The FANTASIO+ set-up (for ‘Fourier trANsform, Tunable, diode and quadrupole mAss spectrometers interfaced to a Supersonic expansIon’) was upgraded by implementing a pulsed nozzle and a liquid injector. Experiments were performed to test the new capacities of this improved set-up. The first results will be presented, among which the CW-cavity ring down spectra of the $^{12}$C$_2$H$_2$-H$_2$O and $^{12}$C$_2$H$_2$-D$_2$O absorption bands in the 2CH excitation range (1.5 $\mu$m). The first analyses of these spectra will be presented.