Luca Fossati

List of Publications by Year
in descending order

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Version: 2024-02-01

138 papers	5,468 citations	76326 40 h-index	118850 62 g-index
142 all docs	142 docs citations	142 times ranked	3223 citing authors

#	Article	IF	Citations
1	METALS IN THE EXOSPHERE OF THE HIGHLY IRRADIATED PLANET WASP-12b. Astrophysical Journal Letters, 2010, 714, L222-L227.	8.3	300
2	NEAR-ULTRAVIOLET ABSORPTION, CHROMOSPHERIC ACTIVITY, AND STAR-PLANET INTERACTIONS IN THE WASP-12 SYSTEM. Astrophysical Journal, 2012, 760, 79.	4.5	184
3	An excess of massive stars in the local 30 Doradus starburst. Science, 2018, 359, 69-71.	12.6	164
4	The CHEOPS mission. Experimental Astronomy, 2021, 51, 109-151.	3.7	140
5	THREE-DIMENSIONAL GAS DYNAMIC SIMULATION OF THE INTERACTION BETWEEN THE EXOPLANET WASP-12b AND ITS HOST STAR. Astrophysical Journal, 2013, 764, 19.	4.5	132
6	Magnetic field measurements and their uncertainties: the FORS1 legacy. Astronomy and Astrophysics, 2012, 538, A129.	5.1	112
7	Detection of Feâ€‰i in the atmosphere of the ultra-hot Jupiter WASP-121b, and a new likelihood-based approach for Doppler-resolved spectroscopy. Monthly Notices of the Royal Astronomical Society, 2020, 493, 2215-2228.	4.4	112
8	Five carbon- and nitrogen-bearing species in a hot giant planetâ€™s atmosphere. Nature, 2021, 592, 205-208.	27.8	99
9	Six transiting planets and a chain of Laplace resonances in TOI-178. Astronomy and Astrophysics, 2021, 649, A26.	5.1	94
10	Grid of upper atmosphere models for 1â€“40 M_{âŠ•} planets: application to CoRoT-7 b and HD 219134 b,c. Astronomy and Astrophysics, 2018, 619, A151.	5.1	89
11	TESSâ€™s first planet. Astronomy and Astrophysics, 2018, 619, L10.	5.1	86
12	A DETAILED SPECTROPOLARIMETRIC ANALYSIS OF THE PLANET-HOSTING STAR WASP-12[,]. Astrophysical Journal, 2010, 720, 872-886.	4.5	85
13	The spectroscopic Hertzsprung-Russell diagram of Galactic massive stars. Astronomy and Astrophysics, 2014, 570, L13.	5.1	85
14	Aeronomical constraints to the minimum mass and maximum radius of hot low-mass planets. Astronomy and Astrophysics, 2017, 598, A90.	5.1	84
15	Neutral Iron Emission Lines from the Dayside of KELT-9b: The GAPS Program with HARPS-N at TNG XX. Astrophysical Journal Letters, 2020, 894, L27.	8.3	84
16	ABSORBING GAS AROUND THE WASP-12 PLANETARY SYSTEM. Astrophysical Journal Letters, 2013, 766, L20.	8.3	83
17	Rejuvenation of stellar mergers and the origin of magnetic fields in massive stars. Monthly Notices of the Royal Astronomical Society, 2016, 457, 2355-2365.	4.4	82
18	Overcoming the Limitations of the Energy-limited Approximation for Planet Atmospheric Escape. Astrophysical Journal Letters, 2018, 866, L18.	8.3	82

