

Gerrit van der Plas

Astronomer

Summary

My research is centered on protoplanetary disks. During my PhD I focused on optical and near infrared, high-resolution spectroscopy of gas in disks around Herbig Ae/Be stars, which allows to study the physical and chemical structure and evolution of the terrestrial zone in protoplanetary disks. I continue to study these disks in high spatial resolution, adding optical (SPHERE) and sub-mm (ALMA) imaging to my toolkit. In recent years I started a large project to study disks around the lowest mass stars and brown dwarfs. This work is well in progress now and forms the basis for this fellowship application.

Education

2003–2005	MSc degree in Physics and Astronomy Master's degree in Astronomy. Thesis title "A monte carlo simulation of Gamma Ray Bursts; a study in selection effects and jet structure" under supervision of Prof. Dr. R.A.M.J. Wijers	University of Amsterdam
2001-2003	BSc degree in Physics and Astronomy Bachelors degree in Physics and Astronomy. Bachelor project on Apparent superluminal motion in the jet of GRS1915 under supervision of Prof. Dr. Rob Fender	University of Amsterdam
2000-2001	Beta Gamma Propedeuse Astrophysics and Political Science A "propedeuse" is the name for the first year of any university education in the pre-bachelor/master educational structure in the Netherlands	University of Amsterdam

Research experience

2013-present	Independent Fellow Independent researcher with a three year Fondecyt postdoctoral fellowship (information) with as sponsors R. Mendez and F. Menard.	University of Chile, Santiago, Chile
2011–2013	Postdoctoral Researcher Independent researcher for the Milenium Scientific Iniciative (ICM) Nucleus on "Protoplanetary Disks in ALMA Early Science" (MAD Nucleus). This is a centre for research on planet formation hosted by the Universidad de Chile and the Universidad de Valparaiso (webpage)	University of Chile, Santiago, Chile
2006–2010	PhD in Astronomy & Astrophysics Ph.D. on Warm Gas in Proto Planetary Disks under the supervision of Dr. M. van den Ancker at ESO and Prof. Dr. L.B.F.M Waters and Prof. Dr. C. Dominik at the University of Amsterdam. Ph.D. awarded on December 7th 2010	ESO/Munich and the University of Amsterdam

Teaching and Mentoring experience

2014-2015	Universidad de Chile Co-supervised the master thesis research of Gijsbert van Malsen for the 9 months of his visit to Chile (from the Netherlands). The thesis was completed on August 31st 2015 and titled "The Structure of Protoplanetary Disks Around Brown Dwarfs and Low Mass Stars"	Master thesis supervision
2009-2010	University of Amsterdam Sterrenkunde 1 (Astronomy 101), University of Amsterdam	Teaching assistant
2009-2010	University of Amsterdam Planeten Stelsels (Planetary Systems), University of Amsterdam	Teaching assistant
2003-2005	University of Amsterdam 1st year students of Physics and Astronomy, University of Amsterdam.	Tutor

Organizational experience

2014	Workshop Member of the LOC of the international workshop "Protoplanetary disks and the planets they form" in Santiago, Chile from November 3-7 2014	workshop webpage
2014	Workshop Member of the LOC of the ESO workshop: "Herbig Ae/Be stars: The missing link in star formation", help in Santiago, Chile from April 7 - 11, 2014	workshop webpage
2013	Summer school Member of the organization committee of the 2013 summer school "Formacion Planetaria", meant for master and PhD students at Chilean universities (more information)	school webpage
2013	Weekly Star Formation meetings Co-organizing local Star Formation Meetings at the institute where I work. These meetings take place weekly, and have been since May 2013.	Calan star formation talks webpage
2009	Workshop Principal organizer of the "CRIRES + CO Workshop" (Amsterdam, The Netherlands). Workshop to discuss CO observations with the VLT/CRIRES.	no webpage available

Awards

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| 2013-2016 | Fondecyt Fellowship
Fondecyt is a competitive 3 year postdoctoral research fellowship, funded by the state (Chile) | FONDECYT webpage |
| 2006-2008 | ESO Studentship
The European Organisation for Astronomical Research in the Southern Hemisphere awards several studentship positions each year in both Germany and Chile. The goal of the ESO studentship program is to connect Ph.D. students and their advisors throughout the ESO community with the activities and people at one of the world's foremost observatories, and offers an invaluable training opportunity for the next generation of Astronomers and users of ESO facilities. | ESO studentship webpage |

Selected accepted observing proposals

- PI – ALMA cycle 3 project 2015.1.00192.S: “Hunting for gaps in HAEBE disks” - 4 hours
- PI – ALMA cycle 3 project 2015.1.01460.S.: “Dynamical Masses of a Taurus Low Mass Star and Brown Dwarf” - 3.5 hours
- PI – ALMA cycle 2 project 2013.1.00658.S: “Hunting for gaps in HAEBE disks” - 3.3 hours
- PI – ALMA cycle 1 project 2012.1.00743.S: “Detection and characterization of protoplanetary disks across the stellar/substellar transition” - 2.4 hours
- PI – VLT/SPHERE proposal 096.C-0459: “Observing Planet Formation in the Disk Around the Herbig Ae Star HD 97048 with SPHERE” - 1/2 night
- PI – VLT/SPHERE proposal 095.C-0787: “A SPHERE-IFS Survey of Nearby Herbig Ae/Be Stars: Are All Group I Disks Transitional?” - 24 hours
- PI – VLT/XSHOOTER 093.C-0109 and 096.C-0455: “Characterization of protoplanetary disks across the stellar/substellar transition” - 25.9 hours
- PI – PdbI/IRAM projects S14AT and S15AU: “Particle growth in protoplanetary disks across the stellar/substellar transition” - 18.6 hours
- PI – ATCA 2014atnf.prop.6245V: “Observing planet formation in the disk around HD97048” - 26 hours

Publication list

Relevant publication statistics as of October 2015 are: 317 total refereed citations and a h-index of 9. Find all publications, including my PhD thesis and non-refereed publications, in [this ADS library](#)

Contact

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languages

Fluent: Dutch + English
Conversational: Spanish + German

Computer skills

Experience with the radiative transfer code MCFOST and ProDiMo
Programming in Python, IDL, CSS
Experience with UNIX and OSX