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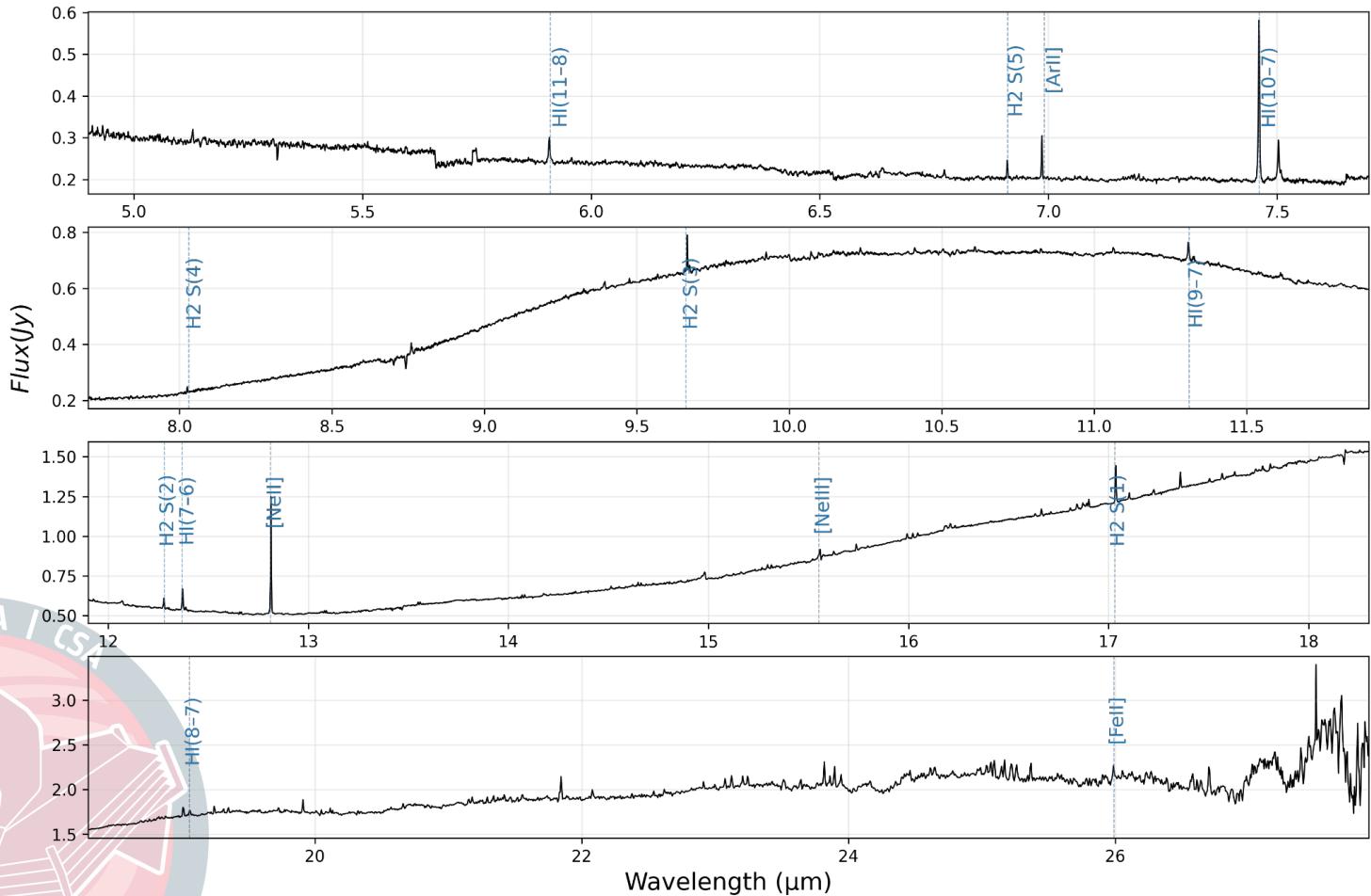
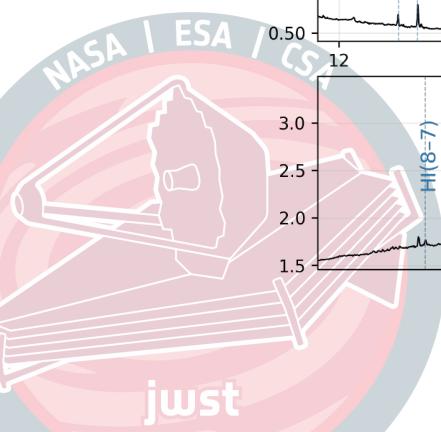


