

KIC 007887791

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
007887791-01	OBS	1964.01	2.229339	133.090705	51.2	2.013	35.5	39.8	0.86	5587	0.74	621.42

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007887791-01	OBS	PC	1.00	0	0	0	0	CENT_SATURATED

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

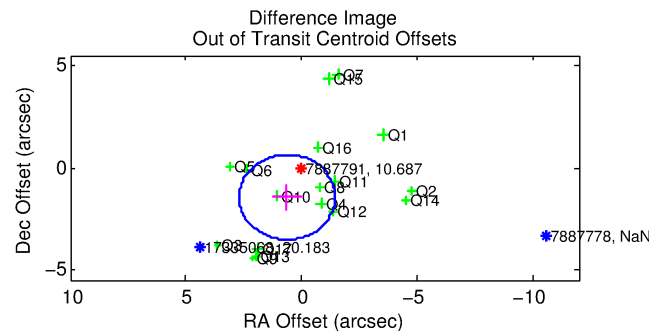
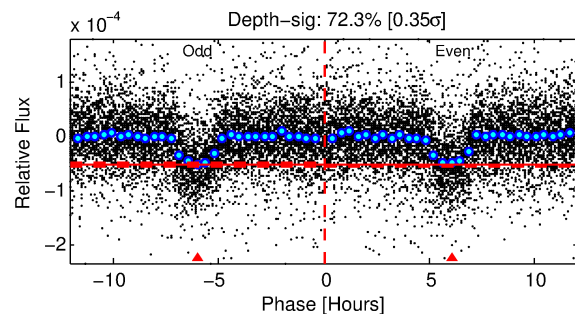
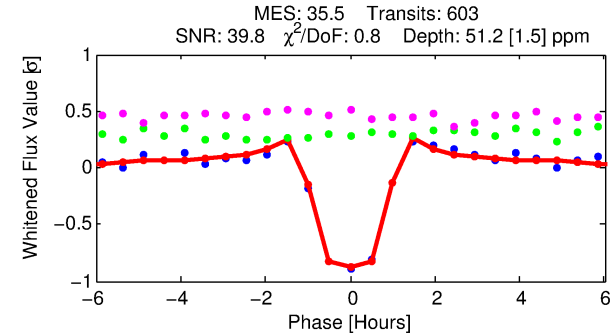
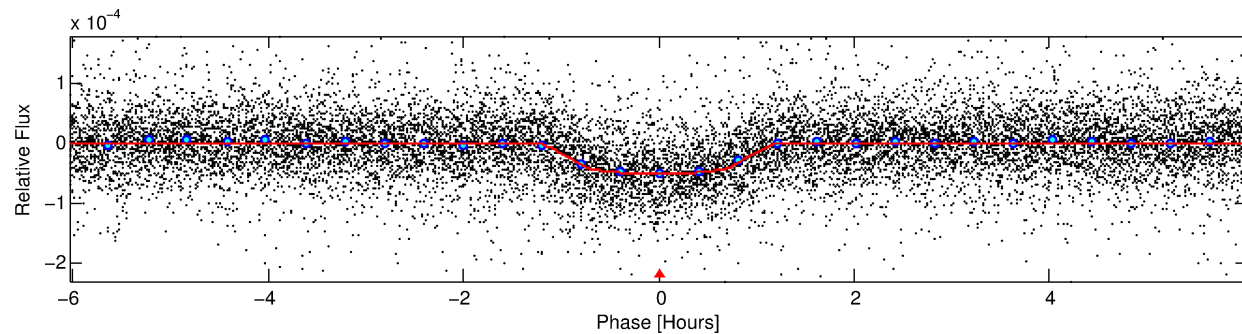
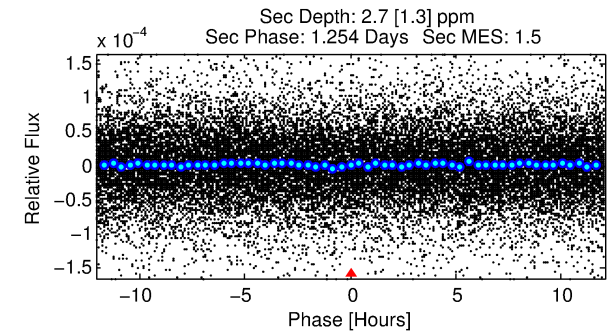
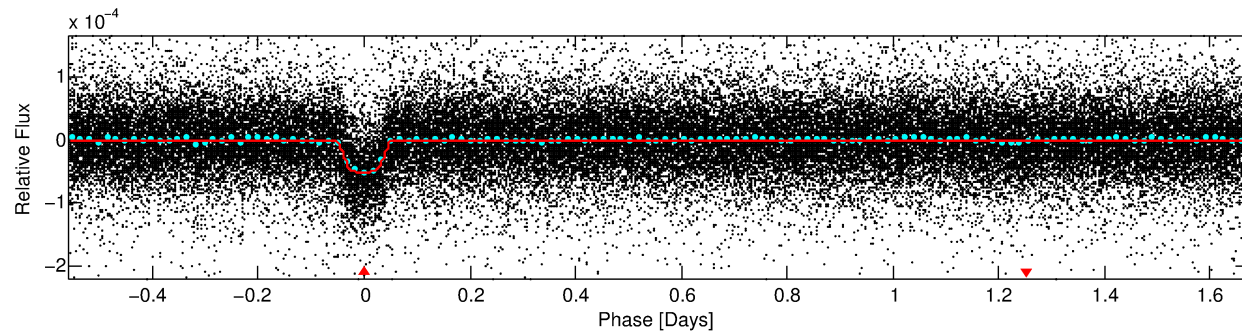
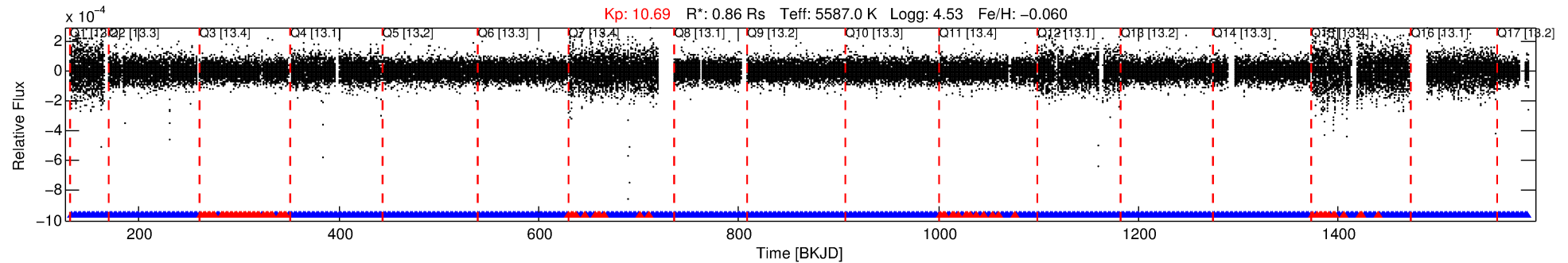
Ephemeris Match Information For 007887791-01

No Significant Match Found

DV One-Page Summary

KIC: 7887791 Candidate: 1 of 1 Period: 2.229 d

KOI: K01964.01 Corr: 0.970



DV Fit Results:

Period = 2.22934 [0.00000] d
Epoch = 133.0907 [0.0006] BKJD
 $R_p/R^* = 0.0078$ [0.0009]
 $a/R^* = 3.95$ [1.89]
 $b = 0.90$ [0.11]
 $S_{\text{eff}} = 621.42$ [123.10]
 $T_{\text{eq}} = 1273$ [63] K
 $R_p = 0.74$ [0.12] R_{e}
 $a = 0.0324$ [0.0038] AU
 $A_g = 2.81$ [1.62] [1.12σ]
 $T_{\text{eff}} = 2549$ [353] K [3.56σ]

