



International Astronomical Union
Union Astronomique Internationale

POST MEETING REPORT FORM

for meetings other than Joint Discussions and Special Sessions

Deadline for Submission: within 1 month after the meeting

**the following information should be sent
to the IAU Assistant General Secretary**

The following documents should be attached:

- i Final Scientific Program
- ii List of participants
- iii List of recipients of IAU Grants, including amount and country
- iv Receipts signed by the recipients of IAU Grants (This does not apply to Scientific Meetings held during General Assemblies)
- v Brief report (text.txt file or word.doc) to the Executive Committee on the scientific highlights of the meeting (1-2 pages)

1. Meeting Number: 297

2. Meeting Title: The Diffuse Interstellar Bands

3. Coordinating Division: Division VI: Interstellar Matter

4. Dedication of meeting (if any):

5. Location (city, country): Noordwijkerhout, The Netherlands

6. Dates of meeting: May 20--24, 2013

7. Number of participants: 109

8. List of represented countries: See list of participants in this report

9. Report submitted by: Jan Cami

10. Date and place: June 23, 2013, London, Canada

11. Signature of SOC Chairperson:

IAU Symposium 297 "The Diffuse Interstellar Bands"

Noordwijkerhout, The Netherlands, May 20—24, 2013.

Scientific Summary

IAU symposium 297 was fully dedicated to the long-standing problem associated with the identification of the diffuse interstellar bands (DIBs). These DIBs are absorption features observed in starlight passing through translucent interstellar clouds. More than 400 such bands have been reported since the first DIB discovery in 1921, but their origin remains as mysterious as 90 years ago. Solving the long standing DIB problem is an important step towards a further understanding of the cosmochemical cycle of (organic) matter in which diffuse clouds are at the starting point for star and planet formation.

The conference brought together leading researchers in observational astronomy, laboratory astrophysics, molecular spectroscopy and interstellar chemistry. There has been much progress in each of these individual disciplines since the last (and only) DIB conference in 1994, and the meeting provided a much needed update on the current status on the DIB identification from different points of view.

The symposium was divided into six sessions, with 47 oral presentations and 47 posters. The 109 participants (including 6 one-day visitors) originated from 21 countries, with 25 invited speakers (of which 5 were women) and 22 contributed speakers (of which 4 were women). To encourage interactions between researchers, and to stimulate younger scientists to get involved in this interesting research area, we organized five discussion sessions, four of which were introduced by special discussion talks.

During the meeting, observational astronomers reported the latest observational data that allow linking the DIBs to specific environments in space with well-characterized physical and chemical properties. We also heard about DIB analogues in other wavelength domains (UV, near- and far infrared), and surveys covering a large number of lines of sight. The newest laboratory techniques were explained, and we saw impressive results of dedicated laboratory studies, focusing in particular on a number of potential DIB carriers – carbon chains and rings, PAH (cations), fullerenes and fullerene compounds, HACs and molecular hydrogen. We furthermore discussed the potential of very accurate theoretical calculations with respect to the DIB problem, and were shown experimental results as well as astrochemical models simulating chemical reactions under diffuse cloud conditions. Within the program there were regular slots reserved for plenary discussions, to summarize ideas and to brainstorm further approaches. The meeting was concluded with a large discussion round aiming to define a roadmap for future DIB research leading to the identification of the DIBs. The questions, ideas, suggestions, and recommendations of this engaging and inspirational meeting will be summarized in the IAU297 proceedings that will provide a full update of where this research field is standing.

IAU symposium 297 therefore not only provided a timely report on the current status on the identification of the DIB carriers from the perspectives of different fields, but also resulted in renewed and focused research efforts and synergies in a much broader field.