last update: November 6, 2020 (click here for the live version)

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#### Personal information

Full name Vinicius Moris Placco

Languages Portuguese (native), English (fluent),

Spanish (intermediate), Italian (basic)

Website http://vmplacco.github.io/ e-mail vmplacco@gmail.com

# **Employment / Appointments**

2020- Associate Scientist

Community Science & Data Center – US National Gemini Office NSF's National Optical-Infrared Astronomy Research Laboratory

2015-2020 Research Assistant Professor

Department of Physics University of Notre Dame

2018-2020 Faculty Fellow

Liu Institute for Asia and Asian Studies

University of Notre Dame

2014-2015 Science Fellow

Gemini Observatory – Northern Operations Center Association of Universities for Research in Astronomy

2013-2014 Postdoctoral Fellow

National Optical Astronomy Observatory

Association of Universities for Research in Astronomy

2010-2013 Postdoctoral Fellow

Instituto de Astronomia, Geofísica e Ciências Atmosféricas

Universidade de São Paulo

#### Education

2007–2010 Doctorate degree in Astronomy

Search for very metal-poor stars based on carbon over-abundance

Instituto de Astronomia, Geofísica e Ciências Atmosféricas

Universidade de São Paulo

2005–2007 Master's degree in Astronomy

Abundance patterns among very metal-poor stars in the Galaxy: a statistical approach

Instituto de Astronomia, Geofísica e Ciências Atmosféricas

Universidade de São Paulo

2001–2005 Bachelor's degree in Physics (concentration: Astronomy)

Instituto de Física

Universidade de São Paulo

#### **Awards**

2011 Featured Astronomy thesis of the year 2010

Instituto de Astronomia, Geofísica e Ciências Atmosféricas

Universidade de São Paulo

2005 Best Astronomy undergraduate project

Instituto de Astronomia, Geofísica e Ciências Atmosféricas

Universidade de São Paulo

# **Observatory Experience**

# Leardership roles/Service

2018-present 2017-present 2017-present	Member of the J-PAS Survey Science Committee (Javalambre Physics of the Accelerating Universe Survey Member of the S-PLUS Advisory Committee (Southern Photometric Local Universe Survey) Principal Investigator of the S-PLUS Short Survey		
2020-present 2019-present 2017-present	nt Member of the NSF's OIR Lab Time Allocation Committee - Galactic Panel 2		
2018-present 2018-present 2018-present 2017-present	Co-coordinator of the Resolved Stellar Population Working Group of the J-PAS Survey Member of the US Extremely Large Telescope Program – First Stars Key Science Project Member of the Maunakea Spectroscopic Explorer (MSE) Science Team Co-coordinator of the Stellar Parameters Value-Added Catalog Group of the J-PLUS Survey		
2017–2020 2018–2019 2017–2018	US representative for the Gemini Observatory Users Committee  Member of the NOAO Time Allocation Committee - Galactic Panel 2  Member of the Gemini OCS Upgrades Working Group		

#### Operations and Instrument/User Support

2014–2015 **Gemini-North**: Operations

Support Scientist for Phase II programs Backup support for instrument teams

Interface between observatory and visitors (staff, scientists, and others) Interactions with astronomers, engineers, IT personnel, and facilities staff

Community support (help-desk and troubleshooting) Write/edit/update internal and external webpages

Weekly operations meetings

Queue observer Data reductions

2014–2015 **Gemini-North**: GMOS Instrument Team

Instrument performance monitoring pipeline

Throughput characterization Commissioning of AO capabilities

Write/edit/update internal and external instrument webpages

Data quality assessment

Commissioning of Hamamatsu CCD at GMOS-S

Commissioning of the instrument Developed early data-reduction pipeline

Write/edit/update internal and external instrument webpages Developed exposure time calculator (GRACES ITC v0.1 Beta)

2008–2012 **SOAR Telescope**: remote observing station – University of São Paulo

Responsible for operations and maintenance

Develop data reduction tools

Edit/write manuals and data analysis cookbooks

User support and troubleshooting

Configure, quote, and purchase new workstations and teleconference hardware

Work with university staff and IT personel to ensure physical access to buildings and computers

Support daytime calibrations / nighttime observations

# **Observing Experience**

Period	Telescope	# of nights	instrument	mode
2019-present	CTIO/Blanco	5	COSMOS	remote
2011-present	ESO/NTT	12	EFOSC2	visitor
2008-present	SOAR	40+	Goodman OSIRIS	remote
2013–2018	KPNO/Mayall	20+	RCSPEC KOSMOS	visitor/remote
2014–2015	Gemini North	12	GMOS GRACES GNIRS NIRI NIFS	queue observer
2014–2015	Gemini South	2	GMOS	remote
2013	McDonald 2.1m	4	ES2 Spectrometer	visitor

# Research Experience

# **Funding**

#### Current

2018–2020 Hubble Space Telescope (Co-PI)

The Unexplored Domains of the s-Process

Space Telescope Science Institute (USD 119,104)

2019–2021 Hubble Space Telescope (Co-PI)

HD 222925: A unique opportunity to study the full range of nuclei produced by a single r-process event

Space Telescope Science Institute (USD 60,732)

2020–2022 Hubble Space Telescope (Co-I)

Testing r-process nucleosynthesis models with two r-process enhanced stars

Space Telescope Science Institute (USD 35,000)

#### Past (Total: USD 255,393)

2018 Liu Institute for Asia & Asian Studies (PI)

Stellar Archaeology as a Time Machine to the First Stars

University of Notre Dame (USD 600 - Travel support for conference)

2018 Liu Institute for Asia & Asian Studies (PI)

TDLI Workshop on The Exploding Universe

University of Notre Dame (USD 2,600 - Travel support for conference)

2015–2017 Hubble Space Telescope (Co-I)

The First Detections of Phosphorus, Sulphur, and Zinc in a Bona-Fide Second-Generation Star

Space Telescope Science Institute (USD 85,293)

2016–2017 Faculty Research Support Program Initiation Grant (PI)

Identification of CEMP Stars from S-PLUS Photometry using Artificial Neural Networks

University of Notre Dame (USD 10,000)

2013–2014 FAPESP (State of São Paulo Research Foundation) – Postdoctorate

(re)discovery and analysis of metal-poor stars in the Milky Way

National Optical Astronomy Observatory (USD 71,400)

2010–2013 FAPESP (State of São Paulo Research Foundation) – Postdoctorate

The Milky Way Halo revisited

Universidade de São Paulo (USD 85,500)

# **Fellowships**

2007–2010 Doctorate – FAPESP (07/04356-3) – Universidade de São Paulo Search for very metal-poor stars based on carbon over-abundance 2005-2007 Master's - FAPESP (05/01023-8) - Universidade de São Paulo Abundance patterns among very metal-poor stars in the Galaxy: a statistical approach 2004-2005 Undergraduate research project - CNPq/PIBIC - Universidade de São Paulo Descoberta e Análise de Objetos com Linhas em Emissão no Survey HK 2002-2004 Undergraduate research project – FAPESP (02/04704-8) – Universidade de São Paulo Construção de câmara de alvo gasoso para produção de feixes radioativos Visiting Faculty/Postdoc/Graduate Student Universidade de São Paulo 2018

Instituto de Astronomia, Geofísica e Ciências Atmosféricas Funding: USP/FAPESP/JINA-CEE

2018 Chungnam National University Department of Astronomy & Space Science Funding: CNU

2014 University of Notre Dame Department of Physics Funding: Gemini Observatory and JINA (Joint Institute for Nuclear Asthophysics)

2014/2012 Massachusetts Institute of Technology

Kavli Institute for Astrophysics and Space Research

Funding: Gemini Observatory, FAPESP (The State of São Paulo Research Foundation - Brazil)

2013/2012 National Optical Astronomy Observatory

> Kitt Peak National Observatory Funding: FAPESP (Brazil)

2013 New Mexico State University Department of Astronomy Funding: FAPESP (Brazil)

2010/2008 Universität Heidelberg Zentrum für Astronomie

Funding: Universität Heidelberg (Germany), FAPESP, PROEX (Brazil)

2010/2009 Michigan State University

> Physics and Astronomy Department 2007

> > Funding: JINA (USA), FAPESP, PROEX (Brazil)

# **Academic Experience**

# Teaching

Lead Instructor (LI) / Co-Instructor (CI) / Guest Lecturer (GL)

#### Undergraduate

- 2020 (LI) Descriptive Astronomy (SU20-PHYS-10140)

  Course Instructor Feedback: 5.0/5.0 link to full report
  - (LI) Descriptive Astronomy (SP20-PHYS-10140)

    Course Instructor Feedback: 5.0/5.0 link to full report
  - (LI) General Physics B E & M Laboratory (SP20-PHYS-11422) Course Instructor Feedback: 5.0/5.0 - link to full report
  - (GL) Engineering Physics II Laboratory (SP20-PHYS-11320)
  - (GL) Engineering Physics I Laboratory (SP20-PHYS-11310)
- 2019 (LI) Physics A Mechanics Laboratory (FA19-PHYS-11411)

  Course Instructor Feedback: 5.0/5.0 link to full report
  - (LI) Descriptive Astronomy (SU19-PHYS-10140)

    Course Instructor Feedback: 5.0/5.0 link to full report
- 2018 (GL) Descriptive Astronomy (FA18-PHYS-10140)
- 2017 (CI) Descriptive Astronomy (FA17-PHYS-10140)
  - (LI) General Physics B E & M Laboratory (SP17-PHYS-11422)

    Course Instructor Feedback: 4.8/5.0 link to full report
- 2016 (GL) Descriptive Astronomy (FA16-PHYS-10140)
- 2015 (GL) Modern Observational Techniques (FA15-PHYS-30481)

#### Universidade Virtual do Estado de São Paulo

- 2012 (LI) Sky and Stars: An introduction
  - (LI) Galaxies: An introduction
- 2011 (LI) Sky and Stars: An introduction
  - (LI) Galaxies: An introduction

### Graduate

#### **University of Notre Dame**

- 2017 (CI) Astrophysics: Stars (SP17-PHYS-80202)
- 2016 (CI) Large-Scale Astronomical Surveys (SP16-PHYS-70210)
- 2015 (GL) Astrophysics: Stars (SP15-PHYS-80202)

