

KIC 010096653

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})
010096653-01	OBS	No	1.535336	132.006904	49.3	4.425	13.0	12.4	1.02	6178	0.84	1941.47

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010096653-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—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.

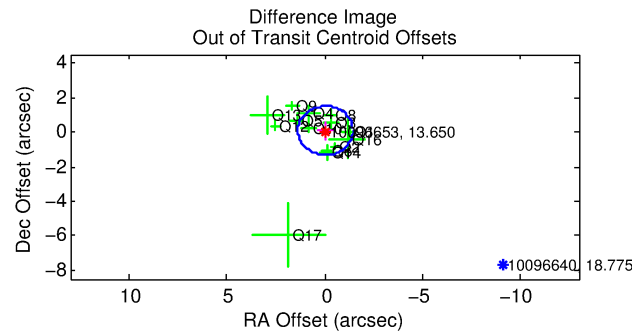
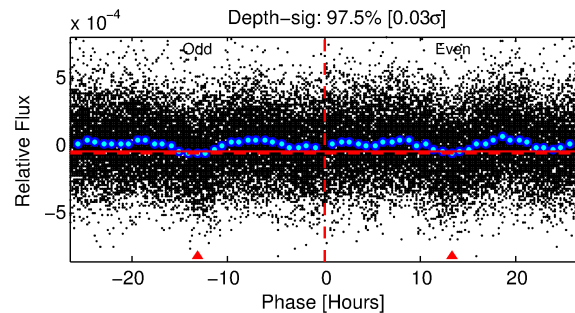
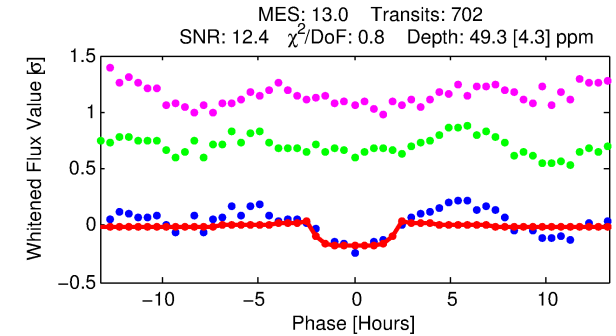
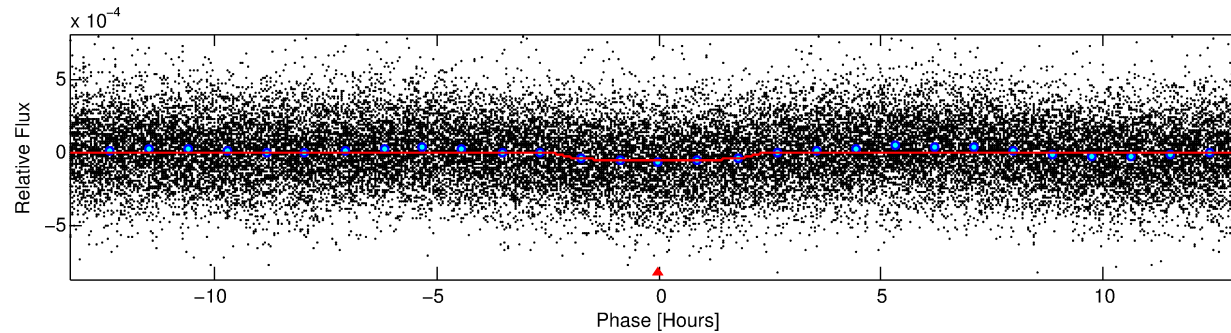
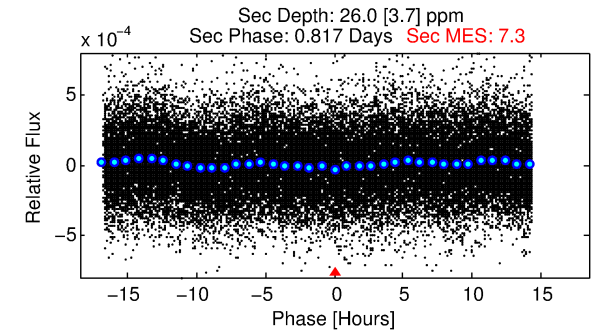
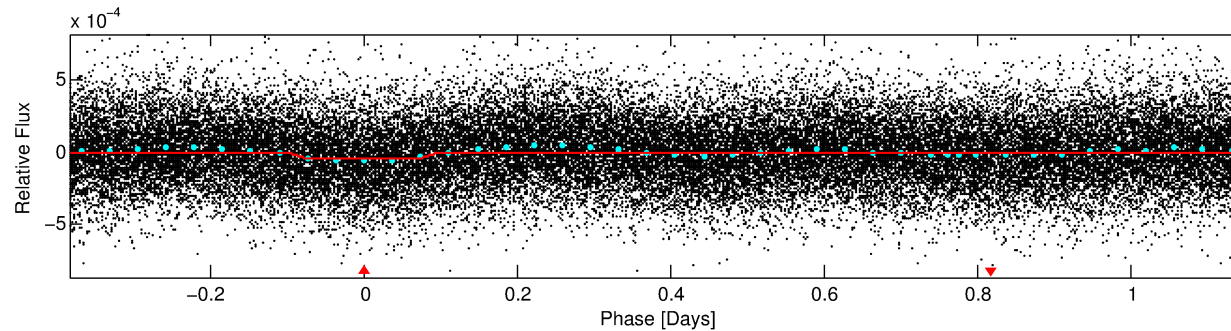
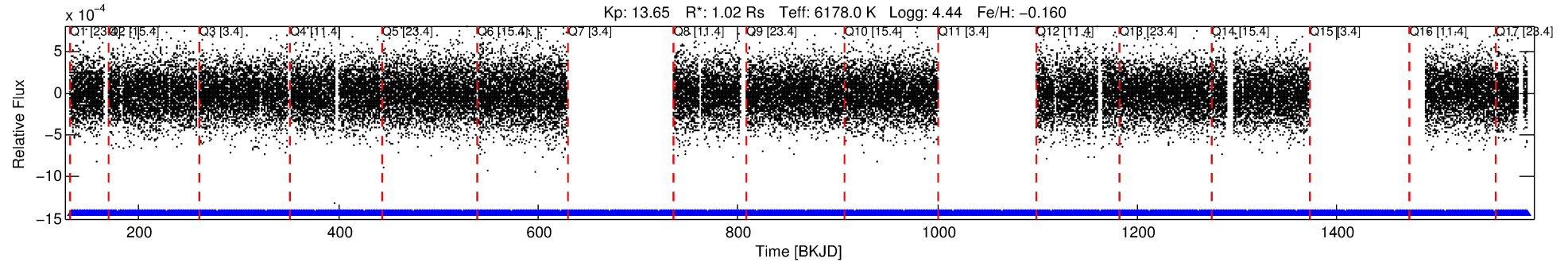
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010096653-01

No Significant Match Found

DV One-Page Summary

KIC: 10096653 Candidate: 1 of 1 Period: 1.535 d



DV Fit Results:

Period = 1.53534 [0.00001] d
Epoch = 132.0069 [0.0035] BKJD
Rp/R* = 0.0075 [0.0025]
a/R* = 1.54 [1.59]
b = 0.90 [0.40]
Seff = 1941.47 [826.69]
Teff = 1693 [180] K
Rp = 0.84 [0.40] Re
a = 0.0264 [0.0075] AU
Ag = 14.28 [11.26] [1.18σ]
Teffp = 5087 [877] K [3.79σ]

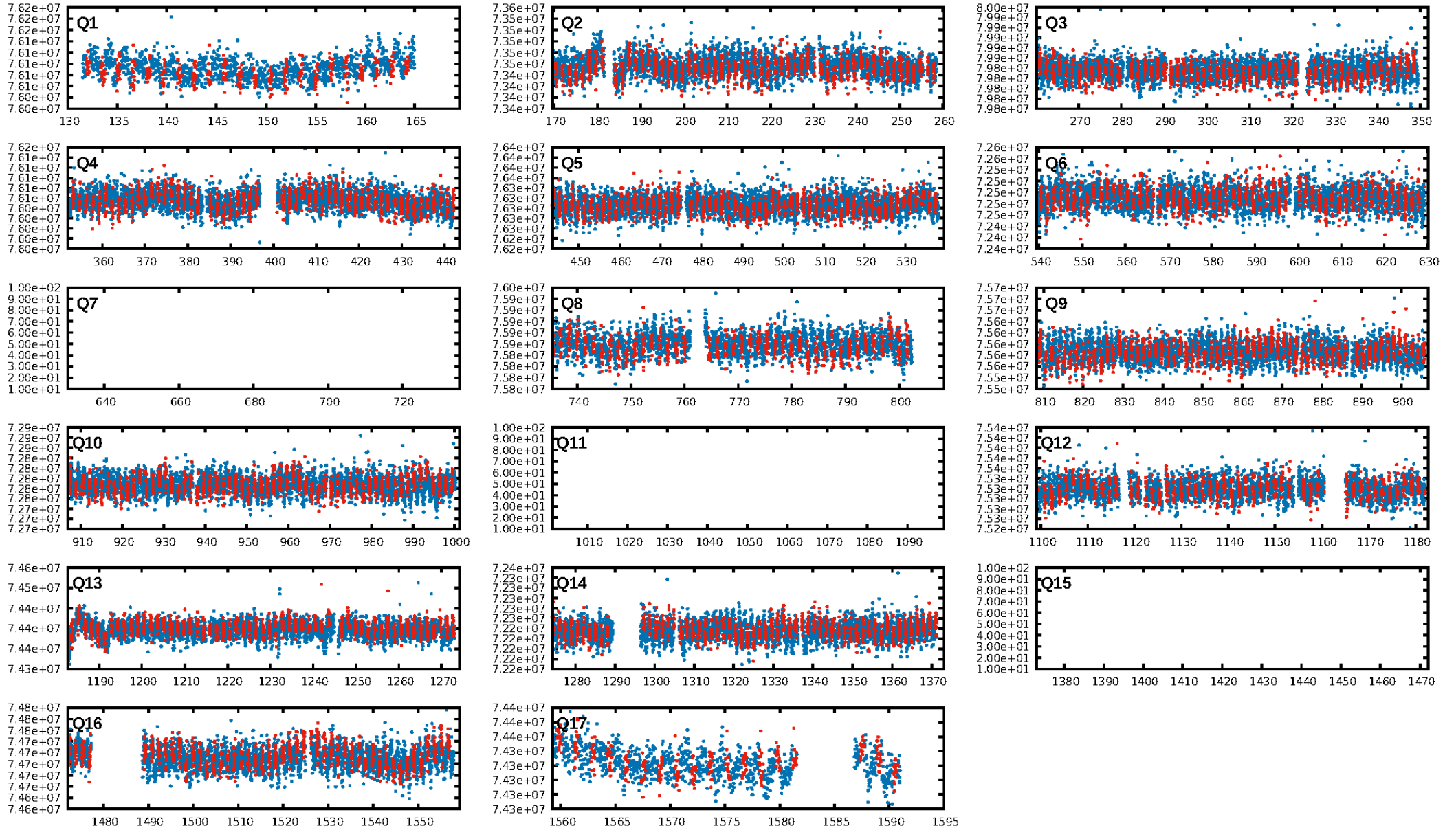
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.22e-30
RollingBand-fgt: 1.00 [662/662]
GhostDiagnostic-chr: 2.117
Centroid-sig: 42.4%
Centroid-so: 0.911 arcsec [1.23σ]
OotOffset-rm: 0.096 arcsec [0.20σ]
KicOffset-rm: 0.076 arcsec [0.16σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 0.79 [11/14]
DiffImageOverlap-fno: 1.00 [14/14]

