

KIC 009662811

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})
009662811-01	OBS	1854.01	43.034096	137.692469	539.7	6.598	37.6	40.6	0.91	5550	2.51	13.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009662811-01	OBS	PC	0.99	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.

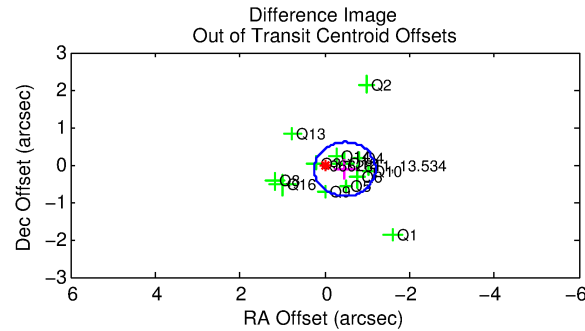
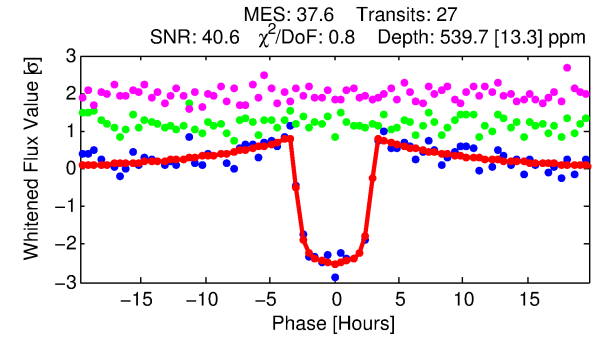
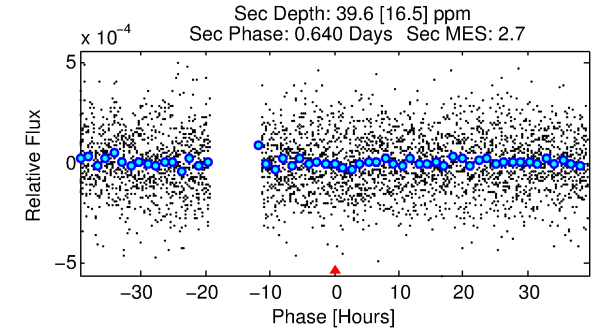
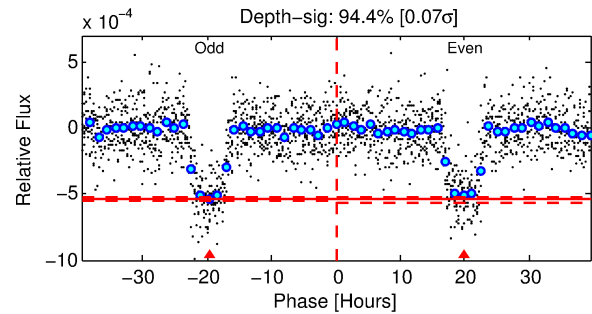
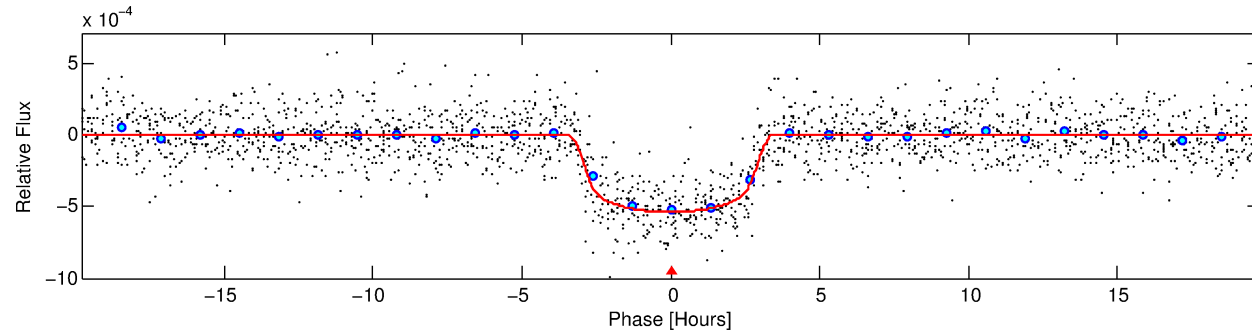
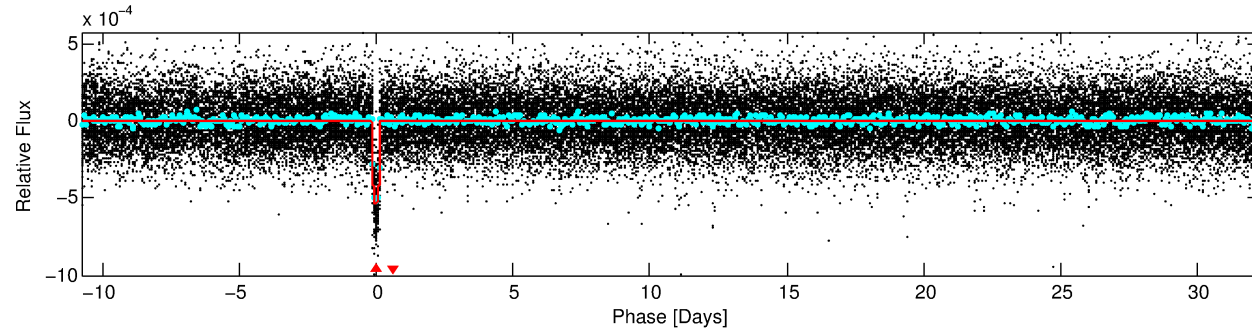
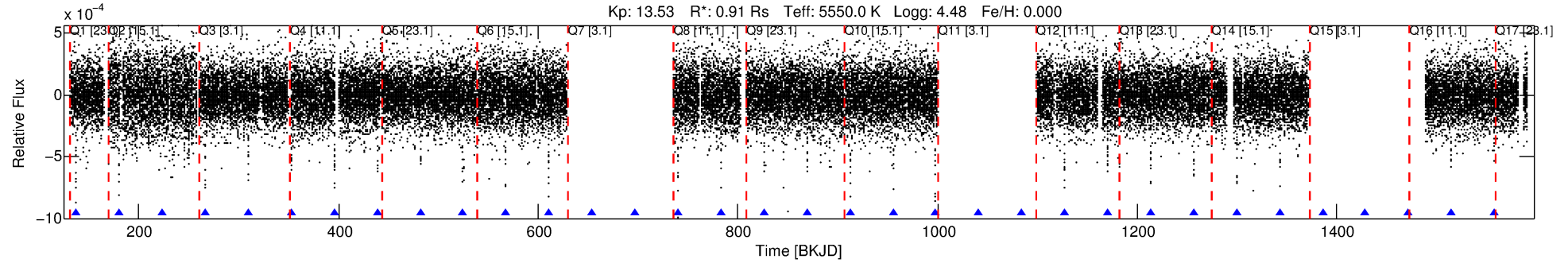
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009662811-01

No Significant Match Found

DV One-Page Summary

KIC: 9662811 Candidate: 1 of 1 Period: 43.034 d
KOI: K01854.01 Corr: 0.959



DV Fit Results:

Period = 43.03410 [0.00014] d
Epoch = 137.6925 [0.0026] BKJD
Rp/R* = 0.0253 [0.0009]
a/R* = 25.26 [3.62]
b = 0.89 [0.03]
Seff = 13.04 [2.42]
Teff = 485 [22] K
Rp = 2.51 [0.32] Re
a = 0.2326 [0.0254] AU
Ag = 186.92 [85.11] [2.18 σ]
Teffp = 2770 [298] K [7.64 σ]

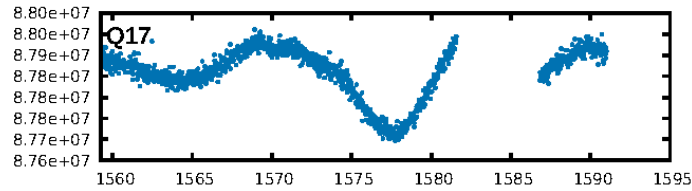
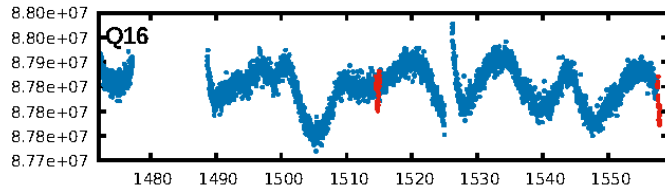
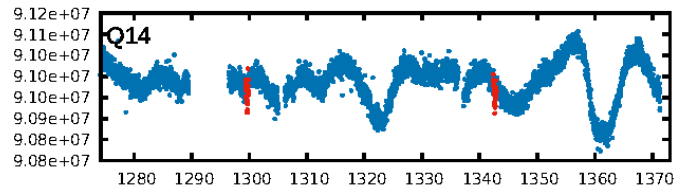
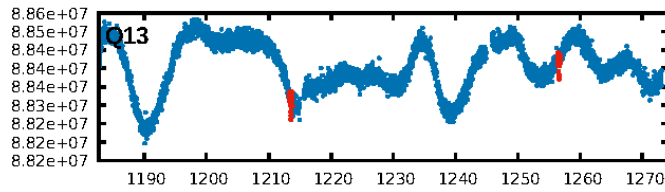
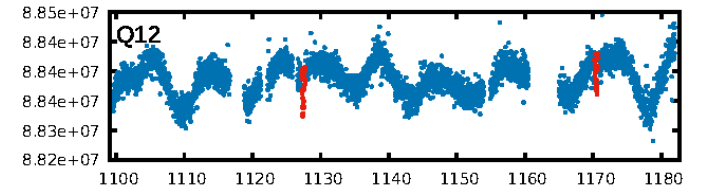
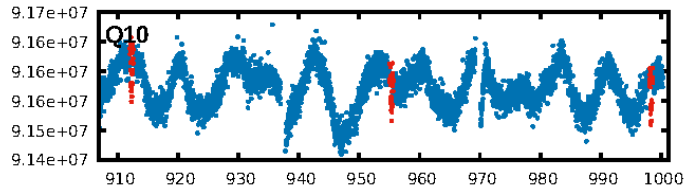
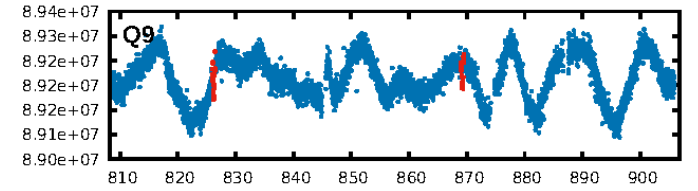
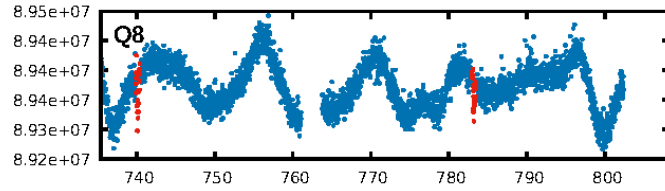
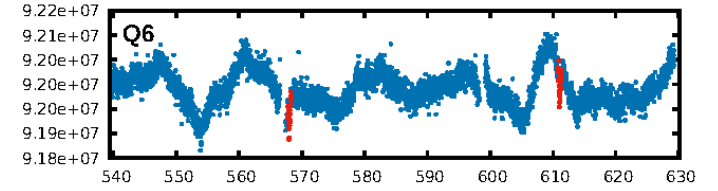
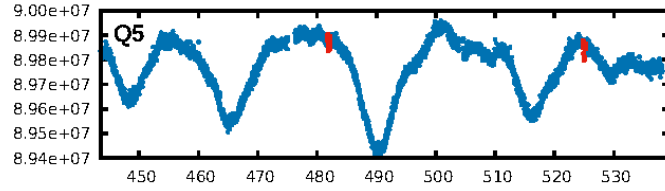
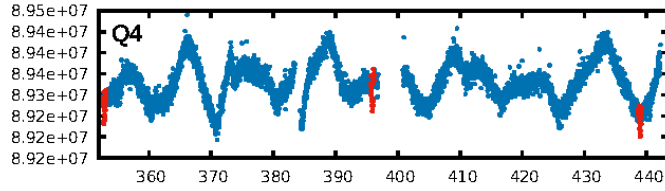
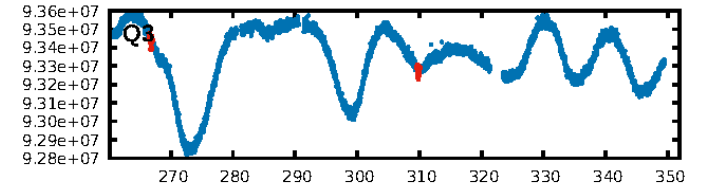
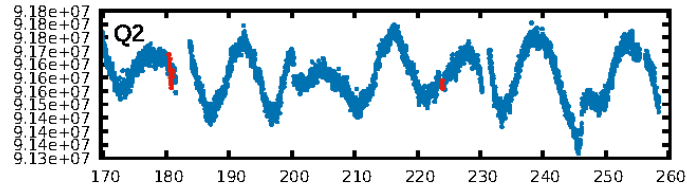
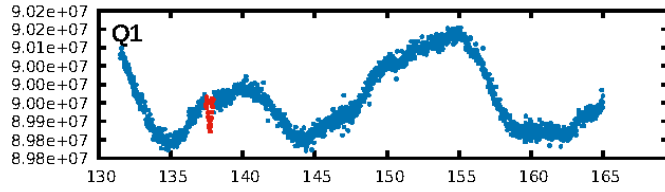
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 80.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 8.16e-246
RollingBand-fgt: 1.00 [26/26]
GhostDiagnostic-chr: 2.344
Centroid-sig: 10.1%
Centroid-so: 0.397 arcsec [1.61 σ]
OotOffset-rm: 0.493 arcsec [2.05 σ]
KicOffset-rm: 0.558 arcsec [2.16 σ]
OotOffset-st: 4/1/4/4 [13]
KicOffset-st: 4/1/4/4 [13]
DiffImageQuality-fgm: 1.00 [13/13]
DiffImageOverlap-fno: 1.00 [13/13]

