

KIC 010963065

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})
010963065-01	OBS	1612.01	2.465022	132.680742	30.4	1.235	21.6	25.7	1.19	6139	0.78	1406.67

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010963065-01	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.

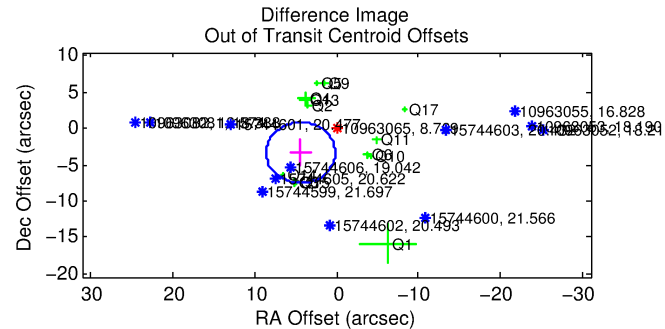
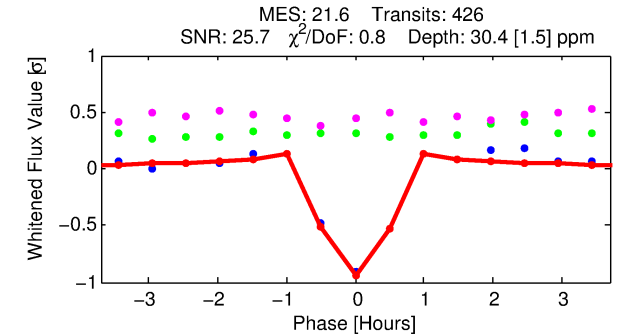
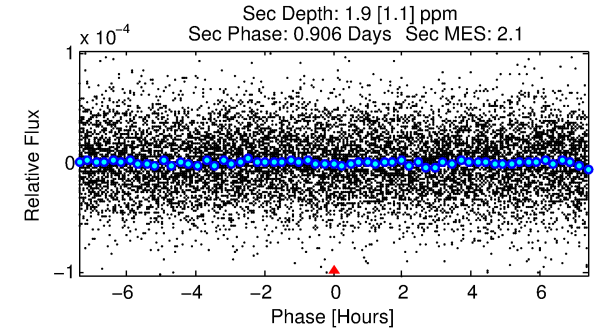
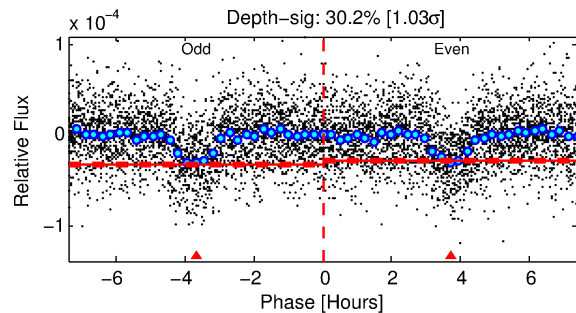
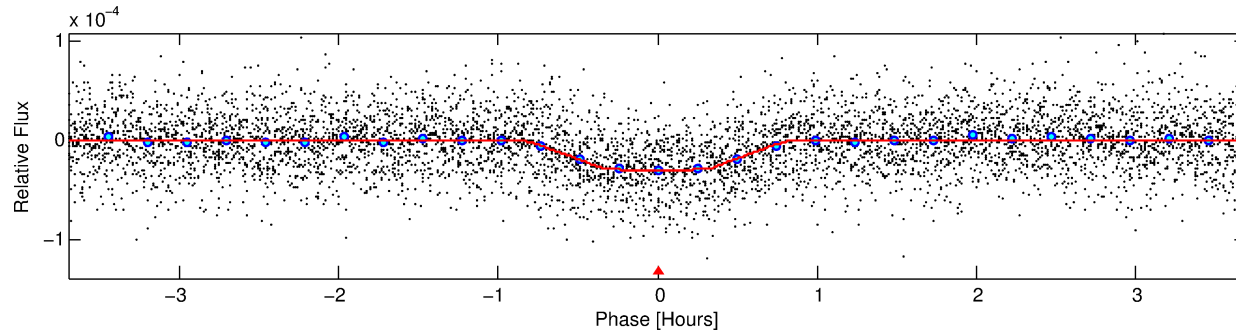
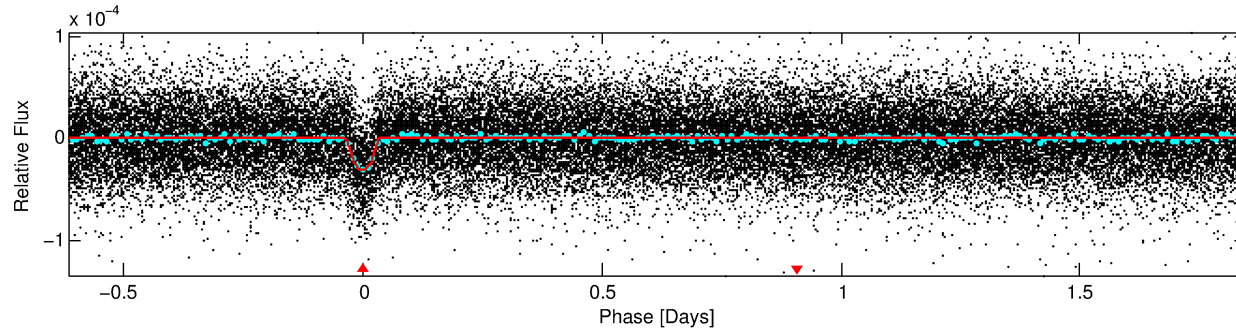
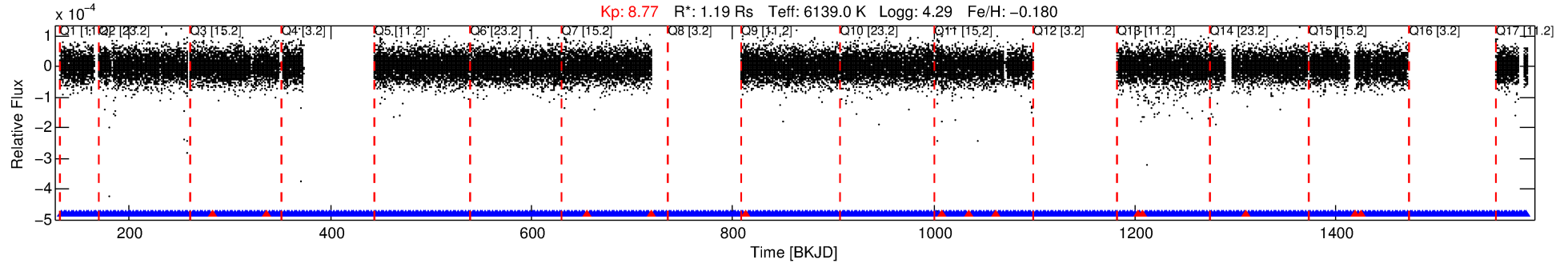
Ephemeris Match Information For 010963065-01

No Significant Match Found

DV One-Page Summary

KIC: 10963065 Candidate: 1 of 1 Period: 2.465 d
KOI: K01612.01 Name: Kepler-408b Corr: 0.988

Kp: 8.77 R*: 1.19 Rs Teff: 6139.0 K Logg: 4.29 Fe/H: -0.180



DV Fit Results:

Period = 2.46502 [0.00000] d
Epoch = 132.6807 [0.0007] BKJD
Rp/R* = 0.0060 [0.0005]
a/R* = 6.94 [2.98]
b = 0.90 [0.09]
Seff = 1406.67 [115.12]
Teq = 1562 [32] K
Rp = 0.78 [0.08] Re
a = 0.0359 [0.0016] AU
Ag = 2.23 [1.37] [0.90σ]
Teff = 2952 [451] K [3.07σ]

