

KIC 009967884

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})
009967884-01	OBS	0425.01	5.428346	131.755159	13797.9	1.915	776.6	694.7	0.96	5936	15.53	269.77

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009967884-01	OBS	FP	0.00	0	1	0	0	DEEP_V_SHAPED

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

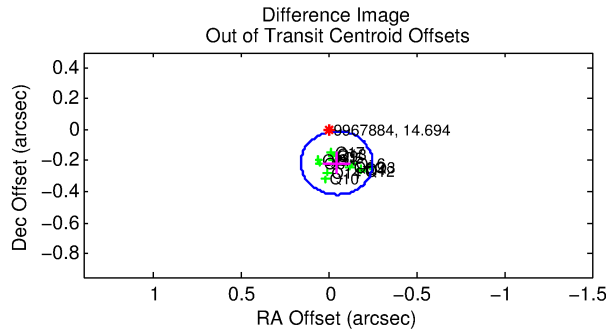
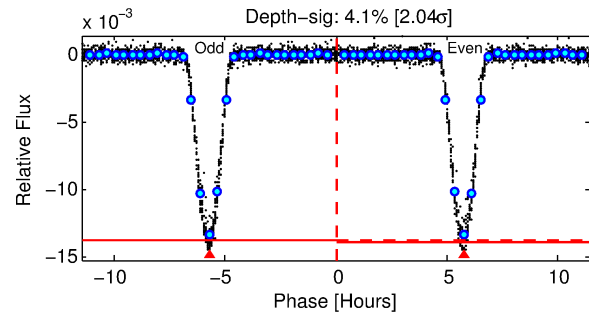
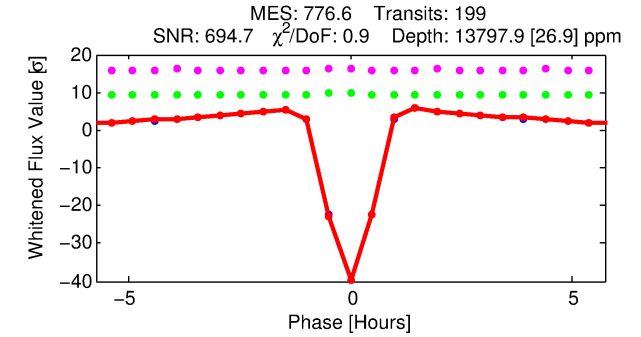
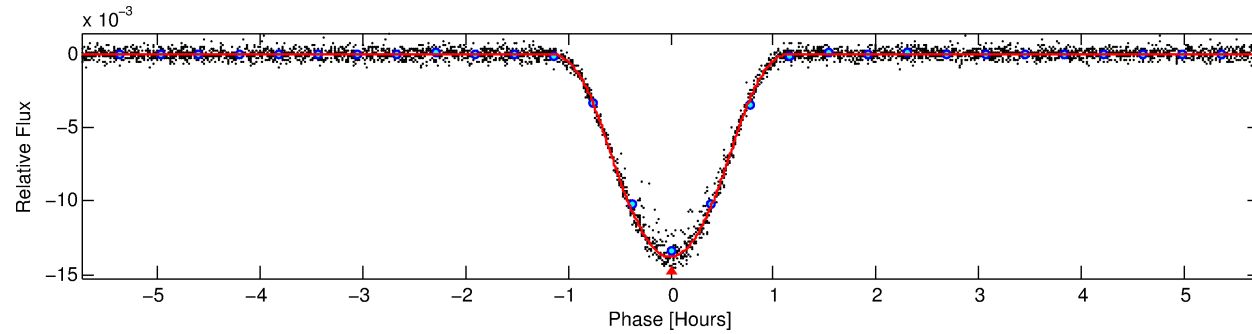
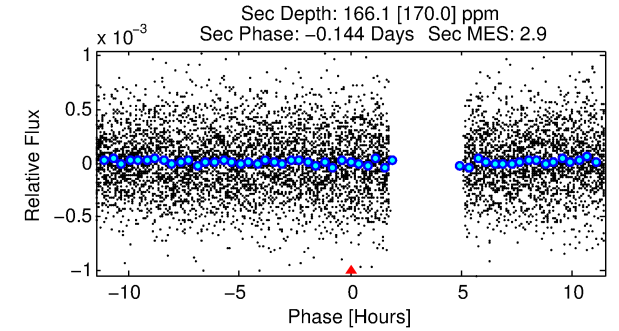
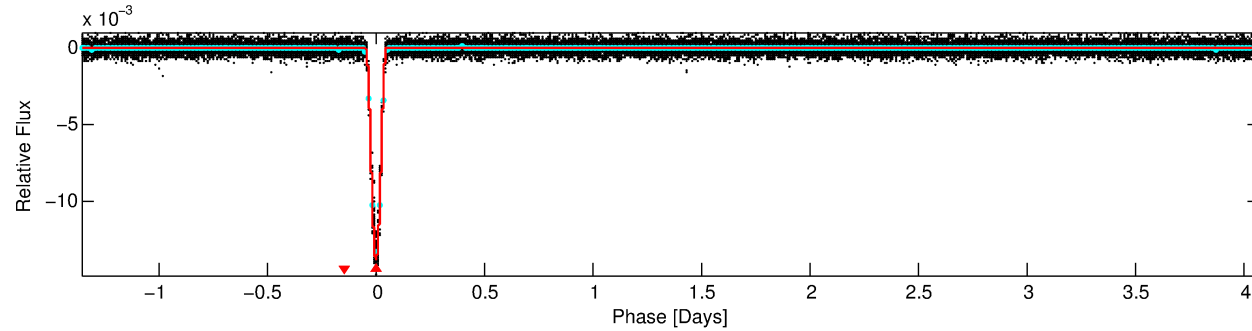
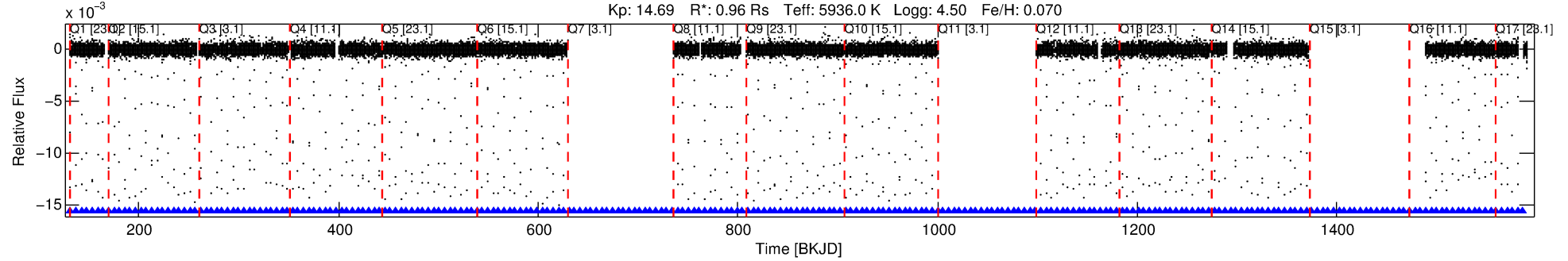
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009967884-01

No Significant Match Found

DV One-Page Summary

KIC: 9967884 Candidate: 1 of 1 Period: 5.428 d
KOI: K00425.01 Corr: 0.991



DV Fit Results:

Period = 5.42835 [0.00000] d
Epoch = 131.7552 [0.0000] BKJD
Rp/R* = 0.1475 [0.0043]
a/R* = 14.77 [0.14]
b = 0.92 [0.01]
Seff = 269.77 [115.01]
Teq = 1033 [110] K
Rp = 15.53 [5.04] Re
a = 0.0620 [0.0170] AU
Ag = 1.46 [1.60] [0.28 σ]
Teffp = 1755 [454] K [1.54 σ]

