

KIC 006063220

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})
006063220-01	OBS	0305.01	4.603575	135.011407	434.0	2.525	84.0	89.8	0.74	4783	1.89	101.73

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006063220-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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.

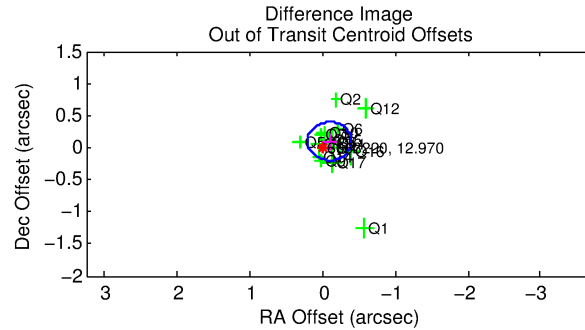
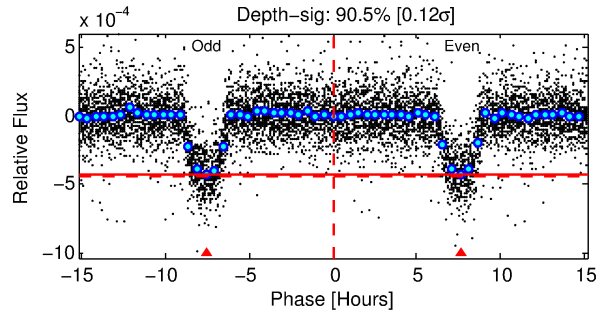
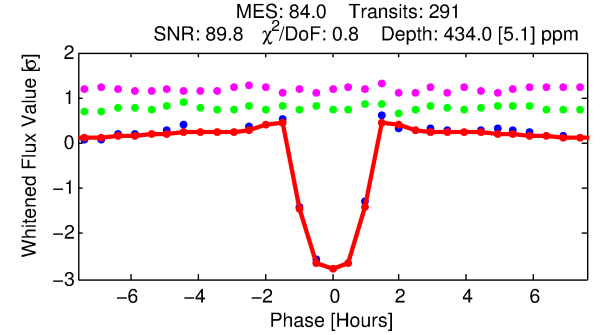
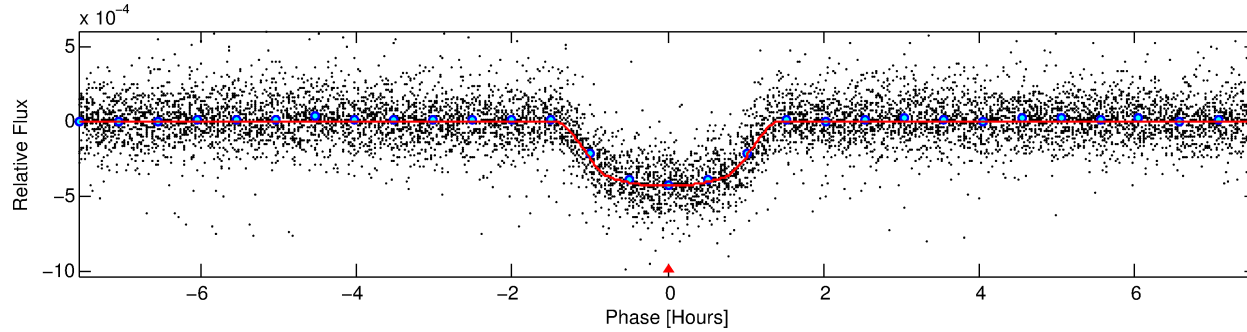
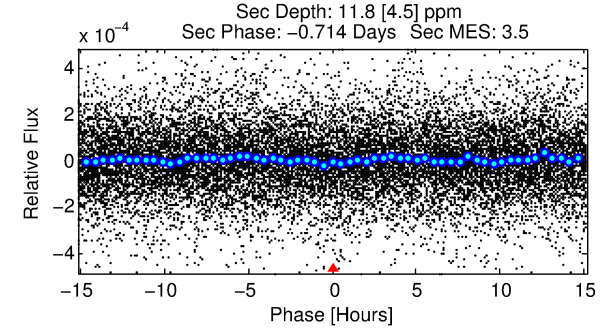
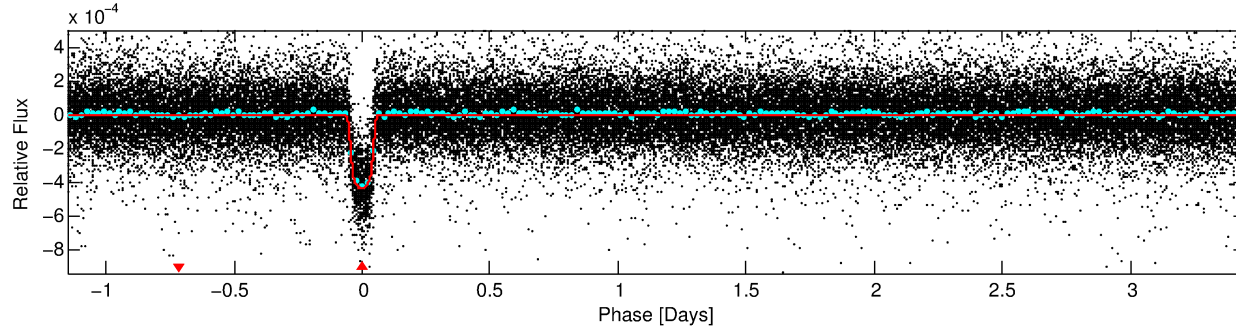
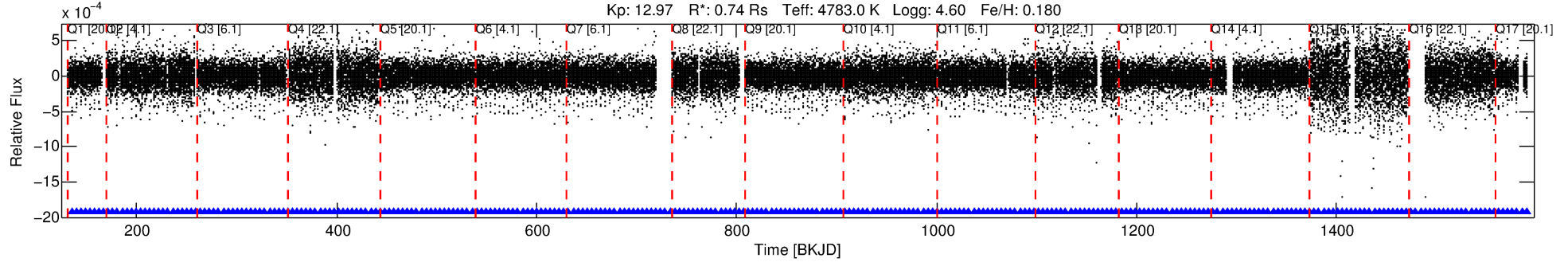
Ephemeris Match Information For 006063220-01

No Significant Match Found

DV One-Page Summary

KIC: 6063220 Candidate: 1 of 1 Period: 4.604 d
KOI: K00305.01 Name: Kepler-99b Corr: 0.985

Kp: 12.97 R*: 0.74 Rs Teff: 4783.0 K Logg: 4.60 Fe/H: 0.180



DV Fit Results:

Period = 4.60357 [0.00000] d
Epoch = 135.0114 [0.0004] BKJD
Rp/R* = 0.0234 [0.0013]
a/R* = 6.91 [1.39]
b = 0.90 [0.05]
Seff = 101.73 [11.39]
Teff = 810 [23] K
Rp = 1.89 [0.14] Re
a = 0.0503 [0.0025] AU
Ag = 4.58 [1.87] [1.91σ]
Teffp = 1831 [187] K [5.42σ]

