

KIC 010881457

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})
010881457-01	OBS	3484.01	84.704139	152.181990	631.2	10.450	13.8	14.0	1.63	6085	4.28	19.63

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010881457-01	OBS	PC	0.97	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 010881457-01

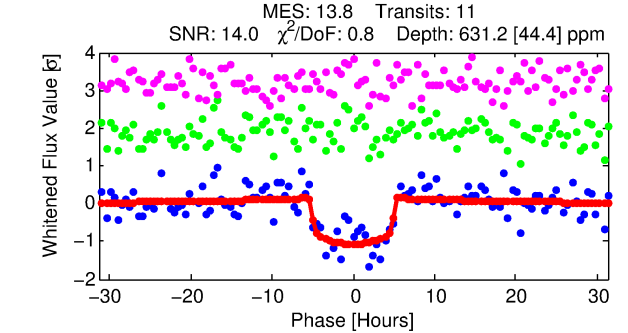
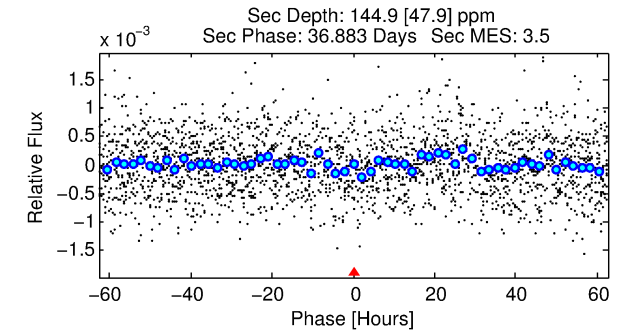
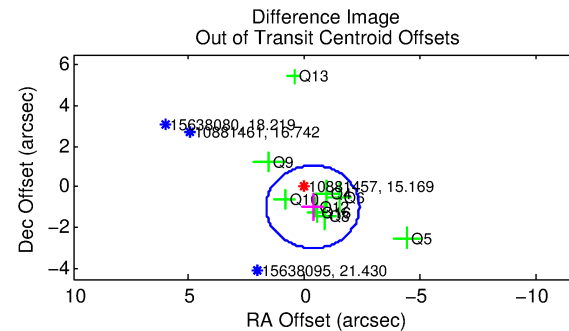
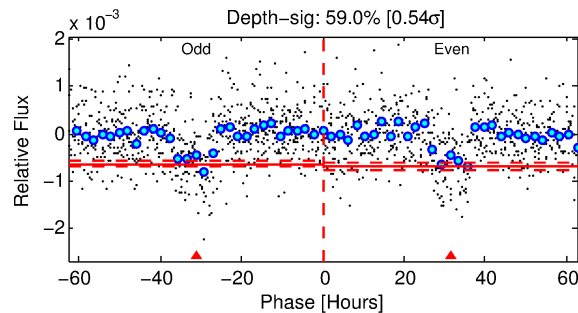
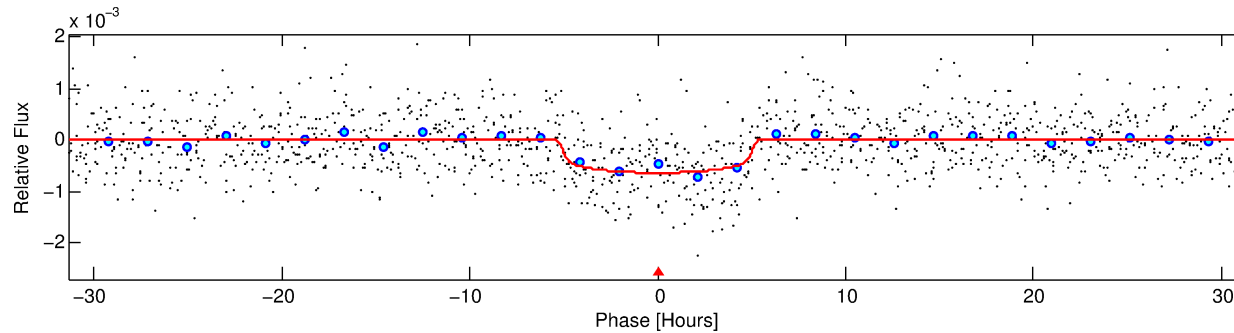
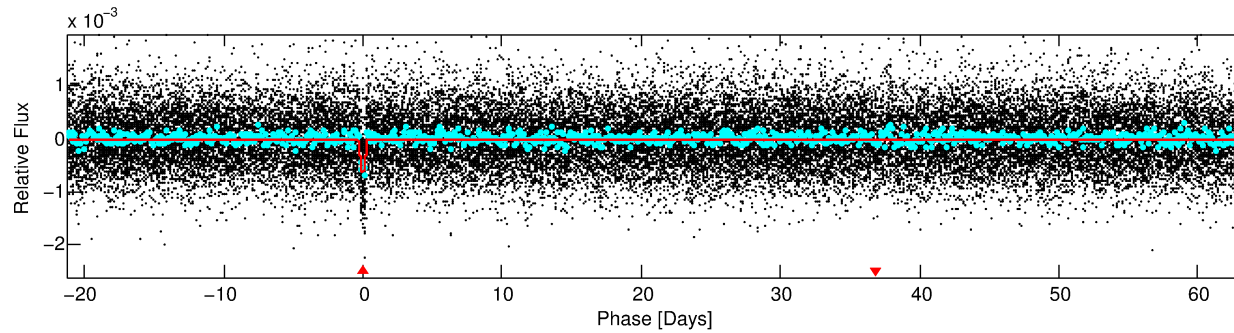
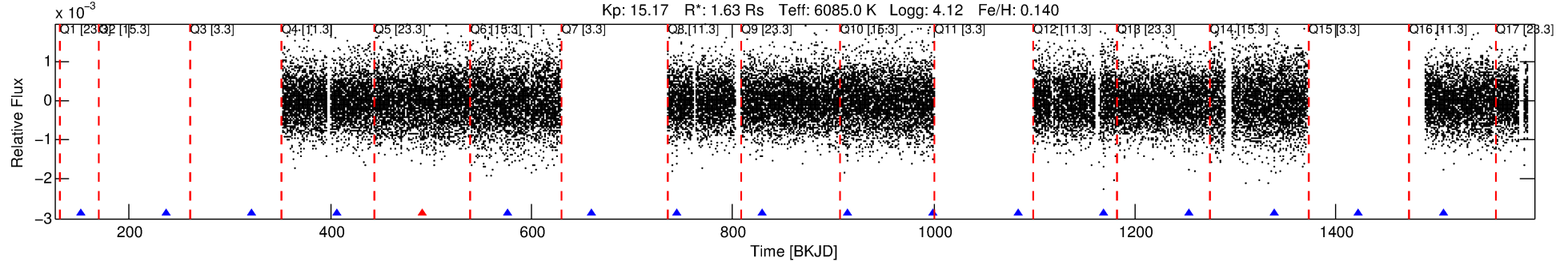
No Significant Match Found

DV One-Page Summary

KIC: 10881457 Candidate: 1 of 1 Period: 84.704 d

KOI: K03484.01 Corr: 0.995

Kp: 15.17 R*: 1.63 Rs Teff: 6085.0 K Logg: 4.12 Fe/H: 0.140



DV Fit Results:

Period = 84.70414 [0.00134] d
Epoch = 152.1820 [0.0137] BKJD
Rp/R* = 0.0240 [0.0104]
a/R* = 51.73 [106.31]
b = 0.59 [2.26]
Seff = 19.63 [6.04]
Teq = 537 [41] K
Rp = 4.28 [2.07] Re
a = 0.4088 [0.0797] AU
Ag = 728.34 [712.40] [1.02σ]
Teff = 4311 [1004] K [3.75σ]

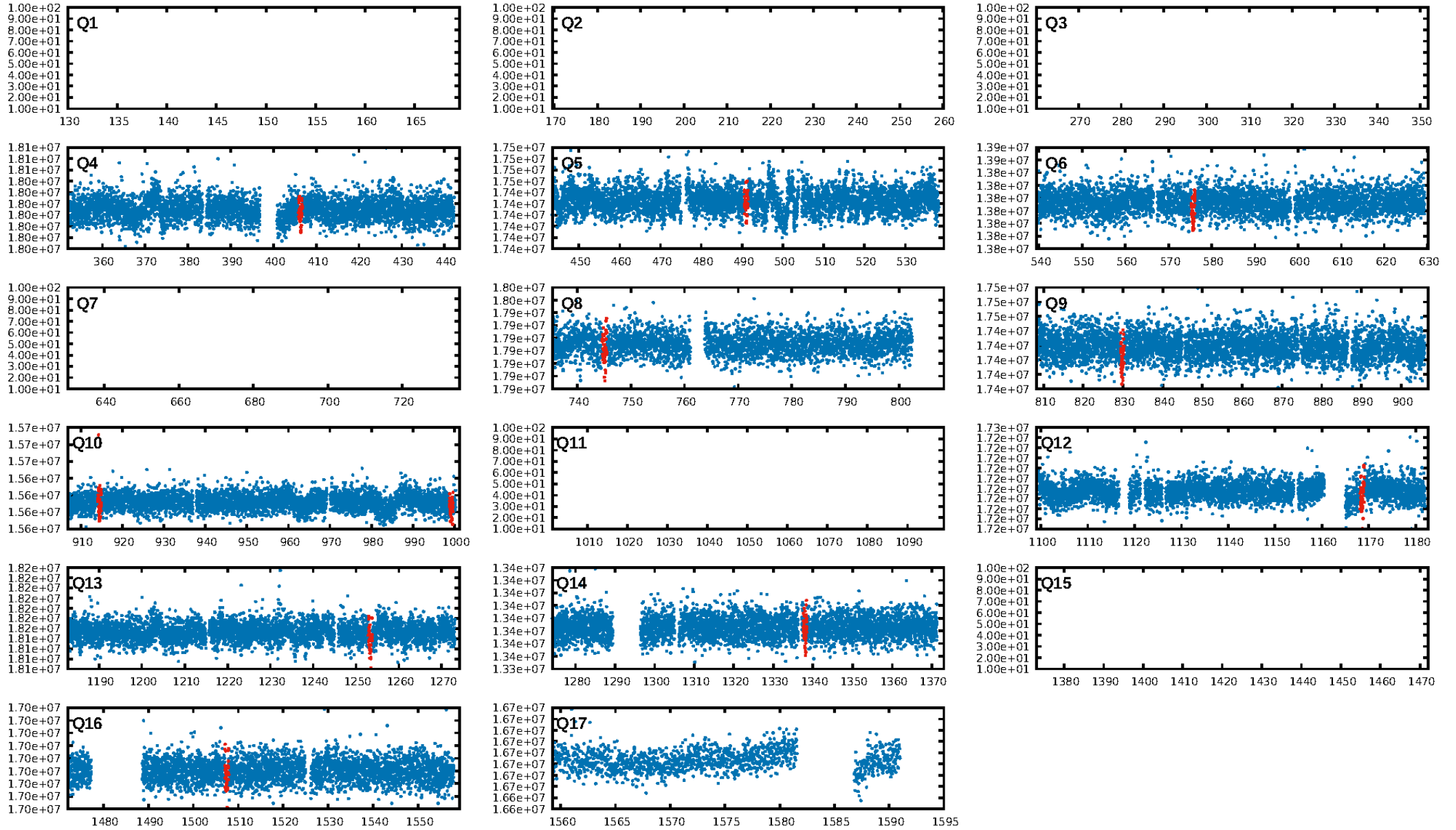
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 70.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 7.65e-40
RollingBand-fgt: 0.91 [10/11]
GhostDiagnostic-chr: 10.47
Centroid-sig: 45.8%
Centroid-so: 0.351 arcsec [0.45σ]
OotOffset-rm: 1.034 arcsec [1.53σ]
KicOffset-rm: 0.969 arcsec [1.16σ]
OotOffset-st: 2/0/4/3 [9]
KicOffset-st: 2/0/4/3 [9]
DiffImageQuality-fgm: 0.67 [6/9]
DiffImageOverlap-fno: 1.00 [9/9]