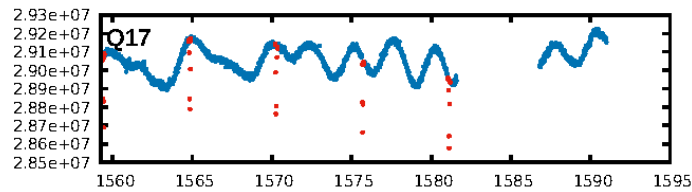
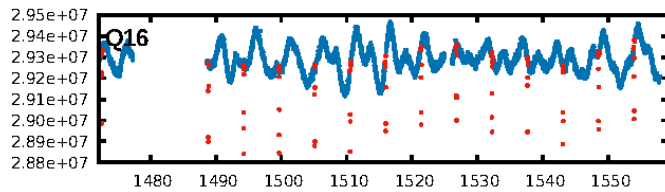
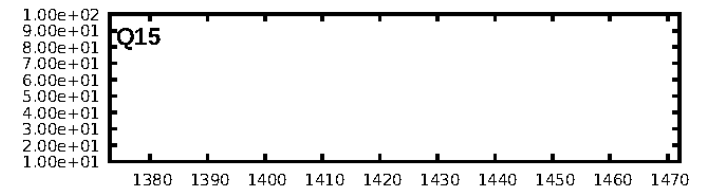
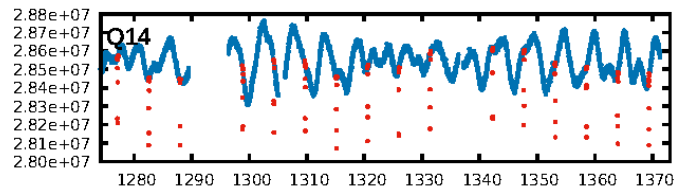
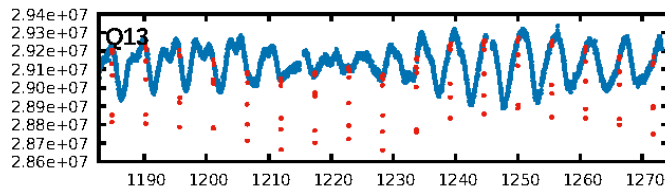
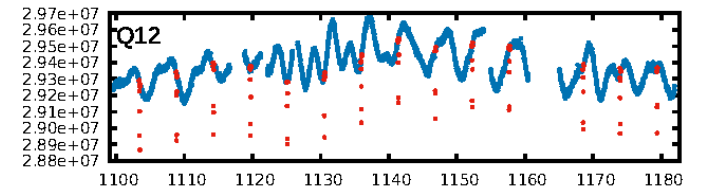
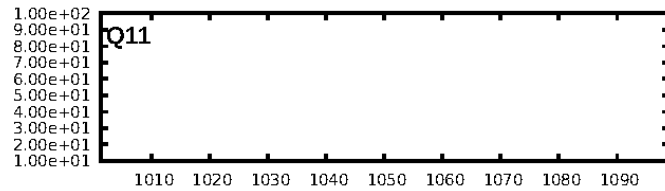
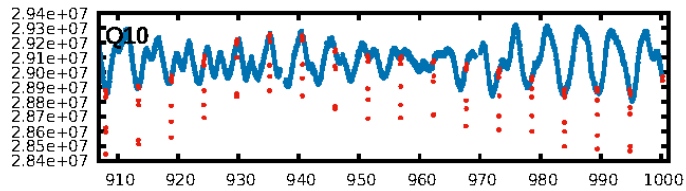
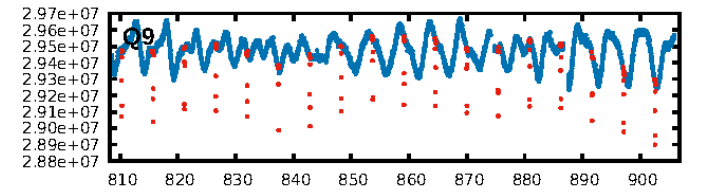
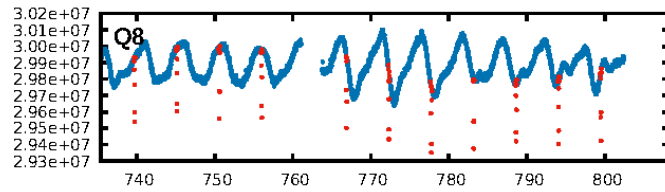
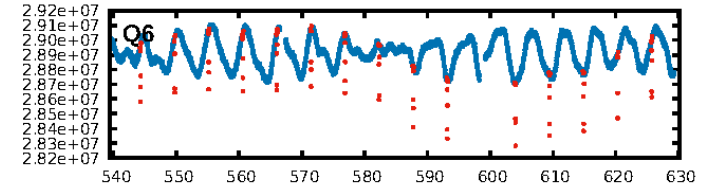
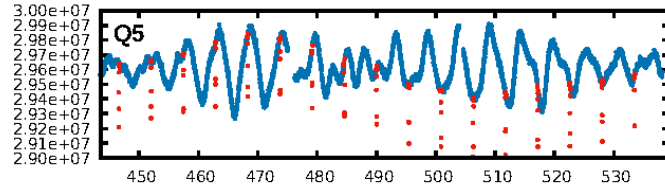
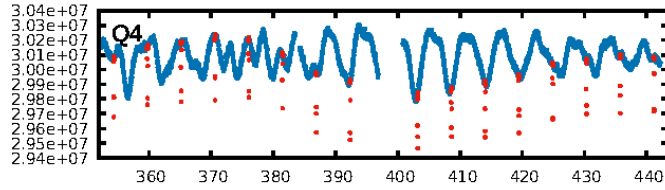
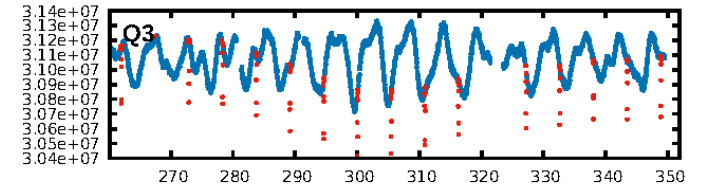
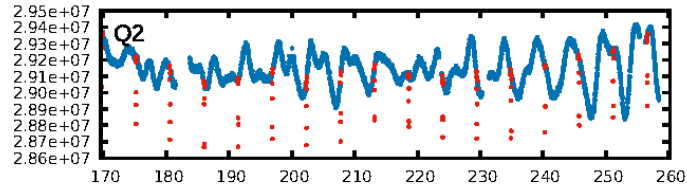
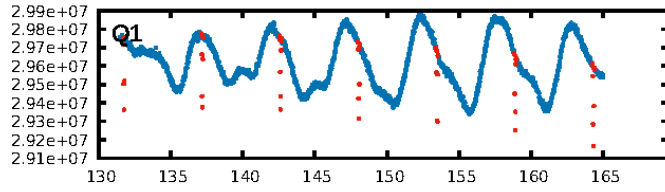
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [187/187]
GhostDiagnostic-chr: 3.887
Centroid-sig: 0.0%
Centroid-so: 0.193 arcsec [11.79 σ]
OotOffset-rm: 0.218 arcsec [3.19 σ]
KicOffset-rm: 0.193 arcsec [2.74 σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

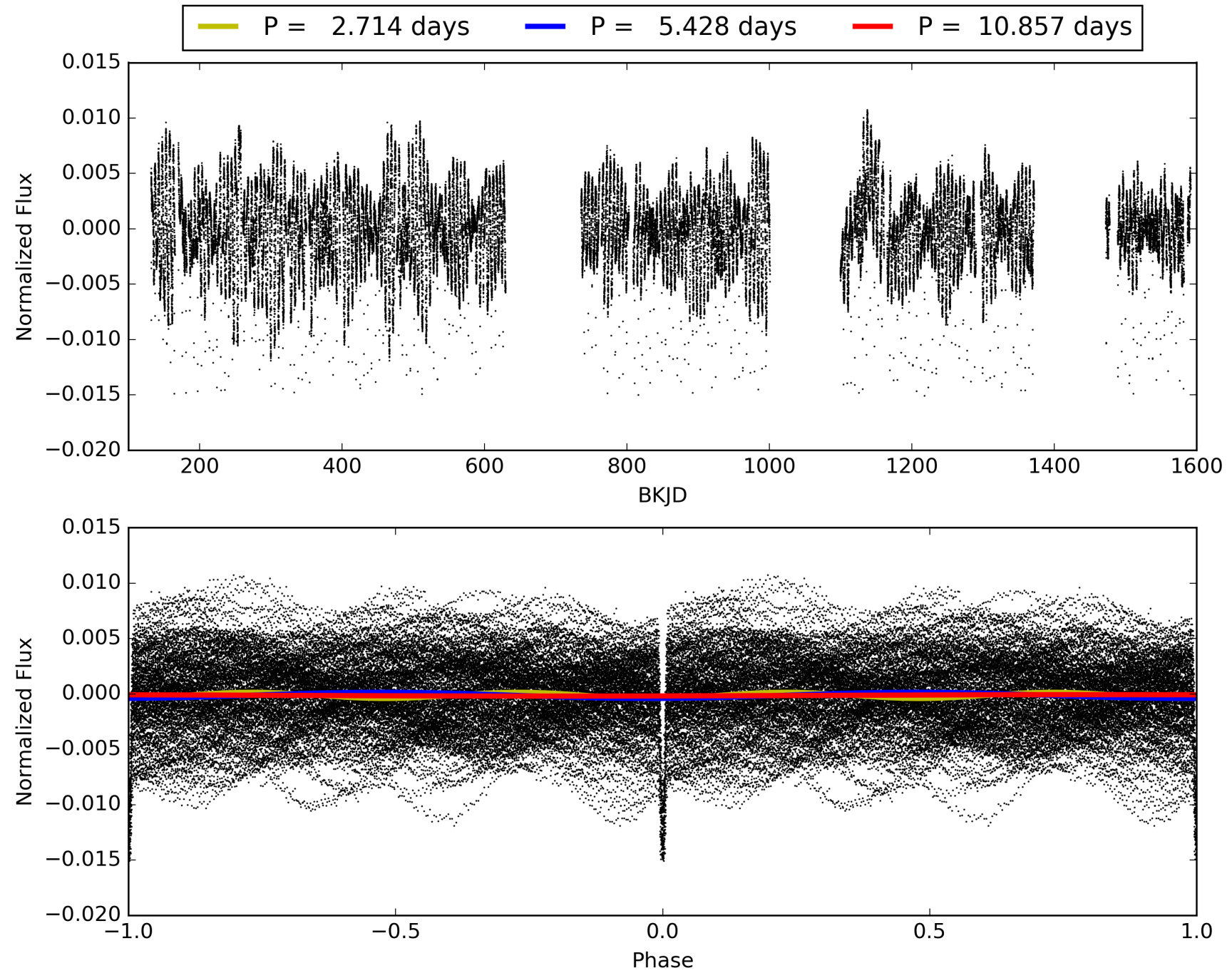
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 16:50:17 Z