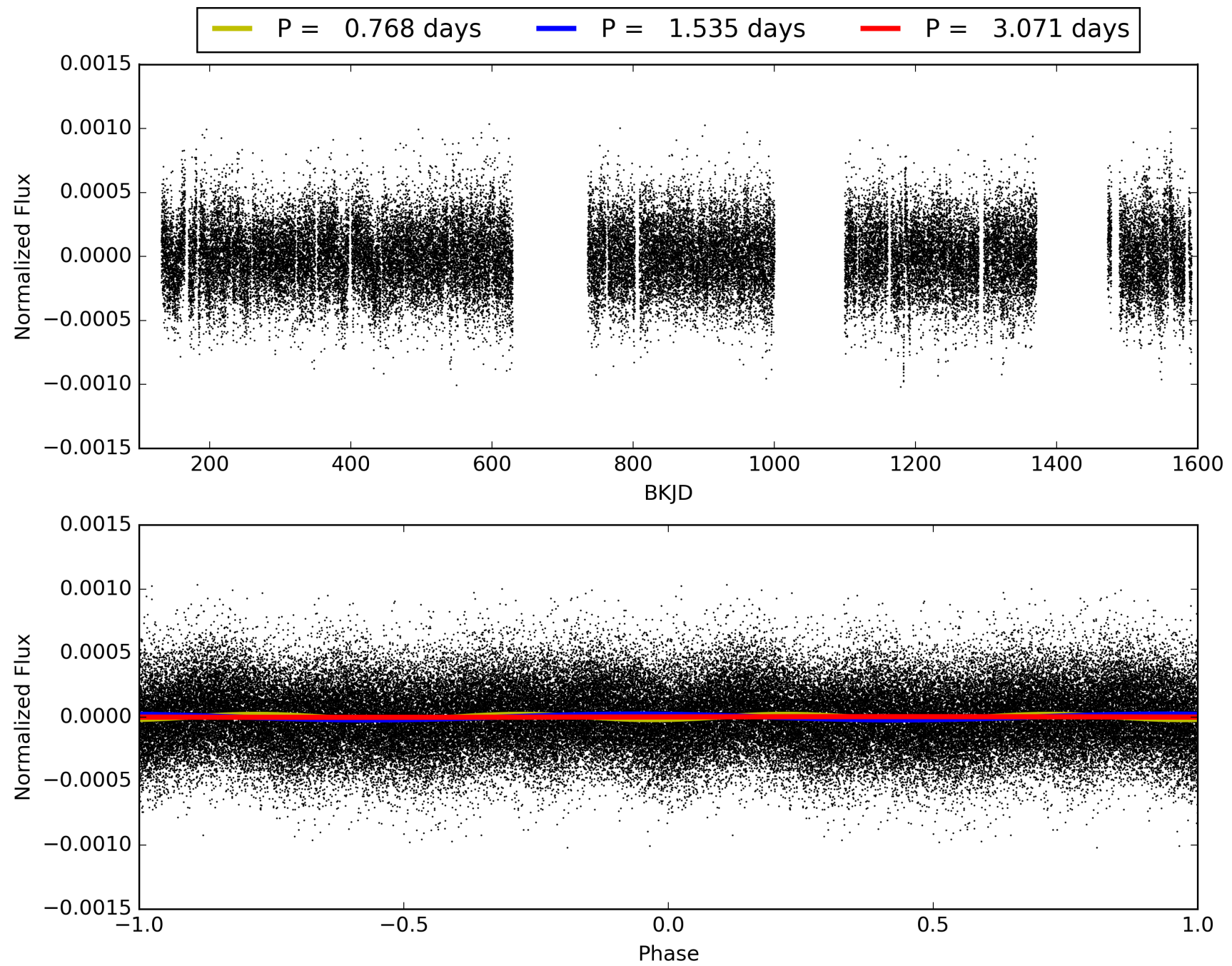
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 11:54:31 Z

