

## U of Toronto supernova a 00 years find once - in -

TORONTO (CUP) - One of the most important astronomical discoveries in the last 400 years has been made by a University of Toronto astronomer at the university's Chilean observatory.

lan Shelton, resident observer at the Southern Station of the Dunlop Observatory in the foothills of the Andes Mountains, detected Feb. 23 the largest supernova to be observed in the last four centuries.

Analysis of this major phenomenon, the result of a massive explosion and the death of a giant star, has shed light on the formation of our solar system.

Located in the large Magellanic Cloud, a galaxy 150,000 light years from earth, the explosion at its peak may emit more light than the 100 billion stars of our galaxy combined. The supernova will be visible during daytime for up to several months in the Southern Hemisphere, and could become brighter than Venus.

"In the astronomy world, this is equivalent to the Nobel Prize," said Bob Garrison, U of T astronomy professor and associate director of the Dunlop Observatory. "This' is the find of the century. The timing was perfect. We were at the right place at the right time with the right equipment."

The event actually took place 150,000 years ago, but the light is only reaching earth now. It is the largest and nearest supernova to be observed since the famous supernova of 1604, observed by Galileo and Kepler.

Previously, supernovas have only been spotted at their peak or fading phases, but Supernova Shelton, named after the astronomer that spotted it, is still expanding.

"We are doing continuous monitoring now," Garrison said. "This is the way one does basic science. We don't know if it is going to be important, but where would we be now if we didn't have the data?"

The discovery may disprove some current theories. Thought to occur after a period of instability as a giant star runs out of fuel, this supernova, the first to be identified as a star before its explosion, was stable until it collapsed. Supernova explosions occur when a large collapsing star becomes so dense it "bounces" outward again in a spectacular explosion.

As the supernova fades, it is expected to reveal a pulsar, emitting regular bursts of high frequency energy. Giant stars can also collapse into black holes and not explode into supernovas.

Supernovas are believed to be crucial to the formation of solar systems.

"One of the things we know least about is the formation of a solar system," Garrison said. "We envision a big dust and gas cloud, and the supernova provides the shock for the cloud to start contracting." Our sun, about five to 10 times smaller than the one that exploded to create this supernova, burns at 5,507 degrees Celsius, while the temperature of the supernova is estimated to be between 15,000 to 20,000 degrees.

Our sun is considered too small to "go supernova". It will expand and slowly die over millions of years. However, nearby supernovas and the radiation they emit are thought by some to be responsible for the extinction of the dinosaurs.

Shelton has spent five of the last seven years at the remote station atop Las Companas mountain, 120 kilometres from the nearest hamlet. U of T's 60-centimetre telescope, small by research standards, shares a peak with a U.S. observatory.

Shelton, who is constantly observing the supernova, could not be reached for comment.

The U of T has another observatory in Richmond Hill, Ont., but cloud and light pollution make it an inferior research site. The Southern Observatory, established in 1971 and partly funded by the federal government, was almost closed three years ago when the federal government threatened to withdraw funding.

## Today's grads can't find jobs — StatsCan

MONTREAL (CUP) - University graduates of the 1980's, especially women, have less chance of finding work than graduates of a decade ago, according to a survey conducted by Statistics Canada.

Almost 20 per cent of 1982 graduates looking for work had not

Quips and Quotes — "Real education ultimately must be limited to men who insist on knowing: the rest is merely sheepherding."

— Ezra Pound

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found full-time employment within two years, while only 14 per cent of grads from 1976 were still looking after two years.

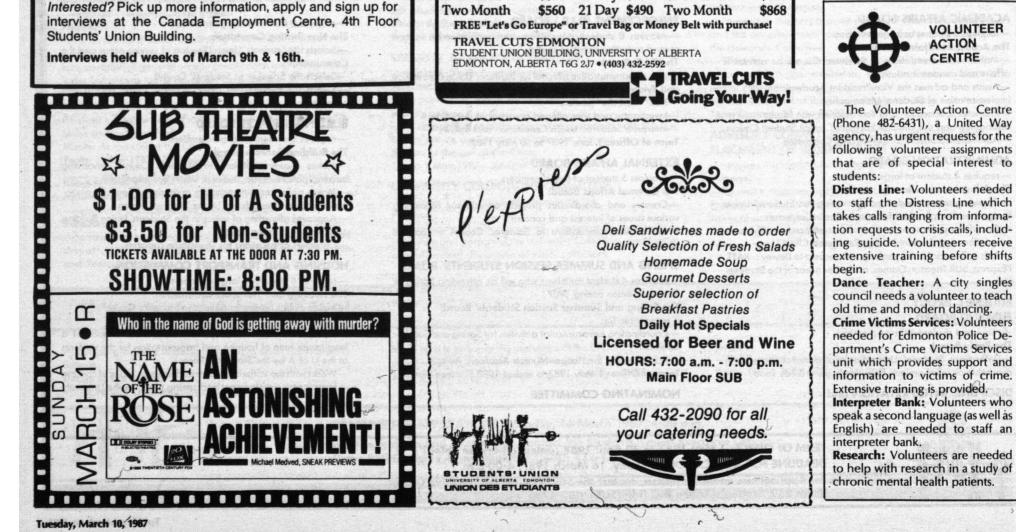
"I would suspect the job situation for graduates this year and last year is even worse," said Concordia council co-president Karen Takacs.

"Women were less likely than men to be employed full-time in June 1984," reads the survey. "A greater proportion of them had part-time jobs, or were not members of the labour force.'

Karen Herland of Concordia's status of women office is not sur-prised by the statistics. "You still have women earning somewhere between 65 and 70 cents for every man's dollar. None of this stuff has changed," she said.

Takacs agreed. "It just goes to show that equality between the sexes is just a lot of talk.'

The two-year national survey polled 36,000 of 209,000 graduates of universities, colleges, and trade schools.



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