

KIC 004661980

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})
004661980-01	OBS	No	1.478325	133.179222	0.1	5.619	9.1	0.0	3.80	6643	0.16	27480.73

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004661980-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

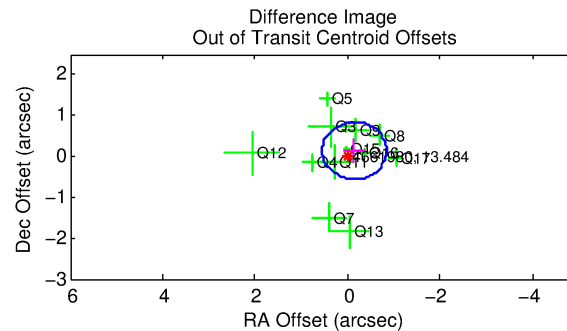
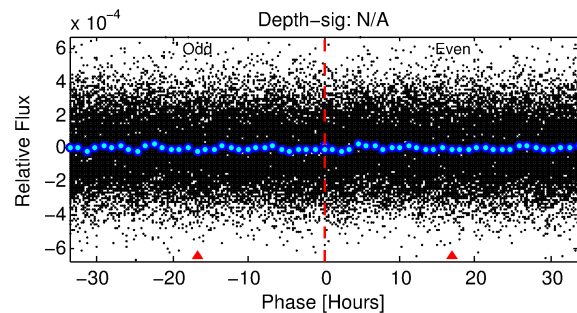
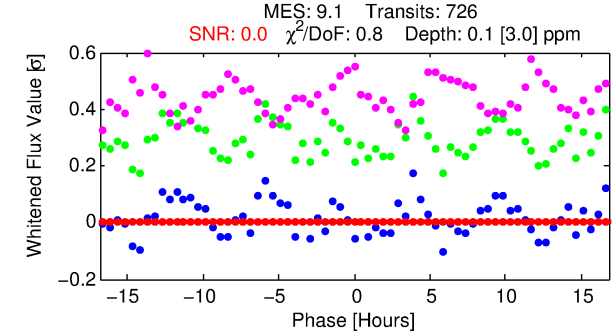
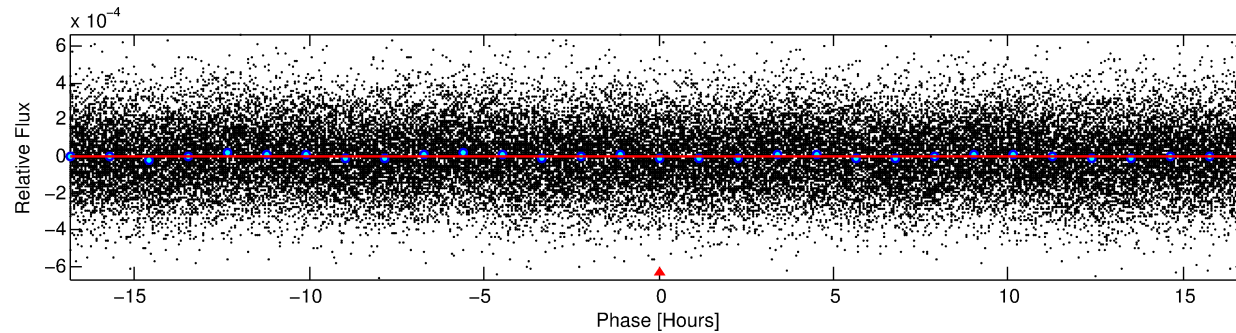
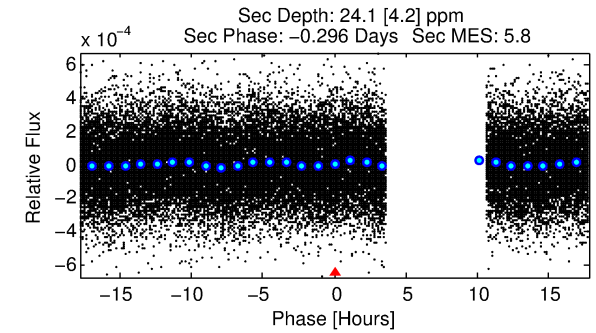
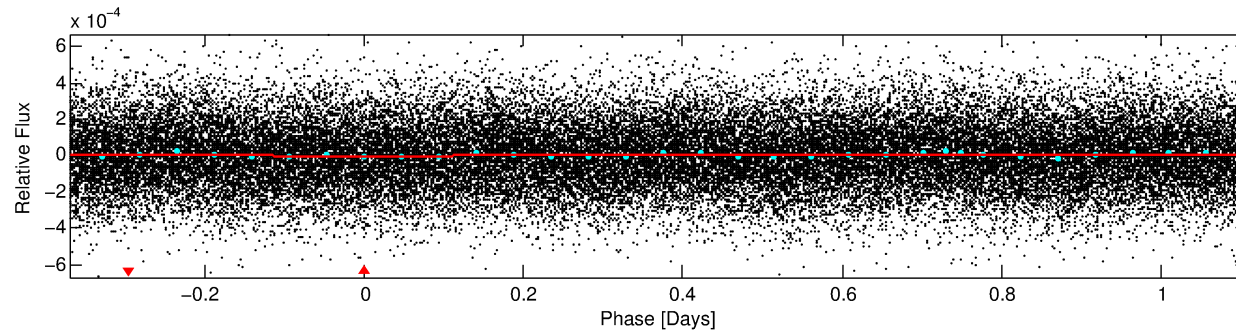
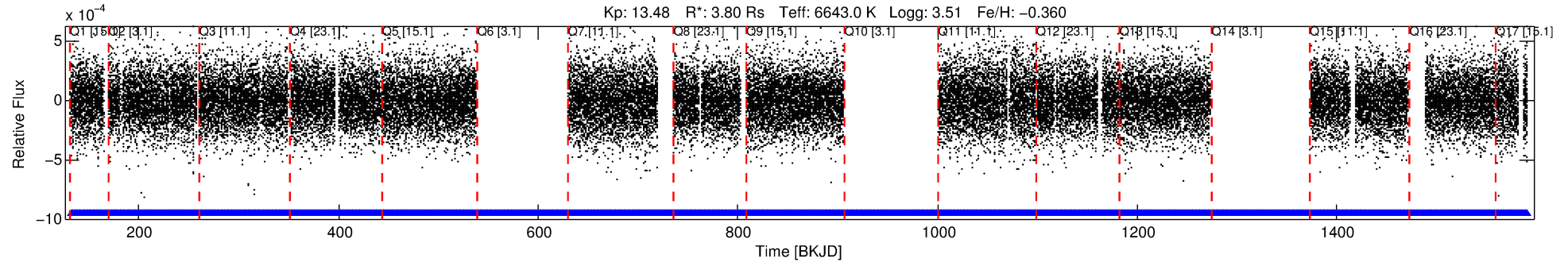
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004661980-01

No Significant Match Found

DV One-Page Summary

KIC: 4661980 Candidate: 1 of 1 Period: 1.478 d



DV Fit Results:

Period = 1.47832 [0.00419] d
Epoch = 133.1792 [1.1276] BKJD
Rp/R* = 0.0004 [0.0060]
a/R* = 1.09 [7.22]
b = 0.97 [2.40]
Seff = 27480.73 [16396.31]
Teq = 3283 [490] K
Rp = 0.16 [2.48] Re
a = 0.0303 [0.0112] AU
Ag = 468.71 [14440.77] [0.03σ]
Teffp = 23618 [181895] K [0.11σ]

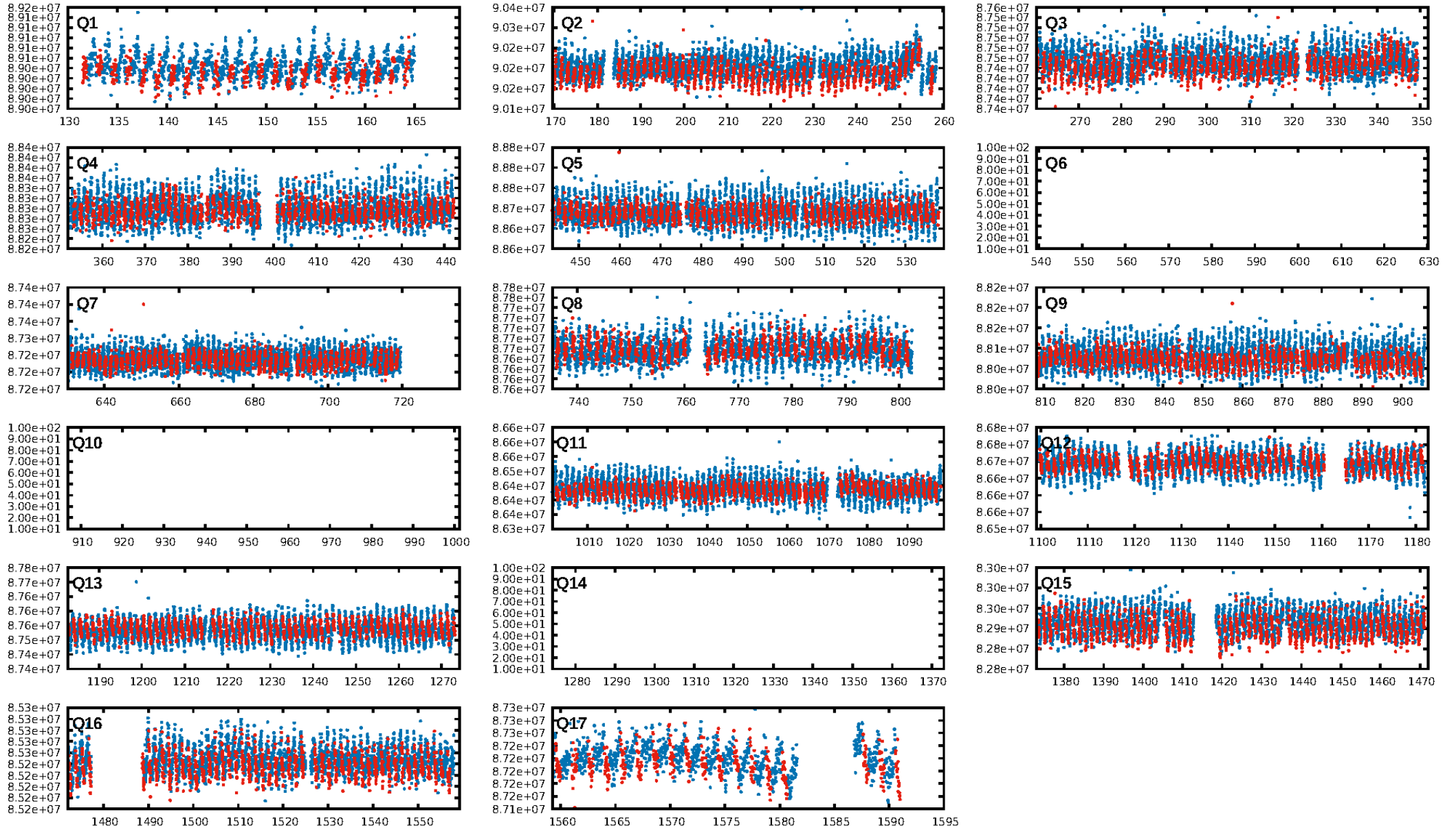
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.55e-17
RollingBand-fgt: 1.00 [685/685]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.200 arcsec [0.86σ]
KicOffset-rm: 0.119 arcsec [0.47σ]
OotOffset-st: 0/4/4/4 [12]
KicOffset-st: 0/4/4/4 [12]
DiffImageQuality-fgm: 0.50 [6/12]
DiffImageOverlap-fno: 1.00 [14/14]