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

TCE 010096653-01, PDC Light Curves

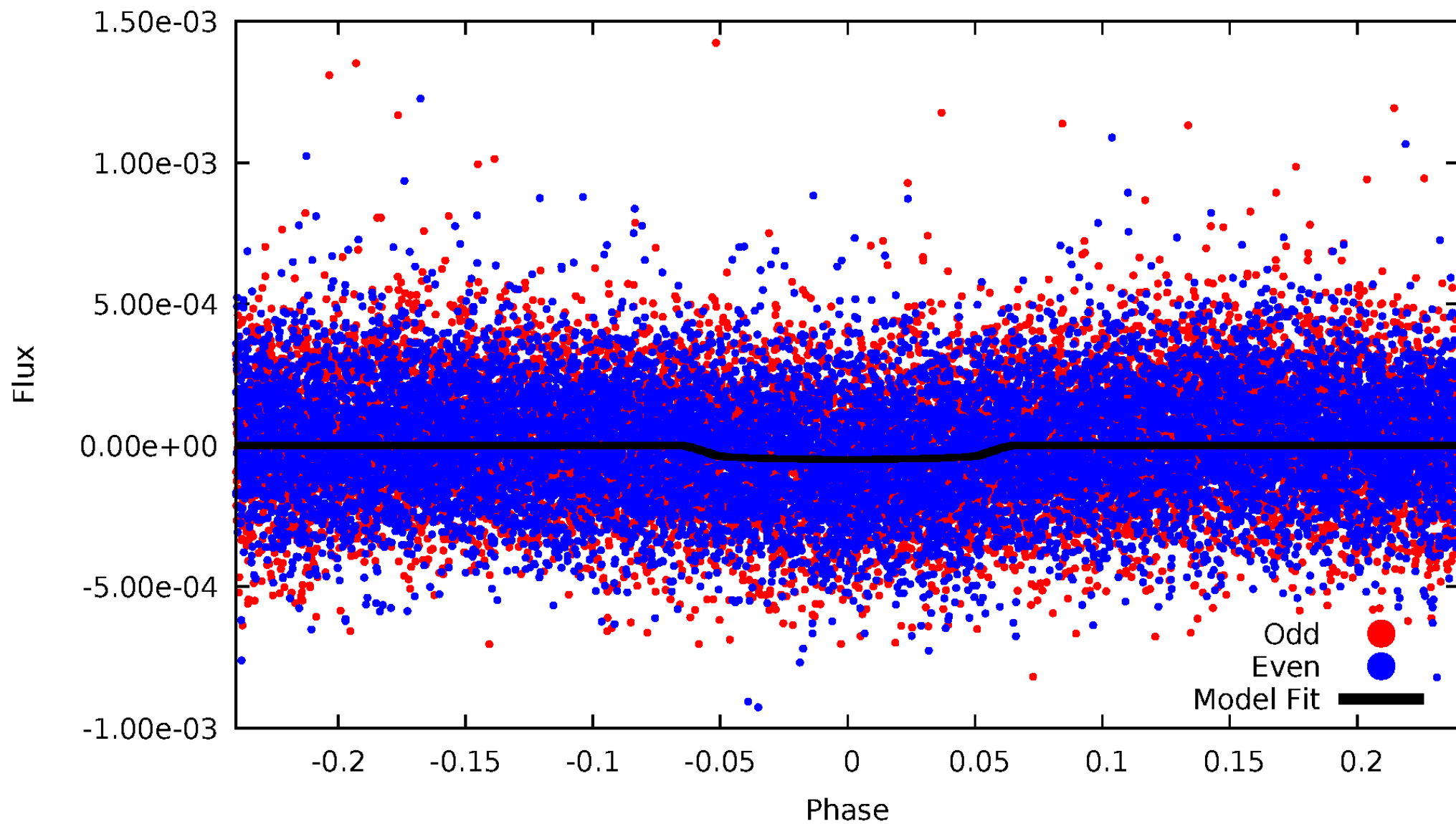


TCE 010096653-01



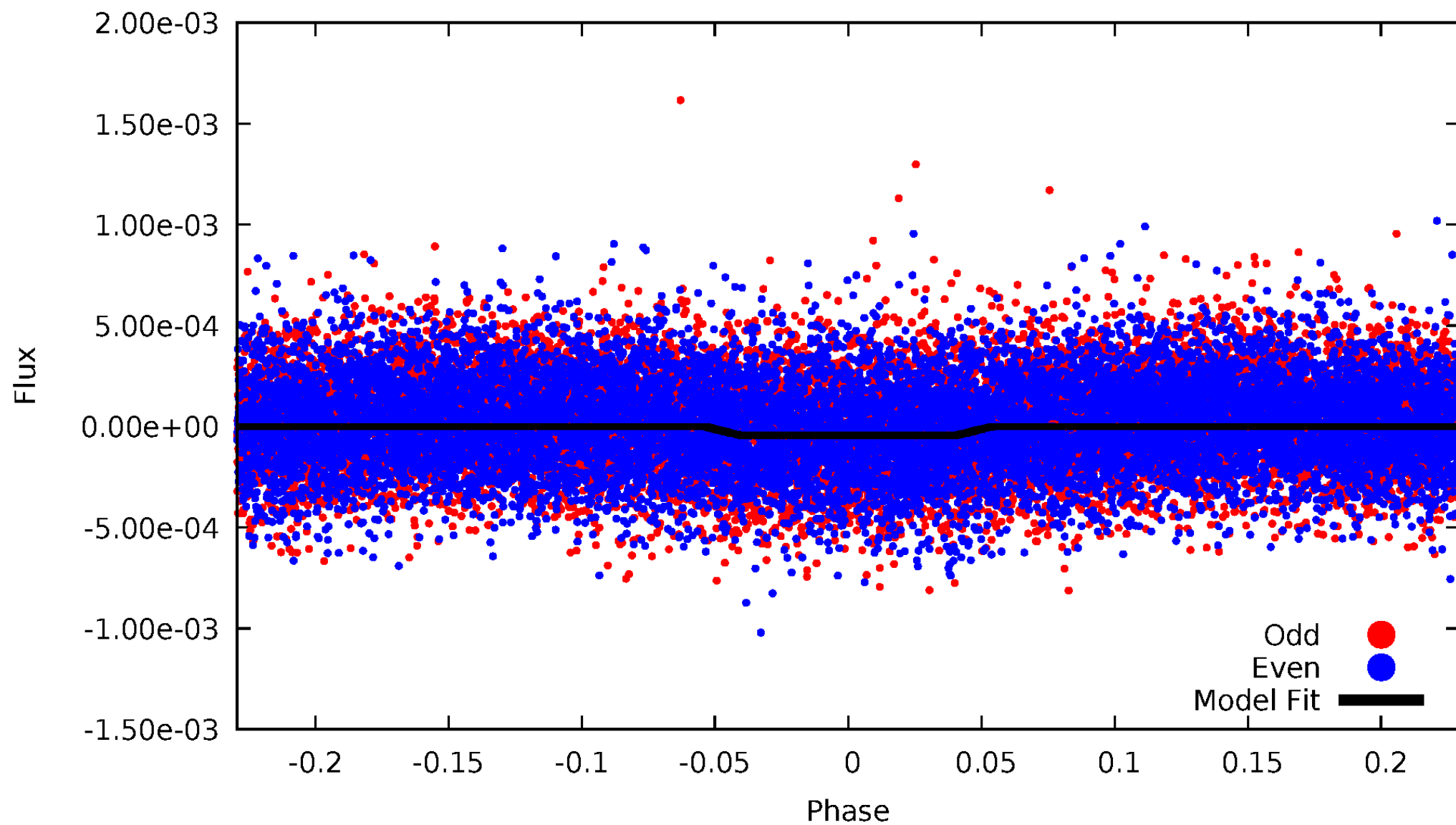
DV Odd/Even

TCE 010096653-01

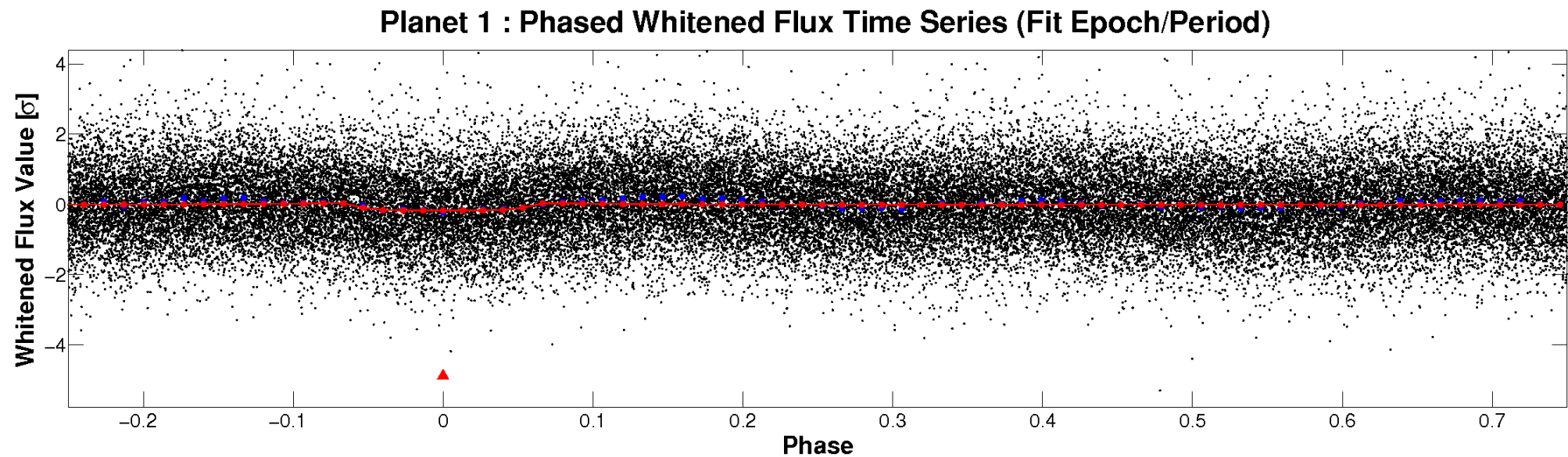
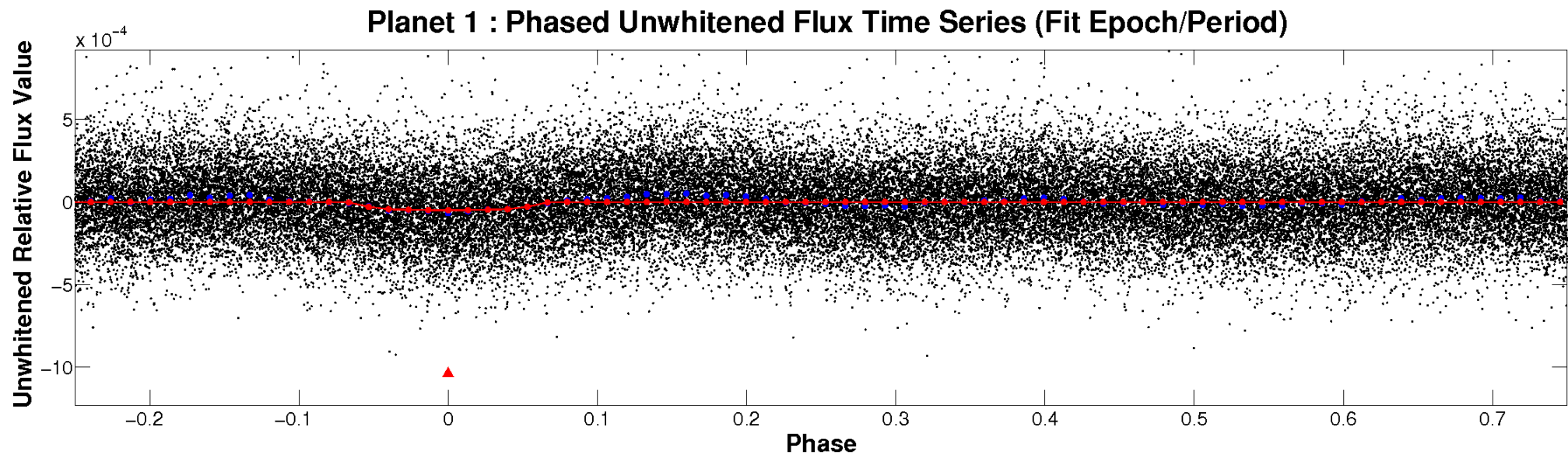


