

KIC 009965957

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})
009965957-01	OBS	1911.01	5.753229	136.754715	742.1	1.801	30.8	36.4	0.93	5445	3.19	169.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009965957-01	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.

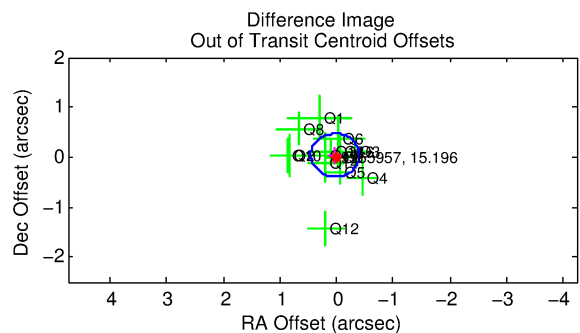
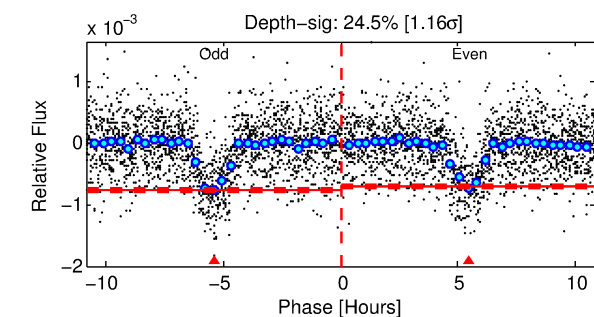
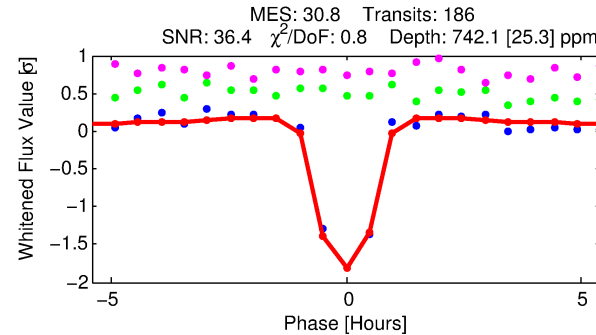
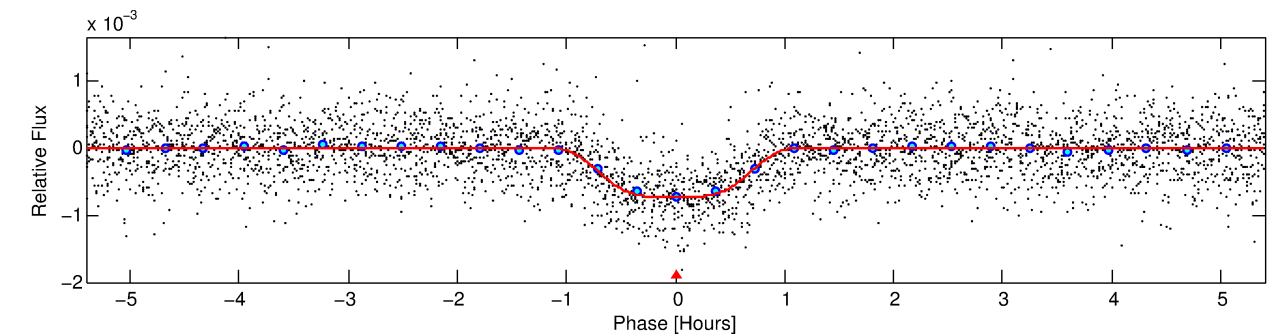
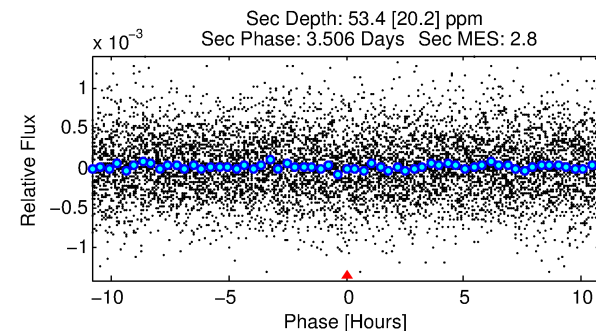
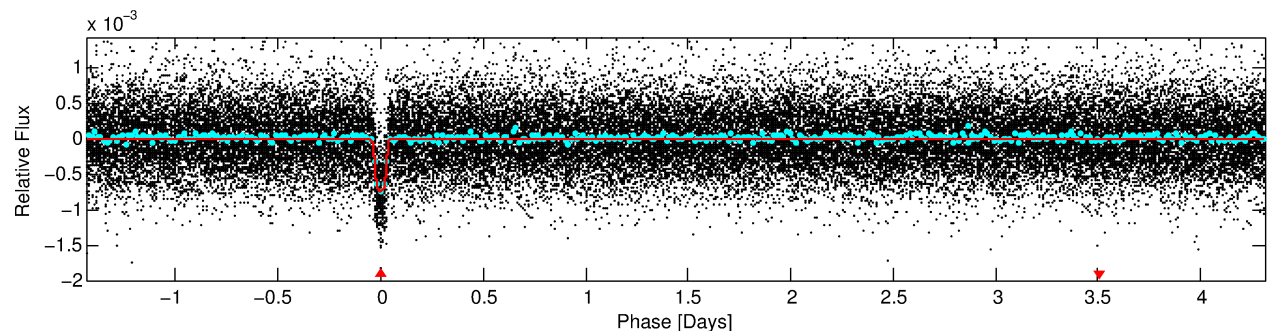
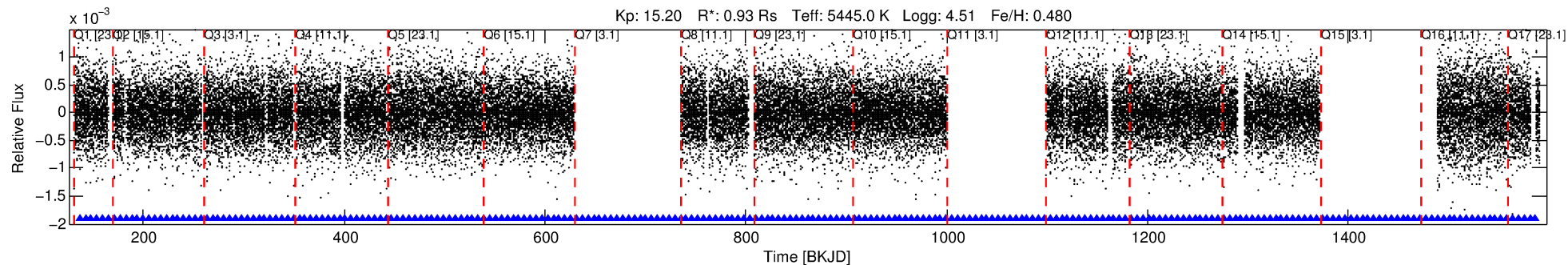
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009965957-01

No Significant Match Found

DV One-Page Summary

KIC: 9965957 Candidate: 1 of 1 Period: 5.753 d
KOI: K01911.01 Corr: 0.967



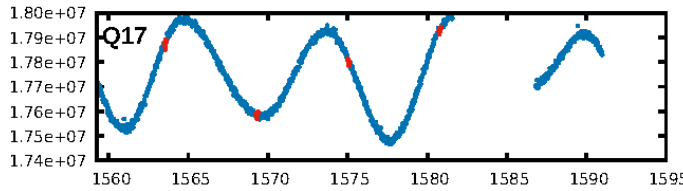
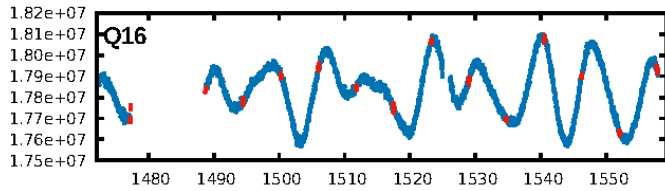
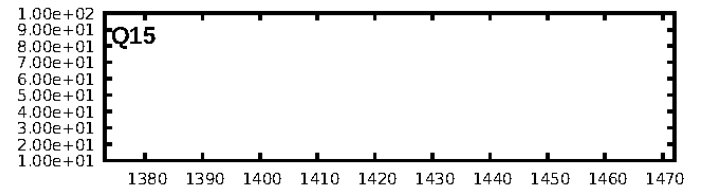
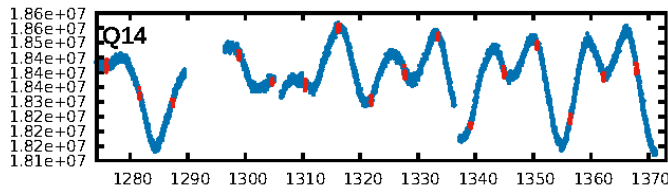
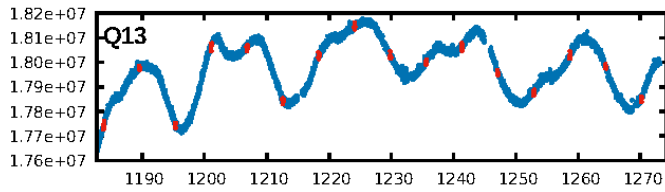
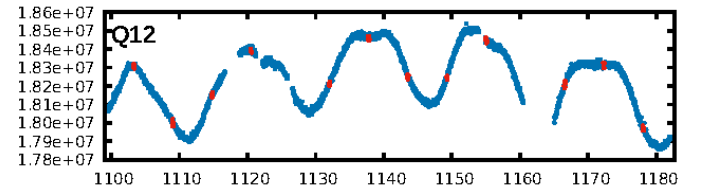
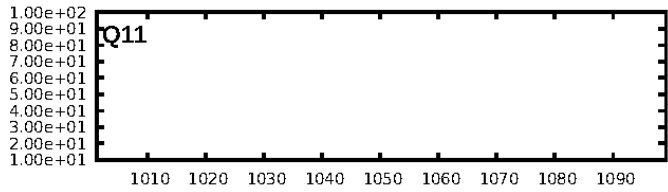
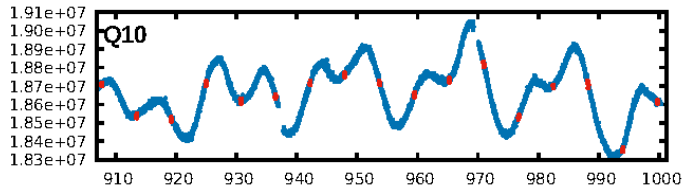
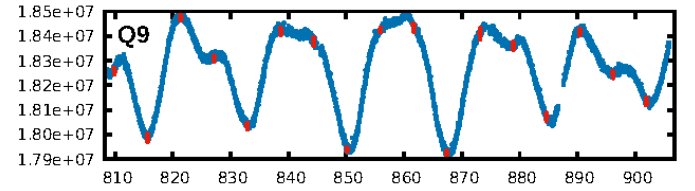
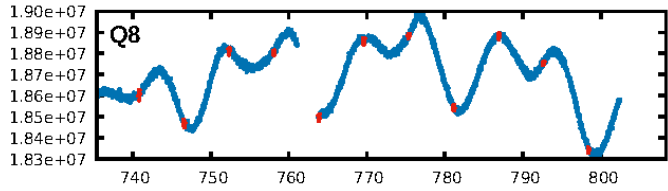
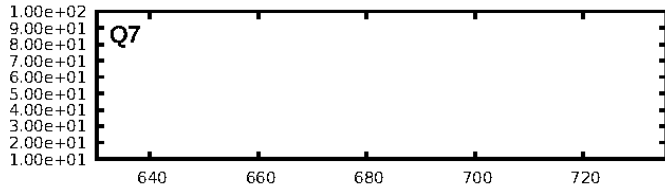
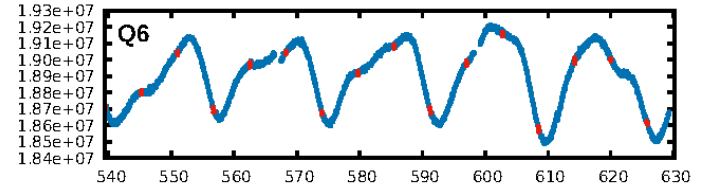
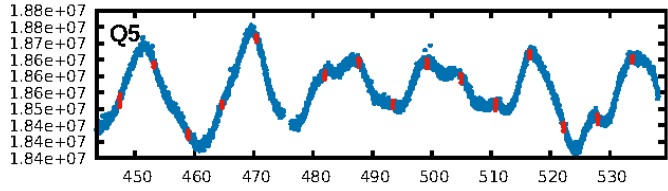
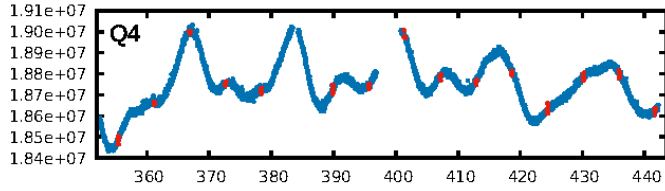
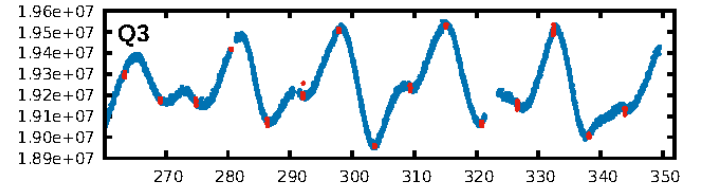
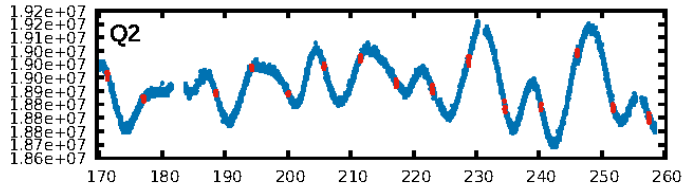
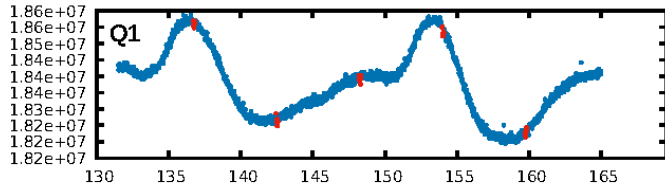
DV Fit Results:

