

KIC 008364969

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})
008364969-01	OBS	5508.01	22.571969	145.034633	78804.6	4.000	1837.7	1529.9	0.87	5645	35.26	34.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008364969-01	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 008364969-01

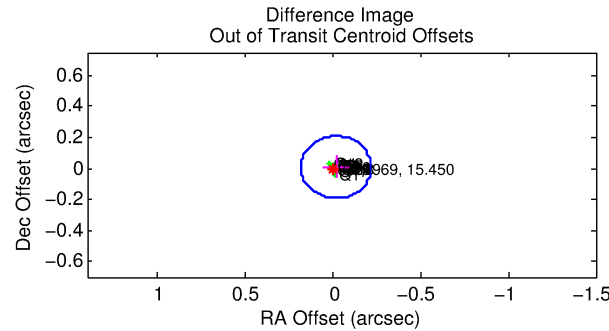
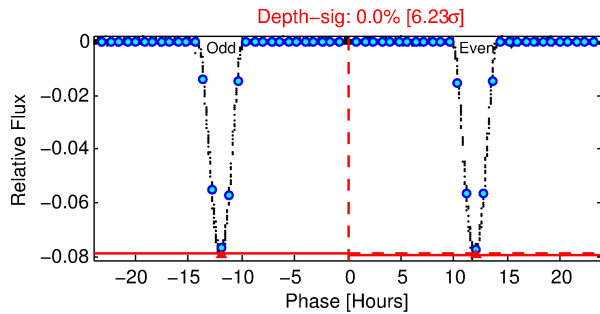
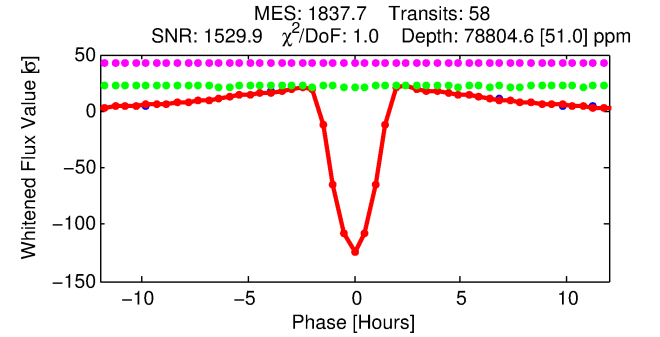
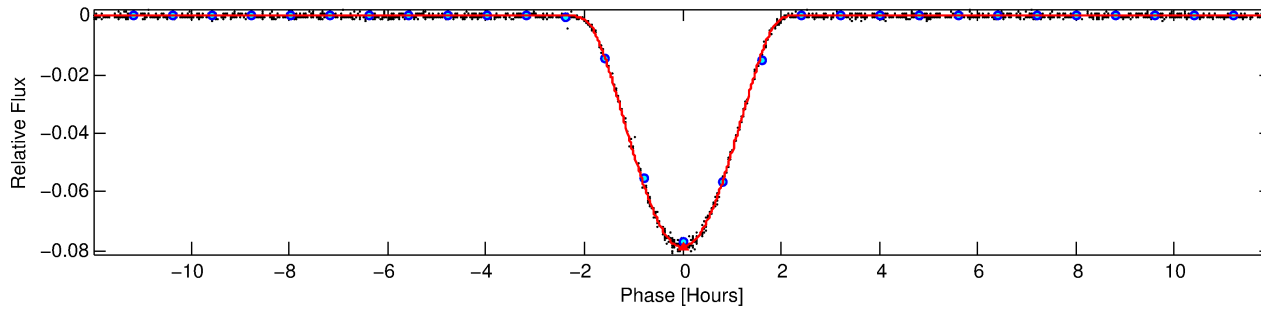
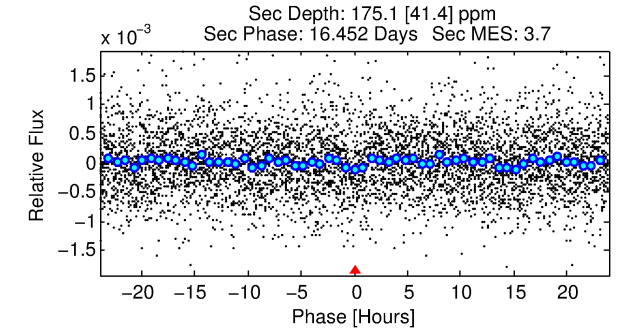
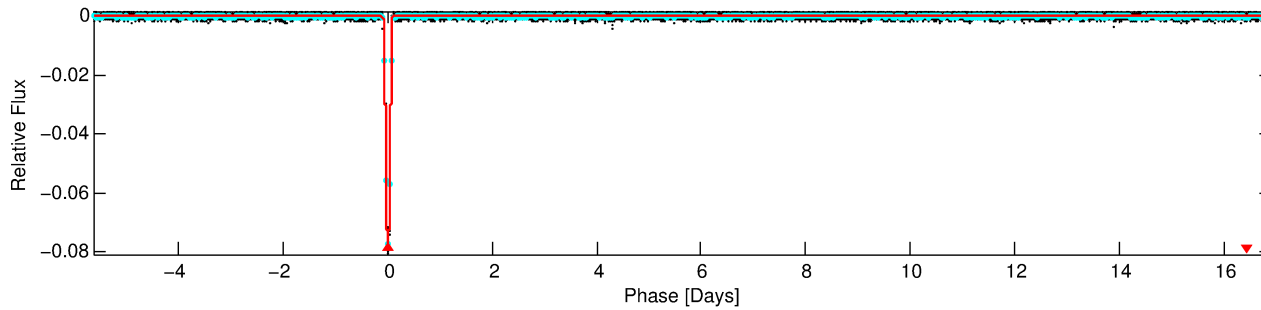
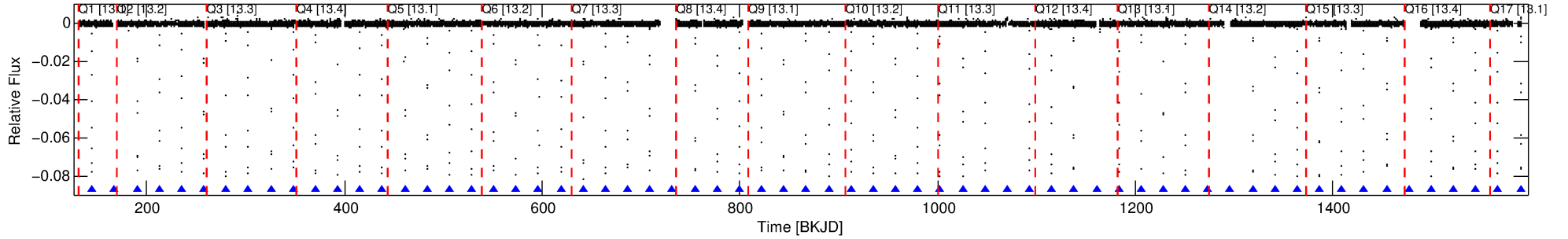
No Significant Match Found

DV One-Page Summary

KIC: 8364969 Candidate: 1 of 1 Period: 22.572 d

KOI: K05508.01 Corr: 0.998

Kp: 15.45 R*: 0.87 Rs Teff: 5645.0 K Logg: 4.43 Fe/H: -0.540



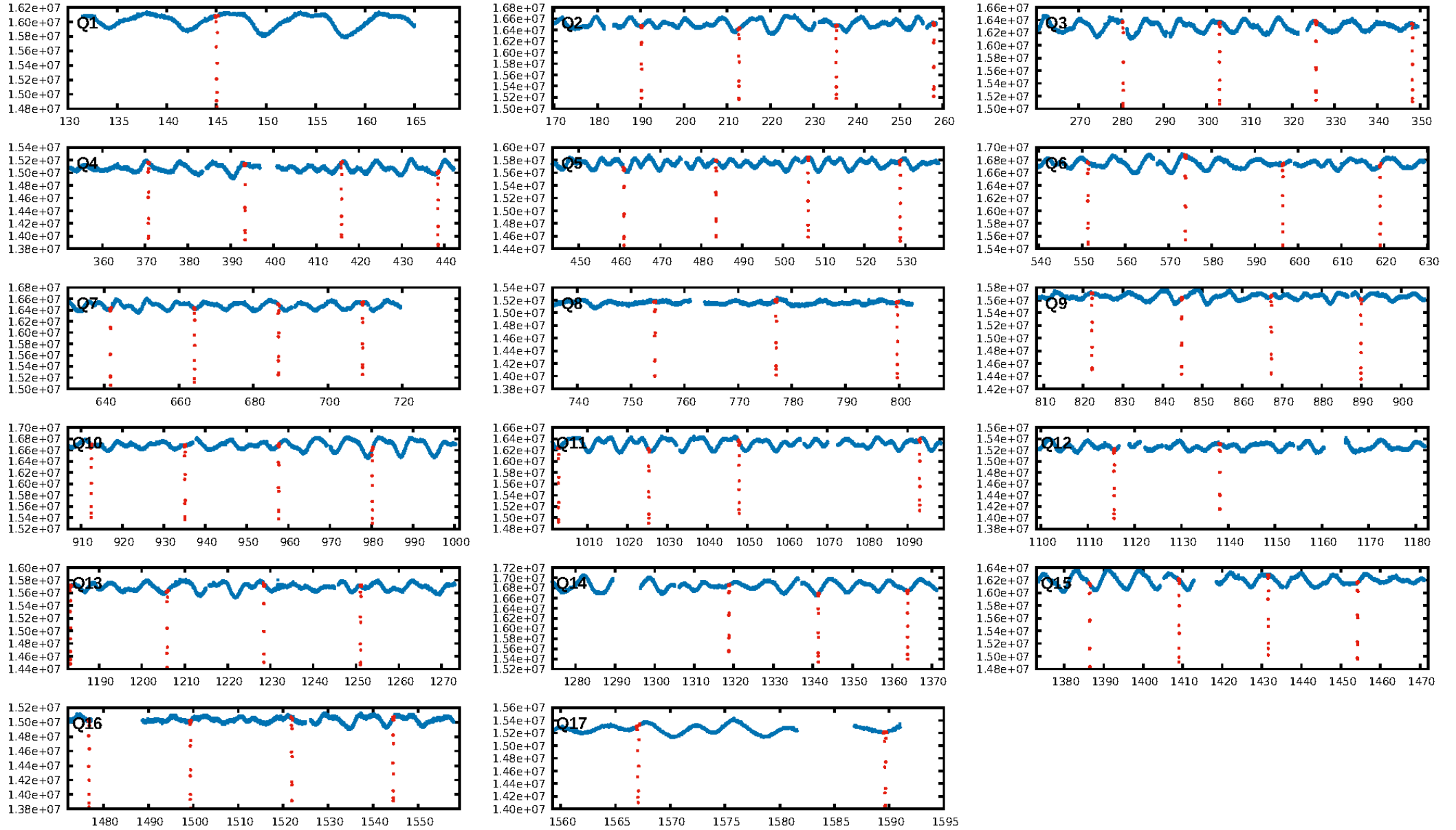
DV Fit Results:

Period = 22.57197 [0.00000] d
Epoch = 145.0346 [0.0001] BKJD
Rp/R* = 0.3710 [0.0129]
a/R* = 44.51 [0.05]
b = 0.90 [0.02]
Seff = 34.31 [11.88]
Teff = 617 [53] K
Rp = 35.26 [8.35] Re
a = 0.1418 [0.0297] AU
Ag = 1.56 [0.63] [0.89σ]
Teffp = 1066 [74] K [4.90σ]