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19	B fields in OB stars (BOB): Low-resolution FORS2 spectropolarimetry of the first sample of 50 massive stars. Astronomy and Astrophysics, 2015, 582, A45.	5.1	77
20	The Transiting Multi-planet System HD 3167: A 5.7 M_{âŠ•} Super-Earth and an 8.3 M_{âŠ•} Mini-Neptune. Astronomical Journal, 2017, 154, 123.	4.7	71
21	TESS Delivers Its First Earth-sized Planet and a Warm Sub-Neptune*. Astrophysical Journal Letters, 2019, 875, L7.	8.3	69
22	TWO REGIMES OF INTERACTION OF A HOT JUPITERâ€™S ESCAPING ATMOSPHERE WITH THE STELLAR WIND AND GENERATION OF ENERGIZED ATOMIC HYDROGEN CORONA. Astrophysical Journal, 2016, 832, 173.	4.5	67
23	Late stages of the evolution of A-type stars on the main sequence: comparison between observed chemical abundances and diffusion models for 8ÂAmÂstars of the Praesepe cluster. Astronomy and Astrophysics, 2007, 476, 911-925.	5.1	65
24	Properties of OB starâ˜black hole systems derived from detailed binary evolution models. Astronomy and Astrophysics, 2020, 638, A39.	5.1	65
25	Far-ultraviolet Activity Levels of F, G, K, and M Dwarf Exoplanet Host Stars. Astrophysical Journal, Supplement Series, 2018, 239, 16.	7.7	63
26	The VLT-FLAMES Tarantula Survey. Astronomy and Astrophysics, 2018, 618, A73.	5.1	62
27	An overabundance of low-density Neptune-like planets. Monthly Notices of the Royal Astronomical Society, 2017, 466, 1868-1879.	4.4	61
28	The hot dayside and asymmetric transit of WASP-189 b seen by CHEOPS. Astronomy and Astrophysics, 2020, 643, A94.	5.1	61
29	The chemical abundance analysis of normal early A- and late B-type stars. Astronomy and Astrophysics, 2009, 503, 945-962.	5.1	60
30	The Influence of Coronal Mass Ejections on the Mass-loss Rates of Hot-Jupiters. Astrophysical Journal, 2017, 846, 31.	4.5	60
31	Magma oceans and enhanced volcanism on TRAPPIST-1 planets due to induction heating. Nature Astronomy, 2017, 1, 878-885.	10.1	57
32	The FORS1 catalogue of stellar magnetic field measurements. Astronomy and Astrophysics, 2015, 583, A115.	5.1	54
33	Identifying the â€˜trueâ€™ radius of the hot sub-Neptune CoRoT-24b by mass-loss modelling. Monthly Notices of the Royal Astronomical Society: Letters, 2016, 461, L62-L66.	3.3	53
34	Detection of Ionized Calcium in the Atmosphere of the Ultra-hot Jupiter KELT-9b. Astrophysical Journal Letters, 2020, 888, L13.	8.3	52
35	K2-106, a system containing a metal-rich planet and a planet of lower density. Astronomy and Astrophysics, 2017, 608, A93.	5.1	51
36	Transit detection of the long-period volatile-rich super-Earth Î½2 Lupi d with CHEOPS. Nature Astronomy, 2021, 5, 775-787.	10.1	51

