# Galaxy-IGM workshop 2022

Monday, Aug 8 – Friday, Aug 12

Contributions talk + Q&A **Review**  $40 \min + 10 \min$ **Contributed talk** 13 min + 7 min **Group presentation** 8 min + 7 min

Day 1 – Monday, Aug 8

9:20 - 11:10Session 1

Chair: Hidenobu Yajima

9:20 – 9:30 Hidenobu Yajima (University of Tsukuba) Introductory remarks

9:30 - 10:20 Chiaki Gen (NAOJ) The formation of the first stars and galaxies

10:20 - 10:40 Xhemollari Oerd (University of Tsukuba) The Formation of Pop III Star Clusters under UV radiation

10:40 - 11:00 Nakazato Yurina (University of Tokyo) 遠方銀河における [OIII] 輝線比

11:00 - 11:10 Break

Session 2 11:10 - 13:40

Chair: Hidenobu Yajima

11:10 – 11:30 Kaneda Yuka (University of Tsukuba) ダークマターハローの Scaling Relation

11:30 - 11:50 Nishigaki Moka (SOKENDAI) 近傍の極金属欠乏銀河の探査とその物理起源

11:50 – 12:10 Xu Yi (University of Tokyo) Spatially Resolved Early Star Formation in Local Extremely Metal-poor Galaxies

12:10 - 13:40 Lunch

13:40 - 15:40Session 3

13:40 – 14:00 Isobe Yuki (The University of Tokyo, ICRR) 近傍観測と遠方シミュレーションが示唆する遠方初期銀河の分散運動優

Chair: Takuya Hashimoto

14:00 – 14:20 Watanabe Kuria (SOKENDAI) 高い鉄酸素比を持つ極金属欠乏銀河の元素組成比とその起源

14:20 – 15:10 Egami Eiichi (University of Arizona) James Webb Space Telescope (JWST): Dawn of a New Era in Astronomy

15:10 - 15:30 Harikane Yuichi (The University of Tokyo, ICRR) A Comprehensive Study on Galaxies at z 9-17 Found in the Early JWST Data

15:30 - 15:40 Break

Session 4

15:40 - 17:40Chair: Yoshiaki Ono

15:40 – 16:00 Umeda Hiroya (University of Tokyo) すばる/HSC で探る z-6-7 での Ly α光度関数と等価幅分布

16:00 – 16:20 Kikuta Satoshi (NAOJ) PFS-SSP に向けた high-z LAE サイエンス検討

16:20 - 16:40 Inoue Akio (Waseda University) Possible Rotation in a z=9.1 Galaxy

16:40 – 17:00 Sugawara Yuma (Waseda University) Tokult: 重力レンズ効果を受けた銀河の回転運動解析コード

17:00 - 17:10 Break

17:10 – 17:40 Discussion

## Day 2 – Tuesday, Aug 9

9:30 - 10:40 Session 5

Chair: Yuichi Harikane

- 9:30 9:50 Ren Yi (Waseda University) Updated measurements of [OIII] 88 μ m, [CII] 158 μ m, and dust continuum emission from a z=7.2 galaxy
- 9:50 10:10 Ono Yoshiaki (University of Tokyo) ALMA Observations for CO Emission from Luminous Lyman-break Galaxies at z=6.0293-6.2037
- 10:10 10:30 Tsujita Akiyoshi (University of Tokyo) ALMA Lensing Cluster Survey: Nature of a lensed H-dropout galaxy at

10:30 - 10:40 Break

#### Session 6 10:40 - 14:00

- Chair: Satoshi Kikuta
- 10:40 11:30 Kana Moriwaki (University of Tokyo) IGM at high redshifts probed by 21cm line
- 11:30 11:50 Takumi Itoh (Kumamoto University) Foreground Removal with Gaussian Process Regression for observing **Epoch of Reionization**
- 11:50 12:10 Imoto Seiya (Nagoya University) 21cm 線シグナルから探る初代星質量
- 12:10 12:30 Akiba Takeshi (University of Tsukuba) 原始銀河団領域の星形成活動と 21cm シグナルの関係
- 12:30 14:00 Lunch

