

THE PHYSICS OF FIRST STAR & GALAXY FORMATION

EDINBURGH, 10 JUNE - 12 JUNE 2014

June 9th

17:00 - 18:00 Formation of the Galaxies Joe Silk

18:00 Welcome reception

June 10th

9:00 - 9:10 Welcome

Session 1: First Stars

9:10 - 10:00 The formation of Pop III stars: first collapse and early fragmentation Pauk Clark

10:00 - 10:40 The endgame of the first star formation: protostellar evolution and radiative feedback Takashi Hosokawa

10:40 - 11:20 Near field cosmology with the most metal-poor stars John Norris

11:20 - 11:50 Coffee

11:50 - 12:30 Searching for signatures of the first stars: news from the SkyMapper survey Heather Jacobson

12:30 - 13:00 The First Stars: A Low-Mass Formation Mode Athena Stacy

13:00 - 14:30 Lunch

June 10th

14:30 - 15:00	Chemistry and cooling in the first protogalaxies	Simon Glover
15:00 - 15:30	The transition from a metal-free to a metal-poor stellar generation	Ryan Cooke
15:30 - 16:00	Coffee	
16:00 - 16:30	The massive-star populations of nearby metal-poor, star-forming galaxies	Chris Evans
16:30 - 16:55	IMF Intro	Ralf Klessen
16:55 - 17:10	The IMF of the First Stars	Hajime Susa
17:10 - 17:25	IMF of the First Stars Explored Using CEMP Star Statistics	Takuma Suda
17:25 - 17:40	The first carbon enhanced star in the Sculptor dwarf spheroidal	Asa Skuladottir
17:40 - 17:55	Population III Initial Mass Function: Effect of a Large Fraction of Population III.2 Stars Formed from Photo-Dissociated Clouds	Shingo Hirano
17:55 - 18:10	Hydrodynamic simulations of collapsing gas clouds with low metallicities	Gen Chiaki
18:10 - 18:50	IMF Podium Discussion	Ralf Klessen et al.

June 11th

	Session 3: First Explosions	
9:00 - 9:30	Synchrotron radio remnants from Pop III supernovae	Avery Meiksin
9:30 - 10:00	Outflows and Chemical Enrichment from Clustered Supernovae in the First Galaxies	Jeremy Ritter
10:00 - 10:30	The Effect of Feedback on Baryons and Dark Matter in the First Galaxies	Andrew Davis
10:30 - 11:00	Coffee	
11:00 - 11:30	Populating long gamma-ray bursts in the First Billion Years simulations at $z > 5$	Jonathan Elliott
11:30 - 13:00	Lunch	

THE PHYSICS OF FIRST STAR & GALAXY FORMATION 3

Session 4: Black Holes

13:00 - 13:25	BH Intro	Priya Natarajan
13:25 - 13:40	The impact of reionization on the formation of black holes by direct collapse	Jarrett Johnson
13:40 - 13:55	Formation of an embryo supermassive star in the first galaxy	Kohei Inayoshi
13:55 - 14:10	Formation of massive black holes under time and spatial varying Lyman- Werner background	Bhaskar Agarwal
14:10 - 14:25	High resolution simulations of direct collapse and the impact of anisotropic sources	John Regan
14:25 - 14:40	The formation of supermassive black holes in the early Universe	Muhammad Latif
14:25 - 14:40	Formation of massive black holes in star clusters	Hidenobu Yajima
14:40 - 14:55	Formation of intermediate mass black holes in high redshift, metal poor, star clusters	Harley Katz
14:55 - 15:45	Podium Discussion Black Holes	Priya Natarajan et al.
15:45 - 16:15	Coffee	

Session 5: Reionization

16:15 - 16:40	Reionization intro	Avery Meiksin
16:40 - 16:55	New Constraints on Reionization from Quasar Absorption Lines	George Becker
16:55 - 17:10	Using reionization to distinguish early galaxy formation	Keri Dixon
17:10 - 17:25	Dwarf galaxies: metal polluters and reionization sources	Stefania Salvadori
17:25 - 17:40	Cosmic reionization: sources and constraints	Pratika Dayal

17:40 - 17:55	The First Billion Years Project: The contribution of the first galaxies to cosmic reionisation	Jan-Pieter Paardekooper
17:55 - 18:30	Podium Discussion Reionization	Avery Meiksin
19:00	Whiskey tasting & Conference Dinner	

June 12th

Session 6: First Galaxies

9:00 - 9:40	Cosmic Reionization and Star-Forming Galaxies: Progress and Challenges	Richard Ellis
9:40 - 10:20	A Simulated Census of the First Galaxies	John Wise
10:20 - 11:00	Probing the Physics of Galaxy Evolution at $z > 6$	Steve Finkelstein
11:00 - 11:30	Coffee	
11:30 - 12:10	Physical Conditions for Star Formation in Typical Galaxies and Extreme Starbursts back to the First Giga-Year of Cosmic Time	Dominik Riechers
12:10 - 12:40	On the Role of the Turbulent Dynamo in Young Galaxies	Jennifer Schober
12:40 - 14:00	Lunch	
14:00 - 14:30	Stellar populations and morphological evolution of LBGs	Emma Curtis Lake
14:30 - 14:55	The Final Frontier: Galaxies in the First Billion Years	Rachael Livermore
14:55 - 15:25	Coffee	
15:25 - 15:45	The bright end of the galaxy luminosity function at $z \sim 7$	Rebecca Bowler
15:45 - 16:05	Probing the Faint-End of the Galaxy Stellar Mass Function at $z=7$ with CANDELS and S-CANDELS	Mimi Song
16:05 - 16:25	Impact of nebular emission in the derived properties of high-redshift galaxies	Esther Marmol-Queraltó
16:25 - 17:00	Galaxies Discussion	A. Frebel & R. McLure
17:00 - 17:30	Conference Summary	Andrea Ferrara