

# List of Publications

**Michael H. Montgomery**

Note: Titles of papers are [hyperlinked](#) to their NASA ADS abstracts

## Refereed Papers

[“The Physics of Crystallization From Globular Cluster White Dwarf Stars in NGC 6397,”](#) Winget, D. E., Kepler, S. O., Campos, F., **Montgomery, M. H.**, Girardi, L., Bergeron, P., & Williams, K., 2009, ApJ, 693, L6

[“2006 Whole Earth Telescope Observations of GD358: A New Look at the Prototype DBV,”](#) Provençal, J. L., **Montgomery, M. H.**, Kanaan, A., Shipman, H. L., Childers, D., Baran, A., Kepler, S. O., Reed, M., Zhou, A., Eggen, J., Watson, T. K., Winget, D. E., Thompson, S. E., Riaz, B., Nitta, A., Kleinman, S. J., Crowe, R., Slivkoff, J., Sherard, P., Purves, N., Binder, P., Knight, R., Kim, S. ., Chen, W.-P., Yang, M., Lin, H. C., Lin, C. C., Chen, C. W., Jiang, X. J., Sergeev, A. V., Mkrtchian, D., Andreev, M., Janulis, R., Siwak, M., Zola, S., Koziel, D., Stachowski, G., Paparo, M., Bognar, Z., Handler, G., Lorenz, D., Steininger, B., Beck, P., Nagel, T., Kusterer, D., Hoffman, A., Reiff, E., Kowalski, R., Vauclair, G., Charpinet, S., Chevreton, M., Solheim, J. E., Pakstiene, E., Fraga, L., & Dalessio, J., 2009, ApJ, 693, 564

[“Constraining the Surface Inhomogeneity and Settling Times of Metals on Accreting White Dwarfs,”](#) **Montgomery, M. H.**, Thompson, S. E., & von Hippel, T., 2008, ApJ, 685, L133

[“SDSS J142625.71+575218.3: A Prototype for a New Class of Variable White Dwarf,”](#) **Montgomery, M. H.**, Williams, K. A., Winget, D. E., Dufour, P., DeGennaro, S., & Liebert, J., 2008, ApJ, 678, L51

[“Strong Limits on the DFSZ Axion Mass with G117-B15A,”](#) Bischoff-Kim, A., **Montgomery, M. H.**, & Winget, D. E., 2008, ApJ, 675, 1512

[“Fine Grid Asteroseismology of G117-B15A and R548,”](#) Bischoff-Kim, A., **Montgomery, M. H.**, & Winget, D. E., 2008, ApJ, 675, 1505

[“What We Can Learn from the Light Curves of GD 358 and PG 1351+489,”](#) **Montgomery, M. H.**, 2008, Communications in Asteroseismology, 154, 38

[“Whole Earth Telescope observations of the hot helium atmosphere pulsating white dwarf EC20058-5234,”](#) Sullivan, D. J., Metcalfe, T. S., O’Donoghue, D., Winget, D. E., Kilkenny, D., van Wyk, F., Kanaan, A., Kepler, S. O., Nitta, A., Kawaler, S. D., **Montgomery, M. H.**, Nather, R. E., O’Brien, M. S., Bischoff-Kim, A., Wood, M., Jiang, X. J., Leibowitz, E. M., Ibbetson, P., Zola, S., Krzesinski, J., Pajdosz, G., Vauclair, G., Dolez, N., & Chevreton, M., 2008, MNRAS, 387, 137

[“The pulsation modes of the pre-white dwarf PG 1159-035,”](#) Costa, J. E. S., Kepler, S. O., Winget, D. E., O’Brien, M. S., Kawaler, S. D., Costa, A. F. M., Giovannini, O., Kanaan, A., Mukadam, A. S., Mullally, F., Nitta, A., Provençal, J. L., Shipman, H., Wood, M. A., Ahrens, T. J., Grauer, A., Kilic, M., Bradley, P. A., Sekiguchi, K., Crowe, R., Jiang, X. J., Sullivan, D., Sullivan, T., Rosen, R., Clemens, J. C., Janulis, R., O’Donoghue, D., Ogloza, W., Baran, A., Silvotti, R., Marinoni, S., Vauclair, G., Dolez, N., Chevreton, M., Dreizler, S., Schuh, S., Deetjen, J., Nagel, T., Solheim, J.-E., Gonzalez Perez, J. M., Ulla, A., Barstow, M., Burleigh, M., Good, S., Metcalfe, T. S., Kim, S.-L., Lee, H., Sergeev, A., Akan, M. C., Çakırlı, Ö., Paparo, M., Viraghalmy, G., Ashoka, B. N., Handler, G., Hürkal, Ö., Johannessen, F., Kleinman, S. J., Kalytis, R., Krzesinski, J., Klumpe, E., Larrison, J., Lawrence, T., Meištas, E., Martinez, P., Nather, R. E., Fu, J.-N.,

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*“Mapping Convection using Pulsating White Dwarf Stars,”* **Montgomery, M. H.**, 2007, *Communications in Asteroseismology*, 150, 253

