

KIC 007432548

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})
007432548-01	OBS	No	4.090766	134.824242	6.5	28.431	10.8	11.9	3.74	7244	0.97	8253.27

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007432548-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL —LPP_DV —CENT_SATURATED

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

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

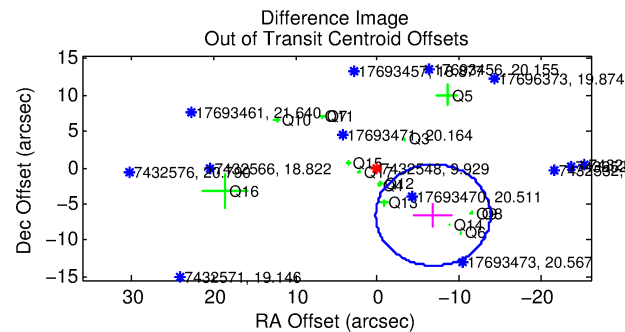
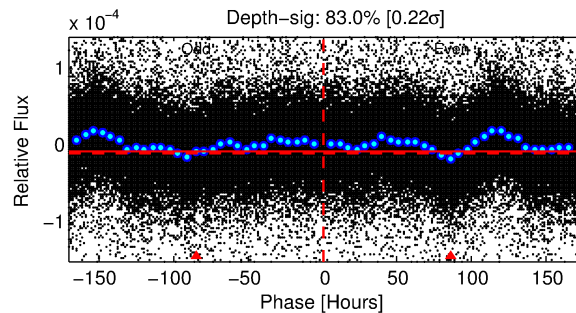
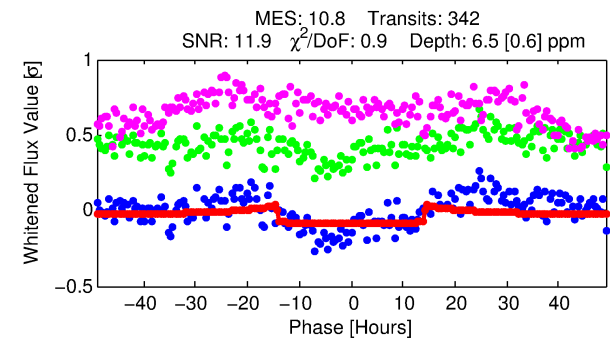
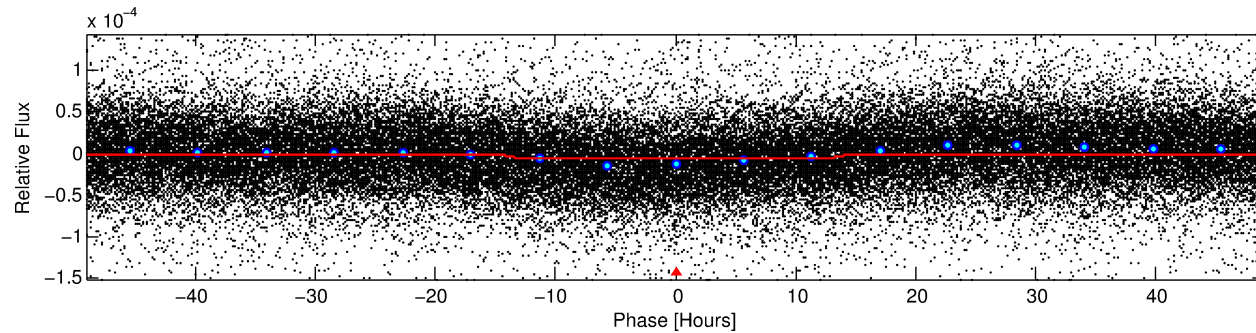
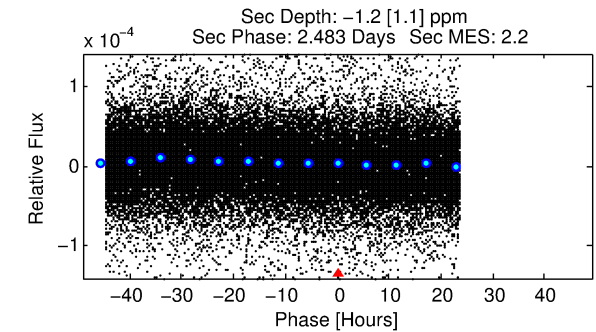
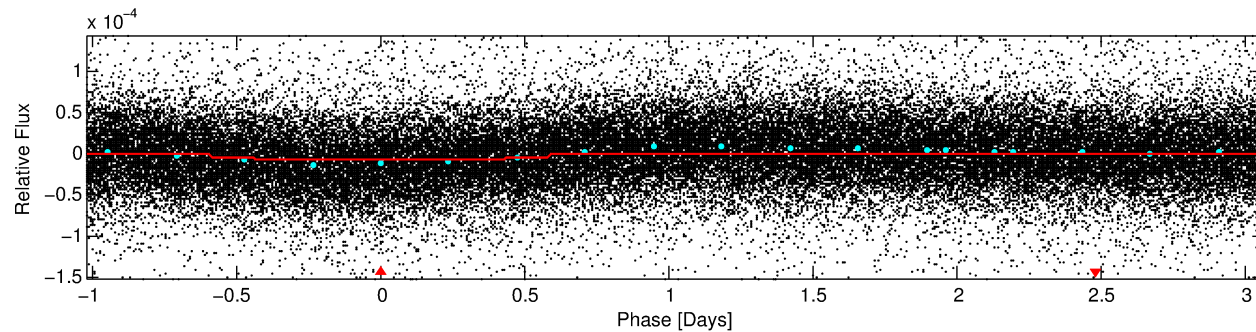
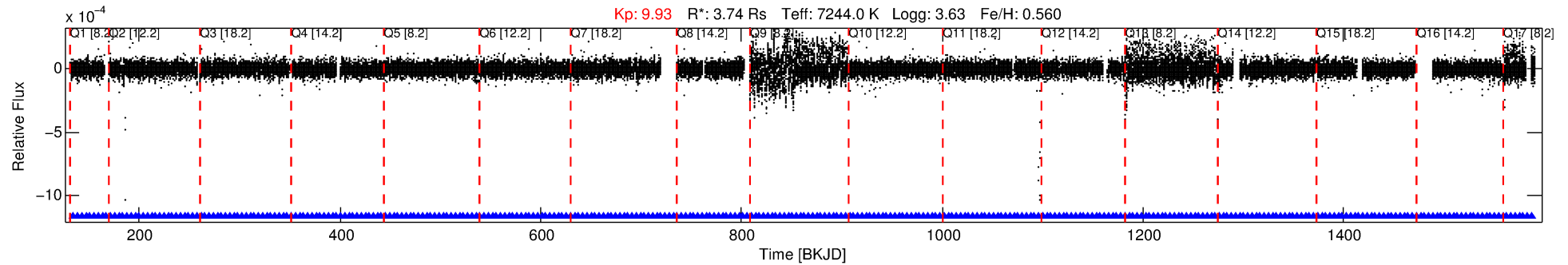
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007432548-01

No Significant Match Found

DV One-Page Summary

KIC: 7432548 Candidate: 1 of 1 Period: 4.091 d



DV Fit Results:

Period = 4.09077 [0.00006] d
Epoch = 134.8242 [0.0098] BKJD
Rp/R* = 0.0024 [0.0011]
a/R* = 1.25 [1.19]
b = 0.32 [7.58]
Seff = 8253.27 [7695.06]
Teff = 2430 [567] K
Rp = 0.97 [0.68] Re
a = 0.0647 [0.0338] AU
Ag = N/A
Teffp = N/A

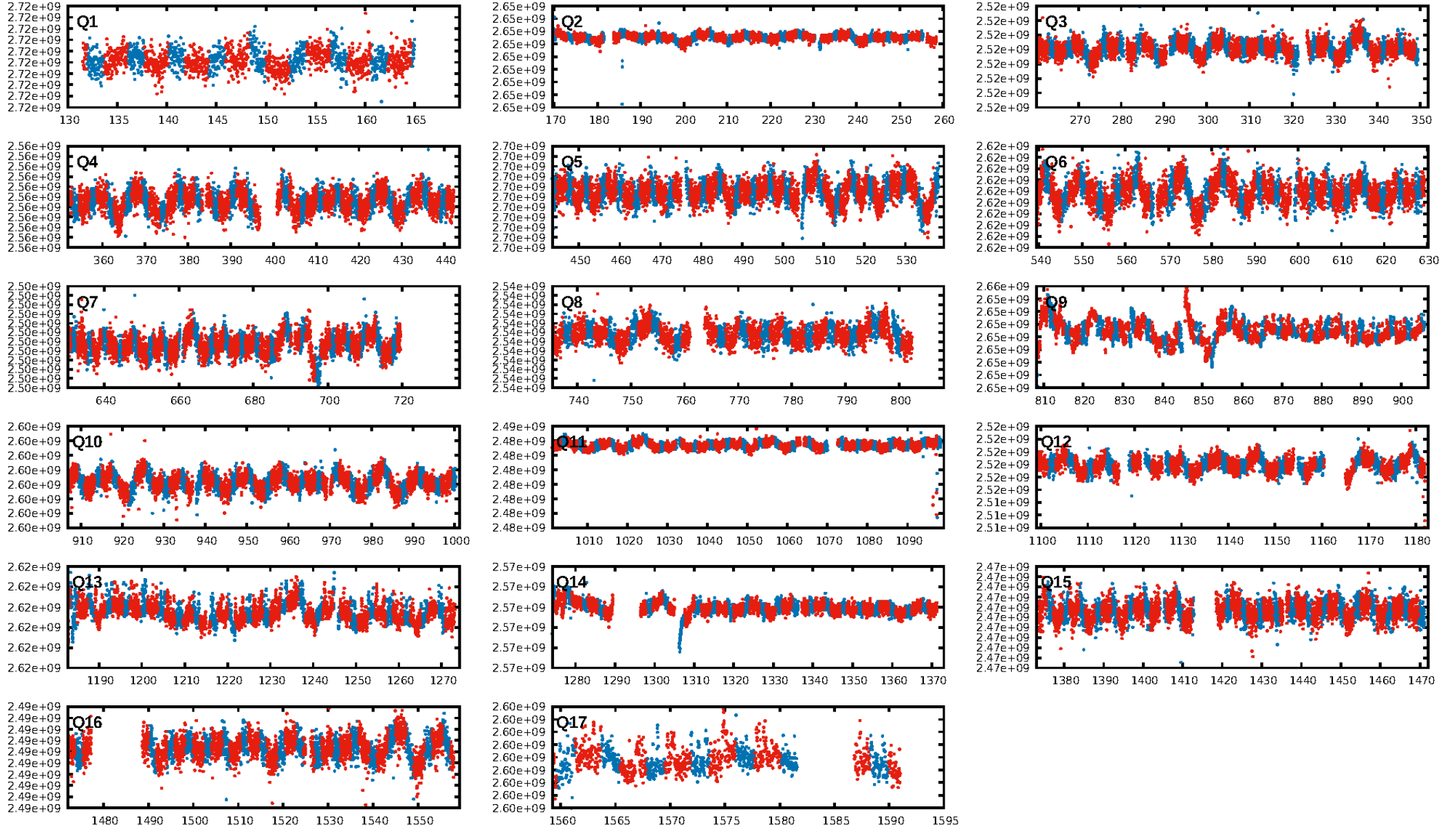
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.28e-37
RollingBand-fgt: 1.00 [327/327]
GhostDiagnostic-chr: N/A
Centroid-sig: 0.0%
Centroid-so: 7.338 arcsec [3.85σ]
OotOffset-rm: 9.422 arcsec [4.04σ]
KicOffset-rm: 9.551 arcsec [4.45σ]
OotOffset-st: 3/4/4/4 [15]
KicOffset-st: 3/4/4/4 [15]
DiffImageQuality-fgm: 0.27 [4/15]
DiffImageOverlap-fno: 1.00 [17/17]

