

David GOBRECHT

PERSONAL DATA

PLACE AND DATE OF BIRTH: Baden, Switzerland | 08 December 1985
NATIONALITY: Swiss | German
ADDRESS: Celestijnenlaan 200D, B-3001 Heverlee
PHONE: +39 499 156631
EMAIL: [Work mail](mailto:dave@gobrecht.ch)
HOMEPAGE: www.gobrecht.ch/dave.htm



PROFESSIONAL EXPERIENCE

- JUNE 2017 - now Postdoctoral ERC fellowship “Aerosol: Astrochemistry of old stars: direct probing of unique chemical laboratories” at **KU Leuven** in Leuven, Belgium
Advisor: Prof. Leen DECIN
- MAY 2015 - Apr 2017 Postdoctoral research fellowship “Advances in AGB modelling” at the astronomical observatory (**INAF-OACTe**) in Teramo, Italy
Advisor: Dr. Sergio CRISTALLO
- MAY 2010 - Feb 2015 Scientific assistant and tutor at the **University of Basel**
Tutor in Mechanics, Thermodynamics, Astronomy and Experimental Physics, including administration and lecture representation for Prof. F.-K. Thielemann
- AUG 2010 - Feb 2011 Math teacher at Bezirksschule Schöftland and Wettingen, Switzerland
Teaching Mathematics for 7th - 9th year pupils
- JUNE 2006 - July 2007 Scientific work at PSI in Villigen, Switzerland
Interpretation of satellite data and analysis of Gamma Ray Bursts (GRB's)

EDUCATION

- FEBRUARY 2015 *PhD thesis defence and examination*
- FEB 2011 - FEB 2015 PhD studies “Dust synthesis in evolved oxygen-rich AGB stars” in the subject *Theoretical Physics*
Physics department, **University of Basel**, Switzerland
Thesis advisor: PD Dr Isabelle CHERCHNEFF
- SEP 2008 - DEC 2010 Master studies in *Theoretical Physics*
Physics department, **University of Basel**, Switzerland
Advisors: Prof Friedrich-Karl Thielemann & PD Dr Ahmad A. Hujeirat
- SEP 2005 - SEP 2008 Bachelor studies in *Physics*
Physics department, **University of Basel**, Switzerland
- MAY 2005 *Abitur: grade 1.8 (12/15 points)*

PUBLICATIONS AND TALKS

Publications

Nucleation of Small Silicon Carbide Dust Clusters in AGB Stars

Gobrecht, David; Cristallo, Sergio; Piersanti, Luciano; Bromley, Stefan T.

Astrophysical Journal, Vol. 840, Iss. 2, p. 117, 2017

Constraints of the Physics of Low-mass AGB Stars from CH and CEMP Stars

Cristallo, S.; Karinkuzhi, D.; Goswami, A.; Piersanti, L.; Gobrecht, D.

Astrophysical Journal, Vol. 833, Iss. 2, p. 181, 2016

Dust formation in the oxygen-rich AGB star IK Tauri

Gobrecht, D.; Cherchneff, I.; Sarangi, A.; Plane, J. M. C.; Bromley, S. T.

Astronomy & Astrophysics, Vol. 585, p. 6, 2016

Dust Formation in the Inner Wind of the Oxygen-rich AGB Star IK Tau

Gobrecht, D.; Cherchneff, I.; Sarangi, A.

Astronomical Society of the Pacific Conference Series, Vol. 497, p. 321, 2015

Evolution, Nucleosynthesis, and Yields of AGB Stars at Different Metallicities.

III. Intermediate-mass Models, Revised Low-mass Models, and the ph-FRUIITY Interface

Cristallo, S.; Straniero, O.; Piersanti, L.; Gobrecht, D.

Astrophysical Journal Supplement Series, Vol. 219, p. 40, 2015

From Nuclei to Dust Grains: How the AGB Machinery Works

Gobrecht, D.; Cristallo, S.; Piersanti, L.

European Astronomical Society Publications Series, Vol. 71, p. 251, 2015

Forming silicate and alumina dust in the wind of the O-rich AGB IK Tau

Gobrecht, D.; Cherchneff, I.

Proceedings of Science, LCDU, p. 93, 2013

Talks

- | | |
|----------------|--|
| NOVEMBER 2016 | Talk (contributed) at the “ECLA” conference in Madrid, Spain |
| AUGUST 2016 | Review talk (invited) at the “Rencontre du Vietnam” conference in Quy Nhon, Vietnam |
| JULY 2016 | Talk (contributed) at the “XII Torino workshop on AGB stars” conference in Quy Nhon, Vietnam |
| SEPTEMBER 2015 | Talk at the “Silicates in Space” workshop in Heidelberg, Germany |
| JULY 2015 | Talk (contributed) at the “POE 2015” conference in Nice, France |

- SEPTEMBER 2014 Seminar talk at the OACTe
in Teramo, Italy
- JULY 2014 Talk (invited) at the “GALAGB”
conference in Vienna, Austria
- NOVEMBER 2012 Talk (invited) at the “CoDustMas”
workshop in Perugia, Italy

GRANTED OBSERVATION TIMES AND SUPERCOMPUTER ACCESS TIMES

- NOVEMBER 2015 Successful application for machine time (128'000 CPU hours)
on the Galileo cluster at CINECA in Bologna, Italy
- NOVEMBER 2012 Successful application for computing time
at the High Performance Computer (HPC) in Barcelona, Spain
- JULY 2013 Observations at the IRAM 30m telescope
in Granada, Spain
- FEBRUARY 2013 Observations at the OSO 25m telescope
in Onsala, Sweden

LANGUAGES

- GERMAN Native, mother-tongue
- ENGLISH excellent knowledge in reading, writing and speaking
deepened by multiple language studies in England: Paignton (2001) and Malta: Gzira (2003)
- FRENCH excellent knowledge in reading, writing and speaking
deepened by multiple language studies in France: La Rochelle (2004) and Blois (2002, 2003)
- ITALIAN advanced level

IT SKILLS

- Basic Knowledge: Origin, OSX, shell-scripting
- Advanced Knowledge: FORTRAN, HTML, LINUX, Ubuntu, L^AT_EX, GNUPLOT, MATLAB,
High-performance computing, Excel, Word, PowerPoint