

KIC 008554853

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})
008554853-01	OBS	No	383.699187	172.957990	519.0	21.217	11.1	10.7	0.86	5799	2.50	0.72

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008554853-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL_SKYE—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST

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

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

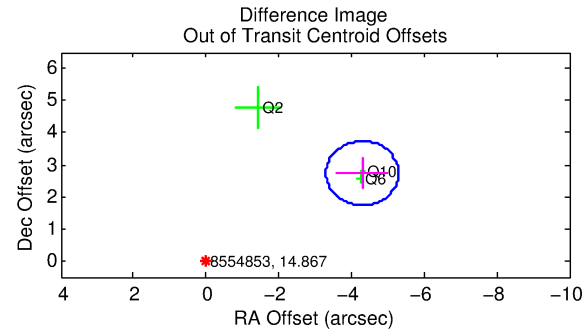
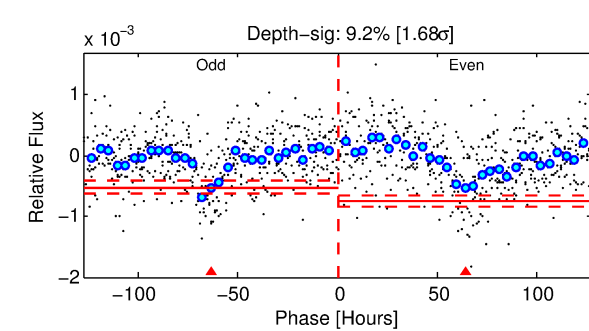
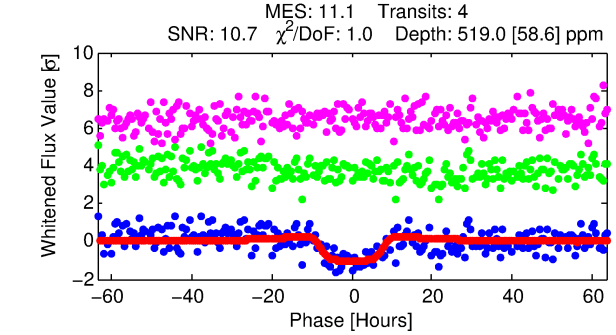
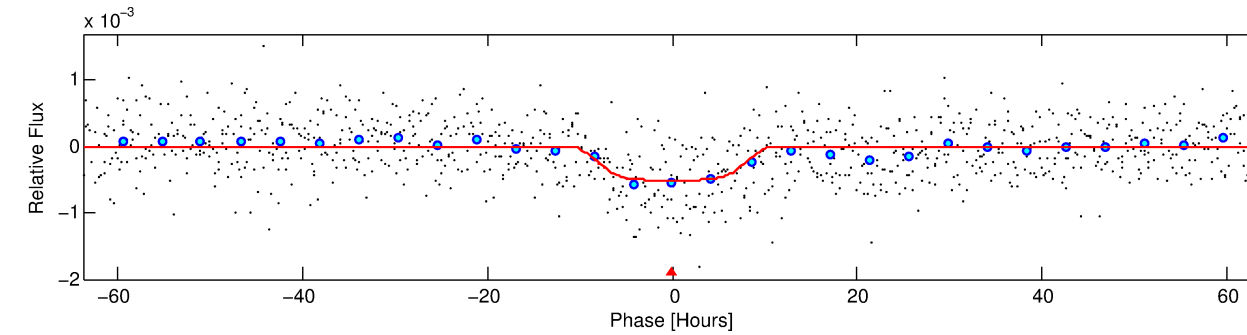
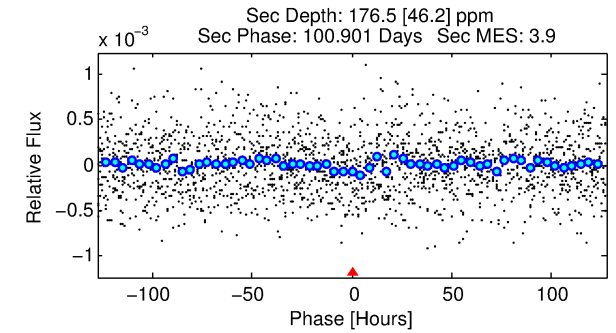
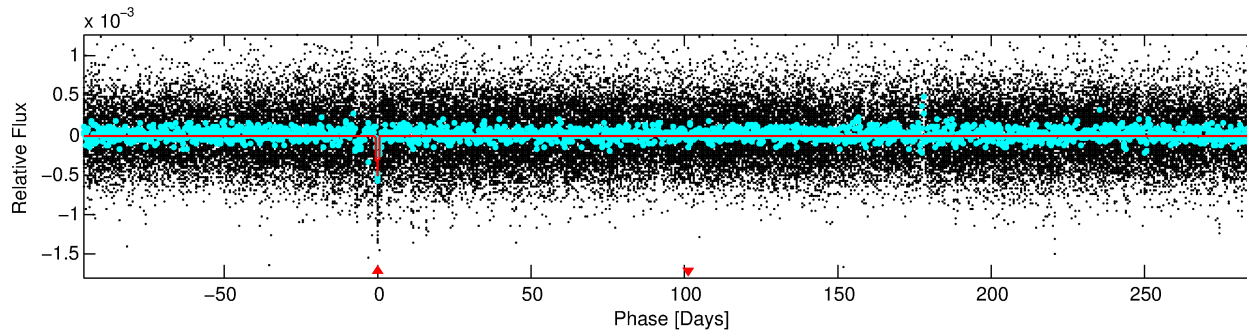
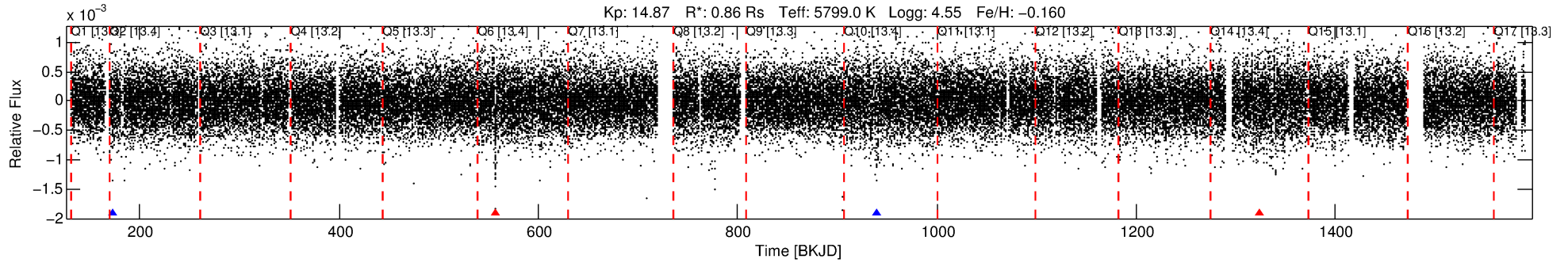
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008554853-01

No Significant Match Found

DV One-Page Summary

KIC: 8554853 Candidate: 1 of 1 Period: 383.699 d



DV Fit Results:

Period = 383.69919 [0.01908] d
Epoch = 172.9580 [0.0336] BKJD
Rp/R* = 0.0267 [0.0022]
a/R* = 52.26 [12.56]
b = 0.95 [0.02]
Seff = 0.72 [0.23]
Teq = 235 [18] K
Rp = 2.50 [0.62] Re
a = 1.0171 [0.2024] AU
Ag = 16039.44 [6838.53] [2.35σ]
Teffp = 4093 [341] K [11.30σ]