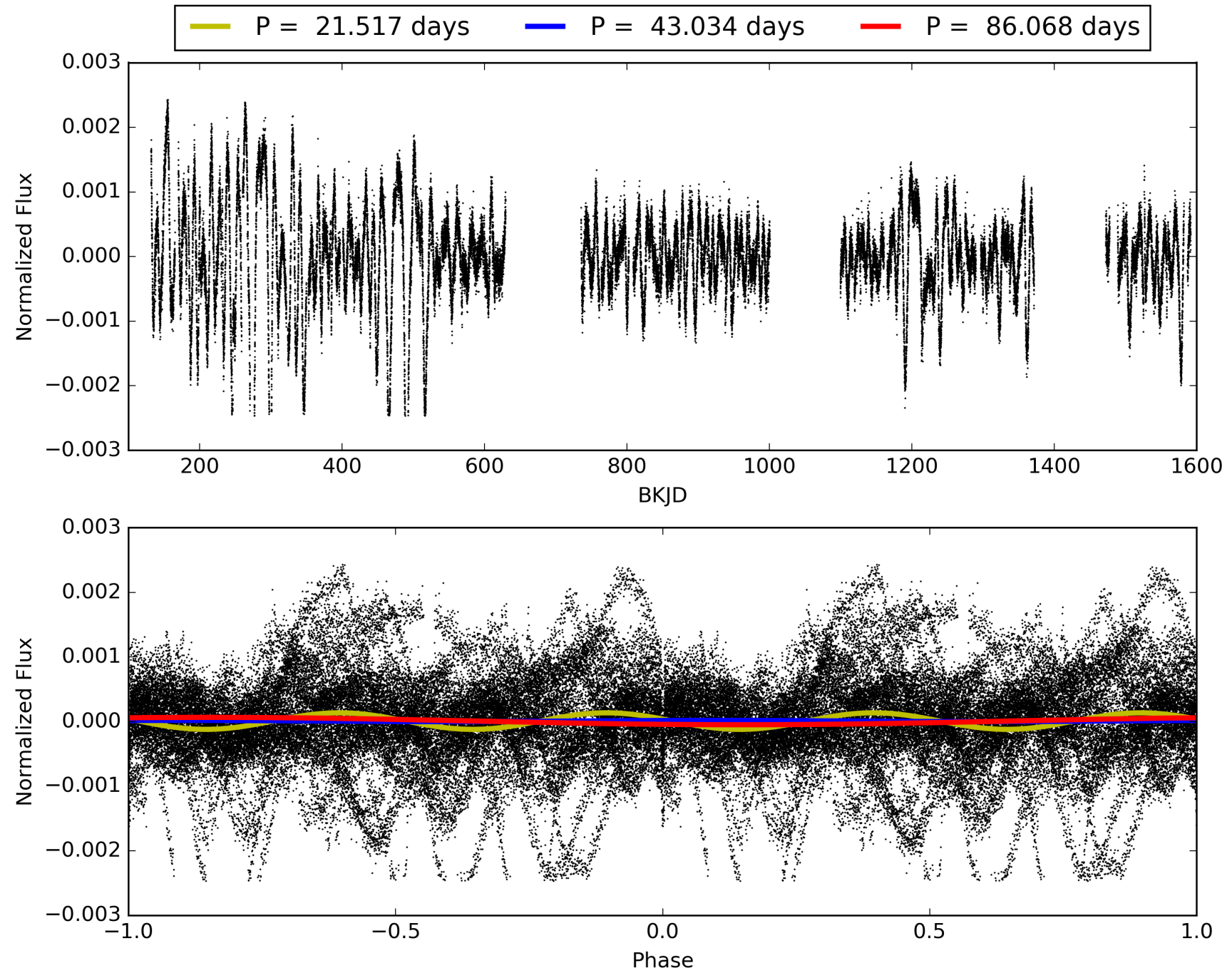
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 08:31:34 Z

