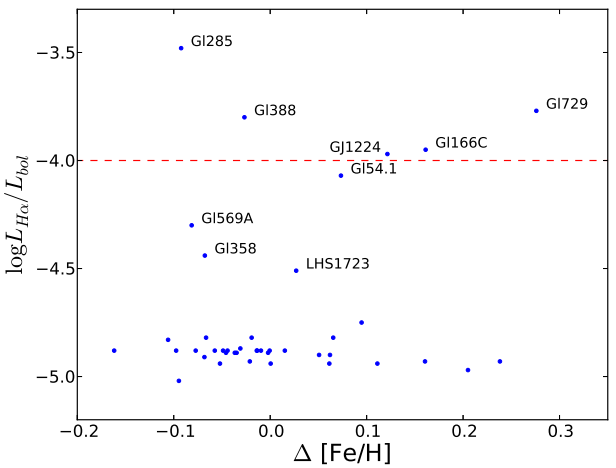
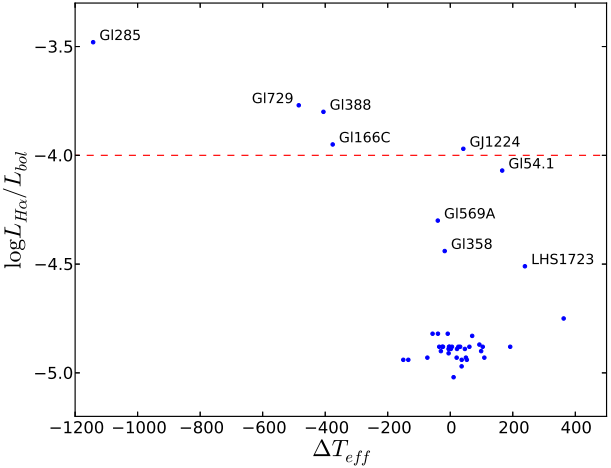
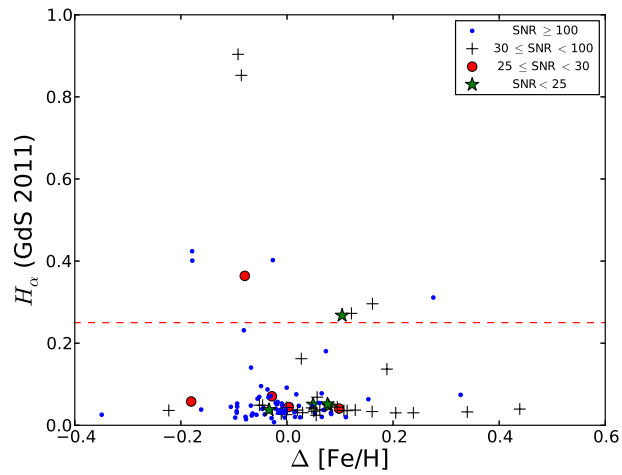

Gl285
Gl388
Gl729
GJ1224
Gl166C
Gl54.1
Gl569A
Gl358
LHS1723
−3.5
−4.0
−4.5
−5.0
−0.2
−0.1
0.0
0.1
0.2
0.3
$\log L_{H\alpha}/L_{bol}$
Δ [Fe/H]

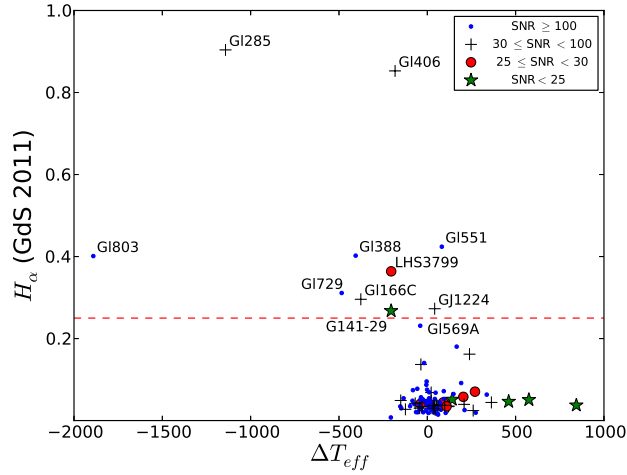
(a)


Gl285
Gl729
Gl388
Gl166C
GJ1224
Gl54.1
Gl569A
Gl358
LHS1723
−3.5
−4.0
−4.5
−5.0
−1200
−1000
−800
−600
−400
−200
0
200
400
$\log L_{H\alpha}/L_{bol}$
ΔT_{eff}

(b)


SNR ≥ 100
30 ≤ SNR < 100
25 ≤ SNR < 30
SNR < 25
1.0
0.8
0.6
0.4
0.2
0.0
−0.4
−0.2
0.0
0.2
0.4
0.6
H_α (GdS 2011)
Δ [Fe/H]

(c)


SNR ≥ 100
30 ≤ SNR < 100
25 ≤ SNR < 30
SNR < 25
Gl285
Gl406
Gl803
Gl388
Gl551
LHS3799
Gl729
Gl166C
GJ1224
G141-29
Gl569A
1.0
0.8
0.6
0.4
0.2
−2000
−1500
−1000
−500
0
500
1000
H_α (GdS 2011)
ΔT_{eff}

(d)