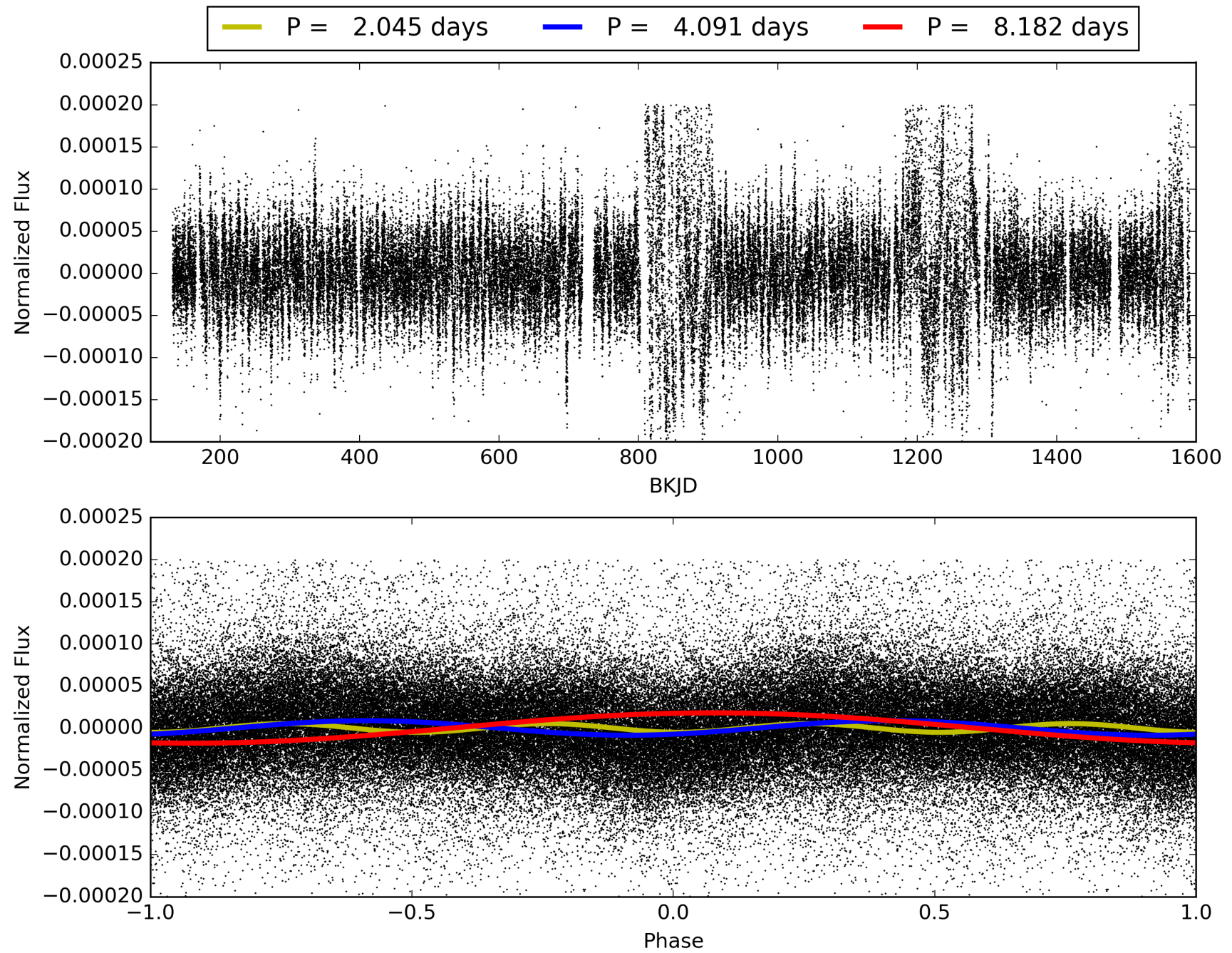
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 18:01:33 Z

