

Horst Balthasar

List of Publications by Year in descending order

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55
papers

1,056
citations

471509

17
h-index

434195

31
g-index

55
all docs

55
docs citations

55
times ranked

491
citing authors

#	ARTICLE	IF	CITATIONS
1	The 1.5 meter solar telescope GREGOR. <i>Astronomische Nachrichten</i> , 2012, 333, 796-809.	1.2	131
2	Two magnetic components in sunspot penumbrae. <i>Astronomy and Astrophysics</i> , 2004, 427, 319-334.	5.1	122
3	Field-aligned Evershed flows in the photosphere of a sunspot penumbra. <i>Astronomy and Astrophysics</i> , 2003, 403, L47-L50.	5.1	73
4	Asymmetries and wavelengths of solar spectral lines and the solar rotation determined from Fourier-transform spectra. <i>Solar Physics</i> , 1984, 93, 219-241.	2.5	55
5	The GREGOR Fabry-Pérot Interferometer. <i>Astronomische Nachrichten</i> , 2012, 333, 880-893.	1.2	46
6	Three-dimensional structure of a sunspot light bridge. <i>Astronomy and Astrophysics</i> , 2016, 596, A59.	5.1	41
7	Horizontal flow fields observed in Hinode G-band images. <i>Astronomy and Astrophysics</i> , 2012, 538, A109.	5.1	31
8	On the contribution of horizontal granular motions to observed limb-effect curves. <i>Solar Physics</i> , 1985, 99, 31-38.	2.5	28
9	Inference of magnetic fields in the very quiet Sun. <i>Astronomy and Astrophysics</i> , 2016, 596, A5.	5.1	24
10	Temporal fluctuations of the magnetic field in sunspots. <i>Solar Physics</i> , 1999, 187, 389-403.	2.5	23
11	Spectro-Polarimetric Observations of Solar Magnetic Fields and the SOHO/MDI Calibration Issue. <i>Solar Physics</i> , 2009, 260, 261-270.	2.5	23
12	Active region fine structure observed at 0.08 arcsec resolution. <i>Astronomy and Astrophysics</i> , 2016, 596, A7.	5.1	23
13	Comparison of Solar Magnetic Fields Measured at Different Observatories: Peculiar Strength Ratio Distributions Across the Disk. <i>Solar Physics</i> , 2008, 250, 279-301.	2.5	21
14	Magnetic fields of opposite polarity in sunspot penumbrae. <i>Astronomy and Astrophysics</i> , 2016, 596, A4.	5.1	21
15	The three-dimensional structure of sunspots. <i>Astronomy and Astrophysics</i> , 2008, 488, 1085-1092.	5.1	21
16	Upper chromospheric magnetic field of a sunspot penumbra: observations of fine structure. <i>Astronomy and Astrophysics</i> , 2016, 596, A8.	5.1	20
17	Observational study of chromospheric heating by acoustic waves. <i>Astronomy and Astrophysics</i> , 2020, 642, A52.	5.1	19
18	Rotational periodicities in sunspot relative numbers. <i>Astronomy and Astrophysics</i> , 2007, 471, 281-287.	5.1	18

