

CV – Sjoert van Velzen

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Current Position	Assistant Professor – Leiden University	09-2020 - present
Education	PhD – Radboud University Nijmegen Promotor: Heino Falcke Thesis: <i>Jets from supermassive black holes: from cosmic to human timescales</i> Double M.Sc. Particle Physics, Astrophysics (cum laude) – University of Amsterdam Advisors: Glennys Farrar, Ralph Wijers, and Els de Wolf Thesis: <i>Optical flares and cosmic particles</i> B.Sc. Physics and Astrophysics (cum laude) – University of Amsterdam Advisor: Koenraad Schalm Thesis: <i>Degeneracies in the CMB</i>	2014 2010 2006
Honors and Awards	Oort Fellowship Three years of funding for independent research at Leiden Observatory James Arthur Fellowship Three years of funding for independent postdoctoral research at NYU Hubble Postdoctoral Fellowship Three years of funding for independent postdoctoral research at US institution Huygens Scholarship by the Dutch Ministry of Education National scholarship for top 10% of Master’s students, supports research abroad Science Award by the Institute of Interdisciplinary Studies, University of Amsterdam Awarded for popular science article: <i>Wanted: Cosmic Designer</i>	2020 2017 2014 2008 2006
Collaboration membership	LSST : leading the Tidal Disruption Event working group ZTF : Black Hole working group LOFAR : member of the Surveys key science project Auger : member, responsible for catalogs used in cross-correlation studies	2019-today 2017-today 2012-16; 2020-today 2010-14
Selected Publications	As of Oct 2020: 15 first-author articles with 968 citations (h-index 13, via ADS). Total 4,590 citations (h-index 39, via ADS). * indicates papers by students that I supervised. van Velzen , Gezari, Hammerstein, et al., ApJ , 908 , 4 <i>Seventeen Tidal Disruption Events from the first half of ZTF survey operations: Entering a new era of population studies</i> Stein, van Velzen , Kolawski, et al., Nature Astronomy <i>A tidal disruption event coincident with a high-energy neutrino</i> van Velzen , Stone, Fruchter, et al., ApJ , 878 , 82 <i>Late-time UV observations of tidal disruption flares reveal unobscured, compact accretion disks</i> van Velzen , Gezari, Cenko, et al., ApJ , 872 , 198 <i>The first tidal disruption flare in ZTF: from photometric selection to multi-wavelength characterization</i> van Velzen , ApJ , 741 , 73	2021 2021 2019 2019 2018

On the mass and luminosity functions of tidal disruption flares

Pasham & **van Velzen**, [ApJ](#), 856, 1 2018
Evidence for linear disk-jet coupling following a tidal disruption flare

Wevers*, **van Velzen**, Jonker, et al., [MNRAS](#), 471, 1691 2017
Black hole masses of tidal disruption event host galaxies

van Velzen, Mendez, Krolik, & Gorjian, [ApJ](#), 829, 19 2016
Discovery of infrared emission from dust heated by stellar tidal disruption flares

van Velzen, Anderson, Stone, et al., [Science](#), 351, 62 2016
A radio jet from the optical and x-ray bright stellar tidal disruption flare ASASSN-14li

Stone & **van Velzen**, [ApJ Letters](#), 825, 14 2016
An enhanced rate of tidal disruptions in a centrally overdense E+A galaxy

Blagorodnova*, **van Velzen**, et al., [MNRAS](#), 455, 603 2016
Gaia transient detection efficiency: hunting for nuclear transients

