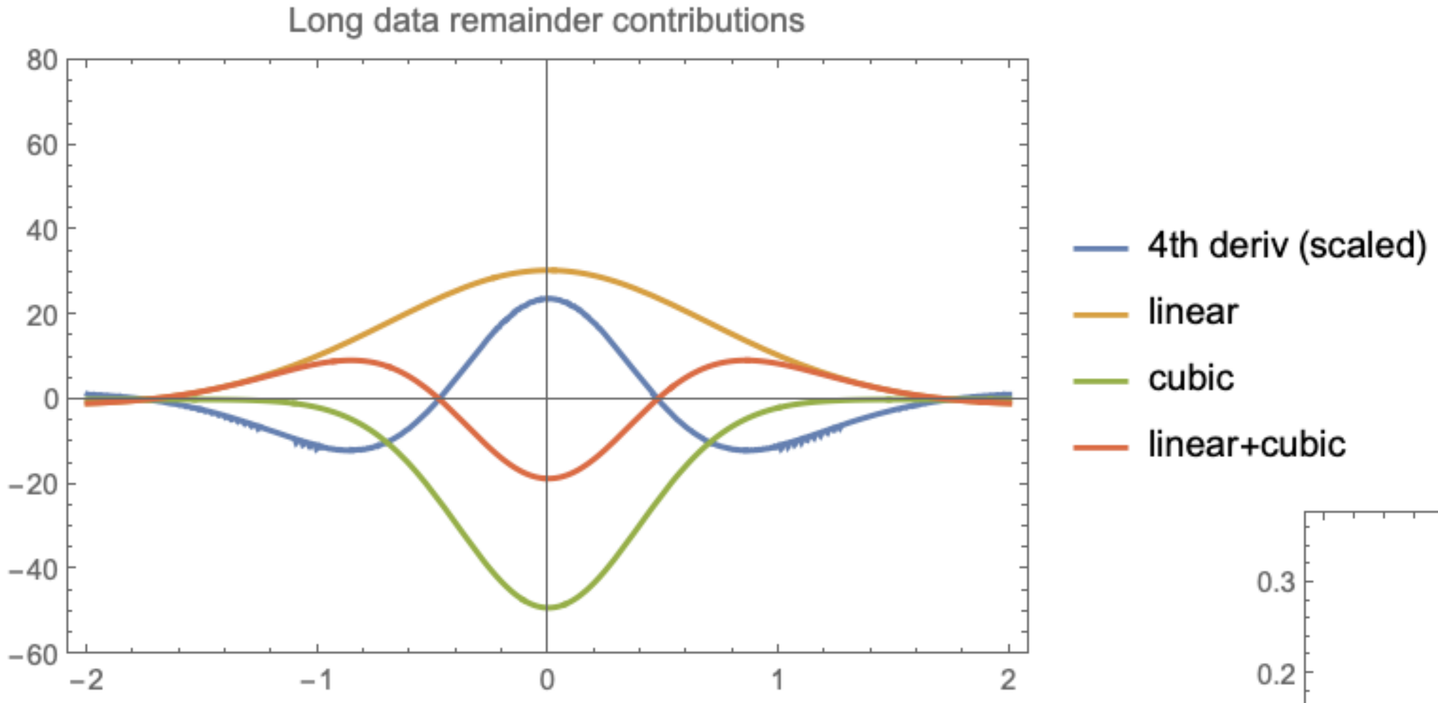
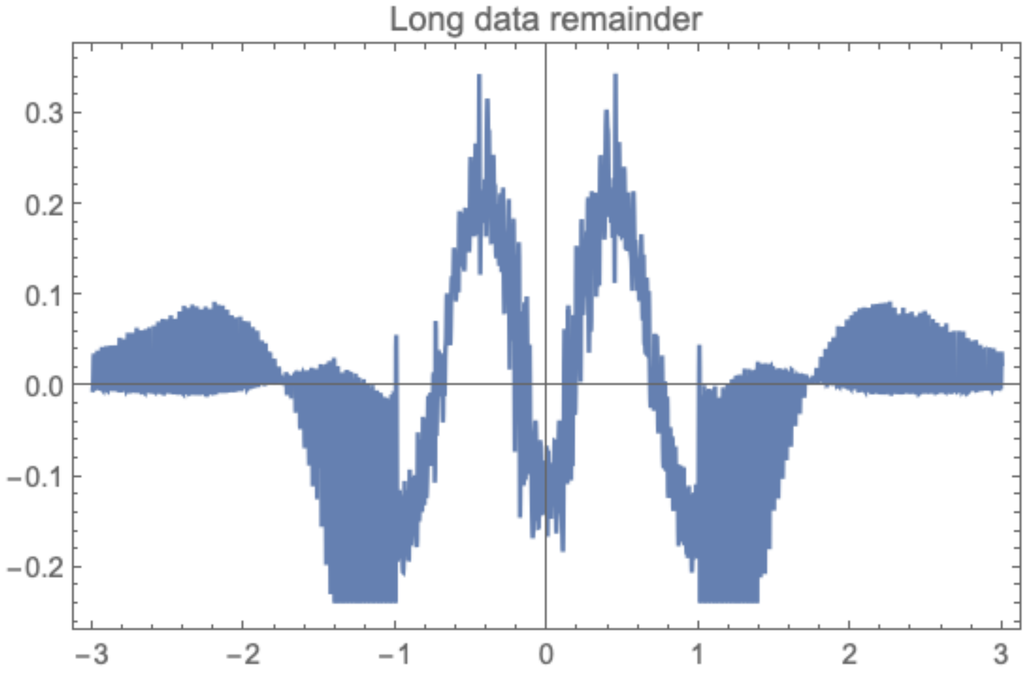
# PQS

