Investigating Amplifier Measurements Task for the Multimessenger School

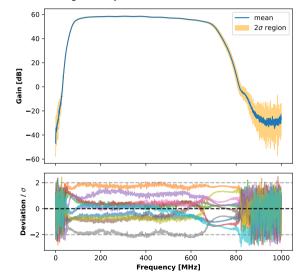
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Thursday 18th January, 2024

Mean Gain Curve and Deviations

- ► The amplifiers are designed to be identical – the mean gain curve is expected to approximate the manufacturer's ideal gain curve.
- ► The deviations from the mean gain curve are plotted in units of standard deviation at each frequency. These are symmetrically distributed about the mean gain curve.
- \blacktriangleright Offsets in the gain curves specific to each amplifier are visible. In the constant gain region amplifiers' gain curves lie within \sim 2 standard deviations or ca 5% of the mean gain curve.

Mean gain and per-dataset deviation from mean



Zooming in on the Constant Gain Region

- ► The constant gain region is approximated as the region between the extrema of the gain gradient w.r.t frequency.
- ► The offsets in the individual gain curves are more visible now.
- The gradient of the mean gain curve oscillates between ±0.04 dB/MHz in this region. The individual gain gradients follow the same trend in phase with the former's oscillations

Zooming into the high gain region