#### Universidade de São Paulo

2012 (GL) Observational Astronomy

#### Teaching Assistant - Universidade de São Paulo

2009	Introduction to Astronomy
	Fundamental Astronomy
2008	Introduction to Astronomy
2007	Fundamental Astronomy

# Student/Postdoc supervision

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Postdoctoral level
2019-present Hélio Dotto Perottoni (Universidade de São Paulo)
Graduate Level (co-advisor) - University of Notre Dame
2019-present
              Carlos Andrés Galarza Arevalo (Observatório Nacional - Brazil)
2019-present
              Joseph Zepeda
2019-present
              Derek Shank
  2015-2020
              Sarah Dietz
 2015-2020 Dmitrii Gudin
 2015-2020
             Devin Whitten
  2015-2020
              Kaitlin Rasmussen
 2015-2017
              Geoffrey Lentner
 2010-2016
              Rafael Santucci (M.Sc. and Ph.D. - Universidade de São Paulo)
Undergraduate Level (advisor) - University of Notre Dame
     2020
           Dante Komater (Physics Major)
2019-2020
            Lucas Pinheiro (Engineering Major)
     2019
            Shenghua Liu (Physics Major)
     2019
            Winter Allen (Arkansas Tech University - REU)
     2019
            Yihao Zhou (Shanghai Jiao Tong University - REU)
2018-2020
            Guilherme Limberg (Universidade de São Paulo)
2016-2018
            Erik Peterson
2016-2018
            David Kalamarides
2015-2018
            Spencer Clark (Glynn Family Honors Program) - Senior Thesis
            John Roach
2016-2017
            Cristobal Gonzales
2016-2017
2016-2017
            Michael Kurkowski
     2017
            Jazmine Jefferson (University of Kansas - REU)
            Derek Shank (Ohio Wesleyan University - DISC/REU) - video report
     2017
     2017
            Diego Fernandez (University of Oregon - REU)
     2016
            Travis Hodges (Austin Peay State University - DISC/REU)
     2016
            Miguel Correa (San Diego State University - REU)
     2015
            Siyu He (Xi'an Jiaotong University - REU)
2012-2014
            William Alves (Universidade de São Paulo)
2008-2010
            Rafael Santucci (Universidade de São Paulo)
Committee Service - University of Norte Dame
2019-2020
            Undergraduate Research, Department of Physics
2016-2018
            Graduate Recruitment, Department of Physics
2015-2018
            Preliminary Exam Committee, Department of Physics
2015-2018
            University Committee on Research & Sponsored Programs, Notre Dame Research
Thesis Defense Committee
              Heitor Ernandes (Ph.D. - committee chair)
              Universidade de São Paulo
       2019
              Henrique Reggiani (Ph.D.)
              Universidade de São Paulo
```

Rafael Miloni Santucci (Ph.D.)

Camilo Francisco Javier Muñoz Peña (M.Sc.)

Universidade de São Paulo

Universidade de São Paulo

2016

2016

#### Other relevant information

### Computing skills

Linux/Unix/MACOSX/Windows operating systems

Shell Scripting (sh, bash, tcsh, zsh)

LATEX, OpenOffice, MS Office. Co-author of the LATEX template IAGTESE

Python (iPython/Jupyter Notebooks): scipy, numpy, pandas, scikitlearn, pyfits, astropy

R-project (terminal/RStudio): FITSio, tidyverse, cluster, sciviews

Databases: SQL (PostgreSQL/pgAdmin3), SDSS CasJobs, ADQL (J-PLUS/J-PAS/TAPVizieR)

Web: html, ccs, wordpress, apache, curl, wget, ssh, ftp Graphics: Gnuplot, ggplot2, matplotlib, bokeh, tableau

Data reduction: IRAF/Pyraf/Gemini packages, focused on spectroscopy

Astronomy tools: WCSTools, CDSclient, STILTS, SkyCalc

Version control: Git

#### Online Resources

Webpage: http://vmplacco.github.io/

LinkedIn: https://www.linkedin.com/in/vinicius-placco/

GitHub: https://github.com/vmplacco/

stackoverflow: https://stackoverflow.com/users/5964833/vinicius-placco

pythonanywhere: https://vplacco.pythonanywhere.com/

Sample webpages/

side projects: http://vmplacco.github.io/#resources

#### Professional Affiliations/Service

Member of the American Astronomical Society

Member of the Brazilian Astronomical Society

Member of the Brazilian Physical Society

Member of the JINA Center for the Evolution of the Elements

Referee for the American Astronomical Society Journals

Referee for the AAAS Science Magazine

Referee for Astronomy & Astrophysics

Referee for Monthly Notices of the Royal Astronomical Society

# \* Invited / Contributed talks

#### 2020

\* Gemini Observatory Science Coffee From R=40 to R=40,000: Mining narrow-band photometric catalogs in search of low-metallicity stars

- Joint Institute for Nuclear Astrophysics Physics of Atomic Nuclei High School Program The Age and Chemical Evolution of the Universe from two stars in the Milky Way
- \* Regional Center for Space Science and Technology Education for West Asia / Arab Union for Astronomy & Space Science Our eyes in the skies: How telescopes help us place ourselves in the Universe
- \* NSF's National Optical-Infrared Astronomy Research Laboratory
  Near-Field Cosmology with Narrow-Band Photometry and Spectroscopy of Low-Metallicity Stars
- \* Universidade de São Paulo Astrophysics Colloquium Near-Field Cosmology using Narrow-Band Photometry and Low-Metallicity Stars
- \* Universidade de São Paulo Astronomia ao Meio-dia Agulhas no palheiro: A evolução química e idade do Universo contadas por duas estrelas

#### 2019

- \* National Optical Astronomy Observatory
  Stellar Archaeology: Understanding the Chemical Evolution of the Universe through Color Maps of the Night Sky
- \* Joint Institute for Nuclear Astrophysics Physics of Atomic Nuclei High School Program The Age and Chemical Evolution of the Universe from two stars in the Milky Way

Consejo Superior de Investigaciones Científicas – 17th J-PAS Collaboration Meeting Identification of Low-Metallicity Stars from Narrow-Band Photometry

\* San Francisco State University – Physics & Astronomy Colloquium
Stellar Archaeology: Origin of the Chemical Elements in the Universe through a 59-Color Map of the Sky

#### 2018

\* Kavli IPMU at The University of Tokyo – Stellar Archaeology as a Time Machine to the First Stars The Mass Distribution of the First Stars revealed by Abundance Pattern Matching of Ultra Metal-Poor Stars

Kavli IPMU at The University of Tokyo – Introduction to Stellar Archaeology Radioactive Stellar Ages

- \* Texas A&M University Commerce Physics & Astronomy Colloquium
  Stellar Archaeology: Understanding the Origin of the Chemical Elements through a 59-Color Map of the Night Sky
- Chungnam National University Department of Astronomy & Space Science Seminar
   The Origin of the Chemical Elements in the Universe revealed by a 12-Color Map of the Night Sky
- \* Korea Astronomy and Space Science Institute Colloquium
  Constraints on Near-Field Cosmology through Abundance Pattern Matching of Ultra Metal-Poor Stars
- \* Universidade de São Paulo Astronomy Colloquium The Southern Photometric Local Universe Survey (S-PLUS): An Overview

Universidade de São Paulo – S-PLUS Meeting Short update on S-PLUS SHORTS

University of Notre Dame – Astronomy 1-minute talks (23 presenters) Organizer

\* University of Notre Dame – Our Universe Revealed A day in the life of an Astronomer

Kavli Institute for Cosmological Physics – Near-Field Cosmology with the Dark Energy Survey The Age Structure of the Milky Way Halo revealed by DES

\* Joint Institute for Nuclear Astrophysics – Physics of Atomic Nuclei High School Program
Can we talk about the Age and Chemical Evolution of the Universe by looking at only two stars?

Centro de Estudios de Física del Cosmos de Aragón – J-PLUS  $2^{\rm nd}$  Virtual Meeting *J-PLUS Stellar Parameter Value Added Catalog* 

- \* Shanghai Jiao Tong University Tsung-Dao Lee Institute Workshop on The Exploding Universe Probing the mass distribution of the first stars through abundance pattern matching of ultra metal-poor stars
- \* JINA-CEE Frontiers in Nuclear Astrophysics Main Conference
  Observational constraints on the origin of the elements: from First stars to Neutron-Star mergers
- \* Manhattan College Physics Department Understanding the Origin of the Elements in the Universe through a 12-Color Map of the Night Sky
- \* JINA-CEE Frontiers in Nuclear Astrophysics Junior Workshop Speaking Skills
- \* Centro de Estudios de Física del Cosmos de Aragón 16th J-PAS Collaboration Meeting Pathfinder science Constraints on First-Star Nucleosynthesis from J-PAS Photometry of Low-Metallicity Stars

Universidade de São Paulo – S-PLUS Collaboration Meeting (online) Updates on S-PLUS Short Survey(s)

#### 2017

Universidade de São Paulo – S-PLUS Collaboration Meeting (online) Updates on S-PLUS Short Survey(s)

\* Michiana Astronomical Society – MAS monthly meeting speaker A Tale of Two Stars: Revealing the Age and Chemical Evolution of the Universe

University of Notre Dame – Astro-Skills Lunch *The do's and don'ts when plotting data* 

Red de Infraestructuras de Astronomia – Early Data Release and Scientific Exploitation of the J-PLUS Survey Identification of (Bright) Carbon-Enhanced Metal-Poor Stars with J-PLUS Photometry

GMT Community Science Meeting – Chemical Evolution of the Universe A Monte Carlo approach to find the Progenitors of Ultra Metal-Poor Stars (Rapid Poster Talk)

University of Notre Dame – The Great American Eclipse at Notre Dame Co-organizer / Astronomy faculty representative – 3,500 attendees

