

# Publication list

(*Electronic links available in blue*)

## Resume:

Total number of referred publications

**117 articles.**

Articles as 1<sup>er</sup> author

**20 articles.**

23951 Citations (ADS, 31 January 2024)

**H index 45.**

Conference proceedings

**84 articles.**

Color legend for different topics:

Stars ● - 62 articles, planets ● - 13 articles, instrumental ● - 2 articles, large collaborations ● - 40 articles.

## Referred publications

### 2024

1. **A. Chiavassa**, K. Kravchenko, J. Goldberg ●  
Signatures of convection in the atmospheres of cool evolved stars, *Living Reviews in Computational Astrophysics, Springer Nature*, in press

### 2023

2. J. Z. Ma, **A. Chiavassa**, S. E. de Mink, R. Valli, S. Justham, B. Freytag ●  
Is Betelgeuse really rotating? Synthetic ALMA observations of large-scale convection in 3D simulations of Red Supergiants, *ApJ*, in press
3. D. Jadrlovsky et al. ●  
The Great Dimming of Betelgeuse: the photosphere as revealed by tomography during the past 15 years, *Astronomy & Astrophysics*, in press
4. E. Pallé et al. ●  
Ground-breaking Exoplanet Science with the ANDES spectrograph at the ELT, *Experimental Astronomy*, submitted
5. I. Roederer et al. ●  
The discovery space of ELT-ANDES. Stars and stellar populations, *Experimental Astronomy*, submitted
6. J. Drevon et al. ●  
Images of Betelgeuse with VLTI/MATISSE across the Great Dimming, *MNRAS*, 527, L88

7. B. Klein et al. ●  
ATMOSPHERIX: I- An open source high resolution transmission spectroscopy pipeline for exoplanets atmospheres with SPIRou, *MNRAS*, 527, 544
8. F. Debras et al. ●  
ATMOSPHERIX: II- Characterising exoplanet atmospheres through transmission spectroscopy with SPIRou, *MNRAS*, 527, 566
9. G. Roccetti et al. ●  
Presence of liquid water during the evolution of exomoons orbiting ejected free-floating planets, *International Journal of Astrobiology*, 22, 4, 317-346
10. E. Cannon et al. ●  
The dusty circumstellar environment of Betelgeuse during the Great Dimming as seen by VLTI/MATISSE, *Astronomy & Astrophysics*, 675, A46
11. Gaia Collaboration ●  
Gaia Focused Product Release: Asteroid orbital solution. Properties and assessment, *Astronomy & Astrophysics*, 680, A37
12. Gaia Collaboration ●  
Gaia Focused Product Release: Spatial distribution of two diffuse interstellar bands, *Astronomy & Astrophysics*, 680, A38
13. Gaia Collaboration ●  
Gaia Focused Product Release: Radial velocity time series of long-period variables, *Astronomy & Astrophysics*, 680, A36
14. Gaia Collaboration ●  
Gaia Focused Product Release: Sources from Service Interface Function image analysis. Half a million new sources in omega Centauri, *Astronomy & Astrophysics*, 680, A35
15. Gaia Collaboration ●  
Gaia Focused Product Release: A catalogue of sources around quasars to search for strongly lensed quasars, *Astronomy & Astrophysics*, in press
16. Gaia Collaboration ●  
Gaia Data Release 3. The extragalactic content, *Astronomy & Astrophysics*, 674, A41
17. Gaia Collaboration ●  
Gaia Data Release 3. Exploring and mapping the diffuse interstellar band at 862 nm, *Astronomy & Astrophysics*, 674, A40
18. Gaia Collaboration ●  
Gaia Early Data Release 3. The celestial reference frame (Gaia-CRF3), *Astronomy & Astrophysics*, 667, A148

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## 2022

19. M. C. Maimone, M. Brogi, **A. Chiavassa**, et al. ●  
Detecting H<sub>2</sub>O with CRIRES+: the case of WASP-20b, *Astronomy & Astrophysics*, 667, A106
20. **A. Chiavassa**, R. Kudritzki, B. Davies, B. Freytag, S. E. de Mink ●

Probing red supergiant dynamics through photo-center displacements measured by Gaia, *Astronomy & Astrophysics*, 661, L1 (*Press Release*)

