

KIC 008745553

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})
008745553-01	OBS	5568.01	62.136630	154.030150	153.5	10.955	9.6	9.3	4.91	5889	6.67	173.29

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008745553-01	OBS	PC	0.81	0	0	0	0	NO_COMMENT

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 008745553-01

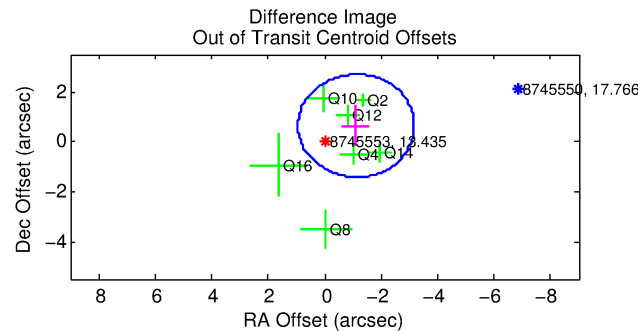
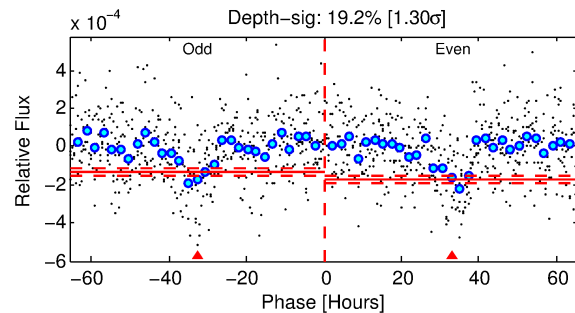
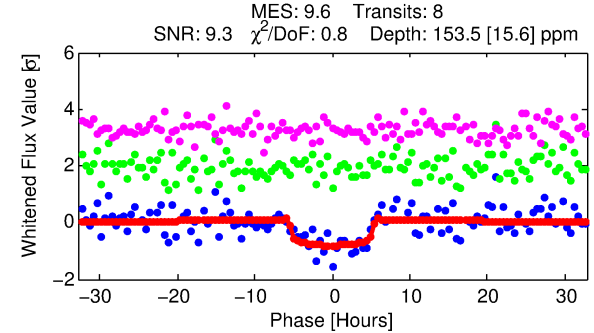
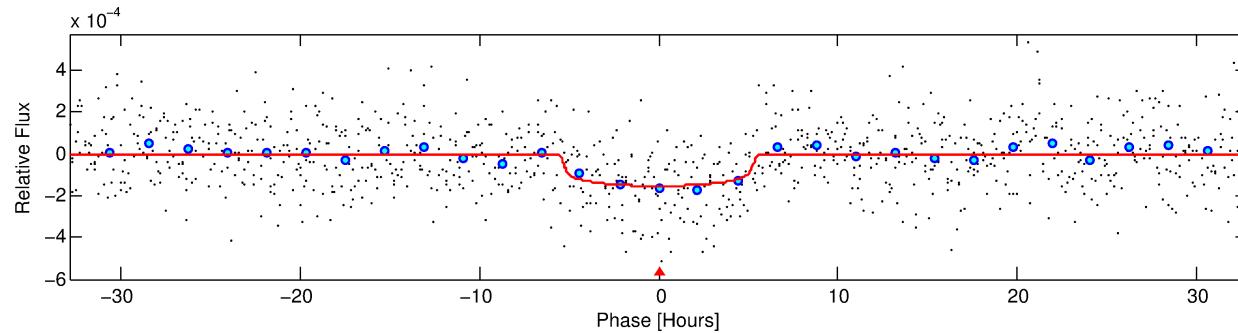
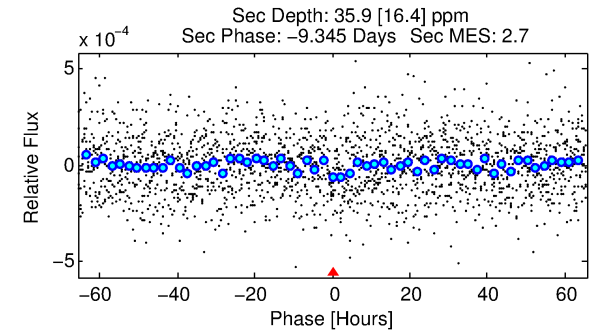
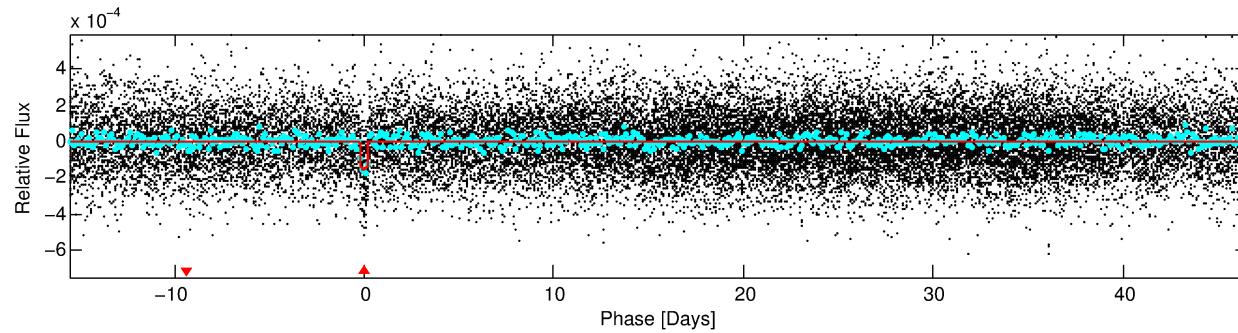
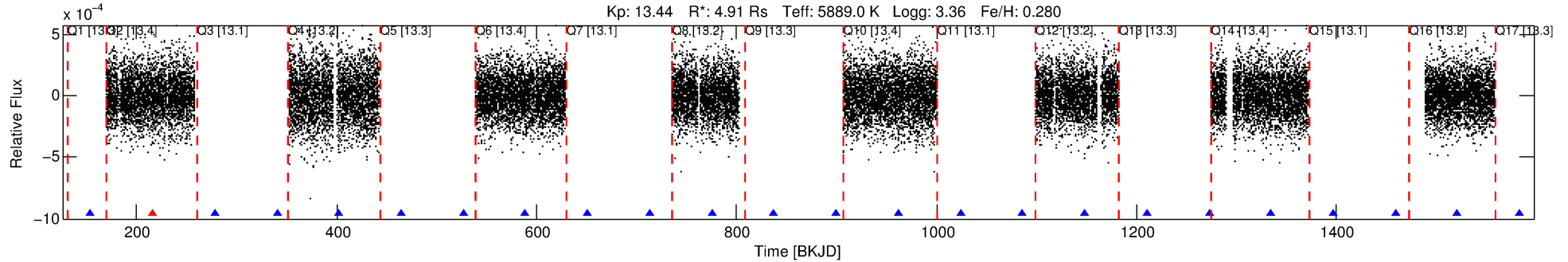
No Significant Match Found

DV One-Page Summary

KIC: 8745553 Candidate: 1 of 1 Period: 62.137 d

KOI: K05568 Corr: No Ephemeris Match

Kp: 13.44 R*: 4.91 Rs Teff: 5889.0 K Logg: 3.36 Fe/H: 0.280



DV Fit Results:

Period = 62.13663 [0.00122] d
Epoch = 154.0301 [0.0170] BKJD
Rp/R* = 0.0124 [0.0056]
a/R* = 28.33 [59.12]
b = 0.77 [1.10]
Seff = 173.29 [132.71]
Teq = 925 [177] K
Rp = 6.67 [4.44] Re
a = 0.3873 [0.1838] AU
Ag = 66.57 [84.62] [0.77σ]
Teffp = 4086 [1040] K [3.00σ]