\* University of Notre Dame – Research Experiences for Undergraduates (REU) Program A needle in a haystack: What one star can tell us about the age and chemical evolution of the entire Universe

Centro de Estudios de Física del Cosmos de Aragón – J-PLUS 1<sup>st</sup> Virtual Meeting *Identifying (Carbon-Enhanced) Metal-Poor Stars from J-PLUS Photometry* 

- \* Joint Institute for Nuclear Astrophysics Physics of Atomic Nuclei High School Program Stellar Archaeology: The Age and Chemistry of the Universe revealed by old Stars
- \* Universidade de São Paulo Astrophysics Colloquium Searching for the Origin of the Elements Using a 12-Color Map of the Night Sky

#### 2016

- \* University of Notre Dame Astrophysics Seminar A Monte Carlo approach to find the Progenitors of Ultra Metal-Poor Stars
- \* University of Notre Dame Department of Physics Colloquium
  Searching for the Origin of the Elements Using a 12-Color Map of the Night Sky

University of Notre Dame – Astronomy 1-minute talks (19 presenters) Organizer

Universidade de São Paulo – X-PLUS Collaboration Meeting Identifying Bright Carbon-Enhanced Metal-Poor Stars from S-PLUS Photometry

- \* University of Notre Dame Research Experiences for Undergraduates (REU) Program Near-Field Cosmology with Metal-Poor Stars
- \* University of Notre Dame Our Universe Revealed A day in the life of an Astronomer

University of Notre Dame – Our Universe Revealed Our eyes in the skies: How telescopes help us place ourselves in the Universe

227th Meeting of the American Astronomical Society Identifying Bright Carbon-Enhanced Metal-Poor Stars in the RAVE Catalog

#### 2015

University of Notre Dame – Our Universe Revealed The stuff we are made of: how do we determine the chemical elements in stars and the Universe?

University of Notre Dame – Astronomy 1-minute talks (15 presenters) Organizer

- \* Joint Institute for Nuclear Astrophysics / University of Notre Dame High School On Air Talk Stellar Archaeology: The Age and Chemistry of the Universe revealed by old Stars YouTube video
- \* Michigan State University JINA-CEE Nuclear Astrophysics Lunch Research Discussions Observing the First Stars through the Atmospheres of Ultra Metal-Poor Stars

Universidade de São Paulo – X-PLUS Collaboration Meeting Identifying Carbon-Enhanced Metal-Poor Stars from S-PLUS Photometry

University of Notre Dame – Research Experiences for Undergraduates (REU) Program Galactic Archaeology: The Chemical Evolution and Age of the Universe revealed by old Stars

#### 2014

- \* University of Notre Dame Astronomy Seminar
  Exploring the history of the Galactic halo with Carbon-Enhanced Metal-Poor stars
- \* Massachusetts Institute of Technology Kavli Institute Exploring the history of the Galactic halo with Carbon-Enhanced Metal-Poor stars

#### 2013

National Optical Astronomy Observatory (Carbon Enhanced) metal-poor stars and the chemical evolution of the Universe

\* Gemini Observatory – Northern Operations Center Metal-poor stars as tracers of the chemical evolution of the Galaxy

#### 2012

- \* Universidade Cruzeiro do Sul Astronomy Colloquium Search for Carbon-Enhanced Metal-Poor stars in the Halo(es) of the Galaxy
- \* Universidade de São Paulo Astronomy Colloquium Spectroscopy from R=300 to 30000: metal-poor stars and Galactic chemical evolution
- \* Universidade de São Paulo Invitation to Physics: undergraduate weekly seminar Galactic Archaeology: chemical evolution of the Universe revealed by metal-poor stars

Universidade de São Paulo - Astronomy at noon: undergraduate weekly seminar Census of the Milky Way

#### 2011

Universidade de São Paulo - Chemical Evolution Group Seminar Rediscovering the Dual Halo of the Milky Way via Hierarquical Clustering

Universidade de São Paulo - Astronomy at noon: undergraduate weekly seminar Stellar Archaeology

Universidade de São Paulo - Astronomy Colloquium Making good use of bad weather: finding extremely metal-poor stars in the clouds

\* ESO Headquarters - Santiago - Astronomy Colloquium Searches for Metal-Poor Stars from the Hamburg/ESO Survey using the CH G-band

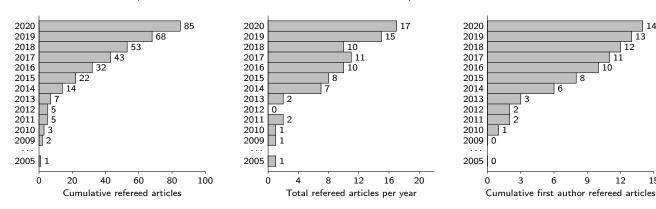
# Quantitative Indicators

- ADS: 3879 citations / h-index = 28 / i10-index = 60 (November 6, 2020 ADS link)
- Google Scholar: 4486 citations / h-index = 31 / i10-index = 60 (November 6, 2020 Google Scholar link)
- ADS Publication List (complete ADS link) / (refereed only ADS link)
- ORCID iD 0000-0003-4479-1265 / ResearcherID C-6864-2015

#### Publication list

#### Refereed articles

Total: 85 publications (14 first author, 9 second author, 10 third author)



85. Limberg, G., Rossi, S., Beers, T., Perottoni, H., Pérez-Villegas, A., Santucci, R., Abuchaim, Y., Placco, V. M., Lee, Y. S., Christlieb, N., Norris, J. E., Bessell, M., Ryan, S. G., Wilhelm, R., Rhee, J., Frebel, A. Dynamically Tagged Groups of Very Metal-Poor Halo Stars from the HK and Hamburg/ESO Surveys 2020, The Astrophysical Journal, submitted

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- 84. Gudin, D., Beers, T. C., Roederer, I. U., Placco, V. M., Yuan, Z., Shank, D., Dietz, S., Holmbeck, E. M., Rasmussen, K. C., Hansen, T. T., Sakari, C. M, Ezzeddine, R., Frebel, A. The R-Process Alliance: Chemo-Dynamically Tagged Groups of Halo r-Process-Enhanced Stars Reveal a Shared Chemical-Evolution History 2020. The Astrophysical Journal, submitted
- 83. Baqui, P., Marra, V., Casarini, L., Angulo, R., Díaz-García, L., Hernández-Monteagudo, C., Lopes, P. A., López-Sanjuan, C., Muniesa, D., Placco, V. M., Quartin, M., Queiroz, C., Sobral, D., Solano, E., Tempel, E., Varela, J., Vílchez, J. M., Abramo, L. R., Alcaniz, J., Benitez, N., Bonoli, S., Carneiro, S., Cenarro, A. J., Cristóbal-Hornillos, D., de Amorim, A., de Oliveira, C. M., Dupke, R. A., Ederoclite, A., González Delgado, R. M., Marín-Franch, A., Moles, M., Vázquez Ramió, H., Sodré, L., Taylor, K. The miniJPAS survey: star-galaxy classification using machine learning
  - 2020, Astronomy & Astrophysics, submitted
- 82. Bonoli, S., Marín-Franch, A., Varela, J., Vázguez Ramió, H., Abramo, L. R., Cenarro, A. J., Dupke, R. A., Vílchez, J. M., Cristóbal-Hornillos, D., González Delgado, R. M., Hernández-Monteagudo, C., López-Sanjuan, C., Muniesa, D., Civera, T., Ederoclite, A., Hernán-Caballero, A., Marra, V., Baqui, P., Cortesi, A., Cypriano, E., Daflon, S., de Amorim, A., Díaz-García, L., Diego, J., Martínez-Solaeche, G., Pérez, E., Placco, V. M., et al. The miniJPAS survey: a preview of the Universe in 56 colours **2020**, **Astronomy & Astrophysics**, submitted
- 81. Fernández-Trincado, J. G., Beers, T. C., Minniti, D., Carigi, L., Barbuy, B., Placco, V. M., Moni Bidin, C., Villanova, S. Roman-Lopes, A., Nitschelm, C.

- Discovery of a large population of Nitrogen-Enhanced stars in the Magellanic Clouds 2020, The Astrophysical Journal Letters, in press
- 80. Fernández-Trincado, J. G., Minniti, D., Beers, T., Villanova, S. Geisler, D., Souza, S., Smith, L., Placco, V. M., Vieira, K., Pérez-Villegas, A., Barbuy, B., Alves-Brito, A., Moni Bidin, C., Alonso-García, J., Tang, B., Palma, T. The enigmatic globular cluster UKS-1 obscured by the bulge: H-band discovery of nitrogen-enhanced stars 2020, Astronomy & Astrophysics, in press
- Mardini, M. K., Placco, V. M., Meiron, Y., Ishchenko, M., Avramov, B., Mazzarini, M., Berczik, P., Arca Sedda, M. Beers, T. C., Frebel, A., Taani, A., Donnari, M., Al-Wardat, M. A., Zhao, G. Cosmological Insights into the Early Accretion of r-Process-Enhanced stars. I. A Comprehensive Chemo-dynamical Analysis of LAMOST J1109+0754
   The Astrophysical Journal, in press
- 78. Rasmussen, K., Zepeda, J., Beers, T. C., Placco, V. M., Depagne, É., Frebel, A., Dietz, S., Hartwig, T. *Metal-Poor Stars Observed with the Southern African Large Telescope* 2020, The Astrophysical Journal, in press
- 77. Molino, A., Costa-Duarte, M. V., Sampedro, L., Herpich, F. R., Sodré, L., Jr., Mendes de Oliveira, C., Schoenell, W., Barbosa, C. E., Queiroz, C., Lima, E. V. R., Azanha, L., Muñoz-Elgueta, N., Ribeiro, T., Kanaan, A., Hernandez-Jimenez, J. A., Cortesi, A., Akras, S., Lopes de Oliveira, R., Torres-Flores, S., Lima-Dias, C., Nilo Castellon, J. L., Damke, G., Alvarez-Candal, A., Jiménez-Teja, Y., Coelho, P., Pereira, E., Montero-Dorta, A. D., Benítez, N., Gonçalves, T. S., Santana-Silva, L., Werner, S. V., Almeida, L. A., Lopes, P. A. A., Chies-Santos, A. L., Telles, E., de Souza, T. C. R., Gonçalves, D. R., de Souza, R. S., Makler, M., Placco, V. M., Nakazono, L. M. I., Saito, R. K., Overzier, R. A., Abramo, L. R. Assessing the photometric redshift precision of the S-PLUS survey: the Stripe-82 as a test-case 2020, Monthly Notices of the Royal Astronomical Society, vol. 499, 3884 (ADS link | download pdf)
- Roederer, I. U., Lawler, J. E., Holmbeck, E. M., Beers, T. C., Ezzeddine, R., Frebel, A., Hansen, T. T., Ivans, I. I., Karakas, A. I., Placco, V. M., Sakari, C. M.
   Detection of Pb II in the Ultraviolet Spectra of Three Metal-Poor Stars

   2020, The Astrophysical Journal Letters, vol. 902, 24 (ADS link | download pdf)
- 75. Holmbeck, E. M., Hansen, T. T., Beers, T. C., Placco, V. M., Whitten, D. D., Rasmussen, K. C., Roederer, I. U., Sakari, C., Ezzeddine, R., Frebel, A., Drout, M. R., Simon, J. D., Thompson, I. B., Bland-Hawthorn, J., Gibson, B. K., Grebel, E. K., Kordopatis, G., Kunder, A., Meléndez, J., Navarro, J. F., Reid, W. A., Seabroke, G., Steinmetz, M., Watson, F., Wyse, R. F. G.

