

KIC 009825625

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})
009825625-01	OBS	0955.01	7.039001	133.497961	522.7	4.203	45.4	51.4	1.06	6321	2.83	289.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009825625-01	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.

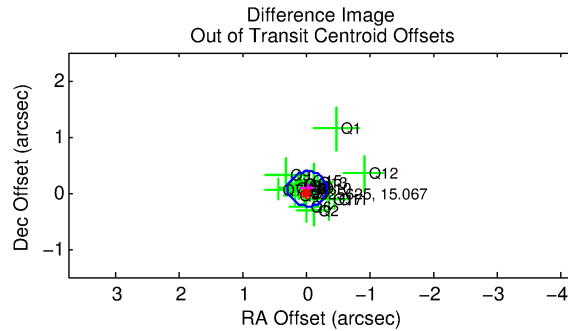
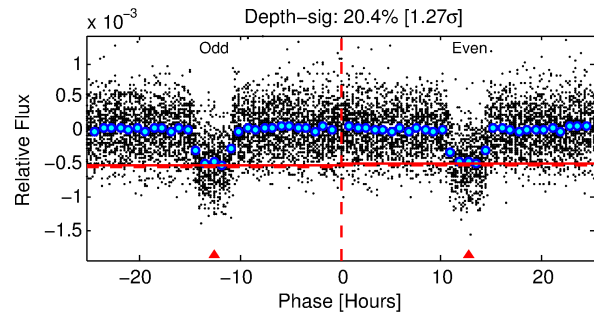
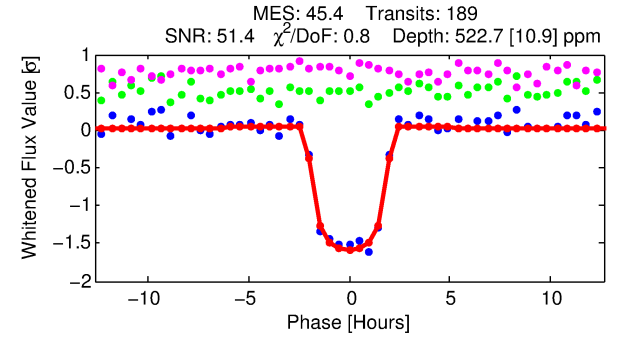
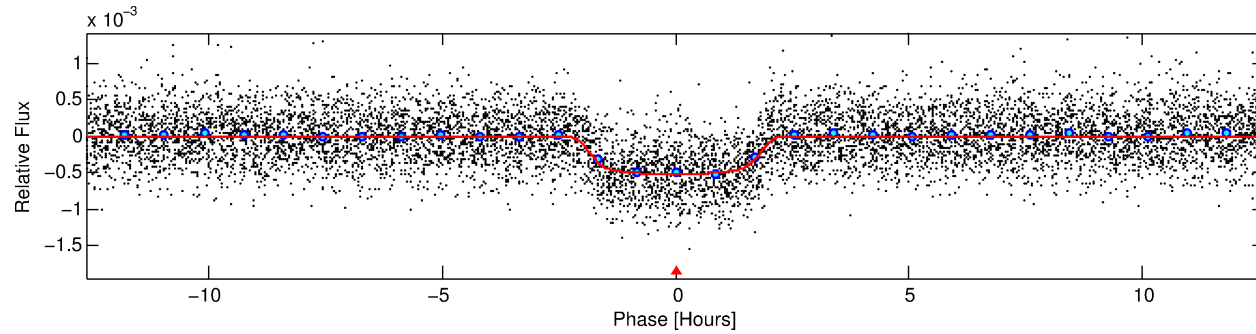
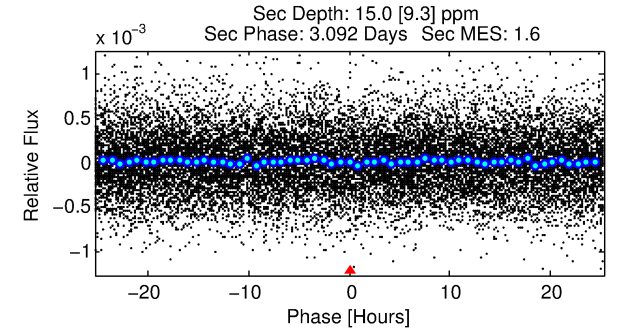
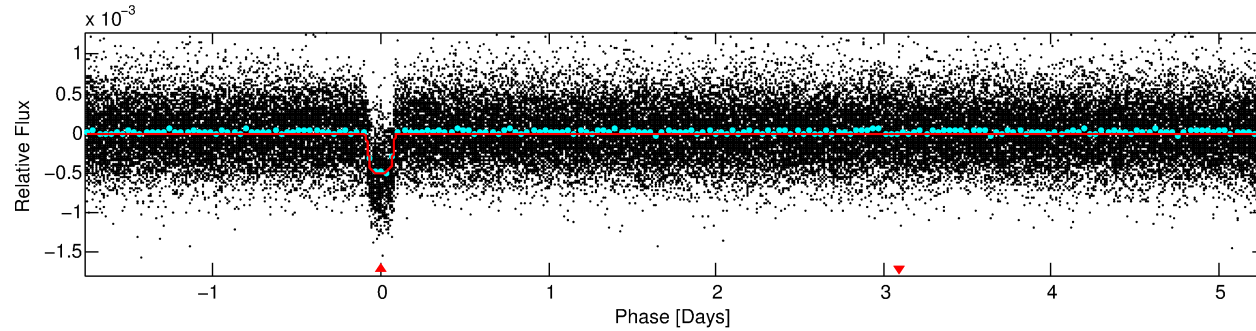
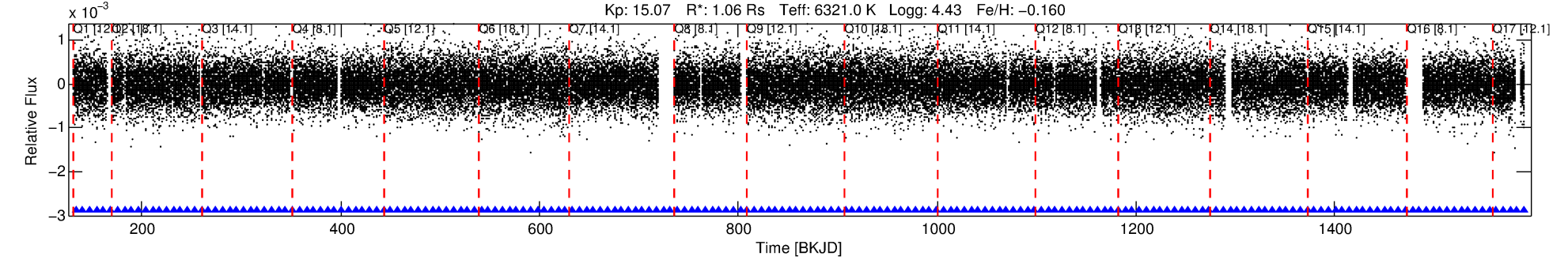
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009825625-01

No Significant Match Found

DV One-Page Summary

KIC: 9825625 Candidate: 1 of 1 Period: 7.039 d
KOI: K00955.01 Corr: 0.962



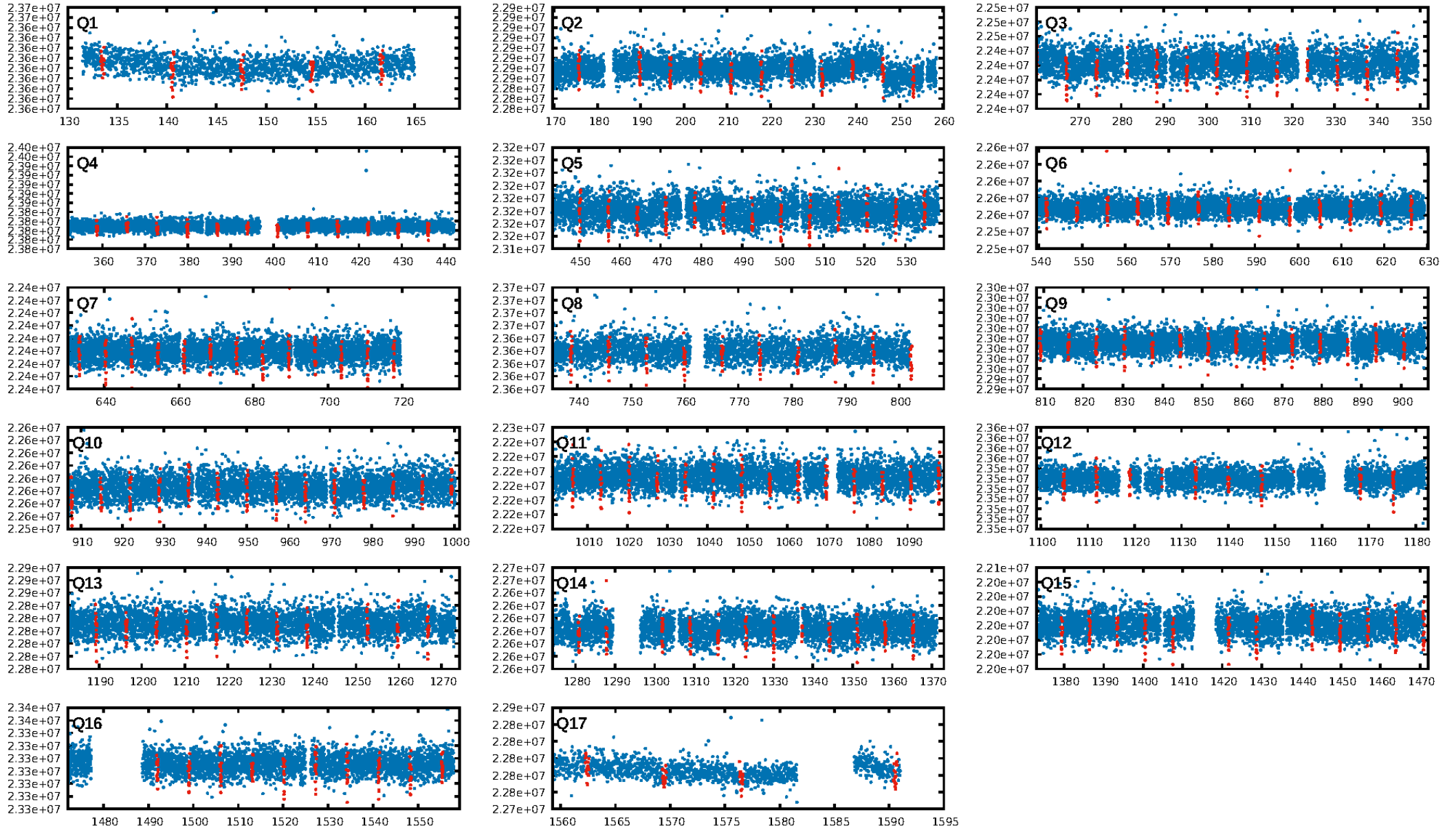
DV Fit Results:

