

KIC 007661958

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})
007661958-01	OBS	No	3.475503	132.162030	21.1	6.353	8.4	7.1	2.45	6861	1.31	4290.73

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007661958-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—CENT_SATURATED

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

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

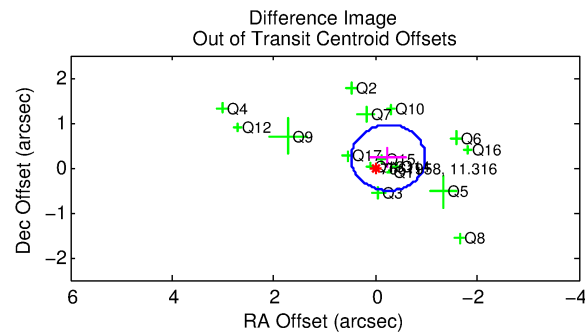
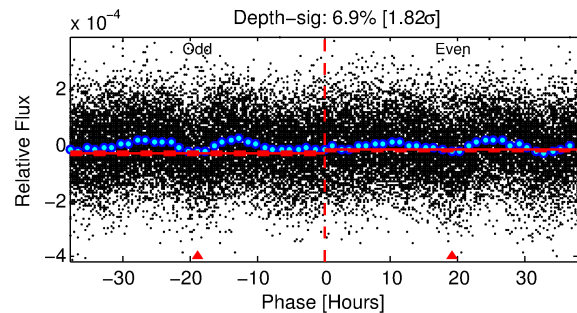
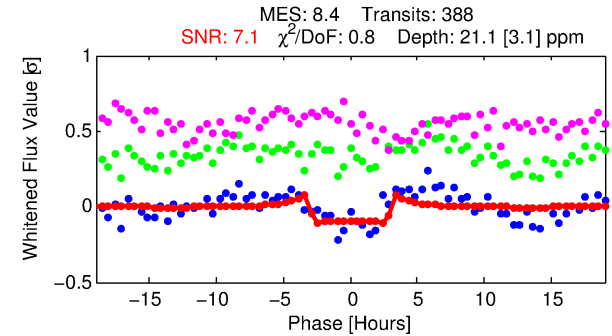
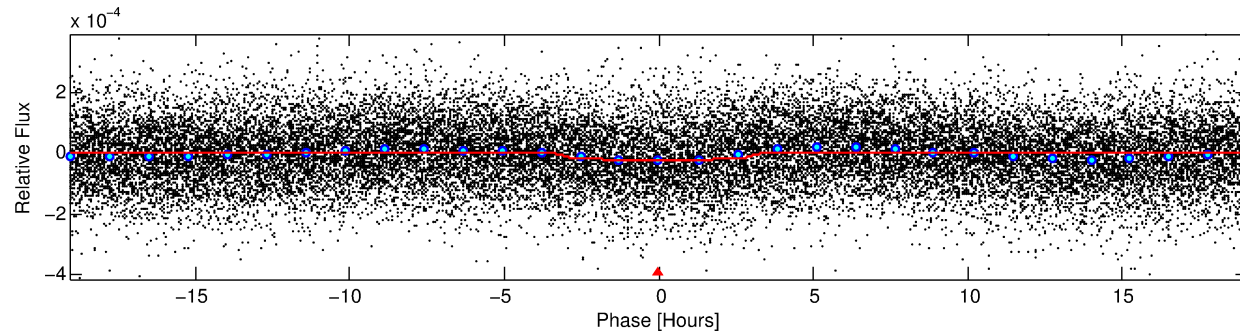
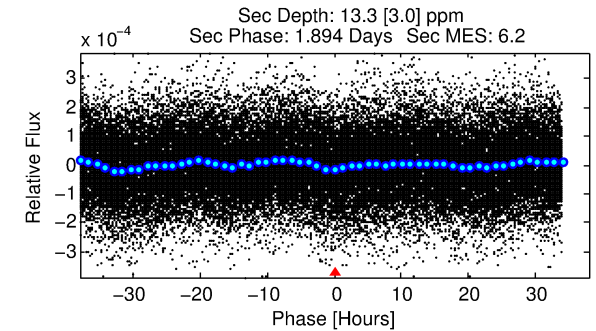
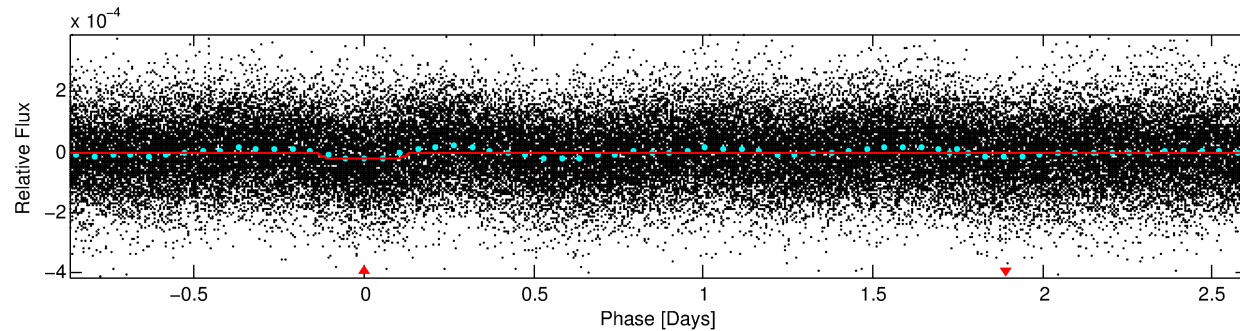
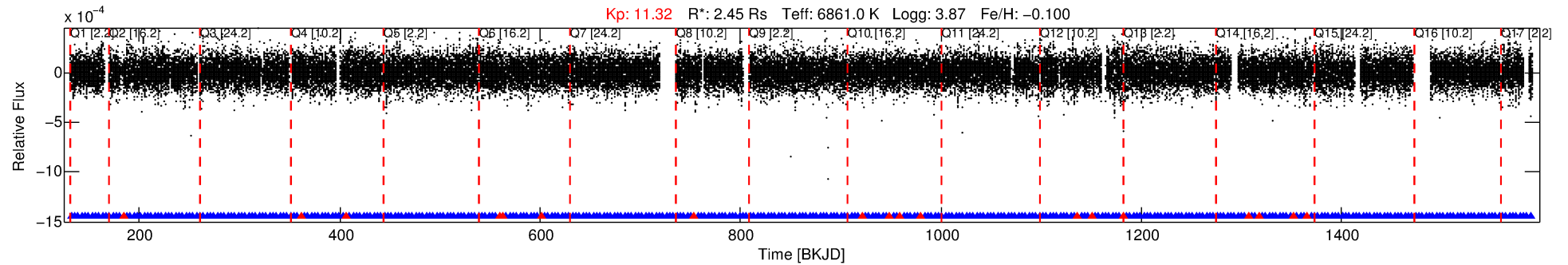
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007661958-01

No Significant Match Found

DV One-Page Summary

KIC: 7661958 Candidate: 1 of 1 Period: 3.476 d



DV Fit Results:

Period = 3.47550 [0.00003] d
Epoch = 132.1620 [0.0048] BKJD
 R_p/R^* = 0.0049 [0.0009]
 a/R^* = 2.06 [1.64]
 b = 0.90 [0.21]
 Seff = 4290.73 [1935.20]
 T_{eq} = 2064 [233] K
 R_p = 1.31 [0.49] R_e
 a = 0.0527 [0.0150] AU
 A_g = 11.77 [7.27] [1.48σ]
 T_{eff} = 5910 [672] K [5.41σ]

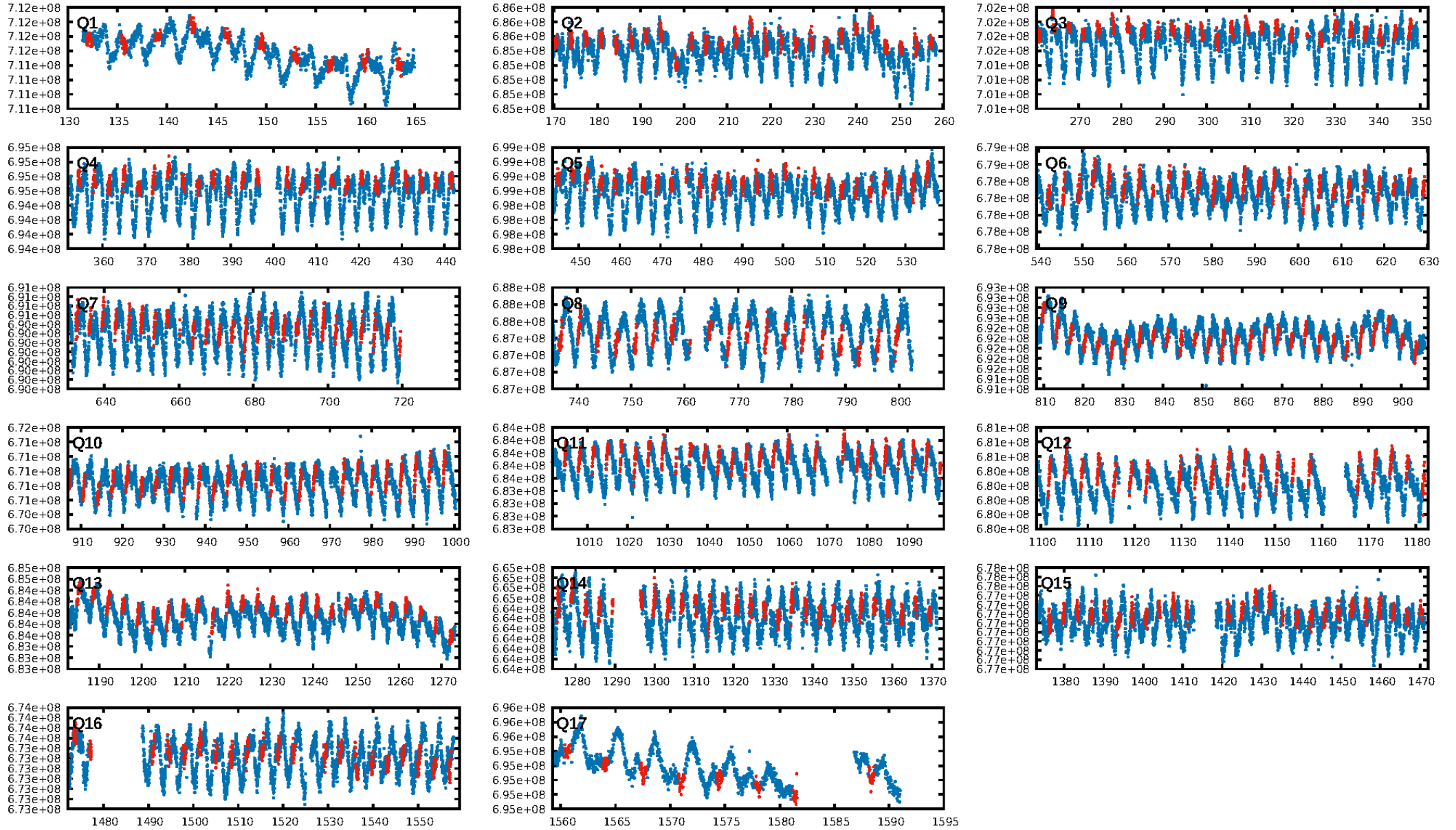
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.15e-14
RollingBand-fgt: 0.95 [352/370]
GhostDiagnostic-chr: 10.33
Centroid-sig: 12.3%
Centroid-so: 0.723 arcsec [1.10σ]
OotOffset-rm: 0.333 arcsec [1.36σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-rm: 0.467 arcsec [2.08σ]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.25 [4/16]
DiffImageOverlap-fno: 1.00 [17/17]

