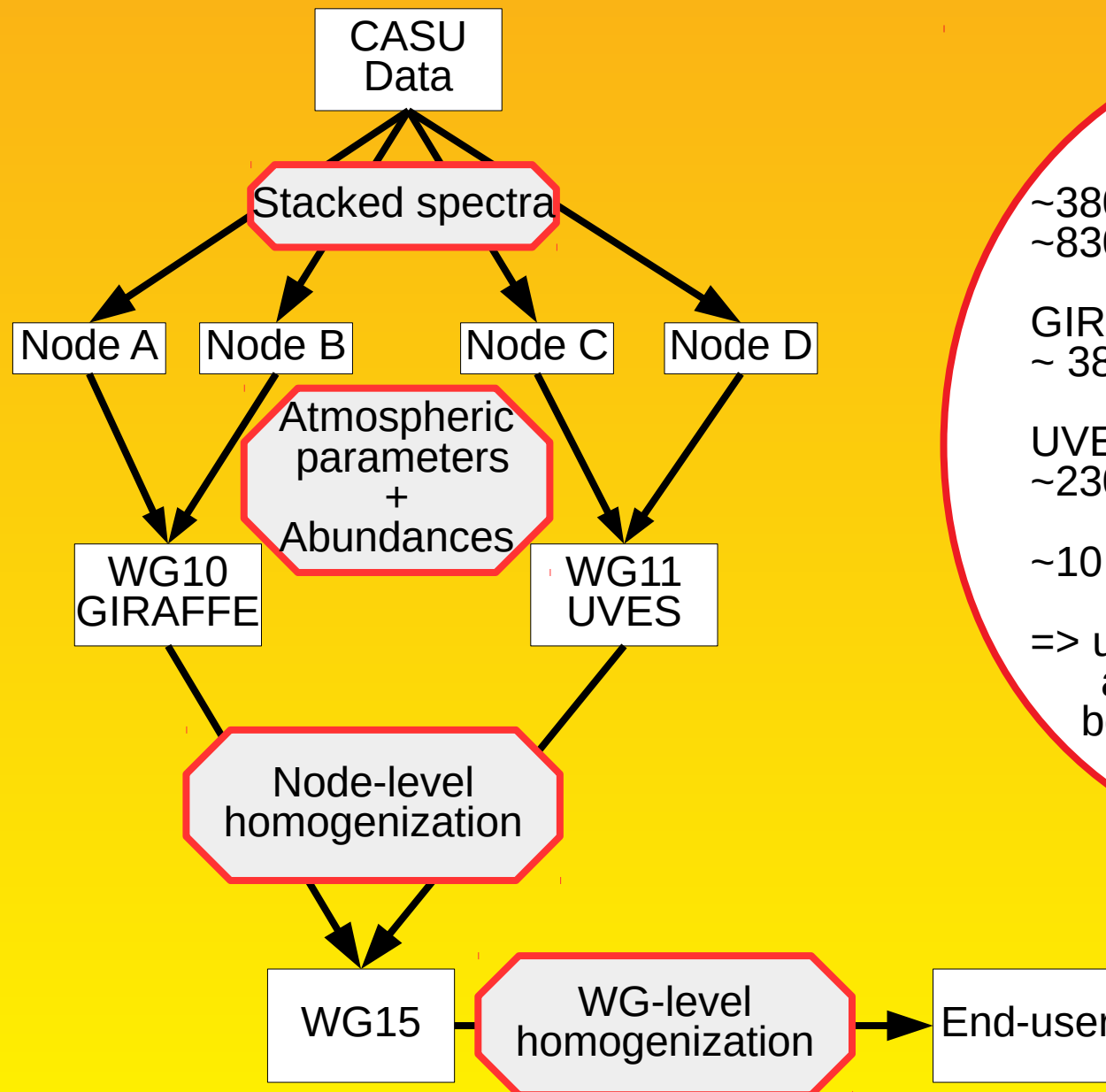


Communicate with flags!