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

TCE 007432548-01, PDC Light Curves

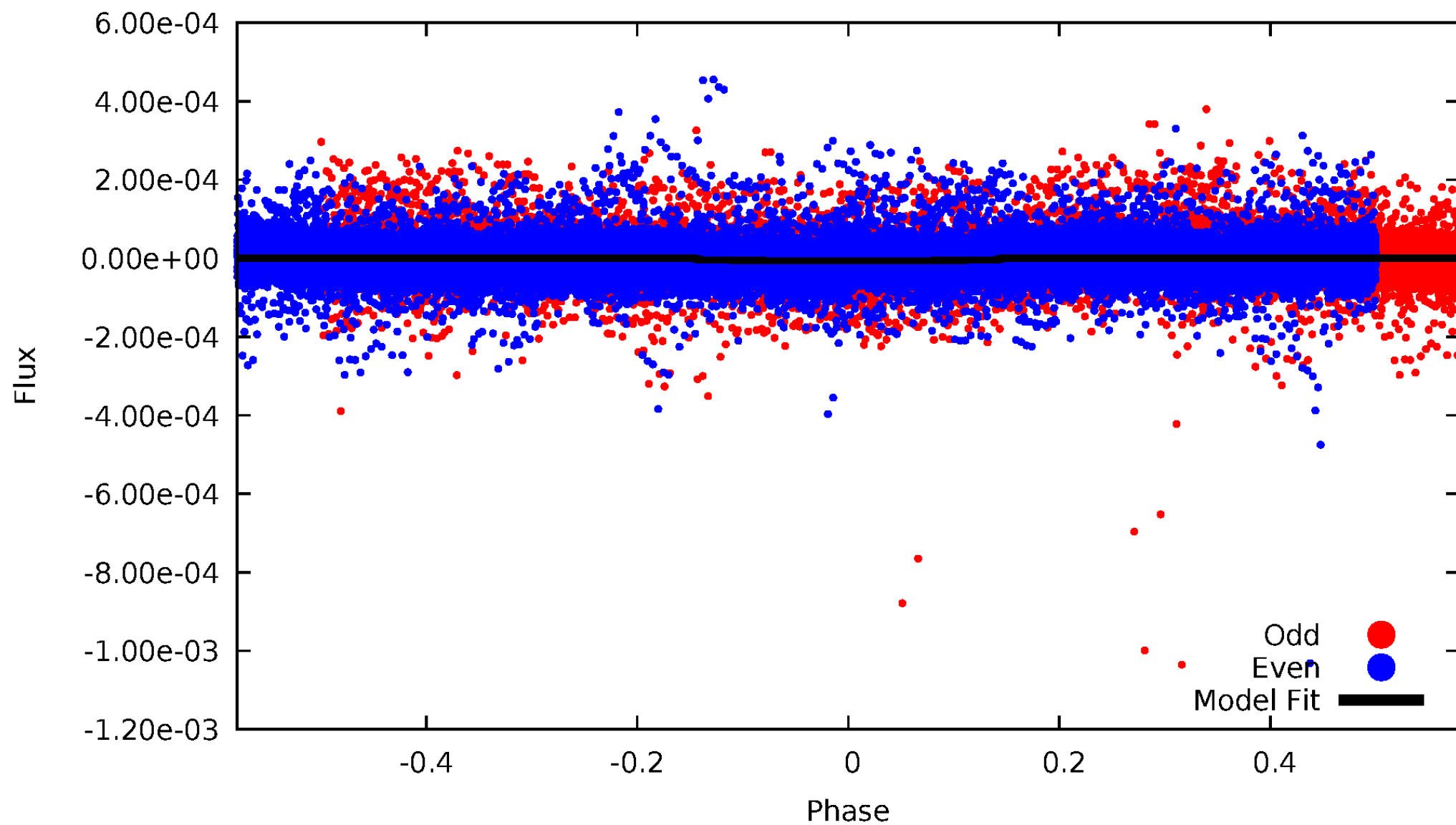


TCE 007432548-01



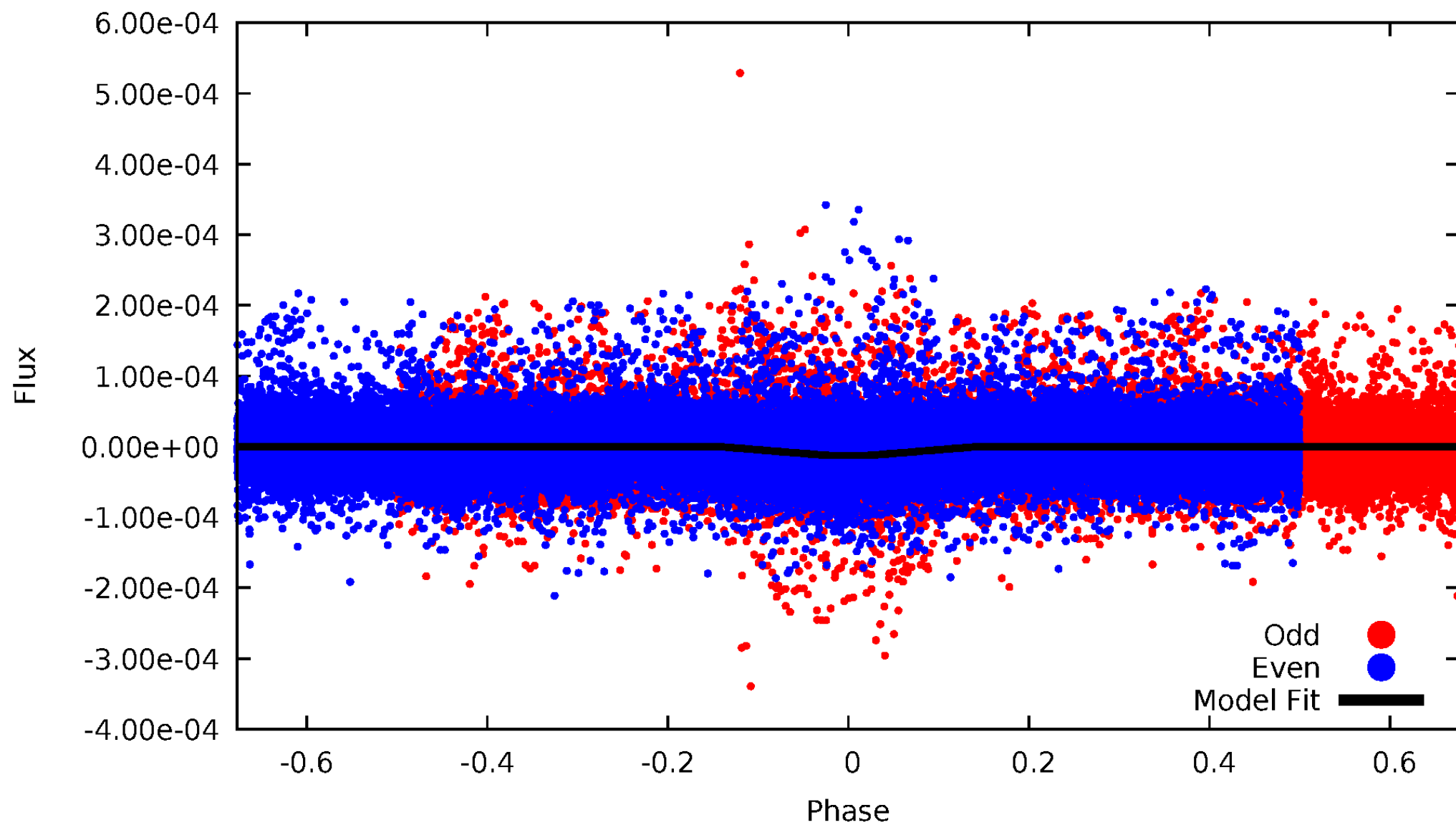
DV Odd/Even

TCE 007432548-01



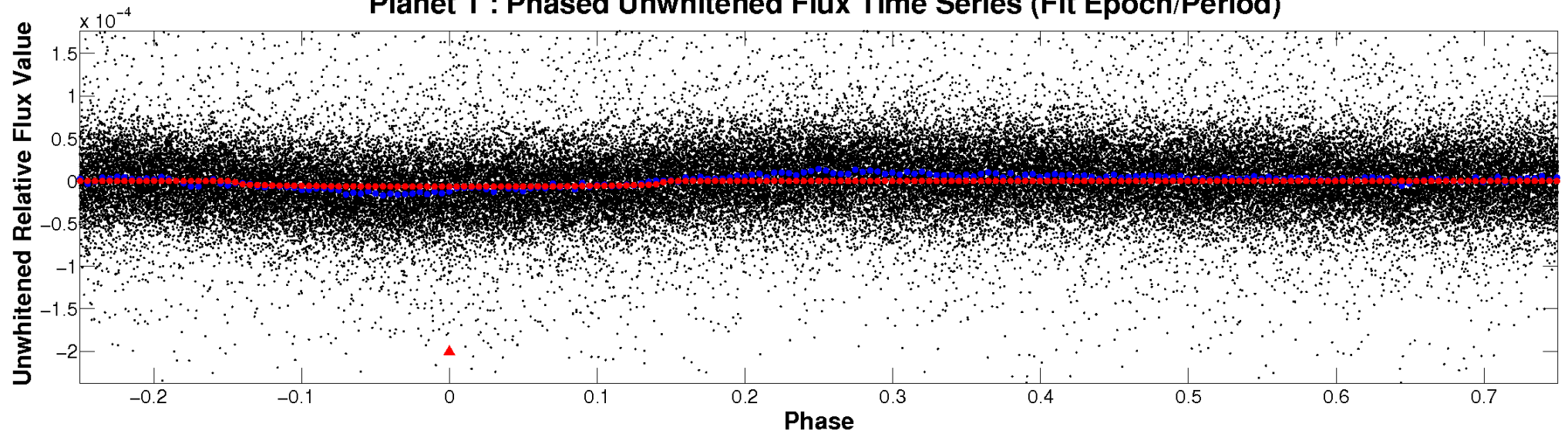
ALT Odd/Even

TCE 007432548-01

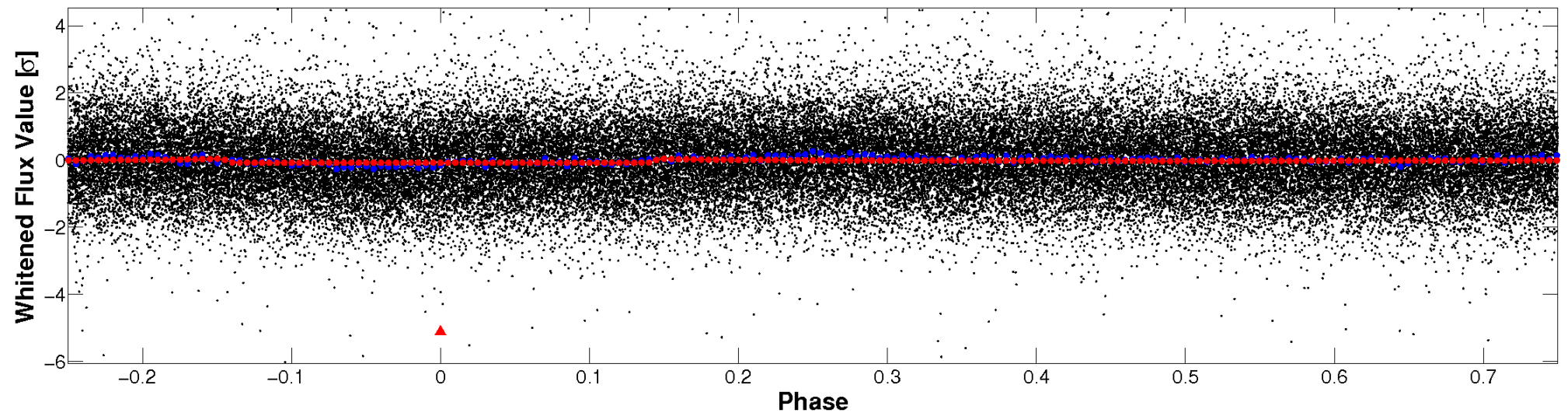


Non-Whitened Vs. Whitened Light Curve

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

