

KIC 010854555

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})
010854555-01	OBS	0755.01	2.525622	133.702506	578.3	1.625	33.2	37.3	1.05	6031	2.69	926.79

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010854555-01	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.

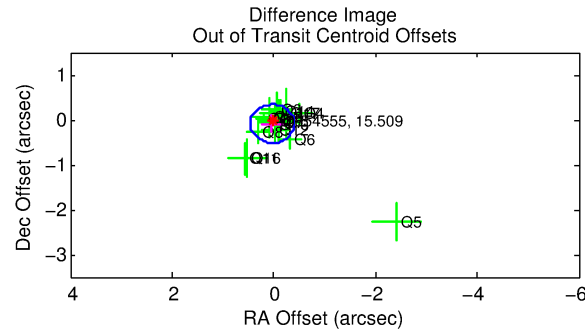
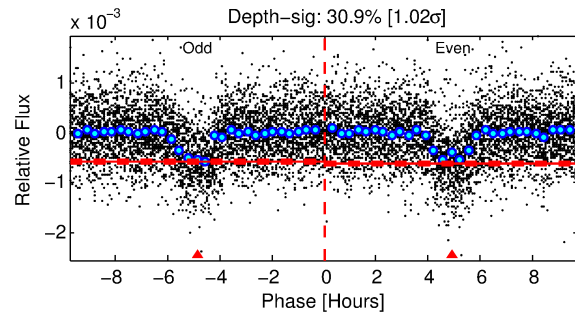
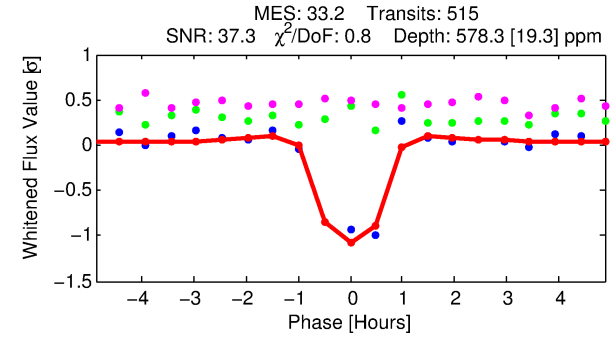
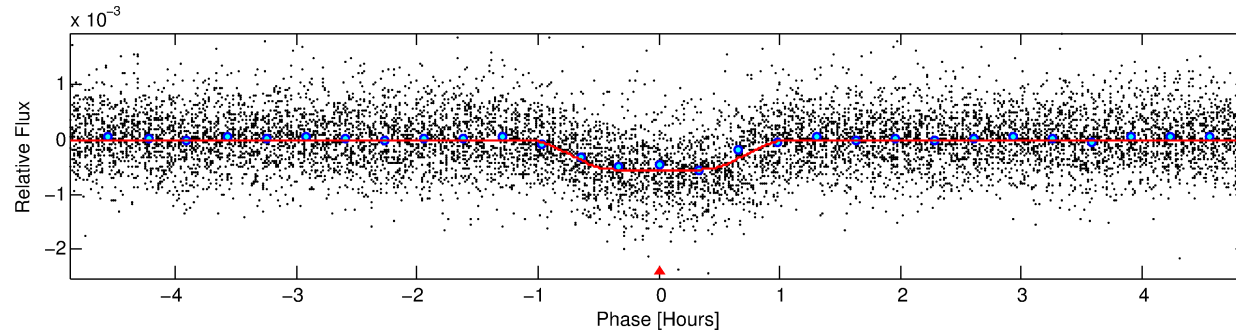
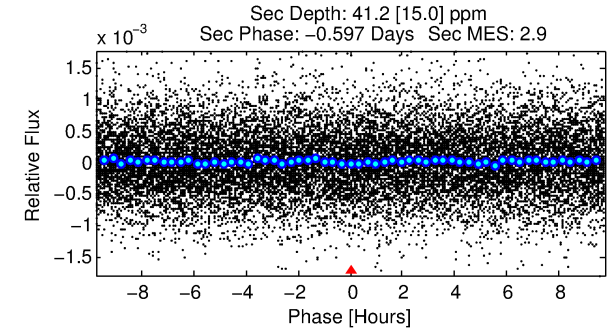
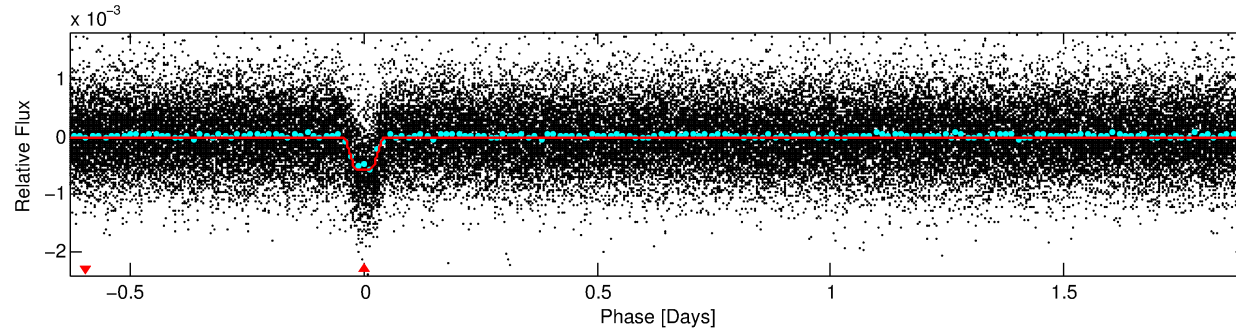
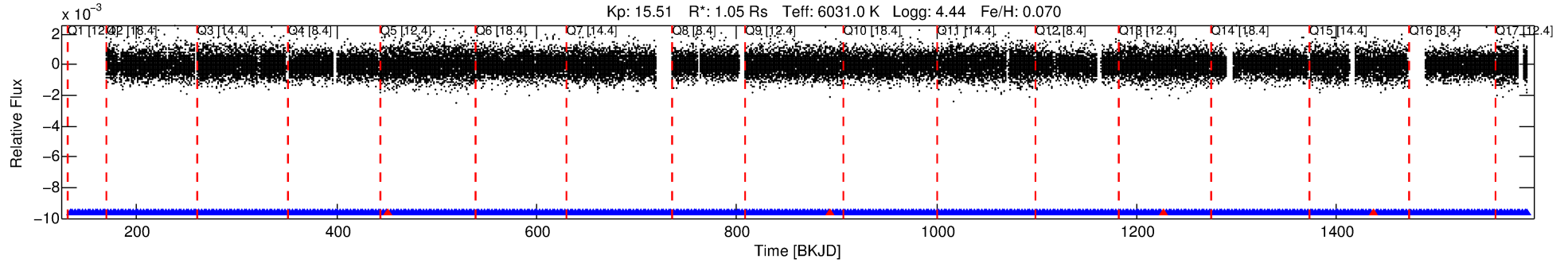
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010854555-01

No Significant Match Found

DV One-Page Summary

KIC: 10854555 Candidate: 1 of 1 Period: 2.526 d
KOI: K00755.01 Corr: 0.938



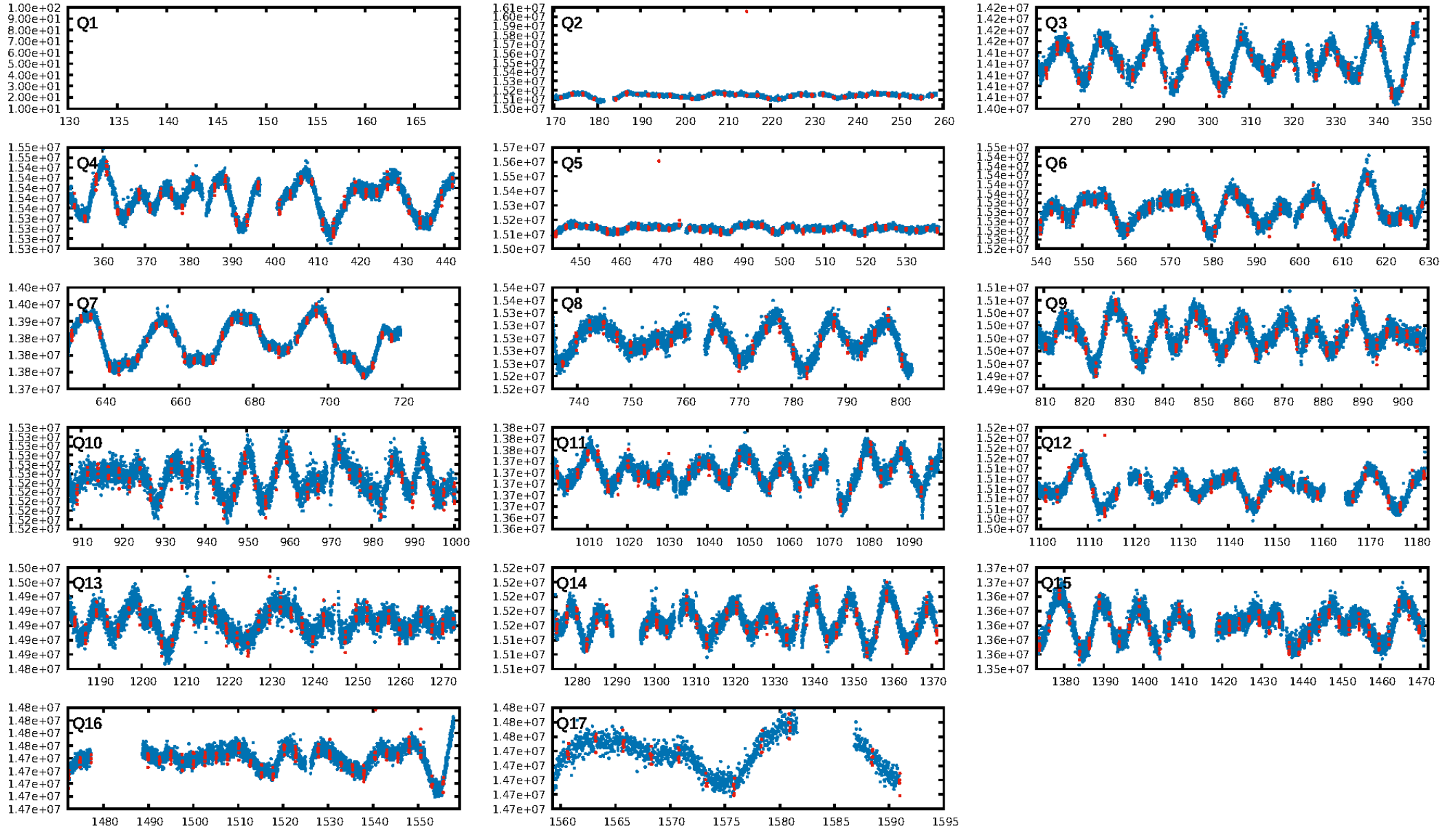
DV Fit Results:

