

# Curriculum Vitae

Dr. Takuya Hashimoto

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## Education:

Mar 2015 Ph.D. Astronomy, The University of Tokyo  
▷ Dissertation: “Outflows in Distant Galaxies Probed by Ly $\alpha$  Spectra”  
▷ Committee : K. Motohara (chair), N. Kashikawa, R. Kawabe, K. Kohno, T. Yamada  
▷ Supervisors : K. Shimasaku, M. Ouchi  
Mar 2012 M.S. Astronomy, The University of Tokyo  
Mar 2010 B.A. Astronomy, Tohoku University

## Experience:

Apr 2016 – present Observatoire de Lyon, Centre de Recherche Astrophysique de Lyon (CRAL), Post-doctoral Researcher  
▷ Advisor : B. Guiderdoni  
Apr 2015 – Mar 2016 JSPS fellowship, Observatoire de Lyon, Centre de Recherche Astrophysique de Lyon (CRAL), Post-doctoral Researcher  
▷ Advisor : B. Guiderdoni

## Grants and Awards:

Apr 2014 – Mar 2016 JSPS DC2 fellowship,  $\sim 8500000$  JPY  
Apr 2012 – Mar 2014 Japan Ikuei-kai Scholarship (JASSO),  $\sim 2000000$  JPY  
2013 Travel Grant from *Takuetsu-Hojokin*, 500000 JPY  
2013 Travel Grant from *Hayakawa-Yukio fund*, 200000 JPY

## Contributions in International Conferences:

2016 “Lyman-Alpha Emitters in MUSE UDF”, Contributed talk at EWASS 2016 (Symposium–MUSE first year science and beyond), Athens, Greece  
2016 “Ly $\alpha$  EW distribution and LAE fraction in UDF10”, Contributed talk at the workshop: 11th MUSE busy week, Corsica, France  
2016 “A close comparison between observed and modeled Ly $\alpha$  lines for  $z \sim 2$  Lyman Alpha Emitters”, Contributed poster at the Saas-Fee Advanced Course (Lyman-alpha as an astrophysical and cosmological tool), Saas-Fee, Switzerland  
2015 “Ly $\alpha$  Equivalent Width Distribution and LAE fraction at  $2.8 < z < 6.6$  in HDFs and UDF” Contributed talk at the workshop: 10th MUSE busy week, Goslar, Germany  
2015 “Ly $\alpha$  Equivalent Width in UDF10”, Contributed talk at the workshop: MUSE UDF meeting, Lyon, France  
2014 “The statistical spectroscopic properties in high- $z$  Lyman-Alpha Emitters and close comparison between observed and modelled Ly $\alpha$  line”, Contributed talk at EWASS 2014 (Symposium–From local galaxies to the reionisation epoch: the Universe as seen in Lyman  $\alpha$ ), Geneva, Switzerland  
2013 “Gas Motion Study of Ly $\alpha$  Emitters at  $z \sim 2$  Using FUV and Optical Spectral Lines”, Invited talk at the workshop: Lyman Alpha as an Astrophysical Tool, Stockholm, Sweden  
2013 “Gas Motion Study of Ly $\alpha$  Emitters at  $z \sim 2$  Using FUV and Optical Spectral Lines”, Contributed poster at the workshop: 2013 COSMOS Team Meeting, Kyoto, Japan  
2012 “Can Gas Outflows Explain The Strong Ly $\alpha$  Emission Of Lyman Alpha Emitters?”, Contributed poster at AAS (American Astronomical Society), Anchorage, Alaska, USA