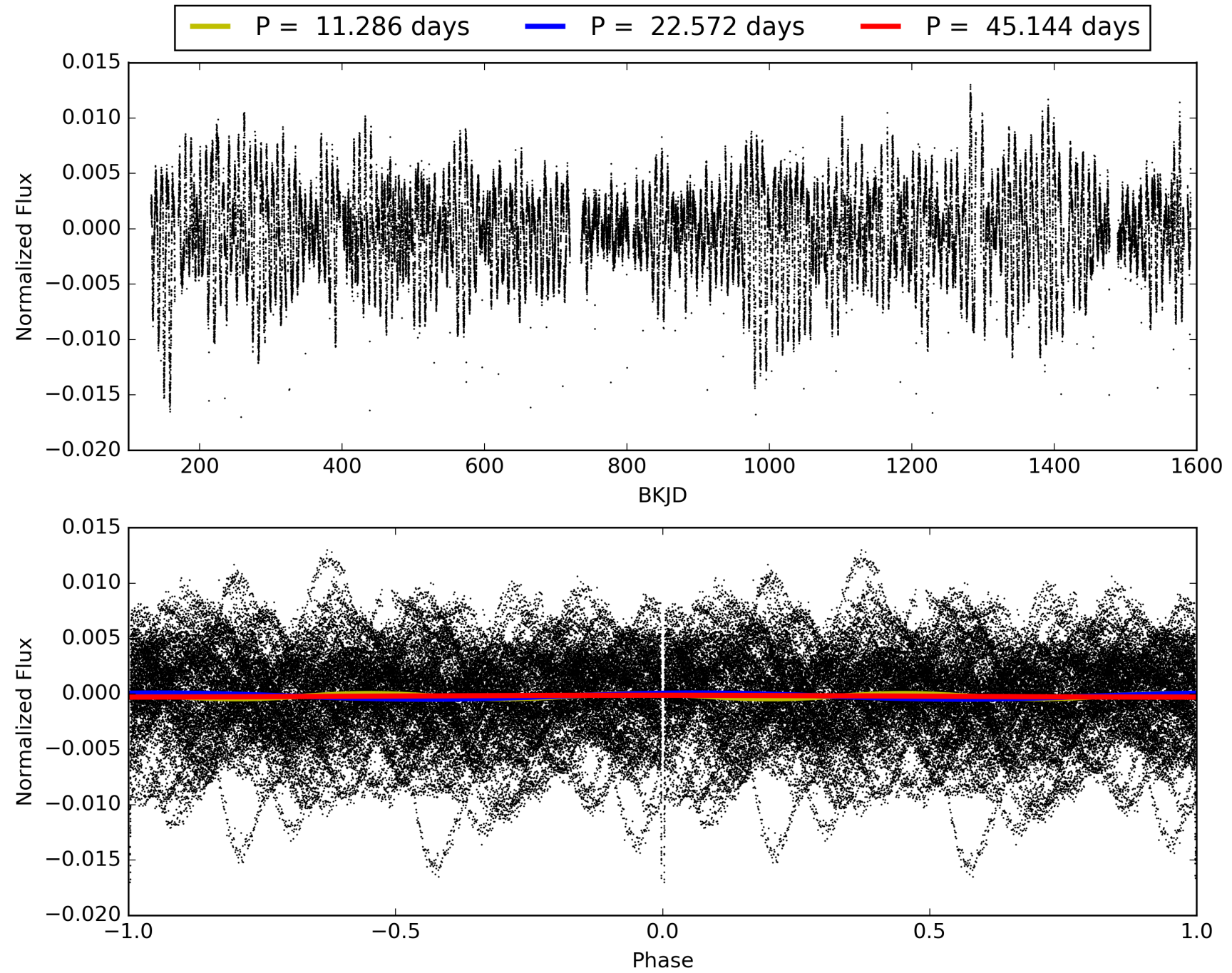
DV Diagnostic Results:

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 [55/55]
GhostDiagnostic-chr: 2.717
Centroid-sig: 0.0%
Centroid-so: 0.156 arcsec [23.06σ]
OotOffset-rm: 0.020 arcsec [0.30σ]
KicOffset-rm: 0.102 arcsec [1.53σ]
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]

