Ana-Maria A. Piso

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EDUCATION

Harvard University, Cambridge, MA

Ph.D., Astronomy & Astrophysics, May 2016 (expected)

Advisor: Dr. Karin Oberg

Thesis Topic: "Dynamics and Chemistry in Protoplanetary Disks"

Harvard University, Cambridge, MA

A.M., Astronomy & Astrophysics, May 2013

Advisor: Dr. Ruth Murray-Clay

Research Exam Project: "On the Minimum Core Mass for Giant Planet Formation"

Massachusetts Institute of Technology, Cambridge, MA

S.B., Physics, June 2010 Major GPA: 4.6/5.0 S.B., Mathematics, June 2010 Major GPA: 4.8/5.0

RESEARCH EXPERIENCE & EMPLOYMENT Research assistant

August 2010 - July 2011

Cambridge, MA

Project: The Magnetic Field Signature of Super Earths

Advisor: Prof. Sara Seager

MIT, EAPS Department

Undergraduate researcher

June 2008 - June 2010

MIT, Kavli Institute or Astrophysics

Cambridge, MA

Project: The Solar Wind (2008) & Structure of Accretion Disks (2009 - 2010)

Advisors: Dr. Paola Rebusco & Prof. Edmund Bertschinger

Research assistant

June 2009 - August 2009

Vienna University of Technology (TU Wien)

Vienna, Austria

Project: Exact relativistic viscous fluid solutions in near horizon extremal Kerr background

Advisor: Dr. Daniel Grumiller

Undergraduate researcher

January 2007 - August 2007

 $Cambridge,\ MA$

MIT, Laboratory of Nuclear Science Project: Dark Matter Direct Detection

Advisors: Prof. Gabriela Sciolla & Dr. Denis Dujmic

Assistant manager

November 2005 - June 2006

Neuron Group S.R.L. Software Company

Bucharest, Romania

Digital map designer and database manager for the '112 Emergency Call Center' national

project

TEACHING & OUTREACH

WISTEM Program Mentor

Mentor for a Harvard College undergraduate

September 2013 - present

 $Cambridge,\ MA$

MIT Educational Counselor

Interviewer for prospective undergraduate students

December 2011 - present

Cambridge, MA

Science Club For Girls Mentor Scientist

September 2014 - May 2015

Taught second grade girls at the Amigos School the class "Sound & Light" Cambridge, MA

CfA Summer Mentor

June 2014 - August 2014

Co-mentored an REU summer student

Cambridge, MA

Co-Organizer of Harvard Graduate Student Prospective Visits March 2013

Organized and coordinated meetings and activities for two groups of 10 prospective graduate students each Cambridge, MA

Teaching Fellow

February 2012 - May 2012

Harvard College class SPU 30: Life as a Planetary Phenomenon

Cambridge, MA

Course Head: Prof. Dimitar Sasselov Held two weekly two-hour sections

REFEREED PUBLICATIONS

Piso, A.-M. A., Öberg, K. I., Birnstiel, T., & Murray-Clay, R. A. C/O and Snowline Locations in Protoplanetary Disks: The Effect of Radial Drift and Viscous Gas Accretion. ApJ, 2015, 815, 109

Piso, A.-M. A., Youdin, A. N., & Murray-Clay, R. A. Minimum Core Masses for Giant Planet Formation with Realistic Equations of State and Opacities. ApJ, 2015, 800, 82

Piso, A.-M. A. & Youdin, A. N. On the Minimum Core Mass for Giant Planet Formation at Wide Separations. ApJ, 2014, 786, 21

Publications in Preparation

Piso, A.-M. A., Öberg, K.I., & Pegues, J. The Role of Ice Compositions and Morphology For Snowlines and the C/N/O Ratios in Active Disks

Online

Publications & Educational Material

The Solar Wind

 $(Mathematica\ Demonstration\ Project:\ http://demonstrations.wolfram.com/The Solar Wind/)$

Author: Ana-Maria Piso

The Interplanetary Magnetic Field (Parker Spiral)

(Mathematica Demonstration Project:

http://demonstrations.wolfram.com/TheInterplanetaryMagneticFieldParkerSpiral/

Author: Ana-Maria Piso

Conferences and Seminars

C/O and Snowline Locations in Protoplanetary Disks: The Effect of Radial Drift and Viscous Gas Accretion

Extreme Solar Systems III, Waikoloa Village, HI, December 2015 Poster

Giant Planet Formation and Snowlines in Protoplanetary Disks

University of Michigan Astronomy Lunch Talk, Ann Arbor, MI, November 2015 Seminar speaker

Giant Planet Formation and Snowlines in Protoplanetary Disks

University of Chicago Exoplanet Journal Club, Chicago, IL, November 2015

Seminar speaker

Giant Planet Formation and Snowlines in Protoplanetary Disks

MIT Exoplanet Tea, Cambridge, MA, October 2015 Seminar speaker

Giant Planet Formation and Snowlines in Protoplanetary Disks

Center for Integrative Planetary Science Planet and Star Formation Seminar, Berkeley, CA, September 2015 Invited talk

Minimum Core Masses for Giant Planet Formation

CfA Exoplanet Pizza Lunch, Cambridge, MA, May 2015 Internal department talk

Minimum Core Masses for Giant Planet Formation

Star and Planet Formation in the Southwest, Oracle, AZ, March 2015 Contributed talk

On the Minimum Core Mass for Giant Planet Formation

CfA Exoplanet Pizza Lunch, Cambridge, MA, November 2013 Internal department talk

On the Minimum Core Mass for Giant Planet Formation

Protostars and Planets VI, Heidelberg, Germany, July 2013 Poster

On the Minimum Core Mass for Giant Planet Formation

IAUS 299: Exploring the Formation and Evolution of Planetary Systems, Victoria, BC, June 2013

Contributed talk

The Structure and Stability of Atmospheres Accreting around Protoplanetary Cores

Exoplanets in Multi-body Systems in the Kepler Era, Aspen, CO, February 2013 Poster

Magnetic field signature of Super Earths

AAS 217^{th} Meeting, Washington, Seattle, January 2011 Poster

Exact relativistic viscous fluid solutions in NHEK background

APS April Meeting, Washington, DC, February 2010 Poster

The Solar Wind

Vienna Theory Lunch Club, TU Wien, Vienna, Austria, June 2009 Invited talk

Professional Activities & Service

SKILLS

American Physical Society member American Astronomical Society member

Languages: Fluent in Romanian, English and Spanish, Conversant in German, Basics in French Computer: Python, Mathematica, Matlab, LaTeX, C++, ROOT, Mac OS, Windows 2000/XP/Vista, Microsoft Office, Corel, Database Desktop