

# Curriculum Vitae: Eva Sofia Wirström

*Current employer:*

*Department of Space, Earth and Environment, Chalmers University of Technology, Göteborg, Sweden*

**Gender** Female  
**Date of Birth** February 9, 1977  
**Country of Origin** Sweden  
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## Academic positions

**Associate professor (Docent)** **November 2020–present**  
Dep. of Space, Earth and Environment, Chalmers University of Technology, Sweden

**Head of Onsala Space Observatory division and Deputy Director of Onsala Space Observatory** **December 2018–present**  
Dep. of Space, Earth and Environment, Chalmers University of Technology, Sweden

**Senior researcher (Oavlönad docent)** **July 2017–Oct 2020**  
Dep. of Space, Earth and Environment, Chalmers University of Technology, Sweden

**Assistant Professor** **February 2013–June 2017**  
Dep. of Earth and Space Sciences, Chalmers University of Technology, Sweden

**Doctor (Postdoc)** **August 2012–January 2013**  
Dep. of Earth and Space Sciences, Onsala Space Observatory, Chalmers University of Technology, Sweden

**Research associate (Postdoc)** **July 2010–June 2012**  
NASA Goddard SFC/Catholic University of America, Washington DC, USA

**Research engineer** **February 2010–June 2010**  
Onsala Space Observatory, Department of Radio and Space Science, Chalmers University of Technology, Göteborg, Sweden

**PhD position** **March 2003–January 2010**  
Onsala Space Observatory, Department of Radio and Space Science, Chalmers University of Technology, Göteborg, Sweden

## Funding awarded

**Swedish National Space Board** **2017–2022**  
PI. Total 8.5 MSEK funding for Swedish science support for the SWI instrument on ESAs JUICE mission to Jupiter, as part of a long-term plan for support throughout the mission until 2034.

**Swedish National Space Board** **2015–2016**  
co-I, PI D. Murtagh. Total 430 kSEK funding for Swedish science support for the SWI instrument on ESAs JUICE mission to Jupiter.

**Swedish National Space Board - Assistant professor** **2013–2016**  
PI, personal. Total 4.4 MSEK funding for project *Interstellar chemistry with Herschel*.

**NASA Herschel data analysis (DA) funding** **2012**  
Total 34 640 USD for two PI'd HIFI proposals. Funding bound to US-based co-I.

## Education

- Chalmers leadership courses** **2019**  
*Arbetsmiljö, Lönesättning och lönerevision, Att hålla effektiva medarbetaresamtal*
- Chalmers Leadership Development program nr 14** **2019**  
5 × two days programme for Chalmers leaders.
- Diploma of Higher Education** **2018**  
Pedagogical diploma offered at Chalmers University of Technology, including 12 HP of pedagogical courses.
- Leadership Development training for Assistant Professors** **2014**  
Completed the Chalmers tailored program aiming at supporting participants to become critical independent researchers at the highest international level.
- PhD in Electrical engineering/Radioastronomy** **March 2010**  
Department of Radio and Space Science, Chalmers University of Technology, Göteborg, Sweden  
Thesis title: *Astrochemistry at Millimetre and Submillimetre Wavelengths*  
Supervisor: Prof. John H. Black
- Licentiate of Engineering** **March 2006**  
Department of Radio and Space Science, Chalmers University of Technology, Göteborg, Sweden. Report title: *Studies in Molecular Astrophysics and Astrobiology*
- MSc in Engineering Physics, Astronomy and Astrophysics** **February 2003**  
Chalmers University of Technology, Göteborg, Sweden  
Masters thesis title: *CO in the Starburst Galaxy NGC 2146*  
Supervisor: Dr. Susanne Aalto
- High school Diploma in Natural Sciences** **May 1996**  
Rinmansskolan, Eskilstuna, Sweden

