

KIC 011413812

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})
011413812-01	OBS	1885.01	5.653793	131.710075	366.5	2.105	33.0	37.3	0.93	5988	2.11	256.53

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011413812-01	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.

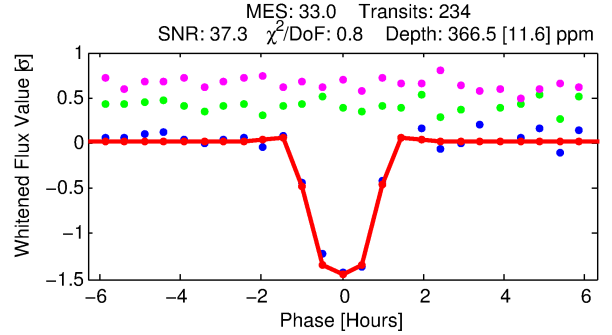
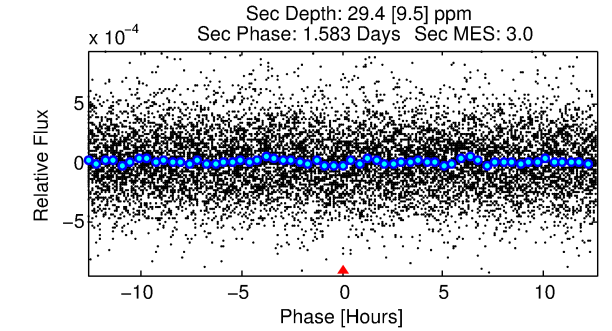
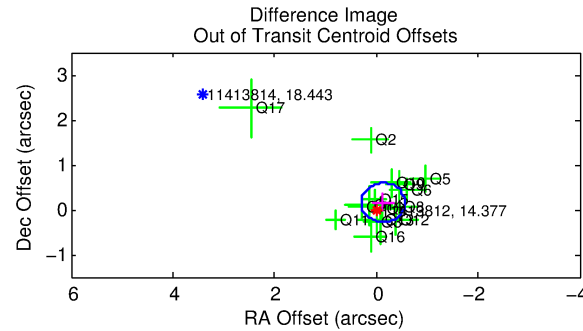
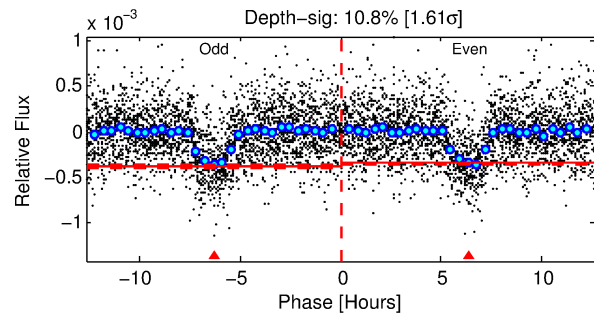
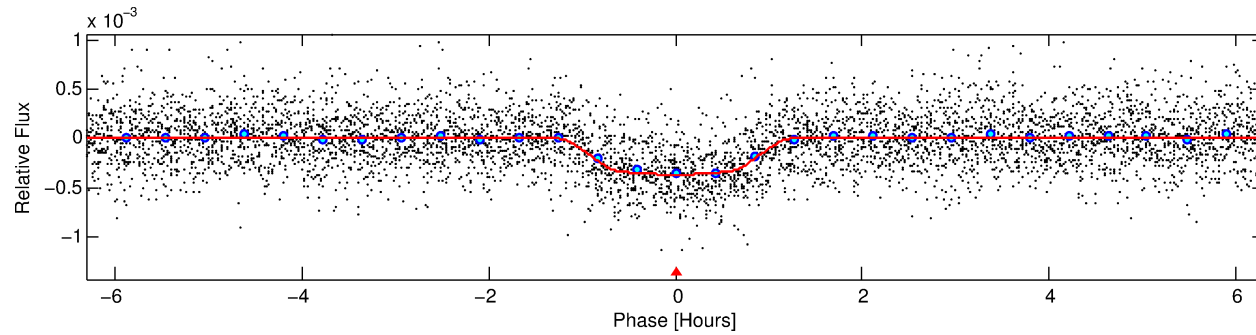
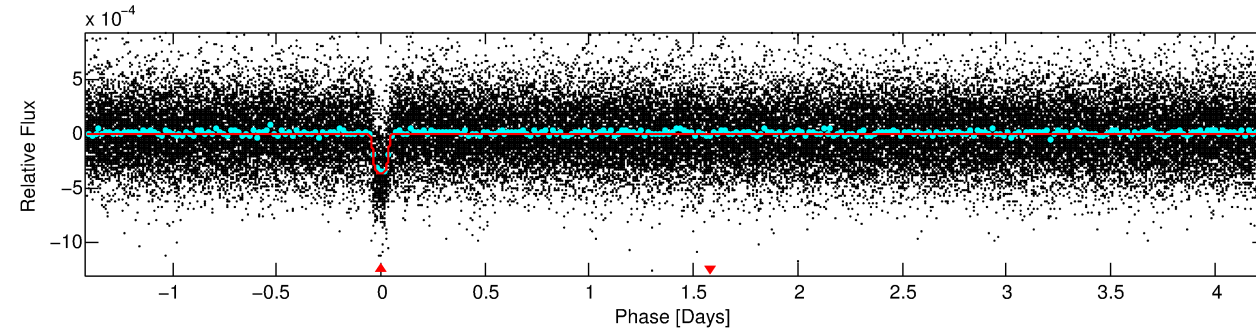
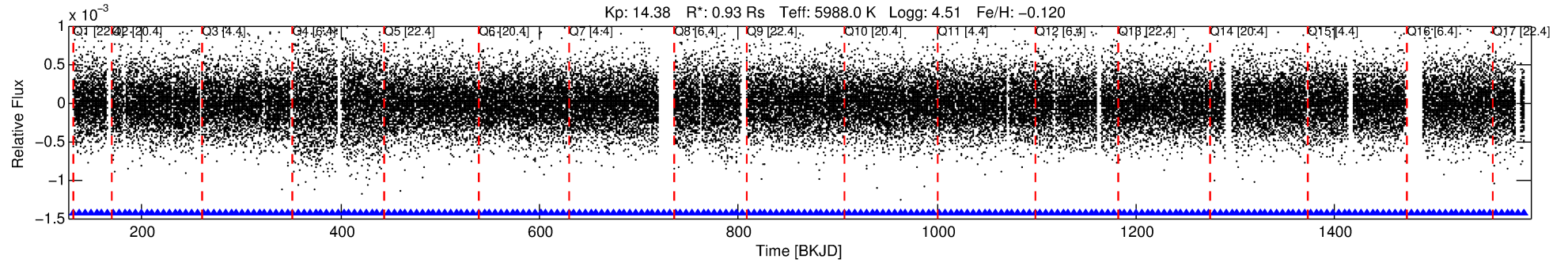
Ephemeris Match Information For 011413812-01

