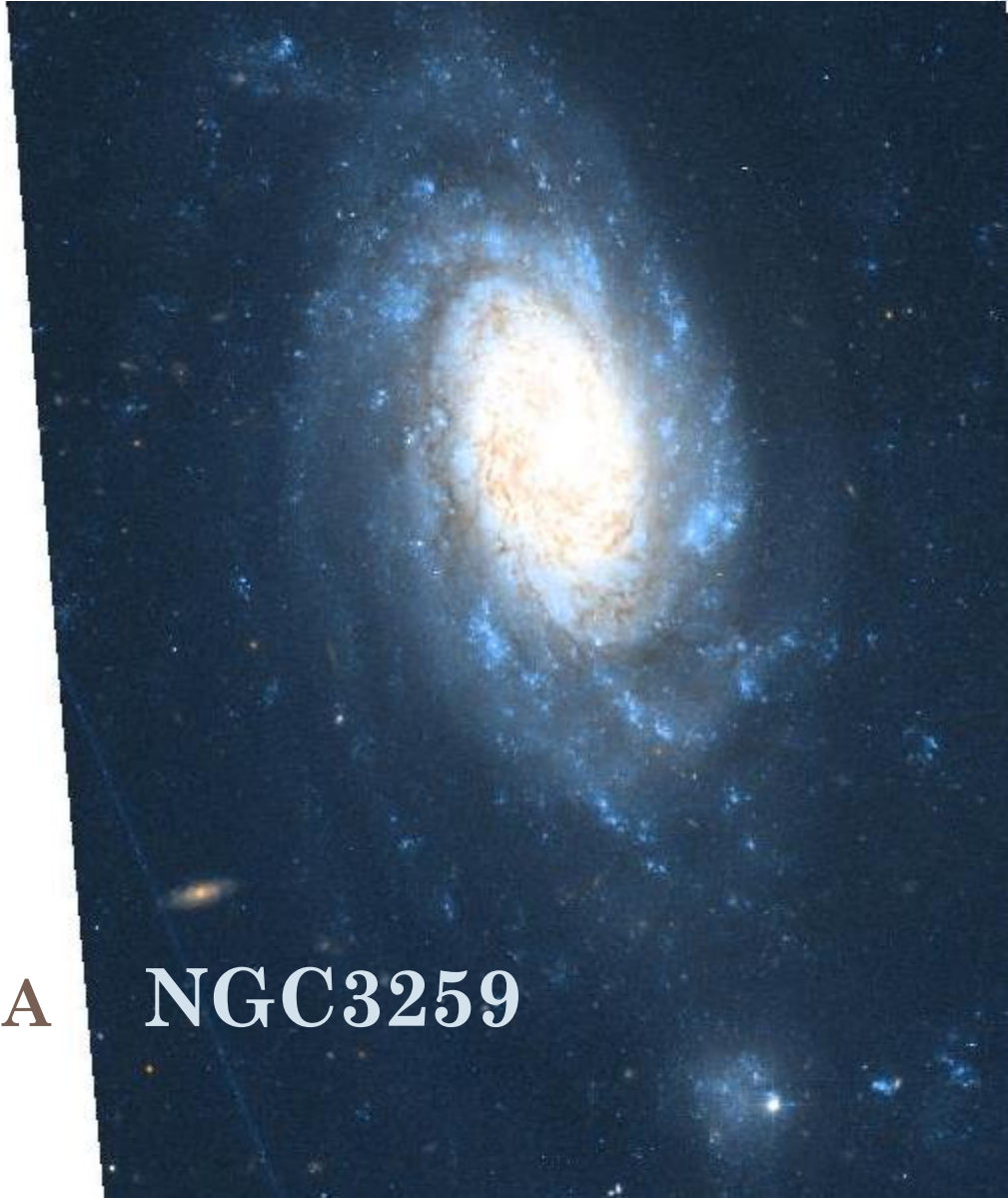


ГАЛАКТИКА

NGC3259

Ирина Смирнова-Пинчукова  
Магистрантка 2-ого года обучения



# NGC 3259

- ❖ Redshift 0.005624  
nearby galaxy
- ❖ Seyfert 2
- ❖ Low  $\sigma = 40,8 \pm 18,5$   
(van den Bosch et al. 2015)
- ❖  $\log (M_{\text{NC}}/M_{\text{sun}}) = 7,2$   
(Seth et al. 2008)
- ❖  $M_{\text{BH}} < 10^6 M_{\text{Sun}}$

MRK 79

NGC 450

NGC 672

NGC 2748

NGC 2960

NGC 3177

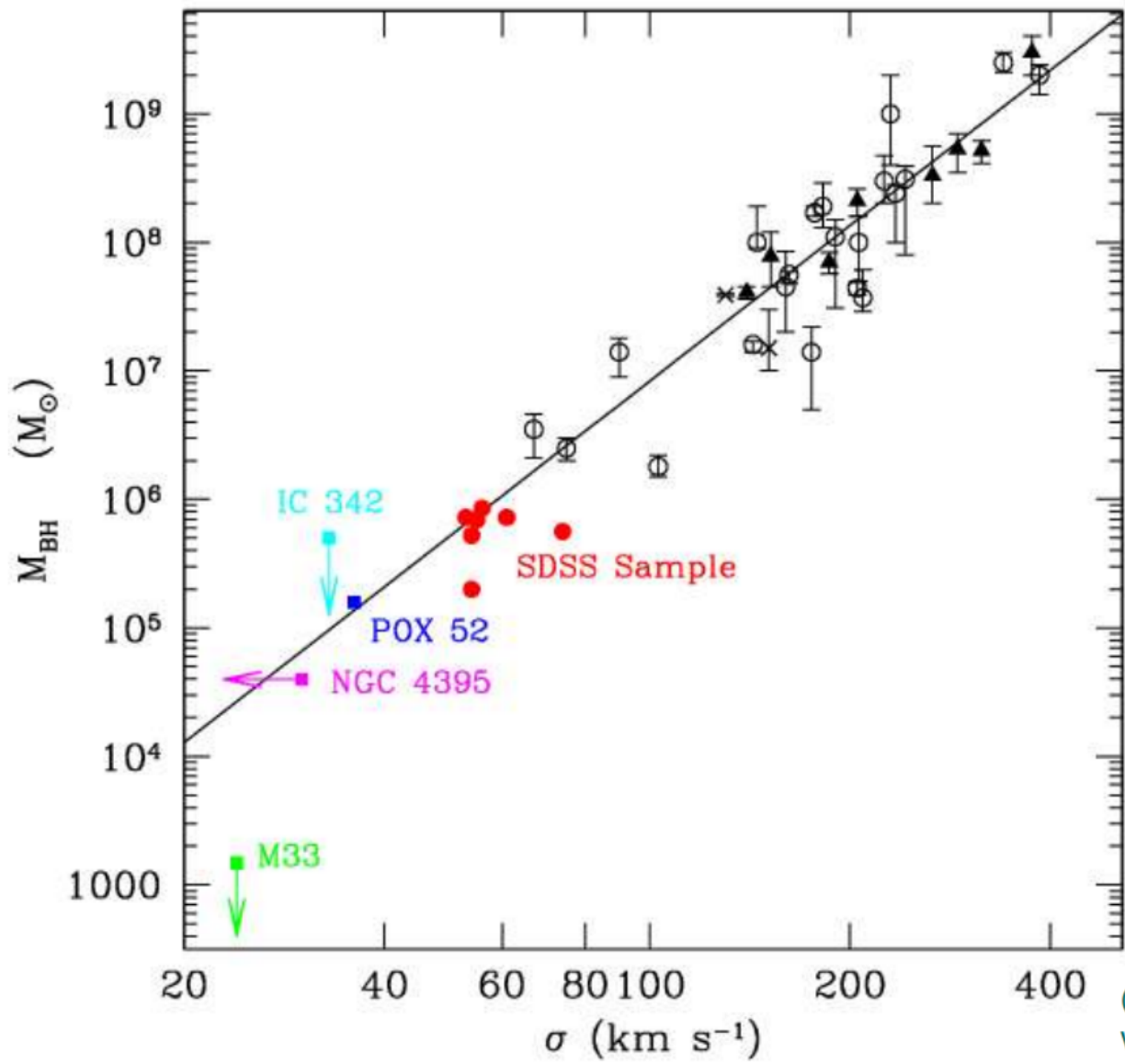
NGC 3259

NGC 4750

NGC 5548

UGC 11920

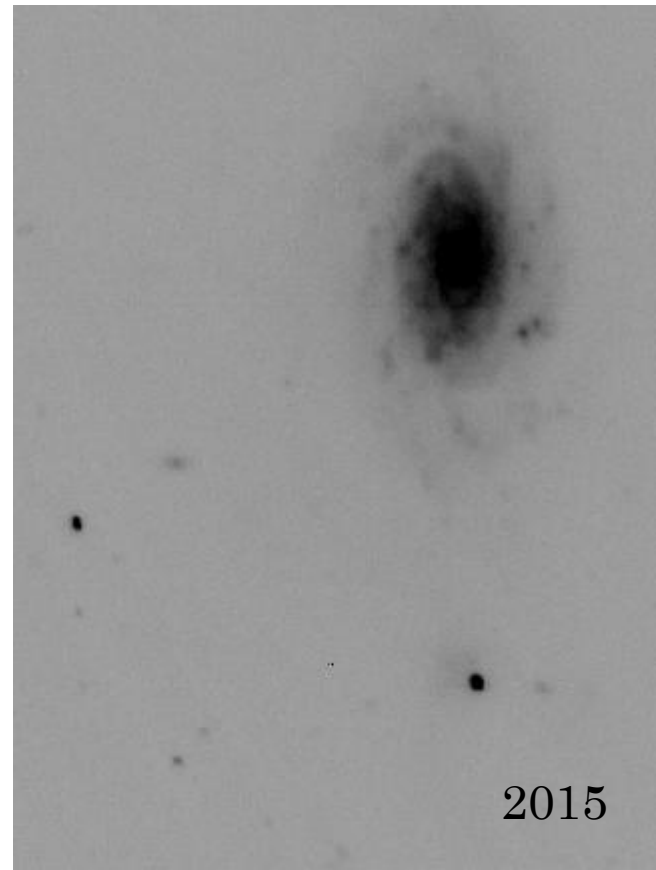
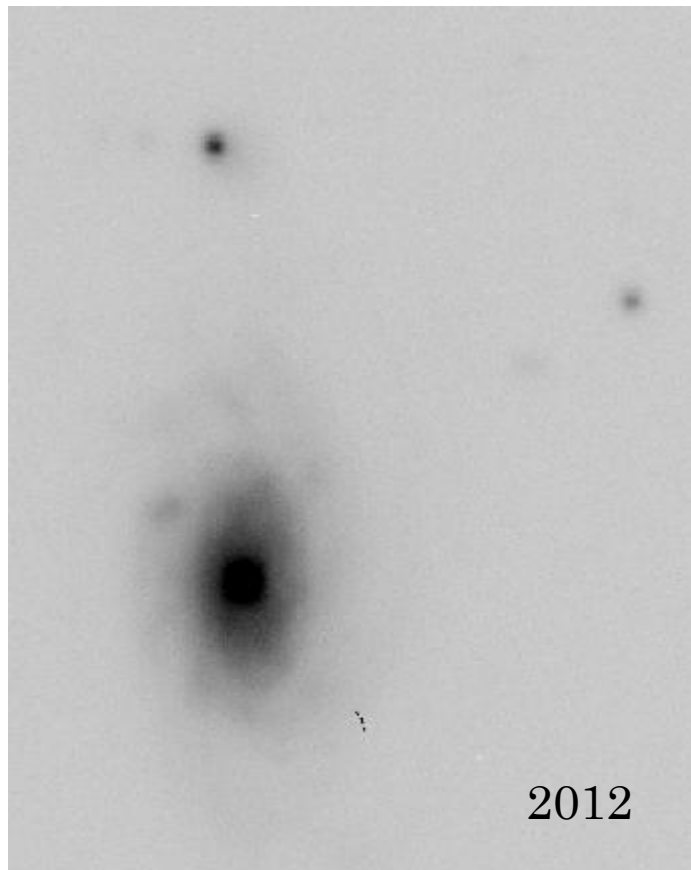
UGC 12732



(Barth, Greene, & Ho, work in progress...)

