Ian U. Roederer, PhD — Curriculum Vitae

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Education

PhD, Astronomy, University of Texas, Austin, Texas *(2010)*
MA, Astronomy, University of Texas, Austin, Texas *(2007)*
BS, Astronomy (with dept. honors), Indiana University, Bloomington, Indiana *(2005)*
BS, Physics, Indiana University, Bloomington, Indiana *(2005)*

Appointments

Research Professor, Department of Astronomy, University of Michigan (*2021–*)
Intermittent Lecturer, Department of Astronomy, University of Michigan (*2014–*)
Associate Research Scientist, Department of Astronomy, University of Michigan (*2017–2021*)
Assistant Research Scientist, Department of Astronomy, University of Michigan (*2013–2017*)
Carnegie Fellow, Carnegie Observatories, Pasadena, California (*2010–2013*)

Grants

(Total of $1,398,201 to my institution)

NSF

Co-PI, Astronomy & Astrophysics Research Grant AST 1815403: $329,793 (*2018–2022*)
PI, Astronomy & Astrophysics Research Grant AST 1613536: $144,914 (*2016–2019*)

NASA

PI, *Astrophysics Data Analysis Program* 80NSSC21K0627: $185,197 (*2021–2024*)
PI, *Hubble Space Telescope* AR-16630: $80,725 (*2021–2023*)
PI, *Hubble Space Telescope* GO-15657: $66,821 (*2019–2022*)
PI, *Hubble Space Telescope* AR-15051: $68,070 (*2017–2020*)
PI, *Hubble Space Telescope* GO-14765: $72,844 (*2016–2019*)
PI, *Hubble Space Telescope* GO-14232: $57,609 (*2016–2019*)
PI, *Hubble Space Telescope* GO-13827: $46,472 (*2016–2019*)
PI, *Hubble Space Telescope* GO-14231: $54,292 (*2015–2018*)
PI, *Hubble Space Telescope* AR-13884: $74,476 (*2015–2018*)
PI, *Hubble Space Telescope* AR-13879: $54,155 (*2014–2017*)
PI, *Hubble Space Telescope* GO-12976: $1,504 (*2012–2015*)
PI, *Hubble Space Telescope* GO-12268: $54,960 (*2011–2014*)
Co-I, *Hubble Space Telescope* GO-15951 (PI Hansen): $13,805 (*2020–2023*)
Co-I, *Hubble Space Telescope* GO-14151 (PI Frebel): $53,547 (*2016–2019*)
Co-I, *Hubble Space Telescope* AR-13246 (PI Frebel): $27,549 (*2013–2016*)
Co-I, *Hubble Space Telescope* GO-12554 (PI Beers): $1,488 (*2012–2015*)

Other

PI, AAS travel grant: $930 (*2009*)
PI, IAU travel grants (3): $2,500 (*2008–2009*)

PI, Professional development awards, University of Texas (3): $1,675 (*2007–2009*)
PI, *Sigma Xi* Grant-in-Aid of Research Award: $4,875 (*2006*)

Honors and Awards

Barbara McClintock Fellow, Carnegie Observatories (*2012*)
Outstanding Dissertation Award, Univ. of Texas Graduate School/University Co-op (*2011*)
NSF Graduate Research Fellowship—Honorable Mention (*2005, 2006, 2007*)
Hollis and Grete Johnson Award for Excellence in Student Research, Dept. of Astronomy, Indiana Univ. (*2005*)
Herman B Wells Scholar, Indiana University (*2001–2005*)