Period = 7.03900 [0.00002] d
Epoch = 133.4980 [0.0016] BKJD
Rp/R* = 0.0246 [0.0010]
a/R* = 6.35 [1.34]
b = 0.90 [0.05]
Seff = 289.08 [121.03]
Teff = 1051 [110] K
Rp = 2.83 [0.94] Re
a = 0.0744 [0.0205] AU
Ag = 5.69 [4.22] [1.11 σ]
Teffp = 2510 [401] K [3.51 σ]

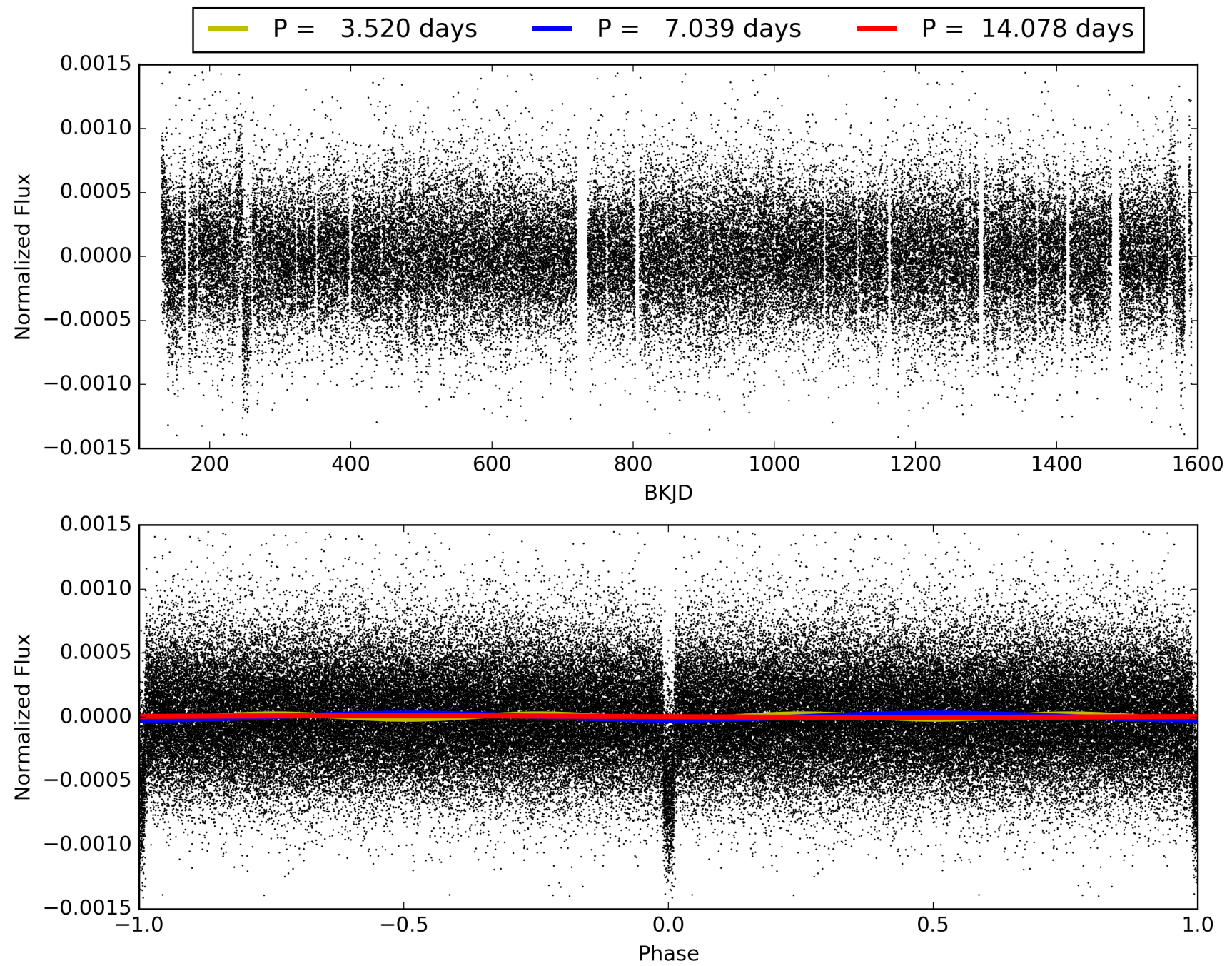
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [180/180]
GhostDiagnostic-chr: 7.264
Centroid-sig: 39.7%
Centroid-so: 0.506 arcsec [1.78 σ]
OotOffset-rm: 0.069 arcsec [0.68 σ]
KicOffset-rm: 0.092 arcsec [0.95 σ]
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 009825625-01, PDC Light Curves