ALT Odd/Even

TCE 010096653-01

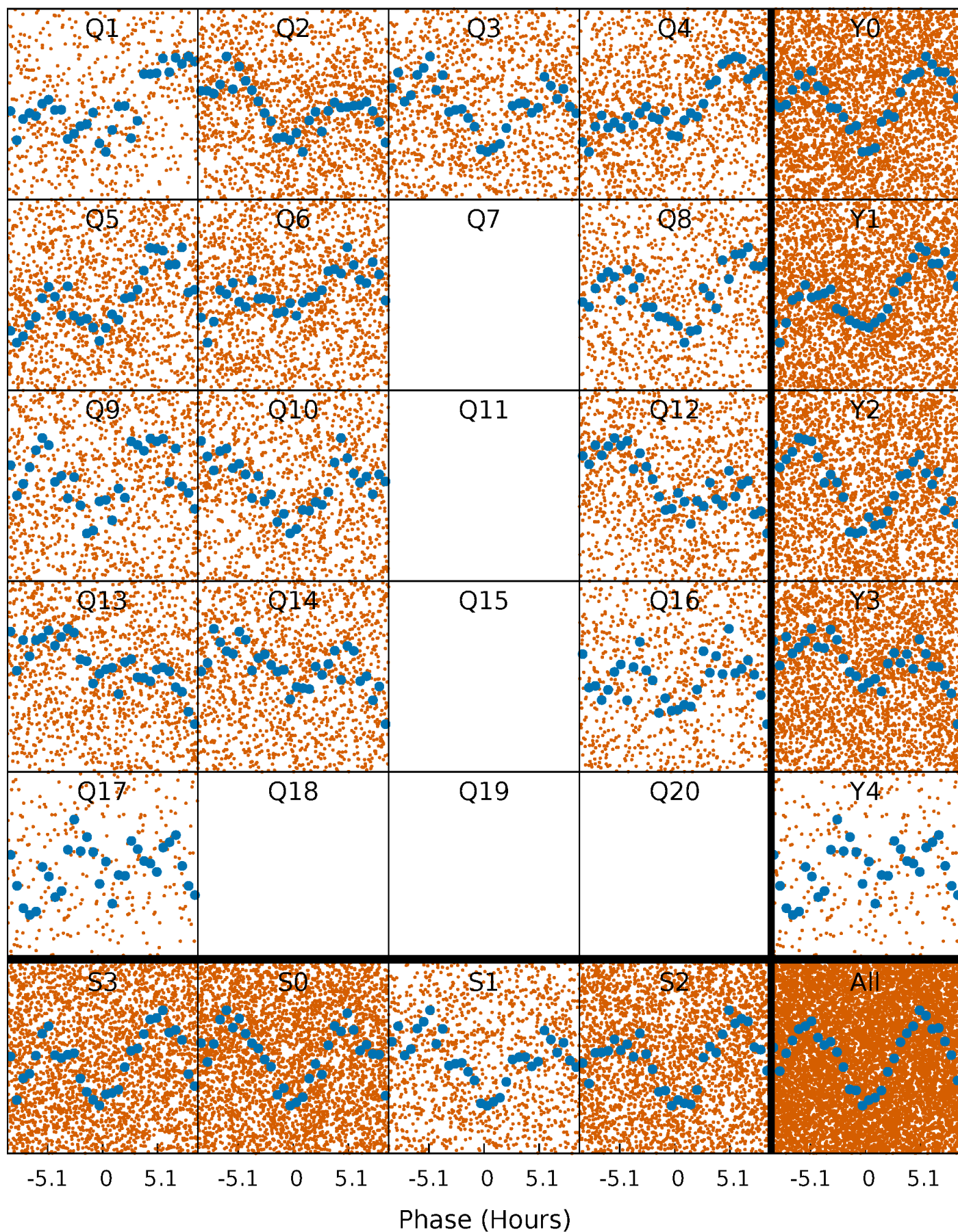


Non-Whitened Vs. Whitened Light Curve



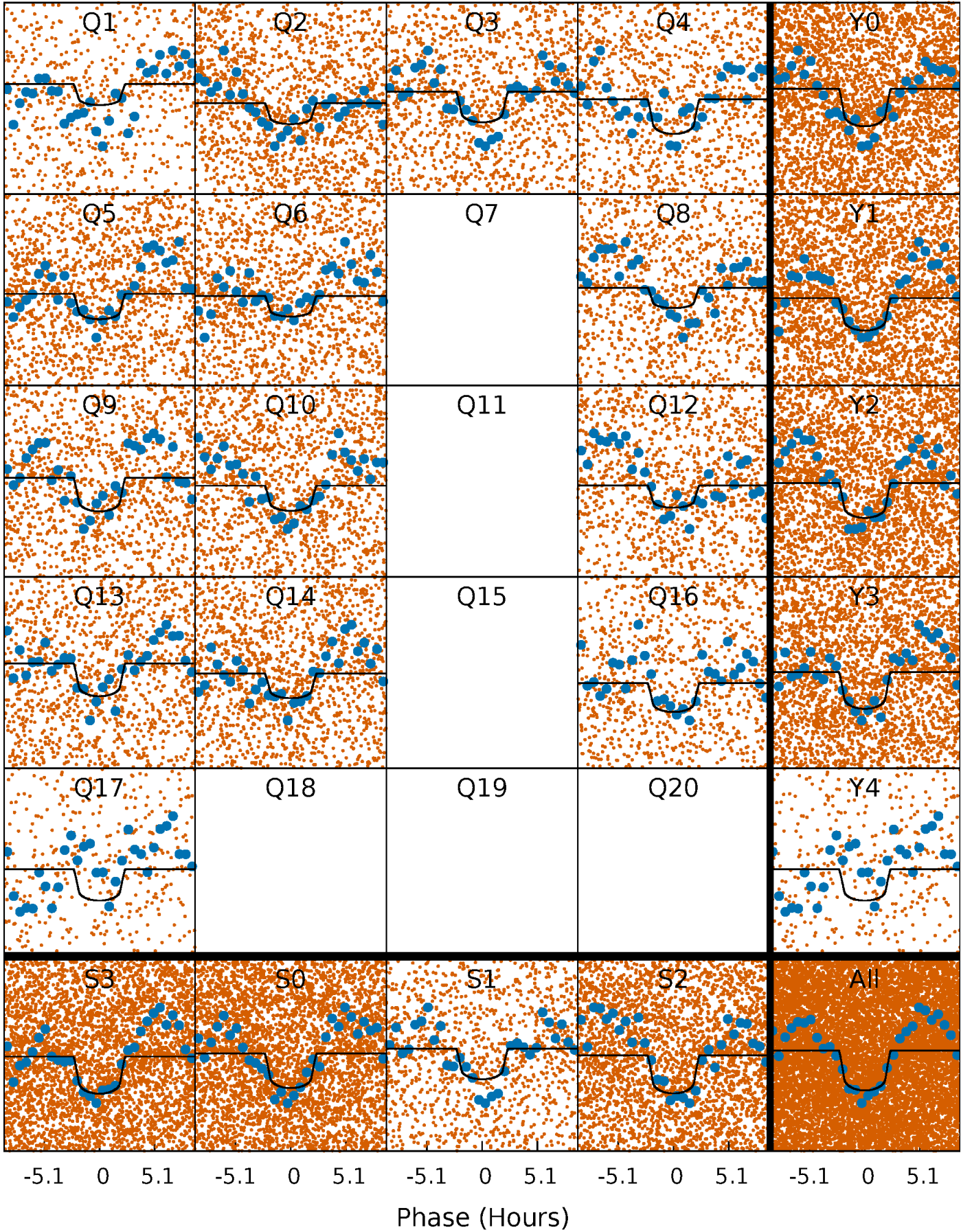
PDC Quarter-Phased Transit Curves

TCE 010096653-01 P= 1.535336 Days $T_0=132.006904$ (BKJD)



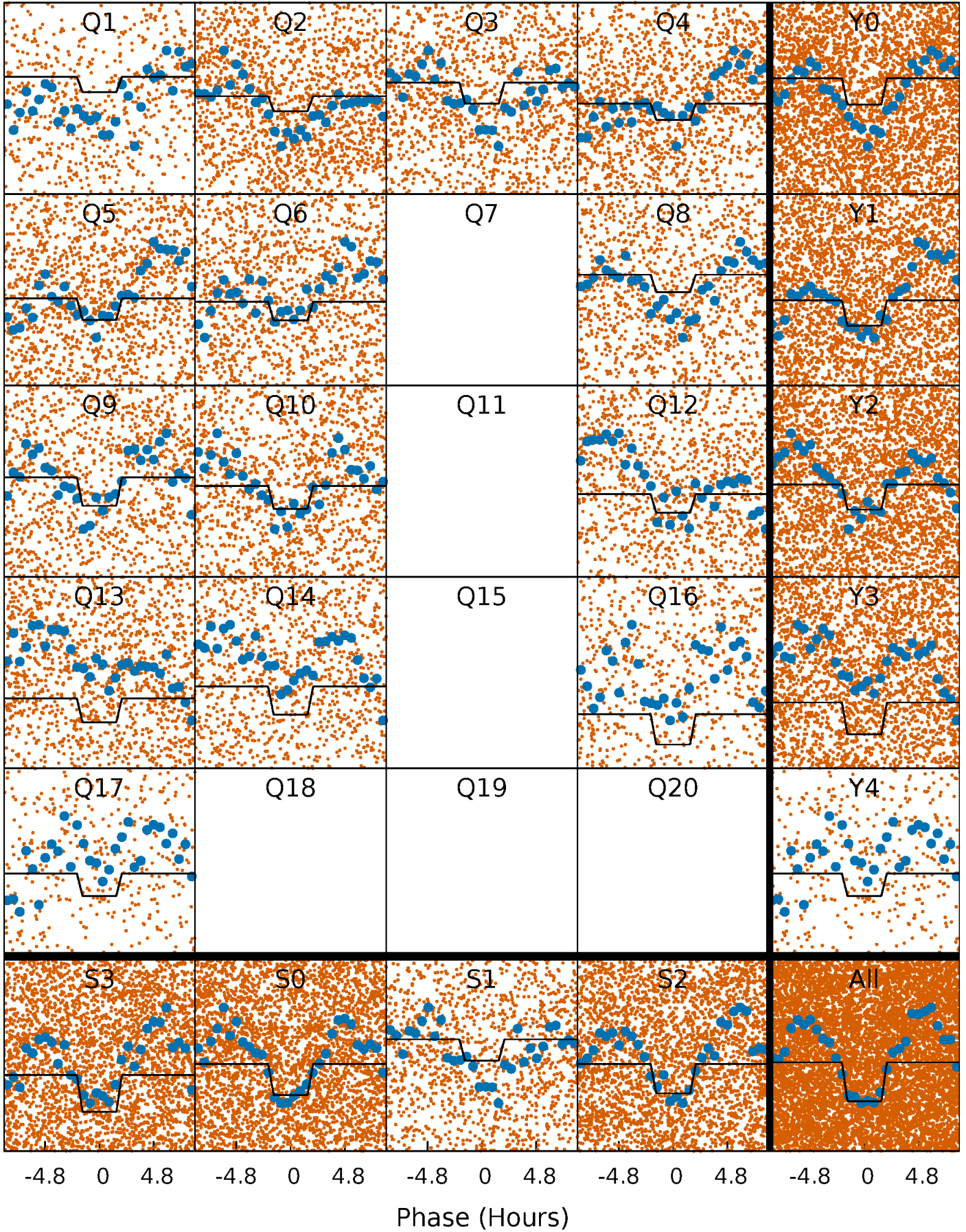
DV Quarter-Phased Transit Curves

TCE 010096653-01 P= 1.535336 Days $T_0=132.006904$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

