

## 主著（査読付論文）

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Takahashi, N., 2020: Analysis of Surface Cross-Sectional Data Taken During the 90 degrees Yaw Experiment of the TRMM Precipitation Radar, 58-8, 5729-5738.

Takahashi, N., 2019: Analysis of a Precipitation System that Exists above Freezing Level Using a Multi-Parameter Phased Array Weather Radar, Atmosphere, 10, 12.

Takahashi, N. and co-authors, 2019: Development of Multi-Parameter Phased Array Weather Radar (MP-PAWR) and Early Detection of Torrential Rainfall and Tornado Risk, J. Disaster Research, 14, 2, 235-247.

Takahashi N., 2017: Surface Echo Characteristics Derived From the Wide Swath Experiment of the Precipitation Radar Onboard TRMM Satellite During Its End-of-Mission Operation, IEEE TRANSACTIONS ON GEOSCIENCE AND REMOTE SENSING DOI : 10.1109/TGRS.2016.2633971

Takahashi N. H. Hanado, K. Nakamura, K. Kanemaru, K. Nakagawa, T. Iguchi, T. Nio, T. Kubota, R. Oki, and N. Yoshida, 2016: Overview of the End-of-Mission Observation Experiments of Precipitation Radar onboard the Tropical Rainfall Measuring Mission Satellite, IEEE Trans. Geosci. and Remote Sensing, 54, 3450-3459.

Takahashi, N., H. Uyeda, and K. Kikuchi, 1993: A Doppler radar observation on wave-like echoes generated in a strong vertical shear, JMSJ, 71, 357-365.

Takahashi, N., and H. Uyeda, 1995: Doppler radar observation of the structure and characteristics of tropical clouds during the TOGA-COARE IOP in Manus, Papua New Guinea –Three case studies on November 23 and December 16, 1992, JMSJ, Vol. 73, 427-442.

Takahashi, N., H. Uyeda, K. Kikuchi, and K. Iwanami, 1996: Mesoscale and convective scale features of heavy rainfall events in late period of the Baiu season in July, 1988, Nagasaki prefecture, JMSJ, Vol. 74, 539-561.

Takahashi, N., H. Kuroiwa, T. Kawanishi, 2003: Four-year result of external calibration for precipitation radar (PR) of the Tropical Rainfall Measuring Mission (TRMM) satellite, *Trans., Geo. and Remote Sense.*, 41, 2398-2403.

Takahashi, N., T. Iguchi, 2004: Estimation and correction of beam mismatch of the precipitation radar after an orbit boost of the Tropical Rainfall Measuring Mission satellite, *IEEE Trans., Geo. and Remote Sense.*, 42, 2362-2369

Takahashi, N., H. Hanado and T. Iguchi, 2006: Estimation of path-integrated attenuation and its non-uniformity from TRMM/PR range profile data, *IEEE Trans., Geo. and Remote Sense.*, 44, 3276-3283.

Takahashi, N. and T. Iguchi, 2008: Characteristics of TRMM/PR System Noise and Their Application to the Rain Detection Algorithm, *IEEE Trans., Geo. and Remote Sense.*, 46, 1697-1704.

## 共著（査読付論文）

---

Kikuchi M., Okamoto H., Sato K., Suzuki K., Cesana G., Hagihara Y., Takahashi N., Hayasaka T., Oki R., 2017: Development of Algorithm for Discriminating Hydrometeor Particle Types With a Synergistic Use of CloudSat and CALIPSO, JOURNAL OF GEOPHYSICAL RESEARCH-ATMOSPHERES DOI : 10.1002/2017JD027113

Sy O., S. Tanelli, N. Takahashi, Y. Ohno, H. Horie, and P. Kollias, 2014 , Simulation of EarthCARE Spaceborne Doppler Radar Products using Ground-based and Airborne Data: Effects of Aliasing and Non-Uniform Beam-filling, IEEE TRANSACTIONS ON GEOSCIENCE AND REMOTE SENSING, Vol 52-2, 1463-1479.

