


To provide an instantaneous bandwidth of 2 GHz the XFFTS uses an extremely fast Gigasample ADC. Unfortunately, this comes at a price, because such data rates are currently not possible with monolithic chips. Internally, the ADC uses an *interleaving technique*, i.e. combining 4 slower ADCs. Since being analog, these four ADC have to be calibrated (in terms of gain, phase and timing) against each other. This is done by feeding in a pure sine signal generated by a quartz and should be repeated every few hours.

The XFFTS ADC calibration can be invoked via UDP, using the SCPI command "EFFBG:XFFTS:CALADC". For convenience, the [XFFTS Leveling tool](#) also provides a button for this.

Of course, re-calibrating the ADCs means that the overall calibration of the spectra changes. It is highly recommended to use it during the focus measurement of the *pointing-focus-pointing* which should be done on similar time scales anyway. This way, the first pointing can be used to calibrate previous observations, while the second provides new calibration factors for following observations. (If one uses spectroscopic measurements of a calibration source instead of continuum scans, one should of course do the calibration measurement twice, as well - before and after re-calibrating the ADCs.)

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