



XVIII годишна конференция на Съюза на астрономите в
България
15-16 май 2025, гр. Белоградчик



Размери на акреционния диск на Т CrВ

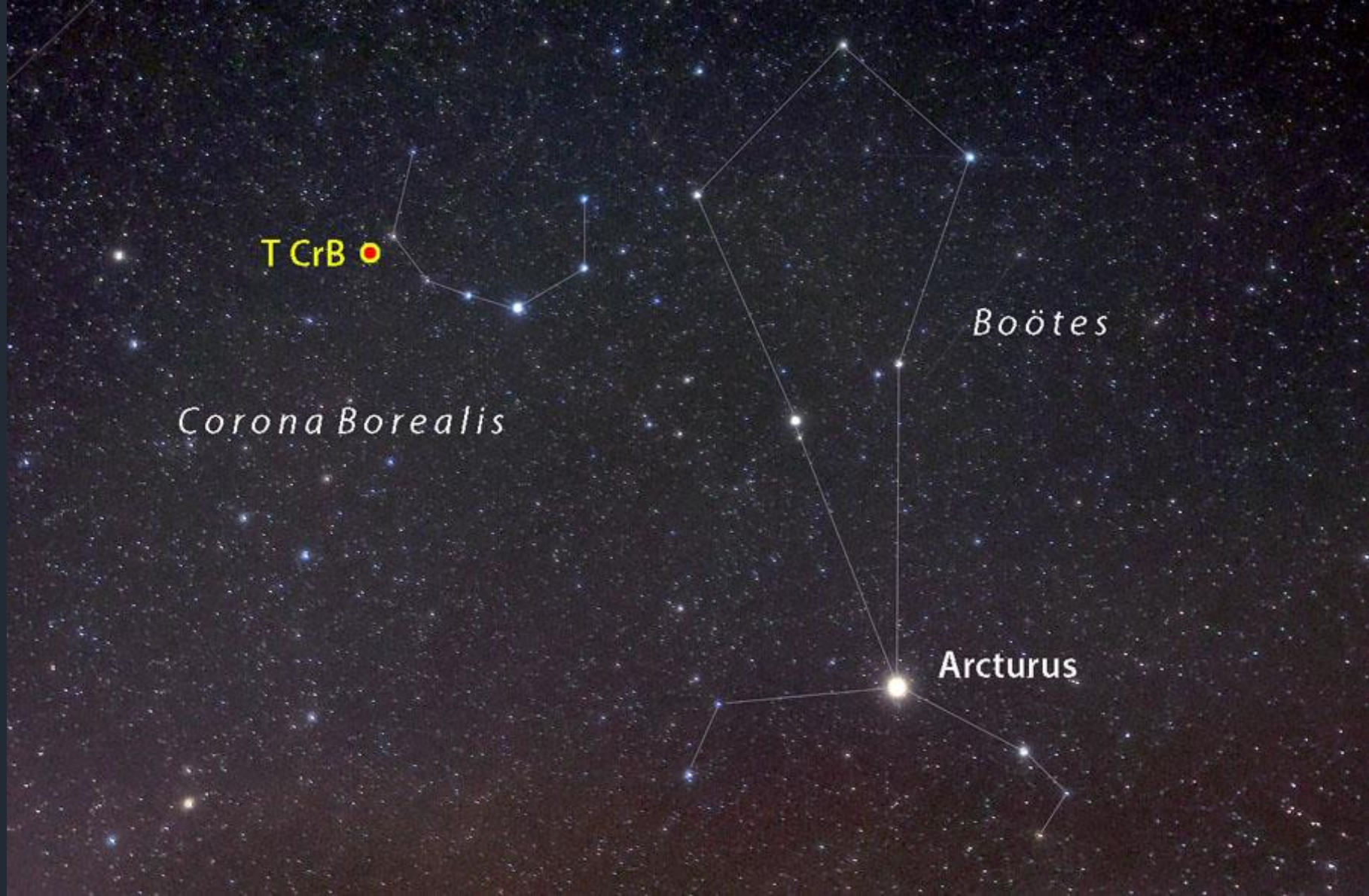
М. Мойсеев, Р. Заманов, К. Стоянов, В. Марчев