Shusse, Y., N. Takahashi, K. Nakagawa, S. Satoh, and T. Iguchi, 2011, Polarimetric radar observation of the melting layer in a convective rainfall system during the rainy season over the East China Sea, Journal of applied meteorology and climatology, 50-2, 354-367

Aonashi, K. J. Awaka, M. Hirose, T. Kozu, T. Kubota, G. Liu, S. Shige, S. Kida, S. Seto and N. Takahashi, 2009: GSMP Passive Microwave Precipitation Retrieval Algorithm: Algorithm Description and Validation, JMSJ, Vol. 87A, 119-136.

Uyeda, H., Y. Asuma, N. Takahashi, S. Shimizu, O. Kikuchi, A. Kinoshita, S. Matsuoka, M. Katsumata, K. Takeuchi, T. Endoh, M. Ohi, S. Satoh, Y. Tachibana, T. Ushiyama, Y. Fujiyoshi, R. Shirooka, N. Nishi, T. Tomita, H. Ueda, T. Sueda, and A. Sumi, 1995: Doppler radar observations on the structure and characteristics of tropical clouds during TOGA-COARE IOP in Manus, Papua New Guinea -Outline of the obervation -, JMSJ, 73, 415-426.

泉 裕明、菊地勝弘、加藤禎博、高 橋暢宏、上田 博、遊馬芳雄、1996：降雪機構からみた北海道の酸性雨、天気、43、147-158。

Kumagai, H., K. Nakamura, H. Hanado, K. Okamoto, N. Hosaka, N. Miyano, T. Kozu, N. Takahashi, T. Iguchi, and H. Miyauchi, 1996: CRL airborne multiparameter precipitation radar (CAMPR): System description and preliminary results, IEICE Trans. Com., E79-B, 770-778.

Mardiana, R., T. Iguchi, N. Takahashi, 2004a: A dual-frequency rain profiling method without the use of a surface reference technique, IEEE Trans., Geo. and Remote Sens., 42, 2214-2225.

Mardiana, R., T. Iguchi, N. Takahashi, H. Hanado, 2004b: Study of quantization effects on rainfall rate estimation from GPM dual-frequency radar, IEEE Geo. and Remote Sens. Letters, 42, :220 – 223.

中川勝広、北村康司、花土弘、高橋暢宏、井口俊夫、2005:沖縄偏波降雨レーダ  
(COBRA) を用いた降雨の鉛直構造特性に関する研究、土木学会 3月号 Vol. 49,  
277-282.

松嶋暁広、高橋暢宏、黒岩博司、竹葉豊幸、2004：能動型レーダ校正器 (ARC)を用いた TRMM 降雨レーダの校正、リモートセンシング学会誌、24、367-377.

Seto, S., N. Takahashi, and T. Iguchi, 2005: Rain/No-rain Classification Methods for Microwave Radiometer Observation over Land Using the Statistical Information of Brightness Temperature under No-rain Conditions, J. Appl. Meteor., 44.

北村康司・中川勝広・関澤信也・花土弘・高橋暢宏・井口俊夫, 2006 : 400MHz 帯 ウィンドプロファイラを用いた融解層より上層における粒径分布の推定手法の開発, 水工学論文集, 第 50 卷, pp.439-444.

北村康司・中川勝広・関澤信也・花土弘・高橋暢宏・井口俊夫, 2007 : 400MHz 帯 ウィンドプロファイラおよび COBRA を用いた融解層上層の粒径分布推定手法の開発, 水工学論文集, 第 51 卷, pp.349-354.

Aonashi, K., T. Koike K. Muramoto, K. Imaoka, N. Takahashi, G. Liu , and Y. Noh, 2007: Physical validation of microwave properties of winter precipitation over Sea of Japan. IEEE Trans., Geo. and Remote Sens. Vol. 45, No. 7, 2247-2258.

