The recent discovery of two extremely metal-poor dwarf stars in the Galactic halo

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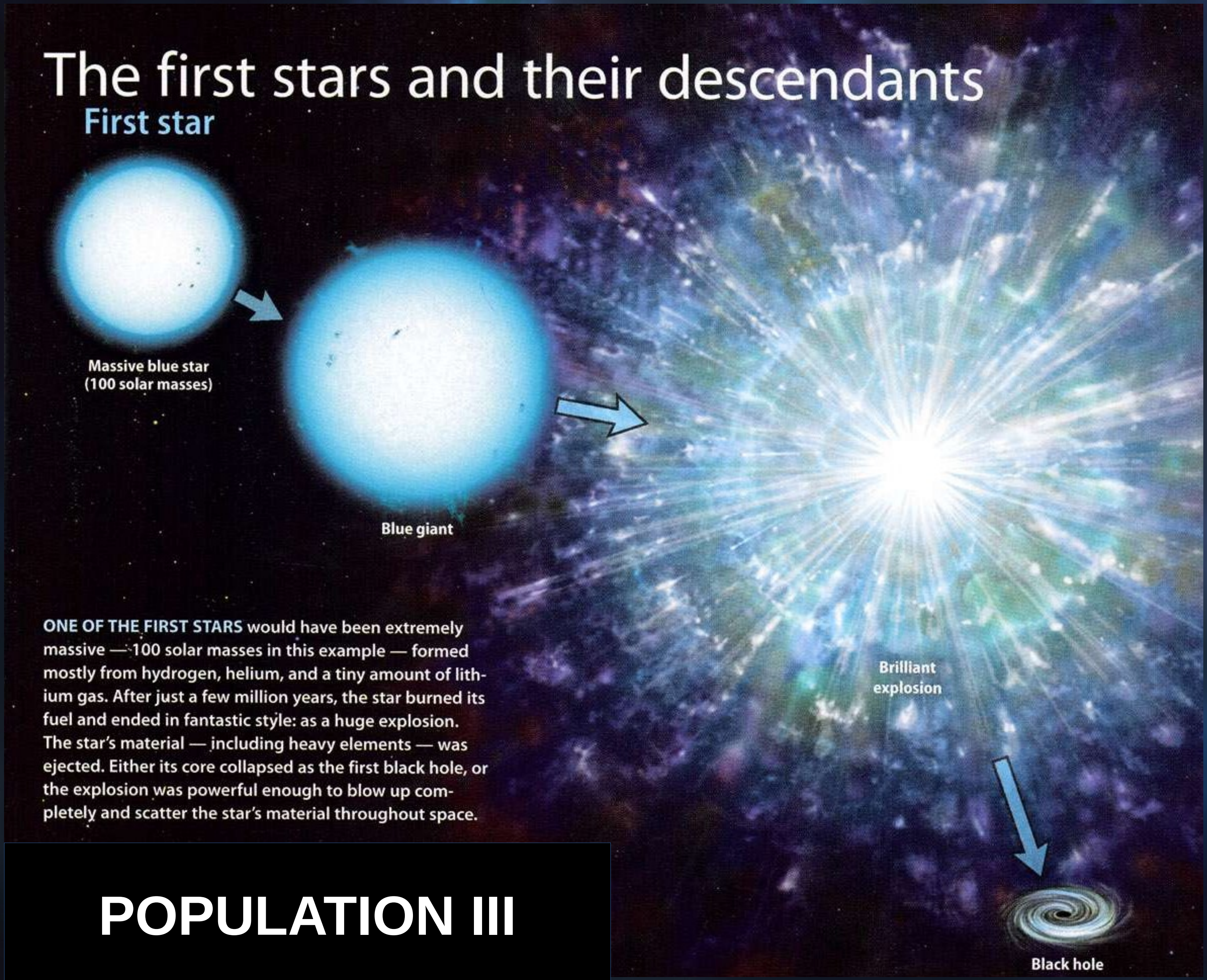
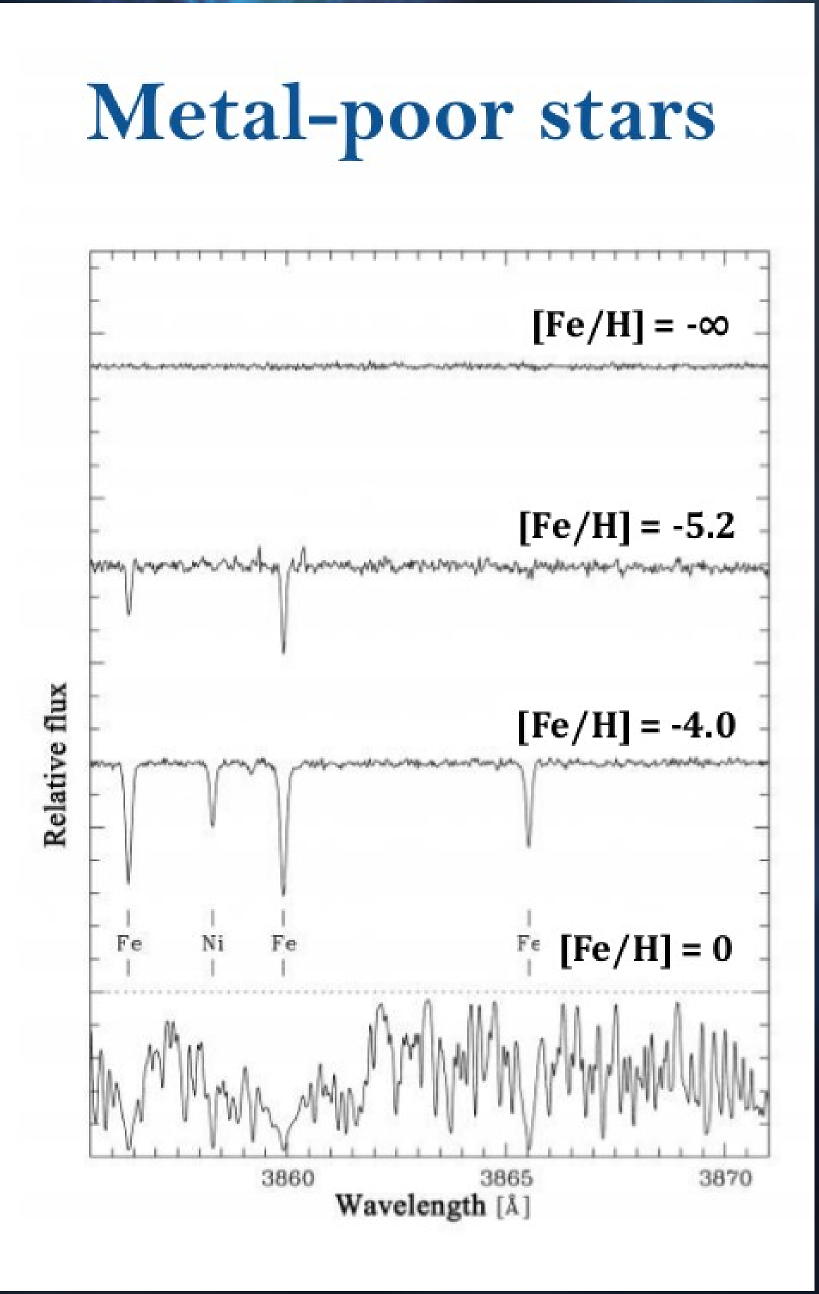
Introduction: The Early Universe



POPULATION III

Introduction: The Early Universe



4MOST collaboration

1-Methodology to find Metal-Poor Stars

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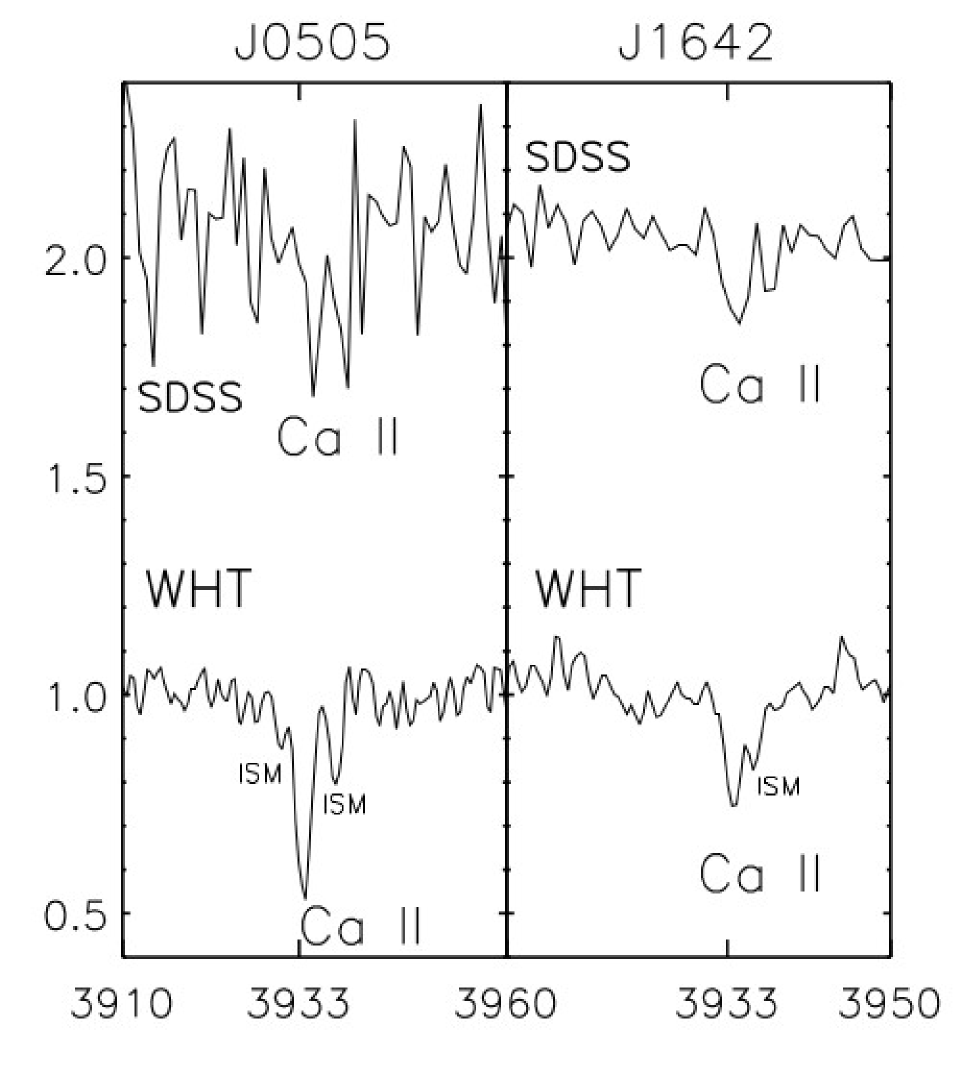
~10,000,000 spectra from SDSS and LAMOST or PRISTINE and J-plus

