

KIC 010611420

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})
010611420-01	OBS	3148.01	11.505368	135.099493	264.6	2.308	10.6	12.3	1.11	6355	1.94	164.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010611420-01	OBS	FP	0.01	0	0	1	0	CENT_UNRESOLVED_OFFSET

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.

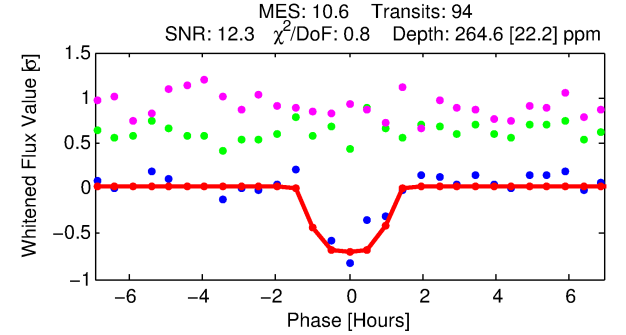
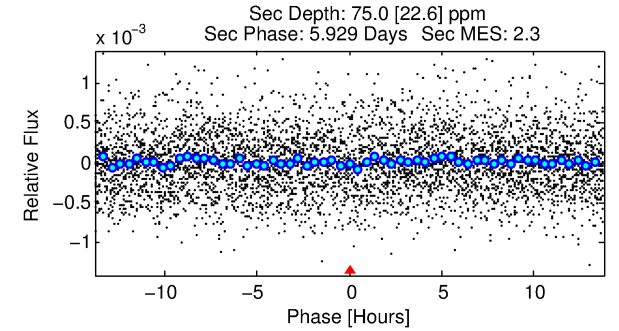
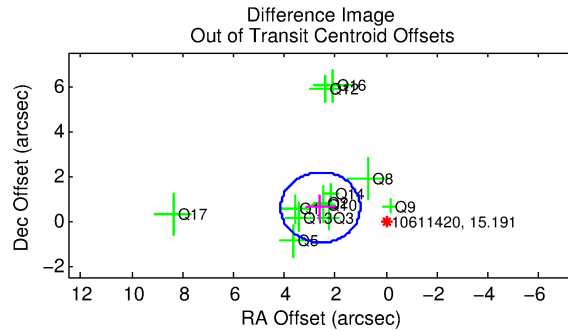
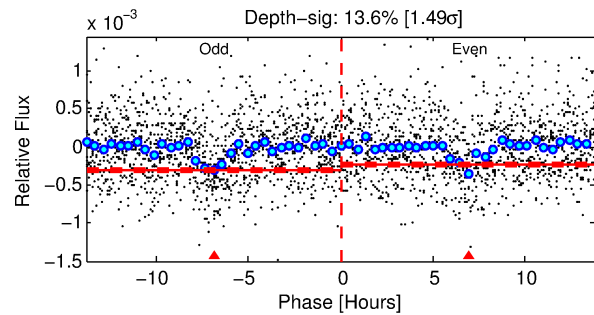
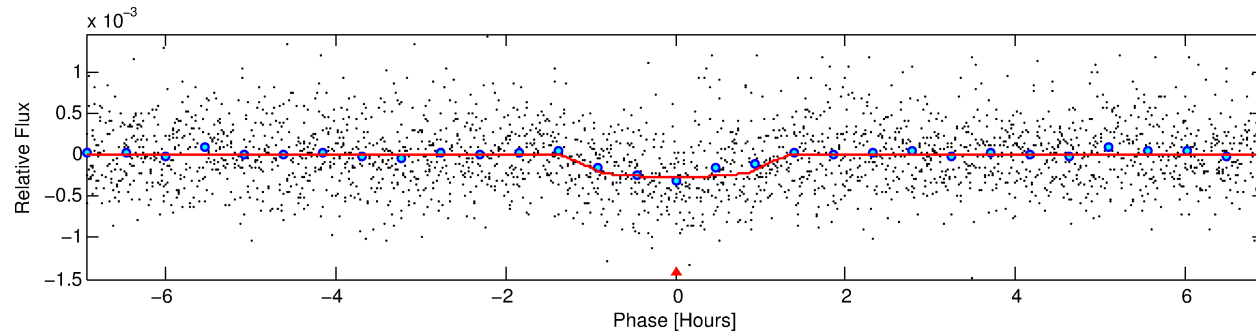
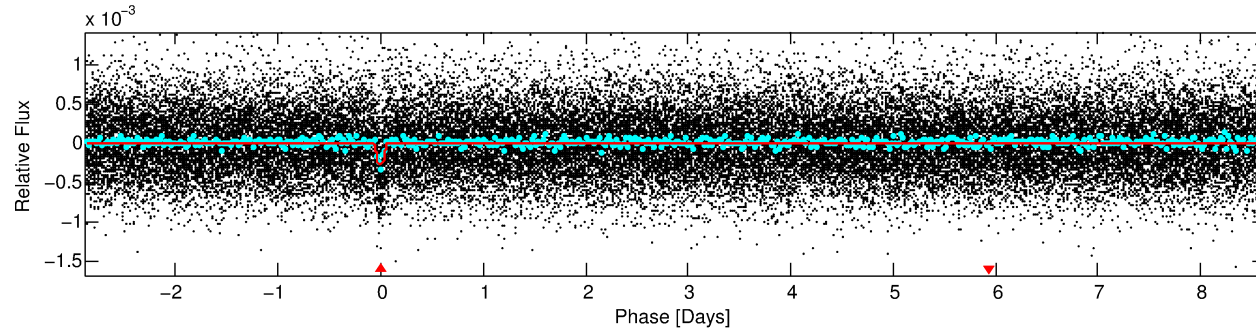
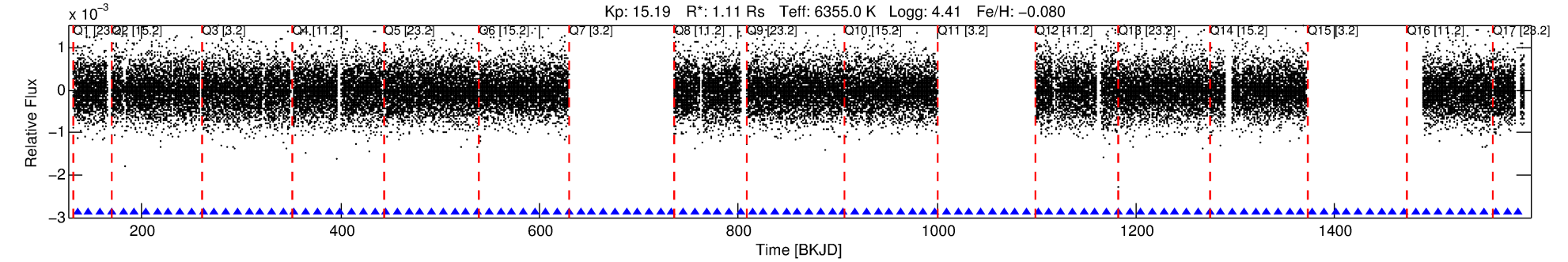
Ephemeris Match Information For 010611420-01

No Significant Match Found

DV One-Page Summary

KIC: 10611420 Candidate: 1 of 1 Period: 11.505 d

KOI: K03148.01 Corr: 0.979



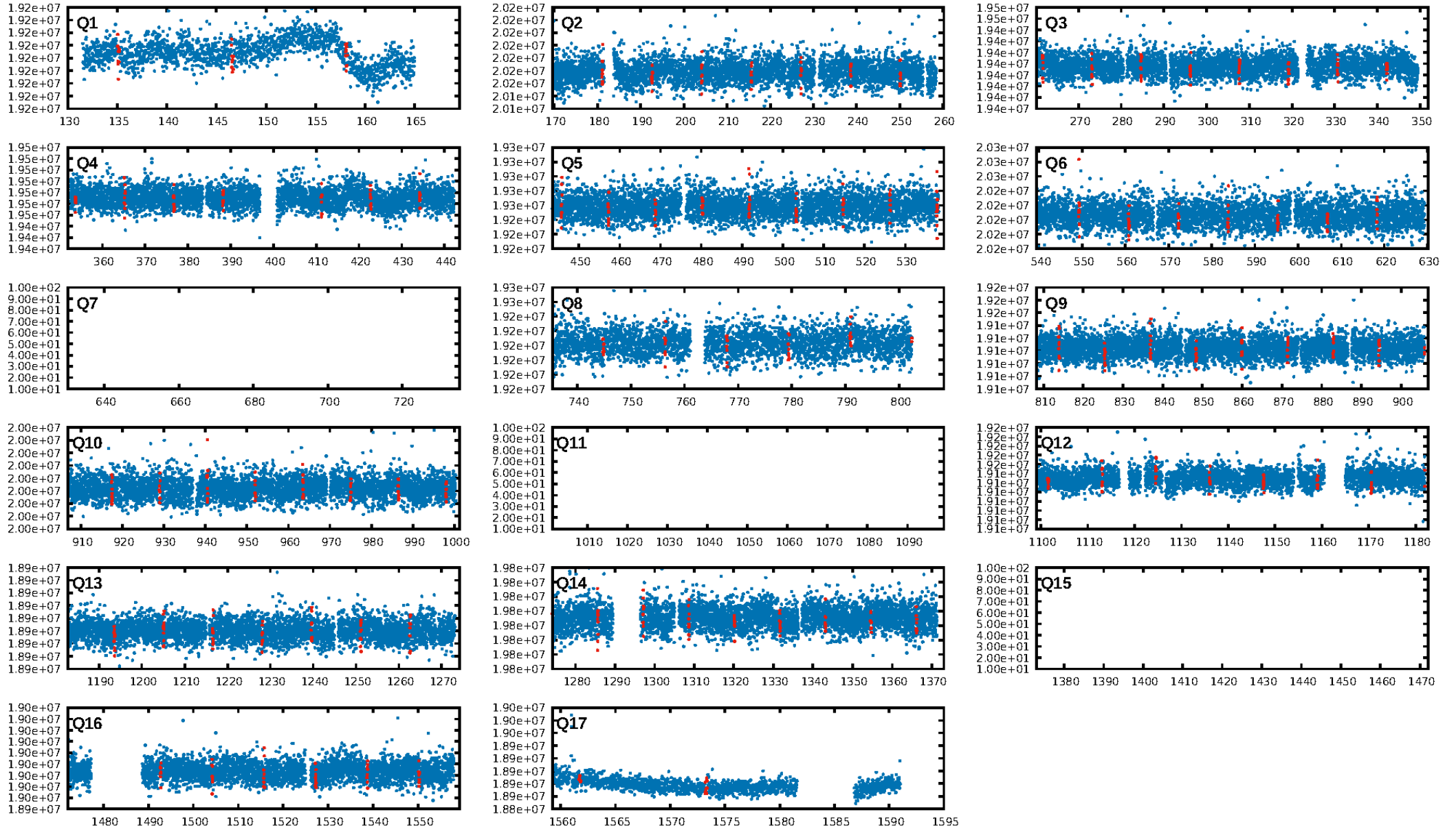
DV Fit Results:

Period = 11.50537 [0.00007] d
Epoch = 135.0995 [0.0044] BKJD
Rp/R* = 0.0160 [0.0135]
a/R* = 27.46 [121.00]
b = 0.72 [3.03]
Seff = 164.13 [61.71]
Teff = 913 [86] K
Rp = 1.94 [1.73] Re
a = 0.1045 [0.0259] AU
Ag = 120.02 [209.44] [0.57 σ]
Teffp = 4671 [2002] K [1.88 σ]

