

KIC 006461850

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})
006461850-01	OBS	3054.01	0.544964	131.524632	243.7	1.031	12.7	17.6	0.64	5257	0.99	2068.66

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006461850-01	OBS	FP	0.00	0	1	1	0	MOD_SEC_DV—CENT_RESOLVED_OFFSET

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 006461850-01

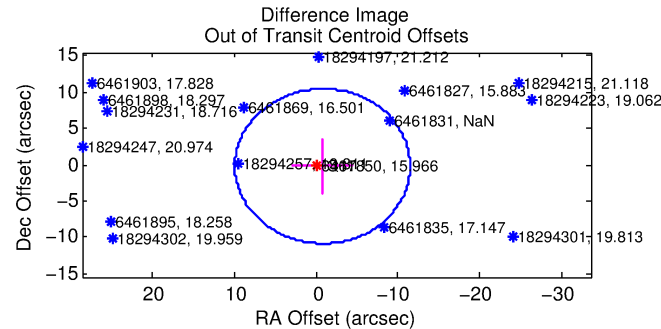
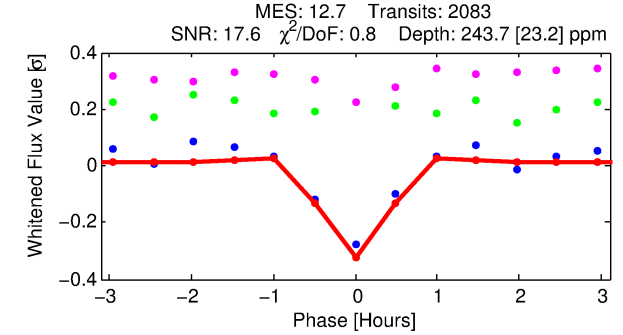
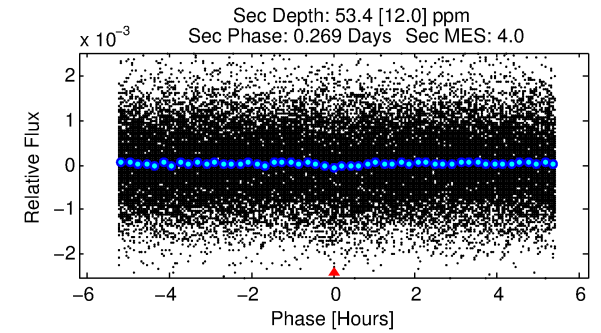
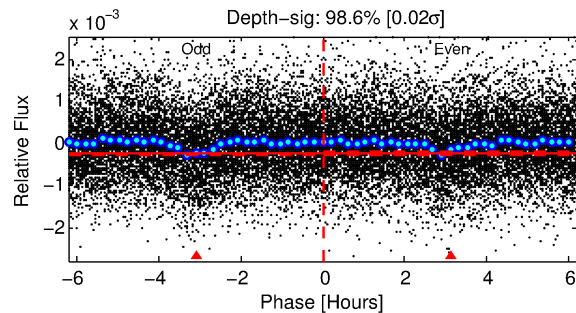
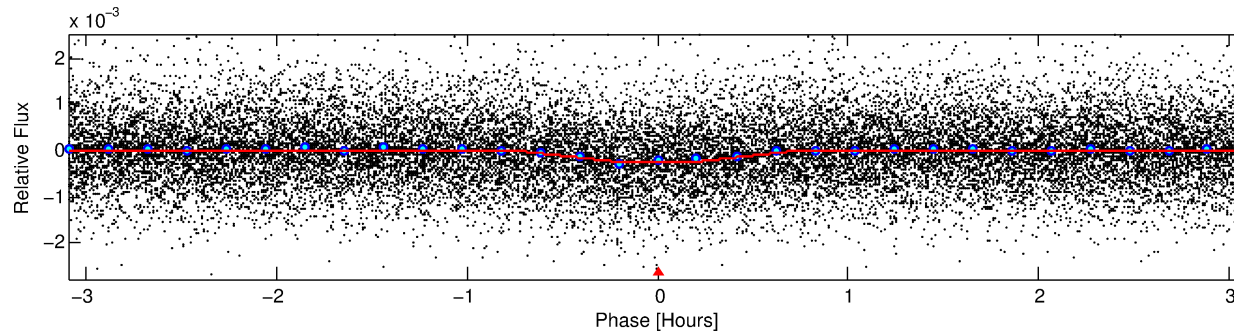
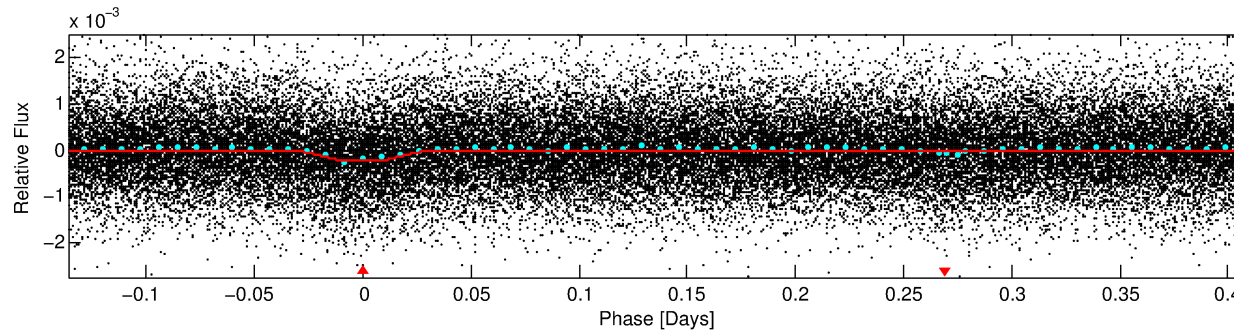
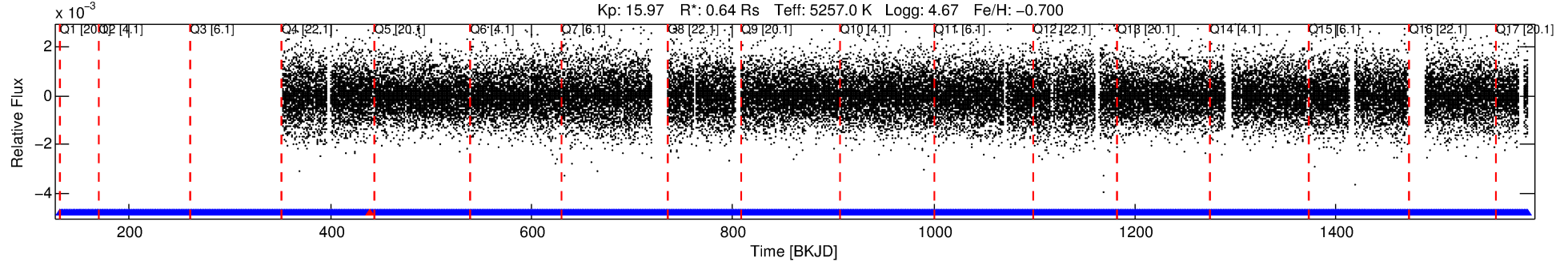
No Significant Match Found

DV One-Page Summary

KIC: 6461850 Candidate: 1 of 1 Period: 0.545 d

KOI: K03054.01 Corr: 0.911

Kp: 15.97 R*: 0.64 Rs Teff: 5257.0 K Logg: 4.67 Fe/H: -0.700



DV Fit Results:

Period = 0.54496 [0.00001] d
Epoch = 131.5246 [0.0010] BKJD
Rp/R* = 0.0142 [0.0141]
a/R* = 4.12 [16.24]
b = 0.10 [41.47]
Seff = 2068.67 [426.57]
Teq = 1720 [89] K
Rp = 0.99 [0.99] Re
a = 0.0116 [0.0012] AU
Ag = 4.02 [8.02] [0.38σ]
Teffp = 3765 [1876] K [1.09σ]

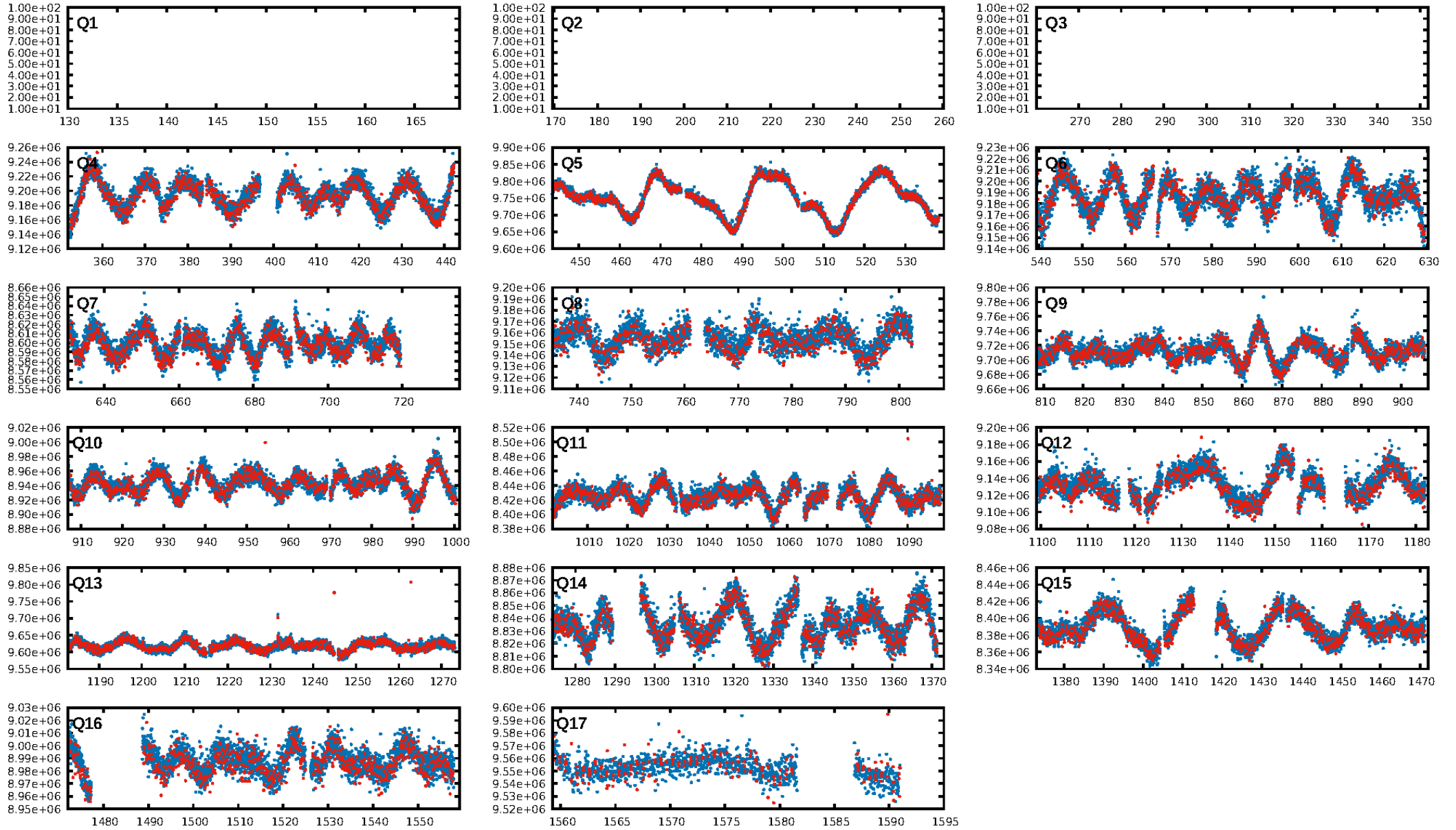
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.62e-36
RollingBand-fgt: 1.00 [2033/2034]
GhostDiagnostic-chr: -0.6182
Centroid-sig: 0.0%
Centroid-so: 8.274 arcsec [12.01σ]
OotOffset-rm: 0.827 arcsec [0.23σ]
KicOffset-rm: 0.802 arcsec [0.23σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [14/14]

