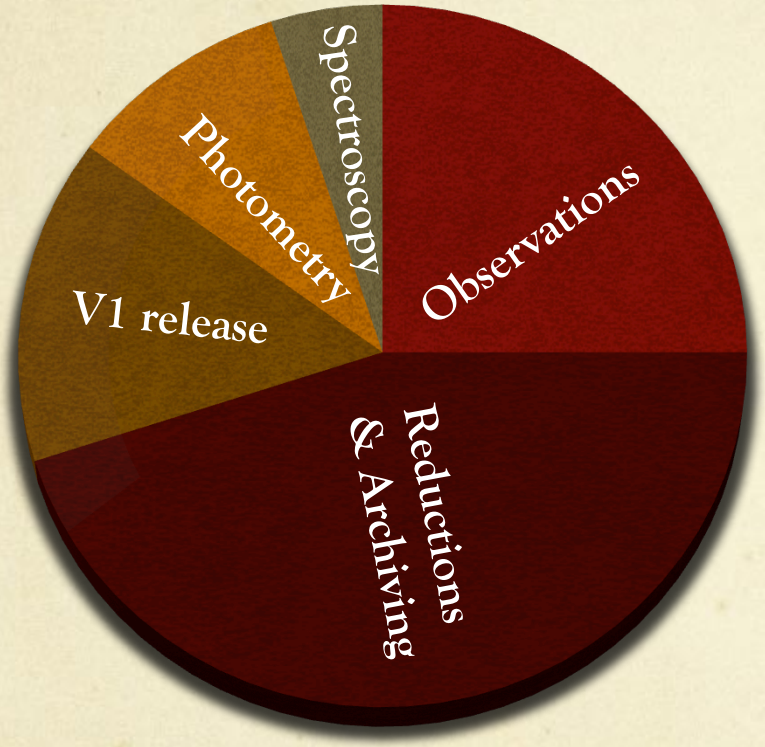
DU13 STATUS
and
DATA RELEASES

by
Elena Pancino and the DU13 team

Summary of last year

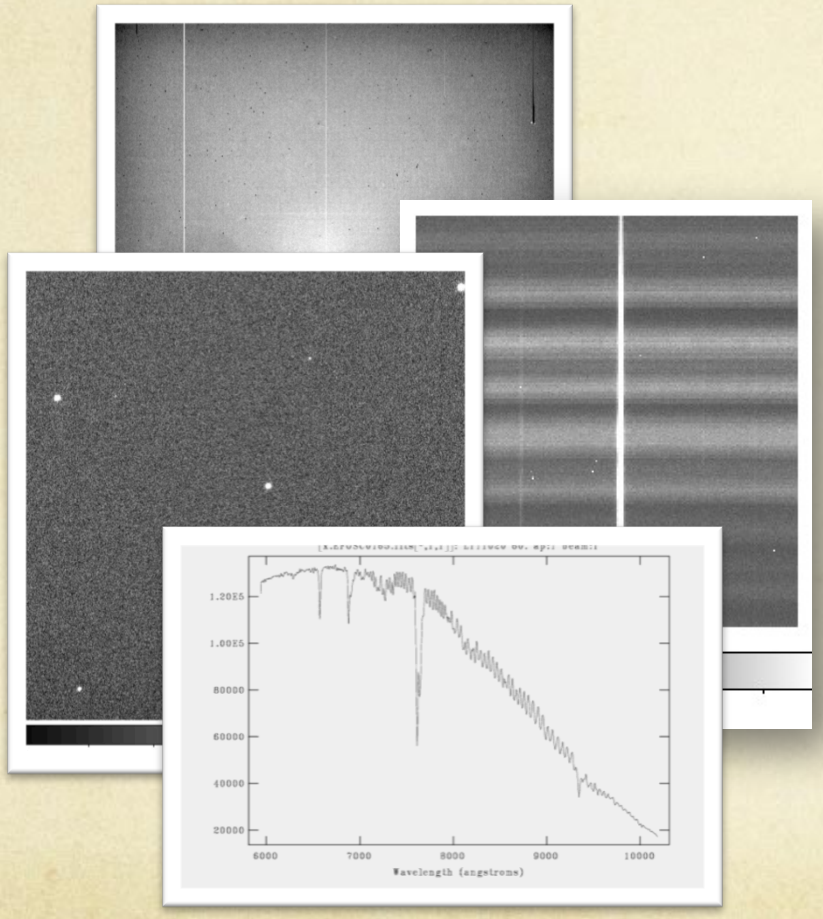


- Two milestones reached
  - End of observations
  - V1 flux tables release
- Other major progress
  - Pre-reductions and ASDC archiving
  - Relative and absolute photometry
  - Advanced spectroscopy reductions