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

TCE 009967884-01, PDC Light Curves

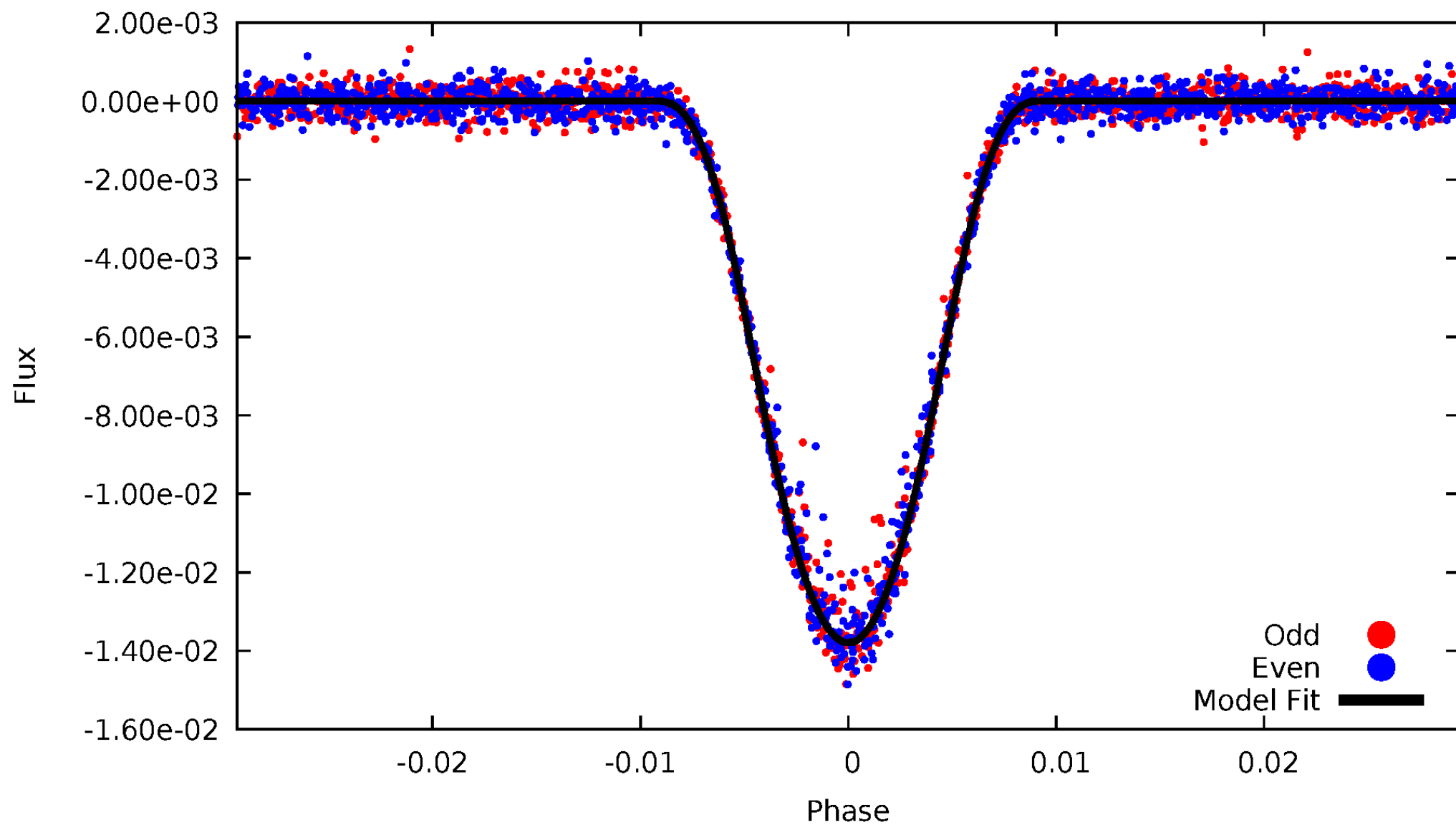


TCE 009967884-01



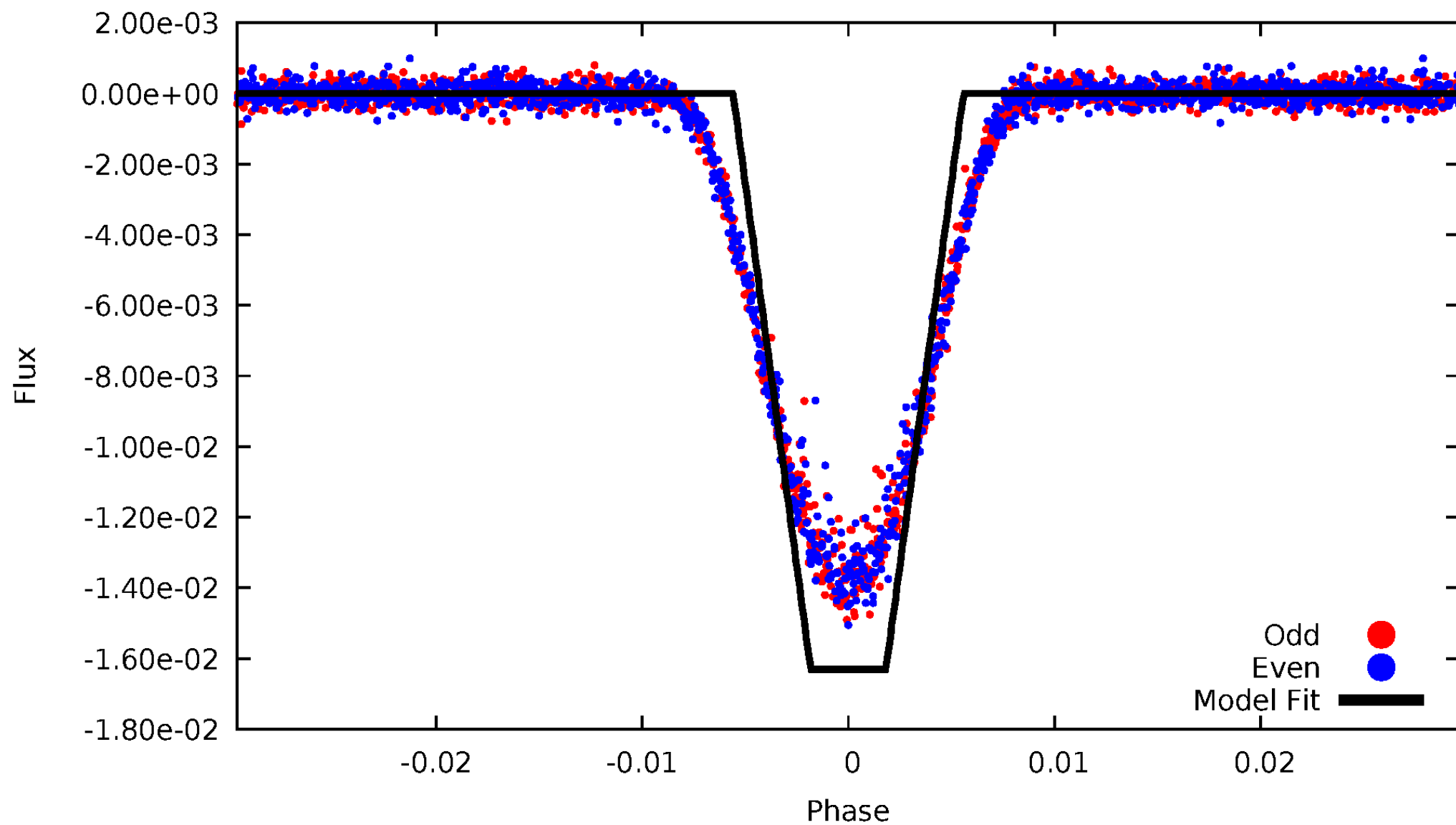
DV Odd/Even

TCE 009967884-01



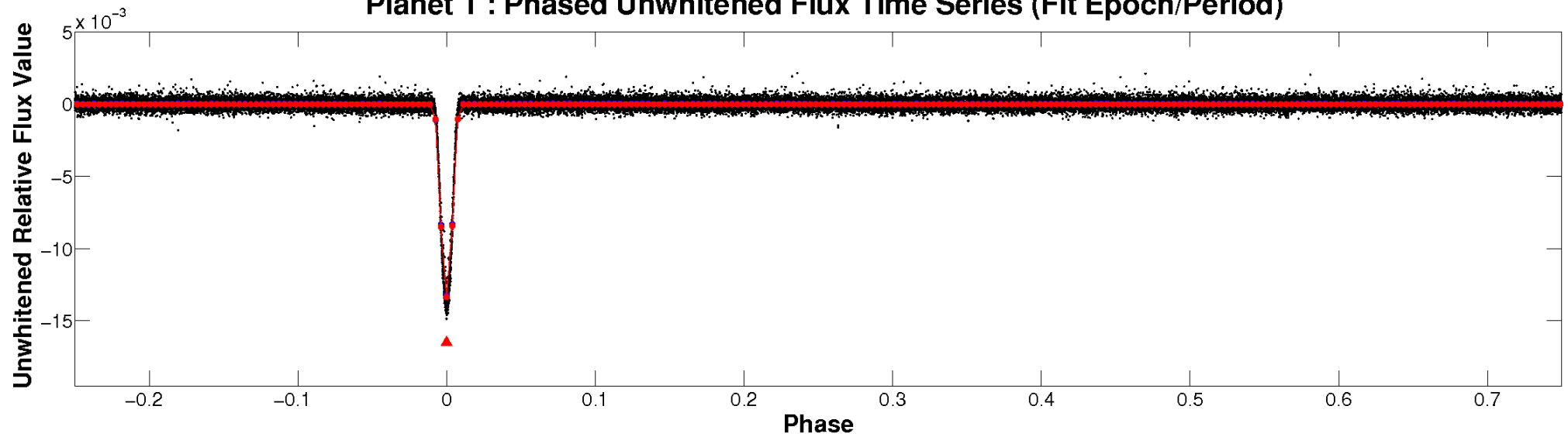
ALT Odd/Even

TCE 009967884-01

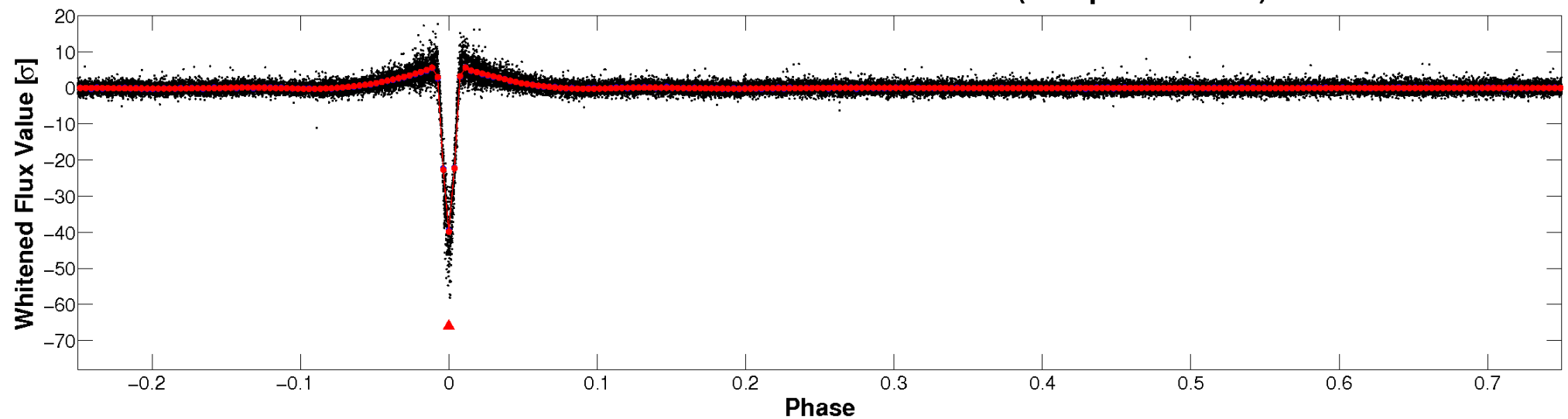


Non-Whitened Vs. Whitened Light Curve

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

