Luca Fossati

List of Publications by Year
in descending order

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	The search for living worlds and the connection to our cosmic origins. Experimental Astronomy, 2022, 54, 1275-1306.	3.7	1
2	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
3	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
4	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
5	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
6	The atmosphere and architecture of WASP-189 b probed by its CHEOPS phase curve. Astronomy and Astrophysics, 2022, 659, A74.	5.1	26
7	Detection of Ongoing Mass Loss from HD 63433c, a Young Mini-Neptune. Astronomical Journal, 2022, 163, 68.	4.7	31
8	The GAPS Programme at TNG. Astronomy and Astrophysics, 2022, 658, A136.	5.1	20
9	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
10	CHEOPS geometric albedo of the hot Jupiter HD 209458 b. Astronomy and Astrophysics, 2022, 659, L4.	5.1	20
11	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
12	The GAPS Programme at TNG. Astronomy and Astrophysics, 2022, 663, A141.	5.1	12
13	The CHEOPS mission. Experimental Astronomy, 2021, 51, 109-151.	3.7	140
14	A Heavy Molecular Weight Atmosphere for the Super-Earth Ï€ Men c. Astrophysical Journal Letters, 2021, 907, L36.	8.3	35
15	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
16	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
17	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
18	Five carbon- and nitrogen-bearing species in a hot giant planetâ€™s atmosphere. Nature, 2021, 592, 205-208.	27.8	99

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19	Extending a Grid of Hydrodynamic Planetary Upper Atmosphere Models. Research Notes of the AAS, 2021, 5, 74.	0.7	8
20	Six transiting planets and a chain of Laplace resonances in TOI-178. Astronomy and Astrophysics, 2021, 649, A26.	5.1	94
21	Transit detection of the long-period volatile-rich super-Earth Î½2 Lupi d with CHEOPS. Nature Astronomy, 2021, 5, 775-787.	10.1	51
22	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
23	Interior heating and outgassing of Proxima Centauri b: Identifying critical parameters. Astronomy and Astrophysics, 2021, 651, A103.	5.1	10
24	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
25	Detection of Ionized Calcium in the Atmosphere of the Ultra-hot Jupiter WASP-76b. Astrophysical Journal Letters, 2021, 919, L15.	8.3	18
26	The GAPS Programme at TNG. Astronomy and Astrophysics, 2021, 653, A104.	5.1	15
27	HD 144941: the most extreme helium-strong star. Astronomy and Astrophysics, 2021, 654, A119.	5.1	6
28	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
29	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
30	New Spectropolarimetric Measurements of HD 144941. Research Notes of the AAS, 2021, 5, 254.	0.7	1
31	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
32	Dispersed Matter Planet Project discoveries of ablating planets orbiting nearby bright stars. Nature Astronomy, 2020, 4, 408-418.	10.1	14
33	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
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	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
36	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

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37	Understanding the rotational variability of K2 targets. Astronomy and Astrophysics, 2020, 639, A8.	5.1	5
38	Hydrogen Dominated Atmospheres on Terrestrial Mass Planets: Evidence, Origin and Evolution. Space Science Reviews, 2020, 216, 1.	8.1	37
39	Observability of ultraviolet Ni lines in the atmosphere of transiting Earthâ€like planets. Astronomische Nachrichten, 2020, 341, 879-886.	1.2	2
40	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
41	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
42	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
43	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
44	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
45	Circumstellar environment of 55 Cancri. Astronomy and Astrophysics, 2020, 633, A48.	5.1	22
46	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
47	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
48	Near-ultraviolet Transmission Spectroscopy of HD 209458b: Evidence of Ionized Iron Beyond the Planetary Roche Lobe. Astronomical Journal, 2020, 159, 111.	4.7	34
49	Modeling the LyÎ± transit absorption of the hot Jupiter HD 189733b. Astronomy and Astrophysics, 2020, 638, A49.	5.1	17
50	Properties of OB starâ^'black hole systems derived from detailed binary evolution models. Astronomy and Astrophysics, 2020, 638, A39.	5.1	65
51	Mitigating flicker noise in high-precision photometry. Astronomy and Astrophysics, 2020, 636, A70.	5.1	16
52	The GAPS programme at TNG. Astronomy and Astrophysics, 2020, 639, A49.	5.1	47
53	Non-local thermodynamic equilibrium transmission spectrum modelling of HD 209458b. Astronomy and Astrophysics, 2020, 641, A47.	5.1	8
54	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

