

KIC 011090561

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R _★ (R _☉)	T _★ (K)	R _p (R _⊕)	S _p (S _⊕)
011090561-01	OBS	5865.01	35.872943	131.557868	934.6	4.553	12.9	17.1	15.37	5254	65.13	1840.47

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011090561-01	OBS	FP	0.00	0	0	1	0	CENT_UNRESOLVED_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 011090561-01

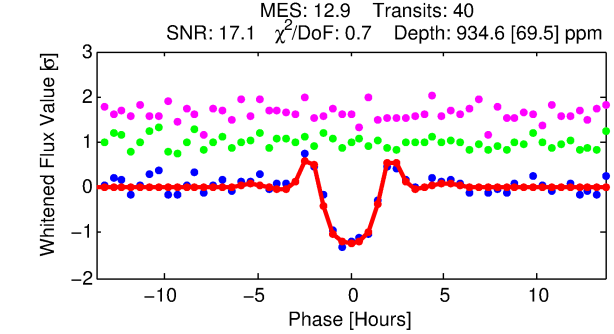
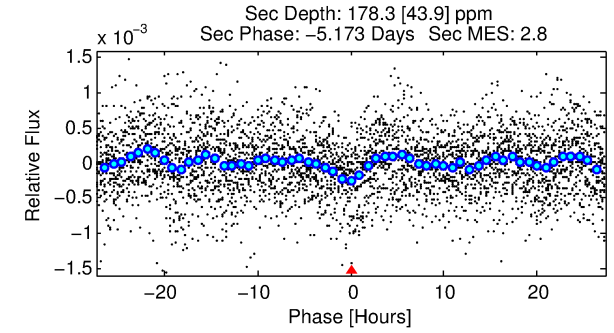
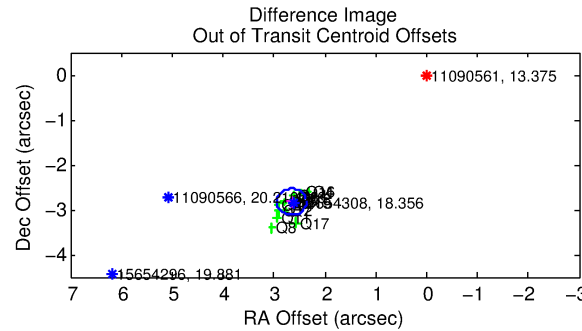
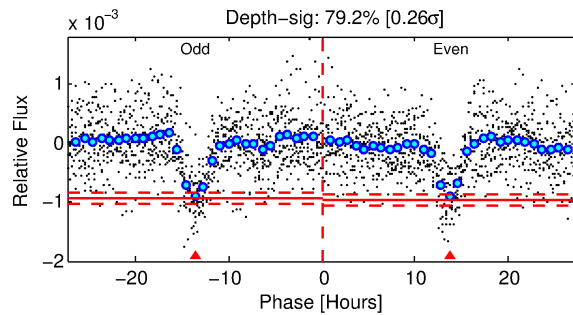
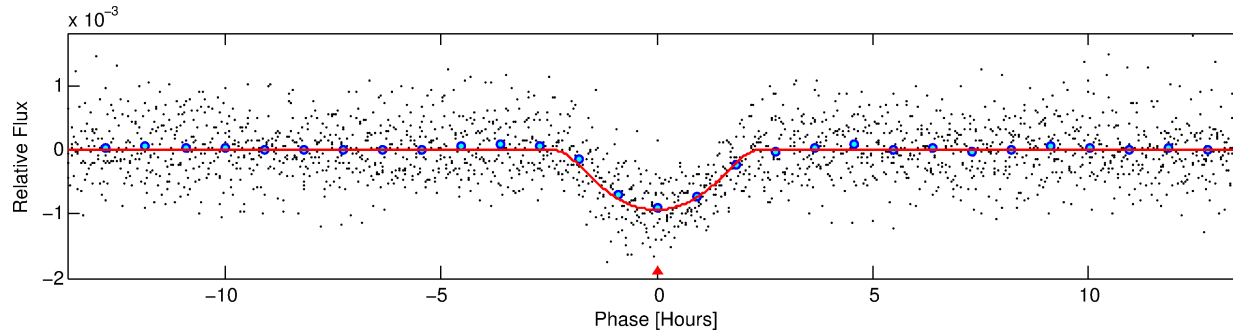
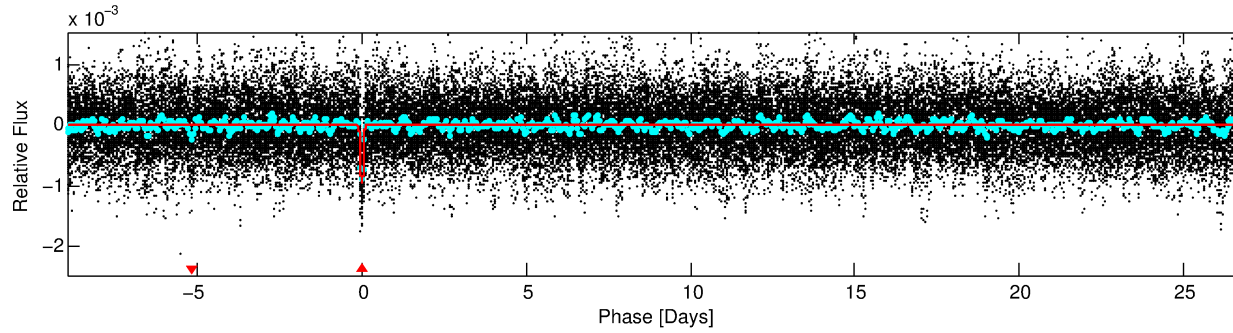
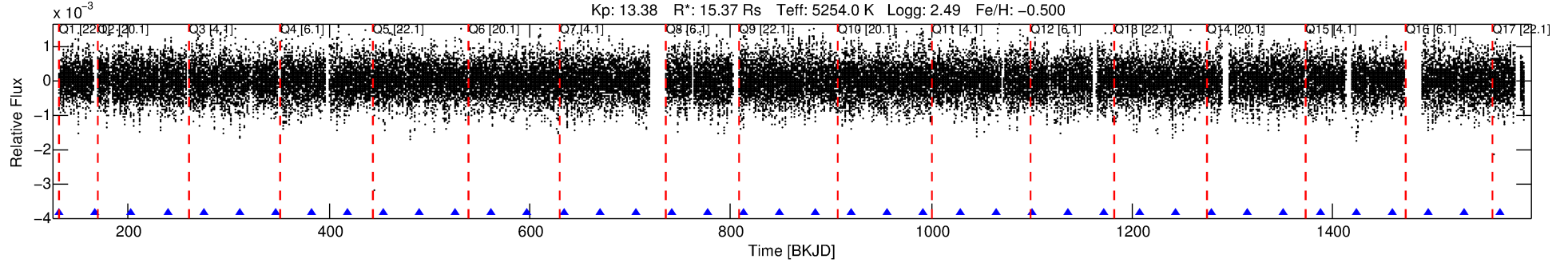
No Significant Match Found

DV One-Page Summary

KIC: 11090561 Candidate: 1 of 1 Period: 35.873 d

KOI: K05865.01 Corr: 0.975

Kp: 13.38 R*: 15.37 Rs Teff: 5254.0 K Logg: 2.49 Fe/H: -0.500



DV Fit Results:

Period = 35.87294 [0.00014] d
Epoch = 131.5579 [0.0033] BKJD
Rp/R* = 0.0388 [0.0034]
a/R* = 22.54 [1.18]
b = 0.97 [0.01]
Seff = 1840.47 [590.00]
Teq = 1670 [134] K
Rp = 65.13 [22.34] Re
a = 0.2960 [0.0658] AU
Ag = 2.03 [0.77] [1.34σ]
Teff = 3081 [292] K [4.39σ]