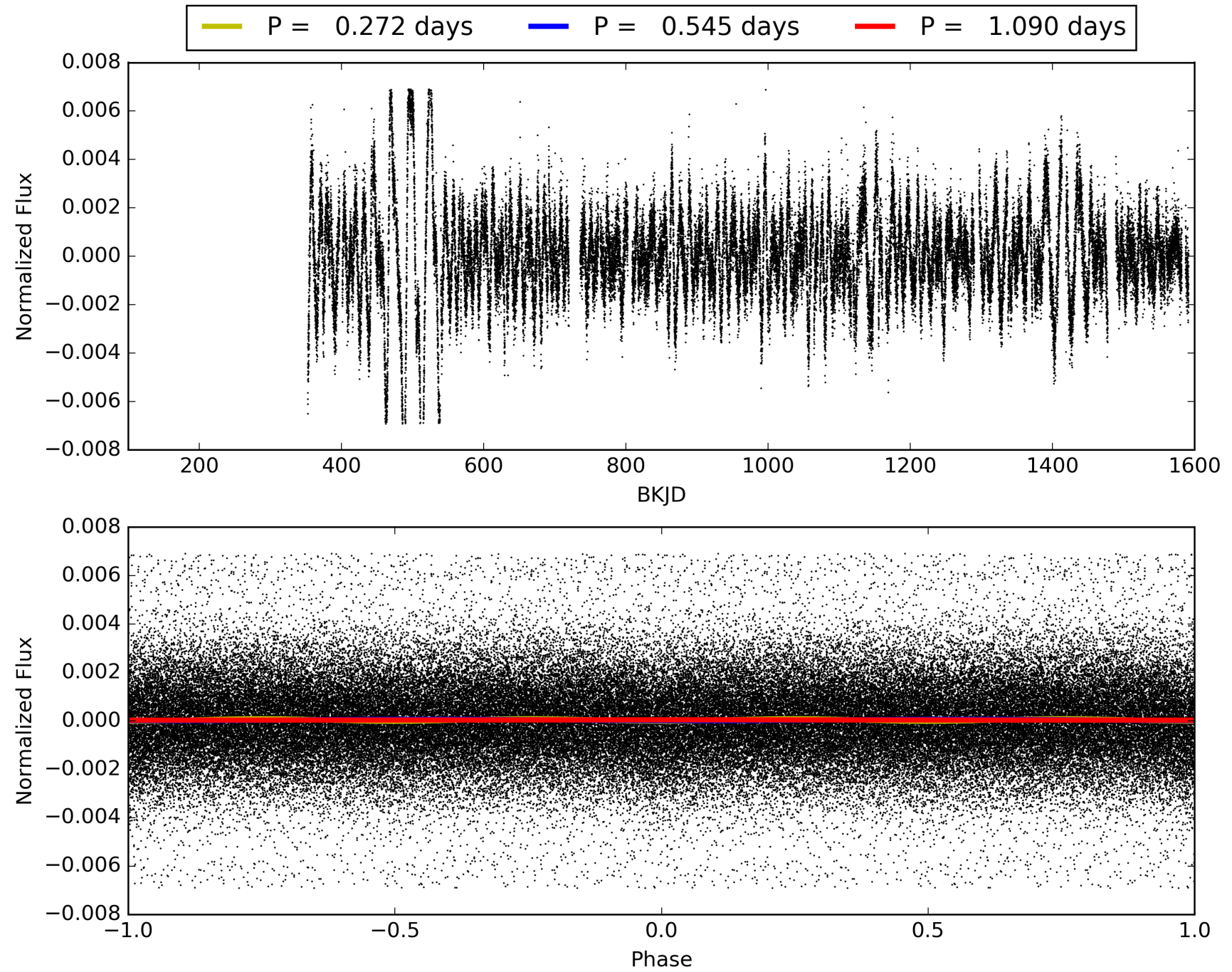
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 17:19:01 Z