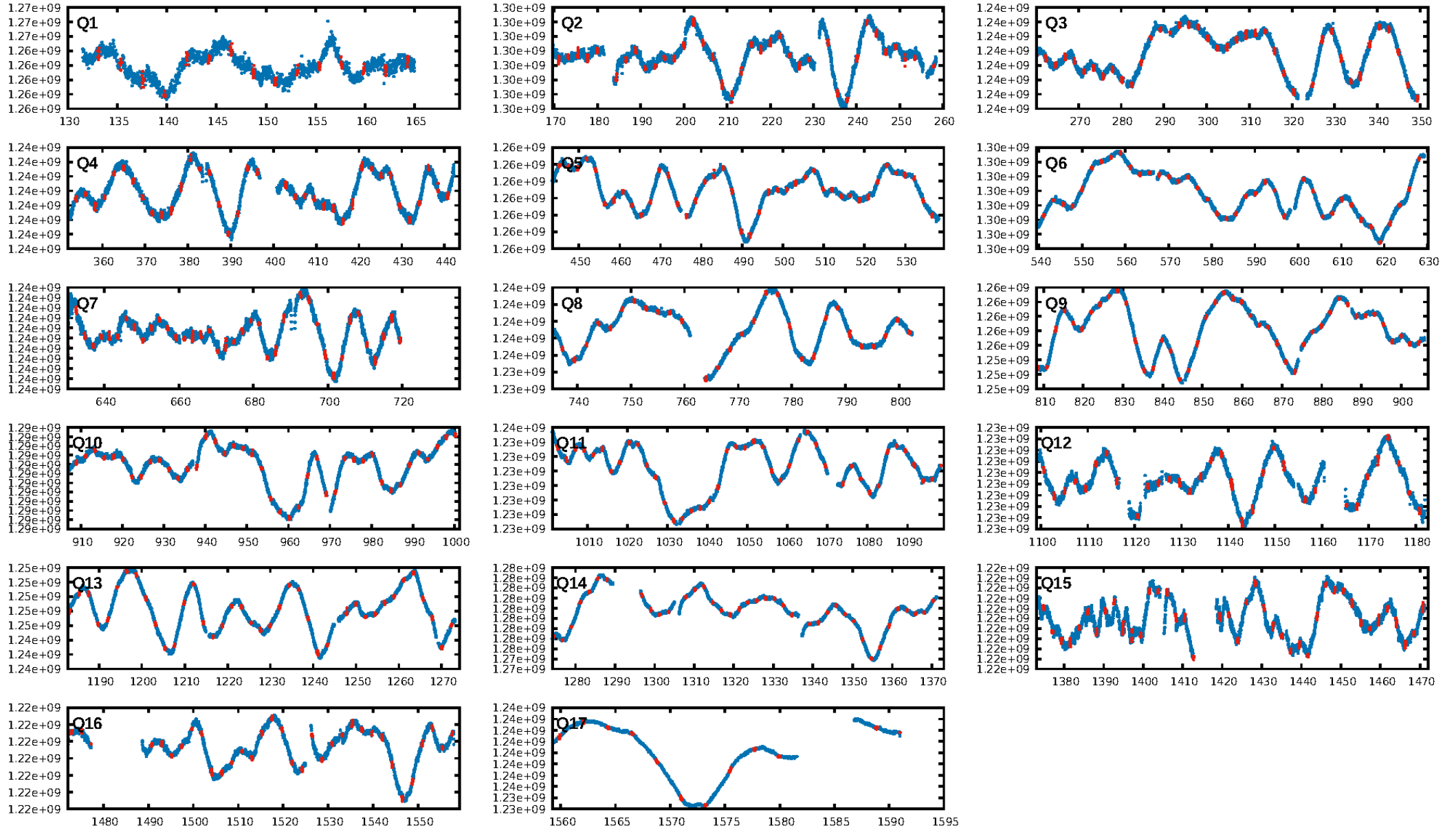
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.01e-245
RollingBand-fgt: 0.88 [505/577]
GhostDiagnostic-chr: 2.523
Centroid-sig: 57.3%
Centroid-so: 0.523 arcsec [1.95σ]
OotOffset-rm: 1.576 arcsec [2.28σ]
KicOffset-rm: 1.373 arcsec [2.05σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.41 [7/17]
DiffImageOverlap-fno: 1.00 [17/17]

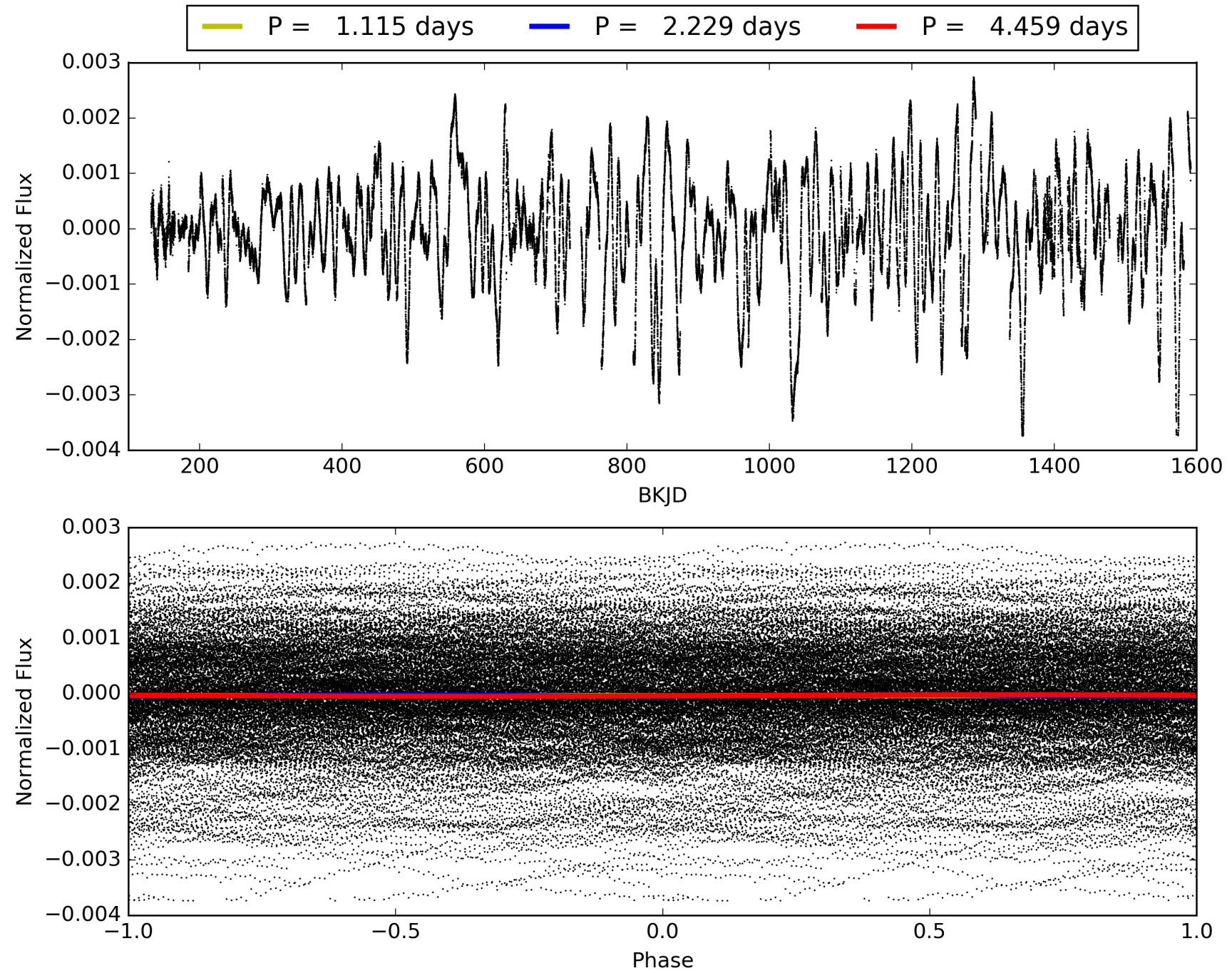
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:17:43 Z

