

MEREL VAN 'T HOFF

PhD student, Leiden Observatory

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EDUCATION

- 10.2015 - now **PhD Astronomy**, Leiden University, Leiden, NL
Huygens Fellowship
Supervisors: Dr. John Tobin & Prof. Ewine van Dishoeck
Chemistry in embedded disks: setting the stage for planet formation
- 2012 - 2015 **MSc Astronomy**, Leiden University, Leiden, NL (cum laude)
• Research project supervised by Prof. Ignas Snellen:
Assessment of the false positive rate of Kepler planet candidates
• Thesis project supervised by Dr. Mihkel Kama, Dr. Catherine Walsh & Prof. Ewine van Dishoeck:
Tracing the CO snowline in protoplanetary disks with N_2H^+
- 2007 - 2012 **BSc Astronomy**, Leiden University, Leiden, NL
• Research course including four nights observing with the Isaac Newton Telescope, La Palma.
• Research project at MPA, Garching, supervised by Prof. Henk Spruit: *Kinematic simulation of a magnetic field in a turbulent flow*
- 2011 - 2015 **MSc Life Science & Technology**, Leiden University, Leiden, NL (summa cum laude)
- 2006 - 2012 **B.Sc. Life Science & Technology**, Leiden University, Leiden, NL and Delft University of Technology, Delft, NL (cum laude)

ADDITIONAL EDUCATION & TRAINING

- Summer school **IRAM Interferometry summer school** (2016)
Bad Honnef summer school: 'Extrasolar planets: their formation and evolution' (2016)
NOVA Fall school: soft skills and advance course on ISM physics (2015)
- Training **ALMA data reduction training day** (2017)
- Soft skills **Speed reading** (2018)
NOVA 3rd year PhD weekend: communication, presentation and job application (2017)
Communication in science: presenting and writing (2017)
Effective communication: generic communication (2017)
Time management (2017)
Ethics course 'On being a scientist' (2016)

EXPERTISE & SKILLS

Observations	(Sub-)mm interferometry (ALMA , NOEMA) and single dish (IRAM-30m). Data reduction in CASA and GILDAS .
Models	Radiative transfer modeling (LIME , RADEX , RATRAN) Physical-chemical modeling of protoplanetary disks (DALI) Modeling of small chemical networks
Programming	Python, IDL, R, C (basic), C++ (basic), MatLab (basic)
Software	LaTeX, Microsoft Office, Adobe Photoshop and Illustrator, Inkscape
Languages	Dutch (native), English (fluent), German (basic)

TEACHING & SUPERVISION

09.2018 - now	Co-supervision of the Master's thesis project of Margot Leemker (main advisor: Prof. Ewine van Dishoeck)
2016, 2018	Teaching assistant for the Master's course Astrochemistry
2008, 2009, 2013	Teaching assistant for several Bachelor's and Master's lab courses on biochemistry, genetics, microscopy and image processing

AWARDS & GRANTS

2015 - now	Huygens PhD Fellowship , Leiden Observatory, Leiden, NL Poster prizes
2018	• Star and Planet Formation in the Southwest (Oracle, AZ, USA)
2017	• IAU 332: Astrochemistry VII (Puerto Varas, Chile)
2016	• Bad Honnef summer school (Bad Honnef, Germany)
2016	Award for 'best slide design and visuals' for my talk on the Leiden Observatory Science Day
	Accepted observing proposals as PI
2018	• ALMA Cycle 6 C-priority (10 hr; 2018.1.00863.S) <i>Chemistry unveils the physics of embedded disks.</i>
	• ALMA Cycle 6 C-priority (3.5 hr; 2018.1.01062.S) <i>Calibrating the CO snowline measuring stick.</i>
	• ALMA Cycle 6 C-priority (5 hr; 2018.1.01510.S) <i>Hot or cold? Characterizing the temperature structure of young disks in Perseus.</i>
2017	• ALMA Cycle 5 B-priority (10 hr; 2017.1.01413.S) <i>Chemistry unveils the physics of embedded disks.</i>
	• ALMA Cycle 5 B-priority (7.5 hr; 2017.1.01371.S) <i>Imaging the water snowline in low-mass protostellar cores.</i>
	Accepted observing proposals as co-I
2016 - 2018	• ALMA A-priority: 2 proposals (23 hr total) • ALMA B-priority: 2 proposals (9 hr total) • ALMA C-priority: 7 proposals (86 hr total)

SERVICES

- 2016, 2017 Co-organizer of the first-year PhD weekend, and PhD interview days at Leiden Observatory
- 2009 - 2010 Co-organizer of a symposium with international speakers for 350 Life Science & Technology students
- 2007 - 2016 Chairman and committee member of multiple committees at a rowing club (ALSRV Asopos de Vliet)