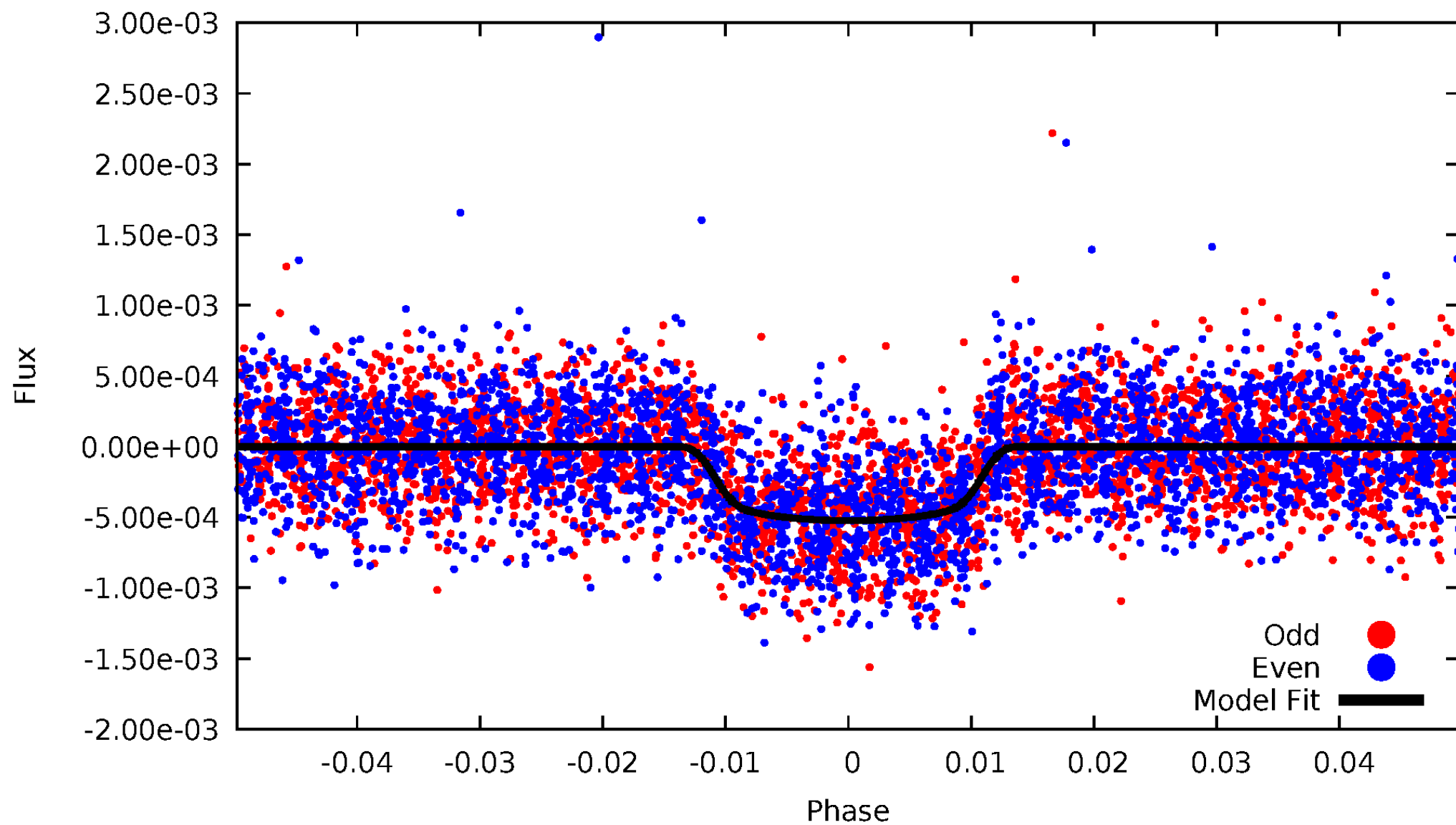


TCE 009825625-01



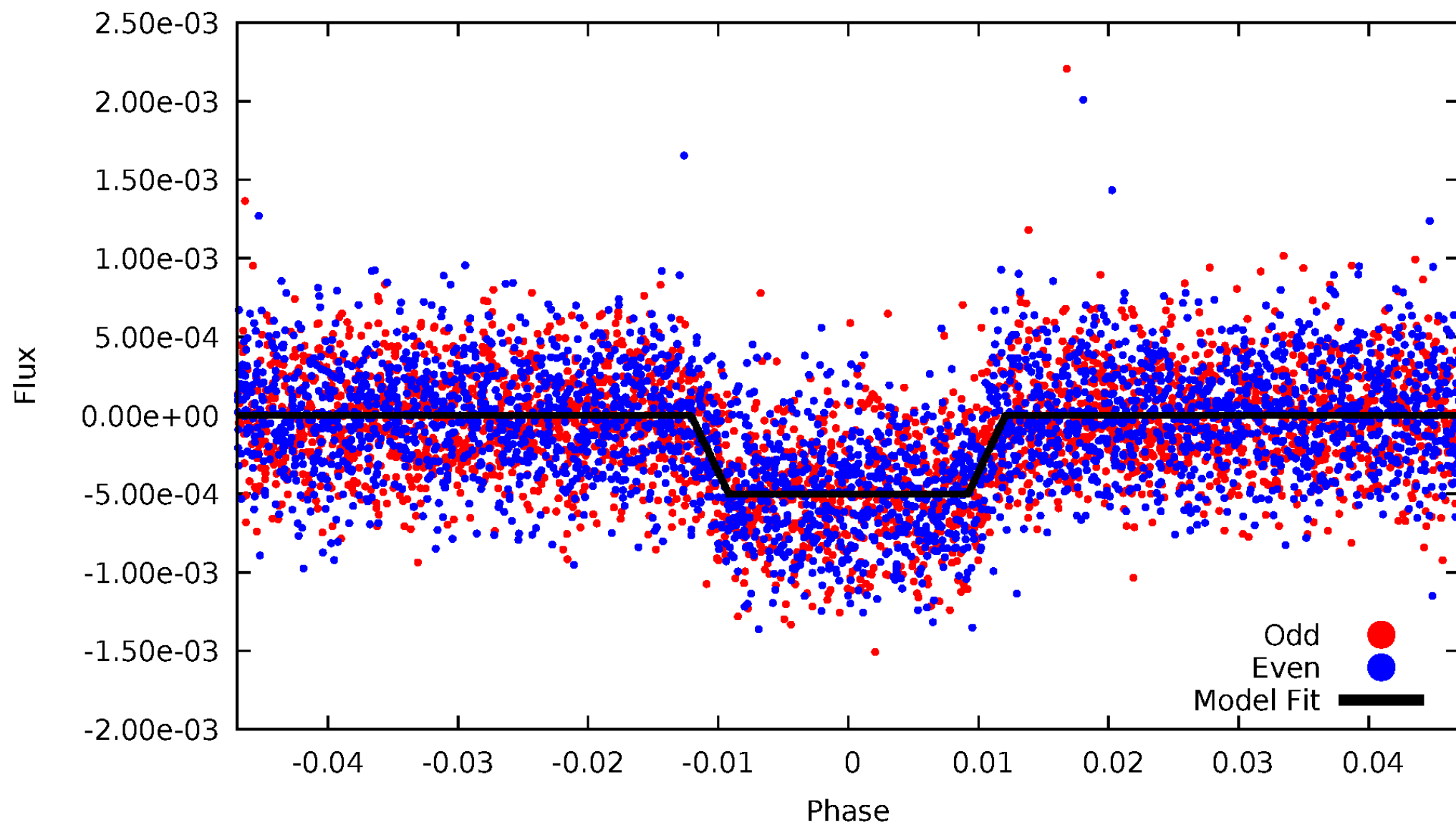
DV Odd/Even

TCE 009825625-01

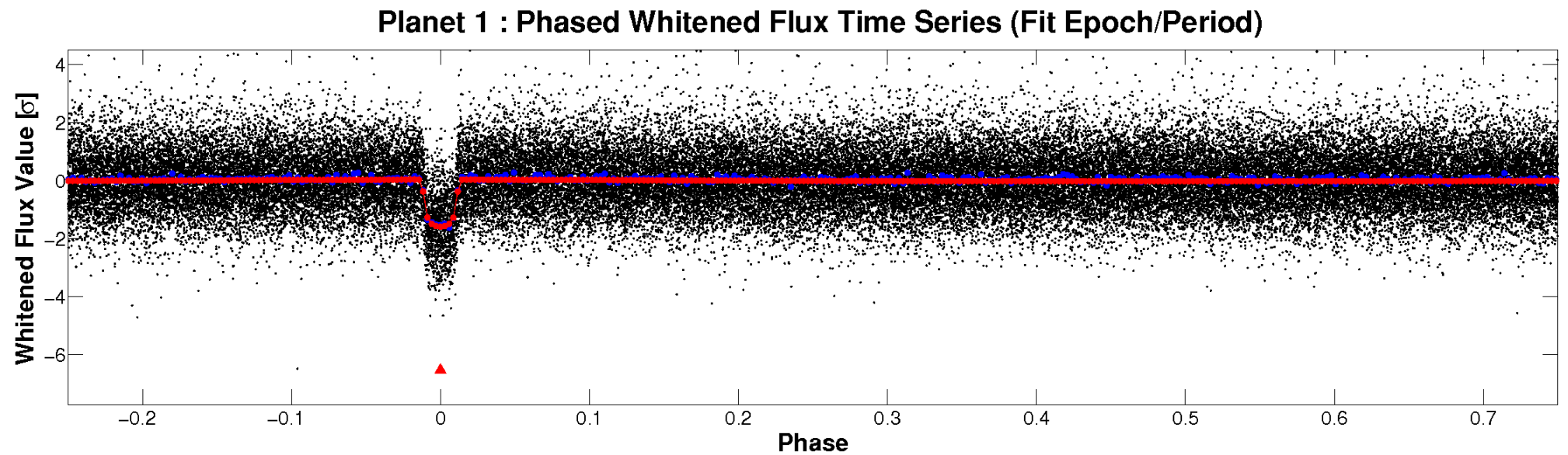
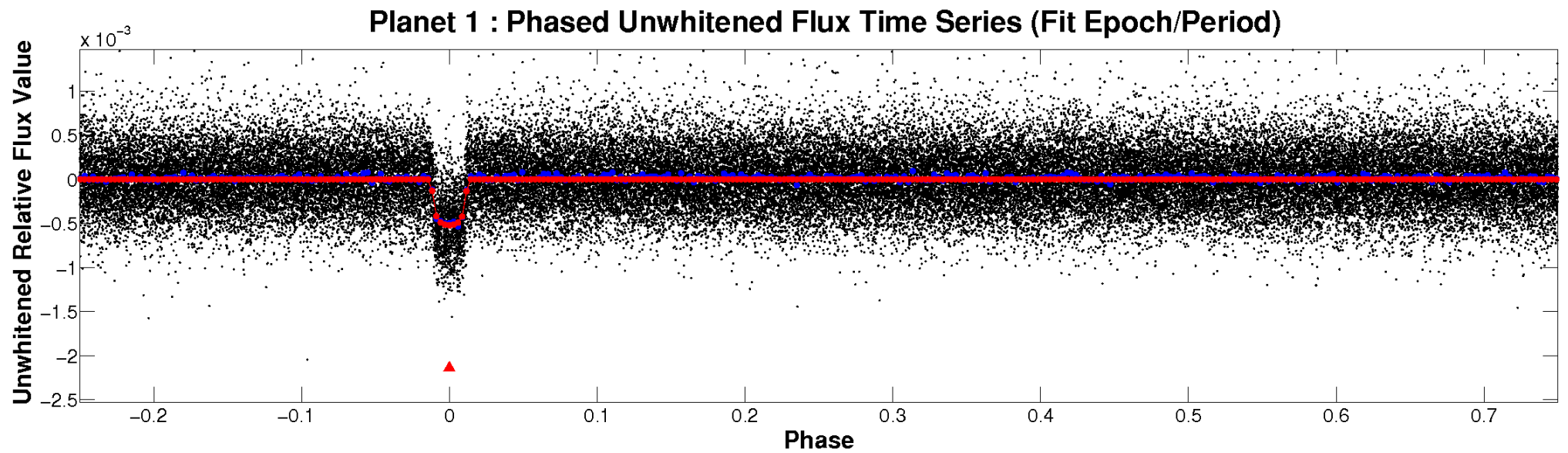