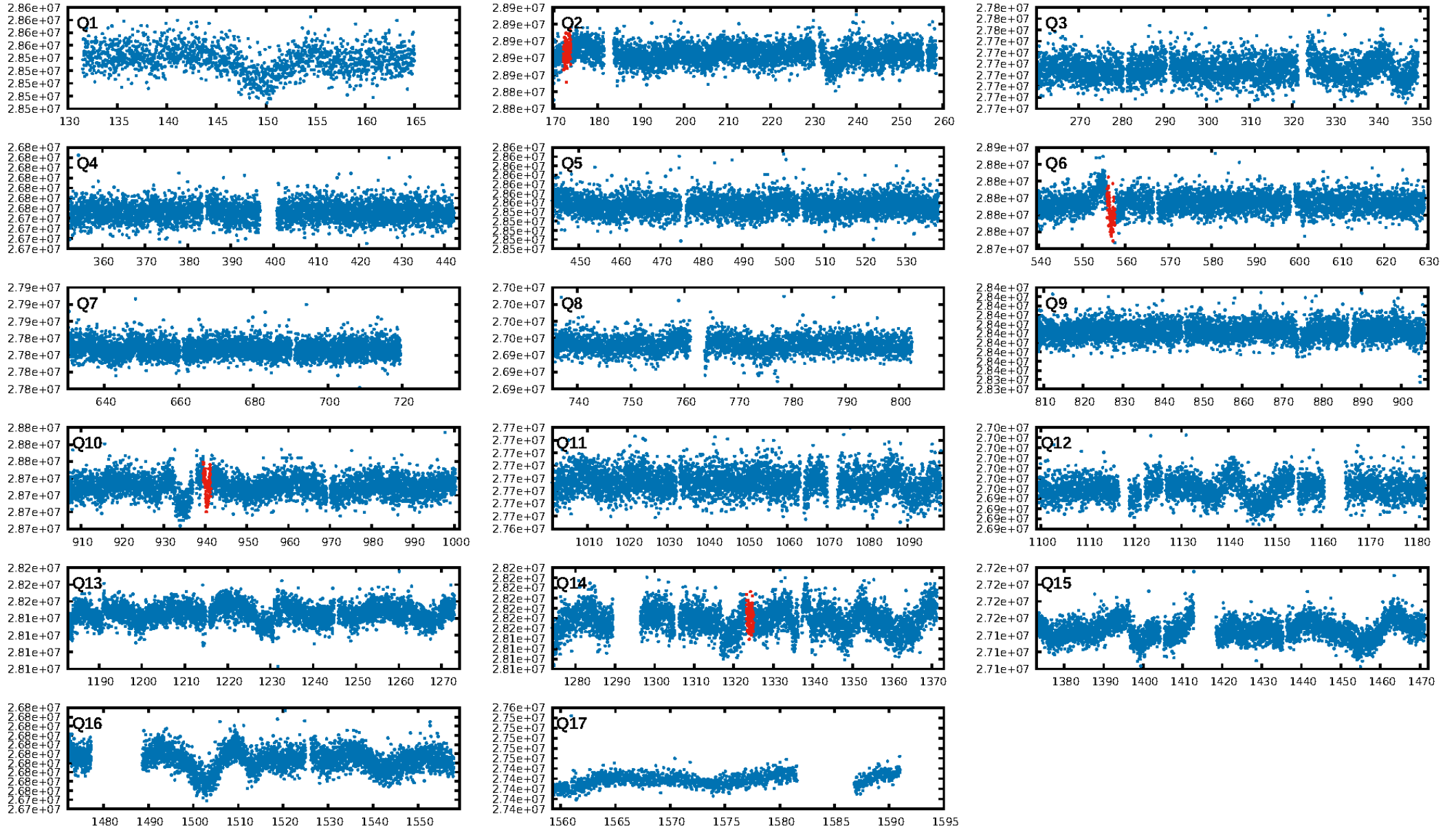
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 99.4%
Bootstrap-pfa: 5.35e-17
RollingBand-fgt: 0.50 [2/4]
GhostDiagnostic-chr: 0.1759
Centroid-sig: 7.0%
Centroid-so: 1.752 arcsec [1.27σ]
OotOffset-rm: 5.086 arcsec [15.29σ]
KicOffset-rm: 5.071 arcsec [11.77σ]
OotOffset-st: 3/0/0/0 [3]
KicOffset-st: 3/0/0/0 [3]
DiffImageQuality-fgm: 0.00 [0/3]
DiffImageOverlap-fno: 1.00 [4/4]

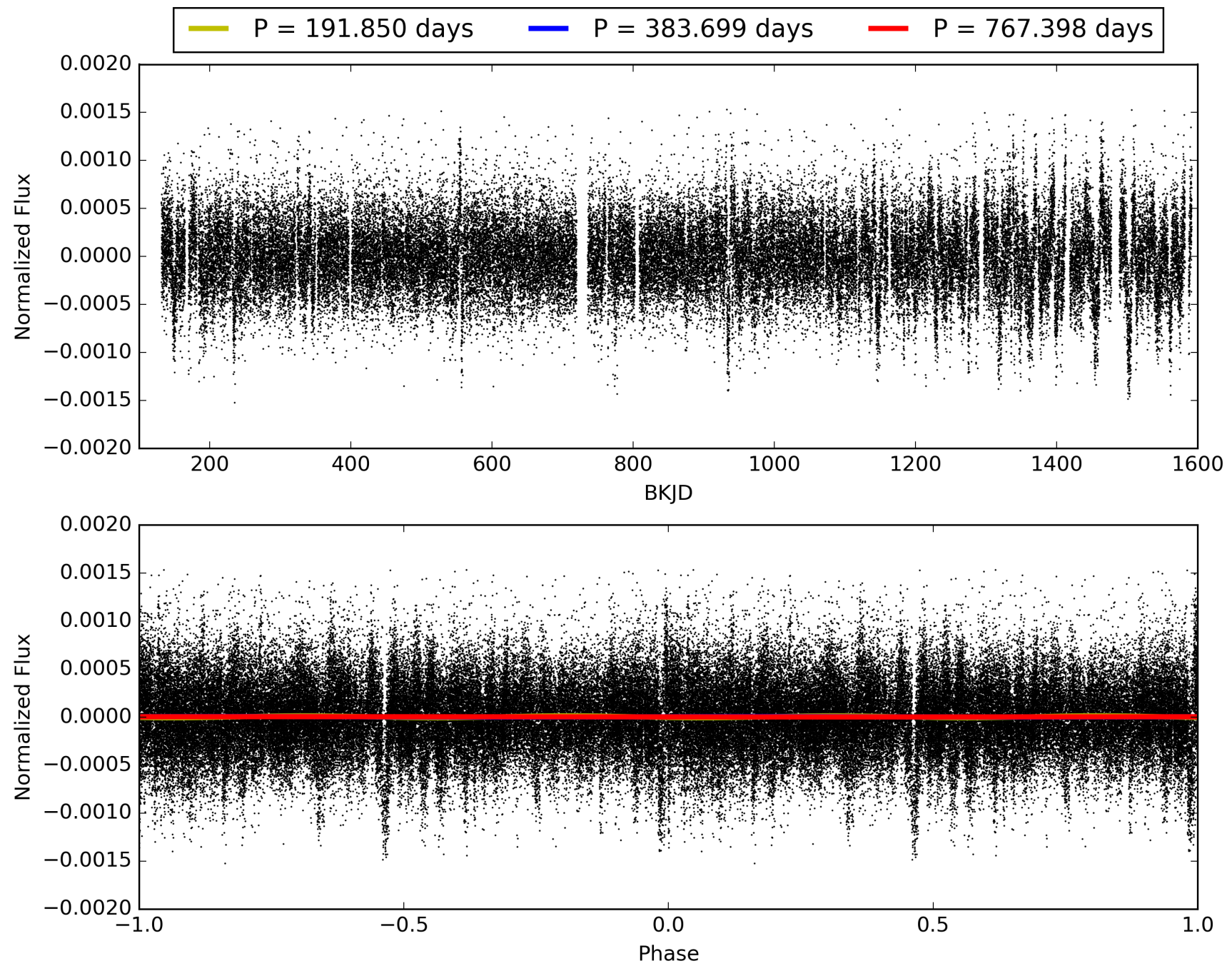
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:28:32 Z