1-Methodology to find Metal-Poor Stars

~500 candidates to observe with ISIS at WHT or with OSIRIS at GTC

~3,000,000 spectra from SDSS and LAMOST

1-Methodology to find Metal-Poor Stars



Aguado+ 2016

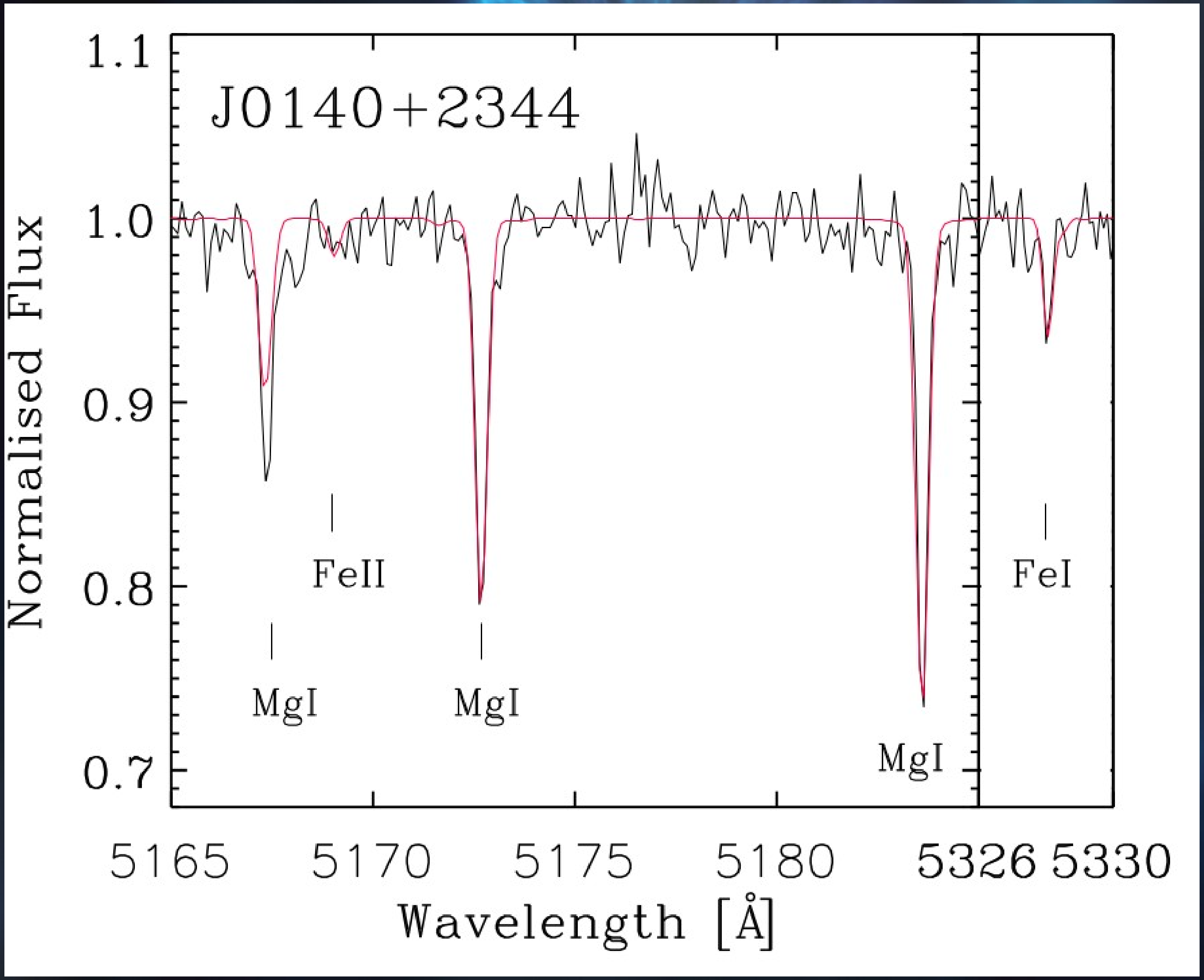
1-Methodology to find Metal-Poor Stars

6 UMP stars

~500 candidates to observe with ISIS at WHT or with OSIRIS at GTC

~3,000,000 spectra from SDSS and LAMOST

1-Methodology to find Metal-Poor Stars

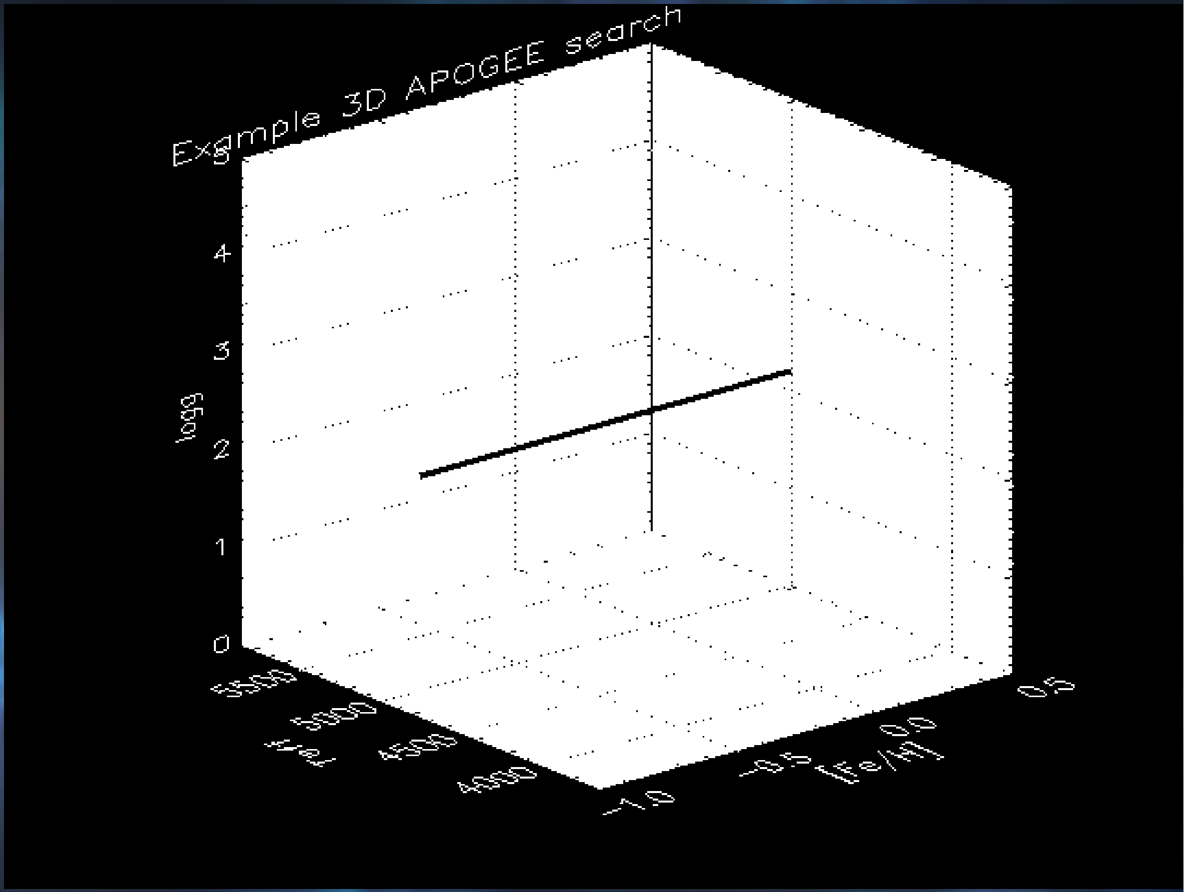


Aguado+ 2016