No Significant Match Found

DV One-Page Summary

KIC: 11413812 Candidate: 1 of 1 Period: 5.654 d

KOI: K01885.01 Corr: 0.965



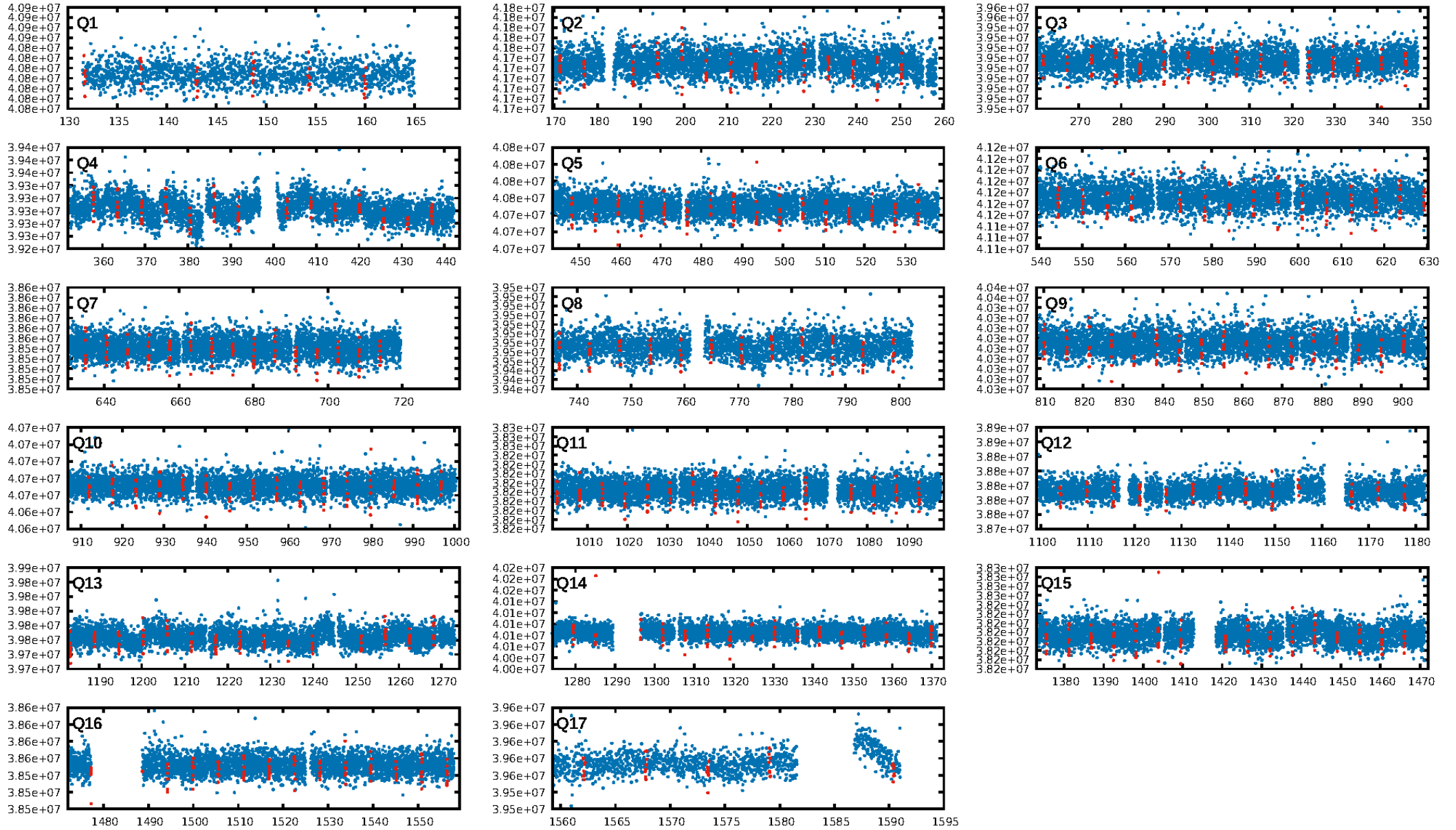
DV Fit Results:

Period = 5.65379 [0.00001] d
Epoch = 131.7101 [0.0012] BKJD
Rp/R* = 0.0207 [0.0029]
a/R* = 9.94 [6.97]
b = 0.90 [0.15]
Seff = 256.53 [106.83]
Teq = 1020 [106] K
Rp = 2.11 [0.73] Re
a = 0.0626 [0.0169] AU
Ag = 14.18 [8.32] [1.58 σ]
Teffp = 3062 [342] K [5.70 σ]

