

IAU Symposium 268 "Light Elements in the Universe"

Daily Agenda and Scientific Program

Sunday, November 8

14h30 – 18h – Welcome and registration reception at the
Musée d'Histoire des Sciences
in the Villa Batholoni, park "La Perle du Lac" at the lakeshore
128, route de Lausanne – Genève
<http://www.ville-ge.ch/mhs/villa.php>

Monday, November 9, to Friday, November 13

All the scientific sessions from Monday to Friday are being held at the
Museum of Natural History
1, rue Malagnou – Genève
<http://www.ville-ge/mhng>

See maps on
<http://obswww.unige.ch/iau268/Conference.htm>

Monday, November 9

Chair: Suzanne Talon

9h15 – Welcome – Danielle Decrouez, director of the Museum
– Gilbert Burki, director of Geneva Observatory

9h30 – **Historical perspective (IT)** – David Lambert

Session 1 - Production of the light elements in the first minutes of the Universe

10h – **Constraints from cosmic microwave background experiments (R)** – Joanna Dunkley

10h30 – 11h – Coffee break and poster viewing

11h – **Primordial nucleosynthesis: a cosmological probe (R)** – Gary Steigman

11h30 – **The cosmic lithium abundances and physics beyond the standard model (R)**
– Karsten Jedamzik

12h – **Big Bang nucleosynthesis with long-lived strongly interacting relic particles (C)**
– Motohiko Kusakabe

12h20 – 14h – Lunch at the Museum and poster viewing

Session 2 – Abundances of D, ^3He and ^4He (observations)

Chair: Robert Rood

14h – **Measurements of Deuterium in the Milky Way (R)** – Kenneth Sembach

14h30 – **The total deuterium abundance in the local Galactic disk and its implications (C)**
– Jeffrey Linsky

14h55 – **What the D/O ratio tells us about the instellar abundance of deuterium? (C)**
– Guillaume Hébrard

15h20 – **(Un)true deuterium abundance in the Galactic disk (C)** – Tijana Prodanovic

15h45 – 16h15 – Coffee break and poster viewing

16h15 – **D and ^3He in the protosolar cloud (R)** – Johannes Geiss

16h45 – 17h30 – **Discussion A: What is the local ISM value of D? How can we explain the dispersion of extragalactic D values?** – [Leader: Monica Tosi](#)

17h30 – 19h – Wine and cheese poster viewing

Tuesday, November 10

Chair: [Monica Tosi](#)

9h – **Measurements of ^3He in Galactic HII regions and planetary nebulae (R)** – Tom Bania

9h30 – **Measurements of ^4He in metal-poor extragalactic regions: The primordial helium abundance and the Delta Y / Delta O Ratio (R)** – Manuel Peimbert

10h – ^4He abundances: Discrepancies between optical and radio recombination line measurements (C)

– Dana Balser

10h20 – The primordial He abundance from a large sample of low-metallicity HII regions (C)

– Yuri Izotov

10h40 – The dominant terms contributing to the uncertainties in nebular abundances (C)

– Evan Skillman

11h – 11h30 – Coffee break and poster viewing

11h30 – **The quite complex Simple Stellar Populations of Globular Clusters (R)**

– Angela Bragaglia

12h – Revisiting the helium abundance from multiple main sequences in globular clusters (C)

– Luca Casagrande

12h20 – Helium self-enrichment in globular clusters (C) – Thibaut Decressin

12h40 – Are the most iron-poor stars helium rich? (C) – Georges Meynet

13h – 14h30 – Lunch outside the Museum

Chair: [Beatriz Barbuy](#)

14h30 – The helium contribution from massive AGBs (C) – Paolo Ventura

Session 3 - Abundances of LiBeB (observations)

14h50 – **LiBeB in the light of 3D hydrodynamical models and non-LTE line formation (R)**

– Martin Asplund

15h20 – **Li isotopes in metal-poor halo dwarfs (R)** – Monique Spite

15h50 – 16h15 – Coffee break and poster viewing

16h15 – Depletion in the Spite plateau: solving the cosmological Li discrepancy (C) – Jorge Melendez

16h35 – Convection and ^6Li in the atmospheres of metal-poor halo stars (C) – Matthias Steffen

16h55 – 17h40 **Discussion B:** What is the ^4He from HII regions? What needs to be done to better understand the systematic effects? – [Leader: Gary Ferland](#)

17h45 – Welcome address by Jean-Dominique Vassalli and Stéphane Berthet, Rector and General Secretary of the University of Geneva – Cocktail

