

## Z115a Possible evidence for HI colliding flows triggering high-mass stars in the Small Magellanic Cloud

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We present a new analysis of the HI gas in the SMC. The HI data are obtained with the ATCA and Parkes telescope at a resolution of 90 arcsec by Stanimirovic et al. (2003). In the previous study, the whole complicated HI emission was considered to be a single velocity component and rotation of the galaxy was derived. Recently, in two high mass star formation regions R136 and N44 of the LMC, a model of two converging HI flows was presented by Fukui et al. (2017) and Tsuge et al. (2018), and these authors suggested that the high mass star formation was triggered by the strong compression in the collision of the HI gas. High mass star formation in the SMC is most active in the southwest of the SMC where NANTEN revealed a group of CO clouds (Mizuno, N. et al. 2001). In this paper we present a model that HI converging flows observed triggered the formation of high-mass stars in the southwest region. The origin of the collision is the tidal interaction driven by a close encounter of the LMC and the SMC some 0.2 Byrs ago as in case of the LMC. The relative velocity between the two components is  $40 \text{ km s}^{-1}$  on average and the collision time scale is estimated to be  $\sim 1 \text{ Myr}$ . This triggering formed more than 50 OB stars in the SMC. If the present model is correct, this support an idea that galactic tidal interactions are a crucial process in high mass star formation in dwarf galaxies.