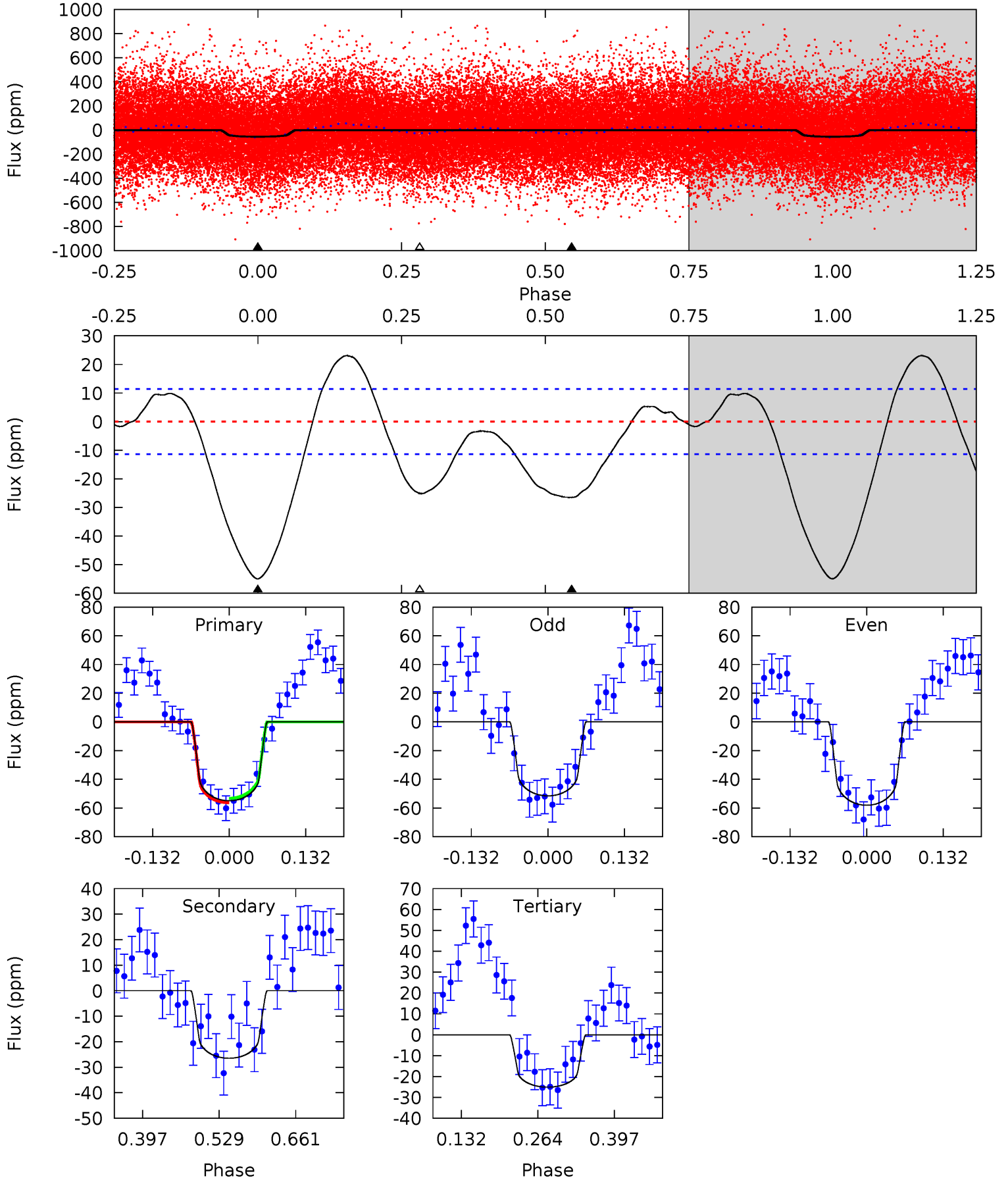
TCE 010096653-01 P= 1.535382 Days $T_0=131.990994$ (BKJD)



DV Model-Shift Uniqueness Test

010096653-01, P = 1.535336 Days, E = 130.471568 Days

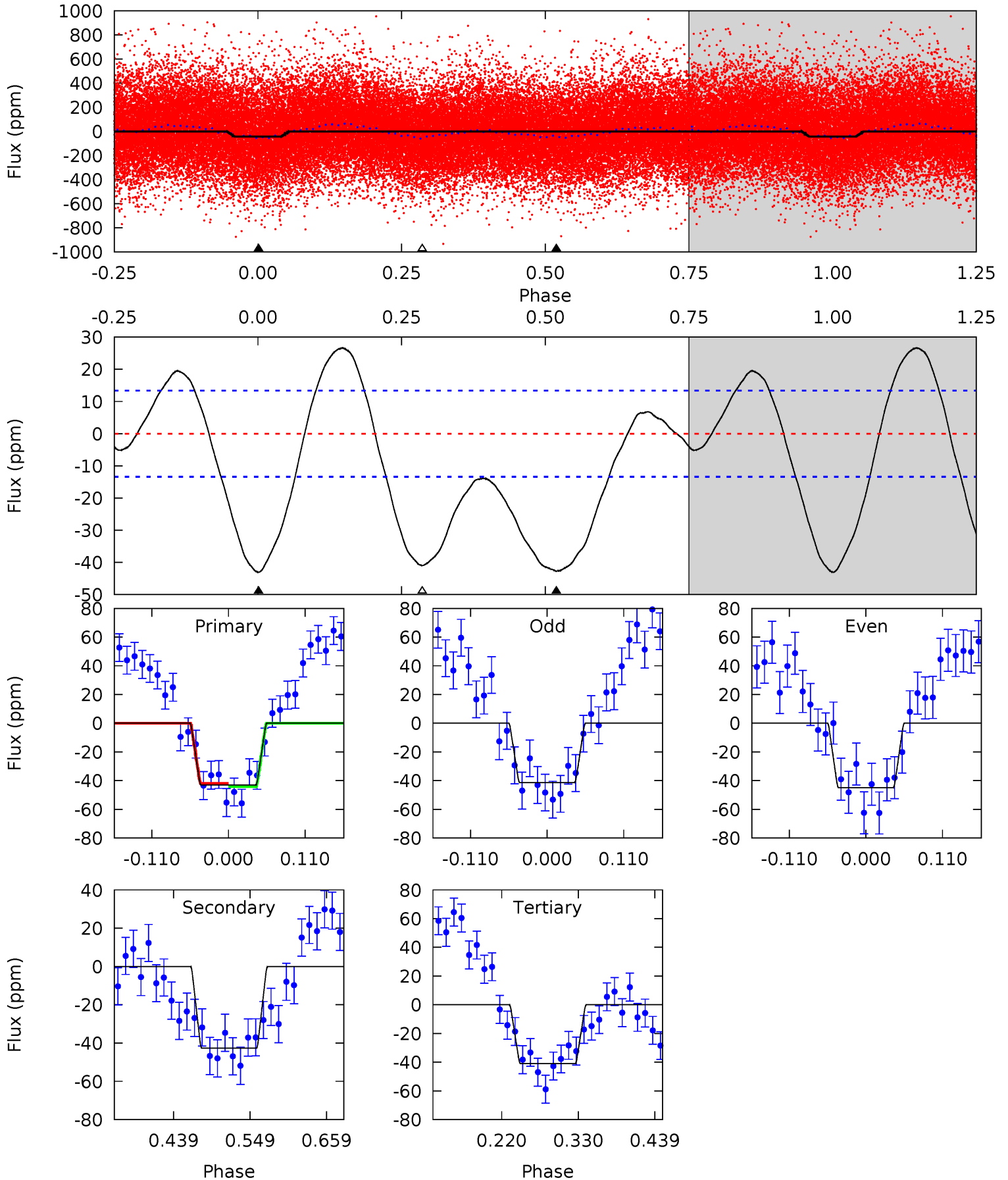
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.8	10.5	9.93	0	4.51	1.51	5.26	11.8	21.8	0.55	10.5	1.29	0.96	0.30	0.60



Alt Model-Shift Uniqueness Test

010096653-01, P = 1.535382 Days, E = 130.455612 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.6	14.5	13.9	0	4.55	1.60	6.66	0.72	14.6	0.57	14.5	0.59	0.85	0.38	0.37



Stellar Parameters For KIC 010096653

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6178^{+168}_{-205}	$4.440^{+0.058}_{-0.217}$	$-0.160^{+0.250}_{-0.350}$	$1.019^{+0.351}_{-0.117}$	$1.037^{+0.159}_{-0.130}$	$1.381^{+0.409}_{-0.740}$
	+3%/-3%	+1%/-5%	+156%/-219%	+34%/-11%	+15%/-13%	+30%/-54%
Source	PHO1	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 010096653-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-26 ± 3	$0.89^{+0.33}_{-0.30}$	2410^{+186}_{-119}	5119^{+1098}_{-595}	13^{+17}_{-6}
Alt.	-43 ± 3	$0.78^{+0.31}_{-0.30}$	2409^{+174}_{-116}	6081^{+1555}_{-821}	26^{+39}_{-13}