## Teaching (in selection)

- Fall 2021**  
Main lecturer and examiner for Nautical Mathematics and Physics ('Nautisk matematik och fysik', code SJM002), Chalmers University of Technology
- Spring 2021**  
Teaching assistant in "Tekniskt basår" Physics B (code LMA538 and SEE095), Chalmers University of Technology
- February 2018**  
Invited lecturer for a course on galactic molecules ('Galaktiska molekyler') at the Senior University ('Senioruniversitetet') in Stockholm.
- Falls 2013, 14, 15, 16, 17**  
Main lecturer and examiner for Planetary Physics ('Planeternas Fysik', code RRY120), Bachelor level at Chalmers University of Technology
- Summers 2017, 2019, 2021**  
Invited lecturer for the Space research summer school ('Rymdforskarskolan') in Gothenburg, organized by the youth section of the Swedish Astronomical Society, 'Astronomisk Ungdom'. Aimed at second and third year high school students.
- July 2015**  
Invited teacher for the Summerschool on Submillimeter Astronomy at the Moscow Institute for Physics and Technology (MIPT), Moscow. Post-graduate level.
- Fall 2007, 2006, 2005, 2004**  
Teaching assistant (in charge of exercise classes and hand-ins) in Space Science and Techniques, code ERR051 (until 2006) and RRY015 (from 2007), Master level at Chalmers University of Technology. I also took active part in developing the course.

## Student supervision

<b>Tadeus Carl</b> Main supervisor to PhD	starting Sept 2021
<b>Mitra Hajigholi</b> Co-supervisor to Licenciate of Engineering	June 2014
<b>Negar Entekhabi</b> Main supervisor to Master's thesis	October 2018
<b>Madeleine Karlsson, Viktor Martvall, Ajsa Cuprija, Johanna Matero, Veronica Jannisa</b> Co-supervisor to Bachelor's thesis	June 2020
<b>Philip Källström, Alexander Levinsson, Astrid Olivefors, Elin Tegehall</b> Main supervisor to Bachelor's thesis	June 2015

## Invited presentations and seminars (in selection)

<b>Rymdforum 2019 (Trollhättan, Sweden)</b> Invited talk: <i>Exploring Jupiter's Icy Moons with the Submillimetre Wave Instrument on JUICE</i> and part of panel discussion on <i>Framtidens rymdforskning: Vad betyder den för oss?</i>	Mar 2019
<b>"Science with the Origins Space Telescope" (Oxford, UK)</b> Invited talk: <i>Heterodyne Science at Jupiter's Icy Moons with SWI on JUICE</i>	Sept 2018
<b>"Our Astro-Chemical History: Past, Present, and Future" (Assen, NL)</b> Invited talk: <i>Nitrogen Fractionation - possibilities and challenges</i>	Sept 2018
<b>"Nitrogen Fractionation in Space" (Copenhagen, DK)</b> Invited talk: <i>Models of Nitrogen Fractionation in Depletion Cores</i>	Nov 2017
<b>Fractionation of isotopes in space: From the solar system to galaxies (Florence, Italy)</b> Invited review talk: <i>Deuteration and fractionation in prestellar cores</i>	October 2016
<b>Invited seminar at the Center for Astrochemical Studies, Max Planck Institute for Extraterrestrial Physics (Garching, Germany)</b> Title: <i>Cool Astrochemistry: Isotopic Fractionation and Complex Organics</i>	January 2016
<b>IAU General Assembly (Honolulu HI, USA)</b> Focus Meeting 9 Invited talk: <i><math>^{15}\text{N}</math> fractionation in star-forming regions and Solar System objects</i>	August 2015
<b>Gordon Research Conference: Origins of Solar Systems (South Hadley MA, USA)</b> Invited talk: <i>Bridging the molecular cloud-disk gap with isotopologues</i>	June 2013
<b>Nordic Network for Astrobiology meeting: Isotopes as diagnostic tools in astronomy, geology and biology (Höör, Sweden)</b> Invited talk: <i>Spin-State-Dependent Ion-Molecule Chemistry as the Origin of <math>^{15}\text{N}</math> and D Isotopic Anomalies in Primitive Matter</i>	June 2013