Period = 5.75323 [0.00001] d
Epoch = 136.7547 [0.0010] BKJD
Rp/R* = 0.0315 [0.0024]
a/R* = 10.99 [3.23]
b = 0.93 [0.05]
Seff = 169.96 [58.26]
Teff = 921 [79] K
Rp = 3.19 [0.82] Re
a = 0.0632 [0.0135] AU
Ag = 11.56 [5.96] [1.77σ]
Teffp = 2625 [281] K [5.84σ]

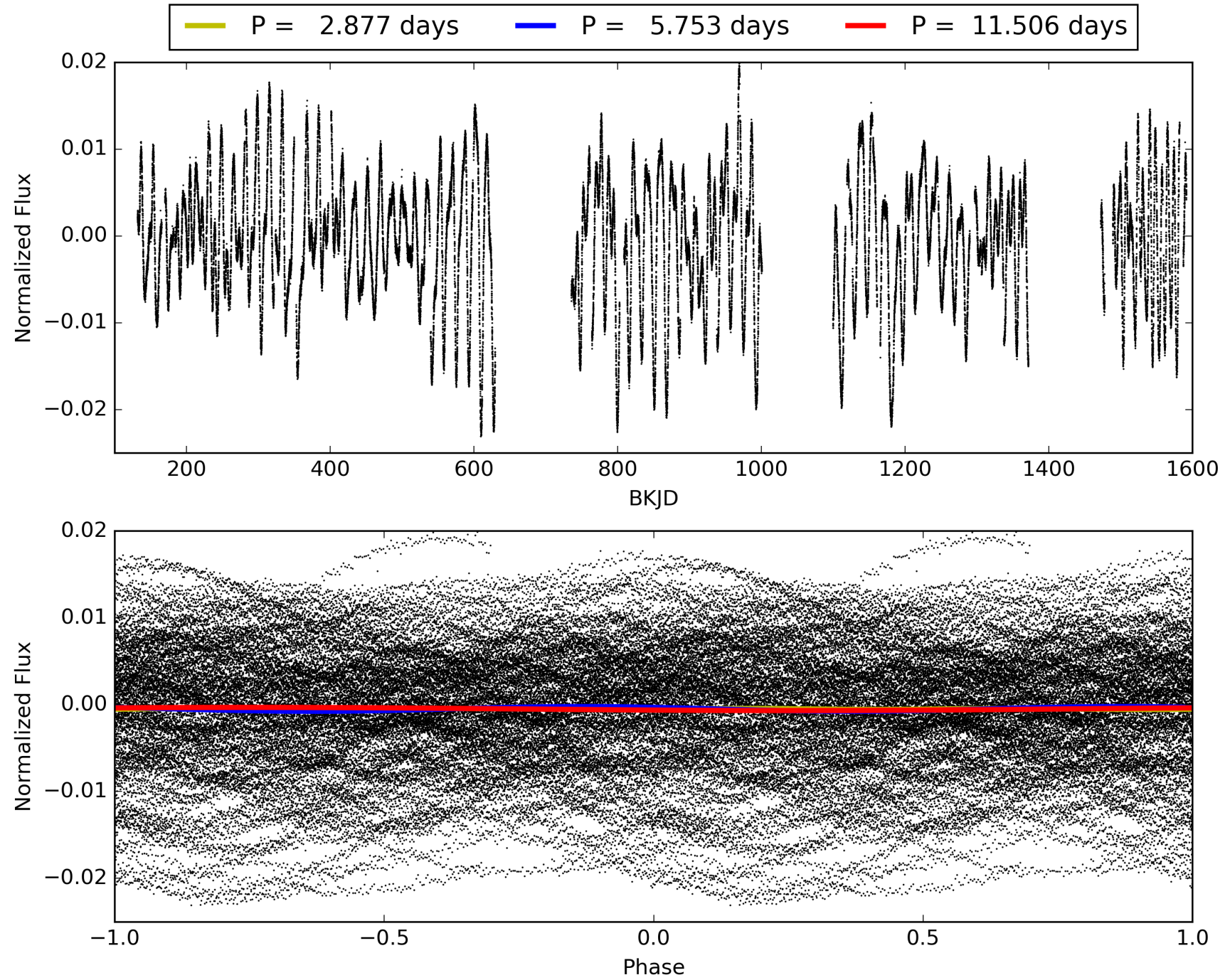
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.46e-199
RollingBand-fgt: 1.00 [177/177]
GhostDiagnostic-chr: 2.625
Centroid-sig: 0.6%
Centroid-so: 0.786 arcsec [1.93σ]
OotOffset-rm: 0.048 arcsec [0.34σ]
KicOffset-rm: 0.136 arcsec [0.90σ]
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]

