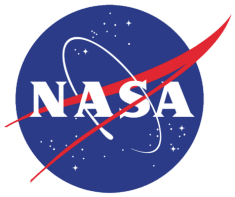

Data Validation (DV) Report
for Kepler ID 5868793
Quarters 1 - 17

This Data Validation Report was produced in the
Kepler Science Operations Center Pipeline
at NASA Ames Research Center

29-Jan-2016 17:32:35 Z

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Contents

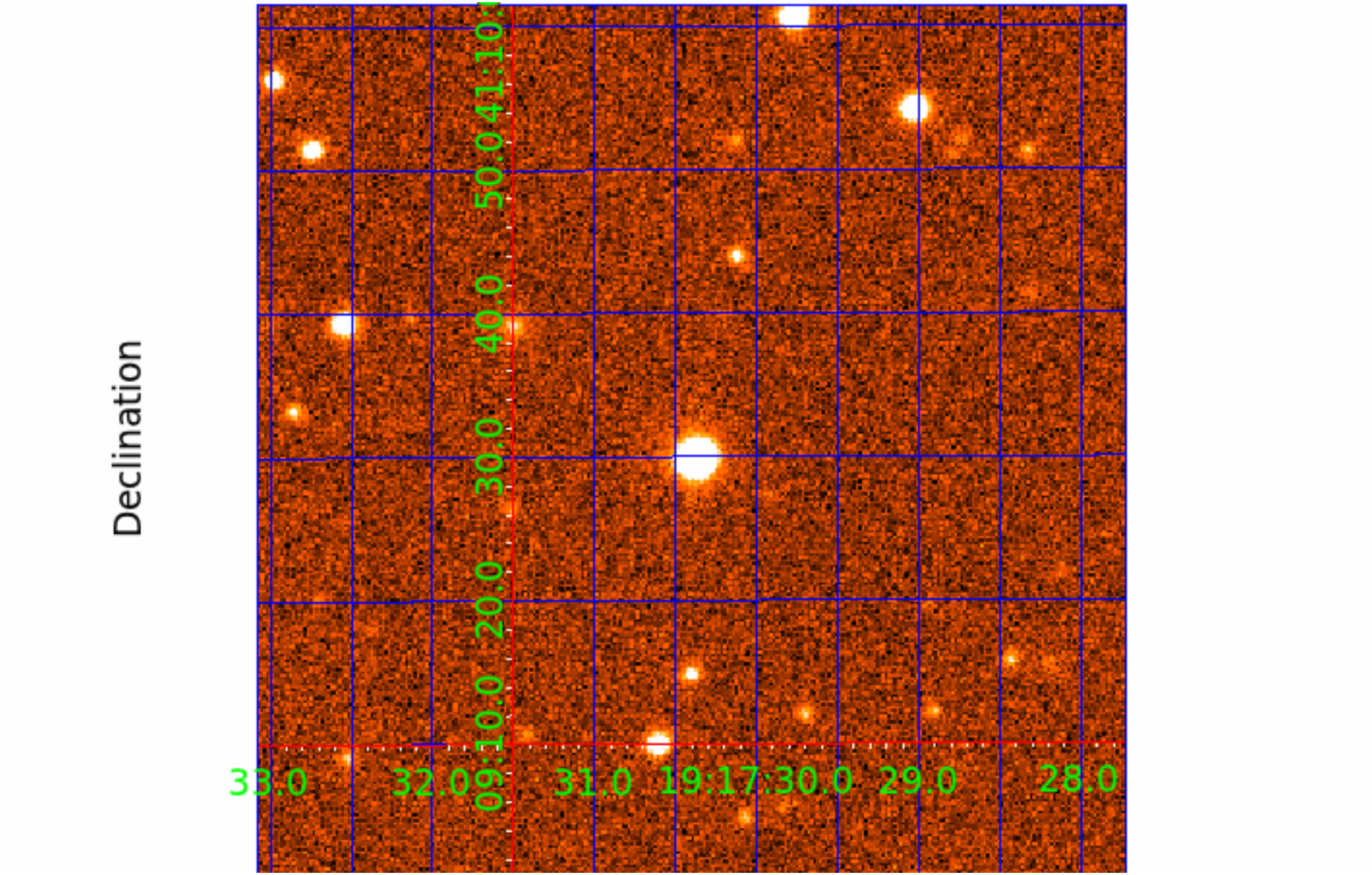
1 Summary

Target Properties	Value	Uncertainty	Units	Provenance
Kepler ID	5868793			
KOI ID	K04290			
Kepler Name	-			
Sky Group	66			
RA	19.29177810	0	hours	KIC
Dec	41.15867200	0	degrees	KIC
Magnitude	17.058	0		KIC
Radius	0.20	0.03	Solar radii	MULT70
Effective Temperature	3187	88	Kelvin	SPE70
log(g)	5.09	0.01	cm/sec^2	SPE70
[Fe/H]	0.10	0.16	Solar metallicity	SPE70
Number of Planet Candidates	1			
Categories	GO_LC, MERGED			
KOI Model	cumulative_20150925110000.csv			
Kepler Names Model	keplernames_20150925110000.csv			
External TCE Model	-			
Software Revision	svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958			
Date Report Generated	29-Jan-2016 17:32:35 Z			

Quarter	Target Table	Module/ Output	Crowding Metric	Flux Fraction	Limb Darkening Coefficients 1	2	3	4
6	35	7/2	1.0000	0.8140	0.4555	0.6075	-0.2460	0.0014
7	38	17/2	1.0000	0.8232	0.4555	0.6075	-0.2460	0.0014
8	41	19/2	1.0000	0.6862	0.4555	0.6075	-0.2460	0.0014
9	44	9/2	1.0000	0.7929	0.4555	0.6075	-0.2460	0.0014

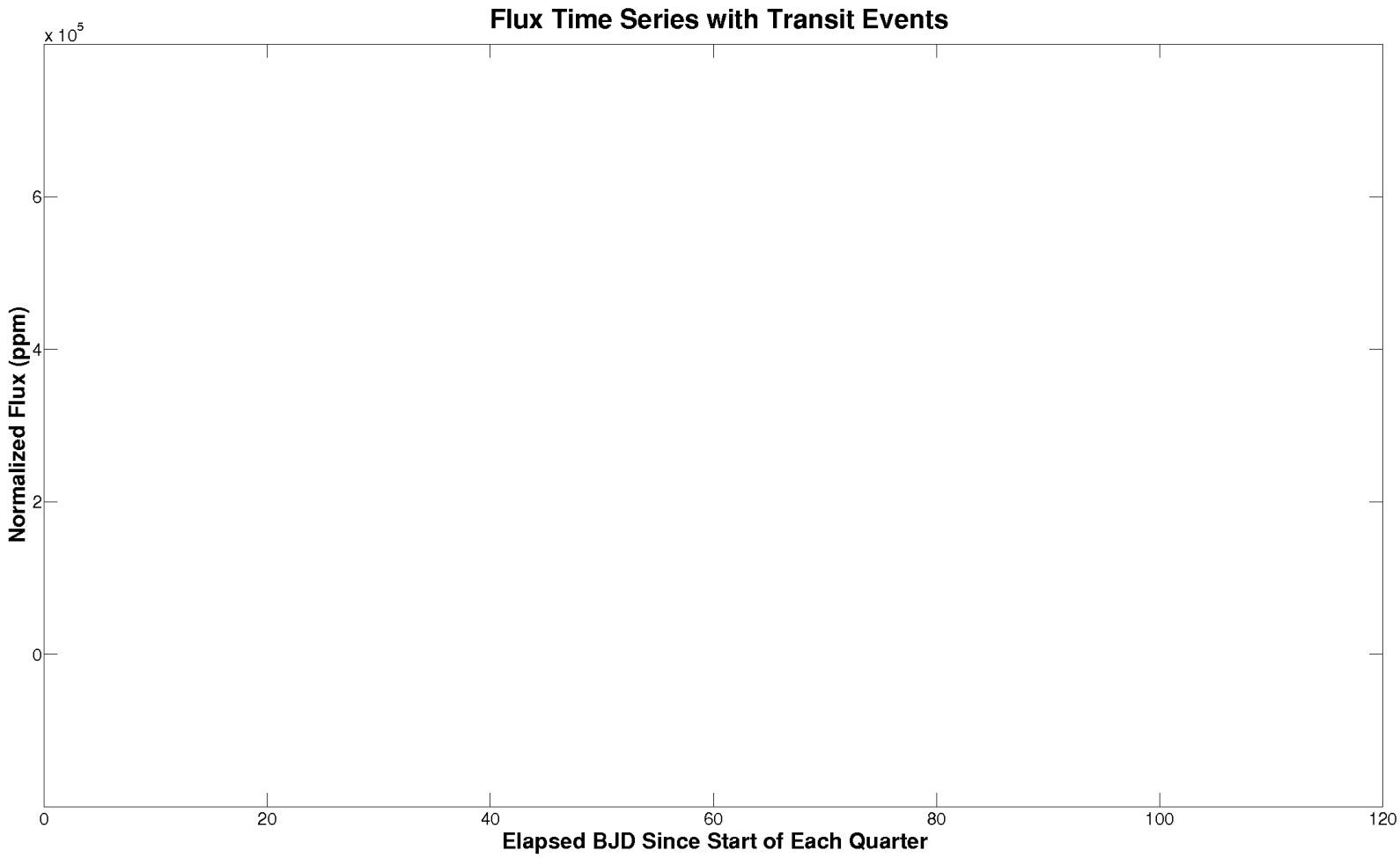
Planet Candidate	KOI ID	Kepler Name	KOI Correlation	Period (days)	Period Ratio	Epoch (BKJD)	Semi-major Axis (AU)	Radius (Re)	Teq (K)	False Alarm	Suspected EB
1	K04290.01	-	0.92	4.8	1.0	135.2	0.0	0.9	354	8.33e-27	false

2 UKIRT Image

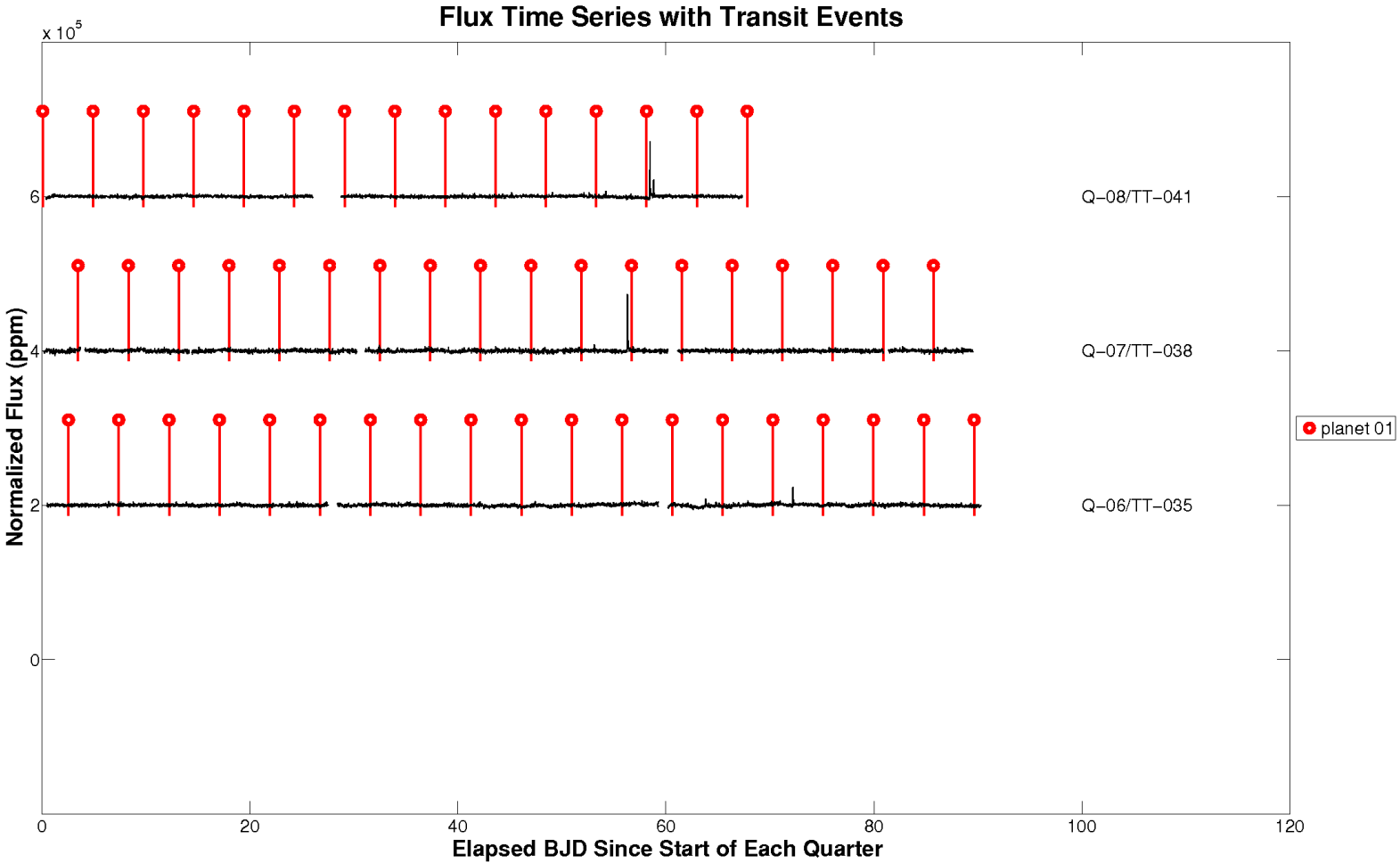


UKIRT Wide Field Camera (WFCAM) infra-red J-band image. The 1' x 1' image is centered on the target (5868793).

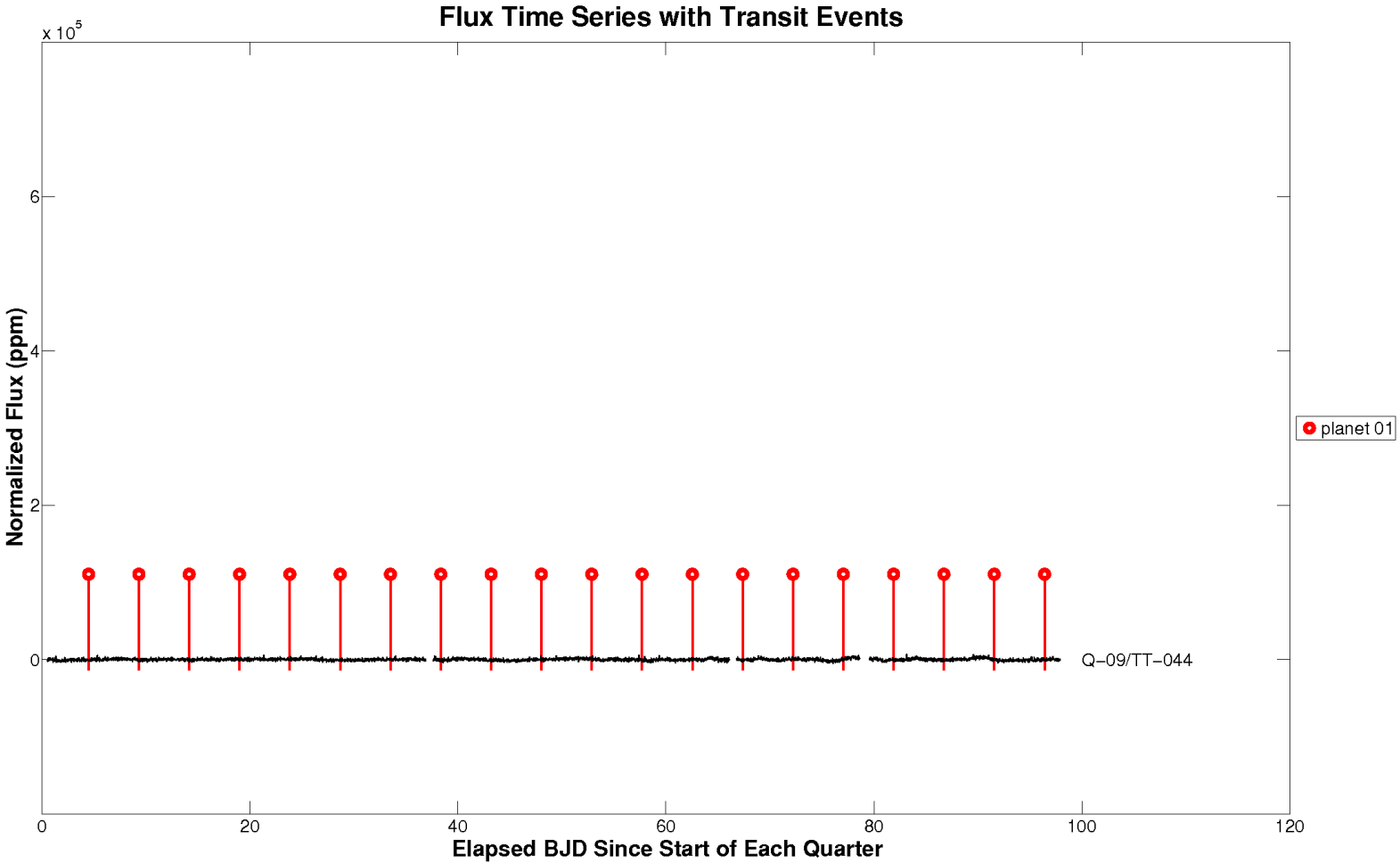
3 Flux Time Series



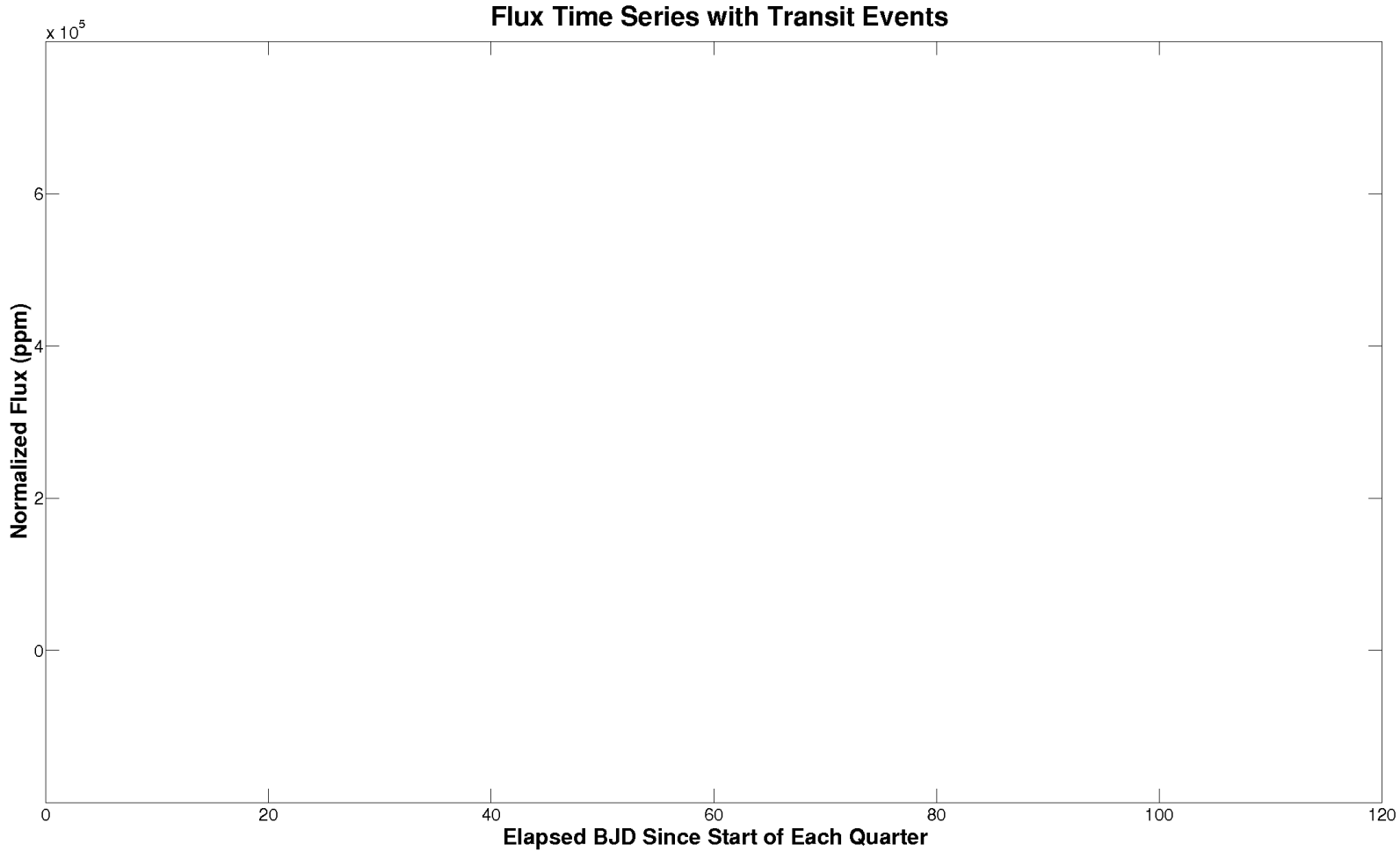
Summary plot of quarter-stitched PDC flux time series and transits for target 5868793, marked with DV fitted epoch/period (or TPS epoch/period if fit was not successful). Transits of identified planets are labeled with epoch BKJD and orbital period. For the data of quarter 1, target table 20, start BJD is 2454964 and the vertical offset is 0 ppm. For the data of quarter 2, target table 21, start BJD is 2455002 and the vertical offset is 200000 ppm. For the data of quarter 3, target table 26, start BJD is 2455093 and the vertical offset is 400000 ppm. For the data of quarter 4, target table 29, start BJD is 2455184 and the vertical offset is 600000 ppm.
Open `./summary-plots/005868793-00-flux-dv-fit-01-020.fig`



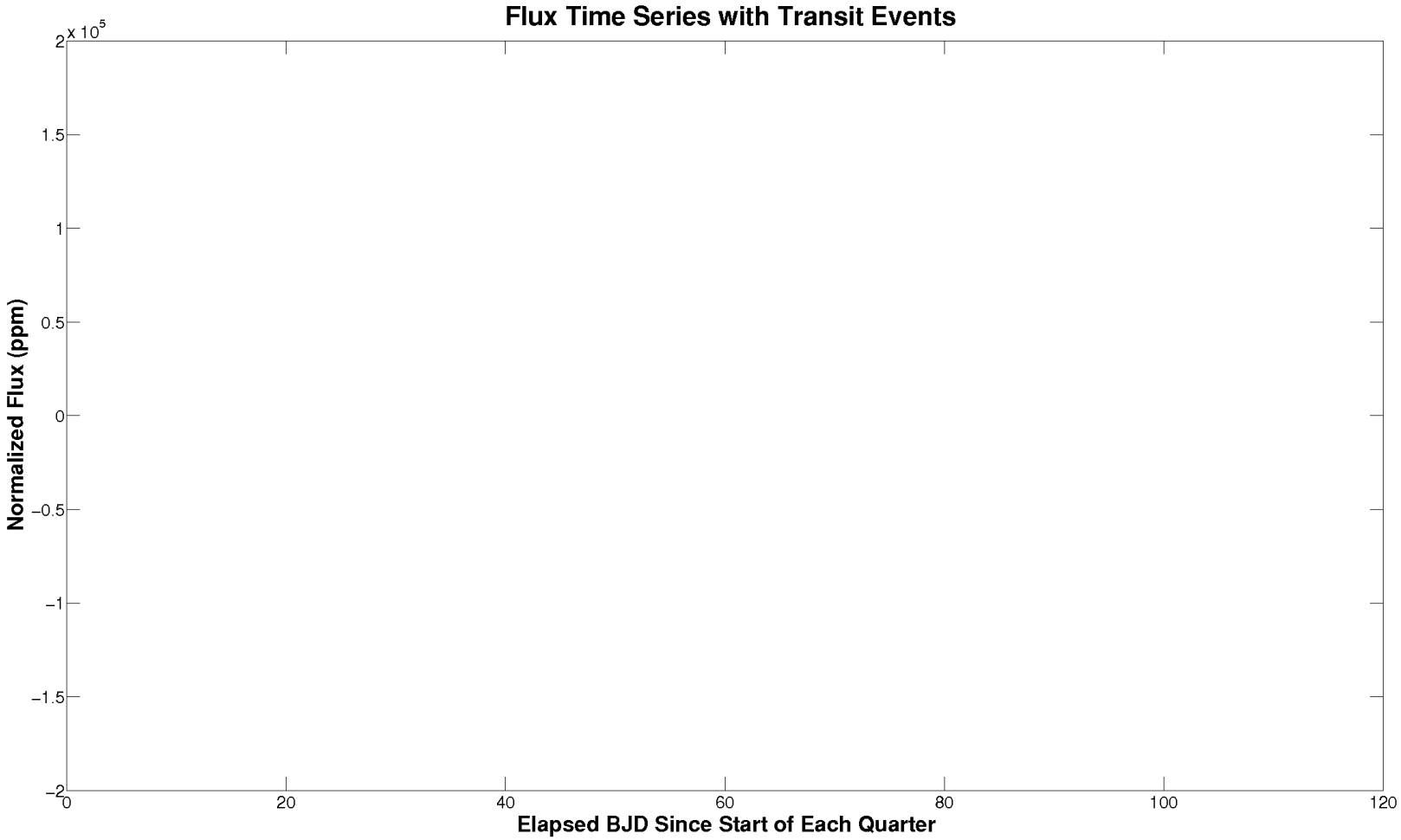
Summary plot of quarter-stitched PDC flux time series and transits for target 5868793, marked with DV fitted epoch/period (or TPS epoch/period if fit was not successful). Transits of identified planets are labeled with epoch BKJD and orbital period. For the data of quarter 5, target table 32, start BJD is 2455276 and the vertical offset is 0 ppm. For the data of quarter 6, target table 35, start BJD is 2455372 and the vertical offset is 200000 ppm. For the data of quarter 7, target table 38, start BJD is 2455463 and the vertical offset is 400000 ppm. For the data of quarter 8, target table 41, start BJD is 2455568 and the vertical offset is 600000 ppm.
Open `./summary-plots/005868793-00-flux-dv-fit-05-032.fig`



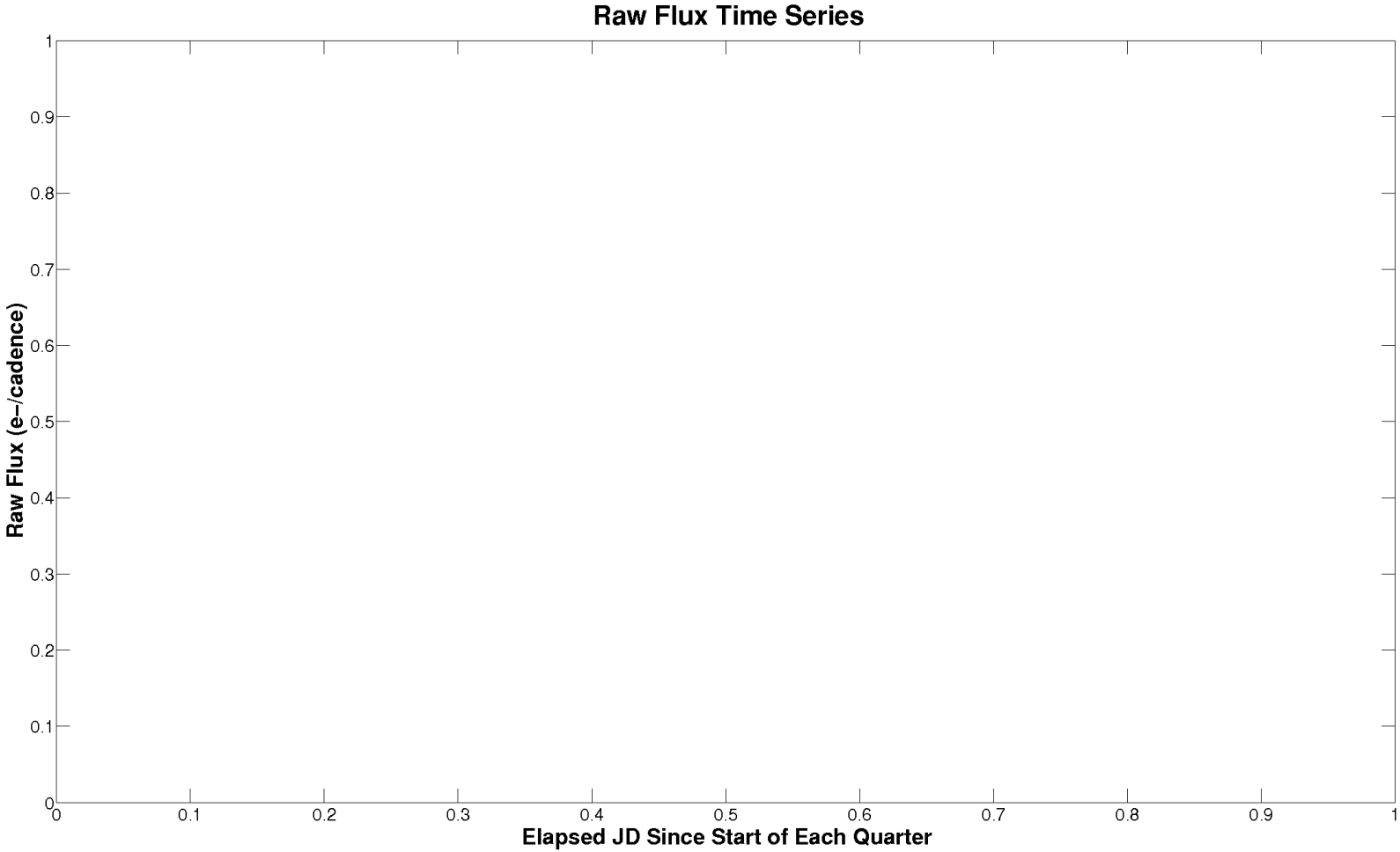
Summary plot of quarter-stitched PDC flux time series and transits for target 5868793, marked with DV fitted epoch/period (or TPS epoch/period if fit was not successful). Transits of identified planets are labeled with epoch BKJD and orbital period. For the data of quarter 9, target table 44, start BJD is 2455641 and the vertical offset is 0 ppm. For the data of quarter 10, target table 47, start BJD is 2455739 and the vertical offset is 200000 ppm. For the data of quarter 11, target table 50, start BJD is 2455834 and the vertical offset is 400000 ppm. For the data of quarter 12, target table 53, start BJD is 2455932 and the vertical offset is 600000 ppm.
Open `./summary-plots/005868793-00-flux-dv-fit-09-044.fig`