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

TCE 006461850-01, PDC Light Curves

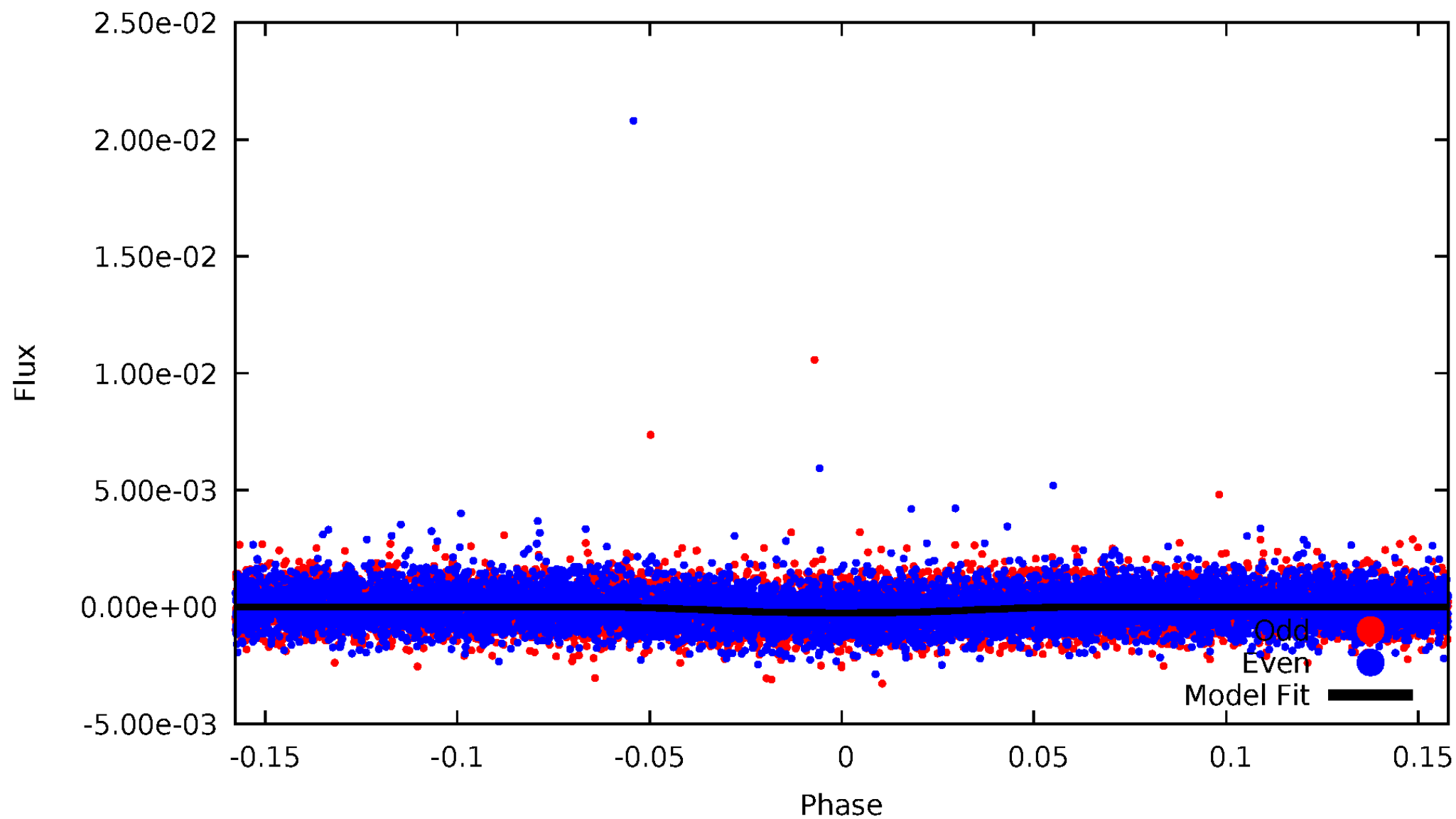


TCE 006461850-01



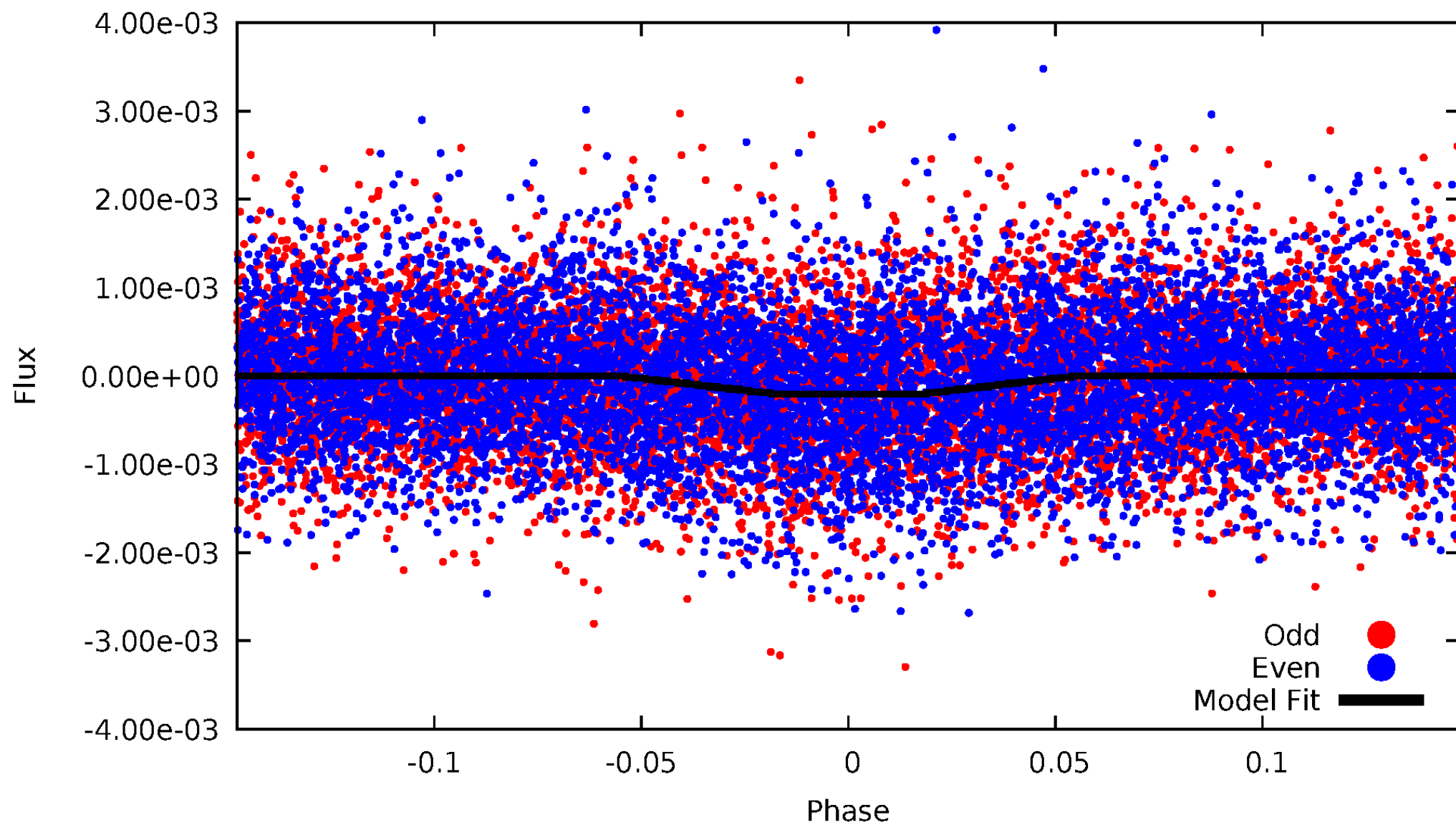
DV Odd/Even

TCE 006461850-01



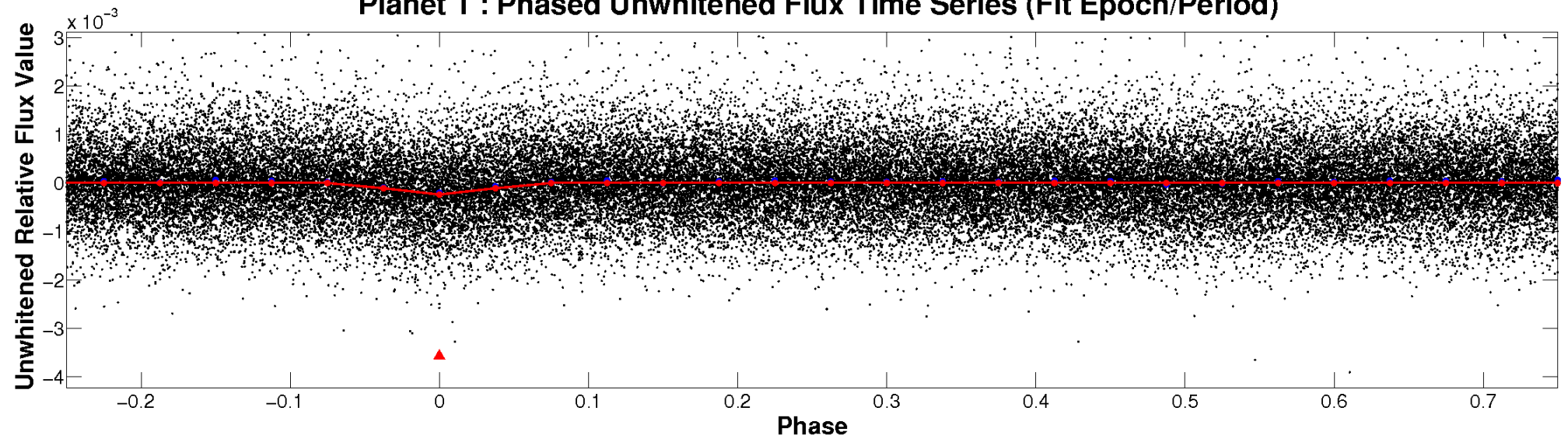
ALT Odd/Even

TCE 006461850-01

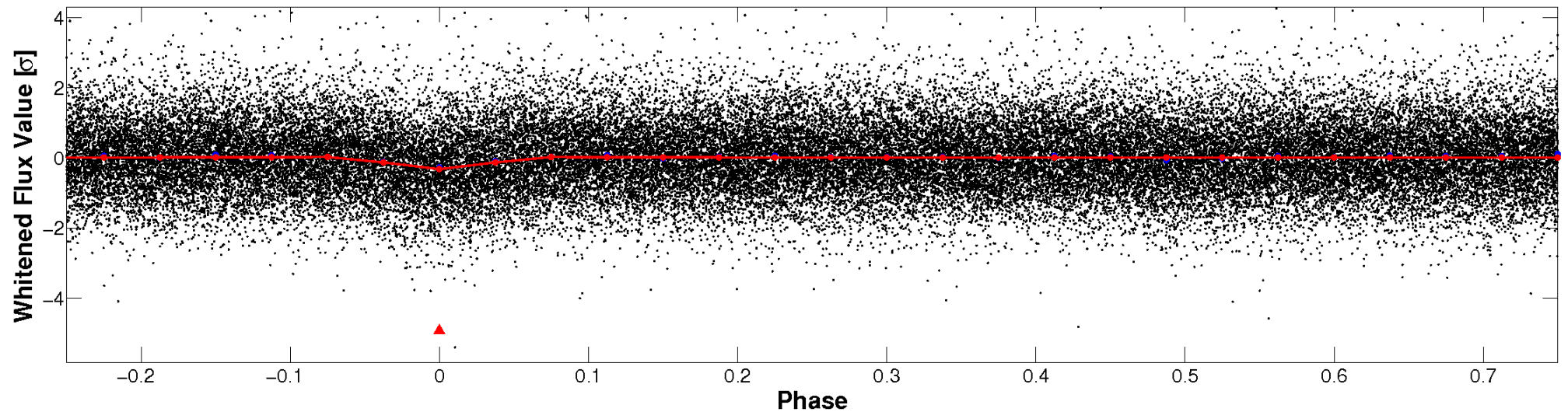


Non-Whitened Vs. Whitened Light Curve

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