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

TCE 007887791-01, PDC Light Curves

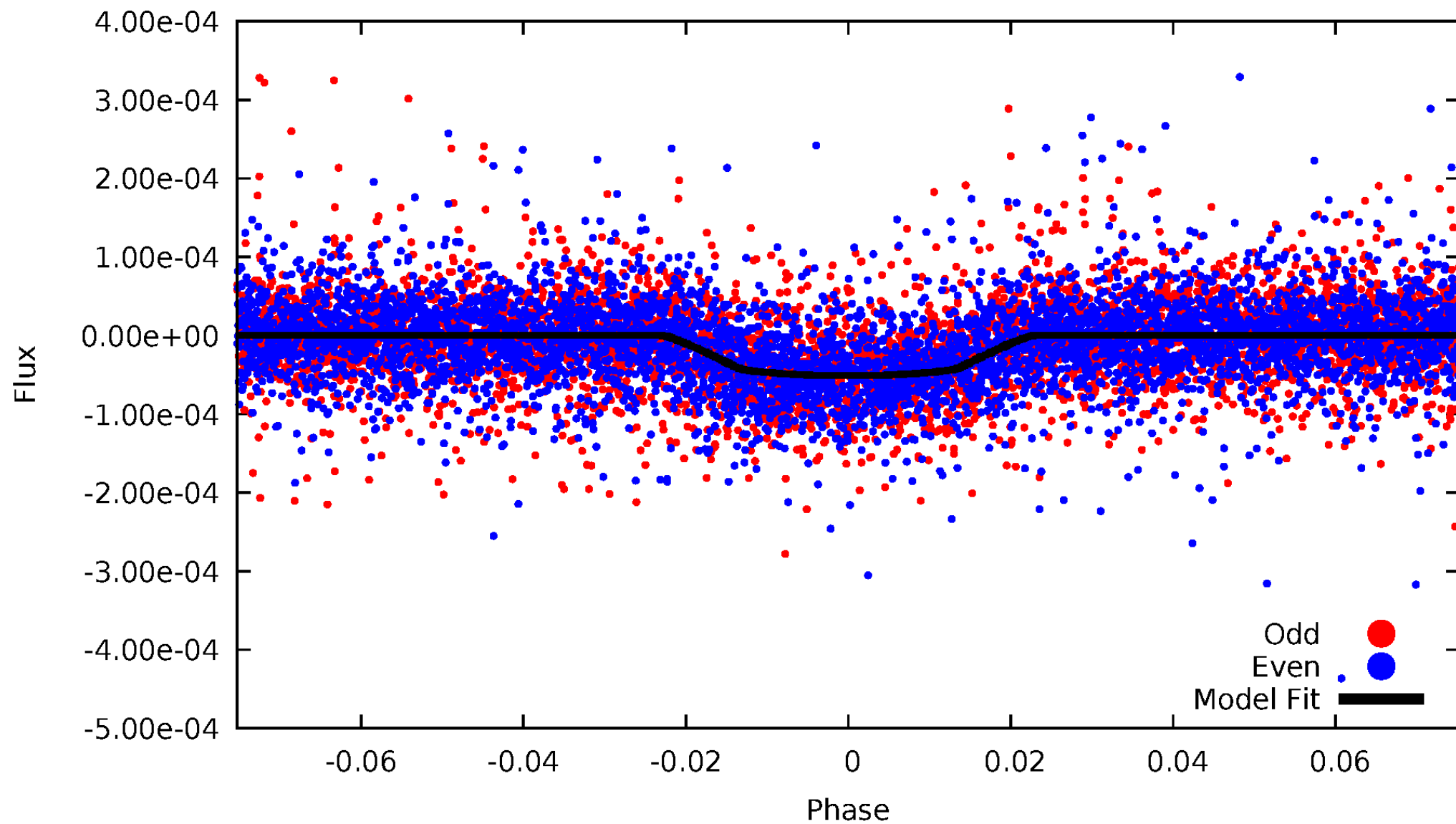


TCE 007887791-01



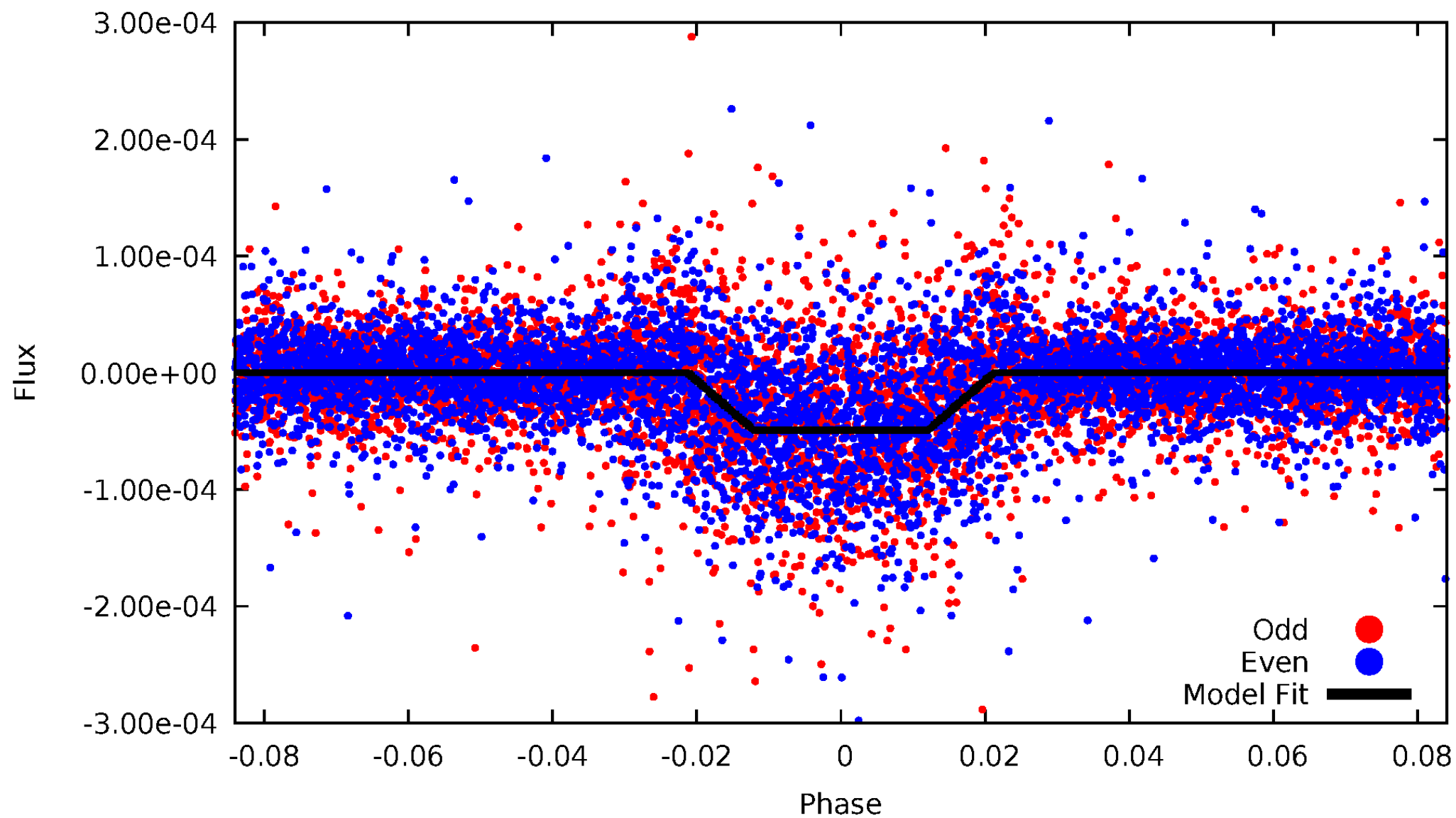
DV Odd/Even

TCE 007887791-01



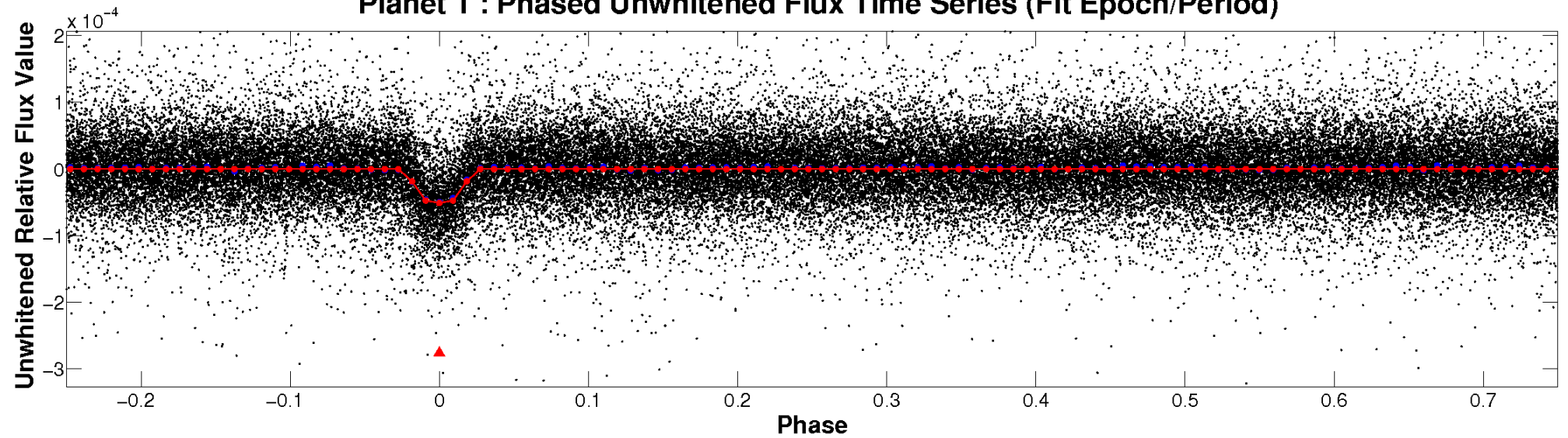
ALT Odd/Even

TCE 007887791-01

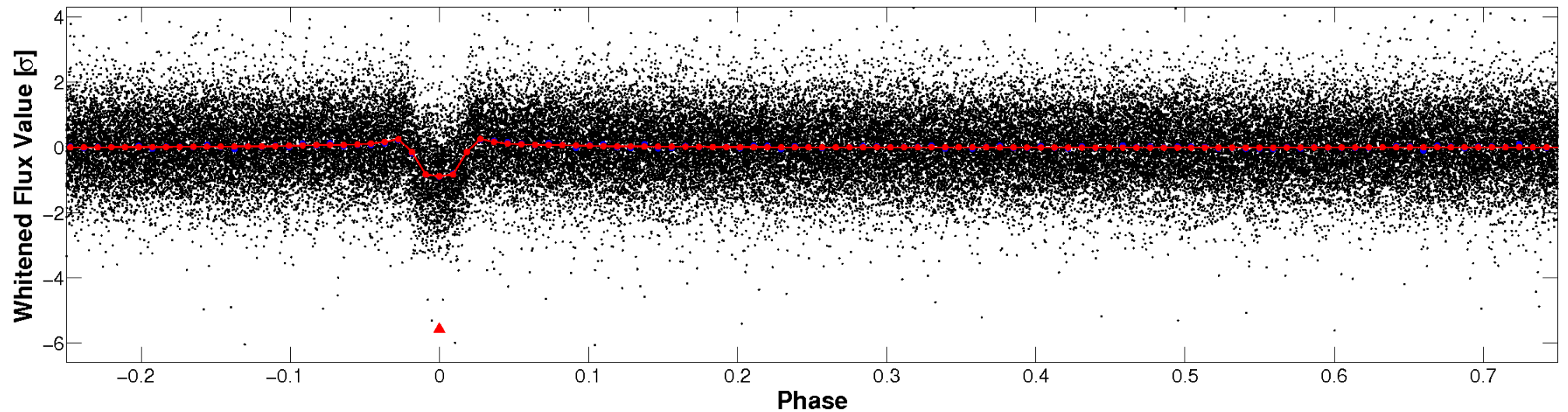


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