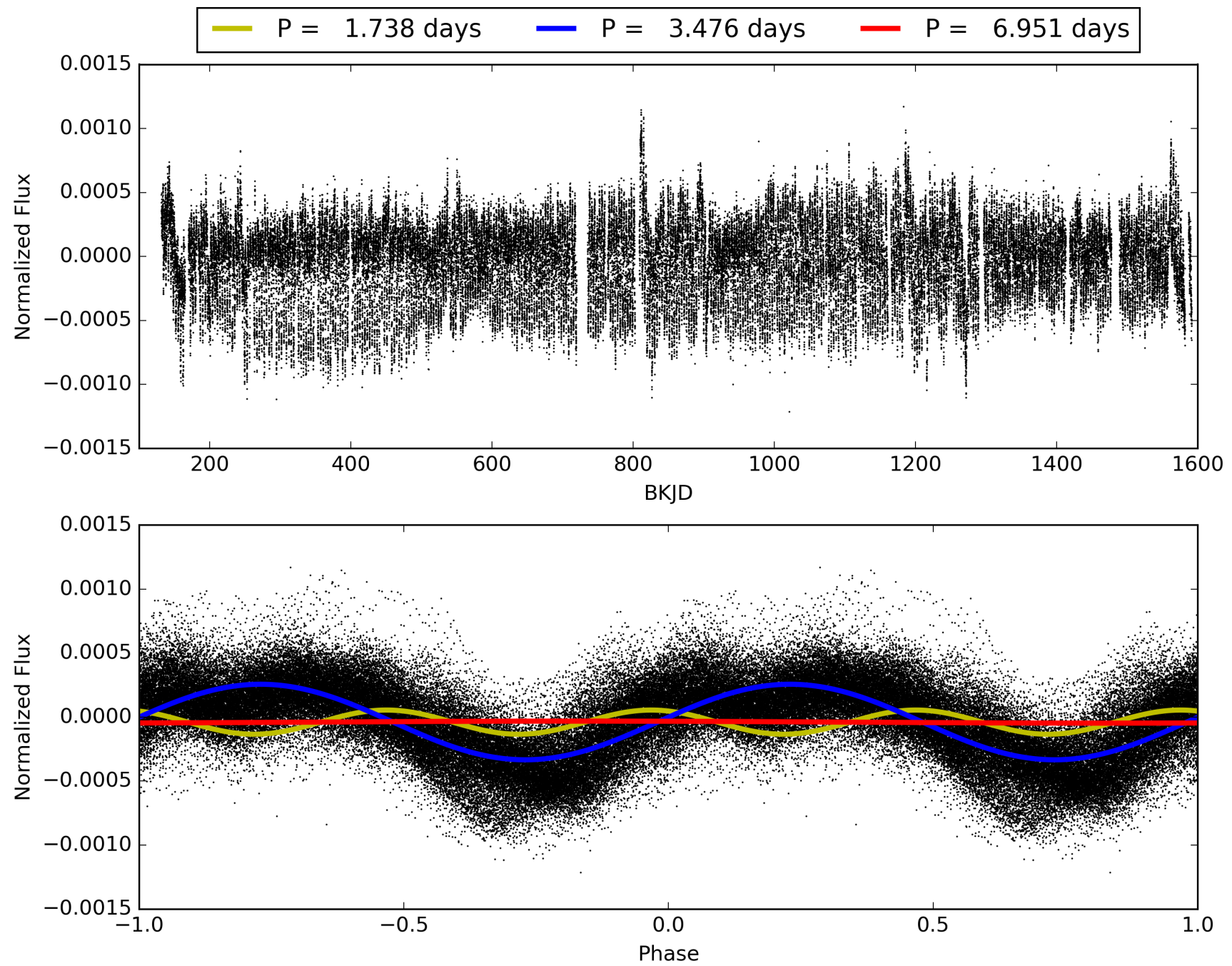
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 01:26:51 Z