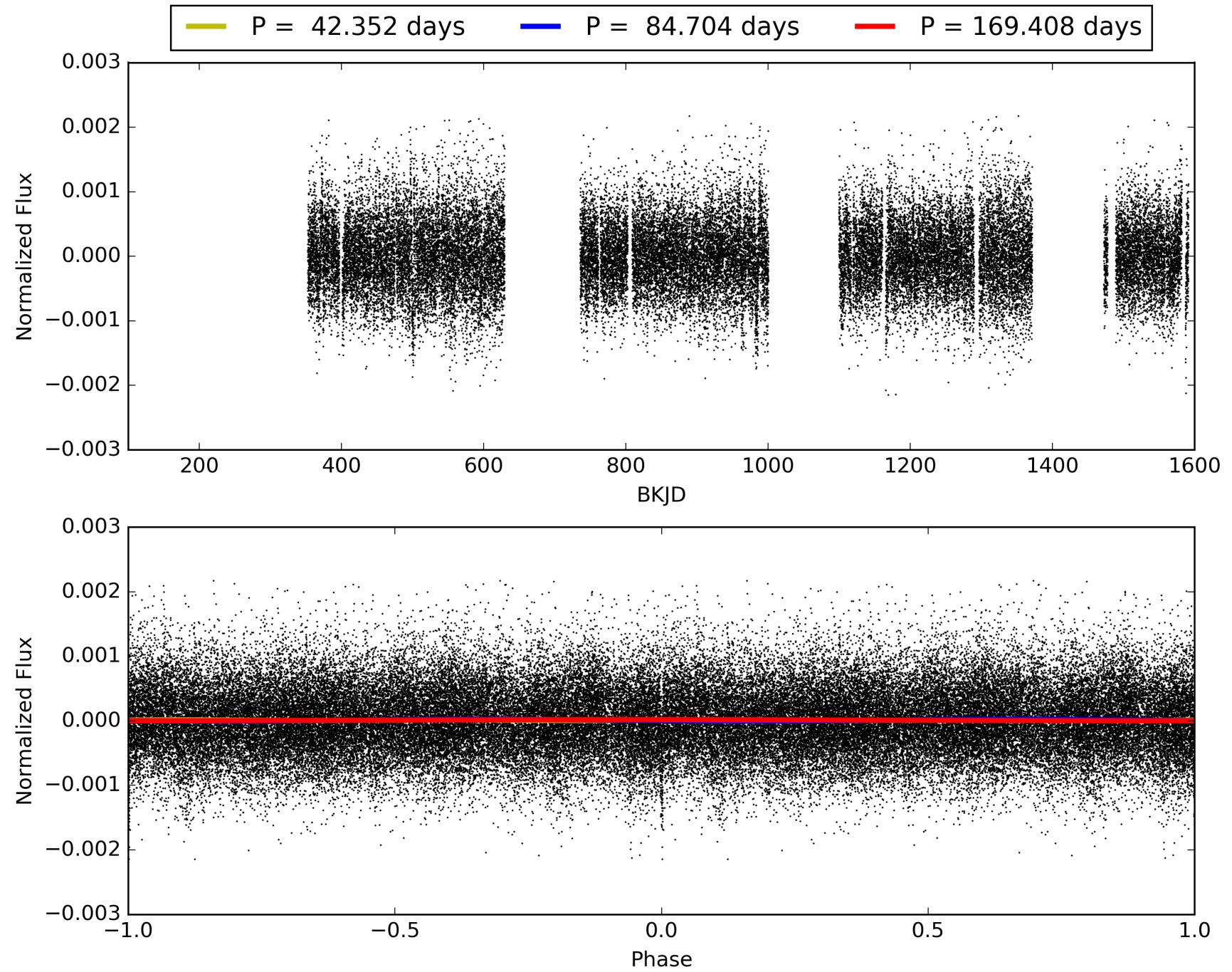
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:46:45 Z

