



TIC 198153540 TRANSITS VALIDATION REPORT

This document is created by the WATSON report generator (<https://github.com/PlanetHunters/watson>) and focuses on the target star TIC 198153540.

RA (deg)	Dec (deg)	V (mag)	J (mag)	H (mag)	K (mag)
14:04:22.59	46:31:09.84	-	-	-	-

Table 1: The proposed target parameters.

T0 (d)	Period (d)	Duration (h)	Depth (ppt)
1739.5119	0.4378	0.85	0.25

Table 2: The candidate parameters.

Metric	Value	Passed
fast_snr	9.548	True
short_snr	15.077	True
long_snr	12.537	True
folded_cadences_snr	0.182	True
snr_p_t0	32.439	True
snr_p_2t0	0.483	False
snr_2p_t0	23.823	True
snr_2p_2t0	22.063	True
snr_p2_t0	0.483	True
snr_p2_t02	0.001	True
snr_p_score	0.015	True
snr_2p_score	1.76	True
snr_p2_score	0.015	True
transit_offset_ra	211.096	True
transit_offset_dec	46.517	True
transit_offset_err	0.031	False
transit_offset_pos	0.003	True
core_flux_snr	14.086	True
halo_flux_snr	0.864	nan
og_score	0.061	True
centroids_ra_snr	0.427	True
centroids_dec_snr	-2.266	True

Table 3: The results of the numerical tests.

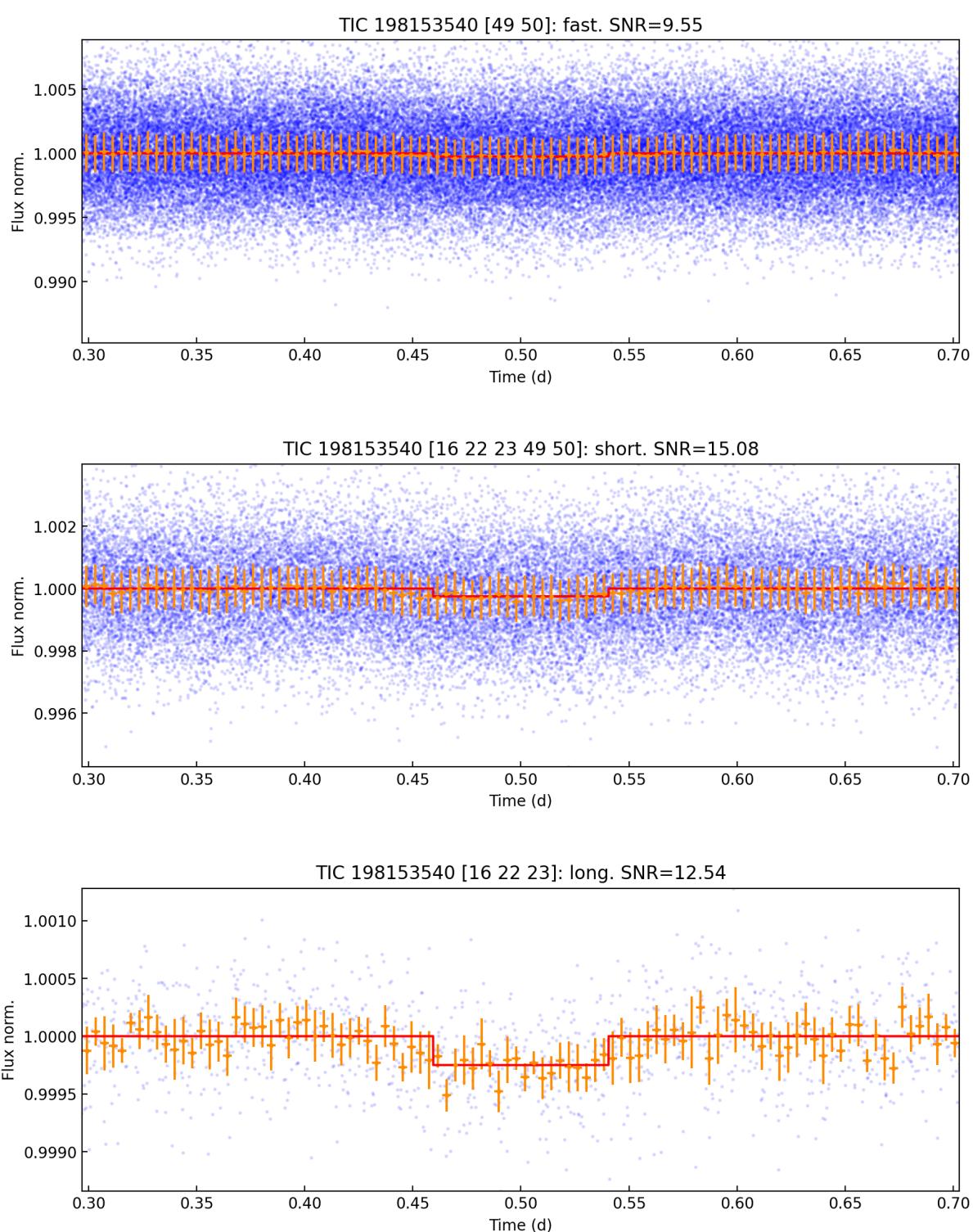


Figure 1: Folded curve for all available cadences.

TIC 198153540 Transits depth analysis $T_0=1739.51$ $P=0.44d$

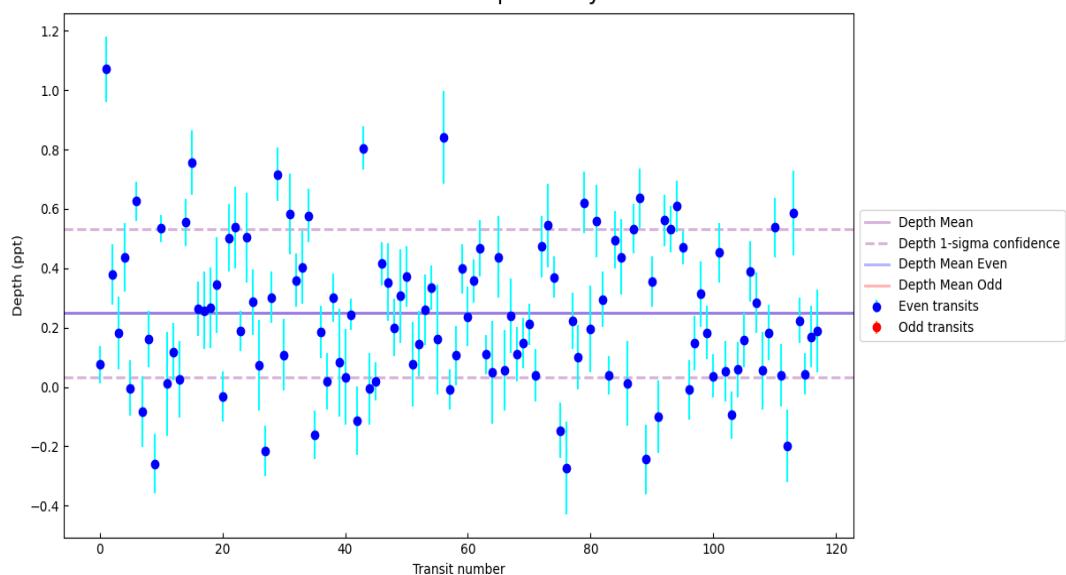


Figure 2: The candidate single-transits depths plot.

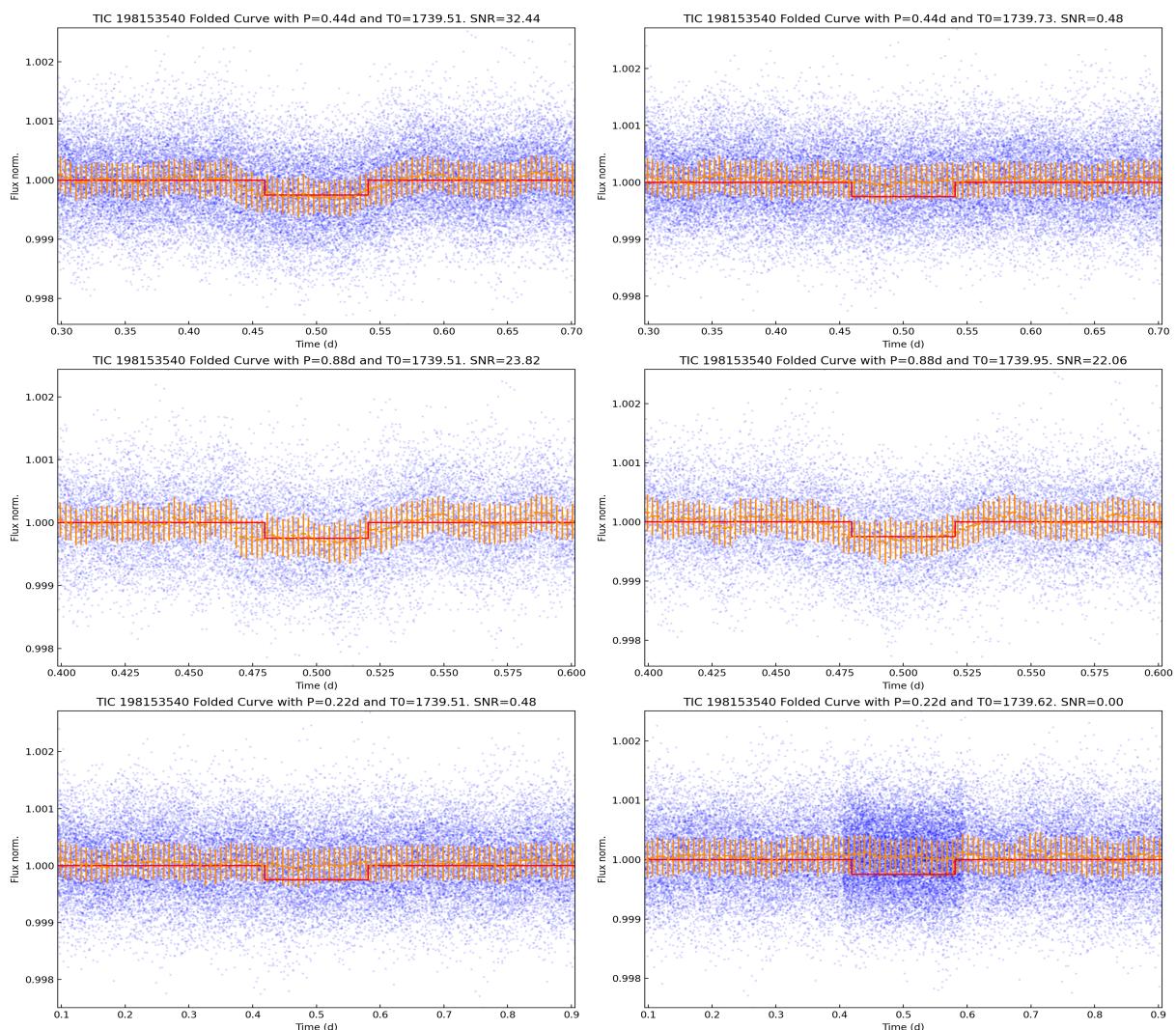


Figure 3: Above, the candidate folded at its found period for the found epoch and epoch + $P/2$. Middle, the candidate folded at its harmonic for the found epoch and epoch + P . Bottom, the candidate folded at its subharmonic for the found epoch and epoch + $P/2$, where the candidate has been masked.

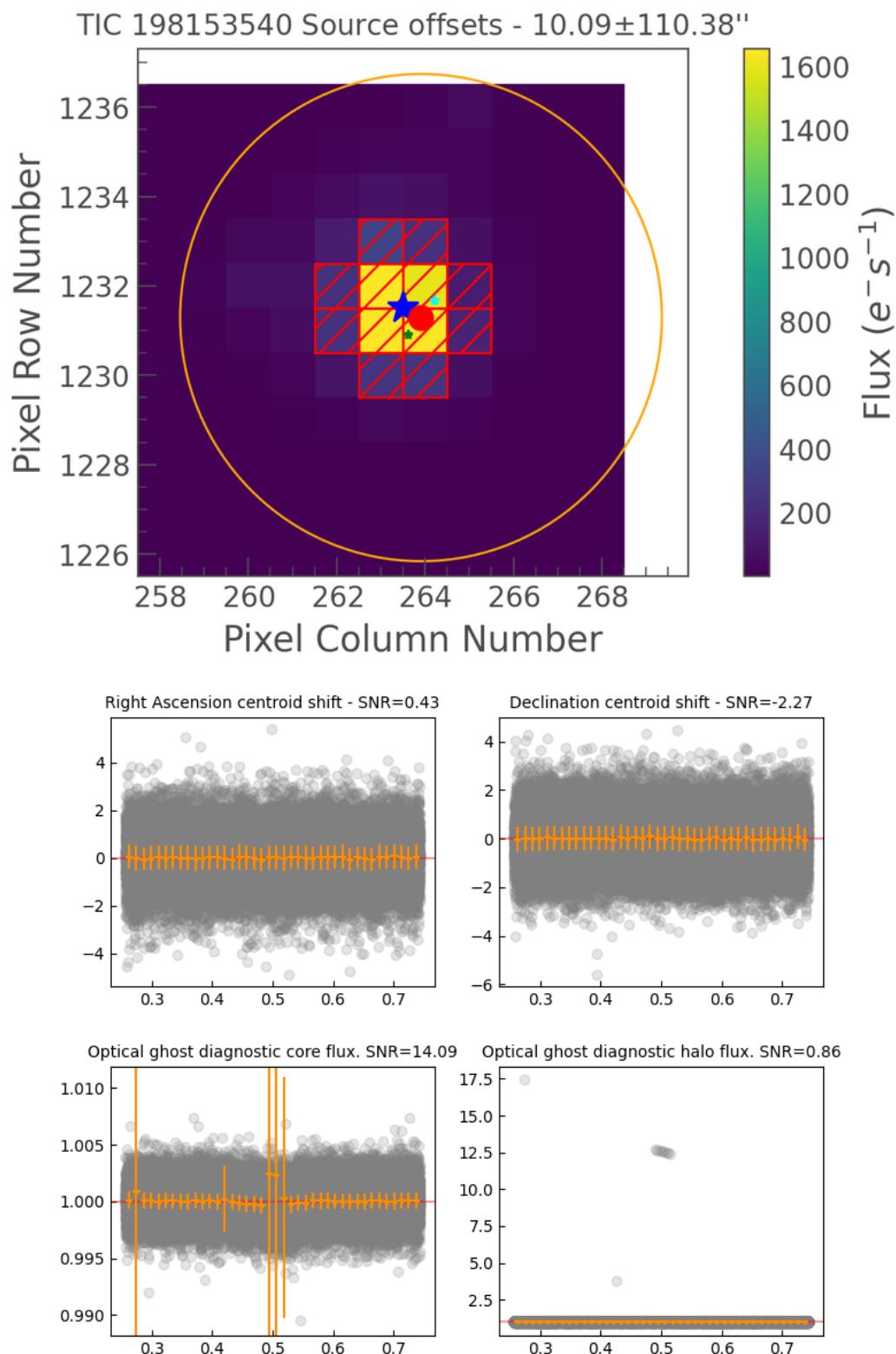


Figure 4: Above, the computed target offset (red circle) from the differential image offset (cyan dot) and the per-pixel BLS SNR offset (green dot). Middle left, the right ascension centroid shift with binning. Middle right, the declination centroid shift with binning. Bottom left, optical ghost diagnostic curve for core flux. Bottom right, optical ghost diagnostic curve for halo flux

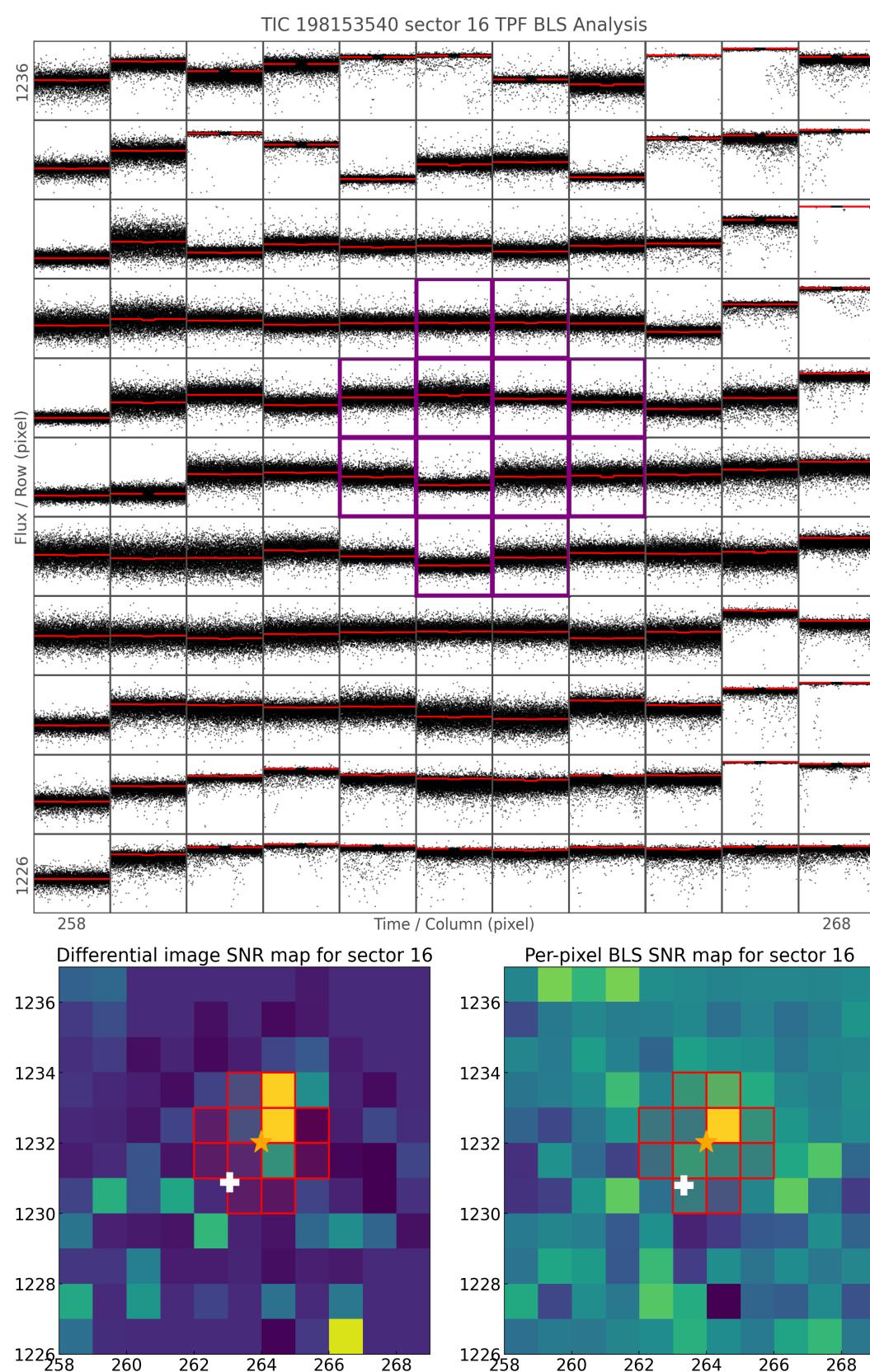


Figure 5: Above, the TPF and per-pixel BLS SNR best fits. Bottom left, the per-pixel BLS SNR for each pixel. Bottom right, the differential images SNR for each pixel. The target position is represented by a red star and the TPF independent source offset is represented by a white plus.

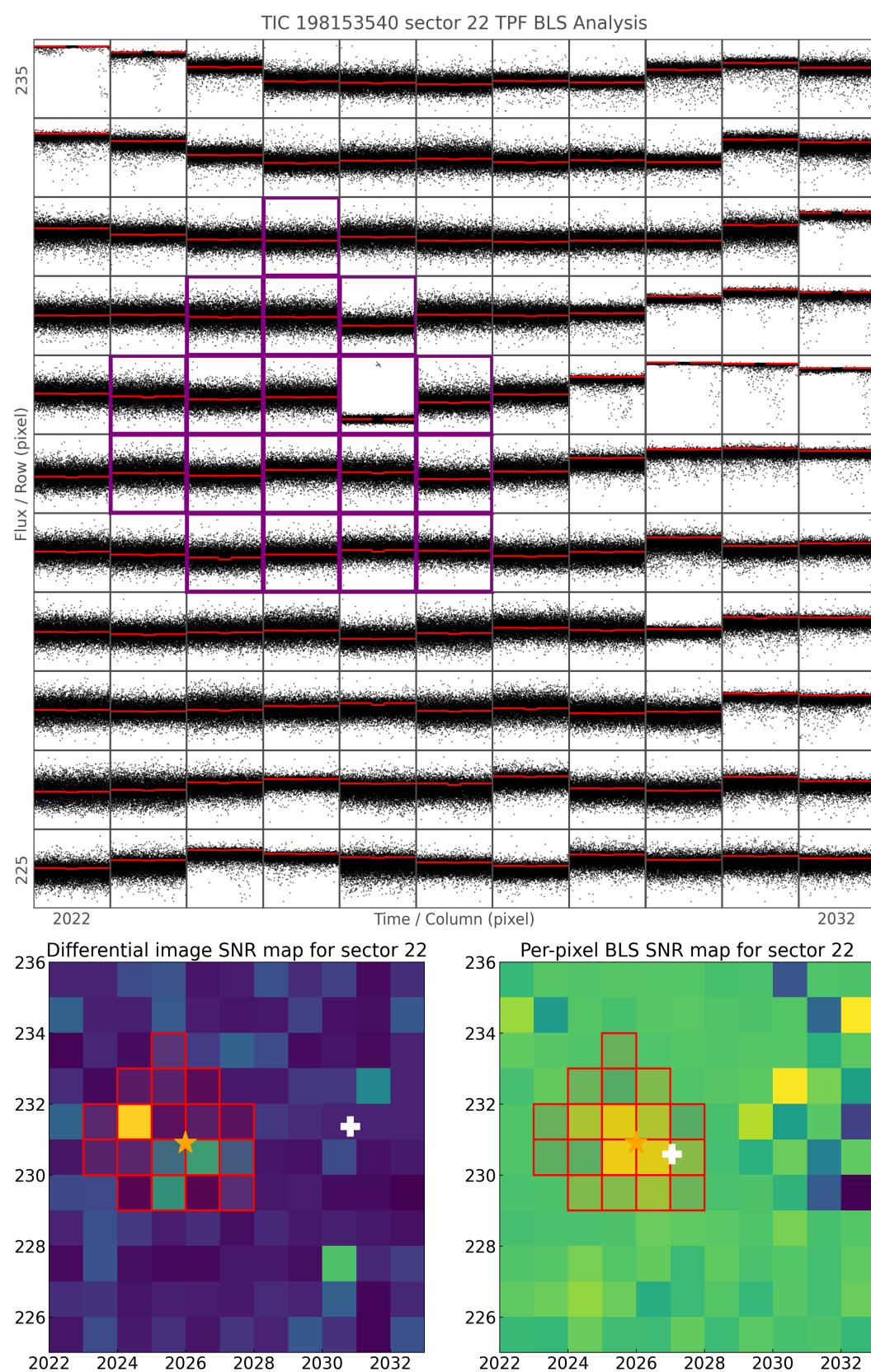


Figure 6: Above, the TPF and per-pixel BLS SNR best fits. Bottom left, the per-pixel BLS SNR for each pixel. Bottom right, the differential images SNR for each pixel. The target position is represented by a red star and the TPF independent source offset is represented by a white plus.

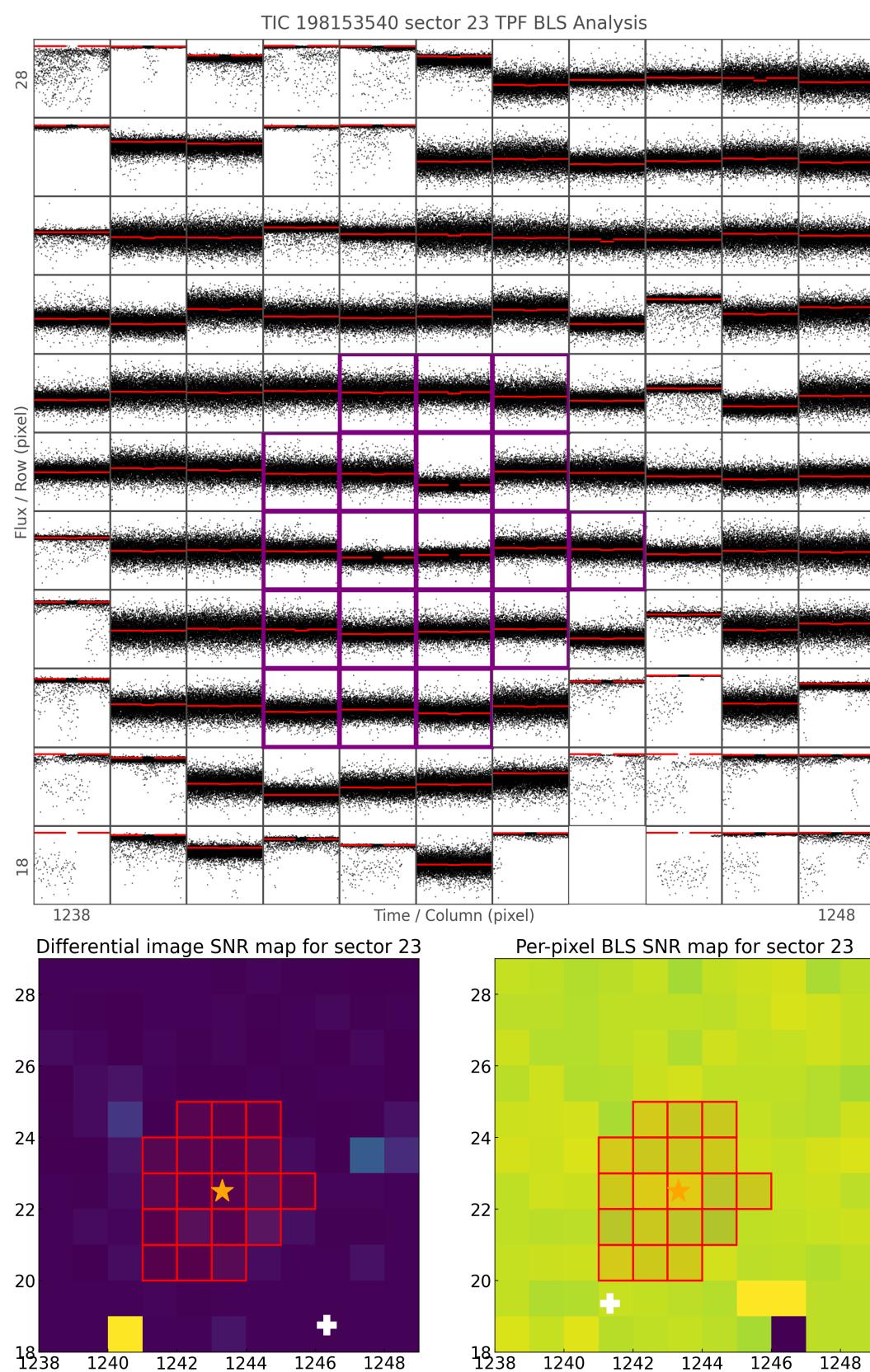


Figure 7: Above, the TPF and per-pixel BLS SNR best fits. Bottom left, the per-pixel BLS SNR for each pixel. Bottom right, the differential images SNR for each pixel. The target position is represented by a red star and the TPF independent source offset is represented by a white plus.

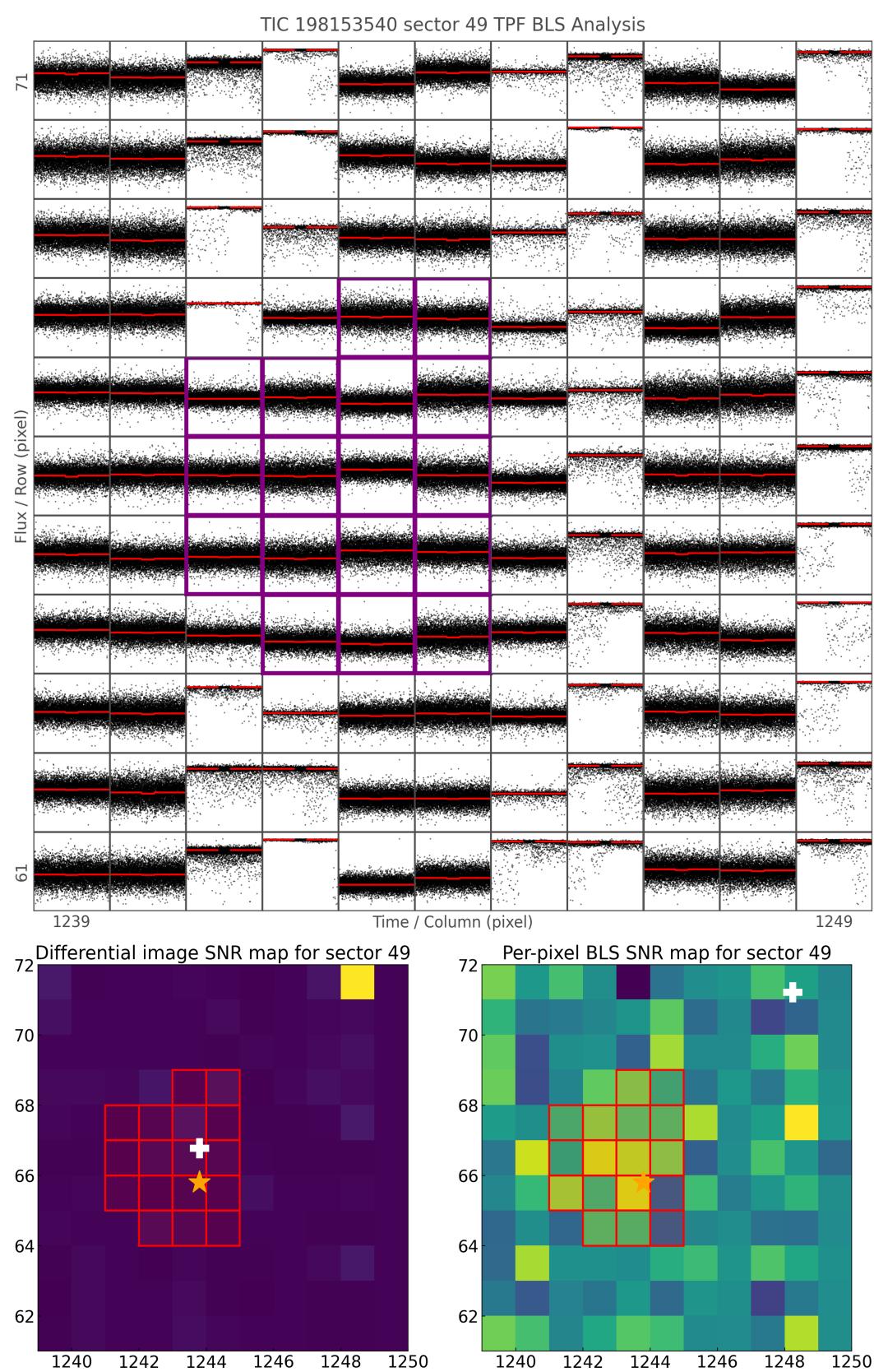


Figure 8: Above, the TPF and per-pixel BLS SNR best fits. Bottom left, the per-pixel BLS SNR for each pixel. Bottom right, the differential images SNR for each pixel. The target position is represented by a red star and the TPF independent source offset is represented by a white plus.

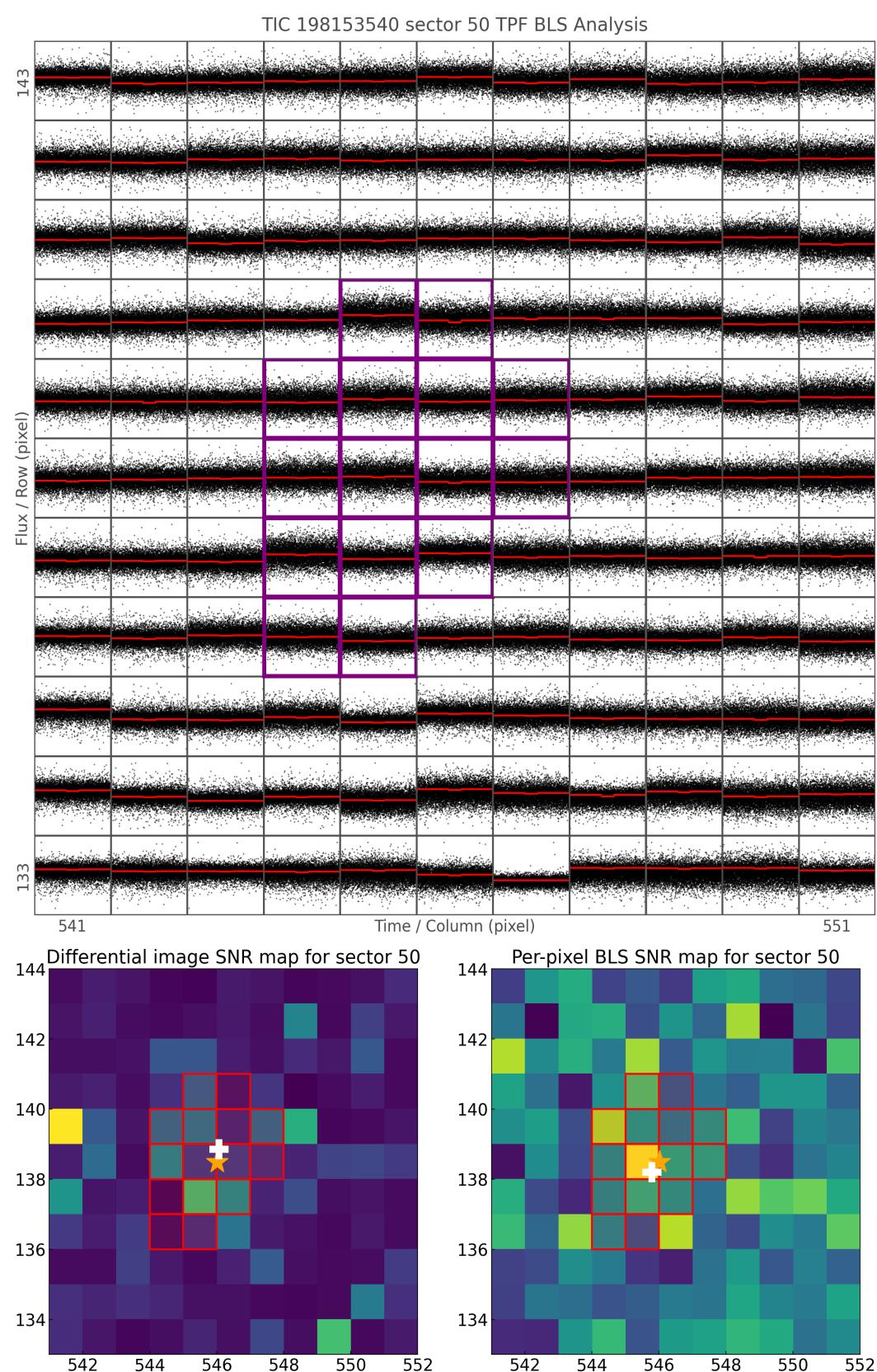


Figure 9: Above, the TPF and per-pixel BLS SNR best fits. Bottom left, the per-pixel BLS SNR for each pixel. Bottom right, the differential images SNR for each pixel. The target position is represented by a red star and the TPF independent source offset is represented by a white plus.



The next pages will contain each of the single-transits vetting sheets with the next information:

1. **TOP-LEFT**: Plot with single transit photometry found in the analyzed curve (with momentum dumps, if any).
2. **TOP-CENTER**: Plot with X-axis data drift (X-axis motion vs X-axis centroid offset) around the transit times.
3. **TOP-RIGHT**: Plot with Y-axis data drift (Y-axis motion vs Y-axis centroid offset) around the transit times.
4. **CENTER-LEFT**: Plot with SAP for used aperture vs SAP for smaller aperture around the transit times.
5. **CENTER-CENTER**: Plot with smaller aperture over used aperture on the target.
6. **CENTER-RIGHT**: Plot with single transit photometry found in the analyzed curve around the transit times.
7. **BOTTOM**: Plot TPF flux measurements for each pixel around the transit times.

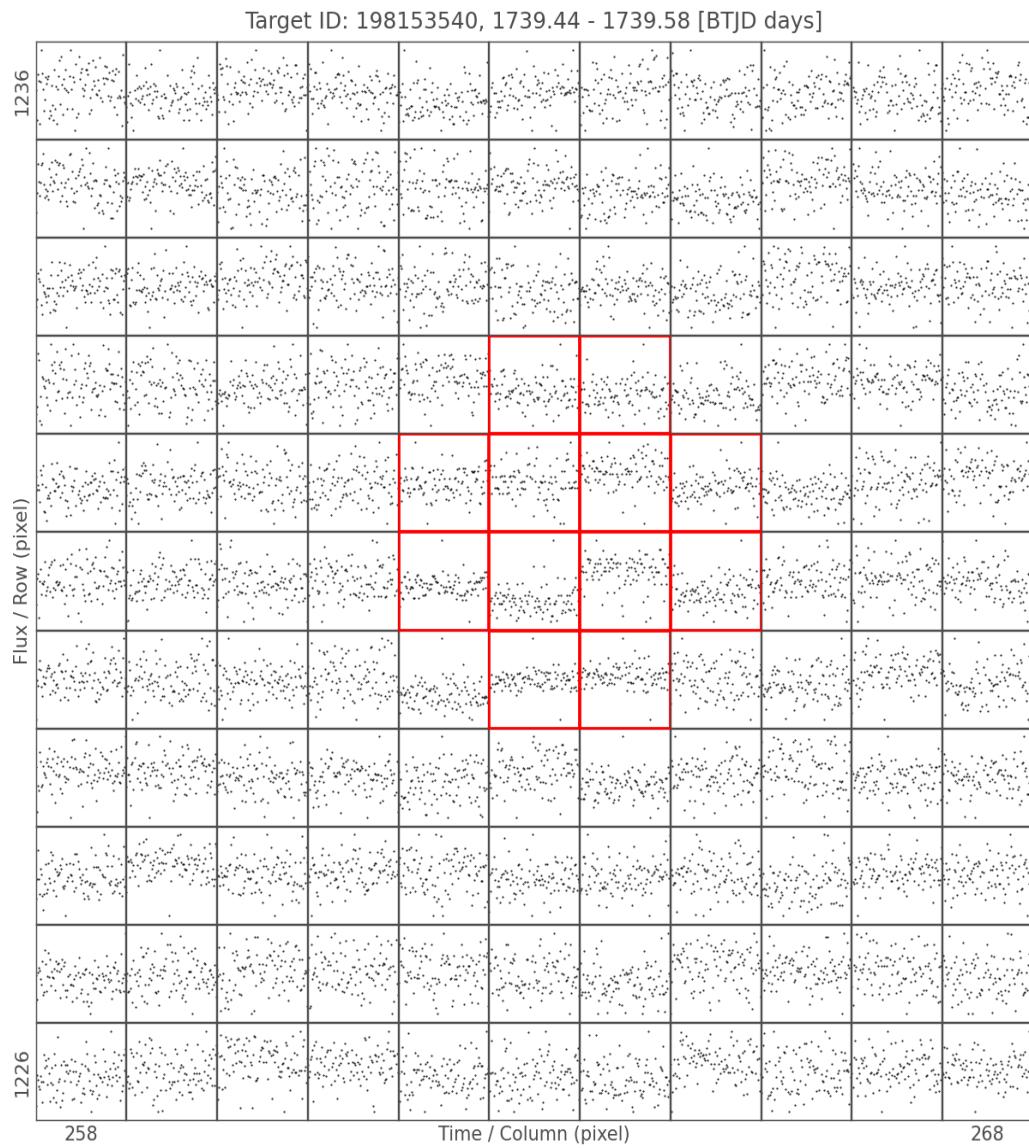
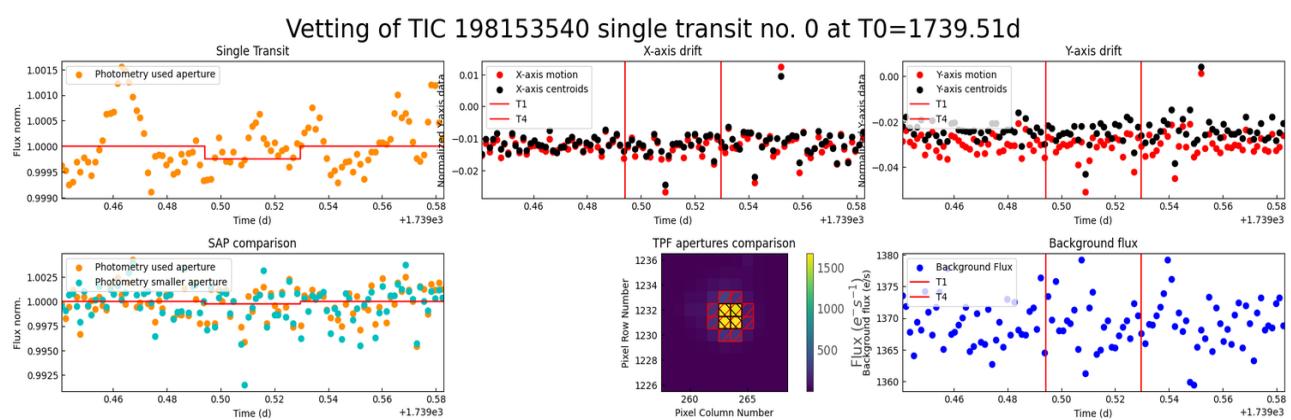


Figure 10: The single transit no. 0 vetting plots



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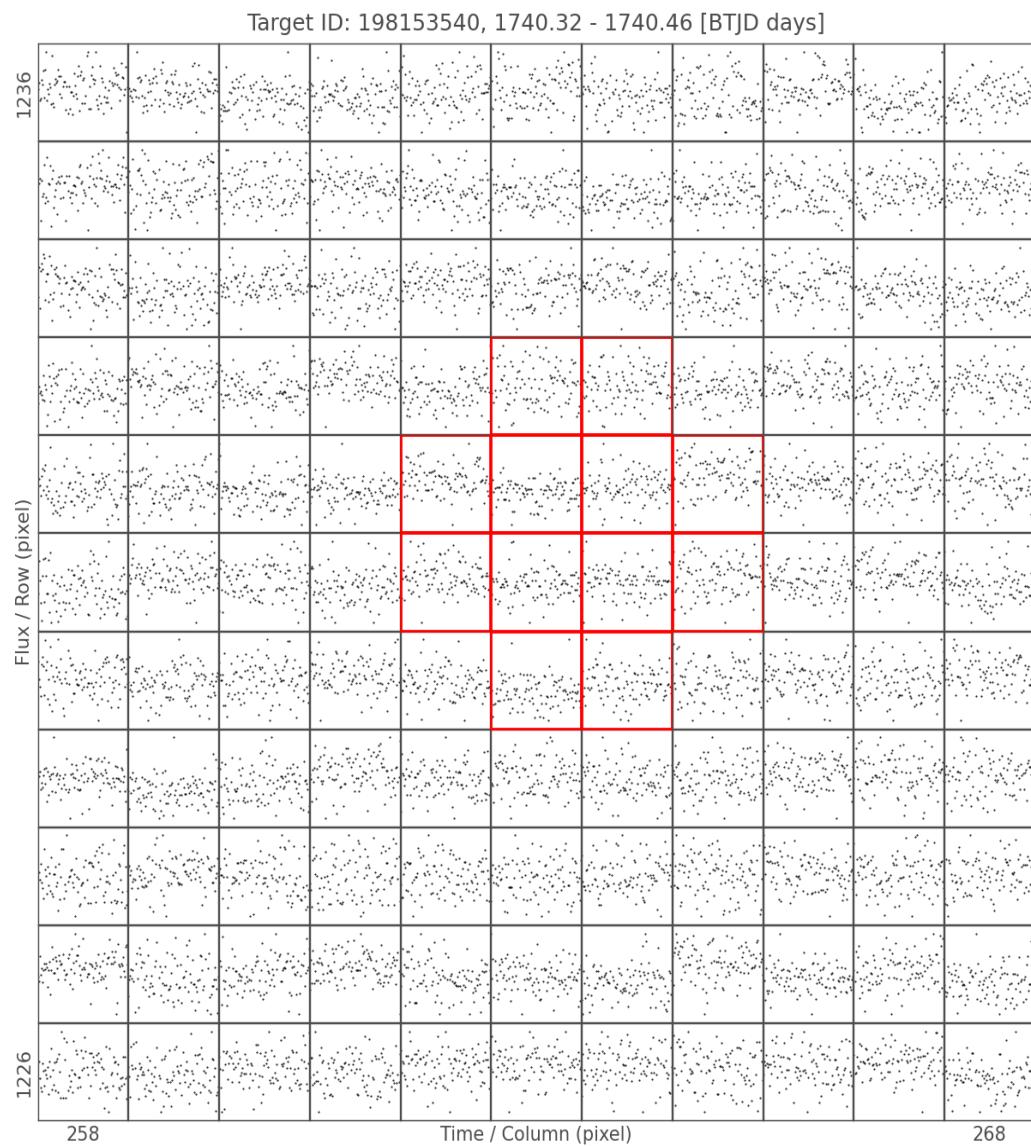
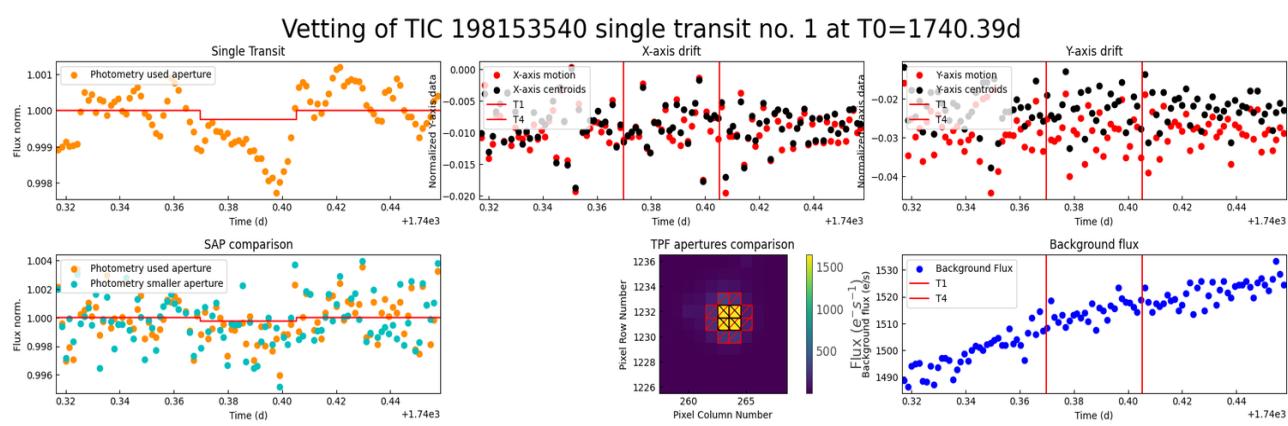


Figure 11: The single transit no. 1 vetting plots

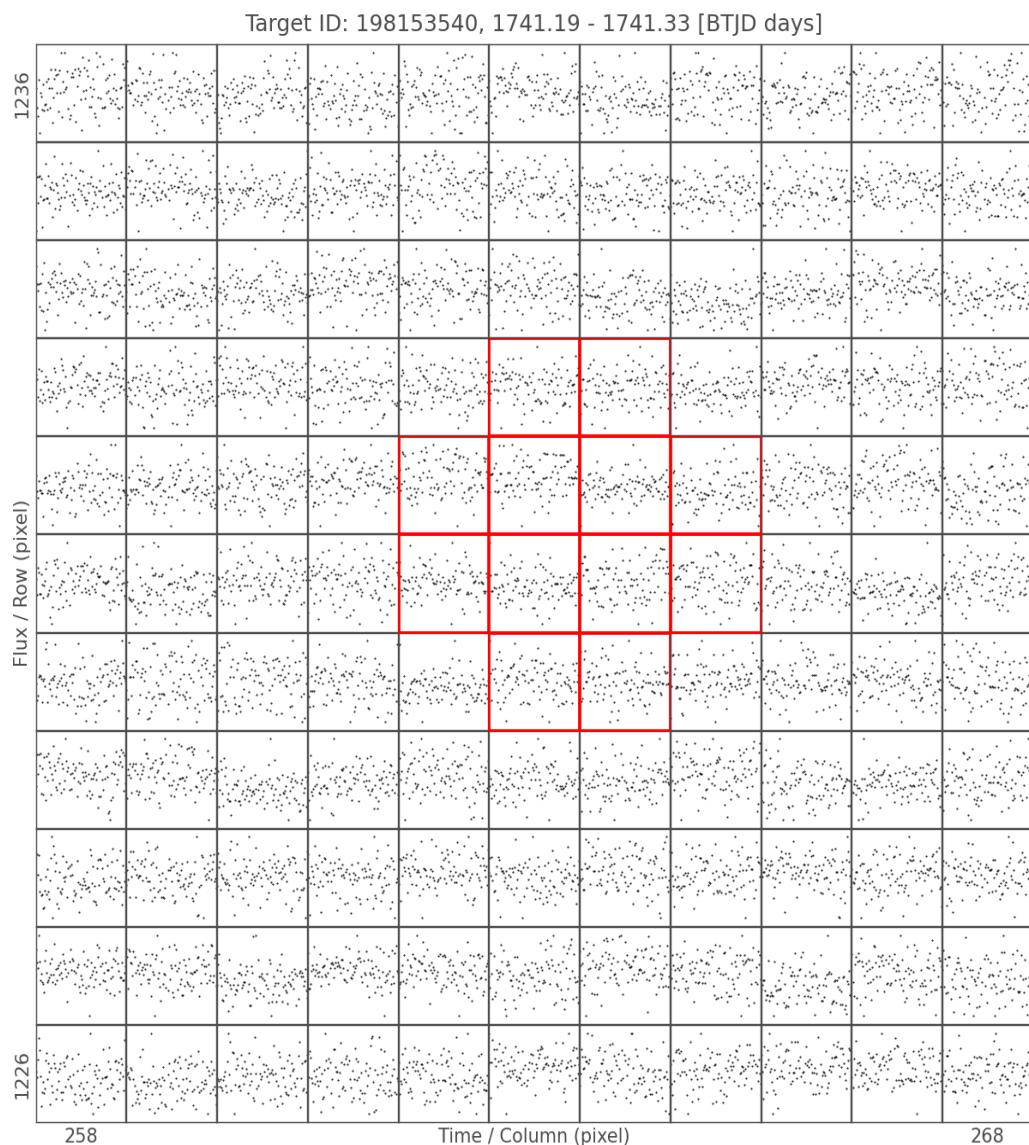
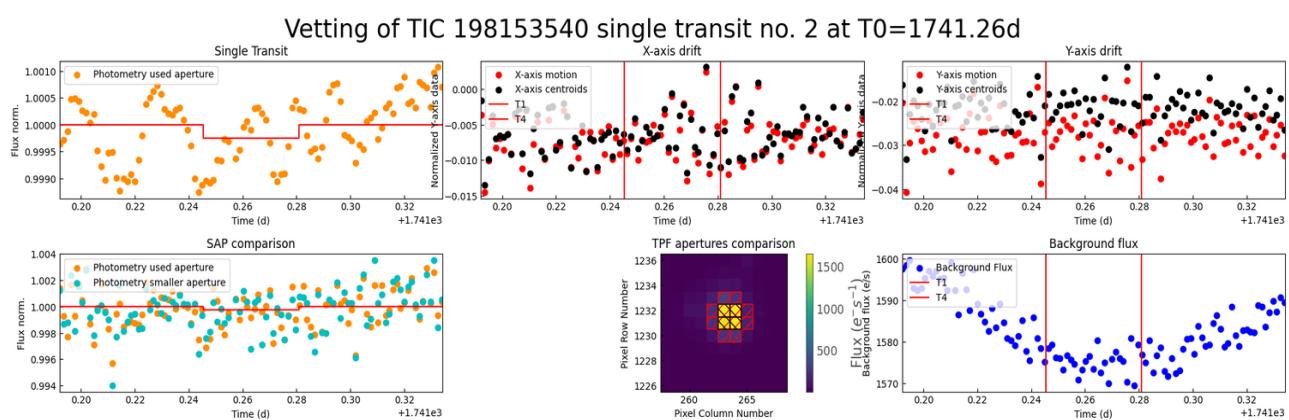


Figure 12: The single transit no. 2 vetting plots

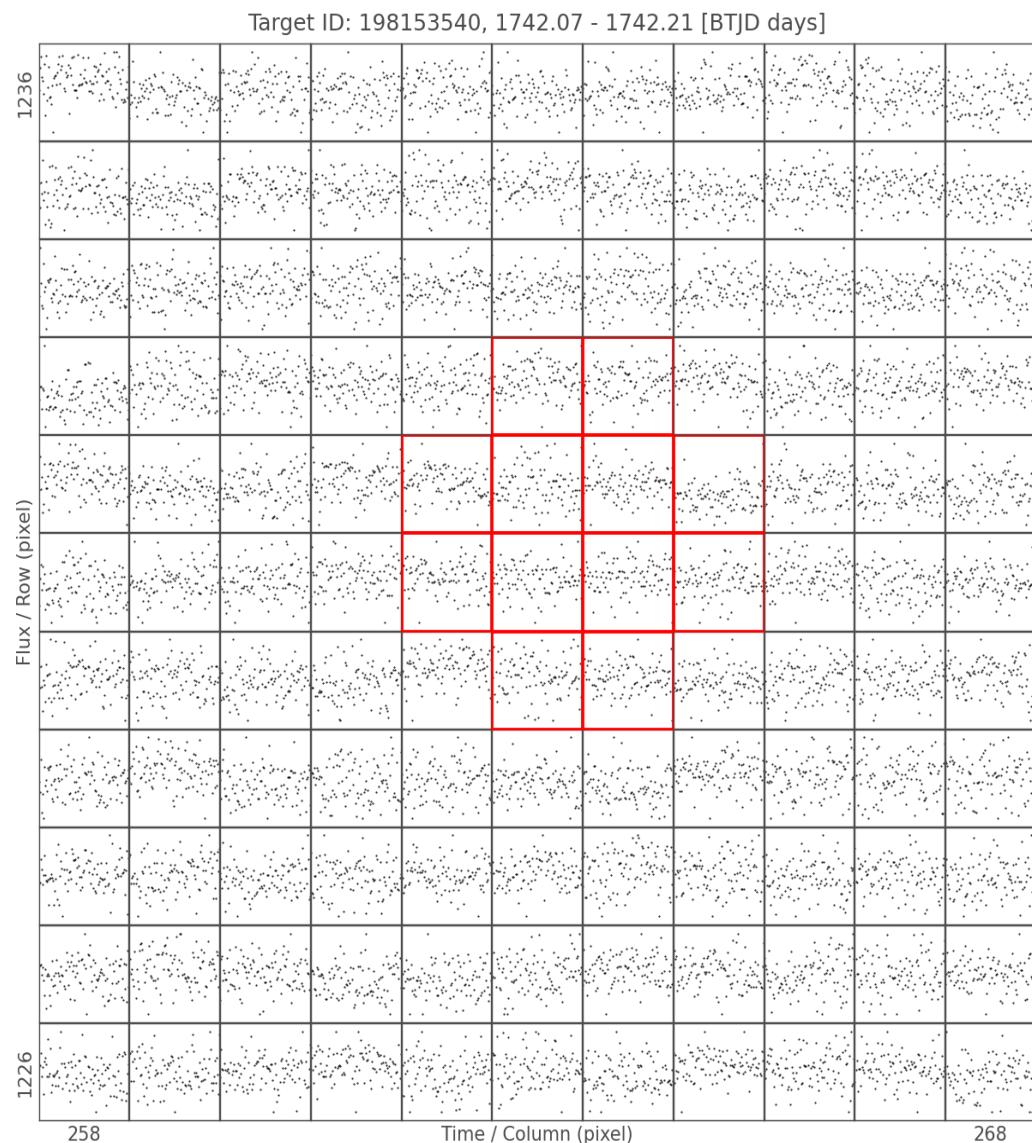
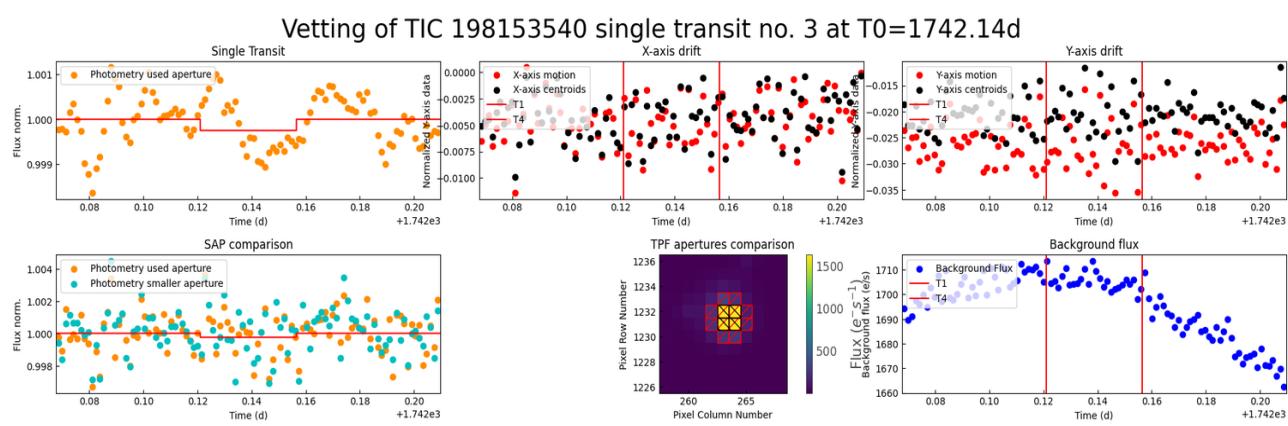


Figure 13: The single transit no. 3 vetting plots

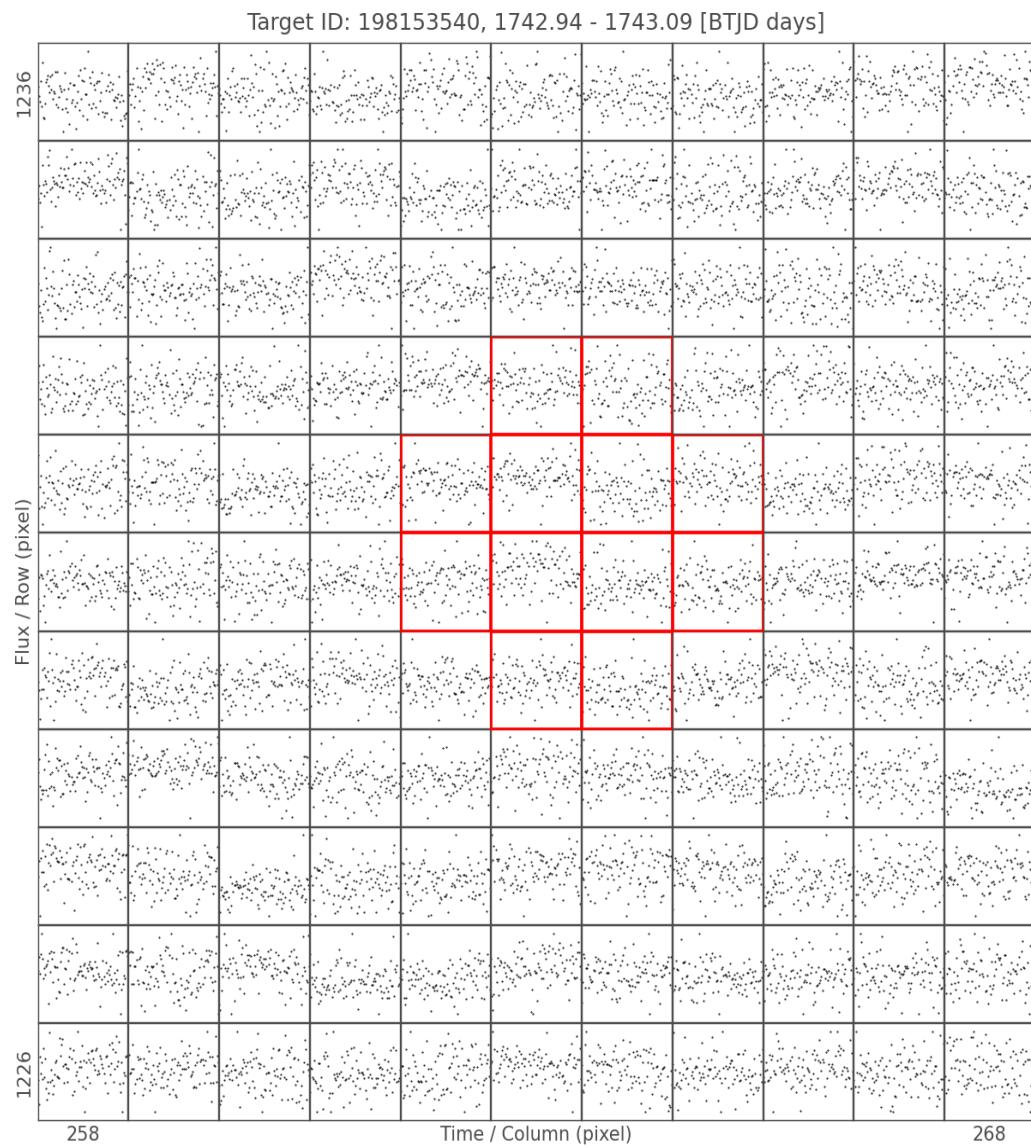
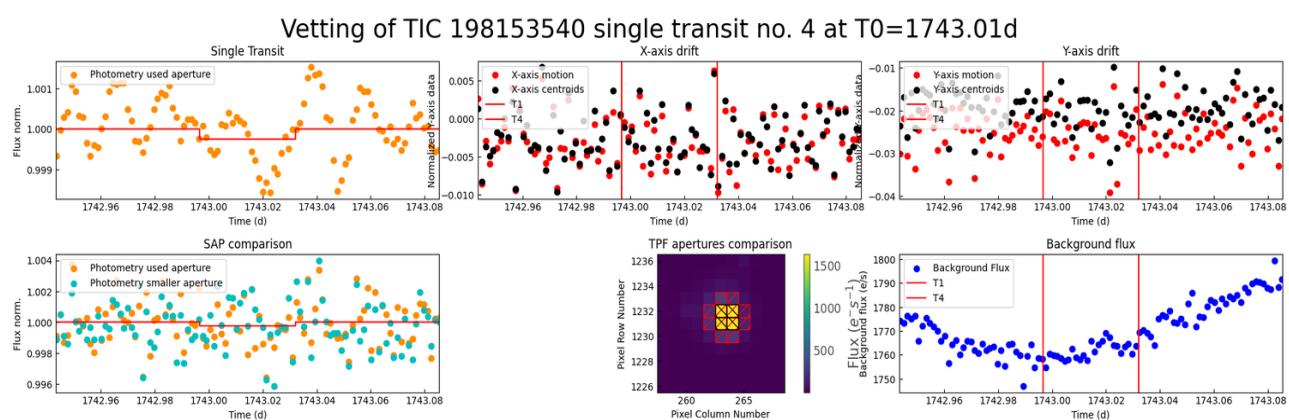


Figure 14: The single transit no. 4 vetting plots

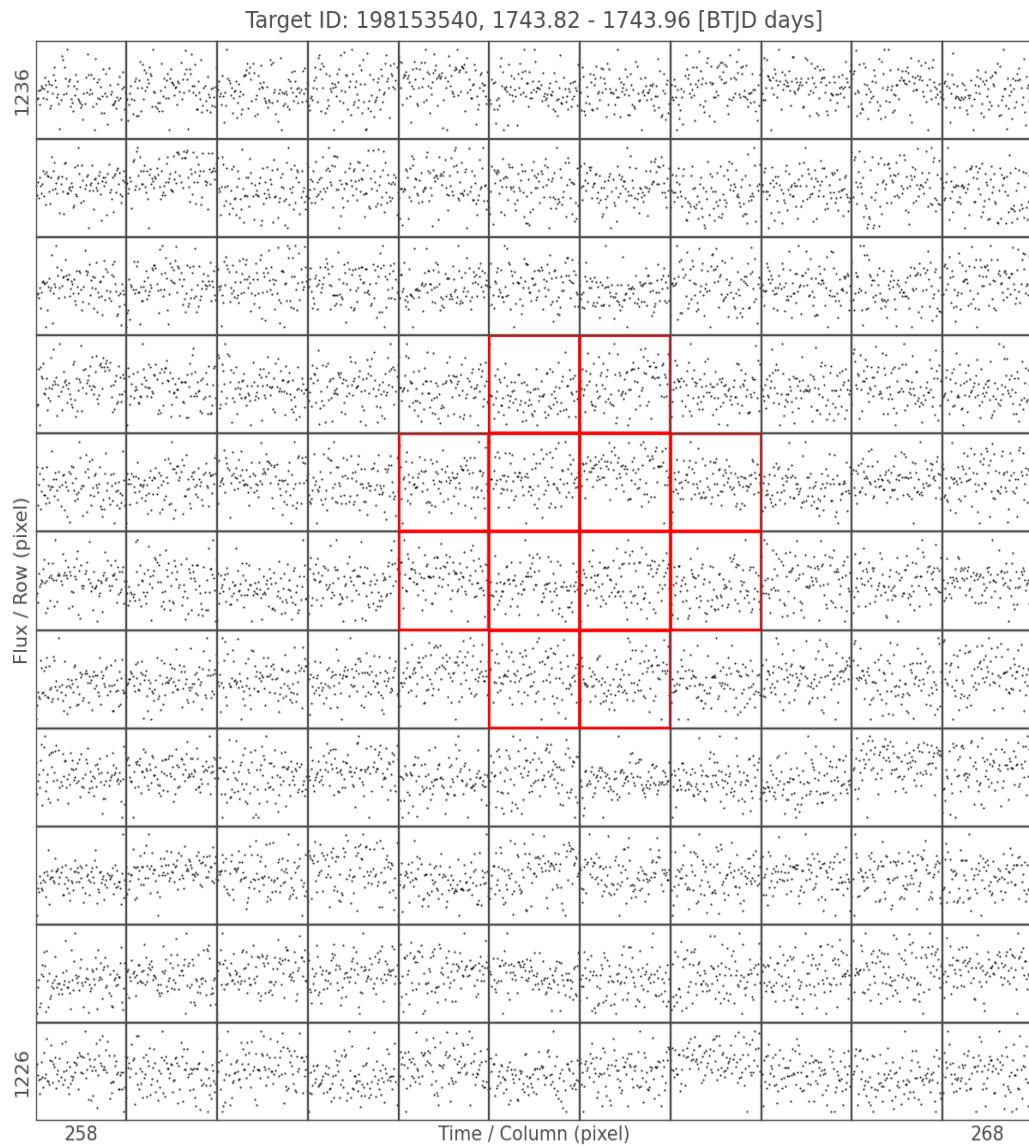
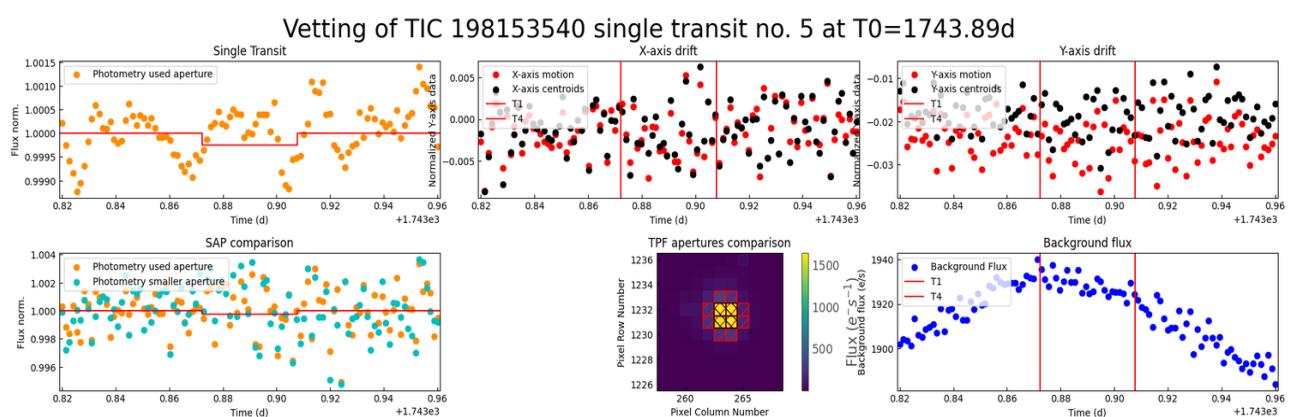


Figure 15: The single transit no. 5 vetting plots

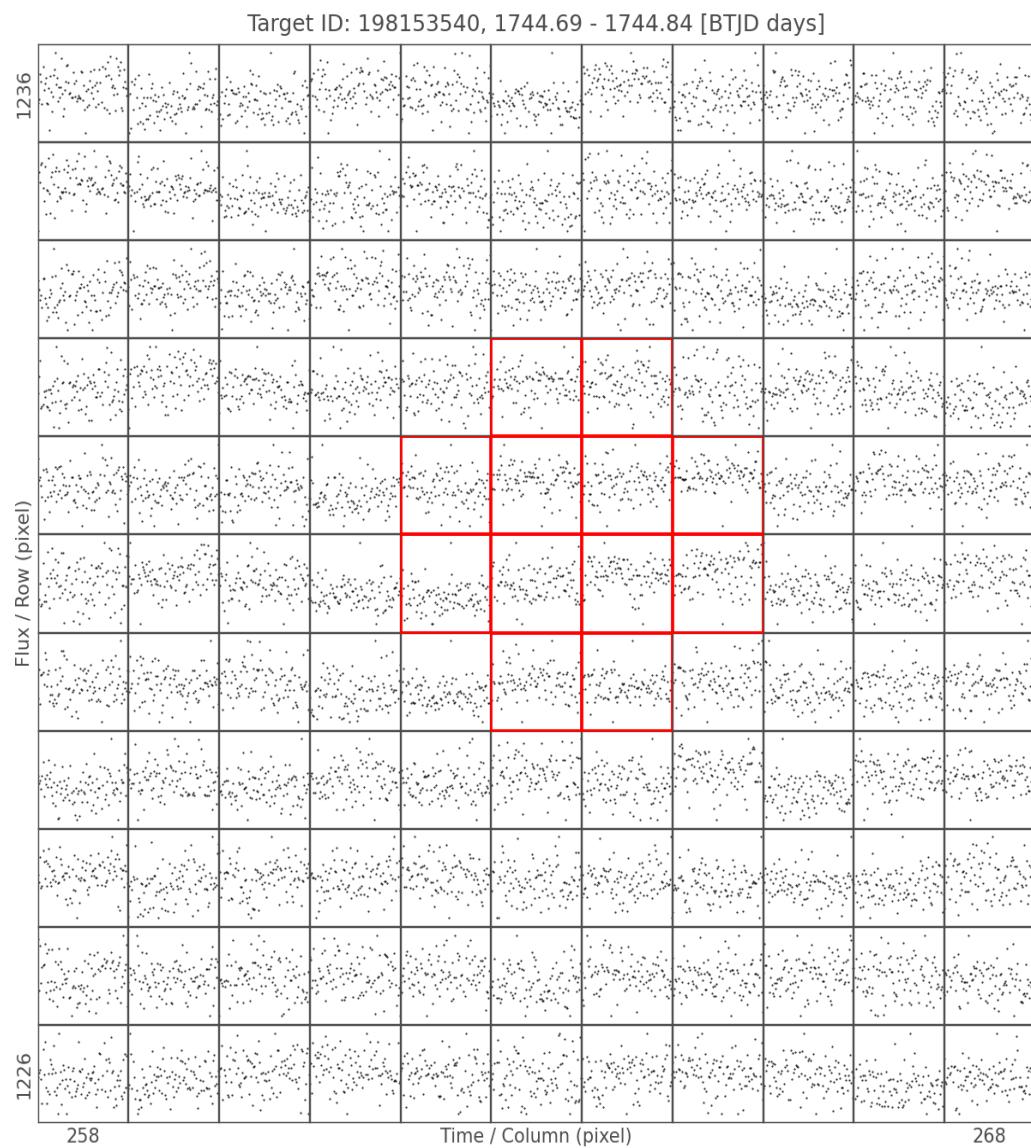
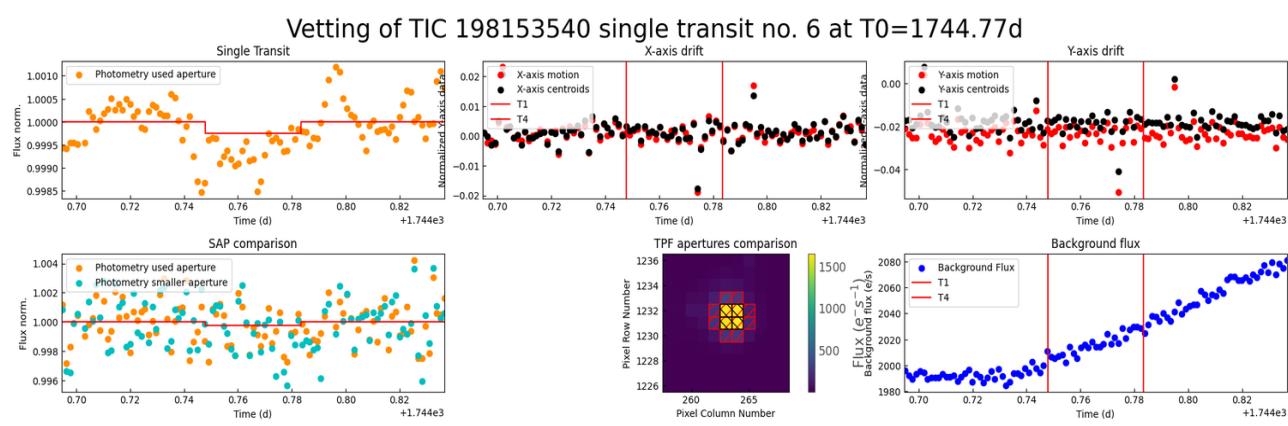


Figure 16: The single transit no. 6 vetting plots

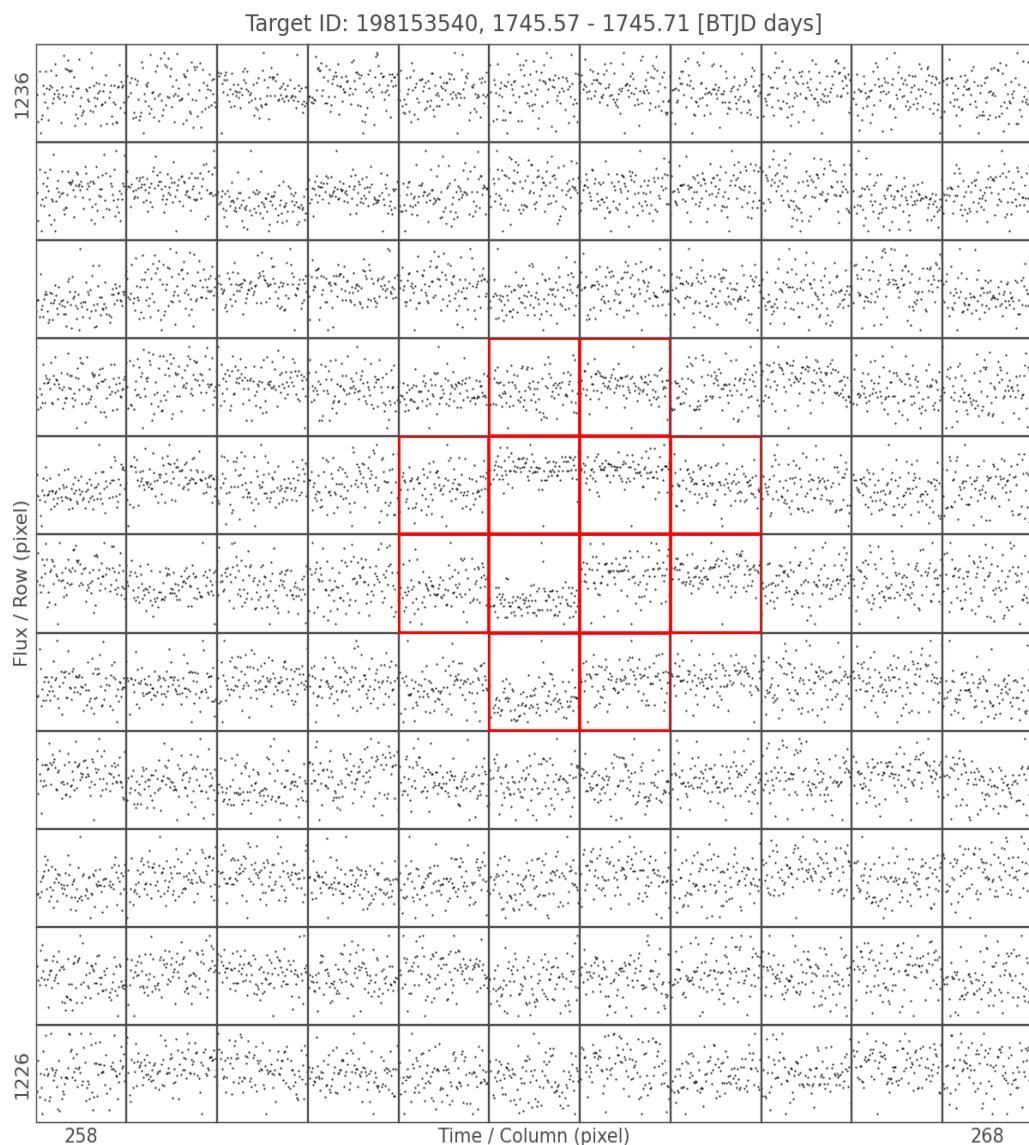
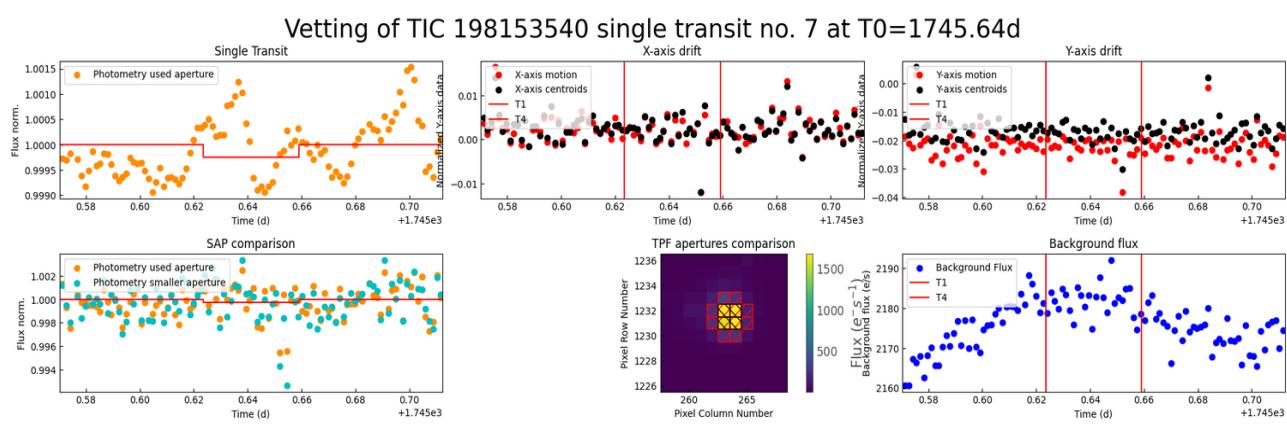


Figure 17: The single transit no. 7 vetting plots

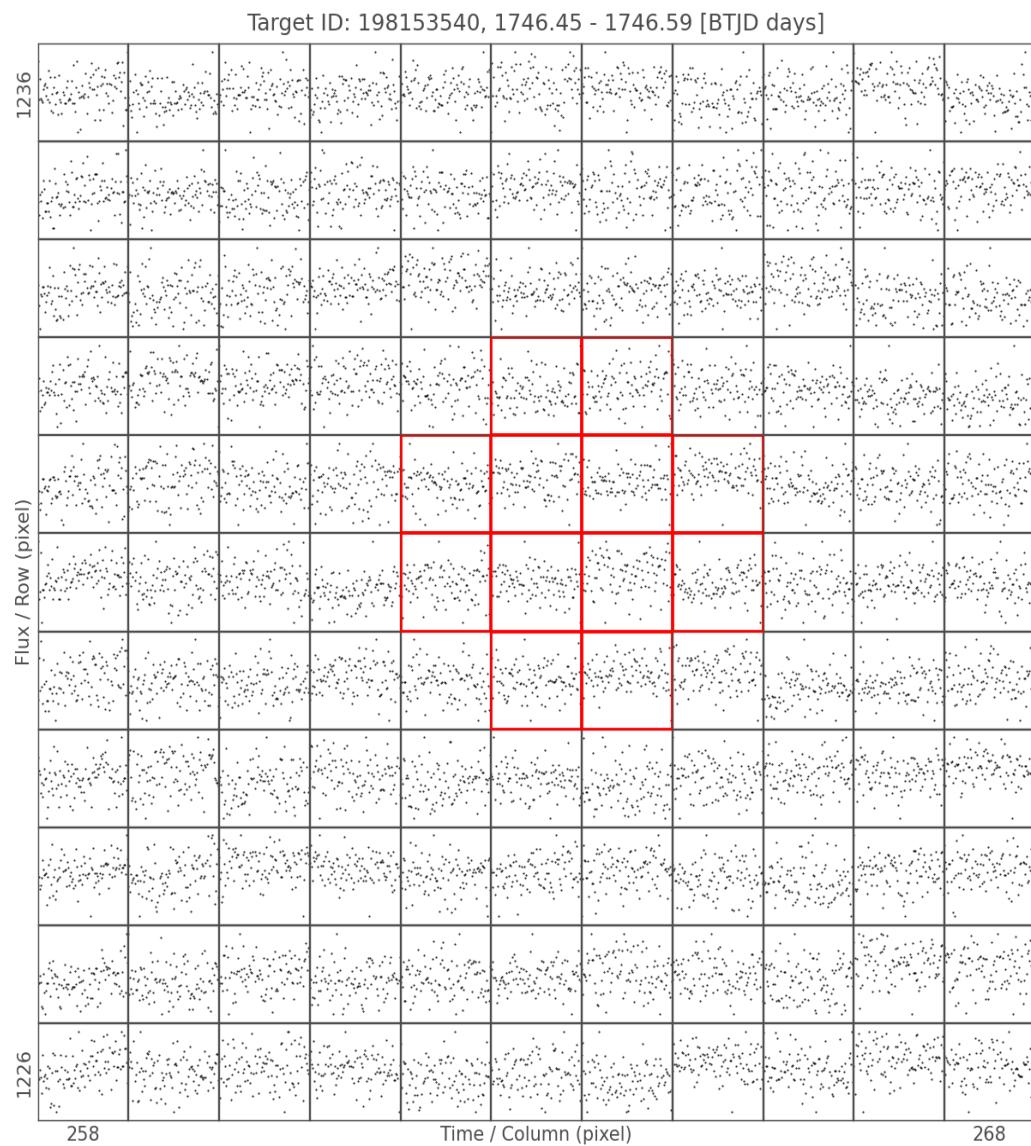
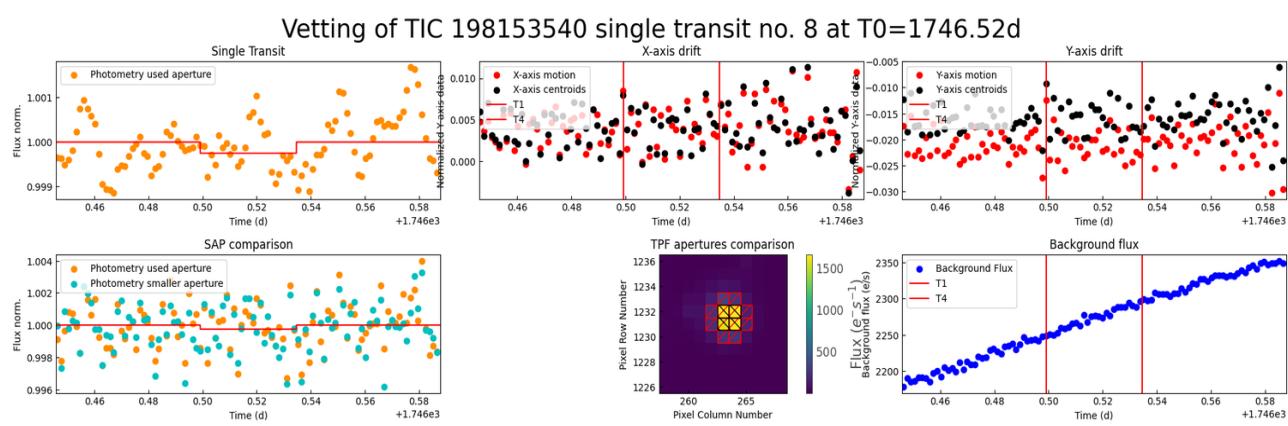


