

Uncertainty Indices

The following table gives the definition of the uncertainty indices used in the HITRAN database. These codes are found towards the end of each line record (consult general format). The code for accuracy of line position and the pressure shift of the line is fairly straightforward: the code indicates the accuracy of the figures after the decimal in wavenumber (hence there is no need to "write" the line position with more digits than that). For the other parameters (intensity, air-broadened half-width, self-broadened half-width, and the coefficient for the temperature-dependence of the air-broadened half-width) we have adopted a different but uniform coding.

Uncertainty Codes Used in HITRAN Database			
Wavenumber and Pressure shift (cm ⁻¹)		Intensity, Halfwidths, and Temperature-dependence	
Code	Uncertainty Range	Code	Uncertainty Range
0	≥ 1. or Unreported	0	Unreported or Unavailable
1	≥ 0.1 and < 1.	1	Default or Constant
2	≥ 0.01 and < 0.1	2	Average or Estimate
3	≥ 0.001 and < 0.01	3	≥ 20%
4	≥ 0.0001 and < 0.001	4	≥ 10% and < 20%
5	≥ 0.00001 and < 0.0001	5	≥ 5% and < 10%
6	≥ 0.000001 and < 0.00001	6	≥ 2% and < 5%
7	≥ 0.0000001 and < 0.000001	7	≥ 1% and < 2%
8	≥ 0.00000001 and < 0.0000001	8	< 1%
9	Better than 0.00000001		



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