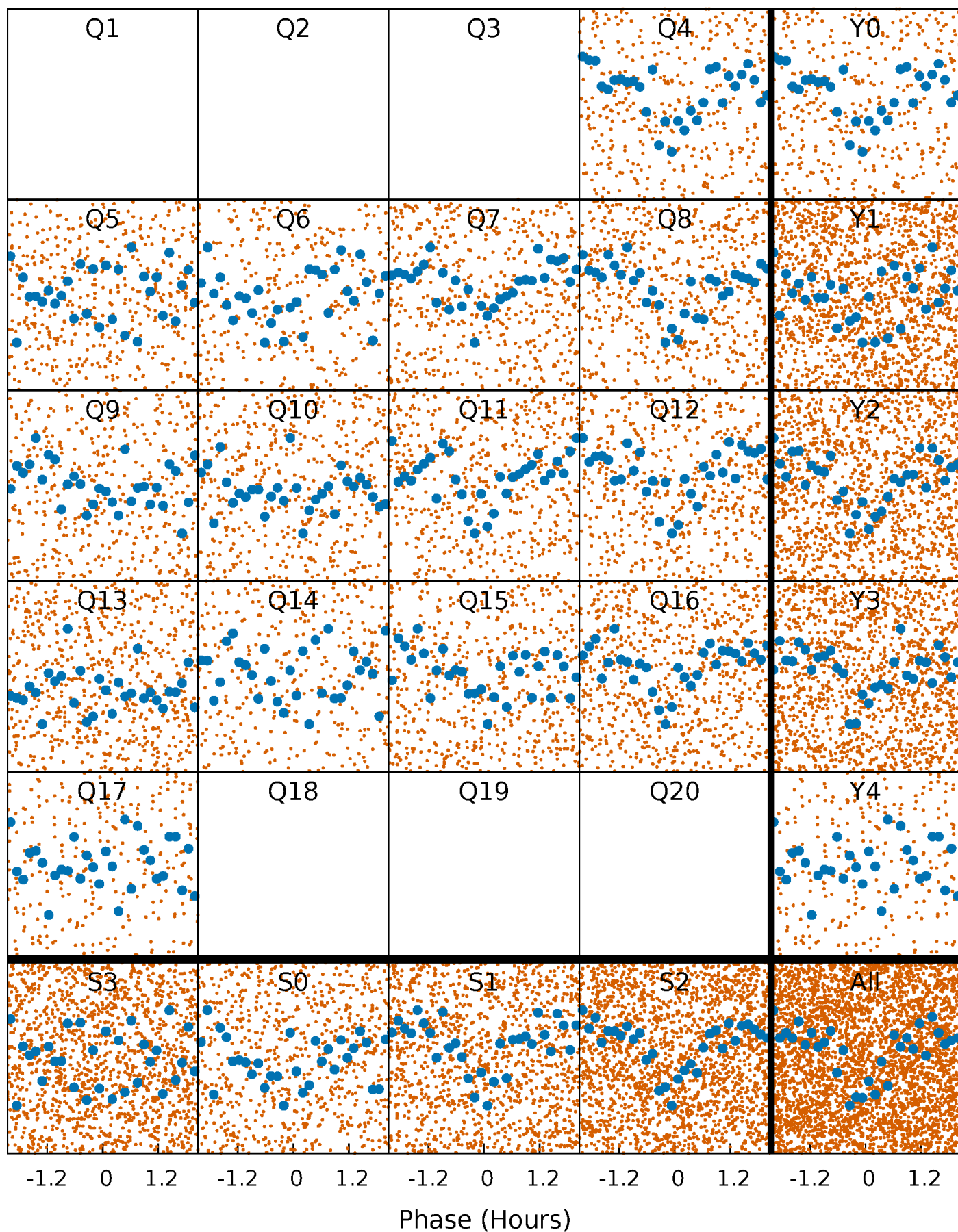


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



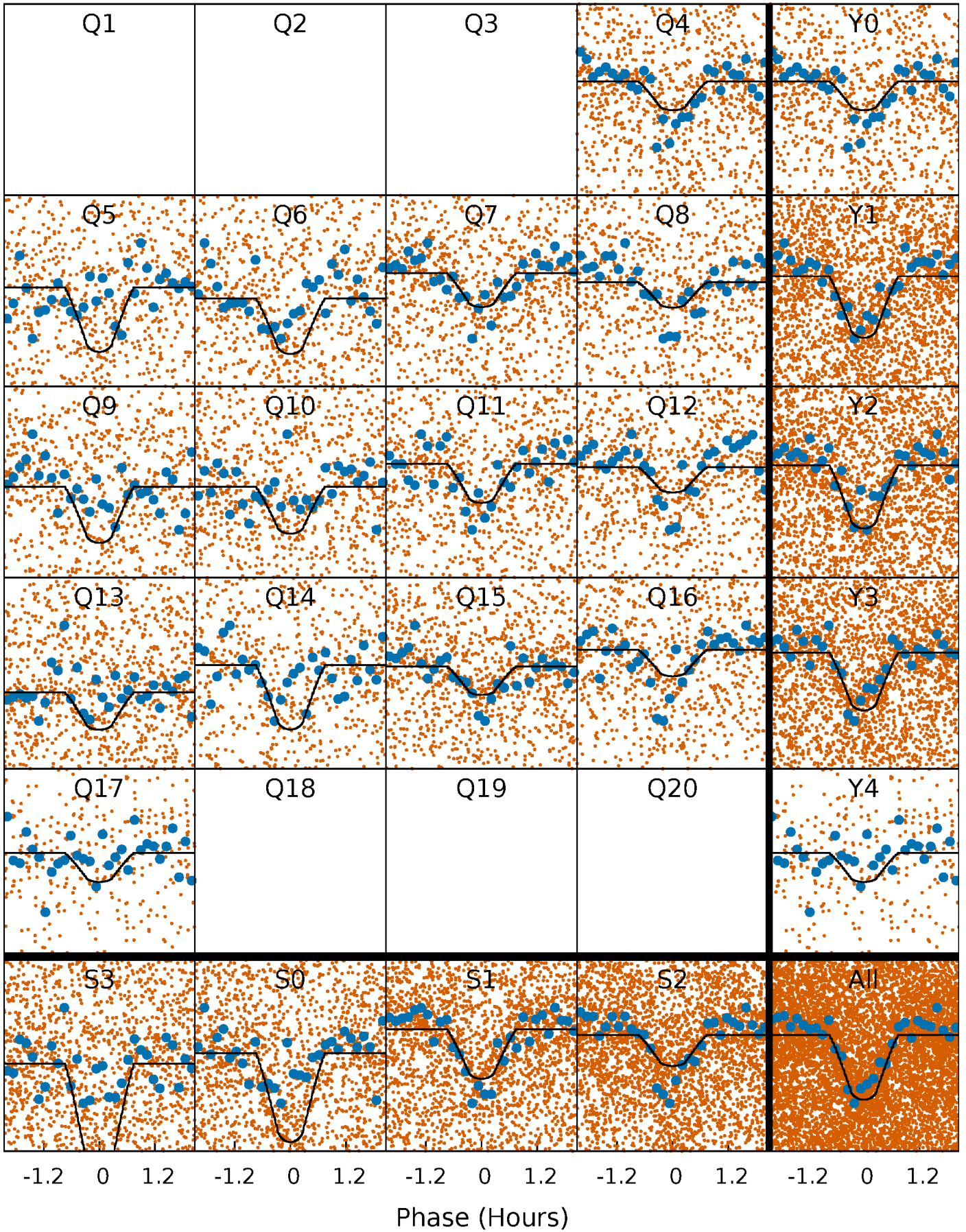
PDC Quarter-Phased Transit Curves

TCE 006461850-01 P= 0.544964 Days $T_0=131.524632$ (BKJD)



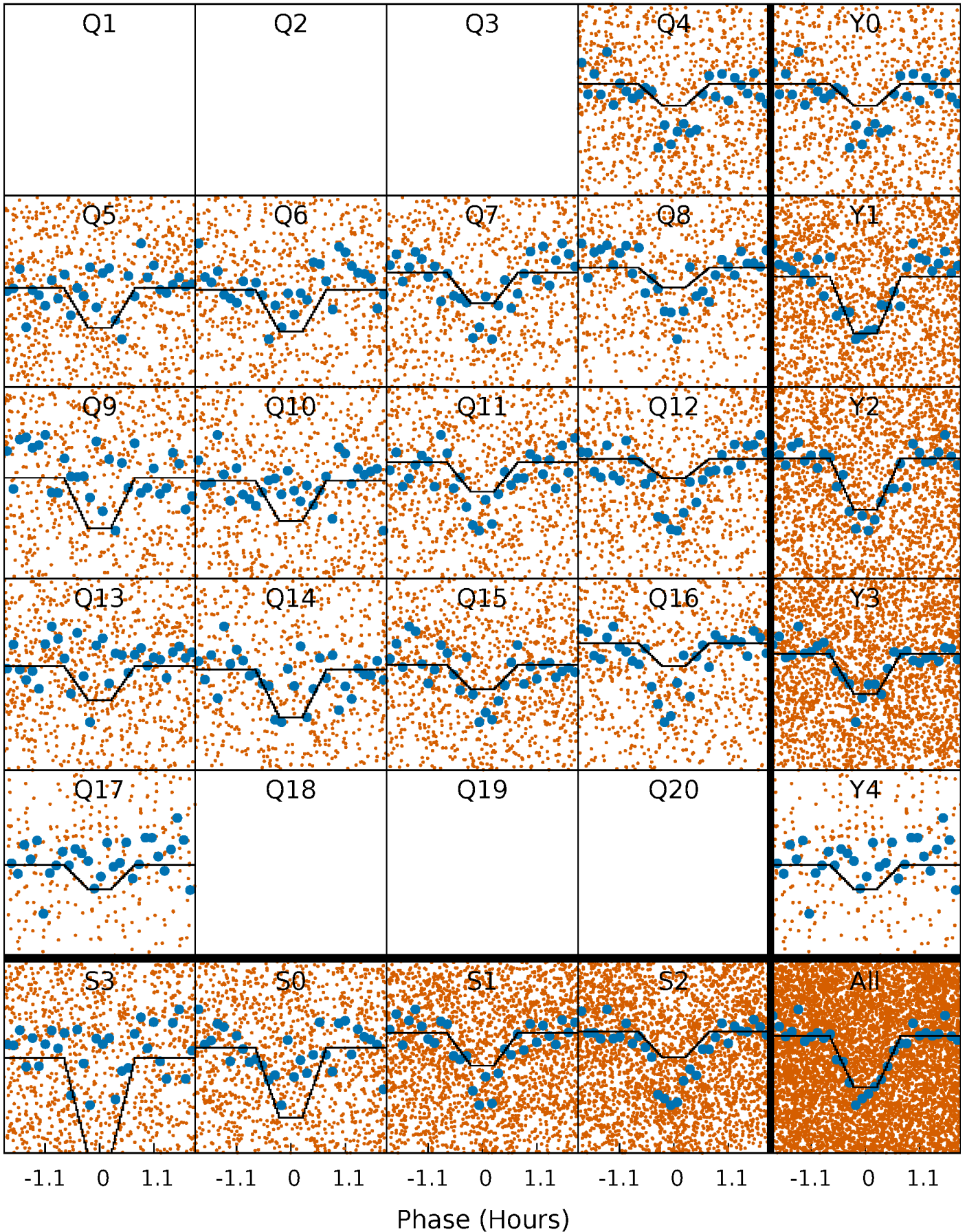
DV Quarter-Phased Transit Curves

TCE 006461850-01 P= 0.544964 Days $T_0=131.524632$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