  The R-Process Alliance: Fourth Data Release from the Search for R-Process-Enhanced Stars in the Galactic Halo
  2020, The Astrophysical Journal Supplement Series, vol. 249, 30 (ADS link | download pdf)
- 74. Ezzeddine, R., Rasmussen, K., Frebel, A., Chiti, A., Hinojisa, K., Placco, V. M., Ji, A. P., Beers, T. C., Hansen, T. T., Roederer, I. U., Sakari, C. M., Melendez, J. The R-Process Alliance: First Magellan/MIKE Release from the Southern Search for R-Process-enhanced Stars 2020, The Astrophysical Journal, vol. 898, 150 (ADS link | download pdf)
- 73. Cain, M., Frebel, A., Ji, A. P., Placco, V. M., Ezzeddine, R., Roederer, I. U., Hattori, K., Beers, T. C., Meléndez, J., Hansen, T. T., Sakari, C. The R-Process Alliance: A Very Metal-Poor, Extremely r-Process-Enhanced Star with [Eu/Fe] = +2.2, and the Class of r-III Stars
  2020, The Astrophysical Journal, vol. 898, 40 (ADS link | download pdf)
- 72. Placco, V. M., Santucci, R. M., Yuan, Z., Mardini, M. K., Holmbeck, E. M., Wang, X., Surman, R., Hansen, T., Roederer, I. U., Beers, T., Choplin, A., Ji, A., Ezzeddine, R., Frebel, A., Sakari, C., Whitten, D., Zepeda, J. *The R-Process Alliance: The Peculiar Chemical Abundance Pattern of RAVE J183013.5—455510* 2020, The Astrophysical Journal, vol. 897, 78 (ADS link | download pdf)

- Dietz, S. E., Yoon, J., Beers, T. C., Placco, V. M.
   The Metallicity Gradient and Complex Formation History of the Outermost Halo of the Milky Way 2020, The Astrophysical Journal, vol. 894, 34 (ADS link | download pdf)
- 70. Yoon, J., Whitten, D. D., Beers, T. C., Lee, Y. S., Masseron, T., Placco, V. M. *Identification of a Group III CEMP-no Star in the Dwarf Spheroidal Galaxy Canes Venatici I* 2020, The Astrophysical Journal, vol. 894, 7 (ADS link | download pdf)
- Yuan, Z., Myeong, G. C., Beers, T. C., Evans, N. W., Lee, Y. S., Banerjee, P., Gudin, D., Hattori, K., Li, H., Matsuno, T., Placco, V. M., Smith, M. C., Whitten, D. D., Zhao, G. Dynamical Relics of the Ancient Galactic Halo
   2020, The Astrophysical Journal, vol. 891, 39 (ADS link | download pdf)
- Andrade-Santos, F., van Weeren, R. J., Di Gennaro, G., Wittman, D., Ryu, D., Lal, D. V., Placco, V. M., Fogarty, K., Jee, M. J., Stroe, A., Sobral, D., Forman, W. R., Jones, C., Kraft, R. P., Murray, S. S., Brüggen, M., Kang, H., Santucci, R. M., Golovich, N., Dawson, W. A. Chandra Observations of the Spectacular A3411—12 Merger Event
   2019, The Astrophysical Journal, vol. 887, 31 (ADS link | download pdf)
- 67. Fernández-Trincado, J. G., Mennickent, R., Cabezas, M., Zamora, O., Martell, S., Beers, T. C., Placco, V. M., Nataf, D., Mészáros, S., Minniti, D., Schleicher, D. R., Tang, B., Pérez-Villegas, A., Robin, A. C., Reylé, C. Discovery of a nitrogen-enhanced mildly metal-poor binary system: Possible evidence for pollution from an extinct AGB star
  - 2019, Astronomy & Astrophysics, vol. 631, A97 (ADS link | download pdf)
- 66. Fernández-Trincado, J. G., Beers, T. C., Placco, V. M., Moreno, E., Alves-Brito, A., Minniti, D., Tang, B., Pérez-Villegas, A., Reylé, C., Robin, A. C., Villanova, S. Discovery of a New Stellar Subpopulation Residing in the (Inner) Stellar Halo of the Milky Way 2019, The Astrophysical Journal Letters, vol. 886, 8 (ADS link | download pdf)
- 65. López-Sanjuan, C., Varela, J., Cristóbal-Hornillos, D., Vázquez Ramió, H., Carrasco, J. M., Tremblay, P. -E., Whitten, D., Placco, V. M., Marín-Franch, A., Cenarro, A., Ederoclite, A., Alfaro, E., Coelho, P., Civera, T., Hernández-Fuertes, J., Jiménez-Esteban, F., Jiménez-Teja, Y., Maíz Apellániz, J., Sobral, D., Vílchez, J., Alcaniz, J., Angulo, R., Dupke, R., Hernández-Monteagudo, C., Mendes de Oliveira, C., Moles, M., Sodré, L., Jr. *J-PLUS: Photometric Calibration of Large-Area Multi-Filter Surveys with Stellar and White Dwarf loci* 2019, Astronomy & Astrophysics, vol. 631, A119 (ADS link | download pdf)
- 64. Whitten, D. D., Beers, T. C., Placco, V. M., Santucci, R. M., Denisenkov, P., Tissera, P. B., Mejías, A., Hernitschek, N., Carollo, D. Constraints on the Galactic Inner Halo Assembly History from the Age Gradient of Blue Horizontal-Branch Stars 2019, The Astrophysical Journal, vol. 884, 67 (ADS link | download pdf)
- 63. Mendes de Oliveira, C., Ribeiro, T., Schoenell, W., Kanaan, A., Overzier, R., Molino, A., Sampedro, L., Coelho, P., Barbosa, C., Cortesi, A., Costa-Duarte, M. V., Herpich, F. R., Hernandez-Jimenez, J., Placco, V. M., et al. The Southern Photometric Local Universe Survey (S-PLUS): improved SEDs, morphologies and redshifts with 12 optical filters
  - 2019, Monthly Notices of the Royal Astronomical Society, vol. 489, 241 (ADS link | download pdf)
- 62. Mardini, M. K., Placco, V. M., Taani, A., Li, H., Zhao, G.

  Metal-Poor Stars Observed with the Automated Planet Finder Telescope. II. Chemodynamical Analysis of Six

  Low-Metallicity Stars in the Halo System of the Milky Way

  2019, The Astrophysical Journal, vol. 882, 27 (ADS link | download pdf)
- Ezzeddine, R., Frebel, A., Roederer, I. U., Tominaga, N., Tumlinson, J., Ishigaki, M., Nomoto, K.,
   Placco, V. M., Aoki, W.
   Evidence for an Aspherical Population III Supernova Explosion Inferred from the Hyper Metal-Poor Star HE 1327—2326
   2019, The Astrophysical Journal, vol. 876, 97 (ADS link | download pdf)

60. Mardini, M. K., Li., H., Placco, V. M., Alexeeva, S., Carollo, D., Taani, A., Ablimit, I., Wang, L., Zhao, G. Metal-Poor Stars Observed with the Automated Planet Finder Telescope. I. Discovery of Five Carbon-Enhanced Metal-Poor Stars from LAMOST

- 2019, The Astrophysical Journal, vol. 875, 89 (ADS link | download pdf)
- 58. Hansen, C. J., Hansen, T. T., Koch, A., Beers, T. C., Nordström, B., Placco, V. M., Andersen, J. Abundances and kinematics of carbon-enhanced metal-poor stars in the Galactic halo. A new classification scheme based on Sr and Ba
  2019, Astronomy & Astrophysics, vol. 623, A128 (ADS link | download pdf)
- 57. Cenarro, A., Moles, M., Cristóbal-Hornillos, D., Marín-Franch, A., Ederoclite, A., Varela, J., López-Sanjuan, C., Hernández-Monteagudo, C., Angulo, R., Vázquez Ramió, H., Viironen, K., Bonoli, S., Orsi, A., Hurier, G., San Roman, I., Vilella-Rojo, G., Díaz-García, L., Logroño-García, R., Gurung-López, S., Spinoso, D., Izquierdo-Villalba, D., Aguerri, J., Allende Prieto, C., Bonatto, C., Carvano, J., Chies-Santos, A., Daflon, S., Dupke, R., Falcón-Barroso, J., Gonçalves, D., Jiménez-Teja, Y., Molino, A., Placco, V. M., Solano, E., Whitten, D., et al. *J-PLUS: The Javalambre Photometric Local Universe Survey*2019, Astronomy & Astrophysics, vol. 622, A176 (ADS link | download pdf)
- López-Sanjuan, C., Vázquez Ramió, H., Varela, J., Spinoso, D., Angulo, R. E., Muniesa, D., Viironen, K., Cristóbal-Hornillos, D., Cenarro, A. J., Ederoclite, A., Marín-Franch, A., Moles, M., Ascaso, B., Bonoli, S., Chies-Santos, A. L., Coelho, P. R., Costa-Duarte, M. V., Cortesi, A., Díaz-García, L. A., Dupke, R. A., Galbany, L., Hernández-Monteagudo, C., Logroño-García, R., Molino, A., Orsi, A., Placco, V. M., Sampedro, L., San Roman, I., Vilella-Rojo, G., Whitten, D., Mendes de Oliveira, C. L., Sodré Jr., L. J-PLUS: Morphological star/galaxy classification by PDF analysis
   2019, Astronomy & Astrophysics, vol. 622, A177 (ADS link | download pdf)
- 55. Whitten, D. D., Placco, V. M., Beers, T. C., Chies-Santos, A. L., Bonatto, C., Varela, J., Cristóbal-Hornillos, D., Ederoclite, A., Akras, S., Caballero, J. A., Coelho, P., Costa-Duarte, M. V., Borges Fernandes, M., Lopes de Oliveira, R., Orsi, A. A., Vázquez Ramió, H., Rossi, S., Cenarro, A. J., Daflon, S., Dupke, R. A., Marín-Franch, A., Mendes de Oliveria, C., Moles, M., Sodré, L. J-PLUS: Identification of Low-Metallicity Stars with Artificial Neural Networks using SPHINX 2019, Astronomy & Astrophysics, vol. 622, A182 (ADS link | download pdf)
- 54. Placco, V. M., Santucci, R. M., Beers, T. C., Chanamé, J., Sepúlveda, M. P., Coronado, J., Rossi, S., Lee, Y. S., Starkenburg, E., Youakim, K., Barrientos, M., Ezzeddine, R., Frebel, A., Hansen, T. T., Holmbeck, E. M., Ji, A. P., Rasmussen, K. C., Roederer, I. U., Sakari, C. M., Whitten, D. D. The R-Process Alliance: Spectroscopic Follow-up of 857 Low-Metallicity Star Candidates from the Best & Brightest Survey
  2019, The Astrophysical Journal, vol. 870, 122 (ADS link | download pdf)
- 53. Sakari, C. M., Placco, V. M., Farrell, E. M., Roederer, I. U., Wallerstein, G., Beers, T. C., Ezzeddine, R., Frebel, A., Hansen, T. T., Holmbeck, E. M., Sneden, C., Cowan, J. J., Venn, K. A., Davis, C. E., Matijevič, G., Wyse, R., Bland-Hawthorn, J., Chiappini, C., Freeman, K. C., Gibson, B. K., Grebel, E. K., Helmi, A., Kordopatis, G., Kunder, A., Navarro, J., Reid, W., Seabroke, G., Steinmetz, M., Watson, F.

  The R-Process Alliance: First Release from Northern Search for R-Process-Enhanced Stars in the Galactic Halo 2018, The Astrophysical Journal, in vol. 868, 110 (ADS link | download pdf)
- 52. Wanying Fu, S., Simon, J. D., Shetrone, M., Bovy, J., Beers, T. C., Fernández-Trincado, J., Placco, V. M., Zamora, O., Allende-Prieto, C., García-Hernández, D. A., Harding, P., Ivans, I. I., Lane, R., Nitschelm, C.,