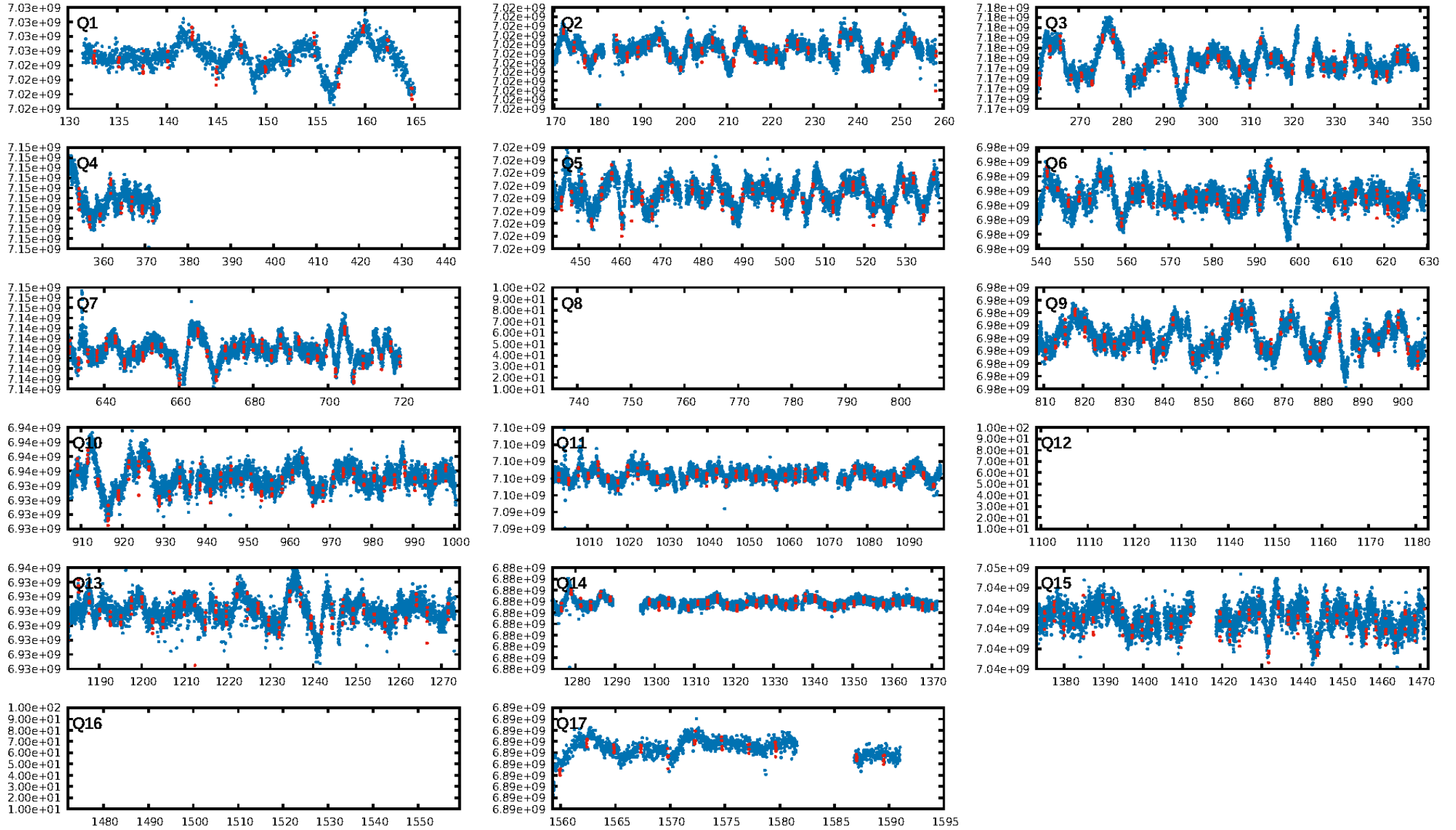
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.08e-92
RollingBand-fgt: 0.97 [380/393]
GhostDiagnostic-chr: N/A
Centroid-sig: 0.2%
Centroid-so: 3.064 arcsec [3.68σ]
OotOffset-rm: 5.510 arcsec [3.94σ]
KicOffset-rm: 6.116 arcsec [4.30σ]
OotOffset-st: 4/4/1/5 [14]
KicOffset-st: 4/4/1/5 [14]
DiffImageQuality-fgm: 0.00 [0/14]
DiffImageOverlap-fno: 1.00 [14/14]

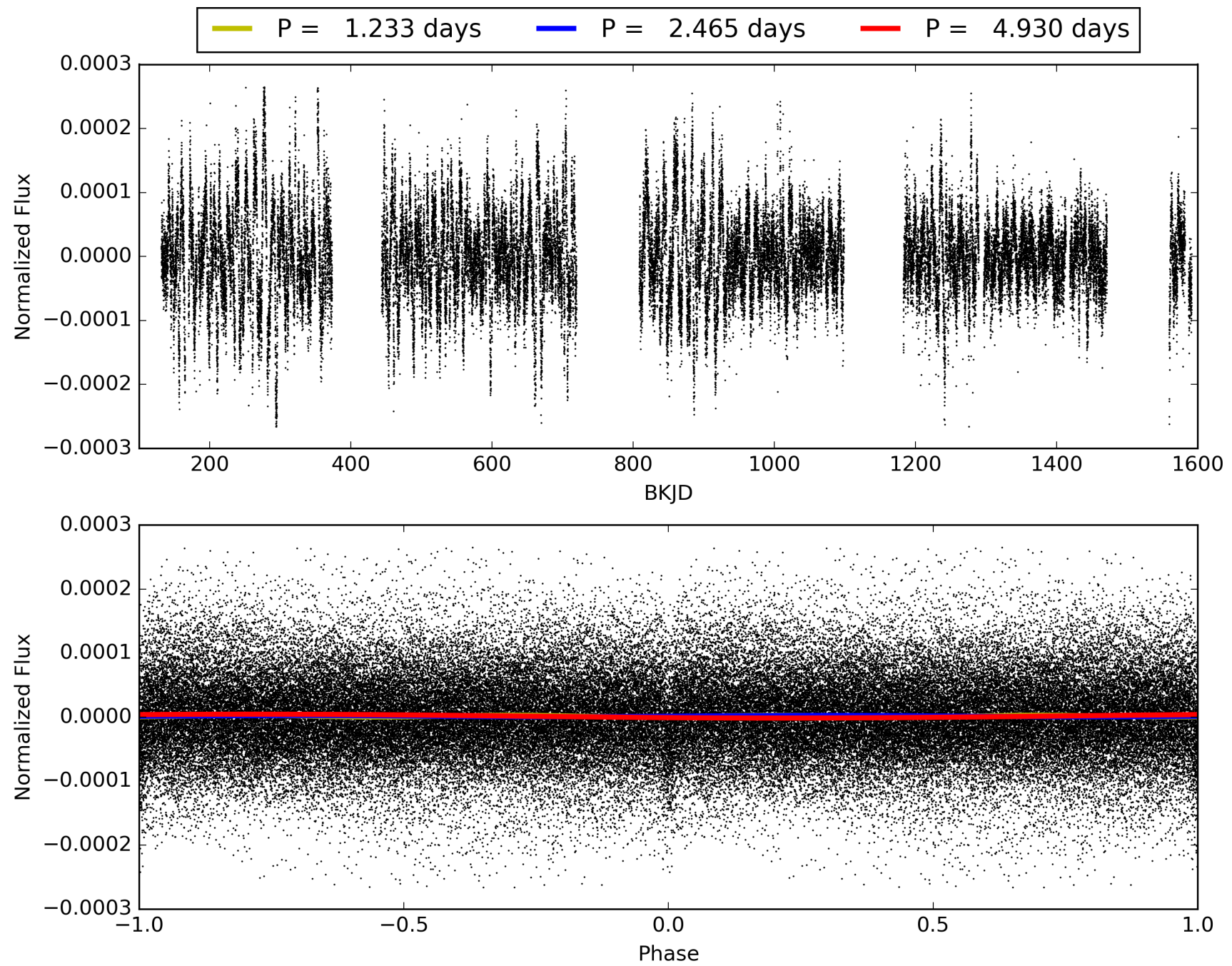
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:20:32 Z

