Centrally Concentrated or Asymmetric HI Distribution Enhances the Central Star Formation in Galaxies

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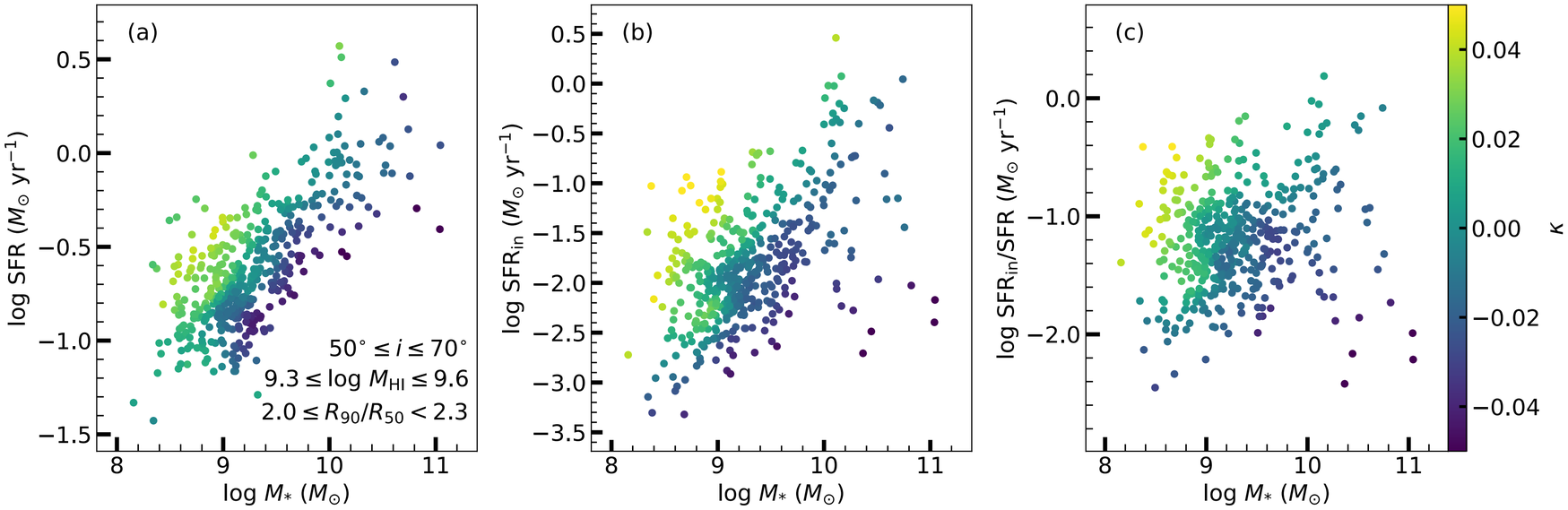

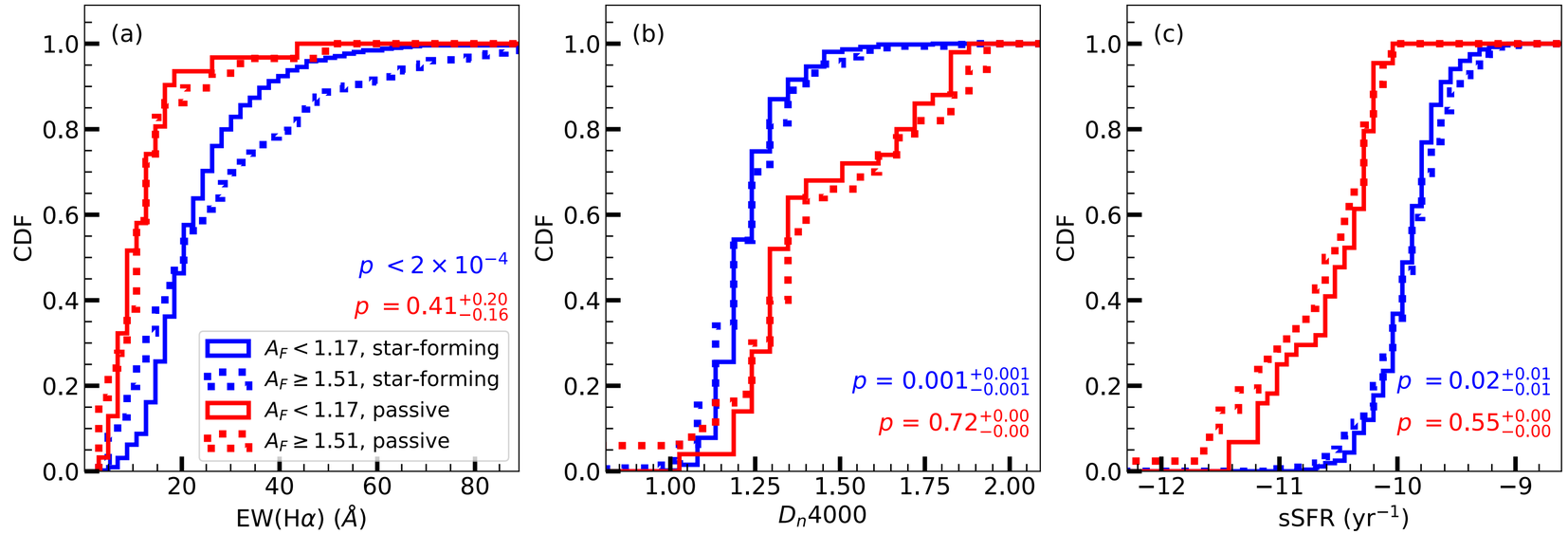

Method: from narrow single-peaked profile to wide double-horned profile, κ increase.

Sample: ALFALFA+SDSS+MPAJHU+GSWLCX2

Top: fix the i, rotation curve shape, and $M_{\rm HI}$, galaxies with high SFR or $\rm SFR_{in}$ have more centrally concentrated H I distribution.

Bottom: fix z, M_*, and $M_{\rm HI}$, star-forming galaxies with asymmetric H I profile has larger EW(Hα), smaller D_n4000, and more efficient global sSFR.