TCE 008364969-01, PDC Light Curves

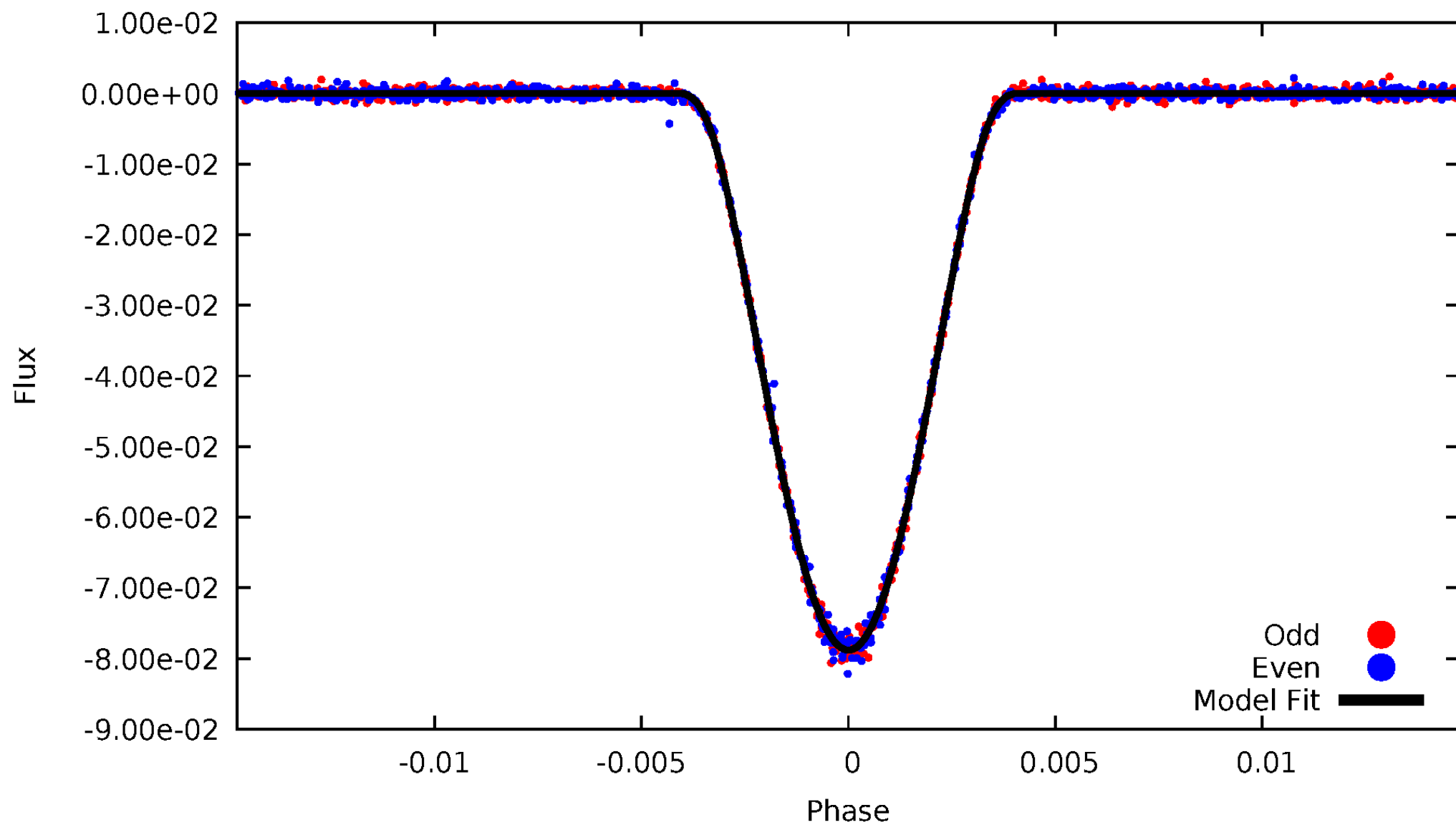


TCE 008364969-01



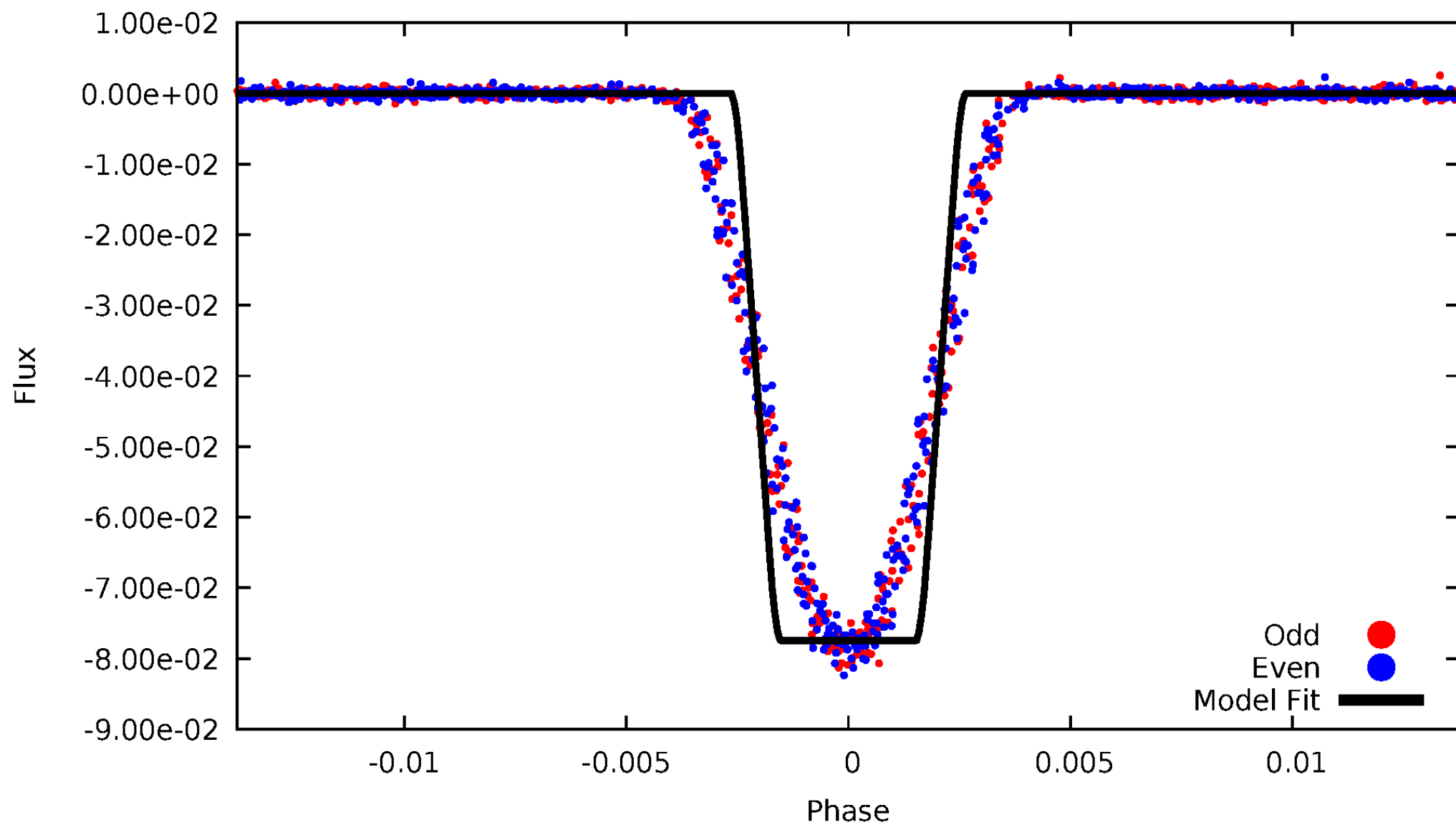
DV Odd/Even

TCE 008364969-01



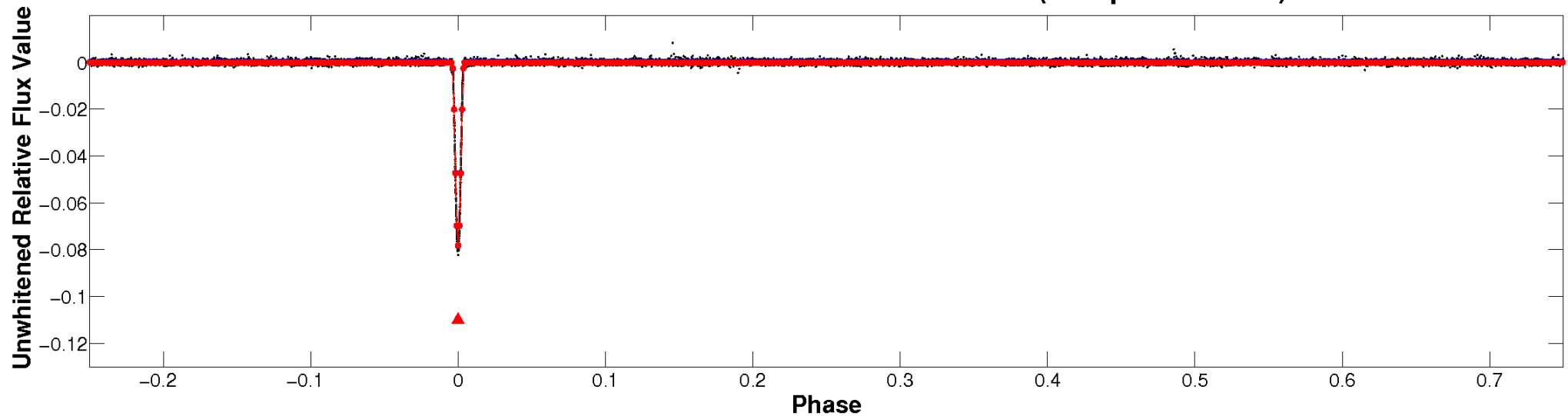
ALT Odd/Even

TCE 008364969-01

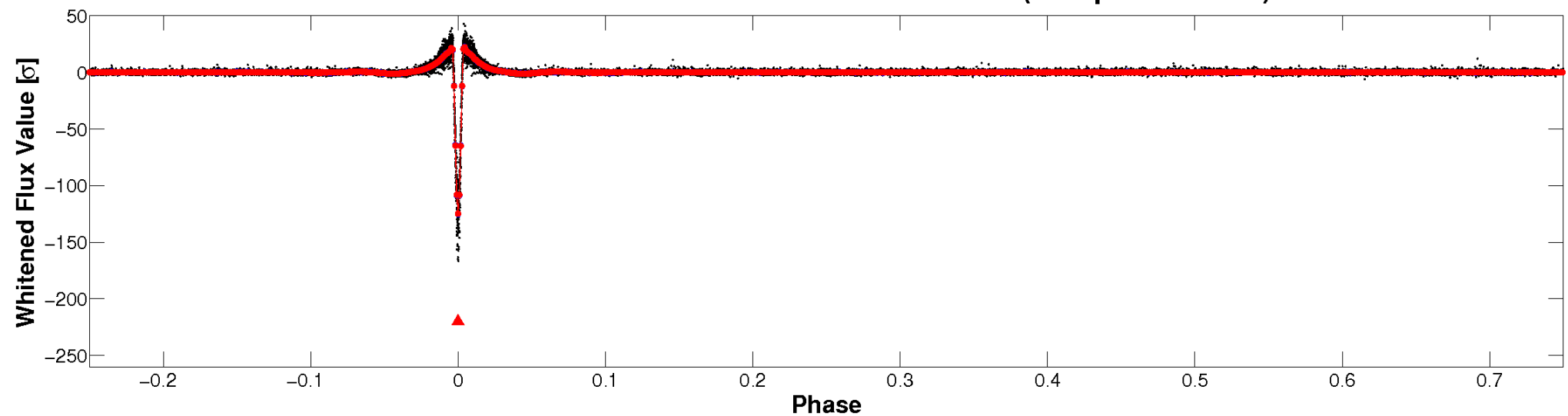


Non-Whitened Vs. Whitened Light Curve

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

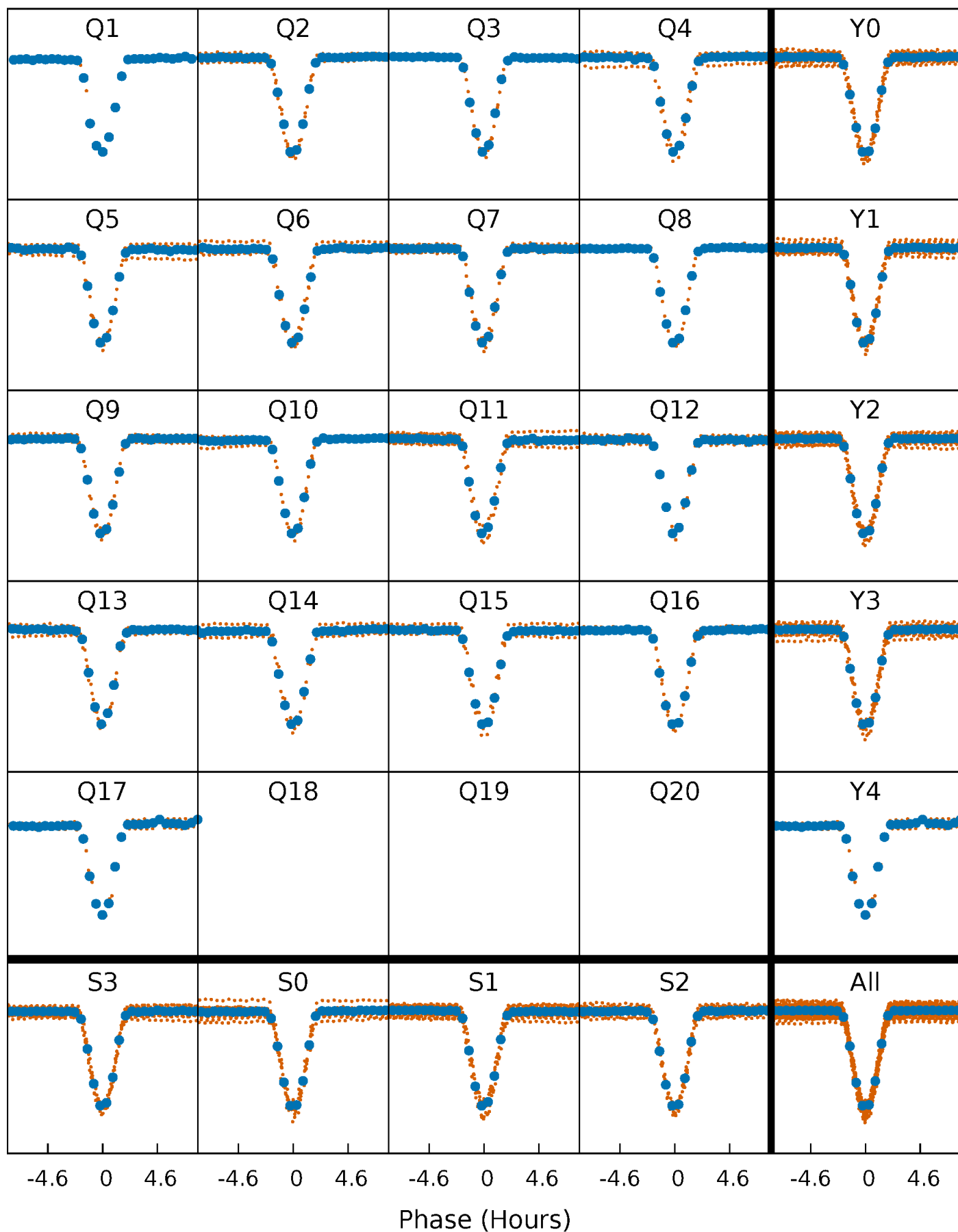


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



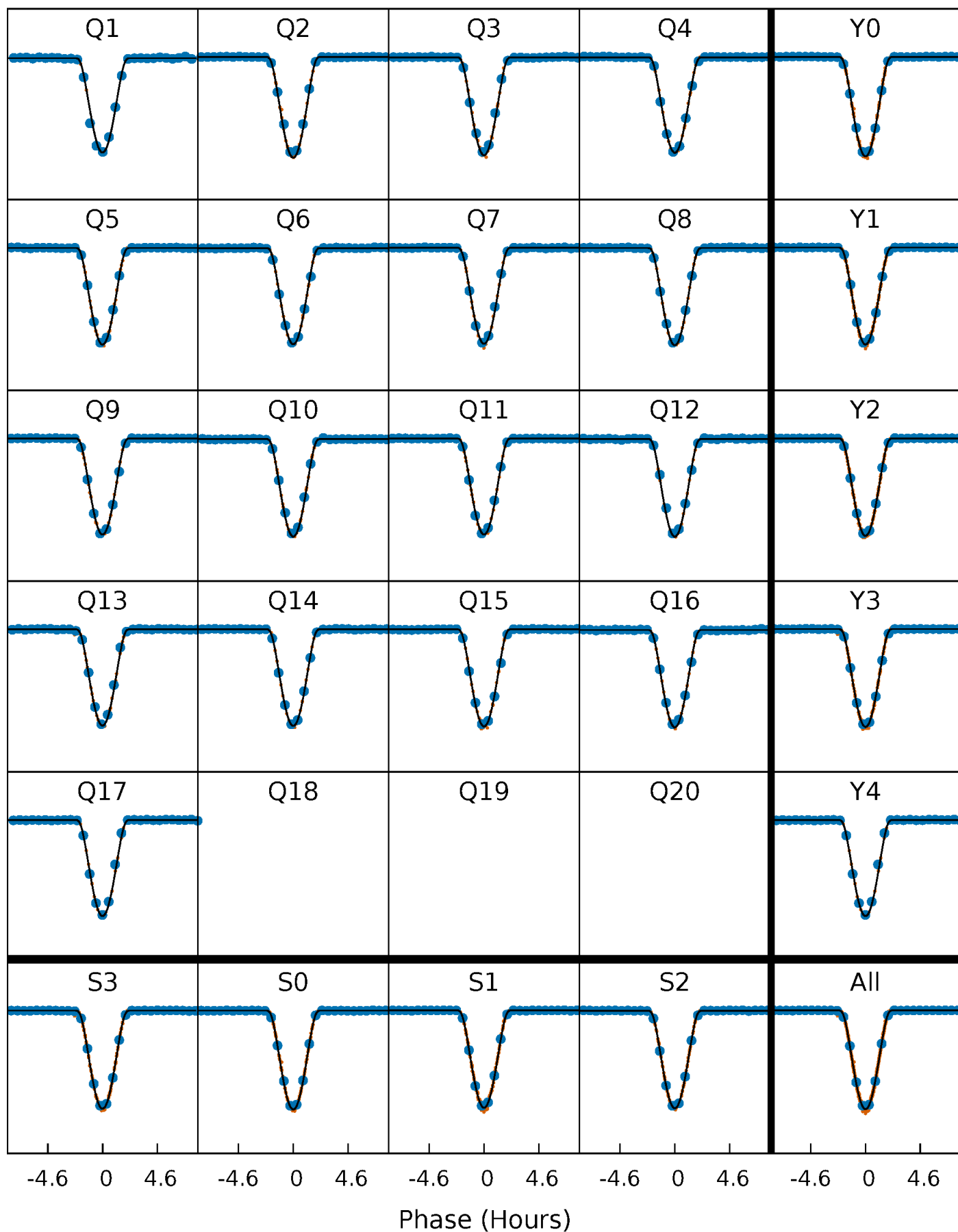
PDC Quarter-Phased Transit Curves

TCE 008364969-01 P= 22.571969 Days $T_0=145.034633$ (BKJD)