T CrB ●

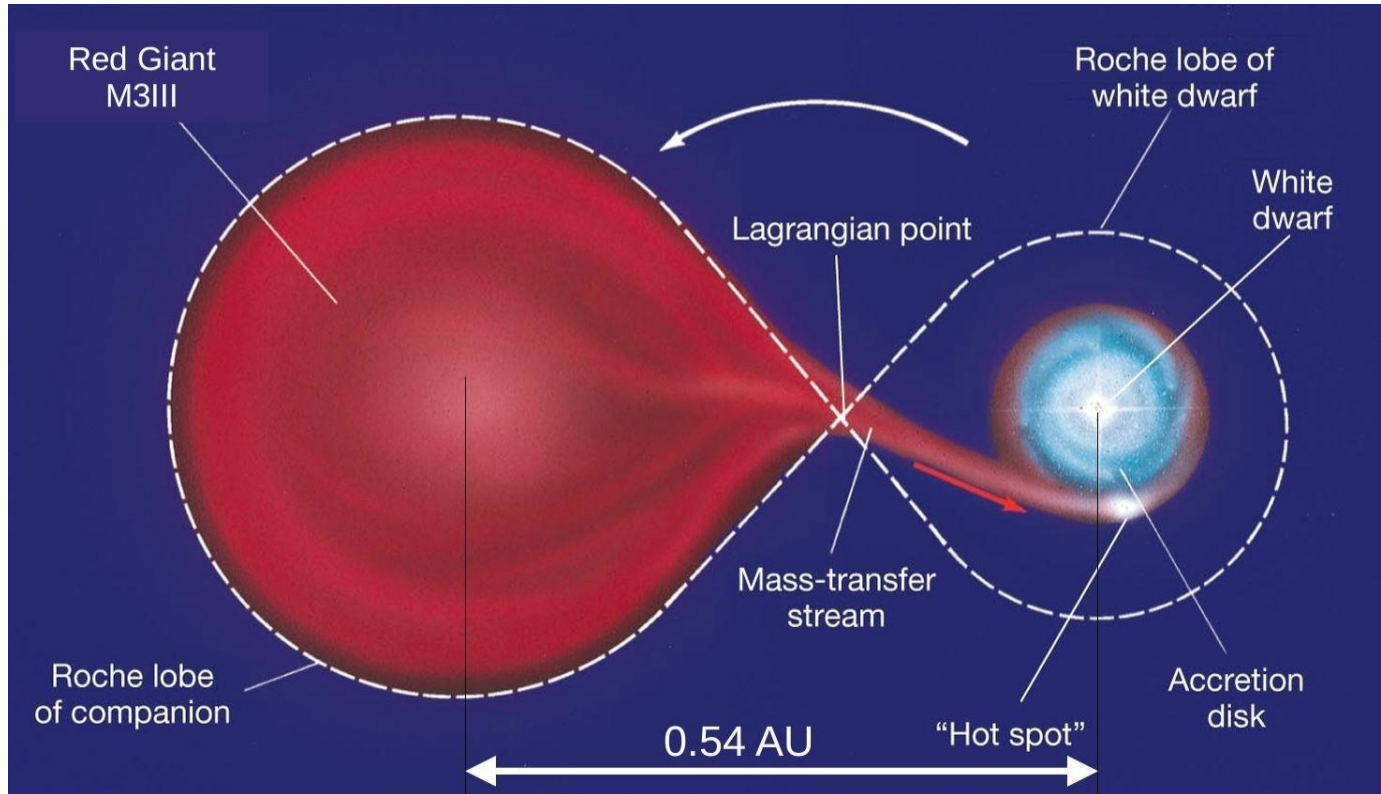
Corona Borealis

Boötes

Arcturus



T CrB