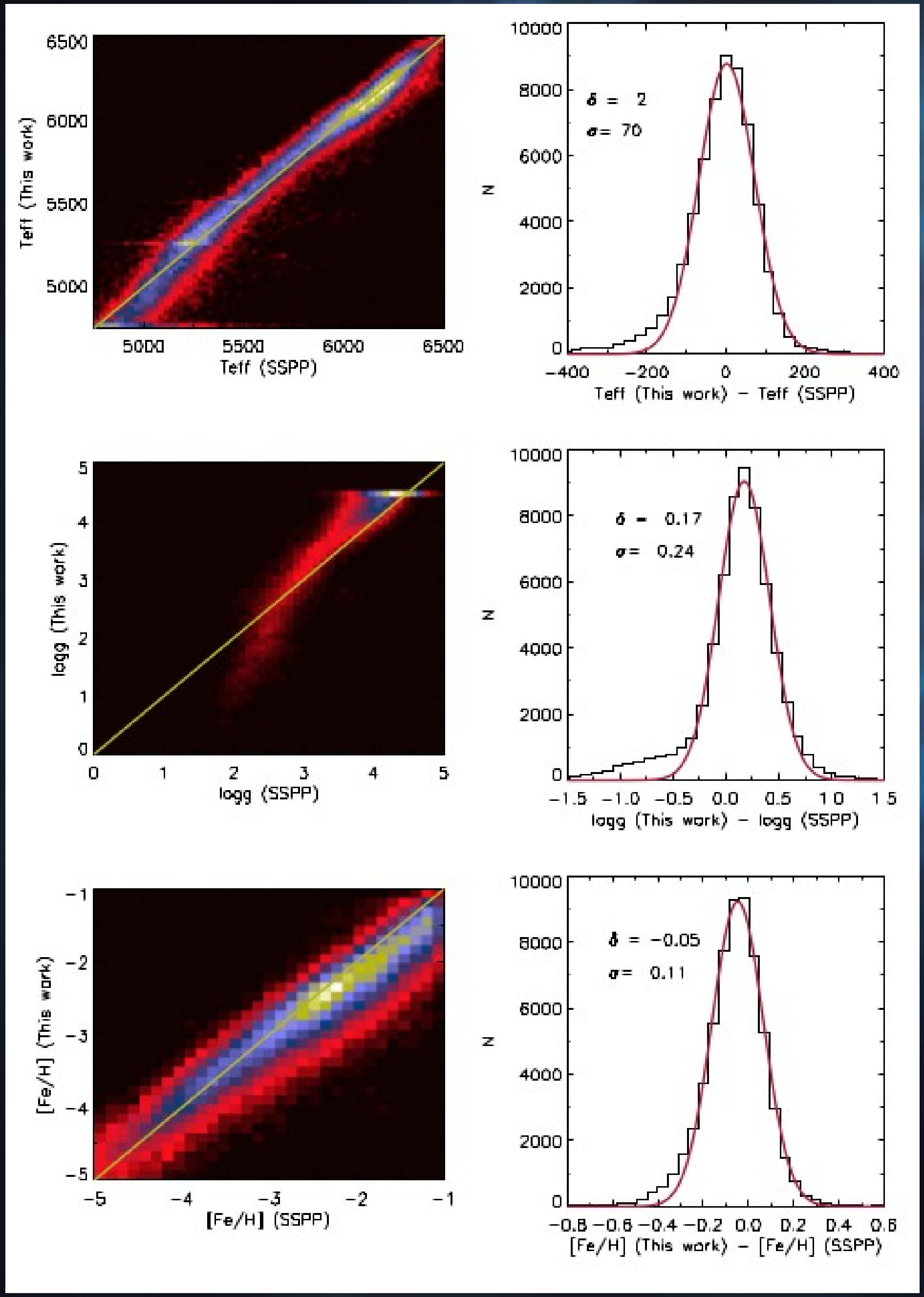
2-Spectroscopic analysis with FERRE

- FERRE is a FORTRAN code developed by Allende Prieto (Allende+ 2014)
- FERRE is able to compare data with a grid of theoretical models
- FERRE searches for the best solution on the N space paremeters
- FERRE interpolates between the nodes of the grid

2-Spectroscopic analysis with FERRE

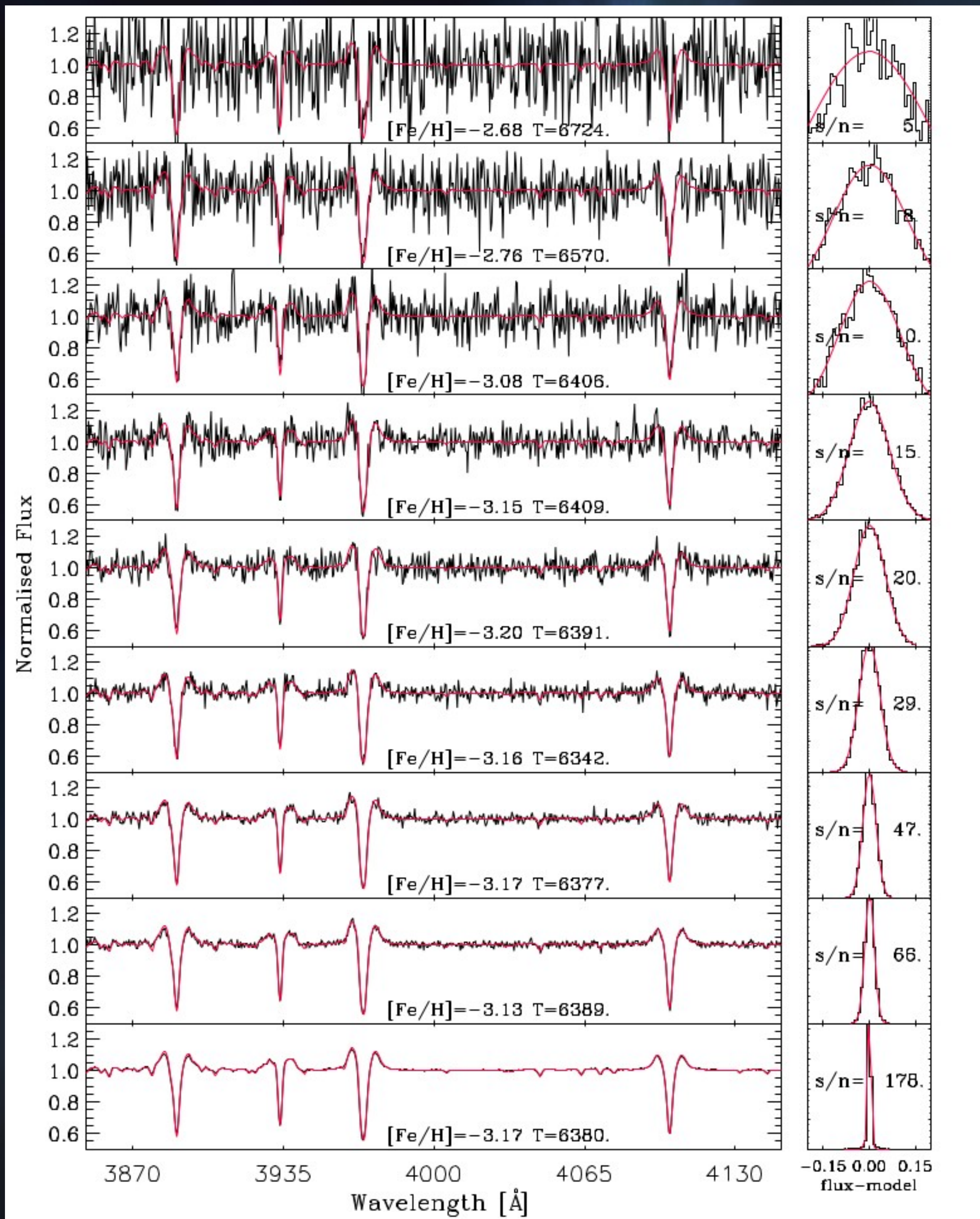


2-Spectroscopic analysis with FERRE



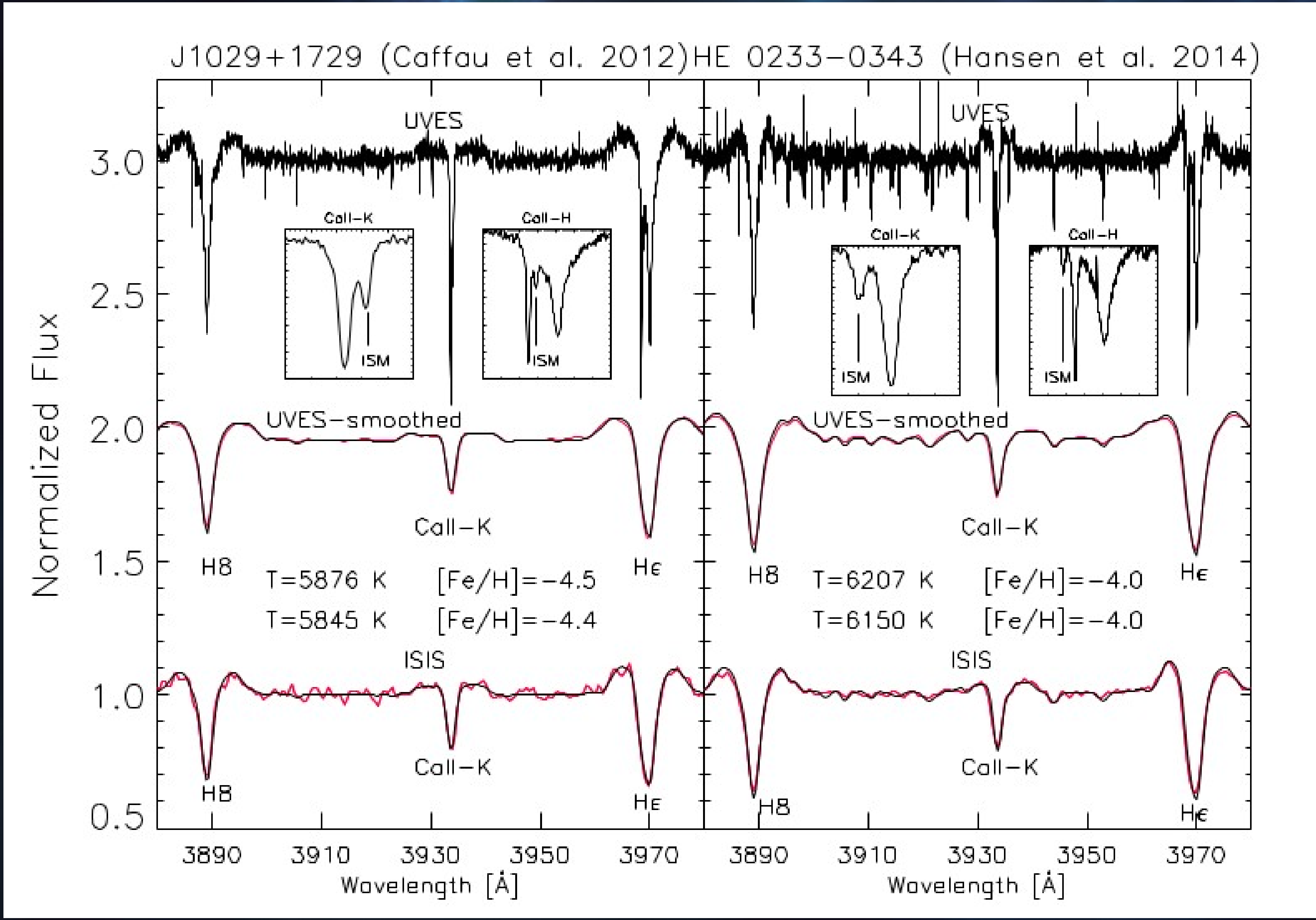
Allende Prieto+ (2014)

