

loss of a naval research laboratory payload intended to return flash spectra of the chromosphere in the ultraviolet—the Aerobee rocket functioned perfectly but the payload disappeared. One of the Nike-Cajun rockets intended for ozone measurement also failed to function, while the second of two airglow experiments was cancelled when the first failed.

In these circumstances, the star turn at Wallops Island was the international experiment involving teams from Imperial College, London, the Culham Laboratory of the UK Atomic Energy Authority, Harvard University and York University, Toronto. Dr R. J. Speer, of Imperial College, said after recovery of the film package that he and his colleagues had been surprised and delighted by the quality of the films recovered. He explained that the experiment was designed to provide ultraviolet spectra of the Sun at three-second intervals in two ranges from 85 to 200 nanometres and from 210 to 310 nanometres. In practice, Dr Speer said, the rocket had functioned perfectly and the apogee had been placed accurately within the ten kilometre cube at the instant of totality. The package of film recovered was found to include fifty complete spectra, only slightly fogged, representing the ultraviolet output of the Sun at intervals of three seconds of time between each of which the Moon had moved 1.3 seconds of arc. Since the chromosphere is about 10 seconds of arc thick, the sequences of films will make it possible to reconstruct the ultraviolet emission of the chromosphere in great detail.

Dr Speer was full of praise for the way in which the rocket operation had been mounted and the equipment itself had performed. He said that this was the first occasion on which the guidance system has been flown—the principle is to lock on to the nearly eclipsed Sun and then to follow with inertial guidance during totality. By good chance, it seems, the rocket happened to be stationary at the point of the second contact, which means that the interpretation of these photographs will be simplified. Dr Speer also praised the way in which an expeditious recovery of the package made it possible to start work on development of the spectra in just over five hours after the eclipse—an important consideration with ultraviolet sensitive film in which the sensitive grains lie on the surface and are easily damaged.

COLLEGE ADMINISTRATION

Scientists as Presidents

Two distinguished scientists will in future be presidents of two colleges which have been more than a little disturbed by the troubles of the past two years. The most unexpected appointment is that of Dr Robert E. Marshak, the theoretical physicist from the University of Rochester, who has been appointed president of City College, New York. Dr Marshak, who is 53, began his research career at Cornell, where he worked with Bethe on thermonuclear reactions in stars, among other things, but has been at the University of Rochester since 1938 and has worked on the penetrating components of cosmic rays. In the past few years, he has been an outspoken critic of university administrations for their unwillingness to admit students into full participation in university government and in this spirit he

resigned from the faculty senate of the University of Rochester as recently as February 13. He said after his appointment on February 27 that he proposed delegating a good deal of the administration of the City College, which has some 20,000 students, to a provost yet to be appointed and that he would try to sponsor ways in which the university could help with the social improvement of depressed parts of the city.

Dartmouth College, New Hampshire, is a somewhat more sedate institution, even though there was some trouble there some years ago. The new president is Dr John G. Kemeny, professor of mathematics and philosophy at Dartmouth for the past fifteen years. Dr Kemeny, a Hungarian by birth, has been much involved in the development of time sharing computers.

YOUNG SCIENTISTS

More Scholarships for Precocity

LIKE an intellectual version of the Miss America competition, the twenty-ninth search for talent among budding scientists in United States high schools ended successfully last week with the presentation of awards ranging from \$4,000 to \$10,000 to ten young people between fifteen and seventeen, two of them girls. A large roomful of people, described by Dr Glen Seaborg, chairman of the Atomic Energy Commission, as "everybody who is anybody in science", shared with the thirty unsuccessful finalists in the room the sight of the winners being called to the limelight in reverse order, \$4,000 people first and the \$10,000 winner, Kirk A. Shinsky of Allentown, Pennsylvania, last of all. The occasion was a great success for New York, the state which provided seven out of the ten winners. The Bronx High School for Science produced no fewer than three of these.

The annual Science Talent Search is organized by Science Services but financed by the Westinghouse Corporation. Mrs Dorothy Shriver, an assistant director of Science Services responsible for the organization of the programme, said there were this year almost 3,000 initial applications from high school students. Applicants provide a written account of a scientific project which is then supplemented by information from teachers and by a "scientific aptitude test". Mrs Shriver explained this week that this test will in future be replaced by the scores obtained in the national scholastic aptitude tests, chiefly because experience has shown that there is very little difference between the two yardsticks of performance even though the test which has in past years been designed for the talent search has consisted almost entirely of scientific questions.

The 3,000 applicants were this year winnowed down to 300, the dossiers of whom were rescrutinized so as to produce a short-list of 40 young people who then spent a week in Washington seeing some sights and some dignitaries. The ten winners were chosen by the seven judges after personal interview. Mrs Shriver says that the judges are more concerned with promise than achievement, but she acknowledges that it is necessarily hard to distinguish between scientific aptitude and general intelligence. Four years ago, a twenty-five year follow-up study among the people who had been the first winners suggested that ninety per cent had gone on to take higher degrees and that seventy per cent had remained in science.