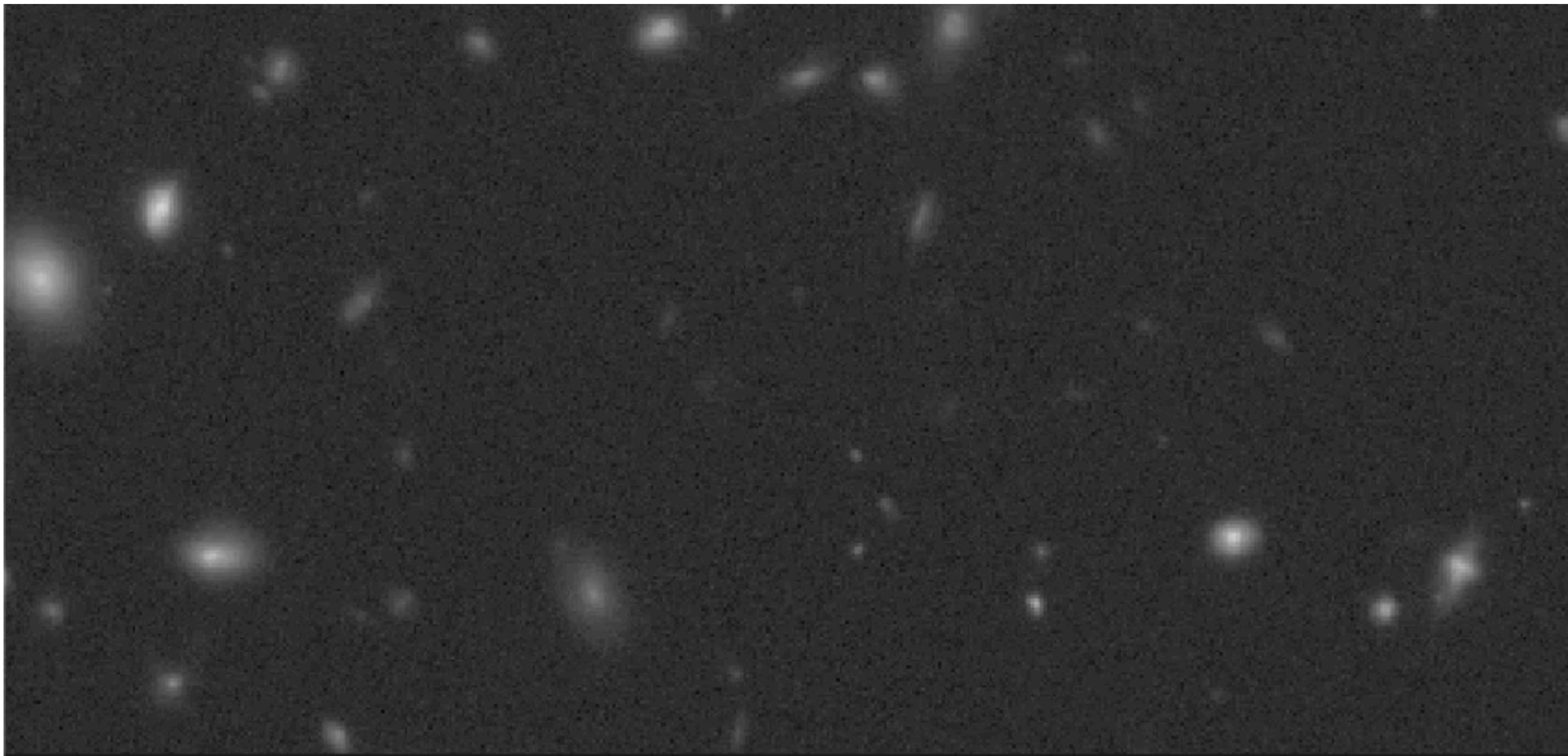


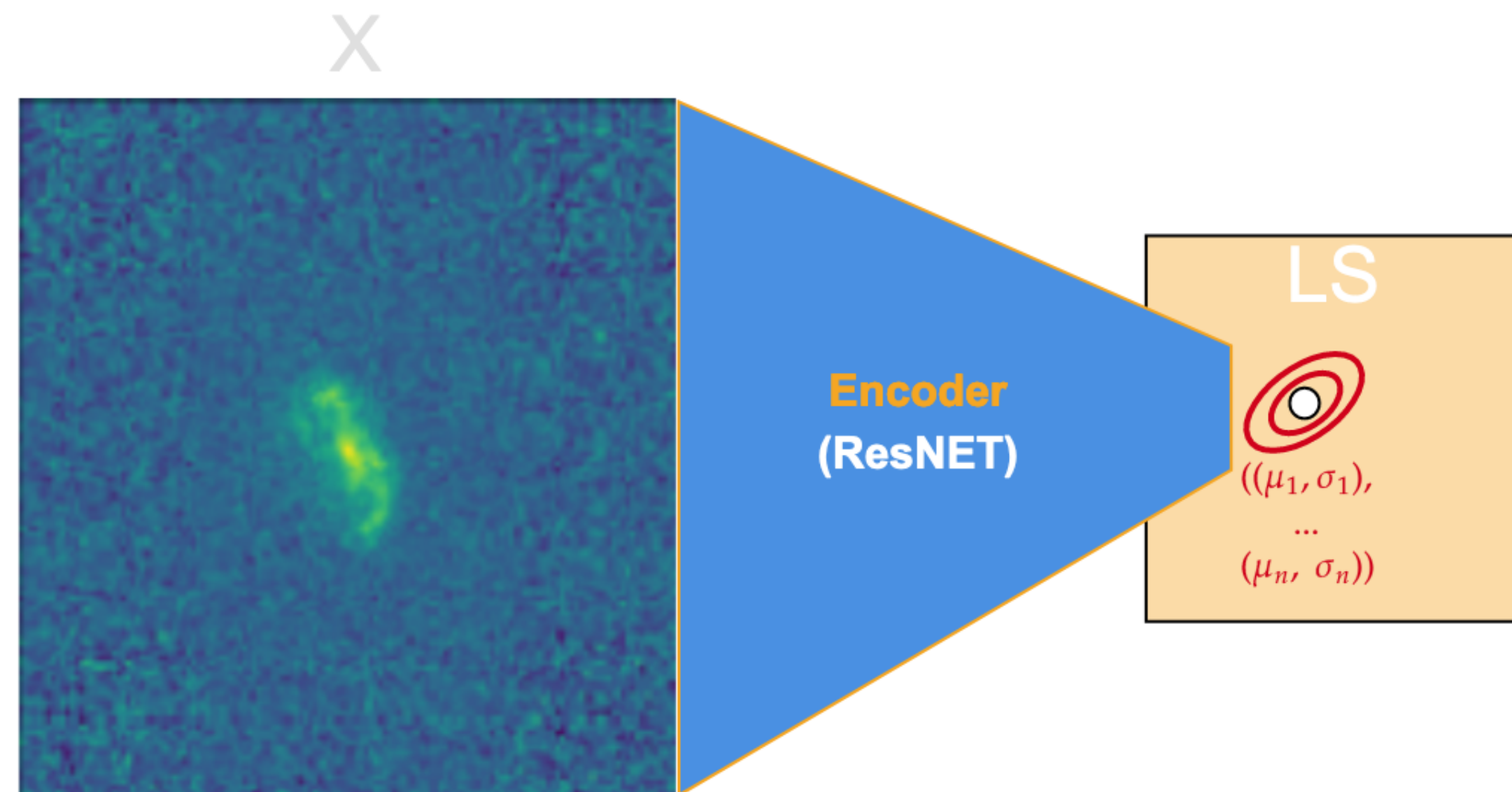
## Simulation and Segmentation of Galaxies

H.Bretonnière, A.Boucaud, M.Huertas-Company, F.Lanusse et al.