Invited Talks

Conferences and Meetings

[14] 15th Internationa Symp. on the Origin of Matter and Evolution of Galaxies, Kyoto, Japan *(07/02/2019)*
[13] FRIB and the GW170817 Kilonova, East Lansing, MI *(07/17/2018)*
[12] Stellar Abundances in Dwarf Galaxies, Denver, CO *(06/05/2018)*
[11] A Celebration of CEMP and Gala of GALAH, Melbourne, Australia *(11/14/2017)*
[10] First Stars V, Heidelberg, Germany *(08/01/2016)*
[9] Connecting FRIB with the Cosmos, East Lansing, MI *(06/01/2016)*
[8] The UV-Visible Path Forward: the Future of UV/Visible Space Astrophysics *(06/25/2015)*
[7] JINA-CEE Frontiers in Nuclear Astrophysics, East Lansing, MI *(03/24/2015)*
[6] Status and Challenges of r-process Nucleosynthesis, INT, Seattle, WA *(07/30/2014)*
[5] Torino Workshop on Nucleosynthesis in AGB Stars, Bad Honnef, Germany *(07/18/2014)*
[4] Nuclear Astrophysics Workshop, NSCL, East Lansing, MI *(08/22/2013)*
[3] National Academy of Science: Korean-American Kavli Frontiers Symposium, Irvine, CA *(08/12/2013)*
[2] American Physical Society / Division of Nuclear Physics, Newport Beach, CA *(10/27/2012)*
[1] Russbach Workshop on Nuclear Astrophysics, Russbach, Austria *(03/12/2012)*

Astronomy/Astrophysics Colloquia

[20] DAO/Herzberg Astronomy and Astrophysics Research Center [virtual] *(11/24/2020)*
[19] University of Florida [virtual] *(05/14/2020)*
[18] MIT *(03/12/2019)*
[17] Michigan State University (JINA-CEE) *(09/10/2018)*
[16] University of Victoria *(05/02/2018)*
[15] Space Telescope Science Institute and Johns Hopkins University *(10/25/2017)*
[14] Case Western Reserve University *(03/01/2017)*
[13] University of Minnesota *(02/17/2017)*
[12] Purdue University *(01/27/2017)*
[11] University of Michigan *(01/12/2017)*
[10] The Ohio State University (CCAPP) *(05/24/2016)*
[9] University of Washington *(05/19/2016)*
[8] Heidelberg (ZAH, MPIA, MPIK, HITS) *(05/03/2016)*
[7] University of Notre Dame *(09/01/2015)*
[6] University of Illinois *(04/21/2015)*
[5] Indiana University *(11/18/2014)*

[4] UC Irvine *(03/05/2013)*
[3] UC Santa Cruz *(11/21/2012)*
[2] University of Utah *(11/09/2012)*
[1] Texas A&M University *(03/25/2009)*

Physics Colloquia

[6] TRIUMF *(05/03/2018)*
[5] University of Wisconsin *(04/20/2018)*
[4] University of Notre Dame *(02/01/2017)*
[3] Central Michigan University *(09/10/2015)*
[2] University of Wisconsin *(09/04/2012)*
[1] University of Oklahoma *(12/03/2009)*

Contributed Talks

[36] RR Lyrae Stars, Galactic Structure, and Chemistry, Pasadena, CA *(06/11/2022)*
[35] JINA-CEE Frontiers in Nuclear Astrophysics, South Bend, IN *(05/26/2022)*
[34] Science with UV-Efficient Ground-Based Spectrographs [virtual] *(02/03/2021)*
[33] The Local Group: Assembly and Evolution, STScI [virtual] *(09/01/2020)*
[32] 236th AAS Meeting [virtual] *(06/02/2020)*
[31] FRIB Proposal Writing Workshop [virtual] *(05/04/2020)*
[30] R-Process Alliance Workshop, Cambridge, MA *(11/22/2019)*
[29] Small Galaxies—Cosmic Questions, Durham, United Kingdom *(08/02/2019)*
[28] 233rd AAS Meeting, Seattle, WA *(01/08/2019)*
[27] 231st AAS Meeting, Washington, DC *(01/11/2018)*
[26] Forging Connections: From Nuclei to the Cosmic Web, East Lansing, MI *(06/26/2017)*
[25] JINA-CEE Frontiers in Nuclear Astrophysics, Lansing, MI *(02/09/2017)*
[24] Magellan Science Symposium, Washington, DC *(12/08/2016)*
[23] JINA-CEE Frontiers in Nuclear Astrophysics, South Bend, IN *(03/30/2016)*
[22] 225th AAS Meeting, Seattle, WA *(01/05/2015)*
[21] 222nd AAS Meeting, Indianapolis, IN *(06/06/2013)*
[20] Seminar, University of Michigan *(12/03/2013)*
[19] 221st AAS Meeting, Long Beach, CA *(01/08/2013)*
[18] Nuclei in the Cosmos XII, Cairns, Australia *(08/06/2012)*
[17] NIC Workshop on r-process Nucleosynthesis, Cairns, Australia *(08/04/2012)*
[16] Carnegie Science Day, Carnegie Observatories *(04/13/2012)*
[15] Chemical Evolution of the Milky Way, Sesto, Italy *(01/25/2012)*
[14] Carnegie Science Day, Carnegie Observatories *(10/28/2011)*
[13] The Globular Cluster Galaxy Connection, UC Santa Cruz *(07/13/2011)*
[12] Ph.D. defense, Department of Astronomy, University of Texas *(06/04/2010)*
[11] 215th AAS Meeting, Dissertation summary talk, Washington, D.C. *(01/04/2010)*
[10] Seminar, Carnegie Observatories *(11/20/2009)*
[9] Astronomy tea talk, Caltech *(11/16/2009)*
[8] Poster summary talk, The Frank N. Bash Symposium, University of Texas *(10/19/2009)*
[7] Institute for Theory and Computation seminar, Harvard-Smithsonian CfA *(09/29/2009)*