```
Roman-Lopes, A., Sobeck, J. The Origin of the 300 km s<sup>-1</sup> Stream near Segue 1 2018, The Astrophysical Journal, vol. 866, 42 (ADS link | download pdf)
```

- 51. Roederer, I. U., Sakari, C. M., **Placco, V. M.**, Beers, T. C., Ezzeddine, R., Frebel, A., Hansen, T. T.

  The R-Process Alliance: A Comprehensive Abundance Analysis of HD 222925, a Metal-Poor Star with an Extreme
  R-Process Enhancement of [Eu/H] = -0.14
  - 2018, The Astrophysical Journal, vol. 865, 129 (ADS link | download pdf)
- 50. Cain, M., Frebel, A., Gull, M., Ji, A. P., Placco, V. M., Beers, T. C., Meléndez, J., Ezzeddine, R., Casey, A. R., Hansen, T. T., Roederer, I. U., Sakari, C.

  The R-Process Alliance: Chemical Abundances for a Trio of R-Process-Enhanced Stars One Strong, One Moderate. One Mild
  - 2018, The Astrophysical Journal, vol. 864, 43 (ADS link | download pdf)
- 49. Gull, M., Frebel, A., Cain, M., Placco, V. M., Ji, A. P., Abate, C., Ezzeddine, R., Karakas, A. I., Hansen, T. T., Sakari, C., Holmbeck, E. M., Santucci, R. M., Casey, A. R., Beers, T. C. The R-Process Alliance: Discovery of the first metal-poor star with a combined r- and s-process element signature 2018, The Astrophysical Journal, vol. 862, 174 (ADS link | download pdf)
- 48. Yoon, J., Beers, T., Dietz, S., Lee, Y. S., Placco, V. M., Da Costa, G., Keller, S., Owen, C. I., Sharma, M. Galactic Archeology with the AEGIS Survey: The Evolution of Carbon and Iron in the Galactic Halo 2018, The Astrophysical Journal, vol. 861, 146 (ADS link | download pdf)
- 47. Holmbeck, E. M., Beers, T. C., Roederer, I. U., Placco, V. M., Hansen, T. T., Sakari, C., Sneden, C., Liu, C., Lee, Y. S., Frebel, A.

  The R-Process Alliance: 2MASS J09544277+5246414, The Most Actinide-Enhanced r-II Star Known
  2018, The Astrophysical Journal Letters, vol. 859, 24 (ADS link | download pdf)
- Placco, V. M., Beers, T. C., Santucci, R. M., Chanamé, J., Sepúlveda, M. P., Coronado, J., Points, S. D., Kaleida, C. C., Rossi, S., Kordopatis, G., Lee, Y. S., Matijevič, G., Frebel, A., Hansen, T. T., Holmbeck, E. M., Rasmussen, K. C., Roederer, I. U., Sakari, C. M., Whitten, D. D. Spectroscopic Validation of Low-Metallicity Stars from RAVE
   2018, The Astronomical Journal, vol. 155, 256 (ADS link | download pdf)
- 45. Hansen, T. T., Holmbeck, E. M., Beers, T. C., Placco, V. M., Roederer, I. U., Frebel, A., Sakari, C. M., Simon, J. D., Thompson, I. B.

  The R-Process Alliance: First Release from Southern Search for R-Process-Enhanced Stars in the Galactic Halo
  2018, The Astrophysical Journal, vol. 858, 92 (ADS link | download pdf)
- 44. Sakari, C. M., Placco, V. M., Hansen, T. T., Holmbeck, E. M., Beers, T. C., Frebel, A. F., Roederer, I. U., Venn, K. A., Wallerstein, G., Davis, C. E., Farrell, E., Yong, D.

  The r-process Pattern of a Bright, Highly r-process-enhanced Metal-poor Halo Star at [Fe/H]∼ −2

  2018, The Astrophysical Journal Letters, vol. 854, 20 (ADS link | download pdf)
- Shappee, B. J., Simon, J. D., Drout, M. R., Piro, A. L., Morrell, N., Prieto, J. L., Kasen, D., Holoien, T. W.-S., Kollmeier, J. A., Kelson, D. D., Coulter, D. A., Foley, R. J., Kilpatrick, C. D., Siebert, M. R., Madore, B. F., Murguia-Berthier, A., Pan, Y.-C., Prochaska, J. X., Ramirez-Ruiz, E., Rest, A., Adams, C., Alatalo, K., Banãdos, E., Baughman, J., Bernstein, R. A., Bitsakis, T., Boutsia, K., Bravo, J. R., Di Mille, F., Higgs, C. R., Ji, A. P., Maravelias, G., Marshall, J. L., Placco, V. M., Prieto, G., Wan, Z. Early Spectra of a Gravitational Wave Source GW170817: Evolution of a Neutron Star Merger 2017, Science, 10.1126/science.aaq0186 (ADS link | download pdf)
- 42. LIGO Scientific Collaboration and Virgo Collaboration, Fermi GBM, INTEGRAL, IceCube Collaboration, ..., TOROS: Transient Robotic Observatory of the South Collaboration (incl. **Placco, V. M.**), ... *Multi-messenger Observations of a Binary Neutron Star Merger*2017, The Astrophysical Journal Letters, vol. 848, 12 (ADS link | download pdf)

- Díaz, M. C., Macri, L. M., Garcia Lambas, D., Mendes de Oliveira, C., Nilo Castellón, J. L., Ribeiro, T., Sánchez, B., Schoenell, W., Abramo, L. R., Akras, S., Alcaniz, J. S., Artola, R., Beroiz, M., Bonoli, S., Cabral, J., Camuccio, R., Castillo, M., Chavushyan, V., Coelho, P., Colazo, C., Costa-Duarte, M. V., Cuevas Larenas, H., DePoy, D. L., Domínguez Romero, M., Dultzin, D., Fernández, D., García, J., Girardini, C., Gonçalves, D. R., Gonçalves, T. S., Gurovich, S., Jiménez-Teja, Y., Kanaan, A., Lares, M., Lopes de Oliveira, R., López-Cruz, O., Marshall, J. L., Melia, R., Molino, A., Padilla, N., Peñuela, T., Placco, V. M., Quiñones, C., Ramírez Rivera, A., Renzi, V., Riguccini, L., Ríos-López, E., Rodriguez, H., Sampedro, L., Schneiter, M., Sodré, L., Starck, M., Torres-Flores, S., Tornatore, M., Zadrozny, A.
   Observations of the first electromagnetic counterpart to a gravitational wave source by the TOROS collaboration
  - Observations of the first electromagnetic counterpart to a gravitational wave source by the TOROS collaboration 2017, The Astrophysical Journal Letters, vol. 848, 29 (ADS link | download pdf)
- 40. Reggiani, H., Meléndez, J., Kobayashi, C., Karakas, A., Ramírez, I., **Placco, V. M.**Constraining cosmic scatter in the Galactic Halo through a differential analysis of Metal Poor Stars

  2017, Astronomy & Astrophysics, vol. 608, 46 (ADS link | download pdf)
- 39. Kielty, C. L., Venn, K. A., Loewen, N. B., Shetrone, M., Placco, V. M., Jahandar, F., Mészáros, Sz., Martell, S. Carbon-enhanced metal-poor stars in the SDSS-APOGEE database

  2017, Monthly Notices of the Royal Astronomical Society, vol. 471, 404 (ADS link | download pdf)
- 38. Fernández-Trincado, J. G., Zamora, O., Garcia-Hernandez, D. A., Souto, D., Dell'Agli, F., Schiavon, R. P., Geisler, D., Tang, B., Villanova, S., Hasselquist, S., Mennickent, R. E., Cunha, K., Shetrone, M., Allende-Prieto, C., Vieira, K., Zasowski, G., Sobeck, J., Hayes, C. R., Majewski, S. R., Placco, V. M., Beers, T. C., Schleicher, D. R. G., Robin, A. C., Meszaros, Sz., Masseron, T., Garcia-Perez, A. E., Anders, F., Meza, A., Alves-Brito, A., Carrera, R., Minniti, D., Lane, R. R., Fernandez-Alvar, E., Moreno, E., Pichardo, B., Perez-Villegas, A., Schultheis, M., Roman-Lopes, A., Fuentes, C. E., Nitschelm, C., Harding, P., Bizyaev, D., Pan, K., Oravetz, D., Simmons, A., Ivans, I. I., Blanco-Cuaresma, S., Hernandez, J., Alonso-Garcia, J., Valenzuela, O., Chaname, J. Atypical Mg-poor Milky Way field stars with globular cluster second-generation like chemical patterns 2017, The Astrophysical Journal Letters, vol. 846, 2 (ADS link | download pdf)
- Hasselquist, S., Shetrone, M., Smith, V. V., Holtzman, J., McWilliam, A., Fernández-Trincado, J. G., Beers, T. C., Majewski, S. R., Nidever, D. L., Tang, B., Tissera, P. B., Fernández-Alvar, E. F., Allende-Prieto, C., Battaglia, G., Carigi, L., Cunha, K., Delgado Inglada, G., Frinchaboy, P., García-Hernández, D. A., Geisler, D., Minniti, D., Placco, V. M., Schultheis, M., Sobeck, J., Villanova, S. APOGEE Chemical Abundances of the Sagittarius Dwarf Galaxy
   2017, The Astrophysical Journal, vol. 845, 162 (ADS link | download pdf)
- 36. Placco, V. M., Holmbeck, E. M., Frebel, A., Beers, T. C., Surman, R. A., Ji, A. P., Ezzedine, R., Points, S. D., Kaleida, C. C., Hansen, T. T., Sakari, C. M., Casey, A. R. RAVE J203843.2—002333: The First Highly R-process-enhanced Star Identified in the RAVE Survey.

  2017, The Astrophysical Journal, vol. 844, 18 (ADS link | download pdf)
- Lee, Y. S., Beers, T. C., Kim, Y. K., Placco, V. M., Yoon, J., Carollo, D., Masseron, T., Jung, J. Chemical Cartography. I. A Carbonicity Map of the Galactic Halo
   2017, The Astrophysical Journal, vol. 836, 91 (ADS link | download pdf)
- Beers, T. C., Placco, V. M., Carollo, D., Rossi, S., Lee, Y. S., Frebel, A., Norris, J. E., Dietz, S., Masseron, T. Bright Metal-Poor Stars from the Hamburg/ESO Survey. II. A Chemodynamical Analysis
   The Astrophysical Journal, vol. 835, 81 (ADS link | download pdf)
- van Weeren, R. J., Andrade-Santos, F., Dawson, W. A., Golovich, N., Lal, D. V., Kang, H., Ryu, D., Brüggen, M., Ogrean, G. A., Forman, W. R., Jones, C., Placco, V. M., Santucci, R. M., Wittman, D., Jee, M. J., Kraft, R. P., Sobral, D., Stroe, A., Fogarty, K.
   The Case for Electron Re-Acceleration at Galaxy Cluster Shocks
   2017, Nature Astronomy, vol. 1, 5 (Nature Astronomy link | Issue cover | download pdf)

32. Carollo, D., Beers, T., Placco, V. M., Santucci, R. M., Denissenkov, P., Tissera, P. B., Lentner, G., Rossi, S., Lee, Y. S., Tumlinson, J.

The age structure of the Milky Way's halo

- 2016, Nature Physics, vol. 12, 1170 (Nature Physics link | Issue cover | download pdf)
- 31. Hasselquist, S., Shetrone, M., Cunha, K., Smith, V. V., Holtzman, J., Lawler, J. E., Beers, T. C., Chojnowski, D., Fernández-Trincado, J., García-Hernández, D., Hearty, F., Majewski, S., Pereira, C., Placco, V. M., Villanova, S., Zamora, O.

Identification of Neodymium in the APOGEE H-band Spectra

- 2016, The Astrophysical Journal, vol. 833, 81 (ADS link | download pdf)
- 30. Placco, V. M., Frebel, A., Beers, T. C., Yoon, J., Chiti, A., Heger, A. Chan, C., Casey, A. R., Christlieb, N. Observational Constraints on First-Star Nucleosynthesis. II. Spectroscopy of an Ultra Metal-Poor CEMP-no Star 2016, The Astrophysical Journal, vol. 833, 21 (ADS link | download pdf)
- 29. Yoon, J., Beers, T., Placco, V. M., Rasmussen, K., Carollo, D., He, S., Hansen, T., Roederer, I. U., Zeanah, J. Observational Constraints on First-Star Nucleosynthesis. I. Evidence for Multiple Progenitors of CEMP-no Stars 2016, The Astrophysical Journal, vol. 833, 20 (ADS link | download pdf)
- Placco, V. M., Beers, T. C., Reggiani, H., Meléndez, J.
   G64–12 and G64–37 are Carbon-Enhanced Metal-Poor Stars
   2016, The Astrophysical Journal Letters, vol. 829, 24 (ADS link | download pdf)
- Roederer, I. U., Placco, V. M., Beers, T. C.
   Detection of Phosphorus, Sulphur, and Zinc in the Carbon-Enhanced Metal-Poor Star BD+44° 493

   The Astrophysical Journal Letters, vol. 824, 19 (ADS link | download pdf)
- 26. Hansen, C. J., Nordström, B., Hansen, T., Kennedy, C. R., **Placco, V. M.**, Beers, T. C., Andersen, J., Cescutti, G., Chiappini, C. *Abundances of carbon-enhanced metal-poor stars as constraints on their formation*2016, Astronomy & Astrophysics, vol. 588, A37 (ADS link | download pdf)
- 25. Hansen, T., Andersen, J., Nordström, B., Beers, T., Placco, V. M., Yoon, J., Buchhave, L. The role of binaries in the enrichment of the early Galactic halo.III. Carbon-Enhanced Metal-Poor Stars CEMP-s 2016, Astronomy & Astrophysics, vol. 588, A3 (ADS link | download pdf)
- Hansen, T., Andersen, J., Nordström, B., Beers, T., Placco, V. M., Yoon, J., Buchhave, L.
   *The role of binaries in the enrichment of the early Galactic halo.II. Carbon-Enhanced Metal-Poor Stars CEMP-no* 2016, Astronomy & Astrophysics, vol. 586, A160 (ADS link | download pdf)
- Meléndez, J., Placco, V. M., Tucci-Maia, M., Ramírez, I., Li, T. S., Perez, G.,
   2MASS J1808-5104: The Brightest (V=11.9) Ultra Metal-Poor Star