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

TCE 008554853-01, PDC Light Curves

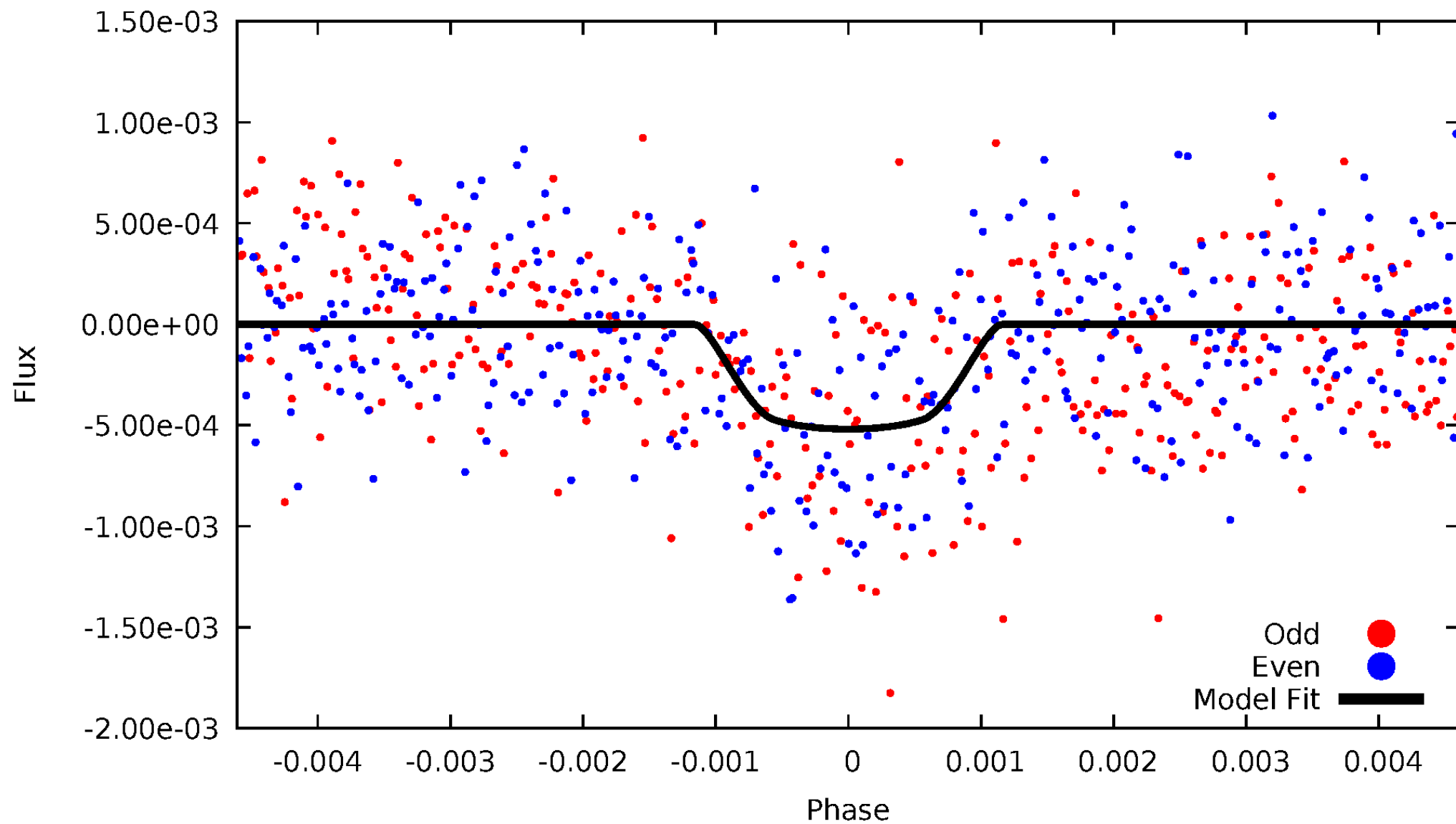


TCE 008554853-01



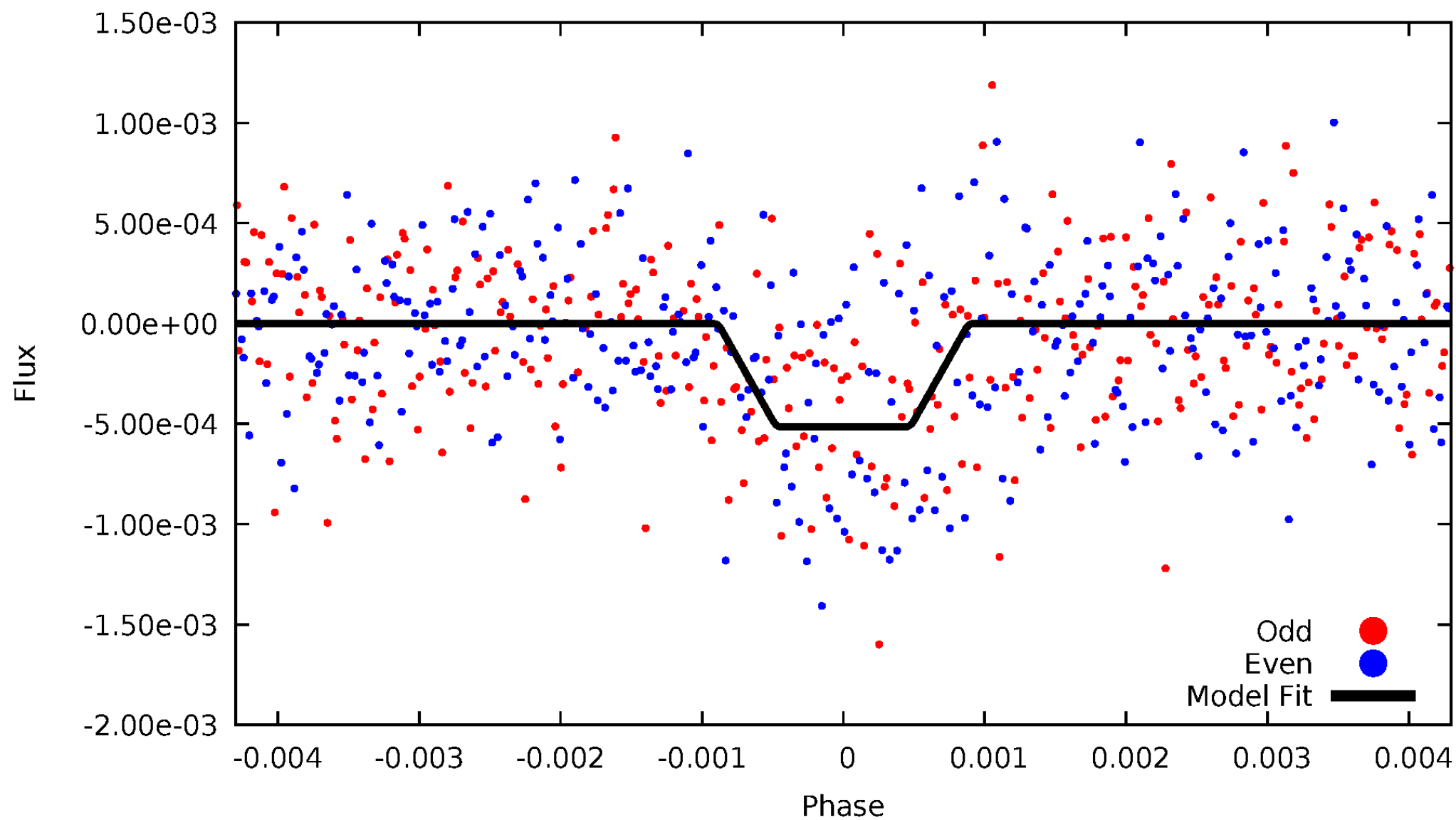
DV Odd/Even

TCE 008554853-01

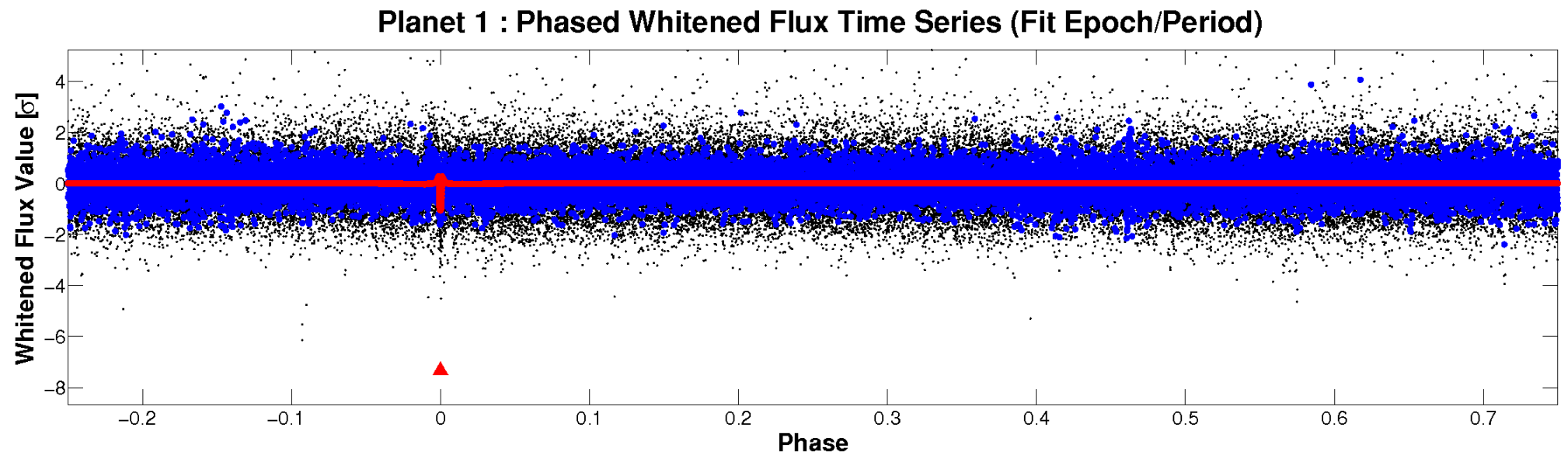
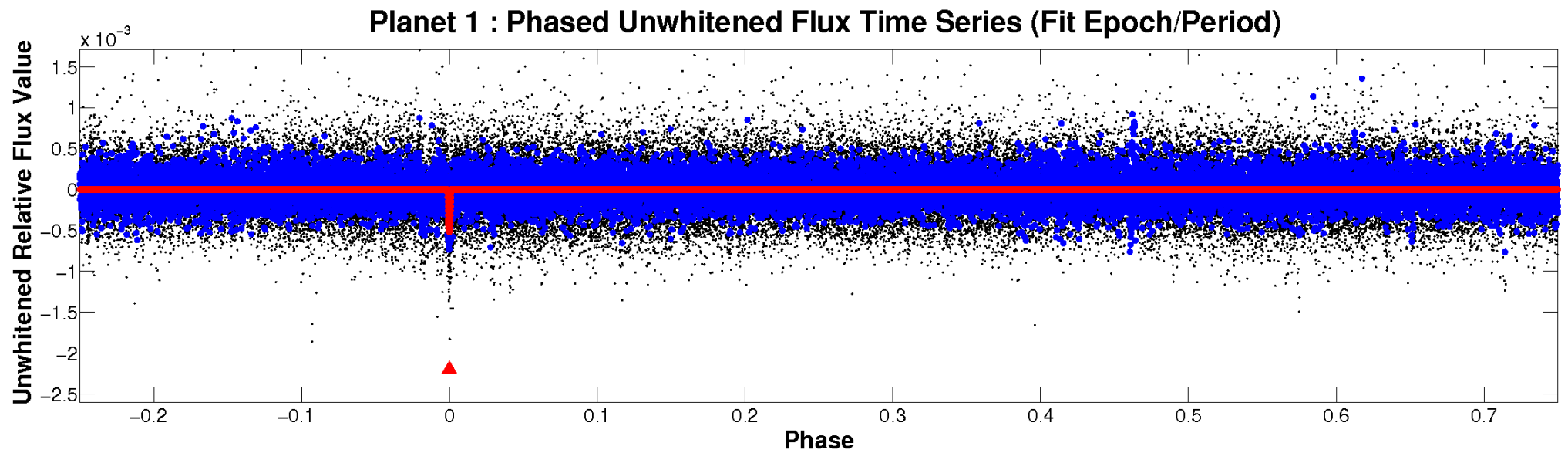