Period = 2.52562 [0.00000] d
Epoch = 133.7025 [0.0007] BKJD
Rp/R* = 0.0236 [0.0091]
a/R* = 9.01 [16.11]
b = 0.69 [1.39]
Seff = 926.79 [380.79]
Teq = 1407 [145] K
Rp = 2.69 [1.35] Re
a = 0.0374 [0.0100] AU
Ag = 4.38 [4.12] [0.82σ]
Teffp = 3147 [684] K [2.49σ]

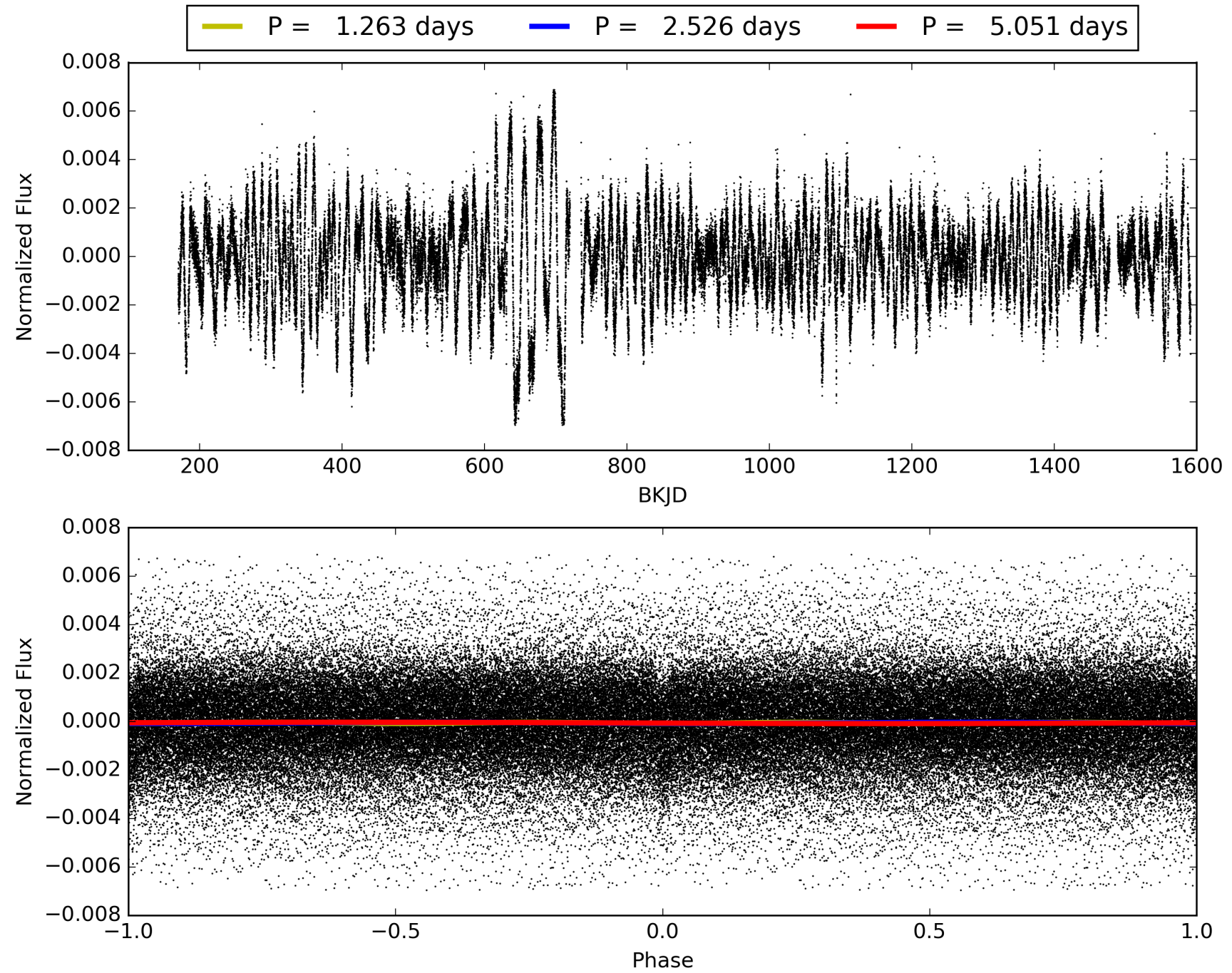
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 8.30e-230
RollingBand-fgt: 0.99 [500/504]
GhostDiagnostic-chr: 11.73
Centroid-sig: 73.3%
Centroid-so: 0.227 arcsec [0.62σ]
OotOffset-rm: 0.096 arcsec [0.67σ]
KicOffset-rm: 0.069 arcsec [0.35σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 1.00 [16/16]
DiffImageOverlap-fno: 1.00 [16/16]

