

Low Z at Low z and High z: Early Chemical Evolution

March 21-23, 2002

Millennium Hotel, 1313 Nicollet Mall, Minneapolis, Minnesota

Thursday, March 21 - Horizons Room (14th Floor)

07:45 Registration

08:30 Welcome and Opening Remarks
Keith Olive (Minnesota)

Session 1: Observations of Abundances in the Galaxy
Chair: Kim Venn (Macalester/Minnesota)

08:45 The Past, Present, and Future of Metal-Poor Star Surveys and an Update on CS 31082-001
Tim Beers (Michigan State)

09:25 Discovery of A Third Highly r-Process-Enriched Metal-Poor Star
Norbert Christlieb (Uppsala Astronomical Observatory)

09:35 Observations of Neutron-Capture Elements in Low-Metallicity Stars
Chris Sneden (Texas)

10:15 The Rise of the s-Process
Jennifer Simmerer (Texas)

10:40 Coffee Break (30 minutes)

11:10 Observations of Fe Group and Lighter Elements in Low-Metallicity Stars
Sean Ryan (Open)

11:50 r-Process and Nucleochronology
John Cowan (Oklahoma)

12:30 Lunch Break (1 hr: 30 mn) - The Dome (14th Floor)

Session 2: Nucleosynthesis and Chemical Evolution of the Galaxy
Chair: Joe Silk (Oxford)

- 14:00 Neutron Star Accretion Disks, Jets, and Primitive Stellar Abundances
Al Cameron (Arizona)
- 14:35 Observational Implications for the r-Process
Yong-Zhong Qian (Minnesota)
- 15:10 Inhomogeneous Chemical Evolution and the Production Site for r-Process Elements
Takuji Tsujimoto (National Astronomical Observatory)
- 15:35 Coffee Break (30 minutes)
- 16:05 Supernova Explosions and Nucleosynthesis
Friedel Thielemann (Basel)
- 16:40 Making Z in Supernovae
Stan Woosley (UCSC)
- 17:15 Oxygen and Sulphur in the Early Galaxy
Garik Israelian (Instituto de Astrofisica de Canarias)
- 17:50 The Yield Patterns of Very Massive Stars and Supernovae and a Model of Chemical Evolution
Jerry Wasserburg (Caltech)
- 18:25 End

Friday, March 22 - Horizons Room (14th Floor)

Session 3: Observations of Abundances in Extragalactic Systems
Chair: Evan Skillman (Minnesota)

- 08:00 Metallicity Evolution of Damped Lyman Alpha Systems
Jason X. Prochaska (OCIW)
- 08:30 Other Properties of Damped Lyman Alpha Systems
Eric Gawiser (UCSD)
- 09:00 Low Z at High z: the Case of Compact Lyman Alpha Emitters
Bill Keel (Alabama)
- 09:25 The Metallicity of Local QSO Absorbers
Dave Bowen (Princeton)
- 09:50 Coffee Break (30 minutes)
- 10:20 Abundances in the IGM and Galactic Halos
Wal Sargent (Caltech)
- 11:00 Metallicity Evolution of the IGM
Antoinette Songaila Cowie (Hawaii)
- 11:25 Abundances in x-Ray Clusters
Richard Mushotzky (NASA/GSFC)
- 12:05 Abundances in QSOs
Fred Hamann (Florida)
- 12:45 Lunch Break (1 hr: 15 mn) - The Dome (14th Floor)

- 14:00 Constraints on Galaxy Formation from Abundance Ratios in Nearby Galaxies
Matthew Shetrone (Texas)
- 14:25 Outflows from Dwarf Galaxies
Chip Kobulnicky (Wisconsin)

Session 4: Structure Formation and Chemical Evolution of the IGM and Galaxies
Chair: Liliya Williams (Minnesota)

- 14:50 Reionization of the IGM and FUSE Studies of He II
Michael Shull (Colorado)
- 15:25 Coffee Break (30 minutes)
- 15:55 Metal Enrichment of the IGM
Andrea Ferrara (Osservatorio Astrofisico di Arcetri)
- 16:30 Chemical Evolution of the IGM
Renyue Cen (Princeton)
- 17:05 Winds from High z Galaxies and the Lyman Alpha Forest
Michael Norman (UCSD)
- 17:40 Possible Feedbacks of Magnetic Fields from Supermassive Black Holes
Hui Li (LANL)
- 18:05 End
- 19:30 Workshop Dinner - The Dome (14th Floor)

Saturday, March 23 - Horizons Room (14th Floor)

Session 5: Formation, Evolution, and Nucleosynthesis of the First Stars
Chair: Stan Woosley (UCSC)

- 09:00 Formation of the First Stars
Tom Abel (Cambridge)
- 09:35 The First Stars in the Universe
Volker Bromm (Harvard)
- 10:00 The Number of Pop III Stars
Sally Oey (Lowell Observatory)
- 10:25 Coffee Break (35 minutes)
- 11:00 Evolution and Nucleosynthesis of Very Massive Primordial Stars
Alex Heger (Chicago)
- 11:35 Nucleosynthesis in Pop III Hypernovae and Early Chemical Evolution of the Galaxy
Ken Nomoto (Tokyo)
- 12:10 s-Process at Low Metallicities
Roberto Gallino (Torino)
- 12:45 Lunch Break (1 hr: 15 mn) - The Dome (14th Floor)

Session 6: Other Contributions and Summaries
Chair: Keith Olive (Minnesota)

- 14:00 Gamma-Ray Bursts as a Probe of the Metallicity History of the Universe
Don Lamb (Chicago)
 - 14:35 Primordial Nucleosynthesis and Chemical Evolution
Brian Fields (UIUC)
 - 15:00 Atomic Data for Abundance Observations
Jim Lawler (Wisconsin)
 - 15:25 Coffee Break (25 minutes)
 - 16:00 Workshop Summary
Joe Silk (Oxford)
 - 16:25 End
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Poster Session

The poster session will be ongoing throughout the daily sessions on Thursday, March 21 through Friday, March 22, early afternoon.

1. Model Atmospheres and Synthetic Spectra of the First Stars
Eric Lentz (Georgia)
 2. Meeting the Astrophysical Need for Experimentally Determined f -Values
L.M. Wiese, G.A. Bonvallet, and J.E. Lawler (Wisconsin)
 3. Observations of Metal-Poor Stars
Eric Depagne (Observatoire de Meudon)
 4. Galactic Archaeology: Chemical Abundances of Kinematically Selected Metal-Poor Stars
Inese Ivans (Texas)
 5. Galaxy Evolution Tool: Construction and Applications
Brad K. Gibson and Yeshe Fenner (Swinburne)
 6. Simulating a White Dwarf Dominated Galactic Halo
Brad K. Gibson, Chris B. Brook, and Daisuke Kawata (Swinburne)
 7. The Chemo-Dynamical Evolution of Elliptical Galaxies
Brad K. Gibson and Daisuke Kawata (Swinburne)
 8. The Mass-Metallicity Relationship of Galaxies: Insights from SDSS
C. Tremonti, T.M. Heckman, G. Kauffmann, S. Charlot (Johns Hopkins)
 9. Constraining Strong Baryon-Dark Matter Interactions with Primordial Nucleosynthesis and Cosmic Rays
Richard H. Cyburt, Brian D. Fields, Vasiliki Pavlidou (UIUC), Paul Steinhardt, and Benjamin Wandelt (Princeton)
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