2-Spectroscopic analysis with FERRE



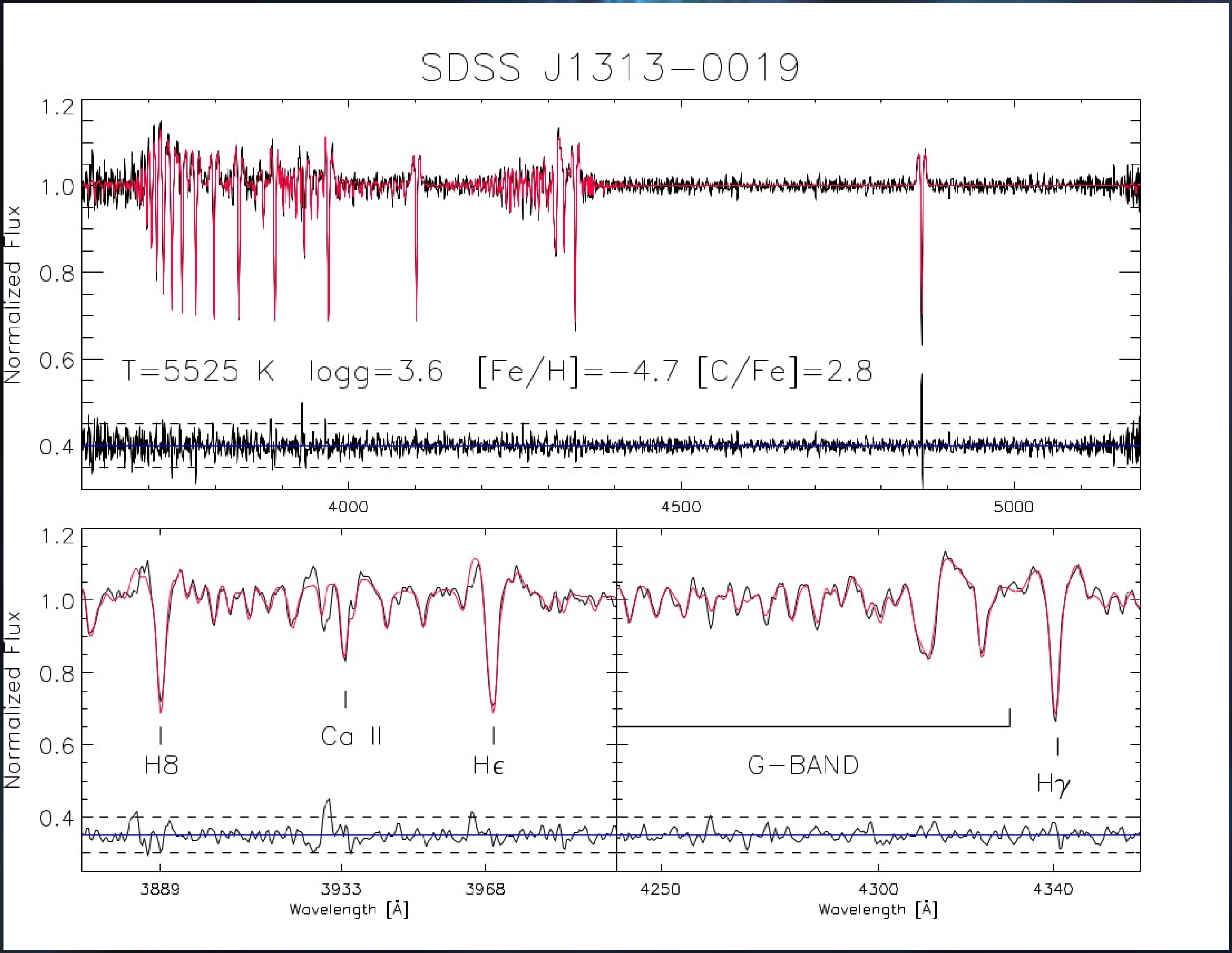
Aguado+ (2017a)

2-Spectroscopic analysis with FERRE



Aguado+ (2017a)

2-Spectroscopic analysis with FERRE



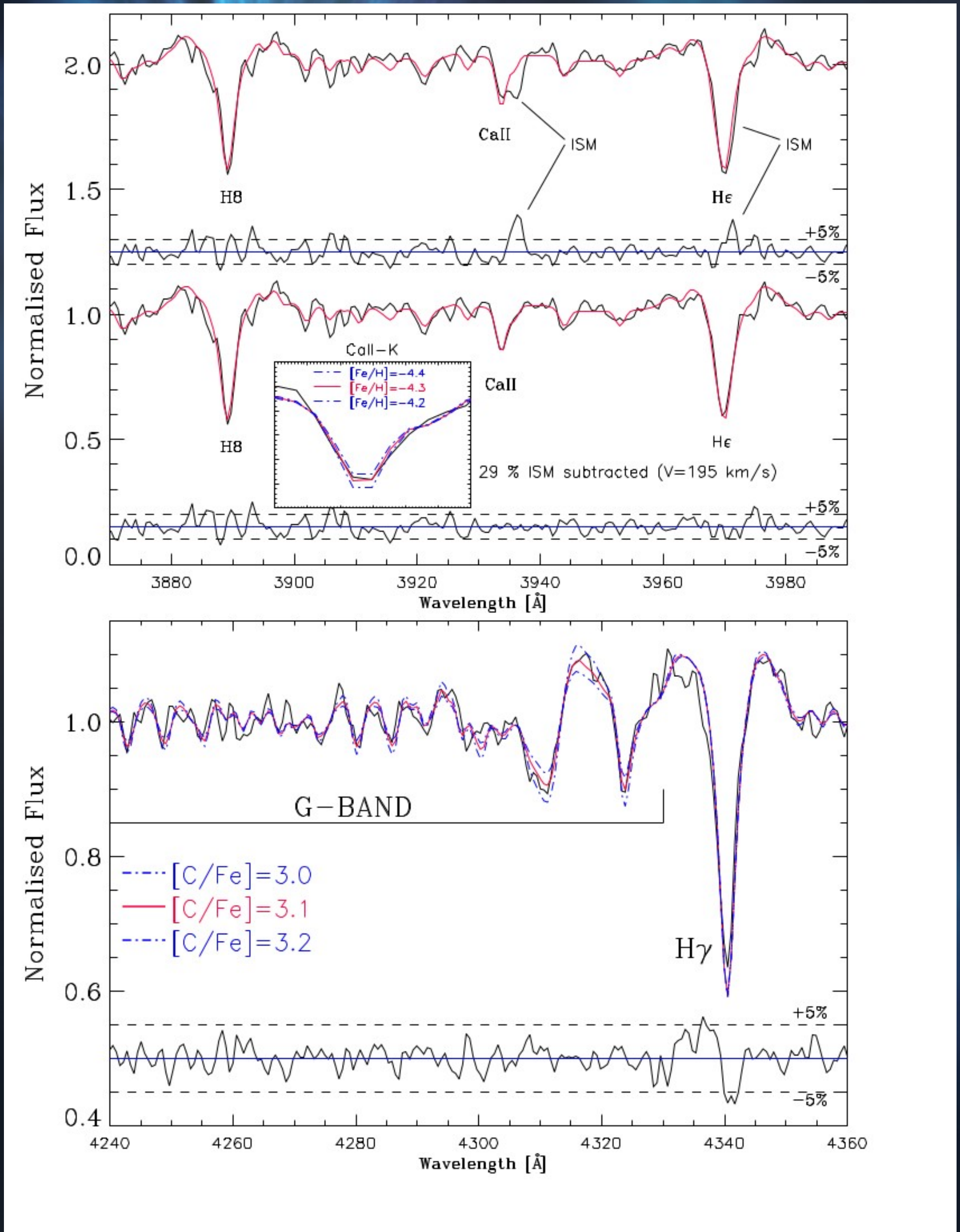
Allende Prieto+ (2015)

Frebel+ (2015)

Aguado+ (2017a)