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37	Constraining the early evolution of Venus and Earth through atmospheric Ar, Ne isotope and bulk K/U ratios. Icarus, 2020, 339, 113551.	2.5	47
38	CHEOPS observations of the HD 108236 planetary system: a fifth planet, improved ephemerides, and planetary radii. Astronomy and Astrophysics, 2021, 646, A157.	5.1	47
39	The GAPS programme at TNG. Astronomy and Astrophysics, 2020, 639, A49.	5.1	47
40	Radial velocity confirmation of K2-100b: a young, highly irradiated, and low-density transiting hot Neptune. Monthly Notices of the Royal Astronomical Society, 2019, 490, 698-708.	4.4	46
41	SALT observations of the chromospheric activity of transiting planet hosts: mass-loss and starâ€“planet interactions. Monthly Notices of the Royal Astronomical Society, 2017, 466, 738-748.	4.4	45
42	Suppressed Far-UV Stellar Activity and Low Planetary Mass Loss in the WASP-18 System*. Astronomical Journal, 2018, 155, 113.	4.7	45
43	Effect of stellar wind induced magnetic fields on planetary obstacles of non-magnetized hot Jupiters. Monthly Notices of the Royal Astronomical Society, 2017, 470, 4330-4336.	4.4	44
44	The GAPS Programme with HARPS-N at TNG. Astronomy and Astrophysics, 2019, 631, A34.	5.1	44
45	The first planet detected in the WTS: an inflated hot Jupiter in a 3.35â€‰d orbit around a late F star. Monthly Notices of the Royal Astronomical Society, 2012, 427, 1877-1890.	4.4	42
46	FAR-UV SPECTROSCOPY OF THE PLANET-HOSTING STAR WASP-13: HIGH-ENERGY IRRADIANCE, DISTANCE, AGE, PLANETARY MASS-LOSS RATE, AND CIRCUMSTELLAR ENVIRONMENT. Astrophysical Journal, 2015, 815, 118.	4.5	40
47	LyÎ± Absorption at Transits of HD 209458b: A Comparative Study of Various Mechanisms Under Different Conditions. Astrophysical Journal, 2017, 847, 126.	4.5	40
48	OBSERVATIONAL CONSEQUENCES OF TURBULENT PRESSURE IN THE ENVELOPES OF MASSIVE STARS. Astrophysical Journal Letters, 2015, 808, L31.	8.3	39
49	A BIMODAL CORRELATION BETWEEN HOST STAR CHROMOSPHERIC EMISSION AND THE SURFACE GRAVITY OF HOT JUPITERS. Astrophysical Journal Letters, 2015, 812, L35.	8.3	39
50	The Role of N₂as a Geo-Biosignature for the Detection and Characterization of Earth-like Habitats. Astrobiology, 2019, 19, 927-950.	3.0	38
51	Analysis of Early Science observations with the CHaracterising ExOPlanets Satellite (CHEOPS) using<scp>pycheops</scp>. Monthly Notices of the Royal Astronomical Society, 2022, 514, 77-104.	4.4	38
52	Hydrogen Dominated Atmospheres on Terrestrial Mass Planets: Evidence, Origin and Evolution. Space Science Reviews, 2020, 216, 1.	8.1	37
53	Is Ï€ Men câ€™s Atmosphere Hydrogen-dominated? Insights from a Non-detection of H i LyÎ± Absorption. Astrophysical Journal Letters, 2020, 888, L21.	8.3	37
54	K2-139 b: a low-mass warm Jupiter on a 29-d orbit transiting an active K0ÂV star. Monthly Notices of the Royal Astronomical Society, 2018, 475, 1765-1776.	4.4	35

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55	A Heavy Molecular Weight Atmosphere for the Super-Earth Ï€ Men c. Astrophysical Journal Letters, 2021, 907, L36.	8.3	35
56	Loss and Fractionation of Noble Gas Isotopes and Moderately Volatile Elements from Planetary Embryos and Early Venus, Earth and Mars. Space Science Reviews, 2020, 216, 1.	8.1	34
57	Near-ultraviolet Transmission Spectroscopy of HD 209458b: Evidence of Ionized Iron Beyond the Planetary Roche Lobe. Astronomical Journal, 2020, 159, 111.	4.7	34
58	Close-in Sub-Neptunes Reveal the Past Rotation History of Their Host Stars: Atmospheric Evolution of Planets in the HD 3167 and K2-32 Planetary Systems. Astrophysical Journal, 2019, 879, 26.	4.5	33
59	Swift UVOT near-UV transit observations of WASP-121 b. Astronomy and Astrophysics, 2019, 623, A57.	5.1	33
60	Non-local thermodynamic equilibrium effects determine the upper atmospheric temperature structure of the ultra-hot Jupiter KELT-9b. Astronomy and Astrophysics, 2021, 653, A52.	5.1	33
61	The importance of non-photon noise in stellar spectropolarimetry. Astronomy and Astrophysics, 2013, 559, A103.	5.1	32
62	Aerosol Constraints on the Atmosphere of the Hot Saturn-mass Planet WASP-49b. Astrophysical Journal, 2017, 849, 145.	4.5	32
63	Extreme-ultraviolet Radiation from A-stars: Implications for Ultra-hot Jupiters. Astrophysical Journal Letters, 2018, 868, L30.	8.3	32
64	Detection of Ongoing Mass Loss from HD 63433c, a Young Mini-Neptune. Astronomical Journal, 2022, 163, 68.	4.7	31
65	Characterization of the HDâ€‰219134 multi-planet system II. Stellar-wind sputtered exospheres in rocky planets b & c. Monthly Notices of the Royal Astronomical Society, 2018, 481, 5296-5306.	4.4	30
66	A pair of sub-Neptunes transiting the bright K-dwarf TOI-1064 characterized with CHEOPS. Monthly Notices of the Royal Astronomical Society, 2022, 511, 1043-1071.	4.4	30
67	Young planets under extreme UV irradiation. Astronomy and Astrophysics, 2018, 612, A25.	5.1	29
68	Super-Earth of 8M_{âŠ•}in a 2.2-day orbit around the K5V star K2-216. Astronomy and Astrophysics, 2018, 618, A33.	5.1	29
69	The Transiting Multi-planet System HD15337: Two Nearly Equal-mass Planets Straddling the Radius Gap. Astrophysical Journal Letters, 2019, 876, L24.	8.3	29
70	HD 219666 b: a hot-Neptune from TESS Sector 1. Astronomy and Astrophysics, 2019, 623, A165.	5.1	29
71	On the consistency of magnetic field measurements of Ap stars: lessons learned from the FORS1 archive. Astronomy and Astrophysics, 2014, 572, A113.	5.1	28
72	Effective Induction Heating around Strongly Magnetized Stars. Astrophysical Journal, 2018, 858, 105.	4.5	28

