

# Torus Chemistry Model Output vs. Derived UVIS Composition

Nominal Model Parameter Values	
Temperature of hot electrons (eV)	70
Percentage of hot electrons ( $N_{e\text{ hot}}/N_e$ )*100.	0.23%
Neutral source rate ( $1e27\text{ s}^{-1}$ )	41.7
O/S source ratio	1.7
Transport time (days)	26.3

DOY 277.5		
	Model S II / S IV	$F_{\text{hot e}}$
S II Peak	5.2	0.21%
S II Valley	2.6	0.25%

- Chemistry model matches nominal plasma composition on DOY 277
- Decreasing  $F_{e\text{ hot}}$  by 0.02% matches conditions at the peak of S II
- Increasing  $F_{e\text{ hot}}$  by 0.02% matches conditions at the valley of S II