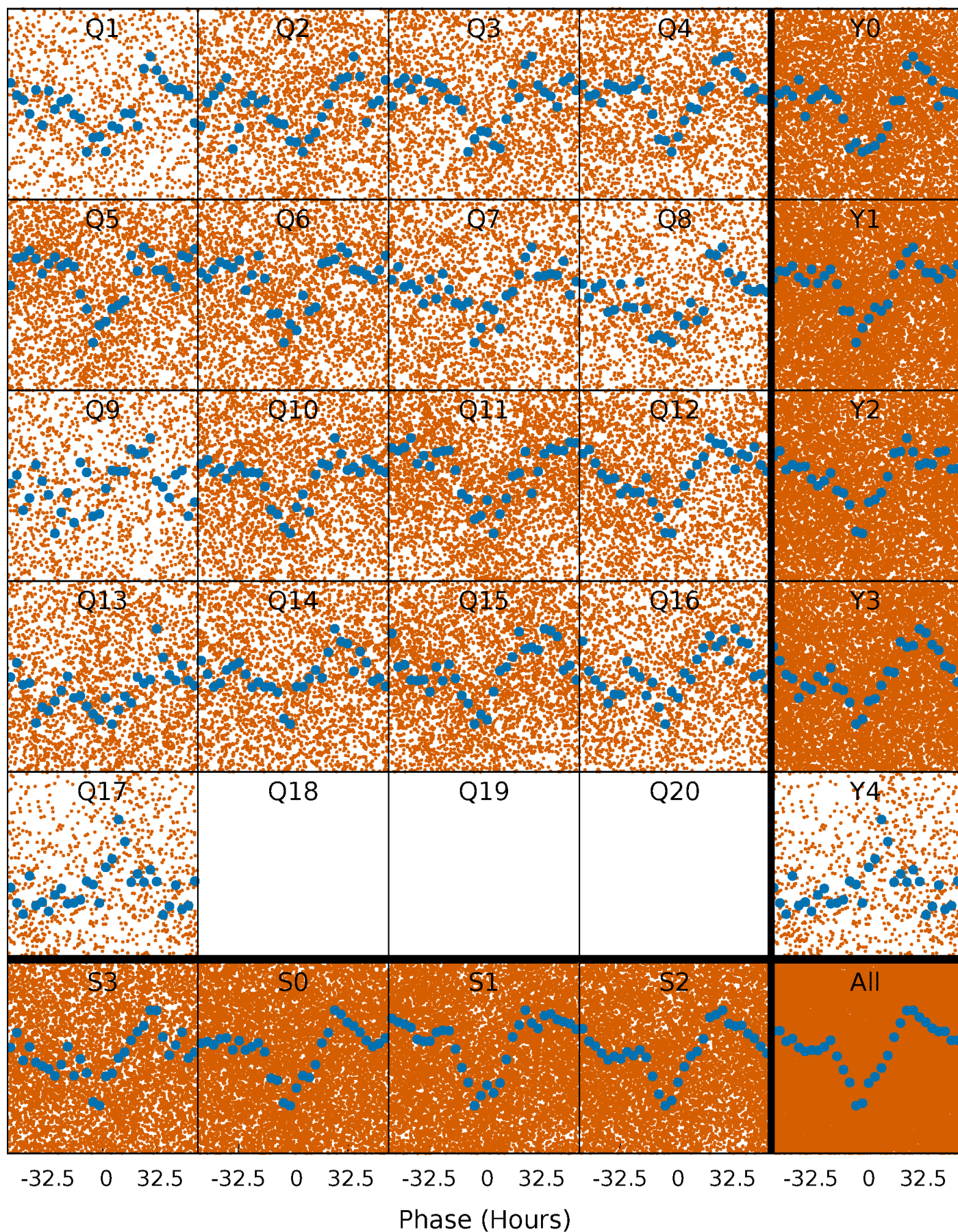


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



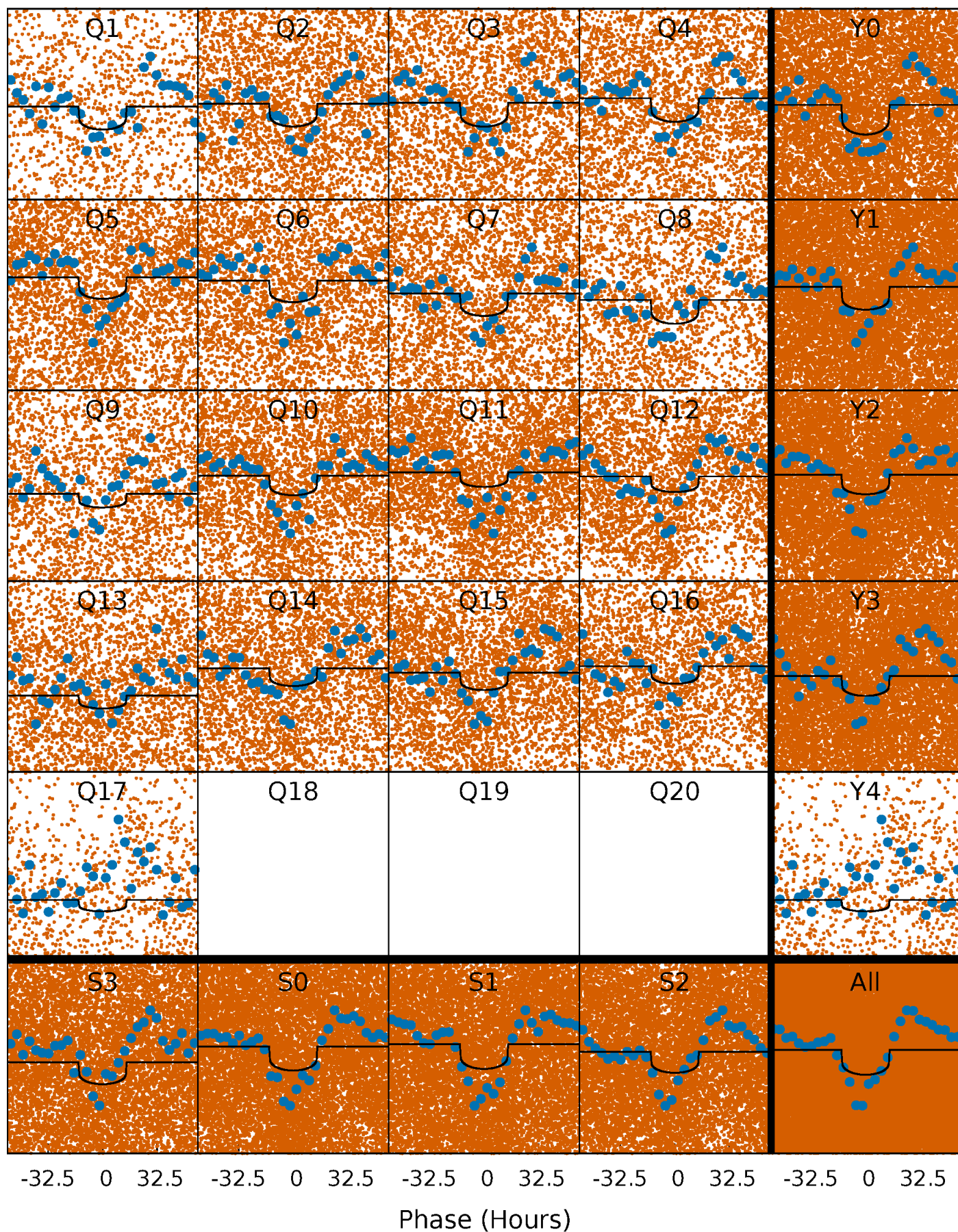
PDC Quarter-Phased Transit Curves

TCE 007432548-01 P= 4.090766 Days $T_0=134.824242$ (BKJD)



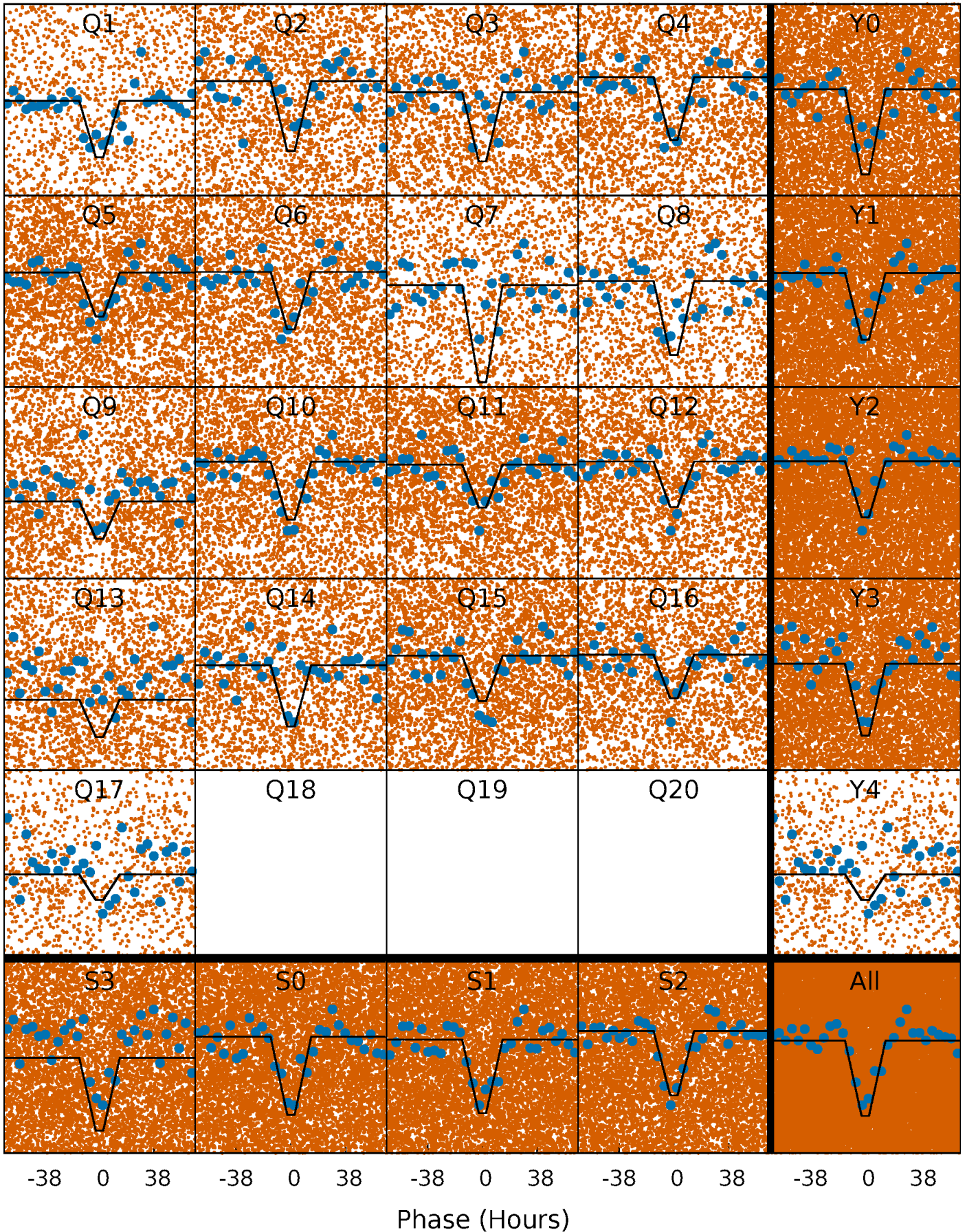
DV Quarter-Phased Transit Curves

TCE 007432548-01 P= 4.090766 Days $T_0=134.824242$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

