

KIC 011252512

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})
011252512-01	OBS	No	407.802629	342.434732	276.4	4.990	7.3	7.7	1.73	6452	4.48	3.46

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011252512-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT

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

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

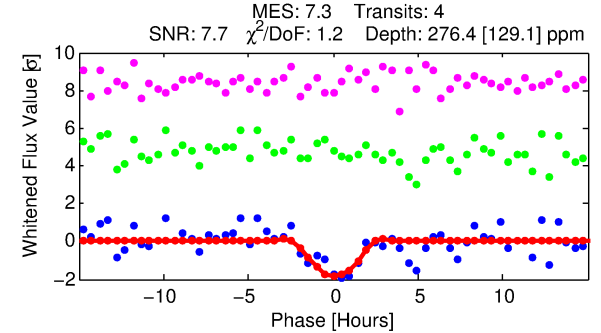
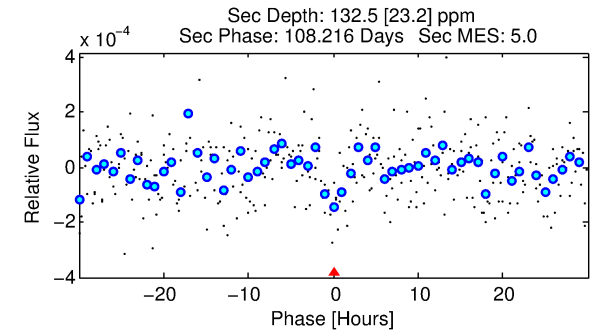
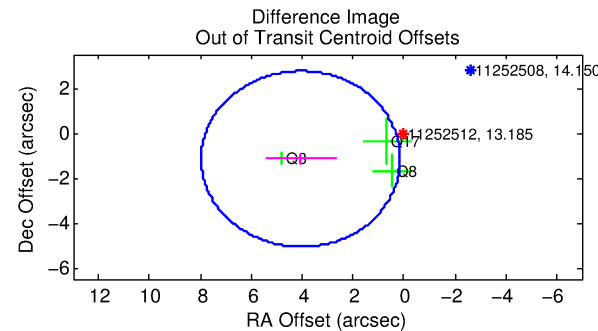
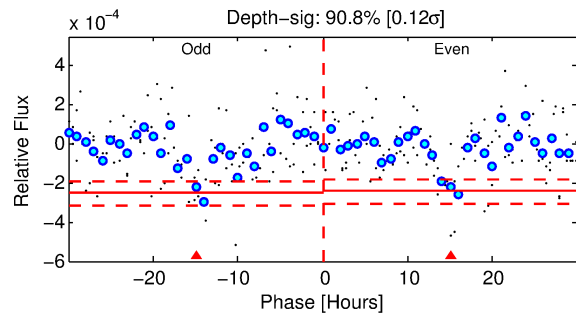
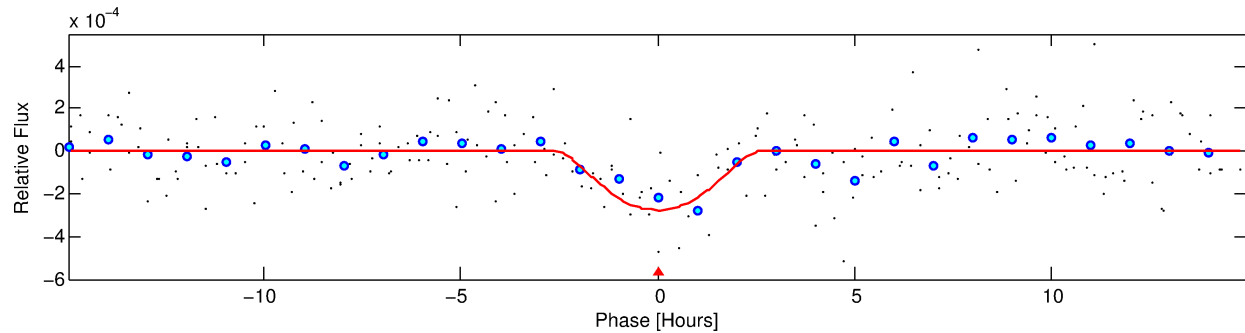
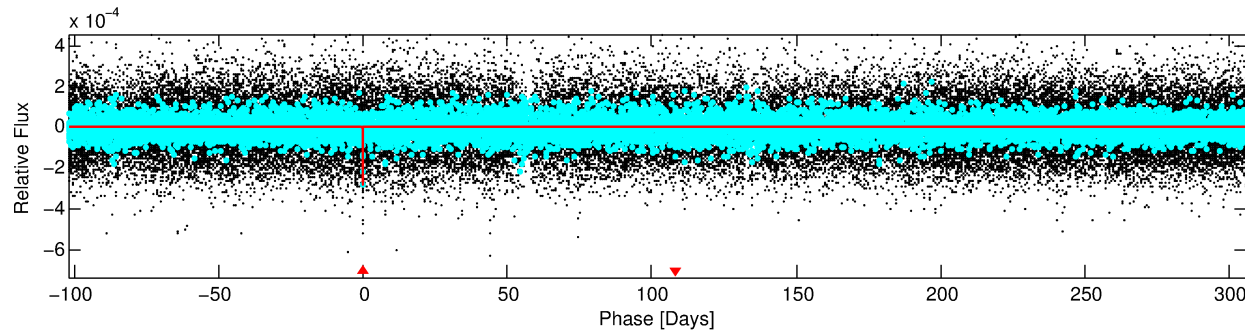
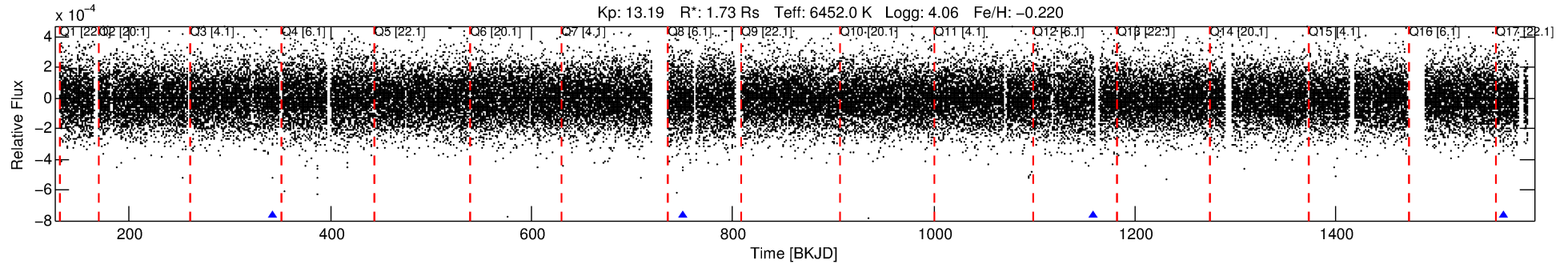
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011252512-01

No Significant Match Found

DV One-Page Summary

KIC: 11252512 Candidate: 1 of 1 Period: 407.803 d



DV Fit Results:

Period = 407.80263 [0.00826] d
Epoch = 342.4347 [0.0144] BKJD
Rp/R* = 0.0238 [0.0474]
a/R* = 163.81 [139.25]
b = 0.99 [0.09]
Seff = 3.46 [1.42]
Teq = 348 [36] K
Rp = 4.48 [9.01] Re
a = 1.1580 [0.2896] AU
Ag = 4864.76 [19498.99] [0.25σ]
Teffp = 4490 [4479] K [0.92σ]