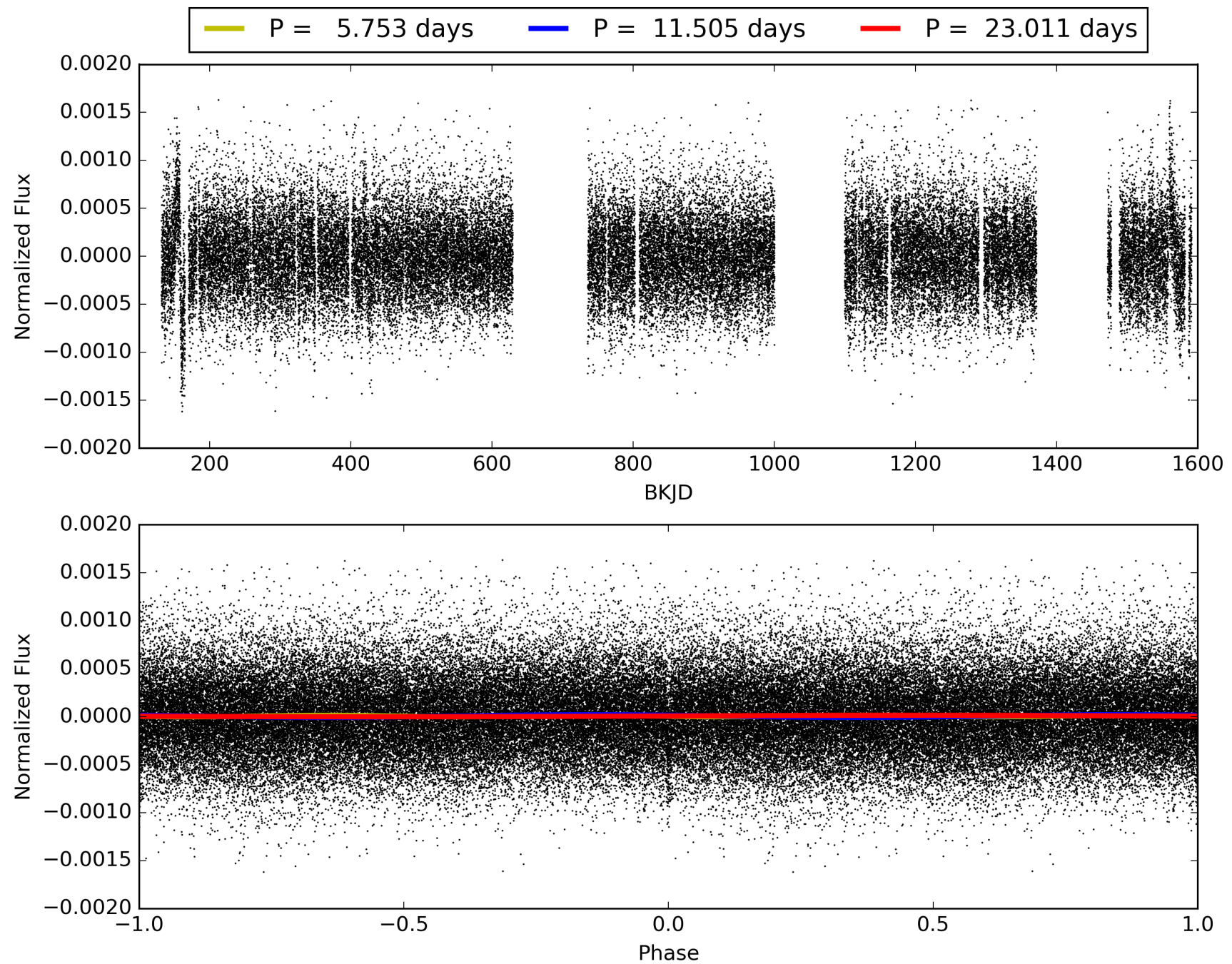
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.69e-26
RollingBand-fgt: 1.00 [89/89]
GhostDiagnostic-chr: 15.33
Centroid-sig: 0.0%
Centroid-so: 5.110 arcsec [3.97 σ]
OotOffset-rm: 2.650 arcsec [5.08 σ]
KicOffset-rm: 2.756 arcsec [5.59 σ]
OotOffset-st: 3/1/3/5 [12]
KicOffset-st: 3/1/3/5 [12]
DiffImageQuality-fgm: 0.67 [8/12]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 010611420-01, PDC Light Curves