TCE 010854555-01, PDC Light Curves

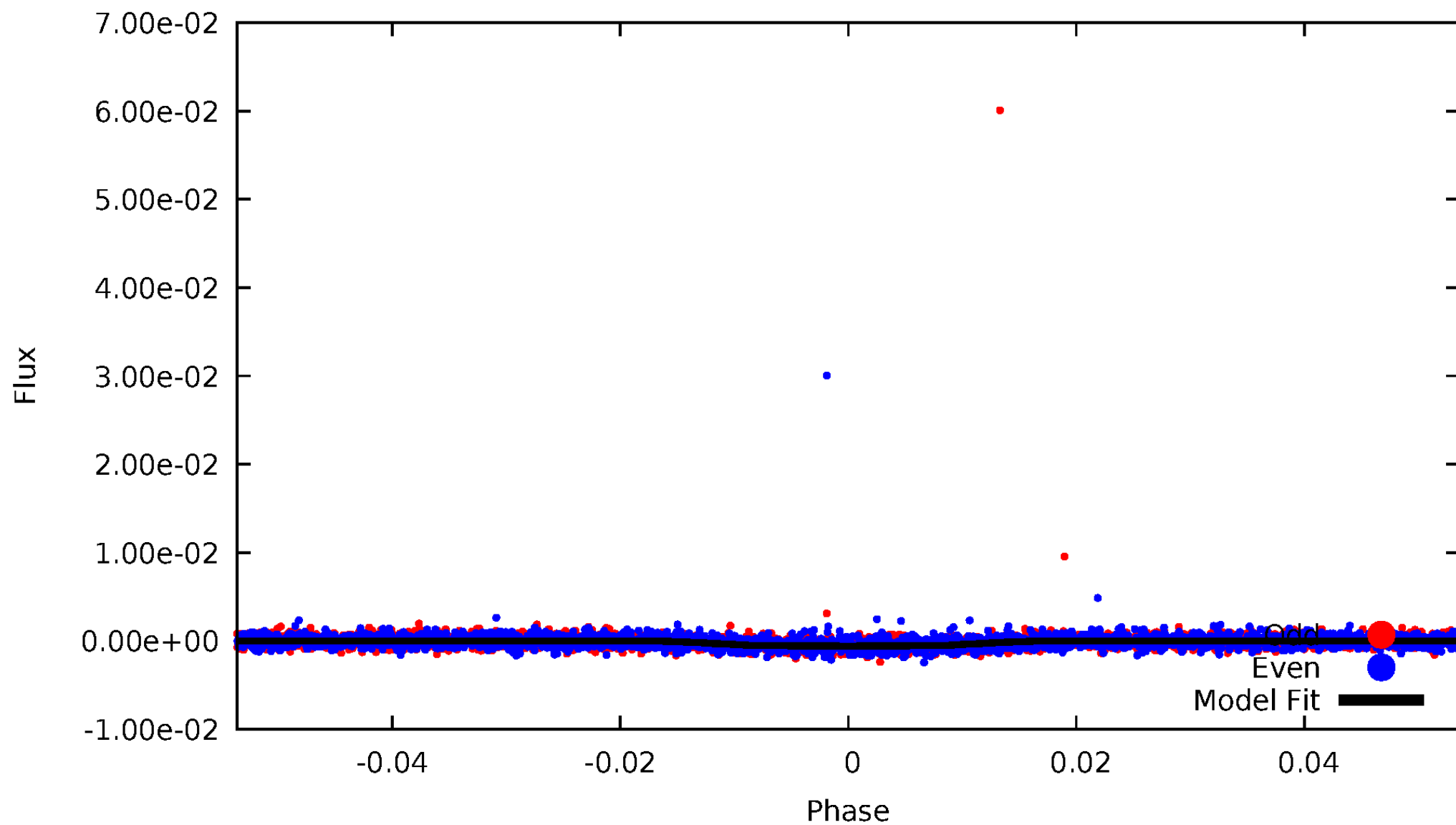


TCE 010854555-01



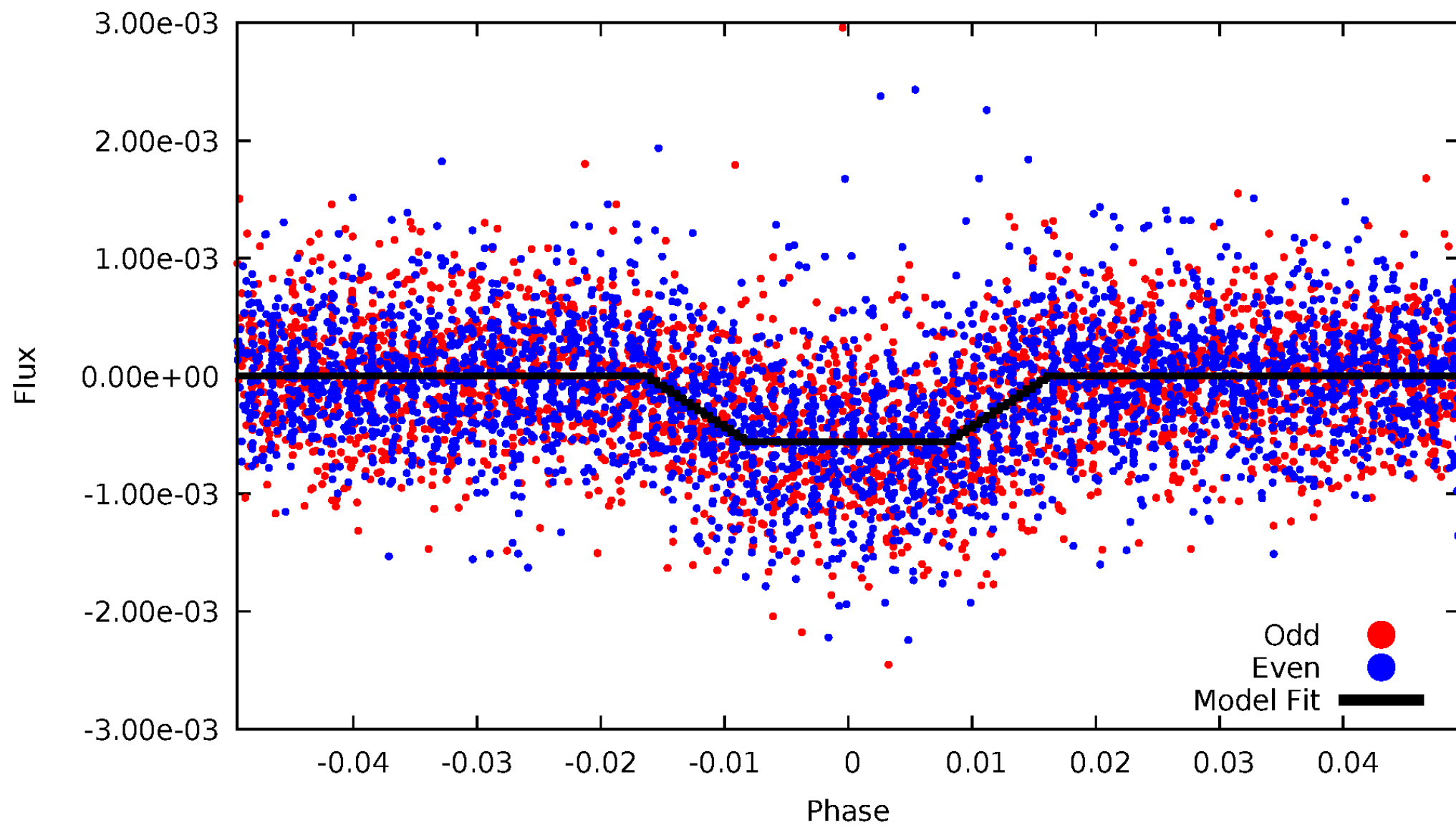
DV Odd/Even

TCE 010854555-01

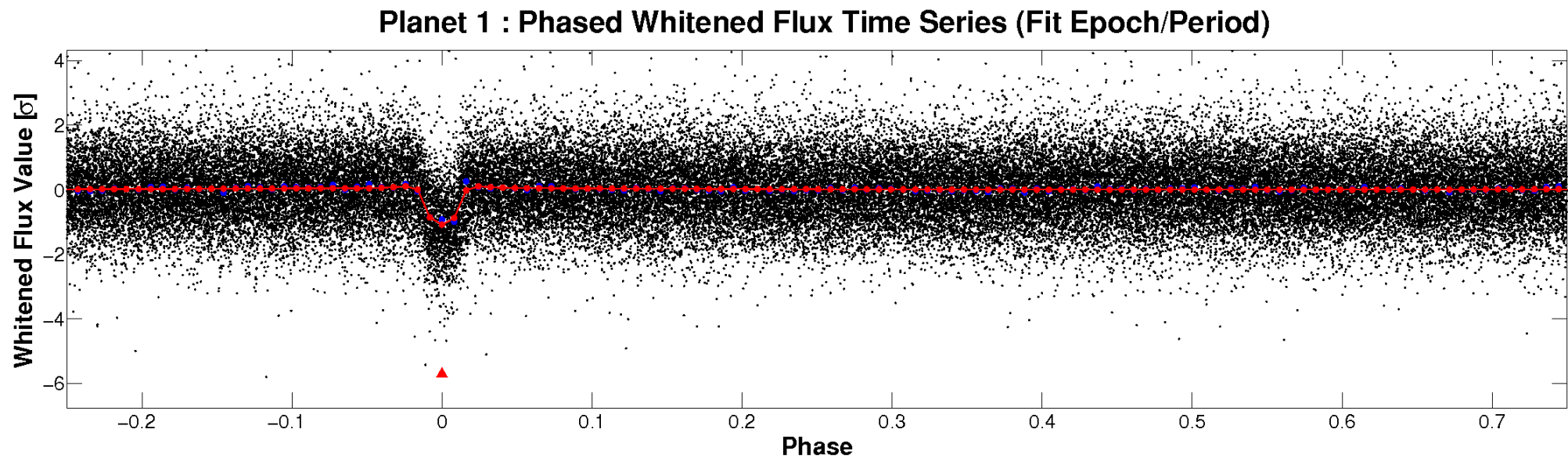
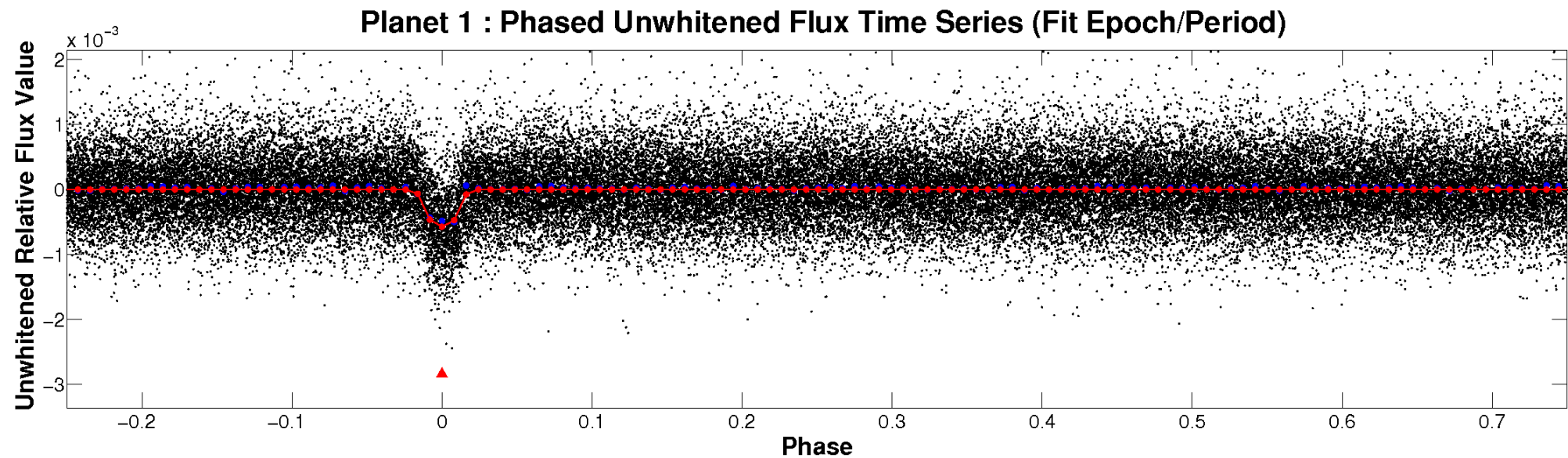