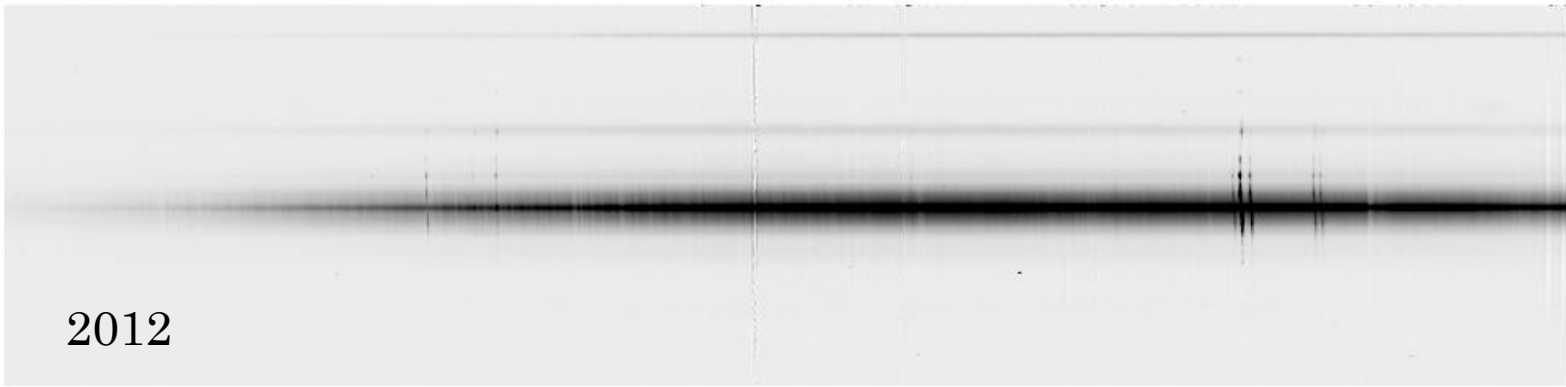


Дата	РА	$T_{\text{exp}}$	Решетка	Seeing
19.02.2012	195	12x1200	1200@540	2.4-2.8
23.01.2015	15	5x900	1200R	1.2

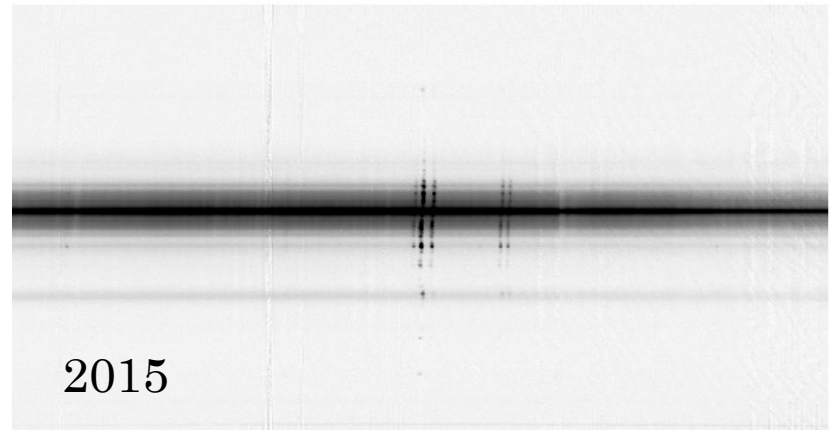


НАБЛЮДЕНИЯ





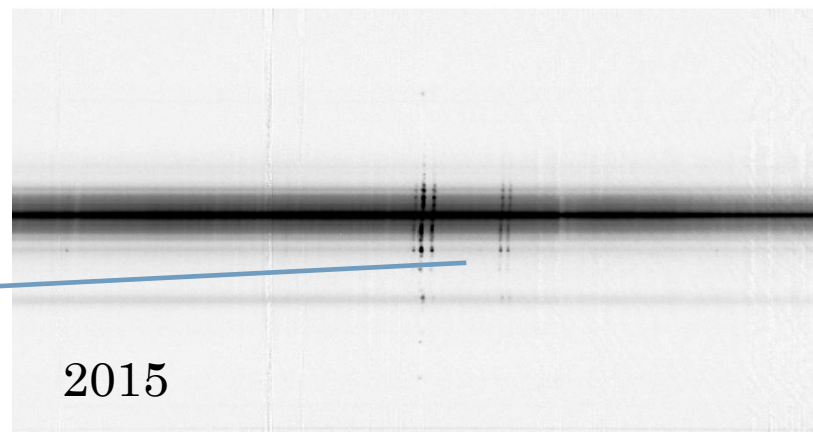
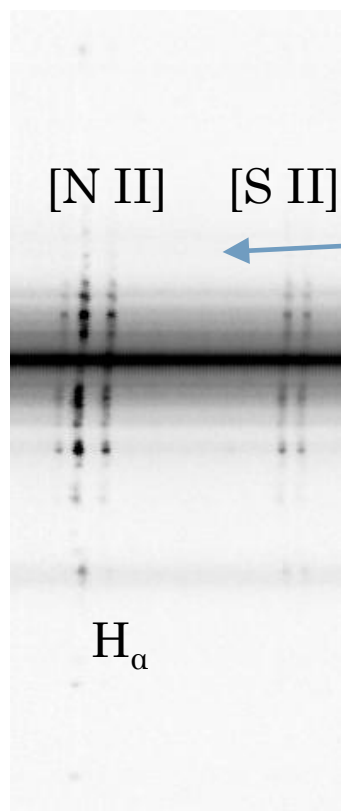
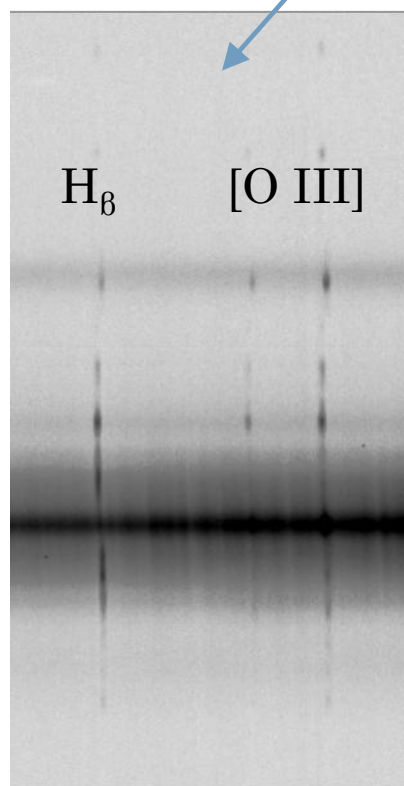
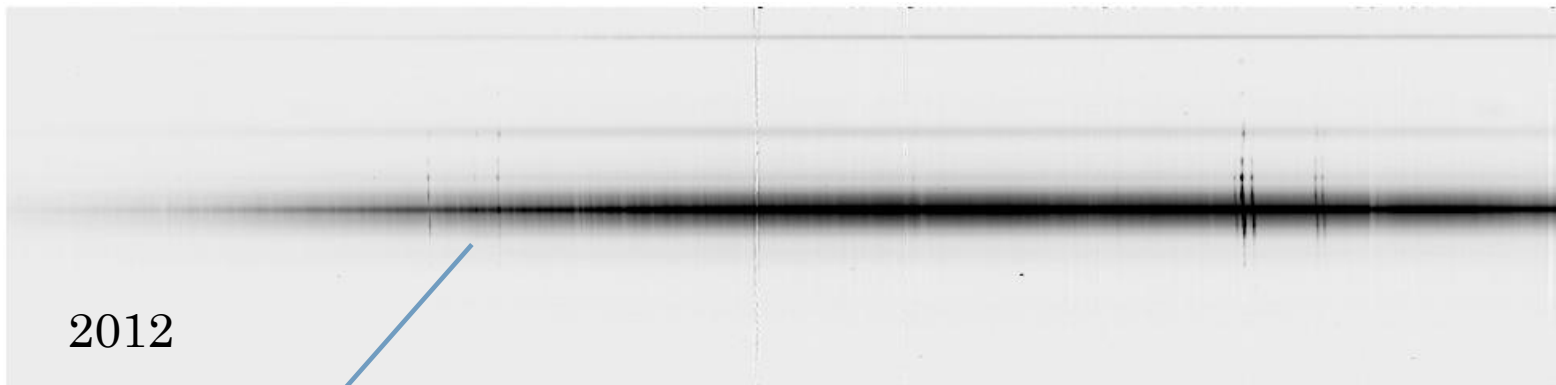
4000 ÷ 7280 Å



5800 ÷ 7390 Å

НАБЛЮДЕНИЯ





НАБЛЮДЕНИЯ



# ЭТАПЫ ПОСТ-ОБРАБОТКИ

1. Получение модели  
звездного населения

2. Получение  
эмиссионного спектра

## Результаты ULySS

- Кривая вращения
- Кривая дисперсии
- Возраст
- Металличность

## Результаты эмиссии

- $H_{\beta}$
- [O III]
- $H_{\alpha}$
- [N II]
- [S II]