ALT Odd/Even

TCE 009825625-01

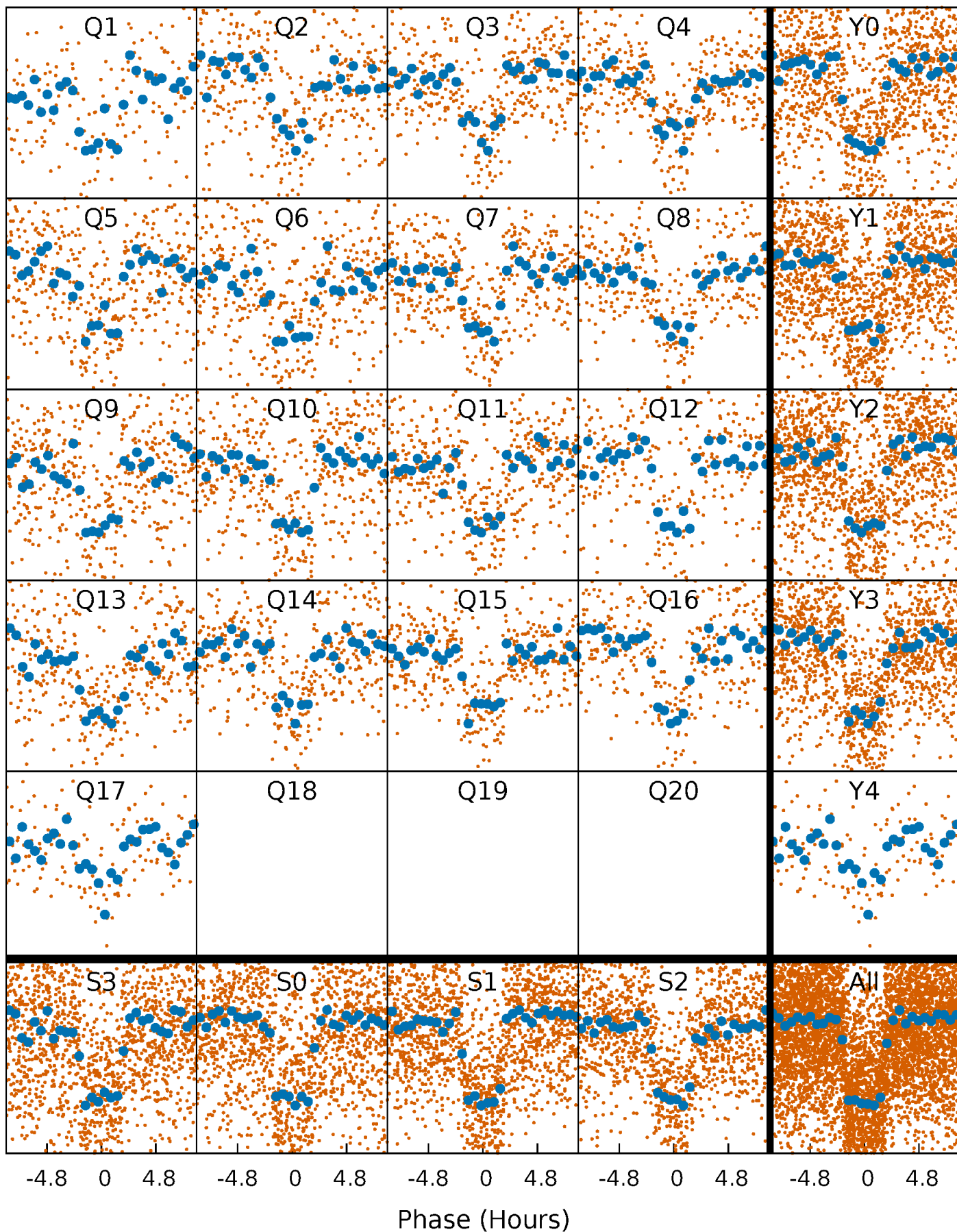


Non-Whitened Vs. Whitened Light Curve



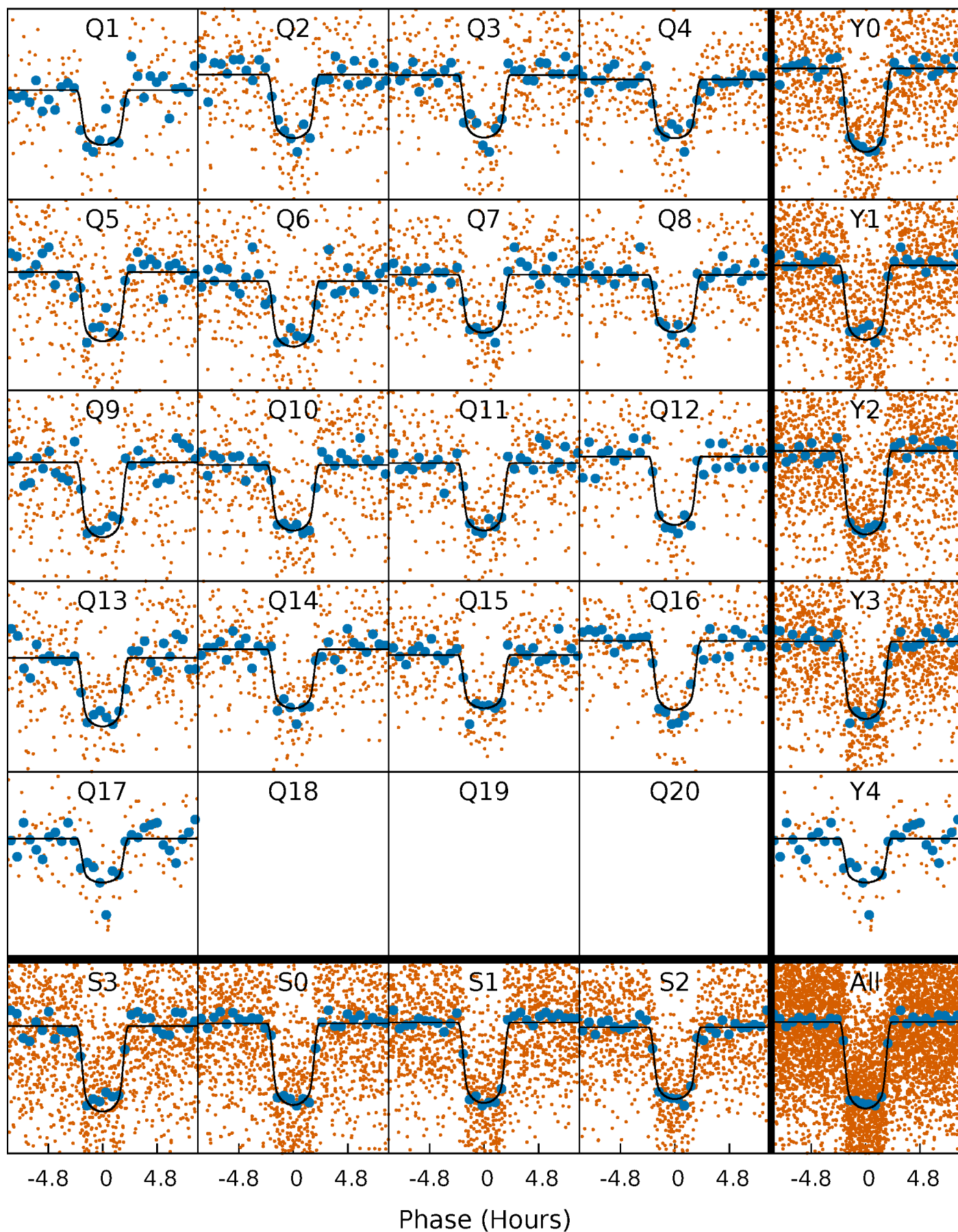
PDC Quarter-Phased Transit Curves

TCE 009825625-01 P= 7.039001 Days $T_0=133.497961$ (BKJD)



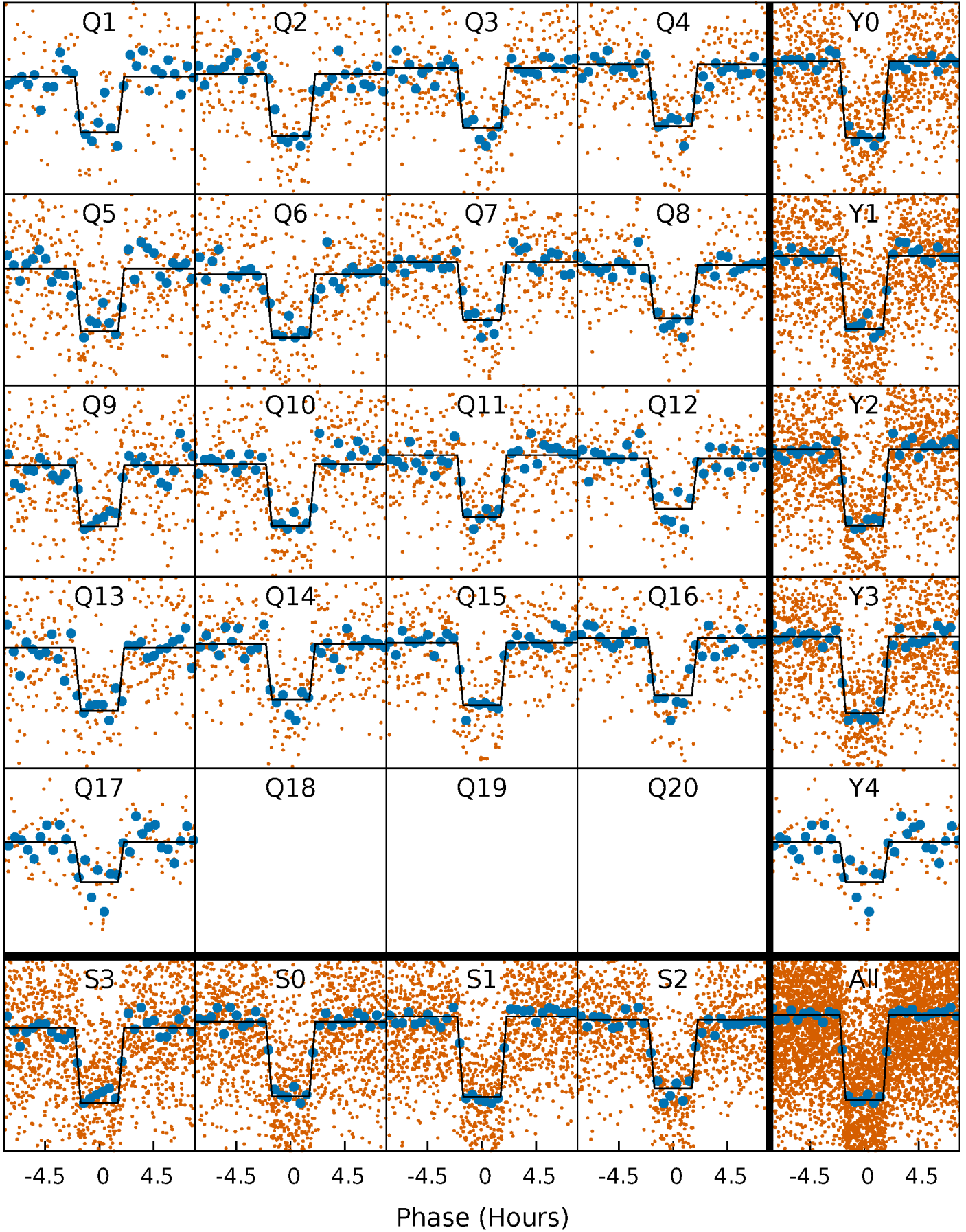
DV Quarter-Phased Transit Curves

TCE 009825625-01 P= 7.039001 Days $T_0=133.497961$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