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

TCE 010963065-01, PDC Light Curves

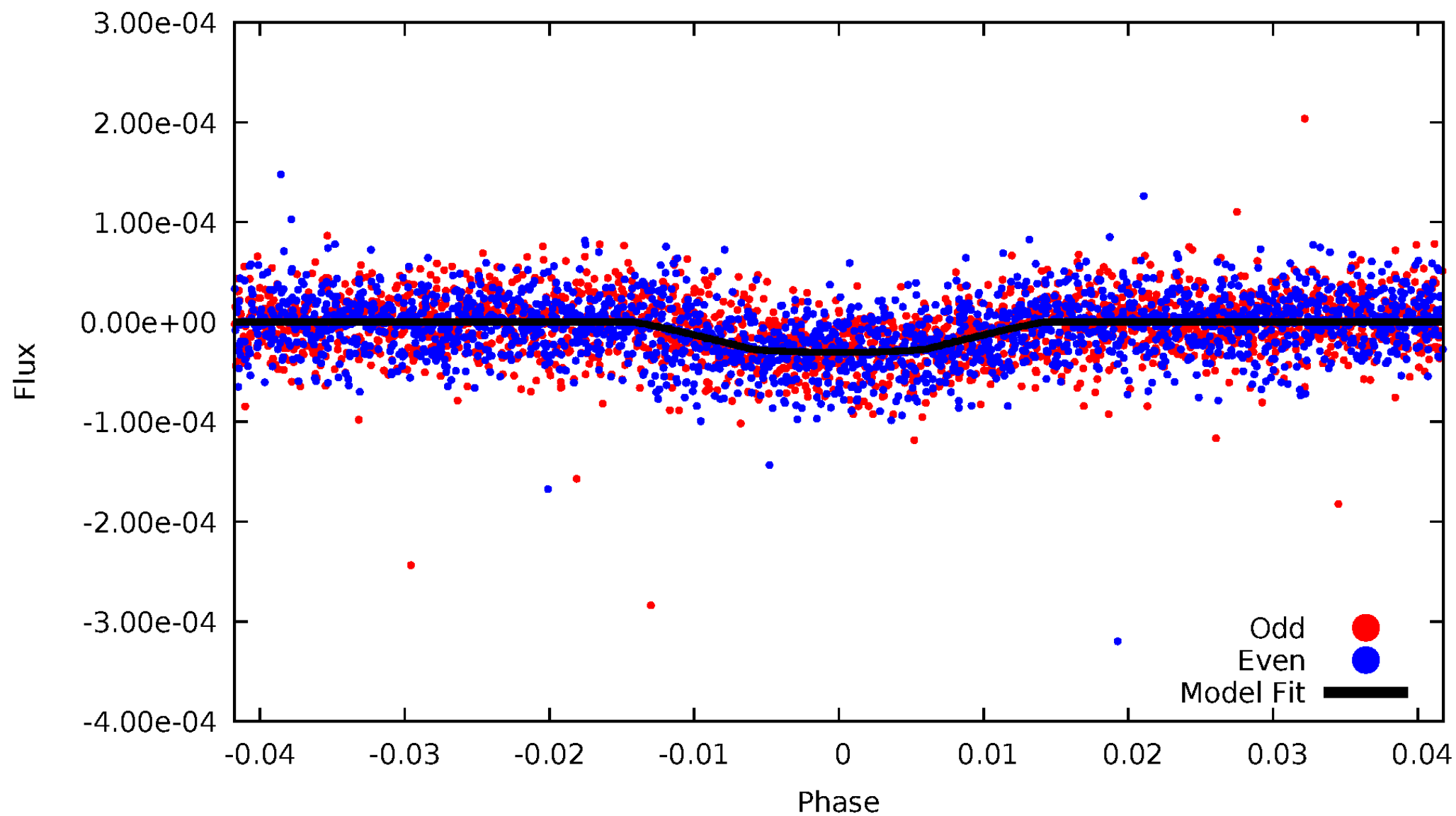


TCE 010963065-01



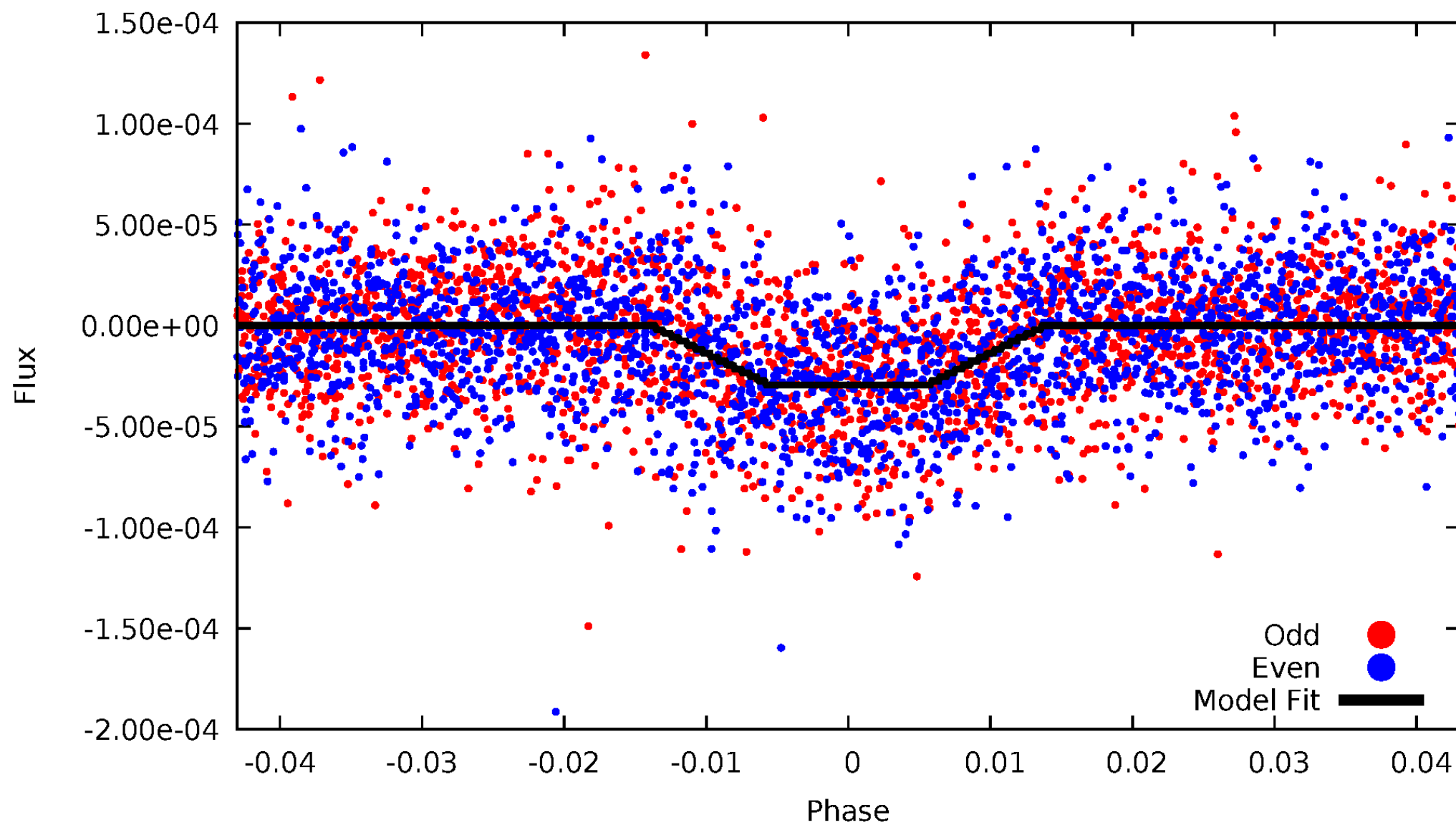
DV Odd/Even

TCE 010963065-01

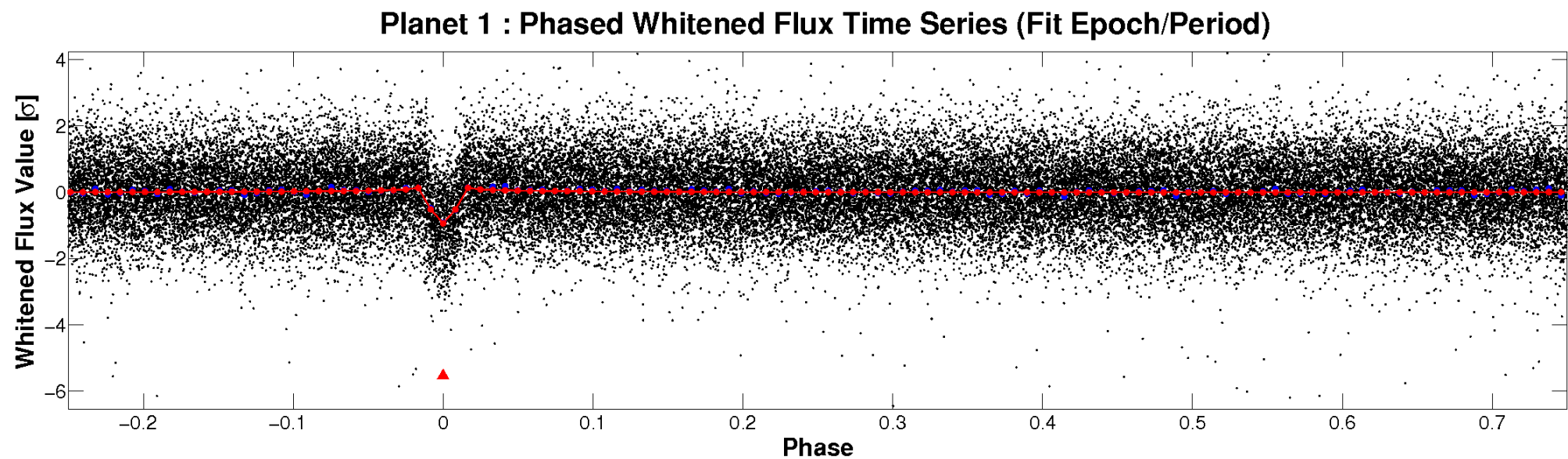
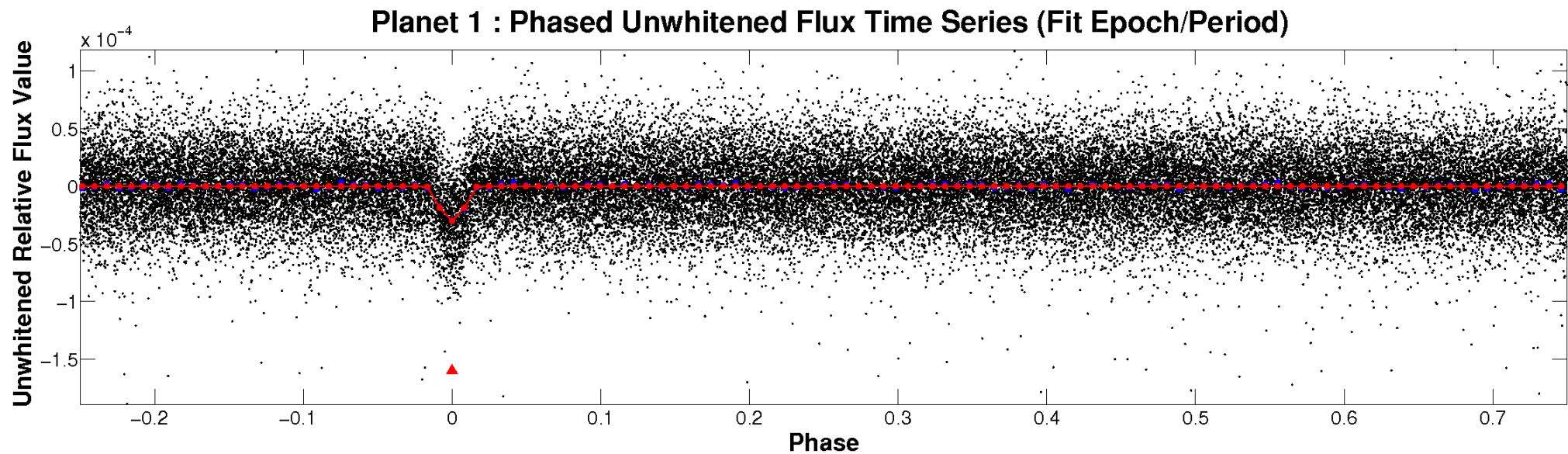