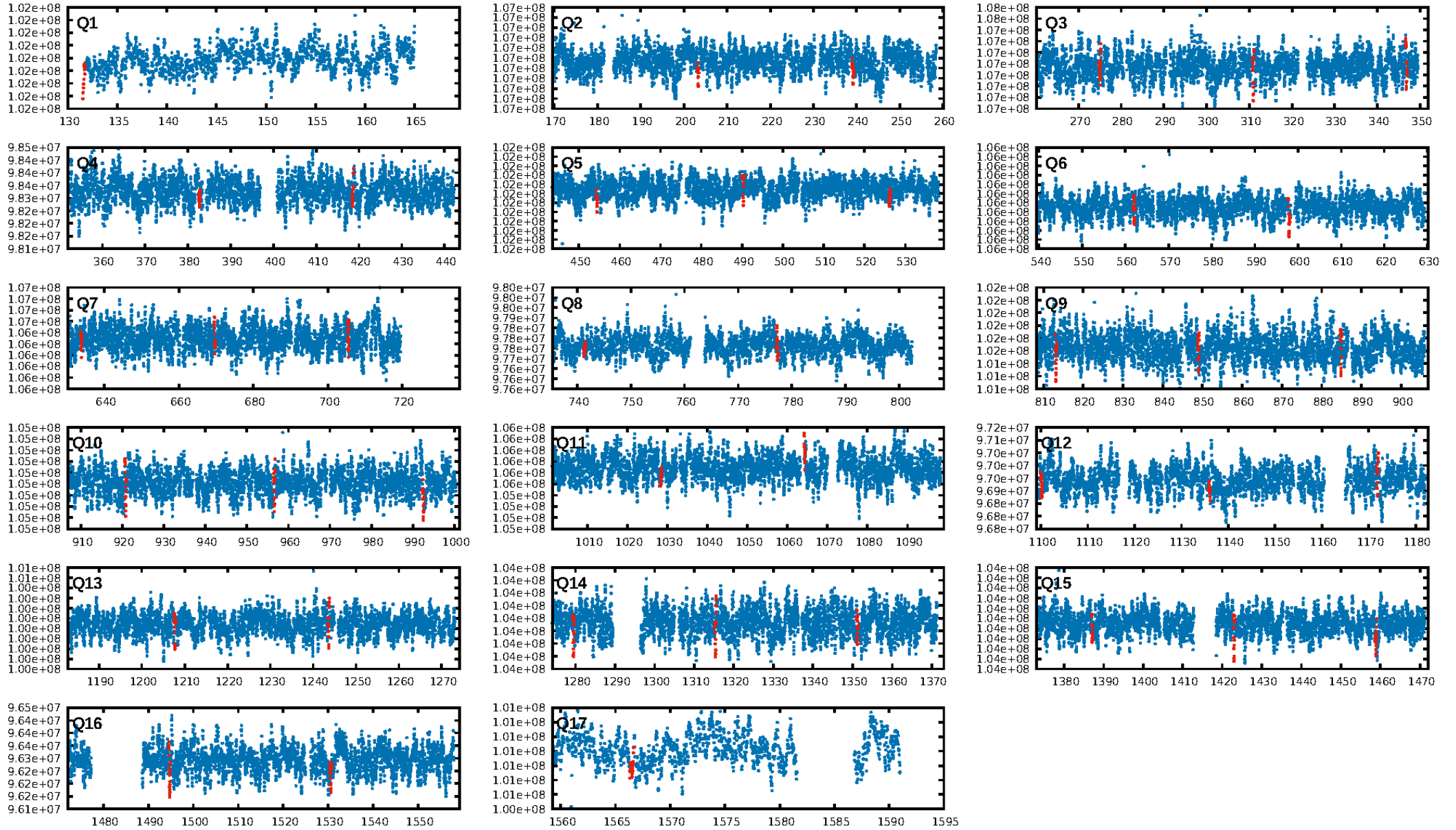
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 76.5%
ModelChiSquareGoF-sig: 100.0%
Bootstrap-pfa: 6.34e-30
RollingBand-fgt: 1.00 [38/38]
GhostDiagnostic-chr: 0.2521
Centroid-sig: 0.0%
Centroid-so: 5.253 arcsec [36.28σ]
OotOffset-rm: 3.881 arcsec [39.53σ]
KicOffset-rm: 3.969 arcsec [39.15σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 1.00 [16/16]
DiffImageOverlap-fno: 1.00 [16/16]

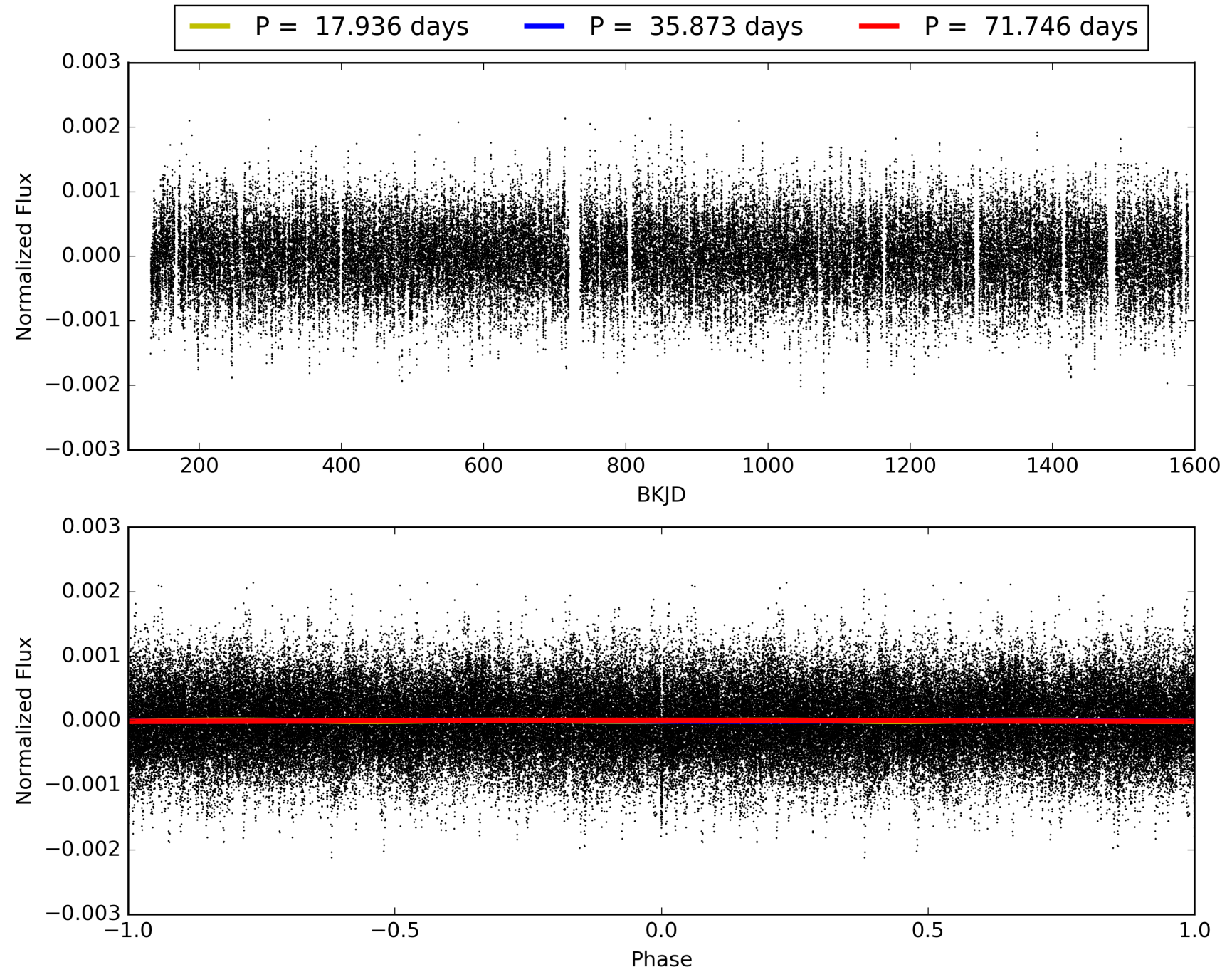
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:54:55 Z

