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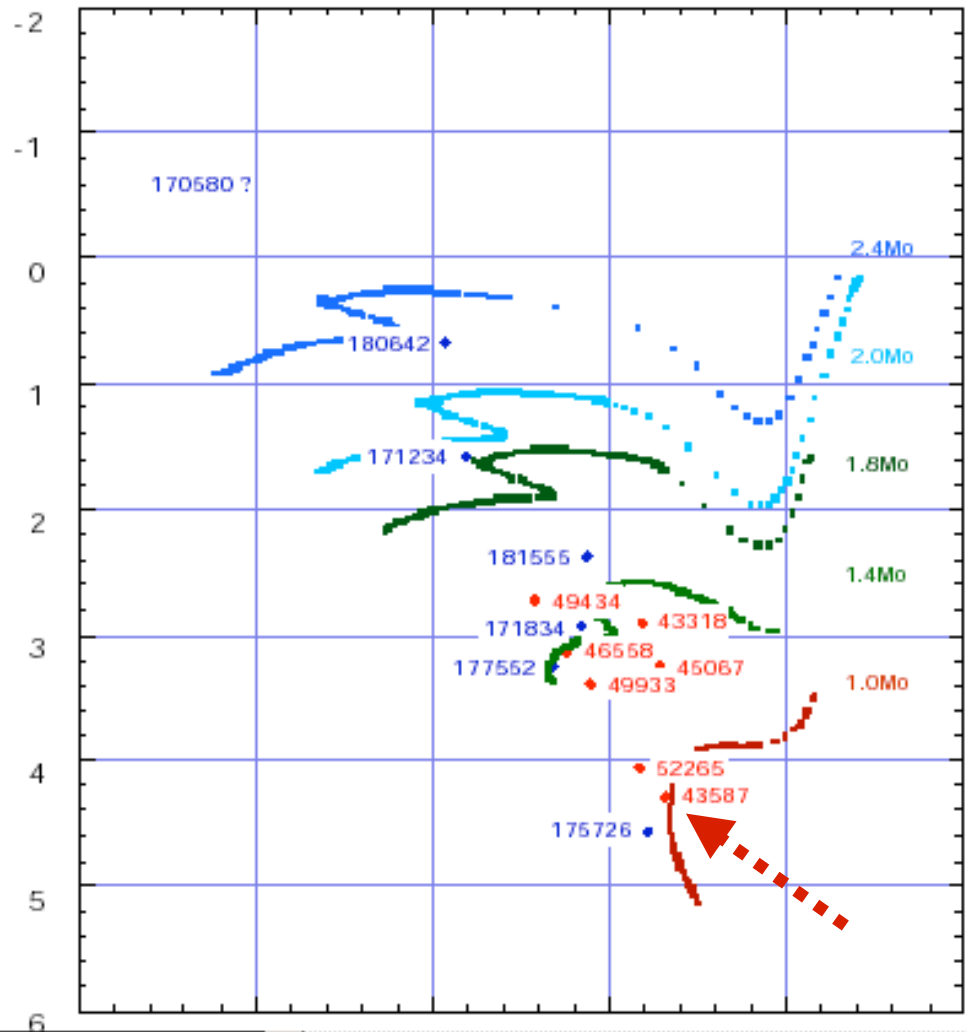
This document explains how the present list of candidate targets, as well as the back-ups, were established, containing « nominal » targets for the long runs and some back-ups.

Object	M& evolution status	mv	distance to field centre (deg)	exoplanet criteria	Siso secondary targets
→ HD52265	~1-1.1Mo ,with planet...	6.3	~6	2100 N 2600 S	?
→ HD49933 + HD49434	~1.2-1.3Mo ~ early MS Gam Dor	5.8 5.7	<2	2200-2770 homogen.	3 Be 2 Ap
→ HD43587	~1Mo, MS	5.7	9.6 (ok with drift)	2420 N 1260 S	1 δ Sct, 1 Be several F MS
LRa03 HD170580	Beta Ceph (multipler)	.	6.5	4000 N 2400 S	2 δ Sct NGC 6633
→ HD171834	~1.3-1.4Mo, late MS	5.4	7.5 (ok with drift)	3300 N 4600 S homogen	1 δ Sct, 1 Be 1 alg bin IC 4756
HD177552	~1.4Mo, earlyMS, Vsini=40km/s	6.5	~4.1	3345 N 6620 S	1 δ Sct 1 Hg,Mn, GoV, Ap, eccl bin.
→ HD181555 HD180642	δ Sc MS ?... Vsini~170km/s Beta Cephei,	8	8 (ok with drift)	4500 N 6200 S	1 δ Sct, 2 Be

