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Maris Assimo - Paleo-spectroscopy: retrieve and complement past data for radioastronomy searches

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A plethora of microwave and millimetre wave molecular spectroscopy data are available to the radioastronomy community. However, some of it was collected several decades ago and its modelling is sometimes obsolete. Moreover, instrumental advances allow complementing the data with new measurements that extend the investigated frequency ranges and improve the quality of the spectral predictions. Therefore, retrieving and complementing past information is necessary to look for not yet detected molecules in space. Some recent cases related to molecules containing atoms of the third period will be discussed, focusing on the challenges derived by the presence of internal motions (i.e. methyl internal rotation) and preliminary searches on Alma Archive.