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

TCE 007661958-01, PDC Light Curves

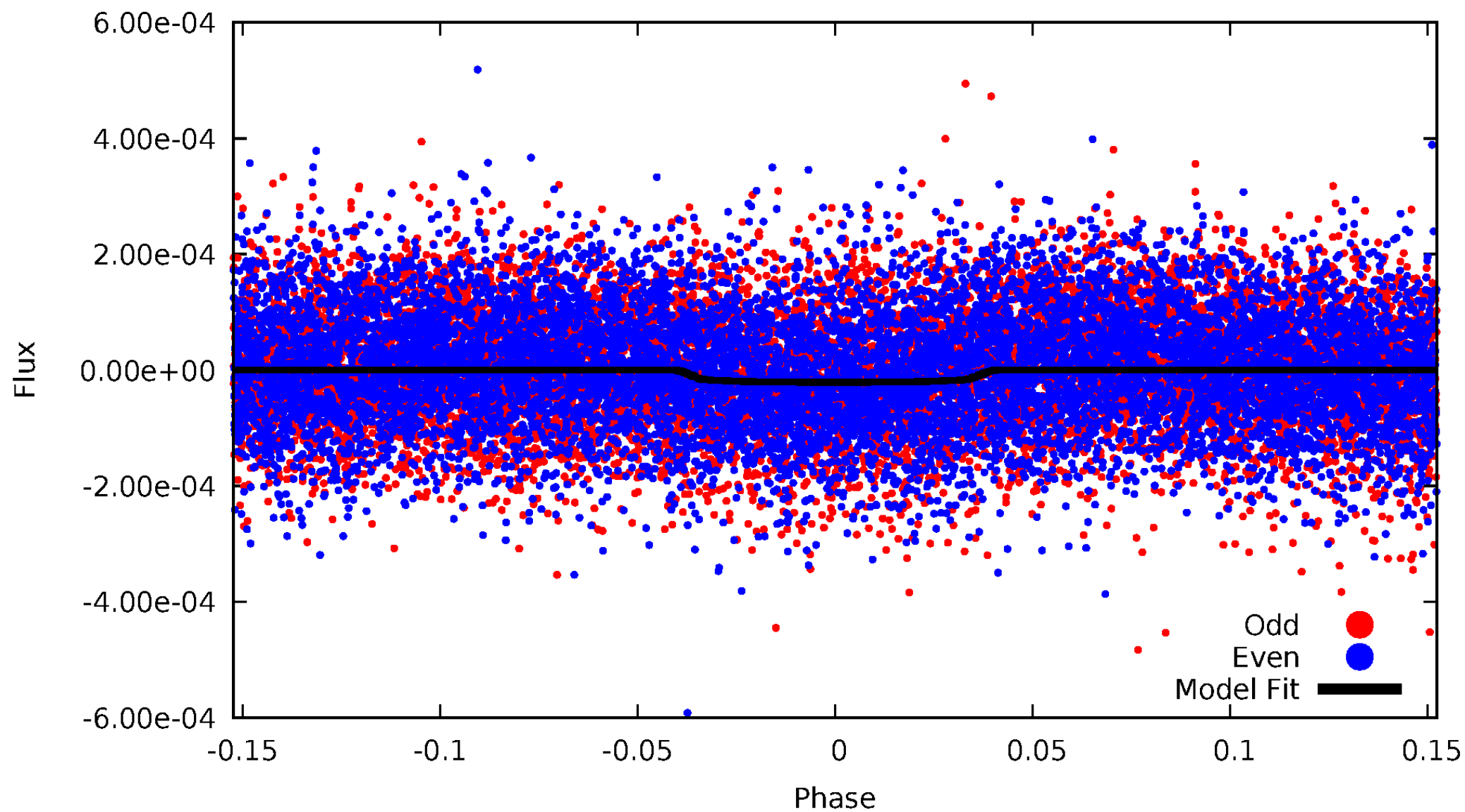


TCE 007661958-01



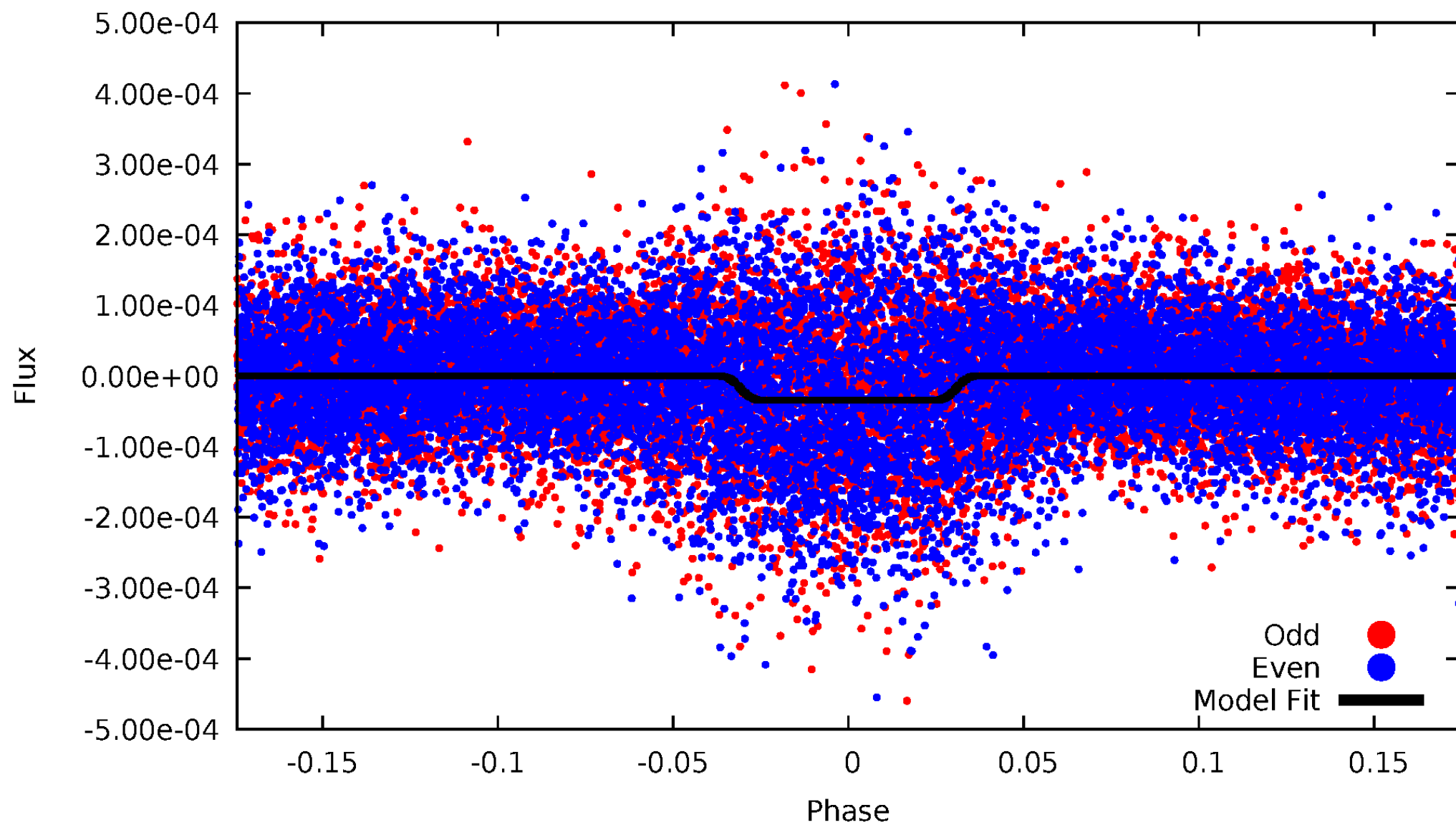
DV Odd/Even

TCE 007661958-01



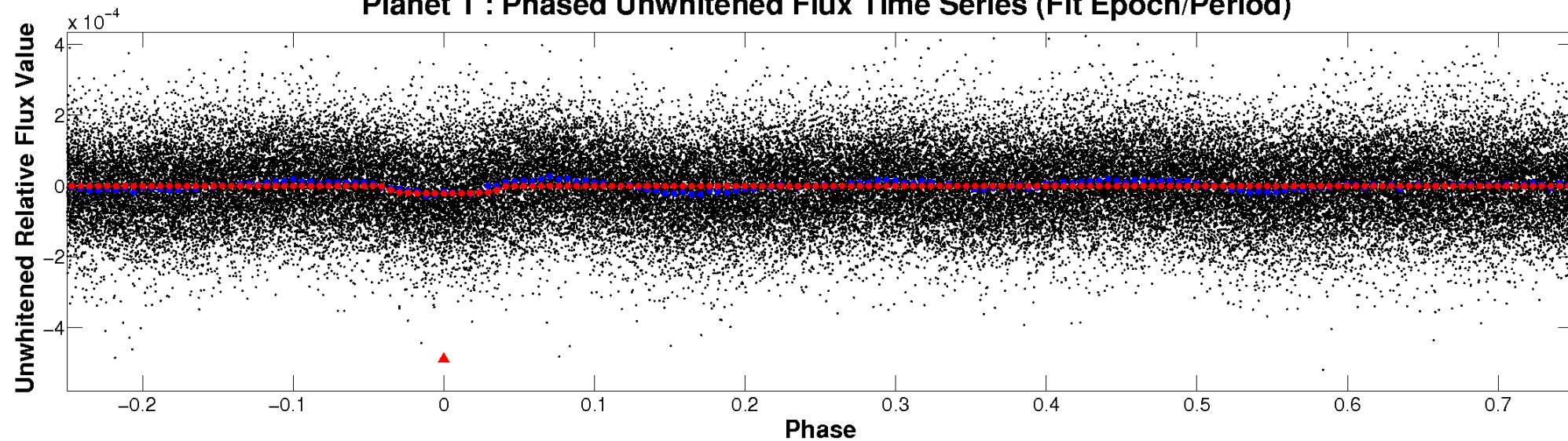
ALT Odd/Even

TCE 007661958-01

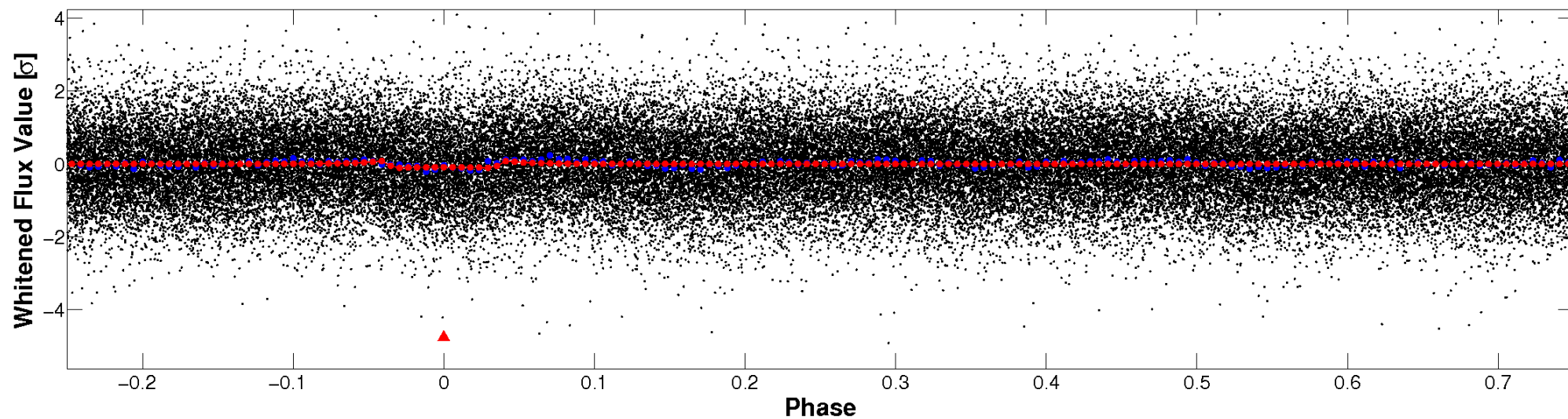


Non-Whitened Vs. Whitened Light Curve

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

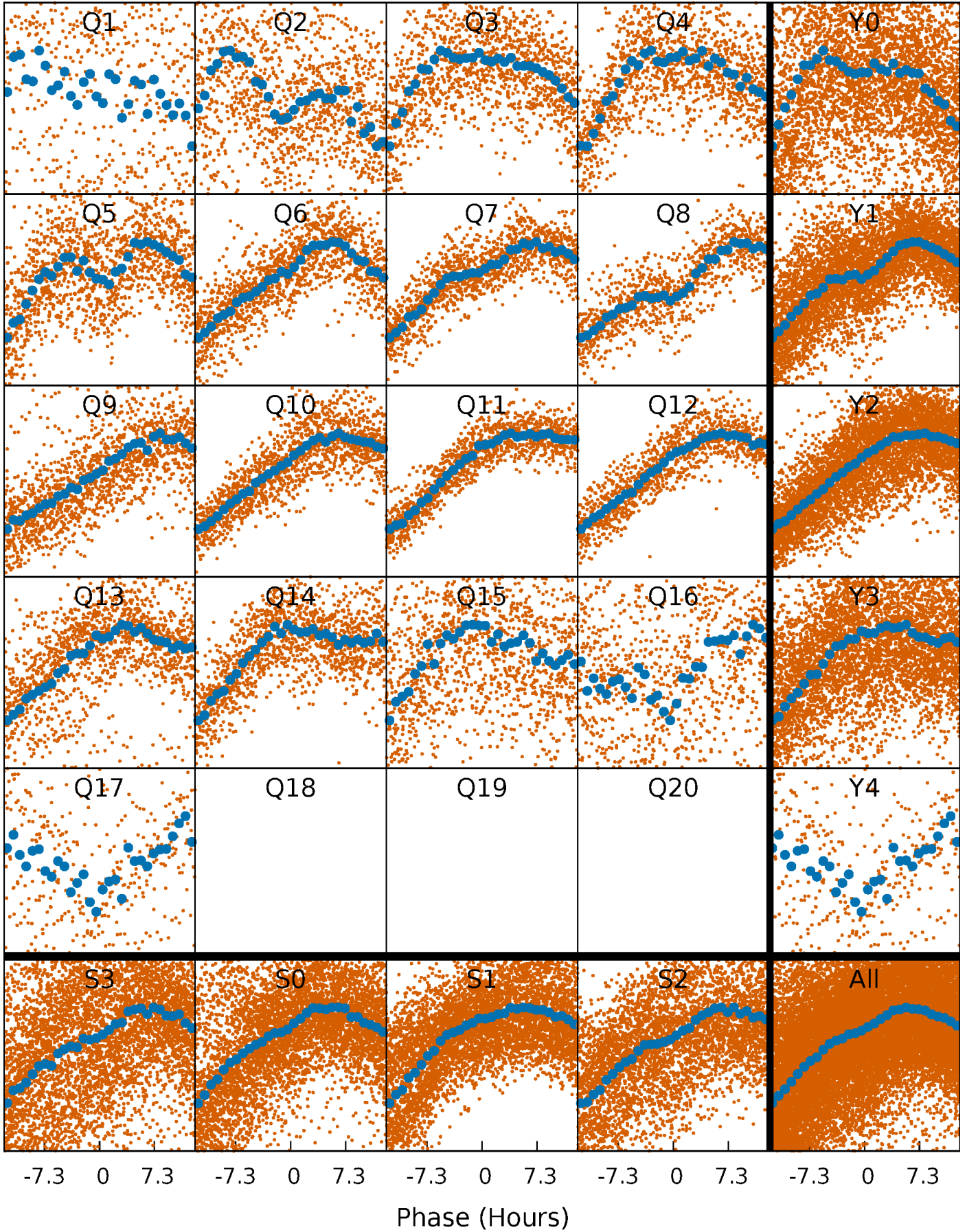


