

Table 4. Comparison of physical properties between HST 10 and two other well-studied proplyds

	Units	Note	LV 2	HST 1	HST 10
Coordinate-based designation		1	167-317	177-341	182-413
<i>Relation to ionizing source</i>					
Projected distance, D'	"	2	7.83	25.84	56.7
Inclination, i	°	3	50	70	150
True distance, D	pc	4	0.022	0.059	0.242
<i>Ionized cusp</i>					
Ionization front radius, r_0	AU	5	53.	136.	247.
Peak electron density, n_0	10^6 cm^{-3}	6	2.0	0.4	0.1
Ionization parameter		7	0.012	0.008	0.002
Cusp mass-loss rate, \dot{M}	$10^{-7} M_{\odot} \text{ yr}^{-1}$	8	2.6	2.5	2.1
<i>Molecular disc</i>					
Disc effective temperature: T_d	K	9	95	58	29
Disc mass M_d	$10^{-3} M_{\odot}$	10	1.6	2.7	5.4
Disc radius R_d	AU	11	34	89	160
Evaporation time, t_{evap}	10^4 yr	12	0.6	1.1	2.6

Notes: (1) O'dell & Wen (1994) (2) Angular separation from θ^1 Ori C (O'Dell 1998) (3) Inclination of proplyd axis to line of sight estimated from kinematic studies of the velocity–ionization correlation in emission lines from the cusp (Henney & O'Dell 1999; Henney et al. 2002). Proplyds with $i > 90^\circ$ have their head pointing away from the observer. (4) $D = D' / \sin i$. (5) Estimated from fitting evaporation models to the H α profiles of the cusps Henney & Arthur (1998). (6) LV 2 from [C III] density (Henney et al. 2002); HST 1 and HST 10 from model fitting (this paper and Mesa-Delgado et al. 2012). (7) $F/(n_0 c)$. (8) Calculated by integrating model mass fluxes over the area of the cusp. (9) Radiative equilibrium temperature, assuming that 25% of the bolometric flux from θ^1 Ori C reaches the surface of the disk (see also Robberto et al. 2002). (10) Estimated from observed fluxes at $880 \mu\text{m}$ (Mann & Williams 2010) after subtracting the contribution from ionized free-free emission, assuming optically thin dust emission with opacity $\kappa_v = 0.034 \text{ cm}^2 \text{ g}^{-1}$ and dust temperature equal to the effective temperatures derived above. (11) Directly estimated from *HST* images from HST 10. For LV 2 and HST 1, we assume $r_d = 0.65r_0$, see Figure 10. (12) Nominal mass loss timescale: M_d/\dot{M} .