   2016, Astronomy & Astrophysics Letter to the Editor, vol. 585, L5 (ADS link | download pdf)
- Hollek, J., Frebel, A., Placco, V. M., Karakas, A., Shetrone, M., Sneden, C., Christlieb, N.
   *The Chemical Abundances of Stars in the Halo (CASH) Project. III. A New Classification Scheme for Carbon-Enhanced Metal-poor Stars with S-process Element Enhancement* 2015, The Astrophysical Journal, vol. 812, 121 (ADS link | download pdf)
- An, D., Beers, T. C., Santucci, R. M., Carollo, D., Placco, V. M., Lee, Y. S., Rossi, S.
   *The Fractions of Inner- and Outer-Halo Stars in the Local Volume as Revealed by SDSS Photometry of Stripe 82* 2015, The Astrophysical Journal Letters, vol. 813, 28 (ADS link | download pdf)
- Santucci, R. M., Beers, T. C., Placco, V. M., Carollo, D., Rossi, S., Lee, Y. S., Denissenkov, P., Tumlinson, J., Tissera, P. B.
   Chronography of the Milky Way's Halo System with Field Blue Horizontal-Branch Stars
   2015, The Astrophysical Journal Letters, vol. 813, 16 (ADS link | download pdf)

Placco, V. M., Beers, T. C., Ivans, I. I., Filler, D., Imig, J. A., Roederer, I., Abate, C., Hansen, T., Cowan, J., Frebel, A., Lawler, J. E., Schatz, H., Sneden, C., Sobeck, J., Aoki, W., Smith, V. V., Bolte, M. Hubble Space Telescope Near-Ultraviolet Spectroscopy of the Bright CEMP-s Stars
 2015, The Astrophysical Journal, vol. 812, 109 (ADS link | download pdf)

- 18. Frebel, A., Chiti, A., Ji, A. P., Jacobson, H. R., **Placco, V. M.**SD 1313-0019 Another second-generation star with [Fe/H] = -5.0, observed with the Magellan Telescope

  2015, The Astrophysical Journal Letters, vol. 810, 27 (ADS link | download pdf)
- Placco, V. M., Frebel, A., Lee, Y. S., Jacobson, H. R., Beers, T. C., Pena, J. M., Chan, C., Heger, A. Metal-poor Stars Observed with the Magellan Telescope. III. New Extremely and Ultra Metal-Poor Stars from SDSS/SEGUE and Insights on the Formation of Ultra Metal-Poor Stars
   2015, The Astrophysical Journal, vol. 809, 136 (ADS link | download pdf)
- Hansen, T., Hansen, C. J., Christlieb, N., Beers, T. C., Yong, D., Bessell, M. S., Frebel, A., García Pérez, A. E., Placco, V. M., Norris, J. E., Asplund, M. An Elemental Assay of Very, Extremely, and Ultra Metal-Poor Stars
   2015, The Astrophysical Journal, vol. 807, 173 (ADS link | download pdf)
- Santucci, R. M., Placco, V. M., Rossi, S., Beers, T. C., Reggiani, H. M., Lee, Y. S., Xue, X. X., Carollo, D. The Frequency of Field Blue-Straggler Stars in the Thick Disk and Halo System of the Galaxy 2015, The Astrophysical Journal, vol. 801, 116 (ADS link | download pdf)
- Placco, V. M., Beers, T. C., Frebel, A., Stancliffe R.
   Carbon-Enhanced Metal-Poor Star Frequencies in the Galaxy: Corrections for the Effect of Evolutionary Status on Carbon Abundances

   2014, The Astrophysical Journal, vol. 797, 21 (ADS link | download pdf)
- Beers, T. C., Norris, J. E., Placco, V. M., Lee Y. S., Rossi S., Carollo, D., Masseron, T. Population Studies. XIII. A New Analysis of the Bidelman-MacConnell "Weak-metal" Stars - Confirmation of Metal-poor Stars in the Thick Disk of the Galaxy
   2014, The Astrophysical Journal, vol. 794, 58 (ADS link | download pdf)
- Placco, V. M., Beers, T. C., Roederer, I., Cowan, J., Frebel, A., Filler, D., Ivans, I. I., Lawler, J. E., Schatz, H., Sneden, C., Sobeck, J., Aoki, W., Smith, V. V. Hubble Space Telescope Near-Ultraviolet Spectroscopy of the Bright CEMP-no Star BD+44°493
   The Astrophysical Journal, vol. 790, 34 (ADS link | download pdf)
- 11. Carollo, D., Freeman, K., Beers, T. C., Placco, V. M., Tumlinson, J., Martell, S. L. Carbon-enhanced Metal-poor Stars: CEMP-s and CEMP-no Subclasses in the Halo System of the Milky Way 2014, The Astrophysical Journal, vol. 788, 180 (ADS link | download pdf)
- Hansen, T., Hansen, C. J., Christlieb, N., Yong, D., Bessell, M., García Pérez, A., Beers, T. C., Placco, V. M., Frebel, A., Norris, J. E., Asplund, M.
   Exploring the Origin of Lithium, Carbon, Strontium, and Barium with Four New Ultra Metal-poor Stars
   2014, The Astrophysical Journal, vol. 787, 162 (ADS link | download pdf)
- Kennedy, C. R., Stancliffe, R. J., Kuehn, C., Beers, T. C., Kinman, T. D., Placco, V. M., Reggiani, H., Rossi, S., Lee, Y. S.
   Seven New Carbon-enhanced Metal-poor RR Lyrae Stars
   2014, The Astrophysical Journal, vol. 787, 6 (ADS link | download pdf)
- 8. Placco, V. M., Frebel, A., Beers, T. C., Christlieb, N., Lee, Y. S., Kennedy, C. R., Rossi, S., Santucci, R. *Metal-poor Stars Observed with the Magellan Telescope. II. Discovery of Four Stars with [Fe/H]*≤ −3.5 2014, The Astrophysical Journal, vol. 781, 40 (ADS link | download pdf)

Lee Y. S., Beers T. C., Masseron T., Plez B., Rockosi, C., Sobeck, J., Yanny, B., Lucatello, S., Sivarani, T., Placco, V. M., Carollo D. Carbon-enhanced Metal-poor Stars in SDSS/SEGUE. I. Carbon Abundance Estimation and CEMP Star Frequency 2013, The Astronomical Journal, vol. 146, 132 (ADS link | download pdf)

- Placco, V. M., Frebel A., Beers T. C., Karakas A., Kennedy C. R., Rossi S., Christlieb N., Stancliffe R. Metal-Poor Stars Observed with the Magellan Telescope I. Constraints on Progenitor Mass and Metallicity of AGB Stars Undergoing s-Process Nucleosynthesis
   2013, The Astrophysical Journal, vol. 770, 104 (ADS link | download pdf)
- Placco, V. M., Kennedy C.R., Beers T.C., Christlieb N., Rossi S., Sivarani T., Lee Y.S., Reimers D., Wisotzki L. Searches for Metal-Poor Stars from the Hamburg/ESO Survey using the CH G-band 2011, The Astronomical Journal, vol. 142, 188 (ADS link | download pdf)
- 4. Kennedy, C.R., Sivarani, T., Beers, T.C., Lee, Y.S., Placco, V. M., Rossi, S., Christlieb, N., Herwig, F., Plez, B. [O/Fe] Estimates for Carbon-enhanced Metal-poor Stars from Near-infrared Spectroscopy 2011, The Astronomical Journal, vol. 141, 102 (ADS link | download pdf)
- 3. Placco, V. M., Kennedy C.R., Rossi S., Beers T.C., Lee Y.S., Christlieb N., Sivarani T., Reimers D., Wisotzki L. A Search for Unrecognized Carbon-Enhanced Metal-Poor Stars in the Galaxy 2010, The Astronomical Journal, vol. 139, 1051 (ADS link | download pdf)
- 2. Marsteller, B., Beers, T. C., Sivarani, T., Rossi, S, **Placco, V. M.**, Knapp, G. R., Johnson, J. A., Lucatello, S. *Automated Determination of [Fe/H] and [C/Fe] from Low-Resolution Spectroscopy* **2009**, **The Astronomical Journal**, vol. 138, 533 (ADS link | download pdf)
- Lichtenthäler, R., Lépine-Szily, A., Guimarães, V., Perego, C., Placco, V. M., Camargo, O., Jr., Denke, R., de Faria, P. N., Benjamim, E. A., Added, N., Lima, G. F., Hussein, M. S., Kolata, J., Arazi, A. Radioactive Ion beams in Brazil (RIBRAS)
   2005, The European Physical Journal A Supplement, vol. 25, 733 (ADS link | download pdf)

#### Proceedings, non-refereed publications and abstracts

- 39. Jeong, M., Lee, Y. S., Beers, T. C., Placco, V. M., Chemodynamical Properties of Extremely Metal-Poor Stars, American Astronomical Society, AAS Meeting #235, 2020
- 38. Yoon, J., Beers, T. C., Tian, D., Placco, V. M., Lee, Y. S., Origin and evolution of the CEMP-no stars in the Galaxy and its satellite dwarf galaxies, American Astronomical Society, AAS Meeting #235, 2020
- 37. Vázquez Ramió, H., Cristóbal-Hornillos, D., Ederoclite, A., Whitten, D. D., Placco, V. M., J-PLUS Team *Identification of RR Lyrae stars in the Javalambre Photometric Local Universe Survey*, Proceedings of the XIII Scientific Meeting of the Spanish Astronomical Society, 2019 (ADS link)
- 36. Yoon, J., Whitten, D. D., Beers, T. C., Placco, V. M., Lee, Y. S., Dietz, S., Gudin, D., Rasmussen, K., Lifting the Veil on Ultra Metal-Poor Stars in the Outermost Halo, Rediscovering our Galaxy, Proceedings of the International Astronomical Union, 2018, vol. 334 (ADS link)
- 35. Whitten, D. D., Placco, V. M., Beers, T. C., Clark, S., Ederoclite, A., Mendes de Oliveira, C., *Probing Galactic Chemical Evolution with J-PLUS Photometry*, Rediscovering our Galaxy, Proceedings of the International Astronomical Union, 2018, vol. 334 (ADS link)
- 34. Rasmussen, K., Beers, T. C., Placco, V. M., Yoon, J., Dietz, S., *Measurement of [Fe/H] and [C/Fe] for Metal-Poor Stars from the RAVE Survey*, Rediscovering our Galaxy, Proceedings of the International Astronomical Union, 2018, vol. 334 (ADS link)
- Dietz, S., Beers, T. C., Placco, V. M., Yoon, J., AEGIS Collaboration, Kinematic and Chemical Analysis of AEGIS Survey Stars, Rediscovering our Galaxy, Proceedings of the International Astronomical Union, 2018, vol. 334 (ADS link)

32. Beers, T. C., Holmbeck, E. M., Placco, V. M., Hansen, T. T., Simon, J. D., Thompson, I., Frebel, A., Sakari, C. M., New Highly r-Process-Enhanced Halo Stars, Rediscovering our Galaxy, Proceedings of the International Astronomical Union, 2018, vol. 334 (ADS link)

- 31. Placco, V. M. Identification Of (Bright) Carbon-Enhanced Metal-Poor Stars With J-Plus Photometry, Early Data Release and Scientific Exploitation of the J-PLUS Survey, 2017 (ADS link)
- 30. Holmbeck, E. M., Placco, V. M., Beers, T. C., Frebel, A., Sakari, C., Surman, R. *RAVE J2038-0023: The First Bright r-Process Enhanced Star Identified in the RAVE Survey*, **Proceedings of the 14th Symposium on Nuclei in the Cosmos, 2017** (ADS link)
- van Weeren, R. J., Andrade-Santos, F., Dawson, W. A., Golovich, N., Lal, D. V., Kang, H., Ryu, D., Brüggen, M., Ogrean, G. A., Forman, W. R., Jones, C., Placco, V. M., Santucci, R. M., Wittman, D., Jee, M. J., Kraft, R. P., Sobral, D., Stroe, A., Fogarty, K.
   Discovery of Electron Re-Acceleration at Galaxy Cluster Shocks, American Astronomical Society, AAS Meeting #229, 2017
- 28. Yoon, J., Beers, T. C., Dietz, S., Lee, Y. S., Placco, V. M. Kinematics and chemistry of faint high latitude dwarf carbon stars, American Astronomical Society, AAS Meeting #229, 2017
- Beers, T. C., Placco, V. M., Holmbeck, E. M., Hansen, T. T., Simon, J. D., Thompson, I., Frebel, A. Searching for New Highly r-Process-Enhanced Stars in the Halo of the Milky Way, American Astronomical Society, AAS Meeting #229, 2017
- Dietz, S. E., Beers, T. C., Carollo, D., Yoon, J., Placco, V. M. Identifying CEMP-s and CEMP-no Stars within Milky Way Halo Structures, American Astronomical Society, AAS Meeting #229, 2017
- 25. Lentner, G., Beers, T. C., Placco, V. M., Carollo, D., Whitten, D., Denissenkov, P., Santucci, R., Rossi, S. Structures in the Milky Way's Halo System using the Age Distribution of Field Horizontal-Branch Stars, American Astronomical Society, AAS Meeting #229, 2017
- 24. Rasmussen, K., Beers, T. C., Placco, V. M., Yoon, J. The First Mass Function and Rise of Carbon in the Early Universe, American Astronomical Society, AAS Meeting #229, 2017
- Hasselquist, S., Shetrone, M. D., Smith, V. V., Cunha, K., McWilliam, A., Holtzman, J. A., Majewski, S. R., Sobeck, J., Frinchaboy, P. M., Roman-Lopes, A., Ivans, I. I., Allende-Prieto, C., Placco, V. M., Lane, R., Zasowski, G. APOGEE Chemical Abundances of the Sagittarius Dwarf Galaxy, American Astronomical Society, AAS Meeting #229, 2017