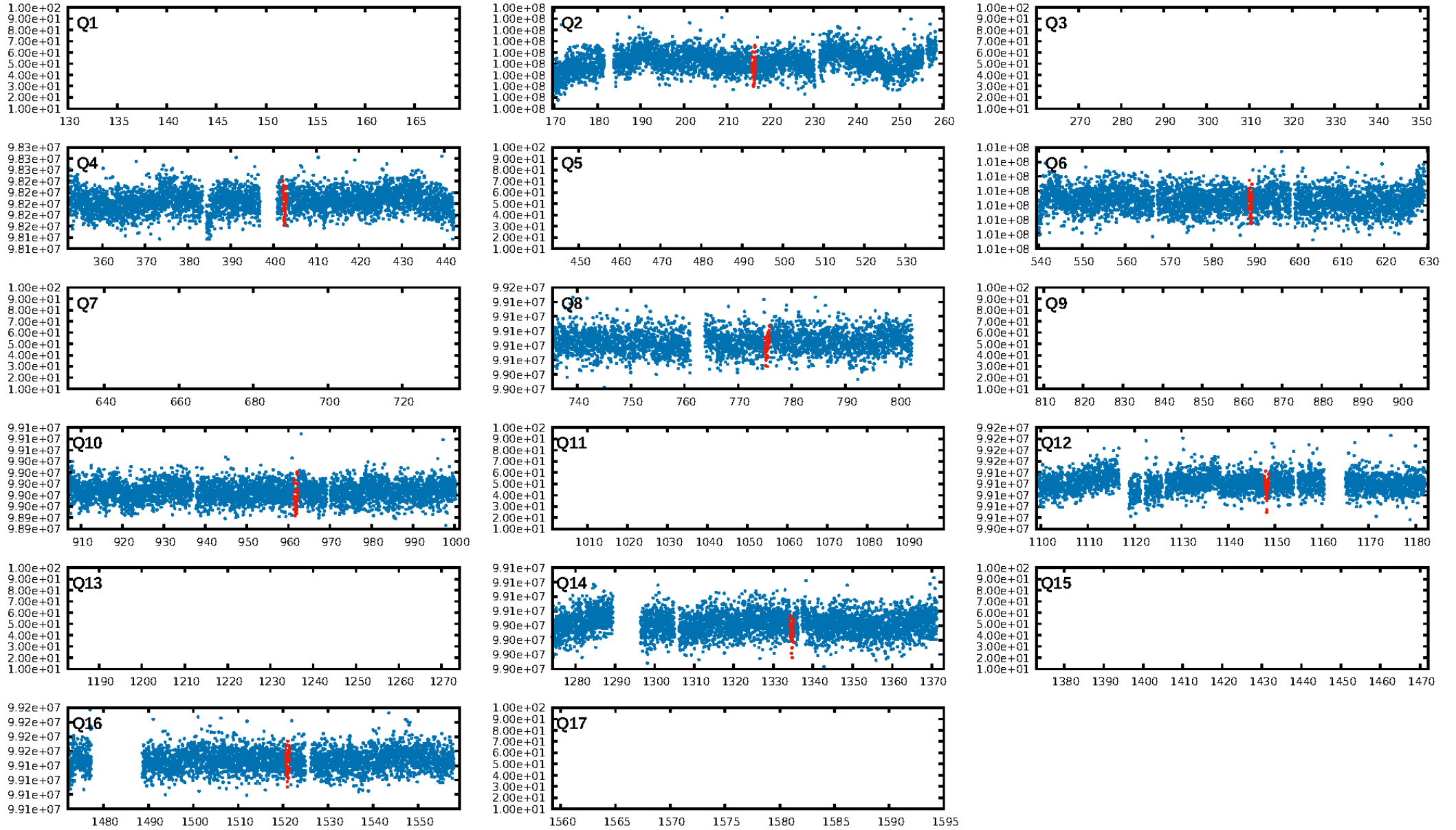
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 21.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 7.48e-21
RollingBand-fgt: 0.88 [7/8]
GhostDiagnostic-chr: 2.134
Centroid-sig: 30.1%
Centroid-so: 1.339 arcsec [1.07σ]
OotOffset-rm: 1.286 arcsec [1.87σ]
KicOffset-rm: 1.248 arcsec [2.78σ]
OotOffset-st: 3/0/4/0 [7]
KicOffset-st: 3/0/4/0 [7]
DiffImageQuality-fgm: 0.86 [6/7]
DiffImageOverlap-fno: 1.00 [8/8]

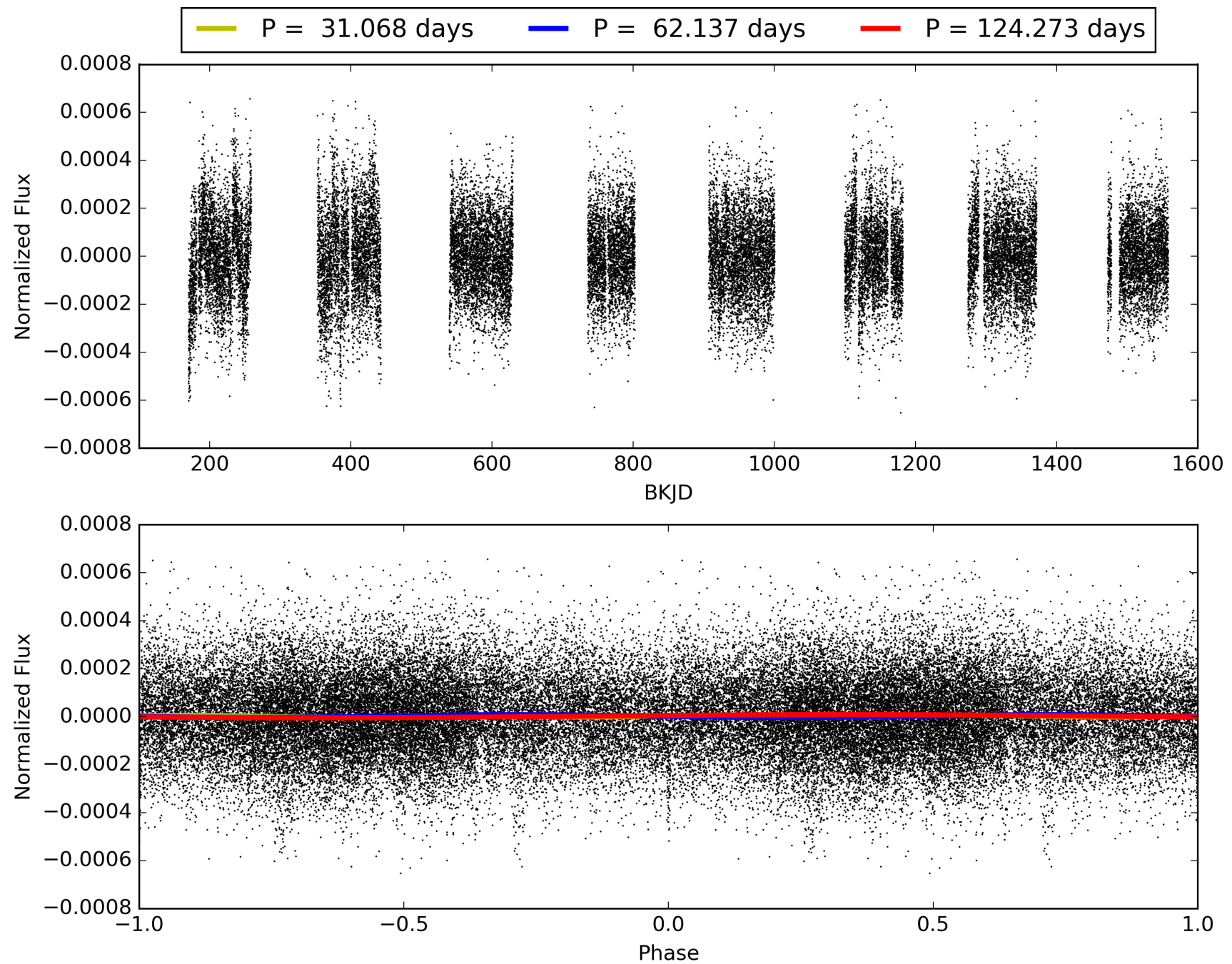
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 12:46:02 Z