TCE 009965957-01, PDC Light Curves

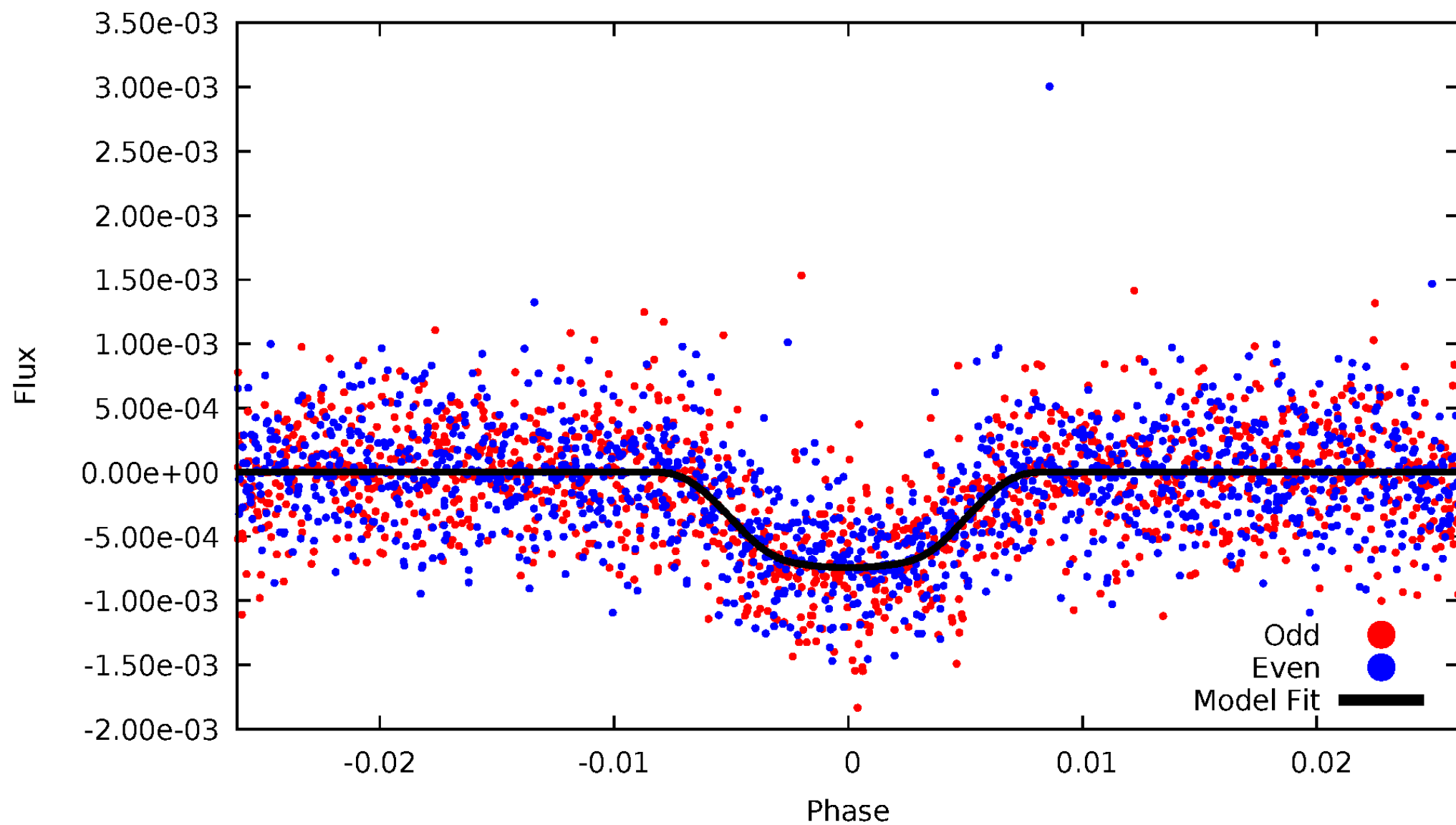


TCE 009965957-01



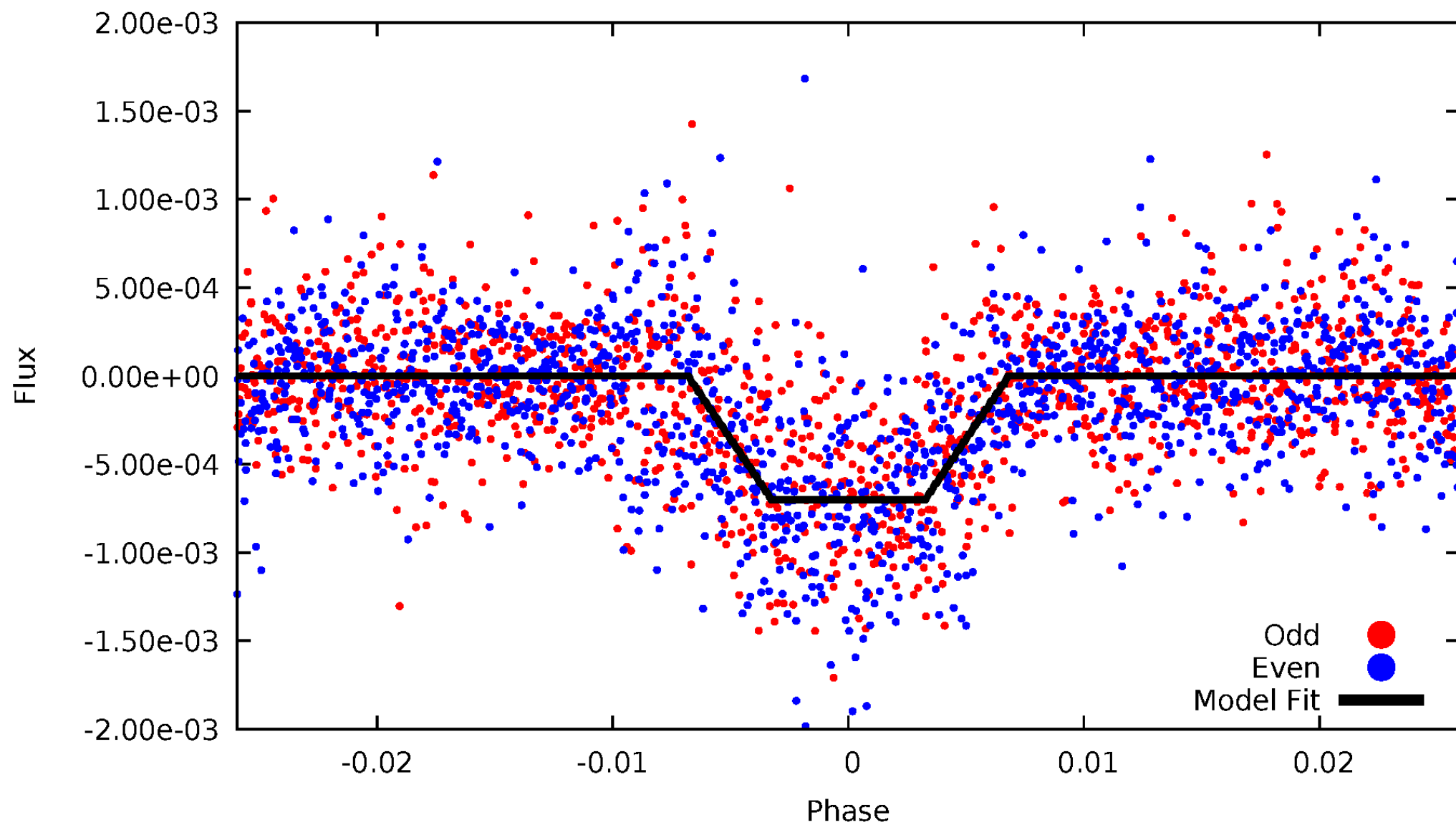
DV Odd/Even

TCE 009965957-01

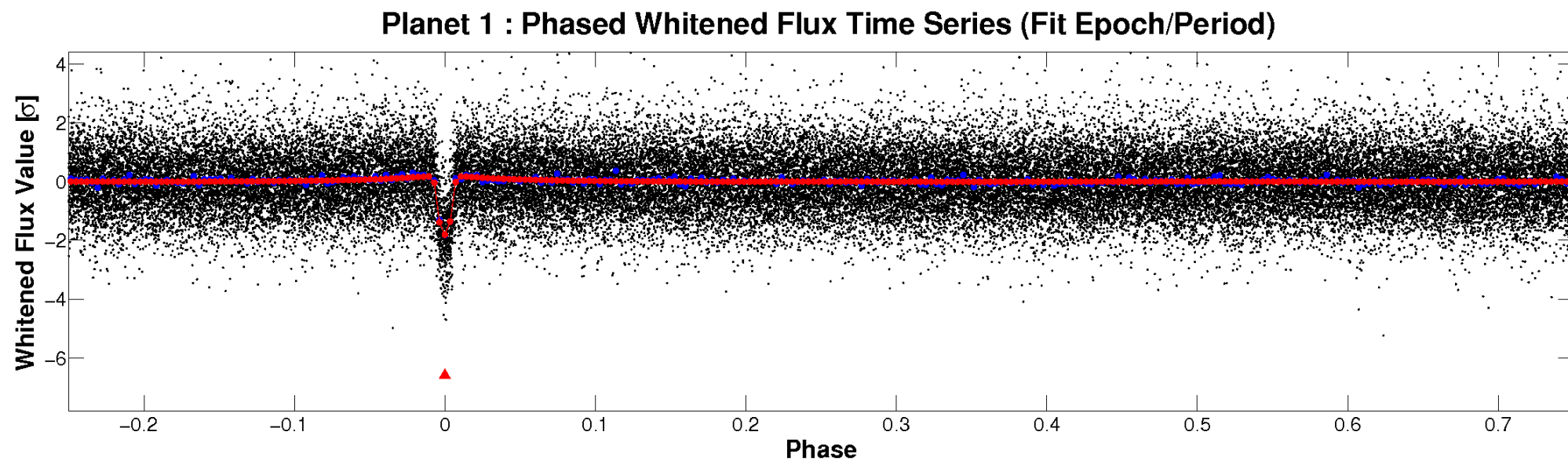
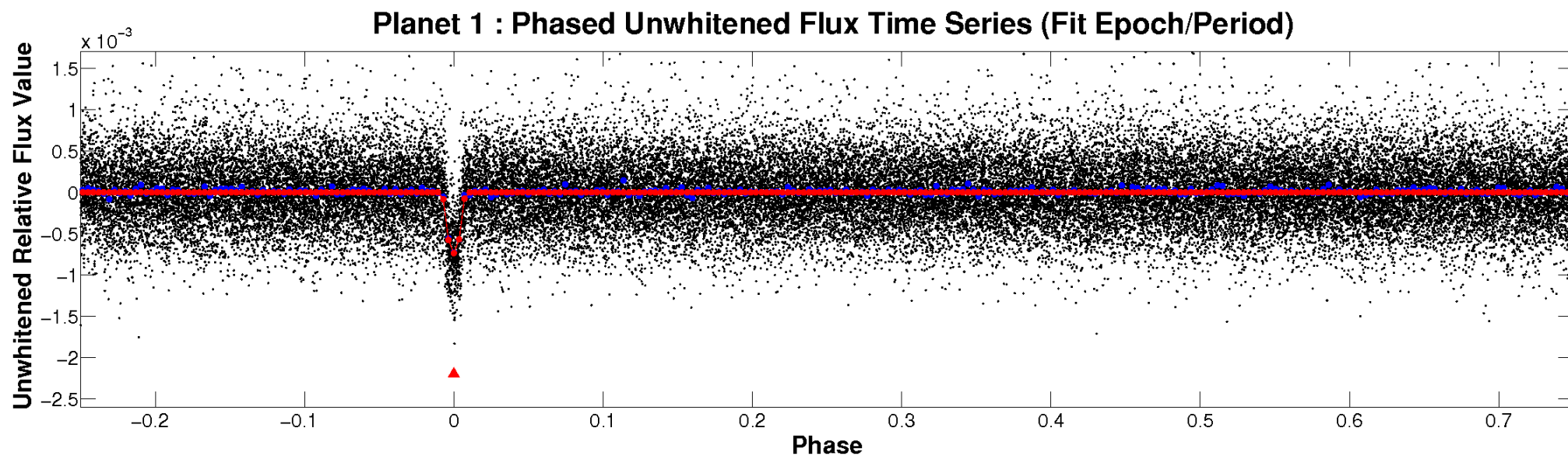