Figure 18: The single transit no. 8 vetting plots

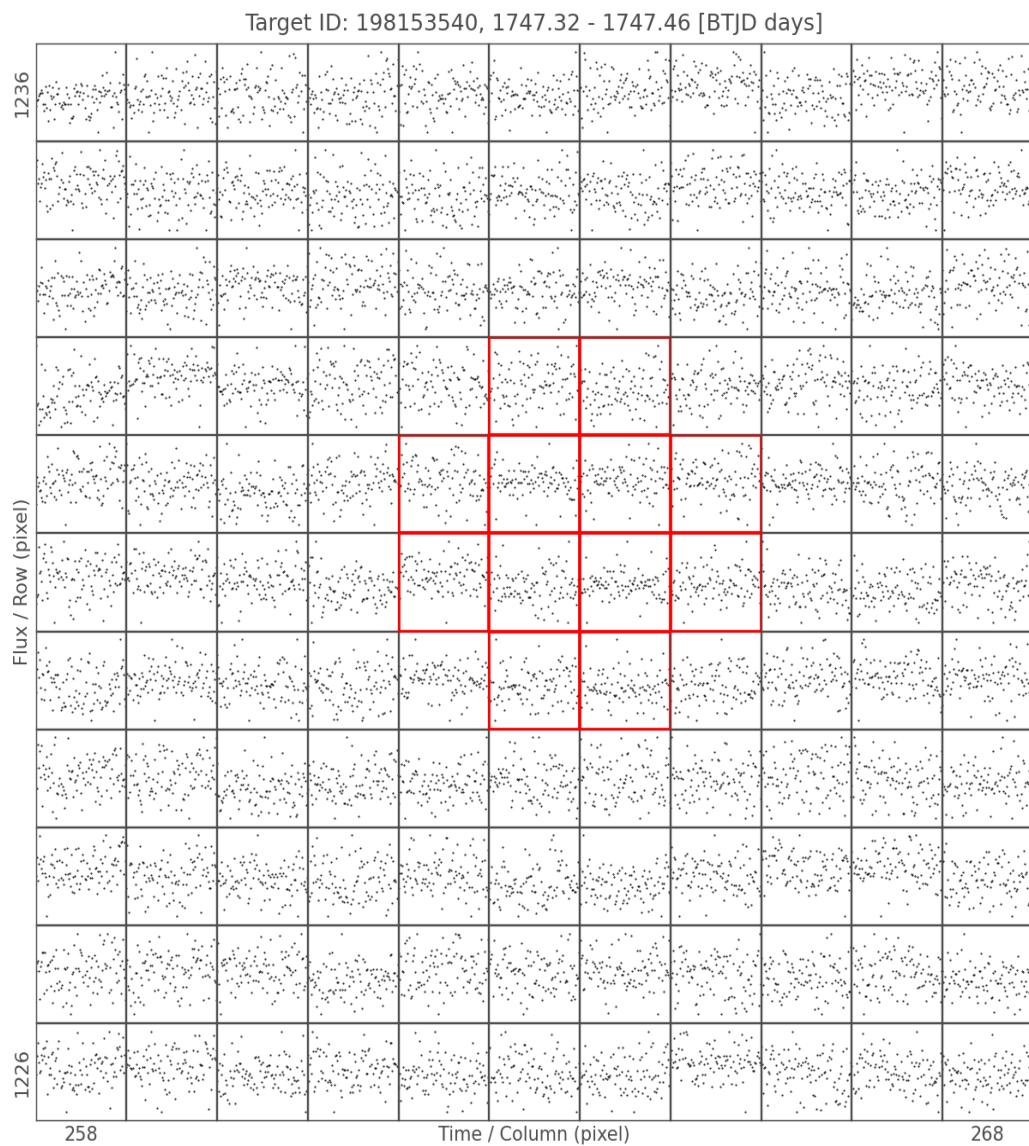
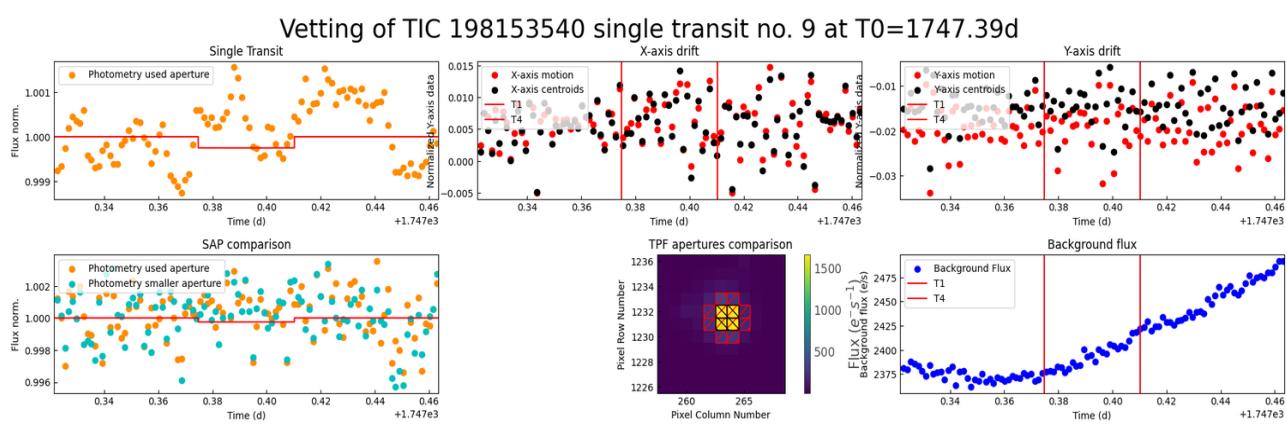


Figure 19: The single transit no. 9 vetting plots

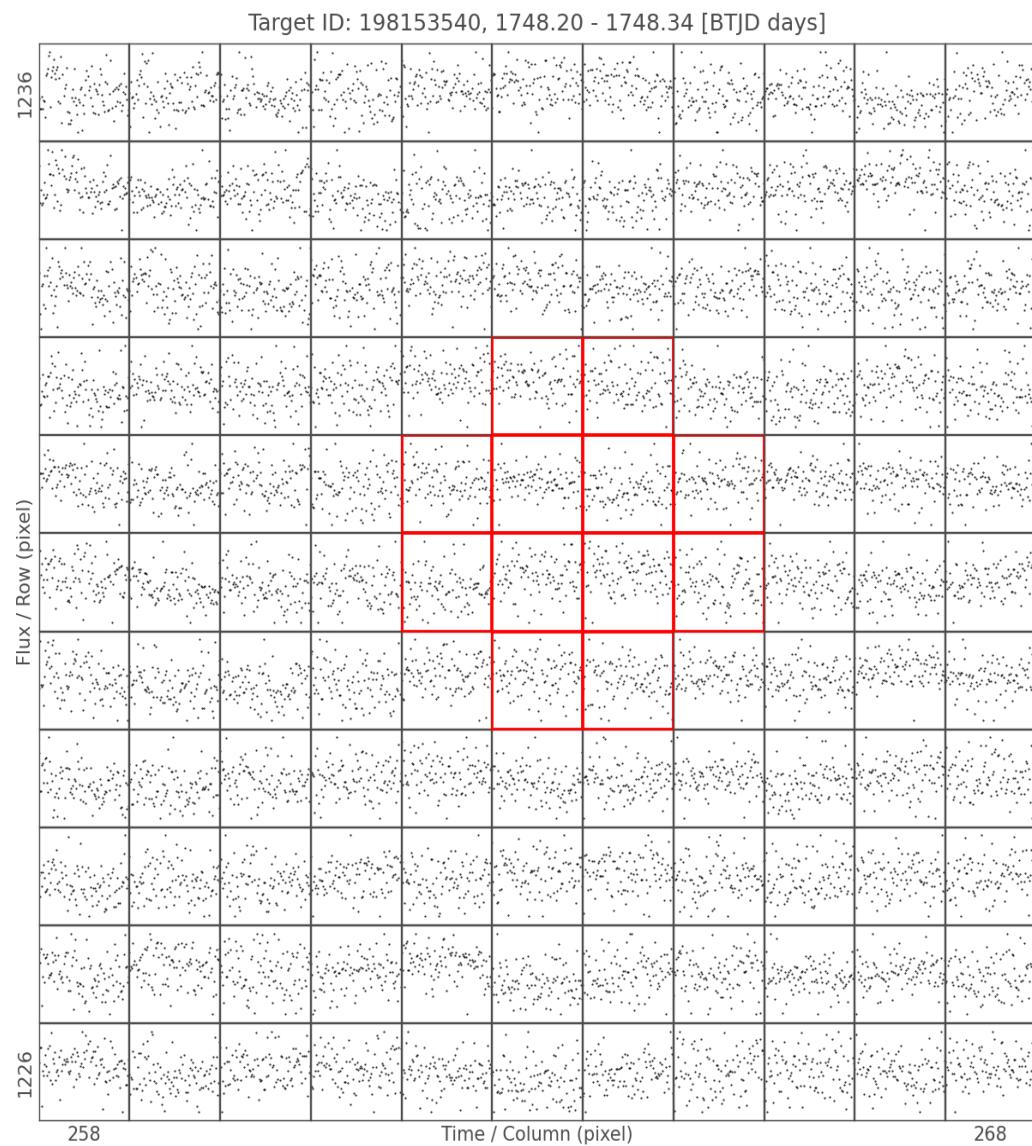
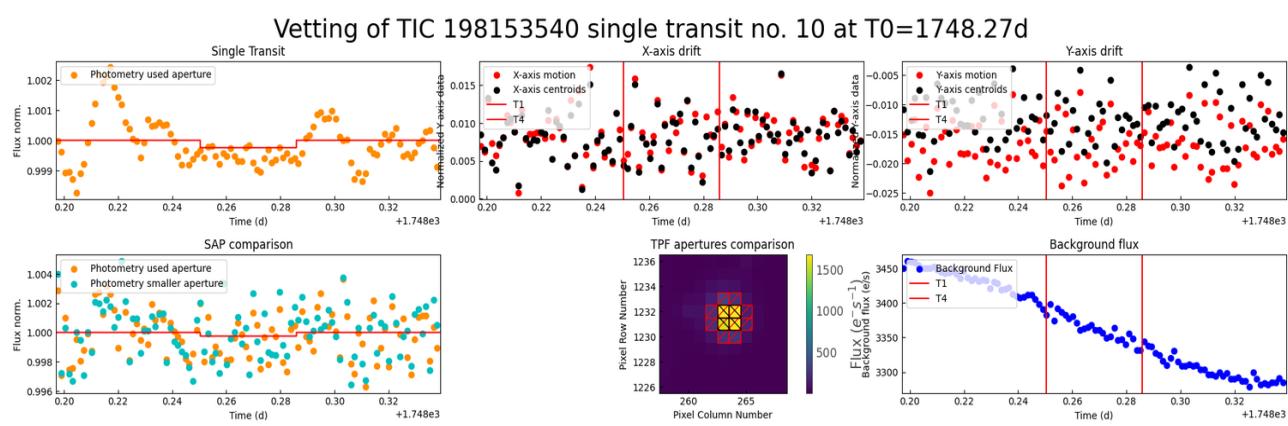


Figure 20: The single transit no. 10 vetting plots

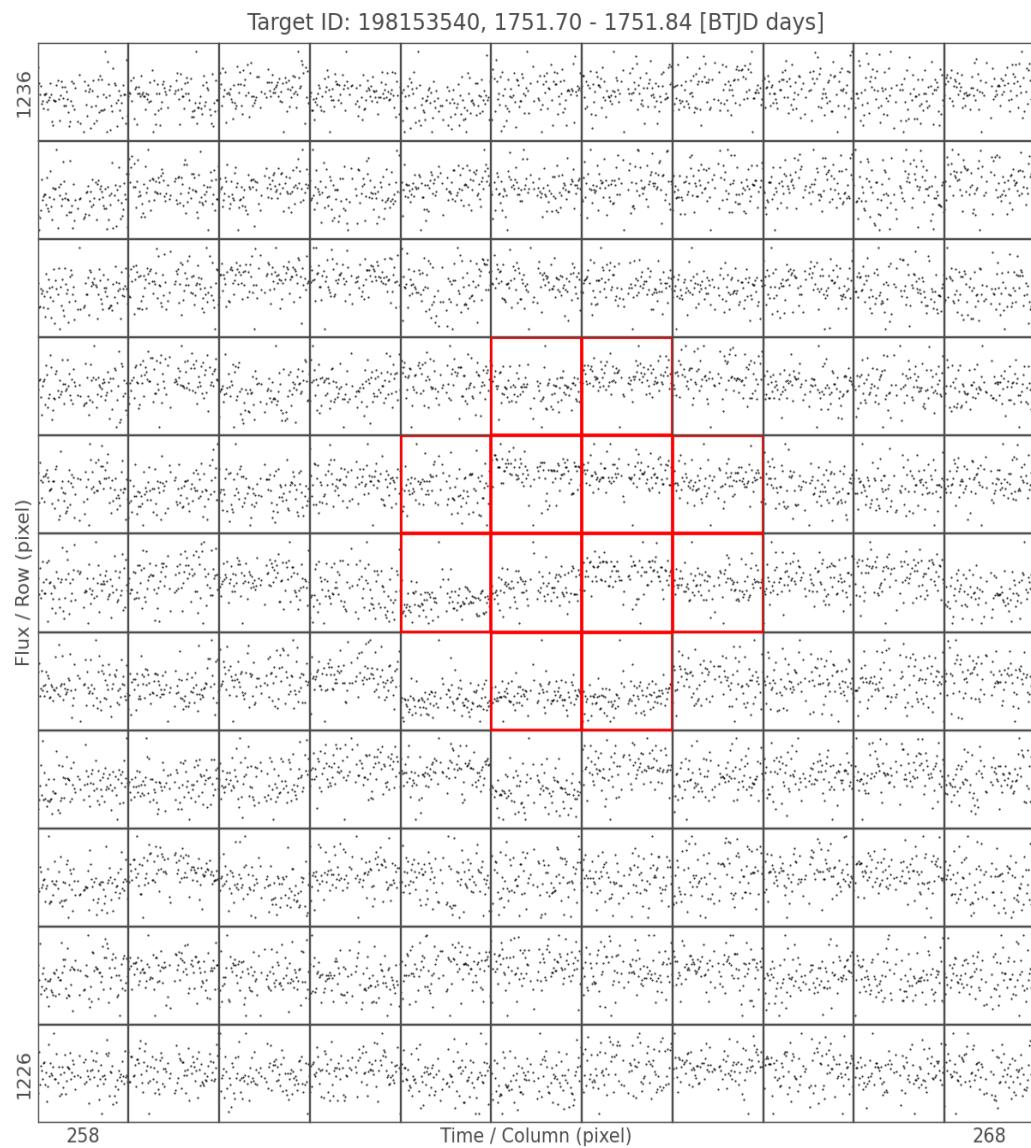
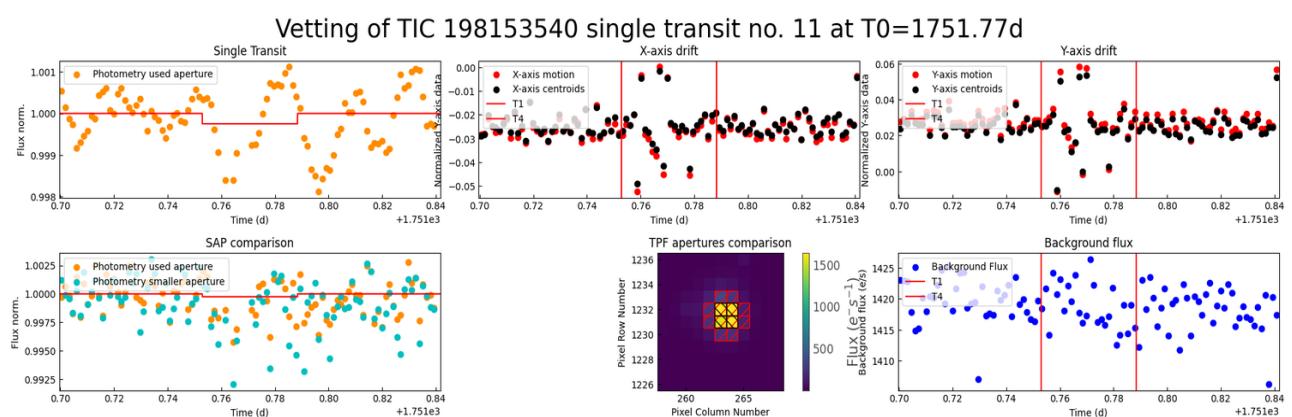


Figure 21: The single transit no. 11 vetting plots

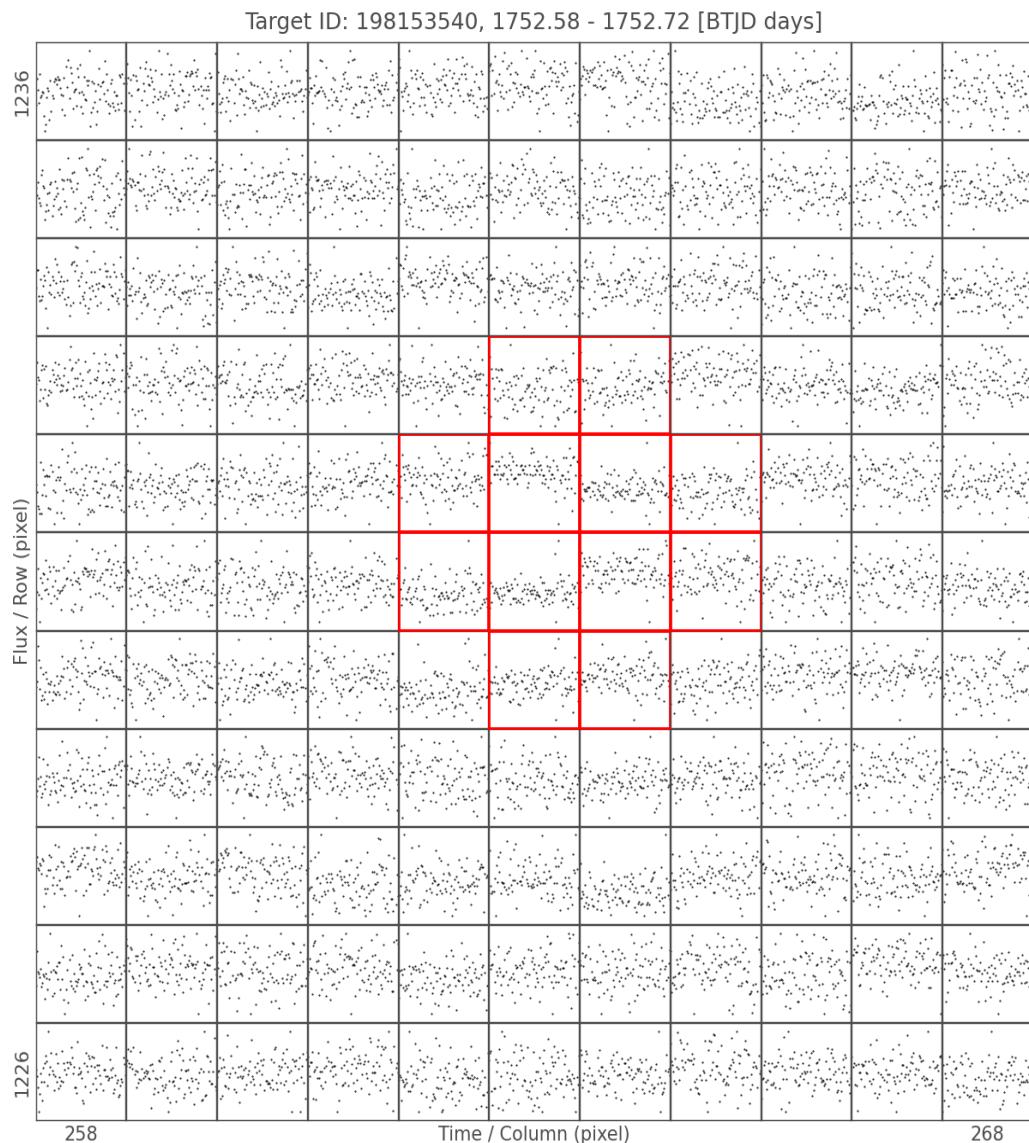
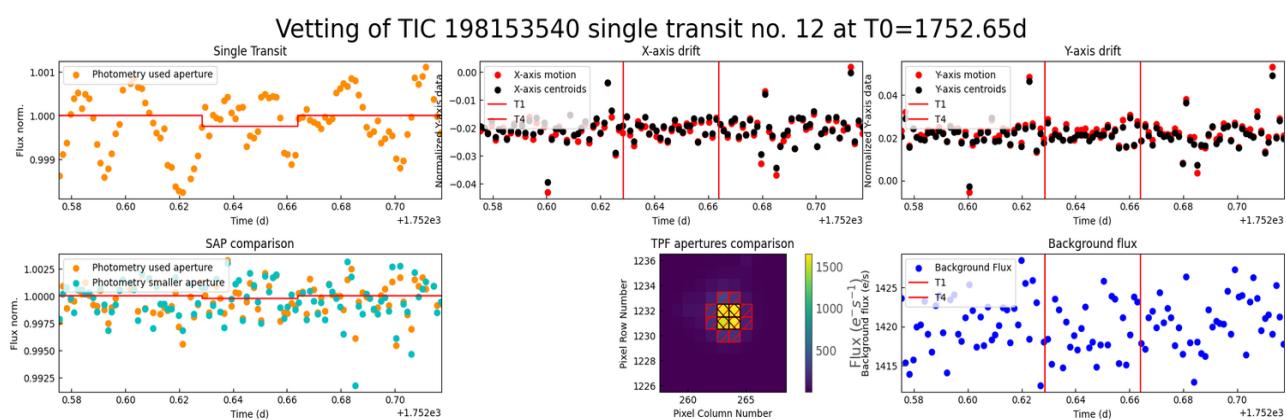


Figure 22: The single transit no. 12 vetting plots

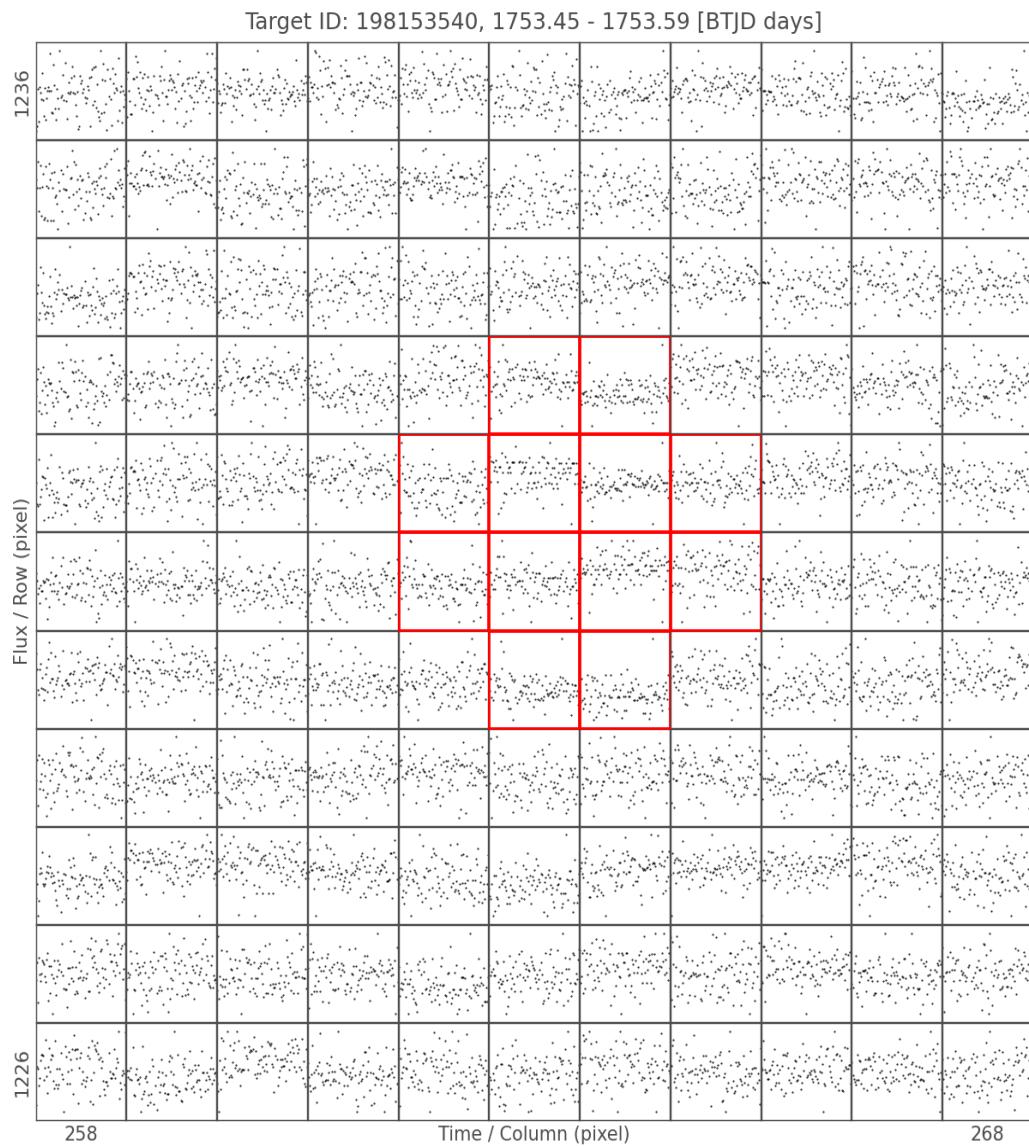
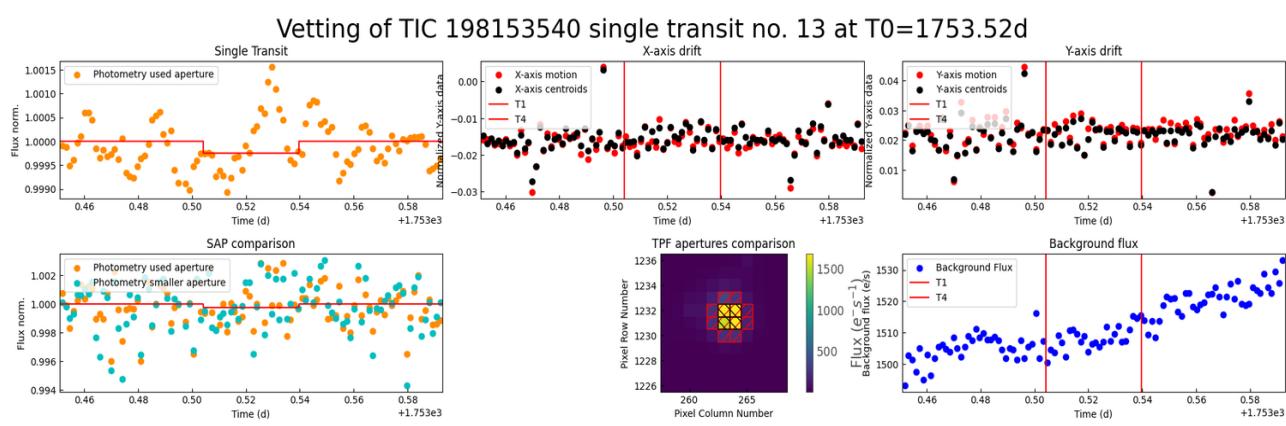


Figure 23: The single transit no. 13 vetting plots

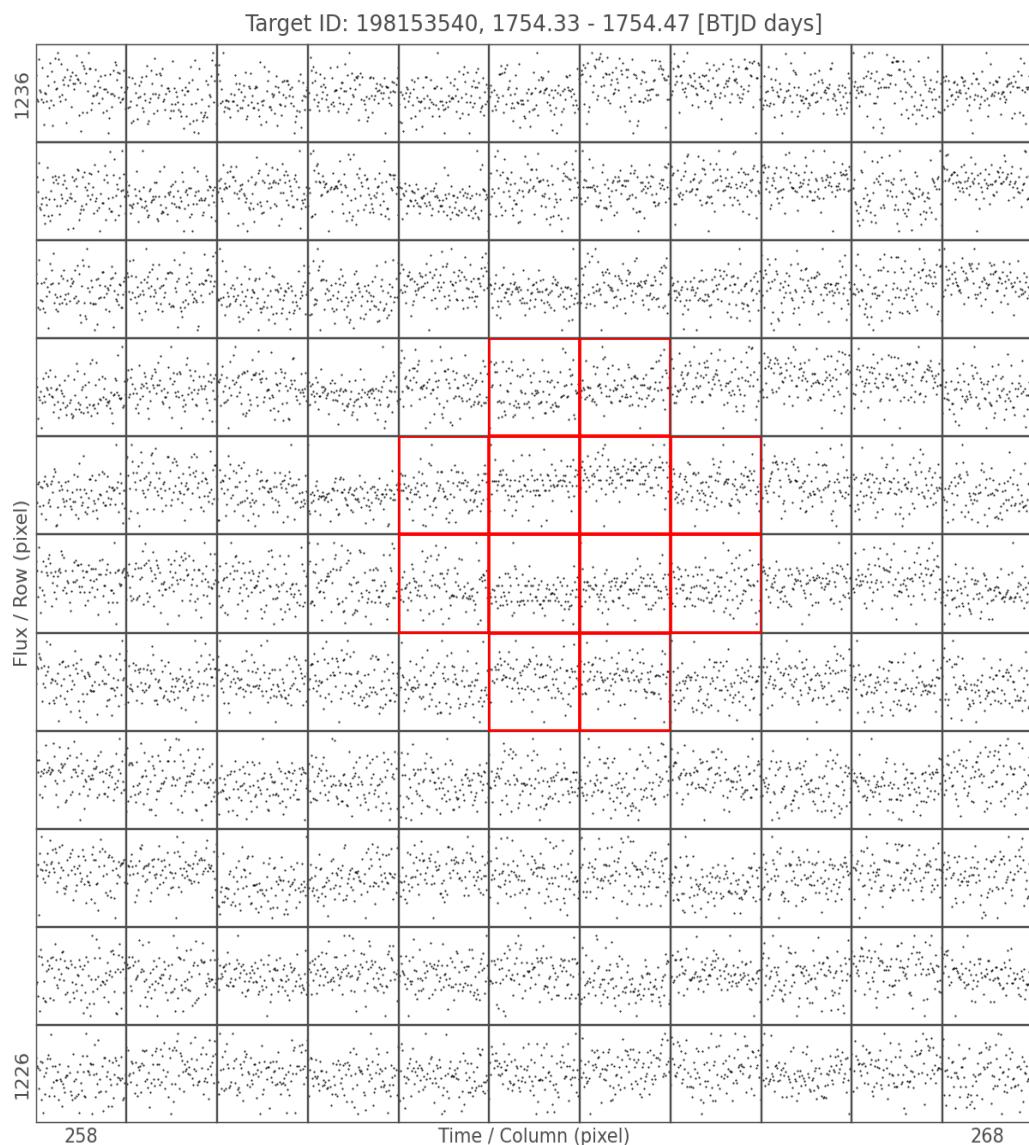
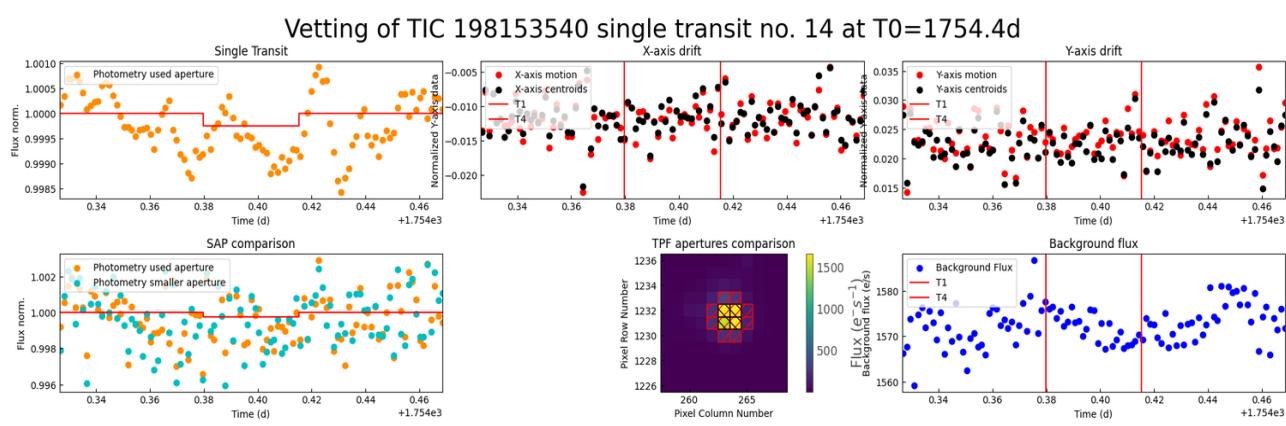


Figure 24: The single transit no. 14 vetting plots

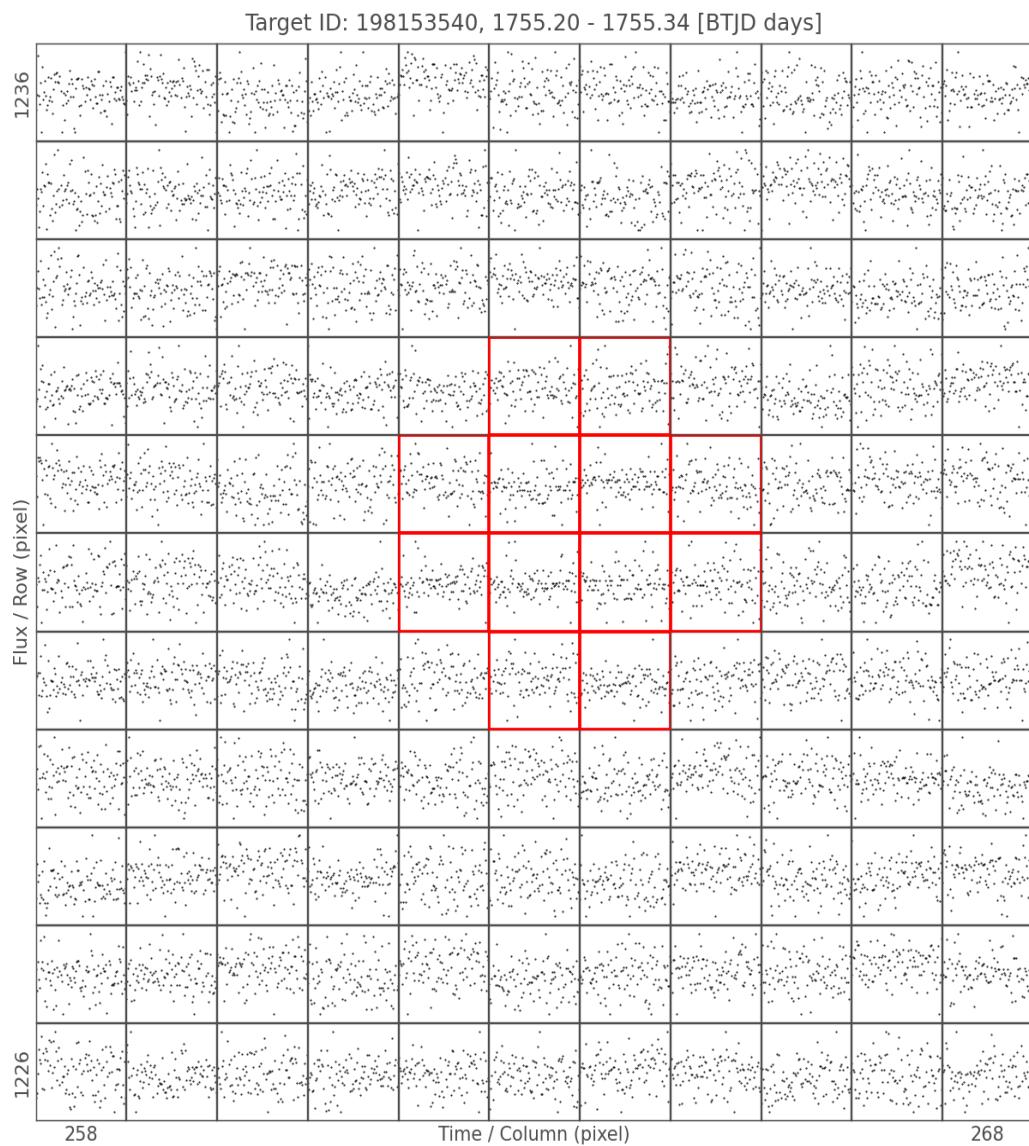
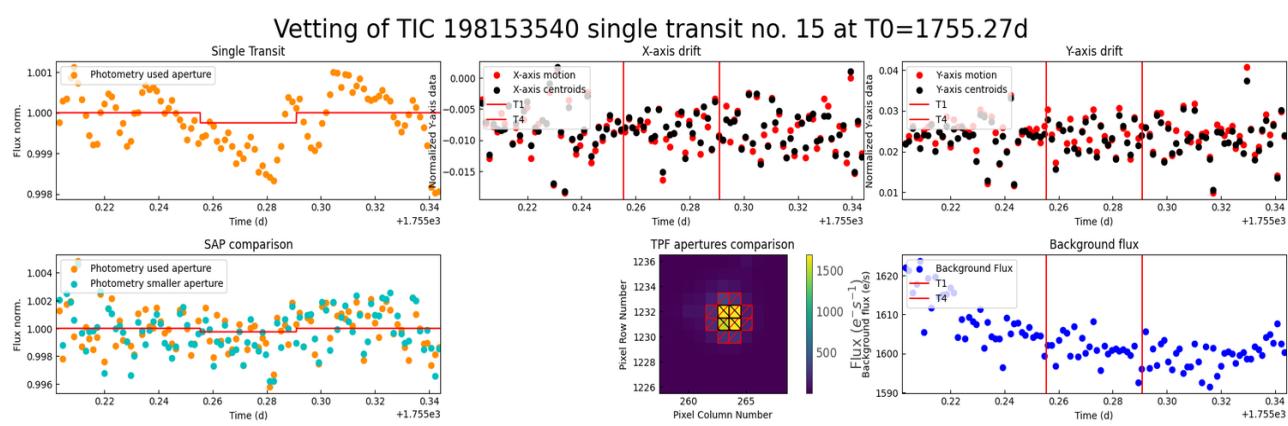


Figure 25: The single transit no. 15 vetting plots



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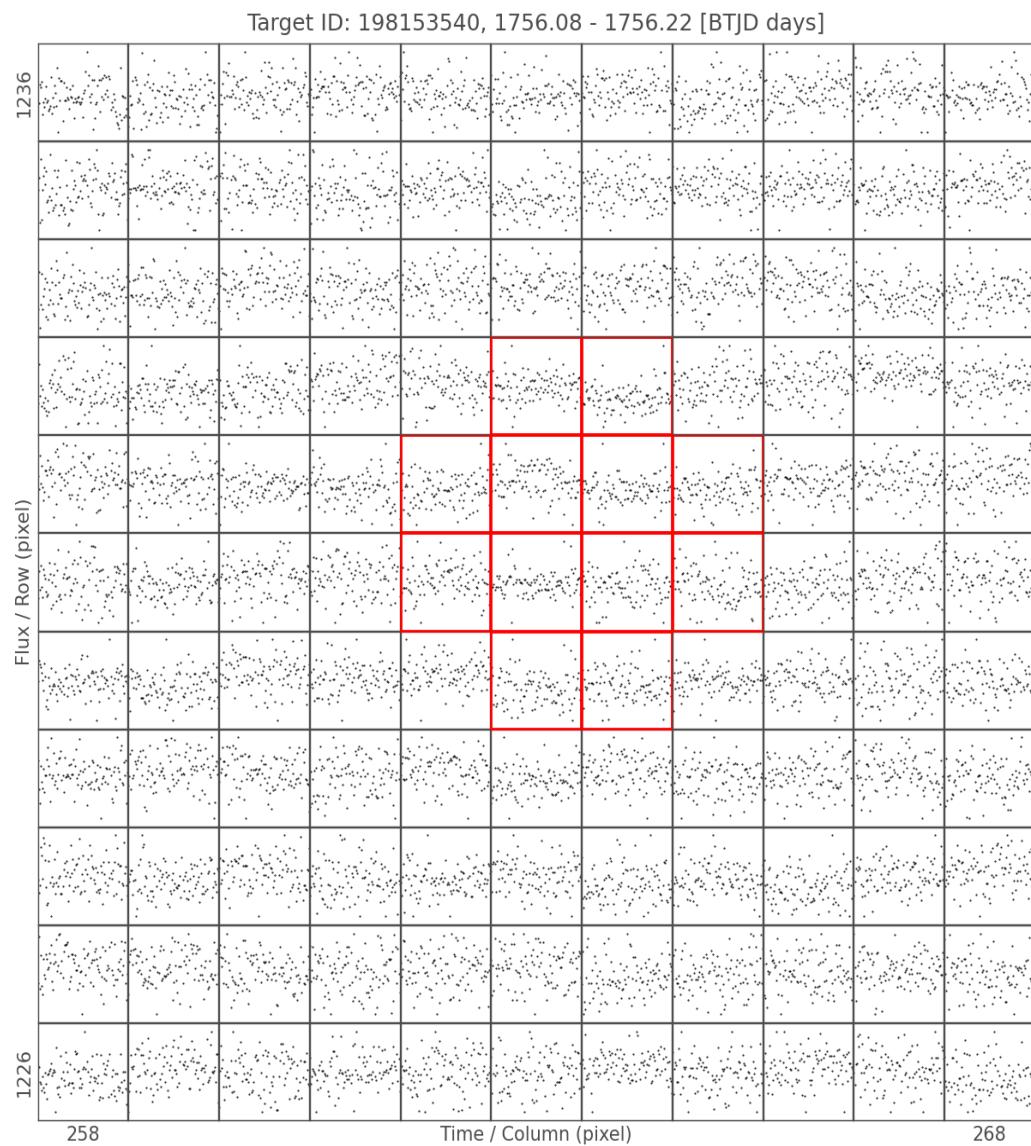
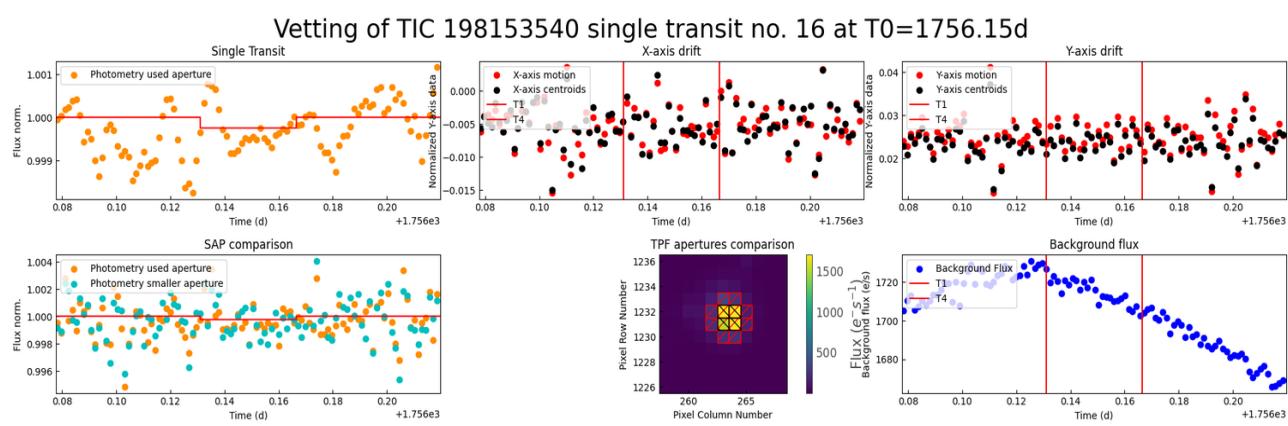


Figure 26: The single transit no. 16 vetting plots

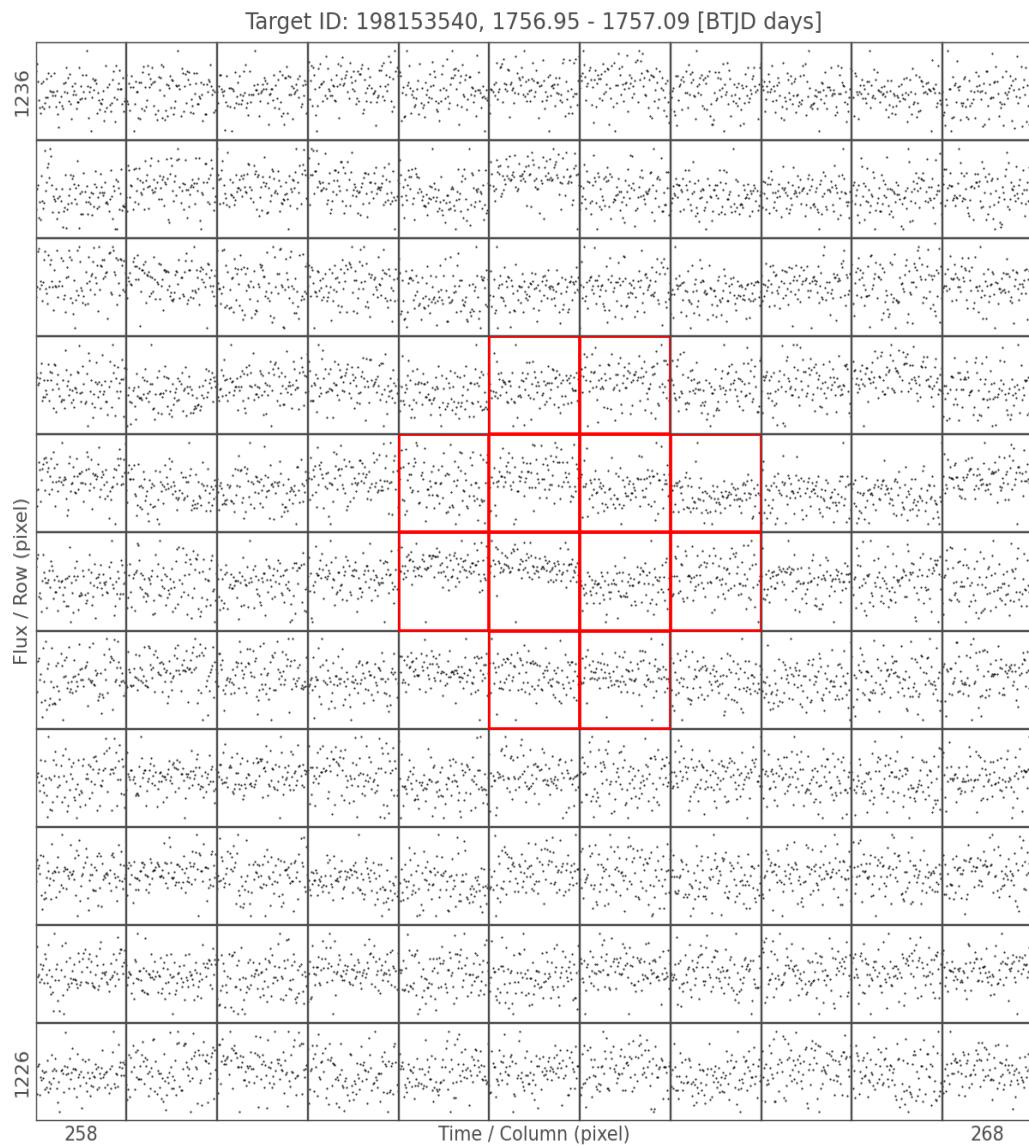
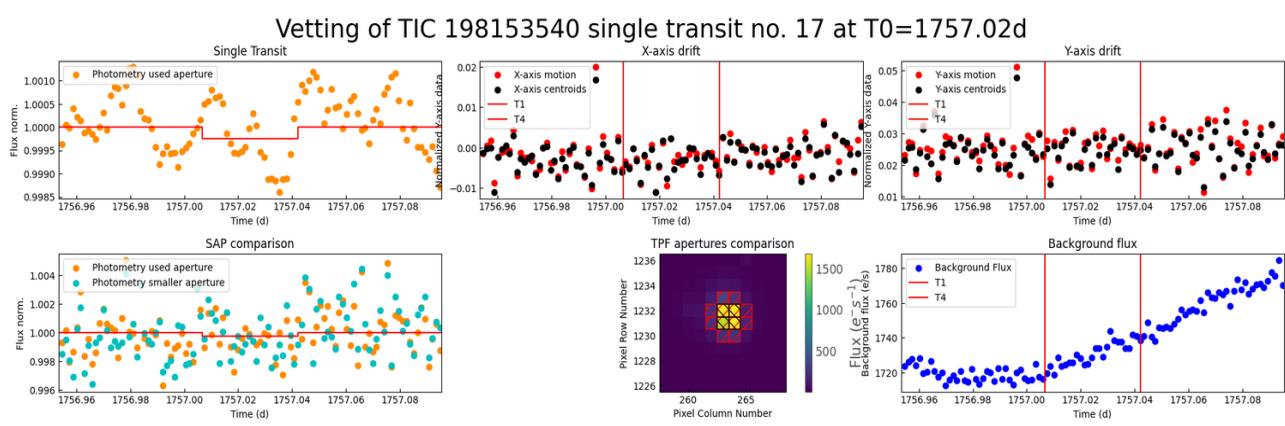


Figure 27: The single transit no. 17 vetting plots



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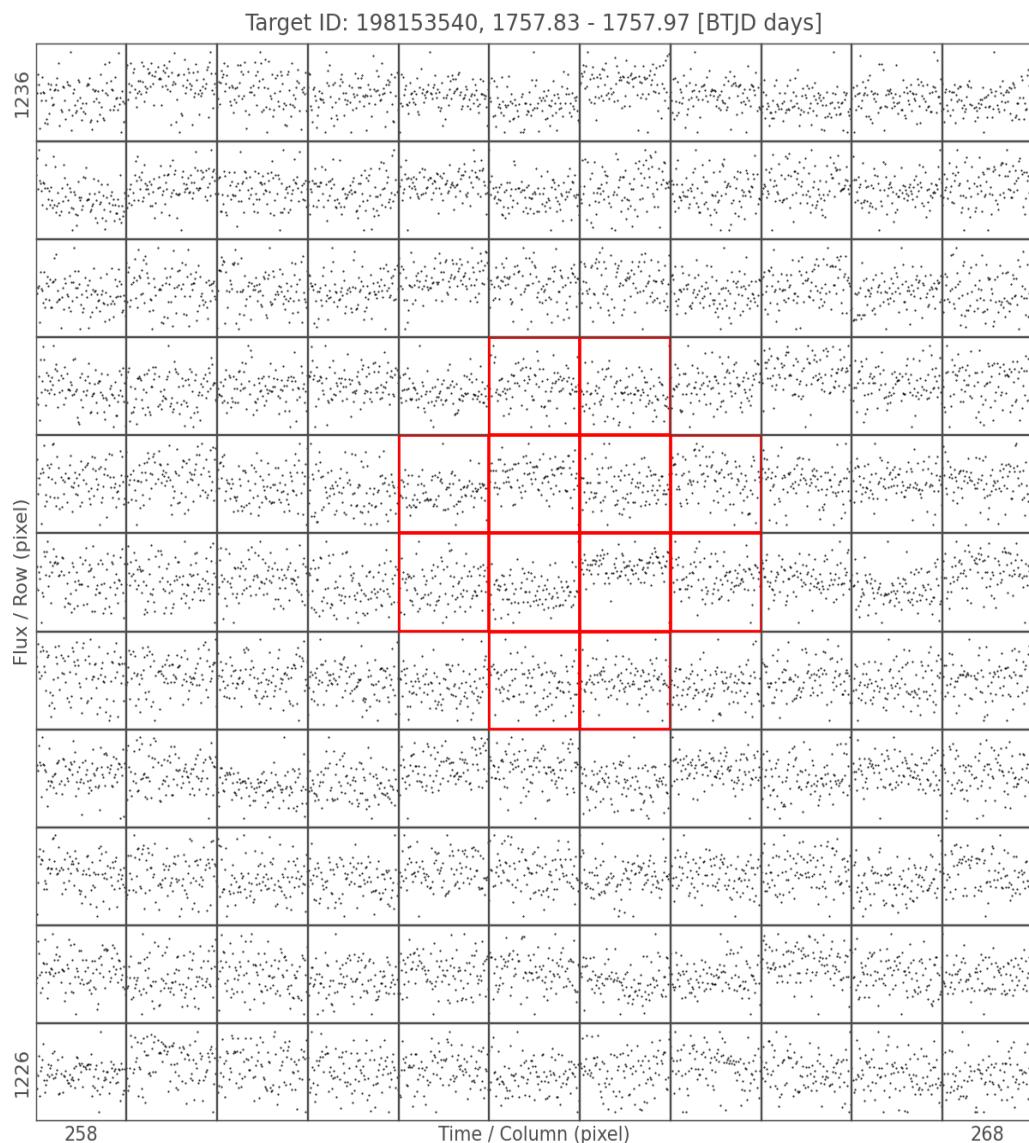
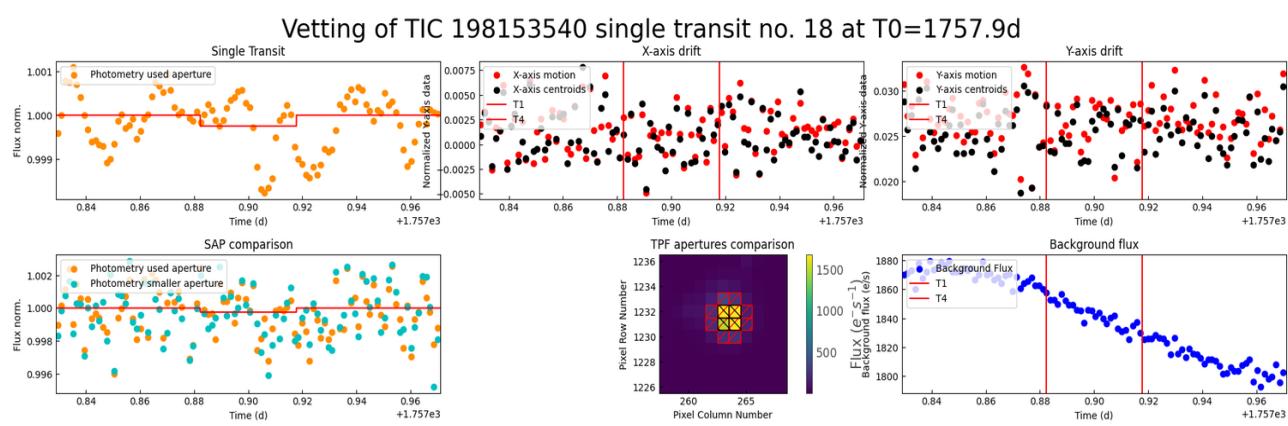


Figure 28: The single transit no. 18 vetting plots

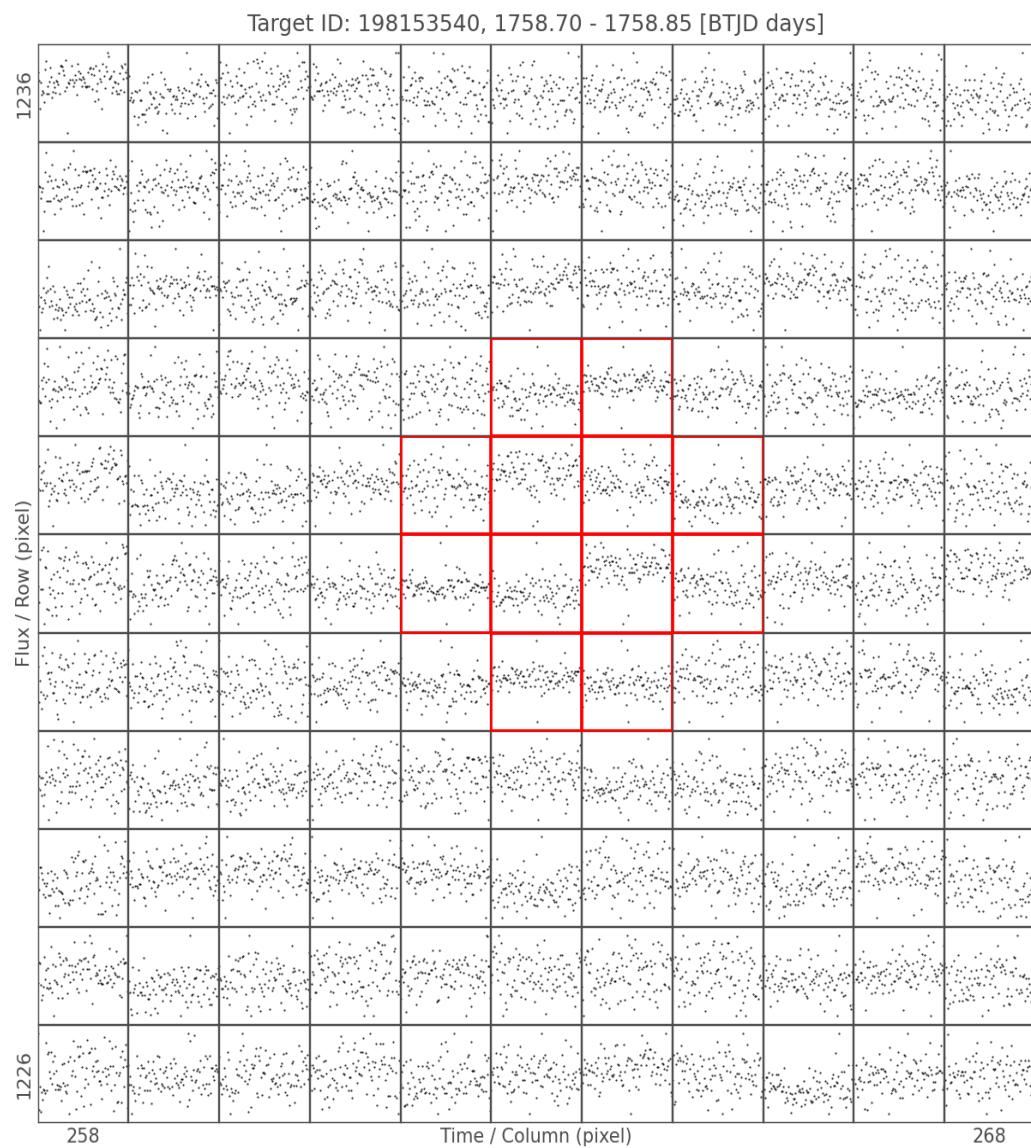
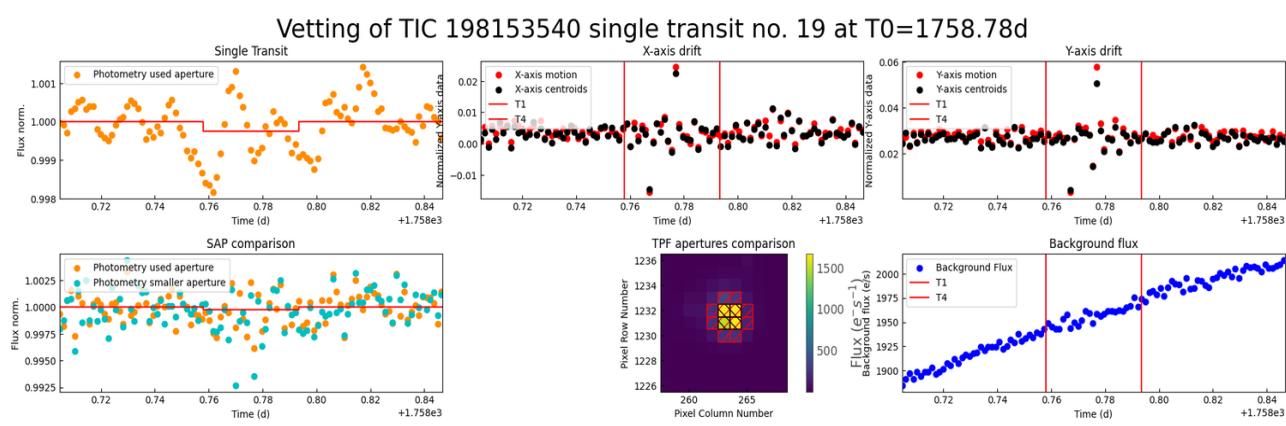


Figure 29: The single transit no. 19 vetting plots



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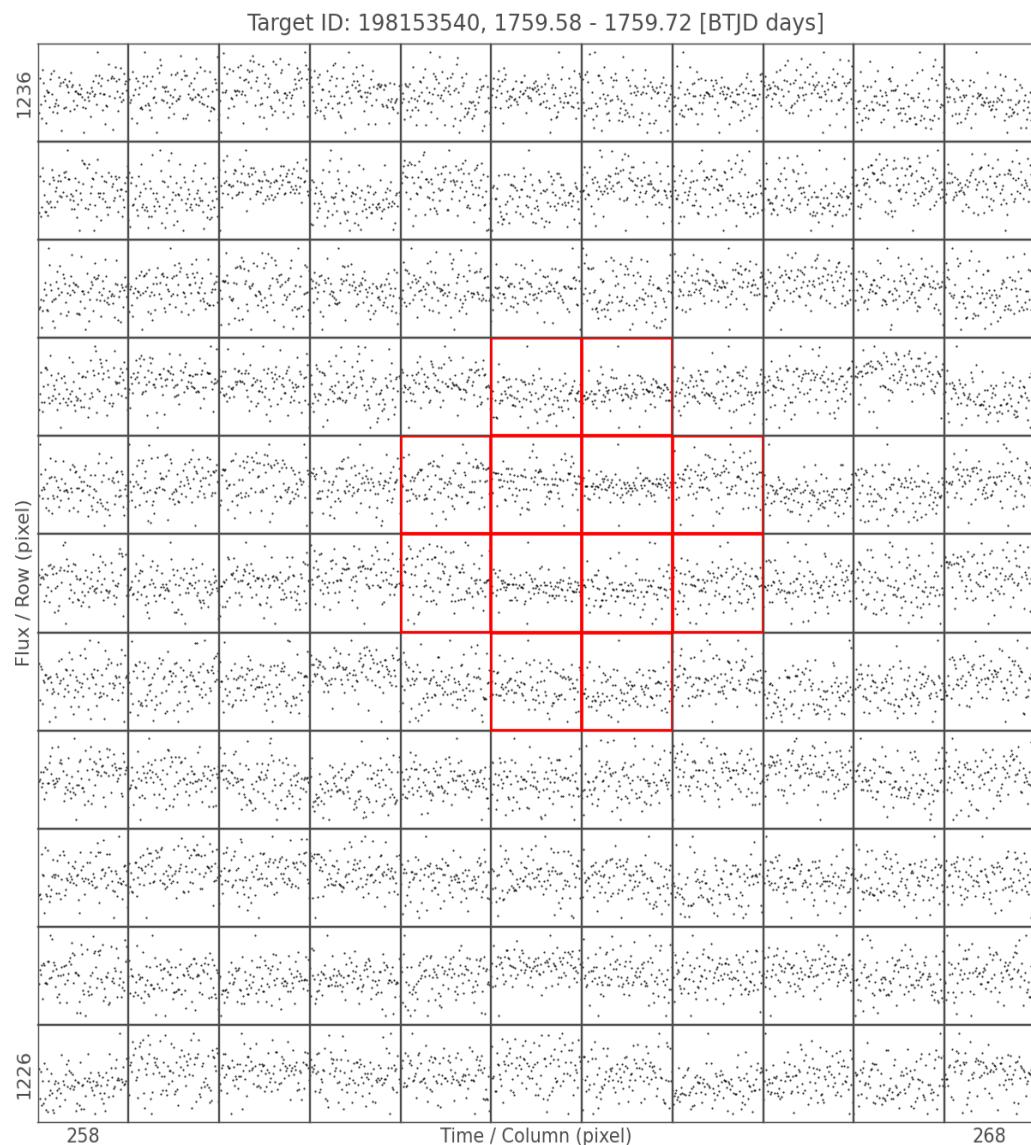
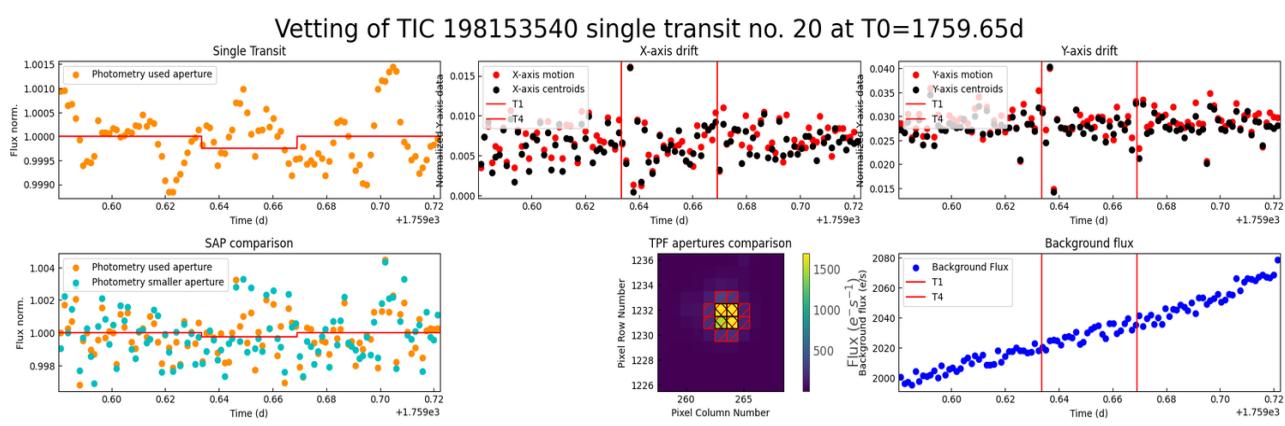


Figure 30: The single transit no. 20 vetting plots

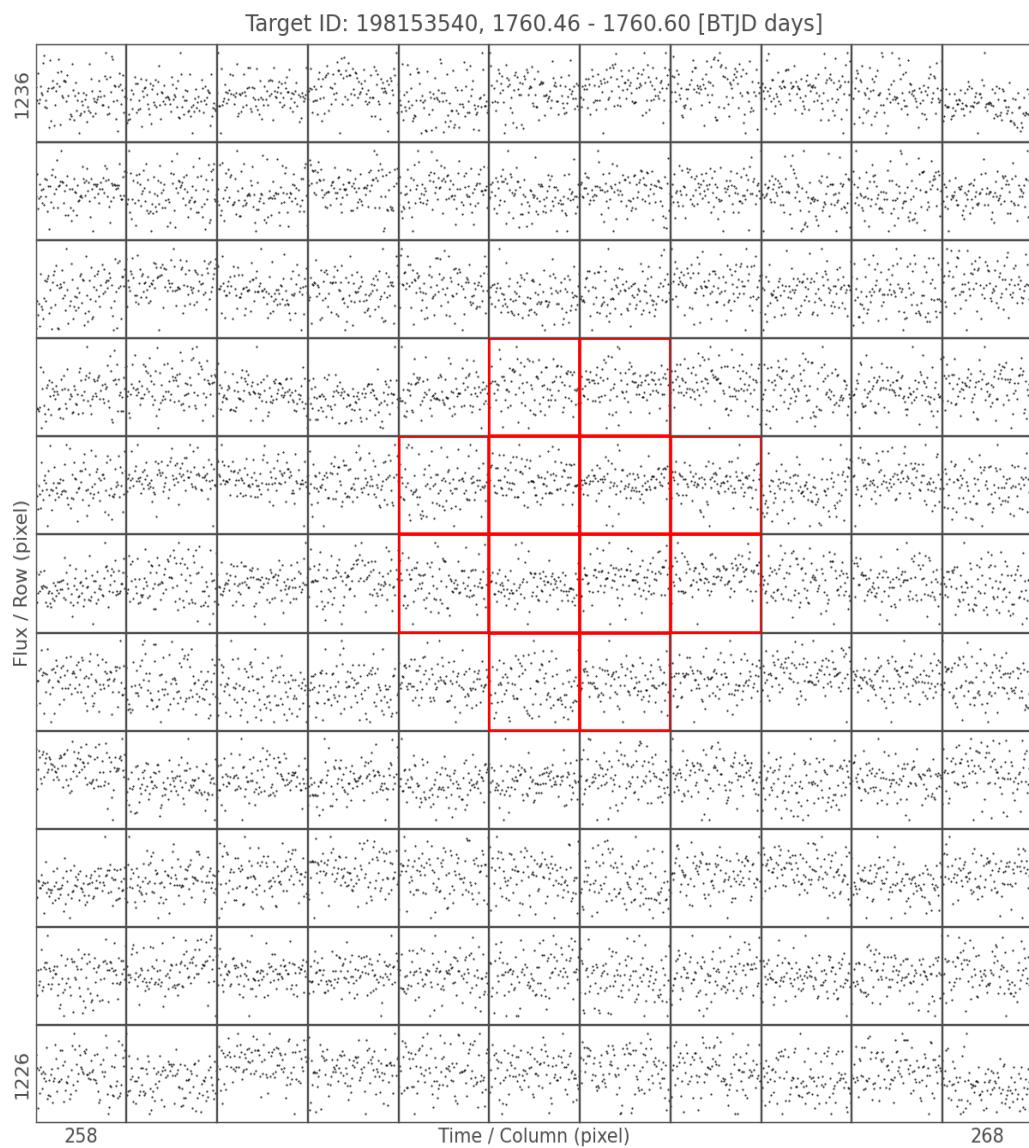
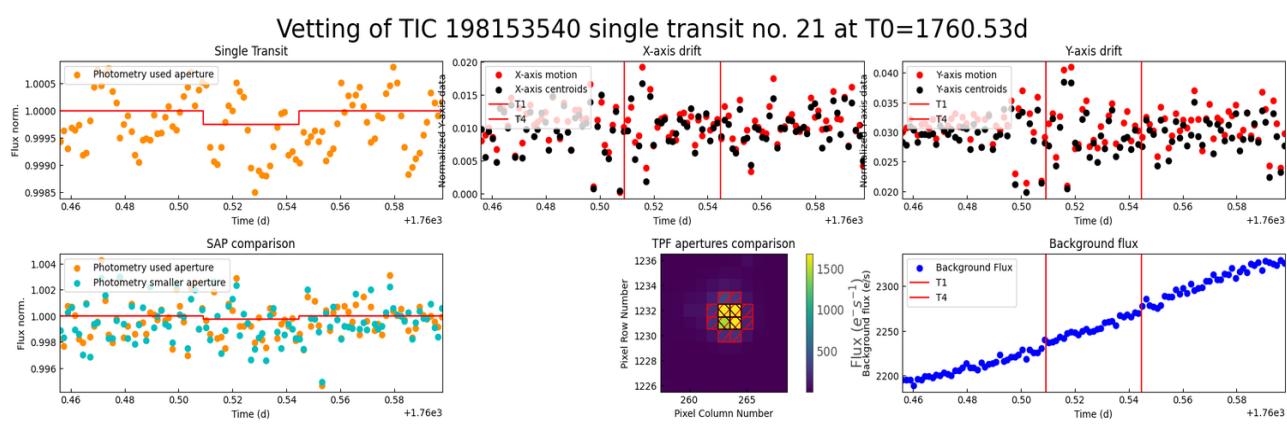


Figure 31: The single transit no. 21 vetting plots

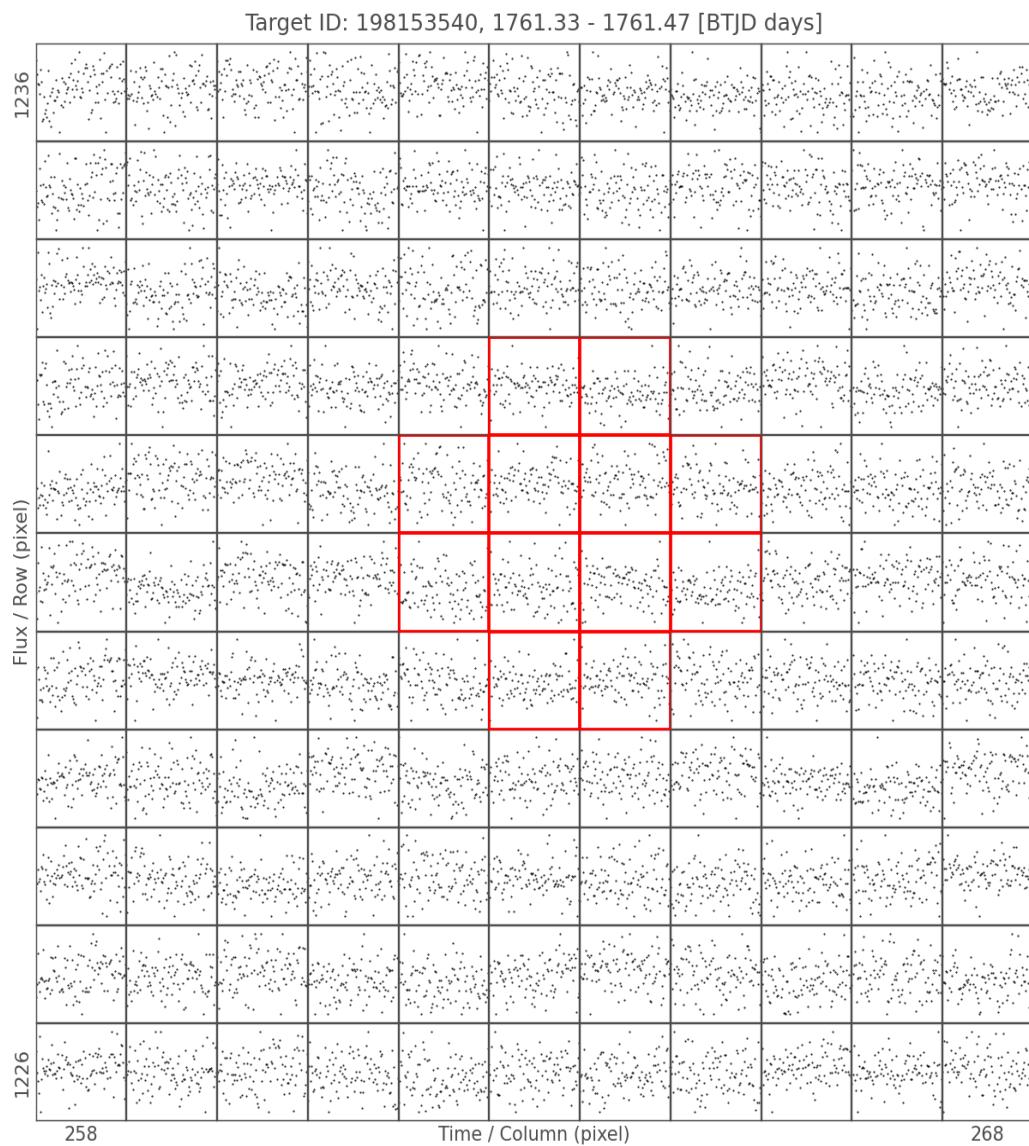
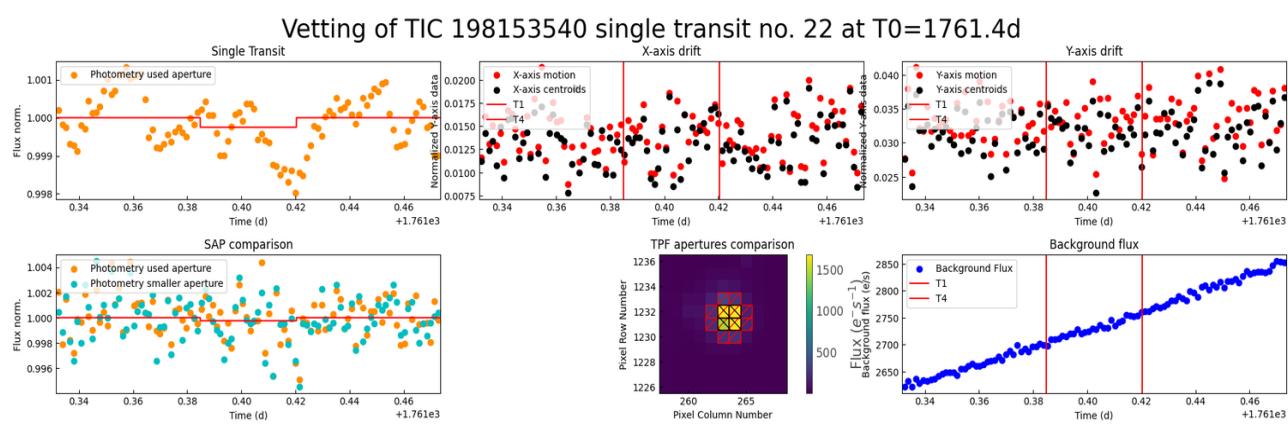


Figure 32: The single transit no. 22 vetting plots

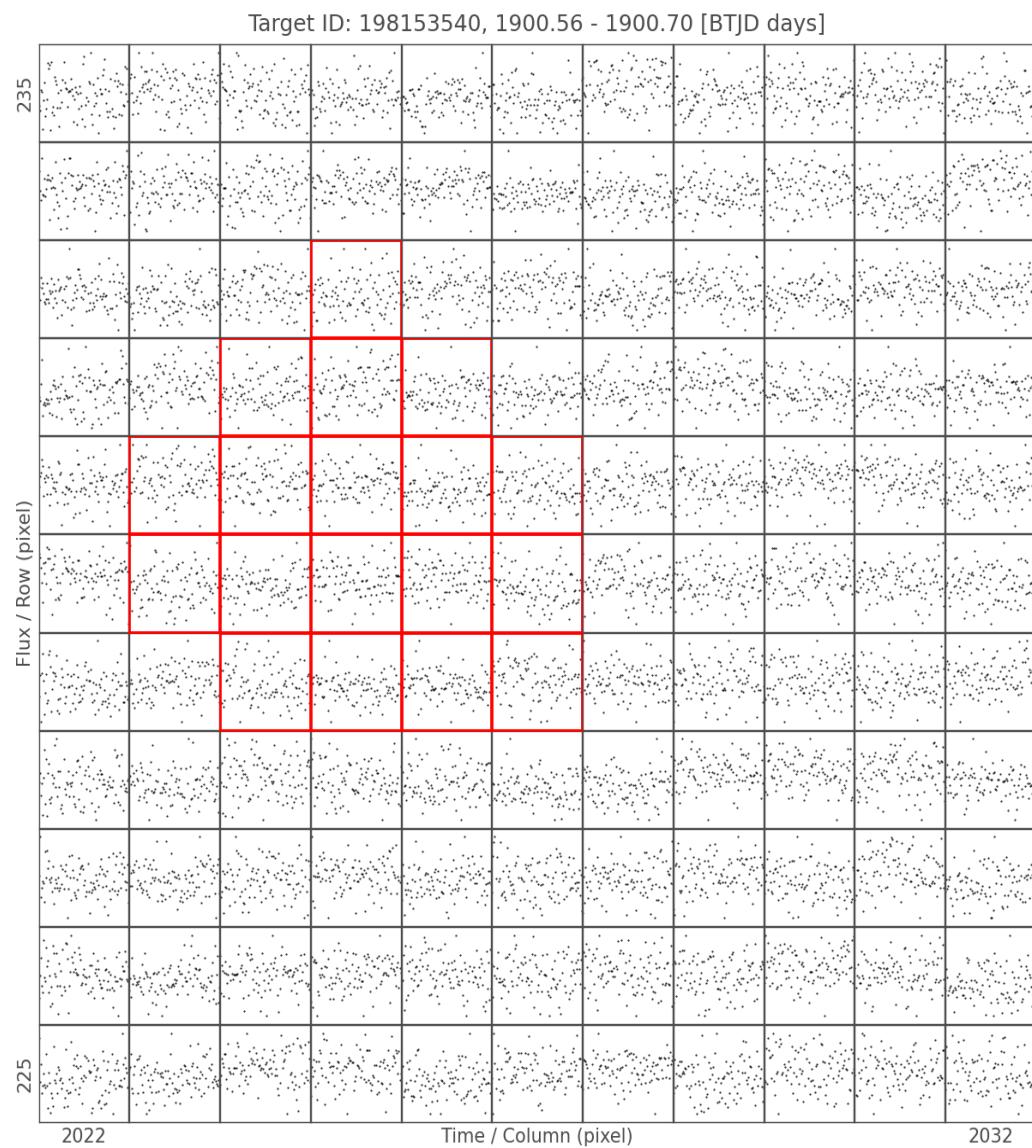
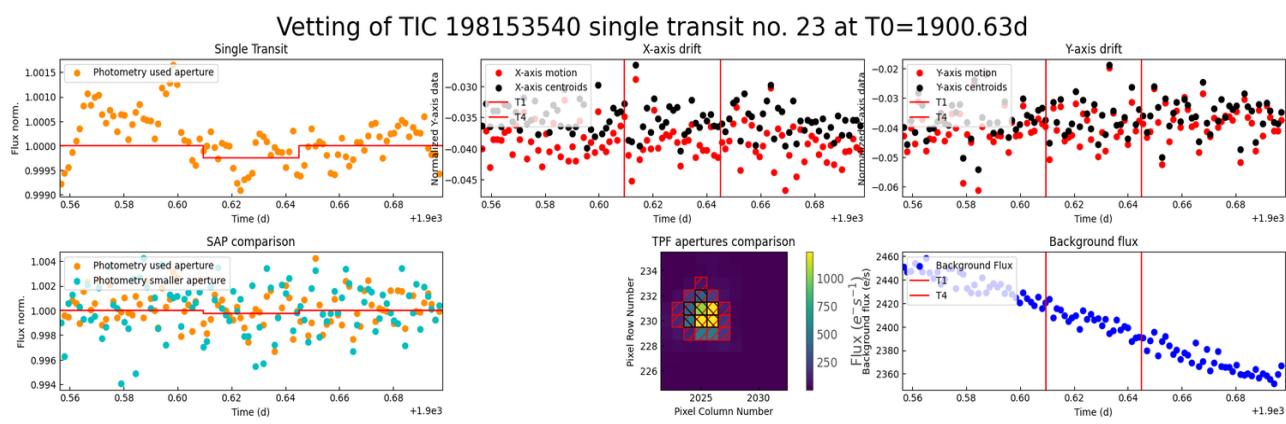