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

TCE 008745553-01, PDC Light Curves

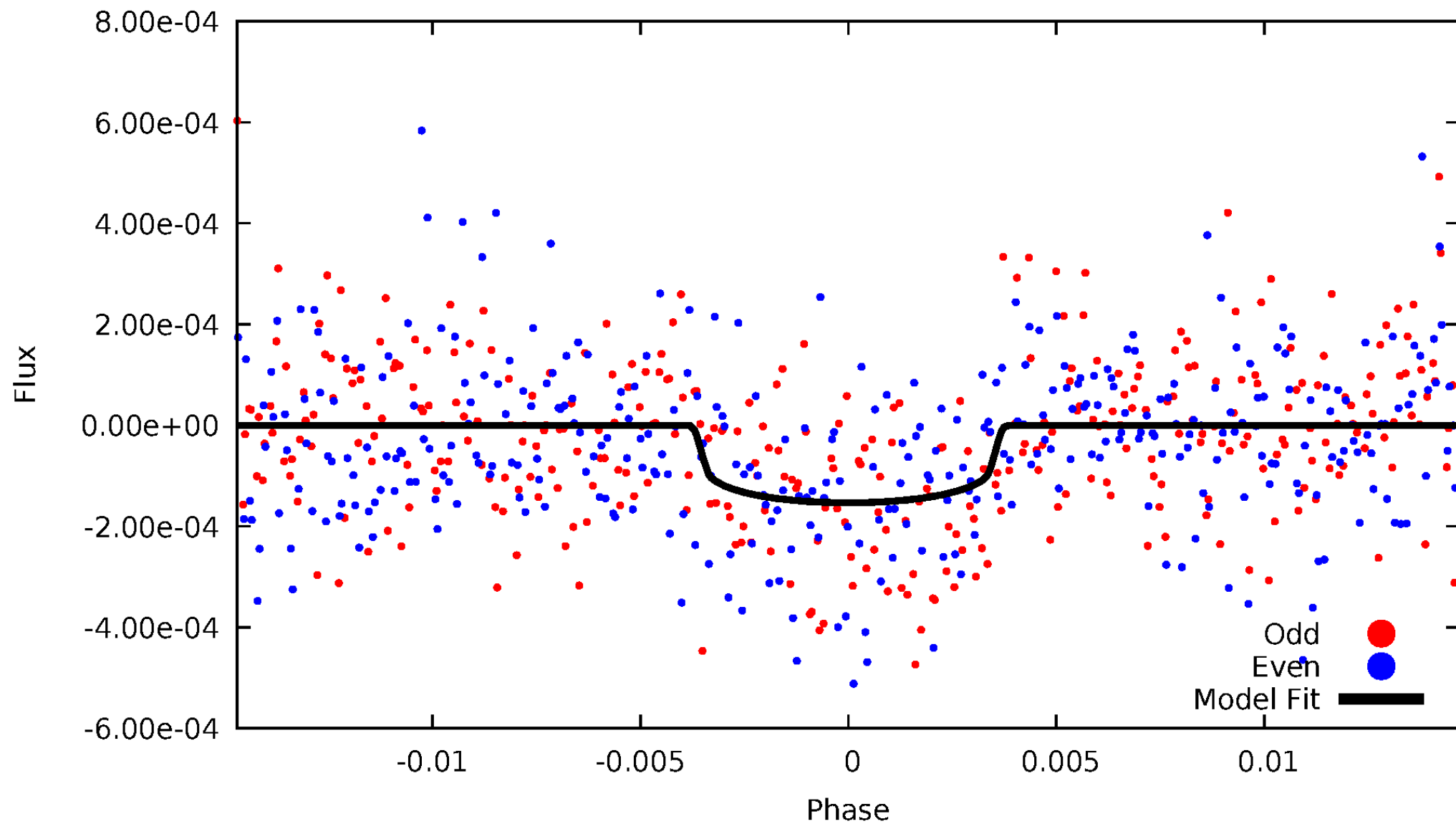


TCE 008745553-01



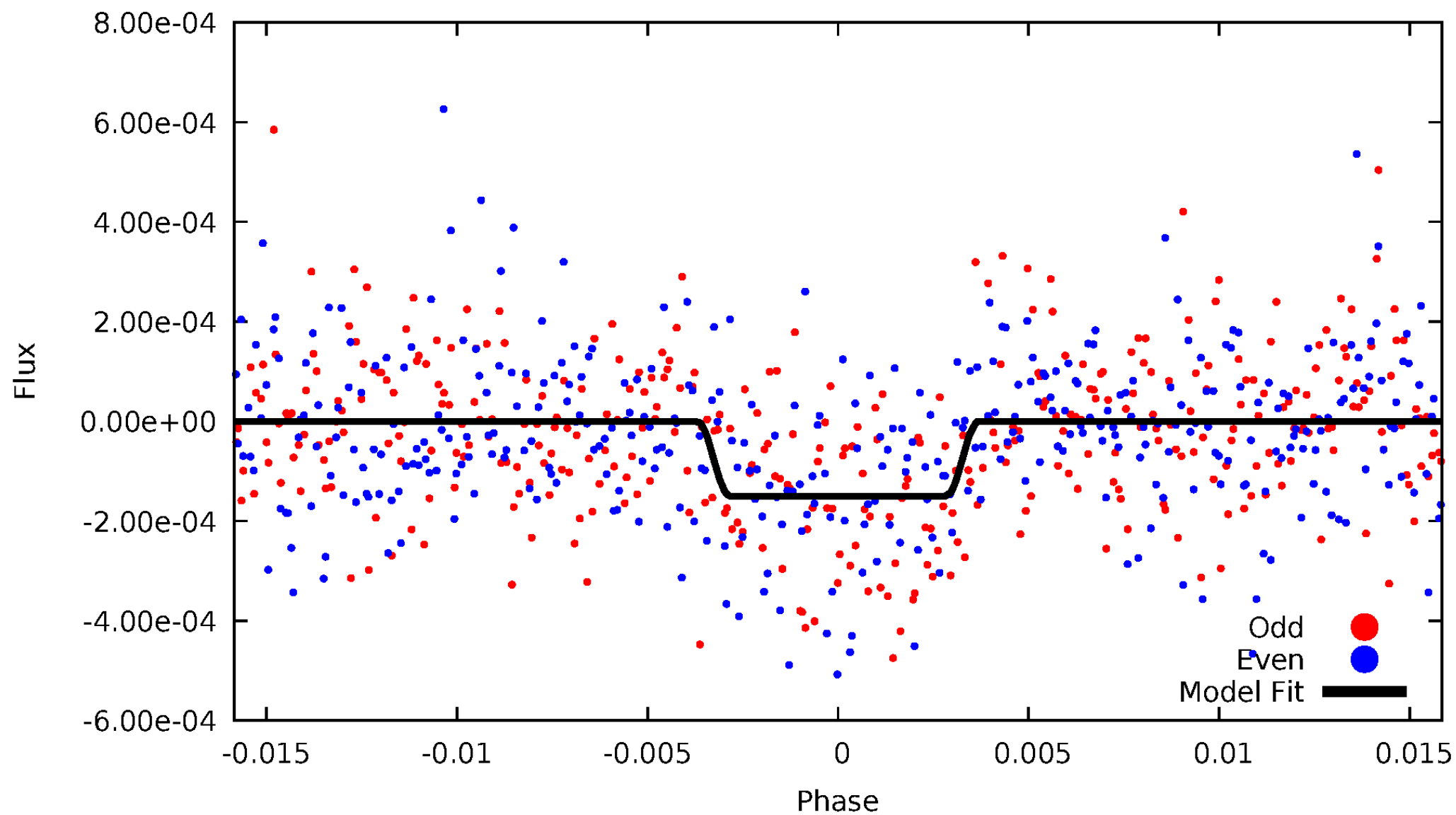
DV Odd/Even

TCE 008745553-01

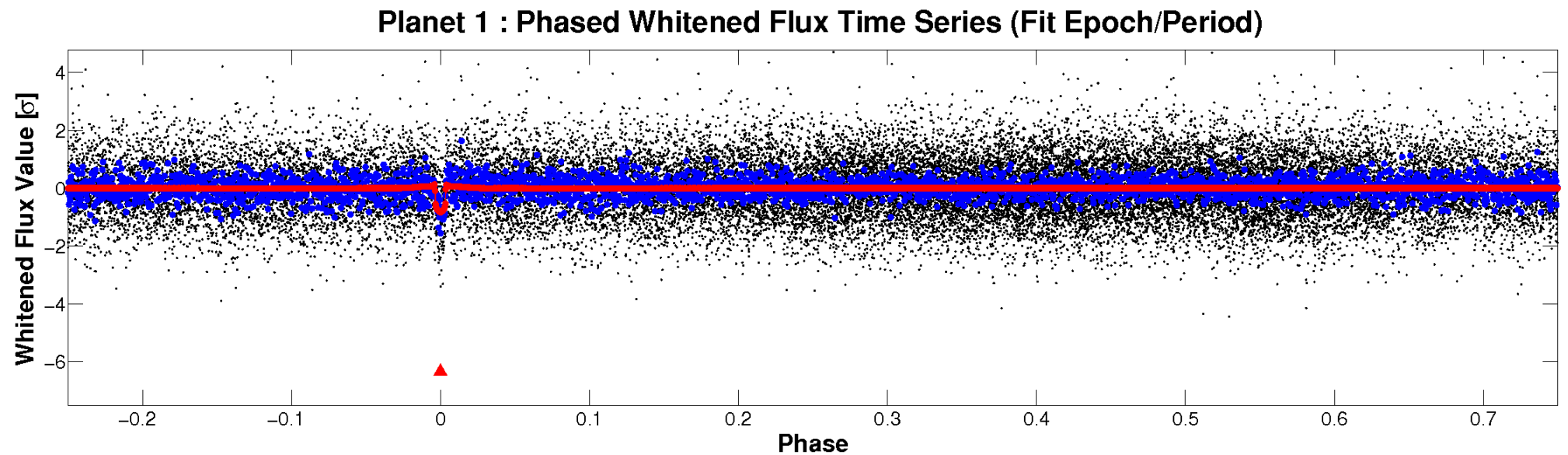
