

## Leonids in 2000: A First Look from Sky & Telescope Web Site

The November 2000 Leonid meteor shower is now history, and early reports reaching *Sky & Telescope* make no mention of the "meteor storm" that some astronomers had foreseen. But many enthusiasts - those blessed with clear skies in the predawn hours of November 17th and 18th - were far from disappointed by what they saw. This was not your typical Leonid shower.

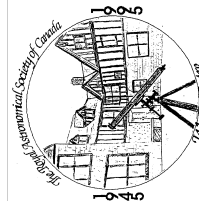
Clouds overspread eastern North America on the morning of November 17th, the period favored in predictions by meteor specialists Ignacio Ferrín, Carola Göckel, and Rüdiger Jehn. But after piecing together dozens of reports from Europe, Marc Gyssens of the International Meteor Organization (IMO) found that two modest peaks in activity did occur on the 17th, at around 6h and 8h Universal Time, respectively. Meteor rates (as corrected for sky conditions and the altitude of the shower radiant) briefly exceeded 100 per hour. In an electronic circular issued by the IMO, Gyssens notes that these peaks arrived at just about the time this year when the Earth was encountering particles that had been released by the Leonids' parent comet, 55P/Tempel-Tuttle, back in 1932.

Much higher rates are being reported for the predawn hours of November 18th, the period favored by astronomers Robert McNaught and David Asher in their own forecasts. Just before 4h UT, when the Earth was passing through particles that had bubbled off the comet as long ago as 1733, the rates for IMO observers in Europe climbed to nearly 300 meteors per hour.

Then shortly before 8h UT on the 18th (associated with particles from 1866), North Americans saw similarly high numbers. Initial reports to the IMO place the peak about a half hour early, between 7:00 and 7:30 rather than at the predicted 7:51 UT. In Chelmsford, Massachusetts, Cheryl Beatty observed from 1:50 to 2:30 a.m. (6:50 to 7:30 UT) - one Leonid per minute - despite strong moonlight and suburban light pollution. In nearby Bedford, *Sky & Telescope's* Alan MacRobert logged 105 Leonids in 76 minutes and judged that the true (corrected) rate must have been a few hundred per hour. "They were beautiful!" he adds. "The ones that showed through moonlight were mostly bright and colored yellow or (in the case of the brightest ones) green-white."

Two other staffers, Dennis di Cicco and Stuart Goldman, observed under very clear skies in Sudbury, Massachusetts. "There were times when I counted 10 meteors per minute, all over the sky!" di Cicco reports. "But they came in spurts - then it would be quiet." Long-time observer John Bortle of New York State noticed several curious pairings of meteors. "One pair, separated by about 3 degrees, paralleled each other across the sky. In other cases one meteor followed in the path of another after a few seconds."

"The Leonids I saw were fast and very bright, some even outshining Sirius," says *Sky & Telescope* chief editor Rick Fienberg. "With few exceptions they left impressive trains that lasted a second or two. It was certainly the most fun I've had meteor-watching in a long time."



# AURORA



December 2000 The Royal Astronomical Society of Canada - Windsor Centre Volume 26, Number 4

## Flyer

### Next Meeting

#### *December Social*

Friday December 1, 2000

Dinner at 7:30 p.m.

Setup at 7:00 p.m.

at

St. Stephen's Church

Howard Road, 1.4 kms. South of  
Highway #3

### *Upcoming Events*

**Public Observing Night:** Saturday December 2 from 7:00 - 9:00 p.m. Two locations - West side at Malden Park and East side at Forest Glade Park. Rain Date is December 3.

**Occultation:** On the morning of December 13th the Moon will occult 3.5 mag. Delta Geminorum (Wasat). Disappearance: 2:00 a.m. and Reappearance: 3:13 a.m.

**Meteor Showers:** Geminids are due to peak on the night of December 12 - 13 and the Ursids peak on the night of December 22 - 23.

**Partial Solar Eclipse:** Christmas Day (December 25) a partial solar eclipse will be visible from 11:00 a.m. to 2:00 p.m. with maximum at 12:30 p.m.

## GENERAL MEETING MINUTES

Tuesday, October 17, 2000

The meeting was opened by the President, Susan Sawyer-Beaulieu at 8:05 p.m.

President asked membership to review the minutes of the September 19, 2000 general meeting minutes.

MOTION #1 10-17-2000 Rob Hastings-Trew put forth a motion to accept the minutes of the September 19, 2000 general meeting minutes. Seconded by Peter Bondy. Carried

### REPORTS

*Secretary* - Joady Ulrich, was absent from the meeting due to illness.

*Librarian* - Tom Sharron noted that the book "Galaxies" by Timothy Ferris had been donated by Ken Rount to the Centre's library.

*Director of Education* - Randy Groundwater reported the past month had been quiet.

*Editor* - Steve Mastellotto appreciates any articles for the newsletter.

*National Council Rep.* - Tim Bennett reported that the increased membership fees made an additional \$11,000 in revenues (National) but this still does not erase the operating deficit. Tim introduced the proposed Centre Bylaws changes, in order to accommodate the proposed positions of First Vice President and Second Vice President, to the Centre's executive. Copies of the Centre Bylaws were distributed to the membership, to be voted on at the November Annual Meeting. Tim also introduced the proposed Slate of Officers and Council for the Windsor Centre for 2001, also to be voted on at the November Annual Meeting.

Susan announced that a Members Observing Night would be held at Dan Taylor's home on Friday, October 27th (rain date October 28th).

A Beginners Observing Night will be held at Ellen Ryall's home on Saturday, November 4th and interested beginners in astronomy were

encouraged to attend.

The December Social would be held in the Church Basement on Friday, December 1st.

A Public Observing Night will be held once again this year on Saturday, December 2nd (rain date December 3rd) at two sites in Windsor, on the west end at Malden Park (entrance off Malden Road), and on the east end at Optimist Park in Forest Glade (entrance at Forest Glade Community Centre off Forest Glade Drive). Members encouraged to come out and share their knowledge and enthusiasm with the public, at either site.

*Director of Observing* - Robin Smallwood led a very animated group discussion on members observing experiences over the past month, and introduced upcoming sky events along with a handout.

John Beaudoin has tentatively accepted the position of Centre Recorder for the year 2001.

The Centre's copy of Cyanogen Production's video on Comet Hyakutake was screened for the membership. The evening was billed as an "Observer's Night", but sky conditions did not clear sufficiently for outdoor observing, during the meeting.

The President closed the meeting at 10:10 p.m.

Randy Groundwater, acting Recording Secretary

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