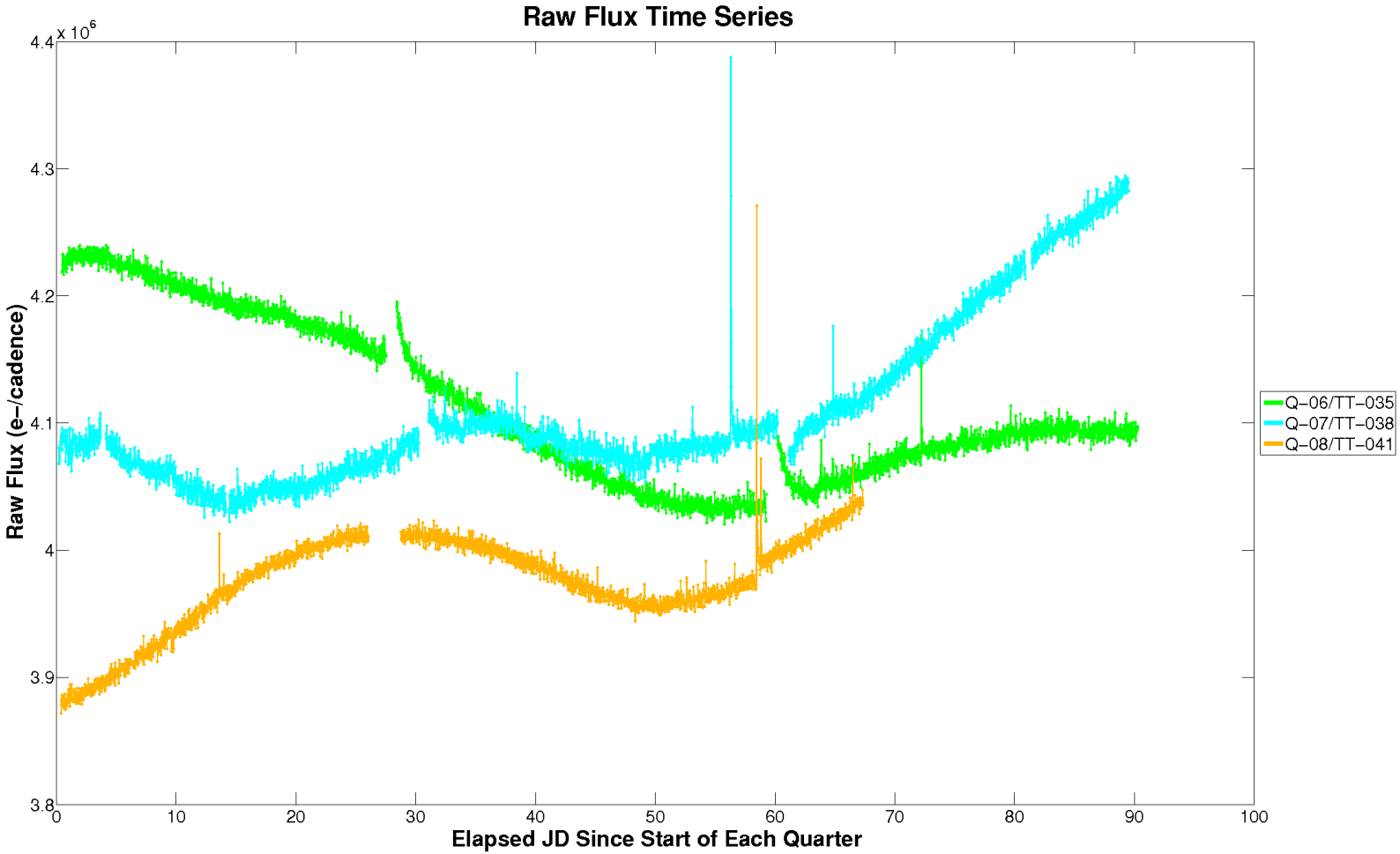
Summary plot of quarter-stitched PDC flux time series and transits for target 5868793, marked with DV fitted epoch/period (or TPS epoch/period if fit was not successful). Transits of identified planets are labeled with epoch BKJD and orbital period. For the data of quarter 13, target table 56, start BJD is 2456015 and the vertical offset is 0 ppm. For the data of quarter 14, target table 59, start BJD is 2456107 and the vertical offset is 200000 ppm. For the data of quarter 15, target table 62, start BJD is 2456206 and the vertical offset is 400000 ppm. For the data of quarter 16, target table 65, start BJD is 2456305 and the vertical offset is 600000 ppm.
Open `./summary-plots/005868793-00-flux-dv-fit-13-056.fig`



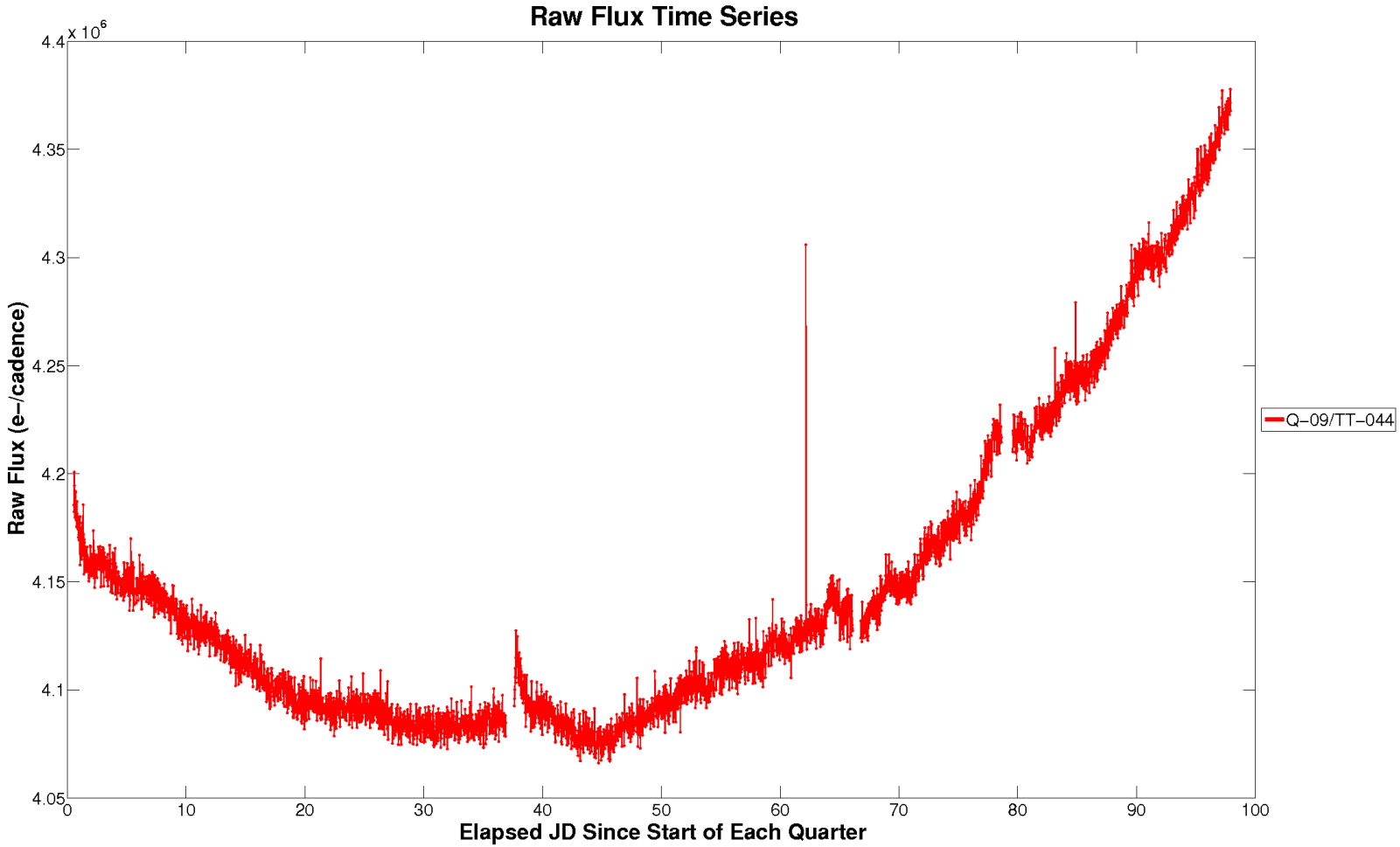
Summary plot of quarter-stitched PDC flux time series and transits for target 5868793, marked with DV fitted epoch/period (or TPS epoch/period if fit was not successful). Transits of identified planets are labeled with epoch BKJD and orbital period. For the data of quarter 17, target table 68, start BJD is 2456392.
Open `./summary-plots/005868793-00-flux-dv-fit-17-068.fig`



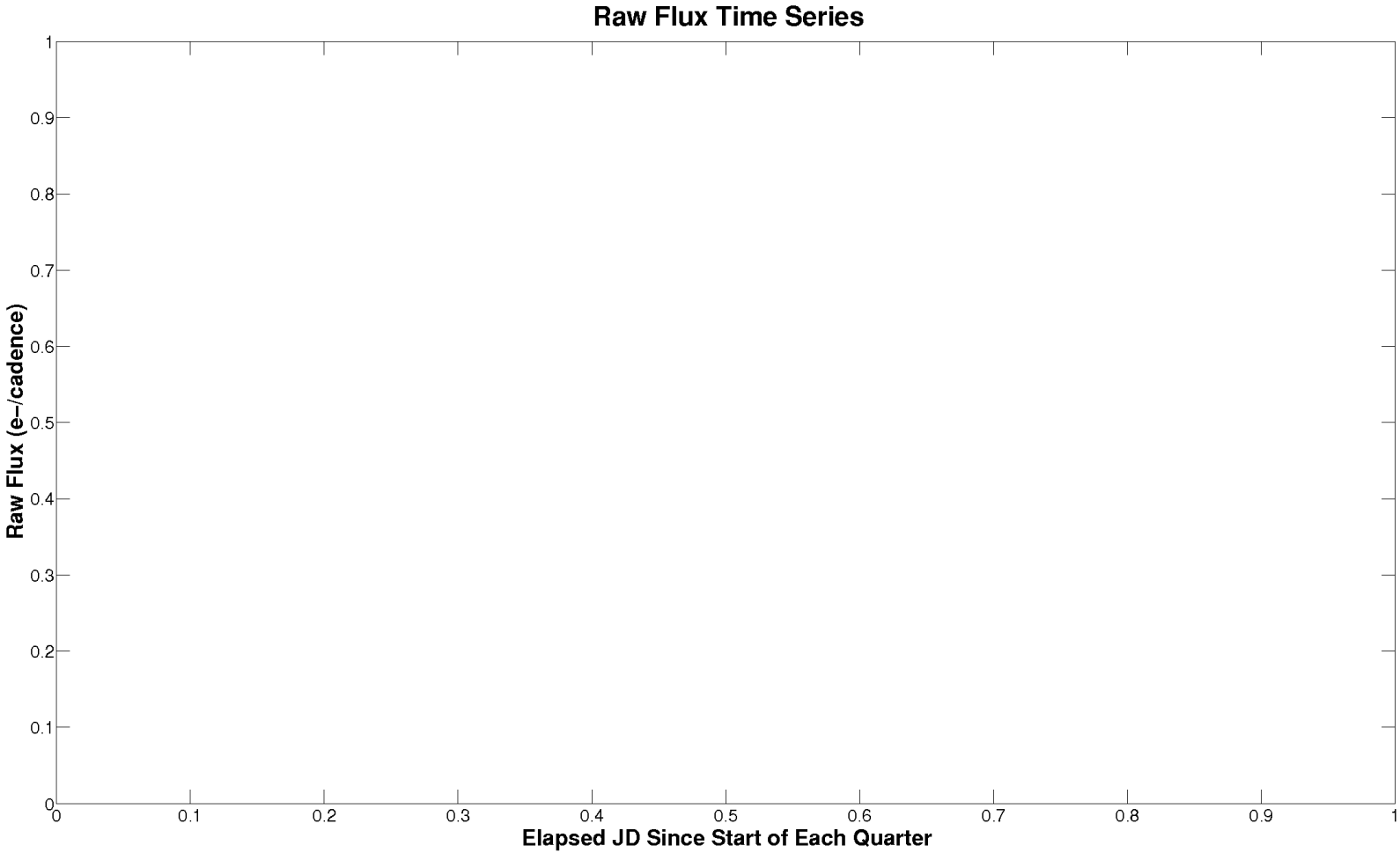
Summary plot of raw flux time series. For the data of quarter 1, target table 20, start JD is 2454964 and the vertical offset is 0 electrons/cadence. For the data of quarter 2, target table 21, start JD is 2455002 and the vertical offset is 0 electrons/cadence. For the data of quarter 3, target table 26, start JD is 2455093 and the vertical offset is 0 electrons/cadence. For the data of quarter 4, target table 29, start JD is 2455184 and the vertical offset is 0 electrons/cadence.
Open `./summary-plots/005868793-00-raw-flux-01-020.fig`



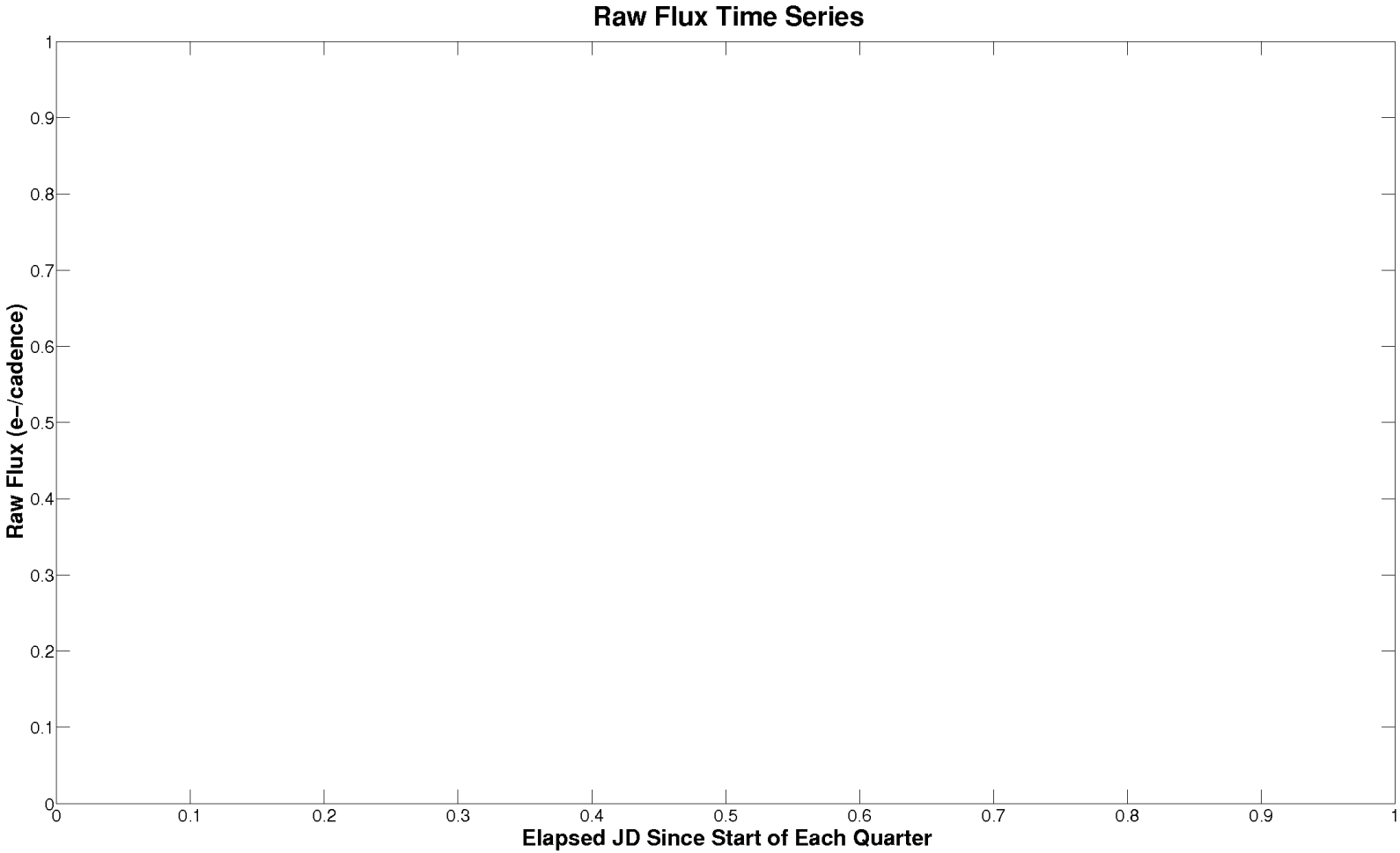
Summary plot of raw flux time series. For the data of quarter 5, target table 32, start JD is 2455276 and the vertical offset is 0 electrons/cadence. For the data of quarter 6, target table 35, start JD is 2455372 and the vertical offset is 0 electrons/cadence. For the data of quarter 7, target table 38, start JD is 2455463 and the vertical offset is 0 electrons/cadence. For the data of quarter 8, target table 41, start JD is 2455568 and the vertical offset is 0 electrons/cadence.
Open `./summary-plots/005868793-00-raw-flux-05-032.fig`



Summary plot of raw flux time series. For the data of quarter 9, target table 44, start JD is 2455641 and the vertical offset is 0 electrons/cadence. For the data of quarter 10, target table 47, start JD is 2455739 and the vertical offset is 0 electrons/cadence. For the data of quarter 11, target table 50, start JD is 2455834 and the vertical offset is 0 electrons/cadence. For the data of quarter 12, target table 53, start JD is 2455932 and the vertical offset is 0 electrons/cadence.
Open `./summary-plots/005868793-00-raw-flux-09-044.fig`



Summary plot of raw flux time series. For the data of quarter 13, target table 56, start JD is 2456015 and the vertical offset is 0 electrons/cadence. For the data of quarter 14, target table 59, start JD is 2456107 and the vertical offset is 0 electrons/cadence. For the data of quarter 15, target table 62, start JD is 2456206 and the vertical offset is 0 electrons/cadence. For the data of quarter 16, target table 65, start JD is 2456305 and the vertical offset is 0 electrons/cadence.
Open `./summary-plots/005868793-00-raw-flux-13-056.fig`



Summary plot of raw flux time series. For the data of quarter 17, target table 68, start JD is 2456392.
Open `./summary-plots/005868793-00-raw-flux-17-068.fig`

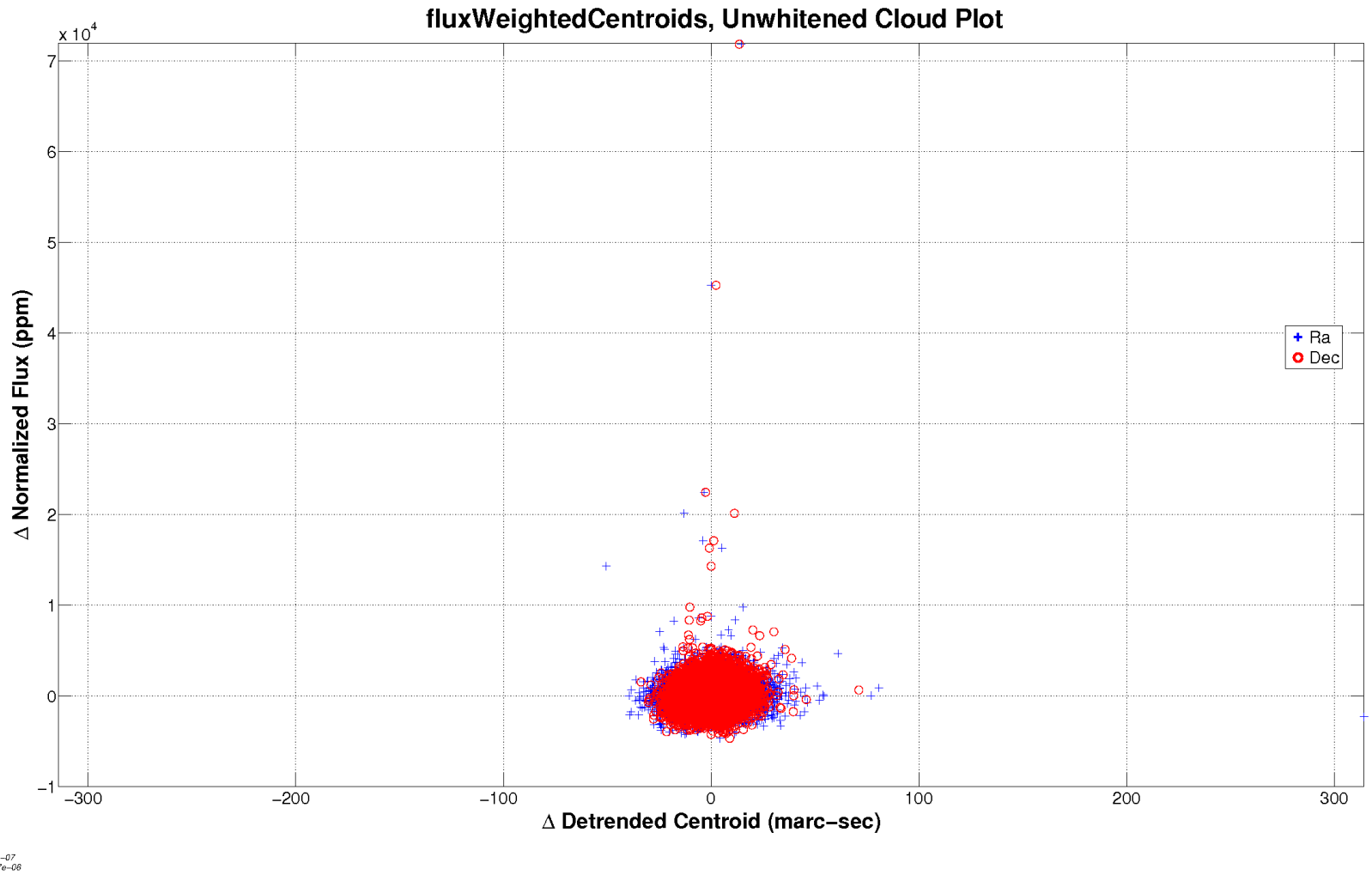
4 Dashboards

Planet Candidate 1

<table>
<tr><td rowspan="2">Model Fitter</td><td colspan="2">Stellar Radius
0.2 ± 0.0 Solar units</td><td>Flux Weighted Motion Detection Statistic</td><td rowspan="2">Centroid Test</td></tr>
<tr><td colspan="2">Period = 4.8 ± 0.0 days
Depth = 1590 ± 163 ppm
Planet Radius = 0.9 ± 0.7 Earth radii
Semi-major Axis = 0.0 ± 0.0 AU
Effective Stellar Flux = 3.7 ± 0.6
Equilibrium Temperature = 354 ± 13 Kelvin
Chi-squared/DoF = 0.8
SNR = 13.7</td><td>Value = 4.86e+00
Significance = 8.81%
Peak RA Offset -2.18e-03 ± 1.90e-03 arcsec (-1.2 σ)
Peak Dec Offset = 1.28e-03 ± 2.10e-03 arcsec (0.61 σ)
Peak Offset Distance = 2.53e-03 ± 1.95e-03 arcsec (1.3 σ)
Source RA Offset = 1.00e+00 ± 1.11e+00 arcsec (0.91 σ)
Source Dec Offset = -2.38e+00 ± 1.18e+00 arcsec (-2 σ)
Source Offset Distance = 2.58e+00 ± 1.17e+00 arcsec (2.2 σ)</td></tr>
<tr><td rowspan="2">Eclipsing Binary Discrimination Test</td><td>Odd-Even Depth Comparison Statistic
Value = 1.73e+00
Significance = 18.90%</td><td>Odd-Even Epoch Comparison Statistic
Value = 7.09e-02
Significance = 79.00%</td><td>Offsets Relative to Out of Transit Centroid
Source RA Offset = -4.44e-02 ± 2.79e-01 arcsec (-0.16 σ)
Source Dec Offset = 6.00e-01 ± 2.73e-01 arcsec (2.20 σ)
Source Offset Distance = 6.02e-01 ± 2.73e-01 arcsec (2.20 σ)
Offsets Relative to KIC Position
Source RA Offset = -3.31e-01 ± 2.43e-01 arcsec (-1.36 σ)
Source Dec Offset = -9.98e-01 ± 2.93e-01 arcsec (-3.41 σ)
Source Offset Distance = 1.05e+00 ± 2.88e-01 arcsec (3.65 σ)</td><td>Difference Image Centroid Offsets</td></tr>
<tr><td>Shorter Period Comparison Statistic
Value = N/A
Significance = N/A</td><td>Longer Period Comparison Statistic
Value = N/A
Significance = N/A</td><td>False Alarm = 8.33e-27
Final Skip Count = -1
Observed Number of Transits = 70
Max Multiple Event Statistic = 11.0</td><td>Bootstrap Test</td></tr>
</table>

Summary of model fitter results and validation test results for target 5868793, planet candidate 1. In general, green denotes that the candidate is likely a planet, while red denotes that the candidate is unlikely to be a planet. Cyan denotes that no data is available. The color of the Model Fitter block is: green, when the SNR of the fit is greater than or equal to 10; yellow, if the SNR is greater than or equal to 7.1 but less than 10; red, if the SNR is less than 7.1 or if the fitter failed. The color of the Centroid Test and Eclipsing Binary Discrimination Test blocks are: green, when the significance is within 2-sigma; yellow, when the significance is between 2- and 3-sigma; red when the significance is greater than 3-sigma. The color of the Difference Image Centroid Offsets block is: green, when the max offset distance sigma is less than or equal to 2; yellow, when the max sigma is between 2 and 3; red when the max sigma is greater than 3. The color of the Bootstrap Test block is green whenever the false alarm probability is less than 10^{-12}, low enough to limit the total number of false alarms from a four year mission to less than one. If the false alarm probability is greater than 10^{-12}, the color of the Bootstrap Test block is: green, when the false alarm probability is less than or equal to the CCDF of a Gaussian distribution at the observed maximum multiple event statistic; yellow when the false alarm probability is between 1 and 2 times that of a Gaussian distribution at the max multiple event statistic; and red when the false alarm probability is more than 2 times that of a Gaussian distribution at the max multiple event statistic.

5 Centroid Cloud Plot



KeplerId 5868793, KeplerMag 17.058 - This figure shows median detrended flux as a function of median detrended centroids for both ra and dec on the sky. Transit features above the noise jitter are seen as scatter outside the central cloud. Features in the flux time series are seen in the vertical direction while features in the centroid time series are seen in the horizontal direction. Any tilt to the out-of-cloud scatter indicates correlation between transit features in the flux and centroid time series. The out of transit mean and standard deviation (SD) indicated in the lower left-hand corner are robust values.
Open `./summary-plots/005868793-00-fluxWeighted-centroids-cloud.fig`

6 Image Artifacts

6.1 Planet Candidate 1

Rolling Band Contamination

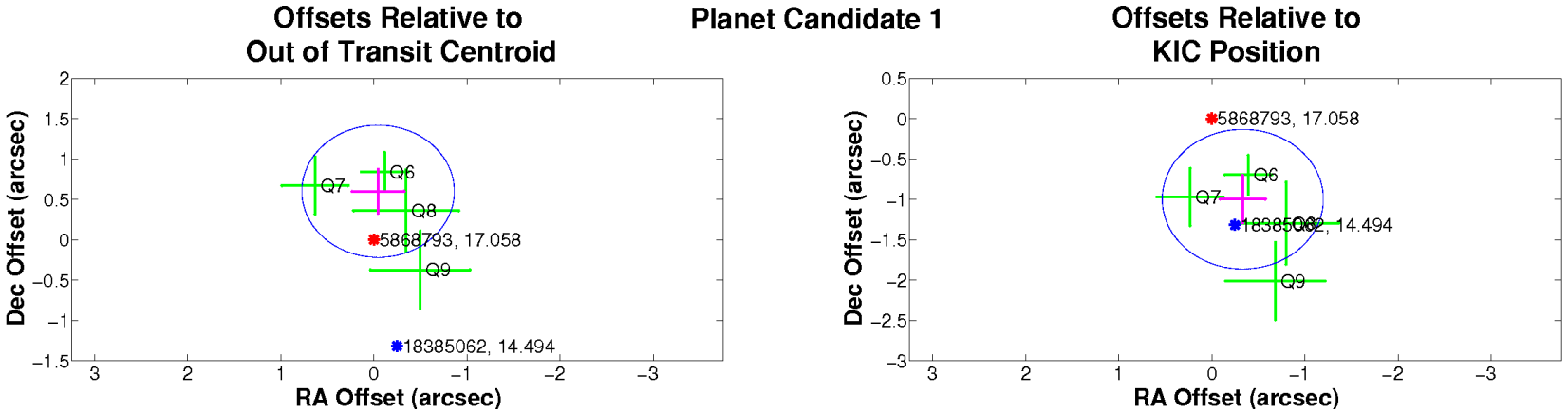
Severity Level	Transit Count	Transit Fraction
0	58	0.83
1	12	0.17
2	0	0.00
3	0	0.00
4	0	0.00
	70	1.00

7 Pixel Level Diagnostics

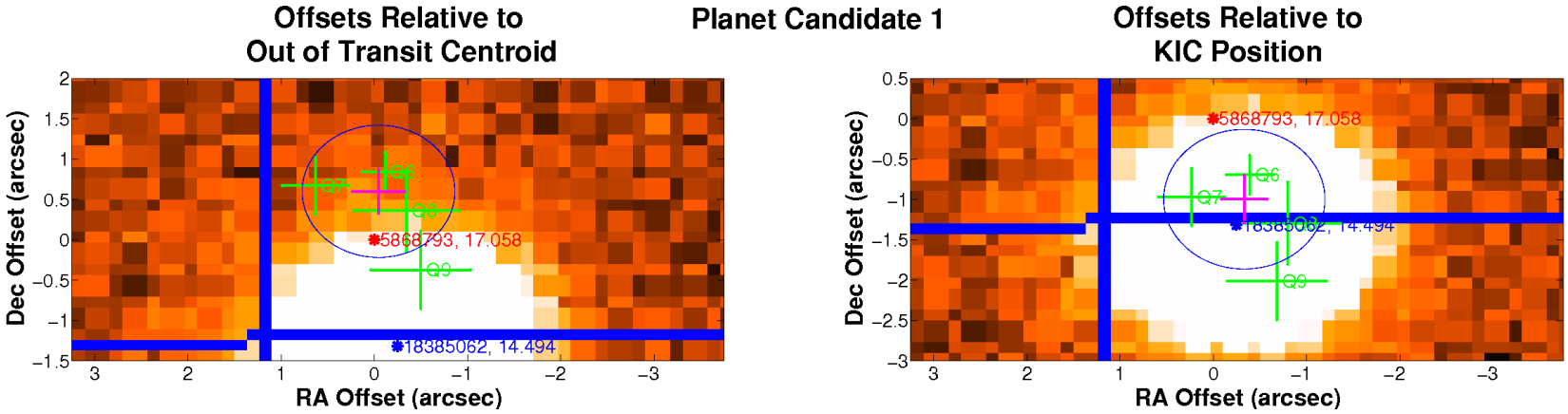
7.1 Planet Candidate 1

Difference Image Summary Metrics

Number of Difference Images	Number of Metrics	Number of Good Metrics	Fraction of Good Metrics	Quality Threshold
4	4	2	0.5000	0.70



Difference image centroid offsets for target 5868793, planet candidate 1. Left: difference image PRF centroid offsets in RA and Dec with respect to the quarterly out-of-transit centroids for the given target. Right: difference image PRF centroid offsets in RA and Dec with respect to the KIC coordinates of the given target. Symbol key: green cross: quarterly centroid offsets with 1-sigma error bars in RA and Dec; magenta cross: robust weighted mean offset over all quarters with 1-sigma error bars in RA and Dec; blue circle: 3-sigma radius of confusion for weighted mean offset; red cross (where applicable): multi-quarter PRF centroid offset with 1-sigma error bars in RA and Dec; cyan circle (where applicable): 3-sigma radius of confusion for multi-quarter PRF offset; red asterisk: location of target star; blue asterisk: location of other KIC objects in the neighborhood. KIC ID and magnitude are noted in the text associated with each marked object (objects in the UKIRT extension to the KIC have IDs between 15,000,000 and 30,000,000). A constant error term of 0.0667 arcseconds has been added in quadrature to the computed uncertainty in the RA and Dec components of the robust mean offset and the multi-quarter PRF offset.
Open `./planet-01/difference-image/005868793-01-difference-image-centroid-offsets.fig`