Figure 33: The single transit no. 23 vetting plots

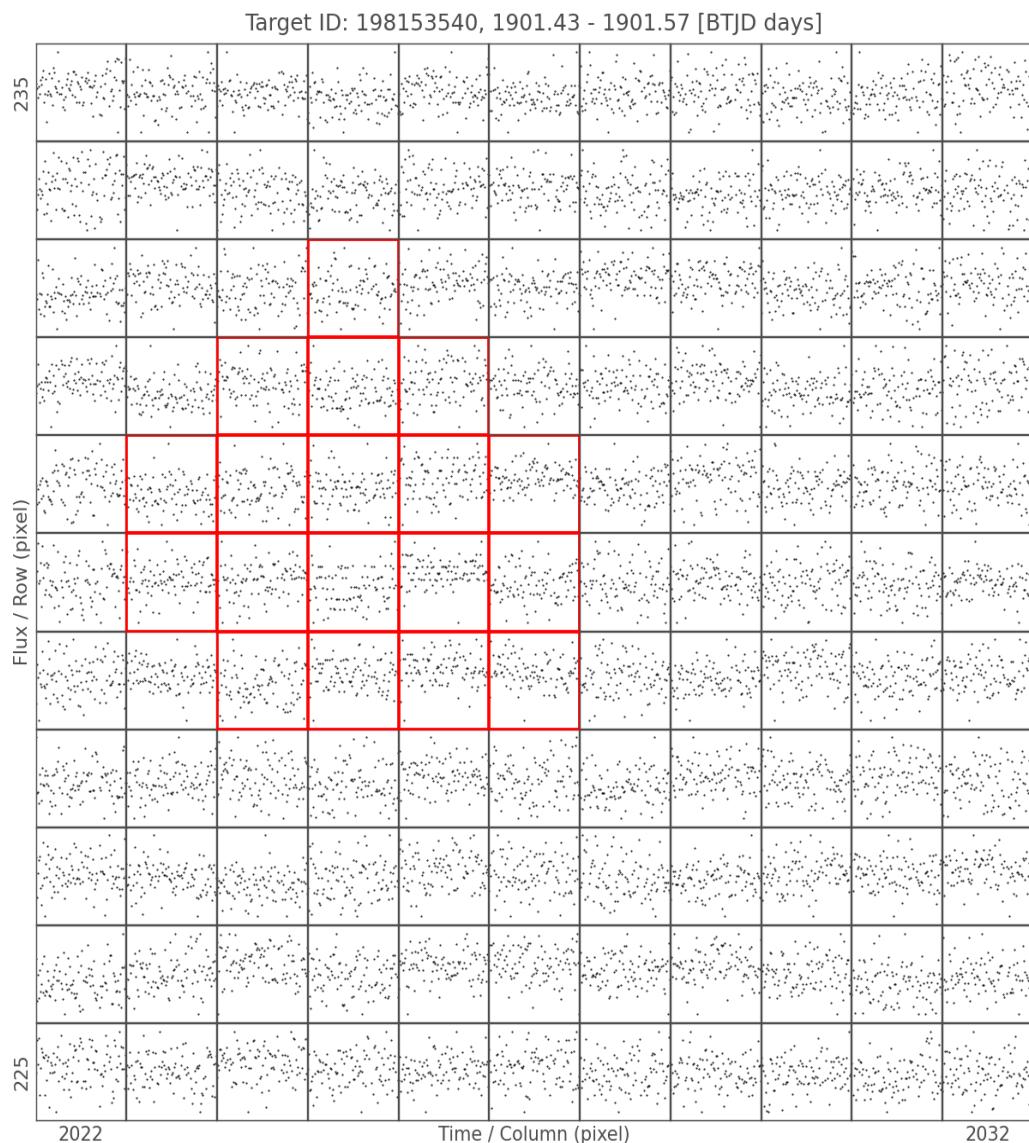
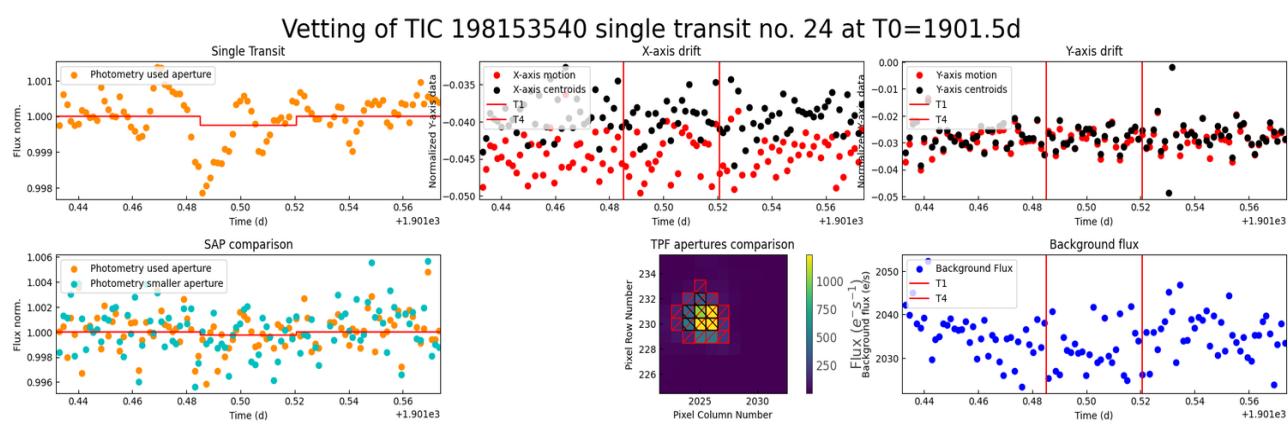


Figure 34: The single transit no. 24 vetting plots

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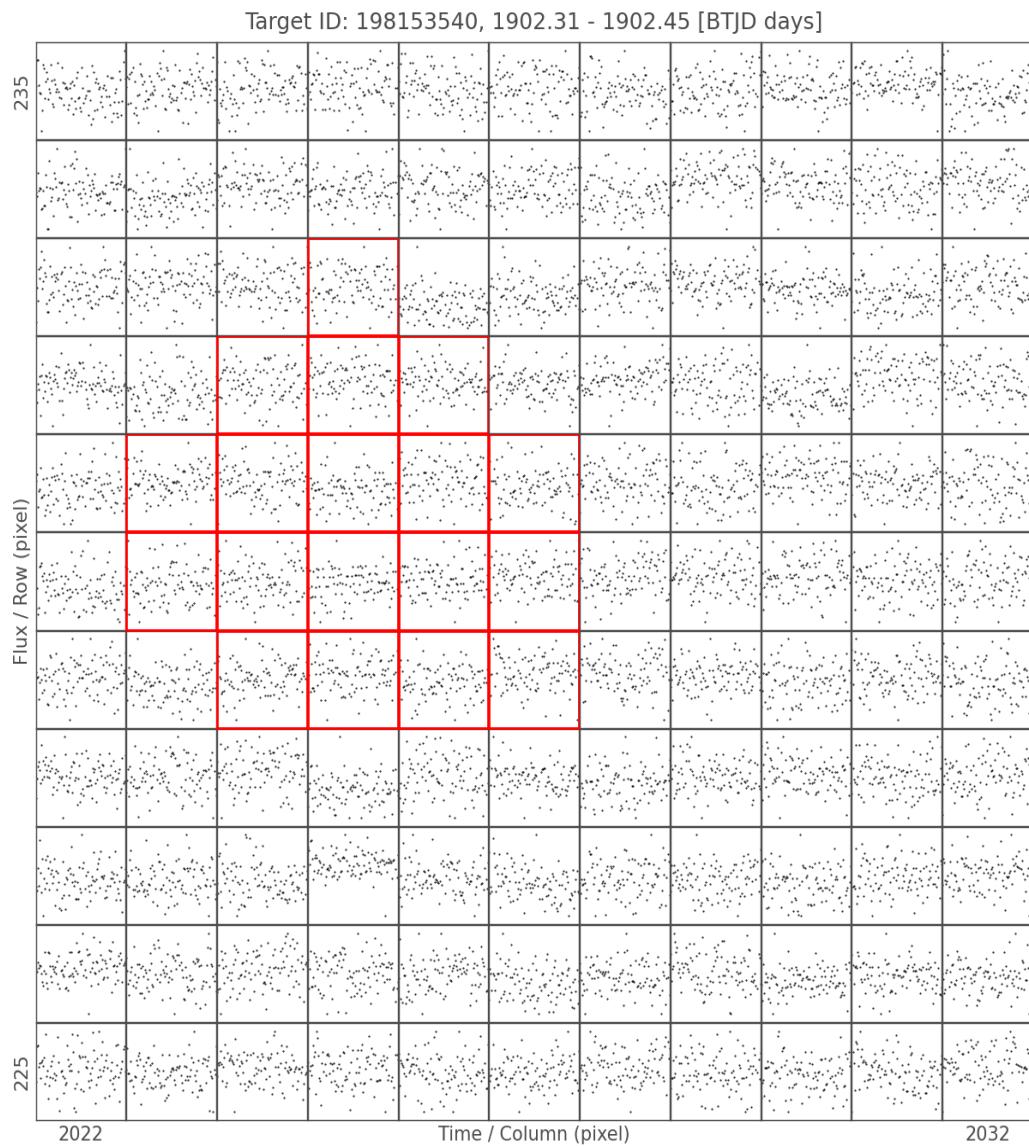
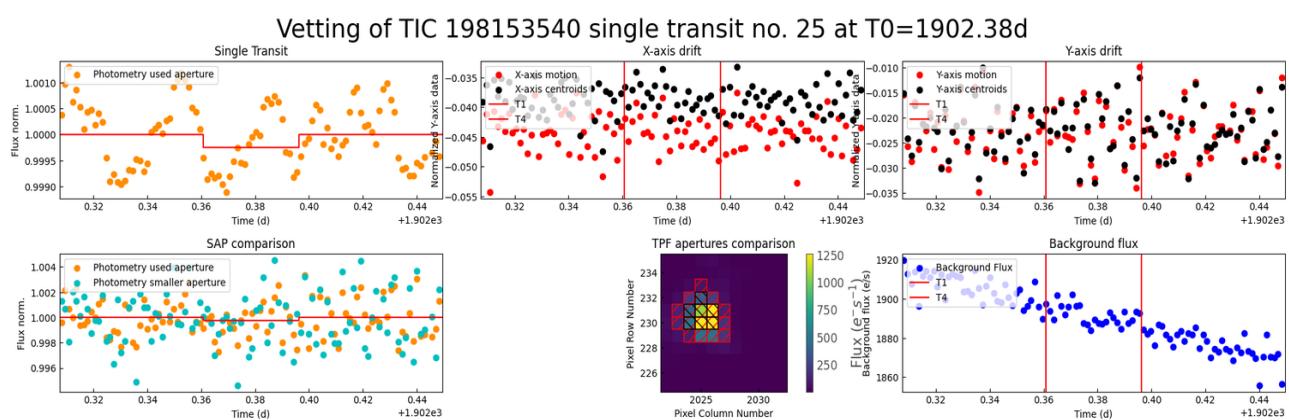


Figure 35: The single transit no. 25 vetting plots

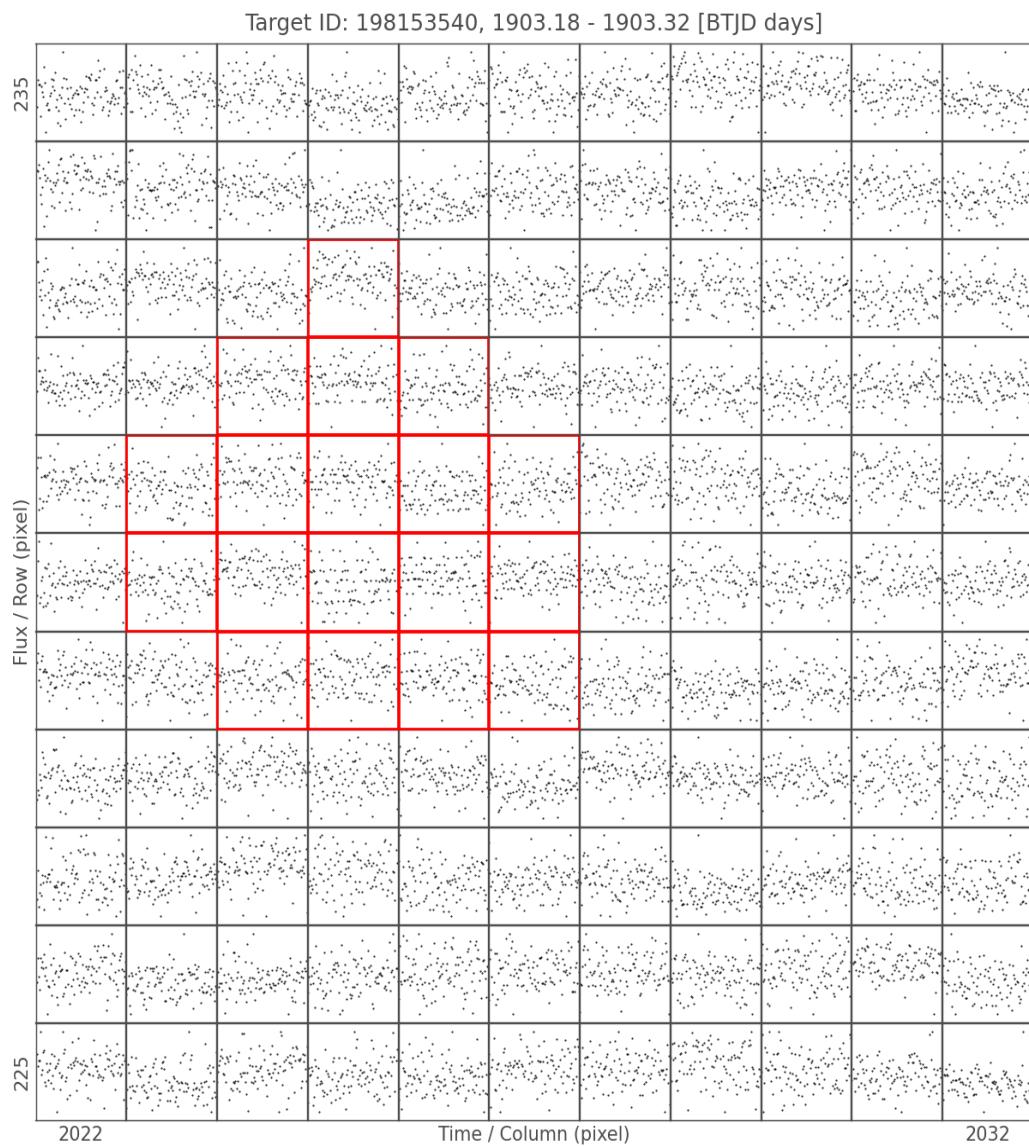
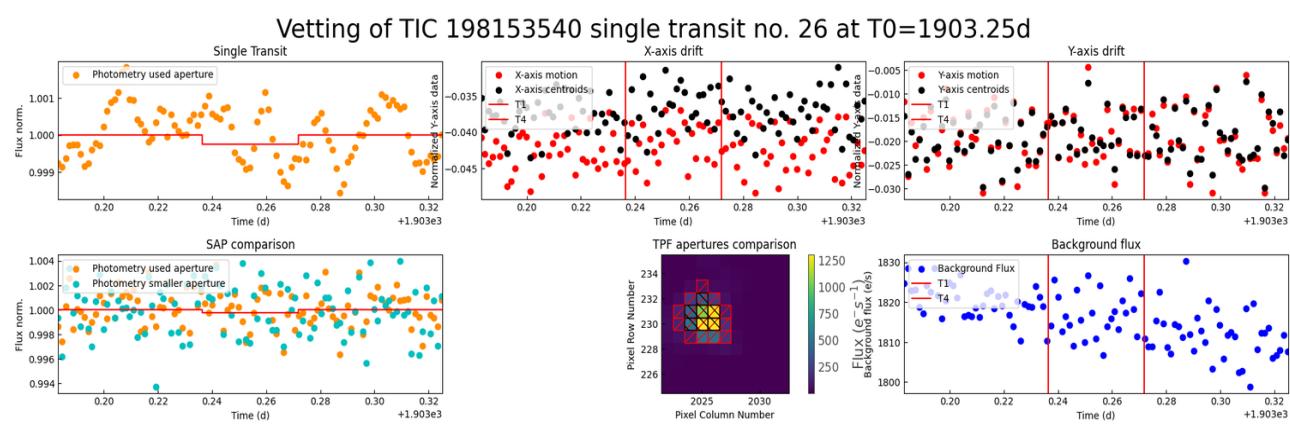


Figure 36: The single transit no. 26 vetting plots



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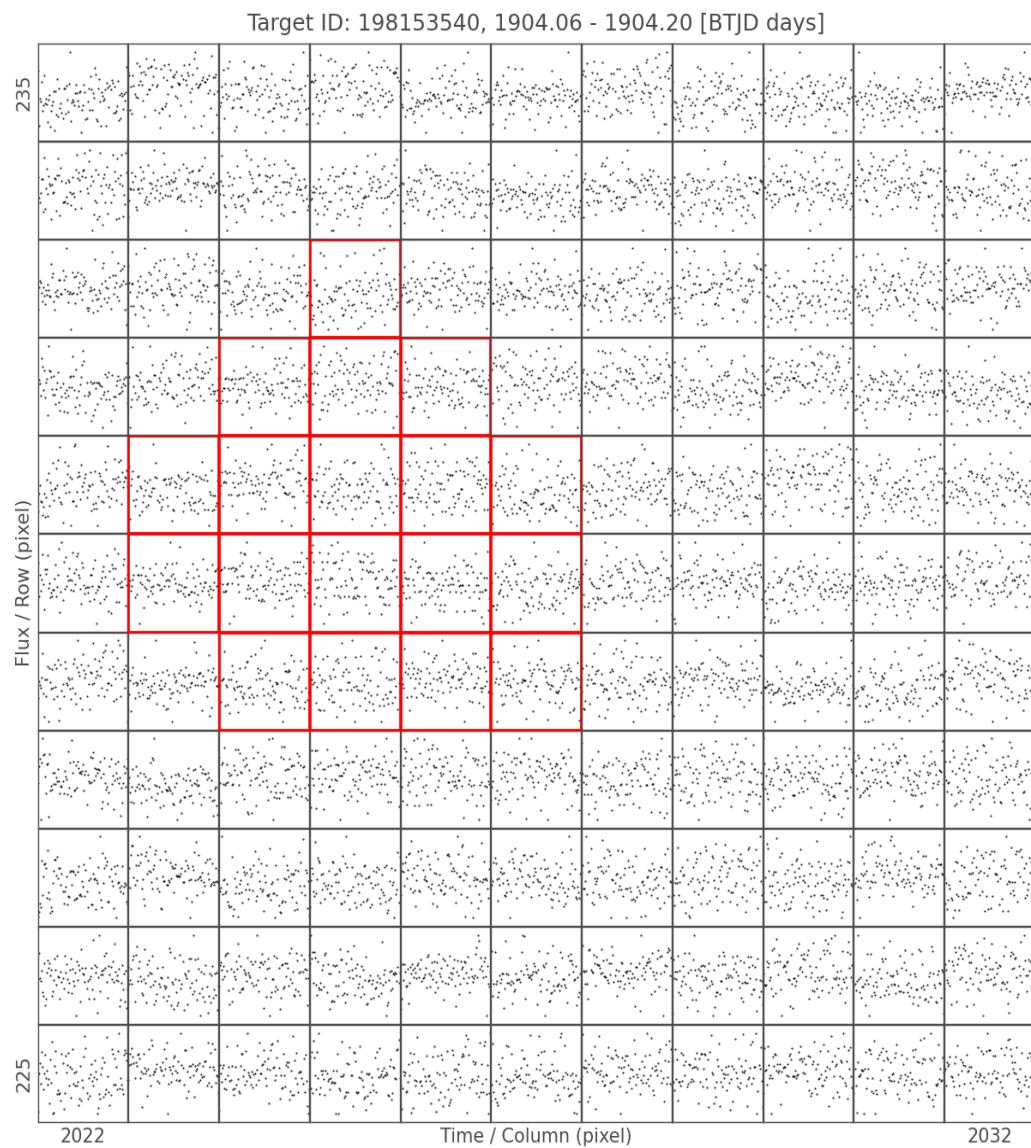
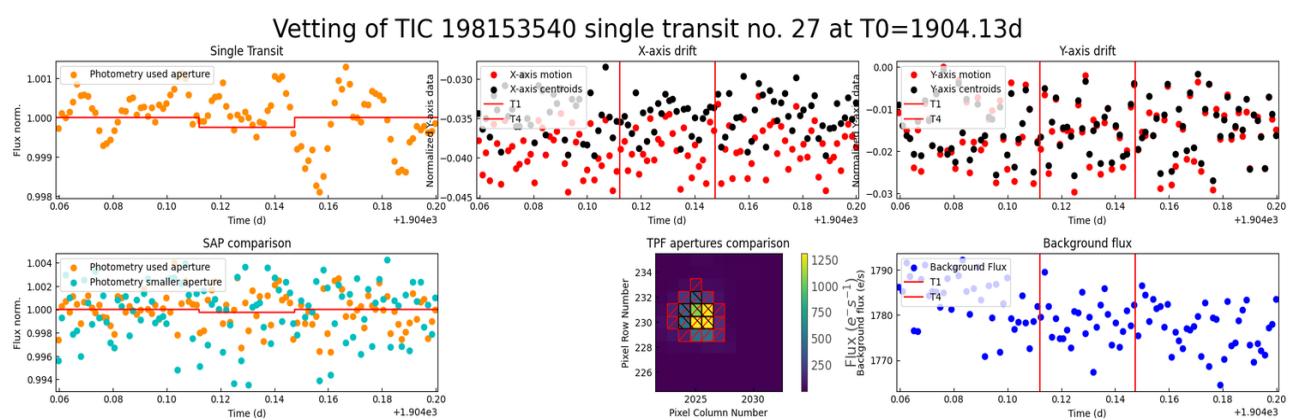


Figure 37: The single transit no. 27 vetting plots



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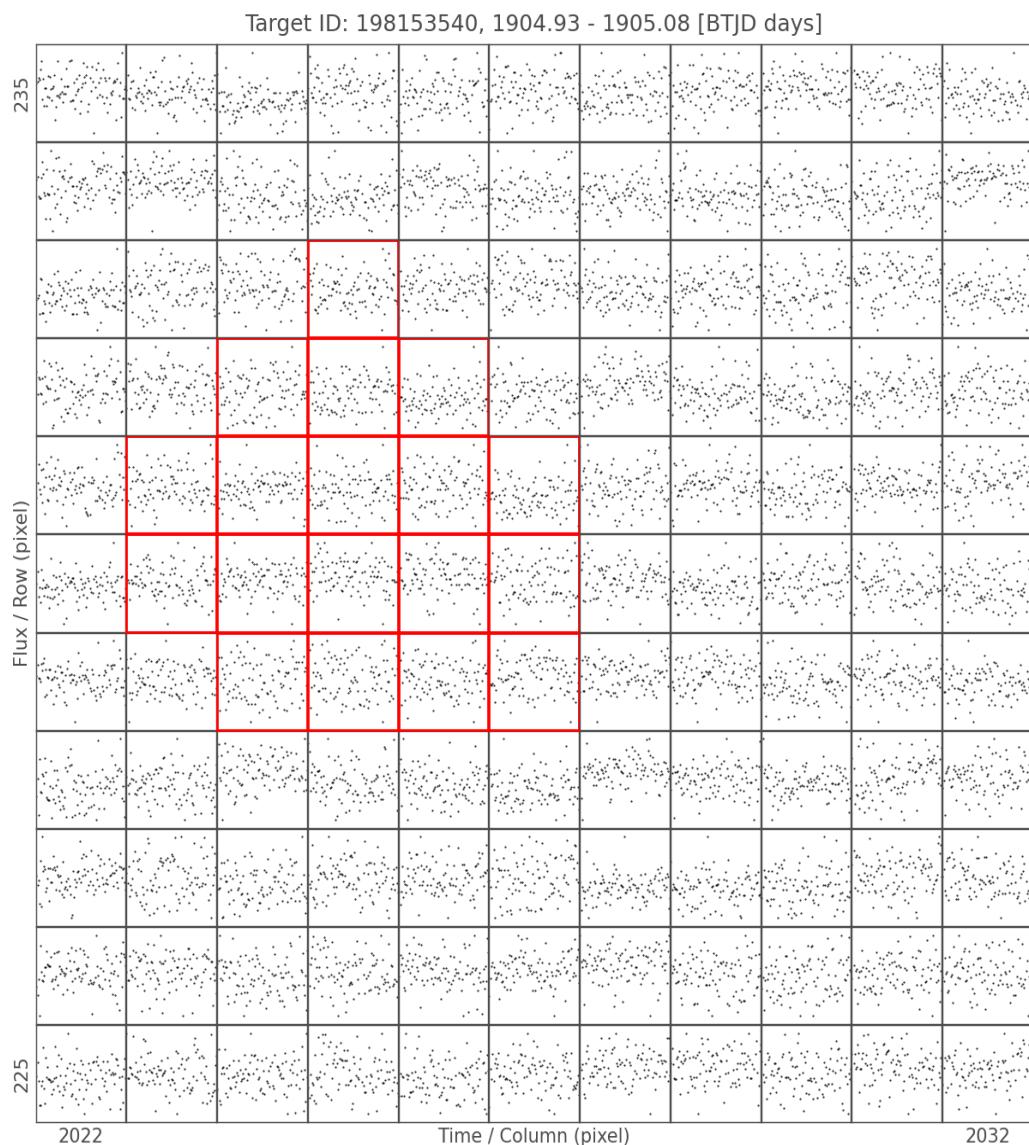
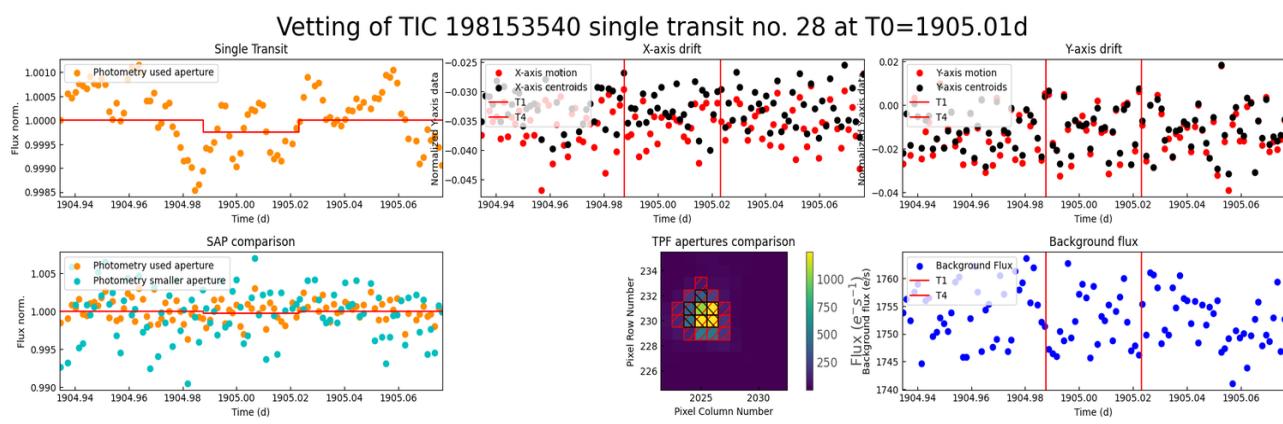


Figure 38: The single transit no. 28 vetting plots



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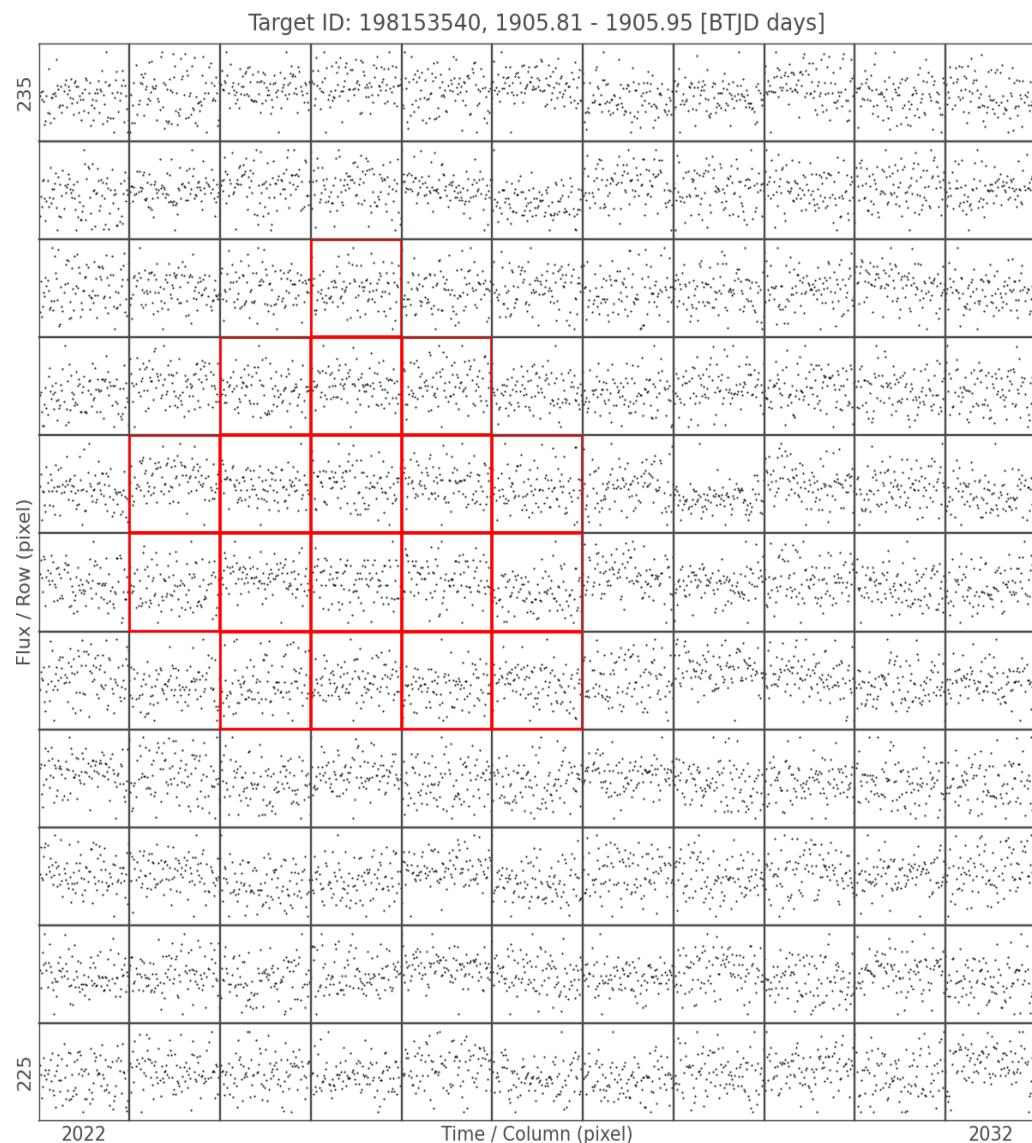
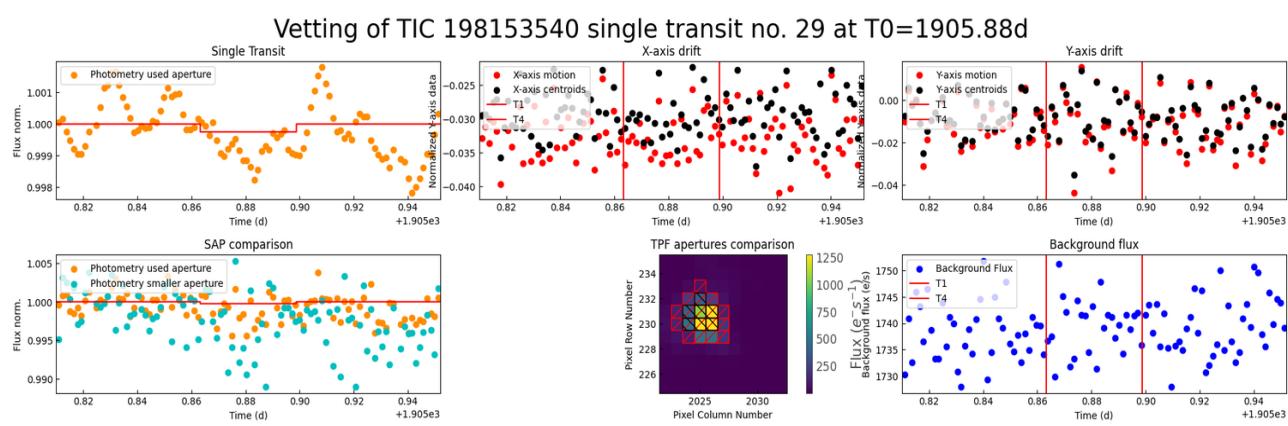


Figure 39: The single transit no. 29 vetting plots

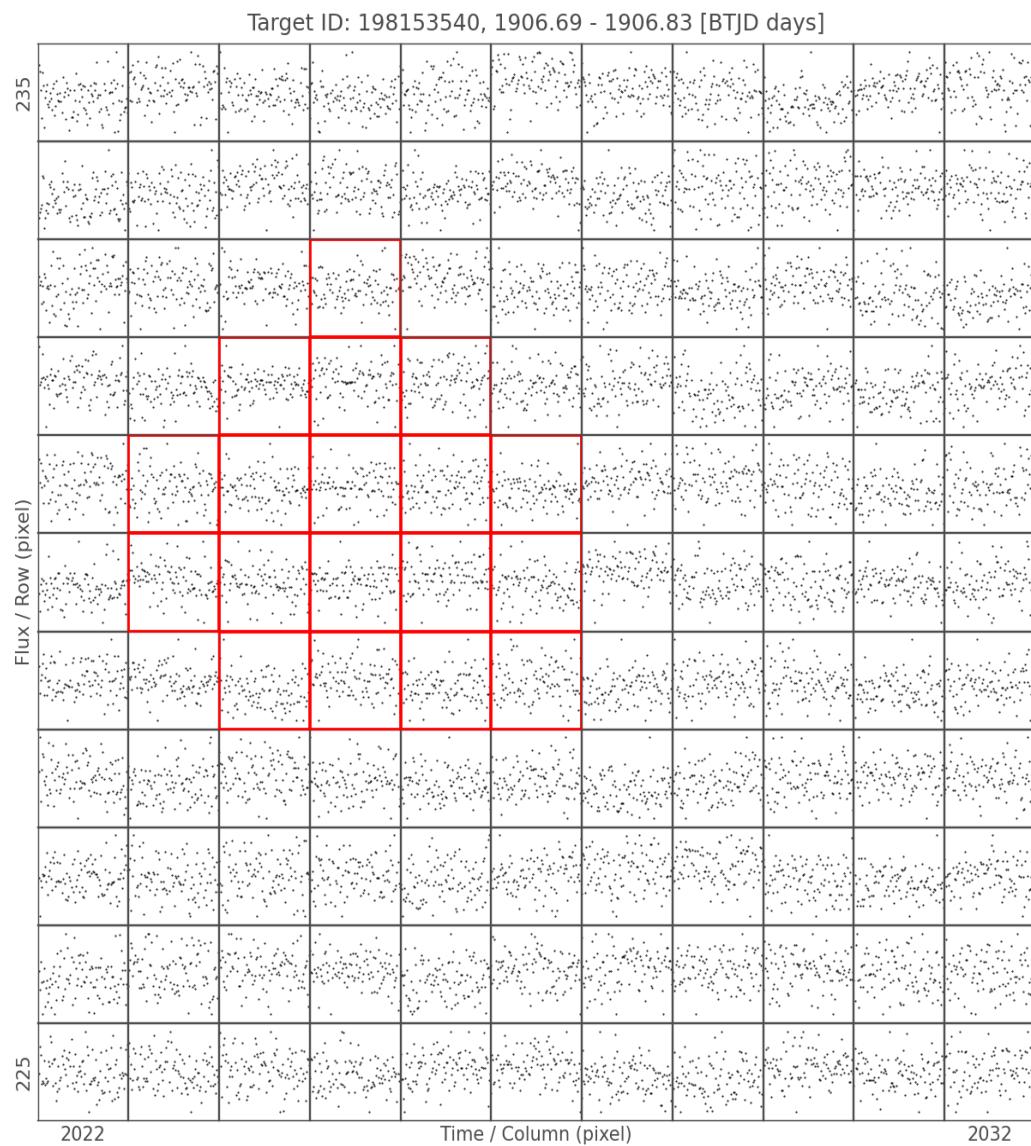
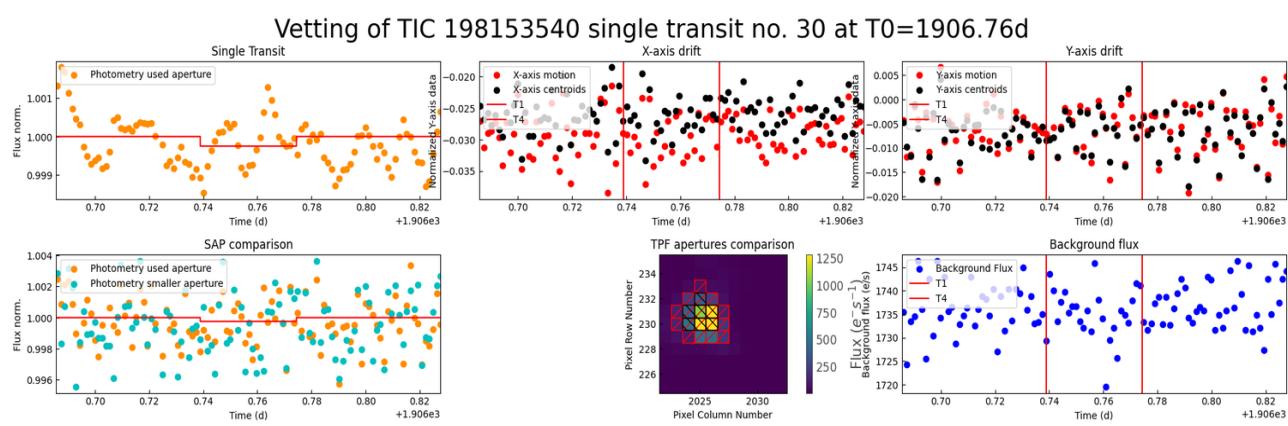


Figure 40: The single transit no. 30 vetting plots

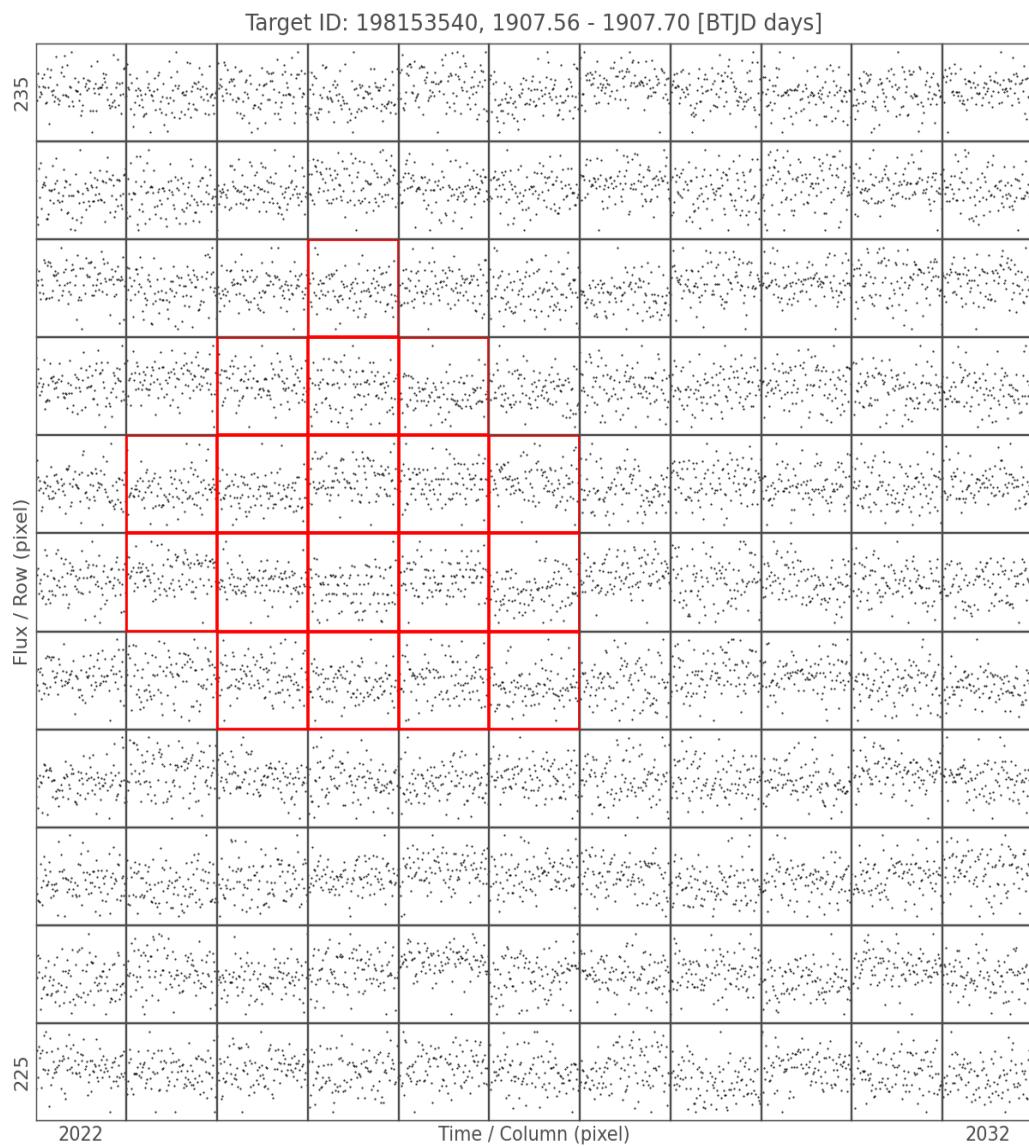
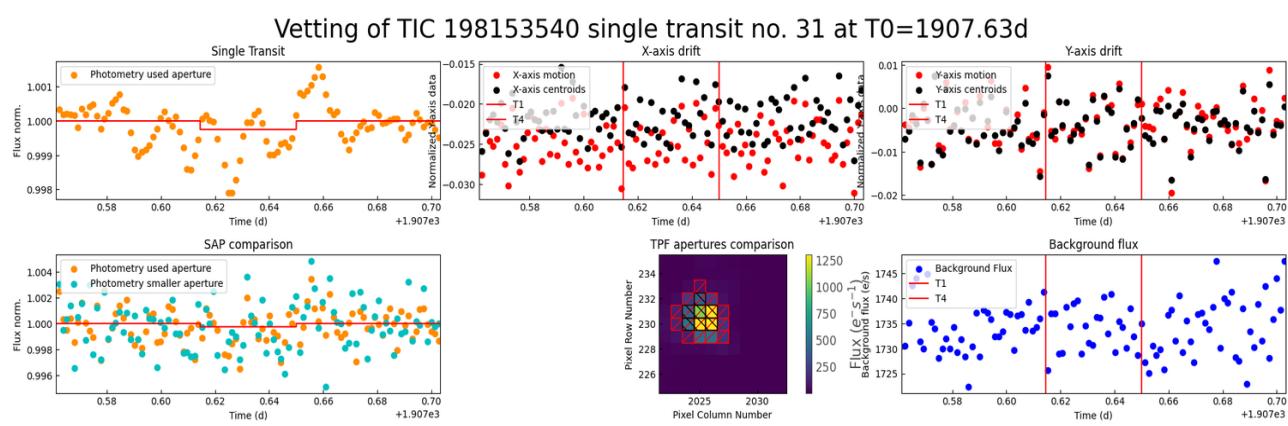


Figure 41: The single transit no. 31 vetting plots



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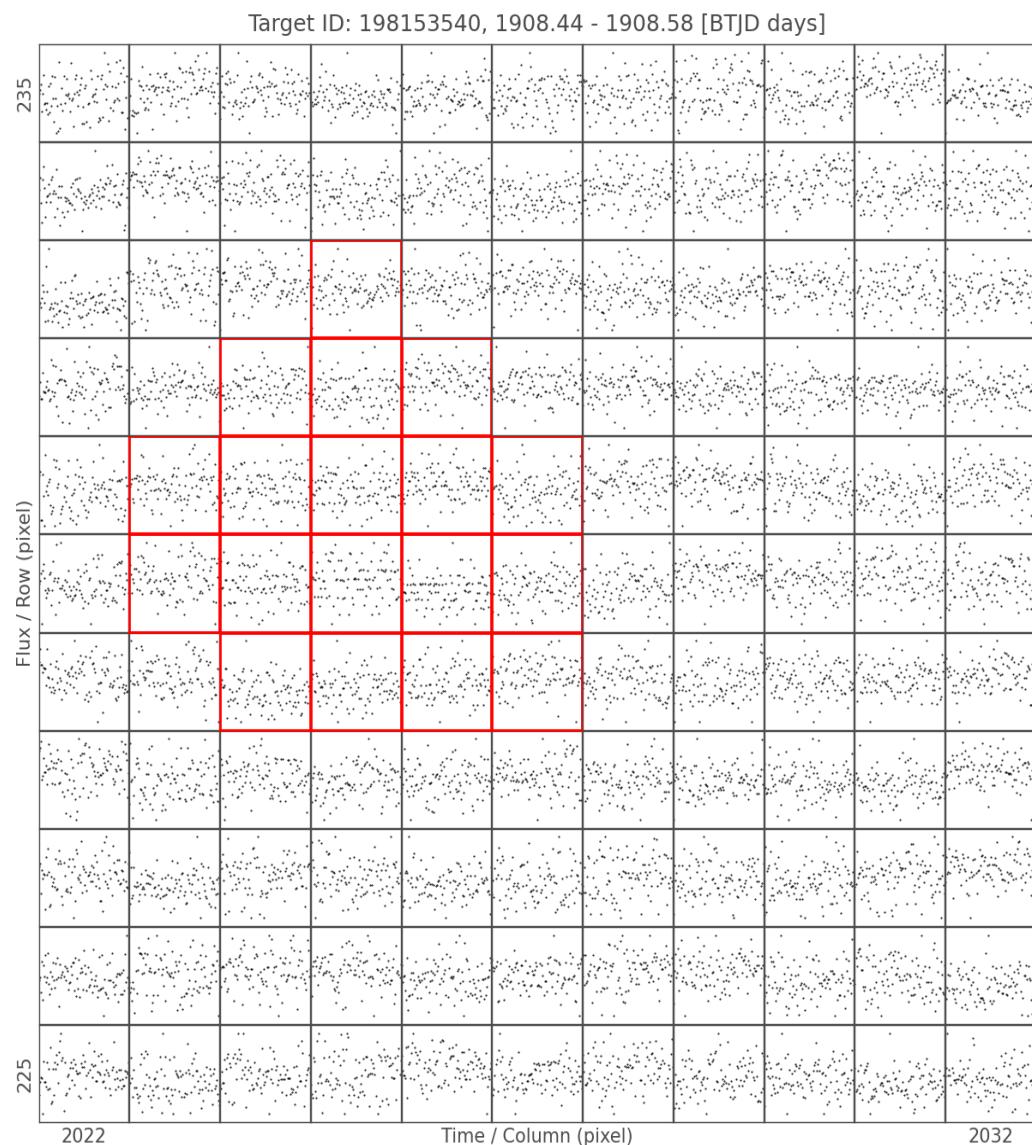
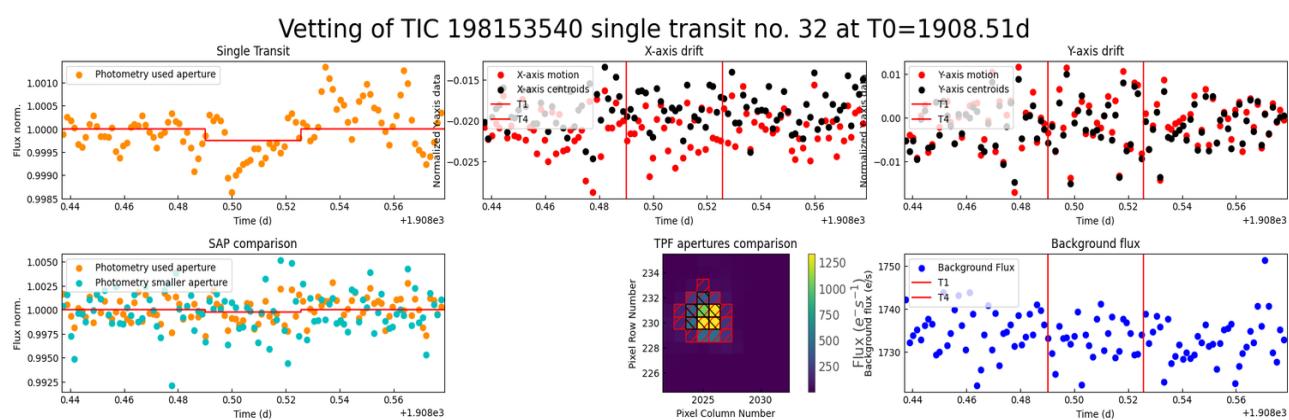


Figure 42: The single transit no. 32 vetting plots

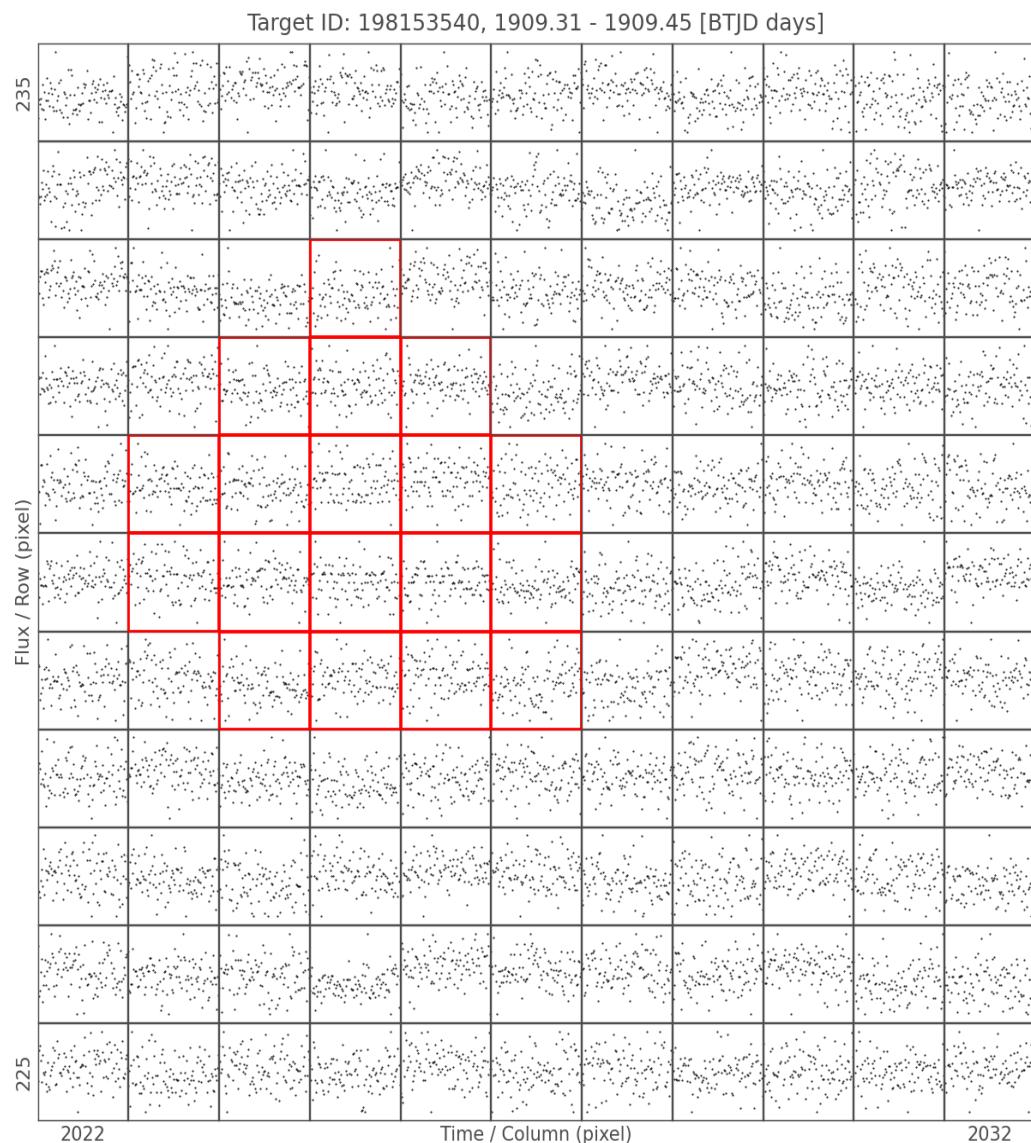
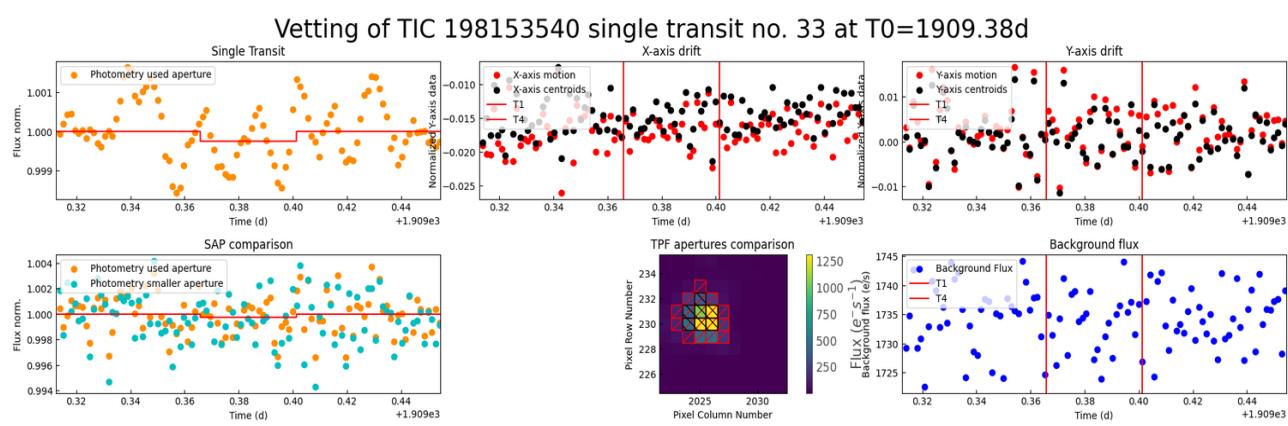


Figure 43: The single transit no. 33 vetting plots



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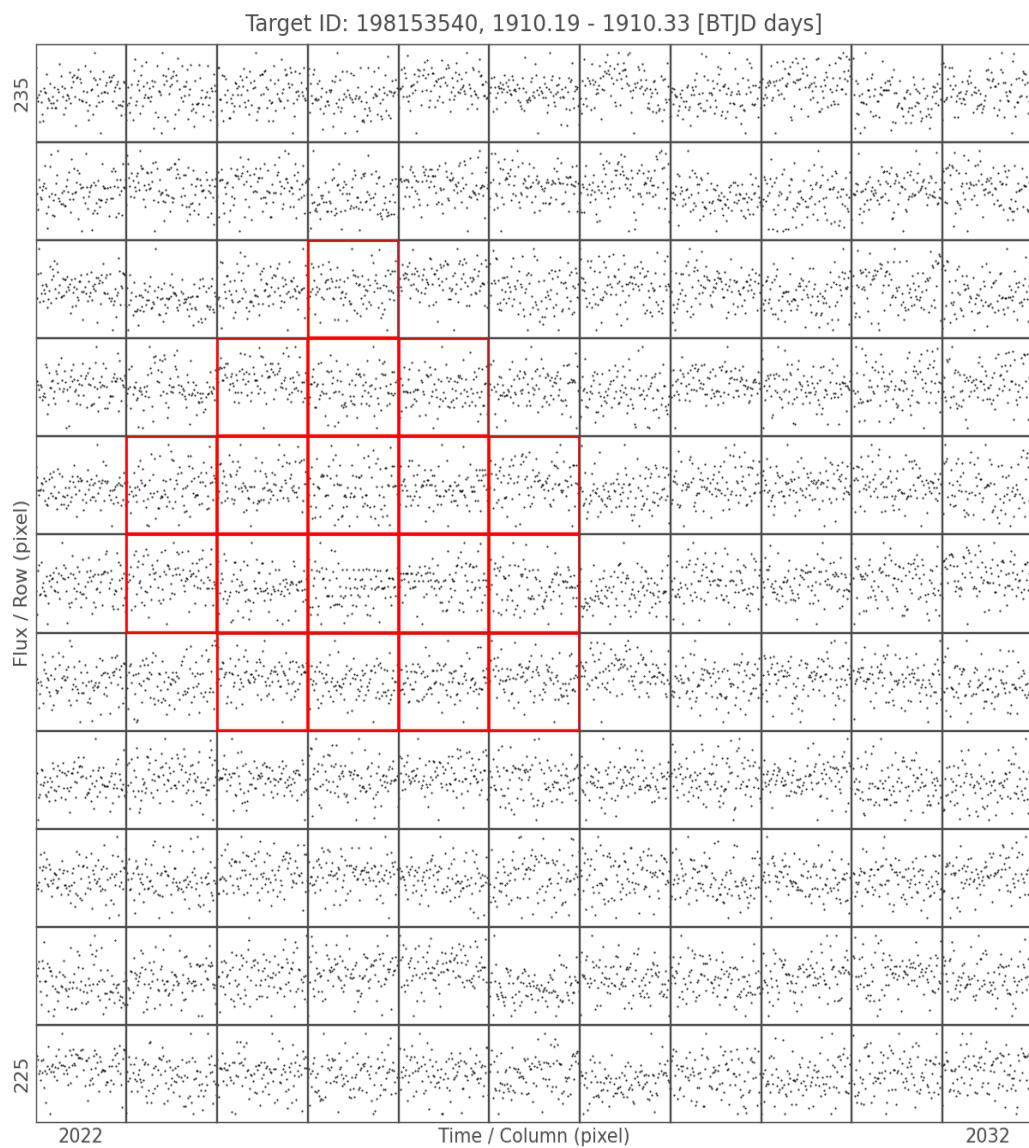
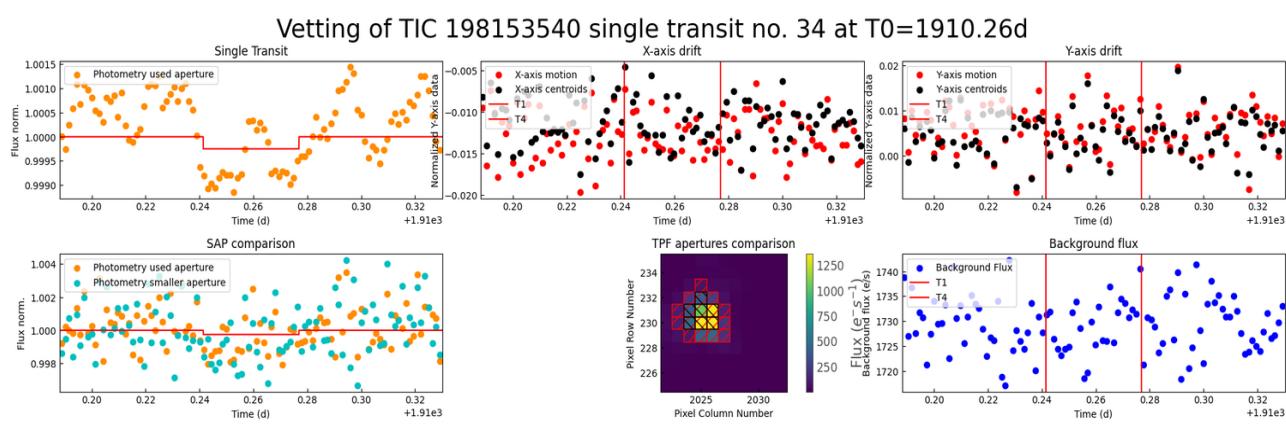


Figure 44: The single transit no. 34 vetting plots



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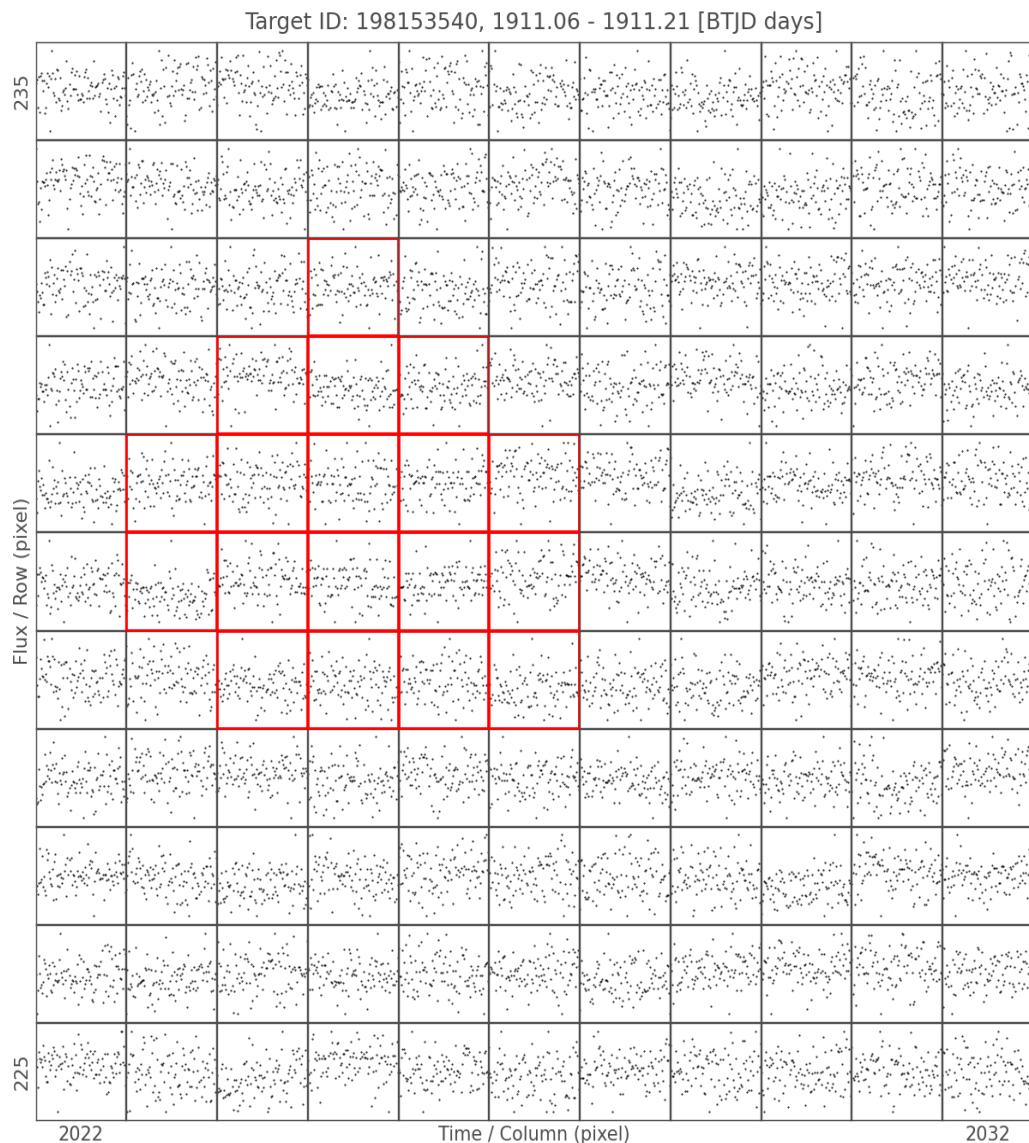
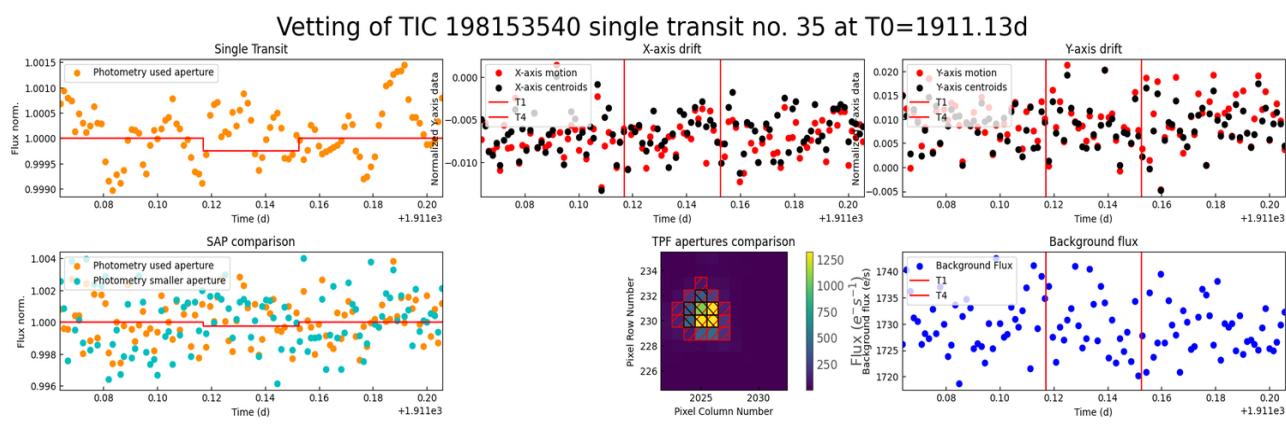


Figure 45: The single transit no. 35 vetting plots

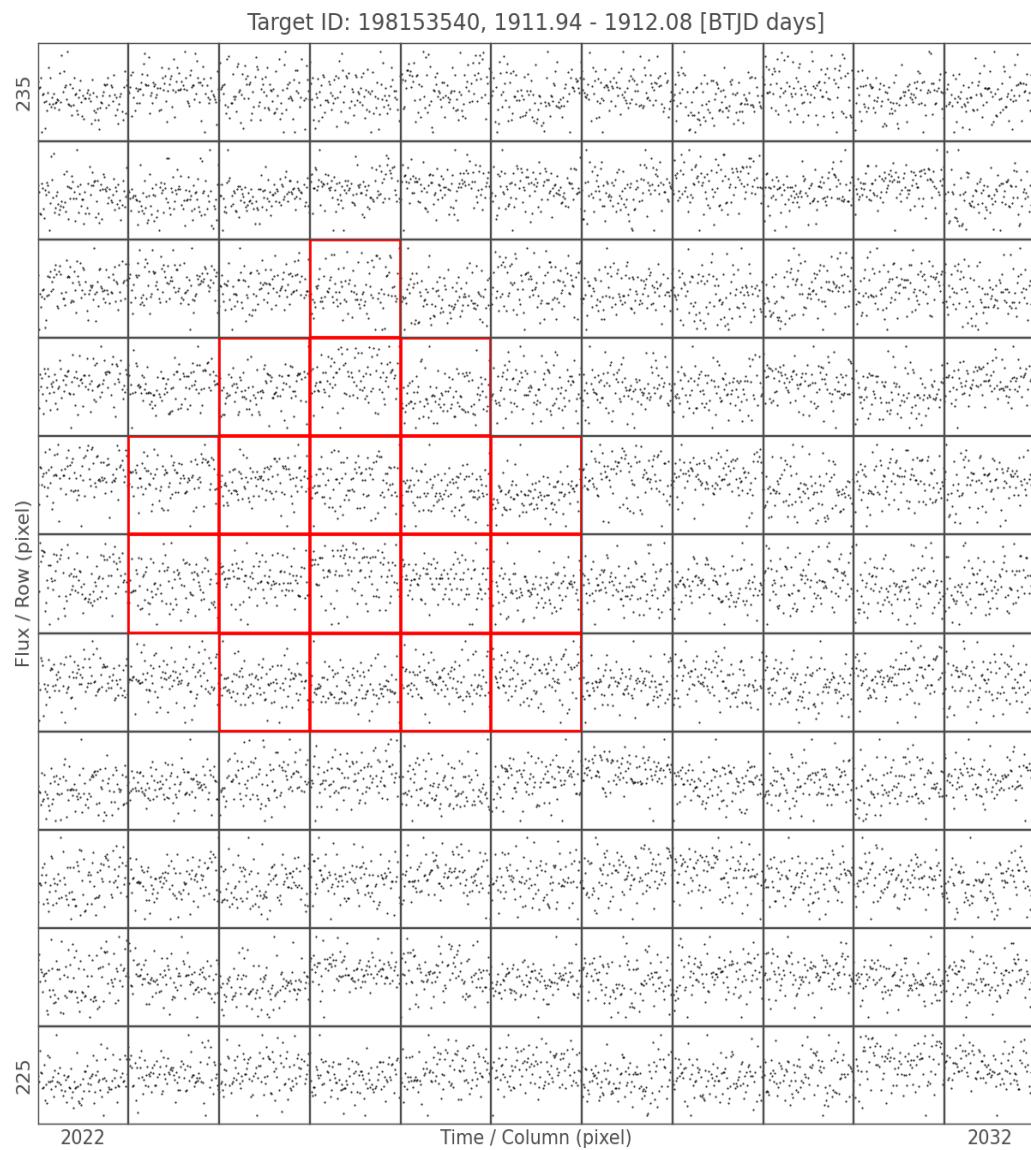
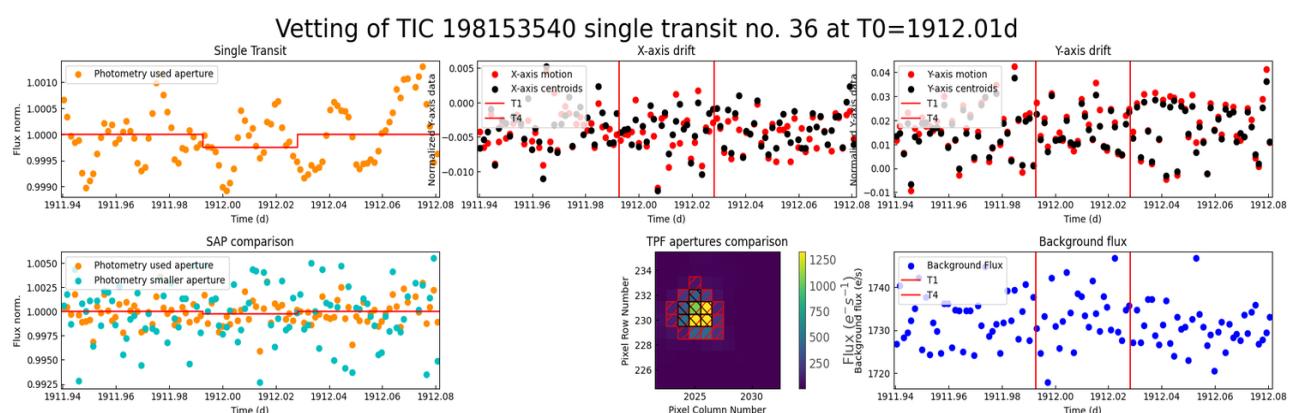


Figure 46: The single transit no. 36 vetting plots

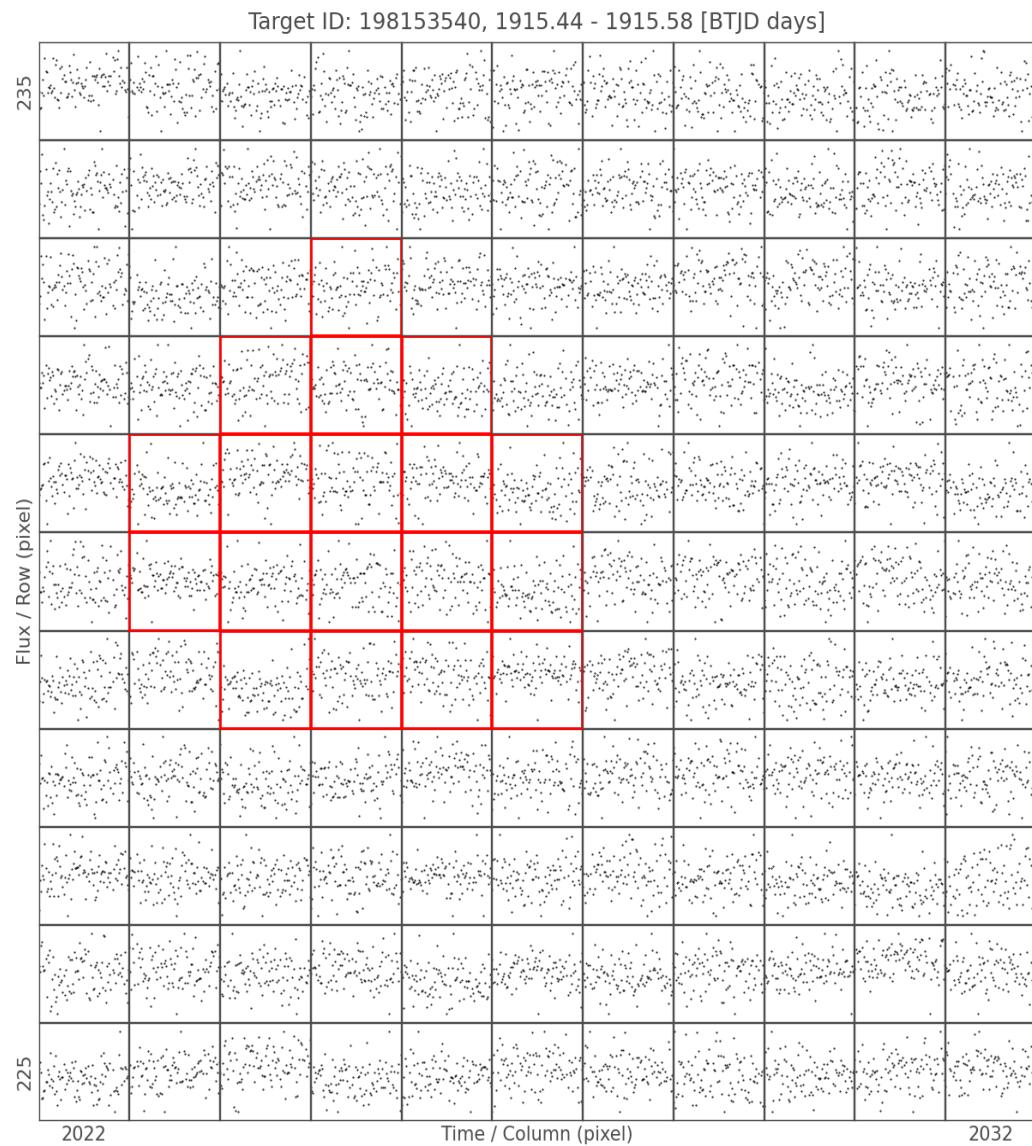
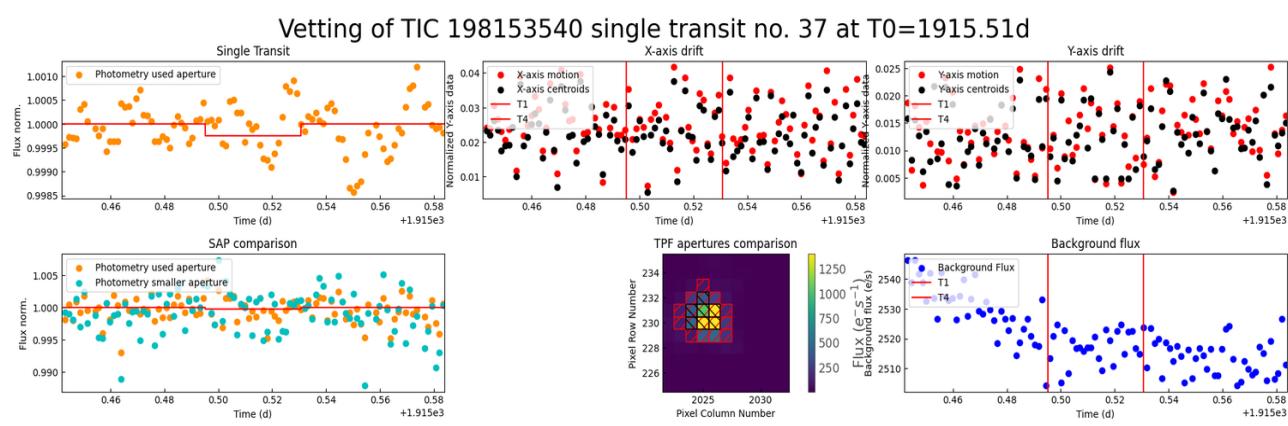


Figure 47: The single transit no. 37 vetting plots

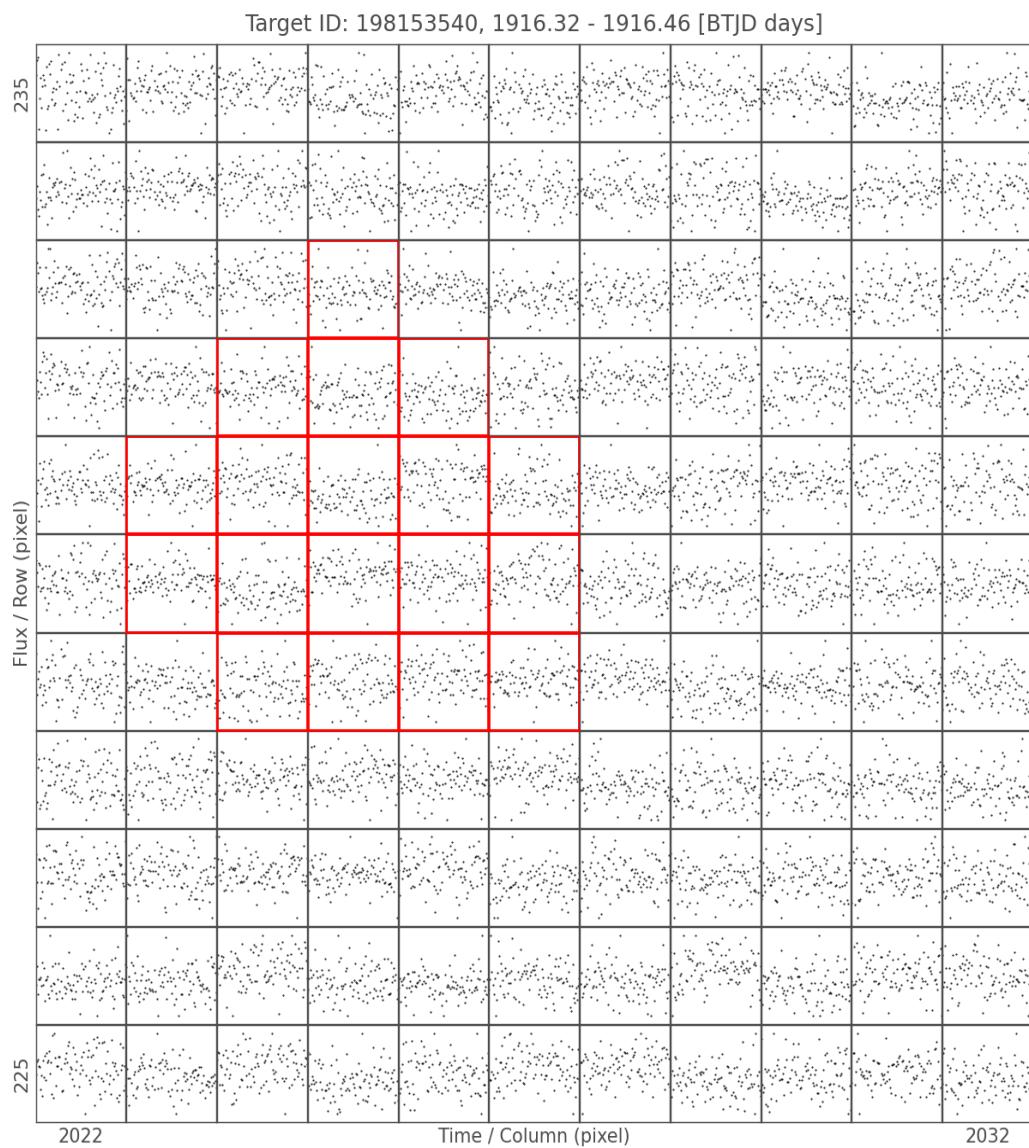
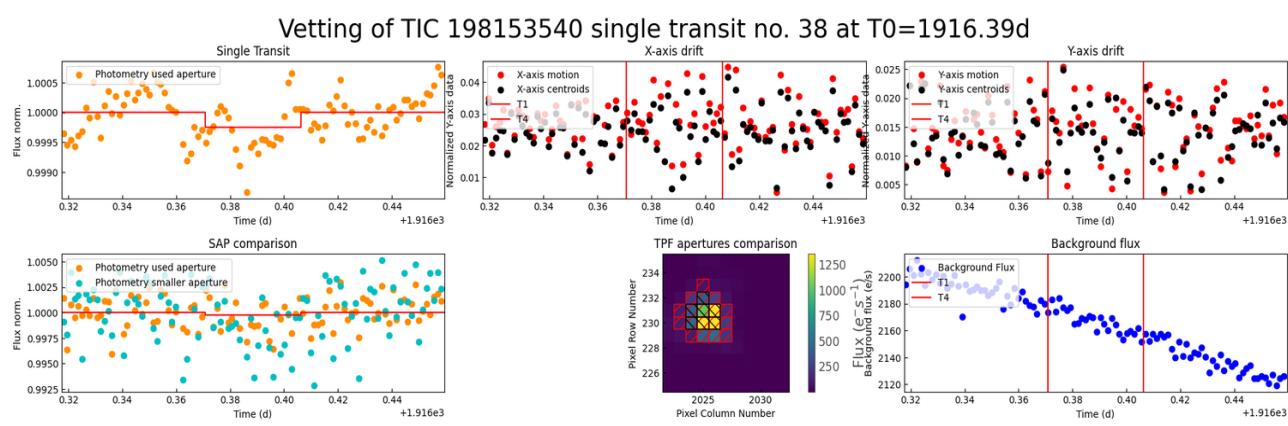


Figure 48: The single transit no. 38 vetting plots

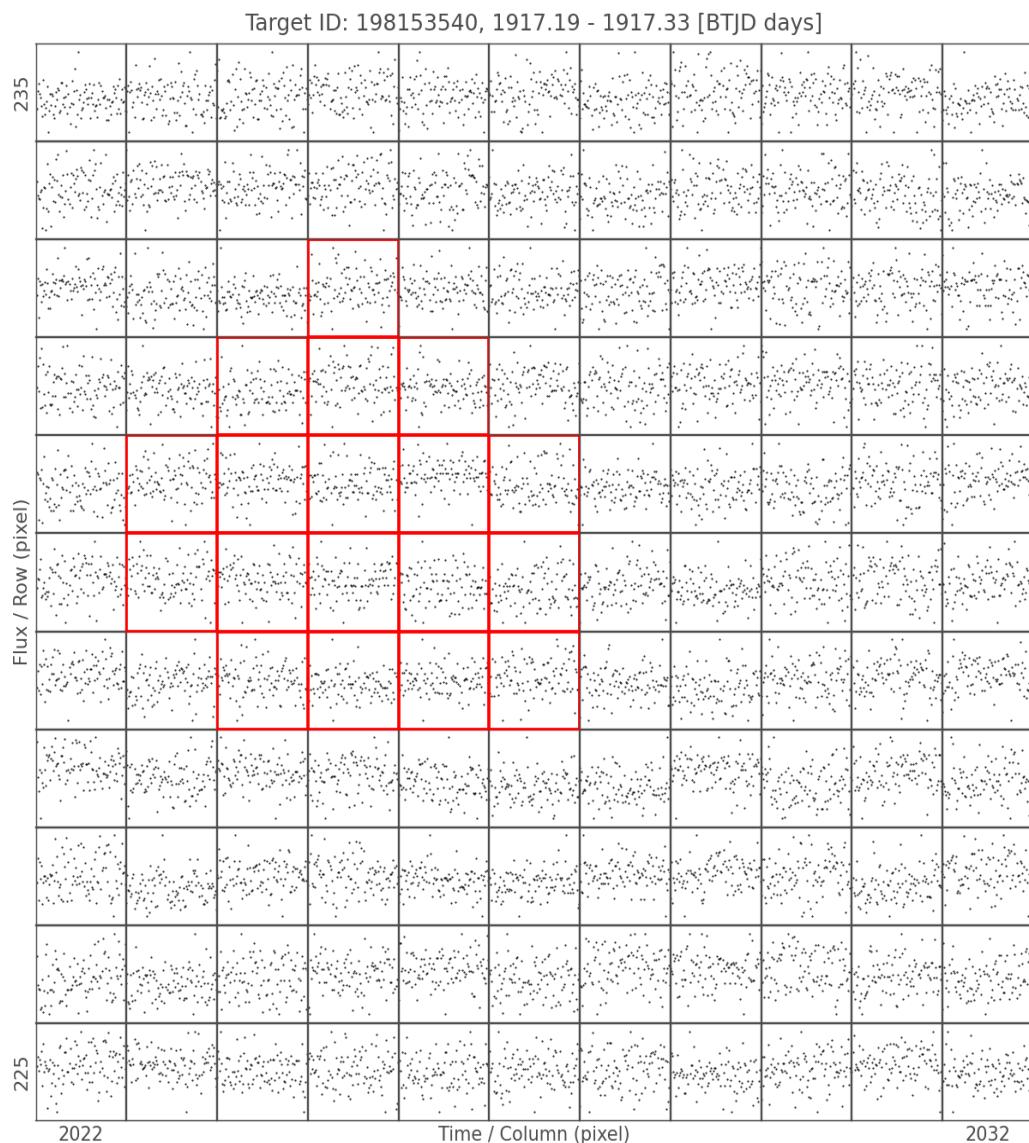
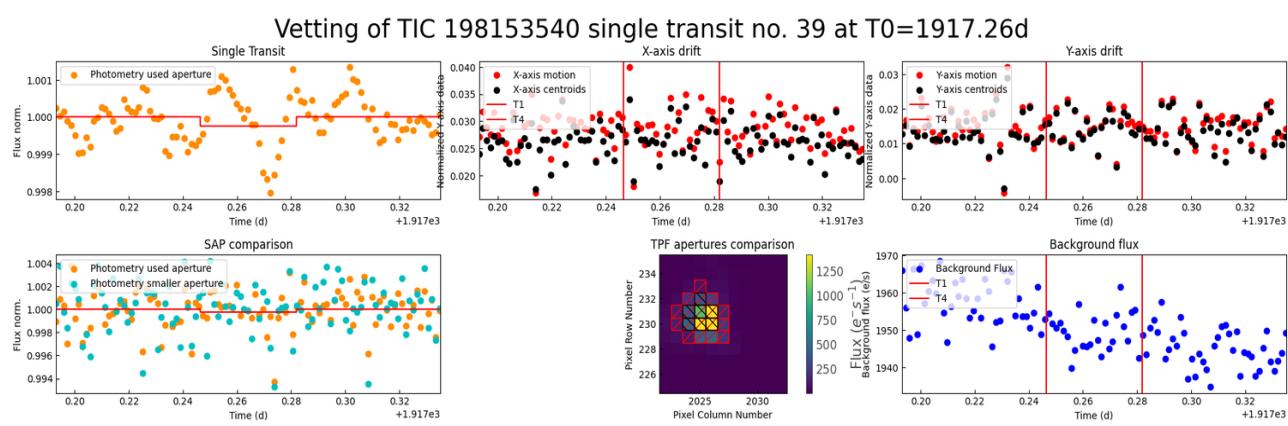