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

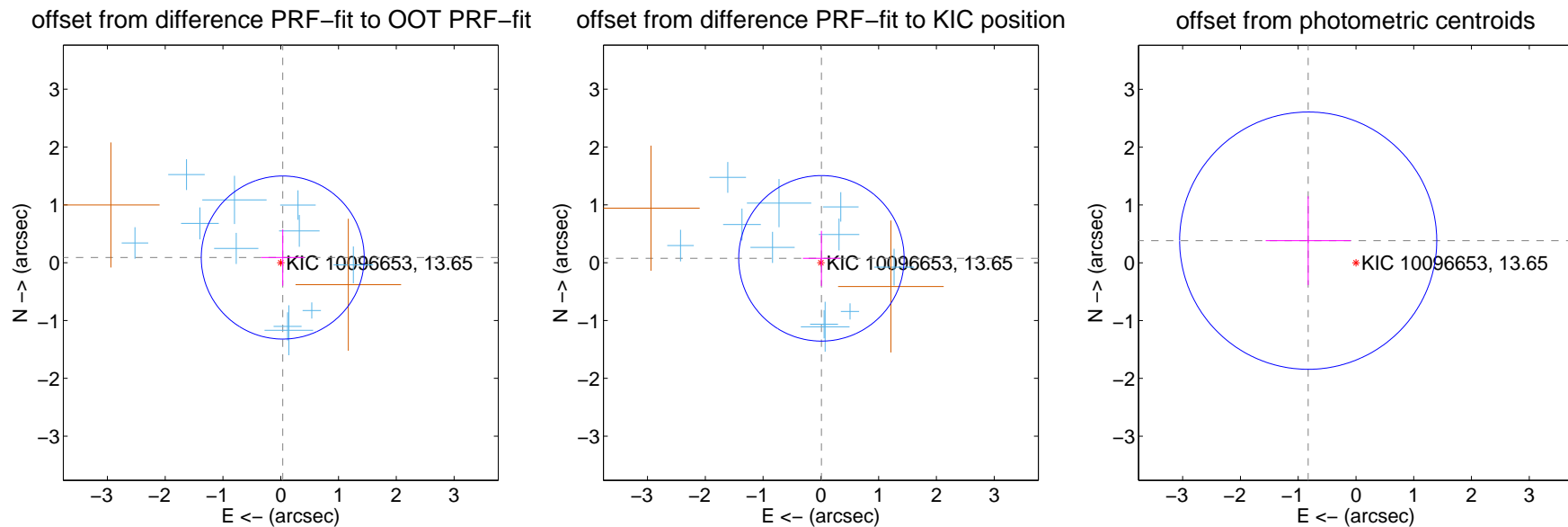
DV Centroid Data

Supplemental centroid analysis for 010096653-01. Kepler magnitude: 13.65. Transit SNR 12.42

There are 11 quarters with good PRF difference image offsets

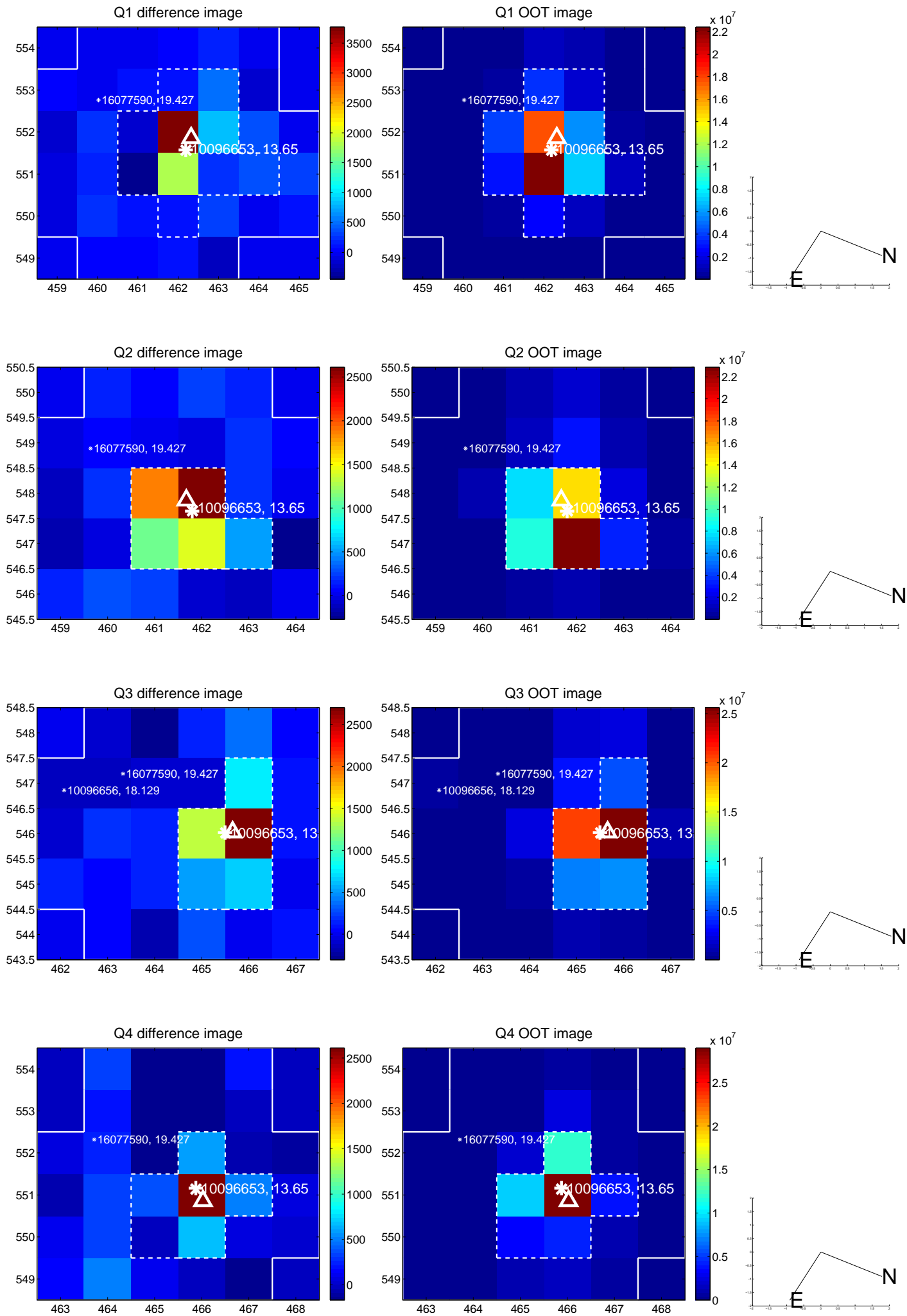
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.096 ± 0.470	0.20	-0.034 ± 0.374	0.089 ± 0.487
PRF-fit source offset from KIC position	0.076 ± 0.477	0.16	-0.010 ± 0.321	0.075 ± 0.476
photometric centroid source offset	0.91 ± 0.74	1.23	0.83 ± 0.74	0.38 ± 0.77

