

Denis Defrère

List of Publications by Year in descending order

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127
papers

3,237
citations

159358

30
h-index

189595

50
g-index

127
all docs

127
docs citations

127
times ranked

2332
citing authors

#	ARTICLE	IF	CITATIONS
1	Accreting protoplanets in the LkCa 15 transition disk. <i>Nature</i> , 2015, 527, 342-344.	13.7	249
2	197 CANDIDATES AND 104 VALIDATED PLANETS IN K2'S FIRST FIVE FIELDS. <i>Astrophysical Journal, Supplement Series</i> , 2016, 226, 7.	3.0	177
3	VIP: Vortex Image Processing Package for High-contrast Direct Imaging. <i>Astronomical Journal</i> , 2017, 154, 7.	1.9	129
4	<i>Darwin</i>â€”A Mission to Detect and Search for Life on Extrasolar Planets. <i>Astrobiology</i> , 2009, 9, 1-22.	1.5	112
5	DIRECTLY IMAGED L-T TRANSITION EXOPLANETS IN THE MID-INFRARED[,]. <i>Astrophysical Journal</i> , 2014, 792, 17.	1.6	112
6	A near-infrared interferometric survey of debris disk stars. <i>Astronomy and Astrophysics</i> , 2007, 475, 243-250.	2.1	95
7	A near-infrared interferometric survey of debris-disc stars. <i>Astronomy and Astrophysics</i> , 2013, 555, A104.	2.1	94
8	The HOSTS Surveyâ€”Exozodiacal Dust Measurements for 30 Stars. <i>Astronomical Journal</i> , 2018, 155, 194.	1.9	78
9	Darwinâ€”an experimental astronomy mission to search for extrasolar planets. <i>Experimental Astronomy</i> , 2009, 23, 435-461.	1.6	74
10	THE W. M. KECK OBSERVATORY INFRARED VORTEX CORONAGRAPH AND A FIRST IMAGE OF HIP 79124 B. <i>Astronomical Journal</i> , 2017, 153, 43.	1.9	74
11	A near-infrared interferometric survey of debris-disk stars. <i>Astronomy and Astrophysics</i> , 2014, 570, A128.	2.1	73
12	NULLING DATA REDUCTION AND ON-SKY PERFORMANCE OF THE LARGE BINOCULAR TELESCOPE INTERFEROMETER. <i>Astrophysical Journal</i> , 2016, 824, 66.	1.6	70
13	Discovery of a point-like source and a third spiral arm in the transition disk around the Herbig Ae star MWC 758. <i>Astronomy and Astrophysics</i> , 2018, 611, A74.	2.1	70
14	CONSTRAINING THE EXOZODIACAL LUMINOSITY FUNCTION OF MAIN-SEQUENCE STARS: COMPLETE RESULTS FROM THE KECK NULLER MID-INFRARED SURVEYS. <i>Astrophysical Journal</i> , 2014, 797, 119.	1.6	69
15	THE LEECH EXOPLANET IMAGING SURVEY: CHARACTERIZATION OF THE COLDEST DIRECTLY IMAGED EXOPLANET, GJ 504 b, AND EVIDENCE FOR SUPERSTELLAR METALLICITY*. <i>Astrophysical Journal</i> , 2016, 817, 166.	1.6	68
16	CHARACTERIZATION OF THE INNER DISK AROUND HD 141569 A FROM KECK/NIRC2 L-BAND VORTEX CORONAGRAPHY. <i>Astronomical Journal</i> , 2017, 153, 44.	1.9	59
17	DOES THE DEBRIS DISK AROUND HD 32297 CONTAIN COMETARY GRAINS?., <i>Astrophysical Journal</i> , 2014, 783, 21.	1.6	57
18	The HOSTS Survey for Exozodiacal Dust: Observational Results from the Complete Survey. <i>Astronomical Journal</i> , 2020, 159, 177.	1.9	57