ALT Odd/Even

TCE 008554853-01

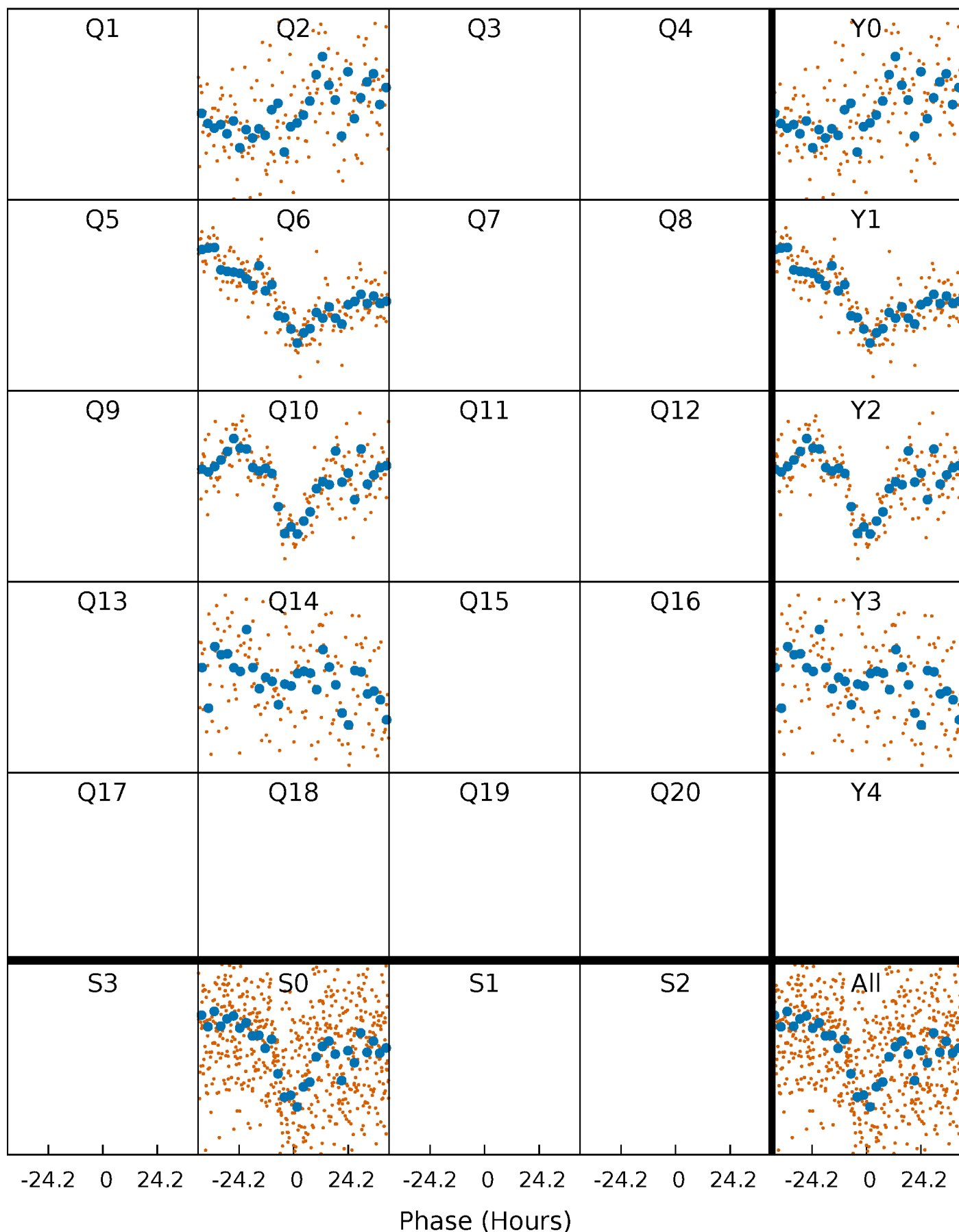


Non-Whitened Vs. Whitened Light Curve



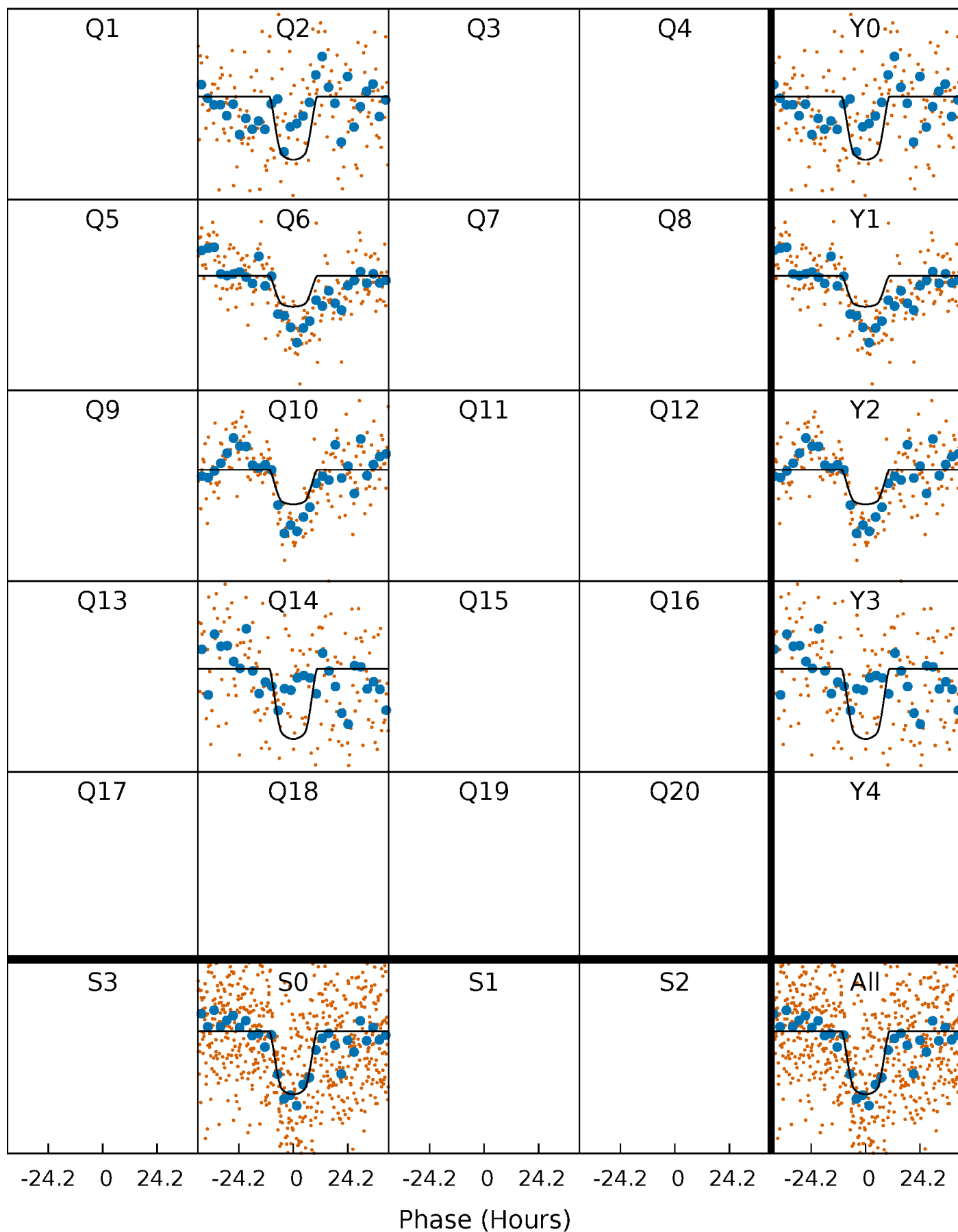
PDC Quarter-Phased Transit Curves

TCE 008554853-01 P=383.699187 Days $T_0=172.957990$ (BKJD)