Accretion and Disk Irradiation in TW Hydrae: Insights from JWST/MIRI and AstroSat Observations

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Supervisors

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Data Analysis Help – Dr Shridharan B



JWST/MIRI-MRS Line Flux Analysis

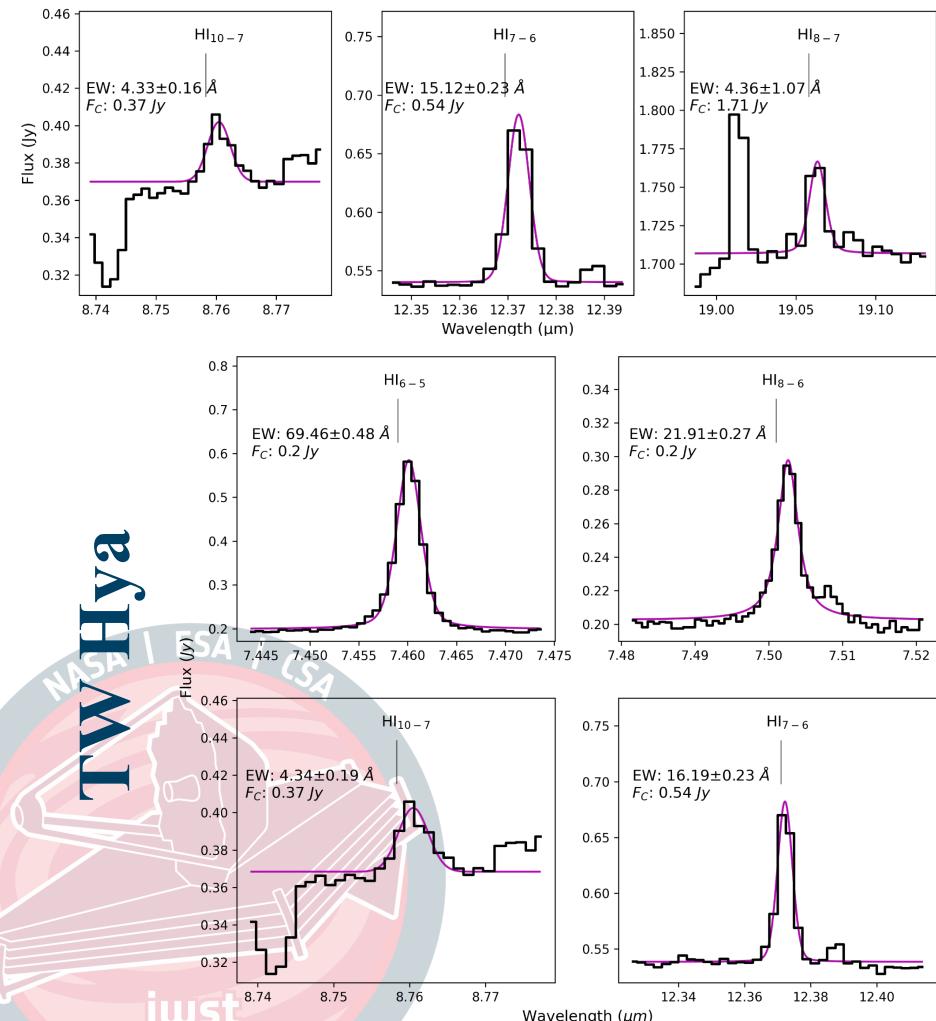
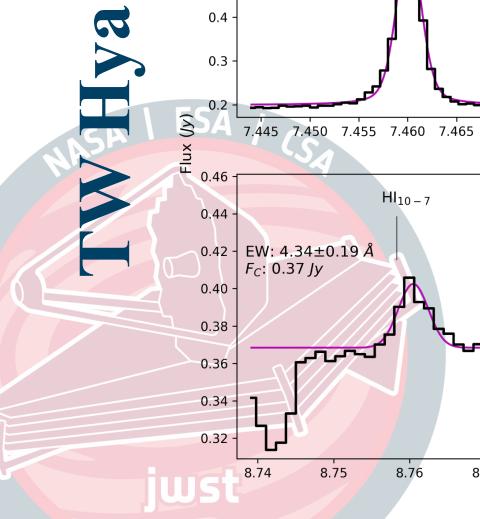
(Emp. Model from Tofflemire et al. 2025)