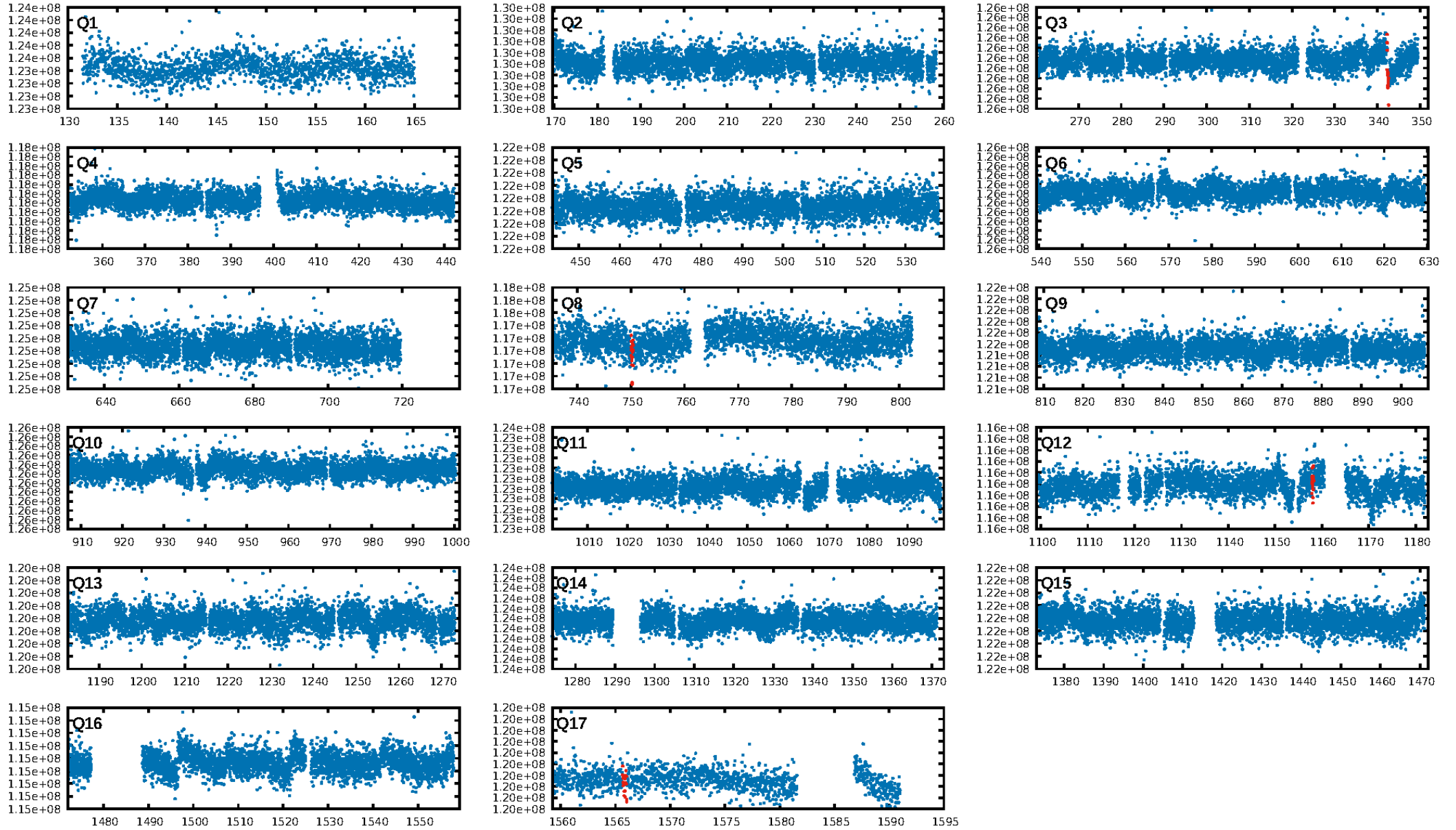
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 8.4%
ModelChiSquareGof-sig: 96.9%
Bootstrap-pfa: 3.28e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 11.73
Centroid-sig: 1.1%
Centroid-so: 3.975 arcsec [2.77σ]
OotOffset-rm: 4.215 arcsec [3.23σ]
KicOffset-rm: 4.293 arcsec [3.07σ]
OotOffset-st: 0/1/1/1 [3]
KicOffset-st: 0/1/1/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [4/4]

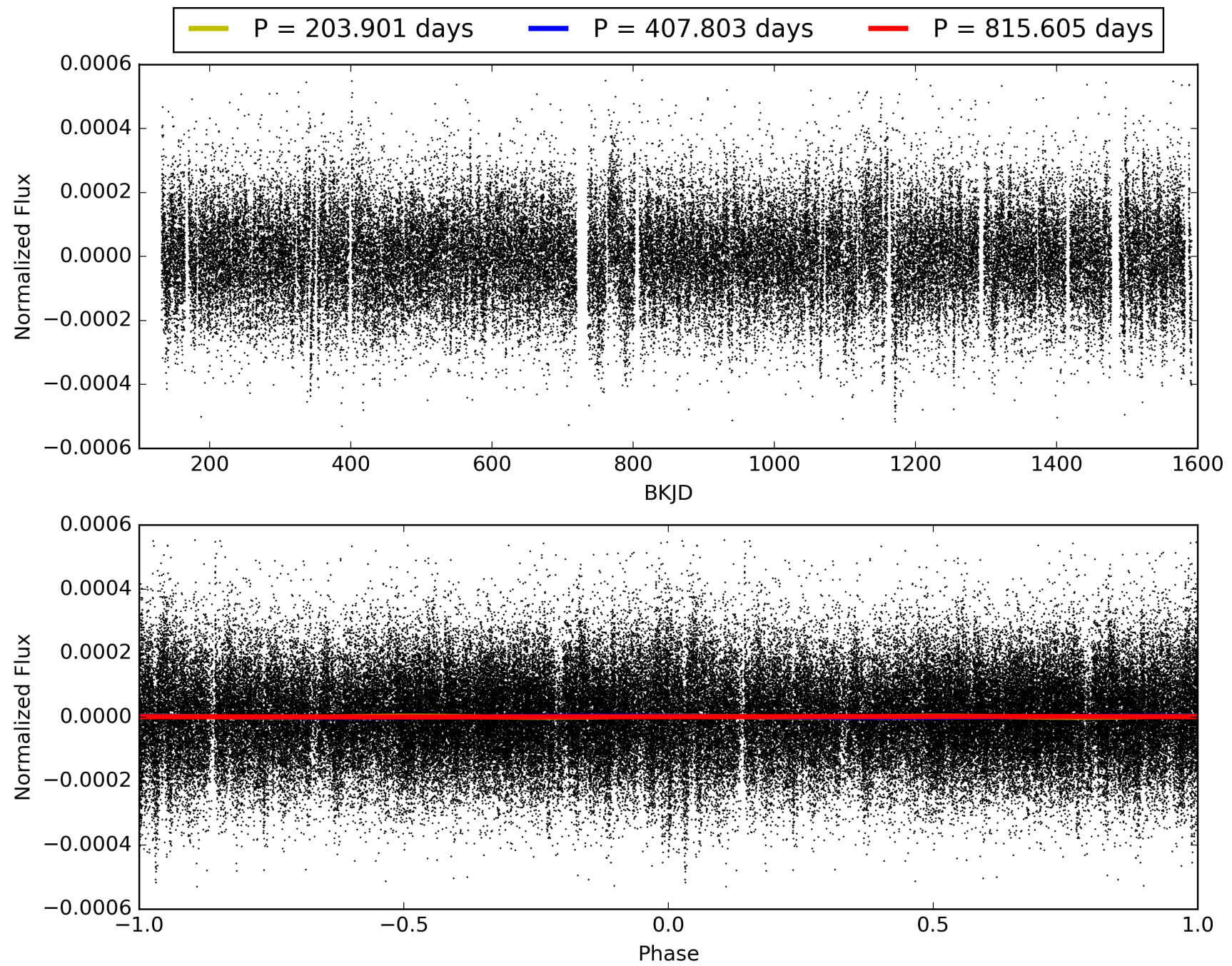
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:09:05 Z