ALT Odd/Even

TCE 009965957-01

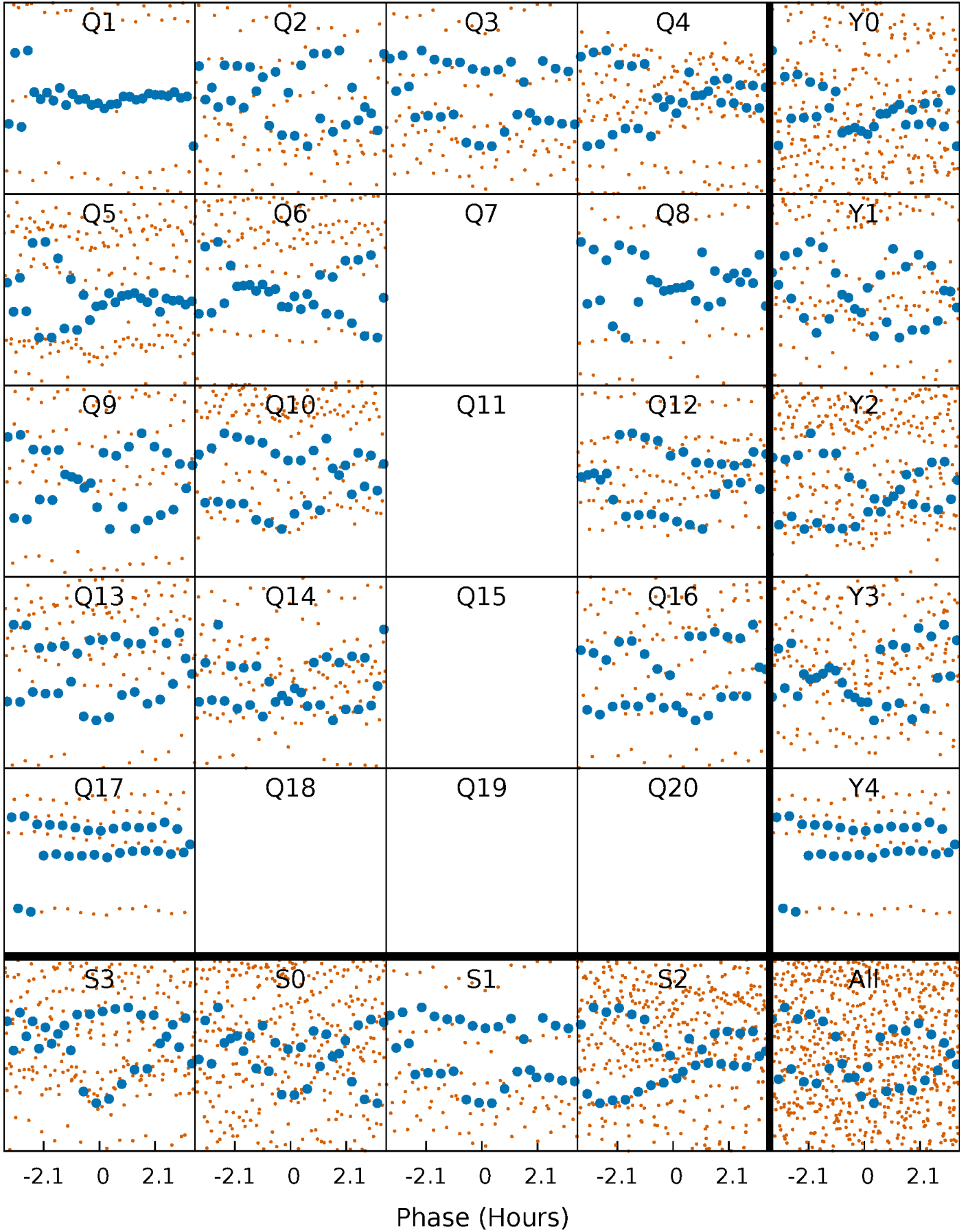


Non-Whitened Vs. Whitened Light Curve



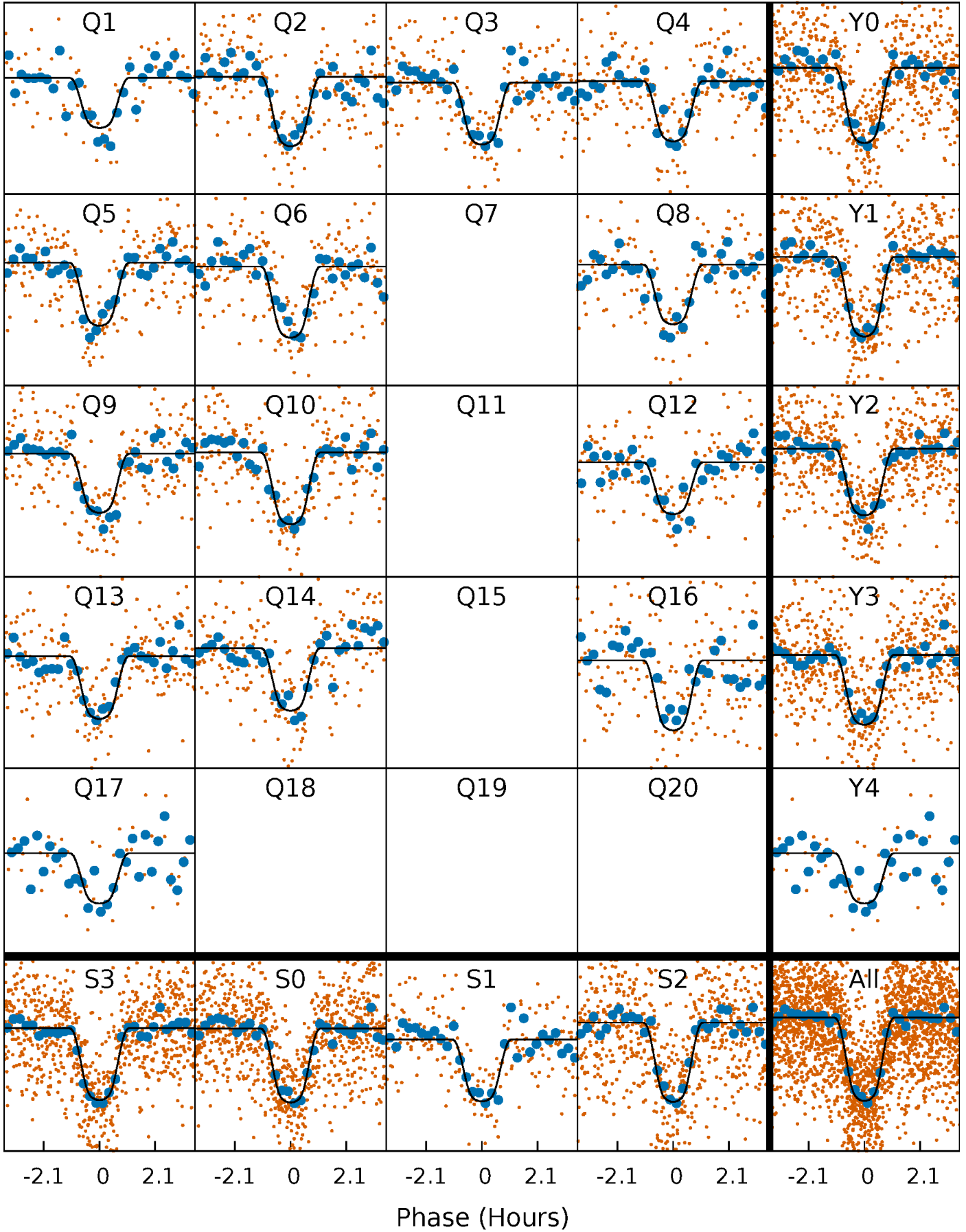
PDC Quarter-Phased Transit Curves

TCE 009965957-01 P= 5.753229 Days $T_0=136.754715$ (BKJD)



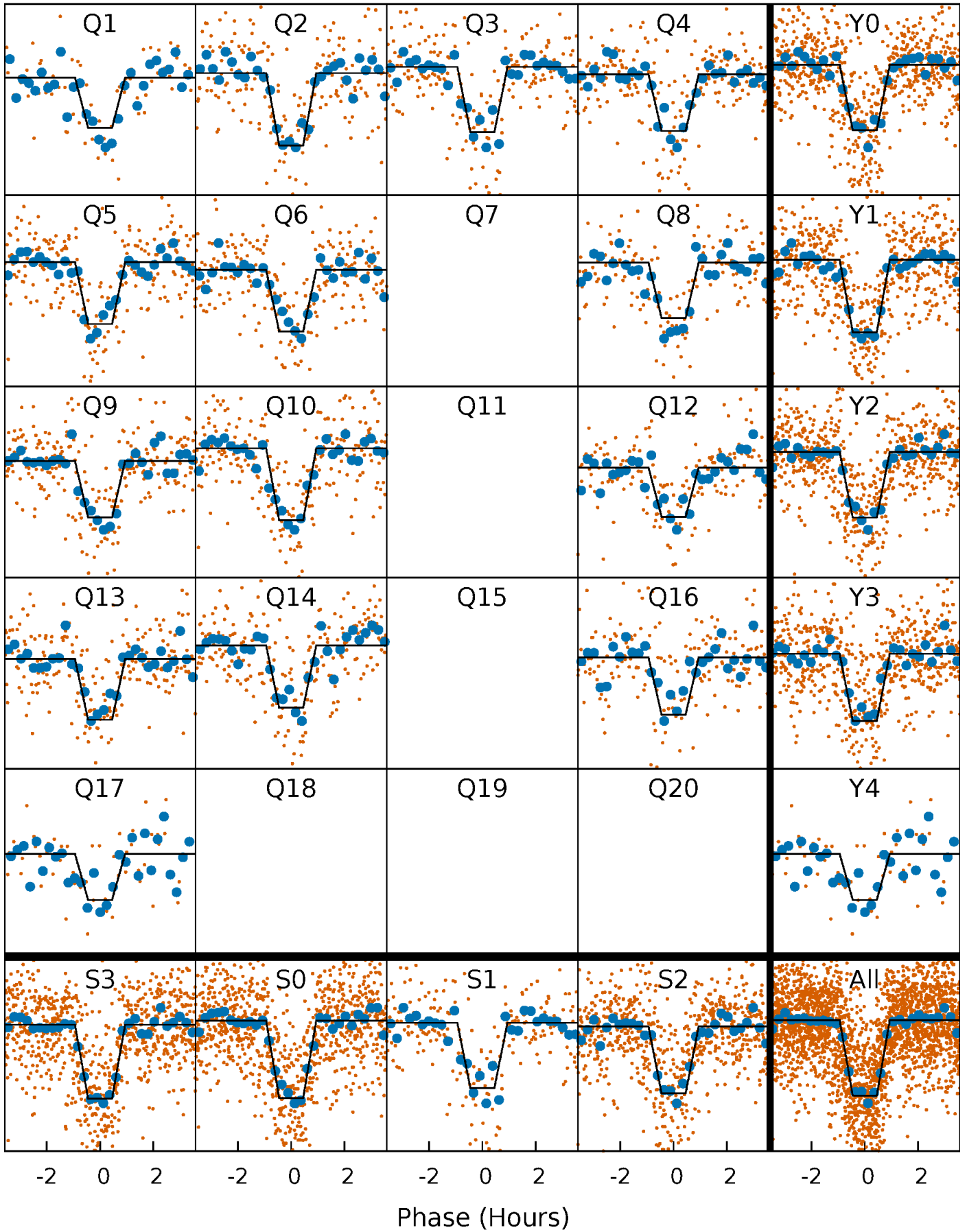
DV Quarter-Phased Transit Curves

TCE 009965957-01 P= 5.753229 Days $T_0=136.754715$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

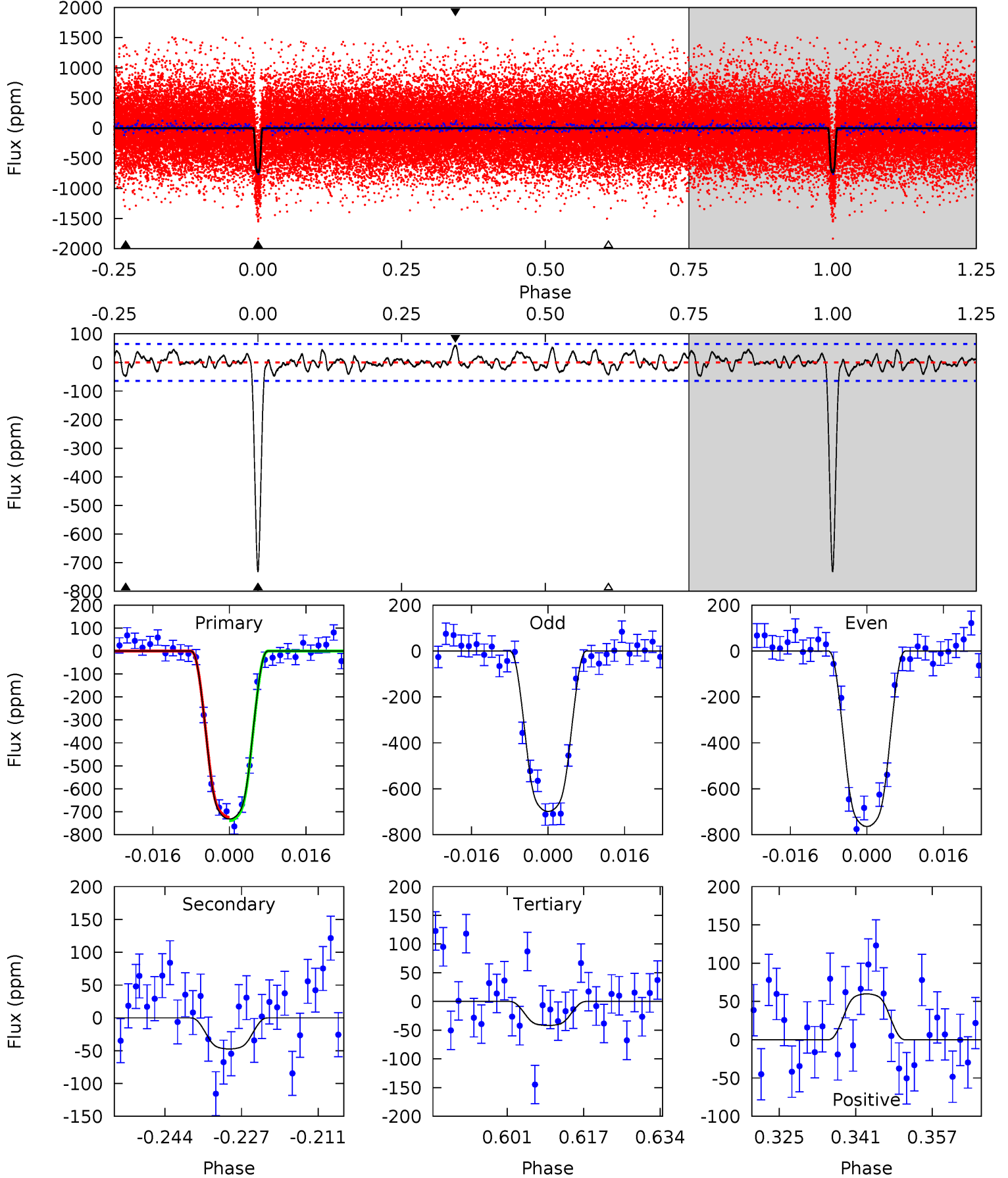
TCE 009965957-01 P= 5.753240 Days $T_0=136.753211$ (BKJD)