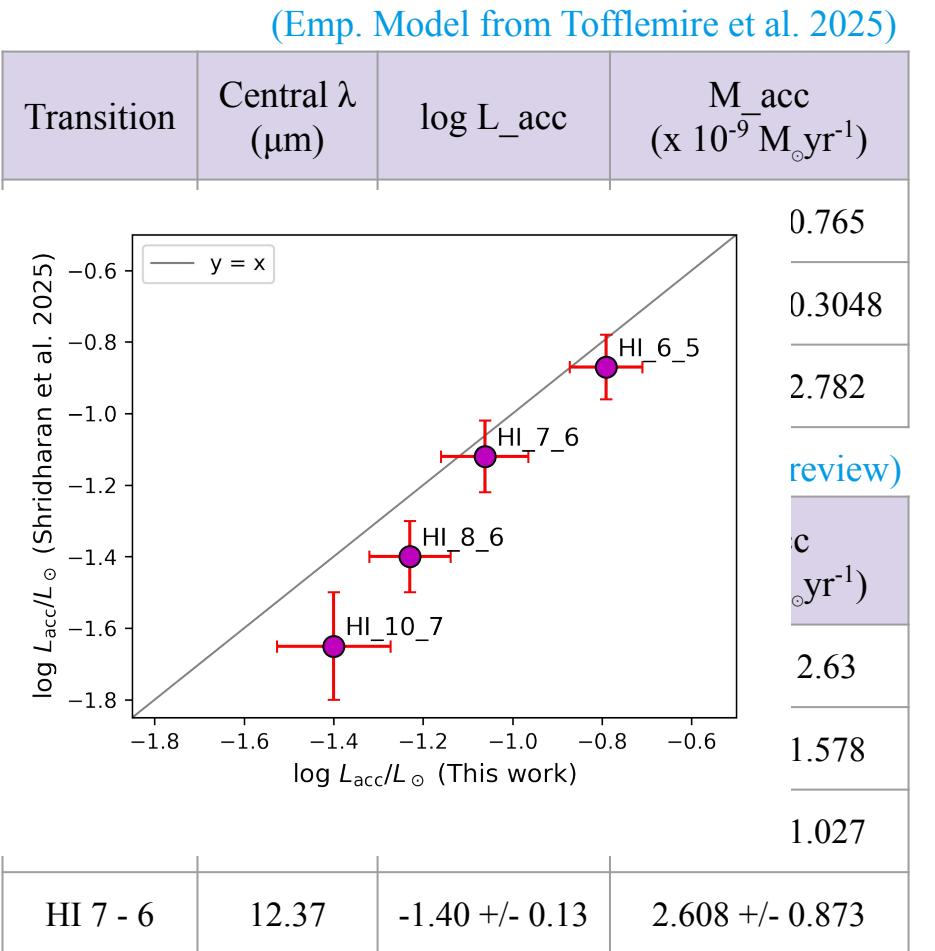
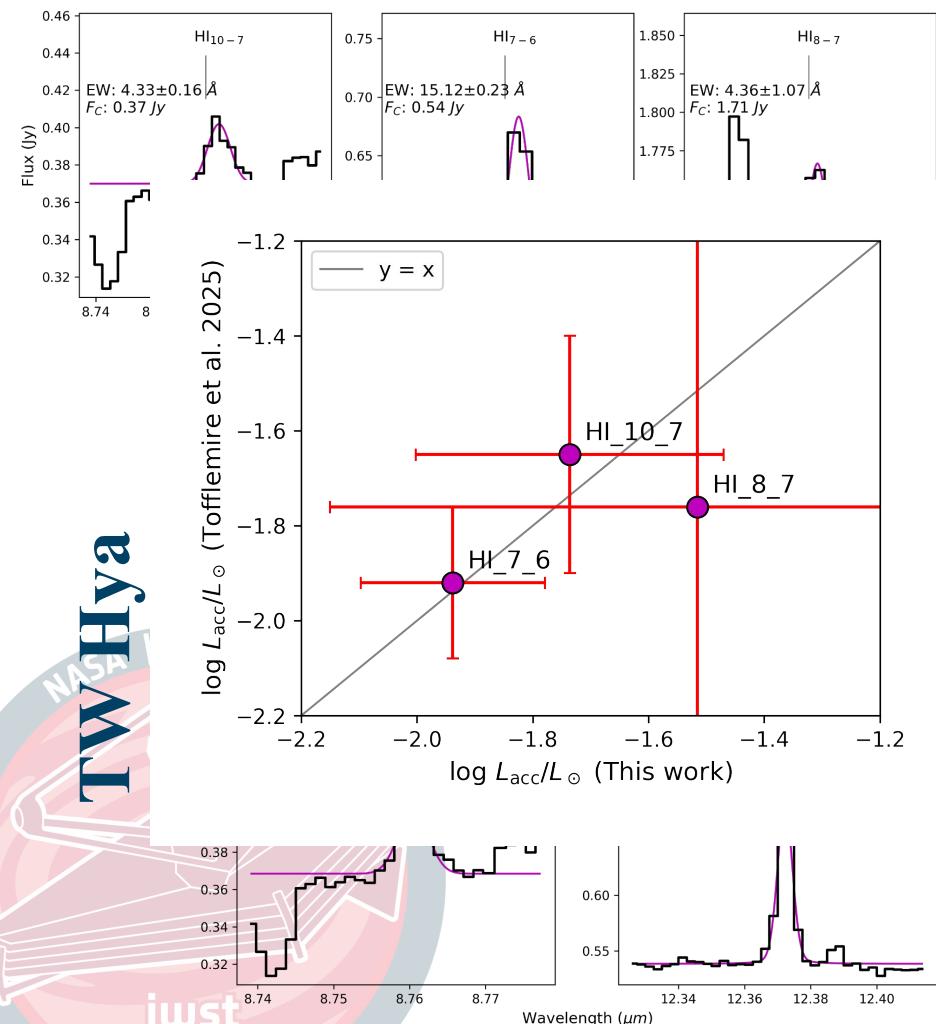
Transition	Central λ (μm)	$\log L_{\text{acc}}$	M_{acc} ($\times 10^{-9} M_{\odot}\text{yr}^{-1}$)
HI 10 - 7	8.758	-1.73 +/- 0.27	1.210 +/- 0.765
HI 7 - 6	12.37	-1.94 +/- 0.16	0.7601 +/- 0.3048
HI 8 - 7	19.058	-1.57 +/- 0.68	1.776 +/- 2.782