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

TCE 010881457-01, PDC Light Curves

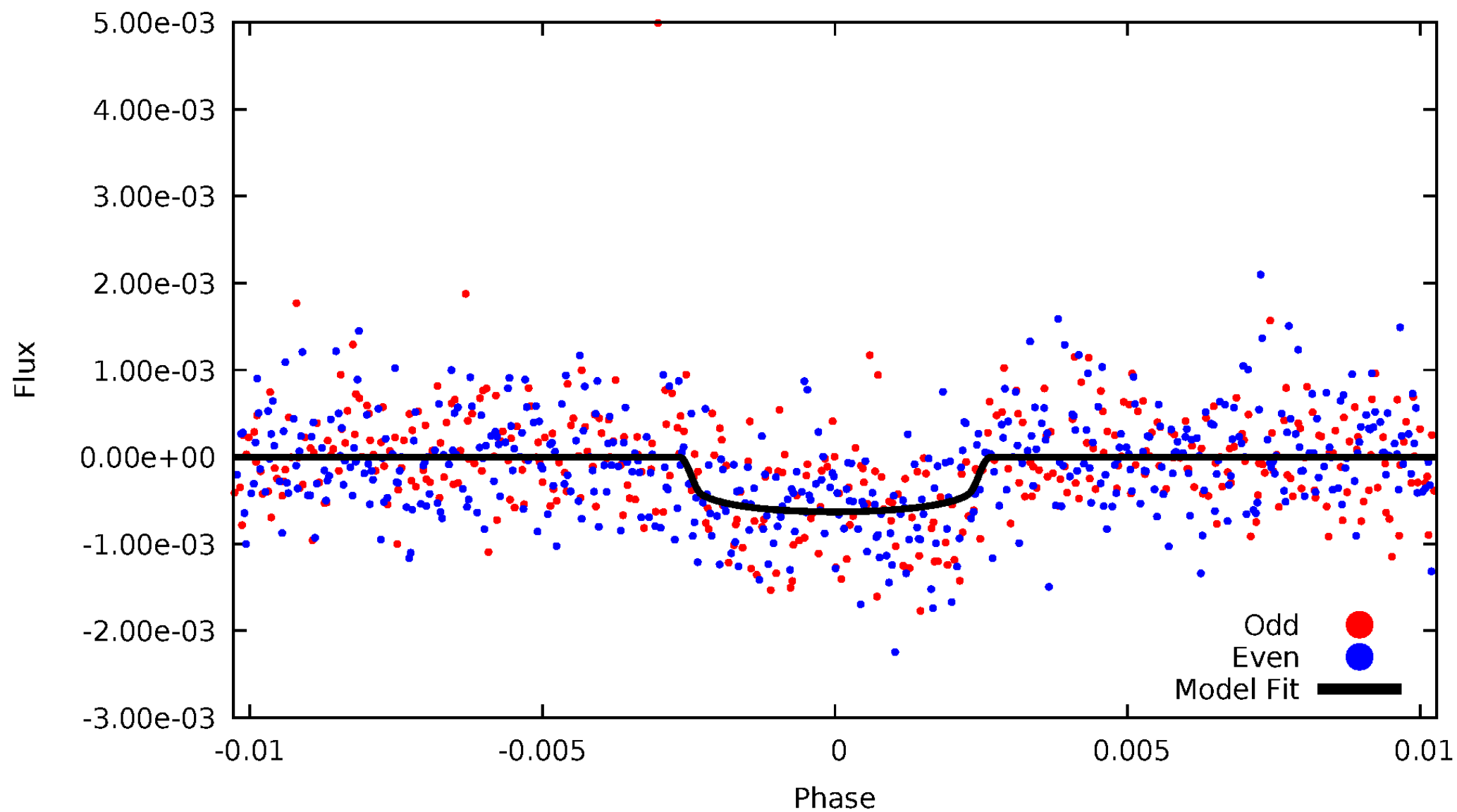


TCE 010881457-01



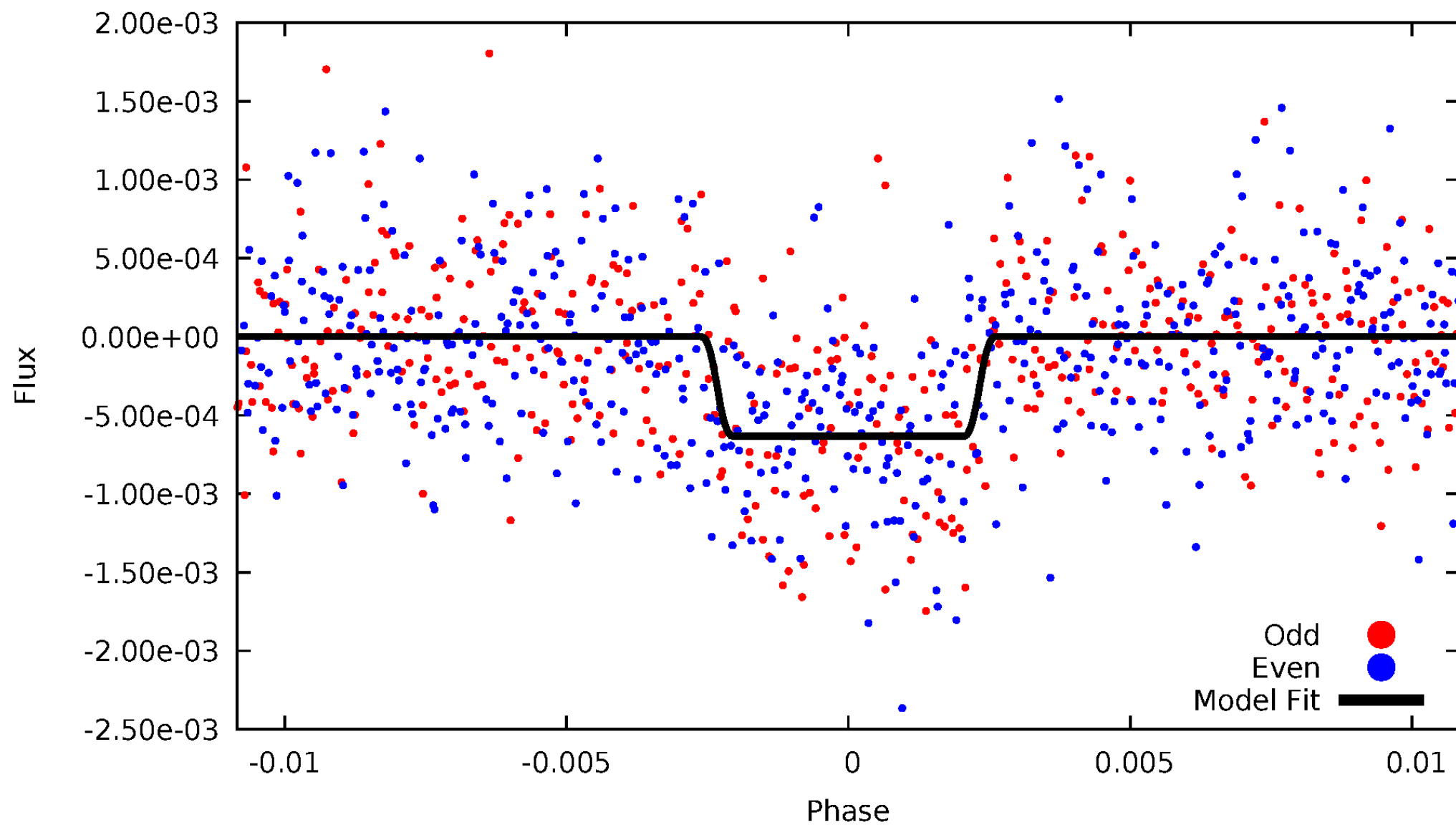
DV Odd/Even

TCE 010881457-01



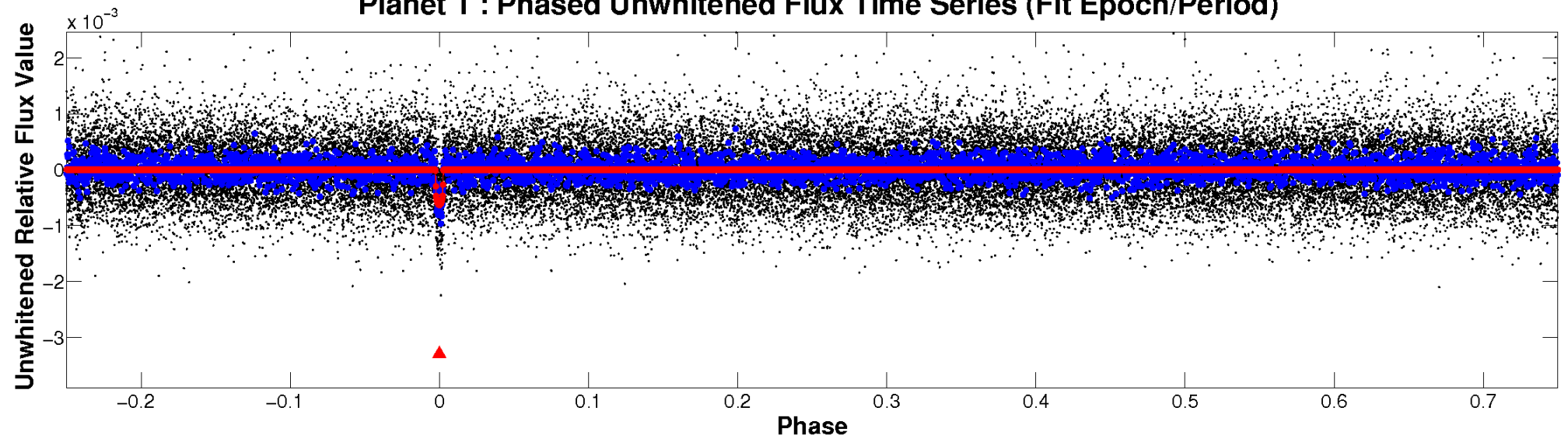
ALT Odd/Even

TCE 010881457-01

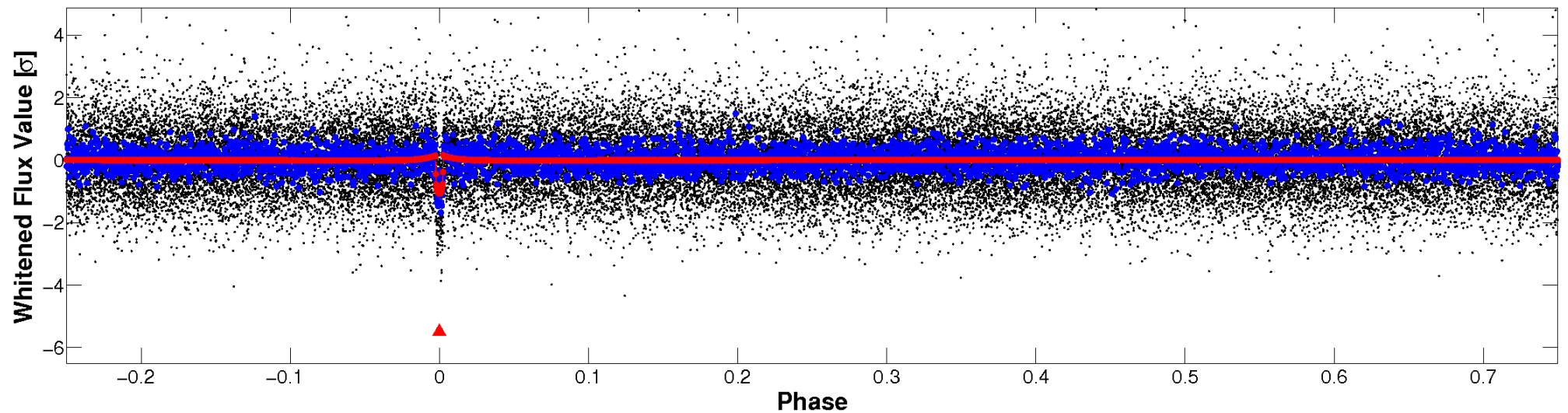


Non-Whitened Vs. Whitened Light Curve

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

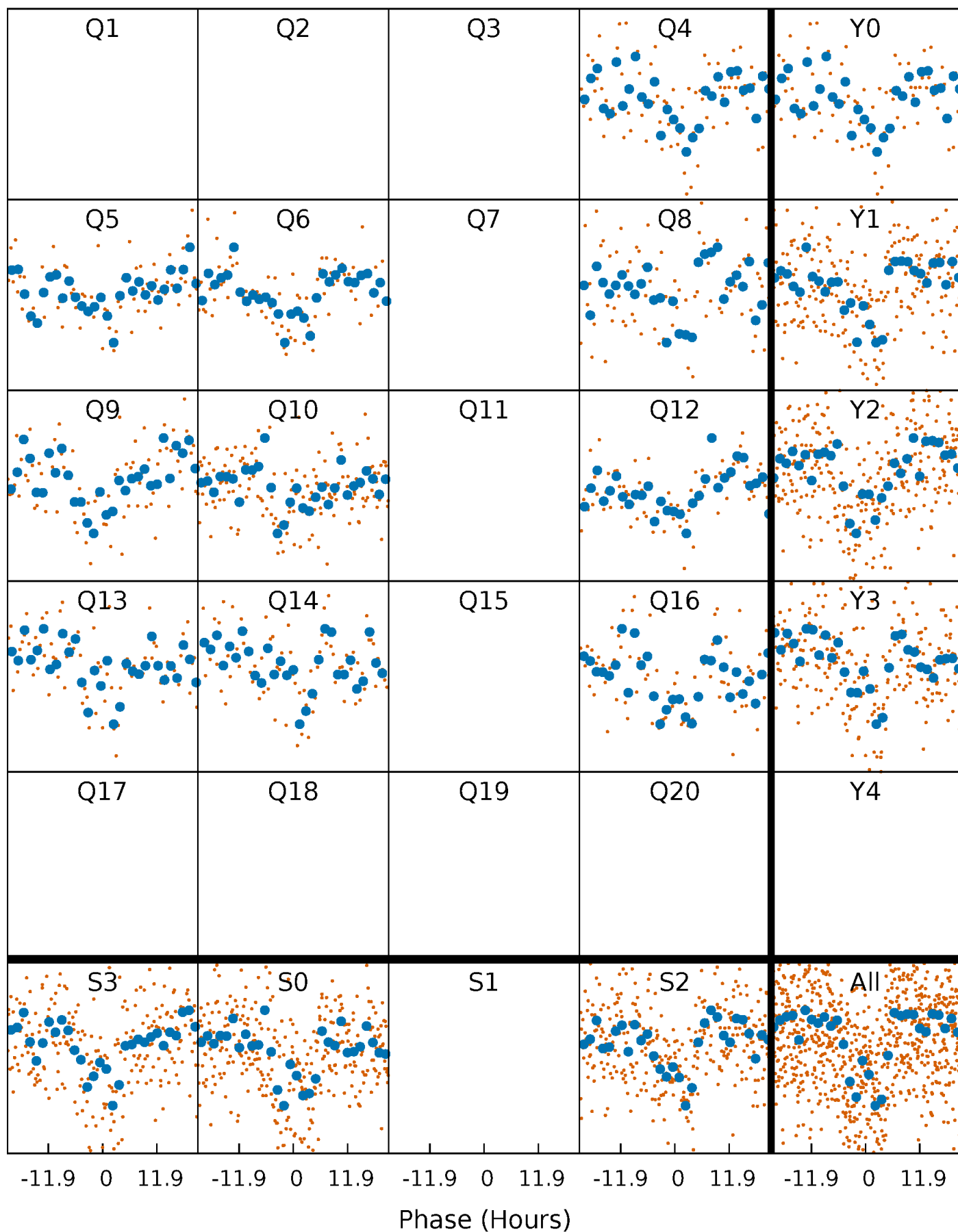