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

TCE 011252512-01, PDC Light Curves

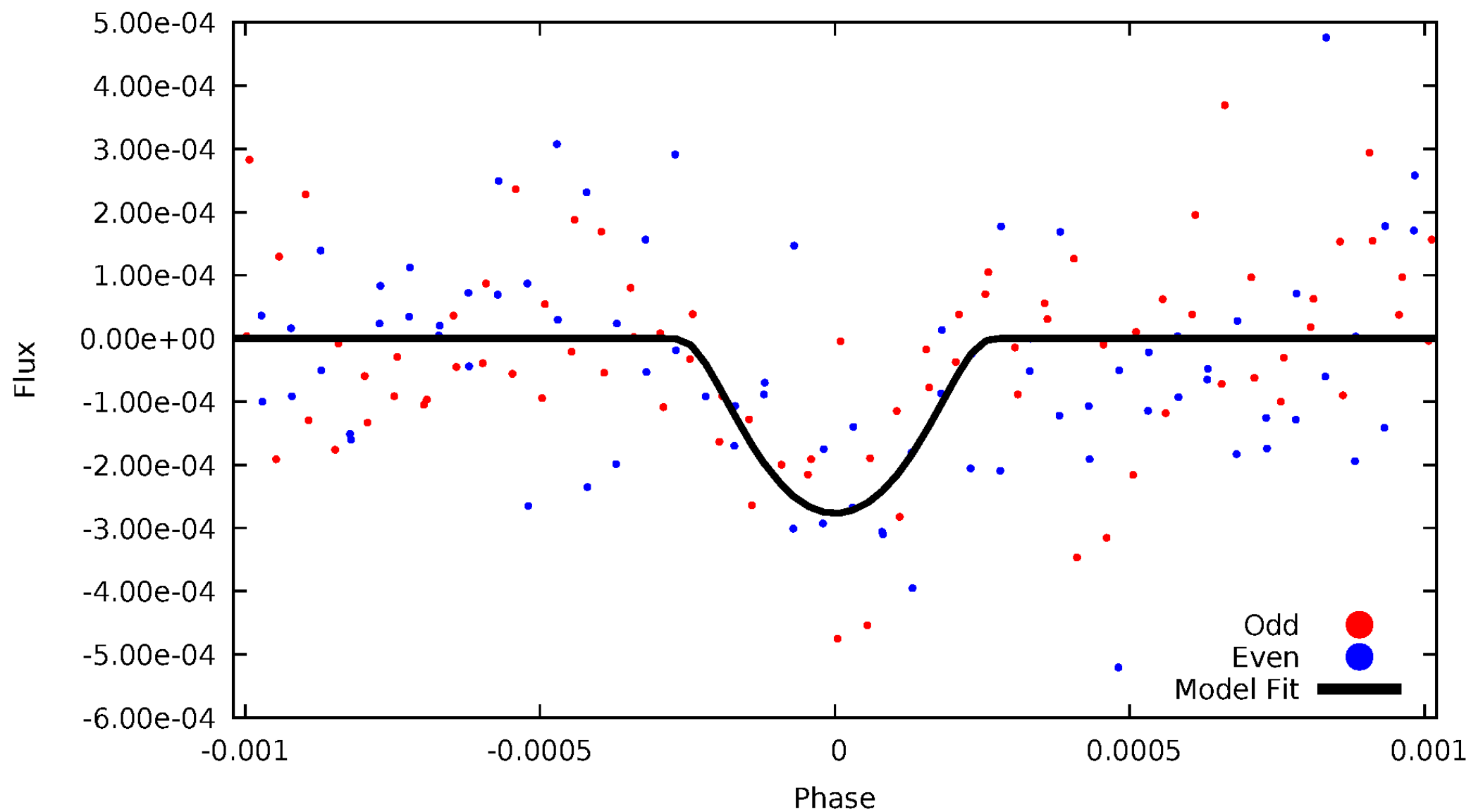


TCE 011252512-01



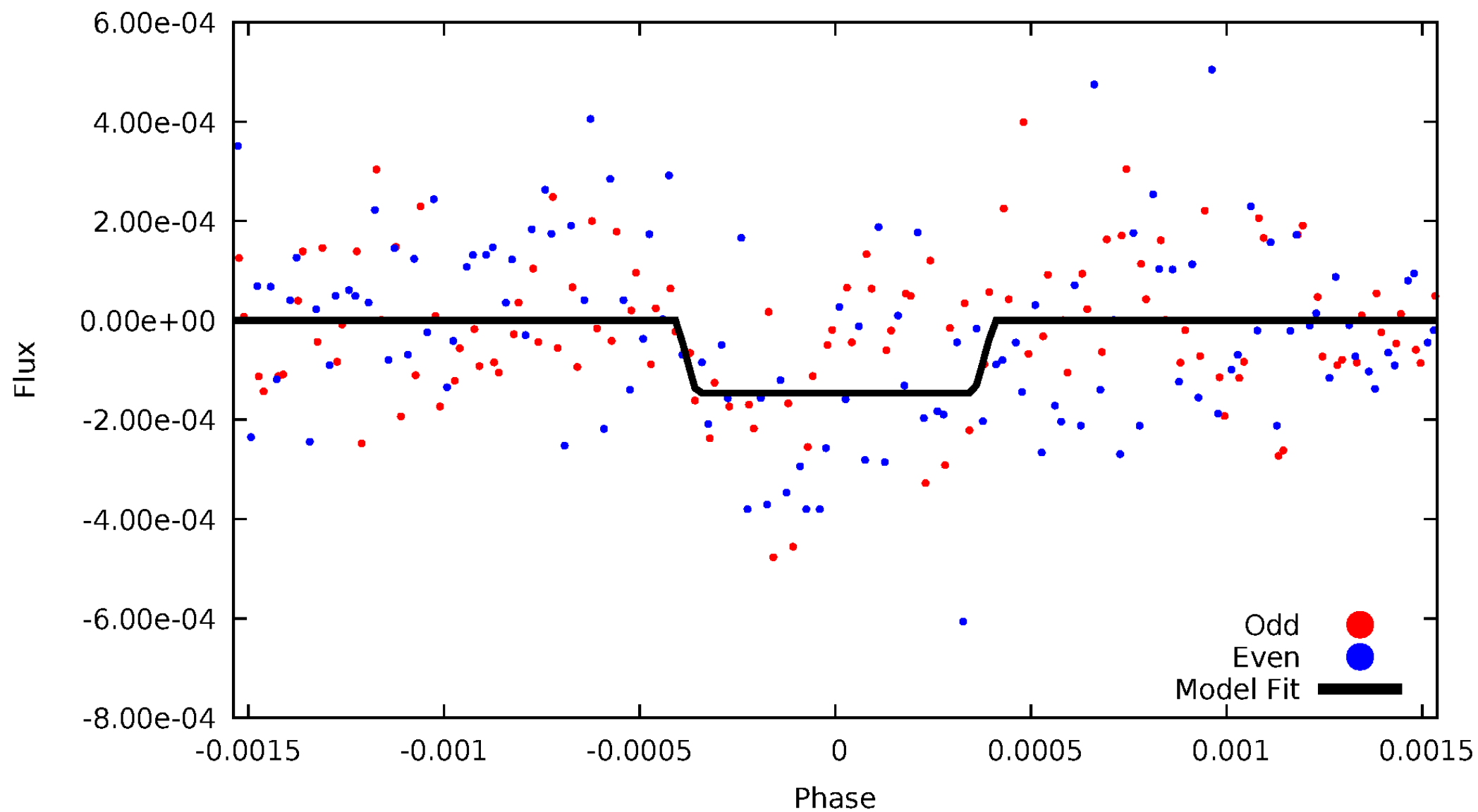
DV Odd/Even

TCE 011252512-01

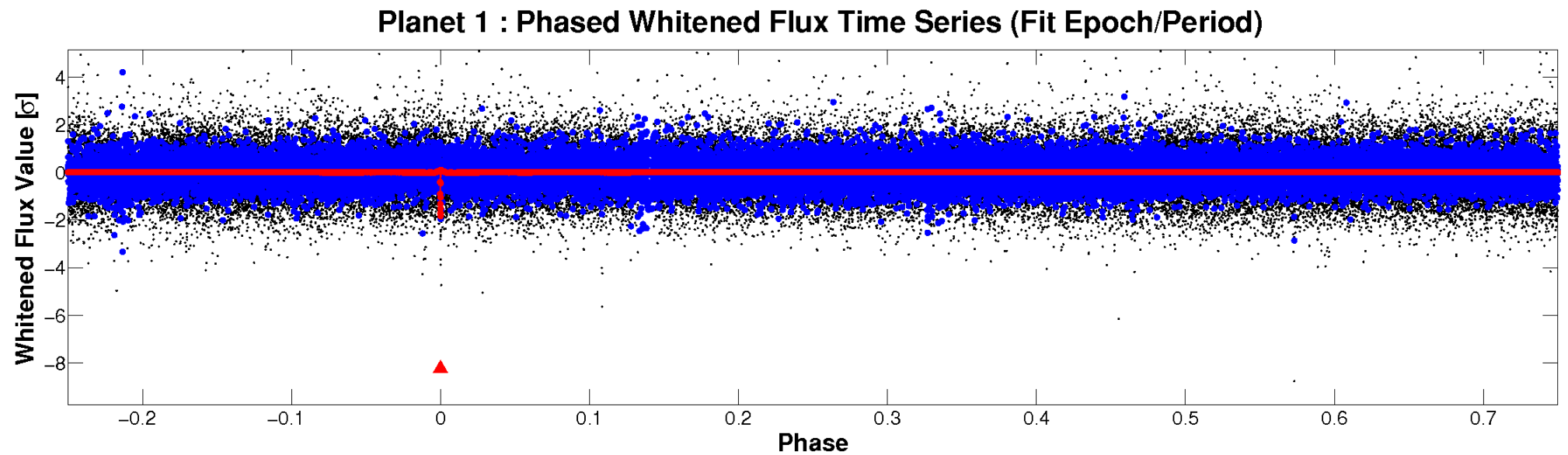
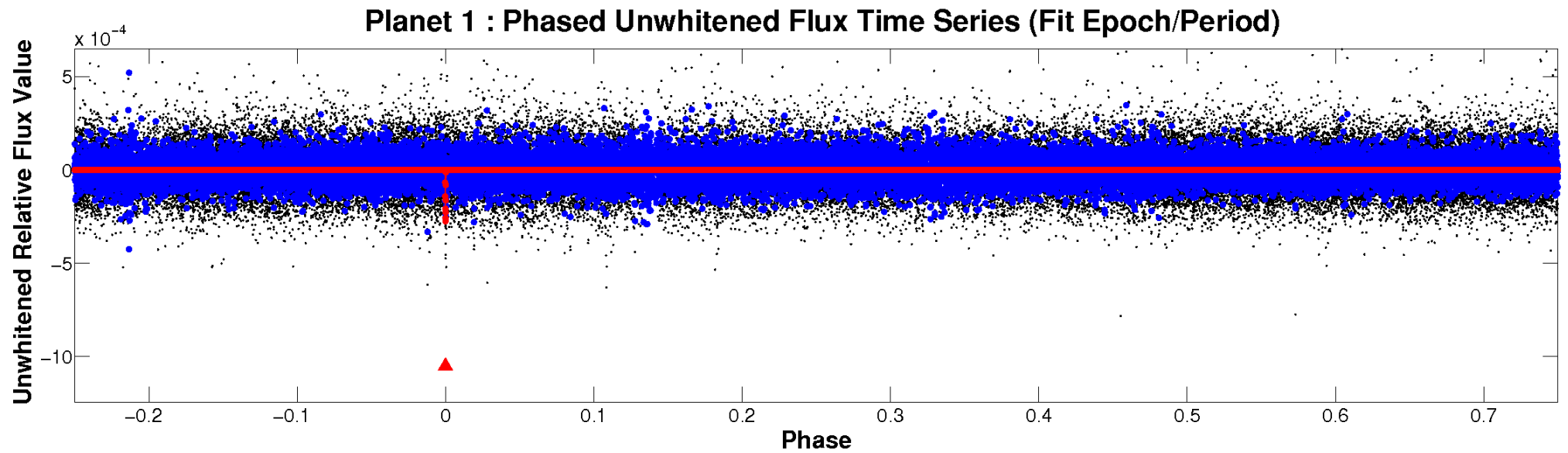