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

TCE 009662811-01, PDC Light Curves

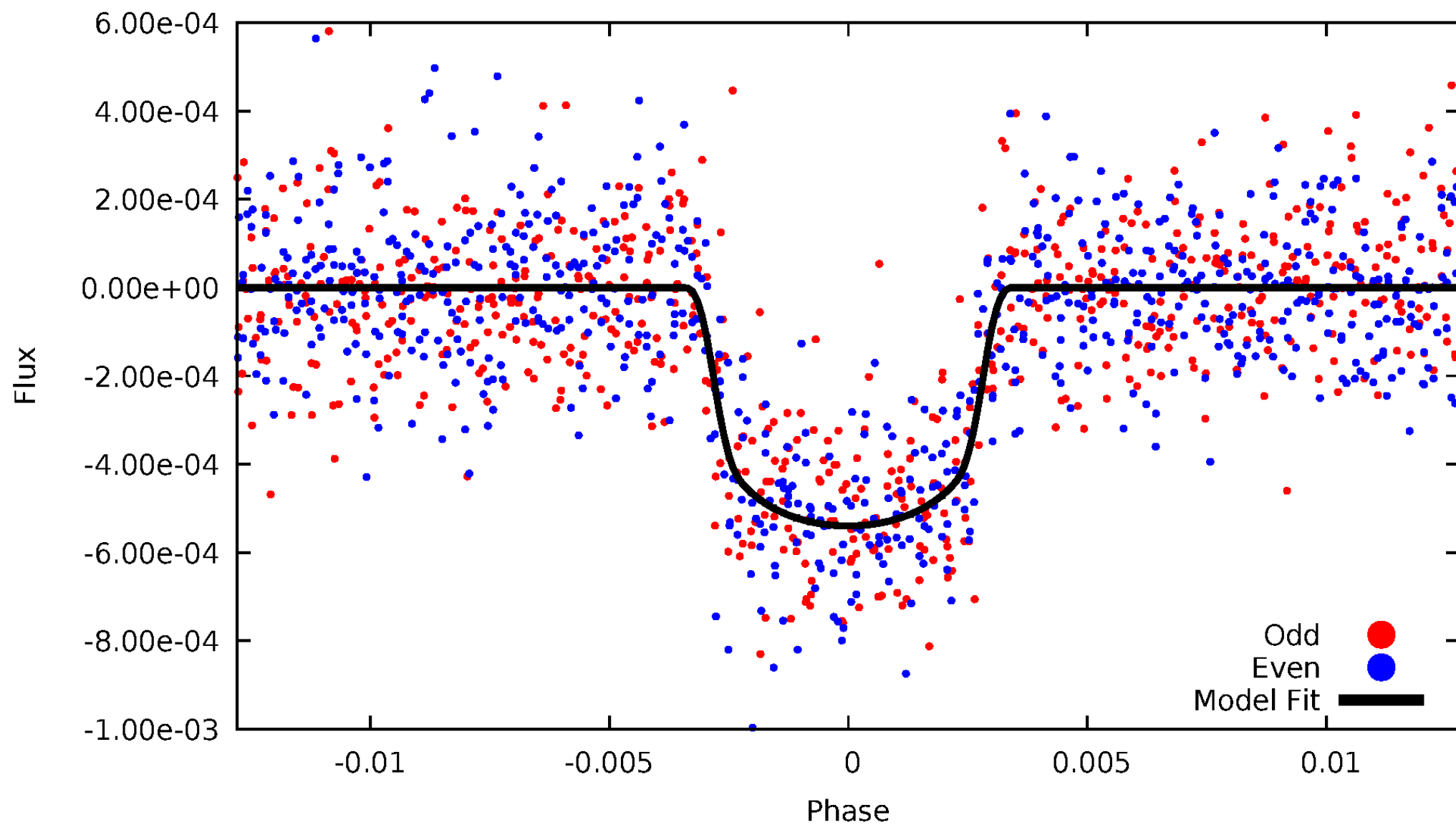


TCE 009662811-01



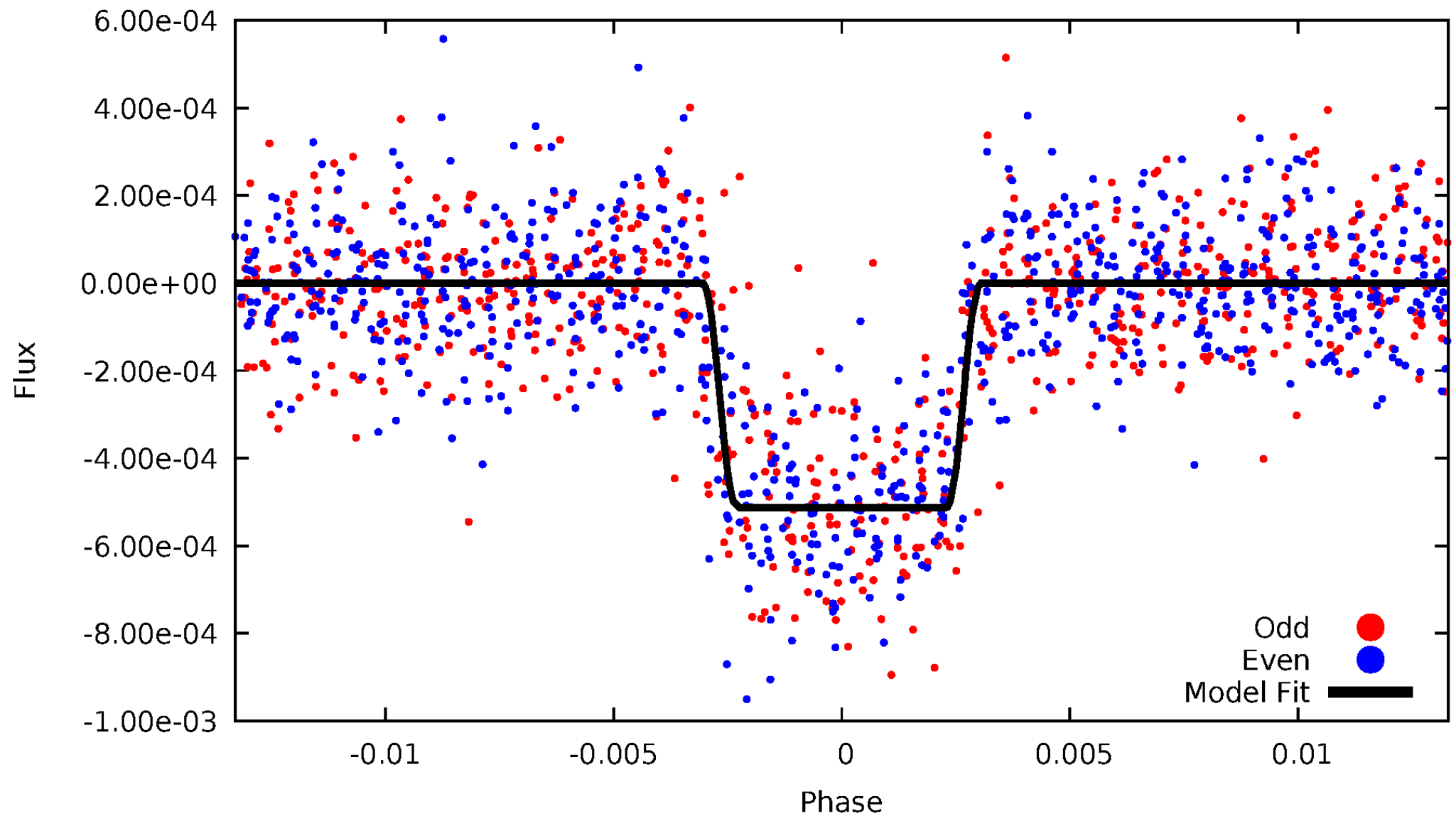
DV Odd/Even

TCE 009662811-01

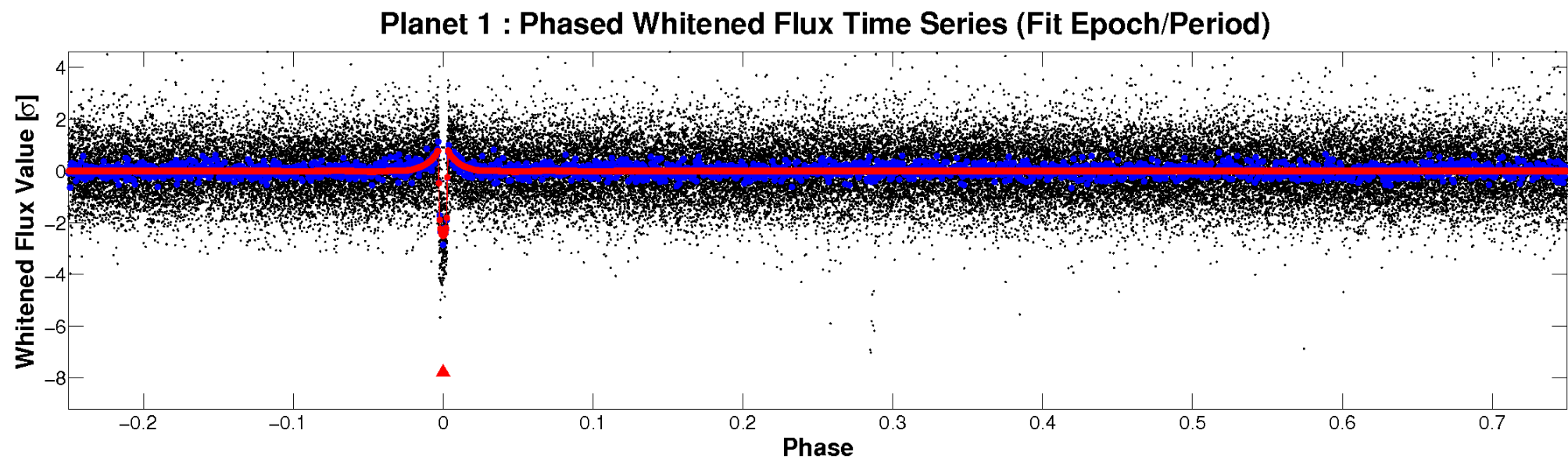
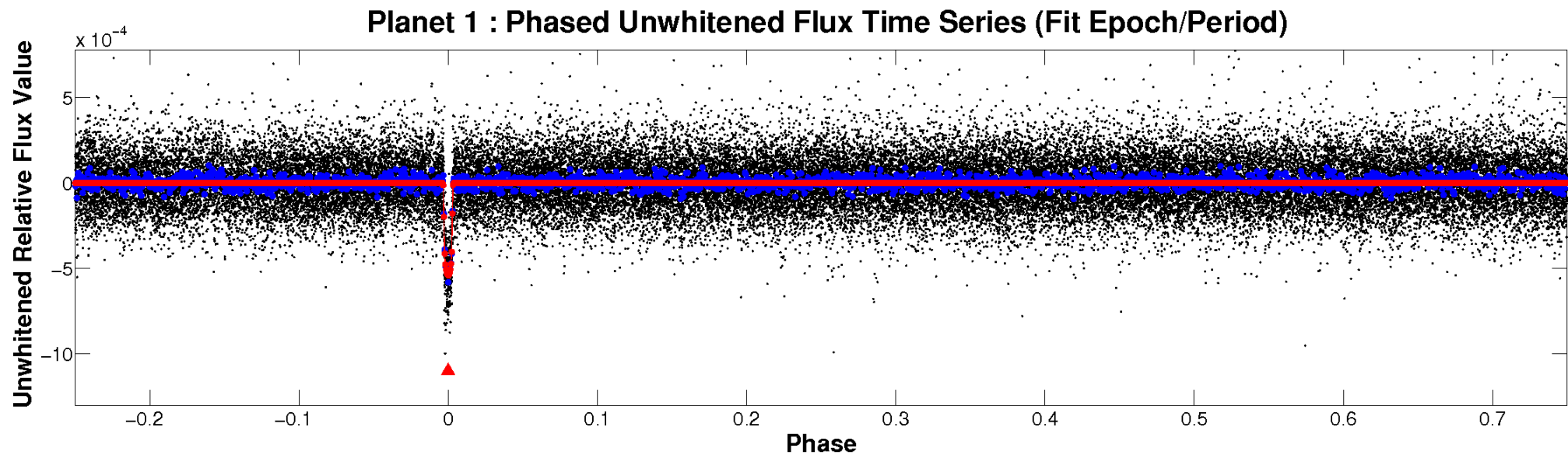