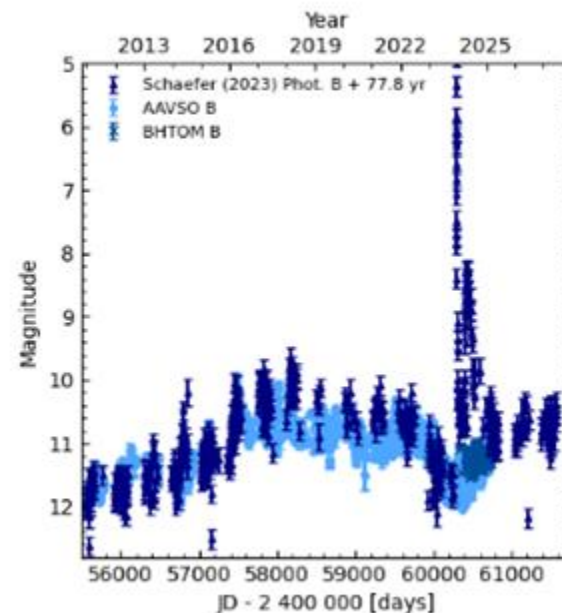
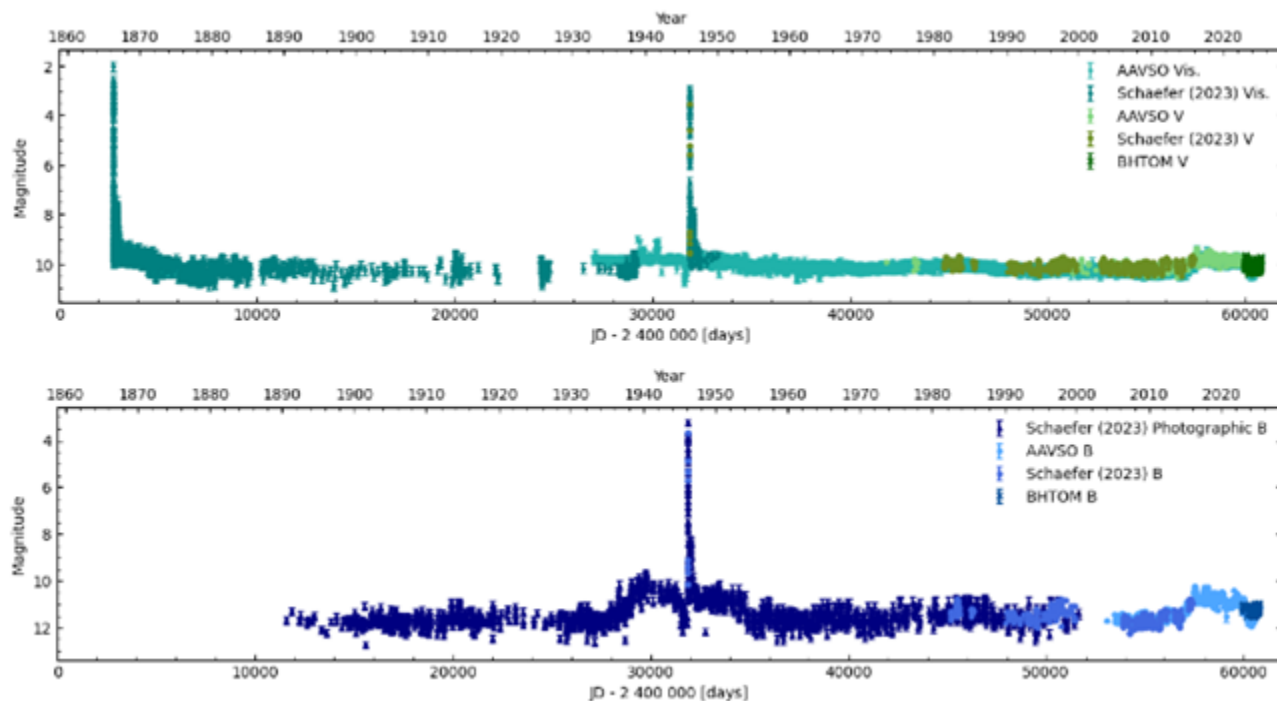
$T = 227.5687 \text{ d}$