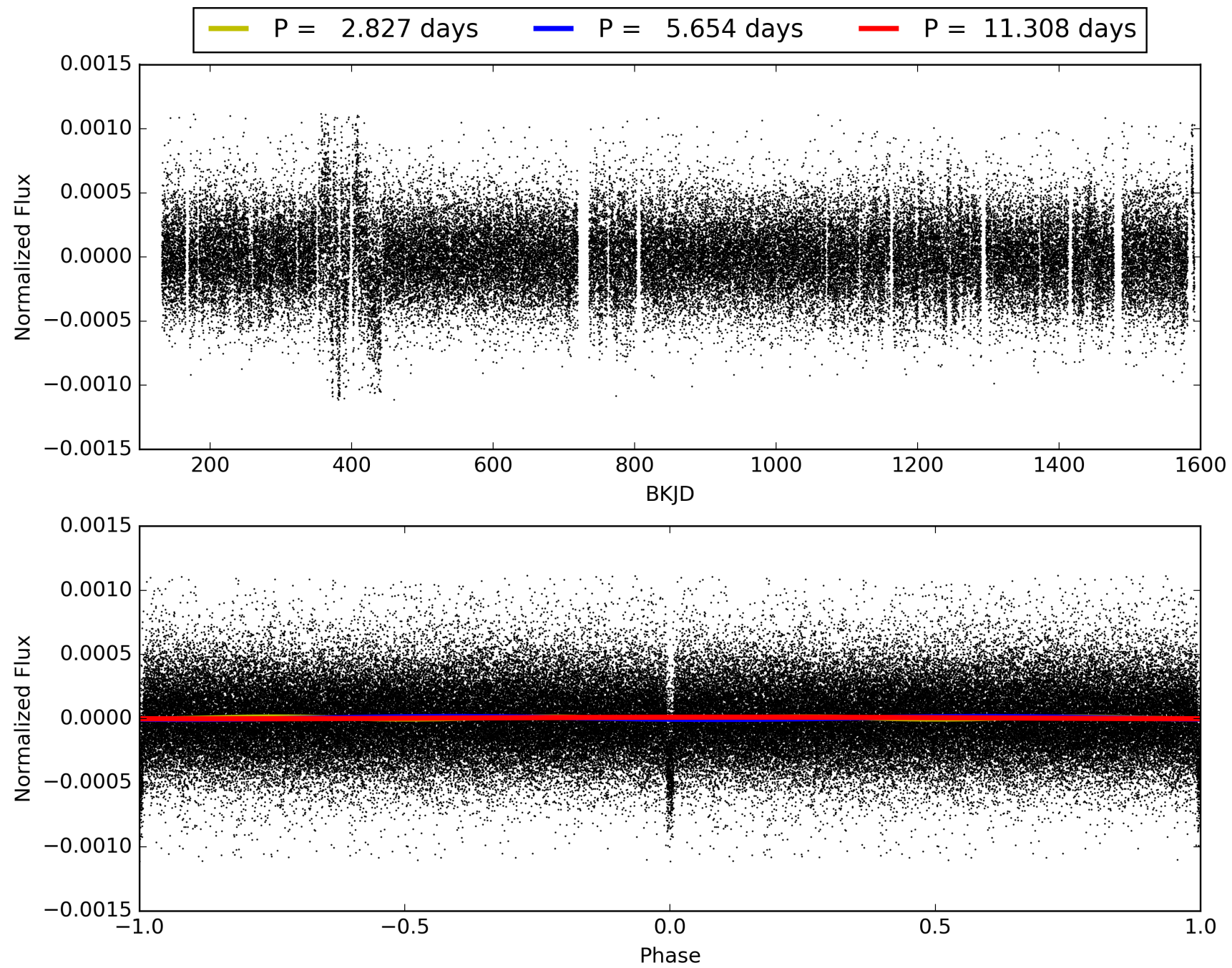
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.36e-234
RollingBand-fgt: 1.00 [223/223]
GhostDiagnostic-chr: 4.297
Centroid-sig: 18.3%
Centroid-so: 0.573 arcsec [1.71 σ]
OotOffset-rm: 0.204 arcsec [1.42 σ]
KicOffset-rm: 0.180 arcsec [1.18 σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.94 [15/16]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 011413812-01, PDC Light Curves