DV Model-Shift Uniqueness Test

009965957-01, P = 5.753229 Days, E = 131.001486 Days

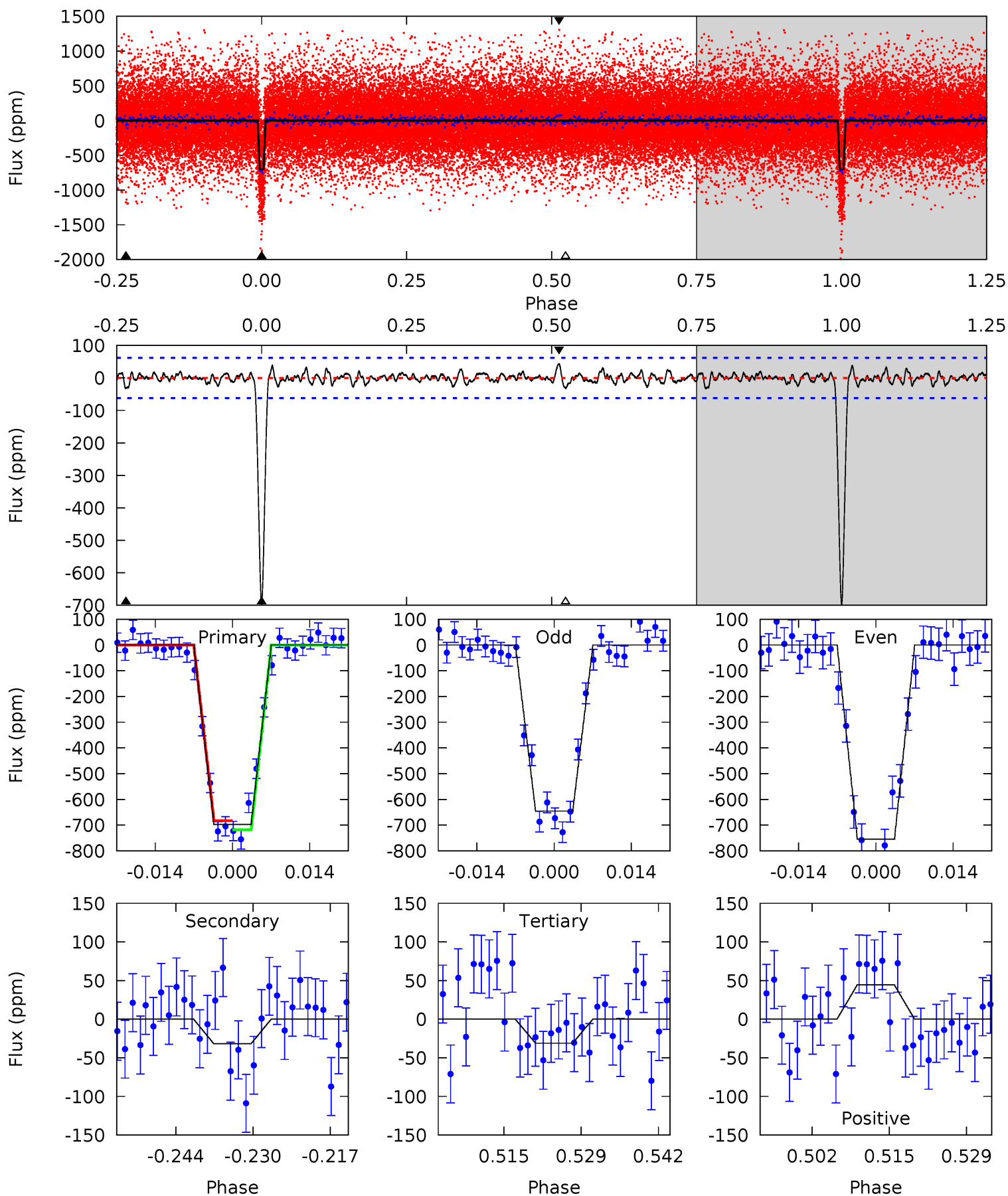
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
55.7	3.61	3.19	4.56	4.93	2.40	1.43	52.6	51.2	0.42	-0.95	2.51	0.98	0.08	0.57



Alt Model-Shift Uniqueness Test

009965957-01, P = 5.753240 Days, E = 130.999971 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
56.0	2.56	2.50	3.57	4.97	2.47	0.93	53.5	52.5	0.07	-1.00	4.40	1.02	0.06	1.39



Stellar Parameters For KIC 009965957

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5445^{+180}_{-164}	$4.510^{+0.033}_{-0.176}$	$0.480^{+0.050}_{-0.250}$	$0.929^{+0.229}_{-0.076}$	$1.017^{+0.074}_{-0.101}$	$1.789^{+0.298}_{-0.820}$
	+3%/-3%	+1%/-4%	+10%/-52%	+25%/-8%	+7%/-10%	+17%/-46%
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 009965957-01 / KOI 1911.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-47 ± 13	$3.28^{+0.46}_{-0.32}$	1317^{+77}_{-60}	3135^{+167}_{-179}	$9.146^{+3.824}_{-3.091}$
Alt.	-32 ± 12	$2.81^{+0.42}_{-0.34}$	1316^{+80}_{-57}	3104^{+207}_{-239}	$8.528^{+5.015}_{-3.689}$

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 $A_{obs} \gg 1.0$

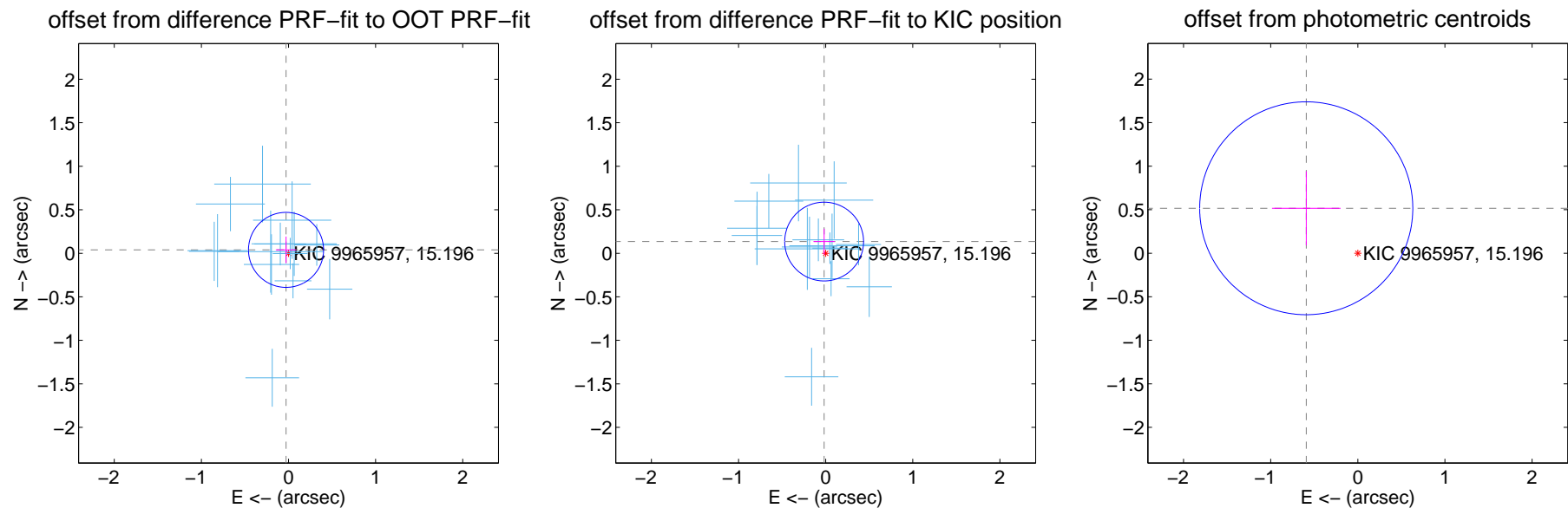
DV Centroid Data

Supplemental centroid analysis for 009965957-01. Kepler magnitude: 15.20. Transit SNR 36.39