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



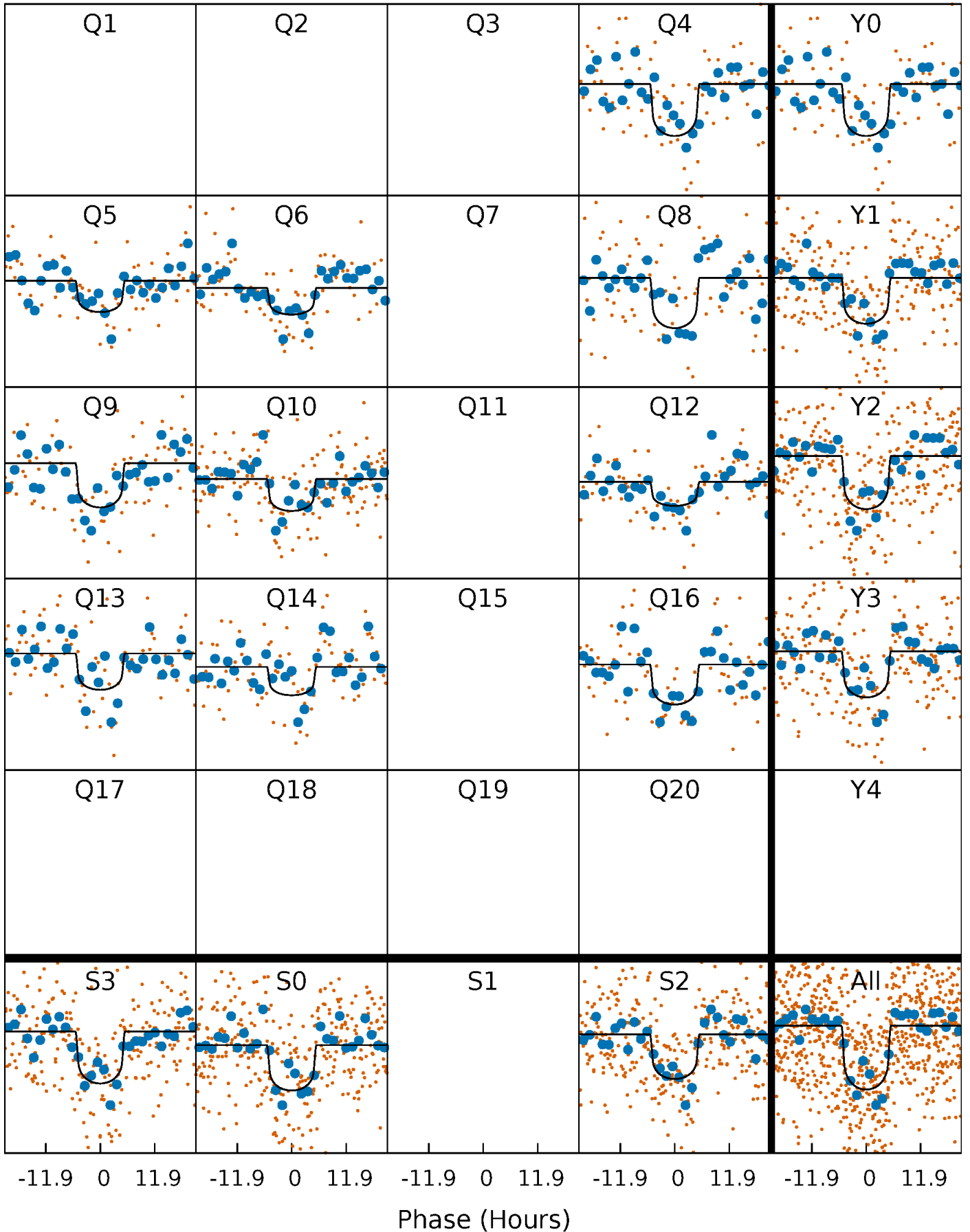
PDC Quarter-Phased Transit Curves

TCE 010881457-01 P= 84.704139 Days $T_0=152.181990$ (BKJD)



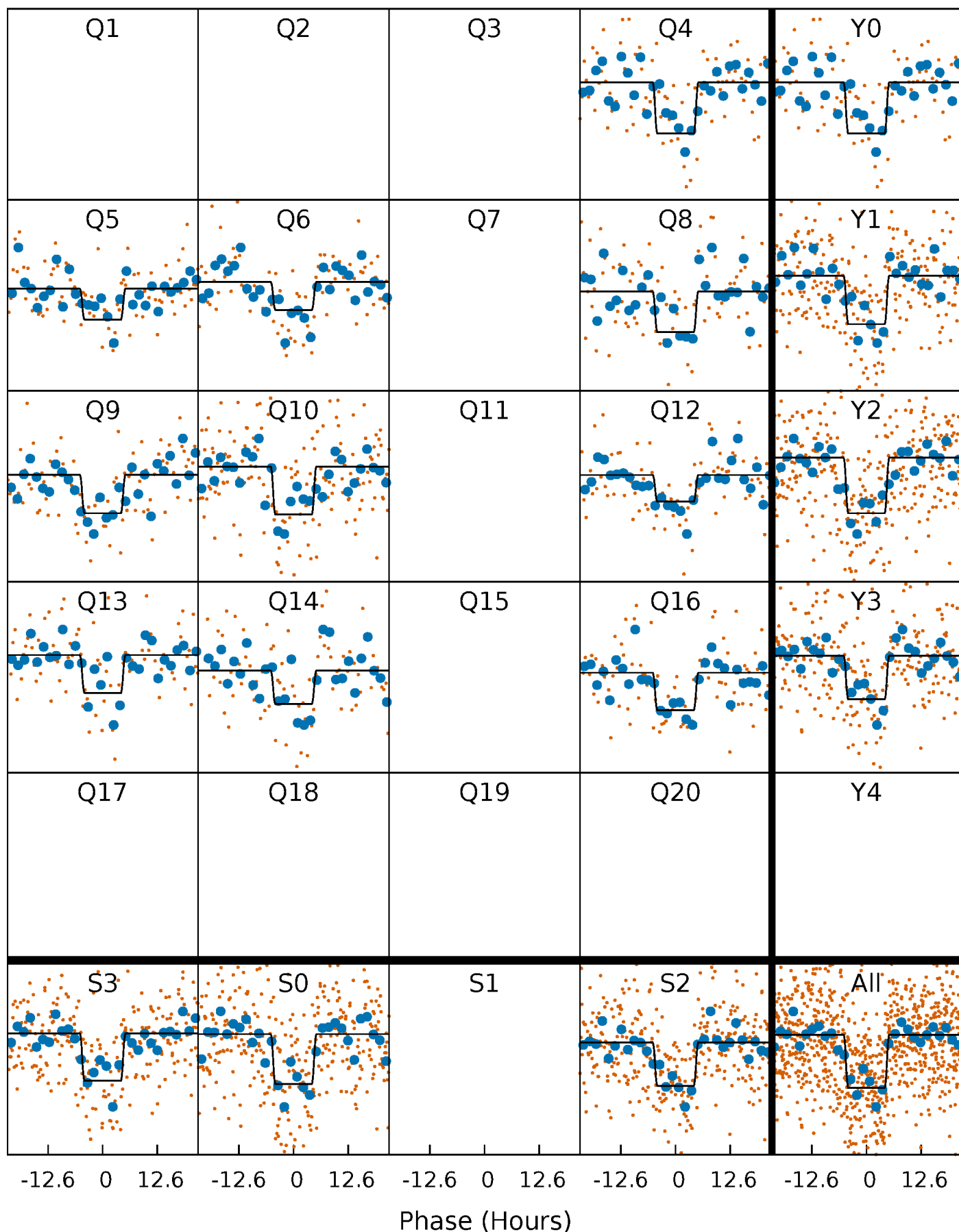
DV Quarter-Phased Transit Curves

TCE 010881457-01 P= 84.704139 Days $T_0=152.181990$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

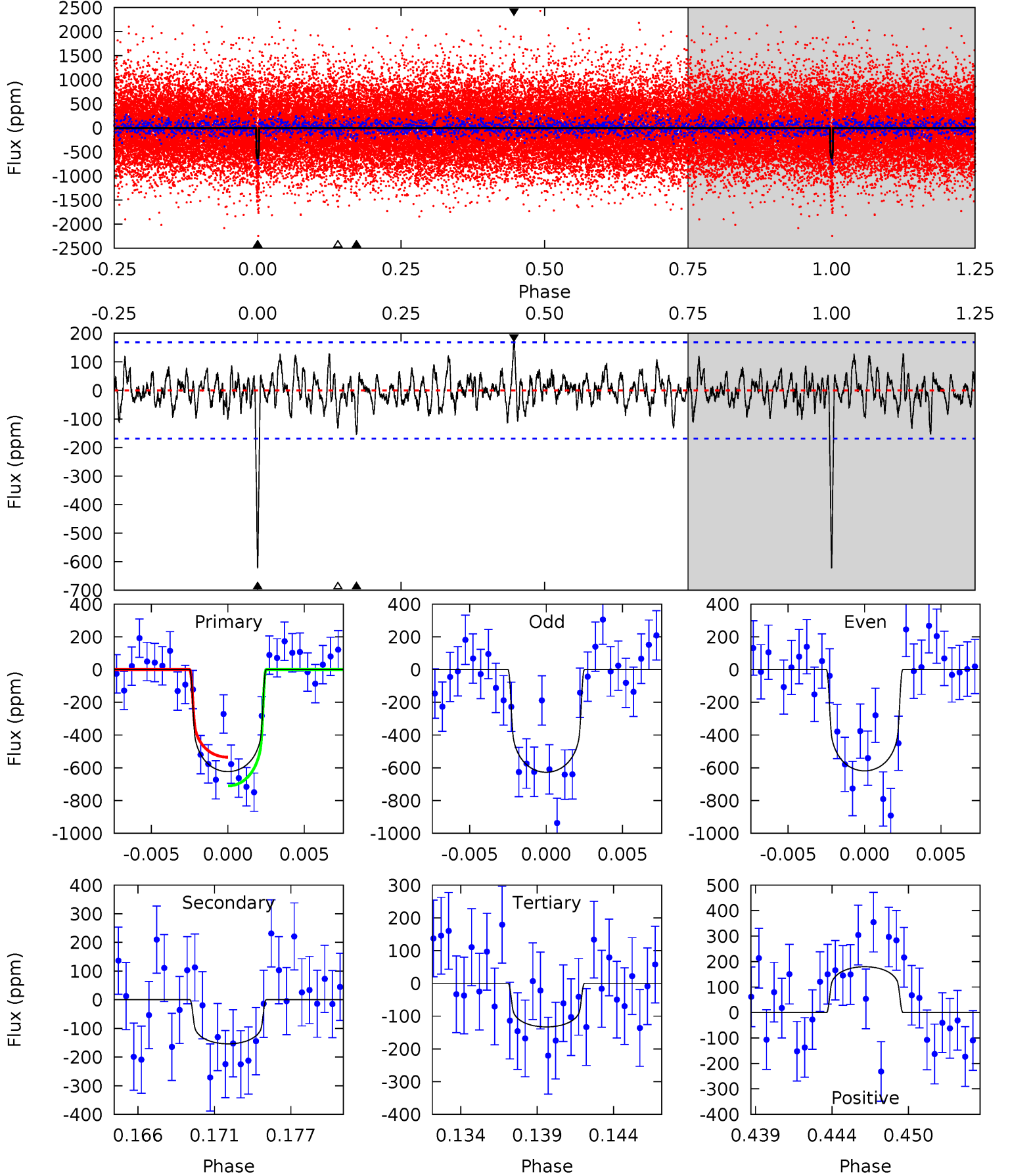
TCE 010881457-01 P= 84.704374 Days $T_0=152.185677$ (BKJD)