**Meeting 2022-02-09 3:30pm**

Cory Aitchison

# Remainder

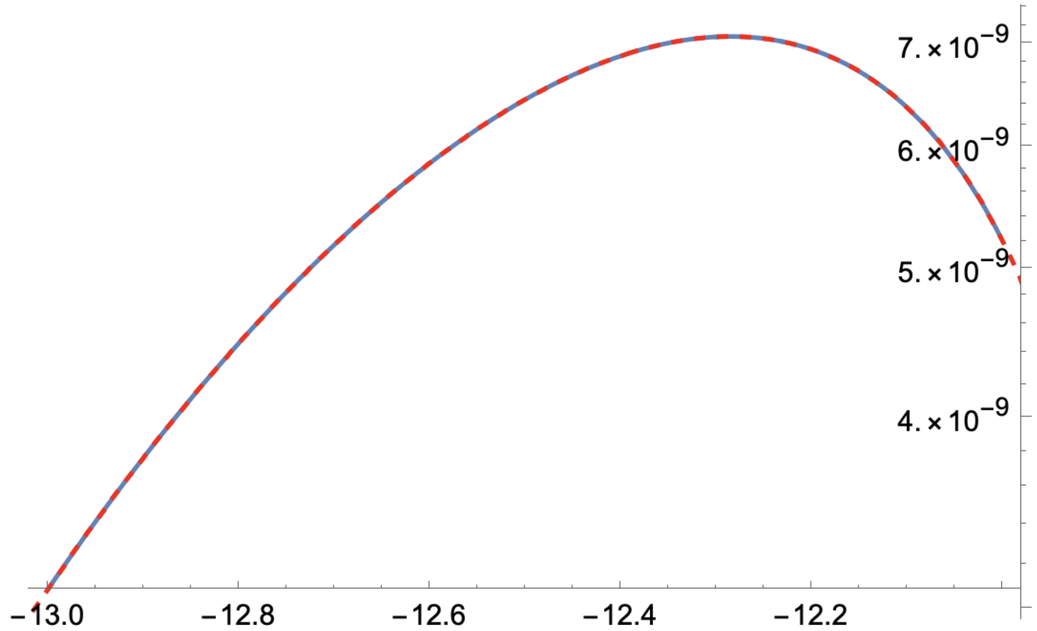

Long data remainder contributions
80
60
40
20
0
−20
−40
−60
−2
−1
0
1
2
4th deriv (scaled)
linear
cubic
linear+cubic