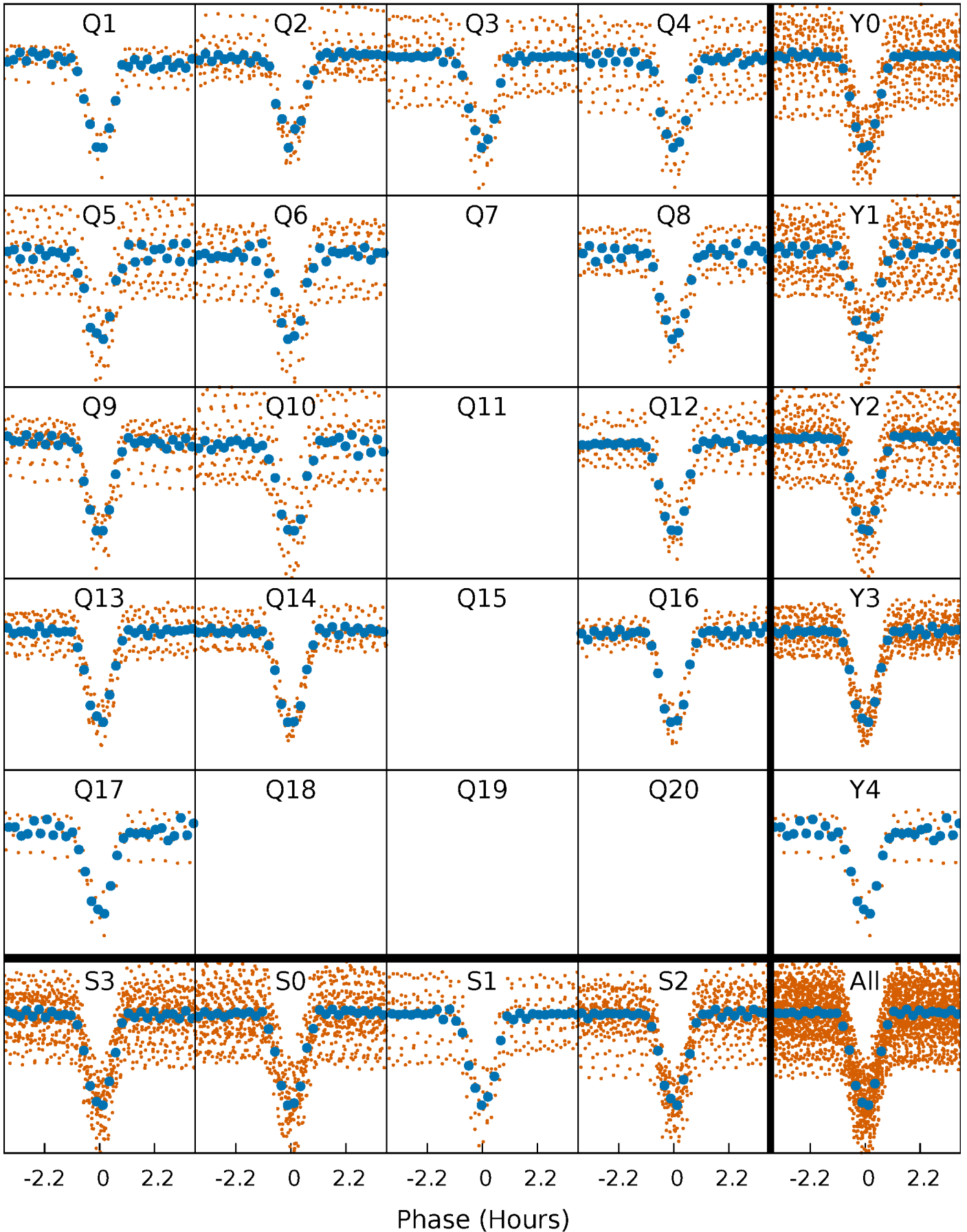


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



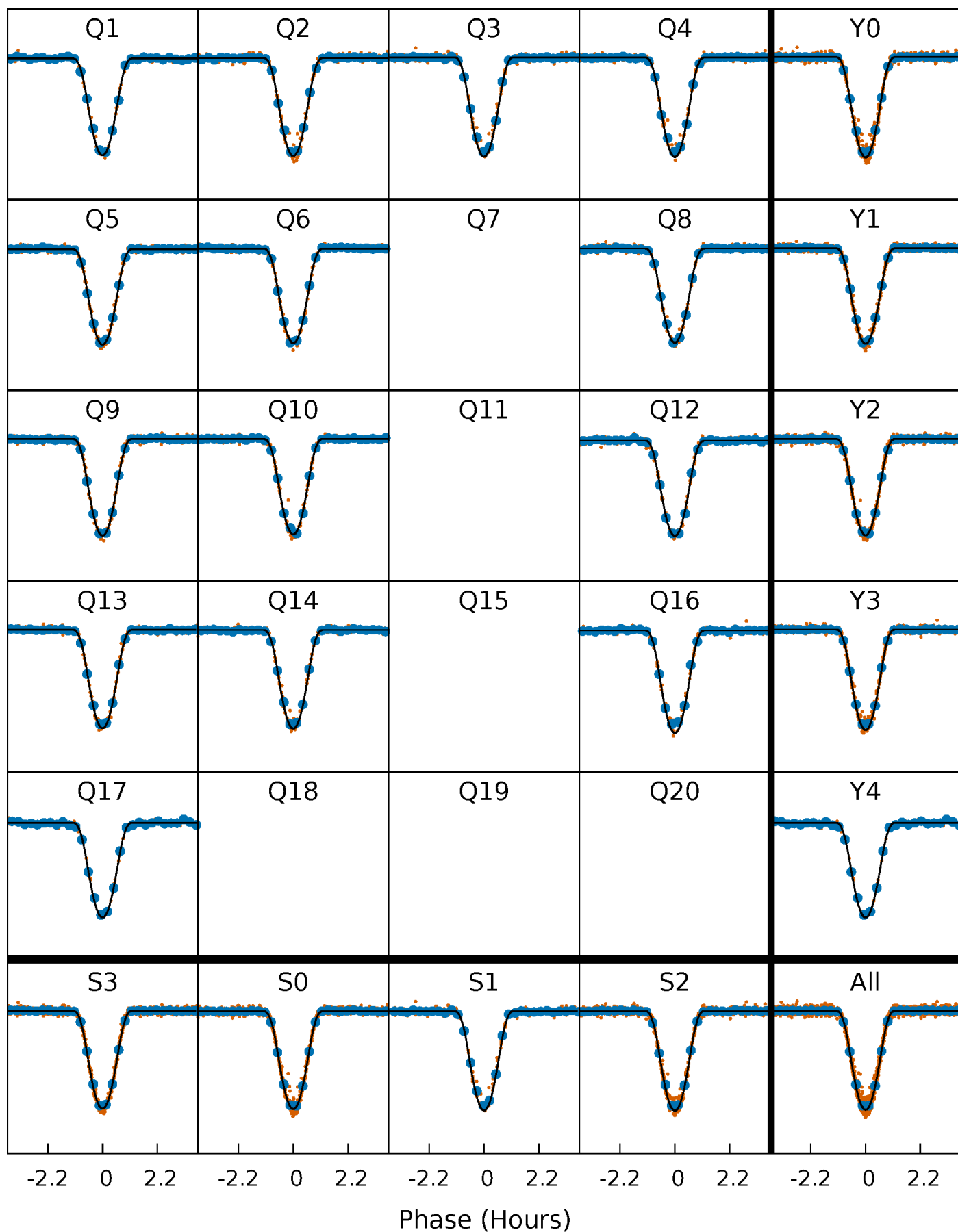
PDC Quarter-Phased Transit Curves

TCE 009967884-01 P= 5.428346 Days $T_0=131.755159$ (BKJD)



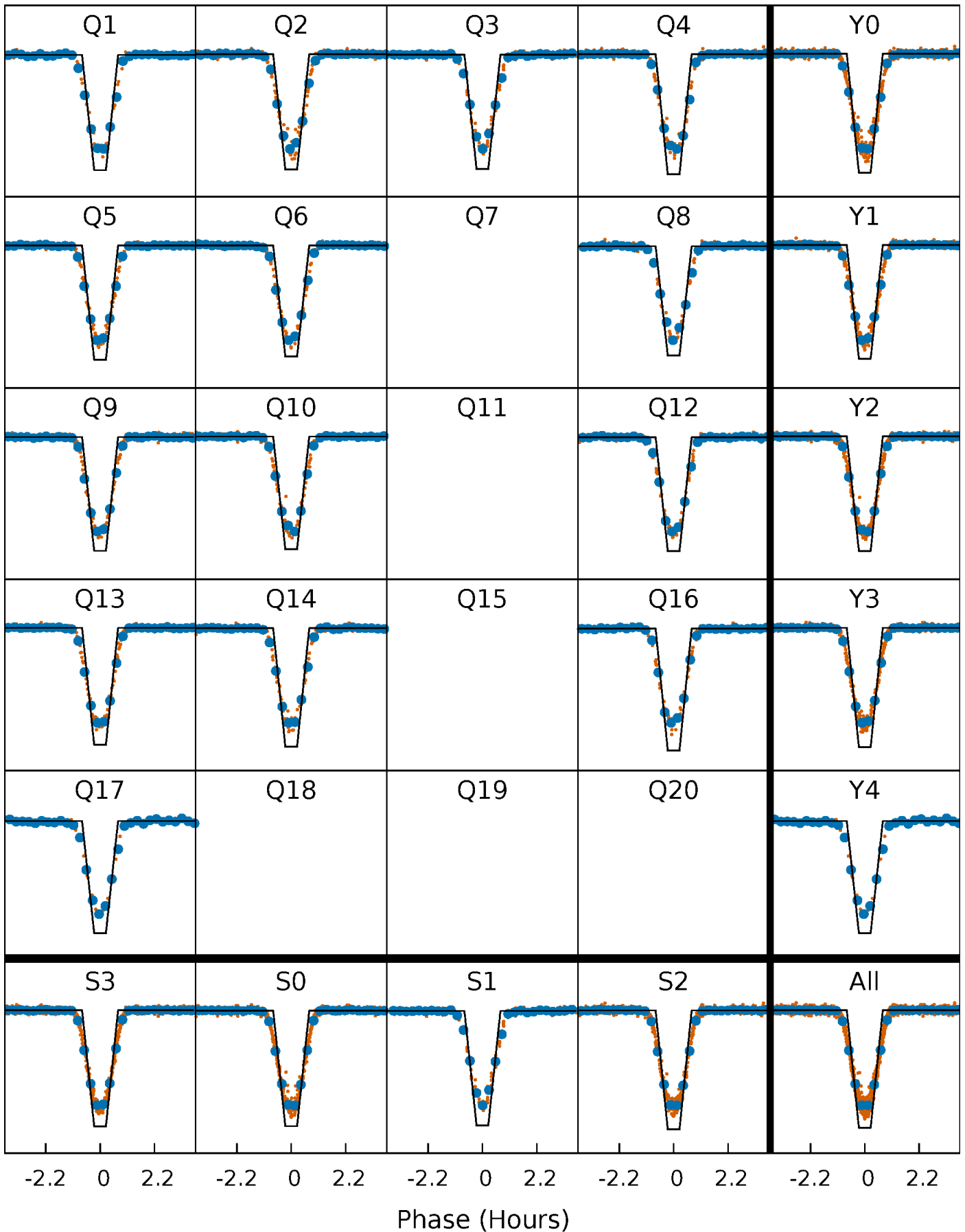
DV Quarter-Phased Transit Curves

TCE 009967884-01 P= 5.428346 Days $T_0=131.755159$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