## Simulation of realistic galaxies: application and speed

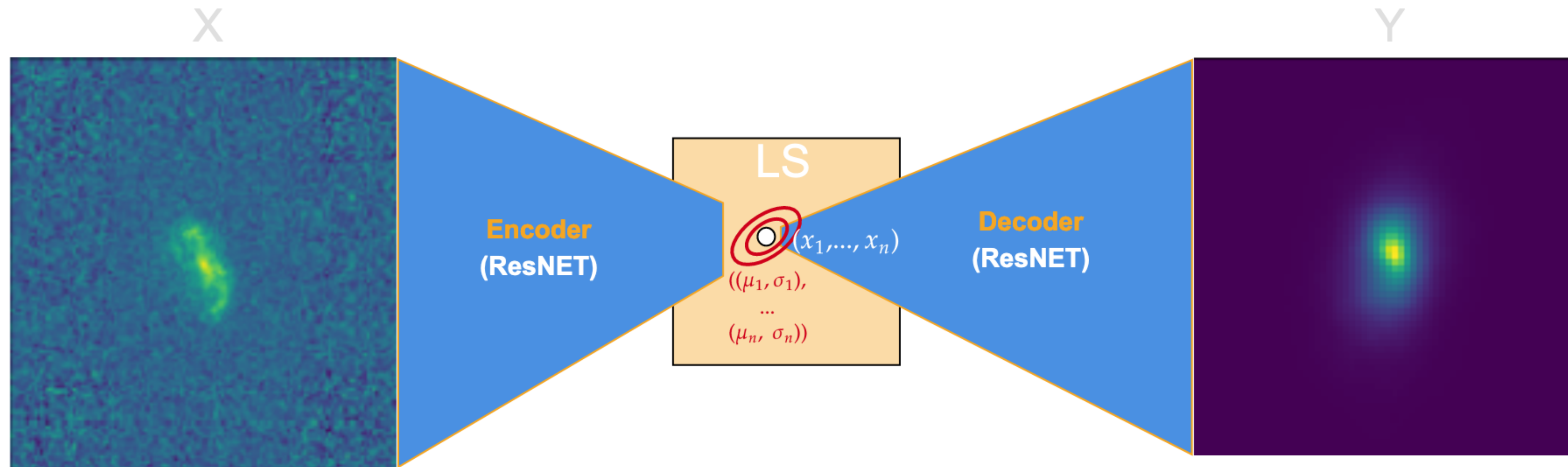


(From Lanusse et al., 2020)





(From Lanusse et al., 2020)



(From Lanusse et al., 2020)

**Galaxy structural parameters  
(Catalogue)**

**&**

$$G \sim N(0, 1)$$

Galaxy structural parameters  
(Catalogue)

&

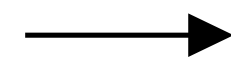
$G \sim N(0, 1)$



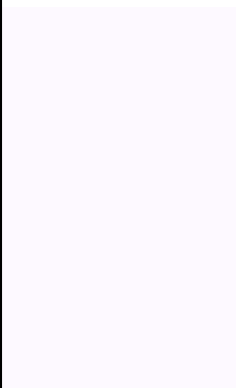
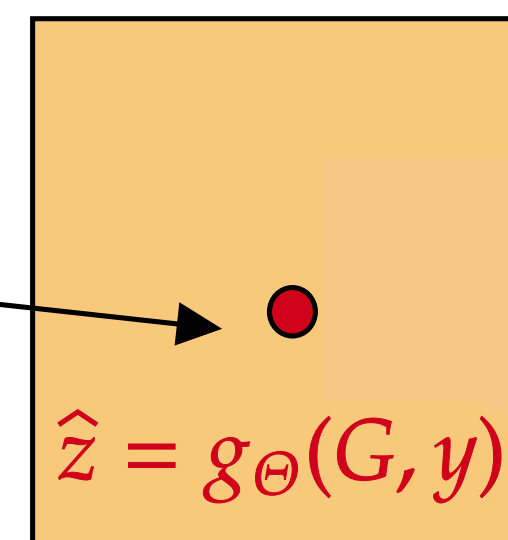
Galaxy structural parameters  
(Catalogue)