21. A. Kozyreva, J. Klencki, A. V. Filippenko, P. Baklanov, A. Mironov, S. Justham, **A. Chiavassa** ●  
The circumstellar material around the Type IIP SN 2021yja, *ApJ*, 934, L31
22. Gaia Collaboration ●  
Gaia Data Release 3: Summary of the content and survey, *Astronomy & Astrophysics*, 674, A1
23. Gaia Collaboration ●  
Gaia Data Release 3: Reflectance spectra of Solar System small bodies, *Astronomy & Astrophysics*, 674, A35
24. Gaia Collaboration ●  
Gaia Data Release 3: Apsis III – Non-stellar content and source classification, *Astronomy & Astrophysics*, 674, A31
25. Gaia Collaboration ●  
Gaia Data Release 3: Analysis of the Gaia BP/RP spectra using the General Stellar Parameterizer from Photometry, *Astronomy & Astrophysics*, 674, A27
26. Gaia Collaboration ●  
Gaia Data Release 3: Pulsations in main sequence OBAF-type stars, *Astronomy & Astrophysics*, 674, A36
27. Gaia Collaboration ●  
Gaia Data Release 3: Astrophysical parameters inference system (Apsis) I – methods and content overview, *Astronomy & Astrophysics*, 674, A26
28. Gaia Collaboration ●  
Gaia Data Release 3: Apsis II – Stellar Parameters, *Astronomy & Astrophysics*, 674, A28
29. Gaia Collaboration ●  
Gaia Data Release 3: A Golden Sample of Astrophysical Parameters, *Astronomy & Astrophysics*, 674, A39
30. Gaia Collaboration ●  
Gaia Data Release 3: Stellar chromospheric activity and mass accretion from Ca II IRT observed by the Radial Velocity Spectrometer, *Astronomy & Astrophysics*, 674, A30
31. Gaia Collaboration ●  
Gaia Data Release 3: The extragalactic content, *Astronomy & Astrophysics*, 674, A41
32. Gaia Collaboration ●  
Gaia Data Release 3: Stellar multiplicity, a teaser for the hidden treasure, *Astronomy & Astrophysics*, 674, A34
33. Gaia Collaboration ●  
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34. Gaia Collaboration ●  
Gaia Data Release 3: Mapping the asymmetric disc of the Milky Way Gaia Collaboration, *Astron-*

35. Gaia Collaboration ●  
Gaia Data Release 3: Chemical cartography of the Milky Way Gaia Collaboration, *Astronomy & Astrophysics*, 674, A38
36. Gaia Collaboration ●  
Gaia Early Data Release 3: The celestial reference frame (Gaia-CRF3), *Astronomy & Astrophysics*, 667, A148

## 2021

37. **A. Chiavassa**, K. Kravchenko, M. Montargès et al. ●  
The extended atmosphere and circumstellar environment of the cool evolved star VX Sagittarii as seen by MATISSE, *Astronomy & Astrophysics*, 658, A185
38. M. Montargès et al. ●  
A dusty veil shading Betelgeuse during its Great Dimming, *Nature*, 594, 7863, 365 (*Press Release*)
39. P. J. Avila, T. Grassi, S. Bovino, **A. Chiavassa**, et al. ●  
Presence of water on exomoons orbiting free-floating planets: a case study, *International Journal of Astrobiology*, 20, 300 (*Press Release*)
40. K. Kravchenko, A. Jorissen, S. Van Eck, T. Merle, **A. Chiavassa**, et al. ●  
Atmosphere of Betelgeuse before and during the Great Dimming event revealed by tomography, *Astronomy & Astrophysics*, 650, L17
41. R. Norris et al. ●  
Long Term Evolution of Surface Features on the Red Supergiant AZ Cyg, *Astrophysical Journal*, 919, 124
42. M. R. Gent et al. ●  
The SAPP pipeline for the determination of stellar abundances and atmospheric parameters of stars in the core program of the PLATO mission, *Astrophysical Journal*, 658, A147
43. P.-M. Gori et al. ●  
I3T: Intensity Interferometry Imaging Telescope, *MNRAS*, 505, 2328
44. V. Houdé et al. ●  
Mid-infrared circumstellar emission of the long-period Cepheid I Carinae resolved with VLTI/MATISSE, *Astronomy & Astrophysics*, 651, A92
45. E. Tognelli et al. ●  
Theoretical predictions of surface light element abundances in protostellar and pre-Main Sequence phase, *Front. Astron. Space Sci.*, 8, 22
46. Gaia Collaboration ●  
Gaia Early Data Release 3: The Galactic anticentre, *Astronomy & Astrophysics*, 649, 8

## 2020

47. **A. Chiavassa**, K. Kravchenko, F. Millour, et al. ●  
Optical interferometry and Gaia measurement uncertainties reveal the physics of asymptotic giant