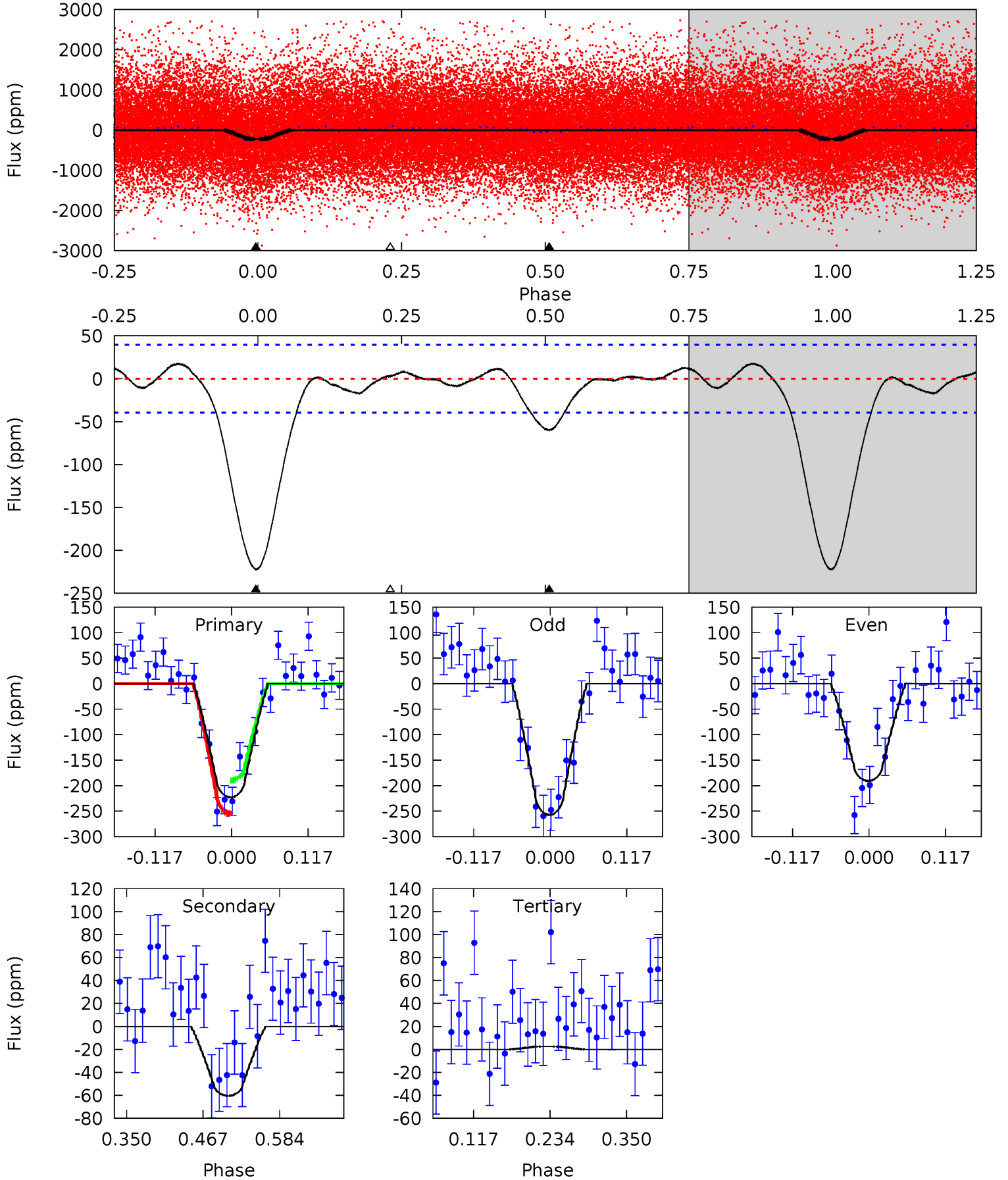
TCE 006461850-01 P= 0.544963 Days $T_0=131.524550$ (BKJD)



DV Model-Shift Uniqueness Test

006461850-01, P = 0.544964 Days, E = 131.524632 Days

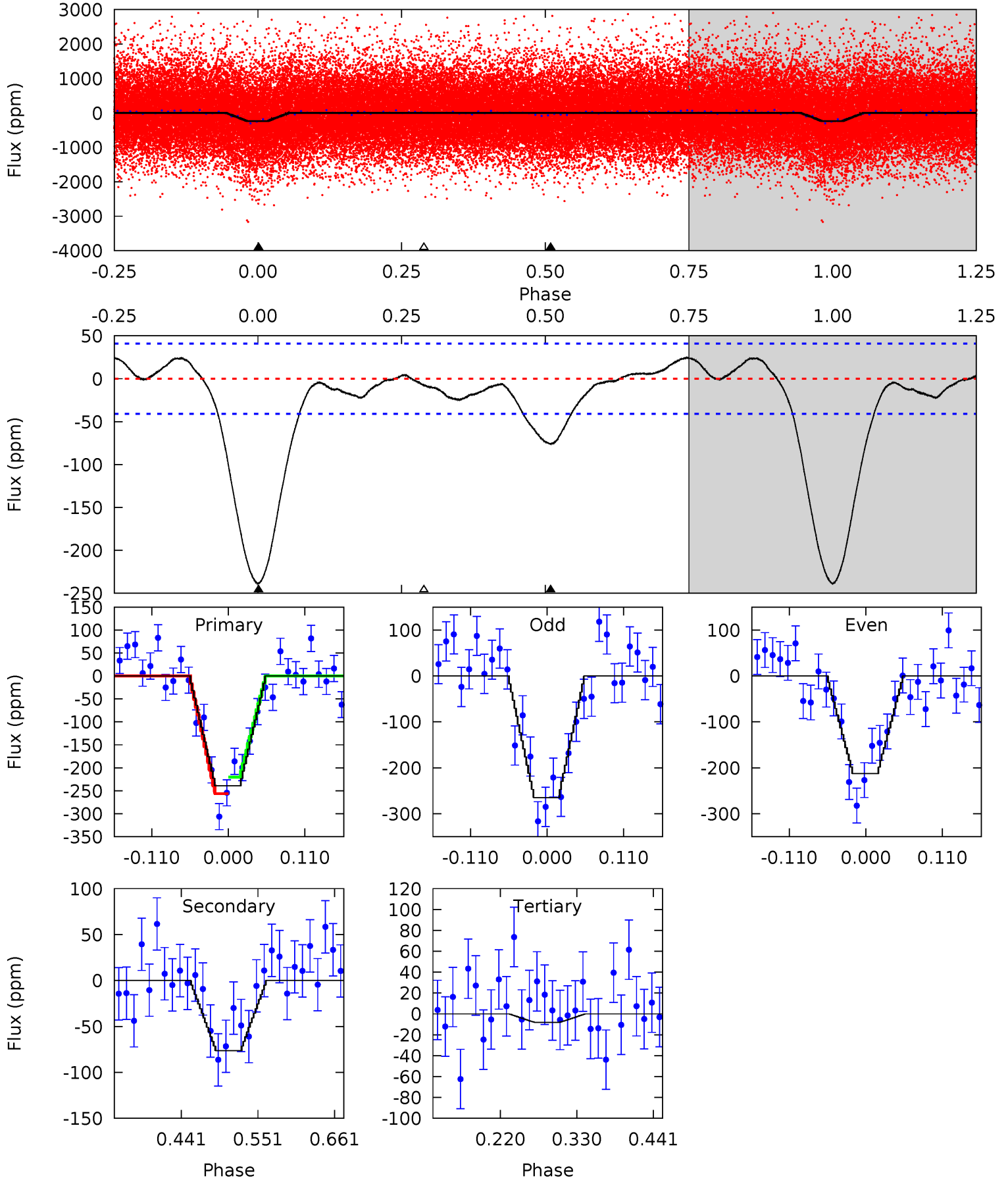
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.5	6.92	-0.29	0	4.53	1.57	0.91	25.8	25.5	7.21	6.92	3.83	1.01	0.07	3.78



Alt Model-Shift Uniqueness Test

006461850-01, P = 0.544963 Days, E = 131.524550 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.6	8.49	0.92	0	4.54	1.60	1.58	25.6	26.6	7.57	8.49	2.90	1.00	0.10	1.99



Stellar Parameters For KIC 006461850

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5257^{+182}_{-182}	$4.675^{+0.027}_{-0.082}$	$-0.700^{+0.300}_{-0.300}$	$0.639^{+0.083}_{-0.038}$	$0.713^{+0.060}_{-0.060}$	$3.842^{+0.536}_{-1.007}$
	+3%/-3%	+1%/-2%	+43%/-43%	+13%/-6%	+8%/-8%	+14%/-26%
Source	KIC0	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 006461850-01 / KOI 3054.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-60 ± 9	$1.25^{+0.94}_{-0.79}$	2432^{+103}_{-95}	3746^{+1923}_{-697}	$2.836^{+18.622}_{-1.904}$
Alt.	-76 ± 9	$1.23^{+0.91}_{-0.79}$	2435^{+93}_{-98}	3969^{+2269}_{-770}	$3.806^{+23.981}_{-2.582}$

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 $A_{\text{obs}} \gg 1.0$

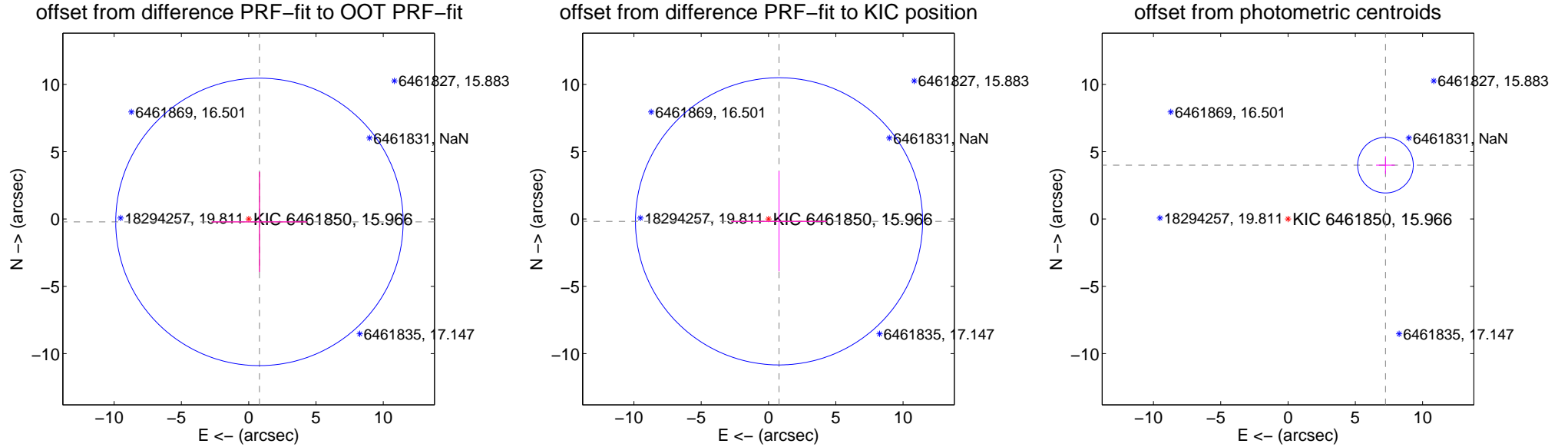
DV Centroid Data

Supplemental centroid analysis for 006461850-01. Kepler magnitude: 15.97. Transit SNR 17.62

