



**Fig 5** This figure shows the six Legendre  $\lambda$  coefficients for the ROI of Figure 1. The red box highlights the information that is used by the WFC3 calibration pipeline. The pipeline fits a straight line ( $\lambda_0$  and  $\lambda_1$ ) after “linearization”; thereby discarding the information that is in  $\lambda_2 - \lambda_4$ . Consistent with Figure 2b,  $\lambda_5$  and higher contain very little astronomical information. For comparison, we fitted the same data with a 2-parameter straight line. The yellow box is a photometer aperture. For this source, there is a 0.9% difference in brightness between the 5<sup>th</sup> degree Legendre fit and the straight line. The Legendre fit is the fainter of the two. The images show detector edges from stacking (especially  $\lambda_0$ ). The bright-dark artifacts seen especially in  $\lambda_2$  are more interesting. These are caused by  $\approx 1.5$  milliarcsecond guiding errors (1% of WFC3’s pixel pitch) during each exposure. This is discussed more fully in Appendix C