*“Ensemble Characteristics of the ZZ Ceti Stars,”* Mukadam, A. S., **Montgomery, M. H.**, Winget, D. E., Kepler, S. O., & Clemens, J. C., 2006, *ApJ*, 640, 956

*“A New Technique for Probing Convection in Pulsating White Dwarf Stars,”* **Montgomery, M. H.**, 2005, *ApJ*, 633, 1142

*“DQ Herculis in Profile: Whole Earth Telescope Observations and Smoothed Particle Hydrodynamics Simulations of an Edge-on Cataclysmic Variable System,”* Wood, M. A., Robertson, J. R., Simpson, J. C., Kawaler, S. D., O’Brien, M. S., Nather, R. E., Winget, D. E., **Montgomery, M. H.**, Metcalfe, T. S., Jiang, X. J., Leibowitz, E. M., Ibbetson, P., O’Donoghue, D., Zoła, S., Krzesiński, J., Pajdosz, G., Vauclair, G., Dolez, N., Chevreton, M., Sullivan, D. J., Kanaan, A., & Nitta, A., 2005, *ApJ*, 634, 570

*“Atmospheric Oscillations in White Dwarfs: A New Indicator of Chromospheric Activity,”* Musielak, Z. E., Winget, D. E., & **Montgomery, M. H.**, 2005, *ApJ*, 630, 506

*“Binaries discovered by the SPY project. IV. Five single-lined DA double white dwarfs,”* Nelemans, G., Napiwotzki, R., Karl, C., Marsh, T. R., Voss, B., Roelofs, G., Izzard, R. G., **Montgomery, M. H.**, Reerink, T., Christlieb, N., & Reimers, D., 2005, *A&A*, 440, 1087

*“Whole Earth Telescope observations of BPM 37093: A seismological test of crystallization theory in white dwarfs,”* Kanaan, A., Nitta, A., Winget, D. E., Kepler, S. O., **Montgomery, M. H.**, Metcalfe, T. S., Oliveira, H., Fraga, L., da Costa, A. F. M., Costa, J. E. S., Castanheira, B. G., Giovannini, O., Nather, R. E., Mukadam, A., Kawaler, S. D., O’Brien, M. S., Reed, M. D., Kleinman, S. J., Provencal, J. L., Watson, T. K., Kilkenny, D., Sullivan, D. J., Sullivan, T., Shobbrook, B., Jiang, X. J., Ashoka, B. N., Seetha, S., Leibowitz, E., Ibbetson, P., Mendelson, H., Meišt̄as, E. G., Kalytis, R., Ališauskas, D., O’Donoghue, D., Buckley, D., Martinez, P., van Wyk, F., Stobie, R., Marang, F., van Zyl, L., Ogloza, W., Krzesiński, J., Zoła, S., Moskalik, P., Breger, M., Stankov, A., Silvotti, R., Piccioni, A., Vauclair, G., Dolez, N., Chevreton, M., Deetjen, J., Dreizler, S., Schuh, S., Gonzalez Perez, J. M., Østensen, R., Ulla, A., Manteiga, M., Suarez, O., Burleigh, M. R., & Barstow, M. A., 2005, *A&A*, 432, 219

*“New evolutionary models for massive ZZ Ceti stars. II. The effects of crystallization on their pulsational properties,”* Córscico, A. H., Althaus, L. G., **Montgomery, M. H.**, García-Berro, E., & Isern, J., 2005, *A&A*, 429, 277

*“Redefining the Empirical ZZ Ceti Instability Strip,”* Mukadam, A. S., Winget, D. E., von Hippel, T., **Montgomery, M. H.**, Kepler, S. O., & Costa, A. F. M., 2004, *ApJ*, 612, 1052

*“Testing White Dwarf Crystallization Theory with Asteroseismology of the Massive Pulsating DA Star BPM 37093,”* Metcalfe, T. S., **Montgomery, M. H.**, & Kanaan, A., 2004, *ApJ*, 605, L133

*“White Dwarf Envelopes: Further Results of a Non-local Model of Convection,”* **Montgomery, M. H.** & Kupka, F., 2004, *MNRAS*, 350, 267

*“A Strong Test of Electroweak Theory Using Pulsating DB White Dwarf Stars as Plasmon Neutrino Detectors,”* Winget, D. E., Sullivan, D. J., Metcalfe, T. S., Kawaler, S. D., & **Montgomery, M. H.**, 2004, *ApJ*, 602, L109

*“Observations of the Pulsating White Dwarf G 185-32,”* Castanheira, B. G., Kepler, S. O., Moskalik, P., Zola, S., Pajdosz, G., Krzesiński, J., O’Donoghue, D., Katz, M., Buckley, D., Vauclair, G., Dolez, N., Chevreton, M., Barstow, M. A., Kanaan, A., Giovannini, O., Provencal, J., Kawaler, S. D., Clemens, J. C., Nather, R. E., Winget, D. E., Watson, T. K., Yanagida, K., Dixon, J. S., Hansen, C. J., Bradley, P. A., Wood, M. A., Sullivan, D. J., Kleinman, S. J., Meistas, E., Solheim, J.-E., Bruvold, A., Leibowitz, E., Maze, T., Koester, D., & **Montgomery, M. H.**, 2004, *A&A*, 413, 623