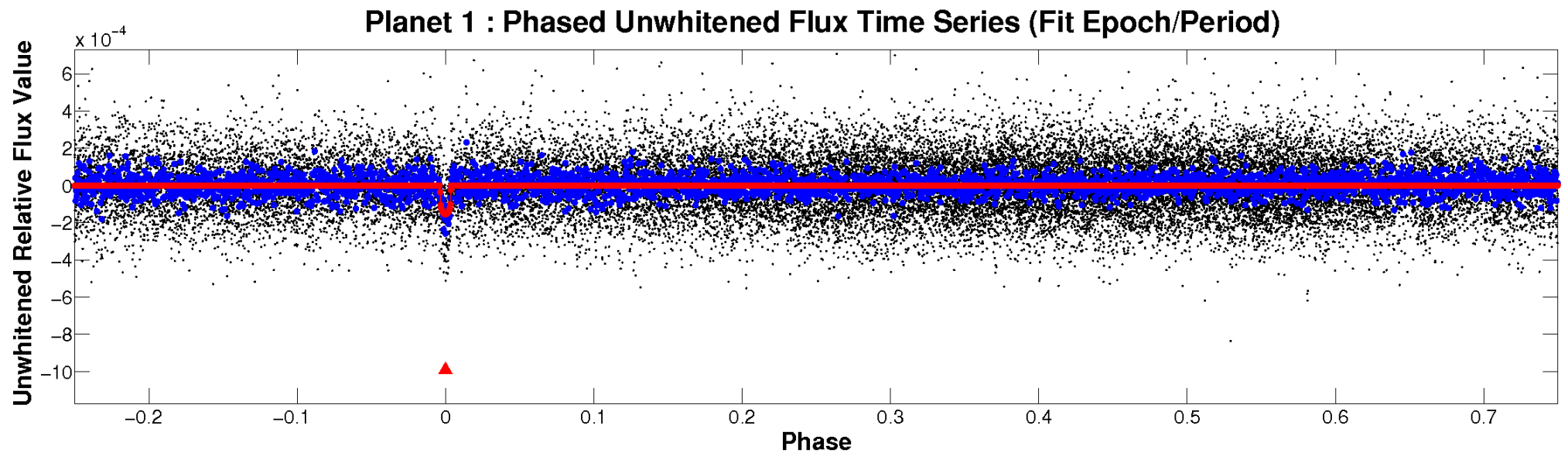


ALT Odd/Even

TCE 008745553-01

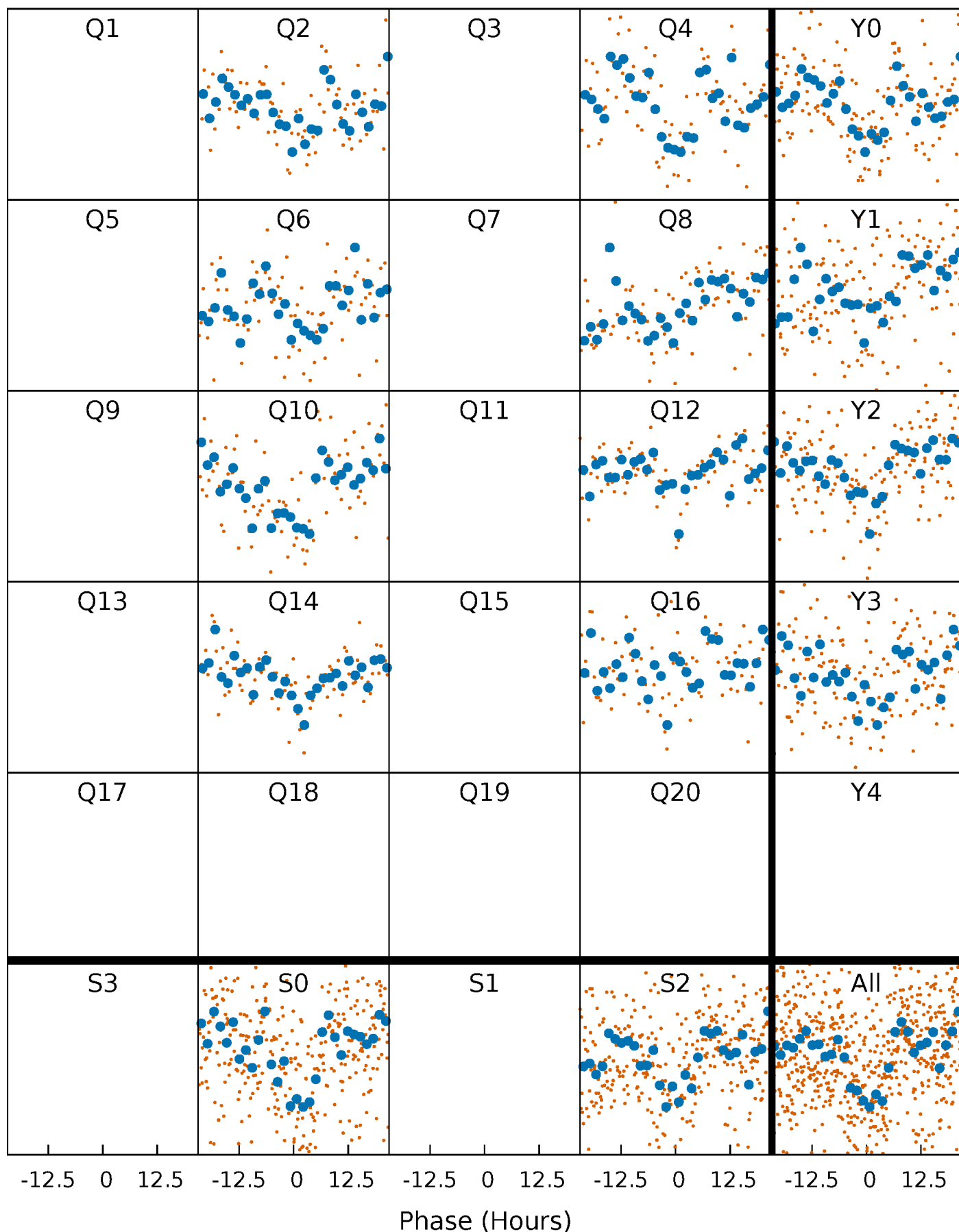


Non-Whitened Vs. Whitened Light Curve



PDC Quarter-Phased Transit Curves

TCE 008745553-01 P= 62.136630 Days $T_0=154.030150$ (BKJD)