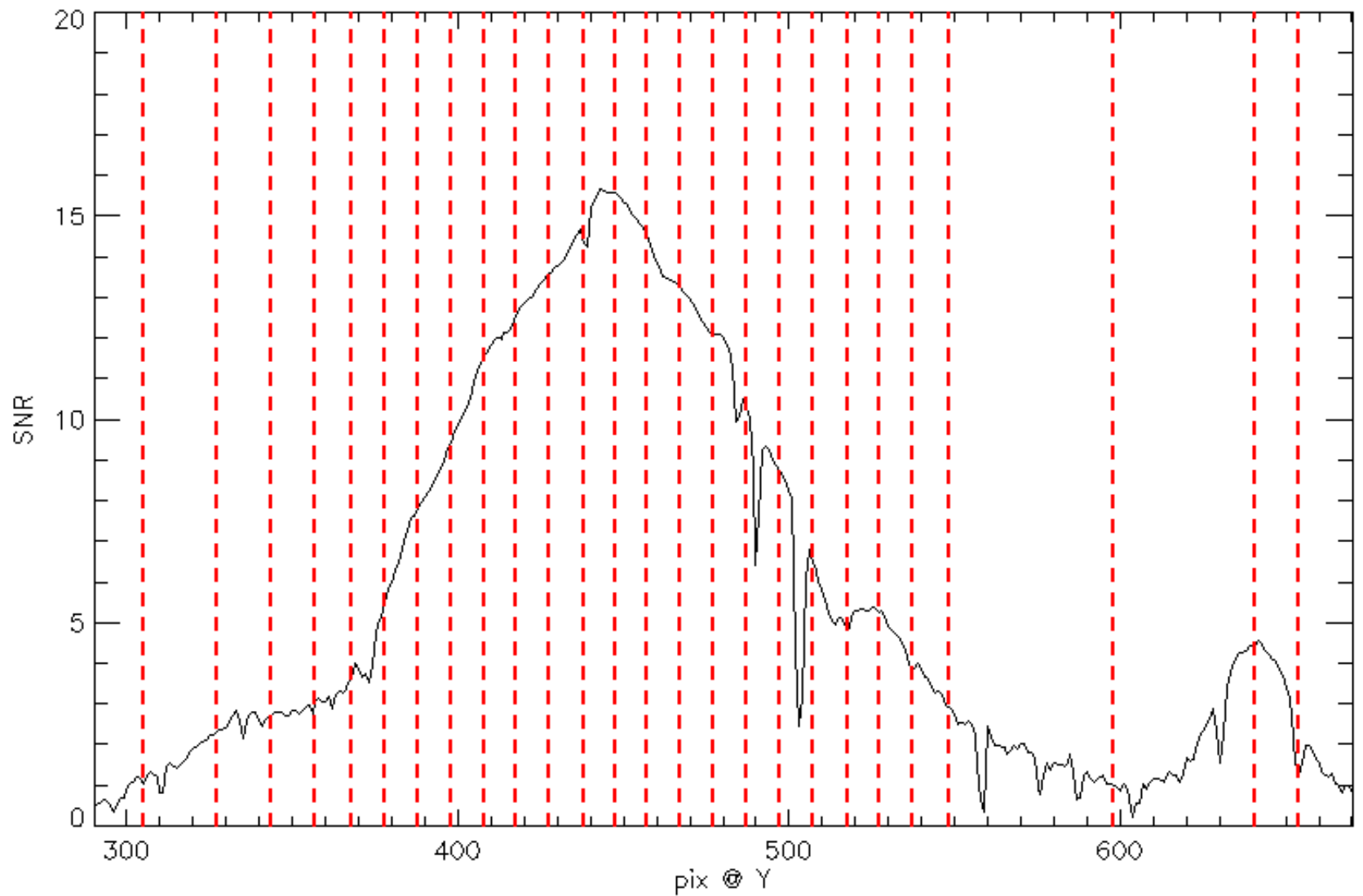
Adaptive

Galaxy

Fitting

And binning





The Number of Bins = 25

ОБРАБОТКА: БИННИНГ





ОБРАБОТКА: БИННИНГ



# ULYSS

University of

Lyon

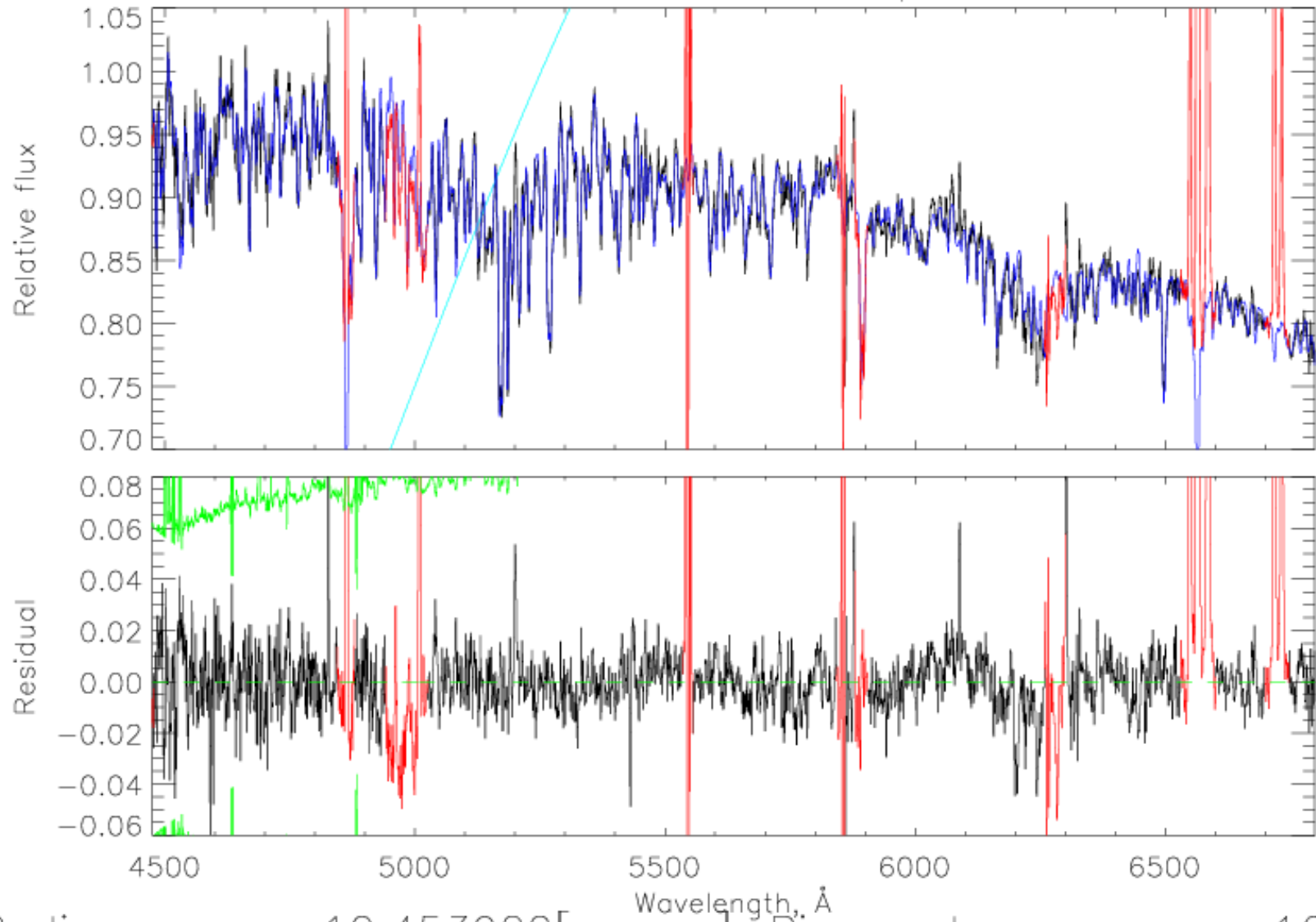
Spectroscopic analysis

Software

- ❖ Спектры звезд  $(T_{\text{eff}}; \log(g); [\text{Fe}/\text{H}])$
- ❖ Спектры галактик  $(\text{LOSVD}; \text{age}; [\text{Fe}/\text{H}])$
- ❖ Минимизация  $\chi^2$  между спектром и моделью
- ❖ Elodie.3.1 library  $3900 \div 6800 \text{ \AA}$
- ❖ Pegase.HR population model  $4000 \div 6800 \text{ \AA}$
- ❖ Документация и tutoriales

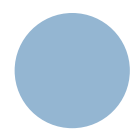


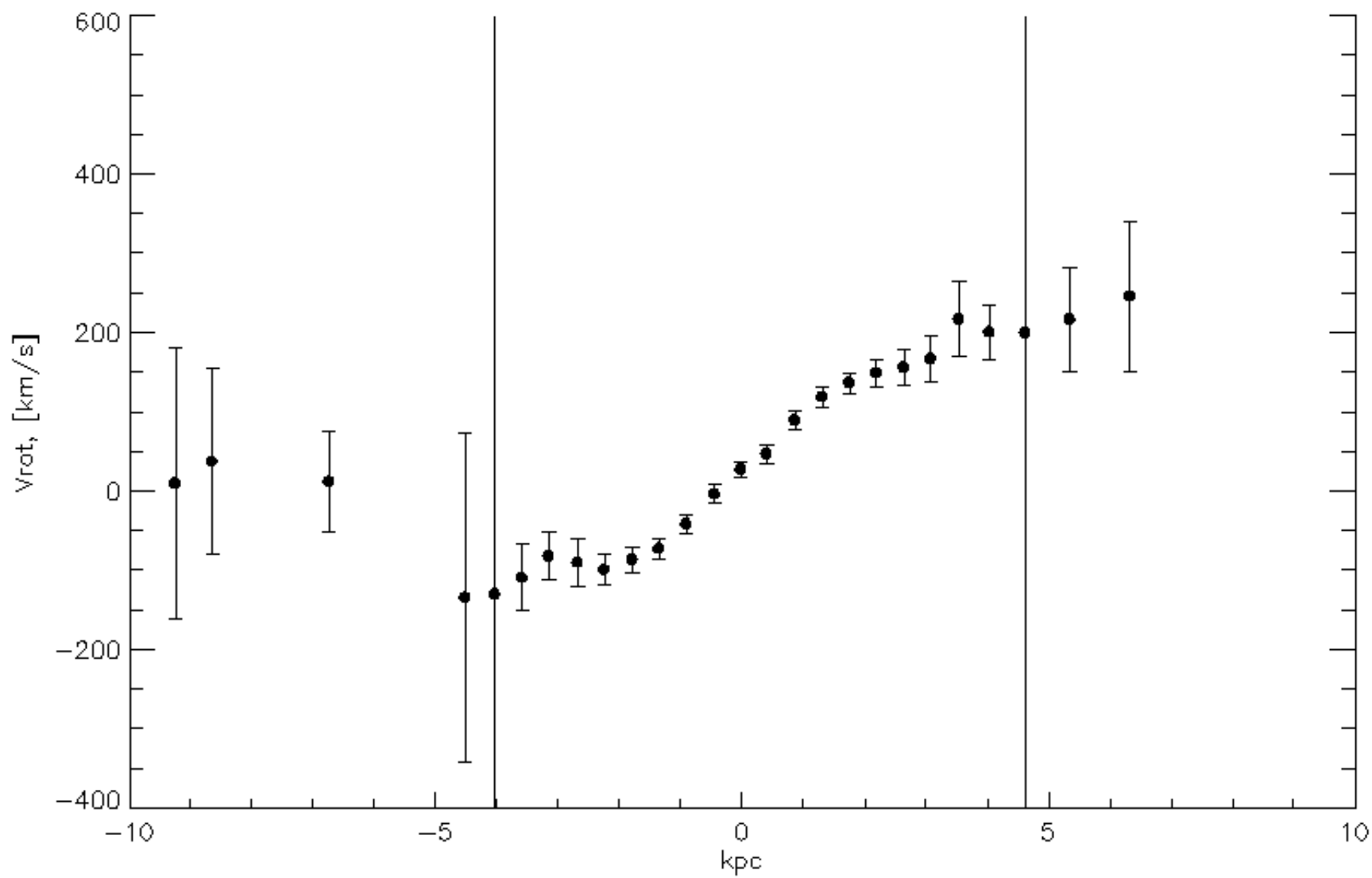
D:\Astrowork\SMBH\_Cher\n3259pa195\bin.fts