There are 0 quarters with good PRF difference image offsets

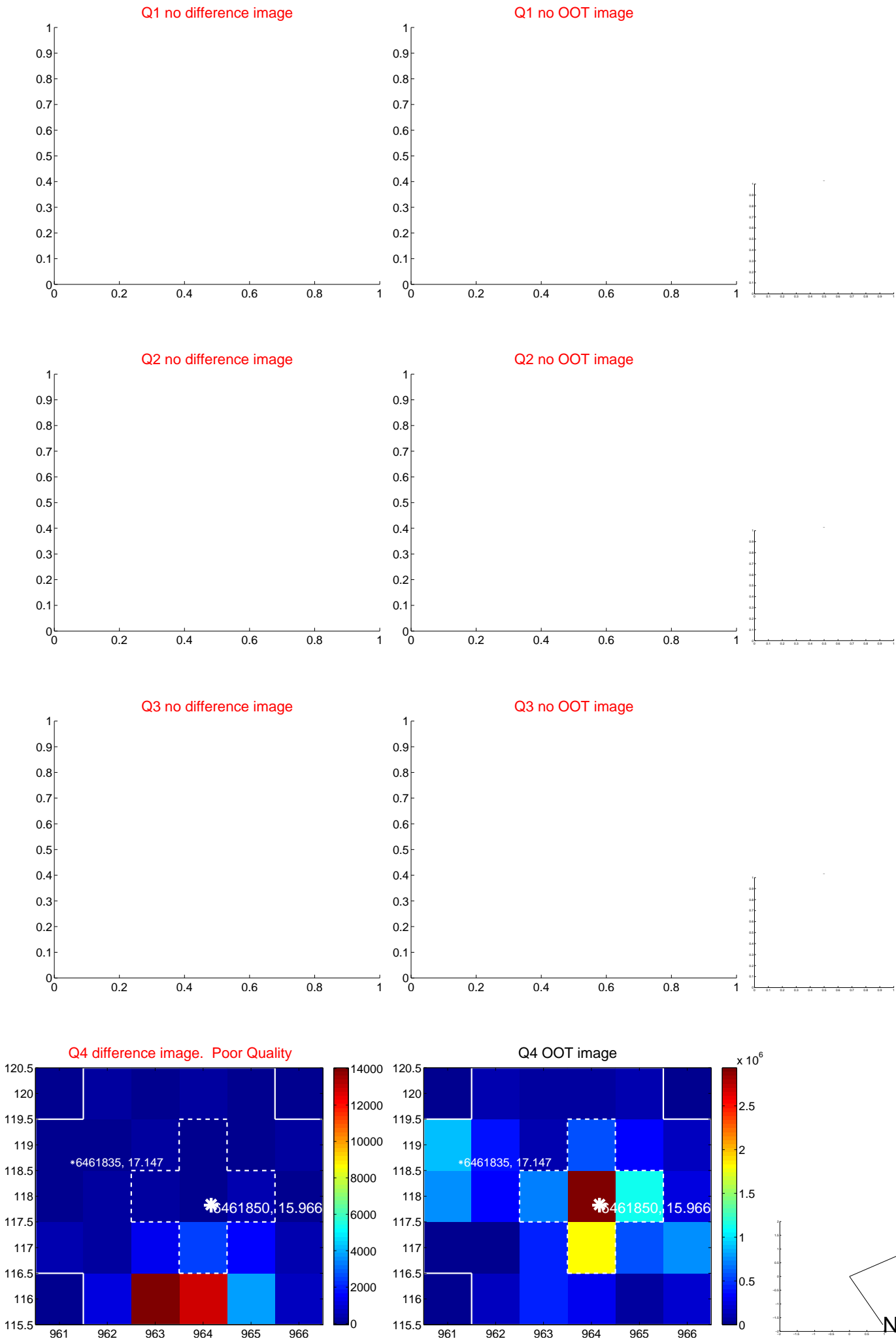
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.827 ± 3.559	0.23	-0.799 ± 3.548	-0.214 ± 3.714
PRF-fit source offset from KIC position	0.802 ± 3.556	0.23	-0.783 ± 3.548	-0.173 ± 3.714
photometric centroid source offset	8.27 ± 0.69	12.01	-7.24 ± 0.70	4.00 ± 0.66

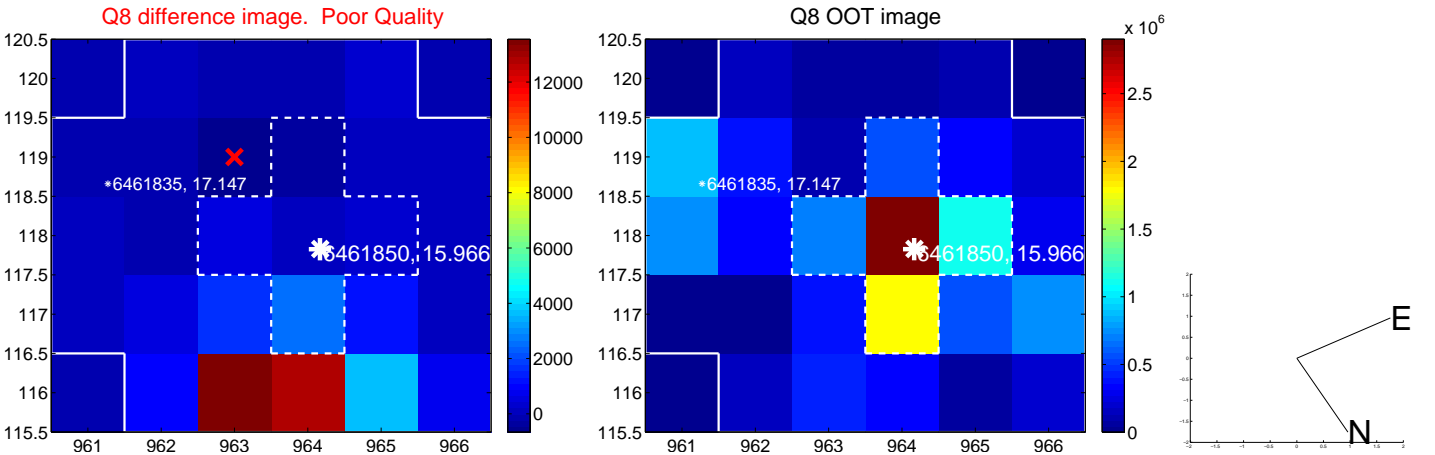
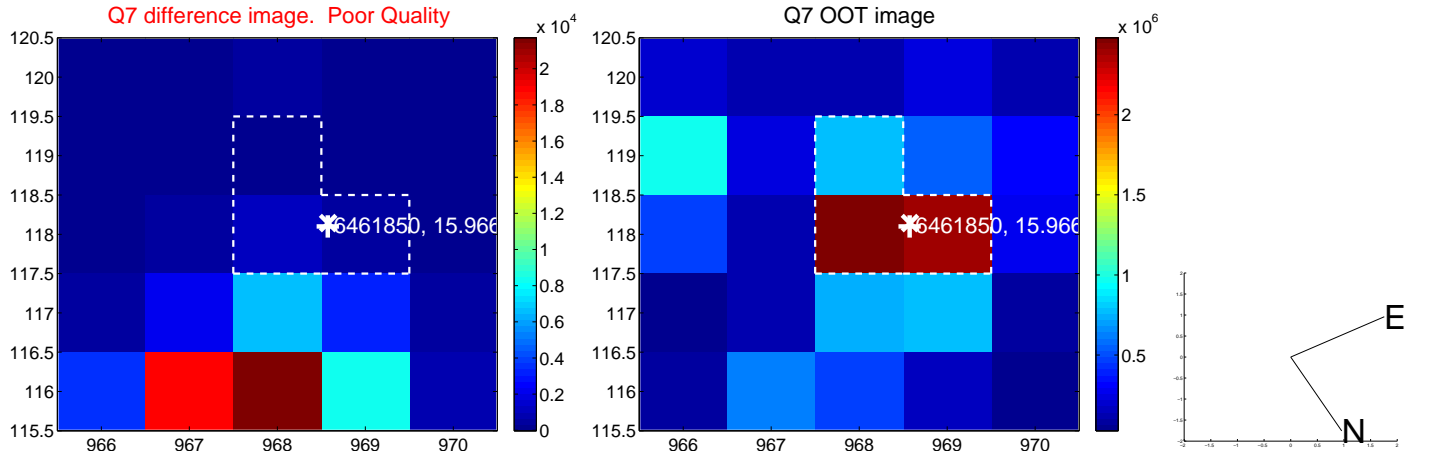
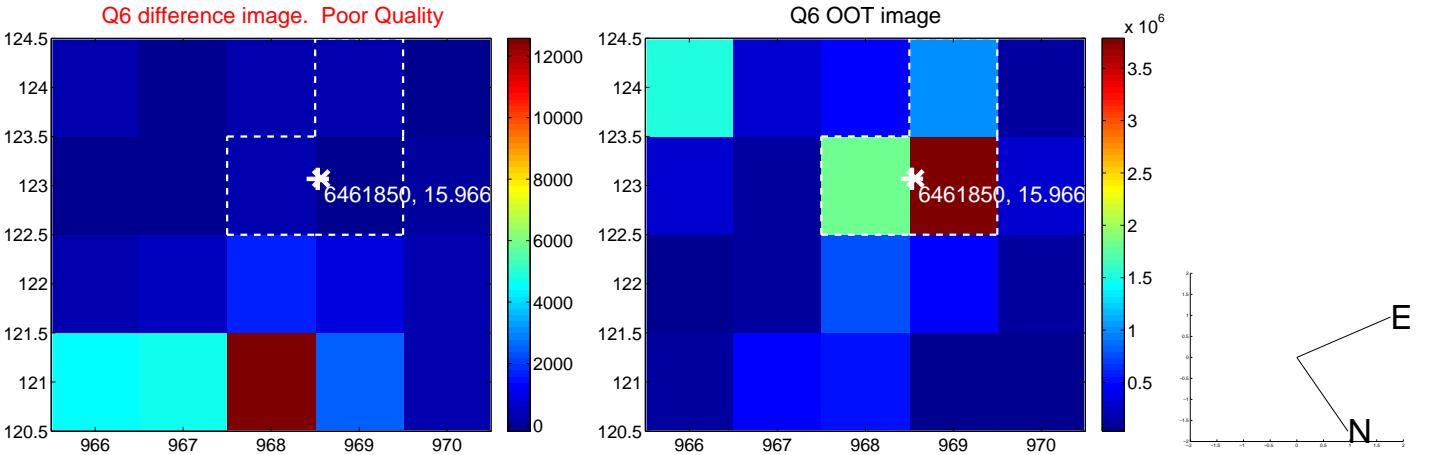
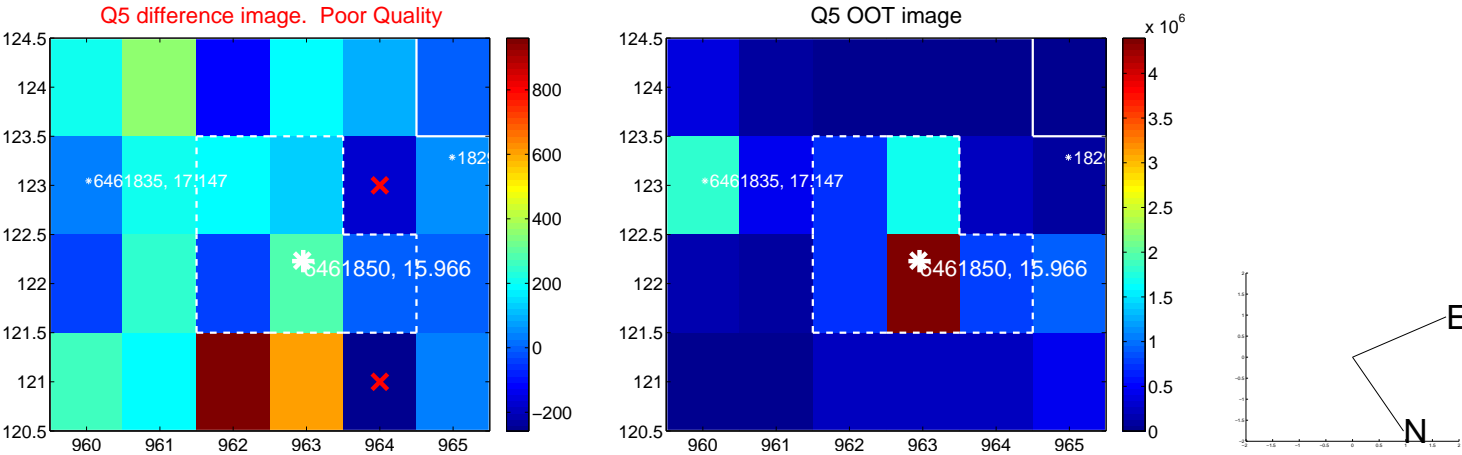