ALT Odd/Even

TCE 010963065-01

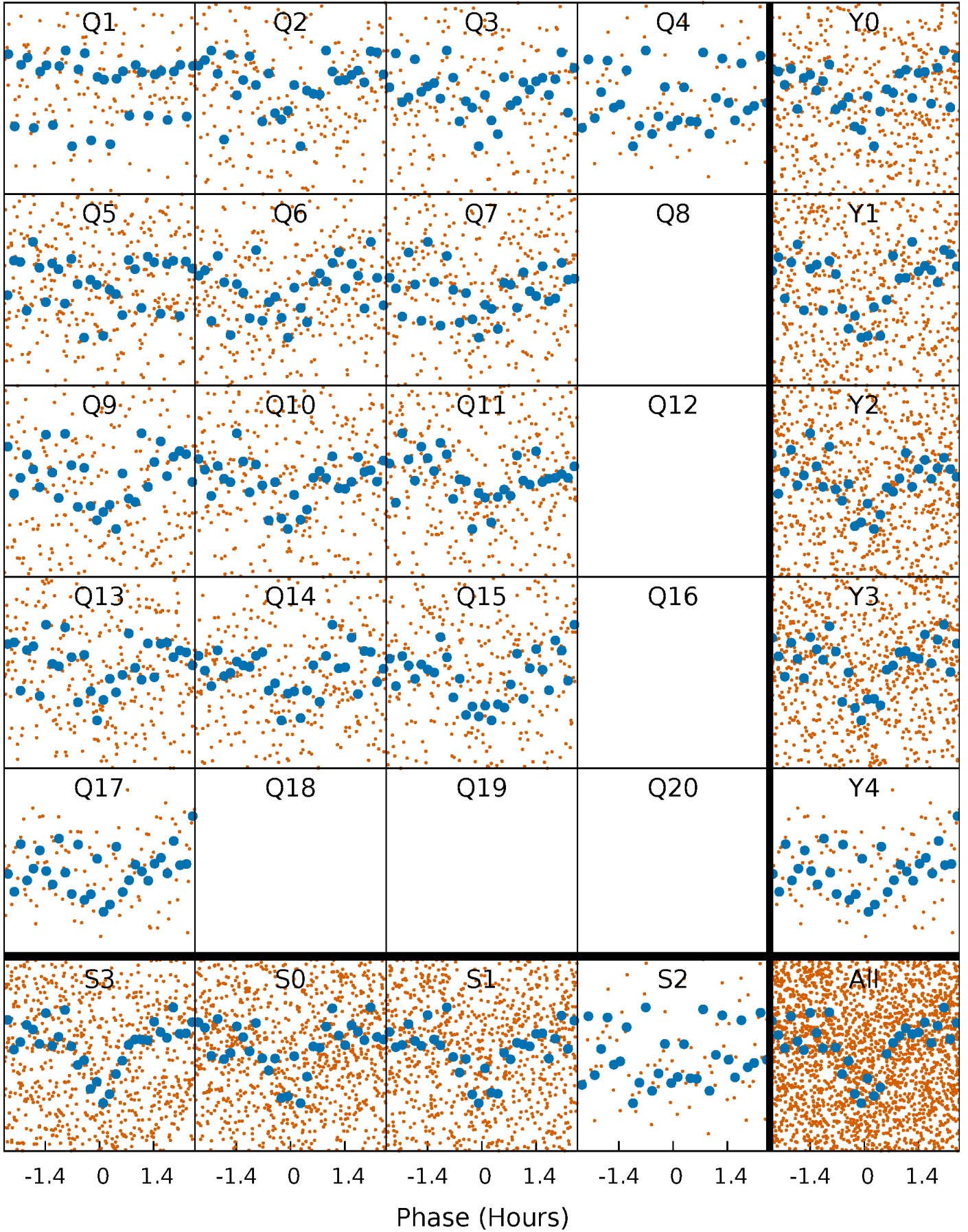


Non-Whitened Vs. Whitened Light Curve



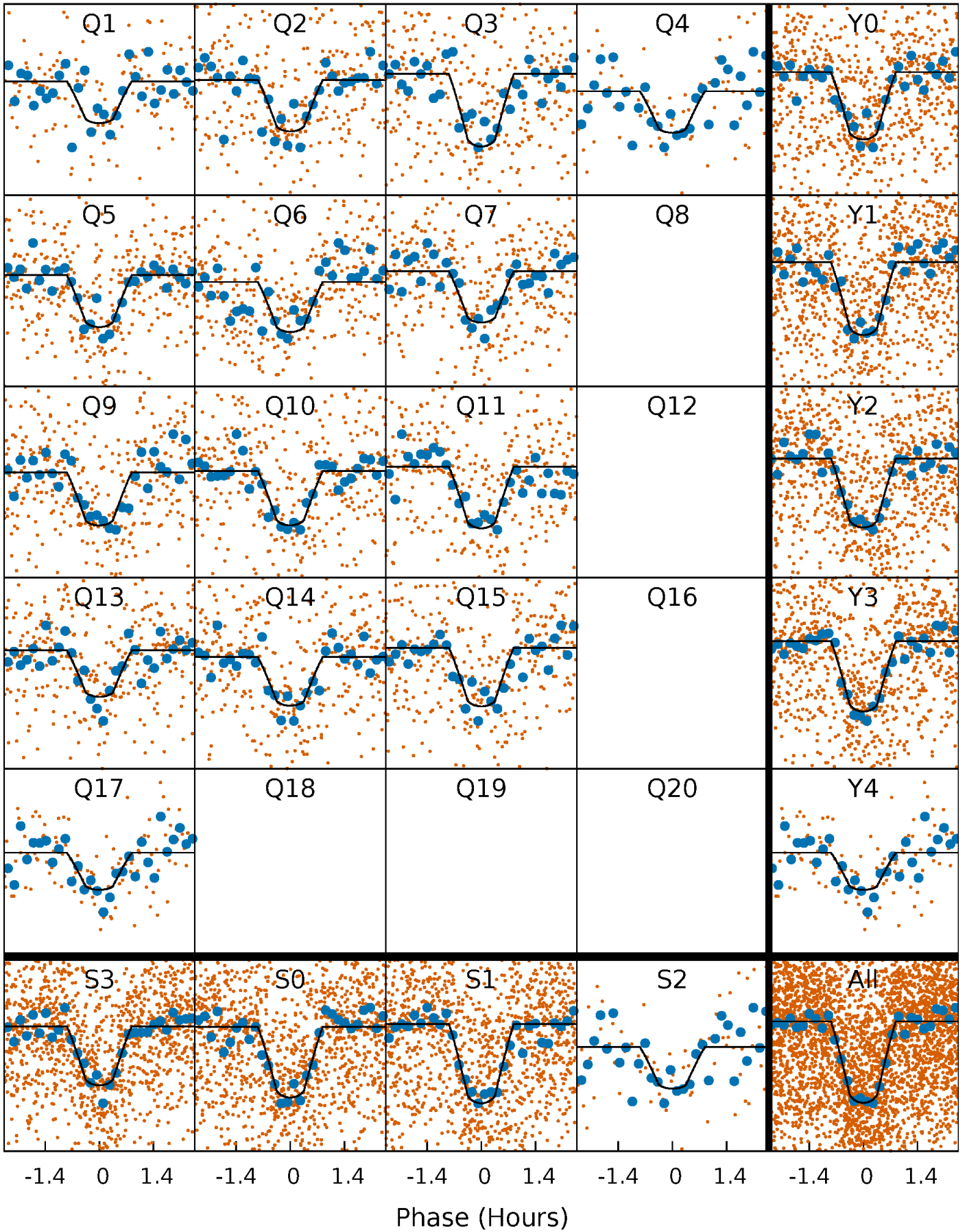
PDC Quarter-Phased Transit Curves

TCE 010963065-01 P= 2.465022 Days $T_0=132.680742$ (BKJD)



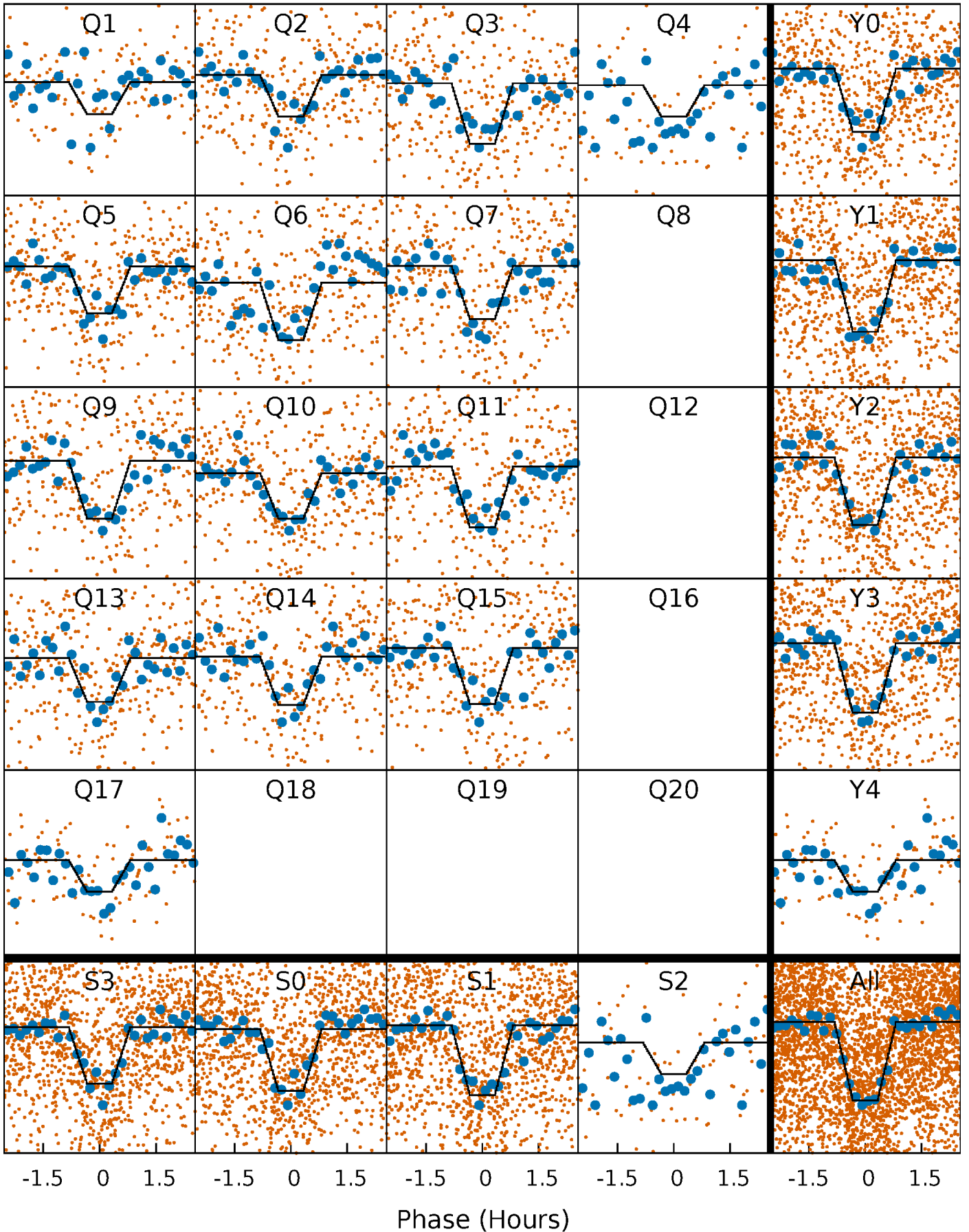
DV Quarter-Phased Transit Curves

TCE 010963065-01 P= 2.465022 Days $T_0=132.680742$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

