

# Leonid meteor shower observation during twilight

By

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**Abstract:** Officially, we finished viewing of the Leonid meteor shower on Nov 18, 2001 at 20-21h UT, which is after sunrise. Leonid meteors were seen even in daytime conditions. This confirms that meteor observations in daytime are possible.

## 1. INTRODUCTION

The Leonid meteors kept observed after 20:00 on November 18, 2001 (UT), with un-decreasing frequency of appearance. To collect the meteor observation data for this time zone, I used the data from my observation continued until 21:00 that day, the NMS (Nippon Meteor Society) circular data, and the data supplied in response to my call on @nifty Space Forum. As a result, a total of 84 observers had captured 2,559 meteors. This report will discuss the data exclusively for 20:00-21:00 on November 18, when the sky started to twilight at 19:52, dawn at 20:46, and the sunrise at 21:20 in Tokyo.

### 1.1 Observation method Fujisyoshi case

I had carried out eye-observation of the north to east sky until 20:05. And then I turned my back to the sun because of nearing sunrise and kept watching mainly on the zenith to the southwest sky until 21:00.

### *Comment*

In this report the data collected by Mr. Hiroshi Ogawa and the data supplied through @nifty Space Forum are combined into the graph. While the meteors were frequently observed before around 20:20 when stars are still visible, fewer meteors were observed thereafter. Although the frequency rapidly decreased as the sky grew light, the meteor observation was still possible. In the sky after 20:30 there were only Jupiter and Sirius, whose visual magnitude is estimated to be of -2.2, allowing us a prediction that the Leonid meteors are brighter than this Limiting Magnitude. (It is a proven fact that meteor magnitudes, when they are eye-observed, drop to a couple of classes below, no matter how dark the Limiting Magnitude is.)

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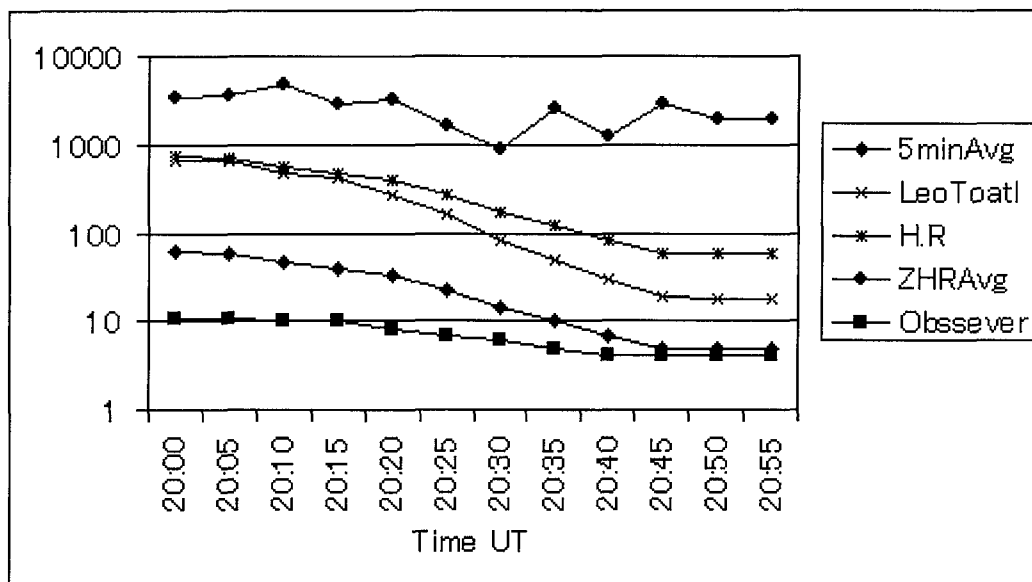


Fig. 1: Comparison on Semi-Log graph

## 2. CONCLUSION

It may be concluded that most of the meteors observed in the early morning were fireballs. Also in the case of Parsedmeteor shower, for instance, you will find that the meteors are visible to some extent even at the dawn if you start the observation a couple of hours before the sunrise. I'm going continue the observation of the meteor from during twiligat to daytime.

## ACKNOWLEDGMENTS

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