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



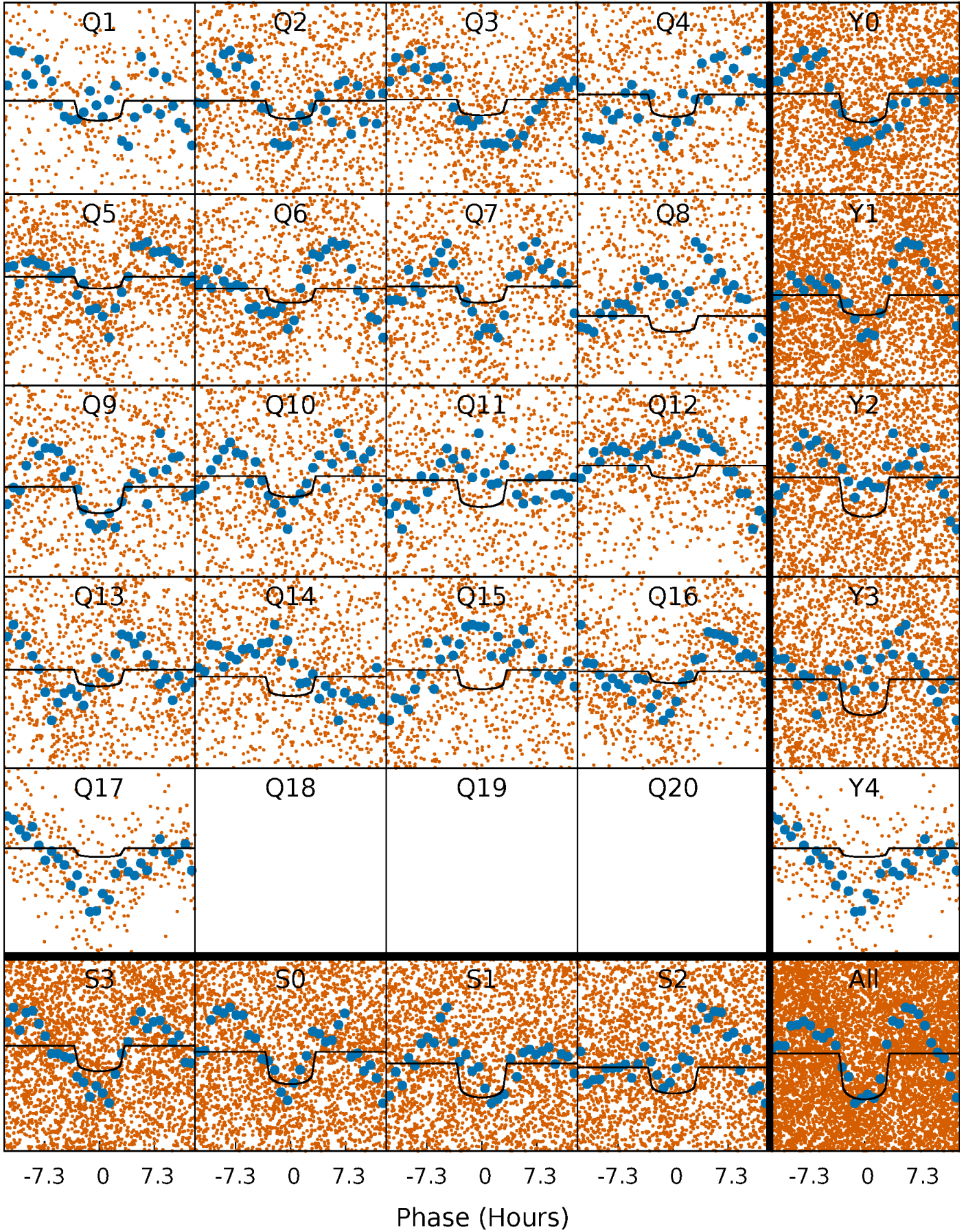
PDC Quarter-Phased Transit Curves

TCE 007661958-01 P= 3.475503 Days $T_0=132.162030$ (BKJD)



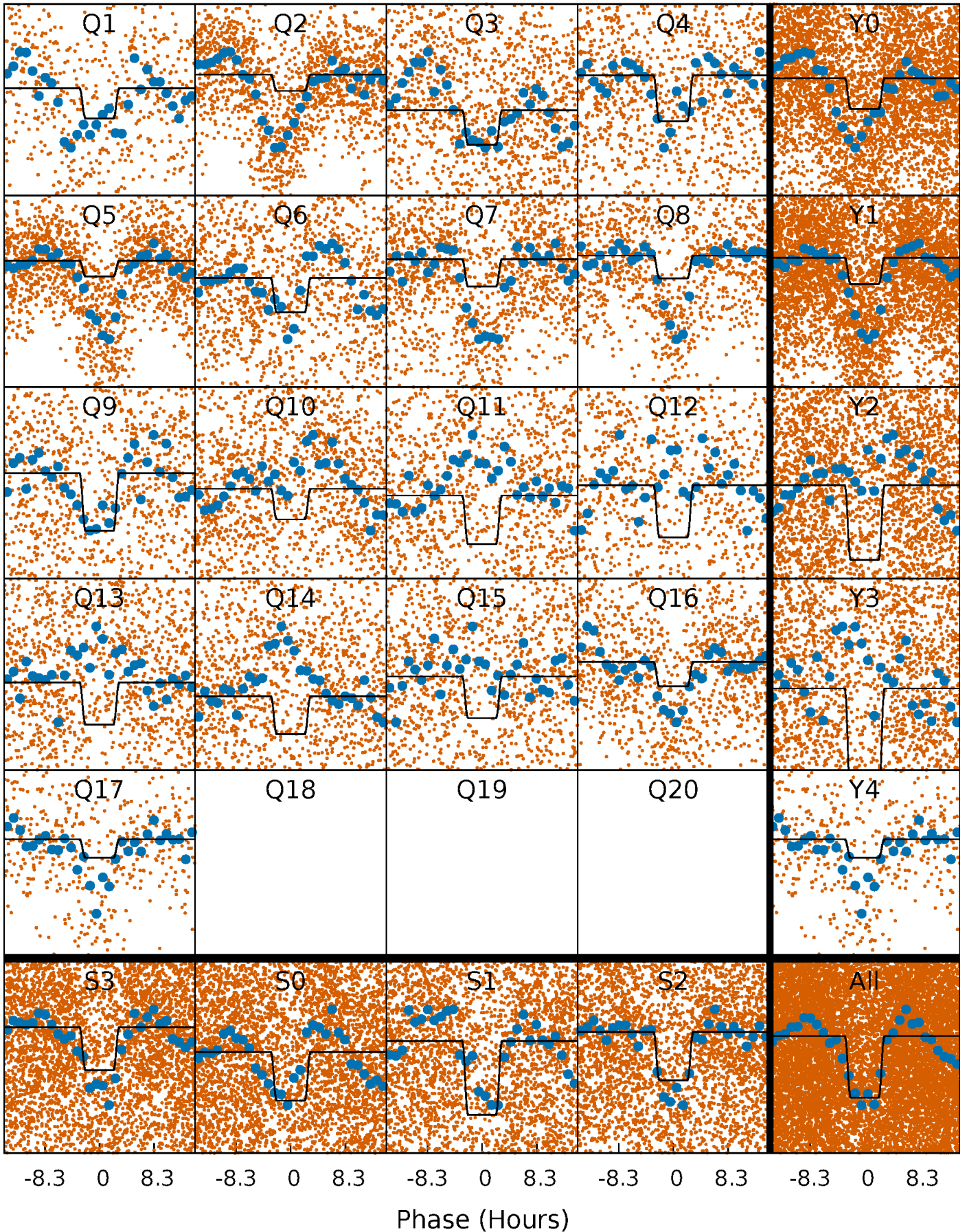
DV Quarter-Phased Transit Curves

TCE 007661958-01 P= 3.475503 Days $T_0=132.162030$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

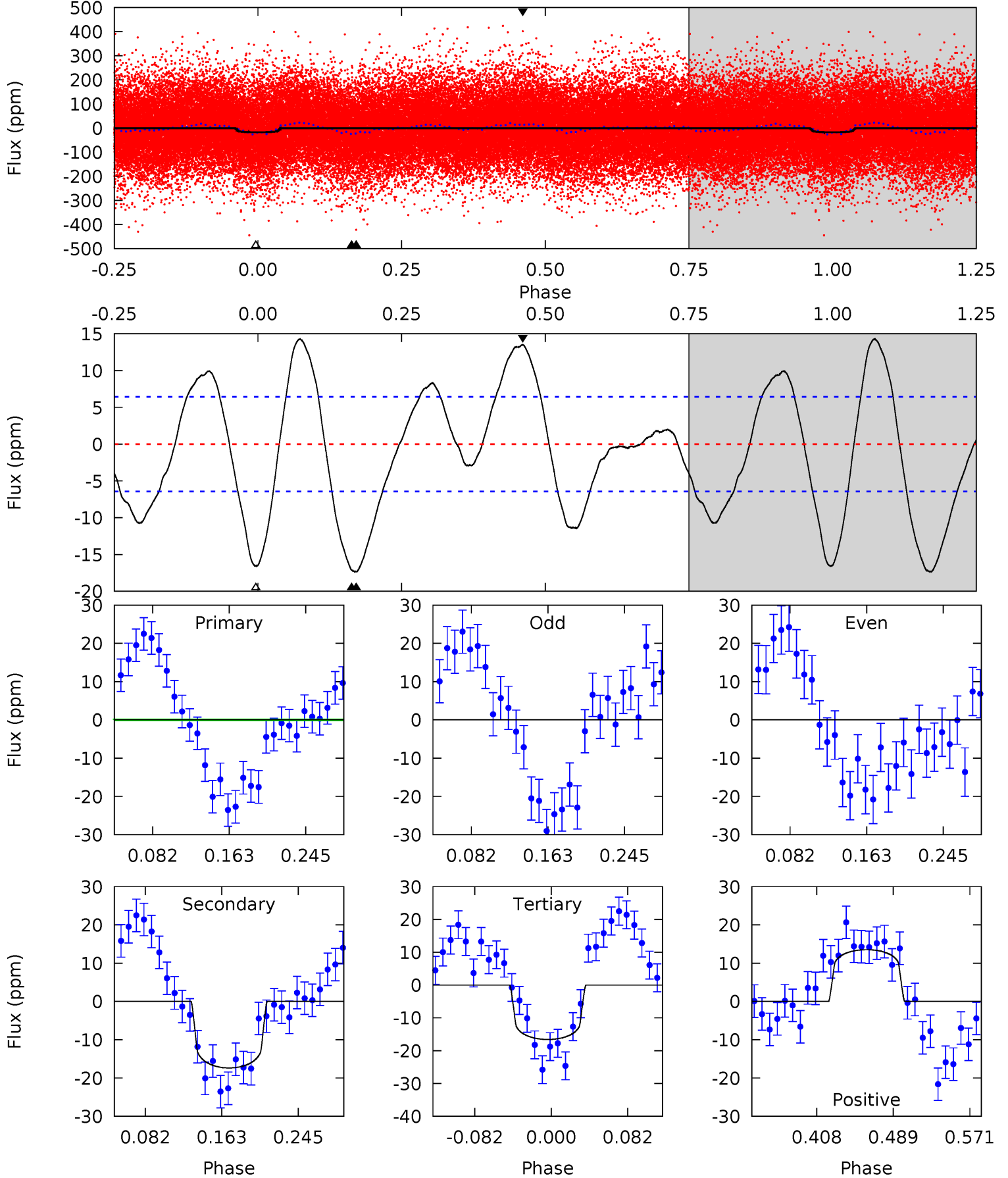
TCE 007661958-01 P= 3.475424 Days $T_0=132.178271$ (BKJD)