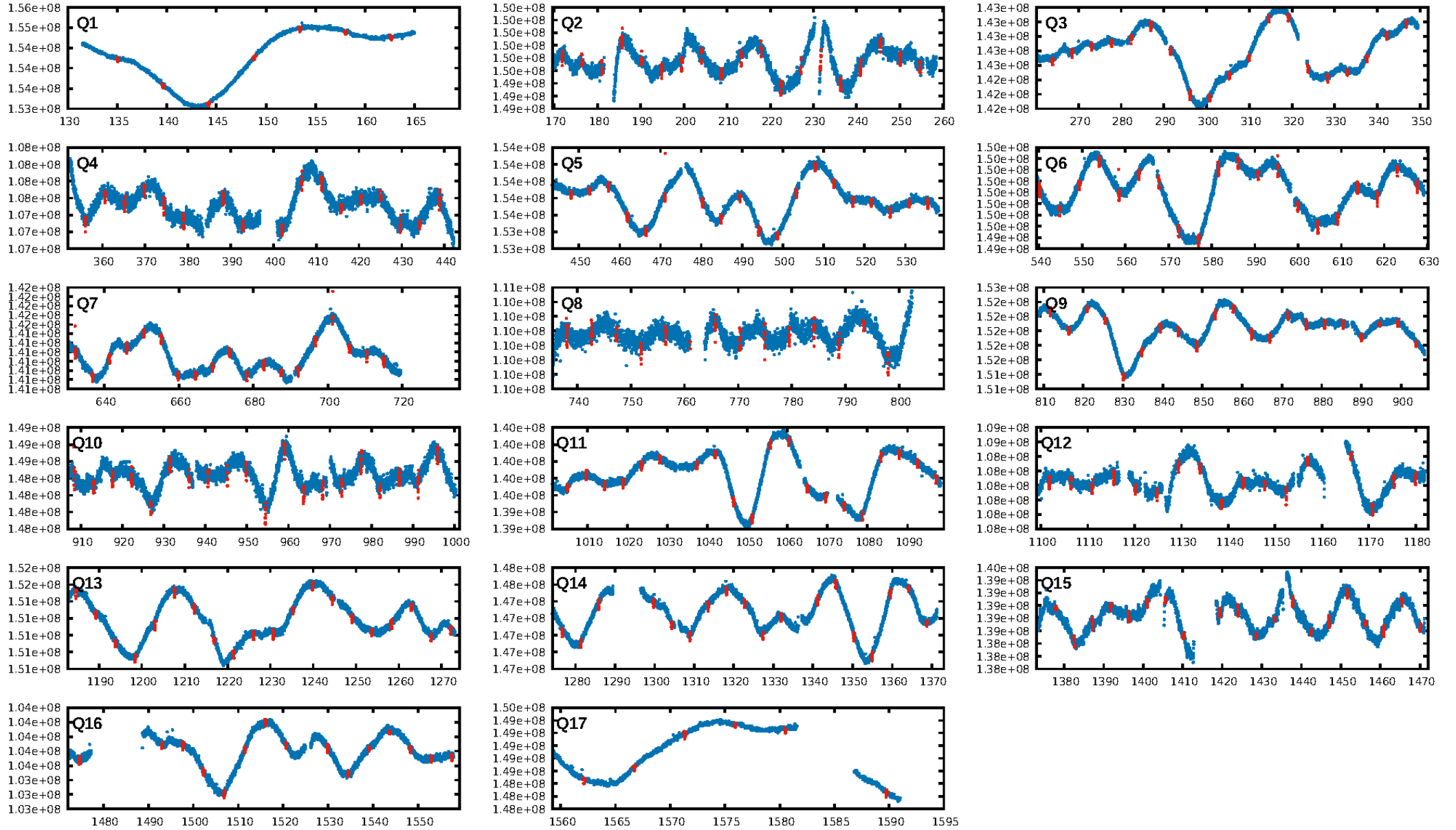
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [278/278]
GhostDiagnostic-chr: 4.173
Centroid-sig: 0.0%
Centroid-so: 0.881 arcsec [7.20σ]
OotOffset-rm: 0.139 arcsec [1.39σ]
KicOffset-rm: 0.089 arcsec [0.66σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

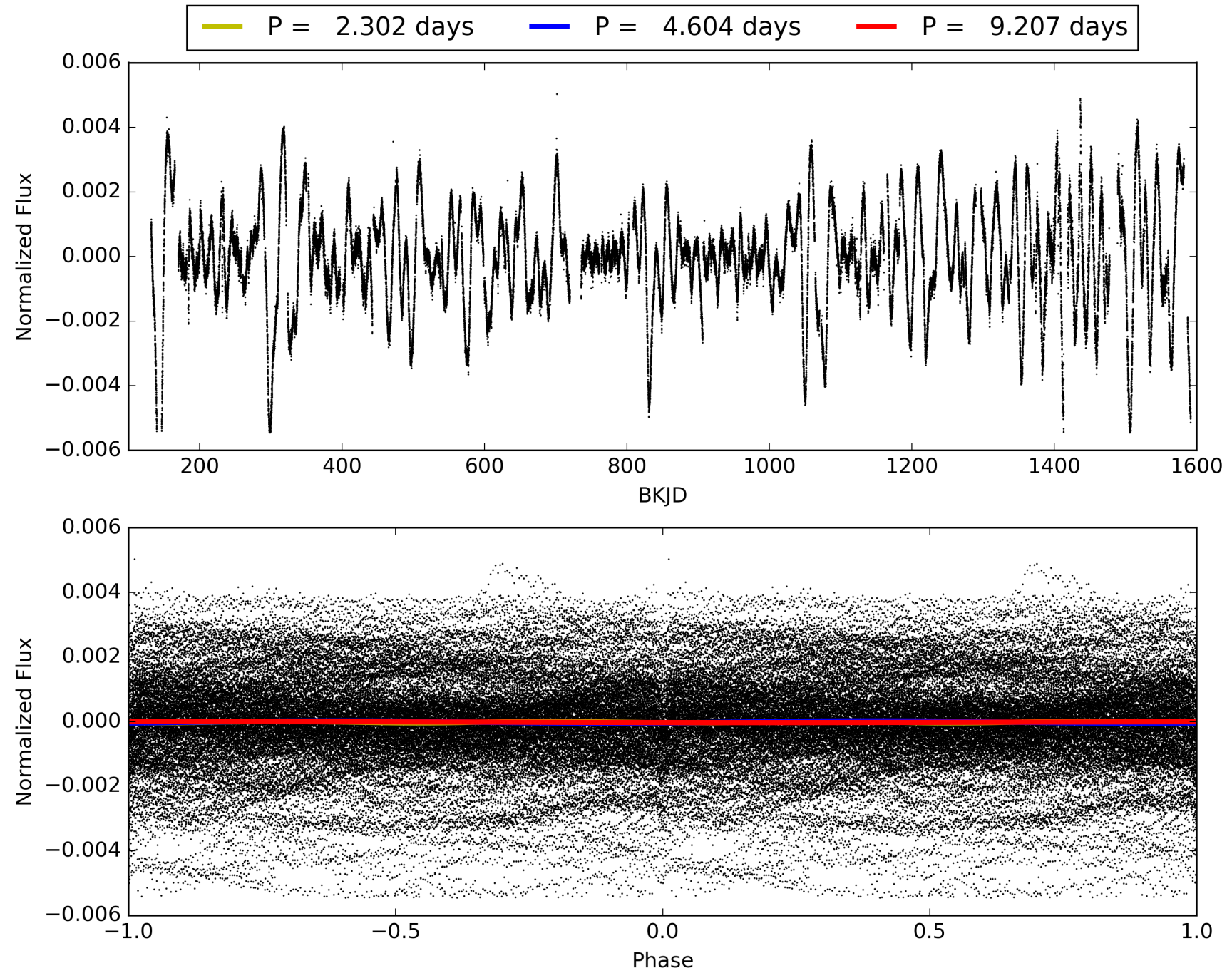
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:09:43 Z