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*“Probing the core and envelope structure of DBV white dwarfs,”* Metcalfe, T. S., **Montgomery, M. H.**, & Kawaler, S. D., 2003, *MNRAS*, 344, L88

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*“Is the helium in the variable DB white dwarfs  $^3\text{He}$ ?,”* Wolff, B., Koester, D., **Montgomery, M. H.**, & Winget, D. E., 2002, *A&A*, 388, 320

*“A-star Envelopes: a Test of Local and Non-local Models of Convection,”* Kupka, F. & **Montgomery, M. H.**, 2002, *MNRAS*, 330, L6

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*“The Effect of  $^3\text{He}$  Diffusion on the Pulsational Spectra of DBV Models,”* **Montgomery, M. H.**, Metcalfe, T. S., & Winget, D. E., 2001, *ApJ*, 548, L53

*“Normal modes and discovery of high-order cross-frequencies in the DBV white dwarf GD 358,”* Vuille, F., O’Donoghue, D., Buckley, D. A. H., Massacand, C.-M., Solheim, J.-E., Bard, S., Vauclair, G., Giovannini, O., Kepler, S. O., Kanaan, A., Provencal, J. L., Wood, M. A., Clemens, J. C., Kleinman, S. J., O’Brien, M. S., Nather, R. E., Winget, D. E., Nitta, A., Klumpe, E. W., **Montgomery, M. H.**, Watson, T. K., Bradley, P. A., Sullivan, D. J., Wu, K., Marar, T. M. K., Seetha, S., Ashoka, B. N., Mahra, H. S., Bhat, B. C., Babu, V. C., Leibowitz, E. M., Hemar, S., Ibbetson, P., Mashals, E., Meistas, E., Moskalik, P., Zola, S., Krzesiński, J., & Pajdosz, G., 2000, *MNRAS*, 314, 689

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*“30+ frequencies for the delta Scuti variable 4 Canum Venaticorum: results of the 1996 multisite campaign,”* Breger, M., Handler, G., Garrido, R., Audard, N., Zima, W., Paparó, M., Beichbuchner, F., Zhi-Ping,

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“*Delta Scuti and Related Stars*,” ed. M. Breger & **M. H. Montgomery**, 2000, volume 210 of *Astronomical Society of the Pacific Conference Series*

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O’Brien, M. S., Vauclair, G., Kawaler, S. D., Watson, T. K., Winget, D. E., Nather, R. E., **Montgomery, M. H.**, Nitta, A., Kleinman, S. J., Sullivan, D. J., Jiang, X. J., Marar, T. M. K., Seetha, S., Ashoka, B. N., Bhattacharya, J., Leibowitz, E. M., Hemar, S., Ibbetson, P., Warner, B., van Zyl, L., Moskalik, P., Zola, S., Pajdosz, G., Krzesinski, J., Dolez, N., Chevreton, M., Solheim, J.-E., Thomassen, T., Kepler, S. O., Giovannini, O., Provencal, J. L., Wood, M. A., & Clemens, J. C., 1998, *ApJ*, 495, 458

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“*Complex light variations of the “hybrid” PG 1159 star HS 2324+3944.*,” Handler, G., Kanaan, A., & **Montgomery, M. H.**, 1997, *A&A*, 326, 692

“*New Whole Earth Telescope observations of CD-24 7599: steps towards delta Scuti star seismology*,”

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*“Convection: A Seismological Perspective,”* **Montgomery, M. H.**, 2007, In Unsolved Problems in Stellar Physics: A Conference in Honor of Douglas Gough, ed. R. J. Stancliffe, G. Houdek, R. G. Martin, & C. A. Tout, volume 948. AIP, 99

*“Using Non-Sinusoidal Light Curves of Multi-Periodic Pulsators to Constrain Convection,”* **Montgomery, M. H.**, 2007, In Astronomical Society of the Pacific Conference Series, ed. A. Napiwotzki & M. R. Burleigh, volume 372 of *Astronomical Society of the Pacific Conference Series*, 635

*“The Hottest Known DBV White Dwarf,”* Sullivan, D. J., Metcalfe, T. S., O’Donoghue, D., Winget, D. E., Kilkenny, D., van Wyk, F., Kanaan, A., Kepler, S. O., Nitta, A., Kawaler, S. D., **Montgomery, M. H.**, Nather, R. E., Steeghs, D., Koester, D., Bergeron, P., O’Brien, M. S., Wood, M., Jiang, X. J., Leibowitz, E. M., Ibbetson, P., Zola, S., Krzesinski, J., Pajdosz, G., Vauclair, G., Dolez, N., & Chevreton, M., 2007, In Astronomical Society of the Pacific Conference Series, ed. A. Napiwotzki & M. R. Burleigh, volume 372 of *Astronomical Society of the Pacific Conference Series*, 629

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*“On the effect of a laterally varying surface boundary layer on the modes of stellar oscillation,”* **Montgomery, M. H.** & Gough, D. O., in preparation

*“The identification of low  $\ell$  pulsation modes from line profile variations,”* **Montgomery, M. H.**, in preparation

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