Difference image centroid offsets for target 5868793, planet candidate 1, diplayed on UKIRT image for given target. Left: difference image PRF centroid offsets in RA and Dec with respect to the quarterly out-of-transit centroids for the given target. Right: difference image PRF centroid offsets in RA and Dec with respect to the KIC coordinates of the given target. Symbol key: green cross: quarterly centroid offsets with 1-sigma error bars in RA and Dec; magenta cross: robust weighted mean offset over all quarters with 1-sigma error bars in RA and Dec; blue circle: 3-sigma radius of confusion for weighted mean offset; red asterisk: location of target star; blue asterisk: location of other KIC objects in the neighborhood. KIC ID and magnitude are noted in the text associated with each marked object (objects in the UKIRT extension to the KIC have IDs between 15,000,000 and 30,000,000). A constant error term of 0.0667 arcseconds has been added in quadrature to the computed uncertainty in the RA and Dec components of the robust mean offset and the multi-quarter PRF offset.
Open `./planet-01/difference-image/005868793-01-difference-image-centroid-offsets-ukirt.fig`

Multi-Quarter Average PRF Fit of the Difference Images

Mean offset from the PRF fit to the out of transit image

	RA	Dec	Units
Offset	$-0.0444 \pm 2.79e-01$	$0.6001 \pm 2.73e-01$	arcseconds
Offset/σ	-0.16	2.20	
Offset Distance	$0.6017 \pm 2.73e-01$		arcseconds
Offset Distance/σ	2.20		
3σ Radius	0.8191		arcseconds

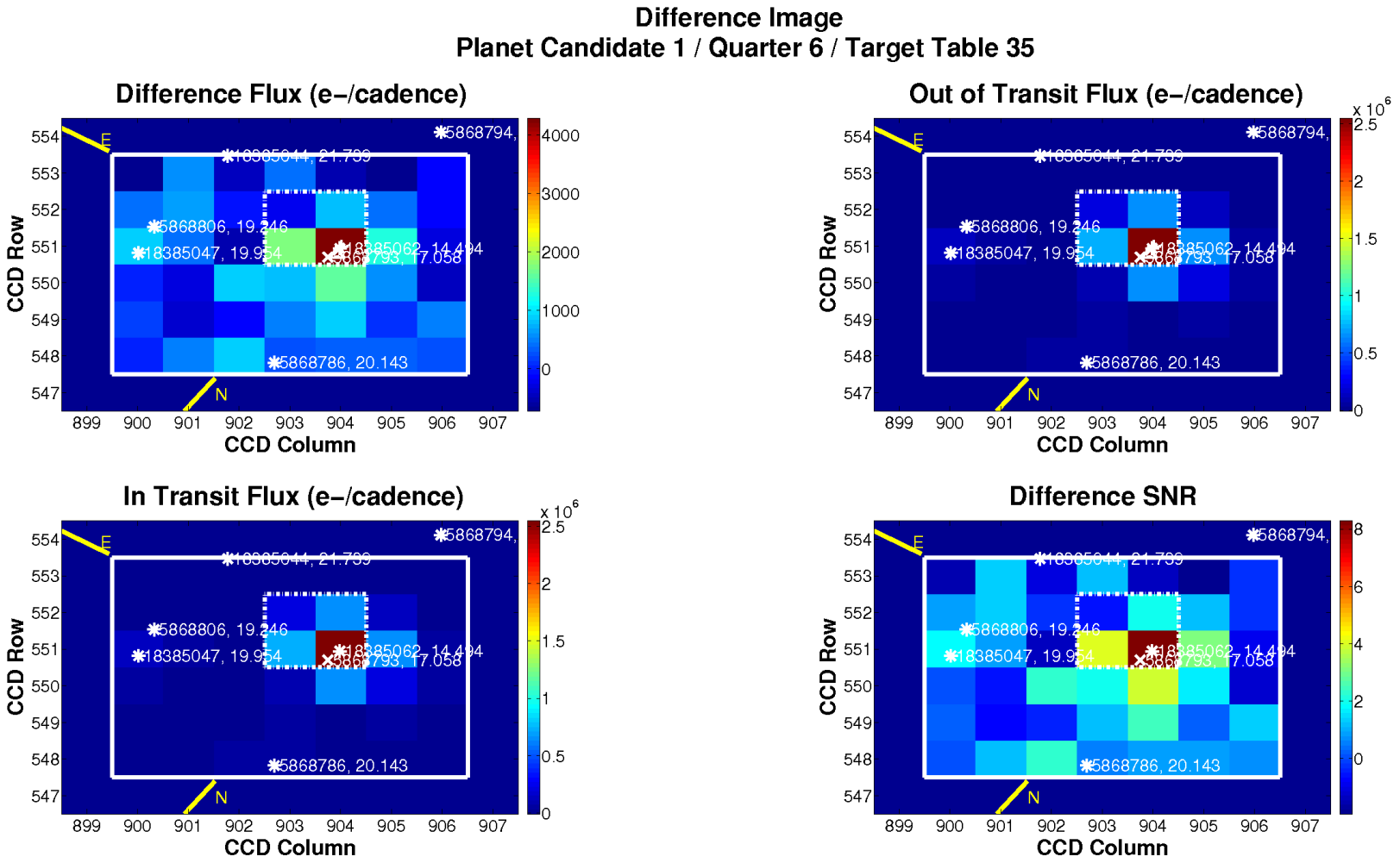
Mean offset from the KIC RA and Dec

	RA	Dec	Units
Offset	$-0.3311 \pm 2.43e-01$	$-0.9978 \pm 2.93e-01$	arcseconds
Offset/σ	-1.36	-3.41	
Offset Distance	$1.0513 \pm 2.88e-01$		arcseconds
Offset Distance/σ	3.65		
3σ Radius	0.8650		arcseconds

Bootstrap Multi-Quarter PRF Fit of the Difference Images

Bootstrap multi-quarter PRF fit results for the difference images associated with this planet candidate are not available.

Pixel correlation centroid offsets figure for this planet candidate is not available.



Difference image for target 5868793, planet candidate 1, quarter 6, target table 35. Upper left: difference between mean flux out-of-transit and in-transit; upper right: mean out-of-transit flux; lower left: mean in-transit flux; lower right: difference between mean flux out-of-transit and in-transit after normalizing by the uncertainty in the difference for each pixel. The optimal aperture is outlined with a white dash-dotted line in each panel and the target mask is outlined with a solid white line. Symbol key: x: target position from KIC RA and Dec converted to CCD coordinates via motion polynomials; *: position of nearby KIC objects converted to CCD coordinates via motion polynomials (objects in the UKIRT extension to the KIC have IDs between 15,000,000 and 30,000,000); +: PRF-fit location of target from out-of-transit image; triangle: PRF-fit location of transit source from the difference image. CCD row and column coordinates are 0-based. Number of transits = 18; number of valid in-transit cadences = 28; number of in-transit cadence gaps = 1; number of valid out-of-transit cadences = 111; number of out-of-transit cadence gaps = 1. Difference image quality metric = 0.86 (good).
Open `./planet-01/difference-image/005868793-01-difference-image-06-035.fig`

The pixel correlation statistic plot is not available for target 5868793, planet candidate 1, in target table 35.

PRF Fit of the Difference Image

Offset from the PRF fit to the out of transit image

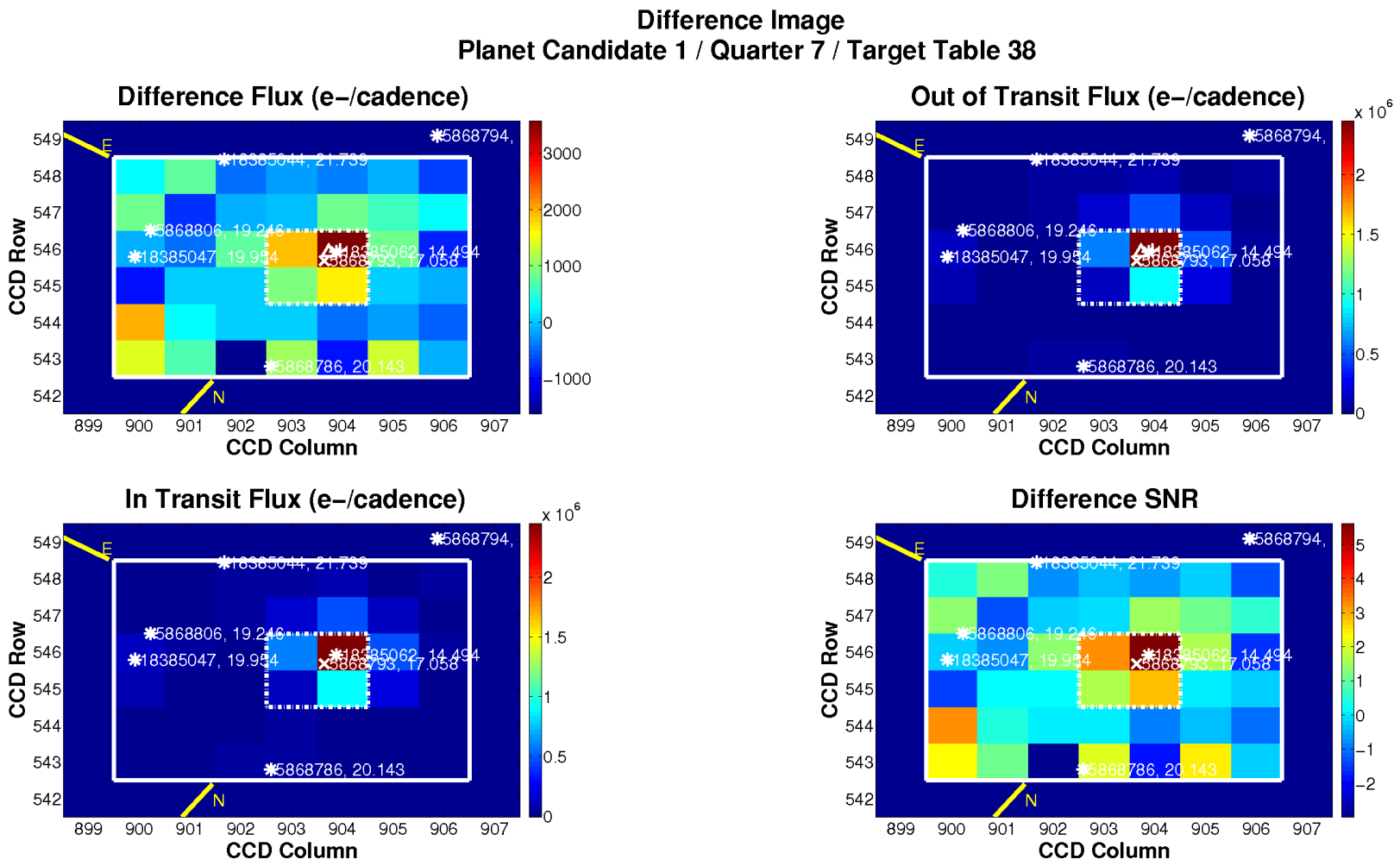
	Row	Column	Units	RA	Dec	Units
Out of Transit Image Centroid	$550.98 \pm 6.59e-05$	$904.02 \pm 5.85e-05$	pixels	$19.29177134 \pm 6.12e-09$	$41.15824547 \pm 7.22e-08$	hours/degrees
Difference Image Centroid	$550.79 \pm 6.46e-02$	$903.93 \pm 5.92e-02$	pixels	$19.29176851 \pm 6.19e-06$	$41.15847891 \pm 6.71e-05$	hours/degrees
Offset	$-0.1915 \pm 6.46e-02$	$-0.0938 \pm 5.92e-02$	pixels	$-0.1153 \pm 2.52e-01$	$0.8404 \pm 2.42e-01$	arcseconds
Offset/σ	-2.97	-1.58		-0.46	3.48	
Offset Distance	$0.2133 \pm 6.17e-02$		pixels	$0.8482 \pm 2.46e-01$		arcseconds
Offset Distance/σ	3.46			3.45		

Offset from the KIC RA and Dec converted to pixels via motion polynomials

	Row	Column	Units	RA	Dec	Units
KIC Reference Centroid	$550.70 \pm 1.36e-05$	$903.75 \pm 1.46e-05$	pixels	$19.29177810 \pm 0.00e+00$	$41.15867200 \pm 0.00e+00$	hours/degrees
Difference Image Centroid	$550.79 \pm 6.46e-02$	$903.93 \pm 5.92e-02$	pixels	$19.29176851 \pm 6.19e-06$	$41.15847891 \pm 6.71e-05$	hours/degrees
Offset	$0.0904 \pm 6.46e-02$	$0.1788 \pm 5.92e-02$	pixels	$-0.3900 \pm 2.52e-01$	$-0.6951 \pm 2.42e-01$	arcseconds
Offset/σ	1.40	3.02		-1.55	-2.88	
Offset Distance	$0.2004 \pm 5.84e-02$		pixels	$0.7971 \pm 2.32e-01$		arcseconds
Offset Distance/σ	3.43			3.43		

PRF Fit of the Pixel Correlation Image

`The pixel correlation image centroid could not be calculated for target 5868793, planet candidate 1, in target table 35.`



Difference image for target 5868793, planet candidate 1, quarter 7, target table 38. Upper left: difference between mean flux out-of-transit and in-transit; upper right: mean out-of-transit flux; lower left: mean in-transit flux; lower right: difference between mean flux out-of-transit and in-transit after normalizing by the uncertainty in the difference for each pixel. The optimal aperture is outlined with a white dash-dotted line in each panel and the target mask is outlined with a solid white line. Symbol key: x: target position from KIC RA and Dec converted to CCD coordinates via motion polynomials; *: position of nearby KIC objects converted to CCD coordinates via motion polynomials (objects in the UKIRT extension to the KIC have IDs between 15,000,000 and 30,000,000); +: PRF-fit location of target from out-of-transit image; triangle: PRF-fit location of transit source from the difference image. CCD row and column coordinates are 0-based. Number of transits = 16; number of valid in-transit cadences = 26; number of in-transit cadence gaps = 0; number of valid out-of-transit cadences = 97; number of out-of-transit cadence gaps = 1. Difference image quality metric = 0.69 (not good).
Open `./planet-01/difference-image/005868793-01-difference-image-07-038.fig`

The pixel correlation statistic plot is not available for target 5868793, planet candidate 1, in target table 38.

PRF Fit of the Difference Image

Offset from the PRF fit to the out of transit image

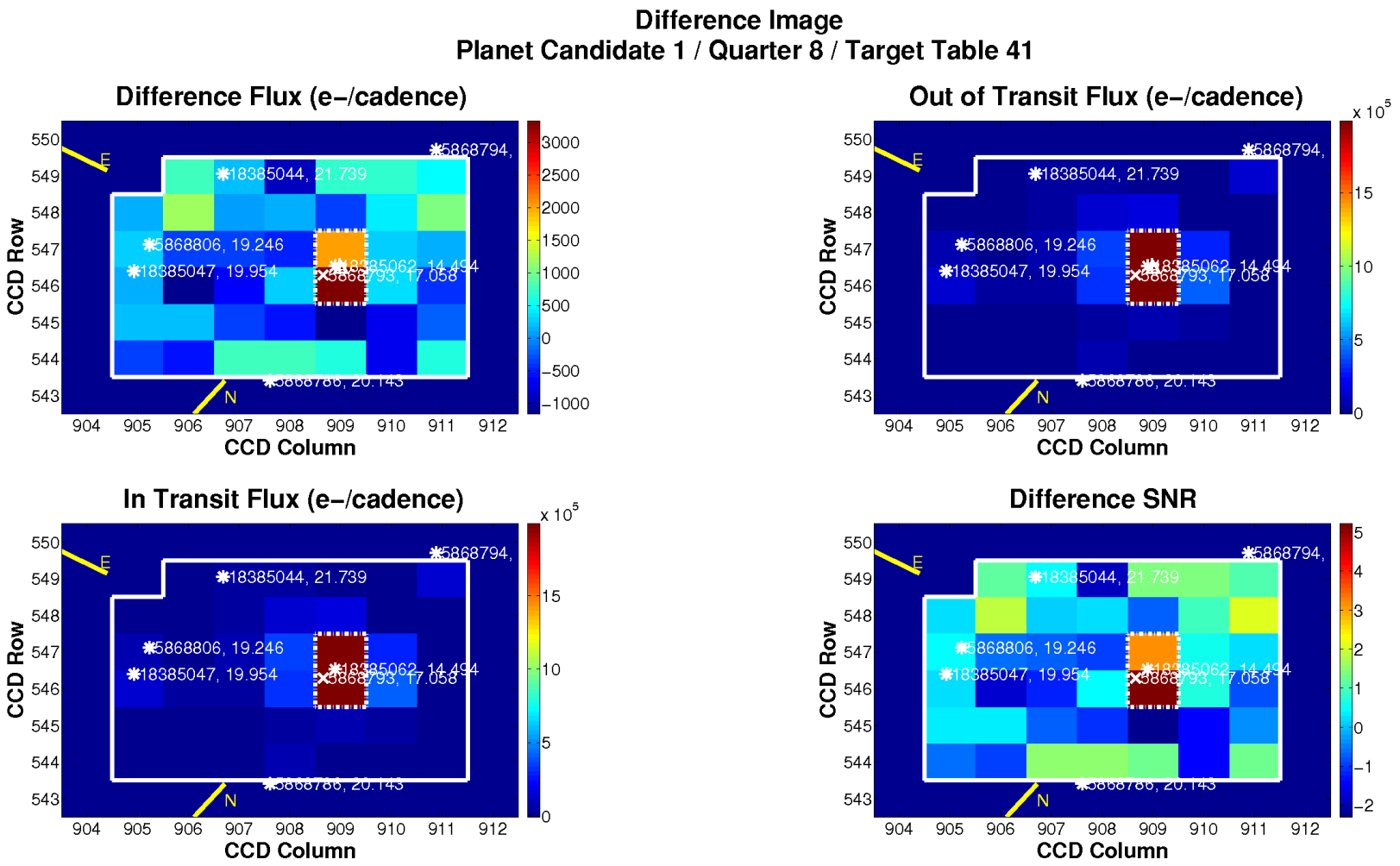
	Row	Column	Units	RA	Dec	Units
Out of Transit Image Centroid	$545.96 \pm 6.93e-05$	$903.96 \pm 9.23e-05$	pixels	$19.29176828 \pm 8.10e-09$	$41.15821597 \pm 9.10e-08$	hours/degrees
Difference Image Centroid	$545.91 \pm 9.03e-02$	$903.73 \pm 8.81e-02$	pixels	$19.29178385 \pm 8.76e-06$	$41.15840232 \pm 9.86e-05$	hours/degrees
Offset	$-0.0514 \pm 9.03e-02$	$-0.2260 \pm 8.81e-02$	pixels	$0.6327 \pm 3.56e-01$	$0.6709 \pm 3.55e-01$	arcseconds
Offset/σ	-0.57	-2.57		1.78	1.89	
Offset Distance	$0.2318 \pm 8.80e-02$		pixels	$0.9222 \pm 3.51e-01$		arcseconds
Offset Distance/σ	2.63			2.63		

Offset from the KIC RA and Dec converted to pixels via motion polynomials

	Row	Column	Units	RA	Dec	Units
KIC Reference Centroid	$545.68 \pm 1.15e-05$	$903.64 \pm 1.12e-05$	pixels	$19.29177810 \pm 0.00e+00$	$41.15867200 \pm 0.00e+00$	hours/degrees
Difference Image Centroid	$545.91 \pm 9.03e-02$	$903.73 \pm 8.81e-02$	pixels	$19.29178385 \pm 8.76e-06$	$41.15840232 \pm 9.86e-05$	hours/degrees
Offset	$0.2354 \pm 9.03e-02$	$0.0873 \pm 8.81e-02$	pixels	$0.2336 \pm 3.56e-01$	$-0.9708 \pm 3.55e-01$	arcseconds
Offset/σ	2.61	0.99		0.66	-2.74	
Offset Distance	$0.2511 \pm 8.98e-02$		pixels	$0.9985 \pm 3.57e-01$		arcseconds
Offset Distance/σ	2.80			2.80		

PRF Fit of the Pixel Correlation Image

`The pixel correlation image centroid could not be calculated for target 5868793, planet candidate 1, in target table 38.`



Difference image for target 5868793, planet candidate 1, quarter 8, target table 41. Upper left: difference between mean flux out-of-transit and in-transit; upper right: mean out-of-transit flux; lower left: mean in-transit flux; lower right: difference between mean flux out-of-transit and in-transit after normalizing by the uncertainty in the difference for each pixel. The optimal aperture is outlined with a white dash-dotted line in each panel and the target mask is outlined with a solid white line. Symbol key: x: target position from KIC RA and Dec converted to CCD coordinates via motion polynomials; *: position of nearby KIC objects converted to CCD coordinates via motion polynomials (objects in the UKIRT extension to the KIC have IDs between 15,000,000 and 30,000,000); +: PRF-fit location of target from out-of-transit image; triangle: PRF-fit location of transit source from the difference image. CCD row and column coordinates are 0-based. Number of transits = 12; number of valid in-transit cadences = 18; number of in-transit cadence gaps = 0; number of valid out-of-transit cadences = 74; number of out-of-transit cadence gaps = 0. Difference image quality metric = 0.69 (not good).
Open `./planet-01/difference-image/005868793-01-difference-image-08-041.fig`

The pixel correlation statistic plot is not available for target 5868793, planet candidate 1, in target table 41.

PRF Fit of the Difference Image

Offset from the PRF fit to the out of transit image

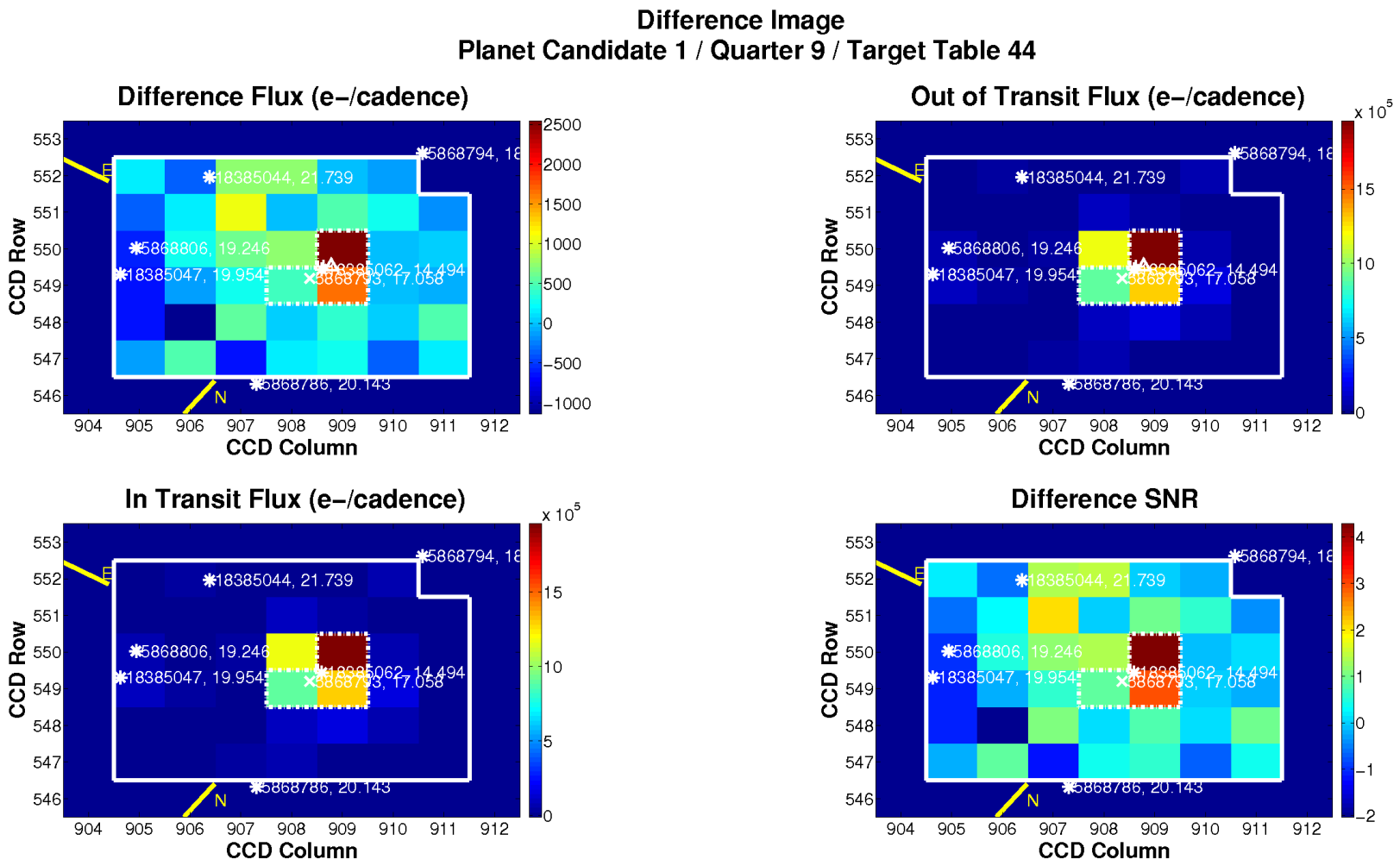
	Row	Column	Units	RA	Dec	Units
Out of Transit Image Centroid	$546.57 \pm 4.49e-05$	$908.98 \pm 1.01e-04$	pixels	$19.29176704 \pm 8.73e-09$	$41.15821244 \pm 7.39e-08$	hours/degrees
Difference Image Centroid	$546.45 \pm 1.03e-01$	$909.00 \pm 1.61e-01$	pixels	$19.29175852 \pm 1.39e-05$	$41.15831213 \pm 1.41e-04$	hours/degrees
Offset	$-0.1234 \pm 1.03e-01$	$0.0220 \pm 1.61e-01$	pixels	$-0.3462 \pm 5.66e-01$	$0.3589 \pm 5.09e-01$	arcseconds
Offset/σ	-1.20	0.14		-0.61	0.71	
Offset Distance	$0.1254 \pm 1.03e-01$		pixels	$0.4987 \pm 4.12e-01$		arcseconds
Offset Distance/σ	1.21			1.21		

Offset from the KIC RA and Dec converted to pixels via motion polynomials

	Row	Column	Units	RA	Dec	Units
KIC Reference Centroid	$546.29 \pm 9.57e-06$	$908.66 \pm 9.93e-06$	pixels	$19.29177810 \pm 0.00e+00$	$41.15867200 \pm 0.00e+00$	hours/degrees
Difference Image Centroid	$546.45 \pm 1.03e-01$	$909.00 \pm 1.61e-01$	pixels	$19.29175852 \pm 1.39e-05$	$41.15831213 \pm 1.41e-04$	hours/degrees
Offset	$0.1589 \pm 1.03e-01$	$0.3476 \pm 1.61e-01$	pixels	$-0.7959 \pm 5.66e-01$	$-1.2955 \pm 5.09e-01$	arcseconds
Offset/σ	1.54	2.16		-1.41	-2.55	
Offset Distance	$0.3822 \pm 1.55e-01$		pixels	$1.5205 \pm 6.17e-01$		arcseconds
Offset Distance/σ	2.46			2.46		

PRF Fit of the Pixel Correlation Image

`The pixel correlation image centroid could not be calculated for target 5868793, planet candidate 1, in target table 41.`



Difference image for target 5868793, planet candidate 1, quarter 9, target table 44. Upper left: difference between mean flux out-of-transit and in-transit; upper right: mean out-of-transit flux; lower left: mean in-transit flux; lower right: difference between mean flux out-of-transit and in-transit after normalizing by the uncertainty in the difference for each pixel. The optimal aperture is outlined with a white dash-dotted line in each panel and the target mask is outlined with a solid white line. Symbol key: x: target position from KIC RA and Dec converted to CCD coordinates via motion polynomials; *: position of nearby KIC objects converted to CCD coordinates via motion polynomials (objects in the UKIRT extension to the KIC have IDs between 15,000,000 and 30,000,000); +: PRF-fit location of target from out-of-transit image; triangle: PRF-fit location of transit source from the difference image. CCD row and column coordinates are 0-based. Number of transits = 18; number of valid in-transit cadences = 27; number of in-transit cadence gaps = 0; number of valid out-of-transit cadences = 109; number of out-of-transit cadence gaps = 2. Difference image quality metric = 0.74 (good).
Open `./planet-01/difference-image/005868793-01-difference-image-09-044.fig`

The pixel correlation statistic plot is not available for target 5868793, planet candidate 1, in target table 44.