[6] Joint Institute for Nuclear Astrophysics seminar, Michigan State University *(09/14/2009)*
[5] Second GMT Hi-Res Spectroscopy Workshop, University of Texas *(01/17/2009)*
[4] Astronomy journal club presentation, UCLA *(01/13/2009)*
[3] Seminar, Carnegie Observatories *(04/11/2008)*
[2] The IXth Torino Workshop on AGB Stars, Perugia, Italy *(10/25/2007)*
[1] Precision Spectroscopy in Astrophysics, Aveiro, Portugal *(09/12/2006)*

Teaching

Lecturer, University of Michigan, Ann Arbor, Michigan
Astro 101, The Solar System and the Search for a New Earth (4 cr.) *(winter 2019, fall 2022)*
Astro 102, Stars, Galaxies, and the Universe (4 cr.) *(winter 2020)*
Astro 104, Alien Skies: A Tour through the Universe (3 cr.) *(winter 2017)*
Astro 127, Naked Eye Astronomy (1 cr.) *(10 sections, fall 2014 to fall 2016)*
Stars and the Atomic Age *(developed as part of NSF AAG 16-13536)*
Instructor, Pasadena City College, Pasadena, California
New Horizons in Astronomy (extended learning curriculum) *(summer 2012)*

Mentoring

Undergraduate students
A. Lang, University of Michigan '21 *(2020–2022)*
X. Ou, University of Michigan '20 *(2016–2020)*
D. Khatami, Pomona College '16 *(summer 2013)*

Professional Service

Chair, Stars and stellar populations science working group, European Extremely Large Telescope (ELT) ArmazoNes high Dispersion Echelle Spectrograph (ANDES) (*2022–*)
Member, Hubble Space Telescope Users' Committee (*2022–*)
Science Verification Team, Gemini High Resolution Optical SpecTrograph (GHOST) (*2020–*)
External reviewer, CFHT French Time Allocation Committee, China Telescope Access Program, FONDECYT, NIST, Austrian Science Fund's Erwin Schrödinger Fellowship, and the Canadian Time Allocation Committee; 1–2 reviews per year (*2014–*)
Peer-review referee, AJ, ApJ, A&A, MNRAS, PASP, Science; 4–5 manuscripts per year (*2009–*)
Panel reviewer, NASA Astrophysics Data Analysis Program (*2021*)
Science Advisory Group, Integral Field Units for Magellan (IFU-M) (*2017–2021*)
Collaborator, Cosmic Evolution Through UV Surveys (CETUS) a probe-class mission concept proposed to NASA (*2016–2020*)
Member, science working group to advise the science and technology definition team for the UV Spectrograph on NASA's Habitable Exoplanet Observatory (HabEx) mission concept (*2016–2020*)
Member, Magellan-2020 Strategic Planning Committee (*2020*)
Panel reviewer, NSF Astronomy & Astrophysics Research Grants Program (*2019*)
Topical group convener, US ELT Key Science Program effort (*2018–2019*)
Member, UV-visible science interest group, Cosmic Origins Program Analysis Group (*2015*)
Judge, Chambliss student poster award competition, 221st, 222nd, 225th, 231st, 232nd, and 233rd AAS