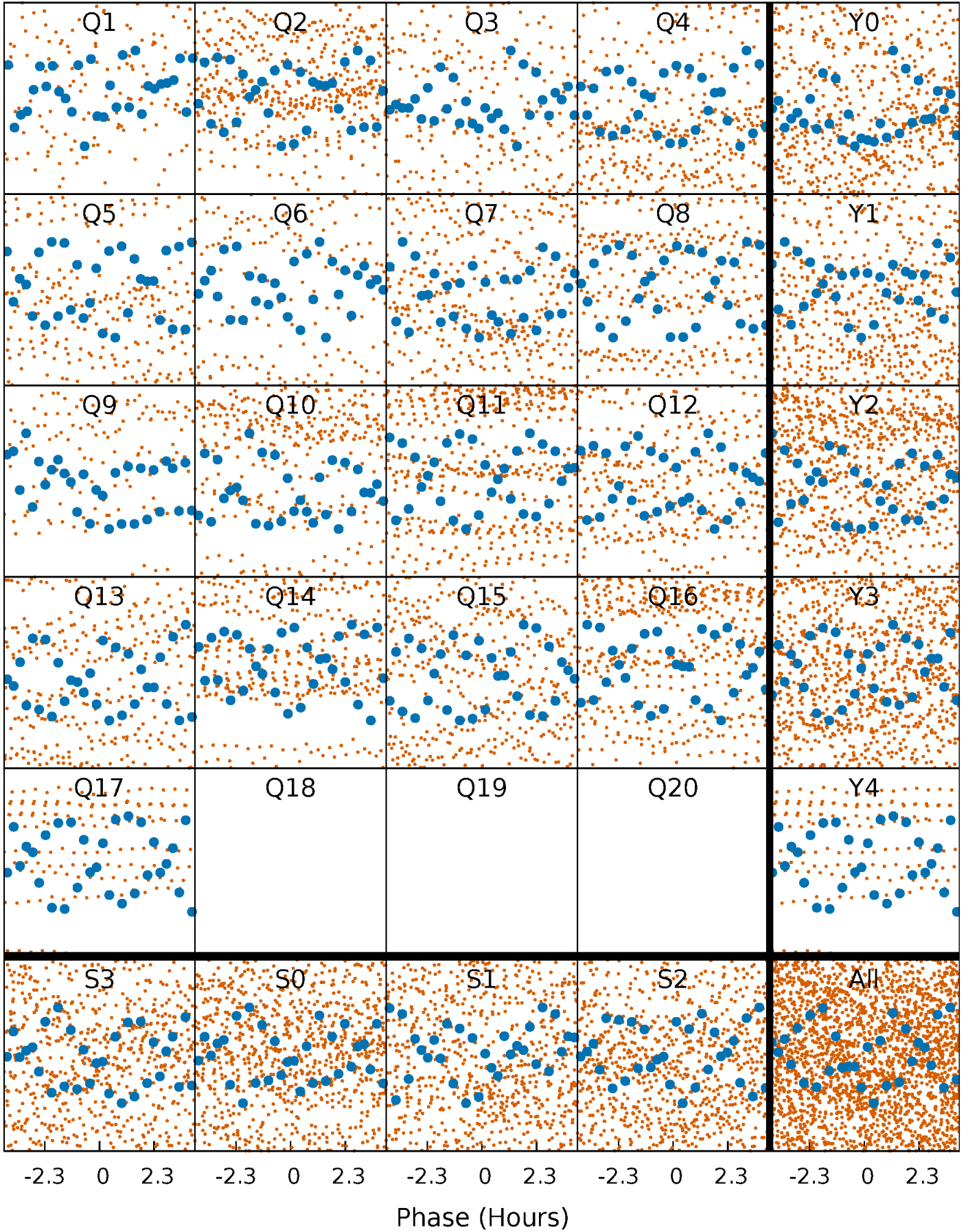


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



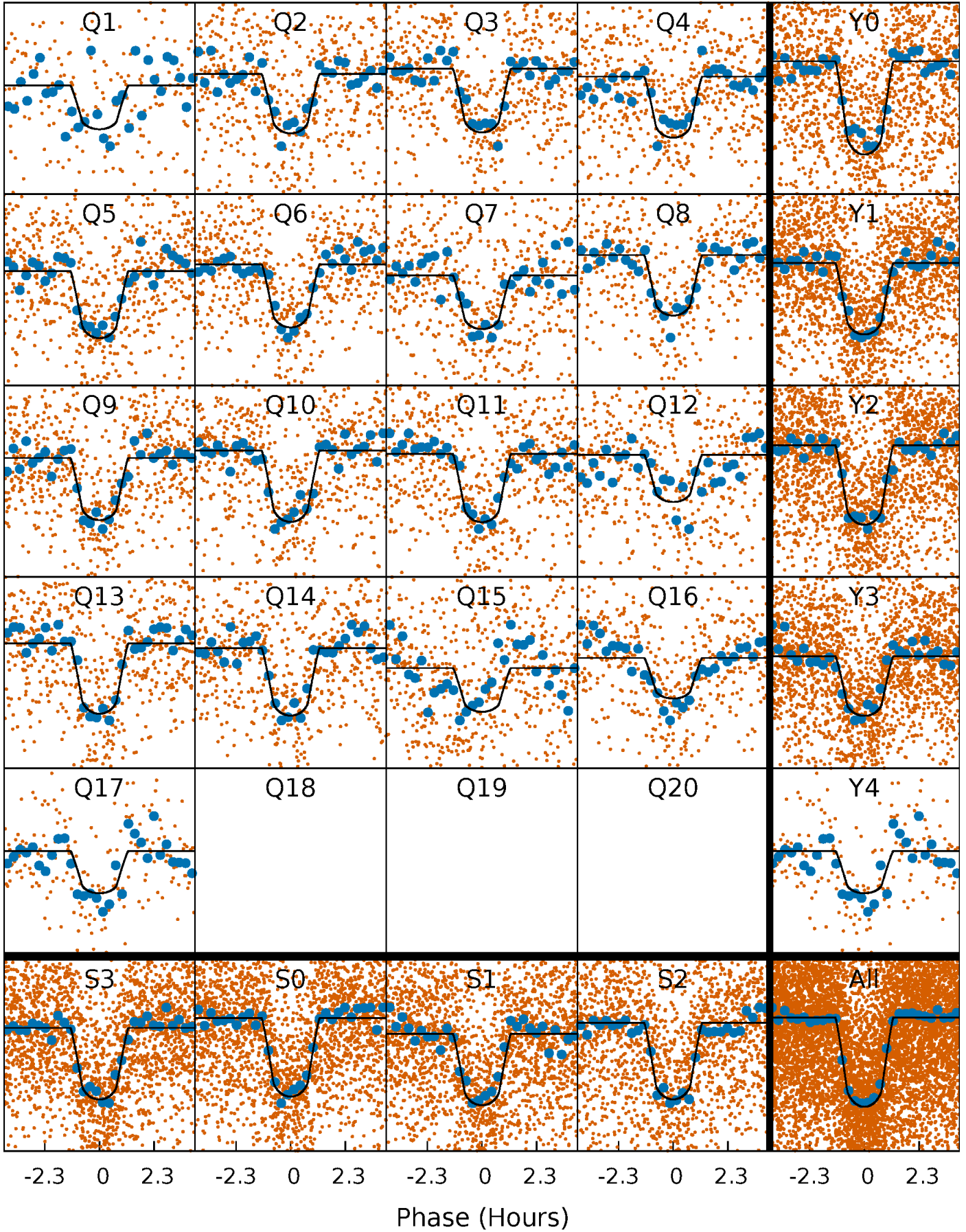
PDC Quarter-Phased Transit Curves

TCE 007887791-01 P= 2.229339 Days $T_0=133.090705$ (BKJD)



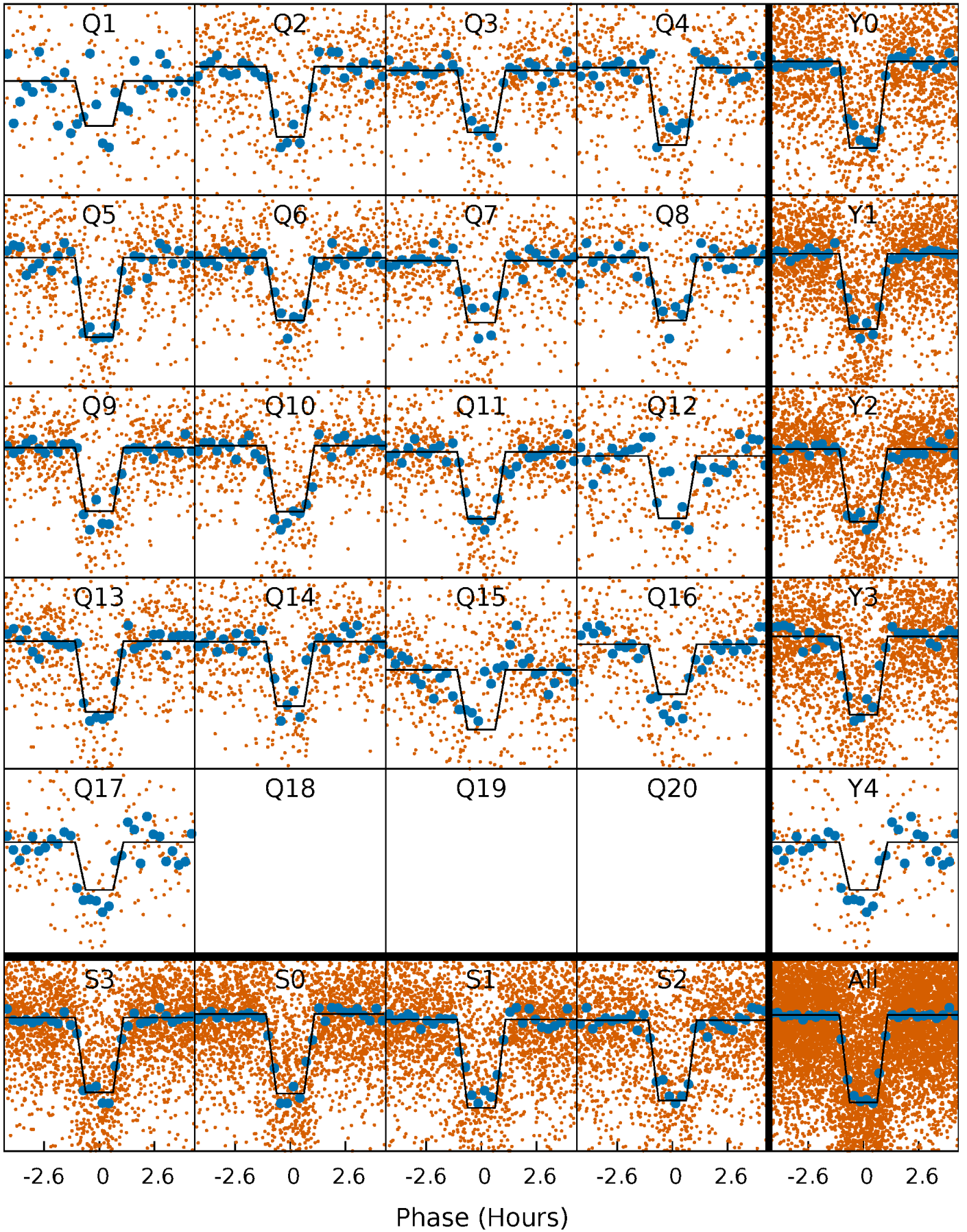
DV Quarter-Phased Transit Curves

TCE 007887791-01 P= 2.229339 Days $T_0=133.090705$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