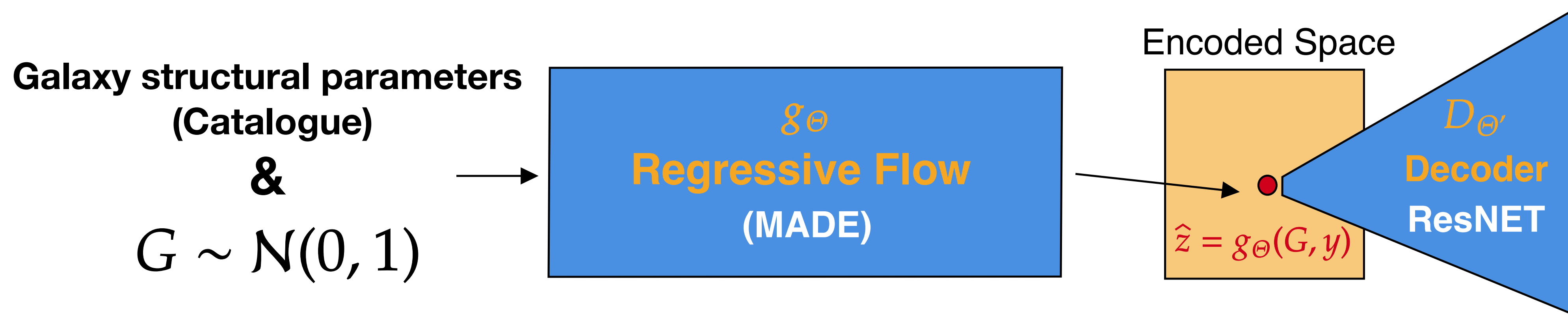
&

$$G \sim \mathcal{N}(0, 1)$$

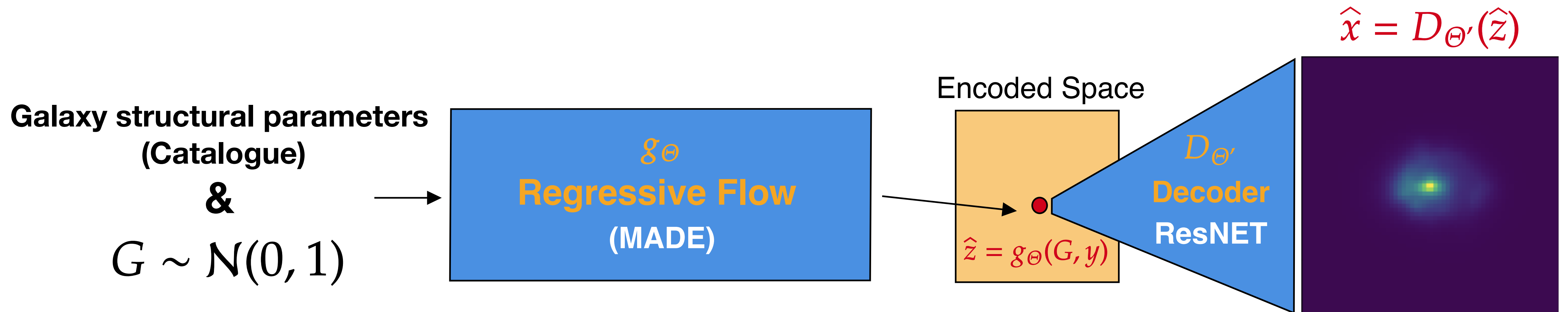


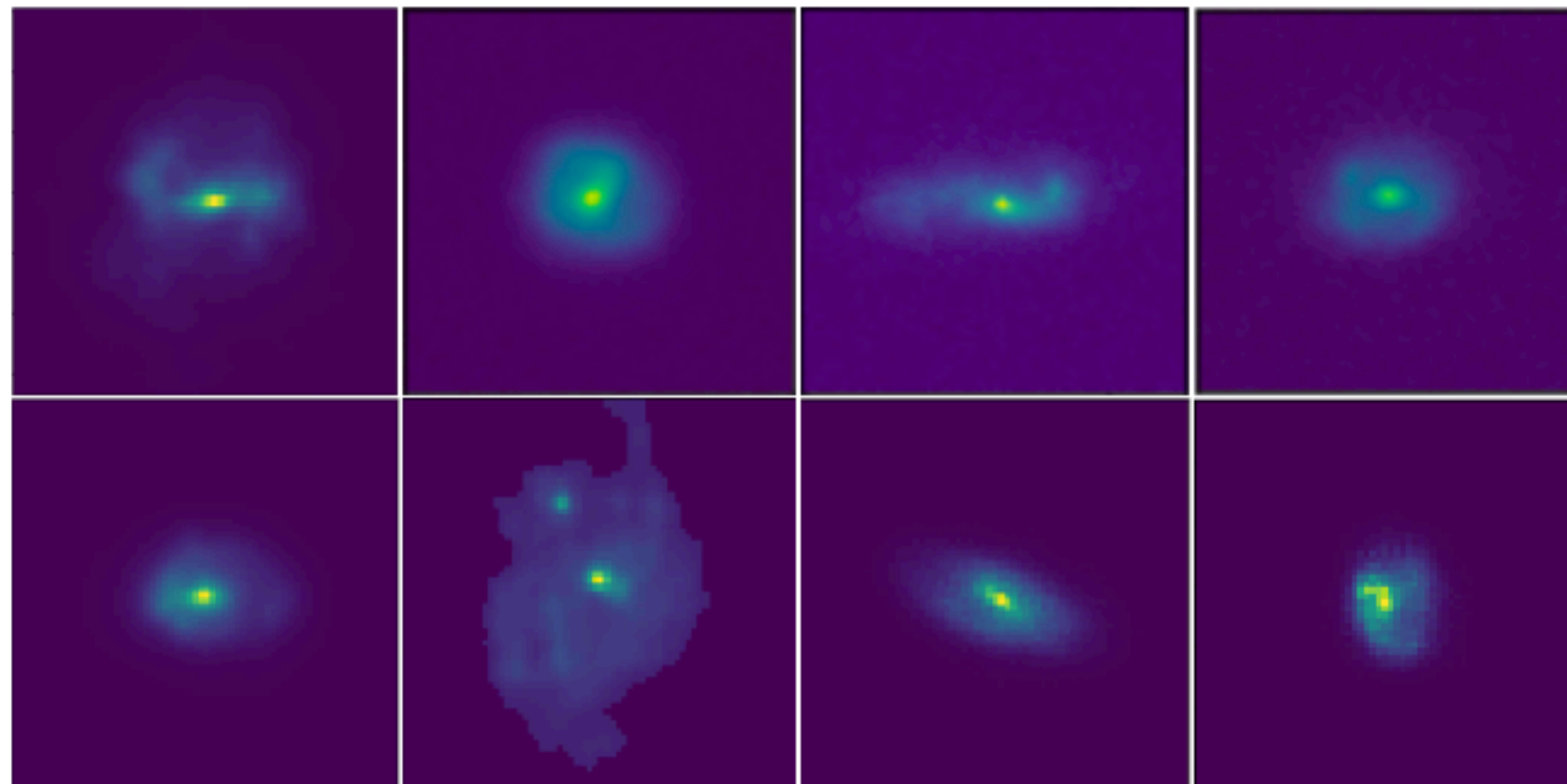