ALT Odd/Even

TCE 011252512-01

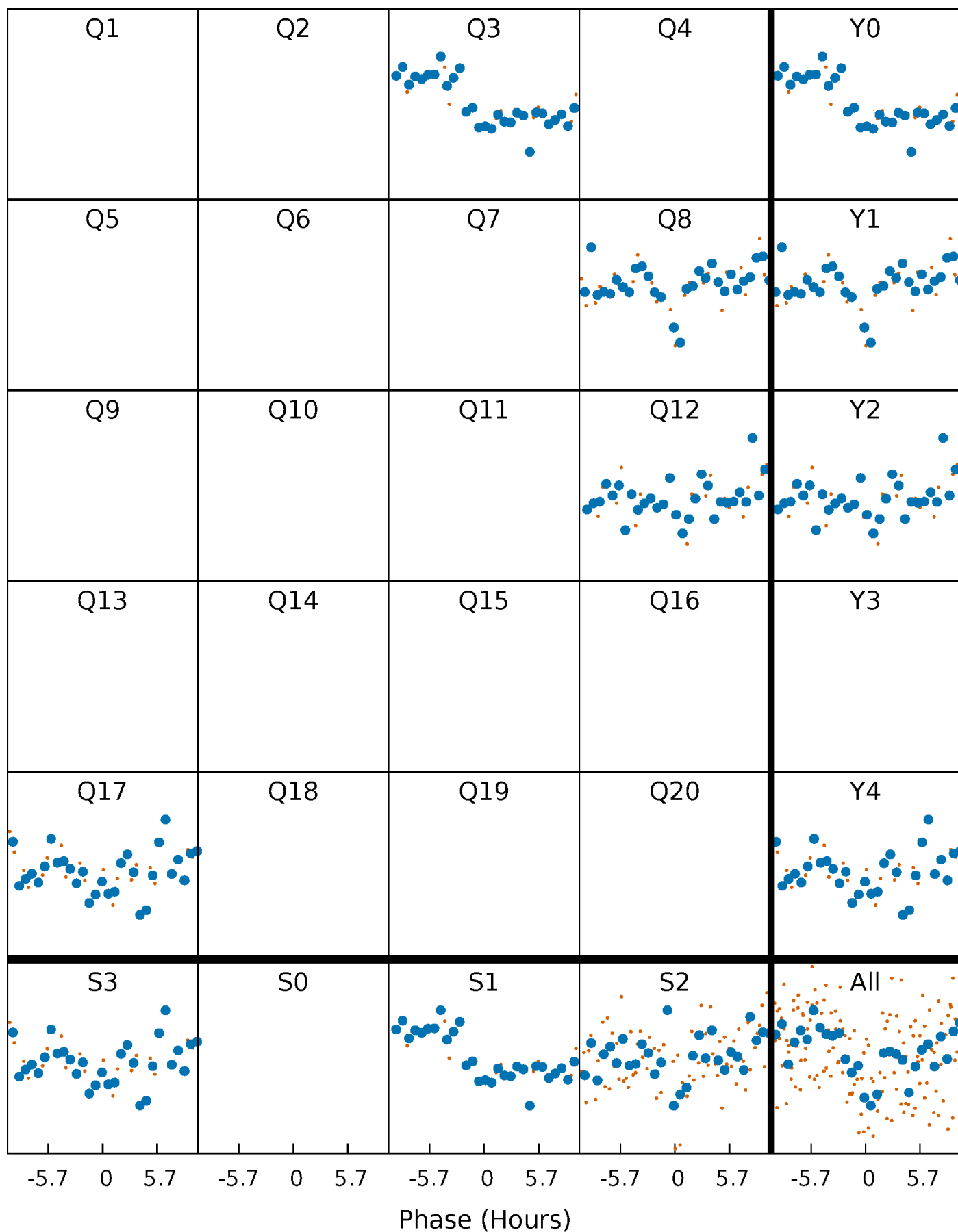


Non-Whitened Vs. Whitened Light Curve



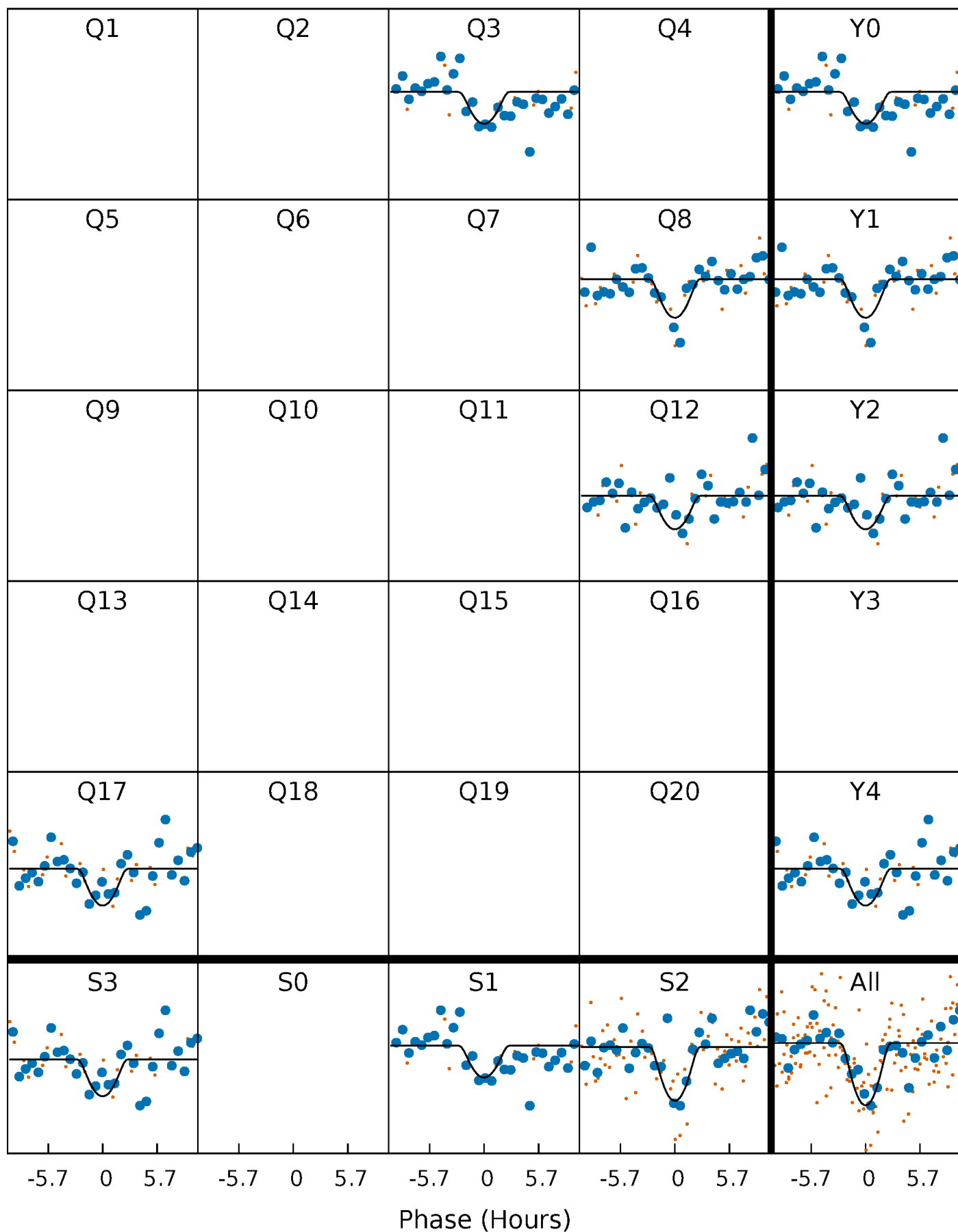
PDC Quarter-Phased Transit Curves

TCE 011252512-01 P=407.802629 Days $T_0=342.434732$ (BKJD)