ALT Odd/Even

TCE 009662811-01

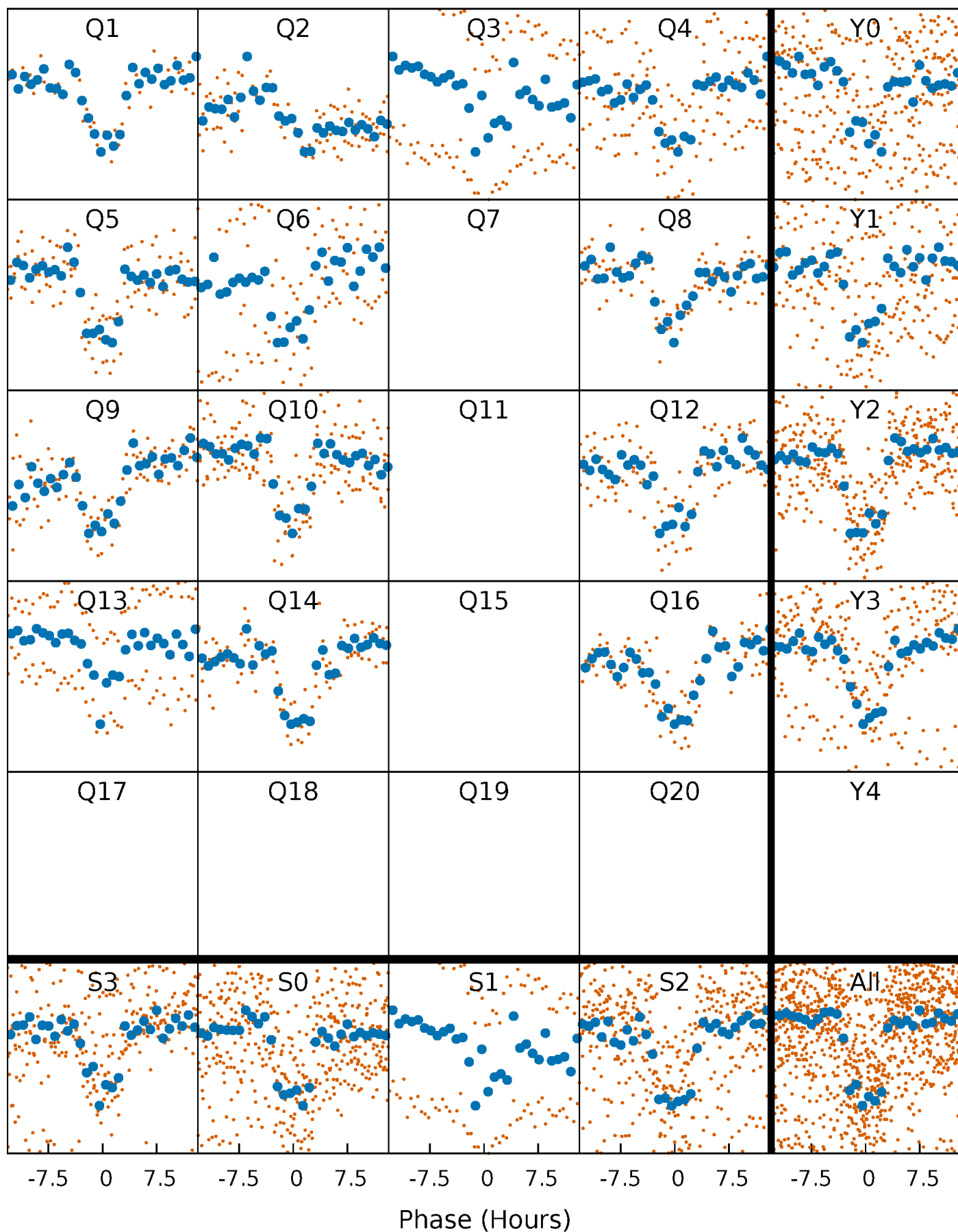


Non-Whitened Vs. Whitened Light Curve



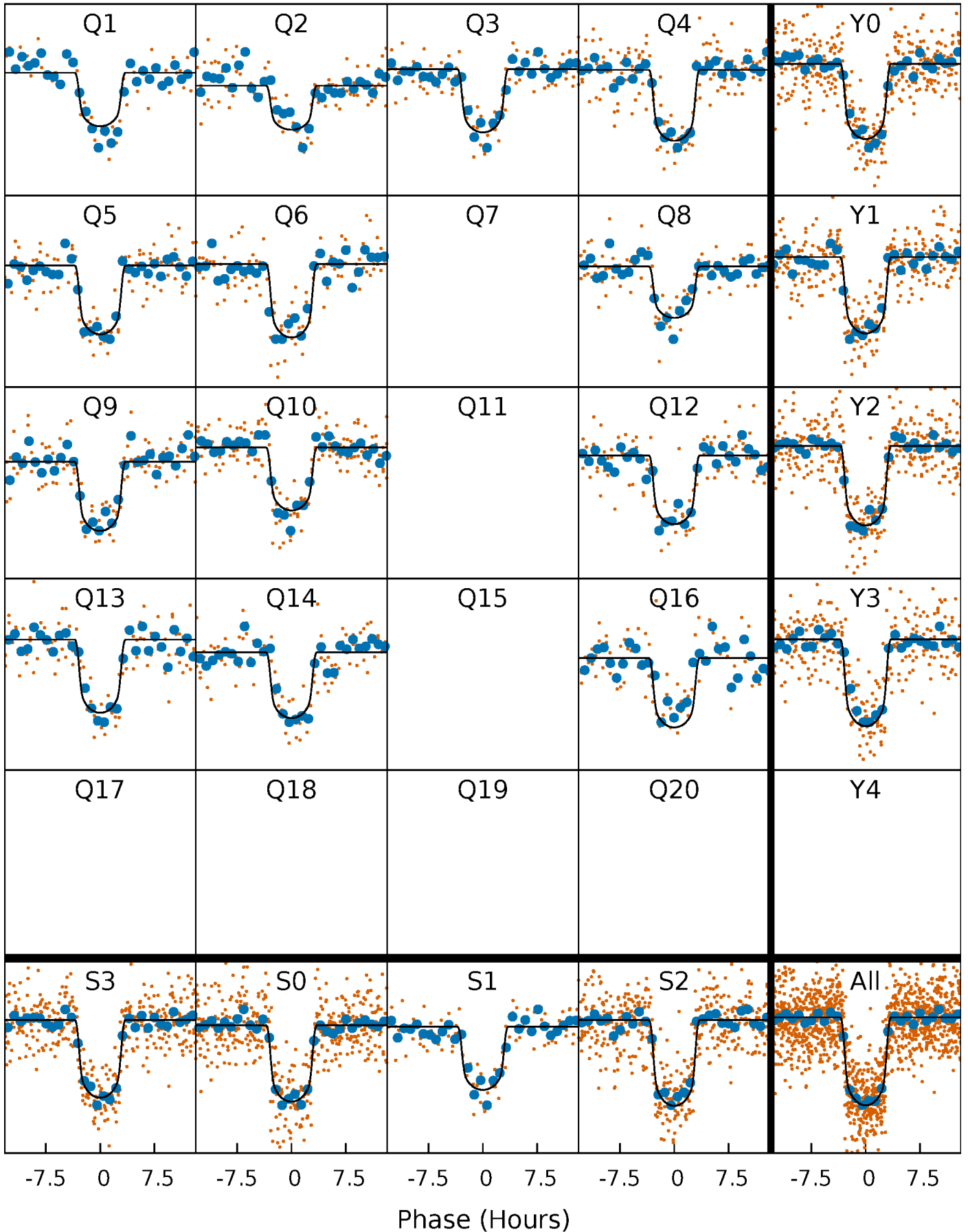
PDC Quarter-Phased Transit Curves

TCE 009662811-01 P= 43.034096 Days $T_0=137.692469$ (BKJD)



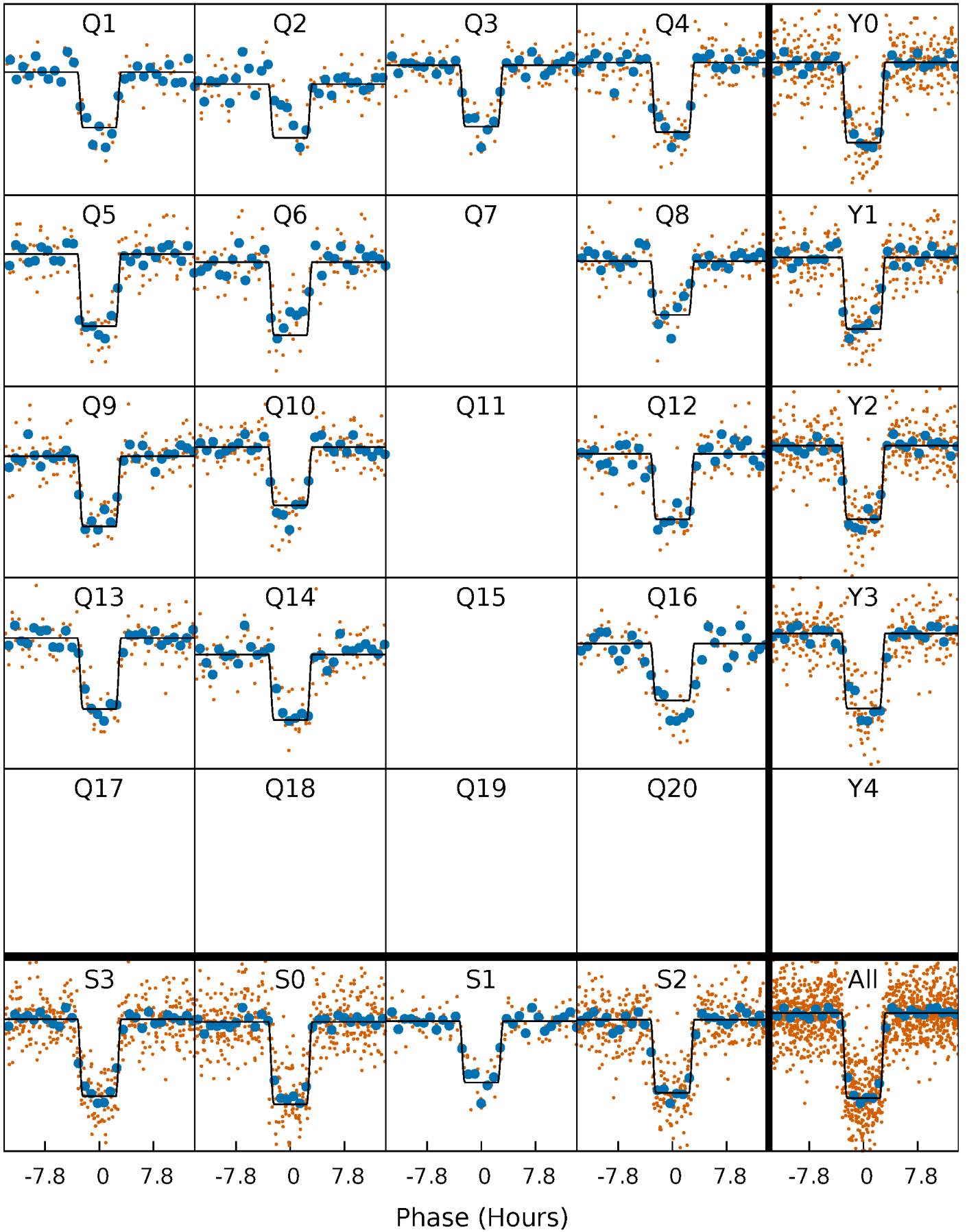
DV Quarter-Phased Transit Curves

TCE 009662811-01 P= 43.034096 Days $T_0=137.692469$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