ALT Odd/Even

TCE 010854555-01

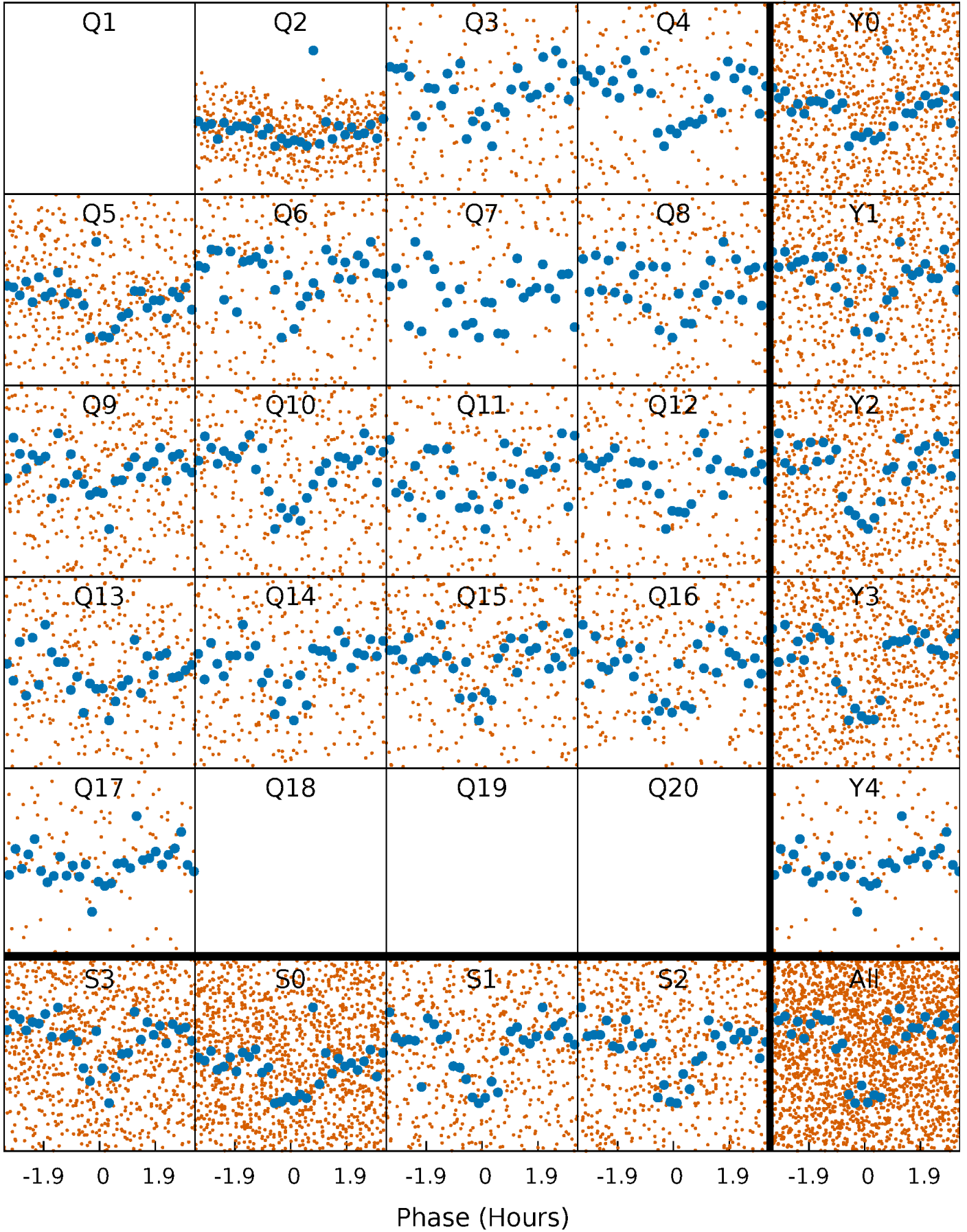


Non-Whitened Vs. Whitened Light Curve



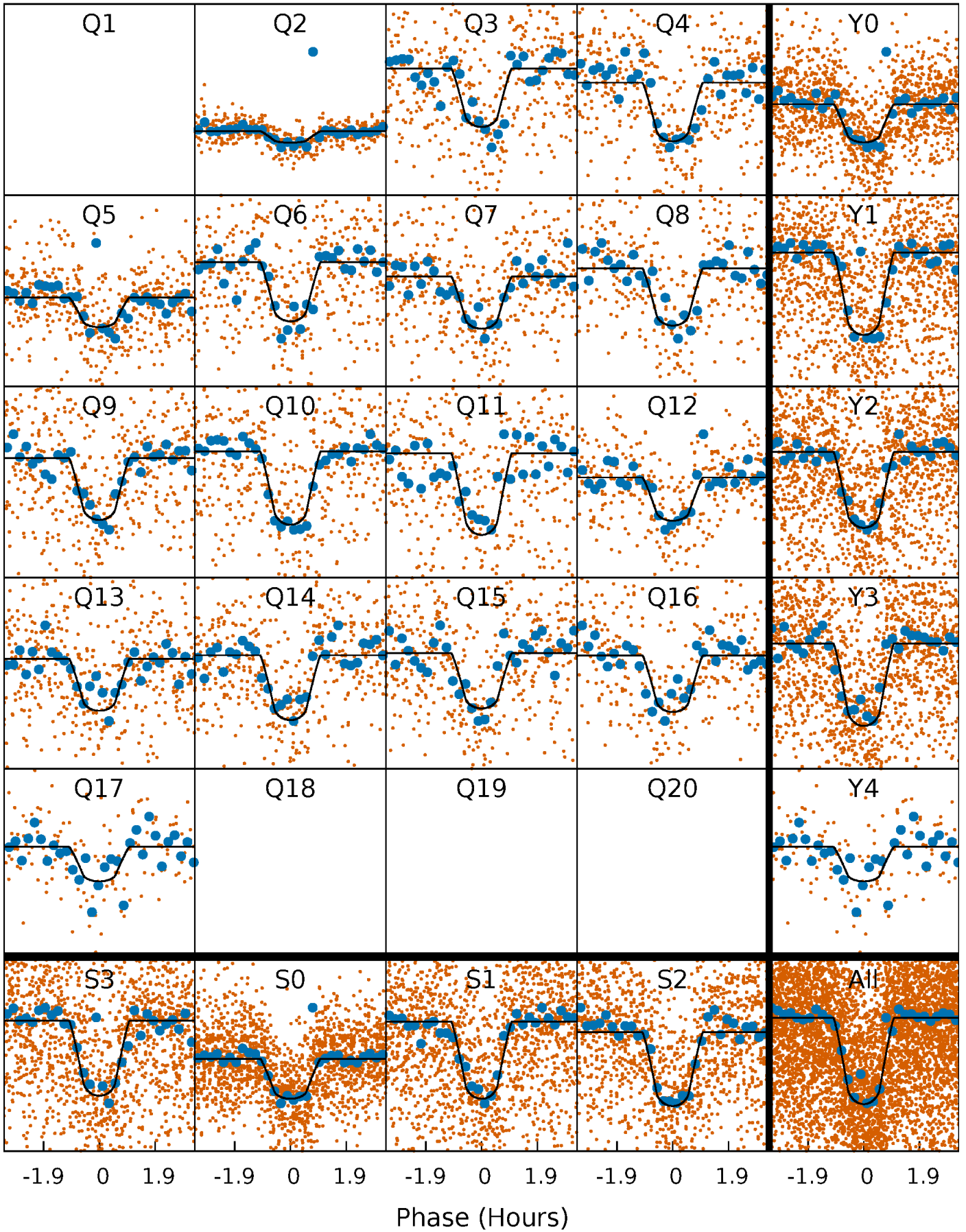
PDC Quarter-Phased Transit Curves

TCE 010854555-01 P= 2.525622 Days $T_0=133.702506$ (BKJD)



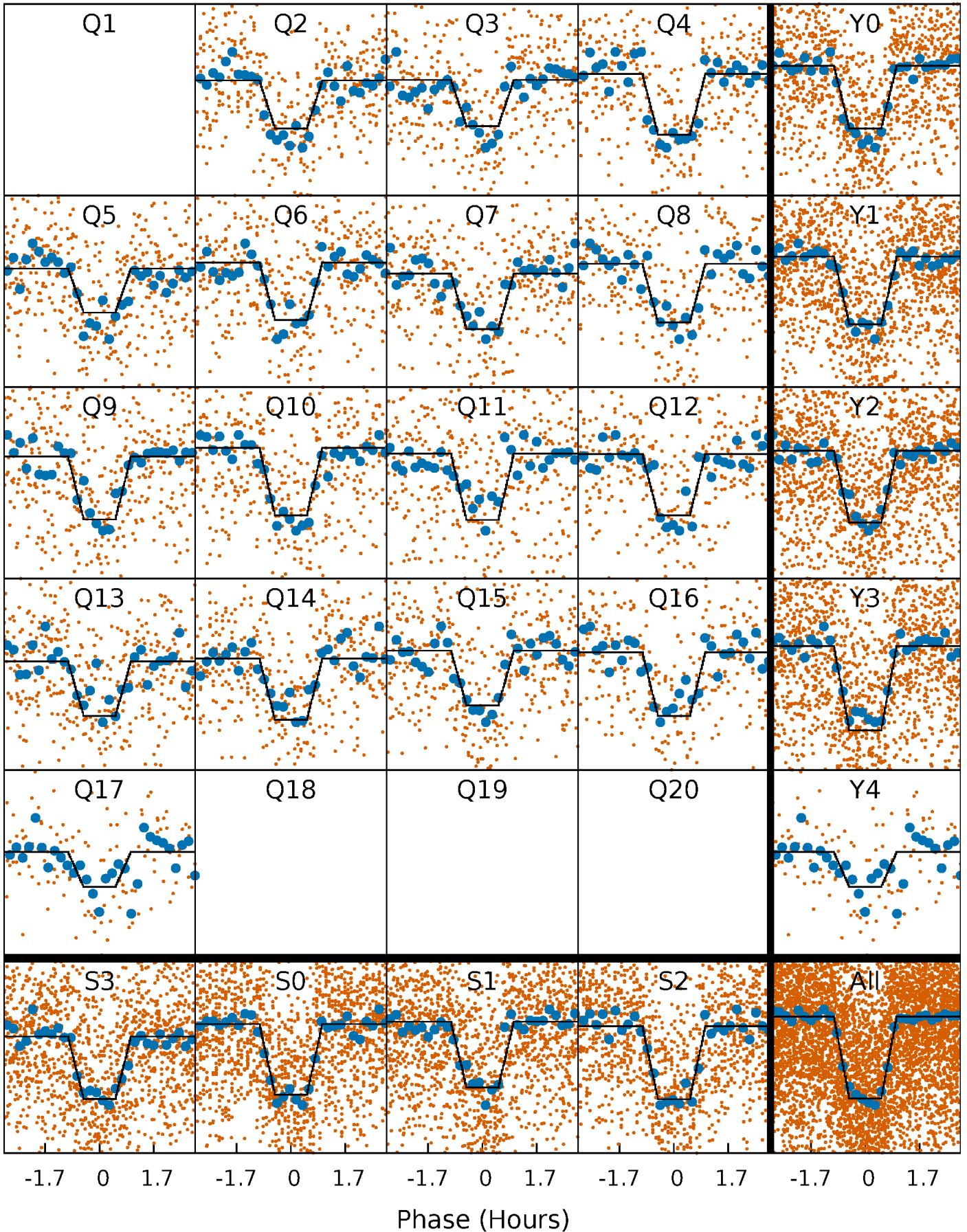
DV Quarter-Phased Transit Curves

TCE 010854555-01 P= 2.525622 Days $T_0=133.702506$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