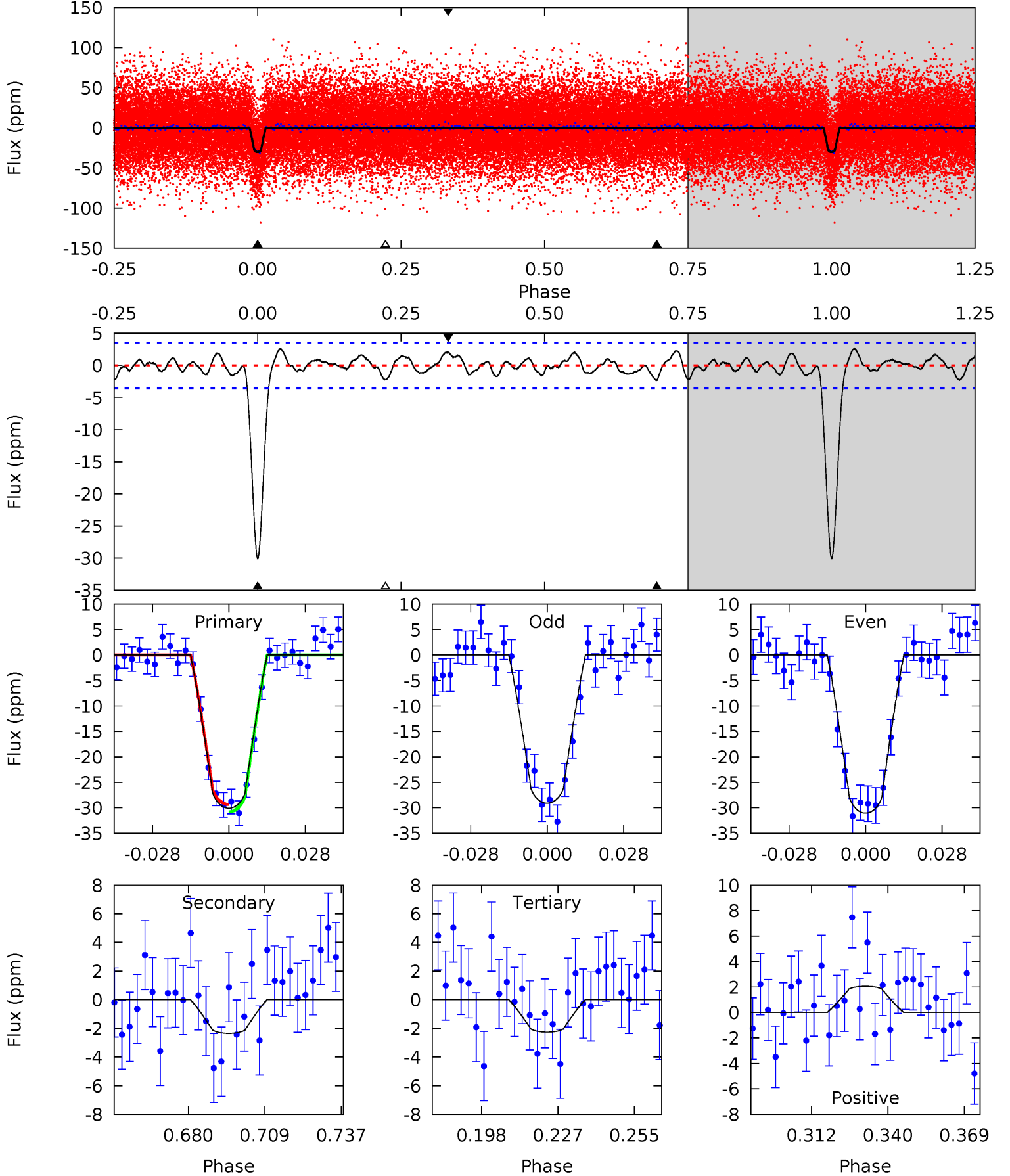
TCE 010963065-01 P= 2.465018 Days $T_0=132.682530$ (BKJD)



DV Model-Shift Uniqueness Test

010963065-01, P = 2.465022 Days, E = 130.215720 Days

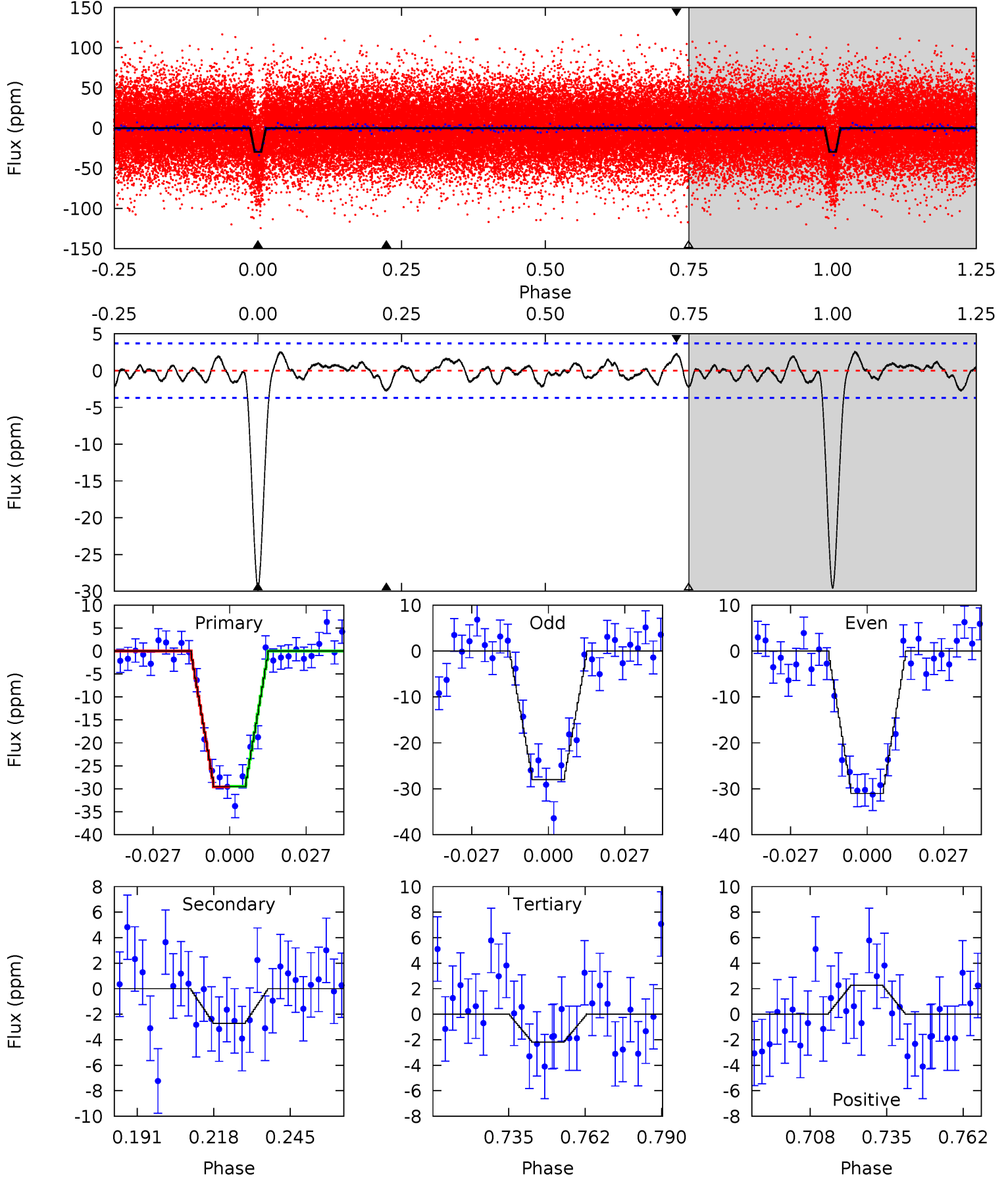
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
41.0	3.21	3.09	2.81	4.82	2.19	1.36	38.0	38.2	0.12	0.40	1.33	1.04	0.08	0.99



Alt Model-Shift Uniqueness Test

010963065-01, P = 2.465018 Days, E = 130.217512 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	3.54	2.86	2.96	4.83	2.21	1.23	35.6	35.5	0.68	0.58	1.97	0.98	0.08	0.09



Stellar Parameters For KIC 010963065

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6139^{+82}_{-82}	$4.291^{+0.033}_{-0.027}$	$-0.180^{+0.150}_{-0.150}$	$1.194^{+0.064}_{-0.064}$	$1.016^{+0.076}_{-0.063}$	$0.841^{+0.102}_{-0.082}$
	+1%/-1%	+1%/-1%	+83%/-83%	+5%/-5%	+7%/-6%	+12%/-10%
Source	SPE72	AST69	SPE72	DSEP		