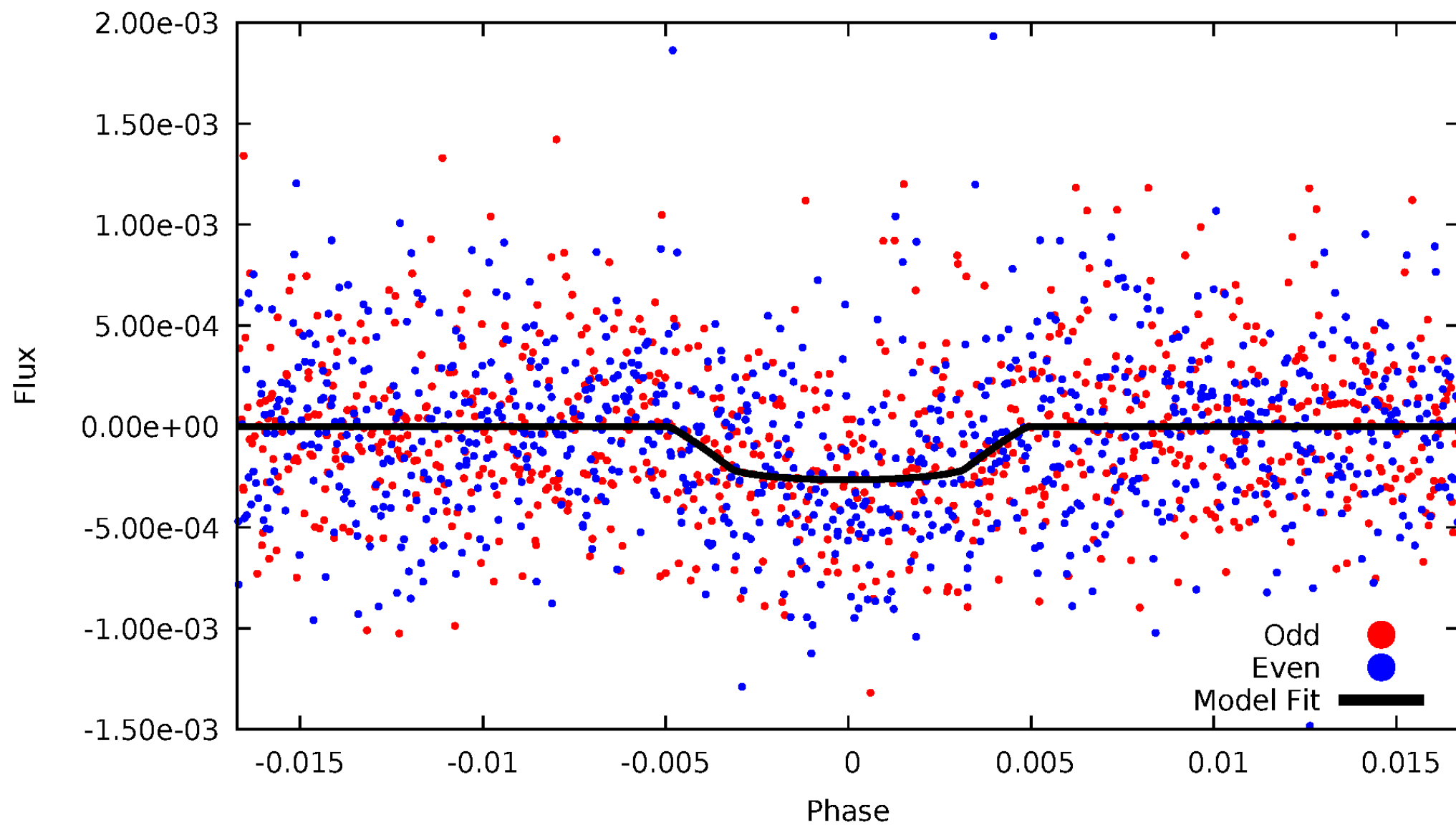


TCE 010611420-01



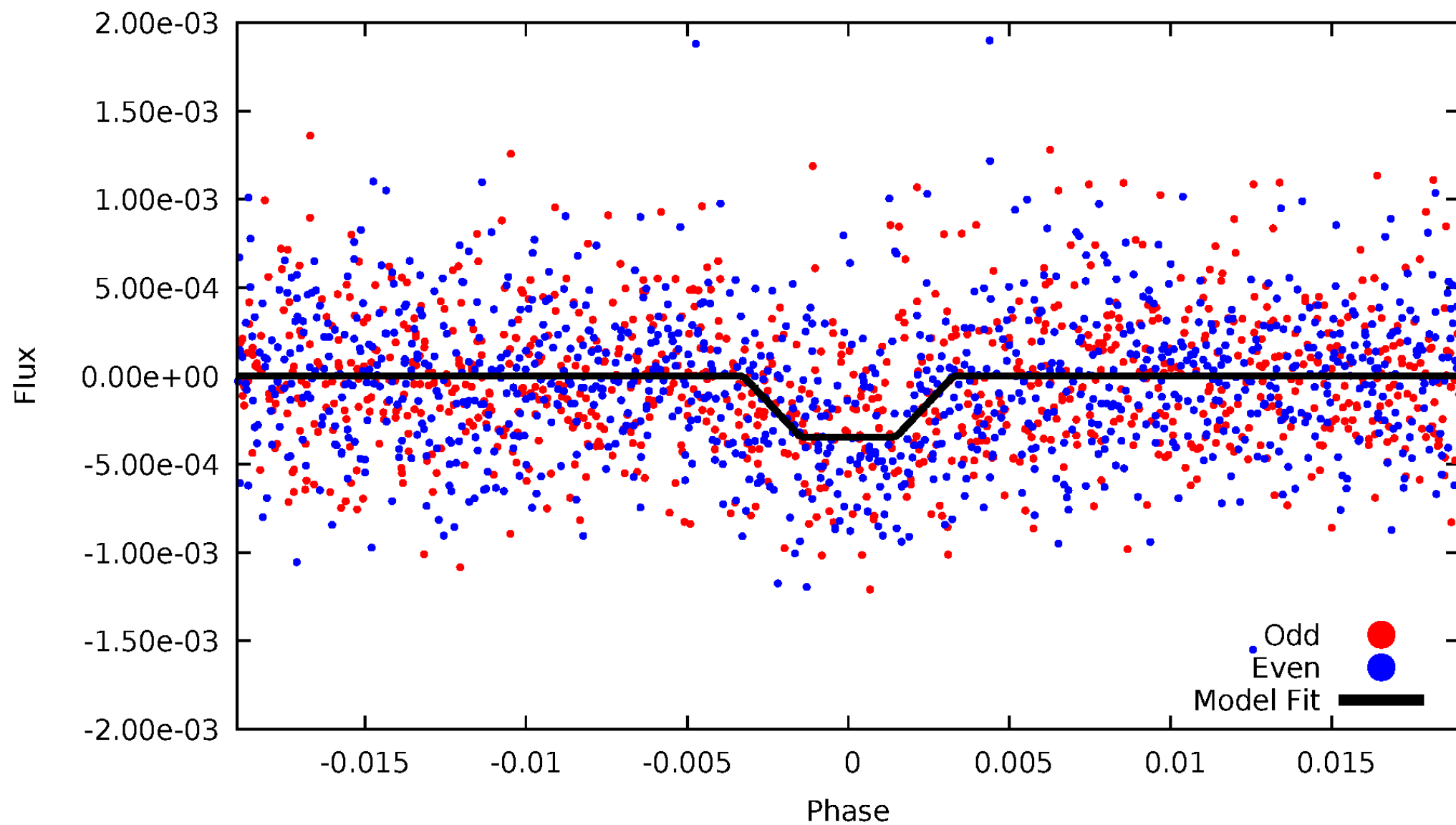
DV Odd/Even

TCE 010611420-01



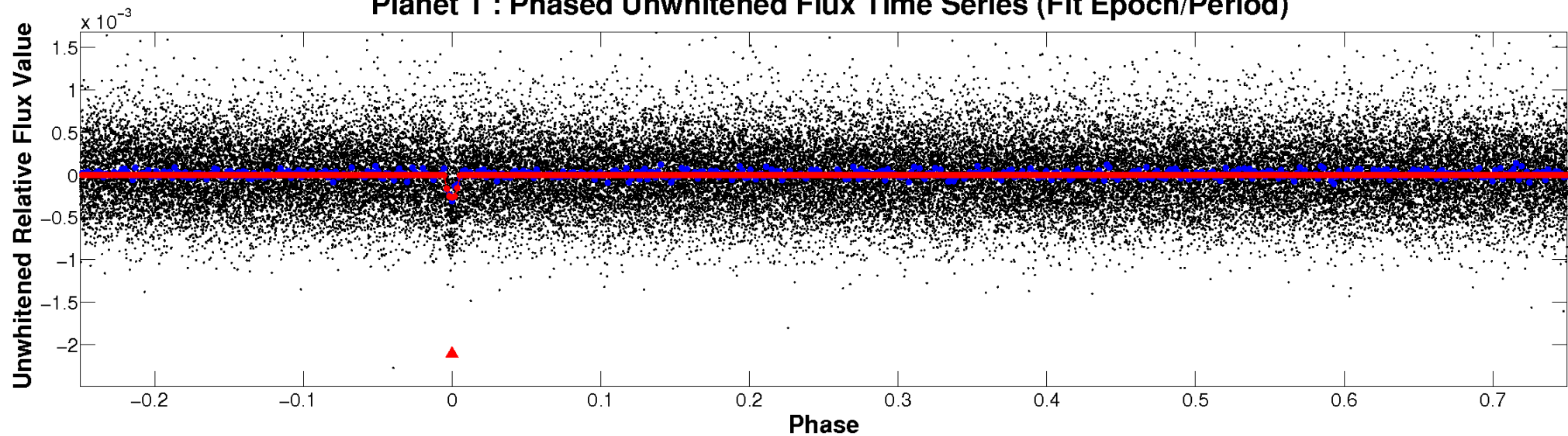
ALT Odd/Even

TCE 010611420-01

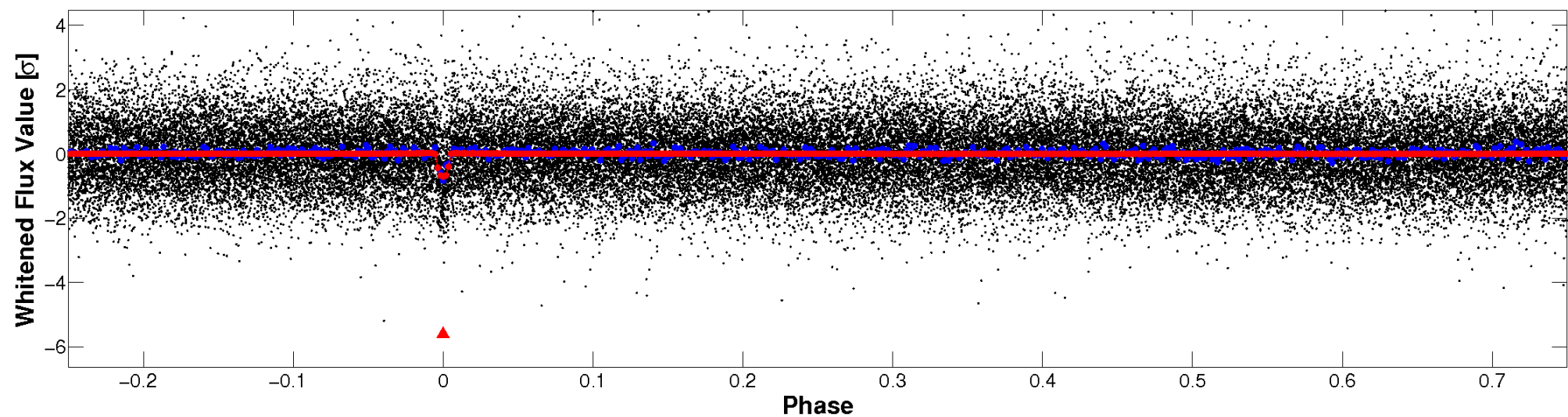


Non-Whitened Vs. Whitened Light Curve

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

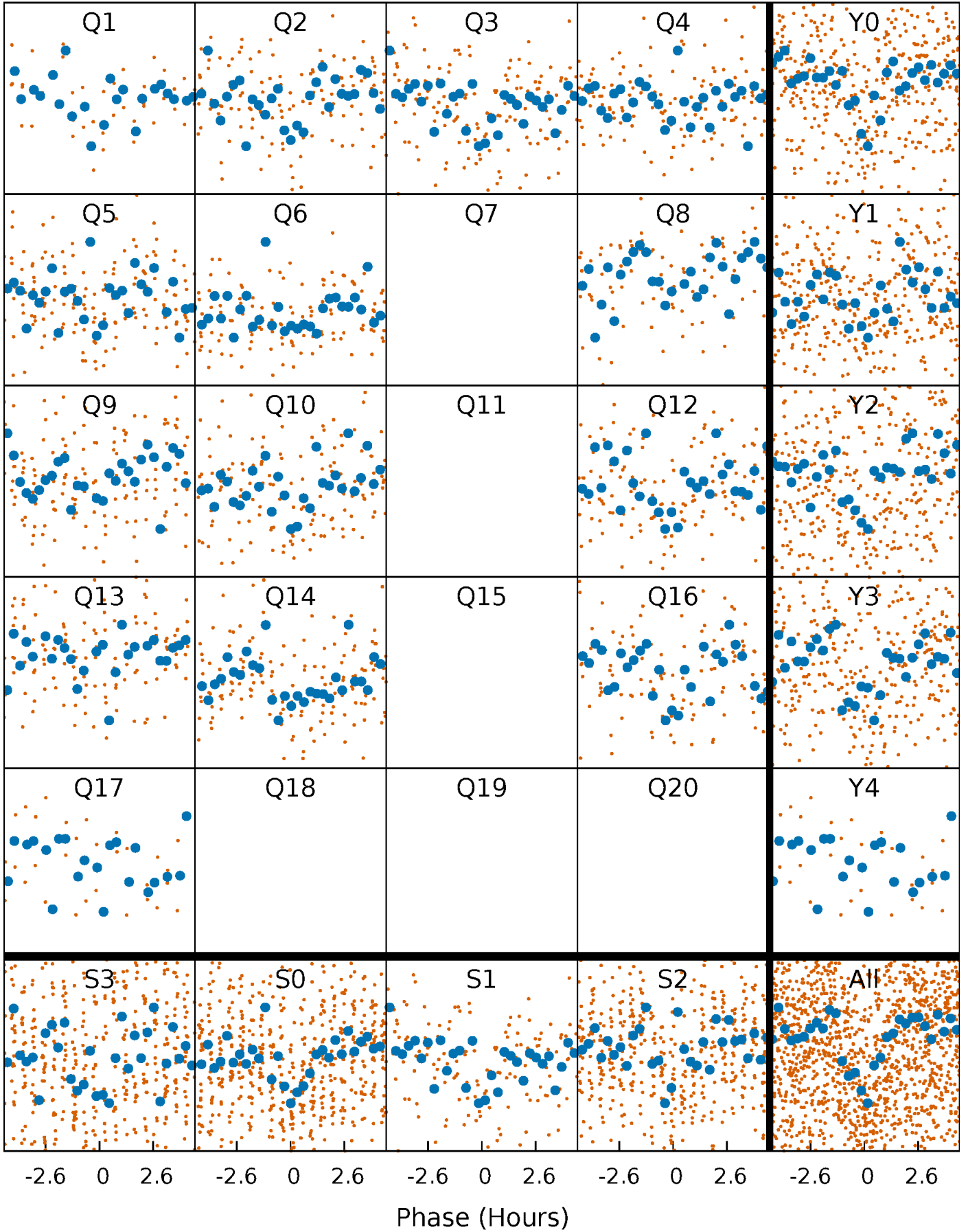


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



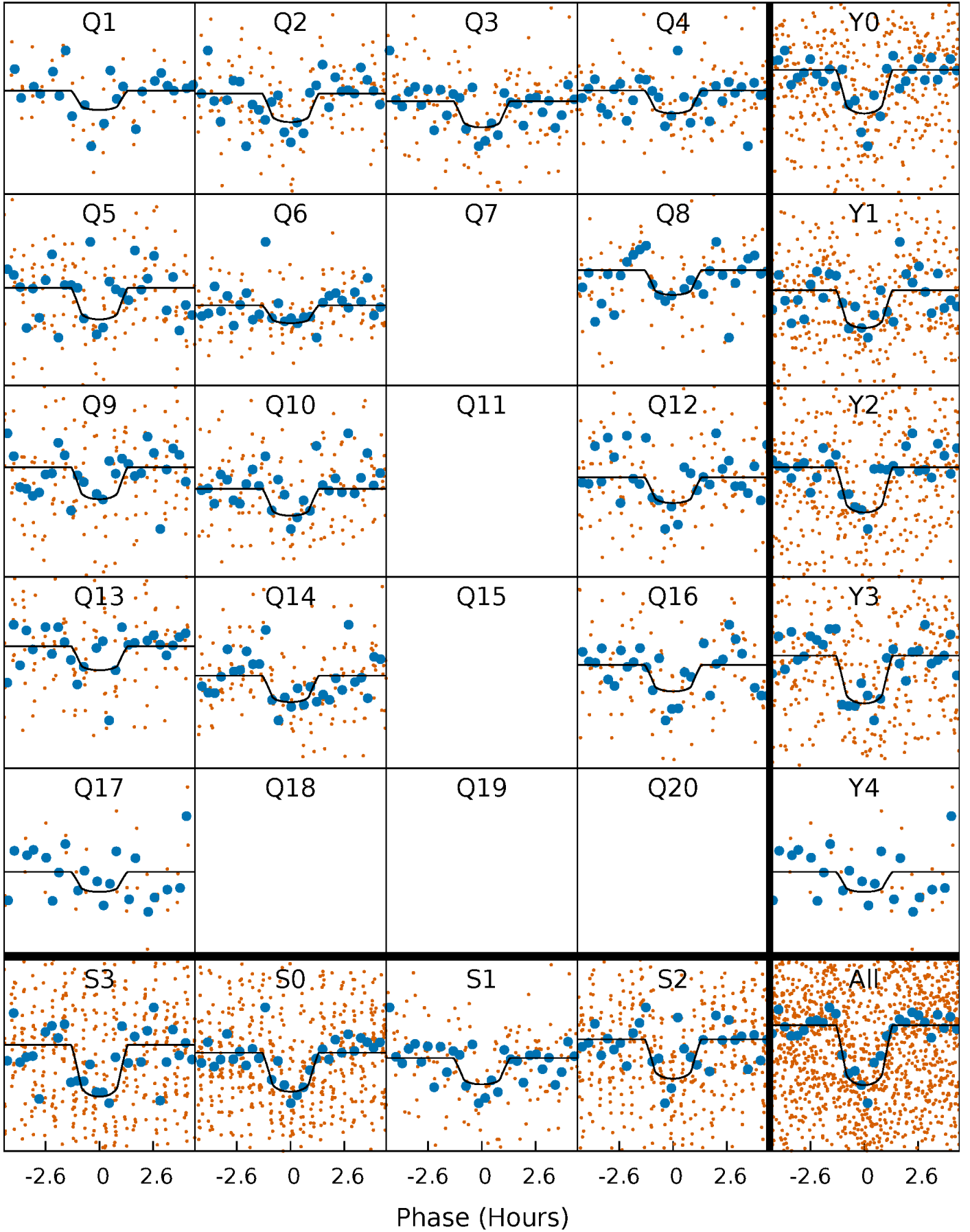
PDC Quarter-Phased Transit Curves

TCE 010611420-01 P= 11.505368 Days $T_0=135.099493$ (BKJD)