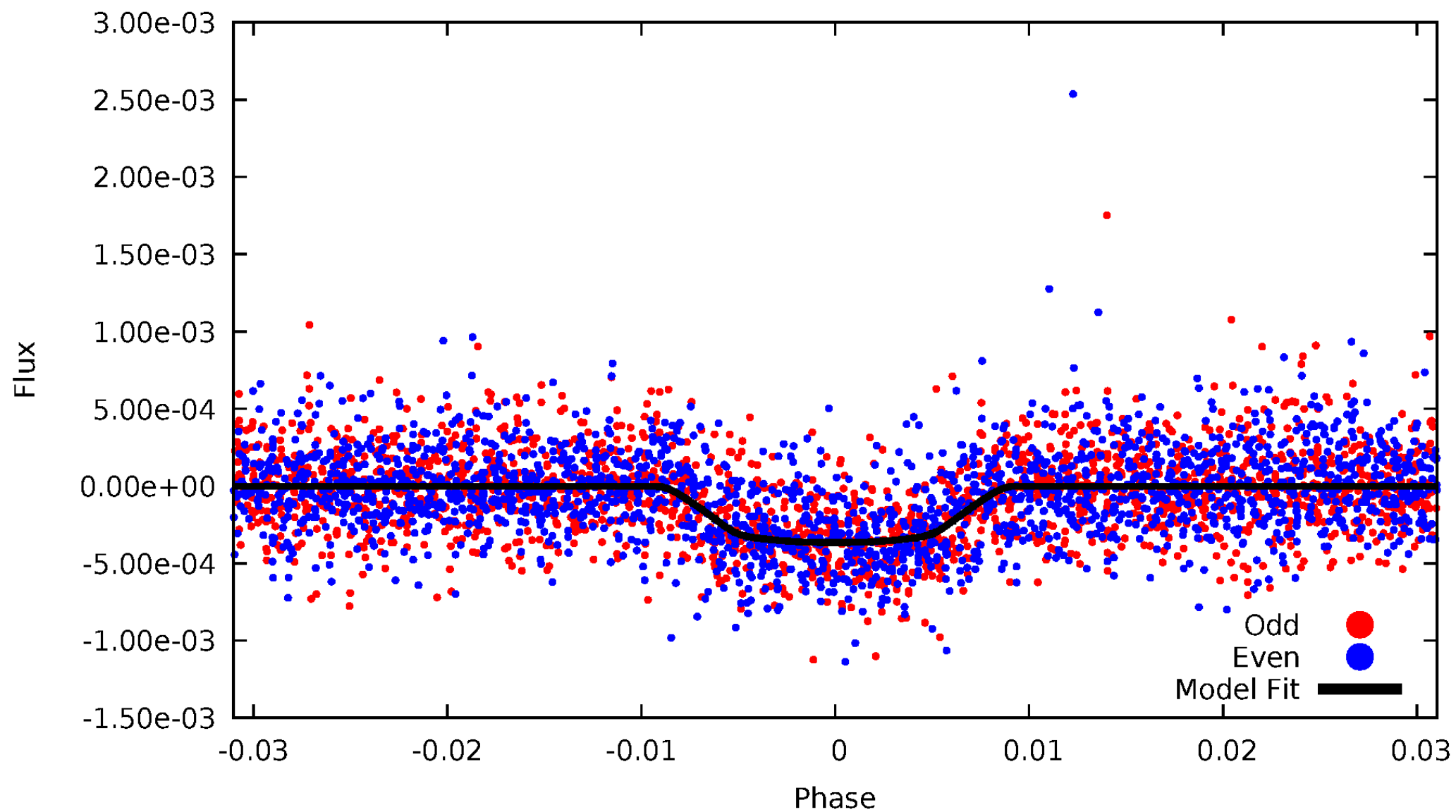


TCE 011413812-01



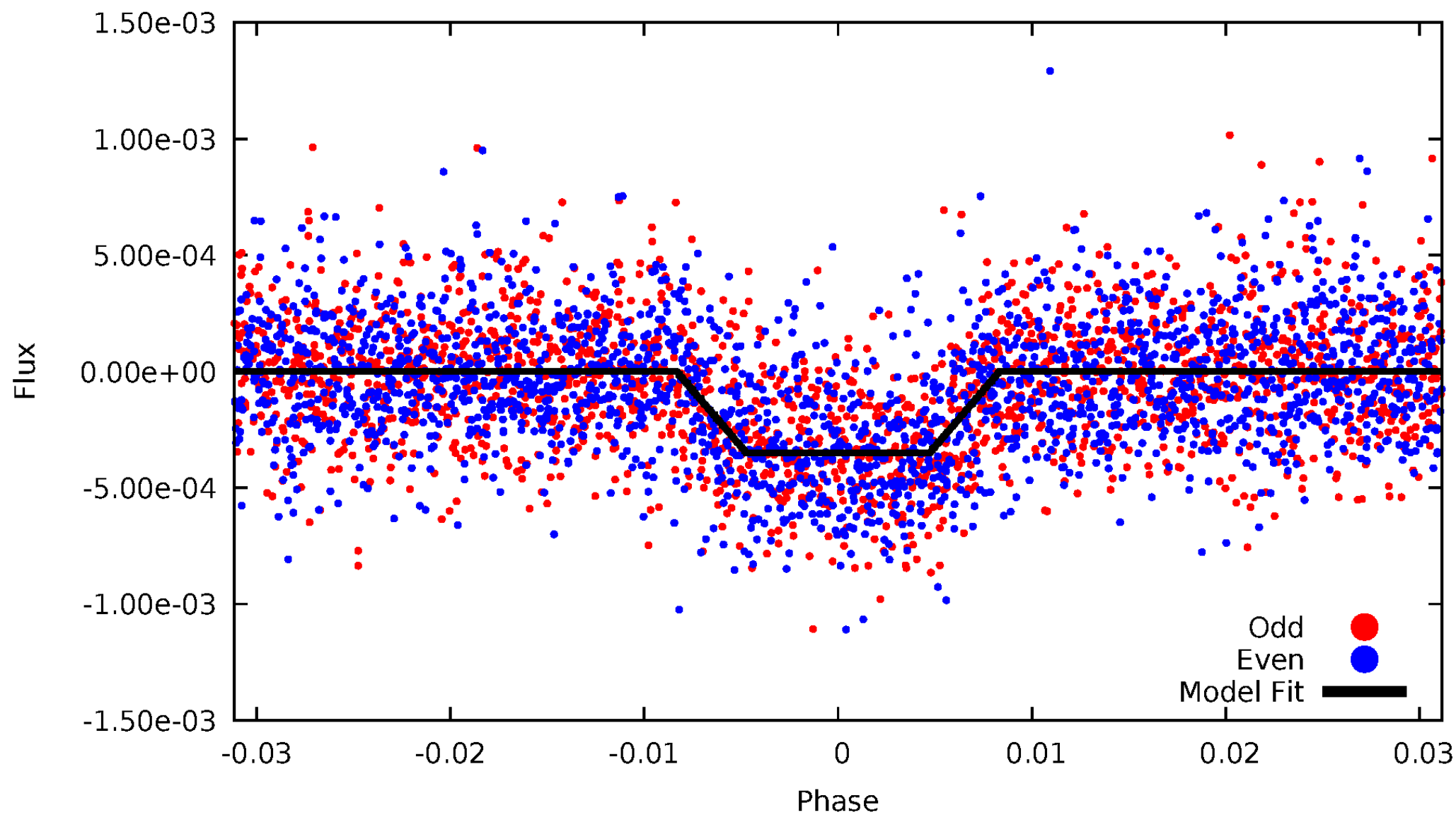