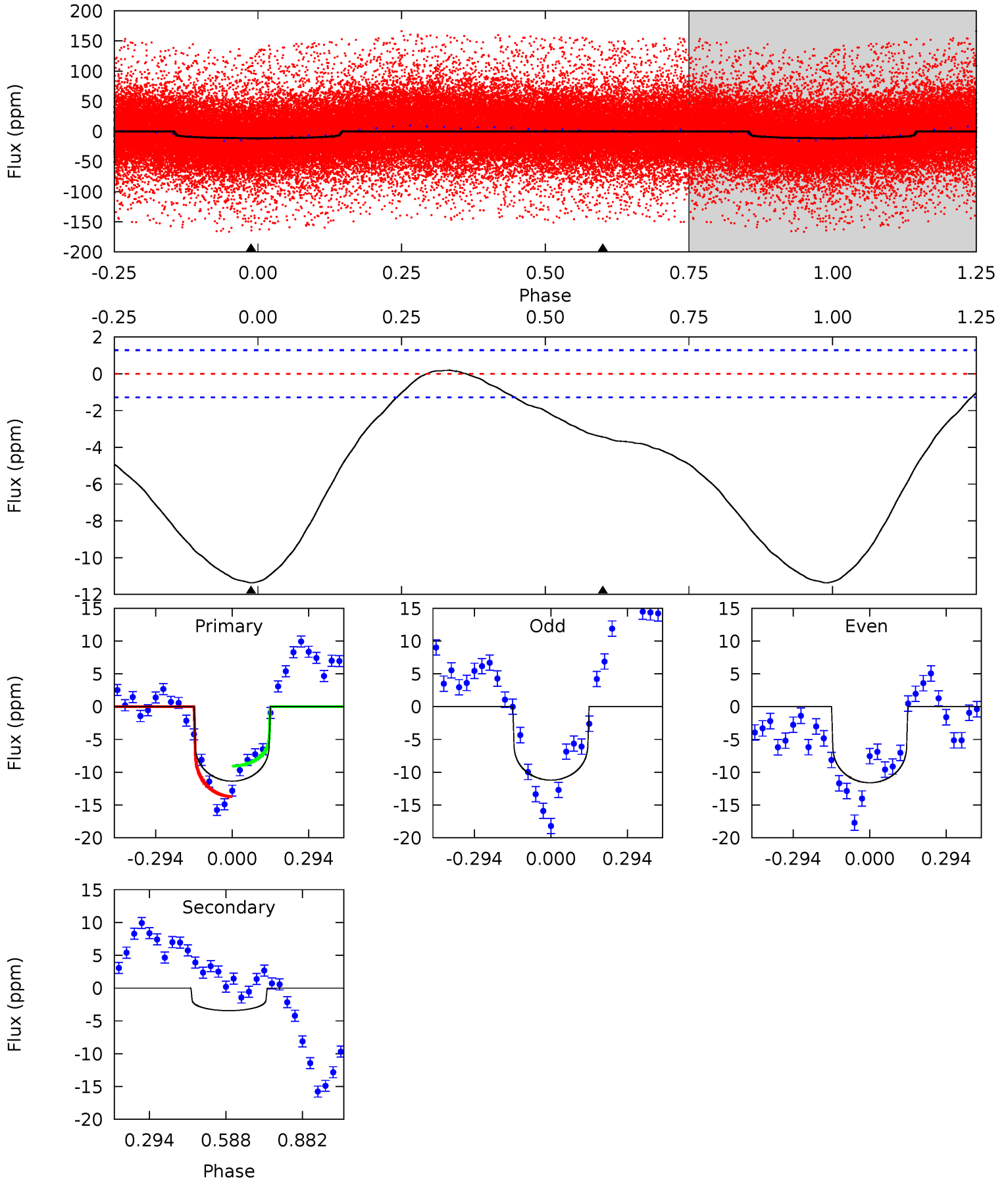
TCE 007432548-01 P= 4.090184 Days $T_0=134.820695$ (BKJD)



DV Model-Shift Uniqueness Test

007432548-01, P = 4.090766 Days, E = 130.733476 Days

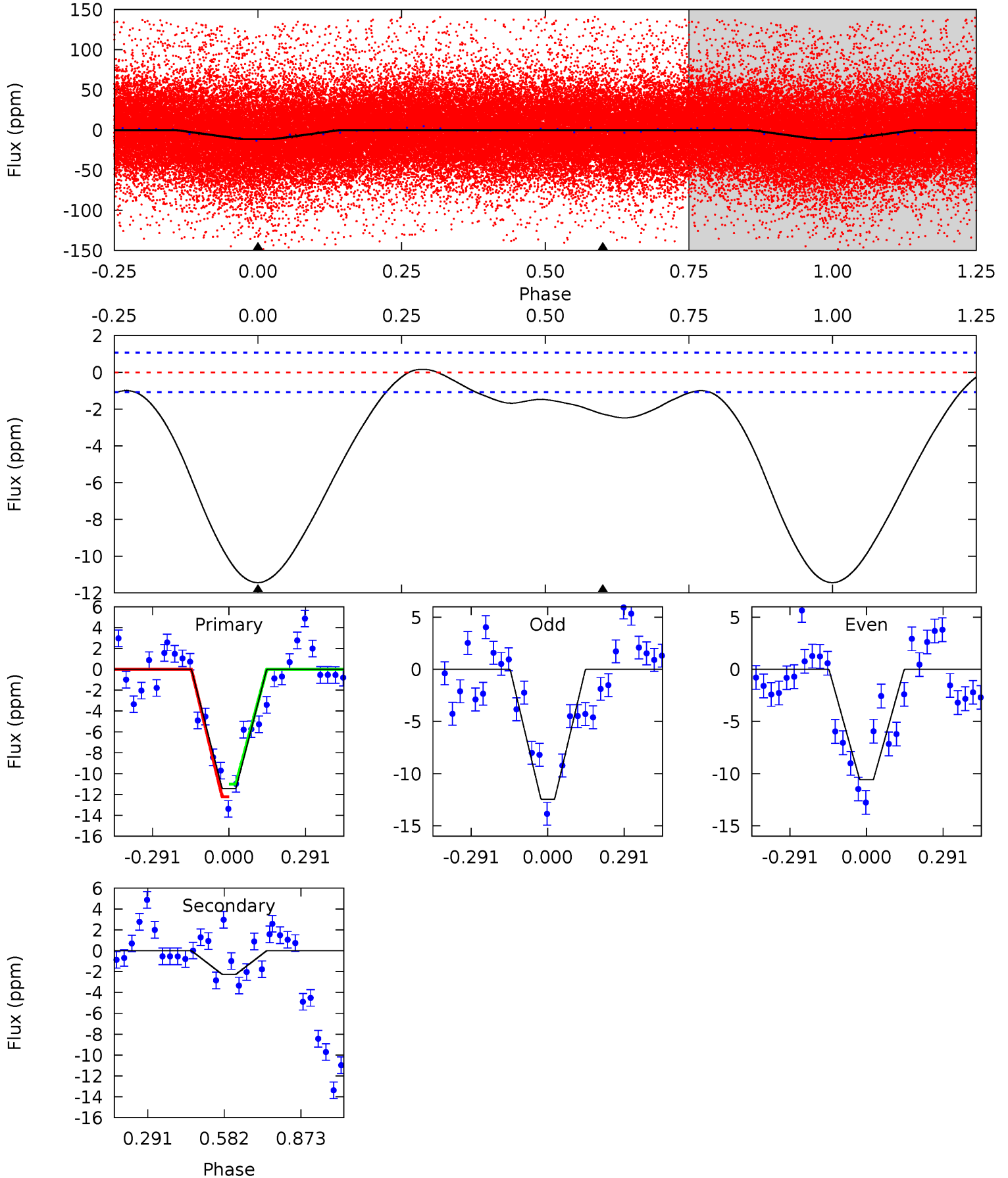
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
38.5	11.7	0	0	4.33	1.05	1.46	38.5	38.5	11.7	11.7	0.69	0.96	0.02	8.32



Alt Model-Shift Uniqueness Test

007432548-01, P = 4.090184 Days, E = 130.730511 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
46.2	9.15	0	0	4.34	1.06	0.88	46.2	46.2	9.15	9.15	3.74	0.88	0.01	2.48



Stellar Parameters For KIC 007432548

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7244^{+413}_{-672}	$3.626^{+0.510}_{-0.090}$	$0.560^{+0.050}_{-0.150}$	$3.744^{+0.645}_{-1.935}$	$2.160^{+0.242}_{-0.565}$	$0.058^{+0.329}_{-0.016}$
	+6%/-9%	+14%/-2%	+9%/-27%	+17%/-52%	+11%/-26%	+568%/-28%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 007432548-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-3 ± 0	$0.84^{+0.47}_{-0.41}$	3205^{+360}_{-494}	6173^{+2453}_{-1042}	11^{+30}_{-6}
Alt.	-2 ± 0	$1.28^{+0.49}_{-0.50}$	3220^{+348}_{-452}	4671^{+973}_{-575}	$3.177^{+4.628}_{-1.534}$

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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

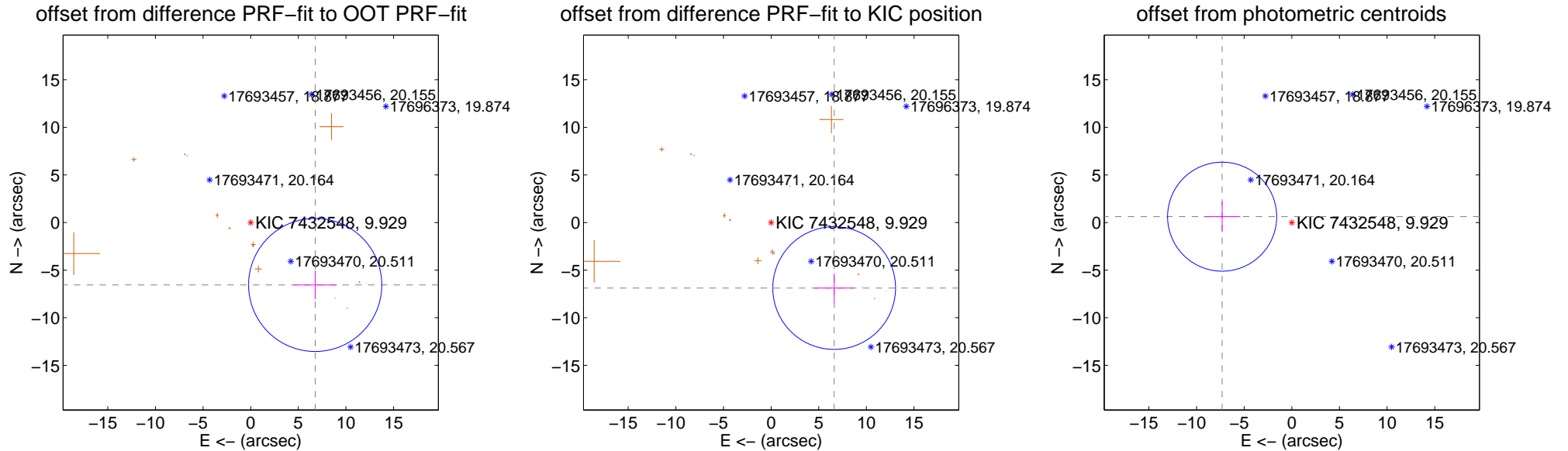
DV Centroid Data

Supplemental centroid analysis for 007432548-01. **Kepler magnitude: 9.93.** Transit SNR 11.86

