

Jordi Isern

List of Publications by Year in descending order

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119
papers

5,169
citations

61984

43
h-index

85541

71
g-index

121
all docs

121
docs citations

121
times ranked

3277
citing authors

#	ARTICLE	IF	CITATIONS
1	Evolutionary and pulsational properties of white dwarf stars. <i>Astronomy and Astrophysics Review</i> , 2010, 18, 471-566.	25.5	266
2	Conceptual design of the International Axion Observatory (IAXO). <i>Journal of Instrumentation</i> , 2014, 9, T05002-T05002.	1.2	201
3	A white dwarf cooling age of 8 ± 1 Gyr for NGC 6791 from physical separation processes. <i>Nature</i> , 2010, 465, 194-196.	27.8	191
4	The initial-final mass relationship of white dwarfs revisited: effect on the luminosity function and mass distribution. <i>Monthly Notices of the Royal Astronomical Society</i> , 2008, 387, 1693-1706.	4.4	186
5	The Large Observatory for X-ray Timing (LOFT). <i>Experimental Astronomy</i> , 2012, 34, 415-444.	3.7	168
6	The Cooling of CO White Dwarfs: Influence of the Internal Chemical Distribution. <i>Astrophysical Journal</i> , 1997, 486, 413-419.	4.5	155
7	The ^{85}Kr β -Process Branching and the Mass of Carbon Stars. <i>Astrophysical Journal</i> , 2001, 559, 1117-1134.	4.5	152
8	β -Process Nucleosynthesis in Carbon Stars. <i>Astrophysical Journal</i> , 2002, 579, 817-831.	4.5	149
9	Cobalt-56 γ -ray emission lines from the type Ia supernova 2014J. <i>Nature</i> , 2014, 512, 406-408.	27.8	141
10	High-resolution smoothed particle hydrodynamics simulations of the merger of binary white dwarfs. <i>Astronomy and Astrophysics</i> , 2009, 500, 1193-1205.	5.1	138
11	Revisiting the axion bounds from the Galactic white dwarf luminosity function. <i>Journal of Cosmology and Astroparticle Physics</i> , 2014, 2014, 069-069.	5.4	134
12	Cooling theory of crystallized white dwarfs. <i>Astrophysical Journal</i> , 1994, 434, 641.	4.5	134
13	Axions and the Cooling of White Dwarf Stars. <i>Astrophysical Journal</i> , 2008, 682, L109-L112.	4.5	119
14	The Ages of Very Cool Hydrogen-rich White Dwarfs. <i>Astrophysical Journal</i> , 2000, 544, 1036-1043.	4.5	115
15	DOUBLE DEGENERATE MERGERS AS PROGENITORS OF HIGH-FIELD MAGNETIC WHITE DWARFS. <i>Astrophysical Journal</i> , 2012, 749, 25.	4.5	115
16	Bounds on the possible evolution of the gravitational constant from cosmological type-Ia supernovae. <i>Physical Review D</i> , 2001, 65, .	4.7	109
17	Smoothed Particle Hydrodynamics simulations of merging white dwarfs. <i>Astronomy and Astrophysics</i> , 2004, 413, 257-272.	5.1	109
18	A LARGE STELLAR EVOLUTION DATABASE FOR POPULATION SYNTHESIS STUDIES. VI. WHITE DWARF COOLING SEQUENCES. <i>Astrophysical Journal</i> , 2010, 716, 1241-1251.	4.5	102