PRF Fit of the Difference Image

Offset from the PRF fit to the out of transit image

	Row	Column	Units	RA	Dec	Units
Out of Transit Image Centroid	$549.52 \pm 4.70e-05$	$908.63 \pm 4.15e-05$	pixels	$19.29177357 \pm 4.21e-09$	$41.15821653 \pm 5.26e-08$	hours/degrees
Difference Image Centroid	$549.52 \pm 1.02e-01$	$908.78 \pm 1.49e-01$	pixels	$19.29176136 \pm 1.31e-05$	$41.15811294 \pm 1.33e-04$	hours/degrees
Offset	$0.0085 \pm 1.02e-01$	$0.1559 \pm 1.49e-01$	pixels	$-0.4965 \pm 5.34e-01$	$-0.3729 \pm 4.79e-01$	arcseconds
Offset/σ	0.08	1.05		-0.93	-0.78	
Offset Distance	$0.1561 \pm 1.49e-01$		pixels	$0.6210 \pm 5.93e-01$		arcseconds
Offset Distance/σ	1.05			1.05		

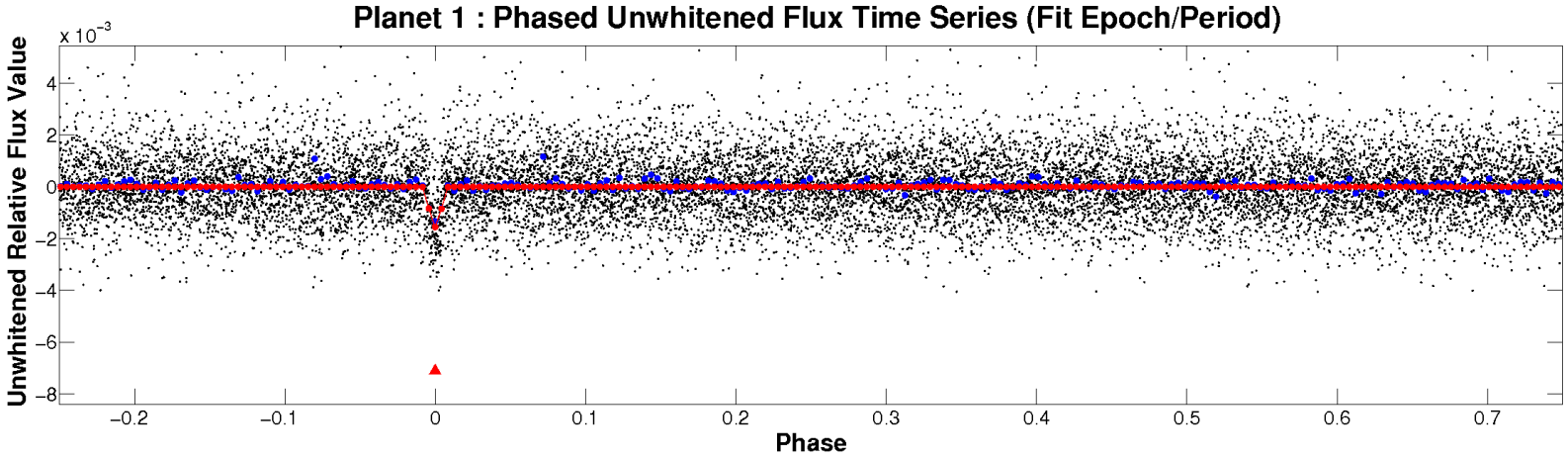
Offset from the KIC RA and Dec converted to pixels via motion polynomials

	Row	Column	Units	RA	Dec	Units
KIC Reference Centroid	$549.20 \pm 9.43e-06$	$908.36 \pm 9.04e-06$	pixels	$19.29177810 \pm 0.00e+00$	$41.15867200 \pm 0.00e+00$	hours/degrees
Difference Image Centroid	$549.52 \pm 1.02e-01$	$908.78 \pm 1.49e-01$	pixels	$19.29176136 \pm 1.31e-05$	$41.15811294 \pm 1.33e-04$	hours/degrees
Offset	$0.3252 \pm 1.02e-01$	$0.4237 \pm 1.49e-01$	pixels	$-0.6807 \pm 5.34e-01$	$-2.0126 \pm 4.79e-01$	arcseconds
Offset/σ	3.19	2.85		-1.27	-4.20	
Offset Distance	$0.5341 \pm 1.36e-01$		pixels	$2.1246 \pm 5.39e-01$		arcseconds
Offset Distance/σ	3.94			3.94		

PRF Fit of the Pixel Correlation Image

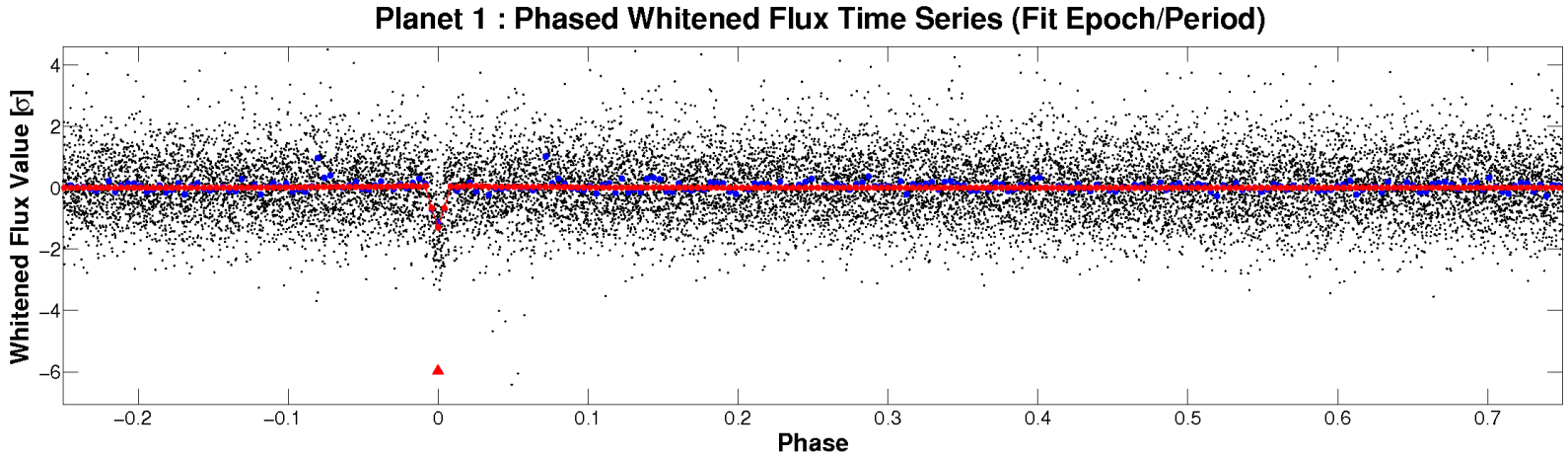
`The pixel correlation image centroid could not be calculated for target 5868793, planet candidate 1, in target table 44.`

8 Phased Light Curves

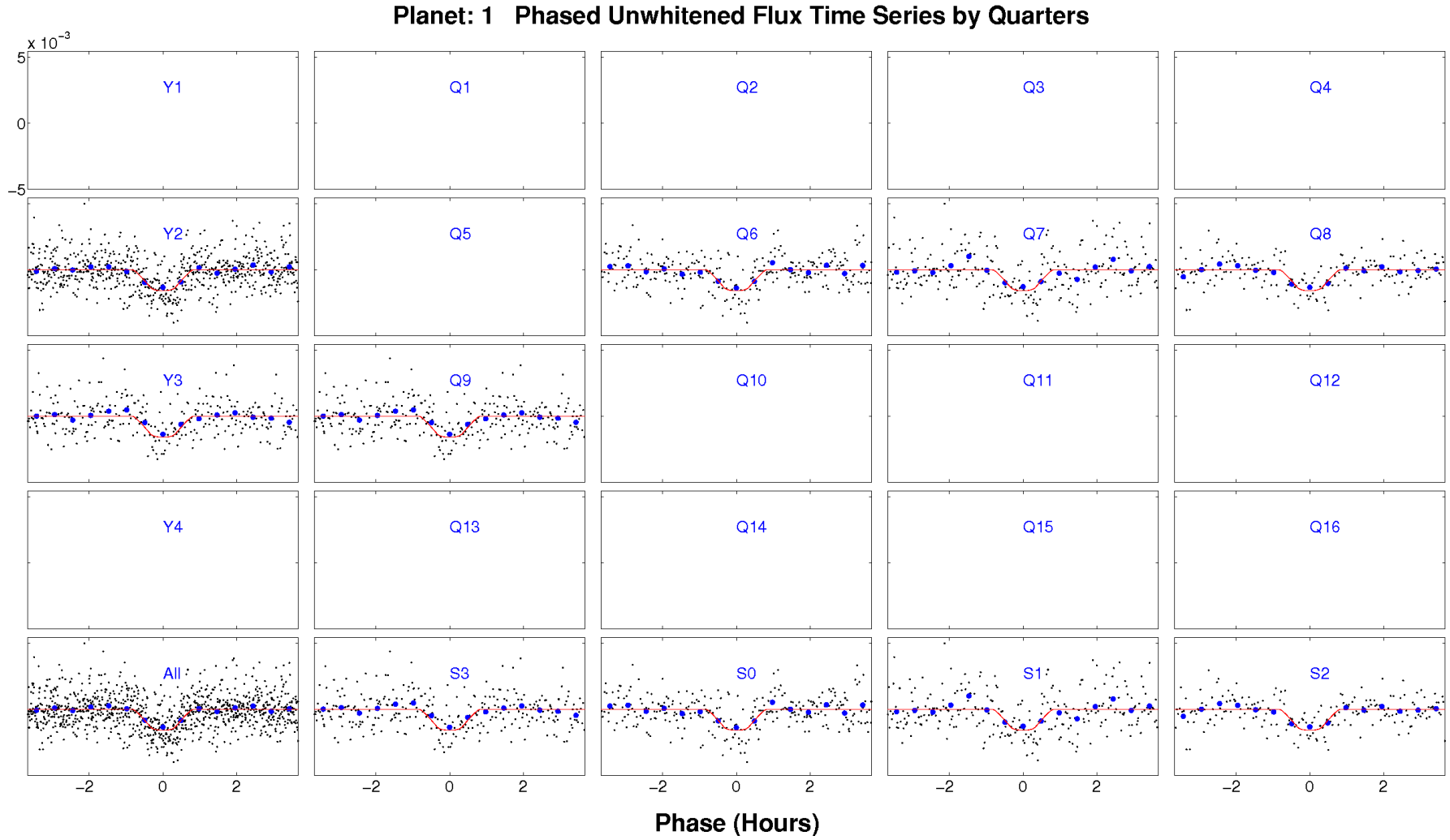


Phased unwhitened flux time series is plotted in black dots. When all transits fit completed with full or secondary convergence, the phase is determined with the fitted epoch and period; otherwise, the phase is determined with the TPS epoch and period. The values of the phased unwhitened flux time series averaged in one cadence wide bins are plotted in bigger blue dots. When all transits fit completes with full or secondary convergence, the averaged values of the phased unwhitened fitted model light curve are plotted in red dots. Transit event markers in different colors indicate the locations of the transits of all planet candidates. The transits of the same planet candidate are labeled with the markers of the same color, for example, blue markers for transits of plane candidate #1, red markers for transits of planet candidate #2, etc.

Open `./summary-plots/005868793-01-phased-unwhitened-flux-time-series.fig`



Phased whitened flux time series is plotted in black dots. When all transits fit completed with full or secondary convergence, the phase is determined with the fitted epoch and period; otherwise, the phase is determined with the TPS epoch and period. The values of the phased whitened flux time series averaged in one cadence wide bins are plotted in bigger blue dots. When all transits fit completes with full or secondary convergence, the averaged values of the phased whitened fitted model light curve are plotted in red dots. Transit event markers in different colors indicate the locations of the transits of all planet candidates. The transits of the same planet candidate are labeled with the markers of the same color, for example, blue markers for transits of plane candidate #1, red markers for transits of planet candidate #2, etc.
Open `./summary-plots/005868793-01-phased-whitened-flux-time-series.fig`



Phased unwhitened flux time series by quarter for target 5868793, planet candidate 1. Period = 4.8381 days; transit epoch = 135.1503 BKJD.
Open `./summary-plots/005868793-01-phased-unwhitened-flux-time-series-by-quarter.fig`

9 Planet Candidate 1

9.1 Model Fitter: All Transits

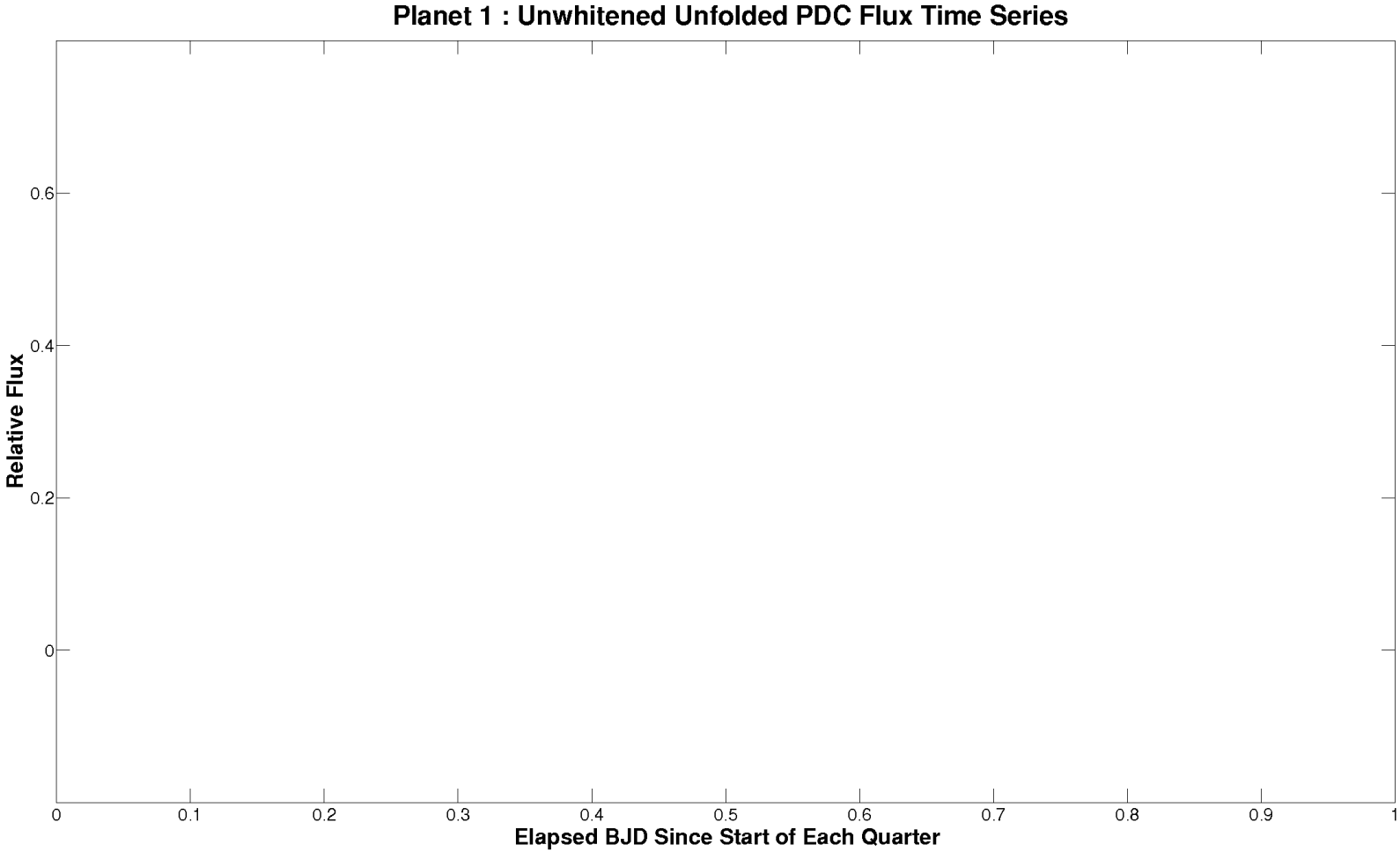
Model Characteristic	Name
Transit Model	mandel-agol_geometric_transit_model
Limb Darkening Model	claret_nonlinear_limb_darkening_model_2011

TCE Parameter	Value	Units
Trial Transit Pulse Duration	1.5	hours
Transit Epoch	54967.6297447	MJD
Orbital Period	4.8382831	days
Maximum SES	3.3	
Maximum MES	11.0	
Robust Statistic	11.8	
Chi Square Goodness of Fit Statistic (DoF)	297.3 (250)	
Chi Square2 Statistic (DoF)	78.0 (79.9)	
Threshold for Desired PFA		

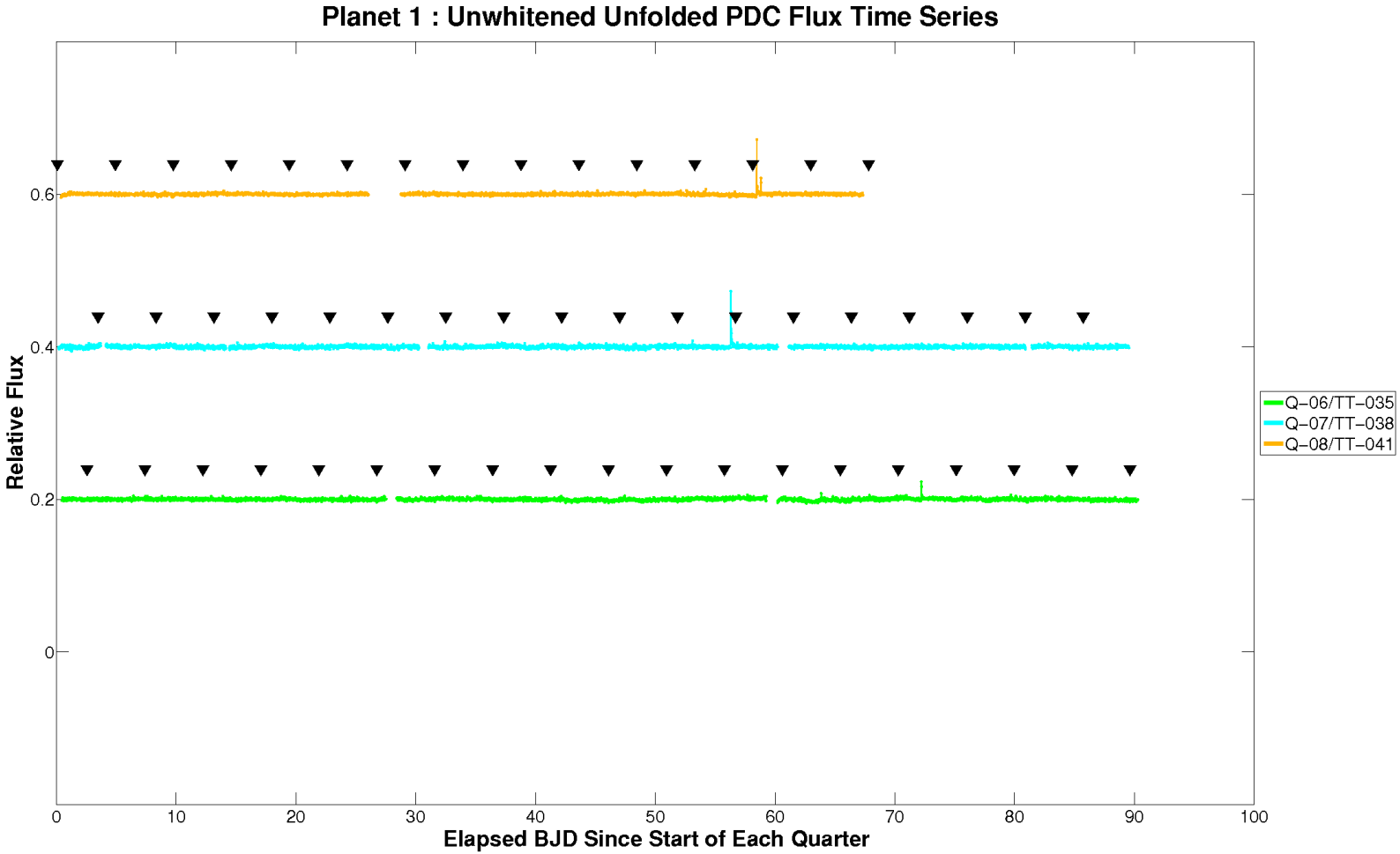
DoF: Degrees of Freedom

Parameter	Value	Uncertainty	Units
SNR	13.7		
Orbital Period	4.8381336	3.3819e-05	days
Transit Epoch	135.1502551	3.6328e-03	BKJD
Impact Parameter	0.7496	2.0073e+00	
Planet Radius to Star Radius Ratio	0.0399272	3.3126e-02	
Semi-major Axis to Star Radius Ratio	21.7411	7.3586e+01	
Planet Radius	0.8714	7.3468e-01	Earth radii
Semi-major Axis	0.0316	3.1704e-03	AU
Effective Stellar Flux	3.7000	5.5420e-01	Goldilocks
Equilibrium Temperature	354	1.3243e+01	Kelvin
Transit Depth	1590	1.6294e+02	ppm
Transit Duration	1.2263	6.9414e-01	hours
Transit Ingress Time	0.1029	7.9281e-01	hours
Eccentricity	0.0000	0.0000e+00	
Peri Longitude	0.0000	0.0000e+00	degrees
Model Chi Square Statistic (DoF)	823.1 (1017.2)		
Model Chi Square Goodness of Fit Statistic (DoF)	141.6 (238)		
Model Chi Square2 Statistic (DoF)	44.5 (69)		

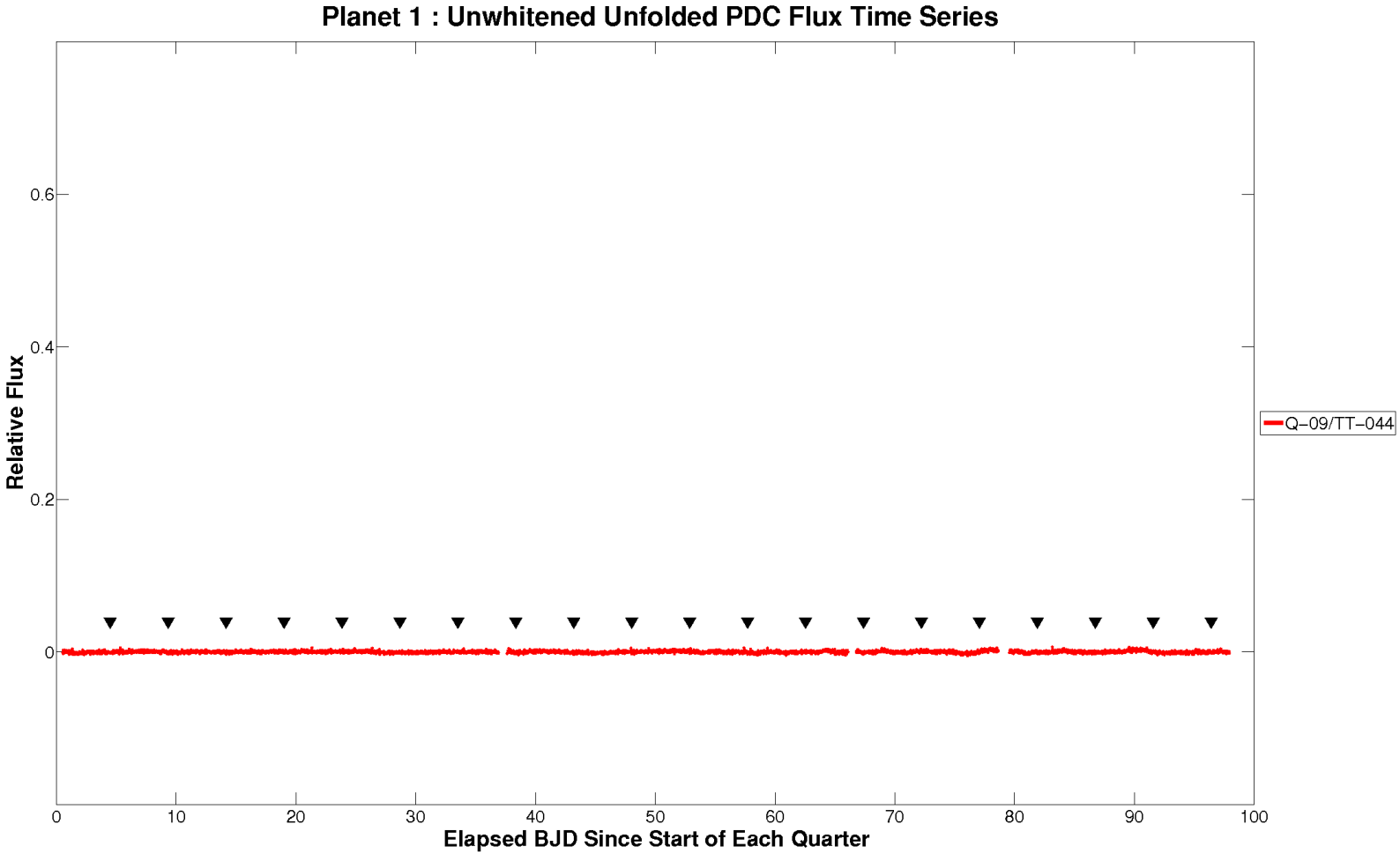
DoF: Degrees of Freedom



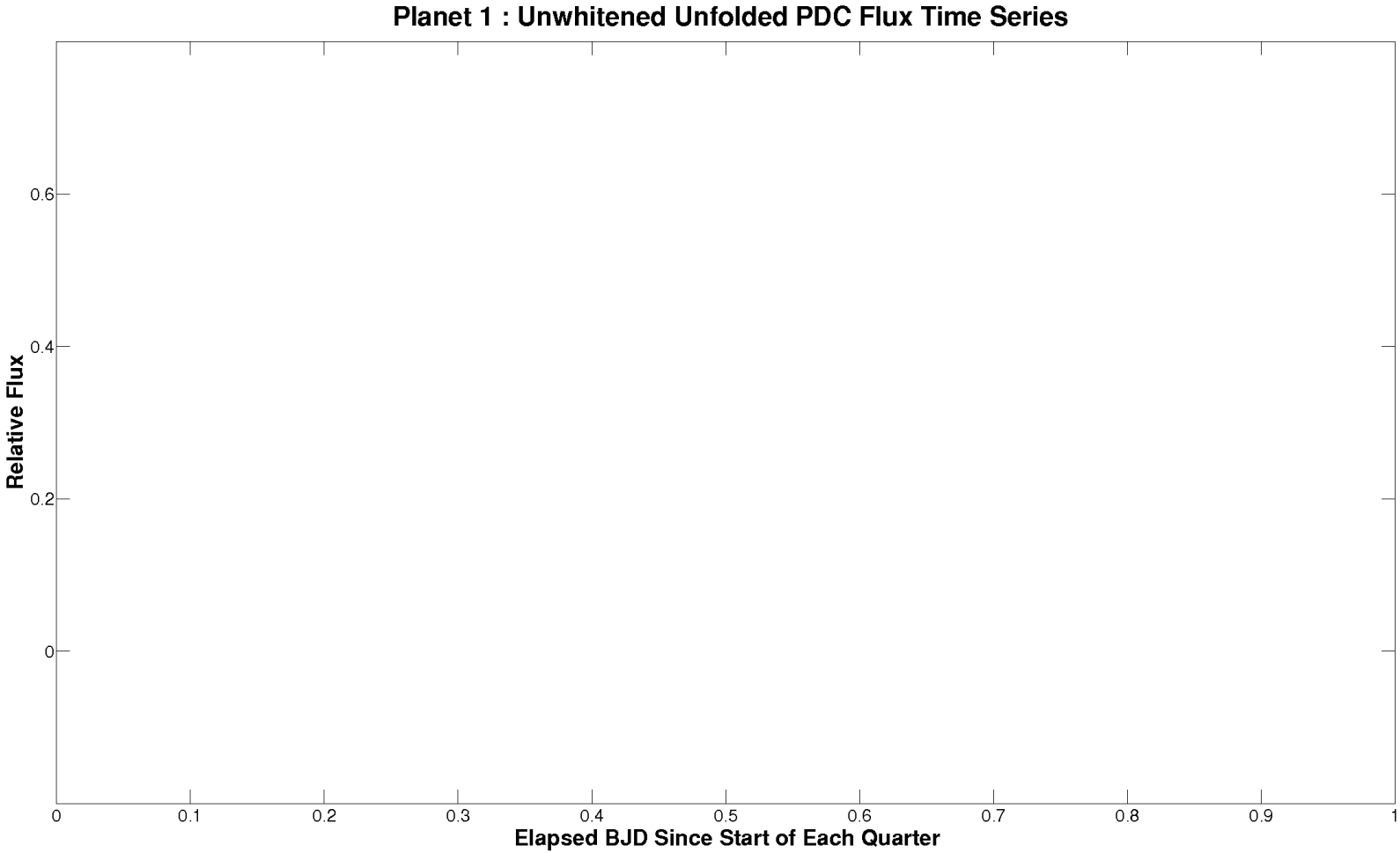
PDC Flux time series for KeplerId 5868793, Planet candidate 1 in the unwhitened domain. For the data of Quarter-01/TargetTableId-020, start BJD is 2454964 and the vertical offset is 0. For the data of Quarter-02/TargetTableId-021, start BJD is 2455002 and the vertical offset is 0.2. For the data of Quarter-03/TargetTableId-026, start BJD is 2455093 and the vertical offset is 0.4. For the data of Quarter-04/TargetTableId-029, start BJD is 2455184 and the vertical offset is 0.6. Transit event markers indicate the location of transits of the given planet candidate. All transits fit completed with full convergence.
Open `./planet-01/planet-search-and-model-fitting-results/all-transits-fit/005868793-01-all-unwhitened-01-020.fig`



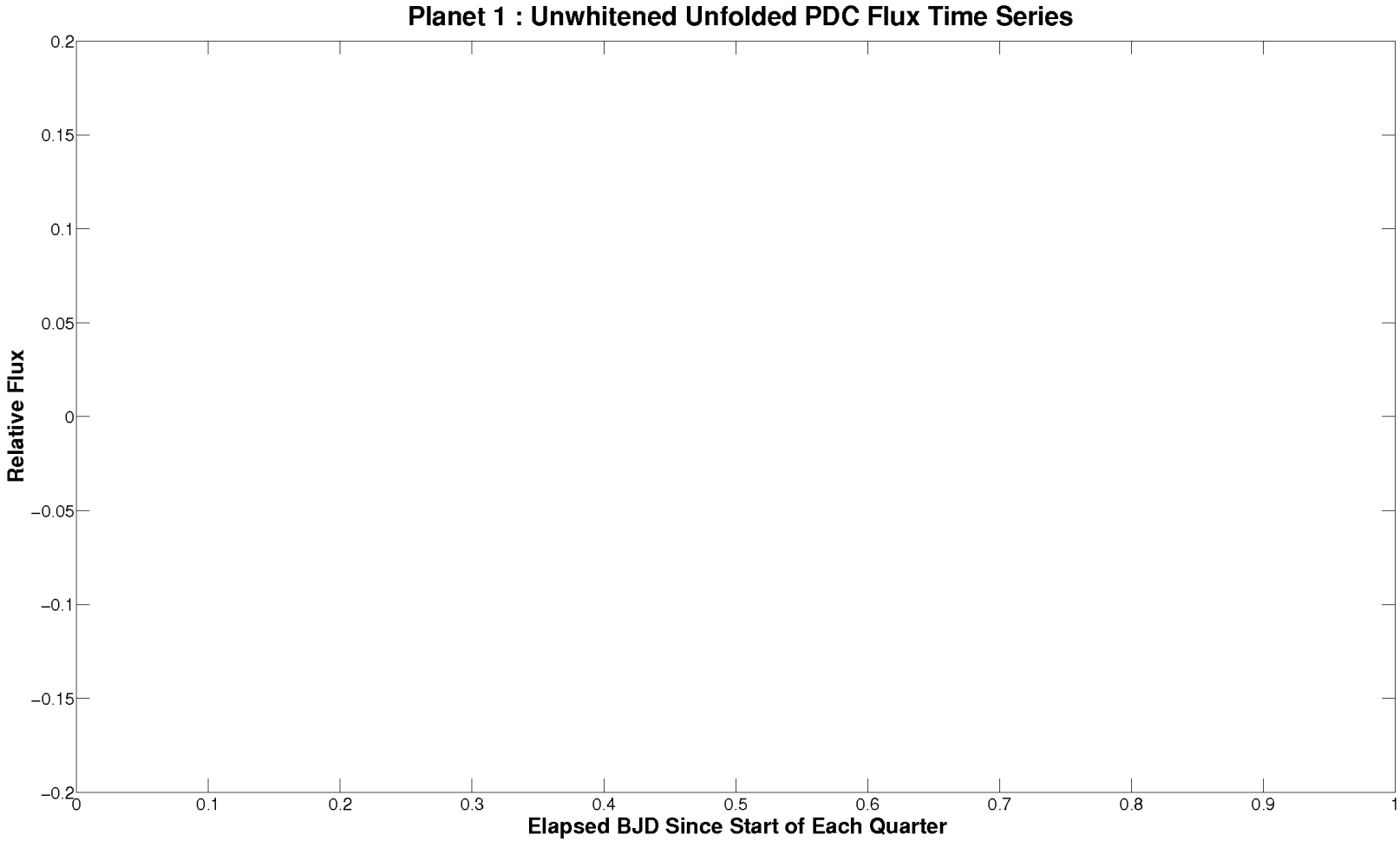
PDC Flux time series for KeplerId 5868793, Planet candidate 1 in the unwhitened domain. For the data of Quarter-05/TargetTableId-032, start BJD is 2455276 and the vertical offset is 0. For the data of Quarter-06/TargetTableId-035, start BJD is 2455372 and the vertical offset is 0.2. For the data of Quarter-07/TargetTableId-038, start BJD is 2455463 and the vertical offset is 0.4. For the data of Quarter-08/TargetTableId-041, start BJD is 2455568 and the vertical offset is 0.6. Transit event markers indicate the location of transits of the given planet candidate. All transits fit completed with full convergence.
Open `./planet-01/planet-search-and-model-fitting-results/all-transits-fit/005868793-01-all-unwhitened-05-032.fig`