There are 4 quarters with good PRF difference image offsets

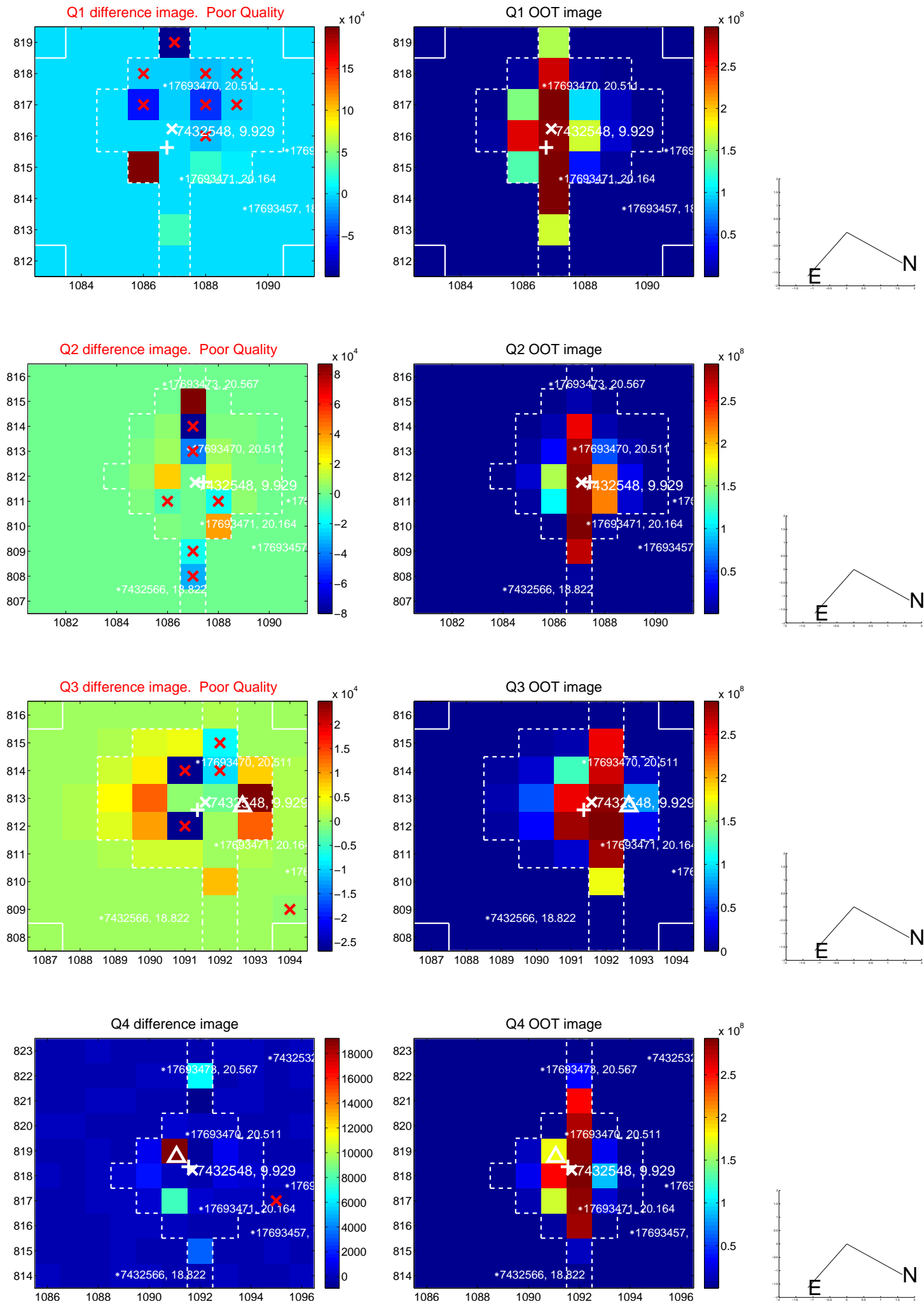
The OOT PRF centroid is offset from the target star catalog position by about 2.27 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	9.422 ± 2.330	4.04	-6.768 ± 2.271	-6.554 ± 1.509
PRF-fit source offset from KIC position	9.551 ± 2.147	4.45	-6.621 ± 2.073	-6.883 ± 1.526
photometric centroid source offset	7.34 ± 1.91	3.85	7.31 ± 1.91	0.62 ± 1.59

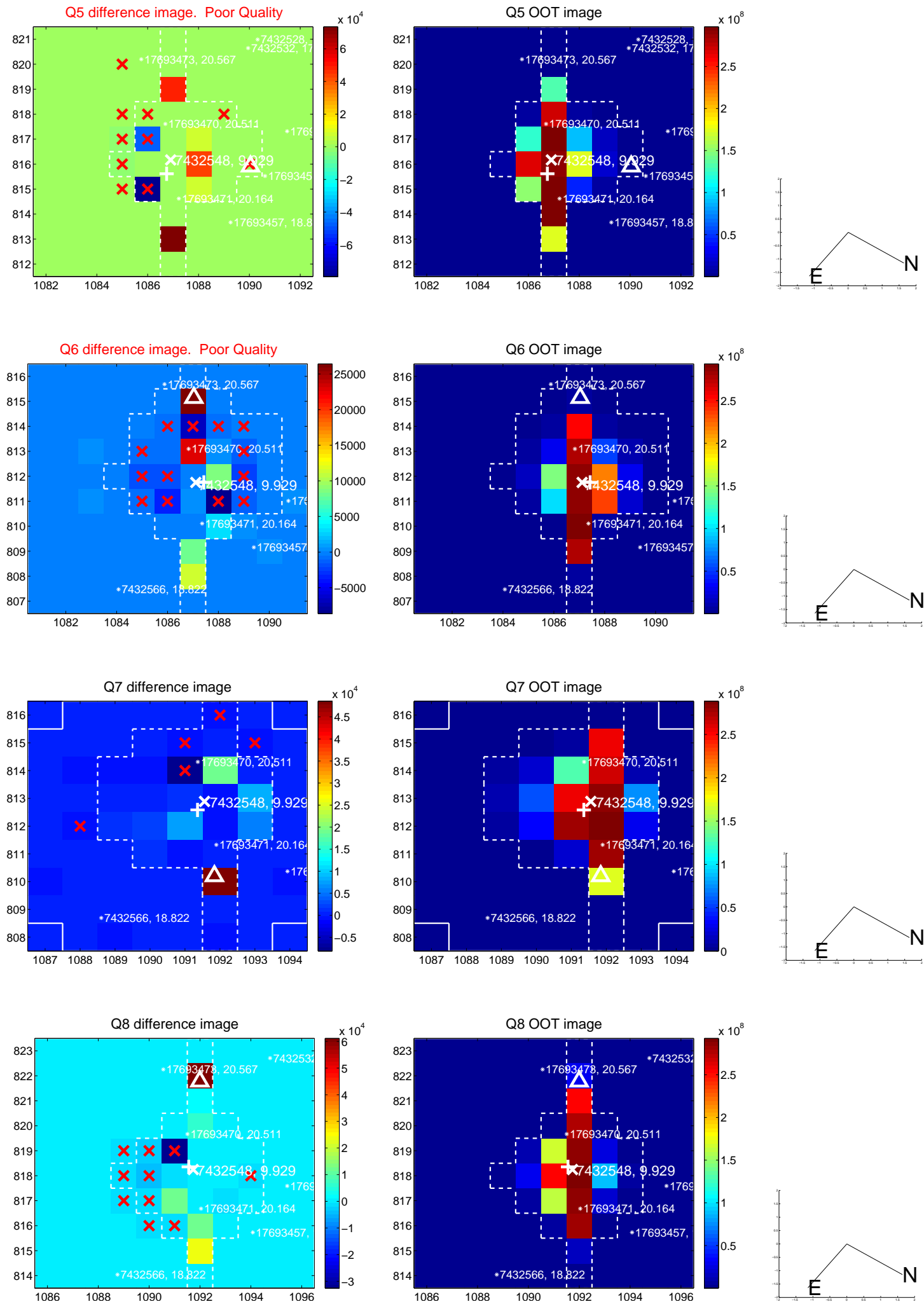


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- 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.

