

Curriculum Vitae

- **Takeru K. Suzuki**

- Nationality : Japanese
- Date of Birth : June 23rd, 1975
- Place of Birth : Osaka, Japan
- Associate Professor, Division of Particle & Astrophysical Science, Graduate School of Science, Nagoya University
- Office : ES bldg. 611, Furo-cho, Chikusa, Nagoya, 464-8602, Japan
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- Professional Appointments

- April, 2003 – February, 2006 : JSPS Research Fellow, Department of Physics, Kyoto University
- March, 2006 – September, 2009 : Assistant Professor, School of Arts & Sciences, University of Tokyo
- October, 2009 – : Associate Professor, School of Science, Nagoya University

- Education

- March, 1998, University of Tokyo, Bachelor of Science
- March, 2000, University of Tokyo, Master of Science
Title of Thesis “A New Model of Evolution of Light Elements in Inhomogeneous Early Galaxy”
- March, 2003, University of Tokyo, D.Sci.
Title of Thesis “On the Heating of the Solar Corona and the Acceleration of the Solar Wind by Waves”

- Awards

- 2003: JSPS Research Fellow
- 2007: Grant from Inamori Foundation
- 2011: Astronomical Society of Japan, Young Astronomer Award

Papers (Refereed Journals)

1. “A signature of chromospheric activity in brown dwarfs revealed by 2.5-5.0 μm AKARI spectra”,
Sohrahana, S., Suzuki, T. K., & Yamamura, I., *Mon. Not. Roy. Astron. Soc.*, **440**, 3675-3684 (2014)
2. “Connecting the Sun and the solar wind: the self-consistent transition of heating mechanisms”,
Matsumoto, T. & Suzuki, T. K., *Mon. Not. Roy. Astron. Soc.*, **440**, 971-986 (2014)
3. “The Evolution of High-temperature Plasma in Magnetar Magnetospheres and its Implications for Giant Flares”,
Takamoto, M., Kisaka, S., Suzuki, T. K., & Teraawa, T., *Astrophys. J.*, **787**, 84, 13pp
4. “Magnetohydrodynamic Simulations of Global Accretion Disks with Vertical Magnetic Fields”,
Suzuki, T. K. & Inutsuka, S., *Astrphys. J.*, **784**, 121, 30pp (2014)
5. “Driving Disk Winds and Heating Hot Coronae by MRI Turbulence”,
Io, Yuki & Suzuki, T. K., *Astrophys. J.*, **780**, 46, 13pp (2014)
6. “Saturation of Stellar Winds from Young Suns”,
Suzuki, T. K., Imada, S., Kataoka, R., Kato, Y., Matsumoto, T., Miyahara, H., & Tsuneta, S. *Publ. Astron. Soc. Japan*, **65**, 98 (2013)
7. “Evolution of solar-type stellar winds”,
Suzuki, T. K., *Astronomische Nachrichten*, **334**, 81-84 (2013)
8. “Noble gas isotopic fractionation between solar wind and the Sun, and implications for Genesis solar wind oxygen measurements”,
Ozima, M, Suzuki, T. K., Yamada, A., & Podosek, F. A., *Meteoritics & Planetary Science*, **47**, 2049-2055 (2012)
9. “Connecting the Sun and the Solar Wind: The First 2.5-dimensional Self-consistent MHD Simulation under the Alfvén Wave Scenario”,
Matsumoto, T. & Suzuki, T. K., *Astrophys. J.*, **749**, 8, 5pp (2012)
10. “Solar wind and its evolution”
Suzuki, T. K., *Earth, Planets and Space*, **64**, 201-206 (2012)
11. “Self-consistent Simulations of Alfvén Wave Driven Winds from the Sun and Stars”,
Suzuki, T. K., *Space Science Rev.*, **158**, 339 - 363 (2011)
12. “Two-dimensional Study of the Propagation of Planetary Wake and the Indication of Gap Opening in an Inviscid Protoplanetary Disk”,
Muto, T., Suzuki, T. K., & Inutsuka, S., *Astrophys. J.*, **724**, 448 - 463 (2010)
13. “Protoplanetary Disk Winds via Magnetorotational Instability: Formation of an Inner Hole and a Crucial Assist for Planet Formation”,
Suzuki, T. K., Muto, T. & Inutsuka, S., *Astrophys. J.*, **718**, 1289 - 1304 (2010)
14. “Thermal Response of a Solar-like Atmosphere to an Electron Beam from a Hot Jupiter: A Numerical Experiment”,
Gu, P.-G. & Suzuki, T. K., *Astrophys. J.*, **705**, 1189 - 1195 (2009)
15. “ $^6\text{Li}/^7\text{Li}$ estimates for metal-poor stars”,
García Pérez, A. E., Aoki, W., Inoue, S., Ryan, S. G., Suzuki, T. K., & Chiba, M., *Astron.& Astrphys.*, **504**, 213 - 223 (2009)
16. “The New Detections of $^7\text{Li}/^6\text{Li}$ Isotopic Ratio in the Interstellar Media”,
Kawanomoto, S., Kajino, T., Aoki, W., Bessell, M., Suzuki, T. K., Ando, H., Noguchi, K., Honda, S., Izumiura, H., Kambe, E., Okita, K., Sadakane, K., Sato, B., Tajitsu, A., Takada-Hidai, M., Tanaka, W., Watanabe, E., & Yoshida, M., *Astrophys. J.*, **701**, 1506 - 1518 (2009)
17. “Disk Winds Driven by Magnetorotational Instability and Dispersal of Protoplanetary Disks”,
Suzuki, T. K. & Inutsuka, S., *Astrophys. J. Lett.*, **691**, L49 - L54 (2009)