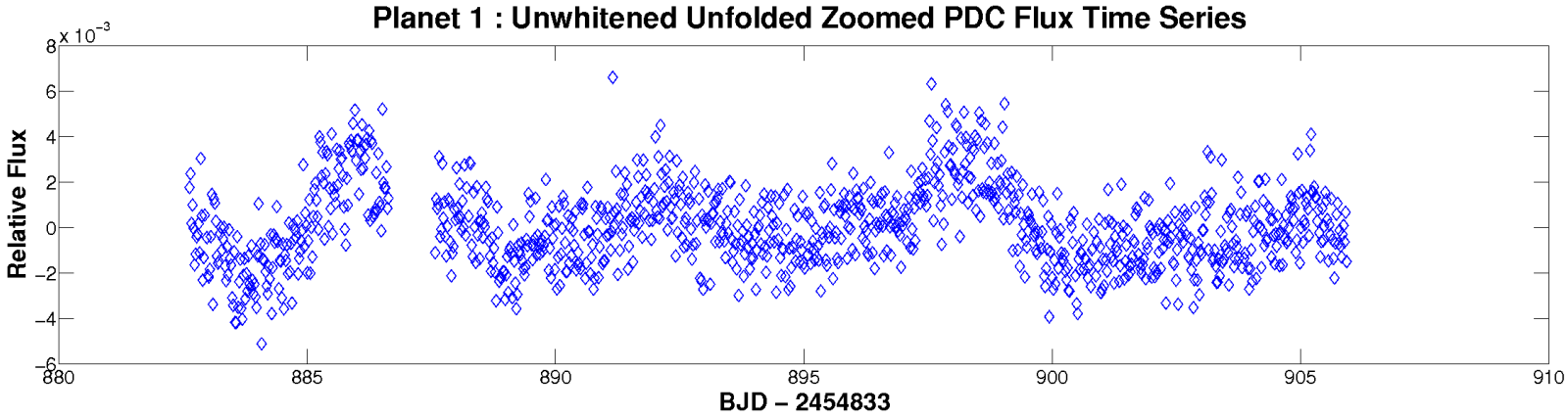
PDC Flux time series for KeplerId 5868793, Planet candidate 1 in the unwhitened domain. For the data of Quarter-09/TargetTableId-044, start BJD is 2455641 and the vertical offset is 0. For the data of Quarter-10/TargetTableId-047, start BJD is 2455739 and the vertical offset is 0.2. For the data of Quarter-11/TargetTableId-050, start BJD is 2455834 and the vertical offset is 0.4. For the data of Quarter-12/TargetTableId-053, start BJD is 2455932 and the vertical offset is 0.6. Transit event markers indicate the location of transits of the given planet candidate. All transits fit completed with full convergence.
Open `./planet-01/planet-search-and-model-fitting-results/all-transits-fit/005868793-01-all-unwhitened-09-044.fig`



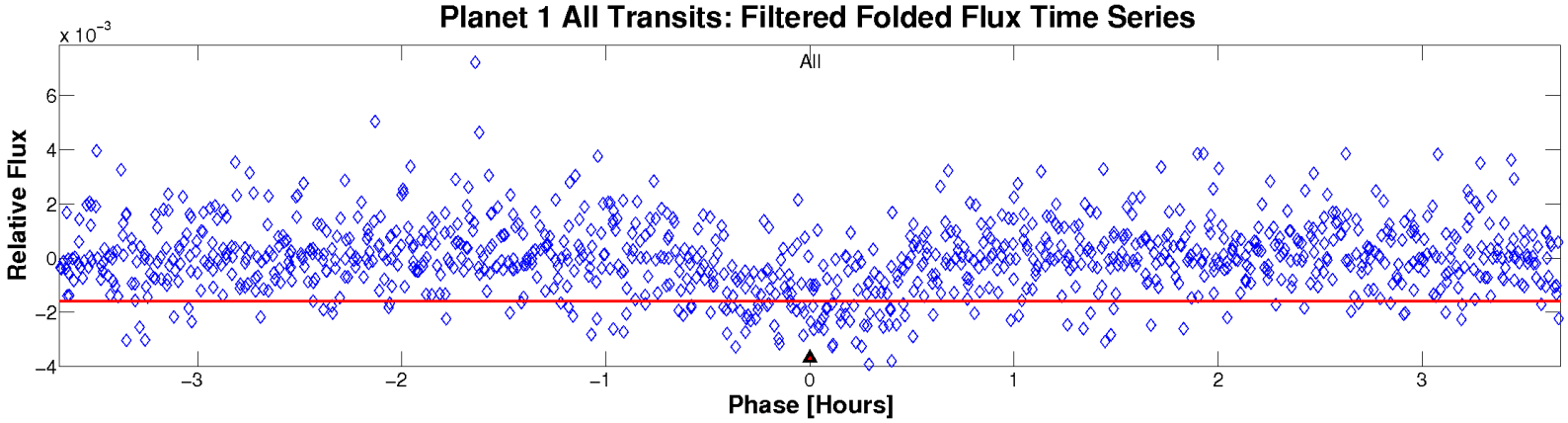
PDC Flux time series for KeplerId 5868793, Planet candidate 1 in the unwhitened domain. For the data of Quarter-13/TargetTableId-056, start BJD is 2456015 and the vertical offset is 0. For the data of Quarter-14/TargetTableId-059, start BJD is 2456107 and the vertical offset is 0.2. For the data of Quarter-15/TargetTableId-062, start BJD is 2456206 and the vertical offset is 0.4. For the data of Quarter-16/TargetTableId-065, start BJD is 2456305 and the vertical offset is 0.6. Transit event markers indicate the location of transits of the given planet candidate. All transits fit completed with full convergence.
Open `./planet-01/planet-search-and-model-fitting-results/all-transits-fit/005868793-01-all-unwhitened-13-056.fig`



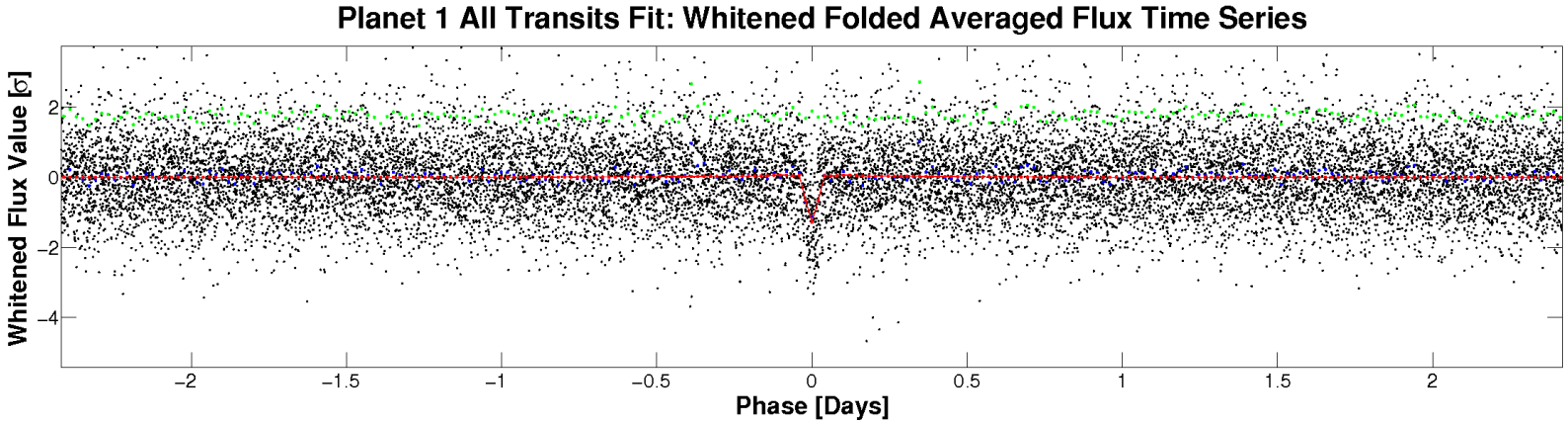
PDC Flux time series for KeplerId 5868793, Planet candidate 1 in the unwhitened domain. For the data of Quarter-17/TargetTableId-068, start BJD is 2456392. Transit event markers indicate the location of transits of the given planet candidate. All transits fit completed with full convergence.
Open `./planet-01/planet-search-and-model-fitting-results/all-transits-fit/005868793-01-all-unwhitened-17-068.fig`



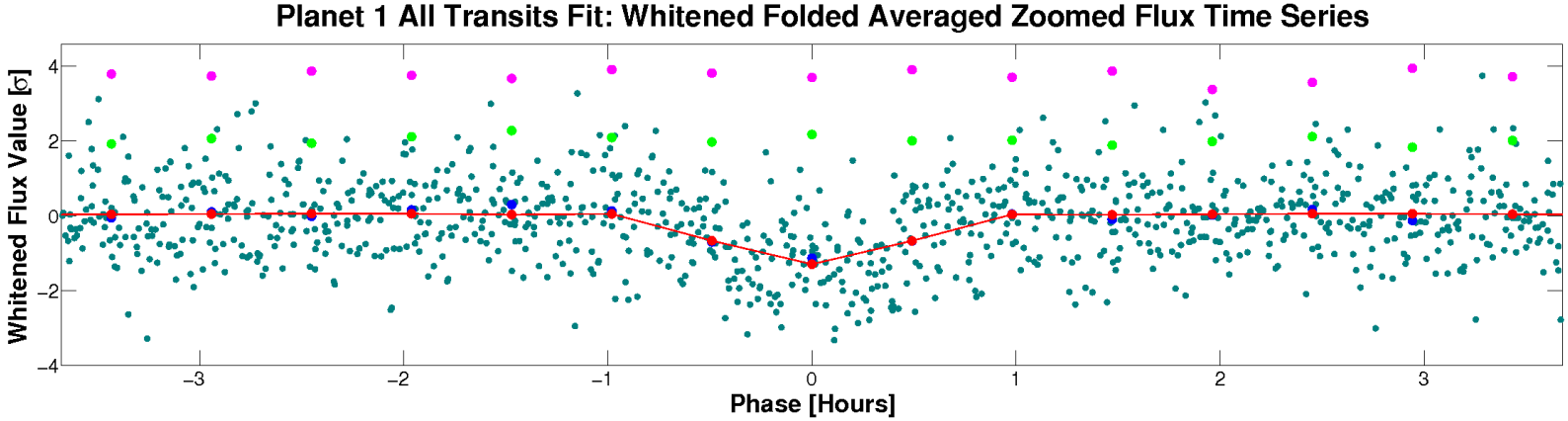
PDC Flux time series for KeplerId 5868793, Planet candidate 1 in the unwhitened domain, zoomed on last 5 transits in the unit of work. If # of transits is smaller than 5, all transits are shown.
Open `./planet-01/planet-search-and-model-fitting-results/all-transits-fit/005868793-01-all-unwhitened-zoomed.fig`



PDC Flux time series of all transits for KeplerId 5868793, Planet candidate 1 in the unwhitened domain. Data has been high-pass filtered via a median filter operating at a specified multiple of the transit duration, folded per the fitted period and epoch, and zoomed to the location of the model transit.
Open `./planet-01/planet-search-and-model-fitting-results/all-transits-fit/005868793-01-all-unwhitened-filtered-zoomed.fig`



Folded flux time series for KeplerId 5868793, Planet candidate 1 in the whitened domain is plotted in black dots. Values are averaged into 1 cadence wide bins. The blue dots represent the averaged values of the folded flux time series; the red dots represent the averaged values of the folded model light curve of the all transits fit; the green dots are the averaged folded fit residuals, vertically offset for clarity. All transits fit completed with full convergence.
Open `./planet-01/planet-search-and-model-fitting-results/all-transits-fit/005868793-01-all-whitened.fig`

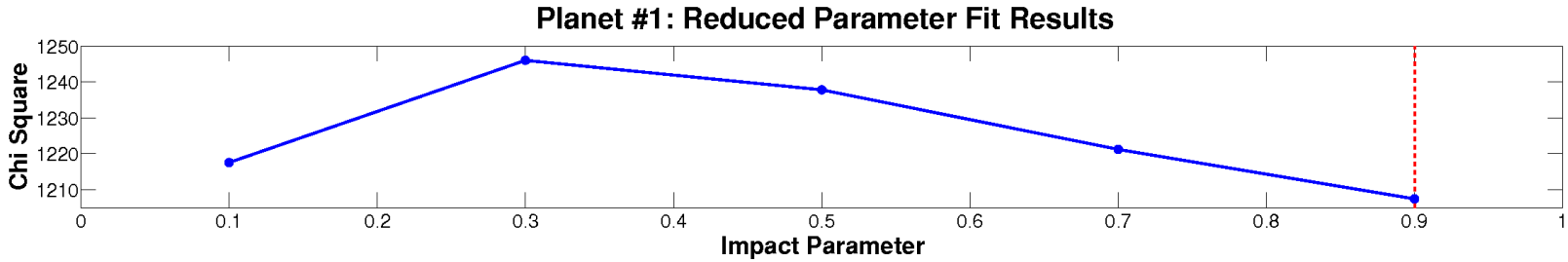


Folded flux time series for KeplerId 5868793, Planet candidate 1 in the whitened domain, zoomed on the transit. The flux data whose robust weights are larger/smaller than 0.1 are plotted in dark green/cyan dots, respectively. Values are averaged into 1 cadence wide bins. The blue dots represent the averaged values of the folded flux time series; the red dots represent the averaged values of the fitted model light curve of the all transits fit; the green dots are the averaged folded fit residuals, vertically offset for clarity. Magenta dots are the averaged values of the folded flux time series, with a phase shift of 0.5 relative to the blue dots, vertically offset for clarity. All transits fit completed with full convergence.
Open `./planet-01/planet-search-and-model-fitting-results/all-transits-fit/005868793-01-all-whitened-zoomed.fig`

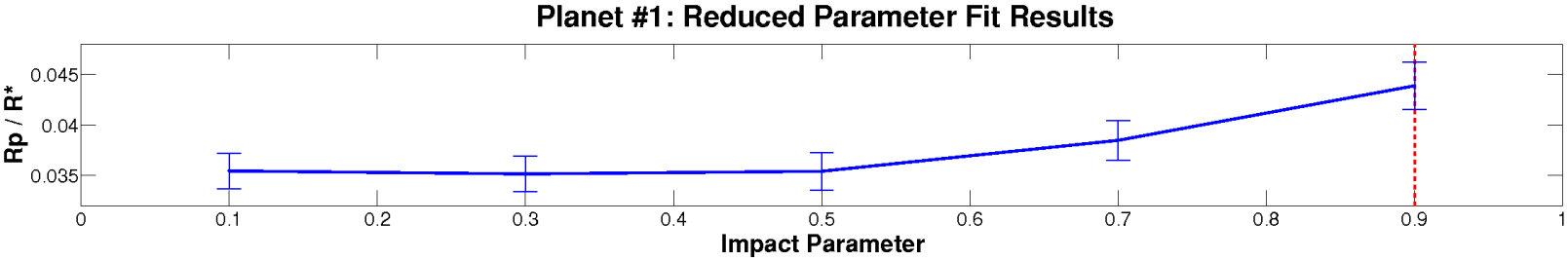
9.2 Model Fitter: Reduced Parameter Fit Results

Impact Parameter	SNR	Model Chi Square	Planet Radius to Star Radius	Uncert	Semi-major Axis to Star Radius	Uncert	Transit Depth (ppm)	Uncert	Transit Duration (hours)	Uncert
0.10	14.1	1217.6	0.0354561	1.7530e-03	31.0998	2.4274e+00	1524	1.4808e+02	1.2251	9.4544e-02
0.30	14.0	1246.1	0.0351569	1.7500e-03	28.5361	2.2453e+00	1471	1.4405e+02	1.2836	9.9811e-02
0.50	13.4	1237.9	0.0354192	1.8555e-03	26.2593	2.1795e+00	1426	1.4681e+02	1.2767	1.0447e-01
0.70	14.1	1221.3	0.0384868	1.9566e-03	22.6060	1.8334e+00	1534	1.5287e+02	1.2551	9.9551e-02
0.90	14.3	1207.5	0.0438913	2.3158e-03	14.0759	1.2039e+00	1575	1.6173e+02	1.3919	1.1266e-01

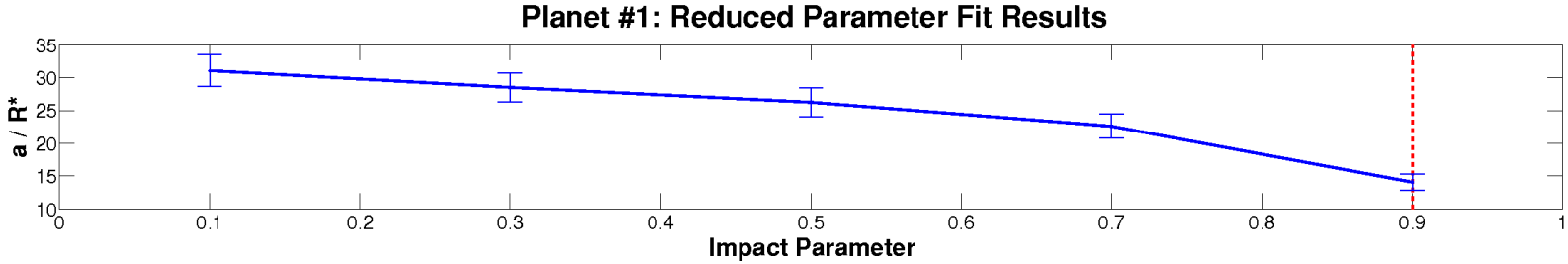
Highlighted row is the best reduced-parameter model fit.



Model chi squares of reduced parameter fits vs. impact parameter for KeplerId 5868793, Planet candidate 1. The fit result with the minimum chi square is marked with a dashed line in the plot.
Open `./planet-01/planet-search-and-model-fitting-results/reduced-parameter-fits/005868793-01-reduced-fits-chi-square.fig`



Ratios of planet radius to star radius of reduced parameter fits vs. impact parameter for KeplerId 5868793, Planet candidate 1. The fit result with the minimum chi square is marked with a dashed line in the plot.
Open `./planet-01/planet-search-and-model-fitting-results/reduced-parameter-fits/005868793-01-reduced-fits-rp-over-rstar.fig`



Ratios of semimajor axis to star radius of reduced parameter fits vs. impact parameter for KeplerId 5868793, Planet candidate 1. The fit result with the minimum chi square is marked with a dashed line in the plot.
Open `./planet-01/planet-search-and-model-fitting-results/reduced-parameter-fits/005868793-01-reduced-fits-a-over-rstar.fig`

9.3 Model Fitter: Trapezoidal Fit Results

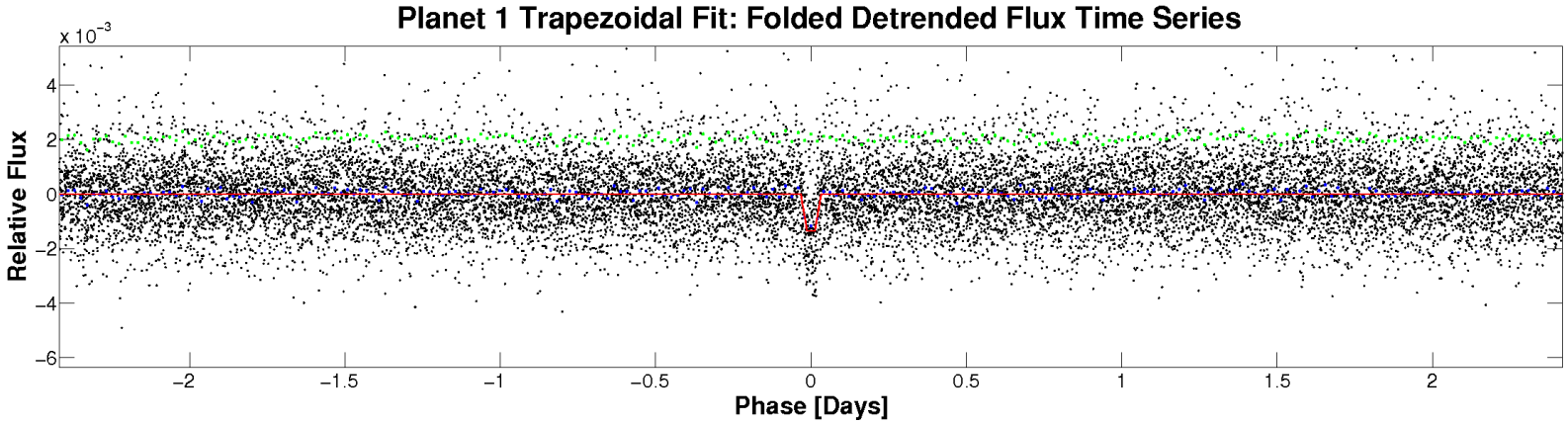
Model Characteristic	Name
Transit Model	trapezoidal_model
Limb Darkening Model	

TCE Parameter	Value	Units
Trial Transit Pulse Duration	1.5	hours
Transit Epoch	54967.6297447	MJD
Orbital Period	4.8382831	days
Maximum SES	3.3	
Maximum MES	11.0	
Robust Statistic	11.8	
Chi Square Goodness of Fit Statistic (DoF)	297.3 (250)	
Chi Square2 Statistic (DoF)	78.0 (79.9)	
Threshold for Desired PFA		

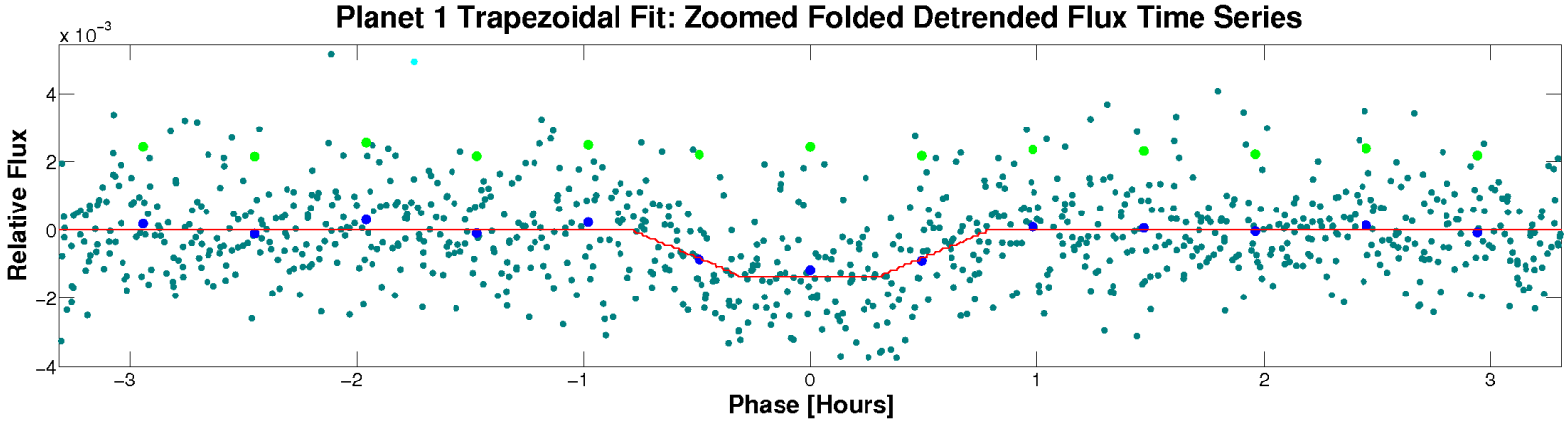
DoF: Degrees of Freedom

Parameter	Value	Uncertainty	Units
SNR	13.2		
Orbital Period	4.8382831		days
Transit Epoch	135.1332883		BKJD
Transit Depth	1351		ppm
Transit Duration	1.1045		hours
Transit Ingress Time	0.0123		hours
Model Chi Square Statistic (DoF)	17321.2 (1673)		

DoF: Degrees of Freedom



Folded detrended flux time series for KeplerId 5868793, Planet candidate 1 and folded trapezoidal model light curve.
Open `./planet-01/planet-search-and-model-fitting-results/trapezoidal-model-fit/005868793-01-all-trapezoidal.fig`



Zoomed folded detrended flux time series for KeplerId 5868793, Planet candidate 1 and folded trapezoidal model light curve.
Open `./planet-01/planet-search-and-model-fitting-results/trapezoidal-model-fit/005868793-01-all-trapezoidal-zoomed.fig`

9.4 Validation Tests

The Centroid Test and Eclipsing Binary Discrimination Test are chi-squared hypothesis tests. For these tests, a significance of 100% favors a planet, while 0% indicates an unlikely planet.

9.4.1 Weak Secondary Test

Result	Value	Uncertainty	Units	Statistic in Sigmas	Significance (%)
Orbital Period	4.8383		days		
Transit Duration	1.5		hours		
Maximum MES	11.0				
Secondary Phase	0.96563		days		
Secondary MES	2.5				
Minimum Phase	1.382		days		
Minimum MES	-2.4				
Median MES	-0.1				
MAD MES	0.59589				
Robust Statistic	1.7				
Secondary Depth	172.7	9.1851e+01	ppm		
Geometric Albedo	125.0	2.1823e+02		0.5684	28.49
Planet Effective Temperature	1828	7.9809e+02	Kelvin	1.8476	3.23

9.4.2 Flux-Weighted Centroid Test

Result	Value	Uncertainty	Units	Value in Sigmas	Significance (%)
Stellar Magnitude	17.0580	0.0000e+00			
Motion Detection Statistic	4.8583e+00				8.81
Peak RA Offset	-2.1815e-03	1.8954e-03	arcseconds	-1.1510	
Peak Dec Offset	1.2805e-03	2.1029e-03	arcseconds	0.6089	
Peak Offset Distance	2.5296e-03	1.9507e-03	arcseconds	1.2968	
Source RA Offset	1.0024e+00	1.1052e+00	arcseconds	0.9070	
Source Dec Offset	-2.3821e+00	1.1829e+00	arcseconds	-2.0138	
Source Offset Distance	2.5844e+00	1.1715e+00	arcseconds	2.2060	
Source RA	19.29180276	2.7184e-05	hours		
Source Dec	41.15801030	3.2858e-04	degrees		

Peak offsets are relative to the out-of-transit centroid. Source offsets are relative to the KIC target location.

9.4.3 Eclipsing Binary Discrimination Test

Result	Value	Value in Sigmas	Significance (%)
Odd Even Transit Depth Comparison Statistic	1.7253e+00	1.3135	18.90
Odd Even Transit Epoch Comparison Statistic	7.0931e-02	0.2663	79.00

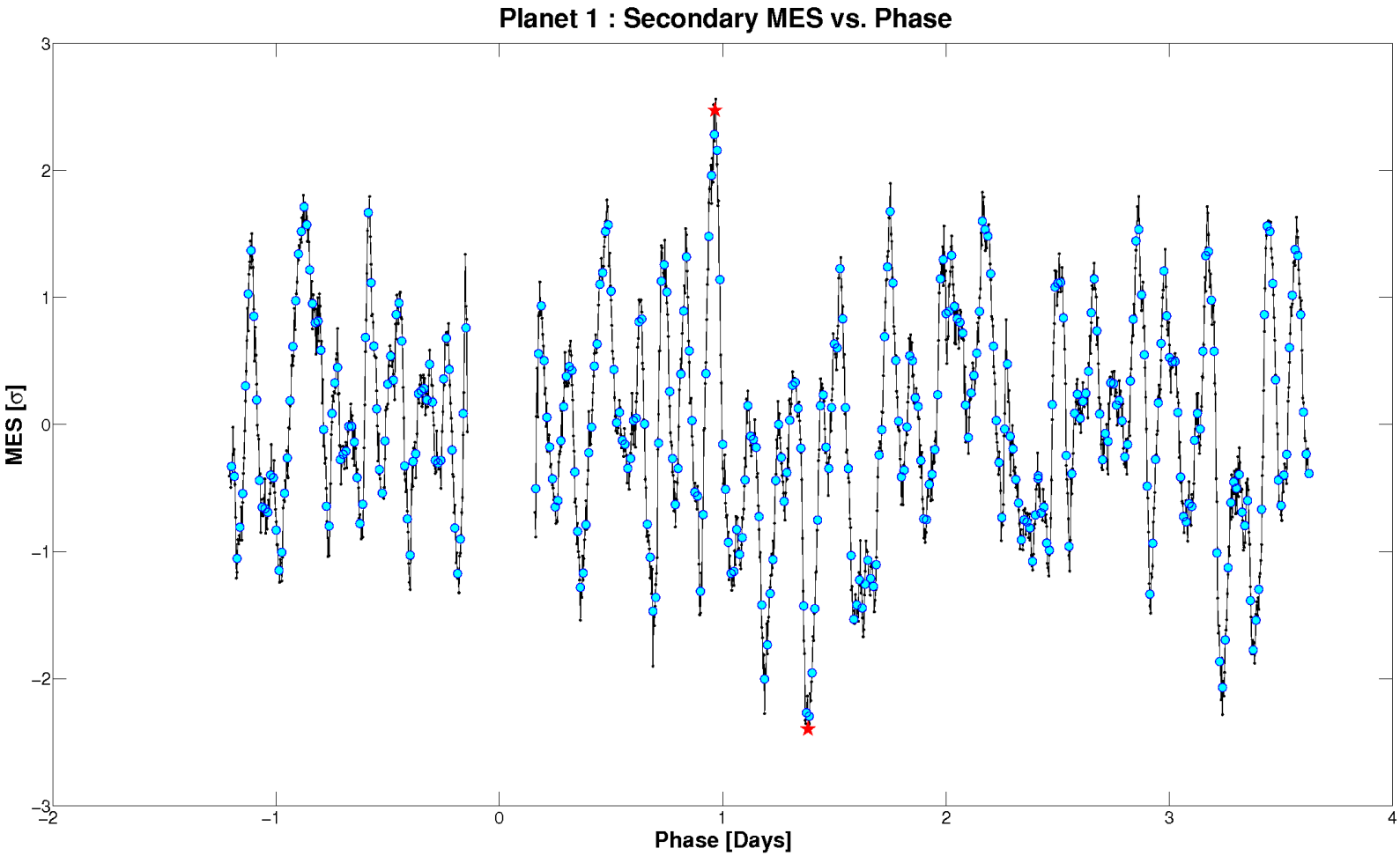
9.4.4 Bootstrap Test

Result	Value
False Alarm Probability	8.3300e-27
Bootstrap Threshold for Desired PFA	7.4
MES Mean	0.08
MES Standard Deviation	1.02
Observed Number of Transits	70

