HDO and D₂O line parameters for Fourier Transform Infrared Spectroscopy: The 8800-11600 cm⁻¹ Spectral Region.

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The infrared absorption of water vapor in one of the spectroscopic caves that we are not working with for several years (1, 2). Our goal is to measure new lines and analyze new observational data on the effects on the atmosphere. The high resolution infrared spectral region (1-2000 cm⁻¹) was measured on the atmosphere. The high resolution infrared spectral region (1-2000 cm⁻¹) was measured on the atmosphere.

This work is dedicated to the infrared spectroscopy of the D₂O and D₂O molecules in the 8800-11600 cm⁻¹ spectral region. Using a modified version of the infrared absorptions of D₂O and D₂O molecules in the 8800-11600 cm⁻¹ spectral region, we have performed a detailed analysis of the absorption and emission spectra. A global analysis of the line positions, absorption cross sections, and self-broadening parameters has been successful.

Stick spectrum of the D₂O (red) and D₂O (blue) transitions assigned to the observed spectra measured in line and calculated.

- Observed intensity range: 1.2 × 10⁻³ to 1.3 × 10⁻³ m⁻¹ cm⁻¹
- Total number of lines: 24

For each species, the following parameters were measured:
- Observation number
- Partial pressure
- Line parameters
- Line positions
- Self-broadening parameters
- Intensities

Summary of line measurements for each band:

<table>
<thead>
<tr>
<th>Species</th>
<th>N</th>
<th>Intensity</th>
<th>CMB</th>
<th>YMB</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDO</td>
<td>24</td>
<td>1.2 × 10⁻³</td>
<td>1.3 × 10⁻³</td>
<td></td>
</tr>
<tr>
<td>D₂O</td>
<td>24</td>
<td>1.2 × 10⁻³</td>
<td>1.3 × 10⁻³</td>
<td></td>
</tr>
</tbody>
</table>

References: