# Michal Sobotka

List of Publications by Year
in descending order



| | | 331670 | 361022 |
|---|---|---|---|
| 71 | 1,360 | 21 | 35 |
| papers | citations | h-index | g-index |

| | | | |
|---|---|---|---|
| 72 | 72 | 72 | 591 |
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | The 1.5 meter solar telescope GREGOR. Astronomische Nachrichten, 2012, 333, 796-809. | 1.2 | 131 |
| 2 | A High-Resolution Study of Inhomogeneities in Sunspot Umbrae. Astrophysical Journal, 1993, 415, 832. | 4.5 | 77 |
| 3 | The magnetic canopy above light bridges. Astronomy and Astrophysics, 2006, 453, 1079-1088. | 5.1 | 73 |
| 4 | Time Series of Solar Granulation Images. I. Differences between Small and Large Granules in Quiet Regions. Astrophysical Journal, 1997, 480, 406-419. | 4.5 | 71 |
| 5 | Temporal Evolution of Fine Structures in and around Solar Pores. Astrophysical Journal, 1999, 511, 436-450. | 4.5 | 66 |
| 6 | A high-resolution study of the structure of sunspot light bridges and abnormal granulation. Astrophysical Journal, 1994, 426, 404. | 4.5 | 53 |
| 7 | Three-dimensional structure of a sunspot light bridge. Astronomy and Astrophysics, 2016, 596, A59. | 5.1 | 41 |
| 8 | Narrowband dm-spikes in the 2 GHz frequency range and MHD cascading waves in reconnection outflows. Solar Physics, 1996, 168, 375-383. | 2.5 | 40 |
| 9 | Fine structure and dynamics in a light bridge inside a solar pore. Astronomy and Astrophysics, 2002, 383, 275-282. | 5.1 | 36 |
| 10 | Dynamics of the solar atmosphere above a pore with a light bridge. Astronomy and Astrophysics, 2013, 560, A84. | 5.1 | 36 |
| 11 | Fine structure in sunspots. Astronomy and Astrophysics, 2001, 380, 714-718. | 5.1 | 33 |
| 12 | Morphology and evolution of umbral dots and their substructures. Astronomy and Astrophysics, 2009, 504, 575-581. | 5.1 | 32 |
| 13 | EVOLUTION OF PHYSICAL CHARACTERISTICS OF UMBRAL DOTS AND PENUMBRAL GRAINS. Astrophysical Journal, 2009, 694, 1080-1084. | 4.5 | 31 |
| 14 | Photometry of umbral dots. Astronomy and Astrophysics, 2005, 442, 323-329. | 5.1 | 30 |
| 15 | Deep probing of the photospheric sunspot penumbra: no evidence of field-free gaps. Astronomy and Astrophysics, 2016, 596, A2. | 5.1 | 29 |
| 16 | Probing deep photospheric layers of the quiet Sun with high magnetic sensitivity. Astronomy and Astrophysics, 2016, 596, A6. | 5.1 | 28 |
| 17 | Dynamics of Magnetic Bright Points in an Active Region. Solar Physics, 2006, 237, 13-23. | 2.5 | 26 |
| 18 | Solar activity II: Sunspots and pores. Astronomische Nachrichten, 2003, 324, 369-373. | 1.2 | 24 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Inference of magnetic fields in the very quiet Sun. Astronomy and Astrophysics, 2016, 596, A5. | 5.1 | 24 |
| 20 | Active region fine structure observed at 0.08 arcsec resolution. Astronomy and Astrophysics, 2016, 596, A7. | 5.1 | 23 |
| 21 | Large-scale horizontal flows in the solar photosphere. Astronomy and Astrophysics, 2006, 458, 301-306. | 5.1 | 21 |
| 22 | Magnetic fields of opposite polarity in sunspot penumbrae. Astronomy and Astrophysics, 2016, 596, A4. | 5.1 | 21 |
| 23 | Magnetic and velocity fields of a solar pore. Astronomy and Astrophysics, 2012, 537, A85. | 5.1 | 20 |
| 24 | Upper chromospheric magnetic field of a sunspot penumbra: observations of fine structure. Astronomy and Astrophysics, 2016, 596, A8. | 5.1 | 20 |
| 25 | Properties of sunspot moats derived from horizontal motions. Astronomy and Astrophysics, 2007, 472, 277-282. | 5.1 | 20 |
| 26 | Power-law spectra of 1â€“2 GHz narrowband dm-spikes. Solar Physics, 2000, 195, 165-174. | 2.5 | 19 |
| 27 | Observational study of chromospheric heating by acoustic waves. Astronomy and Astrophysics, 2020, 642, A52. | 5.1 | 19 |
| 28 | Phase diversity restoration of sunspot images. Astronomy and Astrophysics, 2004, 423, 737-744. | 5.1 | 18 |
| 29 | Infrared Photometry of Solar Photospheric Structures. I. Active Regions at the Center of the Disk. Astrophysical Journal, 2000, 544, 1155-1168. | 4.5 | 17 |
| 30 | CHROMOSPHERIC HEATING BY ACOUSTIC WAVES COMPARED TO RADIATIVE COOLING. Astrophysical Journal, 2016, 826, 49. | 4.5 | 17 |
| 31 | On the Dynamics of Bright Features in Sunspot Umbrae. Astrophysical Journal, 1995, 447, . | 4.5 | 16 |
| 32 | Phase diversity restoration of sunspot images. Astronomy and Astrophysics, 2005, 430, 1089-1097. | 5.1 | 15 |
| 33 | Properties of horizontal flows inside and outside a solar pore. Astronomy and Astrophysics, 2002, 395, 249-255. | 5.1 | 14 |
| 34 | Large-scale horizontal flows in the solar photosphere. Astronomy and Astrophysics, 2008, 477, 285-292. | 5.1 | 14 |
| 35 | High-resolution imaging and near-infrared spectroscopy of penumbral decay. Astronomy and Astrophysics, 2018, 614, A2. | 5.1 | 14 |
| 36 | GREGOR solar telescope: Design and status. Astronomische Nachrichten, 2010, 331, 624-627. | 1.2 | 13 |