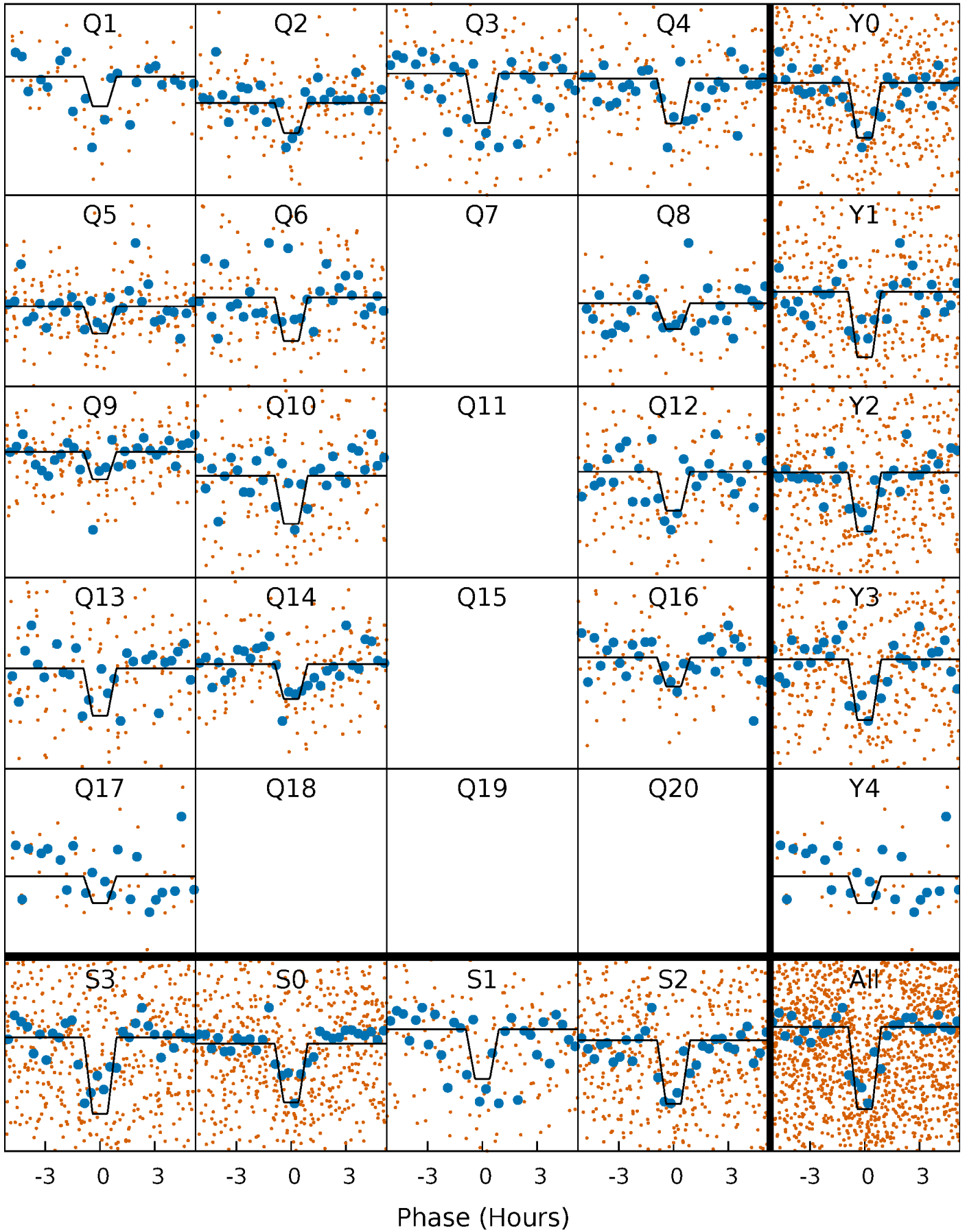
DV Quarter-Phased Transit Curves

TCE 010611420-01 P= 11.505368 Days $T_0=135.099493$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

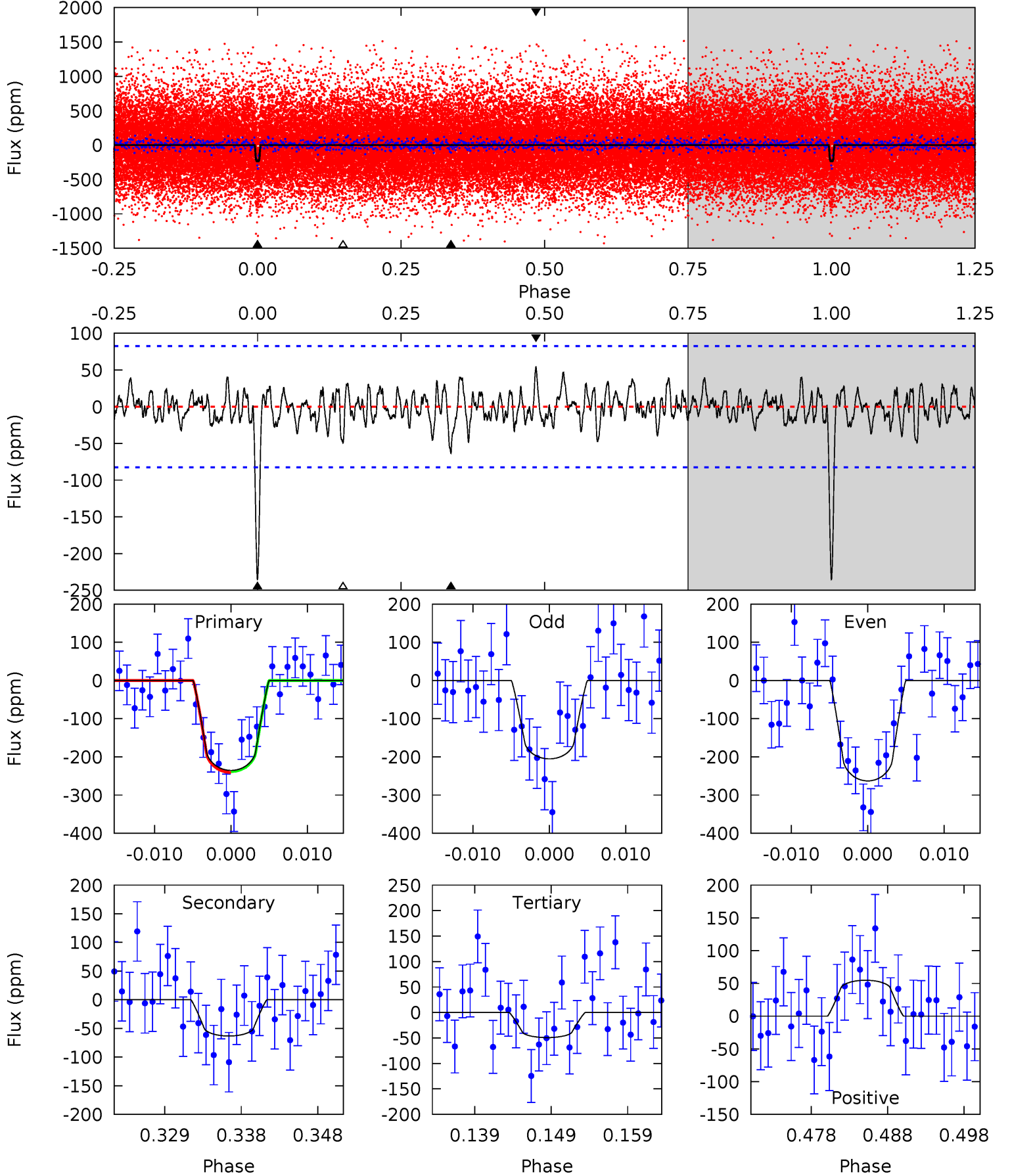
TCE 010611420-01 P= 11.505253 Days $T_0=135.102739$ (BKJD)



DV Model-Shift Uniqueness Test

010611420-01, $P = 11.505368$ Days, $E = 123.594125$ Days

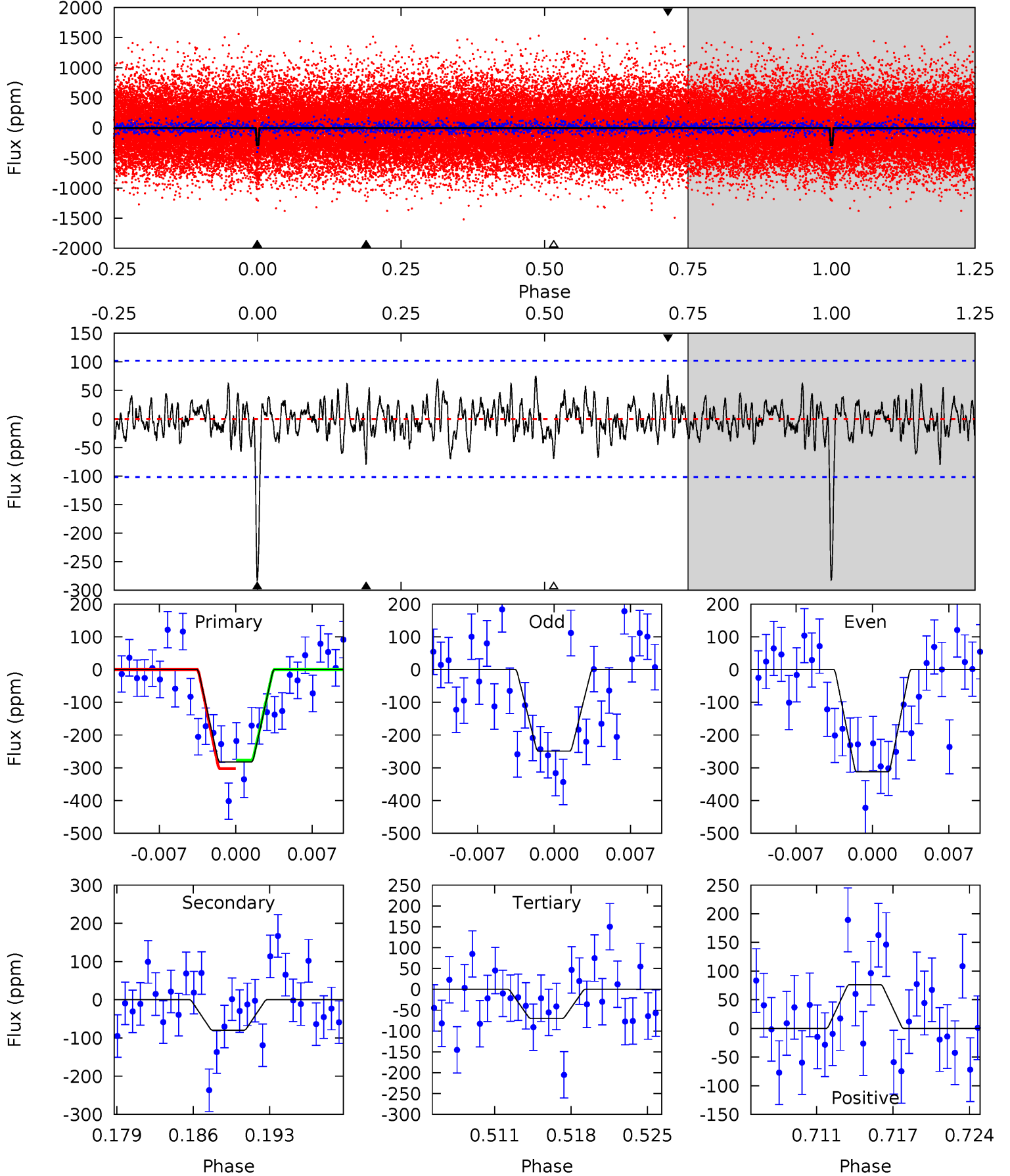
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.3	3.85	3.00	3.33	5.03	2.58	1.06	11.3	11.0	0.85	0.52	1.76	1.05	0.19	0.08