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19	An interferometric study of the Fomalhaut inner debris disk. <i>Astronomy and Astrophysics</i> , 2013, 555, A146.	2.1	54
20	A near-infrared interferometric survey of debris disc stars. <i>Astronomy and Astrophysics</i> , 2008, 487, 1041-1054.	2.1	53
21	Deep Exploration of μ Eridani with Keck Ms-band Vortex Coronagraphy and Radial Velocities: Mass and Orbital Parameters of the Giant Exoplanet*. <i>Astronomical Journal</i> , 2019, 157, 33.	1.9	53
22	HUNTING FOR PLANETS IN THE HL TAU DISK. <i>Astrophysical Journal Letters</i> , 2015, 812, L38.	3.0	52
23	Keck/NIRC2 Lâ€™-band Imaging of Jovian-mass Accreting Protoplanets around PDS 70. <i>Astronomical Journal</i> , 2020, 159, 263.	1.9	51
24	The LEECH Exoplanet Imaging Survey. Further constraints on the planet architecture of the HR 8799 system. <i>Astronomy and Astrophysics</i> , 2015, 576, A133.	2.1	50
25	Nulling interferometry: impact of exozodiacal clouds on the performance of future life-finding space missions. <i>Astronomy and Astrophysics</i> , 2010, 509, A9.	2.1	49
26	Hot exozodiacal dust resolved around Vega with IOTA/IONIC. <i>Astronomy and Astrophysics</i> , 2011, 534, A5.	2.1	49
27	TWO SMALL TEMPERATE PLANETS TRANSITING NEARBY M DWARFS IN K2 CAMPAIGNS 0 AND 1* â€‰â€‰. <i>Astrophysical Journal</i> , 2016, 818, 87.	1.6	47
28	Characterization of the gaseous companion $\hat{\rho}$ Andromedae b. <i>Astronomy and Astrophysics</i> , 2014, 562, A111.	2.1	44
29	The LEECH Exoplanet Imaging Survey: Limits on Planet Occurrence Rates under Conservative Assumptions. <i>Astronomical Journal</i> , 2018, 156, 286.	1.9	44
30	FIRST-LIGHT LBT NULLING INTERFEROMETRIC OBSERVATIONS: WARM EXOZODIACAL DUST RESOLVED WITHIN A FEW AU OF $\hat{\rho}$ Crv. <i>Astrophysical Journal</i> , 2015, 799, 42.	1.6	42
31	THE LEECH EXOPLANET IMAGING SURVEY: ORBIT AND COMPONENT MASSES OF THE INTERMEDIATE-AGE, LATE-TYPE BINARY NO UMa* â€‰â€‰. <i>Astrophysical Journal</i> , 2016, 818, 1.	1.6	41
32	THE INNER DEBRIS STRUCTURE IN THE FOMALHAUT PLANETARY SYSTEM*. <i>Astrophysical Journal</i> , 2016, 818, 45.	1.6	40
33	Overview of LBTI: a multipurpose facility for high spatial resolution observations. <i>Proceedings of SPIE</i> , 2016, , .	0.8	37
34	Three years of harvest with the vector vortex coronagraph in the thermal infrared. <i>Proceedings of SPIE</i> , 2016, , .	0.8	37
35	Hot circumstellar material resolved around $\hat{\rho}$ Pic with VLT/PIONIER. <i>Astronomy and Astrophysics</i> , 2012, 546, L9.	2.1	31
36	A near-infrared interferometric survey of debris-disc stars. <i>Astronomy and Astrophysics</i> , 2016, 595, A44.	2.1	31

