

ISBN 978-2-87355-024-4

**Proceedings of the
International Meteor Conference
La Palma, Canary Islands, Spain
20–23 September, 2012**



Published by the International Meteor Organization 2013
Edited by Marc Gyssens and Paul Roggemans

Proceedings of the International Meteor Conference
La Palma, Canary Islands, Spain, 20–23 September, 2012
International Meteor Organization
ISBN 978-2-87355-024-4

Copyright notices

© 2013 The International Meteor Organization
The copyright of papers in this publication remains with the authors.

It is the aim of the IMO to increase the spread of scientific information, not to restrict it. When material is submitted to the IMO for publication, this is taken as indicating that the author(s) grant(s) permission for the IMO to publish this material any number of times, in any format(s), without payment. This permission is taken as covering rights to reproduce both the content of the material and its form and appearance, including images and typesetting. Formats may include paper and electronically readable storage media. Other than these conditions, all rights remain with the author(s). When material is submitted for publication, this is also taken as indicating that the author(s) claim(s) the right to grant the permissions described above. The reader is granted permission to make unaltered copies of any part of the document for personal use, as well as for non-commercial and unpaid sharing of the information with third parties, provided the source and publisher are mentioned. For any other type of copying or distribution, prior written permission from the publisher is mandatory.

Editing team and Organization

Publisher: The International Meteor Organization
Editors: Marc Gyssens and Paul Roggemans
Typesetting: L^AT_EX 2_ε (with styles from Imolate 2.4 by Chris Trayner)

Printed in Belgium

Legal address: International Meteor Organization, Mattheessensstraat 60, 2540 Hove, Belgium

Distribution

Further copies of this publication may be ordered from the Treasurer of the International Meteor Organization, Marc Gyssens, Mattheessensstraat 60, 2540 Hove, Belgium, or through the IMO website (<http://www.imo.net>).

Spectroscopic observations of the 2011 Draconids meteor shower

Regina Rudawska¹, Joe Zender², Peter Jenniskens³, Jiří Borovička⁴ and
Jérémie Vaubaillon¹

¹ IMCCE, Observatoire de Paris, 77 avenue Denfert-Rochereau, F-75014 Paris, France
rrudawska@imcce.fr and vaubaillon@imcce.fr

² ESA/ESTEC, Keplerlaan 1, NL-2200 Noordwijk, the Netherlands
Joe.Zender@esa.int

³ SETI Institute, 189 Bernardo Ave., Mountain View, CA 94043, USA
pjenniskens@mail.arc.nasa.gov

⁴ Astronomical Institute, Academy of Sciences, CZ-251 65 Ondřejov Observatory, Czech Republic
jiri.borovicka@asu.cas.cz

In this presentation, we report on spectroscopic observations of the 2011 Draconids with cameras provided by the IMCCE, the ESA, the SETI Institute, and Ondřejov Observatory.

Summary

Spectroscopic observations of meteors reveal the chemical composition of the parent bodies and interplanetary dust. Draconids are an example of most fragile meteoroids, bringing us information about physical properties of Comet 21P/Giacobini-Zinner.

During the 2011 Draconids meteor shower, airborne and ground-based spectroscopic meteor observations were carried out. Here, we report on the results for spectra captured by cameras provided by the IMCCE, the ESA, the SETI Institute, and Ondřejov Observatory. The spectra we collected show two dominant emissions of the sodium line at 5890 Å and the magnesium line at 5180 Å. Other emission lines belong to iron and the N₂ molecule. An example is shown in Figure 1.

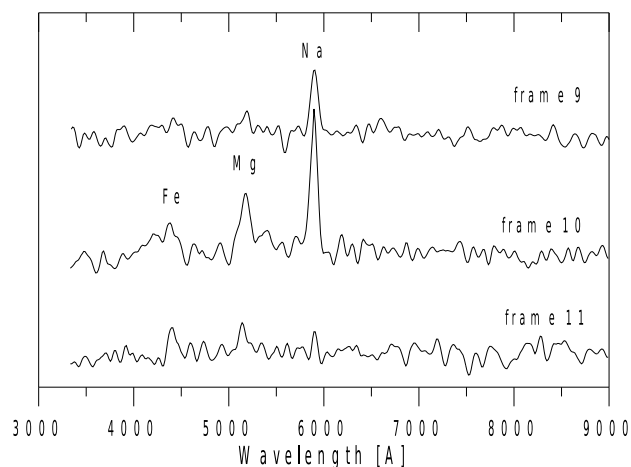


Figure 1 – Time variation of the spectra of a Draconid meteor observed at 20^h52^m UT on October 8, 2011.

Preliminary