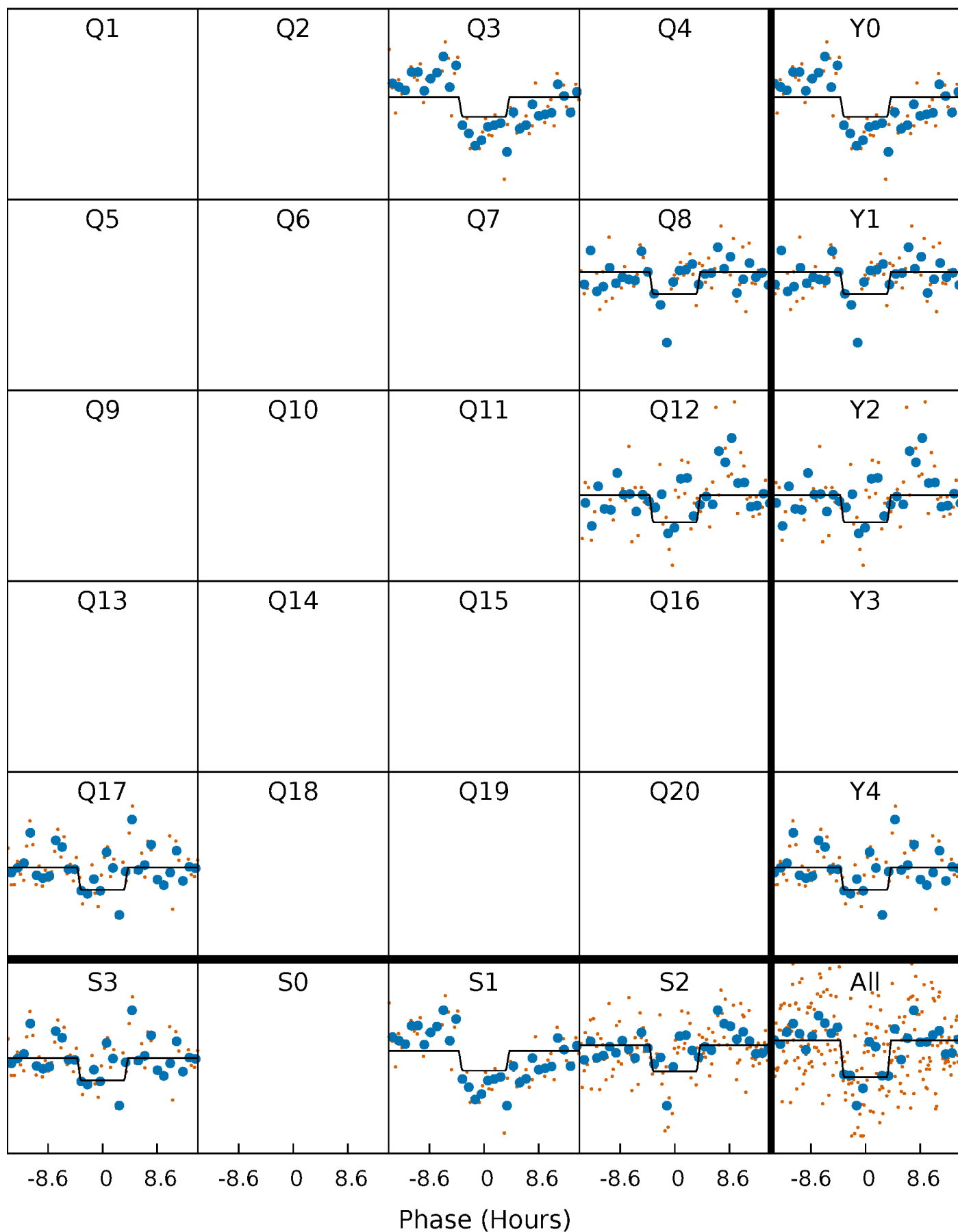
DV Quarter-Phased Transit Curves

TCE 011252512-01 P=407.802629 Days $T_0=342.434732$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

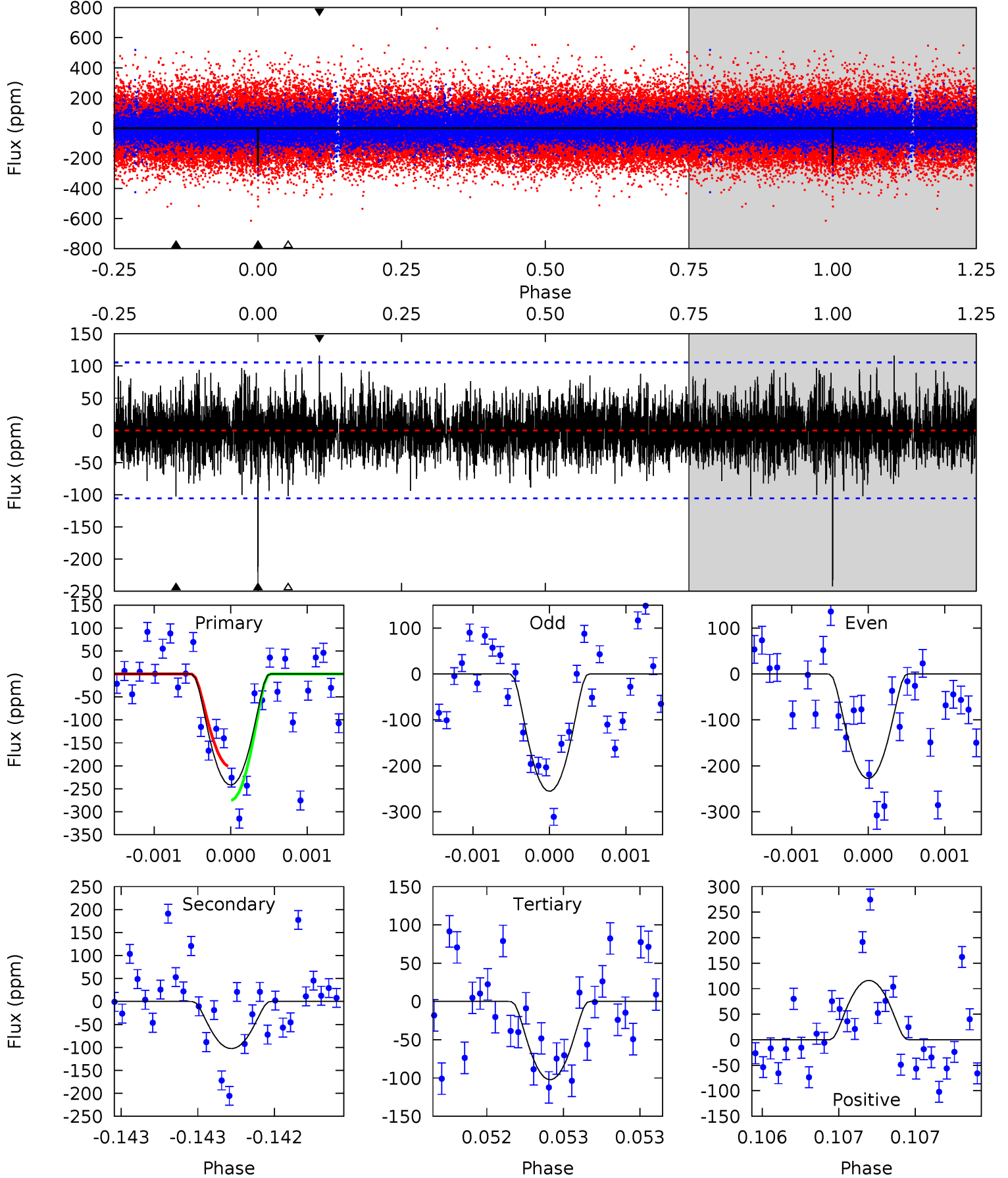
TCE 011252512-01 P=407.806179 Days $T_0=342.497495$ (BKJD)



DV Model-Shift Uniqueness Test

011252512-01, $P = 407.802629$ Days, $E = 342.434732$ Days

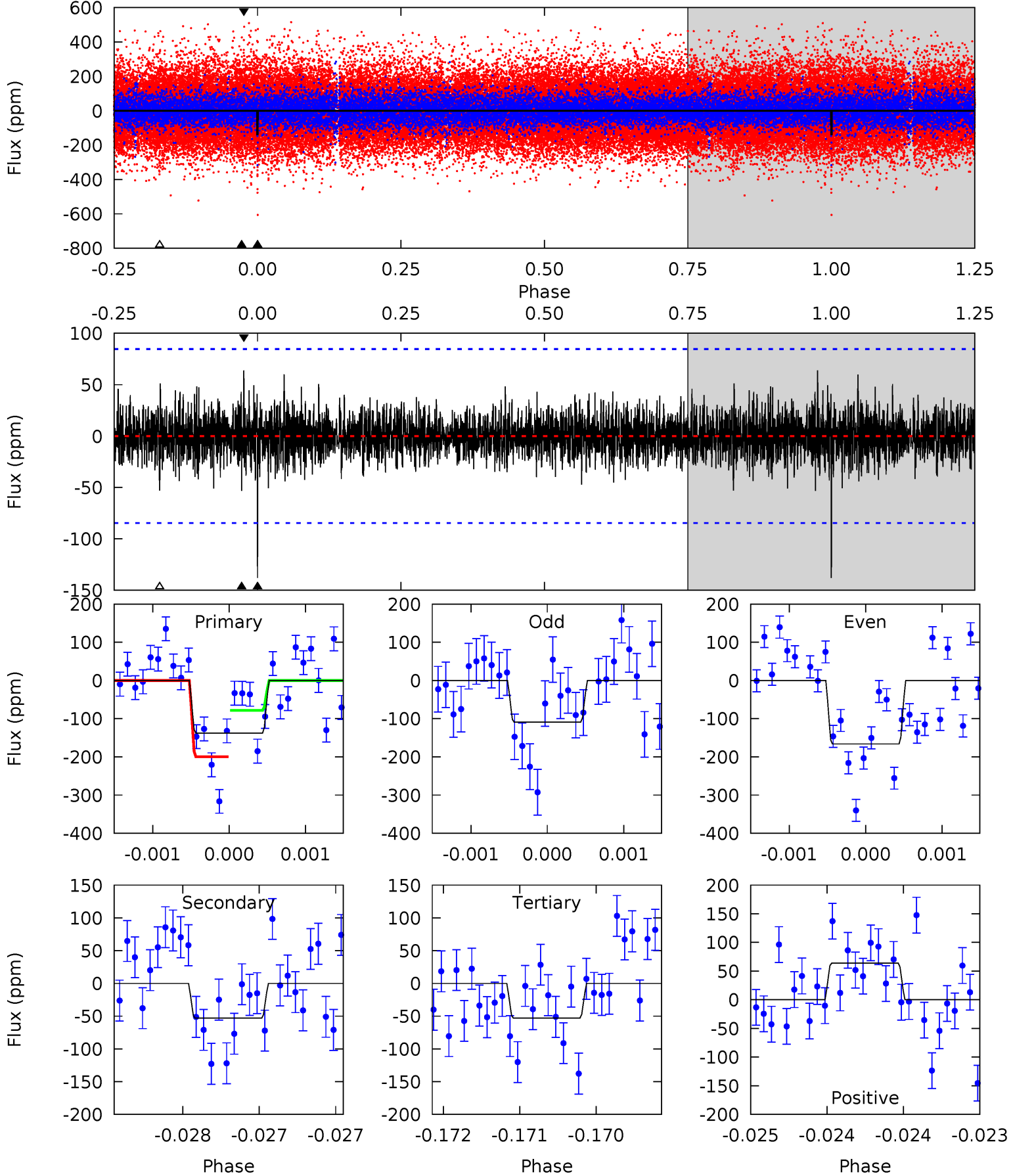
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.7	5.40	5.38	6.12	5.56	3.46	1.43	7.36	6.62	0.02	-0.72	0.74	1.00	0.32	1.95