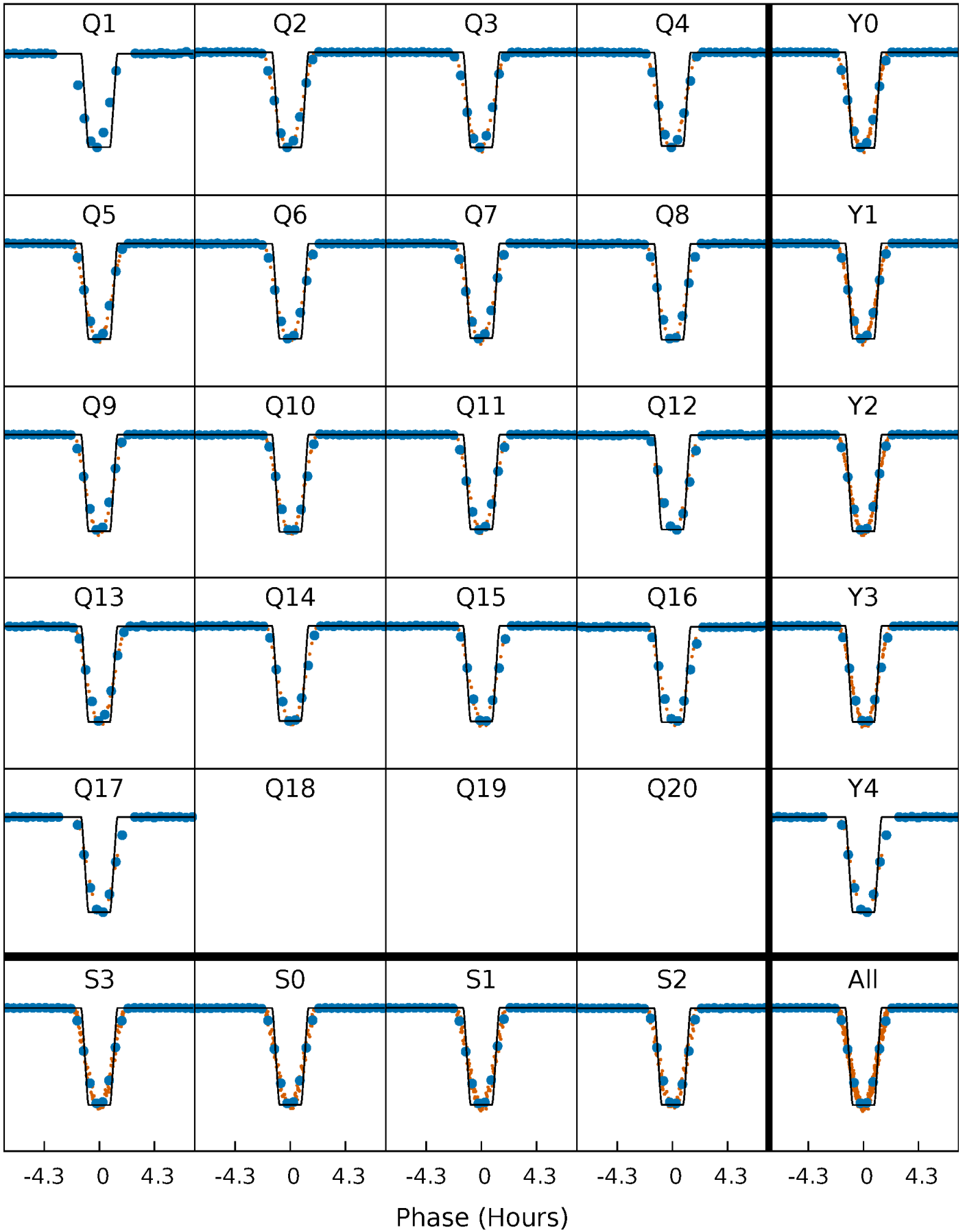
DV Quarter-Phased Transit Curves

TCE 008364969-01 P= 22.571969 Days $T_0=145.034633$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

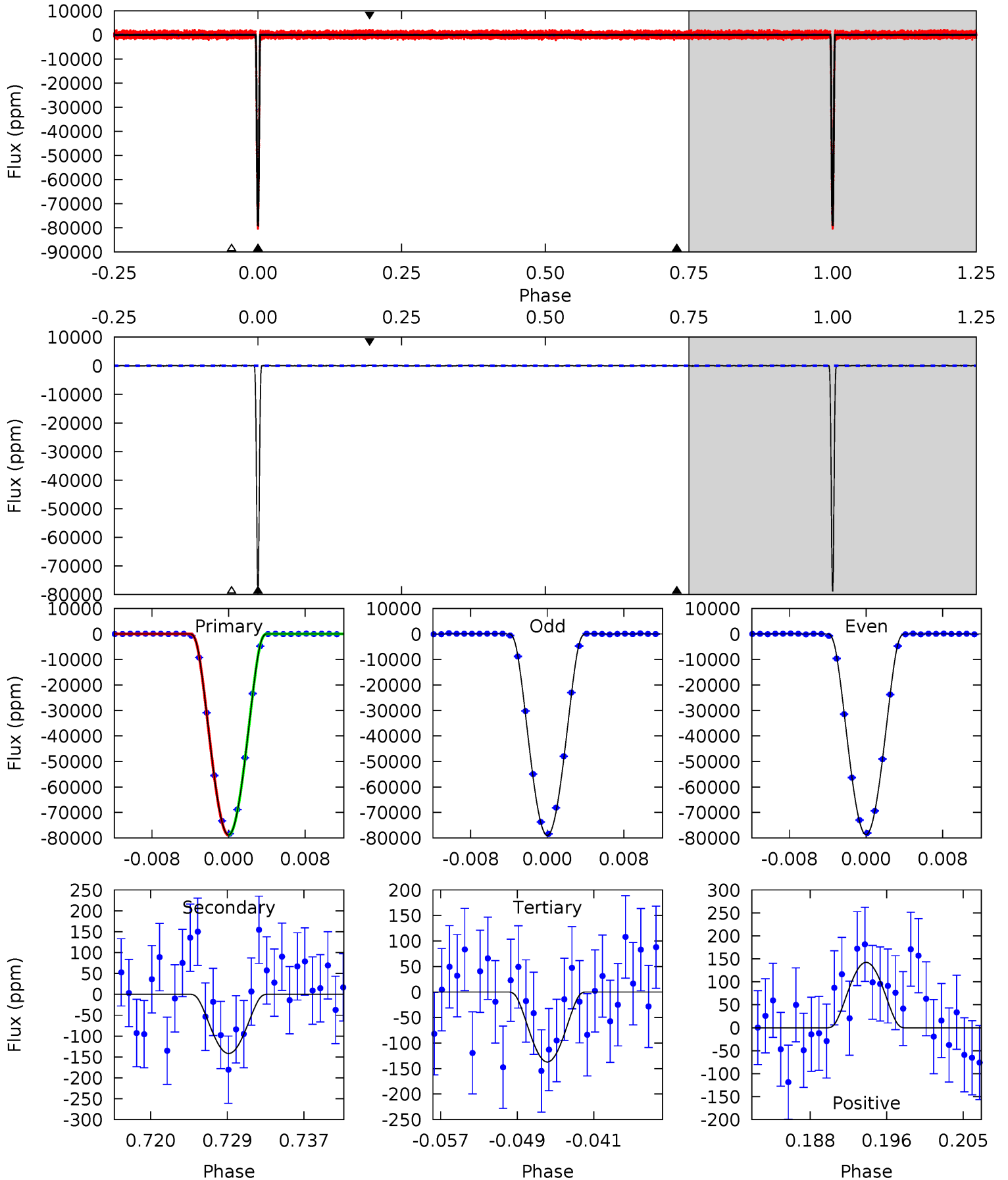
TCE 008364969-01 P= 22.571778 Days $T_0=145.040702$ (BKJD)



DV Model-Shift Uniqueness Test

008364969-01, P = 22.571969 Days, E = 122.462664 Days

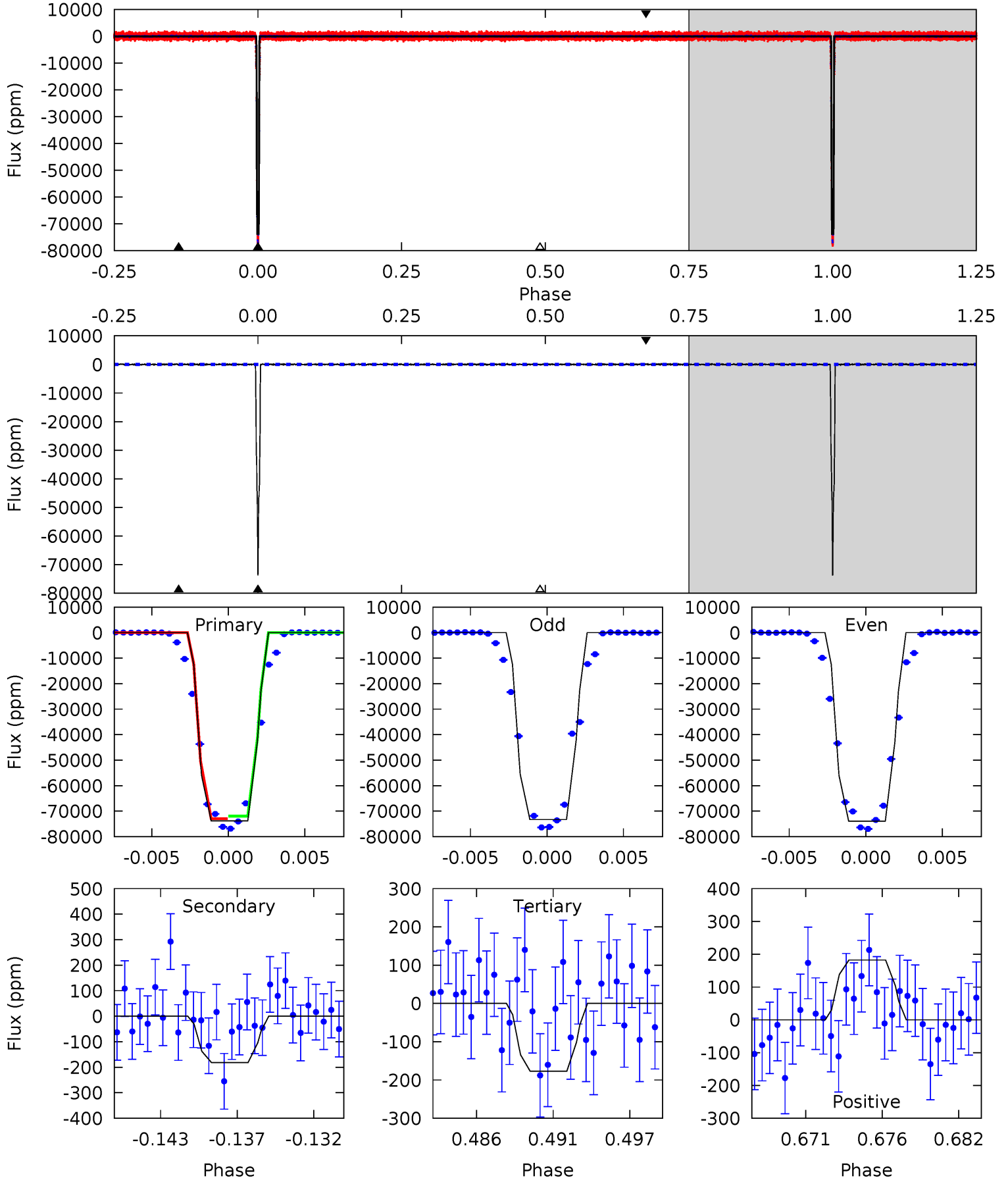
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3471	6.24	6.04	6.27	5.06	2.64	1.92	3465	3465	0.20	-0.03	6.98	1.00	0.00	0