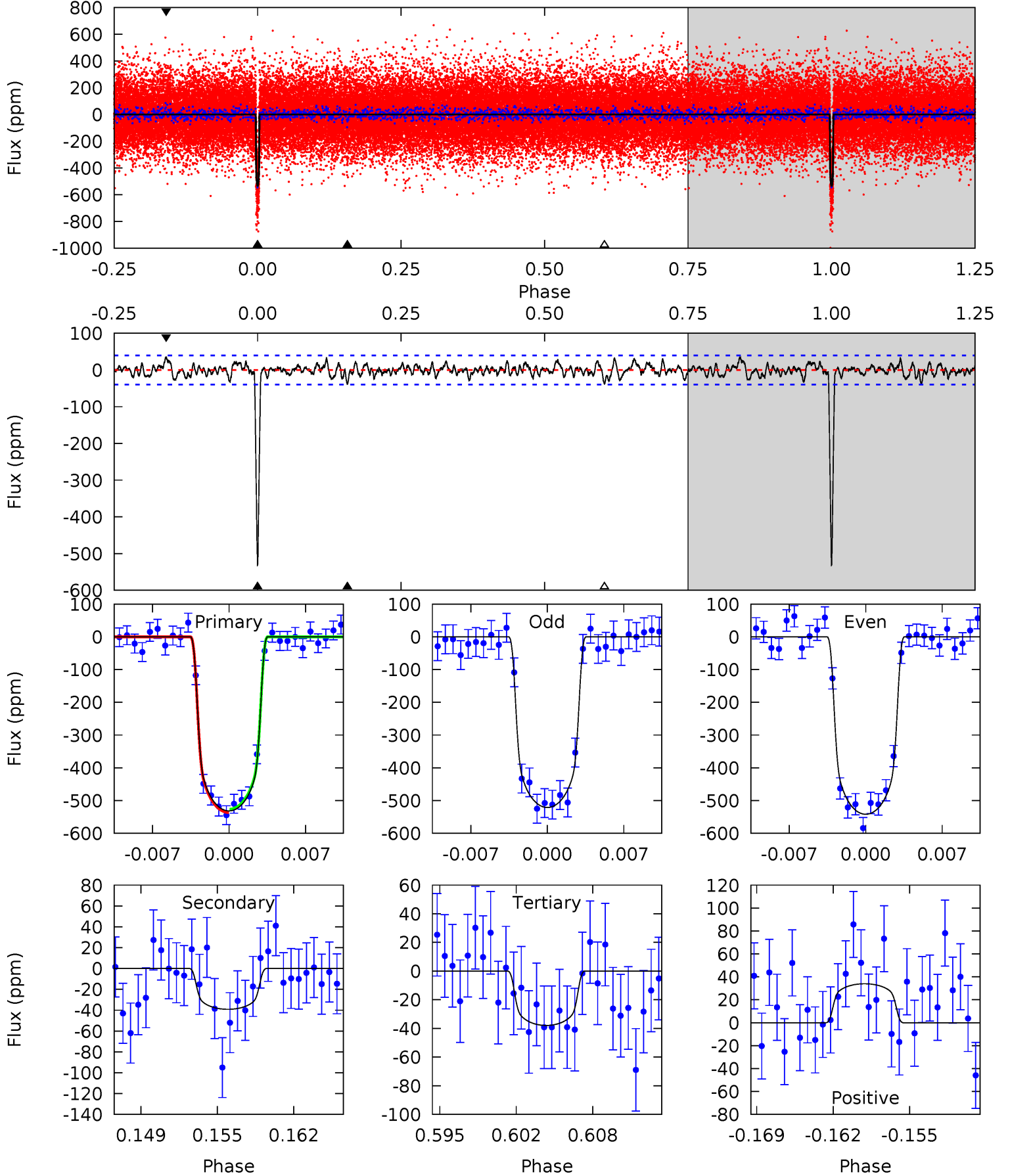
TCE 009662811-01 P= 43.033492 Days $T_0=137.704622$ (BKJD)



DV Model-Shift Uniqueness Test

009662811-01, P = 43.034096 Days, E = 94.658373 Days

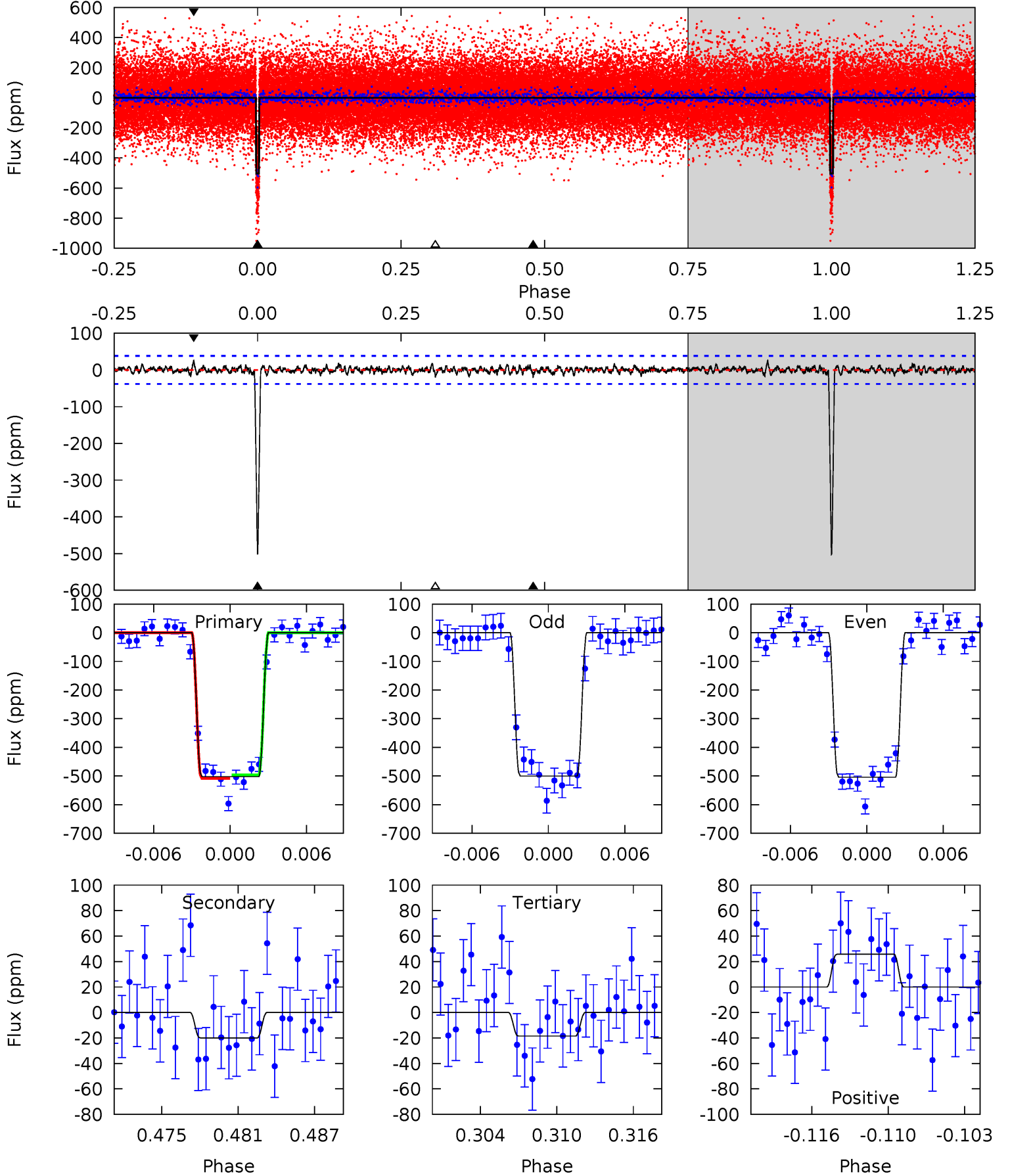
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
68.7	5.06	4.90	4.38	5.10	2.71	1.51	63.8	64.3	0.16	0.68	1.34	1.00	0.06	0.66



Alt Model-Shift Uniqueness Test

009662811-01, P = 43.033492 Days, E = 94.671130 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
67.5	2.68	2.49	3.46	5.12	2.74	0.78	65.0	64.0	0.19	-0.78	0.27	1.01	0.05	0.81



Stellar Parameters For KIC 009662811

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5550^{+110}_{-110}	$4.476^{+0.064}_{-0.096}$	$0.000^{+0.150}_{-0.150}$	$0.911^{+0.110}_{-0.064}$	$0.906^{+0.055}_{-0.055}$	$1.689^{+0.419}_{-0.479}$
	+2%/-2%	+1%/-2%	+inf%/-inf%	+12%/-7%	+6%/-6%	+25%/-28%
Source	SPE57	SPE57	SPE57	DSEP		

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

Secondary Eclipse Parameters for KIC 009662811-01 / KOI 1854.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-39 ± 8	$2.53^{+0.19}_{-0.15}$	680^{+24}_{-21}	3298^{+117}_{-119}	178^{+44}_{-40}
Alt.	-20 ± 7	$2.26^{+0.17}_{-0.13}$	678^{+23}_{-20}	3079^{+165}_{-196}	114^{+49}_{-45}

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 $A_{obs} \gg 1.0$

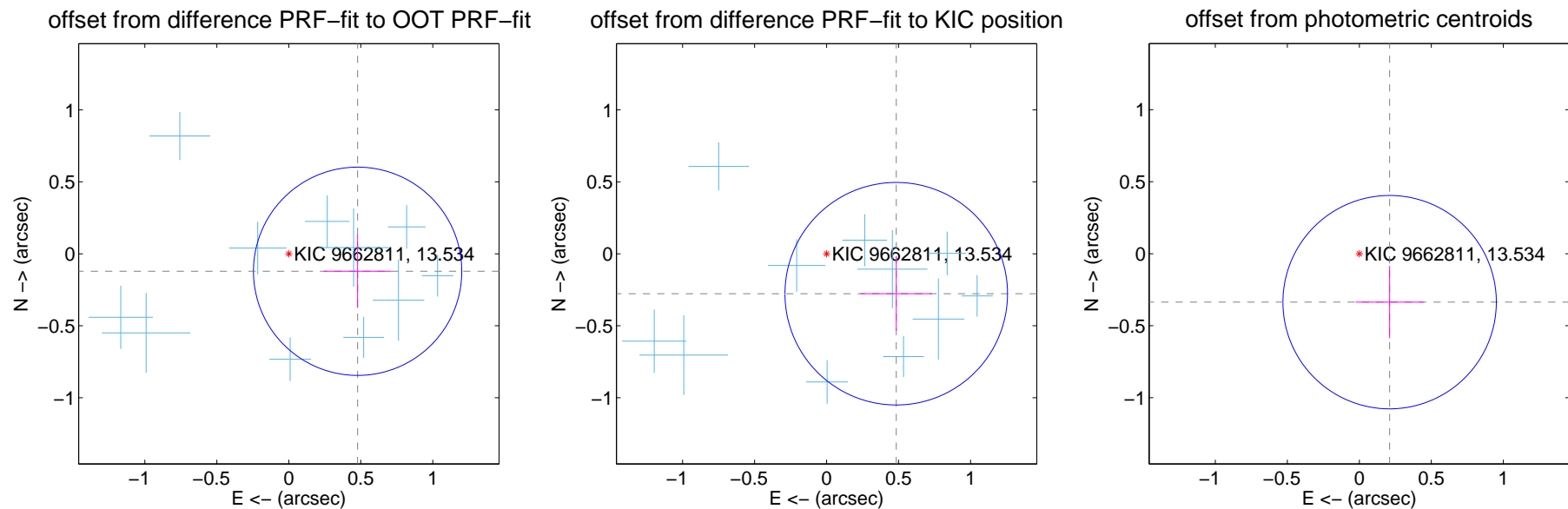
DV Centroid Data

Supplemental centroid analysis for 009662811-01. Kepler magnitude: 13.53. Transit SNR 40.63