Alt Model-Shift Uniqueness Test

010611420-01, $P = 11.505253$ Days, $E = 123.597486$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.2	4.00	3.50	3.82	5.10	2.71	1.21	10.7	10.4	0.49	0.18	1.59	1.10	0.21	0.64



Stellar Parameters For KIC 010611420

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6355^{+172}_{-210}	$4.410^{+0.062}_{-0.188}$	$-0.080^{+0.250}_{-0.300}$	$1.108^{+0.335}_{-0.134}$	$1.151^{+0.154}_{-0.154}$	$1.191^{+0.389}_{-0.602}$
	+3%/-3%	+1%/-4%	+312%/-375%	+30%/-12%	+13%/-13%	+33%/-51%
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 010611420-01 / KOI 3148.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-63 ± 16	$2.33^{+1.68}_{-1.35}$	1296^{+88}_{-60}	4389^{+2068}_{-808}	70^{+297}_{-48}
Alt.	-80 ± 20	$2.54^{+1.59}_{-1.47}$	1299^{+81}_{-70}	4377^{+2186}_{-694}	71^{+351}_{-44}

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

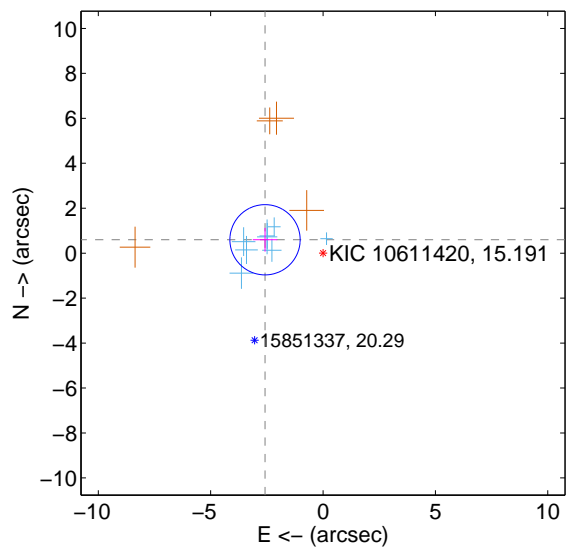
Supplemental centroid analysis for 010611420-01. Kepler magnitude: 15.19. Transit SNR 12.34

There are 8 quarters with good PRF difference image offsets

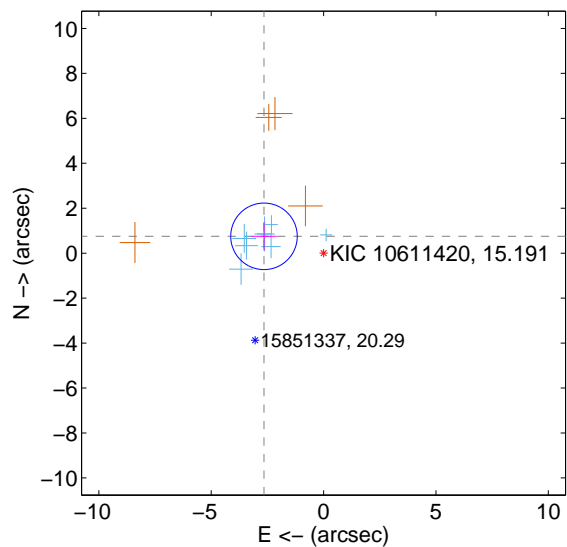
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.650 ± 0.521	5.08	2.582 ± 0.542	0.597 ± 0.528
PRF-fit source offset from KIC position	2.756 ± 0.493	5.59	2.652 ± 0.559	0.750 ± 0.628
photometric centroid source offset	5.11 ± 1.29	3.97	5.05 ± 1.29	0.80 ± 1.33

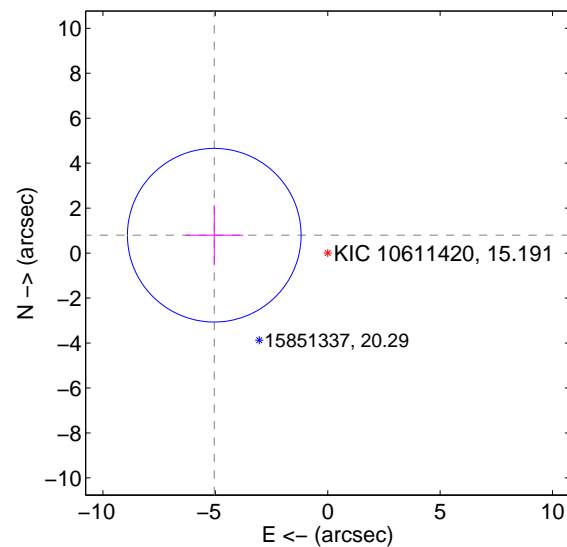
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

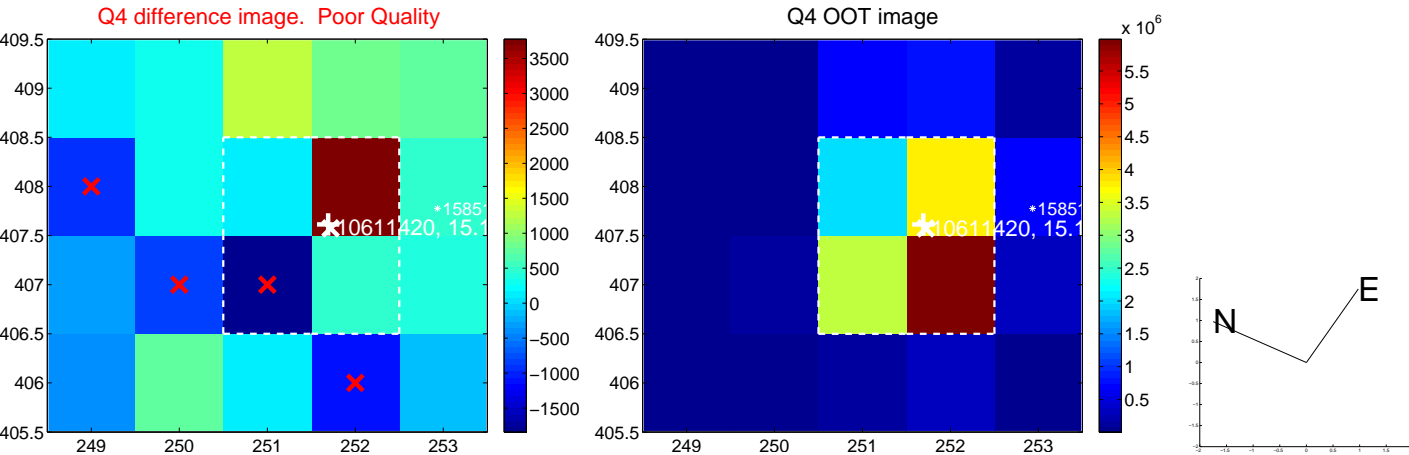
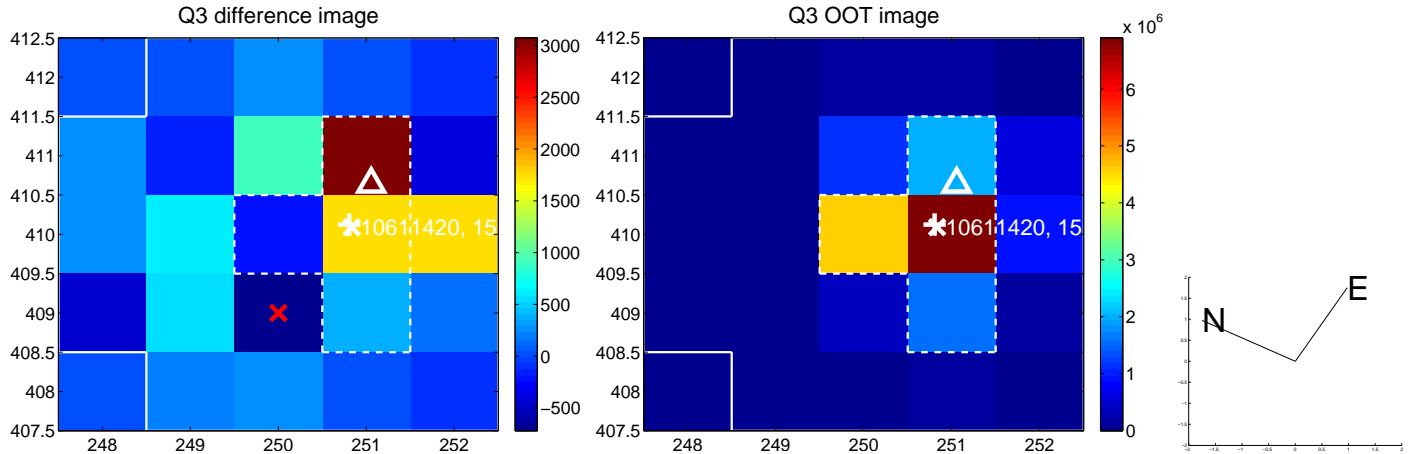
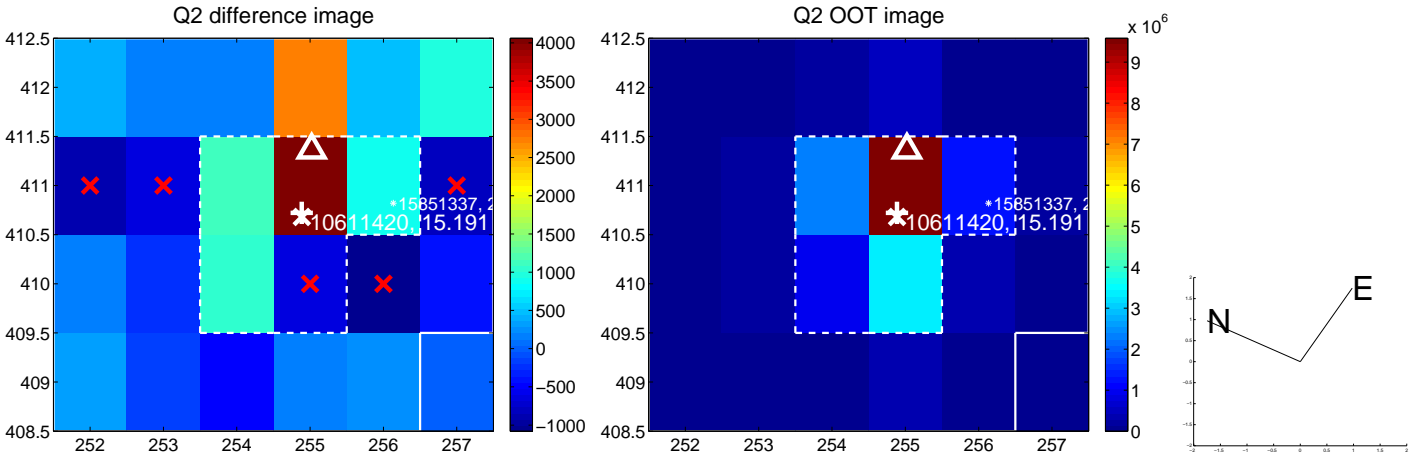
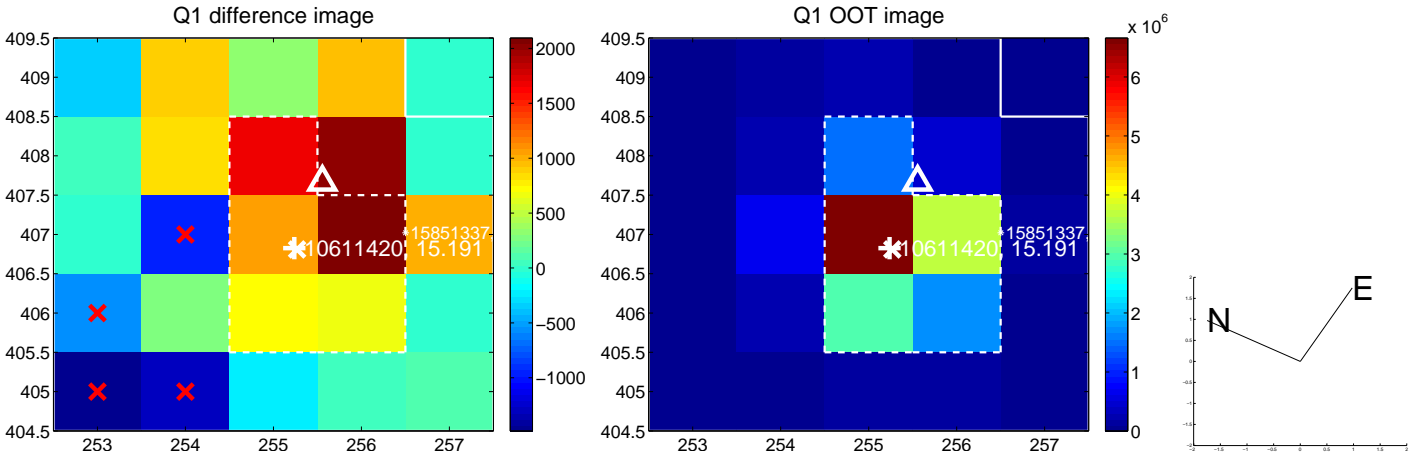