M. Van der Swaelmen, S. Van Eck, A. Gonneau, C. W. Worley, T. Merle, A. Hourihane

Data flow within Gaia-ESO for FGK stars



DR5 – numbers

~380000 indiv. spectra
~83000 unique targets

GIRAFFE – FGK:
~ 38000 stars

UVES – FGK:
~2300 stars

~10 nodes for WG10+WG11

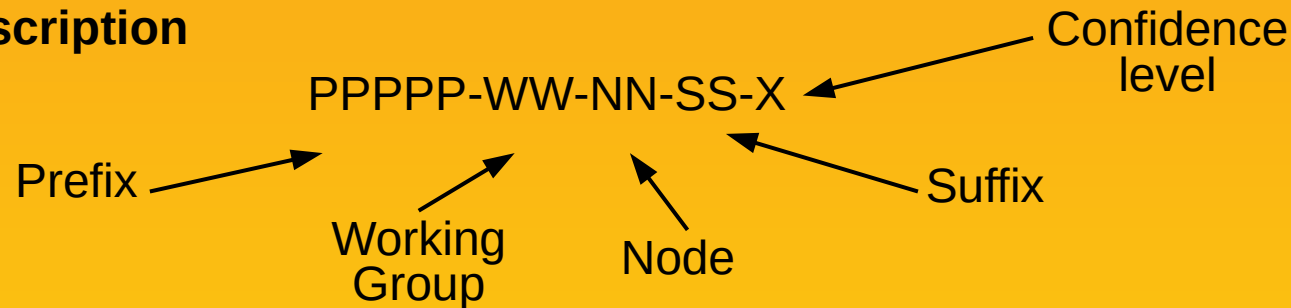
=> up to ~10 sets of parameters+
abundances per object to
be folded into a single result

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Flag dictionary – description

- Versatile syntax:



Prefix → Integer coding for an issue or for a stellar specificity

Suffix → Integer coding for a node-specific comment (e.g., grid limits, criteria to raise the flag)

Confidence level → Letter coding for the probability ($A > B > C$) that the specificity coded by the flag is correct

- Prefixes:

=> classes of data/analysis issues (TECH) or stellar properties (PECULI, REMARK)

10100	Saturated spectrum
10103	Suspicious or bad co-addition of exposures
10104	Suspicious or bad spectrum normalisation
10105	Incomplete spectrum (missing wavelengths)

Data
reduction

10302	Code convergence issue: one of more convergence criteria (node-specific) could not be fulfilled. Criteria to be described using the suffix
10309	Photometric gravity (instead of spectroscopic gravity)
10311	No parameters because too few Fe I lines
10317	Incomplete/missing set of parameters because of mass loss / wind determination problems. Conditions to be described using the suffix
10320	Incomplete/missing set of parameters because of suspected multiple stellar system