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

TCE 006063220-01, PDC Light Curves

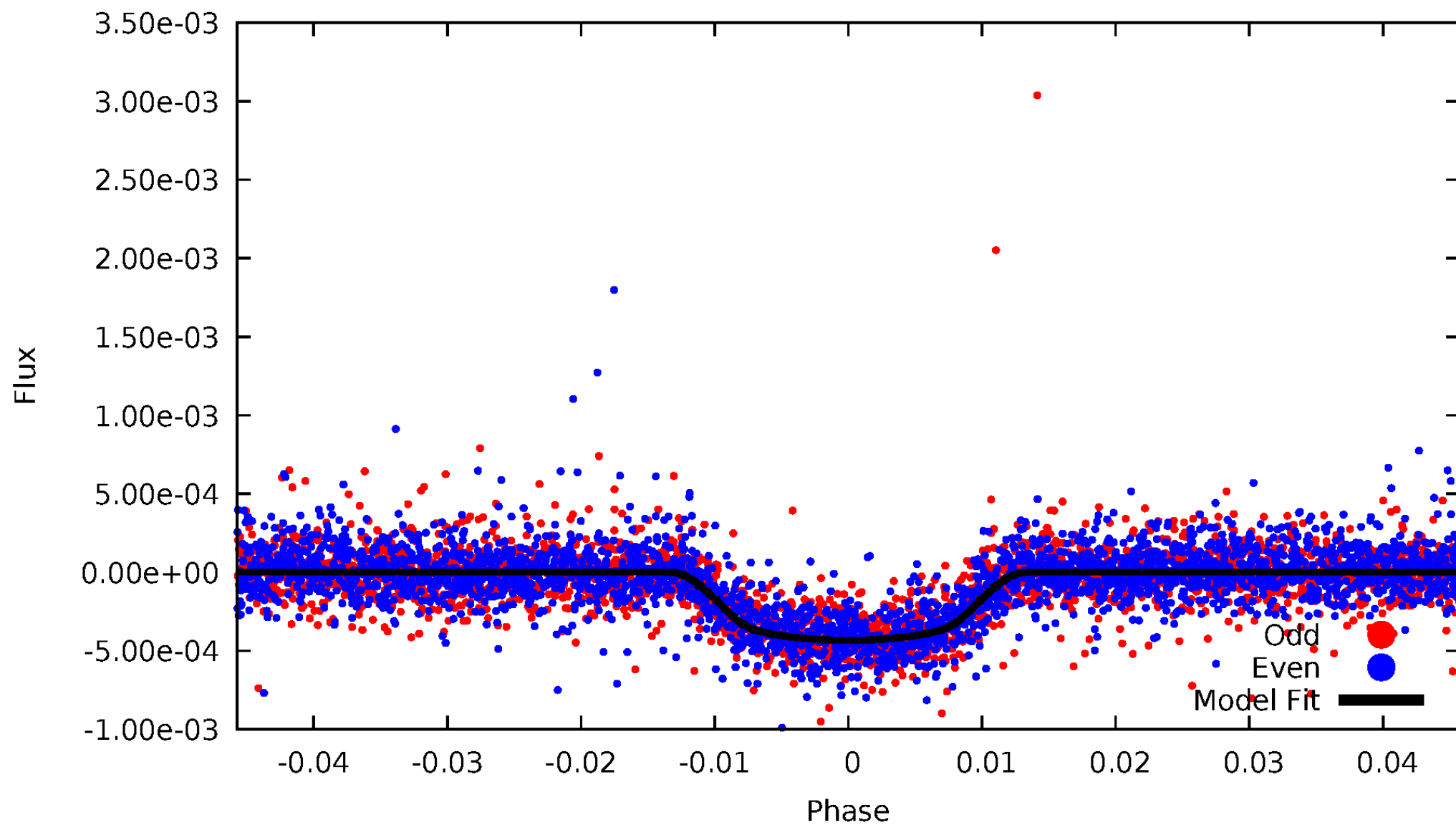


TCE 006063220-01



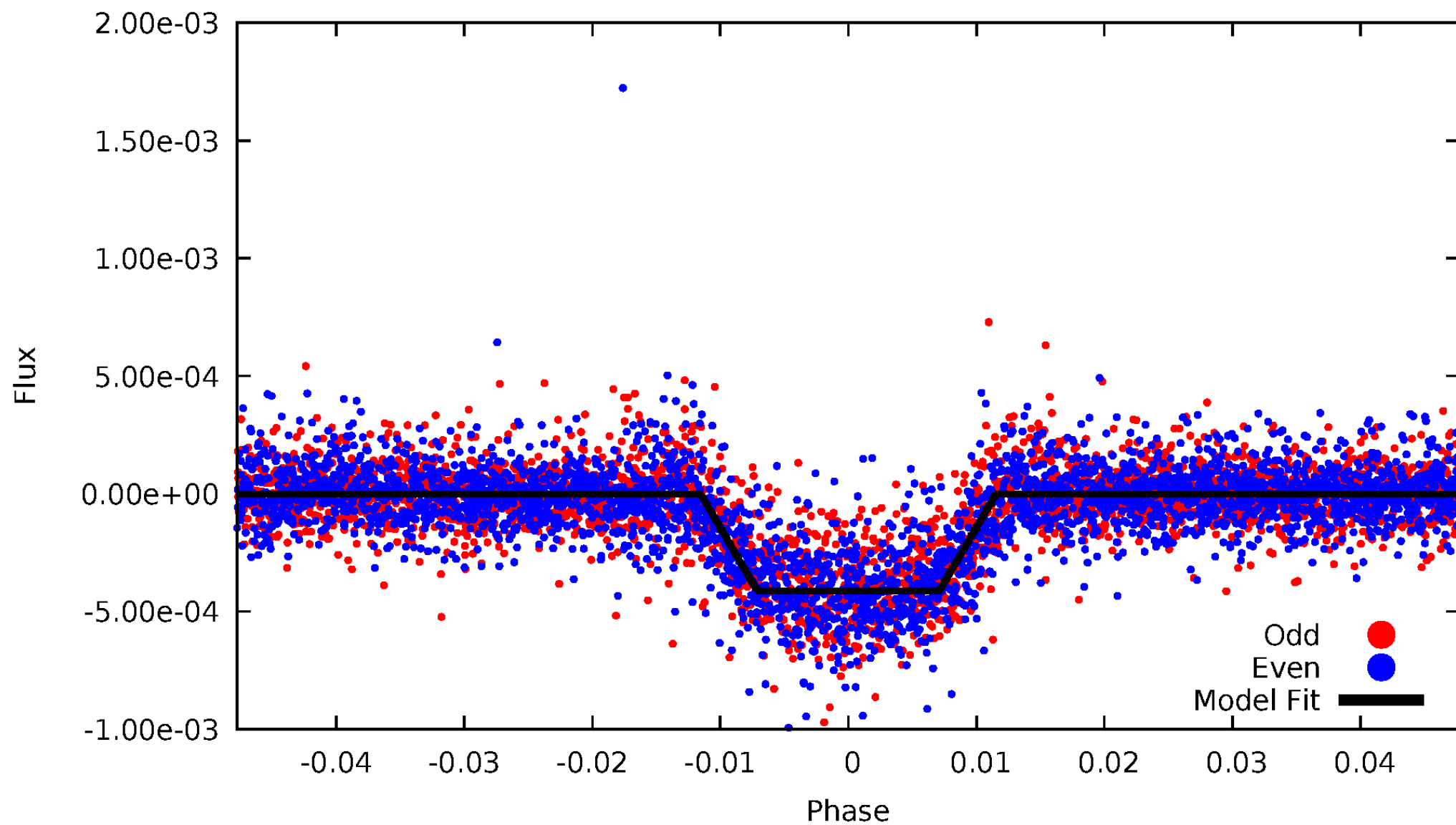
DV Odd/Even

TCE 006063220-01



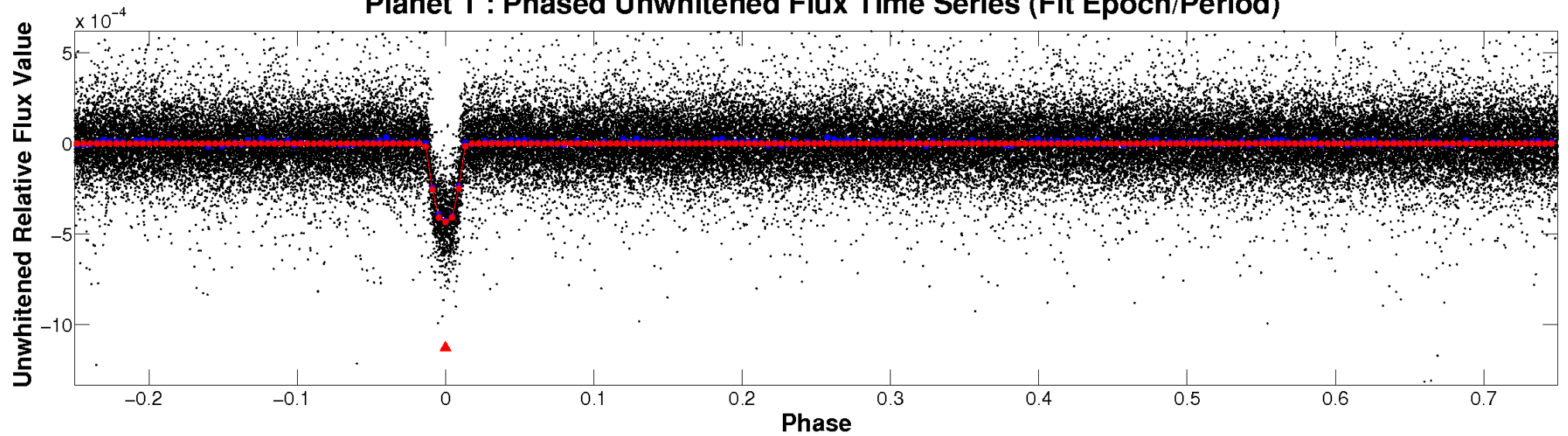
ALT Odd/Even

TCE 006063220-01

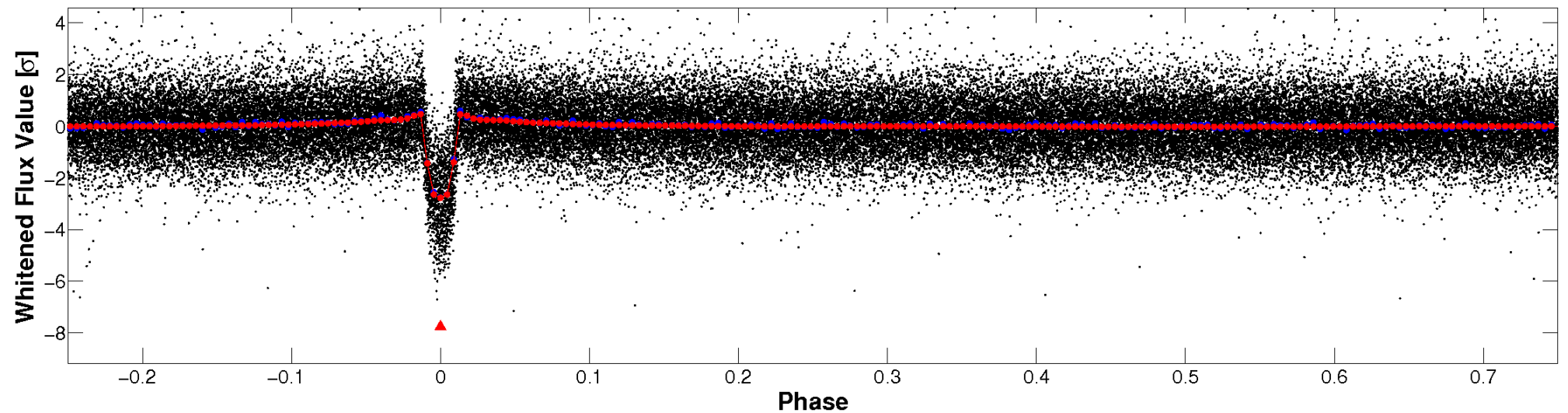


