

University NEWSBEAT

Prepared by the Communications Department, S 802 Ross, 667-3441

All aboard the Space Shuttle

Spacelab is new stage in space exploration

Dr. Allan I. Carswell, professor of physics and experimental space science at York University, has been appointed a member of the National Research Council committee co-ordinating Canadian participation in Spacelab experiments.

Spacelab is a reusable manned space laboratory designed by the European Space Agency in cooperation with the National Aeronautics and Space Administration.

That the Spacelab is reusable represents a new stage in the development of the space programme. In the past, both unmanned satellites and manned space stations, such as Skylab and Salyut, were lost forever (together with their costly instruments) once the mission had ended.

Spacelab, by contrast, will be launched, transported into orbit, and brought back to earth by the Space Shuttle.

The Shuttle, developed by NASA, is enormous: longer than

a football field, almost 60 feet high, with a wingspan of approximately 80 feet. Spacelab will be carried inside the Shuttle's massive cargo bay.

The main element of the Shuttle, the Orbiter, is both a rocket (for take-off) and an aircraft (for landing). It may make repeated journeys out into space and back again.

Spacelab may comprise either a pressurized laboratory, or an instrument carrying pallet, or both. Whereas the crew of the Shuttle is composed of astronauts properly speaking, the crew of the Spacelab — up to four in number — are engineers and scientists.

The ability to transport scientists into space to perform experiments on the spot is also a new development. The scientists will have on board the necessary computing facilities for first interpretation of the results obtained, and will be able to modify the experiments while they are in progress

and take corrective action in the event of malfunctioning.

Though it is expected the Shuttle will carry Spacelab on about 40 per cent of its missions, it can function in a great variety of ways. If a serious malfunction were to develop in a communication satellite, for example, the Shuttle could fly out, retrieve the satellite, and bring it back to earth for repairs.

The first Spacelab mission, following a programme of development flights of the Orbiter, is scheduled July 15, 1980.

In the meantime, scientists from Canada, the United States, and Europe will determine the experiments that are to be made on the flight, and develop the appropriate equipment package for Spacelab's instrumentation pallet.

Dr. Carswell anticipates that this first mission will include a Lidar (light detection and ranging) system. Lidar uses a laser beam, in much the same way that radar uses a radio beam,

to probe the atmosphere.

Dr. Carswell has done extensive work with Lidar, both from the ground and from aircraft, and is the Canadian member of NASA's Lidar management working group.

Lidar experiments from Spacelab, he says, would have two advantages.

First, as an orbiting laboratory, Spacelab would allow global

examination of the atmosphere, rather than the narrow range possible from earth. Second, the Lidar signal obtained in earth monitoring is weakest in the upper atmosphere, because the density of air molecules is lowest there and because the upper atmosphere is farthest away from the beam. The Spacelab Lidar would be closest to the upper atmosphere, which would partly compensate for the lower density.

Footnotes

ESP pioneer Rhine to speak

J.B. Rhine, the man who introduced the term "extra-sensory perception", joins two other panelists, A.R.G. Owen and Allen Spraggett, to present "The Will Beyond Ours", a Human Kaleidoscope lecture scheduled December 2.

Dr. Rhine, retired director of the Parapsychology Laboratory, Duke University, continues to serve as executive director of the Foundation for Research on the Nature of Man (FRNM) and consultant to the "Journal of Parapsychology".

Dr. Owen is executive director of the New Horizons Research Foundation, Toronto, and Mr. Spraggett is a local writer and broadcaster.

The lecture, co-sponsored by York University, the North York Board of Education and Seneca College, will be held in Minkler Auditorium, 1750 Finch Ave. E at 8 p.m. Tickets for the event are available in the Communications Department, S802 Ross.

Ethnic research finds food

Professor Grace Anderson, former chairman of the anthropology department at Wilfrid Laurier University and currently visiting professor of multiculturalism, will present the fourth in a series of seminars sponsored by York's ethnic research programme on Thursday, December 2.

The seminar, Food, Ethnic Groups, and Social Interaction, will take place at 4 p.m. in room N537 Ross.

Library group hears Rohmer

Richard H. Rohmer, Q.C., Canadian novelist, lawyer, and Chairman of the Ontario Royal Commission on Book Publishing in Canada, will be the keynote speaker at York University's national conference on Canadian Libraries in their Changing Environment to be held at The Sheraton Centre in Toronto from February 24 to 26, 1977.

Twenty-three authorities on Canadian librarianship will present papers of major concern to the profession which will be published and distributed to conference participants. The published papers will make an important contribution to librarianship in Canada and the conference will generate information for practising librarians, library administrators and educators.

Conference participants will be given an opportunity to hear and discuss the papers in an academically stimulating forum designed to aid and increase understanding of Canadian libraries and librarians and their changing social, political, economic and organizational environment.

The fee for the two and a half day conference is \$95. Participants may attend for one day for \$45. The conference fee includes payment for one copy of the conference proceedings, banquet and a wine and cheese reception.

For further information, brochures and registration forms contact Studies in Management, The Centre for Continuing Education, 667-2524.