$M_{\text{WD}} = 1.37 M_{\odot}$

$M_{\text{RG}} = 1.12 M_{\odot}$

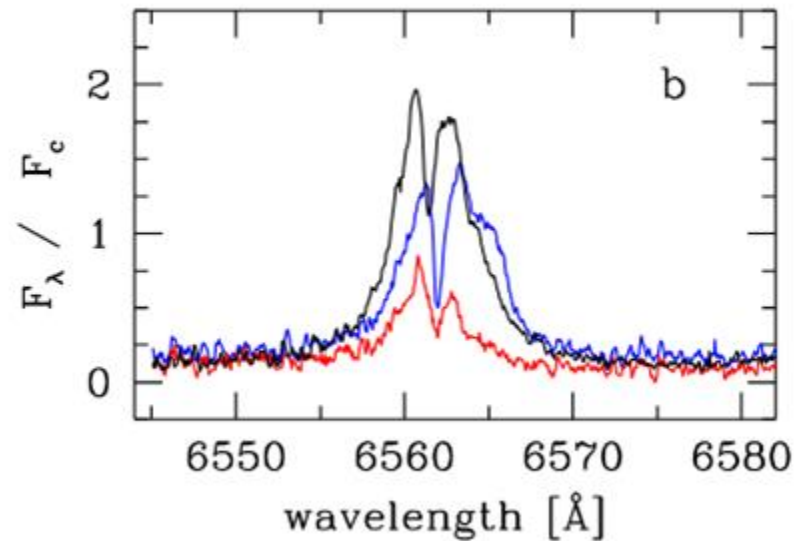
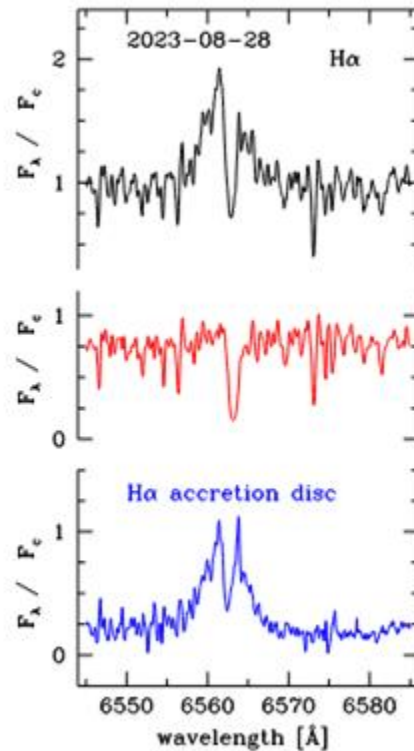
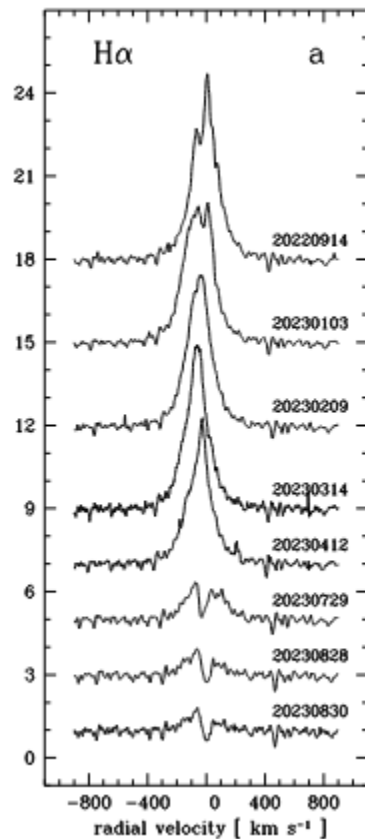
Spectral type:
M4III

Крива на бляска



Merc et al. 2025

H α наблюдения



Zamanov et al. 2024

date-obs	phase	exp.time [min]	EW(H α) [Å]	Δv_a [km s $^{-1}$]	R_{disc} [$R_{\odot}$]
2022-09-14 17:41	0.365	60	28.2		
2023-01-04 02:57	0.855	60	28.4		
2023-01-07 03:00	0.868	60	30.4		
2023-02-10 00:58	0.017	60	24.9		
2023-03-14 22:53	0.162	3x15	24.8		
2023-03-29 21:58	0.228	60	28.8		
2023-04-12 21:02	0.289	60	20.9		
2023-06-07 20:23	0.535	60	10.9		
2023-07-29 19:35	0.763	9x15	6.8	103.7 ± 4	83.2 ± 6
2023-07-30 18:48	0.767	6x15	7.2	102.1 ± 2	85.6 ± 4
2023-08-28 19:11	0.895	7x15	3.0	117.8 ± 3	64.4 ± 4
2023-08-29 18:37	0.899	10x15	3.2	118.4 ± 2	63.7 ± 3
2023-08-30 17:51	0.904	13x15	2.1	118.9 ± 3	63.2 ± 3
2023-08-31 19:31	0.908	3x15	2.4	120.1 ± 3	61.9 ± 3
2023-10-23 16:37	0.140	2x30	1.5	89.7 ± 2	110.8 ± 4
2023-12-25 02:51	0.415	2x45	3.5	96.6 ± 3	95.6 ± 4
2023-12-26 02:44	0.419	4x25	6.4	89.9 ± 5	111.1 ± 8
2023-12-27 02:45	0.424	1x50	4.1	90.2 ± 7	109.7 ± 8
2023-12-28 02:44	0.428	1x60	4.2	98.9 ± 7	91.2 ± 8
2024-01-22 03:00	0.542	1x30	7.3	94.8 ± 7	99.2 ± 8
2024-01-23 01:52	0.542	6x20	8.9	90.9 ± 2	108.0 ± 3

