6. 成果発表

6. 1. 論文等

気象研究所の職員が、平成 22 年度に発表した原著論文や報告書、著書、翻訳、解説などの著作物について、単独・共著の区別なく掲載した。ただし、口頭発表に伴う著作物のうち学会予稿集など簡易なものについては除いている。

各著作物の情報は、整理番号, 著者, 発表年, タイトル, *掲載誌（書名）*, **掲載巻**, 発行者（著書（分担執筆含む））, 掲載頁, doi（オンライン論文誌）または ISBN（著書（分担執筆含む））の順で掲載した。整理番号の後ろに「*」を付した著作物は、査読付きであることを示している。

青木重樹

1* 青木重樹, 岡田正実, 2010: 三角ダイヤグラムを用いたメカニズムタイプの変化の統計的検出, *地震 2*, **63**, 101-105.

2 地震火山研究部（編集）, 2011: 東海地震の予測精度向上及び東南海・南海地震の発生準備過程の研究, *気象研究所技術報告*, **63**, 299pp.

青木輝夫

1 能登美之, 青木輝夫, 坂本尚章, 島村哲也, 2010: 紫外域放射伝達モデルの観測値による検証 ―放射伝達モデルの高度化に向けて―, *技術時報*, **150**, 札幌管区気象台, 7-15.

2 青木輝夫, 竹内望, 2010: 雪氷不純物に関するワークショップ参加報告, *雪氷*, **72**, 323-326.

3* 青木輝夫, 2010: 極域における雪氷中の光吸収性エアロゾルとその光学特性, *エアロゾル研究*, **25**, 240-246.

4* Yasunari, T. J., R. D. Koster, K.-M. Lau, Te. Aoki, Y. C. Sud, T. Yamazaki, H. Motoyoshi and Y. Kodama, 2011: Influence of dust and black carbon on the snow albedo in the NASA Goddard Earth Observing System version 5 land surface model, *J. Geophys. Res.*, **116**, D02210, doi:10.1029/2010JD 014861.

青柳曉典

1 萱場瓦起, 青柳曉典, 高橋俊二, 2010: 重回帰分析による人工排熱量の推定, *測候時報*, **77**, 137-153.

2* Aoyagi, T. and N. Seino, 2011: A Square Prism Urban Canopy Scheme for the NHM and Its Evaluation on Summer Conditions in the Tokyo Metropolitan Area, Japan, *J. Appl. Meteor. Climatol.*, **50**, 1476-1496, doi:10.1175/2011 JAMC2489.1.

青山道夫

1 Aoyama, M., D. Hydes, A. Daniel, K. Bakker, A. Murata, T. Tanhua and E. M. S. Woodward, 2010: Joint IOC-ICES Study Group on Nutrient Standards (SGONS) First Meeting UNESCO Headquaters, Paris, France 23-24 March 2010, *IOC Reports of Meetings of Experts and Equivalent Bodies*, **223**, UNESCO.

2 Aoyama, M., 2010: Oceans and Sea, *Radionuclides in the Environment*, Wiley-Blackwell, 339-345, ISBN: 978-0-470-71434-8.

3 Aoyama, M., 2010: Pacific Ocean, *Radionuclides in the Environment*, Wiley-Blackwell, 347-359, ISBN: 978 -0-470-71434-8.

4 山本政義, 河合健太, K. Zhumadilov, 遠藤暁, 坂口綾, 星正治, 今中哲二, 青山道夫, 2010: 広島原爆投下 1-3 年後に建築された家屋の床下土壌中の ^{137}Cs 測定：広島原爆由来フォールアウトの降下量と分布を評価するための試み, *広島原爆"黒い雨"にともなう放射性降下物に関する研究の現状*, 広島"黒い雨"放射能研究会, 46-48.

5 青山道夫, 2010: 気象シミュレーションの課題と再検証の可能性について, *広島原爆"黒い雨"にともなう放射性降下物に関する研究の現状*, 広島"黒い雨"放射能研究会, 79-88.

6 Aoyama, M., A. G. Dickson, D. J. Hydes, A. Murata, J. R. Oh, P. Roose and E. M. S. Woodward (Eds), 2010: *Comparability of nutrients in the world's ocean ― INSS international workshop 10-12 Feb. 2009, Paris―*, Mother Tank, 148pp, ISBN: 978-4990486303.

7 Hydes, D. J., M. Aoyama, A. Aminot, K. Bakker, S. Becker, S. Coverly, A. Daniel, A. G. Diskson, O. Grosso, R. Kerouel, J. van Ooijen, K. Sato, T. Tanhua, E. M. S. Woodward and J. Z. Zhang, 2010: DETERMINATION OF DISSOLVED NUTRIENTS (N, P, SI) IN SEAWATER WITH HIGH PRECISION AND INTER-COMPARABILITY USING GAS-SEGMENTED CONTINUOUS FLOW ANALYSERS, *The Go-ship Repeat Hydrography Manual: A Collection of Expert Reports and Guidelines, IOCCP Report No.14, ICPO Publication Series No.134* ,87pp.

8 Aoyama, M., D. Hydes, A. Daniel, K. Bakker, A. Murata, T. Tanhua and E. M. S. Woodward, 2010: *ICES SGONS REPORT 2010 Report of the IOC-ICES Study Group on Nutrients Standards(SGONS)*, 37pp.

9 青山道夫, 2010: 液体シンチレーションカウンターによる低レベル放射能測定の現状, *Isotope News*, **678**, 19-20.

10* Nakano, H., T. Motoi, K. Hirose and M. Aoyama, 2010: Analysis of ^{137}Cs concentration in the Pacific using a Lagrangian approach, *J. Geophys. Res.*, **115**, C06015, doi:10.1029/2009JC005640.

足立恭将 1 Yukimoto, S., H. Yoshimura, M. Hosaka, T. Sakami, H. Tsujino, M. Hirabara, T. Y. Tanaka, M. Deushi, A. Obata, H. Nakano, Y. Adachi, E. Shindo, S. Yabu, T. Ose and A. Kitoh, 2011: Meteorological Research Institute-Earth System Model Version 1 (MRI-ESM1) -Model Description-, *気象研究所技術報告*, **64**, 83pp.

五十嵐康人 1* Inomata, Y., Y. Igarashi, K.. Yoshioka, T. Y. Tanaka and M. Chiba, 2010: Temporal variation of ^{222}Rn at the summit of Mt.Fuji associated with the Asian continental outflow, *Atmospheric Environment*, **44**, 3856-3865, doi: 10.1016/ j.atmosenv.2010.05.005.

2* Takahashi, H., H. Naoe, Y. Igarashi, Y. Inomata and N. Sugimoto, 2010: Aerosol concentrations observed at Mt. Haruna, Japan, in relation to long-range transport of Asian mineral dust aerosols, *Atmospheric Environment*, **44**, 4638-4644, doi:10.1016/j.atmosenv.2010.08.007.

3* Igarashi, Y., H. Fujiwara and J. Dulam, 2011: Change of the Asian dust source region deduced from the relationship between anthropogenic radionuclides in surface soil and precipitation in Mongolia, *Atmos. Chem. Phys. Discuss.*, **11**, 2843-2871, doi:10.5194/acpd-11-2843-2011.

4 五十嵐康人, 2011: 核エネルギー利用拡大に伴う大気中 ^{85}Kr 濃度増加と測定技術, *フロンティアシリーズ1 環境放射能の最前線*, 日本放射化学会, 15-22.

5* Yamamoto, Y., S. Toyoda, K. Nagashima and Y. Igarashi, 2010: The Grain Size Influence on the E1' Centre Observed in Quartz of Atmospheric Deposition at Two Japanese Cities: A Preliminary Study, *Geochronometria*, **37**, 9-12, doi:10.2478/v10003-010-0024-2.

石井雅男 1* Midorikawa, T., M. Ishii, S. Saito, D. Sasano, N. Kosugi, T. Motoi, H. Kamiya, A. Nakadate, K. Nemoto and H. Y. Inoue, 2010: Decreasing pH trend estimated from 25-yr time series of carbonate parameters in the western North Pacific, *Tellus B*, **62**, 649-659, doi:10.1111/j.1600-0889.2010.0054.x.

2* Sabine, C. L., M. Hoppema, R. M. Key, B. Tilbrook, S. van Heuven, C. Lo Monaco, N. Metzl, M. Ishii, A. Murata and S. Musielewicz, 2010: Assessing the

internal consistency of the CARINA data base in the Pacific sector of the Southern Ocean, *Earth System Science Data*, 2, 195-204, doi: 10.5194/essd-2-195-2010.

3* Omori, Y., T. Hama, M. Ishii and S. Saito, 2010: Relationship between the seasonal change in fluorescent dissolved organic matter and mixed layer depth in the subtropical western North Pacific, *J. Geophys. Res.*, **115**, C06001, doi:10.1029/2009JC005526.

4* Omori, Y., T. Hama, M. Ishii and S. Saito, 2010: Vertical change in the composition of marine humic-like fluorescent dissolved organic matter in the subtropical western North Pacific and its relation to photoreactivity, *Marine Chemistry*, **124**, 38-47, doi:10.1016/j.marchem.2010.11.005.

5* Takamura, T. R., H. Y. Inoue, T. Midorikawa, M. Ishii and Y. Nojiri, 2010: Seasonal and inter-annual variations in pCO_2^{sea} and air-sea CO_2 fluxes in mid-latitudes of the western and eastern North Pacific during 1999-2006: recent results utilizing voluntary observation ships. *J. Meteor. Soc. Japan*, **88**, 883-898.

6 Ishii, M., 2011: Mode waters: uptake windows of atmospheric CO_2 into the ocean Interior, *SOLAS News*, **12**, 14-15.

石井正好

1* Lyman, J. M., S. A. Good, V. V. Gouretski, M. Ishii, G. C. Johnson, M. D. Palmer, D. M. Smith and J. K. Willis, 2010: Robust Warming of the Global Upper Ocean, *Nature*, **465**, 334-337, doi:10.1038/nature09043.

2 木本昌秀，石井正好，2010: 近未来気候予測実験 ―十年規模気候変動の予測に向けて―, *月刊海洋*, **42**, 271-282.

3* Shiogama, H., S. Emori, T. Mochizuki, S. Yasunaka, T. Yokohata, M. Ishii, T. Nozawa and M. Kimoto, 2010: Possible Influence of Volcanic Activity on the Decadal Potential Predictability of the Natural Variability in Near-Term Climate Predictions, *Advances in Meteorology*, **2010**, 657318, doi:10.1155/2010/657318.

4 石井正好，2010: 歴史的海洋観測データに見る海洋気候の変化とデータ同化による20世紀気候再現，*天気*, **57**, 768-773.

5 石井正好, 2010: Argoと歴史的海洋貯熱量変化，*月刊海洋*, **42**, 614-620.

6* Suzuki, T. and M. Ishii, 2011: Regional distributuion of sea level changes resulting from enhanced greenhouse warming in the Model for Interdisciplinary Research on Climate version 3.2, *Geophys. Res. Lett.*, **38**, L02601, doi:10.1029/ 2010GL045693.

7* Toyoda, T., T. Awaji, N. Sugiura, S. Masuda, H. Igarashi, Y. Sasaki, Y. Hiyoshi, Y. Ishikawa, T. Mochizuki, T. T. Sakamoto, H. Tatebe, Y. Komuro, T. Suzuki, T. Nishimura, M. Mori, Y. Chikamoto, S. Yasunaka, Y. Imada, M. Arai, M. Watanabe, H. Shiogama, T. Nozawa, A. Hasegawa, M. Ishii and M. Kimoto, 2011: Impact of the Assimilation of Sea Ice Concentration Data on an Atmosphere-Ocean-Sea Ice Coupled Simulation of the Arctic Ocean Climate, *SOLA*, **7**, 37-40, doi:10.2151/sola.2011-010.

石橋俊之

1 石橋俊之, 2011: データ同化システムの課題の俯瞰，*数値予報課報告別冊*, **57**, 93-96.

2 石橋俊之，2011: 観測データの予報精度への影響評価，*数値予報課報告別冊*, **57**, 97-102

3 石橋俊之, 2011: 解析誤差の推定，*数値予報課報告別冊*, **57**, 103-107

4 石橋俊之, 2011: 非線形性の考慮，*数値予報課報告別冊*, **57**, 108-112

5 石橋俊之，2011: 水物質同化のための制御変数の拡張，*数値予報課報告別冊*, **57**, 113-116

成果発表

6 石橋俊之, 2011: 実大気解析における確率密度関数の近似, *数値予報課報告別冊*, 57, 117-118

7 石橋俊之, 2011: 誤差共分散行列の最適化, *数値予報課報告別冊*, 57, 119-122

8 石橋俊之, 2011: 変分法バイアス補正, *数値予報課報告別冊*, 57, 123-127

9 石橋俊之, 2011: カルマンゲインの診断的構成, *数値予報課報告別冊*, 57, 128-129

10 Ishibashi, T., 2010: Optimization of Error Covariance Matrices and Estimation of Observation Data Impact in the JMA Global 4D-Var System, *CAS/JSC WGNE Research Activities in Atmospheric and Oceanic Modelling*, 40, 1.11-1.12.

11 Okamoto, K., M. Kazumori, T. Egawa, T. Ishibashi, H. Owada, A. Murata and H. Nishihata, 2010: Recent development of satellite data assimilation at JMA. *Proceedings of The 17th International TOVS Study Conferences, Monterey, USA, 14–20 April 2010.*

石原幸司 1* 石原幸司, 2010: 都道府県別に適用した地域頻度解析によるアメダス地点の確率降水量評価, *水文・水資源学会誌*, 23(2), 118-128.

2* Kitajima, T., K. Yoshimatsu, H. Ohno and K. Ishihara, 2010: Reproducibility of Regional-Mean Probable Precipitation by High-Resolution Climate Models, *Hydrological Research Letters*, 4, 20-24, doi:10.3178/hrl.4.20.

3* Ishihara, K., 2010: Assessment for the 30-Year Daily Precipitation Change due to Global Warming Using Regional Frequency Analysis, *Hydrological Research Letters*, 4, 30-34, doi:10.3178/hrl.4.30.

4* Fujibe, F. and K. Ishihara, 2010: Possible urban bias in gridded climate temperature data over the Japan area, *SOLA*, 6, 61-64, doi:10.2151/sola. 2010-016.

5* Ishihara, K., 2010: Quantifying the uncertainty range of 30-year daily precipitation change due to global warming using regional frequency analysis, *Hydrological Research Letters*, 4, 90-94. doi:10.3178/hrl.4.90.

石原正仁 1 石原正仁, 2011: 稠密観測による極端気象のメカニズム解明, *防災科研ニュース*, 174, 5-9.

2 内田顕司, 溝本悟, 澤田睦子, 石原正仁, 2010: 気象レーダーによる雹（ひょう）の監視の試み, *天気*, 57, 646-650.

石元裕史 1* Ishimoto, H., Y. Zaizen, A. Uchiyama, K. Masuda and Y. Mano, 2010: Shape modeling of mineral dust particles for light-scattering calculations using the spatial Poisson-Voronoi tessellation, *Journal of Quantitative Spectroscopy & Radiative Transfer*, 111, 2434-2443, doi:10.1016/j.jqsrt.2010.06.018.

2* Iwasaki, S., T. Shibata, J. Nakamoto, H. Okamoto, H. Ishimoto and H. Kubota, 2010: Characteristics of deep convection measured by using the A-train constellation, *J. Geophys. Res.*, 115, D06207, doi:10.1029/2009JD013000.

3* Yoshida, R., H. Okamoto, Y. Hagiwara and H. Ishimoto, 2010: Global analysis of cloud phase and ice crystal orientation from Cloud-Aerosol Lidar and infrared Pathfinder Satellite Observation (CALIPSO) data using attenuated backscattering and depolarization ratio, *J. Geophys. Res.*, 115, D00H32, doi: 10.1029/2009JD012334.

猪上華子 1* Inoue, H. Y., K. Kusunoki, W. Kato, H. Suzuki, T. Imai, T. Takemi, K. Bessho, M. Nakazato, S. Hoshino, W. Mashiko, S. Hayashi, T. Fukuhara, T. Shibata, H. Yamauchi and O. Suzuki, 2011: Finescale Doppler Radar Observation of a Tornado and Low-Level Misocyclones within a Winter Storm in the Japan Sea Coastal Region, *Mon. Wea. Rev.*, 139, 351–369 ,doi:10.1175/2010MWR 3247.1.

