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От Сильченко О.К.

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Galaxy And Mass Assembly: Galaxy Morphology in the Green Valley, Prominent rings and looser Spiral Arms

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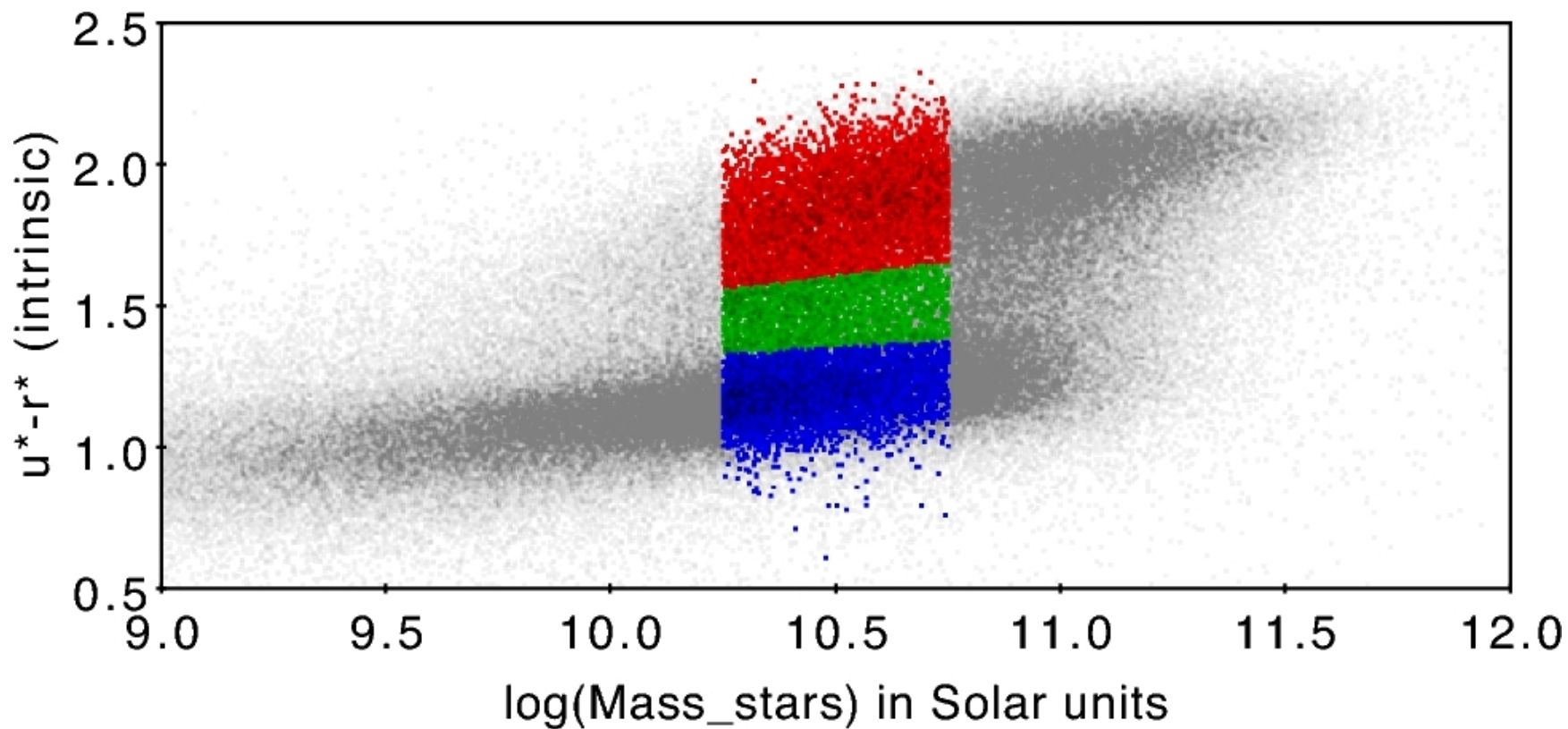
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Предыстория: Bremer+(2018)