DV Model-Shift Uniqueness Test

007661958-01, P = 3.475503 Days, E = 128.686527 Days

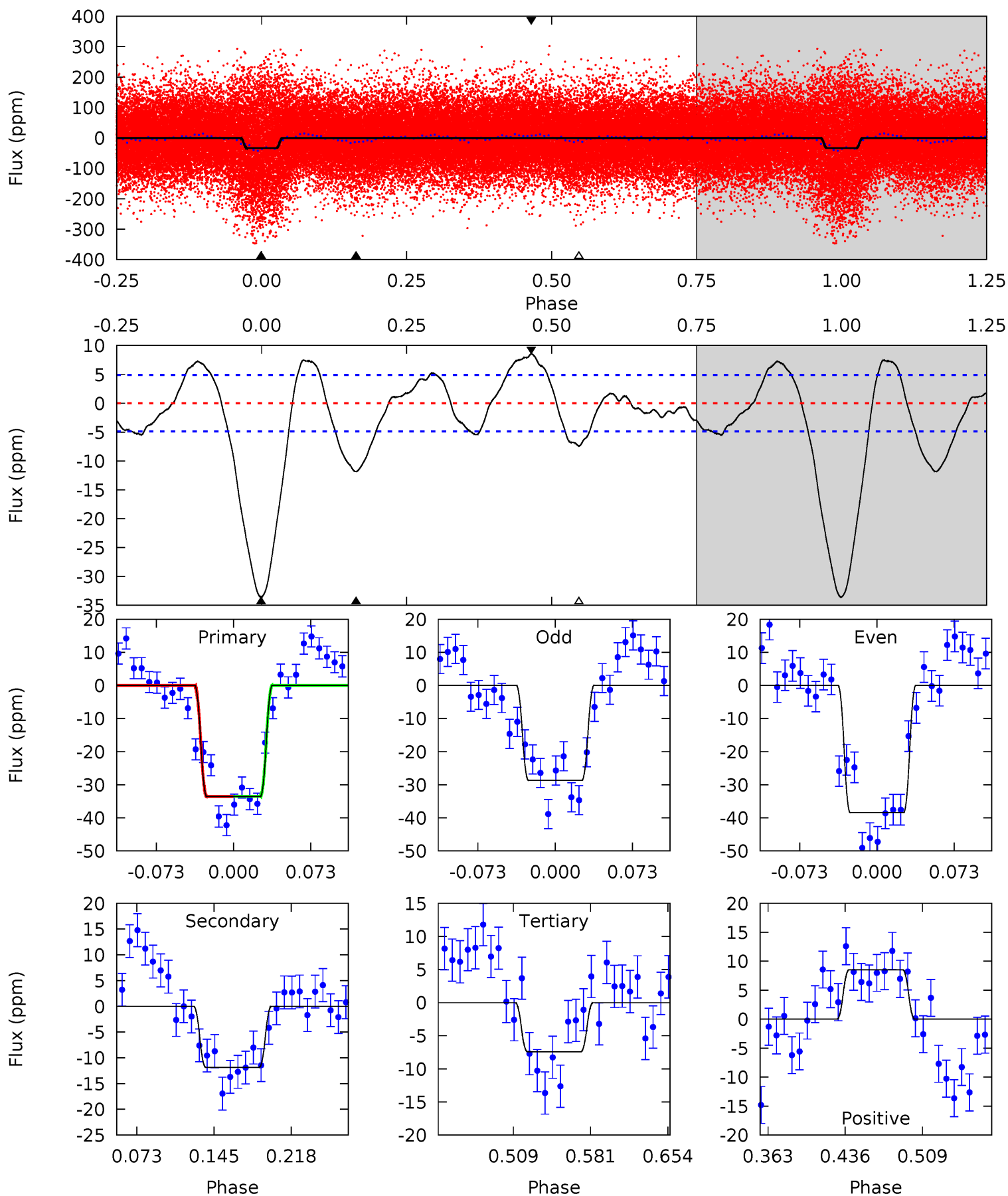
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.3	12.4	11.9	9.68	4.61	1.74	5.38	0.39	2.59	0.56	2.75	0.87	1.01	0.45	0.77



Alt Model-Shift Uniqueness Test

007661958-01, P = 3.475424 Days, E = 128.702847 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.7	11.2	6.99	8.07	4.63	1.79	4.01	24.7	23.6	4.20	3.12	4.61	0.90	0.20	0.02



Stellar Parameters For KIC 007661958

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6861^{+170}_{-204}	$3.868^{+0.247}_{-0.114}$	$-0.100^{+0.300}_{-0.300}$	$2.450^{+0.523}_{-0.784}$	$1.614^{+0.194}_{-0.292}$	$0.154^{+0.245}_{-0.063}$
	+2%/-3%	+6%/-3%	+300%/-300%	+21%/-32%	+12%/-18%	+158%/-41%
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 007661958-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-17 ± 1	$1.25^{+0.33}_{-0.31}$	2856^{+172}_{-220}	6271^{+841}_{-599}	17^{+12}_{-6}
Alt.	-12 ± 1	$1.49^{+0.35}_{-0.29}$	2836^{+206}_{-221}	5243^{+452}_{-365}	$8.201^{+4.341}_{-2.739}$

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

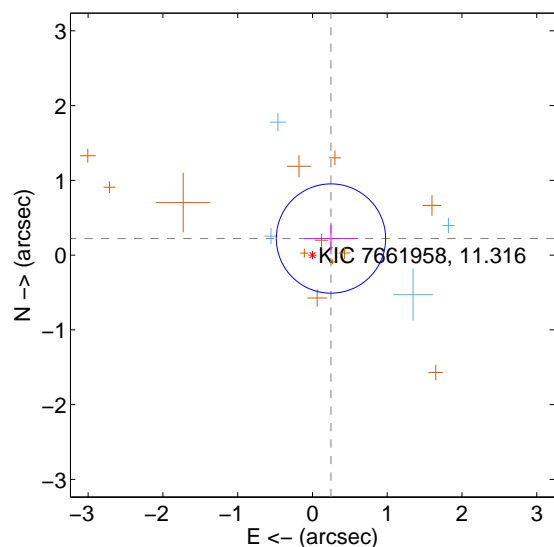
Supplemental centroid analysis for 007661958-01. **Kepler magnitude: 11.32.** Transit SNR 7.09

There are 4 quarters with good PRF difference image offsets

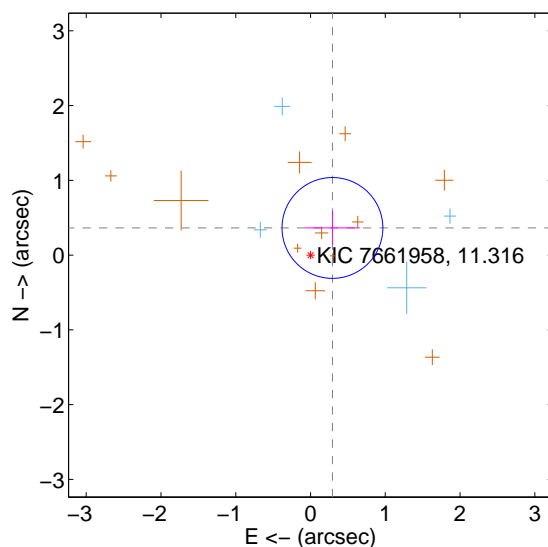
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.333 ± 0.244	1.36	-0.248 ± 0.361	0.222 ± 0.206
PRF-fit source offset from KIC position	0.467 ± 0.225	2.08	-0.293 ± 0.366	0.363 ± 0.228
photometric centroid source offset	0.72 ± 0.66	1.10	0.59 ± 0.68	-0.43 ± 0.61

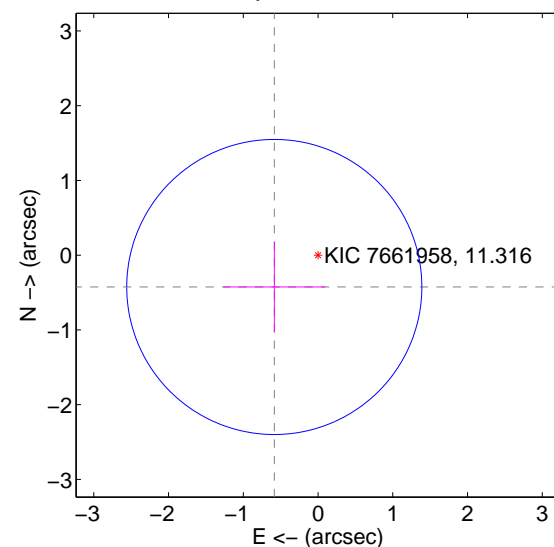
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