Meetings (*2013–2019*)

Panel member or mid-cycle reviewer, Hubble Space Telescope Time Allocation Committee (*2011, 2014, 2017, 2019, 2022*)

Science advisor, Michigan/Magellan Fiber System (M2FS) (*2011–2013*)

Member, Science Working Group for G-Clef, the high-resolution optical spectrograph for the Giant Magellan Telescope (*2010*)

Member, Science Working Group for Q-Spec, a proposed high-resolution optical spectrograph for the Giant Magellan Telescope (*2009*)

Department Service

Undergraduate Advisor (*2021–*)

Member, U. Michigan Extremely Large Telescope Committee (*2021–*)

Co-chair, Colloquium Committee (*2019–2020*)

Member, Magellan Training/Use Committee (*2018–2019*)

Co-chair, member, Diversity, Equity, & Inclusion Committee (*2017–2018; 2020*)

Member, NOEMA Telescope Allocation Committee (U. Michigan internal) (*2018*)

Member, Magellan Telescope Allocation Committee (U. Michigan internal) (*2014–2015*)

Coordinator, Carnegie Observatories lunch seminar (*2011–2013*)

Graduate student representative, Dept. of Astronomy, Univ. of Texas (*2007–2008*)

Science Communication

Organizer/speaker, virtual activities for children and adults at public libraries across Michigan and Indiana during the COVID-19 pandemic *(2020–2021)*

Speaker, Carnegie Observatories Public Lecture Series, "Stars and the Atomic Age" *(2013)*

Judge, Los Angeles County Science Fair *(2013)*

Contributing author, "Ask an Astronomer" column in *Astronomy* Magazine *(2009–2014)*

Host/speaker/volunteer, astronomy outreach events including star parties, University open houses, K–12 school groups, library groups, scout groups, Rotary, and amateur astronomy societies (*2005–*)

Intern, Gheens Science Hall and Rauch Planetarium, Louisville, Kentucky: led planetarium shows and discussions for the public and school groups (*summer 2002, 2003, 2005*)

Professional Affiliations

American Astronomical Society
International Astronomical Union

Press Releases and Media Coverage

"Astronomers find 'gold standard' star in Milky Way": University of Michigan (*05/2022*)

"Explosions of universe's first stars spewed powerful jets": MIT (*05/2019*)

"Massive hyper-runaway star ejected from the Milky Way Disk": University of Michigan (*03/2019*)

"Using the Gaia Satellite to study the environment of the r-process": JINA-CEE Highlight (*10/2018*)

"Relics of the Milky Way's first generation of stars": University of Michigan (*06/2016*)

"A rare and prolific r-process event preserved in an ancient dwarf galaxy": JINA-CEE Highlight (*05/2016*)

"New evidence for the i-process in the early Galaxy": JINA-CEE Highlight (*04/2016*)
"Our Cosmic Selves": New York Times commentary by R. Jayawardhana on my team's detection of phosphorus, among other things (*04/2015*)
"Candidate Solar Sibling Found": McDonald Observatory (*05/2014*)
"Old Star, New Trick": Carnegie Institution for Science (*04/2012*)
"Astronomers Find Rare Element in Ancient Stars": MIT (*02/2012*)

Refereed Publications

– Total citations: 3,577 (1,863 as first author, 1,714 as Nth author)
– h-index: 37 (as of 2022 June 17)
– Publications are linked to the NASA ADS whenever possible.
– Follow this link for a full listing of my publications at the NASA ADS.
– ★ marks publications led by a student under my supervision.