(Emp. Model from Shridharan et al., under review)

Transition	Central λ (μm)	$\log L_{\text{acc}}$	M_{acc} ($\times 10^{-9} M_{\odot}\text{yr}^{-1}$)
HI 6 - 5	7.459	-0.79 +/- 0.08	10.60 +/- 2.63
HI 8 - 6	7.501	-1.06 +/- 0.10	5.675 +/- 1.578
HI 10 - 7	8.758	-1.23 +/- 0.09	3.863 +/- 1.027
HI 7 - 6	12.37	-1.40 +/- 0.13	2.608 +/- 0.873

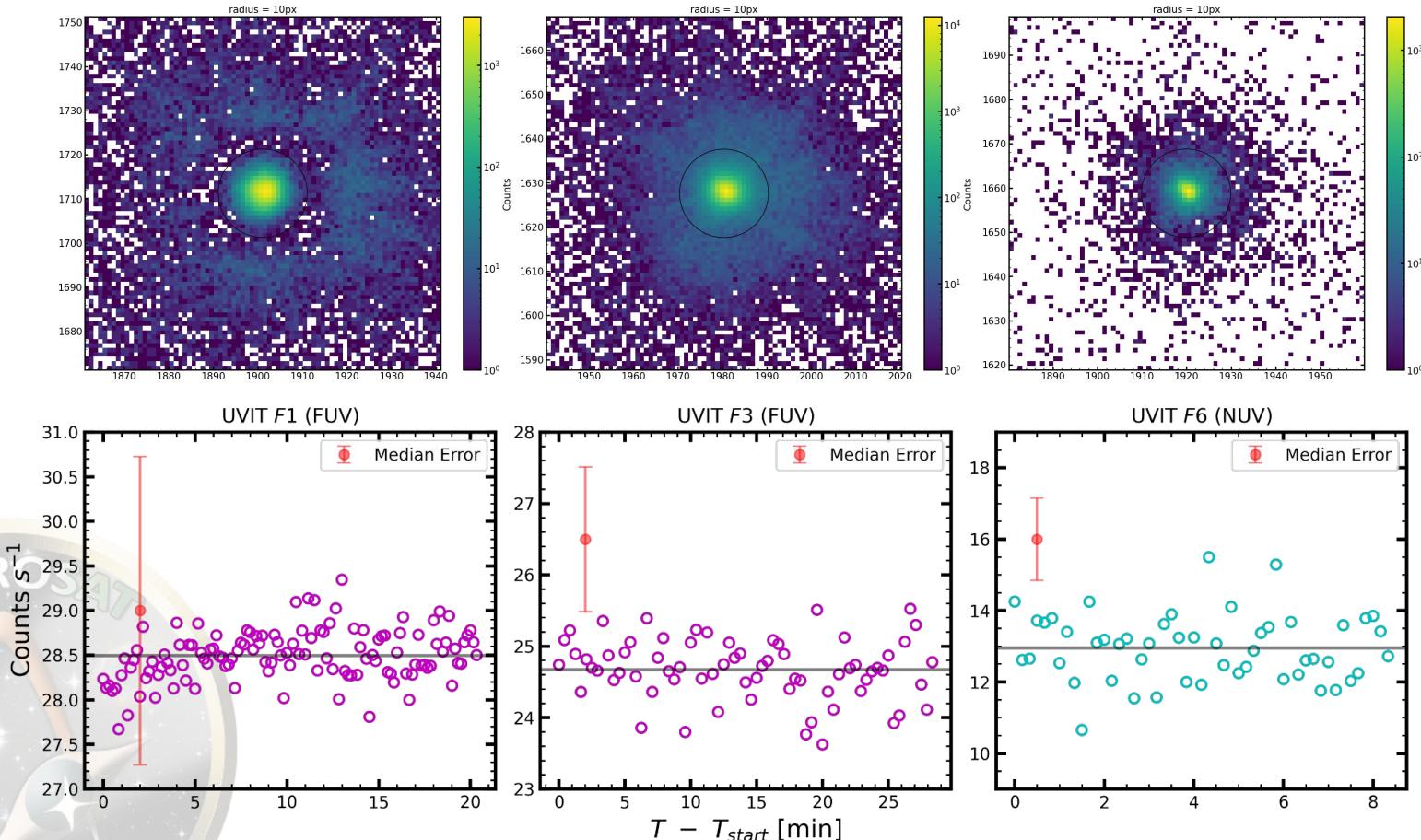
JWST/MIRI-MRS Line Flux Analysis



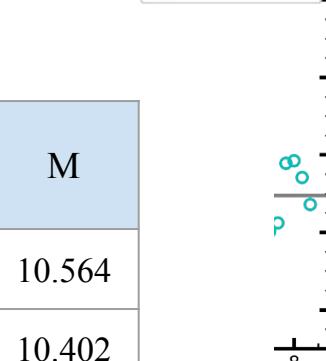
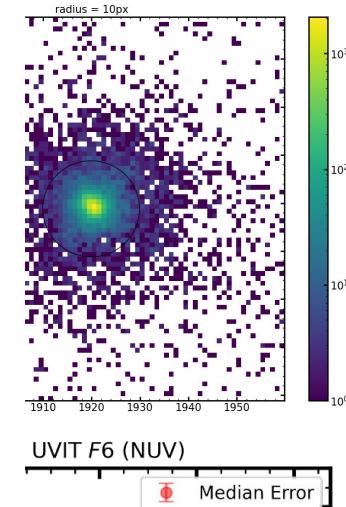
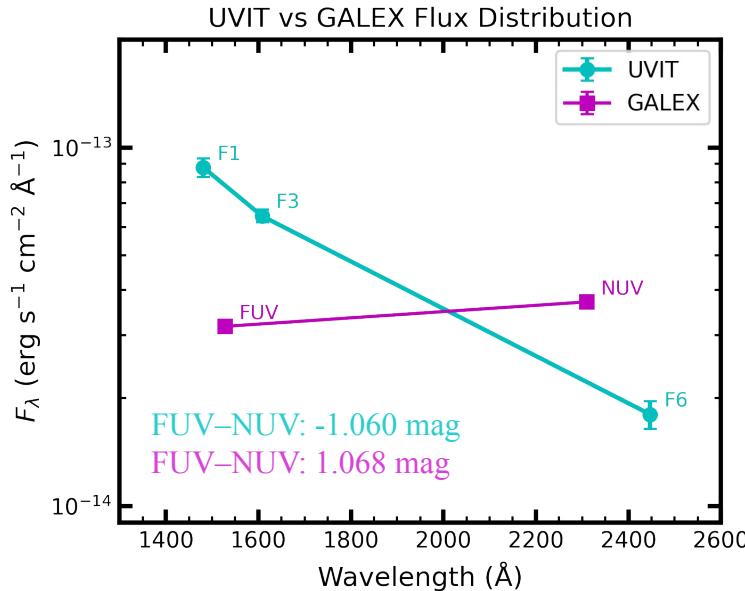
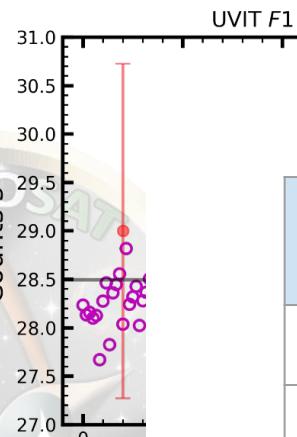
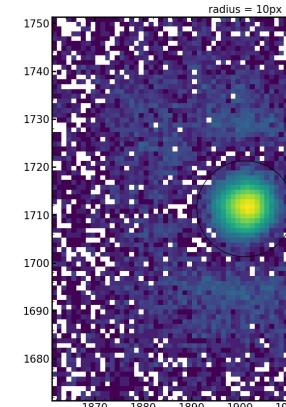
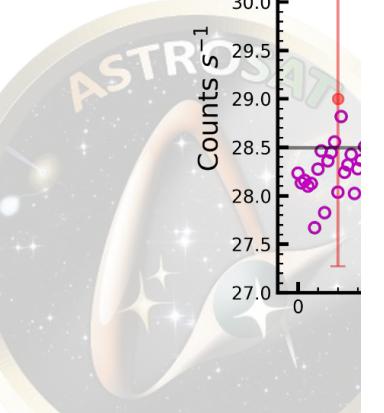