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19	Vertical current densities and magnetic gradients in sunspots. <i>Astronomy and Astrophysics</i> , 2006, 449, 1169-1176.	5.1	17
20	Properties of the inner penumbral boundary and temporal evolution of a decaying sunspot. <i>Astronomy and Astrophysics</i> , 2018, 620, A191.	5.1	17
21	Some properties of an isolated sunspot. <i>Astronomy and Astrophysics</i> , 2005, 429, 705-711.	5.1	17
22	The GREGOR Fabry-Perot interferometer: a new instrument for high-resolution solar observations. <i>Proceedings of SPIE</i> , 2010, , .	0.8	16
23	Velocity Oscillations in Active Sunspot Groups. <i>Solar Physics</i> , 1998, 182, 65-72.	2.5	15
24	Oscillations in Sunspots observed in the Near Infrared. <i>Solar Physics</i> , 2003, 218, 85-97.	2.5	15
25	Image Quality in High-resolution and High-cadence Solar Imaging. <i>Solar Physics</i> , 2018, 293, 1.	2.5	14
26	Temporal evolution of arch filaments as seen in He I 10 830 Å.... <i>Astronomy and Astrophysics</i> , 2018, 617, A55.	5.1	14
27	The Problem of the Height Dependence of Magnetic Fields in Sunspots. <i>Solar Physics</i> , 2018, 293, 1.	2.5	14
28	High-resolution imaging and near-infrared spectroscopy of penumbral decay. <i>Astronomy and Astrophysics</i> , 2018, 614, A2.	5.1	14
29	GREGOR solar telescope: Design and status. <i>Astronomische Nachrichten</i> , 2010, 331, 624-627.	1.2	13
30	On Multi-Line Spectro-Polarimetric Diagnostics of the Quiet Sun's Magnetic Fields. <i>Solar Physics</i> , 2012, 276, 43-59.	2.5	13
31	Horizontal flow fields in and around a small active region. <i>Astronomy and Astrophysics</i> , 2016, 596, A3.	5.1	13
32	High-cadence Imaging and Imaging Spectroscopy at the GREGOR Solar Telescope – A Collaborative Research Environment for High-resolution Solar Physics. <i>Astrophysical Journal, Supplement Series</i> , 2018, 236, 5.	7.7	11
33	Classification of High-resolution Solar H I± Spectra Using t-distributed Stochastic Neighbor Embedding. <i>Astrophysical Journal</i> , 2021, 907, 54.	4.5	10
34	Spectral Inversion of Multiline Full-Disk Observations of Quiet Sun Magnetic Fields. <i>Solar Physics</i> , 2012, 280, 355-364.	2.5	9
35	Spectropolarimetric observations of an arch filament system with the GREGOR solar telescope. <i>Astronomische Nachrichten</i> , 2016, 337, 1050-1056.	1.2	9
36	Oscillations in a solar pore. <i>Astronomische Nachrichten</i> , 2000, 321, 121-127.	1.2	8

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37	A full-Stokes polarimeter for the GREGOR Fabry-Perot interferometer. Proceedings of the International Astronomical Union, 2008, 4, 665-666.	0.0	8
38	A retrospective of the GREGOR solar telescope in scientific literature. Astronomische Nachrichten, 2012, 333, 810-815.	1.2	8
39	Observational evidence for two-component distributions describing solar magnetic bright points. Astronomy and Astrophysics, 2022, 657, A79.	5.1	8
40	Near-infrared spectropolarimetry of a δ -spot. Astronomy and Astrophysics, 2014, 562, L6.	5.1	7
41	sTools – a data reduction pipeline for the GREGOR Fabry-Perot Interferometer and the High-resolution Fast Imager at the GREGOR solar telescope. Proceedings of the International Astronomical Union, 2016, 12, 20-24.	0.0	7
42	High-resolution spectroscopy of a surge in an emerging flux region. Astronomy and Astrophysics, 2020, 639, A19.	5.1	7
43	Penumbral finestructure: need for larger telescopes. Astronomische Nachrichten, 2001, 322, 367-370.	1.2	6
44	Multiple Stokes I inversions for inferring magnetic fields in the spectral range around $\text{Cr} \lambda 5782 \text{ \AA}$... Astronomy and Astrophysics, 2021, 653, A165.	5.1	6
45	Velocity Difference of Ions and Neutrals in Solar Prominences. Astrophysical Journal, 2021, 920, 47.	4.5	6
46	High-resolution Spectroscopy of an Erupting Minifilament and Its Impact on the Nearby Chromosphere. Astrophysical Journal, 2020, 898, 144.	4.5	5
47	Ca II 8542 \AA ... brightenings induced by a solar microflare. Astronomy and Astrophysics, 2017, 608, A117.	5.1	4
48	The Solar granulation in different heights. Astronomische Nachrichten, 1998, 319, 387-390.	1.2	2
49	Oscillations in a solar pore. , 2000, 321, 121.		2
50	Solar physics at the Einstein Tower. Astronomische Nachrichten, 2016, 337, 1105-1113.	1.2	1
51	The structure of the penumbra. Astronomische Nachrichten, 2003, 324, 390-390.	1.2	0
52	The three-dimensional structure of the magnetic field of a sunspot. Proceedings of the International Astronomical Union, 2008, 4, 225-226.	0.0	0
53	The magnetic structure and dynamics of a decaying active region. Proceedings of the International Astronomical Union, 2019, 15, 53-57.	0.0	0
54	Revisiting the building blocks of solar magnetic fields by GREGOR. Proceedings of the International Astronomical Union, 2019, 15, 38-41.	0.0	0

#	ARTICLE	IF	CITATIONS
55	Coordinated observations between China and Europe to follow active region 12709. Proceedings of the International Astronomical Union, 2019, 15, 58-61.	0.0	0