Kosuke TAKAHASHI

Curriculum Vitae

kosuke.takahashi@astr.tohoku.ac.jp
0009-0009-8116-0316
Kosuke TAKAHASHI
Kosuke TAKAHASHI
Astronomical Institute, Tohoku University

Interests

Galaxy formation and evolution, Massive galaxies, Galaxy quenching, High-z Universe

Education

2023 Apr. – Present **Ph.D course of Astronomy**, *Tohoku University*, Sendai, Japan

2024 Oct. – Present **Program student of Graduate Program on Physics for the Universe (GP-PU)**, *Tohoku University*, Sendai, Japan

2025 Apr.– Present **Program student of Advanced Graduate School Research Initiative for International Scholarly Excellence Program (AGS RISE Program)**, *Tohoku University*, Sendai, Japan

2025 Mar. **Master of Science in Astronomy**, *Tohoku University*, Sendai, Japan

2023 Mar. **Bachelor of Science in Astronomy**, *Tohoku University*, Sendai, Japan

Papers

1. **Kosuke Takahashi**, Takahiro Morishita, Tadayuki Kodama, et al., "Green Flash: Residual Emissions Enshrouded in Low-mass Balmer-break Galaxies at $z \sim 5$", 2025, Submitted to ApJ, arXiv:2505.05942 (Revising)
2. Takahiro Morisita, Charlotte A. Marson, ⋯, **Kosuke Takahashi**, et.al., "BEACON: JWST NIRCam Pure-parallel Imaging Survey. I. Survey Design and Initial Results", 2025, ApJ, 983, 152
3. Kazuki Daikuhara, Tadayuki Kodama, ⋯, **Kosuke Takahashi**, et al., "Association of cold gas, massive galaxies, and AGNs in a filamentary protocluster traced by triple narrow-band imaging", 2025, Submitted to MNRAS

Allocated observation programs as a P.I.

Subaru/MOIRCS **"MOIRCS Medium-Band Survey for Red Ultra-Luminous Shiners"**, *S25B0054N*, Imaging, 1.5 nights

Subaru/MOIRCS **"Hunting ultra-massive quiescent galaxies in protoclusters at $z \sim$ 5.2–5.3"**, *S25B0009N*, Imaging, 1.0 night

Subaru/MOIRCS **"Hunting ultra-massive quiescent galaxies in the structures at z∼5.2-5.3"**, *S25A0006N*, Imaging, 2.0 nights
(RETRY)

Keck/MOSFIRE **"Confirmation of red monsters; ultra-massive quiescent galaxies at z∼5"**, *S24B0019N, S452*, Spectroscopy, 0.5 nights
- Subaru-Keck time exchange program

Subaru/MOIRCS **"Hunting ultra-massive quiescent galaxies in the structures at z∼5.2-5.3"**, *S24A0025N*, Imaging, 1.0 night

Subaru/MOIRCS **"Hunting massive monsters in a proto-cluster at z = 5.3 with the K4 filter"**, *S23B0145S*, Imaging, 0.5 nights
- Rank-A

Observing Experience

Imaging	Subaru/SWIMS, Subaru/MOIRCS
Spectroscopy	Subaru/MOIRCS, Keck/MOSFIRE

International Conferences

1. Kosuke Takahashi, et al., "From Low-mass to High-mass: Exploring the Nature of Balmer Break Galaxies at $z \sim 5$", IAU Symposium 396: Massive Galaxies Across the Universe, INAF and Univ. Federico II, Italy, June 9-13, 2025, (Oral)
2. Kosuke Takahashi, et al., "Ruby-Rush: Investigating accelerated growth of massive galaxies at z∼5", 10th Galaxy Evolution Workshop, ASIAA, Taiwan, August 6-9, 2024, (Oral)
3. Kosuke Takahashi, et al., "Ruby-Rush: Investigating massive quiescent galaxies at z∼5 with SWIMS-18", The Second SUPER-IRNET Workshop, Beppu, July 23-26, 2024, (Oral)
4. Kosuke Takahashi, et al., "Ruby-Rush: Investigating accelerated growth of massive galaxies at z∼5", ELT Science in Light of JWST, Tohoku University, Sendai, June 3-7, 2024, (Oral)
5. Kosuke Takahashi, et al., "Ruby-Rush: Investigating accelerated growth of massive quiescent galaxies in z∼5 protoclusters", First Structures in the Universe 2023, Université de Paris Cité, France, September 4-8, 2023, (Oral)
6. Kosuke Takahashi, et al., "Accelerated evolution of massive galaxies in high-z protoclusters", International Leading Research kickoff meeting, NAOJ, May 31- June 2, 2023, (Poster)
7. Kosuke Takahashi, et al., "Ruby-Rush: The quest of red monsters lurking in the protoclusters at z∼5", The First SUPER-IRNET Workshop, NAOJ, March 23-24, 2023, (Poster)
8. Kosuke Takahashi, et al., "Ruby-Rush: The quest of red monsters lurking in the protoclusters at z∼5", 9th Galaxy Evolution Workshop, Kyoto University, February 20-23, 2023, (Oral)

Domestic Conferences

1. 高橋宏典, 兒玉忠恭, 他, "Ruby-Rush: 地上広視野中間帯域撮像で解明する初期宇宙の銀河加速成長", 日本天文学会 2025 年秋季年会, Z203b, 山口大学, 周南公立大学 (海峡メッセ下関), 2025 年 9 月, (Poster+Flash talk, Accepted)
2. 高橋宏典, 森下貴弘, 他, "$z \sim 5.5$ のバルマーブレーク銀河で探る星形成活動の抑制機構", 日本天文学会 2025 年春季年会, X67a, 茨城大学 (水戸市民会館), 2025 年 3 月, (Oral)
3. 高橋宏典, 兒玉忠恭, 他, "Accelerated evolution of red monsters in high-z protoclusters", 日本天文学会 2023 年秋季年会, X06a, 名古屋大学, 2023 年 9 月, (Oral)
4. 高橋宏典, "Ruby-Rush: Accelerated evolution of massive quiescent galaxies in high-z protoclusters", 2023 年度第 53 回天文・天体物理夏の学校銀河・銀河団分科会 a10, 東京大学, 2023 年 8 月, (Oral)
5. 高橋宏典, 兒玉忠恭, 他, "Ruby-Rush: z∼5 の原始銀河団で加速的に誕生する巨大銀河の探査", 日本天文学会 2023 年春季年会, X24a, 立教大学, 2023 年 3 月, (Oral)

Seminar and Colloquium

1. Kosuke Takahashi, “Investigating Galaxy Mass Growth and ”Death” One Billion Years after the Big Bang”, GP-PU Seminar, GP-PU, Tohoku University, Sendai, March 26, 2025
2. Kosuke Takahashi, “Investigating galaxy mass growth and quenching mechanisms one billion years after the Big Bang”, Colloquium, Astronomical Institute, Tohoku University, Sendai, November 11, 2024
3. Kosuke Takahashi, “Ruby-Rush: Investigating massive quiescent galaxies at z∼5 with Subaru Telescope”, Subaru Seminar, Subaru Telescope (Hilo Office), Hawaii, May 22, 2024

Skills

Programming	Python, IRAF, UNIX, C++
Tools	Git

Fellowships and Awards

2024/04-2025/03 **Global Hagi Scholarship**, *Tohoku University*