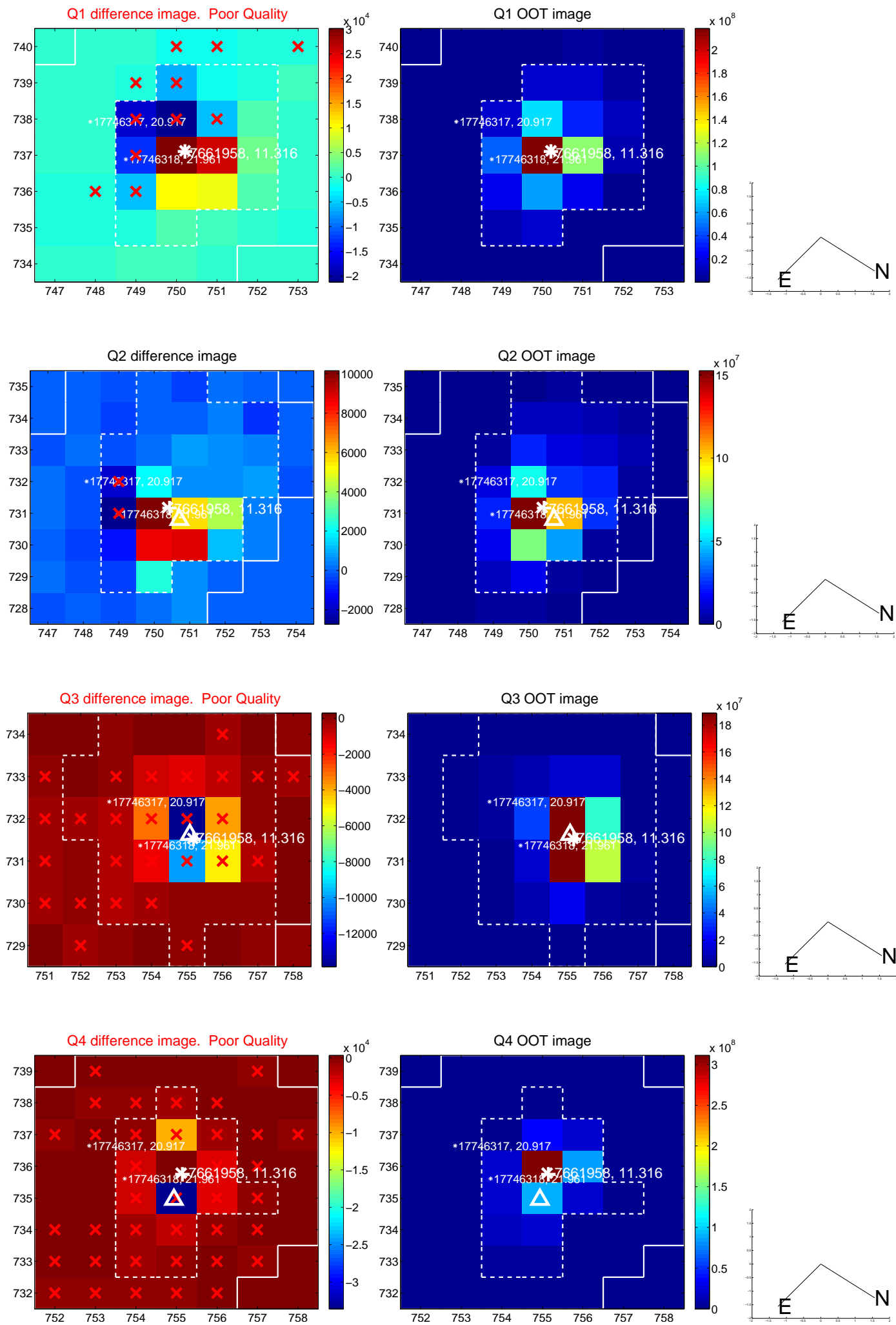


offset from photometric centroids

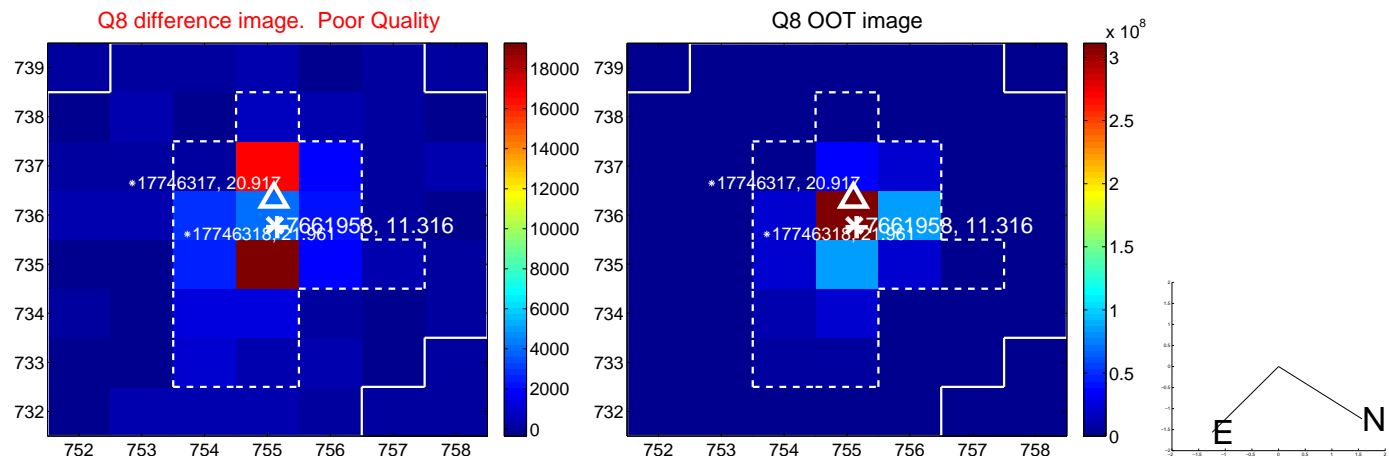
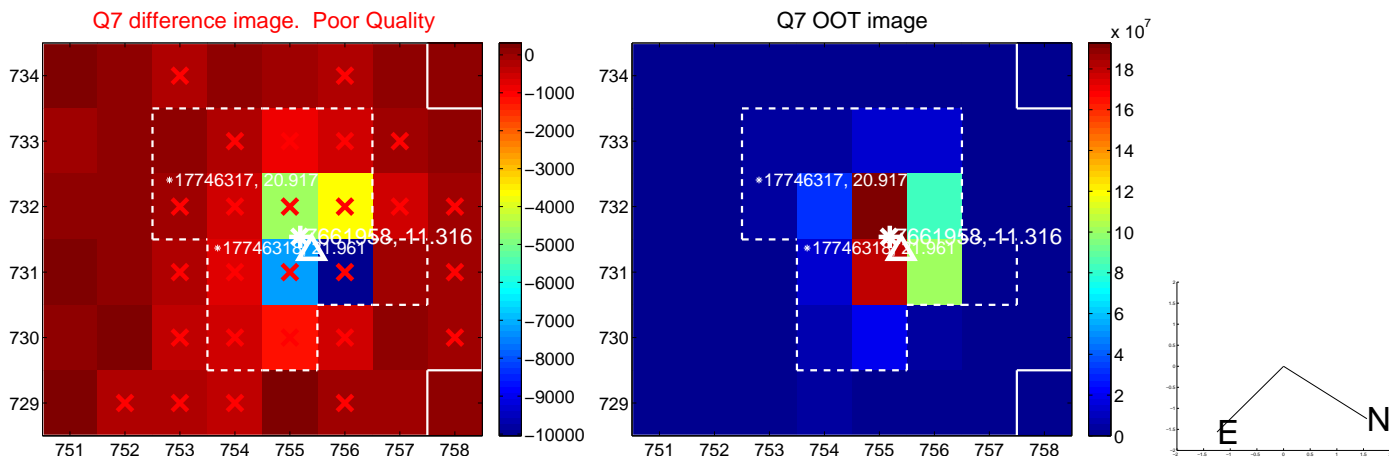
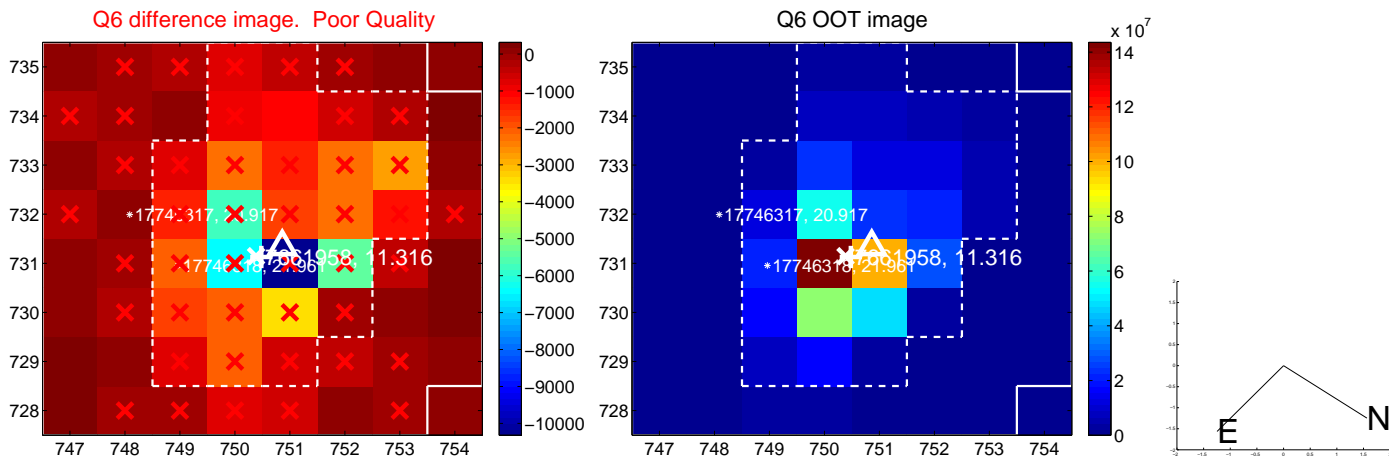
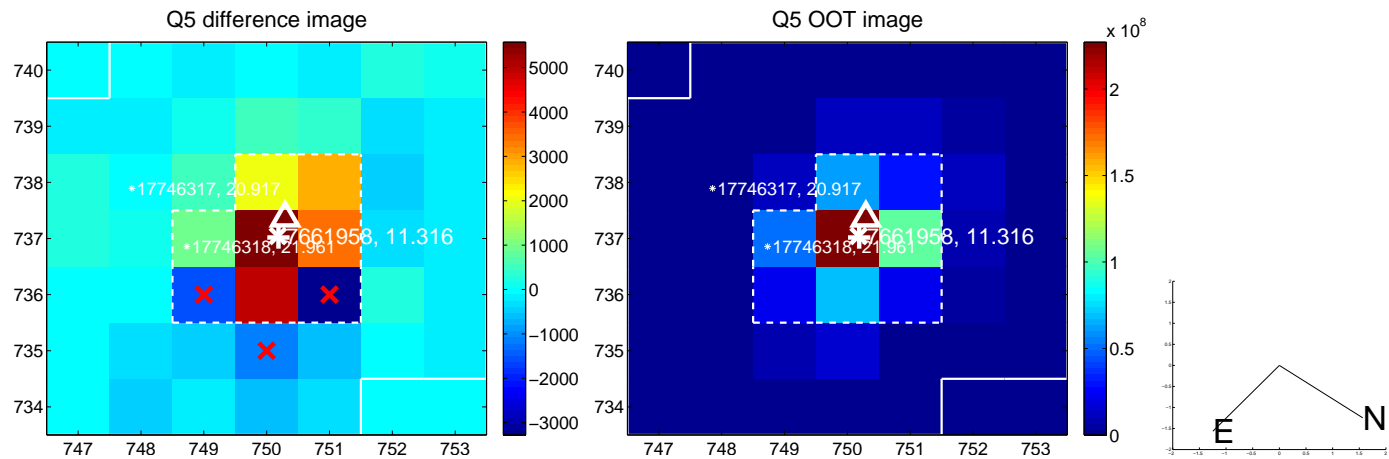