offset from photometric centroids

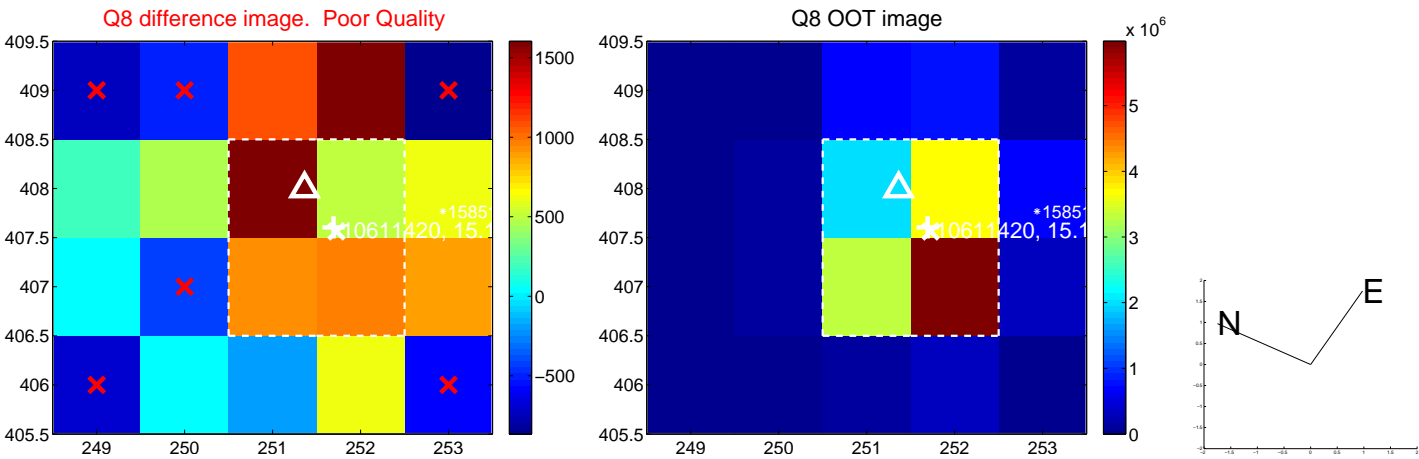
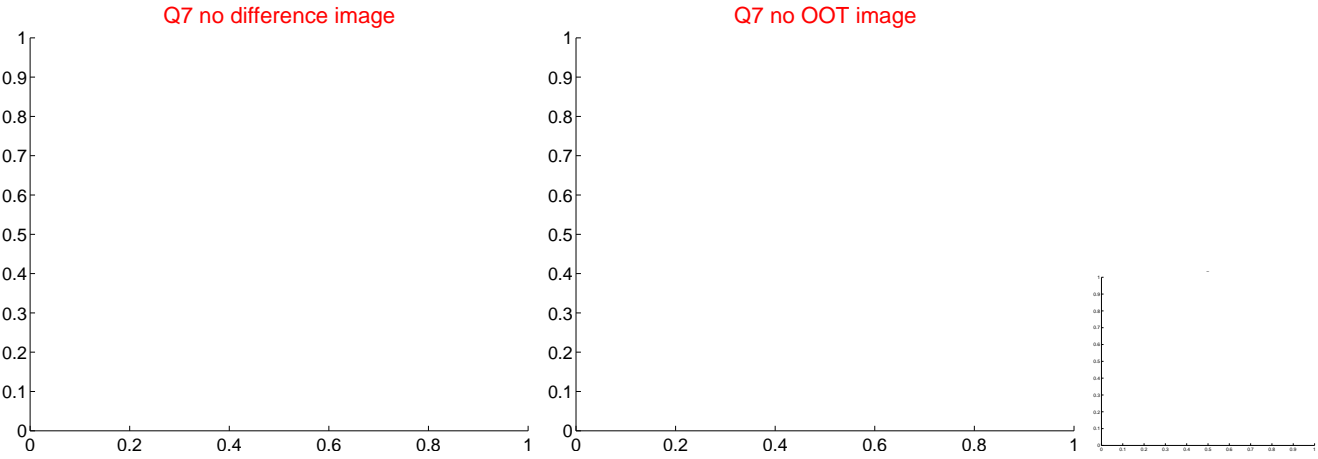
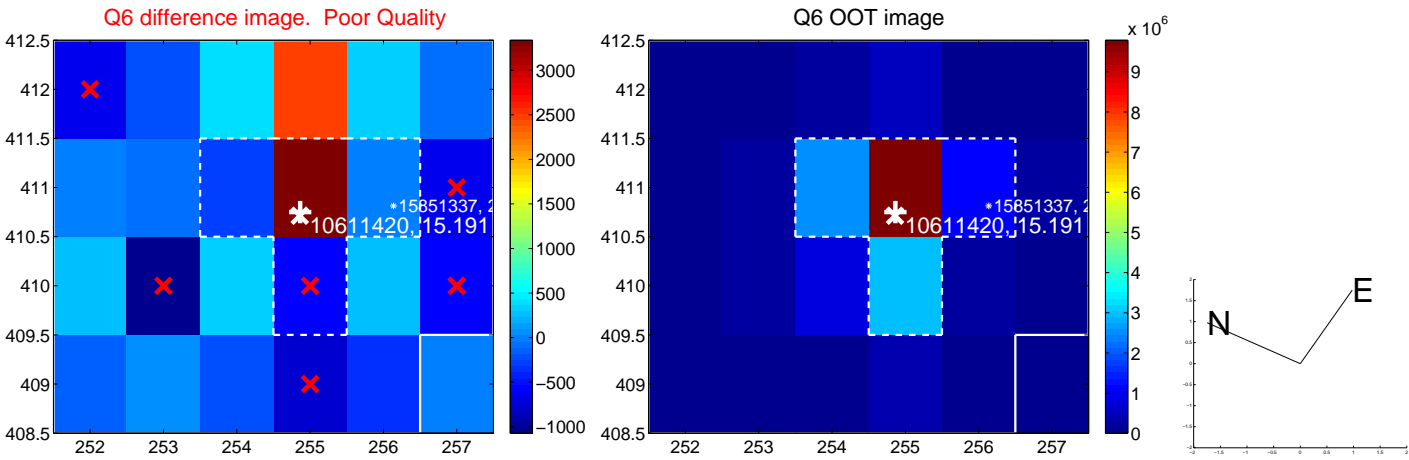
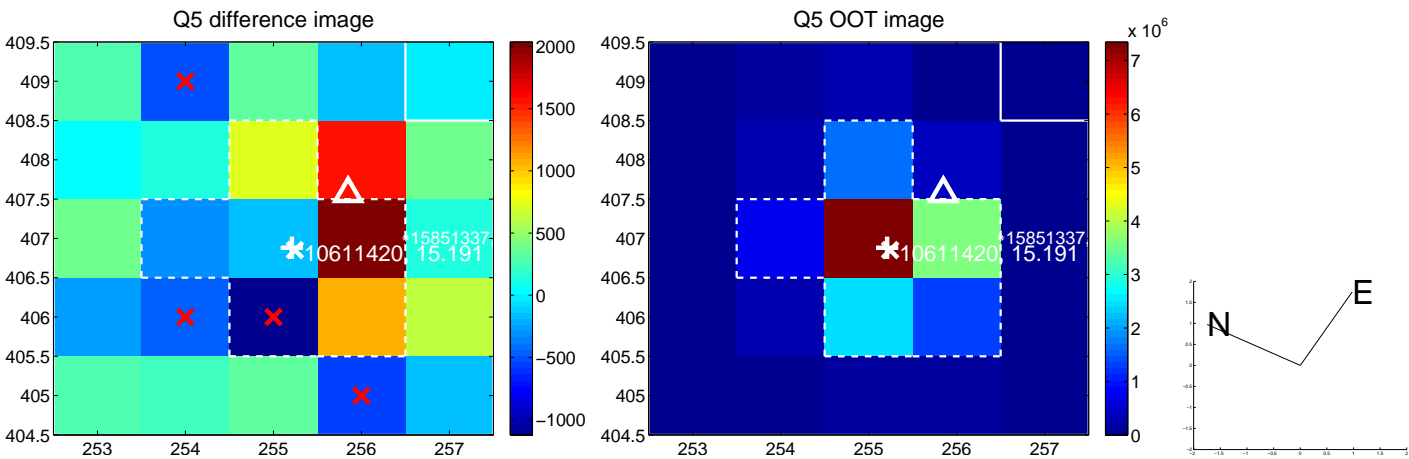