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

TCE 011090561-01, PDC Light Curves

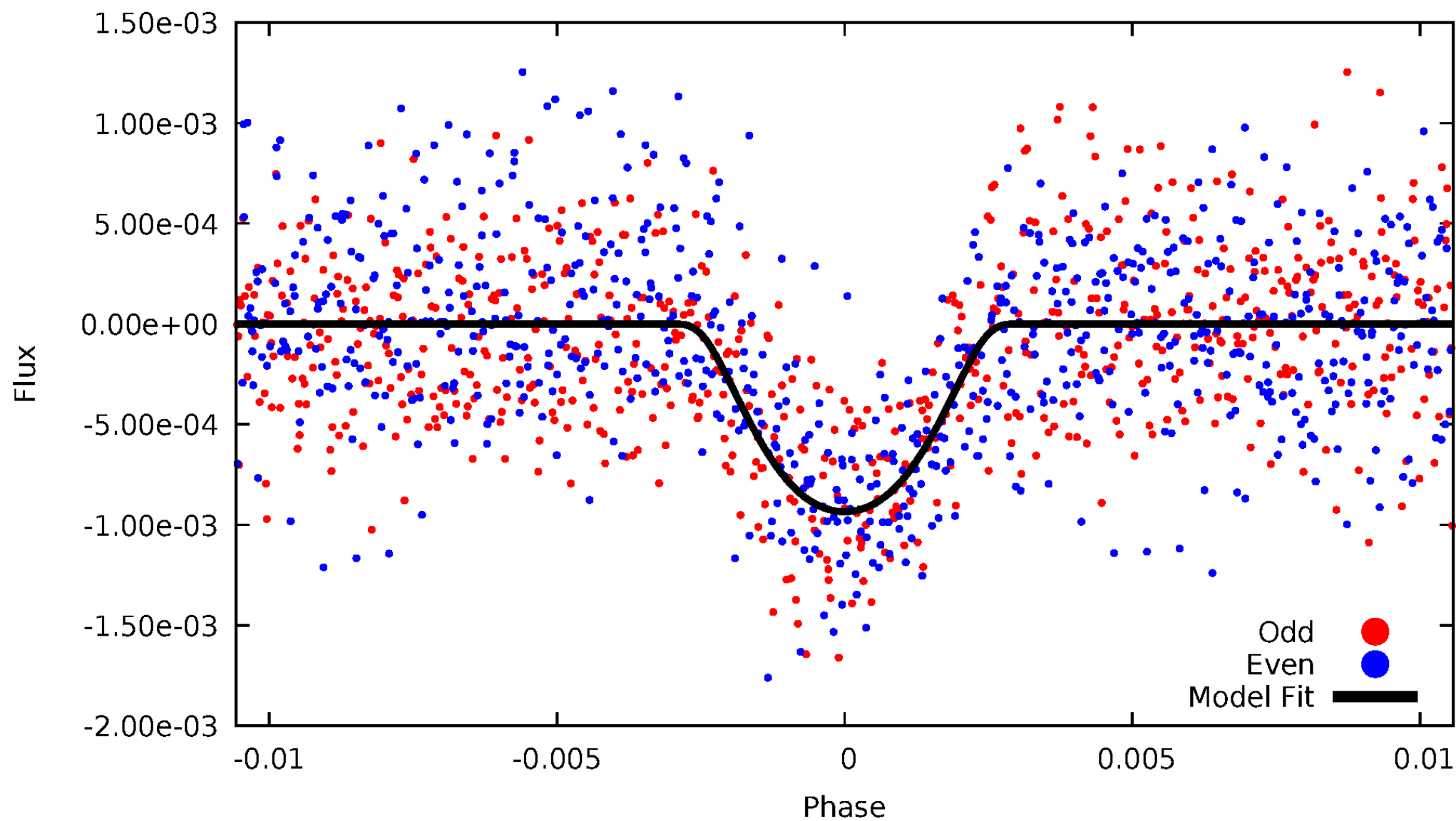


TCE 011090561-01



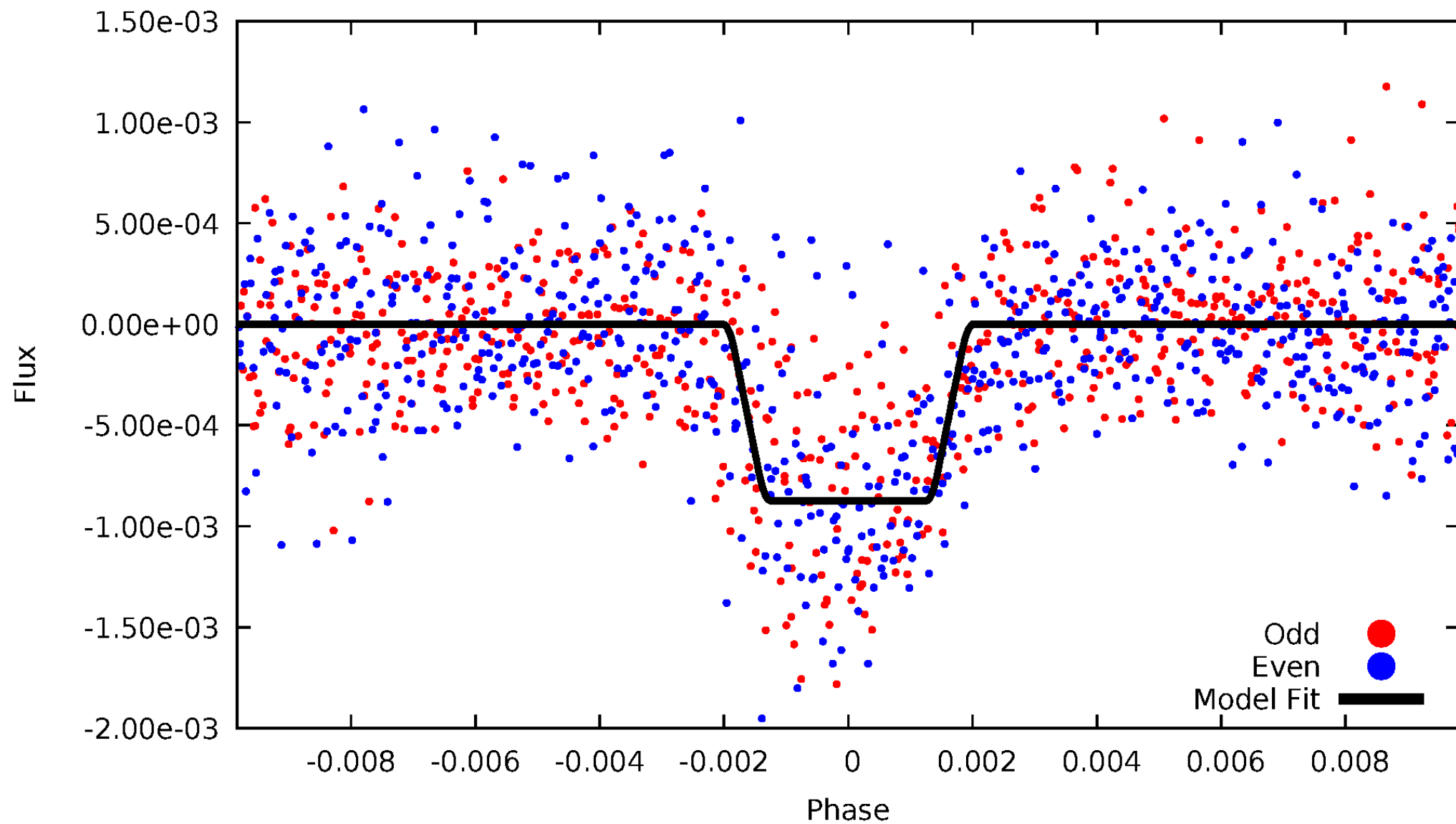
DV Odd/Even

TCE 011090561-01



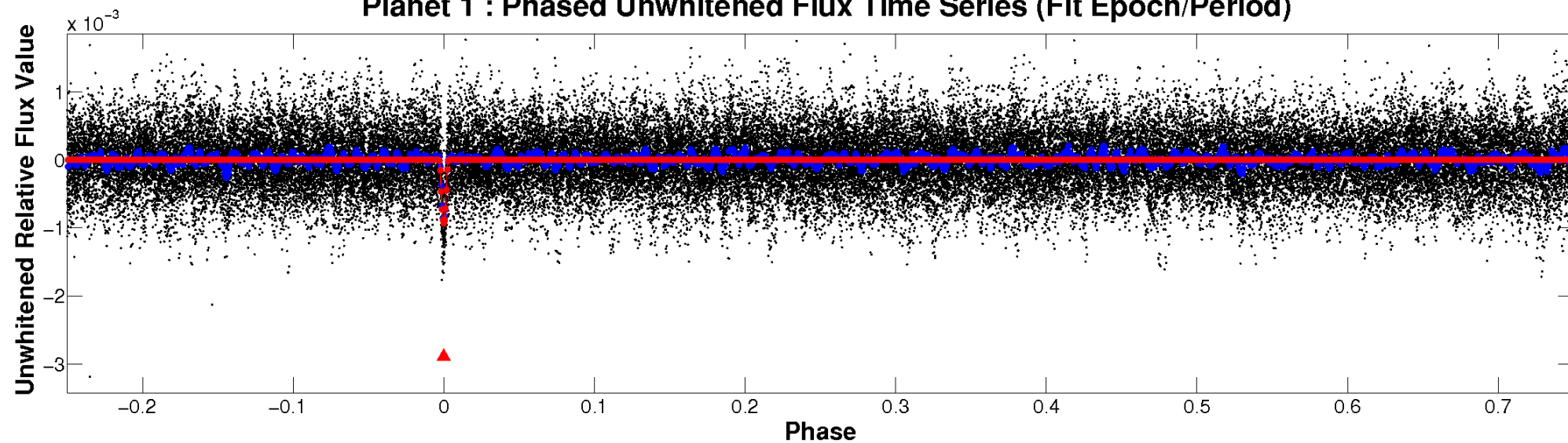
ALT Odd/Even

TCE 011090561-01

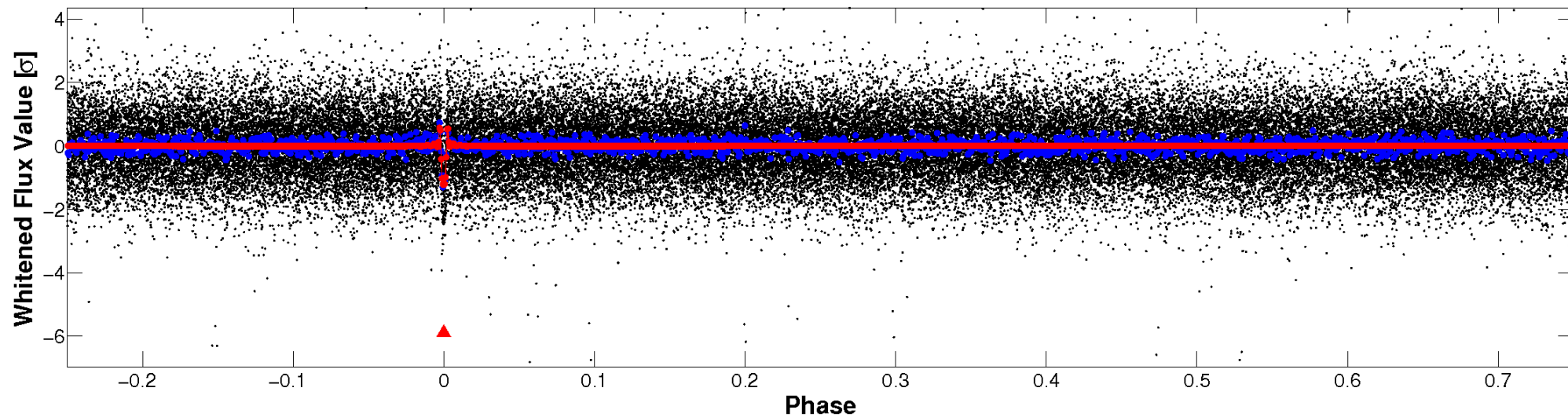


Non-Whitened Vs. Whitened Light Curve

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