There are 14 quarters with good PRF difference image offsets

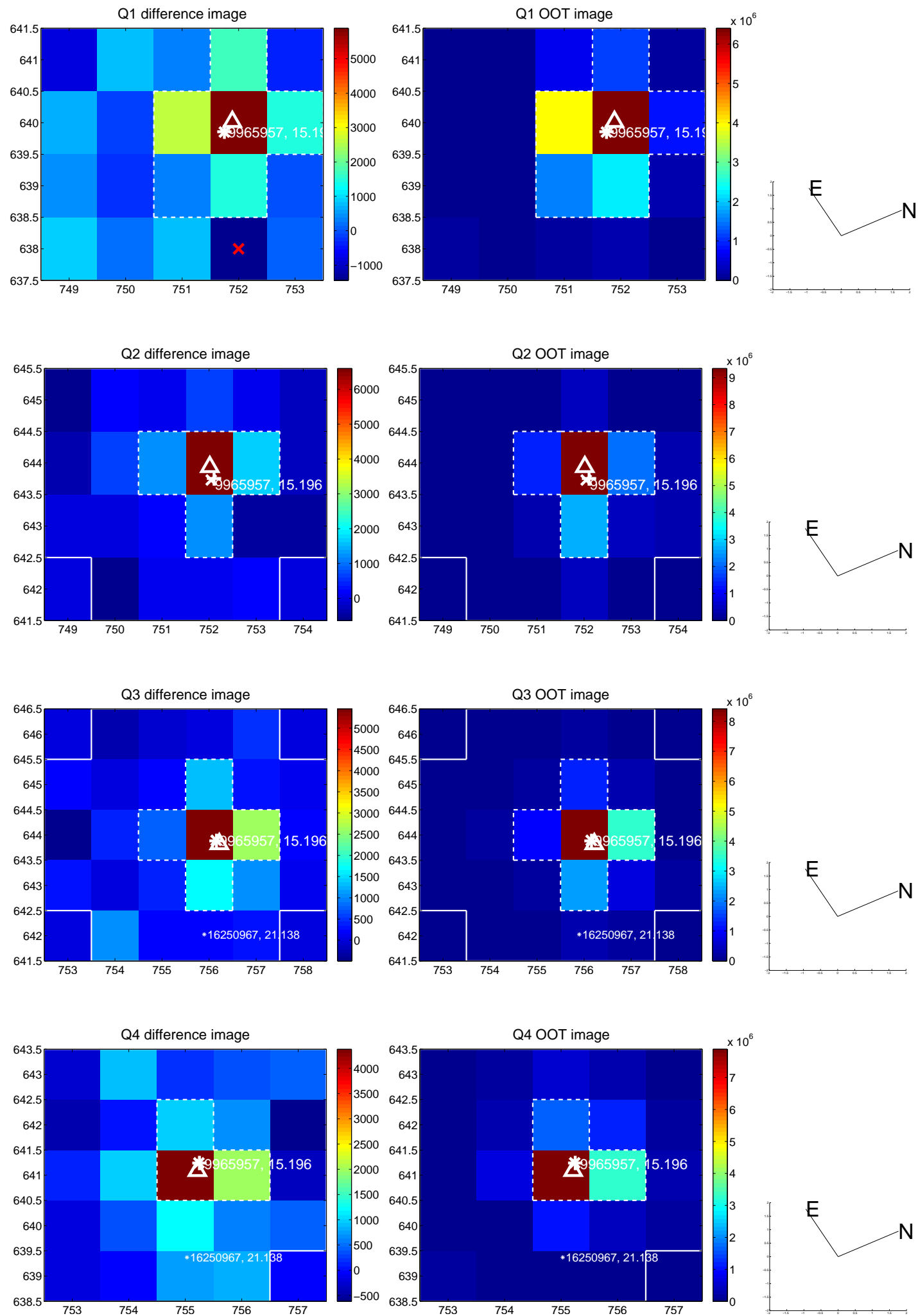
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.048 ± 0.144	0.34	0.028 ± 0.117	0.039 ± 0.153
PRF-fit source offset from KIC position	0.136 ± 0.151	0.90	0.018 ± 0.122	0.135 ± 0.148
photometric centroid source offset	0.79 ± 0.41	1.93	0.59 ± 0.39	0.52 ± 0.43

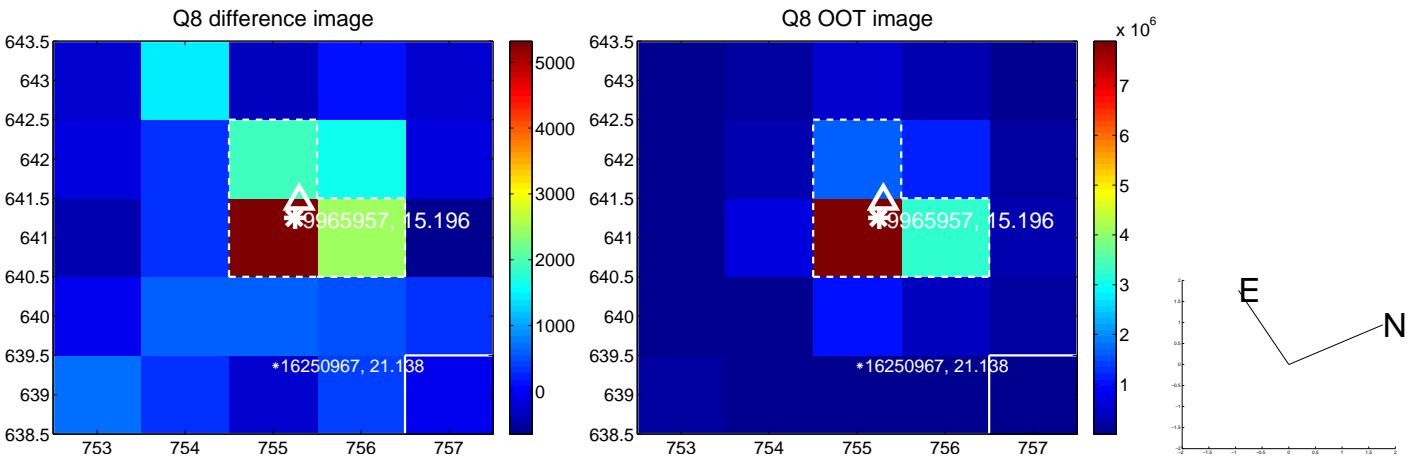
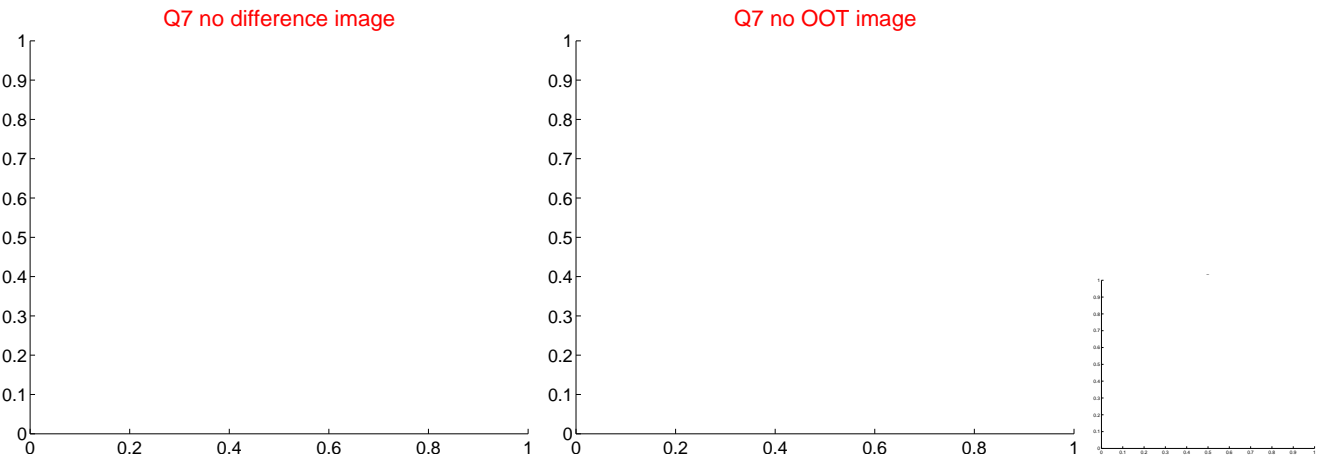
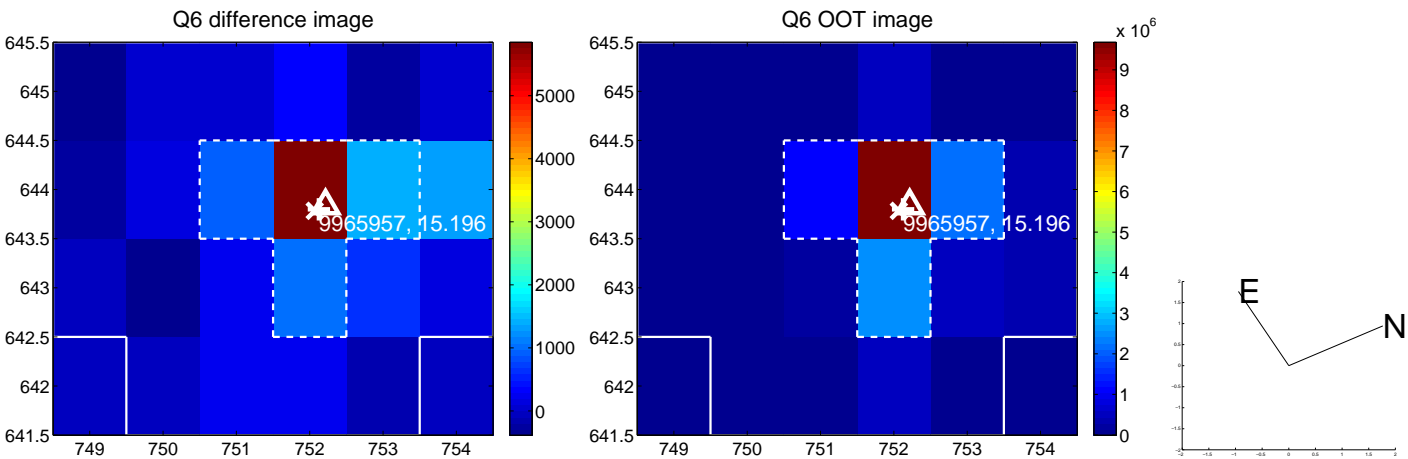
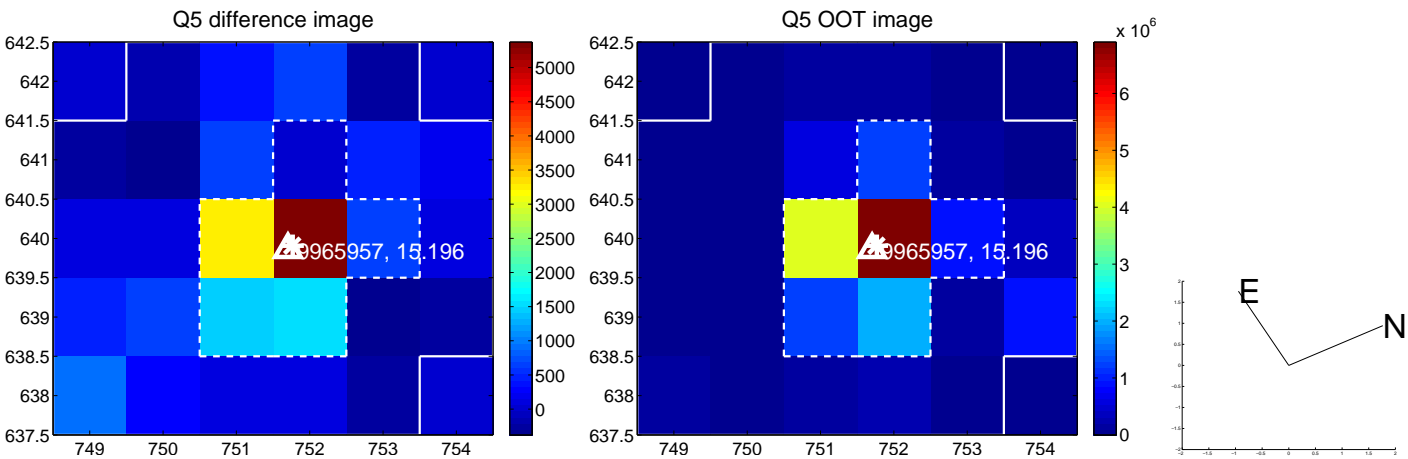