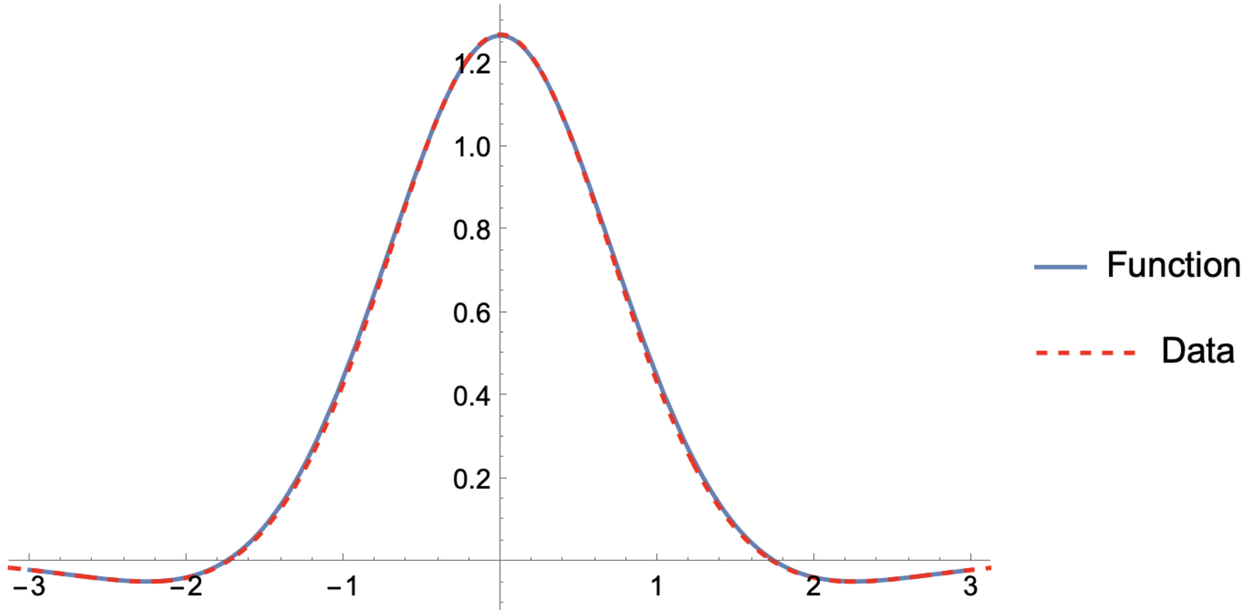

Long data remainder
0.3
0.2
0.1
0.0
−0.1
−0.2
−3
−2
−1
0
1
2
3

# Combination

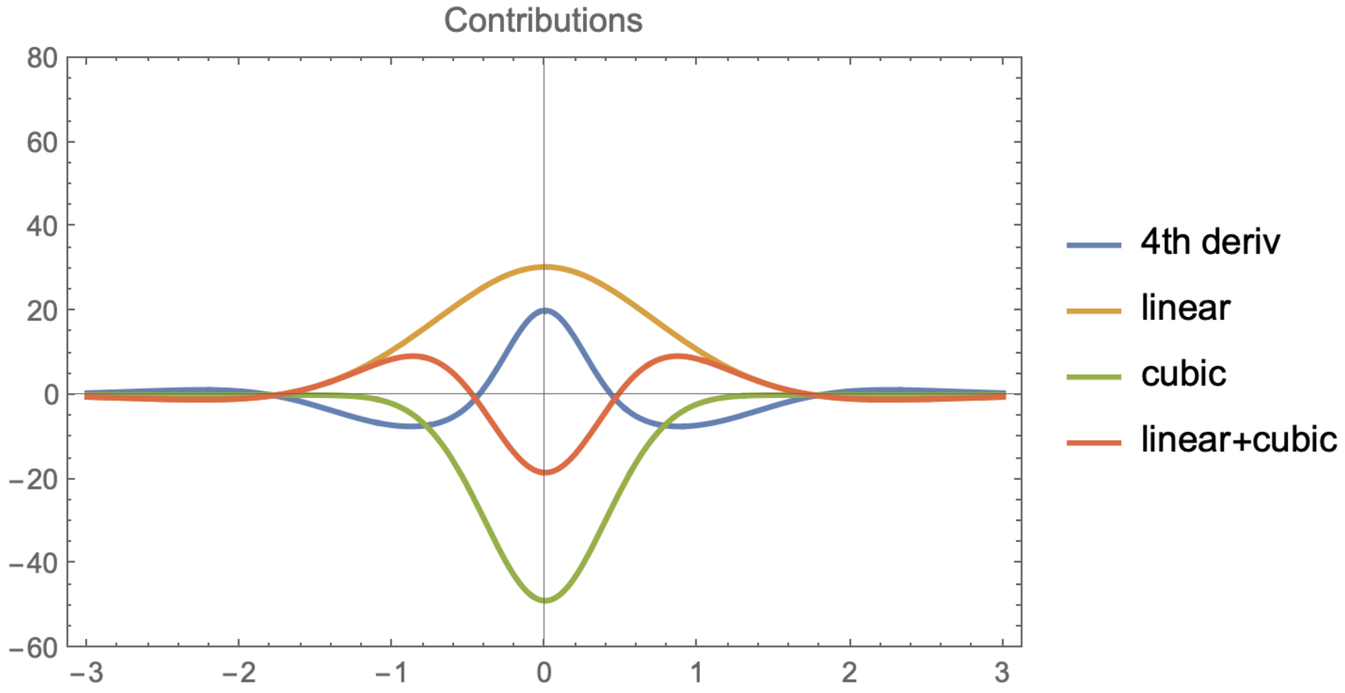
The required fourth derivative looks qualitatively similar to the fourth derivative of a Gaussian; what if we used a function that behaved like u0 in the tails but Gaussian near the peak?