18. “The Magnetic Landscape of the Sun’s Polar Region”,
Tsuneta, S., Ichimoto, K., Katsukawa, Y., Lites, B. W., Matsuzaki, K., Nagata, S., Orozco Suarez, D., Shimizu, T., Shimojo, M., Shine, R. A., Suematsu, Y., Suzuki, T. K., Tarbell, T. D., Title, A. M., *Astrophys. J.*, **688**, 1374 - 1381 (2008)
19. “Alfvén wave-driven Supernova Explosions”,
Suzuki, T. K., Sumiyoshi, K., & Yamada, S., *Astrophys. J.*, **678**, 1200-1206 (2008)
20. “Coronal heating and wind acceleration by nonlinear Alfvén waves - global simulations with gravity, radiation, and conduction”,
Suzuki, T. K., *Nonlinear Processes in Geophysics*, **15**, 205 - 304 (2008)
21. “Evolution of Collisionally Merged Massive Stars”,
Suzuki, T. K., Nakasato, N., Baumgardt, H. Ibukiyama, A., Makino, J., & Ebisuzaki, T., *Astrophys. J.*, **668**, 435-448 (2007)
22. “Cascading of Fast-Mode Balanced and Imbalanced Turbulence”,
Suzuki, T. K., Lazarian, A., & Beresnyak, A., *Astrophys. J.*, **662**, 1033-1042 (2007)
23. “The Origin of Ripples in Cool Cores of Galaxy Clusters: Heating by Magnetohydrodynamical Waves?”,
Fujita, Y., Suzuki, T. K., Kudoh, T., & Yokoyama, T., *Astrophys. J. Lett.*, **659**, L1-L4 (2007)
24. “Structured Red Giant Winds with Magnetized Hot Bubbles and the Corona/Cool Wind Dividing Line”,
Suzuki, T. K., *Astrophys. J.*, **659**, 1592-1610 (2007)
25. “Solar winds driven by nonlinear low-frequency Alfvén waves from the photosphere: Parametric study for fast/slow winds and disappearance of solar winds”,
Suzuki, T. K. & Inutsuka, S., *J. Geophys. Res.*, A06101 (2006)
26. “Collisionless Damping of Fast Magnetohydrodynamic Waves in Magnetorotational Winds”,
Suzuki, T. K., Yan, H., Lazarian, A., & Cassinelli, J. P., *Astrophys. J.*, **640**, 1005-1017 (2006)
27. “Forecasting Solar Wind Speeds”,
Suzuki, T. K., *Astrophys. J.*, **640**, L75-L78 (2006)
28. “Making the Corona and the Fast Solar Wind: A Self-consistent Simulation for the Low-Frequency Alfvén Waves from the Photosphere to 0.3 AU”,
Suzuki, T. K. & Inutsuka, S., *Astrophys. J.*, **632**, L49-L52 (2005)
29. “On the Heating of Cluster Cooling Flows by Sound Waves”,
Fujita, Y. & Suzuki, T. K., *Astrophys. J.*, **630**, L1-L4 (2005)
30. “Alfvén Wave-driven Proto-Neutron Star Winds and r-Process Nucleosynthesis”,
Suzuki, T. K. & Nagataki, S., *Astrophys. J.*, **628**, 914-922 (2005)
31. “Cosmic Rays and Gamma-Rays in Large-Scale Structure”,
Inoue, S., Nagashima, M., Suzuki, T. K., & Aoki, W., *J. Korean Astron. Soc.*, **37**, 447-454 (2004)
32. “A low upper-limit on the lithium isotope ratio in HD140283”,
Aoki, W., Inoue, S., Kawanomoto, S., Ryan, S. G., Smith, I. M., Suzuki, T. K., & Takada-Hidai, M., *Astron. Astrophys.*, **428**, 579-586 (2004)
33. “Coronal heating and acceleration of the high/low-speed solar wind by fast/slow MHD shock trains”,
Suzuki, T. K., *Mon. Not. Roy. Astron. Soc.*, **349**, 1227-1239 (2004)
34. “Tsunamis in Galaxy Clusters: Heating of Cool Cores by Acoustic Waves”,
Fujita, Y., Suzuki, T. K., & Wada, K., *Astrophys. J.*, **600**, 650-656 (2004)
35. “Cosmic Ray Production of ${}^6\text{Li}$ by Virialisation Shocks in the Early Milky Way”,
Suzuki, T. K. & Inoue, S., *Pub. Astron. Soc. Australia*, **21**, 148-152 (2004)
36. “Cosmic ray production of ${}^6\text{Li}$ by structure formation shocks in the early galaxy”,
Inoue, S. & Suzuki, T. K., *Nucl. Phys. A.*, **718**, 69-72 (2003)