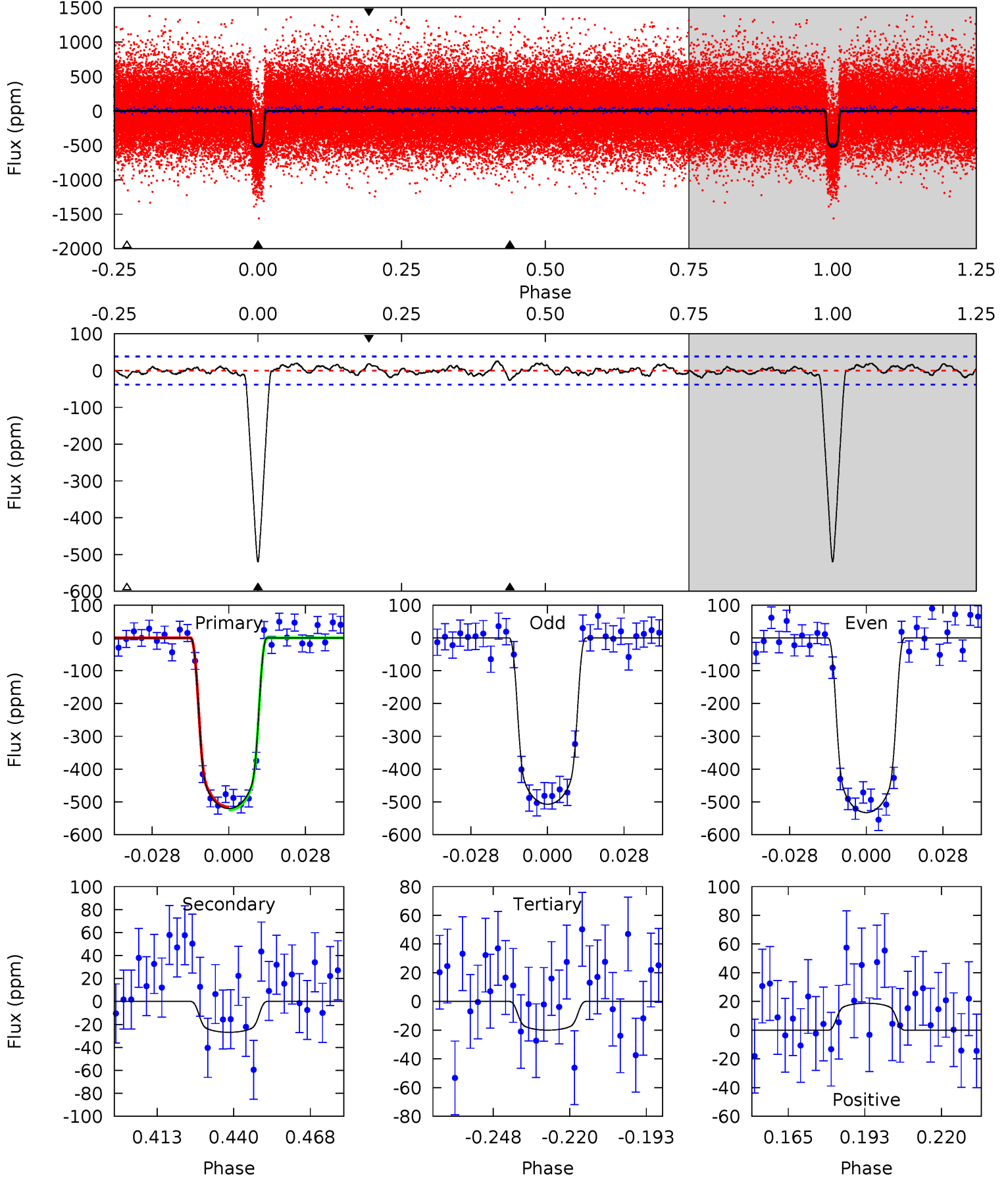
TCE 009825625-01 P= 7.039072 Days $T_0=133.491055$ (BKJD)



DV Model-Shift Uniqueness Test

009825625-01, P = 7.039001 Days, E = 126.458960 Days

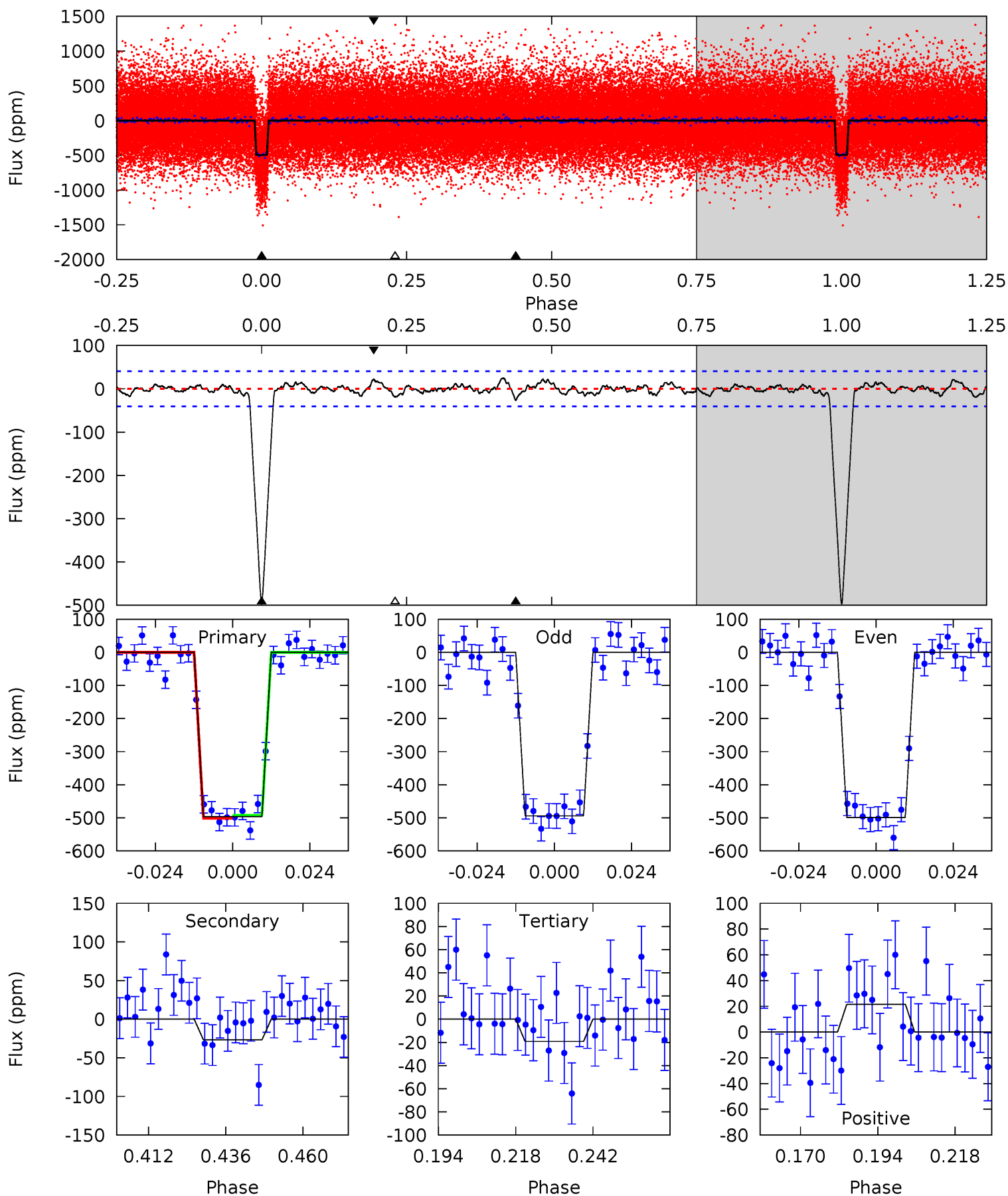
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
65.8	3.40	2.53	2.37	4.83	2.20	1.10	63.2	63.4	0.87	1.02	1.61	0.98	0.05	0.55



Alt Model-Shift Uniqueness Test

009825625-01, P = 7.039072 Days, E = 126.451983 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
59.5	3.20	2.30	2.59	4.85	2.25	0.97	57.2	56.9	0.90	0.61	0.30	0.98	0.05	0.52



Stellar Parameters For KIC 009825625

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6321^{+169}_{-206}	$4.434^{+0.054}_{-0.216}$	$-0.160^{+0.250}_{-0.300}$	$1.058^{+0.349}_{-0.116}$	$1.108^{+0.154}_{-0.139}$	$1.317^{+0.380}_{-0.702}$
	+3%/-3%	+1%/-5%	+156%/-188%	+33%/-11%	+14%/-13%	+29%/-53%
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 009825625-01 / KOI 0955.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-27 ± 8	$2.94^{+0.52}_{-0.28}$	1501^{+115}_{-73}	3385^{+183}_{-188}	$8.932^{+3.649}_{-3.343}$
Alt.	-27 ± 8	$2.65^{+0.47}_{-0.23}$	1498^{+114}_{-77}	3492^{+187}_{-219}	11^{+5}_{-4}

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

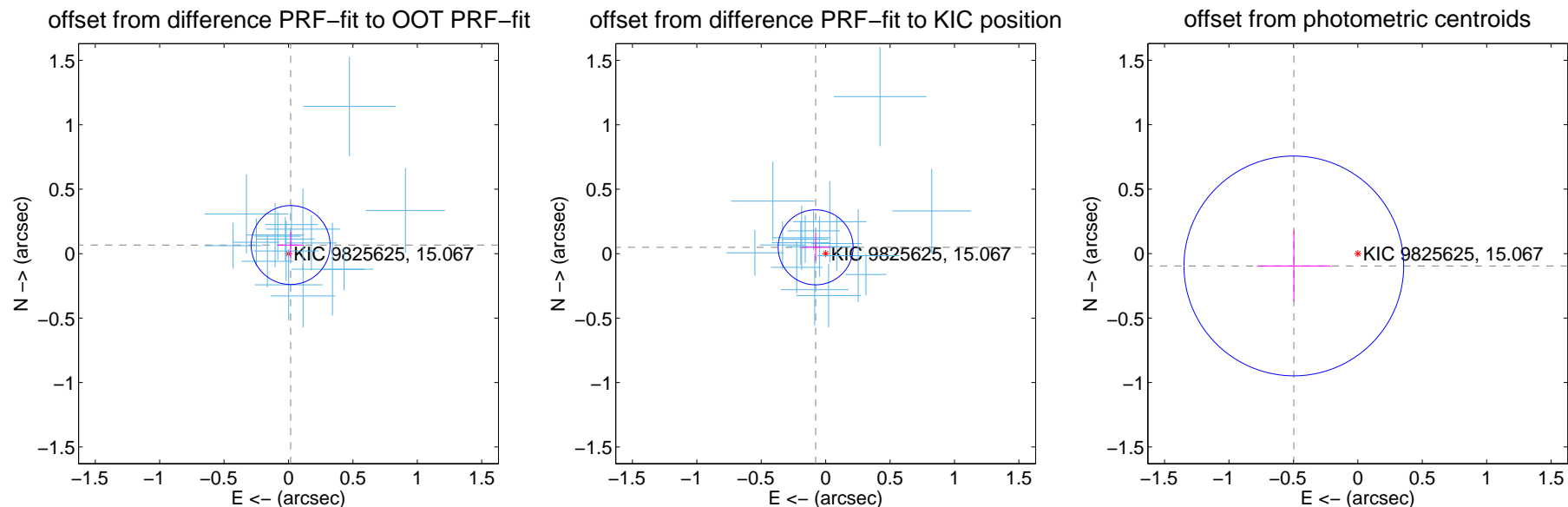
DV Centroid Data

Supplemental centroid analysis for 009825625-01. Kepler magnitude: 15.07. Transit SNR 51.38