Mathematical society meets

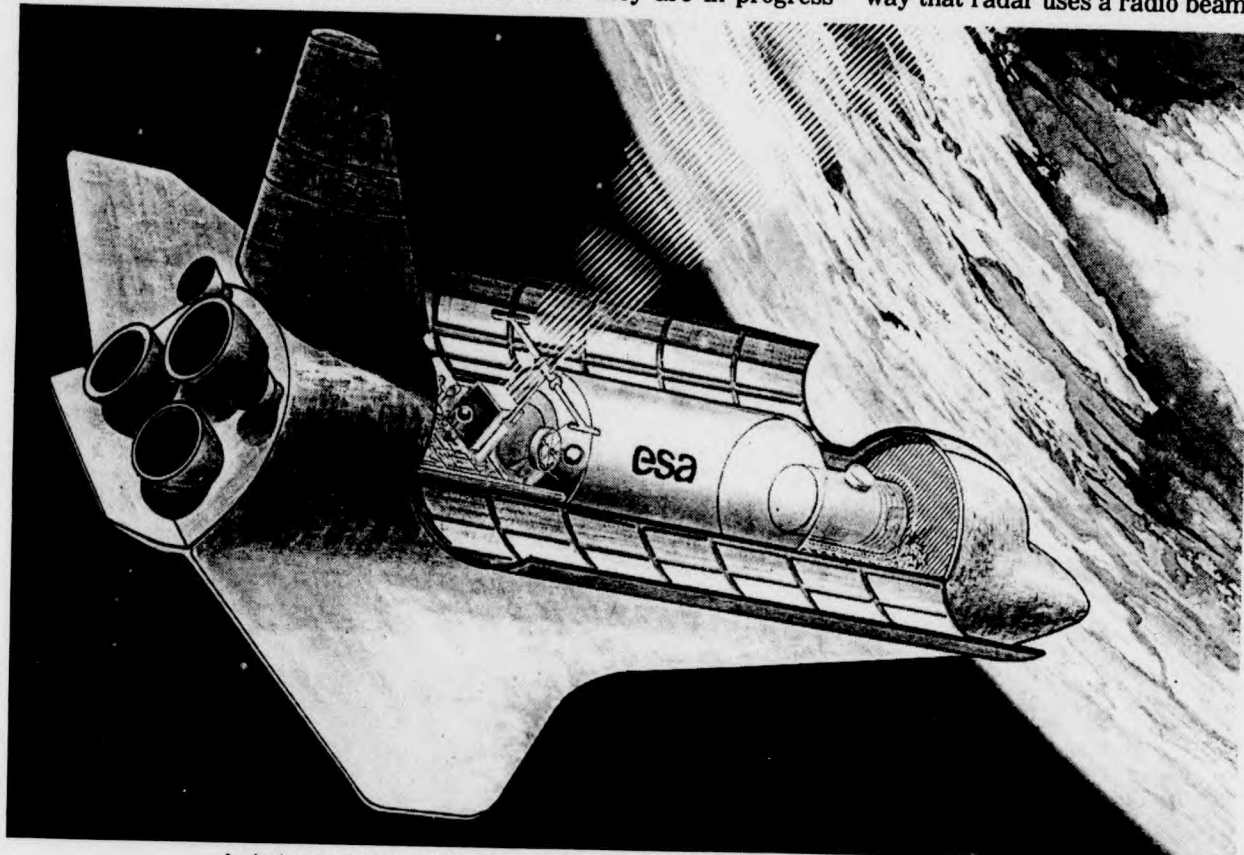
More than 250 mathematicians from all parts of Canada and the United States are expected to attend the second annual winter meeting of the Canadian Mathematical Congress December 10 through 12 in Curtis Lecture Halls.

Professor George L. O'Brien of York's Mathematics Department (Faculty of Arts) is scheduled to deliver a paper on the stochastic inequalities on partially ordered spaces December 12 at 10:30.

Thirteen other speakers also will lecture, with meeting times beginning at 1:45 December 10.

Professor K. May, University of Toronto, will speak at 3:30 that day on the history of mathematical technology.

The conference is being supported in part by the National Research Council of Canada.



Artist's rendering of the Space Shuttle Orbiter with Spacelab in cargo bay.

1976 Book Prizes

Arts honours superior students

At a luncheon held Thursday, November 18, in the Vanier College masters dining room, the Faculty of Arts honoured recipients of the 1976 Book Prize for outstanding academic achievement. The winners, all of whom achieved the highest overall grade point average in their year of study, are the following:

Year I — Sally Humphries — Anthropology-Humanities
Year II — William Bernstein — Economics
— Agnes Chan — Economics
— Iris Pascot — French-Latin
— Kim Todd — English

Year III — Frederick Berger — Mathematics

Year IV — Sui Ip — Mathematics-Computer Science.

In addition to the chairmen of the departments and division named above, the luncheon was attended by President Macdonald, Dean Eisen, and members of the dean's office staff. The winners received a cheque for \$100 and a book in their major field of study.

In paying tribute to the recipients

of the award, Associate Dean Whitla commented that it is gratifying for faculty members to have superior students in their classes, since they prompt their fellow students to perform at a higher level and thus make the business of teaching more rewarding.

Dean Eisen spoke about his con-

cern that the new stress on basics in education will take precedence over the development of other abilities, and expressed his hope that the winners would continue to achieve excellence in whatever field of endeavour they might enter after graduation.

President Macdonald made the presentations.

Task force considers college system, seeks participation in open meeting

There will be an open meeting of the task force on the future of the college system on Monday, November 29 from 4 p.m. to 6 p.m. in the Senate Chambers (Ross Building, ninth floor).

The task force, established by the president's commission on goals and objectives, has been asked to study the York colleges and to make recommendations on the future development of the college including:

- 1) the possibility of creating a new or refined academic and/or Faculty orientation for some or all colleges;
- 2) the appropriate administrative and academic support required for any future development or orientation of the colleges;
- 3) the future relationships among the colleges, the Faculties, and the central administration;
- 4) the appointment and future role of college fellows and masters.