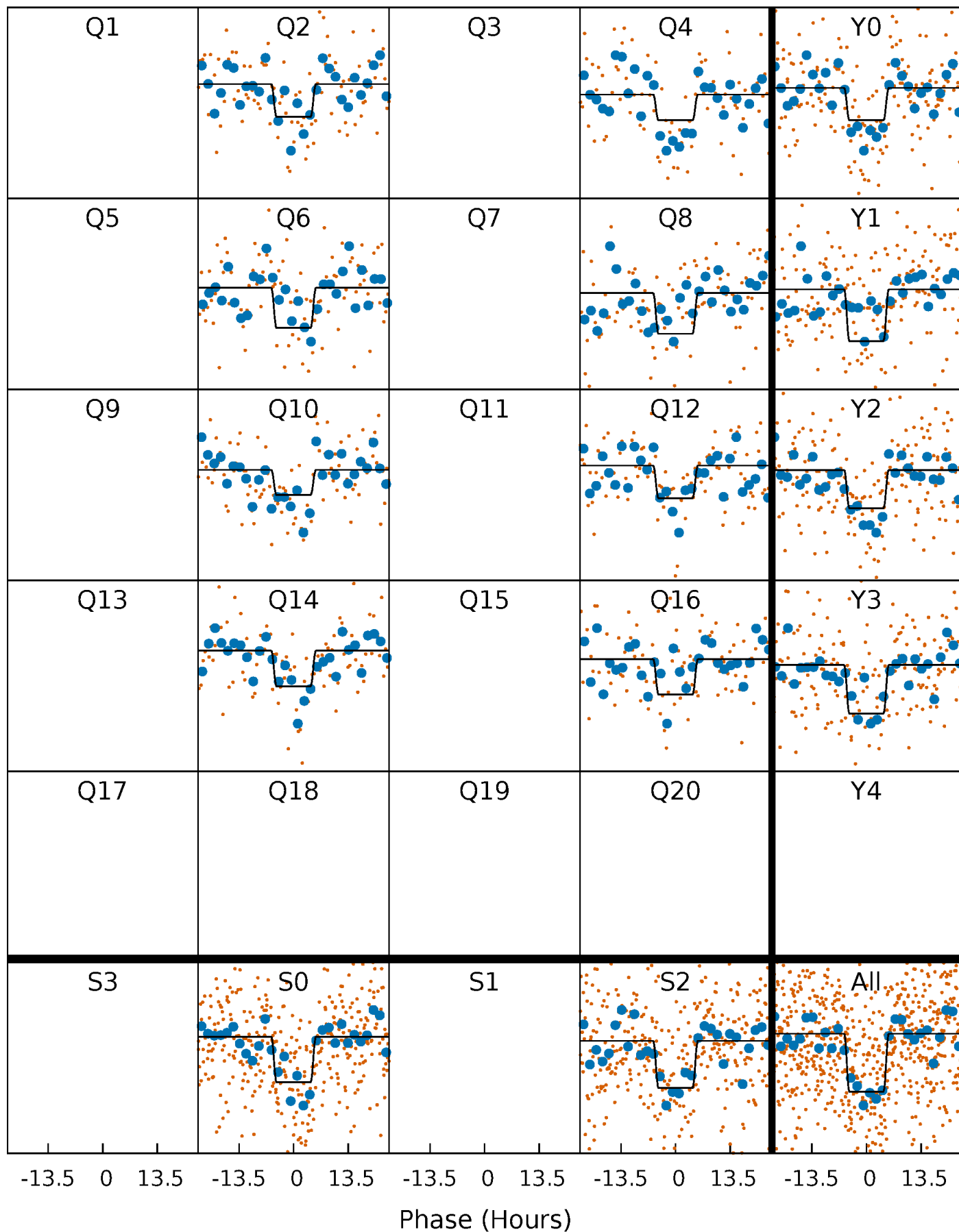
DV Quarter-Phased Transit Curves

TCE 008745553-01 P= 62.136630 Days $T_0=154.030150$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

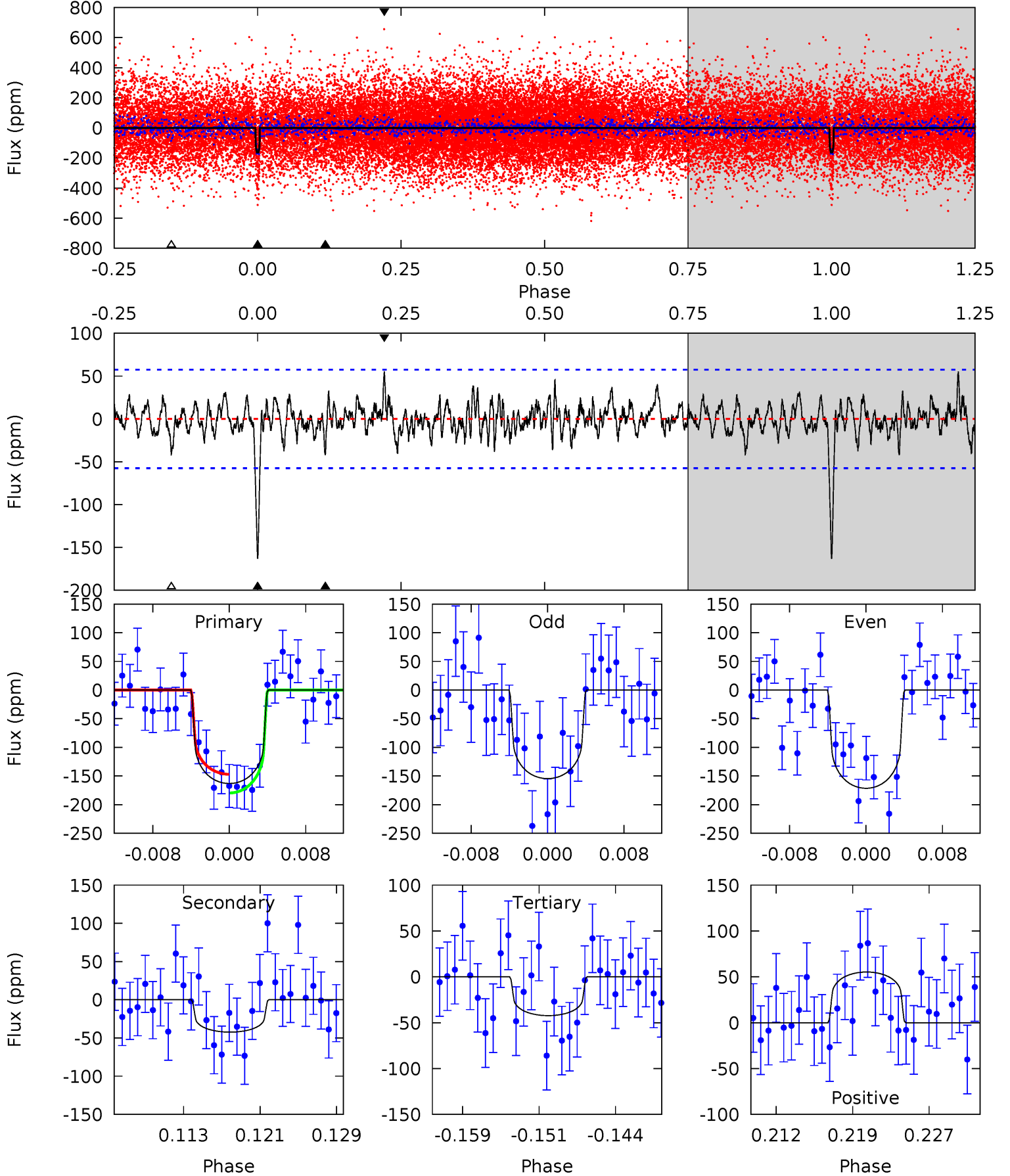
TCE 008745553-01 P= 62.137126 Days $T_0=154.030856$ (BKJD)