岩切一宏 1 干場充之, 岩切一宏, 大竹和生, 2010: 経過時間に応じたP波マグニチュード推定の

補正—緊急地震速報への応用—, *第 13 回日本地震工学シンポジウム論文集*, 3043-3048.

2 岩切一宏, 干場充之, 中村浩二, 森川信之, 2010: 最大速度の距離減衰式に基づく経験的なサイト増幅特性を用いた緊急地震速報の震度予測の精度向上, *第 13 回日本地震工学シンポジウム論文集*, 4278-4283.

3 下山利浩, 平野和幸, 山田安之, 干場充之, 大竹和生, 岩切一宏, 2010: 緊急地震速報の発表状況、技術改良, *第 13 回日本地震工学シンポジウム論文集*, 4291-4296.

4 大竹和生, 干場充之, 岩切一宏, 気象庁の緊急地震速報への OBS データの導入に関わる改良, *第 13 回日本地震工学シンポジウム論文集*, 4313-4317.

5* Hoshiba, M., K. Ohtake, K. Iwakiri, T. Aketagawa, H. Nakamura and S. Yamamoto, 2010: How precisely can we anticipate seismic intensities? A study of uncertainty of anticipated seismic intensities for the Earthquake Early Warning method in Japan, *Earth Planets Space*, **62**, 611-620.

6* Iwakiri, K., M. Hoshiba, K. Nakamura and N. Morikawa, 2011: Improvement in the accuracy of expected seismic intensities for earthquake early warning in Japan using empirically estimated site amplification factors, *Earth Planets Space*, **63**,57-69.

7 岩切一宏, 2011: 第２章　精密制御震源（アクロス）を用いた地殻活動モニタリング 2.4.短スパン地震計アレイ観測, *気象研究所技術報告*, **63**, 149-161.

上野　充

1* Kunii, M., Y. Shoji, M. Ueno and K. Saito, 2010: Mesoscale Data Assimilation of Myanmar Cyclone Nargis. *J. Meteor. Soc. Japan*, **88**, 455-474, doi:10.2151/jmsj.2010-312

碓氷典久

1 Wada, A., Y. Kawai and N. Usui, 2010: Impacts of diurnally-varying sea-surface temperature on the predictions of Typhoon Hai-Tang in 2005. Part I. Intensity prediction, *CAS/JSC WGNE Research Activities in Atmospheric and Oceanic Modelling*, **40**, 9.09-9.10.

2 Wada, A., Y. Kawai and N. Usui, 2010: Impacts of diurnally-varying sea-surface temperature on the predictions of Typhoon Hai-Tang in 2005. Part II. The impact on the theromodynamics field around Hai-Tang's center, *CAS/JSC WGNE Research Activities in Atmospheric and Oceanic Modelling*, **40**, 9.11-9.12.

3 Wada, A. and N. Usui, 2010: The Influence of the variation of oceanic precondition on the prediction of Typhoon Hai-Tang in 2005, *CAS/JSC WGNE Research Activities in Atmospheric and Oceanic Modelling*, **40**, 9.13-9.14.

4 Wada, A., N. Kohno and N. Usui, 2010: Formulation of the effect of breaking surface waves on entrainment and its impact on Typhoon Hai-Tang in 2005, *CAS/JSC WGNE Research Activities in Atmospheric and Oceanic Modelling*, **40**, 9.15-9.16.

5 碓氷典久, 今泉孝男, 辻野博之, 2010: MOVE/MRI.COM への海氷密度同化の導入に向けて—オホーツク海を対象とした予備調査と簡易同化実験—, *気象庁測候時報*, **77**, S71-S81.

6* Wada, A and N. Usui, 2010: Impacts of oceanic preexisting conditions on predictions of Typhoon Hai-Tang in 2005, *Advances in Meteorology*, **2010**, 756071, doi:10.1155/2010/756071.

内山明博

1* Ishimoto, H., Y. Zaizen, A. Uchiyama, K. Masuda and Y. Mano, 2010: Shape modeling of mineral dust particles for light-scattering calculations using the spatial Poisson-Voronoi tessellation, *Journal of Quantitative Spectroscopy & Radiative Transfer*, **111**, 2434-2443, doi:10.1016/j.jqsrt.2010.06.018.

2 Kudo, R., A. Uchiyama, A. Yamazaki, T. Sakami, and O. Ijima, 2011: Decadal

成果発表

changes in aerosol optical thickness and single scattering albedo estimated from ground-based broadband radiometers: a case study in Japan, *J. Geophys. Res.*, 116, D03207, doi:10.1029/2010JD014911.

3* Kobayashi, E., A. Uchiyama, A. Yamazaki and R. Kudo, 2010: Retrieval of aerosol optical properties based on the spherioid model, *J. Meteor. Soc. Japan*, 88, 847-856, doi: 10.2151/jmsj.2010-505.

4* Nakayama, T., R. Hagino, Y. Matsumi, Y. Sakamoto, M. Kawasaki, A. Yamazaki, A. Uchiyama, R. Kudo, N. Moteki, Y. Kondo and K. Tonokura, 2010: Measurements of aerosol optical properties in central Tokyo during summertime using cavity ring-down spectroscopy: comparison with conventioal techniques, *Atmos. Env.*, 44, 3034-3042, doi: 10.1016/j.atmosenv. 2010.05.008.

5* Nakayama, T., Y. Matsumi, K. Sato, T. Imamura, A. Yamazaki and A. Uchiyama, 2010: Laboratory studies on optical properties of secondary organic aerosols generated during the photooxidation of toluene and the ozonolysis of α-pinene, *J. Geophys. Res.*, 115, D24204, doi:10.1029/2010JD 014387.

遠藤洋和 1* Endo, H., 2011: Long-term changes of seasonal progress in Baiu rainfall using 109 years (1901-2009) daily station data, *SOLA*, 7, 5-8, doi:10.2151/sola.2011 -002.

2* Matsueda, M., H. Endo, and R. Mizuta, 2010: Future change in Southern Hemisphere summertime and wintertime atmospheric blockings simulated using a 20-km-mesh AGCM. *Geophys. Res. Lett.*, 37, L02804, doi:10.1029/ 2009GL041758.

大竹和生 1* Hoshiba, M., K. Ohtake, K. Iwakiri, T. Aketagawa, H. Nakamura and S. Yamamoto, 2010: How precisely can we anticipate seismic intensities? A study of uncertainty of anticipated seismic intensities for the Earthquake Early Warning method in Japan, *Earth Planets Space*, 62, 611-620.

2 干場充之, 岩切一宏, 大竹和生, 2010: 経過時間に応じたP波マグニチュード推定の補正―緊急地震速報への応用―, 第 13 回日本地震工学シンポジウム論文集, 3043-3048.

3 下山利浩, 平野和幸, 山田安之, 干場充之, 大竹和生, 岩切一宏, 2010: 緊急地震速報の発表状況、技術改良, 第13回日本地震工学シンポジウム論文集, 4291-4296.

4 大竹和生, 干場充之, 岩切一宏, 2010: 気象庁の緊急地震速報へのOBSデータの導入に関わる改良, 第13回日本地震工学シンポジウム論文集, 4313-4317.

大野木和敏 1* Onogi, K., 2011: Quality Control of Observational Data and the JRA-25 Reanalysis, *東京大学博士学位論文*, 142pp.

岡本幸三 1 Okamoto, K., M. Kazumori, T. Egawa, T. Ishibashi, H. Owada, A. Murata and H. Nishihata, 2010: Recent development of satellite data assimilation at JMA. *Proceedings of The 17th International TOVS Study Conferences, Monterey, USA, 14–20 April 2010.*

2 岡本幸三, 2011: 衛星データ同化に関する諸外国の状況, *数値予報課報告別冊*, 57, 7-10.

3 岡本幸三, 2011: 衛星データの高度利用に向けて, *数値予報課報告別冊*, 57, 18-24.

4 岡本幸三, 2011: ハイパースペクトル赤外サウンダ, *数値予報課報告別冊*, 57, 25-36.

5 岡本幸三, 2011: 赤外雲域同化, *数値予報課報告別冊*, 57, 84-92.

尾瀬智昭 1 Yukimoto, S., H. Yoshimura, M. Hosaka, T. Sakami, H. Tsujino, M. Hirabara, T. Y. Tanaka, M. Deushi, A. Obata, H. Nakano, Y. Adachi, E. Shindo, S. Yabu, T. Ose and A. Kitoh, 2011: Meteorological Research Institute-Earth System

Model Version 1 (MRI-ESM1) -Model Description-, *気象研究所技術報告*, 64, 83pp.

鬼澤真也 1* 前野深, 鈴木由希, 中田節也, 小山悦郎, 金子隆之, 藤井敏嗣, 宮村淳一, 鬼澤真也, 長井雅史, 2010: 浅間山2009年2月2日噴火の経緯と噴出物, *火山*, 55, 147-154.

2 大熊茂雄, 中塚正, 駒澤正夫, 松島善雄, 佐藤秀幸, 高倉伸一, 石塚吉浩, 鬼澤真也, 小川康雄, 茂木透, 2010: 総合断面図説明書, *有珠火山地域地球物理総合図, 数値地質図*, P-7, 産業総合技術研究所地質調査総合センター.

3 鬼澤真也, 2010: 有珠火山 2000 年噴火の前兆地震活動説明書, *有珠火山地域地球物理総合図, 数値地質図*, P-7, 産業総合技術研究所地質調査総合センター.

小畑 淳 1 Yukimoto, S., H. Yoshimura, M. Hosaka, T. Sakami, H. Tsujino, M. Hirabara, T. Y. Tanaka, M. Deushi, A. Obata, H. Nakano, Y. Adachi, E. Shindo, S. Yabu, T. Ose and A. Kitoh, 2011: Meteorological Research Institute-Earth System Model Version 1 (MRI-ESM1) -Model Description-, *気象研究所技術報告*, 64, 83pp.

折笠成宏 1* Misumi, R., A. Hashimoto, M. Murakami, N. Kuba, N. Orikasa, A. Saito, T. Tajiri, K. Yamashita and J. P. Chen, 2010: Microphysical structure of a developing convective snow cloud simurated by an improved version of the multi-dimensional bin model, *Atmospheric Science Letters*, 11, 186-191, doi:10.1002/asl.268.

梶野瑞王 1* Kajino, M. and Y. Kondo, 2011: EMTACS: Development and regional-scale simulation of a size, chemical, mixing type and soot-shape resolved atmospheric particle model, *J. Geophys. Res.*, 116, D02303, doi:10.1029/2010JD015030.

2* Oku, Y., M. Kajino and H. Ishikawa, 2010: Estimation of the cloud effective particle radius using MTSAT-1R data, *International Journal of Remote Sensing*, 31(20), 5439-5447, doi:10.1080/01431160903369634.

3* Kajino, M., H. Ueda, K. Sato and T. Sakurai, 2010: Spatial distribution of the source-receptor relationship of sulfur in Northeast Asia, *Atmos. Chem. Phys. Discuss.*, 10, 30089-30127.

勝間田明男 1* Katsumata, A., 2010: Depth of the Moho discontinuity beneath the Japanese islands estimated by traveltime analysis, *J. Geophys. Res.*, 115, B04303, doi:10.1029/2008JB005864.

2* Katsumata, A., T. Yamamoto, A. Kobayashi, N. Hamada and S. Yoshikawa, 2010: Evaluation of Detection Level of Crustal Deformation Ovservation in the Time Domain Through Power Spectrum Analysis —investigation of a Long-Baseline Laser Extensometer—, *測地学会誌*, 56(3), 107-116.

3 地震火山研究部（編集）, 2011: 東海地震の予測精度向上及び東南海・南海地震の発生準備過程の研究, *気象研究所技術報告*, 63, 299pp.

4 勝間田明男, 2011: 第４章 新地殻変動観測手法の開発 4.2.技術要素, *気象研究所技術報告*, 63, 197-216.

蒲地政文 1* Fujii, Y., S. Matsumoto, M. Kamachi and S. Ishizaki, 2010: Estimation of the equatorial Pacific salinity field using ocean data assimilation system, *Adv. in Geosciences*, 18, 197-212.

2 Fujii, Y., T. Nakaegawa, S. Matsumoto, T. Yasuda, G. Yamanaka and M. Kamachi, 2010: Coupled model simulation by constraining ocean fields with ocean data through the JMA operational ocean data assimilation system, *Extended Abstract of International workshop on "Development of atmosphere- ocean coupled models towards improvement of long range forecast"*, 52-54.

釜堀弘隆 1 別所康太郎, 中澤哲夫, 川畑拓矢, 釜堀弘隆, 高野洋雄, 新藤永樹, 國井勝, 原昌弘,

成果発表

高橋清利, 海老田綾貴, 太田行哉, 古林慎哉, 守谷昌己, 本田有機, 澤田謙, 2010: 伊勢湾台風再現実験プロジェクト, *天気*, 57, 247-250.

上口賢治 1* Kamiguchi, K., O. Arakawa, A. Kitoh, A. Yatagai, A. Hamada and N. Yasutomi, 2010: Development of APHRO_JP, the first Japanese high-resolution daily precipitation product for more than 100 years, *Hydrological Research Letters*, 4, 60-64, doi:10.3178/hrl.4.60.

川合秀明 1* Lee, S.-J. and H. Kawai, 2011: Mixing Depth Estimation from Operational JMA and KMA Wind-Profiler Data and Its Preliminary Applications: Examples from Four Selected Sites, *J. Meteor. Soc. Japan*, 89, 15-28, doi:10.2151/jmsj.2011-102.

川畑拓矢 1 別所康太郎, 中澤哲夫, 川畑拓矢, 釜堀弘隆, 高野洋雄, 新藤永樹, 國井勝, 原昌弘, 高橋清利, 海老田綾貴, 太田行哉, 古林慎哉, 守谷昌己, 本田有機, 澤田謙, 2010: 伊勢湾台風再現実験プロジェクト, *天気*, 57, 247-250.

2 Seko, H., M. Kunii, T. Kawabata, T. Miyoshi, Ensemble experiments of local heavy rainfall that occurred in Osaka, Japan, 5 September 2008, *CAS/JSC WGNE Res. Activ. Atmos. Oceanic Modell*, 40, 1.35-1.36

北畠尚子 1* N. Kitabatake, 2010: Impact of synthetic wind retrieval on tropical cyclone structures at the extratropical transition stage in the JRA-25 Renalysis, *SOLA*, 6, 77-80.

2 北畠尚子, 2010: 亜熱帯低気圧, *天気*, 57(5), 342-344.

3 Jones, S. C., H. Archambault, J. Beven, L. F. Bosart, J. Callaghan, J. Cordeira, J. Evans, P. Harr, D. Keyser, N. Kitabatake, R. McTaggart-Cowan, R. Torn, and C. Velden, 2010: New reserch and field experiments in extratropical transitions, *Seventh WMO International Workshop on Tropical Cyclones (IWTC-VII)*, WMO/TD-No.1561, 2.4.1-2.4.22

4 Fogarty, C., D. Arwender, E. Atallah, P. Caroff, E.-J. Cha, R. Das, C. Evans, K. Griffin, H. Heming, M. Jurewics, N. Kitabatake, M. Kucas, M. Riemer, and R. Torn, 2010: Forecasting extratropical transitions, *Seventh International Workshop on Tropical Cyclones (IWTC-VII)*, WMO/TD-No.1561, 2.5.1- 2.5.23,

北村祐二 1 Ishida, J., C. Muroi, K. Kawano and Y. Kitamura, 2010: Development of a New Nonhydrostatic Model ASUCA at JMA , *CAS/JSC WGNE Research Activities in Atmospheric and Oceanic Modelling*, 40, 5.11-5.12.

2* Kitamura, Y. and Y. Matsuda, 2010: Energy cascade processes in rotating stratified turbulence with application to the atmospheric mesoscale, *J. Geophys. Res.*, 115, D11104, doi: 10.1029/2009JD012368.