DV Model-Shift Uniqueness Test

010881457-01, $P = 84.704139$ Days, $E = 152.181990$ Days

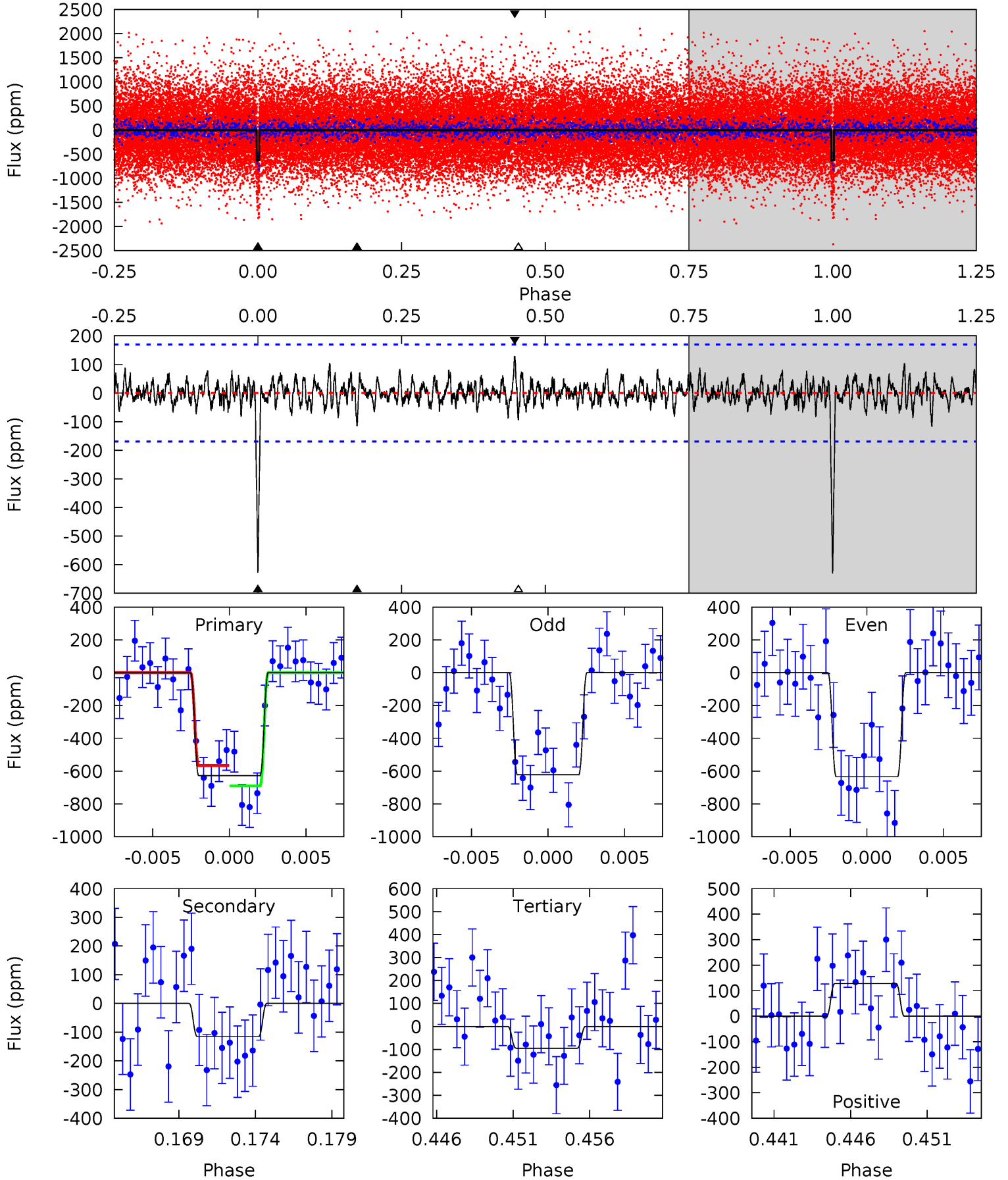
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.0	4.69	4.05	5.47	5.14	2.79	1.32	14.9	13.5	0.64	-0.79	0.13	1.01	0.22	2.68



Alt Model-Shift Uniqueness Test

010881457-01, $P = 84.704374$ Days, $E = 152.185677$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.1	3.50	2.87	3.89	5.15	2.80	0.95	16.2	15.2	0.62	-0.39	0.17	1.00	0.17	1.90



Stellar Parameters For KIC 010881457

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6085^{+79}_{-85}	$4.115^{+0.174}_{-0.116}$	$0.140^{+0.150}_{-0.100}$	$1.634^{+0.285}_{-0.348}$	$1.271^{+0.107}_{-0.143}$	$0.410^{+0.372}_{-0.145}$
	+1%/-1%	+4%/-3%	+107%/-71%	+17%/-21%	+8%/-11%	+91%/-35%
Source	SPE90	SPE90	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 010881457-01 / KOI 3484.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-154 ± 33	$4.20^{+1.83}_{-1.71}$	748^{+39}_{-43}	4539^{+1211}_{-584}	792^{+1532}_{-429}
Alt.	-115 ± 33	$4.23^{+2.04}_{-1.68}$	747^{+37}_{-41}	4243^{+1059}_{-537}	552^{+1148}_{-303}

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 $A_{obs} \gg 1.0$

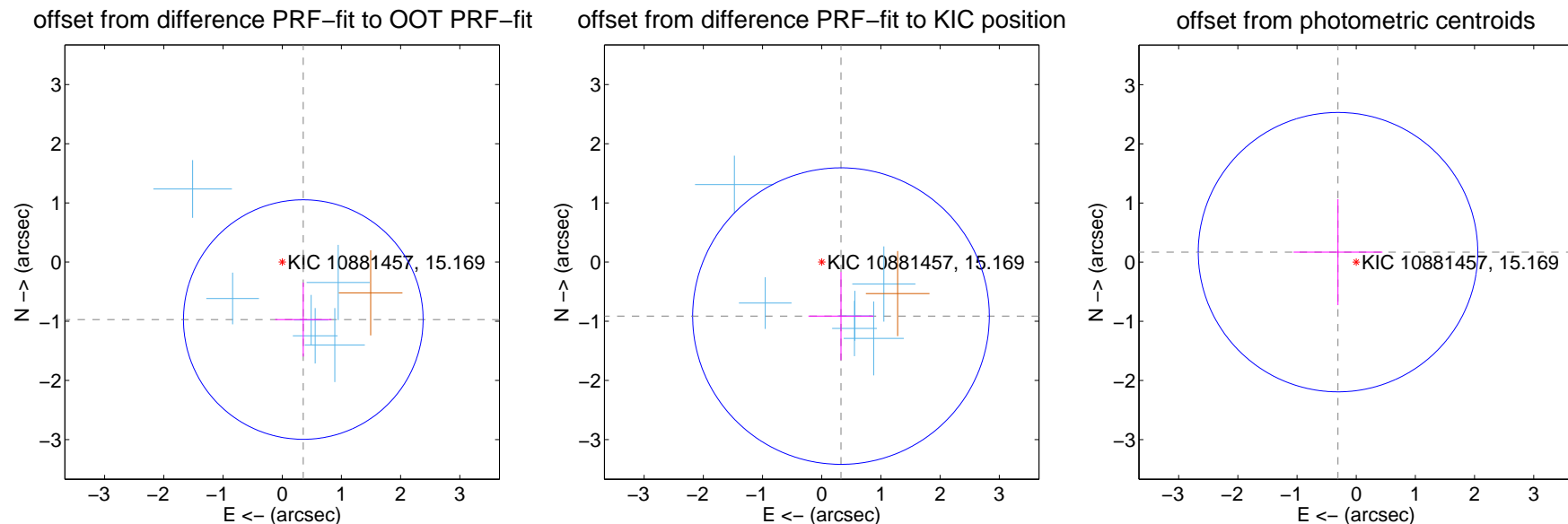
DV Centroid Data

Supplemental centroid analysis for 010881457-01. Kepler magnitude: 15.17. Transit SNR 14.02