DV Model-Shift Uniqueness Test

008745553-01, P = 62.136630 Days, E = 154.030150 Days

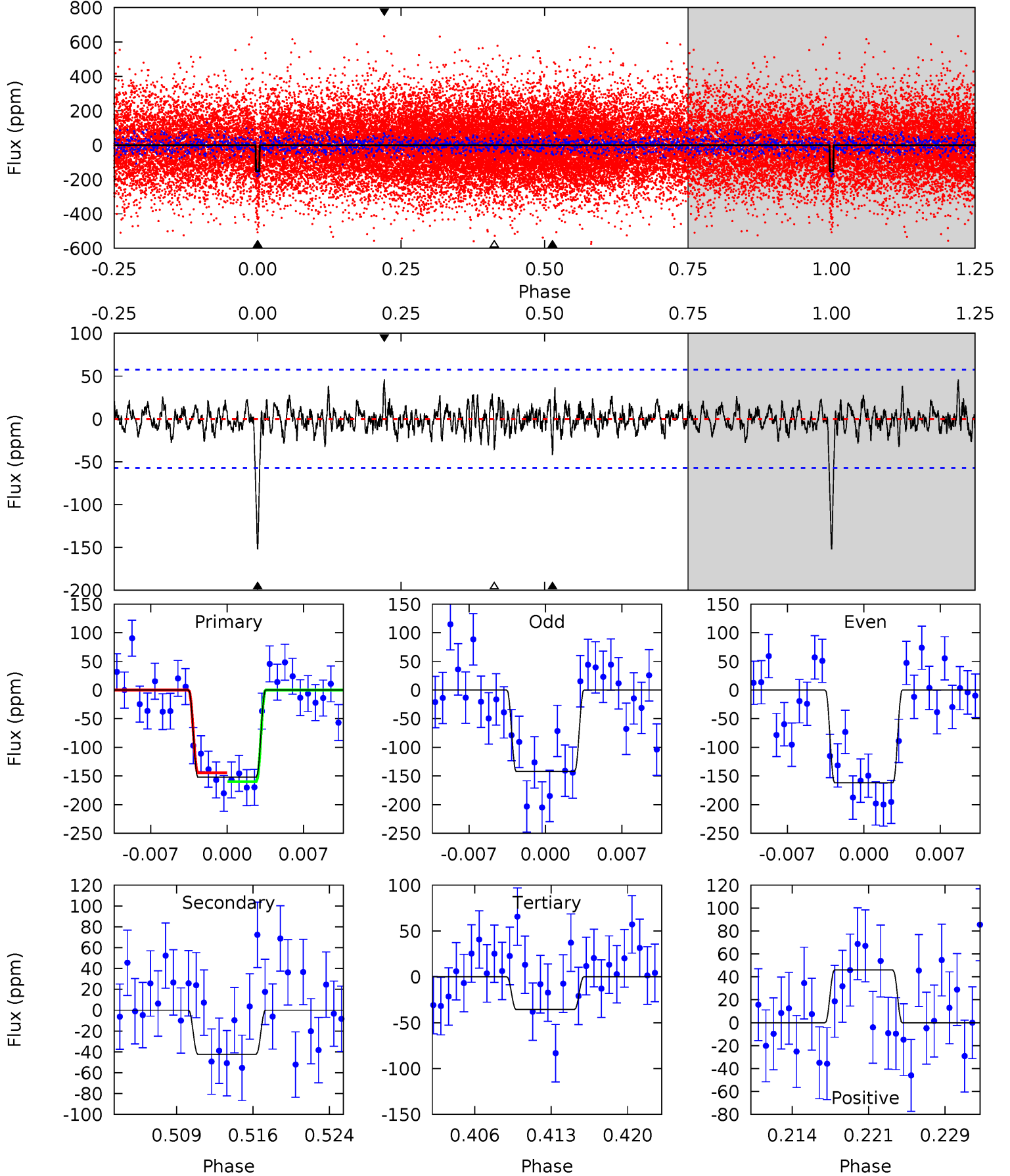
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.4	3.74	3.74	4.88	5.08	2.67	1.25	10.7	9.53	0.00	-1.14	0.75	0.94	0.25	1.44



Alt Model-Shift Uniqueness Test

008745553-01, P = 62.137126 Days, E = 154.030856 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.5	3.74	3.15	4.07	5.08	2.68	0.98	10.3	9.41	0.60	-0.33	0.87	0.92	0.23	0.68



Stellar Parameters For KIC 008745553

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5889^{+79}_{-88}	$3.358^{+0.450}_{-0.079}$	$0.280^{+0.150}_{-0.150}$	$4.912^{+0.799}_{-2.396}$	$2.006^{+0.136}_{-0.511}$	$0.024^{+0.102}_{-0.007}$
	+1%/-1%	+13%/-2%	+54%/-54%	+16%/-49%	+7%/-25%	+429%/-27%
Source	SPE90	FLK73	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 008745553-01 / KOI 5568.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-42 ± 11	$5.91^{+3.26}_{-2.61}$	1253^{+73}_{-150}	4431^{+1037}_{-618}	99^{+198}_{-61}
Alt.	-42 ± 11	$5.70^{+3.29}_{-2.60}$	1251^{+79}_{-155}	4433^{+1180}_{-610}	103^{+231}_{-64}

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

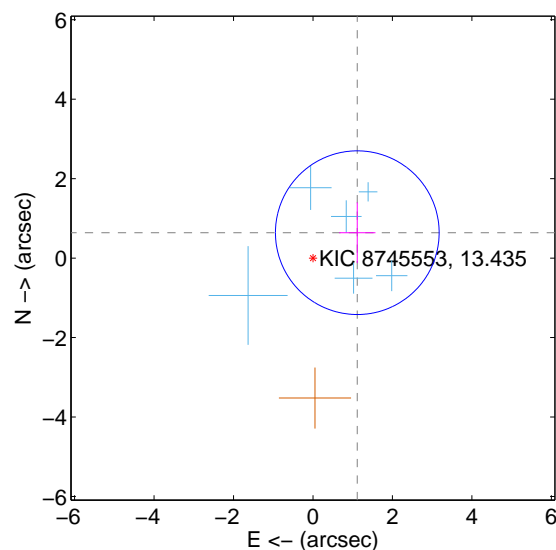
Supplemental centroid analysis for 008745553-01. Kepler magnitude: 13.44. Transit SNR 9.33

There are 6 quarters with good PRF difference image offsets

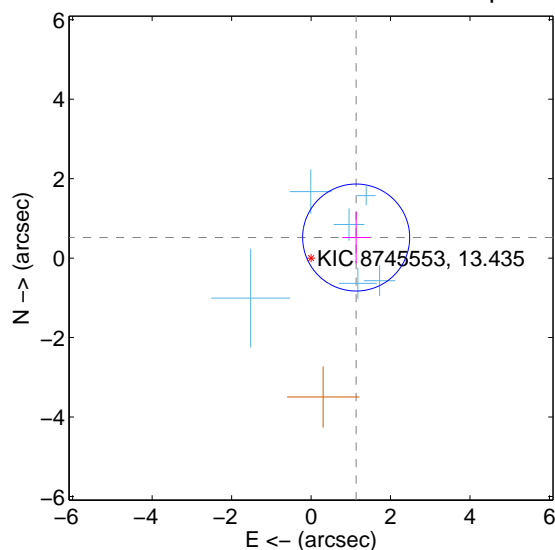
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.286 ± 0.687	1.87	-1.115 ± 0.458	0.639 ± 0.764
PRF-fit source offset from KIC position	1.248 ± 0.449	2.78	-1.135 ± 0.349	0.518 ± 0.651
photometric centroid source offset	1.34 ± 1.25	1.07	1.31 ± 1.24	-0.28 ± 1.30

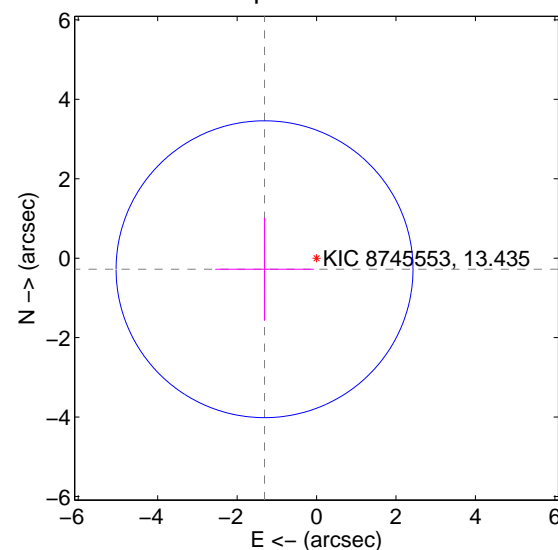
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

