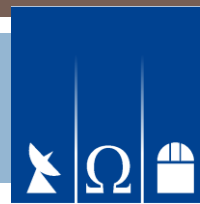


ATLAS WORK UNDERWAY IN BONN

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Outline

2

- Introduction
- Science plans
- Information on THELI pipeline
- Work already done
- First results
- Plans for the (very) near future



Introduction



Introduction

4

- 2011: Bachelor of Science in Physics, Bonn
 - ▣ Data reduction and analysis of Holigrail data
 - Referees: Prof. Peter Schneider, Dr. Mischa Schirmer
- 2013: Master of Science in Astrophysics, Bonn
 - ▣ Illumination correction of OMEGACAM@VST
 - Referees: Prof. Peter Schneider, Prof. Thomas Reiprich
 - Supervisor: Dr. Thomas Erben
- Now: PhD in Bonn
 - Referees: Prof. Peter Schneider, Prof. Thomas Reiprich
 - Supervisor: Dr. Thomas Erben



Science plans

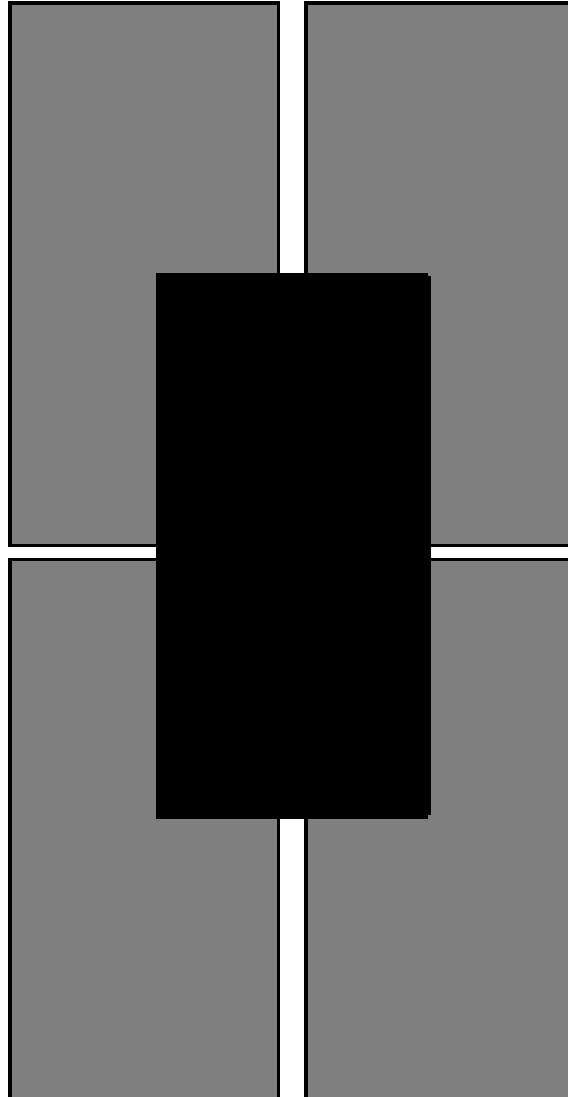
Science plans

6

- Photometric cross-calibration with KiDS (ATLAS is faster and has better seeing as expected)

Science plans

7



Science plans

8

- Photometric cross-calibration with KiDS (ATLAS is faster and has better seeing as expected)
- Finding galaxy clusters (candidates)
- Galaxy cluster catalog for entire 4500deg^2
- Combine with X-Ray (re-analysis of ROSAT data and later for eROSITA)
- Combine with VIKING data?



Information on THELI pipeline

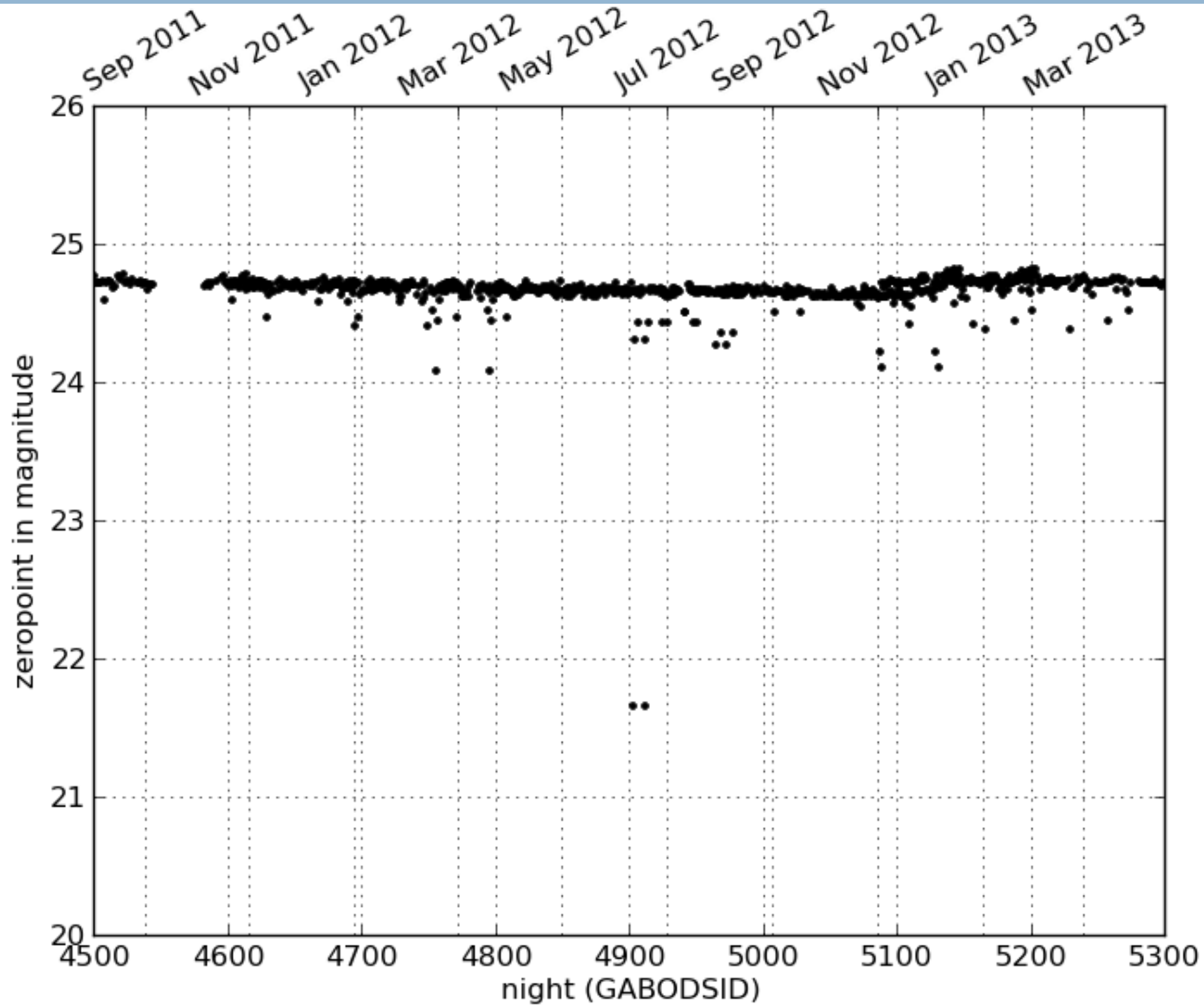
Information on THELI pipeline (1)