CONFERENCES & TALKS

- 09.2018 7th National Capital Area Disk Meeting – **Contributed talk**
- 07.2018 COSPAR 2018 – **Contributed talk**
- 07.2018 Astrochemistry: past, present & future – **Contributed talk**
- 05.2018 Dutch Astronomy Conference – **Contributed talk**
- 03.2018 Star and Planet Formation in the Southwest – **Poster** (prize)
- 02.2018 Water Workshop Zurich – **Contributed talk**
- 02.2018 Disks & Planets group meeting Amsterdam – **Invited talk**
- 07.2017 Disk workshop Leiden – **Invited talk**
- 03.2017 IAU 332: Astrochemistry VII – **Contributed talk & Poster** (prize)
- 02.2017 Dutch NOVA Network II meeting – **Contributed talk**
- 11.2016 European Conference on Laboratory Astrophysics – **Poster**
- 09.2016 Leiden Observatory Science Day – **Invited talk**
- 08.2016 Star Formation 2016, Exeter – **Poster**
- 04.2016 Workshop on Young Solar Systems, Sant Cugat

OUTREACH & GENDER EQUALITY ACTIVITIES

- 2017 - now Organization of Astronomy on Tap, a monthly event in a bar with two astronomy talks and astronomy related quizzes (± 150 attendees). We also organize activities at other (scientific) events.
- 2016 Organization Dutch Astronomy Olympiade for high school students.
- 10.2018 Short talk at the Leiden Science Family Day
- 06.2018 Short talk at the Leiden Old Observatory during Museum night
- 11.2017 Short talk at the open day of the Leiden Old Observatory
- 11.2017 Role model at Physics Ladies' Day for high school students
- 08.2017 Invited talk at Astronomy on Tap (<http://bit.ly/astronomyontap>)
- 11.2016 Talk about 'being a PhD student' at the Master's open day Leiden
- 11.2015 Volunteer at open day of the Leiden Old Observatory
- 10.2015 Talk for high school students visiting Leiden University

NON-ACADEMIC INTERESTS

Reading, traveling, photography, and crafts

PUBLICATION LIST

First author

4. Methanol and its relation to the water snowline in the disk around the young outbursting star V883 Ori.
[van 't Hoff, M.L.R.](#), Tobin, J.J., Trapman, L., Harsono, D., Sheehan, P.D., Fischer, W.J., Megeath, S.T., & van Dishoeck, E.F. 2018, *ApJL*, 864, L23
3. Unveiling the physical conditions of the youngest disk. A warm embedded disk in L1527.
[van 't Hoff, M.L.R.](#), Tobin, J.J., Harsono, D., & van Dishoeck, E.F. 2018, *A&A*, 615, A83
2. Imaging the water snowline in a protostellar envelope with H^{13}CO^+ .
[van 't Hoff, M.L.R.](#), Persson, M.V., Harsono, D., Taquet, V., Jørgensen, J.K., Visser, R., Bergin, E.A., & van Dishoeck, E.F. 2018, *A&A*, 613, A29
1. Robustness of N_2H^+ as tracer of the CO snowline.
[van 't Hoff, M.L.R.](#), Walsh, C., Kama, M., Facchini, S., & van Dishoeck, E.F. 2017, *A&A*, 599, A101

Co-author

2. Linking interstellar and cometary O_2 : a deep search for $^{16}\text{O}^{18}\text{O}$ in the solar-type protostar IRAS 16293-2422.
Taquet, V., van Dishoeck, E.F., Swayne, M., Harsono, D., Jørgensen, J.K., Maud, L., Ligterink, N.F.W., Müller, H.S.P., Codella, C., Altwegg, K., Bieler, A., Coutens, A., Drozdovskaya, M.N., Furuya, K., Persson, M.V., [van 't Hoff, M.L.R.](#), Walsh, C., & Wampfler, S.F. 2018, *A&A*, 618, A11
1. First detection of methanol in a protoplanetary disk.
Walsh, C., Loomis, R.A., Öberg, K.I., Kama, M., [van 't Hoff, M.L.R.](#), Millar, T.J., Aikawa, Y., Herbst, E., Widicus Weaver, S.L., & Nomura, H. 2016, *ApJL*, 823, L10

Conference proceedings

2. Imaging the water snowline in protostellar envelopes.
[van 't Hoff, M.L.R.](#) 2018, in *Astrochemistry VII: Through the cosmos from galaxies to planets*, IAU Symposium 332, ed. M. Cunningham, T. Millar & Y. Aikawa (Cambridge Univ. Press, Cambridge), p. 88
1. Unveiling the physical and chemical conditions in the young disk around L1527.
[van 't Hoff, M.L.R.](#), Tobin, J.J., Harsono, D., & van Dishoeck, E.F. 2018, in *Astrochemistry VII: Through the cosmos from galaxies to planets*, IAU Symposium 332, ed. M. Cunningham, T. Millar & Y. Aikawa (Cambridge Univ. Press, Cambridge), p. 121