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

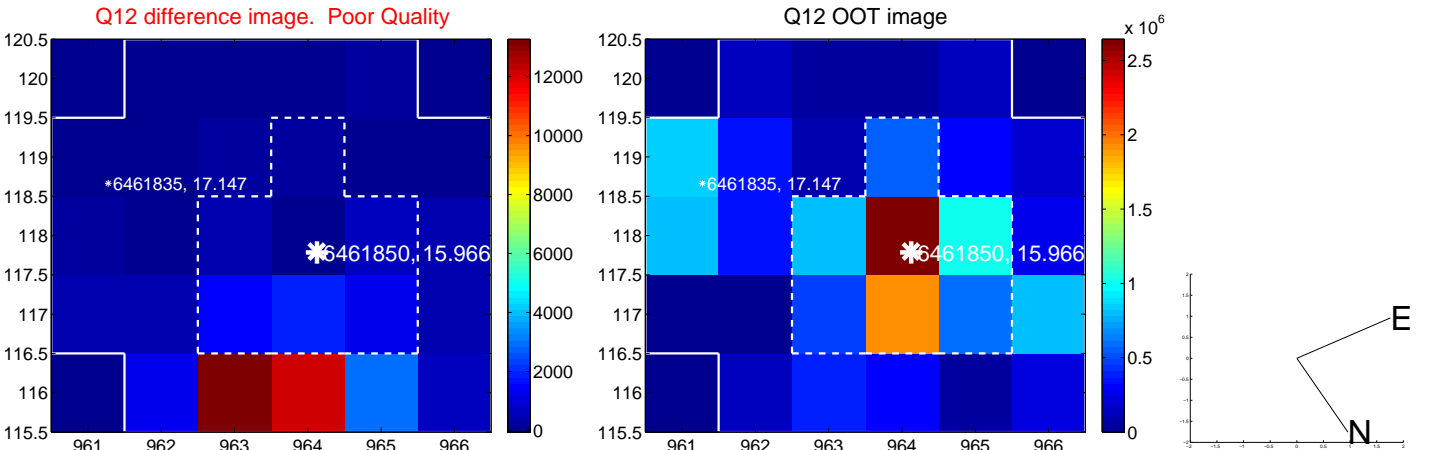
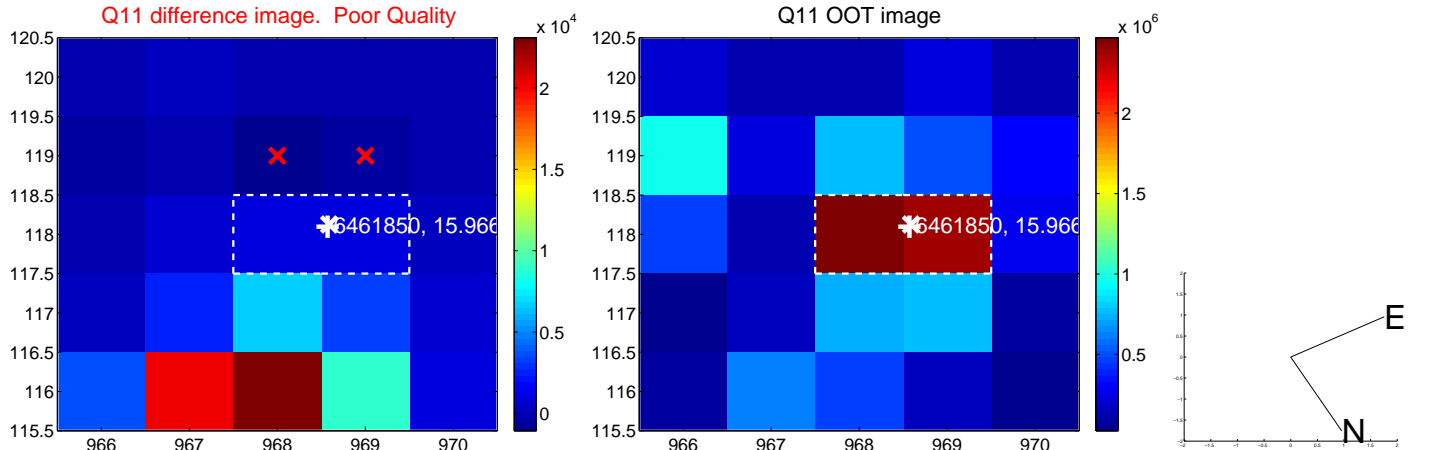
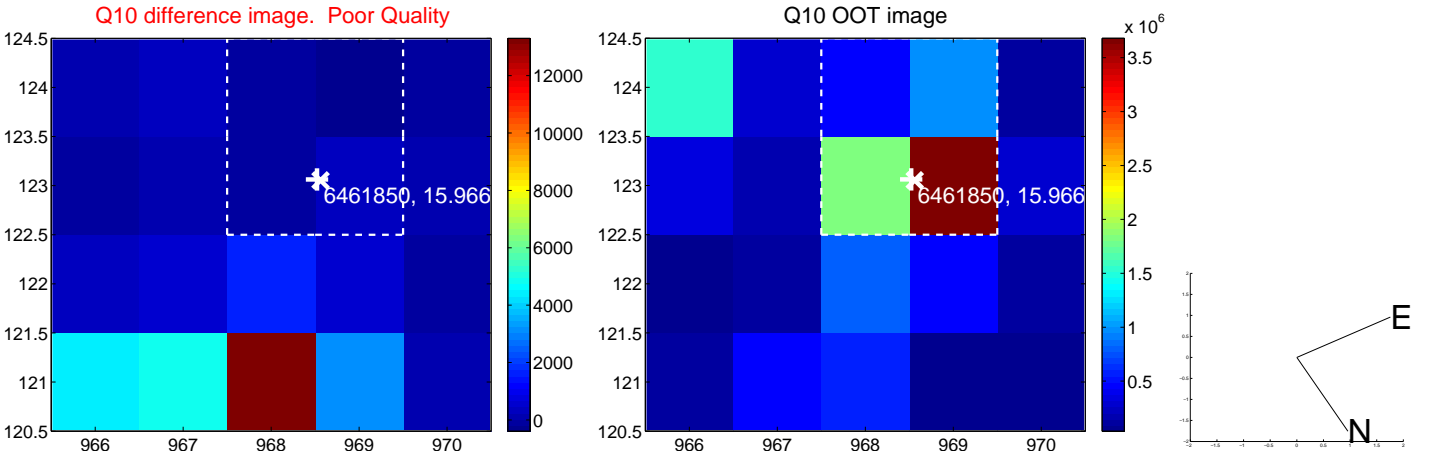
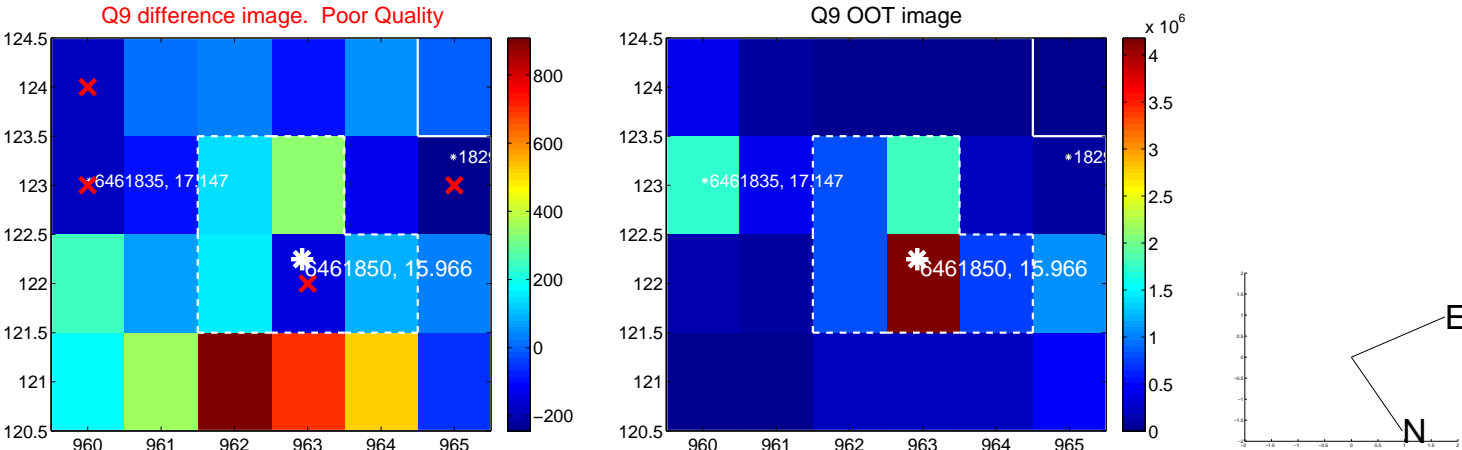
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