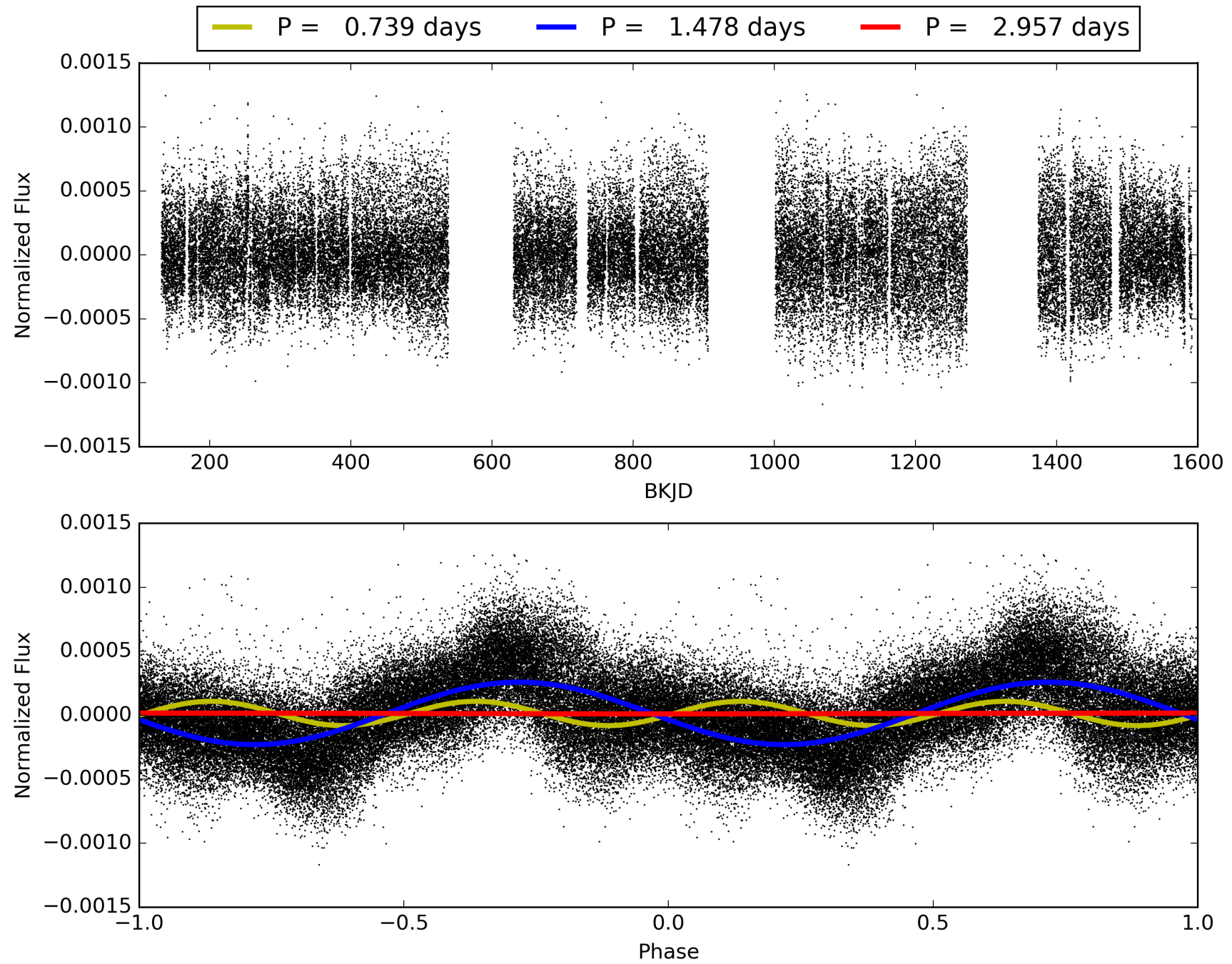
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 04:49:42 Z