## General and public talks (in selection)

- SAS meeting (Svenska Astronomiska Sällskapet), on-line meeting** December 2020  
Invited talk for members: *Spåra liv i Vintergatan med molekylernas hjälp.*
- Astronomy on Tap, bar 'Haket', Göteborg** January 2020  
Invited public talk: *13 reasons to send JUICE (and not beer) to Jupiter.*
- Universeum (Göteborg)** September 2019  
Public talk as part of West Sweden's Space Week: *ESAs satellit JUICE.*
- Navet Science Center (Borås)** September 2017  
Invited public talk in celebration of Sweden's Day and Night of Astronomy ('Astronomins dag och natt'): *Leta liv i Vintergatan med molekylernas hjälp.*
- Örgryte/Härlanda library at Kulturhuset Kåken (Göteborg)** November 2016  
Invited talk for 3rd grade students in the Örgryte/Härlanda stadsdel (reached 415 children during 3 days): *Planeter med liv.*
- Chalmers Aerospace Club (Göteborg)** March 2014  
Popular science talk: *Molekylära isotoper - Länken mellan Solsystemet och stjärnbildande moln.*
- Örebro University** April 2013  
Public talk: *Molekyler och liv i universum*, invited by Örebro Astronomi.
- Rinmansskolan (Eskilstuna)** April 2013  
Presentation for Natural Sciences high school students: *Eva Wirström, Astronom - Astrokemi, Radioastronomi, Astrobiologi.*

## Conference/Workshop organization (in selection)

- Session *Molecules in starless and prestellar cores* at European Astronomical Society meeting (Online)** June 2021  
Member of the Scientific Organizing Committee.
- Isotopes as a Probe of the Growth of Galaxies - From the Milky Way to the Early Universe (Sesto, Italy)** July 2020  
Member of the Scientific Organizing Committee.
- Astrochemistry: From nanometers to megaparsecs – A symposium in honour of John H. Black (Göteborg, Sweden)** June 2019  
Chair of the Scientific Organizing Committee and Local Organizing Committee.
- Nuclear spin effects in astrochemistry (Grenoble, France)** May 2017  
Member of the Scientific Organizing Committee.
- Origins of Habitable Planets (Göteborg, Sweden)** May–June 2016  
PI of application for scientific programme chaired by Leonardo Testi (ESO). Local organizer.
- Astronomdagarna 2015 (Uppsala, Sweden)** October 2015  
Member of the Scientific Organizing Committee.
- Nuclear Spin Effects in Astrochemistry (Göteborg, Sweden)** June 2014  
Initiator, PI of SNSB funding application. Local organizer.

## Referee and evaluation services

<b>Referee for scientific publications</b> Astronomy & Astrophysics; Astrophysical Journal; Astrophysical Journal Letters; Nature Communications	<b>2012-2021</b>
<b>External reviewer for NASA ROSES proposals</b> Planetary Science Division Research program, Emerging Worlds	<b>2019</b>
<b>PhD thesis of Wissam Fakhardji, Luleå Technical University</b> Member of the examining committee (betygsnämnd).	<b>February 2021</b>
<b>PhD thesis of Sébastien Manigand, University of Copenhagen</b> External member of the assessment committee.	<b>June 2020</b>
<b>PhD thesis of Laura Colzi, University of Florence</b> External reviewer of the written thesis.	<b>December 2019</b>
<b>PhD defense of Lam Doan Duc, Uppsala University</b> Chair of the grading committee (betygsnämnd).	<b>October 2019</b>
<b>PhD defense of Tine Libbrecht, Stockholm University</b> Member of the grading committee (betygsnämnd).	<b>April 2019</b>
<b>PhD defense of Etienne Behar, Swedish Institute of Space Physics, Kiruna, and Luleå University of Technology</b> Chair of the grading committee (betygsnämnd).	<b>October 2018</b>
<b>PhD defense of Johan Rohlén, Department of Physics, University of Gothenburg</b> Member of the grading committee (betygsnämnd).	<b>May 2014</b>

## Committees, teams, boards and networks

<b>Member of the ISSI Team "Provenances of our Solar System Relics"</b>	<b>2020–2022</b>
<b>Member of the Steering group of the DESIREE research facility at Stockholm University</b>	<b>2017–</b>
<b>Member of the board of Svenska Astronomiska Sällskapet</b>	<b>2016–</b>
<b>Member of the Swedish National Committee for Astronomy</b>	<b>2016–2018</b>
<b>Member of WG4 of the COST Action CM1401</b> Our Astro-Chemical History	<b>2016–2018</b>
<b>Member of the Swedish Astrobiology Network (SWAN)</b>	<b>2016–</b>
<b>Member of the International Astronomical Union</b>	<b>2015–</b>
<b>Member of the Nordic Network for Astrobiology</b>	<b>2012–</b>