in red: complete agreement between the two programmes, in green eventual difficulties

This first selection has to be confirmed by more detailed studies on the secondary targets in seismology and on the local quality for the exoplanet search.

2 of 14 8,26 x 11,69 in



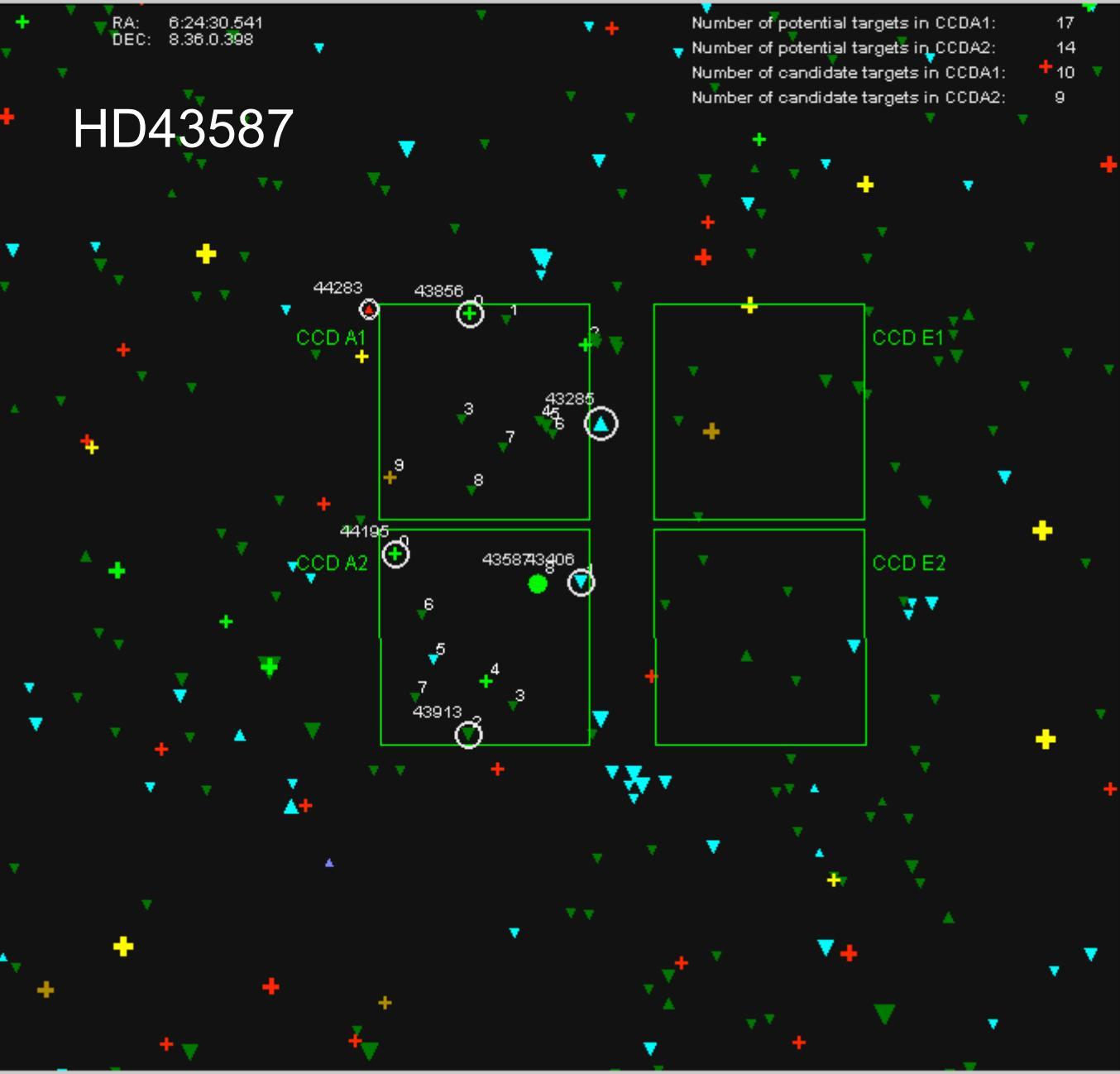
5-6 6-7 7-8 8-9.5 O B A F G K M ... Gr.1 Gr.2 Gr.3