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

Secondary Eclipse Parameters for KIC 010963065-01 / KOI 1612.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-2 ± 1	$0.77^{+0.08}_{-0.07}$	2179^{+41}_{-41}	3513^{+211}_{-244}	$2.788^{+1.082}_{-0.926}$
Alt.	-3 ± 1	$0.71^{+0.07}_{-0.07}$	2177^{+40}_{-39}	3698^{+255}_{-220}	$3.737^{+1.593}_{-1.062}$

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

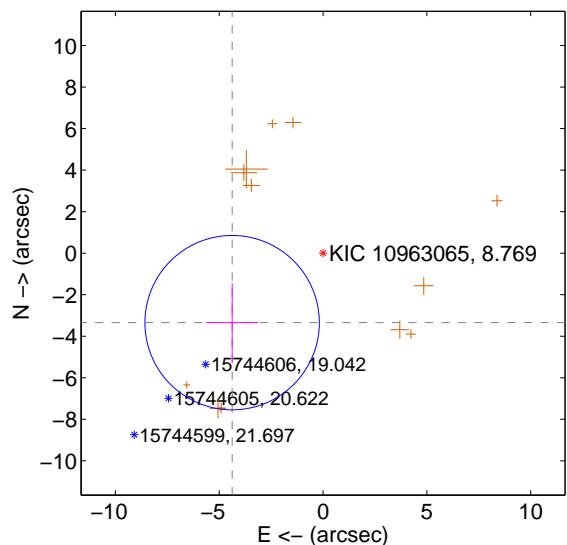
Supplemental centroid analysis for 010963065-01. **Kepler magnitude: 8.77.** Transit SNR 25.75

There are 0 quarters with good PRF difference image offsets

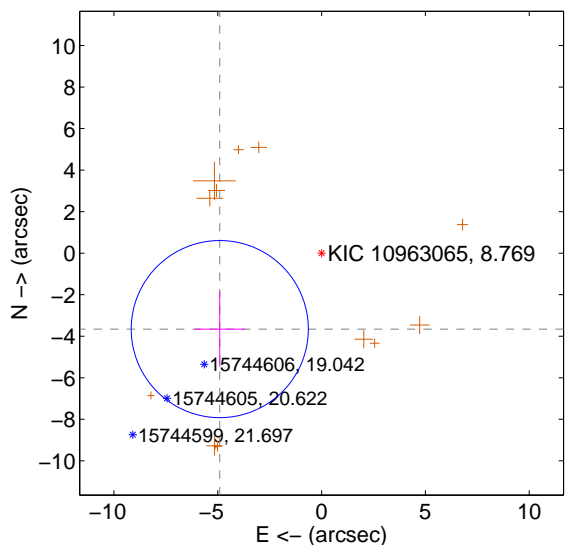
The direct PRF centroid is offset from the target star catalog position by about 1.96 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.510 ± 1.400	3.94	4.378 ± 1.255	-3.346 ± 1.903
PRF-fit source offset from KIC position	6.116 ± 1.421	4.30	4.903 ± 1.215	-3.657 ± 1.806
photometric centroid source offset	3.06 ± 0.83	3.68	3.05 ± 0.83	-0.26 ± 0.96

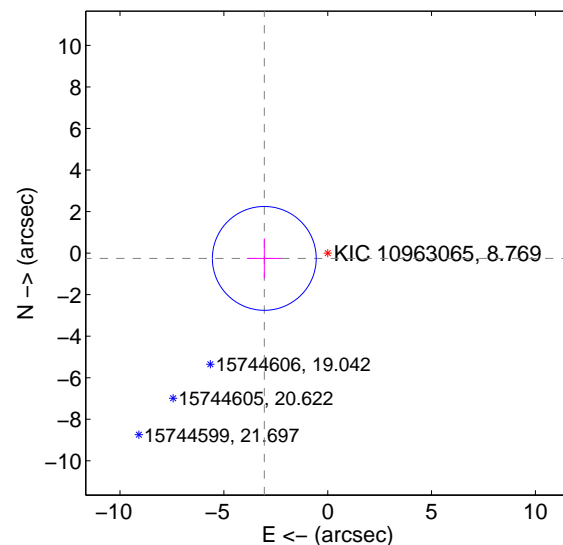
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