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55	The hot dayside and asymmetric transit of WASP-189 b seen by CHEOPS. Astronomy and Astrophysics, 2020, 643, A94.	5.1	61
56	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
57	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
58	Caâ€¯II H&K stellar activity parameter: a proxy for extreme ultraviolet stellar fluxes. Astronomy and Astrophysics, 2020, 644, A67.	5.1	20
59	The Role of N₂as a Geo-Biosignature for the Detection and Characterization of Earth-like Habitats. Astrobiology, 2019, 19, 927-950.	3.0	38
60	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
61	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
62	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
63	The Transiting Multi-planet System HD15337: Two Nearly Equal-mass Planets Straddling the Radius Gap. Astrophysical Journal Letters, 2019, 876, L24.	8.3	29
64	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
65	HD 219666 b: a hot-Neptune from TESS Sector 1. Astronomy and Astrophysics, 2019, 623, A165.	5.1	29
66	TESS Delivers Its First Earth-sized Planet and a Warm Sub-Neptune*. Astrophysical Journal Letters, 2019, 875, L7.	8.3	69
67	Swift UVOT near-UV transit observations of WASP-121 b. Astronomy and Astrophysics, 2019, 623, A57.	5.1	33
68	The GAPS Programme with HARPS-N at TNG. Astronomy and Astrophysics, 2019, 631, A34.	5.1	44
69	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
70	Colorado Ultraviolet Transit Experiment data simulator. Journal of Astronomical Telescopes, Instruments, and Systems, 2019, 5, 1.	1.8	7
71	The extreme-ultraviolet stellar characterization for atmospheric physics and evolution (ESCAPE) mission concept. , 2019, , .		12
72	Suppressed Far-UV Stellar Activity and Low Planetary Mass Loss in the WASP-18 System*. Astronomical Journal, 2018, 155, 113.	4.7	45

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73	An excess of massive stars in the local 30 Doradus starburst. Science, 2018, 359, 69-71.	12.6	164
74	Effective Induction Heating around Strongly Magnetized Stars. Astrophysical Journal, 2018, 858, 105.	4.5	28
75	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
76	The Spectroscopic Hertzsprungâ€“Russell Diagram of Hot Massive Stars in the Small Magellanic Cloud. Astrophysical Journal, 2018, 868, 57.	4.5	21
77	The VLT-FLAMES Tarantula Survey. Astronomy and Astrophysics, 2018, 618, A73.	5.1	62
78	Far-ultraviolet Activity Levels of F, G, K, and M Dwarf Exoplanet Host Stars. Astrophysical Journal, Supplement Series, 2018, 239, 16.	7.7	63
79	Atmospheric Mass Loss from Hot Jupiters Irradiated by Stellar Superflares. Astrophysical Journal, 2018, 869, 108.	4.5	22
80	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
81	TESSâ€™s first planet. Astronomy and Astrophysics, 2018, 619, L10.	5.1	86
82	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
83	Extreme-ultraviolet Radiation from A-stars: Implications for Ultra-hot Jupiters. Astrophysical Journal Letters, 2018, 868, L30.	8.3	32
84	Young planets under extreme UV irradiation. Astronomy and Astrophysics, 2018, 612, A25.	5.1	29
85	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
86	Modeling of Absorption by Heavy Minor Species for the Hot Jupiter HD 209458b. Astrophysical Journal, 2018, 866, 47.	4.5	13
87	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
88	Overcoming the Limitations of the Energy-limited Approximation for Planet Atmospheric Escape. Astrophysical Journal Letters, 2018, 866, L18.	8.3	82
89	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
90	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

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91	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
92	Response to Comment on â€œAn excess of massive stars in the local 30 Doradus starburstâ€• Science, 2018, 361, .	12.6	4
93	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
94	The science case for POLLUX, a high-resolution UV spectropolarimeter onboard LUVOIR. , 2018, , .		11
95	A solar-type star polluted by calcium-rich supernova ejecta inside the supernova remnant RCW 86. Nature Astronomy, 2017, 1, .	10.1	21
96	The effect of ISM absorption on stellar activity measurements and its relevance for exoplanet studies. Astronomy and Astrophysics, 2017, 601, A104.	5.1	22
97	Aeronomical constraints to the minimum mass and maximum radius of hot low-mass planets. Astronomy and Astrophysics, 2017, 598, A90.	5.1	84
98	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
99	Magma oceans and enhanced volcanism on TRAPPIST-1 planets due to induction heating. Nature Astronomy, 2017, 1, 878-885.	10.1	57
100	The Influence of Coronal Mass Ejections on the Mass-loss Rates of Hot-Jupiters. Astrophysical Journal, 2017, 846, 31.	4.5	60
101	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
102	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
103	Aerosol Constraints on the Atmosphere of the Hot Saturn-mass Planet WASP-49b. Astrophysical Journal, 2017, 849, 145.	4.5	32
104	An overabundance of low-density Neptune-like planets. Monthly Notices of the Royal Astronomical Society, 2017, 466, 1868-1879.	4.4	61
105	LyÎ± Absorption at Transits of HD 209458b: A Comparative Study of Various Mechanisms Under Different Conditions. Astrophysical Journal, 2017, 847, 126.	4.5	40
106	K2-106, a system containing a metal-rich planet and a planet of lower density. Astronomy and Astrophysics, 2017, 608, A93.	5.1	51
107	BONNSAI: correlated stellar observables in Bayesian methods. Astronomy and Astrophysics, 2017, 598, A60.	5.1	21
108	B field in OB stars (BOB): The outstandingly strong magnetic field in the evolved He-strong star CPDâ€‰â˜’62Âºâ€‰2124. Astronomy and Astrophysics, 2017, 597, L6.	5.1	20

