

List of Publications

Michael H. Montgomery

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

Refereed Papers

[“Asteroseismological analysis of the polluted ZZ Ceti star G 29-38 with TESS,”](#) Uzundag, M., De Gerónimo, F. C., Córscico, A. H., Silvotti, R., Bradley, P. A., **Montgomery, M. H.**, Catelan, M., Toloza, O., Bell, K. J., Kepler, S. O., Althaus, L. G., Kleinman, S. J., Kilic, M., Mullally, S. E., Gänsicke, B. T., Bąkowska, K., Barber, S., & Nitta, A., 2023, MNRAS

[“A New Mixing Paradigm for Phase Separation in Crystallizing White Dwarfs,”](#) **Montgomery, M. H.** & Dunlap, B. H., 2023, ApJ, submitted

[“Density measurements for the National Ignition Facility \(NIF\) opacity platform,”](#) Opachich, Y. P., Heeter, R. F., Johns, H. M., Dodd, E. S., Kline, J. L., Krashenninnikova, N. S., Mayes, D. C., **Montgomery, M. H.**, Winget, D. E., Urbatsch, T. J., & Perry, T. S., 2022, Review of Scientific Instruments, 93(11), 113515

[“Measuring He I Stark Line Shapes in the Laboratory to Examine Differences in Photometric and Spectroscopic DB White Dwarf Masses,”](#) Schaeuble, M. A., Nagayama, T., Bailey, J. E., Gigosos, M. A., Florido, R., Blouin, S., Gomez, T. A., Dunlap, B., **Montgomery, M. H.**, & Winget, D. E., 2022, ApJ, 940(2), 181

[“Quadratic Zeeman effect in hydrogen at 2-3 MG magnetic fields,”](#) Ivanov, V. V., Mancini, R. C., Huerta, N. A., Swanson, K. J., Winget, D. E., **Montgomery, M. H.**, Golovkin, I. E., Hariharan, H. K., & Berbel, Z. S., 2022, Phys. Rev. E, 106(4), 045206

[“Kepler and TESS Observations of PG 1159-035,”](#) Oliveira da Rosa, G., Kepler, S. O., Córscico, A. H., Costa, J. E. S., Hermes, J. J., Kawaler, S. D., Bell, K. J., **Montgomery, M. H.**, Provencal, J. L., Winget, D. E., Handler, G., Dunlap, B., Clemens, J. C., & Uzundag, M., 2022, ApJ, 936(2), 187

[“The Pulsating Helium-atmosphere White Dwarfs. I. New DBVs from the Sloan Digital Sky Survey,”](#) Vanderbosch, Z. P., Hermes, J. J., Winget, D. E., **Montgomery, M. H.**, Bell, K. J., Nitta, A., & Kepler, S. O., 2022, ApJ, 927(2), 158

[“Simulation of Stark-broadened Hydrogen Balmer-line Shapes for DA White Dwarf Synthetic Spectra,”](#) Cho, P. B., Gomez, T. A., **Montgomery, M. H.**, Dunlap, B. H., Axen, M. F., Hobbs, B., Hubeny, I., & Winget, D. E., 2022, ApJ, 927(1), 70

[“Hydrogen Line Shape Uncertainties in White Dwarf Model Atmospheres,”](#) **Montgomery, M. H.**, Dunlap, B. H., Cho, P. B., & Gomez, T. A., 2022, Frontiers in Astronomy and Space Sciences, 9

[“Pulsating hydrogen-deficient white dwarfs and pre-white dwarfs observed with TESS. III. Asteroseismology of the DBV star GD 358,”](#) Córscico, A. H., Uzundag, M., Kepler, S. O., Silvotti, R., Althaus, L. G., Koester, D., Baran, A. S., Bell, K. J., Bischoff-Kim, A., Hermes, J. J., Kawaler, S. D., Provencal, J. L., Winget, D. E., **Montgomery, M. H.**, Bradley, P. A., Kleinman, S. J., & Nitta, A., 2022, A&A, 659, A30