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37	Fresnel rhombs as achromatic phase shifters for infrared nulling interferometry. <i>Optics Express</i> , 2007, 15, 12850.	1.7	29
38	Exozodiacal clouds: hot and warm dust around main sequence stars. <i>The Astronomical Review</i> , 2017, 13, 69-111.	4.0	28
39	The path towards high-contrast imaging with the VLTI: the Hi-5 project. <i>Experimental Astronomy</i> , 2018, 46, 475-495.	1.6	28
40	EXO-ZODI MODELING FOR THE LARGE BINOCULAR TELESCOPE INTERFEROMETER. <i>Astrophysical Journal, Supplement Series</i> , 2015, 216, 23.	3.0	27
41	Multi-phase volcanic resurfacing at Loki Patera on Io. <i>Nature</i> , 2017, 545, 199-202.	13.7	26
42	Space-based infrared interferometry to study exoplanetary atmospheres. <i>Experimental Astronomy</i> , 2018, 46, 543-560.	1.6	25
43	TARGET SELECTION FOR THE LBTI EXOZODI KEY SCIENCE PROGRAM. <i>Astrophysical Journal, Supplement Series</i> , 2015, 216, 24.	3.0	23
44	Searching for faint companions with VLTI/PIONIER. <i>Astronomy and Astrophysics</i> , 2014, 570, A127.	2.1	22
45	PEGASE, an infrared interferometer to study stellar environments and low mass companions around nearby stars. <i>Experimental Astronomy</i> , 2009, 23, 403-434.	1.6	21
46	Atmospheric characterization of terrestrial exoplanets in the mid-infrared: biosignatures, habitability, and diversity. <i>Experimental Astronomy</i> , 2022, 54, 1197-1221.	1.6	21
47	Exoplanet science with a space-based mid-infrared nulling interferometer. , 2018, , .		21
48	CHARACTERIZATION OF THE BENCHMARK BINARY NLTT 33370. <i>Astrophysical Journal</i> , 2014, 783, 27.	1.6	20
49	Large binocular telescope interferometer adaptive optics: on-sky performance and lessons learned. <i>Proceedings of SPIE</i> , 2014, , .	0.8	20
50	SPATIALLY RESOLVED M-BAND EMISSION FROM IOâ€™S LOKI PATERAâ€™S FIZEAU IMAGING AT THE 22.8 m LBT. <i>Astronomical Journal</i> , 2015, 149, 175.	1.9	20
51	Delay Compensation for Real Time Disturbance Estimation at Extremely Large Telescopes. <i>IEEE Transactions on Control Systems Technology</i> , 2017, 25, 1384-1393.	3.2	20
52	IMPACT OF<i>Ë</i>_{Earth} ON THE CAPABILITIES OF AFFORDABLE SPACE MISSIONS TO DETECT BIOSIGNATURES ON EXTRASOLAR PLANETS. <i>Astrophysical Journal</i> , 2015, 808, 194.	1.6	18
53	Precise radial velocities of giant stars. <i>Astronomy and Astrophysics</i> , 2016, 595, A55.	2.1	18
54	First light with ALES: A 2-5 micron adaptive optics Integral Field Spectrograph for the LBT. <i>Proceedings of SPIE</i> , 2015, , .	0.8	17

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55	The Search for Worlds Like Our Own. <i>Astrobiology</i> , 2010, 10, 5-17.	1.5	16
56	MODELS OF THE Î CORVI DEBRIS DISK FROM THE KECK INTERFEROMETER, SPITZER, AND HERSCHEL. <i>Astrophysical Journal</i> , 2016, 817, 165.	1.6	16
57	MID-INFRARED HIGH-CONTRAST IMAGING OF HD 114174 B: AN APPARENT AGE DISCREPANCY IN A "SIRIUS-LIKE" BINARY SYSTEM. <i>Astrophysical Journal Letters</i> , 2014, 783, L25.	3.0	15
58	Nulling interferometry: performance comparison between space and ground-based sites for exozodiacal disc detection. <i>Astronomy and Astrophysics</i> , 2008, 490, 435-445.	2.1	13
59	Direct imaging of exoEarths embedded in clumpy debris disks. <i>Proceedings of SPIE</i> , 2012, , .	0.8	12
60	L'-band AGPM vector vortex coronagraph's first light on LBTI/LMIRCam. <i>Proceedings of SPIE</i> , 2014, , .	0.8	12
61	High contrast imaging at the LBT: the LEECH exoplanet imaging survey. <i>Proceedings of SPIE</i> , 2014, , .	0.8	11
62	Commissioning the LBTI for use as a nulling interferometer and coherent imager. , 2014, , .		11
63	Operation and performance of the mid-infrared camera, NOMIC, on the Large Binocular Telescope. <i>Proceedings of SPIE</i> , 2014, , .	0.8	11
64	Co-phasing the Large Binocular Telescope: status and performance of LBTI/PHASECam. <i>Proceedings of SPIE</i> , 2014, , .	0.8	10
65	Imaging protoplanets: observing transition disks with non-redundant masking. <i>Proceedings of SPIE</i> , 2016, , .	0.8	10
66	Making high-accuracy null depth measurements for the LBTI exozodi survey. <i>Proceedings of SPIE</i> , 2016, , .	0.8	10
67	An H-band Vector Vortex Coronagraph for the Subaru Coronagraphic Extreme Adaptive Optics System. <i>Publications of the Astronomical Society of the Pacific</i> , 2018, 130, 035001.	1.0	10
68	The LEECH Exoplanet Imaging Survey. Further constraints on the planet architecture of the HR 8799 system (Corrigendum). <i>Astronomy and Astrophysics</i> , 2015, 579, C2.	2.1	10
69	Fizeau interferometric imaging of Io volcanism with LBTI/LMIRcam. <i>Proceedings of SPIE</i> , 2014, , .	0.8	9
70	A near-infrared interferometric survey of debris-disk stars. <i>Astronomy and Astrophysics</i> , 2021, 651, A45.	2.1	9
71	Detection of Near-infrared Water Ice at the Surface of the (Pre)Transitional Disk of AB Aur: Informing Icy Grain Abundance, Composition, and Size. <i>Astronomical Journal</i> , 2022, 163, 145.	1.9	9
72	OVMS-plus at the LBT: disturbance compensation simplified. <i>Proceedings of SPIE</i> , 2016, , .	0.8	8