А это нынешняя выборка для KiDS

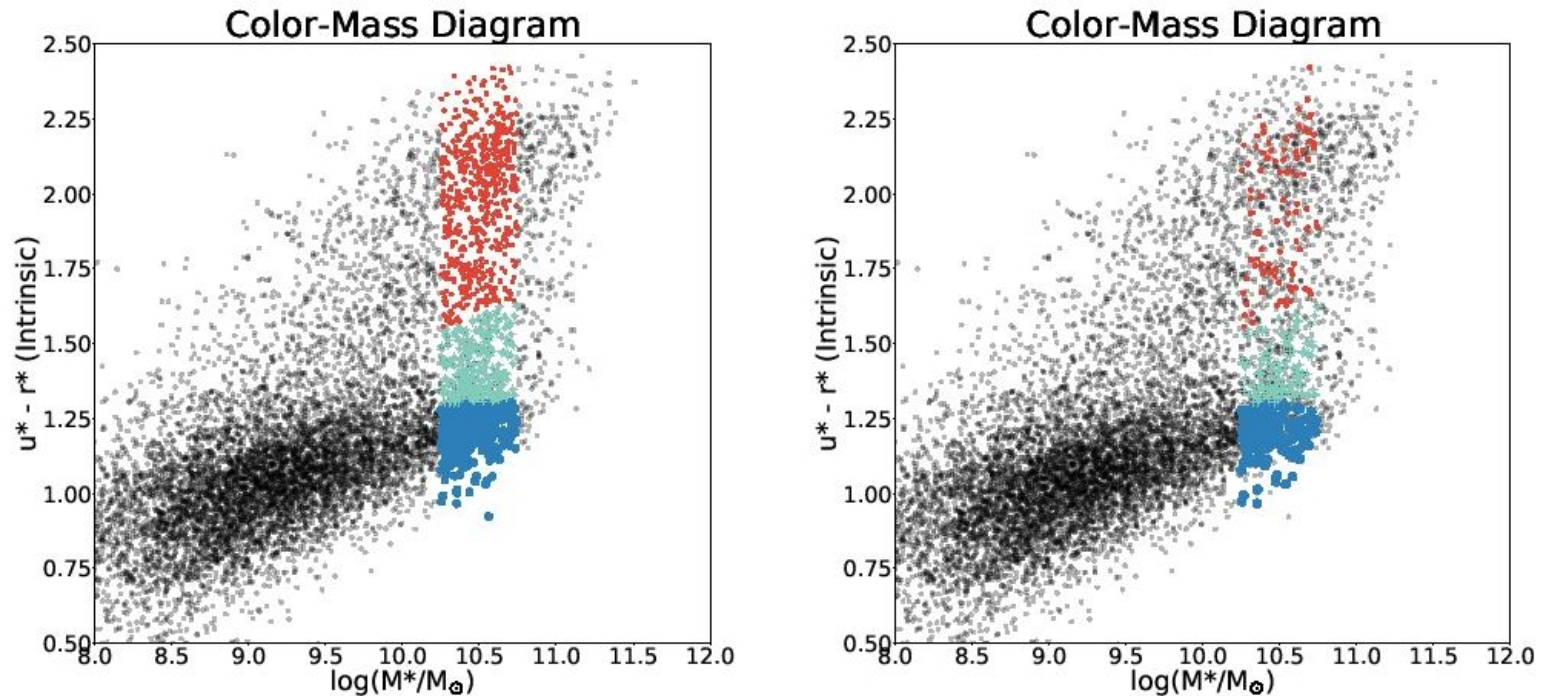


Figure 2. These plots represent all the GAMA galaxies in our mass range ($10.25 < \log(M_*/M_\odot) < 10.75$) colour-coded for their classification. We use the limits from [Bremer et al. \(2018\)](#) to select red, green and blue galaxies. The left panel represents all the respective galaxies in their mass ranges before further data selection. The right panel shows all galaxies with any votes between .1 and 1 for not being seen edge on and votes between .3 and 1 for spiral features. The right image represents our current data selection.