Encoded Space

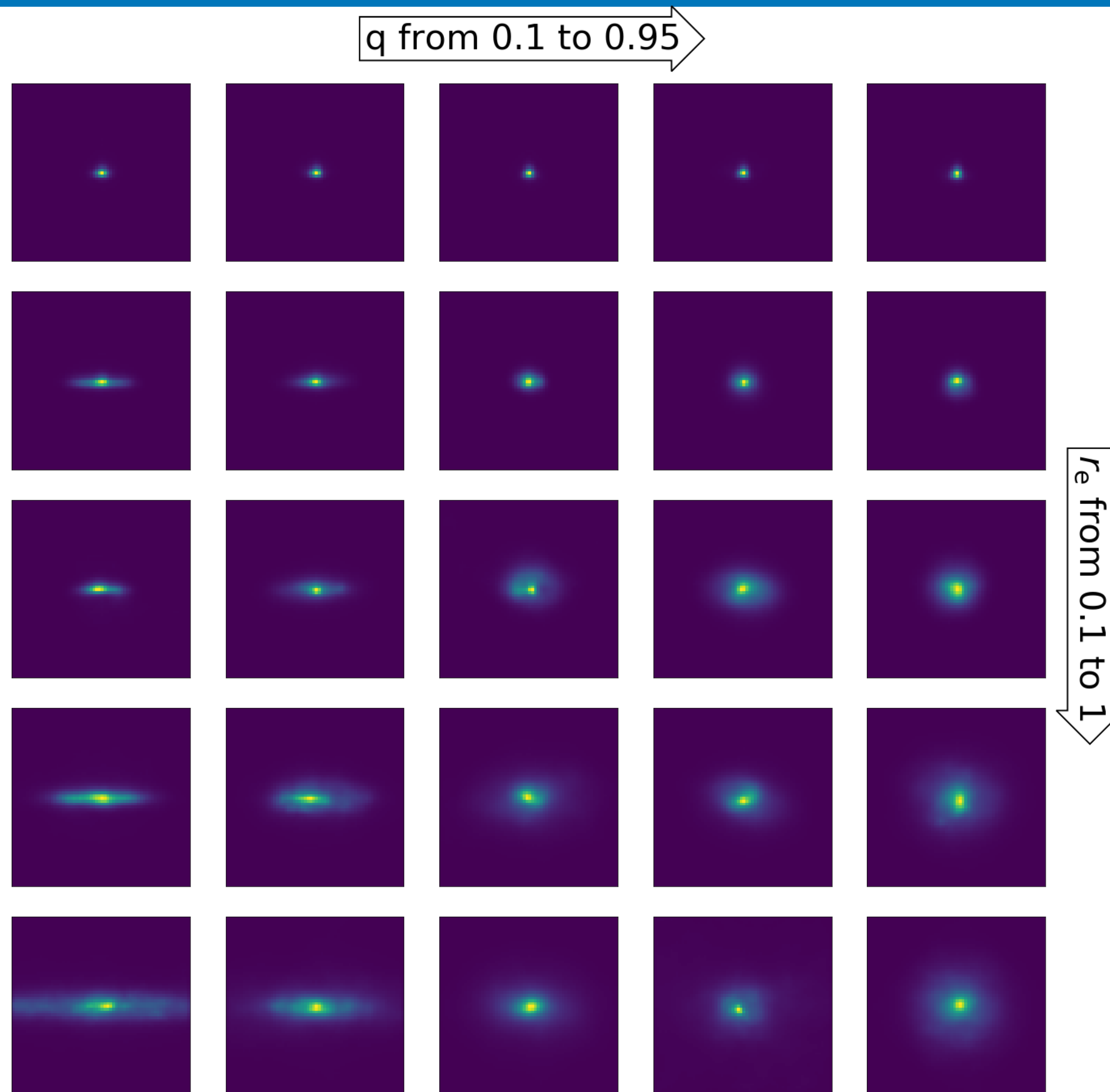


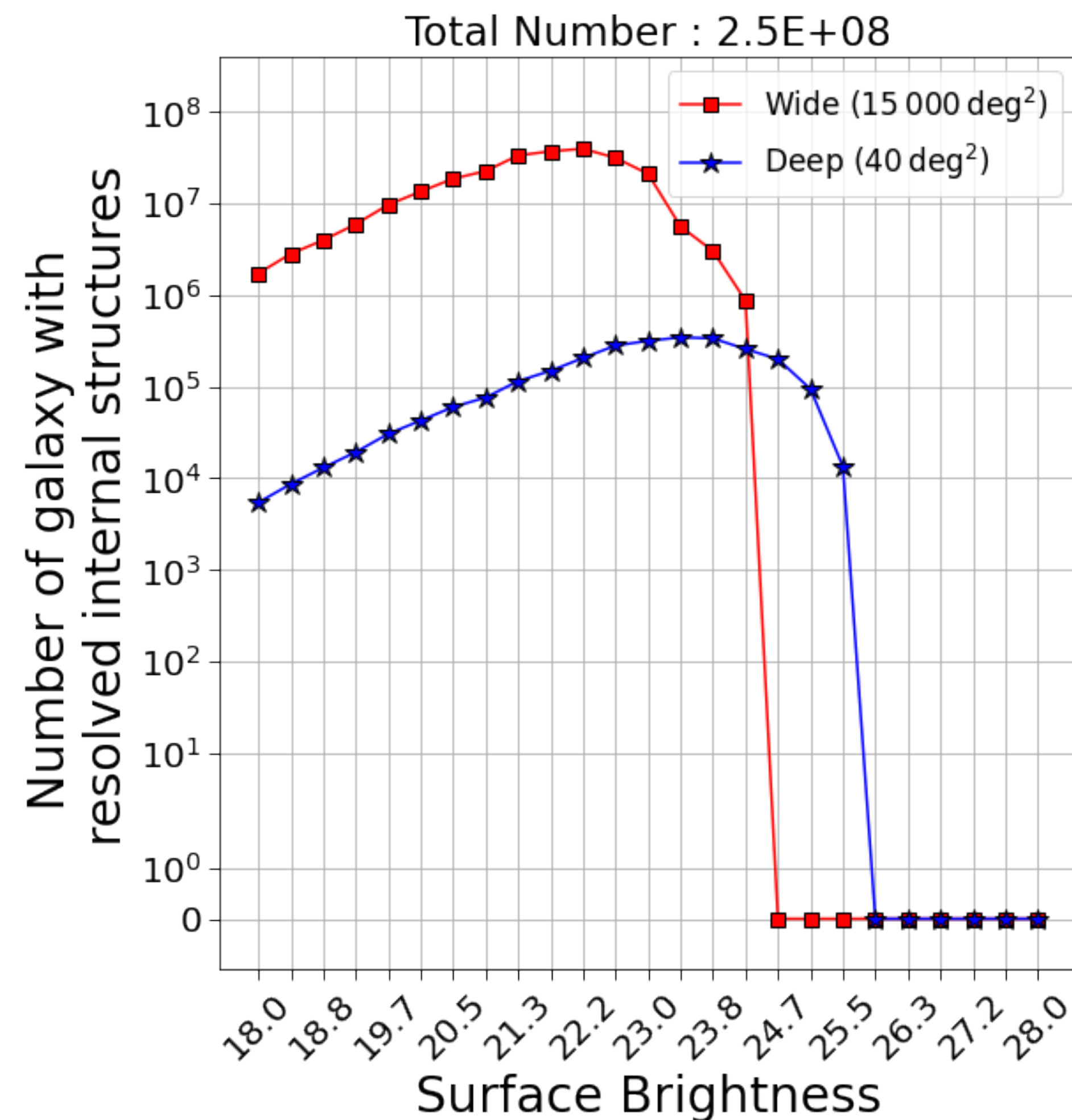
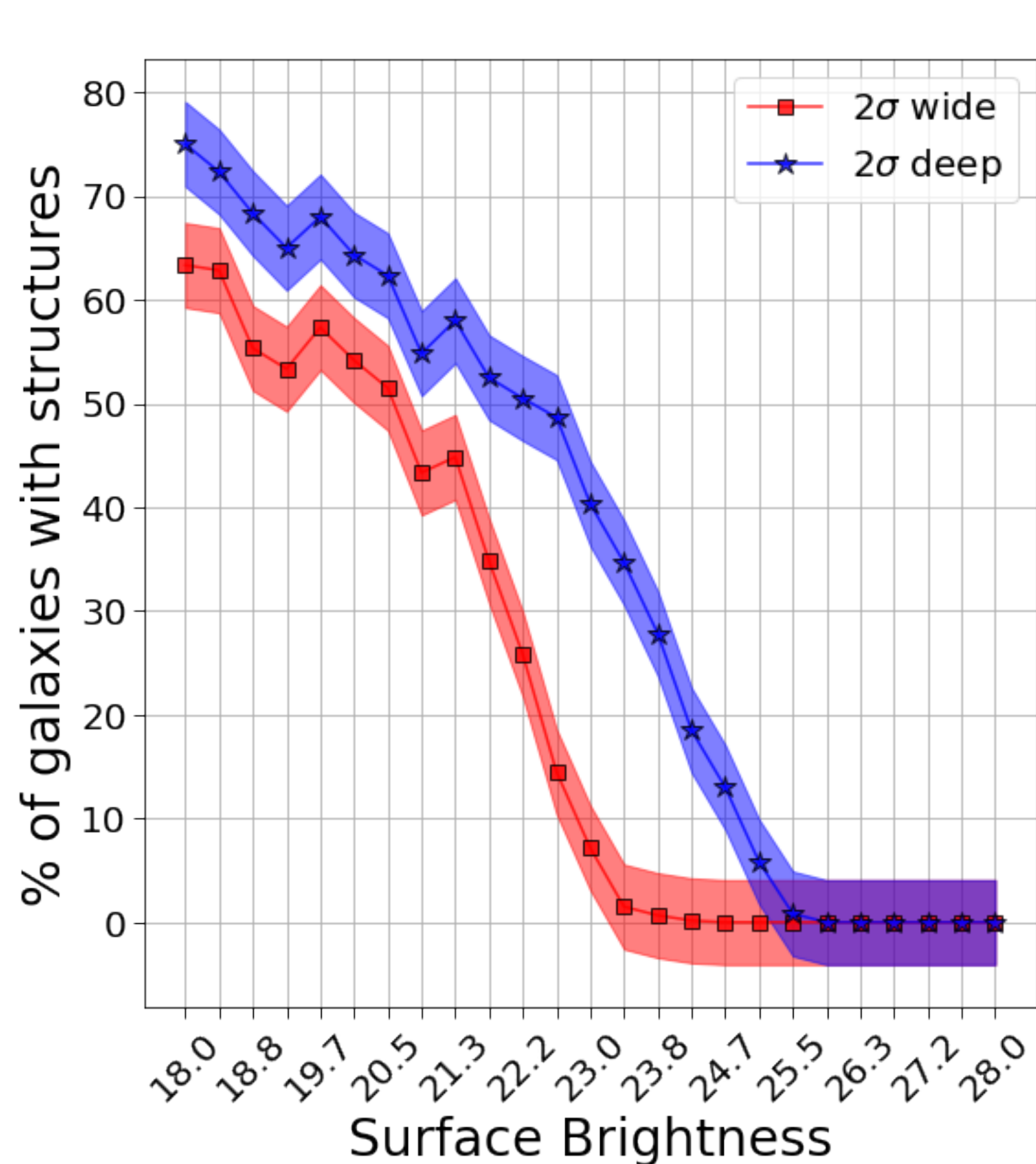