JWST/MIRI-MRS Line Flux Analysis

AstroSat/UVIT Look At TW Hydreae



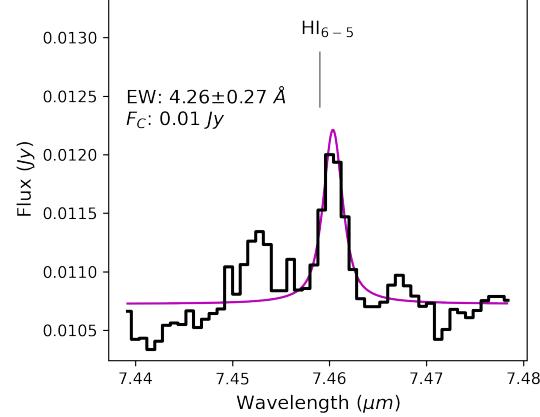
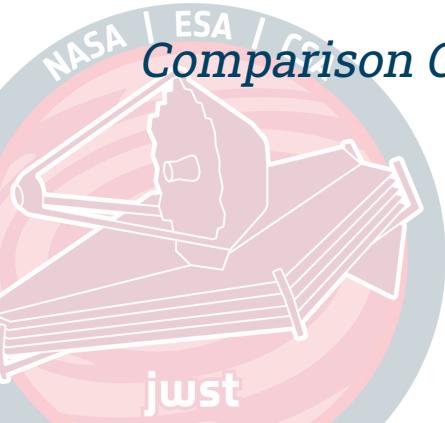
AstroSat/UVIT Look At TW Hydreae



Filter	Central λ (Å)	Flux ($\times 10^{-14}$ $\text{erg cm}^{-2} \text{s}^{-1} \text{\AA}^{-1}$)	m	M
F1	1481	8.805 ± 0.53	14.460	10.564
F3	1608	6.440 ± 0.26	14.297	10.402
F6	2447	1.801 ± 0.16	15.520	11.624

(Tandon et al. 2020)

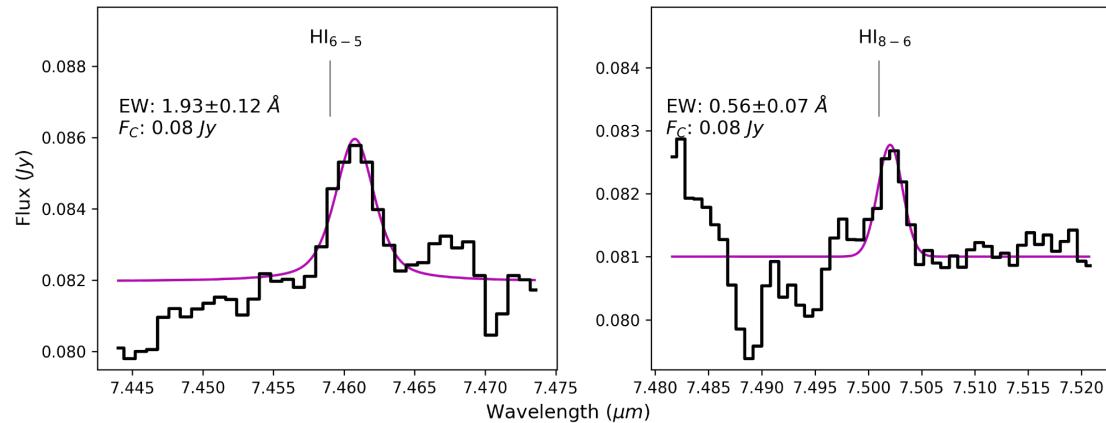
V* HV Tau



Transition	Central λ (μm)	$\log L_{\text{acc}}$	M_{acc} ($\times 10^{-11} M_{\odot} \text{yr}^{-1}$)
HI 6 - 5	7.459	-2.68 +/- 0.27	8.133 +/- 5.061