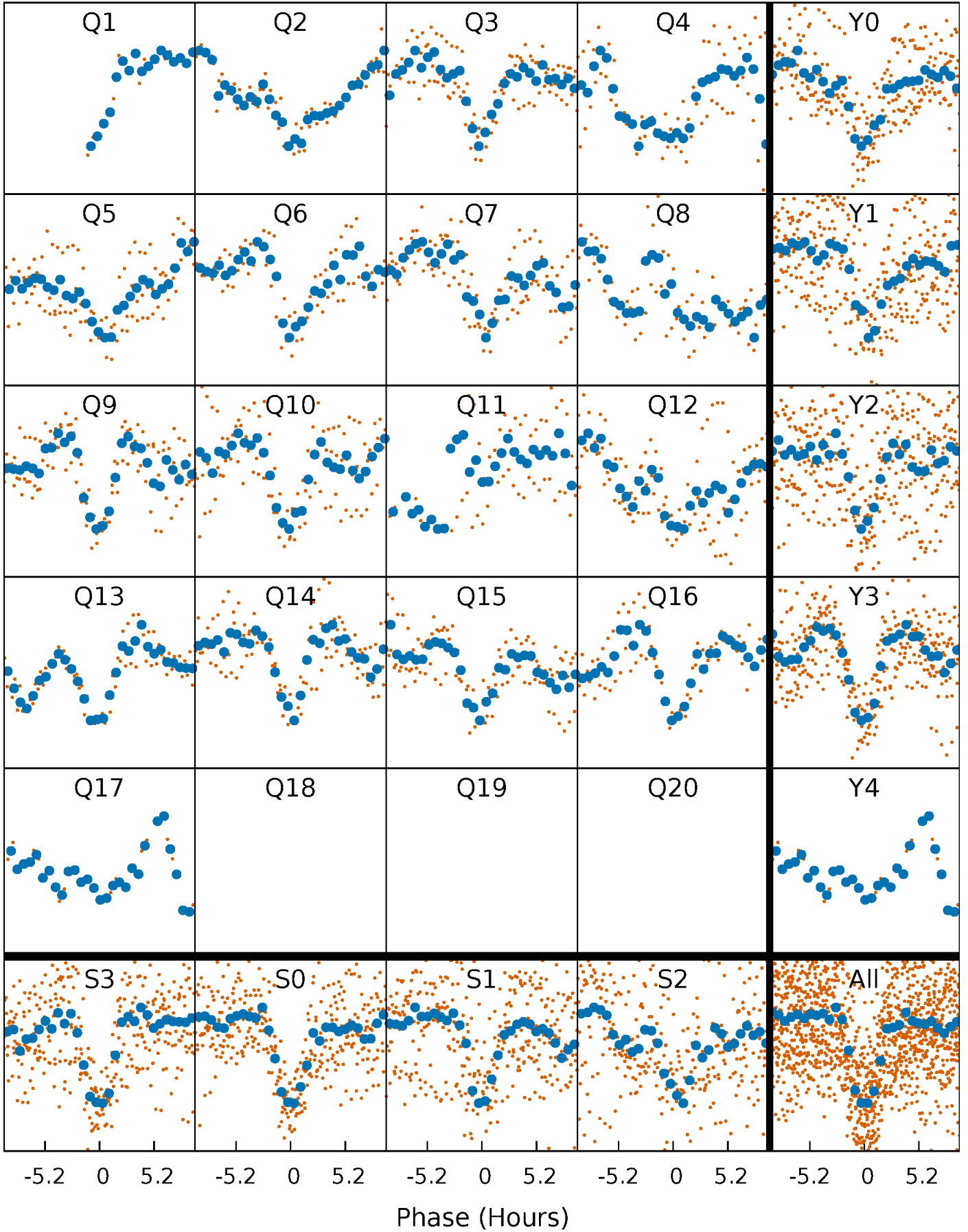


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



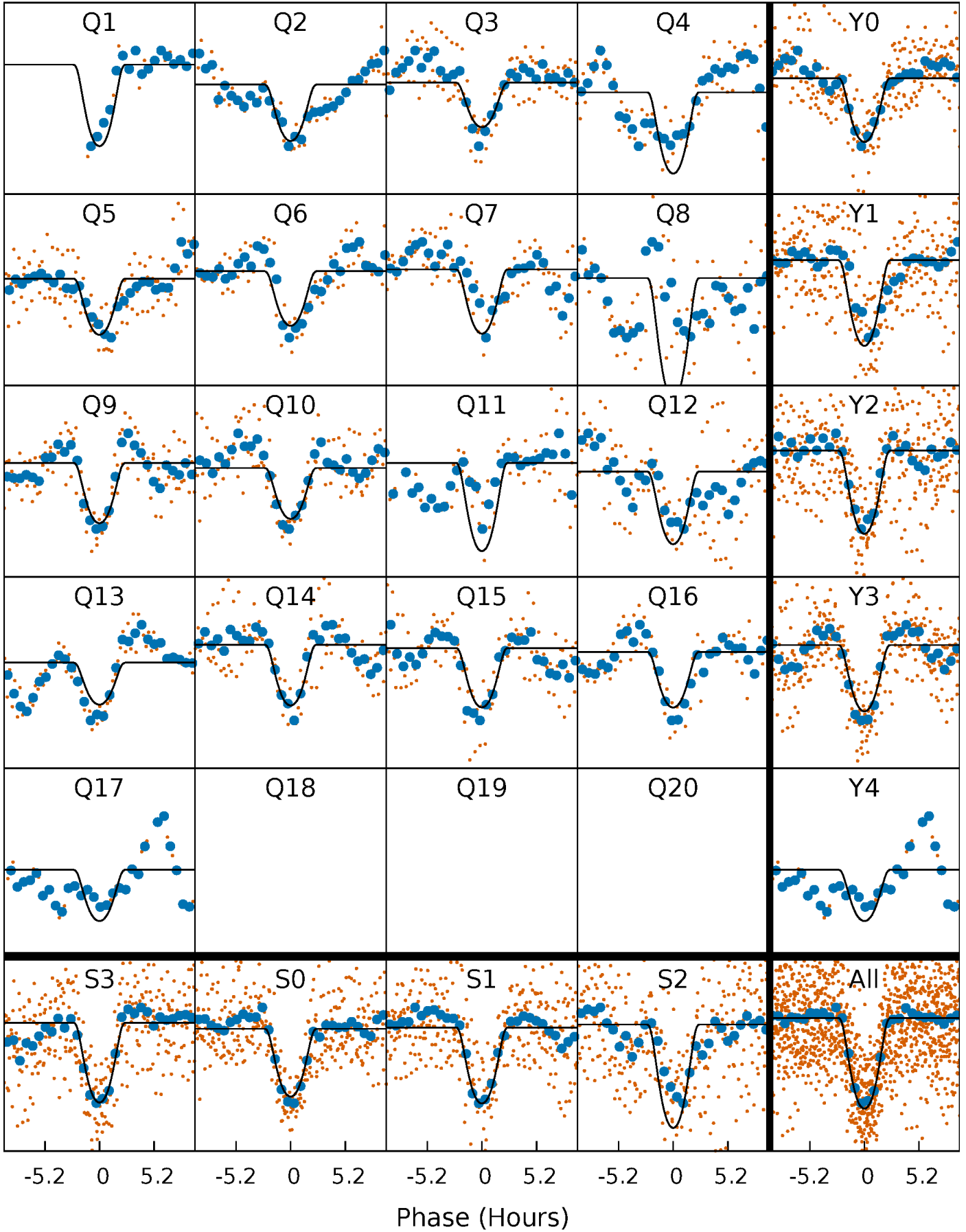
PDC Quarter-Phased Transit Curves

TCE 011090561-01 P= 35.872943 Days $T_0=131.557869$ (BKJD)



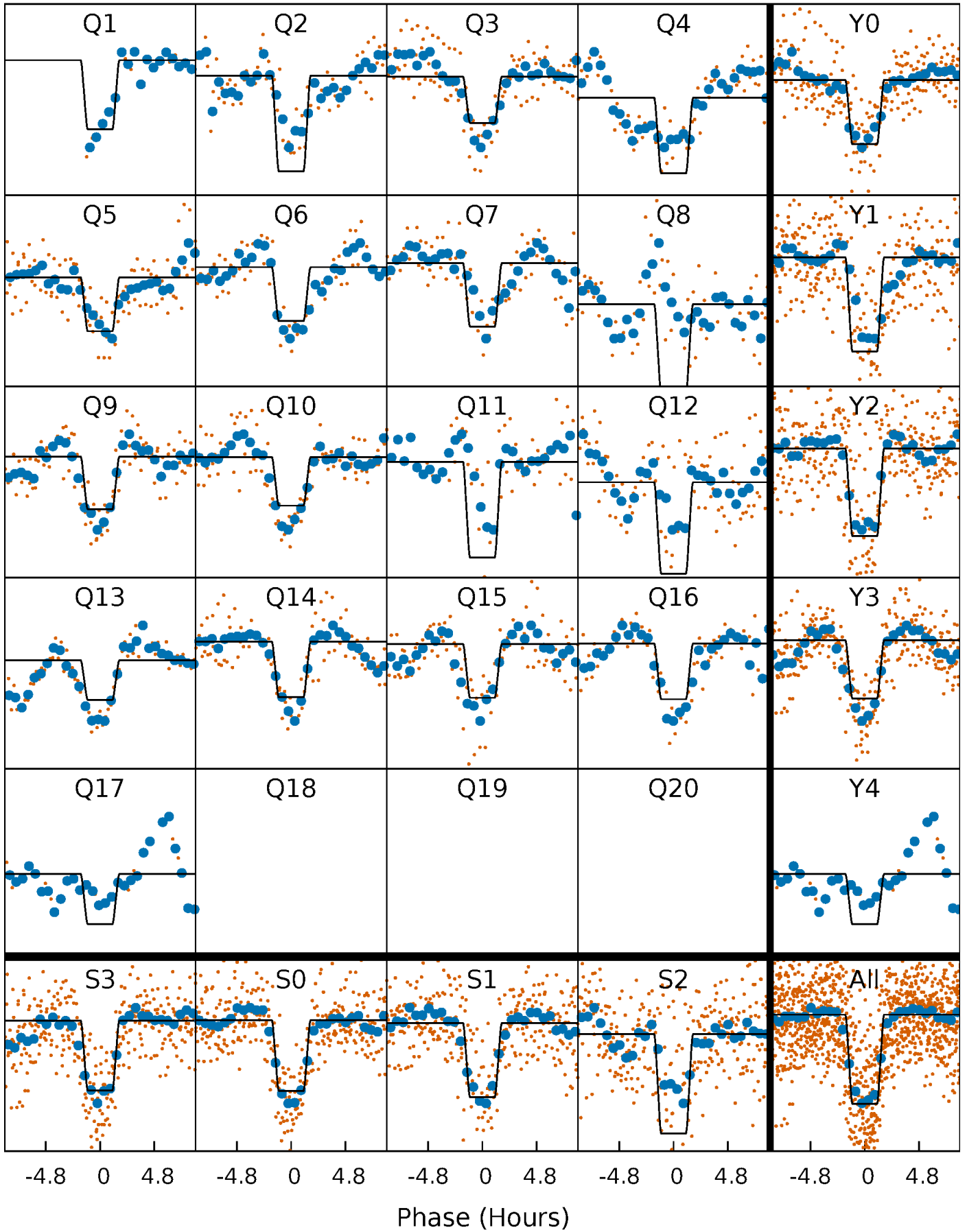
DV Quarter-Phased Transit Curves

TCE 011090561-01 P= 35.872943 Days $T_0=131.557869$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