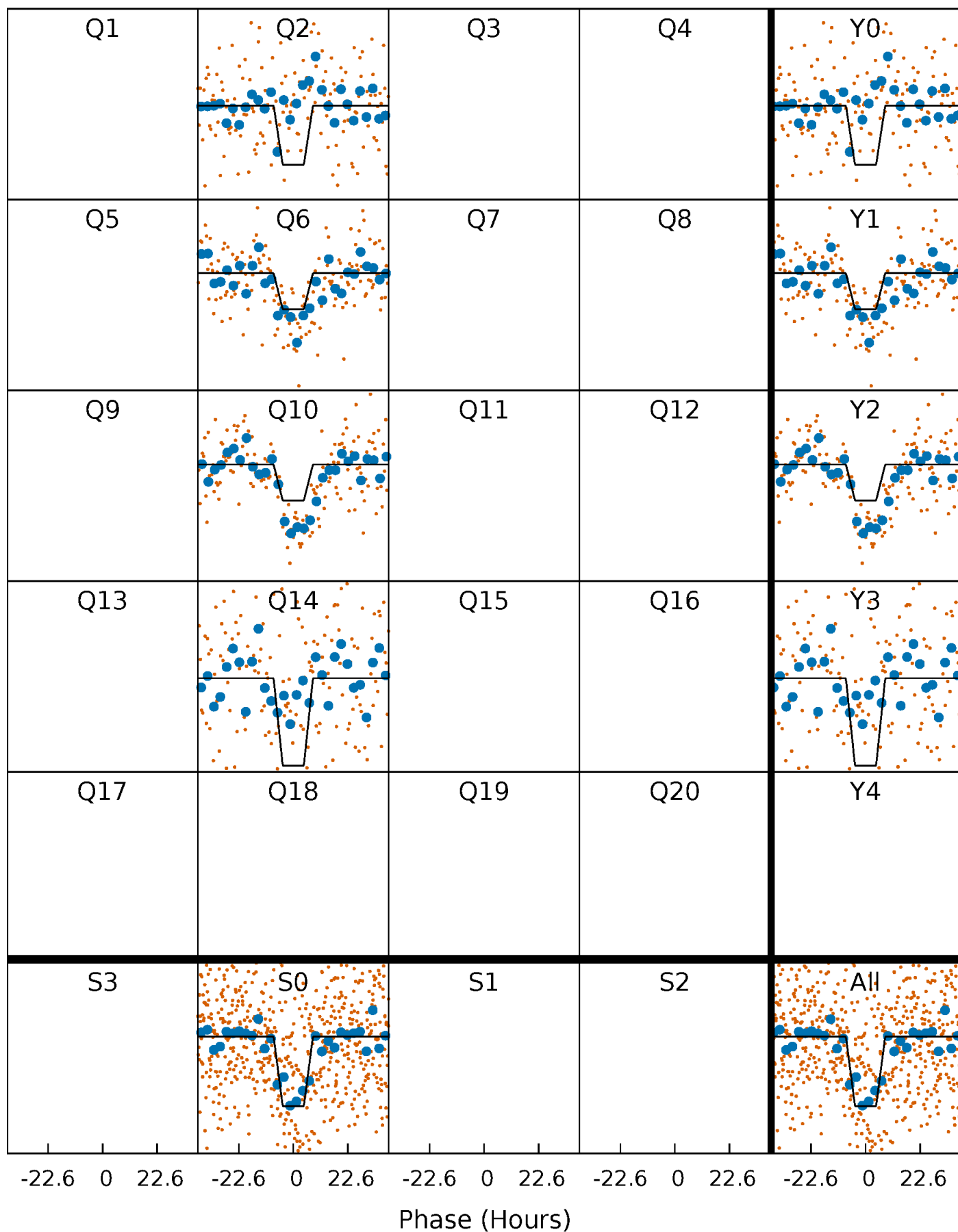
DV Quarter-Phased Transit Curves

TCE 008554853-01 P=383.699187 Days $T_0=172.957990$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

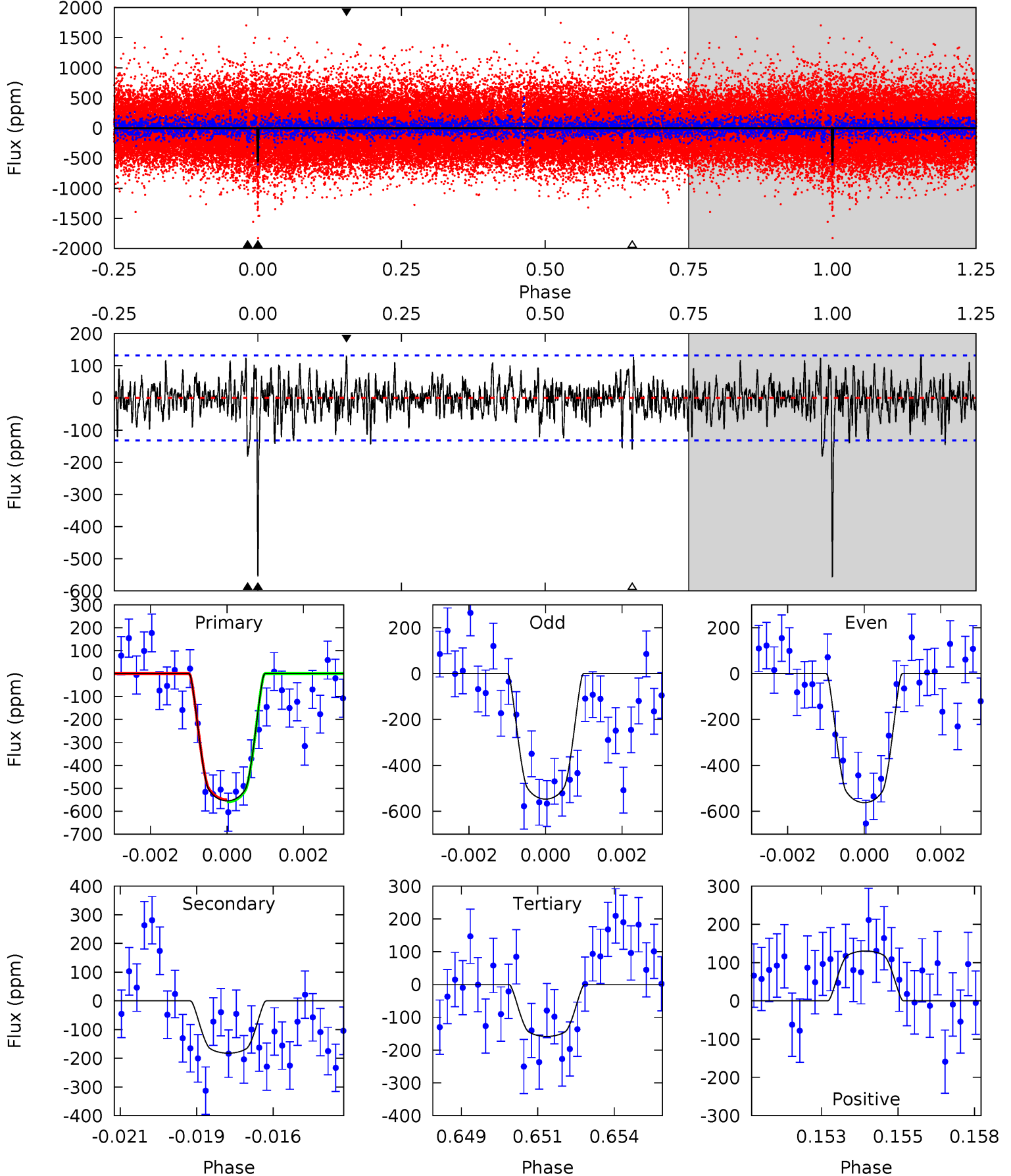
TCE 008554853-01 P=383.571977 Days $T_0=173.108845$ (BKJD)



DV Model-Shift Uniqueness Test

008554853-01, P = 383.699187 Days, E = 172.957990 Days

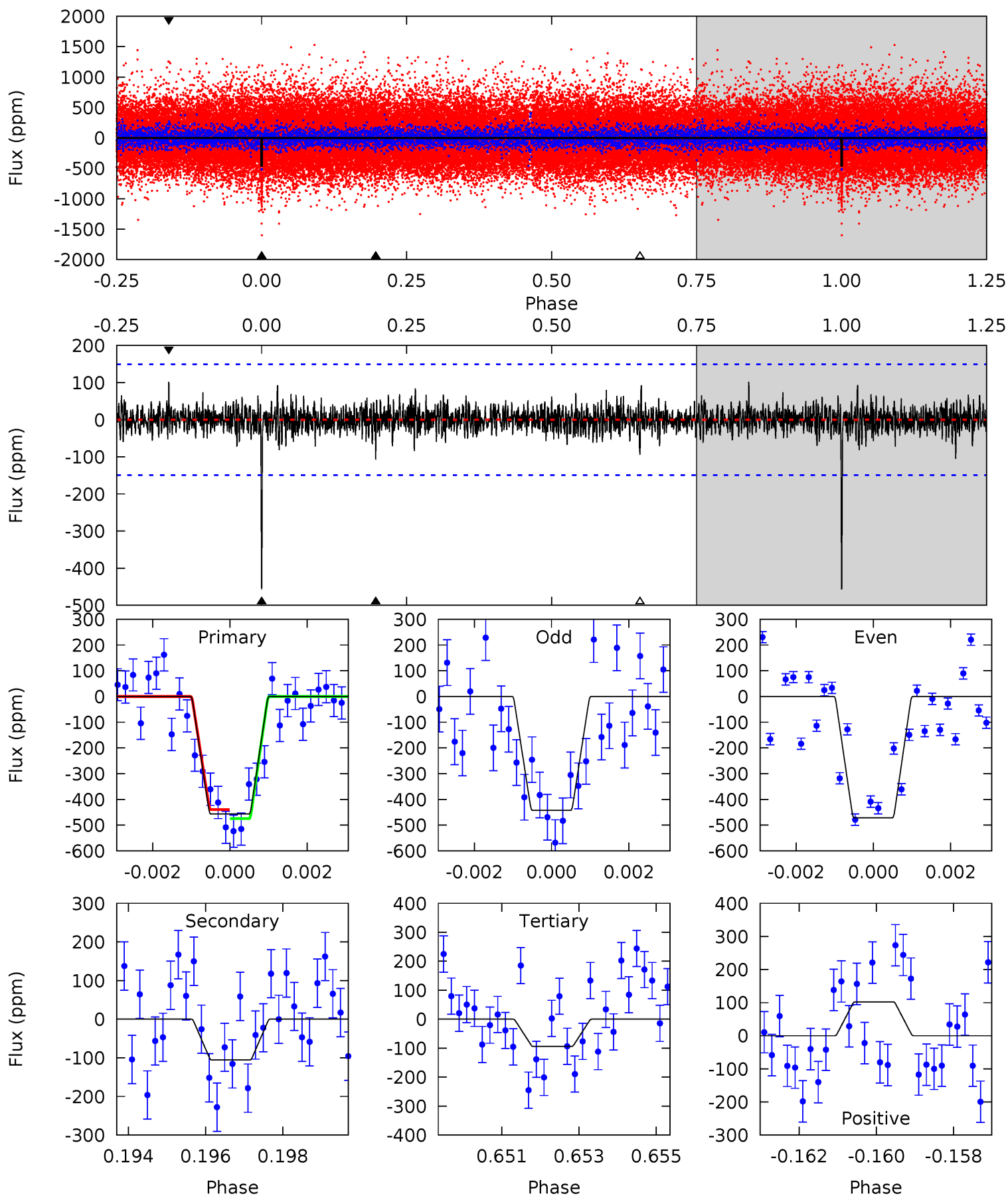
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.2	7.30	6.34	5.22	5.30	3.04	1.65	15.9	17.0	0.96	2.08	0.31	0.99	0.19	0.20