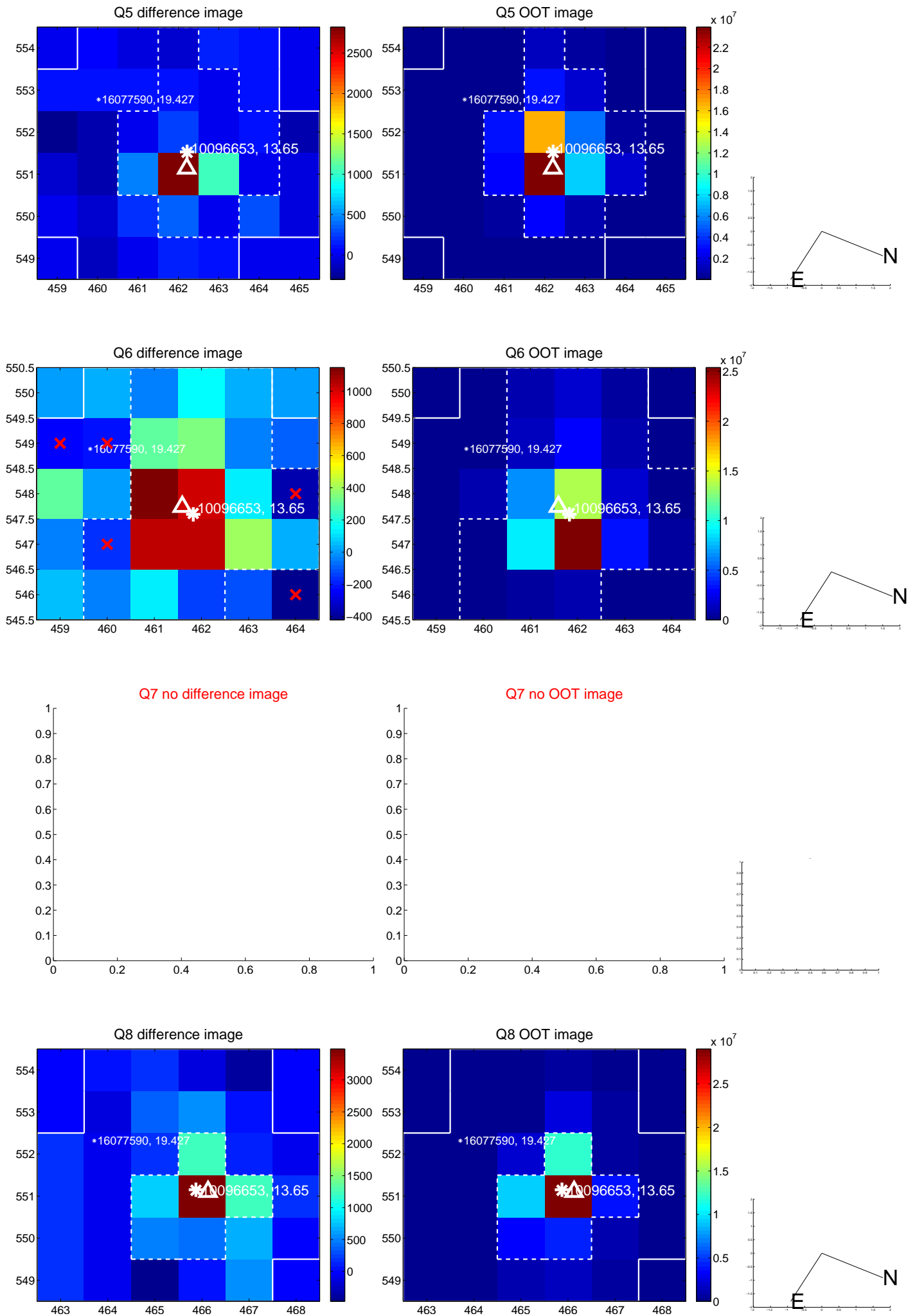


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

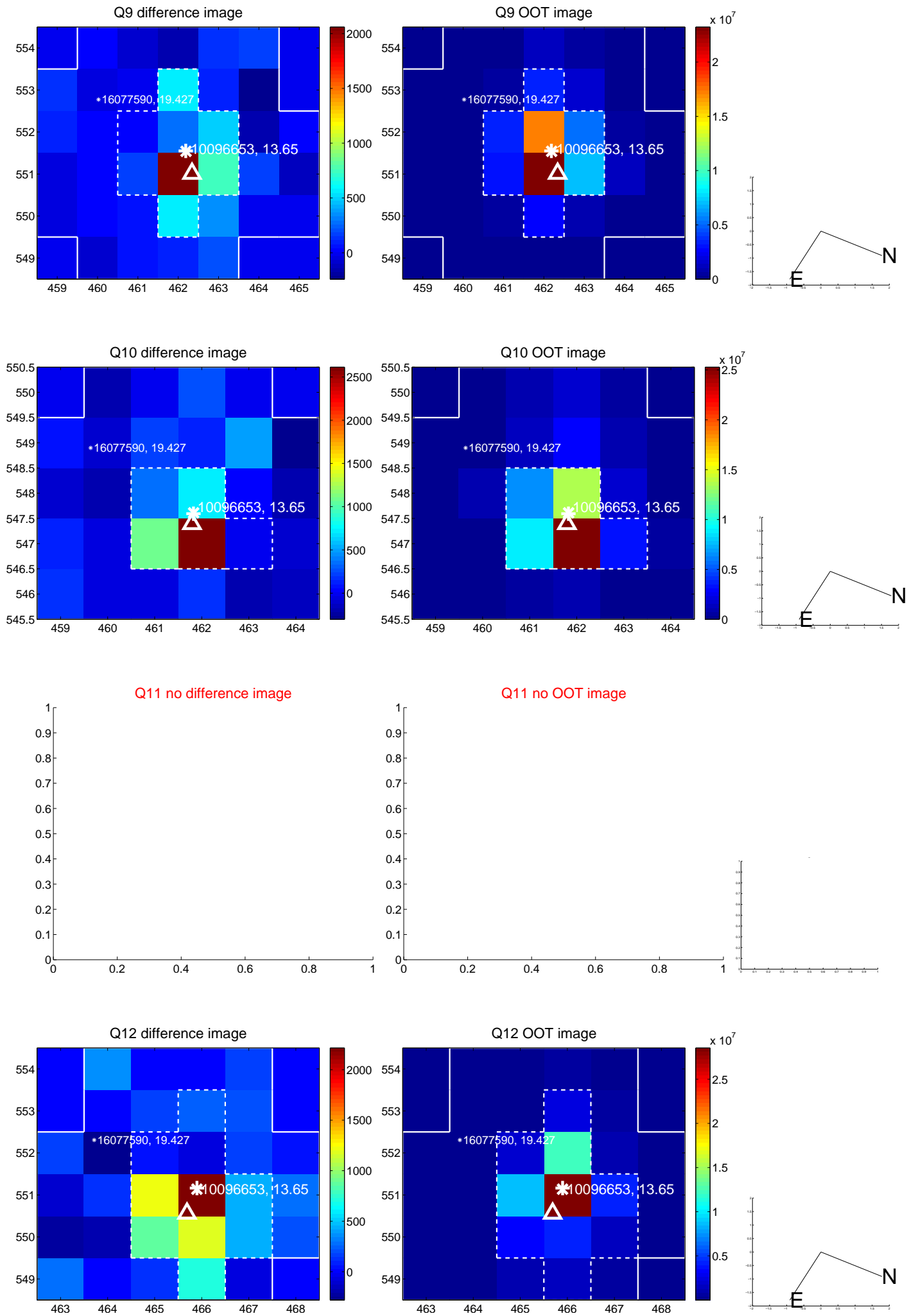
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



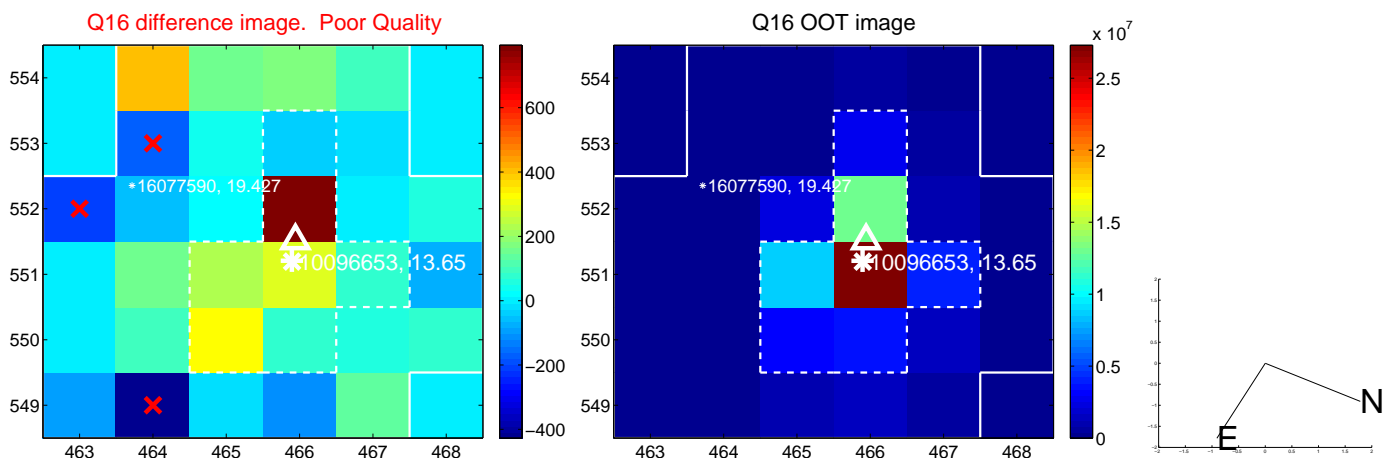
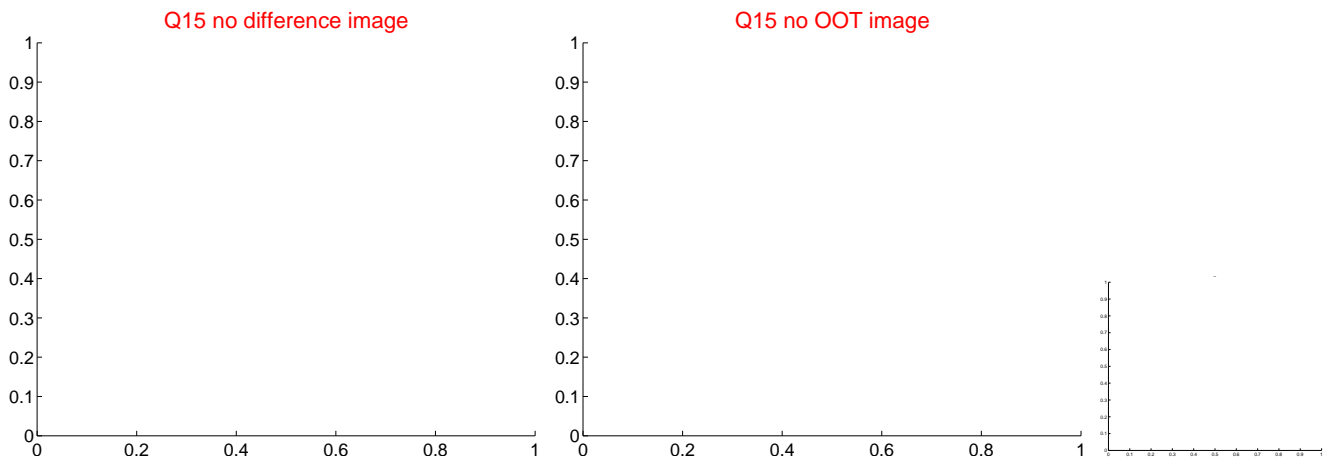
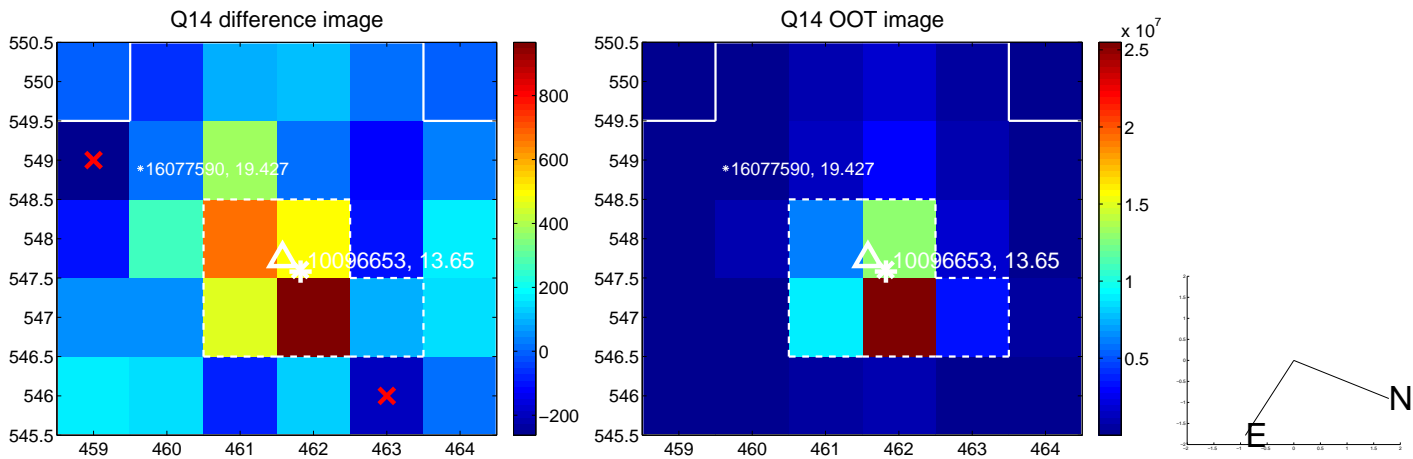
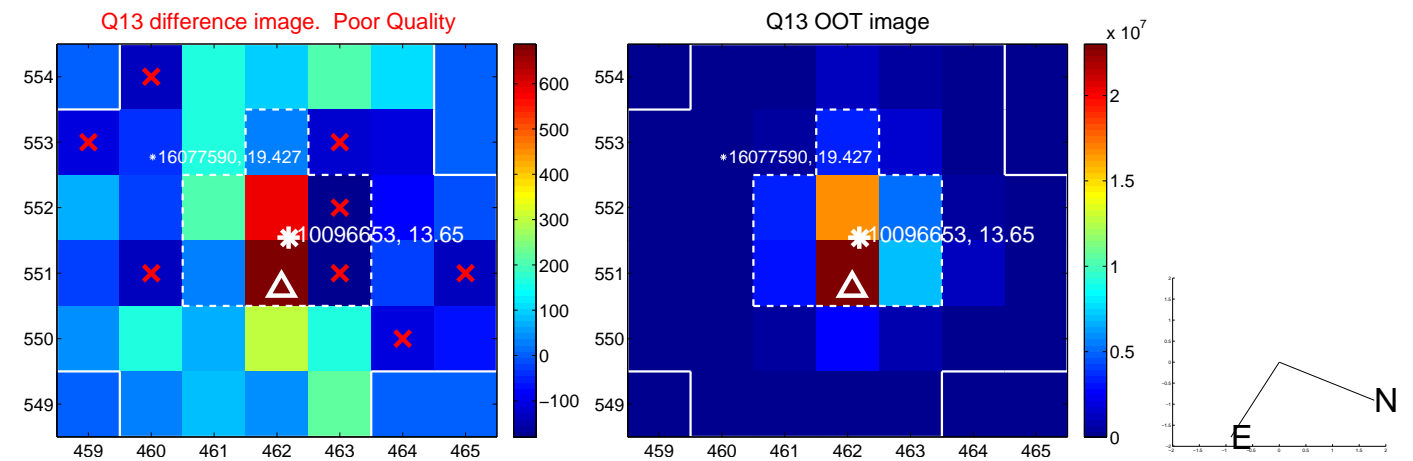
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