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

TCE 004661980-01, PDC Light Curves

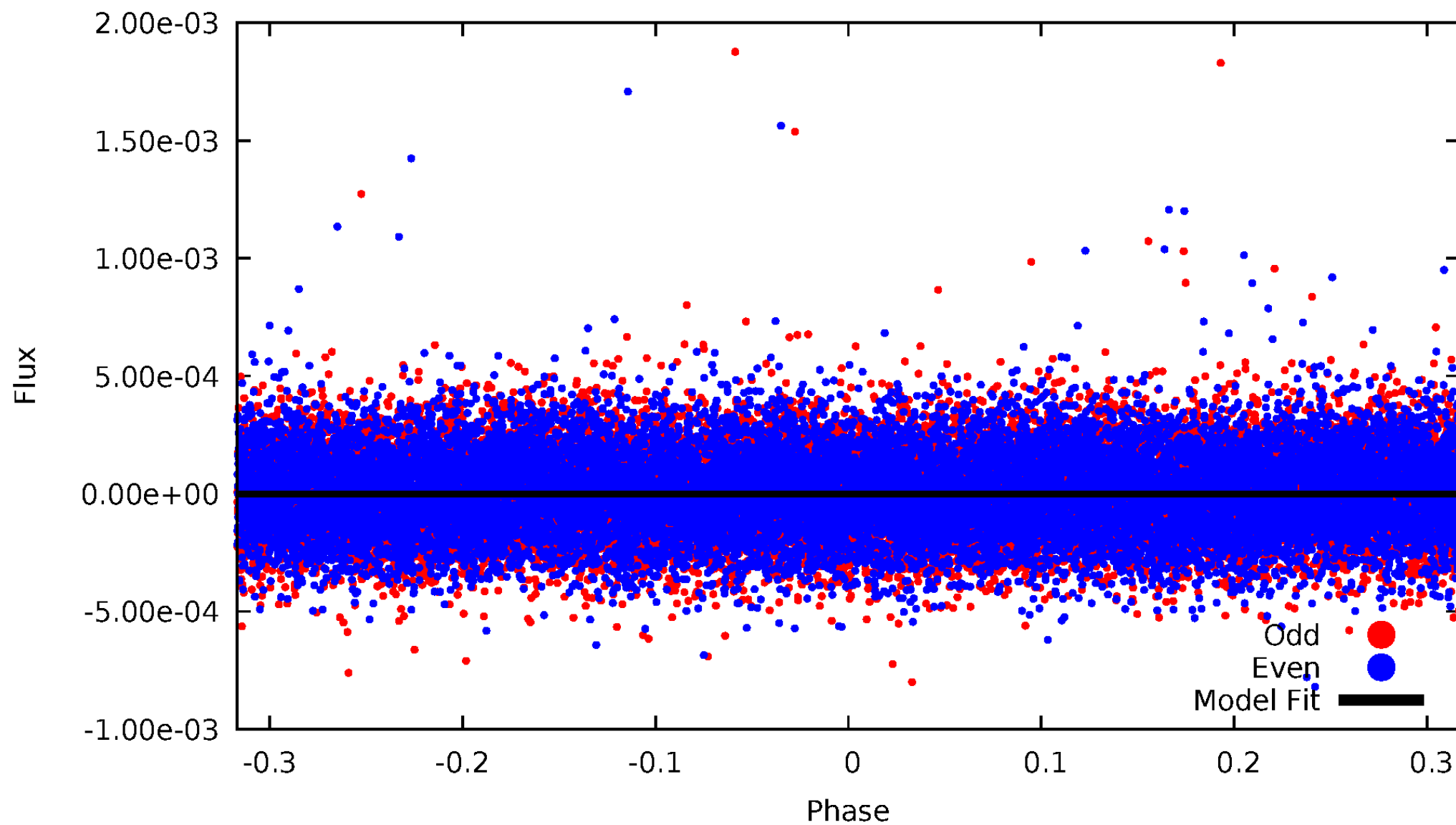


TCE 004661980-01



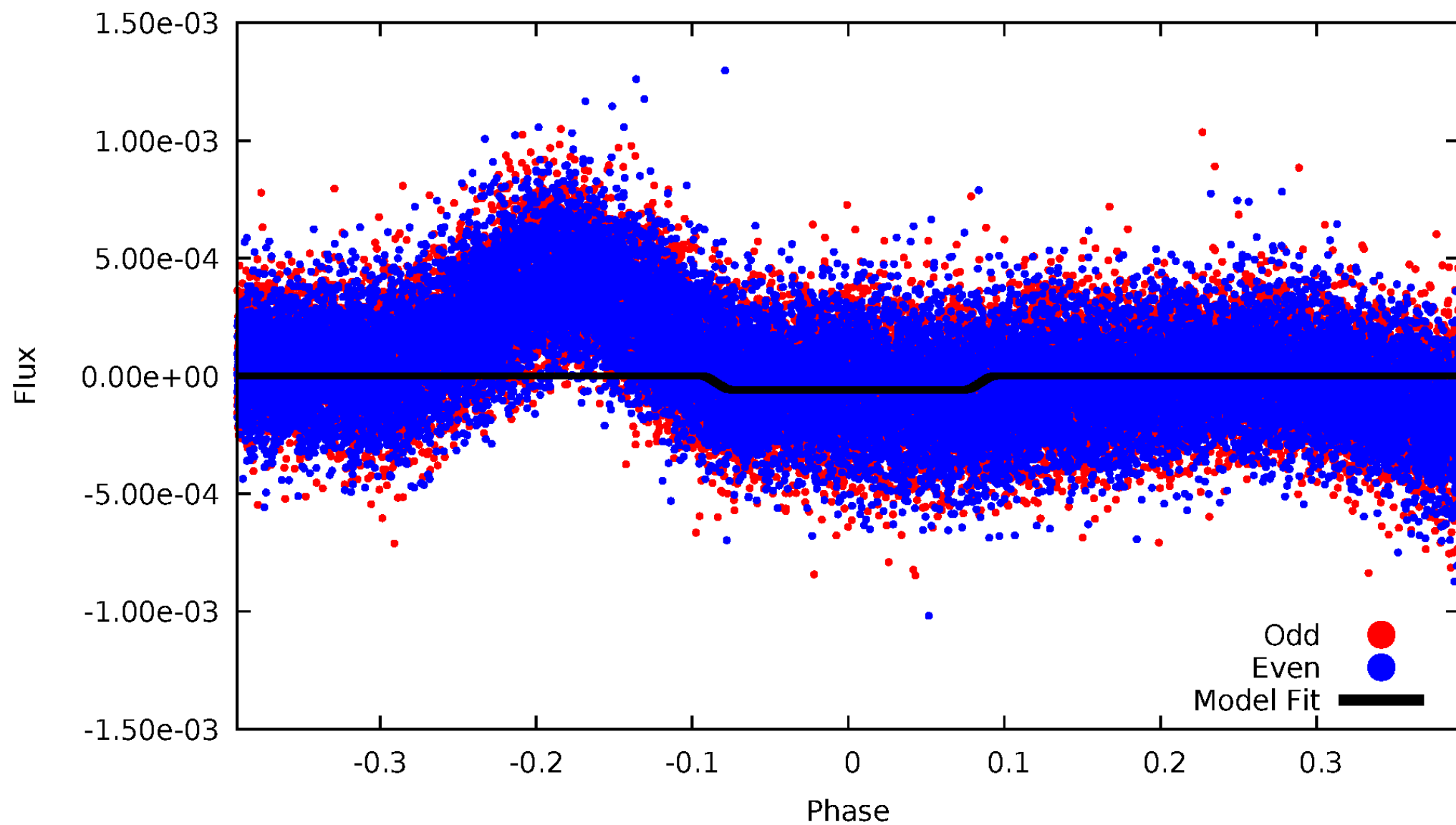
DV Odd/Even

TCE 004661980-01



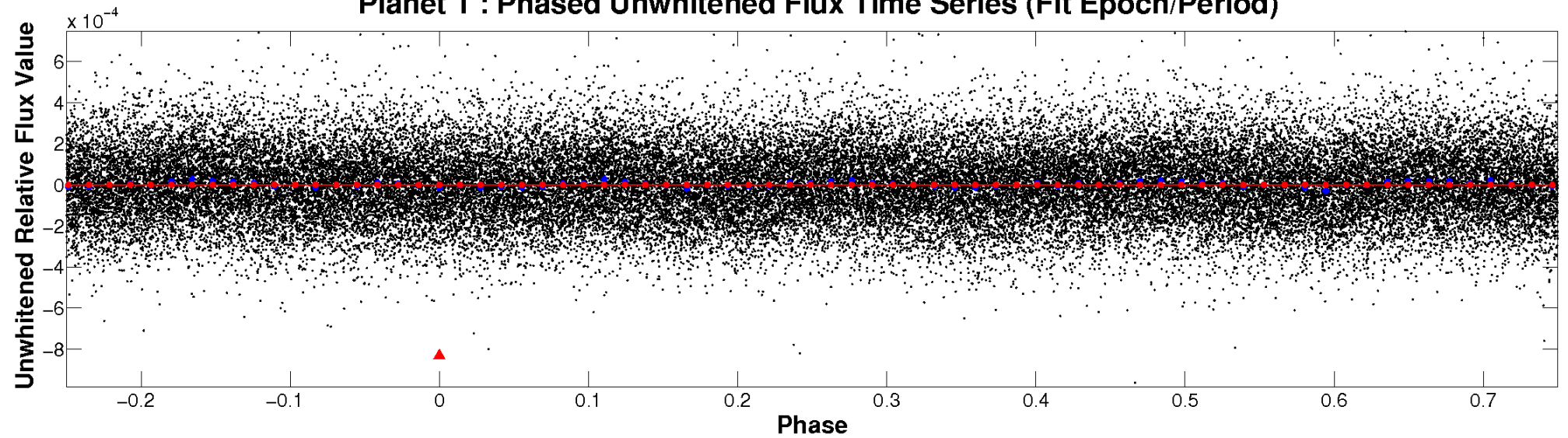
ALT Odd/Even

TCE 004661980-01

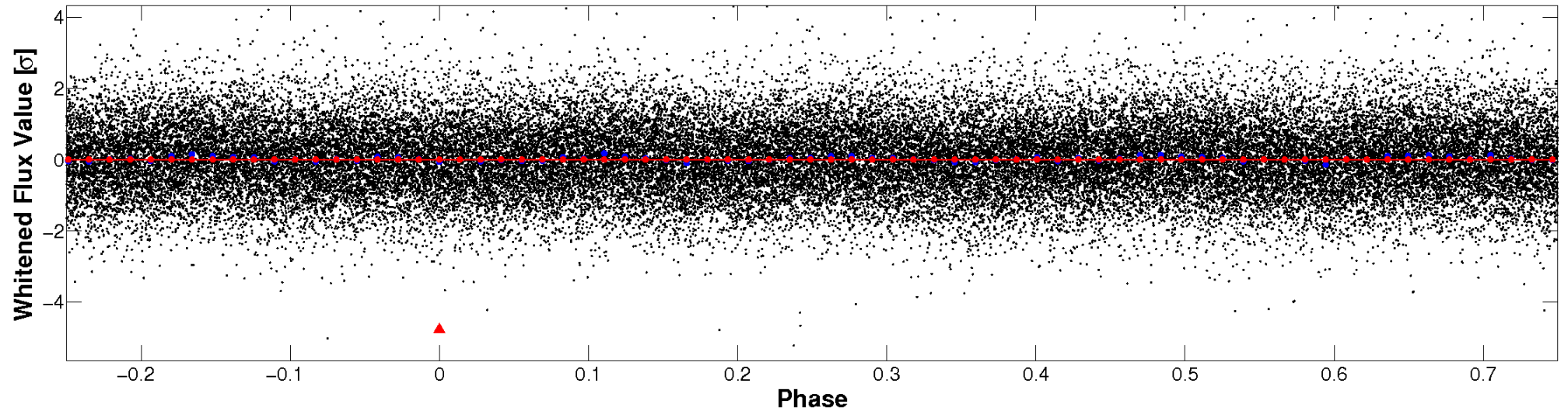


Non-Whitened Vs. Whitened Light Curve

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

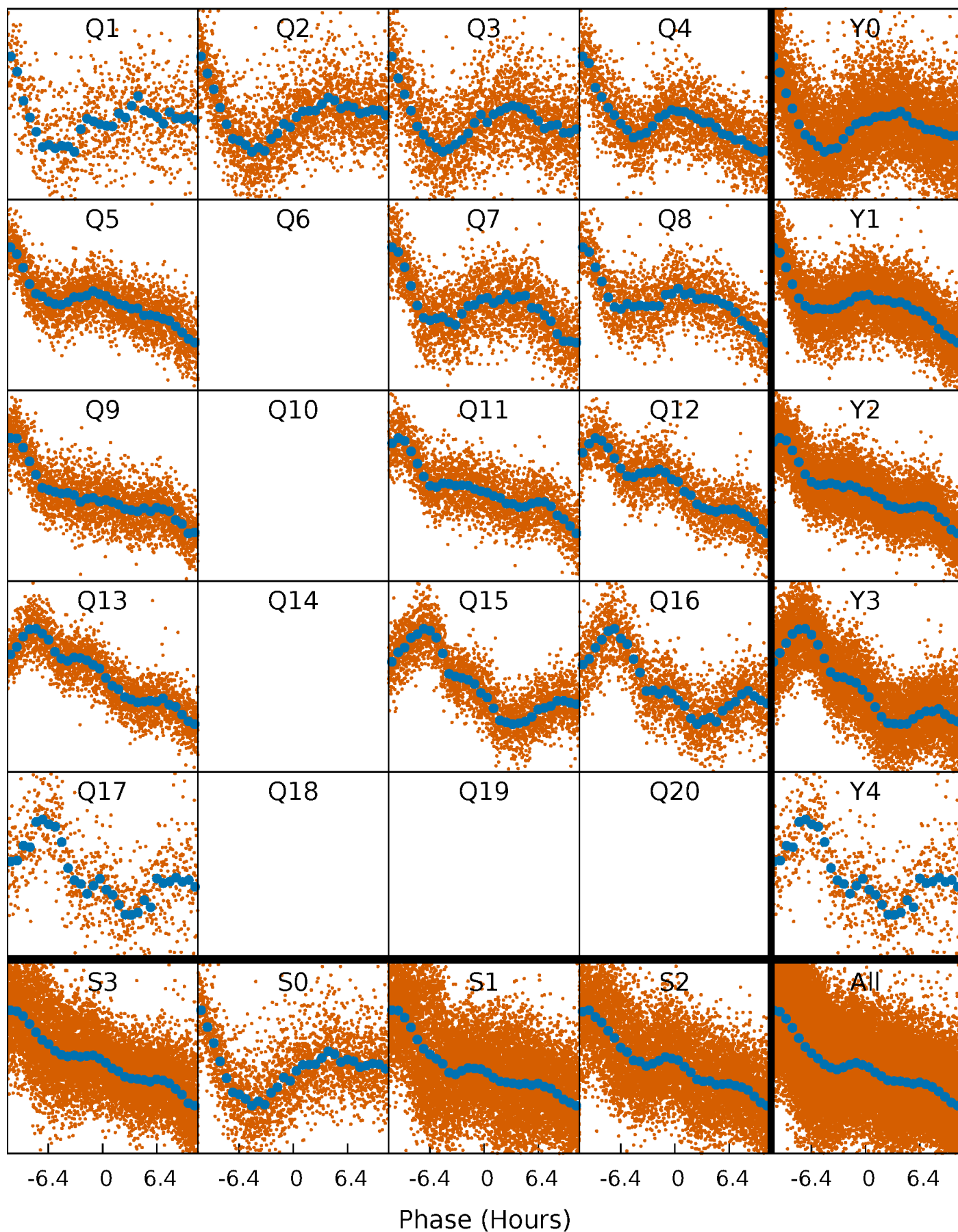