Alt Model-Shift Uniqueness Test

008554853-01, P = 383.571977 Days, E = 173.108845 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.4	3.78	3.37	3.66	5.35	3.12	0.89	13.0	12.7	0.41	0.11	0.52	1.02	0.18	0.64



Stellar Parameters For KIC 008554853

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5799^{+138}_{-172}	$4.548^{+0.040}_{-0.160}$	$-0.160^{+0.300}_{-0.300}$	$0.860^{+0.202}_{-0.072}$	$0.955^{+0.089}_{-0.123}$	$2.112^{+0.445}_{-0.924}$
	+2%/-3%	+1%/-4%	+188%/-188%	+23%/-8%	+9%/-13%	+21%/-44%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008554853-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-182 ± 25	$2.57^{+0.38}_{-0.29}$	333^{+18}_{-13}	4331^{+208}_{-189}	15285^{+4303}_{-3806}
Alt.	-105 ± 28	$2.19^{+0.33}_{-0.26}$	334^{+19}_{-14}	4168^{+255}_{-288}	11907^{+5206}_{-3818}

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

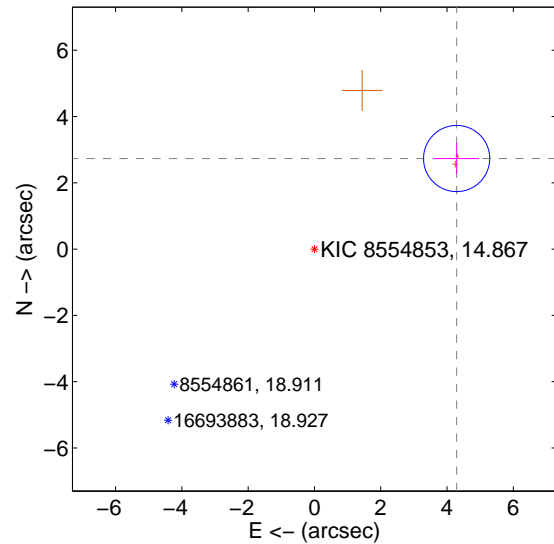
Supplemental centroid analysis for 008554853-01. Kepler magnitude: 14.87. Transit SNR 10.67

There are 0 quarters with good PRF difference image offsets

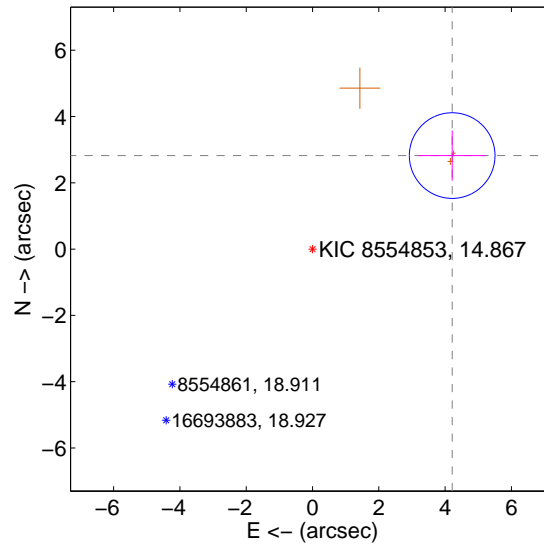
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.086 ± 0.333	15.29	-4.290 ± 0.681	2.733 ± 0.472
PRF-fit source offset from KIC position	5.071 ± 0.431	11.77	-4.213 ± 1.017	2.822 ± 0.755
photometric centroid source offset	1.75 ± 1.38	1.27	-0.30 ± 1.58	-1.73 ± 1.37

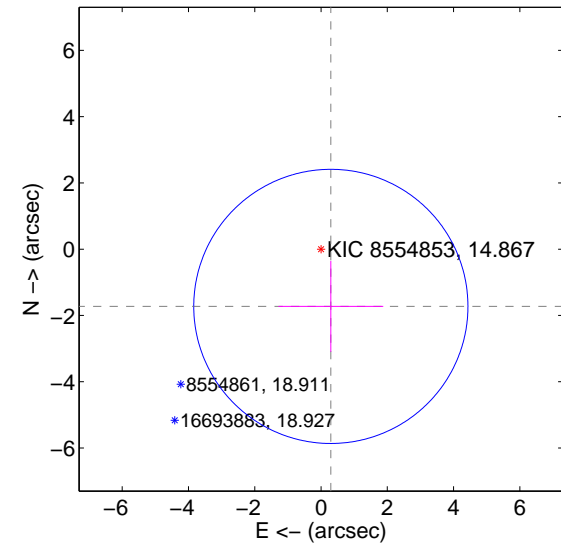
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

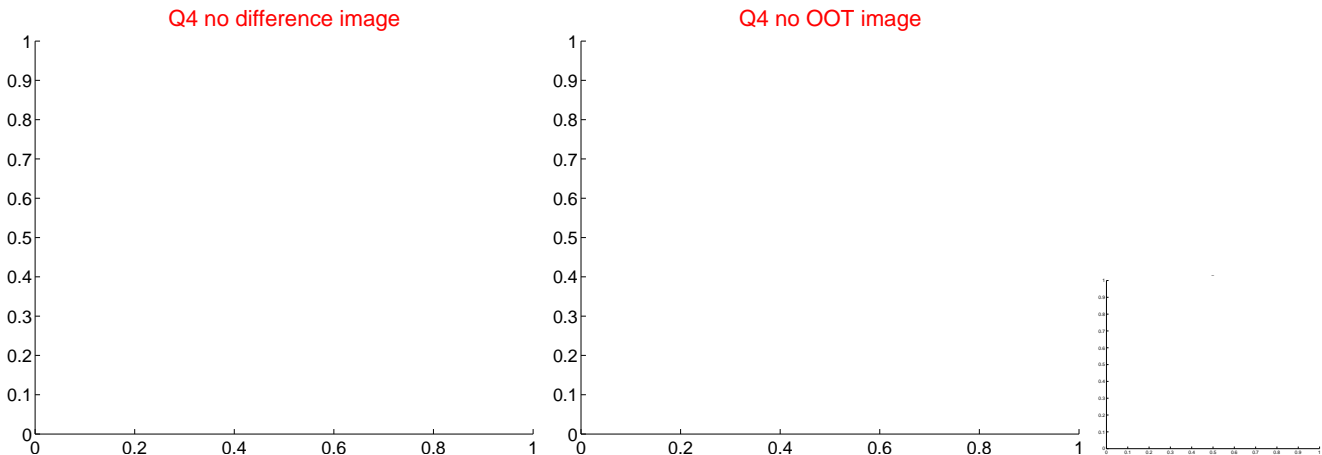
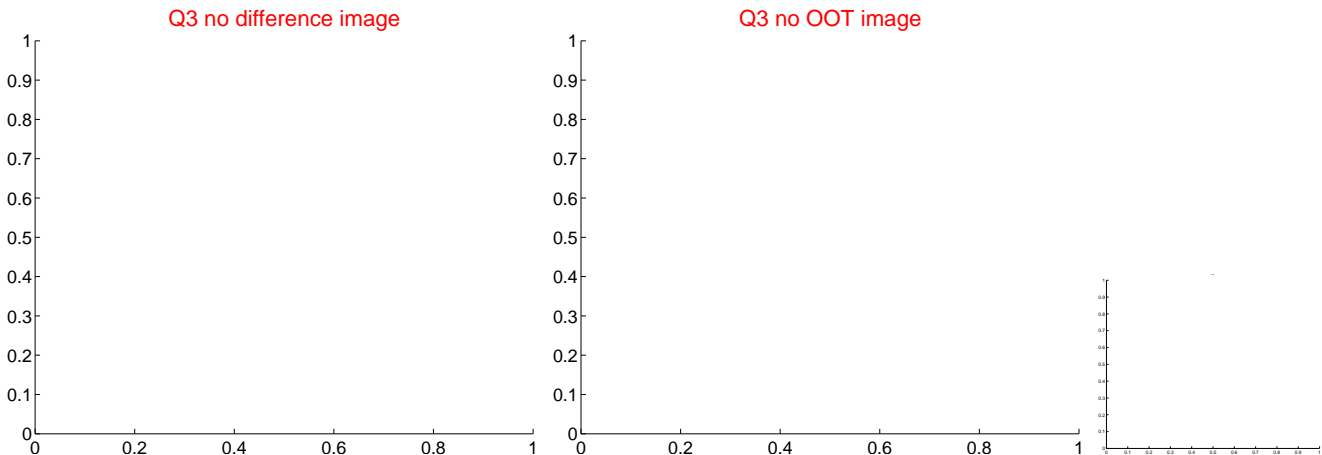
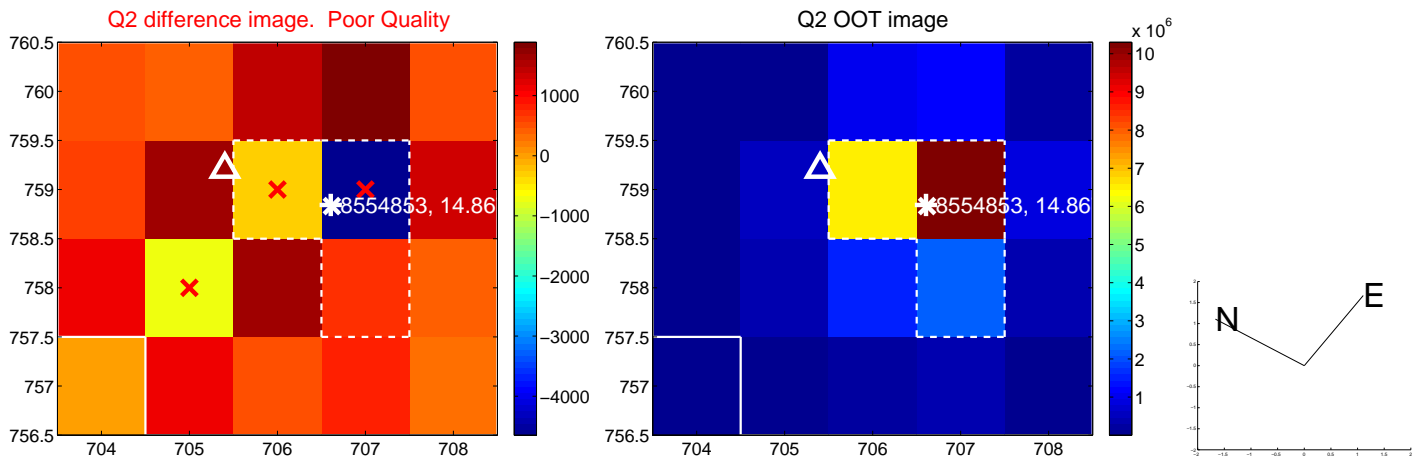
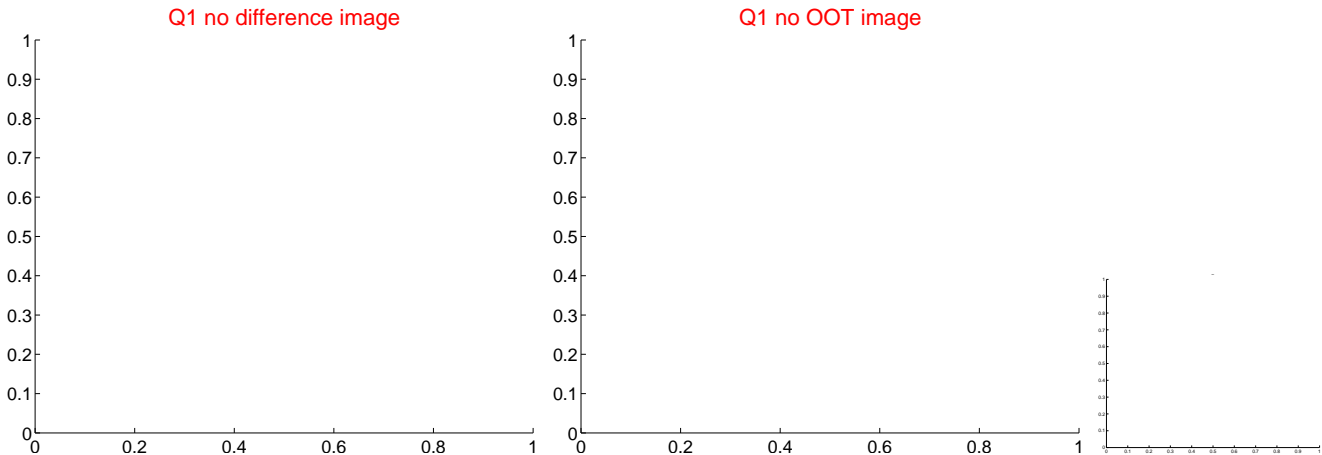