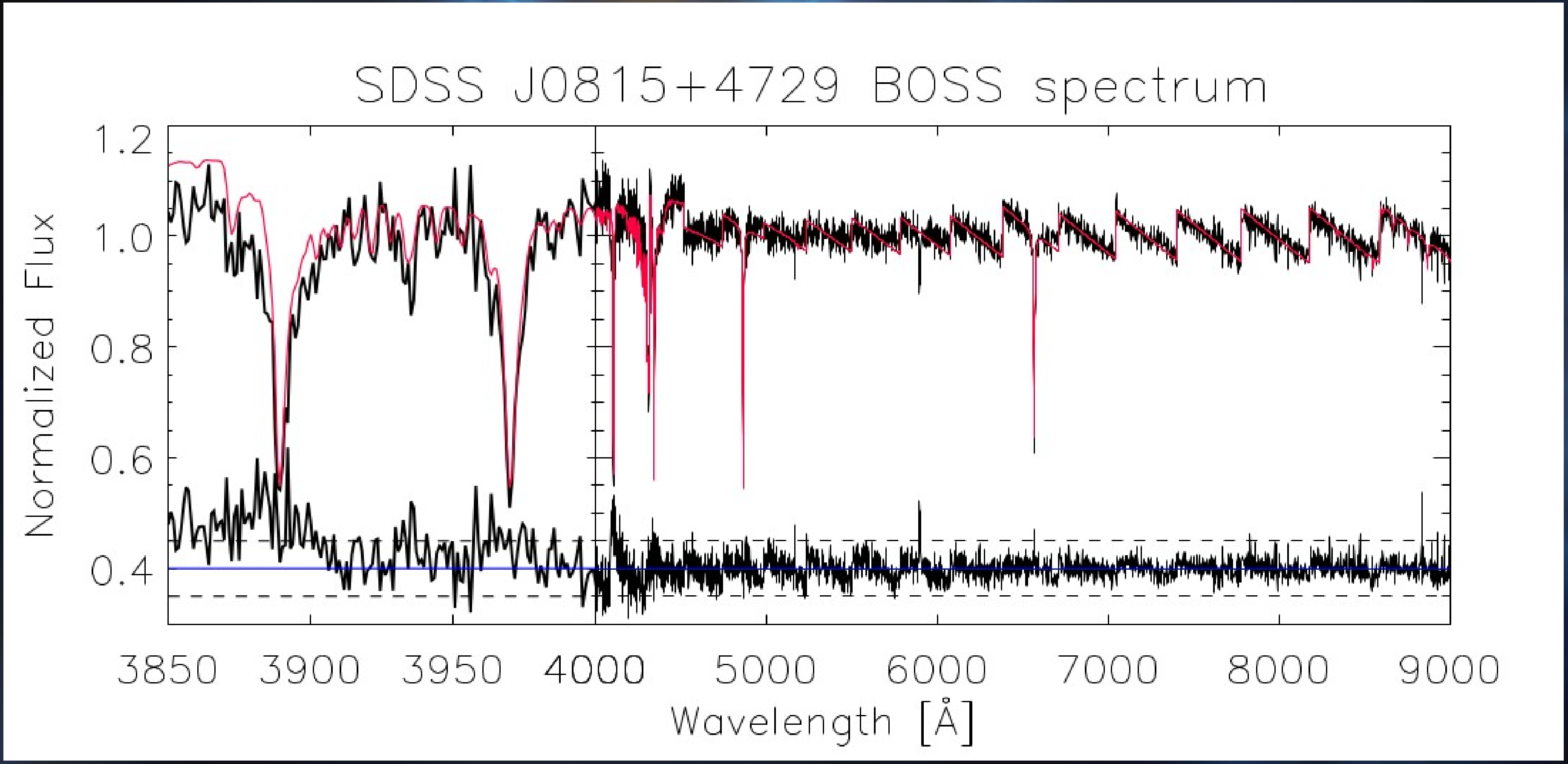
2-Spectroscopic analysis with FERRE

Aguado+ (2017b)



3-The Discovery of J0815+4729

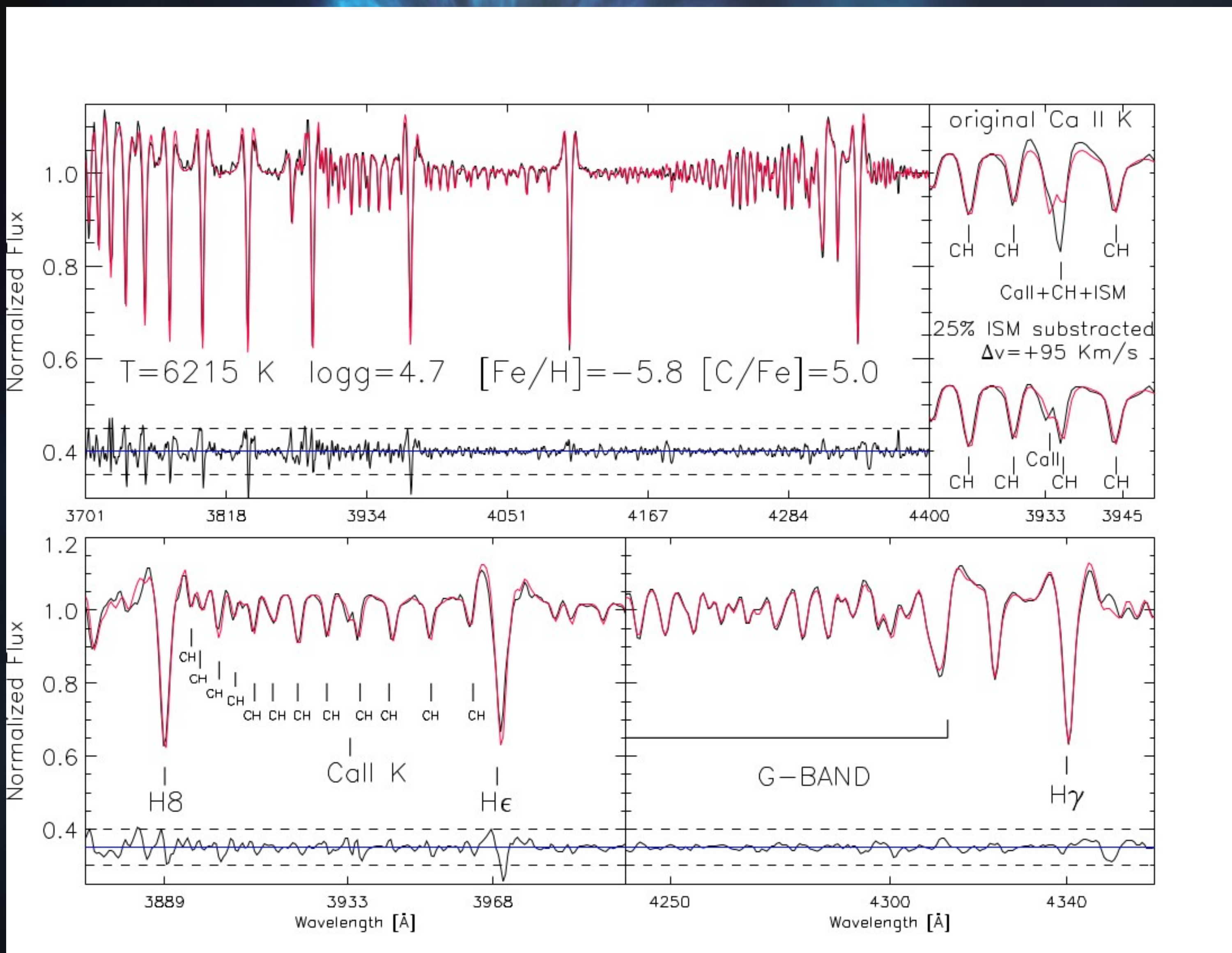
Aguado+ (2018a)



3-The Discovery of J0815+4729

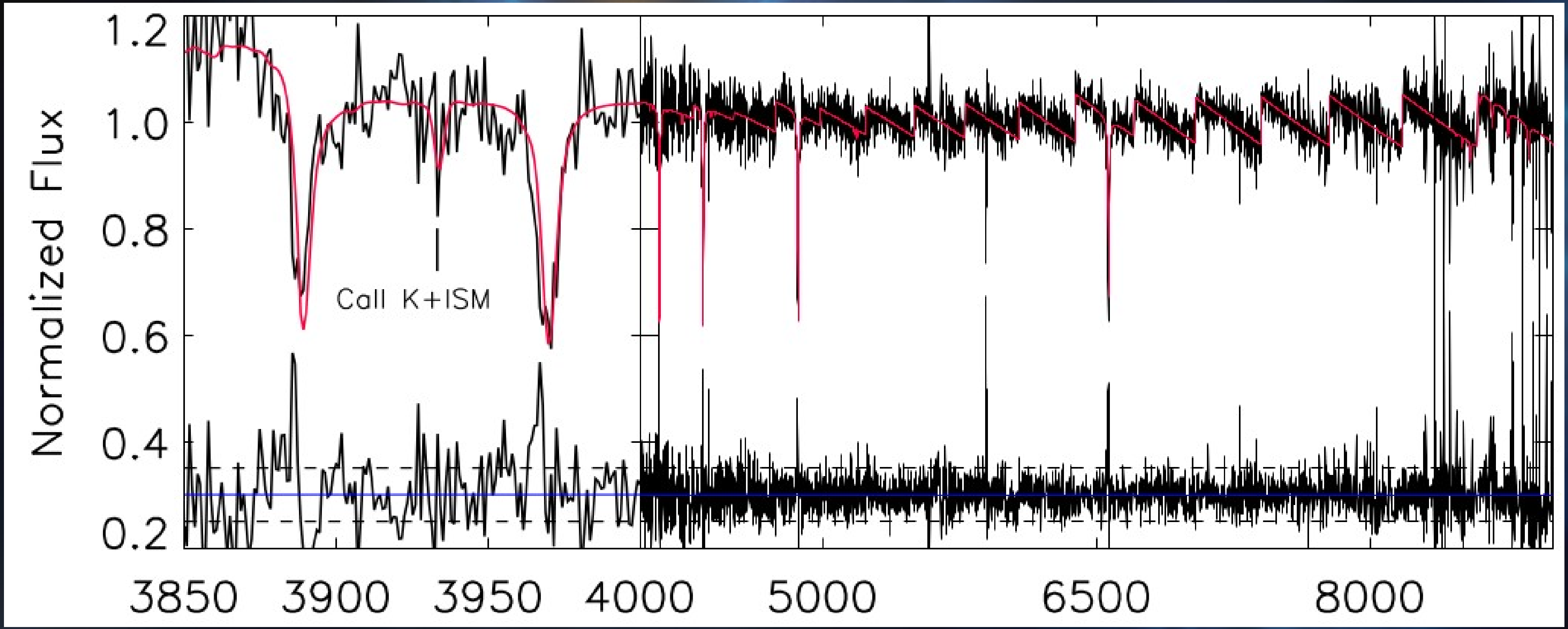
Aguado+ (2018a)