Wednesday, November 11

Chair: Yuri Izotov

9h – **Beryllium and Boron in metal-poor halo stars (R)** – Francesca Primas

9h30 – New Beryllium results in halo stars from Keck/Hires spectra (C) – Ann Merchant Boesgaard

9h50 – Boron abundances in diffuse interstellar clouds (C) – Adam Ritchey

10h10 – Boron abundances in the Galactic disk (C) – Katia Cunha

10h30 – **Lithium in globular clusters: Dip, diffusion, and dredge-up (R)** – Andreas Korn

11h – 11h30 – Coffee break and poster viewing

Chair: Paolo Molaro

11h30 – Main sequence and sub-giant stars in the globular cluster NGC 6397: the complex evolution of the lithium abundance (C) – Jonay Gonzalez Hernandez

11h50 – The primordial lithium problem – clues from old globular cluster stars (C) – Karin Lind

12h10 – Lithium in a metal-poor external galaxy: Omega Centauri (C) – Piercarlo Bonifacio

12h30 – **Li, Be, and B in Population I dwarf stars (R)** – Sofia Randich

13h – Enhanced lithium depletion in solar-type stars with exoplanets (C) – Garick Israelian

13h20 – Lunch outside the Museum

13h30 – Women Networking Lunch (registration requested)

Free afternoon

18h30 – Public colloquium at Uni Dufour – “Deuterium, hélium, lithium: du Big Bang à la civilisation contemporaine”

Thursday, November 12

Chair: Francesca Primas

9h – **Light elements in stars with exoplanets (R)** – Nuno Santos

9h30 – **Observations of LiBeB in RGB and AGB stars (R)** – Verne V. Smith

10h – Mass loss and luminosities of S and C AGB stars with and without Li (C) – Roald Guandalini

10h20 – **Observations of light elements in massive stars (R)** – Andreas Kaufer

10h50 – 11h15 – Coffee break and poster viewing

Session 4 – Sources and sinks of light elements

11h15 – **Light elements as diagnostics on the structure and evolution of low- and intermediate-mass stars (R)** – Suzanne Talon

11h45 – Rotational mixing and lithium depletion (C) – Marc Pinsonneault

12h05 – Effects of rotation and magnetic fields on the structure and surface abundances of solar-type stars (C) – Patrick Eggenberger

12h25 – **The light elements in a helio- (astero-) seismic perspective (R)** – Sylvie Vauclair

12h55 – 14h – Lunch at the Museum and poster viewing

Chair: David Lambert

14h – **Li production in evolved stars (AGB, novae) (R)** – Francesca D'Antona

14h30 – Lithium production by thermohaline mixing in low-mass, low-metallicity asymptotic giant branch stars (C) – Richard Stancliffe

14h50 – **Light elements in massive single and binary stars (R)** – Norbert Langer

15h20 – 15h45 – Coffee break and poster viewing

Session 5 - Evolution of the light elements in the Universe

15h45 – **Galactic evolution of D, 3He , and 4He (R)** – Donatella Romano

16h15 – Thermohaline mixing in stars – Solving the long-standing 3He problem (C)
– Corinne Charbonnel and Nadège Lagarde

16h35 – Theoretical DY/DZ in the early Universe (C) – Sylvia Ekström

16h55 – 17h45 – **Discussion C:** The stellar yields in He-3, He-4, Li-7: main sources, observational constraints and problems – **Leader : André Maeder**

19h30 – Conference dinner (registration requested)

Friday, November 13

Chair: Corinne Charbonnel

9h30 – **Galactic evolution of ${}^7\text{Li}$ (R)** – Francesca Matteucci

10h – Lithium, beryllium, and boron production in core-collapse supernovae (C) – Ko Nakamura

10h20 – **Light elements: Spallation production mechanisms (R)** – Hubert Reeves

10h50 – 11h15 – Coffee break and poster viewing

11h15 – **Galactic evolution of spallogenic elements (Li6 , Be9 , Be10 , and B11) (R)**
– Nikos Prantzos

11h45 – Beryllium abundances and the formation of the halo and the thick disk (C)
– Rodolfo Smiljanic

12h05 – 12h50 – **Discussion D:** Observational problems with Li, Be and B: Did we really detect ${}^6\text{Li}$ in stellar atmospheres? How do the LiBeB abundances vary with metallicity? Which mechanisms are responsible for the Li dip and the Li "plateau"? – **Leader: Poul Eric Nissen**

12h50 – **Conclusions and open questions** – *Robert Rood*

13h30 – End of the Symposium