

Table 4. H<sub>2</sub> Transitions and their associated photon energies ( $E_p$ 's) and relative spectral intensities ( $I$ 's) associated with Uranian satellite orbital radii ( $R''_{ui}$ ,  $R'_{ui}$  and  $R_{ui}$ )

$i$	H <sub>2</sub> Transition <sup>a</sup>	$E_p(\text{cm}^{-1})^a$	$I^a$	$E_p$ 's for Figs. 5a, 5b and 5c	Uranian Satellite	$(R''_{ui} \text{ or } R'_{ui})^b$
<b>11</b>	<b>(3,2) S(5)</b>	<b>4841</b>	<b>0.11</b>			
			→	<b>4826<sup>c</sup></b>	<b>Ring 6</b>	<b>1.637</b>
<b>12</b>	<b>(2,1) S(3)</b>	<b>4823</b>	<b>0.56</b>			
<b>13</b>	<b>(1,0) S(1)</b>	<b>4713</b>	<b>1.6</b>			
			→	<b>4712<sup>c</sup></b>	<b>Ring 5</b>	<b>1.652</b>
<b>14</b>	<b>(3,2) S(4)</b>	<b>4699</b>	<b>0.09</b>			
15	(2,1) S(2)	4642	0.44	4642	Ring 4	1.666
15	(2,1) S(2)	4642	0.44	4642	Ring $\alpha$	1.750
<b>14</b>	<b>(3,2) S(4)</b>	<b>4699</b>	<b>0.09</b>			
			→	<b>4712<sup>c</sup></b>	<b>Ring <math>\beta</math></b>	<b>1.786</b>
<b>13</b>	<b>(1,0) S(1)</b>	<b>4713</b>	<b>1.6</b>			
<b>12</b>	<b>(2,1) S(3)</b>	<b>4823</b>	<b>0.56</b>			
			→	<b>4826<sup>c</sup></b>	<b>Ring <math>\eta</math></b>	<b>1.834</b>
<b>11</b>	<b>(3,2) S(5)</b>	<b>4841</b>	<b>0.11</b>			
10	(1,0) S(2)	4917	0.8	4917	Ring $\gamma$	1.863
9	(2,1) S(4)	4990	0.19	4990	Ring $\delta$	1.900
8	(9,7) S(0) <sup>d</sup>	5032	0.06			
7	(1,0) S(3)	5108	1.07	5108	Cordelia	1.948
<b>6</b>	<b>(2,1) S(5)</b>	<b>5142</b>	<b>0.25</b>			
			→	<b>5144<sup>c</sup></b>	<b>Ring <math>\lambda</math></b>	<b>1.957</b>
<b>5</b>	<b>(9,7) S(1)</b>	<b>5147</b>	<b>0.11</b>			
<b>4</b>	<b>(2,1) S(6)</b>	<b>5278</b>	<b>0.08</b>			
			→	<b>5285<sup>c</sup></b>	<b>Ring <math>\epsilon</math></b>	<b>2.006</b>
<b>3</b>	<b>(1,0) S(4)</b>	<b>5286</b>	<b>0.37</b>			
2	(9,7) S(3) <sup>d</sup>	5325	0.05			
1	(2,1) S(7)	5397	0.12	5397	Ophelia	2.105

continued