3* Kitamura, Y., 2010: Self-consistency validation of subgrid scale parameterization schemes in a large-eddy simulation, *J. Meteor. Soc. Japan*, 88, 813-825, doi:10.2151/jmsj.2010-503.

4* Kitamura, Y., 2010: Modifications to the Mellor-Yamada-Nakanishi-Niino (MYNN) model for the stable stratification case, *J. Meteor. Soc. Japan*, 88, 857-864, doi:10.2151/jmsj.2010-506.

鬼頭昭雄 1 鬼頭昭雄, 2010: 巻頭言：防災影響評価のための極端気象現象の将来変化予測, *自然災害科学*, 28(4), 281-282.

2 鬼頭昭雄, 2010: 極端気象現象の変化予測, *月刊海洋*, 475, 264-270.

3* Kamiguchi, K., O. Arakawa, A. Kitoh, A. Yatagai, A. Hamada and N. Yasutomi, 2010: Development of APHRO_JP, the first Japanese high-resolution daily precipitation product for more than 100 years, *Hydrological Research Letters*, 4, 60-64, doi:10.3178/hrl.4.60.

4* Xue, Y., F. De Sales, W. K.-M. Lau, A. Boone, J. Feng, P. Dirmeyer, Z. Guo, K.-M.

Kim, A. Kitoh, V. Kumar, I. Poccare-Leclercq, N. Mahowald, W. Moufouma-Okia, P. Pegion, D.P. Rowell, J.Schemm, S. D. Schubert, A. Sealy, W. M. Thiaw, A. Vintzileos, S. F. Williams and M. C. Wu, 2010: Intercomparison and analysis of the climatology of the West African Monsoon in the West African Monsoon Modeling and Evaluation project (WAMME) first model intercomparison experiment, *Clim. Dyn.*, 35, 3-27.

5 鬼頭昭雄, 2010: 気候予測がもたらすもの, *Civil Engineering Consultant*, 248, 20-23.

6 Jin, F., A. Kitoh and P. Alpert, 2010: Water cycle changes over the Mediterranean: a comparison study of a super-high-resolution global model with CMIP3, *Phil. Trans. R. Soc. A*, 368, 1-13.

7 江守正多, 甲斐沼美紀子, 鬼頭昭雄, 高橋潔, 野尻幸弘, 原沢英夫, 笹野泰弘, 2010: 座談会：IPCC 疑惑をめぐって, *地球環境研究センターニュース*, 21(4), 14-18.

8 Kitoh, A.,T. Motoi and O. Arakawa, 2010: Climate modeling study on mountain uplift and Asian monsoon evolution, *Monsoon Evolution and Tectnics-Climate Linkage in Asia (Clift, P. D., R. Tada and H. Zheng (eds))*, The Geological Society of London, 293-301, ISBN: 978-1862393103

9 鬼頭昭雄, 2010: 地球温暖化と異常気象, *地球環境学辞典*, 弘文堂, 34-35, ISBN: 978-4335750137.

10 Kitoh, A., S. Kusunoki, Y. Sato, N. Ferdousi, M. Rahman, E. E. S. Makmur, A. L. S. Solis, W. Chaowiwat, T. D. Trong, 2010: Climate change Projections in Some Asian Countries, *Climate Change Adaptation and International Development*, Earthscan Pubns Ltd, 19-62, ISBN: 978-1849711524.

11 鬼頭昭雄, 2011: チベット高原と東アジアの気候, *NHK スペシャル　日本列島　奇跡の大自然*, NHK 出版, 24-27, ISBN: 978-4140814659.

12* Murakami, H., B. Wang and A. Kitoh, 2011: Future change of western North Pacific typhoons: Projections by a 20-km-mesh global atmospheric model, *J. Climate*, 24, 1154-1169.

13* Kitoh, A., S. Kusunoki and T. Nakaegawa, 2011: Climate change projections over South America in the late 21st century with the 20 and 60km mesh Meteorological Research Institute atomospheric general circulation model (MRI-AGCM), *J, Geophys. Res.*, 116, D06105, doi:10.1029/2010JD014920.

14 Yukimoto, S., H. Yoshimura, M. Hosaka, T. Sakami, H. Tsujino, M. Hirabara, T. Y. Tanaka, M. Deushi, A. Obata, H. Nakano, Y. Adachi, E. Shindo, S. Yabu, T. Ose and A. Kitoh, 2011: Meteorological Research Institute-Earth System Model Version 1 (MRI-ESM1) -Model Description-, *気象研究所技術報告*, 64, 83pp.

楠　研一

1 楠研一, 2010: 突風—その理解と災害低減に向けた取組み, *日本鉄道施設協会誌*, 48, 14-16.

2 楠研一, 2010: 鉄道における突風災害防止のためのセンシング・予測技術, *日刊交通新聞*, 19145, 2.

3* Takemi, T., K. Kusunoki, K. Araki, T. Imai, K. Bessho, S. Hoshino, S. Hayashi, 2010: Representation of Gusty winds winds induced by misocyclones with a high-resolution meteorological modeling, *Theoretical and Applied Mechanics Japan*, 58, 121-130.

4 大東忠保, 永戸久喜, 藤吉康志, 岡本宏樹, 柳瀬亘, 楠研一, 2010: 第 33 回メソ気象研究会の報告—冬季のメソ擾乱とそれにともなうストーム—, *天気*, 57, 707-712.

5* Inoue, H. Y., K. Kusunoki, W. Kato, H. Suzuki, T. Imai, T. Takemi, K. Bessho, M.

成果発表

Nakazato, S. Hoshino, W. Mashiko, S. Hayashi, T. Fukuhara, T. Shibata, H. Yamauchi and O. Suzuki, 2011: Finescale Doppler Radar Observation of a Tornado and Low-Level Misocyclones within a Winter Storm in the Japan Sea Coastal Region, *Mon. Wea. Rev.*, **139**, 351–369 ,doi:10.1175/2010MWR 3247.1.

楠　昌司

1 Kitoh, A., S. Kusunoki, Y. Sato, N. Ferdousi, M. Rahman, E. E. S. Makmur, A. L. S. Solis, W. Chaowiwat, T. D. Trong, 2010: Climate change Projections in Some Asian Countries, *Climate Change Adaptation and International Development*, Earthscan Pubns Ltd, 19-62, ISBN: 978-1849711524.

2* Kitoh, A., S. Kusunoki and T. Nakaegawa, Climate change projections over South America in the late 21st century with the 20 and 60km mesh Meteorological Research Institute atomospheric general circulation model (MRI-AGCM), *J, Geophys. Res.*, **116**, D06105, doi:10.1029/2010JD014920.

3* Kusunoki, S., R. Mizuta and M. Matsueda, 2011: Future changes in the East Asian rain band projected by global atmospheric models with 20-km and 60-km grid size, *Climate Dynamics*, doi:10.1007/s00382-011-1000-x.

工藤　玲

1* Kudo, R., A. Uchiyama, A. Yamazaki, T. Sakami, and O. Ijima, 2011: Decadal changes in aerosol optical thickness and single scattering albedo estimated from ground-based broadband radiometers: a case study in Japan, *J. Geophys. Res.*, **116**, D03207, doi:10.1029/2010JD014911.

2* Kobayashi, E., A. Uchiyama, A. Yamazaki and R. Kudo, 2010: Retrieval of aerosol optical properties based on the spherioid model, *J. Meteor. Soc. Japan*, **88**, 847-856, doi:10.2151/jmsj.2010-505.

3* Nakayama, T., R. Hagino, Y. Matsumi, Y. Sakamoto, M. Kawasaki, A. Yamazaki, A. Uchiyama, R. Kudo, N. Moteki, Y. Kondo and K. Tonokura, 2010: Measurements of aerosol optical properties in central Tokyo during summertime using cavity ring-down spectroscopy: comparison with conventioal techniques, *Atmos. Env.*, **44**, 3034-3042, doi:10.1016/j.atmosenv. 2010.05.008.

4* Kudo, R., 2011: Studies on long-term variations in aerosol optical properties and direct effect by ground-based radiometers, *北海道大学博士学位論文*, 99pp.

國井　勝

1 齊藤和雄，國井勝，原昌弘，瀬古弘，原旅人，山口宗彦，三好健正，黄偉健，2010: WWRP 北京オリンピック 2008 予報実証／研究開発プロジェクト，*気象研究所技術報告*, **62**, 210pp.

2 別所康太郎，中澤哲夫，川畑拓矢，釜堀弘隆，高野洋雄，新藤永樹，國井勝，原昌弘，高橋清利，海老田綾貴，太田行哉，古林慎哉，守谷昌己，本田有機，澤田謙, 2010: 伊勢湾台風再現実験プロジェクト，*天気*, **57**, 247-250.

3* Kunii, M., Y. Shoji, M. Ueno and K. Saito, 2010: Mesoscale Data Assimilation of Myanmar Cyclone Nargis. *J. Meteor. Soc. Japan*, **88**, 455-474, doi:10.2151/ jmsj.2010-312

4* Saito, K., T. Kuroda, M. Kunii and N. Kohno, 2010: Numerical Simulations of Myanmar Cyclone Nargis and the Associated Storm Surge Part I: Forecast Expariment with NHM and Simulation of Storm Surge, *J. Meteor. Soc. Japan.*, **88**, 521-545, doi:10.2151/jmsj.2010-315.

5* Kuroda, T., K. Saito, M. Kunii and N. Kohno, 2010: Numerical Simulations of Myanmar Cyclone Nargis and the Associated Storm Surge Part II: Ensemble Prediction, *J. Meteor. Soc. Japan.*, **88**, 547-570, doi:10.2151/jmsj.2010-316.

6* Seko, H., M. Kunii, Y. Shoji and K. Saito, 2010: Improvement of Rainfall Forecast by Assimilations of Ground-based GPS data and Radio Occultation Data.

SOLA. **6**, 81-84, doi:10.2151/sola.2010-021

7* Shoji, Y., M. Kunii and K. Saito, 2011: Mesoscale Data Assimilation of Myanmar Cyclone Nargis. Part II : Assitilation of GPS derived Precipitable Water Vapor. *J. Meteor. Soc. Japan*, **89**, 67-88, doi:10.2151/jmsj.2011-105

8 Kuroda, T., K. Saito, M. Kunii, H. Seko, 2010: Mesoscale LETKF Data Assimilation on Cyclone Nargis. *CAS/JSC WGNE Res. Activ. Atmos. Oceanic Modell*, **40**, 1.23-1.24.

9 Seko, H., M. Kunii, T. Kawabata, T. Miyoshi, Ensemble experiments of local heavy rainfall that occurred in Osaka, Japan, 5 September 2008, *CAS/JSC WGNE Res. Activ. Atmos. Oceanic Modell*, **40**, 1.35-1.36

栗原和夫 1* Murazaki, K., K. Kurihara and H. Sasaki, 2010: Dynamical Downscaling of JRA-25 Precipitation over Japan Using the MRI-Regional Climate Model, *SOLA*, **6**, 141-144, doi:10.2151/sola.2010-036.

黒田友二 1* Kuroda, Y., and K. Yamazaki, 2010: Influence of the solar cycle and QBO modulation on the Southern Annular Mode, *Geophys. Res. Lett*., **37**, L12703, doi:10.1029/2010GL043252.

2* Kuroda, Y., 2010: High initial-time sensitivity of medium-range forecasting observed for a sratospheric sudden warming, *Geophys. Res. Lett*., **37**, L16804, doi:10.1029/2010GL044119.

小杉如央 1 Midorikawa, T., M. Ishii, S. Saito, D. Sasano, N. Kosugi, T. Motoi, H. Kamiya, A. Nakadate, K. Nemoto and H. Y. Inoue, 2010: Decreasing pH trend estimated from 25-yr time series of carbonate parameters in the western North Pacific, *Tellus B*, **62**, 649-659, doi:10.1111/j.1600-0889.2010.0054.x.

小林昭夫 1* 小林昭夫, 2010: 四国西部において 2005 年に発生した小規模な長期的スロースリップ, *地震 2*, **63**, 97-100.

2* 原田昌武, 細野耕司, 小林昭夫, 行竹洋平, 吉田明夫, 2010: 富士山および箱根火山の膨張歪と低周波地震活動, *火山*, **55(4)**, 193-199.

3* Katsumata, A., T. Yamamoto, A. Kobayashi, N. Hamada and S. Yoshikawa, 2010: Evaluation of Detection Level of Crustal Deformation Ovservation in the Time Domain Through Power Spectrum Analysis ― investigation of a Long-Baseline Laser Extensometer ―, *測地学会誌*, **56(3)**, 107-116.

4 小林昭夫, 2011: 第３章　潮位記録による地殻上下変動の推定　3.1.舞阪の潮位変化から推定される東海スロースリップの繰り返し発生, *気象研究所技術報告*, **63**, 162-167.

財前祐二 1* Ishimoto, H., Y. Zaizen, A. Uchiyama, K. Masuda and Y. Mano, 2010: Shape modeling of mineral dust particles for light-scattering calculations using the spatial Poisson-Voronoi tessellation, *Journal of Quantitative Spectroscopy & Radiative Transfer*, **111**, 2434-2443, doi:10.1016/j.jqsrt.2010.06.018.

2* Sakai, T., Y. Zaizen, T. Nagai and Y. Mano, 2010: Backscattering linear depolarization ratio mesurements of mineral, sea-salt, and ammonium sulfate particles simulated in a laboratory chamber, *Applied Optics*, **49(23)**, 4441-4449, doi: 10.1364/AO.49.004441.

3* Sakai, T., T. Nagai and Y. Zaizen, 2010: Backscattering linear depolarization ratio measurement of mineral dust, sea salt, and ammonium sulfate particles generated in a laboratory chamber, *Proceeding of the 25th International Laser Radar Conference, St.-Petersburg, 5–9 July 2010, Russia*, 457-460.

齋藤篤思 1* Misumi, R., A. Hashimoto, M. Murakami, N. Kuba, N. Orikasa, A. Saito, T. Tajiri, K. Yamashita and J. P. Chen, 2010: Microphysical structure of a developing convective snow cloud simurated by an improved version of the

成果発表

multi-dimensional bin model, *Atmospheric Science Letters*, **11**, 186-191, doi: 10.1002/asl.268.

2* Saito, A., M. Murakami and T. Tanaka, 2011: Automated Continuous-Flow Thermal-Diffusion-Chamber Type Ice Nucleus Counter, *SOLA*, **7**, 29-32, doi:10.2151/sola.2011-008.

齊藤和雄

1 齊藤和雄, 國井勝, 原昌弘, 瀬古弘, 原旅人, 山口宗彦, 三好健正, 黄偉健, 2010: WWRP 北京オリンピック 2008 予報実証／研究開発プロジェクト, *気象研究所技術報告*, **62**, 210pp.

2* Kunii, M., Y. Shoji, M. Ueno and K. Saito, 2010: Mesoscale Data Assimilation of Myanmar Cyclone Nargis. *J. Meteor. Soc. Japan*, **88**, 455-474, doi:10.2151/jmsj.2010-312

3* Saito, K., T. Kuroda, M. Kunii and N. Kohno, 2010: Numerical Simulations of Myanmar Cyclone Nargis and the Associated Storm Surge Part I: Forecast Experiment with NHM and Simulation of Storm Surge, *J. Meteor. Soc. Japan.*, **88**, 521-545, doi:10.2151/jmsj.2010-315.

4* Kuroda, T., K. Saito, M. Kunii and N. Kohno, 2010: Numerical Simulations of Myanmar Cyclone Nargis and the Associated Storm Surge Part II: Ensemble Prediction, *J. Meteor. Soc. Japan.*, **88**, 547-570, doi:10.2151/jmsj.2010-316.

5* Seko, H., M. Kunii, Y. Shoji and K. Saito, 2010: Improvement of Rainfall Forecast by Assimilations of Ground-based GPS data and Radio Occultation Data. *SOLA*. **6**, 81-84, doi:10.2151/sola.2010-021

6* Shoji, Y., M. Kunii and K. Saito, 2011: Mesoscale Data Assimilation of Myanmar Cyclone Nargis. Part II : Assitilation of GPS derived Precipitable Water Vapor. *J. Meteor. Soc. Japan*, **89**, 67-88, doi:10.2151/jmsj.2011-105

7 Seko, H., S. Hayashi and K. Saito, 2010: Generation mechanisms of convections by gravity waves. *CAS/JSC WGNE Res. Activ. Atmos. Oceanic Modell.,* **40**, 5.19-5.20.