Alt Model-Shift Uniqueness Test

011252512-01, P = 407.806179 Days, E = 342.497495 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.95	3.45	3.44	4.14	5.49	3.36	0.93	5.51	4.81	0.01	-0.69	1.86	1.27	0.32	3.94



Stellar Parameters For KIC 011252512

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6452^{+162}_{-194}	$4.058^{+0.228}_{-0.123}$	$-0.220^{+0.250}_{-0.250}$	$1.728^{+0.378}_{-0.463}$	$1.250^{+0.169}_{-0.206}$	$0.341^{+0.476}_{-0.129}$
	+3%/-3%	+6%/-3%	+114%/-114%	+22%/-27%	+14%/-16%	+140%/-38%
Source	PHO1	FLK73	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 011252512-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-103 ± 19	$7.48^{+7.60}_{-5.09}$	480^{+30}_{-32}	3660^{+1969}_{-700}	1354^{+11534}_{-1019}
Alt.	-53 ± 15	$6.96^{+6.33}_{-4.78}$	481^{+29}_{-36}	3398^{+1845}_{-628}	834^{+7880}_{-627}

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

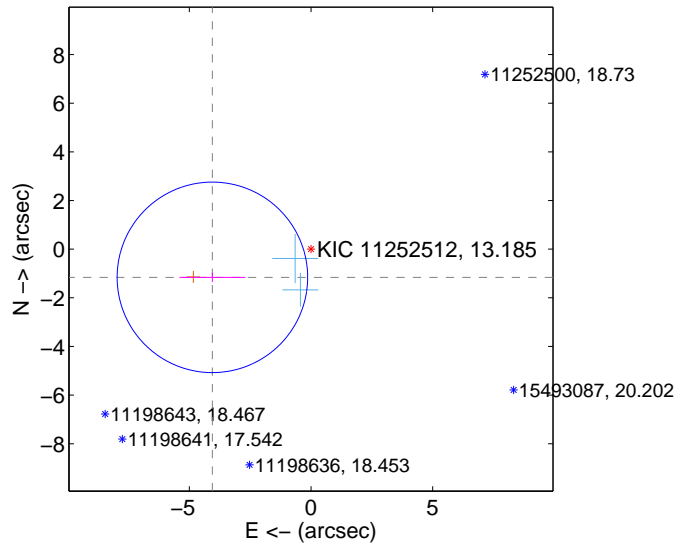
Supplemental centroid analysis for 011252512-01. Kepler magnitude: 13.19. Transit SNR 7.65

There are 2 quarters with good PRF difference image offsets

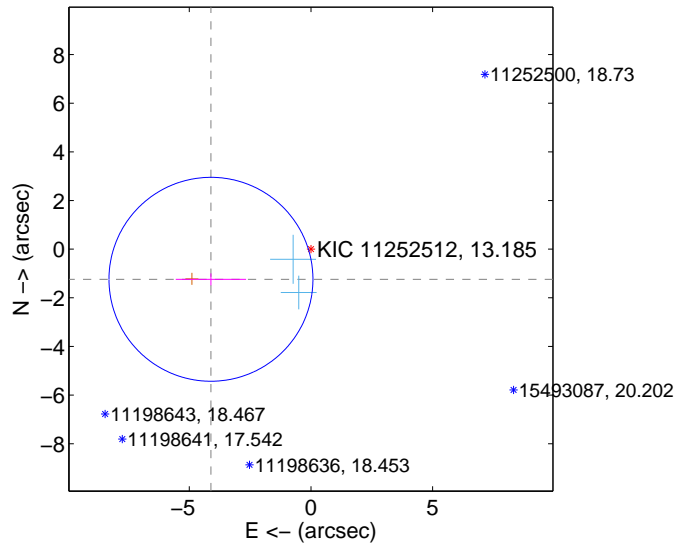
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.215 ± 1.305	3.23	4.053 ± 1.356	-1.159 ± 0.196
PRF-fit source offset from KIC position	4.293 ± 1.397	3.07	4.110 ± 1.445	-1.238 ± 0.245
photometric centroid source offset	3.98 ± 1.44	2.77	3.63 ± 1.43	-1.62 ± 1.46

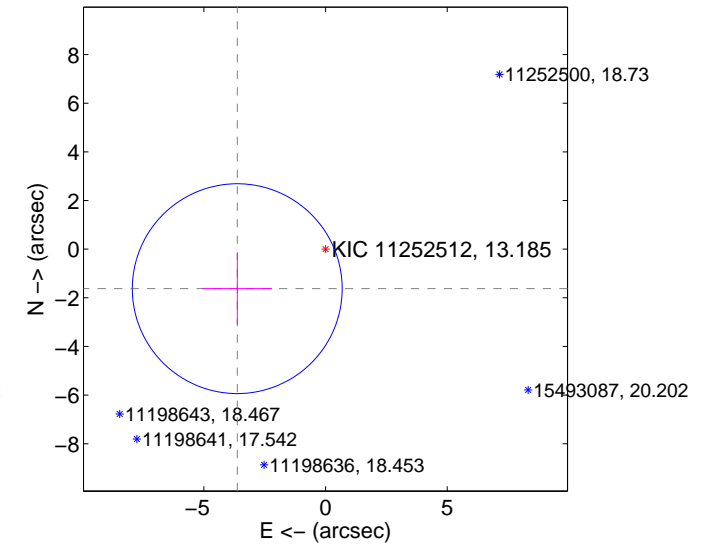
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids



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.