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73	The Kepler-11 system: evolution of the stellar high-energy emission and initial planetary atmospheric mass fractions. Astronomy and Astrophysics, 2019, 632, A65.	5.1	28
74	Relating turbulent pressure and macroturbulence across the HR diagram with a possible link toÎ³Doradus stars. Astronomy and Astrophysics, 2015, 584, L2.	5.1	26
75	Coupling thermal evolution of planets and hydrodynamic atmospheric escape in mesa. Monthly Notices of the Royal Astronomical Society, 2020, 499, 77-88.	4.4	26
76	Effects of radiation pressure on the evaporative wind of HD 209458b. Monthly Notices of the Royal Astronomical Society, 2020, 493, 1292-1305.	4.4	26
77	The atmosphere and architecture of WASP-189 b probed by its CHEOPS phase curve. Astronomy and Astrophysics, 2022, 659, A74.	5.1	26
78	B fields in OB stars (BOB): Detection of a magnetic field in the He-strong star CPDâ€‰â˜’57Â°â€‰3509. Astronomy and Astrophysics, 2016, 587, A7.	5.1	25
79	Spi-OPS: Spitzer and CHEOPS confirm the near-polar orbit of MASCARA-1 b and reveal a hint of dayside reflection. Astronomy and Astrophysics, 2022, 658, A75.	5.1	25
80	A data-driven approach to constraining the atmospheric temperature structure of the ultra-hot Jupiter KELT-9b. Astronomy and Astrophysics, 2020, 643, A131.	5.1	23
81	The effect of ISM absorption on stellar activity measurements and its relevance for exoplanet studies. Astronomy and Astrophysics, 2017, 601, A104.	5.1	22
82	Atmospheric Mass Loss from Hot Jupiters Irradiated by Stellar Superflares. Astrophysical Journal, 2018, 869, 108.	4.5	22
83	Circumstellar environment of 55 Cancri. Astronomy and Astrophysics, 2020, 633, A48.	5.1	22
84	A solar-type star polluted by calcium-rich supernova ejecta inside the supernova remnant RCW 86. Nature Astronomy, 2017, 1, .	10.1	21
85	The Spectroscopic Hertzsprungâ€“Russell Diagram of Hot Massive Stars in the Small Magellanic Cloud. Astrophysical Journal, 2018, 868, 57.	4.5	21
86	Generation of a circumstellar gas disc by hot Jupiter WASP-12b. Monthly Notices of the Royal Astronomical Society, 2018, 478, 2592-2598.	4.4	21
87	BONNSAI: correlated stellar observables in Bayesian methods. Astronomy and Astrophysics, 2017, 598, A60.	5.1	21
88	B field in OB stars (BOB): The outstandingly strong magnetic field in the evolved He-strong star CPDâ€‰â˜’62Â°â€‰2124. Astronomy and Astrophysics, 2017, 597, L6.	5.1	20
89	Caâ€¯II H&K stellar activity parameter: a proxy for extreme ultraviolet stellar fluxes. Astronomy and Astrophysics, 2020, 644, A67.	5.1	20
90	The GAPS Programme at TNG. Astronomy and Astrophysics, 2022, 658, A136.	5.1	20