Non-Whitened Vs. Whitened Light Curve

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

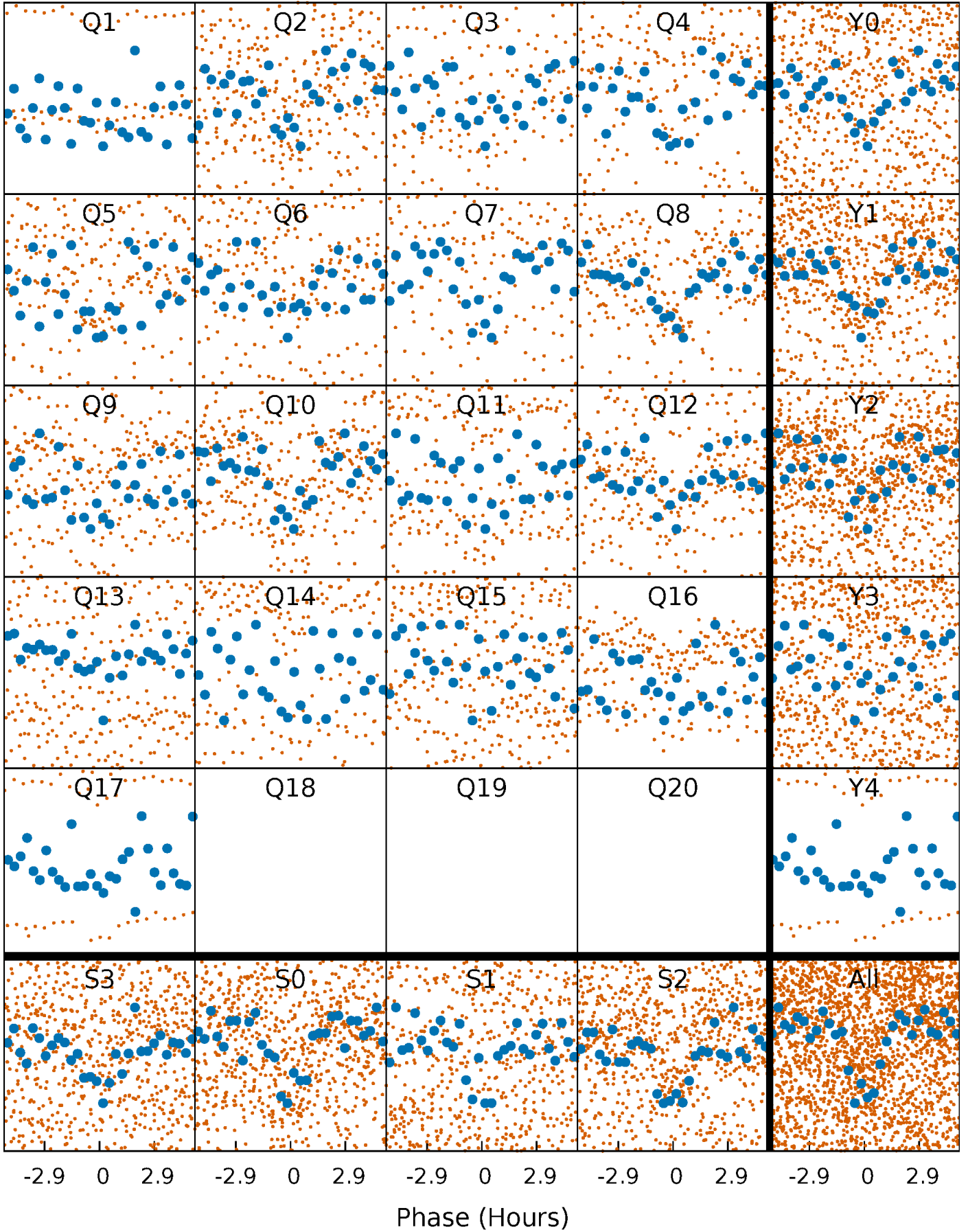


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



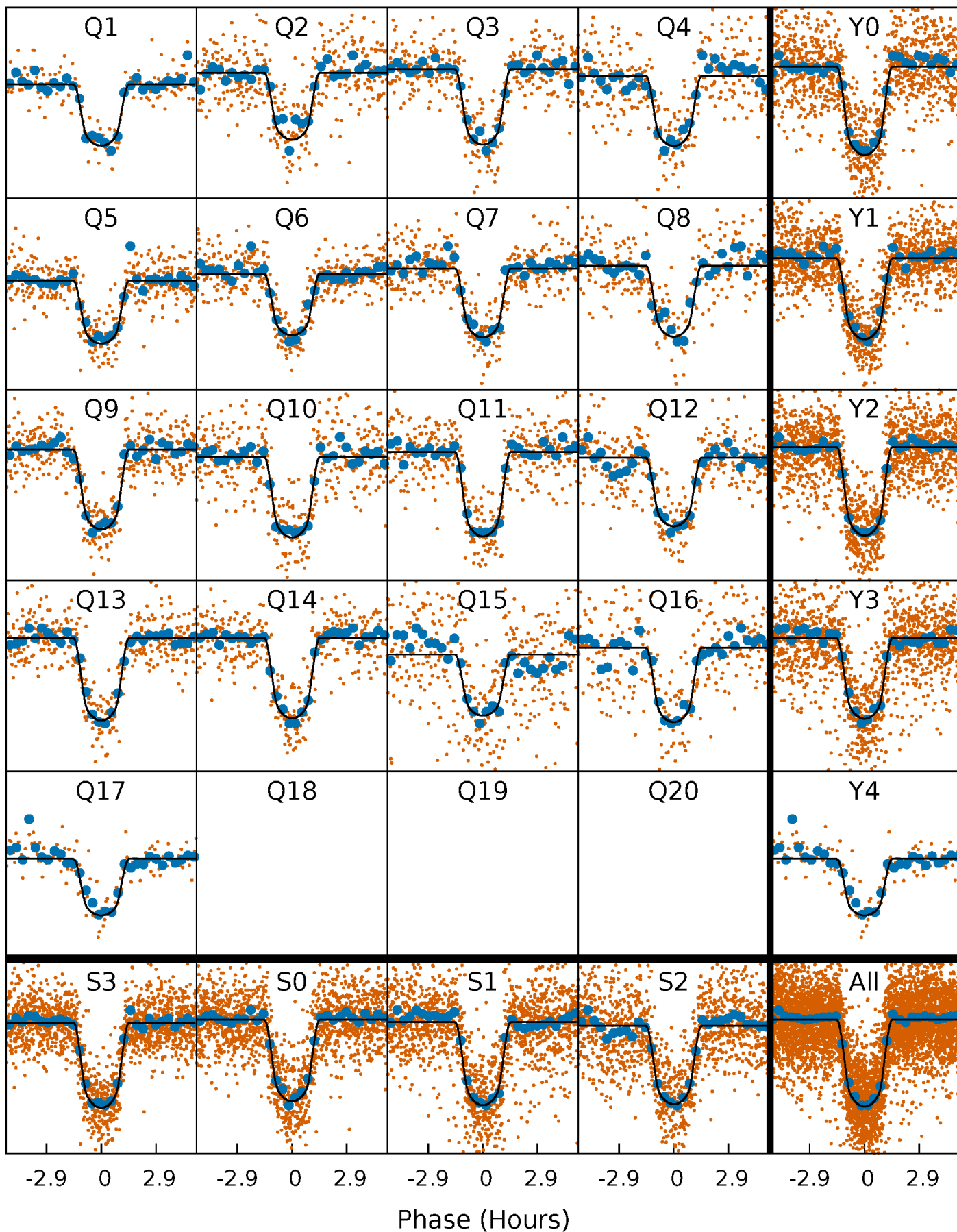
PDC Quarter-Phased Transit Curves

TCE 006063220-01 P= 4.603575 Days $T_0=135.011407$ (BKJD)



