Ultraviolet Observations of Comet Encke

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Ultraviolet Observations of Comet Encke from Space

- International Ultraviolet Explorer observations 1980 – 1994 (five apparitions); acquisition and tracking problems in last three apparitions.
- Pre-/post-perihelion symmetry in water production rate; asymmetry in production rate of parent of CS.
- Comet d'Arrest observed in 1982; SW3 not observed.
- HST/STIS attempt to observe comet Encke in July 1997 failed.

CS Production Asymmetry

Time	r (AU)	Δ (AU)	Q_{CS_2}/Q_{H_2O}
1980 pre-perihelion	0.84	0.30	1.4×10^{-3}
1984 post-perihelion	0.76	0.76	4.2×10^{-4}

1982 IUE observations of comet P/d'Arrest

Spectrum number	Exposure time (min)	r (AU)	Δ (AU)	OH(0,0) (kR)	g(0,0) $10^{-4}s^{-1}$	Q_{H_2O} 10^{28} s^{-1}	$t-\tau_P$ (days)
LWR 14182	110	1.291	0.741	1.02	2.33	1.45	1.141
LWR 14232	70	1.295	0.765	1.19	2.60	1.23	8.268
LWR 14317	90	1.309	0.808	2.03	3.36	1.97	18.040
LWR 14347	85	1.320	0.835	2.33	3.73	3.03	23.057
LWR 14397	90	1.337	0.872	2.31	4.03	2.04	29.056