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91	CHEOPS geometric albedo of the hot Jupiter HD 209458 b. Astronomy and Astrophysics, 2022, 659, L4.	5.1	20
92	Diagnostics of the unstable envelopes of Wolf-Rayet stars. Astronomy and Astrophysics, 2016, 590, A12.	5.1	19
93	Characterization of the HD 219134 multiplanet system I. Observations of stellar magnetism, wind, and high-energy fluxâ˜…. Monthly Notices of the Royal Astronomical Society, 2018, 481, 5286-5295.	4.4	19
94	On the ultraviolet anomalies of the WASP-12 and HD 189733 systems: Trojan satellites as a plasma source. Monthly Notices of the Royal Astronomical Society, 2016, 461, 988-999.	4.4	18
95	Detection of Ionized Calcium in the Atmosphere of the Ultra-hot Jupiter WASP-76b. Astrophysical Journal Letters, 2021, 919, L15.	8.3	18
96	Modelling atmospheric escape and MgÂii near-ultraviolet absorption of the highly irradiated hot Jupiter WASP-12b. Monthly Notices of the Royal Astronomical Society, 2019, 487, 4208-4220.	4.4	17
97	A Multiwavelength Look at the GJ 9827 System: No Evidence of Extended Atmospheres in GJ 9827b and d from HST and CARMENES Data. Astronomical Journal, 2021, 161, 136.	4.7	17
98	A critical assessment of the applicability of the energy-limited approximation for estimating exoplanetary mass-loss rates. Astronomy and Astrophysics, 2021, 650, A94.	5.1	17
99	The impact of intrinsic magnetic field on the absorption signatures of elements probing the upper atmosphere of HD209458b. Monthly Notices of the Royal Astronomical Society, 2021, 507, 3626-3637.	4.4	17
100	Modeling the LyÎ± transit absorption of the hot Jupiter HD 189733b. Astronomy and Astrophysics, 2020, 638, A49.	5.1	17
101	Three-dimensional hydrodynamic simulations of the upper atmosphere of Ï€ Men c: Comparison with LyÎ± transit observations. Astronomy and Astrophysics, 2020, 639, A109.	5.1	17
102	The Multiplanet System TOI-421: A Warm Neptune and a Super Puffy Mini-Neptune Transiting a G9 V Star in a Visual Binary*. Astronomical Journal, 2020, 160, 114.	4.7	17
103	High-resolution detection of neutral oxygen and non-LTE effects in the atmosphere of KELT-9b. Nature Astronomy, 2022, 6, 226-231.	10.1	17
104	An ablating 2.6 MâŠ• planet in an eccentric binary from the Dispersed Matter Planet Project. Nature Astronomy, 2020, 4, 419-426.	10.1	16
105	Mitigating flicker noise in high-precision photometry. Astronomy and Astrophysics, 2020, 636, A70.	5.1	16
106	The Influence of a Stellar Flare on the Dynamical State of the Atmosphere of the Exoplanet HD 209458b. Astronomy Reports, 2018, 62, 648-653.	0.9	15
107	The GAPS Programme at TNG. Astronomy and Astrophysics, 2021, 653, A104.	5.1	15
108	Supermassive hot Jupiters provide more favourable conditions for the generation of radio emission via the cyclotron maser instability â€“ a case study based on Tau Bootis b. Monthly Notices of the Royal Astronomical Society, 2018, 480, 3680-3688.	4.4	14