Coppejans*, **van Velzen**, Intema, et al., [MNRAS](#), 467, 2039 2016
Radio spectra of bright compact sources at $z > 4.5$

van Velzen, Falcke, & Körding, [MNRAS](#), 446, 2985 2015
Nature and evolution of powerful radio galaxies

van Velzen & Farrar, [ApJ](#), 762, 53 2014
Measurement of the rate of stellar tidal disruption flares

van Velzen & Falcke, [A&A letters](#), 557, L7 2013
The contribution of spin to jet-disk coupling in black holes

van Velzen, Frail, Körding, & Falcke, [A&A](#), 552, A5 2013
Constraints on off-axis jets from stellar tidal disruption flares

van Velzen, Falcke, Schellart, et al., [A&A](#), 544, A18 2012
Radio galaxies of the local universe. All-sky catalog, luminosity functions, and clustering

van Velzen, Körding, & Falcke, [MNRAS letters](#), 417, L51 2011
Radio jets from stellar tidal disruptions

van Velzen, Farrar, Gezari, et al., [ApJ](#), 741, 73 2011
Optical discovery of probable stellar tidal disruption flares

Blagorodnova, **van Velzen**, et al., [MNRAS](#), 455, 603 2016
Gaia transient detection efficiency: hunting for nuclear transients

Auger Collaboration (alphabetical author order), [ApJ](#), 804, 15 2015
Anisotropies in the arrival directions of cosmic rays detected by the Auger observatory

Lane, Cotton, **van Velzen**, et al., [MNRAS](#), 400, 327 2014
The Very Large Array Low-frequency Sky Survey Redux (VLSSr)

Successful	Total of \$64,000 awarded as PI on accepted observing proposals.	
Observing Proposals	coI* VLA <i>A Systematic Investigation of Radio Tidal Disruption Events</i> 300 h, ToO (*core member of this Large program)	2020-23
	PI VLA <i>Follow-up of stellar tidal disruption flares found in ZTF</i> 26 h, ToO	2019-21
	coI Chandra <i>Supermassive black holes caught in state changes</i> , 140 ks	2019
	PI VLA <i>Systematic radio follow-up of stellar tidal disruption flares</i> , 32 hour, ToO	2018
	PI HST <i>The mystery of ASASSN-15lh</i> , 3 orbits	2018
	PI VLA <i>Jet-disk coupling in a tidal disruption event</i> , 19 hour, ToO	2017-18
	PI Spitzer DDT <i>Dust emission from a low-redshift tidal flare</i> , 1.5 hours	2016
	PI Gemini FT <i>A unique opportunity to detect a dust echo from a TDF</i> , 3 hours	2016

PI ATCA	<i>Radio emission from stellar tidal disruption flares, 54 hours, ToO</i>	2016-19
PI VLA	<i>A new window on jet physics via rapid VLA follow-up of TDEs, 31 hour, ToO</i>	2016
PI Spitzer	<i>DDT Early IR emission from a tidal flare, 2.9 hours</i>	2016
coI Chandra	<i>Late-time X-ray emission from TDFs, 110 ks</i>	2016
PI HST	<i>Resolving the central dynamics of post-starburst galactic nuclei, 8 orbits</i>	2016
coI HST	<i>What is enhancing the TDF rate in post-starburst galaxies?, 25 orbits</i>	2016
PI Spitzer	<i>Dust reprocessing of stellar tidal disruption flares, 1 hour</i>	2015
PI HST	<i>Late stages of accretion in tidal disruption flares, 8 orbits</i>	2015
PI Gemini	<i>Reverberation mapping of tidal disruption flares, 5 hours, ToO</i>	2015
PI EVN	<i>A new method to find young quasars 13 hours</i>	2014
PI VLA	<i>Delayed radio emission from tidal disruptions, 3.5 hours</i>	2012
PI GMRT	<i>High-redshift radio quasars at low frequencies, 24 hours</i>	2012