Figure 49: The single transit no. 39 vetting plots

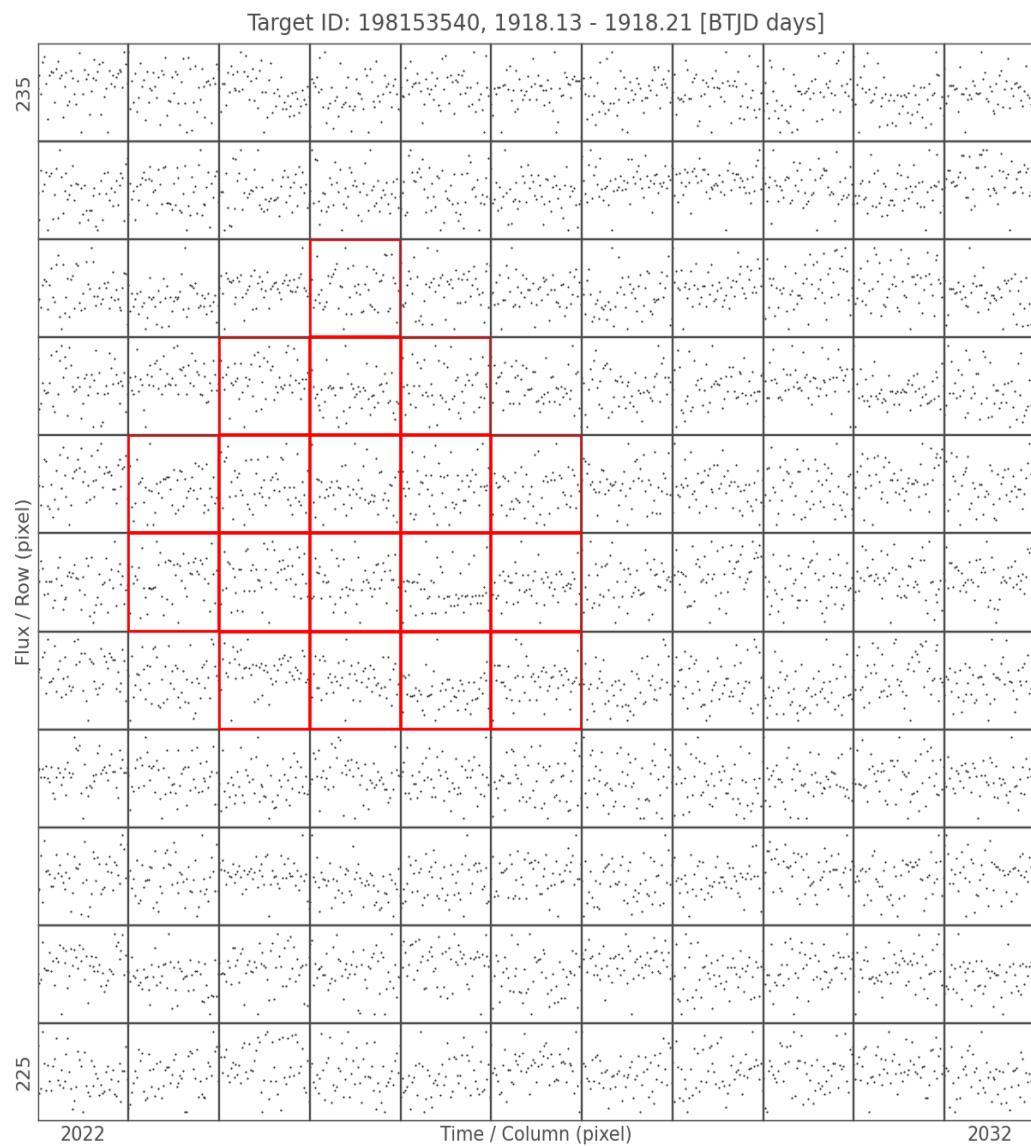
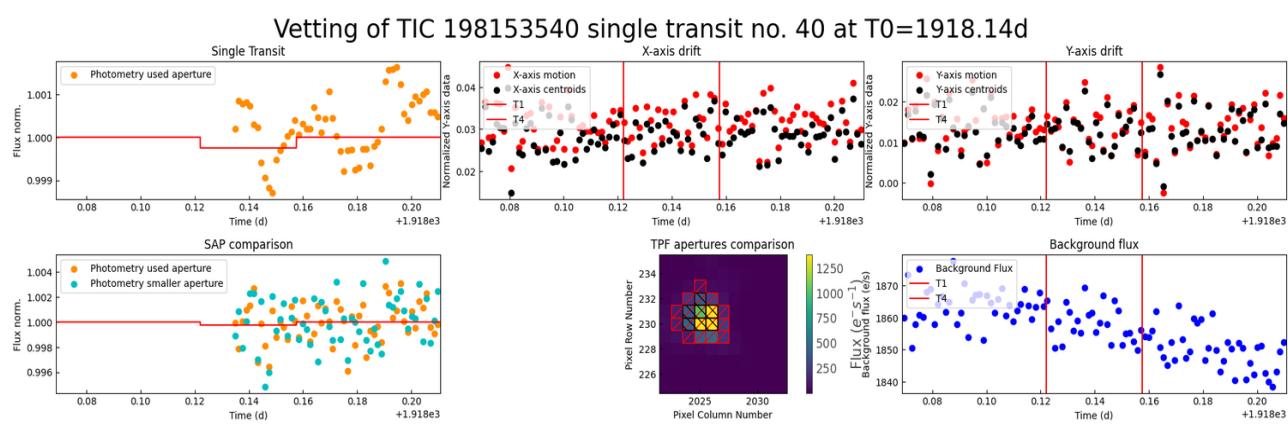


Figure 50: The single transit no. 40 vetting plots



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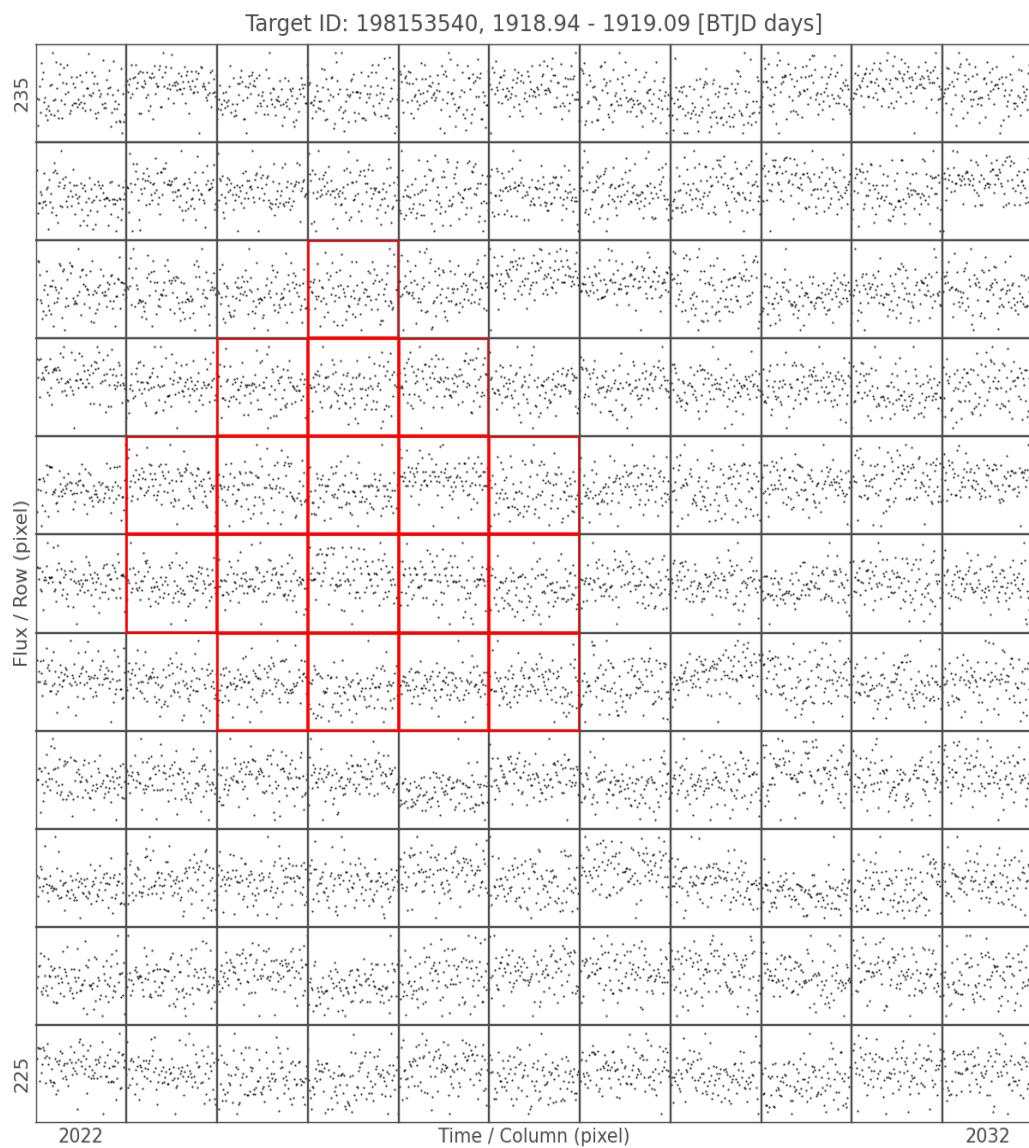
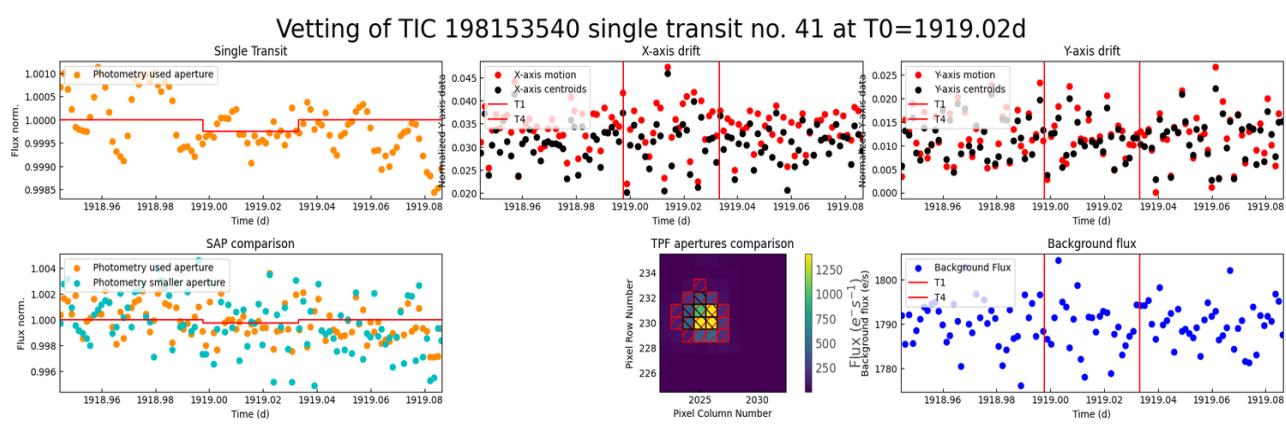


Figure 51: The single transit no. 41 vetting plots

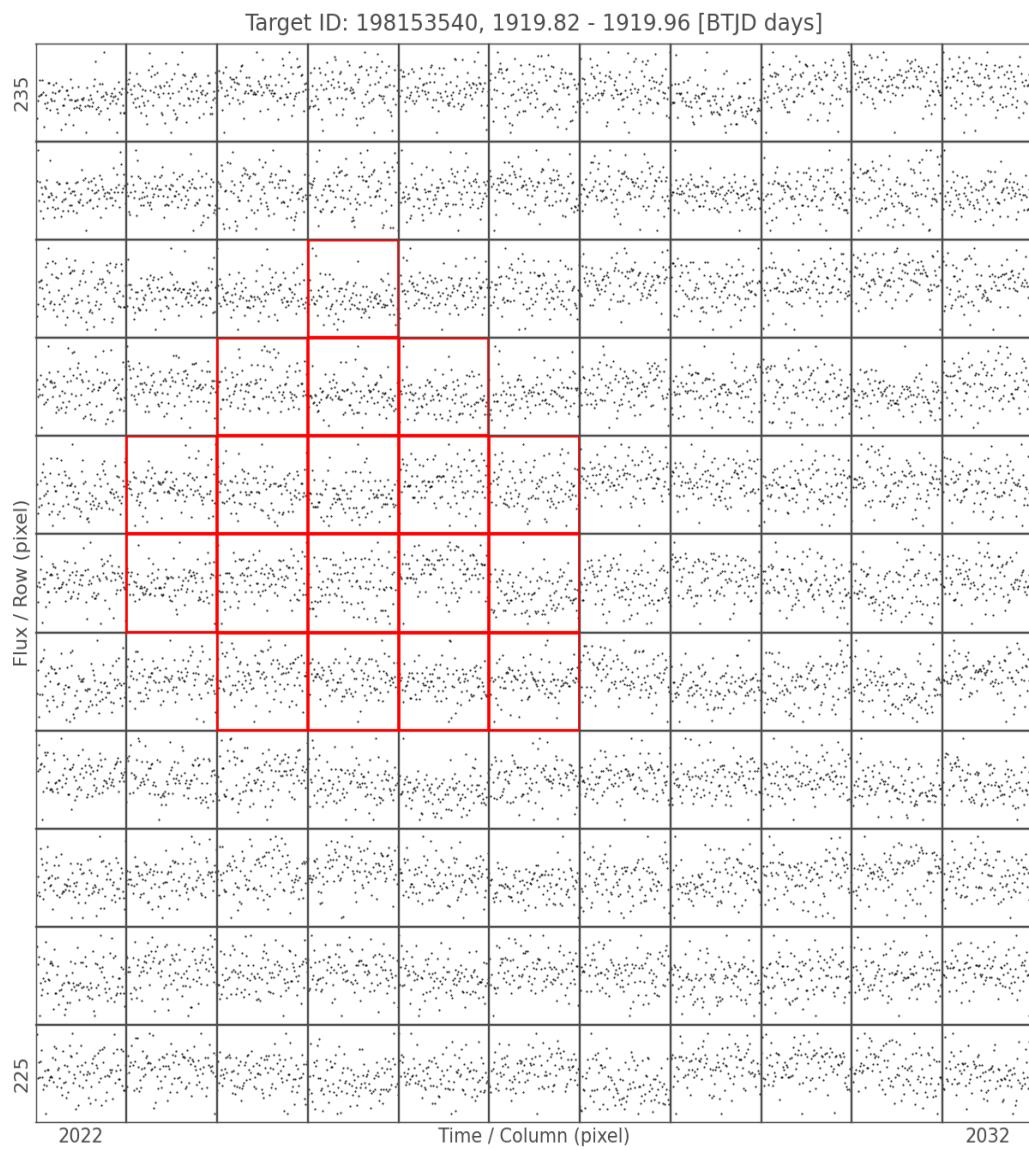
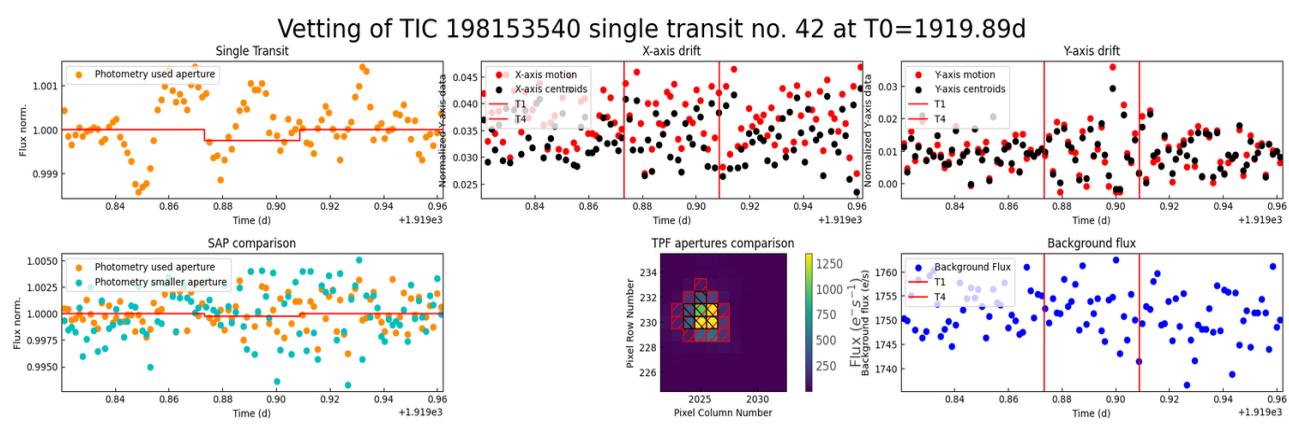


Figure 52: The single transit no. 42 vetting plots

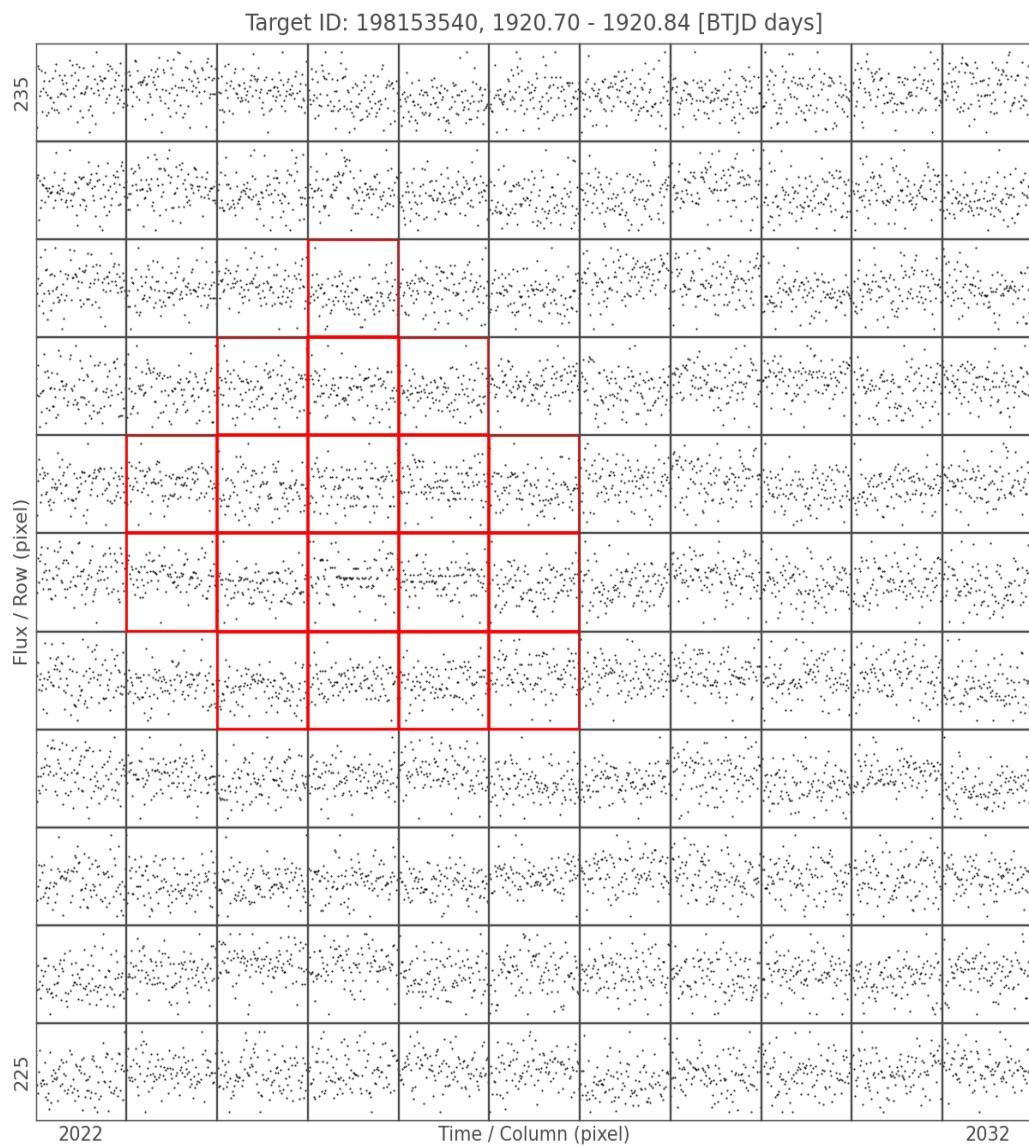
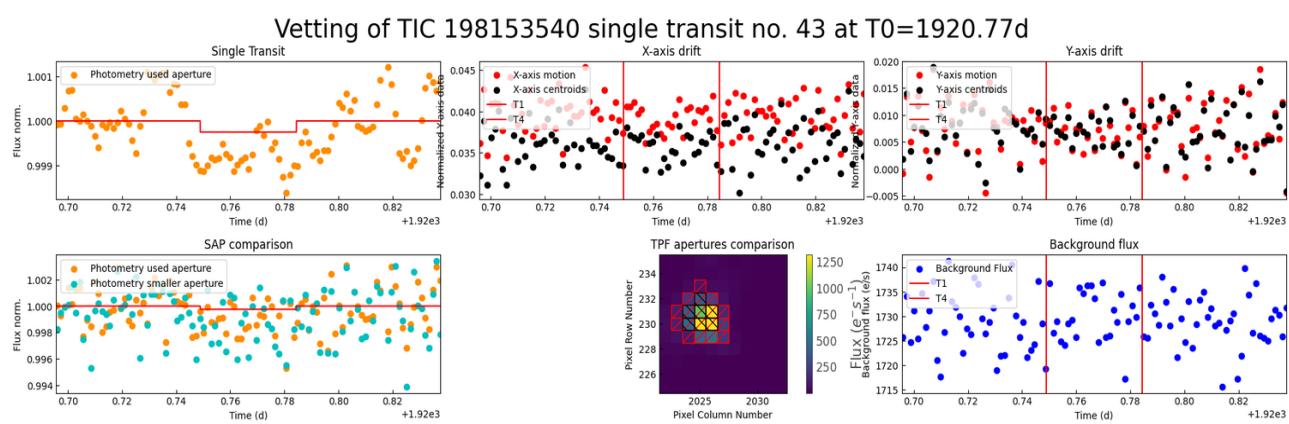


Figure 53: The single transit no. 43 vetting plots

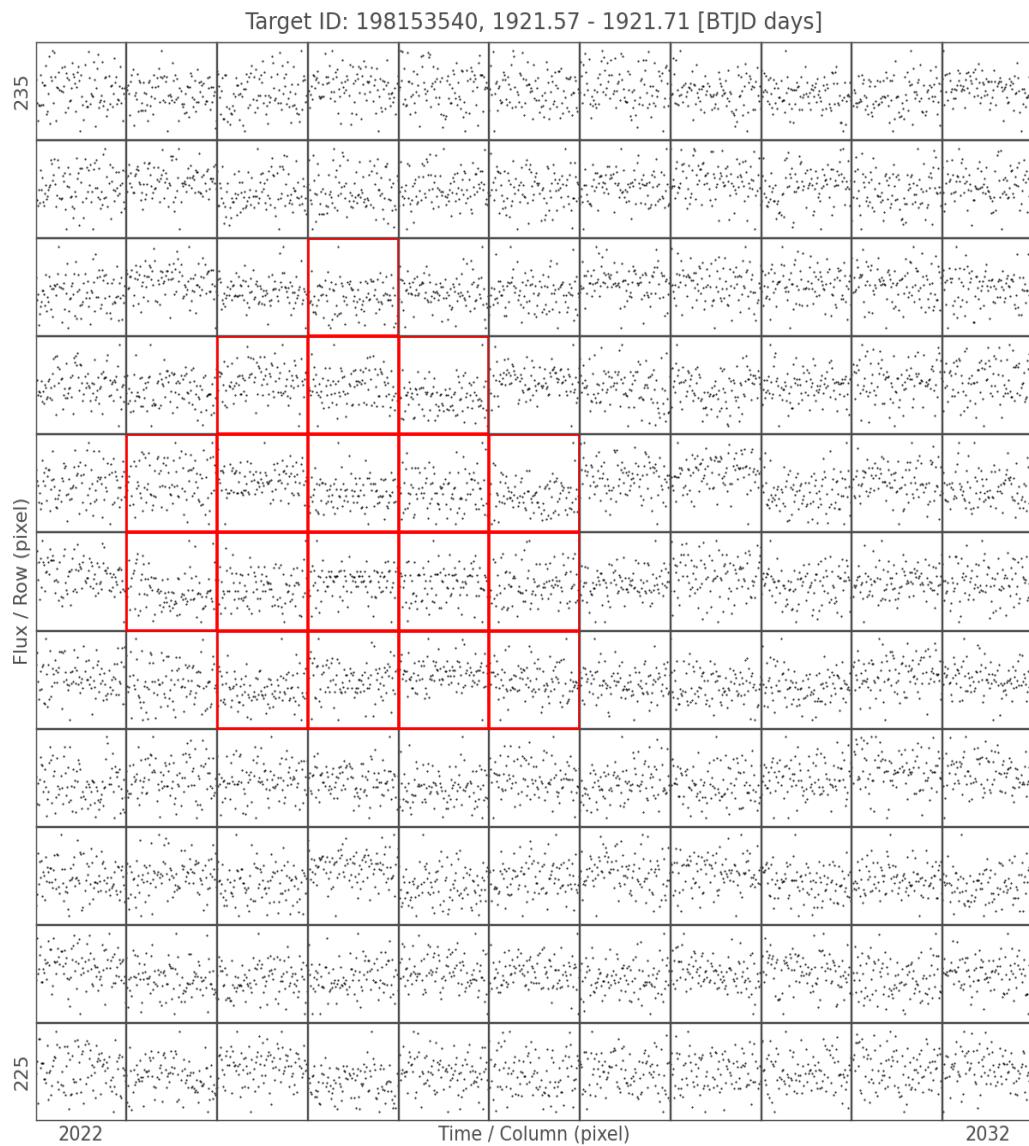
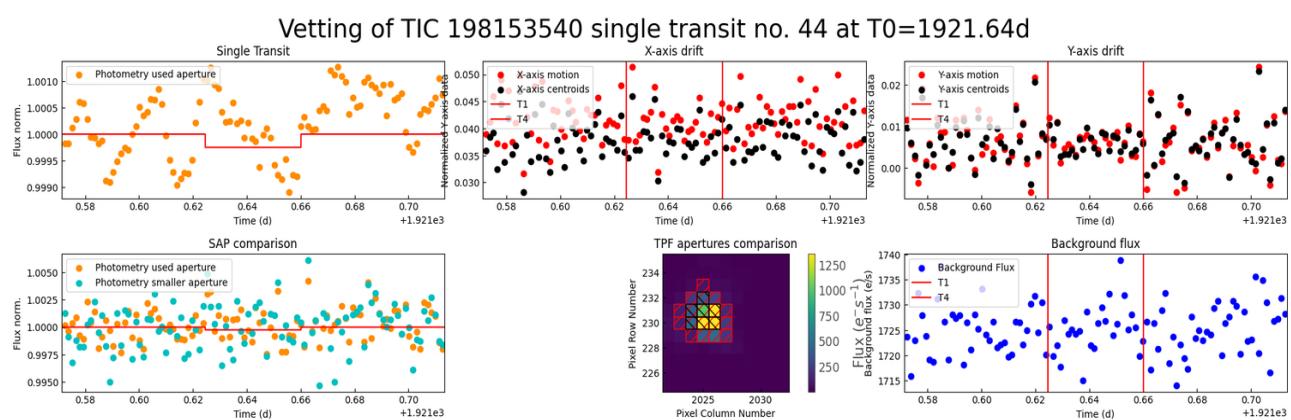
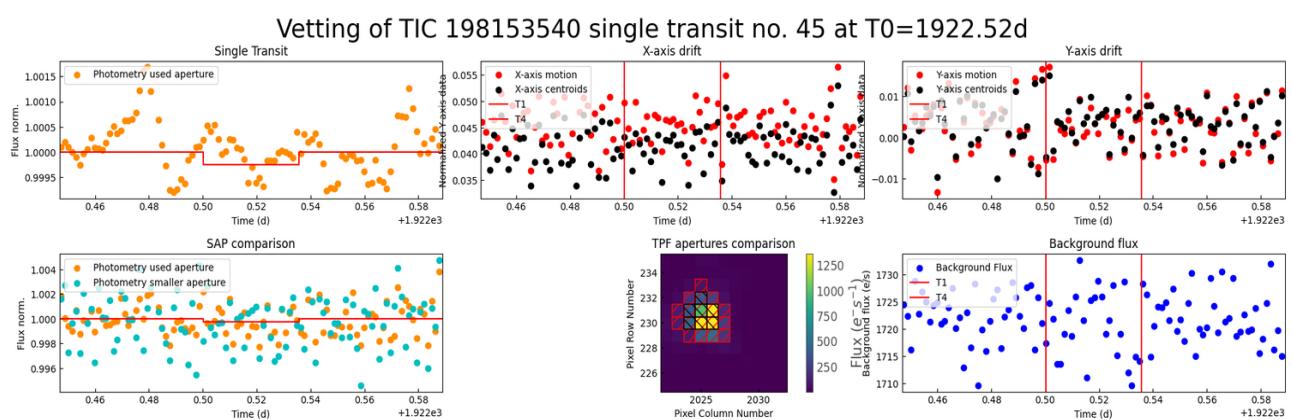


Figure 54: The single transit no. 44 vetting plots



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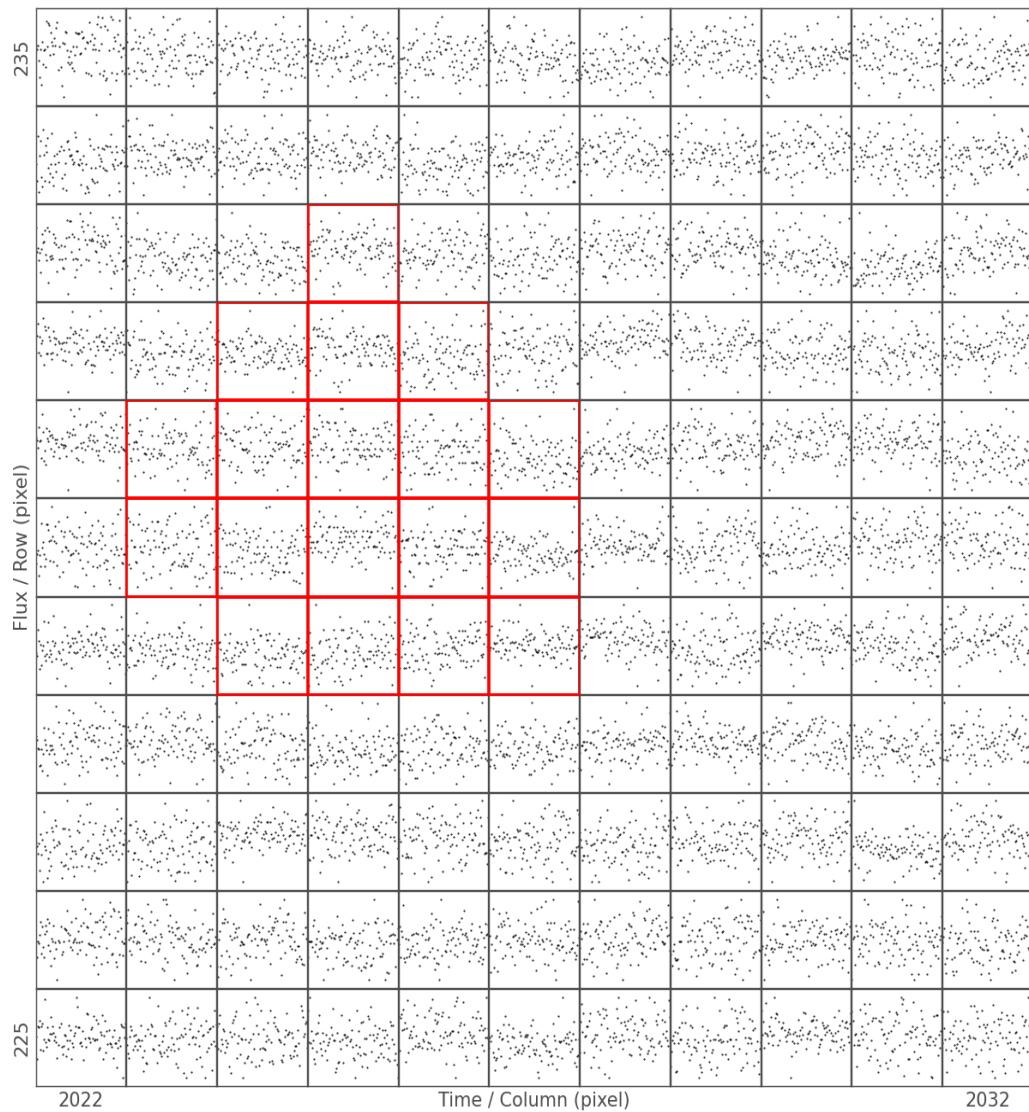


Figure 55: The single transit no. 45 vetting plots

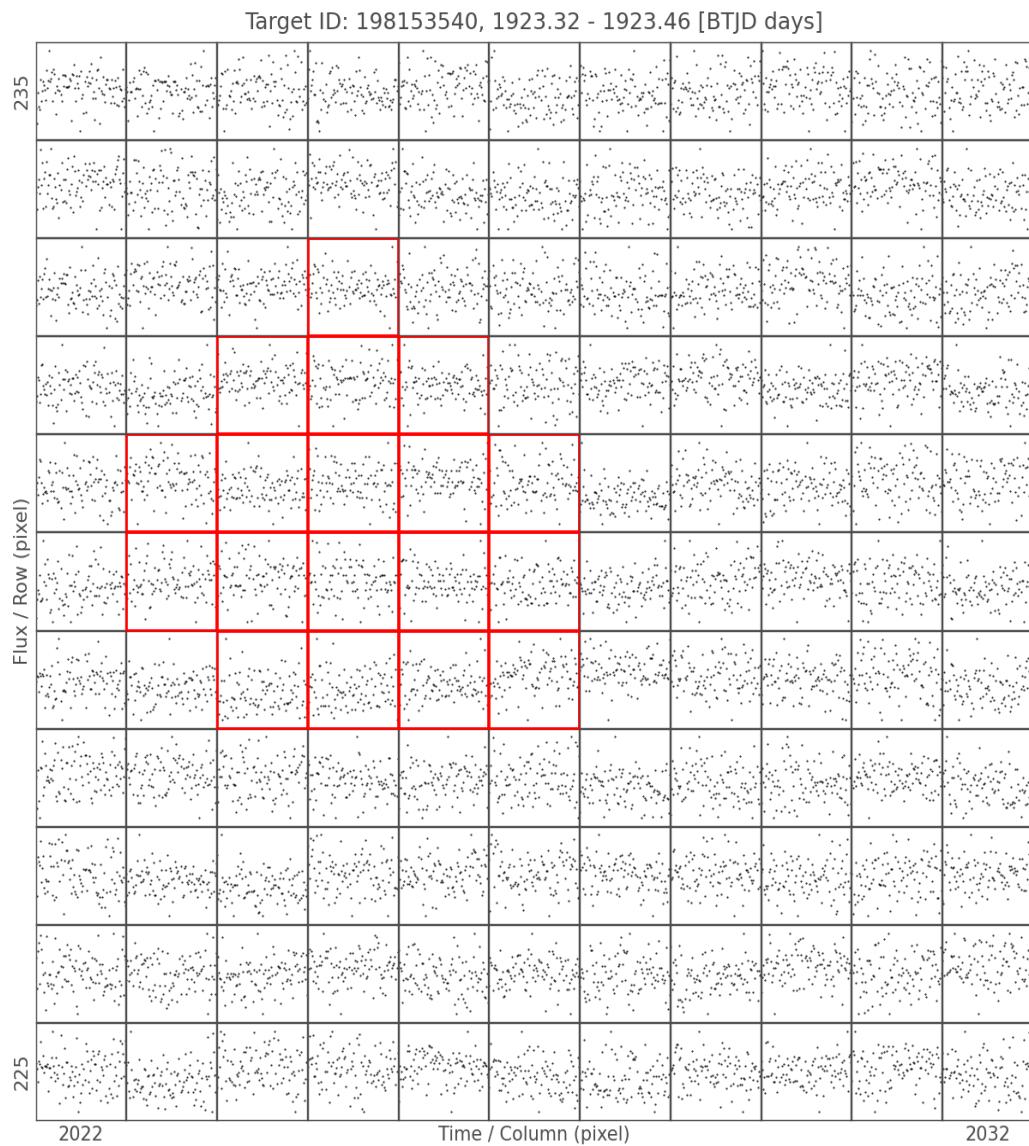
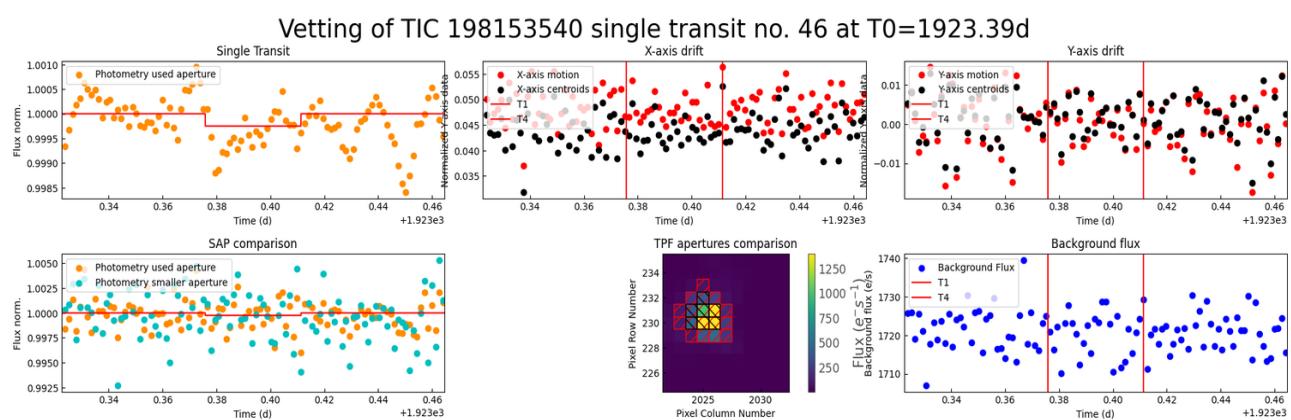


Figure 56: The single transit no. 46 vetting plots

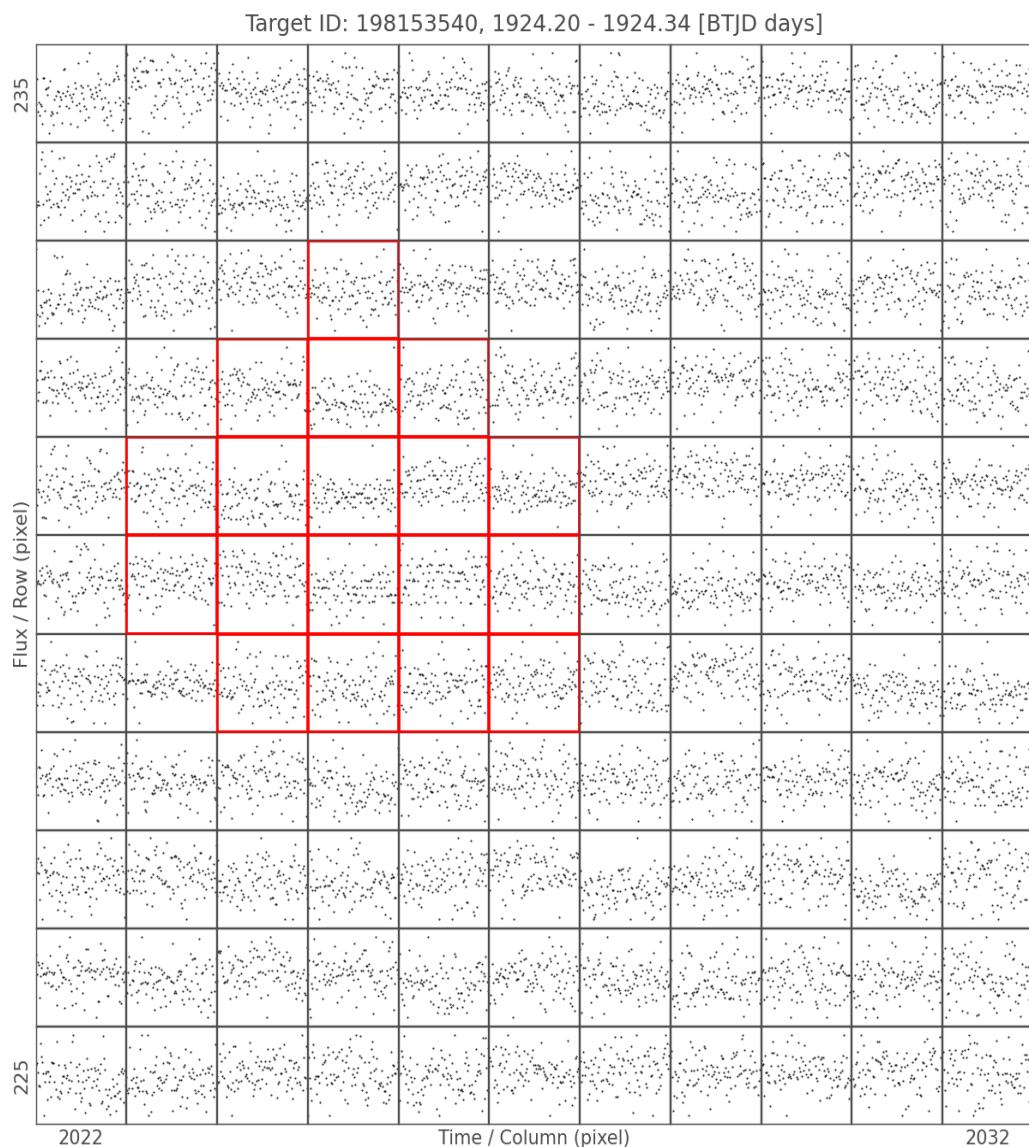
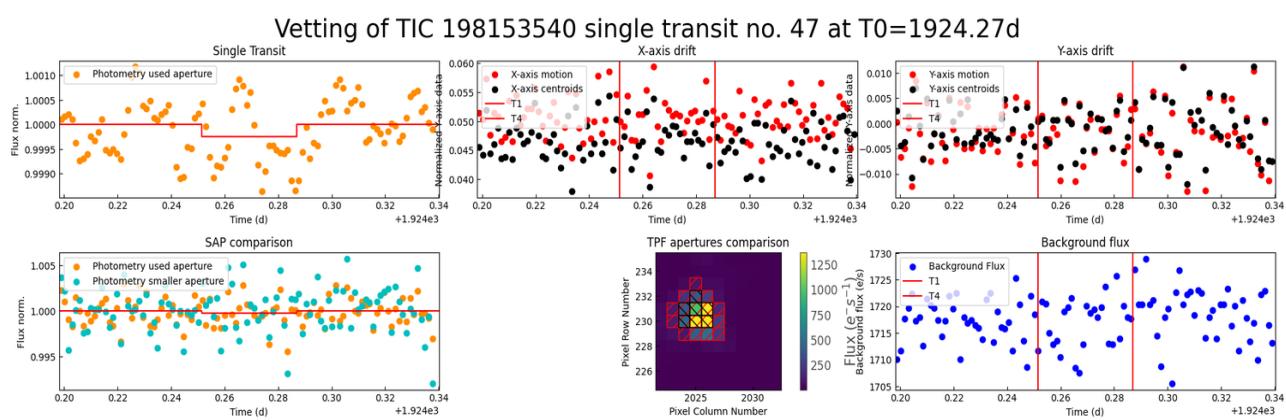


Figure 57: The single transit no. 47 vetting plots

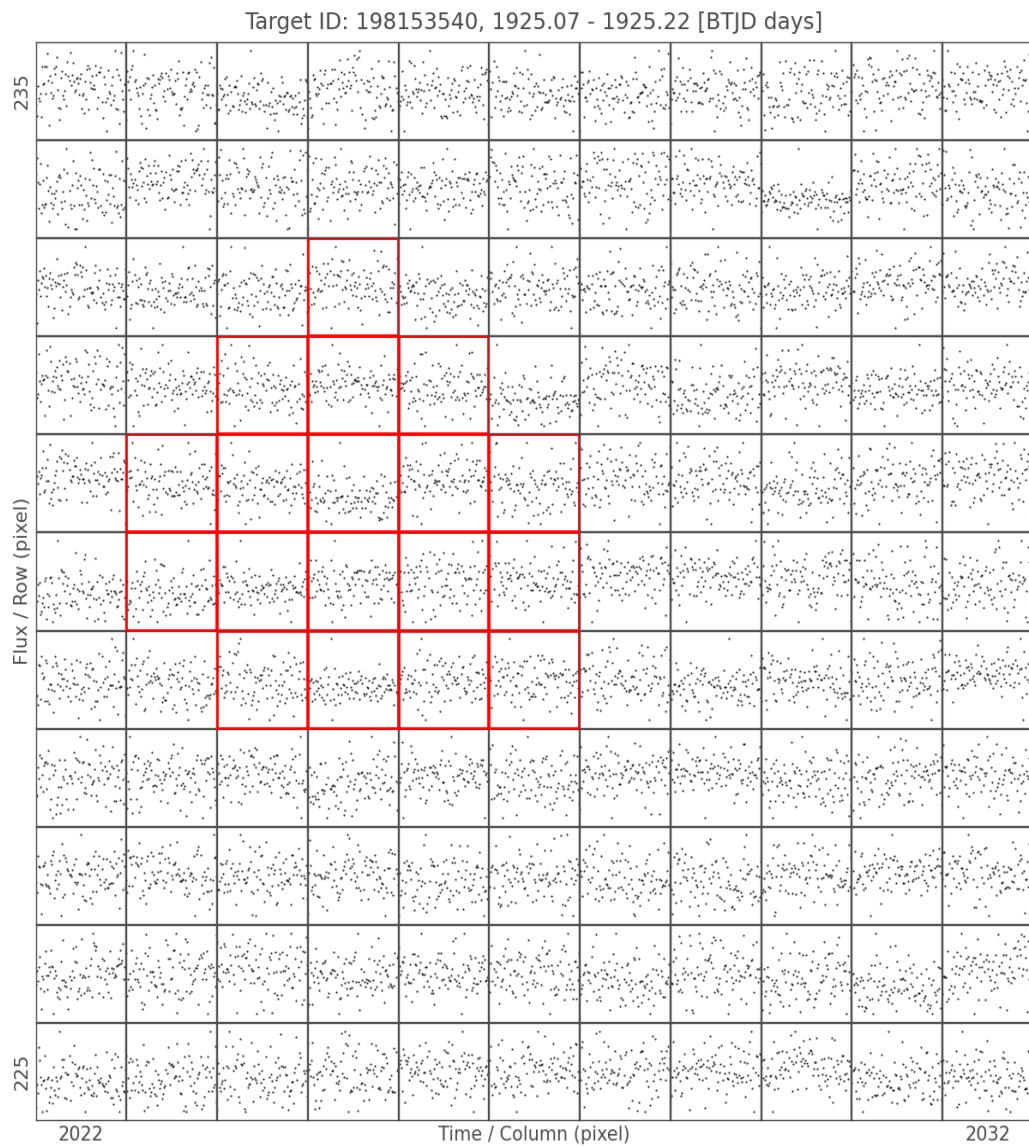
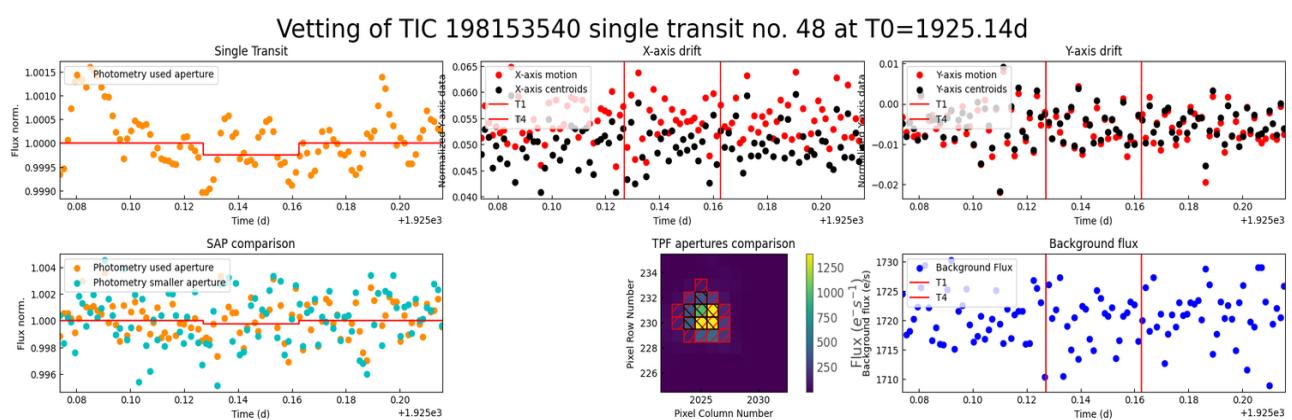


Figure 58: The single transit no. 48 vetting plots

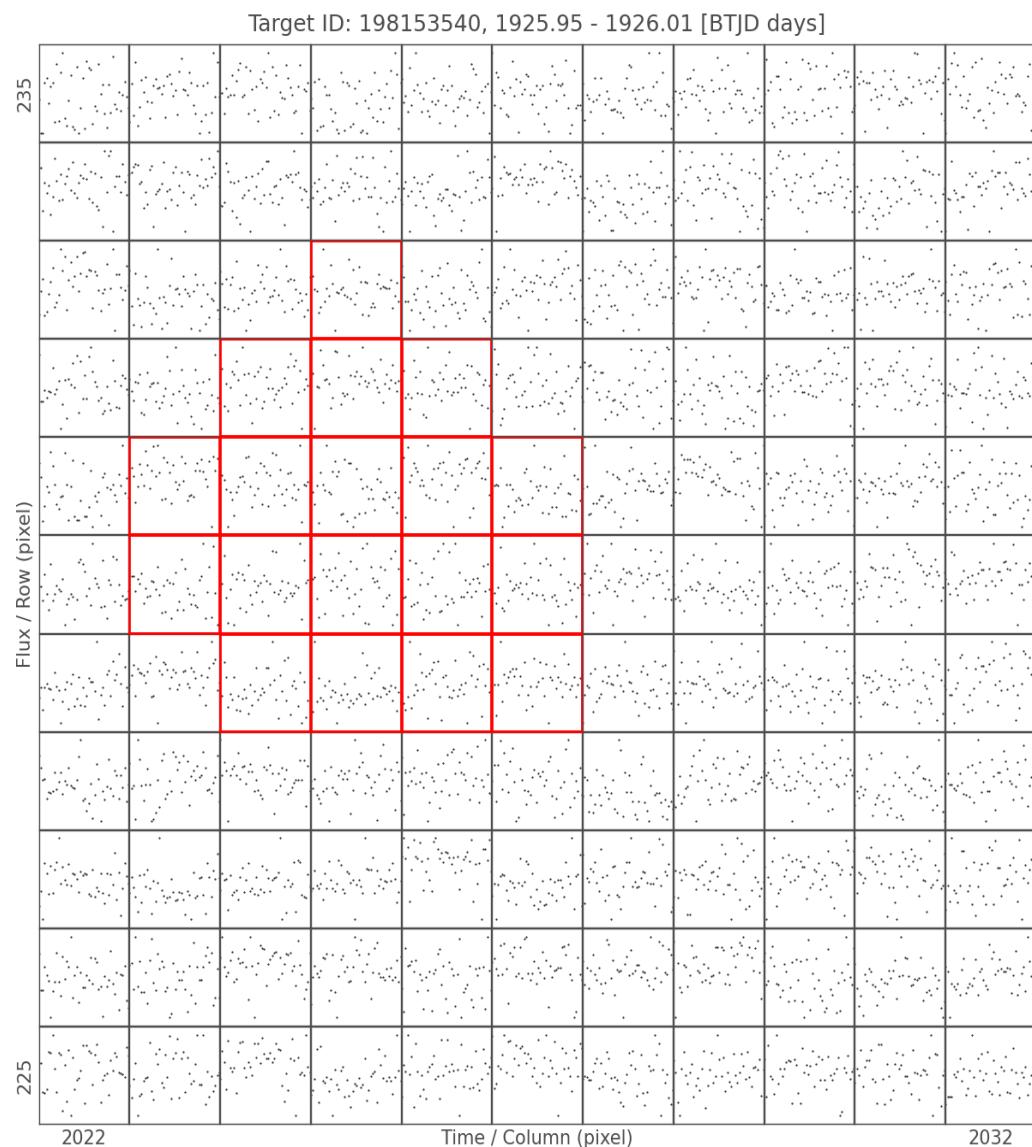
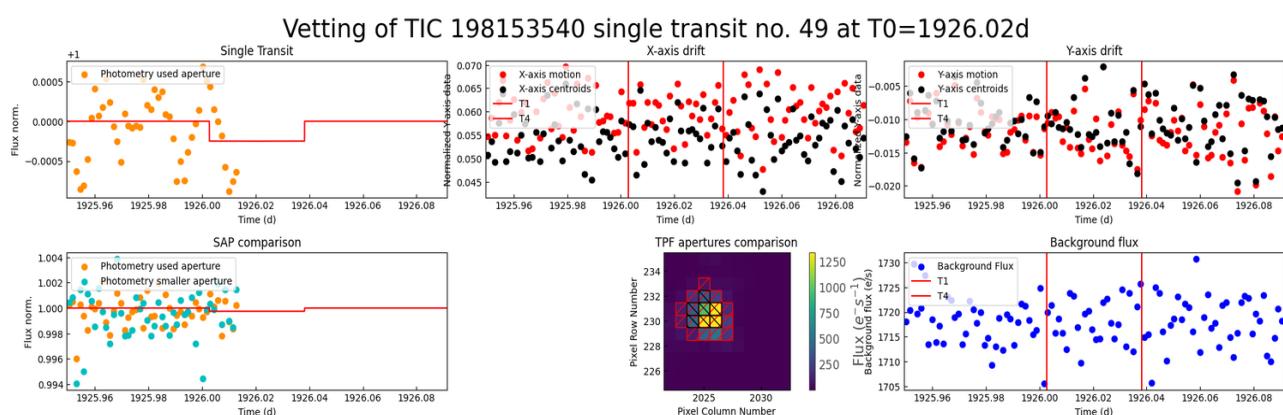


Figure 59: The single transit no. 49 vetting plots

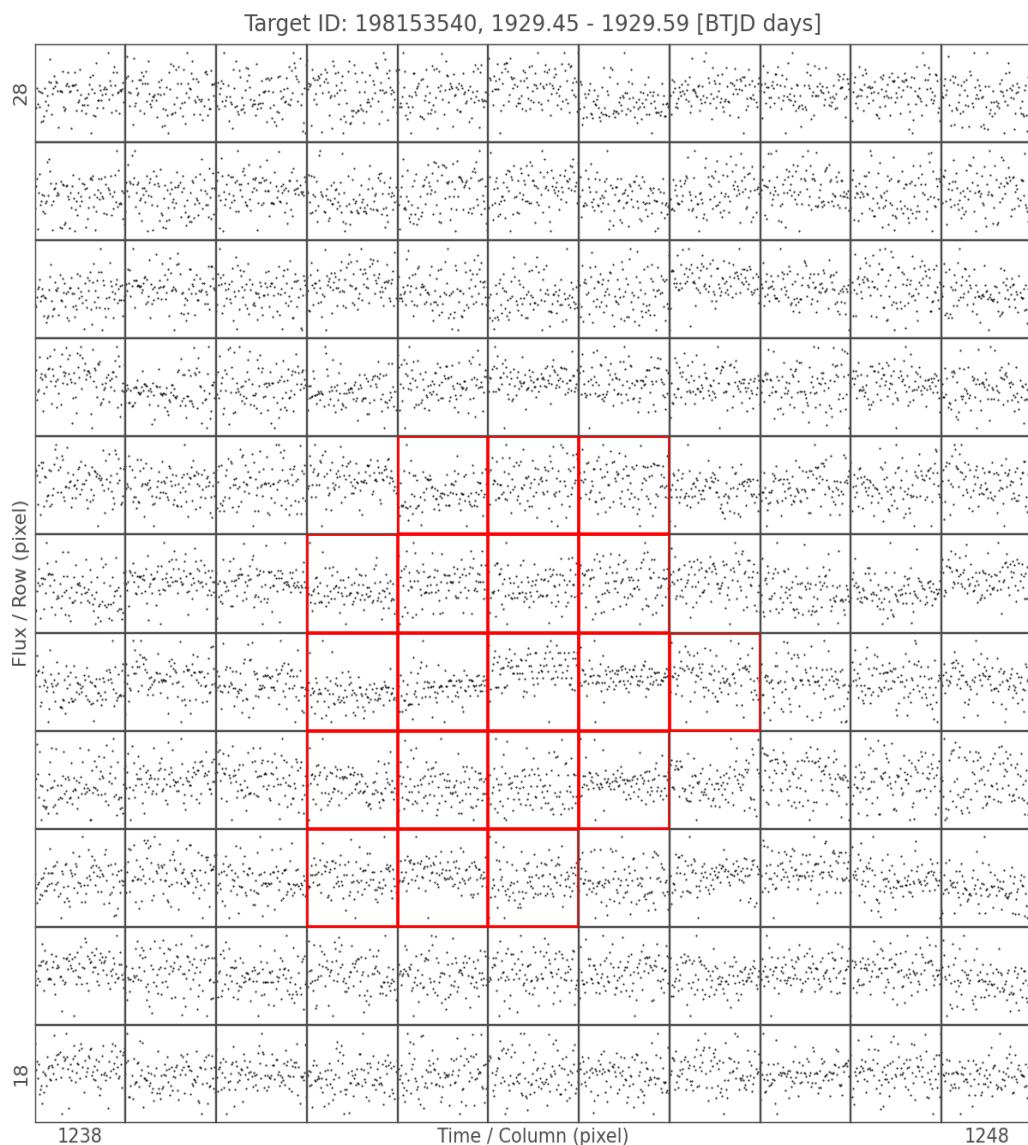
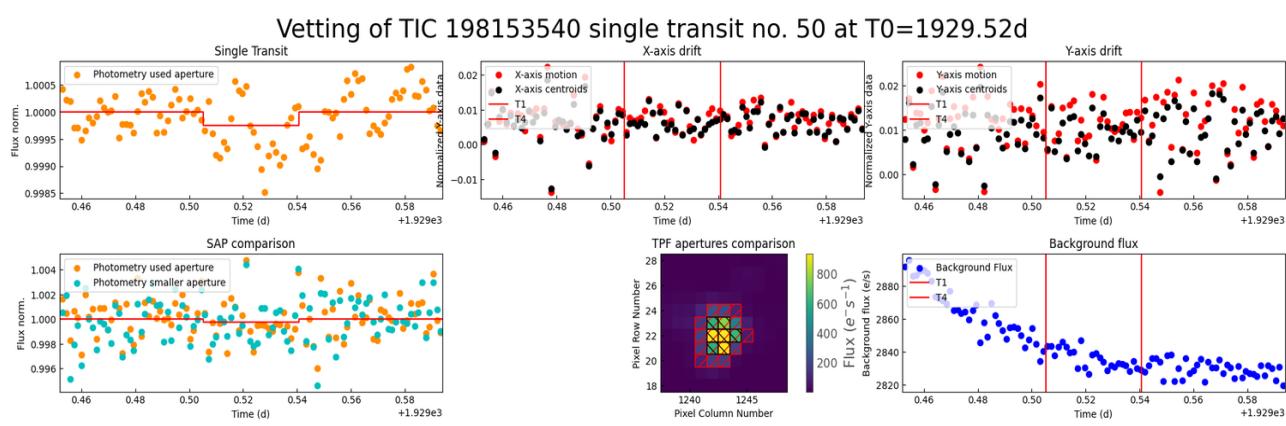


Figure 60: The single transit no. 50 vetting plots

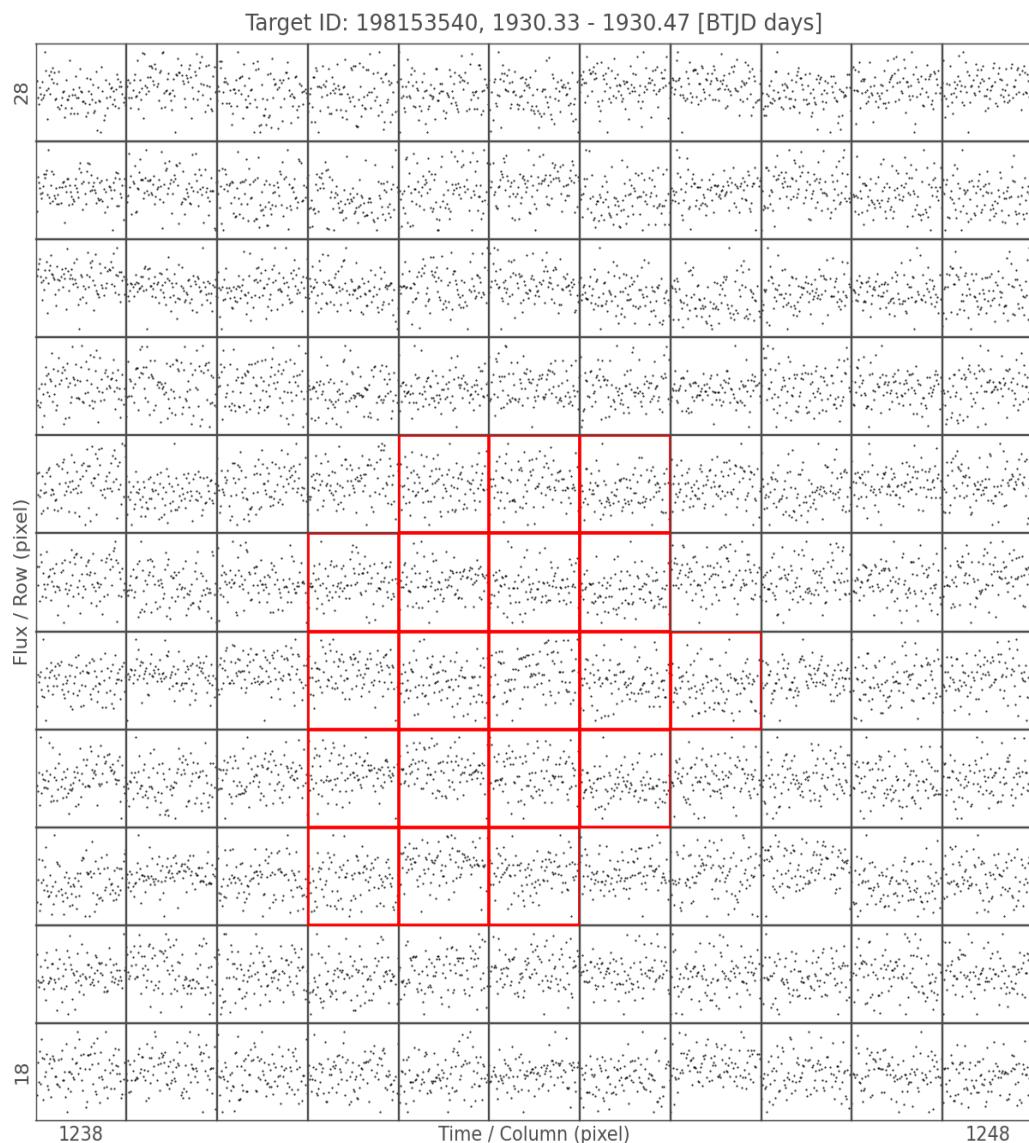
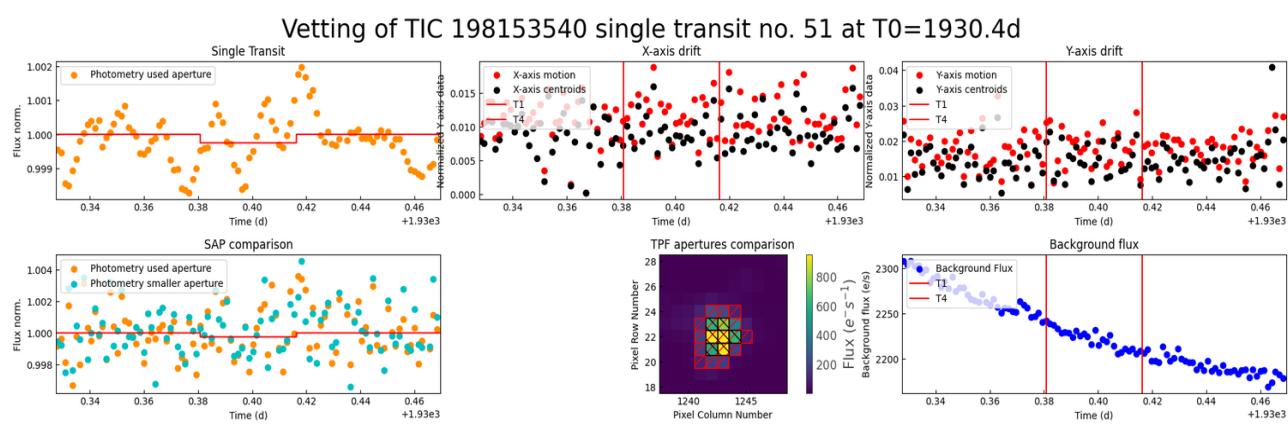


Figure 61: The single transit no. 51 vetting plots



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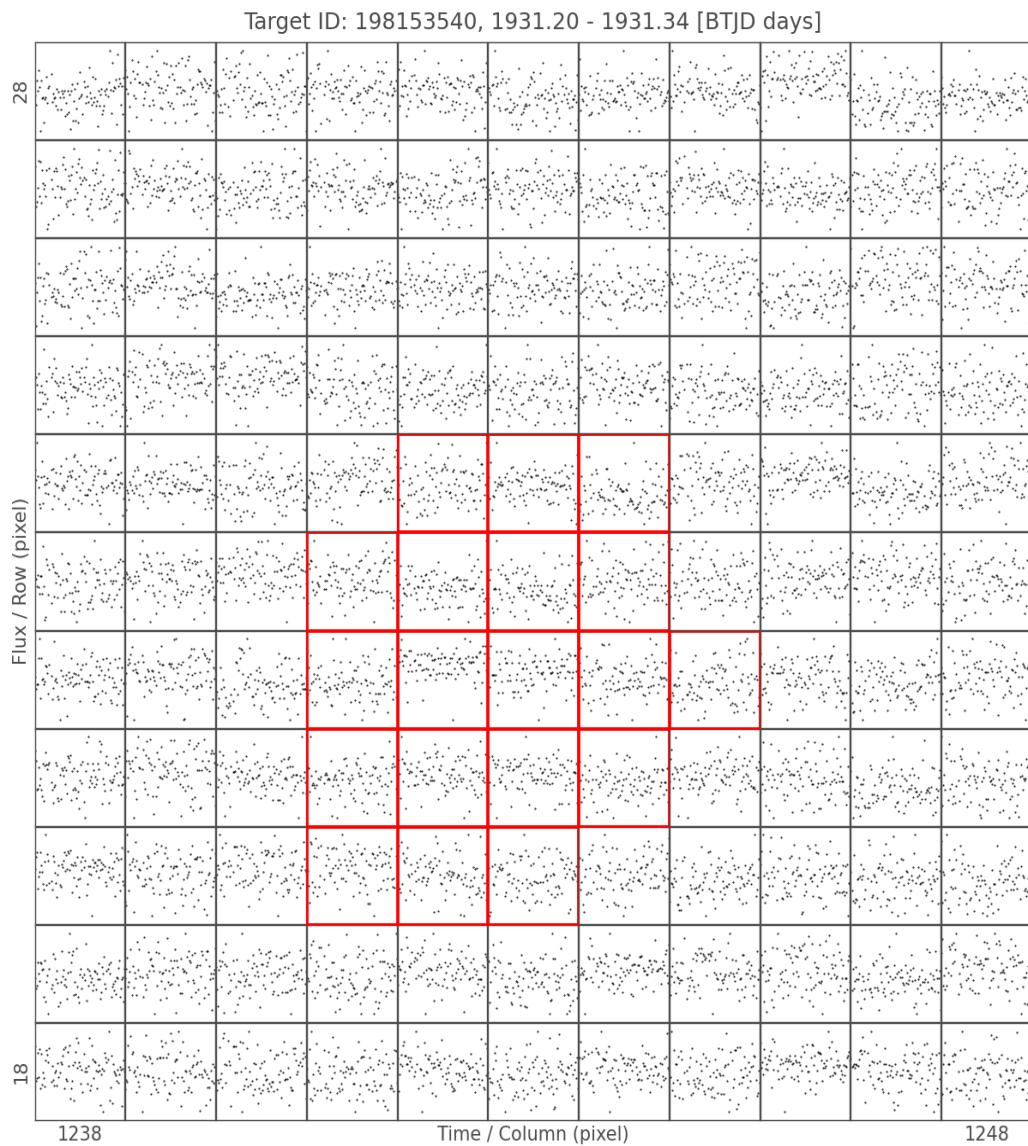
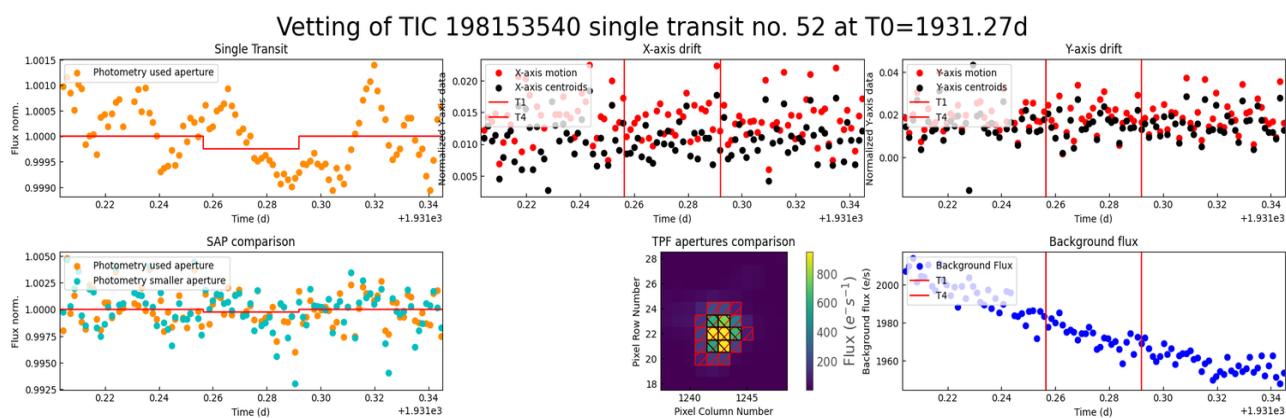


Figure 62: The single transit no. 52 vetting plots

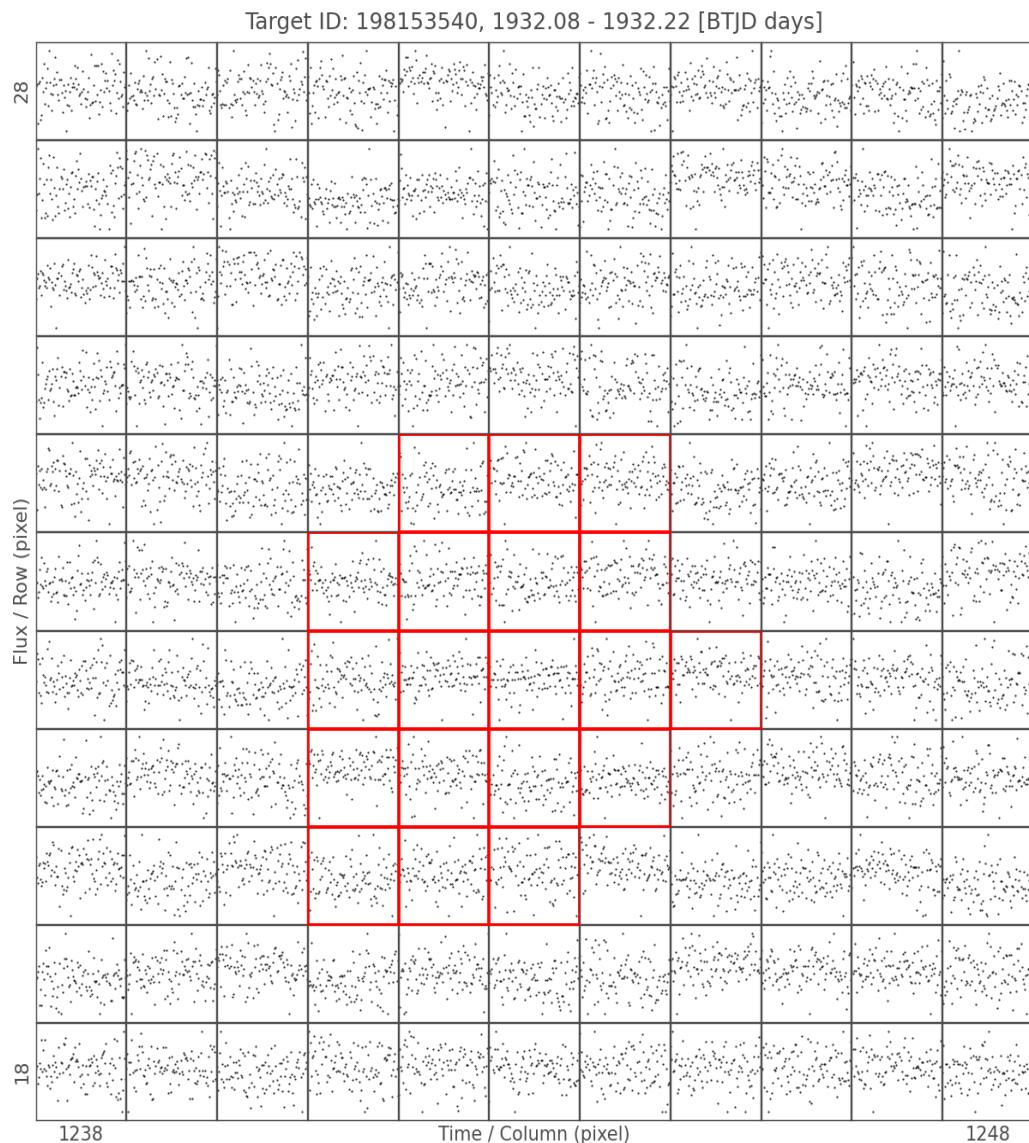
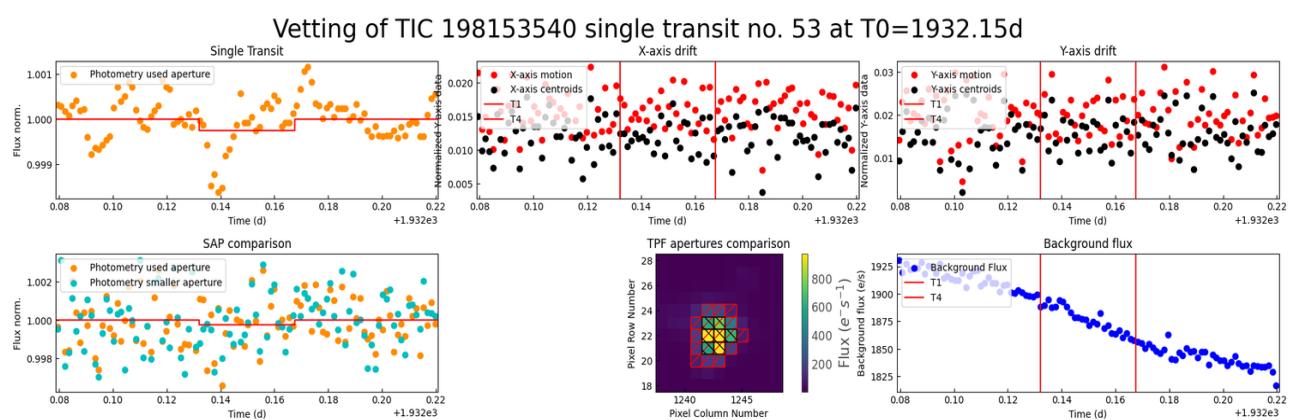


Figure 63: The single transit no. 53 vetting plots

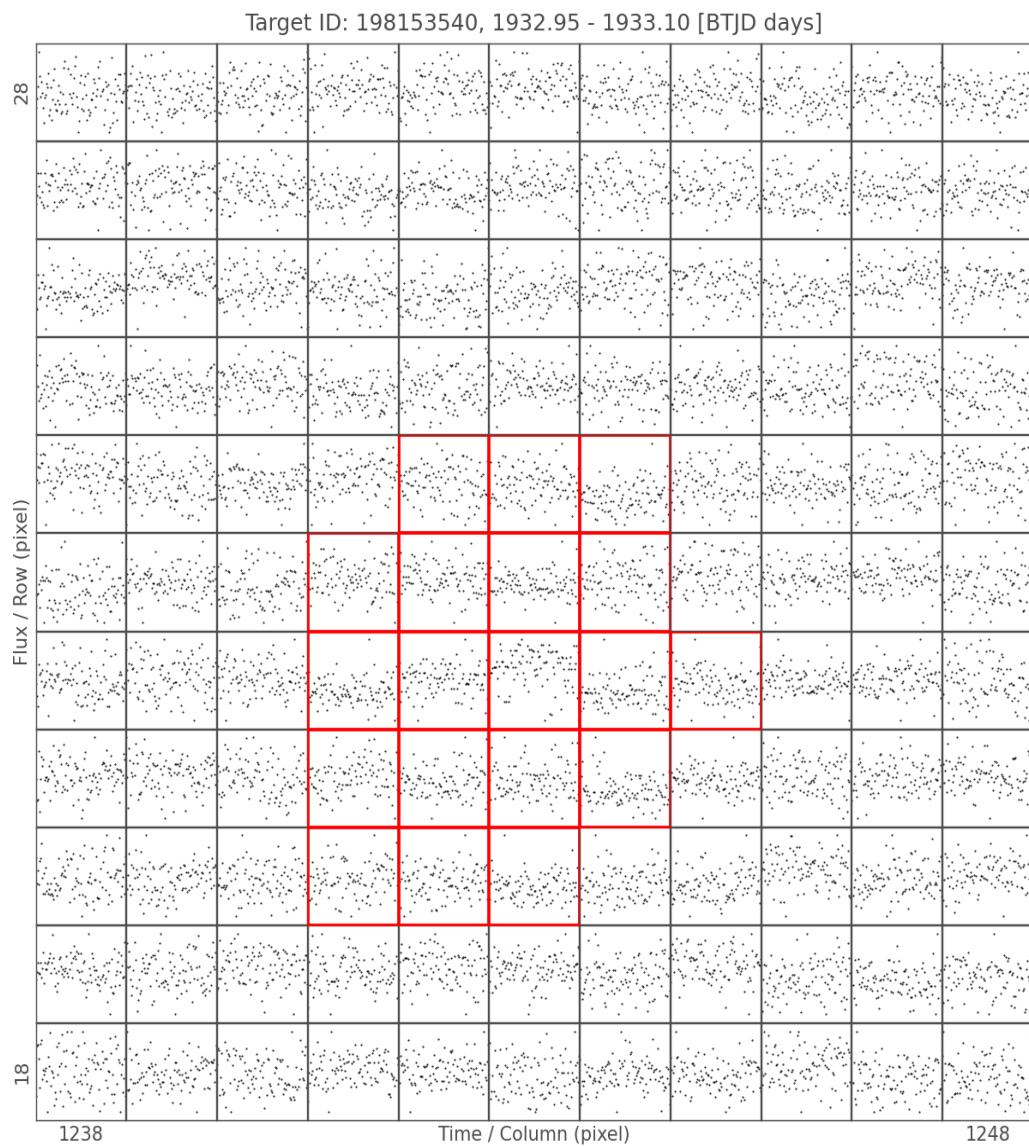
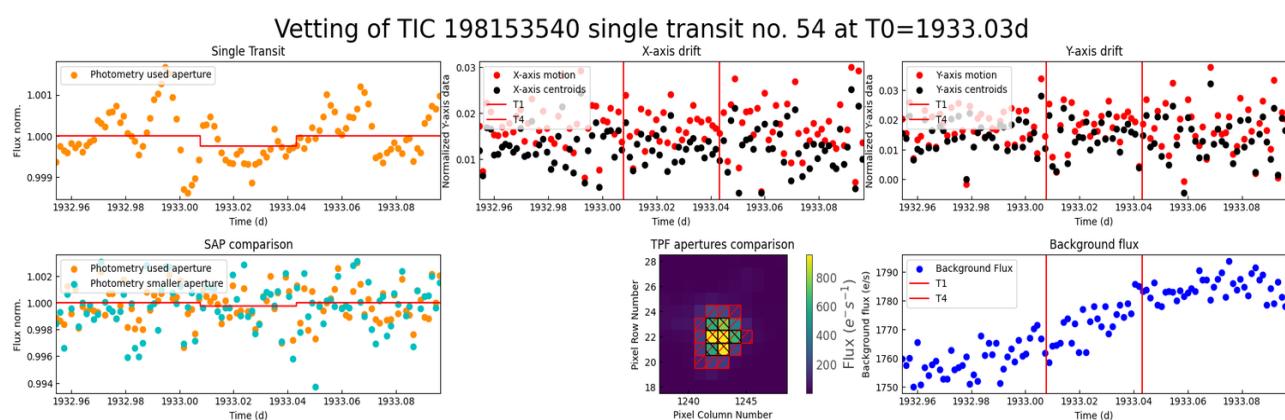


Figure 64: The single transit no. 54 vetting plots

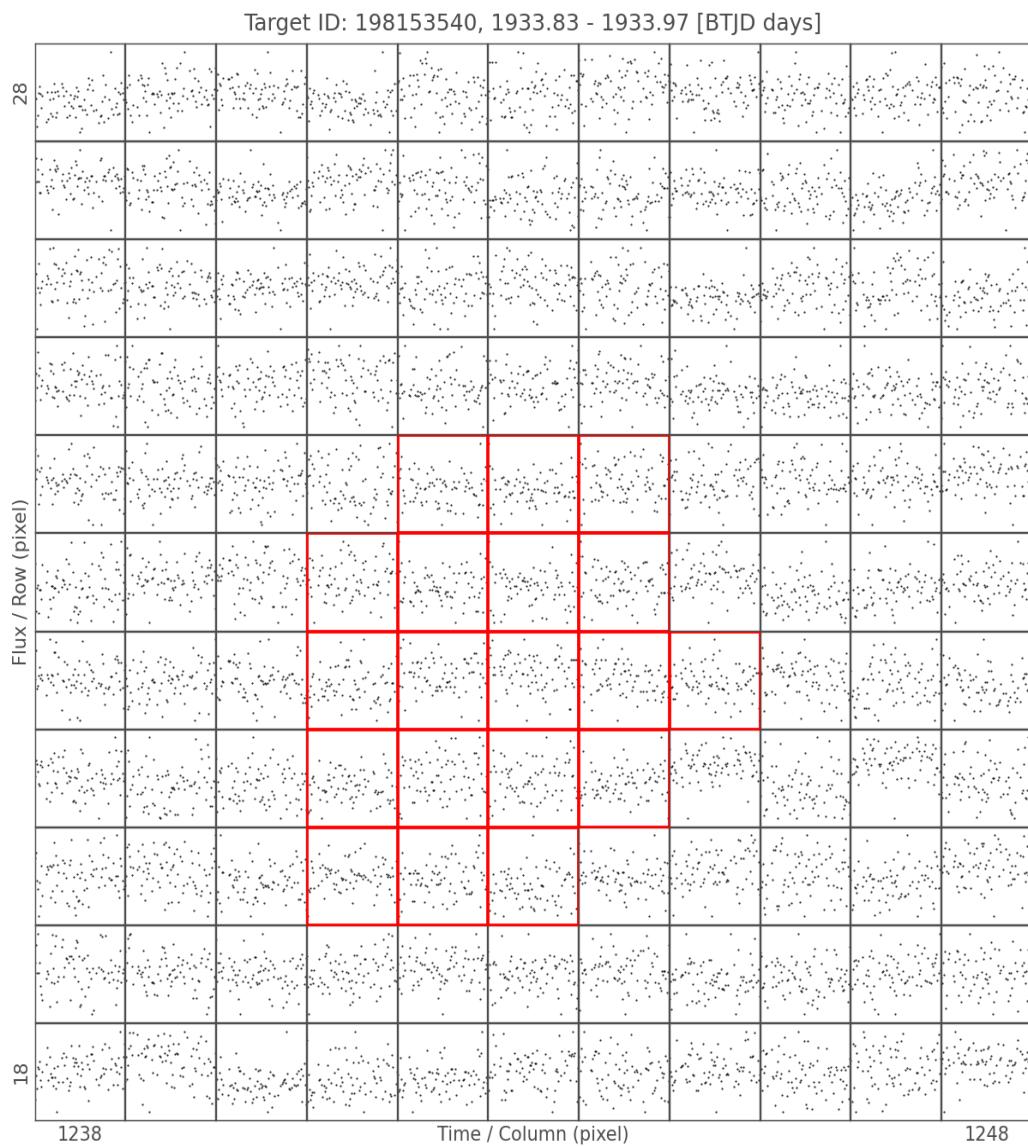
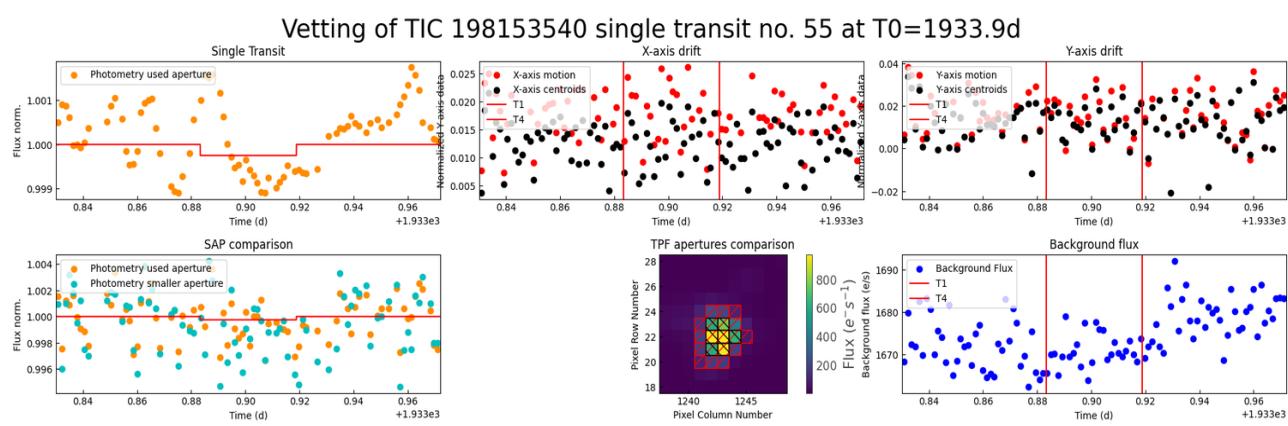