Radius= -10.453922[arcsec]; Bin number= 16

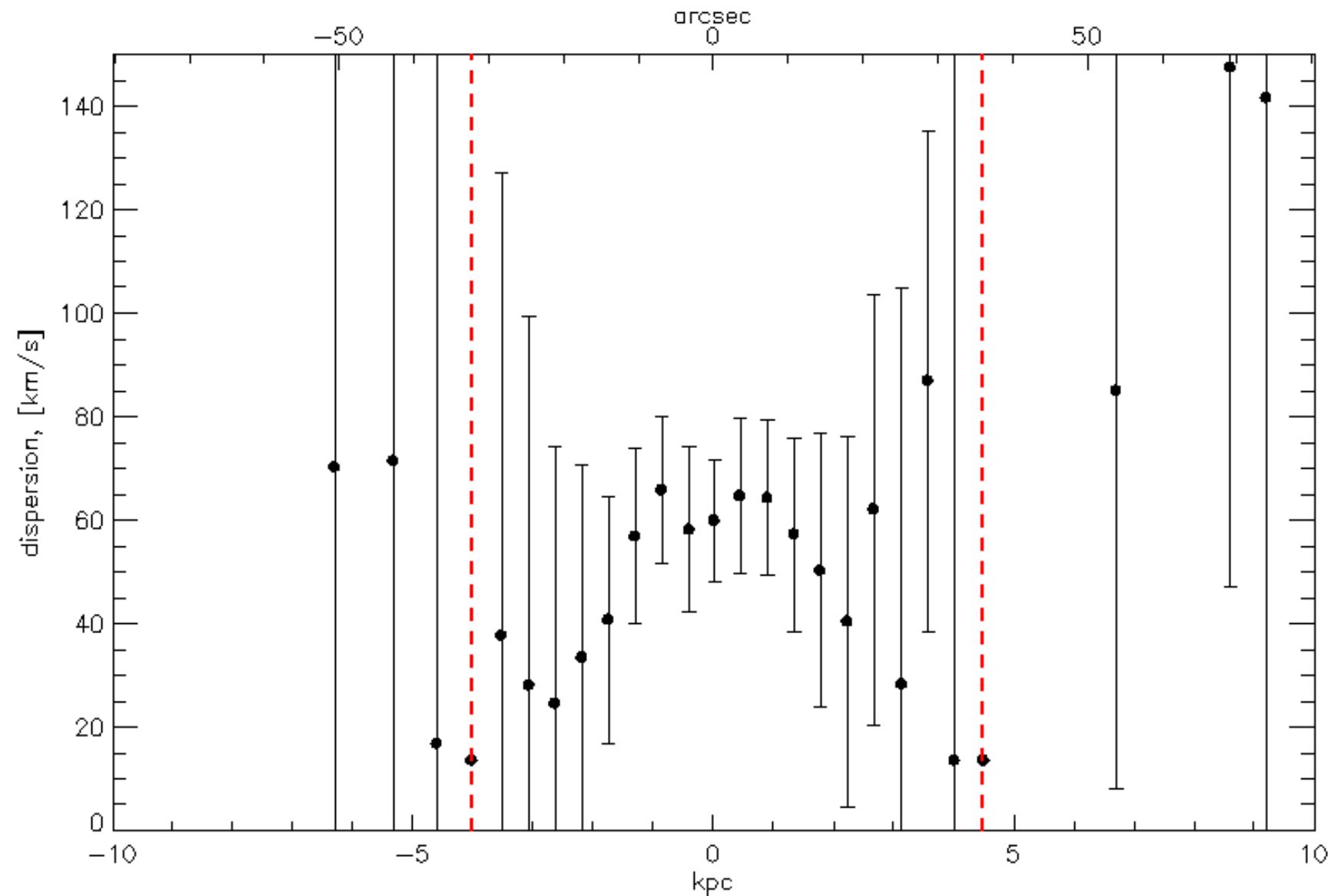
ОБРАБОТКА: ULYSS





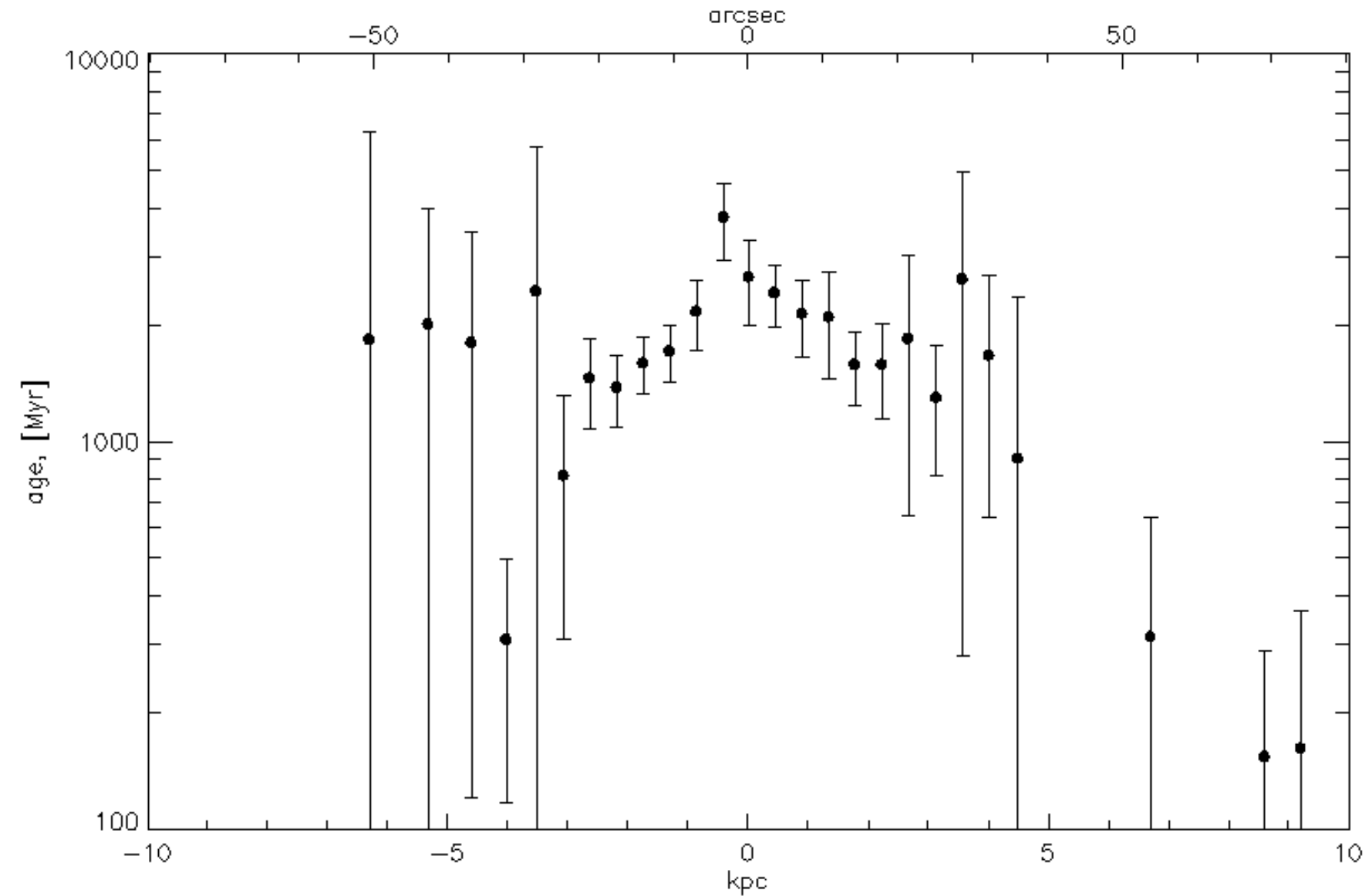
РЕЗУЛЬТАТЫ: ЗВЕЗДНОЕ НАСЕЛЕНИЕ



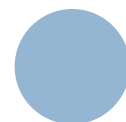


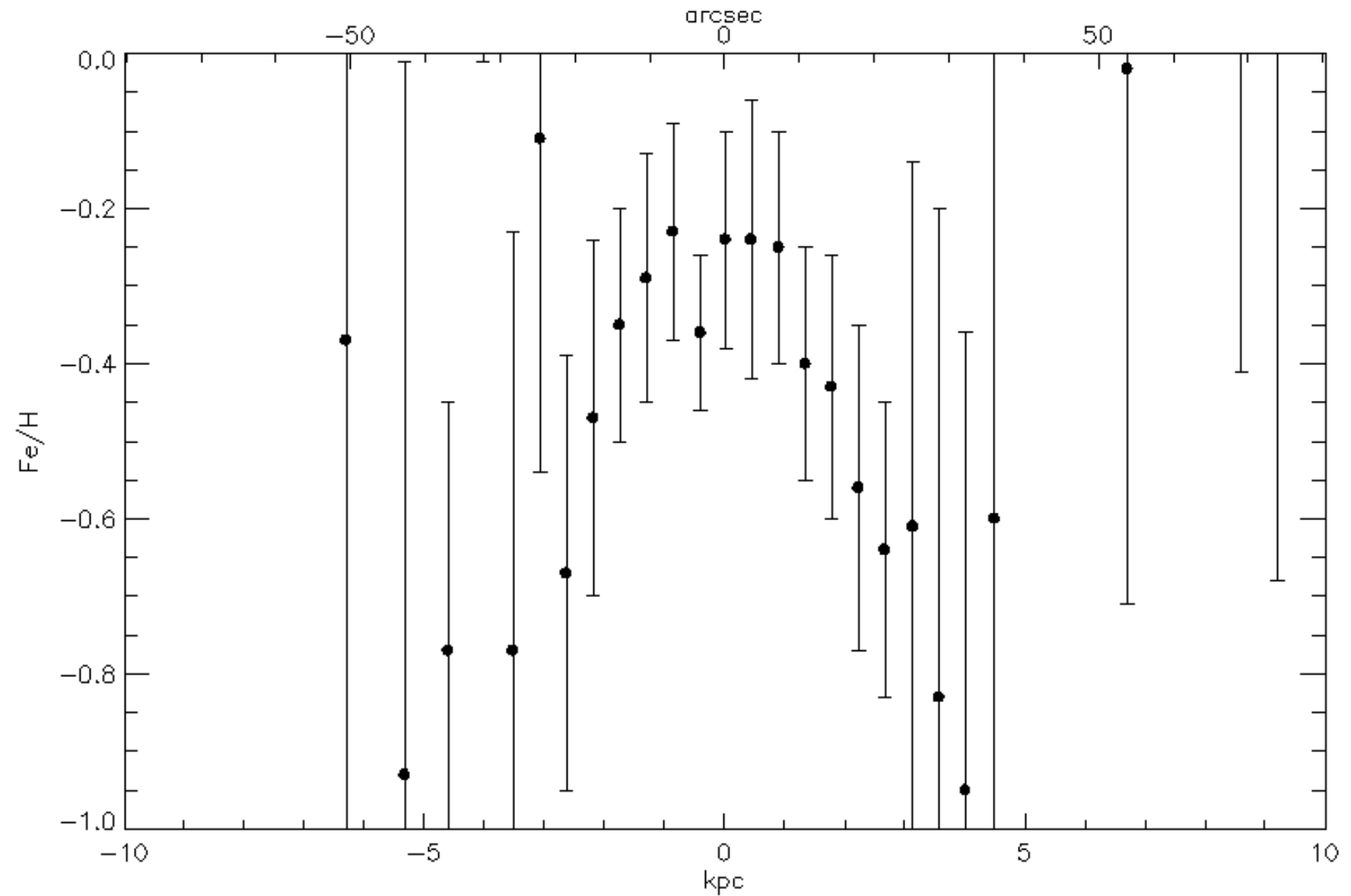
РЕЗУЛЬТАТЫ: ЗВЕЗДНОЕ НАСЕЛЕНИЕ





РЕЗУЛЬТАТЫ: ЗВЕЗДНОЕ НАСЕЛЕНИЕ

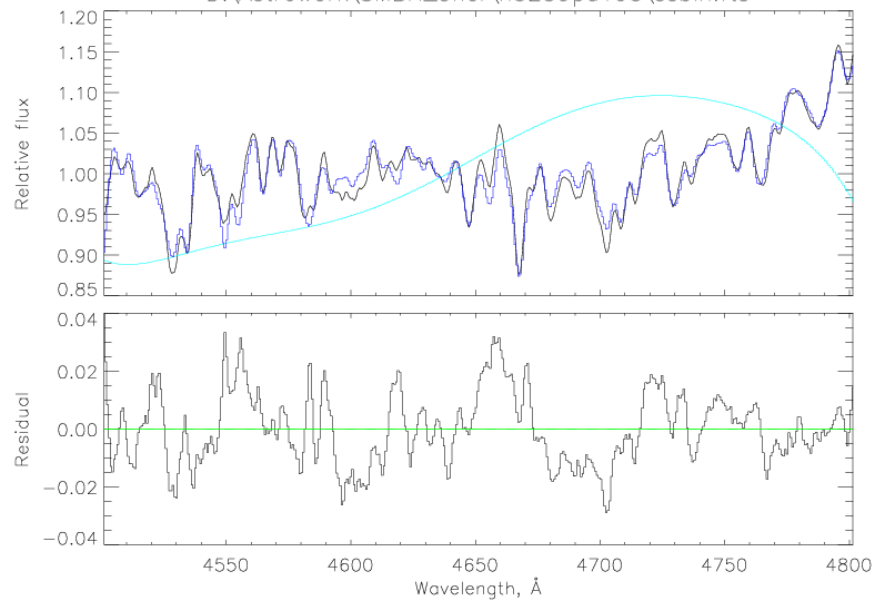




