimum and began to increase. "It is tracking well with the sunspot cycle," said Livingston. "We assume it is cyclic because geological history shows us nothing different." Though it is a small decline, some climatologists have said that a 2 percent drop over a period of centuries could initiate an ice age, so "we should be interested in a change of a fraction of one percent if it is long term," he said. Because of seasonal distance variations between the sun and the earth, the energy received from the sun changes six percent annually, Livingston said. An additional five-tenths percent change in that energy output over a long term could have climatic impact, he said. However, more observations over a longer period of time are needed before the drop can be related to climate changes, Livingston emphasized, and additional data should be gathered by satellite. J. Murray Mitchell Jr. of the National Oceanic and Atmospheric Administration said preliminary data from weather satellite Nimbus 6 verifies the Kitt Peak data. □

Scholarships for planetary studies

A $5,000 prize divided among the more than 10,000 people who have worked on the Viking Mars project might be enough to buy each winner a fast-food hamburger —hold the fries. Such a prize has now been awarded, but Viking officials have decided to use the money in a considerably more productive way: as undergraduate scholarships in planetology and astronomy.

The AAAS-Newcomb Cleveland Prize is awarded annually by a committee of the American Association for the Advancement of Science, usually to "the author of an outstanding paper presented in the 'Reports' section of SCIENCE," the AAAS journal. The results from the first few months of Viking's Mars observations, however, appeared as 47 papers, representing almost 150 researchers and filling nearly three full issues of the journal. Furthermore, said awards committee chairman H. Bentley Glass, the committee felt that the science *and* the technology that made it possible were both so important "that the prize should go to the entire group of persons who have made the Viking mission such an extraordinary achievement. . . ."

Thus the Viking project is seeking one- or two-page proposals by any undergraduate student or group of students wishing to apply for grants (in the range of $500 to $2,000) for research projects in planetology or astronomy. Such projects could involve the use of Viking data (but certainly do not have to), "and where this is the case," says the Viking office, "we will offer our help, if appropriate." Proposals may involve "ongoing space missions, work in laboratories, the field, observatories, libraries, the home, or any locality consistent with the goals of the proposed effort," and may include the continuation of work already in progress.

Viking "student logo," designed in 1975 by Baltimore high school junior Peter P. Purol.

Proposals should include: name(s), address and school of the applicant; the goal of the work; when the work is to be done; "how you will go about it"; the amount and planned use of the requested funds; and the name and address of faculty members or other references. They should be sent to Viking Student Grant, Viking Project Office, Mail Stop 159, NASA Langley Research Center, Hampton, Va. 23665. They must be received at Langley by April 15, 1978, and the selected students will be notified by May 1, so that this summer can be used for the work. □

'Critical days' and highway crashes

A wealth of scientific evidence documents the effects of biological rhythms on sleep-wakefulness cycles, sex and moods, physical and mental alertness and many other aspects of human physiology and behavior. Such rhythms usually occur daily or monthly and tend to be similar in all persons or at least in those of the same sex, but there is no solid evidence for one theory of biorhythms that has been knocking about since the start of the 20th century and has gained worldwide popularity in the past several years. This theory contends that each of us has a 23-day physical cycle, a 28-day emotional cycle and a 33-day intellectual cycle that begins at the moment of birth and that influences our minds, bodies and behavior either favorably or unfavorably depending on which stage of a cycle a person is in.

Probably the most interesting aspect of this theory, at least from a public health and safety standpoint, is that people are supposed to be accident-prone when their cycles switch from plus to minus. Is there any scientific basis for such a link? Perhaps, if one looks at some German or Japanese investigations. No, if one looks at those from English-speaking countries. John W. Shaffer of Johns Hopkins University School of Medicine and his colleagues have now conducted a study to determine whether the theory can predict when a person is accident-prone.

Using data from 205 carefully investigated highway crashes in which the drivers were clearly at fault, Shaffer and his team computed specific points in the drivers' biorhythm cycles at which the accidents occurred. The observed frequencies of accidents taking place during so-called critical and minus periods were then compared with the frequencies to be expected on a chance basis alone. The results, reported in the January ARCHIVES OF GENERAL PSYCHIATRY, provide no evidence for a link between the purported critical days and highway crashes, and thus stack the deck a bit more strongly against the biorhythm theory being able to predict when people might be susceptible to accidents. □