Q1 no difference image



Q1 no OOT image



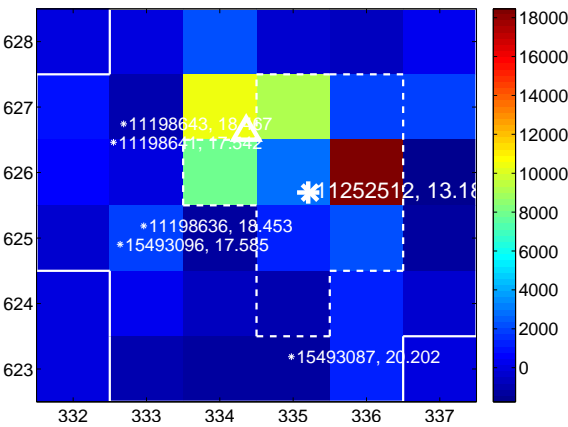
Q2 no difference image



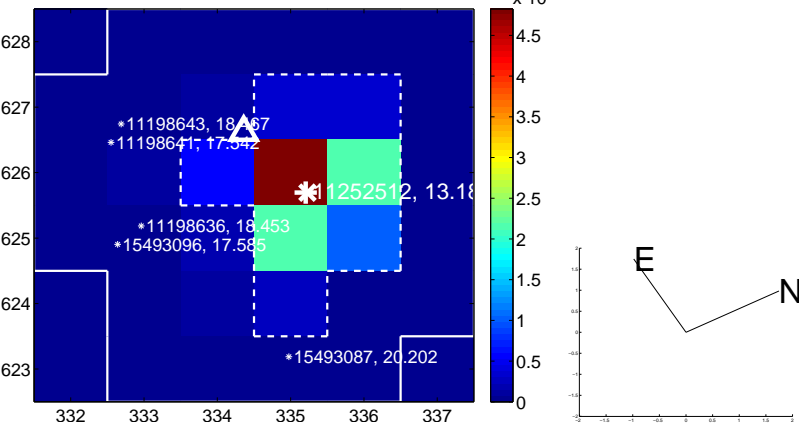
Q2 no OOT image



Q3 difference image. Poor Quality



Q3 OOT image



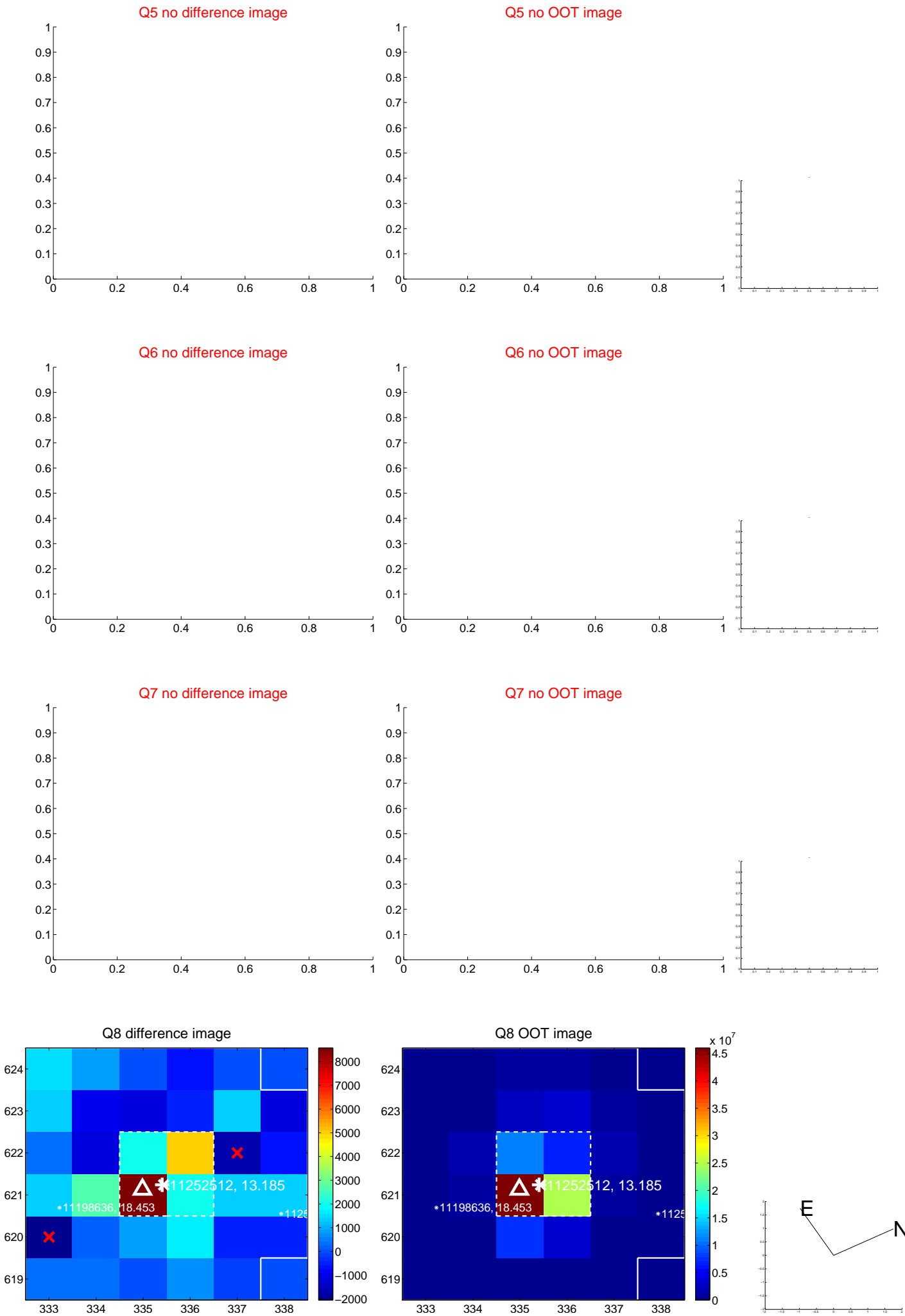
Q4 no difference image



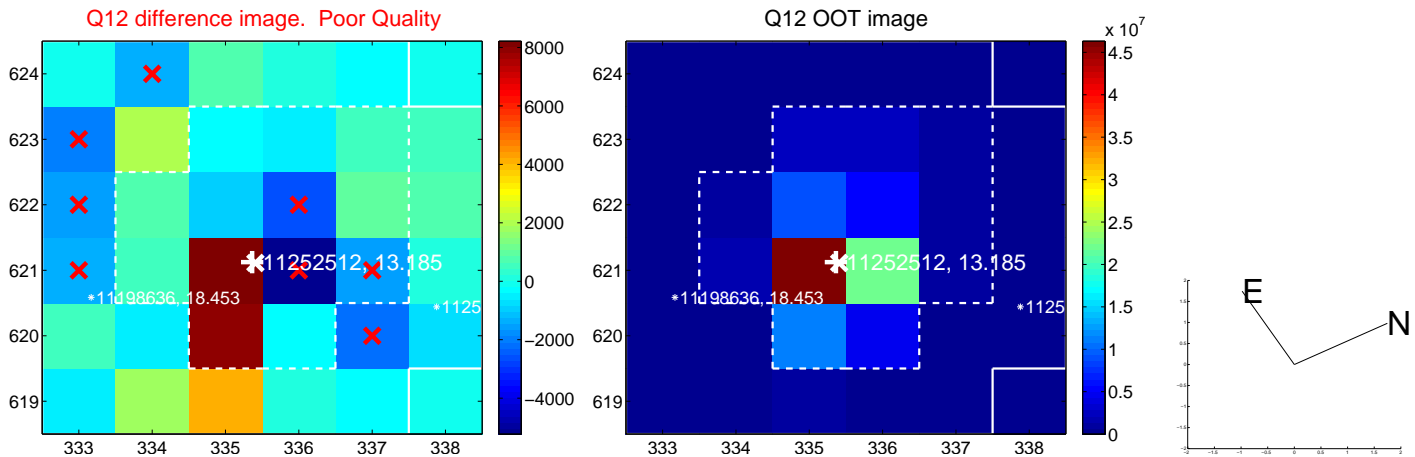
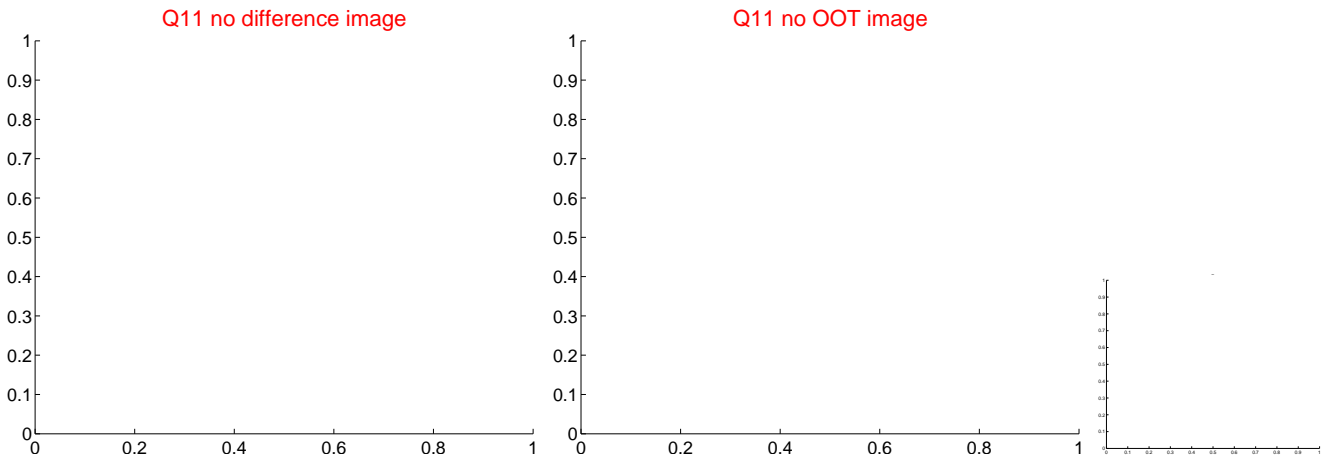
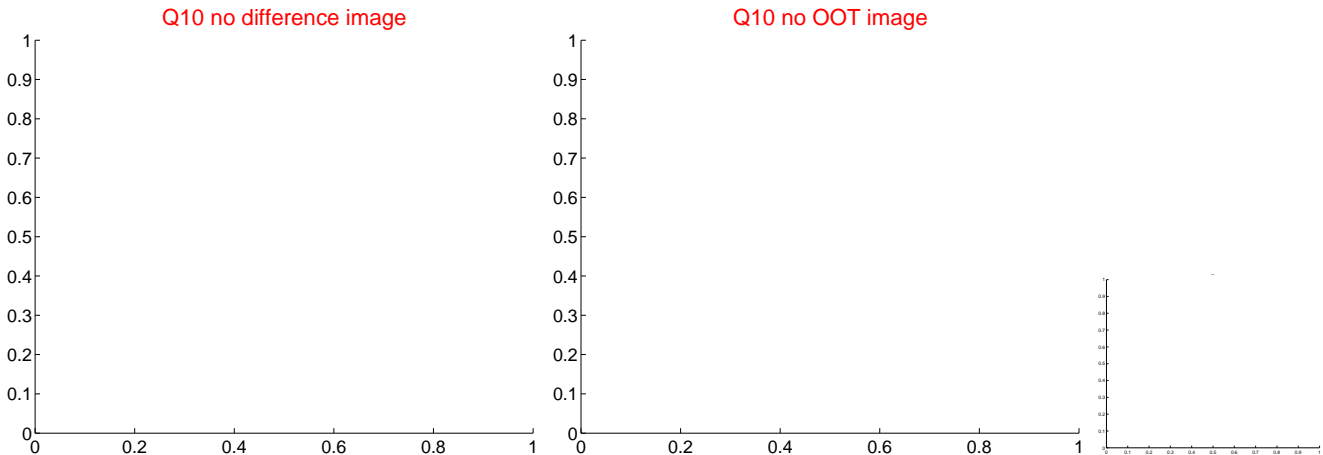
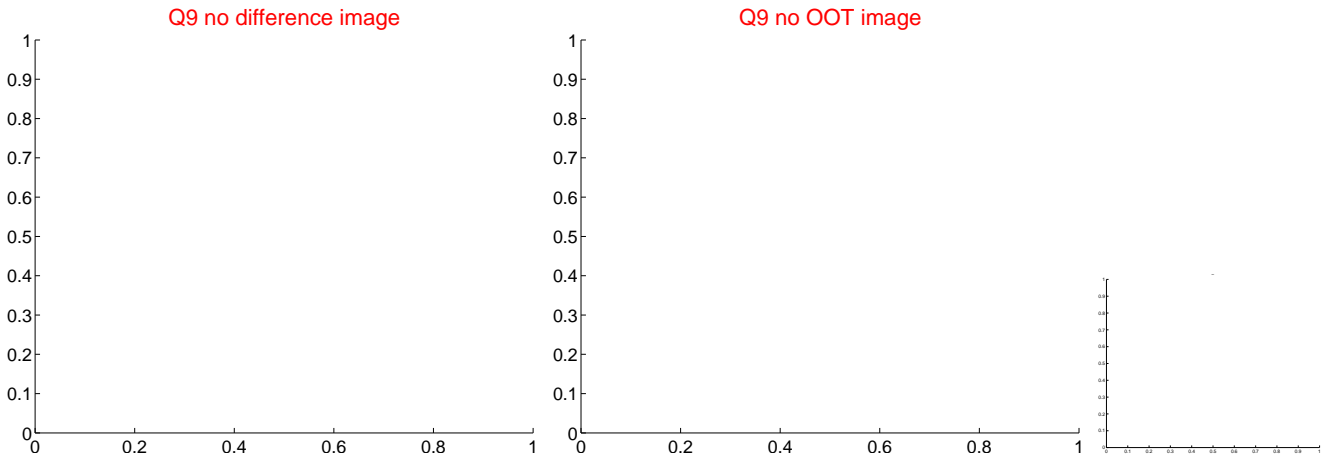
Q4 no OOT image