10

- Calibration frames every 2 weeks (**full / new moon** time): BIAS, DARK, SKYFLATS, illumination correction (MAG_AUTO vs. MAG_PSF_SDSS)
- Photometric calibration from standard star fields + KiDS with SDSS overlap
- Illumination correction only available for r-band, other bands will follow soon

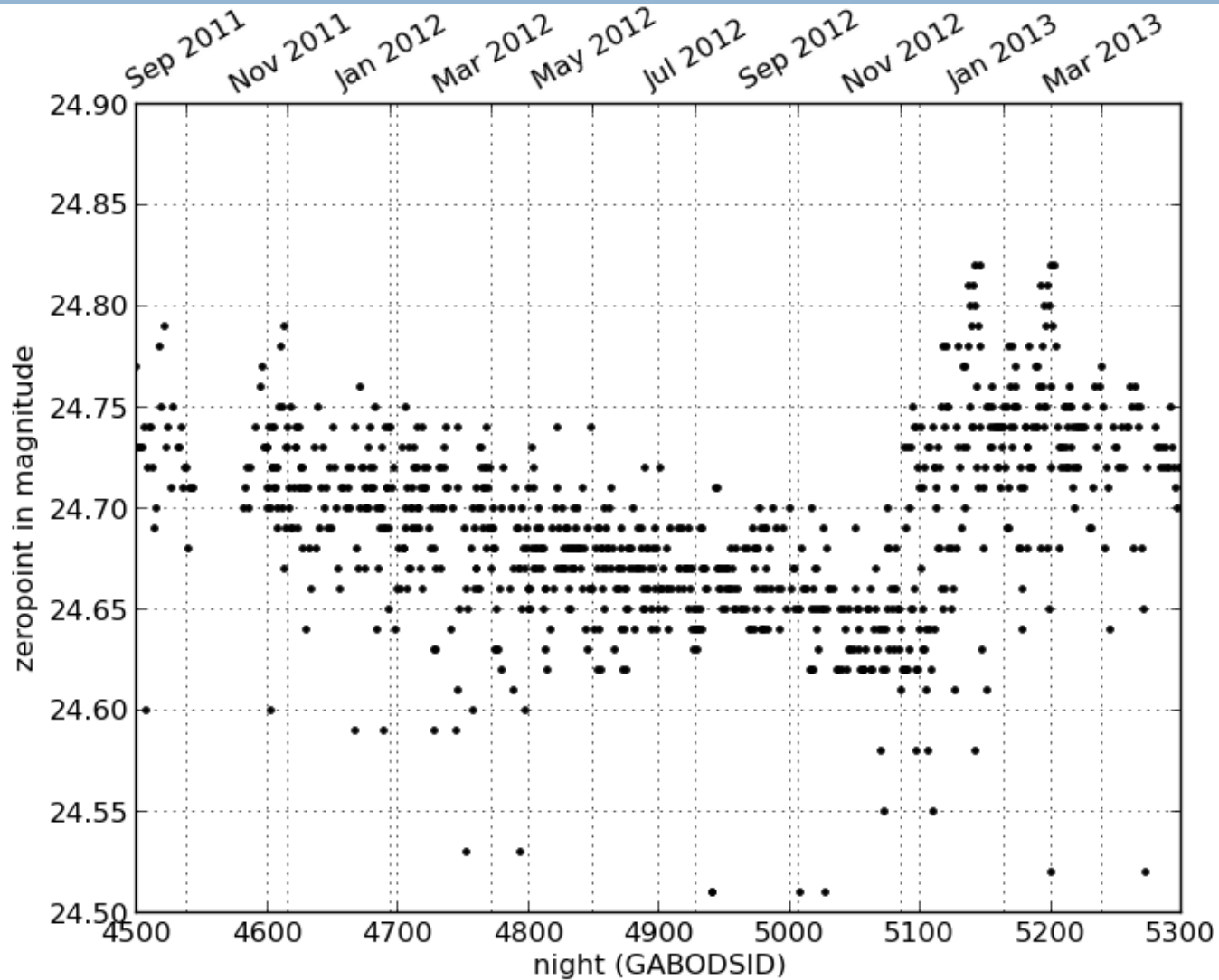
Information on THELI pipeline (2)