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



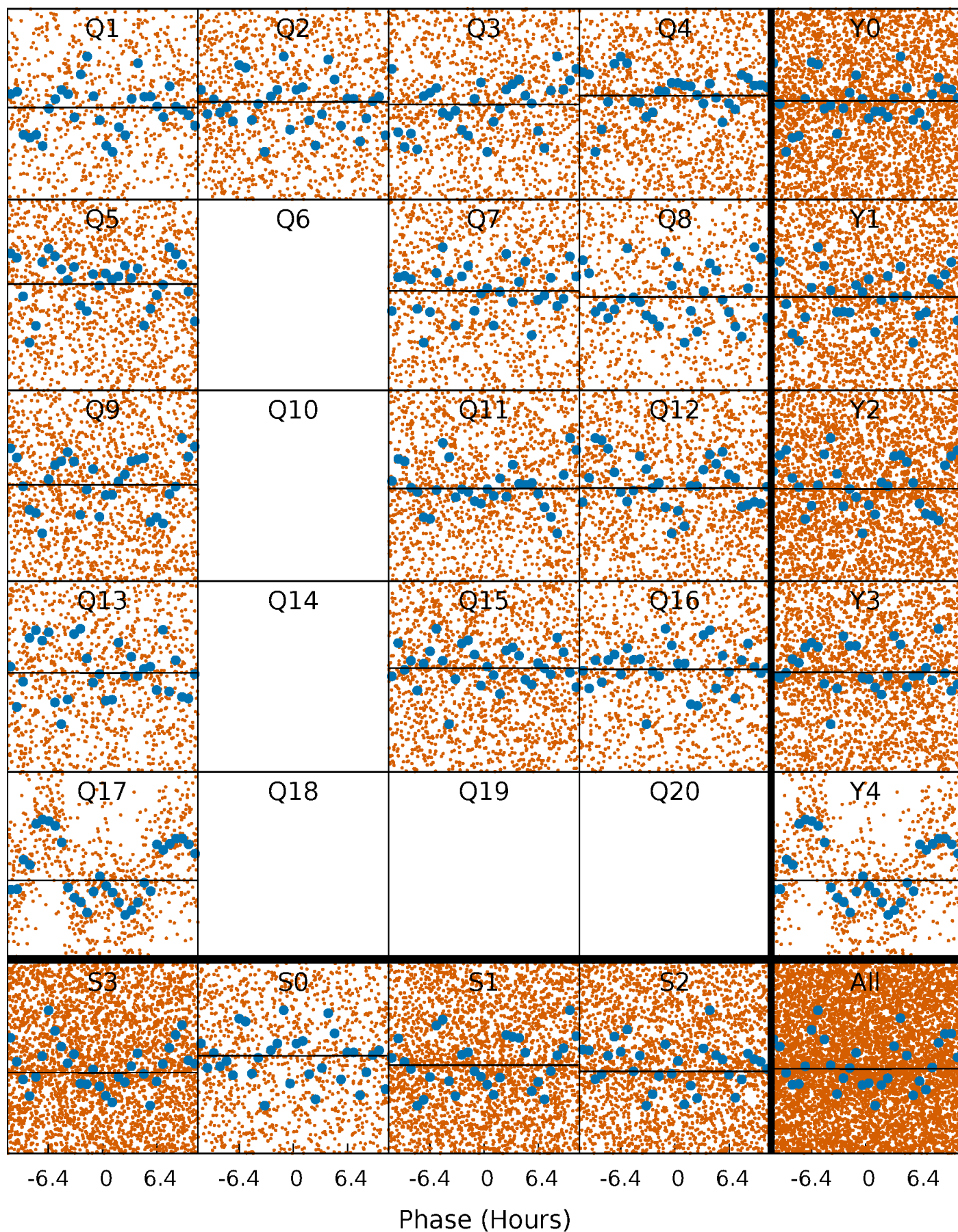
PDC Quarter-Phased Transit Curves

TCE 004661980-01 P= 1.478325 Days $T_0=133.179222$ (BKJD)



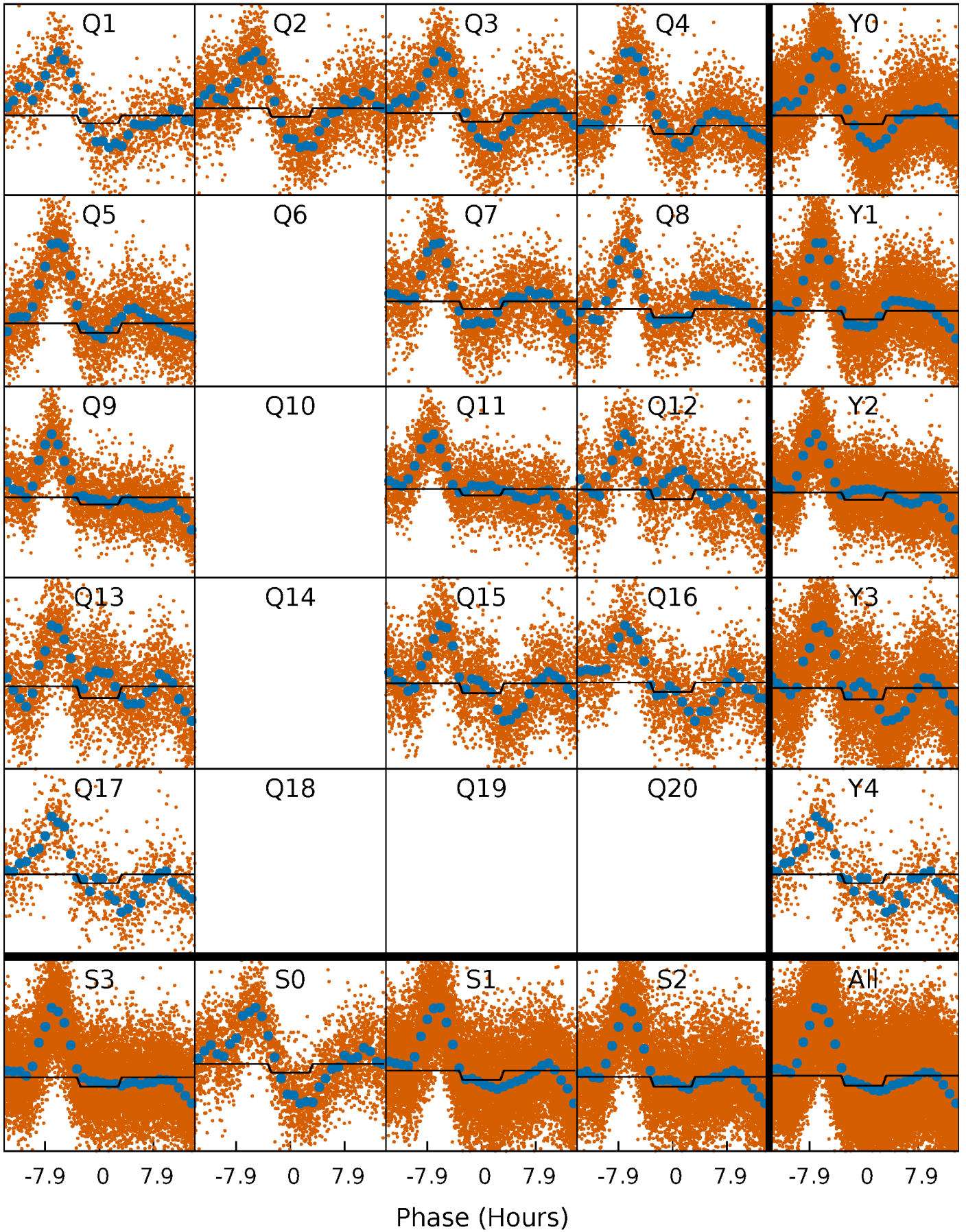
DV Quarter-Phased Transit Curves

TCE 004661980-01 P= 1.478325 Days $T_0=133.179222$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

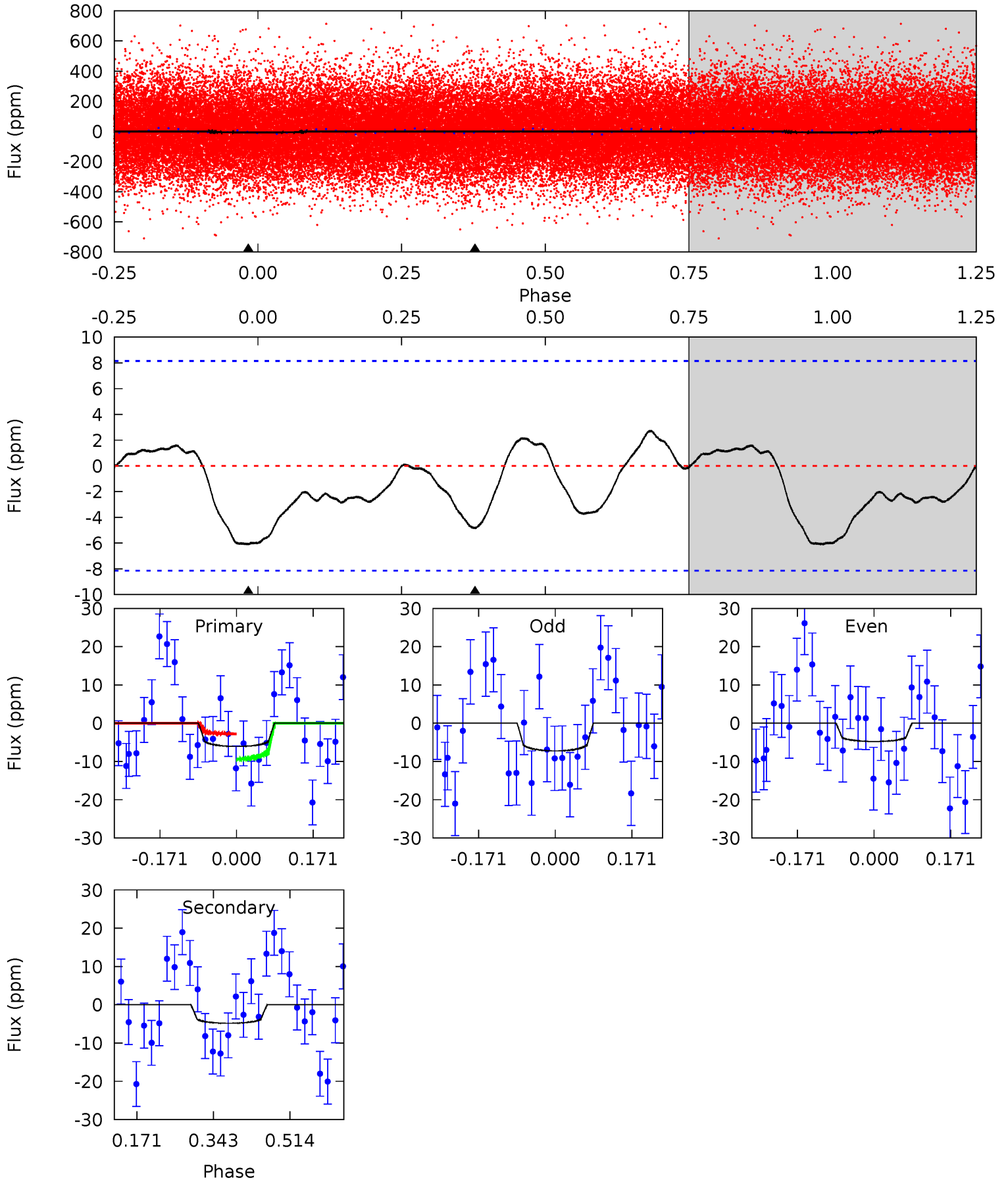
TCE 004661980-01 P= 1.478615 Days $T_0=132.883880$ (BKJD)



