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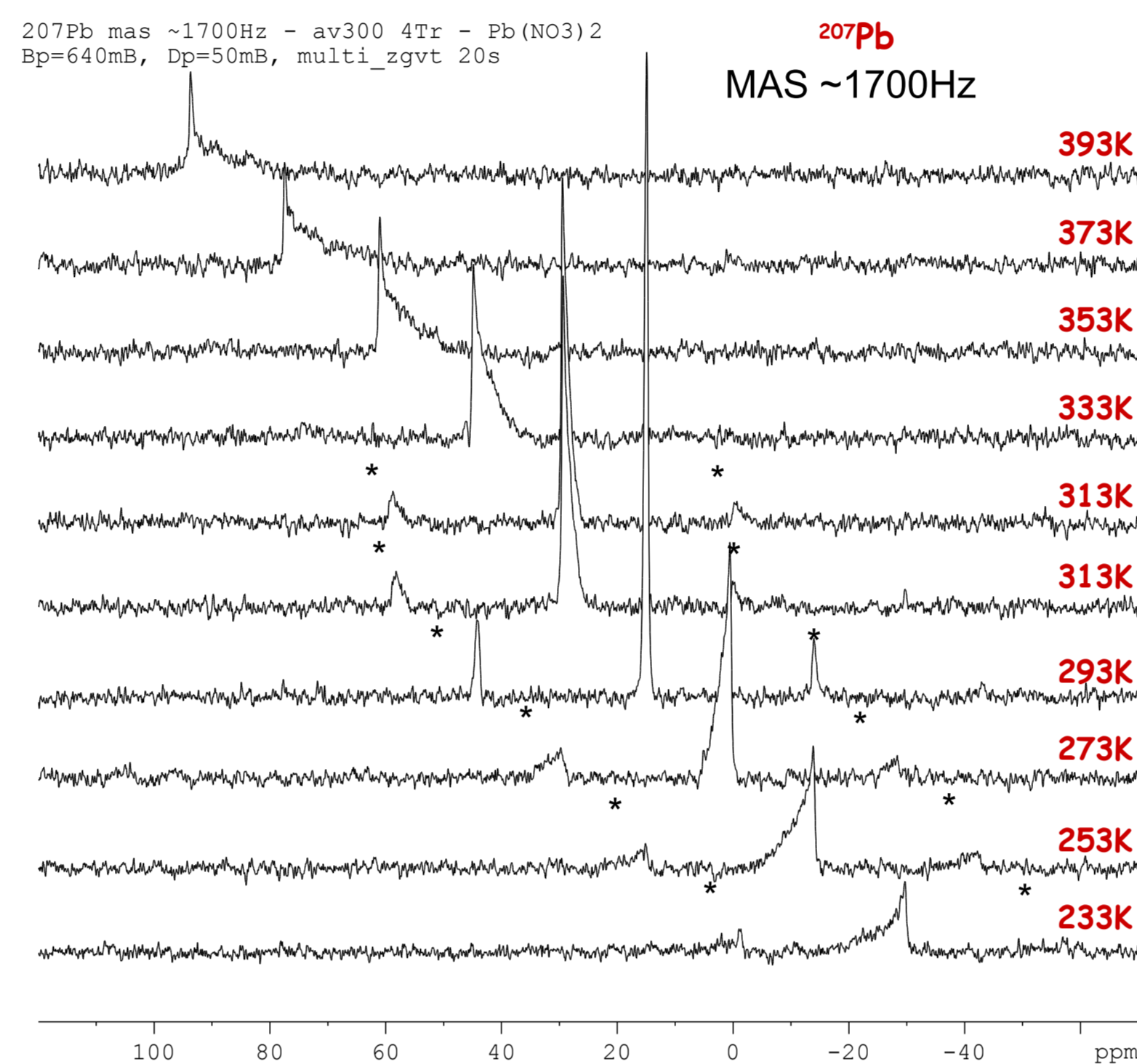
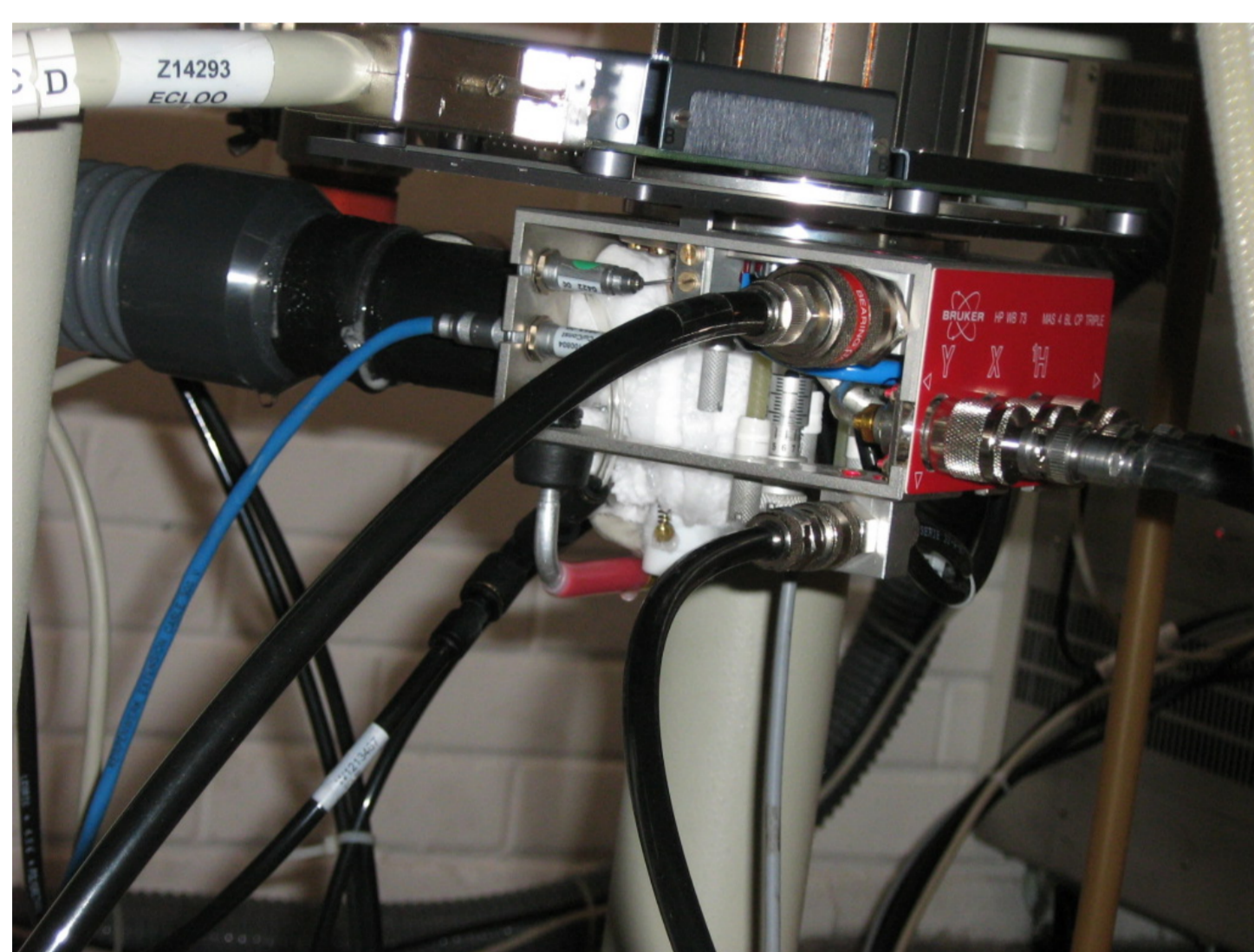


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Silicophosphate can be used as bioactive materials for the growing of hydroxyapatite, or for protonic conduction. They are also interesting models for the study of diatoms, organisms containing a biological part with phosphorous and a shell of silica. The aim of this work is to develop methods to study by NMR interactions between ^{31}P and ^{29}Si nuclei. Due to the mobility, it is difficult to see interactions at ambient temperature. In order to improve the signal to noise ratio and to study dynamic properties, we have used low temperature NMR. However, such study needs a special equipment and a rigorous calibration, which has been done using ^{207}Pb NMR on $\text{Pb}(\text{NO}_3)_2$ ¹. This nucleus is particularly sensitive to the temperature.



¹ Temperature Dependence of ^{207}Pb MAS spectra of Solid Lead Nitrate. An accurate, Sensitive Thermometer for Variable Temperature MAS, A. Bielecki and D. P. Burum, *J. Magn. Reson., Ser. A*, 116, 215-220 (1995).