11



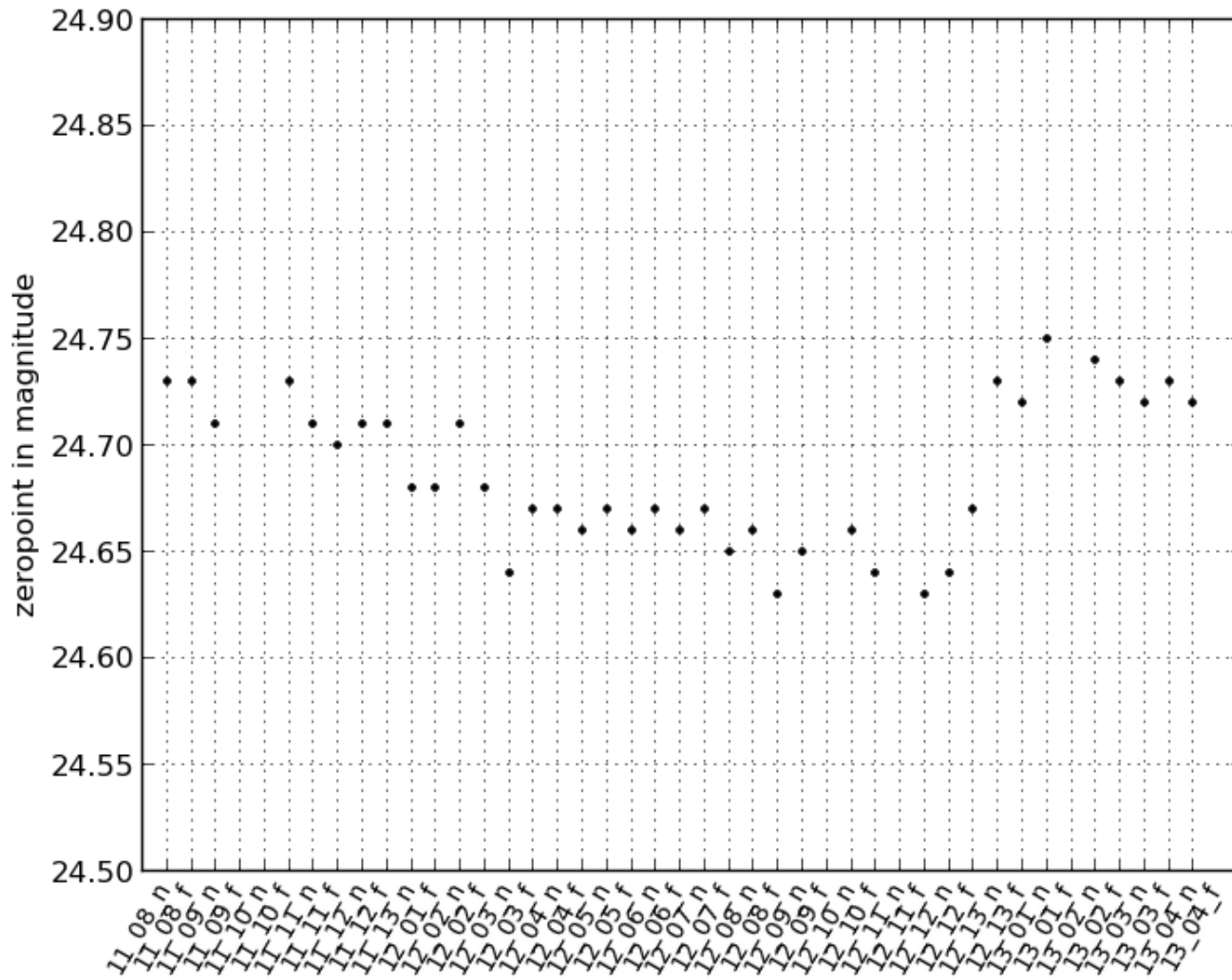
Information on THELI pipeline (3)

12



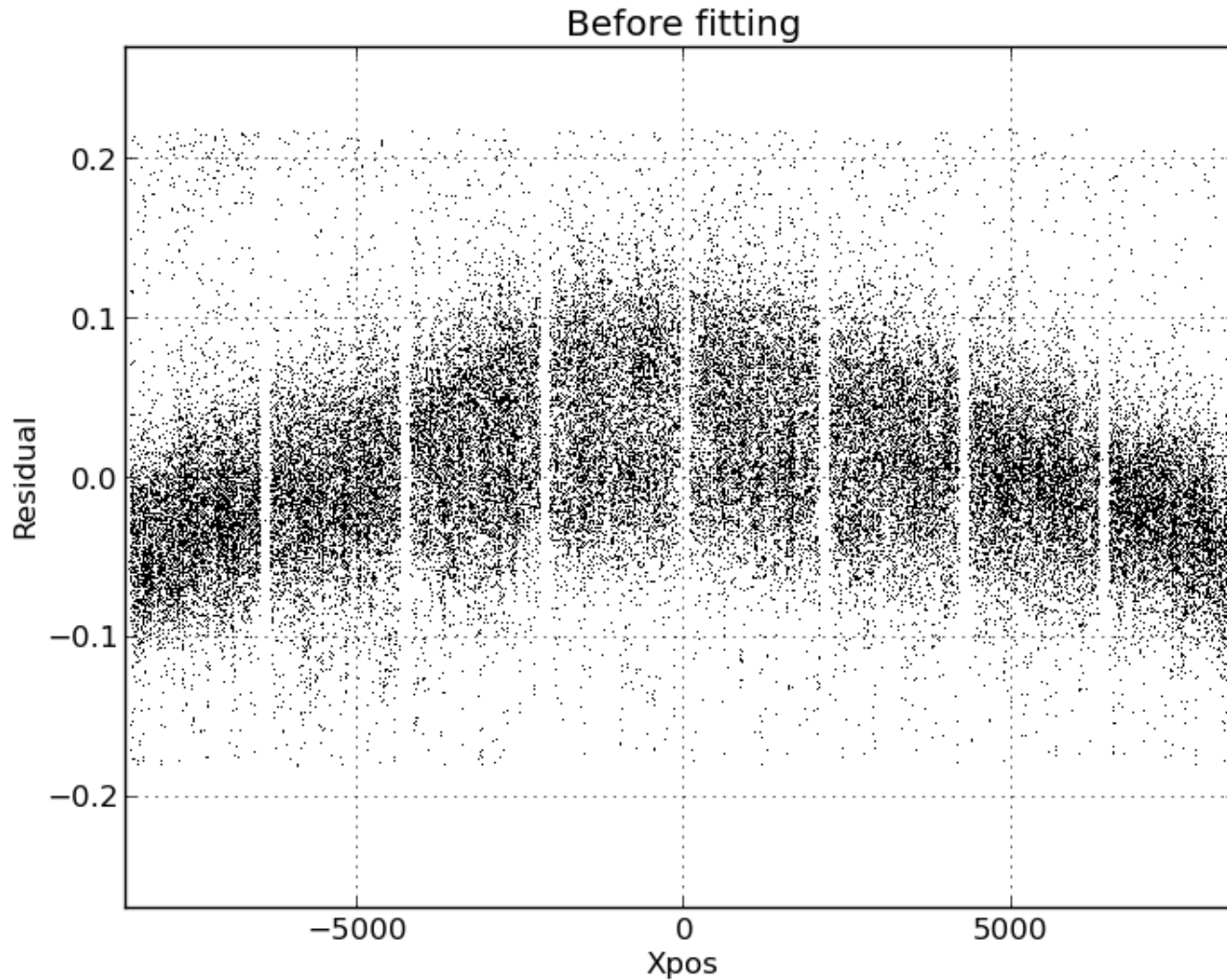
Information on THELI pipeline (4)