DV Model-Shift Uniqueness Test

004661980-01, P = 1.478325 Days, E = 130.222572 Days

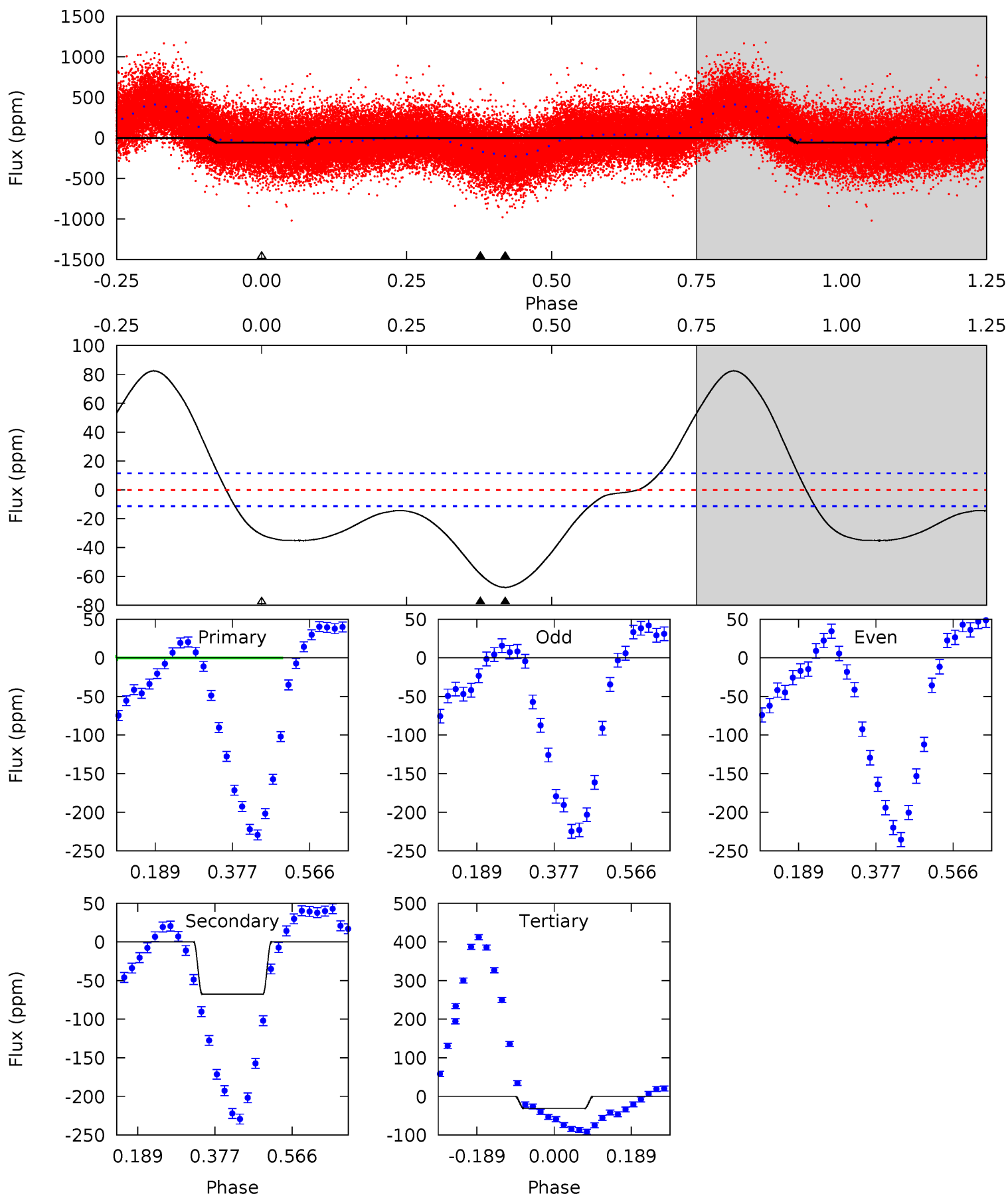
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.33	2.64	0	0	4.45	1.37	1.12	3.33	3.33	2.64	2.64	0.68	0.69	0.31	1.81



Alt Model-Shift Uniqueness Test

004661980-01, P = 1.478615 Days, E = 131.405265 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.7	26.3	12.0	0	4.43	1.31	15.7	10.6	22.7	14.2	26.3	0.77	1.02	0.55	9.20



Stellar Parameters For KIC 004661980

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6643^{+200}_{-220}	$3.507^{+0.337}_{-0.090}$	$-0.360^{+0.350}_{-0.300}$	$3.798^{+0.505}_{-1.516}$	$1.692^{+0.183}_{-0.396}$	$0.043^{+0.123}_{-0.012}$
	+3%/-3%	+10%/-3%	+97%/-83%	+13%/-40%	+11%/-23%	+282%/-28%
Source	PHO1	FLK73	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 004661980-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-5 ± 2	$1.49^{+1.59}_{-1.02}$	4488^{+264}_{-456}	4587^{+4744}_{-7858}	$1.039^{+9.942}_{-0.832}$
Alt.	-68 ± 3	$3.20^{+2.39}_{-1.85}$	4497^{+291}_{-428}	6377^{+4937}_{-1609}	$3.270^{+15.498}_{-2.182}$

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 $A_{obs} \gg 1.0$

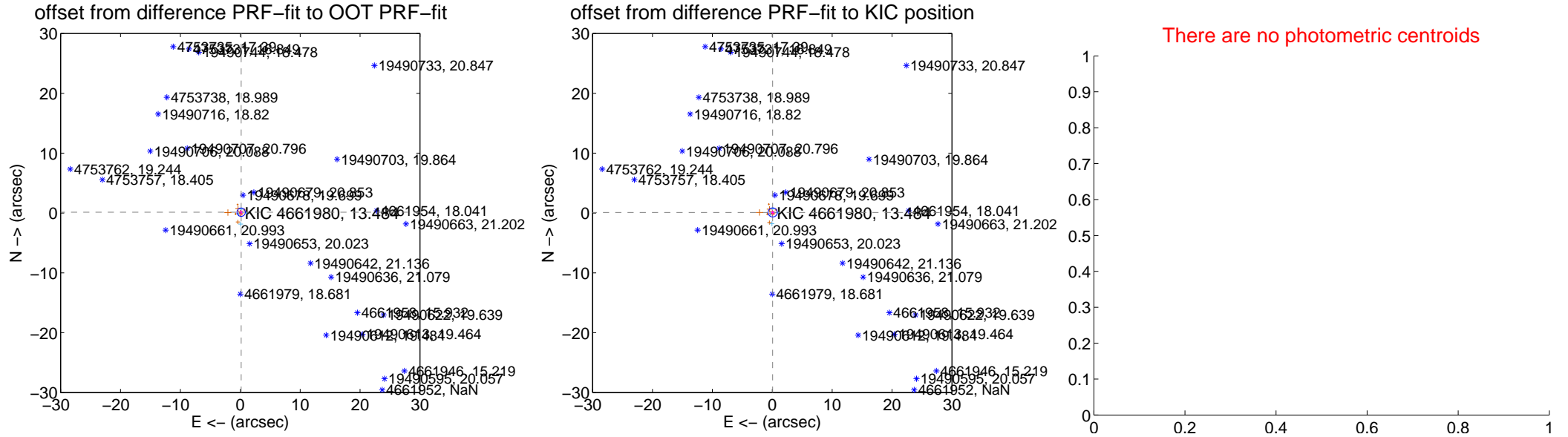
DV Centroid Data

Supplemental centroid analysis for 004661980-01. Kepler magnitude: 13.48. Transit SNR 0.04