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

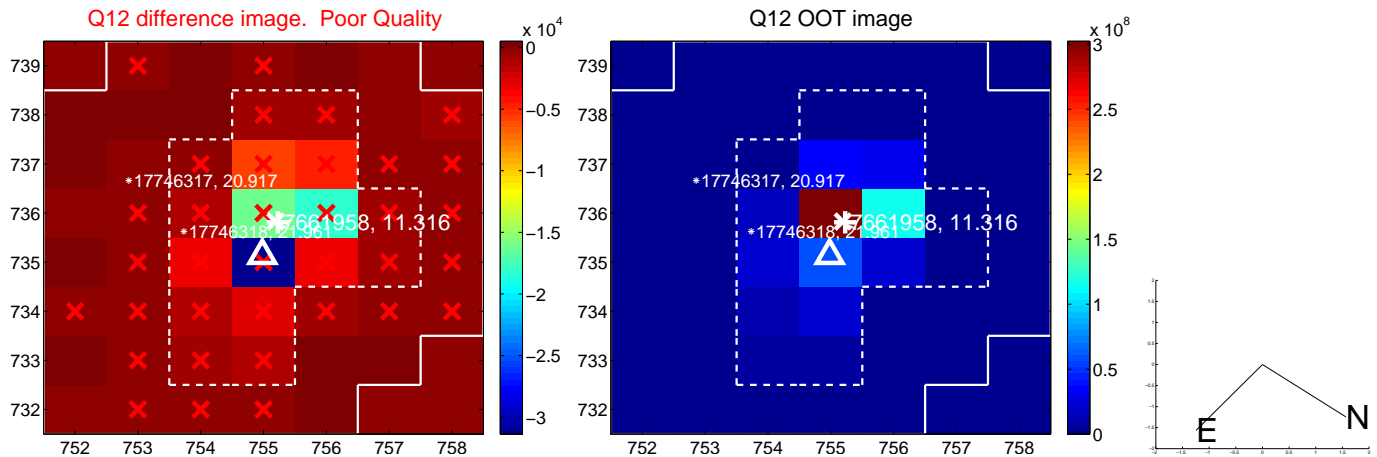
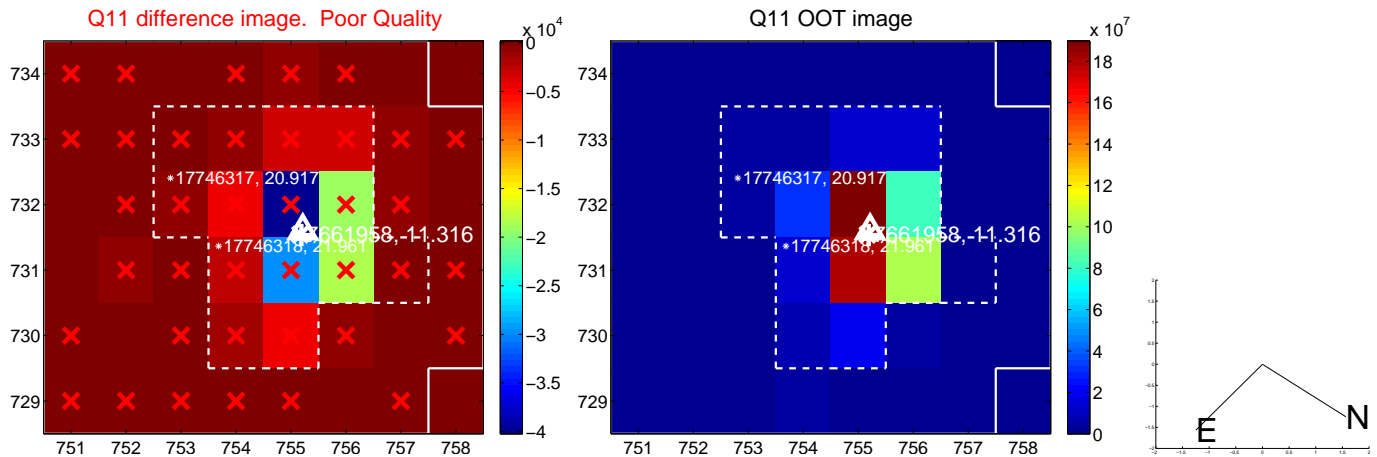
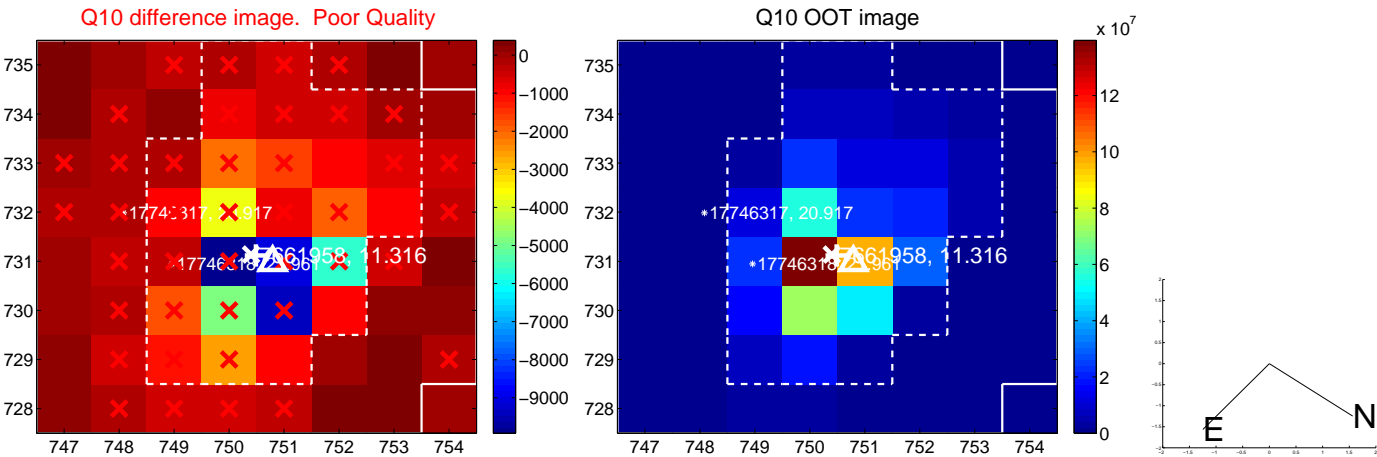
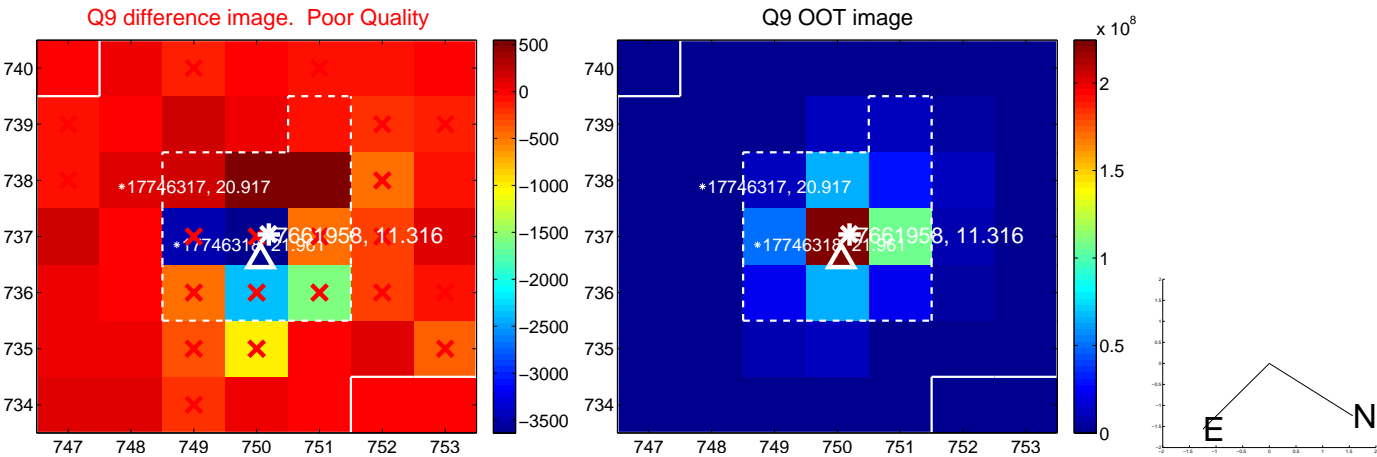
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