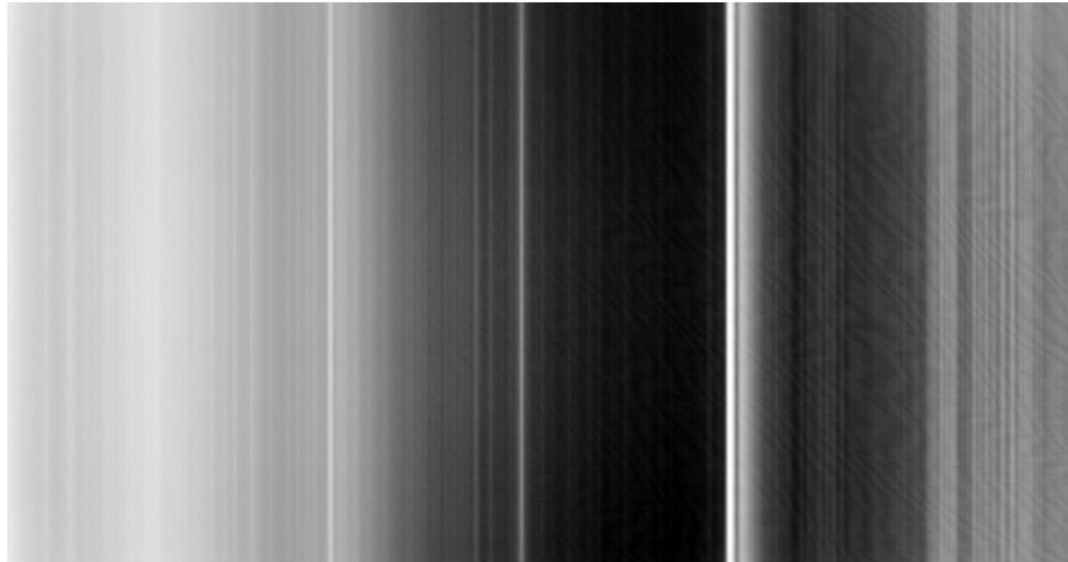
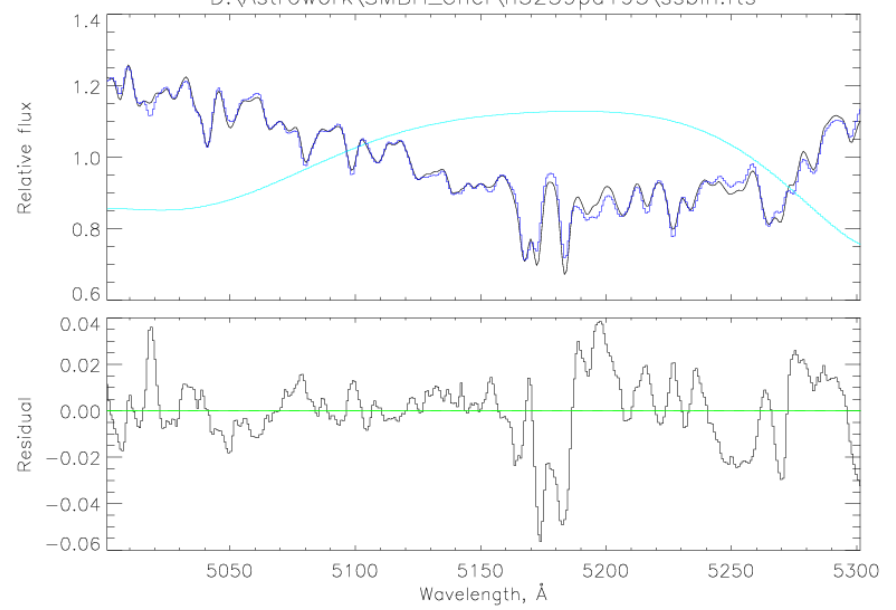
РЕЗУЛЬТАТЫ: ЗВЕЗДНОЕ НАСЕЛЕНИЕ



D:\Astrowork\SMBH\_Cher\n3259pa195\ssbin.fts



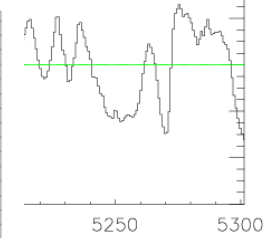
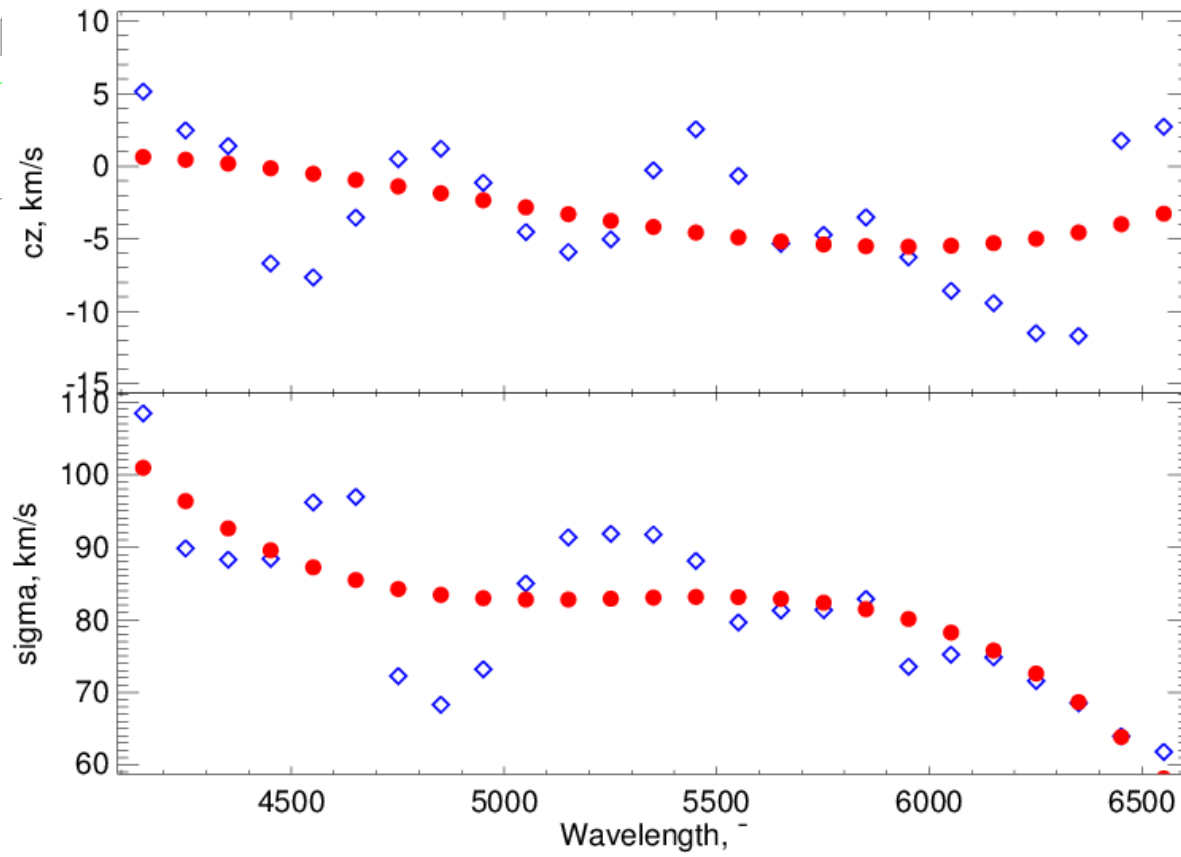
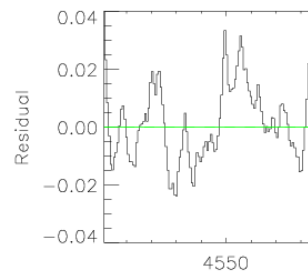
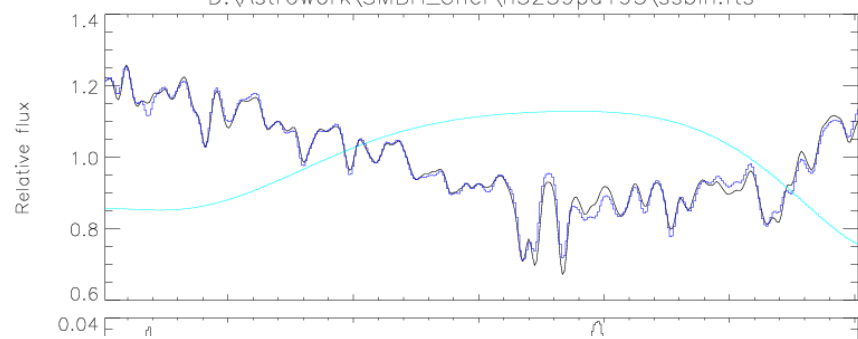
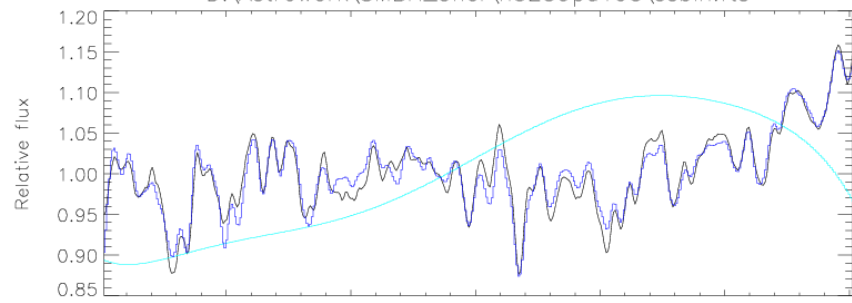
D:\Astrowork\SMBH\_Cher\n3259pa195\ssbin.fts