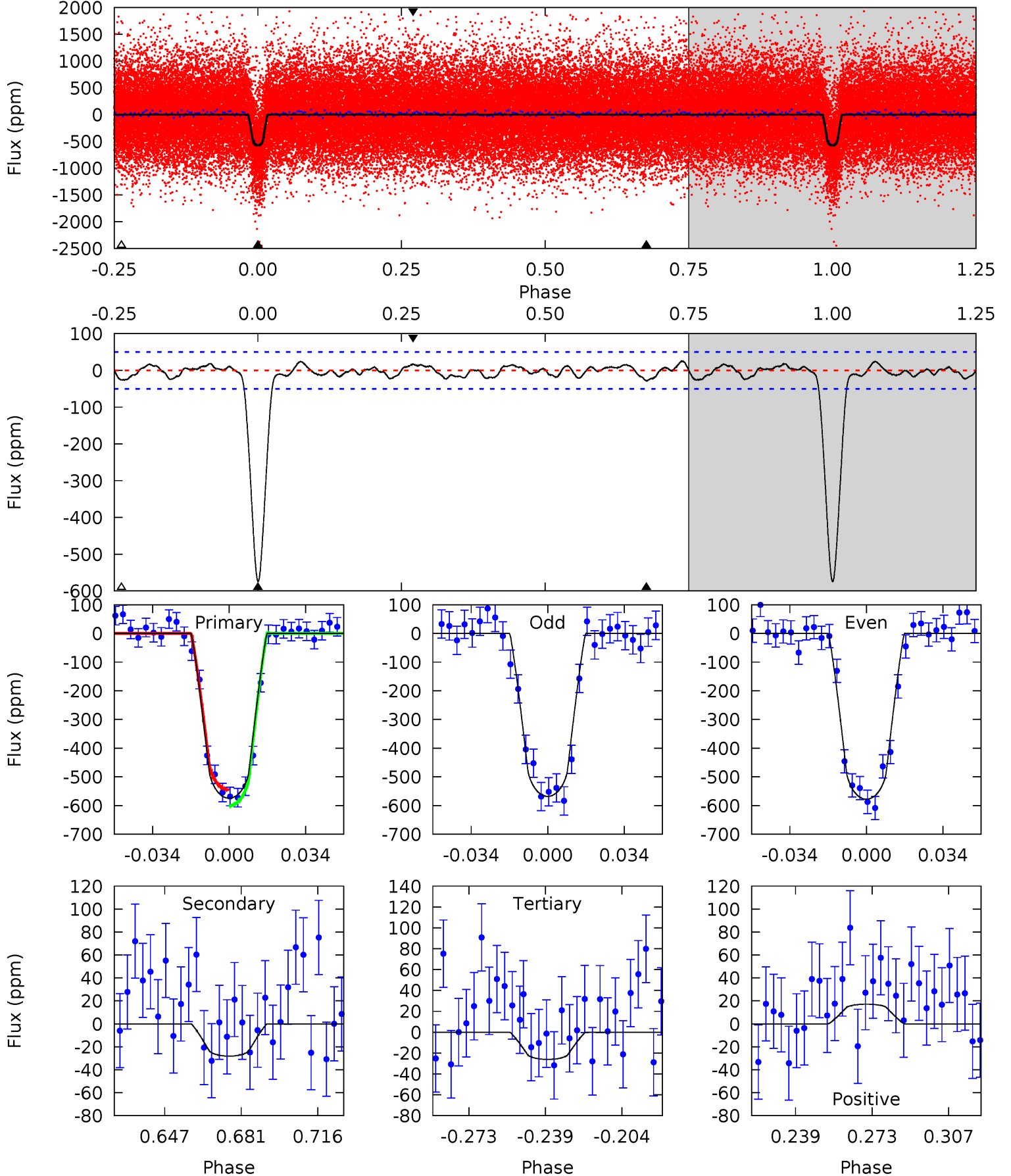
TCE 010854555-01 P= 2.525593 Days $T_0=133.711524$ (BKJD)



DV Model-Shift Uniqueness Test

010854555-01, P = 2.525622 Days, E = 133.702506 Days

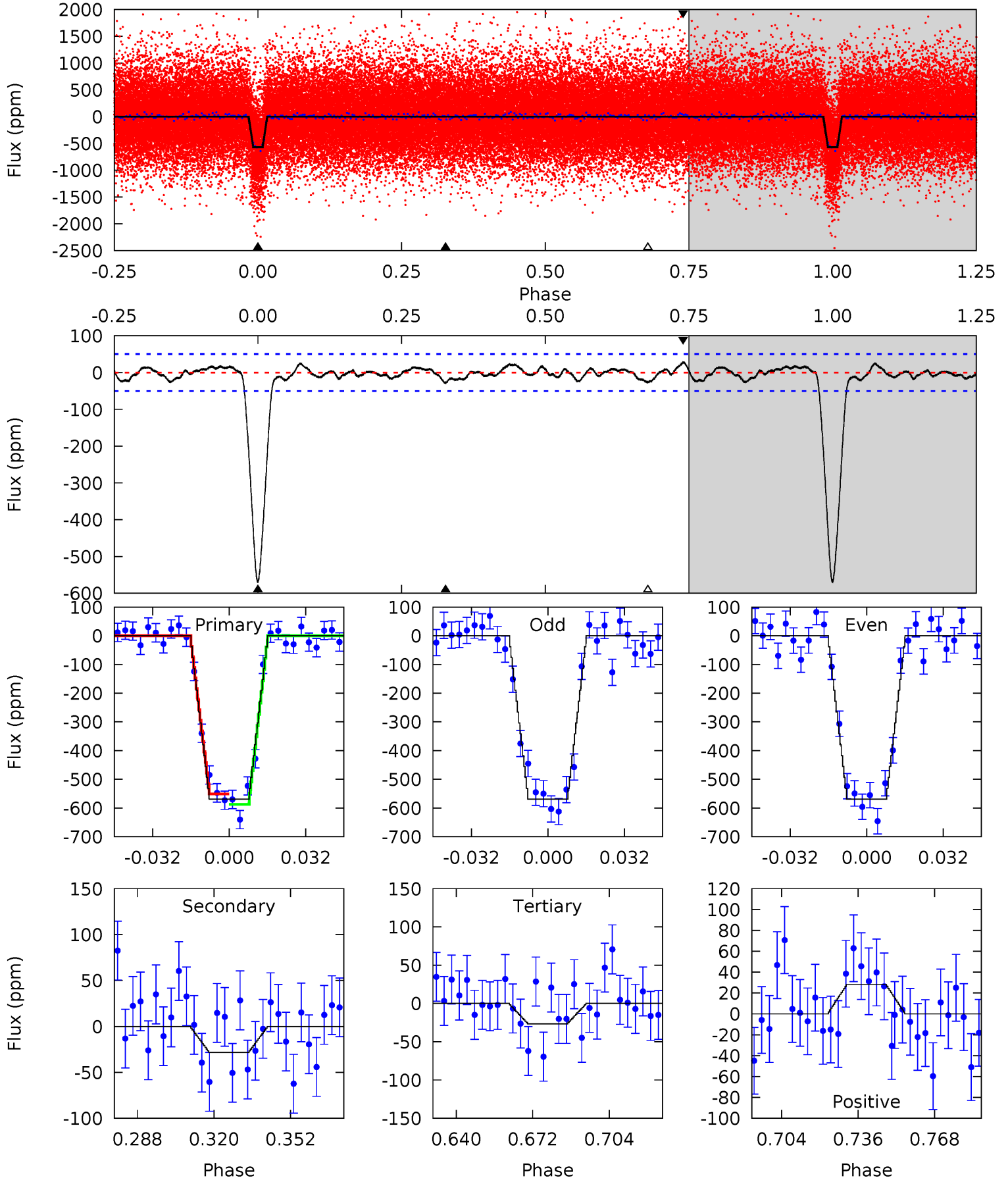
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
54.9	2.69	2.50	1.64	4.79	2.12	1.14	52.4	53.3	0.19	1.05	0.46	0.94	0.04	2.69



Alt Model-Shift Uniqueness Test

010854555-01, P = 2.525593 Days, E = 133.711524 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
54.2	2.71	2.54	2.68	4.80	2.14	1.10	51.7	51.5	0.17	0.03	0.01	0.97	0.05	1.71



Stellar Parameters For KIC 010854555

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6031^{+169}_{-211}	$4.438^{+0.070}_{-0.210}$	$0.070^{+0.250}_{-0.300}$	$1.046^{+0.334}_{-0.133}$	$1.095^{+0.151}_{-0.136}$	$1.347^{+0.404}_{-0.737}$
	+3%/-3%	+2%/-5%	+357%/-429%	+32%/-13%	+14%/-12%	+30%/-55%
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 010854555-01 / KOI 0755.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-28 ± 10	$2.74^{+1.19}_{-1.06}$	2000^{+148}_{-102}	3313^{+644}_{-461}	$2.641^{+4.602}_{-1.534}$
Alt.	-28 ± 11	$2.78^{+1.21}_{-1.12}$	2005^{+145}_{-108}	3322^{+718}_{-417}	$2.668^{+5.432}_{-1.468}$

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 $A_{obs} \gg 1.0$

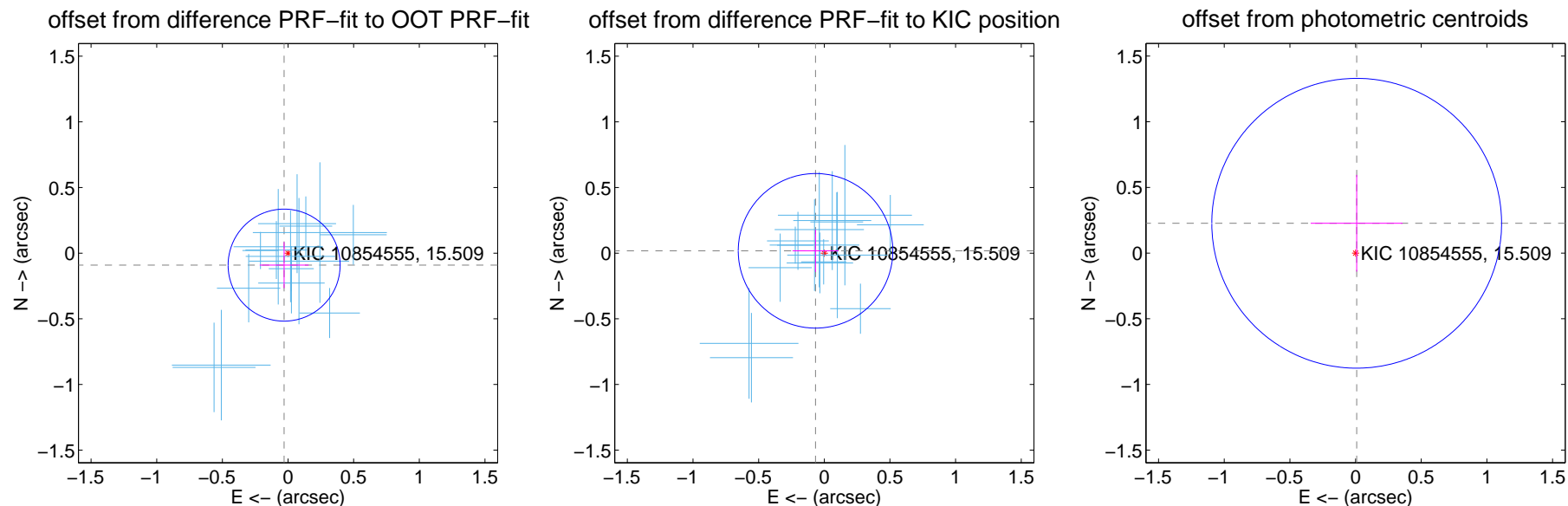
DV Centroid Data

Supplemental centroid analysis for 010854555-01. Kepler magnitude: 15.51. Transit SNR 37.31