[“All-Order Full-Coulomb Quantum Spectral Line-Shape Calculations,”](#) Gomez, T. A., Nagayama, T., Cho, P. B., Zammit, M. C., Fontes, C. J., Kilcrease, D. P., Bray, I., Hubeny, I., Dunlap, B. H., **Montgomery, M. H.**, & Winget, D. E., 2021, Phys. Rev. Lett., 127, 235001

[“Identifying Periodic Variable Stars and Eclipsing Binary Systems with Long-term Las Cumbres Observatory Photometric Monitoring of ZTF J0139+5245,”](#) Sanghi, A., Vanderbosch, Z. P., & **Montgomery, M. H.**,

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“I Spy Transits and Pulsations: Empirical Variability in White Dwarfs Using Gaia and the Zwicky Transient Facility,” Guidry, J. A., Vanderbosch, Z. P., Hermes, J. J., Barlow, B. N., Lopez, I. D., Boudreaux, T. M., Corcoran, K. A., Bell, K. J., **Montgomery, M. H.**, Heintz, T. M., Castanheira, B. G., Reding, J. S., Dunlap, B. H., Winget, D. E., Winget, K. I., & Kuehne, J. W., 2021, ApJ, 912(2), 125

“On the Impact of ^{22}Ne on the Pulsation Periods of Carbon-Oxygen White Dwarfs with Helium-dominated Atmospheres,” Chidester, M. T., Timmes, F. X., Schwab, J., Townsend, R. H. D., Farag, E., Thoul, A., Fields, C. E., Bauer, E. B., & **Montgomery, M. H.**, 2021, ApJ, 910(1), 24

“The Pulsating White Dwarf G117-B15A: Still the Most Stable Optical Clock Known,” Kepler, S. O., Winget, D. E., Vanderbosch, Z. P., Castanheira, B. G., Hermes, J. J., Bell, K. J., Mullally, F., Romero, A. D., **Montgomery, M. H.**, DeGennaro, S., Winget, K. I., Chandler, D., Jeffery, E. J., Fritzen, J. K., Williams, K. A., Chote, P., & Zola, S., 2021, ApJ, 906(1), 7

“A White Dwarf with Transiting Circumstellar Material Far outside the Roche Limit,” Vanderbosch, Z., Hermes, J. J., Dennihy, E., Dunlap, B. H., Izquierdo, P., Tremblay, P. E., Cho, P. B., Gänsicke, B. T., Toloza, O., Bell, K. J., **Montgomery, M. H.**, & Winget, D. E., 2020, ApJ, 897(2), 171

“Limits on Mode Coherence in Pulsating DA White Dwarfs Due to a Nonstatic Convection Zone,” **Montgomery, M. H.**, Hermes, J. J., Winget, D. E., Dunlap, B. H., & Bell, K. J., 2020, ApJ, 890(1), 11

“Illuminating White Dwarf Spectra through Laboratory Experiments at Cosmic Conditions,” Winget, D. E., **Montgomery, M. H.**, Dunlap, B. H., Cho, P. B., Schaeuble, M. A., & Gomez, T. A., 2020, High Energy Density Physics, 37, 100853

“TESS first look at evolved compact pulsators. Asteroseismology of the pulsating helium-atmosphere white dwarf TIC 257459955,” Bell, K. J., Córscico, A. H., Bischoff-Kim, A., Althaus, L. G., Bradley, P. A., Calcaferro, L. M., **Montgomery, M. H.**, Uzundag, M., Baran, A. S., Bognár, Z., Charpinet, S., Ghasemi, H., & Hermes, J. J., 2019, A&A, 632, A42

