

deep space (the
ere) and the Earth's
sphere (the iono-
spheres) by massive
vents.

ave theorized about
d processes involved
ras since the early
time, however, they
und data to rely on.
oking at a television
front and trying to
w the picture is
s Rostoker.

Intelli, scientists may
and measure from
w, and within the

gative team made up
Canadians plays an
in the Viking Project,
and operating the
h records pictures of
rom space.

he global, all-seeing
lains Rostoker. "We
people who are
ie electric fields pre-
happening with the
they take measure-
out those pictures,
ements are meaning-

es this project an
undertaking is the
auroras.

he Viking satellite
the best they could
a picture every 12
is Rostoker. "We get
ery 20 seconds, and
ever been able to do

that before."

Viking is also one of the first
satellites that enable the operators
to command it from Earth. "Most
missions that have been sent up in
the past have been pre-
programmed and you couldn't
get it at after that," says Rostoker.

"Let me paint a picture for you.
You're on a mountain top in
Sweden; there's a room full of
scientists all with their own tasks.
Everybody is bringing in their data
and exchanging it immediately."

This is the tracking station of
the satellite where information is
immediately exchanged among
the international scientific com-
munity present. This international
distribution of information also
makes the Viking Project notable.

While the satellite was developed
to answer specific questions
about the auroral process, there
have been incidental discoveries
along the way.

One of those discoveries has
meant a conceptual change in the
study of auroras.

Scientists deal with sets of equa-
tions. They try to apply those
equations to constant, unvarying
conditions, what they like to call
the "steady state." By ignoring
occasional variations, they may
have more consistent results. The
discoveries of the Viking teams
eliminate this possibility for those
who study auroras.

"The auroras are very dynamic
— there is no steady state," says

Rostoker. "The whole auroral
region is just filled with waves;
they are not just an incidental
effect which can be ignored."

"But the most important discov-
ery in my perception deals
with the concept of the brilliant
auroral displays called substorms,"
adds Rostoker. In a substorm,
of the auroral arcs suddenly get
very bright and then become
explosively active. Observers see
a flash of light blast into their field
of vision, and then seem to whip
off toward the west at about a
kilometer per second. Hence, the
name Westward Travelling Surge.

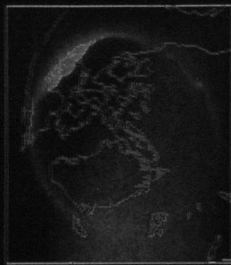
"It turns out they don't travel at
all. What you see is not one thing
moving, it is a whole series of
surges."

Surges may jump back and forth
in either an eastern or western
direction.

The Canadian imager will be
used in a Russian project, Interbol,
which will send four satellites into
space in 1990 in order to answer
the more specific questions that
come out of the final analysis of
the Viking data.

Despite Viking's discoveries,
there are still questions yet to be
answered.

"Every once in a while someone
makes a discovery which will
effectively rewrite the texts," say
Rostoker. "Some of those discov-
eries have already been made
using the Viking data, but we
expect a lot more will be rewritten
when the tale is told."



The full loop of the
Northern Lights.

Mathew McClure

Reporter for the Edmonton Journal
will give a workshop for all Gateway
staff

Thursday 26th at 4 p.m. Rm. 270A SUB

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p.m., Heritage Lounge,
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Jewish Students' Assoc.
Dept. of Religious Studies

CODE OF STUDENT BEHAVIOR: CHANGES

The following changes to the Code were recom-
mended for General Faculties Council approval by
the GFC Executive Committee on November 16.

1. THAT Section 30.3.5 (Definition of Sexual Haras-
sment) be changed as follows:

Present Wording	Amended Wording
No student shall sexually harass another member of the University Community.	No student shall sexually harass another person.

2. THAT the following statement be reintroduced to
the Code immediately preceding Section 30.3, which
lists offenses:

Any of the following activities or conduct or attempts
thereat or participation therein insofar as they relate
to student affairs shall constitute an offense and be
punishable.

3. THAT the required number of calendar days in
which a hearing must be convened under the
"dangerous circumstances provisions" be changed
from 14 days to 25 days.