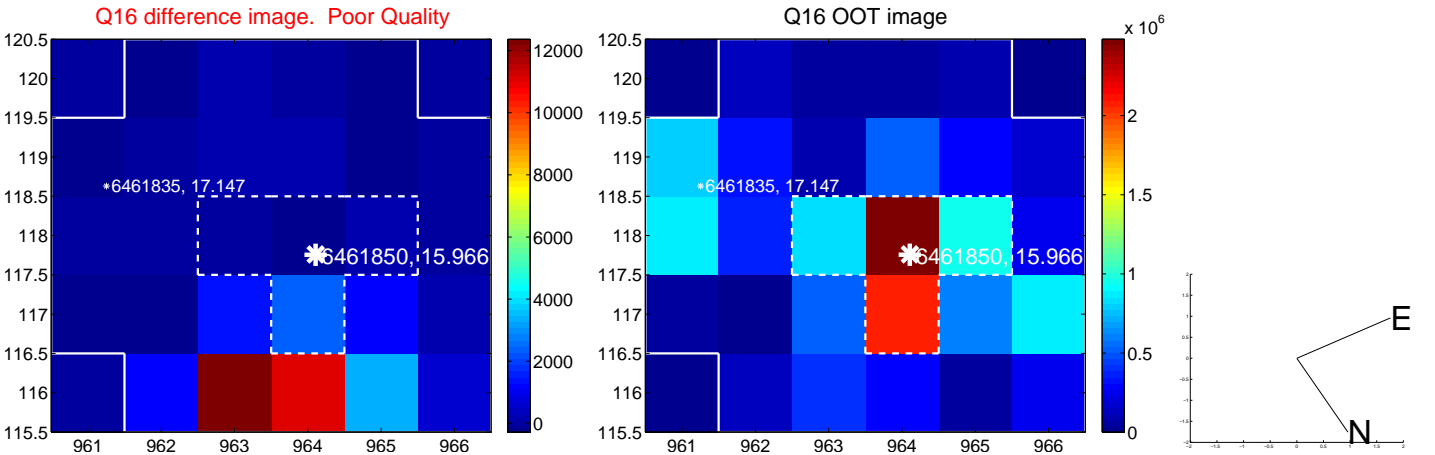
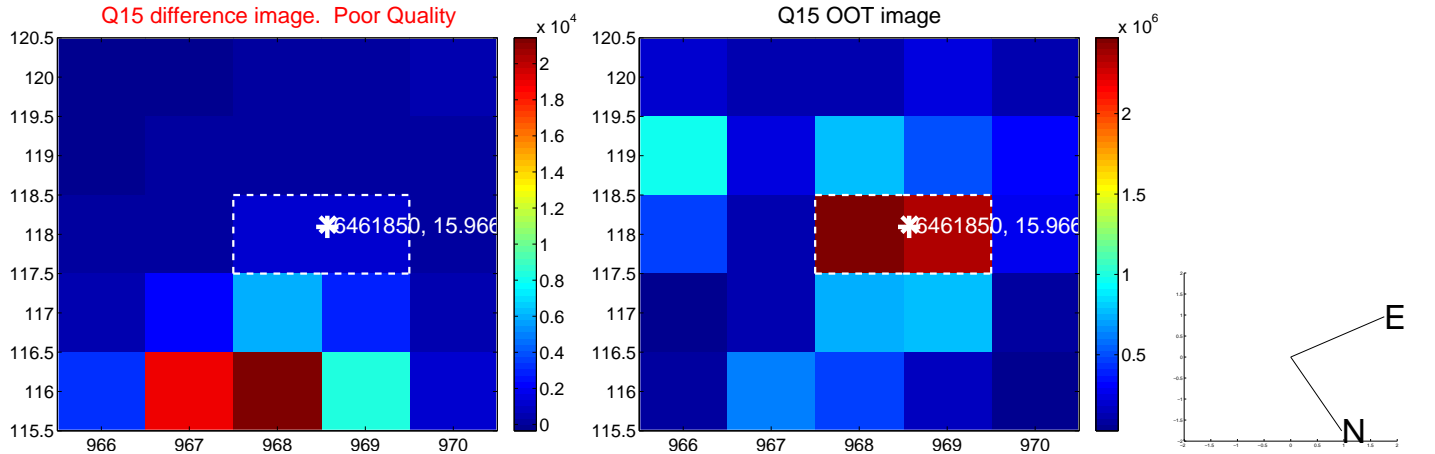
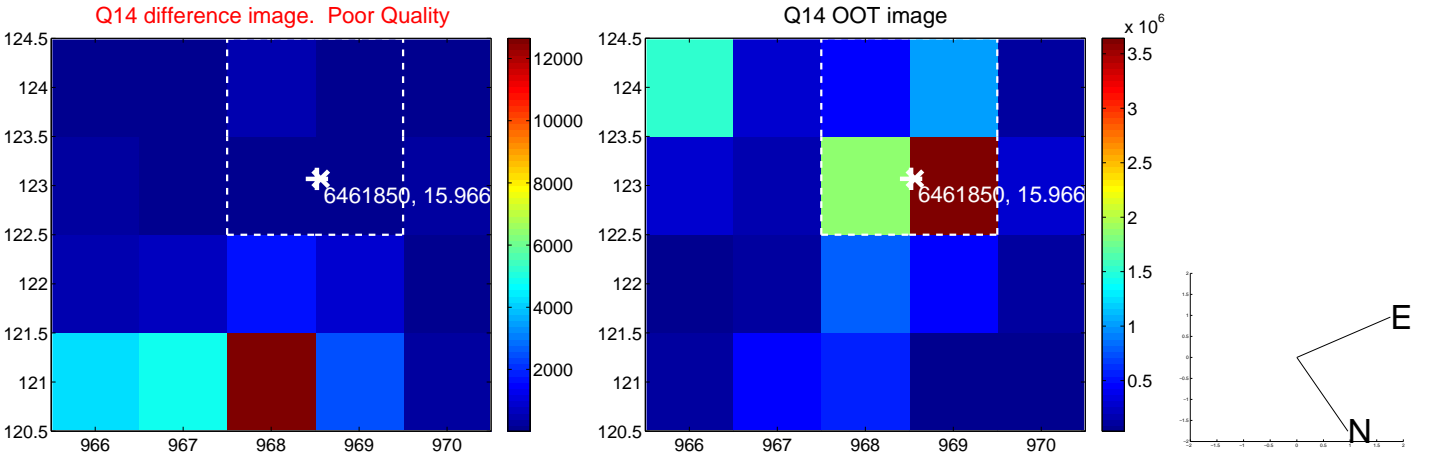
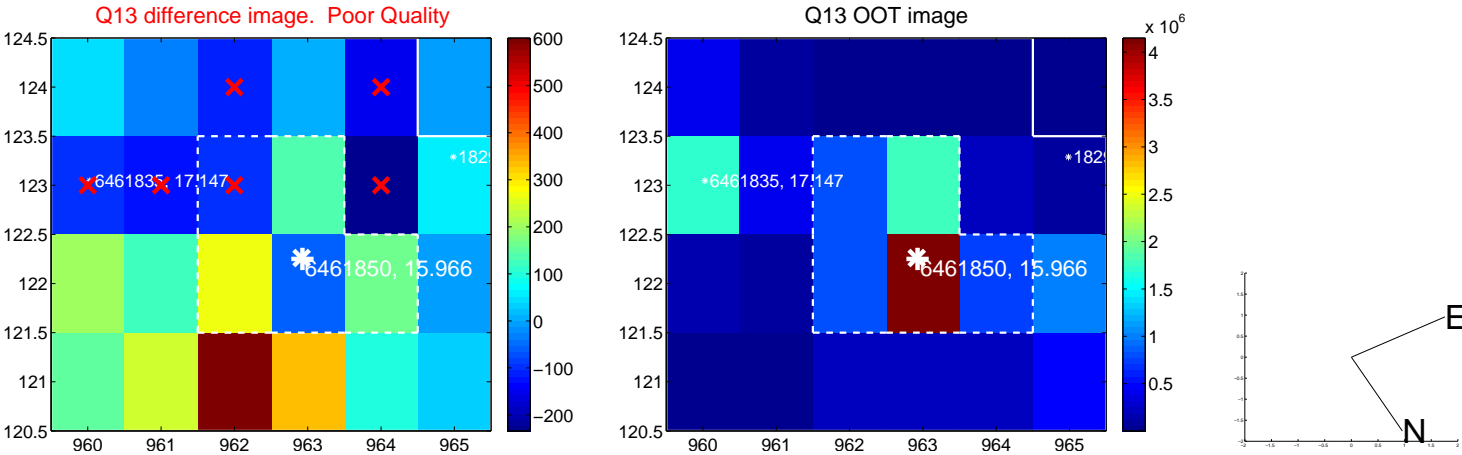
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