There are 6 quarters with good PRF difference image offsets

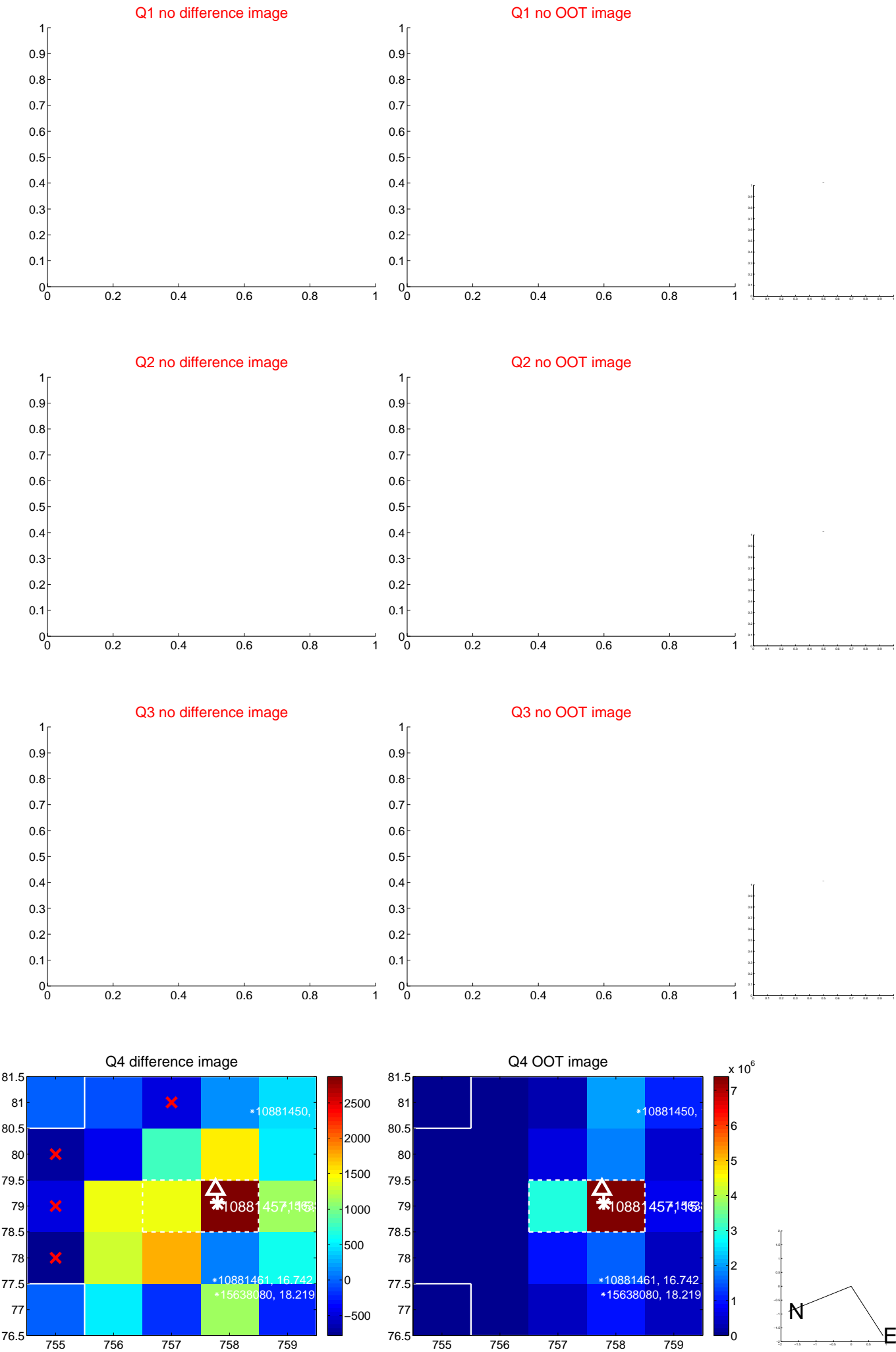
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.034 ± 0.674	1.53	-0.356 ± 0.474	-0.971 ± 0.625
PRF-fit source offset from KIC position	0.969 ± 0.835	1.16	-0.326 ± 0.550	-0.912 ± 0.744
photometric centroid source offset	0.35 ± 0.79	0.45	0.31 ± 0.75	0.17 ± 0.90

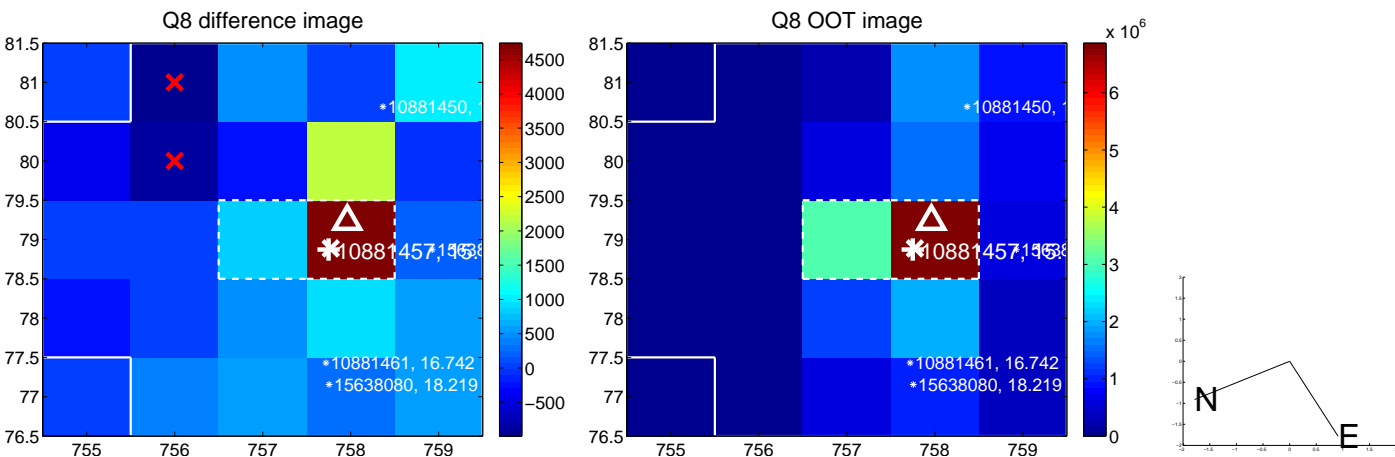
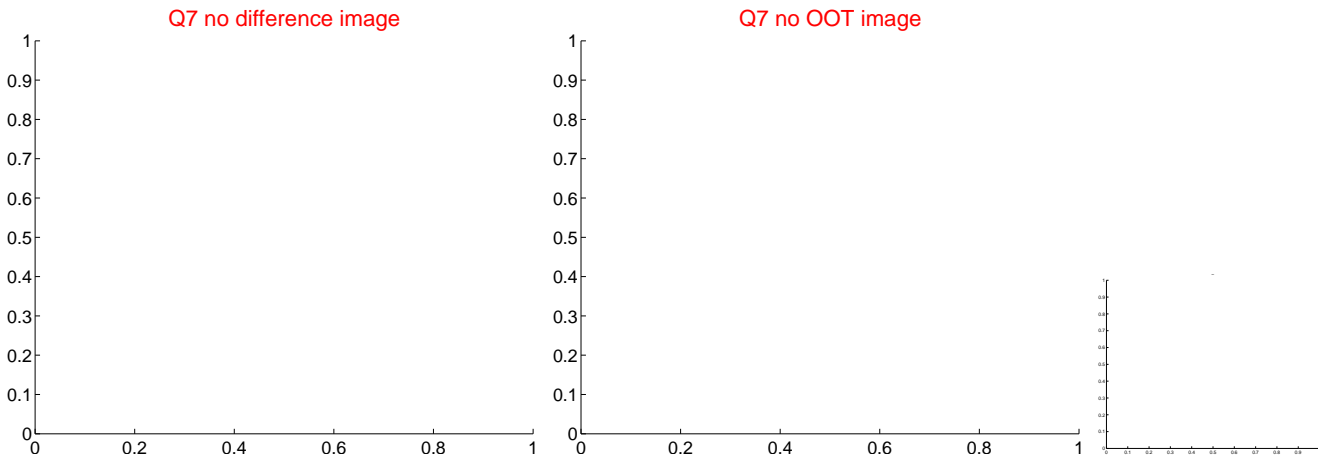
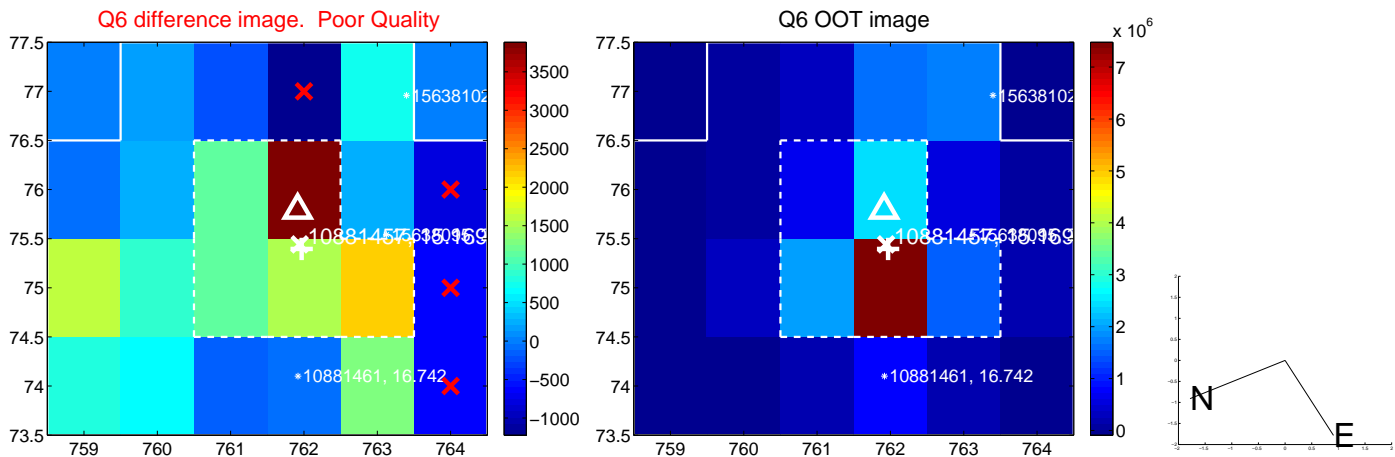
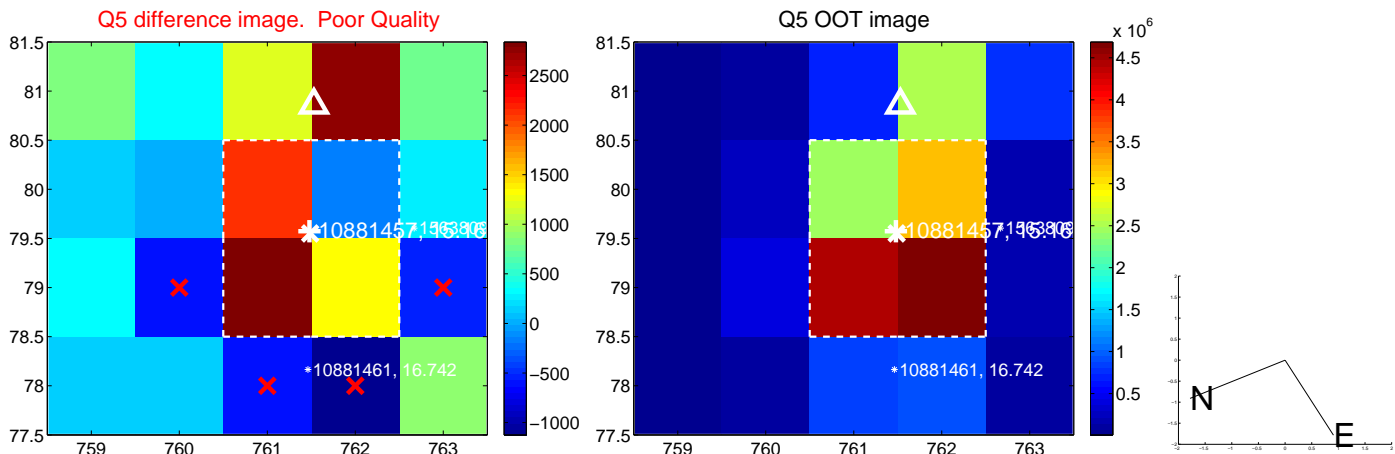