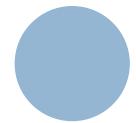
ULYSS, УЧЕТ LSF

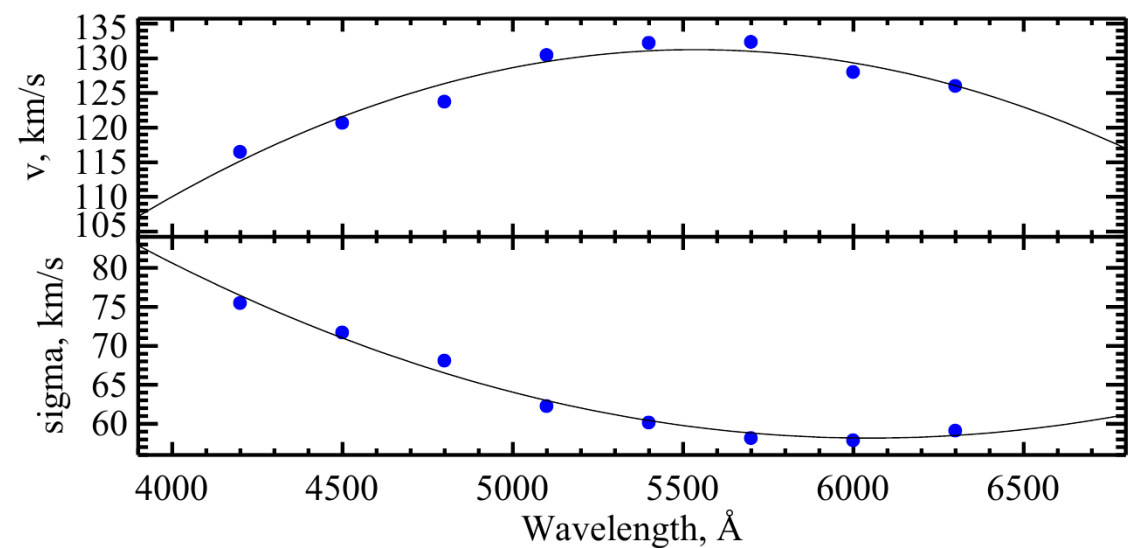
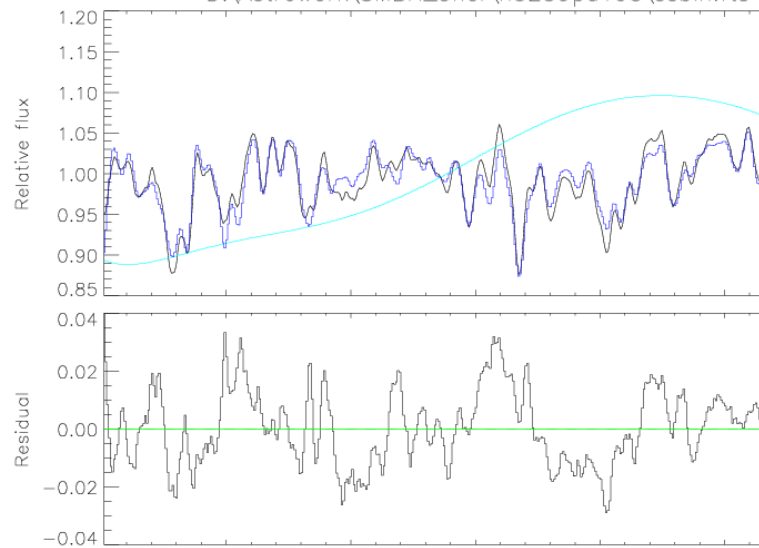




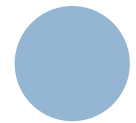
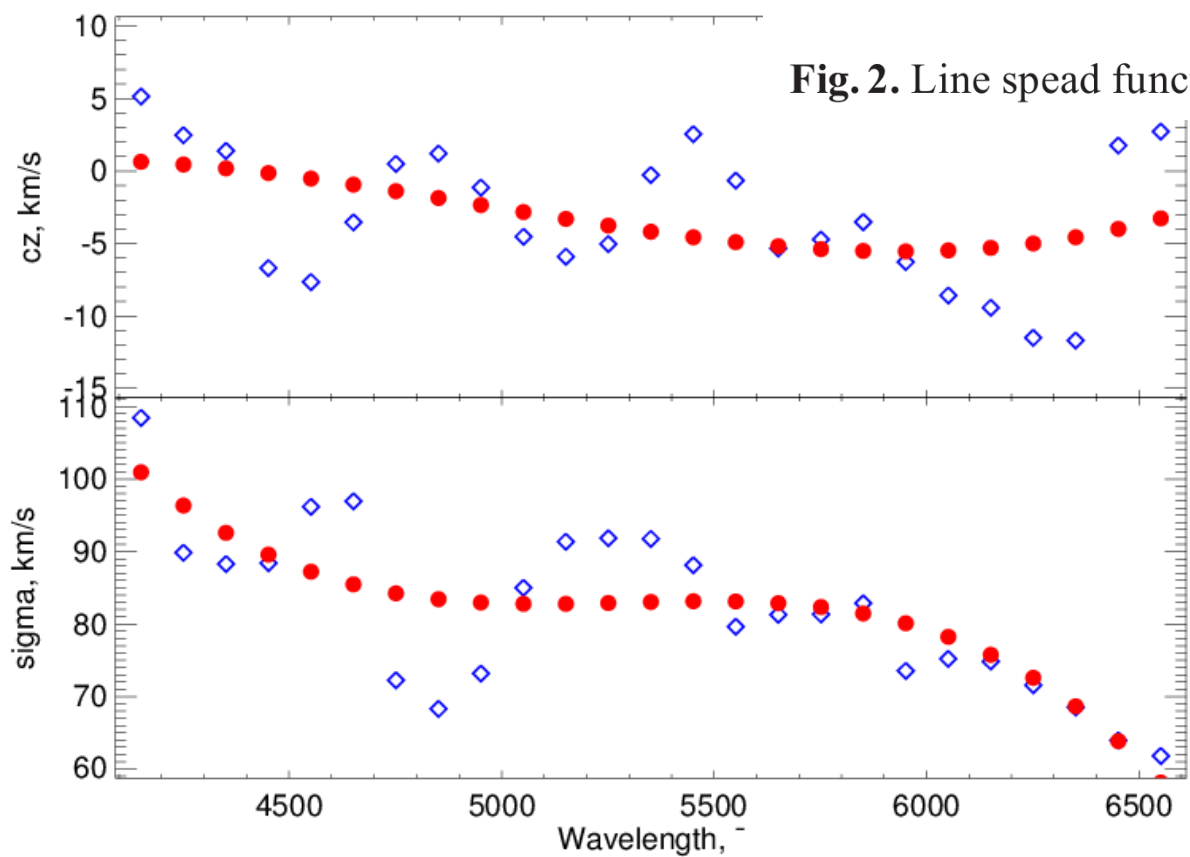