There are 17 quarters with good PRF difference image offsets

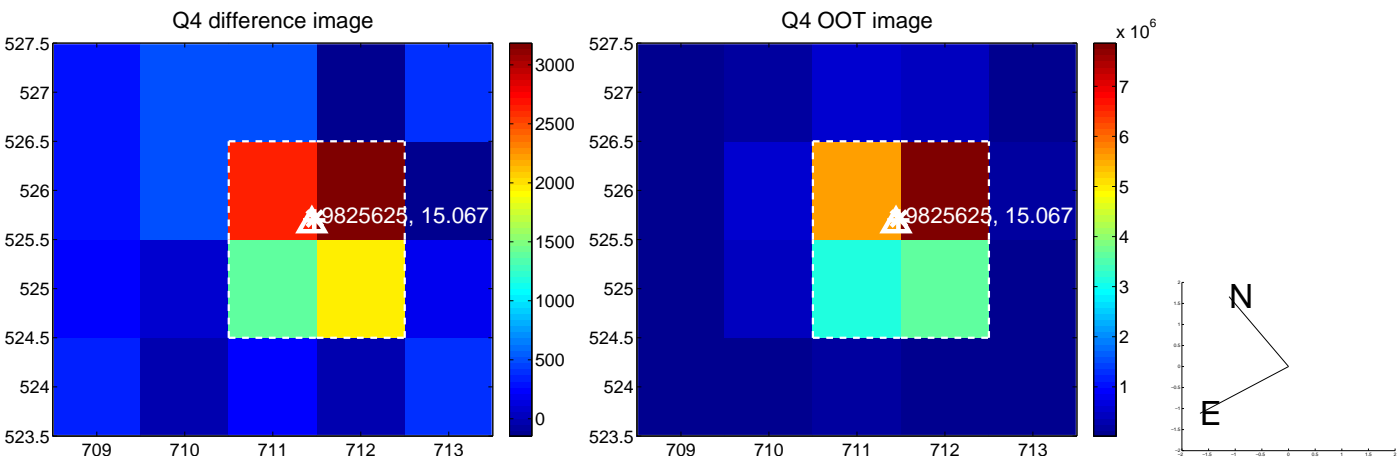
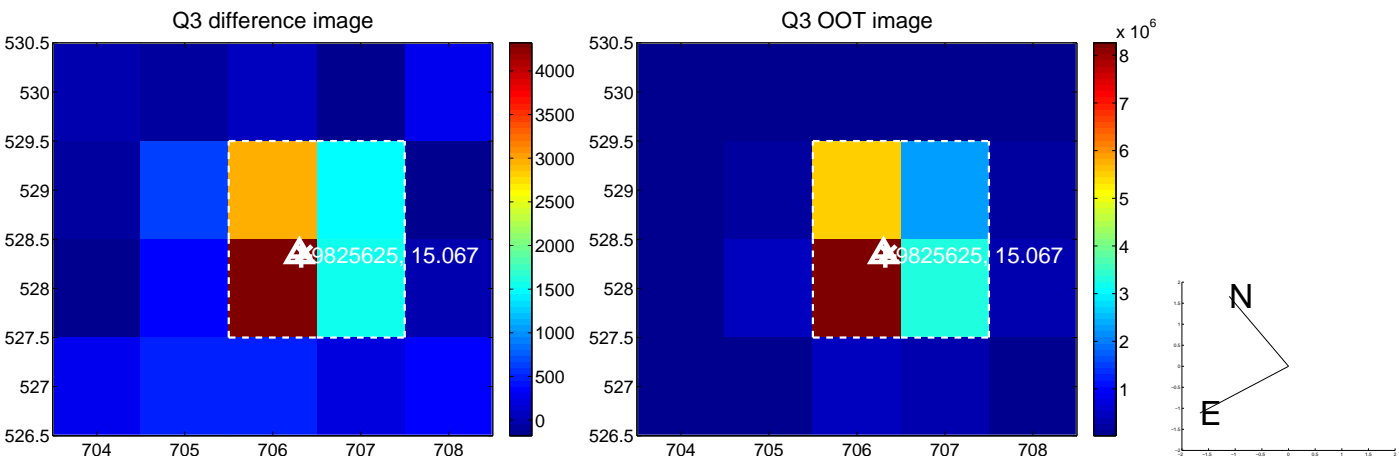
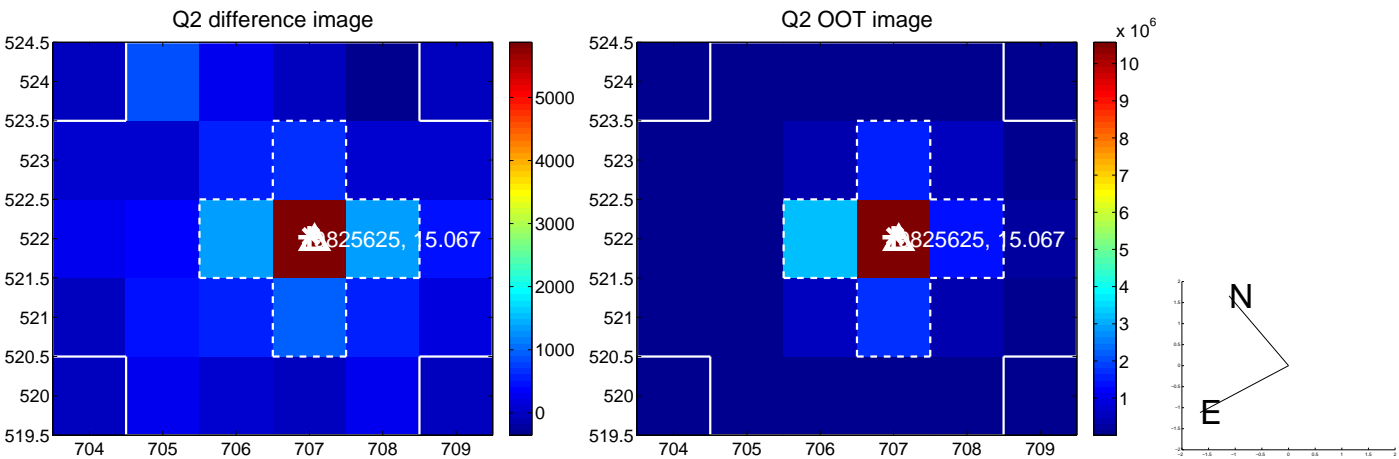
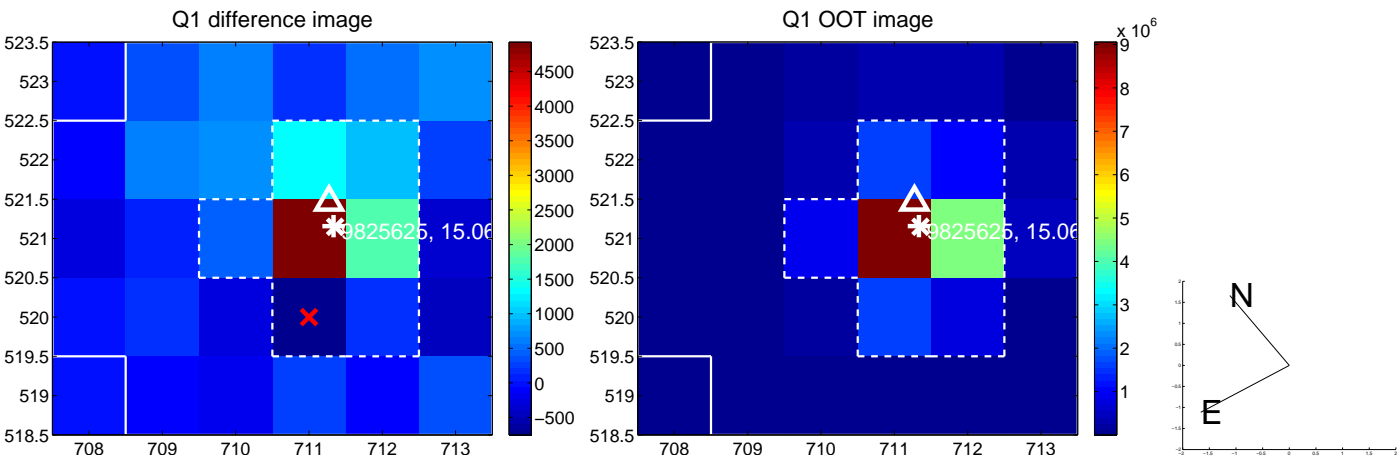
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.069 ± 0.102	0.68	-0.017 ± 0.101	0.067 ± 0.099
PRF-fit source offset from KIC position	0.092 ± 0.097	0.95	0.078 ± 0.109	0.049 ± 0.103
photometric centroid source offset	0.51 ± 0.28	1.78	0.50 ± 0.28	-0.10 ± 0.28