37. “On the Heating of the Solar Corona and the Acceleration of the Low-Speed Solar Wind by Acoustic Waves Generated in the Corona”,
Suzuki, T. K., *Astrophys. J.*, **578**, 598-609 (2002).
38. “Cosmic-Ray Production of ${}^6\text{Li}$ by Structure Formation Shocks in the Early Milky Way: A Fossil Record of Dissipative Processes during Galaxy Formation”,
Suzuki, T. K. & Inoue, S., *Astrophys. J.*, **573**, 168-173 (2002)
39. “A New Model for the Evolution of Light Elements in an Inhomogeneous Galactic Halo”,
Suzuki, T. K. & Yoshii, Y., *Astrophys. J.*, **549**, 303-319, (2001).
40. “Abundances and Evolution of Lithium in the Galactic Halo and Disk”,
Ryan, S. G., Kajino, T., Beers, T. C., Suzuki, T. K., Romano, D., Matteucci, F., & Rosolankova, K., *Astrophys. J.*, **549**, 55-71, (2001).
41. “Primordial Lithium Abundance as a Stringent Constraint on the Baryonic Content of the Universe”,
Suzuki, T. K., Yoshii, Y., & Beers, T. C., *Astrophys. J.*, **540**, 99-103, (2000).
42. “Evolution of Beryllium and Boron in the Inhomogeneous Early Galaxy”,
Suzuki, T. K., Yoshii, Y., & Kajino, T. *Astrophys. J.* **522**, L125 - L128 (1999).

Presentations in International Conferences

Invited Talks

1. “What determines properties of the solar wind ?” in “SCOSTEP 13th Quadrennial Solar-Terrestrial Physics Symposium”, Oct. 12-18, 2014, Xi’an, Shanxi, China
2. “Alfvén wave-driven solar wind during very active phases” in “AGU Chapman Conference on Low-frequency Waves in Space Plasmas”, Aug.31 - Sep. 5, 2014, Jeju island, South Korea
3. “Disk winds driven by MRI –some aspects and applications–” in “Non-ideal MHD, Stability, and Dissipation in Protoplanetary Disks”, Aug, 4-8, 2014, Copenhagen, Denmark
4. “Accretion Disk Winds by MRI Turbulence” in “Astronom 2014, 9th Annual International Conference on Numerical Modeling of Space Plasma Flows”, Jun. 23-27, 2014, Long Beach, California, USA
5. “Accretion Disk Winds by MRI Turbulence” in “MR2014; US–Japan Workshop on Magnetic Reconnection”, May 20-24, Tokyo/Nikko, Japan
6. “Saturation of Stellar Winds from Young Suns” in “Huntsville Workshop 2014 –Solar and Stellar Processes from the Chromosphere to the Outer Corona–”, Mar. 23-27, 2014, Orlando, Florida, USA
7. “Waves and turbulences in solar and stellar atmosphere and wind” in “International Toki Conference 22: Cross-Validation of Experiment and Modeling for Fusion and Astrophysical Plasmas”, Nov. 21-24, 2012, Toki, Gifu, Japan
8. “Evolution and saturation of solar wind and properties of wave and turbulence” in “Turbulence Cascade in the Solar Wind: Anisotropy and Dissipation”, Sep. 19-23, 2012, Meudon/Paris, France
9. “Physics and evolution of the stellar winds from low to intermediate stars” in “IAU General Assembly Special Session 10”, Aug. 20-31, 2012, Beijing, China
10. “Roles of Alfvén Waves in Determining Solar Wind Properties” in 6th. Annual Meeting of Asia Oceania Geoscience Society”, Aug. 11-15, 2009, Singapore
11. “Propagation of Alfvén waves from the photosphere to the solar wind” in Workshop on MHD waves and seismology of the solar atmosphere (BUKS2009), Apr.6-8, 2009, Leuven, Belgium
12. “Evolution of Stellar Wind from the Sun to Red Giants”, in “IAU Symp.257 Universal Heliophysical Processes”, Sep.15-19, 2008, Ioannina, Greece