There are 16 quarters with good PRF difference image offsets

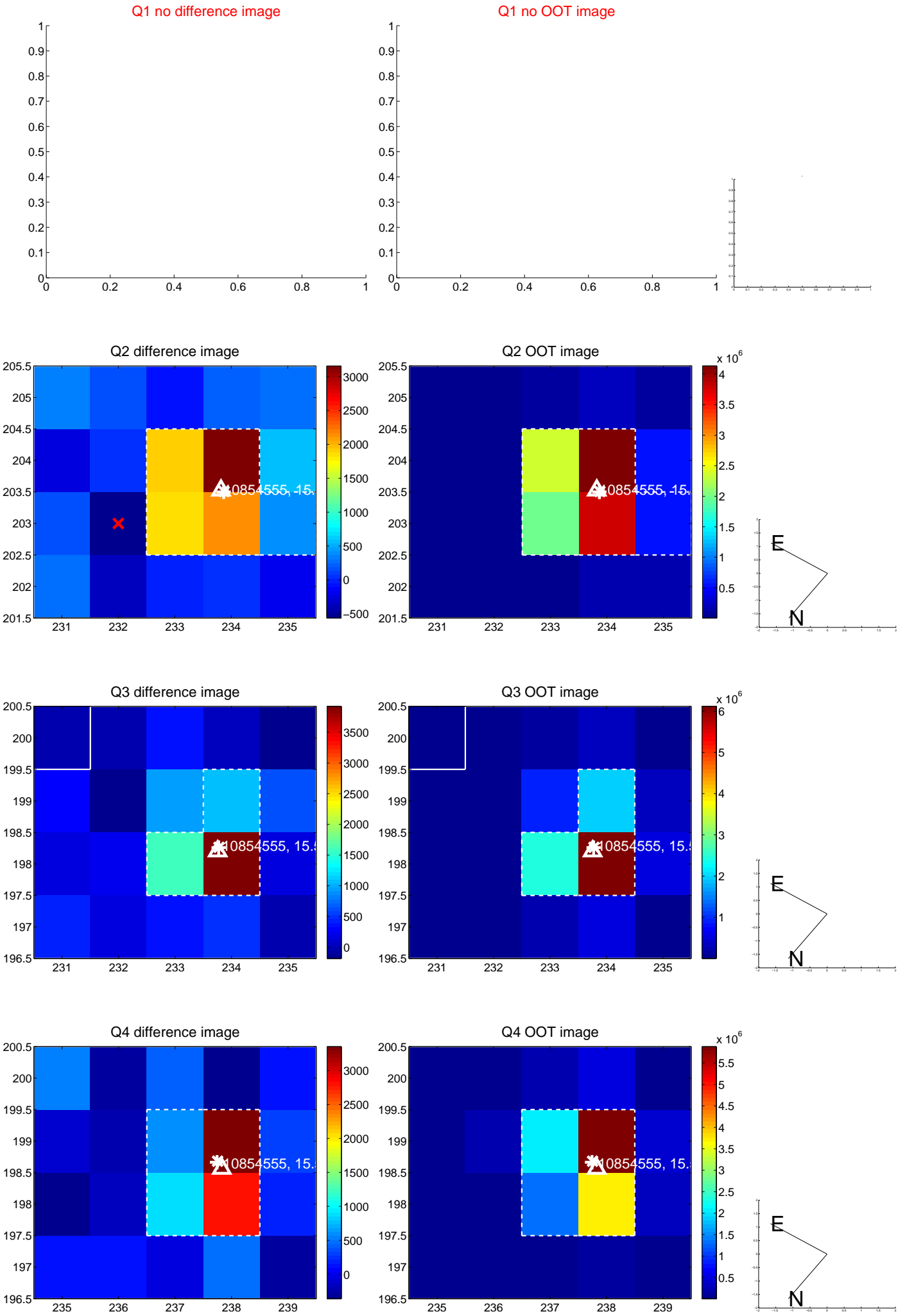
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.096 ± 0.142	0.67	0.030 ± 0.186	-0.091 ± 0.175
PRF-fit source offset from KIC position	0.069 ± 0.196	0.35	0.067 ± 0.176	0.018 ± 0.160
photometric centroid source offset	0.23 ± 0.37	0.62	-0.01 ± 0.35	0.23 ± 0.37