There are 6 quarters with good PRF difference image offsets

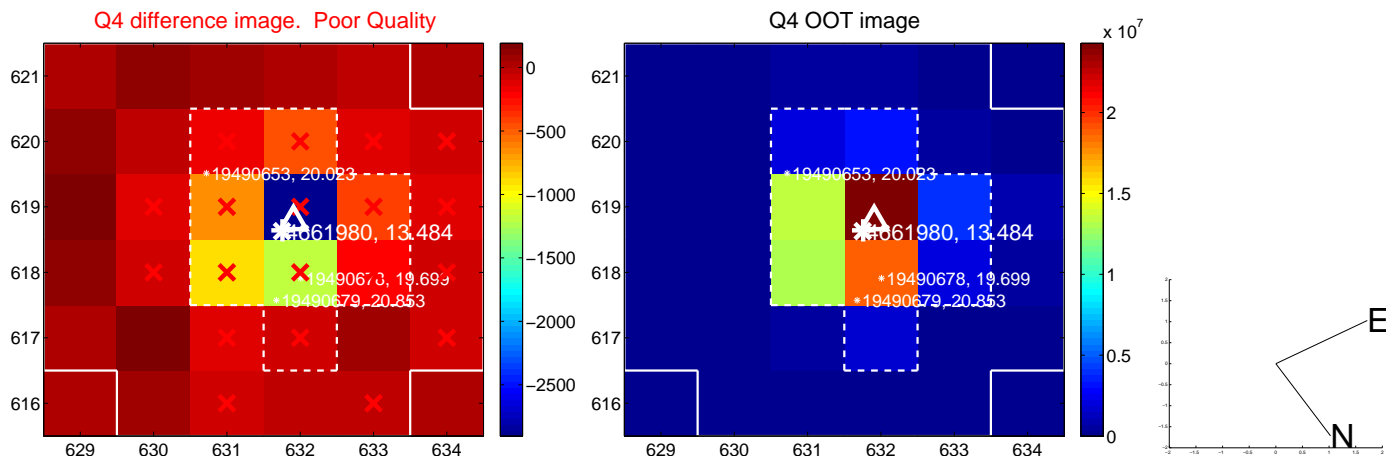
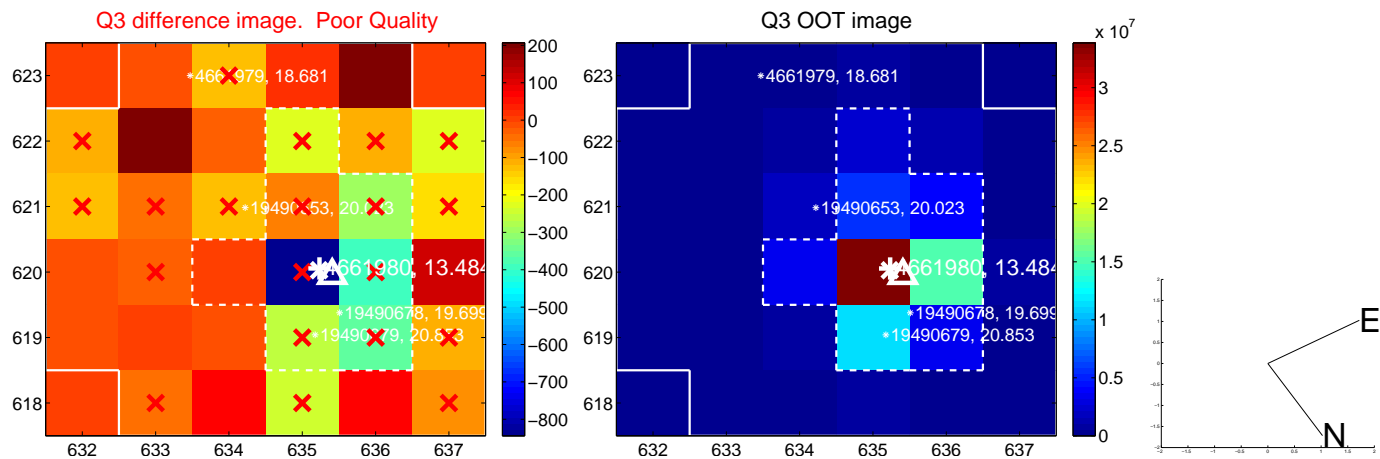
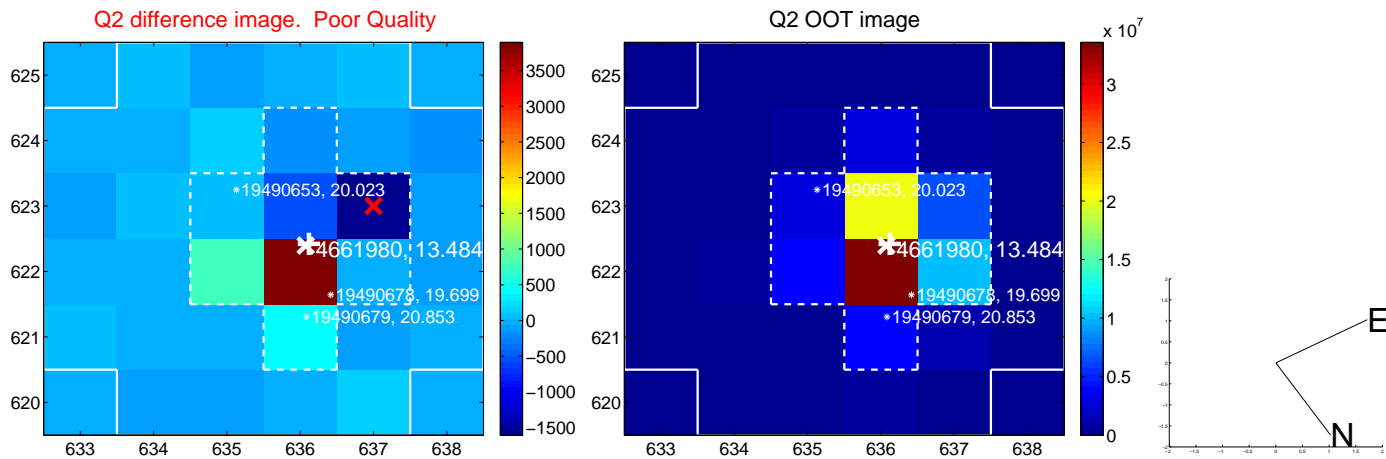
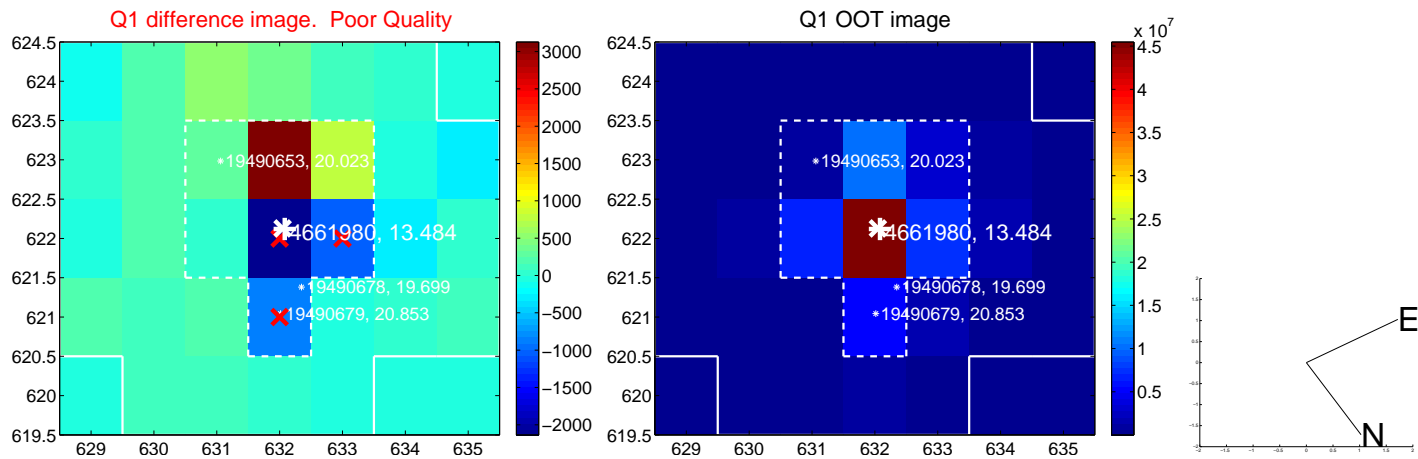
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.200 ± 0.232	0.86	-0.145 ± 0.208	0.138 ± 0.274
PRF-fit source offset from KIC position	0.119 ± 0.254	0.47	-0.070 ± 0.230	0.096 ± 0.272
photometric centroid source offset	—	—	—	—