H α наблюдения

Размери на H α диск

$$\Delta v = 2 \sin i \sqrt{G M_{wd} / R}$$

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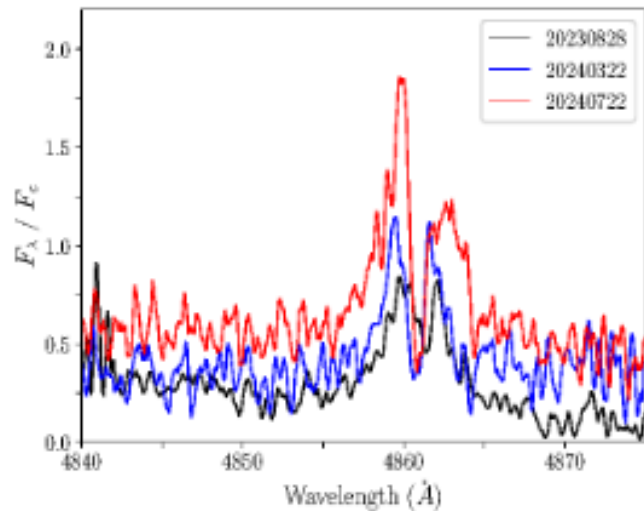
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Zamanov et al. 2024

$$\Delta v_a = 102 \pm 12 \text{ km/s}$$

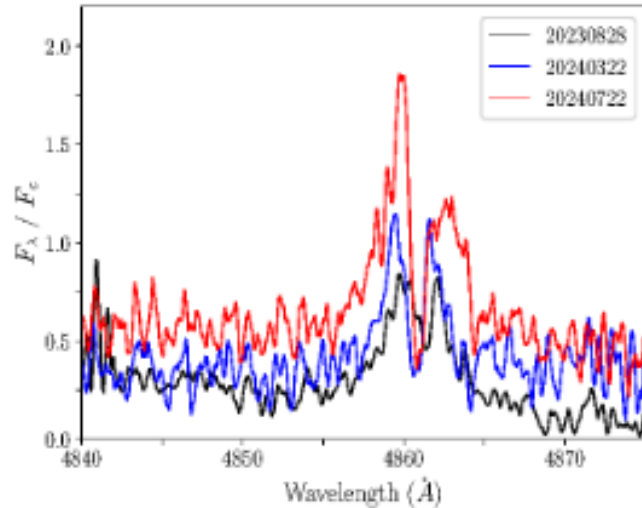
$$R_{\alpha} = 89 \pm 19 R_{\odot}$$

Размери на H β диск



Moyseev et al. 2025

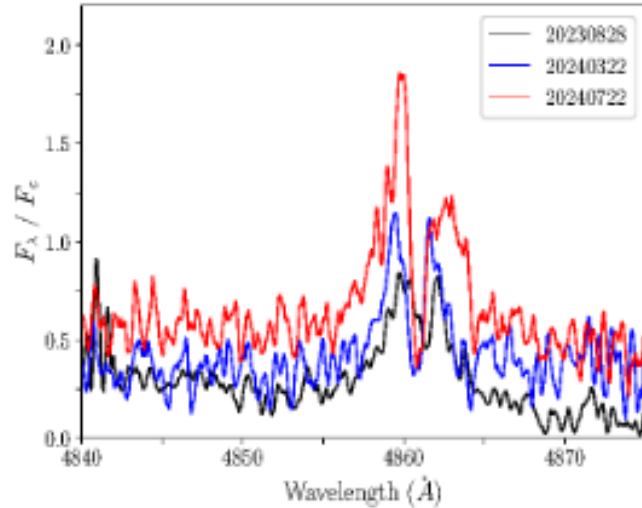
Размери на H β диск



Moyseev et al. 2025

Date	Phase	Exp-Time [min]	EW (H β) [$\text{\AA}$]	RG [%]	Δv_b [km s $^{-1}$]	R_β $R_\odot$
2023-08-28 19:11	0.903	15	1.7 ± 0.2	85	131.5 ± 4	53.9 ± 5
2023-08-29 18:37	0.908	15	1.5 ± 0.1	62	132.1 ± 5	53.4 ± 6
2024-03-22 23:21	0.814	20	1.8 ± 0.1	58	141.9 ± 7	46.2 ± 5
2024-07-22 22:01	0.350	60	3.8 ± 0.2	50	179.0 ± 7	29.1 ± 3

Размери на H β диск



$$\Delta v_b = 146 \pm 22 \text{ km/s}$$

$$R_\beta = 45 \pm 11 R_\odot$$

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Date	Phase	Exp-Time [min]	EW (H β) [Å]	RG [%]	Δv_b [km s $^{-1}$]	R_β $R_\odot$
2023-08-28 19:11	0.903	15	1.7 ± 0.2	85	131.5 ± 4	53.9 ± 5
2023-08-29 18:37	0.908	15	1.5 ± 0.1	62	132.1 ± 5	53.4 ± 6
2024-03-22 23:21	0.814	20	1.8 ± 0.1	58	141.9 ± 7	46.2 ± 5
2024-07-22 22:01	0.350	60	3.8 ± 0.2	50	179.0 ± 7	29.1 ± 3