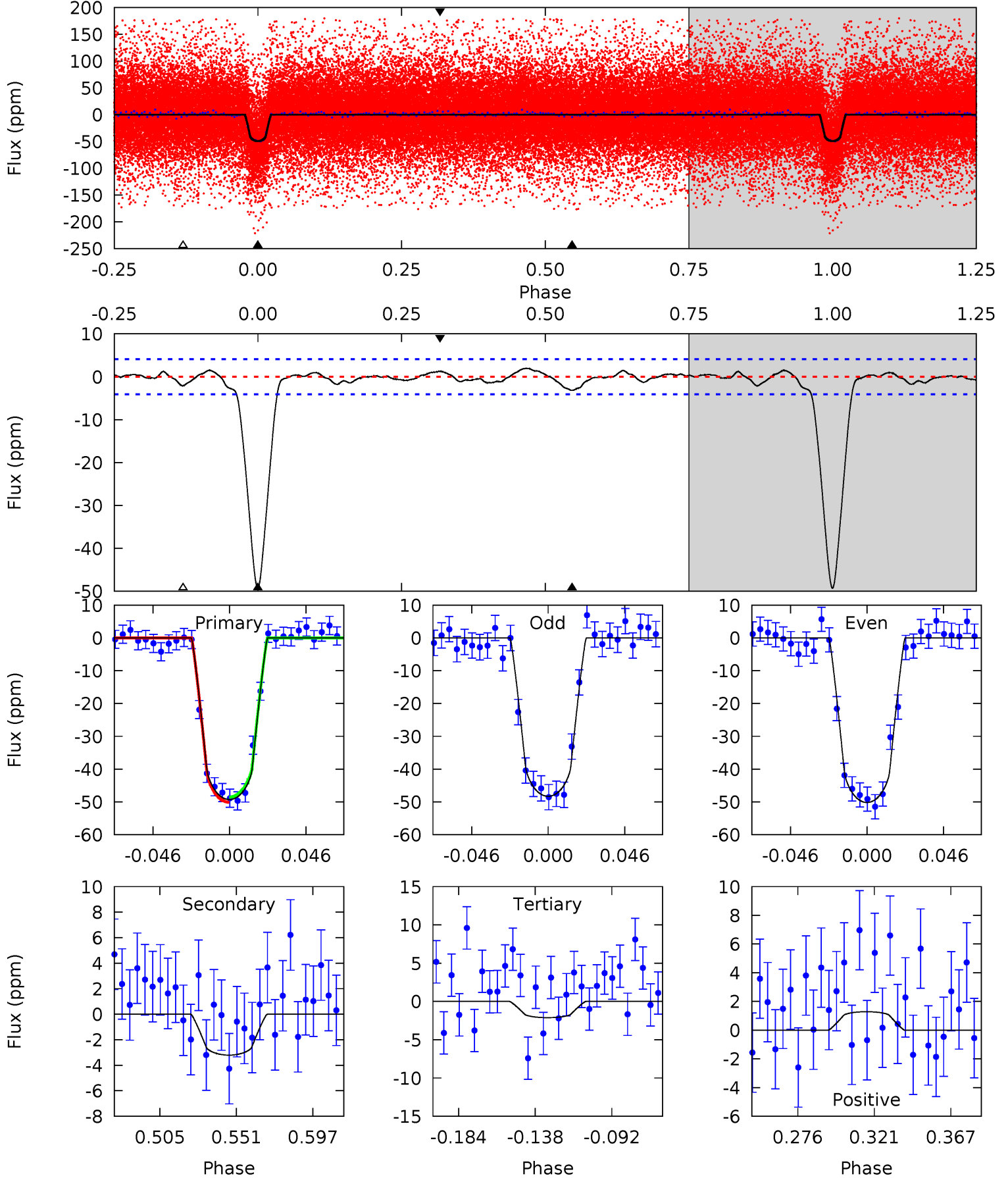
TCE 007887791-01 P= 2.229338 Days $T_0=133.091282$ (BKJD)



DV Model-Shift Uniqueness Test

007887791-01, P = 2.229339 Days, E = 130.861366 Days

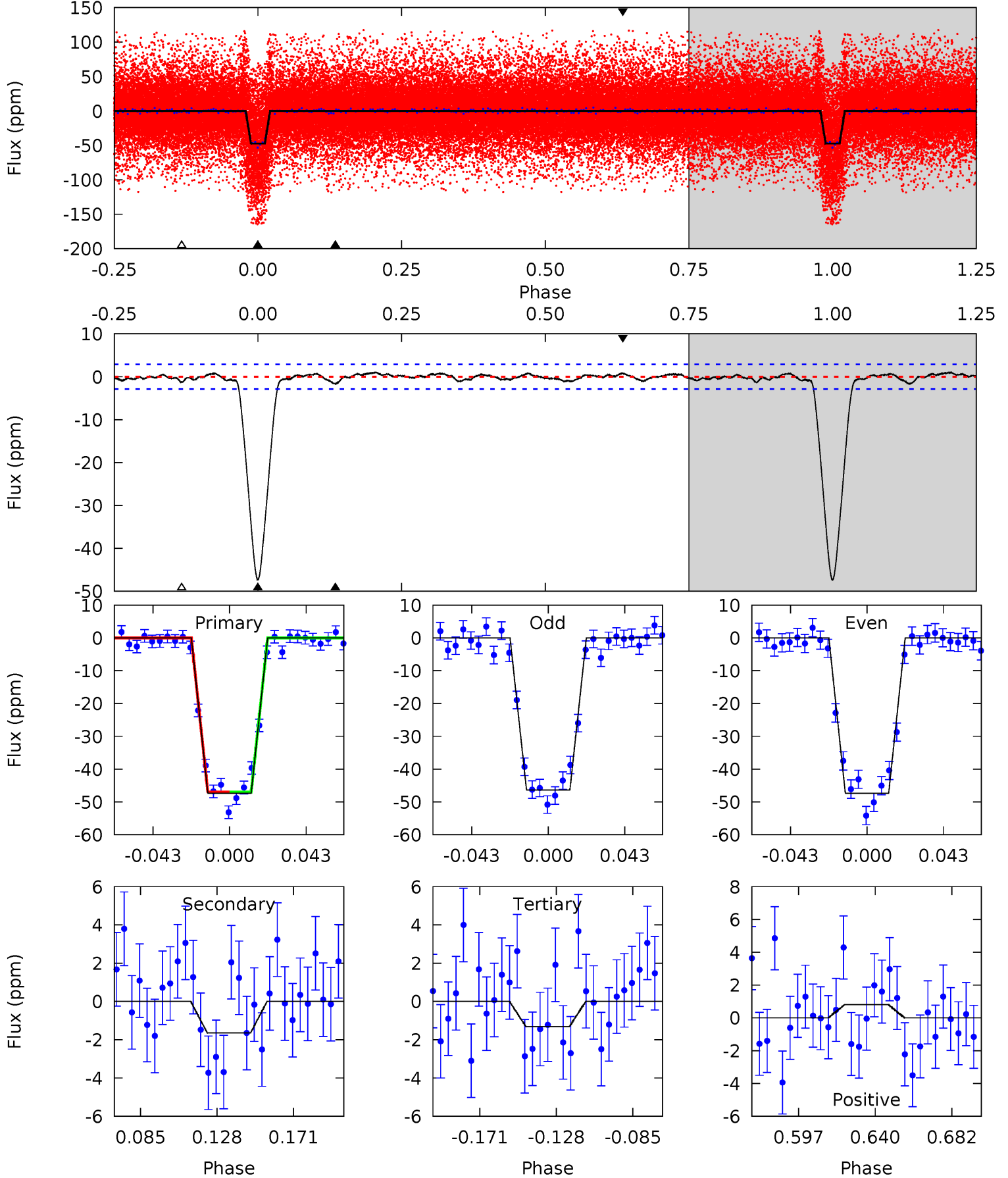
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
56.7	3.69	2.44	1.48	4.73	2.00	1.01	54.3	55.2	1.25	2.21	1.09	0.98	0.04	0.91



Alt Model-Shift Uniqueness Test

007887791-01, P = 2.229338 Days, E = 130.861944 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
78.1	2.70	2.17	1.34	4.74	2.03	0.82	75.9	76.7	0.53	1.36	0.82	1.00	0.02	0.04



Stellar Parameters For KIC 007887791

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5587^{+110}_{-110}	$4.525^{+0.035}_{-0.105}$	$-0.060^{+0.150}_{-0.150}$	$0.865^{+0.109}_{-0.050}$	$0.914^{+0.050}_{-0.067}$	$1.991^{+0.323}_{-0.588}$
	+2%/-2%	+1%/-2%	+250%/-250%	+13%/-6%	+5%/-7%	+16%/-30%
Source	SPE59	SPE59	SPE59	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 007887791-01 / KOI 1964.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-3 ± 1	$0.75^{+0.09}_{-0.08}$	1796^{+63}_{-50}	3192^{+183}_{-190}	$3.250^{+1.268}_{-1.069}$
Alt.	-2 ± 1	$0.68^{+0.09}_{-0.09}$	1797^{+70}_{-55}	2974^{+193}_{-271}	$2.045^{+0.994}_{-0.837}$

