Are the errors reasonable?

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Pick a time period when the chemical composition is constant and the fluctuations in the signal should reflect measurement noise (i.e. electronic+ion counting)
If \( V_{\text{sdev}} \text{ mz44} \ll V_{\text{avg}} \text{ mz44}_{\text{err}} \) → error too large
If \( V_{\text{sdev}} \text{ mz44} \gg V_{\text{avg}} \text{ mz44}_{\text{err}} \) → error too small

With errors being too large, the scaled residuals have a narrower distribution
Notes

• Repeat this check for other major ions (m/z 43, 55, 57 etc).
• What to do when the errors are too big or too small?
  – Can possibly apply a m/z dependent scaling factor, however, this should be done with caution and should be understood and explained in detail