極超金属欠乏星！



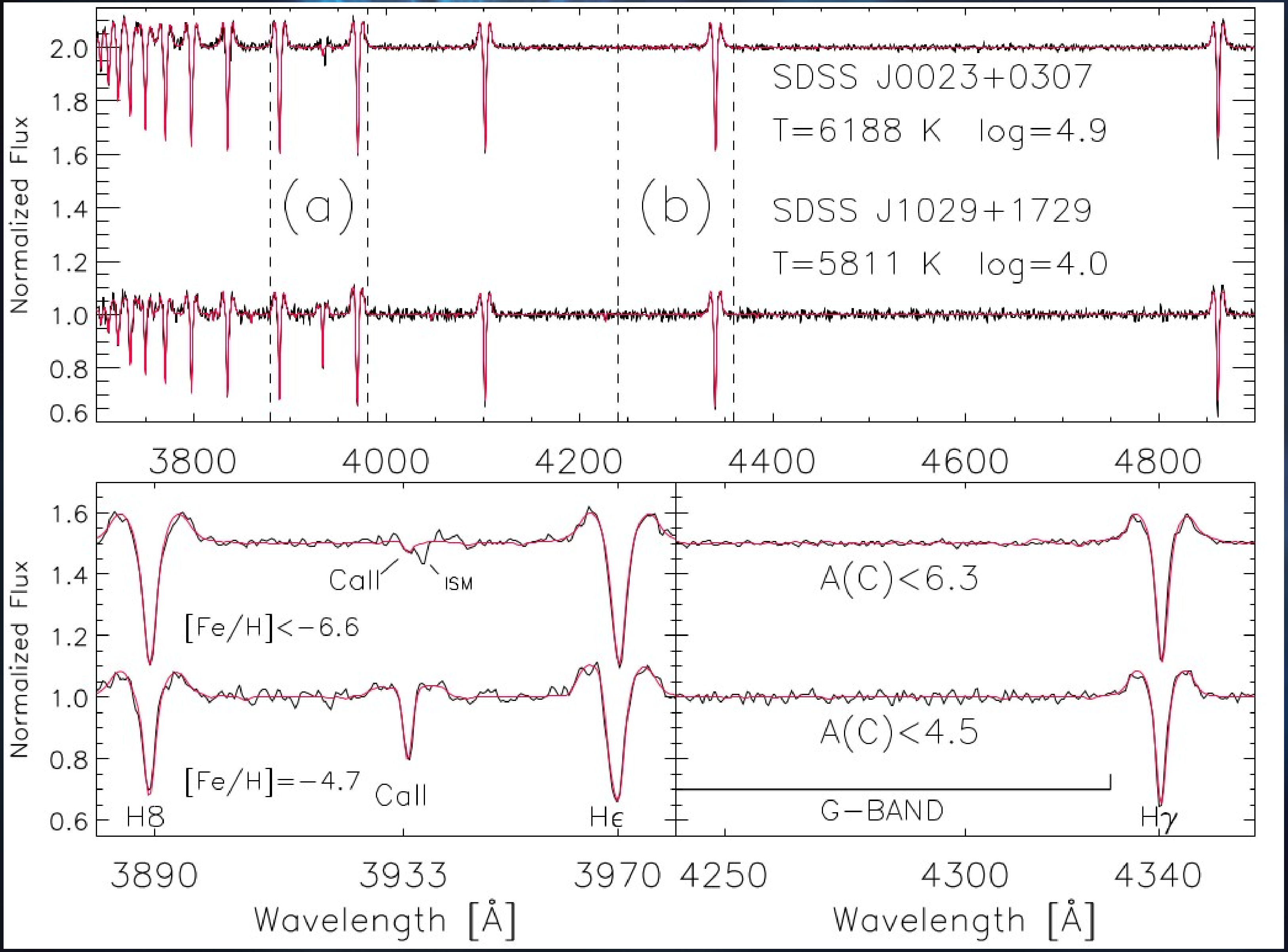
4-The Discovery of J0023+0307

Aguado+ (2018b)



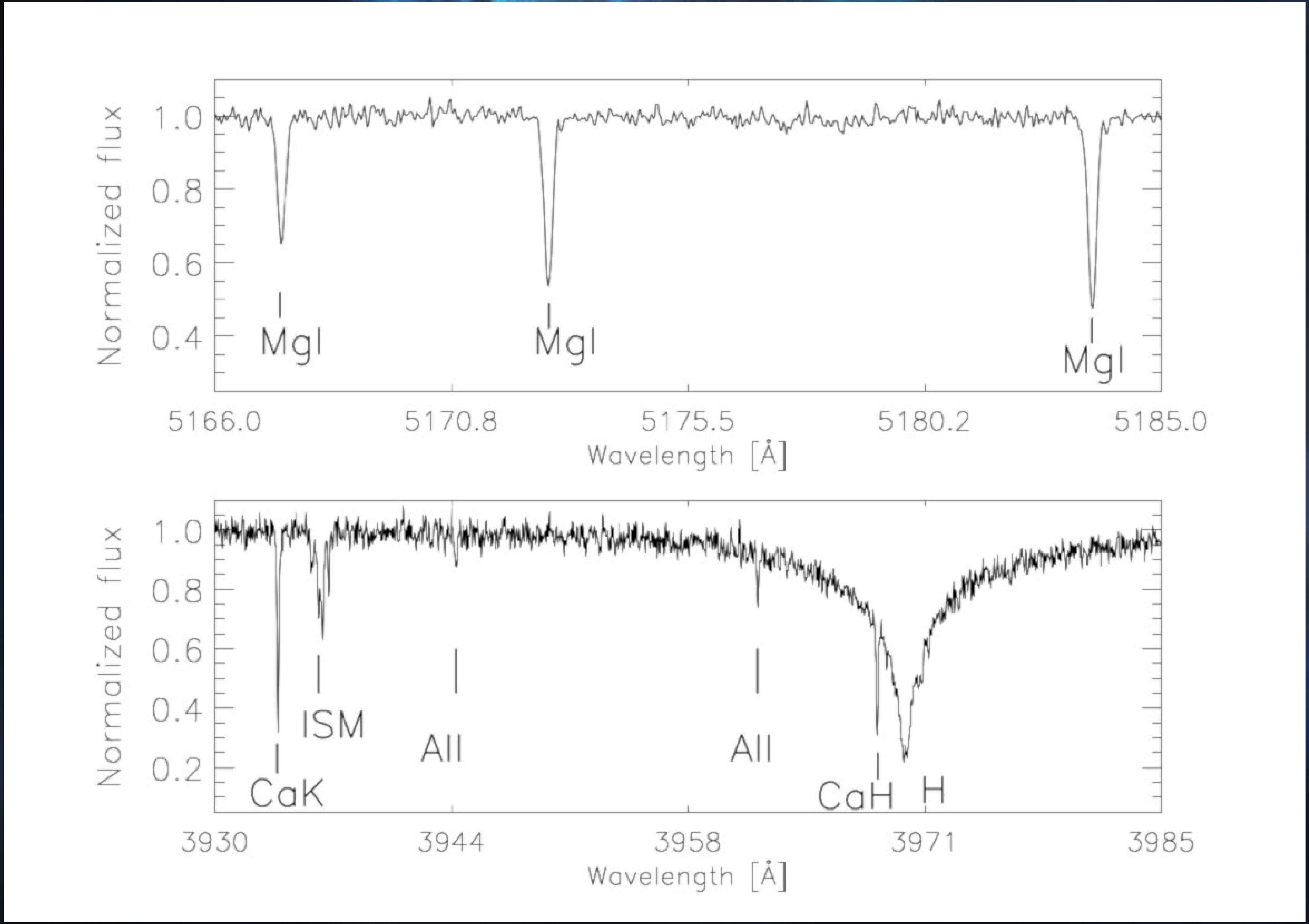
4-The Discovery of J0023+0307

Aguado+ (2018b) 極超金属欠乏星 !!!



4-UVES spectrum of J0023+0307

Aguado+ (2018, submitted)



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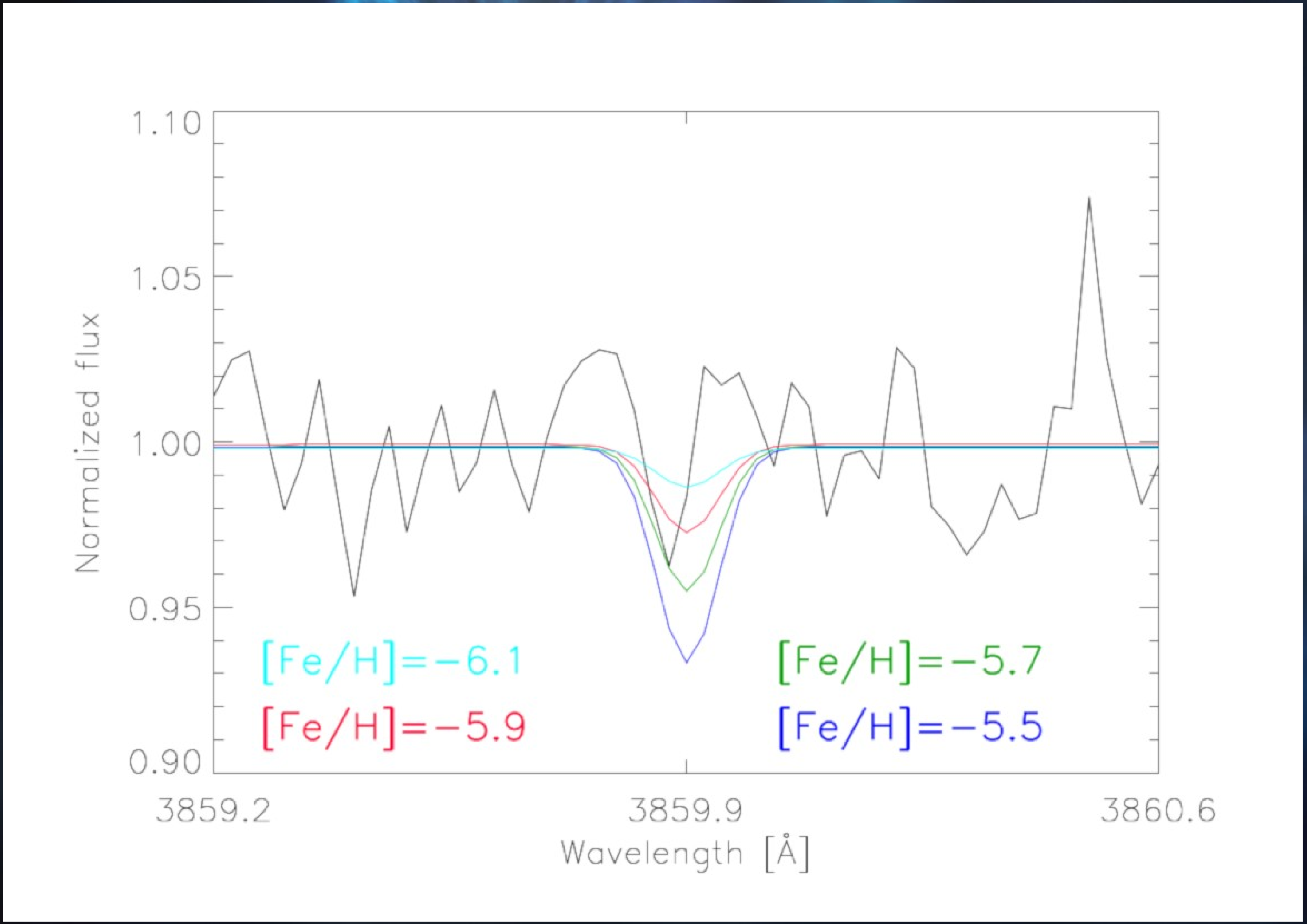

