Karen Pardos Olsen, Ph.D.

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Employment History

2019 – · · · · **Postdoctoral researcher** Steward Observatory, University of Arizona, Tucson, US. PI on a 2-year NASA ADAP proposal titled "Archival Herschel spectroscopy of star-forming galaxies in the light of multi-phase ISM galaxy simulations".

2018 – 2019 **Postdoctoral researcher** Technical University of Denmark, Roskilde, Denmark. Created a new method to quantify the power system flexibility requirements imposed by increased wind and solar power production. Lead the technical assessment of wind and solar installations at a large-scale agricultural business.

2015 – 2018 **Postdoctoral researcher** School of Earth and Space Exploration, Arizona State University, Tempe, US. Achieved and held a 3-year prize Exploration fellowship to develop and publish an astrophysical code that simulates observations. Organized a 3-day conference.

Education

2011 – 2015 **Ph.D., Copenhagen University** in Astrophysics.
Thesis title: *Observing and Simulating Galaxy Evolution - from X-ray to Millimeter Wavelengths.*

2009 – 2011 **M.Sc., Copenhagen University** in Physics.

2005 – 2009 **B.Sc., University of Aarhus** in Physics.

Research Publications

1. Leung, T. K. D., Olsen, K. P., Somerville, R. S., Dave, R., Greve, T. R., Hayward, C. C., Narayanan, D., & Popping, G. (2020). Predictions of the L[CII] – SFR and [CII] Luminosity Function at the Epoch of Reionization. *arXiv e-prints*, arXiv 2004.11912, arXiv:2004.11912.

2. Olsen, K. P., Zong, Y., You, S., Bindner, H., Koivisto, M., & Gea-Bermúdez, J. (2020). Multi-timescale data-driven method identifying flexibility requirements for scenarios with high penetration of renewables. *Applied Energy*, *264*, 114702.
https://doi.org/https://doi.org/10.1016/j.apenergy.2020.114702

3. Olsen, K., Pallottini, A., Wofford, A., Chatzikos, M., Revalski, M., Guzmán, F., Popping, G., Vázquez-Semadeni, E., Magdis, G., Richardson, M., Hirschmann, M., & Gray, W. (2018). Challenges and Techniques for Simulating Line Emission. *Galaxies*, *6*(4), arXiv 1808.08251, 100.
https://doi.org/10.3390/galaxies6040100

4. Olsen, K., Greve, T. R., Narayanan, D., Thompson, R., Davé, R., Niebla Rios, L., & Stawinski, S. (2017). SÍGAME Simulations of the [CII], [OI], and [OIII] Line Emission from Star-forming Galaxies at z $\simeq$ 6. *ApJ*, *846*(2), arXiv 1708.04936, 105. https://doi.org/10.3847/1538-4357/aa86b4

5. Olsen, K. P., Greve, T. R., Brinch, C., Sommer-Larsen, J., Rasmussen, J., Toft, S., & Zirm, A. (2016). SImulator of GAlaxy Millimetre/submillimetre Emission (SÍGAME): CO emission from massive z = 2 main-sequence galaxies. *MNRAS*, *457*(3), arXiv 1507.00012, 3306–3333.
https://doi.org/10.1093/mnras/stw162

6 Olsen, K. P., Greve, T. R., Narayanan, D., Thompson, R., Toft, S., & Brinch, C. (2015). Simulator of Galaxy Millimeter/Submillimeter Emission (SíGAME): The [C ii]-SFR Relationship of Massive z = 2 Main Sequence Galaxies. *ApJ*, *814*(1), arXiv 1507.00362, 76. https://doi.org/10.1088/0004-637X/814/1/76

7 Olsen, K. P., Rasmussen, J., Toft, S., & Zirm, A. W. (2013). Evidence for Widespread Active Galactic Nucleus Activity among Massive Quiescent Galaxies at z ~2. *ApJ*, *764*(1), arXiv 1212.1158, 4. https://doi.org/10.1088/0004-637X/764/1/4

Skills

Languages	Danish - native.
	English - fluent in speaking and writing.
	Spanish - fluent in speaking and writing.
Coding	Python, MATLAB, SQL, html
Writing	LaTeX, OpenOffice, Pages
Operating Systems	Linux, Mac OS X, Windows
Misc.	Academic research, supervising undergrad students, outreach and publishing.