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73	Constraints on HD 113337 fundamental parameters and planetary system. <i>Astronomy and Astrophysics</i> , 2019, 627, A44.	2.1	7
74	Simultaneous water vapor and dry air optical path length measurements and compensation with the large binocular telescope interferometer. <i>Proceedings of SPIE</i> , 2016, , .	0.8	6
75	Commissioning and first light results of an L'-band vortex coronagraph with the Keck II adaptive optics NIRC2 science instrument. <i>Proceedings of SPIE</i> , 2016, , .	0.8	6
76	Searching for Atmospheric Bioindicators in Planets around the Two Nearby Stars, Proxima Centauri and Epsilon Eridani – Test Cases for Retrieval of Atmospheric Gases with Infrared Spectroscopy. <i>Astrobiology</i> , 2019, 19, 797-810.	1.5	6
77	The HOSTS survey for exo-zodiacal dust: preliminary results and future prospects. , 2018, , .		6
78	The LBTI Fizeau imager – II. Sensitivity of the PSF and the MTF to adaptive optics errors and to piston errors. <i>Monthly Notices of the Royal Astronomical Society</i> , 2017, 472, 3288-3297.	1.6	5
79	The HOSTS Survey: Evidence for an Extended Dust Disk and Constraints on the Presence of Giant Planets in the Habitable Zone of β Leo. <i>Astronomical Journal</i> , 2021, 161, 186.	1.9	5
80	Exoplanet detection yield of a space-based Bracewell interferometer from small to medium satellites. <i>Journal of Astronomical Telescopes, Instruments, and Systems</i> , 2020, 6, .	1.0	5
81	Resolving Io – Volcanoes from a Mutual Event Observation at the Large Binocular Telescope. <i>Planetary Science Journal</i> , 2021, 2, 227.	1.5	5
82	The 4m international liquid mirror telescope (ILMT). , 2006, , .		4
83	The LBTI hunt for observable signatures of terrestrial systems (HOSTS) survey: a key NASA science program on the road to exoplanet imaging missions. <i>Proceedings of SPIE</i> , 2014, , .	0.8	4
84	The LBTI Fizeau imager – I. Fundamental gain in high-contrast imaging. <i>Monthly Notices of the Royal Astronomical Society</i> , 2017, 472, 2544-2553.	1.6	4
85	Prospects for the characterisation of exo-zodiacal dust with the VLTI. <i>Experimental Astronomy</i> , 2018, 46, 401-411.	1.6	4
86	Polar-interferometry: what can be learnt from the IOTA/IONIC experiment. <i>Proceedings of SPIE</i> , 2008, , .	0.8	3
87	Enabling the direct detection of earth-sized exoplanets with the LBTI HOSTS project: a progress report. <i>Proceedings of SPIE</i> , 2016, , .	0.8	3
88	Direct imaging of Earth-like planets: why we care about exozodis. <i>Proceedings of SPIE</i> , 2010, , .	0.8	2
89	LEECH: A 100 Night Exoplanet Imaging Survey at the LBT. <i>Proceedings of the International Astronomical Union</i> , 2013, 8, 70-71.	0.0	2
90	The VORTEX project: first results and perspectives. <i>Proceedings of SPIE</i> , 2014, , .	0.8	2