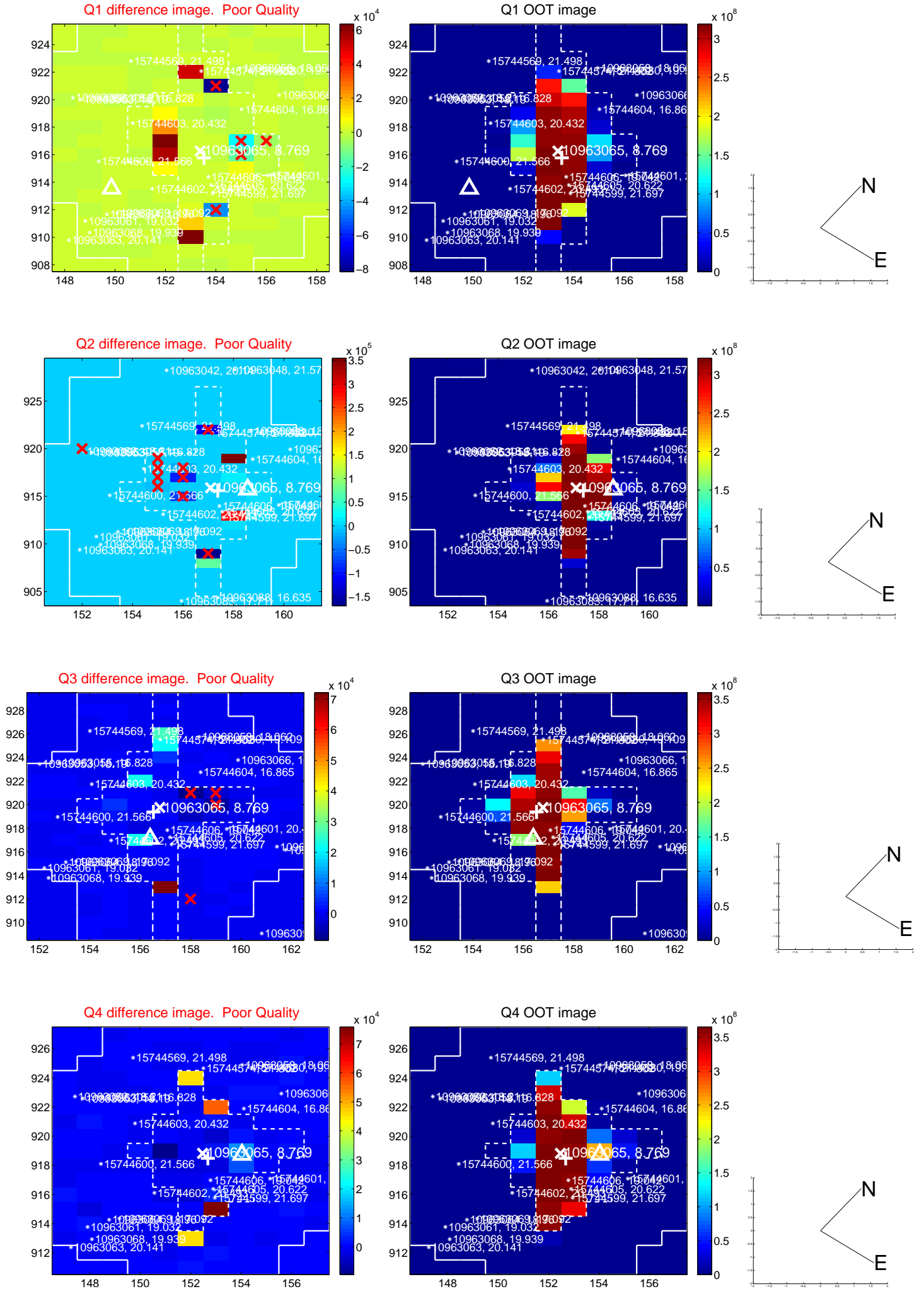


offset from photometric centroids

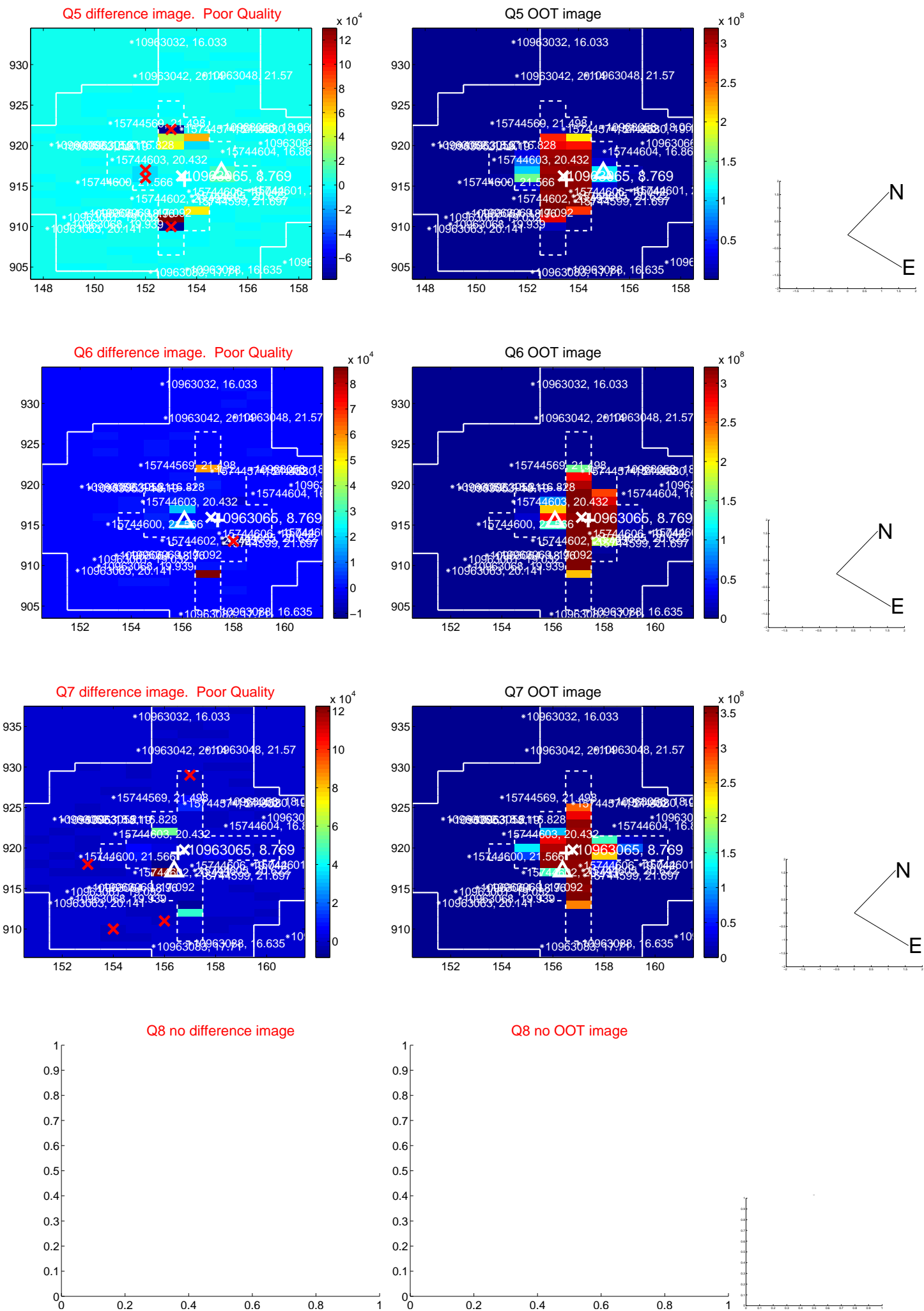


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

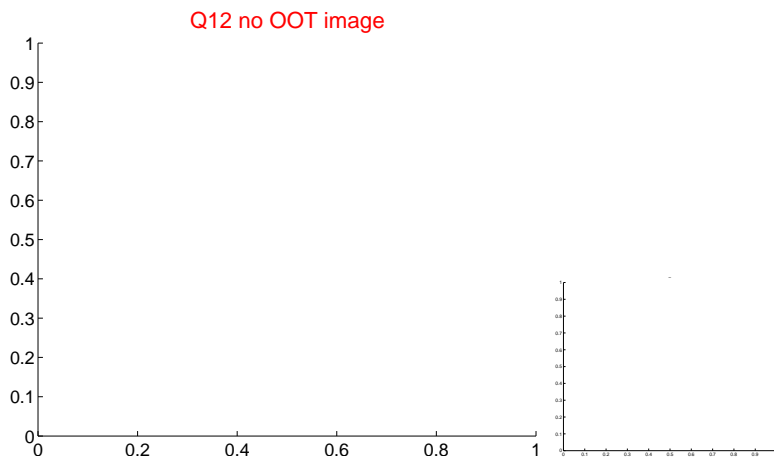
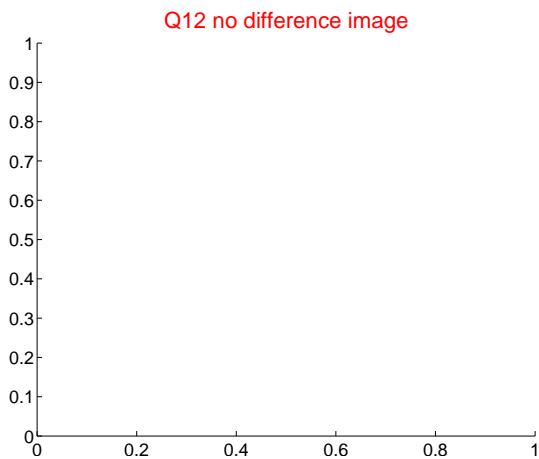
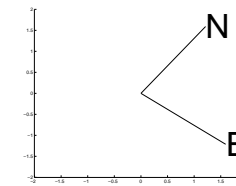
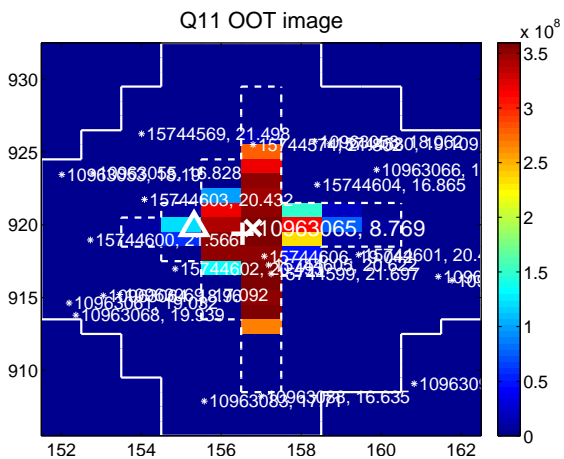
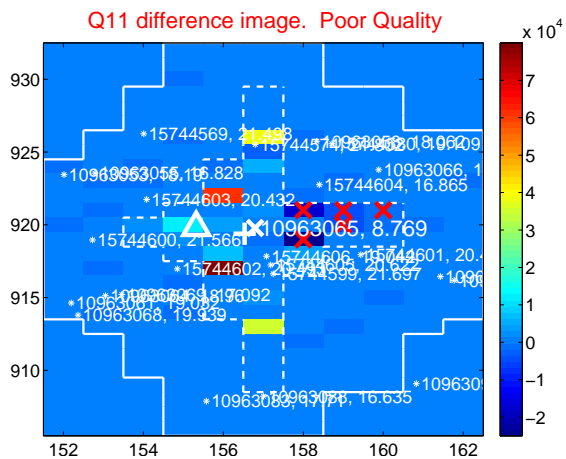
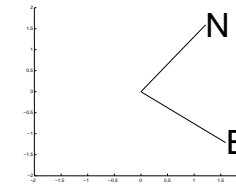
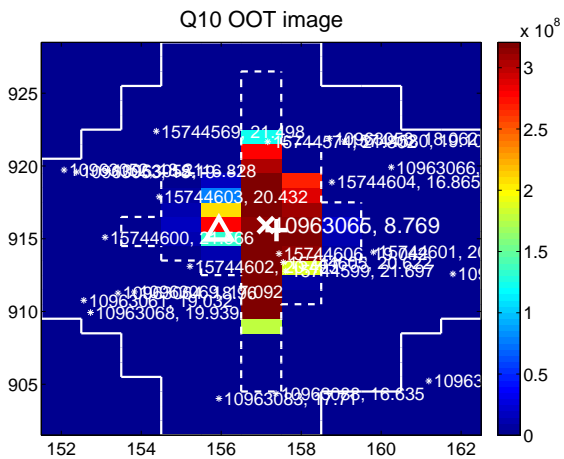
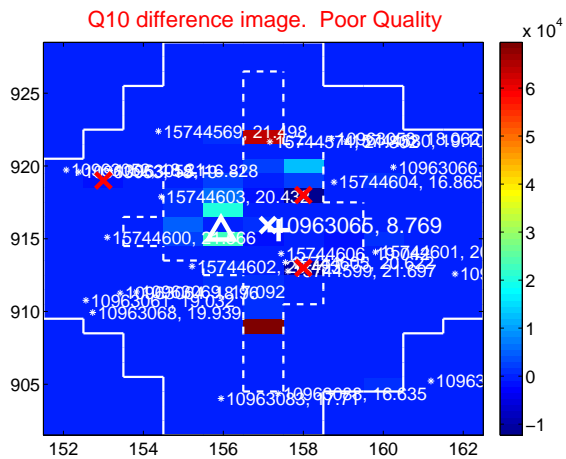
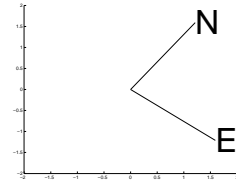
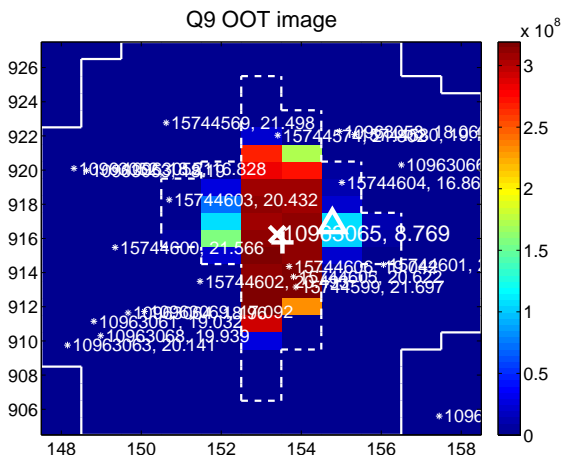
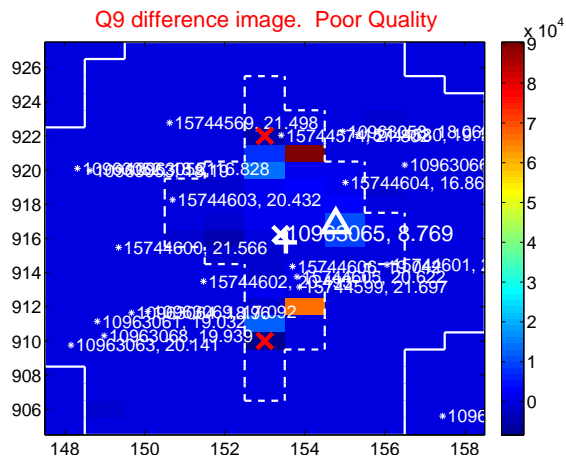
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