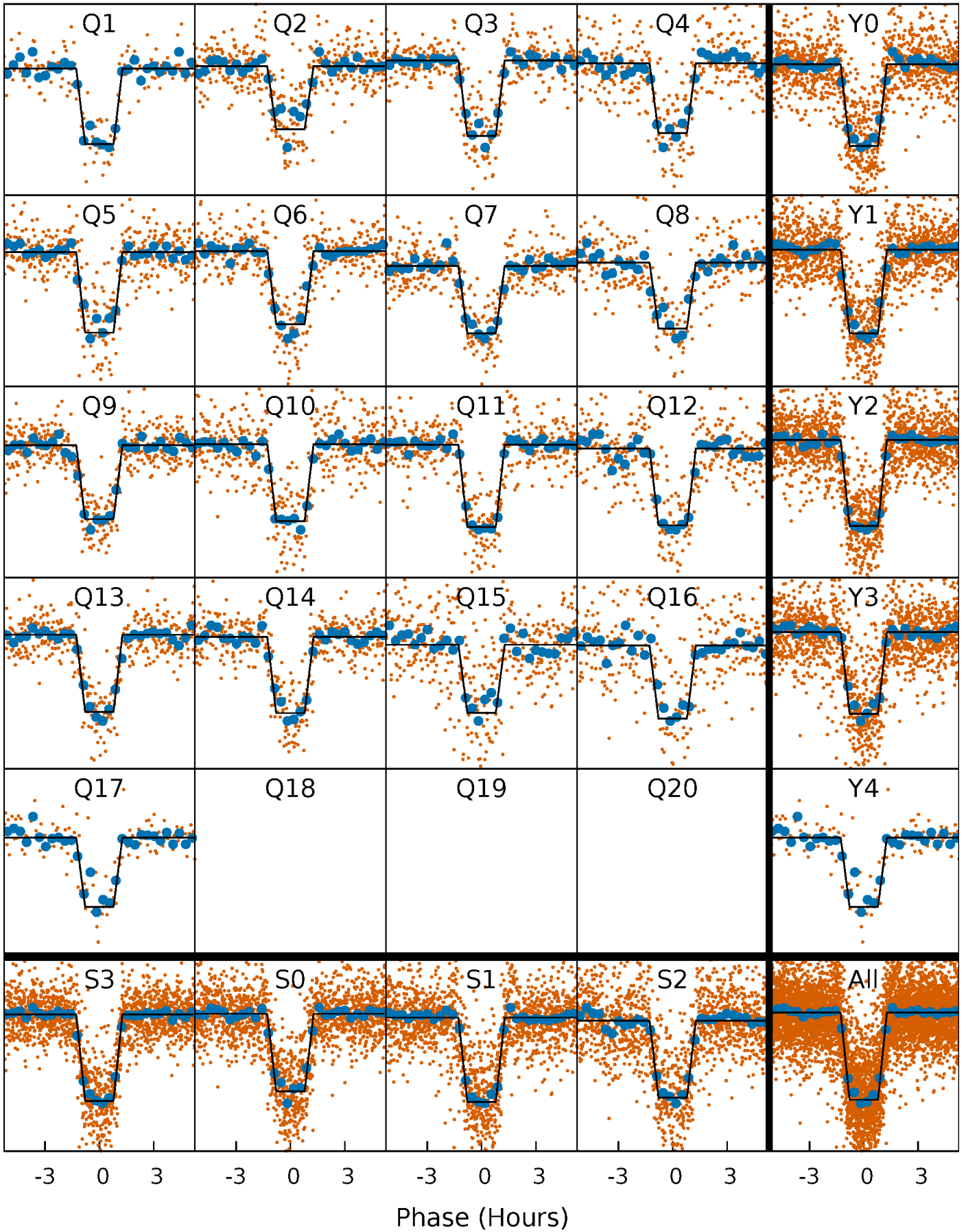
DV Quarter-Phased Transit Curves

TCE 006063220-01 P= 4.603575 Days $T_0=135.011407$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

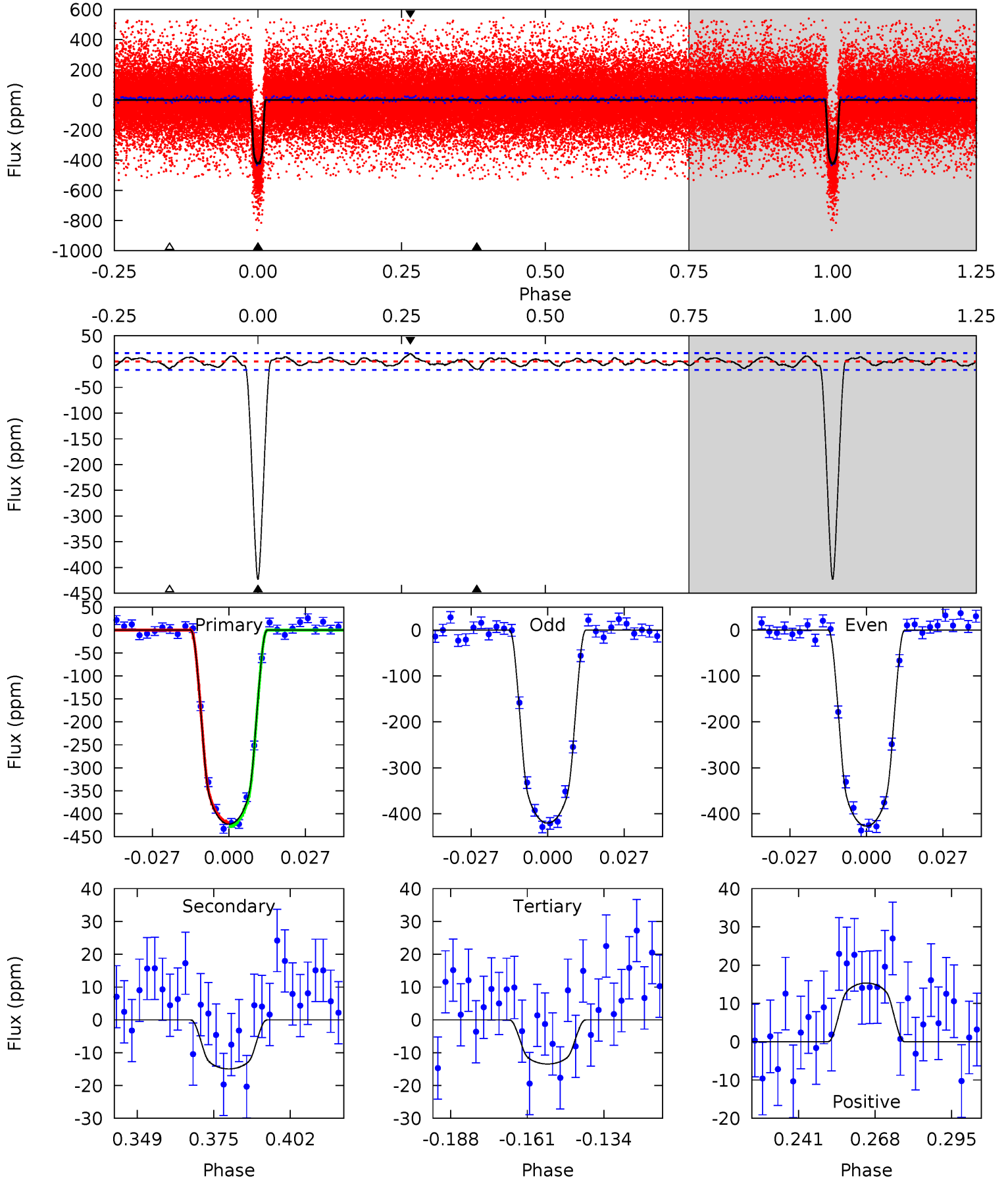
TCE 006063220-01 P= 4.603565 Days $T_0=135.012832$ (BKJD)



