

Publication list - Dr. Veerle J. Sterken (December 2019)

Publications (refereed)

1. **V.J. Sterken**, A.J. Westphal, N. Altobelli, D. Malaspina, F. Postberg, 2019: Interstellar dust in the solar system. *Space Science Reviews*, **215**, Issue 7, id. 43, 32 pp. (refereed **book chapter**).
2. M. Hajdukova, **V.J. Sterken**, P. Wiegert, 2019: Interstellar meteoroids, in Meteoroids: Sources of Meteors on Earth and beyond, *Cambridge University Press*, ISBN 9781108426718, p. 235-252 (refereed **book chapter**)
3. H. Krüger, N. Altobelli, P. Strub, **V.J. Sterken**, R. Srama, E. Grün, 2019: Interstellar dust in the inner solar system: model versus in-situ spacecraft data. *Astronomy & Astrophysics*, **626**, A37
4. H. Krüger, P. Strub, R. Srama, M. Kobayashi, T. Arai, H. Kimura, H. Takayuki, G. Moragas-Klostermeyer, N. Altobelli, **V.J. Sterken**, J. Agarwal, M. Sommer, E. Grün, 2019: Modelling DESTINY+ interplanetary and interstellar dust measurements en route to the active asteroid (3200) Phaethon: *Planetary and Space Science*, **172**, pp. 22-42
5. D. Koschny, R.H. Soja, C. Engrand, G.J. Flynn, J. Lasue, A.C. Levasseur-Regourd, D. Malaspina, T. Nakamura, A.R. Poppe, **V.J. Sterken**, J.M. Trigo-Rodriguez, 2019: Interplanetary dust, meteors and meteorites: *Space Science Reviews*, **215**, Issue 4, id. 34, pp. 62 (refereed **book chapter**)
6. Schreiter, L., Arnold, D., **Sterken, V.J.**, Jäggi, A., 2019: Mitigation of ionospheric signatures in Swarm GPS gravity field estimation using weighting strategies, *Annales Geophysicae*, **37**, pp. 111-127
7. P. Strub, **V.J. Sterken**, R. Soja, H. Krüger, E. Grün, R. Srama, 2019: Heliospheric modulation of the interstellar dust flow on to Earth, *Astronomy & Astrophysics*, **621**, id. A54
8. N. Altobelli, F. Postberg, K. Fiege, M. Tieloff, H. Kimura, **V. Sterken**, S. Hsu, J. Hillier, N. Khawaja, G. Moragas-Klostermeyer, J. Blum, M. Burton, R. Srama, S. Kempf, E. Gruen, 2016: Flux and composition of interstellar dust at Saturn from Cassini's Cosmic Dust Analyzer, *Science*, 352, 6283, pp. 312-318
9. **V.J. Sterken**, P. Strub, H. Krüger, R. von Steiger, P. Frisch, 2015: Sixteen years of Ulysses Interstellar Dust Measurements in the Solar System. III. Simulations and data unveil new insights into local Interstellar Dust, *ApJ*, 812, 141
10. P. Strub, H. Krüger, **V.J. Sterken**, 2015: Sixteen years of Ulysses Interstellar Dust Measurements in the Solar System. II. Fluctuations in the Dust Flow from the Data, *ApJ*, **812**, 140
11. H. Krüger, P. Strub, E. Grün, **V.J. Sterken**, 2015: Sixteen years of Ulysses Interstellar Dust Measurements in the Solar System. I. Mass Distribution and Gas-to-Dust Mass Ratio, *ApJ*, **812**, 139
12. C.S. Arridge, et al, 2014: The science case for an orbital mission to Uranus: Exploring the origins and evolution of ice giant planets: 2014, *Planetary and Space Science*, **104**, pp. 122-140
13. A.J. Westphal, et al, 2014: Evidence for interstellar origin of seven dust particles collected by the Stardust spacecraft: *Science*, **345**, no. 6198, pp. 786-791
14. A.J. Westphal, et al, 2014: Coordinated Microanalyses of Seven Particles of Probable Interstellar Origin from the Stardust mission: *Microscopy and Microanalysis*, **20** (Suppl. S3), pp. 1692-1693.
15. A.J. Westphal, et al, 2014: Final reports of the Stardust Interstellar Preliminary Examination. *MAPS*, **49**, pp. 1720-1733
16. R.M. Stroud, et al, 2014: Stardust Interstellar Preliminary Examination XI: Identification and elemental analysis of impact craters on Al foils from the Stardust Interstellar Dust Collector, *MAPS*, **49**, pp. 1698-1719
17. **V.J. Sterken**, A. Westphal, et al., 2014: Stardust Interstellar Preliminary Examination X: Interstellar dust simulations for the Stardust mission. *MAPS*, **49**, pp. 1690-1697
18. F. Postberg, et al, 2014: Stardust Interstellar Preliminary Examination IX: High-speed interstellar dust analog capture in Stardust flight-spare aerogel. *MAPS*, **49**, pp. 1666-1679

