

## LILLE SPECTROSCOPIC DATABASE FOR ASTROPHYSICALLY AND ATMOSPHERICALLY RELEVANT MOLECULES

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The project of Lille Spectroscopic Database (<https://lsd.univ-lille.fr>) emerged from a large number of molecules of astrophysical and atmospheric interest exhibiting large amplitude motions studied in PhLAM laboratory in the last decade. To fit their spectra and to calculate spectral predictions we used many different codes including SPFIT/SPCAT program suite. While the latter is the main fitting/predicting tool for widely known CDMS and JPL databases, spectral predictions obtained with other codes are somehow scattered in the supplementary data of publications and are eventually available in the another well known Splatalogue database. For this reason, we decided to develop and maintain the Lille Spectroscopic Database which will contain the spectral predictions of the molecules studied by our group in Lille. The new database will provide a typical functionality of other databases: predictions will be available in different formats including different intensity units, and at different temperatures; a search within the full database will be possible to limit the predictions for a particular range of frequencies, intensities or quantum numbers. We will also provide and present an application programming interface (API) that allows the integration of our database into other software.

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