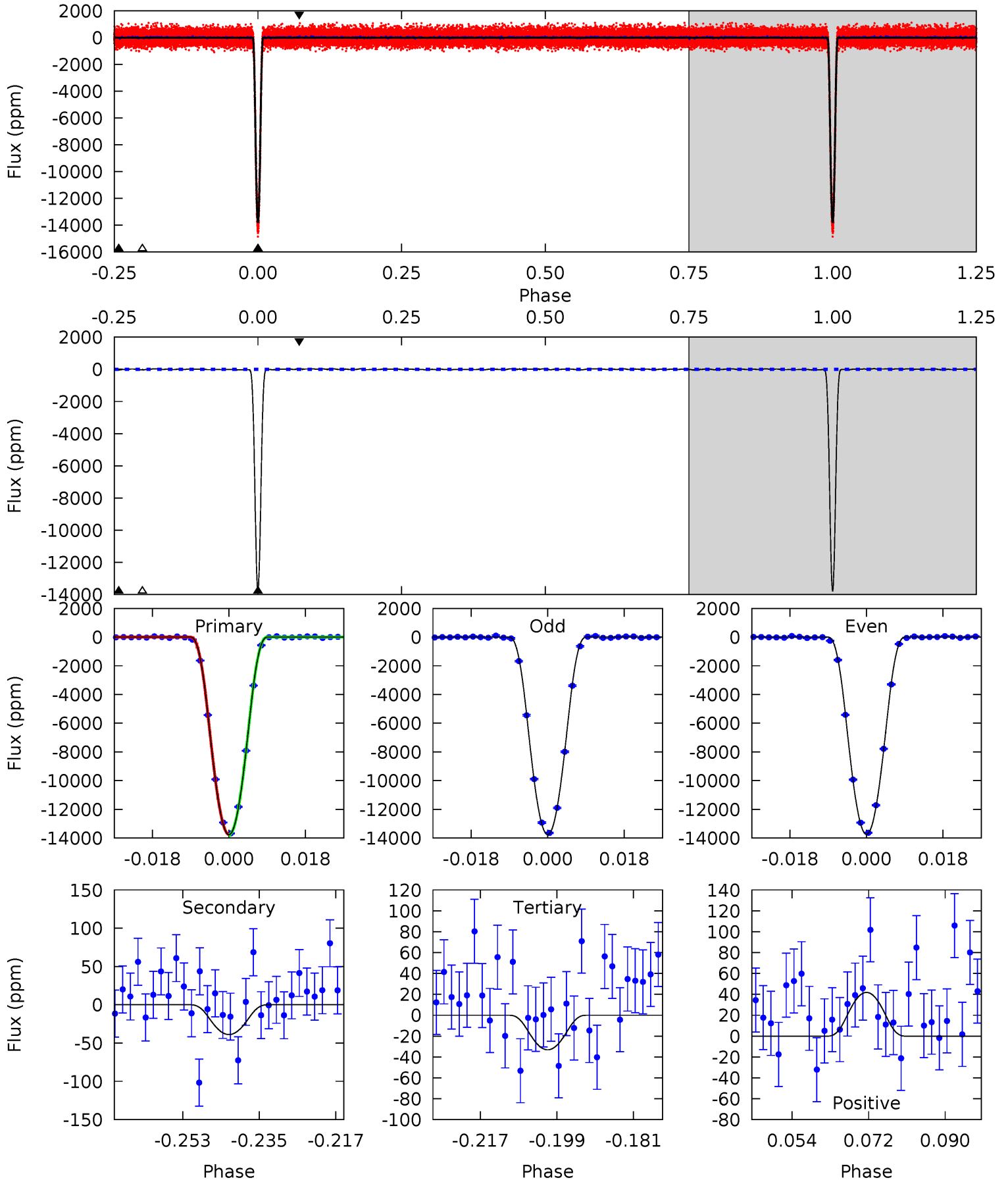
TCE 009967884-01 P= 5.428350 Days $T_0=131.754668$ (BKJD)



DV Model-Shift Uniqueness Test

009967884-01, P = 5.428346 Days, E = 126.326813 Days

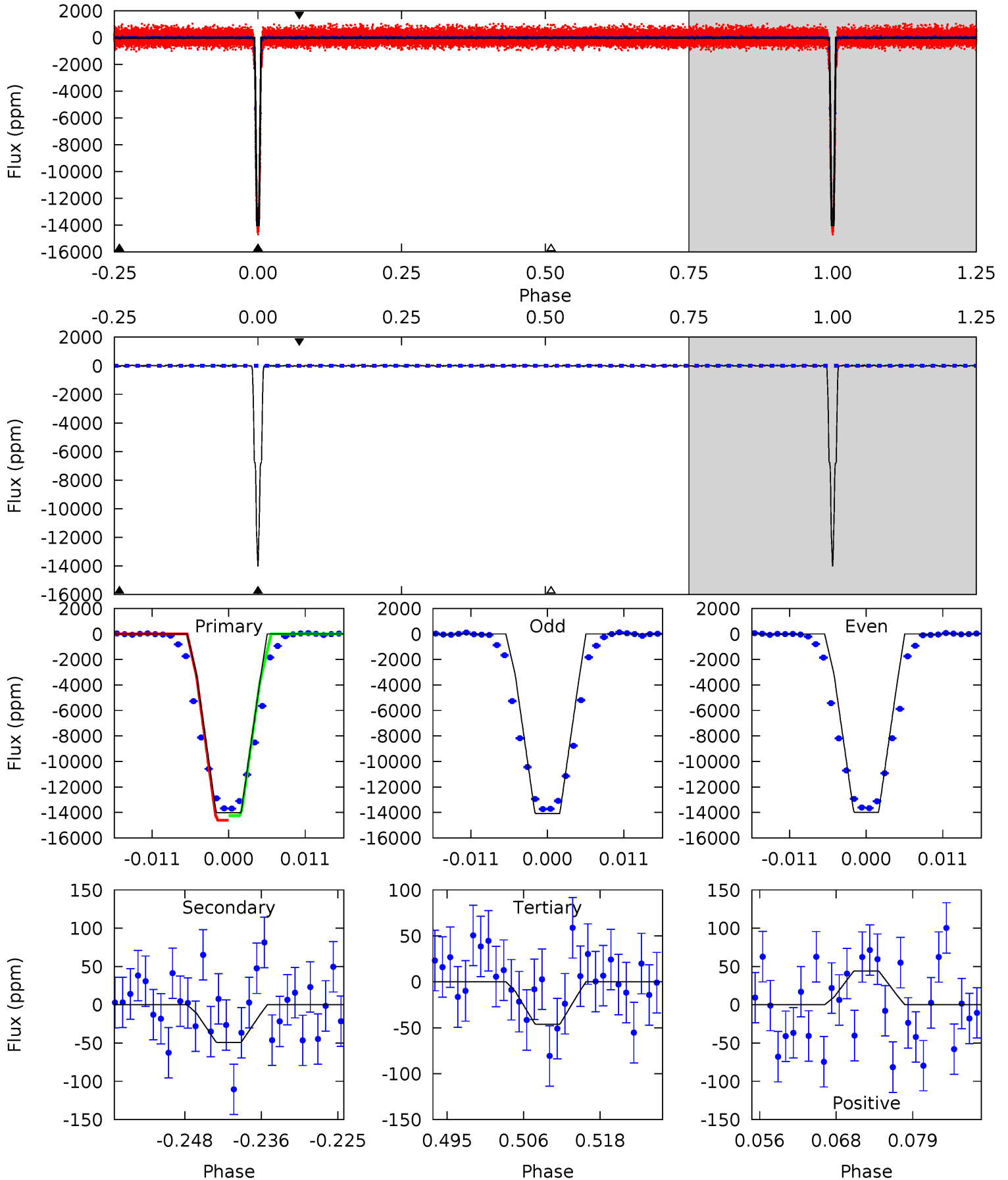
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1461	4.13	3.51	4.44	4.91	2.36	1.63	1458	1457	0.61	-0.31	0.93	0.99	0.00	1.03



Alt Model-Shift Uniqueness Test

009967884-01, P = 5.428350 Days, E = 126.326318 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
992.8	3.48	3.27	3.13	5.00	2.53	1.06	989.5	989.6	0.21	0.35	3.14	0.99	0.00	0



Stellar Parameters For KIC 009967884

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5936^{+176}_{-211}	$4.501^{+0.039}_{-0.221}$	$0.070^{+0.250}_{-0.300}$	$0.965^{+0.312}_{-0.104}$	$1.075^{+0.124}_{-0.152}$	$1.685^{+0.366}_{-0.915}$
	+3%/-4%	+1%/-5%	+357%/-429%	+32%/-11%	+12%/-14%	+22%/-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 009967884-01 / KOI 0425.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-39 ± 9	$16.25^{+2.82}_{-1.53}$	1489^{+108}_{-76}	-1561^{+3465}_{-427}	$0.292^{+0.098}_{-0.090}$
Alt.	-49 ± 14	$13.97^{+2.49}_{-1.20}$	1481^{+118}_{-72}	2080^{+143}_{-363}	$0.492^{+0.194}_{-0.168}$

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 $A_{obs} \gg 1.0$

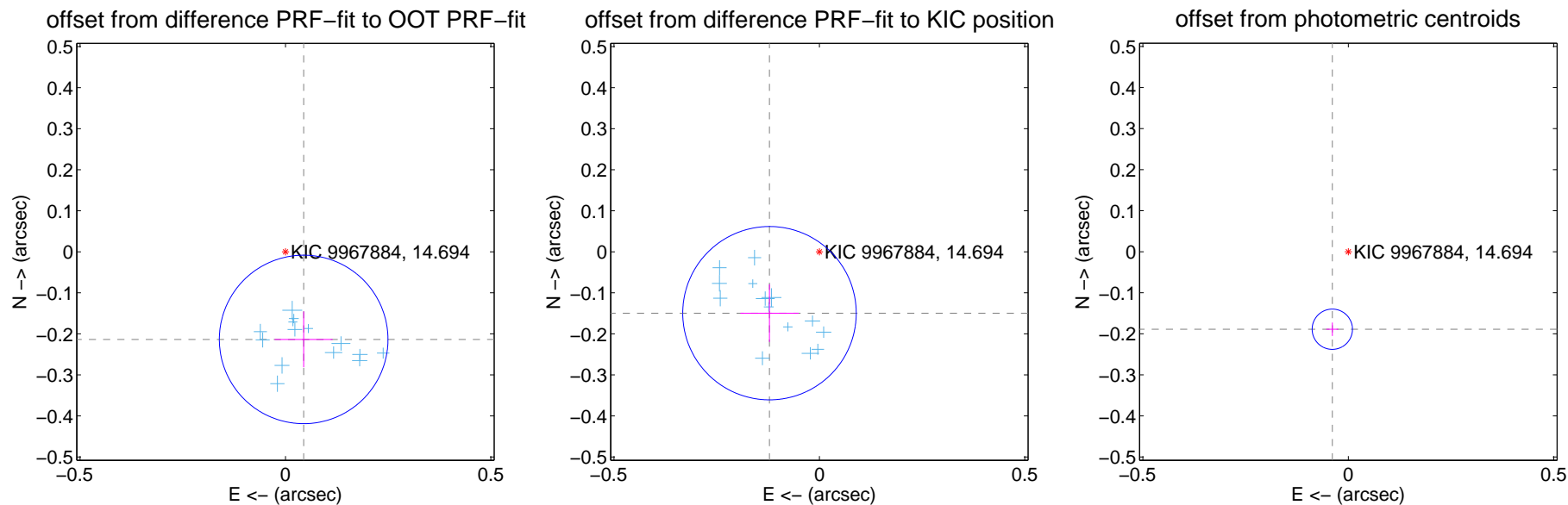
DV Centroid Data

Supplemental centroid analysis for 009967884-01. Kepler magnitude: 14.69. Transit SNR 694.66