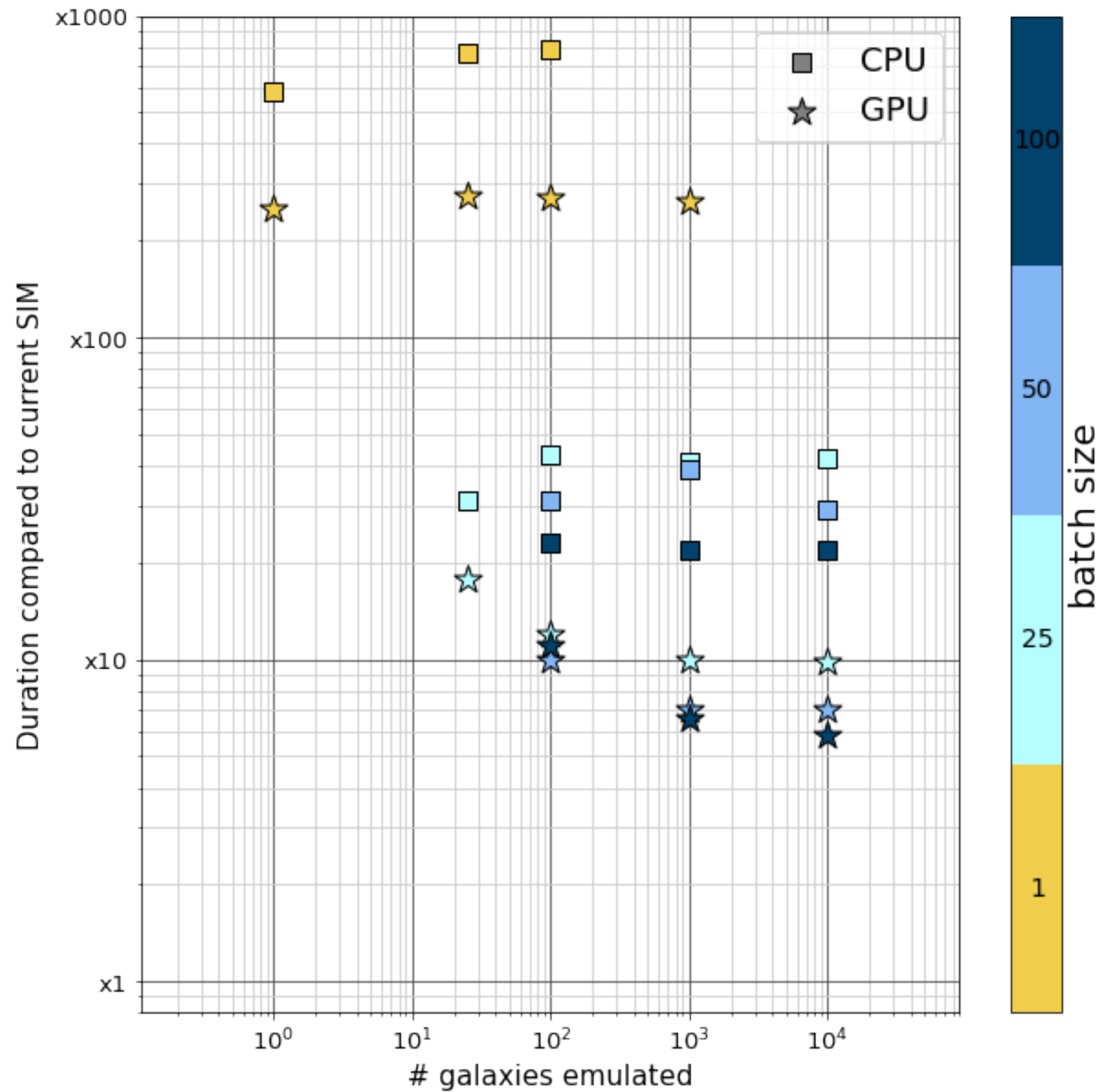




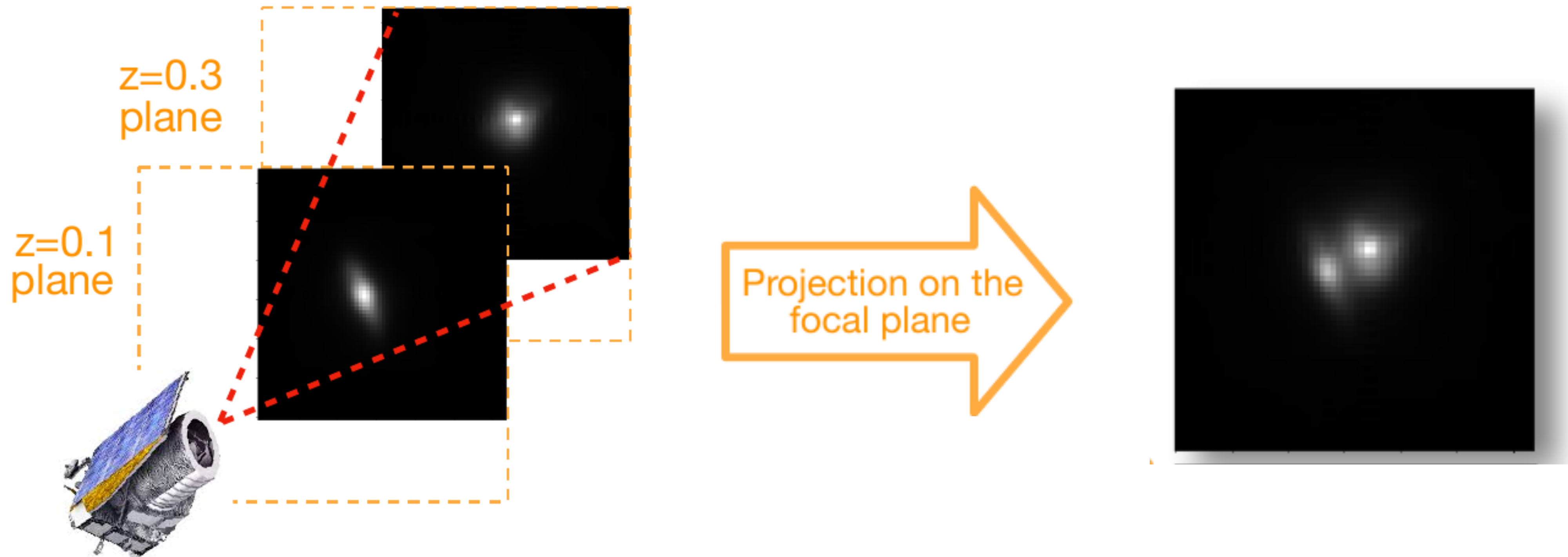


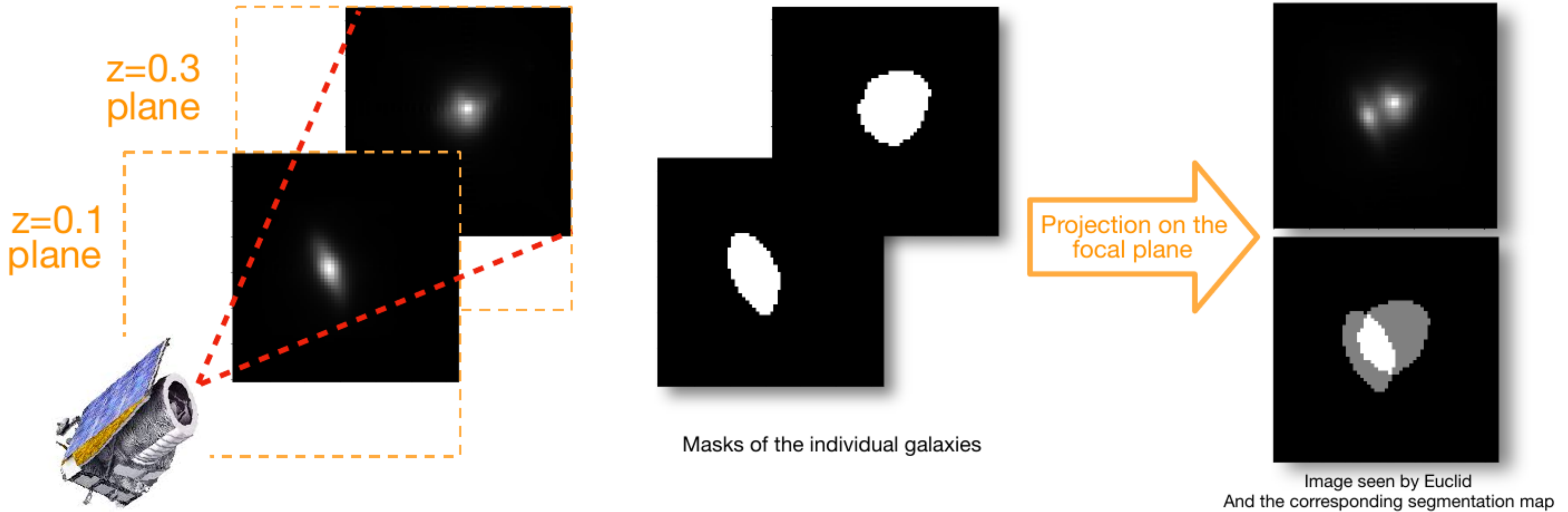




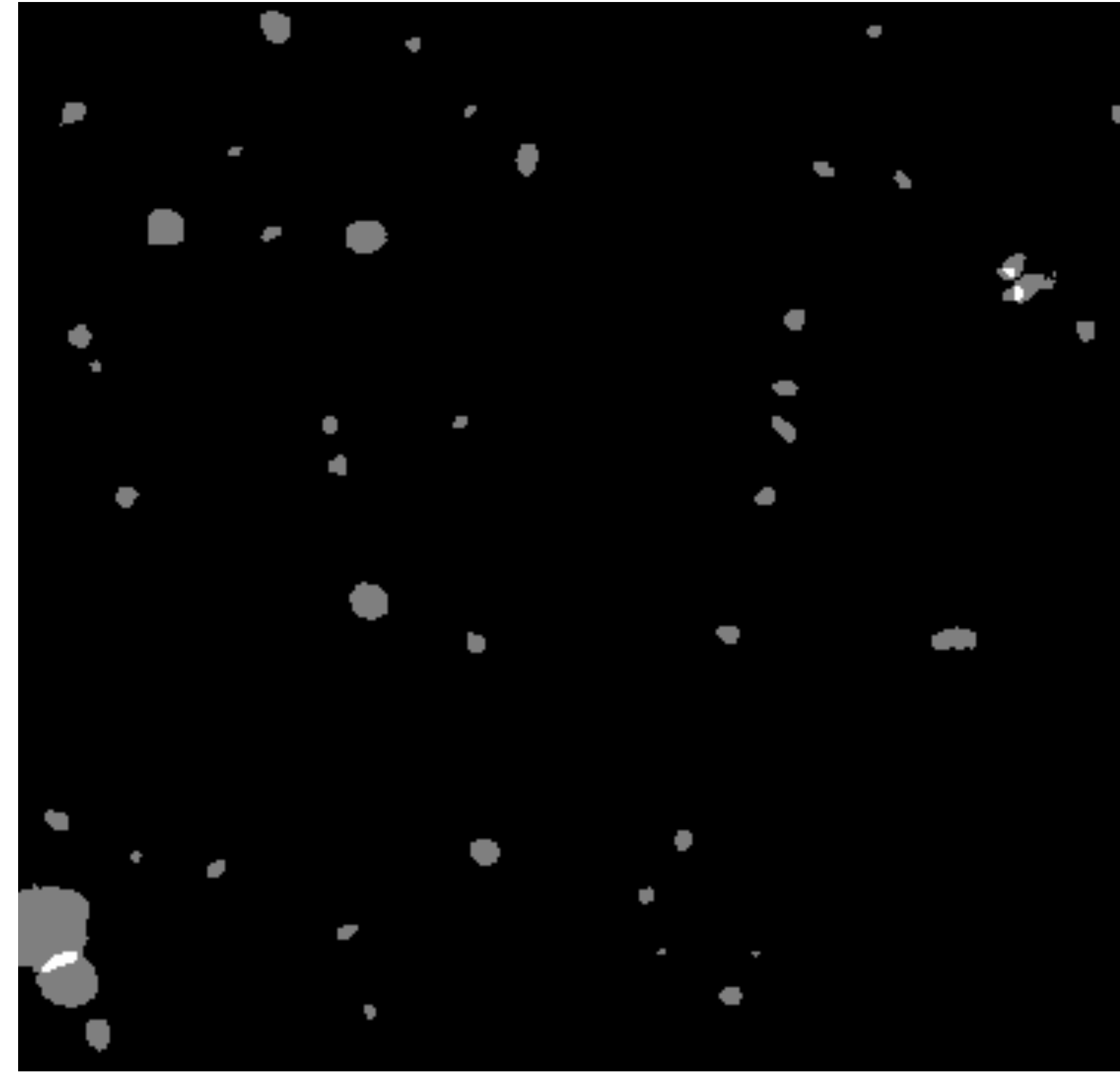