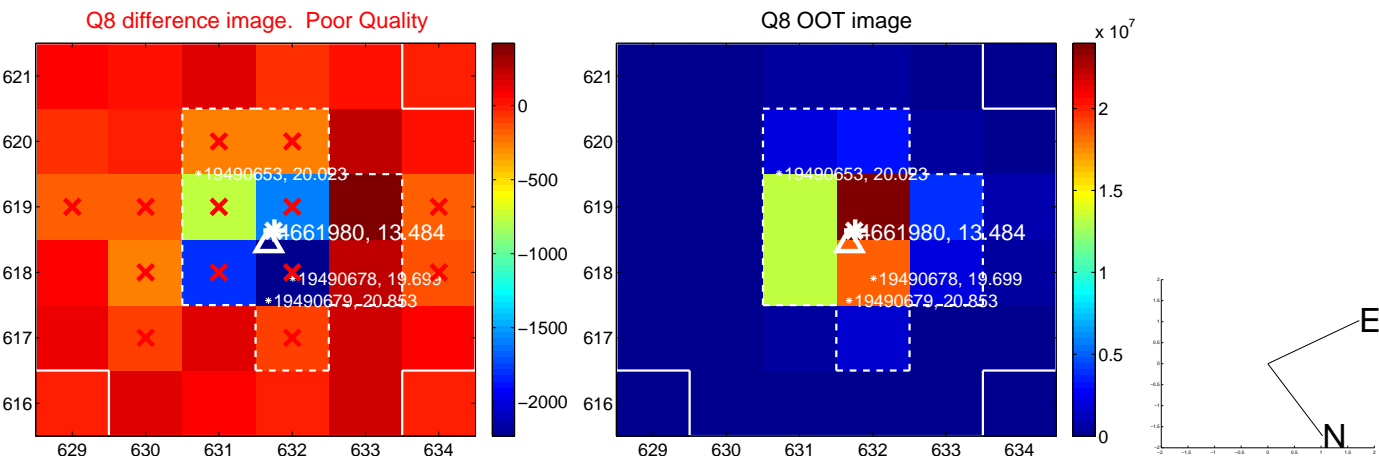
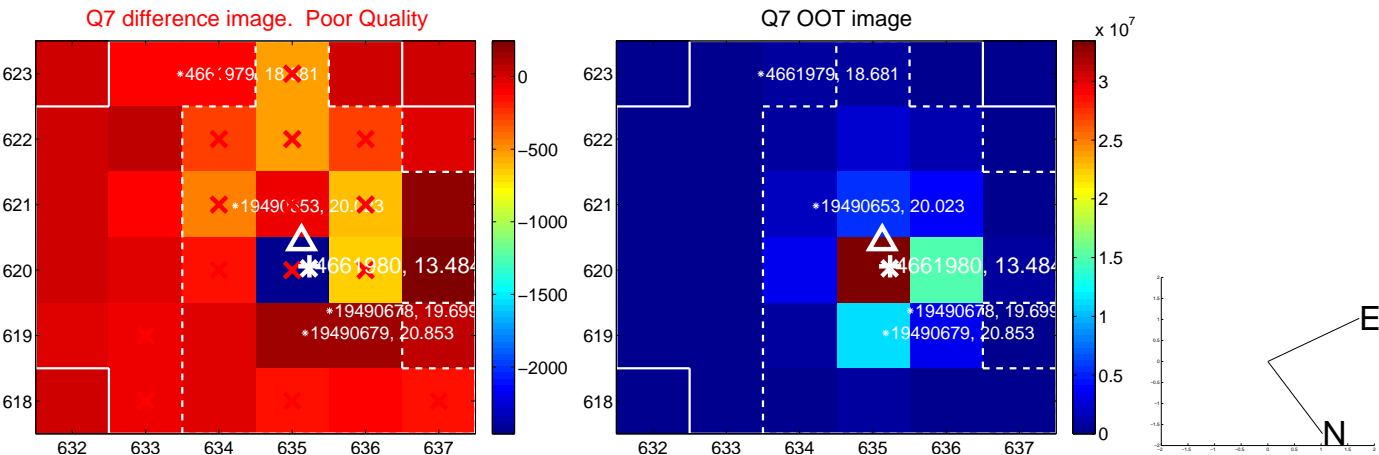
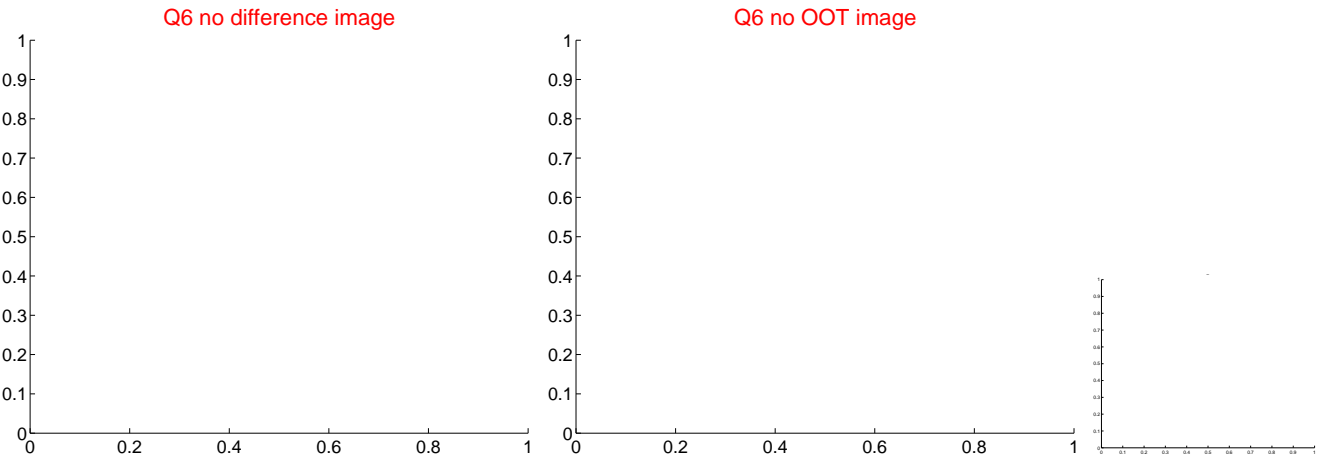
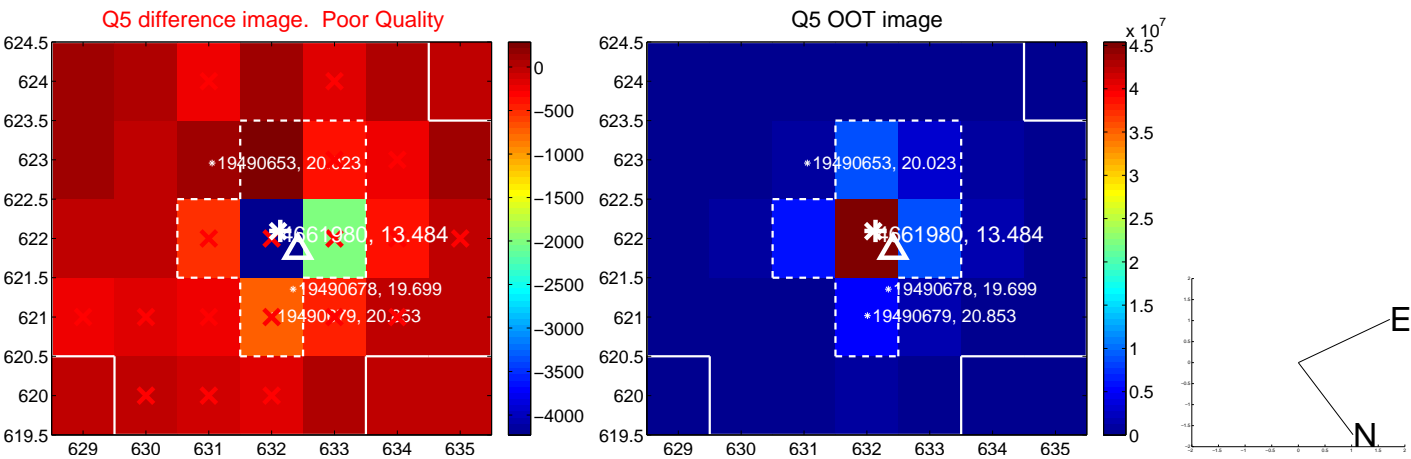


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

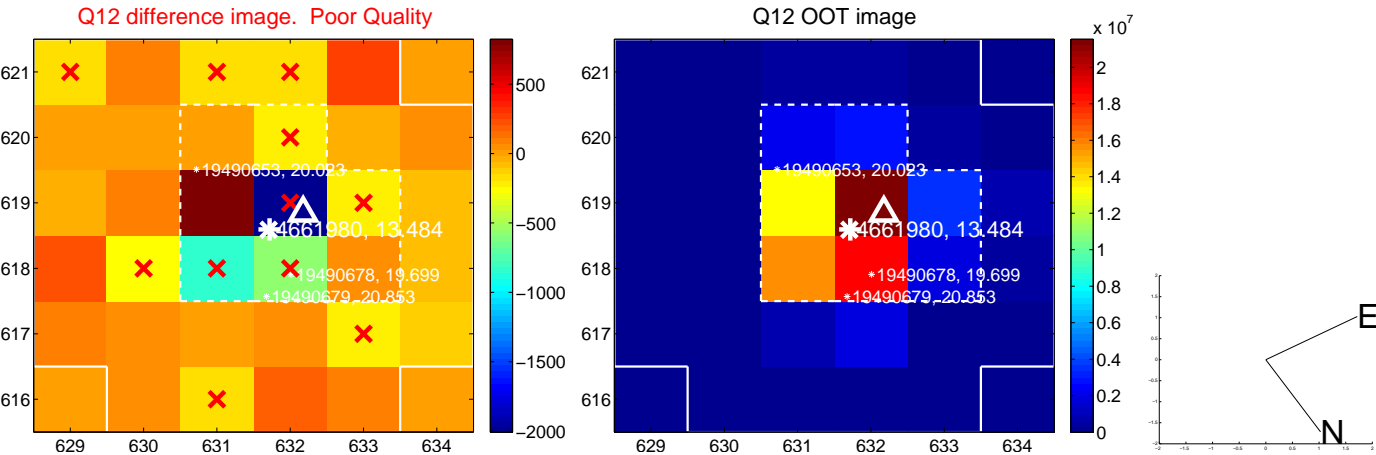
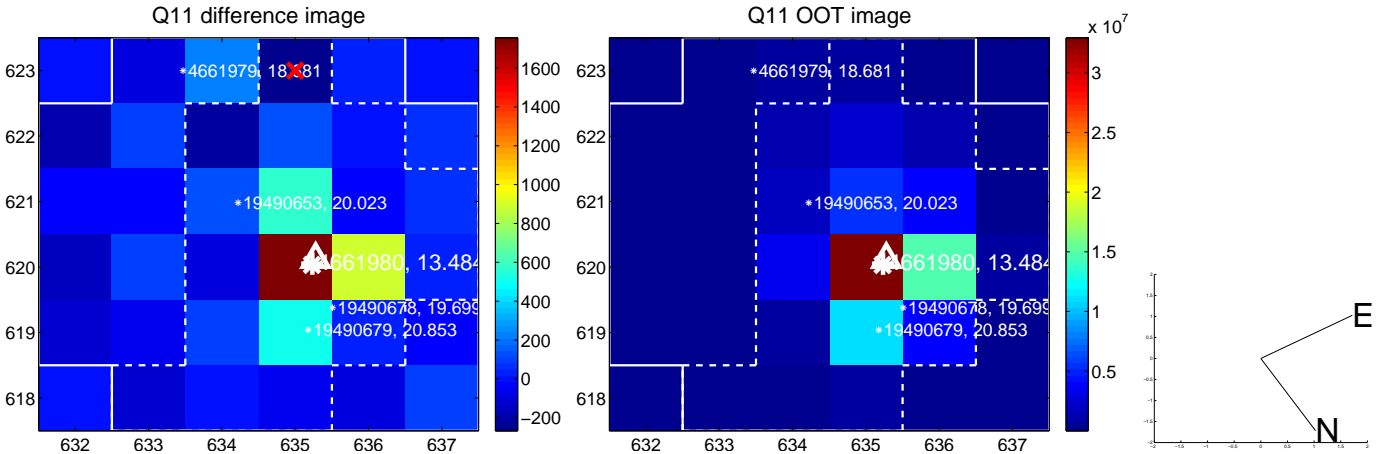
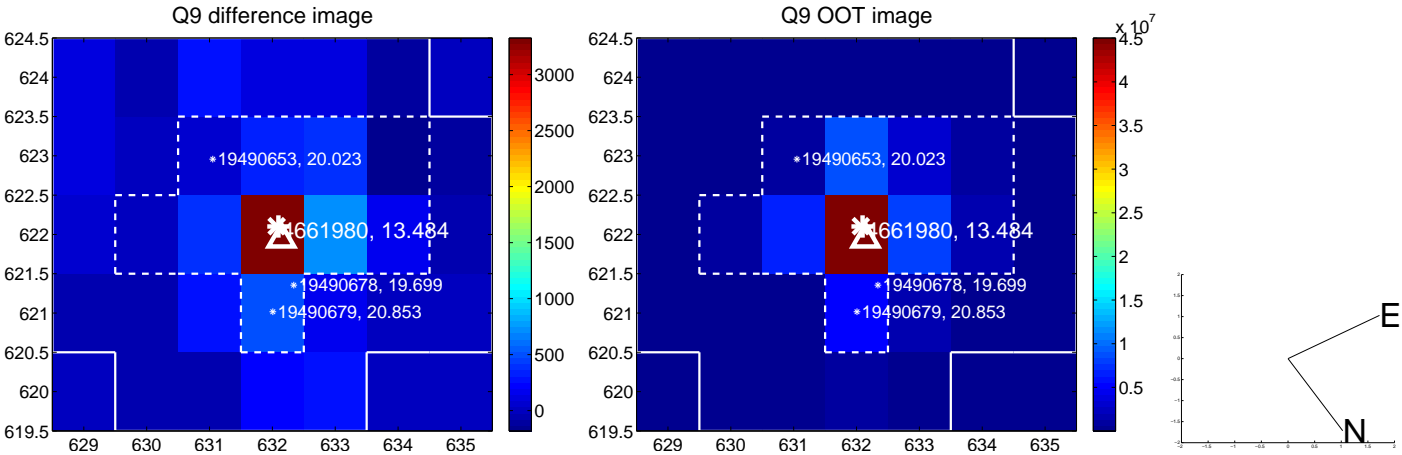
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