There are 14 quarters with good PRF difference image offsets

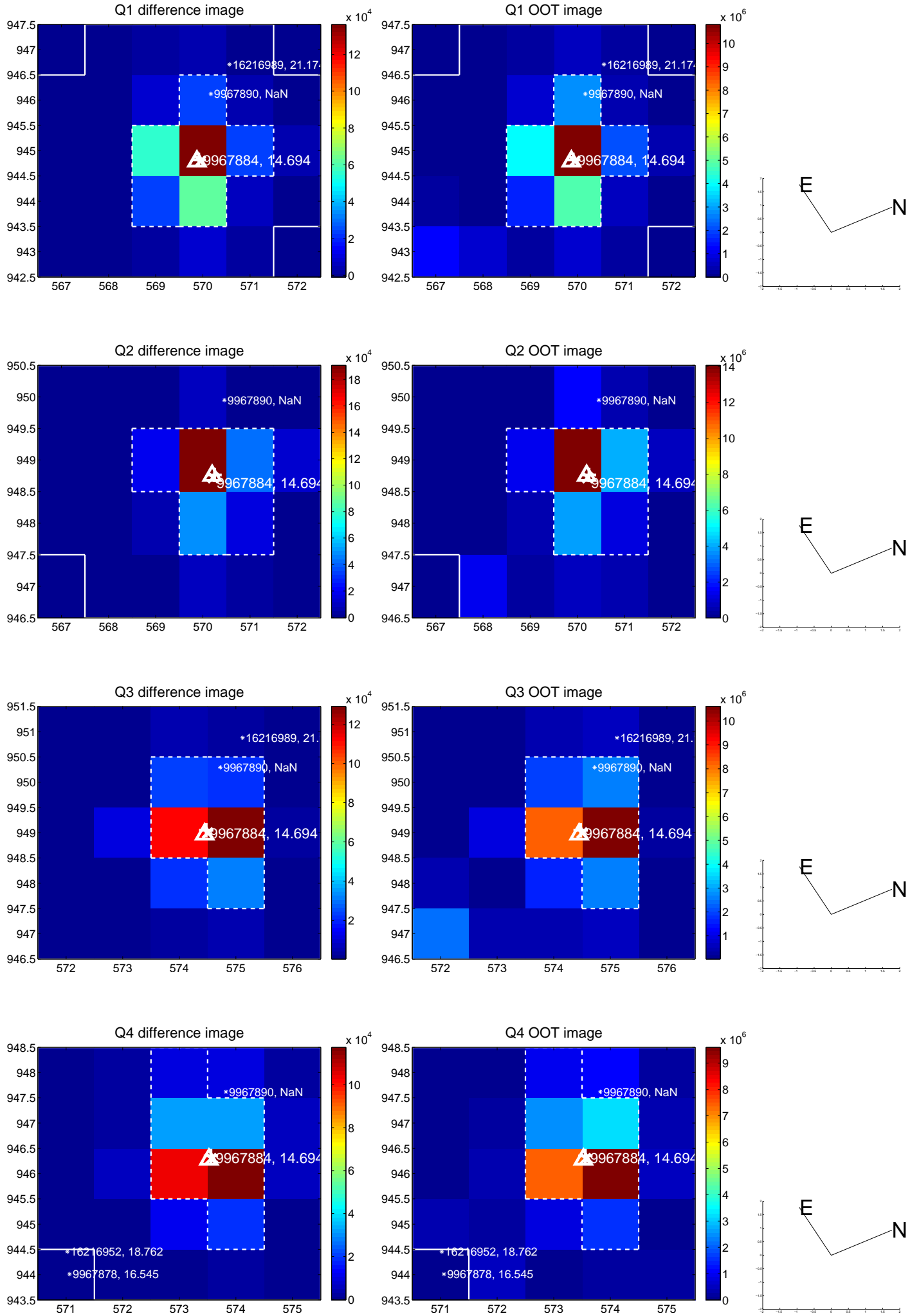
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.218 ± 0.068	3.19	-0.044 ± 0.071	-0.214 ± 0.068
PRF-fit source offset from KIC position	0.193 ± 0.070	2.74	0.121 ± 0.071	-0.150 ± 0.070
photometric centroid source offset	0.19 ± 0.02	11.79	0.04 ± 0.01	-0.19 ± 0.02

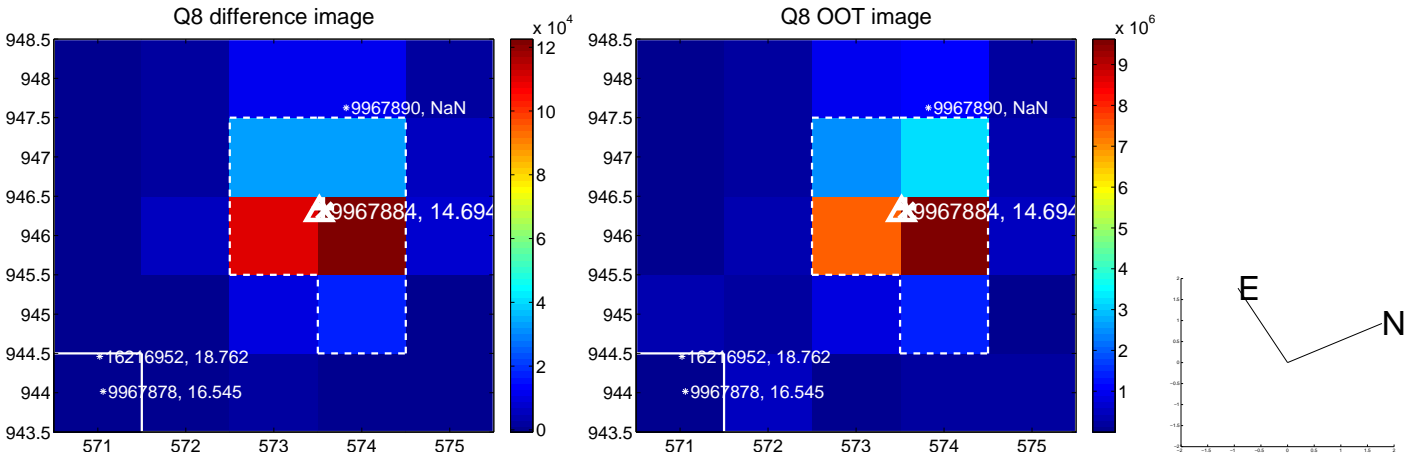
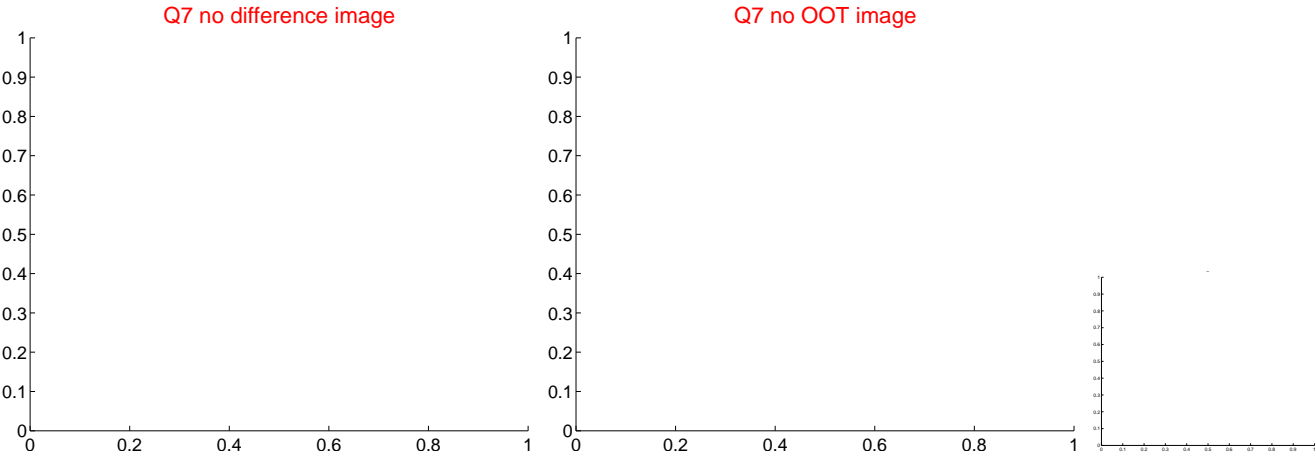
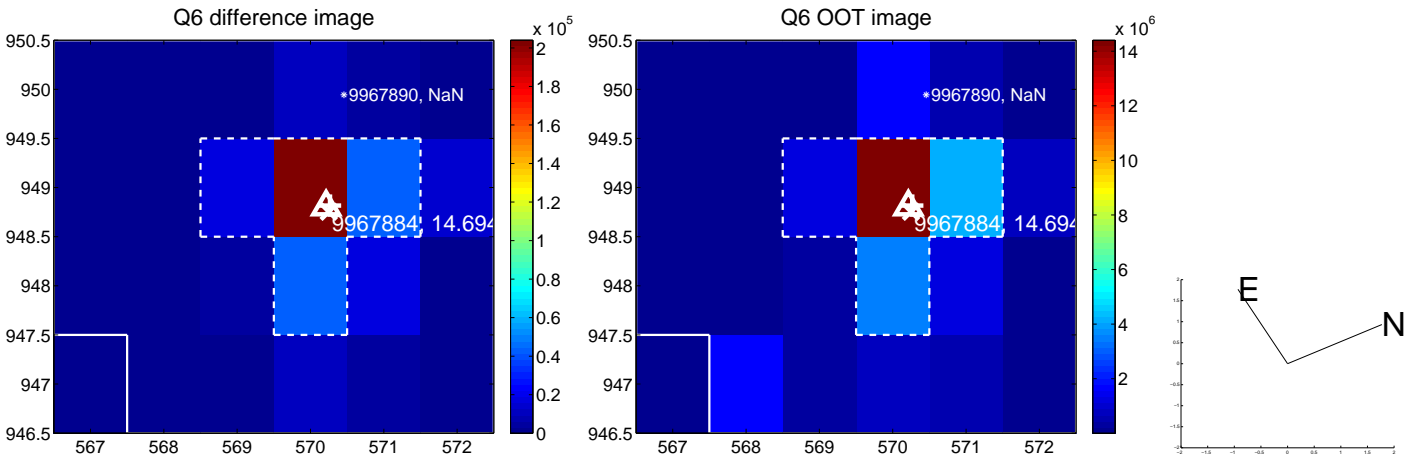
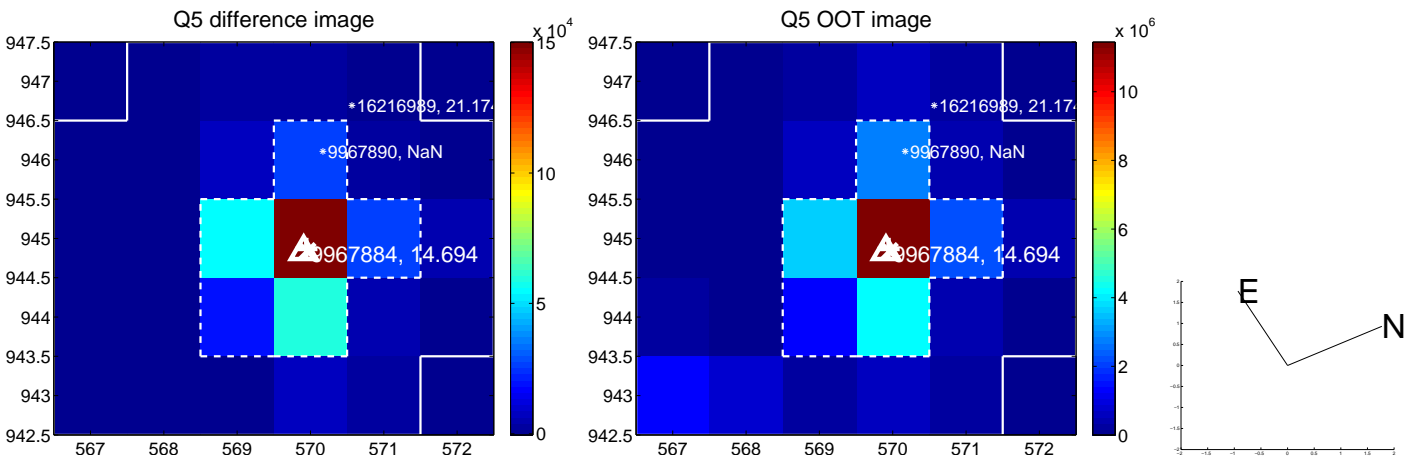