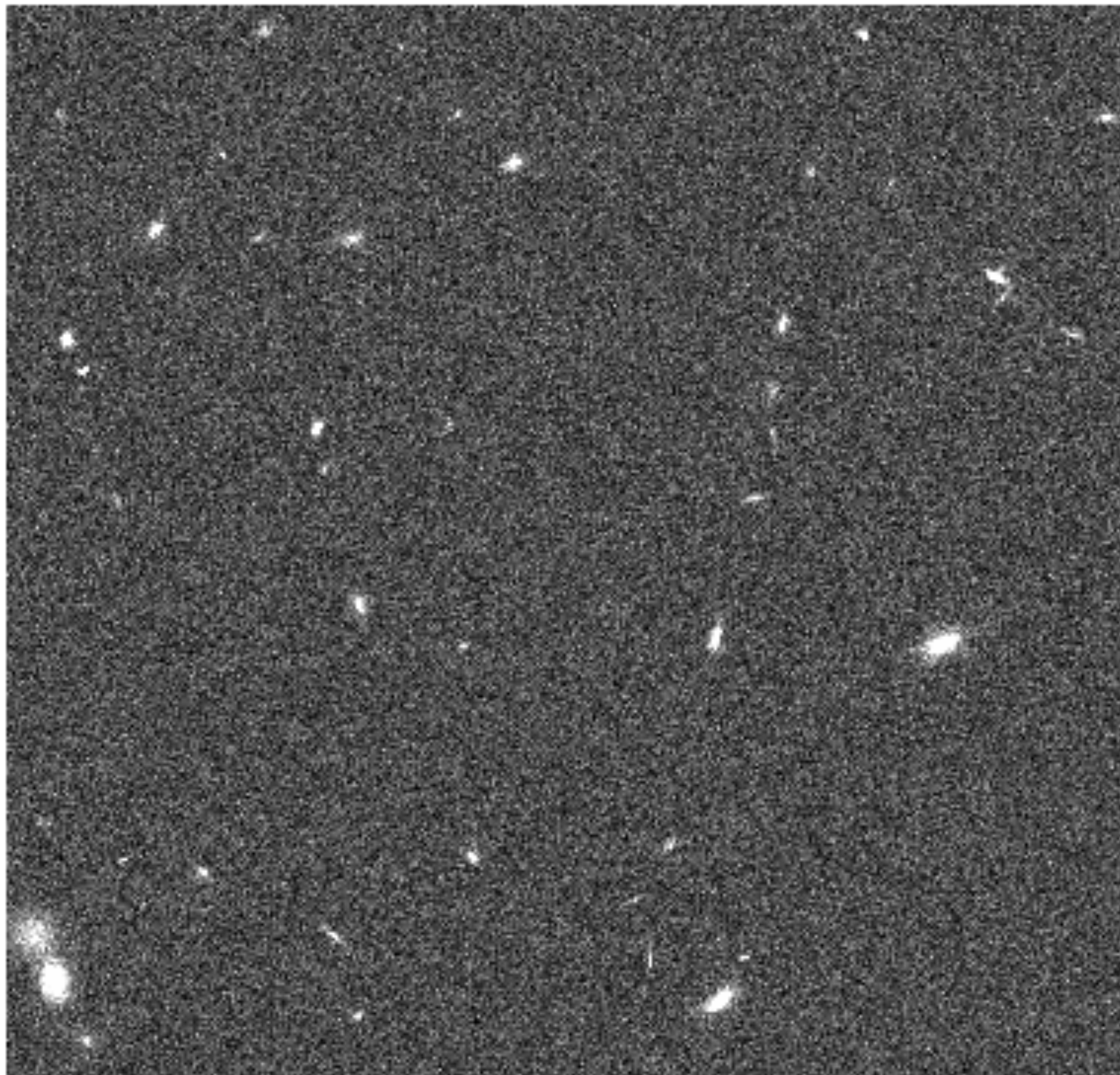


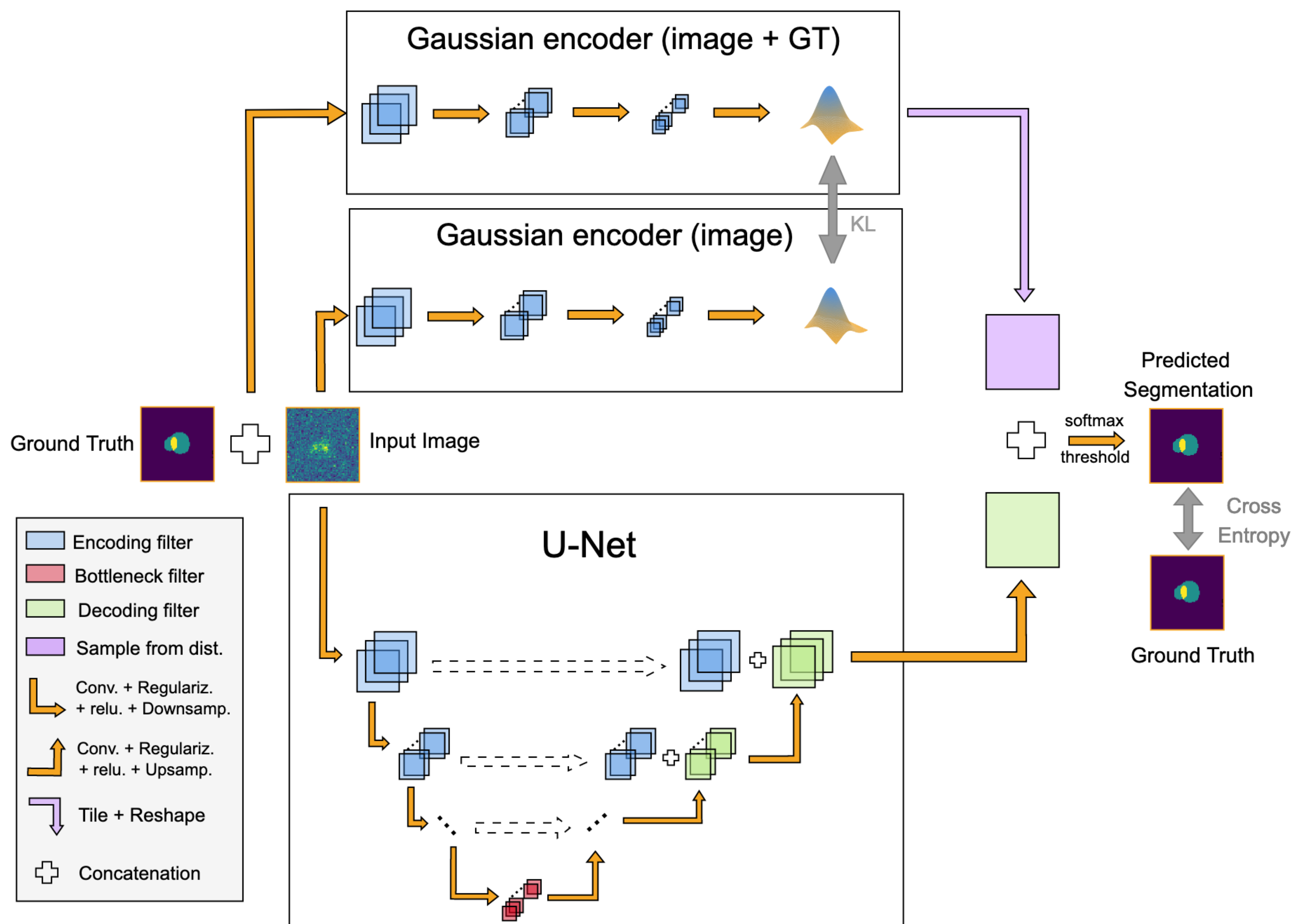
## Probabilistic Segmentation of Blended galaxies