Kubota, T., S. Shige, H. Hashizume, K. Aonashi, N. Takahashi, S. Seto, M. Hirose, Y. N. Takayabu, T. Ushio, M. Kachi, and K. Okamoto, 2007: Global Precipitation Map using Satelliteborne Microwave Radiometers by the GSMAp Project : Production and Validation, IEEE Trans., Geo. and Remote Sens., Vol. 45, No. 7, 2259-2275.

Adhikari, N., T. Iguchi, S. Seto and N. Takahashi, 2007: Rain Retrieval Performance of a Dual-Frequency Precipitation Radar Technique With Differential-Attenuation Constraint, IEEE Trans., Geo. and Remote Sens., Vol. 45, No. 8, 2612-2618.

Shusse, Y., K. Nakagawa, N. Takahashi, S. Satoh, and T. Iguchi, 2009: Characteristics of Polarimetric Radar Variables in Three Types of Rainfalls in a Baiu Front Event over the East China Sea, JMSJ, Vol. 87, No. 5, 865-875.

Ushio, T., K. Sasashige, T. Kubota, S. Shige, K. Okamoto, K. Aonashi, T. Inoue, N. Takahashi, T. Iguchi and M. Kachi, 2009: A Kalman Filter Approach to the Global Satellite Mapping of Precipitation (GSMaP) from Combined Passive Microwave and Infrared Radiometric Data, JMSJ, Vol. 87A, 137-151.

Seto, S., T. Kubota, T. Iguchi, N. Takahashi and T. Oki, 2009: An Evaluation of Over-Land Rain Rate Estimates by GSMAp and GPROF Algorithms: The Role of Lower-Frequency Channels, JMSJ, Vol. 87A, 183-202.

## その他の論文（主著のみ）

---

Takahashi N., H. Uyeda and K. Kikuchi, 1996: Evolution process and precipitation particles of an Isolated echo observed with dual-polarization Doppler radar near Sapporo on July 9, 1992, J. Fac. Sci., Hokkaido Univ., Ser VII, 10, 135-153.

Takahashi, N., H. Uyeda, K. Kikuchi and K. Iwanami, 1995: Doppler radar observations of orographic effects os isolated echoes during the Baiu season at Nagasaki prefecture, on July 14 and 15, 1988. J. Fac. Sci., Hokkaido Univ., Ser VII, 9, 463-479.

Takahashi, N., H. Uyeda, S. Shimizu, Y. Asuma, K. Kikuchi, T. Harimaya, A. Watanabe, and M. D. Yamanaka, 1995: Internal and Meso-γ scale structure of Baiu frontal rainbands observed at Shigaraki, Shiga prefecture by using ad dual-polarization Doppler radar, J. Fac. Sci., Hokkaido Univ., Ser VII, 9, 481-508.

高橋 暢宏、井口 俊夫、小嶋 正弘、古川 欣司、花土 弘、仙北谷 由美、石井 靖之、奥村 実、2006：GPM 主衛星搭載二周波降水レーダの開発 状況、電子情報通信学会技術研究報告、Vol. 106、No. 107、47-52。

## 解説論文

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下田陽久 他、2017：地球観測 の将来構想に関わる世界動向の分析、気象研究ノート  
234号、日本気象学会

高橋暢宏、2016：SIP「レジリエントな防災・減災機能の強化」豪雨・竜巻の観測予測システム の研究開発について、地域防災 12月号、一般財団法人 日本防火・防災協会

高橋 暢宏、花土 弘、楠 研一、 2000：通信総合研究所 C バンドレーダによる対流性レインバンドの解析 –1994年8月19日のケースー、気象研究ノート（つくば域降雨観測実験）日本気象学会, Vol. 193, 83-88.

高橋 暢宏、花土 弘、2000：通信総合研究所 C バンドレーダによる降水雲の観測 –1995年6月4日のケースー、気象研究 ノート（つくば域降雨観測実験）日本気象学会, Vol. 193, 89-94.