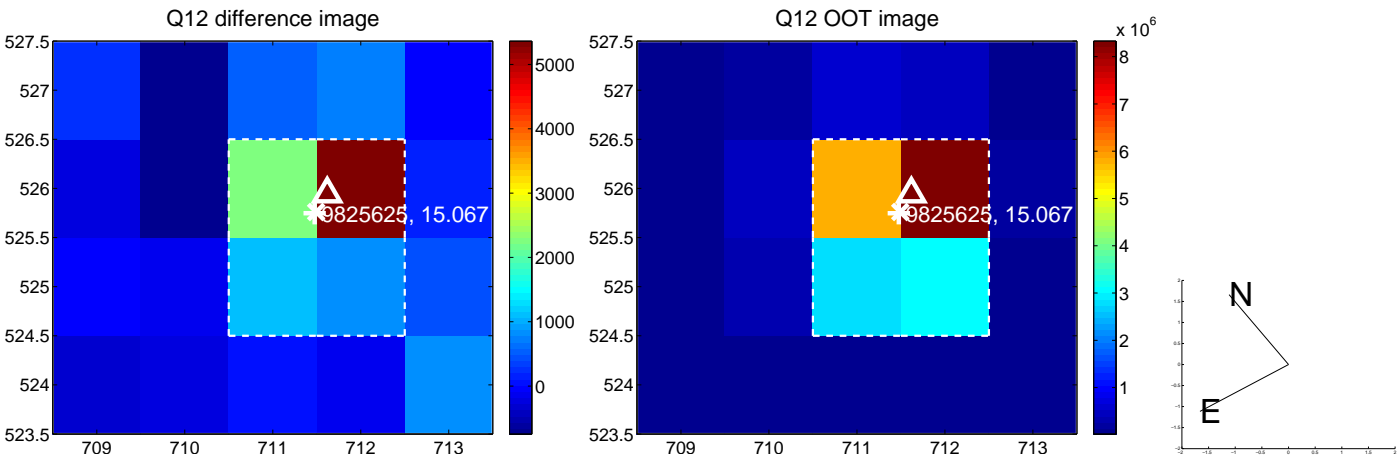
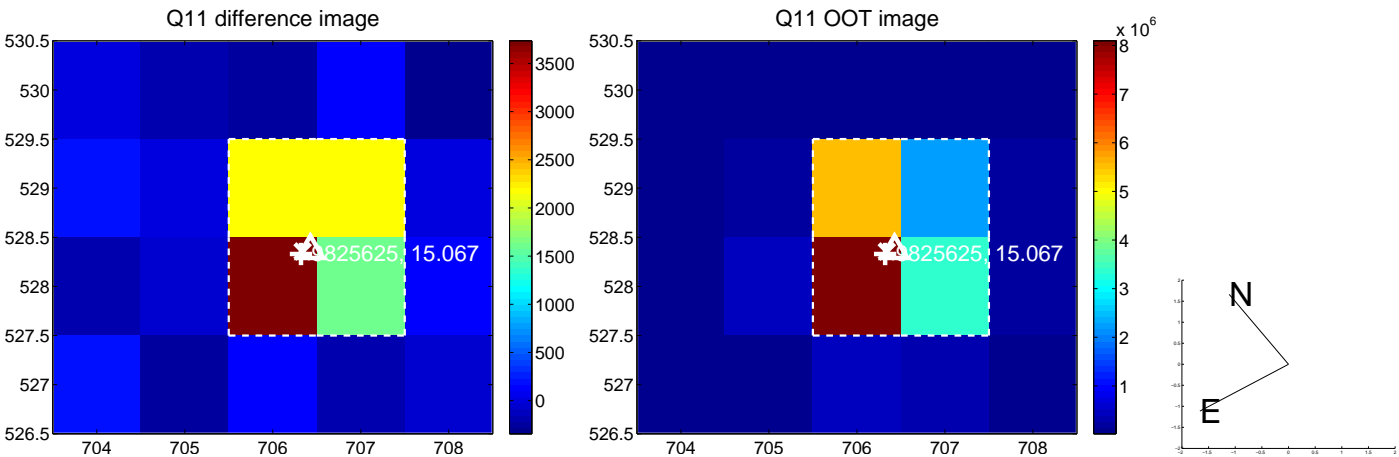
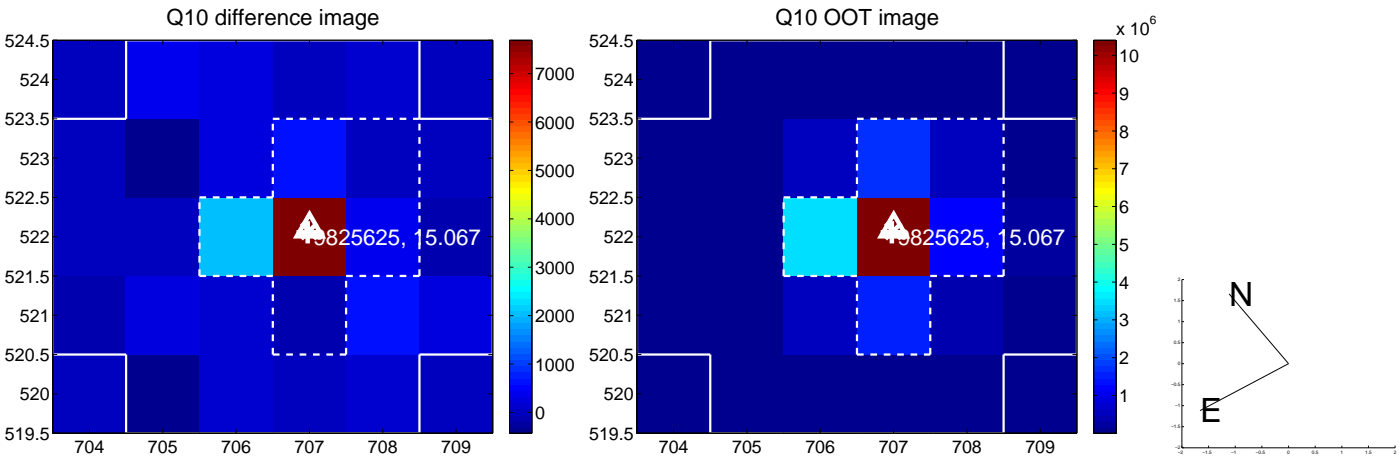
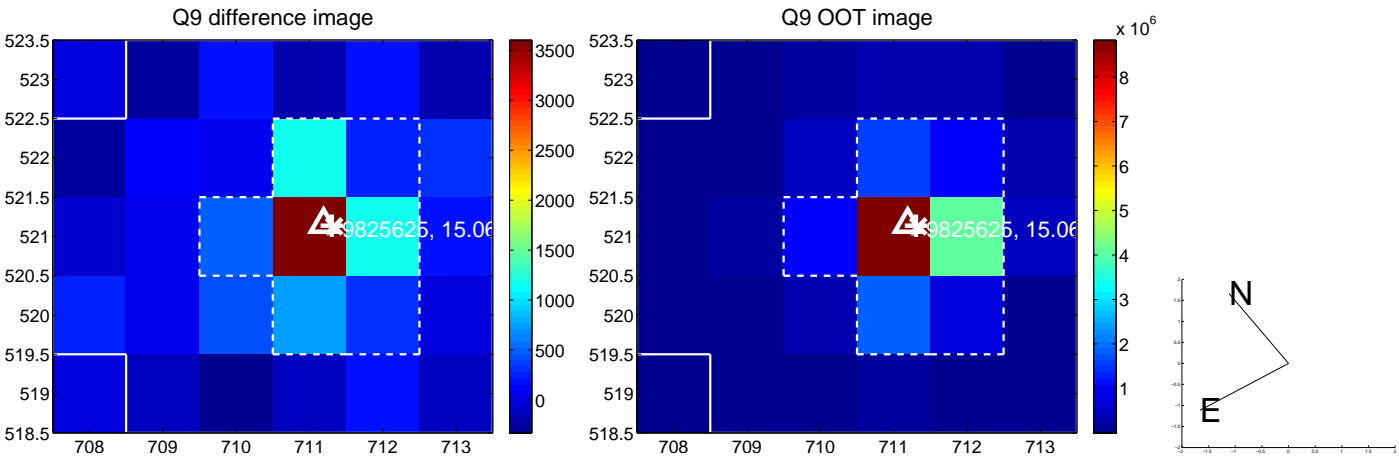