Selection of
Conferences and
Workshops

	Invited talk, European Astronomical Society (EAS) Annual Meeting	2021
	Invited review talk, American Association of Physics Teachers Winter Meeting	2021
	Invited review talk, American Physical Society meeting (Quarks to Cosmos), Washington (DC) 2020	
	Invited talk, Special Session of 235th Meeting of the AAS, Honolulu (Hawaii)	2020
	Invited talk, The New Faces of Black Holes, Annapolis (MD)	2019
	Invited review talk, X-ray Astronomy 2019, Bologna (Italy)	2019
	Invited talk, Quasars in Crisis, Edinburgh (UK)	2019
	Invited talk, Transients in galactic nuclei, EWASS, Lyon (France)	2019
	Contr. talk, Aspen Workshop: Using TDEs to Study SMBHs, Aspen (CO)	2018
	Contr. talk, ZTF collaboration meeting, Pasadena (CA)	2018
	Invited talk, Accreting black holes at their extremes, EWASS, Prague (Czech Republic)	2017
	Invited talk, TDE17: Piercing the Sphere of Influence, Cambridge (UK)	2017
	Contr. talk, 16th HEAD Meeting, Sun Valley (Idaho)	2017
	Contr. talk, Extermes of AGN accretion, US Virgin Islands	2017
	Contr. talk, 229th Meeting of the AAS, Grapevine (Texas)	2017
	Invited participant, International Space Science Institute Workshop, Switzerland	2016
	Contr. talk, Aspen Workshop: Universal Accretion, Aspen (CO)	2016
	Invited talk, Jerusalem Tidal Disruption Events Workshop, Israel	2015
	Contr. talk, Third Mid-Atlantic Radio Loud AGN Meeting, Baltimore (MD)	2015
	Contr. talk, Black Holes in Dense Stellar Clusters, Aspen (CO)	2015
	Contr. talk, Gaia Science Alerts workshop, Poland	2014
	Invited talk, High Energy Tidal Disruption Events, Italy	2013
	Contr. talk, Gaia Alerts Workshop, France	2013
	Contr. talk, Lorentz Center Workshop: Locating Astrophysical Transients, NL	2013
	Contr. talk, The Modern Radio Universe, Germany	2013
	Contr. talk, LOFAR Collaboration Science Workshop, NL	2013
	Invited talk, Blaauw Symposium for Roger Blandford, NL	2012

	Contr. talk, 16th Astroparticle Symposium, NL	2012
	Contr. talk, Tidal Disruption Events and AGN workshop, Spain	2012
	Proceedings: <i>The rate of stellar tidal disruption flares from SDSS data</i> , EPJWC	
	Contr. talk, Auger Analysis meeting, Czech Republic	2010
	Contr. talk, New Horizons in Time Domain Astronomy (IAU 285), UK	2011
	Proceedings: <i>Stellar tidal disruption flares found in SDSS</i> , Proceedings of the IAU	
Colloquia & Seminars	Stanford University, Perimeter Institute, Caltech	2020-21
	University of Washington, CCA (Simons Foundation), Los Alamos National Labs	2018-19
	NRAO, Royal Observatory Edinburgh, Columbia University, NYU, American Museum of Natural History	2016-17
	Oxford, Caltech, JHU, UMD, GWU, STScI	2014-15
	NASA GSFC, NRL, JHU, NRAO, Harvard, UCLA, Caltech, UCSB, Berkeley	2013
Professional Service, Outreach, Press coverage	Co-editor of TDE review book, containing 15 peer-reviewed chapters	2018-20
	Outreach talk (45 min) for Dutch physics teachers association	2020
	Review panel member for major NASA mission	2020
	SOC member for international conference at Kyoto University	2019-20
	Public talk at the annual Postdoc Research Showcase , NYU	2018
	Public panel discussion Aspen Physics Cafe	2018
	Chair of Winter/Summer talk series at STScI/JHU (HotSci/CoolSci)	2017
	Review panel member for two major NASA missions: Swift and Chandra	2015-16
	Co-organizer Mid-Atlantic Radio-Loud AGN meeting (MARLAM)	2016
	Press releases for two papers, received substantial media attention (e.g., Washington Post , Astronomy Magazine , Huffington Post)	2016
	Referee for ApJ, MNRAS, A&A	2013-present
	Presentation (45 min) to ~100 high-school students at University outreach event	2012
	Popular Article <i>Black holes and cosmic rays</i> , appeared in Universum	2011
Popular Article <i>Wanted: Cosmic Designer</i> , appeared in literary magazine De Gids	2007	