DV Odd/Even

TCE 011413812-01

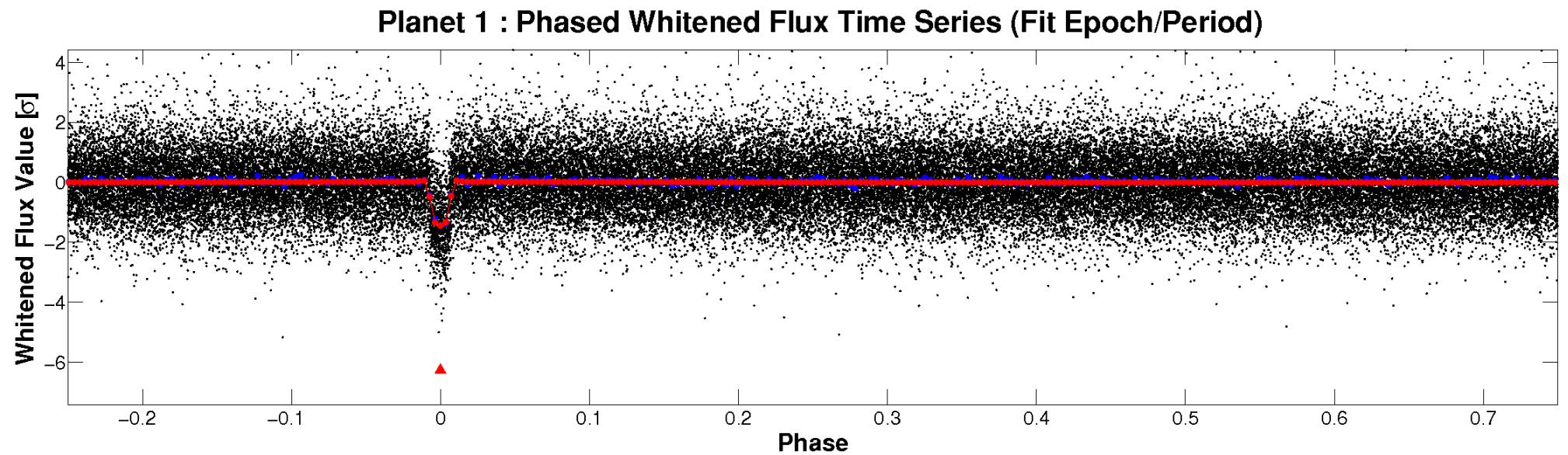
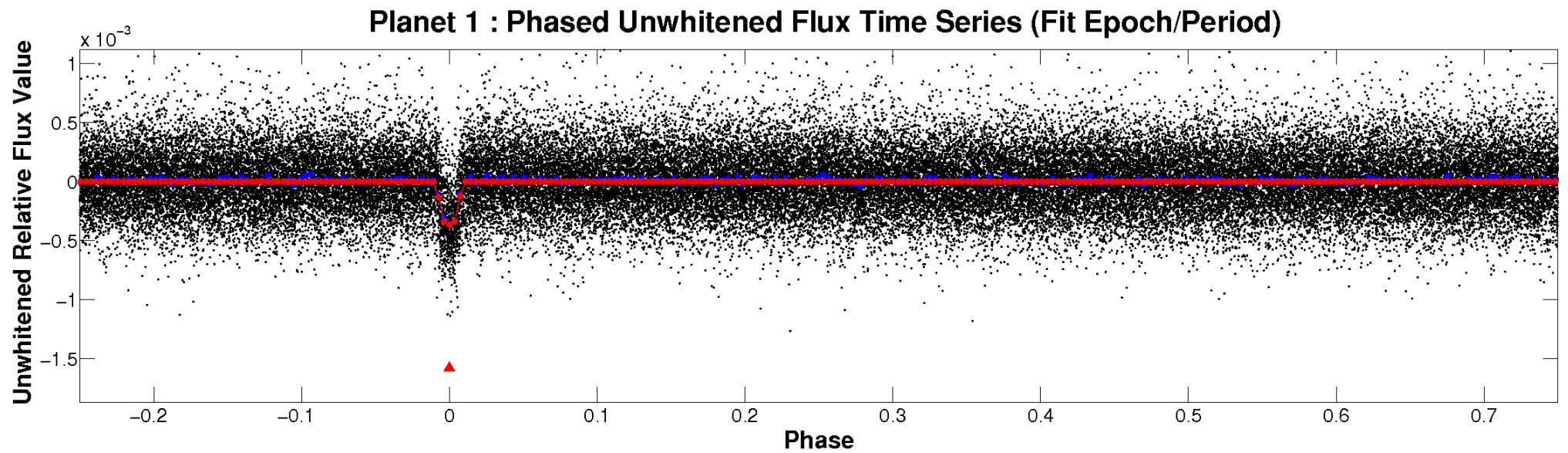