#	ARTICLE	IF	CITATIONS
19	On the Synthesis of ${}^7\text{Li}$ and ${}^7\text{Be}$ in Novae. <i>Astrophysical Journal</i> , 1996, 465, L27-L30.	4.5	83
20	The Final Evolution of ONeMg Electron-Degenerate Cores. <i>Astrophysical Journal</i> , 1996, 459, 701.	4.5	82
21	The age and colors of massive white dwarf stars. <i>Astronomy and Astrophysics</i> , 2007, 465, 249-255.	5.1	79
22	Gamma-Ray Emission from Novae Related to Positron Annihilation: Constraints on its Observability Posed by New Experimental Nuclear Data. <i>Astrophysical Journal</i> , 1999, 526, L97-L100.	4.5	78
23	The Chemical Composition of Carbon Stars. II. The δ -Type Stars. <i>Astrophysical Journal</i> , 2000, 536, 438-449.	4.5	78
24	Asteroseismological bound on Λ from pulsating white dwarfs. <i>Physical Review D</i> , 2004, 69, .	4.7	75
25	The rate of cooling of the pulsating white dwarf star G117 δ B15A: a new asteroseismological inference of the axion mass. <i>Monthly Notices of the Royal Astronomical Society</i> , 2012, 424, 2792-2799.	4.4	75
26	The Physics of Crystallizing White Dwarfs. <i>Astrophysical Journal</i> , 1997, 485, 308-312.	4.5	71
27	The influence of crystallization on the luminosity function of white dwarfs. <i>Astrophysical Journal</i> , 1994, 434, 652.	4.5	67
28	The potential of the variable DA white dwarf G117 δ B15A as a tool for fundamental physics. <i>New Astronomy</i> , 2001, 6, 197-213.	1.8	66
29	Mass-radius relations for massive white dwarf stars. <i>Astronomy and Astrophysics</i> , 2005, 441, 689-694.	5.1	63
30	Astronomical measurements and constraints on the variability of fundamental constants. <i>Astronomy and Astrophysics Review</i> , 2007, 14, 113-170.	25.5	59
31	The Energetics of Crystallizing White Dwarfs Revisited Again. <i>Astrophysical Journal</i> , 2000, 528, 397-400.	4.5	58
32	Smoothed particle hydrodynamics simulations of white dwarf collisions and close encounters. <i>Monthly Notices of the Royal Astronomical Society</i> , 2010, 406, 2749-2763.	4.4	56
33	High-proper-motion white dwarfs and halo dark matter. <i>Monthly Notices of the Royal Astronomical Society</i> , 2002, 336, 971-978.	4.4	55
34	An independent limit on the axion mass from the variable white dwarf star R548. <i>Journal of Cosmology and Astroparticle Physics</i> , 2012, 2012, 010-010.	5.4	53
35	A Common Origin of Magnetism from Planets to White Dwarfs. <i>Astrophysical Journal Letters</i> , 2017, 836, L28.	8.3	53
36	An upper limit to the secular variation of the gravitational constant from white dwarf stars. <i>Journal of Cosmology and Astroparticle Physics</i> , 2011, 2011, 021-021.	5.4	51