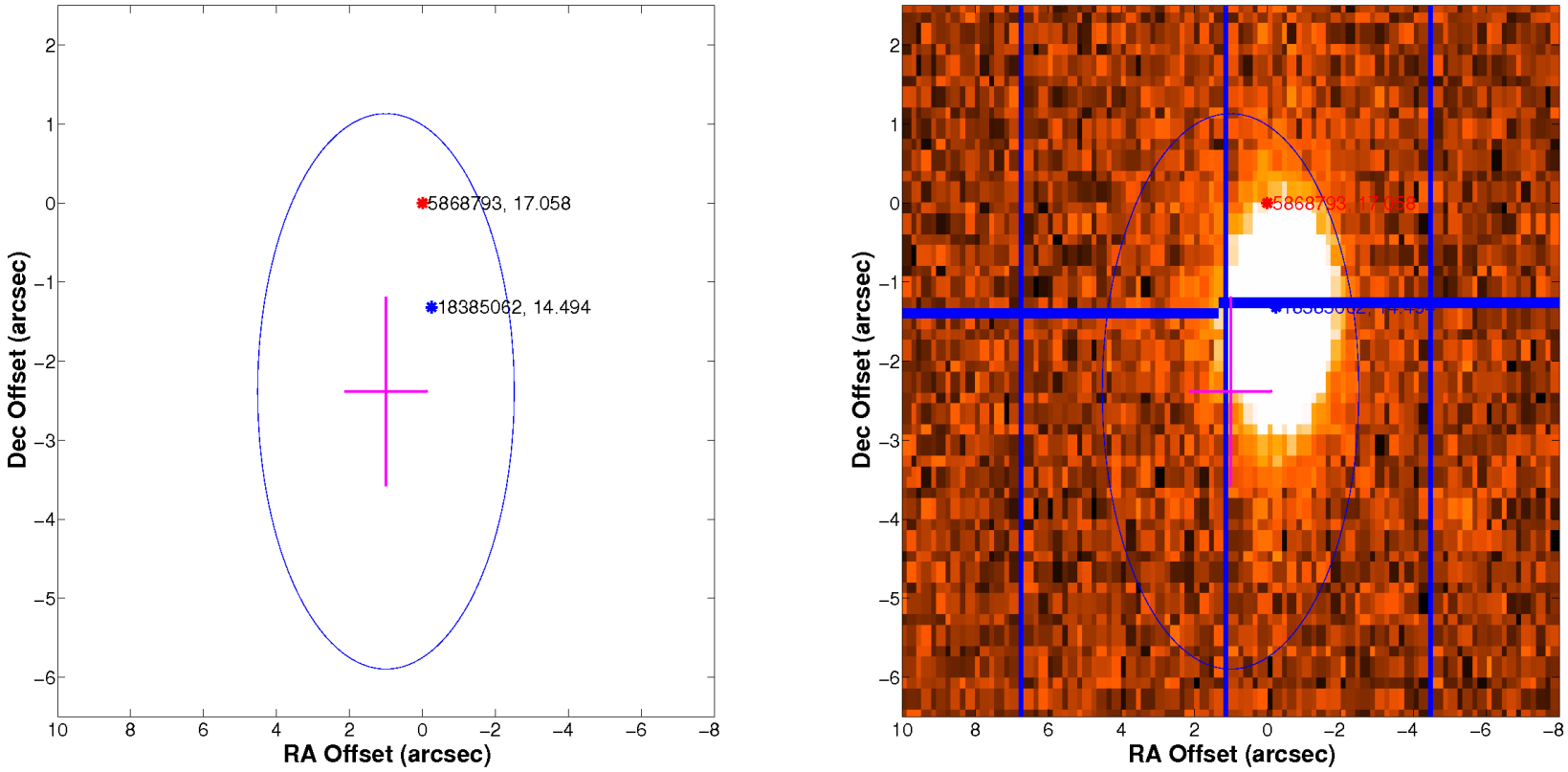
9.4.5 Ghost Diagnostic Test

Result	Value	Significance (%)
Maximum MES	11.0	
SNR	13.7	
Core Aperture Statistic	9.2130e+00	100.00
Halo Aperture Statistic	4.7834e+00	100.00
Ratio of Core/Halo Aperture Statistics	1.9260e+00	

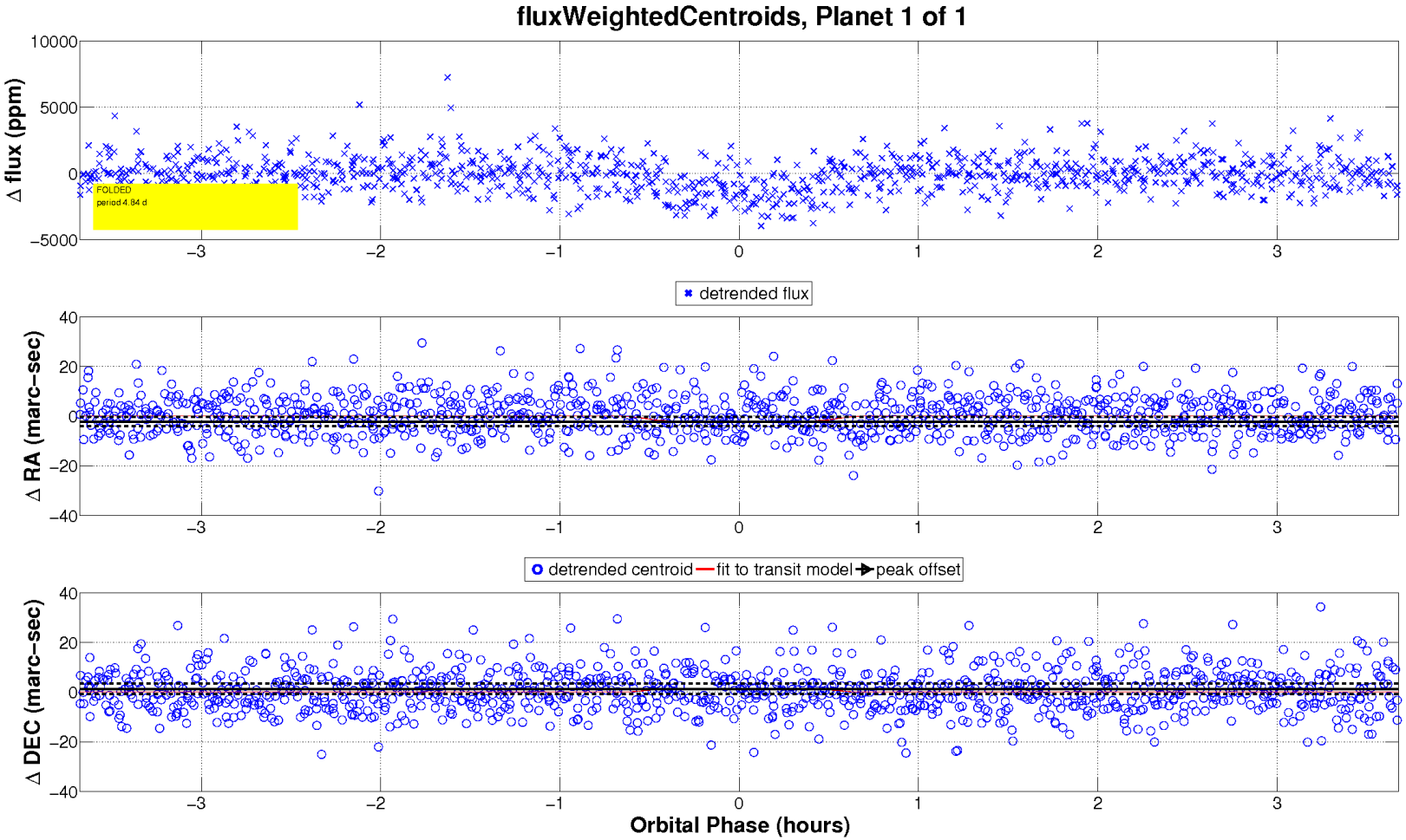
9.4.6 Validation Test Figures



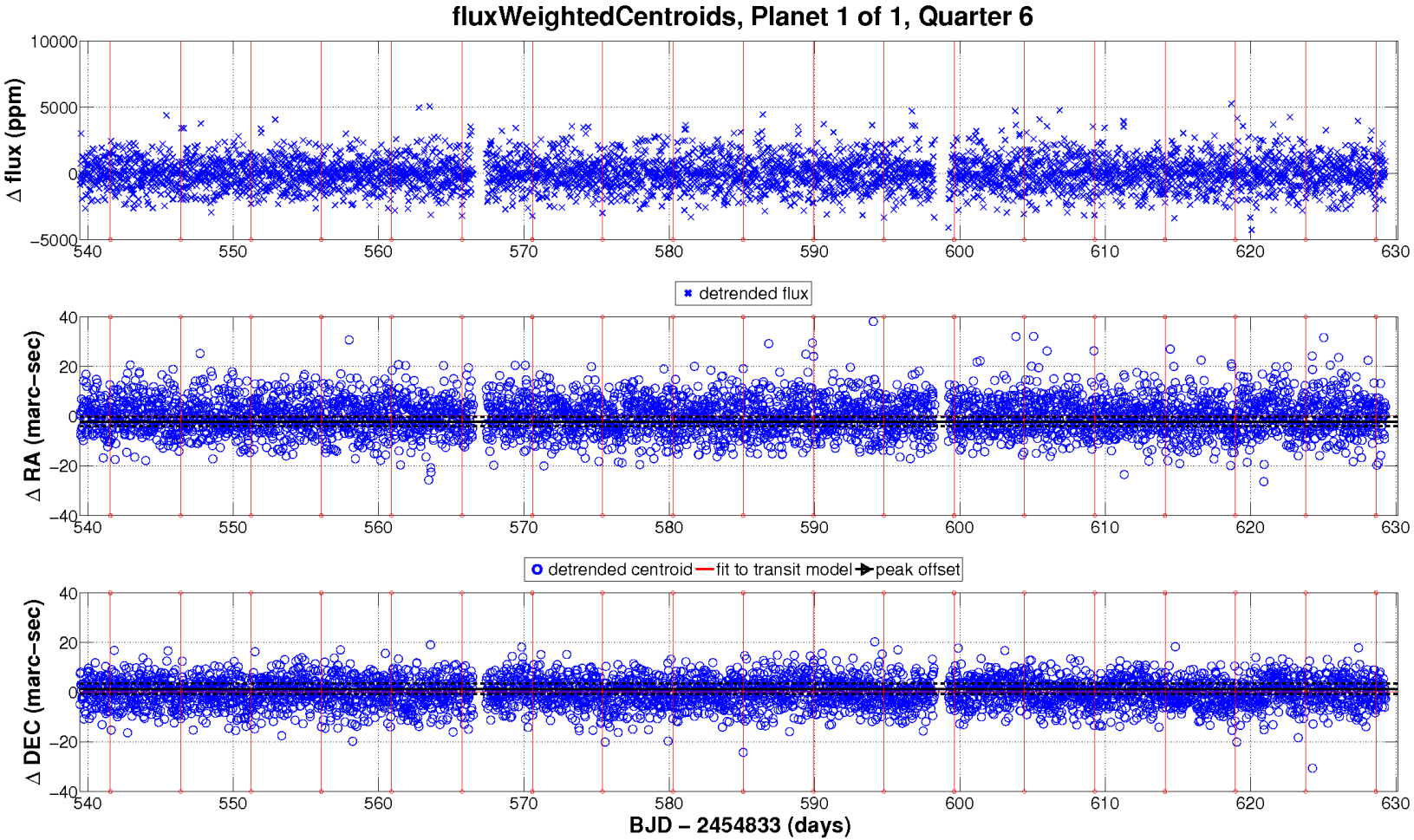
The primary event has been set to zero and both the max and min of the resulting MES vs. Phase are marked with a red star. The best matched pulse duration in hours is 1.5. The maximum secondary MES and corresponding phase are 2.4749 and 0.96563 days respectively. The minimum secondary MES and corresponding phase are -2.3962 and 1.382 days respectively.
Open `./planet-01/report-summary/005868793-01-weak-secondary-diagnostic.fig`



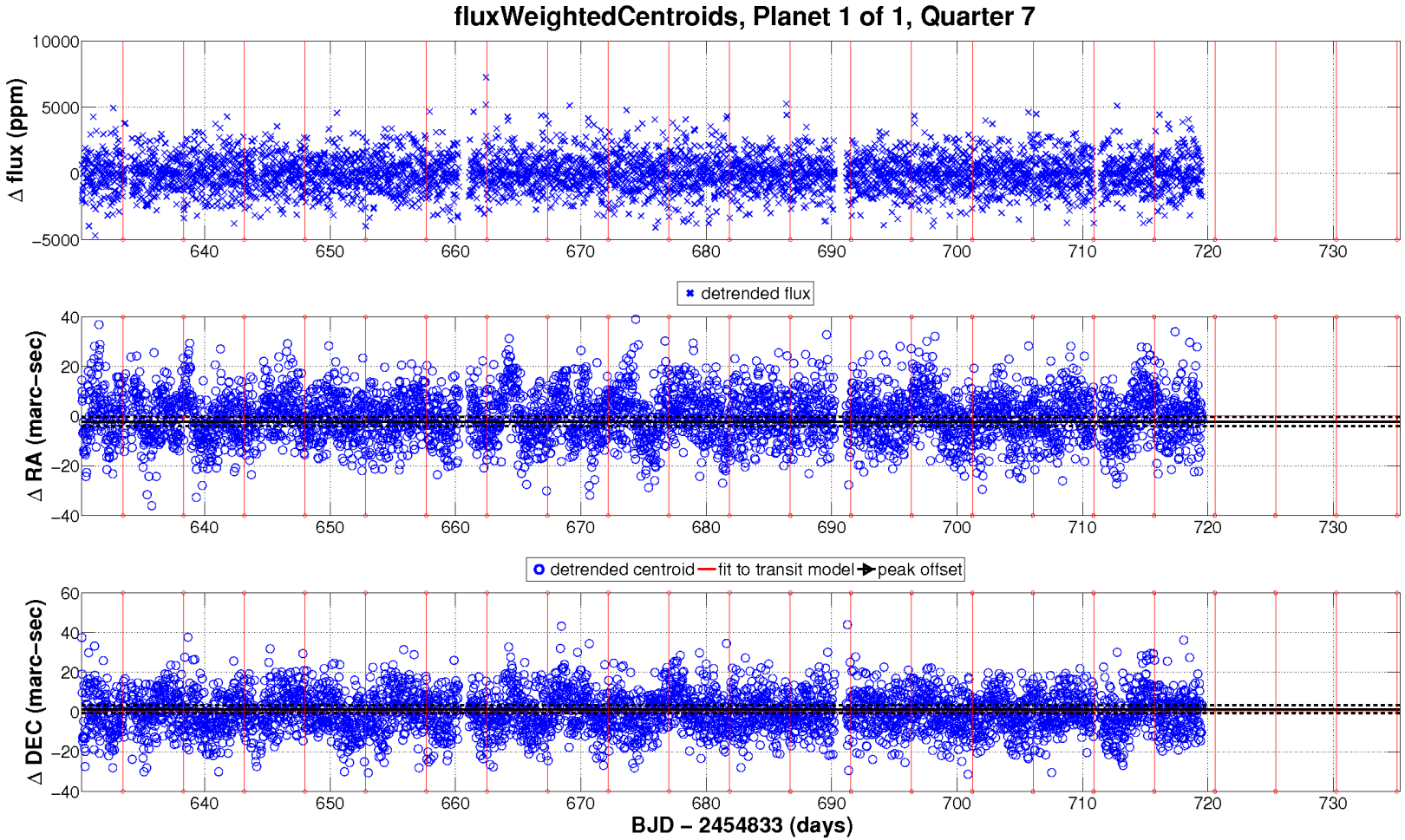
Flux weighted centroid test source offsets for target 5868793, planet candidate 1. Symbol key: magenta cross: flux weighted centroid test source offsets with 1-sigma error bars in RA and Dec; blue circle: 3-sigma radius of confusion for source offset; red asterisk: location of target star; blue asterisk: location of other KIC objects in the neighborhood. KIC ID and magnitude are noted in the text associated with each marked object (objects in the UKIRT extension to the KIC have IDs between 15,000,000 and 30,000,000). Figure on right is displayed on UKIRT image for given target.
Open `./planet-01/centroid-test-results/005868793-01-centroid-test-source-offsets.fig`



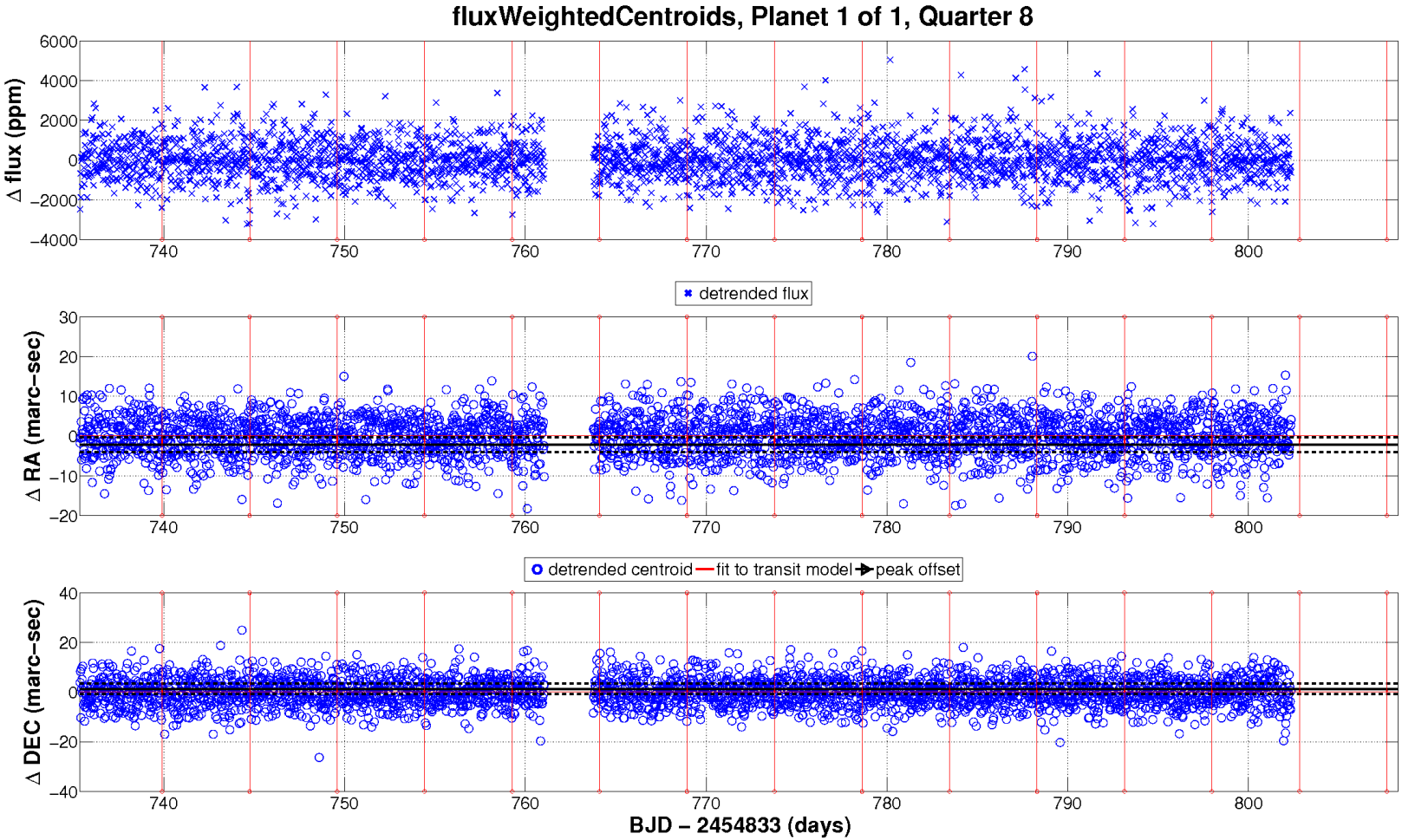
KeplerId 5868793, KeplerMag 17.06 - FOLDED FLUX AND CENTROIDS - This figure shows detrended flux and centroid data folded at the fitted orbital period and centered on the fitted transit over a few fitted transit durations. The top panel shows the change in corrected flux for this target, normalized to the median out of transit value, median detrended with the median out of transit value removed. The bottom two panels show the corresponding change in the centroid in right ascension (RA) and declination (DEC) angles on the sky. The centroids are detrended against ancillary data and have the mean out-of-transit value removed. The scaled transit model fit to the target flux is shown on the centroid plots in red. The peak fitted offset from the out-of-transit centroid is indicated by the solid black horizontal line. One sigma error bars are indicated with dashed black horizontal lines. In-transit data points for any other planets identified for this target have been gapped. The out-of-transit mean and standard deviation (SD) indicated in the lower left-hand corner are robust estimates.
Open `./planet-01/centroid-test-results/005868793-01-folded-transit-fit-fluxWeighted-centroids.fig`



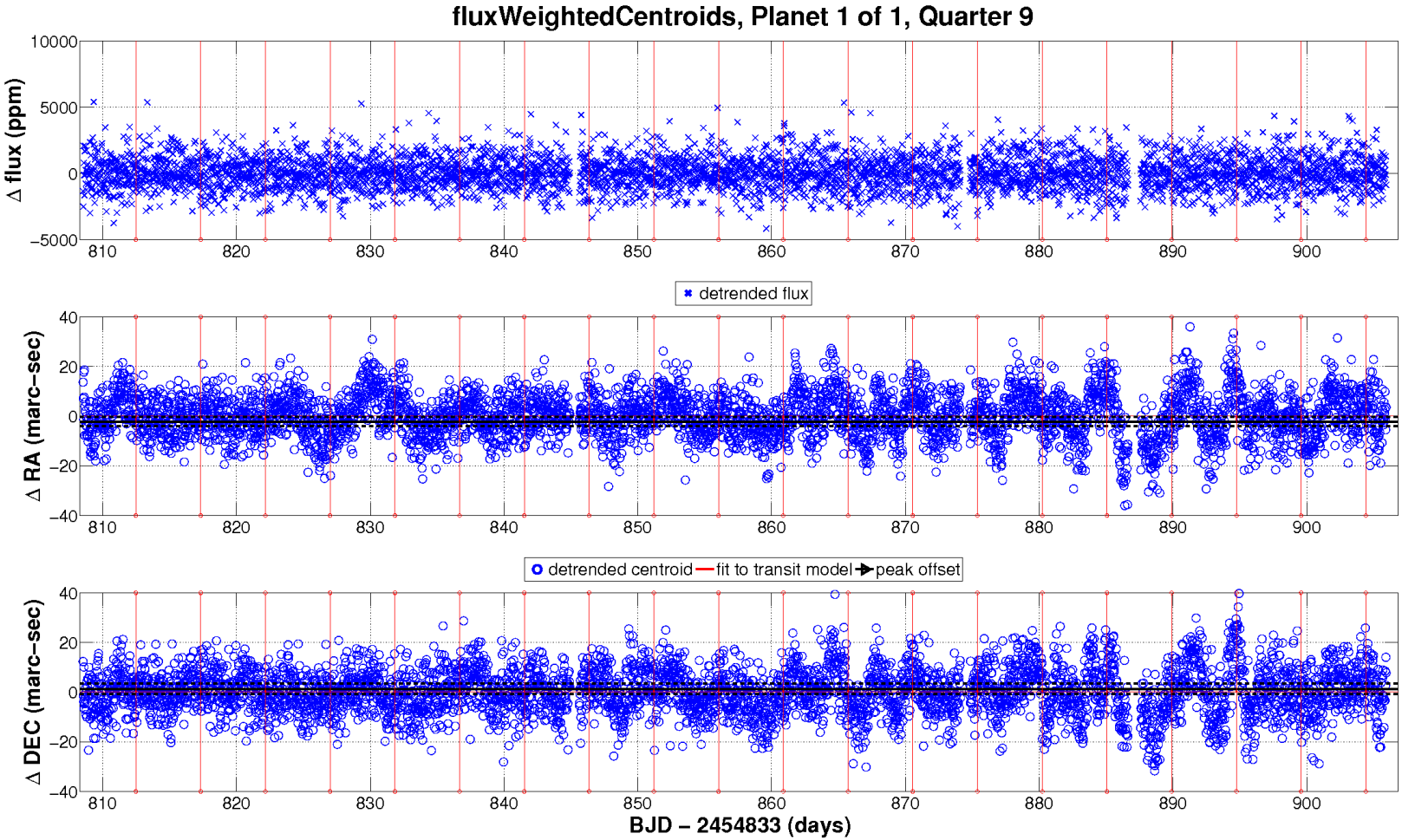
KeplerId 5868793, KeplerMag 17.06 - UNFOLDED FLUX AND CENTROIDS - This figure shows detrended flux and centroid data over the full time range of the data set. The top panel shows the change in corrected flux for this target, normalized to the median out of transit value, median detrended with the median out of transit value removed. The bottom two panels show the corresponding change in the centroid in right ascension (RA) and declination (DEC) angles on the sky. The centroids are detrended against ancillary data and have the mean out-of-transit value removed. The scaled transit model fit to the target flux is shown on the centroid plots in red. The peak fitted offset from the out of transit centroid is indicated by the solid black horizontal line. One sigma error bars are indicated with dashed black horizontal lines. Red circles and vertical lines mark the fitted transit centers. In-transit data points for any other planets identified for this target have been gapped. The out-of-transit mean and standard deviation (SD) indicated in the lower left-hand corner are robust estimates.
Open `./planet-01/centroid-test-results/005868793-01-transit-fit-fluxWeighted-centroids-06.fig`



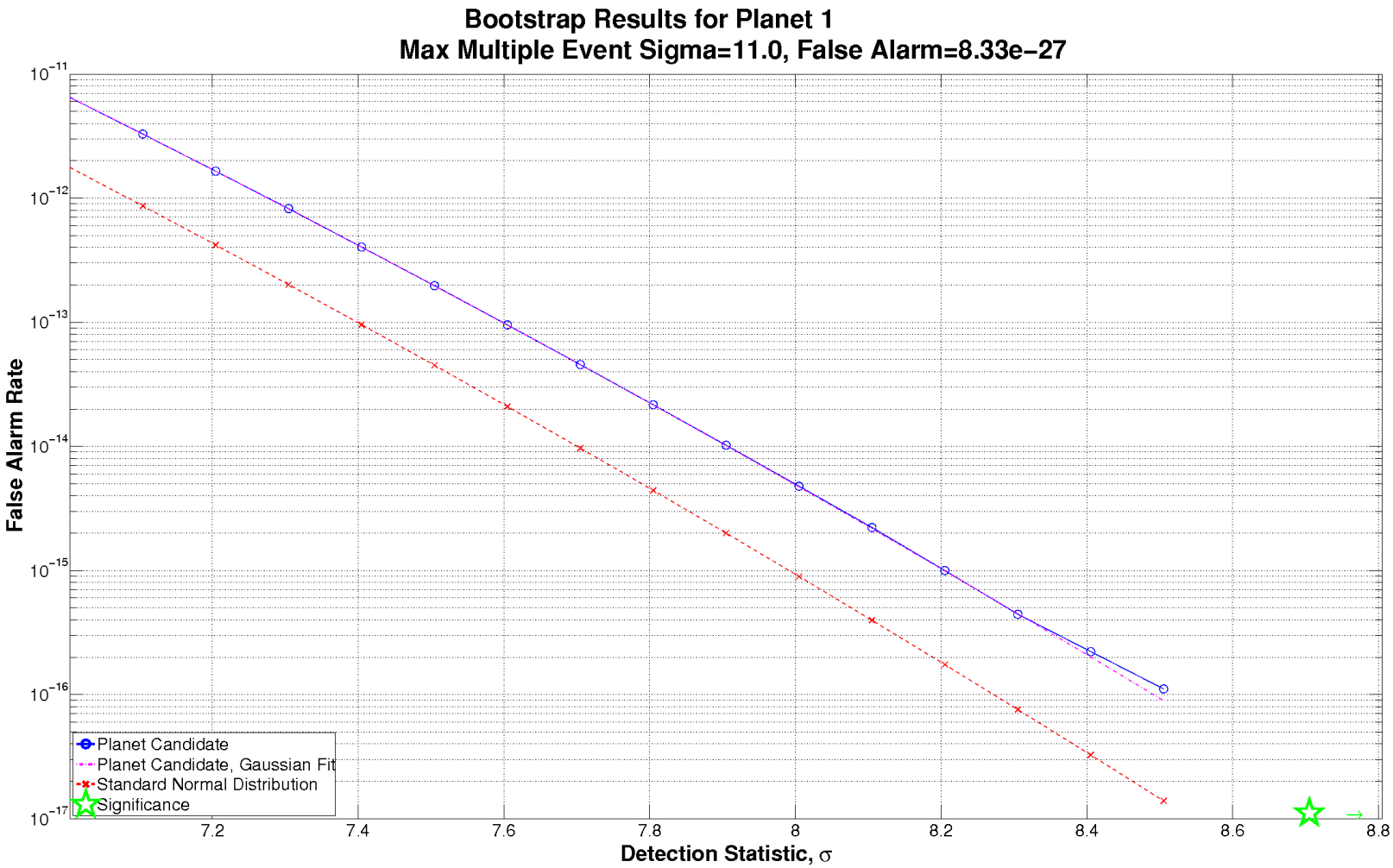
KeplerId 5868793, KeplerMag 17.06 - UNFOLDED FLUX AND CENTROIDS - This figure shows detrended flux and centroid data over the full time range of the data set. The top panel shows the change in corrected flux for this target, normalized to the median out of transit value, median detrended with the median out of transit value removed. The bottom two panels show the corresponding change in the centroid in right ascension (RA) and declination (DEC) angles on the sky. The centroids are detrended against ancillary data and have the mean out-of-transit value removed. The scaled transit model fit to the target flux is shown on the centroid plots in red. The peak fitted offset from the out of transit centroid is indicated by the solid black horizontal line. One sigma error bars are indicated with dashed black horizontal lines. Red circles and vertical lines mark the fitted transit centers. In-transit data points for any other planets identified for this target have been gapped. The out-of-transit mean and standard deviation (SD) indicated in the lower left-hand corner are robust estimates.
Open `./planet-01/centroid-test-results/005868793-01-transit-fit-fluxWeighted-centroids-07.fig`



KeplerId 5868793, KeplerMag 17.06 - UNFOLDED FLUX AND CENTROIDS - This figure shows detrended flux and centroid data over the full time range of the data set. The top panel shows the change in corrected flux for this target, normalized to the median out of transit value, median detrended with the median out of transit value removed. The bottom two panels show the corresponding change in the centroid in right ascension (RA) and declination (DEC) angles on the sky. The centroids are detrended against ancillary data and have the mean out-of-transit value removed. The scaled transit model fit to the target flux is shown on the centroid plots in red. The peak fitted offset from the out of transit centroid is indicated by the solid black horizontal line. One sigma error bars are indicated with dashed black horizontal lines. Red circles and vertical lines mark the fitted transit centers. In-transit data points for any other planets identified for this target have been gapped. The out-of-transit mean and standard deviation (SD) indicated in the lower left-hand corner are robust estimates.
Open `./planet-01/centroid-test-results/005868793-01-transit-fit-fluxWeighted-centroids-08.fig`