Observations

- Observations were completed last July
  - All data logged, archived (almost), and backed up
- Statistics
  - Almost 5000 hours (the equivalent of 500 nights)
  - Spread in >900 different nights in 66 observing runs
  - Using 6(+1) different telescopes and instruments
- Comparable to one of the large modern surveys (GES)

Pre-reductions



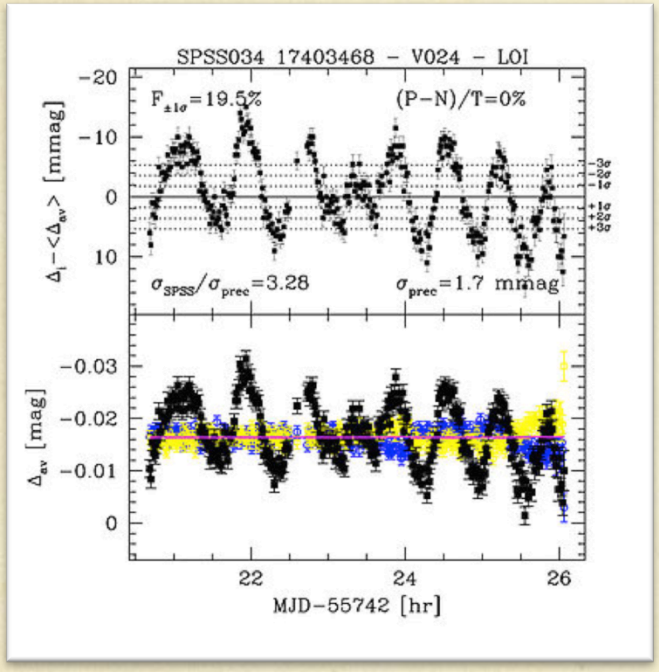
- Three data types
  - master frames creation
  - 2D pre-reduced frames
  - 1D extracted spectra
- Imaging
  - 47/66 runs completed
  - 71% completion
- Spectroscopy
  - 25/37 runs completed
  - 67% completion

ASDC Archiving

Data Product	Status	Frames
Raw frames	≈95 %	100291
Calib. Masters	≈65 %	3051
2D Pre-reduced	≈71 %	47953
1D spectra	≈67 %	4231
Photo catalogues	just started	7905
Light-curves	just started	76
Fringing-corrected spectra	just started	96

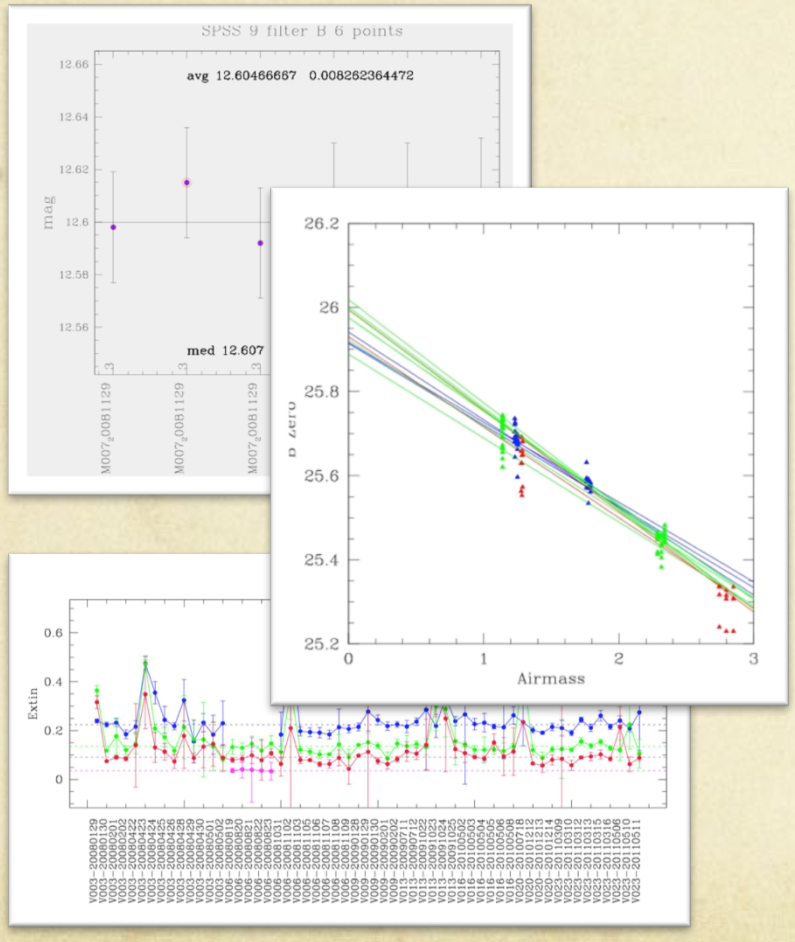
- Raw data (95%):
  - 3 runs missing
- Pre-reductions (65-70%):
  - all pre-reduced runs
- Advanced data products:
  - Just started
  - Photometric catalogues
  - Light curves
  - Fringing-corrected spectra