8 Kuroda, T., K. Saito, M. Kunii, H. Seko, 2010: Mesoscale LETKF Data Assimilation on Cyclone Nargis. *CAS/JSC WGNE Res. Activ. Atmos. Oceanic Modell,* **40**, 1.23-1.24.

9 里村雄彦, 竹見哲也, 野田暁, 三好建正, 富田浩之, 齊藤和雄, 日下博幸, 重尚一, 2011: 第1回非静力学数値モデルに関する国際ワークショップの報告, *天気*, **58**, 249-256.

酒井　哲

1* Nagai, T., B. Liley, T. Sakai, T. Shibata and O. Uchino, 2010: Post-Pinatubo evolution and subsequent trend of he stratospheric aerosol layer observed by mid-latitude lidars in both hemispheres, *SOLA*, **6**, 69-72, doi:10.2151/sola.2010-018.

2* Sakai, T., Y. Zaizen, T. Nagai and Y. Mano, 2010: Backscattering linear depolarization ratio mesurements of mineral, sea-salt, and ammonium sulfate particles simulated in a laboratory chamber, *Applied Optics*, **49(23)**, 4441-4449, doi:10.1364/AO.49.004441.

3* Sakai, T., T. Nagai, M. Murakami, Observation group of Japanese Cloud Seeding Experiment for Precipitation Augmentation, 2010: Aerosol characterization with dual-wavelength and polarization Lidar during Japanese Cloud Seeding Experiment, *Proceeding of the 25th International Laser Radar Conference, St.-Petersburg, 5–9 July 2010, Russia*, 584-587.

4* Sakai, T., T. Nagai and Y. Zaizen, 2010: Backscattering linear depolarization ratio measurement of mineral dust, sea salt, and ammonium sulfate particles generated in a laboratory chamber, *Proceeding of the 25th International*

Laser Radar Conference, St.-Petersburg, 5–9 July 2010, Russia, 457-460.

5* 内野修, 酒井哲, 永井智広, 坂下卓也, 鈴木健司, 柴田隆, 森野勇, 横田達也, 2010:ライダーで観測された 2009 年サリチェフ火山噴火による成層圏エーロゾルの増加, *日本リモートセンシング学会誌*, 30(3), 149-156.

坂見智法

1 Yukimoto, S., H. Yoshimura, M. Hosaka, T. Sakami, H. Tsujino, M. Hirabara, T. Y. Tanaka, M. Deushi, A. Obata, H. Nakano, Y. Adachi, E. Shindo, S. Yabu, T. Ose and A. Kitoh, 2011: Meteorological Research Institute-Earth System Model Version 1 (MRI-ESM1) -Model Description-, *気象研究所技術報告*, 64, 83pp.

2* Kudo, R., A. Uchiyama, A. Yamazaki, T. Sakami, and O. Ijima, 2011: Decadal changes in aerosol optical thickness and single scattering albedo estimated from ground-based broadband radiometers: a case study in Japan, *J. Geophys. Res.*, 116, D03207, doi:10.1029/2010JD014911.

坂本　圭

1* Sakamoto, K., H. Tsujino, S. Nishikawa, H. Nakano and T. Motoi, 2010: Dynamics of Coastal Oyashio and its seasonal variation in a high-resolution western North Pacific Ocean model, *J. Phys. Oceanogr.*, 40, 1283-1301, doi:10.1175/2010JPO4307.1.

2* Nishikawa, S., H. Tsujino, K. Sakamoto and H. Nakano, 2010: Effects of mesoscale eddies on subduction and distribution of subtropical mode water in an eddy-resolving OGCM of the western North Pacific, *J. Phys. Oceanogr.*, 40, 1748-1765, doi:10.1175/2010JPO4261.1.

佐々木秀孝

1* Murazaki, K., K. Kurihara and H. Sasaki, 2010: Dynamical Downscaling of JRA-25 Precipitation over Japan Using the MRI-Regional Climate Model, *SOLA*, 6, 141-144, doi:10.2151/sola.2010-036.

笹野大輔

1* Kouketsu, S., M. Fukusawa, D. Sasano, Y. Kumamoto, T. Kawano, H. Uchida and T. Doi, 2010: Changes in water properties around North Pacific intermediate water between the 1980s, 1990s and 2000s, *Deep-Sea Research II*, 57, 1177-1187, doi:10.1016/j.dsr2.2009.12.007.

2 Chiba, S., T. Hirawake, S. Ishizaki, S. Ito, H. Kamiya, M. Kaeriyama, A. Kuwata, T. Midorikawa, S. Minobe, S. Okamoto, Y. Okazaki, T. Ono, H. Saito, S. Saitoh, D. Sasano, K. Tadokoro, K. Takahashi, Y. Takatani, Y. Watanabe, Y. W. Watanabe, Y. Watanuki, O. Yamamura, N. Yamashita and A. Yatsu, 2010: Status and trends of the Oyashio region, 2003-2008, In: S.M. Mckinnell & M. Dag[Eds.], *Marine Ecosystems of the North Pacific Ocean*, PICES Special Publication 4, 300-329.

3 Midorikawa, T., M. Ishii, S. Saito, D. Sasano, N. Kosugi, T. Motoi, H. Kamiya, A. Nakadate, K.Nemoto and H. Y. Inoue, 2010: Decreasing pH trend estimated from 25-yr time series of carbonate parameters in the western North Pacific, *Tellus B*, 62, 649-659, doi:10.1111/j.1600-0889.2010.0054.x.

澤　庸介

1* Wada, A., S. Murayama, H. Kondo, H. Matsueda, Y. Sawa and K. Tsuboi, 2010: Development of a compact and sensitive electrostatic Radon-222 measuring system for use in atmospheric observation, *J. Meteor. Soc. Japan*, 88(2), 123-134, doi:10.2151/jmsj.2010-202.

2* Kulawik, S. S., D. B. A. Jones, R. Nassar, F. W. Irion, J. R. Worden, K. W. Bowman, T. Machida, H. Matsueda, Y. Sawa, S. C. Biraud, M. L. Fischer and A. R. Jacobsen, 2010: Characterization of Tropospheric Emission Spectrometer (TES) CO_2 for carbon cycle science, *Atmos. Chem. Phys. Discuss.*, 10, 5601-5623, doi:10.5194/acp-10-5601-2010.

3* Wunch, D., G. C. Toon, P. O. Wennberg, S. C. Wofsy, B. B. Stephens, M. L. Fischer,

O. Uchino, J. B. Abshire, P. Bernath, S. C. Biraud, J.-F. L. Blavier, C. Boone, K. P. Bowman, E. V. Browell, T. Campos, B. J. Connor, B. C. Daube, N. M. Deutscher, M. Diao, J. W. Elkins, C. Gerbig, E. Gottlieb, D. W. T. Griffith, D. F. Hurst, R. Jiménez, G. Keppel-Aleks, E. A. Kort, R. Macatangay, T. Machida, H. Matsueda, F. Moore, I. Morino, S. Park, J. Robinson, C. M. Roehl, Y. Sawa, V. Sherlock, C. Sweeney, T. Tanaka and M. A. Zondlo, 2010: Calibration of the Total Carbon Column Observing Network using aircraft profile data, *Atmospheric Measurement Techniques*, 3, 1351-1362.

4* Araki, M., I. Morino, T. Machida, Y. Sawa, H. Matsueda, H. Ohyama, T. Yokota and O. Uchino, 2010: CO_2 Column-Averaged Volume Mixing Ratio Derived over Tsukuba from measurements by Commercial Airlines, *Atmos. Chem. Phys.*,10, 7659-7667, doi:10.5194/acp-10-7659-2010.

5* Ishijima, K., P. K. Patra, M. Takigawa, T. Machida, H. Matsueda, Y. Sawa, L. P. Steele, P. B. Krummel, R. L. Langenfelds, S. Aoki and T. Nakazawa, 2010: Stratospheric influence on the seasonal cycle of nitrous oxide in the upper troposphere as deduced from aircraft observations and model simulations, *J. Geophys. Res.*, 115, D20308, doi:10.1029/2009JD013322.

6* Chevallier, F., P. Ciais, T. J. Conway, T. Aalto, B. E. Anderson, P. Bousquet, E. G. Brunke, L. Ciattaglia, Y. Esaki, M. Frohlich, A. J. Gomez-Peleaz, L. Haszpra, P. Krummel, R. Langenfelds, M. Leuenberger, T. Machida, F. Maignan, H. Matsueda, J. A. Morgui, H. Mukai, T. Nakazawa, P. Peylin, M. Ramonet, L. Rivier, Y. Sawa, M. Schmidt, P. Steele, S. A. Vay, A. T. Vermeulen, S. Wofsy and D. Worthy, 2010: CO_2 surface fluxes at grid point scale estimated from a global 21 year reanalysis of atmospheric measurments, *J. Geophys. Res.*, 115, D21307, doi:10.1029/2010JD013887.

7* Sakaizawa, D., S. Kawakamia, M. Nakajima, Y. Sawa and H. Matsueda, 2010: Ground-based demonstration of a CO_2 remote sensor using a 1.57μm differential laser absorption spectrometer with direct detection, *J. Appl. Remote Sens.* 4, 043548, doi:10.1117/1.3507092.

柴田清孝 1* Oman, L. D., D. A. Plummer, D. W. Waugh, J. Austin, J. F. Scinocca, A. R. Douglass, R. J. Salawitch, T. Canty, H. Akiyoshi, S. Bekki, P. Braesicke, N. Butchart, M. P. Chipperfield, D. Cugnet, S. Dhomse, V. Eyring, S. Frith, S. C. Hardiman, D. E. Kinnison, J.-F. Lamarque, E. Mancini, M. Marchand, M. Michou, O. Morgenstern, T. Nakamura, J. E. Nielsen, D. Olivié, G. Pitari, J. Pyle, E. Rozanov, T. G. Shepherd, K. Shibata, R. S. Stolarski, H. Teyssèdre, W. Tian, Y. Yamashita and J. R. Ziemke, 2010: Multi-model assessment of the factors driving stratospheric ozone evolution over the 21st century, *J. Geophys. Res.*, 115, D24306, doi:10.1029/2010JD014362.

2* Hegglin, M. I., A. Gettelman, P. Hoor, R. Krichevsky, G. L. Manney, L. L. Pan, S.-W. Son, G. Stiller, S. Tilmes, K. A. Walker, V. Eyring, T. G. Shepherd, D. Waugh, H. Akiyoshi, J. A. Anel, J. Austin, A. Baumgaertner, S. Bekki, P. Braesicke, C. Bruehl, N. Butchart, M. P. Chipperfield, M. Dameris, S. Dhomse, S. Frith, H. Garny, S. C. Hardiman, P. Jockel, D. E. Kinnison, J. F. Lamarque, E. Mancini, M. Michou, O. Morgenstern, T. Nakamura, D. Olivie, S. Pawson, G. Pitari, D. A. Plummer, J. A. Pyle, E. Rozanov, J. F. Scinocca, K. Shibata, D. Smale, H. Teyssedre, W. Tian and Y. Yamashita, 2010: Multi-Model Assessment of the Upper Troposphere and Lower Stratosphere: Extra-tropics, *J. Geophys. Res.*, 115, D00M09, doi:10.1029/ 2010JD013884.

3* Ray, E. A., F. L. Moore, K. H. Rosenlof, S. M. Davis, H. Boenisch, O. Morgenstern,

D. Smale, E. Rozanov, M. I. Hegglin, G. Pitari, E. Mancini, P. Braesicke, N. Butchart, S. Hardiman, F. Li, K. Shibata and D. A. Plummer, 2010: Evidence for Changes in Stratospheric Transport and Mixing Over the Past Three Decades Based on Multiple Datasets and Tropical Leaky Pipe Analysis, *J. Geophys. Res.*, **115**, D21304, doi:10.1029/2010JD014206.

4* Austin, J., J. Scinocca, D. Plummer, L. Oman, D. Waugh, H. Akiyoshi, S. Bekki, P. Braesicke, N. Butchart, M. Chipperfield, D. Cugnet, M. Dameris, S. Dhomse, V. Eyring, S. Frith, R. R. Garcia, H. Garny, A. Gettelman, S. C. Hardiman, D. Kinnison, J. F. Lamarque, E. Mancini, M. Marchand, M. Michou, O. Morgenstern, T. Nakamura, S. Pawson, G. Pitari, J. Pyle, E. Rozanov, T. G. Shepherd, K. Shibata, H. Teyssèdre, R. J. Wilson and Y. Yamashita, 2010: The decline and recovery of total column ozone using a multi-model time series analysis, *J. Geophys. Res.*, **115**, D00M10, doi:10. 1029/2010JD013857.

5* Son, S.-W, E. P. Gerber, J. Perlwitz, L. M. Polvani, N. P. Gillett, K.-H. Seo, V. Eyring, T. G. Shepherd, D. Waugh, H. Akiyoshi, J. Austin, A. Baumgaertner, S. Bekki, P. Braesicke, C. Bruehl, N. Butchart, M. P. Chipperfield, D. Cugnet, M. Dameris, S. Dhomse, S. Frith, H. Garny, R. Garcia, S. C. Hardiman, P. Joeckel, J. F. Lamarque, E. Mancini, M. Marchand, M. Michou, T. Nakamura, O. Morgenstern, G. Pitari, D. A. Plummer, J. Pyle, E. Rozanov, J. F. Scinocca, K. Shibata, D. Smale, H. Teyssèdre, W. Tian and Y. Yamashita, 2010: The Impact of stratospheric ozone on southern hemisphere circulation change: A multimodel assessment, *J. Geophys. Res.*, **115**, D00M07, doi:10.1029/2010 JD014271.

6* Austin, J., H. Struthers, J. Scinocca, D. A. Plummer, H. Akiyoshi, A. J. G. Baumgaertner, S. Bekki, G. E. Bodeker, P. Braesicke, C. Bruehl, N. Butchart, M. P. Chipperfield, D. Cugnet, M. Dameris, S. Dhomse, S. Frith, H. Garny, A. Gettelman, S. C. Hardiman, P. Jockel, D. Kinnison, A. Kubin, J. F. Lamarque, U. Langematz, E. Mancini, M. Marchand, M. Michou, O. Morgenstern, T. Nakamura, J. E. Nielsen, G. Pitari, J. Pyle, E. Rozanov, T. G. Shepherd, K. Shibata, D. Smale, H. Teyssèdre and Y. Yamashita, 2010: Chemistry-climate model simulations of spring Antarctic ozone, *J. Geophys. Res.*, **115**, D00M11, doi:10.1029/2009JD013577.

7* Charlton-Perez, A. J., E. Hawkins, V. Eyring, I. Cionni, G. E. Bodeker, D. E. Kinnison, H. Akiyoshi, S. M. Frith, R. Garcia, A. Gettelman, J. F. Lamarque, T. Nakamura, S. Pawson, Y. Yamashita, S. Bekki, P. Braesicke, M. P. Chipperfield, S. Dhomse, M. Marchand, E. Mancini, O. Morgenstern, G. Pitari, D. Plummer, J. A. Pyle, E. Rozanov, J. Scinocca, K. Shibata, T. G. Shepherd, W. Tian and D. W. Waugh, 2010: Quantifying uncertainty in projections of stratospheric ozone over the 21st century, *Atmos. Chem. Phys.*, **10**, 9473–9486, doi:10.5194/acp-10-9473-2010.

8* Eyring, V., I. Cionni, G. E. Bodeker, A. J. Charlton-Perez, D. E. Kinnison, J. F. Scinocca, D. W. Waugh, H. Akiyoshi, S. Bekki, M. P. Chipperfield, M. Dameris, S. Dhomse, S. M. Frith, H. Garny, A. Gettelman, A. Kubin, U. Langematz, E. Mancini, M. Marchand, T. Nakamura, L. D. Oman, S. Pawson, G. Pitari, D. A. Plummer, E. Rozanov, T. G. Shepherd, K. Shibata, W. Tian, P. Braesicke, S. C. Hardiman, J. F. Lamarque, O. Morgenstern, D. Smale, J. A. Pyle and Y. Yamashita, 2010: Multi-model assessment of stratospheric ozone return dates and ozone recovery in CCMVal-2 models, *Atmos. Chem. Phys.*, **10**, 9451-9472, doi:10.5194/acp-10-9451-2010.