#### Session 7 14:00 - 15:40

- 14:00 14:50 Prochaska Xavier J. (University of California, Santa Cruz / Kavli IPMU) Resolving the Cosmic Web with Fast Radio **Bursts**
- 14:50 15:10 Liang Yongming (SOKENDAI) Field Variation in LAE-IGM HI Correlation at z 2 Mapped by Subaru/HSC
- 15:10 15:30 Sun Dongsheng (University of Tokyo) Cosmological-Scale HI Distribution Around Galaxies and AGN Probed with Mas-sive Spectroscopic Data
- 15:30 15:40 Break

#### 15:40 - 17:40Session 8

Chair: Akio Inoue

Chair: Masami Ouchi

- 15:40 16:00 Nakajima Koichiro (Nagoya University) Lyman α forest の 3 次元分布による宇宙大規模構造の測定
- 16:00 16:20 Kakiichi Koki (University of California, Santa Barbara) Narrow-band IGM Tomography with Subaru/HSC across Cosmic Time
- 16:20 16:40 Kashino Daichi (Nagoya University) The EIGER project
- 16:40 17:00 Matsumoto Akinori (The University of Tokyo, ICRR) すばる望遠鏡の原始 He 量測定で検証する宇宙論モデルと反レ プトン存在比
- 17:00 17:10 Break

#### 17:10 - 17:40 Discussion

## Day 3 – Wednesday, Aug 10

Session 9 9:30 – 11:10

Chair: Hidenobu Yajima

Chair: Hidenobu Yajima

Chair: Yuma Sugahara

Chair: Takuya Hashimoto

10:20 – 10:40 Li Wenxiu (Peking University) Massive Black Hole Seeds of z>6 Luminous Quasars in the JWST Era

10:40 – 11:00 Hu Haojie (Peking University) Long-term evolutions of supercritical accretion with outflows: a subgrid feedback model to grow overmassive SMBHs

11:00 - 11:10 Break

### Session 10 11:10 – 13:20

11:10 – 11:30 Mushano Takuya (University of Tsukuba) 超臨界ブラックホール降着流におけるライマンアルファ輝線の輻射力の 計算

11:30 – 11:50 Ogata Erika (University of Tsukuba) Dusty-gas 中を浮遊する中質量ブラックホールの降着成長過程: ダストの昇華 と非等方輻射の影響

11:50 - 13:20 Lunch

### Session 11 13:20 – 15:00

13:20 – 14:10 Kohei Ichikawa (Tohoku University) Review on AGN observations

14:10 - 14:30 Tang Shenli (University of Tokyo) Correlations between type 1 quasar luminosity and host galaxy asymmetry

14:30 – 14:50 Zhang Yechi (The University of Tokyo, ICRR) Black Hole - Galaxy Coevolution at Cosmic Noon Probed by Faint HETDEX AGN

14:50 - 15:00 Break

## Session 12 15:00 – 17:30

15:00 – 15:20 Hatano Shun (SOKENDAI) 可視光輝線と光電離モデルで探る極金属欠乏銀河の隠れた非熱的放射源の正体

15:20 – 15:40 Ezaki Tetsuya (Waseda University) 多波長測光カタログによる活動銀河核の平均スペクトルエネルギー分布

15:40 – 16:00 Kitagawa Shuya (Waseda University) 銀河のスペクトルエネルギー分布モデルフィットにおける遠赤外線データの 重要性

16:00 – 16:20 Yamamoto Suguru (University of Tsukuba) 近傍星形成銀河における分子ガスの分布形態に関する定量的・統計的 解析

16:20 – 16:40 Ando Makoto (University of Tokyo) Detection of anisotropic satellite quenching in galaxy clusters up to z 1

16:40 - 16:50 Break

16:50 – 17:30 Discussion

Day 4 – Thursday, Aug 11

9:30 - 17:00

9:30 – 17:00 Group work

Day 5 – Friday, Aug 12

9:30 - 12:30

9:30 – 12:30 Group work

12:30 - 14:20

12:30 – 14:00 Group work presentations

14:00 - 14:20 Break

14:20 - 14:35

14:20 – 14:30 Ouchi Masami (Presenter) Award presentation

14:30 – 14:35 Umemura Masayuki (University of Tsukuba) Closing remarks

Chair: Hidenobu Yajima