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



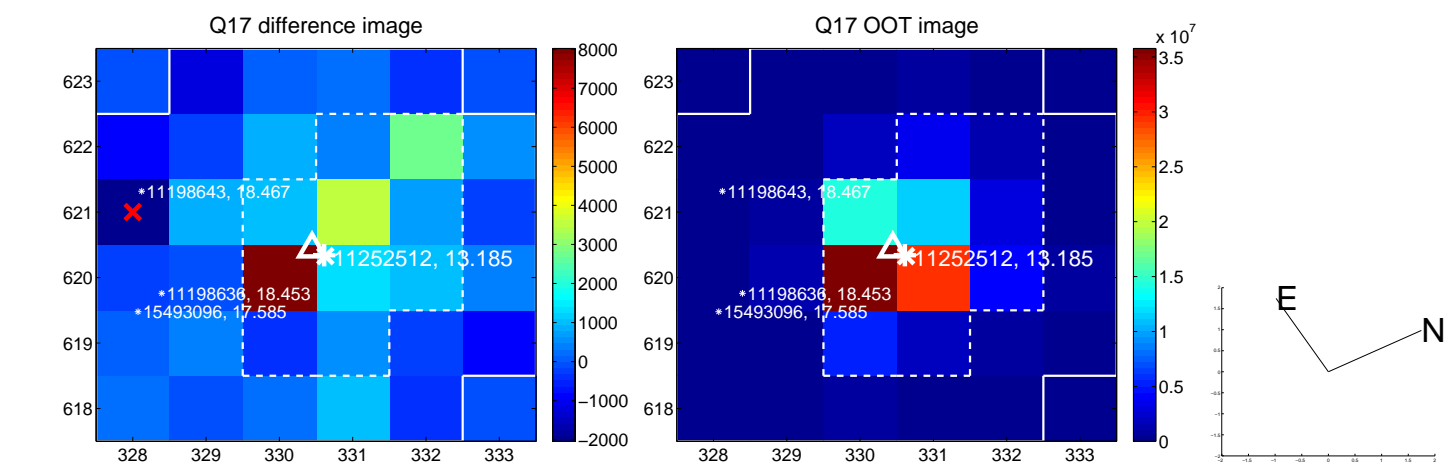
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



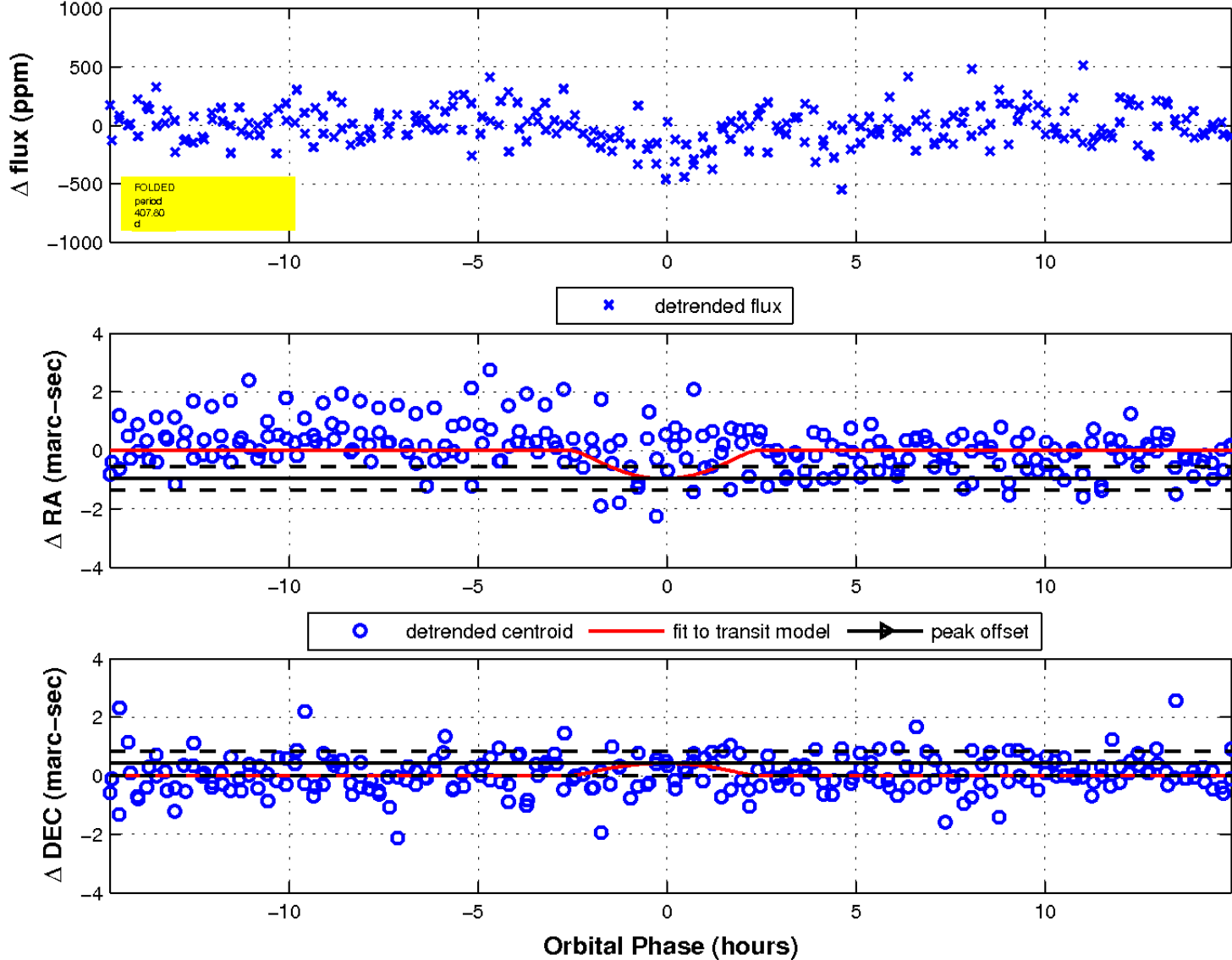
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