Alt Model-Shift Uniqueness Test

008364969-01, P = 22.571778 Days, E = 122.468924 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1533	3.77	3.68	3.79	5.15	2.79	1.05	1530	1529	0.09	-0.02	6.80	1.00	0.00	0



Stellar Parameters For KIC 008364969

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5645^{+186}_{-169}	$4.431^{+0.149}_{-0.182}$	$-0.540^{+0.300}_{-0.300}$	$0.871^{+0.204}_{-0.136}$	$0.746^{+0.112}_{-0.048}$	$1.590^{+1.089}_{-0.752}$
	+3%/-3%	+3%/-4%	+56%/-56%	+23%/-16%	+15%/-6%	+68%/-47%
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 008364969-01 / KOI 5508.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-142 ± 23	$35.58^{+5.07}_{-3.64}$	866^{+58}_{-50}	1954^{+53}_{-58}	$1.239^{+0.377}_{-0.317}$
Alt.	-181 ± 48	$26.84^{+4.07}_{-2.79}$	868^{+60}_{-54}	2159^{+80}_{-95}	$2.676^{+1.321}_{-0.865}$

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 $A_{obs} \gg 1.0$

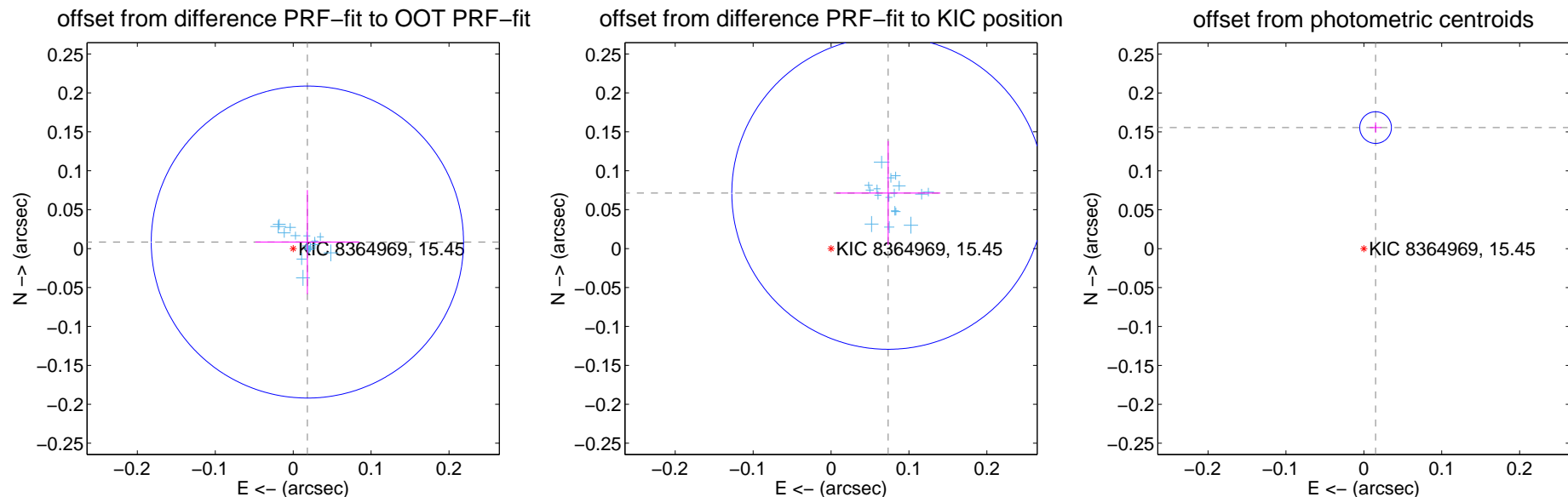
DV Centroid Data

Supplemental centroid analysis for 008364969-01. Kepler magnitude: 15.45. Transit SNR 1529.86

There are 17 quarters with good PRF difference image offsets

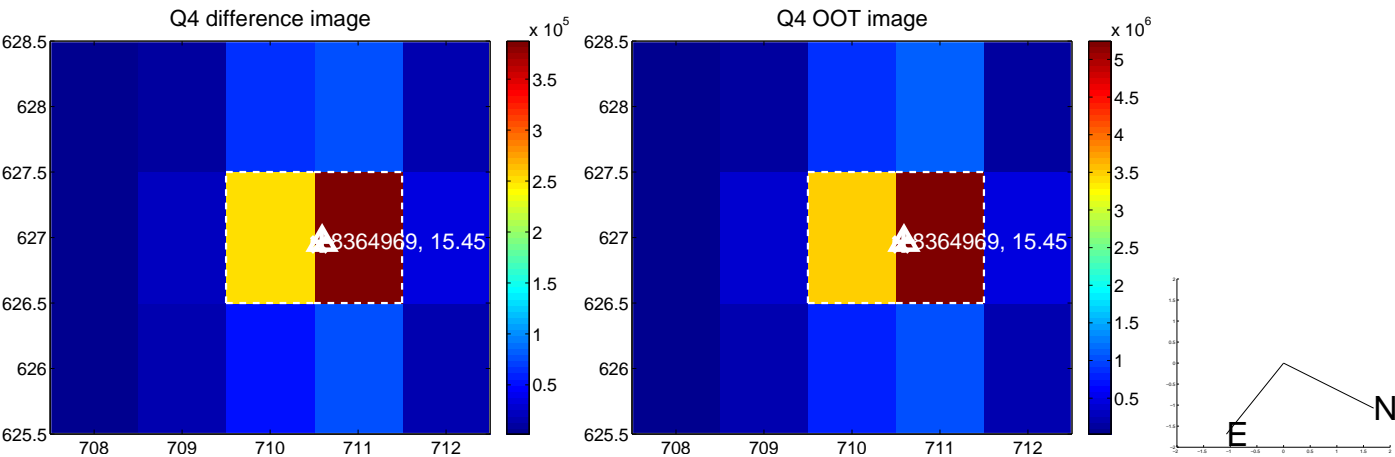
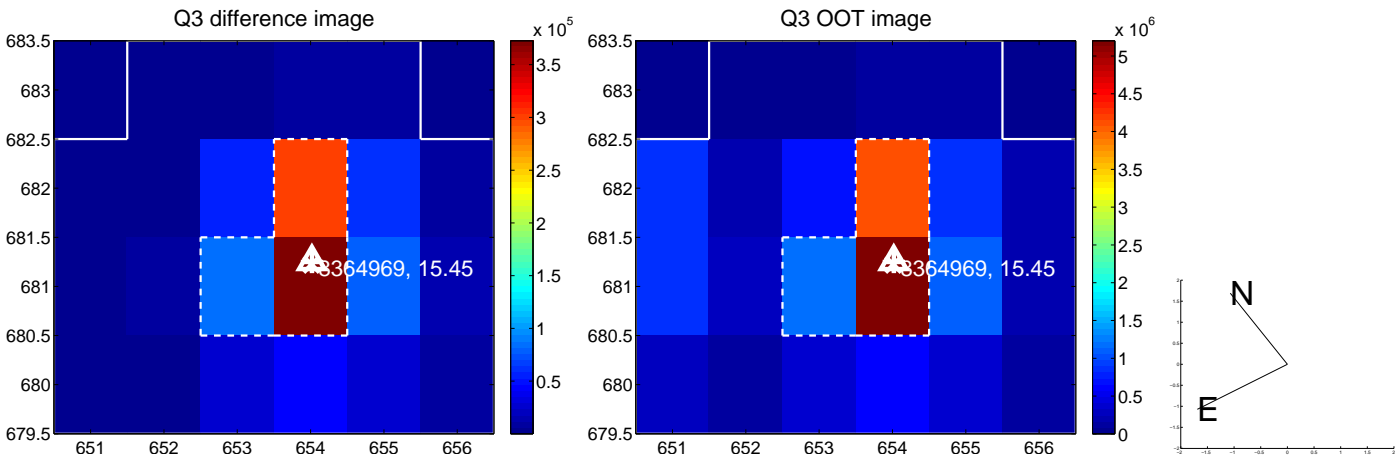
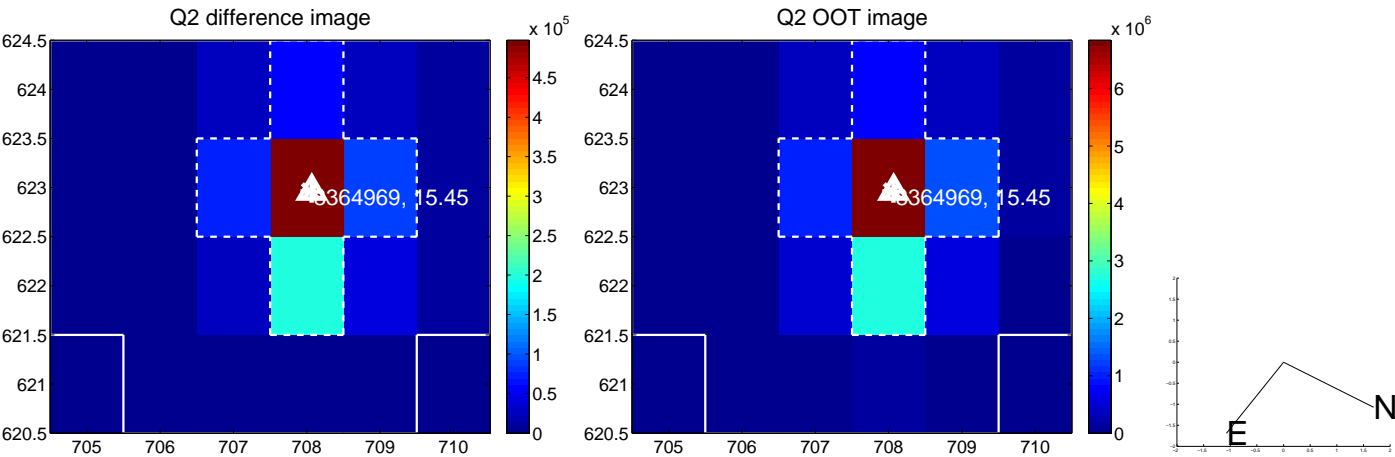
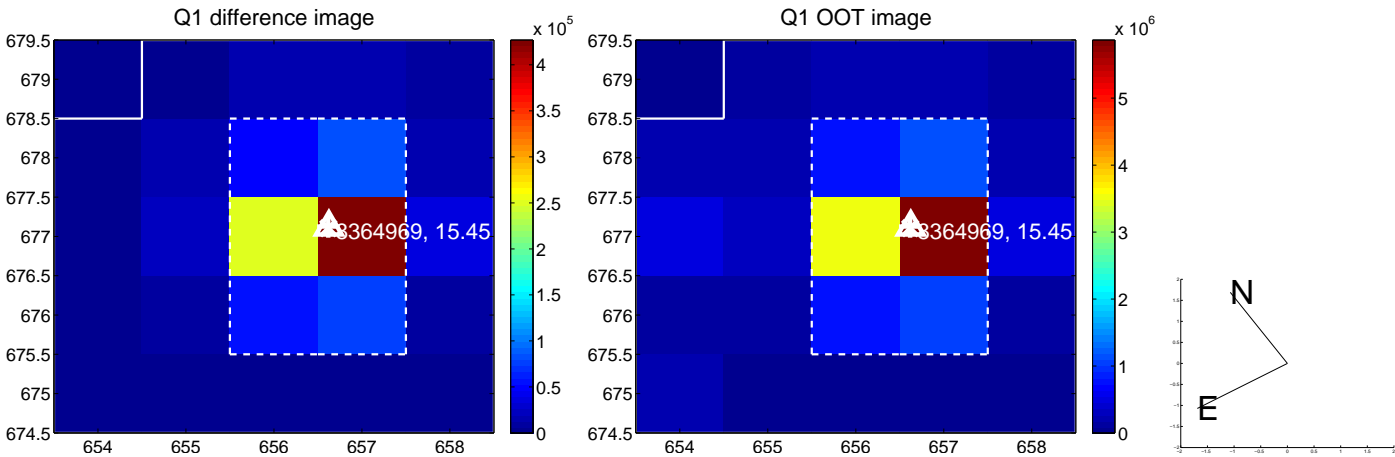
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.020 ± 0.067	0.30	-0.018 ± 0.067	0.008 ± 0.067
PRF-fit source offset from KIC position	0.102 ± 0.067	1.53	-0.073 ± 0.067	0.071 ± 0.067
photometric centroid source offset	0.16 ± 0.01	23.06	-0.02 ± 0.01	0.16 ± 0.01