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

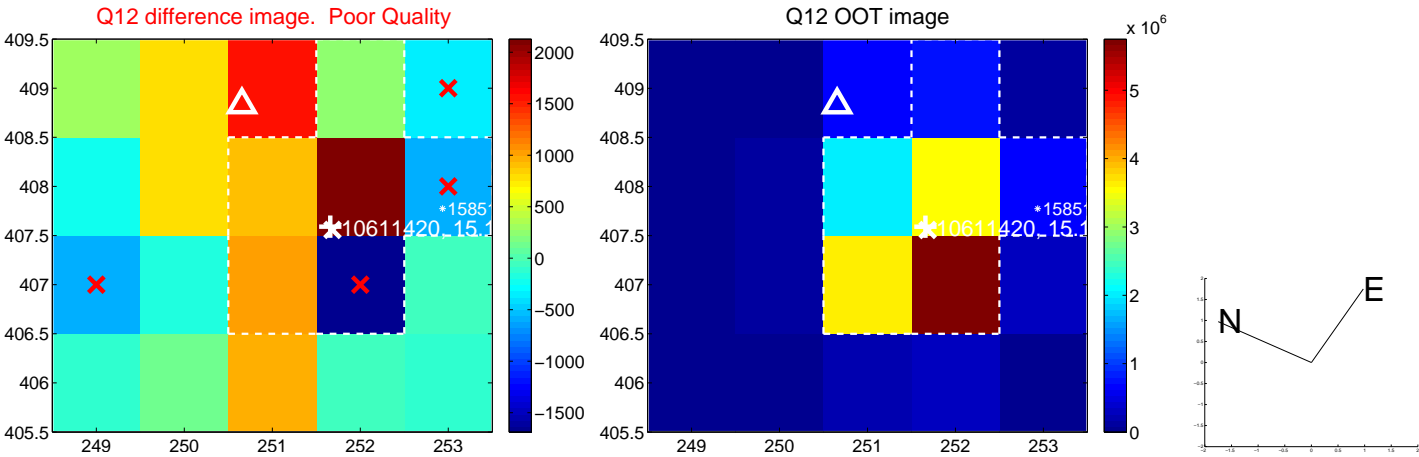
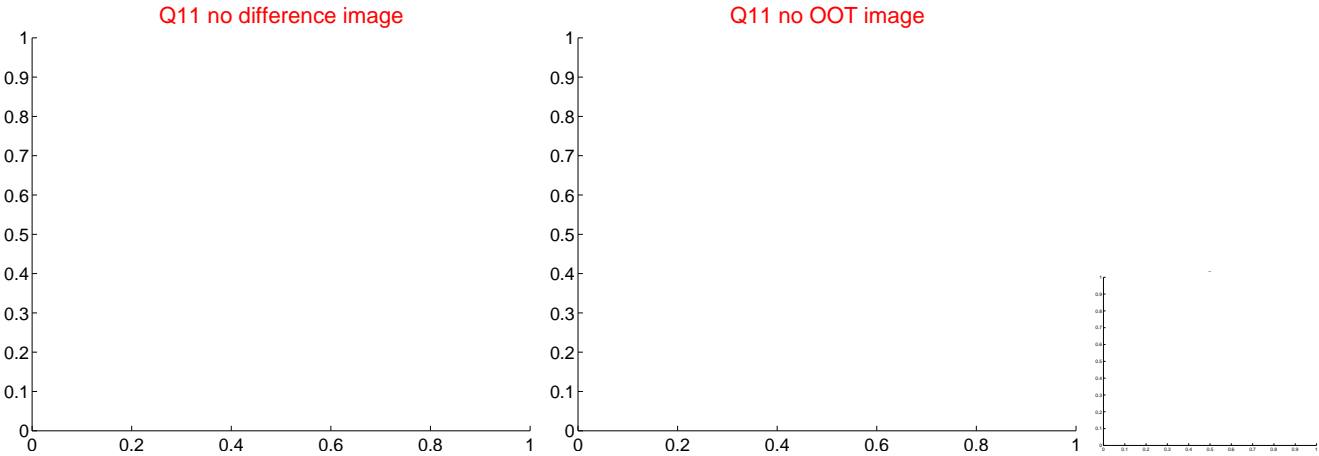
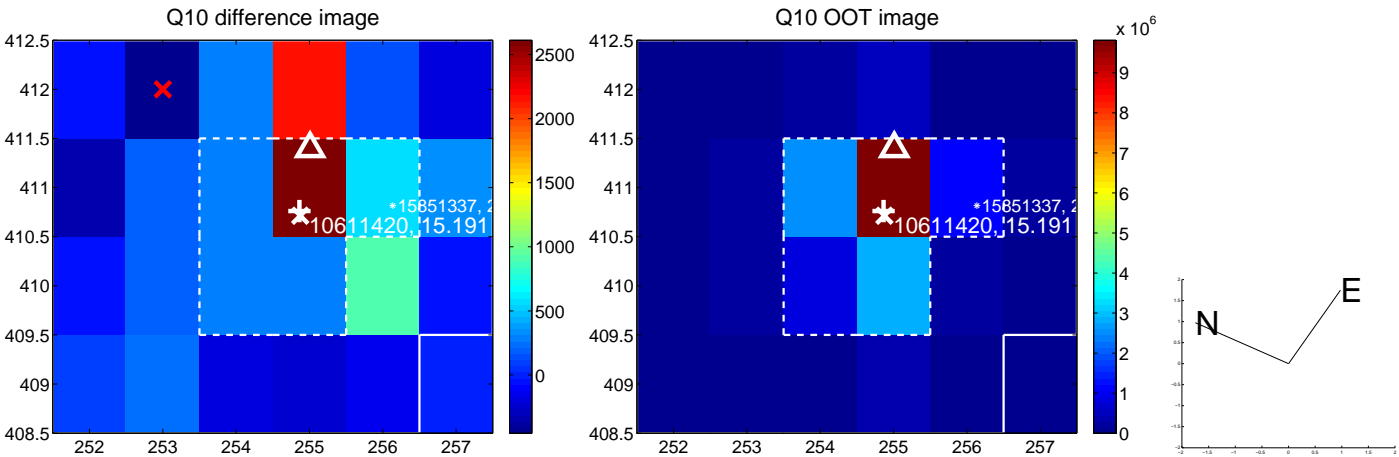
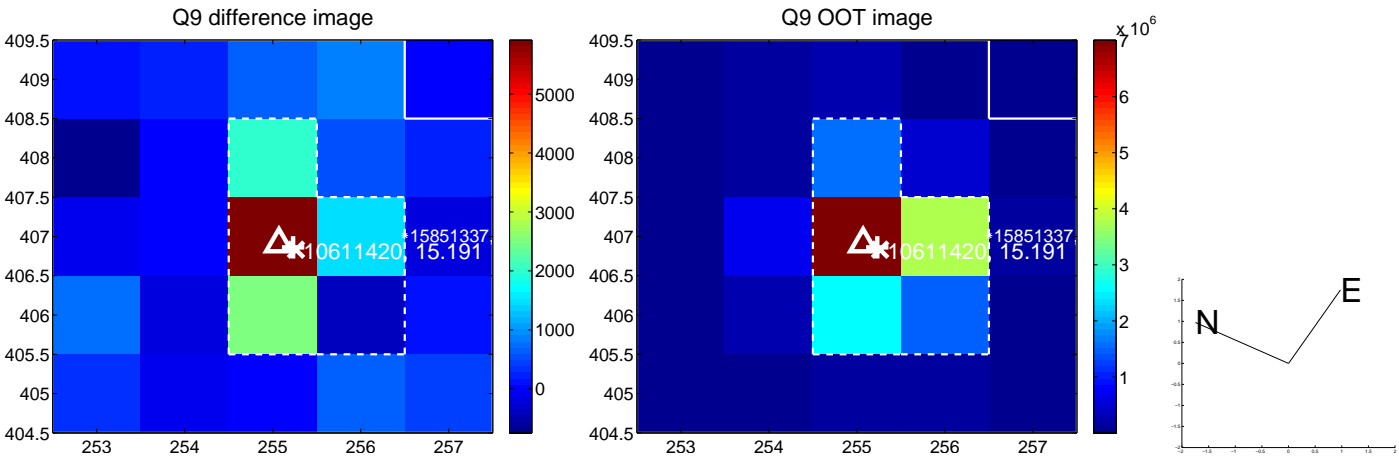
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



