Daniel MatthiÃ¤

List of Publications by Year
in descending order

63 papers	2,663 citations	279798 23 h-index	182427 51 g-index
64 all docs	64 docs citations	64 times ranked	2368 citing authors

#	Article	IF	Citations
1	Marsâ€™ Surface Radiation Environment Measured with the Mars Science Laboratoryâ€™s Curiosity Rover. Science, 2014, 343, 1244797.	12.6	475
2	The COMPASS experiment at CERN. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 577, 455-518.	1.6	388
3	The deuteron spin-dependent structure function <mml:math altimg="si1.gif" overflow="scroll" xmlns:xocs="http://www.elsevier.com/xml/xocs/dtd" xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://www.elsevier.com/xml/ja/dtd" xmlns:ja="http://www.elsevier.com/xml/ja/dtd" xmlns:mml="http://www.w3.org/1998/Math/MathML" xmlns:tb="http://www.elsevier.com/xml/common/table/dtd" xmlns:sb="http://www.elsevier.com/xml/common/struct-bib/dtd" xmlns:ce="http://ww. Physics Letters,	4.1	258
4	A new measurement of the Collins and Sivers asymmetries on a transversely polarised deuteron target. Nuclear Physics B, 2007, 765, 31-70.	2.5	203
5	A ready-to-use galactic cosmic ray model. Advances in Space Research, 2013, 51, 329-338.	2.6	118
6	First measurements of the radiation dose on the lunar surface. Science Advances, 2020, 6, .	10.3	84
7	On the importance of the local interstellar spectrum for the solar modulation parameter. Journal of Geophysical Research, 2010, 115, .	3.3	74
8	The Martian surface radiation environment â€“ a comparison of models and MSL/RAD measurements. Journal of Space Weather and Space Climate, 2016, 6, A13.	3.3	70
9	The radiation environment on the surface of Mars - Summary of model calculations and comparison to RAD data. Life Sciences in Space Research, 2017, 14, 18-28.	2.3	57
10	DOSIS & DOSIS 3D: long-term dose monitoring onboard the Columbus Laboratory of the International Space Station (ISS). Journal of Space Weather and Space Climate, 2016, 6, A39.	3.3	49
11	Temporal and spatial evolution of the solar energetic particle event on 20 January 2005 and resulting radiation doses in aviation. Journal of Geophysical Research, 2009, 114, .	3.3	47
12	Assessment of galactic cosmic ray models. Journal of Geophysical Research, 2012, 117, .	3.3	44
13	DOSIS & DOSIS 3D: radiation measurements with the DOSTEL instruments onboard the Columbus Laboratory of the ISS in the years 2009â€“2016. Journal of Space Weather and Space Climate, 2017, 7, A8.	3.3	44
14	Overview of energetic particle hazards during prospective manned missions to Mars. Planetary and Space Science, 2012, 63-64, 123-132.	1.7	34
15	A Generalized Approach to Model the Spectra and Radiation Dose Rate of Solar Particle Events on the Surface of Mars. Astronomical Journal, 2018, 155, 49.	4.7	32
16	Numerical calculation of the radiation exposure from galactic cosmic rays at aviation altitudes with the PANDOCA core model. Space Weather, 2014, 12, 161-171.	3.7	31
17	Dosimetry at aviation altitudes (2006-2008). Radiation Protection Dosimetry, 2009, 136, 251-255.	0.8	30
18	Calibration and Characterization of the Radiation Assessment Detector (RAD) on Curiosity. Space Science Reviews, 2016, 201, 201-233.	8.1	30

#	Article	IF	Citations
19	The charged particle radiation environment on Mars measured by MSL/RAD from November 15, 2015 to January 15, 2016. Life Sciences in Space Research, 2017, 14, 3-11.	2.3	29
20	Analysis of the Radiation Hazard Observed by RAD on the Surface of Mars During the September 2017 Solar Particle Event. Geophysical Research Letters, 2018, 45, 5845-5851.	4.0	29
21	Energetic Particle Radiation Environment Observed by RAD on the Surface of Mars During the September 2017 Event. Geophysical Research Letters, 2018, 45, 5305-5311.	4.0	29
22	A space weather index for the radiation field at aviation altitudes. Journal of Space Weather and Space Climate, 2014, 4, A13.	3.3	28
23	Dependence of the Martian radiation environment on atmospheric depth: Modeling and measurement. Journal of Geophysical Research E: Planets, 2017, 122, 329-341.	3.6	26
24	The Solar Particle Event on 10 September 2017 as observed onboard the International Space Station (ISS). Space Weather, 2018, 16, 1173-1189.	3.7	26
25	The ground level event 70 on December 13th, 2006 and related effective doses at aviation altitudes. Radiation Protection Dosimetry, 2009, 136, 304-310.	0.8	23
26	The Lunar Lander Neutron and Dosimetry (LND) Experiment on Changâ€™E 4. Space Science Reviews, 2020, 216, 1.	8.1	23
27	Radiation Measurements Performed with Active Detectors Relevant for Human Space Exploration. Frontiers in Oncology, 2015, 5, 273.	2.8	22
28	Space Weather on the Surface of Mars: Impact of the September 2017 Events. Space Weather, 2018, 16, 1702-1708.	3.7	22
29	On determining the zenith angle dependence of the Martian radiation environment at Gale Crater altitudes. Geophysical Research Letters, 2015, 42, 10,557.	4.0	21
30	CONCORD: comparison of cosmic radiation detectors in the radiation field at aviation altitudes. Journal of Space Weather and Space Climate, 2016, 6, A24.	3.3	20
31	Estimation of Galactic Cosmic Ray exposure inside and outside the Earthâ€™s magnetosphere during the recent solar minimum between solar cycles 23 and 24. Advances in Space Research, 2013, 52, 979-987.	2.6	19
32	How Galactic Cosmic Ray models affect the estimation of radiation exposure in space. Advances in Space Research, 2013, 51, 825-834.	2.6	19
33	The radiation environment on the surface of Mars â€“ Numerical calculations of the galactic component with GEANT4/PLANETOCOSMICS. Life Sciences in Space Research, 2017, 14, 57-63.	2.3	19
34	The Solar Particle Event on 10â€“13 September 2017: Spectral Reconstruction and Calculation of the Radiation Exposure in Aviation and Space. Space Weather, 2018, 16, 977-986.	3.7	19
35	Radiation in the Atmosphereâ€”A Hazard to Aviation Safety?. Atmosphere, 2020, 11, 1358.	2.3	14
36	RaDâ€X: Complementary measurements of dose rates at aviation altitudes. Space Weather, 2016, 14, 689-694.	3.7	13