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

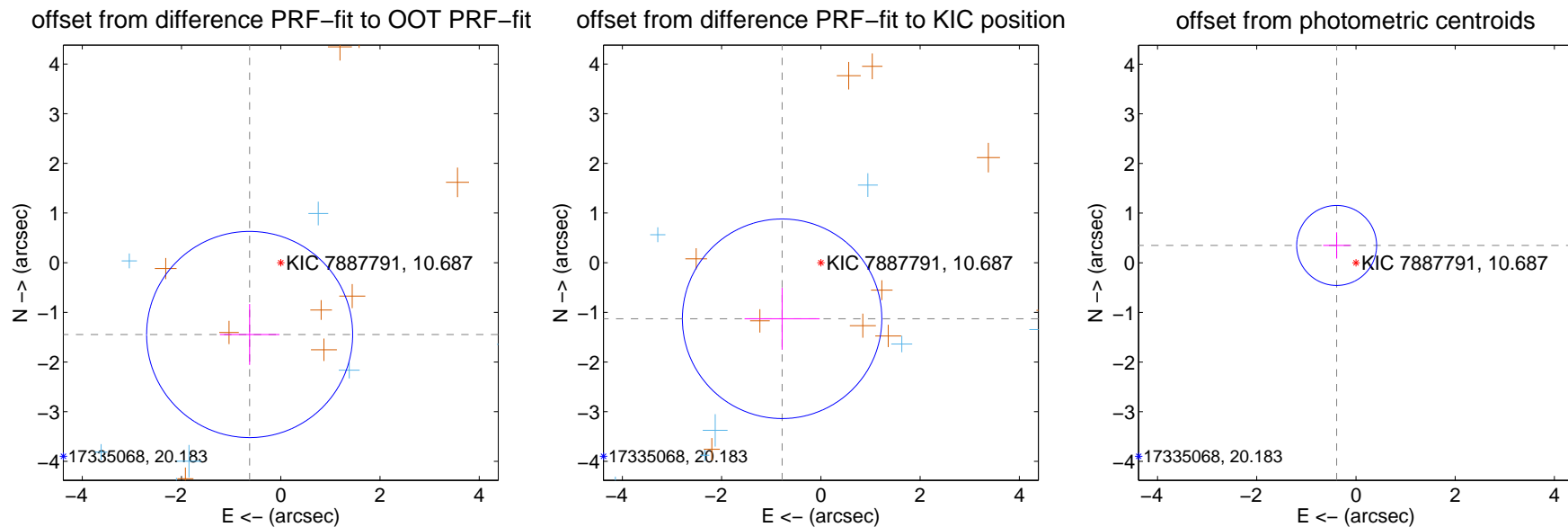
DV Centroid Data

Supplemental centroid analysis for 007887791-01. **Kepler magnitude: 10.69.** Transit SNR 39.77

There are 7 quarters with good PRF difference image offsets

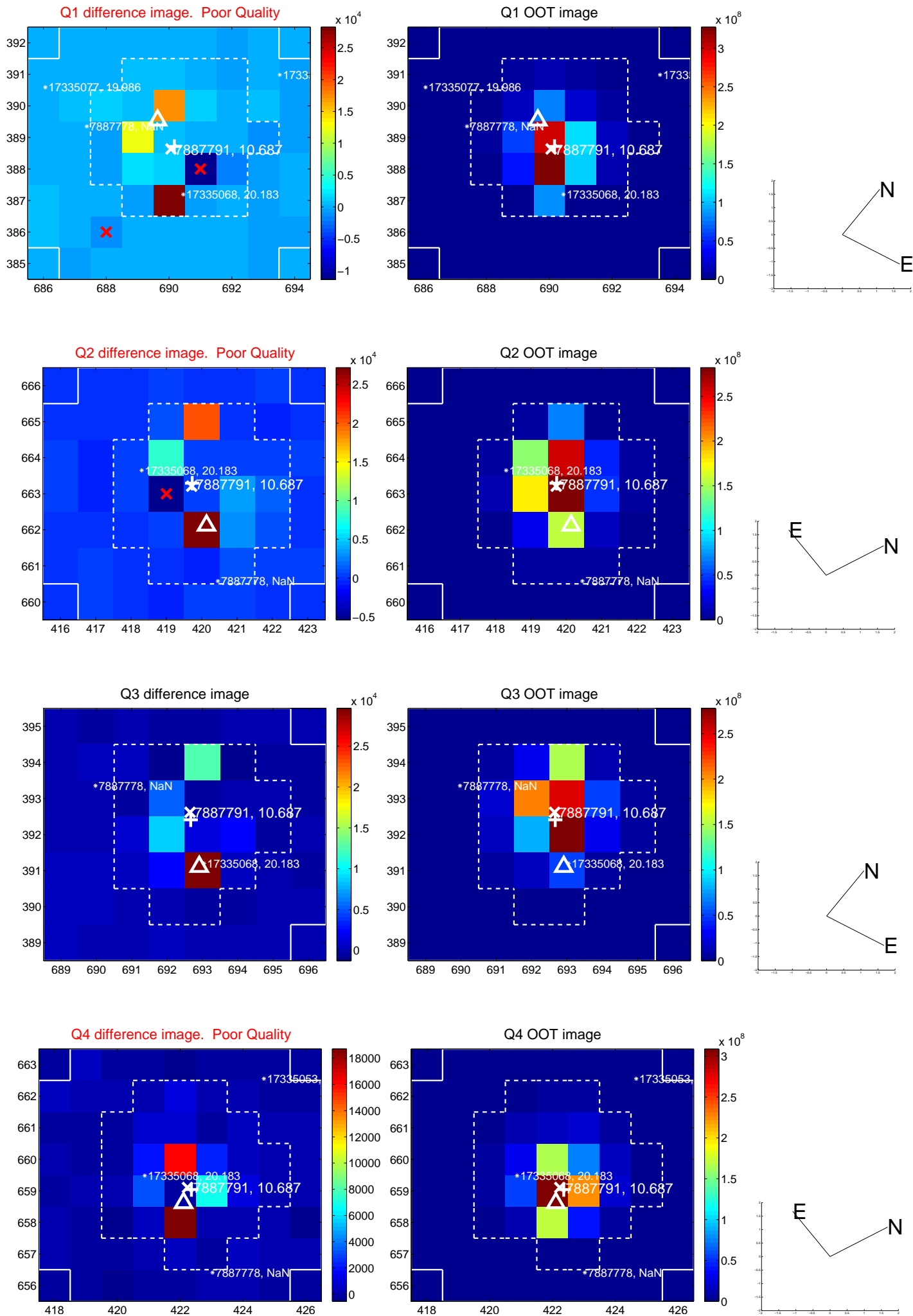
The direct PRF centroid is offset from the target star catalog position by about 0.68 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.576 ± 0.692	2.28	0.627 ± 0.601	-1.446 ± 0.613
PRF-fit source offset from KIC position	1.373 ± 0.670	2.05	0.781 ± 0.758	-1.129 ± 0.623
photometric centroid source offset	0.52 ± 0.27	1.95	0.39 ± 0.27	0.35 ± 0.26