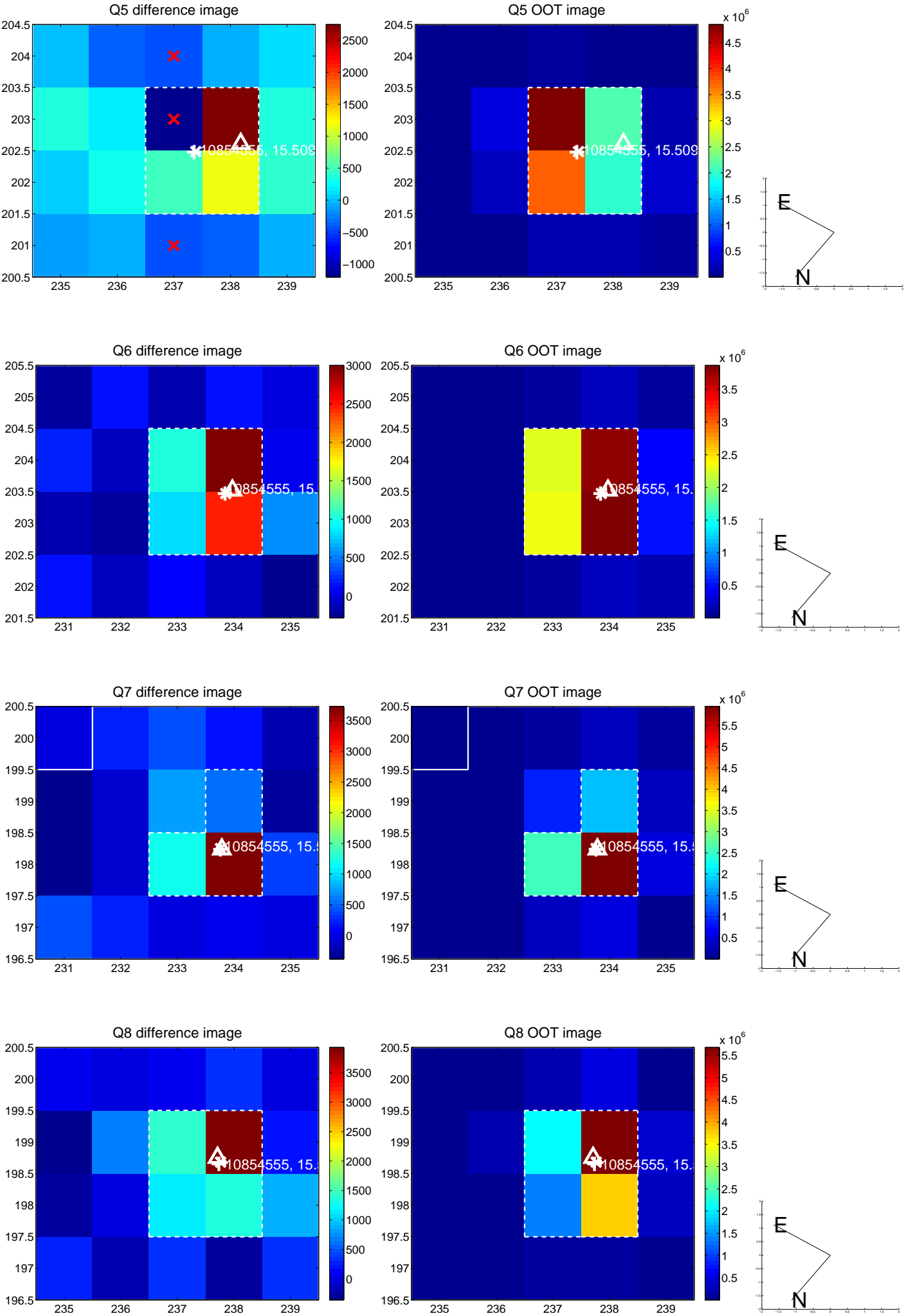


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

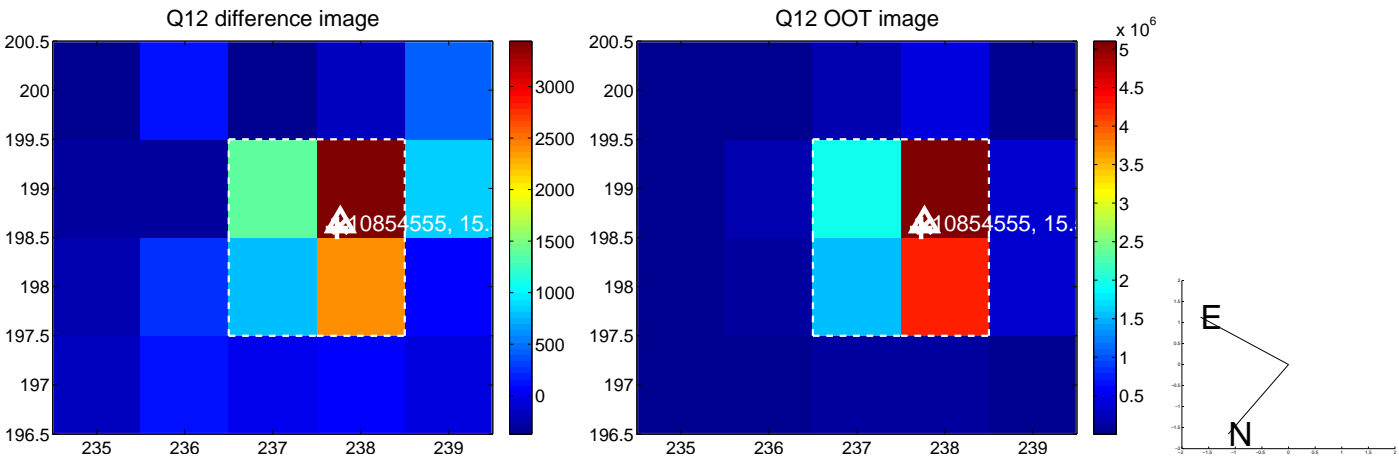
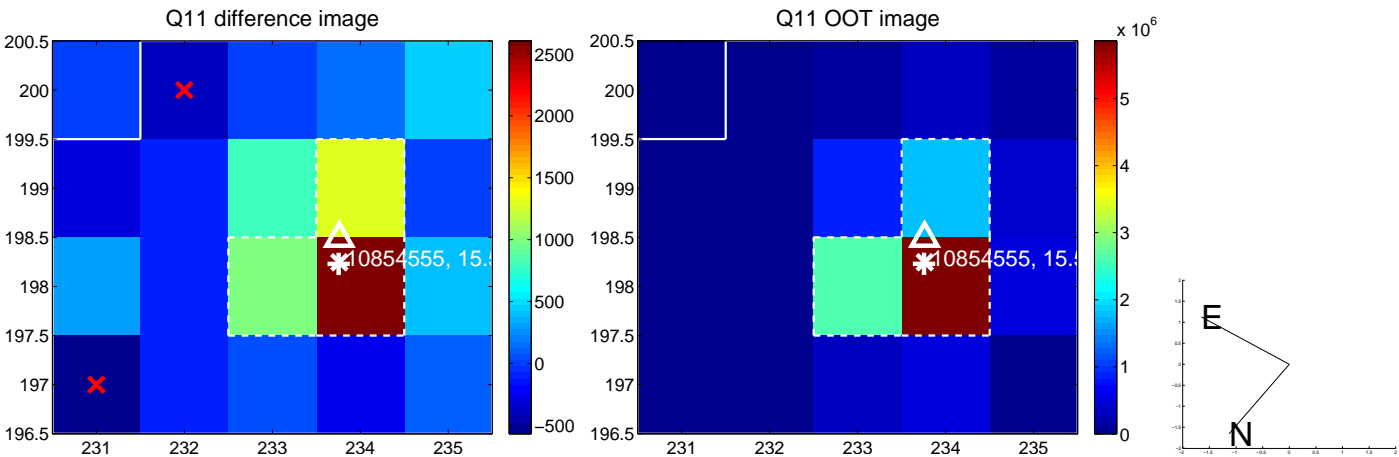
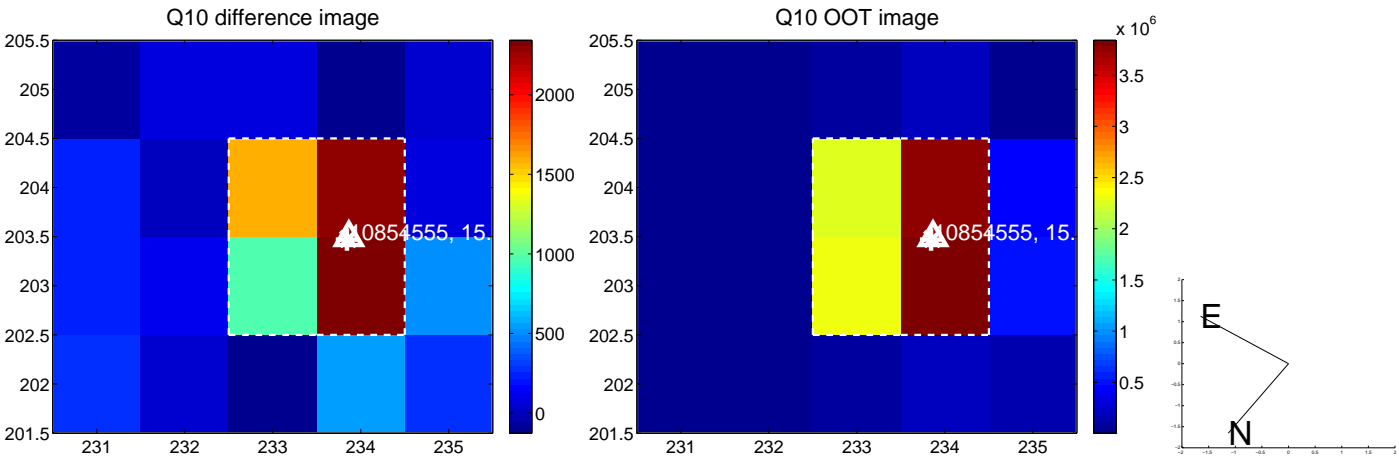
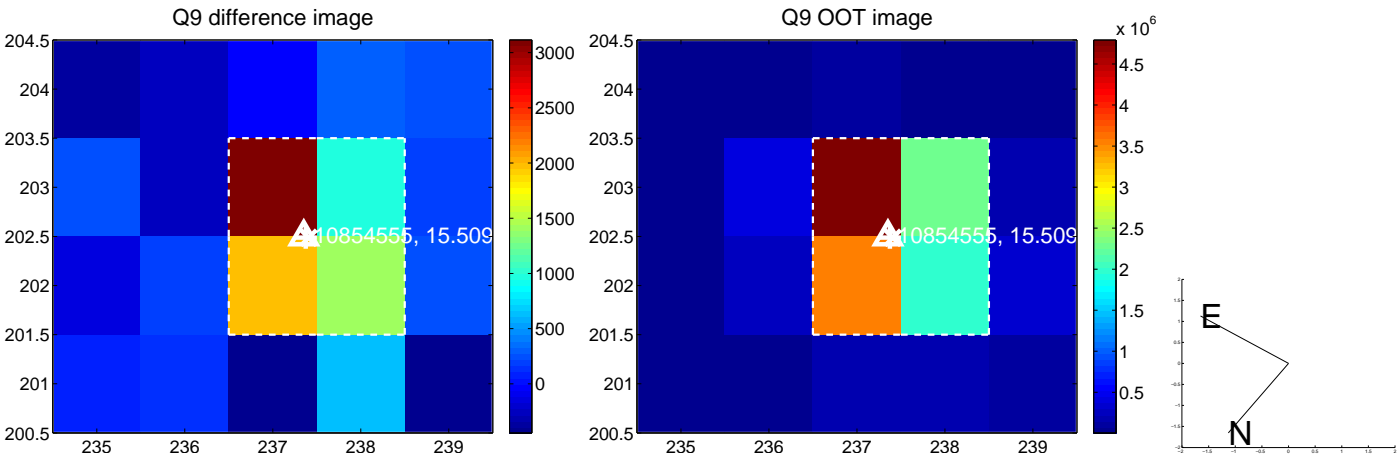
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