RA: 6:24:30.541
DEC: 8:36:0.398

HD43587

Number of potential targets in CCD A1: 17
 Number of potential targets in CCD A2: 14
 Number of candidate targets in CCD A1: 10
 Number of candidate targets in CCD A2: 9



Groups & Operations

(Group 1 AND OR Group 2) AND OR Group

Apply

Group 1

Type

Spectral type

Magnitude

Color b-v

Metallicity **Show**

Vsini

Temperature **Modify**

Group 2

Type

Spectral type

Magnitude

Color b-v

Metallicity **Show**

Vsini

Temperature **Modify**

Group 3

Type

Spectral type

Magnitude

Color b-v

Metallicity **Show**

Vsini

5-6 6-7 7-8 8-9.5 O B A F G K M ... Gr.1 Gr.2 Gr.3



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DEC: 8:36:0.398

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Groups & Operations

(Group 1 AND OR Group 2) AND OR Group

Apply

Group 1

Type

Spectral type F - All All

Magnitude 0.0 8.0

Color b-v

Metallicity

Vsini

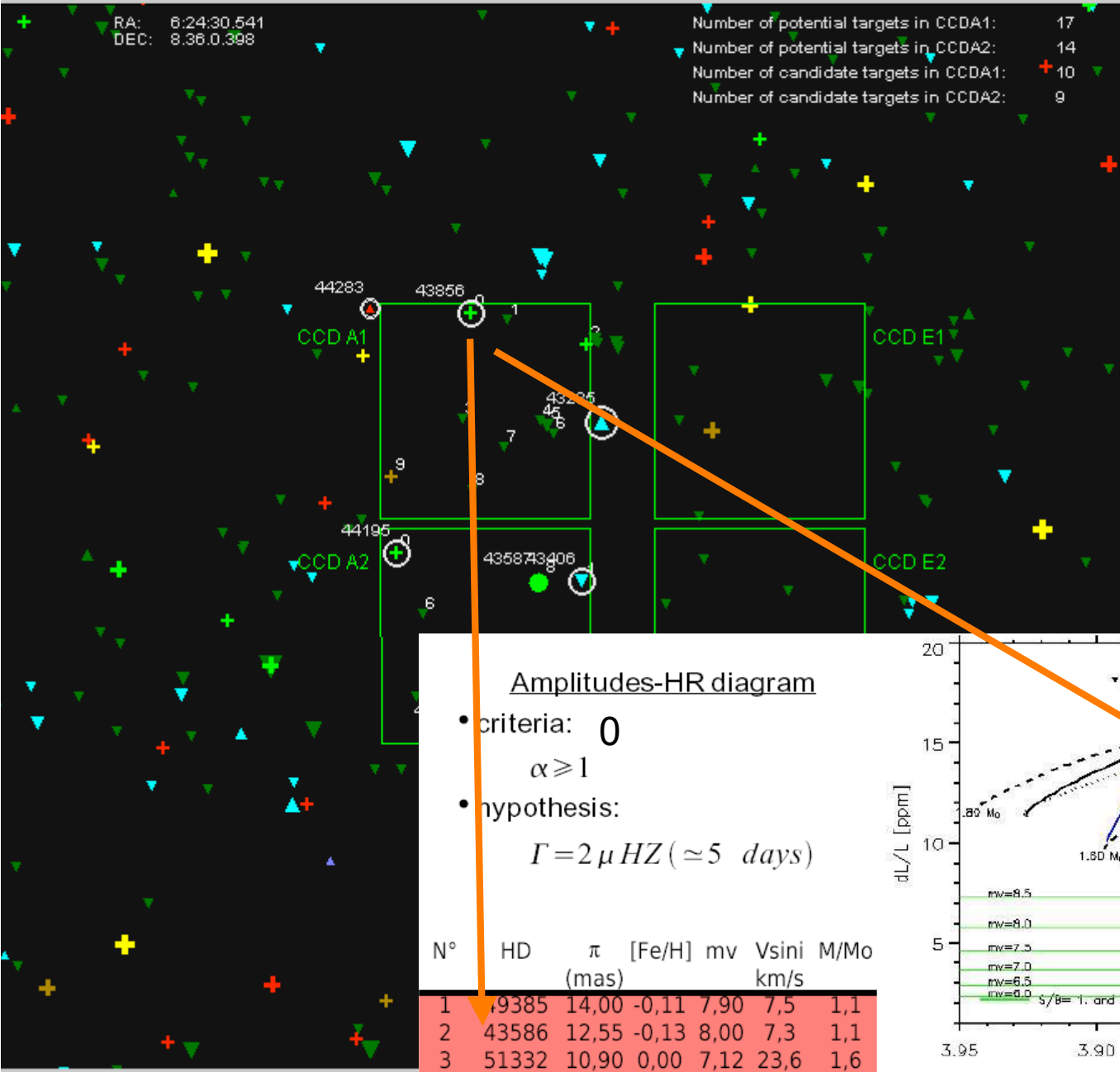
Temperature

Show **Modify**

Group 2

Type Principal T...

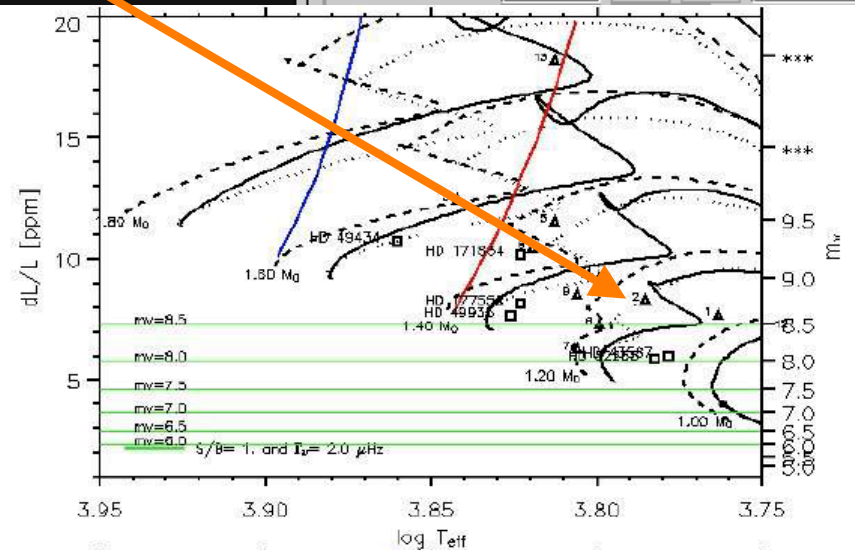
Spectral type



Amplitudes-HR diagram

- criteria: 0
- $\alpha \geq 1$
- hypothesis:
- $\Gamma = 2 \mu \text{HZ} (\approx 5 \text{ days})$

N°	HD	π (mas)	[Fe/H]	mv	Vsini km/s	M/Mo
1	49385	14,00	-0,11	7,90	7,5	1,1
2	43586	12,55	-0,13	8,00	7,3	1,1
3	51332	10,90	0,00	7,12	23,6	1,6



5-6 6-7 7-8 8-9.5 O B A F G K M ... Gr.1 Gr.2 Gr.3



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DEC: 8:36:0.398

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Groups & Operations

(Group 1 AND Group 2) AND Group AND
 OR OR OR

Apply

Group 1

Type

Spectral type F - All All

Magnitude 0.0 8.0

Color b-v

Metallicity

Show



ZAMS :