Чтобы граждане видели детали, ограничили красное смещение

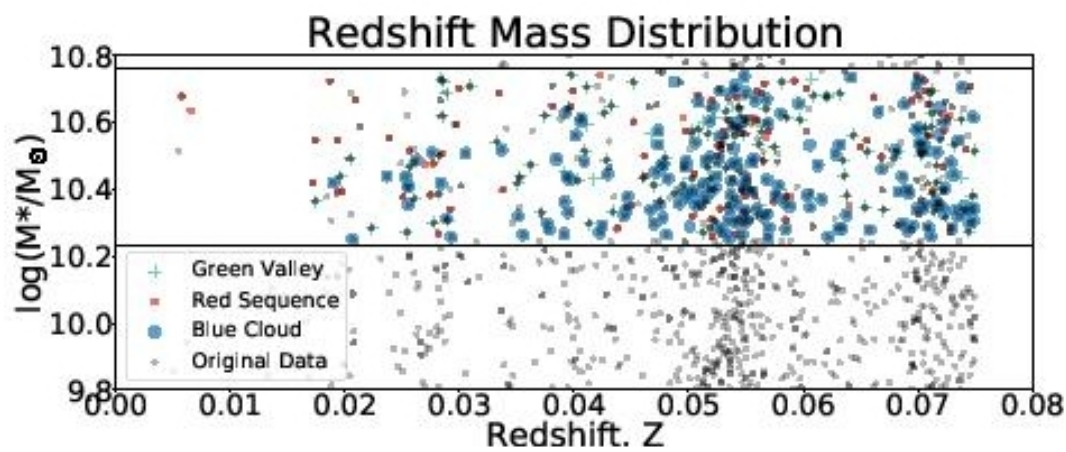


Figure 3. A scatter plot of the blue, green, and red galaxies in our sample extracted from GAMA to compare to GZ voting. The coloured galaxies represent the 396 galaxies that composed our selected sample represented by the right graph of Figure 2. The GAMA sample is taken for $10.25 < \log(M_*/M_\odot) < 10.75$ at $z \leq 0.075$, which is the redshift limit of the GZ selection from KiDS. The colour criteria are from [Bremer et al. \(2018\)](#).

Результаты: в зеленой долине доминируют кольцевые структуры

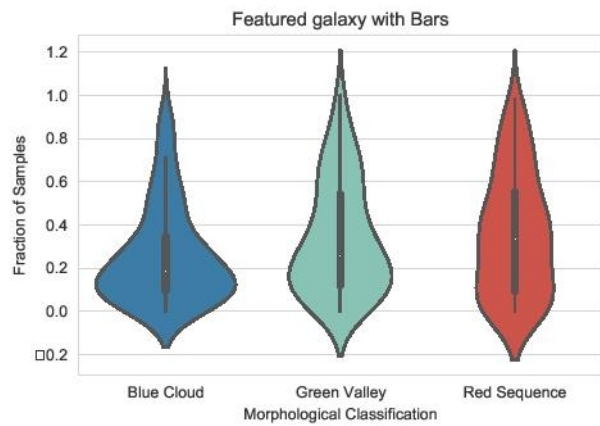


Figure 5. A histogram of the fraction of votes in favor of classifying galaxies as featured with a bar (T02 in the GZ questionnaire). The difference between the 3 groups is nearly equally as distinguishable with K-S values of 0.16 for green valley and blue cloud, 0.10 for green valley and red sequence, and 0.24 for blue cloud and red sequence. The significance from p-values is 6.14×10^{-02} , 6.22×10^{-01} , and 1.25×10^{-03} respectively. This confirms that the 3 groups are statistically variant. The violin plots represent the same data