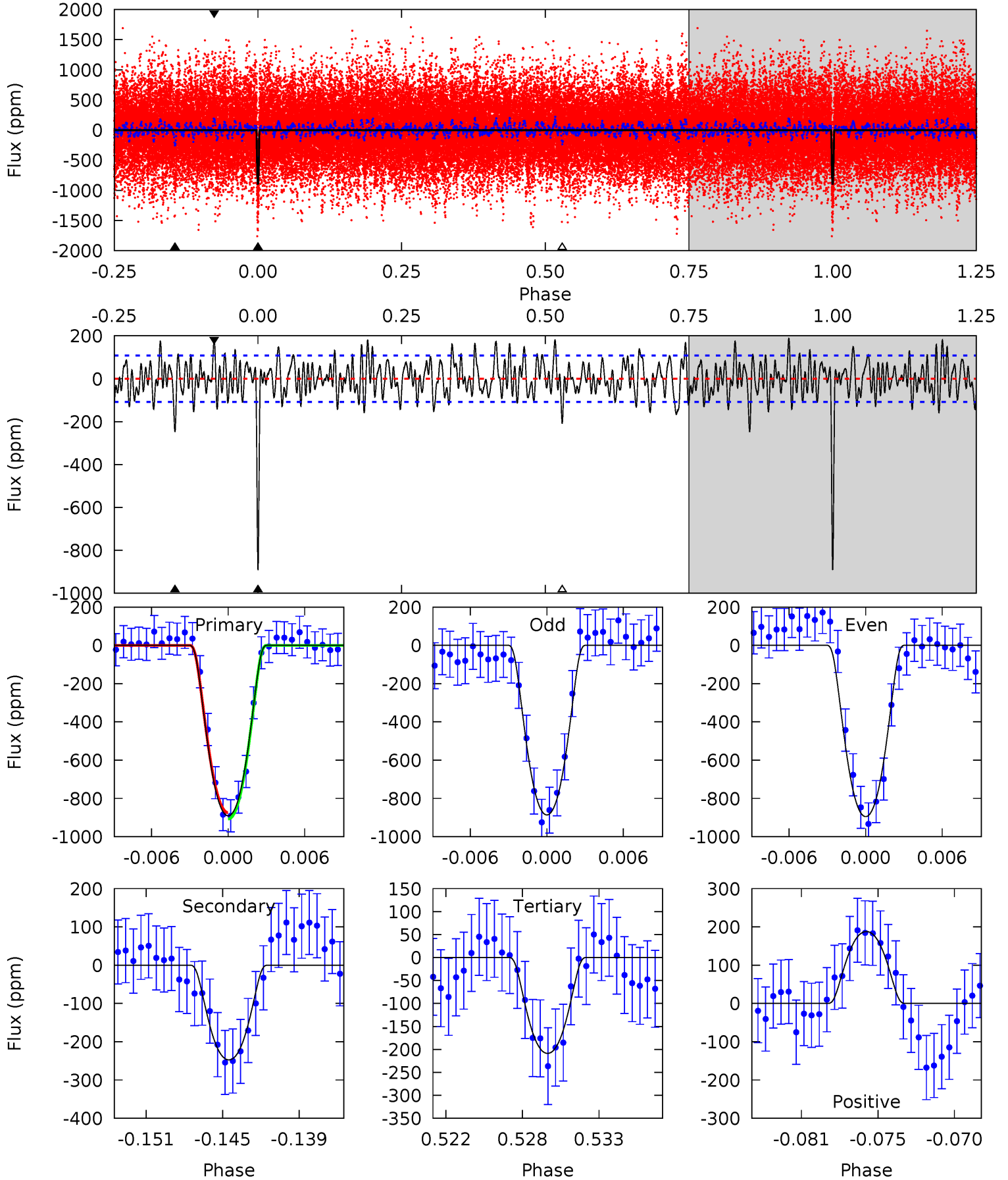
TCE 011090561-01 P= 35.872905 Days $T_0=131.561227$ (BKJD)



DV Model-Shift Uniqueness Test

011090561-01, P = 35.872943 Days, E = 95.684926 Days

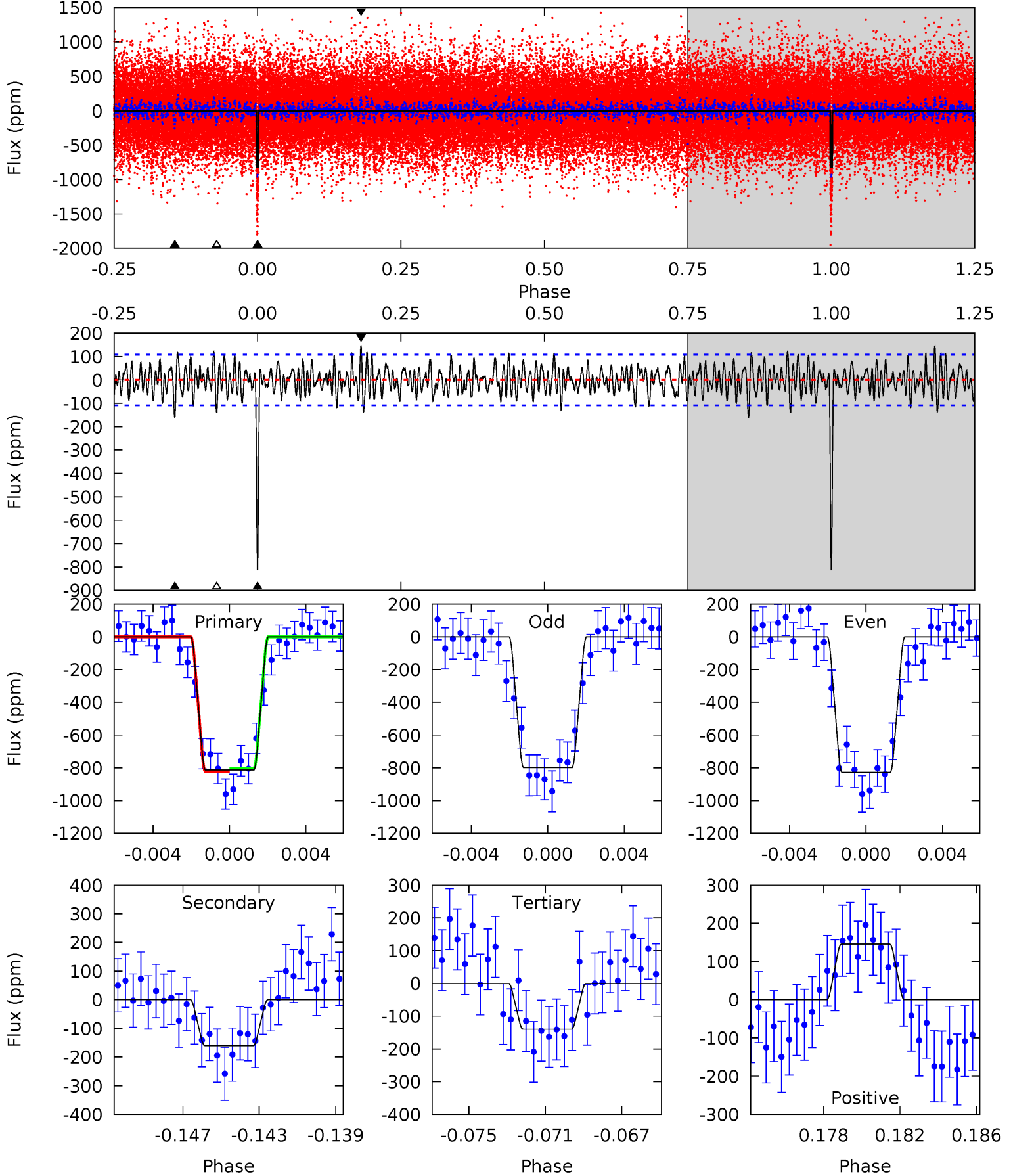
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
42.3	11.7	9.91	8.92	5.13	2.76	3.22	32.4	33.4	1.84	2.83	0.21	1.03	0.17	0.79



Alt Model-Shift Uniqueness Test

011090561-01, P = 35.872905 Days, E = 95.688322 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
39.0	7.69	6.71	6.98	5.20	2.88	2.24	32.3	32.0	0.97	0.70	0.66	0.99	0.15	0.40



Stellar Parameters For KIC 011090561

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5254^{+184}_{-299}	$2.494^{+0.030}_{-0.030}$	$-0.500^{+0.200}_{-0.350}$	$15.369^{+0.955}_{-5.094}$	$2.687^{+0.161}_{-1.451}$	$0.001^{+0.001}_{-0.000}$
	+4%/-6%	+1%/-1%	+40%/-70%	+6%/-33%	+6%/-54%	+52%/-13%
Source	PHO1	AST9	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 011090561-01 / KOI 5865.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-247 ± 21	$65.29^{+6.96}_{-7.10}$	2334^{+95}_{-137}	3642^{+194}_{-195}	$2.839^{+0.672}_{-0.525}$
Alt.	-160 ± 21	$50.03^{+6.60}_{-6.64}$	2339^{+89}_{-144}	3697^{+232}_{-201}	$3.100^{+0.982}_{-0.673}$