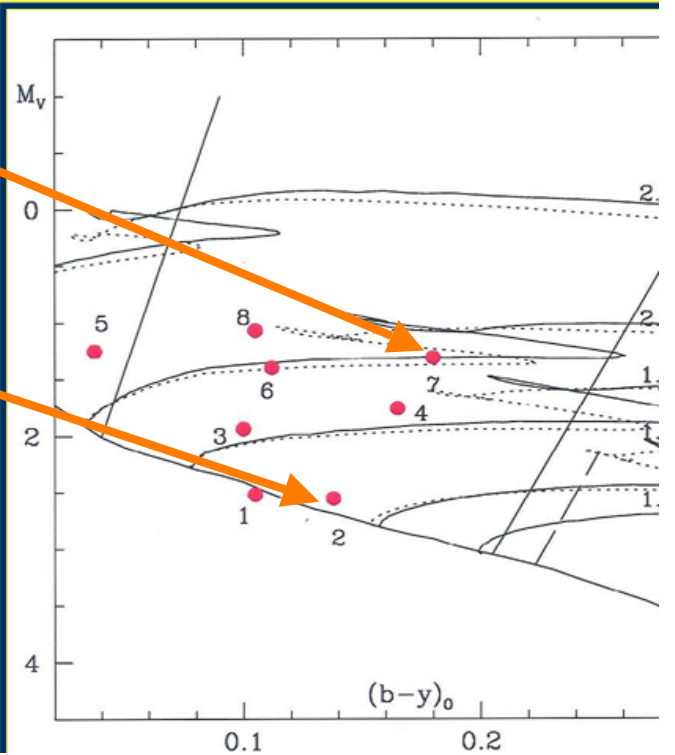
1	HD 181555	7.98	170	primary target
2	HD 44195	7.57	58	HD43587

UNEVOLVED :

