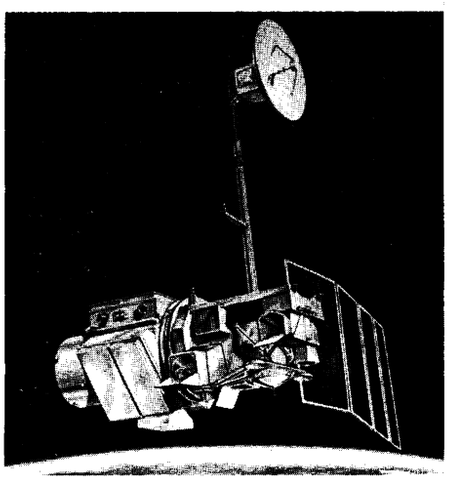
and which are operated by the federal government.

The panel supports this division in principle—assuming that land remote sensing will indeed be commercially viable—but it strongly recommends that the federal weather satellites be supplemented with a system for sensing the oceans. The law is silent as to who should run such an ocean-sensing system. However, given the close physical coupling between the ocean and weather a unified system seems highly desirable.

Second, the federal agencies themselves are split between research on such things as new sensors, which is supposedly the responsibility of NASA, and satellite operations, which is the responsibility of NOAA. A long and fruitful cooperation between these two agencies was abruptly terminated in 1981, when the Reagan Administration's first budget-cutting effort forced NASA to protect higher priority programs. NOAA, meanwhile, was under budget pressures of its own, and was unable to take up the slack. The research council recommends that the NOAA/NASA relationship be restored.

More fundamentally, however, NOAA has been hampered by its position within the Department of Commerce, where scant attention is paid to satellite services. Indeed, it has often been suggested that NOAA be made an independent agency, or perhaps incorporated into a new department of science or natural resources. Whatever the outcome of that debate, the research council report recommends that the issue be resolved quickly, and that wherever NOAA finally resides, it be given greater budgetary and management flexibility.



Artist's rendition of Landsat.

Finally, remote sensing has been split by an artificial division between land, atmosphere, and ocean programs. The sensors are often similar, and their required orbits are similar; from a purely technical point of view, in fact, the whole thing should be a single program. In particular, substantial cost savings would result if NASA, NOAA, and the private Landsat operator would consolidate sensors on multipurpose spacecraft wherever possible. "Observational and orbital requirements, not institutional or programmatic labels, should determine on what satellite a given sensor is flown," says the panel. NASA's polar orbiting platform, for example, which will be built as part of the agency's space station project, might fly a battery of NOAA's operational atmospheric and ocean sensors along with NASA's own experimental instruments. At the same time, NASA might lease space on the platform to privately owned land sensors. ■ **M. Mitchell Waldrop**

Reye's Data to Be Turned Over to Company

Plough, Inc., the manufacturer of St. Joseph's Aspirin for Children, has obtained through a subpoena a protective order that will allow its scientists to examine the raw data from a government-sponsored study of Reye's syndrome. The company has been sued by the family of a young boy who developed Reye's syndrome and alleged that aspirin caused his illness. To defend itself, Plough says it needs to see data that the government has withheld because it may reveal the identity of individuals who participated in the study (*Science*, 18 October, p. 297).

Most of these data are in the hands of Westat, a consulting company located in Rockville, Maryland, which conducted the study under contract for the Centers for Disease Control, and the rest are held by the CDC. The protective order, issued by the circuit court of Maryland in Montgomery County, attempts to reconcile the government's interest in maintaining the privacy of patients and their families with Plough's interest in scrutinizing the data.

To do this, the court requires that names and any other direct identifiers of study participants be removed from the study documents but stipulates that scientists be allowed to verify, by checking a sample of the records, that only direct identifiers are erased. Yet even if direct identifiers are removed, it still may be possible to determine who participated in the study by means of indirect identifiers, such as the location of the towns where the children with Reye's syndrome lived. The court therefore requires that no one who examines the raw data contact or reveal the identities of any study participants.

Plough and its attorneys are satisfied with the protective order and the company intends to begin its analysis of the CDC study. The protective order "sets a useful precedent for public health studies," says Plough attorney Bryan Jay Yolles of the Washington firm Clifford and Warnke. ■ **Gina Kolata**

Creationism Downed Again in Louisiana

Proponents of a law giving creationism equal time with the teaching of evolution in Louisiana schools received yet another setback in December. In an 8–7 decision, the fifth U.S. Circuit Court of Appeals declined to reexamine a ruling it made against the creationism law in July.

Louisiana Attorney General William Guste plans to take the case to the Supreme Court, because, he says, the arguments for the Louisiana balanced treatment law have not been fully aired in court, unlike a similar law in Arkansas, which was declared unconstitutional in January 1982. The seven-vote dissent represents major support for the law, he says.

Louisiana's law, which was enacted by the legislature in July 1981, has been the subject of numerous legal maneuvers, both by proponents and opponents. At one point, in November 1982, Federal Judge Adrian Duplantier declared that the law violated the state constitution, on the grounds that the Board of Elementary and Secondary Education, not the legislature, was empowered to determine school curricula. Creationists persisted in their support of the law, and even survived an attempt to kill it in the legislature itself in summer 1984: the state senate gave a 21 to 16 thumbs down, but the House rescued the law with a surprising 61 to 26 vote in its favor.

Next was another ruling by Judge Duplantier, this time on the issues. This followed the line of argument that had felled the Arkansas law—that the law essentially promoted selected religious beliefs. Duplantier's decision, of 10 January 1985, was appealed by Guste to the 5th Circuit Court of Appeals and was upheld there by a majority ruling in July. Faced with a failed appeal, Guste tried to persuade the court that the law had not had a fair hearing, a move which elicited the recent 8–7 rebuttal.

The influence of the January 1982 decision by Arkansas's Judge William Overton has been apparent through the long odyssey of the Louisiana law, both for its powerful argument and for the $1.5 million bill for legal expenses with which the legislature found itself stuck. ■ **Roger Lewin**