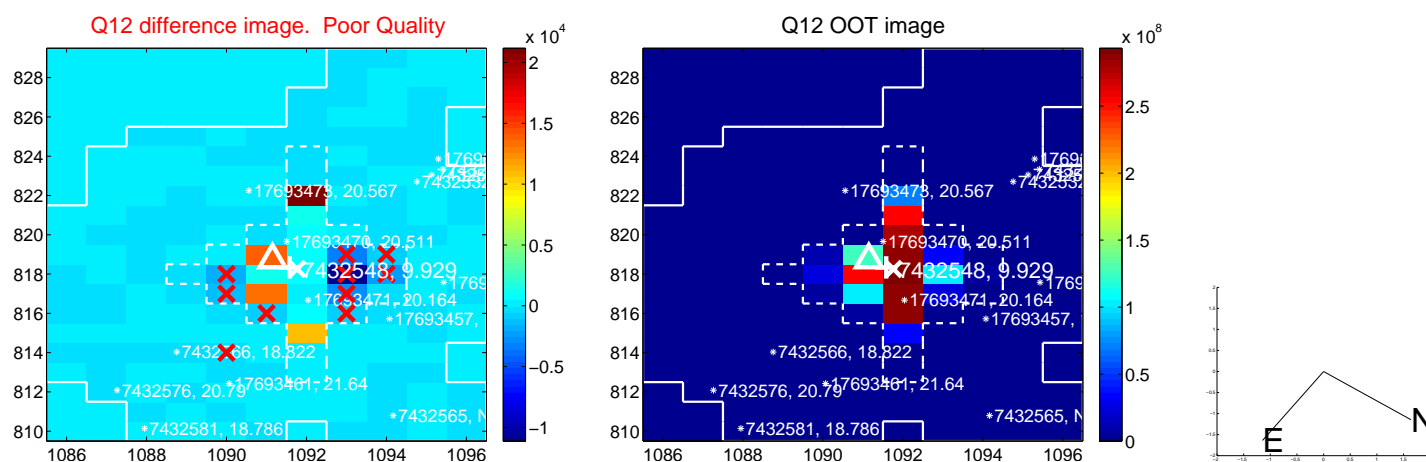
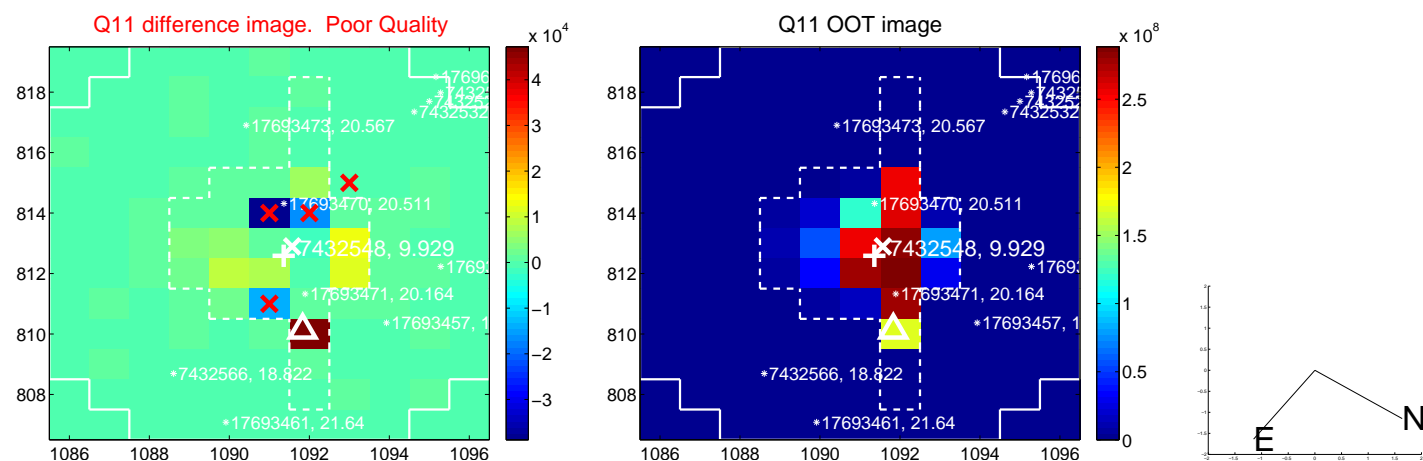
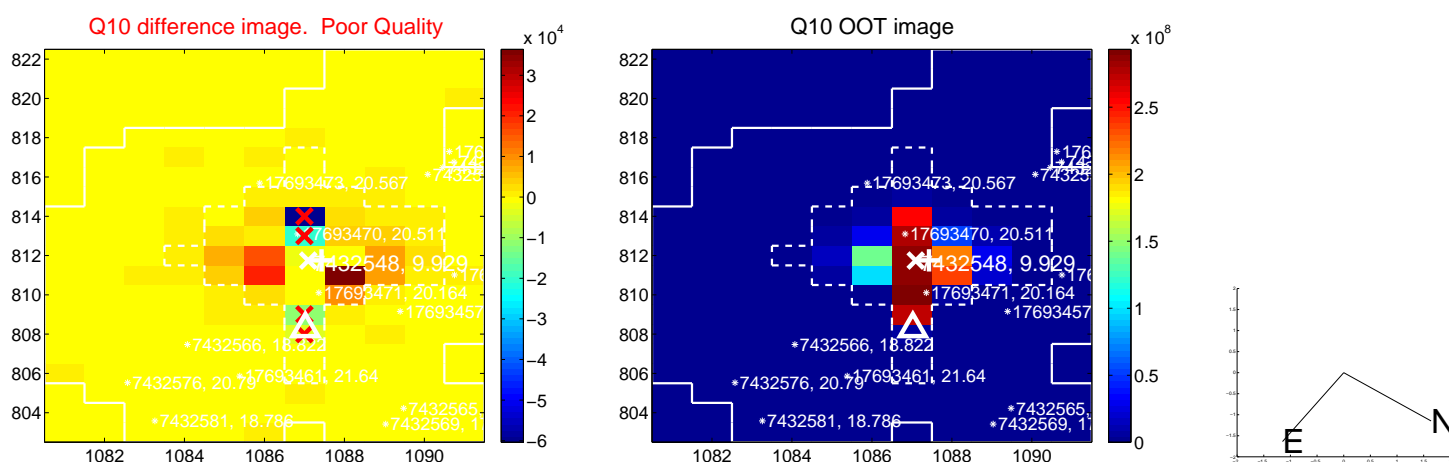
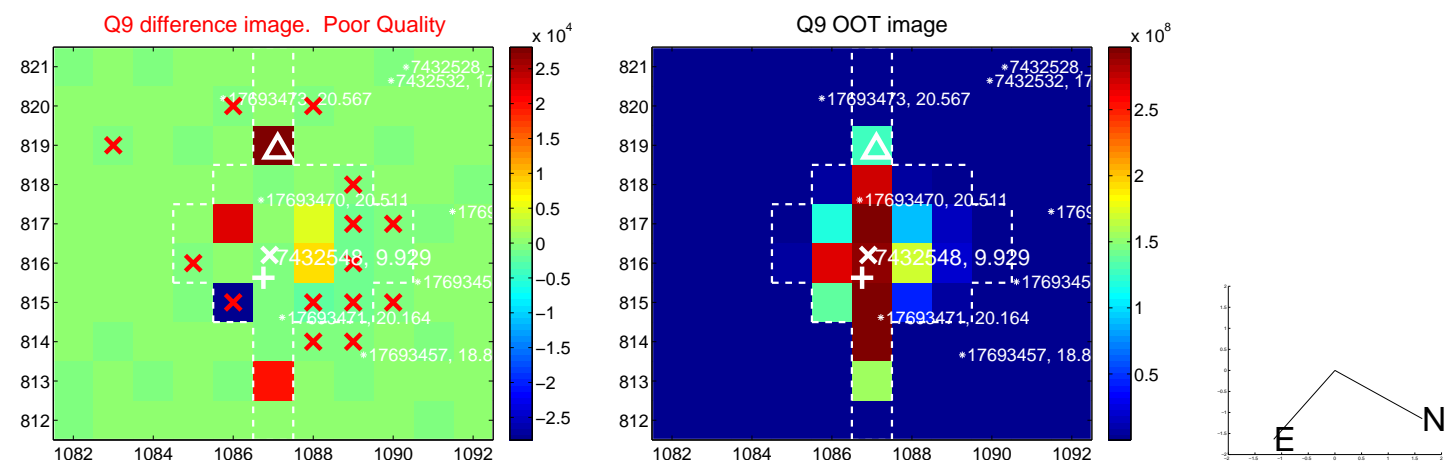
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