[88] *The R-Process Alliance: Abundance Universality among Some Elements at and between the First and Second R-Process Peaks*
Roederer, I.U., Cowan, J.J., Pignatari, M., Beers, T.C., Den Hartog, E.A., Ezzeddine, R., Frebel, A., Hansen, T.T., Holmbeck, E.M., Mumpower, M.R., Placco, V.M., Sakari, C.M., Surman, R., Vassh, N.
Astrophysical Journal, submitted

[87] *The complex stellar system M22: confirming abundance variations with high precision differential measurements*
McKenzie, M., Yong, D., Marino, A.F., Monty, S., Wang, E., Karakas, A.I., Milone, A., Legnardi, M.V., **Roederer, I.U.**, Martell, S., Horta, D.
Monthly Notices of the Royal Astronomical Society, submitted

[86] *Horizons: Nuclear Astrophysics in the 2020s and Beyond*
Schatz, H., Becerril Reyes, A.D., Best, A., et al. (165 authors, including **Roederer, I.U.**)
Journal of Physics G, submitted (arXiv:2205.07996)

[85] *The R-Process Alliance: A Nearly Complete R-Process Abundance Template Derived from Ultraviolet Spectroscopy of the R-Process-Enhanced Metal-Poor Star HD 222925*
Roederer, I.U., Lawler, J.E., Den Hartog, E.A., Placco, V.M., Surman, R., Beers, T.C., Ezzeddine, R., Frebel, A., Hansen, T.T., Hattori, K., Holmbeck, E.M., Sakari, C.M.
Astrophysical Journal Supplement Series, 260, 27 (2022)

[84] *Orbital Parameters and Binary Properties of 37 FGK stars in the Cores of Open Clusters NGC 2516 and NGC 2422*
Lipartito, I., Bailey, J.I. III, Brandt, T.D., Mazin, B.A., Mateo, M., Spencer, M.E., **Roederer, I.U.**
Astronomical Journal, 162, 285 (2021)

[83] *Atomic Transition Probabilities of Neutral Calcium*
Den Hartog, E.A., Lawler, J.E., Sneden, C., Cowan, J.J., **Roederer, I.U.**, Sobeck, J.
Astrophysical Journal Supplement Series, 255, 27 (2021)

[82] *Probing the He II re-Ionization ERa via Absorbing C IV Historical Yield (HIERACHY) I: Discovery of a Strong Outflow from a $z \sim 4.7$ Quasar*
Yu, X., Li, J.-T., Qu, Z., **Roederer, I.U.**, Bregman, J.N., Fan, X., Fang, T., Johnson, S.D., Wang, F., Yang, J.
Monthly Notices of the Royal Astronomical Society, 505, 4444 (2021)

[81] *Dynamical masses and mass-to-light ratios of resolved massive star clusters - II. Results for 26 star clusters in the Magellanic Clouds*
Song, Y.-Y., Mateo, M., Bailey, J.I. III, Walker, M.G., **Roederer, I.U.**, Olszewski, E.W., Reiter, M., Kremin, A.
Monthly Notices of the Royal Astronomical Society, 504, 4160 (2021)

[80] *SPLUS J210428.01–004934.2: An Ultra Metal-Poor Star Identified from Narrow-Band PhotometryâĹŮ*
Placco, V.M, **Roederer, I.U.**, Lee, Y.S., Almeida-Fernandes, F., Herpich, F.R., Perottoni, H.D., Schoenell, W., Ribeiro, T., Kanaan, A.
Astrophysical Journal Letters, 912, L32 (2021)

[79] *Detection of Al II in the Ultraviolet Spectra of Metal-Poor Stars: An Empirical LTE Test of NLTE Aluminum Abundance Calculations*
Roederer, I.U., Lawler, J.E.
Astrophysical Journal, 912, 119 (2021)

[78] *Improved Atomic Transition Probabilities for UV and Optical Lines of Hf II and Determination of the Hf Abundance in Two Metal-Poor Stars*
Den Hartog, E.A., Lawler, J.E., **Roederer, I.U.**
Astrophysical Journal Supplement Series, 254, 5 (2021)