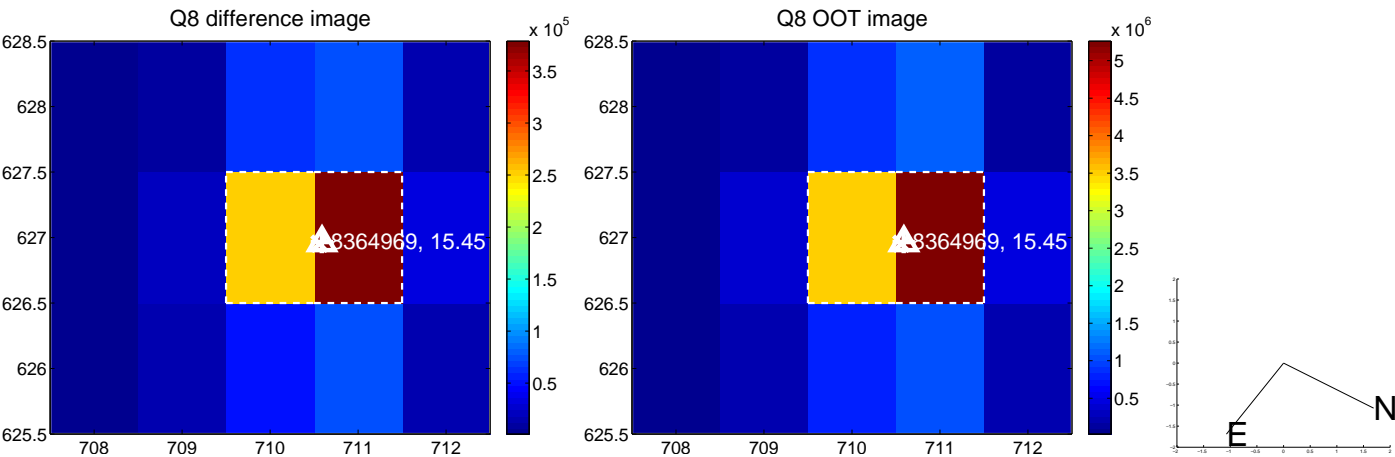
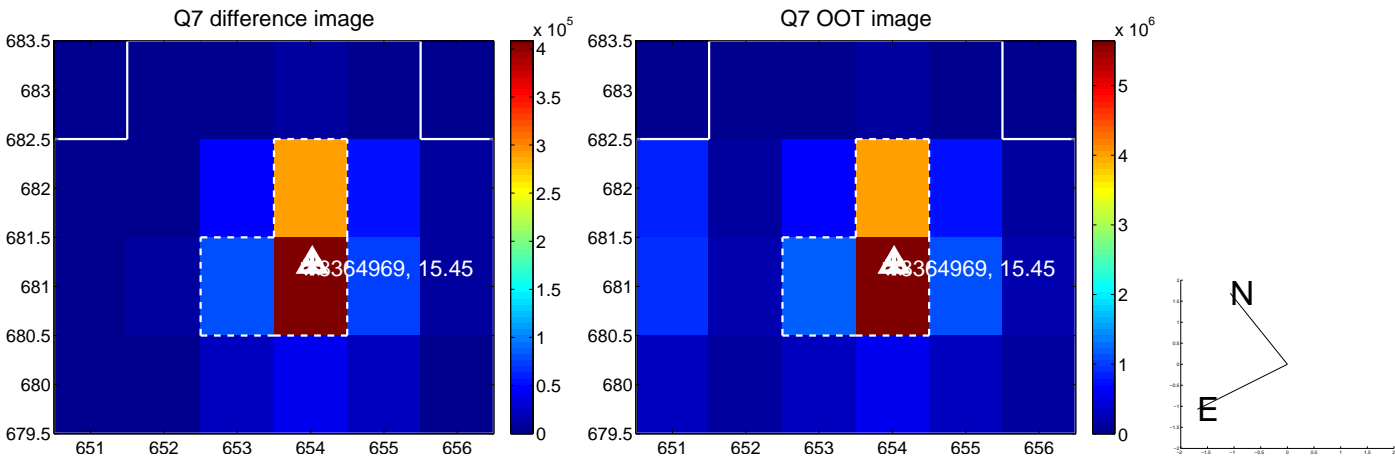
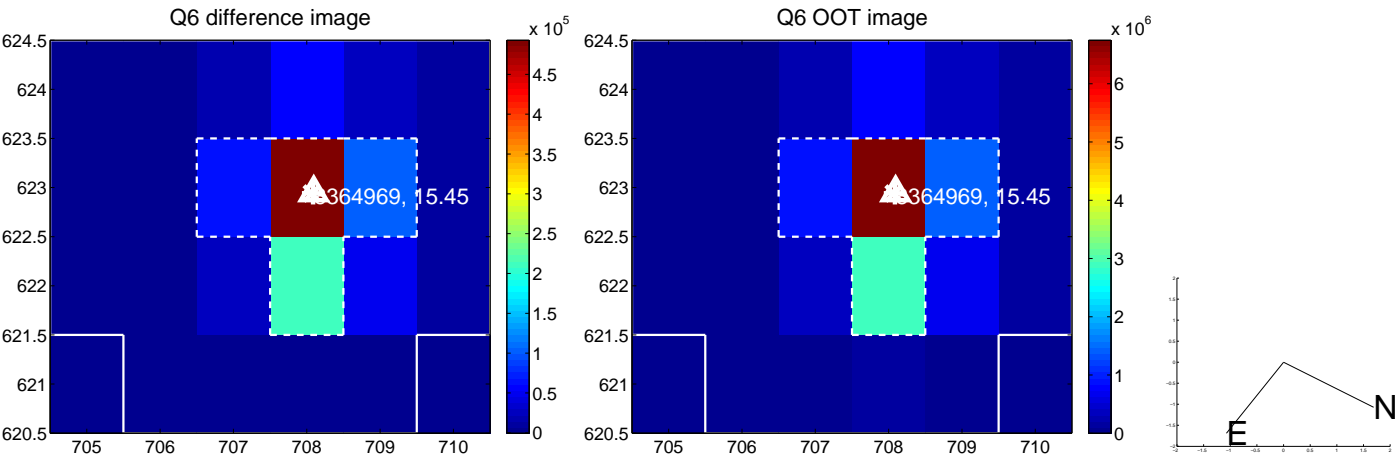
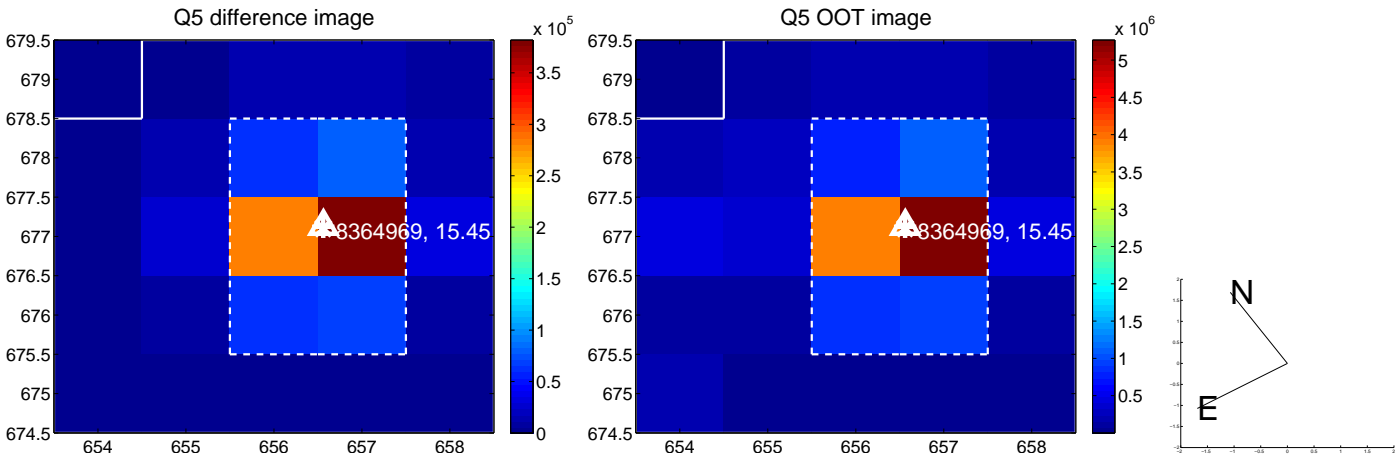