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 $A_{obs} \gg 1.0$

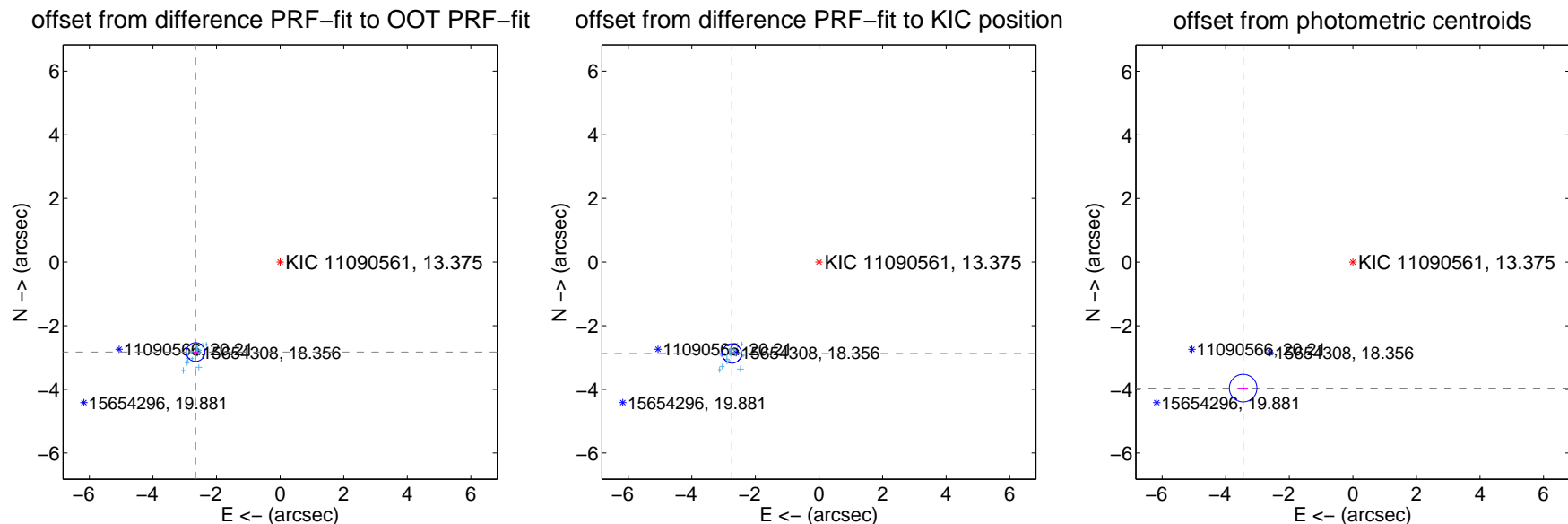
DV Centroid Data

Supplemental centroid analysis for 011090561-01. Kepler magnitude: 13.38. Transit SNR 17.14

There are 16 quarters with good PRF difference image offsets

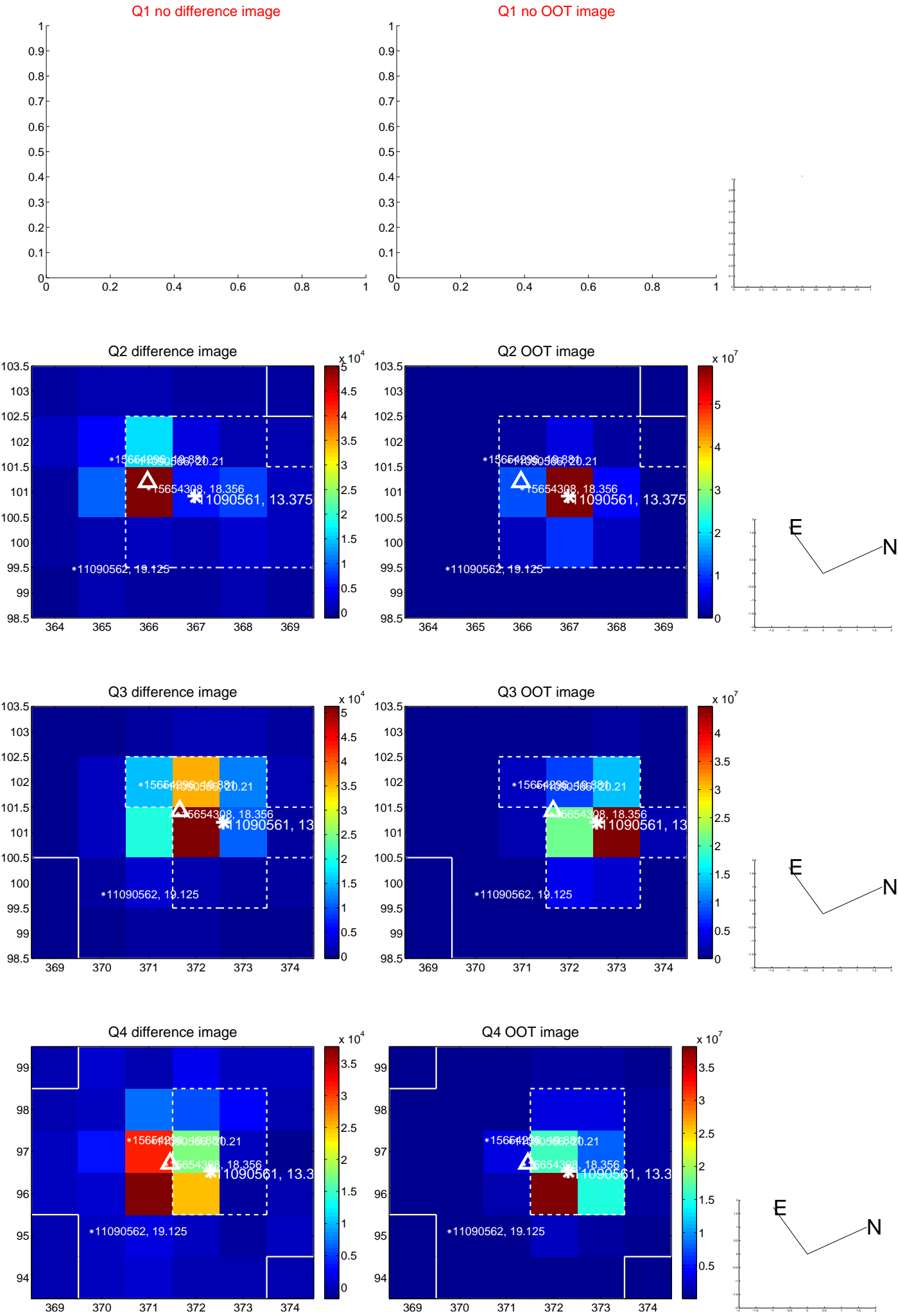
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.881 \pm 0.098	39.53	2.658 ± 0.084	-2.829 ± 0.091
PRF-fit source offset from KIC position	3.969 \pm 0.101	39.15	2.740 ± 0.087	-2.872 ± 0.094
photometric centroid source offset	5.25 \pm 0.14	36.28	3.45 ± 0.15	-3.96 ± 0.14