| # | Article | IF | Citations |
|---|---|---|---|
| 37 | Horizontal flow fields in and around a small active region. Astronomy and Astrophysics, 2016, 596, A3. | 5.1 | 13 |
| 38 | GREGOR: the new 1.5m solar telescope on Tenerife. , 2003, 4853, 360. | | 12 |
| 39 | Fitting peculiar spectral profiles in He <scp>I</scp> 10830 Ã... absorption features. Astronomische Nachrichten, 2016, 337, 1057-1063. | 1.2 | 12 |
| 40 | Orphan penumbrae: Submerging horizontal fields. Astronomy and Astrophysics, 2014, 564, A91. | 5.1 | 11 |
| 41 | MOAT FLOW SYSTEM AROUND SUNSPOTS IN SHALLOW SUBSURFACE LAYERS. Astrophysical Journal, 2014, 790, 135. | 4.5 | 10 |
| 42 | Slipping reconnection in a solar flare observed in high resolution with the GREGOR solar telescope. Astronomy and Astrophysics, 2016, 596, A1. | 5.1 | 10 |
| 43 | Spectropolarimetric observations of an arch filament system with the GREGOR solar telescope. Astronomische Nachrichten, 2016, 337, 1050-1056. | 1.2 | 9 |
| 44 | Centre-to-limb variation of solar granulation in the infrared. Astronomy and Astrophysics, 2003, 397, 1075-1081. | 5.1 | 8 |
| 45 | Observational evidence of Joule heating in some umbral dots. Astronomy and Astrophysics, 2004, 428, 215-218. | 5.1 | 8 |
| 46 | A retrospective of the GREGOR solar telescope in scientific literature. Astronomische Nachrichten, 2012, 333, 810-815. | 1.2 | 8 |
| 47 | Large-scale horizontal flows in the solar photosphere. Astronomy and Astrophysics, 2009, 506, 875-884. | 5.1 | 8 |
| 48 | Spectroscopic observations and models of umbral light bridges. Solar Physics, 1989, 124, 37-52. | 2.5 | 7 |
| 49 | Evolution and motions of small-scale photospheric structures near a large solar pore. Astronomy and Astrophysics, 2002, 387, 665-671. | 5.1 | 7 |
| 50 | Large-scale horizontal flows in the solar photosphere IV. On the vertical structure of large-scale horizontal flows. New Astronomy, 2009, 14, 429-434. | 1.8 | 7 |
| 51 | High-resolution spectroscopy of a surge in an emerging flux region. Astronomy and Astrophysics, 2020, 639, A19. | 5.1 | 7 |
| 52 | IRIS observations of chromospheric heating by acoustic waves in solar quiet and active regions. Astronomy and Astrophysics, 2021, 648, A28. | 5.1 | 7 |
| 53 | The Temperature â€“ Magnetic Field Relation in Observed and Simulated Sunspots. Solar Physics, 2017, 292, 1. | 2.5 | 5 |
| 54 | Progress report of the 1.5 m solar telescope GREGOR. , 2004, , . | | 4 |