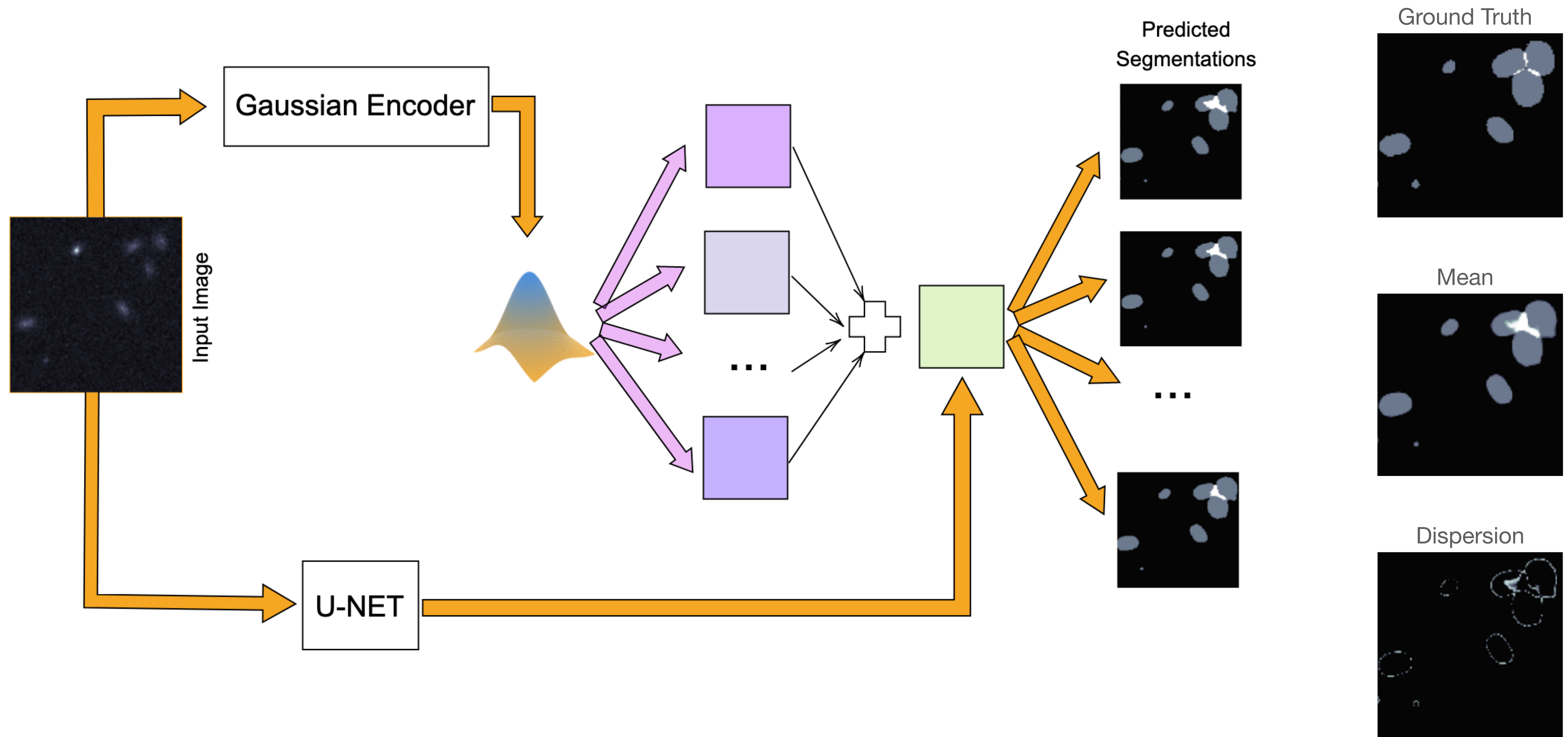


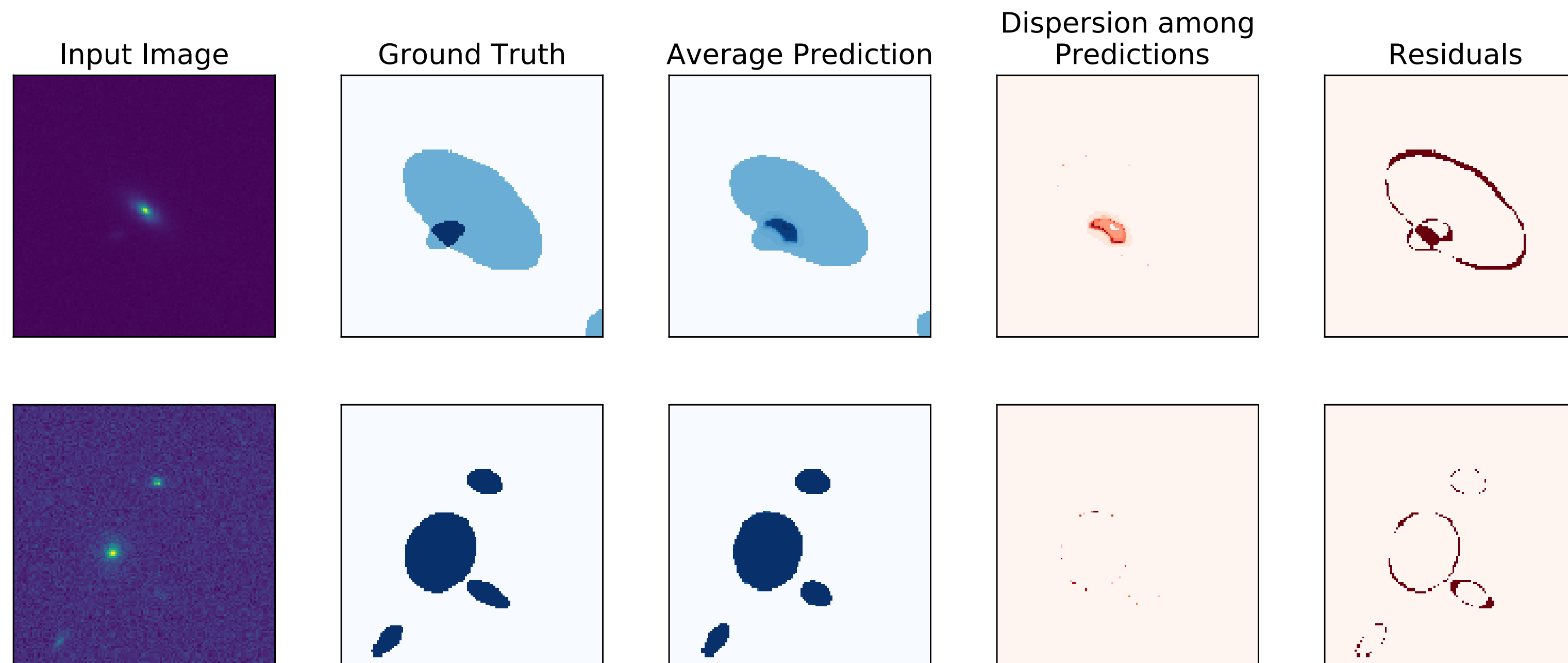




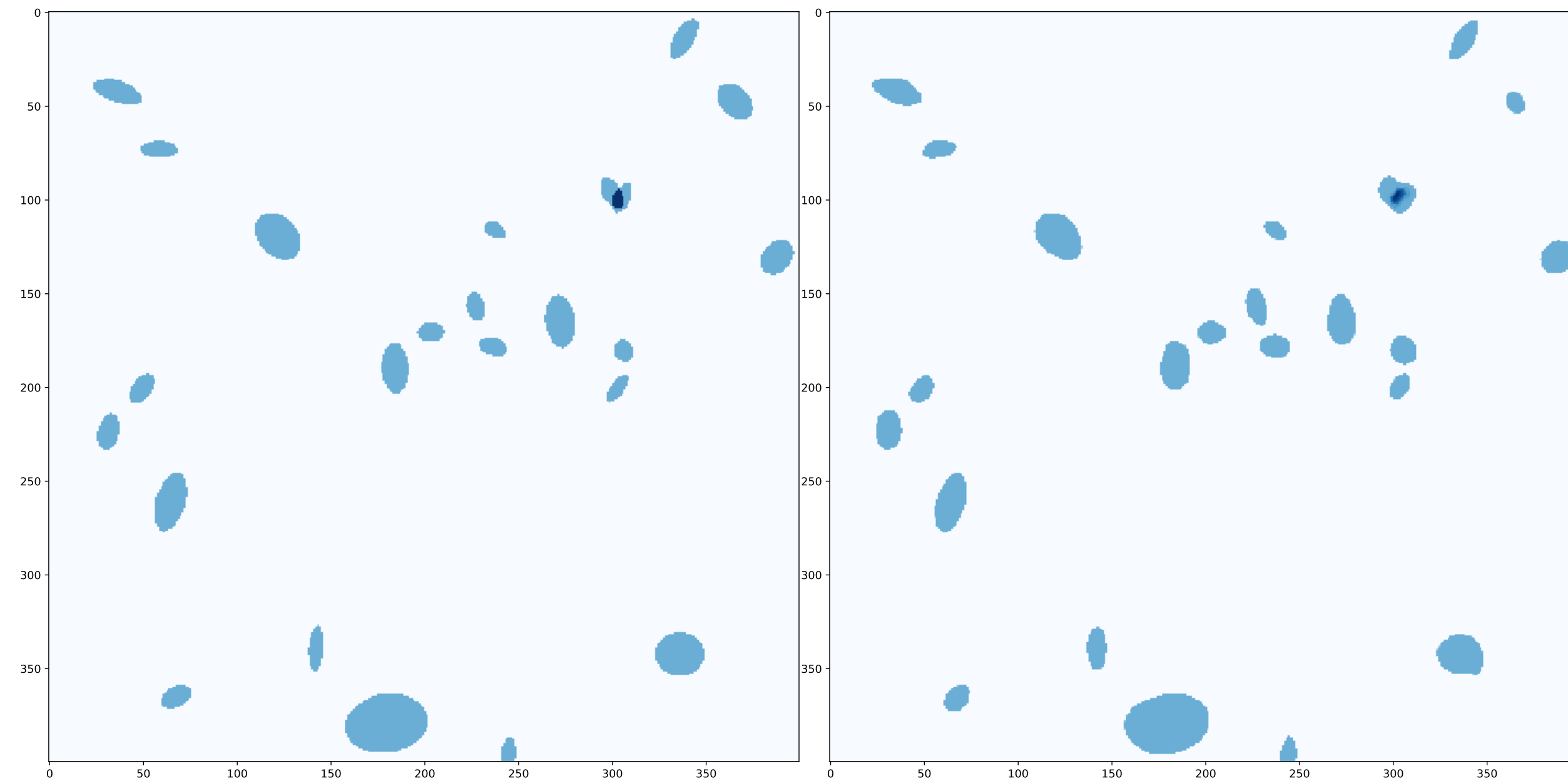