13



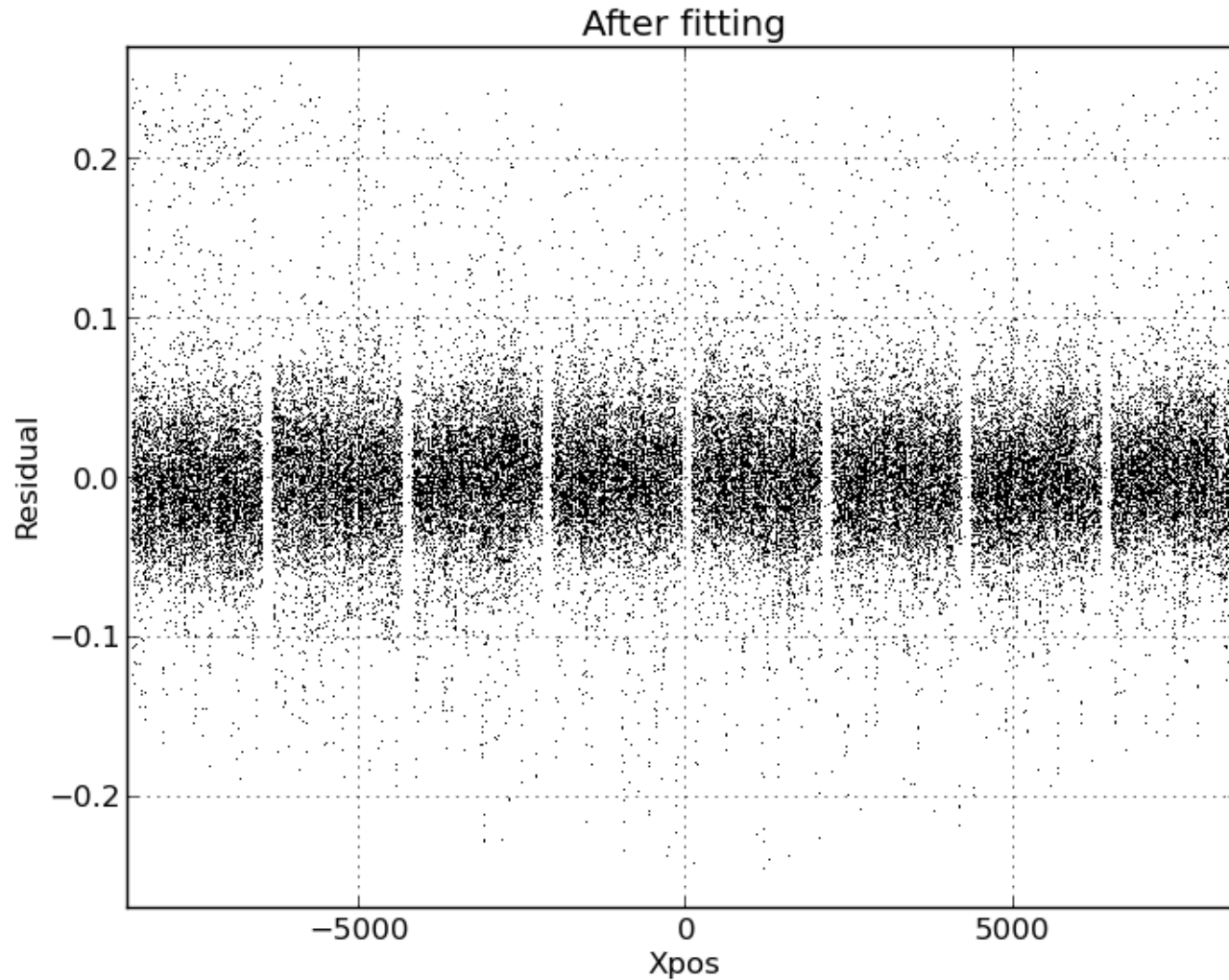
Information on THELI pipeline (5)

