

NAS Extends Boycott of USSR

The Olympic boycott didn't get the Russians out of Afghanistan, but it did keep a lot of athletes from doing their thing. The U.S. boycott of scientific exchanges with the USSR didn't get physicist Andrei Sakharov out of Gorky, but it did bring at least a temporary end to certain scientific exchange programs between the two countries and it may have lasting effects on such programs.

Six months ago, the government-enforced internal exile of Sakharov prompted numerous U.S. science organizations to cancel most cooperative exchanges with the Soviets (SN: 2/9/80, p. 84). The National Academy of Sciences, for instance, suspended all bilateral meetings, symposia and workshops with the Soviet Academy of Sciences. Last week at a meeting in Woods Hole, Mass., the council of the NAS voted unanimously to extend that suspension.

The council's statement read, in part: "We remain deeply concerned by [Sakharov's] continuing exile. Our concern is not an indication of agreement or disagreement with his expressed opinions on political issues. It is rather a concern for his rights as a scientist and as a human being and, in particular, for his freedom to pursue scientific work. Our suspension of those interacademy exchanges involving groups of scientists was a direct expression of this concern. This concern continues. The Council hopes that circumstances will so improve as to permit the resumption of these interacademy exchanges."

The exchange of individual scientists between the two countries has and probably will continue (about 90 percent of such exchanges have not been affected), but the suspension of the more formal programs may have some serious effects. When the action was first taken, four meetings were canceled immediately. Two were strictly science meetings — one on lasers and one on brain research. The other two meetings, however, were planning sessions. If they are not re-scheduled, the Academy's exchange program with the USSR may stay locked, like Sakharov, in a politically imposed limbo. If the meetings are rescheduled in the near future, they will be to plan science exchanges that probably could not take place until late 1981.

As it is, the NAS exchange agreement with the USSR expires on Dec. 31. And even if a new agreement is negotiated, the Academy expects it to take a different form. Throughout the 20-year history of the current program there have been misgivings about the balance of exchange, with U.S. scientists claiming to give much more than they get. This imbalance has

been admitted to in the past by the Academy, but the decision was made to continue the program because it kept open one of the few windows we have on Soviet science.

The new interagency agreement, if it is negotiated, should be "more appropriate to scientific progress and [have] greater

emphasis on multilateral arrangements," says the Academy. In other words, the Academy hopes to structure any future agreement in a way that will make the exchanges more valuable to U.S. and to other scientists.

There has been no formal response from the Soviets. □

Setting sights for Saturn

A barely visible, cloudy smudge on a few otherwise near-featureless photos of Saturn taken Aug. 18 by the Voyager 1 spacecraft may not seem like much basis for excitement, but to scientists in charge of the probe's camera, it is a tantalizing source of hope. For without such markings, the researchers will lack their key clues to the planet's atmospheric circulation — which is likely to be remarkable.

In the cloudtops of gigantic Jupiter, numerous spots, whorls, plumes and other irregular features can be photographically tracked around the globe as indicators of the speed of the winds at different latitudes (as well as revealing their own circulatory patterns). If any such markings exist at Saturn, however, they are apparently overlaid by a high-altitude haze that hides them so that only about nine have ever been tracked by earth-based observers with any certainty, and the Pioneer 11 spacecraft, which flew past Saturn last September, saw virtually none. (Jupiter also has its multicolored, globe-circling bands, and Saturn shows less contrasty equivalents of those bands, but the motions of such axisymmetric features are difficult to track.)

On Nov. 12, Voyager 1 will pass less than 125,000 kilometers from Saturn, and scientists hope that they will by then have been tracking individual cloud features for weeks or months. Until recently, all that could be seen in the photos were the faint encircling bands, producing pessimism from some officials close to the project. On Monday, however, according to camera team leader Bradford Smith of the University of Arizona, a few photos taken through an ultraviolet filter suggested what seemed at a brief look (and after only limited computer-enhancement) to be "a bright cloud" at about 20°N. Never mind its size, or what it might be made of — at this point it is promising enough merely to have something to track as it moves around the planet. And it could be moving at quite a clip.

Early this year, scientists working with Voyager's radio-astronomy instrument detected signals from Saturn that provided the first measurement of the planet's "internal" rotation period — 10 hours, 39.4

minutes. The difference between that and the shorter period calculated from earth-based observations of the few discrete cloud features that have been seen near the equator suggests that Saturn's equatorial winds may be whipping around at speeds greater than 1,400 kilometers per hour — about four times faster than those of Jupiter.

On Aug. 22, Voyager 1 has been scheduled to switch into its "observatory phase," taking many pictures every day instead of just test shots every week or so, and Smith's team will be looking closely for new targets. Closer in, this could include turbulence created between bands of different speeds. A "target-selection working group" will begin meeting Sept. 4 to decide where to aim the camera, which will also be studying the planet's rings and looking at both known and yet-unconfirmed moons. □

Of lead, benzene and coke oven air

The Occupational Safety and Health Administration is simultaneously sighing in relief and holding its breath in the wake of the U.S. Court of Appeals recent decision to uphold the agency's strict lead standard.

On the one hand, the court decided OSHA presented substantial evidence for its decision that a permissible exposure limit of 50 ug/m³ based on an 8 hour time-weighted average is necessary in certain industrial settings to protect workers from dangerous levels of lead. This judicial vote of confidence in OSHA came on the heels of last month's U.S. Supreme Court decision to strike down the agency's standard for occupational exposure to benzene (SN: 7/12/80, p. 20). The high court ruled in that case that OSHA had not carried its burden of proof of coming up with an evidential foundation for its benzene standard. But, "The lead standard stands in marked contrast to the benzene standard struck down by the Supreme Court," wrote Chief Judge J. Skelly Wright in the opinion of the court of appeals.