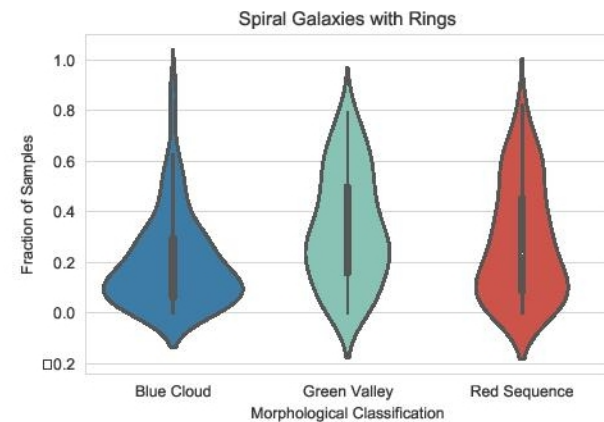
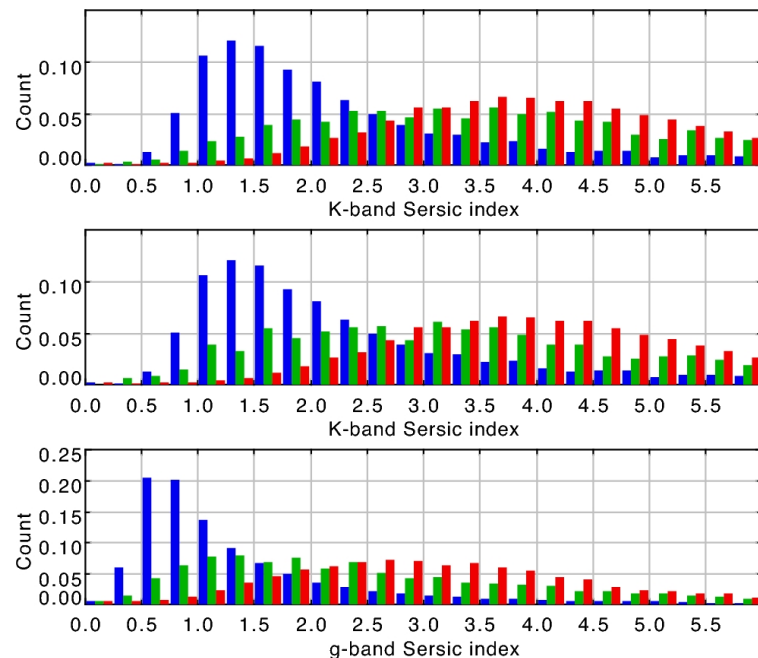
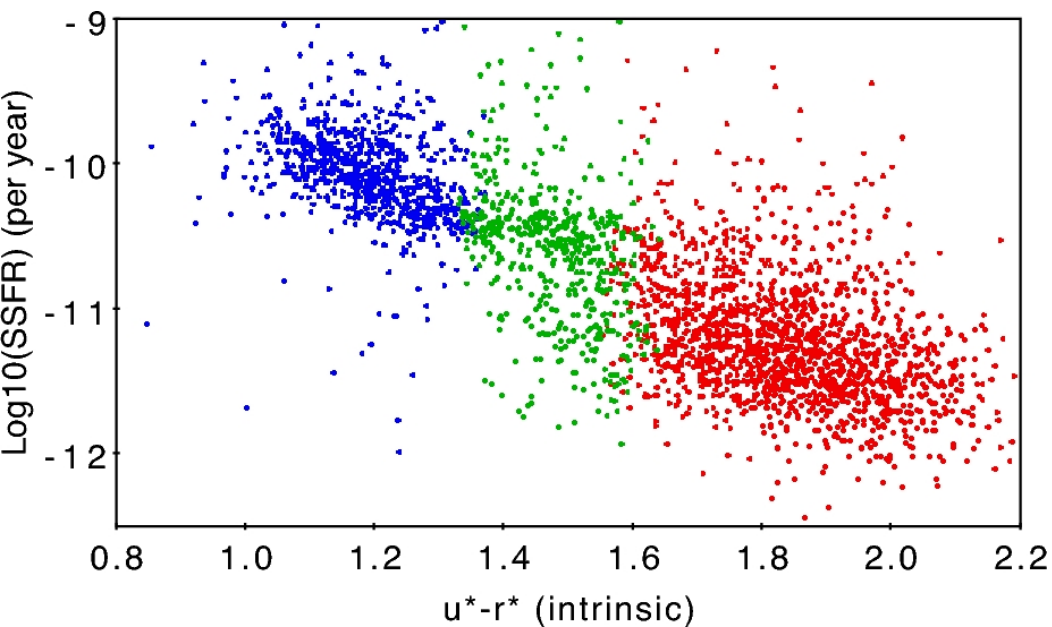


Figure 12. A histogram of the fraction of votes labeling galaxies as featured with rings (T06 in the GZ questionnaire). The green valley is distinguishable from the blue cloud with a K-S value of 0.32. The green valley continues to differ from the red sequence with a K-S value of 0.18; while the red sequence to blue cloud difference has a K-S value of 0.21. The significance p-values are 2.92×10^{-06} , 6.31×10^{-02} , and 7.55×10^{-03} respectively. This is the first time we observe a difference in the location of the green valley data. Here, it is no longer in between the blue cloud and the red sequence, thus presenting behaviour of its own.

Что все-таки подавляет звездообразование (если ...)?



Bremer+(2018)