Reference Template

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difwmf

References

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[3] Center for Cosmological Physics. University of chicago, astronomy department website, 2013. http://astro.uchicago.edu/sza/primer.html.

[4] S. et al. Giodini. Scaling relations for galaxy clusters: Properties and evolution. *14 May 2013 astro-ph.CO.*, Leiden Observatory, Leiden University.

[5] Aaron Parsons. Inverse compton scattering, 2014. http://www.youtube.com/watch?v=2KFVxPENcEw.

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[7] European Space Agency Website. Esa, planck, 2013. http://sci.esa.int/planck/48231-animation-of-the-sunyaev-zel-dovich-effect.

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[1]

This paper gives a generall introduction to the Sunyaev-Zel'dovich effect, discussing the theory of this effect and presenting many published results about it, the overall conclusions and important aspects of them. The author presents, in many steps, relevant equations that describe the SZ effect, different instruments used to detect it and also how astronomers use this phenomena to constrain cosmological parameters by the observation of galaxy clusters.

[2]

This article used the SZ effect to find simulated galaxy clusters and, with the resulting data, measured the SZ effect in terms of the *compton-y* parameter. It begins with the definition of this parameter and describes how the simulation is executed and at what threshold the measurements were taken, finally describing what the resulting maps contained in regard to galactic structures.

[3]

This website, from the Astronomy Department of the University of Chicago, gives an illustrated description of physical details behind the SZ effect, presenting some research data and discussing them.

[4]

This paper provides severall relations between X-Ray and SZ effect detection, how they can together provide severall informations about the observed galaxy cluster and the downside of each frequency observation, presenting images at both spectra. It also provideds a review of the recent literature on SZ effect and X-Ray observations.

[5]

In this video about *Inverse Compton Scattering*, Parsons begins with a review of compton scattering, then goes into the inverse case, describing a moving electron and a lower energy photon and how the scattering results in a higher energy photon and a lower energy electron. Finally, Parsons describes the components of the *compton-y* parameter, a measurement of the change in energy of CMB photons.

[6]

This is a publication on the SZ effect that inctroduces both types, the Thermal and the *Non-Thermal* or *Kinematic SZ effect*, presenting the parameters related to their detection, and the physical informations that are possible to be extracted from observations of galaxy clusters with these paremeters. Simulations illustrating these observations are presented and the results discussed. It also introduces the different instruments used to detect the SZ effect.

[7]

This is the homepage for the European Space Agency's Plack satellite, that gives detailed informations about the most recent results of this mission that, by means of the SZ effect, detect severall galaxy clusters, being able to create a catalogue of these structures. The website provides animations explaining the SZ effect, just as many of the images generated by the data collected by this satellite.

[8]

This Wikipedia article descibes the Sunyaev-Zel'dovich Array (SZA) in California, giving information about its infrastructure, its precise location, a picture of the instruments (used in the presentation) and the main goal of this array.