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37	Monte Carlo simulations of the disc white dwarf population. Monthly Notices of the Royal Astronomical Society, 1999, 302, 173-188.	4.4	50
38	EVOLUTION OF WHITE DWARF STARS WITH HIGH-METALLICITY PROGENITORS: THE ROLE OF ^{22}Ne DIFFUSION. Astrophysical Journal, 2010, 719, 612-621.	4.5	50
39	The Halo White Dwarf Population. Astrophysical Journal, 1998, 503, 239-246.	4.5	48
40	Axions and the pulsation periods of variable white dwarfs revisited. Astronomy and Astrophysics, 2010, 512, A86.	5.1	47
41	Axions and the white dwarf luminosity function. Journal of Physics: Conference Series, 2009, 172, 012005.	0.4	46
42	White dwarfs constrain dark forces. Physical Review D, 2013, 88, .	4.7	46
43	Unified One-Dimensional Simulations of Gamma-Ray Line Emission from Type Ia Supernovae. Astrophysical Journal, 2004, 613, 1101-1119.	4.5	44
44	NUCLEOSYNTHESIS DURING THE MERGER OF WHITE DWARFS AND THE ORIGIN OF R CORONAE BOREALIS STARS. Astrophysical Journal Letters, 2011, 737, L34.	8.3	43
45	Monte Carlo simulations of the halo white dwarf population. Astronomy and Astrophysics, 2004, 418, 53-65.	5.1	42
46	The Implications of the New $Z=0$ Stellar Models and Yields on the Early Metal Pollution of the Intergalactic Medium. Astrophysical Journal, 2001, 557, 126-136.	4.5	42
47	On the Formation of Massive CO White Dwarfs: The Lifting Effect of Rotation. Astrophysical Journal, 1996, 472, 783-788.	4.5	41
48	THE VARIATION OF THE GRAVITATIONAL CONSTANT INFERRED FROM THE HUBBLE DIAGRAM OF TYPE Ia SUPERNOVAE. International Journal of Modern Physics D, 2006, 15, 1163-1174.	2.1	36
49	Gravitational wave radiation from the coalescence of white dwarfs. Monthly Notices of the Royal Astronomical Society, 2005, 356, 627-636.	4.4	35
50	New phase diagrams for dense carbon-oxygen mixtures and white dwarf evolution. Astronomy and Astrophysics, 2012, 537, A33.	5.1	35
51	Detonations in white dwarf dynamical interactions. Monthly Notices of the Royal Astronomical Society, 2013, 434, 2539-2555.	4.4	33
52	Prospects for Type Ia supernova explosion mechanism identification with I^3 -rays. Monthly Notices of the Royal Astronomical Society, 1998, 295, 1-9.	4.4	31
53	New evolutionary models for massive Z Ceti stars. Astronomy and Astrophysics, 2005, 429, 277-290.	5.1	30
54	LOFT: the Large Observatory For X-ray Timing. Proceedings of SPIE, 2012, , .	0.8	29

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55	The Star Formation History in the Solar Neighborhood as Told by Massive White Dwarfs. <i>Astrophysical Journal Letters</i> , 2019, 878, L11.	8.3	28
56	Simulating Gaia performances on white dwarfs. <i>Monthly Notices of the Royal Astronomical Society</i> , 2005, 360, 1381-1392.	4.4	27
57	Type Ia supernovae and the $^{12}\text{C}+^{12}\text{C}$ reaction rate. <i>Astronomy and Astrophysics</i> , 2011, 535, A114.	5.1	27
58	MAX: a gamma-ray lens for nuclear astrophysics. , 2004, , .		25
59	MAX, a Laue diffraction lens for nuclear astrophysics. <i>Experimental Astronomy</i> , 2006, 20, 269-278.	3.7	24
60	Pulsations of massive ZZ Ceti stars with carbon/oxygen and oxygen/neon cores. <i>Astronomy and Astrophysics</i> , 2004, 427, 923-932.	5.1	24
61	Neural Network Identification of Halo White Dwarfs. <i>Astrophysical Journal</i> , 1998, 508, L71-L74.	4.5	22
62	Clues for Lithium Production in Galactic C Stars: The $^{12}\text{C}/^{13}\text{C}$ Ratio. <i>Astrophysical Journal</i> , 1996, 460, 443.	4.5	21
63	Further Constraints on White Dwarf Galactic Halos. <i>Astrophysical Journal</i> , 1997, 488, L35-L38.	4.5	21
64	A DUAL mission for nuclear astrophysics. <i>Experimental Astronomy</i> , 2012, 34, 583-622.	3.7	19
65	Magnetic white dwarfs with debris discs. <i>Monthly Notices of the Royal Astronomical Society</i> , 2013, 431, 2778-2788.	4.4	19
66	Observation of SN2011fe with INTEGRAL. <i>Astronomy and Astrophysics</i> , 2013, 552, A97.	5.1	19
67	Evidence of a Merger of Binary White Dwarfs: The Case of GD 362. <i>Astrophysical Journal</i> , 2007, 661, L179-L182.	4.5	18
68	The white dwarf luminosity function - I. Statistical errors and alternatives. <i>Monthly Notices of the Royal Astronomical Society</i> , 2006, 369, 1654-1666.	4.4	17
69	White dwarf stars as particle physics laboratories. <i>Nuclear Physics, Section B, Proceedings Supplements</i> , 2003, 114, 107-110.	0.4	16
70	The International Robotic Antarctic Infrared Telescope (IRAiT). , 2006, , .		16
71	On the white dwarf distances to galactic globular clusters. <i>Astronomy and Astrophysics</i> , 2001, 371, 921-931.	5.1	15
72	The impact of a merger episode in the galactic disc white dwarf population. <i>Monthly Notices of the Royal Astronomical Society</i> , 2001, 328, 492-500.	4.4	15