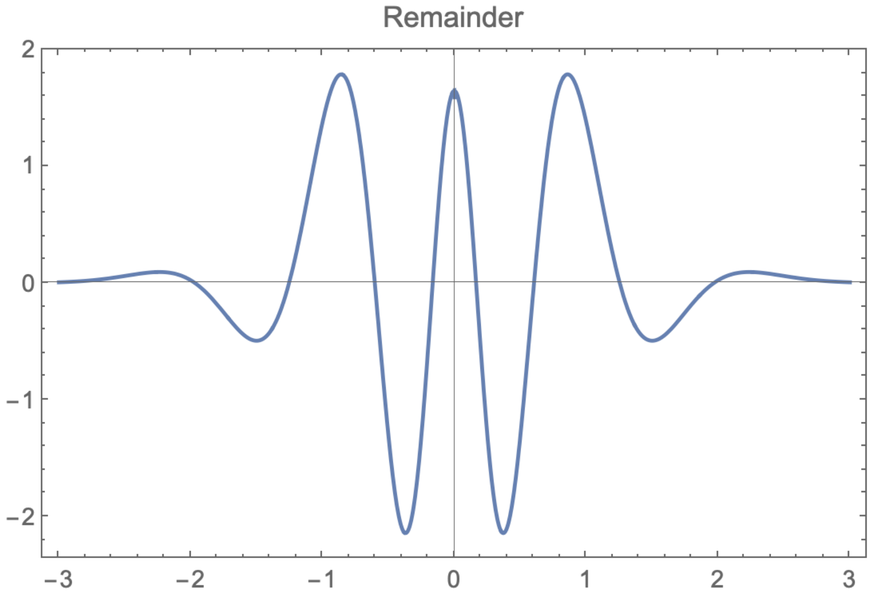
$$v(x) = \frac{u^{(0)}(x) + 0.81e^{-1.874x^2}}{1 + 0.81e^{-x^2}}$$