- 22. Gimeno, G., Roth, K., Chiboucas, K., Hibon, P., Boucher, L., White, J., Rippa, M., Labrie, K., Turner, J., Hanna, K., Lazo, M., Pérez, G., Rogers, R., Rojas, R., Placco, V. M., Murowinski, R. *On-sky commissioning of Hamamatsu CCDs in GMOS-S*, Proceedings of the SPIE, 2016, vol. 9908, id. 99082S 14 pp. (SPIE Library)
- 21. Placco, V. M., Beers, T. C., Identifying Bright Carbon-Enhanced Metal-Poor Stars in the RAVE Catalog, American Astronomical Society, AAS Meeting #227, 2016
- 20. Kennedy, C. R., Placco, V. M., Beers, T. C., *High-resolution analysis of carbon-enhanced metal-poor stars with Magellan*, American Astronomical Society, AAS Meeting #227, 2016
- 19. Yoon, J., He, S., Placco, V. M., Carollo, D., Beers, T. C., Carbon Abundance Plateaus among Carbon-Enhanced Metal-Poor Stars, American Astronomical Society, AAS Meeting #227, 2016
- 18. Beers, T. C., Placco, V. M., Carollo, D., Santucci, R. M., Rossi, S., Lee, Y. S., Denissenkov, P., Tumlinson, J., Tissera, P., Lentner, G., *Chronography of the Milky Way's Halo System with Field Blue Horizontal-Branch Stars*, American Astronomical Society, AAS Meeting #227, 2016
- 17. Roth, K., Gimeno, G., Chiboucas, K., Hibon, P., Gomez, P. L., Placco, V. M., Commissioning new Hamamatsu CCDs for GMOS-S, American Astronomical Society, AAS Meeting #225, 2015

16. Beers, T. C., Carollo, D., Keller, S., Casey, A., Lee, Y. S., Placco, V. M.; Skymapper Team, Aegis Collaboration, Kinematics of the AEGIS Spectroscopic Sample of Milky Way Halo- and Disk-System Stars from SkyMapper, American Astronomical Society, AAS Meeting #225, 2015

- 15. Lopes de Oliveira, R., Placco, V. M., Unveiling optical and X-ray properties of the high mass X-ray binary XMMU J054134.7-682550, Revista Mexicana de Astronomía y Astrofísica (Serie de Conferencias), 2014, vol. 44, pp. 158-158 (ADS link)
- 14. Lopes de Oliveira, R., Placco, V. M., Eighteen years of the life of the Be/X-ray binary XMMUJ054134.7-682550, The X-ray Universe, 2014
- Chene, A. N., Padzer, J., Barrick, G., Anthony, A., Benedict, T., Duncan, D., Gigoux, P., Kleinman, S., Malo, L., Martioli, E., Moutou, C., Placco, V. M.; Reshetovand, V., Rhee, J., Roth, K., Schiavon, R., Tollestrup, E. V., Vermeulen, T. A., White, J., Wooff, R., GRACES: Gemini remote access to CFHT ESPaDOnS spectrograph through the longest astronomical fiber ever made: experimental phase completed, Proceedings of the SPIE, 2014, vol. 9151, id. 915147 16 pp. (arXiv e-print)
- 12. Beers, T. C., Lee, Y. S., Placco, V. M.; Carollo, D., Christlieb, N., Fiorenza, S., Determination of Physical Parameter Estimates for Metal-Poor Stars from the HK and HES Surveys, American Astronomical Society, AAS Meeting #222, 2013
- 11. Beers, T. C., Placco, V. M.; Rossi, S., Christlieb, N., Kennedy, C., A New Survey for Carbon-Enhanced Metal-Poor Stars in the Halo(es) of the Galaxy, American Astronomical Society, AAS Meeting #221, 2013
- 10. Placco, V. M.; Beers, T. C., Rossi, S., Kennedy, C., Christlieb, N., Lee, Y. S., *Making Good Use of Bad Weather: Finding Extremely Metal-Poor Stars in the Clouds*, **Astronomical Society of the Pacific, Conference Proceedings**, 2012, vol. 458 p.77 (ADS link)
- 9. Placco, V. M.; Rossi, S., Beers, T. C., Lucatello, S., Abundance Patterns Among Very Metal-Poor Stars in the Halo of the Galaxy: A Statistical Approach, Proceedings of the International Astronomical Union, 2010, vol. 262, p. 412-413 (ADS link)
- 8. Placco, V. M.; Kennedy, C. R.; Rossi, S., Beers, T. C., Christlieb, N., Sivarani, T., A Search for Unrecognized Carbon-Enhanced Metal-Poor Stars, Proceedings of the International Astronomical Union, 2010, vol. 265, p. 132-133 (ADS link)
- 7. Kennedy, C. R., Sivarani, T., Beers, T. C., Rossi, S., Placco, V. M., Johnson, J., Masseron, T., Near-IR Spectroscopy of CEMP Stars with SOAR/OSIRIS, Proceedings of the International Astronomical Union, 2010, vol. 265, p. 126-127 (ADS link)
- 6. Kennedy, C., Beers, T. C., Nordstrom, B., Placco, V. M.; Rossi, S., Sivarani, T., CNO Abundances in Metal-Poor Stars, Proceedings of the 11th Symposium on Nuclei in the Cosmos, 2010 (ADS link)
- 5. Kennedy, C. R., Sivarani, T., Beers, T. C., Rossi, S., Placco, V. M., Johnson, J., Masseron, T., Near-IR Spectroscopy of CEMP Stars with OSIRIS, American Astronomical Society, AAS Meeting #213, 2009
- 4. Rossi, S., Placco, V. M.; Beers, T. C., Marsteller, B., Kennedy, C. R., Sivarani, T., Masseron, T., Plez, B., Refined Estimates of Carbon Abundances for Carbon-Enhanced Metal-Poor Stars, First Stars III Conference. AIP Conference Proceedings, 2008, vol. 990, pp. 154-156 (ADS link)
- 3. Rossi, S., Placco, V. M.; Beers, T. C., Kennedy, C. R., Marsteller, B., Refined Estimates of [Fe/H] and [C/Fe] in Metal-Poor Stars, Proceedings of the 10th Symposium on Nuclei in the Cosmos, 2008 (ADS link)
- 2. Kennedy, C. R., Sivarani, T., Beers, T. C., Lee, Y. S., Rossi, S., Placco, V. M., Near-IR Observations Of CEMP Stars With OSIRIS, American Astronomical Society, AAS Meeting #211, 2007
- Lichtenthäler, R., Lépine-Szily, A., Guimarães, V., Perego, C., Placco, V. M., Camargo, O., Denke, R., de Faria, P. N., Benjamim, E. A., Kuramoto, R. Y. R., Added, N., Lima, G. F., Hussein, M. S., Kolata, J., Arazi, A., Radioactive Ion Beams in Brazil (RIBRAS), Exotic Nuclei 2004. Proceedings of the International Symposium, 2005. (ADS link)

# Telescope time allocations

Approved observing projects: 139 Total awarded: 6082.36 hours

### Principal Investigator

Approved observing projects: 44 Total awarded: 1555.55 hours

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44. 2020A - CTIO Blanco - 2020A-0032: 5.0 nights
43. 2019B - CTIO Blanco - 2019B-0069: 5.0 nights
42. 2019A - Gemini South - GS-2019A-Q-408 (Band 4): 21.0 hours
41. 2019A - Gemini North - GN-2019A-Q-402 (Band 4): 27.0 hours
40. 2018B - Gemini North - GN-2018B-Q-403 (Band 4): 20.0 hours
39. 2018B - Gemini South - GS-2018B-Q-402 (Band 4): 20.0 hours
38. 2018A - Gemini South - GS-2018A-Q-402 (Band 4): 30.0 hours
37. 2017B - Gemini North - GN-2017B-Q-84 (Band 4): 39.0 hours
36. 2017A - Gemini South - GS-2017A-FT-3: 5.5 hours
35. 2017A - KPNO Mayall - 2017A-0295: 7.0 nights
34. 2016B - Gemini North - GN-2016B-Q-85 (Band 4): 50.0 hours
33. 2016B - Gemini South - GS-2016B-Q-86 (Band 4): 50.0 hours
32. 2016A - Gemini South - GS-2016A-Q-107 (Band 4): 50.0 hours
31. 2015B - Gemini North - GN-2015B-Q-100 (Band 4): 30.0 hours
30. 2015B - Gemini South - GS-2015B-Q-104 (Band 4): 50.0 hours
29. 2015B - ESO/NTT - 096.D-0018(A): 5.0 nights
28. 2015A - Gemini North - GN-2015A-Q-401 (Band 4): 30.0 hours
27. 2015A - Gemini South - GS-2015A-Q-205 (Band 4): 50.0 hours
26. 2015A - ESO/NTT - 095.D-0202(A): 4.0 nights
25. 2015A - KPNO Mayall - 2015A-0071: 6.0 nights
24. 2015A - SOAR - 2015A-0071: 5.0 nights
23. 2014B - Gemini South - GS-2014B-Q-85 (Band 4): 30.0 hours
22. 2014B - Gemini North - GN-2014B-Q-102 (Band 4): 30.0 hours
21. 2014A - Gemini South - GS-2014A-Q-92 (Band 4): 33.3 hours
20. 2014A - Gemini North - GN-2014A-Q-101 (Band 3): 16.7 hours
19. 2014A - Gemini North - GN-2014A-Q-105 (Band 4): 33.3 hours
18. 2013B - Gemini South - GS-2013B-Q-89 (Band 4): 25.0 hours
17. 2013B - Gemini North - GN-2013B-Q-105 (Band 4): 25.0 hours
16. 2013B - SOAR - SO2013B-001: 30.0 hours
15. 2013A - SOAR - SO2013A-018: 34.0 hours
14. 2012B - Gemini South - GS-2012B-Q-65 (Band 3): 10.0 hours - queue
13. 2012B - Gemini South - GS-2012B-Q-84 (Band 4): 70.0 hours - queue
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12. 2012B - Gemini North - GN-2012B-Q-284 (Band 4): 70.0 hours - queue

- 11. 2012B ESO/NTT 090.D-0275(A): 4 nights classical
- 10. 2012B SOAR SO2012B-001: 24.0 hours remote
- 9. 2012A Gemini South GS-2012A-Q-76 (Band 3): 6.0 hours queue
- 8. 2012A ESO/NTT 089.D-0331(A): 4 nights classical
- 7. 2012A SOAR SO2012A-003: 24.0 hours remote
- 6. 2011B ESO/NTT 088.D-0344(A): 4 nights classical
- 5. 2011B SOAR SO2011B-002: 24.0 hours remote
- 4. 2011A Gemini South GS-2011A-Q-86 (Band 4): 4.0 hours queue
- 3. 2011A Gemini North GN-2011A-Q-88 (Band 3): 1.3 hours queue
- 2. 2011A Gemini North GN-2011A-Q-122 (Band 4): 6.7 hours queue
- 1. 2011A SOAR SO2011A-010: 17.0 hours remote

### Co-Investigator

# Approved observing projects: 95 Total awarded: 4526.81 hours

- 95. 2020A McDonald 2.7m McD20-1-2.7-7: 7.0 nights
- 94. 2019B Gemini North GN-2019B-Q-403 (Band 4): 9.40 hours
- 93. 2019B McDonald 2.7m McD19-3-2.7-1: 7.0 nights
- 92. 2019B SOAR 2019B-0013: 26 hours
- 91. 2019A Gemini North GN-2019A-Q-309 (Band 3): 22.73 hours
- 90. 2019A McDonald 2.7m McD19-1-2.7-3: 17.0 nights
- 89. 2019A McDonald 2.1m McD19-1-2.7-1: 5.0 nights
- 88. 2018B Gemini North GN-2018B-Q-122 (Band 1): 10.0 hours
- 87. 2018B Gemini North GN-2018B-Q-316 (Band 3): 25.00 hours
- 86. 2018B Gemini South GS-2018B-Q-315 (Band 3): 47.27 hours
- 85. 2018B SOAR 2018B-0010: 26 hours
- 84. 2018A Gemini North GN-2018A-Q-403 (Band 4): 89.10 hours
- 83. 2018A Gemini South GS-2018A-Q-406 (Band 4): 7.90 hours
- 82. 2018A LCO/Magellan Telescope Carnegie Time: 2 nights
- 81. 2018A LCO/duPont Telescope Carnegie Time: 18 nights
- 80. 2018A Apache Point Observatory UW08: 5.0 nights
- 79. 2018A LCO/Magellan Telescope Chilean Time: 3 nights
- 78. 2018A SOAR 2018A-0021: 36 hours
- 77. 2018A McDonald 2.7m McD18-1-2.7-3: 7.0 nights
- 76. 2017B LCO/Magellan Telescope Michigan Time: 2.5 nights
- 75. 2017B Gemini North GN-2017B-Q-18 (Band 1): 10.2 hours
- 74. 2017B Gemini North GN-2017B-FT-7: 6.28 hours
- 73. 2017B Gemini North GN-2017B-Q-75 (Band 3): 41.82 hours
- 72. 2017B Gemini North GN-2017B-Q-79 (Band 4): 63.64 hours
- 71. 2017B Gemini South GS-2017B-Q-75 (Band 3): 20.91 hours

- 70. 2017B Gemini South GS-2017B-Q-84 (Band 4): 107.82 hours
- 69. 2017A Southern African Large Telescope 2017-1-MLT-012: 55.6 hours
- 68. 2017A Gemini North GN-2017A-Q-82 (Band 3): 202.0 hours
- 67. 2017A Gemini South GS-2017A-Q-86 (Band 3): 142.5 hours
- 66. 2017A ESO/NTT 099.D-0428: 5.0 nights
- 65. 2017A LCO/Magellan Telescope Carnegie Time: 3 nights
- 64. 2017A LCO/duPont Telescope Carnegie Time: 19 nights
- 63. 2017A SOAR 2017A-0016: 40 hours
- 62. 2016B Gemini North GN-2016B-Q-77 (Band 3): 6.4 hours
- 61. 2016B Gemini South GS-2016B-Q-81 (Band 3): 32.3 hours
- 60. 2016B ESO/NTT 098.D-0434: 4.0 nights
- 59. 2016B Hubble Space Telescope Cycle 24 HST-GO-14765: 40 orbits
- 58. 2016B LCO/duPont Telescope Carnegie Time: 5 nights
- 57. 2016A ESO/NTT 097.D-0196: 7.0 nights
- 56. 2016A Apache Point Observatory UW07: 2.5 nights
- 55. 2016A Gemini North GN-2016A-Q-17 (Band 1): 9.8 hours
- 54. 2016A Gemini North GN-2016A-Q-75 (Band 3): 79.4 hours
- 53. 2016A Gemini South GS-2016A-Q-76 (Band 3): 74.0 hours
- 52. 2016A SOAR 2016A-0019: 4.0 nights
- 51. 2015B Southern African Large Telescope 2015-2-SCI-056: 117.8 hours
- 50. 2015B Hubble Space Telescope Cycle 23 HST-GO-14231: 18 orbits
- 49. 2015B Gemini North GN-2015B-Q-86 (Band 3): 26.5 hours
- 48. 2015B Gemini South GS-2015B-Q-71 (Band 3): 42.9 hours
- 47. 2015B SOAR 2015B-0020: 5.0 nights
- 46. 2015A ESO/VLT 095.D-0504(A): 30.0 hours
- 45. 2015A Gemini North GN-2015A-Q-76 (Band 3): 45.8 hours
- 44. 2015A Gemini South GS-2015A-Q-77 (Band 3): 42.8 hours
- 43. 2015A Gemini South GS-2015A-Q-92 (Band 4): 26.0 hours