Analysis: Relative Photometry



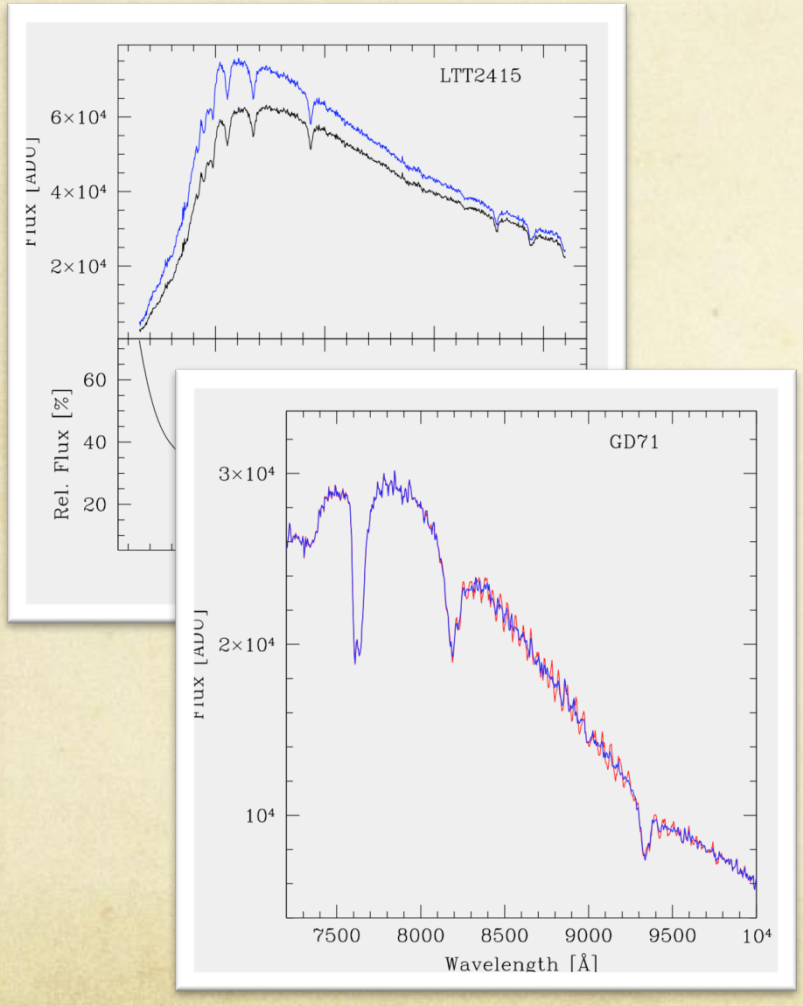
- Constancy assessment:
  - Short-term (1-2 h series)
  - 173 SPSS monitored
  - Found 8 variables
- Major progress this year
  - A few SPSS pending
  - >1 good curve per SPSS
  - With a dozen exceptions
  - Paper and TN in preparation

Analysis: Absolute Photometry



- ZP calibration of (grey) spectra
  - Synthetic photometry
- Major progress last year
  - Night solutions
    - 32 good nights
    - 27 usable nights
    - 36 non-photometric
  - Instrumental magnitudes
  - First pass calibration
- Now comparing internally and with literature