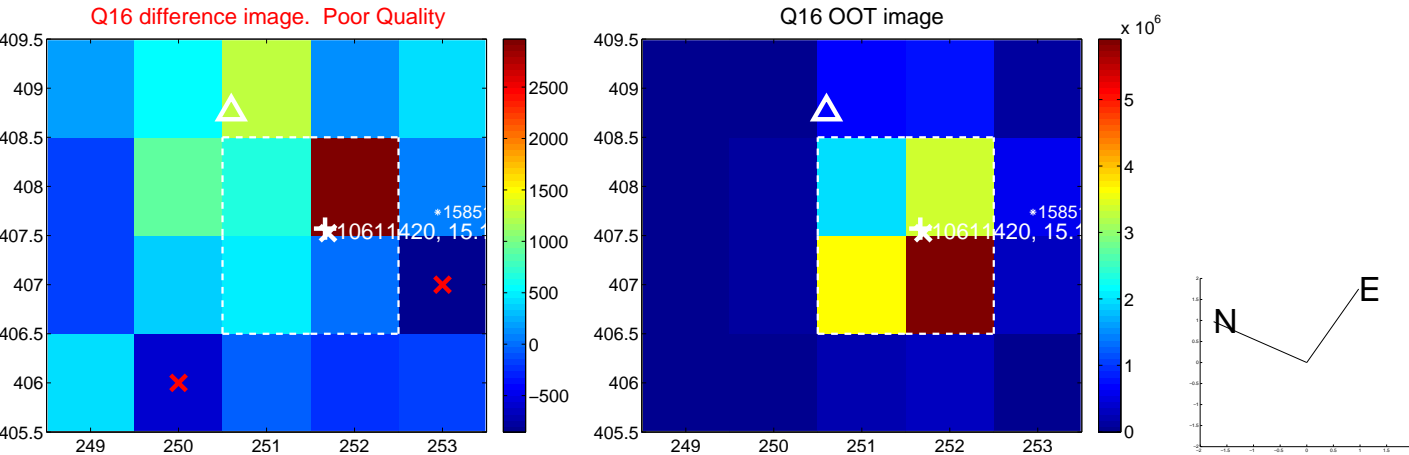
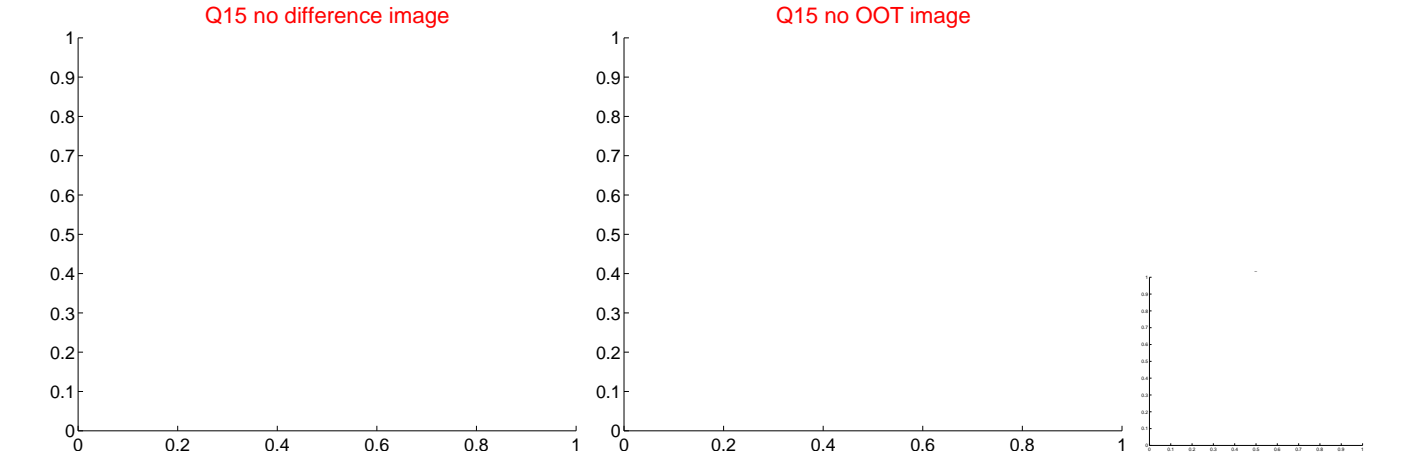
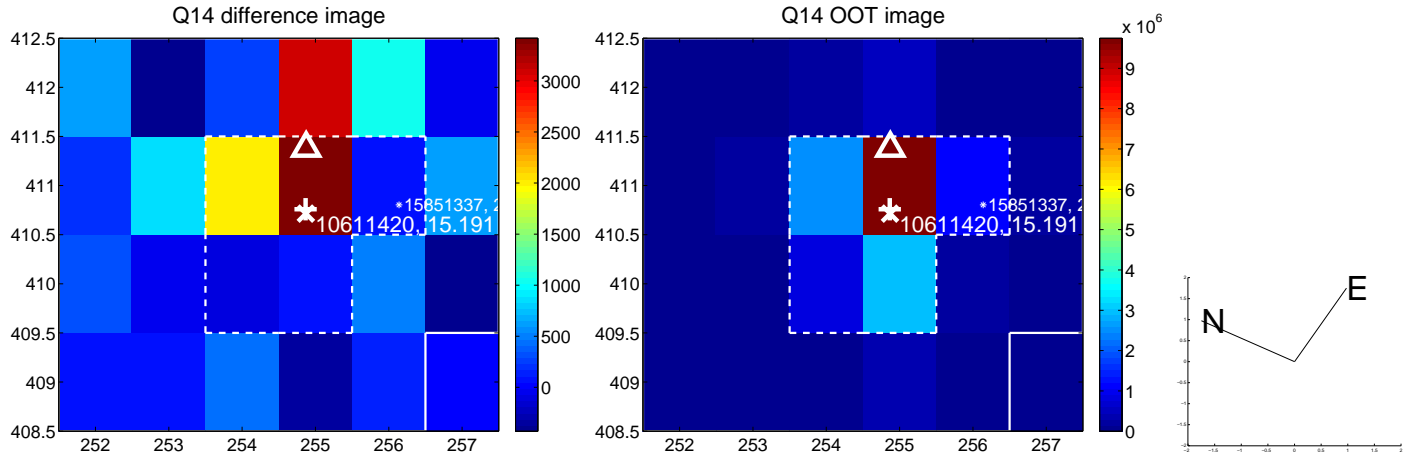
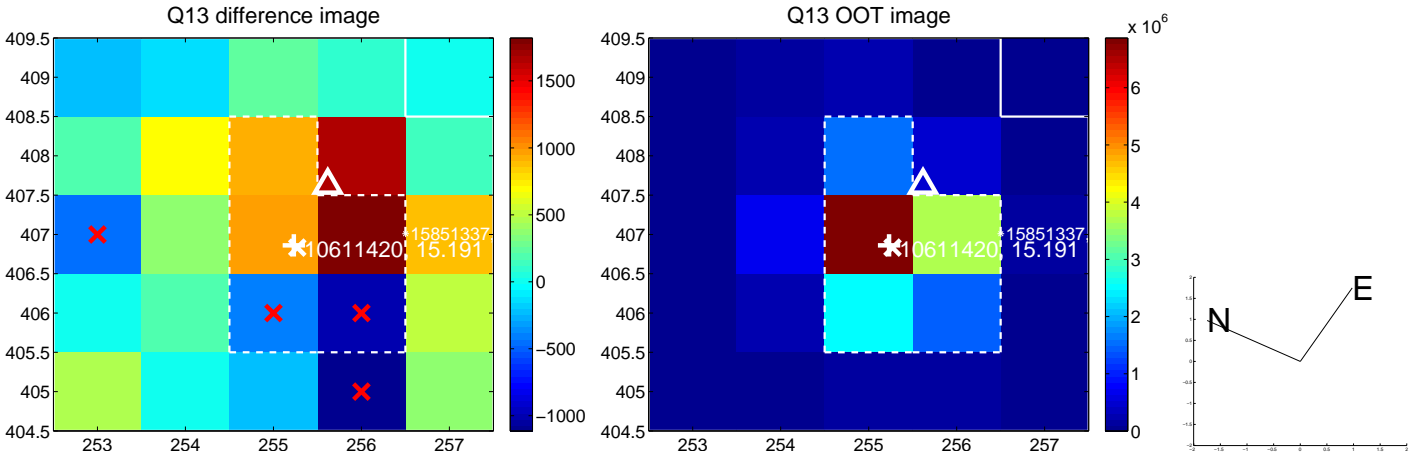
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



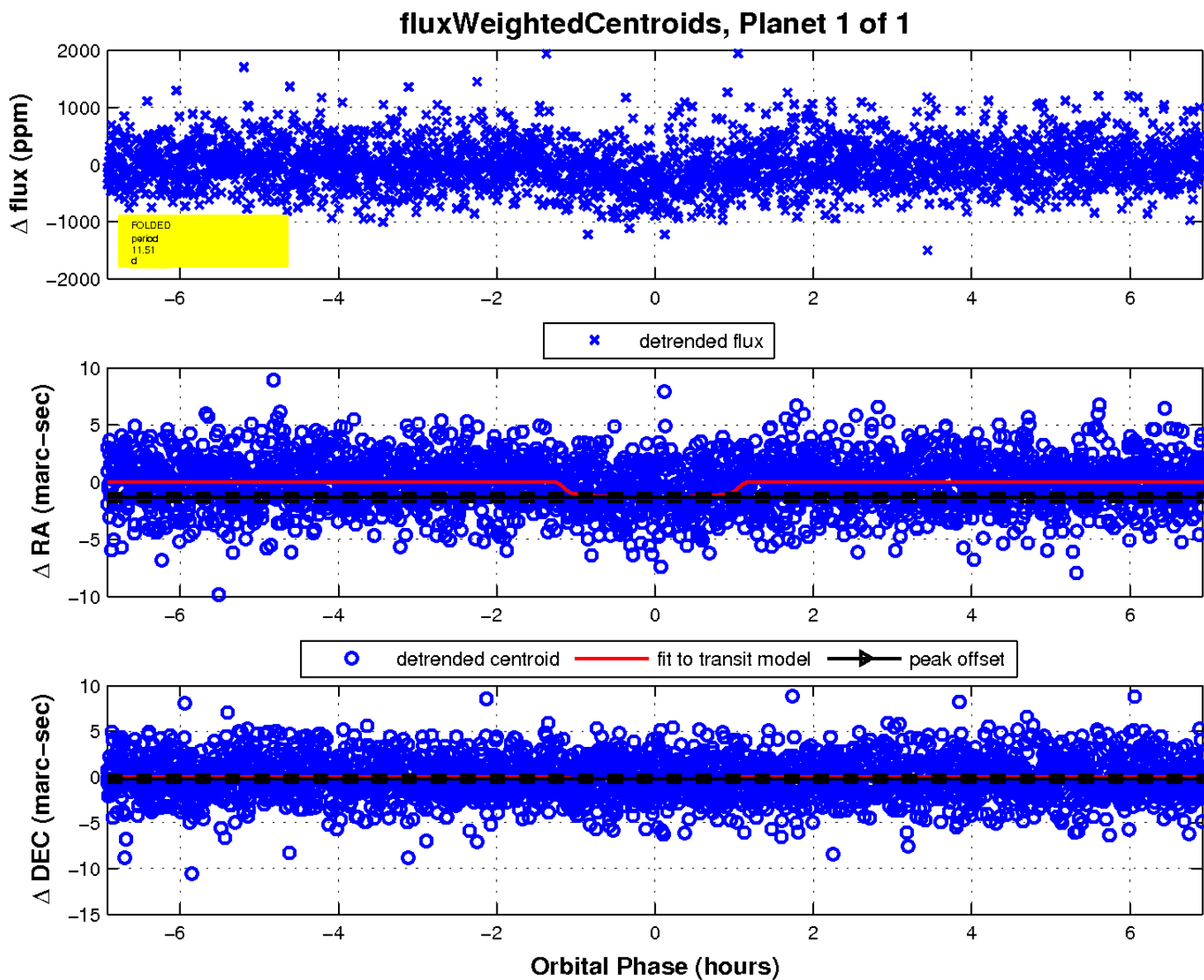
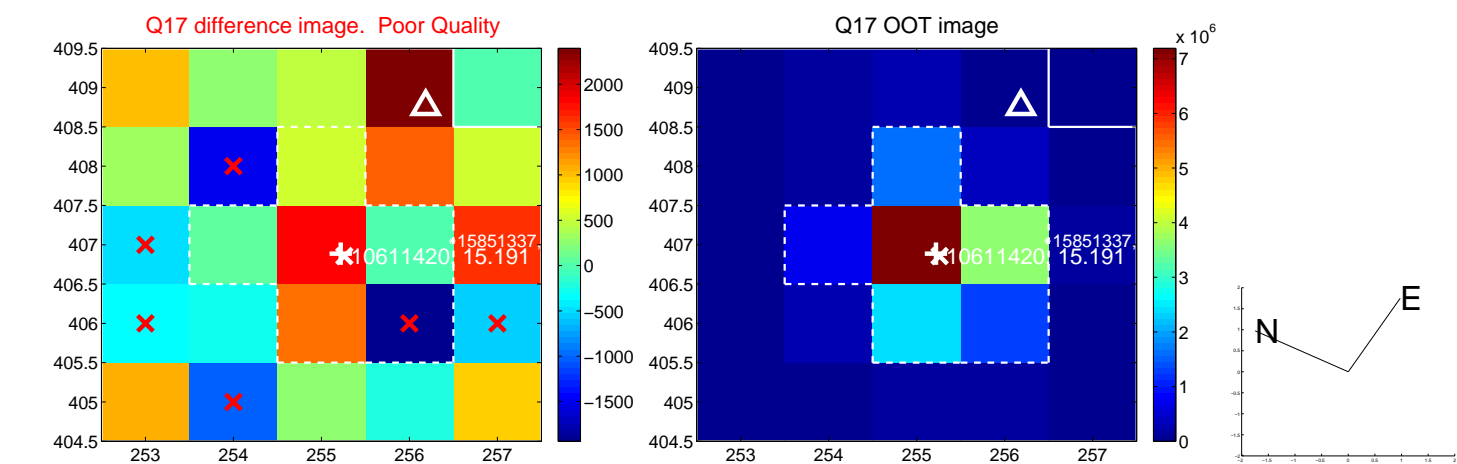
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

