



On the equivalent effective temperature of massive young star clusters: The case of NGC 595

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The softness parameter is based on the relative intensity of several optical emission lines emitted by the gas ionized by young massive star clusters and can be used to derive the equivalent effective temperature (T^*) in those objects whose stellar population cannot be resolved. This method has several uncertainties due to the disagreement between different synthesis model atmospheres but it is robust to study the relative variations between objects. Following the 2D photoionization models of the giant HII region NGC 595 (Pérez-Montero et al. 2011) we show that the determination of T^* with the softness parameter is also robust in different regions of a same object with large variations in the geometry of the gas and in the dust-to-gas ratio.

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