

# 20250916 Inclination

Inclinations are determined from the SDSS r-band axis ratio ( $b/a$ ) as

$$\cos(i) = \sqrt{\frac{(b/a)^2 - q_0^2}{1 - q_0^2}} \quad (1)$$

The inclination degree  $i$  is provided by Table 1 of Brown+2021, and we choose the intrinsic thickness as  $q_0 = 0.2$  for all galaxies with a clear disc component (Cortese+2016).

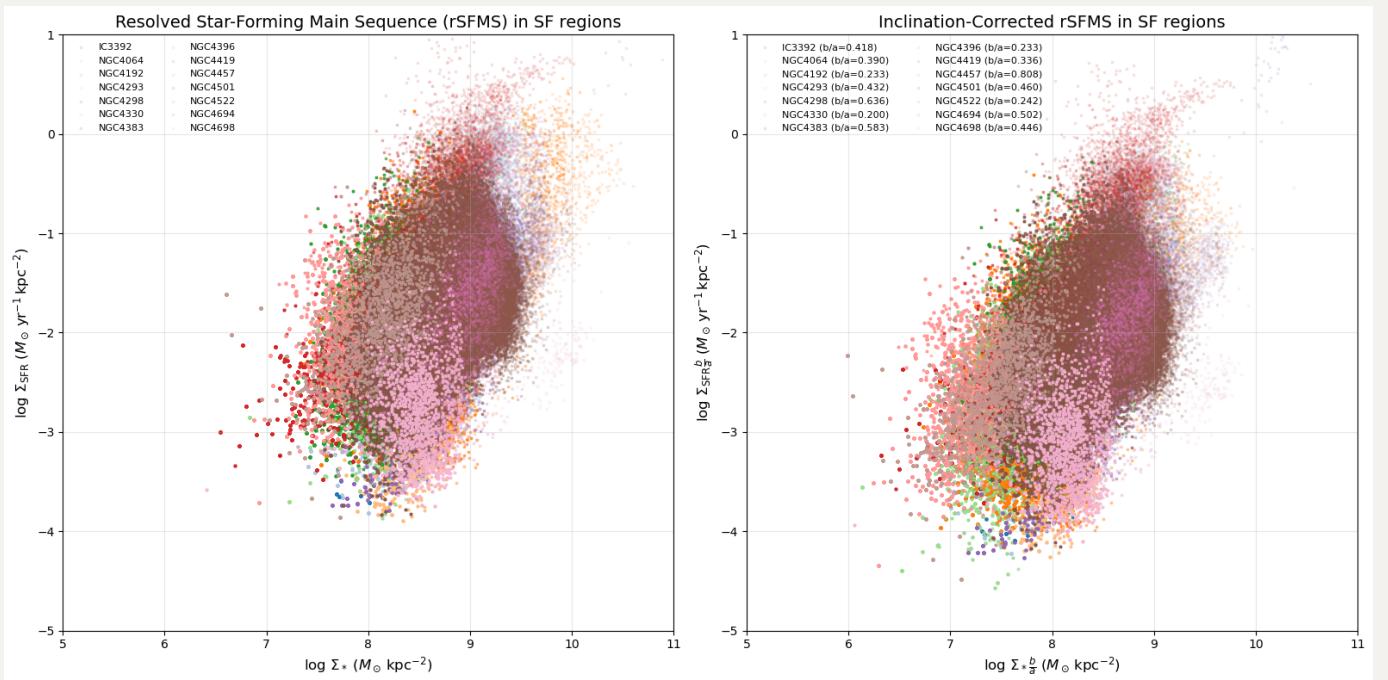
Then the inclination correction for observed surface density properties

$$\Sigma_{\text{corr}} = \frac{b}{a} \Sigma_{\text{observed}} \quad (2)$$

Then I can make comparisons: left is uncorrected, while right is inclination corrected.

## rSFMS

As expected, it just moves diagonally.



# rMZR

In short, just directly look at O3N2-M13 (the third figure, that Koller+24 and Yao+2022 used): if we ignore NGC4383, I would say we do reproduce the rMZR.