There are 13 quarters with good PRF difference image offsets

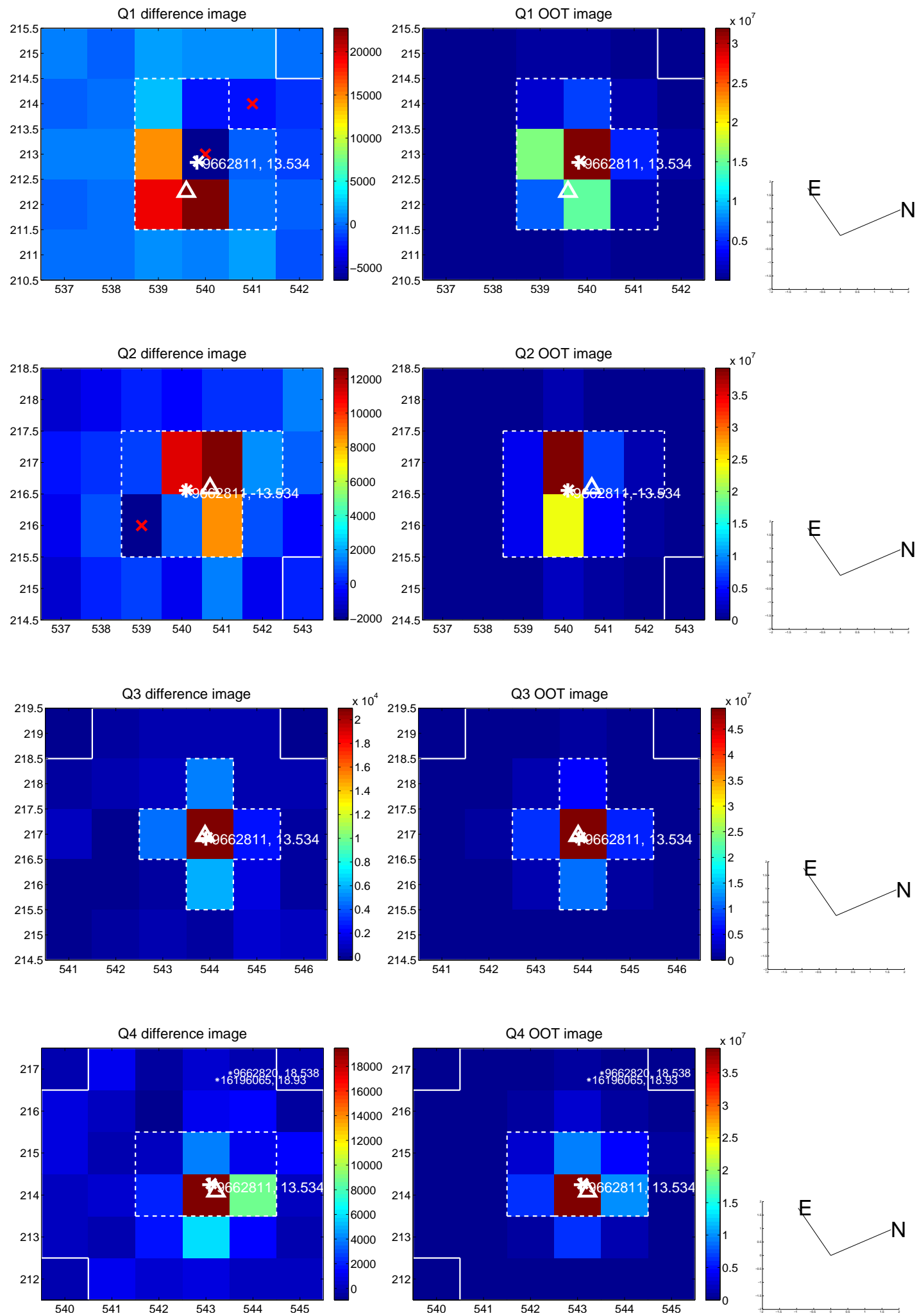
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.493 ± 0.241	2.05	-0.478 ± 0.235	-0.121 ± 0.255
PRF-fit source offset from KIC position	0.558 ± 0.258	2.16	-0.484 ± 0.249	-0.277 ± 0.258
photometric centroid source offset	0.40 ± 0.25	1.61	-0.21 ± 0.24	-0.34 ± 0.25

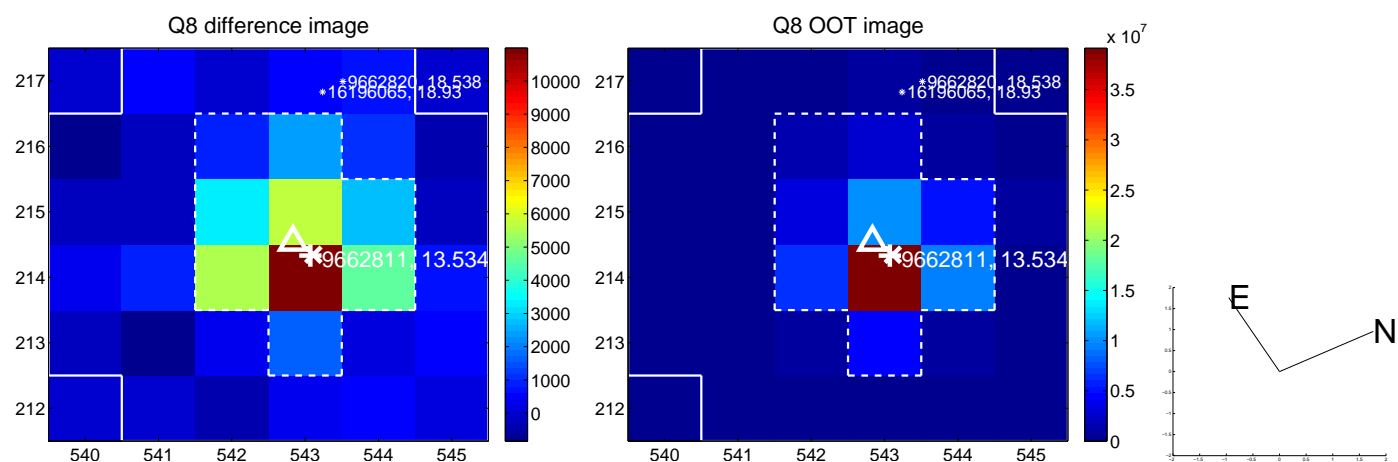
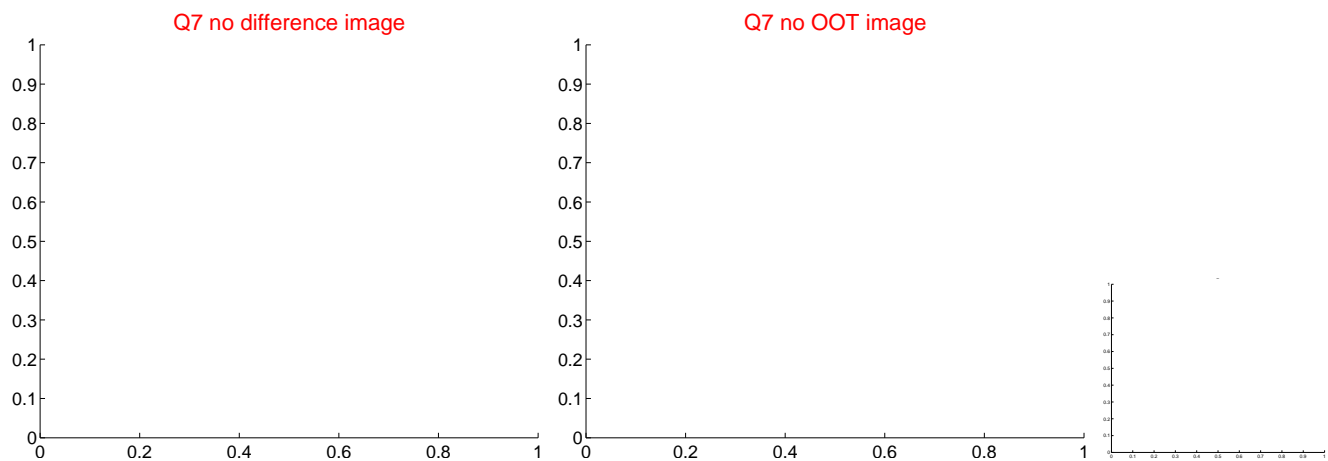
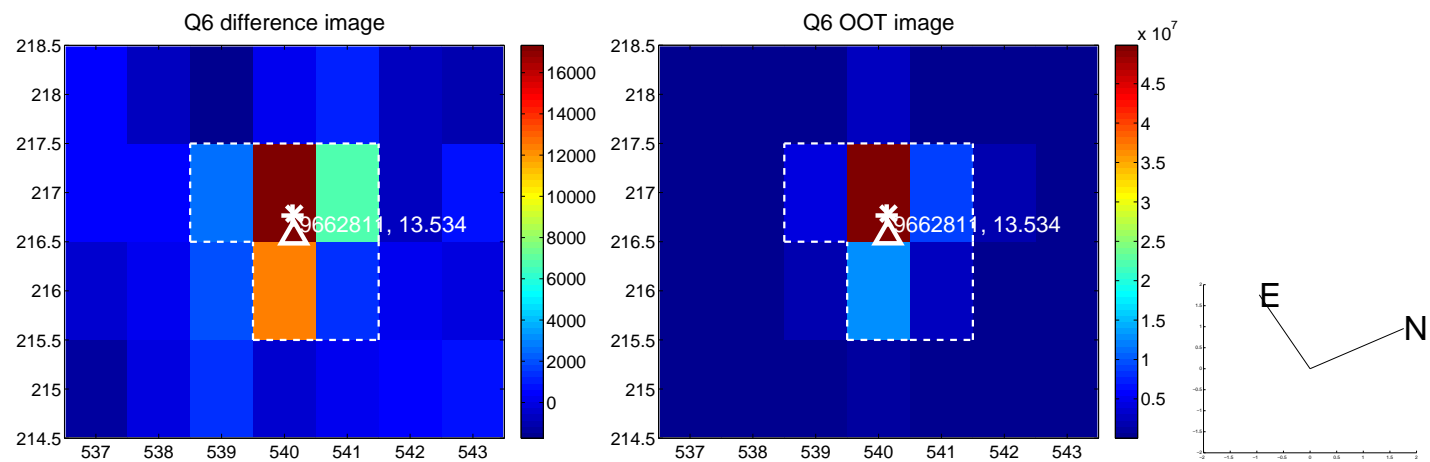
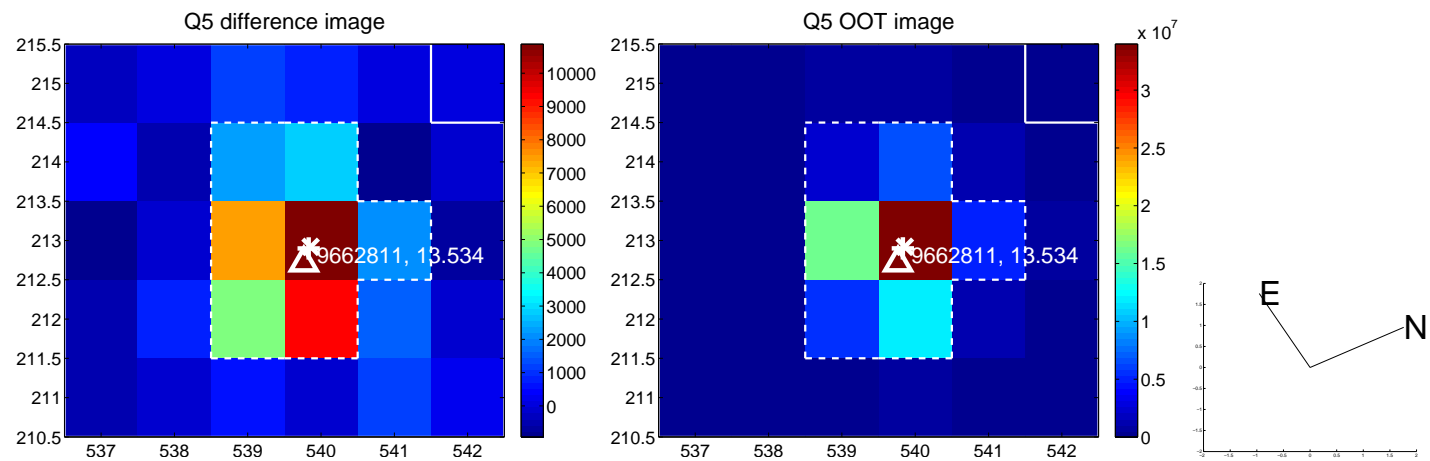