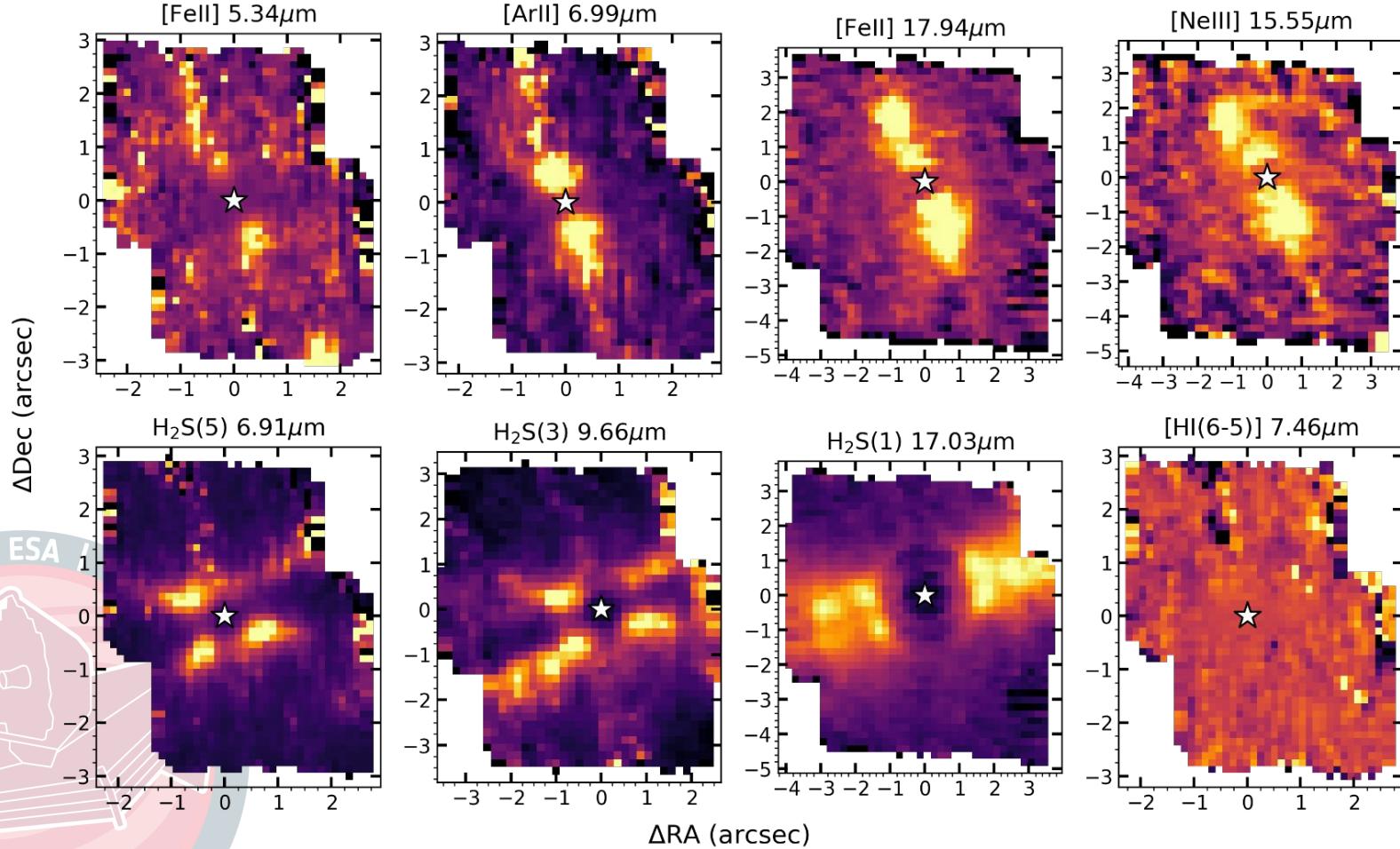
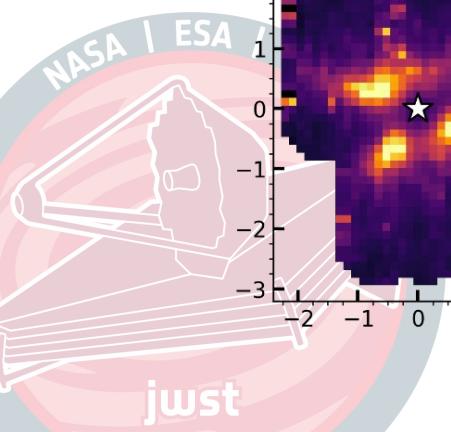
Transition	Central λ (μm)	$\log L_{\text{acc}}$	M_{acc} ($\times 10^{-10} M_{\odot} \text{yr}^{-1}$)
HI 6 - 5	7.459	-1.93 +/- 0.18	6.364 +/- 2.689
HI 8 - 6	7.501	-2.44 +/- 0.20	1.962 +/- 0.917

Comparison Objects



V* V836 Tau

V* HV Tau C



jwst

**Thank
You**