Figure 65: The single transit no. 55 vetting plots



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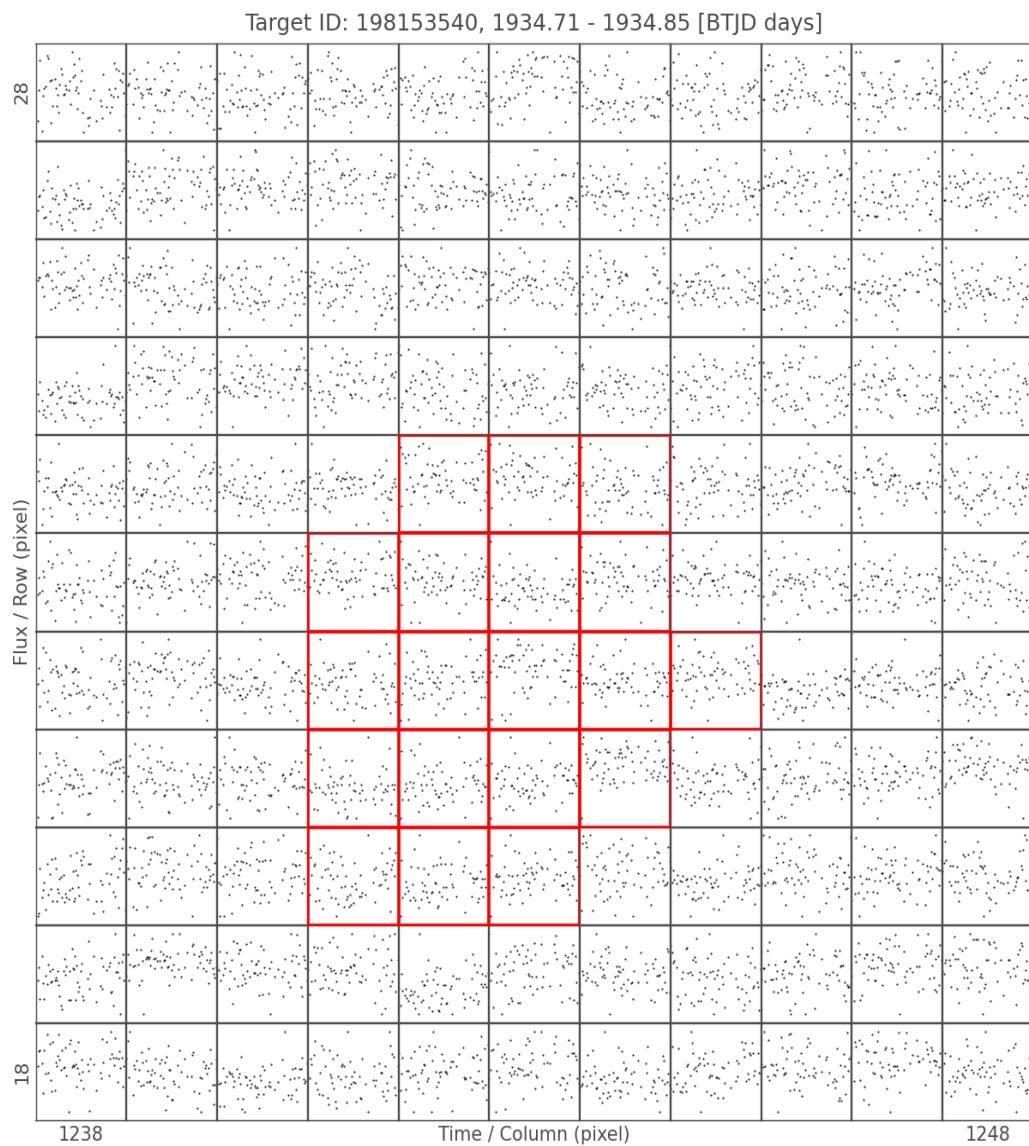
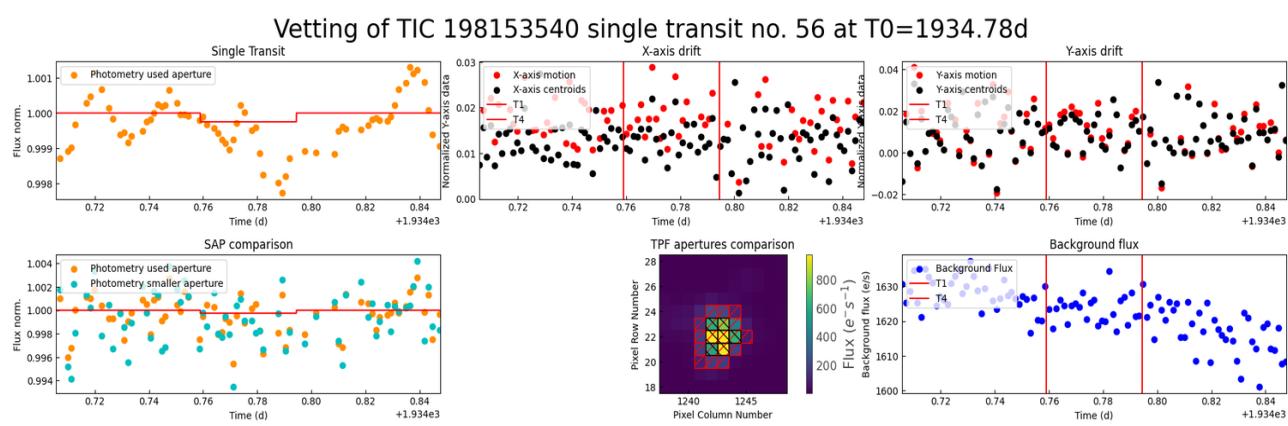


Figure 66: The single transit no. 56 vetting plots



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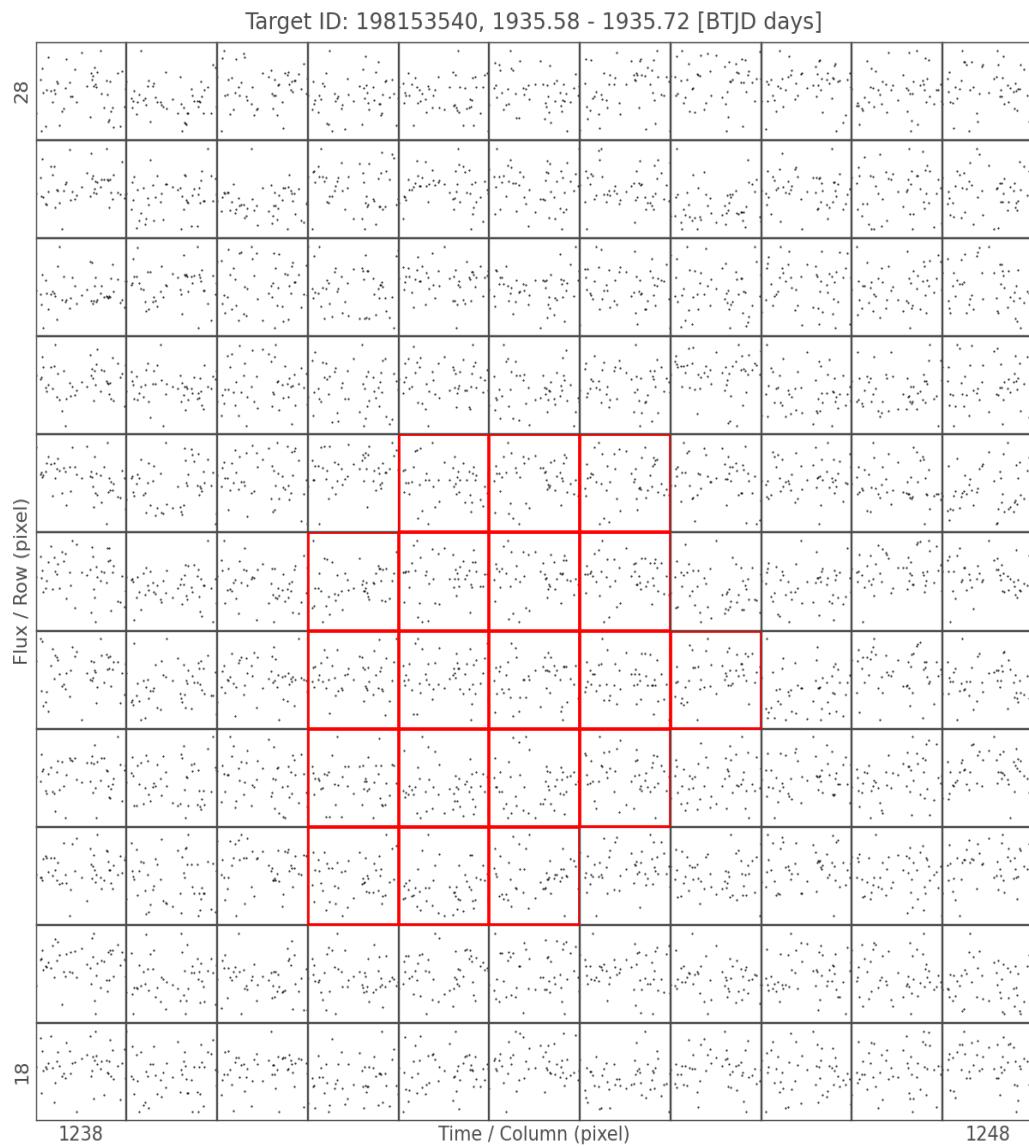
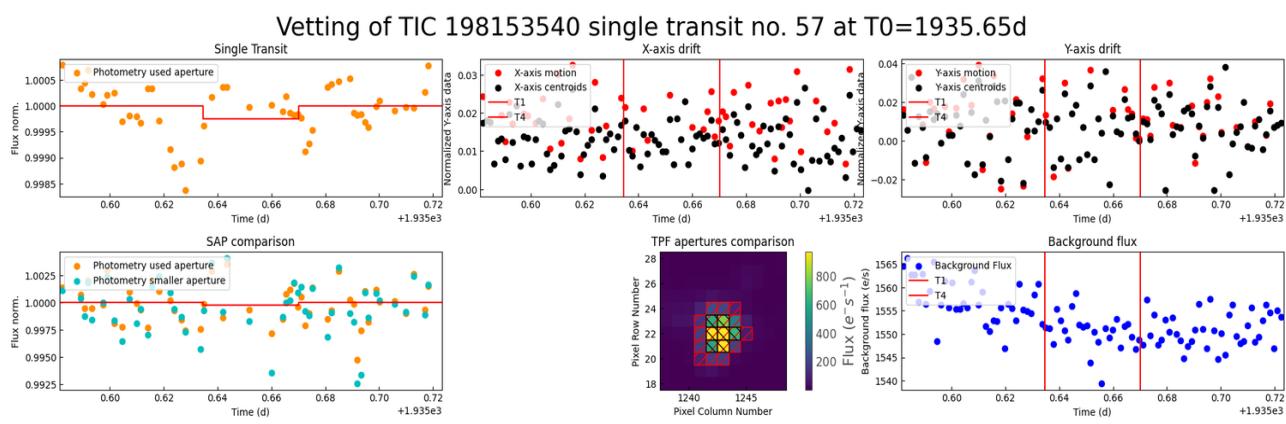


Figure 67: The single transit no. 57 vetting plots

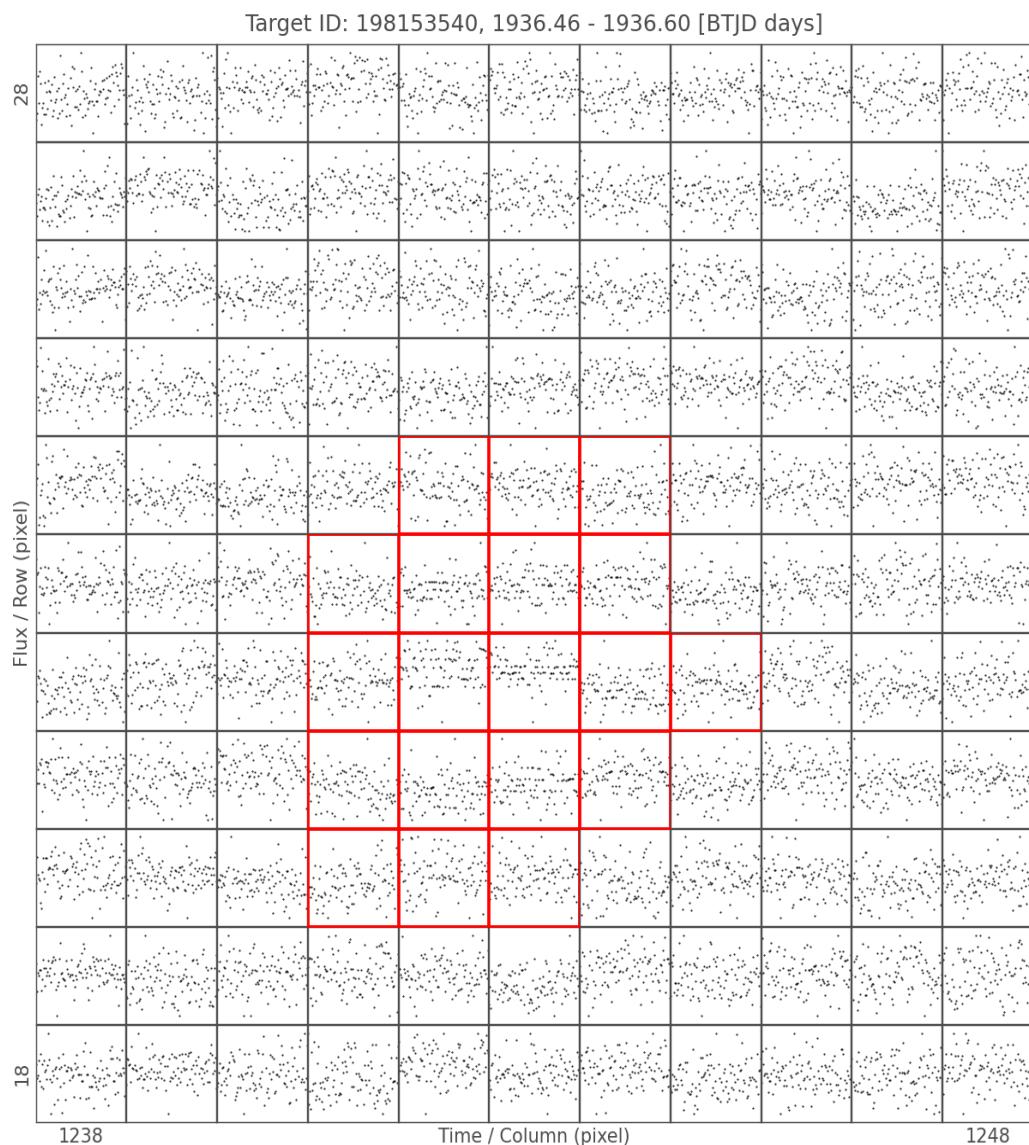
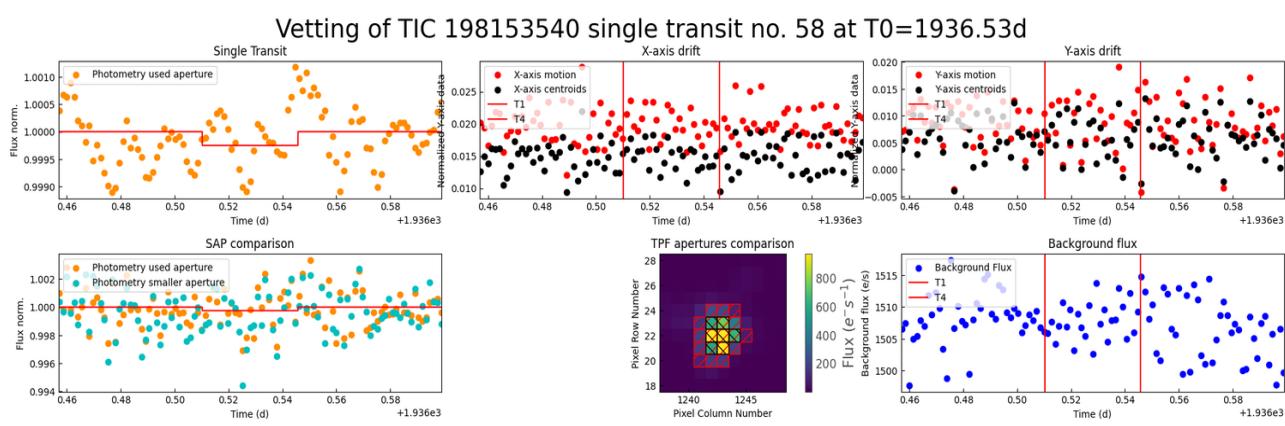


Figure 68: The single transit no. 58 vetting plots

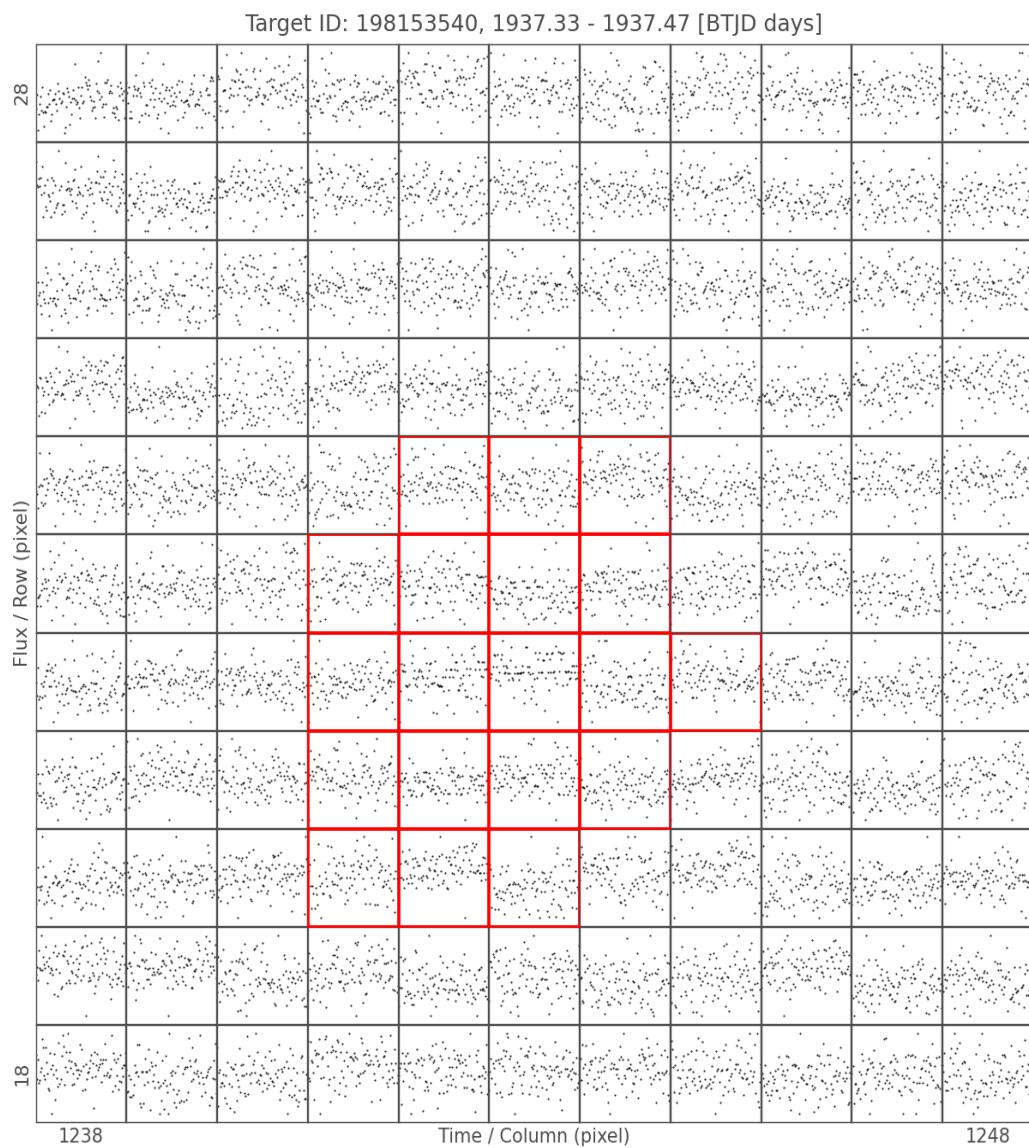
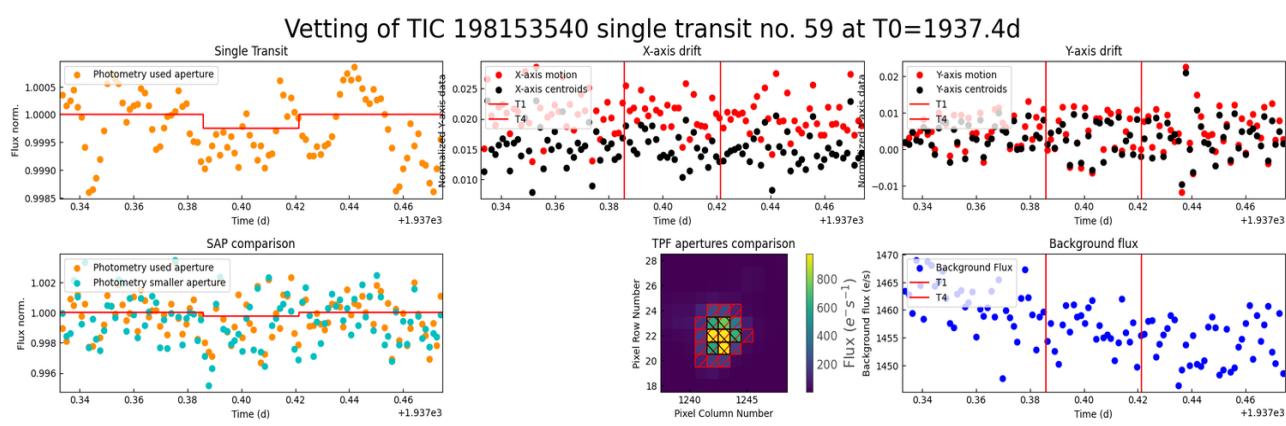


Figure 69: The single transit no. 59 vetting plots



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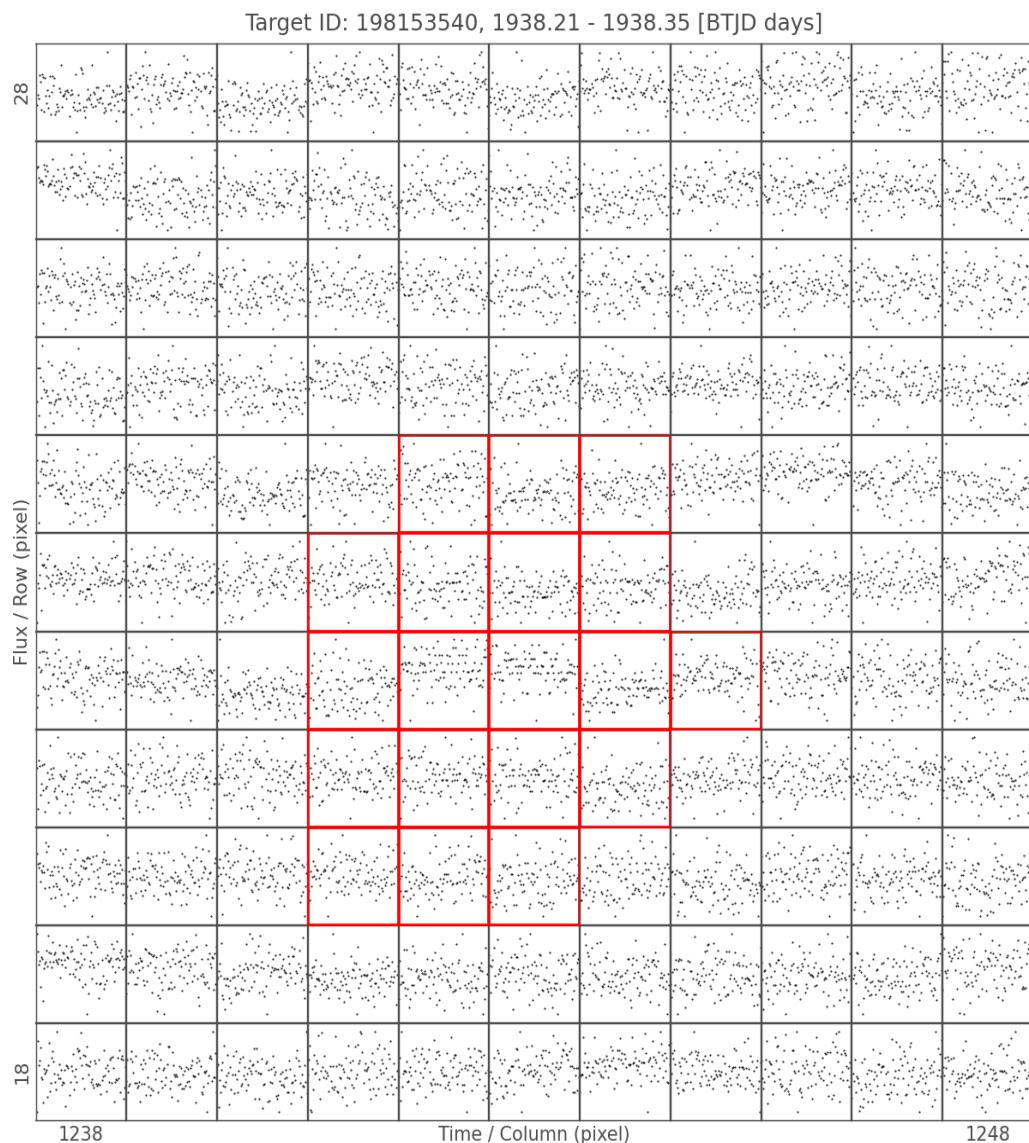
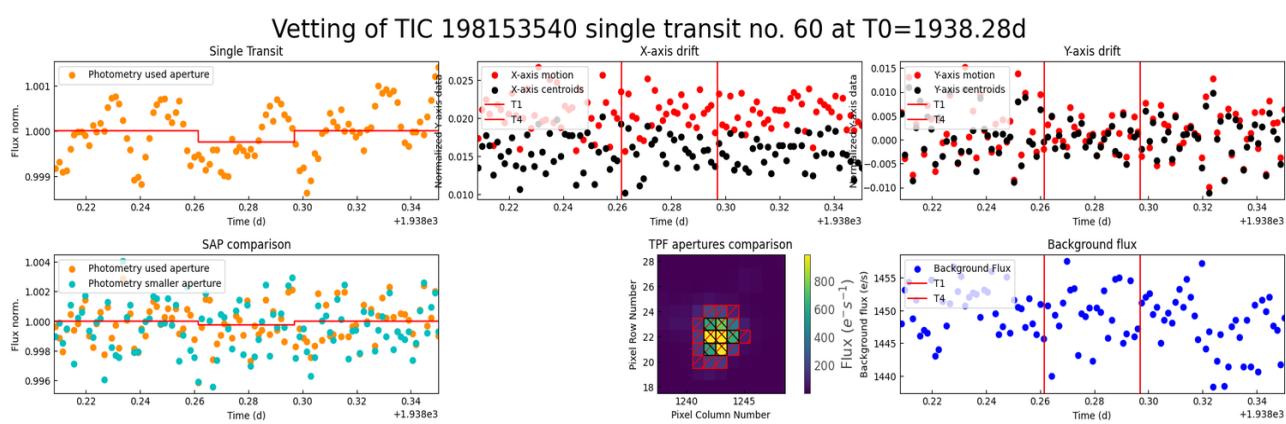


Figure 70: The single transit no. 60 vetting plots



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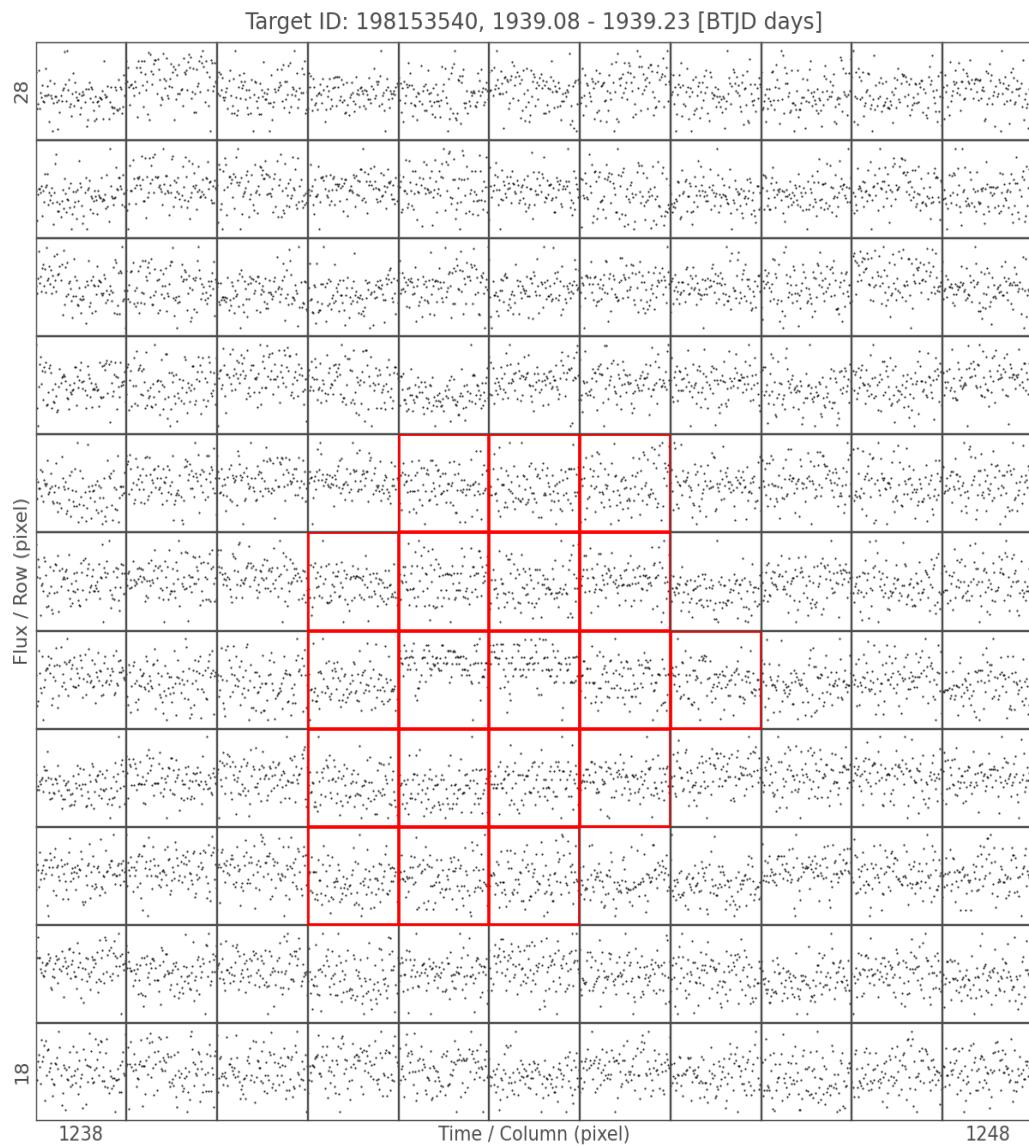
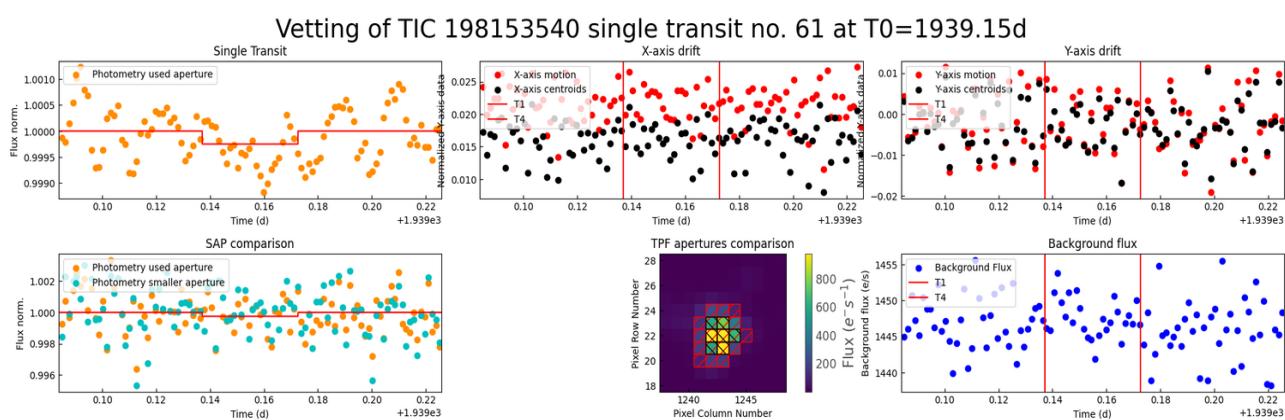


Figure 71: The single transit no. 61 vetting plots



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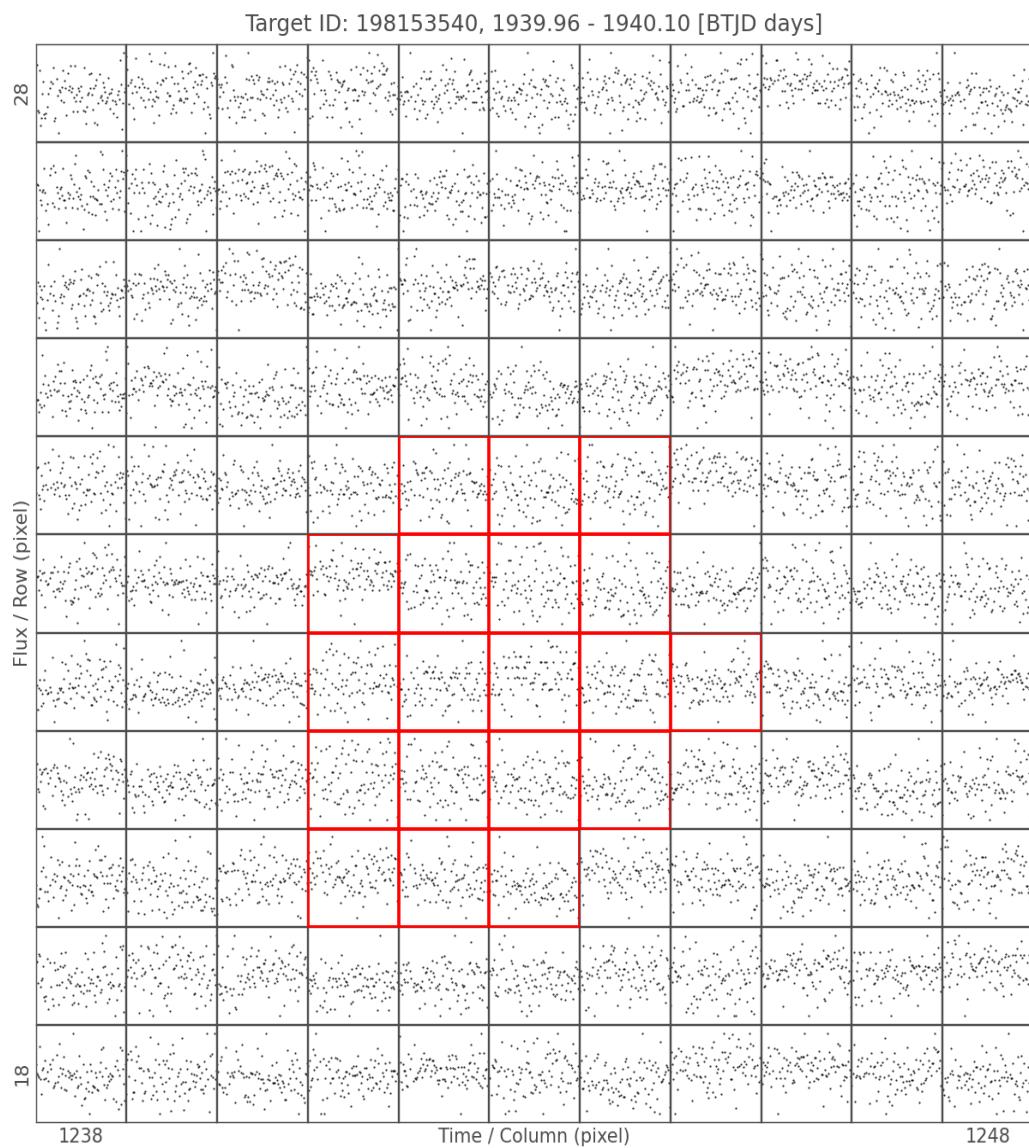
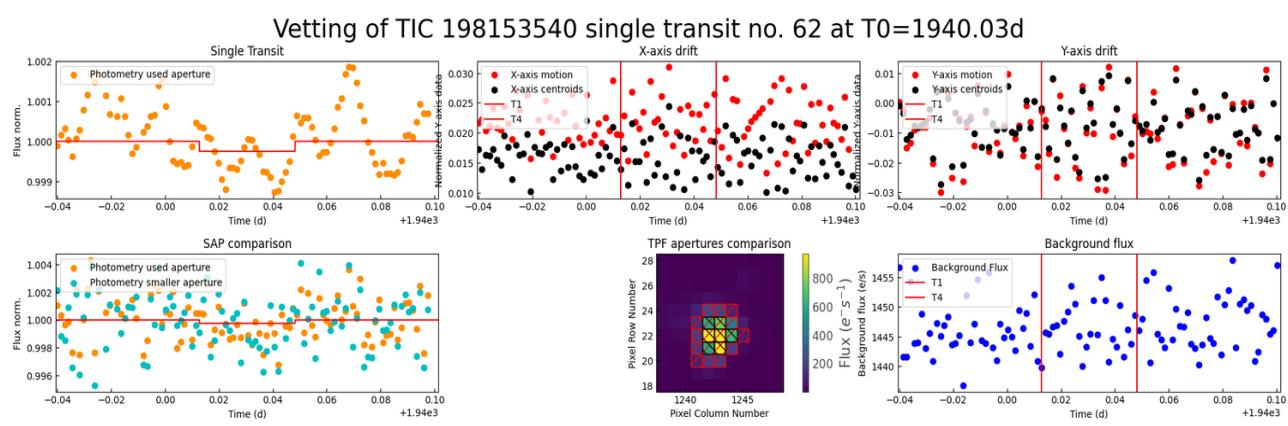


Figure 72: The single transit no. 62 vetting plots

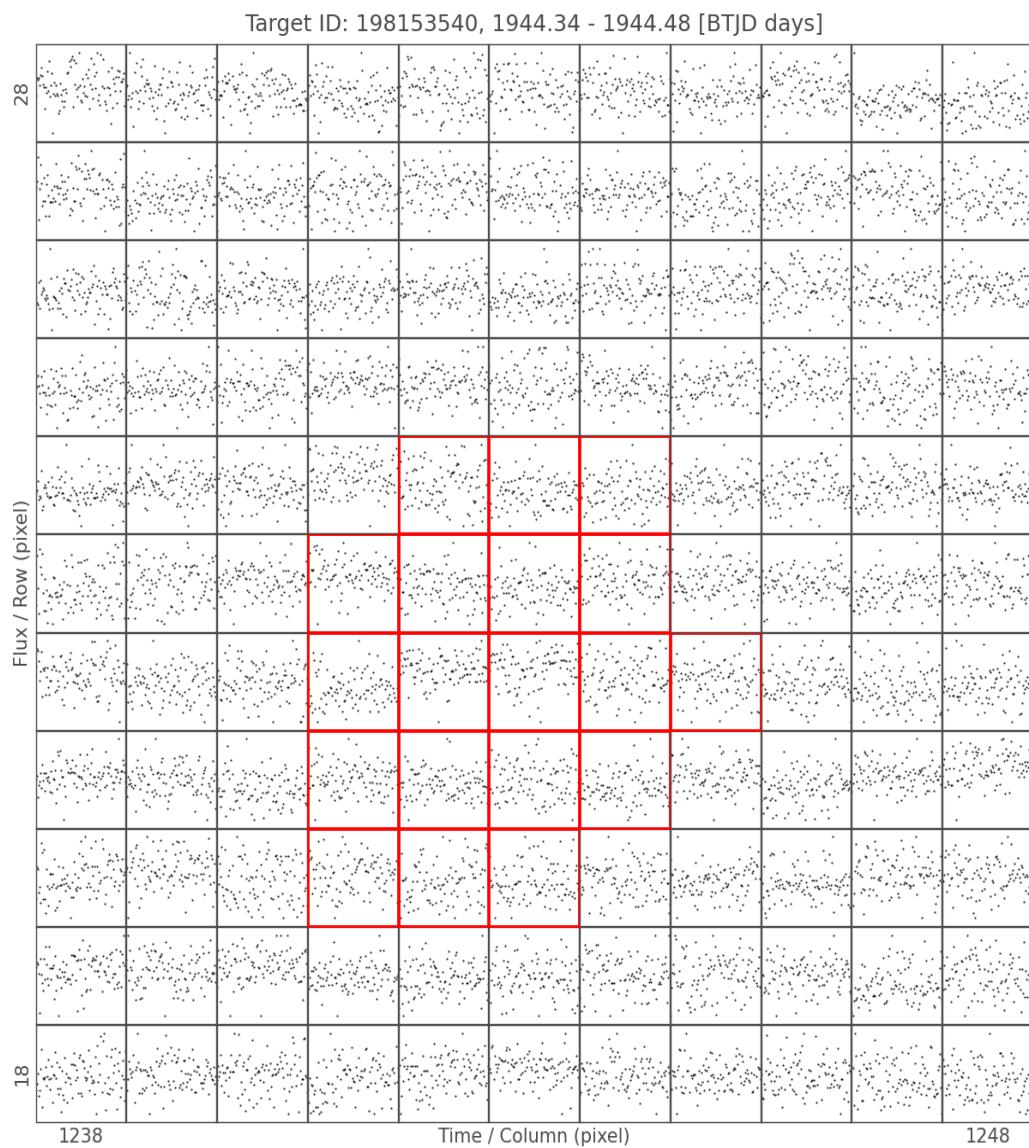
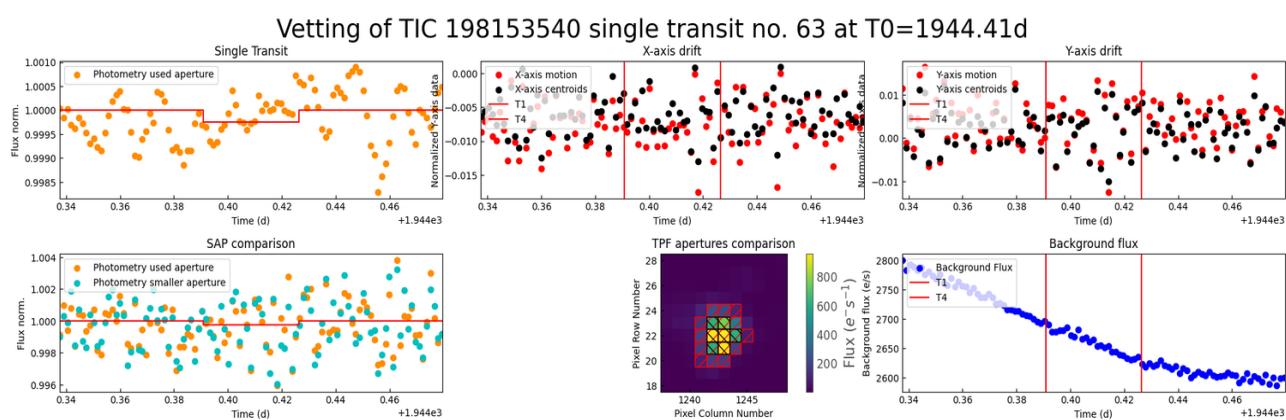


Figure 73: The single transit no. 63 vetting plots

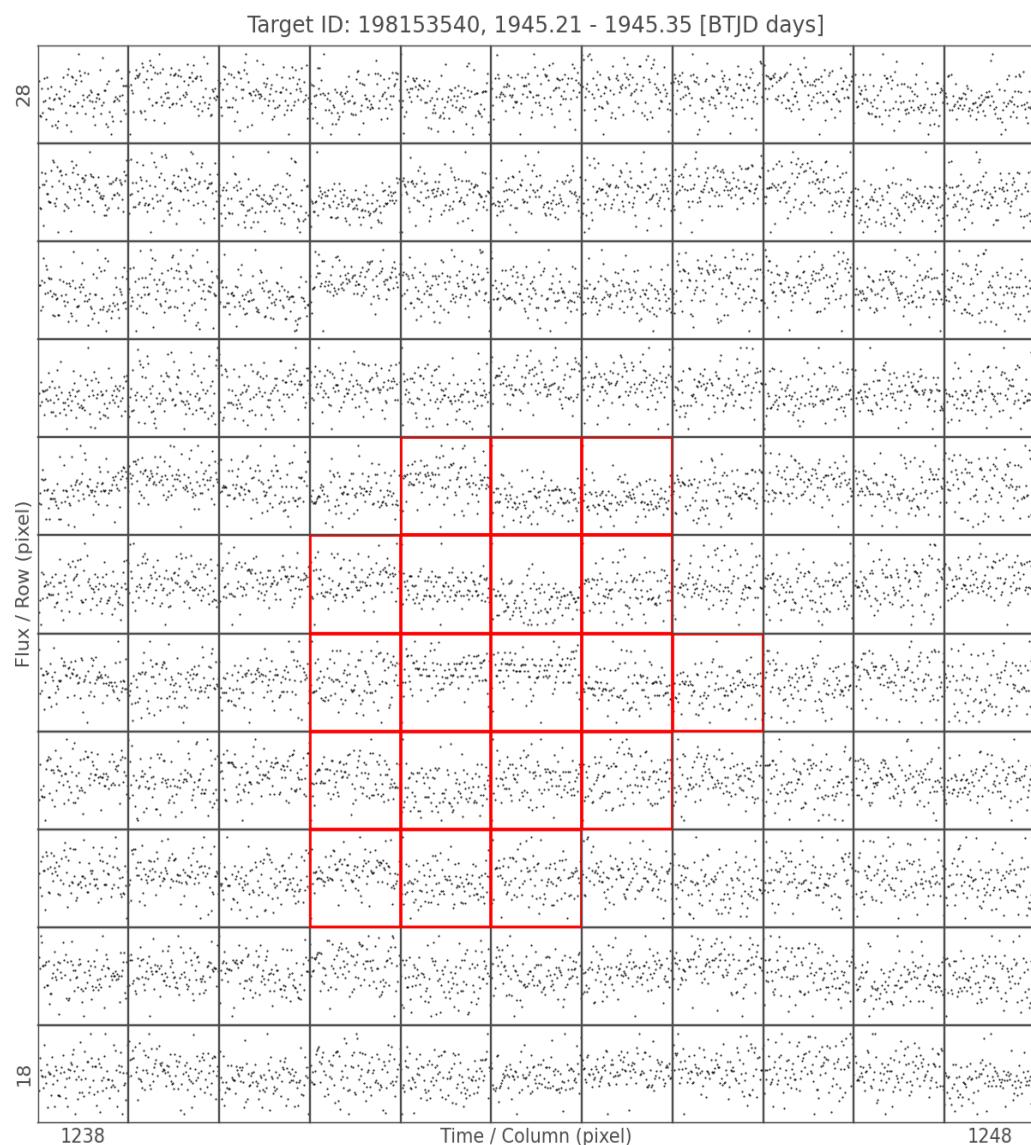
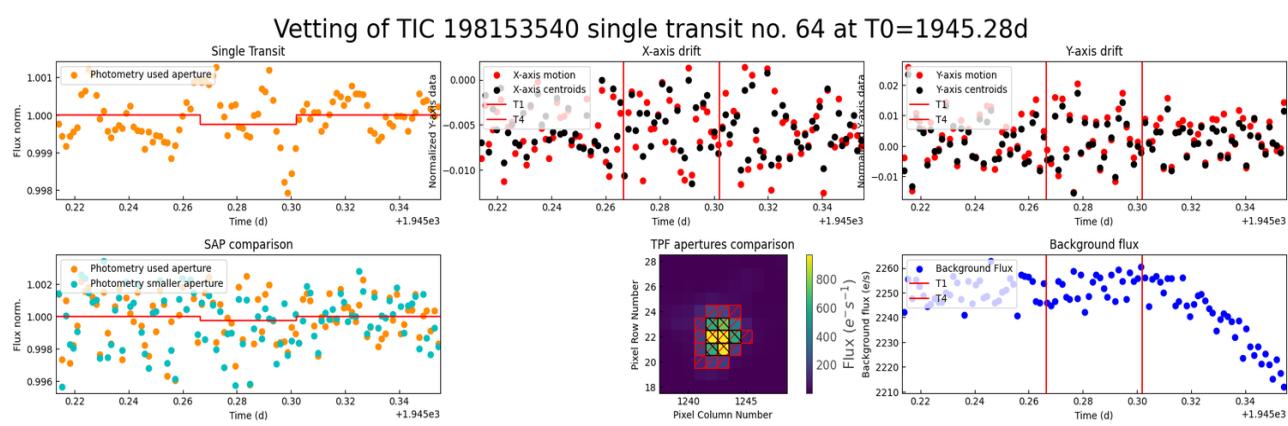


Figure 74: The single transit no. 64 vetting plots

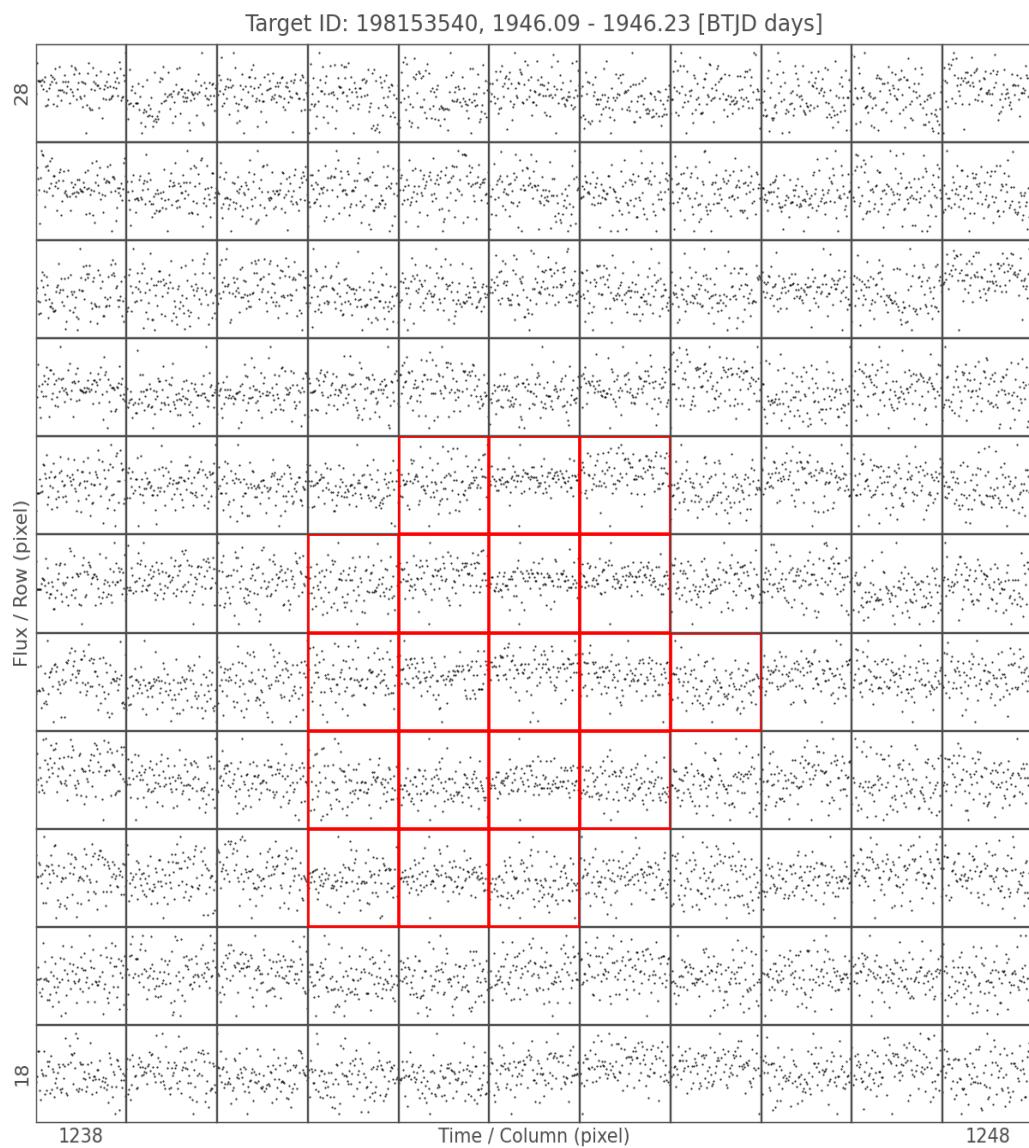
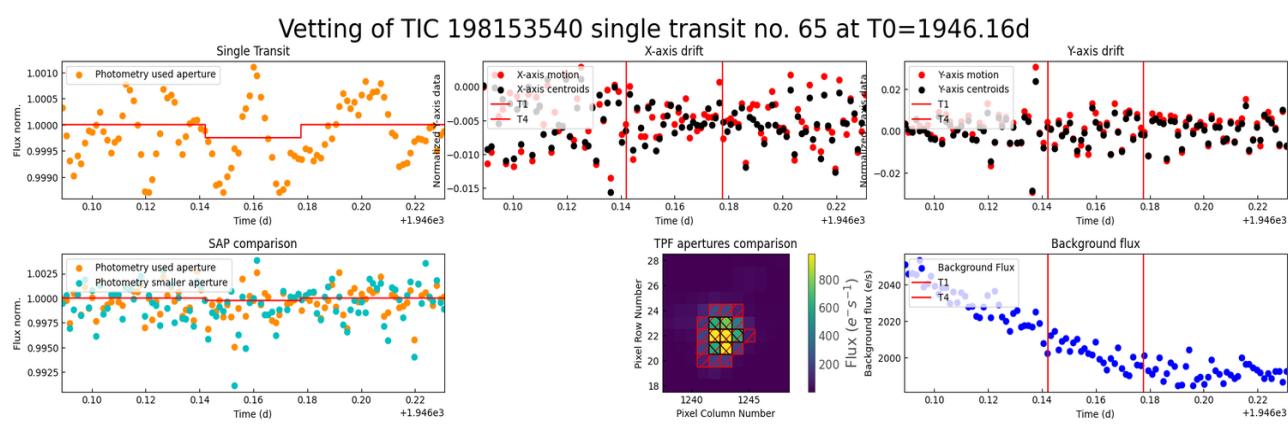


Figure 75: The single transit no. 65 vetting plots



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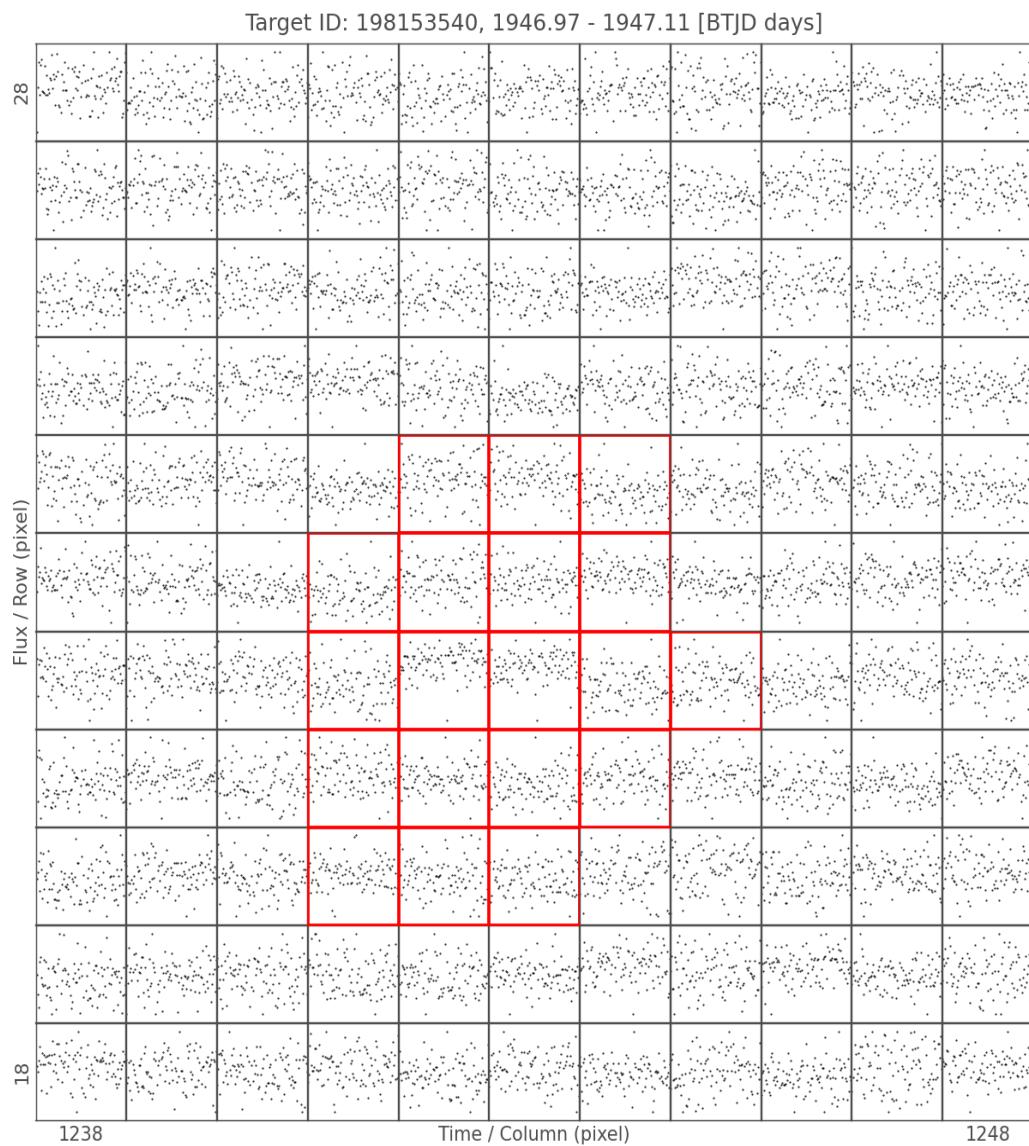
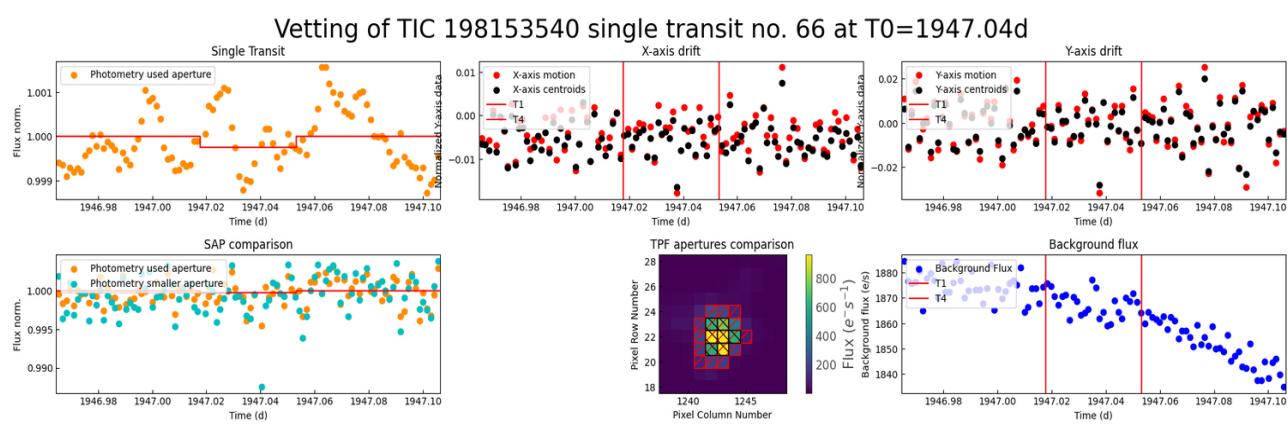


Figure 76: The single transit no. 66 vetting plots

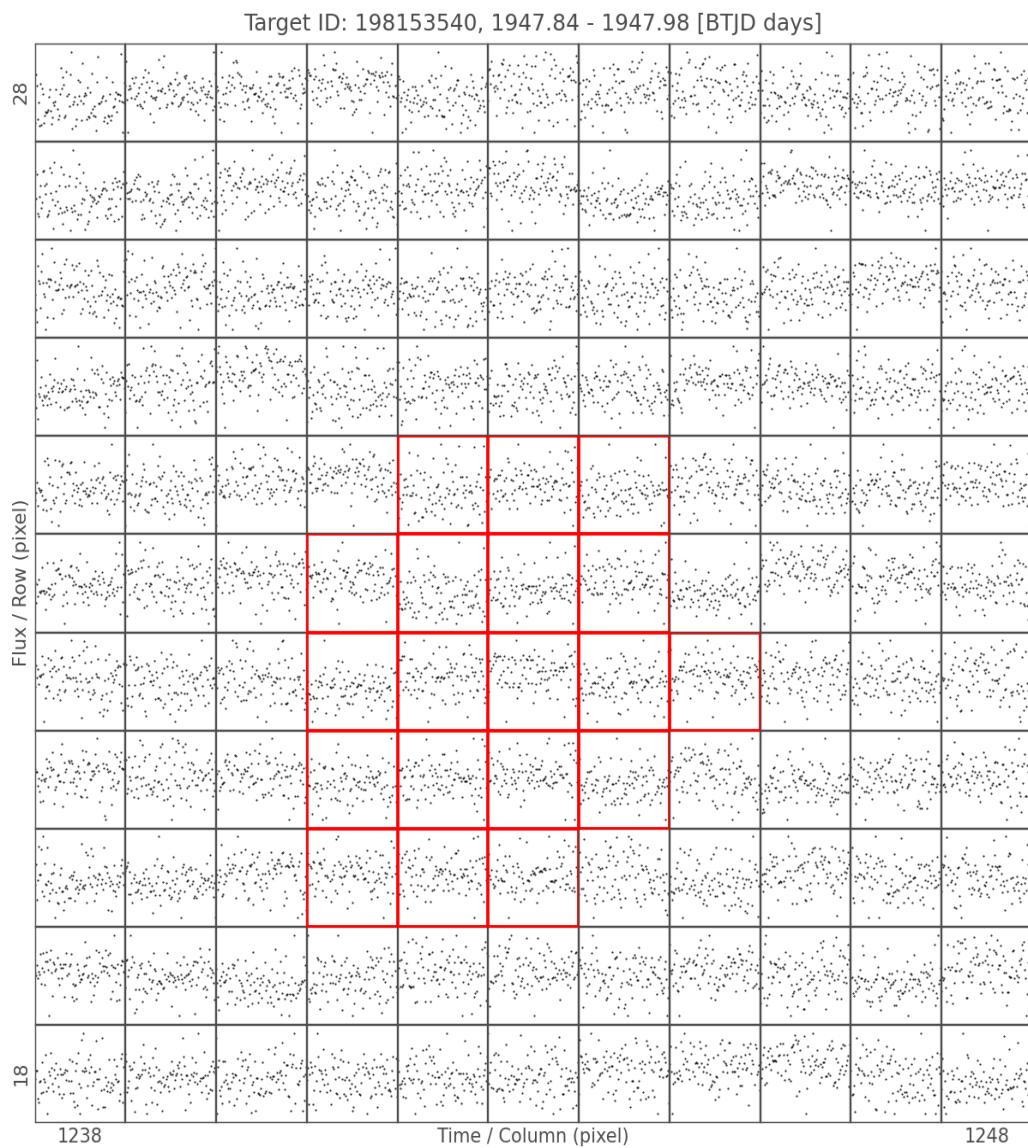
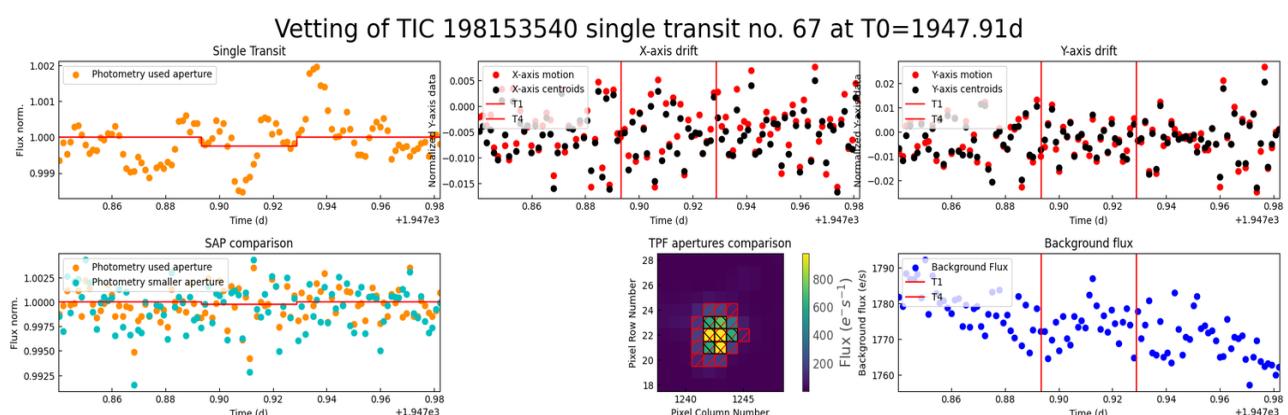


Figure 77: The single transit no. 67 vetting plots

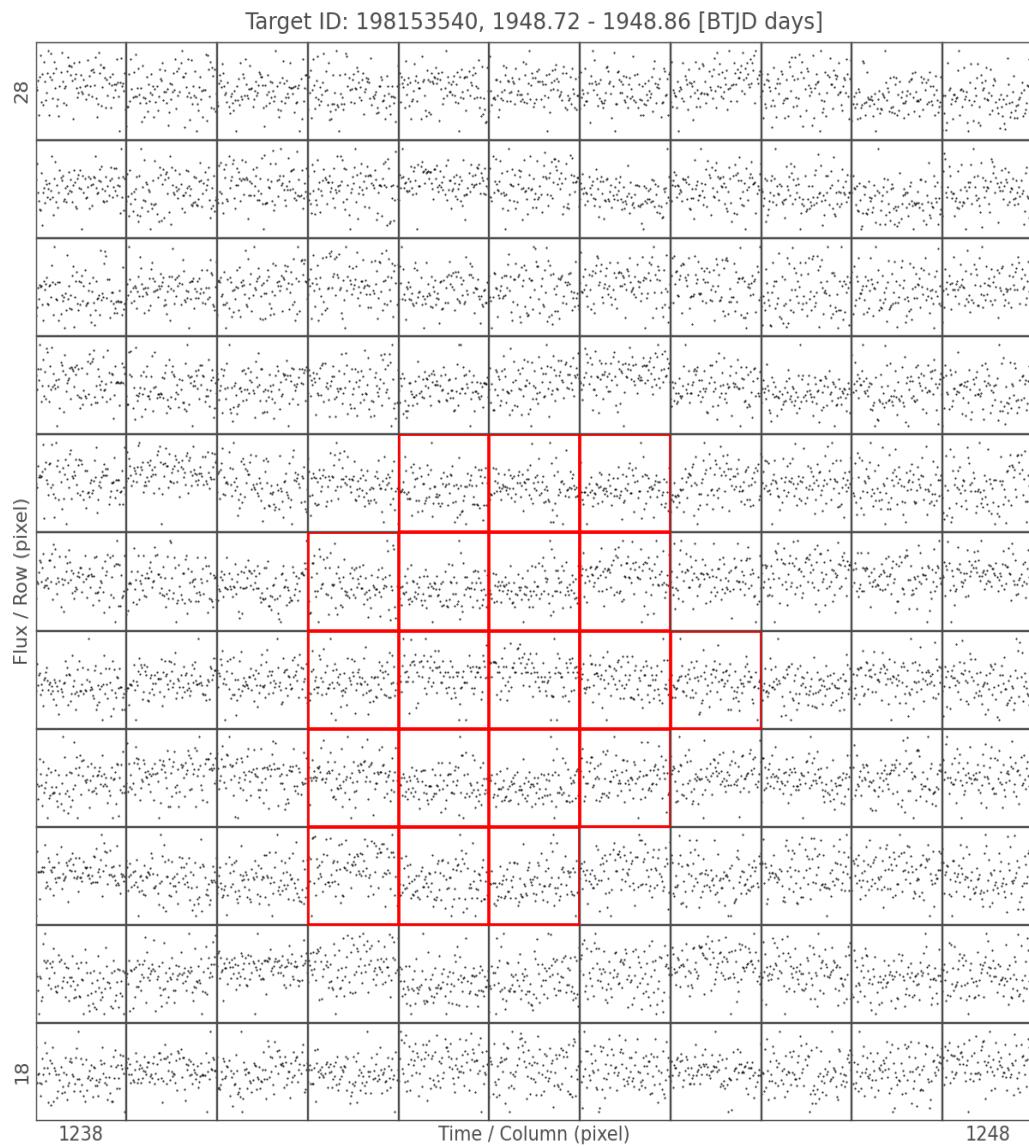
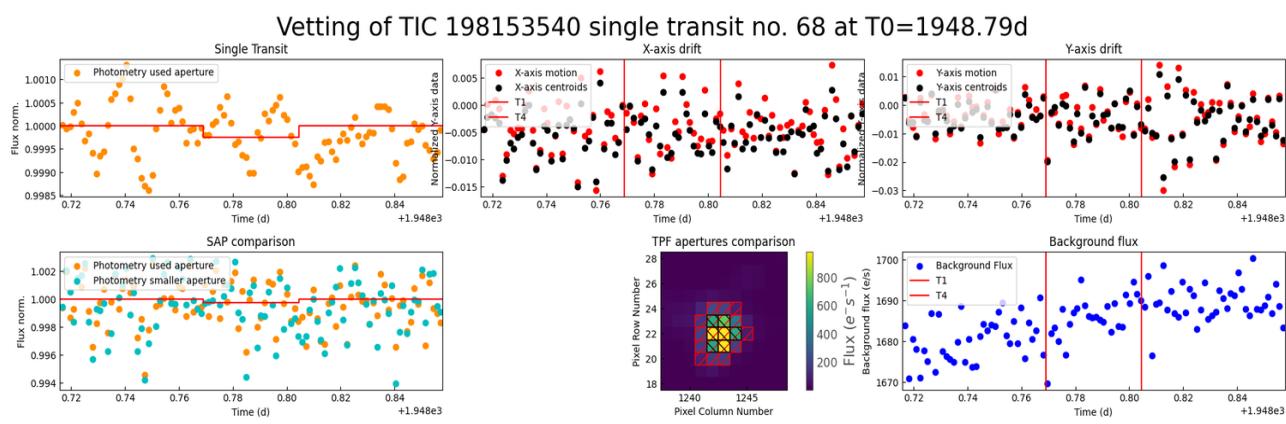


Figure 78: The single transit no. 68 vetting plots

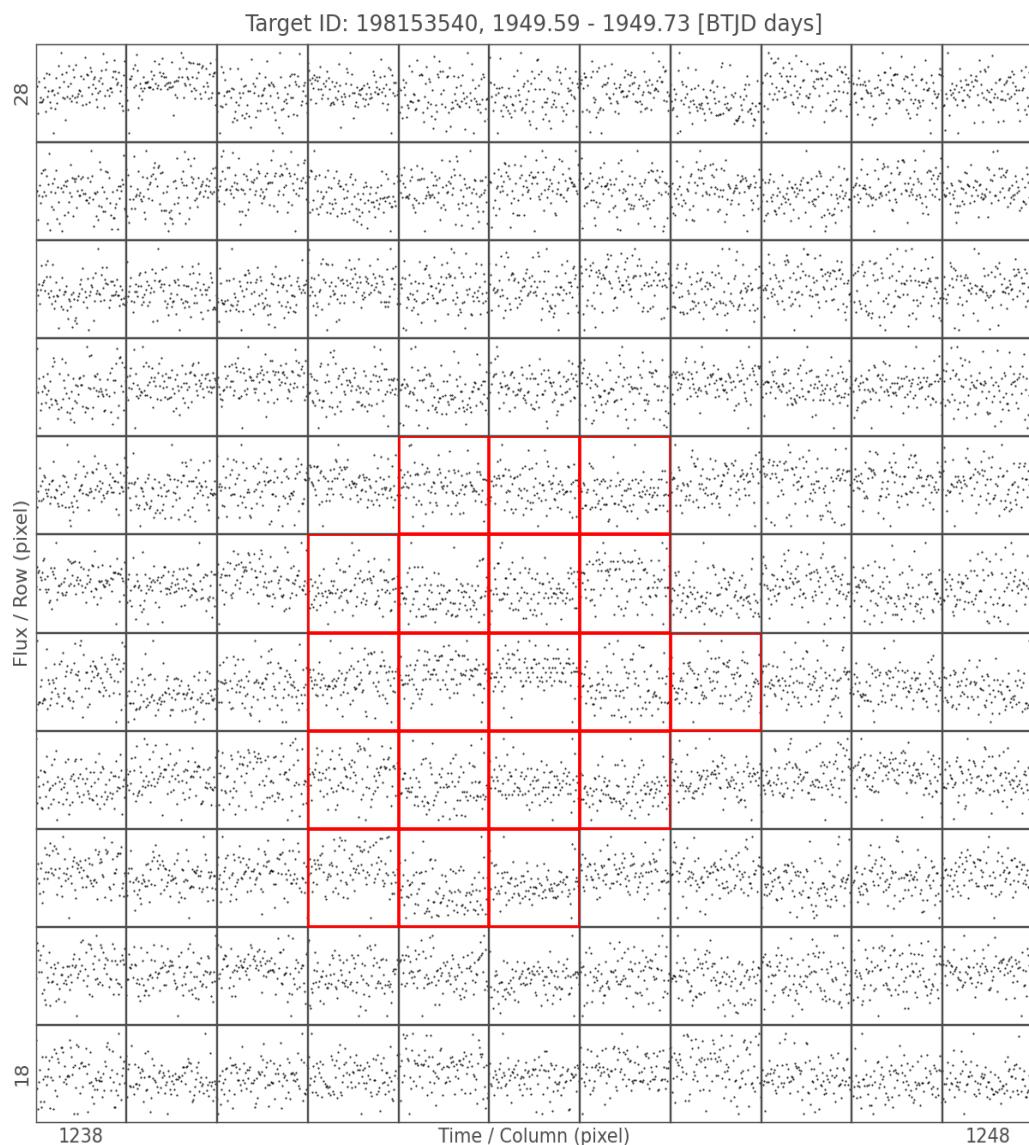
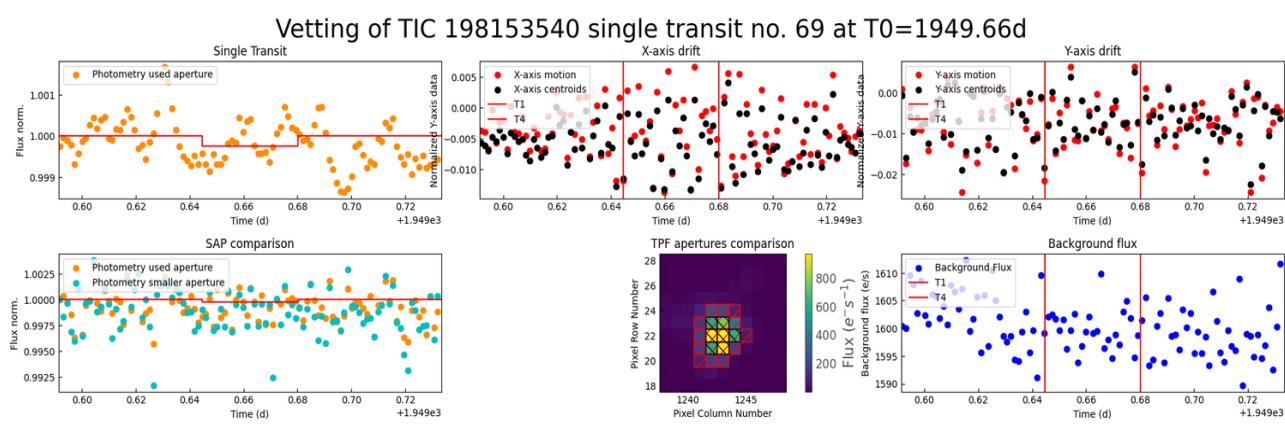


Figure 79: The single transit no. 69 vetting plots



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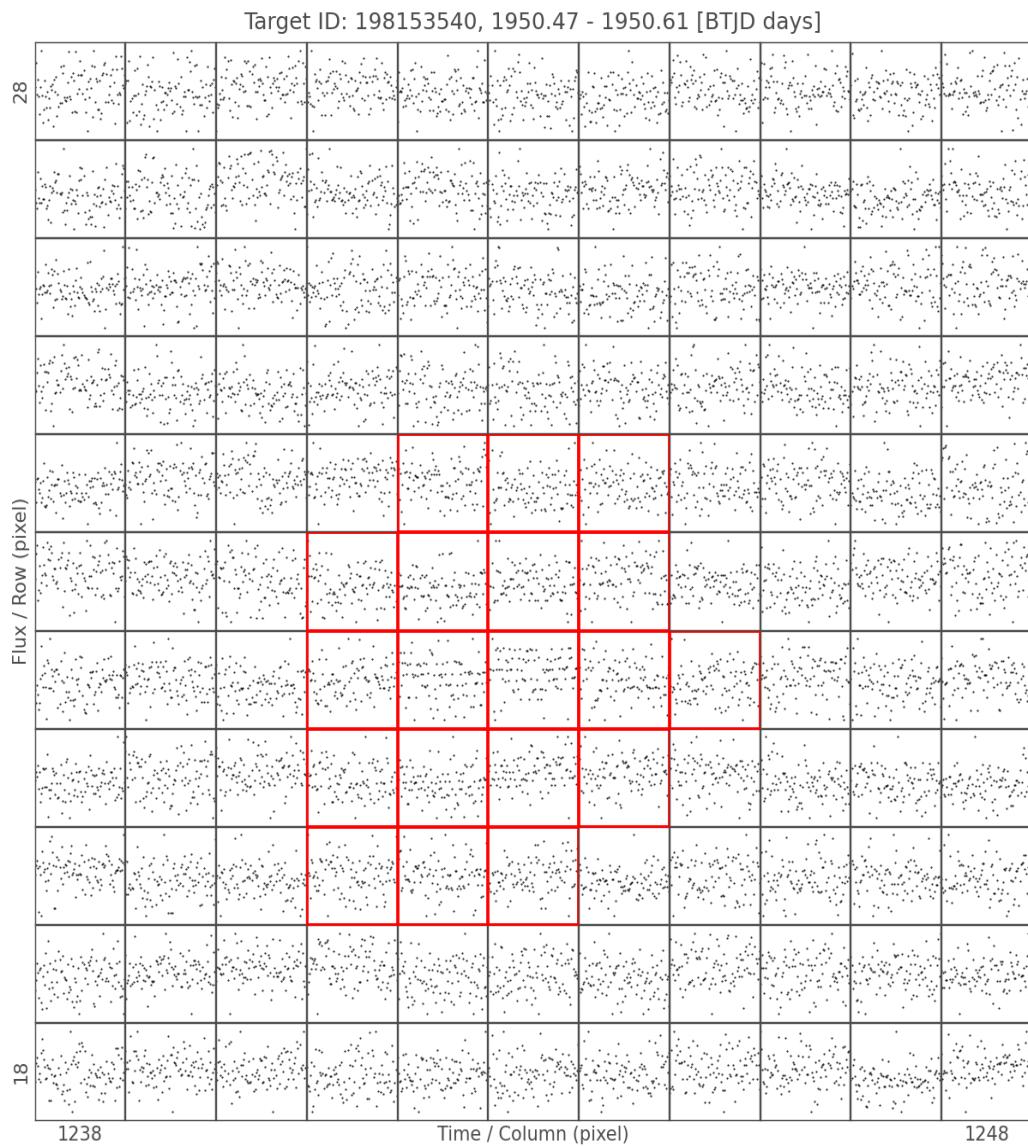
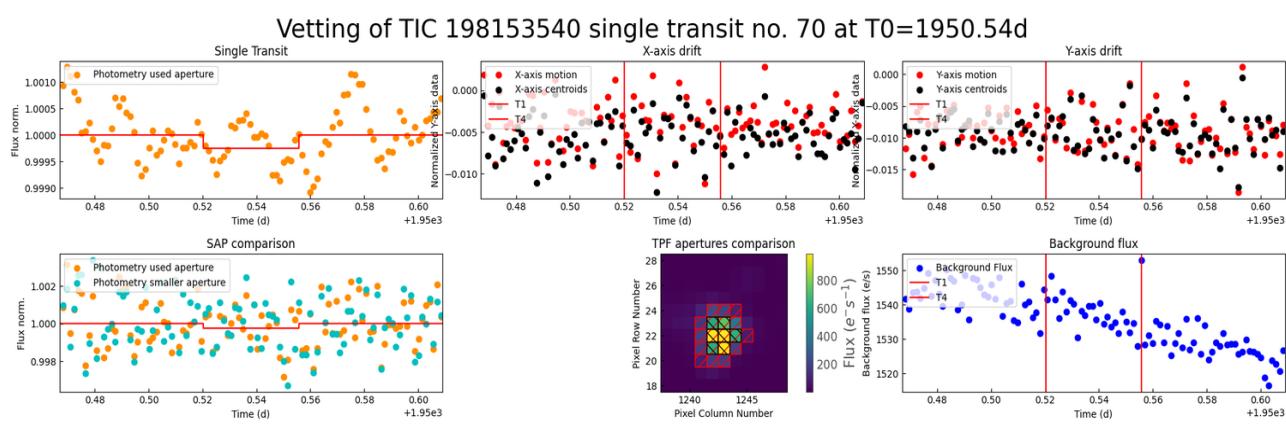