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73	Detection and interpretation of $\hat{\text{I}}^3$ -ray emission from SNIa. <i>New Astronomy Reviews</i> , 2008, 52, 377-380.	12.8	15
74	WD0433+270: an old Hyades stream member or an Fe-core white dwarf?. <i>Astronomy and Astrophysics</i> , 2008, 477, 901-906.	5.1	15
75	The evolution of white dwarfs with a varying gravitational constant. <i>Astronomy and Astrophysics</i> , 2011, 527, A72.	5.1	13
76	The physics of white dwarfs. <i>Journal of Physics Condensed Matter</i> , 1998, 10, 11263-11272.	1.8	11
77	Asymptotic giant branch stars as astroparticle laboratories. <i>Monthly Notices of the Royal Astronomical Society</i> , 1999, 306, L1-L7.	4.4	11
78	The effects of metallicity on the Galactic disk population of white dwarfs. <i>Astronomy and Astrophysics</i> , 2014, 566, A81.	5.1	10
79	Future axion searches with the International Axion Observatory (IAXO). <i>Journal of Physics: Conference Series</i> , 2013, 460, 012002.	0.4	9
80	The white-dwarf cooling sequence of NGC 6791: a unique tool for stellar evolution. <i>Astronomy and Astrophysics</i> , 2011, 533, A31.	5.1	9
81	The contribution of red dwarfs and white dwarfs to the halo dark matter. <i>Astronomy and Astrophysics</i> , 2008, 486, 427-435.	5.1	8
82	SIXE: An X-Ray Experiment for the MINISAT Platform. <i>Astrophysics and Space Science</i> , 2001, 276, 39-48.	1.4	6
83	The contribution of oxygen-neon white dwarfs to the MACHO content of the Galactic halo. <i>Astronomy and Astrophysics</i> , 2007, 471, 151-158.	5.1	6
84	Testing the initial-final mass relationship of white dwarfs. <i>Journal of Physics: Conference Series</i> , 2009, 172, 012007.	0.4	6
85	Imaging detector development for nuclear astrophysics using pixelated CdTe. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2010, 623, 434-436.	1.6	6
86	Using self-organizing maps to identify potential halo white dwarfs. <i>Neural Networks</i> , 2003, 16, 405-410.	5.9	5
87	MAX: Development of a Laue diffraction lens for nuclear astrophysics. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2006, 567, 333-336.	1.6	5
88	The white dwarf luminosity function " II. The effect of the measurement errors and other biases. <i>Monthly Notices of the Royal Astronomical Society</i> , 2007, 378, 1461-1470.	4.4	4
89	Research and development of a gamma-ray imaging spectrometer in the MeV range in Barcelona. , 2010, , .		4
90	The DUAL mission concept. <i>Proceedings of SPIE</i> , 2011, , .	0.8	4