19. Z. Gainsforth, et al, 2014: Stardust Interstellar Preliminary Examination VIII: Identification of crystalline material in two interstellar candidates. *MAPS*, **49**, pp. 1645-1665
20. G.J. Flynn, et al, 2014: Stardust Interstellar Preliminary Examination VII: Synchrotron X-ray fluorescence analysis of six Stardust interstellar candidates measured with the Advanced Photon Source 2-ID-D microprobe. *MAPS*, **49**, pp. 1626-1644
21. A.S. Simionovici, et al, 2014: Stardust Interstellar Preliminary Examination VI: Quantitative elemental analysis by synchrotron X-ray fluorescence nanoimaging of eight impact features in aerogel. *MAPS*, **49**, pp. 1612-1625
22. F.E. Brenker, et al, 2014: Stardust Interstellar Preliminary Examination V: XRF analyses of interstellar dust candidates at ESRF ID13. *MAPS*, **49**, pp. 1594-1611
23. A.L. Butterworth, et al, 2014: Stardust Interstellar Preliminary Examination IV: Scanning transmission X-ray microscopy analyses of impact features in the Stardust Interstellar Dust Collector. *MAPS*, **49**, pp. 1562-1593
24. H.A. Bechtel, et al, 2014: Stardust Interstellar Preliminary Examination III: Infrared spectroscopic analysis of interstellar dust candidates. *MAPS*, **49**, pp. 1548-1561
25. D.R. Frank, et al, 2014: Stardust Interstellar Preliminary Examination II: Curating the interstellar dust collector, picokeystones, and sources of impact tracks. *MAPS*, **49**, pp. 1522-1547
26. A.J. Westphal, et al, 2014: Stardust Interstellar Preliminary Examination I: Identification of tracks in aerogel. *MAPS*, **49**, pp. 1509-1521
27. **V.J. Sterken**, N. Altobelli, S. Kempf, H. Krüger, R. Srama, P. Strub, E. Grün, 2013: The filtering of interstellar dust in the solar system, *A&A*, **552**, pp. A130
28. R.H. Soja, N. Altobelli, H. Krüger, **V.J. Sterken**, 2012: Dust environment predictions for the ESA L-class mission candidate JUICE. *PSS*, **75**, pp. 117-128
29. **V.J. Sterken**, N. Altobelli, S. Kempf, H. Krüger, F. Postberg, R.H. Soja, R. Srama, E. Grün, 2012: An optimum opportunity for interstellar dust measurements by the JUICE mission. *PSS*, **71**, Issue 1, p. 142-146.
30. R. Srama, et al., 2012: SARIM PLUS - Sample Return of Comet 67P/CG and of Interstellar Matter, *Exp. Astron.*, **33**, Issue 2-3, p. 723-751
31. **V.J. Sterken**, N. Altobelli, S. Kempf, G. Schwehm, R. Srama, E. Grün, 2012: The flow of interstellar dust into the solar system, *A&A*, **538** id. A102
32. R. Srama, et al., 2011: The cosmic dust analyser onboard Cassini: ten years of discoveries. *CEAS Space Journal*, **2**, No. 1-4, pp. 3-16
33. **V.J. Sterken**, 2007: Sir Hermann Bondi: A journey trough his life and the early endeavours of Europe into space. *Acta astronautica*, **61**, pp. 514-525