9* Gettelman, A., M. I. Hegglin, S.-W. Son, J. Kim, M. Fujiwara, T. Birner, S. Kremser, M. Rex, J. A. Añel, H. Akiyoshi, J. Austin, S. Bekki, P. Braesike, C. Bruehl, N. Butchart, M. Chipperfield, M. Dameris, S. Dhomse, H. Garny , S. C. Hardiman, P. Joeckel, D. E. Kinnison, J. F. Lamarque, E. Mancini, M. Marchand, M. Michou, O. Morgenstern, S. Pawson , G. Pitari, D. Plummer, J. A. Pyle, E. Rozanov, J. Scinocca, T. G. Shepherd, K. Shibata, D. Smale, H. Teyssèdre and W. Tian, 2010: Multi-model assessment of the upper troposphere and lower stratosphere: Tropics and global trends, J. *Geophys. Res.*, **115**, D00M08, doi:10.1029/2009JD013638.

10* Morgenstern, O., H. Akiyoshi, S. Bekki, P. Braesicke, N. Butchart, M.P. Chipperfield, D. Cugnet, M. Deushi, S. S. Dhomse, R. R. Garcia, A. Gettelman, N. P. Gillett, S. C. Hardiman, J. Jumelet, D. E. Kinnison, J.-F. Lamarque, F. Lott, M. Marchand, M. Michou, T. Nakamura, D. Olivie, T. Peter, D. Plummer, J. A. Pyle, E. Rozanov, D. Saint-Martin, J. F. Scinocca, K. Shibata, M. Sigmond, D. Smale, H. Teyssedre, W. Tian, A. Voldoire and Y. Yamashita (2010),Anthropogenic forcing of the Northern Annular Mode in CCMVal-2 Models, *J. Geophys. Res.*, **115**, D00M03, doi:10.1029/2009JD 013347.

11 Morgenstern, O., M. Giorgetta, K. Shibata (Lead Authors), H. Akiyoshi, J. Austin, A. Baumgaertner, S. Bekki, P. Braesicke, C. Bruehl, M. Chipperfield, M. Dameris, S. Frith, H. Garny, A. Gettelman, S. Hardiman, M. Hegglin, A. Jonsson, D. Kinnison, J.-F. Lamarque, E. Manzini, M. Michou, J. Nielsen, G. Pitari, D. Plummer, E. Rozanov, J. Scinocca, D. Smale, S. Strahan, M. Toohey and W. Tian, 2010: Chemistry climate models and scenarios, Chapter 2 in *SPARC CCMVal Report on the Evaluation of Chemistry-Climate Models, V. Eyring, T. G. Shepherd, D. W. Waugh (Eds.),* **SPARC Report No.5, WCRP-132, WMO/TD-No.1526**, 17-70.

12* Naoe, H. and K. Shibata, 2010: Equatorial quasi-biennial oscillation influence on the northern winter extratropical circulation, *J. Geophys. Res.*, **115**, D19102, doi:10.1029/2009JD012952.

13* Morgenstern, O., M. A. Giorgetta, K. Shibata, V. Eyring, D. W. Waugh, T. G. Shepherd, H. Akiyoshi, J. Austin, A. J. G. Baumgaertner, S. Bekki, P. Braesicke, C. Bruehl, M. P. Chipperfield, D. Cugnet, M. Dameris, S. Dhomse, S. M. Frith, H. Garny, A. Gettelman, S. C. Hardiman, M. I. Hegglin, P. Joeckel, D. E. Kinnison, J. F. Lamarque, E. Mancini, E. Manzini, M. Marchand, M. Michou, T. Nakamura, J. E. Nielsen, D. Olivie, G. Pitari, D. A. Plummer, E. Rozanov, J. F. Scinocca, D. Smale, H. Teyssedre, M. Toohey, W. Tian and Y. Yamashita, 2010: Review of the formulation of present generation stratospheric chemistry-climate models and associated external forcings, *J. Geophys. Res.*, **115**, D00M02, doi:10.1029/2009JD 013728.

14* Butchart, N., I. Cionni, V. Eyring, T. G. Shepherd, D. W. Waugh, H. Akiyoshi, J. Austin, C. Bruhl, M. P. Chipperfield, E. Cordero, M. Dameris, R. Deckert, S. Dhomse, S. M. Frith, R. R. Garcia, A. Gettelman, M. A. Giorgetta, D. E. Kinnison, F. Li, E. Mancini, C. McLandress, S. Pawson, G. Pitari, D. A. Plummer, E. Rozanov, F. Sassi, J. F. Scinocca, K. Shibata, B. Steil and W. Tian, 2010: Chemistry-climate model simulations of 21st century stratospheric climate and circulation changes, *J. Climate*, **23**, 5349–5374, doi:10.1175/2010JCLI3404.1.

小司禎教 1* Kunii, M., Y. Shoji, M. Ueno and K. Saito, 2010: Mesoscale Data Assimilation of

Myanmar Cyclone Nargis. *J. Meteor. Soc. Japan*, 88, 455-474, doi:10.2151/jmsj.2010-312.

2* Seko, H., M. Kunii, Y. Shoji and K. Saito, 2010: Improvement of Rainfall Forecast by Assimilations of Ground-based GPS data and Radio Occultation Data. *SOLA*. 6, 81-84, doi:10.2151/sola.2010-021.

3* Shoji, Y., M. Kunii and K. Saito, 2011: Mesoscale Data Assimilation of Myanmar Cyclone Nargis. Part II : Assitilation of GPS derived Precipitable Water Vapor. *J. Meteor. Soc. Japan*, 89, 67-88, doi:10.2151/jmsj.2011-105.

新藤永樹 1 Yukimoto, S., H. Yoshimura, M. Hosaka, T. Sakami, H. Tsujino, M. Hirabara, T. Y. Tanaka, M. Deushi, A. Obata, H. Nakano, Y. Adachi, E. Shindo, S. Yabu, T. Ose and A. Kitoh, 2011: Meteorological Research Institute-Earth System Model Version 1 (MRI-ESM1) -Model Description-, *気象研究所技術報告*, 64, 83pp.

2 別所康太郎, 中澤哲夫, 川畑拓矢, 釜堀弘隆, 高野洋雄, 新藤永樹, 國井勝, 原昌弘, 高橋清利, 海老田綾貴, 太田行哉, 古林慎哉, 守谷昌己, 本田有機, 澤田謙, 2010: 伊勢湾台風再現実験プロジェクト, *天気*, 57, 247-250.

新堀敏基 1* 新堀敏基, 相川百合, 福井敬一, 橋本明弘, 清野直子, 山里平, 2010: 火山灰移流拡散モデルによる量的降灰予測―2009年浅間山噴火の事例―, *Pap. Met. Geophys.*, 61, 13-29, doi:10.2467/mripapers.61.13.

2 新堀敏基, 2011: 2009年10月3日桜島噴火に伴う降灰予報の検証, *火山噴火予知連絡会会報*, 105, 178-180.

鈴木　修 1* Inoue, H. Y., K. Kusunoki, W. Kato, H. Suzuki, T. Imai, T. Takemi, K. Bessho, M. Nakazato, S. Hoshino, W. Mashiko, S. Hayashi, T. Fukuhara, T. Shibata, H. Yamauchi and O. Suzuki, 2011: Finescale Doppler Radar Observation of a Tornado and Low-Level Misocyclones within a Winter Storm in the Japan Sea Coastal Region, *Mon. Wea. Rev.*, 139, 351-369 ,doi:10.1175/2010MWR3247.1.

2 鈴木修, 小林文明, 2010: 2009 年台風 18 号の気象学的特徴, *日本風工学会誌*, 35, 192-196, doi:10.5359/jawe.35.192.

清野直子 1* Aoyagi, T. and N. Seino, 2011: A Square Prism Urban Canopy Scheme for the NHM and Its Evaluation on Summer Conditions in the Tokyo Metropolitan Area, Japan, *J. Appl. Meteor. Climatol.*, 50, 1476-1496 doi:10.1175/2011JAMC2489.1.

2* 新堀敏基, 相川百合, 福井敬一, 橋本明弘, 清野直子, 山里平, 2010: 火山灰移流拡散モデルによる量的降灰予測―2009年浅間山噴火の事例―, *Pap. Met. Geophys.*, 61, 13-29, doi:10.2467/mripapers.61.13.

関山　剛 1* Sekiyama, T. T., M. Deushi and T. Miyoshi, 2011: Operation-Oriented Ensemble Data Assimilation of Total Column Ozone, *SOLA*, 7, 41-44, doi:10.2151/sola.2011-011.

2* Maki, T., T. T. Sekiyama, T. Y. Tanaka and M. Mikami, 2011: The Impact of Ground-based Observations on the Inverse Technique of Aeolian Dust Aerosol, *SOLA*, 7A, 21-24, doi:10.2151/sola.7A-006.

瀬古　弘 1 齊藤和雄, 國井勝, 原昌弘, 瀬古弘, 原旅人, 山口宗彦, 三好健正, 黄偉健, 2010: WWRP 北京オリンピック 2008 予報実証／研究開発プロジェクト, *気象研究所技術報告*, 62, 210pp.

2 瀬古弘, 2010: 中緯度のメソβスケール線状降水帯の形態と維持機構に関する研究, *気象庁研究時報*, 62, 1-74.

3* Seko, H., M. Kunii, Y. Shoji and K. Saito, 2010: Improvement of Rainfall Forecast by Assimilations of Ground-based GPS data and Radio Occultation Data.

成果発表

SOLA. 6, 81-84, doi:10.2151/sola.2010-021

4　Seko, H., S. Hayashi and K. Saito, 2010: Generation mechanisms of convections by gravity waves. *CAS/JSC WGNE Res. Activ. Atmos. Oceanic Modell.,* 40, 5.19-5.20.

5　Kuroda, T., K. Saito, M. Kunii, H. Seko, 2010: Mesoscale LETKF Data Assimilation on Cyclone Nargis. *CAS/JSC WGNE Res. Activ. Atmos. Oceanic Modell,* 40, 1.23-1.24.

6　Seko, H., M. Kunii, T. Kawabata, T. Miyoshi, Ensemble experiments of local heavy rainfall that occurred in Osaka, Japan, 5 September 2008, *CAS/JSC WGNE Res. Activ. Atmos. Oceanic Modell*, 40, 1.35-1.36

7　Seko, H., T. Tsuda, N. Yoshida and Y.-H. Kuo, Data Assimilation of side-looking radio occultation by observing system simulation experiment, *CAS/JSC WGNE Res. Activ. Atmos. Oceanic Modell*, 40, 1.37-1.38.

高藪　出

1　高藪出，金光正郎，2010: 力学的ダウンスケーリングのレビュー，*天気*, 57(7), 435-447.

2　高藪出, 2010: 2. 地域気候モデルによる温暖化予測, *天気*, 57(8), 546-550.

3*　石崎安洋，仲江川敏之，高藪出，2011: 地域気候マルチモデルアンサンブルを用いた日本域における降水の再現性, *水工学論文集*, 55, S433-S438.

田尻拓也

1*　Misumi, R., A. Hashimoto, M. Murakami, N. Kuba, N. Orikasa, A. Saito, T. Tajiri, K. Yamashita and J. P. Chen, 2010: Microphysical structure of a developing convective snow cloud simurated by an improved version of the multi-dimensional bin model, *Atmospheric Science Letters*, 11, 186-191, doi: 10.1002/asl.268.

2*　Luce, H., T. Mega, M. K. Yamamoto, M. Yamamoto, H. Hashiguchi, S. Fukao, N. Nishi, T. Tajiri and M. Nakazato, 2010: Observations of Kelvin-Helmholtz instability at a cloud base with the middle and upper atmosphere (MU) and weather radars, *J. Geophys. Res.*, 115, D19116, doi:10.1029/2009JD013519.

田中泰宙

1*　Inomata, Y., Y. Igarashi, K.. Yoshioka, T. Y. Tanaka and M. Chiba, 2010: Temporal variation of ^{222}Rn at the summit of Mt.Fuji associated with the Asian continental outflow, *Atmospheric Environment*, 44, 3856-3865, doi:10.1016/j.atmosenv.2010.05.005.

2　Yukimoto, S., H. Yoshimura, M. Hosaka, T. Sakami, H. Tsujino, M. Hirabara, T. Y. Tanaka, M. Deushi, A. Obata, H. Nakano, Y. Adachi, E. Shindo, S. Yabu, T. Ose and A. Kitoh, 2011: Meteorological Research Institute-Earth System Model Version 1 (MRI-ESM1) -Model Description-, *気象研究所技術報告*, 64, 83pp.

3*　Maki, T., T. T. Sekiyama, T. Y. Tanaka and M. Mikami, 2011: The Impact of Ground-based Observations on the Inverse Technique of Aeolian Dust Aerosol, *SOLA*, 7A, 21-24, doi:10.2151/sola.7A-006.

辻野博之

1　辻野博之，2010: 気象研究所共用海洋モデル（MRI.COM）最新版（バージョン 3）と実施中の実験の紹介，*気象庁測候時報*, 77, S1-S10.

2　碓氷典久，今泉孝男，辻野博之, 2010: MOVE/MRI.COM への海氷密度同化の導入に向けて―オホーツク海を対象とした予備調査と簡易同化実験―，*気象庁測候時報*, 77, S71-S81.

3　Yukimoto, S., H. Yoshimura, M. Hosaka, T. Sakami, H. Tsujino, M. Hirabara, T. Y. Tanaka, M. Deushi, A. Obata, H. Nakano, Y. Adachi, E. Shindo, S. Yabu, T. Ose and A. Kitoh, 2011: Meteorological Research Institute-Earth System Model Version 1 (MRI-ESM1) -Model Description-, *気象研究所技術報告*, 64, 83pp.

4* Sakamoto, K., H. Tsujino, S. Nishikawa, H. Nakano and T. Motoi, 2010: Dynamics of Coastal Oyashio and its seasonal variation in a high-resolution western North Pacific Ocean model, *J. Phys. Oceanogr.*, **40**, 1283-1301, doi: 10.1175/2010JPO4307.1.

5* Nishikawa, S., H. Tsujino, K. Sakamoto and H. Nakano, 2010: Effects of mesoscale eddies on subduction and distribution of subtropical mode water in an eddy-resolving OGCM of the western North Pacific, *J. Phys. Oceanogr.*, **40**, 1748-1765, doi:10.1175/2010JPO4261.1.

6* Hirabara, M., H. Ishizaki, G. Yamanaka, H. Tsujino and I. Ishikawa, 2010: Additional flux arising from unresolved scales in eddying ocean models, *Journal of Oceanography*, **66** (**5**), 633-647.

坪井一寛 1* Wada, A., S. Murayama, H. Kondo, H. Matsueda, Y. Sawa and K. Tsuboi, 2010: Development of a compact and sensitive electrostatic Radon-222 measuring system for use in atmospheric observation, *J. Meteor. Soc. Japan*, **88**(**2**), 123-134, doi:10.2151/jmsj.2010-202.

出牛　真 1 Yukimoto, S., H. Yoshimura, M. Hosaka, T. Sakami, H. Tsujino, M. Hirabara, T. Y. Tanaka, M. Deushi, A. Obata, H. Nakano, Y. Adachi, E. Shindo, S. Yabu, T. Ose and A. Kitoh, 2011: Meteorological Research Institute-Earth System Model Version 1 (MRI-ESM1) -Model Description-, *気象研究所技術報告*, **64**, 83pp.

2* Morgenstern, O., H. Akiyoshi, S. Bekki, P. Braesicke, N. Butchart, M. P. Chipperfield, D. Cugnet, M. Deushi, S. S. Dhomse, R. R. Garcia, A. Gettelman, N. P. Gillett, S. C. Hardiman, J. Jumelet, D. E. Kinnison, J.-F. Lamarque, F. Lott, M. Marchand, M. Michou, T. Nakamura, D. Olivie, T. Peter, D. Plummer, J. A. Pyle, E. Rozanov, D. Saint-Martin, J. F. Scinocca, K. Shibata, M. Sigmond, D. Smale, H. Teyssedre, W. Tian, A. Voldoire and Y. Yamashita (2010),Anthropogenic forcing of the Northern Annular Mode in CCMVal-2 Models, *J. Geophys. Res.*, **115**, D00M03, doi:10.1029/2009JD 013347.