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91	Synthesis of radioactive elements in novae and supernovae and their use as a diagnostic tool. <i>New Astronomy Reviews</i> , 2021, 92, 101606.	12.8	4
92	\hat{I}^3 -ray emission from type Ia supernovae. <i>New Astronomy Reviews</i> , 2004, 48, 31-33.	12.8	3
93	The science of \hat{I}^3 -ray spectroscopy. <i>Advances in Space Research</i> , 2006, 38, 1434-1438.	2.6	3
94	OAdM robotic observatory: solutions for an unattended small-class observatory. <i>Proceedings of SPIE</i> , 2008, , .	0.8	3
95	White dwarfs as advanced physics laboratories. The axion case. <i>Proceedings of the International Astronomical Union</i> , 2019, 15, 138-153.	0.0	3
96	Simplified Treatment of the Radiative Transfer Problem in Expanding Envelopes. <i>Astrophysical Journal</i> , 1996, 470, 1018.	4.5	3
97	White Dwarf Collisions, a Promising Scenario to Account for Meteoritic Anomalies. <i>Research Notes of the AAS</i> , 2018, 2, 157.	0.7	3
98	SIXE: A Payload for MINISAT-02. <i>Astrophysics and Space Science</i> , 1998, 263, 389-392.	1.4	2
99	The role of gravitational supernovae in the Galactic evolution of the Li, Be and B isotopes. <i>Monthly Notices of the Royal Astronomical Society</i> , 1998, 299, 1007-1012.	4.4	2
100	The gravitational wave radiation of pulsating white dwarfs revisited: the case of BPM 37093 and PG 1159-035. <i>Astronomy and Astrophysics</i> , 2006, 446, 259-266.	5.1	2
101	White dwarfs with hydrogen-deficient atmospheres and the dark matter content of the Galaxy. <i>Astronomy and Astrophysics</i> , 2010, 511, A88.	5.1	2
102	White dwarf cooling sequences and cosmochronology. <i>EPJ Web of Conferences</i> , 2013, 43, 05002.	0.3	2
103	The fate of CO white dwarfs that experience slow deflagrations. <i>Monthly Notices of the Royal Astronomical Society</i> , 1999, 308, 928-938.	4.4	1
104	Stellar chronology with white dwarfs in wide binaries. <i>Proceedings of the International Astronomical Union</i> , 2008, 4, 307-314.	0.0	1
105	A consistency test of white dwarf and main sequence ages: NGC 6791. <i>EPJ Web of Conferences</i> , 2013, 43, 05003.	0.3	1
106	SIXE: An X-ray experiment for a minisatellite. , 1999, , .		0
107	Classification of the White Dwarf Populations Using Neural Networks. , 0, , 391-393.		0
108	White dwarfs as tracers of galactic evolution. <i>Astrophysics and Space Science</i> , 2001, 277, 273-276.	1.4	0

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109	The Montsec Astronomical Observatory: a robotic telescope in Catalonia (Spain). <i>Astronomische Nachrichten</i> , 2004, 325, 657-657.	1.2	0
110	Robotic design of the Montsec Astronomical Observatory. <i>Astronomische Nachrichten</i> , 2004, 325, 658-658.	1.2	0
111	Gravitational wave emission from the coalescence of white dwarfs. <i>Classical and Quantum Gravity</i> , 2005, 22, S453-S456.	4.0	0
112	Moving Optical Systems of IRAIT: Design and Construction. <i>EAS Publications Series</i> , 2007, 25, 221-224.	0.3	0
113	Infrared Observations of Supernovae with IRAIT at Dome C. <i>EAS Publications Series</i> , 2008, 33, 239-242.	0.3	0
114	White dwarfs, red dwarfs and halo dark matter. <i>Journal of Physics: Conference Series</i> , 2009, 172, 012003.	0.4	0
115	The gravitational waveforms of white dwarf collisions in globular clusters. <i>Journal of Physics: Conference Series</i> , 2009, 172, 012035.	0.4	0
116	SNIa, white dwarfs and the variation of the gravitational constant. <i>Proceedings of the International Astronomical Union</i> , 2009, 5, 311-311.	0.0	0
117	White Dwarfs as Astroparticle Physics Laboratories. <i>EAS Publications Series</i> , 2007, 25, 171-174.	0.3	0
118	Gravitational wave radiation from white dwarf close encounters in globular clusters. <i>EAS Publications Series</i> , 2008, 30, 227-232.	0.3	0
119	The Cooling of White Dwarfs and a Varying Gravitational Constant. <i>Thirty Years of Astronomical Discovery With UKIRT</i> , 2011, , 47-57.	0.3	0