ALT Odd/Even

TCE 011413812-01

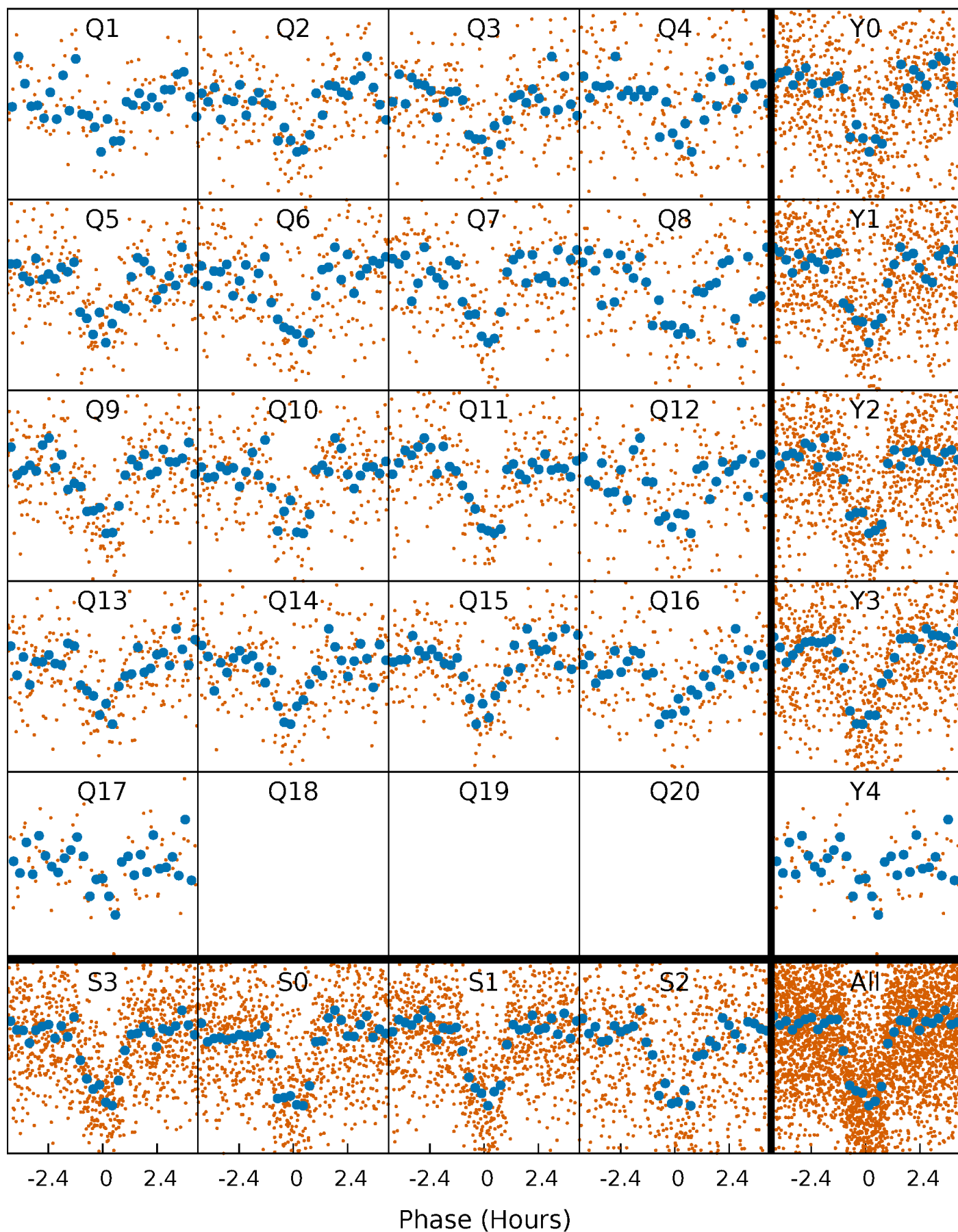


Non-Whitened Vs. Whitened Light Curve



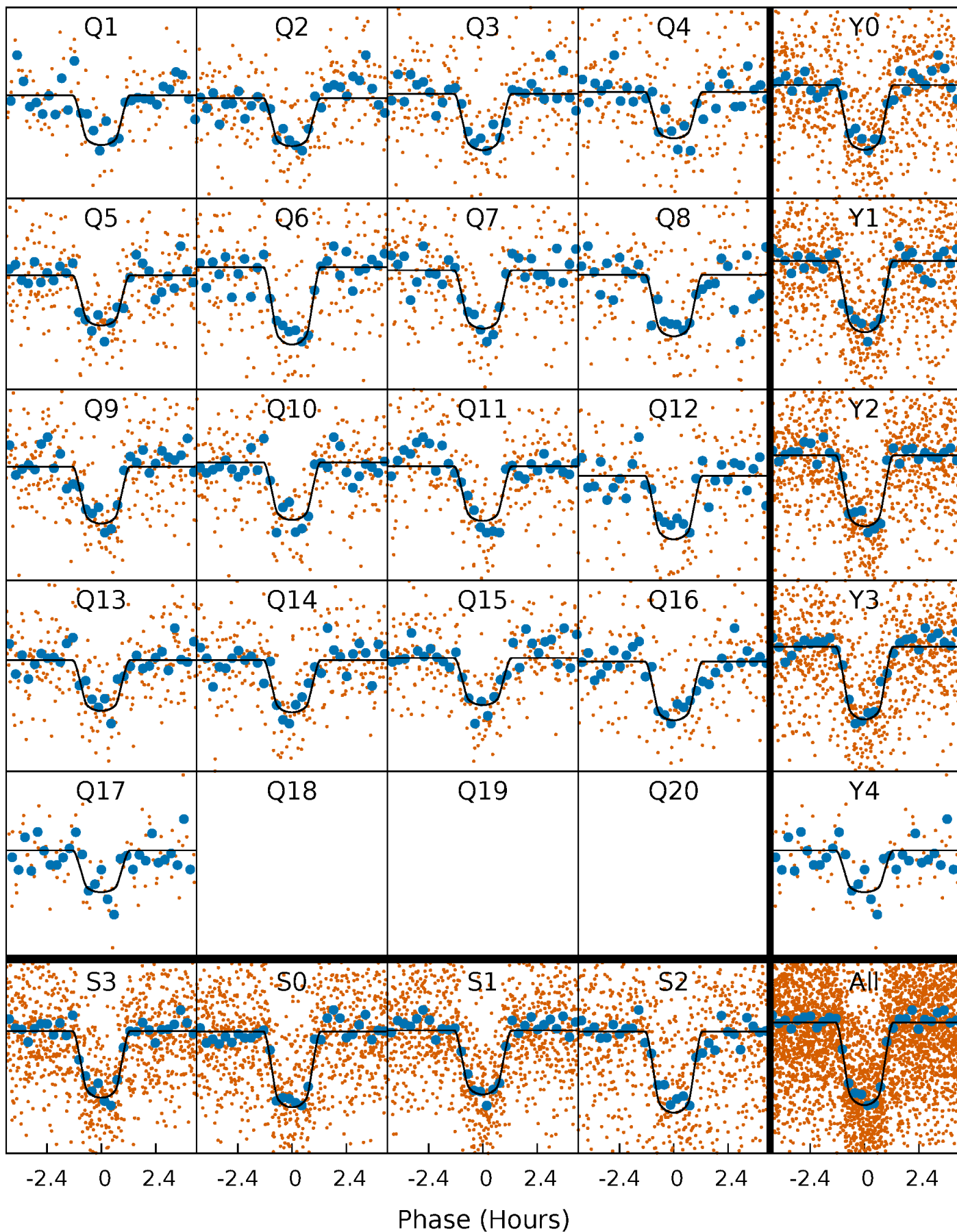
PDC Quarter-Phased Transit Curves

TCE 011413812-01 P= 5.653793 Days $T_0=131.710075$ (BKJD)