Figure 80: The single transit no. 70 vetting plots

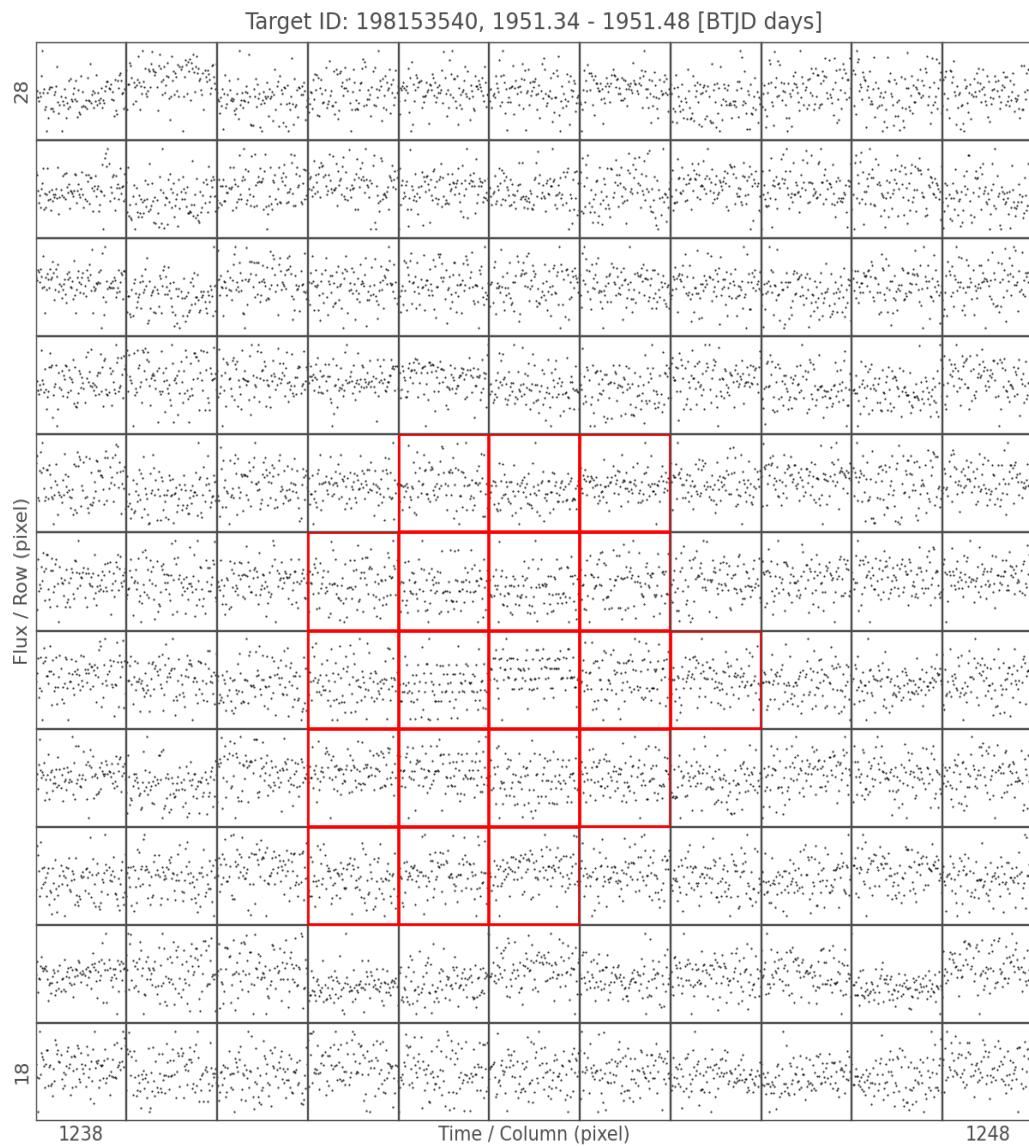
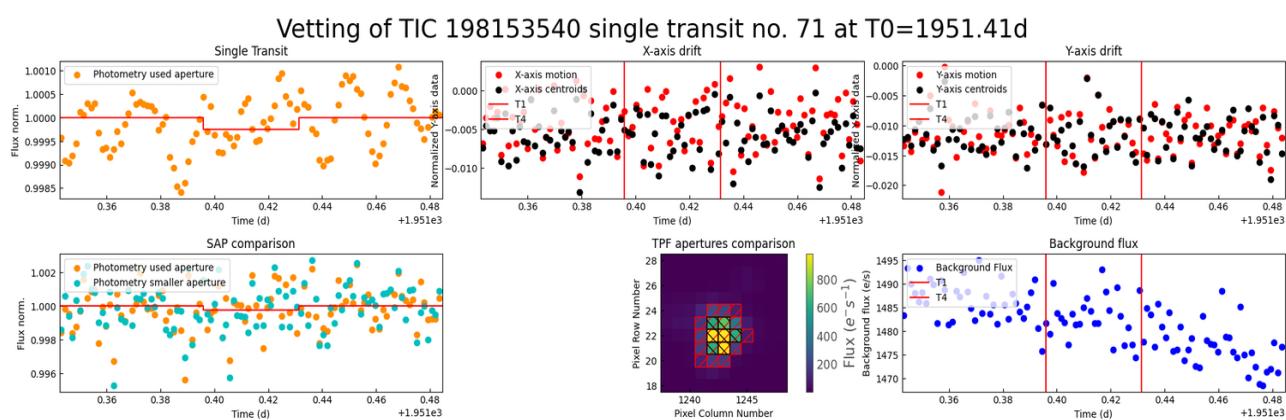


Figure 81: The single transit no. 71 vetting plots

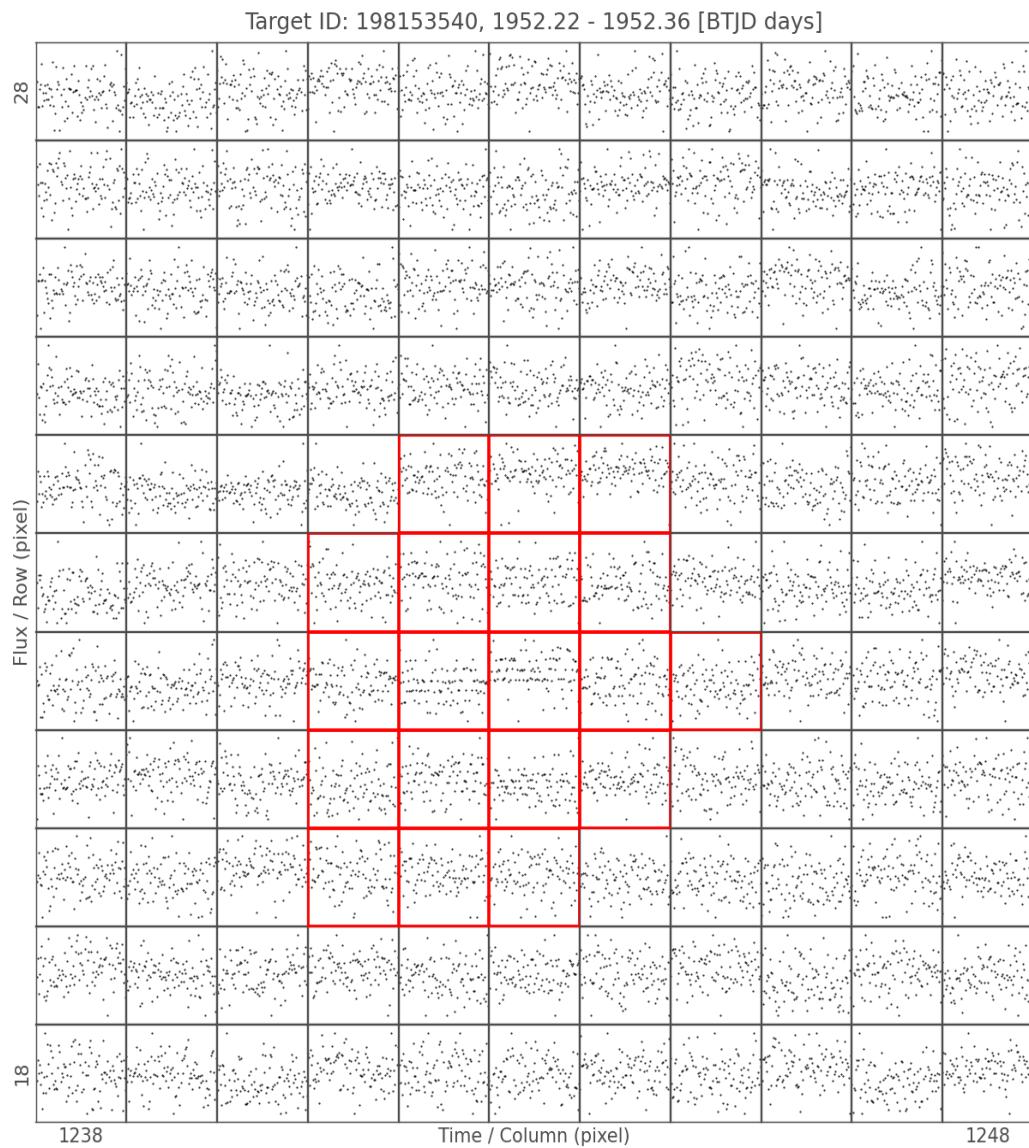
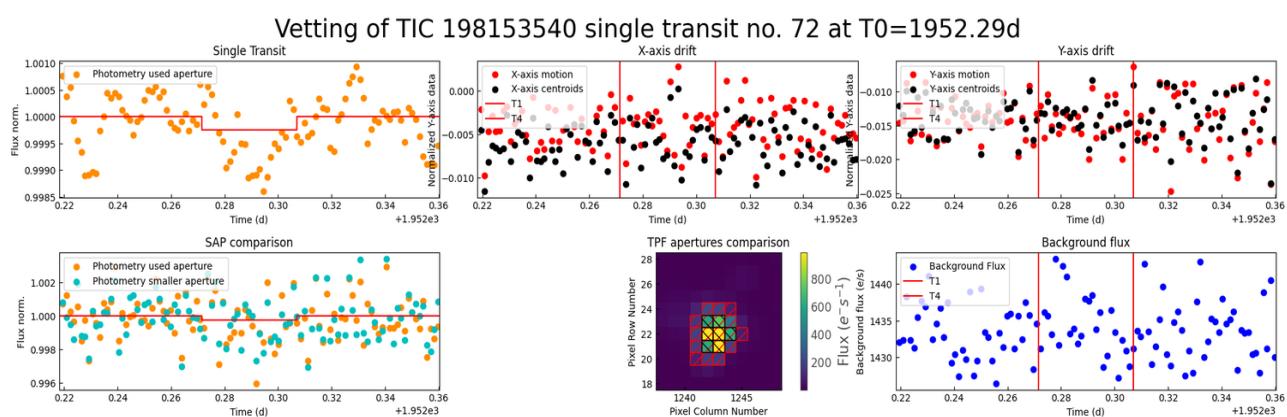
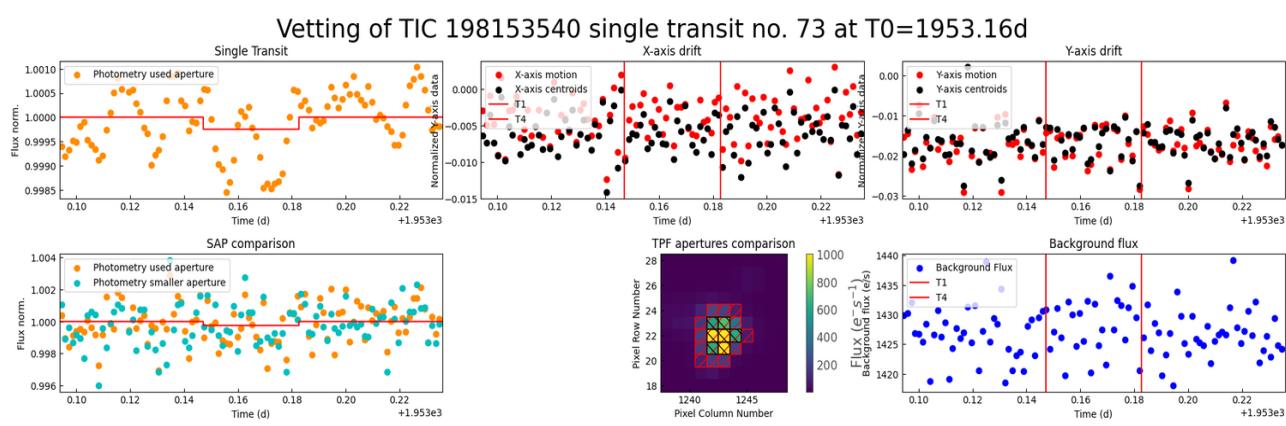
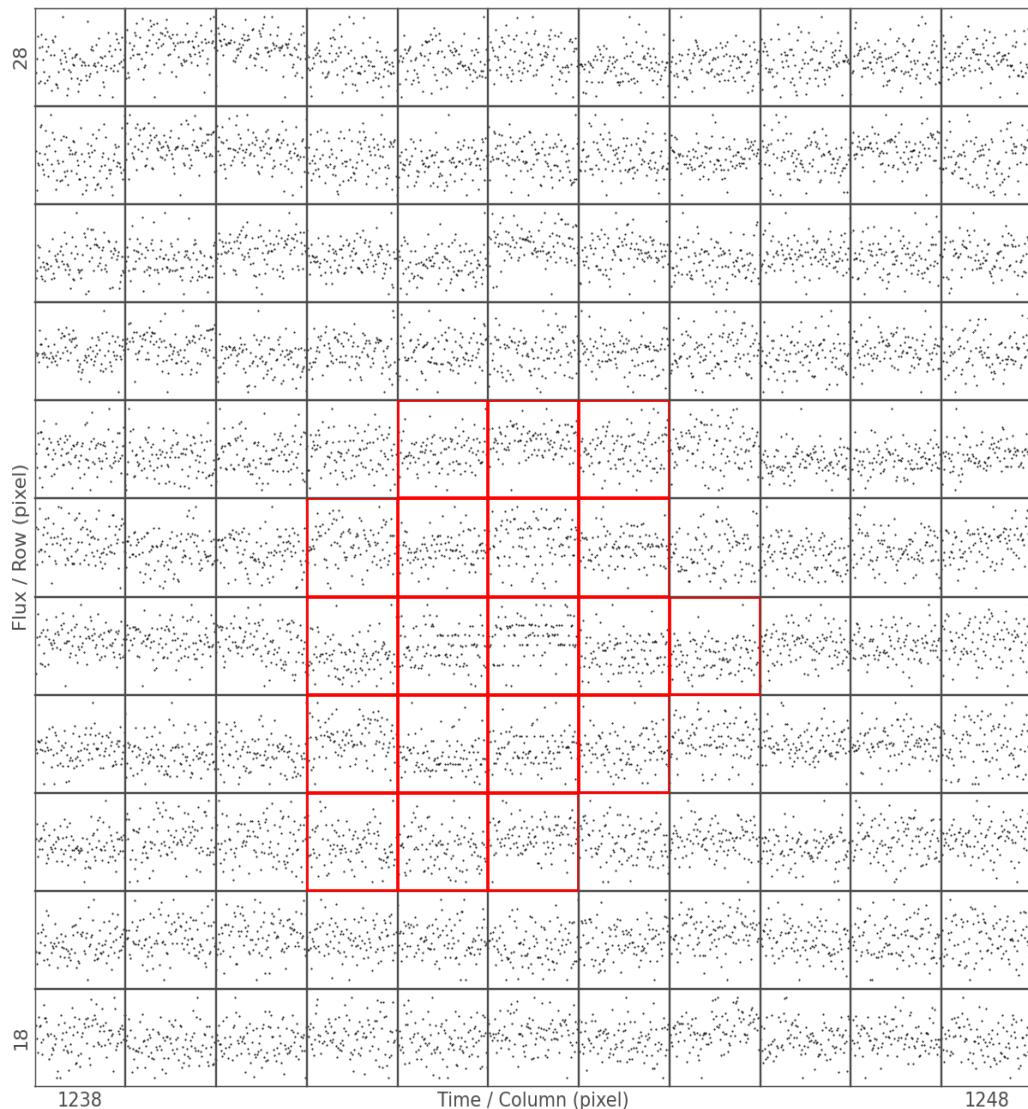


Figure 82: The single transit no. 72 vetting plots



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Figure 83: The single transit no. 73 vetting plots

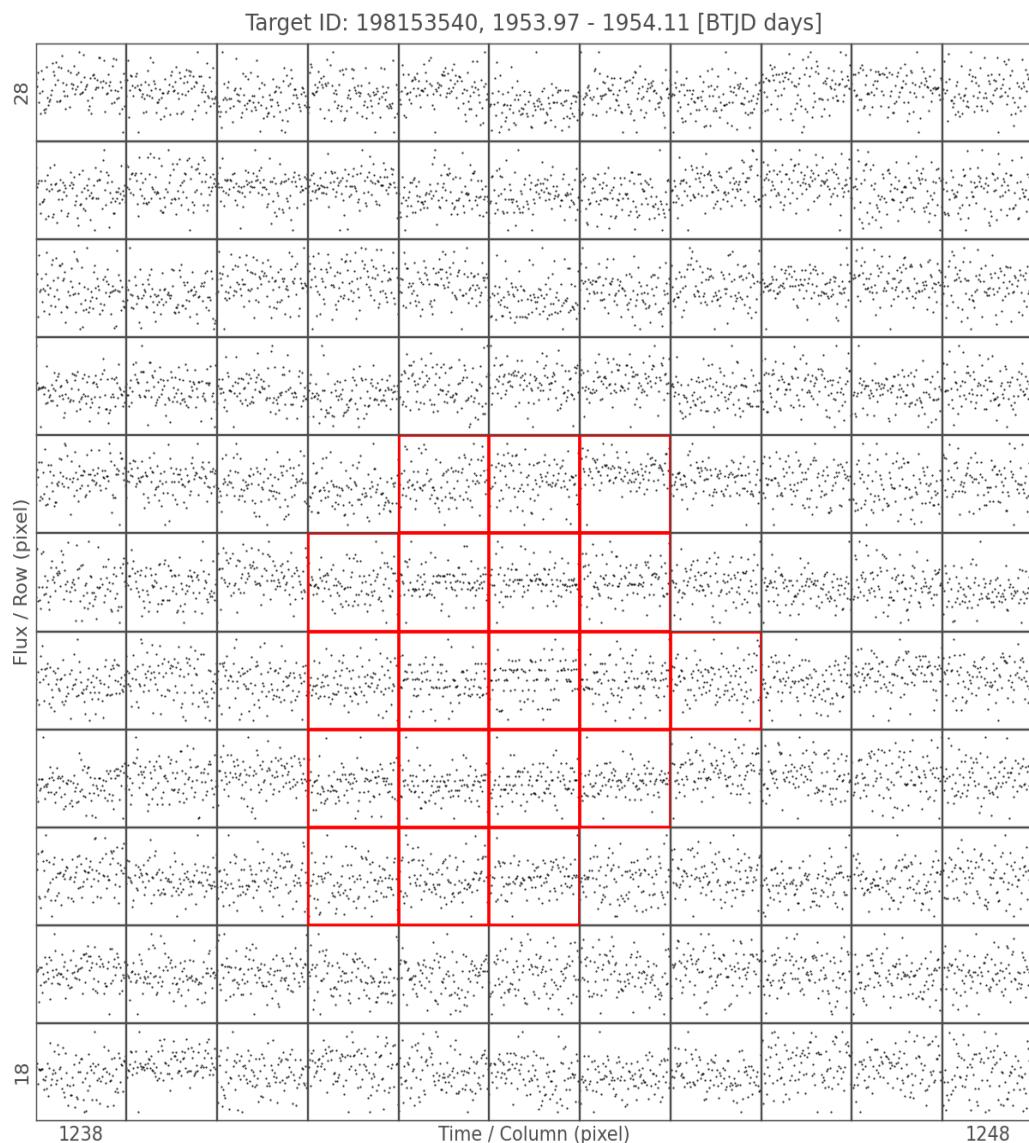
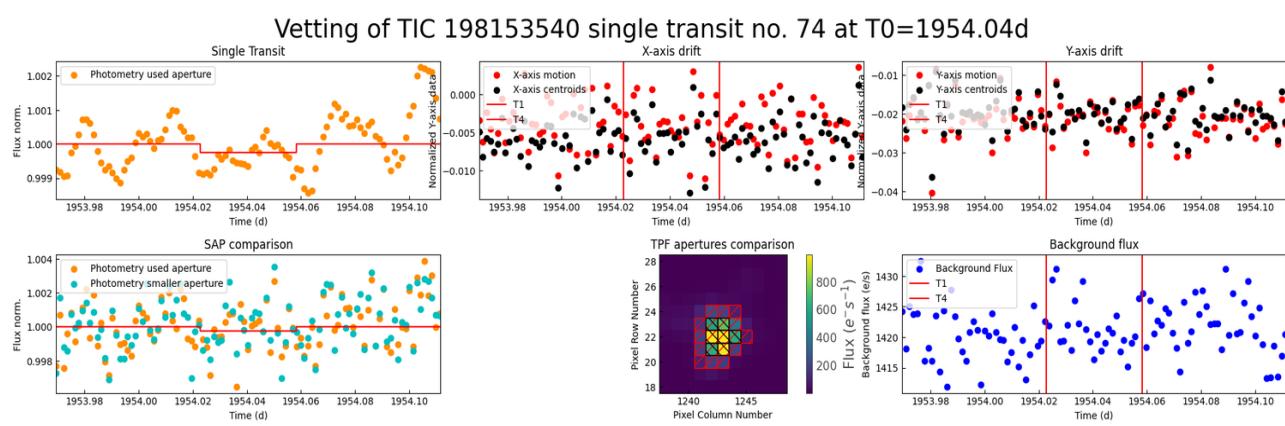


Figure 84: The single transit no. 74 vetting plots

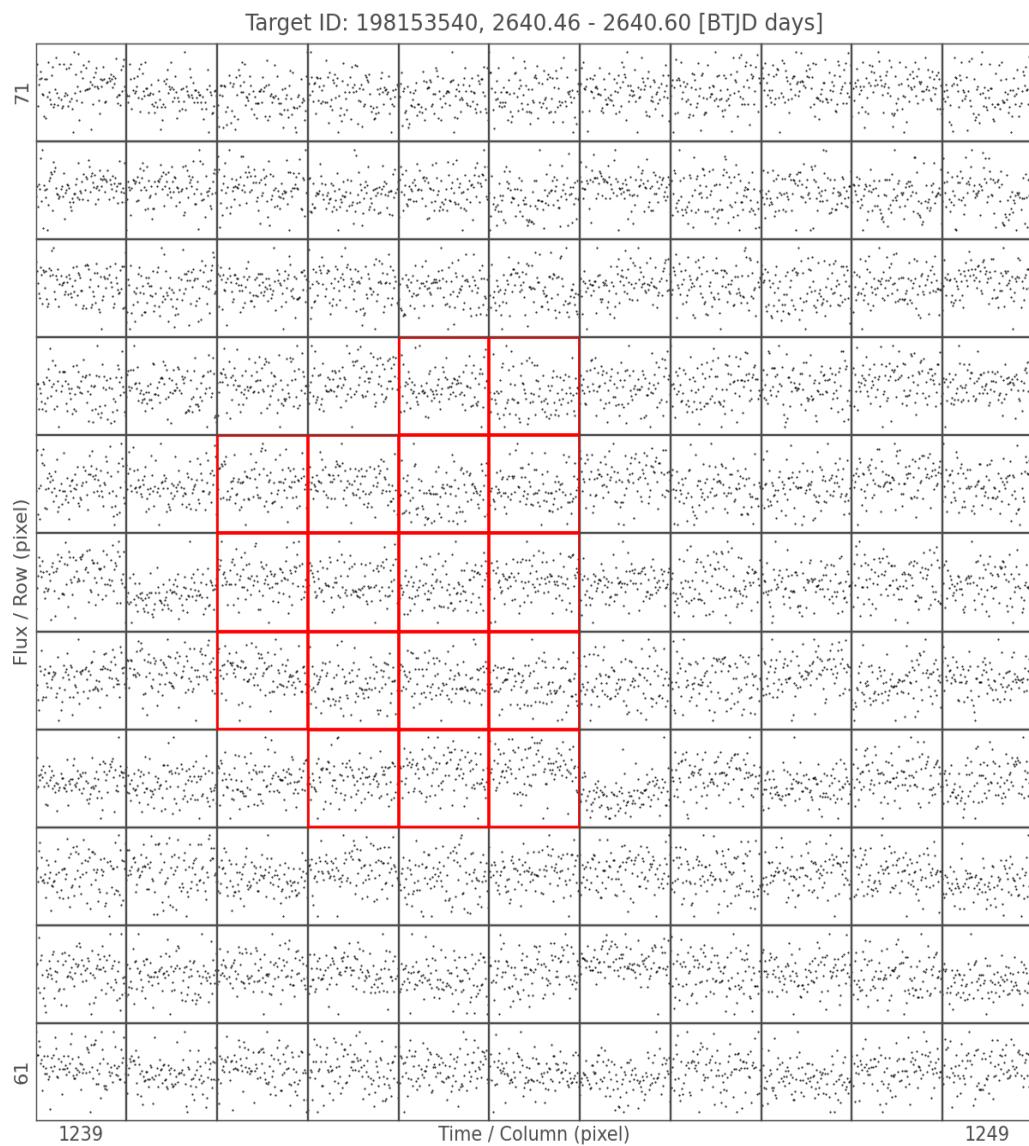
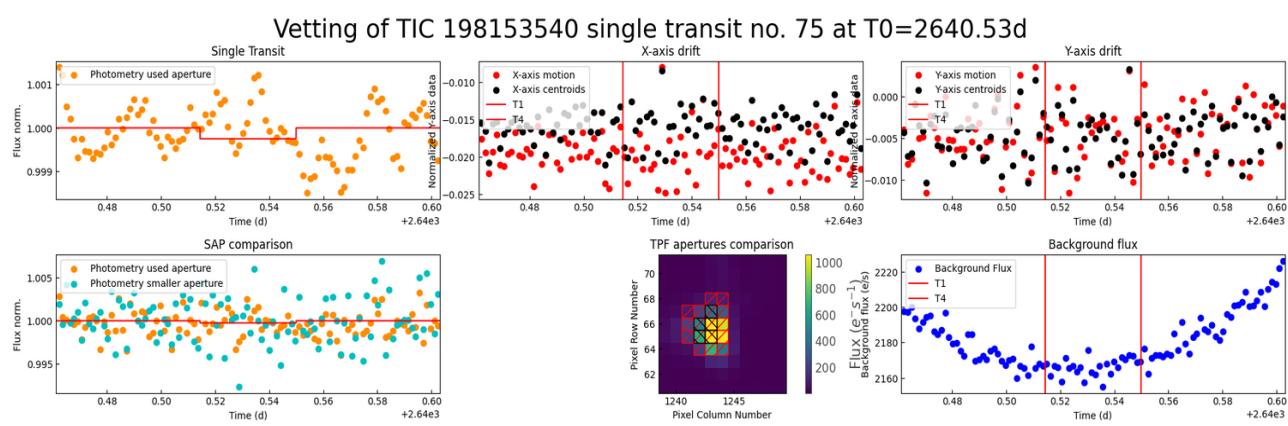


Figure 85: The single transit no. 75 vetting plots

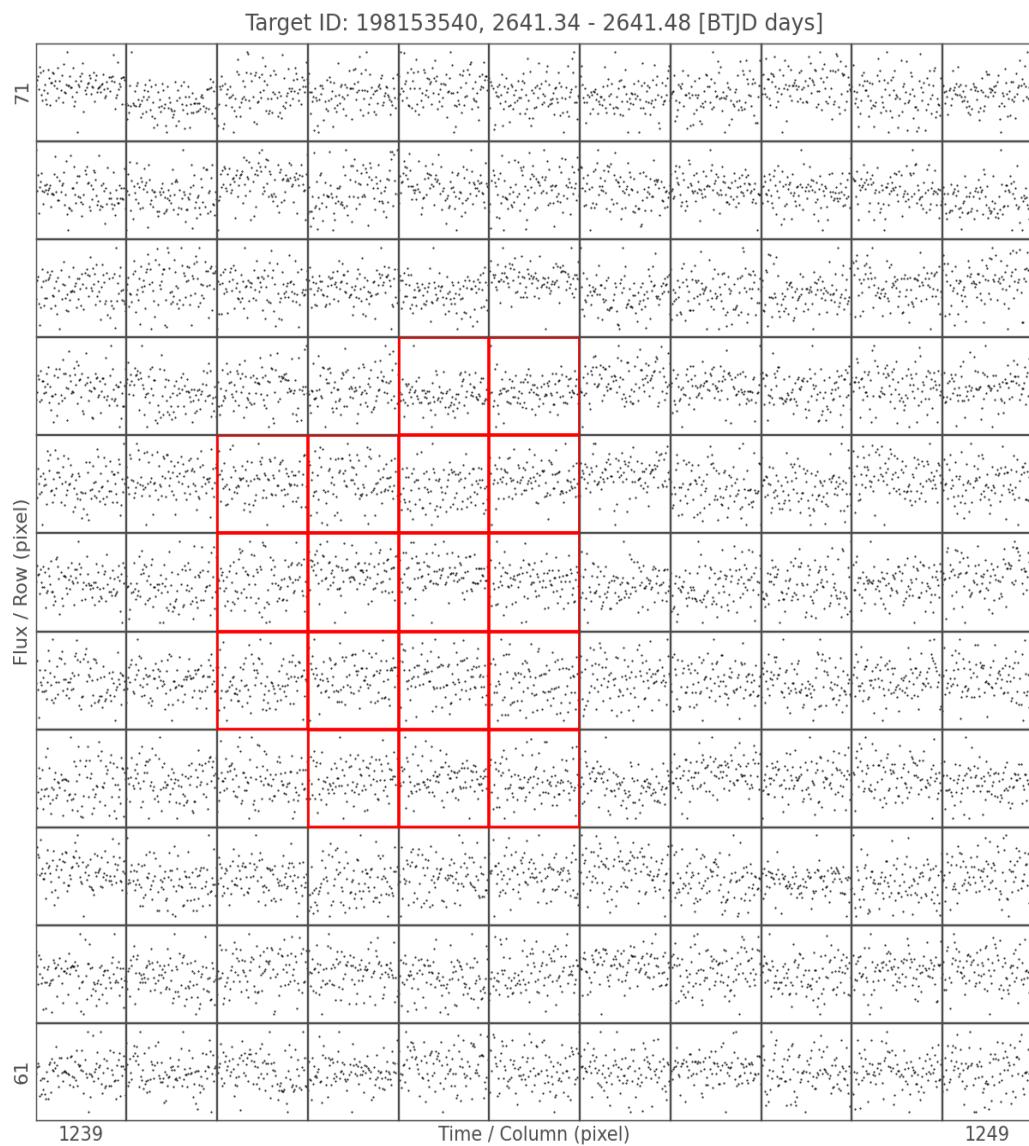
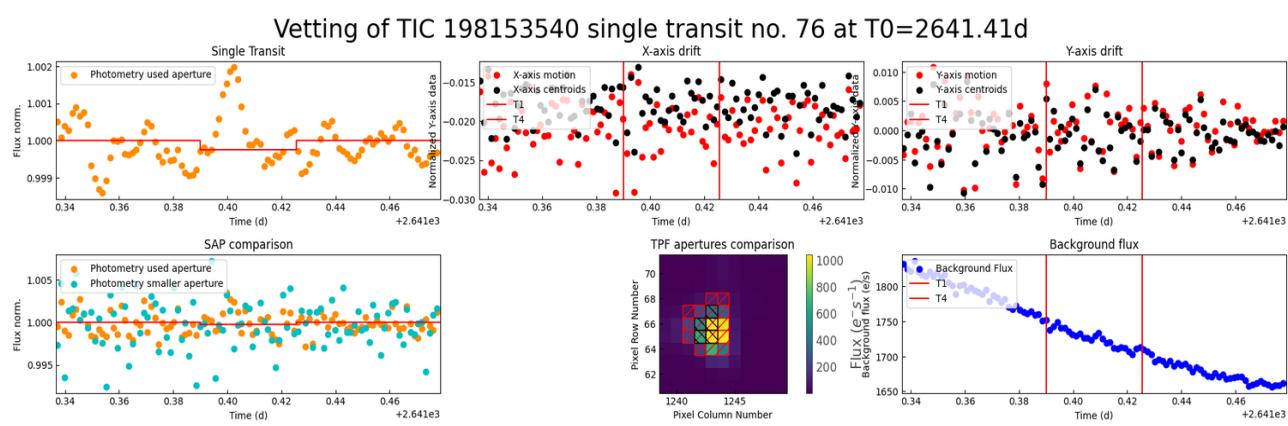


Figure 86: The single transit no. 76 vetting plots

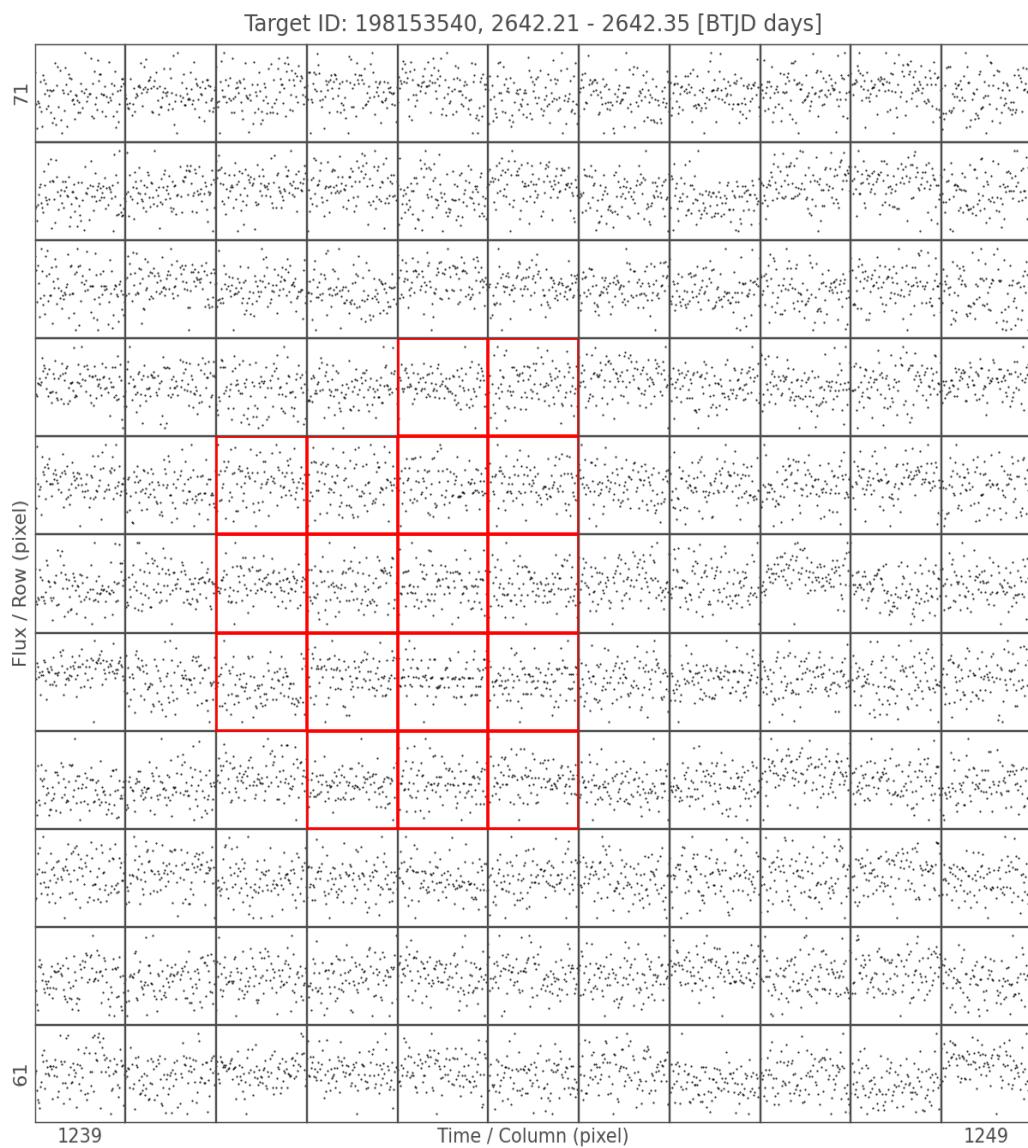
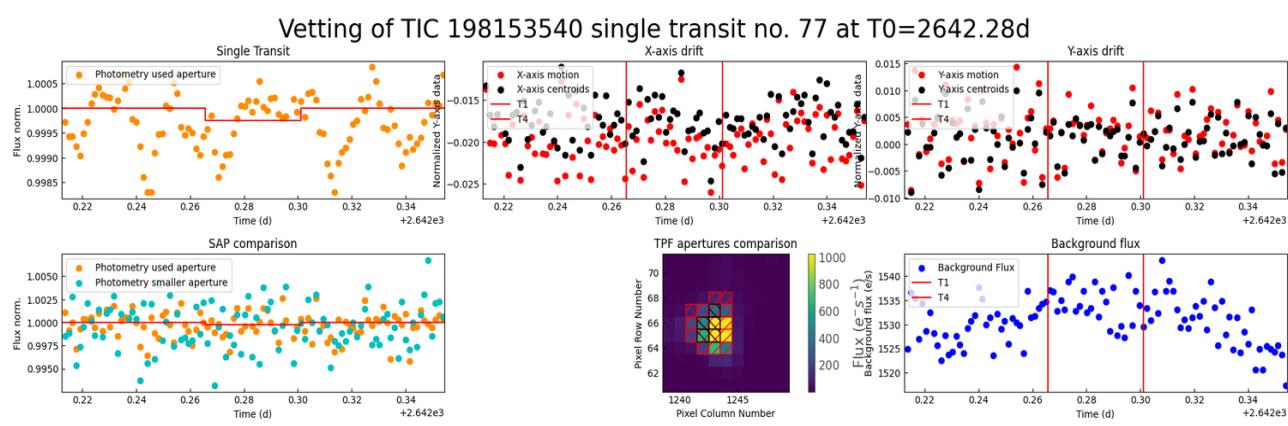


Figure 87: The single transit no. 77 vetting plots



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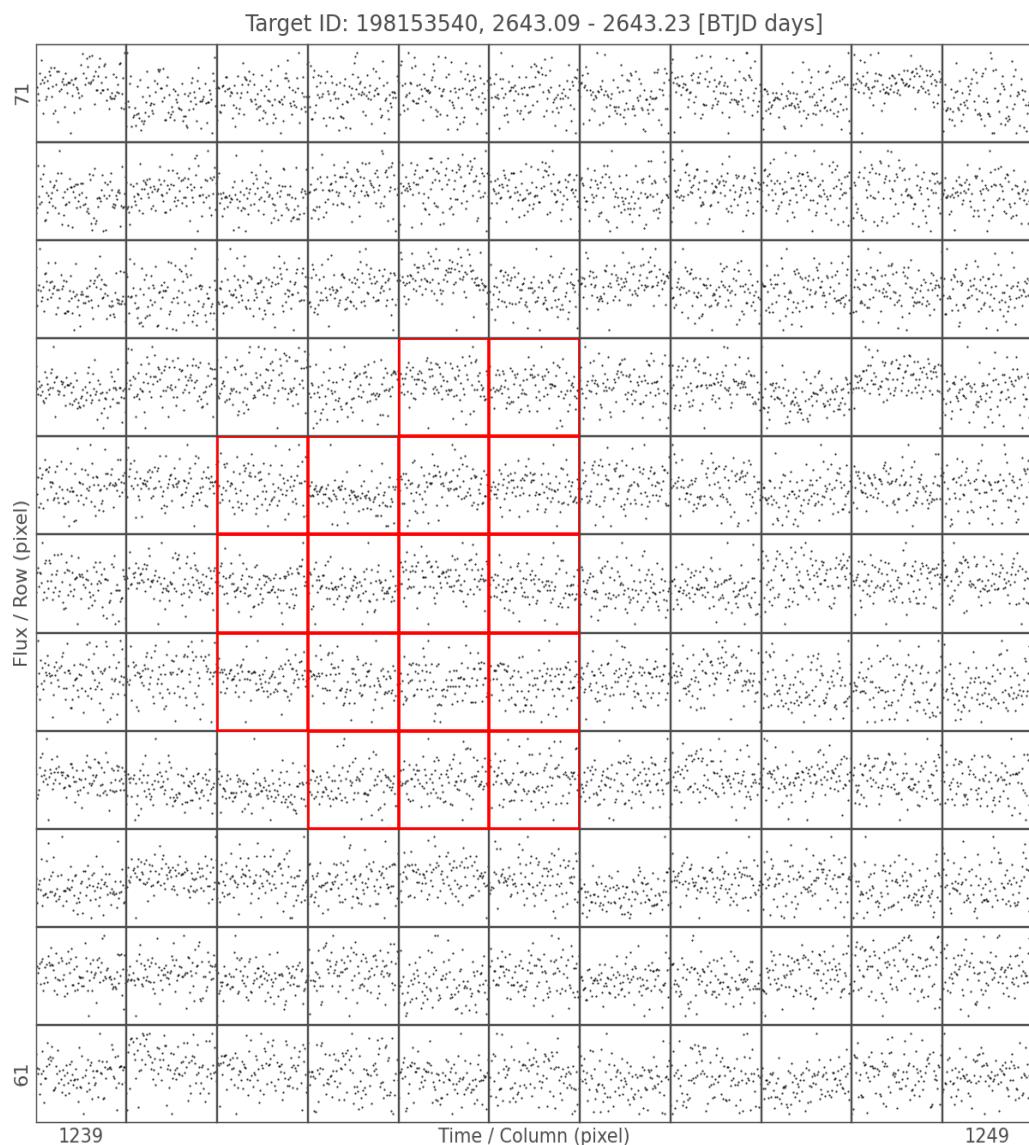
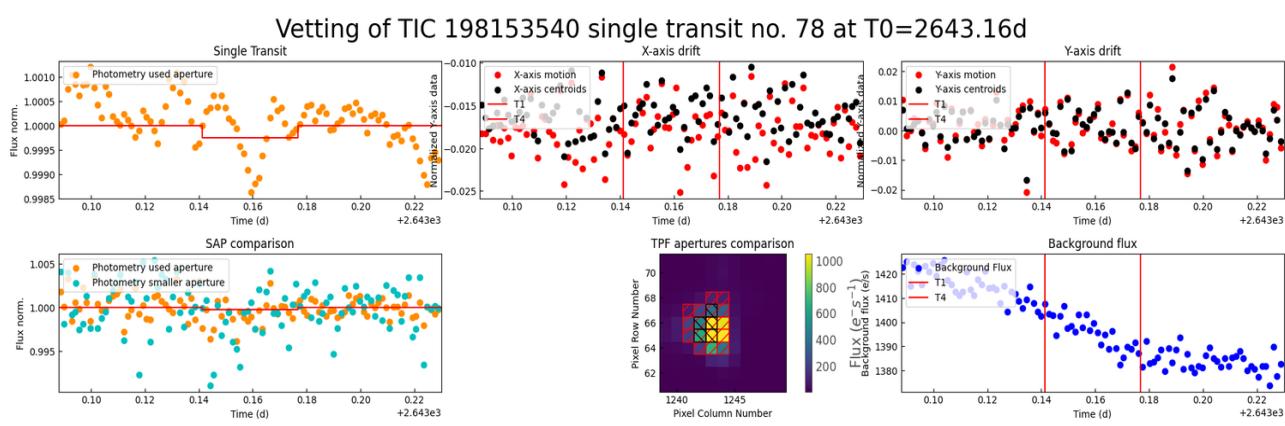
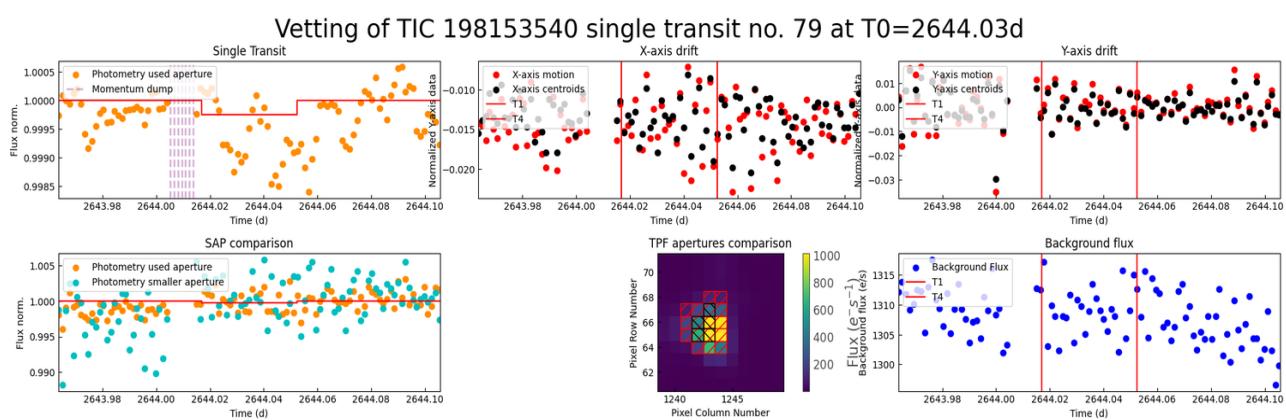


Figure 88: The single transit no. 78 vetting plots



Target ID: 198153540, 2643.96 - 2644.11 [BTJD days]

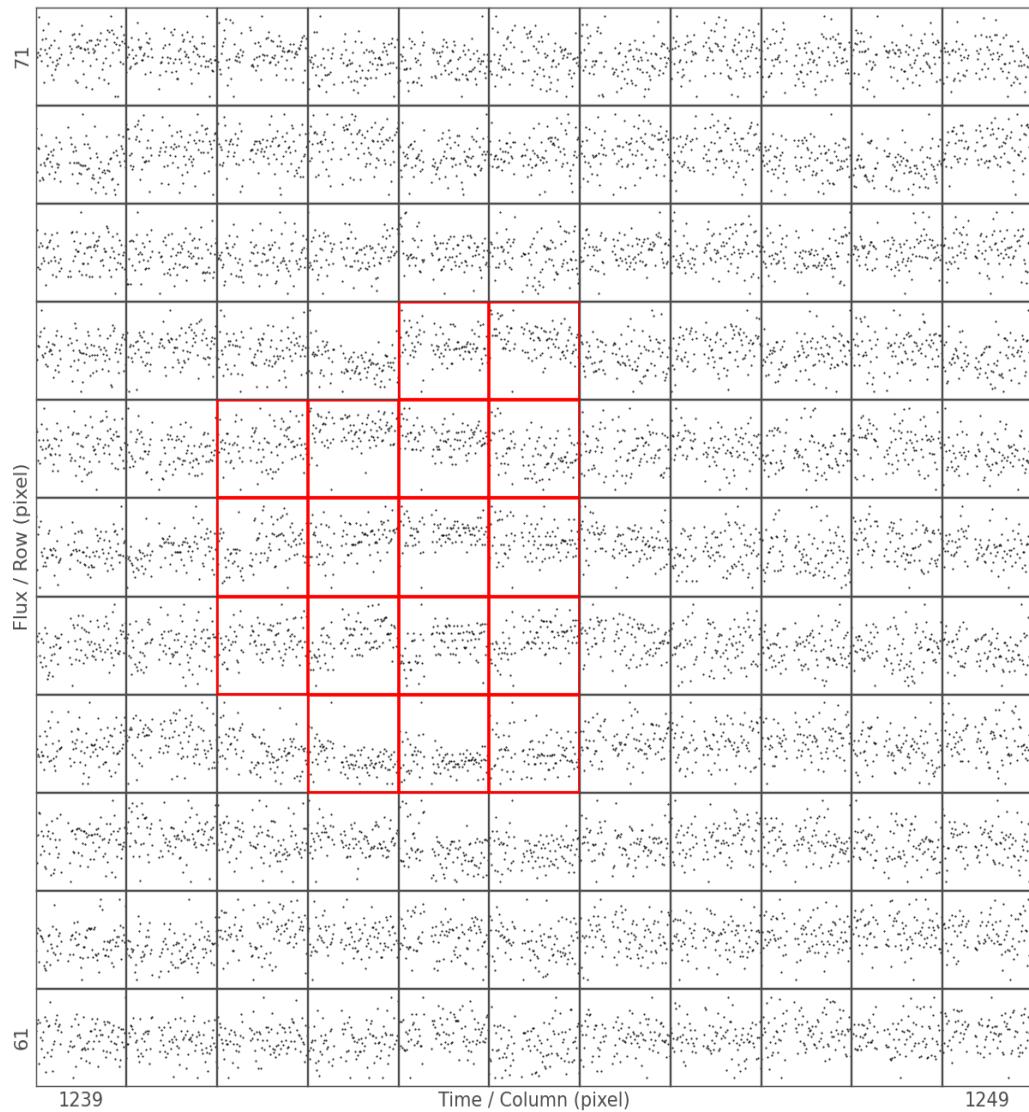


Figure 89: The single transit no. 79 vetting plots

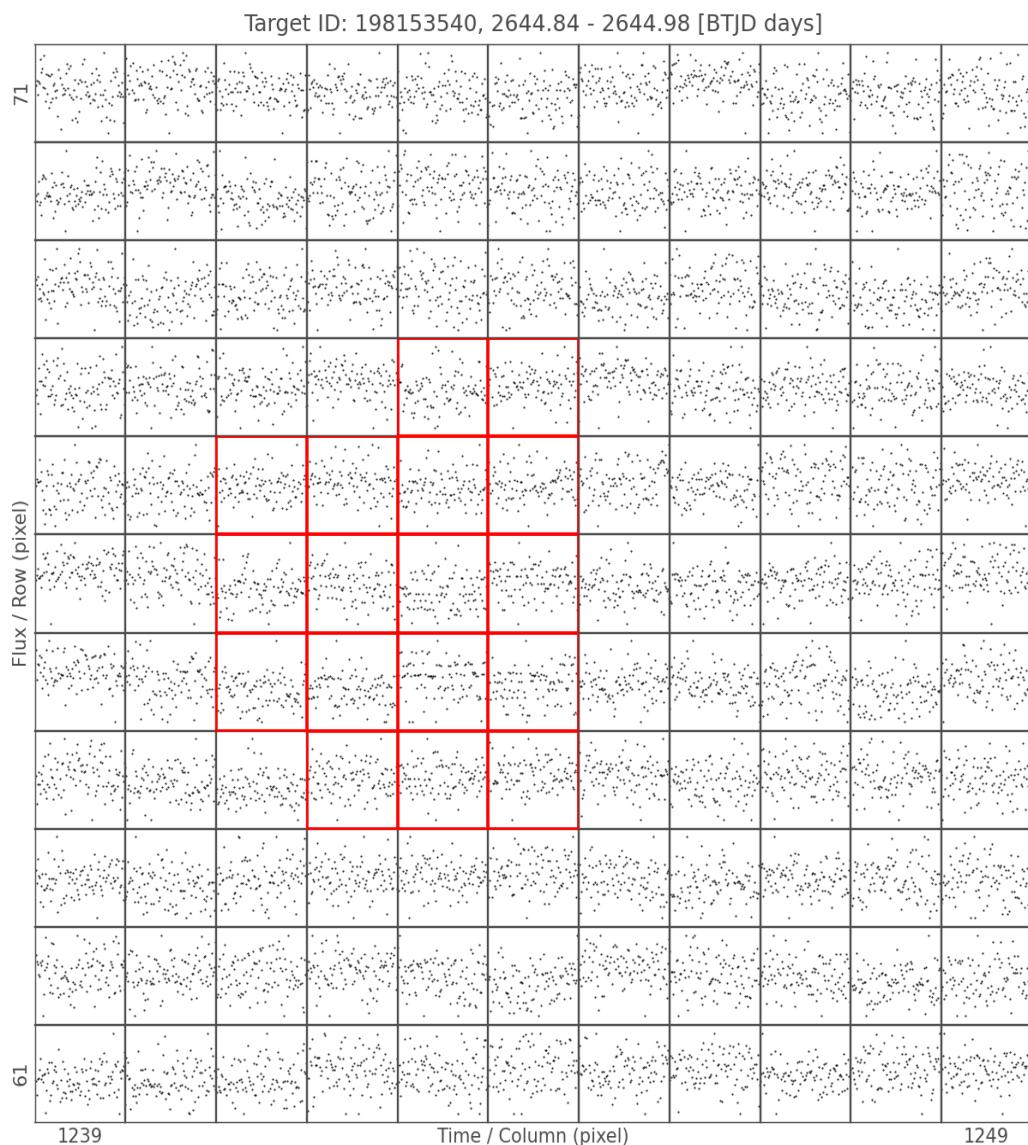
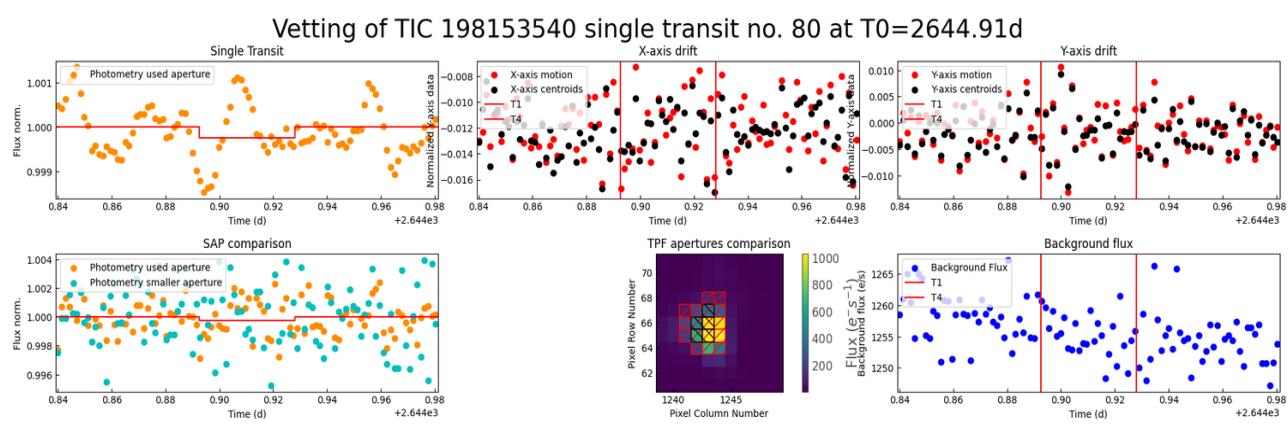


Figure 90: The single transit no. 80 vetting plots

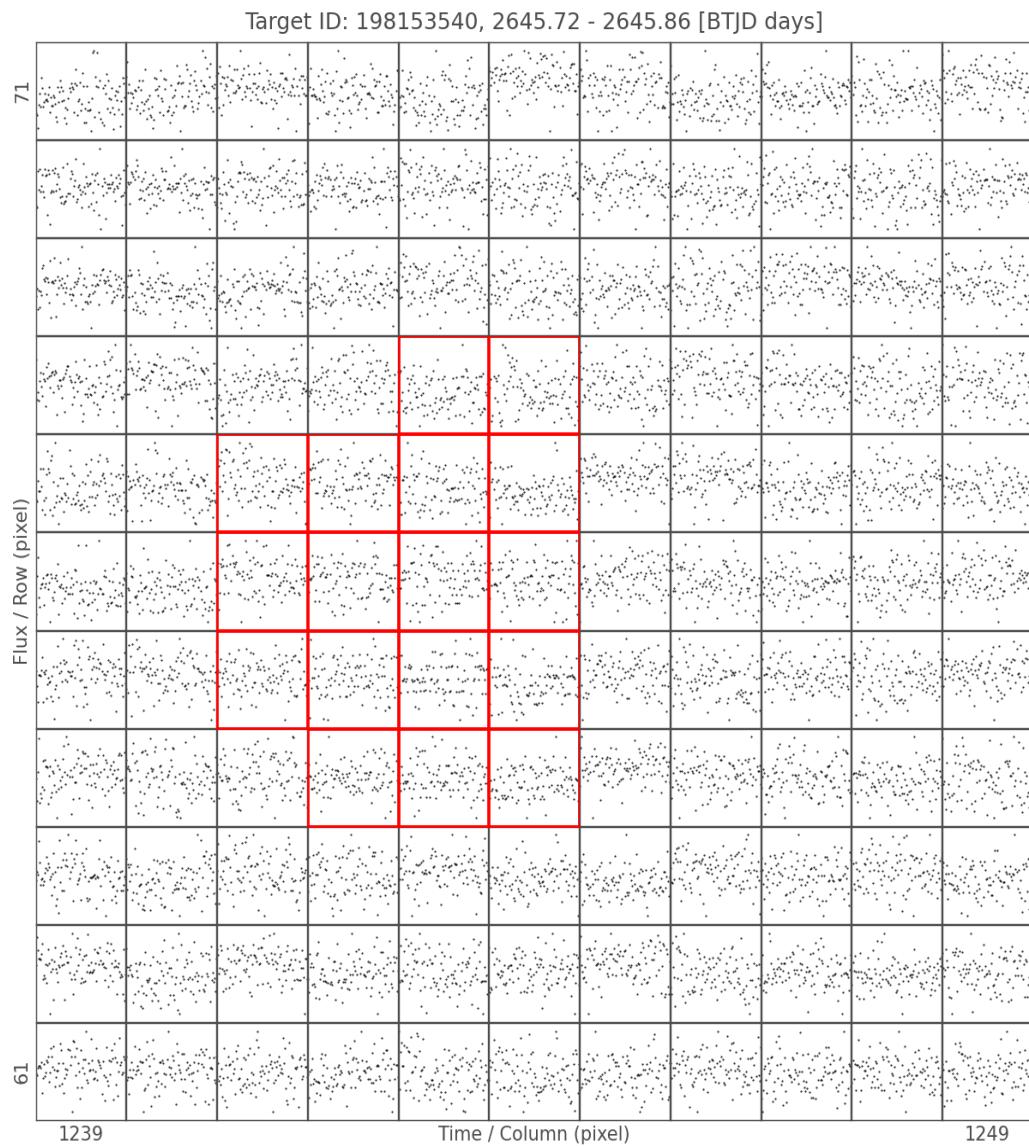
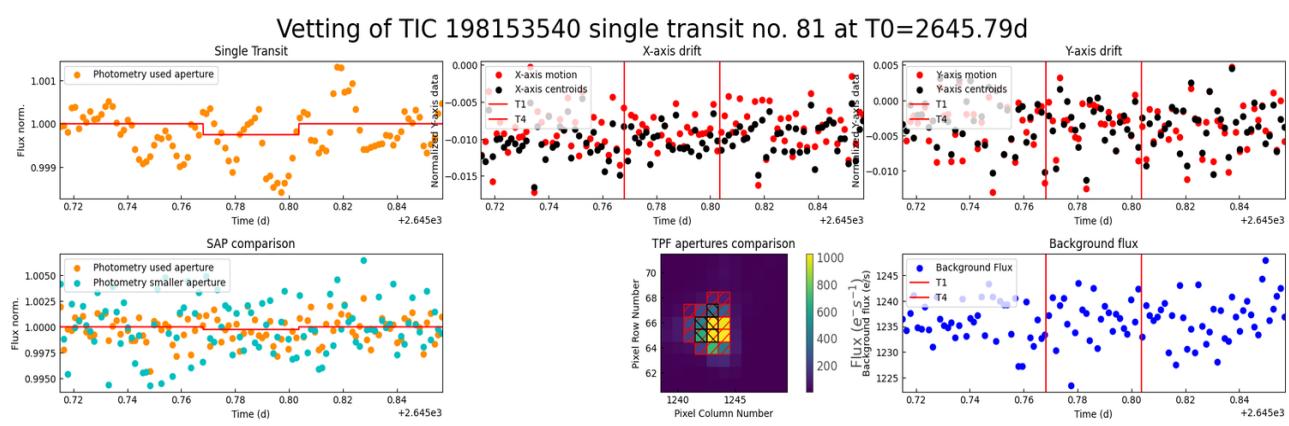


Figure 91: The single transit no. 81 vetting plots

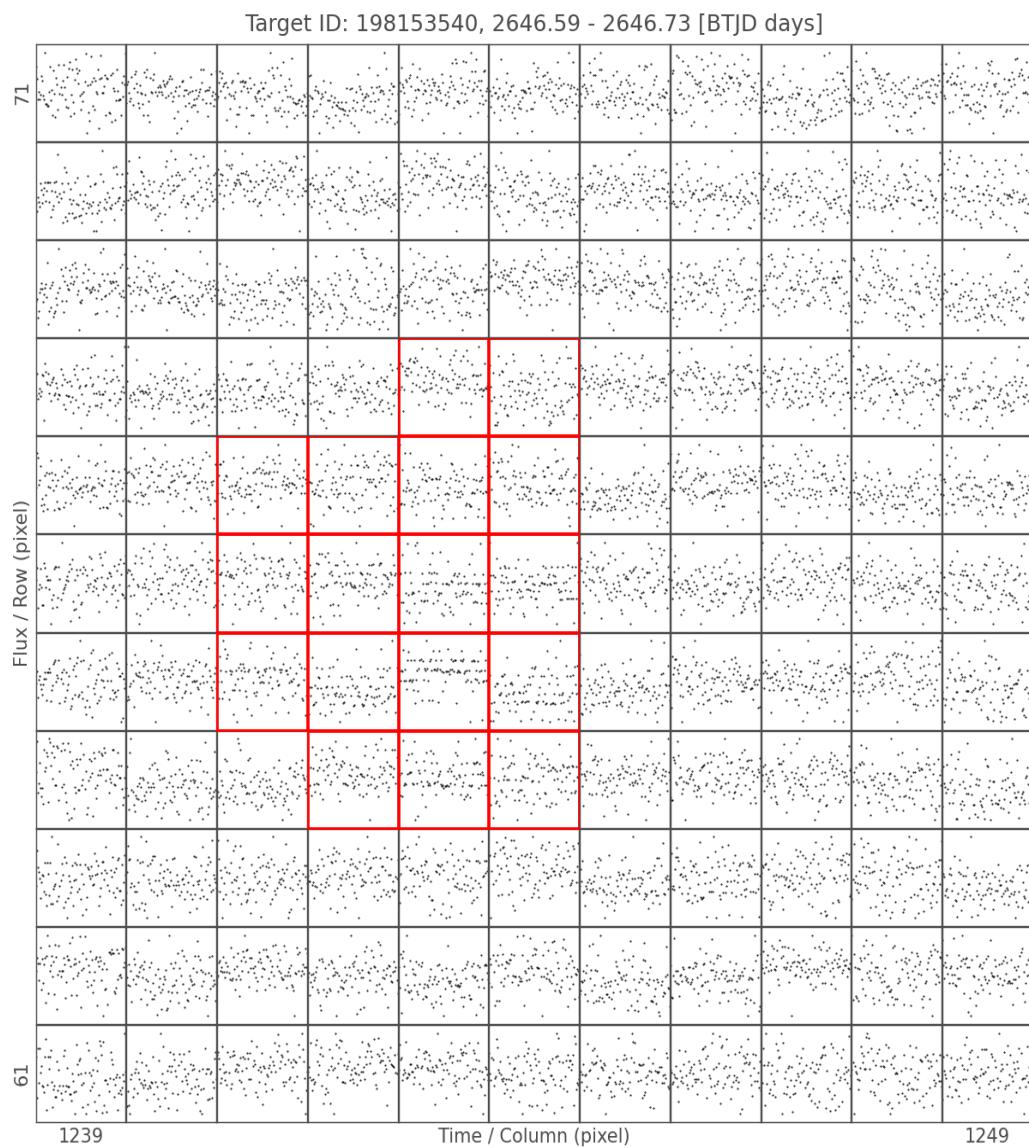
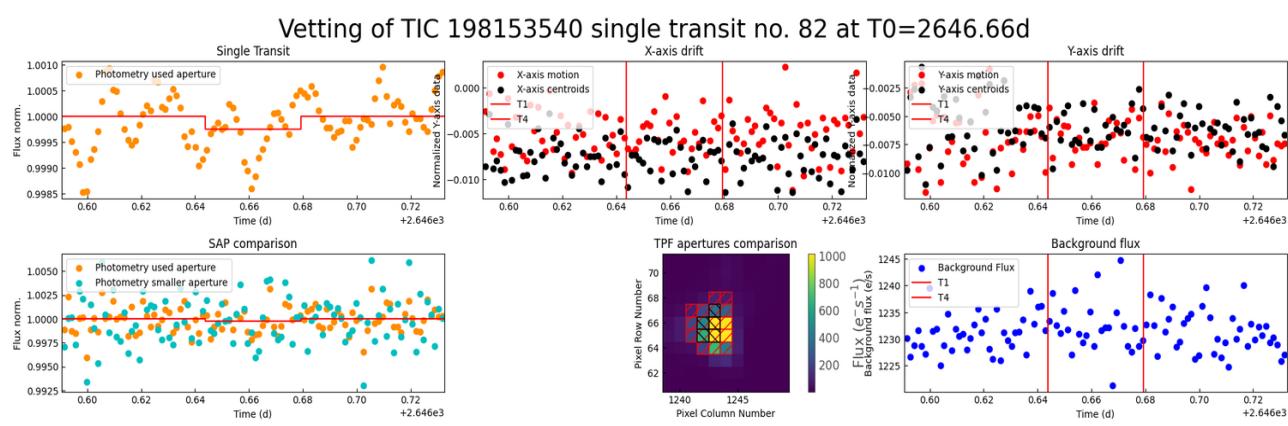


Figure 92: The single transit no. 82 vetting plots

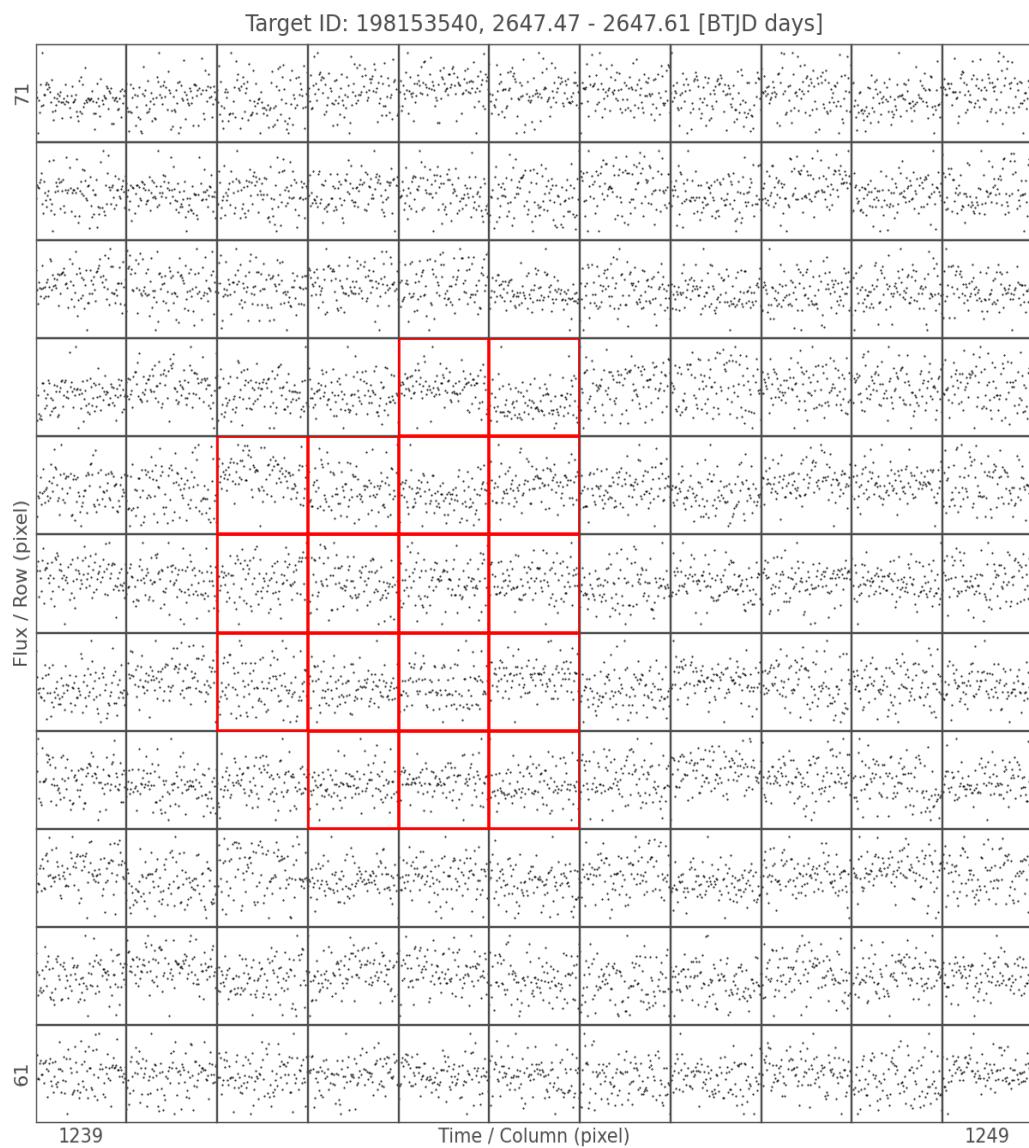
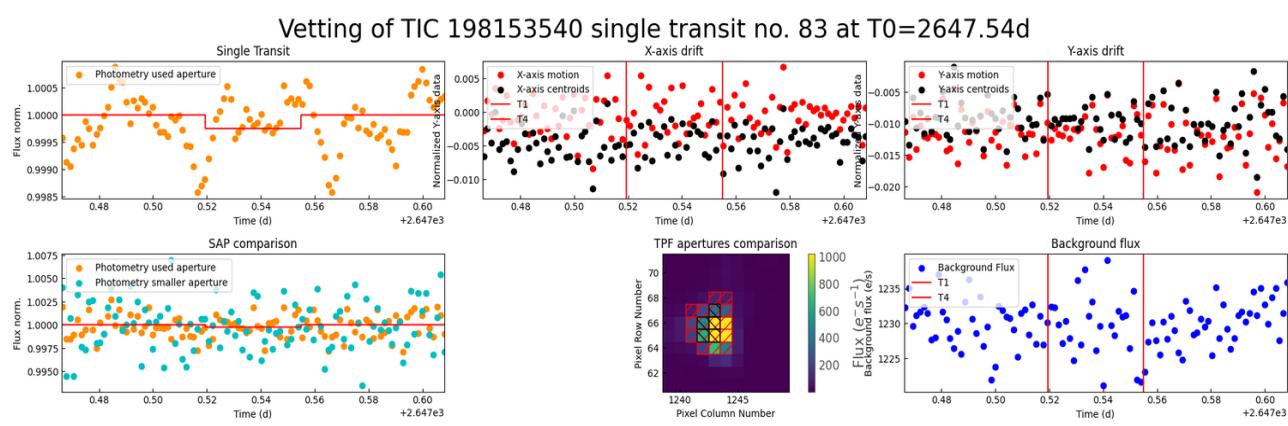


Figure 93: The single transit no. 83 vetting plots



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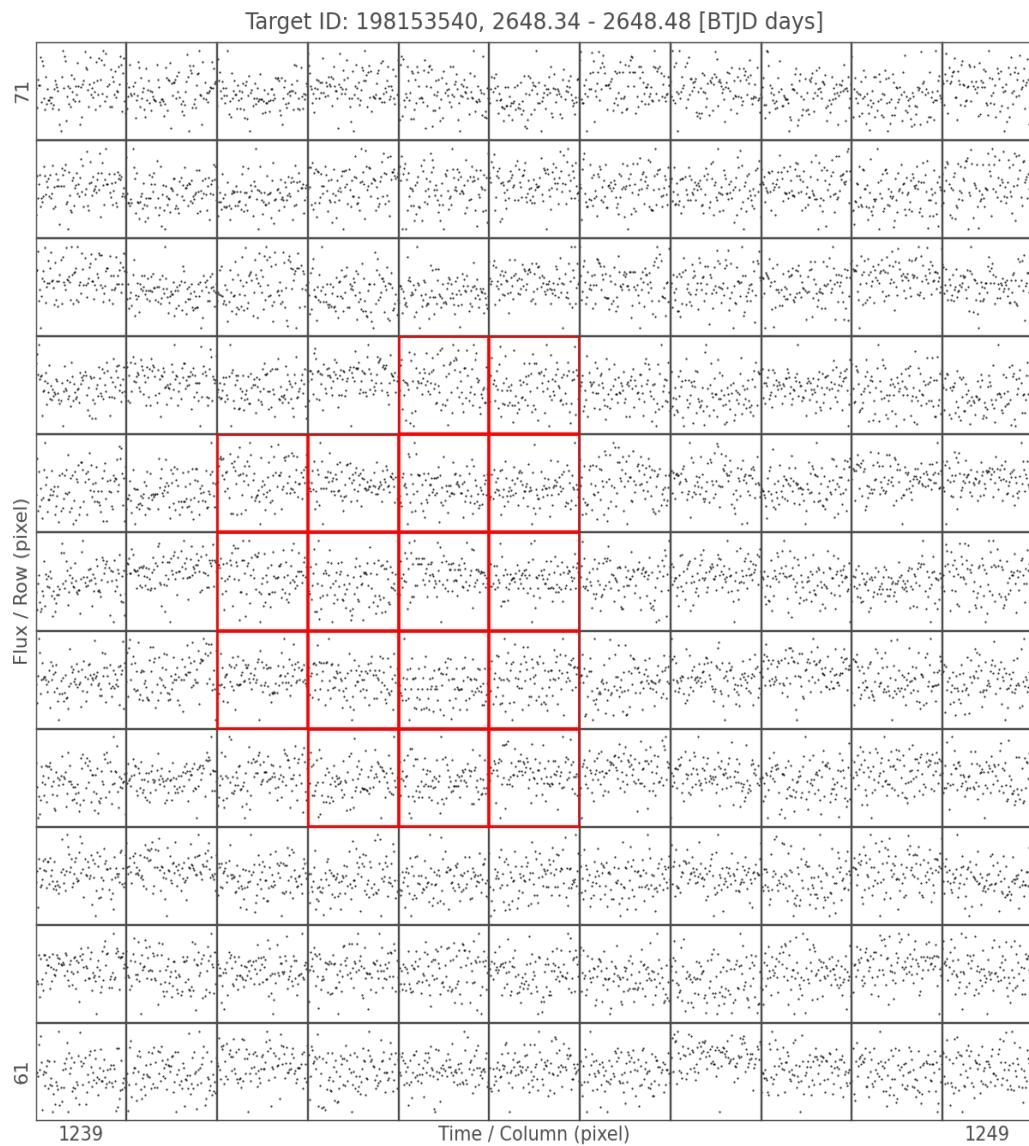
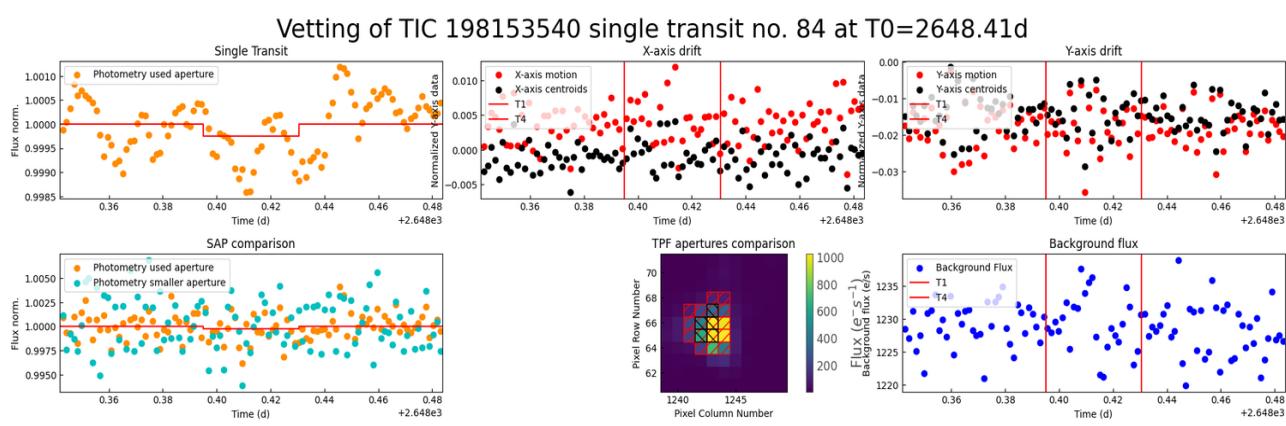


Figure 94: The single transit no. 84 vetting plots

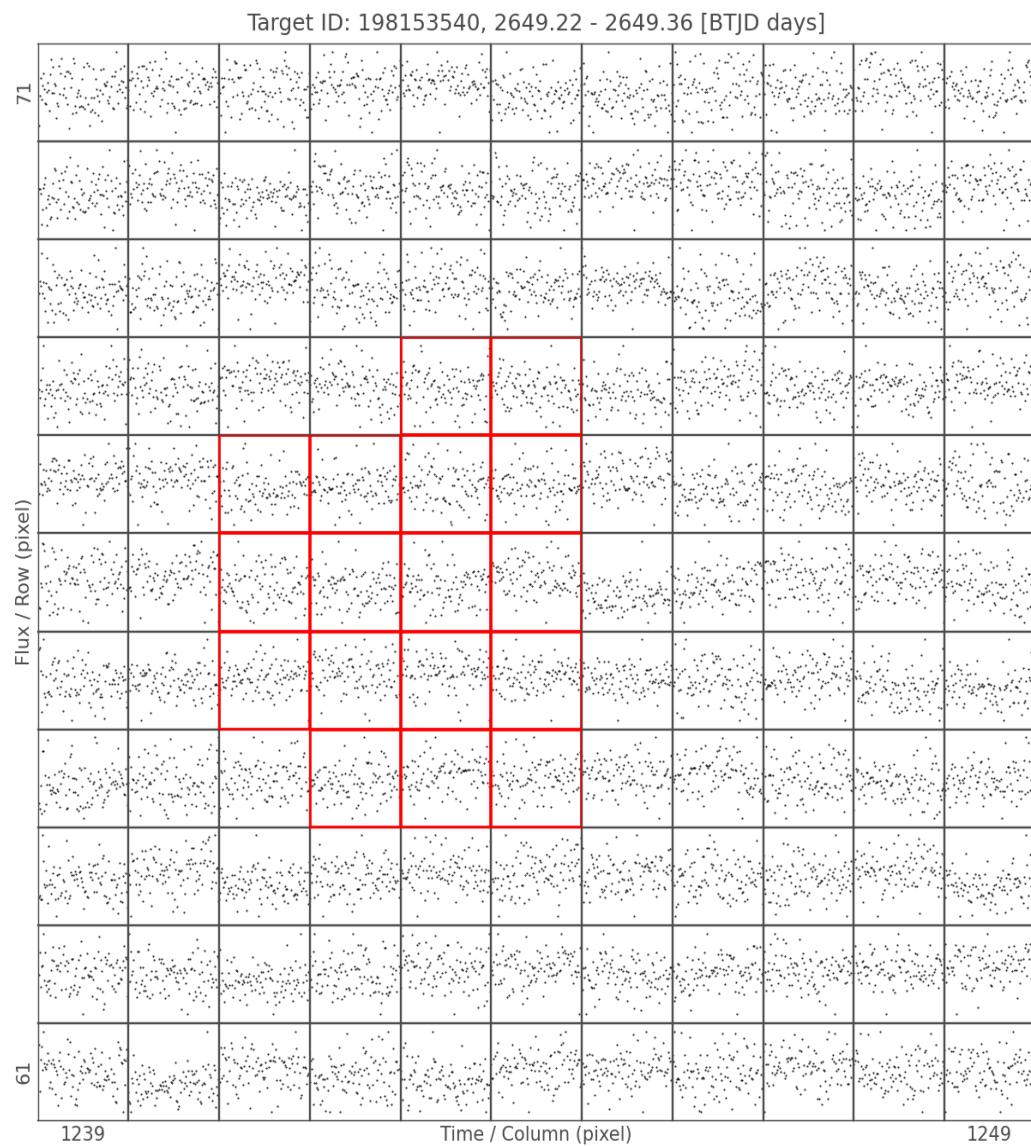
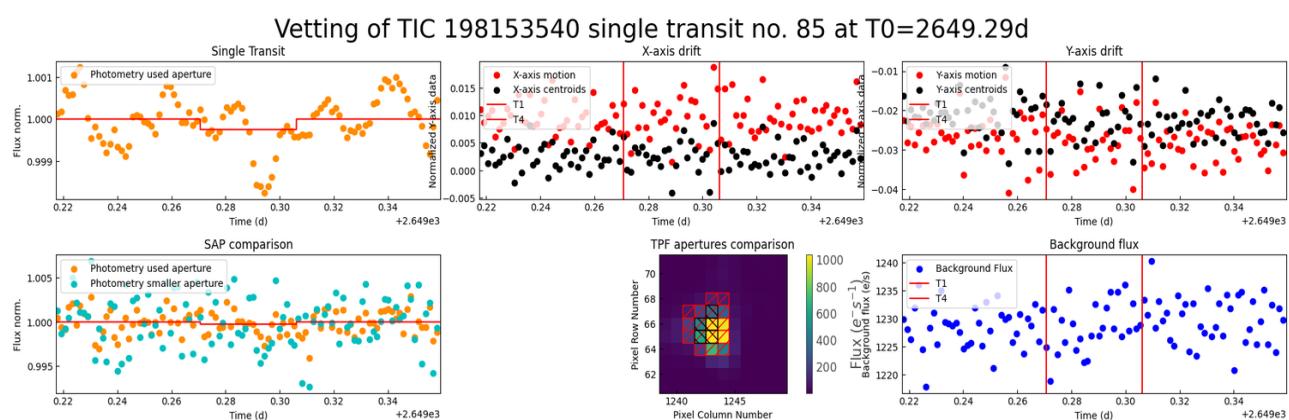


Figure 95: The single transit no. 85 vetting plots

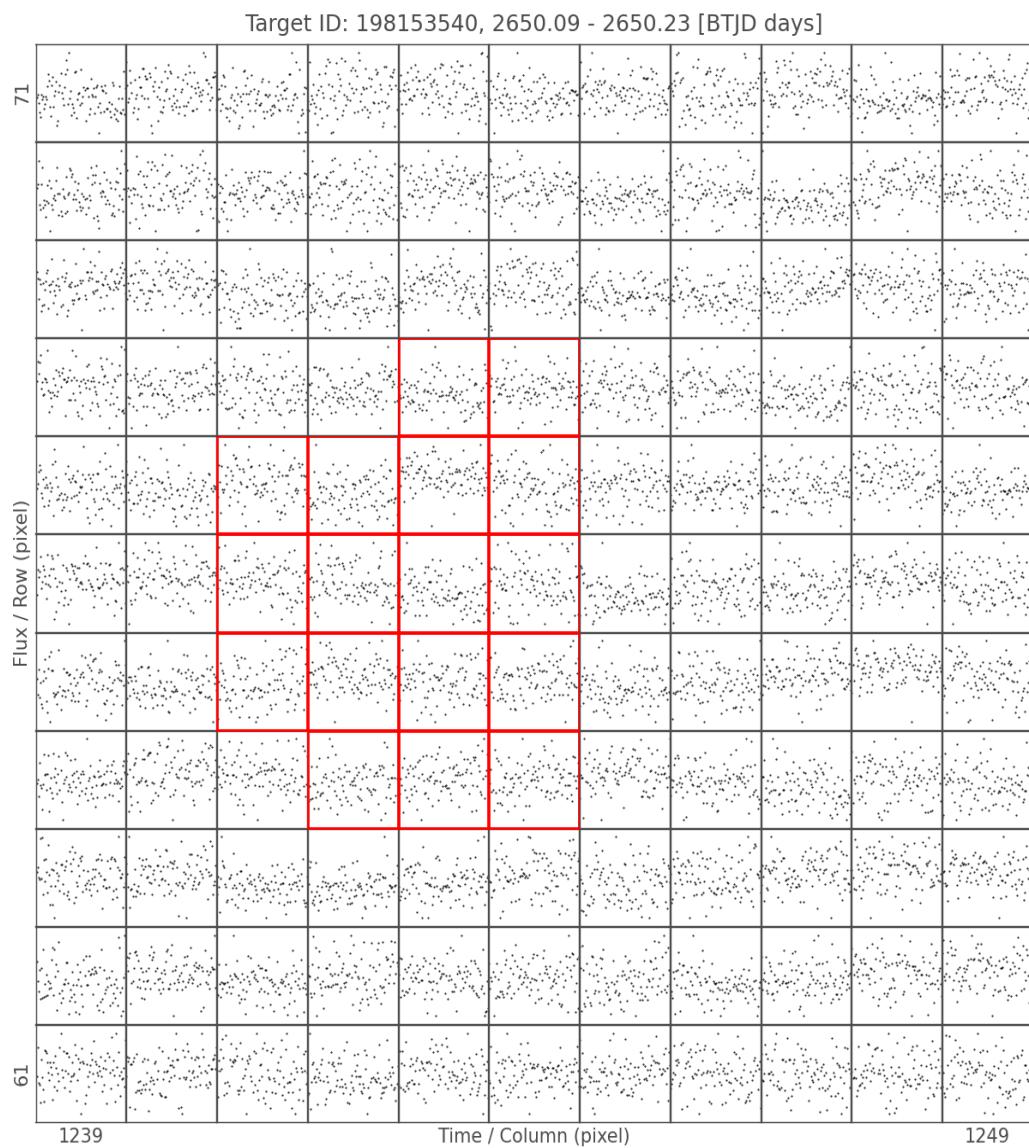
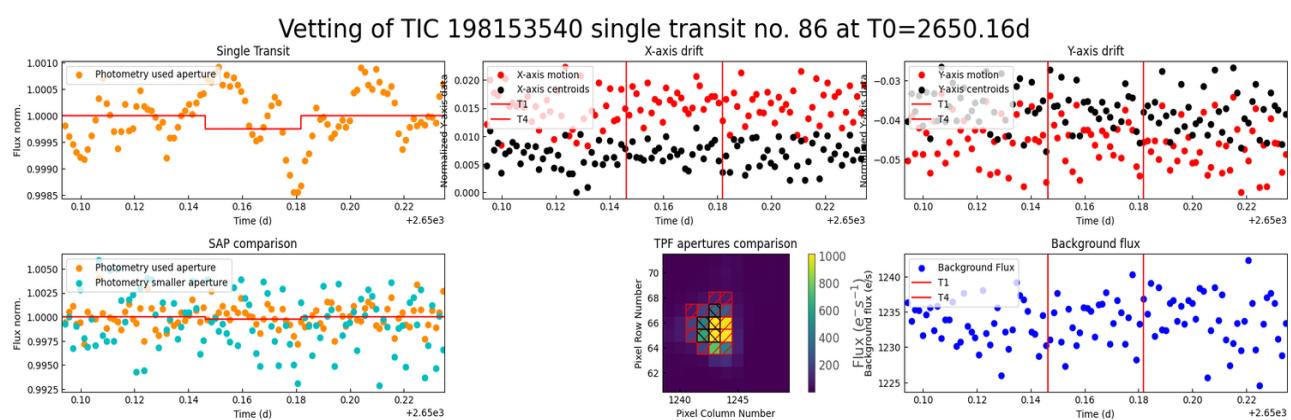