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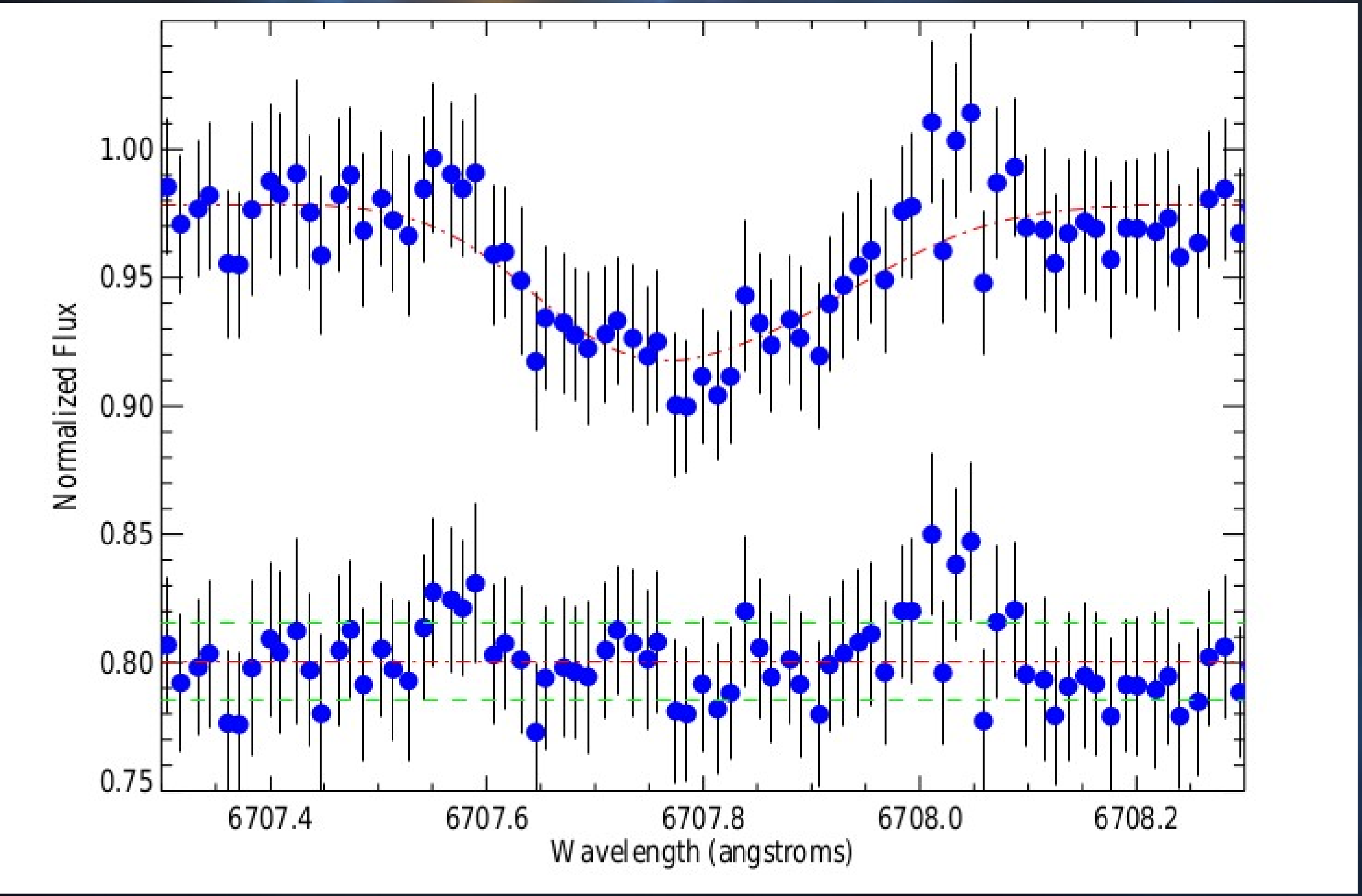

4-The Discovery of J0023+0307

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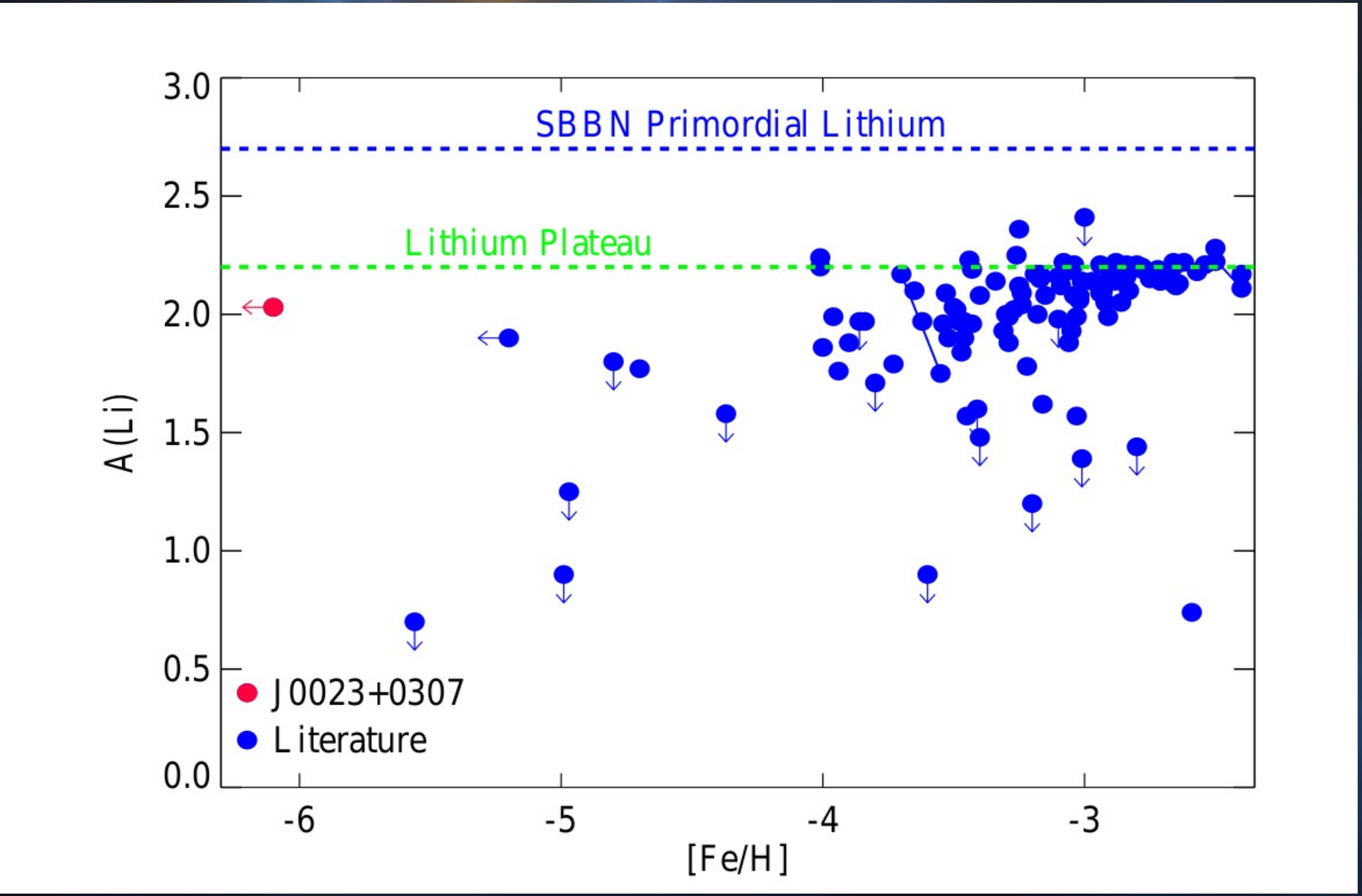


4-The Discovery of J0023+0307

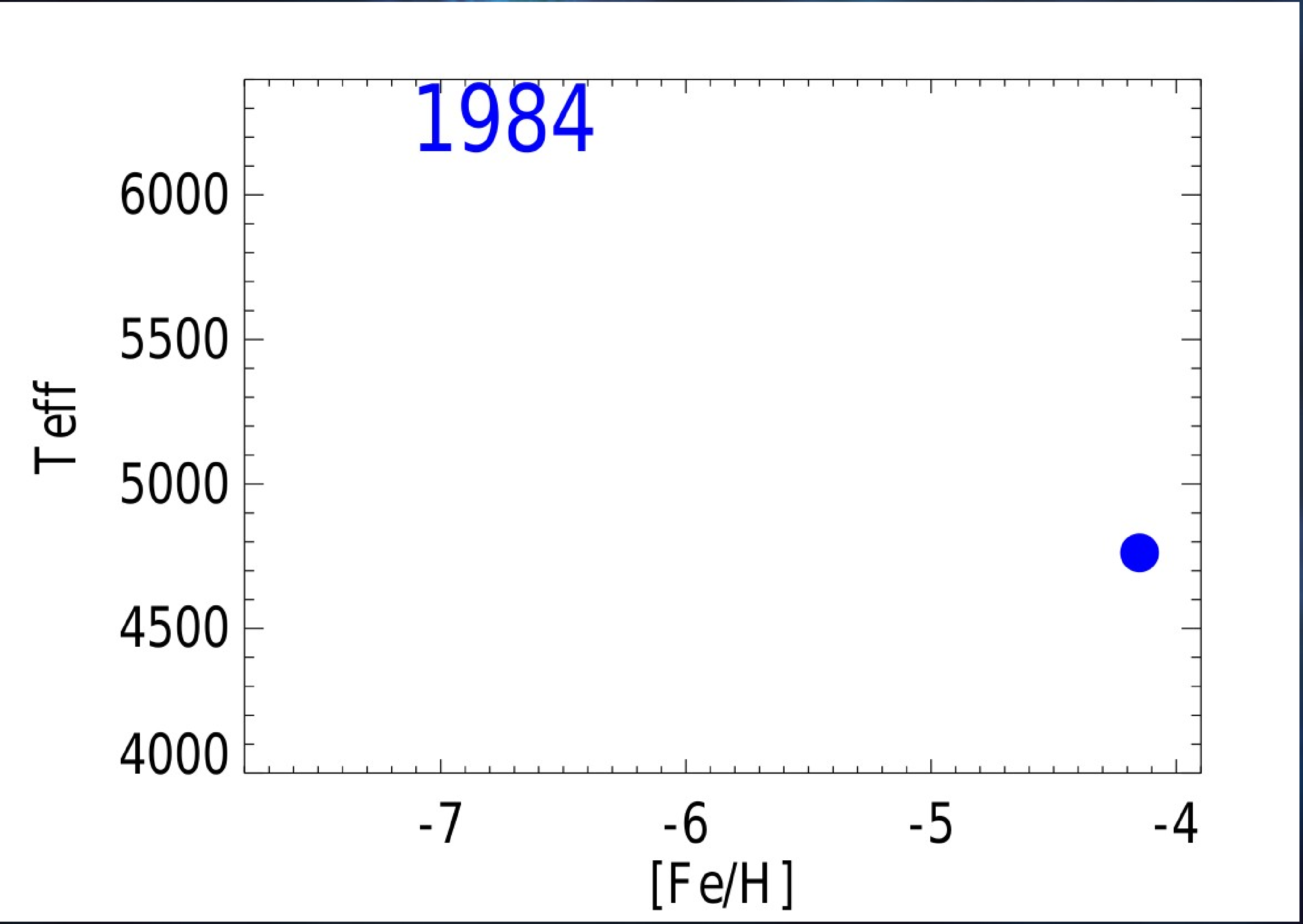
Aguado+ (2018, submitted)