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

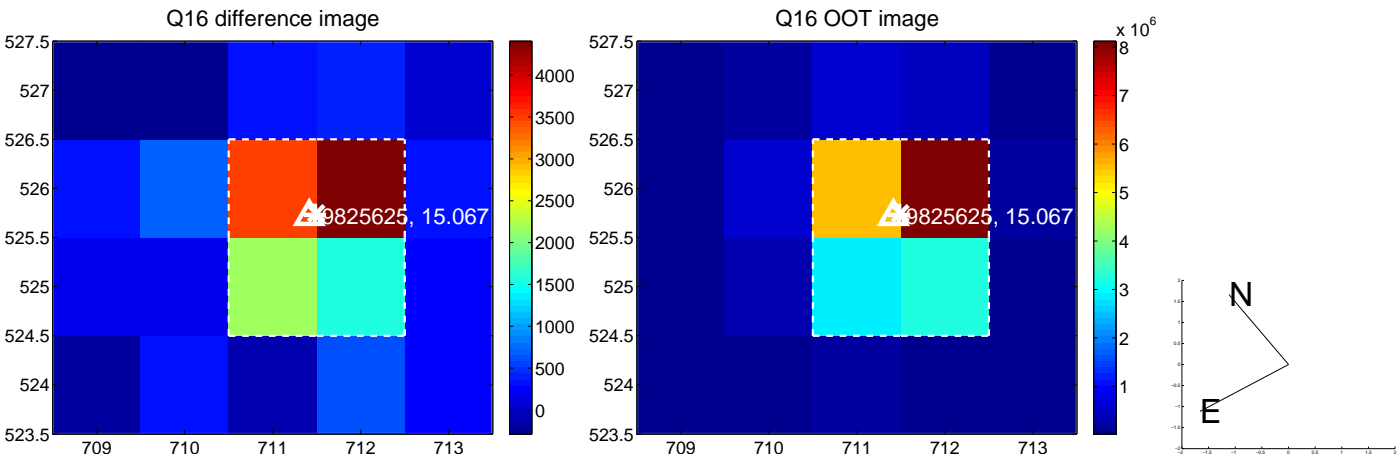
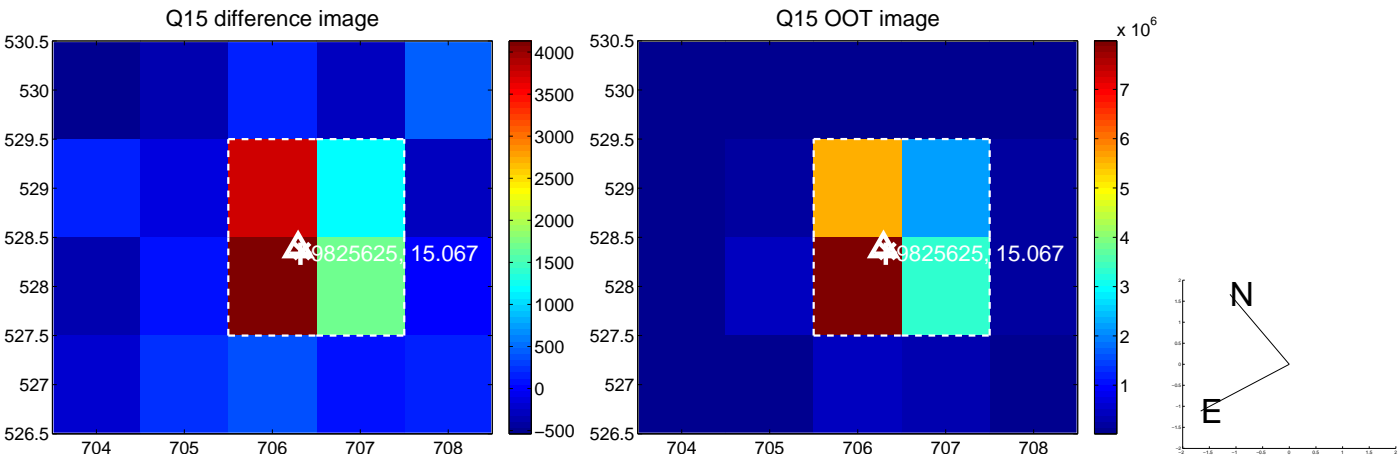
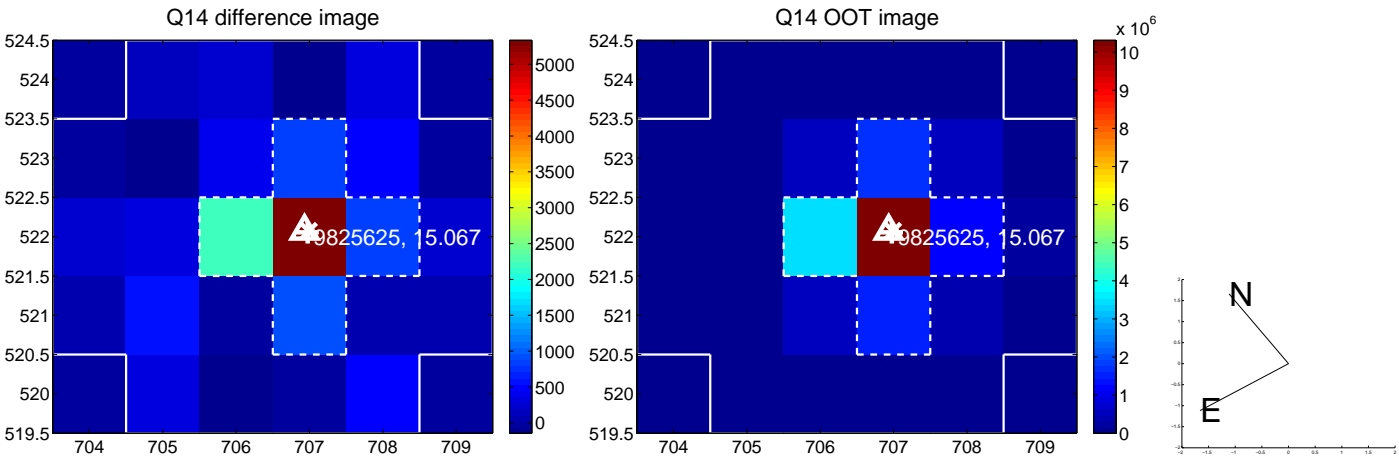
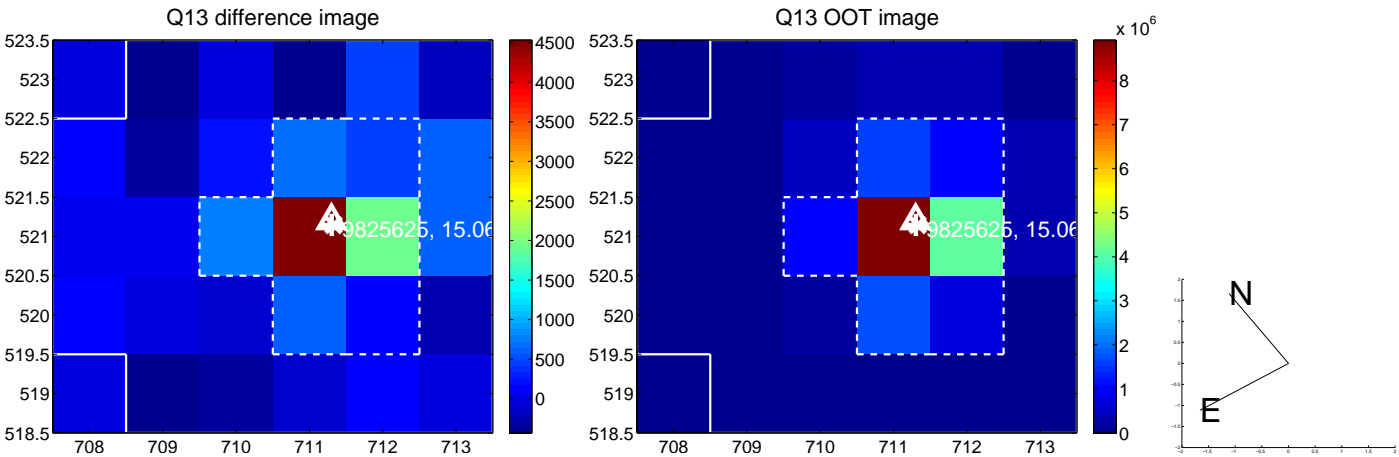
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



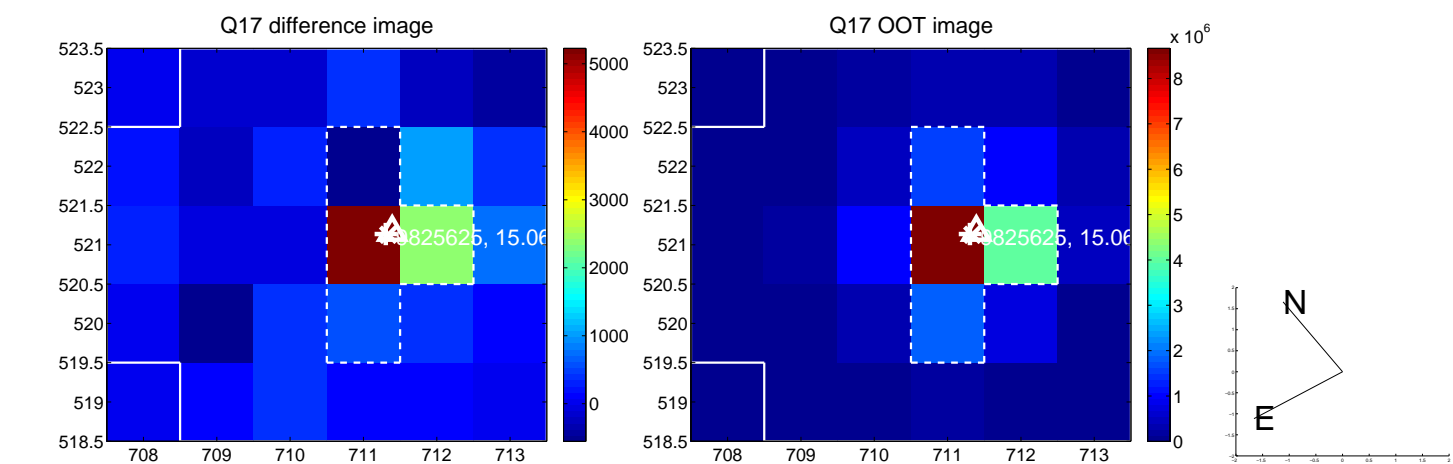
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



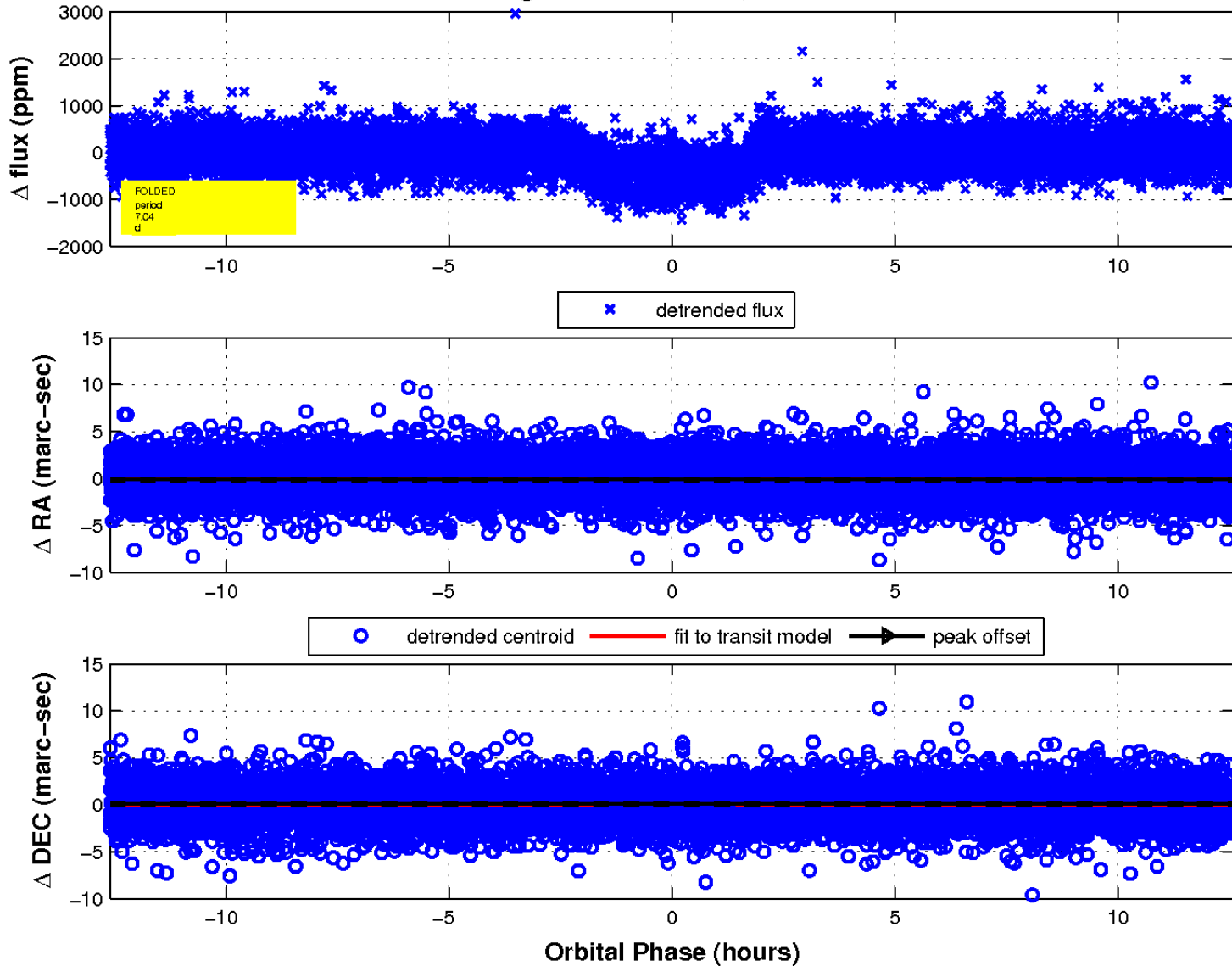
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