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

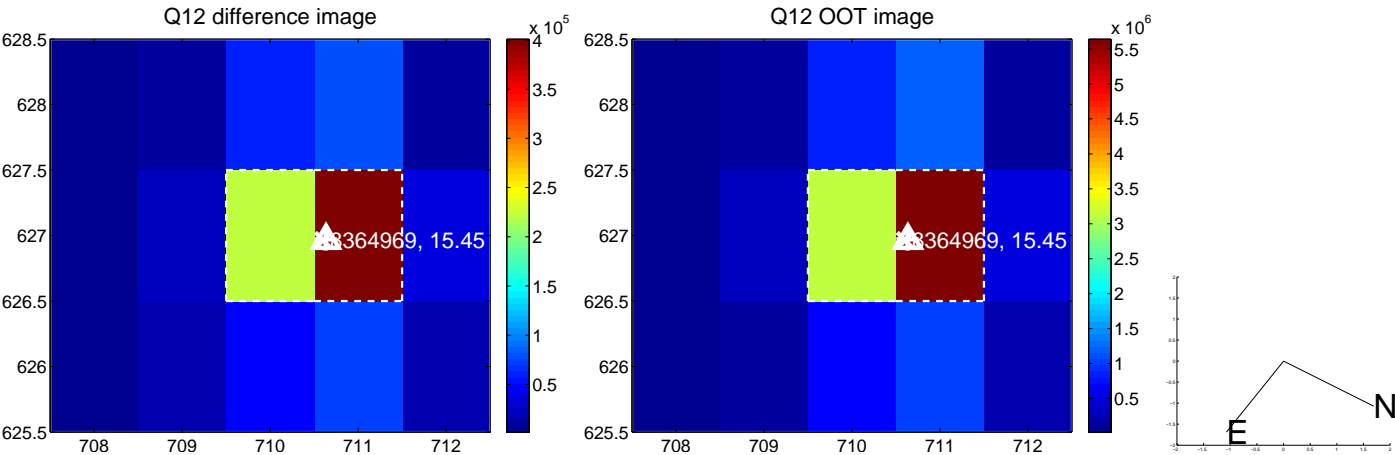
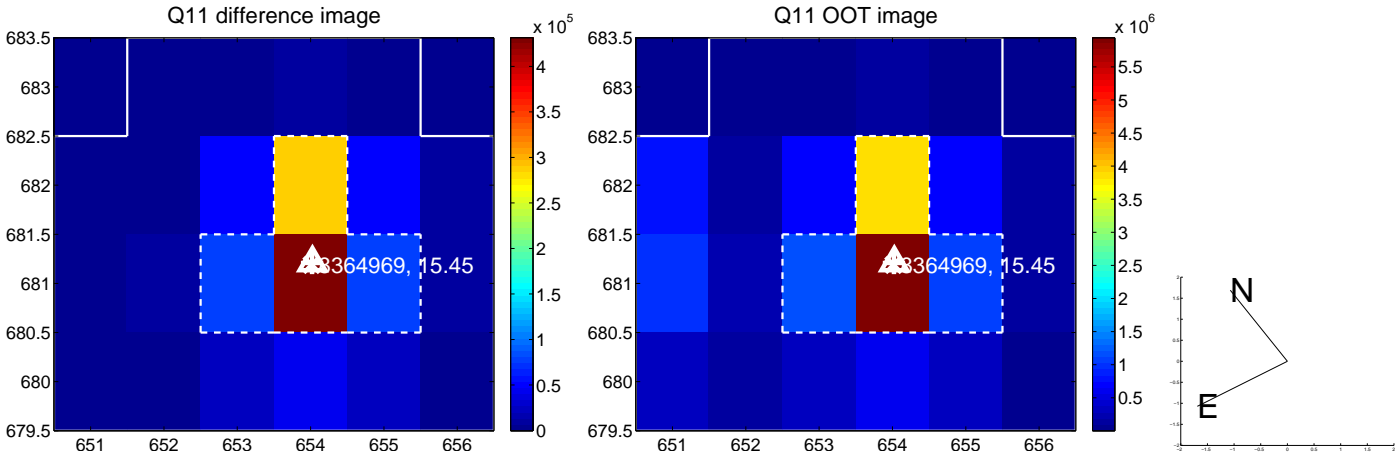
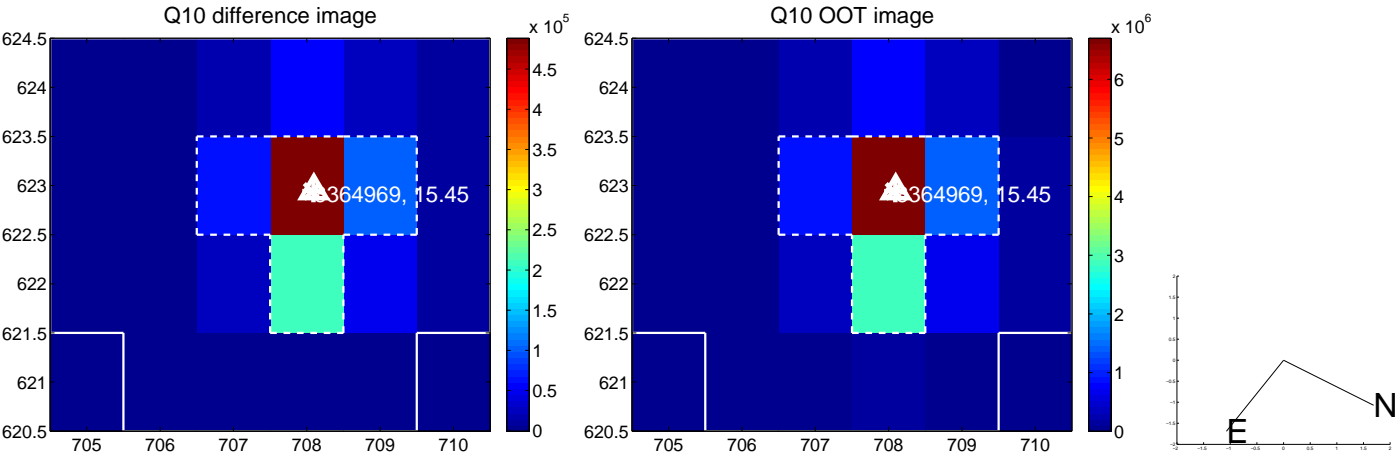
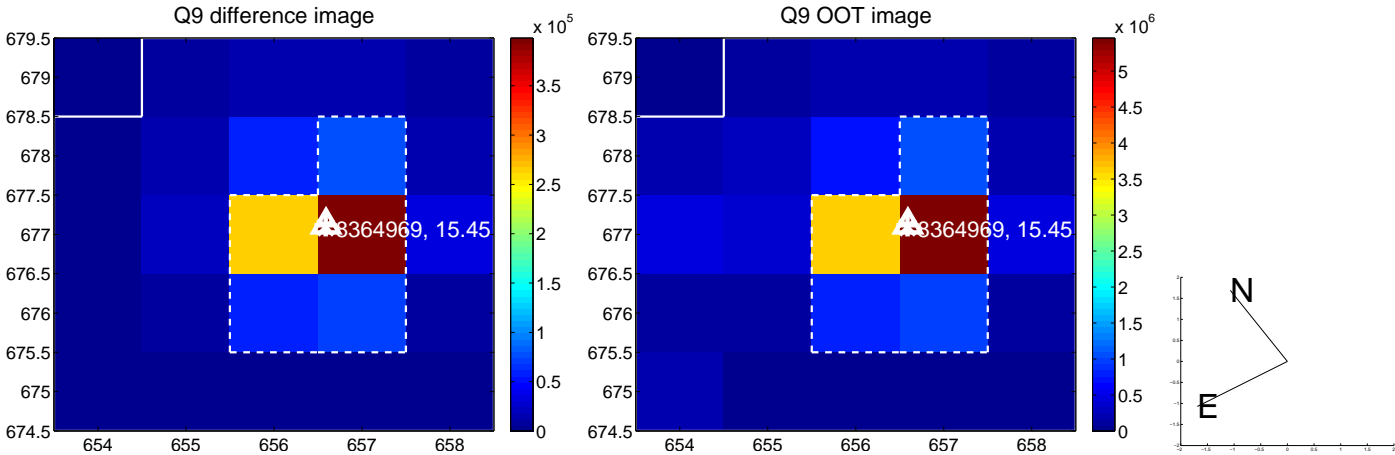
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