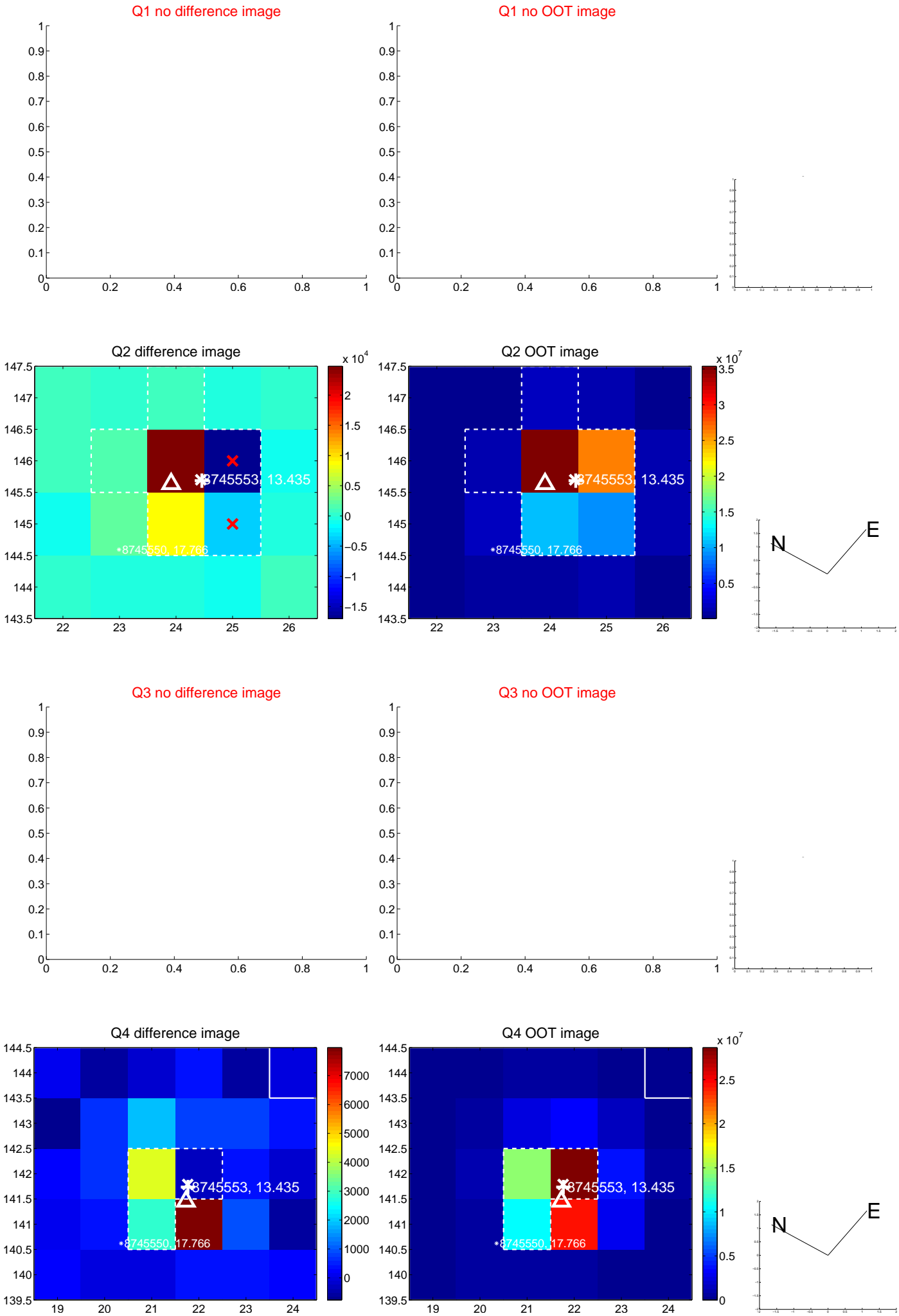


offset from photometric centroids

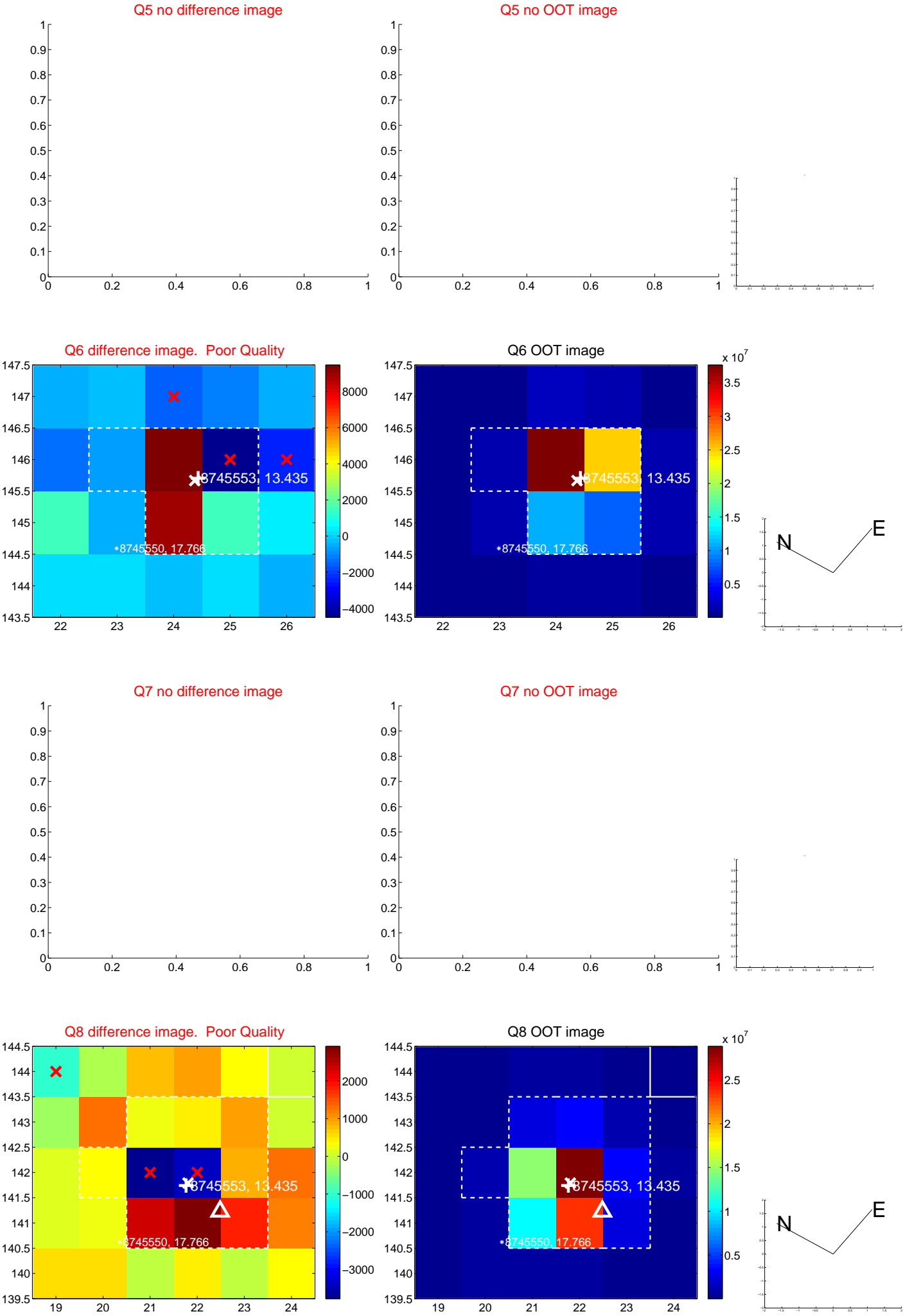


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

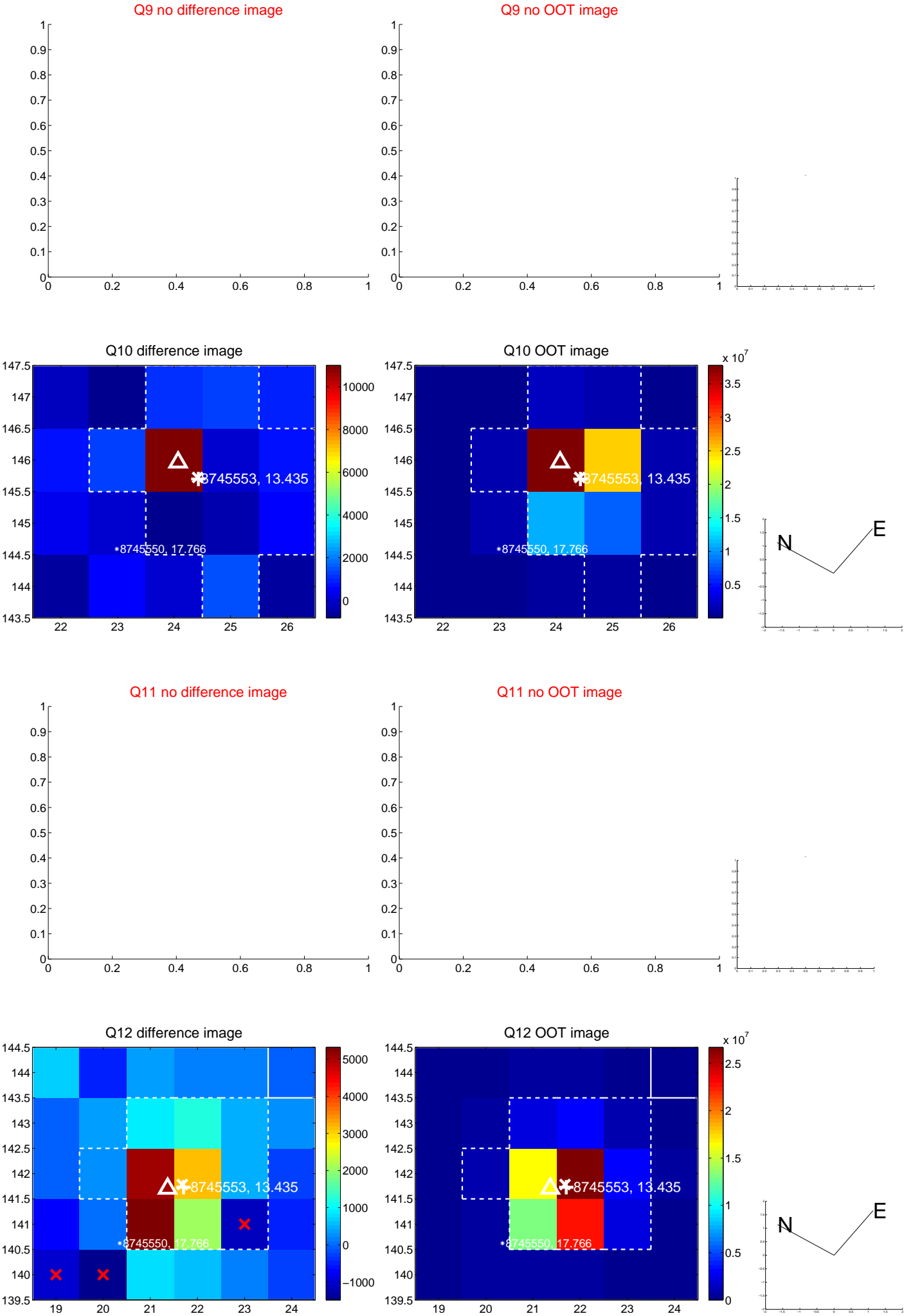
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