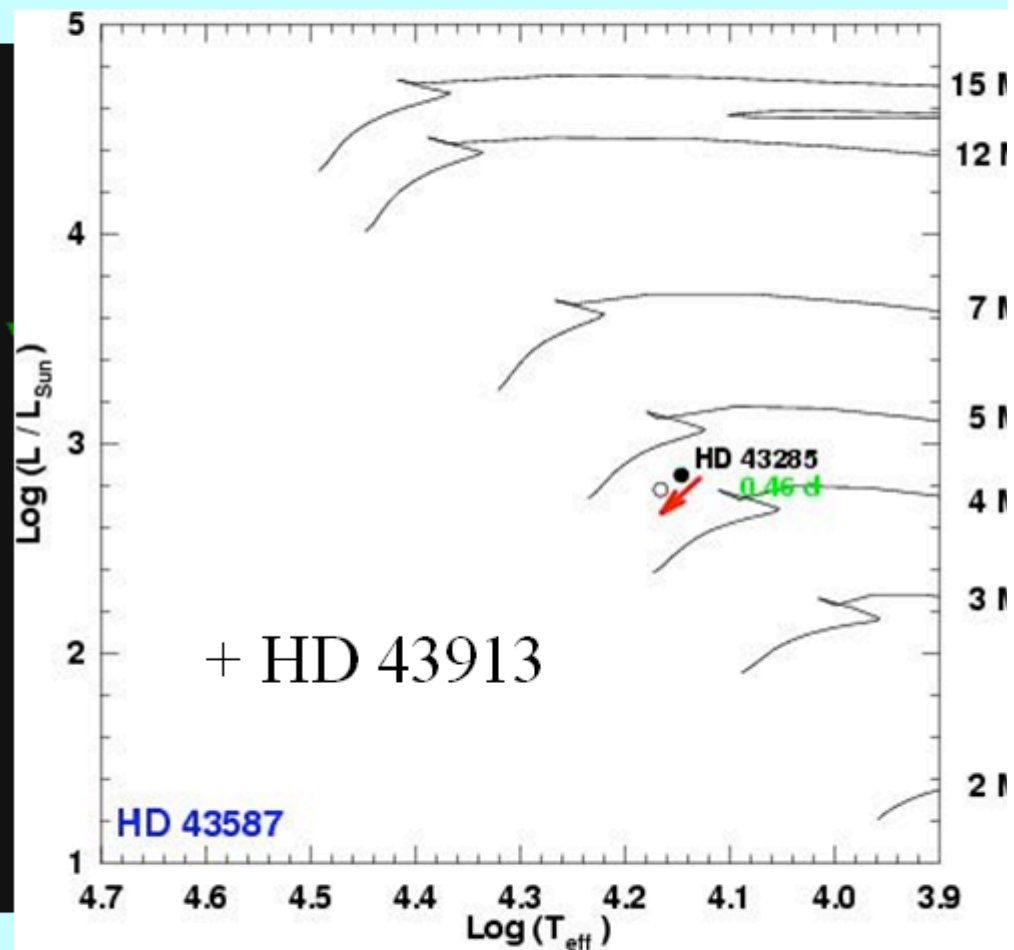
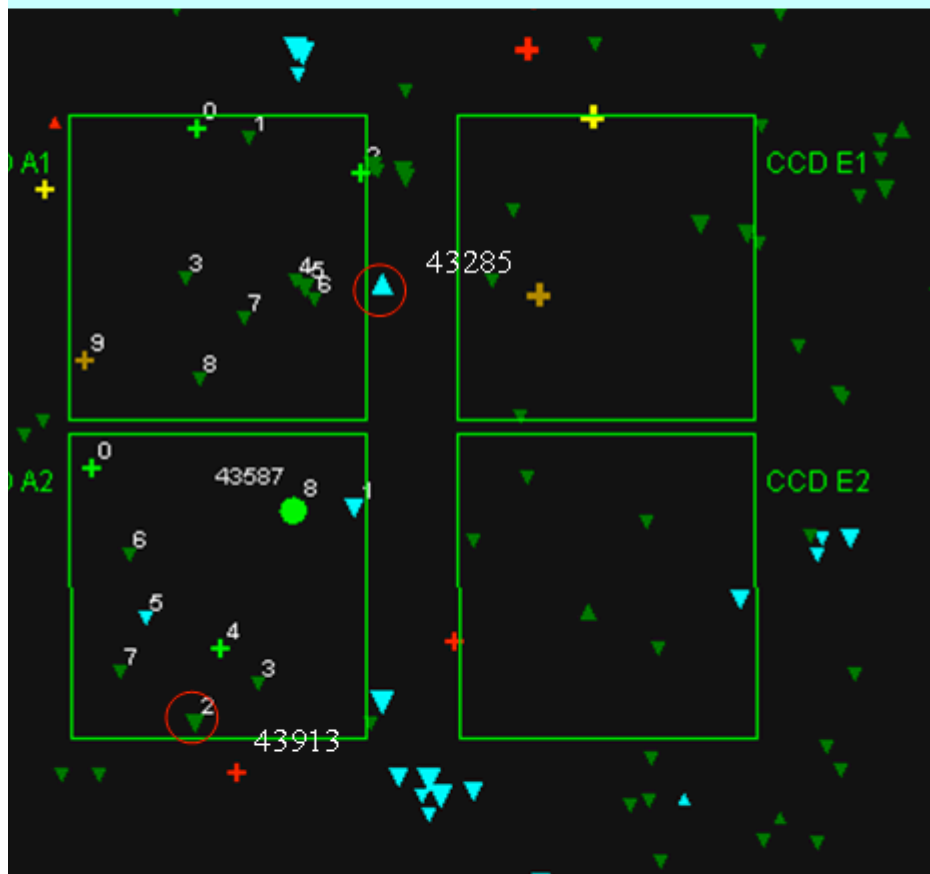
3	HD 181147	8.74	---	HD181555
4	HD 50870	8.86	17	HD52265
5	HD 170782	7.81	19	HD170580
6	HD 170699	6.95	>200	HD170580

ZIGZAGS (TAMS)

7	HD 44283	9.29	19	HD43587
8	HD 172189	8.85	EA	HD171834



Field HD 43587



HD43587

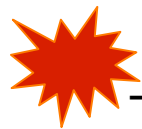
Exo: we used “no constraints”

After discussion with Magali: low density in the south, i.e. go rather north...