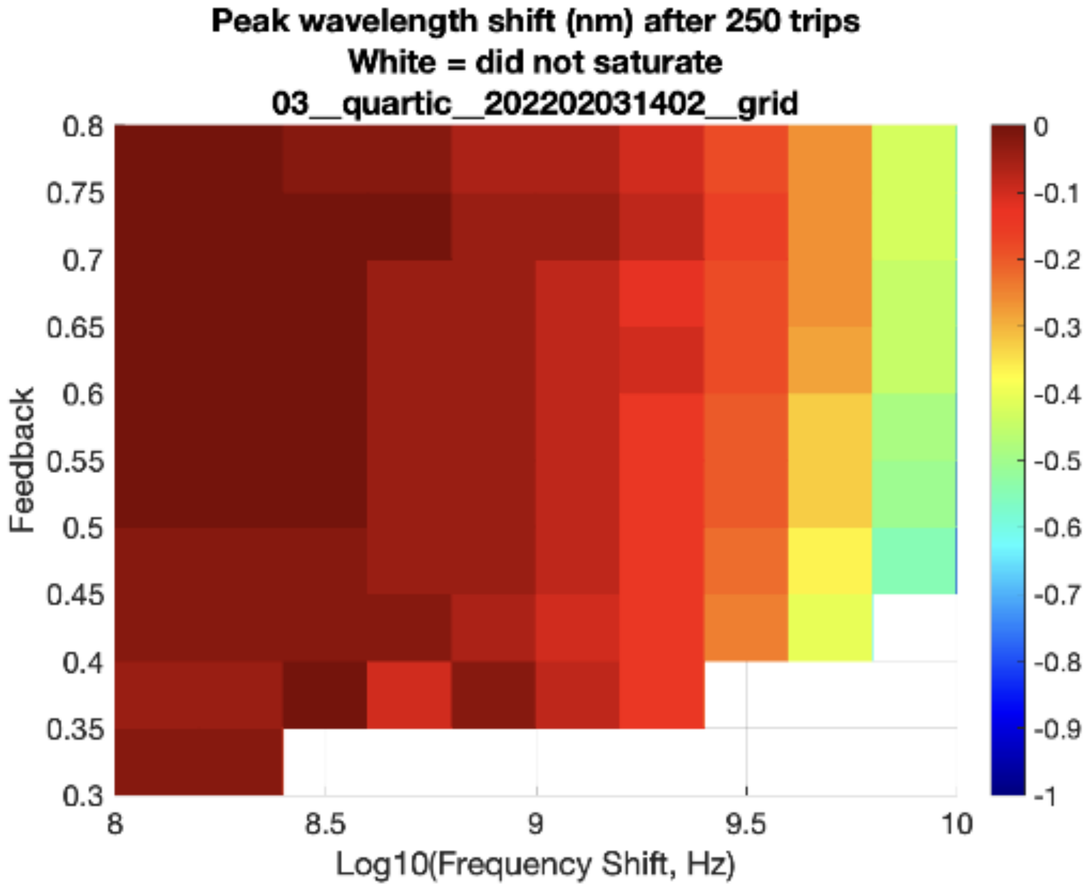



# Combination

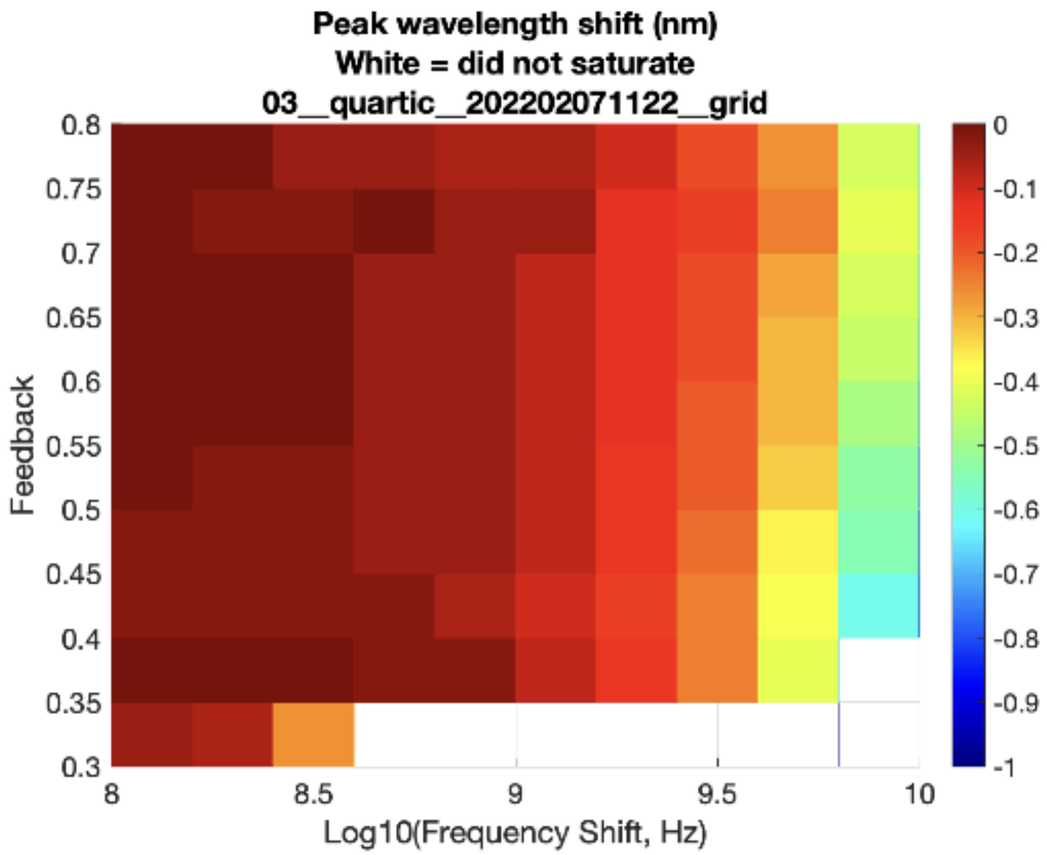