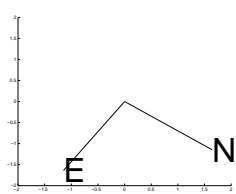
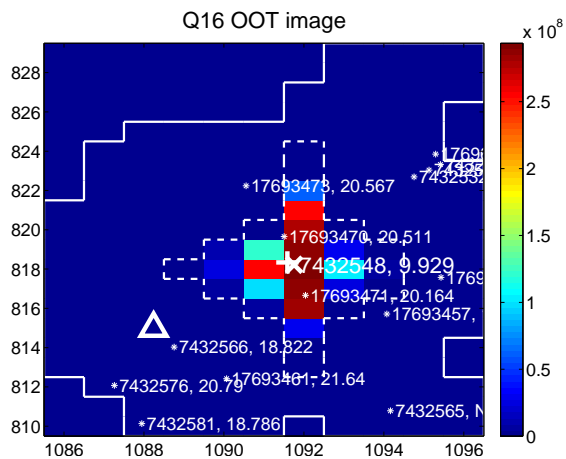
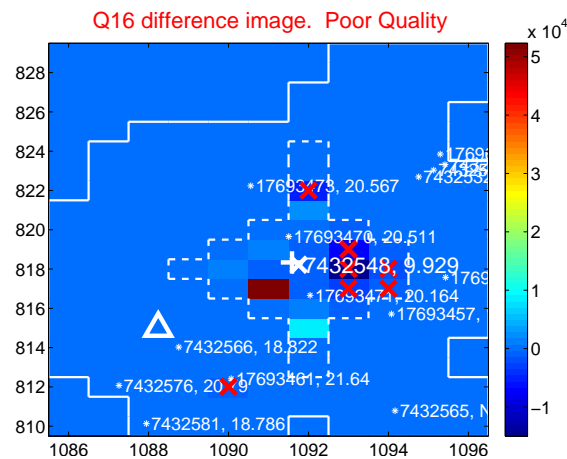
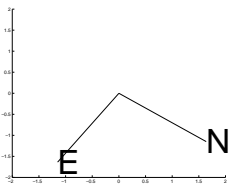
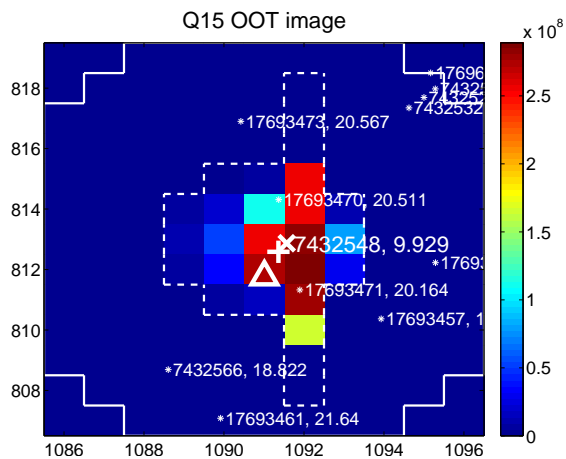
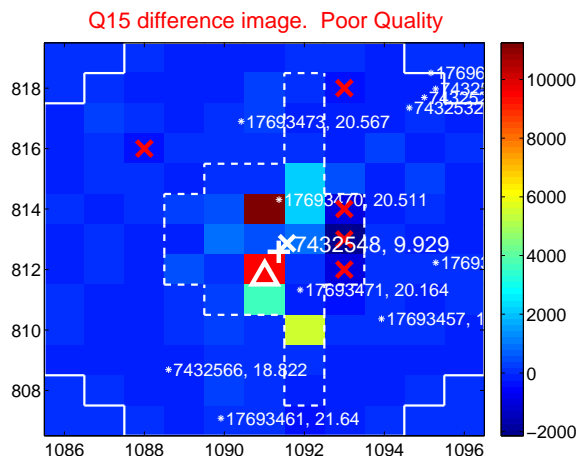
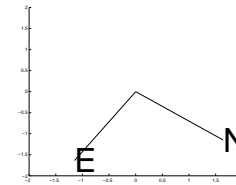
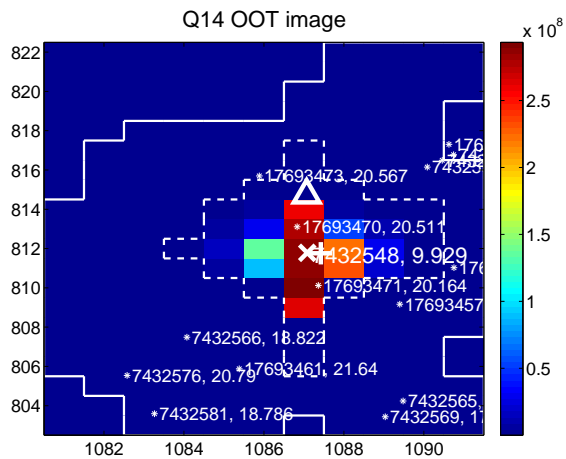
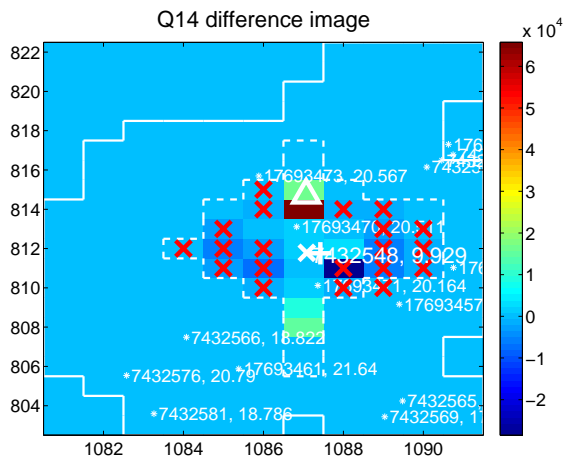
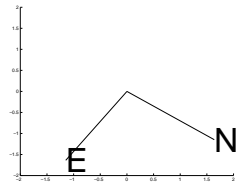
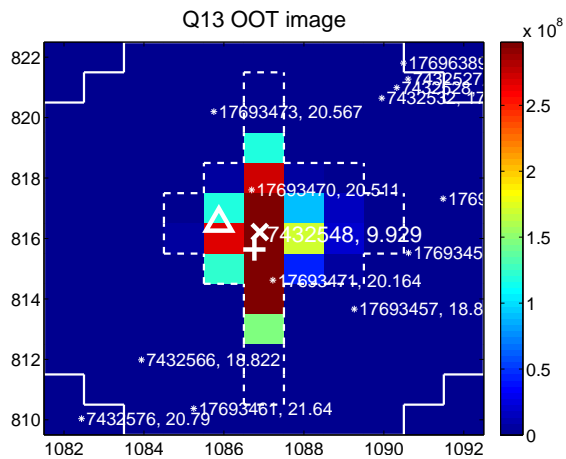
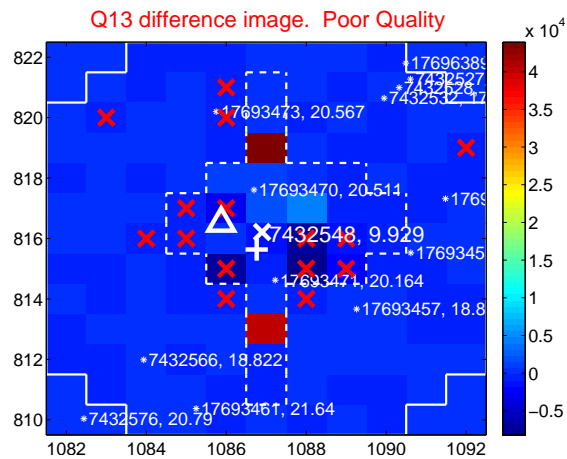
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



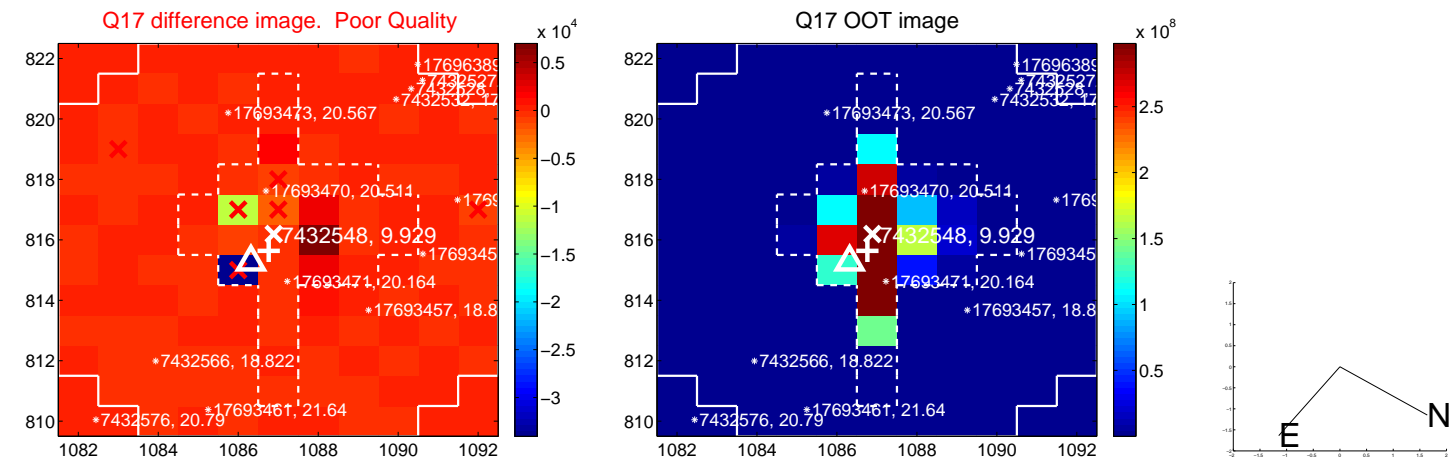
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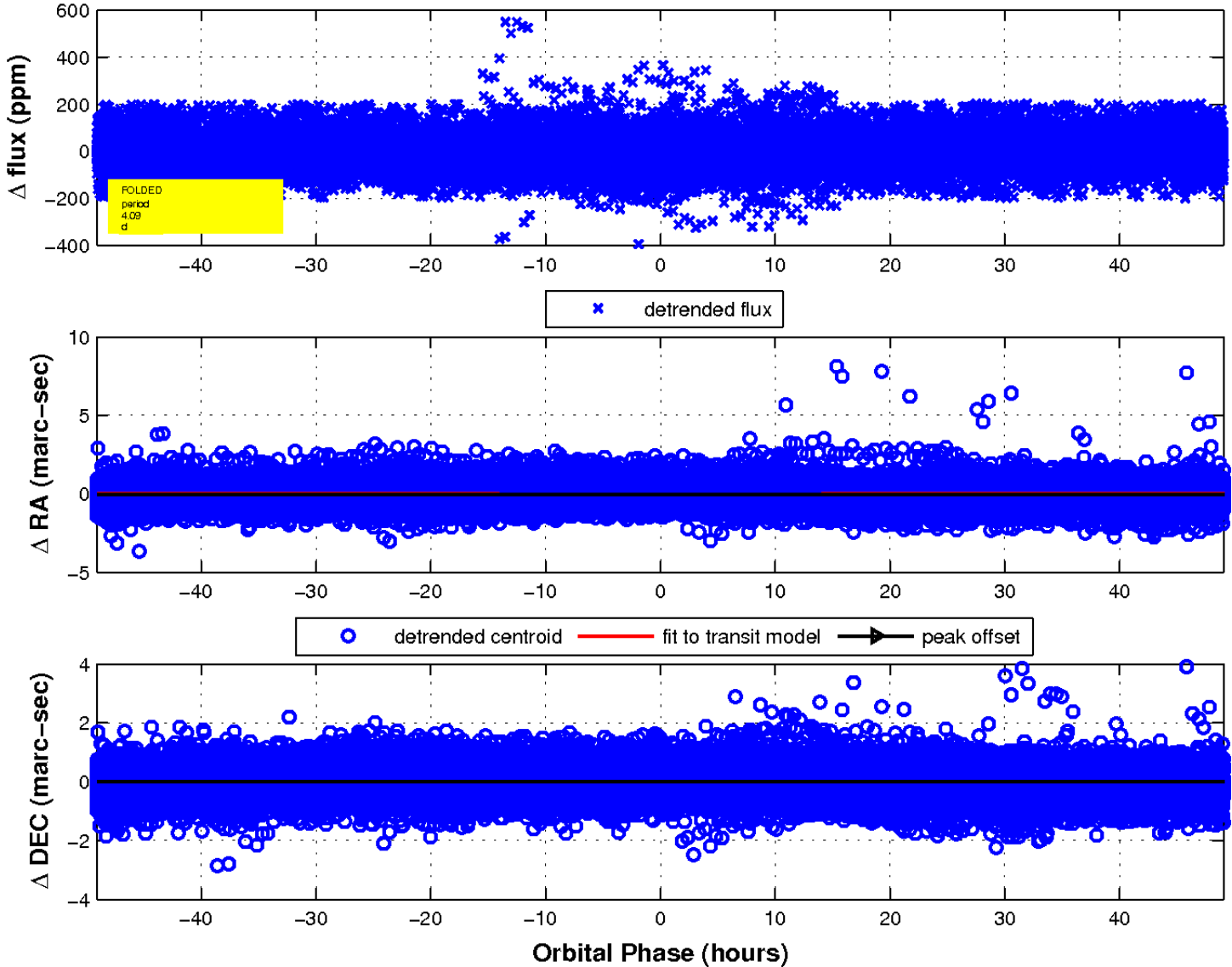
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