offset from photometric centroids

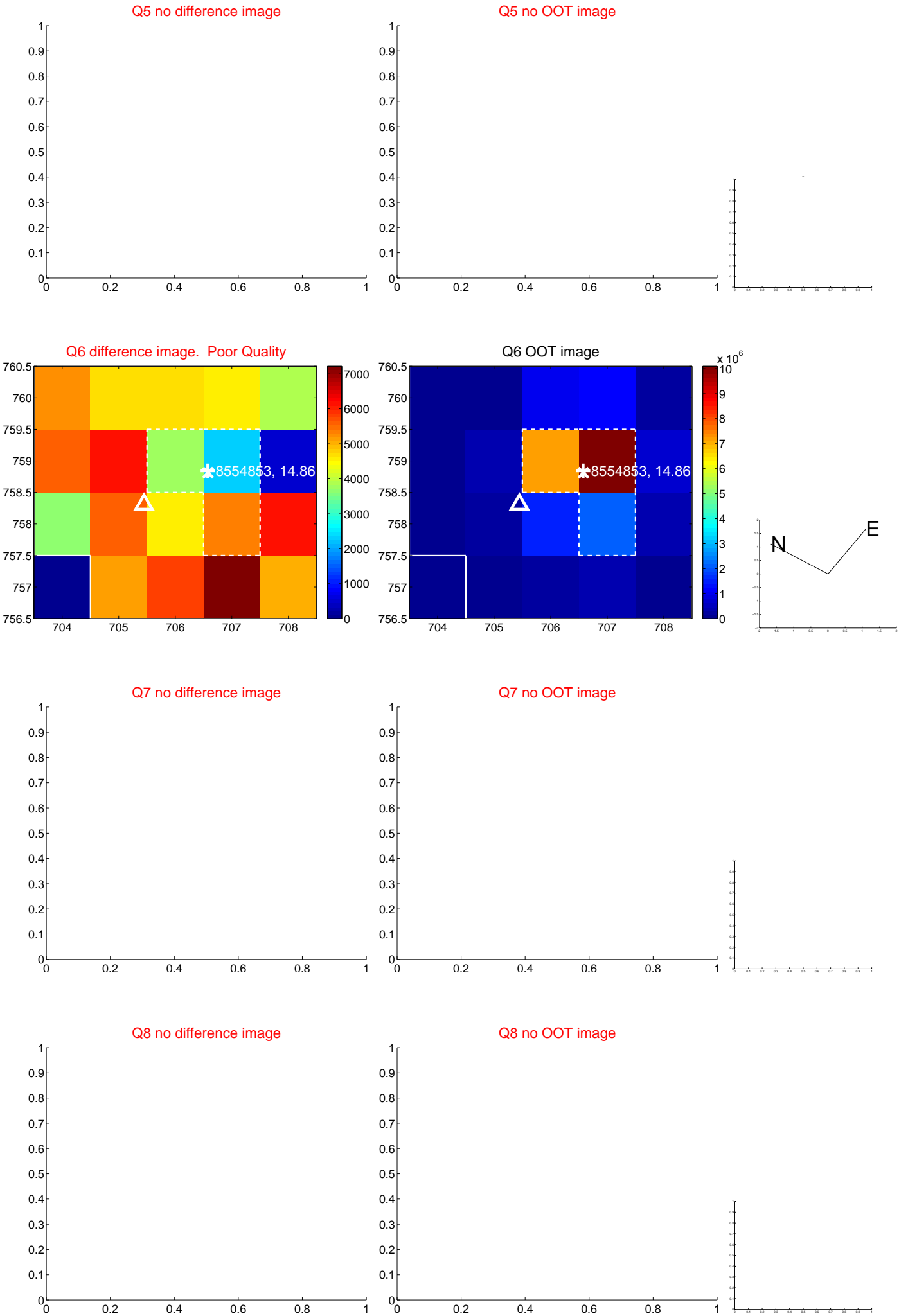


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

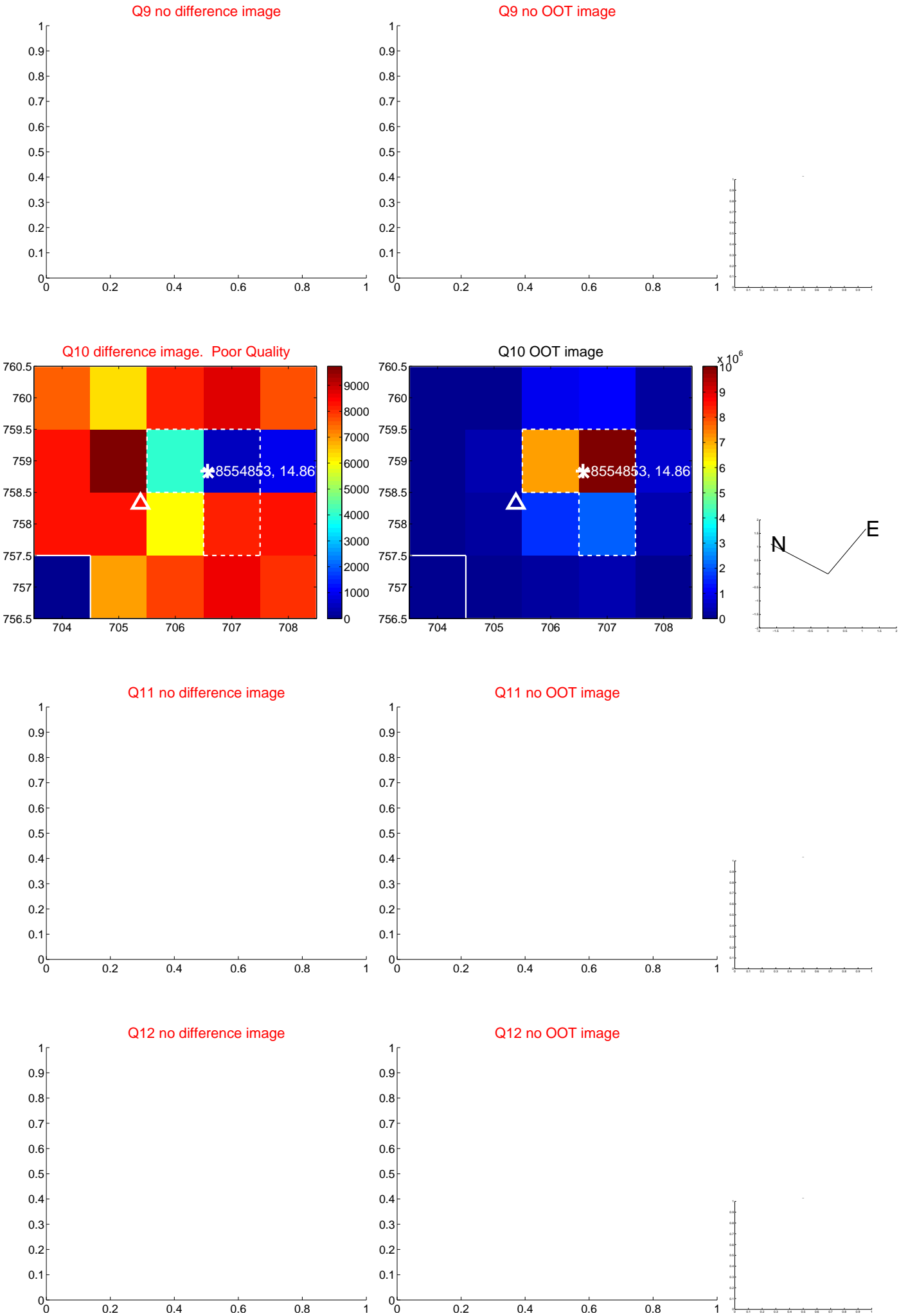
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