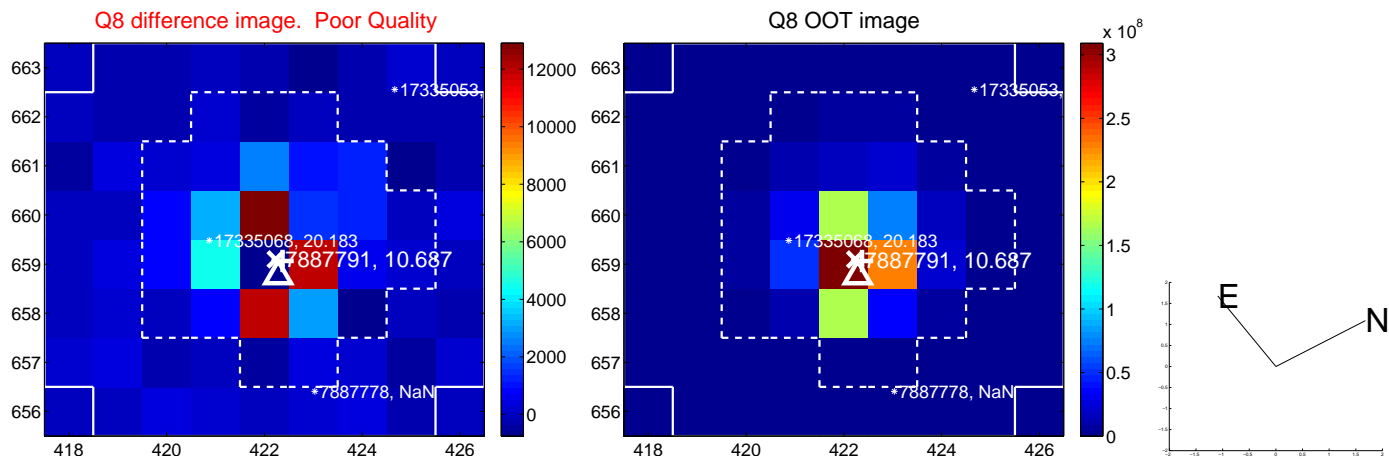
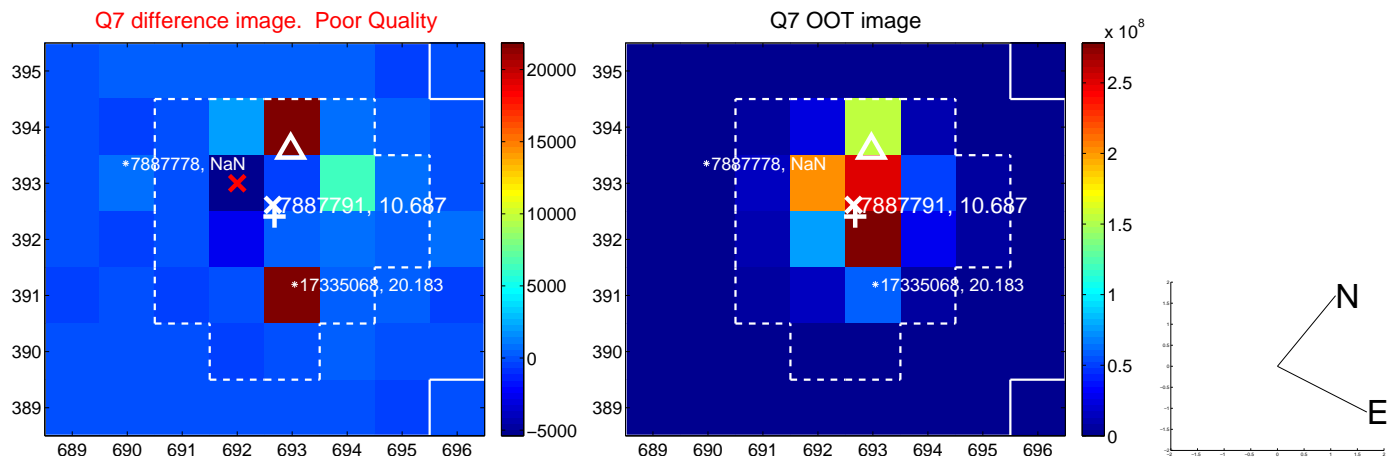
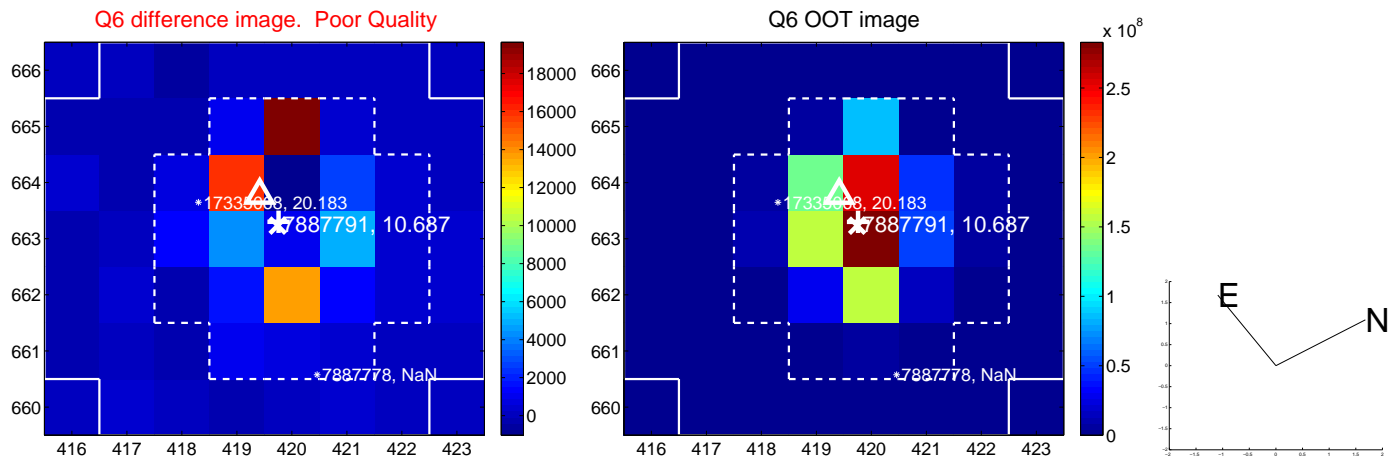
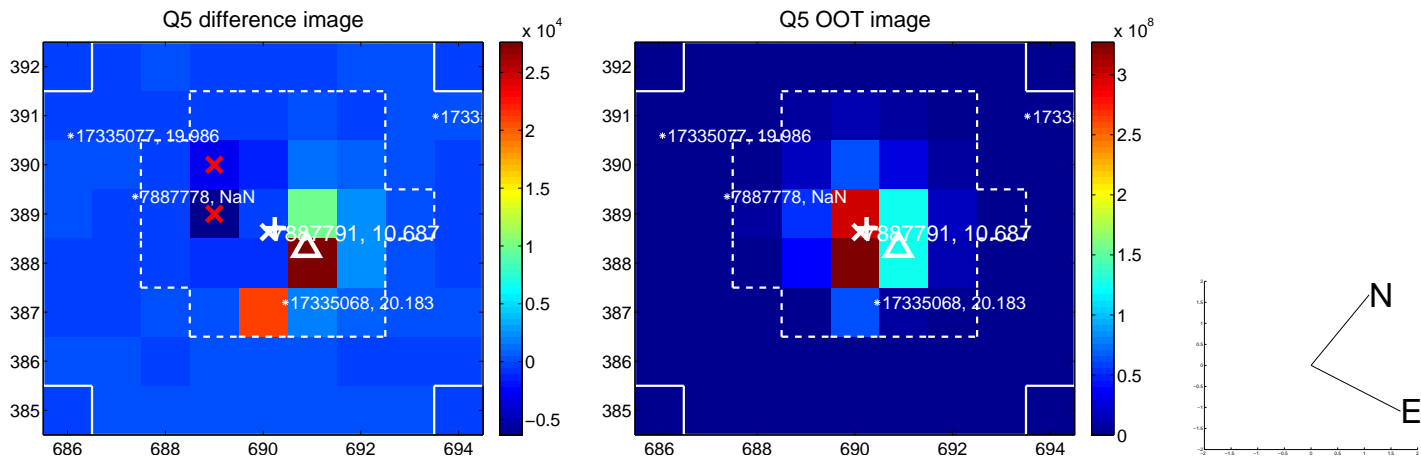


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

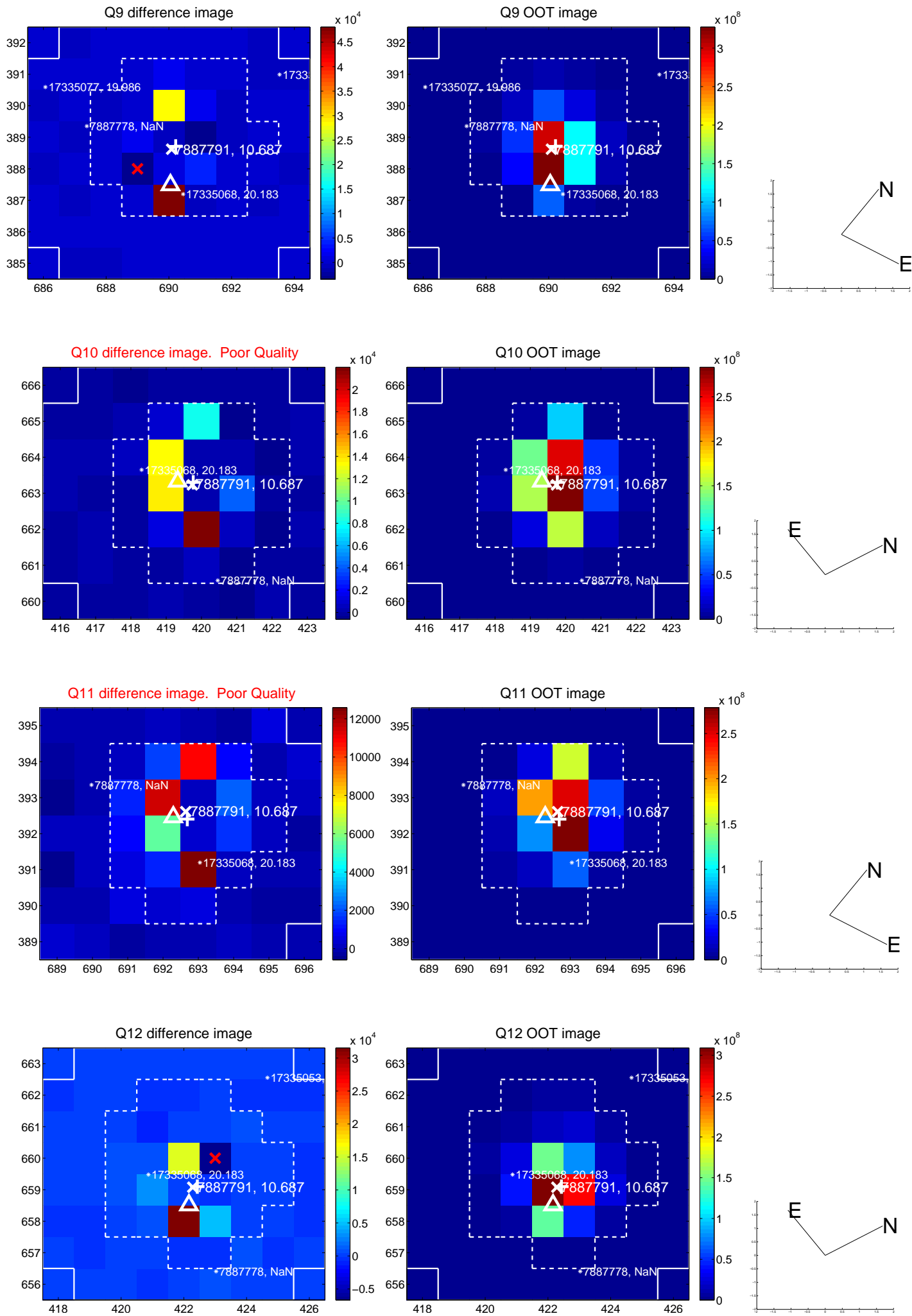
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