- 42. 2014B ESO/VLT DDT293.D-5036(A): 2.4 hours
- 41. 2014B Gemini South GS-2014B-Q-67 (Band 3): 55.0 hours
- 40. 2014B Gemini North GN-2014B-Q-85 (Band 3): 55.0 hours
- 39. 2014B KPNO Mayall 2014B-0231: 3.0 nights
- 38. 2014B SOAR 2014B-0231: 3.0 nights
- 37. 2014A Gemini South GS-2014A-Q-88 (Band 3): 66.7 hours
- 36. 2014A KPNO Mayall 2014A-0323: 8.0 nights
- 35. 2013B KPNO Mayall 2013B-0046: 6.5 nights
- 34. 2013B Gemini South GS-2013B-Q-75 (Band 3): 50.0 hours
- 33. 2013B Gemini North GN-2013B-Q-81 (Band 3): 50.0 hours
- 32. 2013B SOAR SO2013B-S102: 17.0 hours (long term)
- 31. 2013B ESO/NTT 092.D-0308(A): 6 nights

- 30. 2013B McDonald 2.1m McD13-3: 5 nights
- 29. 2013B LNA/Brazil 2013B-P012: 6 nights
- 28. 2013B NOT (Nordic Optical Telescope) 48-031: 3.5 nights
- 27. 2013A Gemini North GN-2013A-Q-113 (Band 4): 54.5 hours
- 26. 2013A Gemini South GS-2013A-Q-91 (Band 3): 54.6 hours
- 25. 2013A Gemini South GS-2013A-Q-95 (Band 4): 10.9 hours
- 24. 2013A ESO/NTT 091.D-0292(A): 6 nights
- 23. 2013A LNA/Brazil 2013A-P030: 4 nights
- 22. 2013A SOAR SO2013A-LP2: 17.0 hours (long term)
- 21. 2013A NOT (Nordic Optical Telescope) 47-003: 3.0 nights
- 20. 2012B NOT (Nordic Optical Telescope) 46-011: 2.5 nights
- 19. 2012B ESO/VLT (X-Shooter) 090.D-0321(A): 12 hours
- 18. 2012B LCO/Magellan MAG/12B/9: 2 nights
- 17. 2012B AAO/AAT AAT/12B/032: 6 nights
- 16. 2012B SOAR SO2012B-005: 8.0 hours (long term)
- 15. 2012A Gemini South GS-2012A-Q-81 (Band 4): 74.0 hours
- 14. 2012A AAO/AAT AAT/12A/011: 4 nights
- 13. 2012A LCO/Magellan MAG/12A/7: 2 nights
- 12. 2012A SOAR SO2012A-002: 16.0 hours
- 11. 2011B Gemini South GS-2011B-Q-91 (Band 4): 75.0 hours
- 10. 2011B SOAR (SO2011B-008): 24.0 hours
- 9. 2011A Gemini South GS-2011A-Q-85 (Band 3): 63.4 hours
- 8. 2011A CFHT CF2011A-002: 13.9 hours
- 7. 2010B CFHT 10BB05A/10BB99B: 13.9 hours
- 6. 2010A Gemini South GS-2010A-Q-78 (Band 4): 25.0 hours
- 5. 2009B SOAR SO2009B-004: 17.0 hours
- 4. 2009A SOAR SO2009A-0249: 6 nights
- 3. 2009A SOAR SO2009A-014: 32.0 hours
- 2. 2008A SOAR SO2008A-006: 3 nights
- 1. 2007B SOAR SO2007B-006: 3 nights

# Press releases, articles, and media resources

#### 2020

Inside Higher Ed (online)

The rise of the remote Ph.D. defense

Gemini Observatory - GeminiFocus 2019 Year In Review (online)

Making Good Use of Bad Weather: Finding Metal-poor Stars Through the Clouds

#### 2019

MIT News (online)

Explosions of universe's first stars spewed powerful jets

Gemini Observatory News (online)

Making Good Use of Bad Weather: Finding Metal-poor Stars Through the Clouds

Gemini Observatory - GeminiFocus April 2019 Lead Science Article (online)

Making Good Use of Bad Weather: Finding Metal-poor Stars Through the Clouds

#### 2018

Notre Dame Science - Department of Physics News (online)

Summertime Stargazing event draws large crowd

Notre Dame Stories (online)

Heavy Metals

#### 2017

Revista FAPESP (in Portuguese - online)

Fonte de ouro e régua do universo

Agência FAPESP (in Portuguese - online)

Nova fonte de ondas gravitacionais é observada

Notre Dame News (online)

Students in right place, right time witness first-ever detected neutron star collision

Notre Dame College of Science News (online)

Astrophysics graduate students witness first-ever detected neutron star collision

Agência FAPESP (in Portuguese - online)

Estudo detecta elétrons duplamente acelerados no choque de aglomerados de galáxias

École Polytechnique News (online)

The inaugural issue of Nature Astronomy features the work of F. Andrade-Santos

Jornal da USP (in Portuguese - online)

Cientistas descobrem poderosa colisão cósmica dupla

Folha de São Paulo (in Portuguese - online)

Quando aglomerados de galáxias colidem e um buraco negro gigante entra no meio da história

Nature Astronomy (online - issue cover)

The case for electron re-acceleration at galaxy cluster shocks

Chandra X-ray Observatory Blog (online)

The Discovery of Particle Re-acceleration in a Galaxy Cluster Collision

Notre Dame News (online)

Notre Dame astrophysicist confirms source of galaxy collision

#### 2016

Nature Physics (online - issue cover)

The age structure of the Milky Way's halo

Notre Dame News (online)

Second-generation stars identified, giving clues about their predecessors

Science Alert (online)

Astronomers have created the most detailed age map of the Milky Way yet

Universe Today (online)

Best picture yet of Milky Way's formation 13.5 billion years ago

Notre Dame News (online)

Detailed age map shows how Milky Way came together

Daily Mail (online)

How the Milky Way formed: Stunning 3D maps show how 130,000 stars came together 13.5 billion years ago

Daily Mail (online)

Graphic shows age structure of the Milky Way's halo

Astrobites (online)

Our halo is getting younger, spatially speaking

UPI (online)

New map details formation of the Milky Way galaxy

International Business Times (online)

How Did The Milky Way Form? New Chronographic Map Provides Answers

Phys.org (online)

Detailed age map shows how Milky Way came together

Reddit Journal of Science (online)

Detailed age map shows how Milky Way came together

Science Daily (online)

Detailed age map shows how Milky Way came together

Laboratory Equipment (online)

Detailed age map shows how Milky Way came together

Geek Journal (online)

Detailed age map shows how Milky Way came together

AboNewsCast (online)

Detailed age map shows how Milky Way came together

Science Newsline (online)

Detailed age map shows how Milky Way came together

MSU Today (online)

Astronomers pinpoint how Milky Way Galaxy was formed

Ancient Code (online)

How the Milky Way formed: Awesome 3D map shows how 130,000 stars merged

Astro Watch (online)

Detailed Age Map Shows How Milky Way Came Together

Science Bulletin (online)

Detailed Age Map Shows How Milky Way Came Together

Science Blog (online)

Astronomers pinpoint how Milky Way Galaxy was formed

EurekAlert! (online)

Detailed Age Map Shows How Milky Way Came Together

nano werk! (online)

Detailed Age Map Shows How Milky Way Came Together

Life Science Network (online)

The age structure of the Milky Way's halo

Jornal da USP (in Portuguese - online)

Astrônomos brasileiros mapeiam estrutura de idades do halo da Via Láctea

Agência FAPESP (in Portuguese - online)

Pesquisadores mapeiam a distribuição cronológica dos astros da Via Láctea

Revista Galileu (in Portuguese - online)

Brasileiros confirmam que estrelas na borda da Via Láctea são as mais novas

O Povo (in Portuguese - online)

Como os astros da Via Láctea se distribuem?

Space Today TV (in Portuguese - online)

Como a Via Láctea Se Formou

Público (in Spanish - online)

Así se formó la Vía Láctea

Geofísica Brasil (in Portuguese - online)

IAG-USP mapeia distribuição cronológica dos astros da Via Láctea

Planeta Universitário (in Portuguese - online)

Pesquisadores mapeiam a distribuição cronológica dos astros da Via Láctea

News Rondônia (in Portuguese - online)

Pesquisadores mapeiam a distribuição cronológica dos astros da Via Láctea

JINA-CEE Newsletter (online - Page 2)

Evidence for Multiple Progenitors of CEMP-no Stars

Space Daily (online)

Relics of the Milky Way's first generation of stars

University of Michigan News (online)

Relics of the Milky Way's first generation of stars

Notre Dame News (online)

Astrophysicists release new study of one of the first stars

Newswise (online)

Astrophysicists release new study of one of the first stars

EurekAlert! - AAAS (online)

Astrophysicists release new study of one of the first stars

Scientia (online - page 13)

Physics team creates Milky Way galaxy map

JINA-CEE Newsletter (online)

Discovery of the Brightest Ultra Metal-Poor Star

Agência FAPESP (in Portuguese - online)

Via Láctea cresceu de dentro para fora

Exame.com (in Portuguese - online)

Via Láctea cresceu de dentro para fora, diz pesquisa

Planeta Universitário (in Portuguese - online)

Via Láctea cresceu de dentro para fora

European Southern Observatory Photo Press Release (online)

ESO Telescopes Spy a Rare Relic

Notre Dame News (online)

Newly discovered star offers opportunity to explore origins of first stars in the early universe

Space Daily (online)

How the first stars sprung to life in early universe

Astronomy Now UK (online)

Ancient star provides insight into stellar origins in early universe

Empresa Brasil de Comunicação (in Portuguese - online)

História da Via Láctea ganha novos capítulos com descoberta de estrela por equipe da USP

Correio Braziliense (in Portuguese - online)

Astrônomos brasileiros identificam estrela rara na Via Láctea

Globo.com (in Portuguese - online)

Professor da USP descobre estrela tão antiga quanto o Universo

G1.globo.com (in Portuguese - online)

Astrônomos identificam estrela antiga e rara na Via Láctea

Agência USP de Notícias (in Portuguese - online)

Estrela traz evidências do início da Via Láctea

Universidade de São Paulo - Notícias (in Portuguese - online)

Equipe liderada pela USP identifica estrela chave para entender o início da Via Láctea

Agência FAPESP (in Portuguese - online)

Astrônomos brasileiros identificam estrela rara na Via Láctea

Folha de São Paulo (in Portuguese - online)

Astrônomos encontram uma estrela quase tão velha quanto o próprio Universo

JINA-CEE Newsletter (online)

Hubble Space Telescope Near-Ultraviolet Spectroscopy of Bright CEMP-s Stars

JINA-CEE Newsletter (online)

The First Age Map of the Galactic Halo

2015

Jornal da USP (in Portuguese - online)

Mapa permite estimar idade dos componentes da Via Láctea

UOL Notícias (in Portuguese - online)

Mapa permite estimar idade das estrelas da Via Láctea

Astronomy & Astrophysics Highlights (online)

2MASS J18082002-5104378: The brightest (V=11.9) ultra metal-poor star

The Observer (online and print)

Galactic archeologists create the first map of Milky Way's stellar halo

Best Education News (online)

Astrophysicists produce the first age map of the halo of the Milky Way

National Science Foundation - News from the Field (online)

Astrophysicists produce the first age map of the halo of the Milky Way

Notre Dame News (online)

Astrophysicists produce the first age map of the halo of the Milky Way

The Watchers (online)

The first age map of the Milky Way's halo produced

Red Orbit (online)

First-ever Milky Way age map shows oldest stars clustered in center

Headlines and Global News (online)

Milky Way Age Map Created For The First Time, Confirming Past Assumptions In Astrophysics

Global News Connect (online)

Astrophysicists furnish a initial age map of a Halo of a Milky Way

Sciece World Report (online)

First Ever Age Map of the Milky Way Galaxy Reveals History of the System

Media INAF (in Italian - online)

Quanto è vecchia la Via Lattea?

The Observer (online and print)

"Our Universe Revealed" lecture looks at chemical composition of stars

#### 2014

JINA-CEE Newsletter (online)

Seven New Stars with [Fe/H] < -3 - Six of them CEMP-no

Phys.org (online)

Galactic archaeologists uncover new insights into the formation of the earliest stars and galaxies