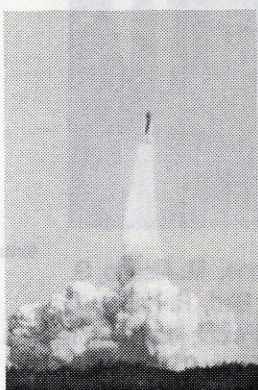


# More research with Bondar next goal of Ryerson team

**N**ow that **Roberta Bondar** has been into space and back, the task for the Centre for Advanced Technology Education (CATE) turns to ensuring its continued involvement with Dr. Bondar's research.

The Centre's contract with the Canadian Space Agency expires this spring. CATE director **Al Oatridge** and associate director **Mike Kassam** plan to meet with Dr. Bondar in the next couple of weeks to discuss a new arrangement to continue work on the astronaut's research. Dr.



P. Dunphy

Jan. 22 liftoff

Bondar is investigating the relationship between cerebral physiology and the nausea and disorientation astronauts experience.

A Ryerson research team has been working on experiment methodology, modelling, evaluation, data collection, and analysis.

The investigative team at Ryerson, which includes research engineer **Paul Dunphy**, has already done some work for another Canadian astronaut -- **Bob Thirsk**, a physician also working on space physiology research, who was **Marc Garneau's** back-up and may make a shuttle flight in the next year or so. Mr. Garneau was the first Canadian in space in 1984.

Dr. Kassam, whose contacts with Dr. Bondar brought part of her research to Ryerson, says Dr. Bondar and the Ryerson research team are approaching the issue of weightlessness and its effects on humans differently than most other researchers.

"We're breaking new ground," Dr. Kassam says. "We're looking at the answer to space adaptation syndrome occurring as a result of physiological changes from the neck up, while most other researchers have been looking at it from the neck down. We feel the answers lie there."

However there's so much information

contained in the physiological signals that it's necessary to research and develop models to represent complex human adaptive processes in order to extract key information that may come later with observed space sickness, he says.

The Ryerson team has been instrumental in establishing the models and database necessary to test the hypotheses, he says. ■

## *Liftoff was 'beautiful,' CATE director says*

The image of the space shuttle and its booster rockets emerging from a billowing plume of white smoke will stay with **Al Oatridge** for a long time.

The CATE director was in Florida with associate director **Mike Kassam** and research engineer **Paul Dunphy** for the liftoff of *Discovery* Jan. 22, carrying Canadian astronaut **Roberta Bondar**. The trio were some of the 400 special guests invited to view the launch from about four miles away.

Dr. Oatridge says watching the nose of *Discovery* slowly emerge from the clouds of smoke at lift-off was a magnificent sight.

"It was almost beautiful, and particularly exciting because we knew someone on board. But I didn't relax until after the boosters separated from the shuttle," he says.

Following the launch, Mr. Dunphy went to Edwards Air Force base in California to await the landing of *Discovery*. Two hours after the shuttle touched down, Mr. Dunphy, along with associate **Flo Stein** of the University of New Mexico, took blood-flow measurements from one of the crew members of *Discovery* for later analysis as part of Dr. Bondar's research.

The Ryerson flag that was aboard *Discovery* will eventually be presented to the Institute, although when is not known. There were a number of flags aboard, representing Dr. Bondar's wide range of associates and research partners, and it's expected she will make presentations in a cross-country tour. ■