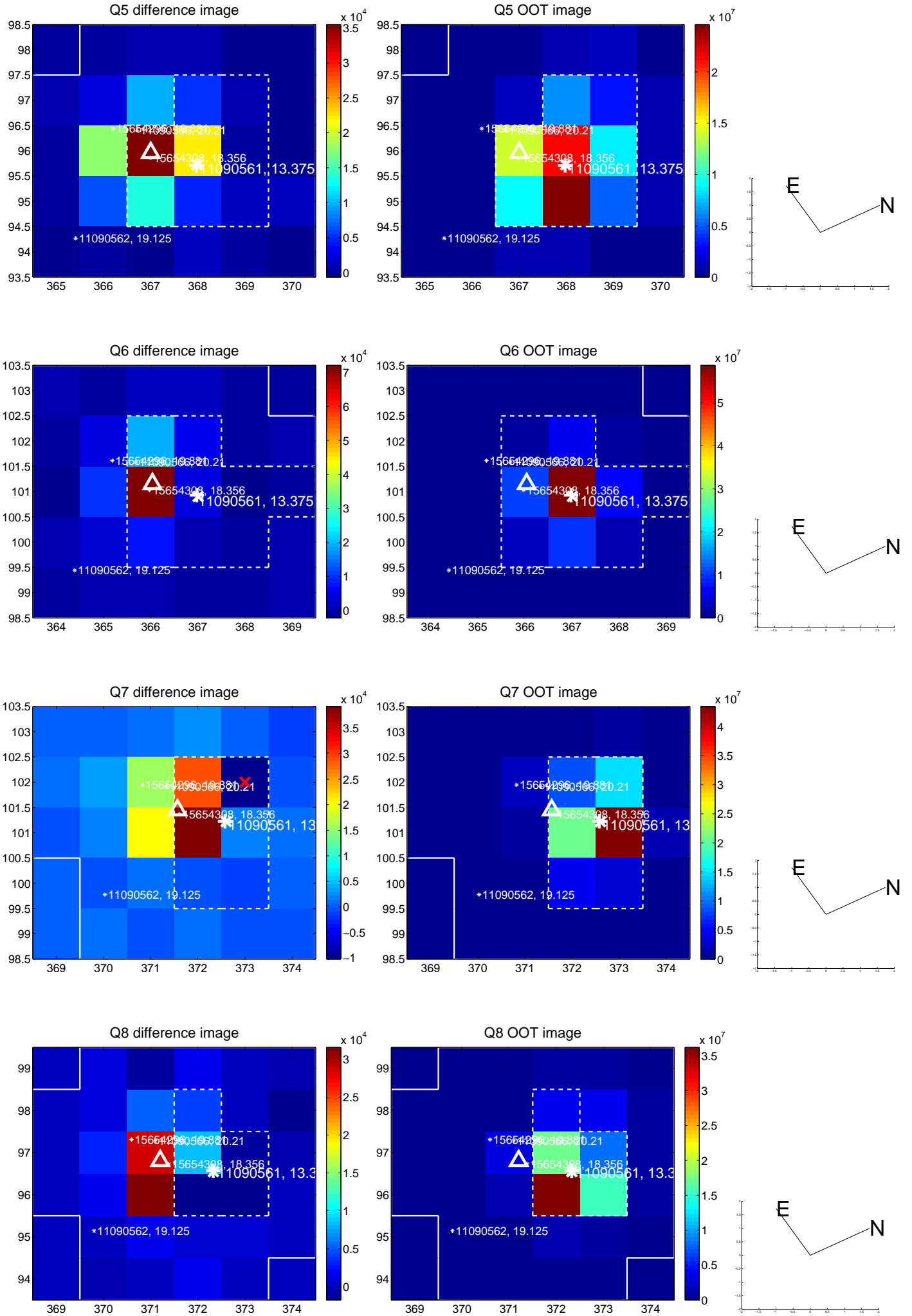


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

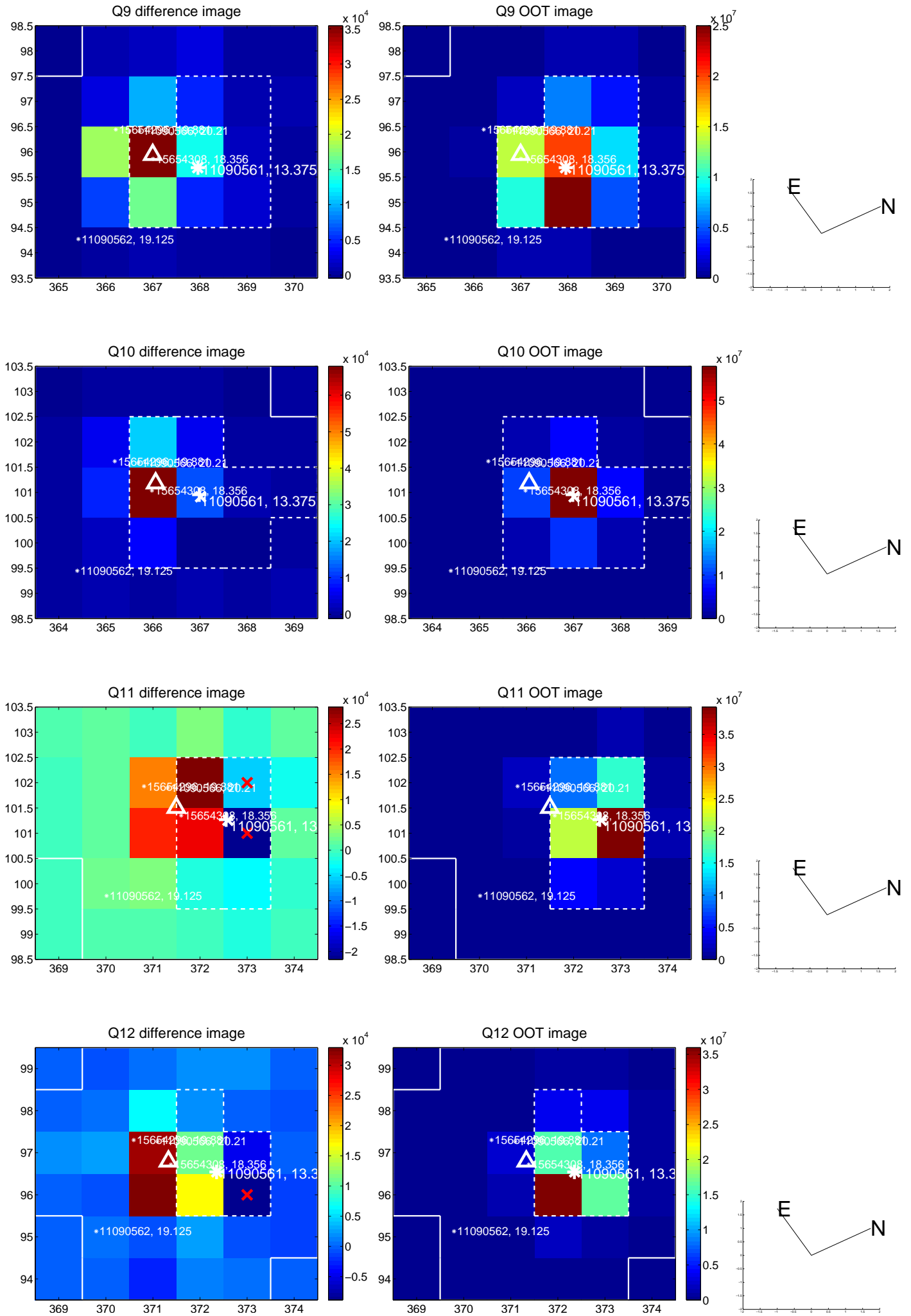
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



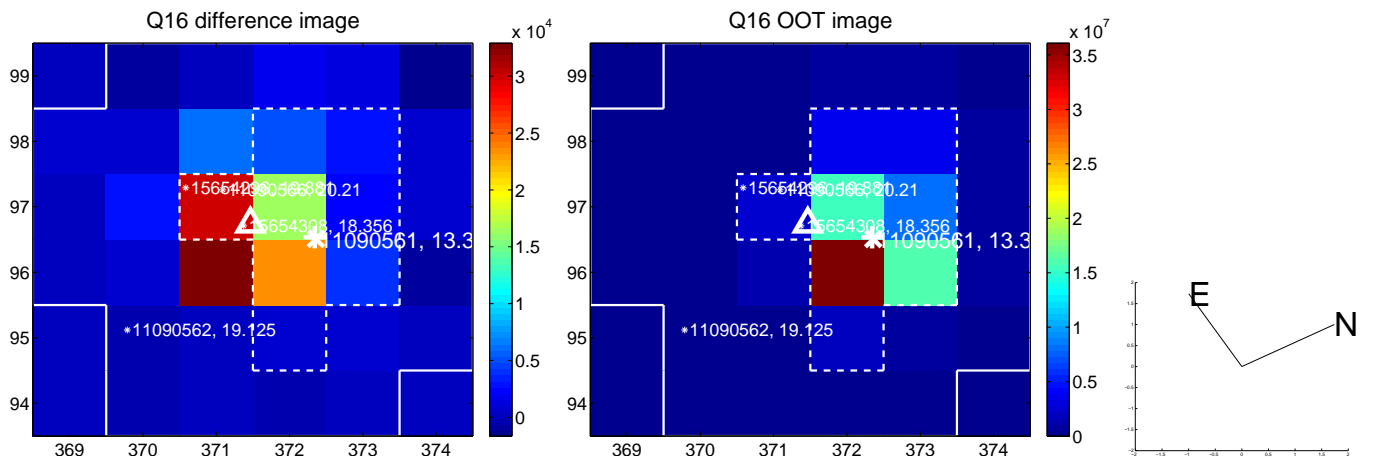
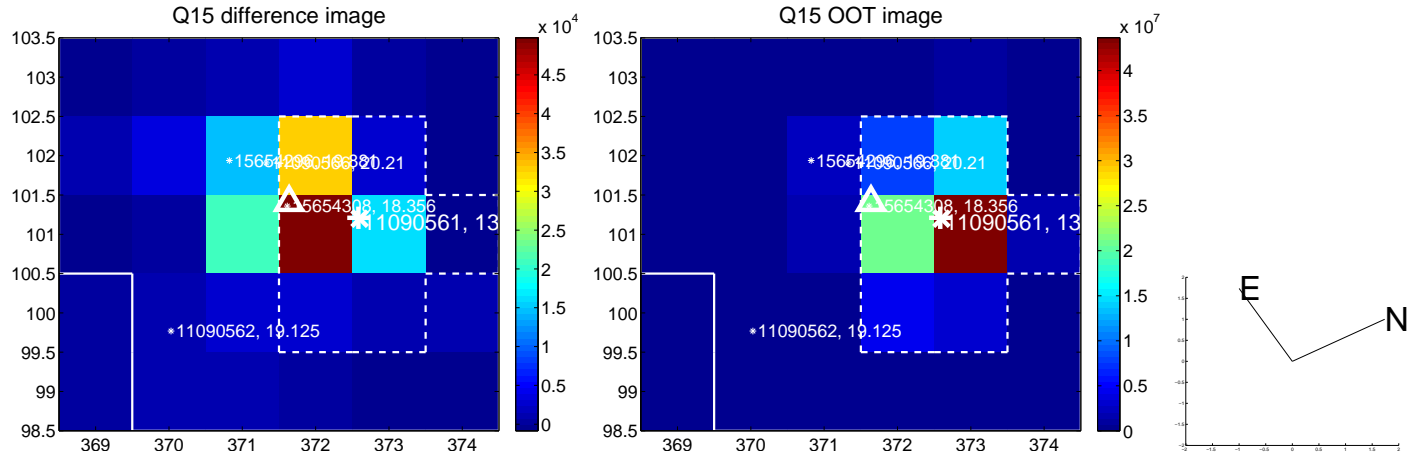
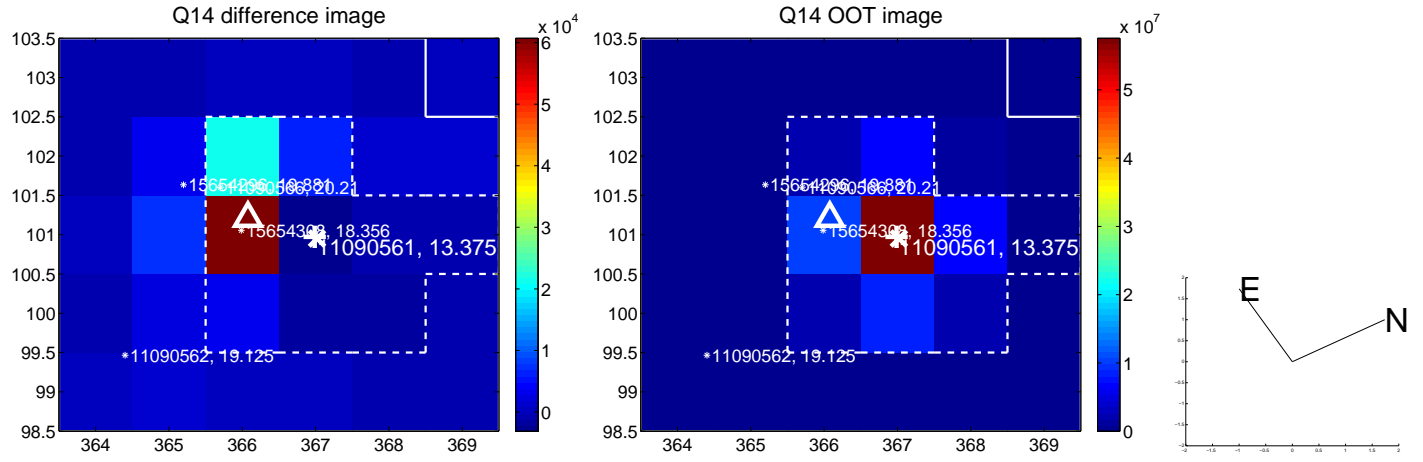
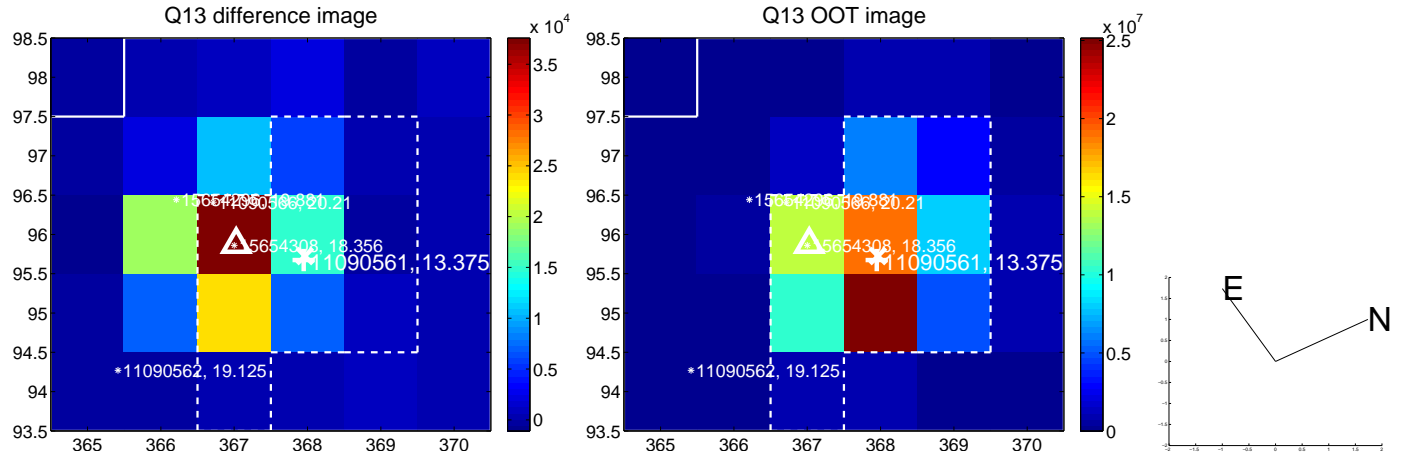
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