[77] *R-Process-Rich Stellar Streams in the Milky Way*
Gull, M., Frebel, A., Hinojosa, K., **Roederer, I.U.**, Ji, A.P., Brauer, K.
Astrophysical Journal, 912, 52 (2021)

[76] *The R-Process Alliance: Chemo-Dynamically Tagged Groups of Halo r-Process-Enhanced Stars Reveal a Shared Chemical-Evolution History*
Gudin, D., Shank, D., Beers, T.C., Yuan, Z., Limberg, G., **Roederer, I.U.**, Placco, V., Holmbeck, E.M., Dietz, S., Rasmussen, K.C., Hansen, T.T., Sakari, C.M., Ezzeddine, R., Frebel, A.
Astrophysical Journal, 908, 79 (2021)

[75] *Detection of Pb II in the Ultraviolet Spectra of Three Metal-Poor Stars*
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.
Astrophysical Journal Letters, 902, L24 (2020)

★ [74] *Vanadium Abundance Derivations in 255 Metal-poor Stars*
Ou, X., **Roederer, I.U.**, Sneden, C., Cowan, J.J., Lawler, J.E., Shectman, S.A., Thompson, I.B.
Astrophysical Journal, 900, 106 (2020)

[73] *The R-Process Alliance: Fourth Data Release from the Search for R-Process-Enhanced Stars in the Galactic Halo*

Holmbeck, E.M., Hansen, T.T., Beers, T.C., Placco, V.M., Whitten, D.D., Rasmussen, K.C., **Roederer, I.U.**, Ezzeddine, R., Sakari, C.M., Frebel, A., Drout, M.R., Simon, J.D., Thompson, I.B., Bland-Hawthorne, 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.

Astrophysical Journal Supplement Series, 249, 30 (2020)

[72] *The R-process Alliance: First Magellan/MIKE Release from the Southern Search for R-Process-enhanced Stars*

Ezzeddine, R., Rasmussen, K., Frebel, A., Chiti, A., Hinojisa, K., Placco, V.M., Beers, T.C., Hansen, T.T., **Roederer, I.U.**, Sakari, C.M., Ji, A.P., Meléndez, J.

Astrophysical Journal, 898, 150 (2020)

[71] *The R-process Alliance: J1521−3538, a Very Metal-Poor Extremely R-Process-Enhanced Star with [Eu/Fe] = +2.2, and the Class of r-III Stars*

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.M.

Astrophysical Journal, 898, 40 (2020)

[70] *The R-Process Alliance: The Peculiar Chemical Abundance Pattern of RAVE J183013.5−455510*

Placco, V.M., Santucci, R.M., Yuan, Z., Mardini, M.K., Holmbeck, E.M., Wang, X., Surman, R., Hansen, T.T., **Roederer, I.U.**, Beers, T.C., Choplin, A., Ji, A.P., Ezzeddine, R., Frebel, A., Sakari, C.M., Whitten, D.D., Zepeda, J.

Astrophysical Journal, 897, 78 (2020)

[69] *Hyperfine Structure Constants for Levels of* $^{175}Lu^{+}$

Den Hartog, E.A., Lawler, J.E., **Roederer, I.U.**

Astrophysical Journal Supplement Series, 248, 10 (2020)

[68] *Detailed Iron-Peak Element Abundances in Three Very Metal-Poor Stars*

Cowan, J.J., Sneden, C., **Roederer, I.U.**, Lawler, J.E., Den Hartog, E.A., Sobeck J.S., Boesgaard, A.M.

Astrophysical Journal, 890, 119 (2020)

[67] *Dynamical Masses and Mass-to-light Ratios of Resolved Massive Star Clusters. I. NGC 419 and NGC 1846*

Song, Y.-Y., Mateo, M., Mackey, A.D., Olszewski, E.W., **Roederer, I.U.**, Walker, M.G., Bailey, J.I. III

Monthly Notices of the Royal Astronomical Society, 490, 385 (2019)

[66] *High Resolution Optical Spectroscopy of Stars in the Sylgr Stellar Stream*

Roederer, I.U., Gnedin, O.Y.