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109	Dispersed Matter Planet Project discoveries of ablating planets orbiting nearby bright stars. Nature Astronomy, 2020, 4, 408-418.	10.1	14
110	Metallicity dependence of turbulent pressure and macroturbulence in stellar envelopes. Astronomy and Astrophysics, 2016, 593, A14.	5.1	13
111	Modeling of Absorption by Heavy Minor Species for the Hot Jupiter HD 209458b. Astrophysical Journal, 2018, 866, 47.	4.5	13
112	Simulation of 10â€‰830ÂÃ... absorption with a 3D hydrodynamic model reveals the solar He abundance in upper atmosphere of WASP-107b. Monthly Notices of the Royal Astronomical Society: Letters, 2021, 503, L23-L27.	3.3	13
113	Constraining stellar rotation and planetary atmospheric evolution of a dozen systems hosting sub-Neptunes and super-Earths. Astronomy and Astrophysics, 2021, 656, A157.	5.1	13
114	The extreme-ultraviolet stellar characterization for atmospheric physics and evolution (ESCAPE) mission concept. , 2019, , .		12
115	The GAPS Programme at TNG. Astronomy and Astrophysics, 2022, 663, A141.	5.1	12
116	The science case for POLLUX, a high-resolution UV spectropolarimeter onboard LUVOIR. , 2018, , .		11
117	Bright low mass eclipsing binary candidates observed by STEREO. Monthly Notices of the Royal Astronomical Society, 2012, 427, 2298-2307.	4.4	10
118	Interior heating and outgassing of Proxima Centauri b: Identifying critical parameters. Astronomy and Astrophysics, 2021, 651, A103.	5.1	10
119	Global 3D Simulation of the Upper Atmosphere of HD189733b and Absorption in Metastable He i and LyÎ± Lines. Astrophysical Journal, 2022, 927, 238.	4.5	10
120	The Influence of Superflares of Host Stars on the Dynamics of the Envelopes of Hot Jupiters. Astronomy Reports, 2019, 63, 94-106.	0.9	9
121	A compact multi-planet system around a bright nearby star from the Dispersed Matter Planet Project. Nature Astronomy, 2020, 4, 399-407.	10.1	9
122	ProbingKeplerâ€™s hottest small planets via homogeneous search and analysis of optical secondary eclipses and phase variations. Astronomy and Astrophysics, 2022, 658, A132.	5.1	9
123	Future Missions Related to the Determination of the Elemental and Isotopic Composition of Earth, Moon and the Terrestrial Planets. Space Science Reviews, 2020, 216, 1.	8.1	8
124	Probing the atmosphere of HD189733b with the Naâ€‰i and Kâ€‰i lines. Monthly Notices of the Royal Astronomical Society, 2020, 498, 1023-1033.	4.4	8
125	Extending a Grid of Hydrodynamic Planetary Upper Atmosphere Models. Research Notes of the AAS, 2021, 5, 74.	0.7	8
126	Non-local thermodynamic equilibrium transmission spectrum modelling of HD 209458b. Astronomy and Astrophysics, 2020, 641, A47.	5.1	8

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127	STELLAR WIND INDUCED SOFT X-RAY EMISSION FROM CLOSE-IN EXOPLANETS. Astrophysical Journal Letters, 2015, 799, L15.	8.3	7
128	Colorado Ultraviolet Transit Experiment data simulator. Journal of Astronomical Telescopes, Instruments, and Systems, 2019, 5, 1.	1.8	7
129	HD 144941: the most extreme helium-strong star. Astronomy and Astrophysics, 2021, 654, A119.	5.1	6
130	Searching for a gas cloud surrounding the WASP-18 planetary system. Astrophysics and Space Science, 2014, 354, 21-28.	1.4	5
131	Understanding the rotational variability of K2 targets. Astronomy and Astrophysics, 2020, 639, A8.	5.1	5
132	Observations of Exoplanet Atmospheres and Surrounding Environments. Astrophysics and Space Science Library, 2015, , 59-80.	2.7	5
133	The Colorado Ultraviolet Transit Experiment (CUTE): a dedicated cubesat mission for the study of exoplanetary mass loss and magnetic fields. , 2017, , .		5
134	Response to Comment on â€œAn excess of massive stars in the local 30 Doradus starburstâ€• Science, 2018, 361, .	12.6	4
135	Observability of ultraviolet Ni lines in the atmosphere of transiting Earthâ€like planets. Astronomische Nachrichten, 2020, 341, 879-886.	1.2	2
136	The search for living worlds and the connection to our cosmic origins. Experimental Astronomy, 2022, 54, 1275-1306.	3.7	1
137	New Spectropolarimetric Measurements of HD 144941. Research Notes of the AAS, 2021, 5, 254.	0.7	1
138	A Hydrodynamic Modelling of Atmospheric Escape and Absorption Line of WASP-12b. Proceedings of the International Astronomical Union, 2018, 14, 301-303.	0.0	0