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|---|---|---|---|
| 55 | Auxiliary full-disc telescope for the European Solar Telescope. , 2010, , . | | 4 |
| 56 | Ca II 8542â€‰Ã… brightenings induced by a solar microflare. Astronomy and Astrophysics, 2017, 608, A117. | 5.1 | 4 |
| 57 | Horizontal motions in sunspot penumbrae. Astronomy and Astrophysics, 2022, 662, A13. | 5.1 | 4 |
| 58 | Observational Evidence for Rising Penumbral Flux Tubes?. Solar Physics, 2007, 241, 223-233. | 2.5 | 3 |
| 59 | The structure of a penumbral connection between solar pores. Astronomy and Astrophysics, 2005, 442, 1079-1086. | 5.1 | 3 |
| 60 | Reconstruction of the HSFA telescopes. Astronomische Nachrichten, 2001, 322, 371-374. | 1.2 | 2 |
| 61 | The new 1.5m solar telescope GREGOR: first light and start of commissioning. , 2006, , . | | 2 |
| 62 | High-Pressure Enantioselective Allylation of Aldehydes Catalyzed by (Salen)Chromium(III) Complexes. Synlett, 2005, 2005, 227-230. | 1.8 | 1 |
| 63 | Flow and magnetic field properties in the trailing sunspots of active region NOAA 12396. Astronomische Nachrichten, 2016, 337, 1090-1098. | 1.2 | 1 |
| 64 | Evolution and motions of magnetic fragments during the active region formation and decay: A statistical study. Astronomy and Astrophysics, 2021, 647, A146. | 5.1 | 1 |
| 65 | Infrared photometry of solar active regions. Journal of Astrophysics and Astronomy, 2000, 21, 289-292. | 1.0 | 0 |
| 66 | A CCD-based guiding and control system for solar telescopes. Astronomische Nachrichten, 2003, 324, 305-307. | 1.2 | 0 |
| 67 | Infrared photometry of a sunspot near the disk center. Astronomische Nachrichten, 2003, 324, 376-377. | 1.2 | 0 |
| 68 | Optimisation of solar synoptic observations. Proceedings of SPIE, 2012, , . | 0.8 | 0 |
| 69 | Atmosphere above a large solar pore. Journal of Physics: Conference Series, 2013, 440, 012049. | 0.4 | 0 |
| 70 | White-light continuum emission from a solar flare and plage. Proceedings of the International Astronomical Union, 2015, 11, 268-277. | 0.0 | 0 |
| 71 | How Temperature And Magnetic Field Are Related In Sunspots?. , 2018, , . | | 0 |