Astrophysical Journal, 883, 84 (2019)

[65] *r-process Nucleosynthesis: Connecting Rare-Isotope Beam Facilities with the Cosmos*

Horowitz, C.J., Arcones, A., Côté, B., Dillmann, I., Nazarewicz, W., **Roederer, I.U.**, Schatz, H., Aprahamian, A., Atanasov, D., Bauswein, A., Bliss, J., Brodeur, M., Clark, J.A., Frebel, A., Foucart, F., Hansen, C.J., Just, O., Kankainin, A., McLaughlin, G.C., Kelly, J.M., Liddick, S.N., Lee, D.M., Lippuner, J., Martin, D., Mendoza-Temis, J., Metzger, B.D., Mumpower, M.R., Perdikakis, G., Pereira, J., O'Shea, B.W., Reifarth, R., Rogers, A.M., Siegel, D.M., Spyrou, A., Surman, R., Tang, X., Uesaka, T., Wang, M.

Journal of Physics G: Nuclear and Particle Physics, 46, 083001 (2019)

[64] *Evidence for an aspherical Population III supernova explosion inferred from the hyper metal-poor star HE 1327-2326*

Ezzeddine, R., Frebel, A., **Roederer, I.U.**, Tominaga, N., Tumlinson, J., Ishigaki, M., Nomoto, K., Placco, V.M., Aoki, W.

Astrophysical Journal, 876, 97 (2019)

[63] *The R-Process Alliance: Discovery of a Low-α, R-Process-Enhanced Metal-Poor Star in the Galactic Halo*

Sakari, C.M., **Roederer, I.U.**, Placco, V.M., Beers, T.C., Ezzeddine, R., Frebel, A., Hansen, T., Sneden, C., Cowan, J.J., Wallerstein, G., Farrell, E.M., Venn, K.A., Matijevič, G., Wyse, R.F.G., 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.

Astrophysical Journal, 874, 148 (2019)

[62] *RELICS: Strong Lensing Analysis of MACS J0417.5−1154 and Predictions for Observing the Magnified High-Redshift Universe with JWST*

Mahler, G., Sharon, K., Fox, C., Coe, D., Jauzac, M., Strait, V., Edge, A., Acebron, A., Andrade-Santos, F., Avila, R.J., Bradač, M., Bradley, L.D., Carrasco, D., Cerny, C., Cibirka, N., Czakon, N.G., Dawson, W.A., Frye, B.L., Hoag, A.T., Huang, K.-H., Johnson, T.L., Jones, C., Kikuchihara, S., Lam, D., Livermore, R., Lovisari, L., Mainali, R., Ogaz, S., Ouchi, M., Paterno-Mahler, R., **Roederer, I.U.**, Ryan, R.E., Salmon, B., Sendra-Server, I., Stark, D.P., Toft, S., Trenti, M., Umetsu, K., Vulcani, B., Zitrin, A.

Astrophysical Journal, 873, 96 (2019)

[61] *Origin of a massive hyper-runaway subgiant star LAMOST-HVS1—implication from Gaia and follow-up spectroscopy*

Hattori, K., Valluri, M., Castro, N., **Roederer, I.U.**, Mahler, G., Khullar, G.

Astrophysical Journal, 873, 116 (2019)

[60] *The R-Process Alliance: Spectroscopic Follow-up of Low-metallicity Star Candidates from the Best & Brightest Survey*

Placco, V.M., Santucci, R.M., Beers, T.C., Chanamé, J., Paz Sepúlveda, M., Coronado, J., Rossi, S., Lee, Y.S., Starkenburg, K. Youakim, E., 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.

Astrophysical Journal, 870, 122 (2019)

[59] *The R-Process Alliance: First Release from the Northern Search for R-Process Enhanced Metal-Poor Stars in the Galactic Halo*

Sakari, C.M., Placco, V.M., Farrell, E.M., **Roederer, I.U.**, Wallerstein, G., Beers, T.C., Ezzeddine, R., Frebel, A., Hansen, T., Holmbeck, E.M., Sneden, C., Venn, K.A., Davis, C.E., Matijevič, G., Wyse, R.F.G., 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.

Astrophysical Journal, 868, 110 (2018)

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