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

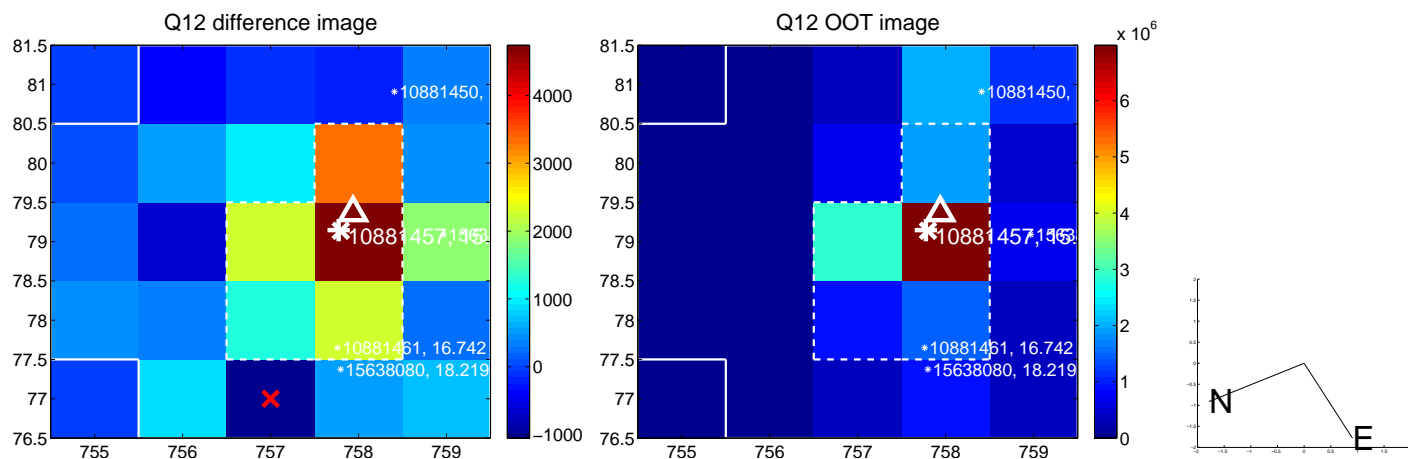
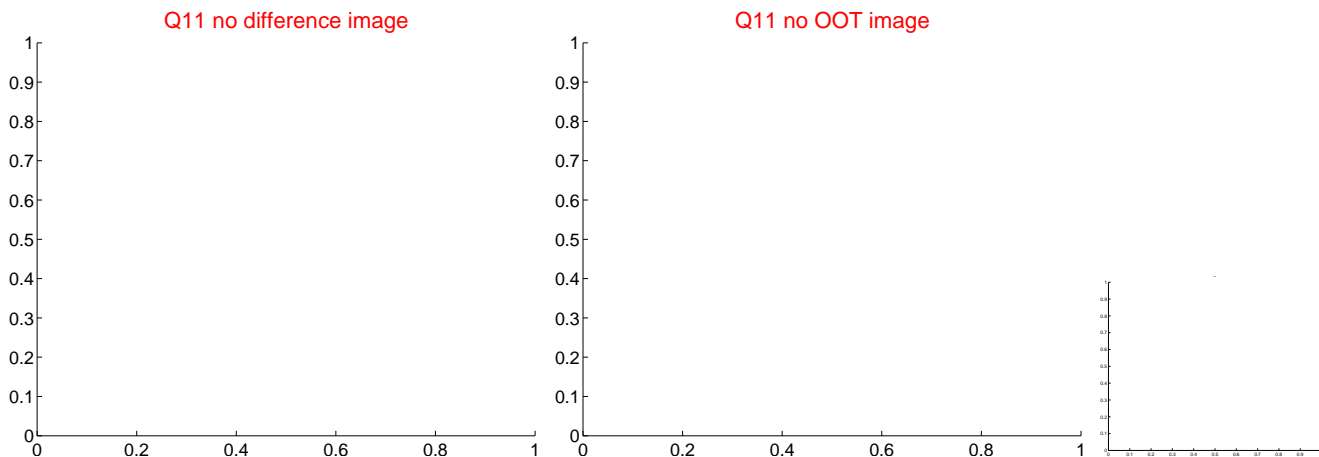
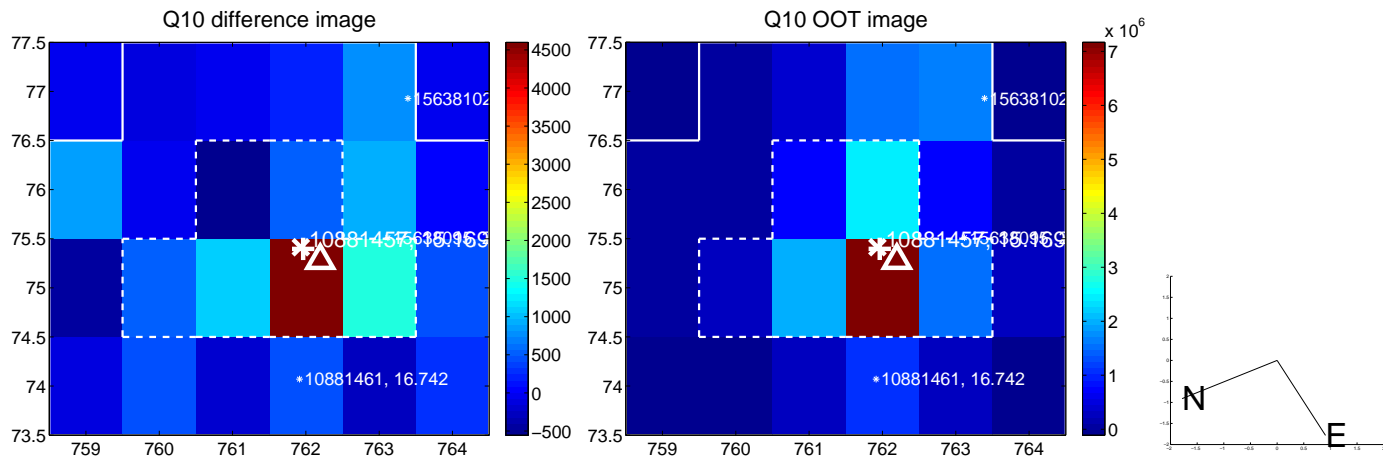
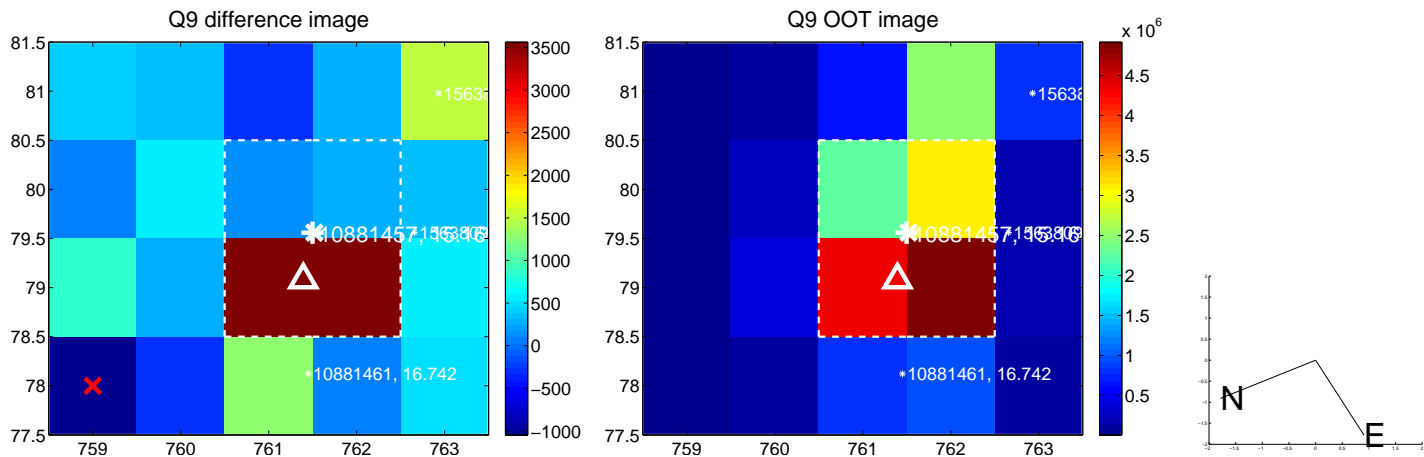
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