Analysis

20020	Spectroscopic binary SB2
25000	Halpna emission profile
30200	CEMP-r

Stellar
properties

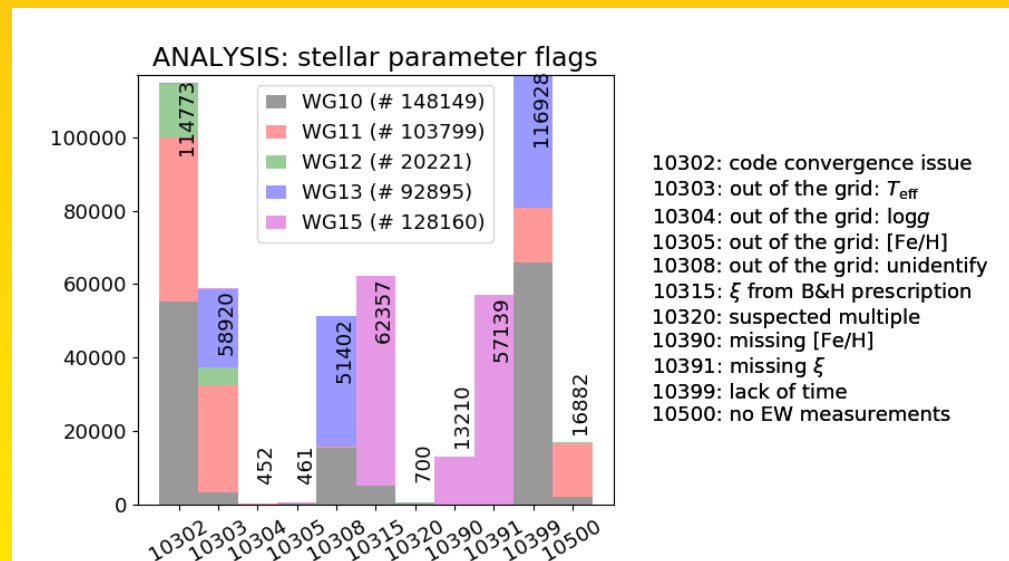
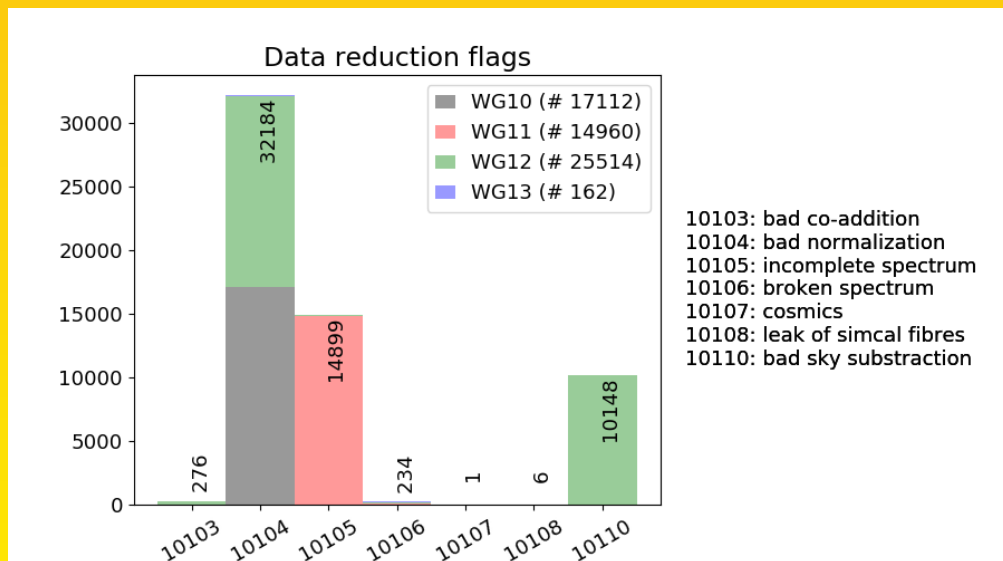
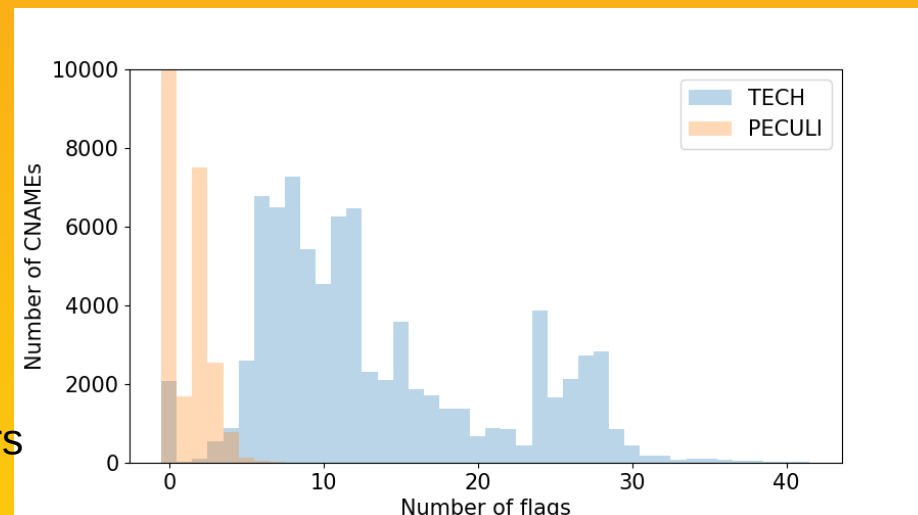
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Flag dictionary – statistics for DR5

- For DR5, more than 1.2 million flags raised by the nodes/WGs
- Data reduction and analysis prefixes are heavily used!
- Node-to-node agreement? Not bad.

