

# Publication list

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- Jan. 2021 Pablo Villanueva-Domingo and Francisco Villaescusa-Navarro.  
*Removing Astrophysics in 21 cm maps with Neural Networks.*  
[The Astrophysical Journal](#), 907(1):44, 2021; [arXiv:2006.14305](#)
- Jun. 2020 Laura Lopez-Honorez, Olga Mena, Sergio Palomares-Ruiz, Pablo Villanueva-Domingo and Samuel J. Witte.  
*Variations in fundamental constants at the cosmic dawn.*  
[JCAP](#), 2006(06):026, 2020; [arXiv:2004.00013](#)
- Apr. 2020 Pablo Villanueva-Domingo, Olga Mena and Jordi Miralda-Escudé.  
*Maximum amplitude of the high-redshift 21-cm absorption feature.*  
[Phys. Rev. D](#)101(8):083502, 2020; [arXiv:1912.09488](#)
- Aug. 2019 Olga Mena, Sergio Palomares-Ruiz, Pablo Villanueva-Domingo, and Samuel J. Witte.  
*Constraining the primordial black hole abundance with 21-cm cosmology.*  
[Phys. Rev.](#), D100(4):043540, 2019; [arXiv:1906.07735](#)
- Jan. 2019 Laura Lopez-Honorez, Olga Mena and Pablo Villanueva-Domingo.  
*Dark Matter microphysics and 21 cm observations.*  
[Phys. Rev.](#), D99(2):023522, 2019; [arXiv:1811.02716](#)
- Jun. 2018 Miguel Escudero, Laura Lopez-Honorez, Olga Mena, Sergio Palomares-Ruiz and Pablo Villanueva-Domingo.  
*A fresh look into the interacting dark matter scenario.*  
[JCAP](#), 1806(06):007, 2018; [arXiv:1803.08427](#)
- May 2018 Samuel Witte, Pablo Villanueva-Domingo, Stefano Gariazzo, Olga Mena and Sergio Palomares-Ruiz.  
*EDGES result versus CMB and low-redshift constraints on ionization histories.*  
[Phys. Rev.](#), D97(10):103533, 2018; <https://arXiv:1804.03888>
- Apr. 2018 Pablo Villanueva-Domingo, Stefano Gariazzo, Nickolay Y. Gnedin and Olga Mena.  
*Was there an early reionization component in our universe?*  
[JCAP](#), 1804(04):024, 2018; [arXiv:1712.02807](#)
- Jan. 2018 Pablo Villanueva-Domingo, Nickolay Y. Gnedin, and Olga Mena.  
*Warm Dark Matter and Cosmic Reionization.*  
[The Astrophysical Journal](#), 852(2):139, 2018; [arXiv:1708.08277](#)
- Nov. 2017 Laura Lopez-Honorez, Olga Mena, Sergio Palomares-Ruiz and Pablo Villanueva-Domingo.  
*Warm dark matter and the ionization history of the Universe.*  
[Phys. Rev.](#), D96(10):103539, 2017; [arXiv:1703.02302](#)