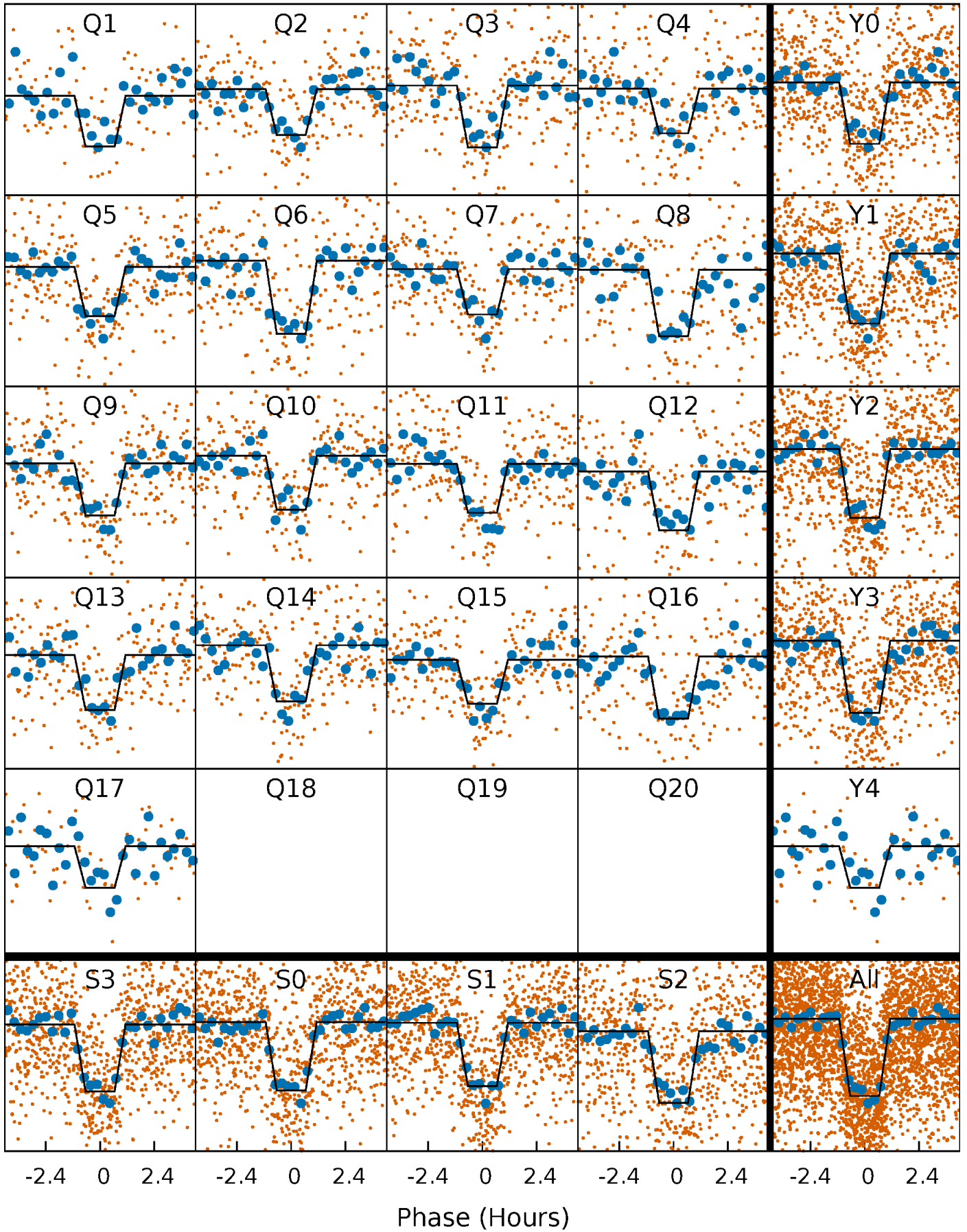
DV Quarter-Phased Transit Curves

TCE 011413812-01 P= 5.653793 Days $T_0=131.710075$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

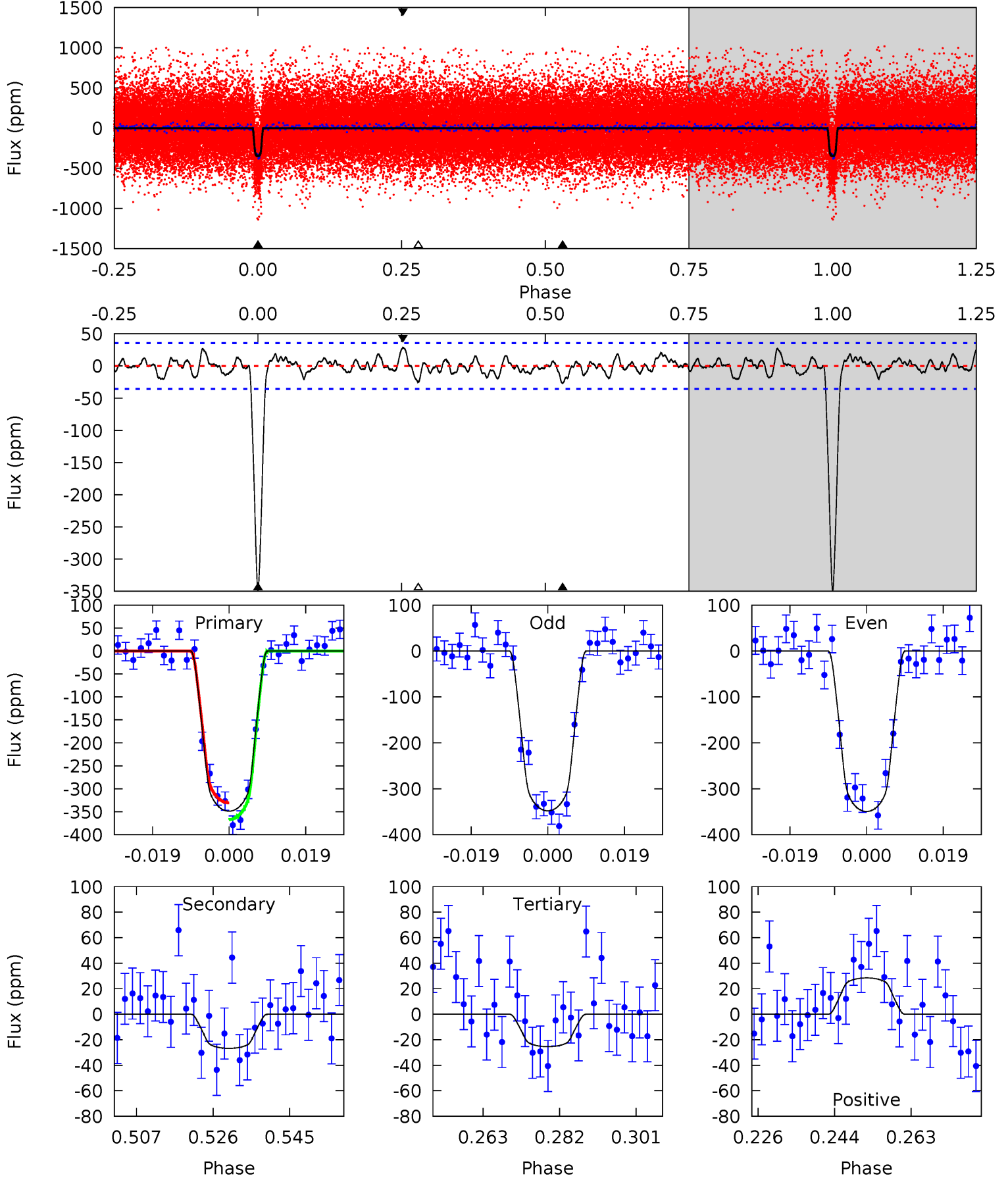
TCE 011413812-01 P= 5.653778 Days $T_0=131.711543$ (BKJD)