高橋 暢宏、花土 弘、2000：C バンドレーダと Ku バンド偏波レーダによる降雨の観測について、気象研究ノート（つくば域降雨観測実験）日本気象学会, Vol. 193, 221-225.

高橋暢宏、重尚一、佐藤晋介、清水 収司、瀬戸心太、2005a：衛星搭載マイクロ波放射計降水リトリーバルアルゴリズムに関するレビュー PART I: 降水リトリーバルの概要、リモートセンシング学会誌、25、101-109

高橋暢宏、重尚一、佐藤晋介、清水 収司、瀬戸心太、2005b：衛星搭載マイクロ波放射計降水リトリーバルアルゴリズムに関するレビュー PART II: 決定論的アルゴリズム、リモートセンシング学会誌、25、221-230.

高橋暢宏、重尚一、佐藤晋介、清水 収司、瀬戸心太、2005c：衛星搭載マイクロ波放射計降水リトリーバルアルゴリズムに関するレビュー PART III: 確率論的アルゴリズム、リモートセンシング学会誌、25、289-297.

高橋暢宏、重尚一、佐藤晋介、清水 収司、瀬戸心太、2005d：衛星搭載マイクロ波放射計降水リトリーバルアルゴリズムに関するレビュー PART IV: 橫断的比較、リモートセンシング学会誌、25、384-398.

## 国際学会・収録論文（主著のみ）

---

Takahashi, N. and H. Uyeda, 1991: A method to describe the fluctuation and discontinuity of horizontal wind fields by a single Doppler radar. Proc. 25th Intn'l Conf. Radar Meteor., Paris, J73-J76.

Takahashi, N., H. Uyeda, and K. Kikuchi, 1992: Doppler radar observation on the Kelvin-Helmholtz billows in stratiform rainfall. Proc. 11th Conf. on Clouds and Precipitation, Montreal, 409-412.

Takahashi, N., H. Kumagai, H. Hanado, T. Kozu, and K. Okamoto, 1995: The CRL airborne multiparameter precipitation radar (CAMPR) and the first observation results, Proc. 27th Intn'l Conf. Radar Meteor., Vail, 83-85..

Takahashi, N. H. Hanado, and S. Satoh, 1996: Measurement of kinematics and precipitation of stratiform rainfall with airborne multiparameter rain radar, Proc. 12th Conf. on Clouds and Precipitation, Zurich.

Takahashi, N., H. Horie, and R. Meneghini, 1997: Rainfall measurement with a ground based dual frequency radar, 28th Conf. Radar Meteor., Austin, Tx., 206-207.

Takahashi, N., and R. Meneghini, 1999: Observation of rain drop size distribution in a convective could with a dual wavelength dual polarization radar, 29th Conf. Radar Meteor., Montreal, Canada, 693-696.

Takahashi, N., T. Kawanishi, M. Kojima, K. Oikawa, H. Kuroiwa, K. Okamoto, T. Kozu, M. Okumura, H. Nakatsuka and K. Nishikawa, 2000: Two year operation of the Precipitation Radar (PR) onboard TRMM satellite, IGARSS 2000, Honolulu. 4 pp.

Takahashi, N., and R. Meneghini, 2000: Comparison of methods to estimate rain drop size distribution with dual-wavelength dual polarization radar and millimeter wave link, 22nd ISTS, 2016-2020.

Takahashi, N., and T. Iguchi, 2002: Preliminary design of dual frequency precipitation radar (DPR) onboard GPM (Global Precipitation Measurement) Core satellite, 23rd ISTS, 2133-2137.

Takahashi, N., H. Hanado and T. Iguchi, 2003: Utilization of range profile data of surface echo from TRMM/PR, IGARSS 2003, Toulouse, 3 pp.

Takahashi, N., J. Awaka, S. Shimizu, and T. Iguchi, 2004: On the effect of the drop size distribution (DSD) and melting layer to the brightness temperature of a spaceborne passive microwave radiometer. 2nd TRMM Intn'l Conf., Nara, 3 pp.