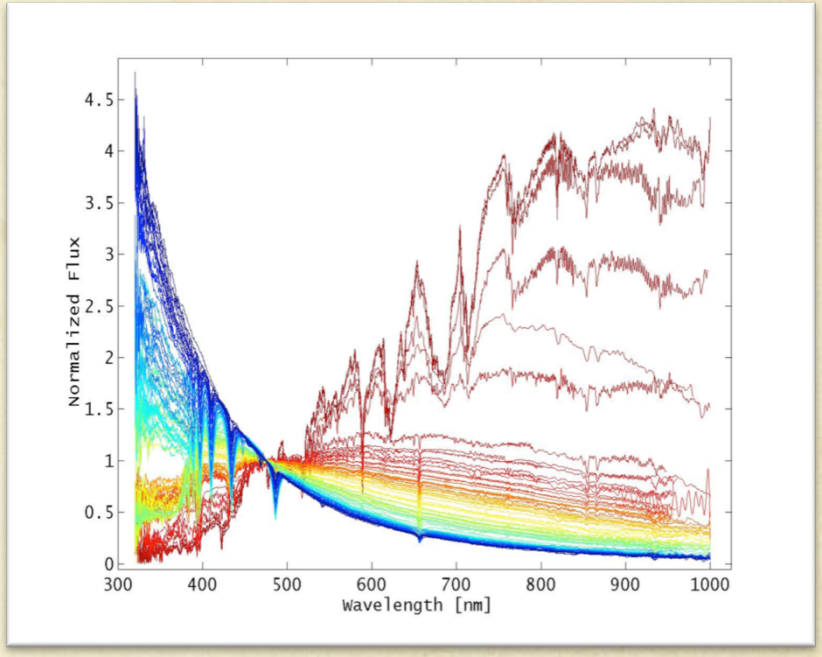
Analysis: Spectroscopy



- Differential loss correction
  - Narrow slit spectra
  - Shape lost, S/N+Q recovered
  - Procedure applied to V0
  - S/N+Q similar to wide spectra
- Fringing correction
  - Procedure applied to V0
  - Easy and fast to apply
  - Varying results (factor 1-3)

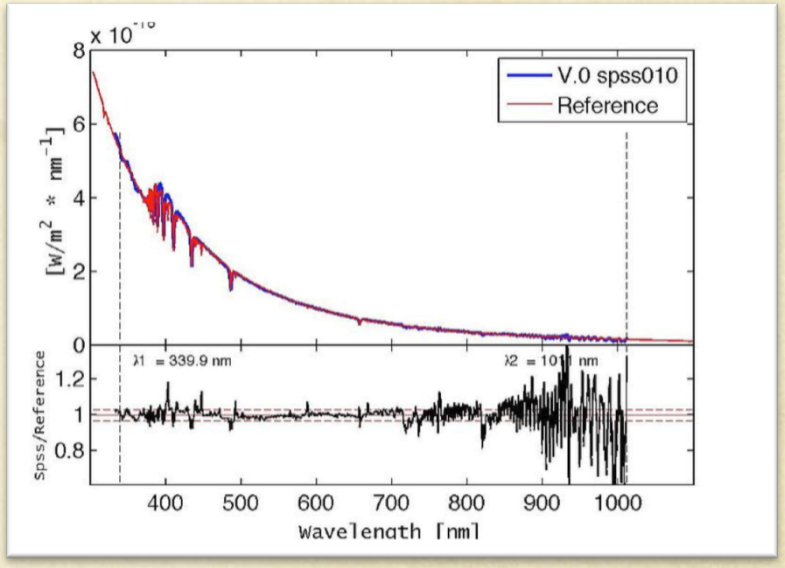
V0 Release (pre-launch)

- 94 flux tables released in October 2013
  - Goal: testing pipelines
  - No fringing correction
  - No narrow-slit spectra
  - Cut borders (blue and red)
  - Already exceeding DPAC requirements
- Major problem :
  - Missing borders induce calibration errors > 0.1 mag



V1 Release

- 94 flux tables released in July 2015
- Extended with template spectra
  - CALSPEC
  - Gaia spectral libraries
  - Public libraries
  - No new observational data
- Can calibrate 1st Gaia release
  - Only G and only ZP
  - Ready to react to problems



V2 Release

- Expected mid-2016, for the 2nd or 3rd Gaia release
  - Including constancy assessment and absolute photometry
  - Fundamental question: quality or quantity? Or hybrid?

QUALITY	QUANTITY
• Add more spectra • New reductions (some)	• Add all/more SPSS (up to ≈200) • New reductions (all/many)
• Apply all correction steps	• Skip some correction steps
• Refine old procedures • No new procedures	• Apply old procedures • Synthetic photometry
Final quality for 94 SPSS	V1 quality for all/most SPSS

Plan for next year

- Up to December 2015:
  - Work on foundations
  - Reductions + Archiving
  - Photometry
  - (Documentation)
- From January 2016:
  - Prepare V2 release
  - Quantity or quality ?
  - Input from this meeting

Conclusions

- We have finally completed observations last year
- We hope to complete data reductions next year
- So that we can focus on data analysis and releases
- We need to know what is needed for the V2 release, this meeting should be already a good starting point, but a decision should be taken by December 2015

Thank you!