Conference proceedings

1. R.H. Soja, J.T. Herzog, M. Sommer, J. Rodmann, J. Vaubailon, P. Strub, T. Albin, **V. Sterken**, A. Hornig, L. Bausch, E. Grün, R. Srama, 2015: Meteor storms and showers with the IMEX model. Proceedings of the IMC, Mistelbach, 2015.
2. E. Grün, R. Srama, M. Horanyi, H. Krüger, R. Soja, **V. Sterken**, Z. Sternovsky, P. Strub, 2013: Comparative analysis of the ESA and NASA interplanetary meteoroid environment models, 6th European Conference on Space Debris, ESA/ESOC Darmstadt, Germany, 22-25 April 2013.
3. **V.J. Sterken**, N. Altobelli, S. Kempf, G. Schwehm, R. Srama, P. Strub and E. Grün, 2011: The flow of interstellar dust through the solar system: the role of dust charging, ICPDP conference 2011, Garmisch-Partenkirchen, Germany.
4. P. Strub, **V.J. Sterken**, H. Krüger, E. Grün, M. Horanyi, 2011: Interstellar dust flow through the solar system. ICPDP conference 2011, Garmisch-Partenkirchen, Germany.
5. **V.J. Sterken**, 2006: Sir Hermann Bondi: A journey through his life and the early endeavours of Europe into space. IAC-06-E4.1.05. IAC conference 2006, Valencia, Spain.

6. **V.J. Sterken**, A. Kamp, S. Kampen, T.C. van den Dool, 2005: Impact of the space environment on Darwin and a Low Earth Orbit (LEO) demonstration mission. IAC-05-C.2.5. IAC conference 2005, Fukuoka, Japan.

Reports and Mission Proposals

1. D. Arnold, V. Sterken, Th. Grombein, L. Schreiter, A. Jäggi, 2019: "Reprocessing of the GOCE Precise Science Orbits" in the Swiss National Report on the Geodetic Activities in the years 2015 to 2019, Swiss Geodetic Commission.
2. V.J. Sterken, C. Lüthi, M. Gasser, C. Seiler, F. Hof, 2017: Contribution to the *Hochalpine Forschungsstation Jungfrauoch und Gornergrat* (HFSJG) year report: "Exploration of the Jochloch cave"
3. Blanc, M., et al., 2016: Joint Europa Mission (JEM): A Multi-scale Study of Europa to Characterize its Habitability and Search for extant Life. Proposal for ESA's Call for Medium Class Missions (M5)
4. Srama, R., et al., 2013: Solar System Debris Disk S2D2: Proposal for Science Themes of ESA's L2 and L3 Missions
5. Wimmer-Schweingruber, R.F., 2013: In situ Investigations of the Local Interstellar Medium (Proposal/ White Paper as a response to the Call for Science Themes of ESA's L2 and L3 Missions)
6. V.J. Sterken, 2012: PhD Thesis IGEP TU Braunschweig, "The filtering of interstellar dust in the heliosphere"
7. V.J. Sterken, N. Altobelli, S. Kempf, E. Grün, R. Srama, 2010: Contribution to MPIK year report: Characterizing the Interstellar Dust flow through the solar system
8. V.J. Sterken, 2006: Belgisch-Nederlandse samenwerking in de ruimtevaartsector. TNO report
9. V.J. Sterken, 2006: ESA Young Graduate Trainee Final Report
10. V.J. Sterken, 2005: Master's thesis at the Delft University of Technology: "Impact of the space and satellite environment on the optical path differences of Darwin", (TNO report no. 050006)
11. V.J. Sterken, M. Hechler, 2003: ESOC Mission Analysis Section Working Paper No. 458, "GAIA Mission Analysis: Use of FEEPs for orbit maintenance"
12. Co-author of the Alpbach Summer School report, 2002: "GLOTEC: Global real-time TEC-map Satellite Navigation System Reliability Forecast"
13. Co-author of the Bachelor group project final report, 2001: "MiMiR: Mission for Moon Ice Research"
14. Co-Author of the report on the Parabolic Flight Campaign experiment, 2000: Technical Description and Strength Calculations of the Test Set-up for Micro-gravity Experiments in the 2000 ESA Parabolic Flight Campaign for Group 1023". Delft University of Technology report no.FM&P-00.011 cat.h.

Outreach articles

1. V. Sterken (Text), L. Kast (Illustr.): Interstellares Leben und Sterben, Megafon Nr. 449, November 2019
2. V. Sterken: ESRO: Europa's spannende eerste stappen in de ruimtevaart. Article for the magazine of the Dutch Space Society (NVR, Nederlandse Vereniging voor Ruimtevaart): "Ruimtevaart" nr. 2009/1

Editorial work

1. Co-editor of the SSSI-book Vol. 214, Issue 1. Cosmic Dust: from the Laboratory to the Stars. Publ. Springer.
2. Co-editor of the SSSI-book Vol. 205, Issue 1-4. From Disks to Planets: The Making of Planets and Their Early Atmospheres, publ. Springer. ISSN: 0038-6308 (Print) 1572-9672 (Online)

Peer-reviewed publications: 33

H-index: 13