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

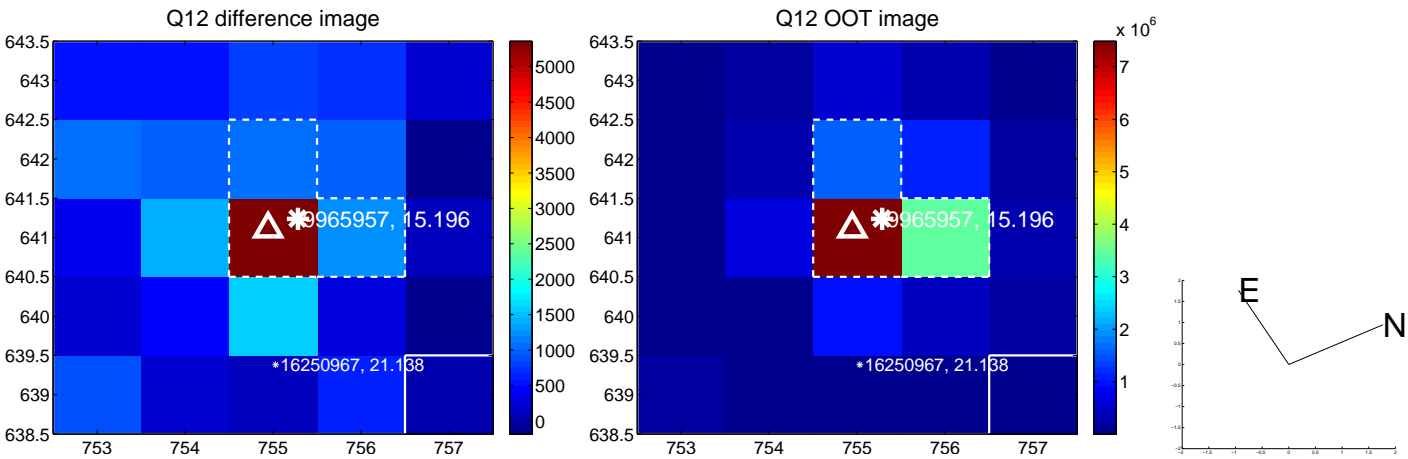
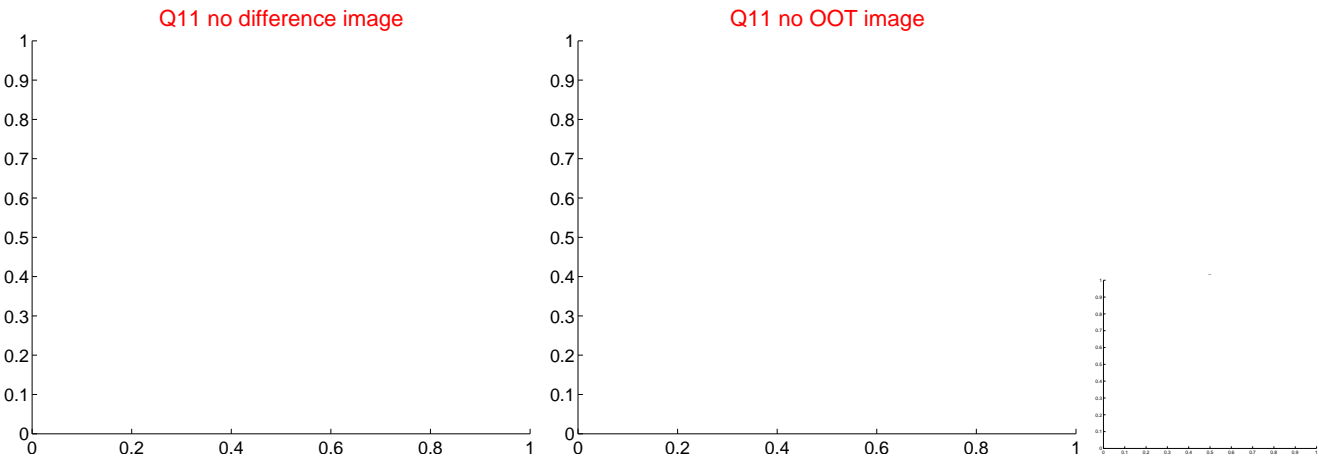
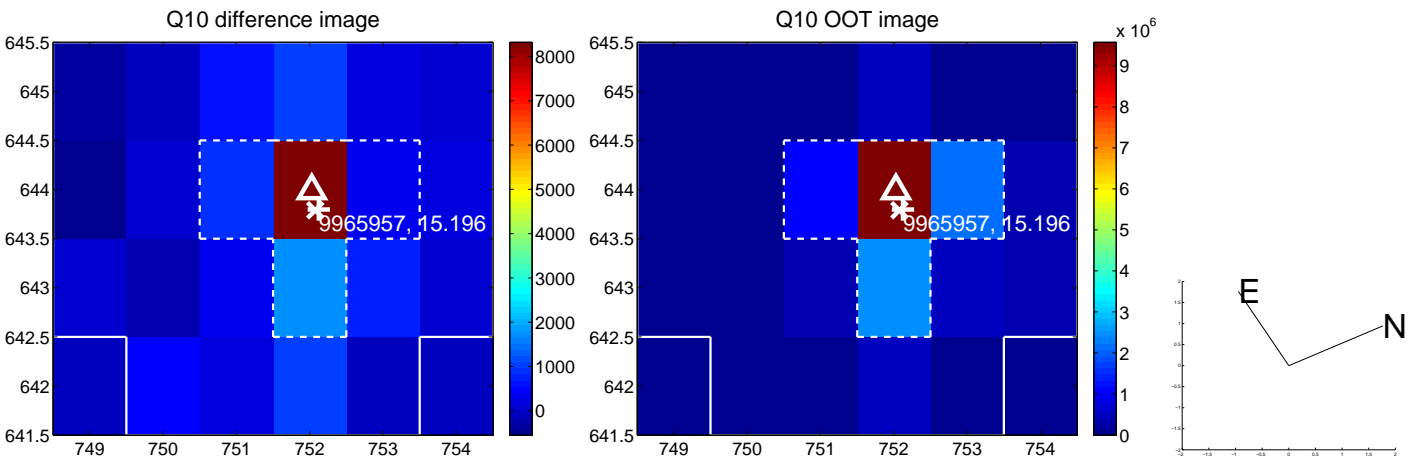
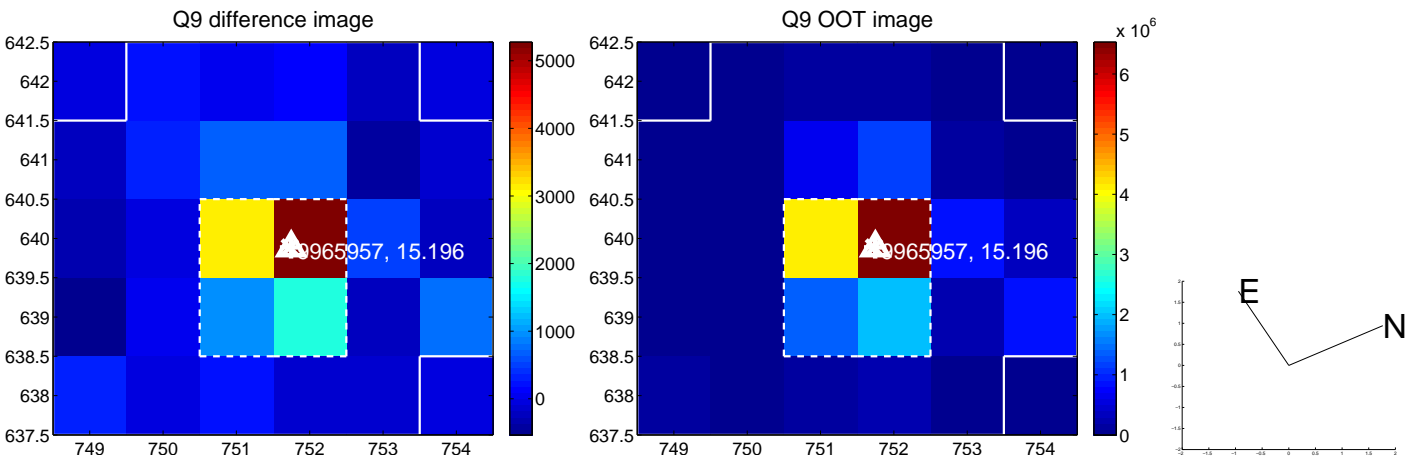
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