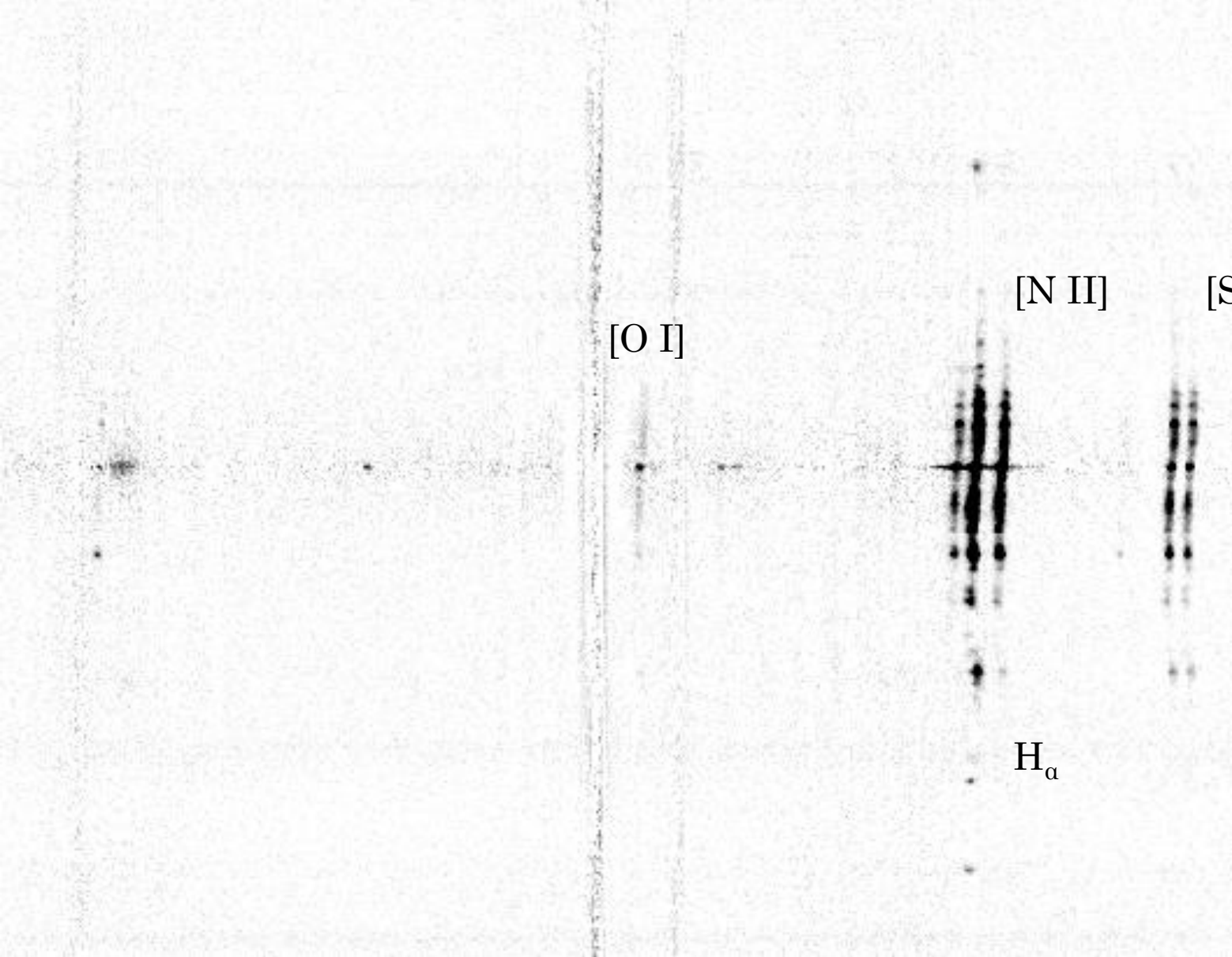
ULYSS,  $\gamma$ ЧЕТ LSF





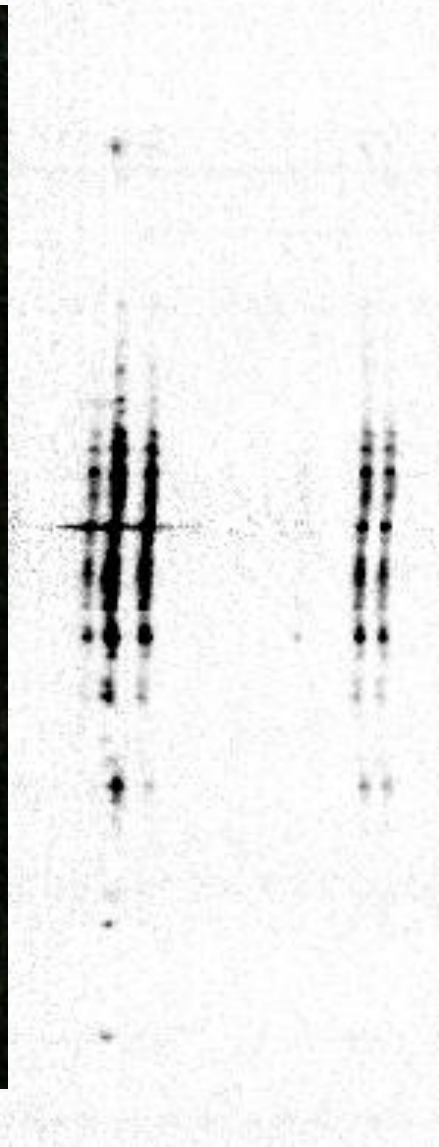
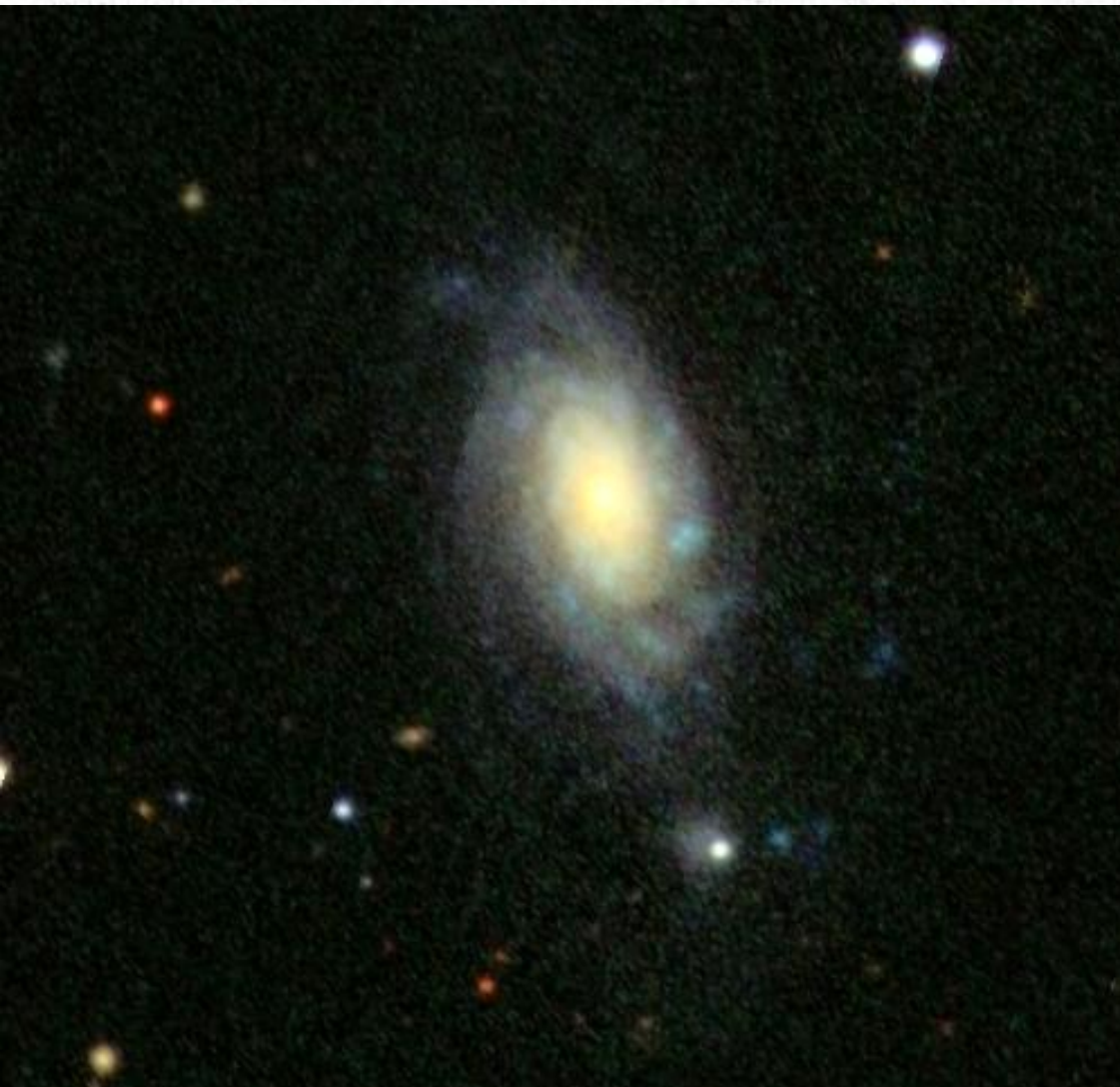
**Fig. 2.** Line speed function of the SDSS.