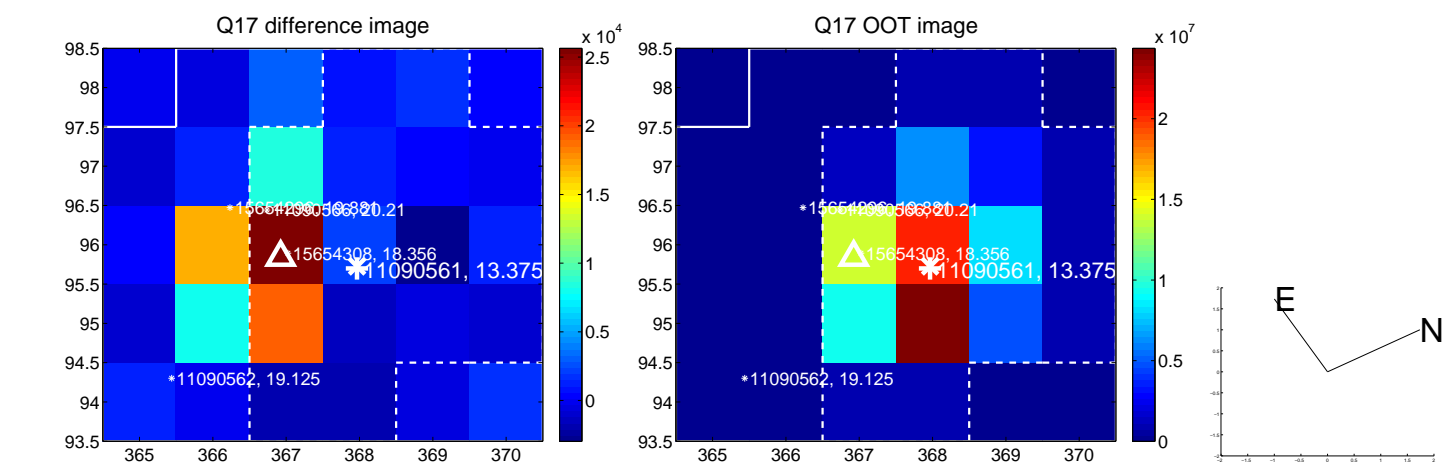
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



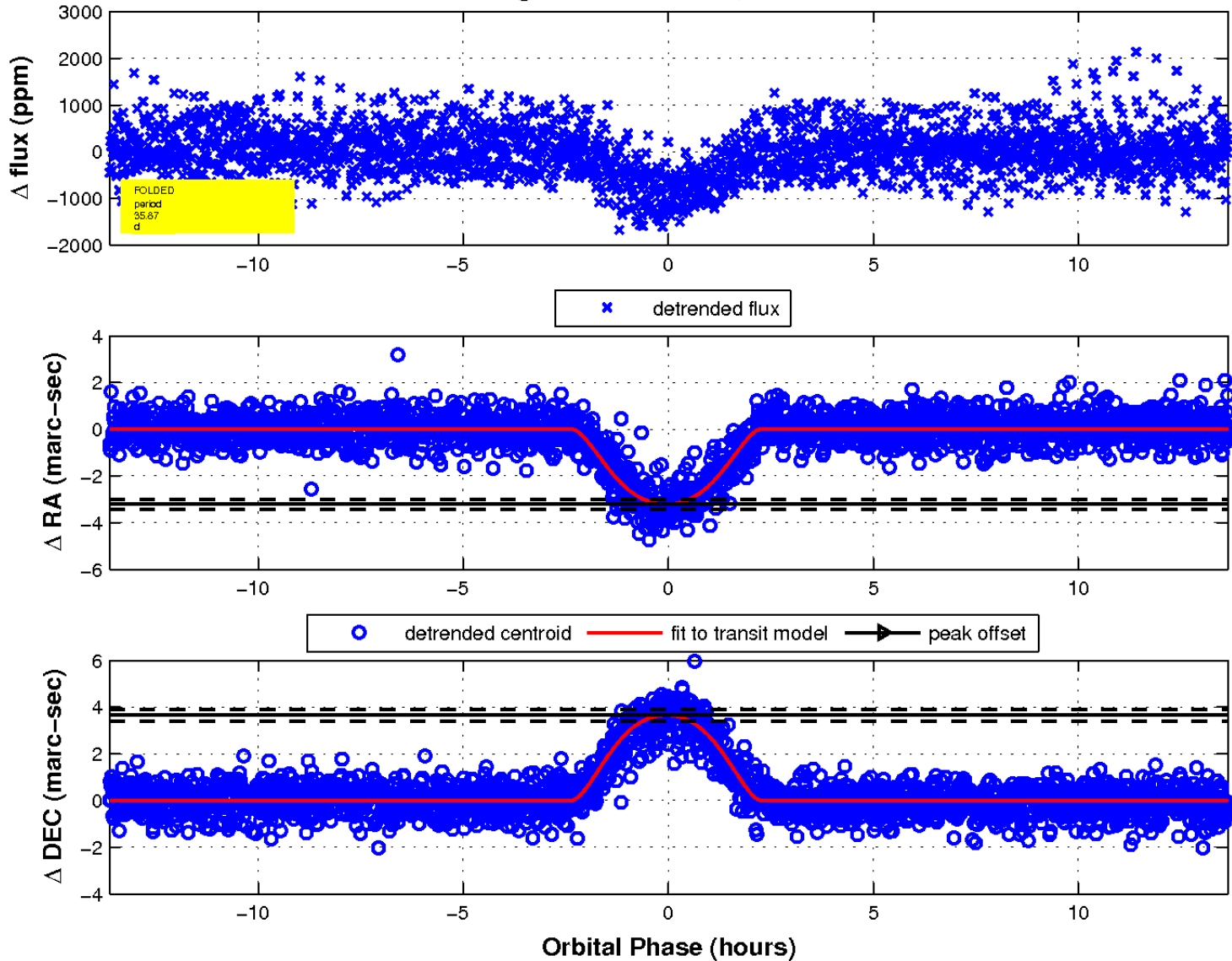
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