14



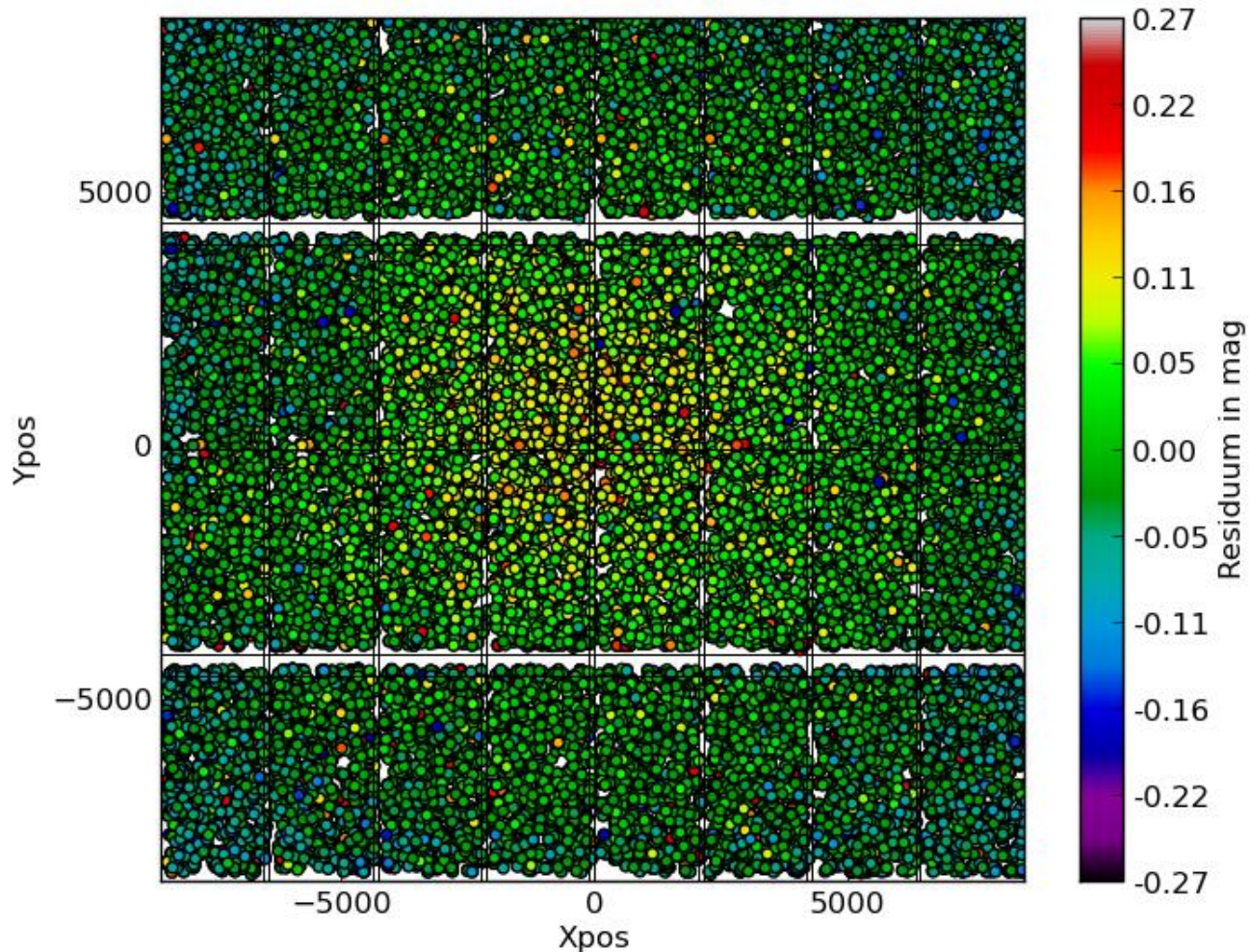
Information on THELI pipeline (6)

15



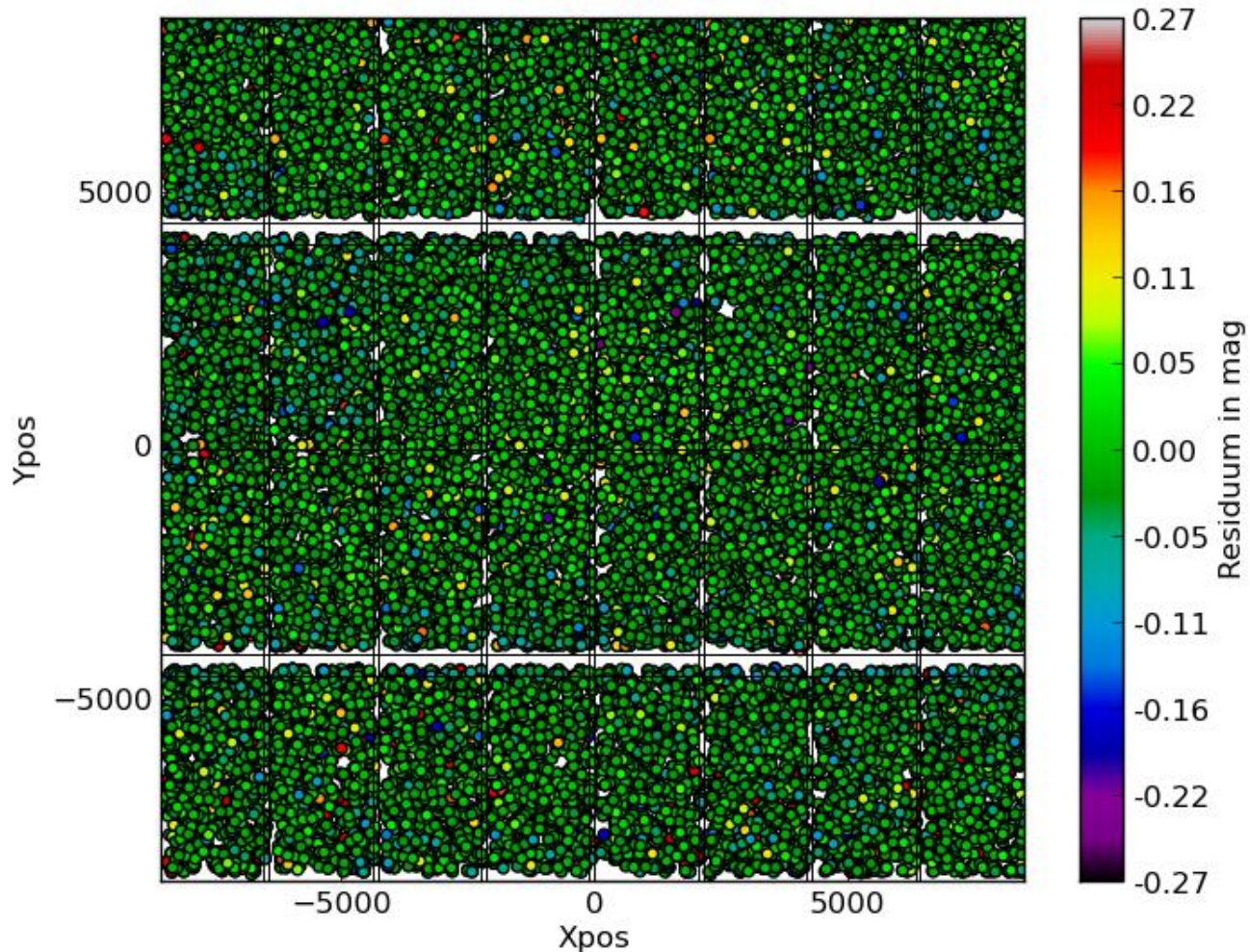
Information on THELI pipeline (7)