## Contributions in Domestic Conferences:

- 2015 “A close comparison between observed and modeled Ly $\alpha$  lines for  $z \sim 2$  Lyman Alpha Emitters”, Poster at the 2015 Autumn Meeting of the Astronomical Society of Japan, Hyogo, Japan
- 2014 “Statistical spectroscopic properties in high- $z$  Lyman-Alpha Emitters and close comparisons between observed and modelled Ly $\alpha$  lines”, Talk at the 2014 Autumn Meeting of the Astronomical Society of Japan, Yamagata, Japan
- 2012 “Gas Motion Statistics of Ly $\alpha$  Emitters and their Ly $\alpha$  Escape Mechanisms”, Talk at the workshop: Theory of the Large-Scale Structure of the Universe in the ALMA-era, Hokkaido, Japan
- 2012 “Gas Motion Statistics of Ly $\alpha$  Emitters at  $z \sim 2$  Using UV and Optical Emission Lines”, Poster at the GCOE International Symposium, Tokyo, Japan
- 2012 “Observational Properties of Ly $\alpha$  Emitters Revealed by Rest-frame FUV and Optical Spectroscopy”, Talk at the RESCUE Observational Cosmology Workshop, Tokyo, Japan
- 2012 “Gas Motion Statistics of Ly $\alpha$  Emitters at  $z \sim 2$  Using UV and Optical Emission Lines”, Poster at the 2012 Autumn Meeting of the Astronomical Society of Japan, Oita, Japan
- 2011 “Near-Infrared Spectroscopy of  $z \sim 2.2$  LAEs 2: Gas Motion Study of LAEs Using Spectral Lines”, Talk at the 2011 Autumn Meeting of the Astronomical Society of Japan, Kagoshima, Japan
- 2011 “Near-Infrared Spectroscopy of  $z \sim 2.2$  LAEs: Detections of Nebular Emission Lines”, Talk at the 2011 Spring Meeting of the Astronomical Society of Japan, Tsukuba, Japan

## Observing Experiences:

- Dec 2013 Magellan/MagE 2 nights (PI: Michael Rauch)
- Dec 2012 Subaru/FMOS 3 nights (PI: Kimihiko Nakajima)
- Apr 2012 Subaru/IRCS + AO188 2 nights (PI: Masami Ouchi)
- Feb 2011 Keck/NIRSPEC 2 nights (PI: Kimihiko Nakajima)
- Jan 2011 Subaru/Suprime-Cam 3 nights (PI: Masami Ouchi)
- Oct 2010 Magellan/MagE 2 nights (PI: Masami Ouchi)

## Publication List (Refereed publications):

– 2 PI papers and 1 Erratum

- **T. Hashimoto**, A. Verhamme, M. Ouchi, K. Shimasaku, D. Schaerer, K. Nakajima, T. Shibuya, R. Michael, Y. Ono, and R. Goto,  
“A Close Comparison between Observed and Modeled Ly $\alpha$  Lines for  $z \sim 2.2$  Lyman Alpha Emitters”, *The Astrophysical Journal*, 812, 157 (22pp) (2015), citation number (13).
- **T. Hashimoto**, M. Ouchi, K. Shimasaku, Y. Ono, K. Nakajima, R. Michael, J. Lee, and S. Okamura,  
Erratum: “Gas motion study of Ly $\alpha$  emitters at  $z \sim 2$  using FUV and optical spectral lines”, *The Astrophysical Journal*, 775, 140 (4pp) (2013), citation number (2)
- **T. Hashimoto**, M. Ouchi, K. Shimasaku, Y. Ono, K. Nakajima, R. Michael, J. Lee, and S. Okamura,  
“Gas motion study of Ly $\alpha$  emitters at  $z \sim 2$  using FUV and optical spectral lines”, *The Astrophysical Journal*, 765, 70 (15pp) (2013), citation number (54).

– 3 CoI papers

- T. Shibuya, M. Ouchi, K. Nakajima, **T. Hashimoto**, Y. Ono, M. Rauch, J. Gauthier, K. Shimasaku, R. Goto, M. Mori, and M. Umemura,  
“What is the Physical Origin of Strong Ly $\alpha$  Emission? II. Gas Kinematics and Distribution of Ly $\alpha$  Emitters”, *The Astrophysical Journal*, 788, 74 (14pp) (2014), citation number (34).
- T. Shibuya, M. Ouchi, K. Nakajima, Y. Suraphong, **T. Hashimoto**, K. Shimasaku, M. Mori, and M. Umemura,  
“What is the Physical Origin of Strong Ly $\alpha$  Emission? I. Demographics of Ly $\alpha$  Emitter Structures”, *The Astrophysical Journal*, 785, 64 (12pp) (2014), citation number (16).
- K. Nakajima, M. Ouchi, K. Shimasaku, **T. Hashimoto**, Y. Ono, J. Lee,  
“First Spectroscopic Evidence for High Ionization State and Low Oxygen Abundance in Ly $\alpha$  Emitters”, *The Astrophysical Journal*, 769, 3 (18pp) (2013), citation number (52).

## Professional Service:

- 2013-present: reviewer for the *Astrophysical Journal*.