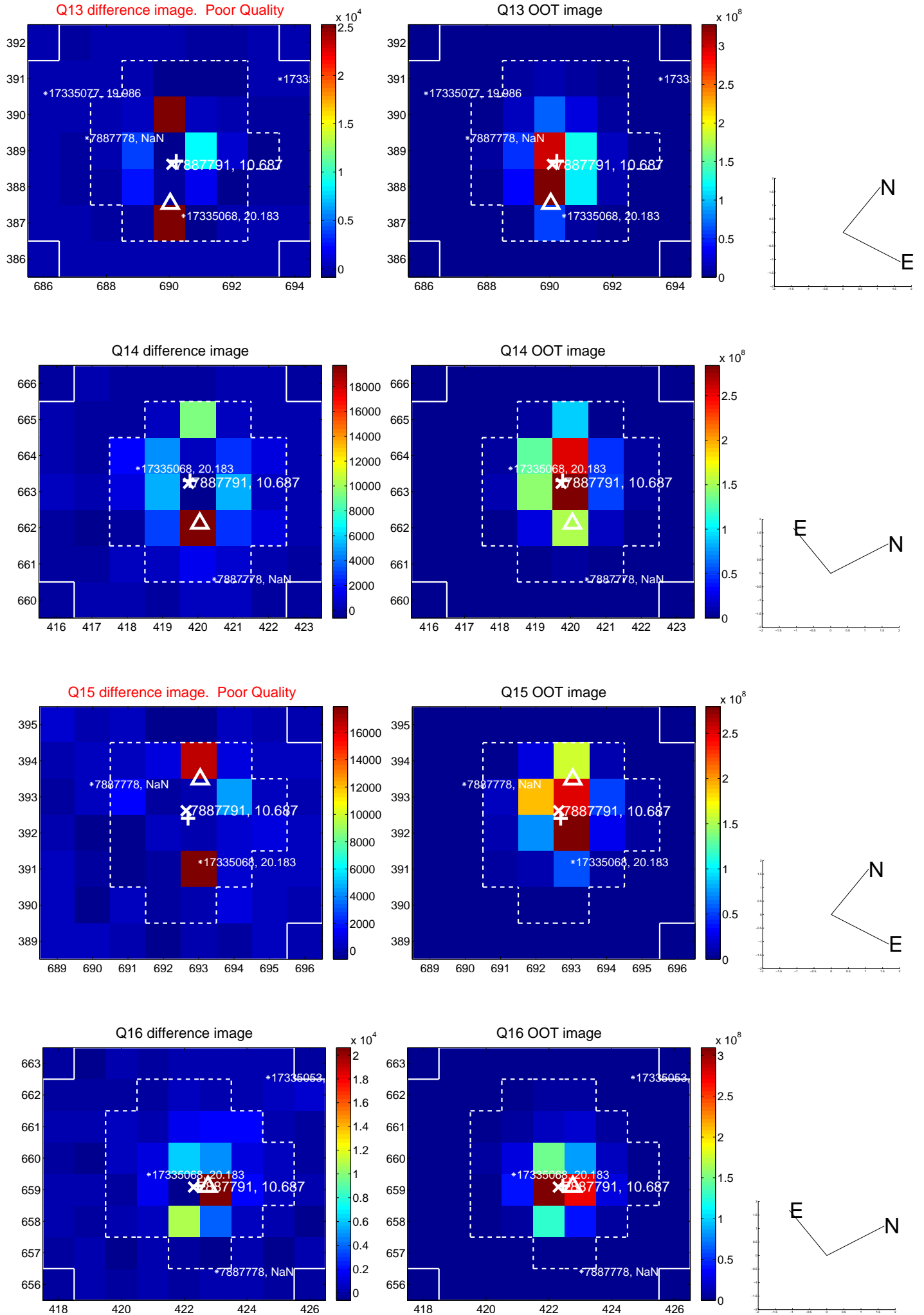
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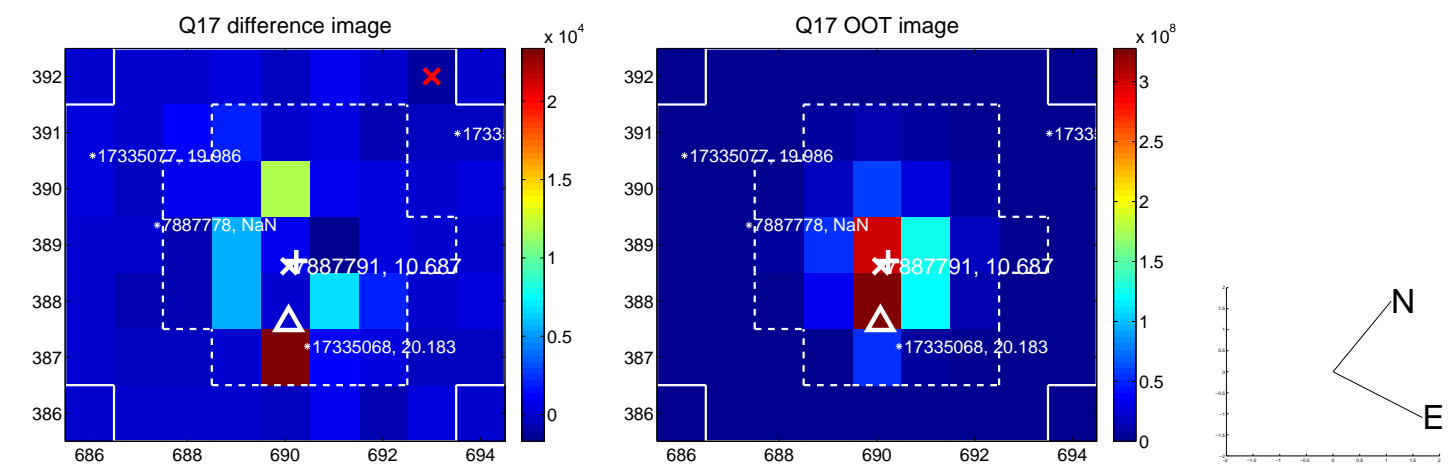
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



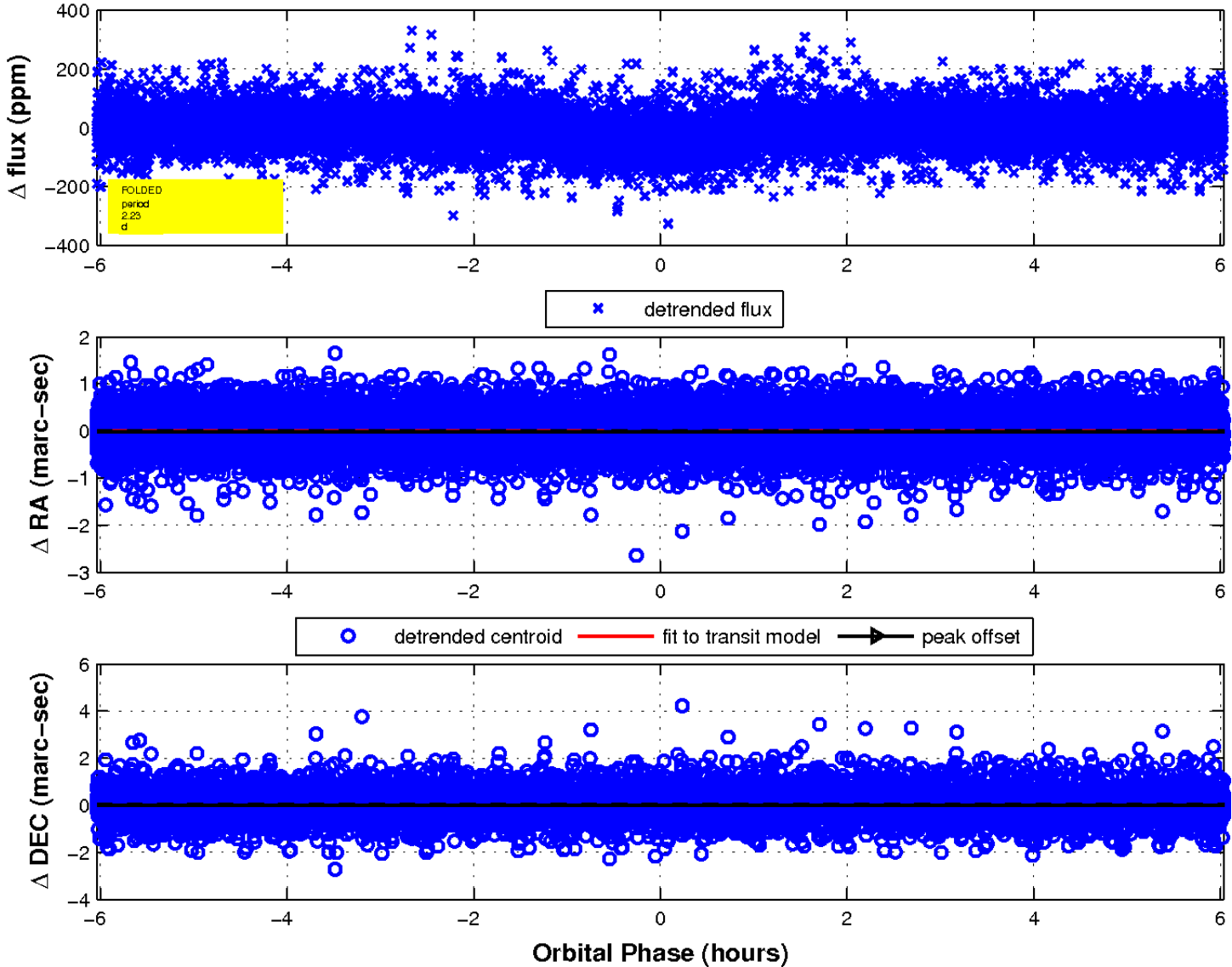
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