DV Model-Shift Uniqueness Test

006063220-01, P = 4.603575 Days, E = 130.407832 Days

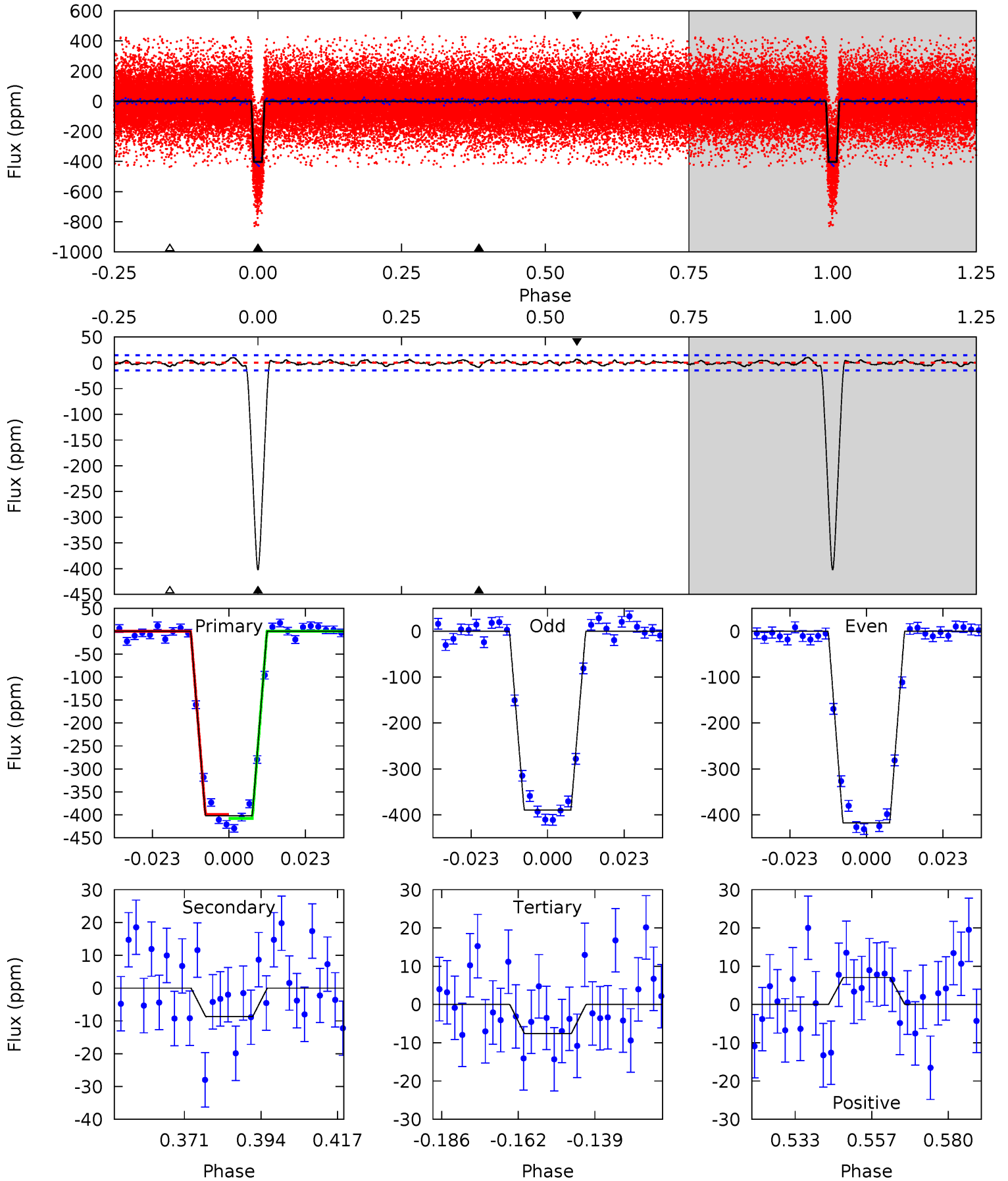
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
126.1	4.46	4.01	4.57	4.83	2.21	1.60	122.0	121.5	0.45	-0.12	0.98	0.99	0.04	1.37



Alt Model-Shift Uniqueness Test

006063220-01, P = 4.603565 Days, E = 130.409267 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
133.5	2.89	2.52	2.34	4.86	2.27	0.99	131.0	131.2	0.37	0.55	4.69	1.01	0.02	1.50



Stellar Parameters For KIC 006063220

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4783^{+95}_{-95}	$4.602^{+0.014}_{-0.046}$	$0.180^{+0.150}_{-0.150}$	$0.741^{+0.039}_{-0.030}$	$0.805^{+0.029}_{-0.046}$	$2.788^{+0.220}_{-0.393}$
	+2%/-2%	+0%/-1%	+83%/-83%	+5%/-4%	+4%/-6%	+8%/-14%
Source	SPE61	SPE61	SPE61	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 006063220-01 / KOI 0305.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-15 ± 3	$1.92^{+0.11}_{-0.11}$	1140^{+27}_{-25}	2665^{+87}_{-107}	$5.630^{+1.422}_{-1.411}$
Alt.	-9 ± 3	$1.66^{+0.12}_{-0.11}$	1138^{+29}_{-25}	2565^{+115}_{-144}	$4.351^{+1.533}_{-1.525}$

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

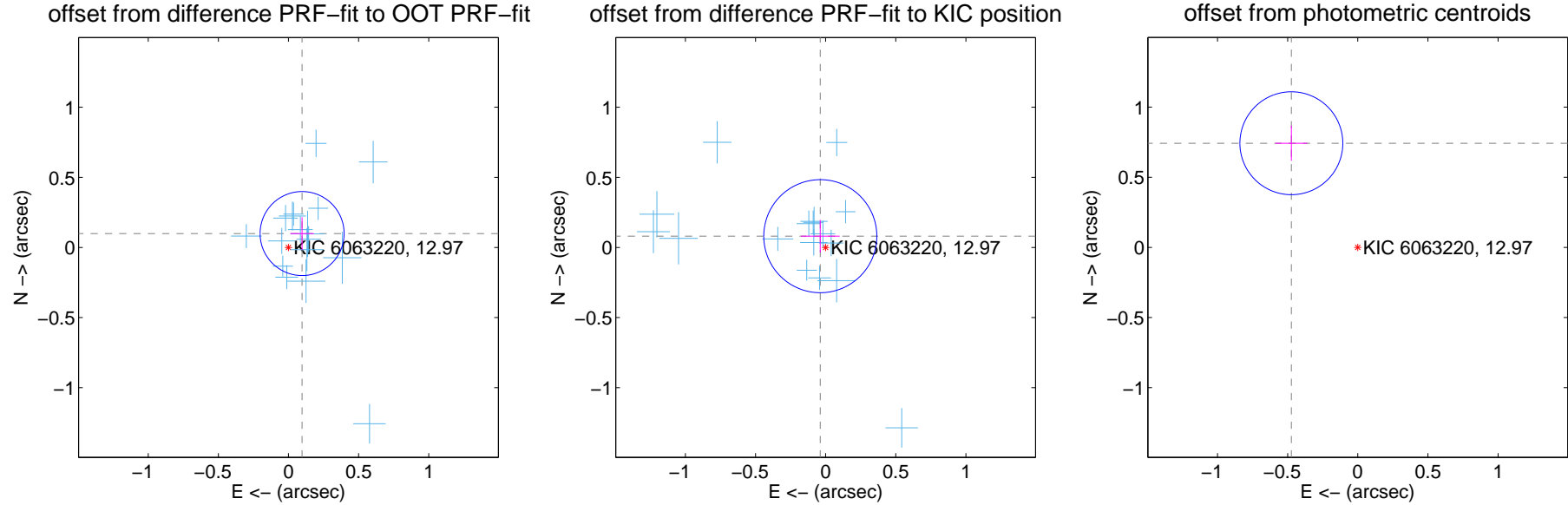
DV Centroid Data

Supplemental centroid analysis for 006063220-01. Kepler magnitude: 12.97. Transit SNR 89.79

There are 17 quarters with good PRF difference image offsets

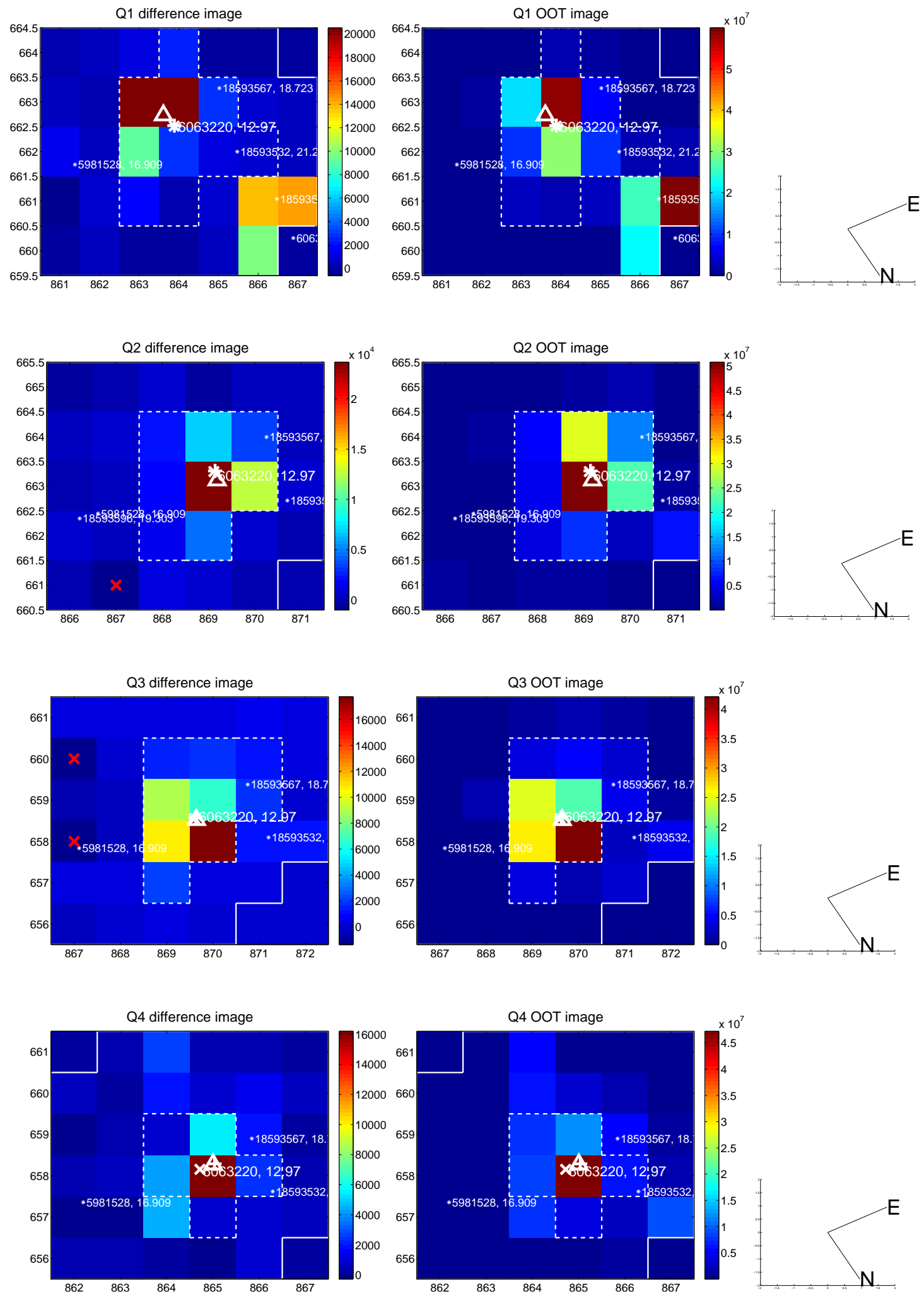
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.139 ± 0.100	1.39	-0.097 ± 0.084	0.099 ± 0.117
PRF-fit source offset from KIC position	0.089 ± 0.134	0.66	0.038 ± 0.138	0.080 ± 0.116
photometric centroid source offset	0.88 ± 0.12	7.20	0.47 ± 0.11	0.74 ± 0.13