Figure 96: The single transit no. 86 vetting plots

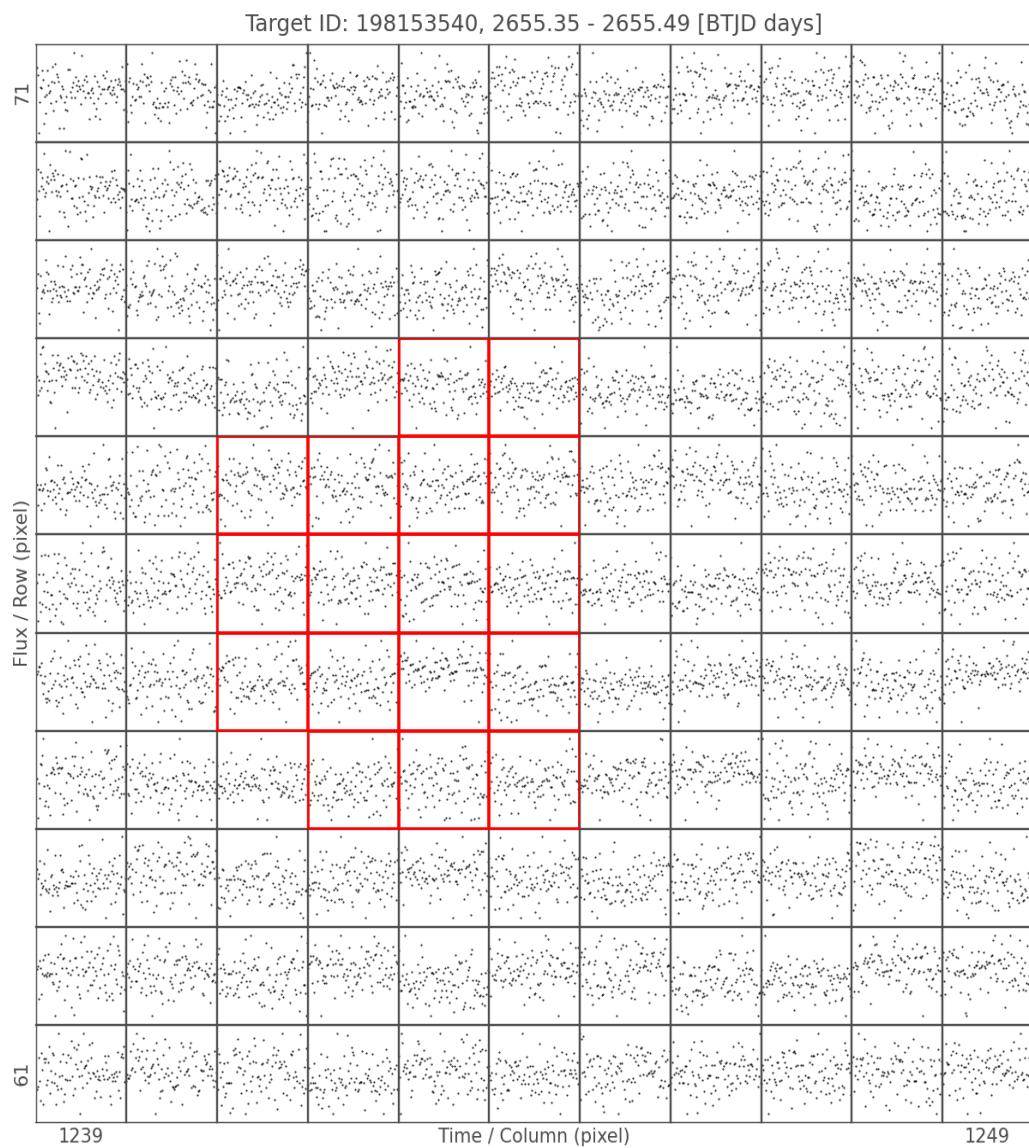
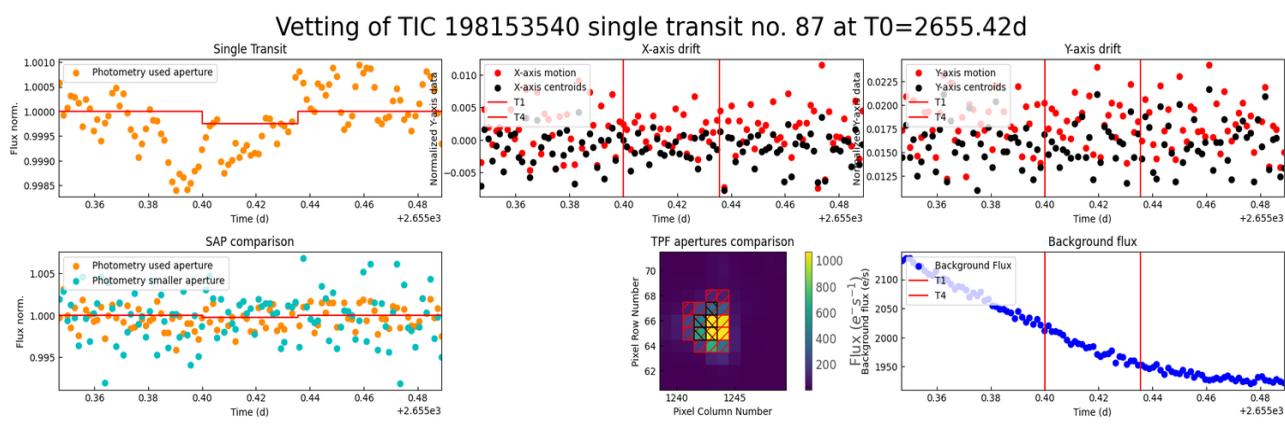


Figure 97: The single transit no. 87 vetting plots

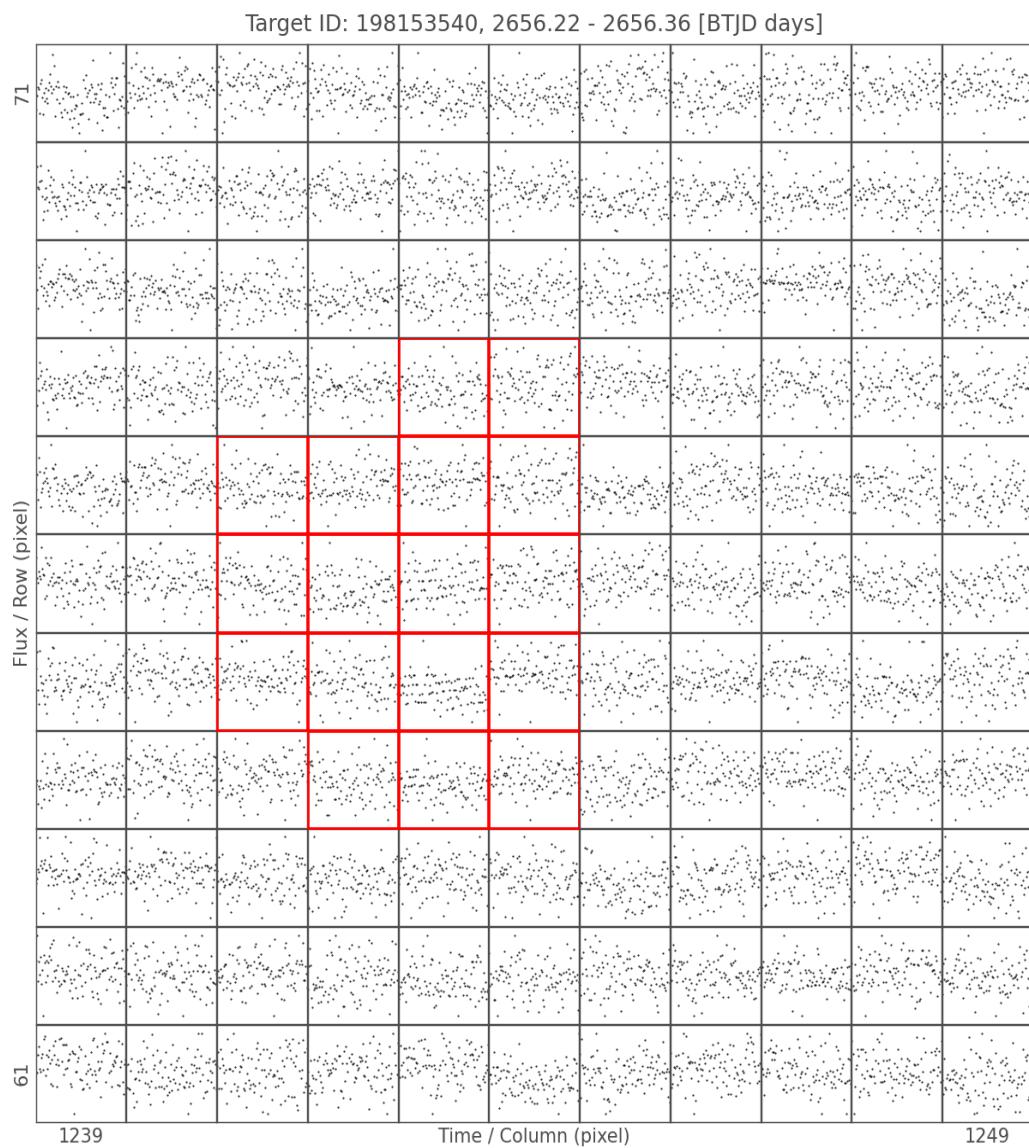
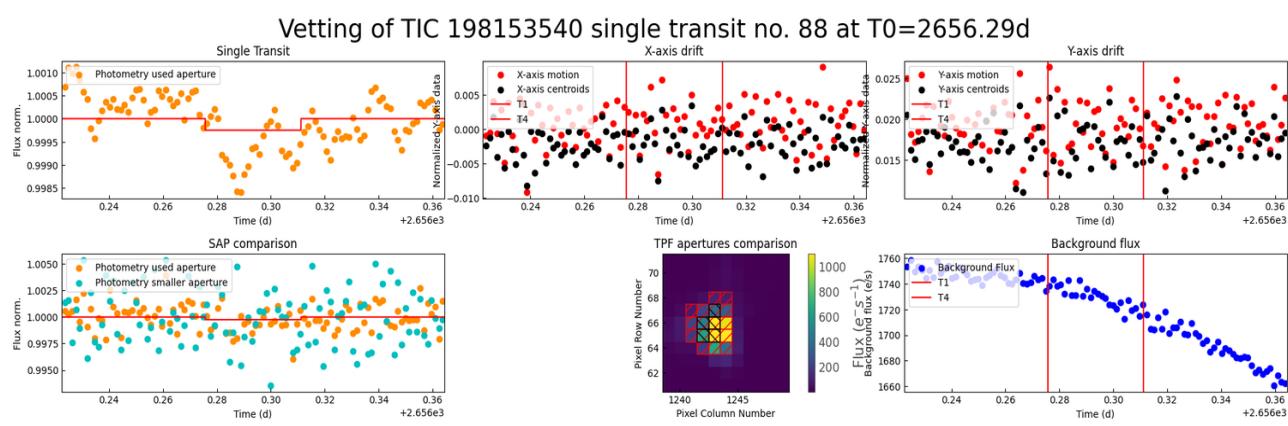


Figure 98: The single transit no. 88 vetting plots

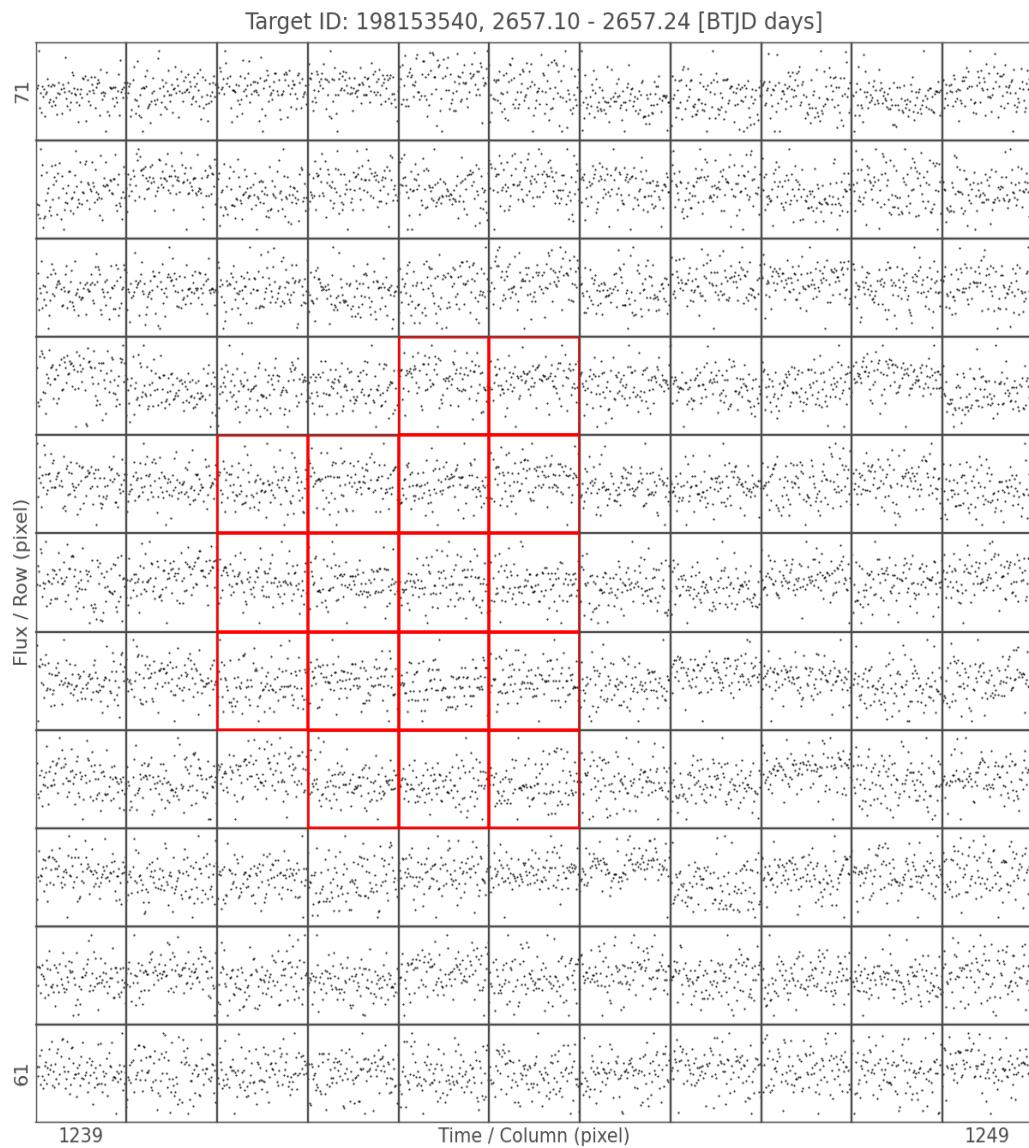
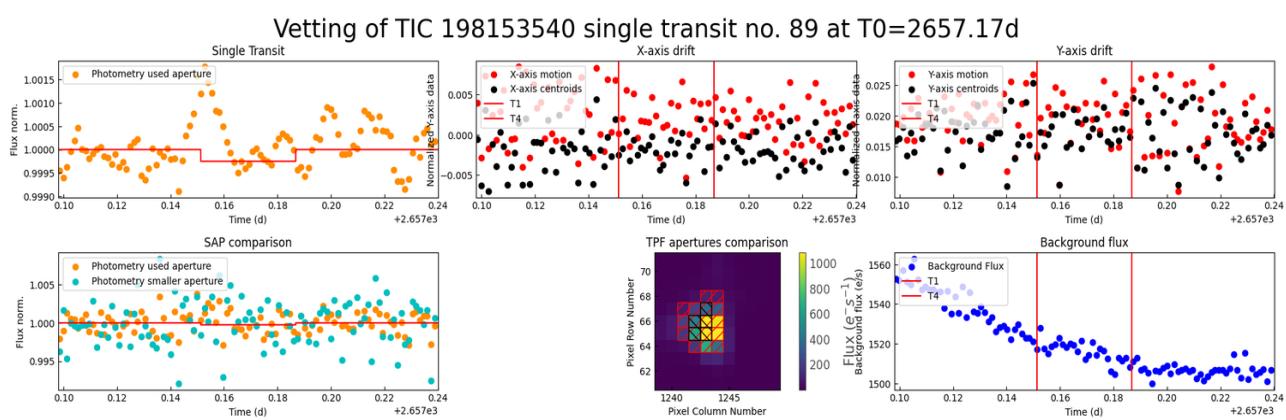


Figure 99: The single transit no. 89 vetting plots



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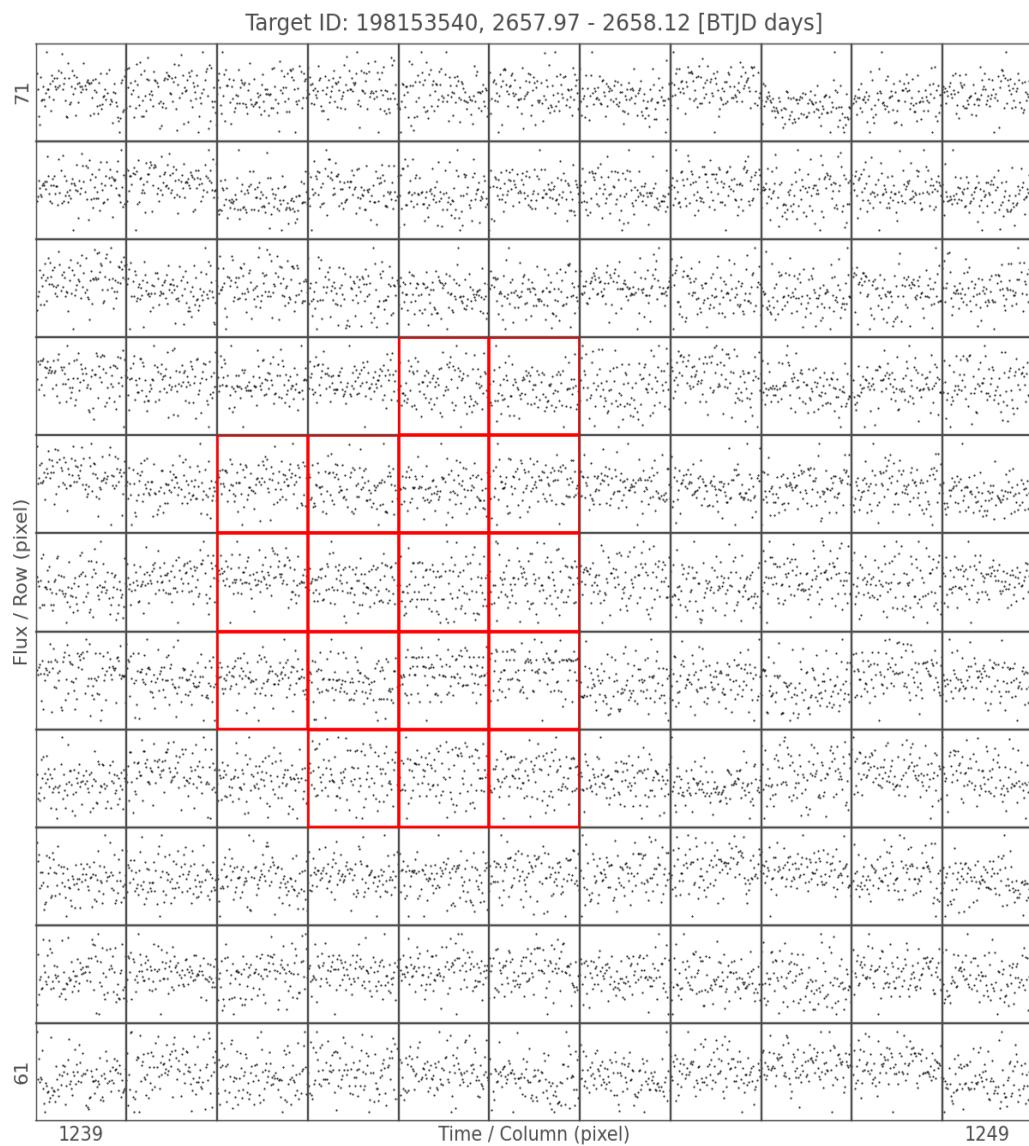
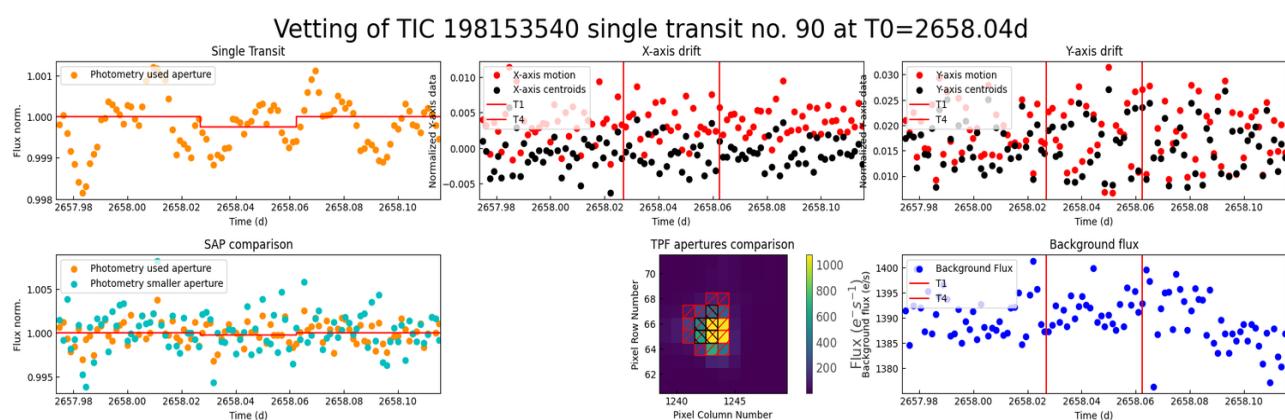


Figure 100: The single transit no. 90 vetting plots

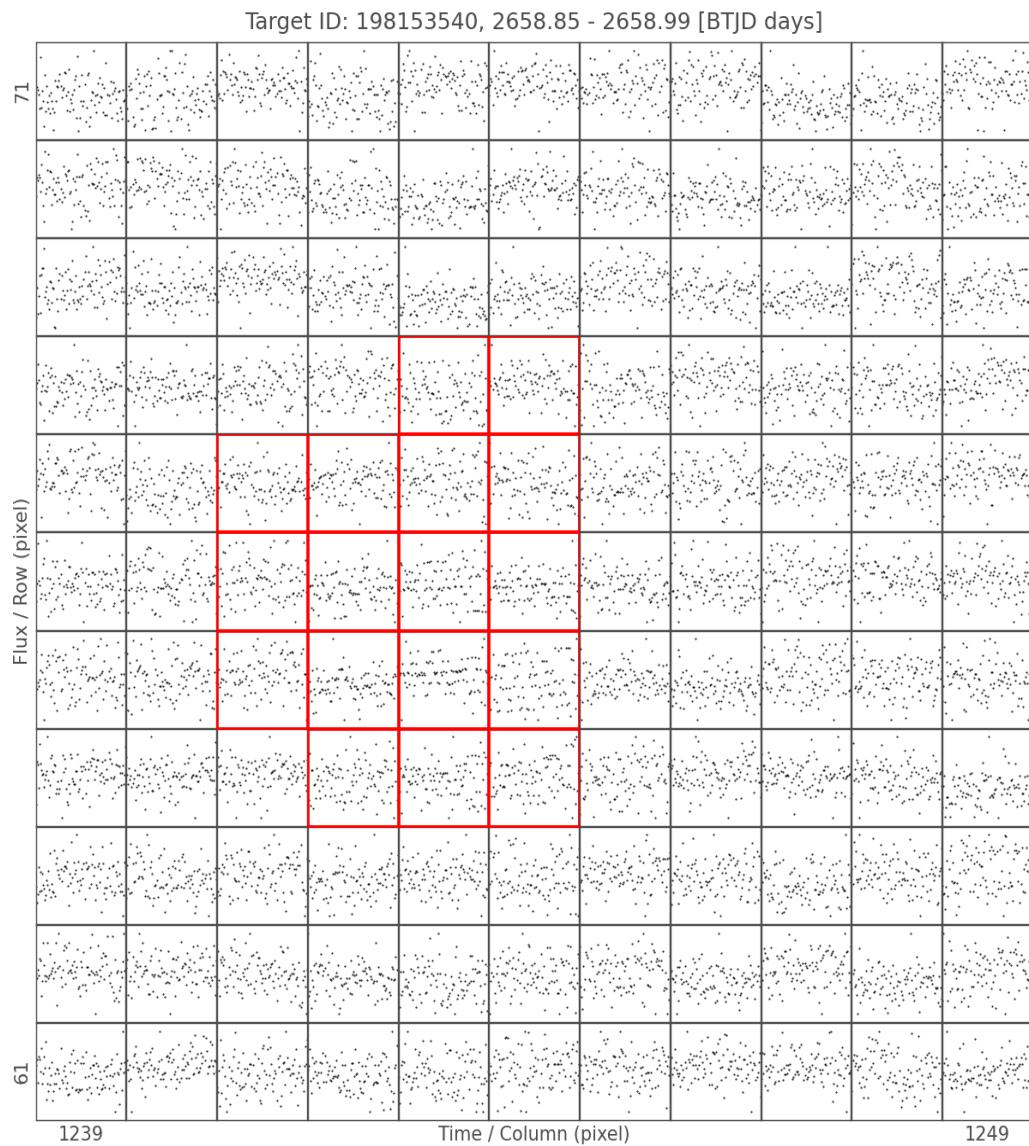
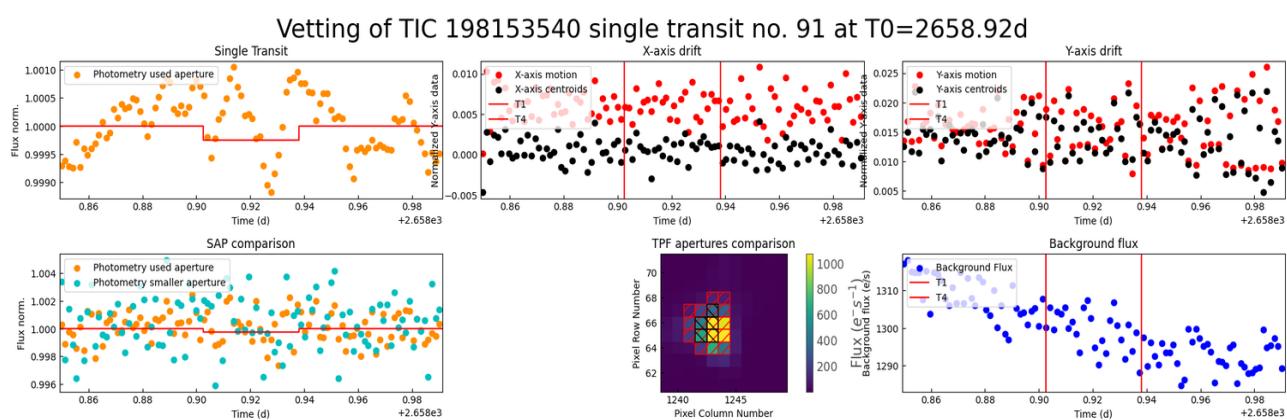


Figure 101: The single transit no. 91 vetting plots

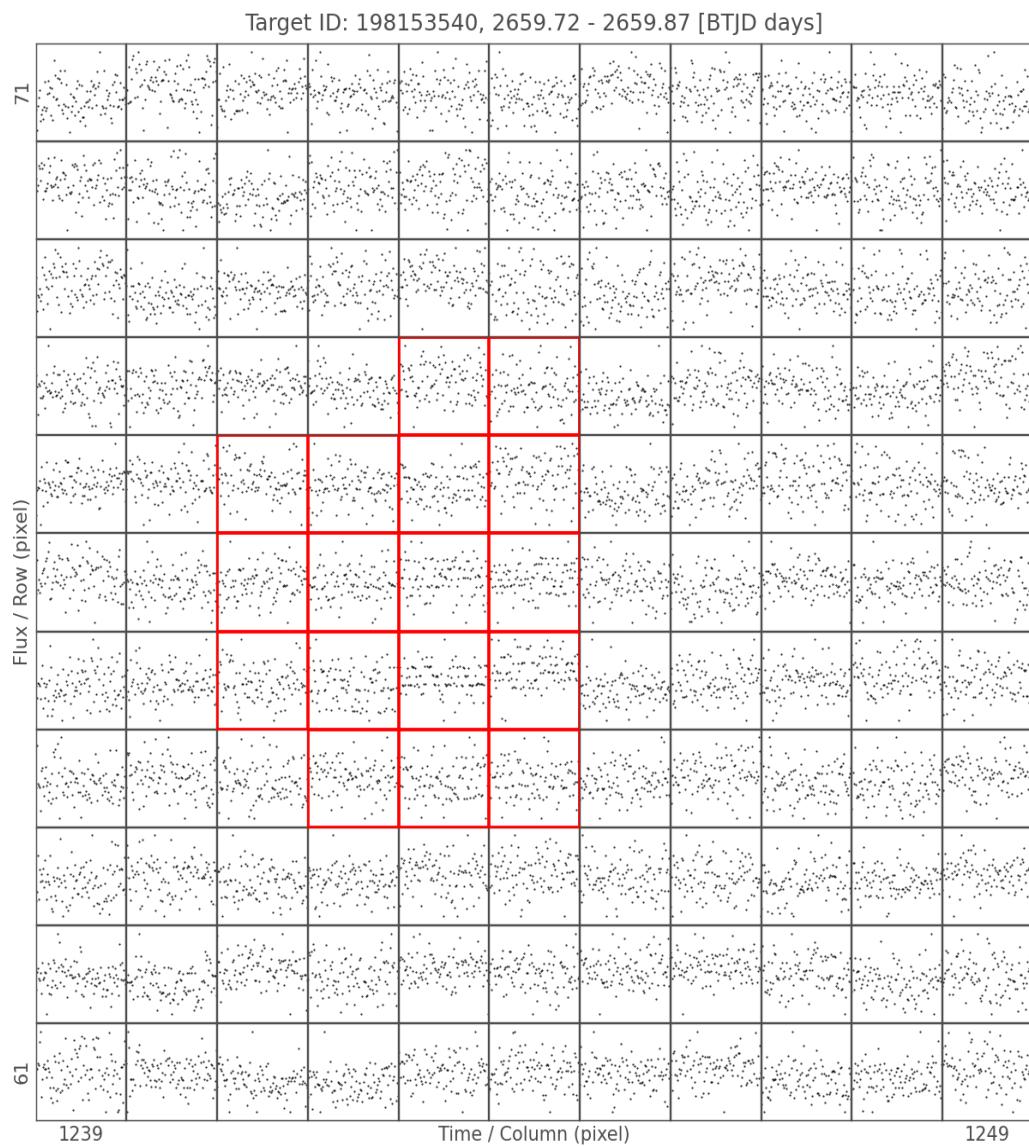
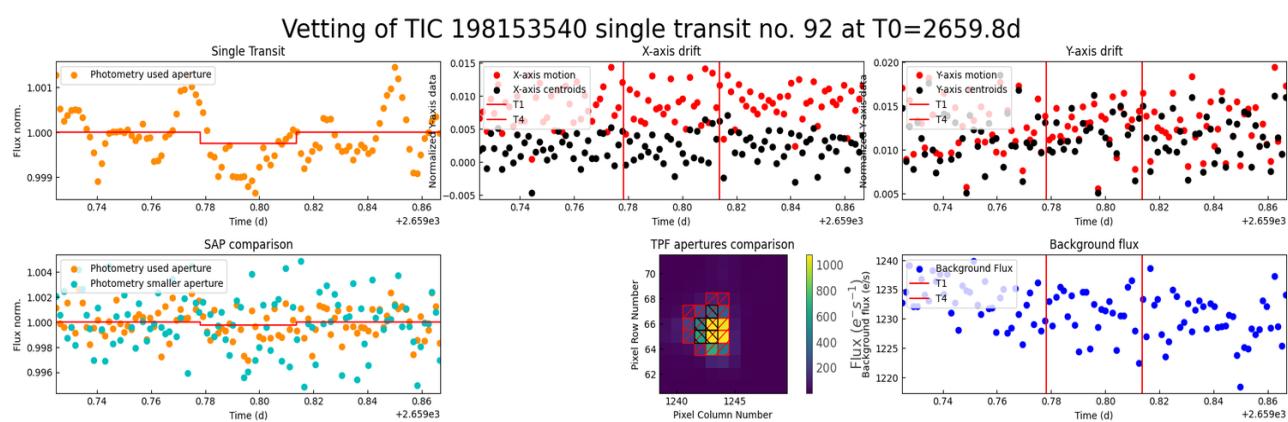


Figure 102: The single transit no. 92 vetting plots



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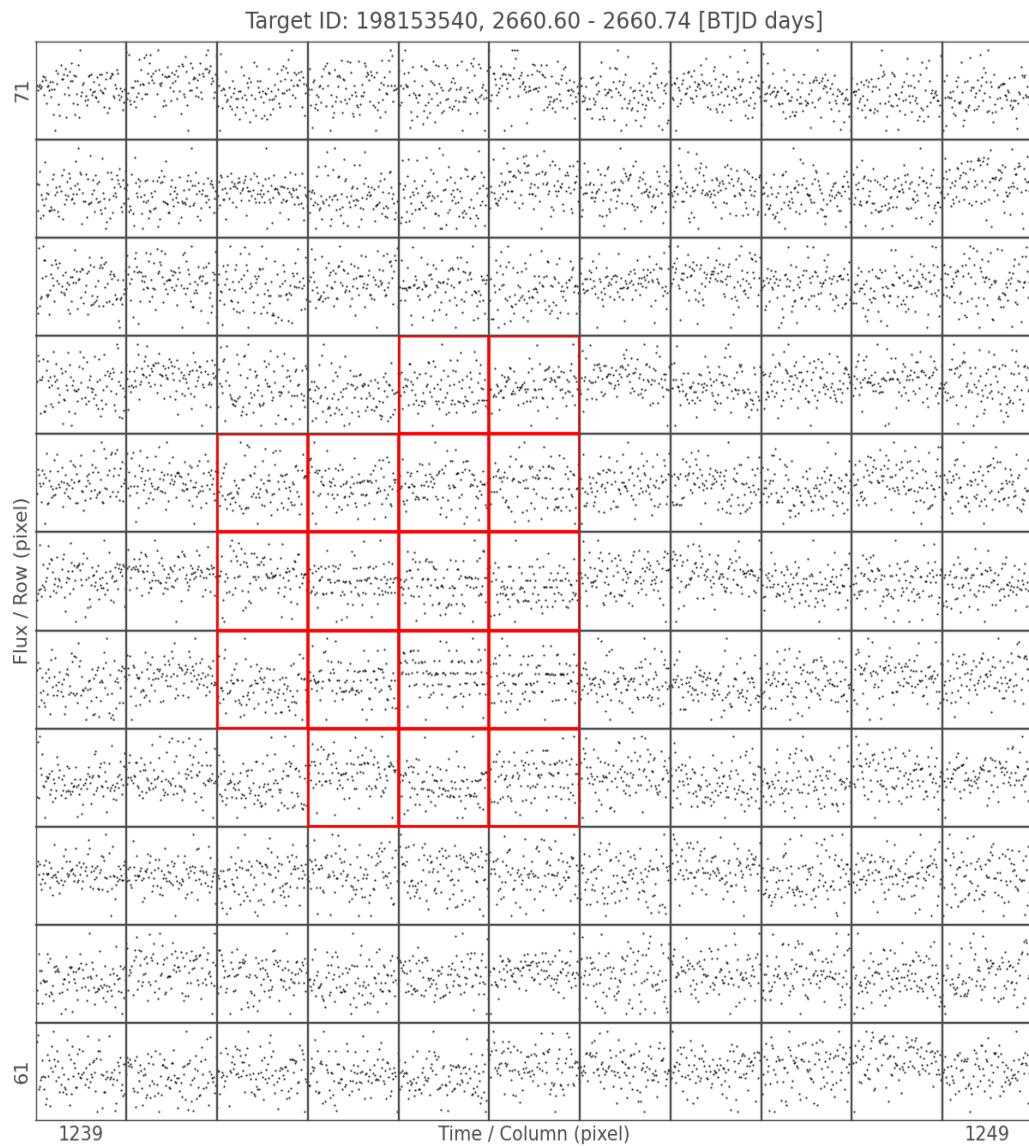
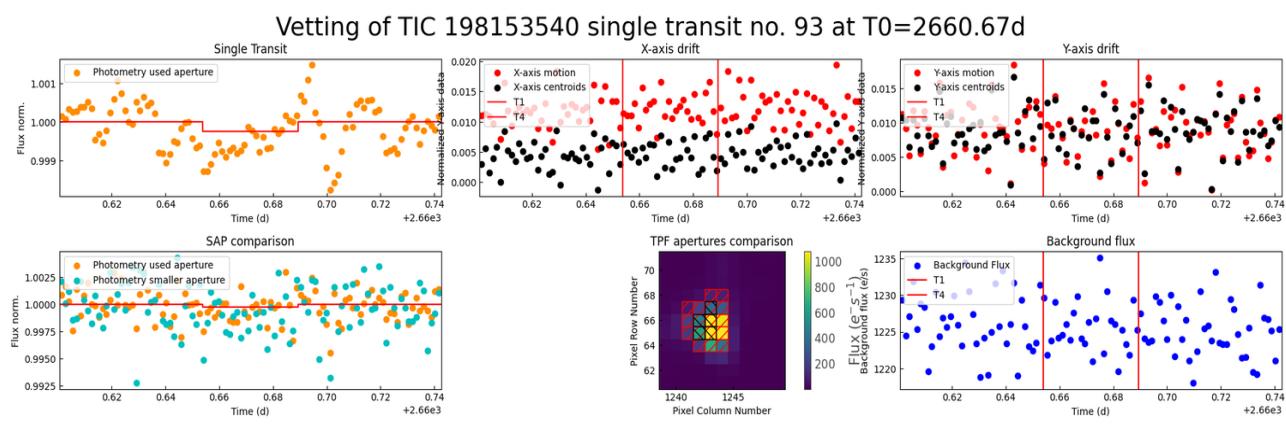


Figure 103: The single transit no. 93 vetting plots

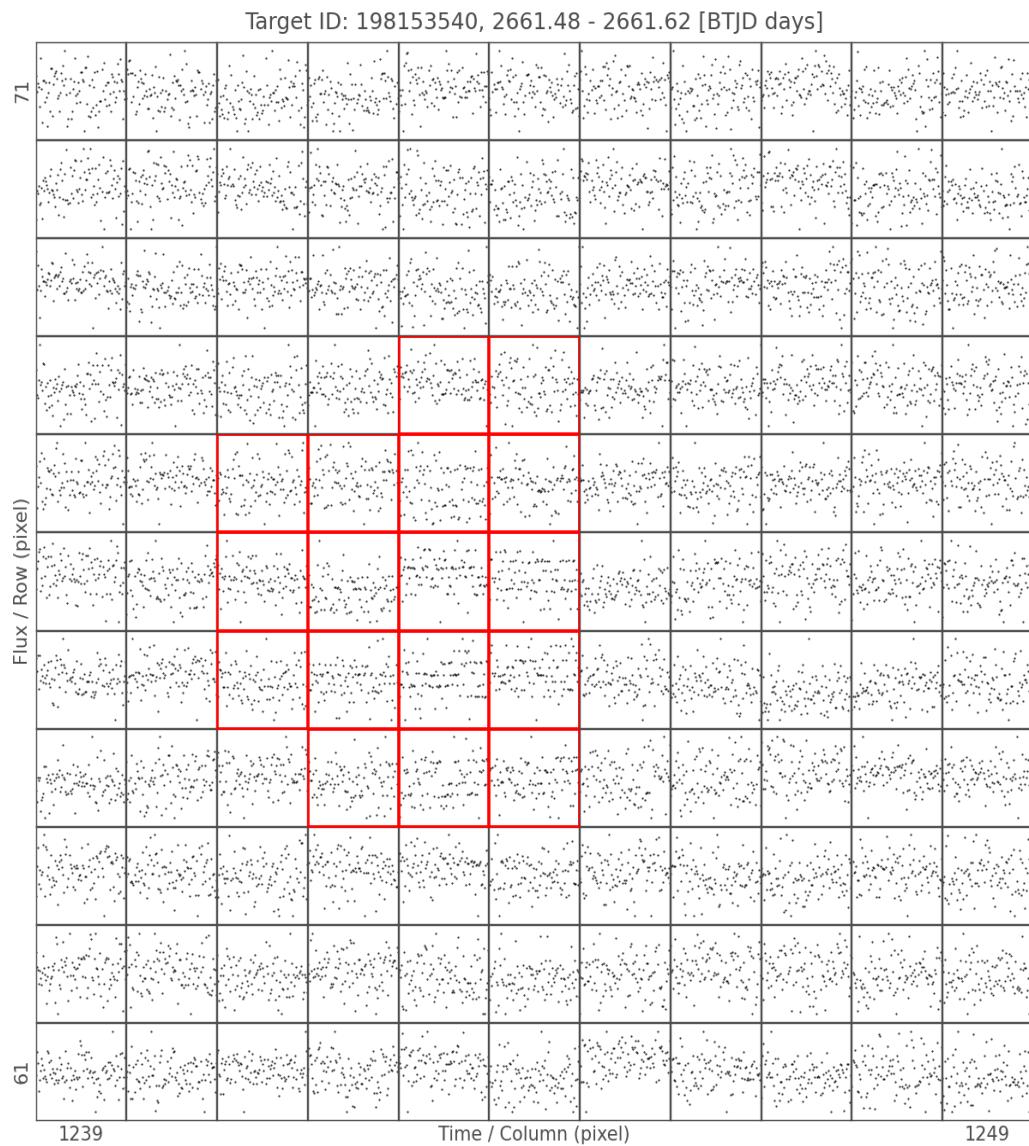
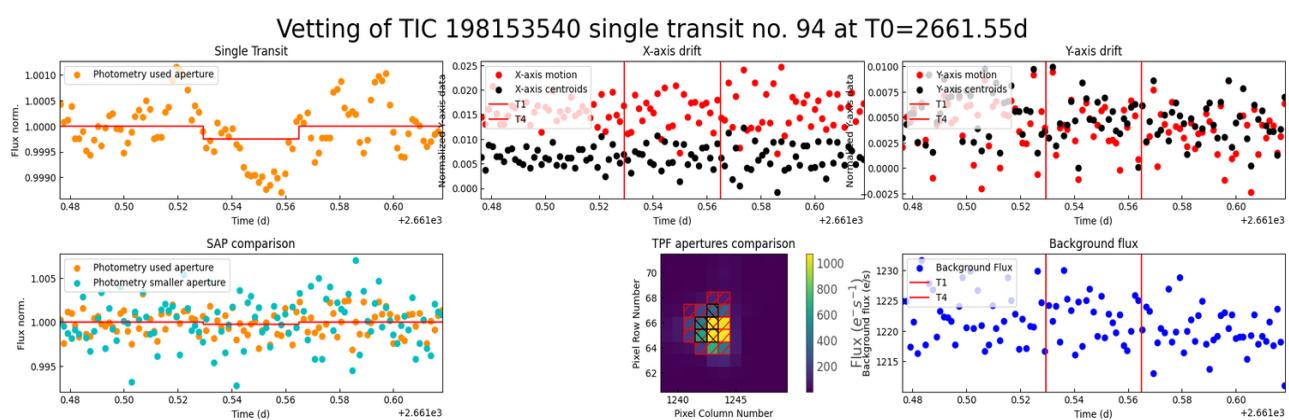


Figure 104: The single transit no. 94 vetting plots

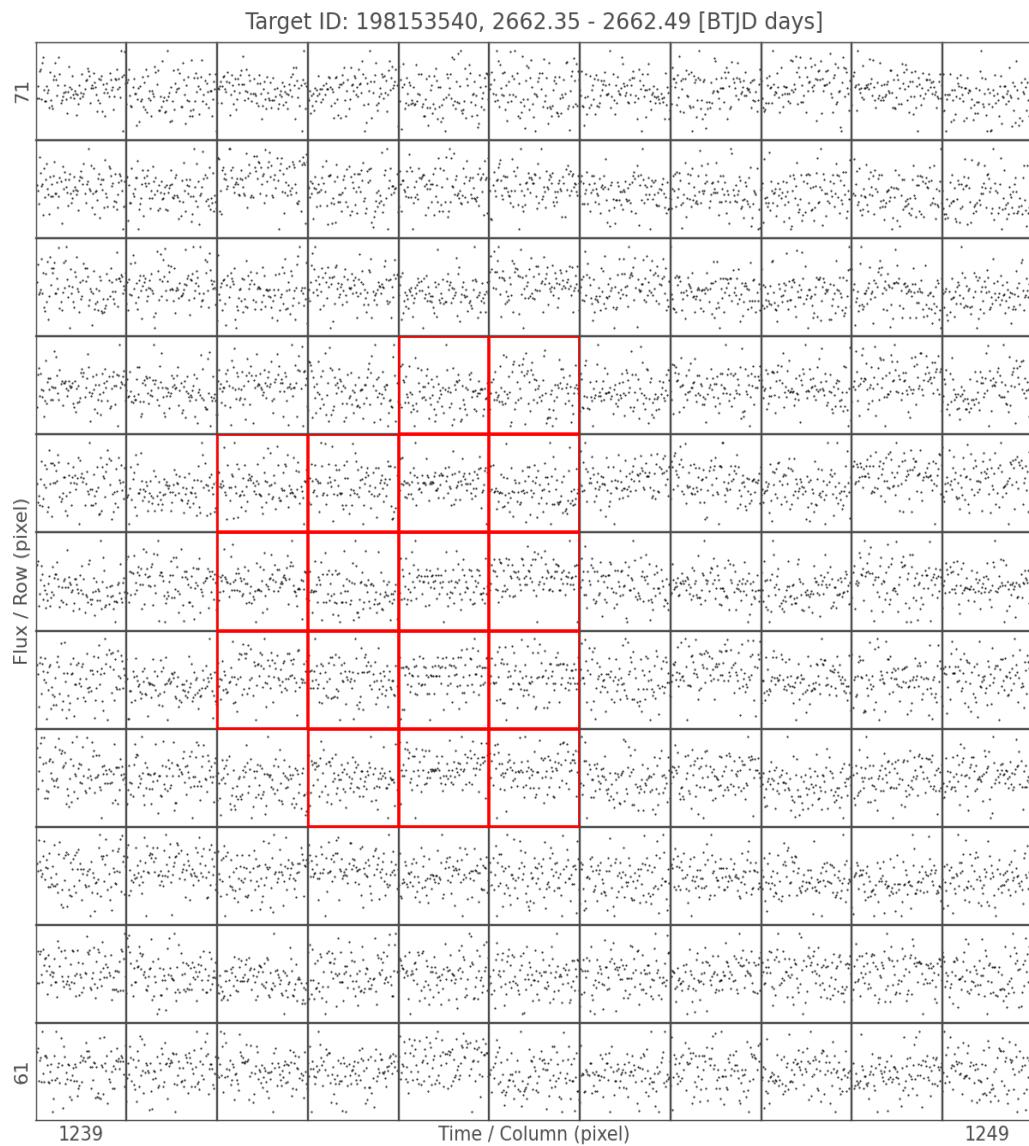
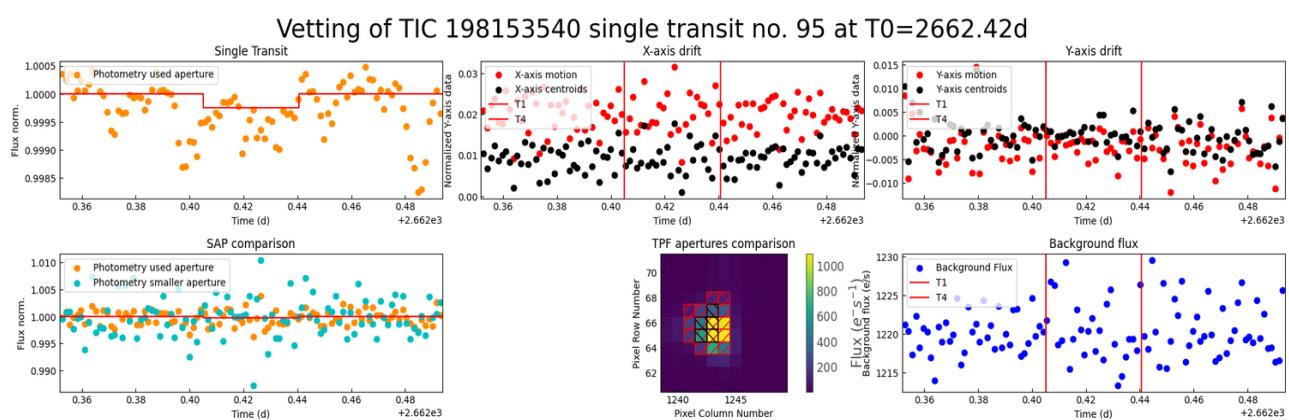


Figure 105: The single transit no. 95 vetting plots



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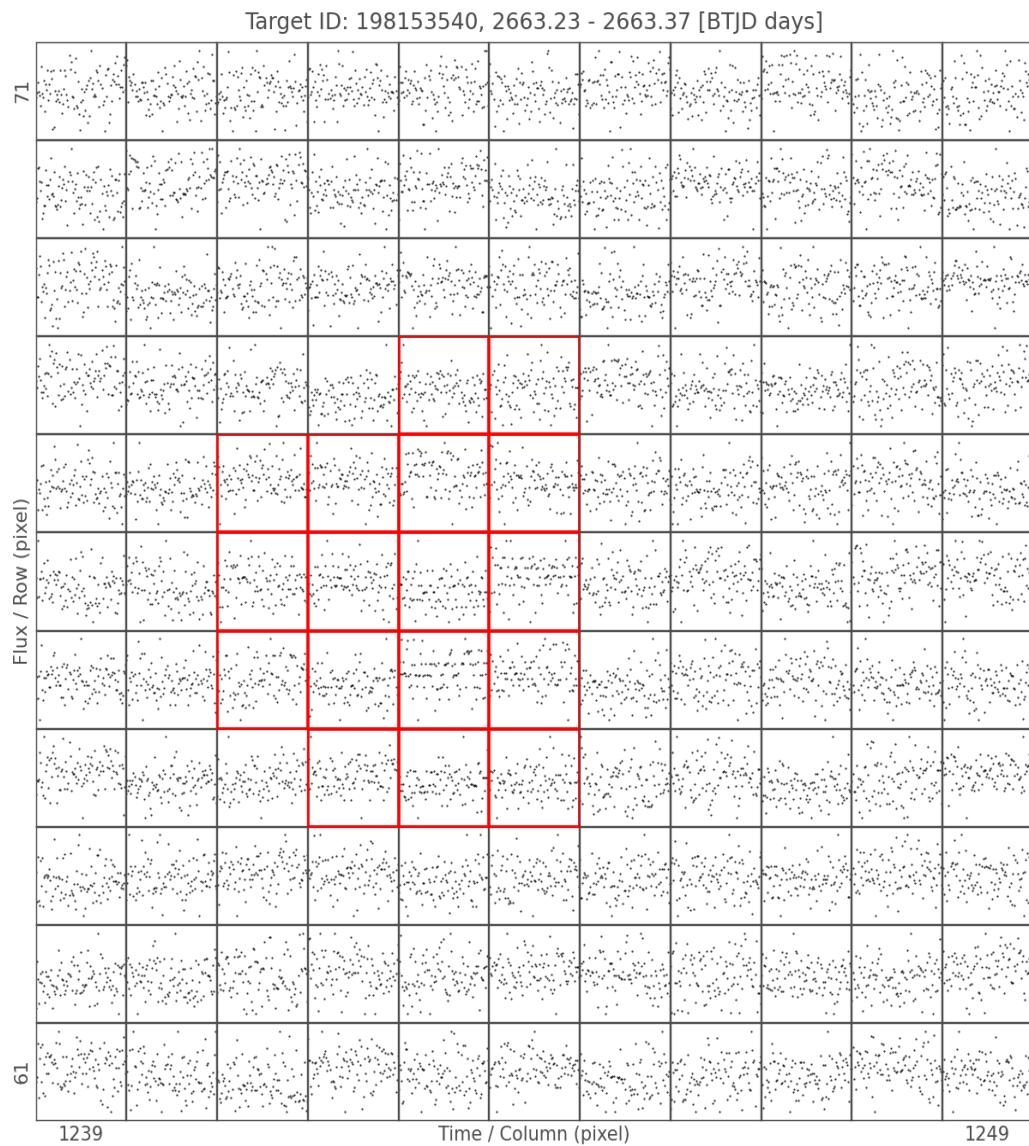
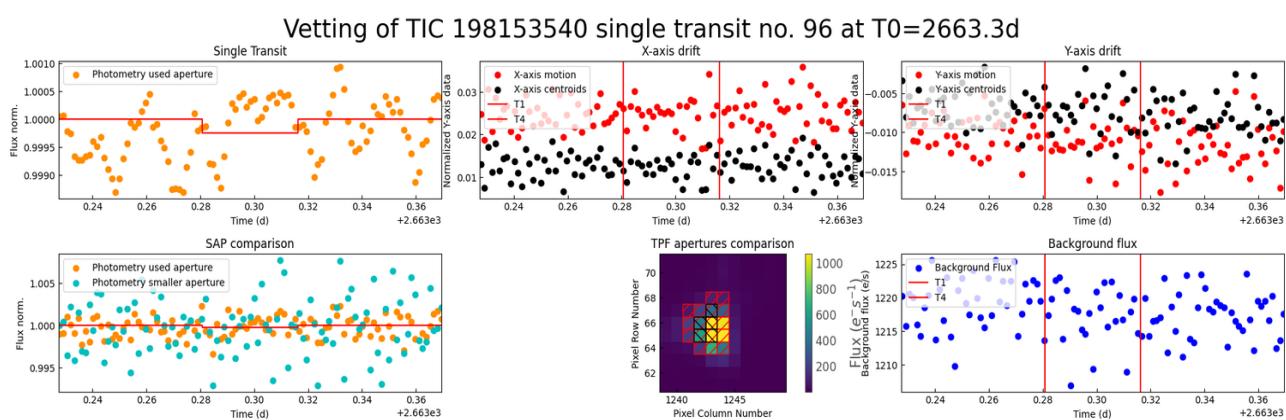


Figure 106: The single transit no. 96 vetting plots

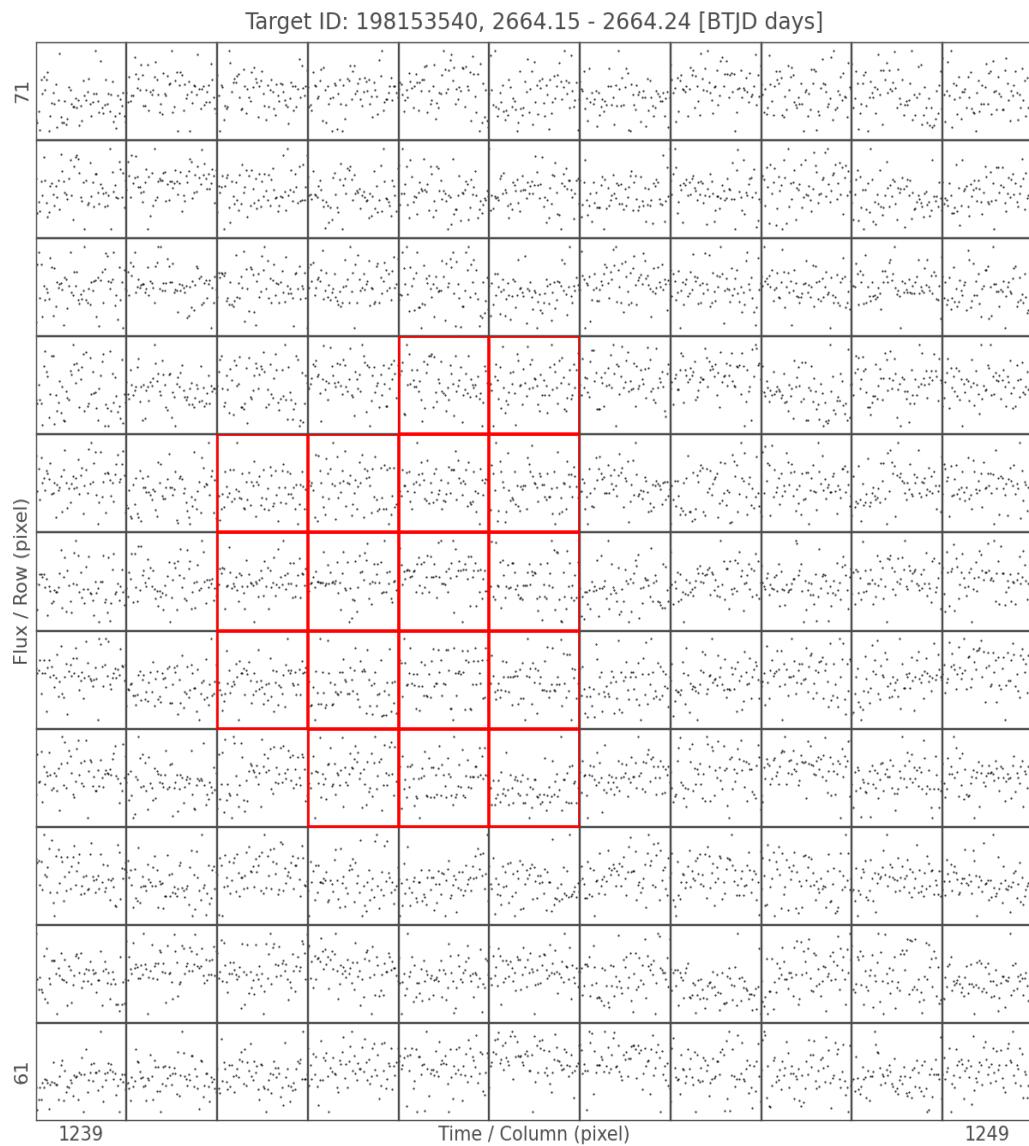
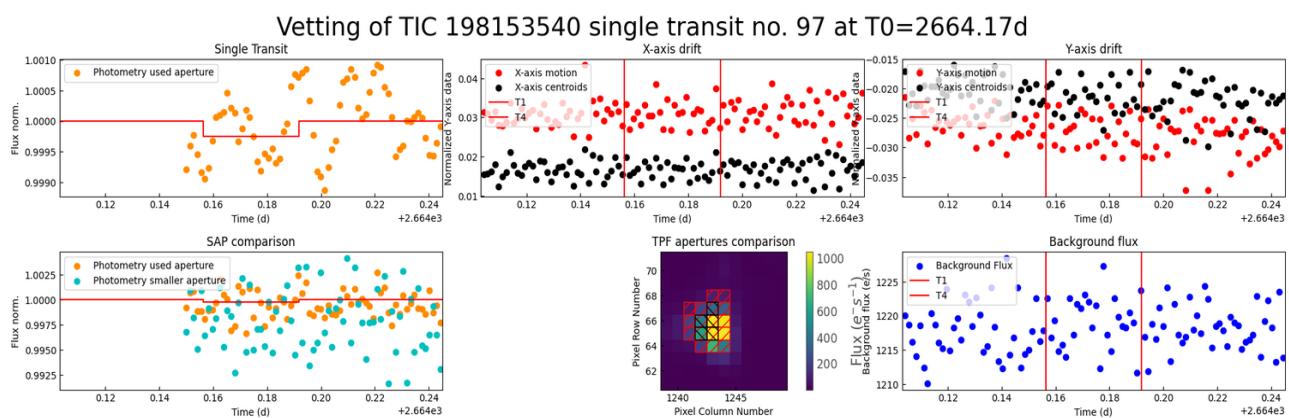


Figure 107: The single transit no. 97 vetting plots

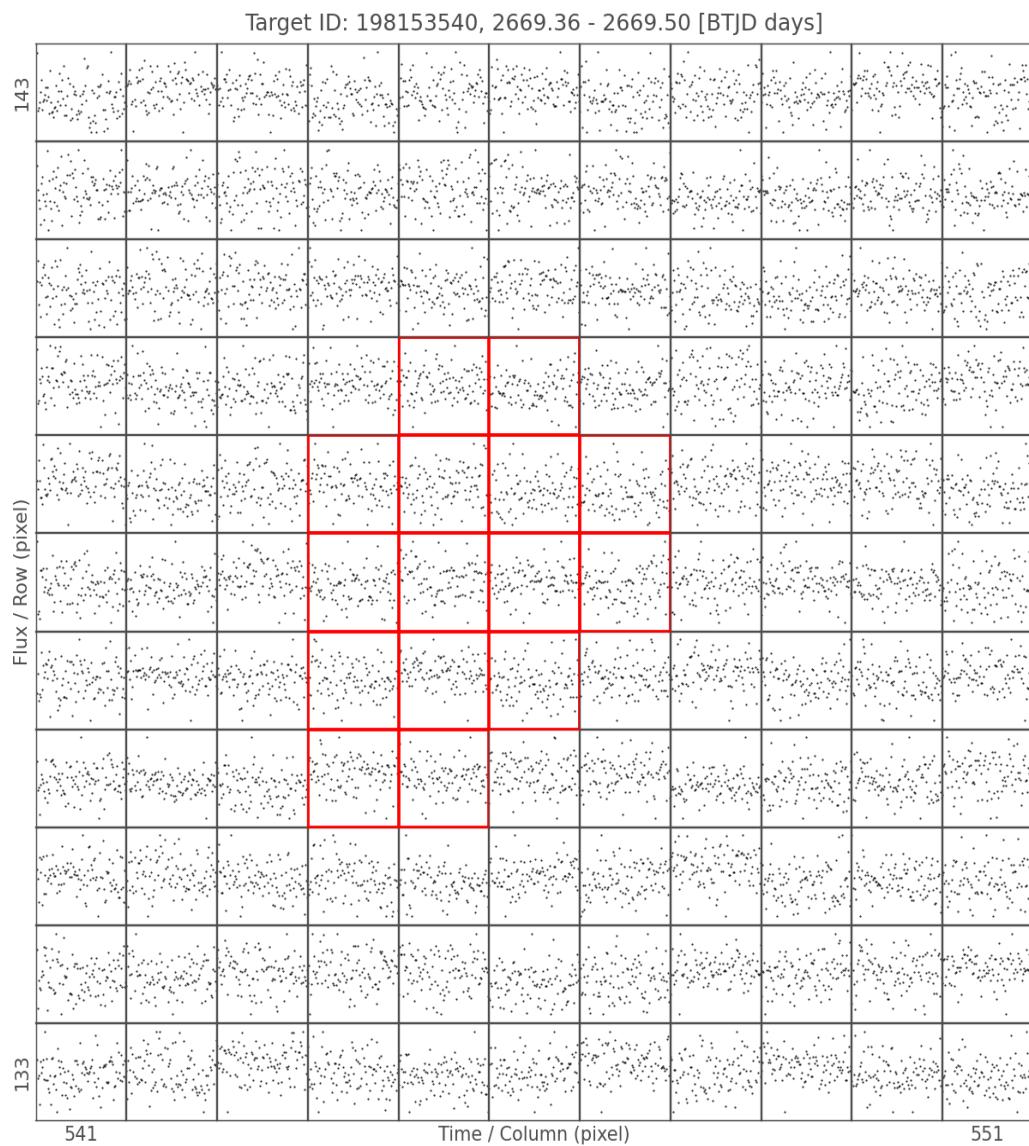
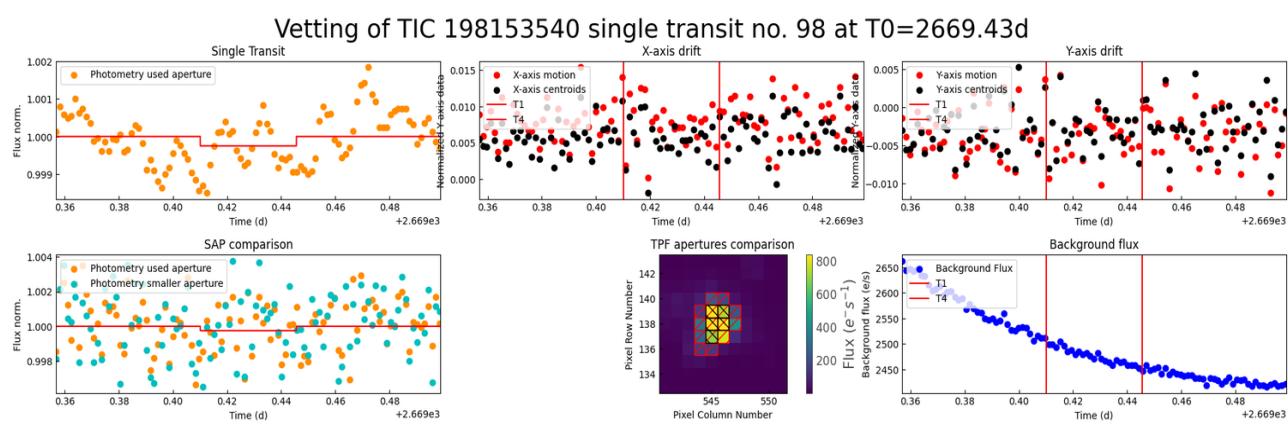


Figure 108: The single transit no. 98 vetting plots



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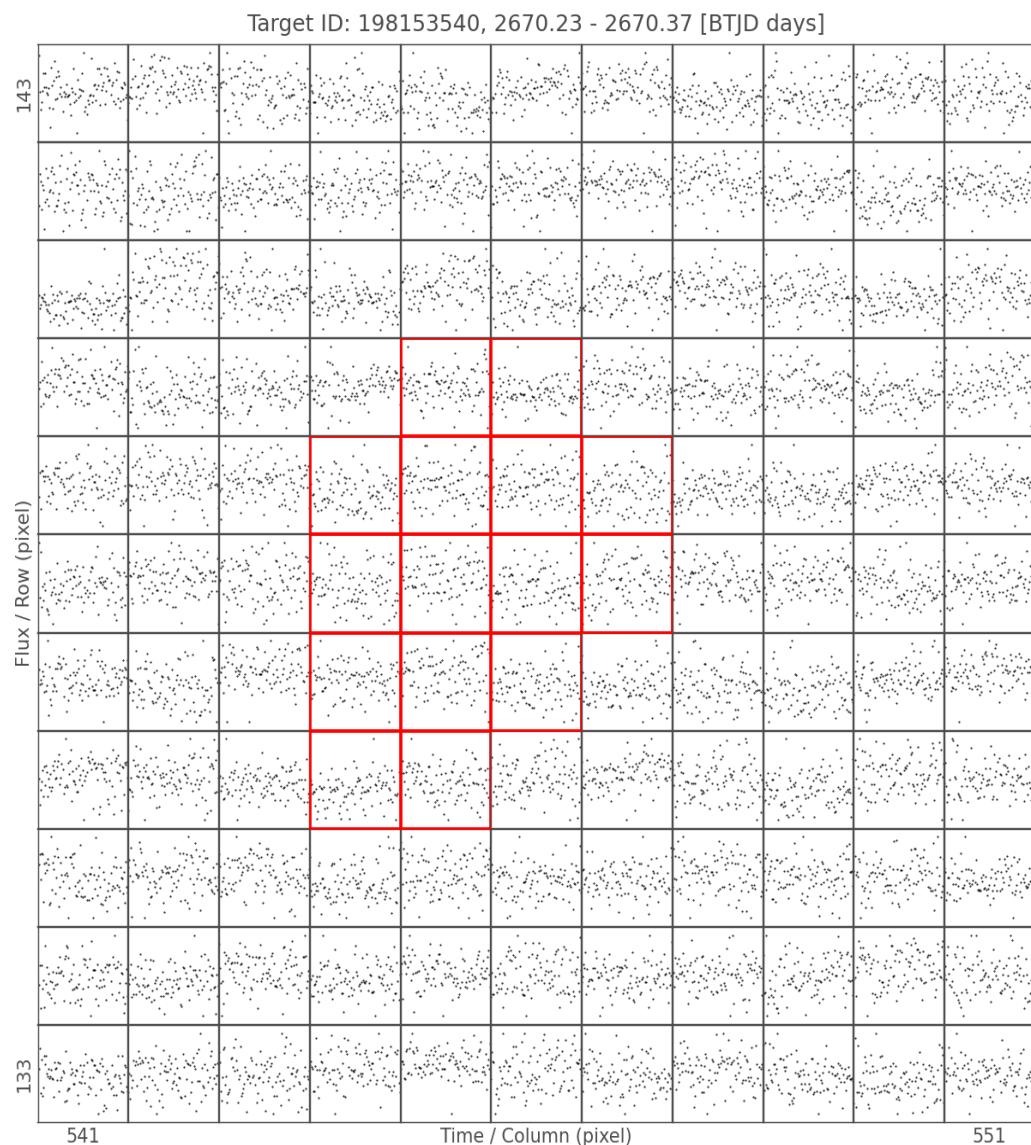
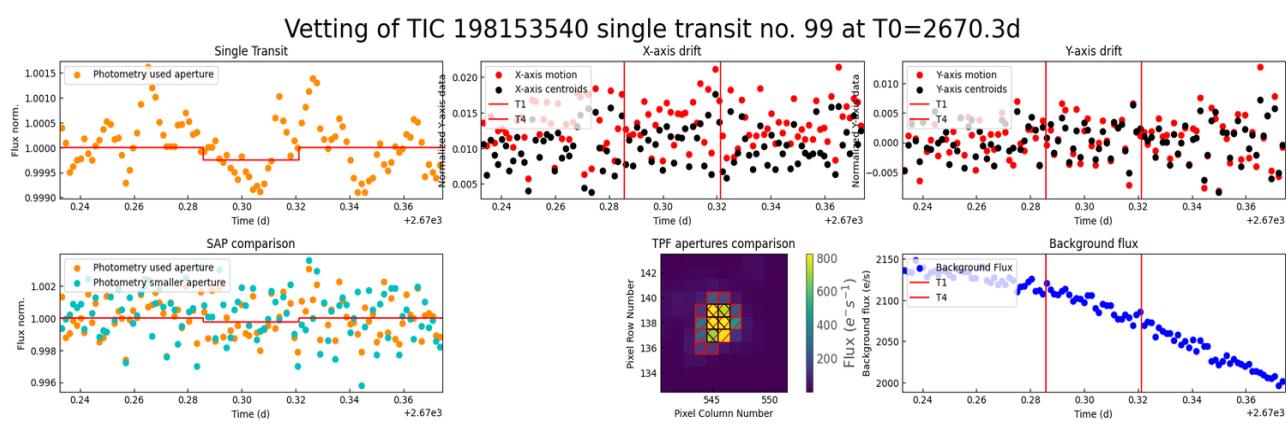


Figure 109: The single transit no. 99 vetting plots

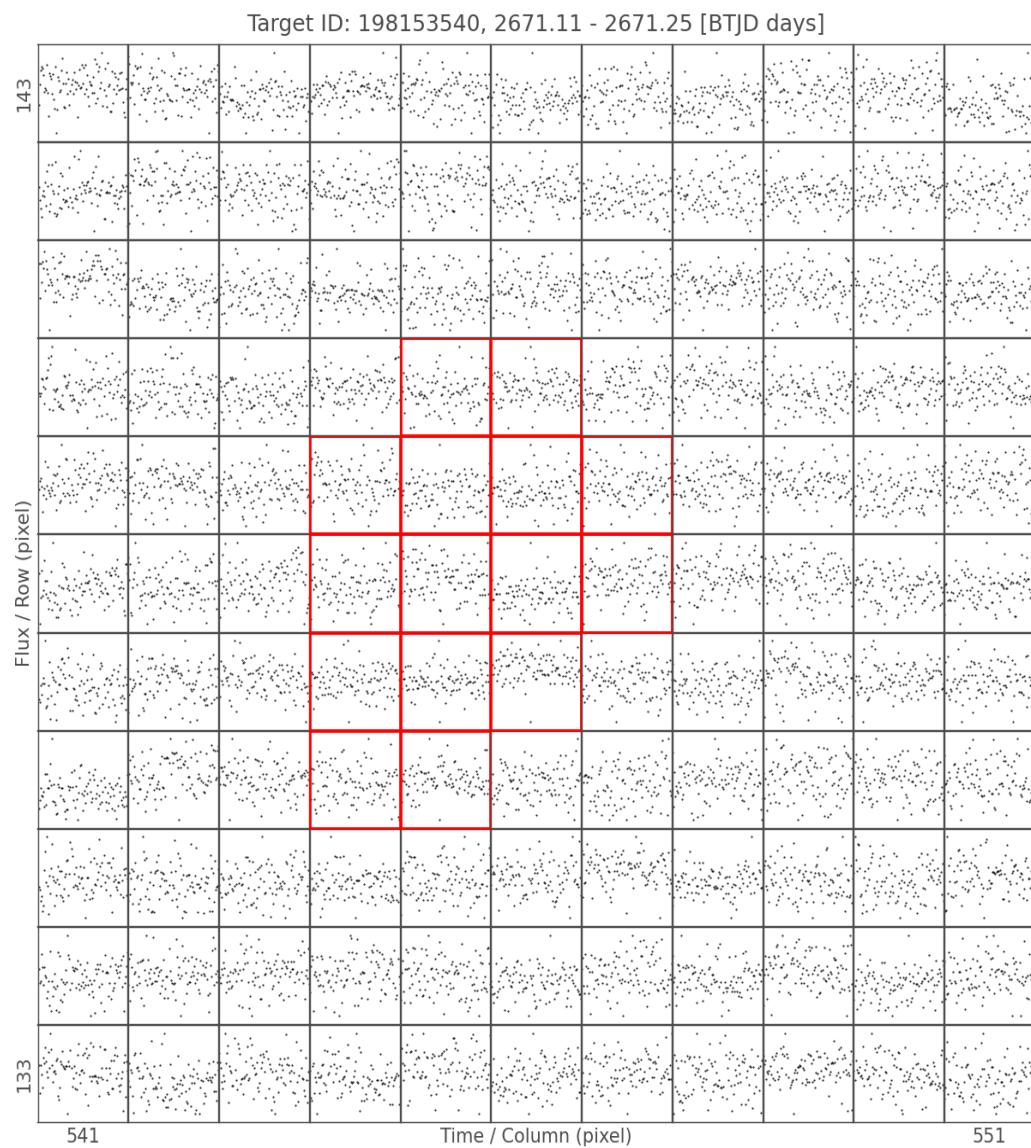
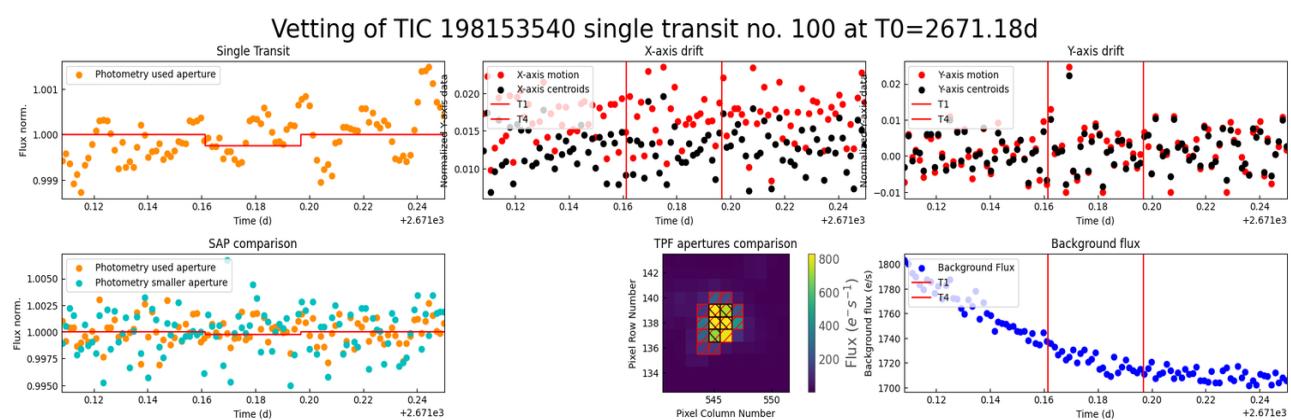


Figure 110: The single transit no. 100 vetting plots

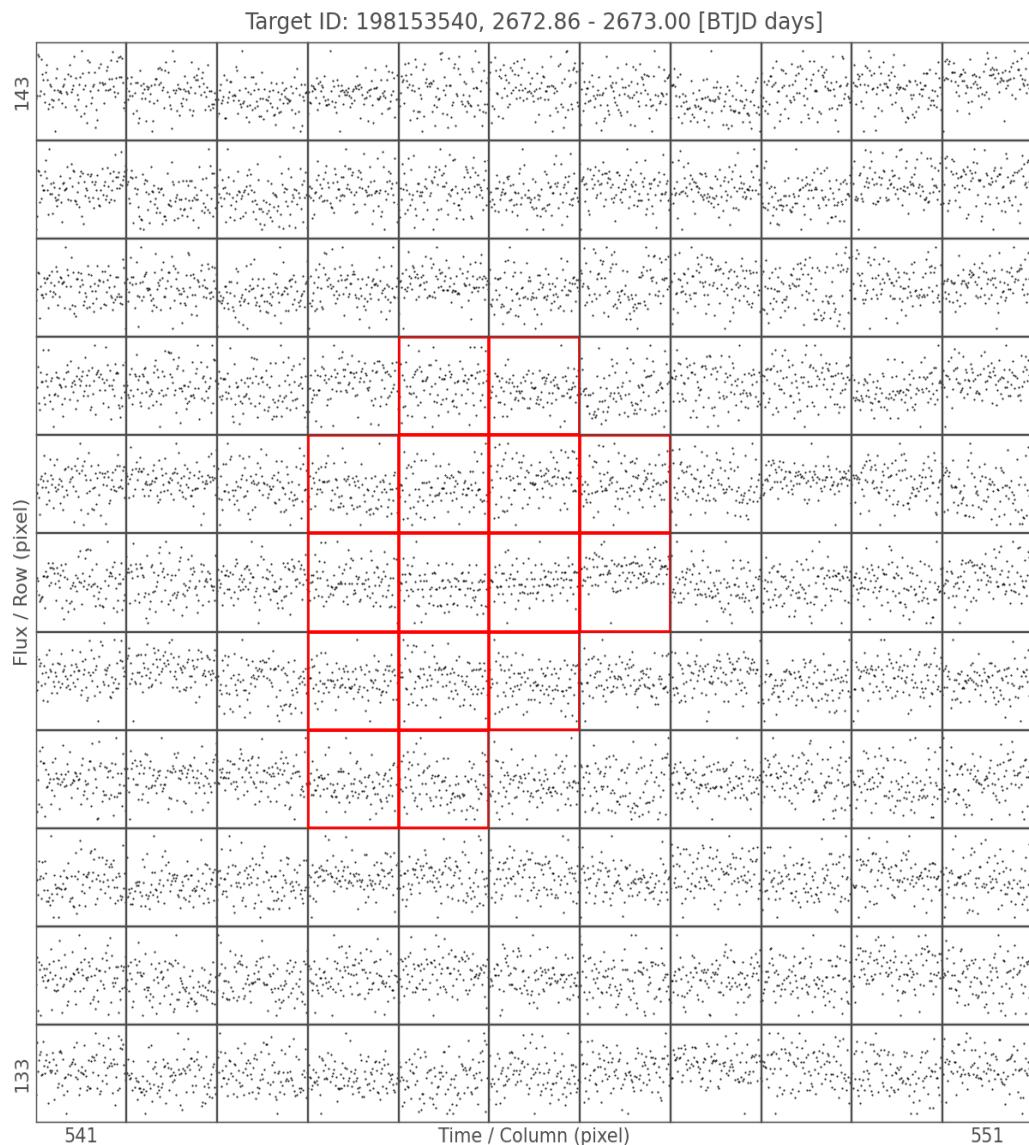
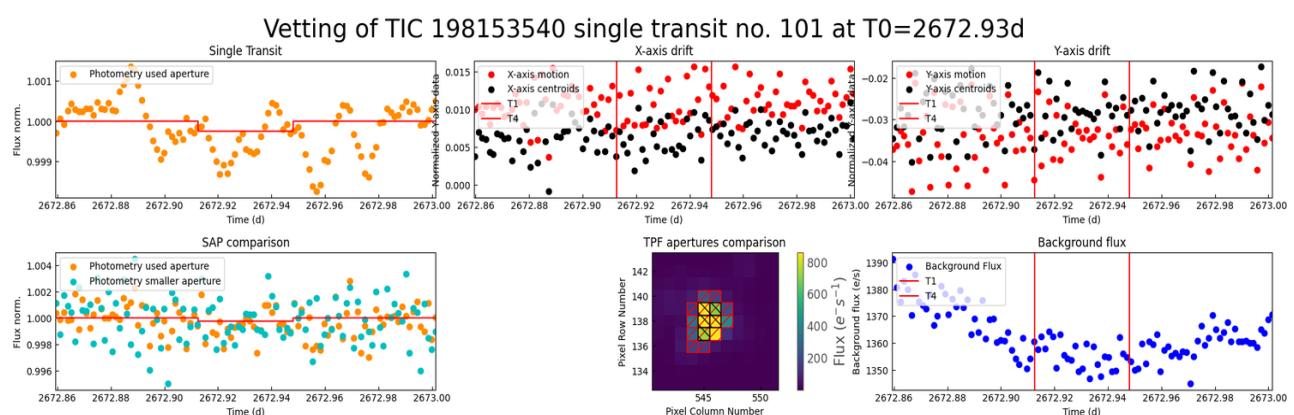