“ $H\beta$ and $H\gamma$ Absorption-line Profile Inconsistencies in Laboratory Experiments Performed at White Dwarf Photosphere Conditions,” Schaeuble, M. A., Nagayama, T., Bailey, J. E., Gomez, T. A., **Montgomery, M. H.**, & Winget, D. E., 2019, ApJ, 885(1), 86

“GD358: Three Decades of Observations for the In-depth Asteroseismology of a DBV Star,” Bischoff-Kim, A., Provencal, J. L., Bradley, P. A., **Montgomery, M. H.**, Shipman, H. L., Harrold, S. T., Howard, B., Strickland, W., Chandler, D., Campbell, D., Arredondo, A., Linn, R., Russell, D. P., Doyle, D., Brickhouse, A., Peters, D., Kim, S.-L., Jiang, X. J., Mao, Y.-N., Kusakin, A. V., Sergeev, A. V., Andreev, M., Velichko, S., Janulis, R., Pakstiene, E., Aliçavuş, F., Horoz, N., Zola, S., Ogłóza, W., Koziel-Wierzbowska, D., Kundera, T., Jableka, D., Debski, B., Baran, A., Meingast, S., Nagel, T., Loebing, L., Heintz, C., Hoyer, D., Bognár, Z., Castanheira, B. G., & Erdem, A., 2019, ApJ, 871, 13

“Wandering near the red edge: photometric observations of three cool ZZ Ceti stars,” Bognár, Z., Papporó, M., Sódor, Á., Jenei, D. I., Kalup, C., Bertone, E., Chavez-Dagostino, M., **Montgomery, M. H.**, Gyórfy, Á., Molnár, L., Ollé, H., Pápics, P. I., Plachy, E., & Verebelyi, E., 2019, MNRAS, 482(3), 4018-4031

“Molecular nucleation theory of dust formation in core-collapse supernovae applied to SN 1987A,” Sluder, A., Milosavljević, M., & **Montgomery, M. H.**, 2018, MNRAS, 480, 5580-5624

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“*Matrix Methods for Solving Hartree-Fock Equations in Atomic Structure Calculations and Line Broadening*,” Gomez, T., Nagayama, T., Fontes, C., Kilcrease, D., Hansen, S., **Montgomery, M.**, & Winget, D., 2018, Atoms, 6, 22

“*Mixing and overshooting in surface convection zones of DA white dwarfs: first results from ANTARES*,” Kupka, F., Zaussinger, F., & **Montgomery, M. H.**, 2018, MNRAS, 474, 4660-4671

“*White dwarf variability with gPhoton: pulsators*,” Tucker, M. A., Fleming, S. W., Pelisoli, I., Romero, A., Bell, K. J., Kepler, S. O., Caton, D. B., Debes, J., **Montgomery, M. H.**, Thompson, S. E., Koester, D., Million, C., & Shiao, B., 2018, MNRAS, 475, 4768-4780

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“*Pruning The ELM Survey: Characterizing Candidate Low-mass White Dwarfs through Photometric Variability*,” Bell, K. J., Gianninas, A., Hermes, J. J., Winget, D. E., Kilic, M., **Montgomery, M. H.**, Castanheira, B. G., Vanderbosch, Z., Winget, K. I., & Brown, W. R., 2017, ApJ, 835, 180

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“An experimental platform for creating white dwarf photospheres in the laboratory: Preliminary results,” **Montgomery, M. H.**, Falcon, R. E., Rochau, G. A., Bailey, J. E., Gomez, T. A., Carlson, A. L., Bliss, D. E., Nagayama, T., Stein, M., & Winget, D. E., 2015, High Energy Density Physics, 17, 168

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“Photometric Variability in a Warm, Strongly Magnetic DQ White Dwarf, SDSS J103655.39+652252.2,” Williams, K. A., Winget, D. E., **Montgomery, M. H.**, Dufour, P., Kepler, S. O., Hermes, J. J., Falcon, R. E., Winget, K. I., Bolte, M., Rubin, K. H. R., & Liebert, J., 2013, ApJ, 769, 123

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