AlbaNova University Center
Stockholm University

Lyman Continuum Leakage and Cosmic Reionization

13-15 August 2014

#lycleak

Workshop Programme

Oskar Klein centre

Vetenskapsrådet

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Workshop Agenda

Venue: Room FB 42 on the 4th floor of the AlbaNova building. From the main entrance (5th floor) go straight to the stairs, down to the 4th floor, pass by the elevator on the right side, cross the bridge and then turn right. FB 42 is one of the lecture rooms on the left side.

Wednesday, August 13

08:30-09:00 **Registration**

09:00-09:30 Garrelt Mellema (Stockholm University)
Welcome + introductory talk

09:30-10:00 Nick Gnedin (Fermilab) — invited
Cosmic Reionization On Computers

10:00-10:20 Robin Mostardi Rehagen (UCLA)
A Critical Test of LyC Leakage in Star-forming Galaxies at z~3

10:20-10:40 Erik Zackrisson (Stockholm University)
Probing LyC leakage from galaxies in the reionization epoch

10:40-11:10 **Coffee break**

11:10-11:40 John Wise (Georgia Institute of Technology) — invited
Propelling Reionization with the Faintest Galaxies

11:40-12:10 Eros Vanzella (INAF) — invited
Investigating the ionizing escaping radiation at high redshift (z>3)

12:10-12:30 Gonzalo Diaz (Swinburne University of Technology)
The environment of CIV absorption systems in the post-reionization Universe: discovery of the galaxies that dominate the ionizing flux density at z~6

12:30-14:00 **Lunch break**

14:00-14:30 Nils Bergvall (Uppsala University) — invited
Lyman continuum escape and the local starburst population

14:30-15:00 Elizabeth Fernandez (Kapteyn Astronomical Institute) — invited
Modeling Infrared Observations of High Redshift Galaxies to Determine the Escape Fraction

15:00-15:20 Claus Leitherer (STScI)
Pushing the Cosmic Origins Spectrograph to the Lyman Limit

15:20-15:40 Sanchayeeta Borthakur (Johns Hopkins University)
A Local Clue to the Reionization of the Universe

15:40-16:10 **Coffee break**

16:10-16:30 Christoffer Fremling (Stockholm University)
The Escape of Ionizing Radiation from Local Starburst Galaxies: Revised Lyman Continuum Escape Fractions for Tololo 1247-232 and Haro 11

16:30-16:50 Janice Lee (STScI)
A New Look at Diffuse Ionized Gas in Dwarf Galaxies

16:50-17:10 Laura Keating (University of Cambridge)
The role of environment in the near-zones of z ~ 7 QSOs

Thursday, August 14

09:00-09:30 Kristian Finlator (Dark Cosmology Centre) —invited
Metal Absorbers in Inhomogeneous Reionization Models

09:30-10:00 Brian Siana (University of California, Riverside) —invited
Deep HST Searches for Lyman Continuum from Galaxies at z~2–3

10:00-10:20 Andreas Faisst (ETH Zürich)
Constraints on re-ionization at z~8 using Lyman-alpha emitters

10:20-10:40 Sally Oey (University of Michigan)
*Constraints on Lyman Continuum Optical Depth from Ly-alpha, C II, and C II**

10:40-11:10 **Coffee break**

11:10-11:30 Genoveva Micheva (Subaru Telescope, NAOJ)
New analysis of LyC leaking z~3 galaxies in the SSA22 field

11:30-12:00 Ikuru Iwata (Subaru Telescope, NAOJ) — invited
Constraints on LyC escape fraction from direct observations of z~3 galaxies

12:00-12:30 Hidenobu Yajima (University of Edinburgh) — invited
The Escape of Ionizing Photons from Lyman-alpha Emitters at the Epoch of Reionization

12:30-14:00 **Conference photo & Lunch break**

14:00-14:30 Jeff Cooke (Swinburne University of Technology) — invited
Not the usual suspects: Uncovering key contributors to cosmic reionization

14:30-15:00 Hansik Kim (University of Melbourne) — invited
Variation in the escape fraction of ionizing photons from galaxies and the redshifted 21-cm power spectrum during reionization

15:00-15:20 Jaehong Park (University of Melbourne)
The cross-power spectrum between 21cm emission and galaxies in hierarchical galaxy formation models

15.20-15:40 Michael Rutkowski (University of Minnesota)
Lyman-Continuum Leakage in Dwarf Star-Forming Galaxies at z~1.2

15:40-16:10 **Coffee break**

16:10-16:30 Brian Fleming (University of Colorado)
A Study of Lyman Alpha Emission from Low-redshift Galaxies and its Potential use as a Tracer of Lyman Continuum Escape

16:30-16:50 Alexander Kaurov (University of Chicago)
Comparison of numerical and analytical methods for studying cosmic Reionization

16:50-17:10 Nitya Hariharan (MPA)
Enabling Radiative Transfer on AMR grids in CRASH

18:00 **Workshop dinner**

Friday, August 15

09:00-09:30 Renyue Cen (Princeton University) — invited
Effects of Stellar Feedback and Runaway OB Stars on Ionizing Photon Escape Fraction

09:30-10:00 Jan-Pieter Paardekooper (MPE) — invited
The Escape Fraction of Ionising Photons from the First Billion Years Simulation

10:00-10:20 Anne Verhamme (Geneva University)
On the use of Lyman-alpha to detect Lyman continuum leaking galaxies

10:20-10:40 Ivana Orlitova (Astronomical Institute ASCR)
Modelling of HST/COS Lyman-alpha spectra of low-z LyC leakers

10:40-11:10 **Coffee break**

11:10-11:40 Tucker Jones (UCSB) — invited
Observational constraints of Lyman continuum leakage at redshift 4

11:40-12:10 Akio Inoue (Osaka Sangyo University) — invited
On the correction for the intergalactic attenuation of the direct Lyman continuum observation

12:10-12:30 Alan Duffy (Swinburne University of Technology)
Escape Fractions and Supernova Feedback in the Epoch of Reionization

12:30-14:00 **Lunch break**

14:00-14:30 Sourav Mitra (University of Western Cape) — invited
Escape fraction of ionizing photons from high-redshift galaxies from reionization models

14:30-14:50 Jens Melinder (Stockholm University)
Escape of ionising radiation from star formation selected galaxies at redshift 2.2

14:50-15:10 Michael Rauch (Carnegie Observatories)
Messy Lyman alpha Emitters at z~3 as Likely Sites of Lyman Continuum Leakage

15:10-15:30 Yumi Choi (University of Washington)
The Power of Panchromatic Imaging: Intrinsic UV flux and its leakage from NGC4214

15:30 Concluding remarks

19:00 **Rooftop tour**