branch stars, *Astronomy & Astrophysics*, 640, 23

48. J. B. Climent, M. Wittkowski, **A. Chiavassa** et al. ●  
VLTI-PIONIER imaging of the red supergiant V602 Carinae, *Astronomy & Astrophysics*, 635, 160
49. K. Kravchenko, M. Wittkowski, A. Jorissen, **A. Chiavassa** et al. ●  
Tomography of cool giant and supergiant star atmospheres III. Validation of the method on VLTI/AMBER, *Astronomy & Astrophysics*, 642, A235
50. V. Houdé et al. ●  
Pulsating chromosphere of classical Cepheids. Calcium infrared triplet and H $\alpha$  profile variations, *Astronomy & Astrophysics*, 641, A74
51. Gaia Collaboration ●  
Gaia Early Data Release 3: Structure and properties of the Magellanic Clouds, *Astronomy & Astrophysics*, 649, A7
52. Gaia Collaboration ●  
Gaia Early Data Release 3: Summary of the contents and survey properties, *Astronomy & Astrophysics*, 649, A1 (*Press Release*)
53. Gaia Collaboration ●  
Gaia Early Data Release 3: Acceleration of the solar system from Gaia astrometry, *Astronomy & Astrophysics*, 649, A9
54. Gaia Collaboration ●  
Gaia Early Data Release 3: The Gaia Catalogue of Nearby Stars, *Astronomy & Astrophysics*, 649, A6

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## 2019

55. **A. Chiavassa** and M. Brogi ●  
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56. K. Kravchenko, **A. Chiavassa**, S. Van Eck et al. ●  
Tomography of cool giant and supergiant star atmospheres II. Signature of convection in the atmosphere of the red supergiant star  $\mu$  Cep, *Astronomy & Astrophysics*, 632, 28
57. E. Flowers, M. Brogi, E. Rauscher, E. Kempton, **A. Chiavassa** ●  
The High-Resolution Transmission Spectrum of HD 189733b Interpreted with Atmospheric Doppler Shifts from Three-Dimensional General Circulation Models, *Astrophysical Journal*, 157, 209
58. X. Haubois et al. ●  
The inner dust shell of Betelgeuse detected by polarimetric aperture-masking interferometry, *Astronomy & Astrophysics*, 628, 101
59. Gaia Collaboration ●  
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60. **A. Chiavassa**, B. Freytag, M. Shultheis ●  
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61. **A. Chiavassa**, L. Casagrande, R. Collet et al. ●  
 The Stagger-grid: A grid of 3D stellar atmosphere models VII. Synthetic stellar spectra and broad-band photometry, *Astronomy & Astrophysics*, 611, A11
62. T. Zwitter, J. Kos, **A. Chiavassa**, et al. ●  
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63. M. Wittkowski, G. Rau, **A. Chiavassa**, et al. ●  
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64. M. Montargès, R. Norris, **A. Chiavassa** et al. ●  
 The convective photosphere of the red supergiant CE Tau. I. VLTI/PIONIER H-band interferometric imaging, *Astronomy & Astrophysics*, 614, A12
65. M. Faurobert, M. Carbillet, L. Marquis, **A. Chiavassa**, and G. Ricort ●  
 Temperature gradient in the solar photosphere. Test of a new spectroscopic method and study of its feasibility for ground-based telescopes *Astronomy & Astrophysics*, 616, A133
66. C. Paladini et al. ●  
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67. P. Mathias et al. ●  
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68. I. Karovicova et al. ●  
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69. N. Nardetto et al. ●  
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70. F. Millour, D. Mourard, J. Woillez, P. Berio, **A. Chiavassa**, et al. ●  
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71. Gaia Collaboration ●  
 Gaia Data Release 2: Summary of the contents and survey properties Gaia Collaboration, *Astronomy & Astrophysics*, 616, A1 (*Press Release*)
72. Gaia Collaboration ●  
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73. Gaia Collaboration ●

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74. Gaia Collaboration ●  
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75. Gaia Collaboration ●  
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76. Gaia Collaboration ●  
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## 2017

77. **A. Chiavassa**, F. Selsis, A. Caldas et al. ●  
Measuring stellar granulation during transiting planets, *Astronomy & Astrophysics*, Volume 597, id.A94.
78. **A. Chiavassa**, R. Norris, M. Montarges et al. ●  
Asymmetries on red giant branch surfaces from CHARA/MIRC optical interferometry, *Astronomy & Astrophysics*, Volume 600, id.L2.
79. M. Montarges, **A. Chiavassa**, P. Kervella et al. ●  
The convective surface of the red supergiant Antares. VLTI/PIONIER interferometry in the near infrared, *Astronomy & Astrophysics*, Volume 605, id.A108.
80. K. Kravchenko, S. Van Eck, **A. Chiavassa** et al. ●  
Tomography of cool giant and supergiant star atmospheres. I. Validation of the method, *Astronomy & Astrophysics*, 610, A29.
81. M. Heida, P.G. Jonker, M.A.P. Torres, **A. Chiavassa** ●  
The mass function of GX 339-4 from spectroscopic observations of its donor star, *Astrophysical Journal*, Volume 846, id.132.
82. M. Wittkowski, F. J. Abellan, B. Arroyo-Torres, **A. Chiavassa**, et al. ●  
Multi-epoch VLTI-PIONIER imaging of the supergiant V766 Cen: Image of the close companion in front of the primary, *Astronomy & Astrophysics*, Volume 606, id.L1
83. Gaia Collaboration ●  
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84. Gaia Collaboration ●  
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## 2016