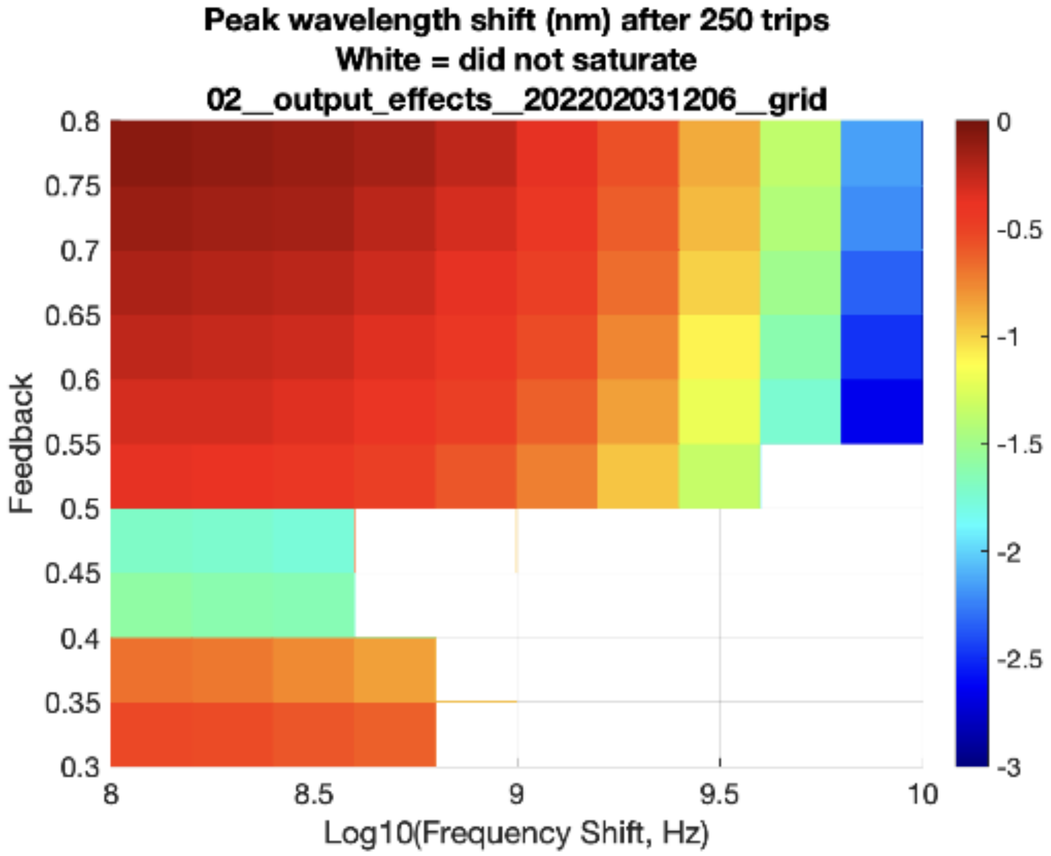
# Wavelength shifts




New



# Wavelength shifts




New