16



Information on THELI pipeline (8)

17





Work already done

Work already done

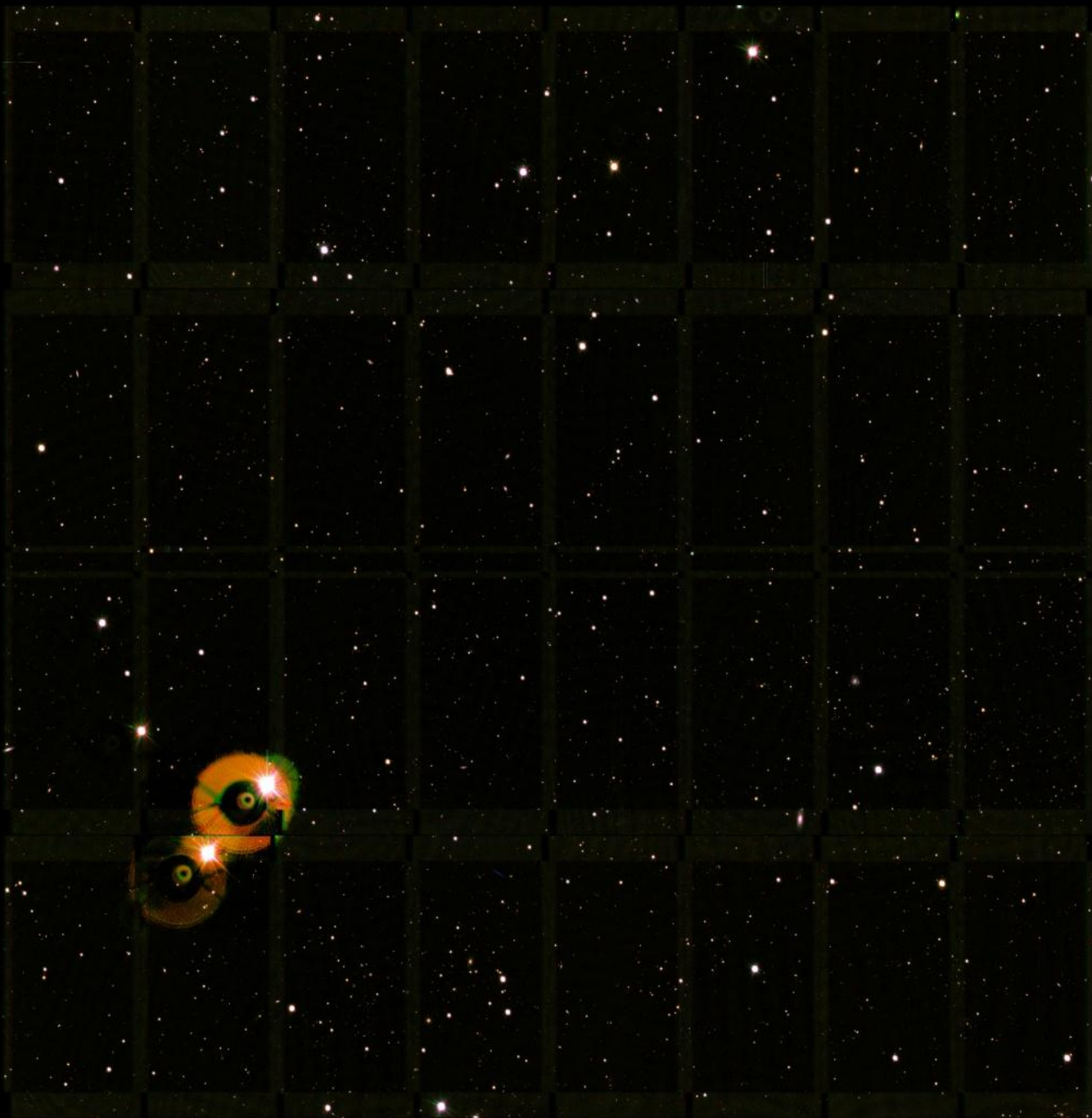
19

- End-to-end pipeline set up (working, improvements / modifications for ATLAS going on), making use of experience with e.g. CFHTLenS
- About 20 pointings in 5 bands with 4 band-KiDS overlap have been reduced to coadded images (144 ATLAS pointings in total until November 2013 corresponds to 75 pointings in KiDS)