13. “MHD simulations of stellar/solar winds driven by surface convection”, in “2nd East Asian Numerical Astrophysics Meeting”, Nov.1-3, 2006, Daejeon, Korea
14. “Coronal Heating and Wind Acceleration by Nonlinear Alfvén Waves -Global Simulation with Gravity, Radiation, and Conduction-”, in “The 6th International Workshop on Nonlinear Waves and Turbulence in Space Plasma”, Oct.9-13, 2006, Fukuoka, Japan
15. “Making the Corona and the Solar Wind via Nonlinear Alfvén Waves from the Photosphere”, in “European Geoscience Union General Assembly”, April 2-7, 2006, Vienna, Austria
16. “Self-Consistent MHD Modeling of Solar Wind”, in “6th Solar-B Science Meeting”, Nov.8-11, 2005, Kyoto, Japan
17. “Coronal Heating and Solar Wind Acceleration by MHD Shock Trains”, in “1st. Annual Meeting of Asia Oceania Geoscience Society”, July 6-9, 2004, Singapore
18. “Cosmic Ray Production of ${}^6\text{Li}$ by Structure Formation Shocks”, in “Galactic Chemodynamics V.”, July 9-11, 2003 in Swinburne University, Melbourne, Australia

Contributed Talks (selected)

1. “Evolution of Solar-type Stellar Wind”, in “AOGS – AGU Joint Assembly”, August 13-17, 2012, Singapore
2. “Evolution of solar-type stellar winds” in “Cool Stars 17”, June 24-29, 2012, Barcelona, Spain
3. “Evolution from coronal wind to structured chromospheric wind”, in “New Quests for Stellar Astrophysics III”, March 12-16, 2012, Puerto Vallarta, Mexico
4. “Protoplanetary Disk Winds” in “Formation of Stars & Planets”, October 3-7, 2011, Ishigaki isla., Japan
5. “Solar wind and its evolution”, in “5th Alfvén Conference on Plasma Interaction with Non-magnetized Planets/Moons and its Influence on Planetary Evolution”, October 4 - 8, 2010, Sapporo, Japan
6. “Hinode observation : Solar Wind” in “The 2nd SOLAR-C Science Definition Meeting”, March 9 - 12, 2010, ISAS/JAXA, Japan
7. “MHD simulation of structured red giant winds” in “Cool Stars 15”, July 20 - 25, 2008, St.Andrews, Scotland, U.K.
8. “Magnetic Reconnections in Planet Magnetosphere and Chromospheric/Coronal Activities of a Central Stars” in “Cool Stars 15”, July 20 - 25, 2008, St.Andrews, Scotland, U.K.
9. “Evolution of Alfvén wave-driven solar winds to red giants”, in “Waves & Oscillations in the Solar Atmosphere: Heating & Magneto-seismology (IAU Symp.247)”, September 17 - 22, 2007, Porlamar, Isla de Margarita, Venezuela
10. “Successful Coronal Heating and Solar Wind Acceleration by MHD Waves by Numerical Simulations from Photosphere to 0.1AU” in “SOHO 16/Solar Wind 11”, June 12-17, 2005, Whistler, Canada
11. “What Determines the Solar Wind Speed ?” in “American Geophysical Union Meeting”, May 23-27, 2005, New Orleans, U.S.A.
12. “Coronal Heating And Acceleration of the High- And Low-Speed Solar Winds by MHD waves” in “SOHO 15; Coronal Heating”, September 6-9, 2004, St.Andrews, Scotland, U.K.
13. “Coronal Heating and Acceleration of the High/Low-Speed Solar Wind by Fast/Slow MHD Waves” in “The 5th Solar-B Science Meeting”, November 12-14, 2003, Tokyo, Japan
14. “Coronal heating by acoustic waves” in “The 4th Solar-B Science Meeting”, February 3-5, 2003, ISAS/NAOJ, Tokyo, Japan
15. “Evolution of light elements in an inhomogeneous Galactic halo”, in “Cosmic Evolution” November 13-17, 2000, IAP, Paris, France

16. "A New Model of Evolution of Light Elements in Inhomogeneous Galactic Halo" in International Conference of "Origin of Matter and Evolution of Galaxy 2000", January 17-19, 2000, Tokyo, Japan
17. "A New Model of Evolution of Light Elements in Galactic Halo And New Determination Method of Primordial Li7 abundance", in "Subaru HDS Workshop on Stars and Galaxies" , December 8-10, 1999, Tokyo, Japan