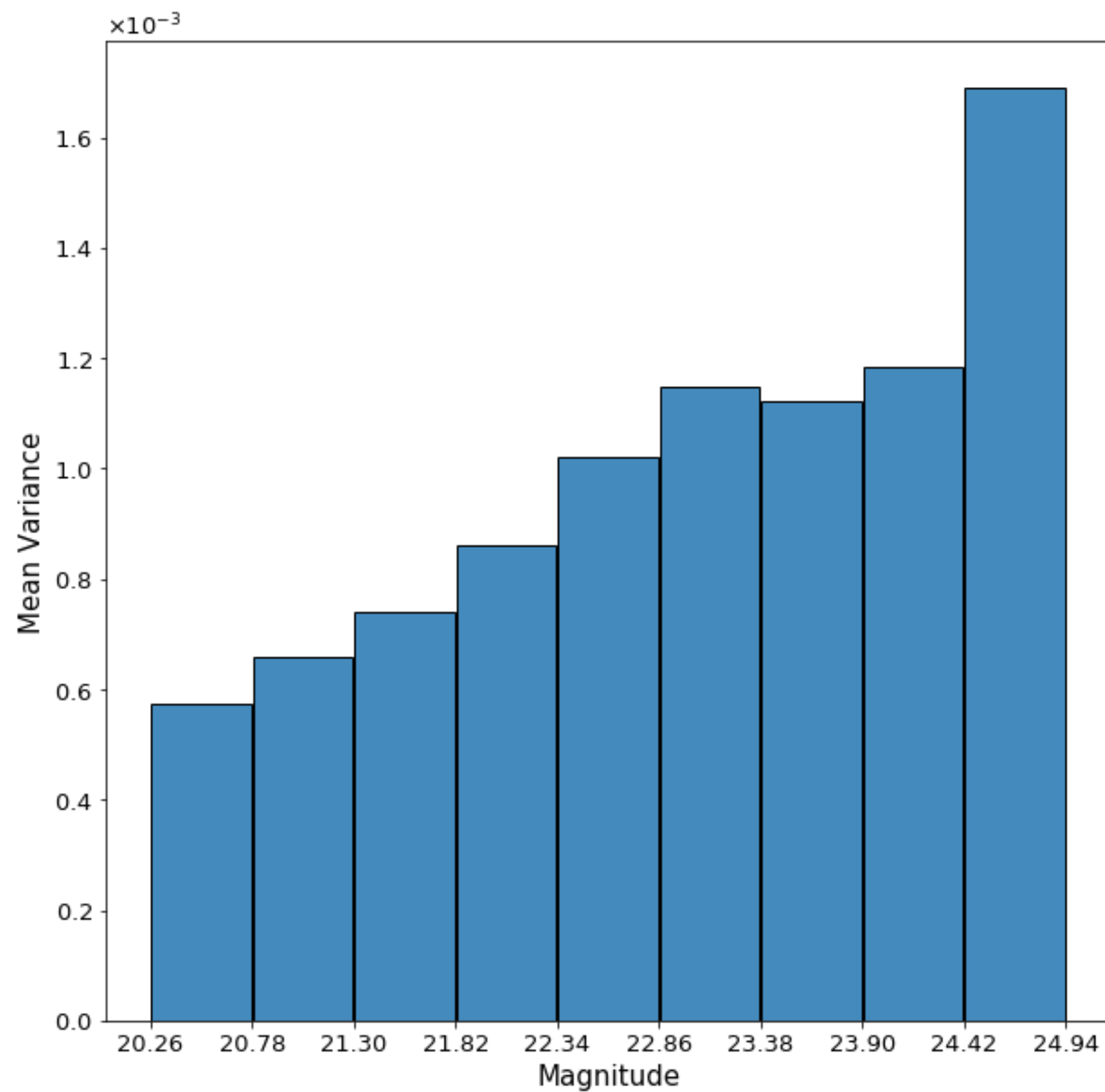








	Isolated	Blended
Completeness	99.1	87.3
Purity	98.5	93.6



**Thank you for your attention !**

