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Dancing with the stars

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Curriculum Vitae

Joshua George Albert was born in London, Ontario, Canada on 27 April, 1990 and grew up in the small town of Ingersoll, Ontario. In June 2008 he graduated from Ingersoll District Collegiate Institute. He had applied for an engineering degree at University of Toronto and was denied, however he was offered to enter the mathematics and physics programs. In September 2008 Josh began an Honours Bachelor of Science in Physics at the University of Toronto Scarborough Campus, and graduated in June, 2013. In the summer of 2010 – 2012 he undertook extracurricular projects which expanded his interests. The most formative research project was in the summer of 2011 when he spent two months at the Giant Metrewave Radio Telescope, 80km north of Pune, India, where he was first exposed to radio astronomy research. During this time his work on radio frequency interference mitigation earned him his first co-authorship. In the fifth year of his Bachelor he took a number of auxiliary graduate level physics courses,



which lead him to choose astronomy as an academic path, and ultimately to apply to Leiden University for a Master of Science in astronomy. In September 2013 Josh began his Master of astronomy at Leiden University. His first Master thesis was on the topic of radio astronomy and galaxy clusters, and his second Master thesis was on the topic of predicting the future detection of hyper-velocity stars with Gaia. In August 2015 he graduated from the M.Sc. and began a Ph.D. at Leiden Observatory. During this time he focused on the problem of ionosphere calibration in radio interferometric data. An updated list of publications can be found at <https://orcid.org/0000-0001-5327-3705>.

List of Publications

- J. G. Albert, R. J. van Weeren, H. T. Intema, and H. J. A. Röttgering. On the feasibility of probabilistic direction-dependent ionospheric screens for LoTSS. (*in preparation*).
- J. G. Albert, C. Sifón, A. Stroe, F. Mernier, H. T. Intema, H. J. A. Röttgering, and G. Brunetti. Complex diffuse emission in the $z = 0.52$ cluster PLCK G004.5-19.5. *A&A*, 607:A4, October 2017. doi: 10.1051/0004-6361/201730496.
- J. G. Albert, M. S. S. L. Oei, R. J. van Weeren, H. T. Intema, and H. J. A. Röttgering. A probabilistic approach to direction-dependent ionospheric calibration. *A&A*, 633:A77, Jan 2020a. doi: 10.1051/0004-6361/201935668.
- J. G. Albert, R. J. van Weeren, H. T. Intema, and H. J. A. Röttgering. Probabilistic direction-dependent ionospheric calibration for LOFAR-HBA. *A&A*, 635:A147, March 2020b. doi: 10.1051/0004-6361/201937424.
- T. Marchetti, O. Contigiani, E. M. Rossi, J. G. Albert, A. G. A. Brown, and A. Sesana. Predicting the hypervelocity star population in Gaia. *MNRAS*, 476:4697–4712, June 2018. doi: 10.1093/mnras/sty579.
- Gregory Paciga, Joshua G. Albert, Kevin Bandura, Tzu-Ching Chang, Yashwant Gupta, Christopher Hirata, Julia Odegova, Ue-Li Pen, Jeffrey B. Peterson, Jayanta Roy, J. Richard Shaw, Kris Sigurdson, and Tabitha Voytek. A simulation-calibrated limit on the H I power spectrum from the GMRT Epoch of Reionization experiment. *MNRAS*, 433(1):639–647, July 2013. doi: 10.1093/mnras/stt753.

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Kim, Jit, Alex, my academic siblings, thank you for your companionship and shared struggle. In fact, to all of the Sterrewacht, thank you for providing a great place to work. There is a strong sense of community at the STRW, a place of friendly faces and good conversation. Where one can find intellect, anecdote, and jokes. It's a place one wants to work (except in the summer months in the Oort building because there's no A/C) and that is something that I'll take with me when I create work spaces of my own.

Next to my Ph.D. was, most importantly, the support, love, and patience of my friends and family. My tribe in all honesty. You are all so smart, beautiful, happy, and funny, and I'm so lucky to have you.

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¹Leap year in Dutch.