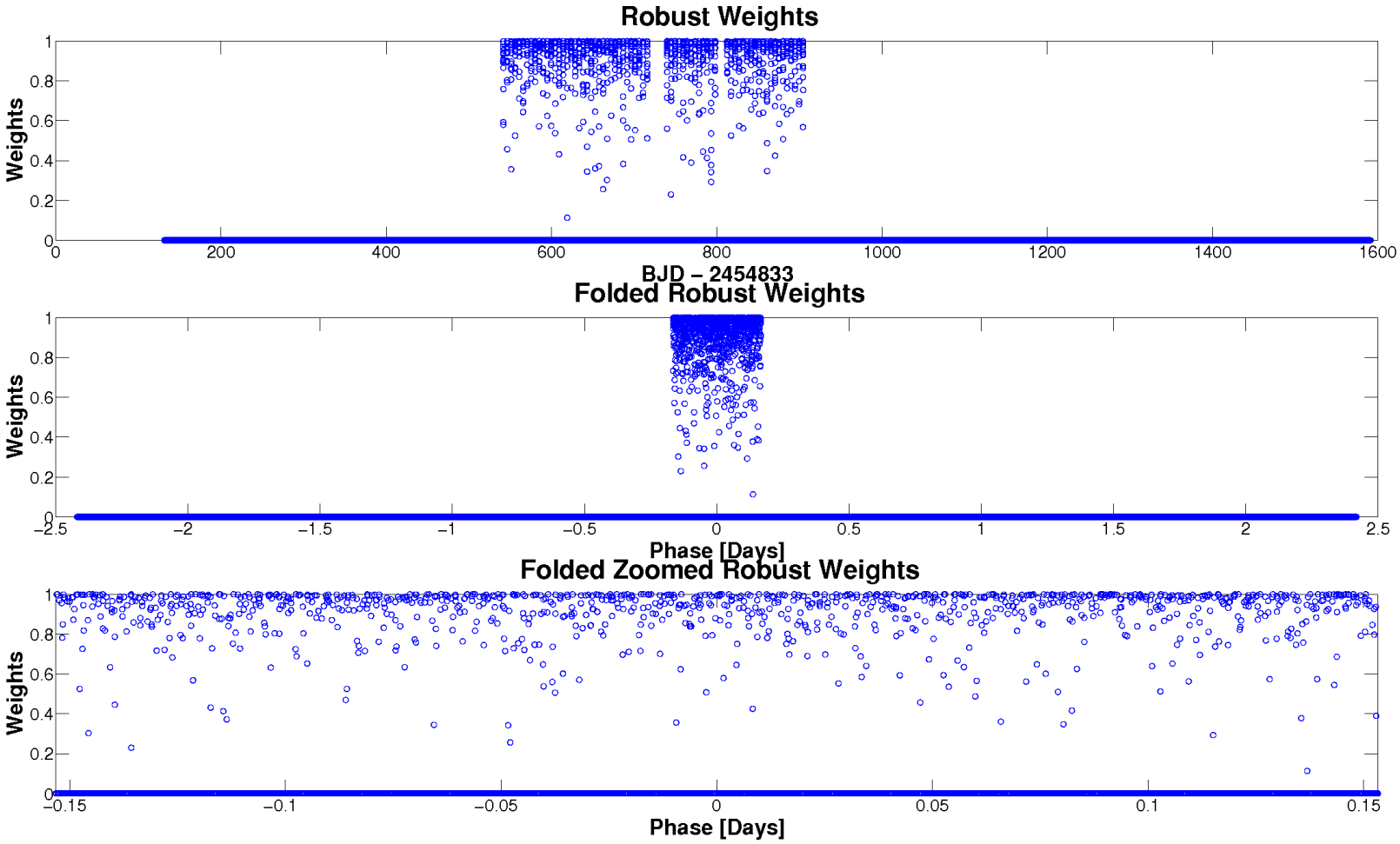
KeplerId 5868793, KeplerMag 17.06 - UNFOLDED FLUX AND CENTROIDS - This figure shows detrended flux and centroid data over the full time range of the data set. The top panel shows the change in corrected flux for this target, normalized to the median out of transit value, median detrended with the median out of transit value removed. The bottom two panels show the corresponding change in the centroid in right ascension (RA) and declination (DEC) angles on the sky. The centroids are detrended against ancillary data and have the mean out-of-transit value removed. The scaled transit model fit to the target flux is shown on the centroid plots in red. The peak fitted offset from the out of transit centroid is indicated by the solid black horizontal line. One sigma error bars are indicated with dashed black horizontal lines. Red circles and vertical lines mark the fitted transit centers. In-transit data points for any other planets identified for this target have been gapped. The out-of-transit mean and standard deviation (SD) indicated in the lower left-hand corner are robust estimates.
Open `./planet-01/centroid-test-results/005868793-01-transit-fit-fluxWeighted-centroids-09.fig`



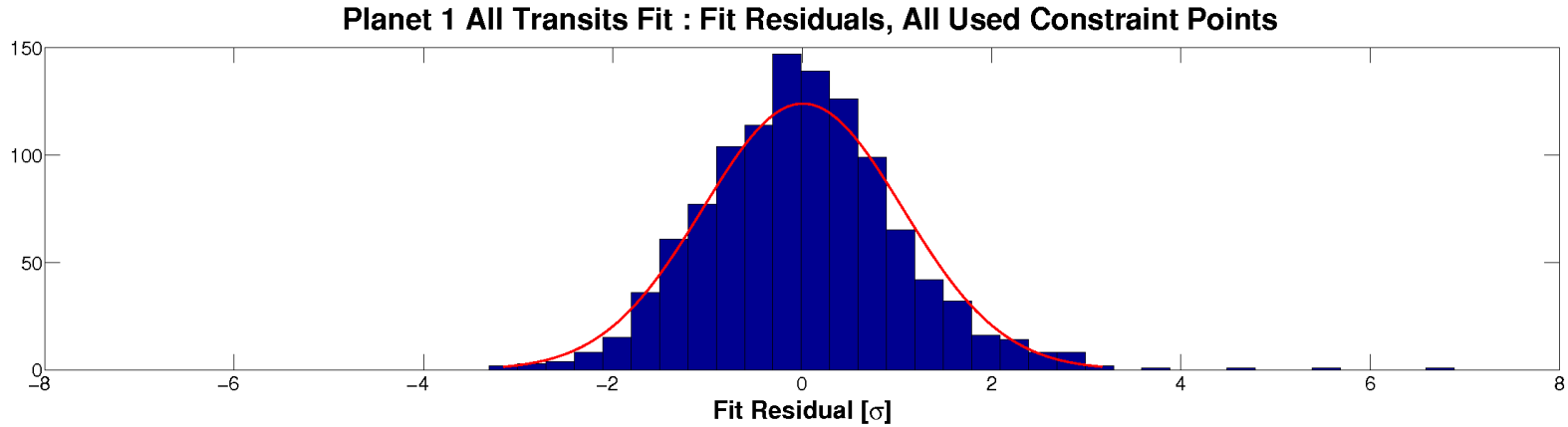
Bootstrap results for target 5868793, planet 1. Cumulative sum of the probabilities (derived from the histogram of counts) from upper tail to the search transit threshold; false alarm probability is indicated by the star. The Gaussian equivalent threshold for this false alarm probability is 10.6542. The threshold on this distribution that achieves the same false alarm rate as a 7.1 sigma threshold on a Gaussian distribution is 7.3522.
Open `./planet-01/bootstrap-results/005868793-01-bootstrap-false-alarm.fig`

Appendix A Planet Candidate 1

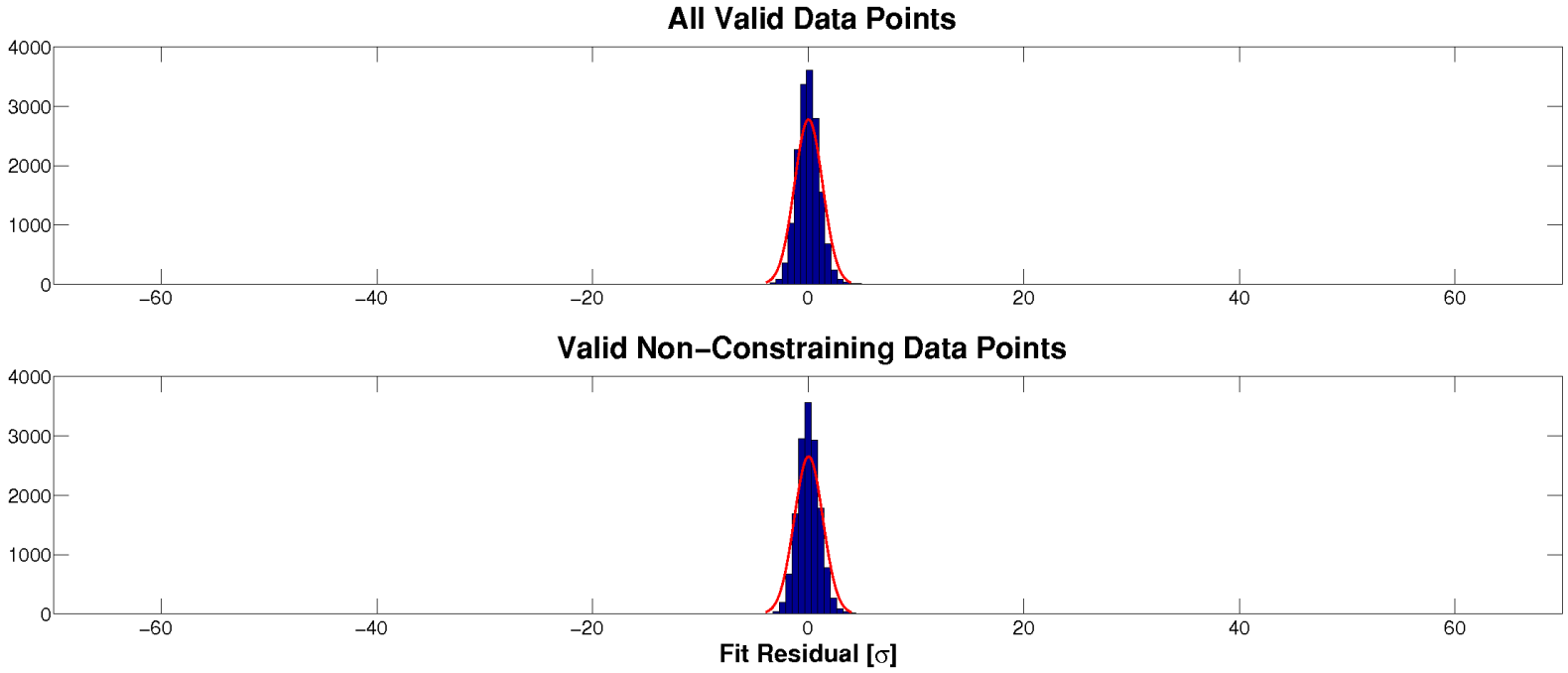
A.1 Model Fitter: All Transits



Robust weights distribution for KeplerId 5868793, Planet candidate 1. Top plot: all data points. Middle plot: all data points, folded per the fitted period and epoch. Bottom plot: all data points, folded and zoomed.
Open `./planet-01/planet-search-and-model-fitting-results/all-transits-fit/005868793-01-all-robust-weights.fig`



Fit residuals distribution for KeplerId 5868793, Planet candidate 1. Only the valid data points used to constrain the fit are shown here. A Gaussian fit to the histogram is shown in red.
Open `./planet-01/planet-search-and-model-fitting-results/all-transits-fit/005868793-01-all-histo-used.fig`

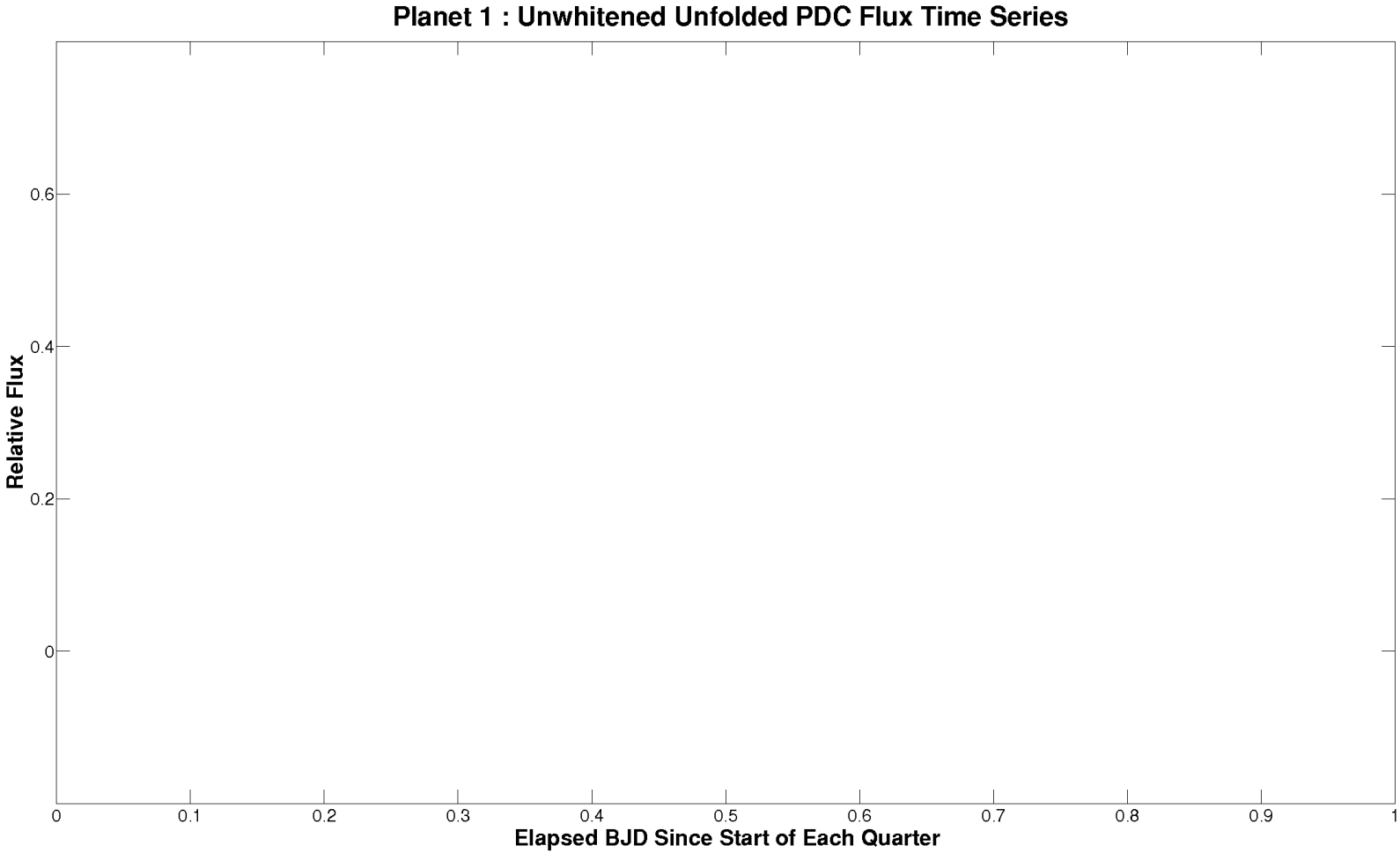


Fit residuals distribution for KeplerId 5868793, Planet candidate 1. Top plot: all valid data. Bottom plot: valid data not used to constrain fit (due to distance from a transit). Gaussian fits to the histograms are shown in red.
Open `./planet-01/planet-search-and-model-fitting-results/all-transits-fit/005868793-01-all-histo-all-and-unused.fig`

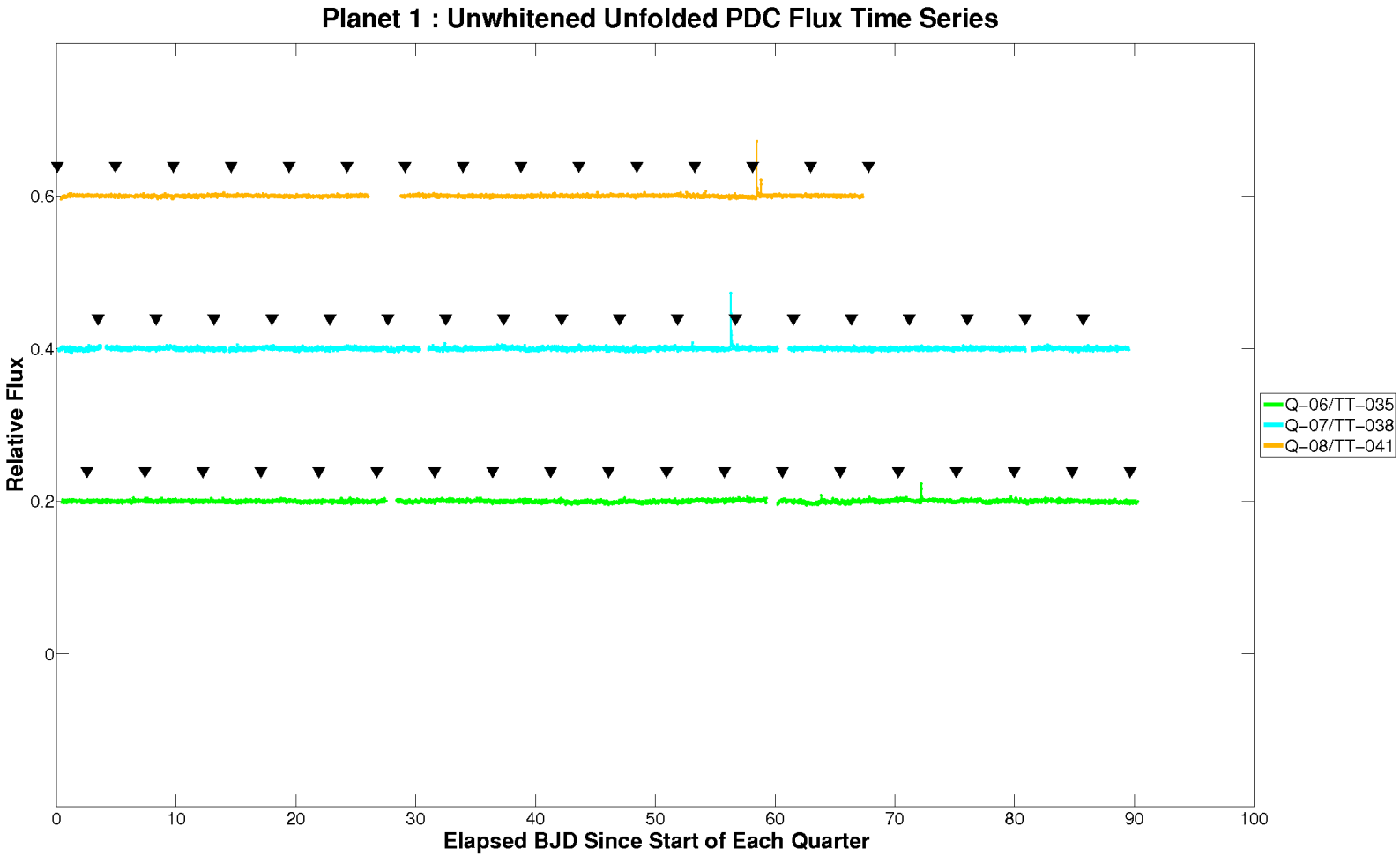
A.2 Model Fitter: Odd & Even Transits

Parameter	Odd Transits Value	Odd Transits Uncertainty	Even Transits Value	Even Transits Uncertainty	Units	Difference / ‖Uncertainty‖
SNR	8.2		11.3			
Orbital Period	4.8379994	5.6149e-05	4.8381575	4.2595e-05	days	2.2440e+00
Transit Epoch	135.1635404	6.0127e-03	139.9878625	4.5939e-03	BKJD	1.8253e+00
Impact Parameter	0.8124	2.7955e+00	0.7141	2.7738e+00		2.4963e-02
Planet Radius to Star Radius Ratio	0.0377480	6.0875e-02	0.0415660	4.0663e-02		5.2153e-02
Semi-major Axis to Star Radius Ratio	19.5736	1.2842e+02	21.2138	8.4664e+01		1.0663e-02
Planet Radius	0.8238	1.3343e+00	0.9072	8.9783e-01	Earth radii	5.1812e-02
Semi-major Axis	0.0316	3.1703e-03	0.0316	3.1704e-03	AU	1.5364e-04
Effective Stellar Flux	3.7002	5.5422e-01	3.7000	5.5419e-01	Goldilocks	2.0576e-04
Equilibrium Temperature	354	1.3243e+01	354	1.3243e+01	Kelvin	2.0576e-04
Transit Depth	1337	2.5429e+02	1774	2.1444e+02	ppm	1.3135e+00
Transit Duration	1.2204	1.5712e+00	1.3221	8.3754e-01	hours	5.7084e-02
Transit Ingress Time	0.1229	1.8465e+00	0.1038	9.4073e-01	hours	9.2421e-03
Eccentricity	0.0000	0.0000e+00	0.0000	0.0000e+00		
Peri Longitude	0.0000	0.0000e+00	0.0000	0.0000e+00	degrees	
Model Chi Square Statistic (DoF)	828.6 (1016.3)		828.6 (1016.3)			

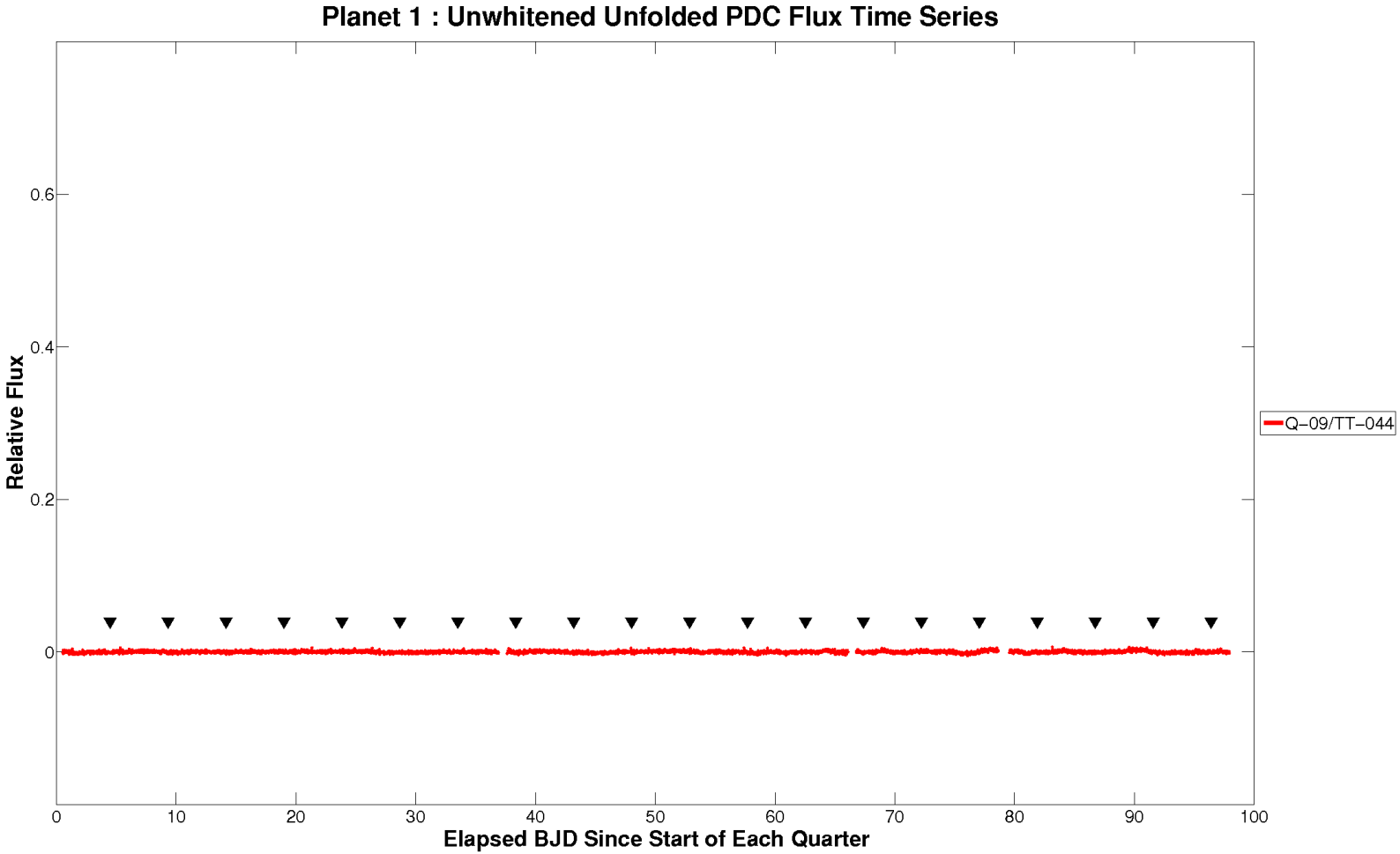
DoF: Degrees of Freedom



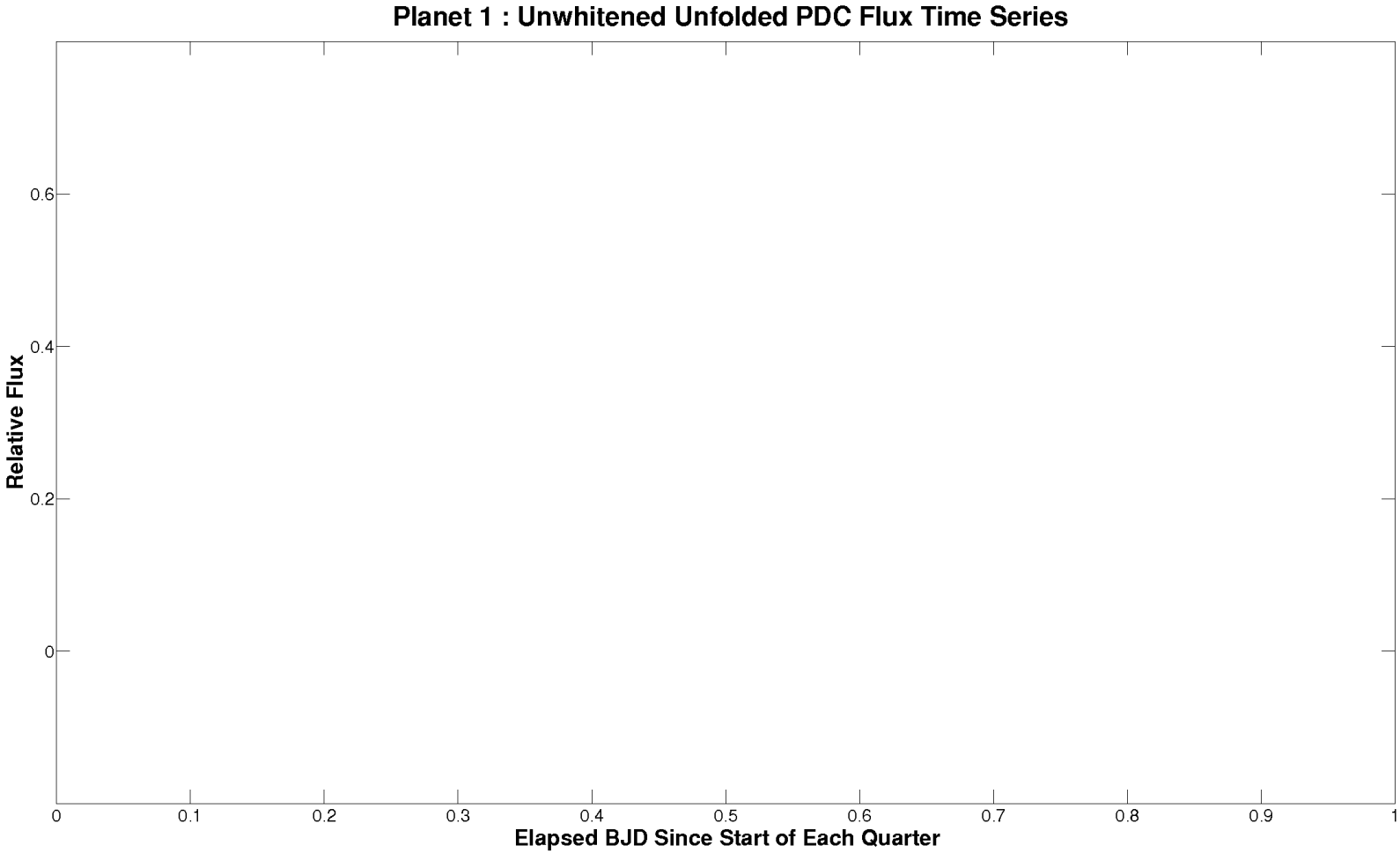
PDC Flux time series for KeplerId 5868793, Planet candidate 1 in the unwhitened domain. For the data of Quarter-01/TargetTableId-020, start BJD is 2454964 and the vertical offset is 0. For the data of Quarter-02/TargetTableId-021, start BJD is 2455002 and the vertical offset is 0.2. For the data of Quarter-03/TargetTableId-026, start BJD is 2455093 and the vertical offset is 0.4. For the data of Quarter-04/TargetTableId-029, start BJD is 2455184 and the vertical offset is 0.6. Transit event markers indicate the location of transits of the given planet candidate. Odd-even transits fit completed with full convergence.
Open `./planet-01/planet-search-and-model-fitting-results/odd-even-transits-fit/005868793-01-odd-even-unwhitened-01-020.fig`



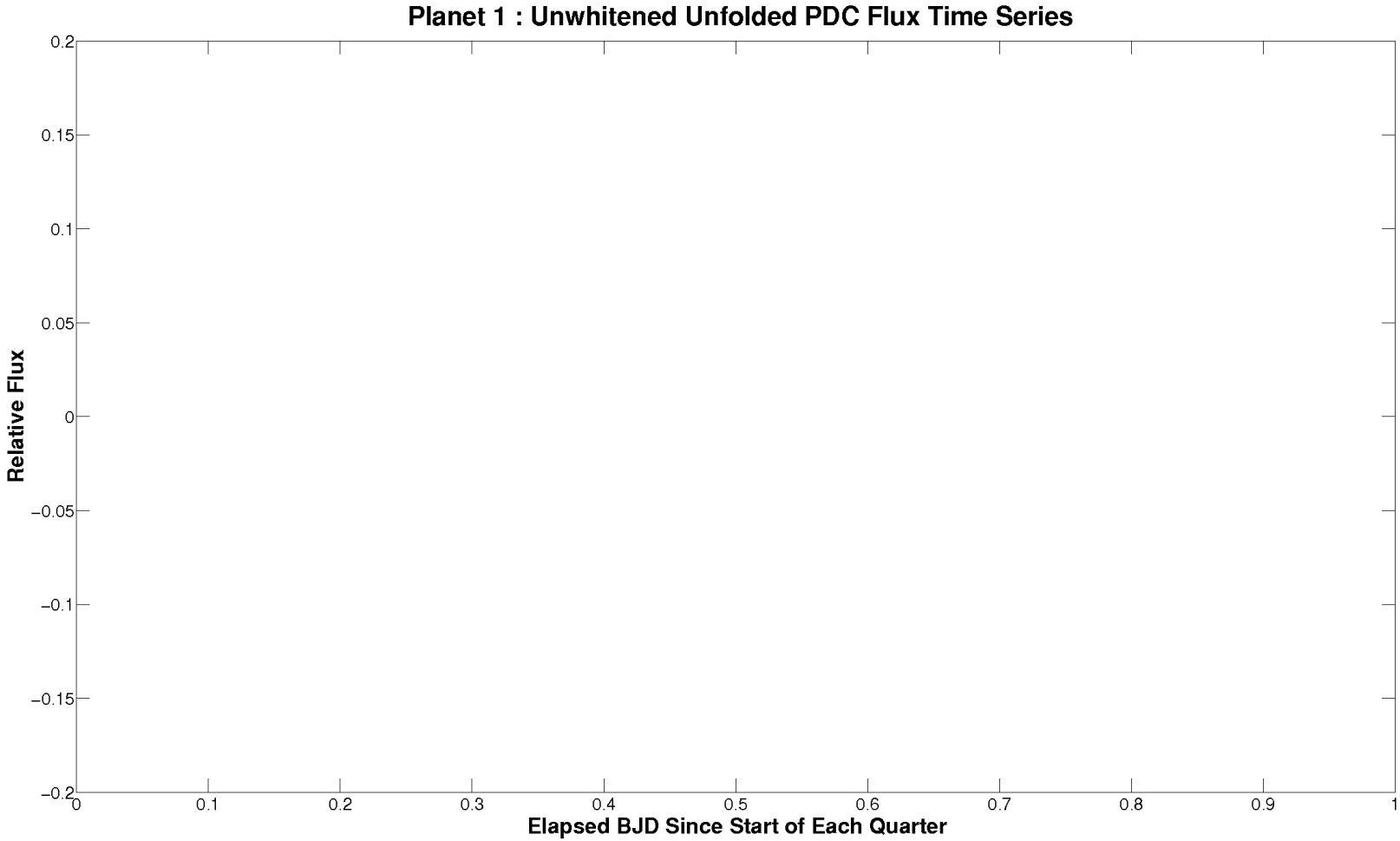
PDC Flux time series for KeplerId 5868793, Planet candidate 1 in the unwhitened domain. For the data of Quarter-05/TargetTableId-032, start BJD is 2455276 and the vertical offset is 0. For the data of Quarter-06/TargetTableId-035, start BJD is 2455372 and the vertical offset is 0.2. For the data of Quarter-07/TargetTableId-038, start BJD is 2455463 and the vertical offset is 0.4. For the data of Quarter-08/TargetTableId-041, start BJD is 2455568 and the vertical offset is 0.6. Transit event markers indicate the location of transits of the given planet candidate. Odd-even transits fit completed with full convergence.
Open `./planet-01/planet-search-and-model-fitting-results/odd-even-transits-fit/005868793-01-odd-even-unwhitened-05-032.fig`