Sekiyama, T. T., M. Deushi and T. Miyoshi, 2011: Operation-Oriented Ensemble Data Assimilation of Total Column Ozone, *SOLA*, **7**, 41-44, doi:10.2151/ sola.2011-011.

豊田隆寛 1* Toyoda, T., T. Awaji, N. Sugiura, S. Masuda, H. Igarashi, Y. Sasaki, Y. Hiyoshi, Y. Ishikawa, T. Mochizuki, T. T. Sakamoto, H. Tatebe, Y. Komuro, T. Suzuki, T. Nishimura, M. Mori, Y. Chikamoto, S. Yasunaka, Y. Imada, M. Arai, M. Watanabe, H. Shiogama, T. Nozawa, A. Hasegawa, M. Ishii and M. Kimoto, 2011: Impact of the Assimilation of Sea Ice Concentration Data on an Atmosphere-Ocean-Sea Ice Coupled Simulation of the Arctic Ocean Climate, *SOLA*, **7**, 37-40, doi:10.2151/sola.2011-010.

2* Kouketsu, S., T. Doi, T. Kawano, S. Masuda, N. Sugiura, Y. Sasaki, T. Toyoda, H. Igarashi, Y. Kawai, K. Katsumata, H. Uchida, M. Fukasawa and T. Awaji, 2011: Deep ocean heat content change estimated from observation and reanalysis product and their influence on sea level change, *J. Geophys. Res.*, **116**, C03012, doi:10.1029/2010JC006464.

直江寛明 1* Harada, Y., A. Goto, H. Hasegawa, N. Fujikawa, H. Naoe and T. Hirooka, 2010; A Major Stratospheric Sudden Warming event in January 2009, *Journal of the Atmospheric Sciences*, **67**, 2052-2069, doi:10.1175/2009JAS3320.1.

2* Takahashi, H., H. Naoe, Y. Igarashi, Y. Inomata and N. Sugimoto, 2010: Aerosol concentrations observed at Mt. Haruna, Japan, in relation to long-range

transport of Asian mineral dust aerosols, *Atmospheric Environment*, 44, 4638-4644, doi:10.1016/j.atmosenv.2010.08.007.

3* Naoe, H. and K. Shibata, 2010: Equatorial quasi-biennial oscillation influence on the northern winter extratropical circulation, *J. Geophys. Res.*, 115, D19102, doi:10.1029/2009JD012952.

4* Naoe, H., 2011: Variability of the Extratropical Stratospheric Circulation in the Northern Hemisphere Winter, *九州大学博士学位論文*, 100pp.

永井智広

1* Nagai, T., B. Liley, T. Sakai, T. Shibata and O. Uchino, 2010: Post-Pinatubo evolution and subsequent trend of he stratospheric aerosol layer observed by mid-latitude lidars in both hemispheres, *SOLA*, 6, 69-72, doi:10.2151/ sola. 2010-018.

2* Sakai, T., Y. Zaizen, T. Nagai and Y. Mano, 2010: Backscattering linear depolarization ratio mesurements of mineral, sea-salt, and ammonium sulfate particles simulated in a laboratory chamber, *Applied Optics*, 49(23), 4441-4449, doi: 10.1364/AO.49.004441.

3* 内野修, 酒井哲, 永井智広, 坂下卓也, 鈴木健司, 柴田隆, 森野勇, 横田達也, 2010:ライダーで観測された 2009 年サリチェフ火山噴火による成層圏エーロゾルの増加, *日本リモートセンシング学会誌*, 30(3), 149-156.

4* Sakai, T., T. Nagai, M. Murakami, Observation group of Japanese Cloud Seeding Experiment for Precipitation Augmentation, 2010: Aerosol characterization with dual-wavelength and polarization Lidar during Japanese Cloud Seeding Experiment, *Proceeding of the 25th International Laser Radar Conference, St.-Petersburg, 5–9 July 2010, Russia*, 584-587.

5* Sakai, T., T. Nagai and Y. Zaizen, 2010: Backscattering linear depolarization ratio measurement of mineral dust, sea salt, and ammonium sulfate particles generated in a laboratory chamber, *Proceeding of the 25th International Laser Radar Conference, St.-Petersburg, 5–9 July 2010, Russia*, 457-460.

6* 永井智広, 2011: 両半球中緯度三地点でのライダー観測によるピナツボ火山噴火後の成層圏エアロゾルの長期的な変動, *名古屋大学博士学位論文*, 70pp.

仲江川敏之

1* Kobashi, T., J. P. Severinghaus, J.-M. Barnola, K. Kawamura, T. Carter and T. Nakaegawa, 2010: Persistent multi-decadal Greenland temperature fluctuation through the last millennium, *Climatic Change*, 100(3-4), 769-815, doi:10.1007/s10584-009-9689-9.

2 Fujii, Y., T. Nakaegawa, S. Matsumoto*, T. Yasuda, G. Yamanaka and M. Kamachi, 2010: Coupled model simulation by constraining ocean fields with ocean data through the JMA operational ocean data assimilation system, *Extended Abstract of International workshop on "Development of atmosphere- ocean coupled models towards improvement of long range forecast"*, 52-54.

3* Kitoh, A., S. Kusunoki and T. Nakaegawa, 2011: Climate change projections over South America in the late 21st century with the 20 and 60km mesh Meteorological Research Institute atomospheric general circulation model (MRI-AGCM), *J, Geophys. Res.*, 116, D06105, doi:10.1029/2010JD014920.

4* Nakaegawa, T. and W. Vergara, 2010: First Projection of Climatological Mean River Discharges in the Magdalena River Basin, Colombia, in a Changing Climate during the 21st Century, *Hydrological Research Letters*, 4, 50-54, doi:10.3178/hrl.4.50.

5* 仲江川敏之, 2010: 大気全球気候モデル実験における既往最大月降水量の再現期間の性質, *水文・水資源学会誌*, 23, 373-383. doi:10.3178/jjshwr.23.373.

6* 仲江川敏之, 2010: 全球大気モデルを用いた河川流量の潜在的季節予測可能性とその水平解像度依存性, *水工学論文集*, 55, S253-S258.

7* 石崎安洋, 仲江川敏之, 高薮出, 2011: 地域気候マルチモデルアンサンブルを用いた日本域における降水の再現性, *水工学論文集*, 55, S433-S438.

中里真久 1* Luce, H., T. Mega, M. K. Yamamoto, M. Yamamoto, H. Hashiguchi, S. Fukao, N. Nishi, T. Tajiri and M. Nakazato, 2010: Observations of Kelvin-Helmholtz instability at a cloud base with the middle and upper atmosphere (MU) and weather radars, *J. Geophys. Res*., 115, D19116, doi:10.1029/2009JD013519.

2* Inoue, H. Y., K. Kusunoki, W. Kato, H. Suzuki, T. Imai, T. Takemi, K. Bessho, M. Nakazato, S. Hoshino, W. Mashiko, S. Hayashi, T. Fukuhara, T. Shibata, H. Yamauchi and O. Suzuki, 2011: Finescale Doppler Radar Observation of a Tornado and Low-Level Misocyclones within a Winter Storm in the Japan Sea Coastal Region, *Mon. Wea. Rev*., 139, 351–369 ,doi:10.1175/2010MWR 3247.1.

中澤哲夫 1* Bessho K., T. Nakazawa, S. Nishimura and K. Kato, 2010: Warm Core Structures in Organized Cloud Clusters Developing or Not Developing into Tropical Storms Observed by the Advanced Microwave Sounding Unit, *Mon. Wea. Rev*., 138, 2624-2643. doi:10.1175/2010MWR3073.1.

2* Shapiro, M., J. Shukla, G. Brunet, C. Nobre, M. Béland, R. Dole, K. Trenberth, R. Anthes, G. Asrar, L. Barrie, P. Bougeault, G. Brasseur, D. Burridge, A. Busalacchi, J. Caughey, D. Chen, J. Church, T. Enomoto, B. Hoskins, Ø. Hov, A. Laing, H. Le Treut, J. Marotzke, G. McBean, G. Meehl, M. Miller, B. Mills, J. Mitchell, M. Moncrieff, T. Nakazawa, H. Olafsson, T. Palmer, D. Parsons, D. Rogers, A. Simmons, A. Troccoli, Z. Toth, L. Uccellini, C. Velden and J. M. Wallace, 2010: An Earth-System Prediction Initiative for the Twenty-First Century, *Bull. Amer. Meteor. Soc*., 91, 1377-1388, doi:10.1175/ 2010BAMS2944.1.

3 別所康太郎, 中澤哲夫, 川畑拓矢, 釜堀弘隆, 高野洋雄, 新藤永樹, 國井勝, 原昌弘, 高橋清利, 海老田綾貴, 太田行哉, 古林慎哉, 守谷昌己, 本田有機, 沢田謙, 2010: 伊勢湾台風再現実験プロジェクト, *天気*, 57, 247-254.

4 中澤哲夫, 2010: 本だな「変わりゆく地球 衛星写真にみる環境と温暖化（Our Changing Planet: The View From Space)」, *天気*, 57, 255-256.

中野英之 1* Nakano, H. and I. Ishikawa, 2010: Meridional shift of the Kuroshio Extension induced by response of recirculation gyre to decadal wind variations, *Deep-Sea Research II*, 57, 1111-1126, doi:10.1016/j.dsr2.2009.12.002.

2* Nakano, H., T. Motoi, K. Hirose and M. Aoyama, 2010: Analysis of ^{137}Cs concentration in the Pacific using a Lagrangian approach, *J. Geophys. Res*., 115, C06015, doi:10.1029/2009JC005640.

3 中野英之, 2010: 気象研究所における海洋生態系モデリングの取り組み, *測候時報*, 77, S11-S21.

4 Yukimoto, S., H. Yoshimura, M. Hosaka, T. Sakami, H. Tsujino, M. Hirabara, T. Y. Tanaka, M. Deushi, A. Obata, H. Nakano, Y. Adachi, E. Shindo, S. Yabu, T. Ose and A. Kitoh, 2011: Meteorological Research Institute-Earth System Model Version 1 (MRI-ESM1) -Model Description-, *気象研究所技術報告*, 64, 83pp.

5* Sakamoto, K., H. Tsujino, S. Nishikawa, H. Nakano and T. Motoi, 2010: Dynamics of Coastal Oyashio and its seasonal variation in a high-resolution western North Pacific Ocean model, *J. Phys. Oceanogr*., 40, 1283-1301, doi.10.1175/2010JPO4307.1.

	6*	Nishikawa, S., H. Tsujino, K. Sakamoto and H. Nakano, 2010: Effects of mesoscale eddies on subduction and distribution of subtropical mode water in an eddy-resolving OGCM of the western North Pacific, *J. Phys. Oceanogr.*, **40**, 1748-1765, doi:10.1175/2010JPO4261.1.
庭野匡思	1	庭野匡思, 2010: 本だな「積雪観測ガイドブック」日本雪氷学会編, *天気*, **57(7)**, 463.
萩野谷成徳	1*	Xu, J., K. Masuda, Y. Ishigooka, T. Kuwagata, S. Haginoya, T. Hayasaka and T. Yasunari, 2011: Estimation and Verification of Daily Surface Shortwave Flux over China, *J. Meteor. Soc. Japan*, **89A**, 225-238, doi:10.2151/jmsj. 2011-A14.
橋本明弘	1*	Misumi, R., A. Hashimoto, M. Murakami, N. Kuba, N. Orikasa, A. Saito, T. Tajiri, K. Yamashita and J. P. Chen, 2010: Microphysical structure of a developing convective snow cloud simurated by an improved version of the multi-dimensional bin model, *Atmospheric Science Letters*, **11**, 186-191, doi: 10.1002/asl.268.
	2*	新堀敏基, 相川百合, 福井敬一, 橋本明弘, 清野直子, 山里平, 2010: 火山灰移流拡散モデルによる量的降灰予測―2009年浅間山噴火の事例―, *Pap. Met. Geophys.*, **61**, 13-29, doi:10.2467/mripapers.61.13.
林　修吾	1*	Takemi, T., K. Kusunoki, K. Araki, T. Imai, K. Bessho, S. Hoshino, S. Hayashi, 2010: Representation of Gusty winds winds induced by misocyclones with a high-resolution meteorological modeling, *Theoretical and Applied Mechanics Japan*, **58**, 121-130.
	2*	Eito, H., M. Murakami, C. Muroi, T. Kato, S. Hayashi, H. Kuroiwa and M. Yoshizaki, 2010: The structure and formation mechanism of transversal cloud bands associated with the Japan-Sea Polar-Airmass Convergence Zone, *J. Meteor. Soc. Japan*, **88**, 625-648, doi:10.2151/jmsj.2010-402.
	3	Seko, H., S. Hayashi and K. Saito, 2010: Generation mechanisms of convections by gravity waves. *CAS/JSC WGNE Res. Activ. Atmos. Oceanic Modell.,* **40**, 5.19-5.20.
	4*	Inoue, H. Y., K. Kusunoki, W. Kato, H. Suzuki, T. Imai, T. Takemi, K. Bessho, M. Nakazato, S. Hoshino, W. Mashiko, S. Hayashi, T. Fukuhara, T. Shibata, H. Yamauchi and O. Suzuki, 2011: Finescale Doppler Radar Observation of a Tornado and Low-Level Misocyclones within a Winter Storm in the Japan Sea Coastal Region, *Mon. Wea. Rev.*, **139**, 351–369 ,doi:10.1175/2010MWR 3247.1.
林　豊	1*	林 豊, 今村文彦, 越村俊一, 2010: 津波減衰過程のトレンドとばらつきの性質の遠地津波予測への活用可能性, *土木学会論文集 B2（海岸工学）*, **66(1)**, 211-215.
	2*	林 豊, 2010: GPS 波浪計の長周期波形観測値による沿岸津波換算値を活用した津波即時情報, *自然災害科学*, **29(3)**, 381-391.
	3	宮下誠, 中禮正明, 宇平幸一, 林 豊, 潟山弘明, 藤井敏嗣, 村上亮, 鵜川元雄, 白土正明, 山里平, 横田崇, 2011: 富士山の火山活動の監視 ―宝永噴火シナリオと火山情報―, *富士火山（改訂版）*, 日本火山学会, 441-449.
原　昌弘	1	齊藤和雄, 國井勝, 原昌弘, 瀬古弘, 原旅人, 山口宗彦, 三好健正, 黄偉健, 2010: WWRP 北京オリンピック 2008 予報実証／研究開発プロジェクト, *気象研究所技術報告*, **62**, 210pp.
	2	別所康太郎, 中澤哲夫, 川畑拓矢, 釜堀弘隆, 高野洋雄, 新藤永樹, 國井勝, 原昌弘, 高橋清利, 海老田綾貴, 太田行哉, 古林慎哉, 守谷昌己, 本田有機, 澤田謙, 2010: 伊勢湾台風再現実験プロジェクト, *天気*, **57**, 247-250.
平田賢治	1*	Romano, F., A. Piatanesi, S. Lorito and K. Hirata, 2010: Slip distribution of the 2003 Tokachi-oki Mw 8.1 earthquake from joint inversion of tsunami waveforms and geodetic data, *J. Geophys. Res.*, **115**, B11313, doi:10.1029/ 2009JB006665.

2* Gaffar, E., Udrekh, K. Hirata, K. Ikehara, K. Arai, 2010; The possibility of magnetic properties of coring samples from Aceh Basin west of Sumatera Island related to occurrence of past Tsunami in Thailand: Preliminary Result of Joint Research between Indonesia and Japan, *The Bali 2010 International Geosciences Conference and Exposition, Bali, Indonesia, 19-22 July 2010*.

3* Permana, H., K. Hirata, T. Fujiwara, Udrekh, E. Z. Gaffar, M. Kawano and Y. S. Djajadihardja, 2010; Fault pattern and active deformation of outer arc ridge of northwest of Simeulue Island, Aceh, Indonesia, Proceedings *PIT IAGI LOMBOK 2010, The 39th IAGI Annual Convention and Exhibition, Bali, Indonesia*.