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

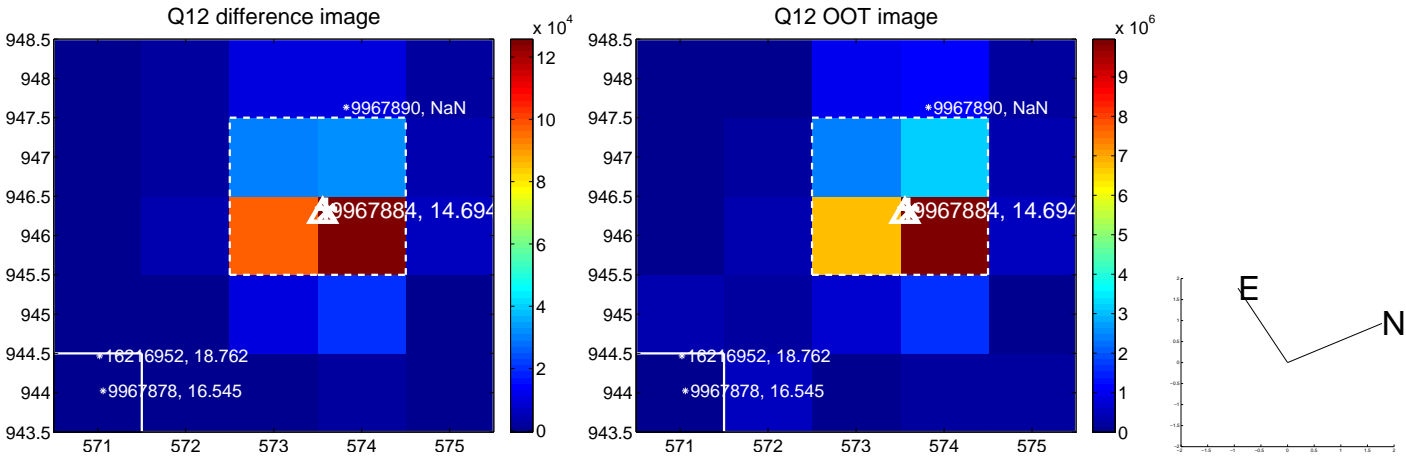
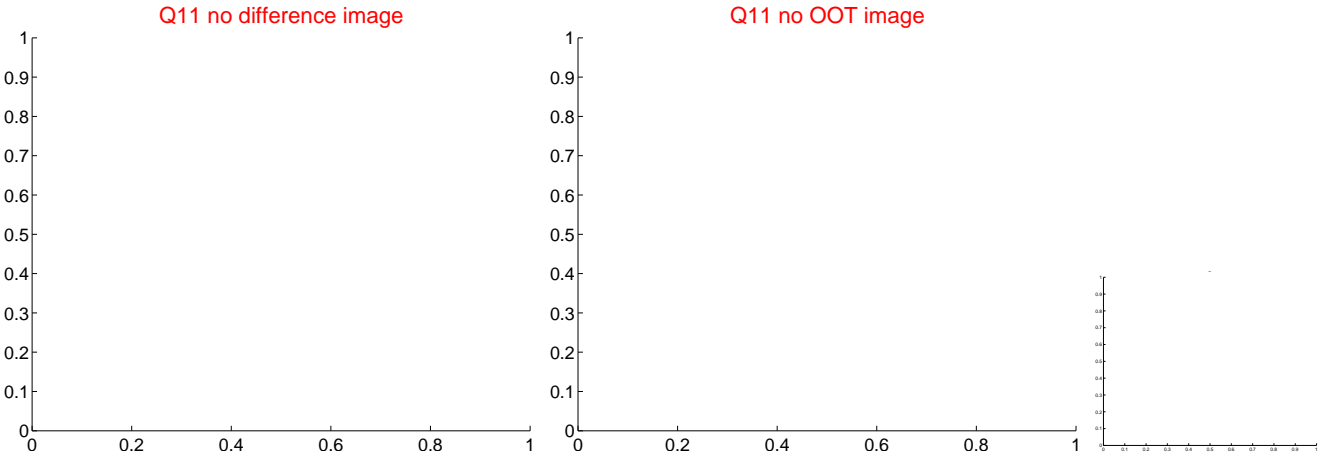
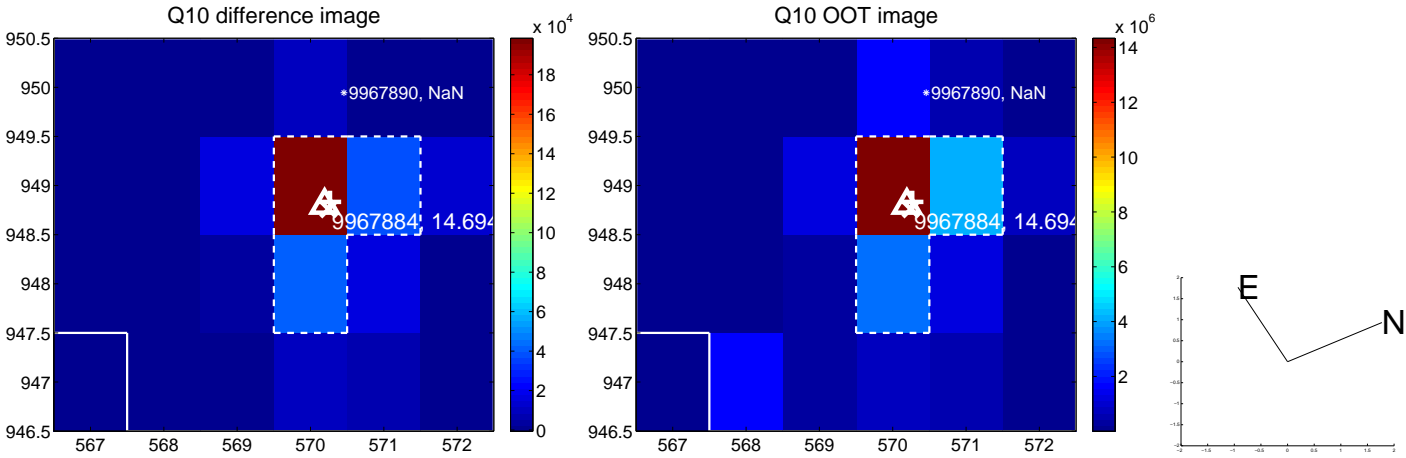
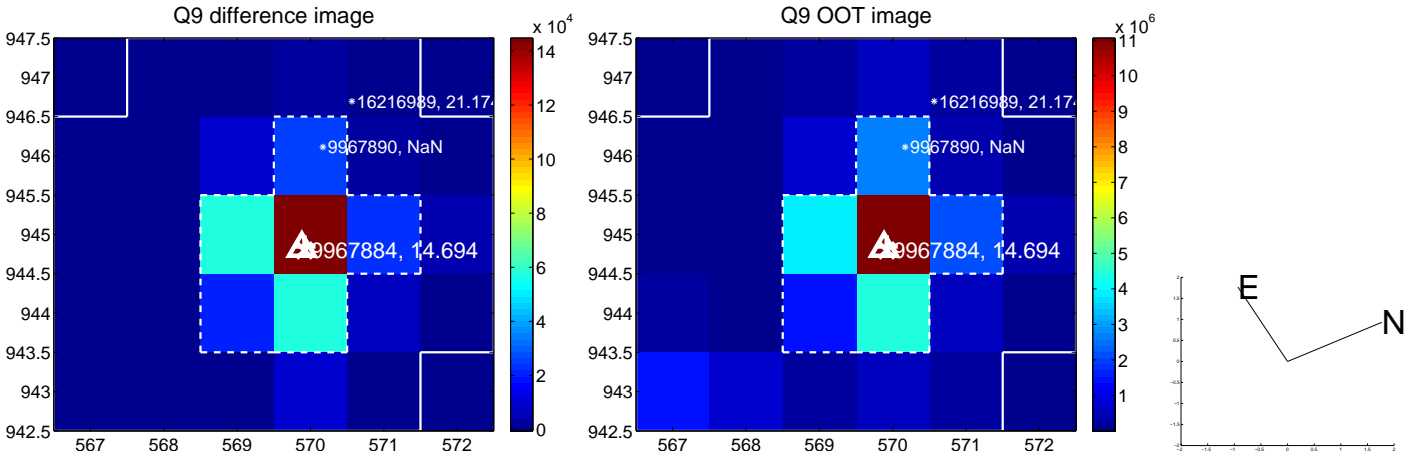
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