For this field, the objects of specific interest mentioned:

- Primary cand.: HD43587

- HD43856 a solar-like cand. (F , $V_{\text{sini}}=7.3\text{km/s}$, $\alpha=12.55$, $mV=8$, $MV=3.45\pm 1.21$, $T_{\text{eff}}=6100\text{K}$, $\text{Fe}/\text{H}=-0.13$; CRIT.0



- HD 44195 delta Sc mod. rot. (F , $V_{\text{sini}}=58.3\text{km/s}$, $\alpha=10.78$, $mV=7.56$, $MV=2.72\pm 1.3$, $T_{\text{eff}}=6900\text{K}$, $\text{Fe}/\text{H}=-0.25$)

- HD 44283 delta Scuti, slow rot (19km/s), TAMS

- HD 43406 a B9 MS Hipp variable

- HD 43913 a new Be star

- HD 43285 Be star, weak phot. Var (Hipparcos) and spectro. Var (same period)

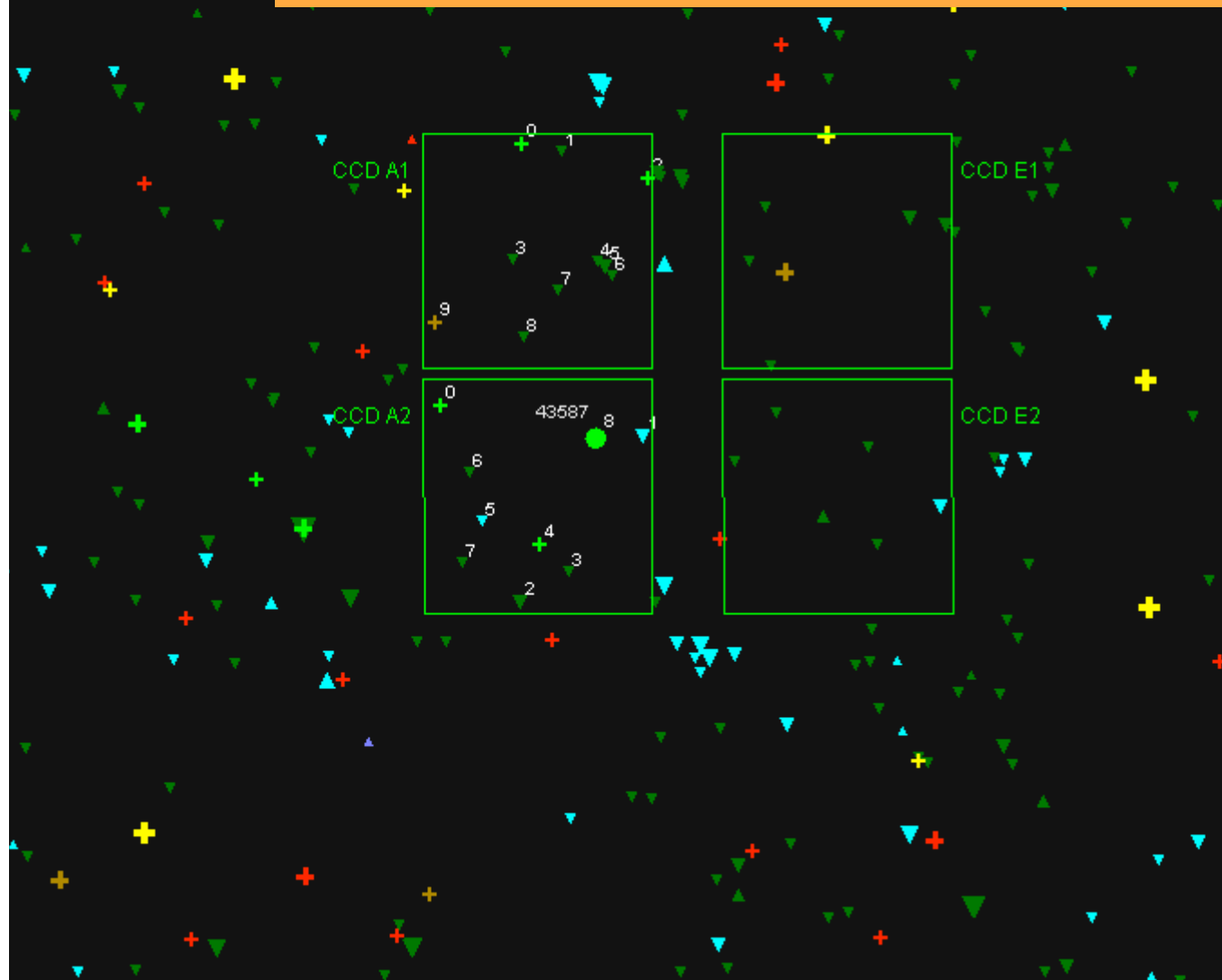
RQ: All these objects cannot be put together on the CCD, but 6 of them can, leading to choose between HD 43285 (Be), HD 44283 (d Scu) and HD 43285 (Be)
The rest of the objects available in the field should be useful to complete HR diagramme exploration for variability