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37	Virtual Planetary Space Weather Services offered by the Europlanet H2020 Research Infrastructure. Planetary and Space Science, 2018, 150, 50-59.	1.7	13
38	Measurements of radiation quality factor on Mars with the Mars Science Laboratory Radiation Assessment Detector. Life Sciences in Space Research, 2019, 22, 89-97.	2.3	13
39	Long term variations of galactic cosmic radiation on board the International Space Station, on the Moon and on the surface of Mars. Journal of Space Weather and Space Climate, 0, , .	3.3	13
40	Organ shielding and doses in Low-Earth orbit calculated for spherical and anthropomorphic phantoms. Advances in Space Research, 2013, 52, 528-535.	2.6	12
41	Ready functions for calculating the Martian radiation environment. Journal of Space Weather and Space Climate, 2019, 9, A7.	3.3	12
42	Dose calculations at high altitudes and in deep space with GEANT4 using BIC and JQMD models for nucleusâ€“nucleus reactions. New Journal of Physics, 2008, 10, 105019.	2.9	11
43	First Steps Toward the Verification of Models for the Assessment of the Radiation Exposure at Aviation Altitudes During Quiet Space Weather Conditions. Space Weather, 2018, 16, 1269-1276.	3.7	11
44	The German Aerospace Center M-42 radiation detectorâ€"A new development for applications in mixed radiation fields. Review of Scientific Instruments, 2019, 90, 125115.	1.3	11
45	Monte-Carlo calculations of particle fluences and neutron effective dose rates in the atmosphere. Radiation Protection Dosimetry, 2008, 131, 222-228.	0.8	10
46	Economic impact and effectiveness of radiation protection measures in aviation during a ground level enhancement. Journal of Space Weather and Space Climate, 2015, 5, A17.	3.3	10
47	Exploiting different active silicon detectors in the International Space Station: ALTEA and DOSTEL galactic cosmic radiation (GCR) measurements. Journal of Space Weather and Space Climate, 2017, 7, A18.	3.3	10
48	Solar Cosmic Ray Dose Rate Assessments During GLE 72 Using MIRA and PANDOCA. Space Weather, 2018, 16, 969-976.	3.7	10
49	Influence of cosmic radiation spectrum and its variation on the relative efficiency of LiF thermoluminescent detectors â€“ Calculations and measurements. Radiation Measurements, 2016, 88, 33-40.	1.4	6
50	Detecting Upward Directed Charged Particle Fluxes in the Mars Science Laboratory Radiation Assessment Detector. Earth and Space Science, 2018, 5, 2-18.	2.6	6
51	The Pivot Energy of Solar Energetic Particles Affecting the Martian Surface Radiation Environment. Astrophysical Journal Letters, 2019, 883, L12.	8.3	6
52	Directionality of the Martian Surface Radiation and Derivation of the Upward Albedo Radiation. Geophysical Research Letters, 2021, 48, e2021GL093912.	4.0	6
53	Simulation of ALTEA calibration data with PHITS, FLUKA and GEANT4. Nuclear Instruments & Methods in Physics Research B, 2009, 267, 3549-3557.	1.4	5
54	New operational dose quantity ambient dose H* in the context of galactic cosmic radiation in aviation. Journal of Radiological Protection, 2022, 42, 021520.	1.1	5

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55	Electron/positron measurements obtained with the Mars Science Laboratory Radiation Assessment Detector on the surface of Mars. Annales Geophysicae, 2016, 34, 133-141.	1.6	4
56	Assessment of the skin dose for aircrew. Journal of Radiological Protection, 2017, 37, 321-328.	1.1	4
57	Measurement of cosmic radiation in LEO by 1U CubeSat. Radiation Measurements, 2020, 139, 106471.	1.4	4
58	Characterizing the Variation in Atmospheric Radiation at Aviation Altitudes. , 2018, , 453-471.		3
59	Dose assessment of aircrew: the impact of the weighting factors according to ICRP 103. Journal of Radiological Protection, 2019, 39, 698-706.	1.1	3
60	10Be Production in the Atmosphere by Galactic Cosmic Rays. Space Science Reviews, 2013, 176, 333-342.	8.1	2
61	The Martian surface radiation environment at solar minimum measured with MSL/RAD. Icarus, 2023, 393, 115035.	2.5	2
62	Radiation in Space: The Physics. SpringerBriefs in Space Life Sciences, 2020, , 7-43.	0.1	1
63	10Be Production in the Atmosphere by Galactic Cosmic Rays. Space Sciences Series of ISSI, 2011, , 333-342.	0.0	0