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

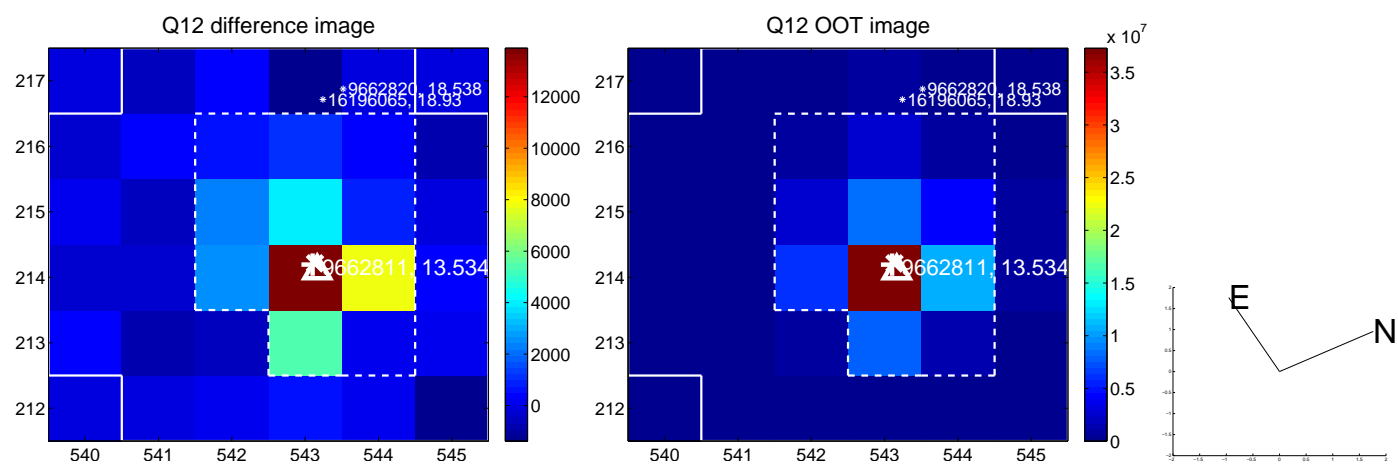
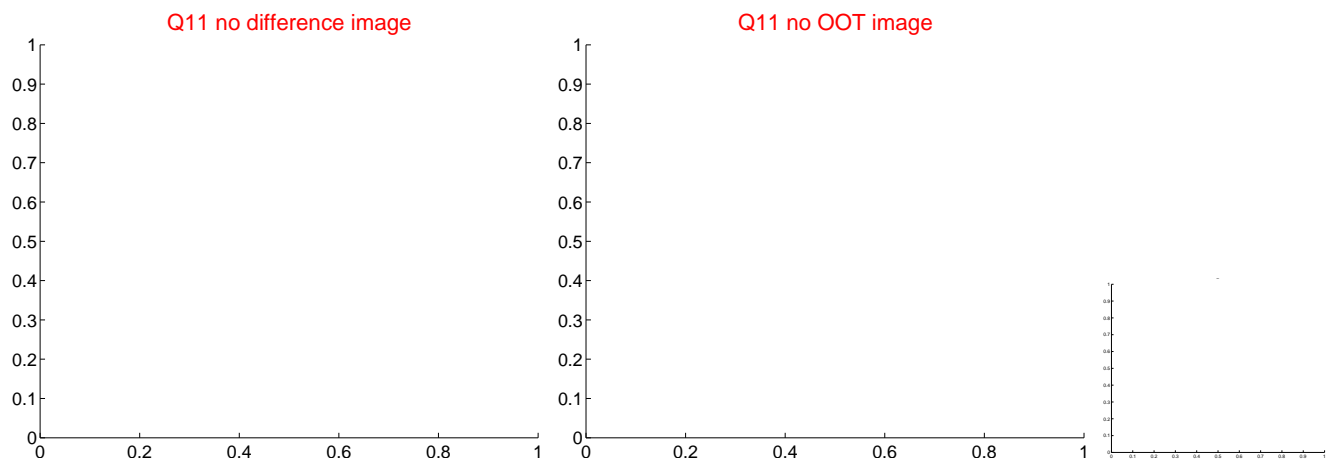
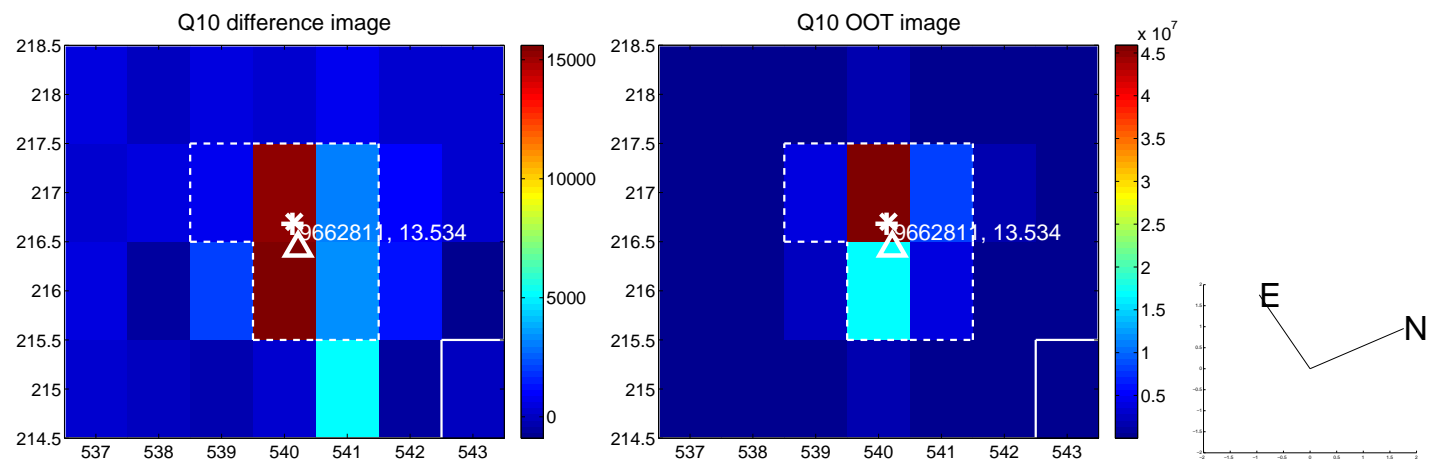
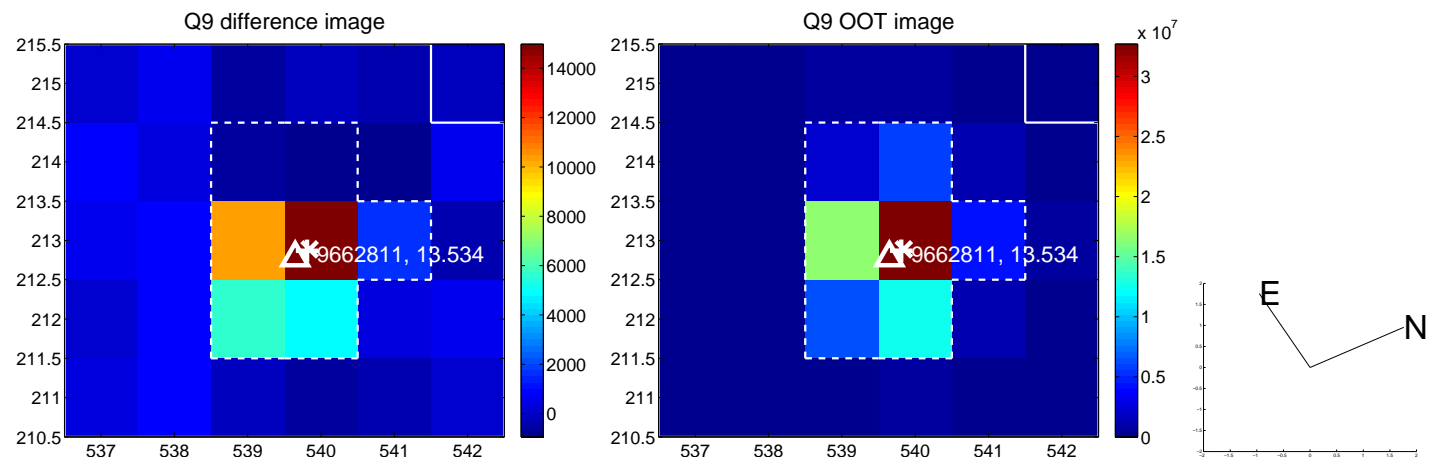
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



