

just rooftops and pavement in metropolitan areas can have significant effects on local weather, and some researchers wonder whether there may also be longer-lasting regional climatic changes. Target cities for the HCMM include seven in the United States (Los Angeles, St. Louis, Houston, Washington, Buffalo, Rochester and Syracuse) as well as others in Switzerland, France, Germany, Austria and Italy.

- Crops and other vegetation: Healthy plants take in water more efficiently than some diseased or otherwise water-starved ones, causing them to "run cooler." Studies of soil moisture, transpiration rates, general "plant stress" and thermal "signature" differences are being conducted with the HCMM in the United States, Italy, Sardinia, Australia, Canada, Spain and other countries.

- Water: These are perhaps the most wide-ranging of the HCMM projects, including water quality in the Great Lakes, a search for fresh-water springs in West Germany, measurements of ocean upwelling along the French coast, and a study in South Dakota to see if it is possible to identify areas whose groundwater supplies are particularly susceptible to contamination.

- Geology: Besides identifying soil and rock types from orbit, HCMM researchers will seek geologic faults, magma concentrations, signs of subsurface morphologies and other results, including studies in the United States, England, Morocco and elsewhere. Geothermal energy deposits will be sought in several countries.

- Snow: A special category, since its IR signature is different from that of liquid water, but it represents potential irrigation or flooding. One study will attempt to characterize the signature of snow seen through forest cover, including the effects of different kinds of trees.

The HCMM is the first of a series of Applications Explorer Missions using certain shared components to build small, low-cost satellites for specific types of measurements. The next in line will be SAGE, to be launched early next year for aerosol and gas studies in the stratosphere. SAGE and HCMM use roughly the same "base module" — attitude control, data-handling, communications and power systems. The HCMM module cost about \$6.9 million (of a total \$9.3 million for the satellite), says AEM program manager Dick S. Diller, while SAGE's similar module, ordered at the same time, cost only about \$2.3 million. After SAGE is scheduled MAGSAR, for late 1979, to map gravitational and geomagnetic variations, possibly followed by ERBS, designed to measure earth's balance between incoming sunlight and reflected heat.

If ERBS is not built in the the AEM series, it may instead become a part of the larger Modular Multimission Spacecraft series, designed with interchangeable components that can be individually replaced in orbit via the space shuttle. □

Mental health report cites chronically ill

"He didn't give us very much time," Rosalynn Carter said as she cast a sidelong glance at the President. "He didn't give us very much money. But he did give us the opportunity to develop a plan and strategy for the direction of mental health services for the next decade." With that, Mrs. Carter — honorary chairperson of the President's Commission on Mental Health — presented her husband with the final form of one year's and \$800,000 worth of work.

On accepting the document, Carter indicated with rather wry optimism that it promised to have a somewhat greater impact — at least in the near future — than that of his proposed energy plan. Some observers have said that if U.S. World War II strategists had been as adept as Carter's administration is in energy, the President related, "the people in Plains [Ga.] would now be speaking Japanese."

Carter did pledge to push most of the commission's 117 recommendations with Congress "next year." "I think [the report] will have a profound beneficial effect on our country in years to come," he said.

Rather than propose massive, across-the-board funding increases, the report calls for a streamlining of mental health delivery systems with a heavy emphasis on services for "the underserved": the poor, minorities, women, the elderly and, perhaps most significantly, the chronically ill. "We're calling for a new national priority to meet the needs of the chronically mentally ill," says Commission Chairman Thomas E. Bryant. "These people go from

park bench to park bench... and boarding house to boarding house."

The report calls for \$50 million a year in federal funds for five years to continue the phase-down of large state hospitals, to upgrade care in smaller hospitals and to develop "community based services." The latter aspect would replace the community mental health center (CMHC) concept, started under President Kennedy, with more flexible community centers. For lack of manpower, money or other factors, many areas of the United States have been unable to meet the stringent qualifications of a CMHC, and consequently have no or little outpatient treatment available, say the commissioners.

The report also advocates inclusion of mental health care in any plan for national health insurance. "Medicaid and Medicare ... frankly discriminate against mental illness right now," says Bryant. It also calls for substantial increases in research on the causes and treatment of mental illness, mental retardation, drug abuse and alcoholism.

New National Institute of Mental Health statistics indicate that close to 15 percent of Americans — rather than the previously believed 10 percent — are in need of mental health services at any one time. Overall, the report asks for \$500 million in federal monies over the next three years, \$600 million over the next five years. "It will not be a costly program," said the President. "In fact, it can save enormous amounts of public funds." □

NAS decries human rights violations

Following a trip to Argentina and Uruguay in mid March, a National Academy of Sciences delegation reported last week on what it feels are clear indications of human rights violations in both countries. The trip was sponsored by the Academy's committee on human rights and resulted from invitations by ambassadors of both countries following inquiries about scientists who were allegedly abducted or imprisoned without trial.

Certain "positive signs" during the trip foster hope "that Uruguay intends to move toward greater individual freedom and respect for human rights," the delegates said. Among those signs were: substantial official cooperation in discussing the problem of imprisoned scientists, opportunity to talk with imprisoned mathematician José Luis Massera, and an interview with the chief judge of the military tribunal prosecuting Massera's case. The judge said that "the plea and presence of the NAS could be viewed in a positive manner" when the case is decided.

The NAS visitors found the Argentine situation worse. "The true tragedy of

Argentina is the large number of persons who have 'disappeared' over the past two years," they said. Even during their visit a prominent hematologist was abducted from her home at 3 a.m. by armed men who said they were "from the police"; she was "missing" six days. The government denies involvement. It does not deny incarcerating thousands of scientists — many for years and without trial — for political associations or action.

Many scientists have threatened to boycott a cancer meeting in Buenos Aires this year to protest the human rights situation. The NAS committee feels that Argentine scientists would be better served, however, by the attendance of foreign colleagues who may, while attending, elect to "express their ... concerns."

Meanwhile, NAS is asking Uruguay to speed Massera's trial and permit him to emigrate, and Argentina to release physicist Elena Sevilla and psychiatrist Claudio Santiago Berman, both imprisoned without trial. Limited resources restrict NAS action to individuals whose situation is "grave and well documented." □