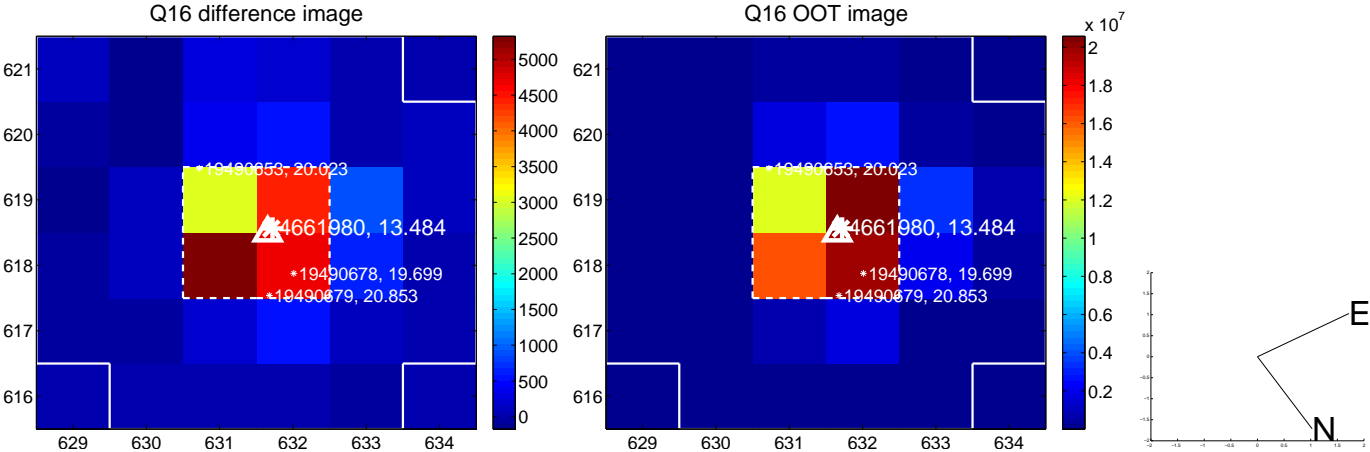
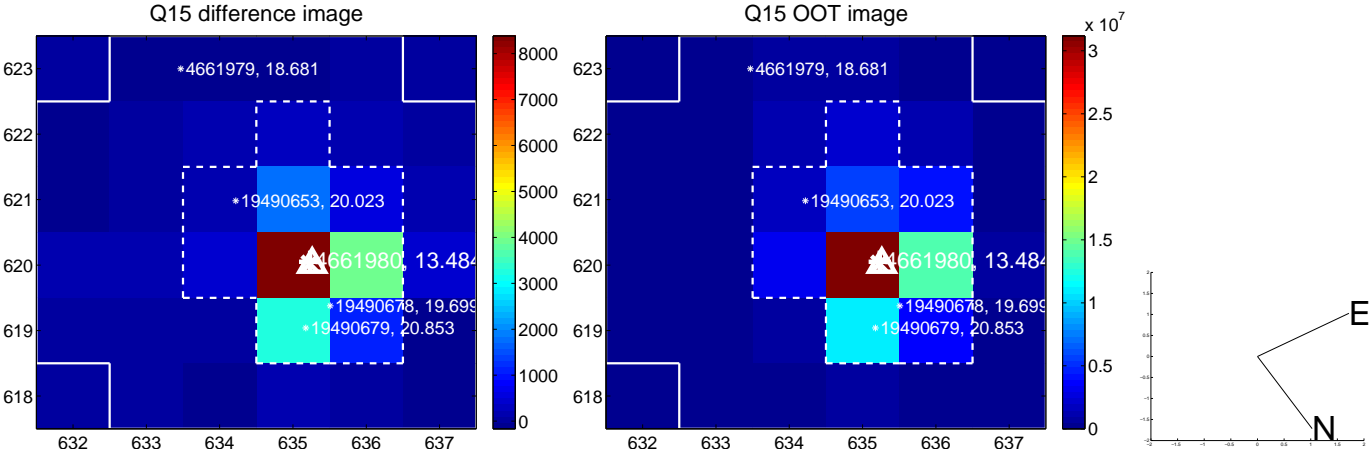
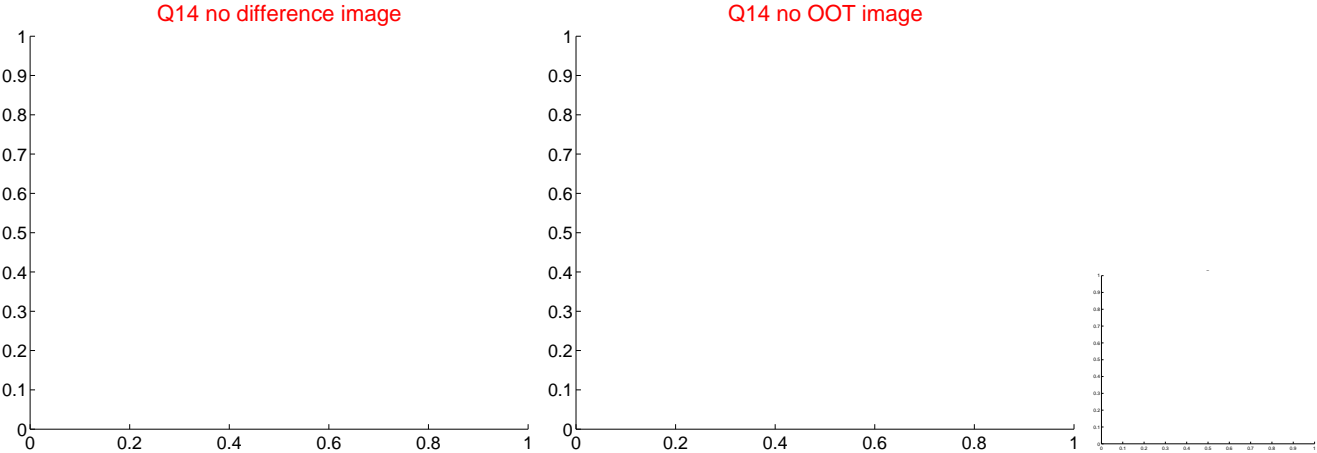
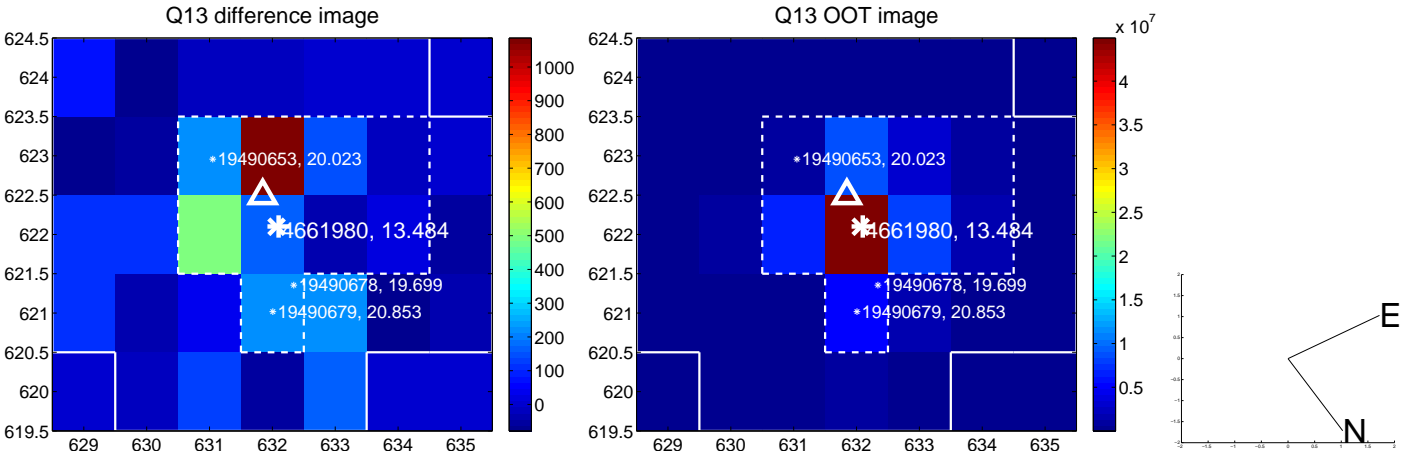
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



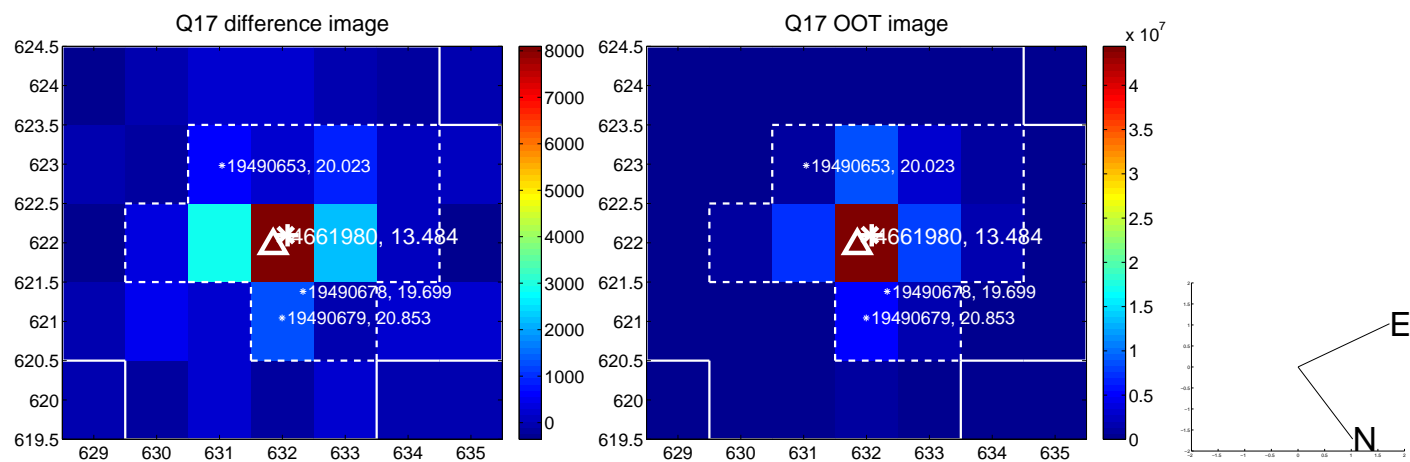
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



folded centroid time series figure for this object.



UKIRT Image

Declination

