

THE former President of the Soviet Academy of Sciences, Mstislav V. Keldysh, who retired from his post earlier this year on the grounds of ill-health, seems to have made a recovery, judging from recent articles in the Soviet press. On November 8, the day following the announcement of this year's State Prizes, it was he, and not his successor Academician Vladimir A. Kotel'nikov, who gave the traditional appreciation of the achievements being honoured. A few days later, on November 16, he was again featured in *Pravda*, in an extensive interview on the success of the recent Venera 9 and 10 probes.

Neither of the articles is in any way out of context. Keldysh is still Chairman of the Lenin and State Prize Committee for Science and Technology, and was closely involved with the Soviet space programme in its early days. Nevertheless, those who suspected some connection between Keldysh's retirement and the postponement of the Academy's Jubilee Celebrations from May 1974 to October 1975 will doubtless find something more than fortuitous in his sudden reappearance in print so soon after the conclusion of the celebrations.

One interesting feature of this year's State Prize lists is the emphasis given not only to basic research and applied technology, but also to the production of text books. Although in the past Lenin or State Prizes have been awarded to authors in connection with a specific scientific monograph, this year three works intended for students' use have been specifically honoured. They represent a broad spectrum: ordinary differential equations, general surgery, and radio receivers.

The Soviet academic system makes a sharp division between pedagogic and research activities—the universities confine themselves entirely to teaching, while original research is carried out only in special institutes. Although a research scientist will frequently hold more than one post, combining research at an appropriate institute with university lectures, his main chance of official recognition in the State and Lenin Prize lists has until now been through his research.

This new emphasis on the importance of text books is an interesting sidelight on the growing concern of Soviet educationalists who want works of "a high scientific and methodological level" at their disposal for use in universities and colleges of special secondary education.

● Following the recent press campaign against Academician Andrei D. Sakharov, the announcement that

the Soviet government would not permit him to travel to Oslo to receive the Nobel Peace Prize came as no surprise. Nevertheless, the reason given—that he is in possession of classified information—demands some scrutiny. It is more than seven years since Sakharov lost his security clearance, which raises the question of whether any information to which he previously had access is still on the secret list.

## Soviet scene

from Vera Rich, London



Moreover, in 1958, the year that Boris Pasternak decided to decline the Nobel Prize for Literature after a prolonged press campaign against him, the award of the Physics Prize to Cherenkov, Frank and Tamm was hailed as a notable tribute to Soviet science, and the three winners received the necessary visas for Stockholm. This was in spite of the potentially sensitive nature of their work: Tamm and Sakharov had actually been working together on certain aspects of thermonuclear reactions.

The Soviet authorities apparently find Sakharov's prize an embarrassment, and for reasons of policy would prefer that he should not receive the award in person. If the precedent is followed in the future, however, a Soviet winner of the Physics Prize might well be forced to receive it *in absentia*.

● Increased concern is being felt for the fate of Andrei N. Tverdokhlebov, the physicist who was arrested on April 18 in connection with his attempts to establish a Moscow group of Amnesty International, and who is now being held in the Lefortovo prison in Moscow. The link between physics and

concern for human rights and freedom dates back to Stalin's time, when the need for a nuclear arsenal allowed physicists to speak from a relatively privileged position and to avert a Lysenko-style disaster in the physical sciences. Tverdokhlebov has been closely associated with Academician Sakharov, whose "Human Rights Group" he joined as a founder member, and also with Valentin Turchin, who was a co-signatory of the second Sakharov manifesto of 1970. An appeal by Turchin on behalf of Tverdokhlebov has been sent to the West. According to press agency reports, Tverdokhlebov and another member of the Amnesty group, the Ukrainian science-fiction writer Mykola Rudenko, will be charged with "anti-Soviet slander", but it is not yet clear whether formal charges have been made.

● Two significant developments in the field of automation have been announced recently in the Latvian SSR. The first, described at the First All Union Conference on Biomechanics in Riga, is a proposed walking robot for rough terrain. Although this has been mooted several times in the last few years, the new version, designed on the basis of extensive mathematical simulation, seems to have been produced with far greater attention to practical implementation than some of the rather theoretical proposals so far discussed. The latest ideas include lasers as a possible means of stimulating vision, and the automatic selection of the form of motion—velocity, length and height of steps—to fit the demands of the terrain. A six-legged robot is likely to prove the most manoeuvrable.

The second and perhaps more alarming development concerns the management-control automation system recently introduced into the radio industry in Latvia. According to the *Novosti* agency, this system, based on a Minsk 22 computer, is intended to assess the competence of production managers.

Among other things, it checks their actual performance against planned deadline dates, and acts as a progress chaser by sending telex messages to remind managers of their obligations. At the end of the month, it evaluates the manager's place in the hierarchy of professional "emulation" and adjusts his pay accordingly.

The system, which operates with a staff of five, is said to repay the investment costs within a year by reducing inter-office correspondence by some 50%, as well as to improve labour discipline. Its adoption has been recommended for all radio-engineering enterprises in the USSR. □