平原幹俊

1* Hirabara, M., H. Ishizaki, G. Yamanaka, H. Tsujino and I. Ishikawa, 2010: Additional flux arising from unresolved scales in eddying ocean models, *Journal of Oceanography*, 66 (5), 633-647.

2 Yukimoto, S., H. Yoshimura, M. Hosaka, T. Sakami, H. Tsujino, M. Hirabara, T. Y. Tanaka, M. Deushi, A. Obata, H. Nakano, Y. Adachi, E. Shindo, S. Yabu, T. Ose and A. Kitoh, 2011: Meteorological Research Institute-Earth System Model Version 1 (MRI-ESM1) -Model Description-, *気象研究所技術報告*, 64, 83pp.

弘瀬冬樹

1 弘瀬冬樹, 前田憲二, 2010: 東海地域の割れ残りと長期スローイベントとの関係, *地震予知連絡会会報*, 84, 547-549.

2* 長谷川昭, 中島淳一, 内田直希, 弘瀬冬樹, 北佐枝子, 松澤暢, 2010: 日本列島下のスラブの三次元構造と地震活動, *地学雑誌*, 119(2), 190-204.

3 弘瀬冬樹, 前田憲二, 2011: 第５章　三次元数値モデルによる巨大地震発生シミュレーション　5.1.3.GPS データを用いた摩擦パラメータ（a-b）の推定, *気象研究所技術報告*, 63, 255-265.

4 前田憲二, 弘瀬冬樹, 2011: 前震による確率予測－日本海溝沿い領域について－, *地震予知連絡会会報*, 85, 460-462.

5 弘瀬冬樹, 前田憲二, 2011: G-R 則および改良 G-R 則を用いた地震発生予測モデル－MGR モデル－, *地震予知連絡会会報*, 85, 437-439.

6* Hirose, F. and K. Maeda, 2011: Earthquake forecast models for inland Japan based on the G-R law and the modified G-R law, *Earth Planets Space*, 63, 239-260.

福井敬一

1 高木朗充, 福井敬一, 山里平, 藤原健治, 加治屋秋実, 2010: 噴火準備期における伊豆大島の相対精密重力測定, *Pap. Met. Geophys.*, 61, 1-11, doi:10.2467/mripapers.61.1.

2 新堀敏基, 相川百合, 福井敬一, 橋本明弘, 清野直子, 山里平, 2010: 火山灰移流拡散モデルによる量的降灰予測―2009 年浅間山噴火の事例―, *Pap. Met. Geophys.*, 61, 13-29, doi:10.2467/mripapers.61.13.

藤井陽介

1 平井雅之, 石川一郎, 新保明彦, 曽我太三, 森浩俊, 藤井陽介, 松本聡, 安田珠幾, 2010: エルニーニョ予測システムの改良, *測候時報*, 77, S23-S34.

2* Fujii, Y., S. Matsumoto, M. Kamachi and S. Ishizaki, 2010: Estimation of the equatorial Pacific salinity field using ocean data assimilation system, *Adv. in Geosciences*, 18, 197-212.

3* Lee, T., T. Awaji, M. Balmaseda, N. Ferry, Y. Fujii, I. Fukumori, B. Giese, P. Heimbach, A. Kohl, S. Masina, E. Remy, A. Rosati, M. Schodlok, D. Stammer and A. Weaver, 2010: Consistency and fidelity of Indonesian- throughflow total volume transport estimated by 14 ocean data assimilation products, *Dyn. Atmos. Ocean.*, 50(2), 201-223, doi:10.1016/j.dynatmoce. 2009.12.004.

4 Fujii, Y., T. Nakaegawa, S. Matsumoto, T. Yasuda, G. Yamanaka and M. Kamachi,

成果発表

2010: Coupled model simulation by constraining ocean fields with ocean data through the JMA operational ocean data assimilation system, *Extended Abstract of International workshop on "Development of atmosphere- ocean coupled models towards improvement of long range forecast"*, 52-54.

藤部文昭 1* Fujibe, F. and K. Ishihara, 2010: Possible urban bias in gridded climate temperature data over the Japan area, *SOLA*, **6**, 61-64, doi:10.2151/sola.2010- 016.

2* Fujibe, F., 2010: Day-of-the-week variations and their long-term trends of urban temperature in Japan, *Theoretical and Applied Climatology*, **102**, 393-401.

3* 藤部文昭，2010: 極端な豪雨の再現期間推定精度に関する検討，*天気*，**57(7)**, 449-462.

4 藤部文昭, 2011: 日本の気候の長期変動と都市化 ―2010 年度日本気象学会賞受賞記念講演―, *天気*, **58**, 5-18.

5* Fujibe, F., 2011: Urban warming in Japanese cities and its relation to climate change monitoring, *Int. J. Climatol.*, **31**, 162-173, doi:10.1002/joc.2142.

保坂征宏 1 Yukimoto, S., H. Yoshimura, M. Hosaka, T. Sakami, H. Tsujino, M. Hirabara, T. Y. Tanaka, M. Deushi, A. Obata, H. Nakano, Y. Adachi, E. Shindo, S. Yabu, T. Ose and A. Kitoh, 2011: Meteorological Research Institute-Earth System Model Version 1 (MRI-ESM1) -Model Description-, *気象研究所技術報告*, **64**, 83pp.

星野俊介 1* Inoue, H. Y., K. Kusunoki, W. Kato, H. Suzuki, T. Imai, T. Takemi, K. Bessho, M. Nakazato, S. Hoshino, W. Mashiko, S. Hayashi, T. Fukuhara, T. Shibata, H. Yamauchi and O. Suzuki, 2011: Finescale Doppler Radar Observation of a Tornado and Low-Level Misocyclones within a Winter Storm in the Japan Sea Coastal Region, *Mon. Wea. Rev.*, **139**, 351–369 ,doi:10.1175/2010MWR 3247.1.

干場充之 1* Hoshiba, M., K. Ohtake, K. Iwakiri, T. Aketagawa, H. Nakamura and S. Yamamoto, 2010: How precisely can we anticipate seismic intensities? A study of uncertainty of anticipated seismic intensities for the Earthquake Early Warning method in Japan, *Earth Planets Space*, **62**, 611-620.

2 干場充之, 岩切一宏, 大竹和生, 2010: 経過時間に応じた P 波マグニチュード推定の補正―緊急地震速報への応用―, *第 13 回日本地震工学シンポジウム論文集*, 3043-3048.

3 岩切一宏, 干場充之, 中村浩二, 森川信之, 2010: 最大速度の距離減衰式に基づく経験的なサイト増幅特性を用いた緊急地震速報の震度予測の精度向上, *第 13 回日本地震工学シンポジウム論文集*, 4278-4283.

4 下山利浩, 平野和幸, 山田安之, 干場充之, 大竹和生, 岩切一宏, 2010: 緊急地震速報の発表状況、技術改良, *第 13 回日本地震工学シンポジウム論文集*, 4291- 4296.

5 大竹和生, 干場充之, 岩切一宏, 2010: 気象庁の緊急地震速報への OBS データの導入に関わる改良, *第 13 回日本地震工学シンポジウム論文集*, 4313-4317.

6* Iwakiri, K., M. Hoshiba, K. Nakamura and N. Morikawa, 2011: Improvement in the accuracy of expected seismic intensities for earthquake early warning in Japan using empirically estimated site amplification factors, *Earth Planets Space*, **63**, 57-69.

前田憲二 1 弘瀬冬樹, 前田憲二, 2010: 東海地域の割れ残りと長期スローイベントとの関係, *地震予知連絡会会報*, **84**, 547-549.

2 弘瀬冬樹, 前田憲二, 2011: 第５章　三次元数値モデルによる巨大地震発生シミュレーション　5.1.3.GPS データを用いた摩擦パラメータ（a-b）の推定, *気象研究所技術報告*, **63**, 255-265.

3 前田憲二, 弘瀬冬樹, 2011: 前震による確率予測－日本海溝沿い領域についてー, *地*

震予知連絡会会報, 85, 460-462.

4 弘瀬冬樹, 前田憲二, 2011: G-R 則および改良 G-R 則を用いた地震発生予測モデル― MGR モデル―, *地震予知連絡会会報*, 85, 437-439.

5* Hirose, F. and K. Maeda, 2011: Earthquake forecast models for inland Japan based on the G-R law and the modified G-R law, *Earth Planets Space*, 63, 239-260.

眞木貴史 1* Maki, T., M. Ikegami, T. Fujita, T. Hirahara, K. Yamada, K. Mori, A. Takeuchi, Y. Tsutsumi, K. Suda and T. J. Conway, 2010: New technique to analyse global distributions of CO_2 concentrations and fluxes from non-processed observational data, *Tellus B*, 62, 797-809, doi:10.1111/j.1600-0889.2010.00488.x.

2* Maki, T., T. T. Sekiyama, T. Y. Tanaka and M. Mikami, 2011: The Impact of Ground-based Observations on the Inverse Technique of Aeolian Dust Aerosol, *SOLA*, 7A, 21-24, doi:10.2151/sola.7A-006.

益子 渉 1* Inoue, H. Y., K. Kusunoki, W. Kato, H. Suzuki, T. Imai, T. Takemi, K. Bessho, M. Nakazato, S. Hoshino, W. Mashiko, S. Hayashi, T. Fukuhara, T. Shibata, H. Yamauchi and O. Suzuki, 2011: Finescale Doppler Radar Observation of a Tornado and Low-Level Misocyclones within a Winter Storm in the Japan Sea Coastal Region, *Mon. Wea. Rev.*, 139, 351–369 ,doi:10.1175/2010MWR3247.1.

2* Mashiko, W., 2011: Generation Mechanisms of Severe Winds and Tornadoes Associated with Typhoons, *東京大学博士学位論文*.

増田一彦 1* Ishimoto, H., Y. Zaizen, A. Uchiyama, K. Masuda and Y. Mano, 2010: Shape modeling of mineral dust particles for light-scattering calculations using the spatial Poisson-Voronoi tessellation, *Journal of Quantitative Spectroscopy & Radiative Transfer*, 111, 2434-2443, doi:10.1016/j.jqsrt.2010.06.018.

松枝秀和 1* Wada, A., S. Murayama, H. Kondo, H. Matsueda, Y. Sawa and K. Tsuboi, 2010: Development of a compact and sensitive electrostatic Radon-222 measuring system for use in atmospheric observation, *J. Meteor. Soc. Japan*, 88(2), 123-134, doi:10.2151/jmsj.2010-202.

2* Kulawik, S. S., D. B. A. Jones, R. Nassar, F. W. Irion, J. R. Worden, K. W. Bowman, T. Machida, H. Matsueda, Y. Sawa, S. C. Biraud, M. L. Fischer and A. R. Jacobsen, 2010: Characterization of Tropospheric Emission Spectrometer (TES) CO_2 for carbon cycle science, *Atmos. Chem. Phys. Discuss.*, 10, 5601-5623, doi:10.5194/acp-10-5601-2010.

3* Wunch, D., G. C. Toon, P. O. Wennberg, S. C. Wofsy, B. B. Stephens, M. L. Fischer, O. Uchino, J. B. Abshire, P. Bernath, S. C. Biraud, J.-F. L. Blavier, C. Boone, K. P. Bowman, E. V. Browell, T. Campos, B. J. Connor, B. C. Daube, N. M. Deutscher, M. Diao, J. W. Elkins, C. Gerbig, E. Gottlieb, D. W. T. Griffith, D. F. Hurst, R. Jiménez, G. Keppel-Aleks, E. A. Kort, R. Macatangay, T. Machida, H. Matsueda, F. Moore, I. Morino, S. Park, J. Robinson, C. M. Roehl, Y. Sawa, V. Sherlock, C. Sweeney, T. Tanaka and M. A. Zondlo, 2010: Calibration of the Total Carbon Column Observing Network using aircraft profile data, *Atmospheric Measurement Techniques*, 3, 1351-1362.

4* Araki, M., I. Morino, T. Machida, Y. Sawa, H. Matsueda, H. Ohyama, T. Yokota and O. Uchino, 2010: CO_2 Column-Averaged Volume Mixing Ratio Derived over Tsukuba from measurements by Commercial Airlines, *Atmos. Chem. Phys.*,10, 7659-7667, doi:10.5194/acp-10-7659-2010.

5* Ishijima, K., P. K. Patra, M. Takigawa, T. Machida, H. Matsueda, Y. Sawa, L. P.

成果発表

Steele, P. B. Krummel, R. L. Langenfelds, S. Aoki and T. Nakazawa, 2010: Stratospheric influence on the seasonal cycle of nitrous oxide in the upper troposphere as deduced from aircraft observations and model simulations, *J. Geophys. Res.*, **115**, D20308, doi:10.1029/2009JD013322.

6* Chevallier, F., P. Ciais, T. J. Conway, T. Aalto, B. E. Anderson, P. Bousquet, E. G. Brunke, L. Ciattaglia, Y. Esaki, M. Frohlich, A. J. Gomez-Peleaz, L. Haszpra, P. Krummel, R. Langenfelds, M. Leuenberger, T. Machida, F. Maignan, H. Matsueda, J. A. Morgui, H. Mukai, T. Nakazawa, P. Peylin, M. Ramonet, L. Rivier, Y. Sawa, M. Schmidt, P. Steele, S. A. Vay, A. T. Vermeulen, S. Wofsy and D. Worthy, 2010: CO_2 surface fluxes at grid point scale estimated from a global 21 year reanalysis of atmospheric measurments, *J. Geophys. Res.*, **115**, D21307, doi:10.1029/2010JD013887.

7* Nassar, R., D. B. A. Jones, P. Suntharalingam, J. M. Chen, R. J. Andres, K. J. Wecht, R. M. Yantosca, S. S. Kulawik, E. Bowman, J. R. Worden, T. Machida and H. Matsueda, 2010: Modeling global atmospheric CO_2 with improved emission inventories and CO_2 production from the oxidation of other carbon species, *Geoscientific Model Development*, **3**, 689-716.

8* Feng, L, P. I. Palmer, Y. Yang, R. M. Yanotosca, S. R. Kawa, J.-D. Paris, H. Matsueda and T. Machida, 2011: Evaluating a 3-D transport model of atmospheric CO_2 using ground-based, aircraft, and space-borne data, *Atmos. Chem. Phys.*, **11**, 2789-2803, doi:10.5194/acp-11-2789-2011.

9* Sakaizawa, D., S. Kawakamia, M. Nakajima, Y. Sawa and H. Matsueda, 2010: Ground-based demonstration of a CO_2 remote sensor using a 1.57μm differential laser absorption spectrometer with direct detection, *J. Appl. Remote Sens.* **4**, 043548, doi:10.1117/1.3507092.

真野裕三

1* Ishimoto, H., Y. Zaizen, A. Uchiyama, K. Masuda and Y. Mano, 2010: Shape modeling of mineral dust particles for light-scattering calculations using the spatial Poisson-Voronoi tessellation, *Journal of Quantitative Spectroscopy & Radiative Transfer*, **111**, 2434-2443, doi:10.1016/j.jqsrt.2010.06.018.

2* Sakai, T., Y. Zaizen, T. Nagai and Y. Mano, 2010: Backscattering linear depolarization ratio mesurements of mineral, sea-salt, and ammonium sulfate particles simulated in a laboratory chamber, *Applied Optics*, **49(23)**, 4441-4449, doi: 10.1364/AO.49.004441.

馬淵和雄

1 Mabuchi, K., 2011: A Numerical investigation of Changes in Energy and Carbon Cycle Balances under Vegetation Transition due to Deforestation in the Asian Tropical Region, *J. Meteor. Soc. Japan*, **89(1)**, 47-65.

三上正男

1* Maki, T., T. T. Sekiyama, T. Y. Tanaka and M. Mikami, 2011: The Impact of Ground-based Observations on the Inverse Technique of Aeolian Dust Aerosol, *SOLA*, **7A**, 21-24, doi:10.2151/sola.7A-006.

水田 亮

1* Matsueda, M., H. Endo and R. Mizuta, 2010: Future change in Southern Hemisphere summertime and wintertime atmospheric blockings simulated using a 20-km-mesh AGCM. *Geophys. Res. Lett.*, **37**, L02804, doi:10.1029/2009GL041758.