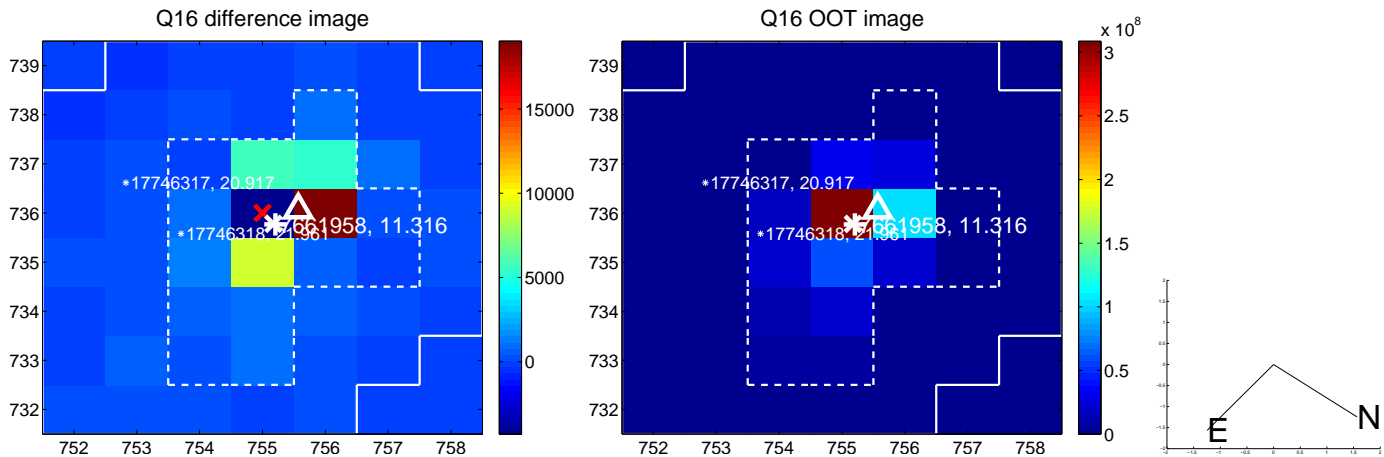
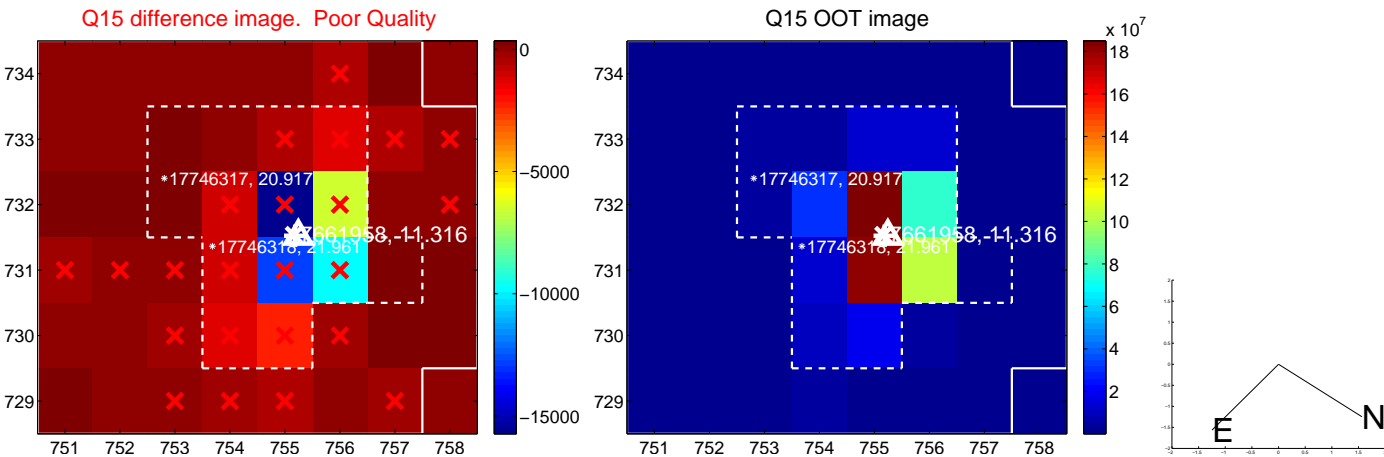
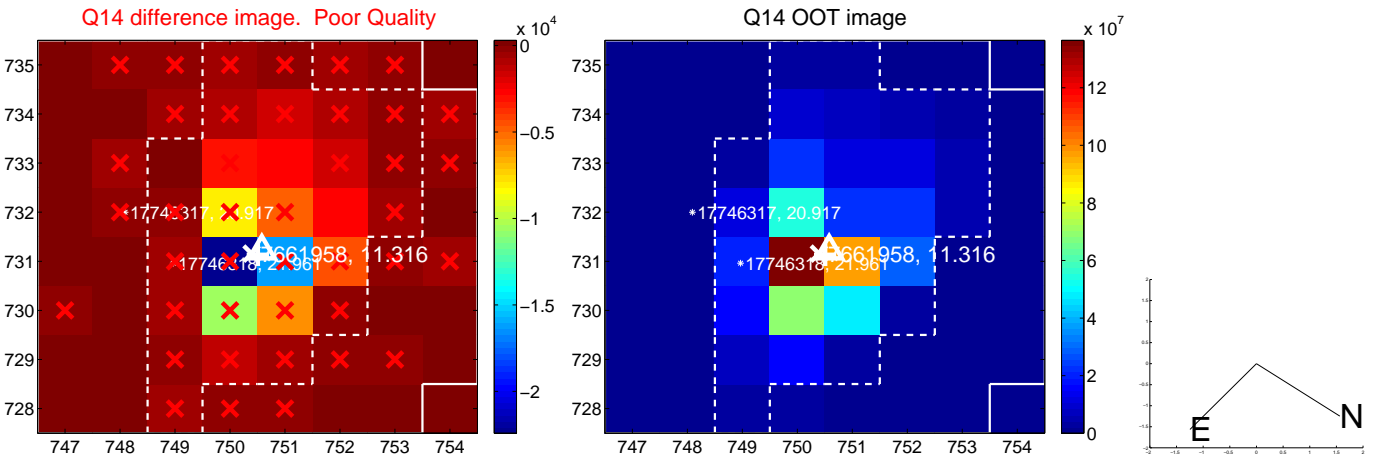
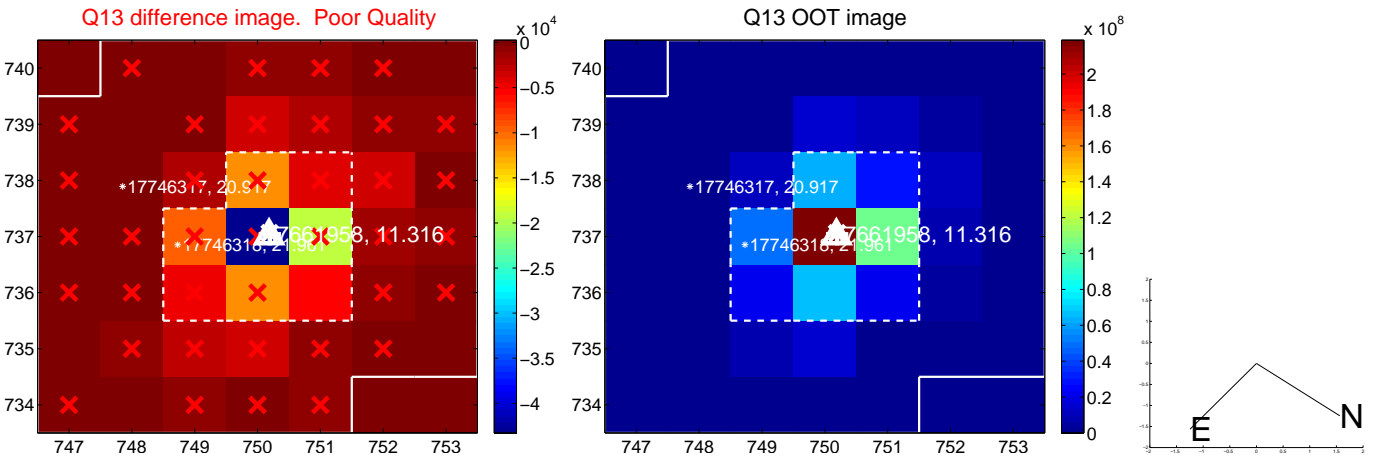
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



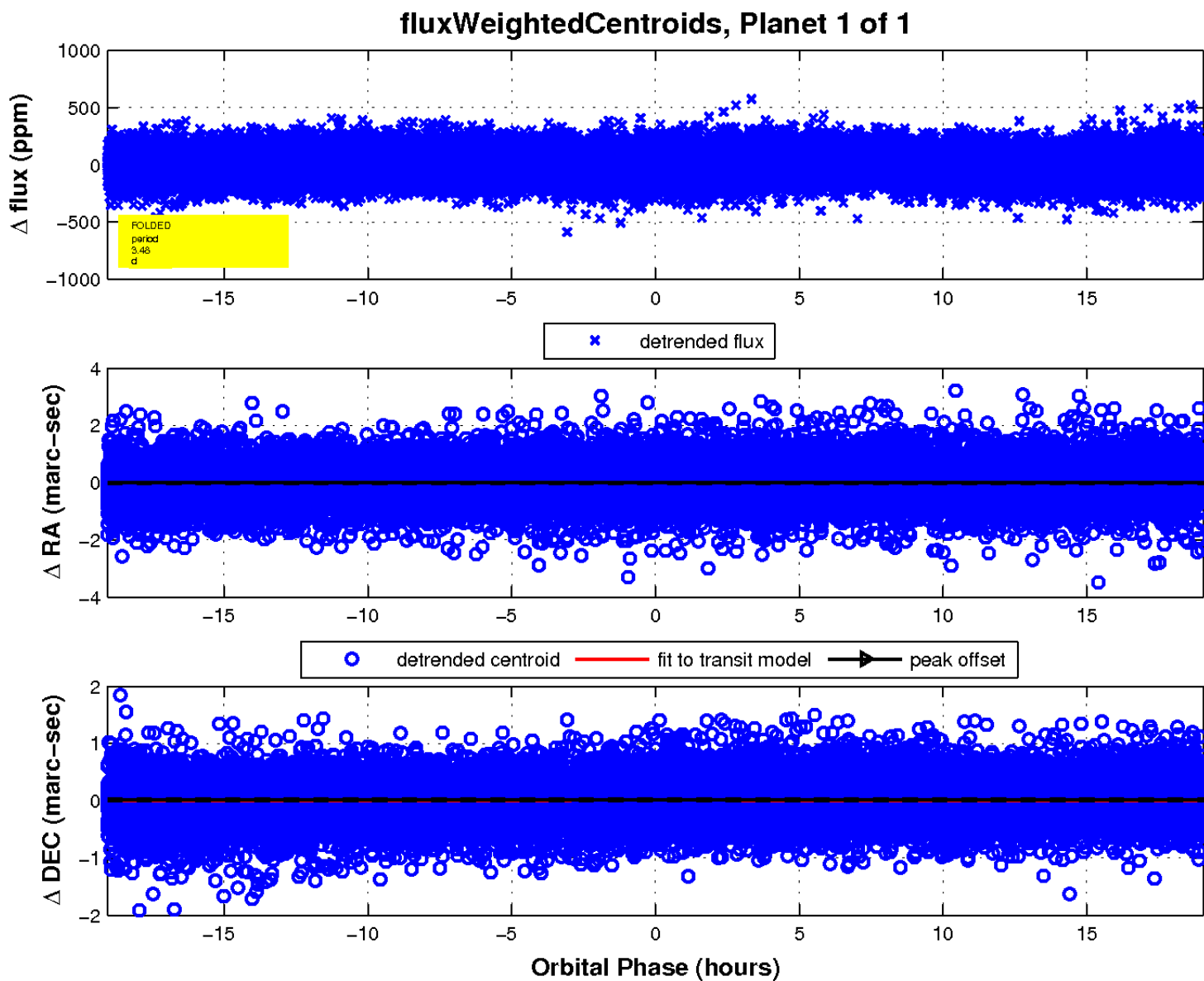
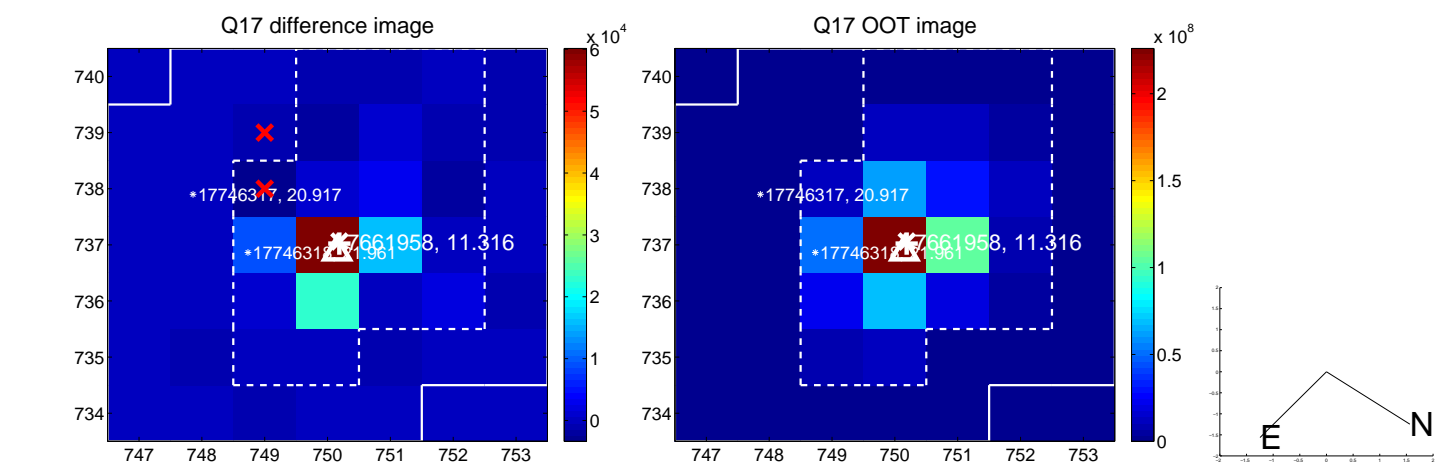
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