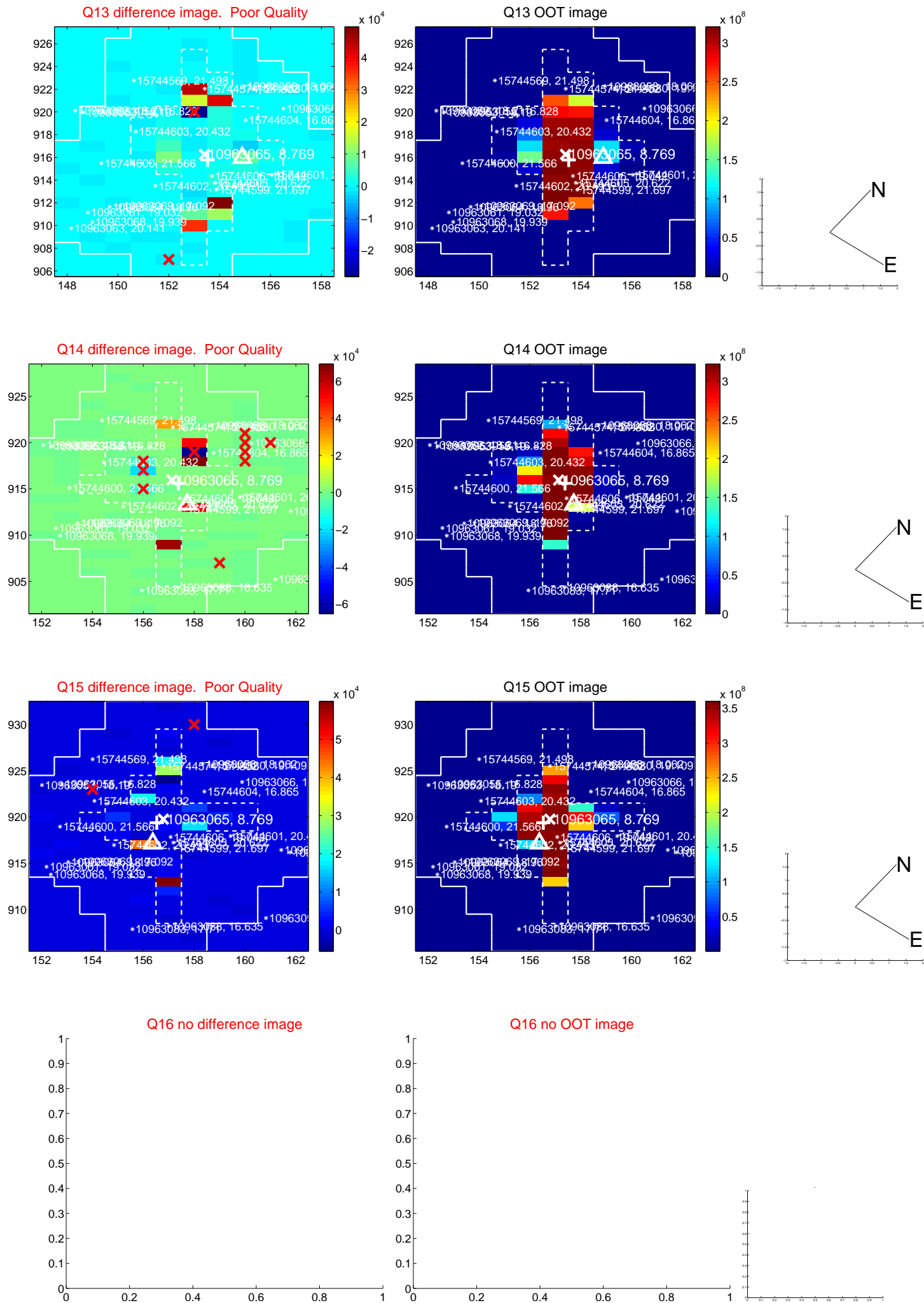
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



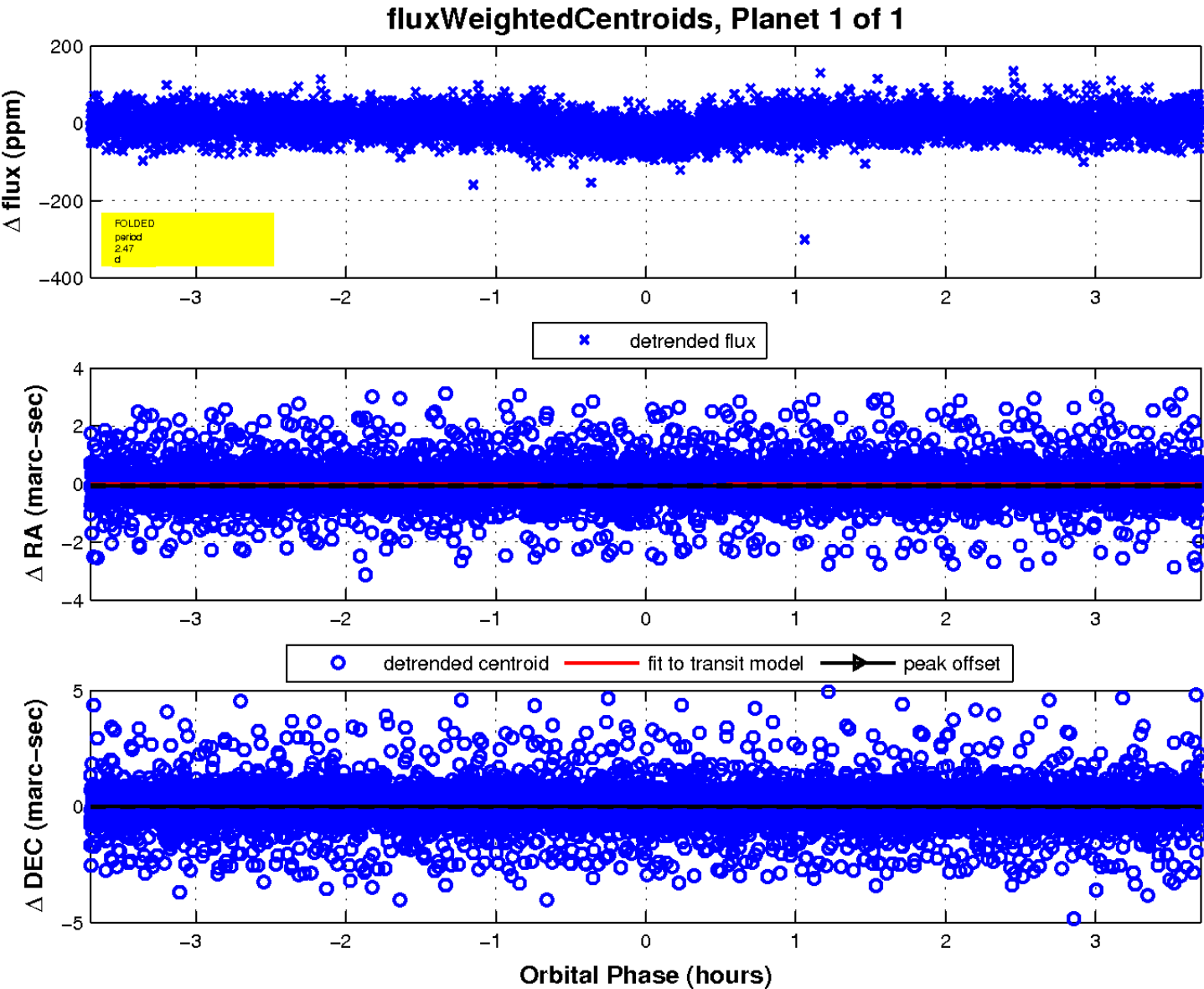
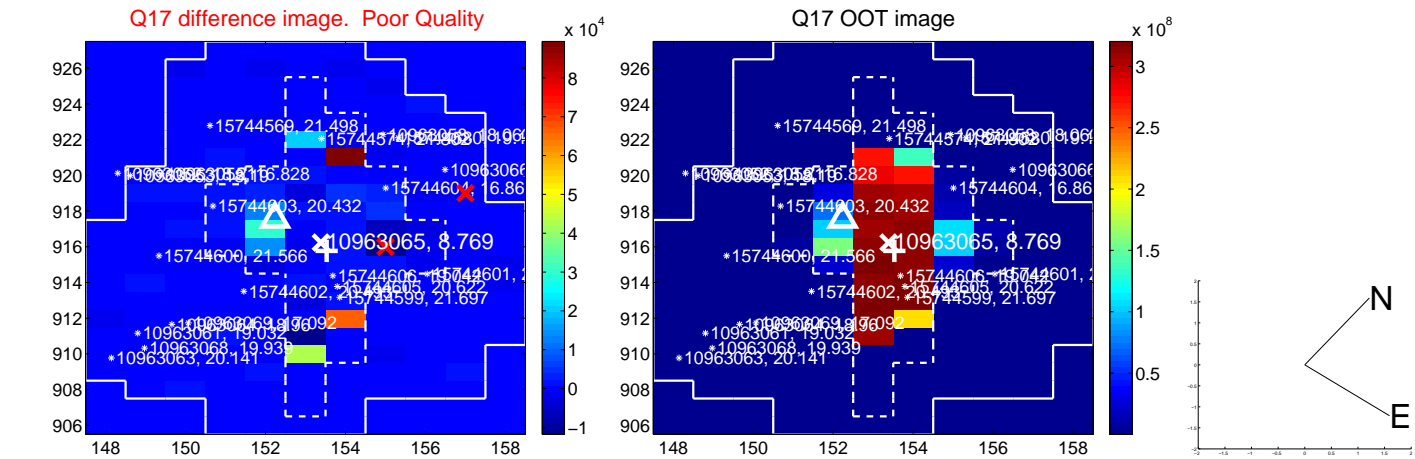
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