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109	The Colorado Ultraviolet Transit Experiment (CUTE): a dedicated cubesat mission for the study of exoplanetary mass loss and magnetic fields. , 2017, , .		5
110	Metallicity dependence of turbulent pressure and macroturbulence in stellar envelopes. Astronomy and Astrophysics, 2016, 593, A14.	5.1	13
111	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
112	Diagnostics of the unstable envelopes of Wolf-Rayet stars. Astronomy and Astrophysics, 2016, 590, A12.	5.1	19
113	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
114	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
115	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
116	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
117	OBSERVATIONAL CONSEQUENCES OF TURBULENT PRESSURE IN THE ENVELOPES OF MASSIVE STARS. Astrophysical Journal Letters, 2015, 808, L31.	8.3	39
118	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
119	Relating turbulent pressure and macroturbulence across the HR diagram with a possible link toÎ³Doradus stars. Astronomy and Astrophysics, 2015, 584, L2.	5.1	26
120	A BIMODAL CORRELATION BETWEEN HOST STAR CHROMOSPHERIC EMISSION AND THE SURFACE GRAVITY OF HOT JUPITERS. Astrophysical Journal Letters, 2015, 812, L35.	8.3	39
121	STELLAR WIND INDUCED SOFT X-RAY EMISSION FROM CLOSE-IN EXOPLANETS. Astrophysical Journal Letters, 2015, 799, L15.	8.3	7
122	Observations of Exoplanet Atmospheres and Surrounding Environments. Astrophysics and Space Science Library, 2015, , 59-80.	2.7	5
123	The FORS1 catalogue of stellar magnetic field measurements. Astronomy and Astrophysics, 2015, 583, A115.	5.1	54
124	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
125	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
126	The spectroscopic Hertzsprung-Russell diagram of Galactic massive stars. Astronomy and Astrophysics, 2014, 570, L13.	5.1	85

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127	Searching for a gas cloud surrounding the WASP-18 planetary system. Astrophysics and Space Science, 2014, 354, 21-28.	1.4	5
128	ABSORBING GAS AROUND THE WASP-12 PLANETARY SYSTEM. Astrophysical Journal Letters, 2013, 766, L20.	8.3	83
129	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
130	The importance of non-photon noise in stellar spectropolarimetry. Astronomy and Astrophysics, 2013, 559, A103.	5.1	32
131	NEAR-ULTRAVIOLET ABSORPTION, CHROMOSPHERIC ACTIVITY, AND STAR-PLANET INTERACTIONS IN THE WASP-12 SYSTEM. Astrophysical Journal, 2012, 760, 79.	4.5	184
132	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
133	Bright low mass eclipsing binary candidates observed by STEREO. Monthly Notices of the Royal Astronomical Society, 2012, 427, 2298-2307.	4.4	10
134	Magnetic field measurements and their uncertainties: the FORS1 legacy. Astronomy and Astrophysics, 2012, 538, A129.	5.1	112
135	METALS IN THE EXOSPHERE OF THE HIGHLY IRRADIATED PLANET WASP-12b. Astrophysical Journal Letters, 2010, 714, L222-L227.	8.3	300
136	A DETAILED SPECTROPOLARIMETRIC ANALYSIS OF THE PLANET-HOSTING STAR WASP-12[,]. Astrophysical Journal, 2010, 720, 872-886.	4.5	85
137	The chemical abundance analysis of normal early A- and late B-type stars. Astronomy and Astrophysics, 2009, 503, 945-962.	5.1	60
138	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