2* Kusunoki, S., R. Mizuta and M. Matsueda, 2011: Future changes in the East Asian rain band projected by global atmospheric models with 20-km and 60-km grid size, *Climate Dynamics*, doi:10.1007/s00382-011-1000-x.

緑川 貴

1 緑川貴, 北村佳照, 2010: 温暖化予測の鍵､海の CO_2 ―長期継続観測データに基づいた炭素循環変動の検出―, *日本海水学会誌*, **64**, 91-98.

2* Midorikawa, T., M. Ishii, S. Saito, D. Sasano, N. Kosugi, T. Motoi, H. Kamiya, A.

Nakadate, K.Nemoto and H. Y. Inoue, 2010: Decreasing pH trend estimated from 25-yr time series of carbonate parameters in the western North Pacific, *Tellus B*, **62**, 649-659, doi:10.1111/j.1600-0889.2010.0054.x.

3 Chiba, S., T. Hirawake, S. Ishizaki, S. Ito, H. Kamiya, M. Kaeriyama, A. Kuwata, T. Midorikawa, S. Minobe, S. Okamoto, Y. Okazaki, T. Ono, H. Saito, S. Saitoh, D. Sasano, K. Tadokoro, K. Takahashi, Y. Takatani, Y. Watanabe, Y. W. Watanabe, Y. Watanuki, O. Yamamura, N. Yamashita and A. Yatsu, 2010: Status and trends of the Oyashio region, 2003-2008, In: S.M. Mckinnell & M. Dag[Eds.], *Marine Ecosystems of the North Pacific Ocean*, **PICES Special Publication 4**, 300-329.

4* Takamura, T. R., H. Y. Inoue, T. Midorikawa, M. Ishii and Y. Nojiri, 2010: Seasonal and inter-annual variations in pCO_2^{sea} and air-sea CO_2 fluxes in mid-latitudes of the western and eastern North Pacific during 1999-2006: recent results utilizing voluntary observation ships. *J. Meteor. Soc. Japan*, **88**, 883-898.

村上茂教 1* Murakami, S., R. Ohgaito and A. Abe-Ouchi, 2011: Atmospheric Local Energetics and Energy Interactions between Mean and Eddy Fields. Part II: An Example for the Last Glacial Maximum Climate, *J. Atmos. Sci.*, **68(3)**, 533-552, doi:10.1175/2010JAS3583.1.

村上正隆 1* Kuba, N. and M. Murakami, 2010: Effect of hygroscopic seeding on warm rain clouds-numerical study using a hybrid cloud microphysical model, *Atoms. Chem. Phys.*, **10**, 3335-3351.

2* Misumi, R., A. Hashimoto, M. Murakami, N. Kuba, N. Orikasa, A. Saito, T. Tajiri, K. Yamashita and J. P. Chen, 2010: Microphysical structure of a developing convective snow cloud simurated by an improved version of the multi-dimensional bin model, *Atmospheric Science Letters*, **11**, 186-191, doi: 10.1002/asl.268.

3* Eito, H., M. Murakami, C. Muroi, T. Kato, S. Hayashi, H. Kuroiwa and M. Yoshizaki, 2010: The structure and formation mechanism of transversal cloud bands associated with the Japan-Sea Polar-Airmass Convergence Zone, *J. Meteor. Soc. Japan*, **88**, 625-648, doi:10.2151/jmsj.2010-402.

4* Yamada, Y., M. Murakami, H. Mizuno, M. Maki, S. Nakai and K. Iwanami, 2010: Kinematic and Thermodynamical Structures of Longitudinal-Mode Snow Bands over the Sea of Japan during Cold-Air Outbreaks Part I: Snow Bands in Large Vertical Shear Environment in the Band-Transverse Direction, *J. Meteor. Soc. Japan*, **88**, 673-718, doi:10.2151/jmsj.2010-404.

5* Saito, A., M. Murakami and T. Tanaka, 2011: Automated Continuous-Flow Thermal-Diffusion-Chamber Type Ice Nucleus Counter, *SOLA*, **7**, 29-32, doi:10.2151/sola.2011-008.

村崎万代 1* Murazaki, K., K. Kurihara and H. Sasaki, 2010: Dynamical Downscaling of JRA-25 Precipitation over Japan Using the MRI-Regional Climate Model, *SOLA*, **6**, 141-144, doi:10.2151/sola.2010-036.

村田昭彦 1 Murata, A., 2010: Precipitation efficiency in numerically simulated heavy rainfall associated with typhoons Man-Yi (2007) and Fitow (2007), *CAS/ JSC WGNE Research Activities in Atmospheric and Oceanic Modelling*, **40**, 5.15-5.16.

毛利英明 1* Mouri, H., 2010: Two-point velocity average of turbulence: Statistics and their implications, *Physics of Fluids*, **22**, 115110, doi:10.1063/1.3504376.

安田珠幾 1 Fujii, Y., T. Nakaegawa, S. Matsumoto, T. Yasuda, G. Yamanaka and M. Kamachi, 2010: Coupled model simulation by constraining ocean fields with ocean data

成果発表

through the JMA operational ocean data assimilation system, *Extended Abstract of International workshop on "Development of atmosphere- ocean coupled models towards improvement of long range forecast"*, 52-54.

2 平井雅之, 石川一郎, 新保明彦, 曽我太三, 森浩俊, 藤井陽介, 松本聡, 安田珠幾, 2010: エルニーニョ予測システムの改良, *測候時報*, 77, S23-S34.

籔 将吉 1 Yukimoto, S., H. Yoshimura, M. Hosaka, T. Sakami, H. Tsujino, M. Hirabara, T. Y. Tanaka, M. Deushi, A. Obata, H. Nakano, Y. Adachi, E. Shindo, S. Yabu, T. Ose and A. Kitoh, 2011: Meteorological Research Institute-Earth System Model Version 1 (MRI-ESM1) -Model Description-, *気象研究所技術報告*, 64, 83pp.

山内 洋 1* Inoue, H. Y., K. Kusunoki, W. Kato, H. Suzuki, T. Imai, T. Takemi, K. Bessho, M. Nakazato, S. Hoshino, W. Mashiko, S. Hayashi, T. Fukuhara, T. Shibata, H. Yamauchi and O. Suzuki, 2011: Finescale Doppler Radar Observation of a Tornado and Low-Level Misocyclones within a Winter Storm in the Japan Sea Coastal Region, *Mon. Wea. Rev.*, 139, 351–369 ,doi:10.1175/2010MWR3247.1.

山口宗彦 1 齊藤和雄, 國井勝, 原昌弘, 瀬古弘, 原旅人, 山口宗彦, 三好健正, 黄偉健, 2010: WWRP 北京オリンピック 2008 予報実証／研究開発プロジェクト, *気象研究所技術報告*, 62, 210pp.

2* Yamaguchi, M., and S. J. Majumdar, 2010: Using TIGGE data to diagnose initial perturbations and their growth for tropical cyclone ensemble forecasts, *Mon. Wea. Rev.*, 138, 3634–3655, doi:10.1175/2010MWR3176.1.

3* Miyoshi, T., T. Komori, H. Yonehara, R. Sakai, and M. Yamaguchi, 2010: Impact of resolution transform of the initial condition on typhoon track forecasts, *Weather and Forecasting*, 25, 1568-1573, doi:10.1175/2010WAF2222392.1.

4 榎本剛, 茂木耕作, 伊藤耕介, 吉田聡, 山口宗彦, 2011: THORPEX 研究連絡会第4回研究集会の報告, *天気*, 58, 245-248.

山崎明宏 1* Kudo, R., A. Uchiyama, A. Yamazaki, T. Sakami and O. Ijima, 2011: Decadal changes in aerosol optical thickness and single scattering albedo estimated from ground-based broadband radiometers: a case study in Japan, J. Geophys. Res., 116, D03207, doi:10.1029/2010JD014911.

3* Kobayashi, E., A. Uchiyama, A. Yamazaki and R. Kudo, 2010: Retrieval of aerosol optical properties based on the spherioid model, *J. Meteor. Soc. Japan*, 88, 847-856, doi: 10.2151/jmsj.2010-505.

4* Nakayama, T., R. Hagino, Y. Matsumi, Y. Sakamoto, M. Kawasaki, A. Yamazaki, A. Uchiyama, R. Kudo, N. Moteki, Y. Kondo and K. Tonokura, 2010: Measurements of aerosol optical properties in central Tokyo during summertime using cavity ring-down spectroscopy: comparison with conventioal techniques, *Atmos. Env.*, 44, 3034-3042, doi: 10.1016/j.atmosenv.2010.05.008.

5* Nakayama, T., Y. Matsumi, K. Sato, T. Imamura, A. Yamazaki and A. Uchiyama, 2010: Laboratory studies on optical properties of secondary organic aerosols generated during the photooxidation of toluene and the ozonolysis of α-pinene, *J. Geophys. Res.*, 115, D24204, doi:10.1029/2010JD 014387.

山里 平 1* 高木朗充, 福井敬一, 山里平, 藤原健治, 加治屋秋実, 2010: 噴火準備期における伊豆大島の相対精密重力測定, *Pap. Met. Geophys.*, 61, 1-11, doi: 10.2467/mripapers.61.1.

2* 新堀敏基, 相川百合, 福井敬一, 橋本明弘, 清野直子, 山里平, 2010: 火山灰移流拡散モデルによる量的降灰予測—2009 年浅間山噴火の事例—, *Pap. Met. Geophys.*, 61, 13-29, doi:10.2467/mripapers.61.13.

3 宮下誠, 中禮正明, 宇平幸一, 林 豊, 濱山弘明, 藤井敏嗣, 村上亮, 鵜川元雄, 白土正明, 山里平, 横田崇, 2011: 富士山の火山活動の監視 ―宝永噴火シナリオと火山情報―, *富士火山（改訂版）*, 日本火山学会, 441-449.

山田芳則 1* Yamada, Y., M. Murakami, H. Mizuno, M. Maki, S. Nakai and K. Iwanami, 2010: Kinematic and Thermodynamical Structures of Longitudinal-Mode Snow Bands over the Sea of Japan during Cold-Air Outbreaks Part I: Snow Bands in Large Vertical Shear Environment in the Band-Transverse Direction, *J. Meteor. Soc. Japan*, 88, 673-718, doi:10.2151/jmsj.2010-404.

山中吾郎 1* Ishizaki, H. and G. Yamanaka, 2010: Impact of explicit sun altitude in solar radiation on an ocean model simulations, *Ocean Modelling*, 33, 52-69, doi: 10.1016/j.ocemod.2009.12.002.

2* Hirabara, M., H. Ishizaki, G. Yamanaka, H. Tsujino and I. Ishikawa, 2010: Additional flux arising from unresolved scales in eddying ocean models, *Journal of Oceanography*, 66 (5), 633-647.

3 Fujii, Y., T. Nakaegawa, S. Matsumoto, T. Yasuda, G. Yamanaka and M. Kamachi, 2010: Coupled model simulation by constraining ocean fields with ocean data through the JMA operational ocean data assimilation system, *Extended Abstract of International workshop on "Development of atmosphere- ocean coupled models towards improvement of long range forecast"*, 52-54.

行本誠史 1 Yukimoto, S., H. Yoshimura, M. Hosaka, T. Sakami, H. Tsujino, M. Hirabara, T. Y. Tanaka, M. Deushi, A. Obata, H. Nakano, Y. Adachi, E. Shindo, S. Yabu, T. Ose and A. Kitoh, 2011: Meteorological Research Institute-Earth System Model Version 1 (MRI-ESM1) -Model Description-, *気象研究所技術報告*, 64, 83pp.

弓本桂也 1* Kim S.-B., K. Yumimoto, I. Uno and Y. Chun, 2011: Dust Model Intercomparison Between ADAM and CFORS/Dust For Asian Dust Case in 2007 (March 28 - April 3), *SOLA*, 7A, 25-28,doi:10.2151/sola.7A-007.

吉川澄夫 1* Katsumata, A., T. Yamamoto, A. Kobayashi, N. Hamada and S. Yoshikawa, 2010: Evaluation of Detection Level of Crustal Deformation Ovservation in the Time Domain Through Power Spectrum ―Analysis-investigation of a Long-Baseline Laser Extensometer―, *測地学会誌*, 56(3), 107-116.

吉田康宏 1 吉田康宏, 2011: 第２章　精密制御震源（アクロス）を用いた地殻活動モニタリング 2.1.アクロスの原理と解析方法　2.2.森町のアクロス送信装置概要　2.3.受信データ解析, *気象研究所技術報告*, 63, 88-148.

2* Kato, A., T. Iidaka, R. Ikuta, Y. Yoshida, K. Katsumata, T. Iwasaki, S. Sakai, C. Thurber, N. Tsumura, K. Yamaoka, T. Watanabe, T. Kunitomo, F. Yamazaki, M. Okubo, S. Suzuki and N. Hirata, 2010: Variations of fluid pressure within the subducting oceanic crust and slow earthquakes, *Geophys. Res. Lett.*, 37, L14310, doi:10.1029/2010GL043723.

吉村裕正 1 Yukimoto, S., H. Yoshimura, M. Hosaka, T. Sakami, H. Tsujino, M. Hirabara, T. Y. Tanaka, M. Deushi, A. Obata, H. Nakano, Y. Adachi, E. Shindo, S. Yabu, T. Ose and A. Kitoh, 2011: Meteorological Research Institute-Earth System Model Version 1 (MRI-ESM1) -Model Description-, *気象研究所技術報告*, 64, 83pp.

2* 荒川隆, 吉村裕正, 2010: 気候モデル MIROC における物理プロセスの結合と性能評価, *日本計算工学会論文集*, 2010, 20100006.

和田章義 1 Wada, A., Y. Kawai and N. Usui, 2010: Impacts of diurnally-varying sea-surface temperature on the predictions of Typhoon Hai-Tang in 2005. Part I.

成果発表

Intensity prediction, *CAS/JSC WGNE Research Activities in Atmospheric and Oceanic Modelling*, 40, 9.09-9.10.

2 Wada, A., Y. Kawai and N. Usui, 2010: Impacts of diurnally-varying sea-surface temperature on the predictions of Typhoon Hai-Tang in 2005. Part II. The impact on the theromodynamics field around Hai-Tang's center, *CAS/JSC WGNE Research Activities in Atmospheric and Oceanic Modelling*, 40, 9.11-9.12.

3 Wada, A. and N. Usui, 2010: The Influence of the variation of oceanic precondition on the prediction of Typhoon Hai-Tang in 2005, *CAS/JSC WGNE Research Activities in Atmospheric and Oceanic Modelling*, 40, 9.13-9.14.

4 Wada, A., N. Kohno and N. Usui, 2010: Formulation of the effect of breaking surface waves on entrainment and its impact on Typhoon Hai-Tang in.2005, *CAS/JSC WGNE Research Activities in Atmospheric and Oceanic Modelling*, 40, 9.15-9.16.

5* Wada, A., N. Kohno and Y. Kawai, 2010: Impact of Wave-Ocean Interaction on Typhoon Hai-Tang in 2005, *SOLA*, 6A, 13-16.

6* Wada, A and N. Usui, 2010: Impacts of oceanic preexisting conditions on predictions of Typhoon Hai-Tang in 2005, *Advances in Meteorology*, 2010, 756071, doi:10.1155/2010/756071.

7 Wada, A., 2010: Tropical Cyclone-Ocean Interaction: Numerical Studies, *Advances in Energy Research. Volume 1*, 1-67, NOVA Publishers, ISBN: 978-1-61668-994-0.

8 Wada, A., 2010: Tropical Cyclone-Ocean Interaction: Climatology, *Advances in Energy Research. Volume 1*, NOVA Publishers, 99-132, ISBN: 978-1-61668-994-0.

9 Shay, L. K., M. M. Ali, D. Barbary, E. A. D'Asaro, G. Halliwell, J. Doyle, C. Fairall, I. Ginis, I-I Lin, I-J Moon, P. Sandery, E. Uhlhorn, and A. Wada, 2010: Air-Sea Interface and Oceanic Influences, *Seventh International Workshop on Tropical Cyclones (IWTC-VII)*, WMO/TD-No.1561, 1.3.1- 1.3.48.