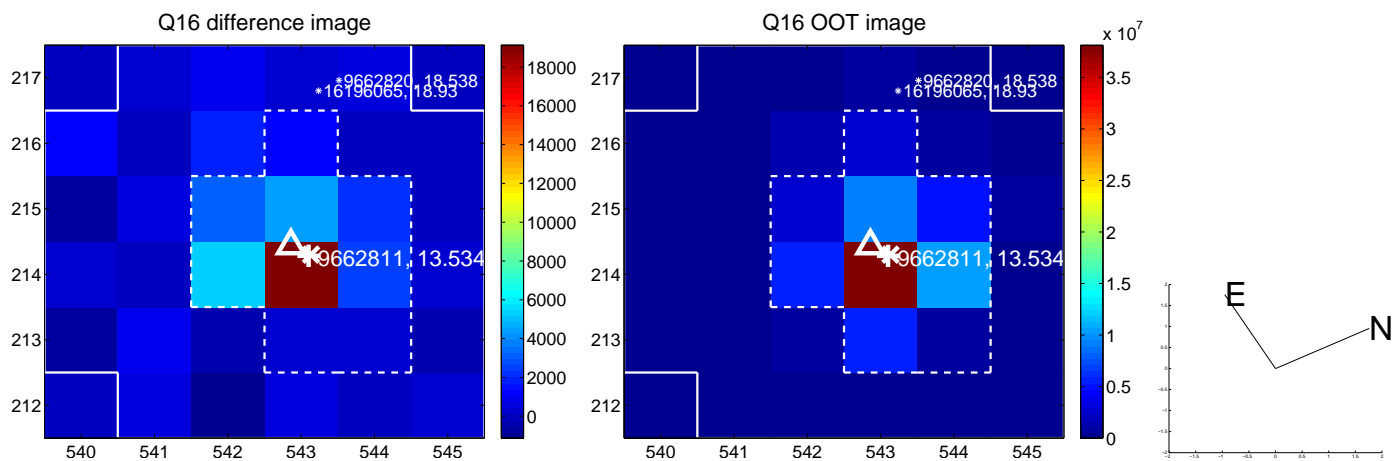
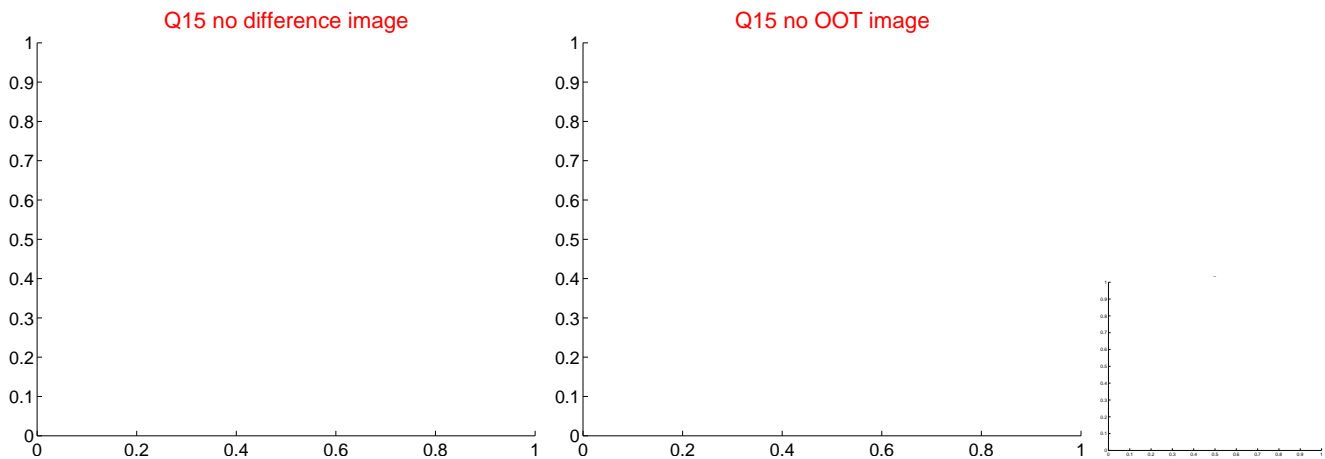
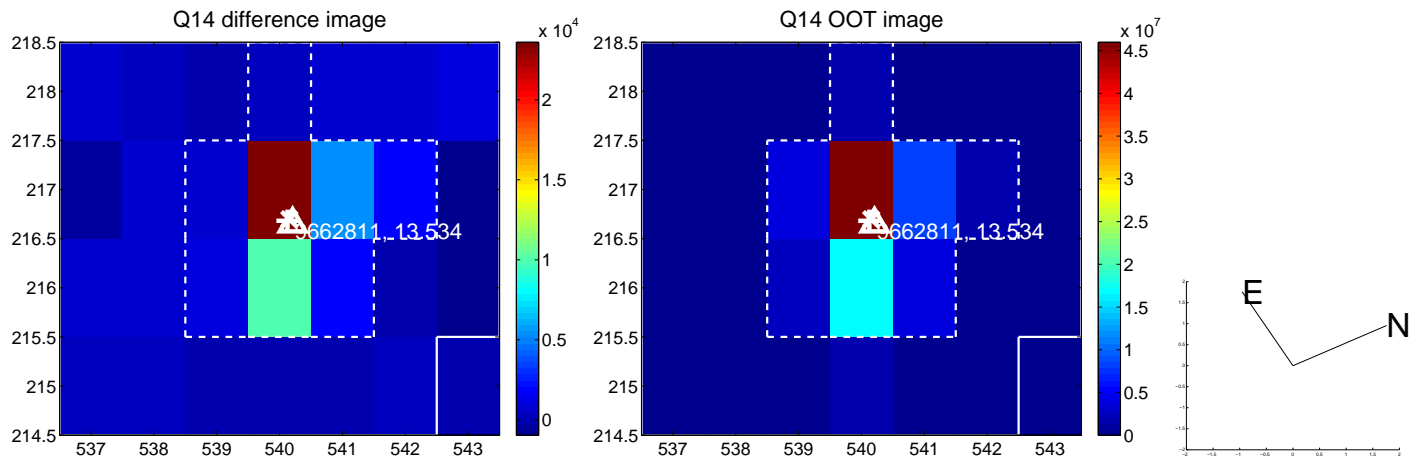
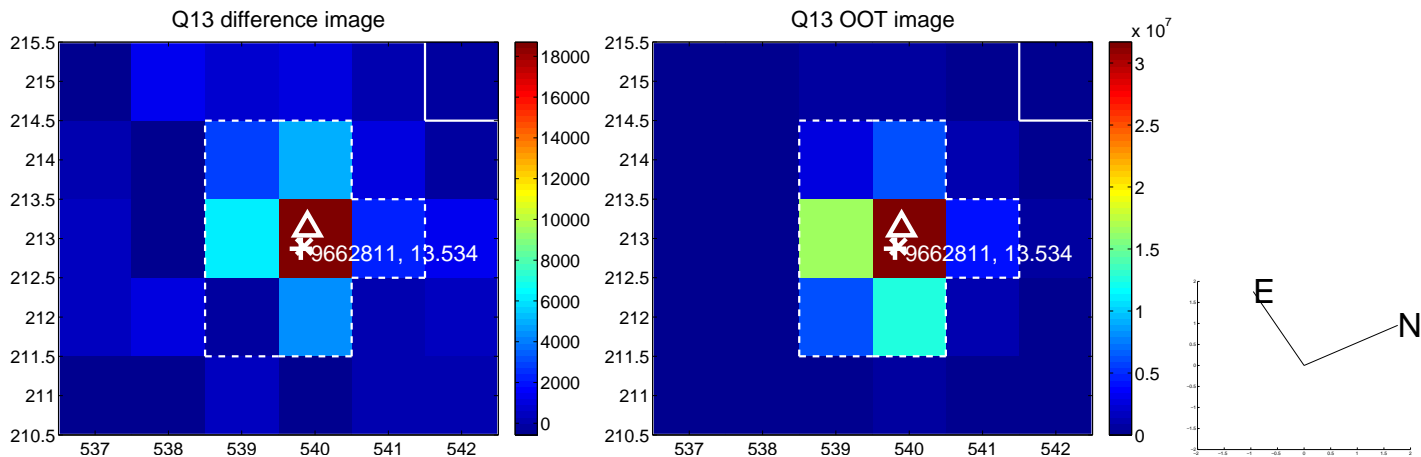
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



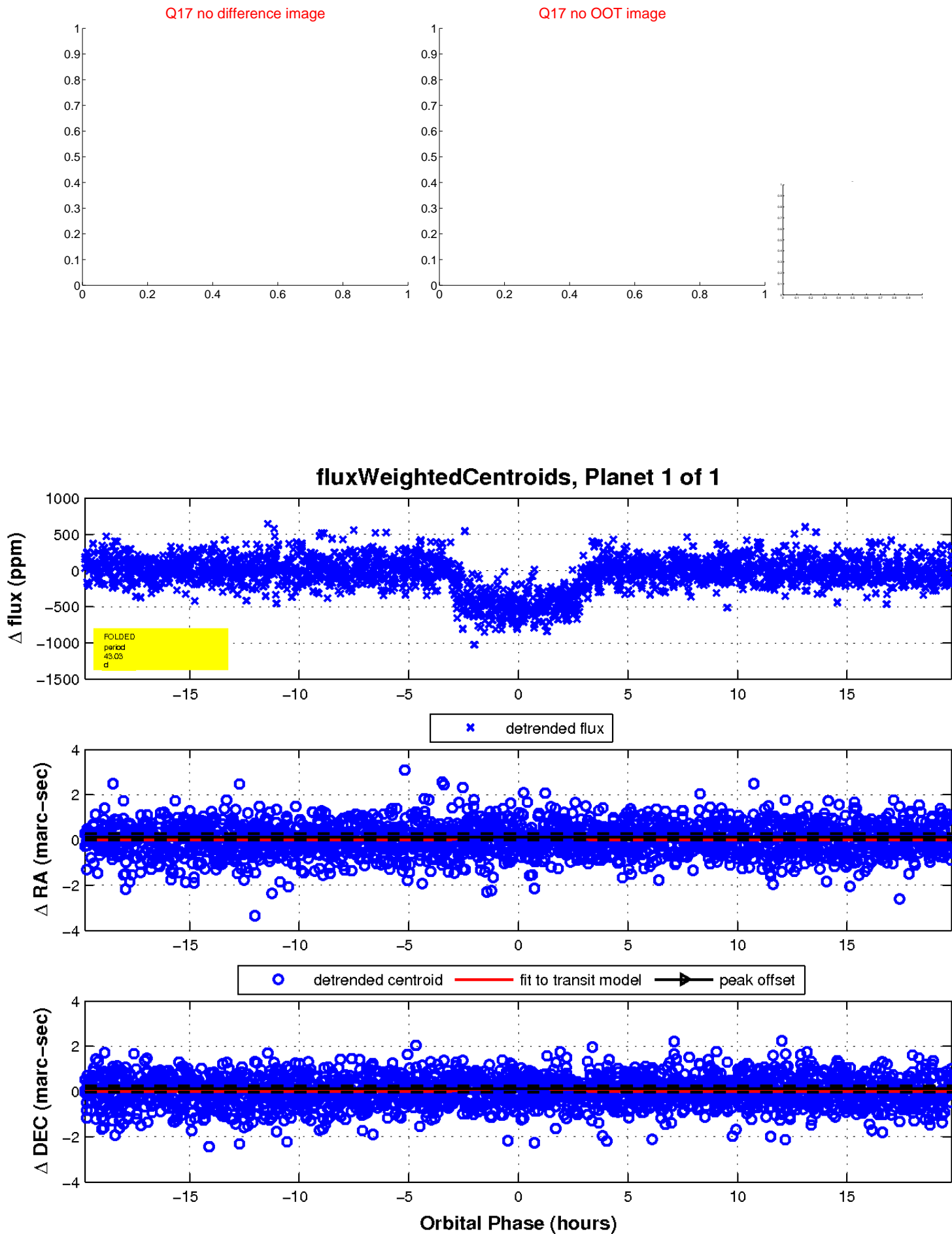
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