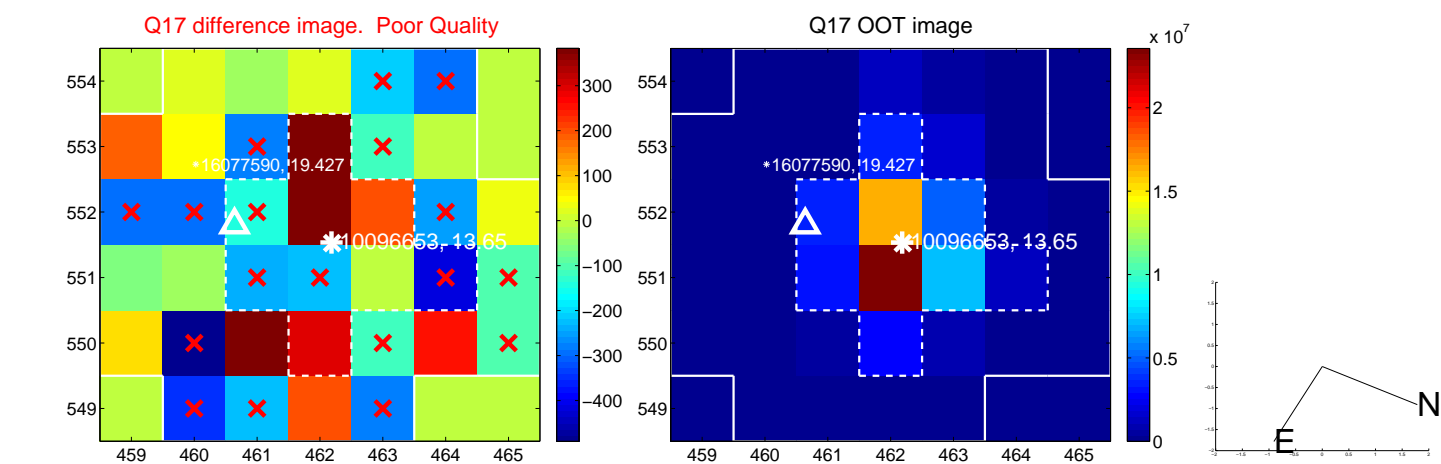
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



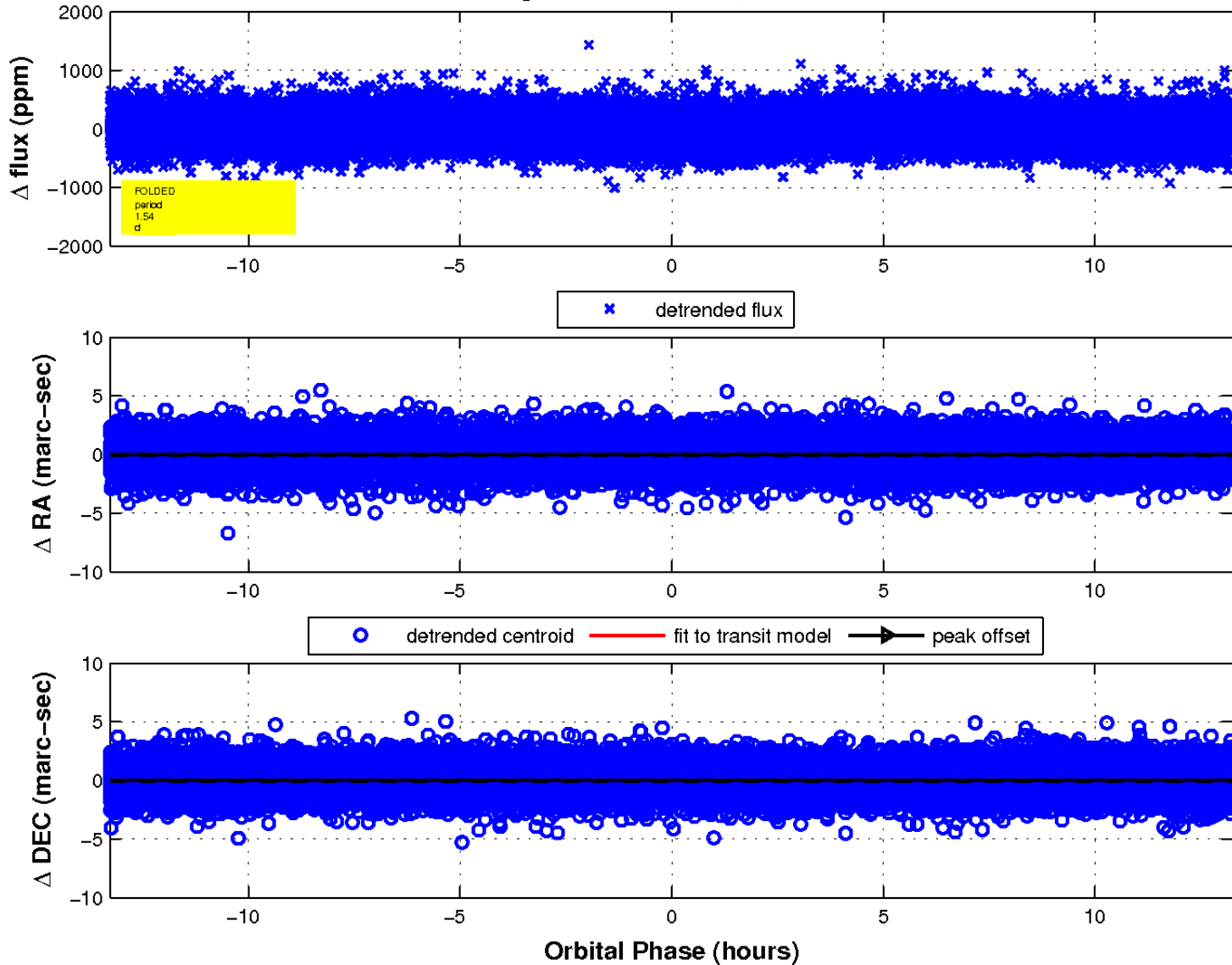
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