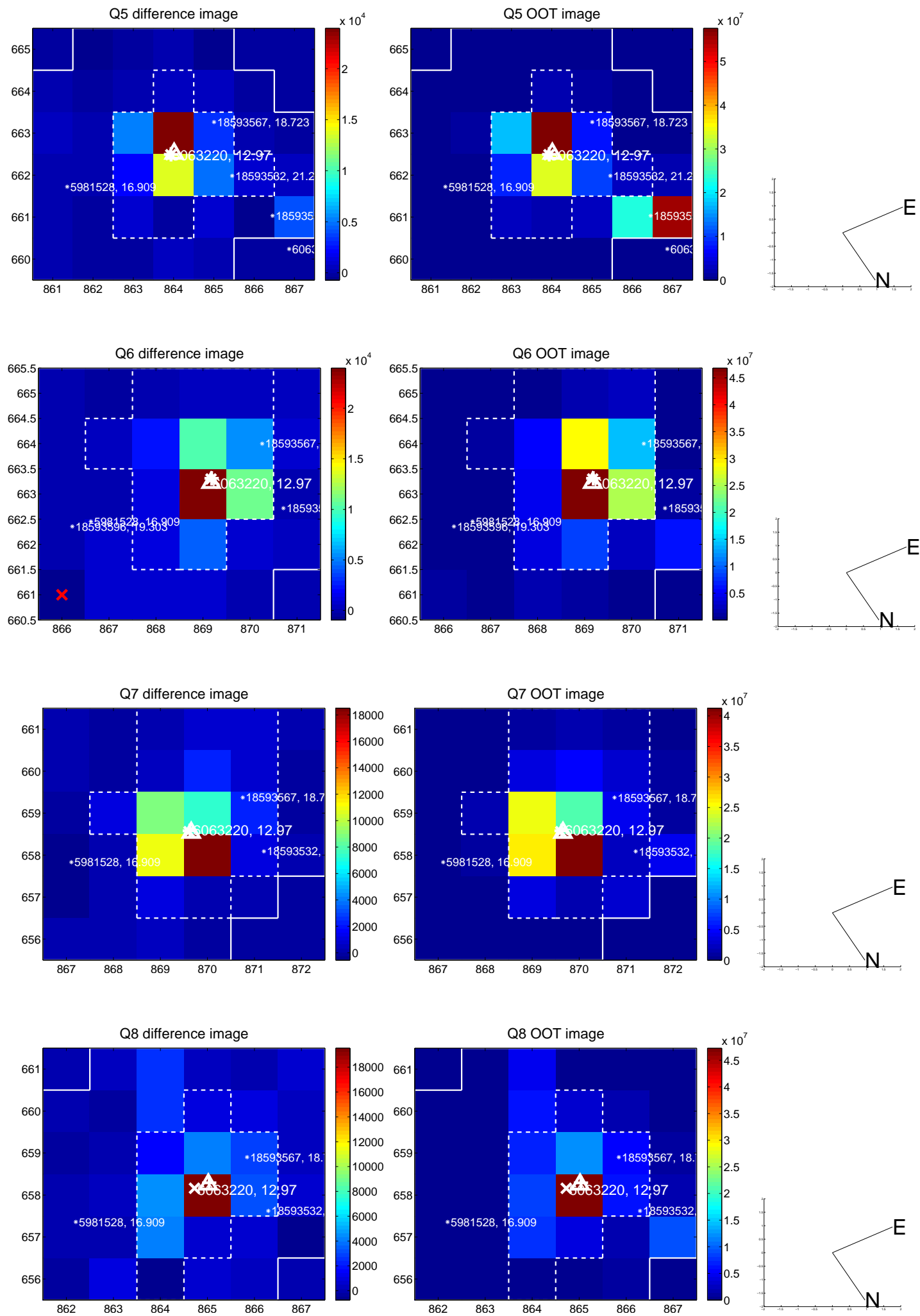


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

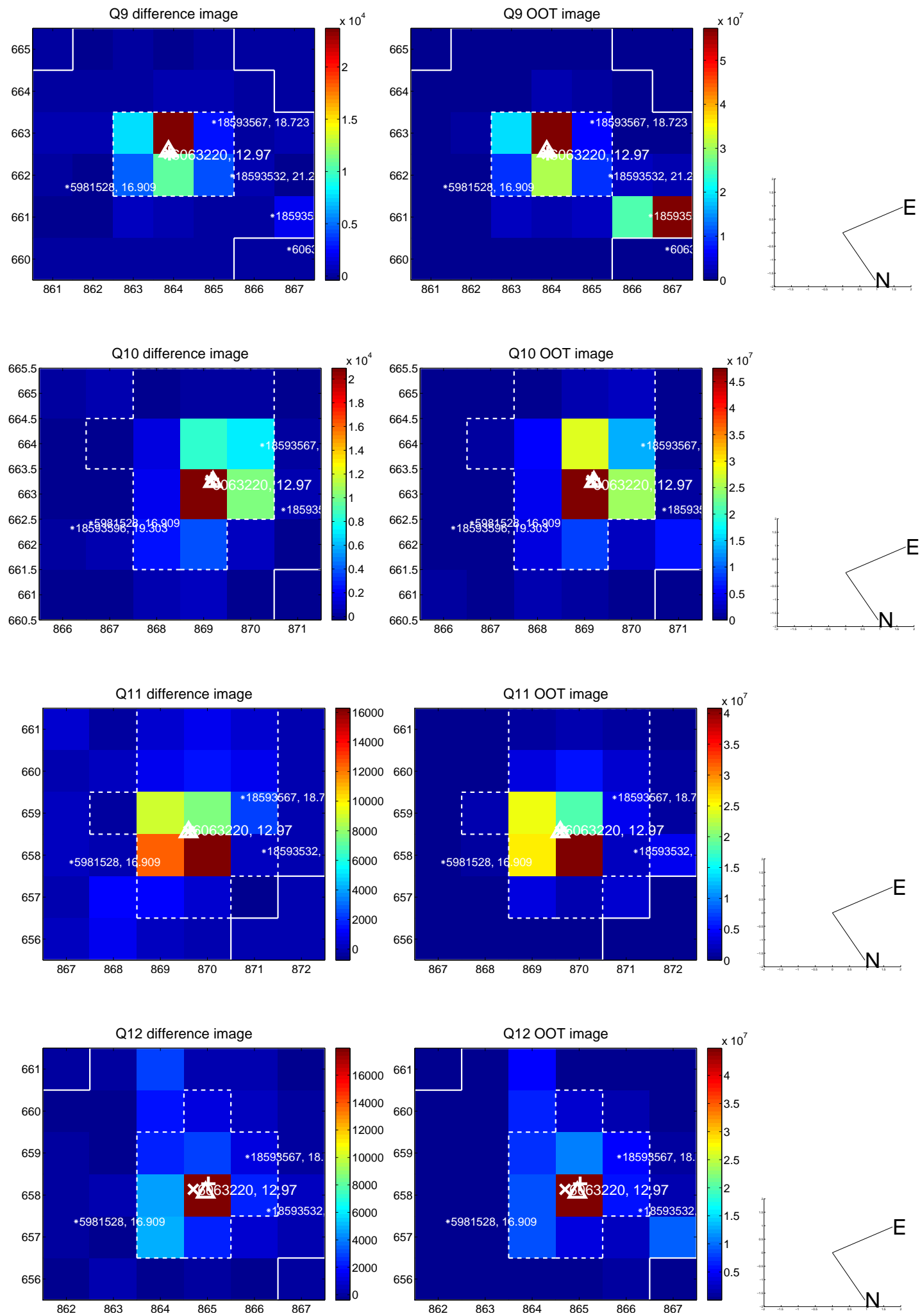
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



