

Star formation history of the galaxy merger Mrk848 with SDSS-IV MaNGA

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Abstract. With the 3D data of SDSS-IV MaNGA (Bundy *et al.* 2015) spectra and multi-wavelength SED modeling, we expect to have a better understanding of the distribution of dust, gas and star formation of galaxy mergers. For a case study of the merging galaxy Mrk848, we use both UV-to-IR broadband SED and the MaNGA integral field spectroscopy to obtain its star formation histories at the tail and core regions. From the SED fitting and full spectral fitting, we find that the star formation in the tail regions are affected by the interaction earlier than the core regions. The core regions show apparently two times of star formation and a strong burst within 500Myr, indicating the recent star formation is triggered by the interaction. The star formation histories derived from these two methods are basically consistent.

Keywords. galaxies: interactions, galaxies: evolution, galaxies: stellar content

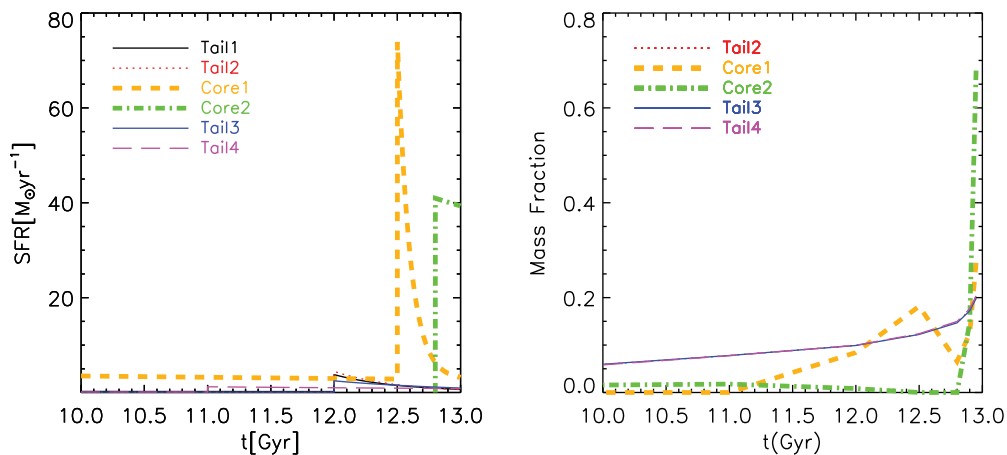


Figure 1. Star formation history of tail and core regions in Mrk848. The radius of each region is 5". Left: Results derived from UV-to-IR broadband SED fitting using CIGALE (<http://cigale.lam.fr> Noll *et al.* 2009; Serra *et al.* 2011). Right: Results derived from MaNGA 2D spectra fitting using pPXF (Cappellari & Emsellem 2004). There are only five regions in the right panel because MaNGA does not cover Tail1 region.

References

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