Figure 111: The single transit no. 101 vetting plots



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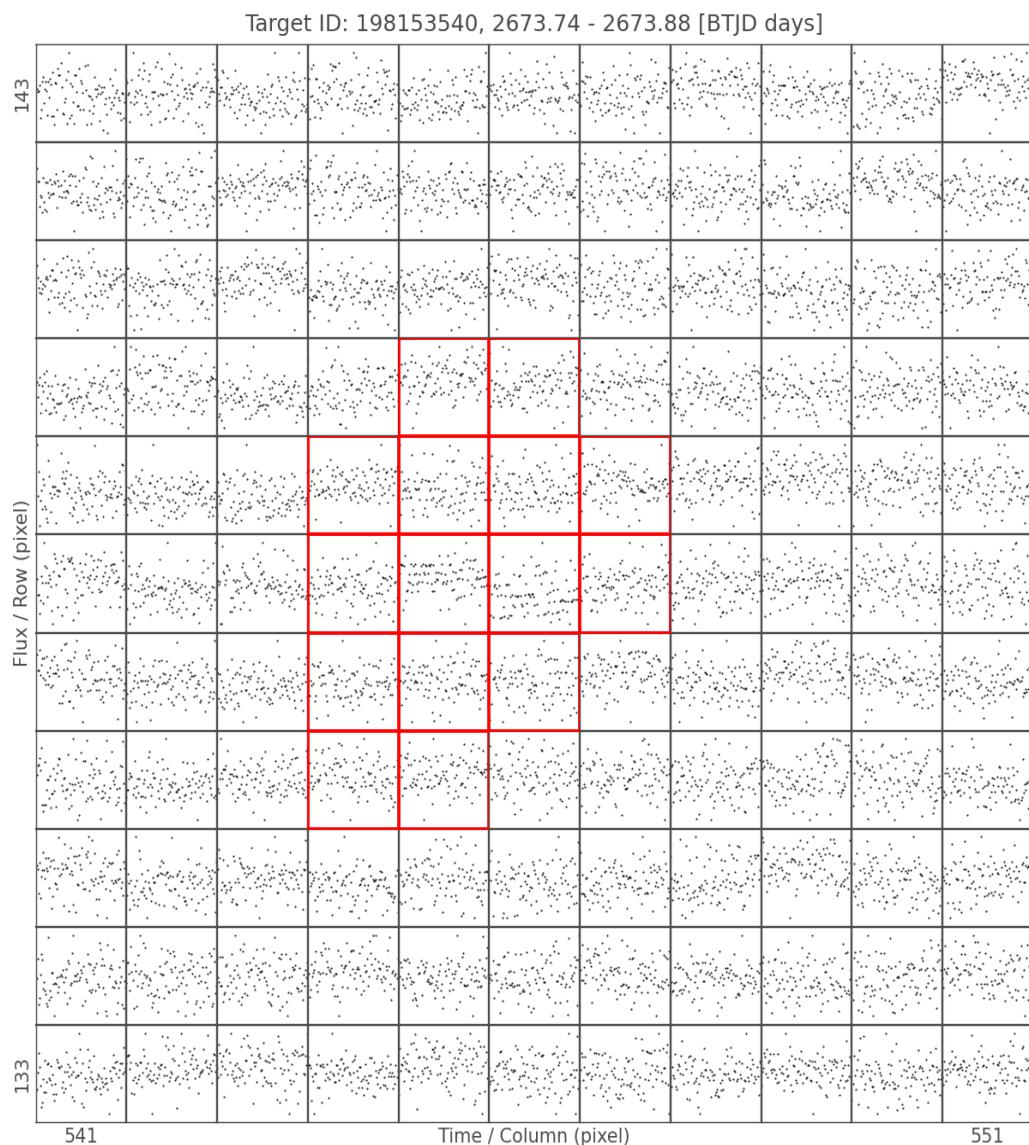
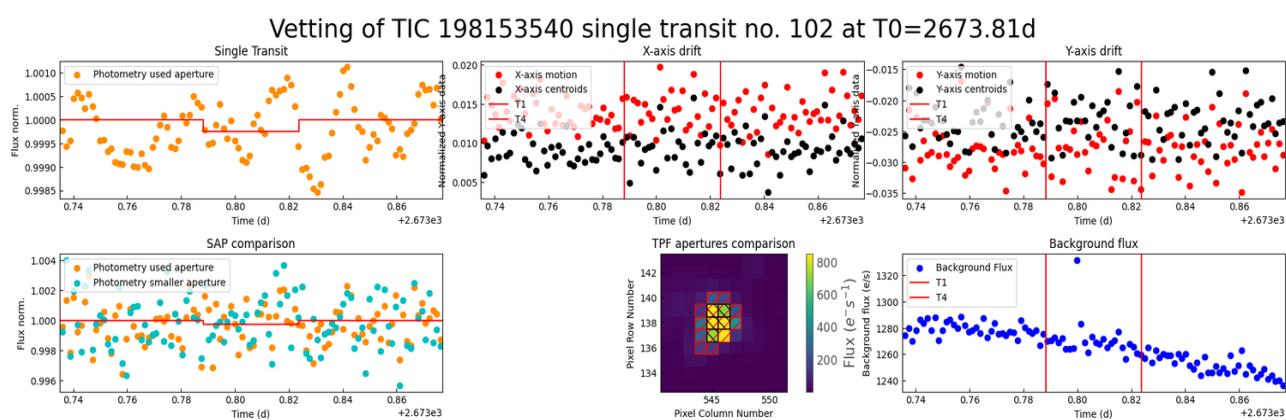


Figure 112: The single transit no. 102 vetting plots

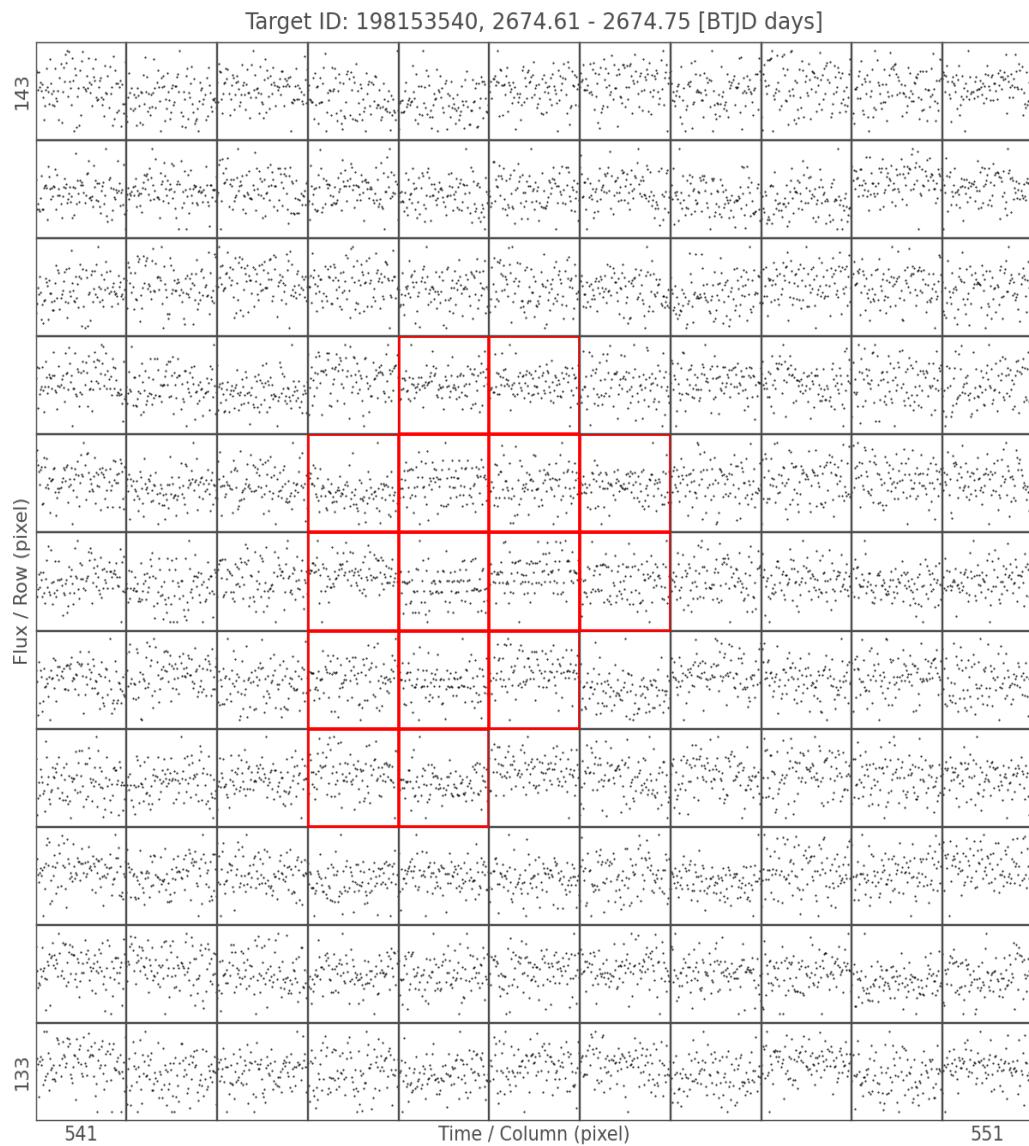
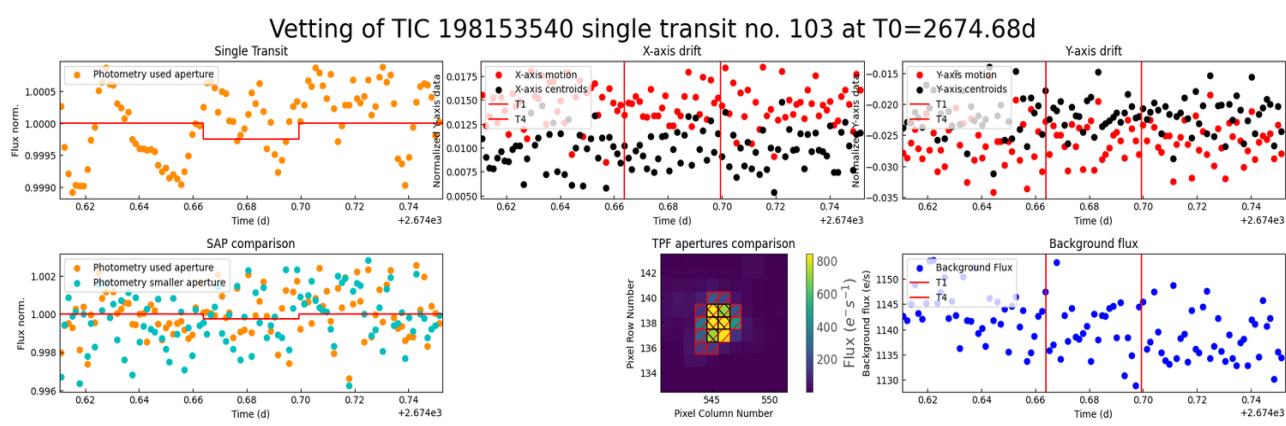


Figure 113: The single transit no. 103 vetting plots

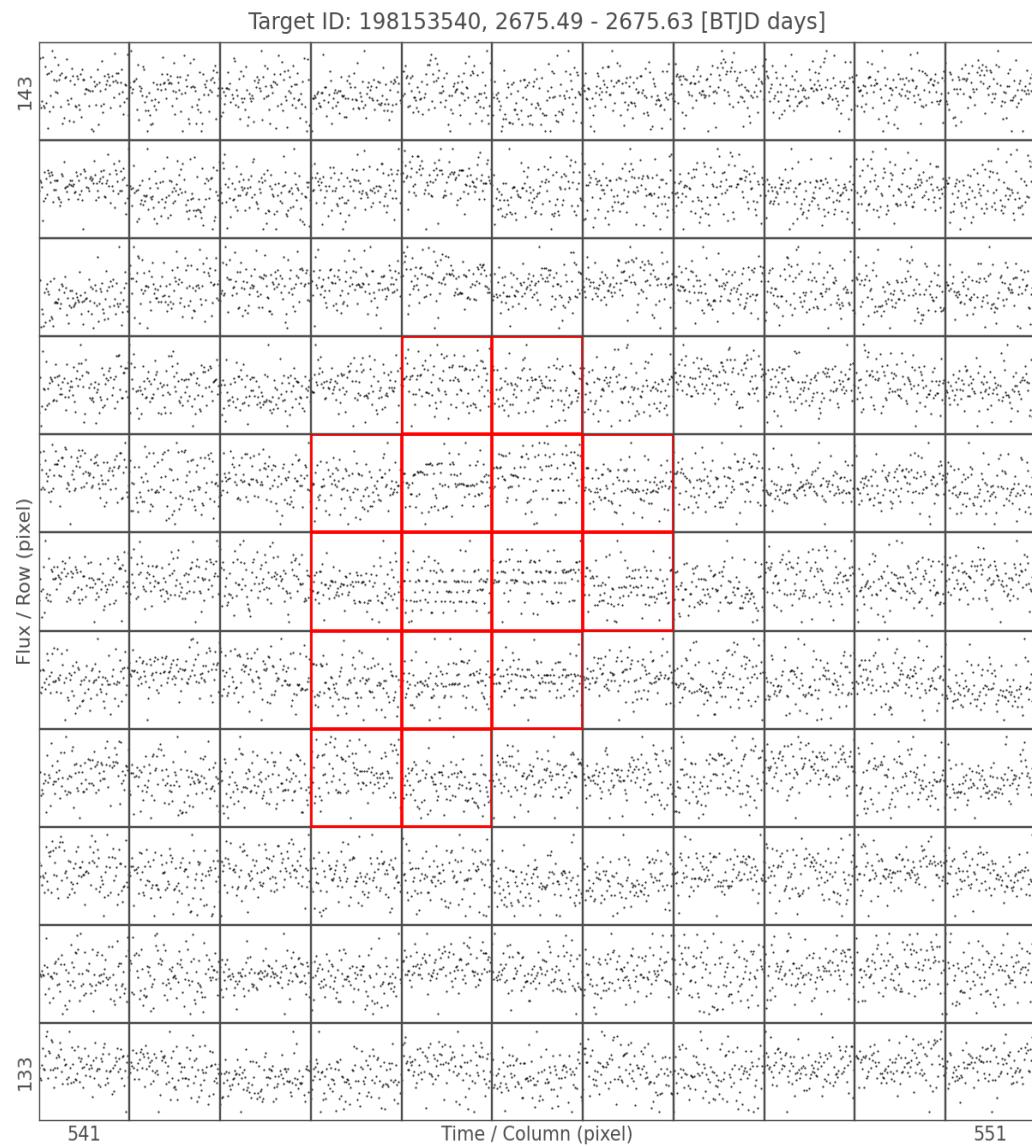
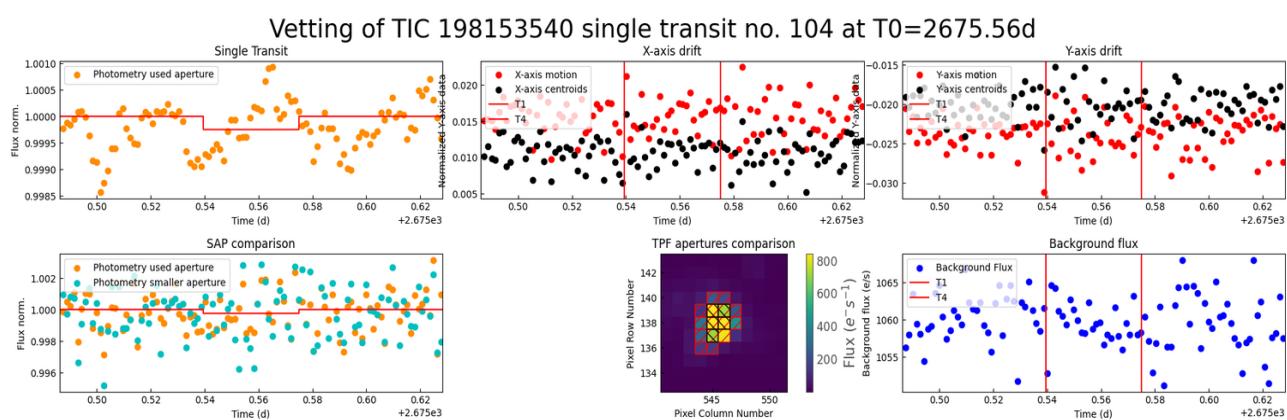


Figure 114: The single transit no. 104 vetting plots

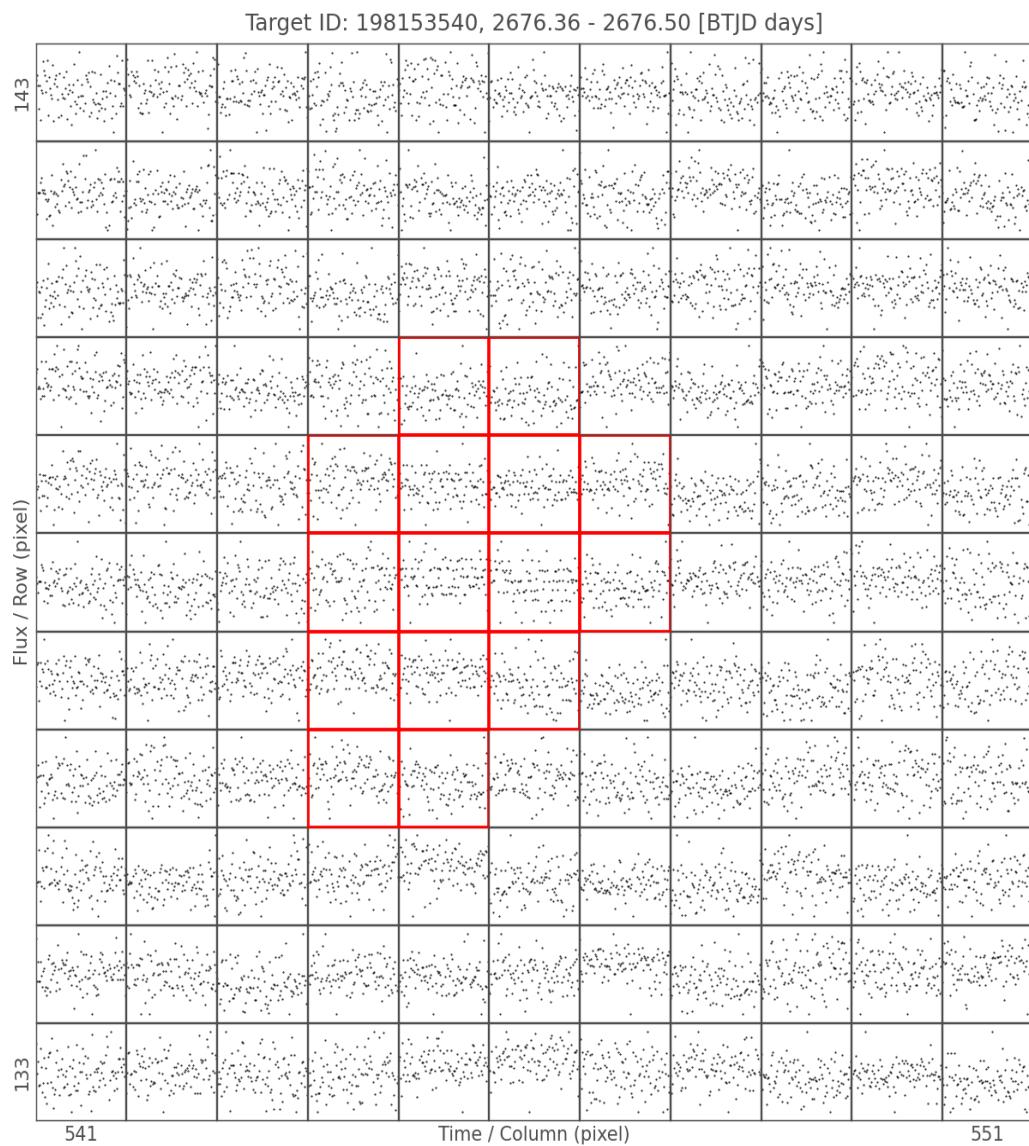
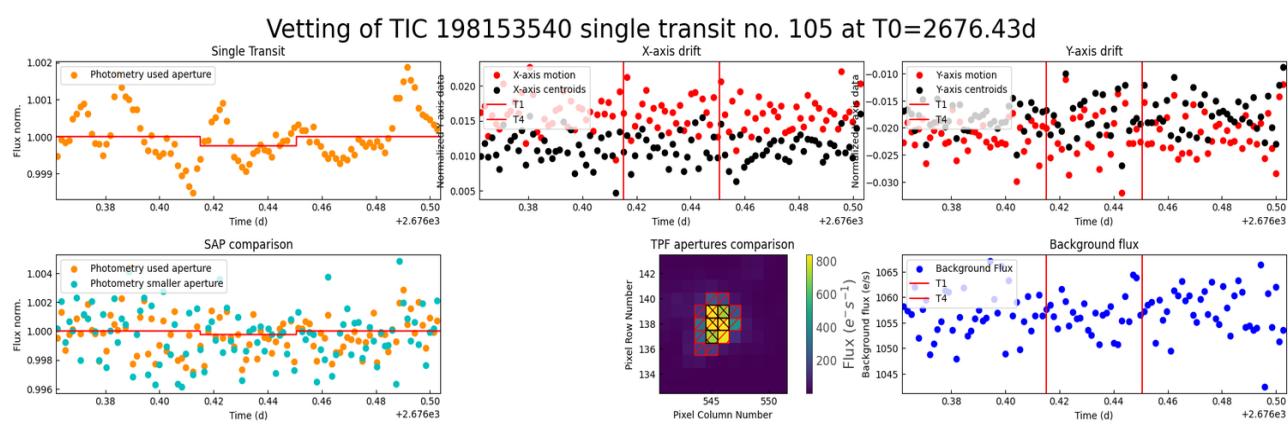


Figure 115: The single transit no. 105 vetting plots

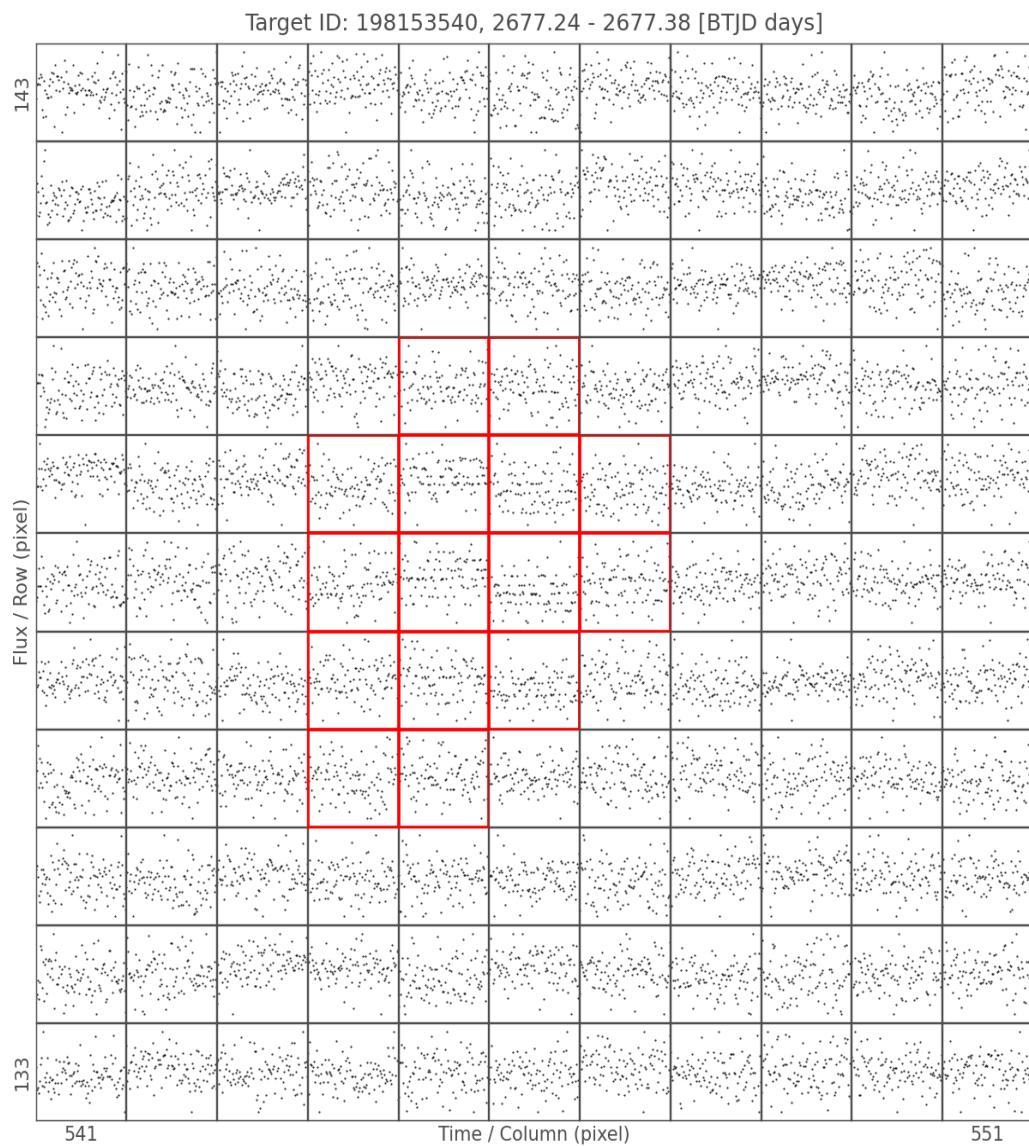
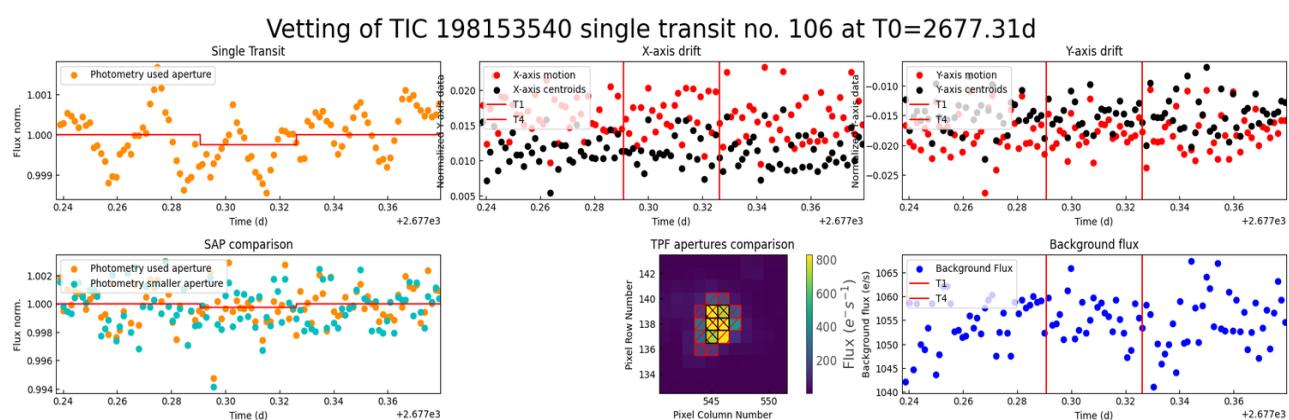


Figure 116: The single transit no. 106 vetting plots

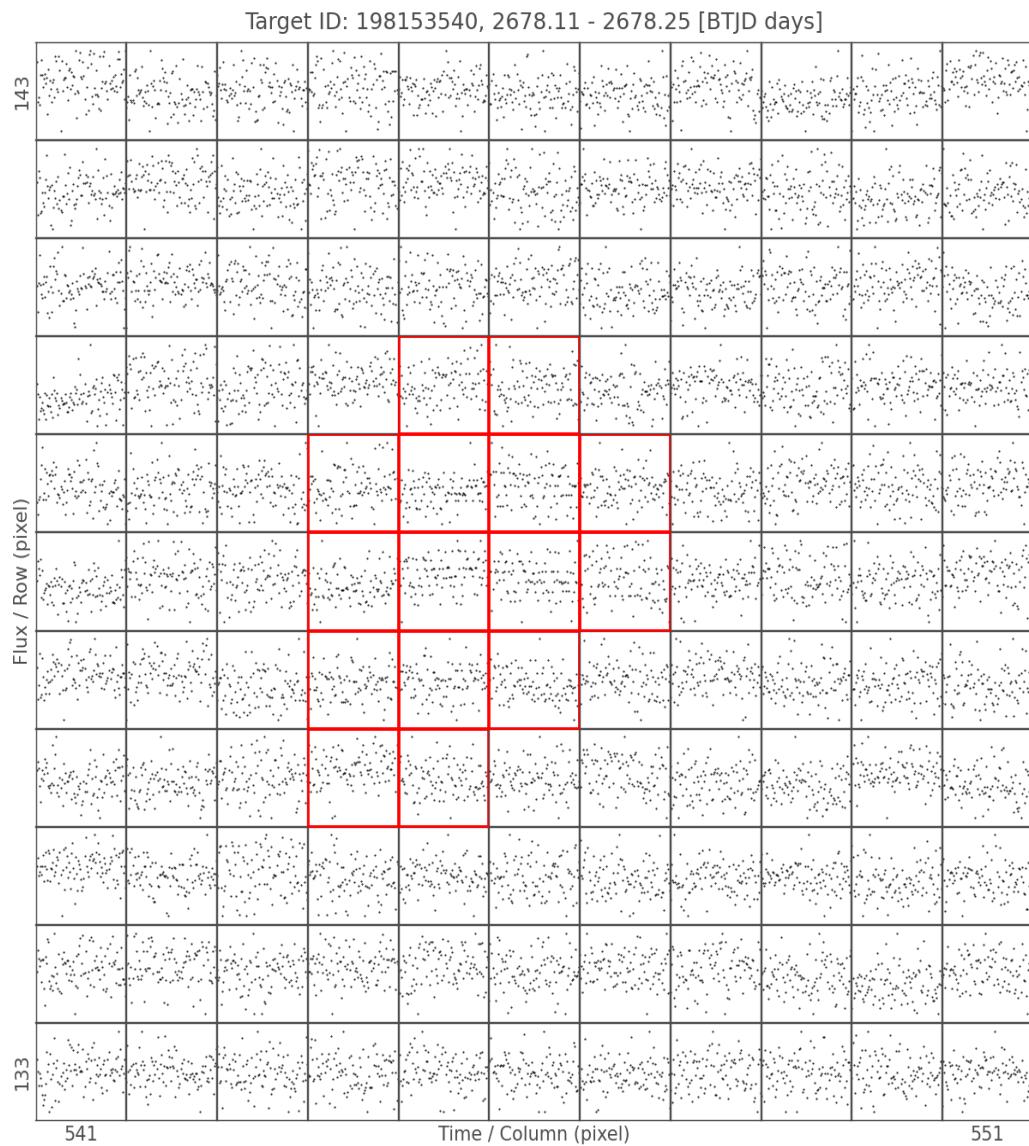
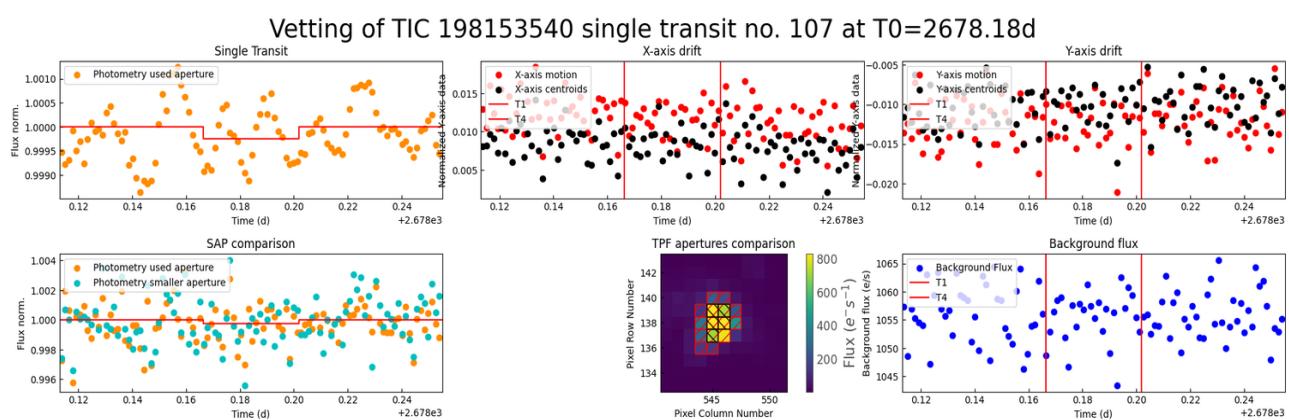


Figure 117: The single transit no. 107 vetting plots



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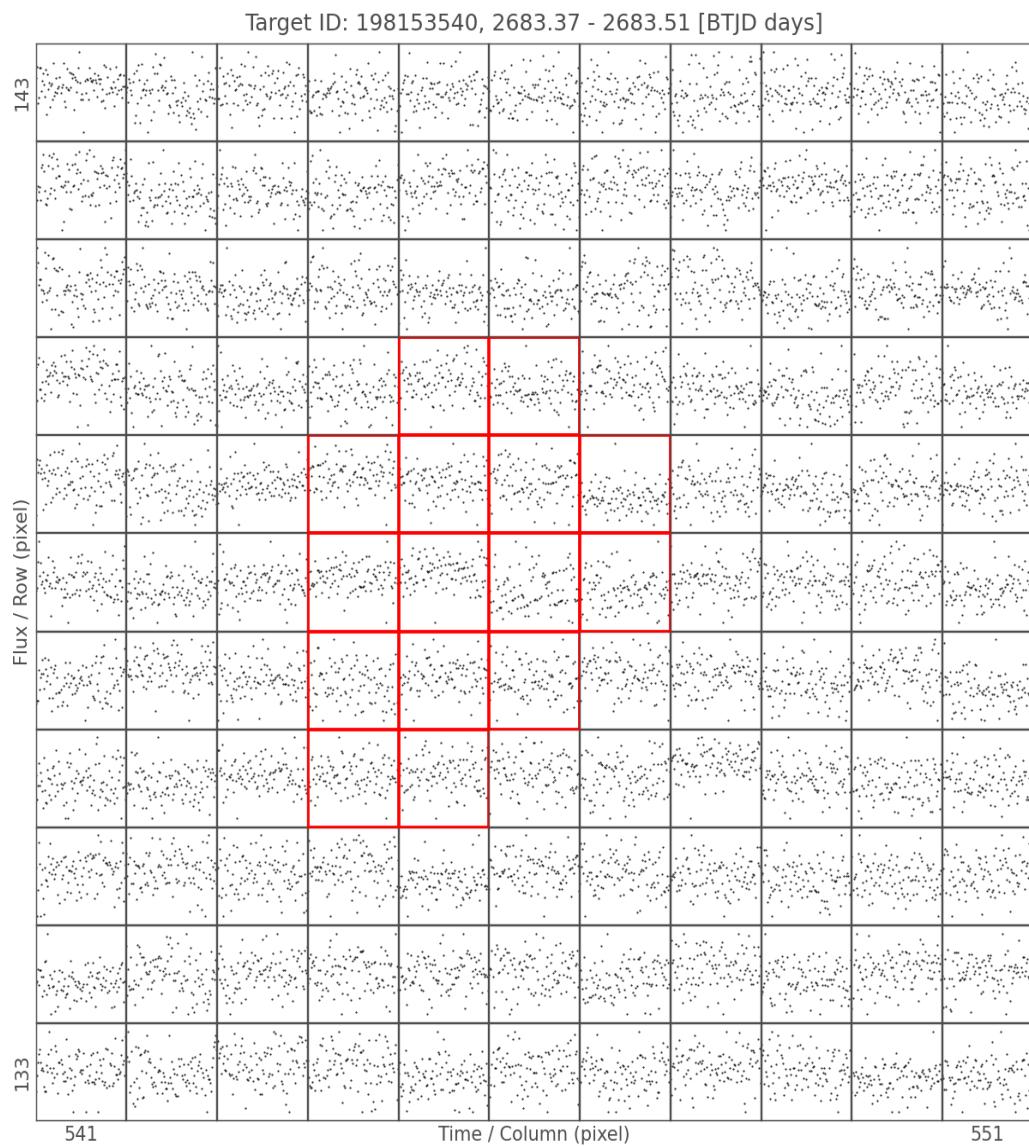
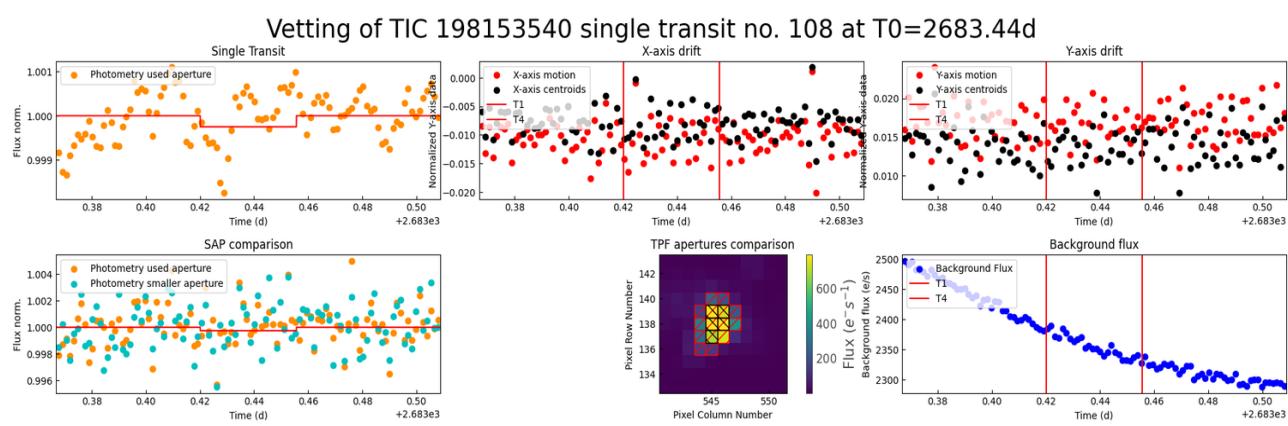


Figure 118: The single transit no. 108 vetting plots

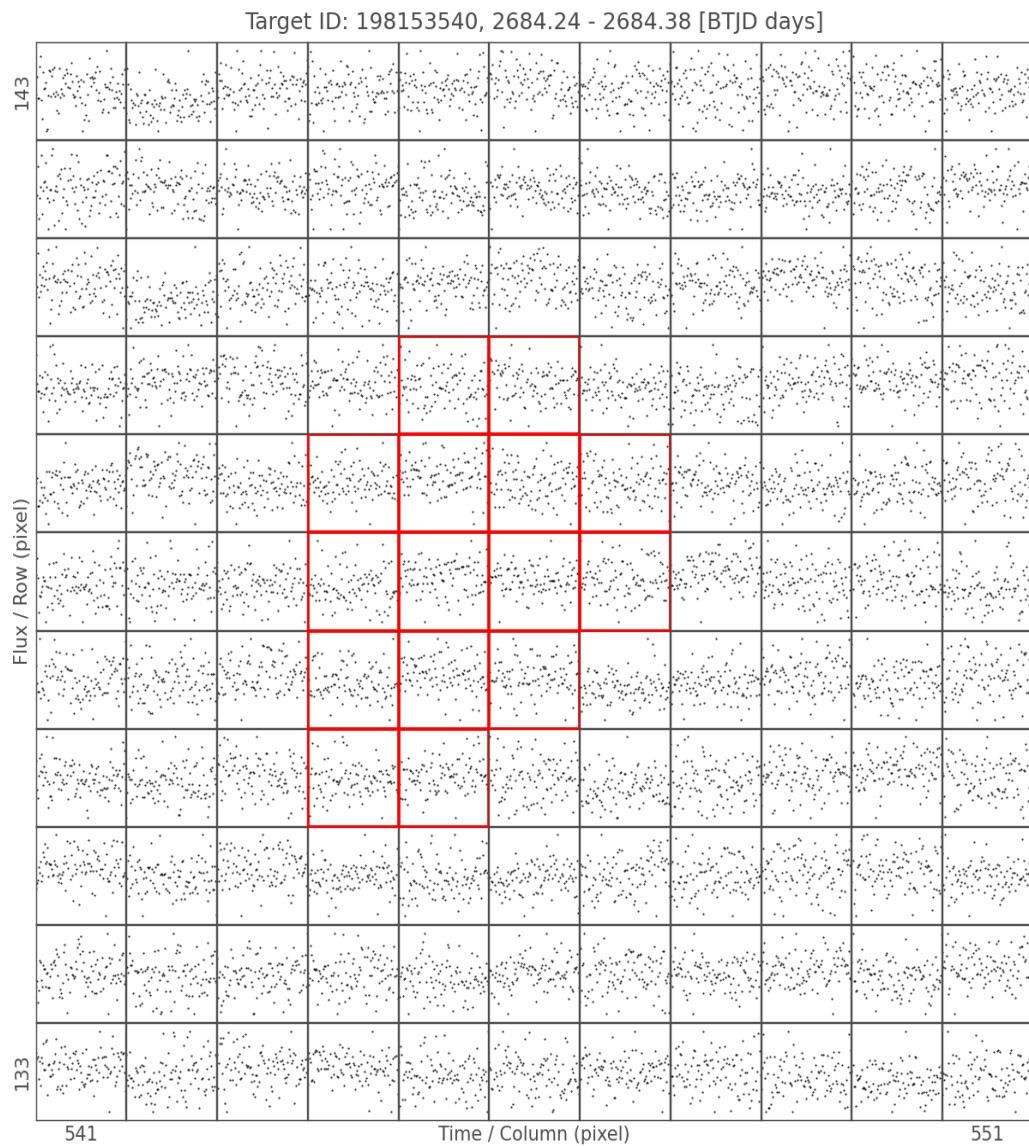
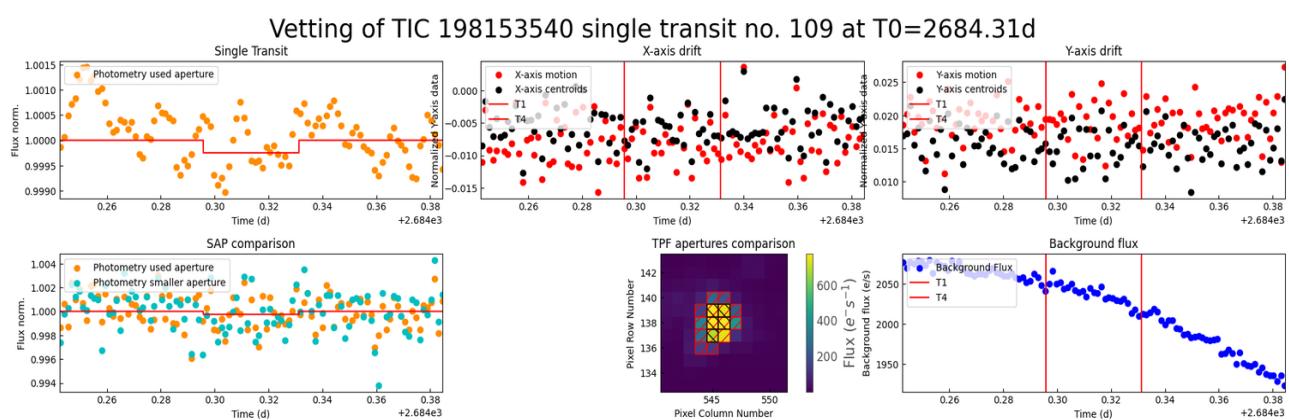


Figure 119: The single transit no. 109 vetting plots

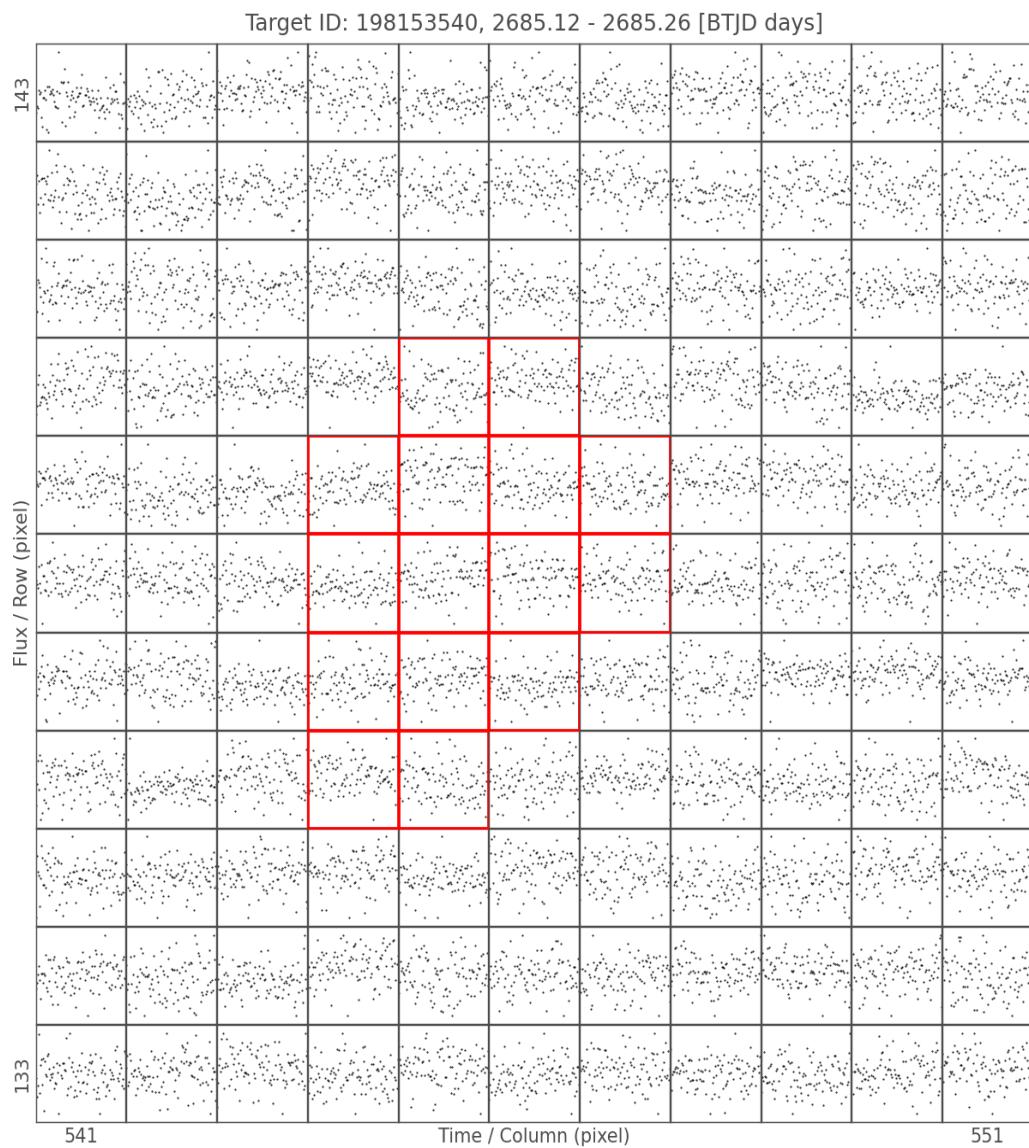
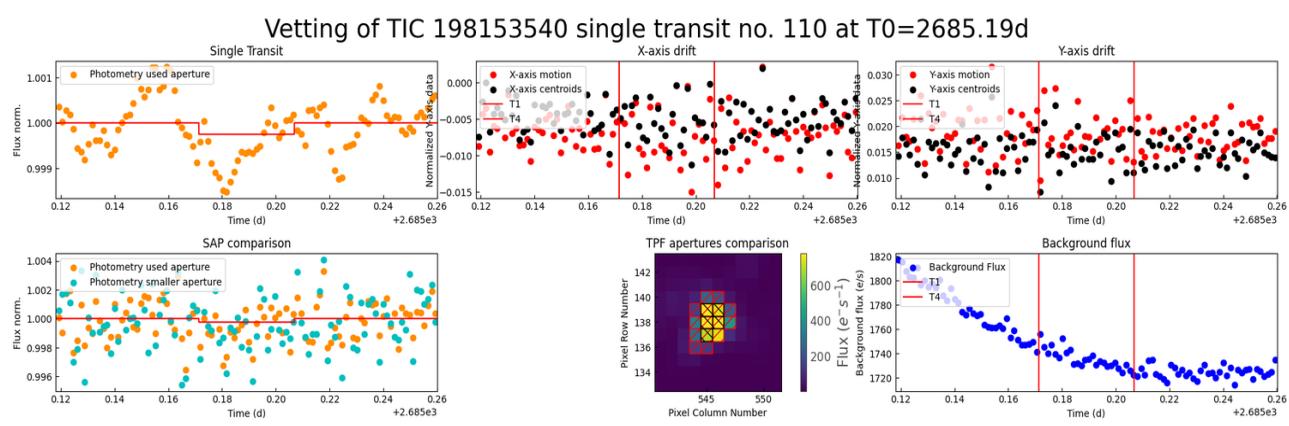


Figure 120: The single transit no. 110 vetting plots

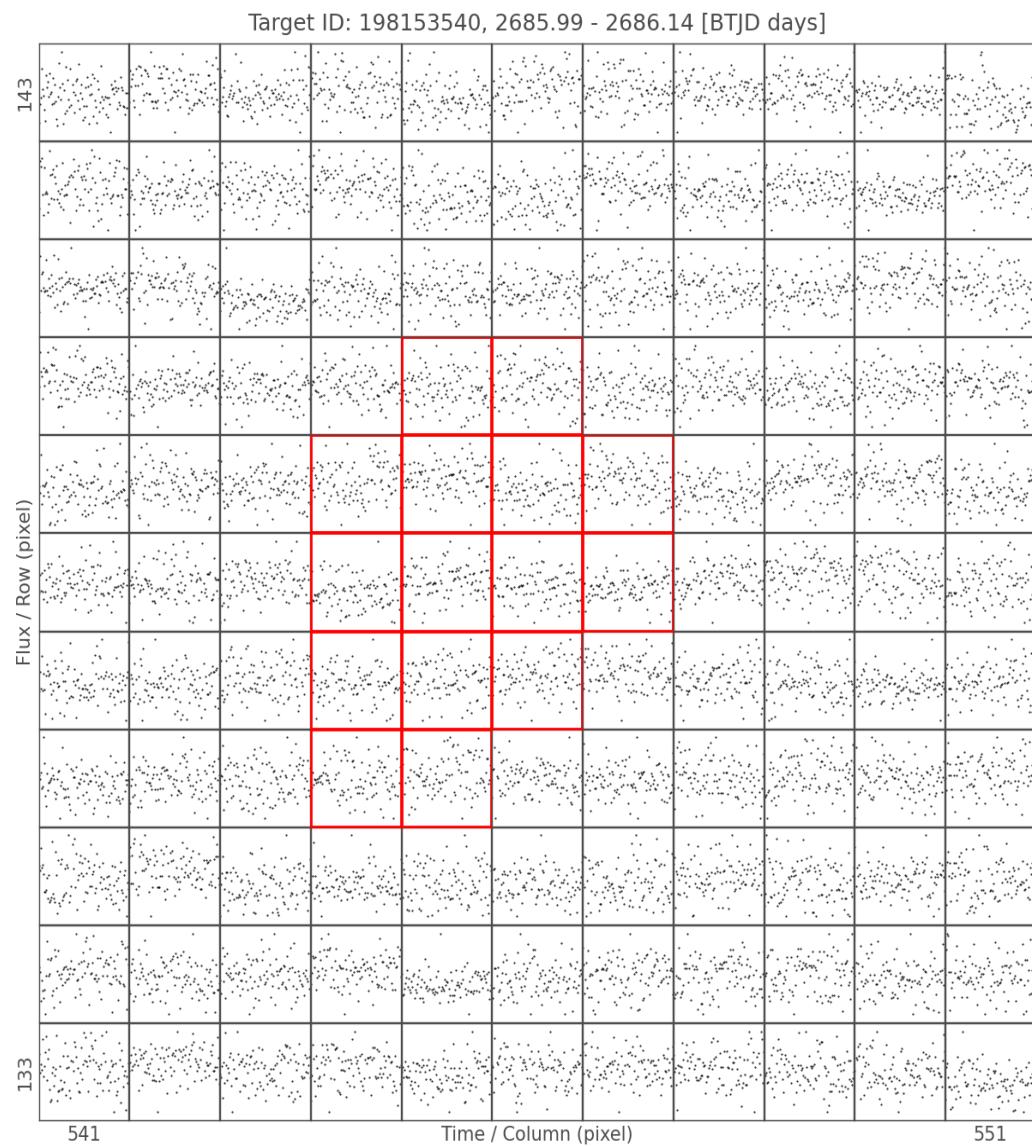
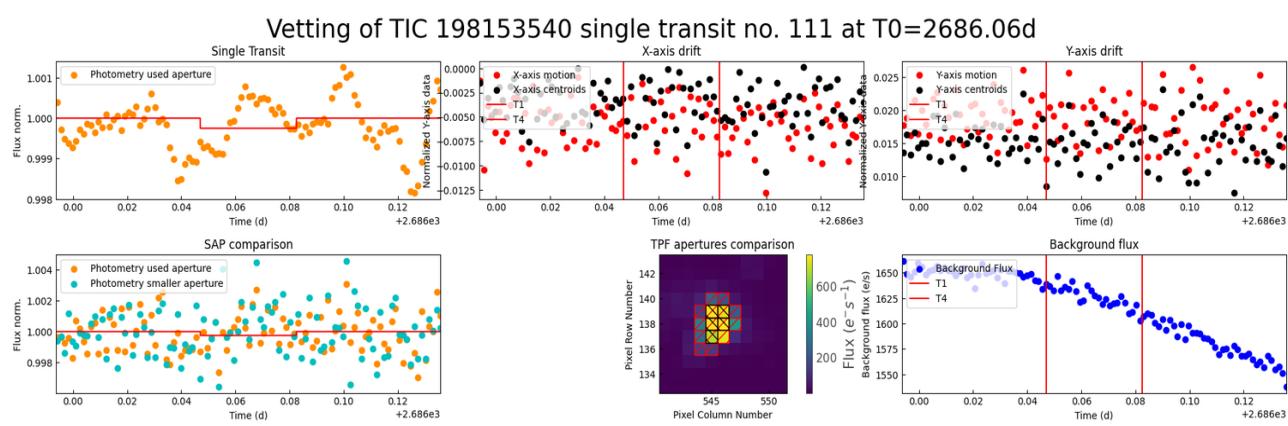


Figure 121: The single transit no. 111 vetting plots

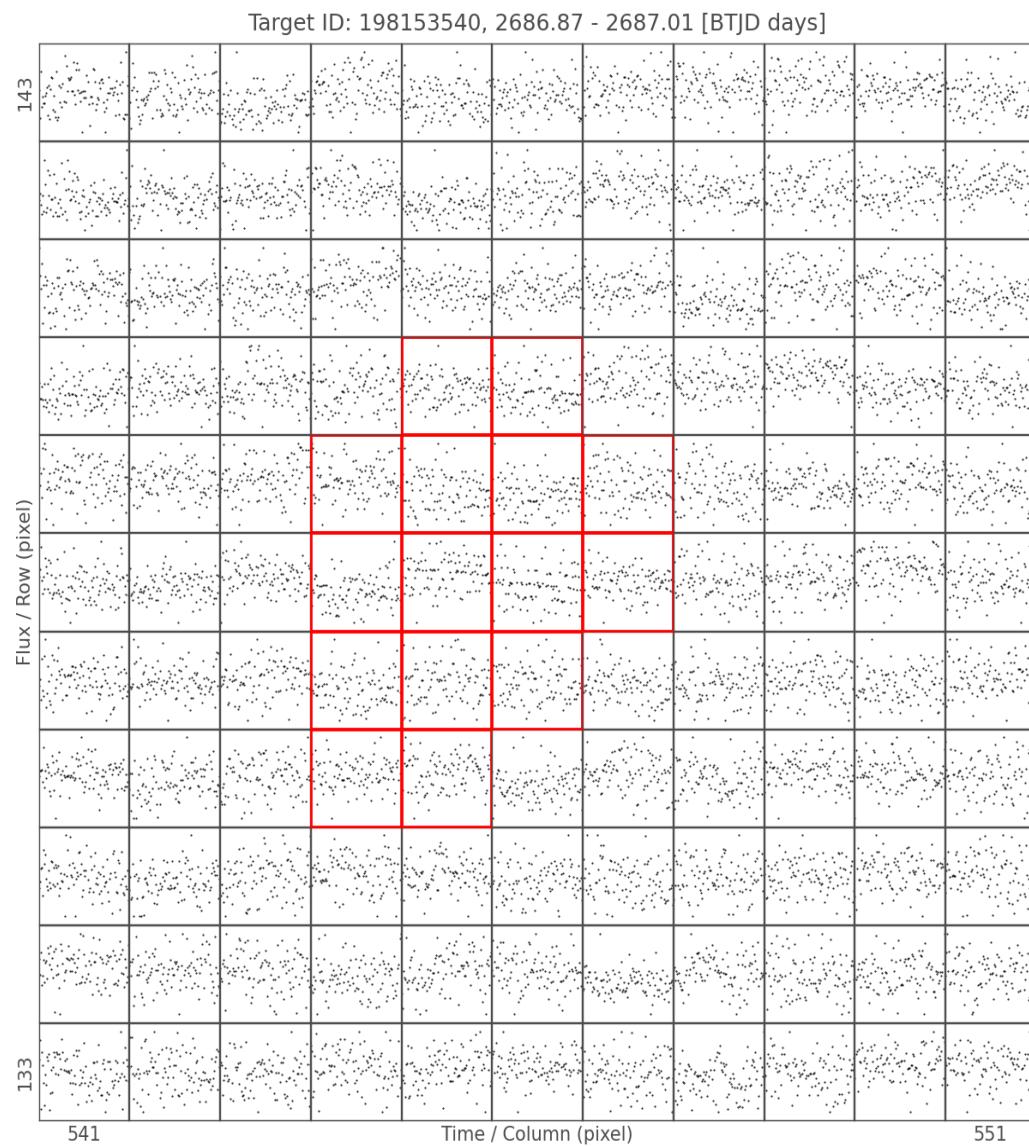
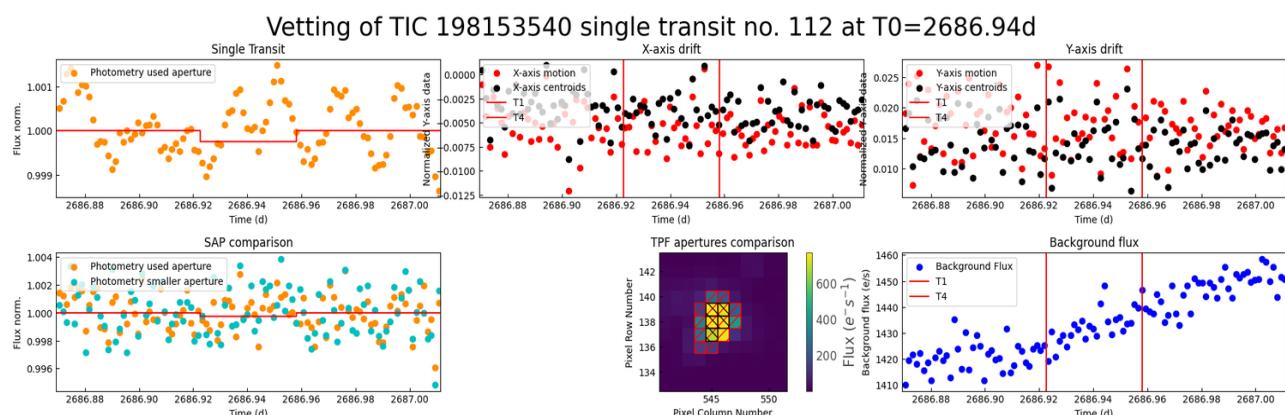


Figure 122: The single transit no. 112 vetting plots



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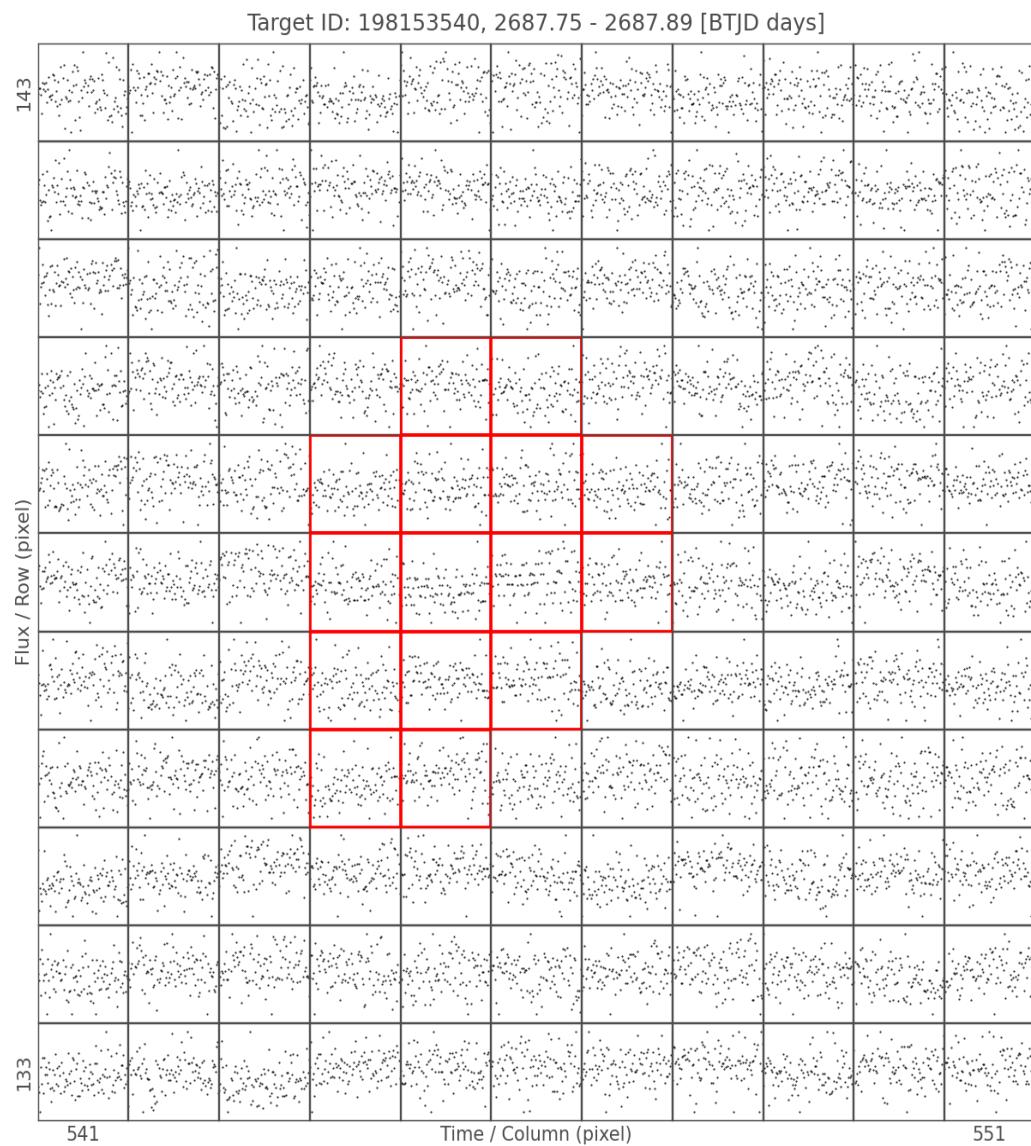
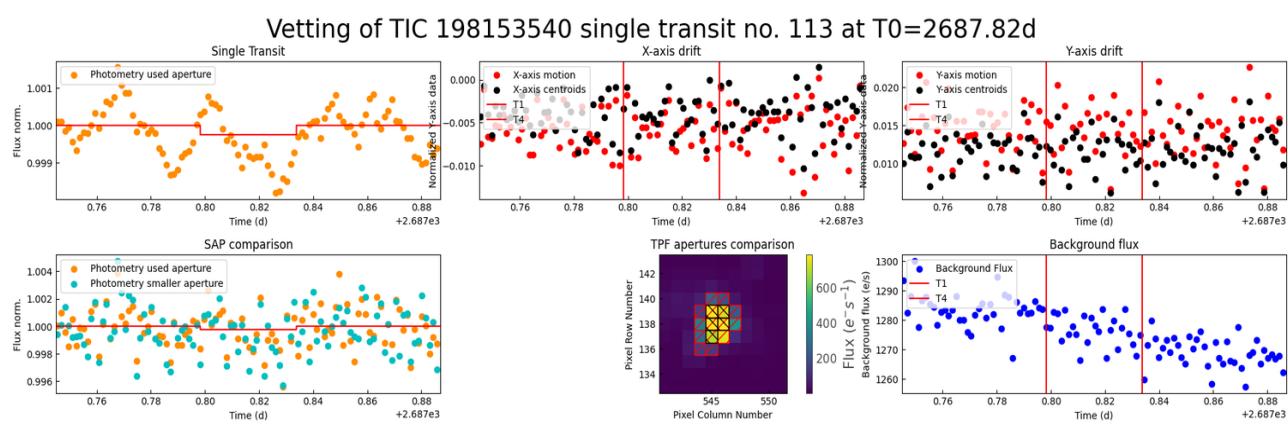


Figure 123: The single transit no. 113 vetting plots



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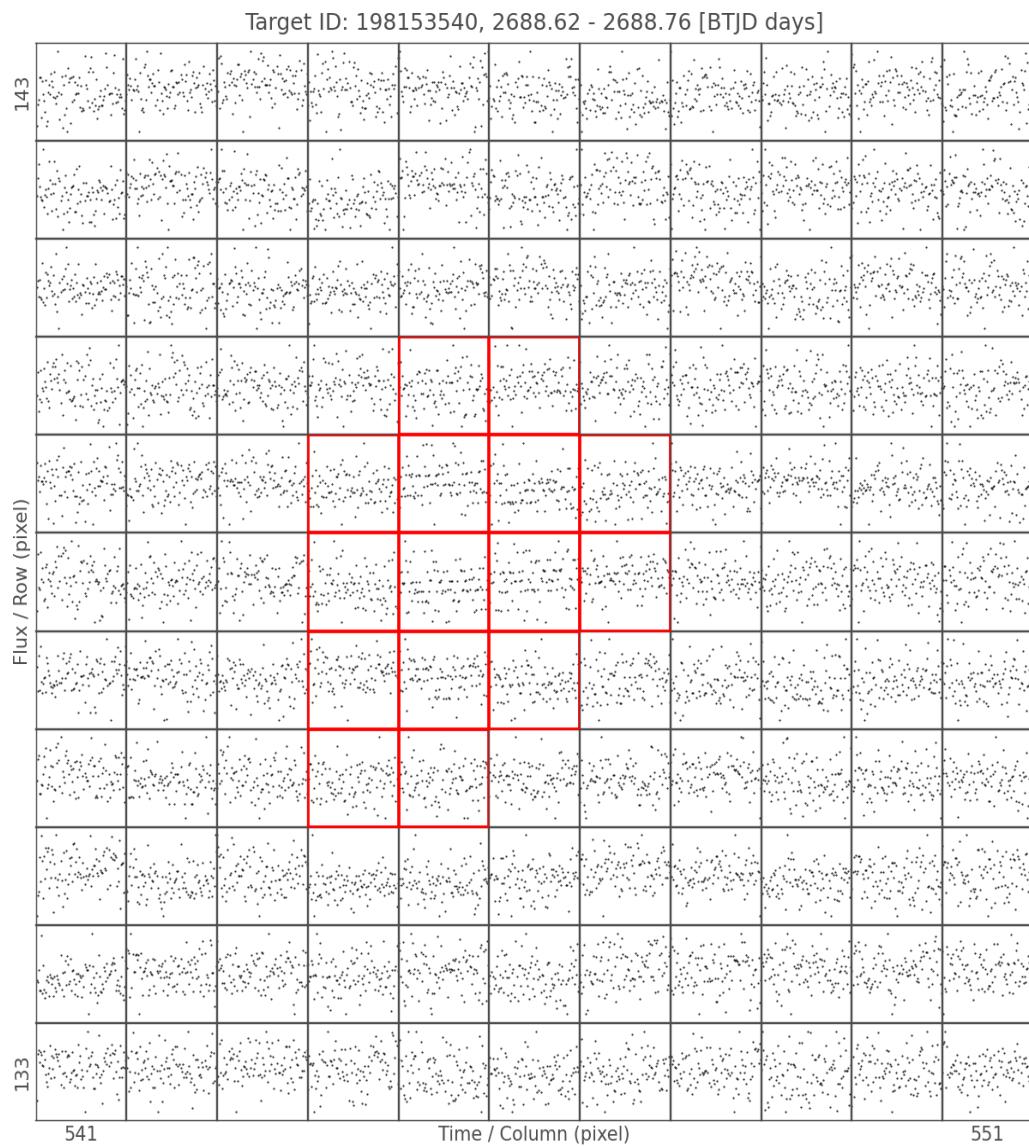
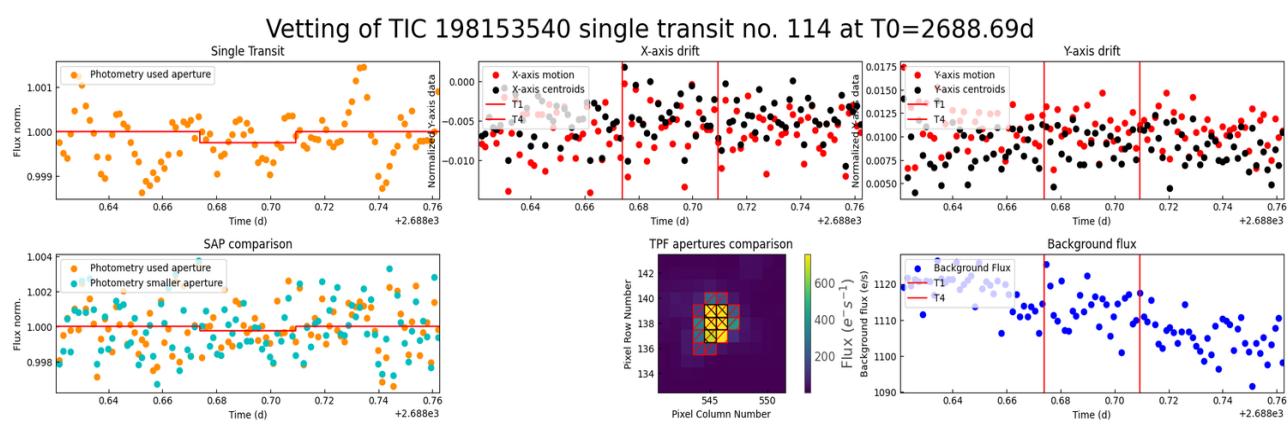


Figure 124: The single transit no. 114 vetting plots

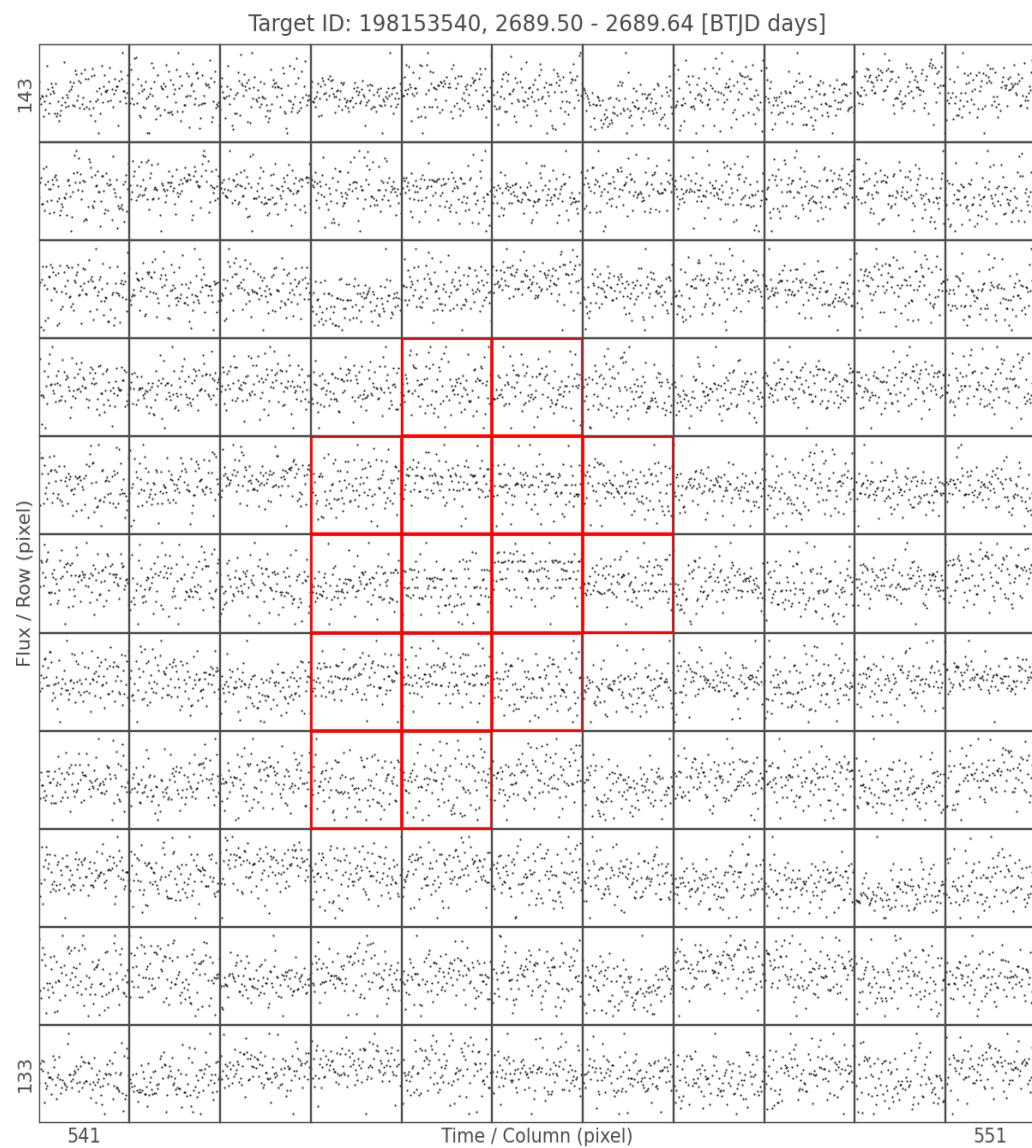
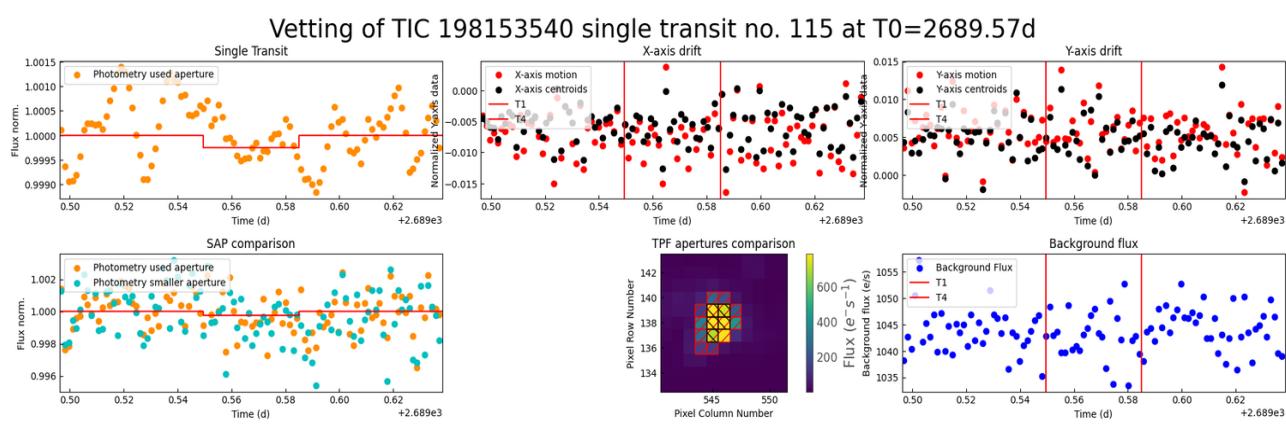


Figure 125: The single transit no. 115 vetting plots



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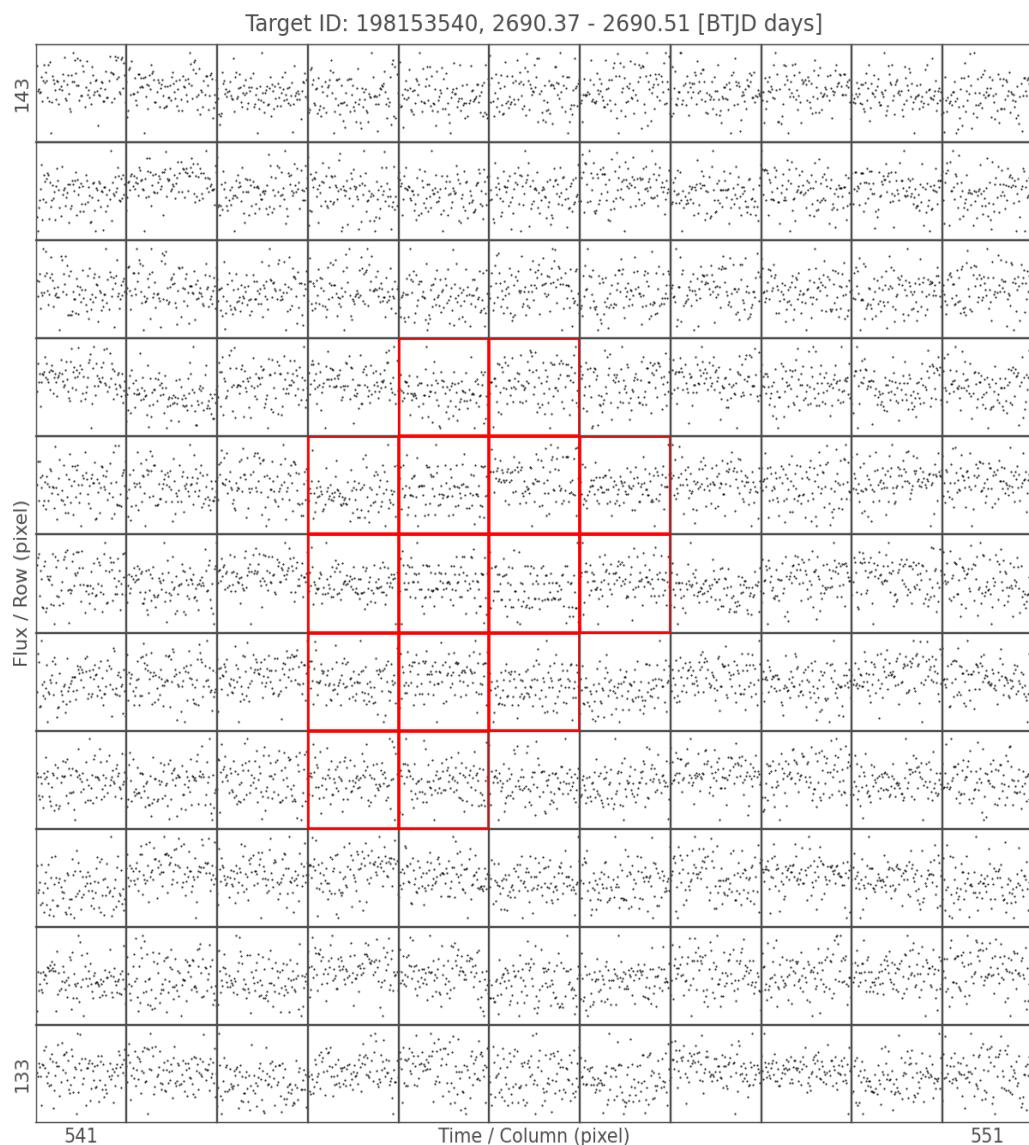
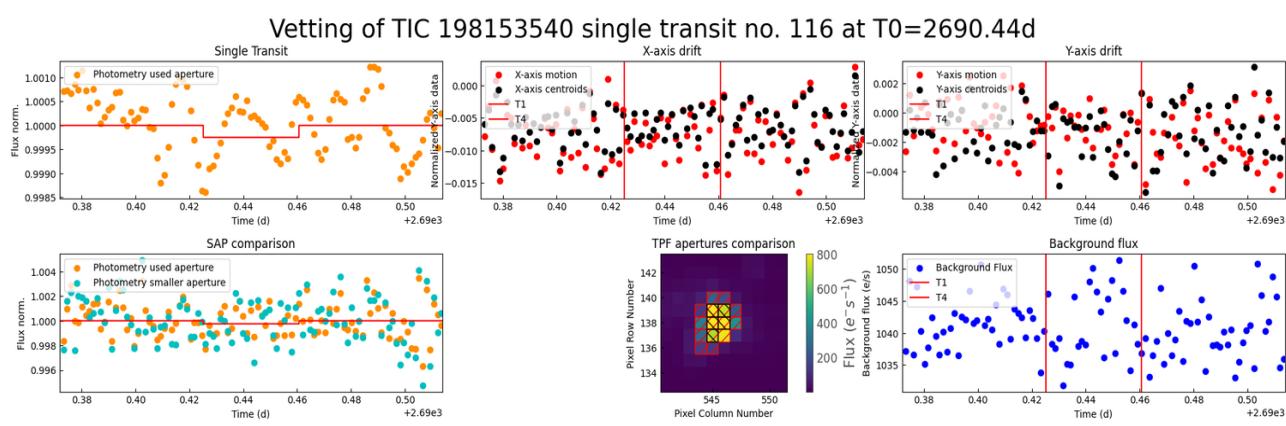


Figure 126: The single transit no. 116 vetting plots

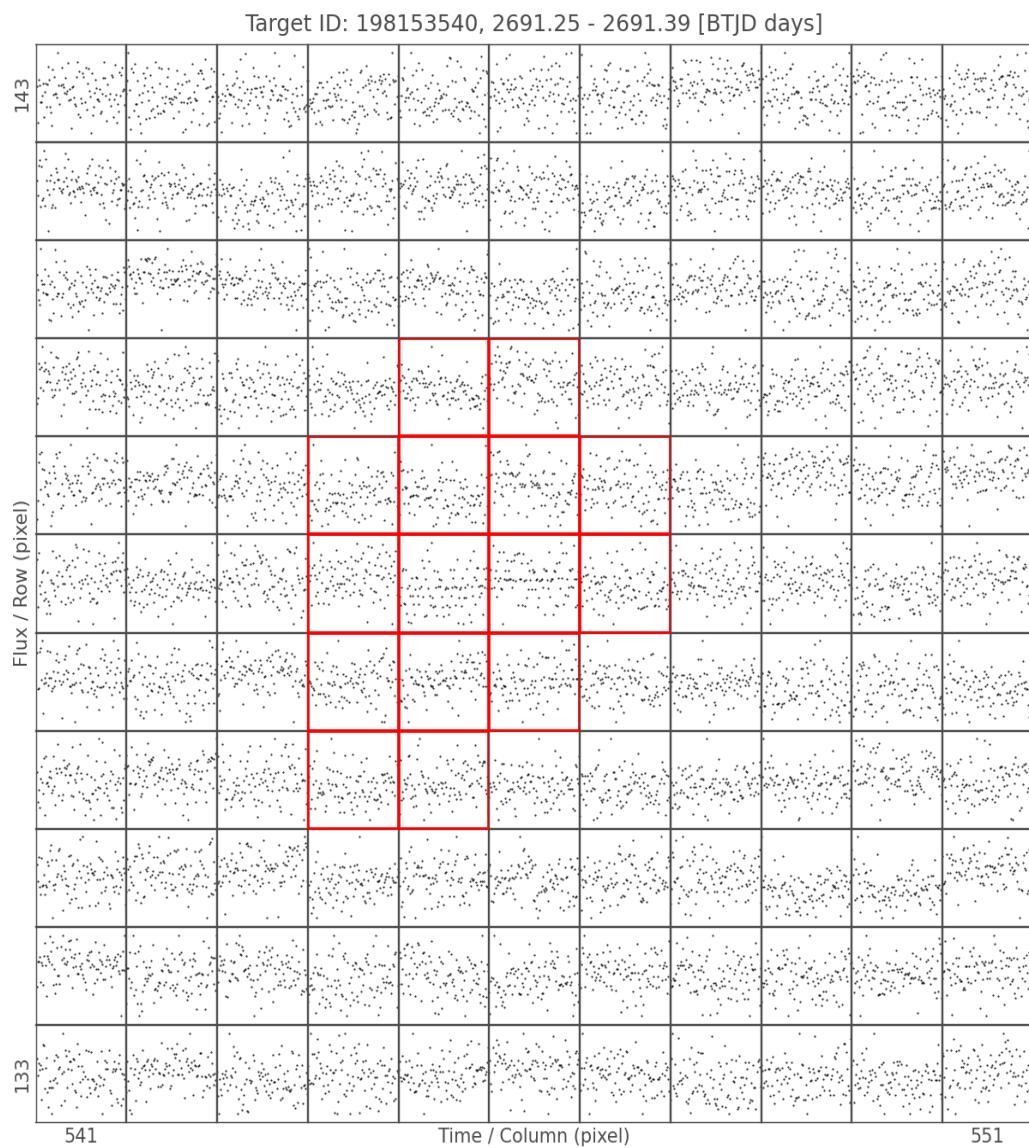
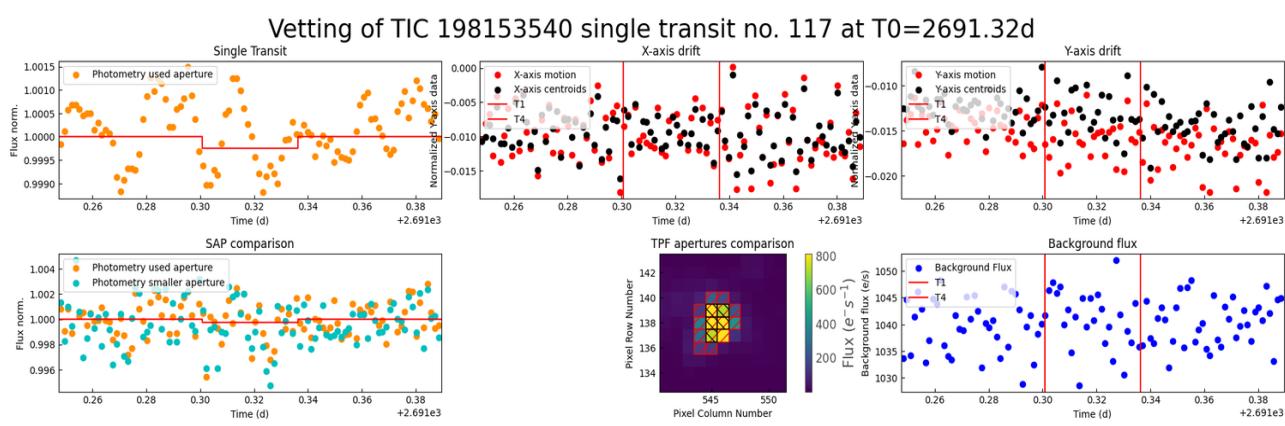


Figure 127: The single transit no. 117 vetting plots