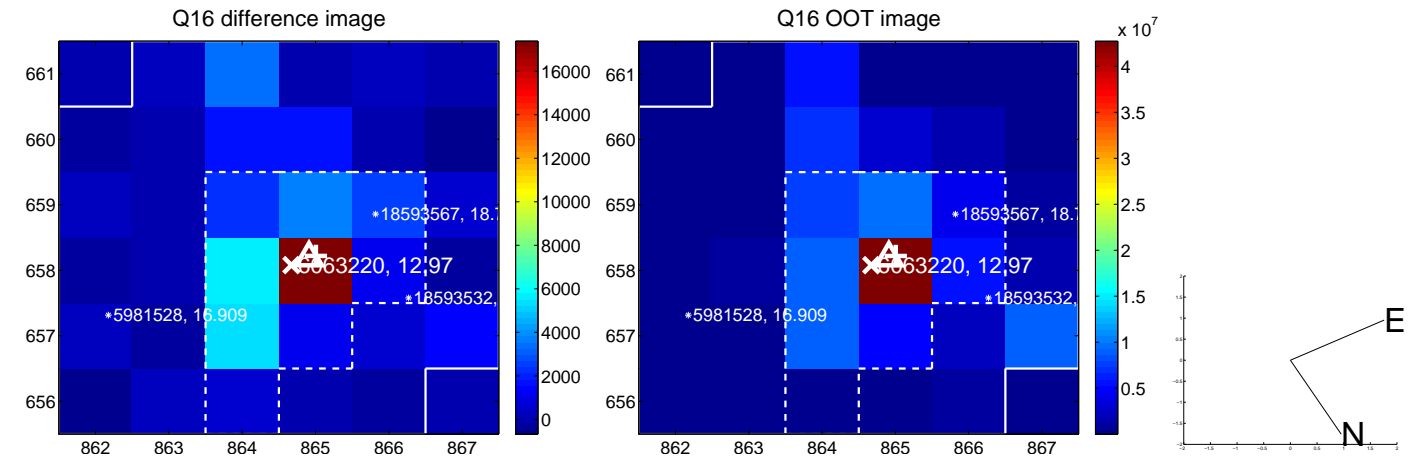
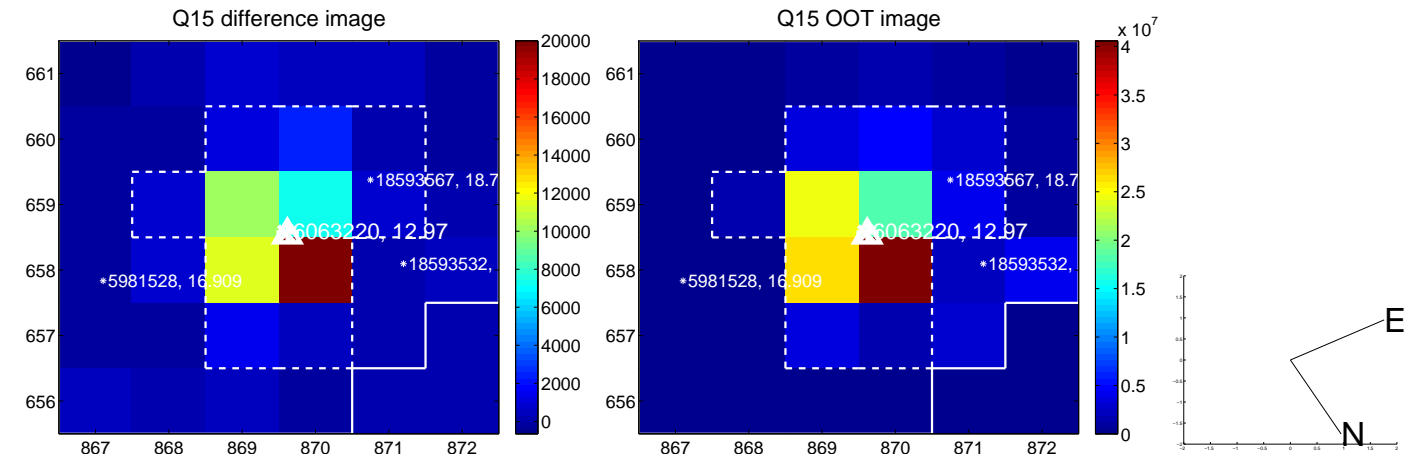
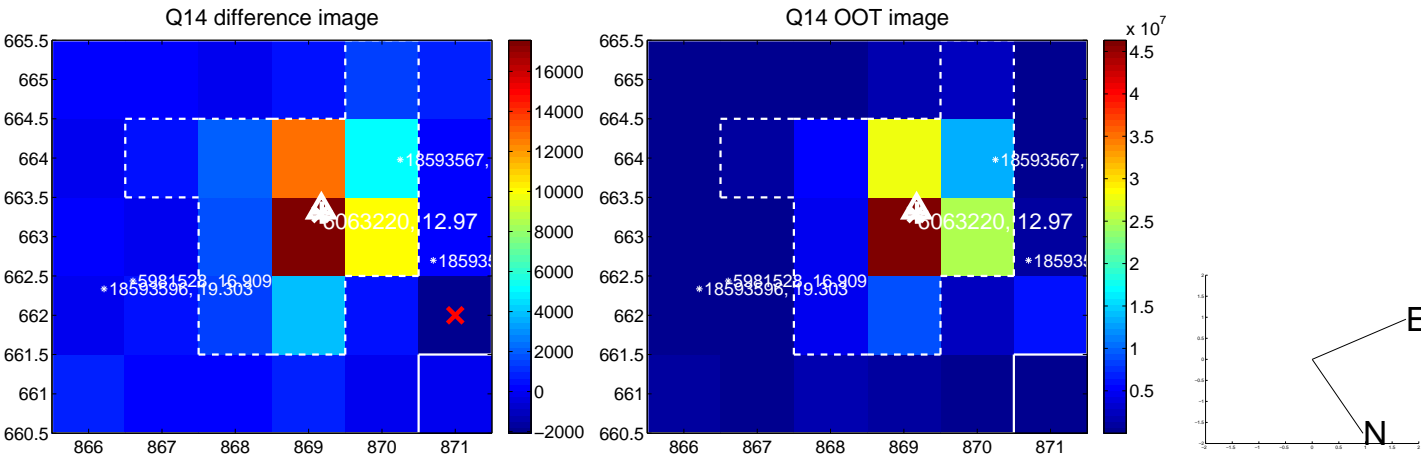
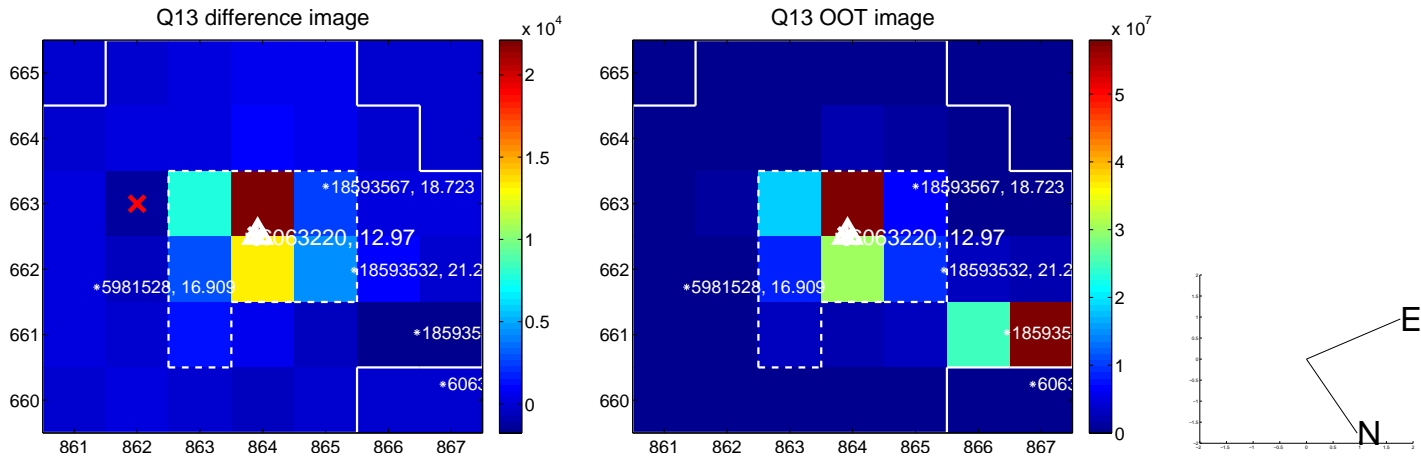
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