Table 1: All the T_{eff} derived values considered in this work and explained in Section 3

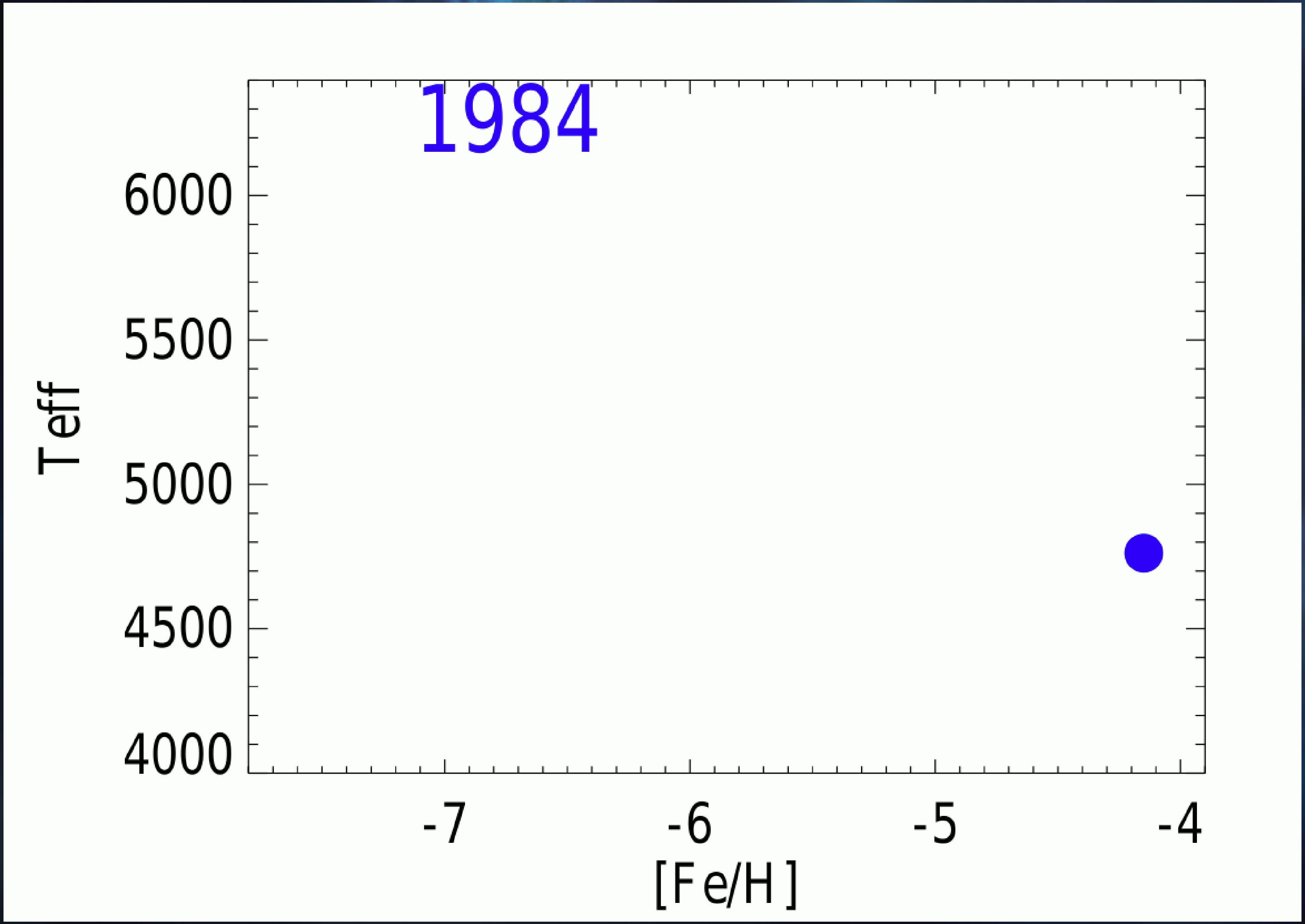
Source	Ref.	T_{eff}	δT
BOSS spectrum	(1)	6295	36
OSIRIS spectrum	(1)	6140	132
ISIS spectrum	(1)	6188	84
(g-z)	(2)	6160	100
H_α	(3)	6400	150
H_β	(3)	6165	62
IRFM	(4)	6482	224
(V-J)	(5)	6481	156
(V-H)	(5)	6335	186
(V-K_s)	(5)	6615	212
Mean V-X	(5)	6474	145
(V-I)	(5)	5992	157
(V-I)	(6)	5997	130

References: (1) Aguado et al. (2018a), (2) François et al. (2018), (3) This work, (4) González Hernández & Bonifacio (2009), (5) Casagrande et al. (2010), (6) Frebel et al. (2018)

5-Summary



5-Summary



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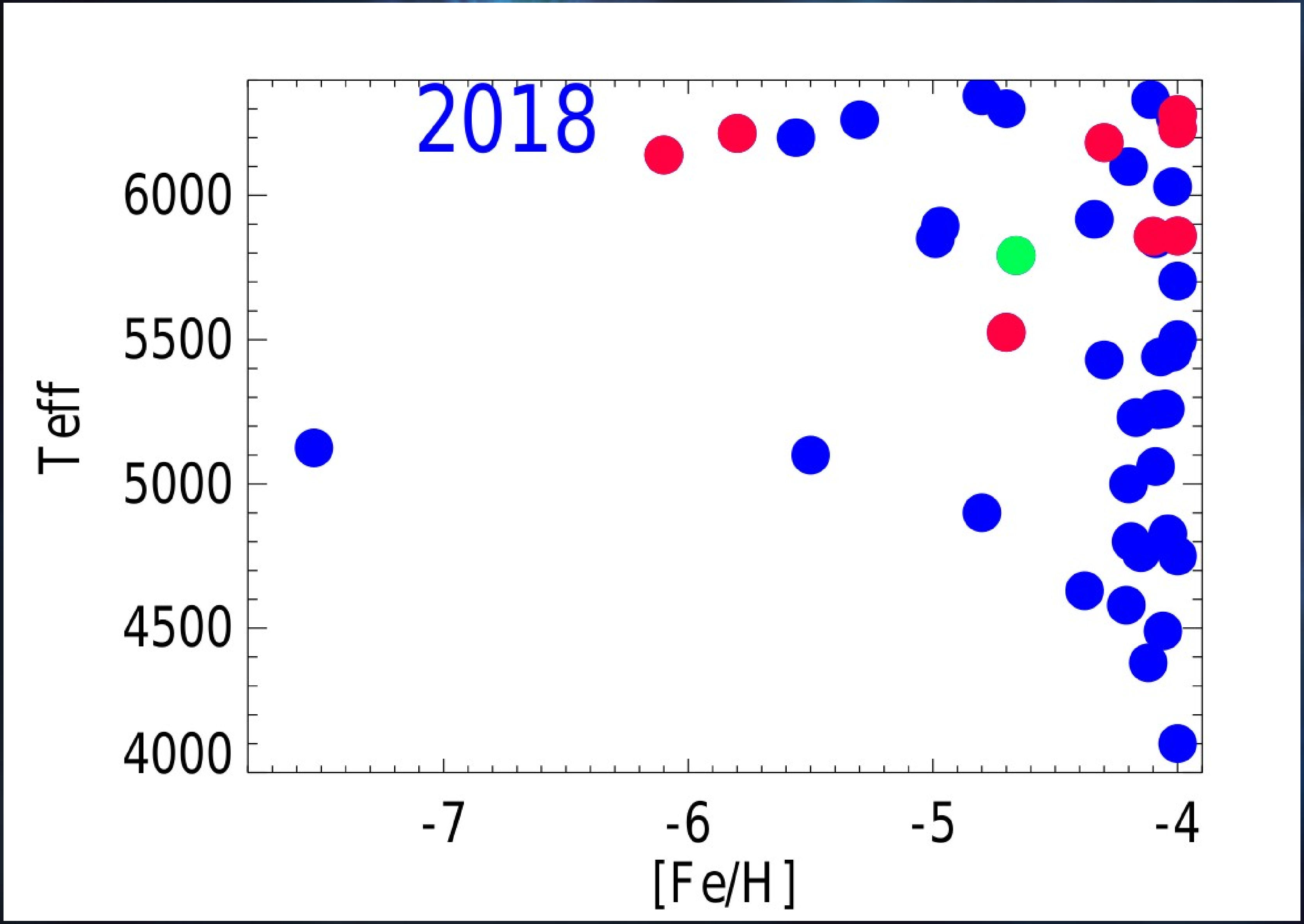

ありがとう！