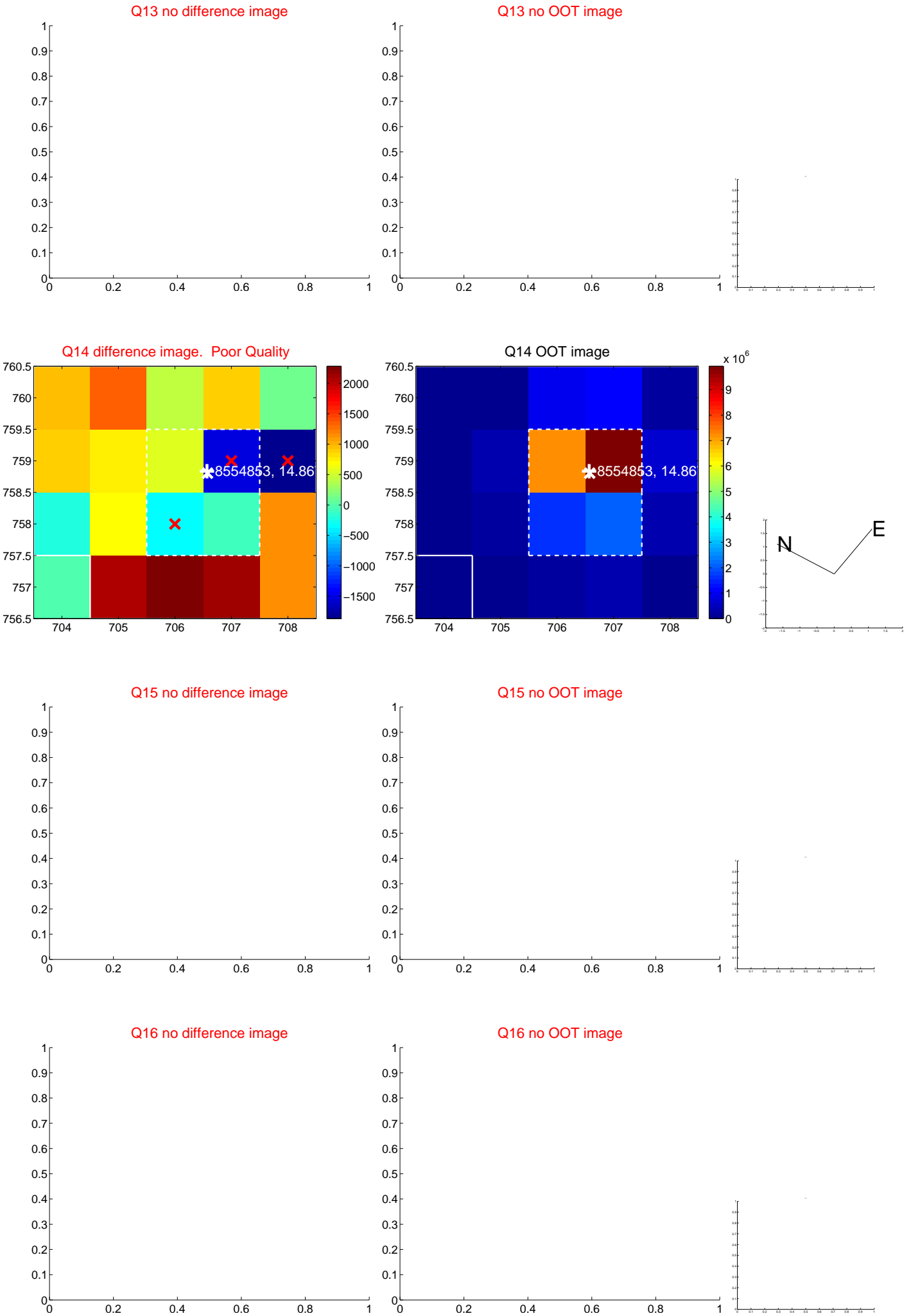
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



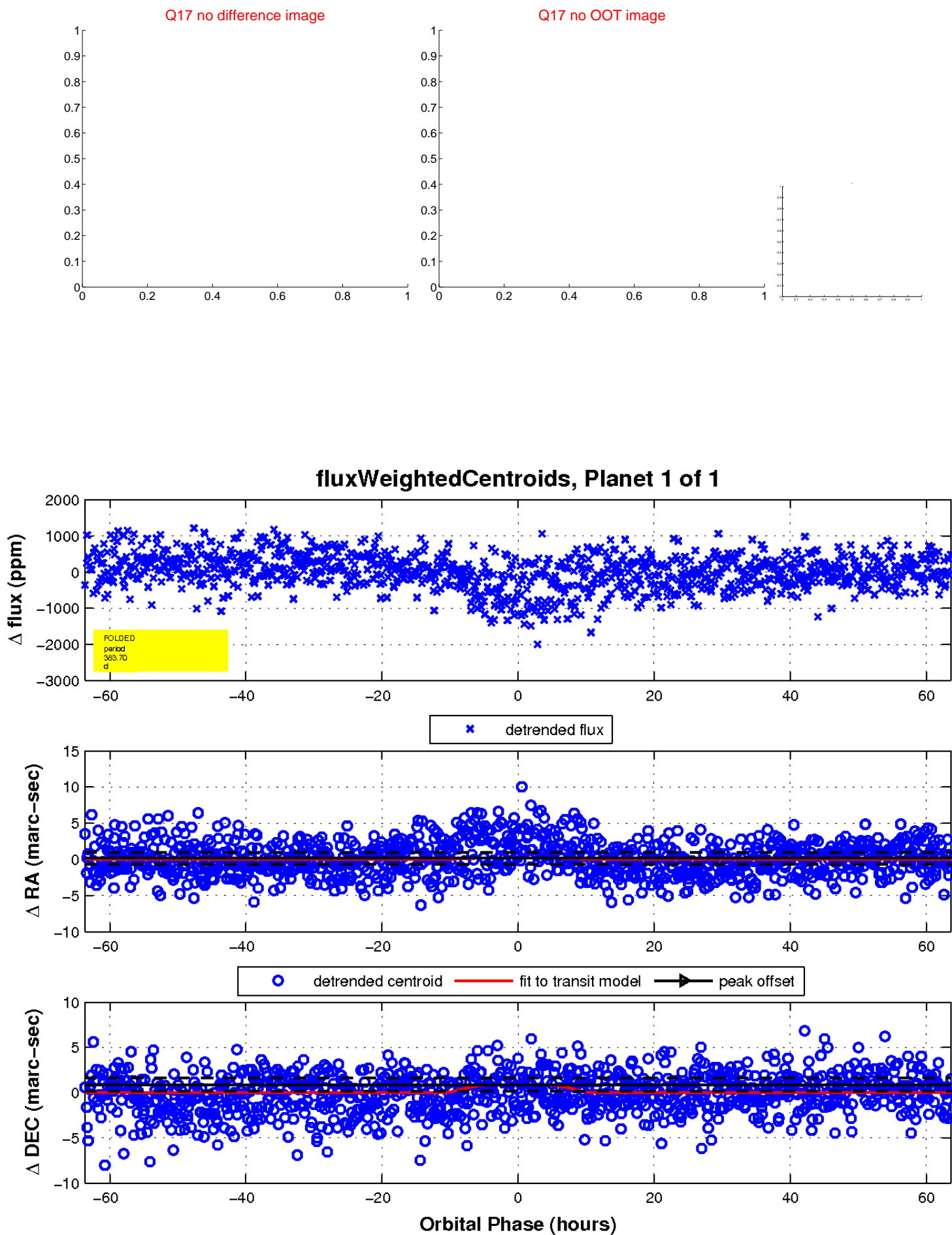
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



UKIRT Image

Declination