Takahashi, N., and T. Iguchi, 2004: The characteristics of system noise of TRMM/PR and their application to the rain detection algorithm, IGARSS 2004, Anchorage, 4 pp.

Takahashi, N., and J. Awaka, 2005: Introduction of a melting layer model to a rain retrieval algorithm for microwave radiometers, IGARSS 2005, Seoul, 4 pp.

Takahashi, N., K. Nakagawa, and T. Iguchi, 2005: SIMULATION OF THE BRIGHTNESS TEMPERATURE OF SPACEBORNE MICROWAVE RADIOMETER BY USING COBRA DATA, 32nd Conf. Radar Meteor., Albuquerque, P5R.4, AMS, 5 pp.

Takahashi, N., Y. Kitamura, and K. Iwanami, 2005: ANLYSIS OF THE MELTING LAYER BY USING 400MHz WIND PROFILER AND 35 GHz DOPPLER RADAR, 32nd Conf. Radar Meteor., Albuquerque,P5R.5, AMS, 5 pp.

Takahashi, N., K. Aonashi, T. Iguchi, K. Iwanami, T. Ushio and K. Okamoto, 2006: The Global Satellite Mapping of Precipitation (GSMaP) Project, European Geophysical Union 2006 General Assembly, NH1.06-004.

Takahashi, N., 2006, Comparison of instantaneous rain rate of stratiform rainfall from TRMM/TMI with PR, IGARSS2006, Colorado. 4 pp.

高橋暢宏、井口俊夫、小嶋正弘、古川欣司、花土弘、石井靖之、仙北谷由美、奥村実、  
2006 : GPM 主衛星搭載二周波降水 レーダの開発状況、電子情報通信学会 宇宙・航行工  
レクトロニ クス研究会-宇宙応用シンポジウム、2006 年 6 月号 SANE2006 No. 74、  
47-52.

Takahashi, N. and T. Iguchi, 2007: Analysis of densely observed TRMM/PR data during 180-degree yaw maneuver, IGARSS2007, Barcelona, 1-6.

Takahashi, N., and T. Iguchi, 2007: Possible improvements in the standard algorithms for TRMM/PR, 33rd Conference on Radar Meteorology, Cairns, 2007, P3.4, 7 pp.

Takahashi, N., and T. Iguchi, 2008: Evaluation of the estimation method for nonuniformity of rainfall within a footprint of TRMM/PR using the data during 180-degree yaw maneuver, SPIE Asia-Pacific Remote Sensing, 7154, 8 pp.

Takahashi, N., T. Kimura, Y. Ohno, H. Horie, H. Nakatsuka, K. Sato, Y. Sakaide, K. Okada, and H. Kumagai, 2009: CLOUD PROFILING RADAR ON EARTHCARE SATELLITE , ICCAS-SICE 2009, 2A16-6, 1328-1332.

高橋暢宏、木村俊義、大野裕一、堀江宏昭、中塚大貴、関義広、佐藤健治、岡田和之、坂出保雄、2010、EarthCARE衛星搭載雲プロファイリングレーダの開発状況について、電子情報通信学会 宇宙・航行エレクトロニクス、SANE2009-161（2010-02）、13-17。

Takahashi, N., and R. Oki, 2010, DEVELOPMENT OF A DIGITAL ELEVATION MAP USING TRMM/PR DATA, ISPRS Technical Comission VIII Symposium, 2010, No.8, 150-153.

Takahashi, N., H. Horie, Y. Ohno and T. Iguchi, 2012: CHARACTERIZATION OF PRECIPITATION SYSTEMS USING TRMM/PR AND CLOUDSAT DATA, IGARSS2012, Munich.331-334.

Takahashi, N., M. Kachi, T. Kubota, and K. Furukawa, 2012: Conceptual study of the future cloud-precipitation observation mission from space, Proc. of SPIE Vol. 8528 85281G 1-8.