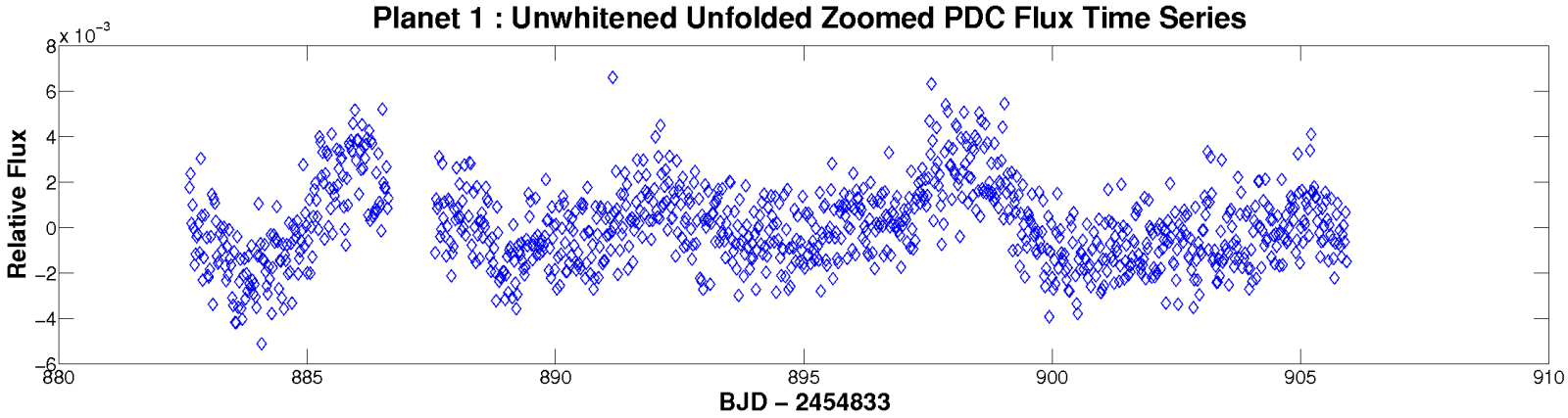
PDC Flux time series for KeplerId 5868793, Planet candidate 1 in the unwhitened domain. For the data of Quarter-09/TargetTableId-044, start BJD is 2455641 and the vertical offset is 0. For the data of Quarter-10/TargetTableId-047, start BJD is 2455739 and the vertical offset is 0.2. For the data of Quarter-11/TargetTableId-050, start BJD is 2455834 and the vertical offset is 0.4. For the data of Quarter-12/TargetTableId-053, start BJD is 2455932 and the vertical offset is 0.6. Transit event markers indicate the location of transits of the given planet candidate. Odd-even transits fit completed with full convergence.
Open `./planet-01/planet-search-and-model-fitting-results/odd-even-transits-fit/005868793-01-odd-even-unwhitened-09-044.fig`



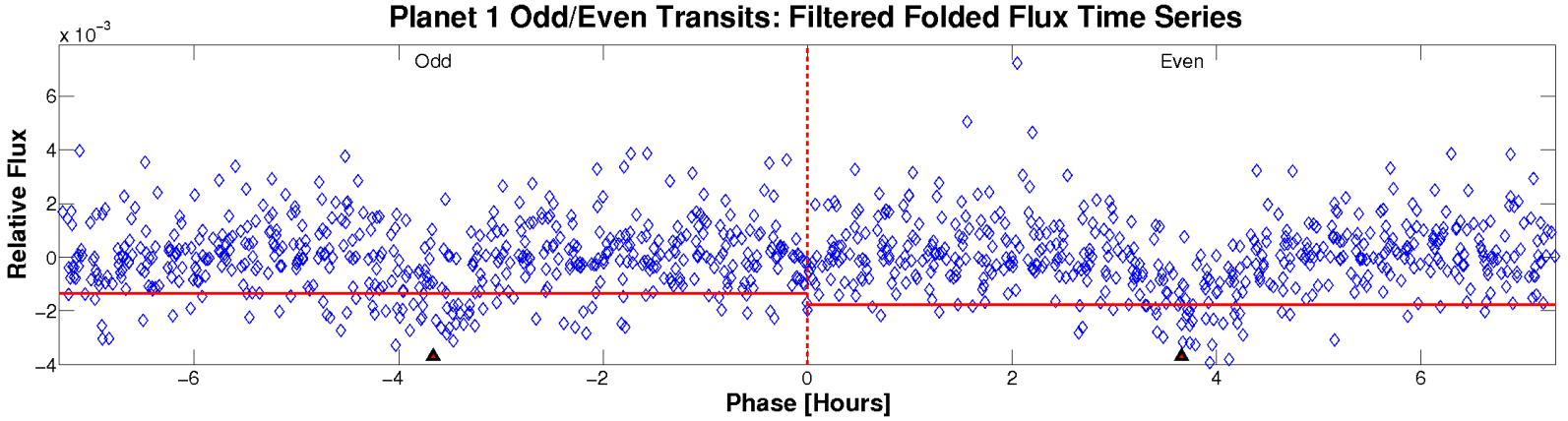
PDC Flux time series for KeplerId 5868793, Planet candidate 1 in the unwhitened domain. For the data of Quarter-13/TargetTableId-056, start BJD is 2456015 and the vertical offset is 0. For the data of Quarter-14/TargetTableId-059, start BJD is 2456107 and the vertical offset is 0.2. For the data of Quarter-15/TargetTableId-062, start BJD is 2456206 and the vertical offset is 0.4. For the data of Quarter-16/TargetTableId-065, start BJD is 2456305 and the vertical offset is 0.6. Transit event markers indicate the location of transits of the given planet candidate. Odd-even transits fit completed with full convergence.
Open `./planet-01/planet-search-and-model-fitting-results/odd-even-transits-fit/005868793-01-odd-even-unwhitened-13-056.fig`



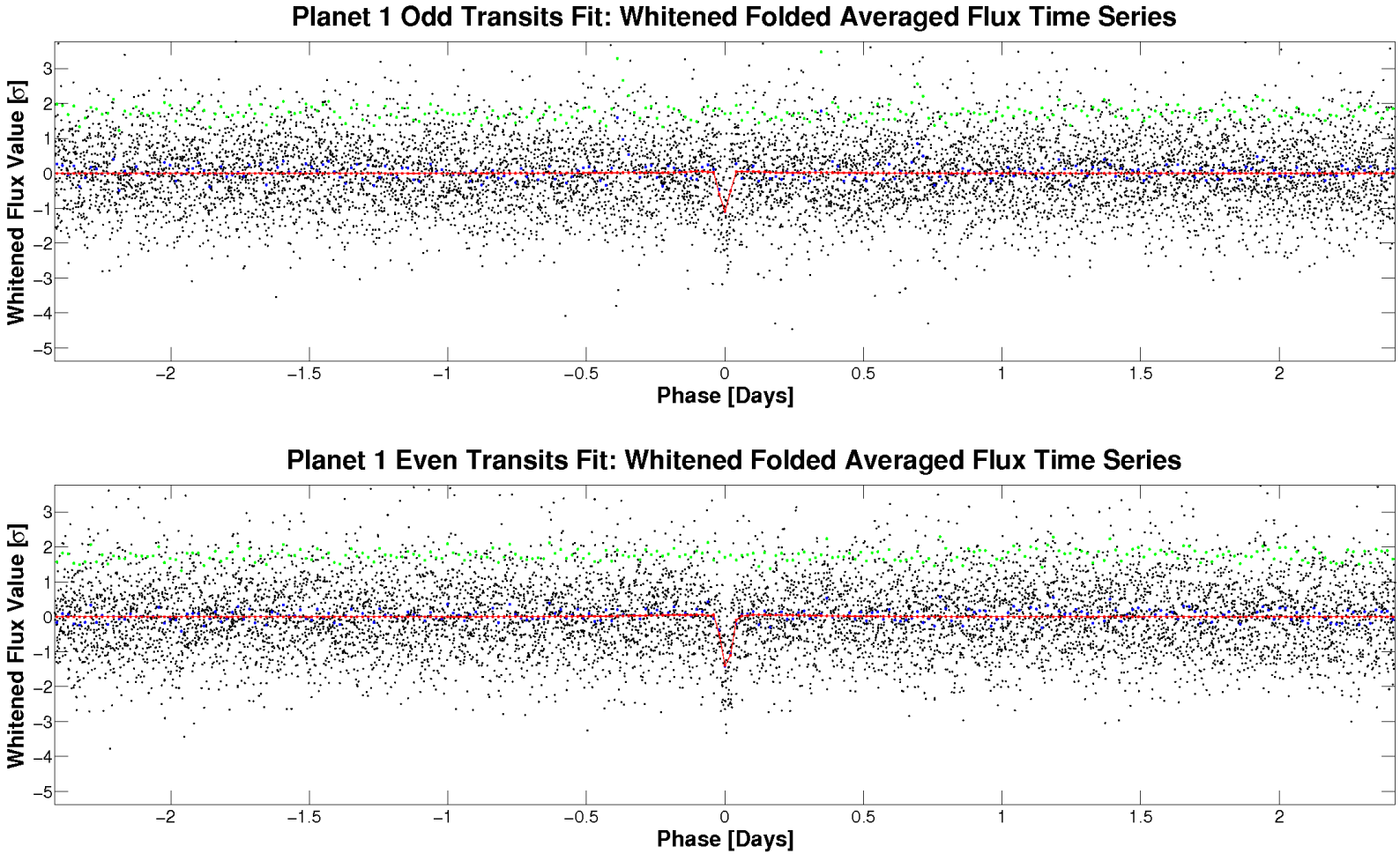
PDC Flux time series for KeplerId 5868793, Planet candidate 1 in the unwhitened domain. For the data of Quarter-17/TargetTableId-068, start BJD is 2456392. Transit event markers indicate the location of transits of the given planet candidate. Odd-even transits fit completed with full convergence.
Open `./planet-01/planet-search-and-model-fitting-results/odd-even-transits-fit/005868793-01-odd-even-unwhitened-17-068.fig`



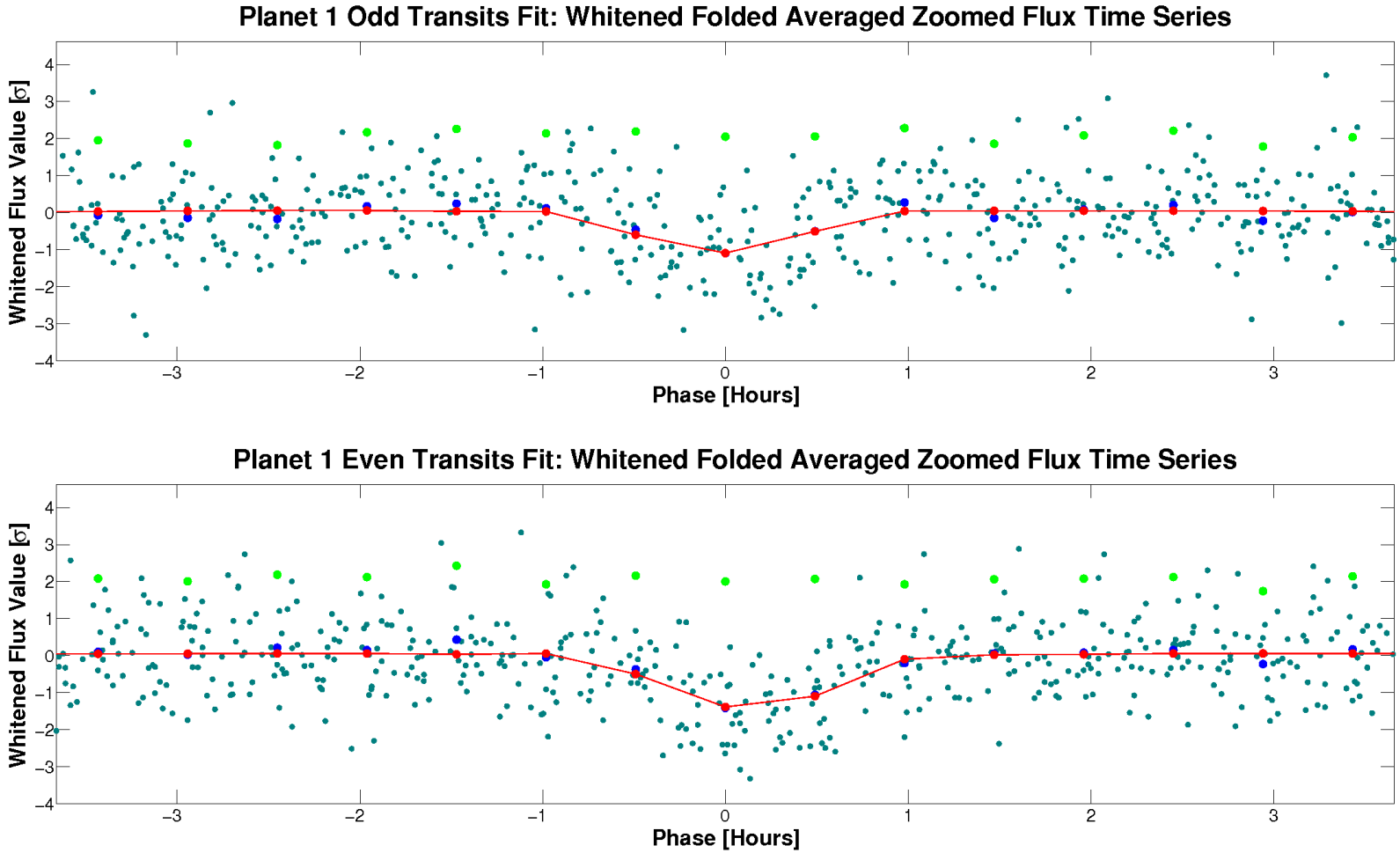
PDC Flux time series for KeplerId 5868793, Planet candidate 1 in the unwhitened domain, zoomed on last 5 transits in the unit of work. If # of transits is smaller than 5, all transits are shown.
Open `./planet-01/planet-search-and-model-fitting-results/odd-even-transits-fit/005868793-01-odd-even-unwhitened-zoomed.fig`



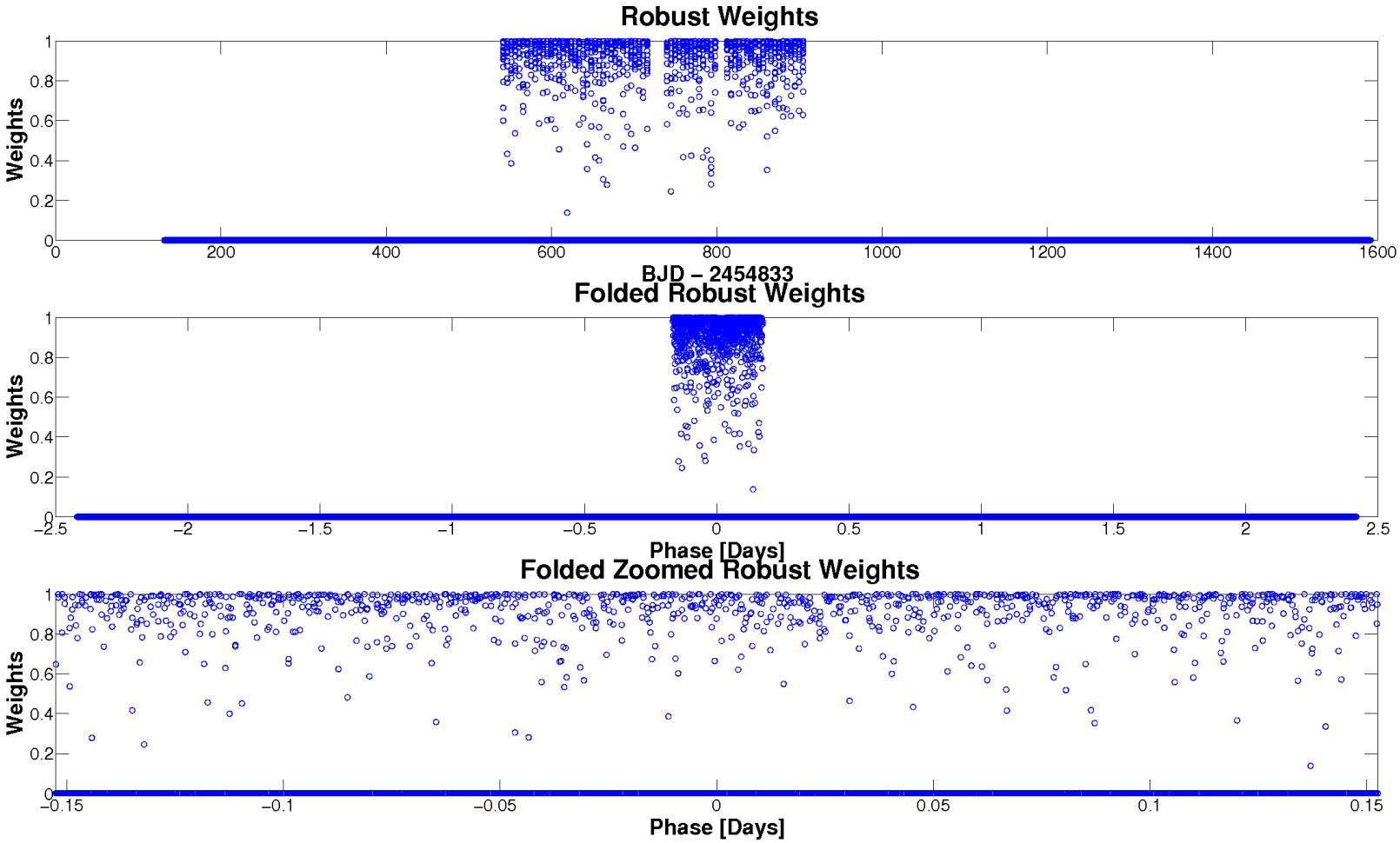
PDC Flux time series of odd/even transits for KeplerId 5868793, Planet candidate 1 in the unwhitened domain. Data has been high-pass filtered via a median filter operating at a specified multiple of the transit duration, folded per the fitted period and epoch, and zoomed to the location of the model transit.
Open `./planet-01/planet-search-and-model-fitting-results/odd-even-transits-fit/005868793-01-odd-even-unwhitened-filtered-zoomed.fig`



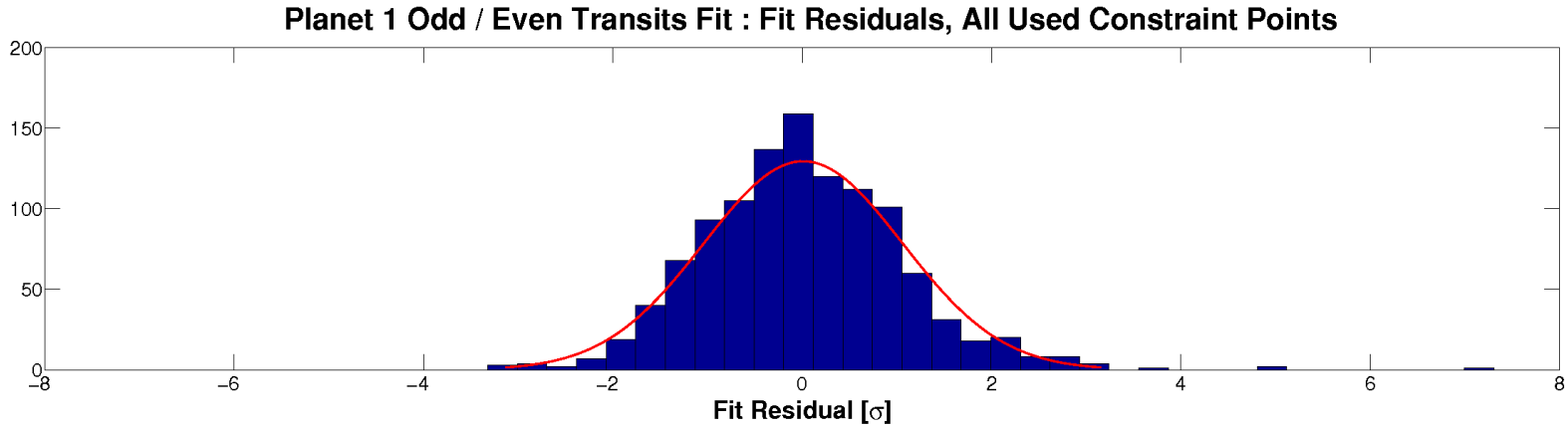
Folded flux time series for KeplerId 5868793, Planet candidate 1 in the whitened domain is plotted in black dots. Values are averaged into 1 cadence wide bins. The blue dots represent the averaged values of the folded flux time series; the red dots represent the averaged values of the folded model light curve of the odd/even transits fit; the green dots are the averaged folded fit residuals, vertically offset for clarity. Odd-even transits fit completed with full convergence.
Open `./planet-01/planet-search-and-model-fitting-results/odd-even-transits-fit/005868793-01-odd-even-whitened.fig`



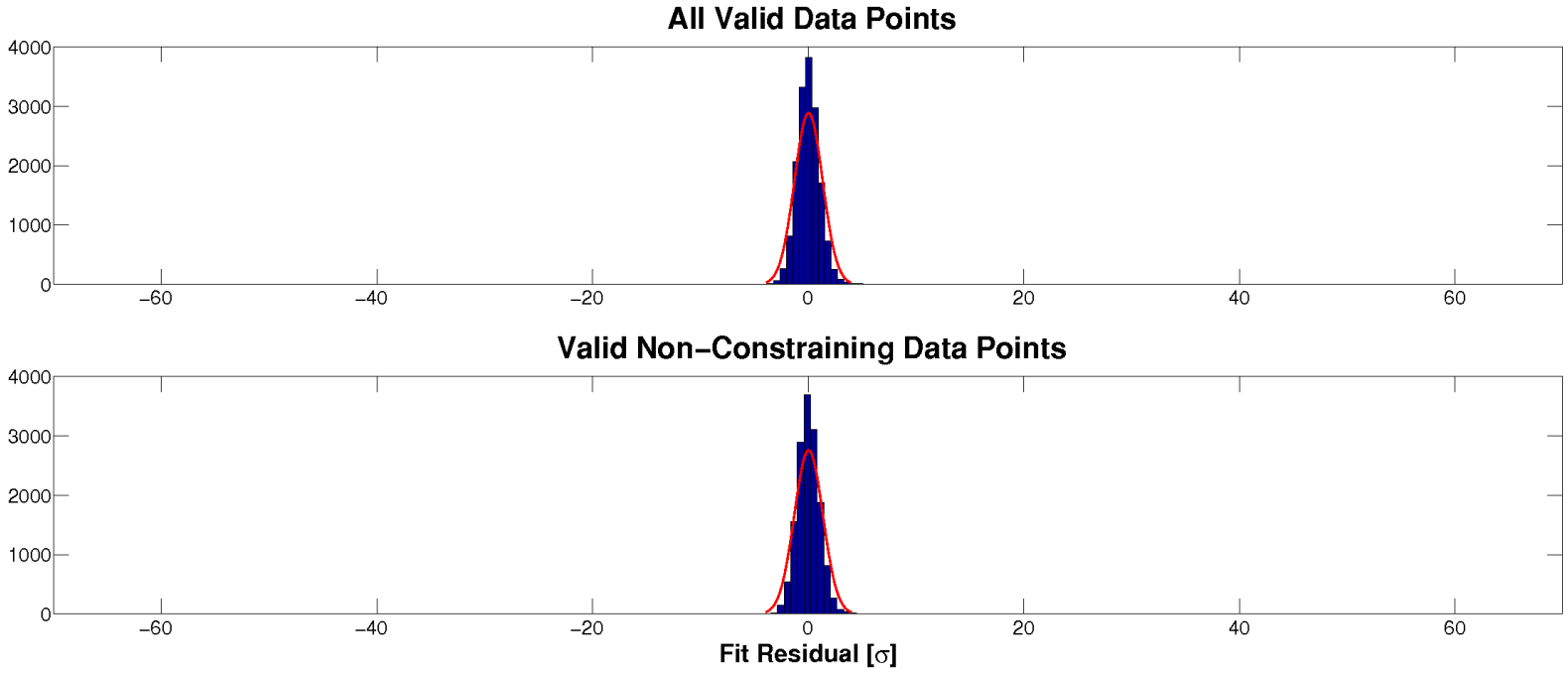
Folded flux time series for KeplerId 5868793, Planet candidate 1 in the whitened domain, zoomed on the transit. The flux data whose robust weights are larger/smaller than 0.1 are plotted in dark green/cyan dots, respectively. Values are averaged into 1 cadence wide bins. The blue dots represent the averaged values of the folded flux time series; the red dots represent the averaged values of the fitted model light curve of the odd/even transits fit; the green dots are the averaged folded fit residuals, vertically offset for clarity. Magenta dots are the averaged values of the folded flux time series, with a phase shift of 0.5 relative to the blue dots, vertically offset for clarity. Odd-even transits fit completed with full convergence.
Open `./planet-01/planet-search-and-model-fitting-results/odd-even-transits-fit/005868793-01-odd-even-whitened-zoomed.fig`



Robust weights distribution for KeplerId 5868793, Planet candidate 1. Top plot: all data points. Middle plot: all data points, folded per the fitted period and epoch. Bottom plot: all data points, folded and zoomed.
Open `./planet-01/planet-search-and-model-fitting-results/odd-even-transits-fit/005868793-01-odd-even-robust-weights.fig`

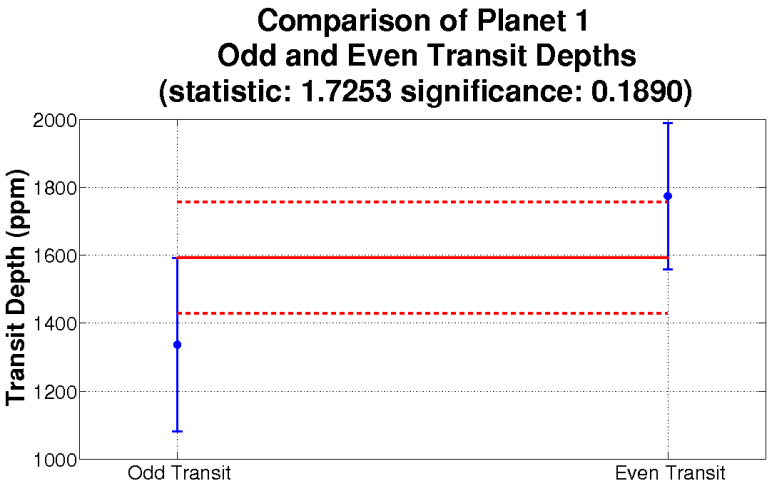


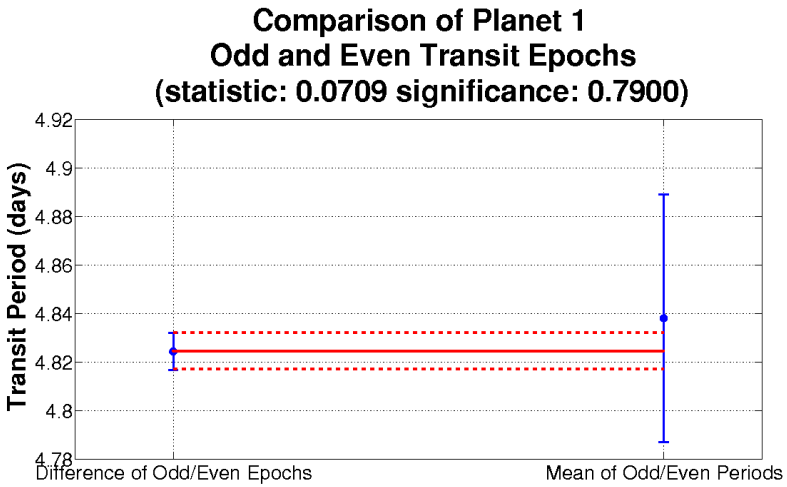
Fit residuals distribution for KeplerId 5868793, Planet candidate 1. Only the valid data points used to constrain the fit are shown here. A Gaussian fit to the histogram is shown in red.
Open `./planet-01/planet-search-and-model-fitting-results/odd-even-transits-fit/005868793-01-odd-even-histo-used.fig`



Fit residuals distribution for KeplerId 5868793, Planet candidate 1. Top plot: all valid data. Bottom plot: valid data not used to constrain fit (due to distance from a transit). Gaussian fits to the histograms are shown in red.
Open `./planet-01/planet-search-and-model-fitting-results/odd-even-transits-fit/005868793-01-odd-even-histo-all-and-unused.fig`

A.3 Eclipsing Binary Discrimination Test





Top-left: Diagnostic plot of Odd/Even Transit Depth Test for keplerId 5868793, planet 1. A significance level close to 1/0 favors a transiting planet/an eclipsing binary. Top-right: Diagnostic plot of Odd/Even Transit Epoch Test for keplerId 5868793, planet 1. A significance level close to 1/0 favors a transiting planet/an eclipsing binary. Open `./planet-01/binary-discrimination-test-results/005868793-01-eclipsing-binary-discrimination-tests.fig`

Appendix B Single Event Statistics from Residual Flux

No figures named 005868793-00-residual-ses-*.fig are available.

Appendix C Alerts

Time	Severity	Message
57416.7238	warning	Multi-quarter PRF fitting and offset analysis will not be performed because model fit SNR is above specified threshold (target=1, keplerId=5868793, planet=1, component=generateDvDifferenceImages)
57416.7248	warning	No centroid data available. Centroid test results set to default values for all planets. (target=1, keplerId=5868793, component=Centroid test prf)
57416.7310	warning	Pixel correlation test is disabled (target=1, keplerId=5868793, component=Pixel correlation test)