85. M. Wittkowski, **A. Chiavassa**, B. Freytag et al. ●  
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86. M. Wittkowski et al. ●  
VLTI/AMBER spectro-interferometry of the late-type supergiants V766 Cen (=HR 5171 A),  $\sigma$  Oph, BM Sco, and HD 206859, *Astronomy & Astrophysics*, Volume 597, id.A9
87. M. Montargès, P. Kervella, G. Perrin, **A. Chiavassa**, et al. ●  
The close circumstellar environment of Betelgeuse. IV. VLTI/PIONIER interferometric monitoring of the photosphere, *Astronomy & Astrophysics*, Volume 588, id.A130
88. Kervella et al. ●  
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89. M. Aurière et al. ●  
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90. Gaia Collaboration ●  
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91. Gaia Collaboration ●  
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## 2015

92. **A. Chiavassa**, C. Pere, M. Faurobert et al. ●  
A new view on exoplanet transits: Transit of Venus described using three-dimensional solar atmosphere Stagger-grid simulations, *Astronomy & Astrophysics*, Volume 576, A13
93. Z. Magic, **A. Chiavassa**, R. Collet et al. ●  
The Stagger-grid: A grid of 3D stellar atmosphere models - IV. Limb darkening coefficients, *Astronomy & Astrophysics*, Volume 573, id.A90
94. B. Arroyo-Torres, M. Wittkowski, **A. Chiavassa** et al. ●  
What causes the large extensions of red-supergiant atmospheres? Comparisons of interferometric observations with 1-D hydrostatic, 3-D convection, and 1-D pulsating model atmospheres, *Astronomy & Astrophysics*, Volume 575, id.A50
95. P. Cruzalèbes, A. Jorissen, **A. Chiavassa** et al. ●  
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96. O. Creevey et al. ●  
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97. **A. Chiavassa**, R. Ligi, Z. Magic et al. ●  
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98. M. Montargès et al. ●  
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99. P. Cruzalèbes et al. ●  
Measuring deviation from centrosymmetry for a source brightness distribution observed by spectro-interferometry, *MNRAS*, Volume 443, 3550
100. R. Ligi et al. ●  
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101. P. Kervella et al. ●  
An edge-on translucent dust disk around the nearest AGB star, L2 Puppis, *Astronomy & Astrophysics*, Volume 564, A88

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102. Z. Magic et al. ●  
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103. P. Cruzalèbes et al. ●  
Fundamental parameters of 16 late-type stars derived from their angular diameter measured with VLTI/AMBER, *MNRAS*, Volume 434, p. 437
104. P. Cruzalèbes et al. ●  
SPIDAST: a new modular software to process spectro-interferometric measurements, *MNRAS*, Volume 432, p. 1658
105. B. Davies et al. ●  
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106. **A. Chiavassa**, L. Bigot, P. Kervella et al. ●  
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107. O. L. Creevey et al. ●  
Fundamental properties of the Population II fiducial stars HD 122563 and Gmb 1830 from CHARA interferometric observations, *Astronomy & Astrophysics*, Volume 545, A17
108. J.-P. Berger, F. Malbet, F. Baron, **A. Chiavassa** et al. ●  
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109. **A. Chiavassa**, B. Freytag, T. Masseron, B. Plez ●  
Radiative hydrodynamics simulations of red supergiant stars. IV gray versus non-gray opacities, *Astronomy & Astrophysics*, Volume 535, A22

110. **A. Chiavassa**, E. Pasquato, A. Jorissen et al. ●  
Radiative hydrodynamics simulations of red supergiant stars. III. Spectro-photocentric variability, photometric variability, and consequences on Gaia measurements, *Astronomy & Astrophysics*, Volume 528, A120
111. **A. Chiavassa**, L. Bigot, F. Thévenin et al. ●  
3D hydrodynamical model atmospheres: a tool to correct radial velocities and parallaxes for Gaia, *Journal of Physics: Conference Series*, Volume 328, id.012012
112. P. Kervella, G. Perrin, **A. Chiavassa** et al. ●  
The close circumstellar environment of Betelgeuse - II. Diffraction-limited spectro-imaging from 7.76 to 19.50  $\mu\text{m}$  with VLT/VISIR, *Astronomy & Astrophysics*, Volume 531, A117 (*Press Release*)

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113. **A. Chiavassa**, R. Collet, L. Casagrande, and M. Asplund ●  
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114. **A. Chiavassa**, X. Haubois, J. S. Young et al. ●  
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115. **A. Chiavassa**, S. Lacour, F. Millour, et al. ●  
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116. **A. Chiavassa**, B. Plez, E. Josselin, B. Freytag ●  
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