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91	Exoplanet science with the LBTI: instrument status and plans. Proceedings of SPIE, 2015, , .	0.8	2
92	The path to interferometry in space. Proceedings of SPIE, 2016, , .	0.8	2
93	A recent history of science cases for optical interferometry. Experimental Astronomy, 2018, 46, 389-399.	1.6	2
94	Interferometric Space Missions for Exoplanet Science: Legacy of Darwin/TPF. , 2018, , 1229-1255.		2
95	Implementing multiwavelength fringe tracking for the Large Binocular Telescope Interferometer's phase sensor, PHASECam. Journal of Astronomical Telescopes, Instruments, and Systems, 2020, 6, 1.	1.0	2
96	Characterizing the atmosphere of Proxima b with a space-based mid-infrared nulling interferometer. , 2018, , .		2
97	Image-plane fringe tracker for adaptive-optics assisted long baseline interferometry. , 2018, , .		2
98	Overview and prospects of the LBTI beyond the completed HOSTS survey. , 2020, , .		2
99	A two-band approach to \hat{n} phase error corrections with LBTI's PHASECam. , 2018, , .		2
100	Large Binocular Telescope Search for Companions and Substructures in the (Pre)transitional Disk of AB Aurigae. Astrophysical Journal, 2022, 926, 71.	1.6	2
101	Unveiling exozodiacal light. Physics Today, 2022, 75, 46-52.	0.3	2
102	Potential of space-based infrared Bracewell interferometers for planet detection. , 2007, , .		1
103	Earth-like planets: science performance predictions for future nulling interferometry missions. , 2008, , .		1
104	Potential of balloon payloads for in flight validation of direct and nulling interferometry concepts. Proceedings of SPIE, 2010, , .	0.8	1
105	The planar optics phase sensor: a study for the VLTI 2nd generation fringe tracker. , 2010, , .		1
106	Studying hot exozodiacal dust with near-infrared interferometry. , 2012, , .		1
107	The Large Binocular Telescope Interferometer & Adaptive Optics System: On-sky Performance and Results. Proceedings of the International Astronomical Union, 2013, 8, 26-27.	0.0	1
108	Unraveling the Mystery of Exozodiacal Dust. Proceedings of the International Astronomical Union, 2013, 8, 338-339.	0.0	1

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109	Interferometric Space Missions for Exoplanet Science: Legacy of Darwin/TPF. , 2017, , 1-27.		1
110	Science case for 1 mas spectro-imaging in the near-infrared. , 2008, , .		0
111	High dynamic range interferometric observations of exozodiacal discs: performance comparison between ground, space, and Antarctica. Proceedings of SPIE, 2008, , .	0.8	0
112	Exozodiacal discs with ALADDIN: how faint can we detect them?. EAS Publications Series, 2010, 40, 257-262.	0.3	0
113	Keck Interferometer Nuller science highlights. Proceedings of SPIE, 2012, , .	0.8	0
114	Parasitic interference in classical and nulling stellar interferometry. Proceedings of SPIE, 2012, , .	0.8	0
115	Parasitic interference in nulling interferometry. Monthly Notices of the Royal Astronomical Society, 2013, 431, 1286-1295.	1.6	0
116	Searching for Faint Exozodiacal Disks: Keck Results and LBTI Status. Proceedings of the International Astronomical Union, 2013, 8, 332-333.	0.0	0
117	Unveiling new stellar companions from the PIONIER exozodi survey. , 2014, , .		0
118	Pioneer Anomaly: What Can We Learn from LISA?. Astrophysics and Space Science Library, 2008, , 605-629.	1.0	0
119	Planet formation imager: project update. , 2018, , .		0
120	Hi-5: a potential high-contrast thermal near-infrared imager for the VLTI. , 2018, , .		0
121	Development of a space-based nulling interferometer to detect and characterize exoplanets. , 2019, , .		0
122	Towards the development of mid-infrared integrated optics in the renewed context of high-contrast interferometry. , 2020, , .		0
123	Performance study of interferometric small-sats to detect exoplanets: updated exoplanet yield and application to nearby exoplanets. , 2020, , .		0
124	Review and scientific prospects of high-contrast optical stellar interferometry. , 2020, , .		0
125	MARVEL, a four-telescope array for high-precision radial-velocity monitoring. , 2020, , .		0
126	Preparatory studies for a mid-infrared nulling interferometry experiment at cryogenic conditions. , 2020, , .		0

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127	Optimizing MARVEL for the radial velocity follow up of TESS and PLATO transiting exoplanets. , 2020, , .		0