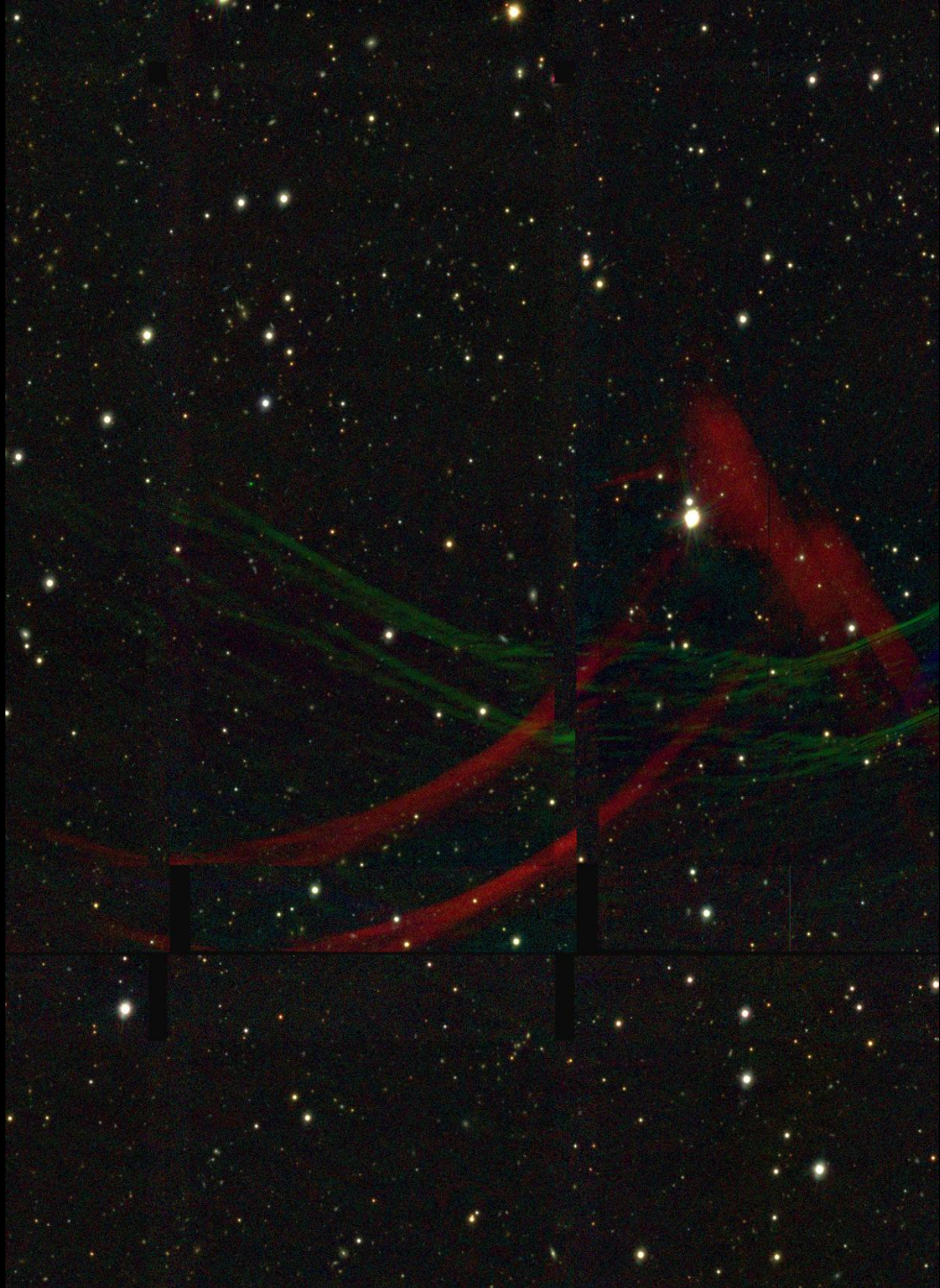


First results





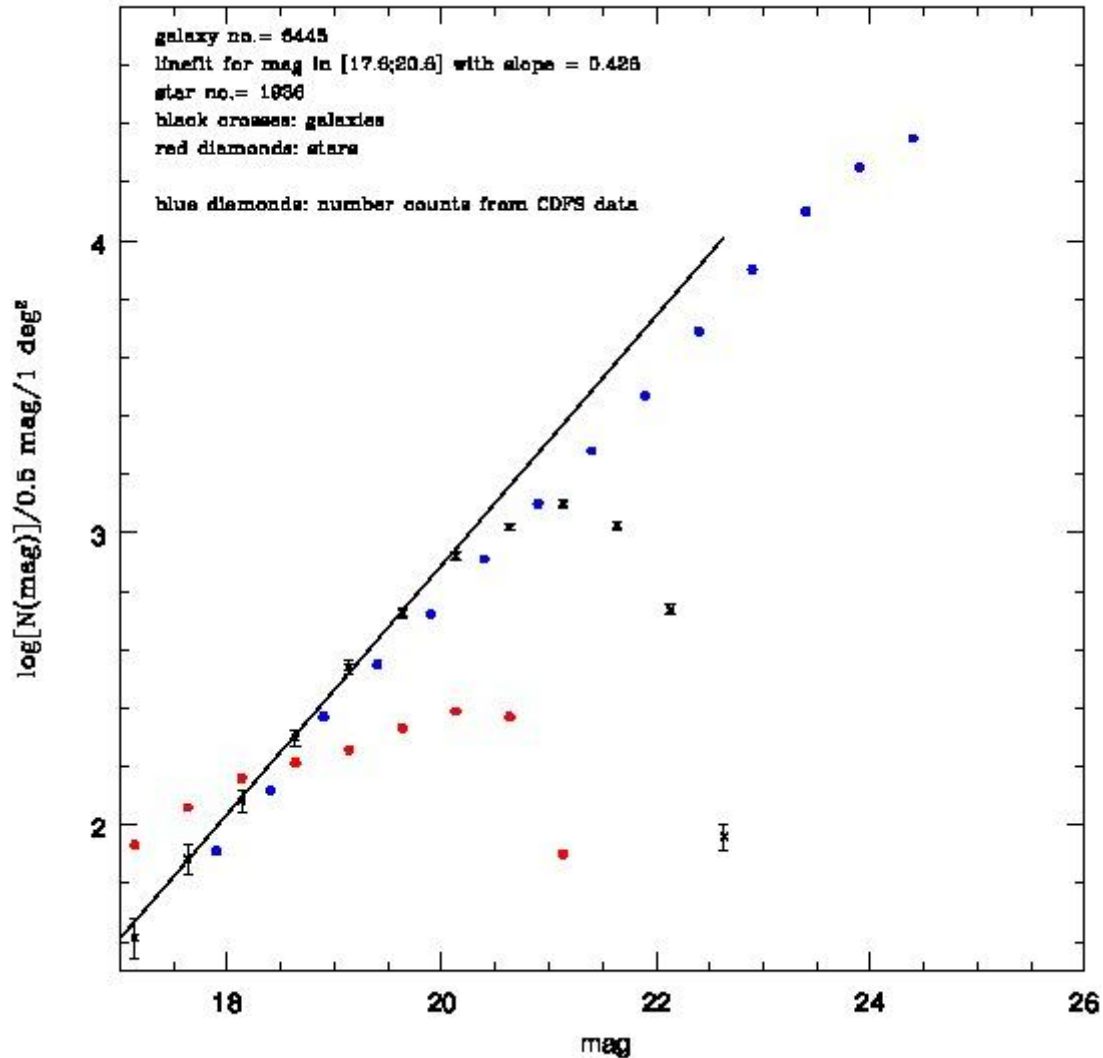




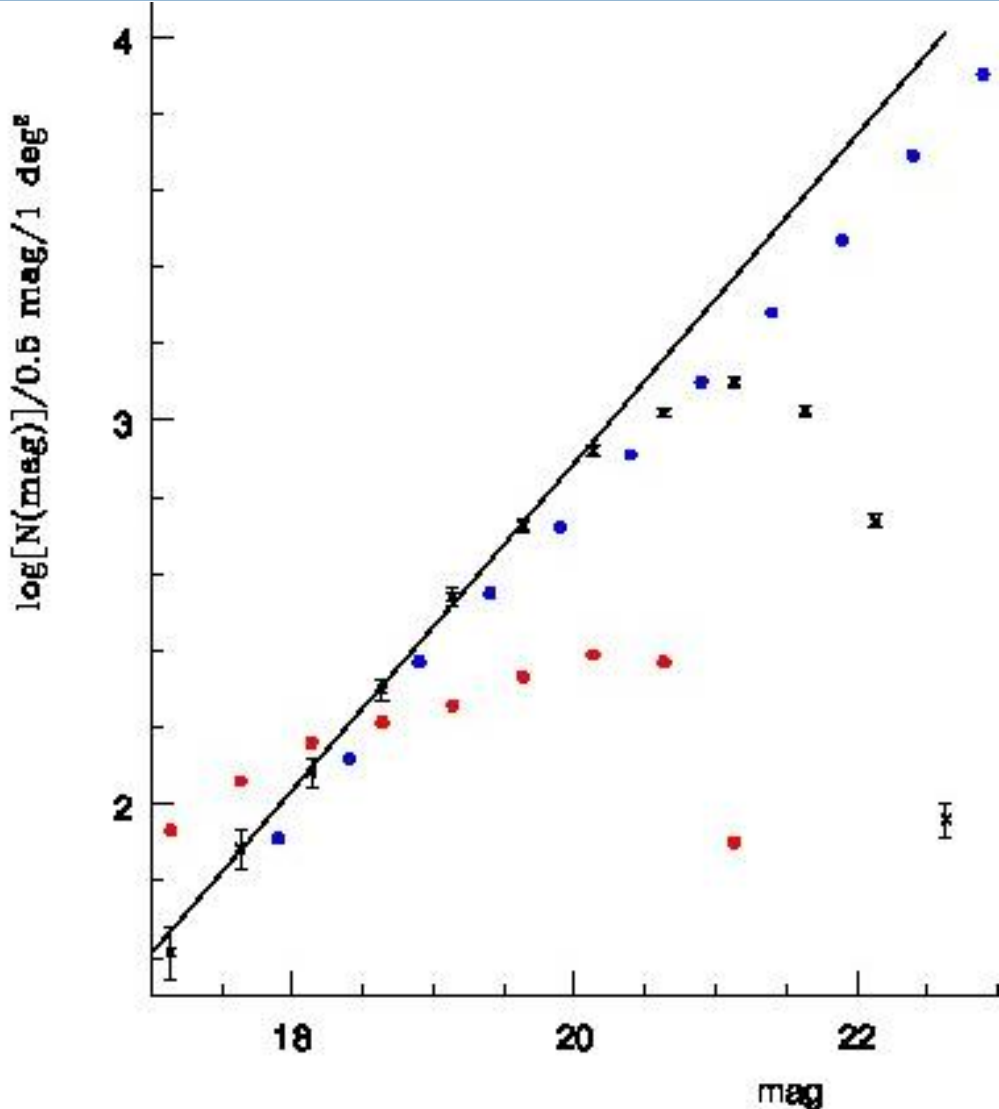
First results (3)

24

ATLAS_g1pθ_m31p5_gDSS.V0.5.5A.swarp.cut (r_gDSS-band)



First results (3)





Plans for the (very) near future

Plans for the (very) near future

27

- Set up photo-z pipeline (BPZ)
- Solve u-band problems (astrometry)
- Reduce all necessary pointings to cover all available KiDS 4-band data (currently 144 pointings)
- Include MAG_PSF calculation
- Include illumination correction
- Automated data download / processing pipeline

Thank you for your attention!

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