RA: 6:3:18.541
DEC: 7:20:24.398

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HD43587

As an example, we scan the content of the field for the following position of the CCDs



Groups & Operations

Apply

Group 1

Type: [dropdown]

Spectral type: F - All All

Magnitude: 0.0 8.0

Color b-v

Metallicity [Show]

Vsini

Temperature [Modify]

Group 2

Type: Principal T...

Spectral type [dropdown]

Magnitude

Color b-v

Metallicity [Show]

Vsini

Temperature [Modify]

Group 3

Type [dropdown]

Spectral type: O - All All

Magnitude: 0.0 9.5

Color b-v

Metallicity [Show]

Vsini

Temperature [Modify]

CCD A1									
Priority	C Id	Name	m_v	Spectral type	M_v	log(Teff)	Vsin(i)	Link to...	SCRO
0	3967	HD 43856	7.96	F V	3.45	3.79	7.3	GAUDI	X
1	4053	HD 43695	9.32	A	1.71	4.01		GAUDI	
2	4243	HD 43338	7.63	F	1.26	3.83	162.8	GAUDI	
3	3622	HD 43912	8.26	A				GAUDI	
4	3908	HD 43565	8.67	A	1.06	3.94		GAUDI	
5	3914	[SC93] 124	7.95	A	0.34			GAUDI	X
6	3913	HD 43511	8.82	A	1.21	4.01		GAUDI	
7	3703	HD 43727	9.13	A	1.52	3.9		GAUDI	
8	3465	HD 43876	9.13	A	1.52	3.97		GAUDI	
9	3241	HD 44213	7.98	M I	0.37	3.31		GAUDI	X

Numerous objects with $m_v > 8$

CCD A2									
Priority	C Id	Name	m_v	Spectral type	M_v	log(Teff)	Vsin(i)	Link to...	SCRO
0	3072	HD 44195	7.56	F	2.72	3.84	58.3	GAUDI	X
1	3641	HD 43406	7.16	B	-0.13	4.07		GAUDI	X
2	2951	HD 43913	7.88	A	-0.8	4.06		GAUDI	X
3	3137	HD 43707	8.71	A	1.1	3.99		GAUDI	
4	3093	HD 43823	7.38	F	1.43	3.8	14.6	GAUDI	
5	2974	HD 44052	8.4	B	0.79	4.12		GAUDI	X
6	3029	HD 44093	9.25	A	1.64	3.95		GAUDI	
7	2824	HD 44130	9.18	A	1.57	3.93		GAUDI	
8	3474	HD 43587	5.71	F V	4.28	3.77	5.9	GAUDI	X
9									

5	2974	HD 44052	8.4	B	0.79	4.12	GAUDI	X
6	3029	HD 44093	9.25	A	1.64	3.95	GAUDI	
7	2824	HD 44130	9.18	A				
8	3474	HD 43587	5.71	F V				
9								

Selection aiming at HR diagramme coverage

→ Reasonably rich