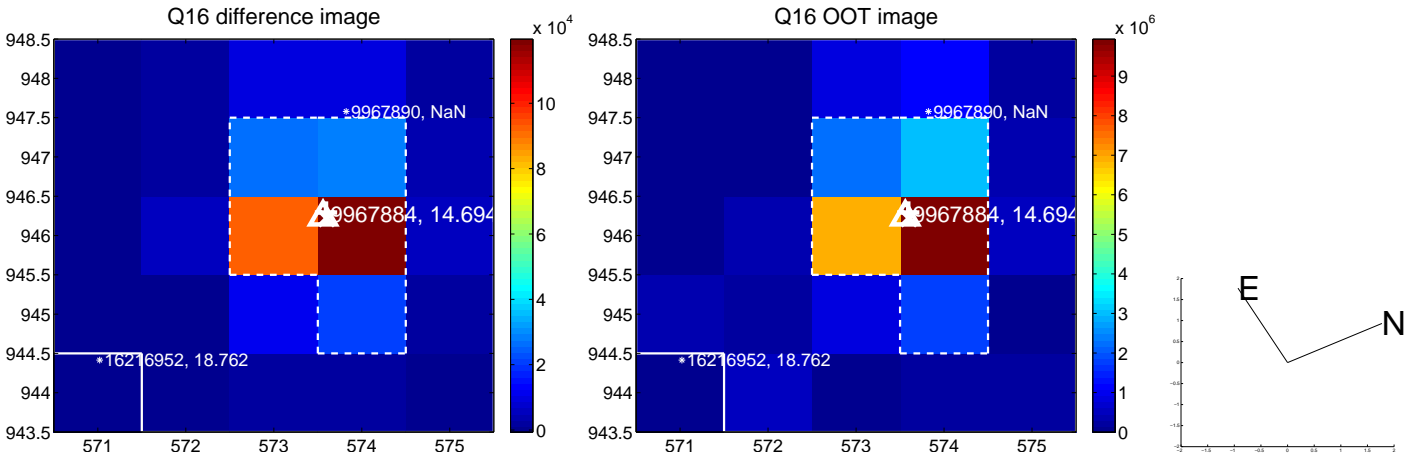
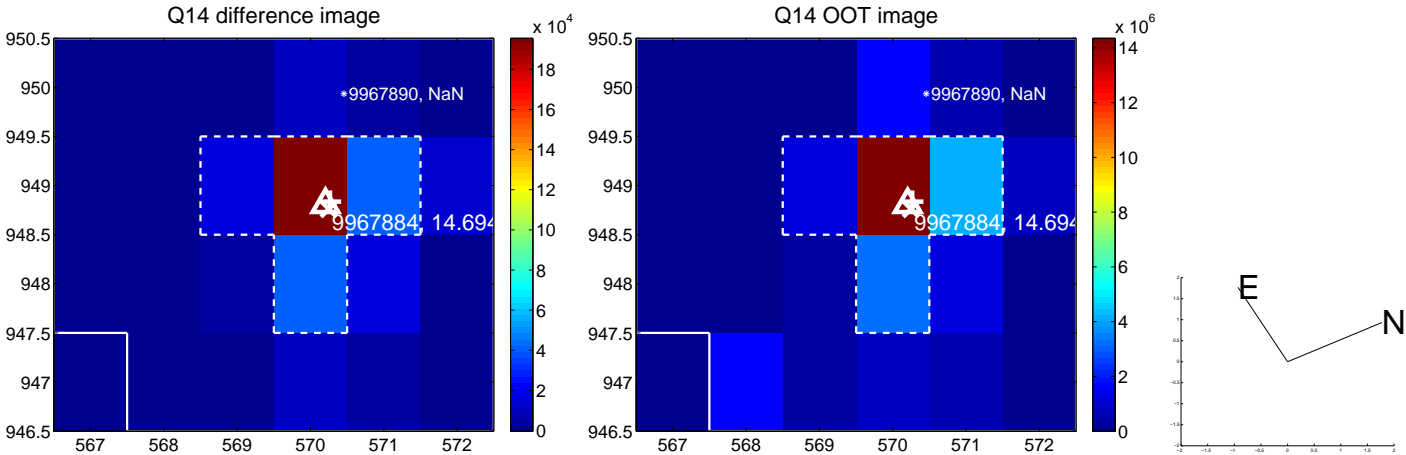
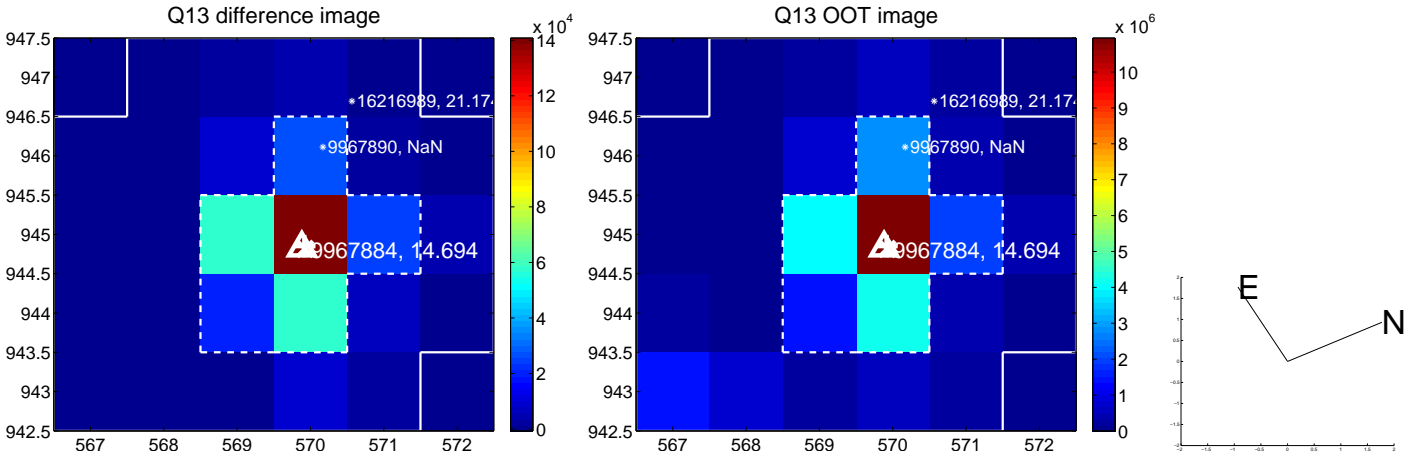
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



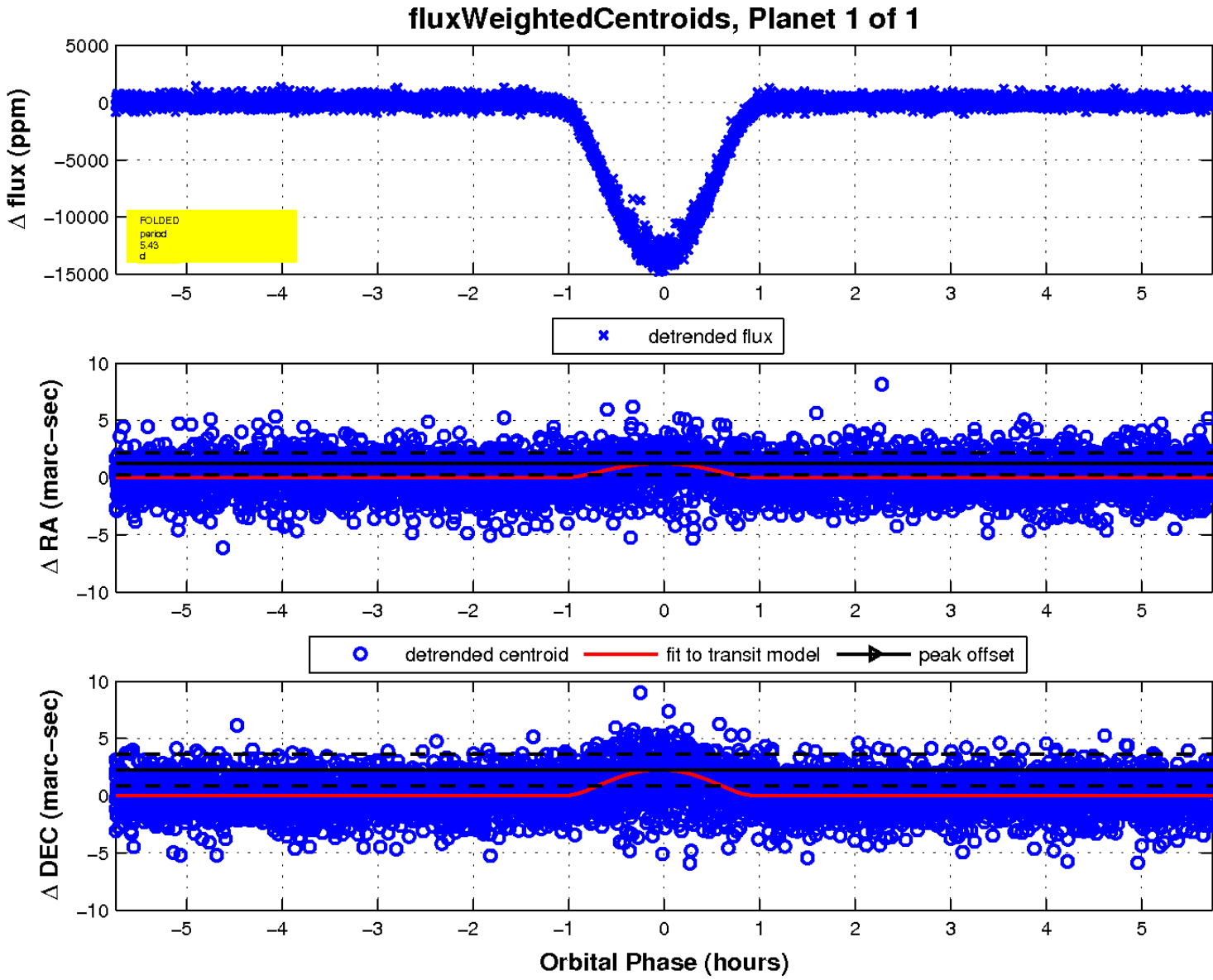
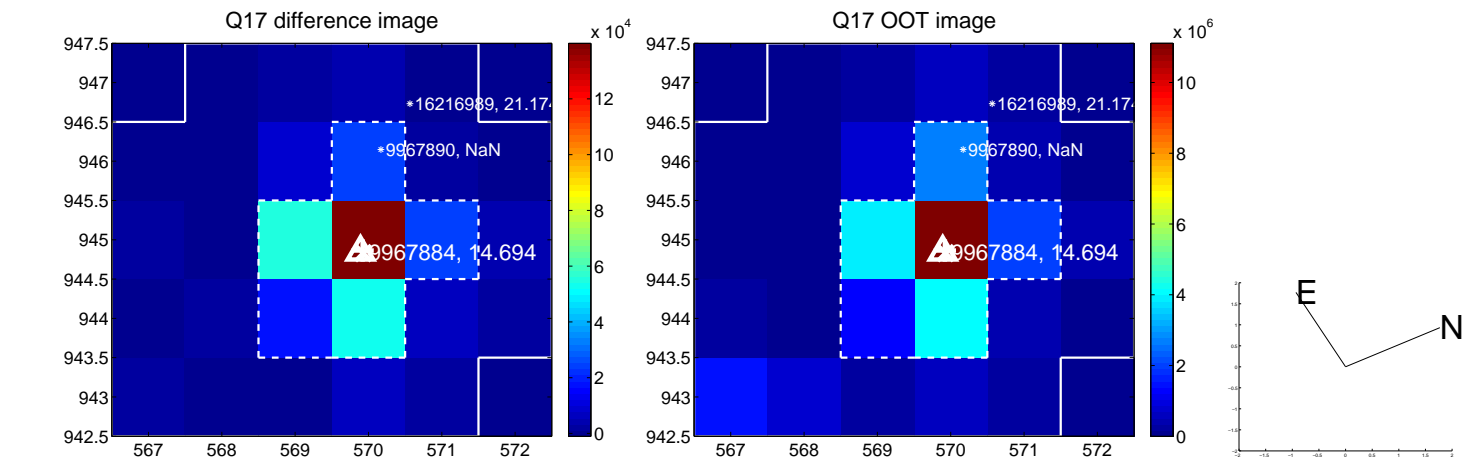
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