Prefix 10302 (convergence issue) = raised for ~14000 stars
→ 60% of cases: two nodes or more activate it

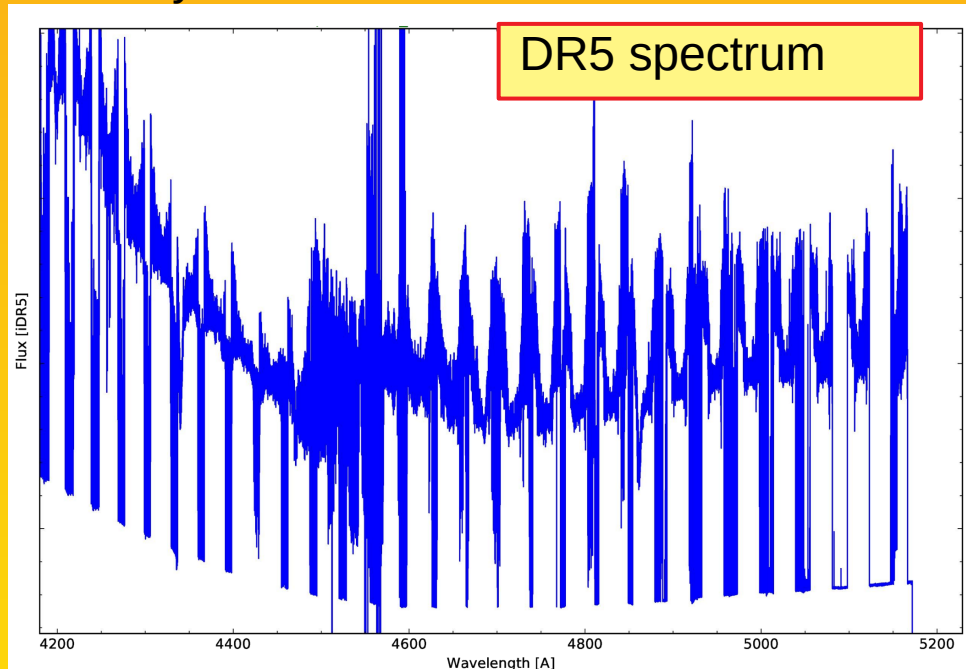


Communicate with flags!

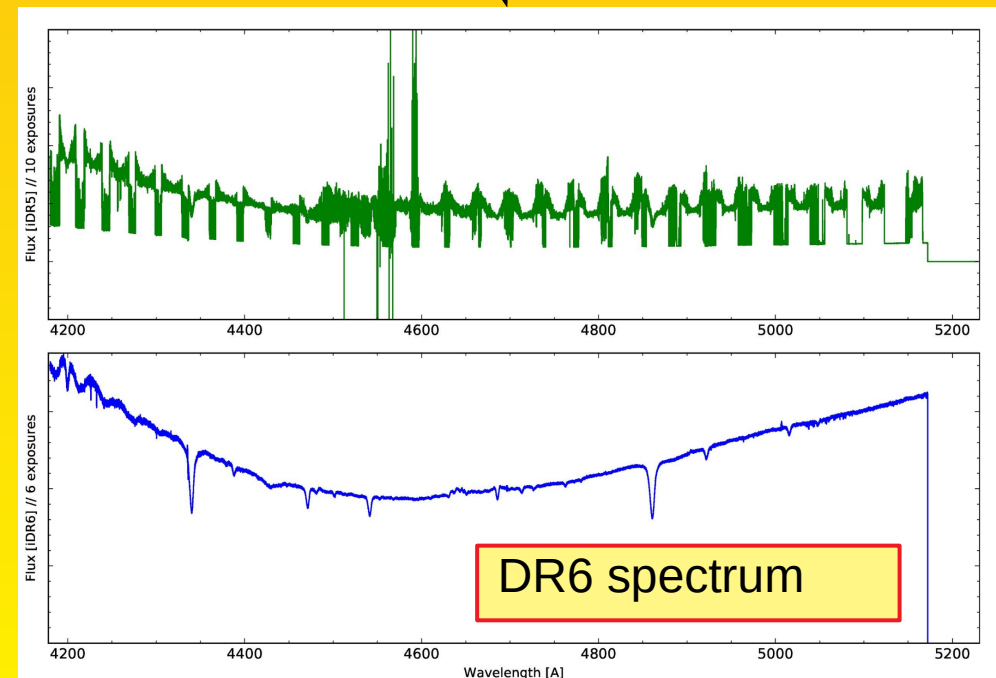
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Flag dictionary – usage

- Identify and fix data reduction issues



- Star in Trumpler14, observed with UVES
- DR5 → flag 10106 for broken spectrum
- DR6 → Removing 4 exposures from the stack fix the spectrum



Courtesy of A. Gonneau