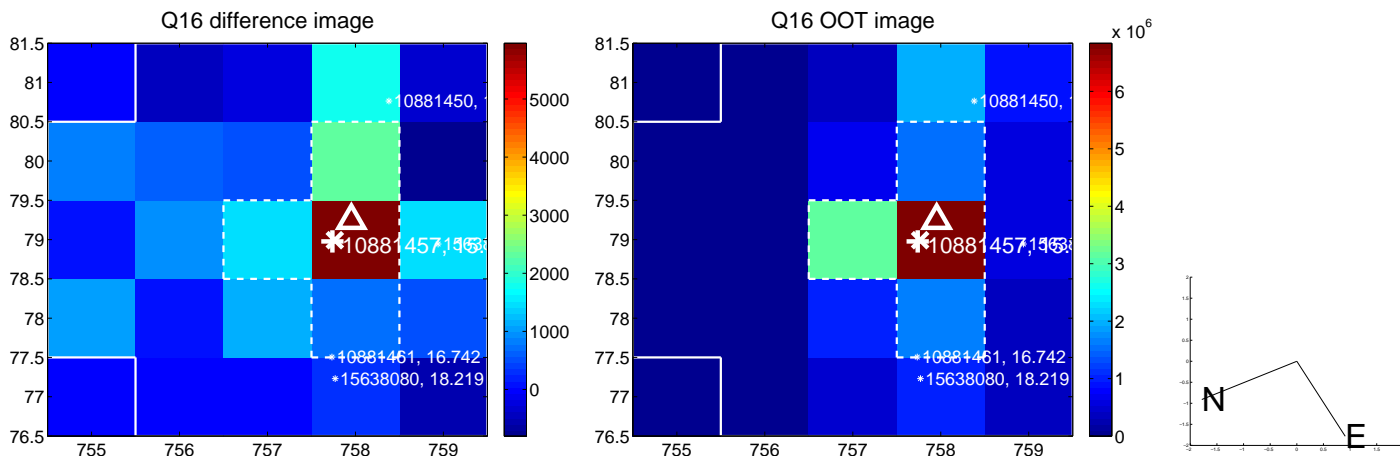
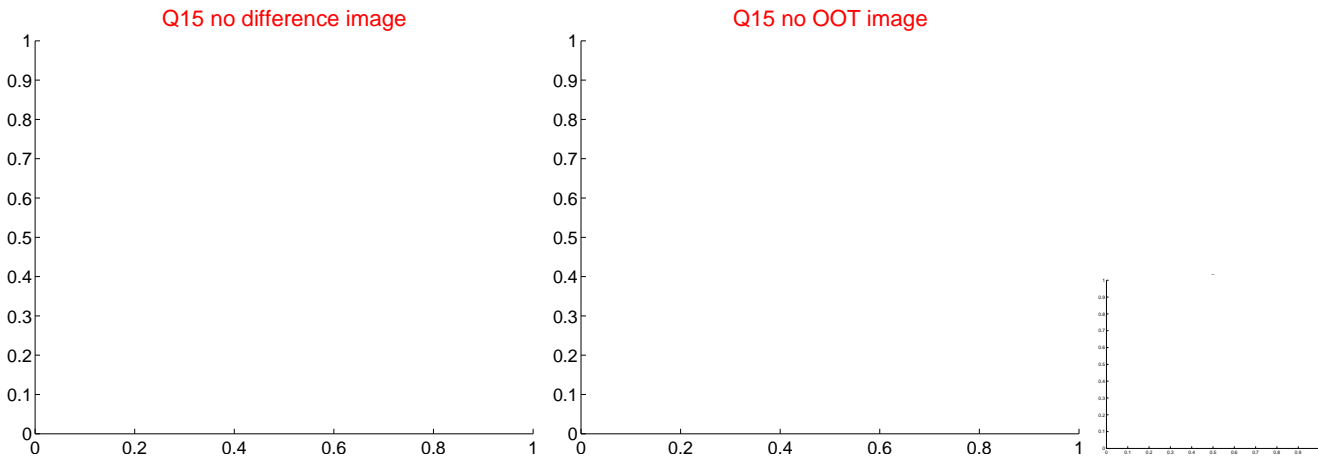
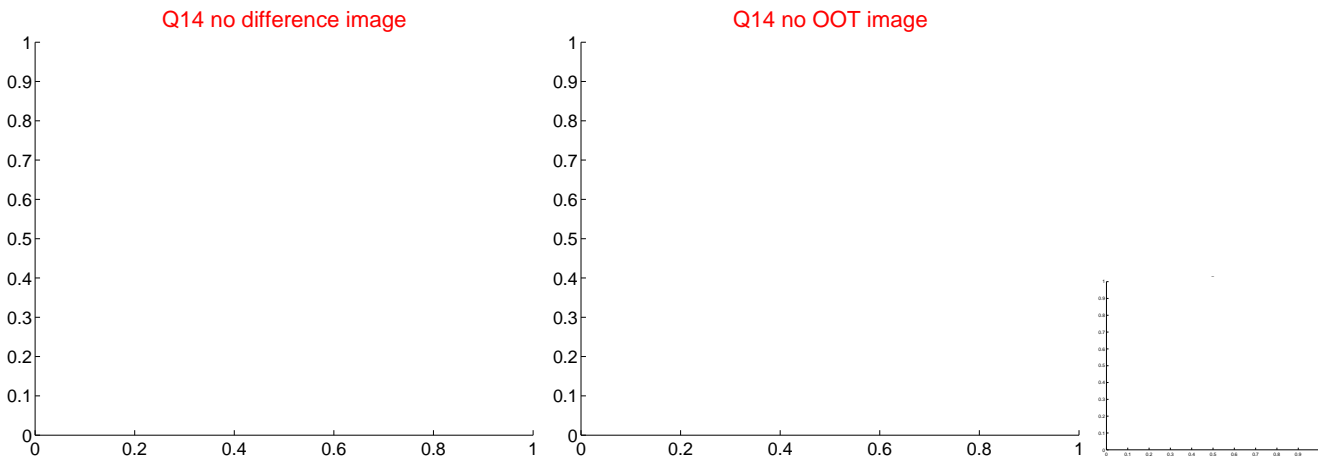
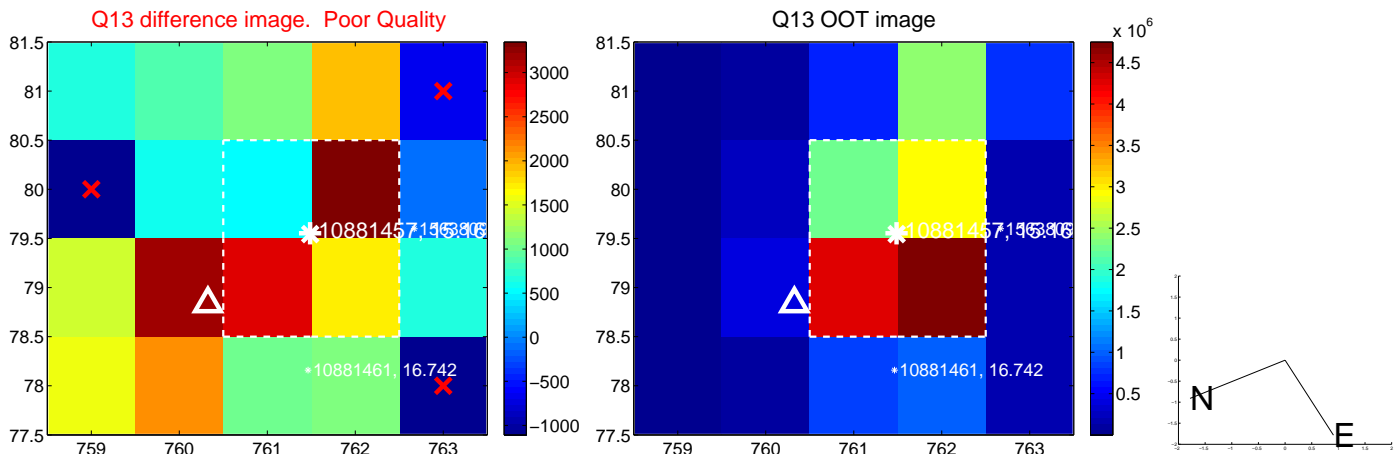
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



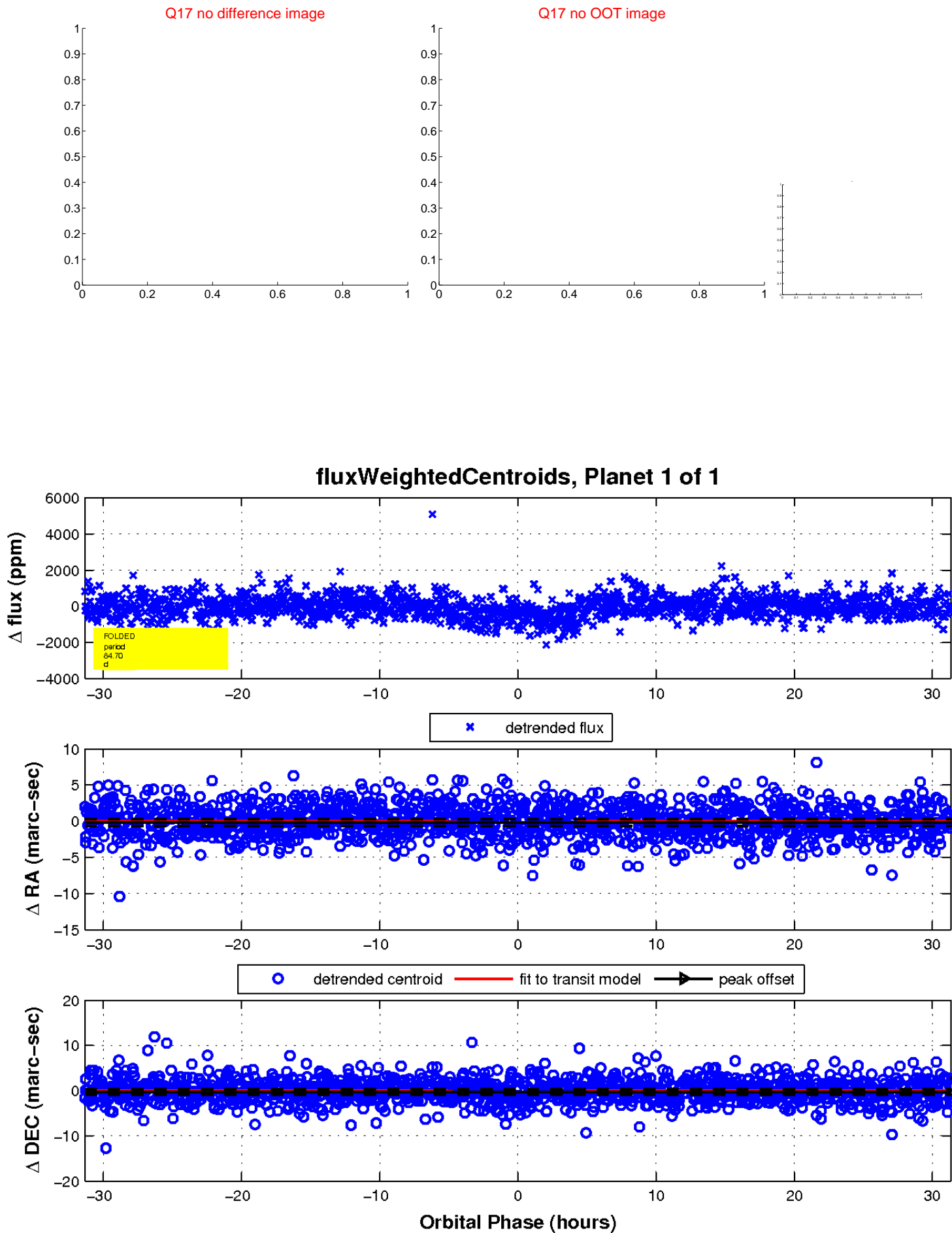
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