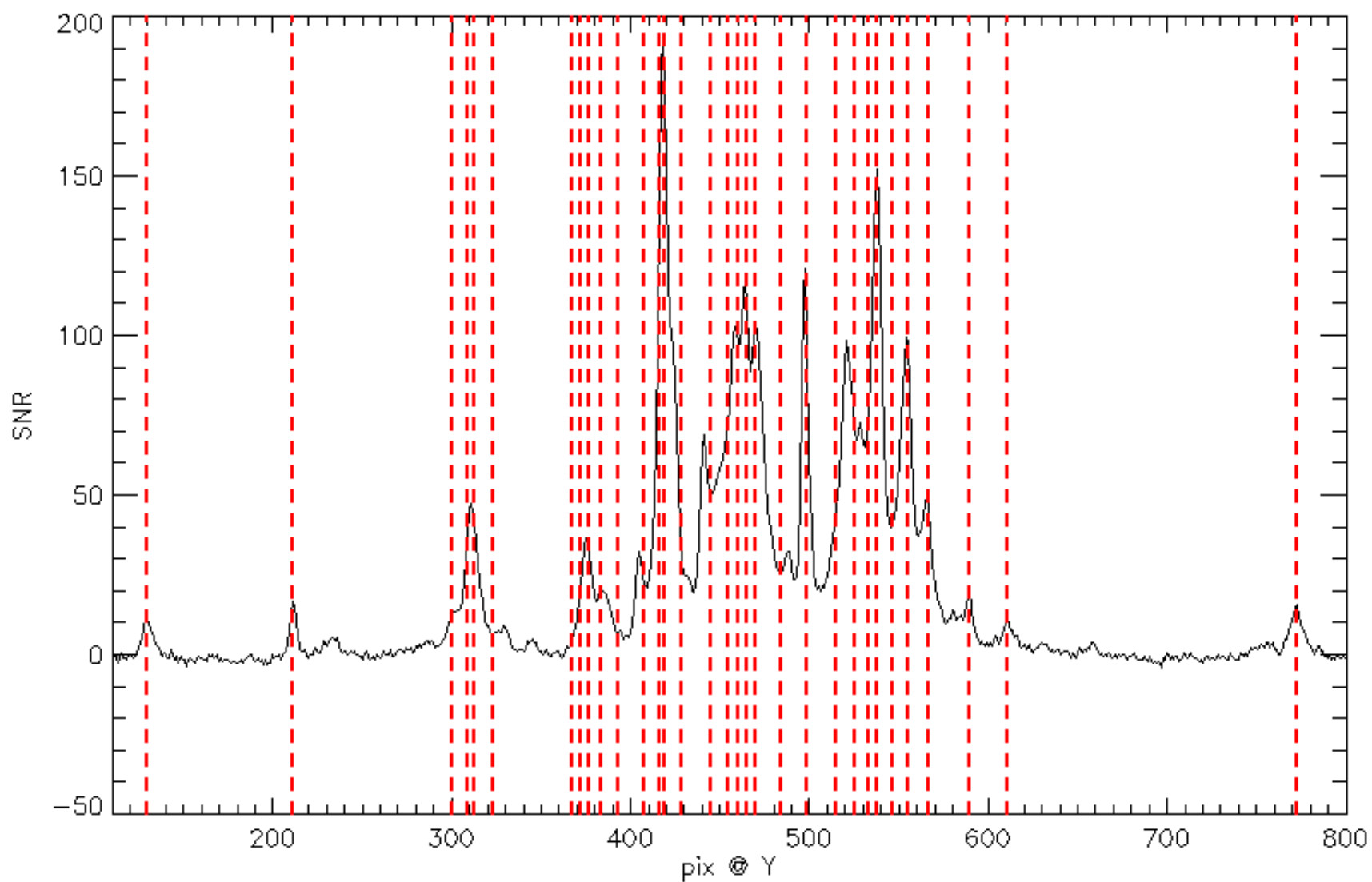
# ЭМИССИОННЫЙ СПЕКТР





ЭМИССИОННЫЙ СПЕКТР

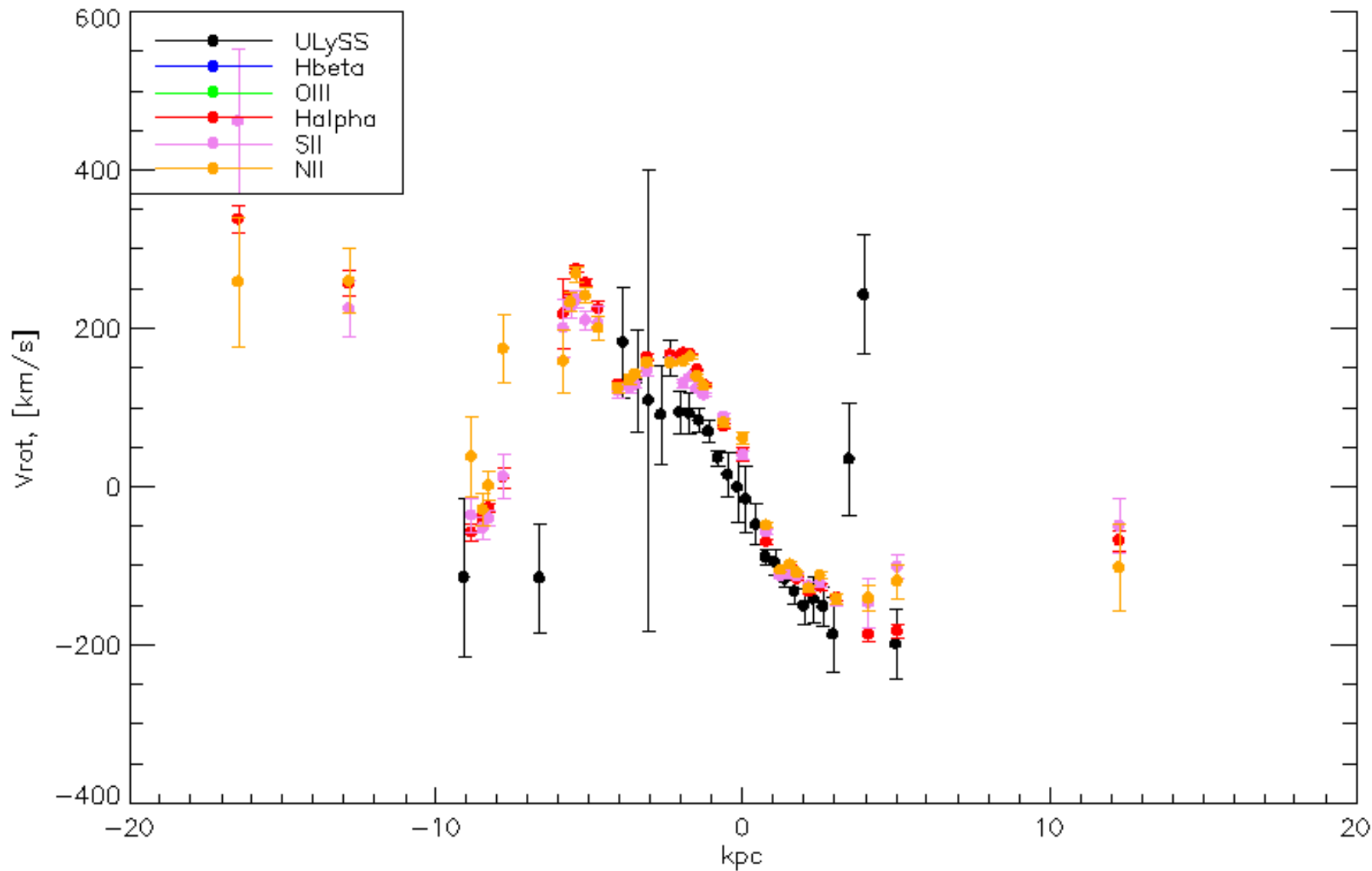




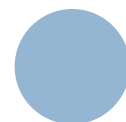
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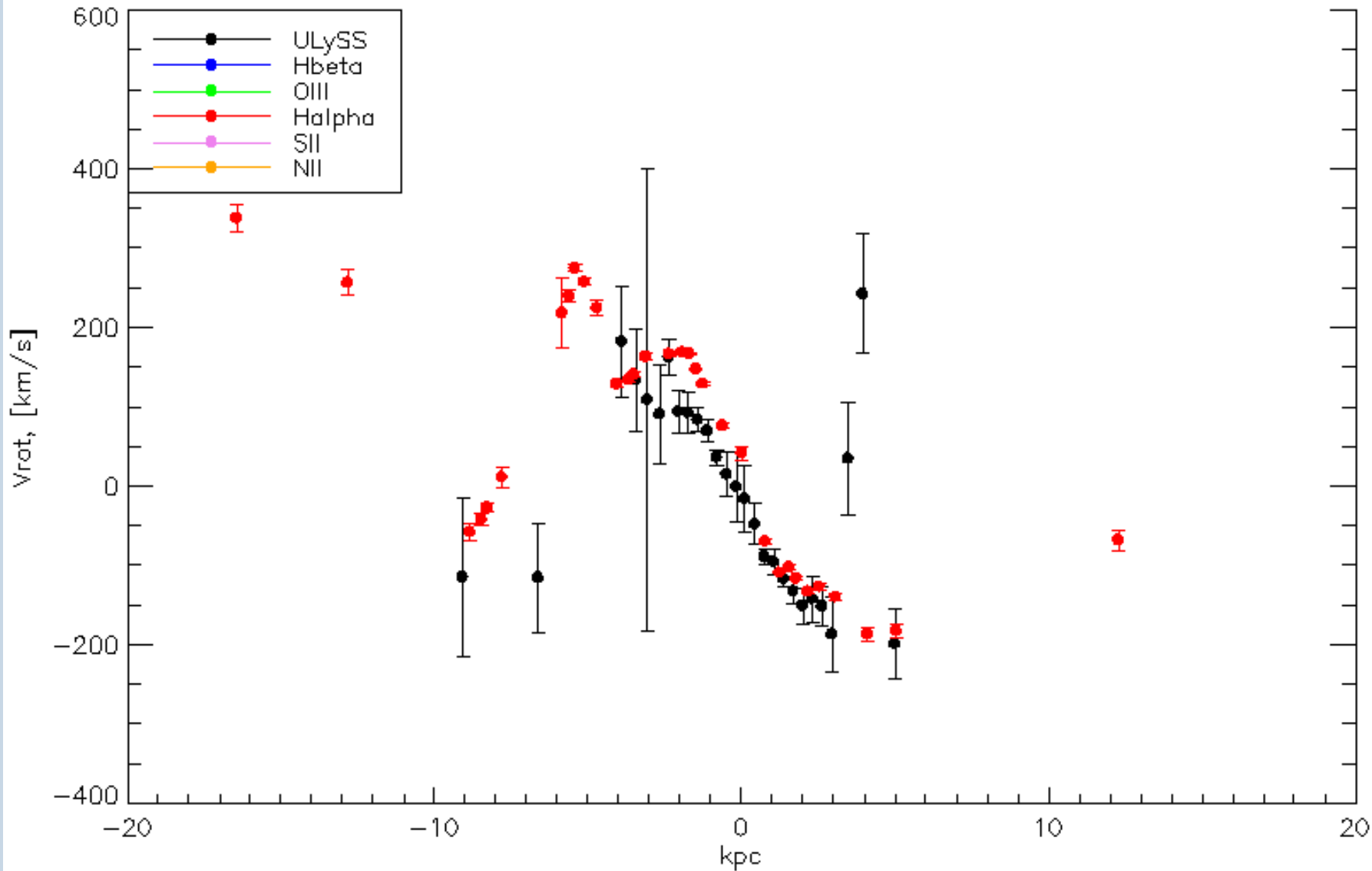
# ЭМИССИЯ: БИННИНГ





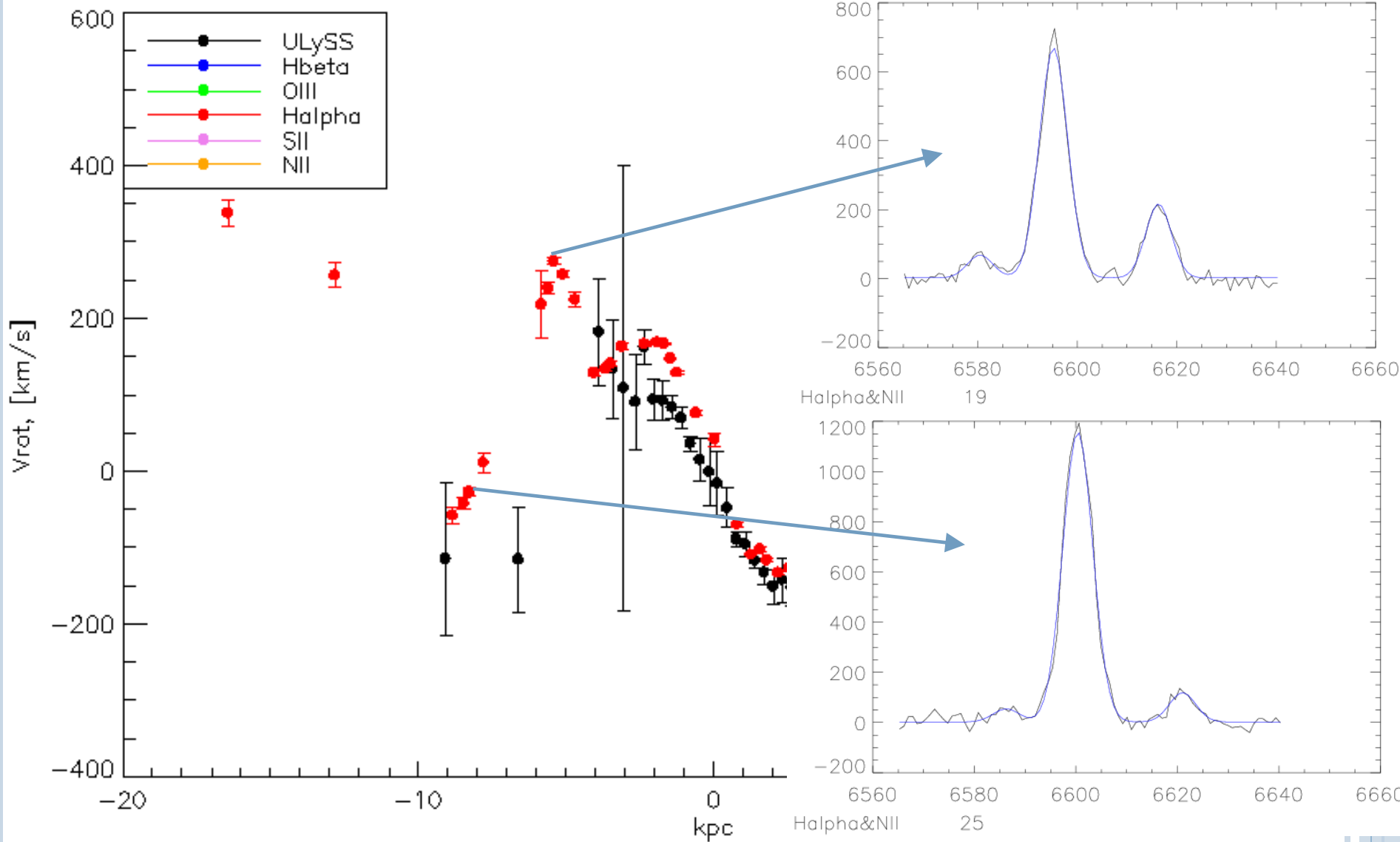
РЕЗУЛЬТАТЫ: ЭМИССИЯ





РЕЗУЛЬТАТЫ: ЭМИССИЯ





# РЕЗУЛЬТАТЫ: ЭМИССИЯ



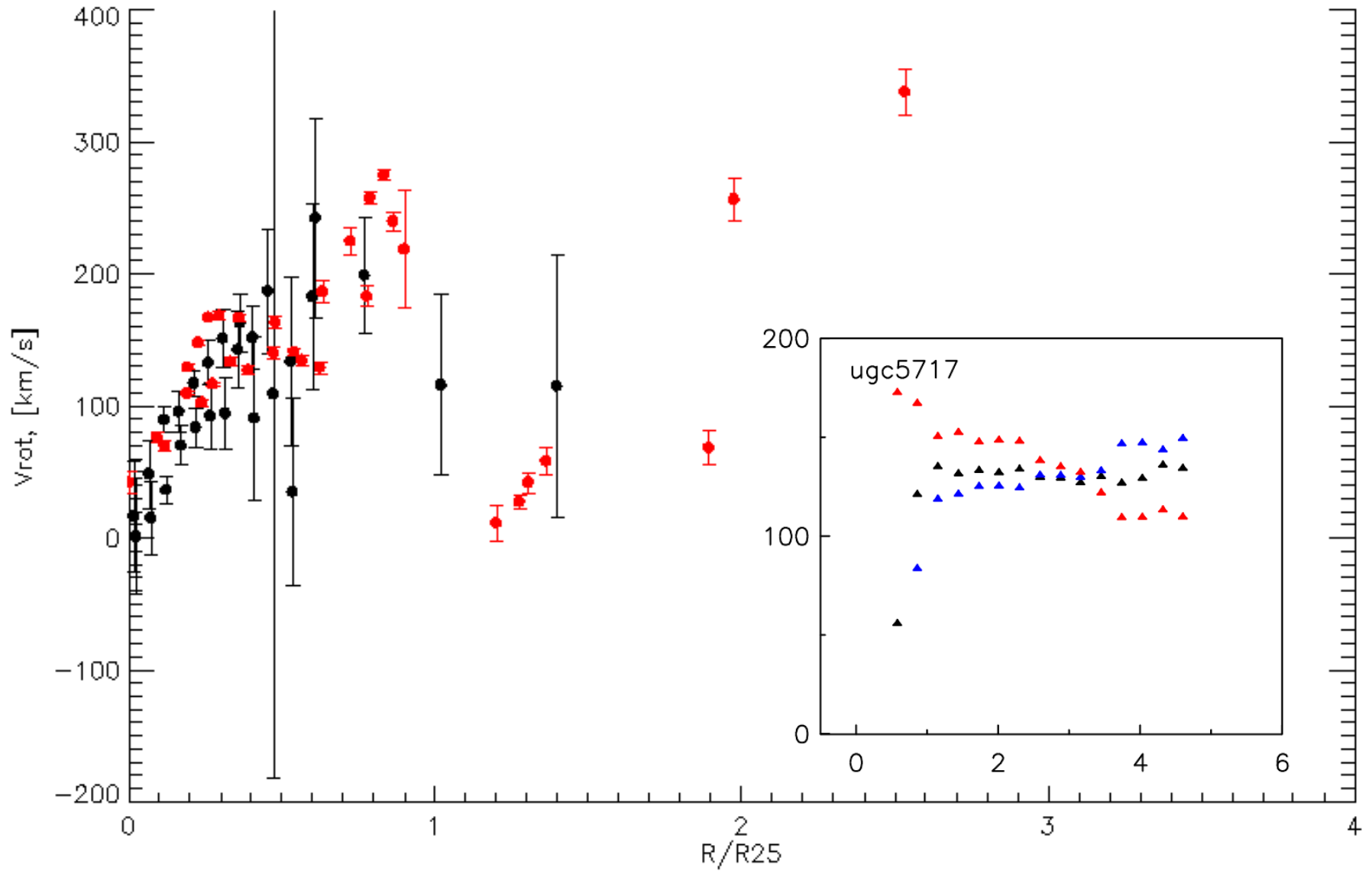




**СПАСИБО ЗА ВНИМАНИЕ!**



**VOLGA 16.11.2016**



СРАВНЕНИЕ С ЛИТЕРАТУРОЙ

Eymeren et al. 2011