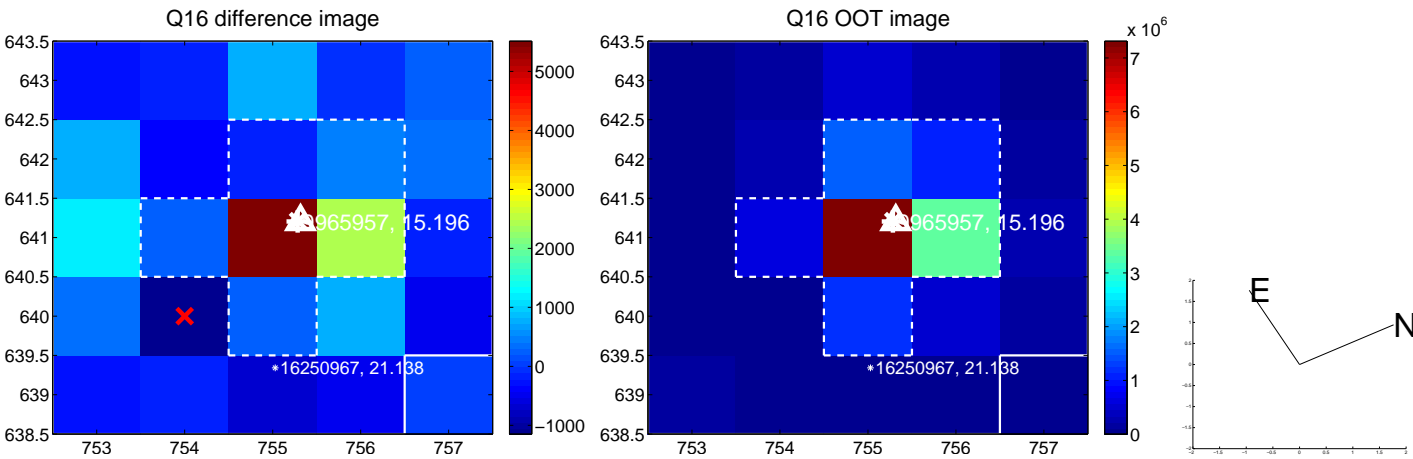
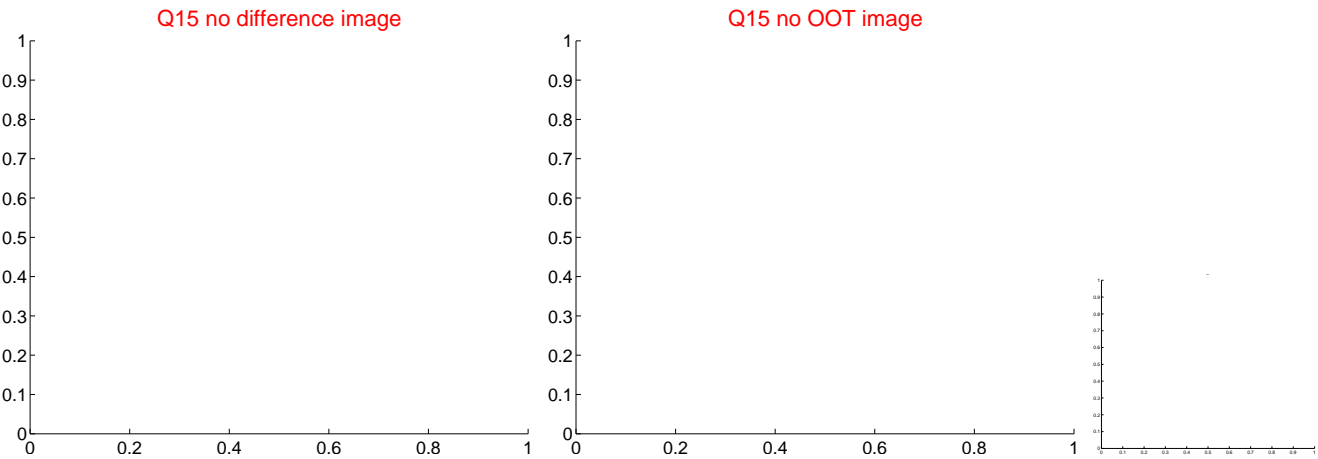
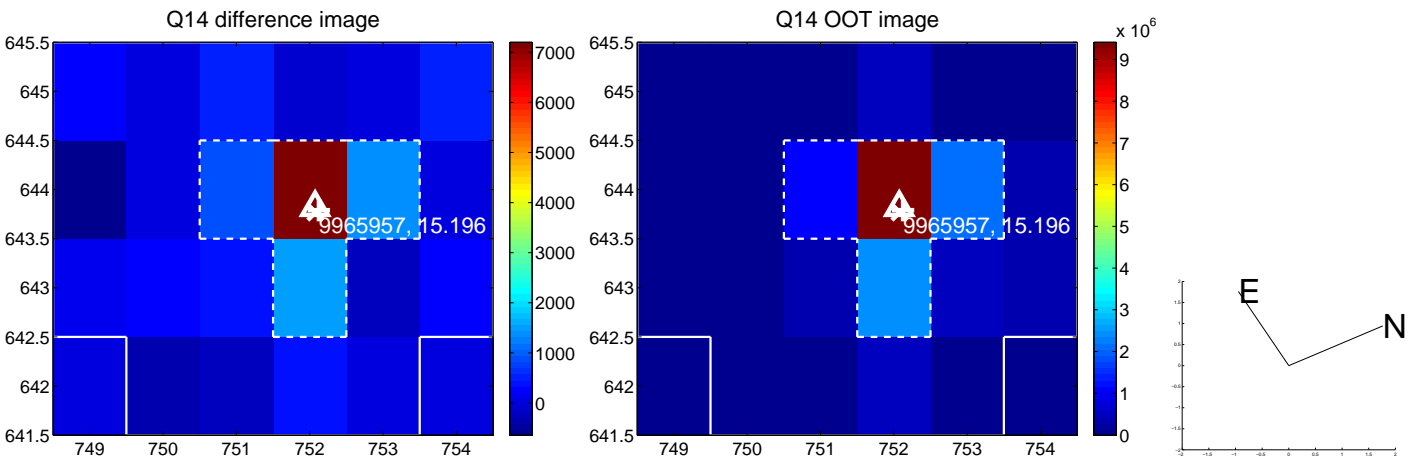
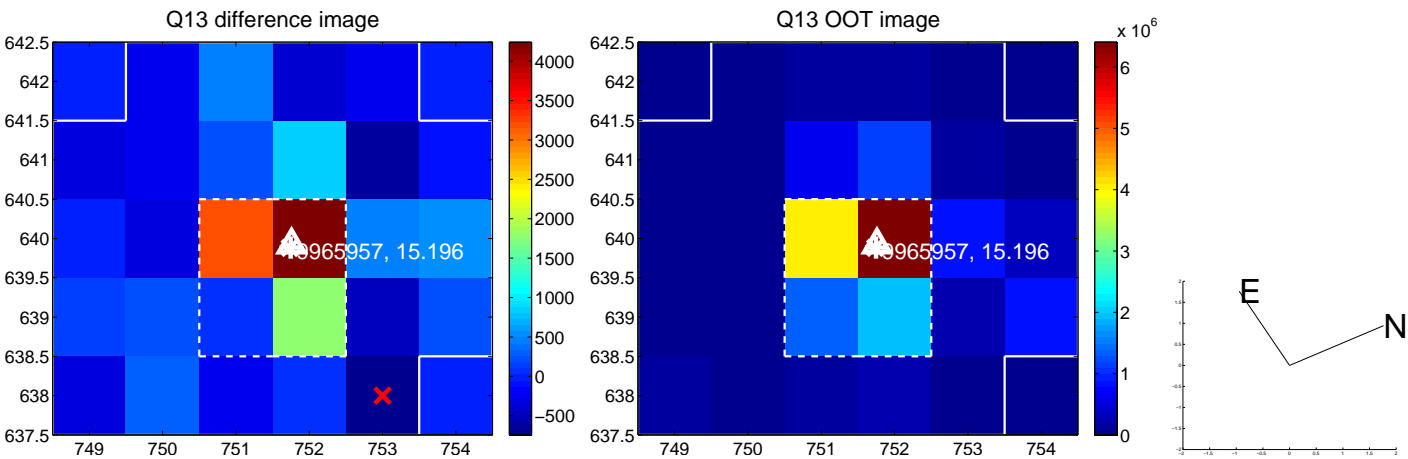
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



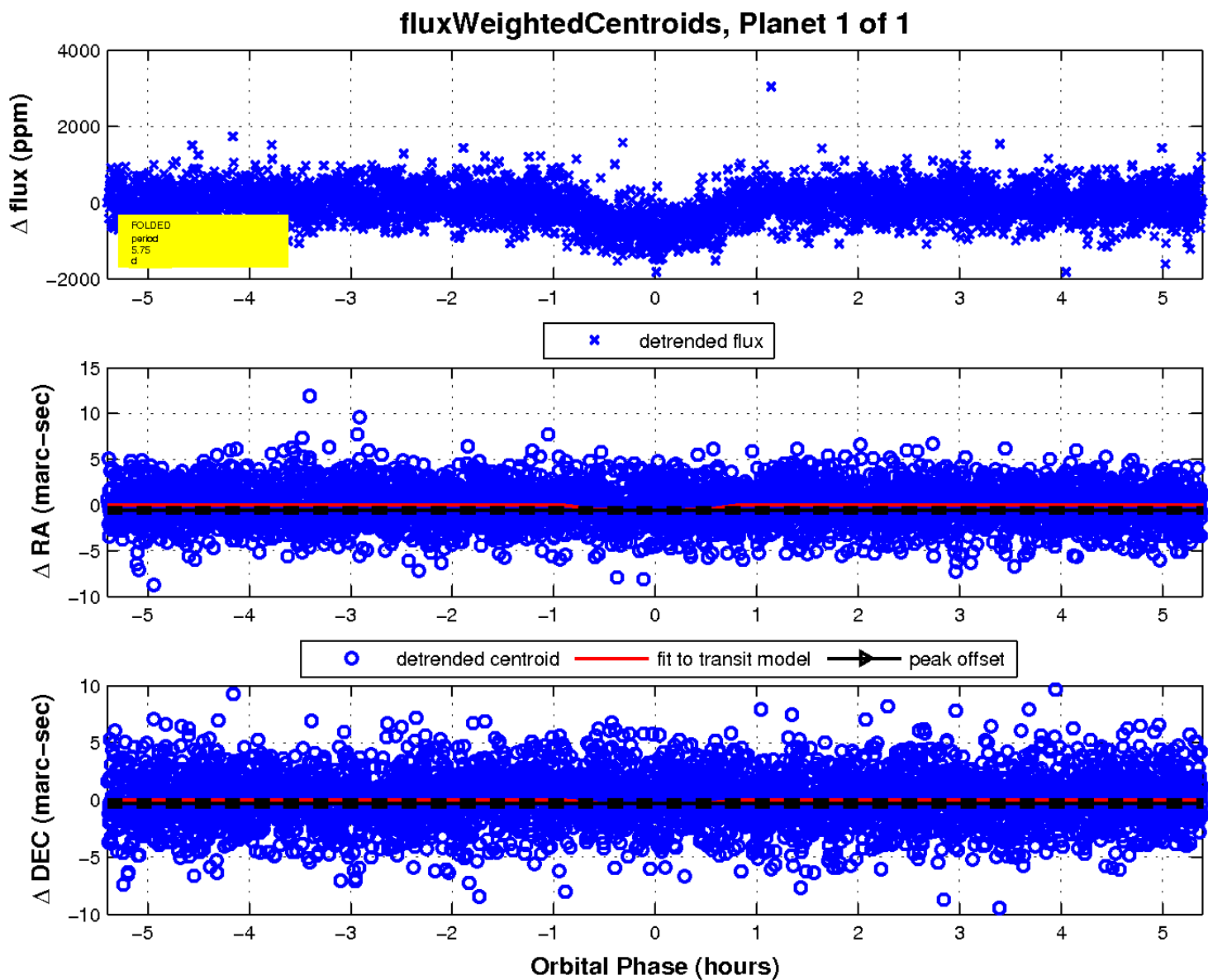
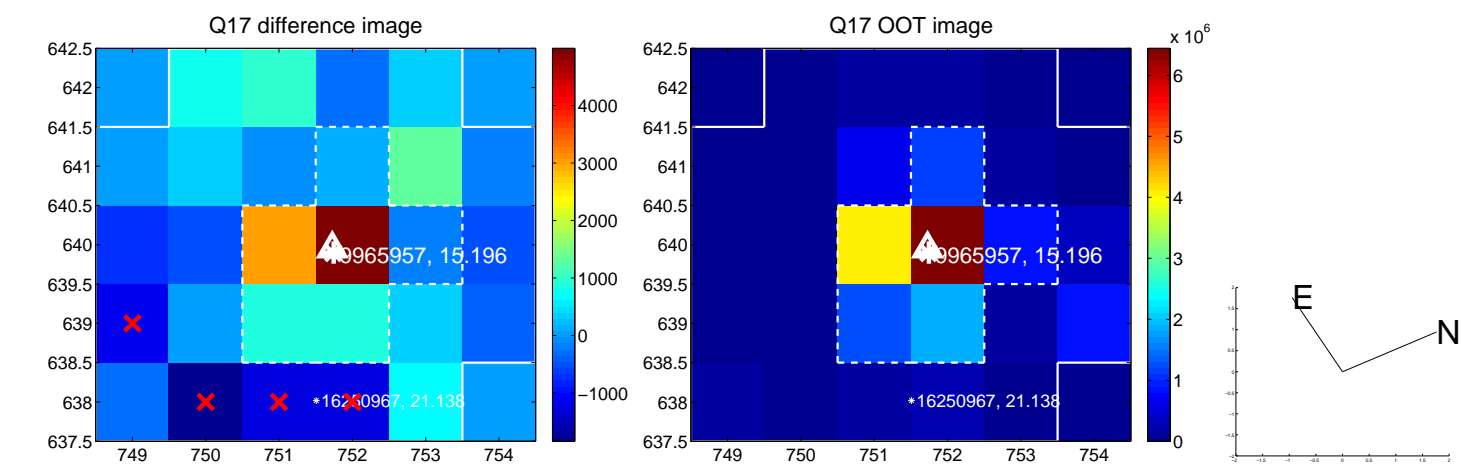
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UKIRT Image

Declination