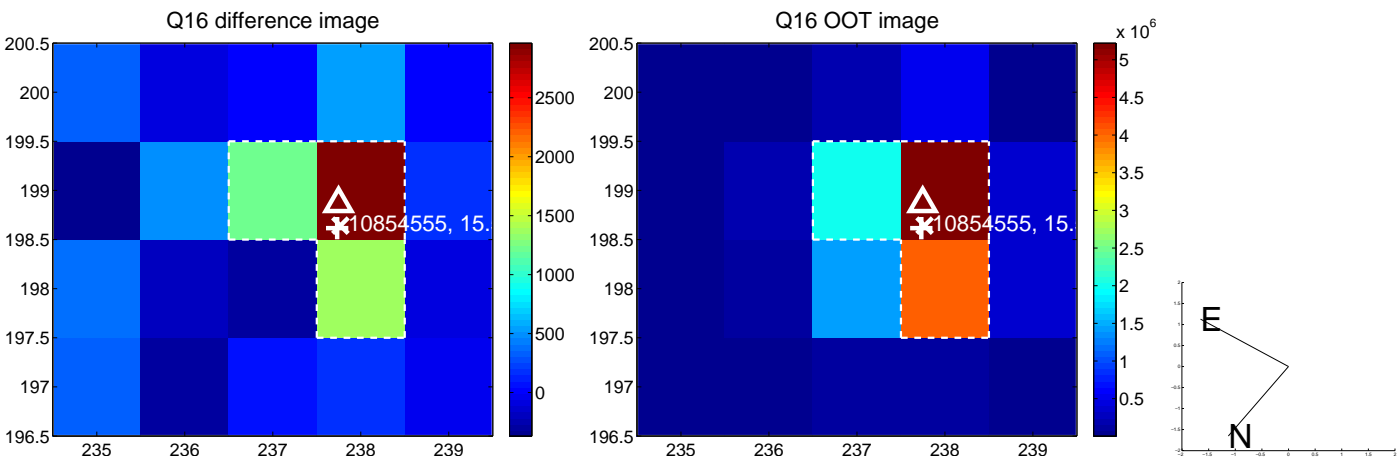
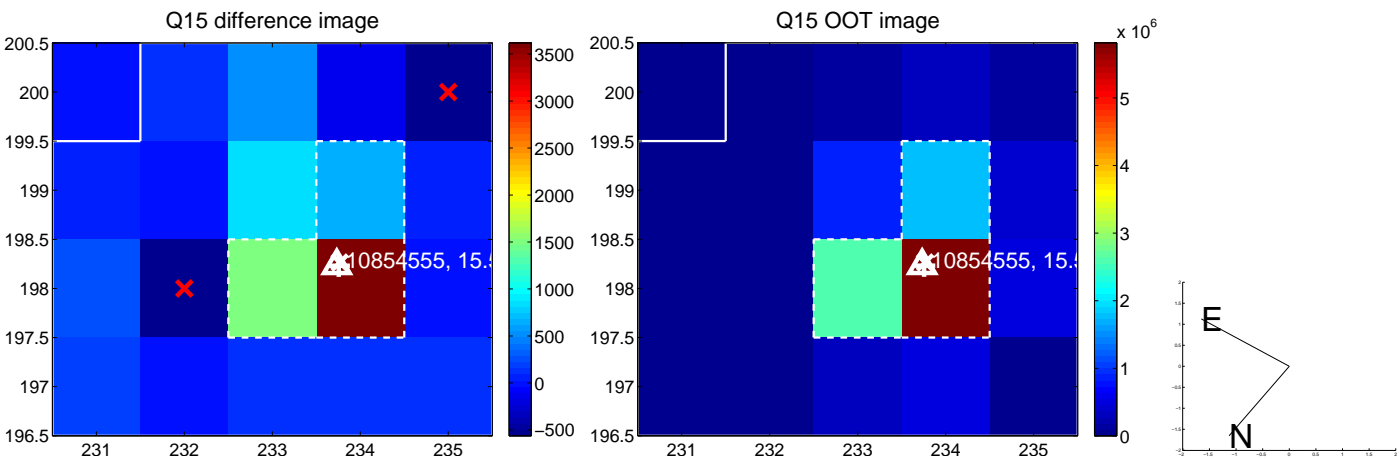
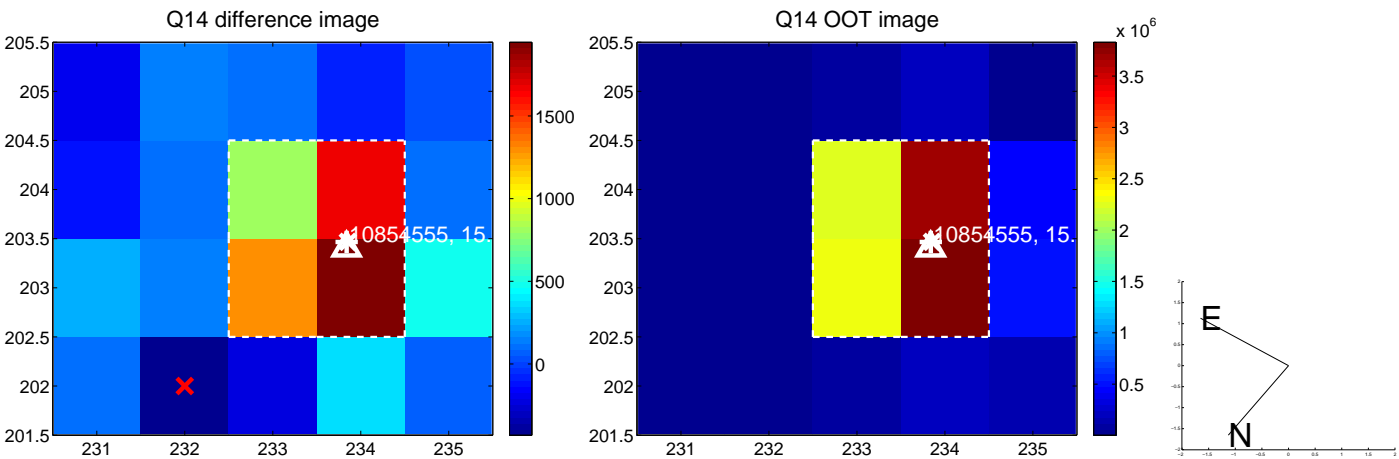
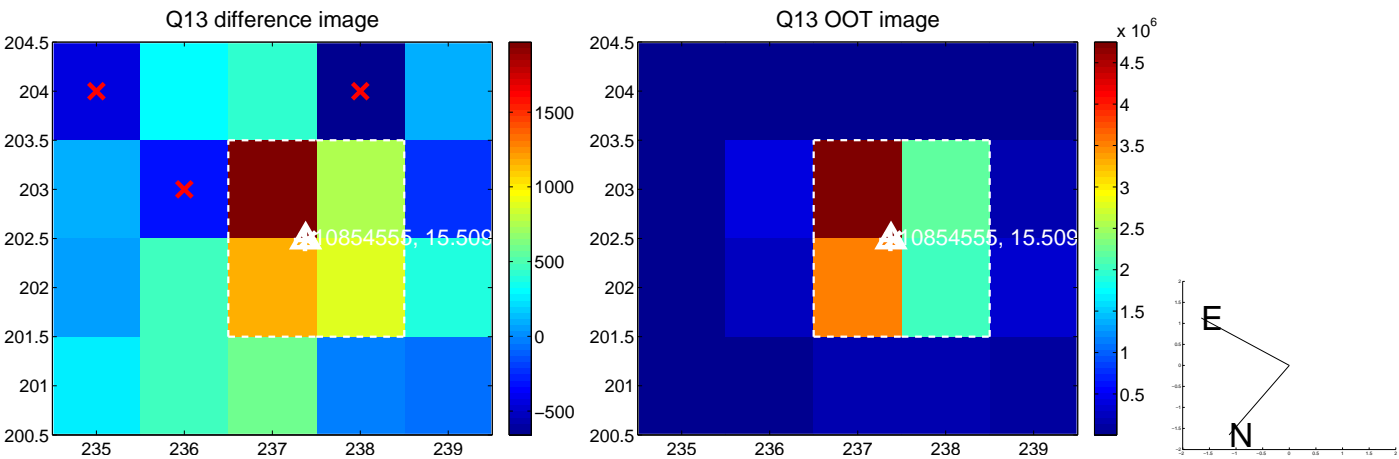
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



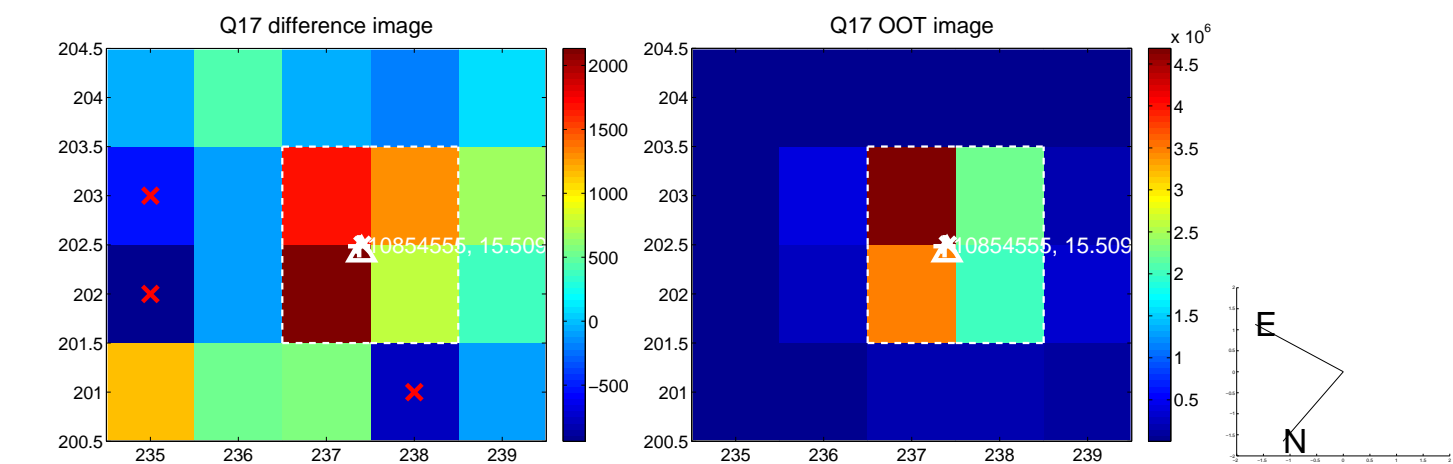
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



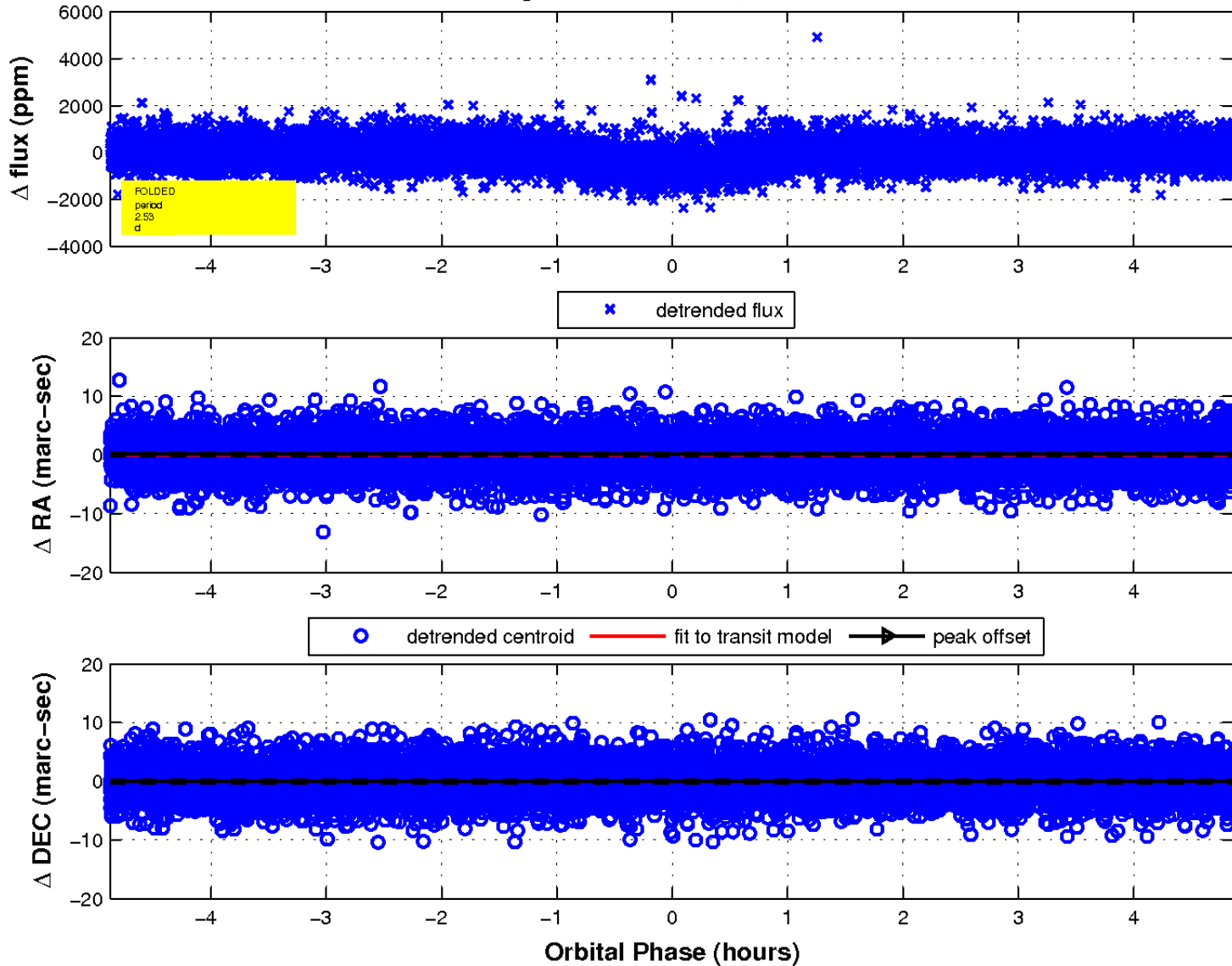
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