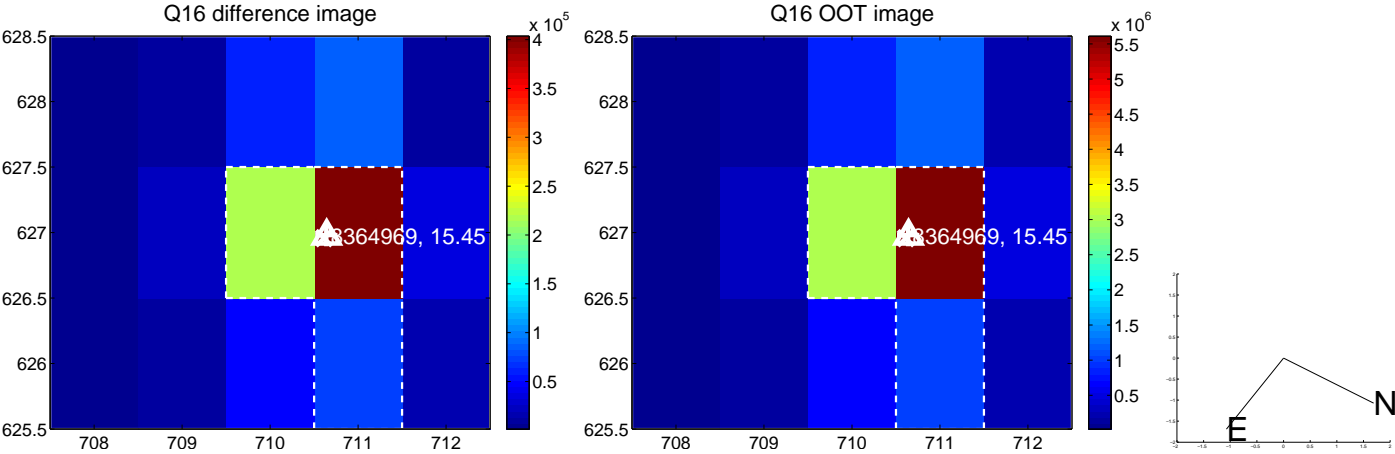
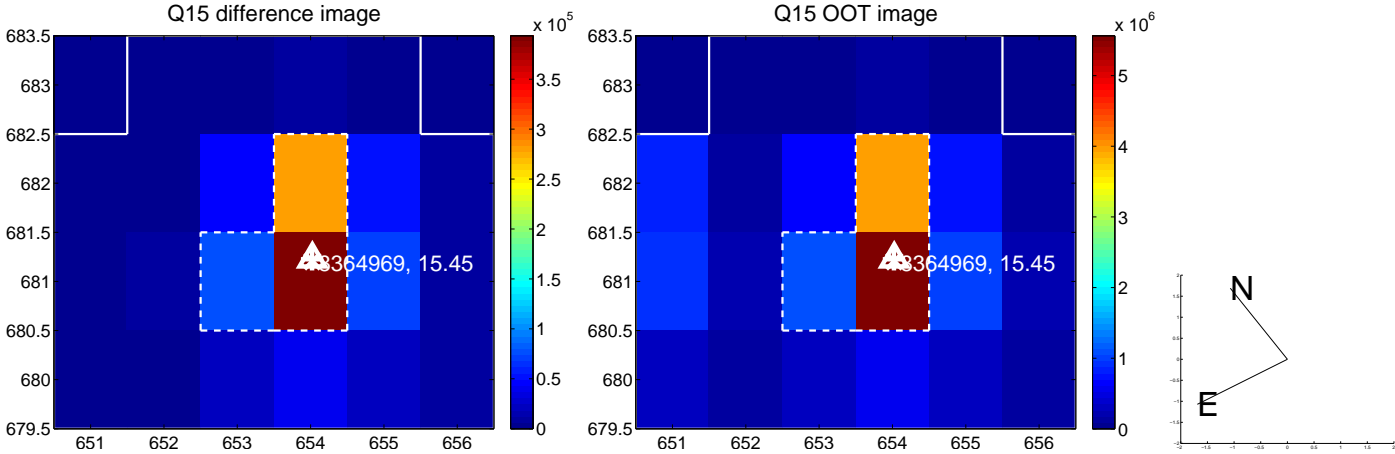
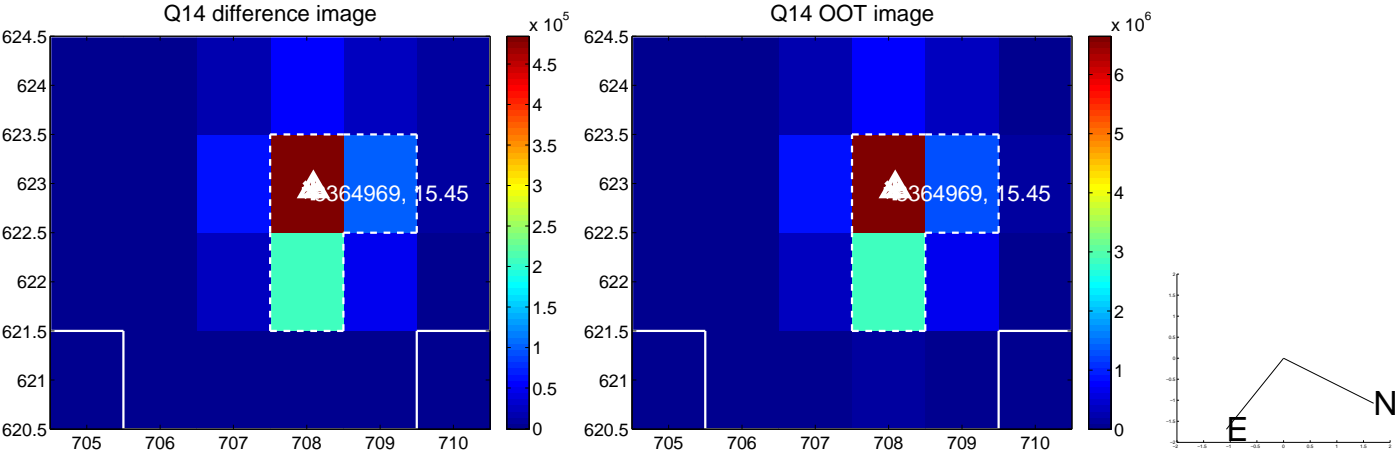
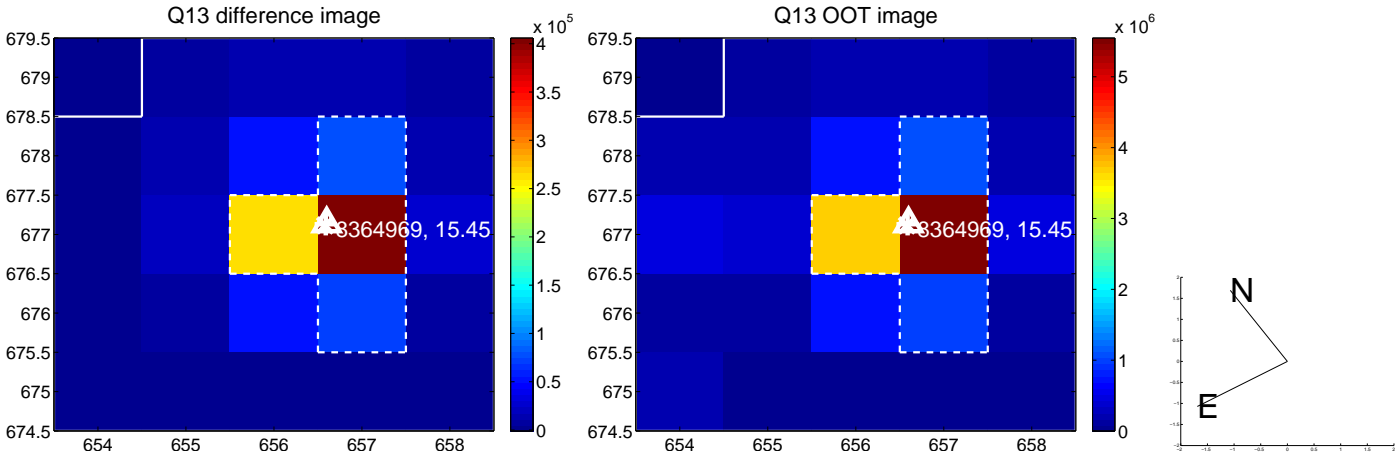
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



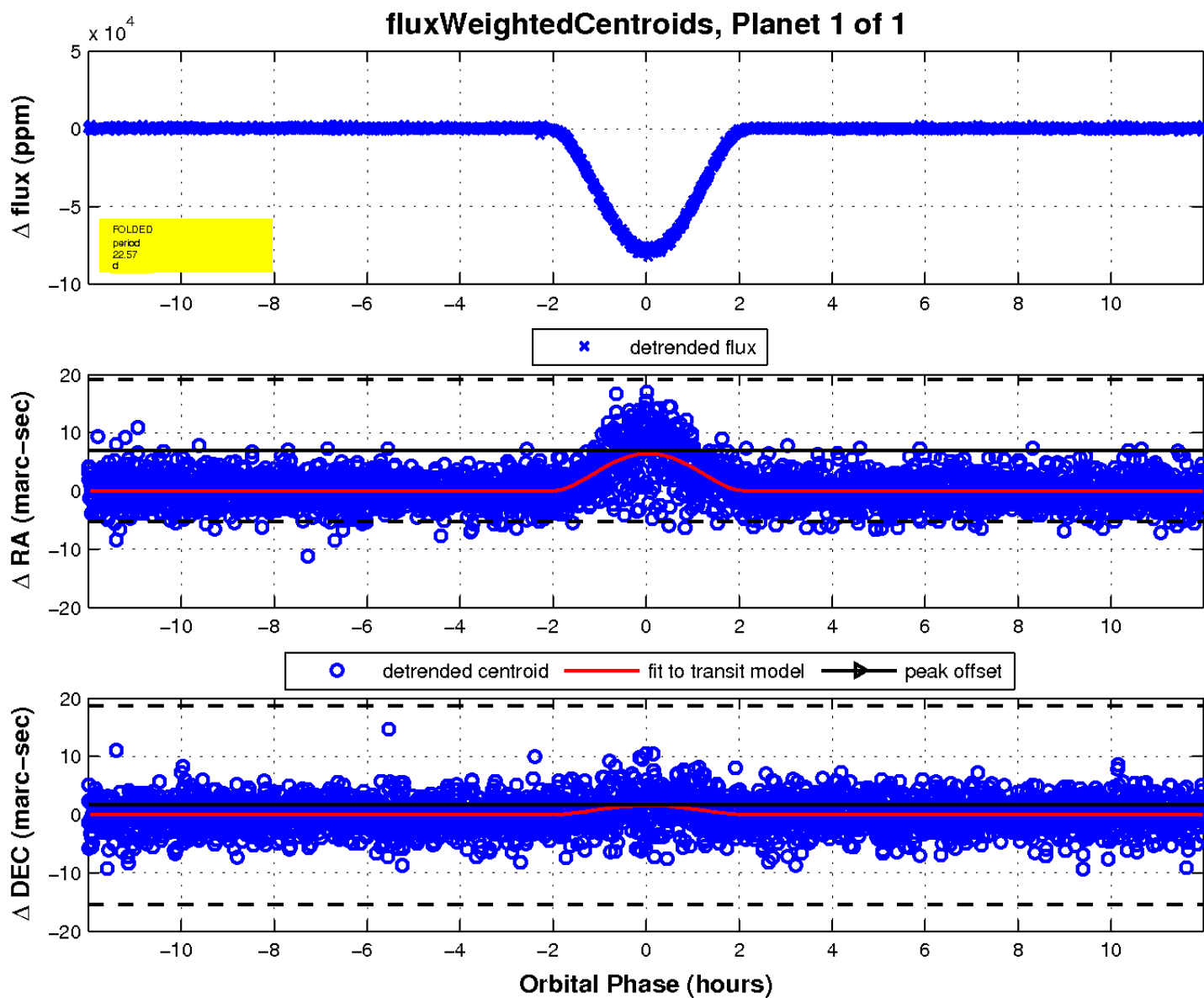
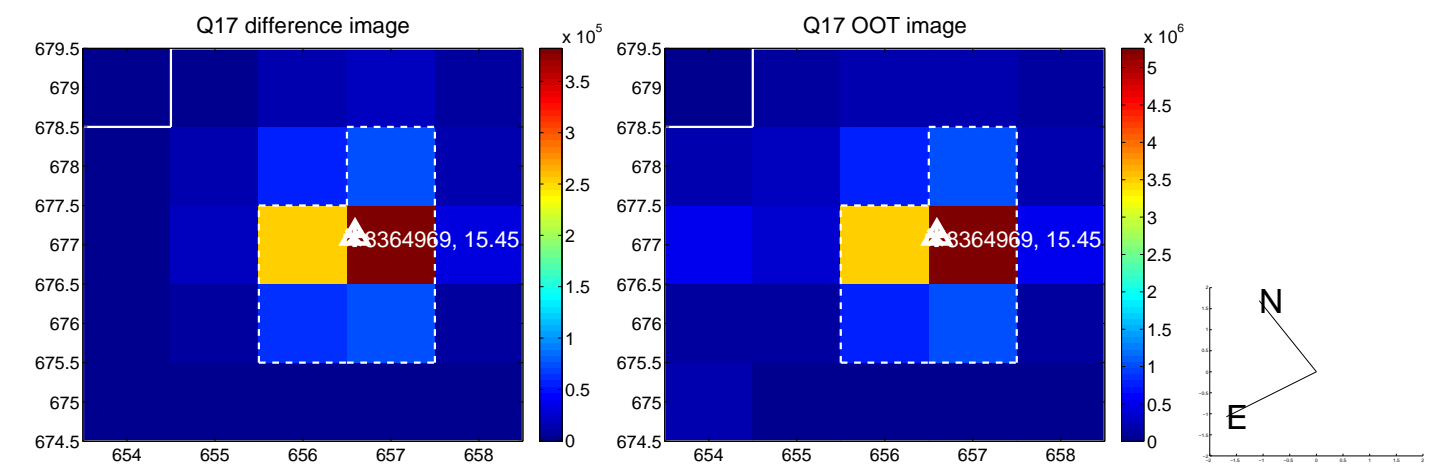
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UKIRT Image

Declination