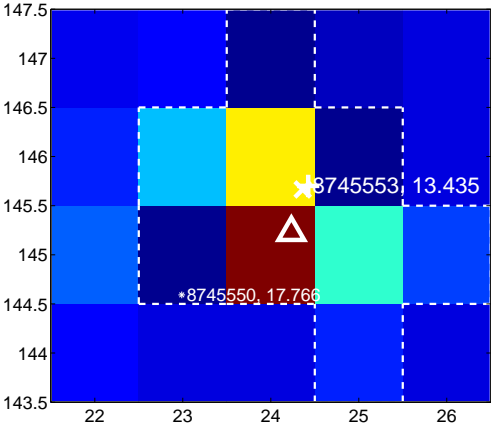
Q13 no difference image



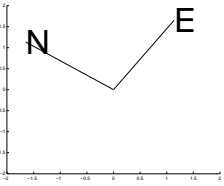
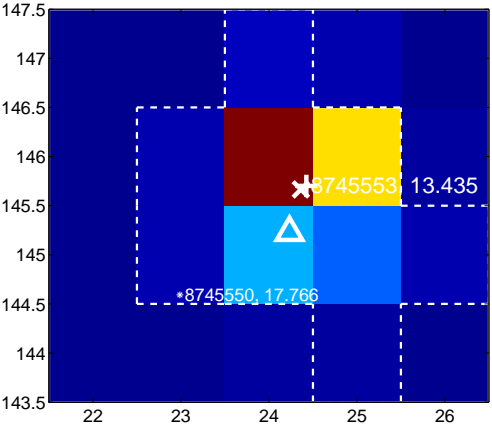
Q13 no OOT image



Q14 difference image



Q14 OOT image



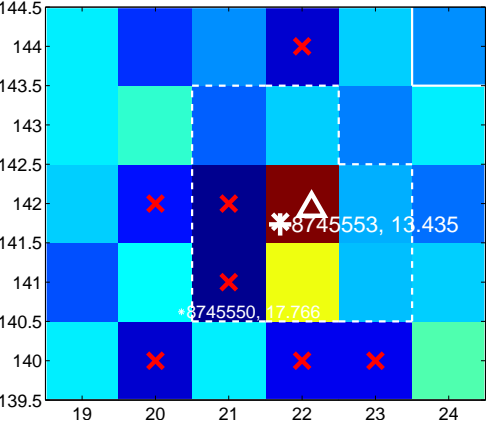
Q15 no difference image



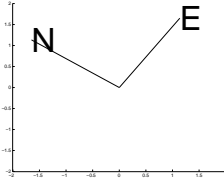
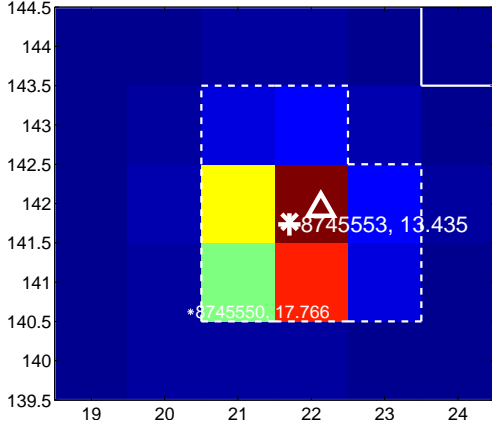
Q15 no OOT image



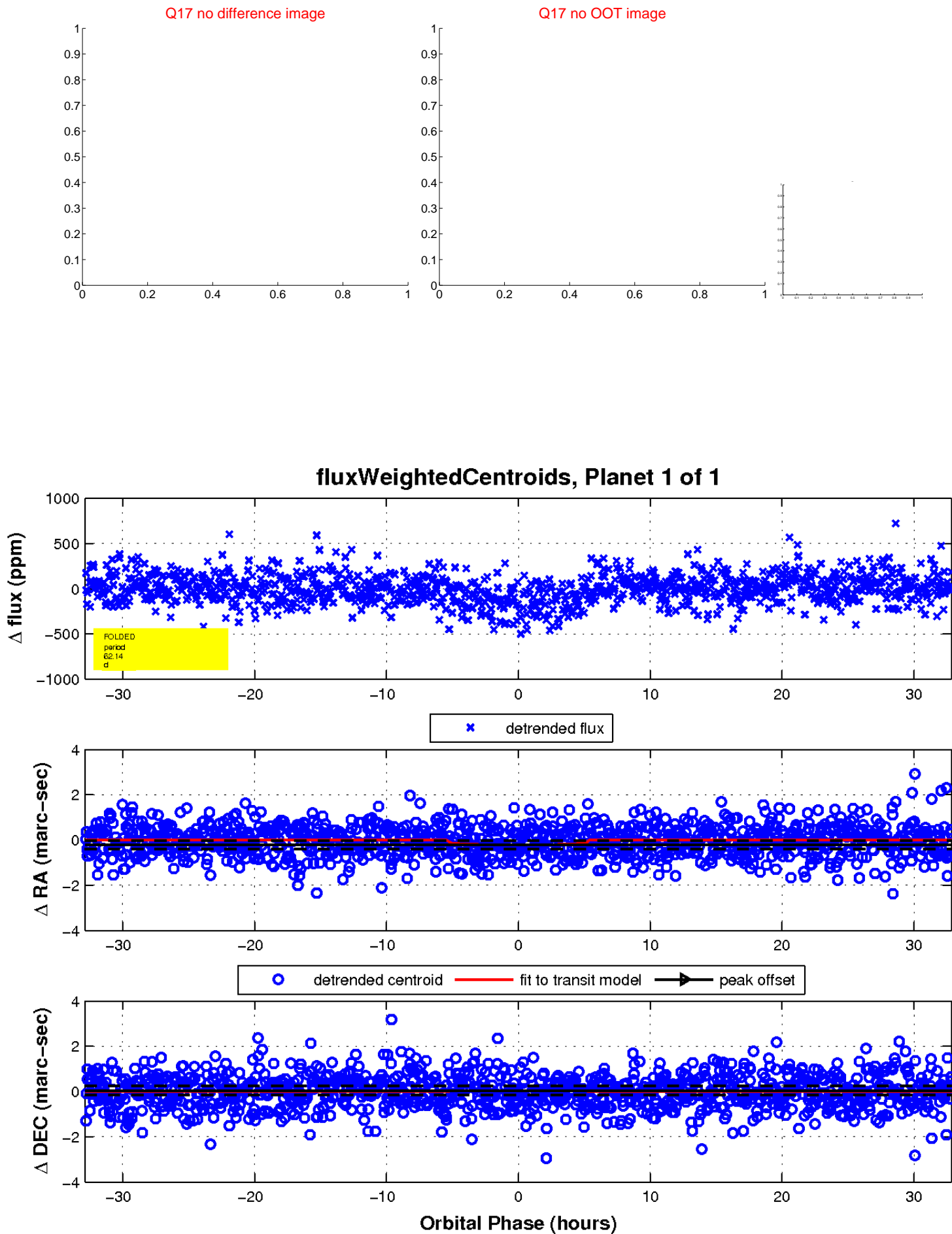
Q16 difference image



Q16 OOT image



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



UKIRT Image

Declination