DV Model-Shift Uniqueness Test

011413812-01, P = 5.653793 Days, E = 126.056282 Days

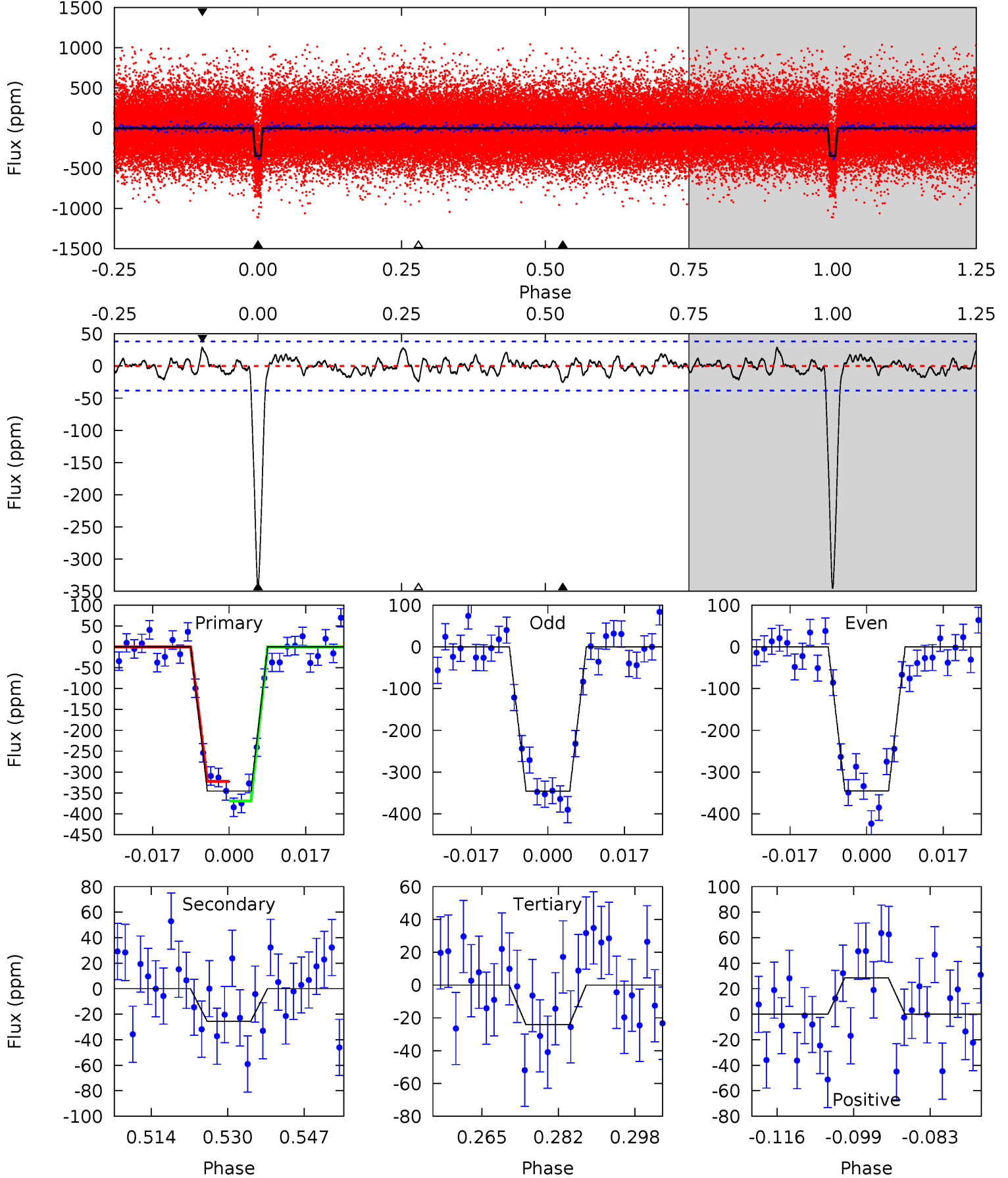
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
48.1	3.69	3.51	3.92	4.90	2.35	1.29	44.6	44.2	0.19	-0.23	0.10	0.96	0.08	2.50



Alt Model-Shift Uniqueness Test

011413812-01, P = 5.653778 Days, E = 126.057765 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
44.5	3.29	3.10	3.67	4.93	2.40	1.16	41.4	40.9	0.19	-0.39	0.06	0.99	0.08	3.01



Stellar Parameters For KIC 011413812

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5988^{+161}_{-179}	$4.507^{+0.039}_{-0.221}$	$-0.120^{+0.300}_{-0.300}$	$0.934^{+0.294}_{-0.078}$	$1.021^{+0.134}_{-0.134}$	$1.767^{+0.370}_{-0.933}$
	+3%/-3%	+1%/-5%	+250%/-250%	+31%/-8%	+13%/-13%	+21%/-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 011413812-01 / KOI 1885.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-27 ± 7	$2.21^{+0.47}_{-0.36}$	1462^{+111}_{-68}	3464^{+234}_{-237}	11^{+6}_{-4}
Alt.	-26 ± 8	$1.97^{+0.44}_{-0.31}$	1465^{+100}_{-72}	3558^{+260}_{-247}	13^{+7}_{-5}

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 $A_{obs} \gg 1.0$

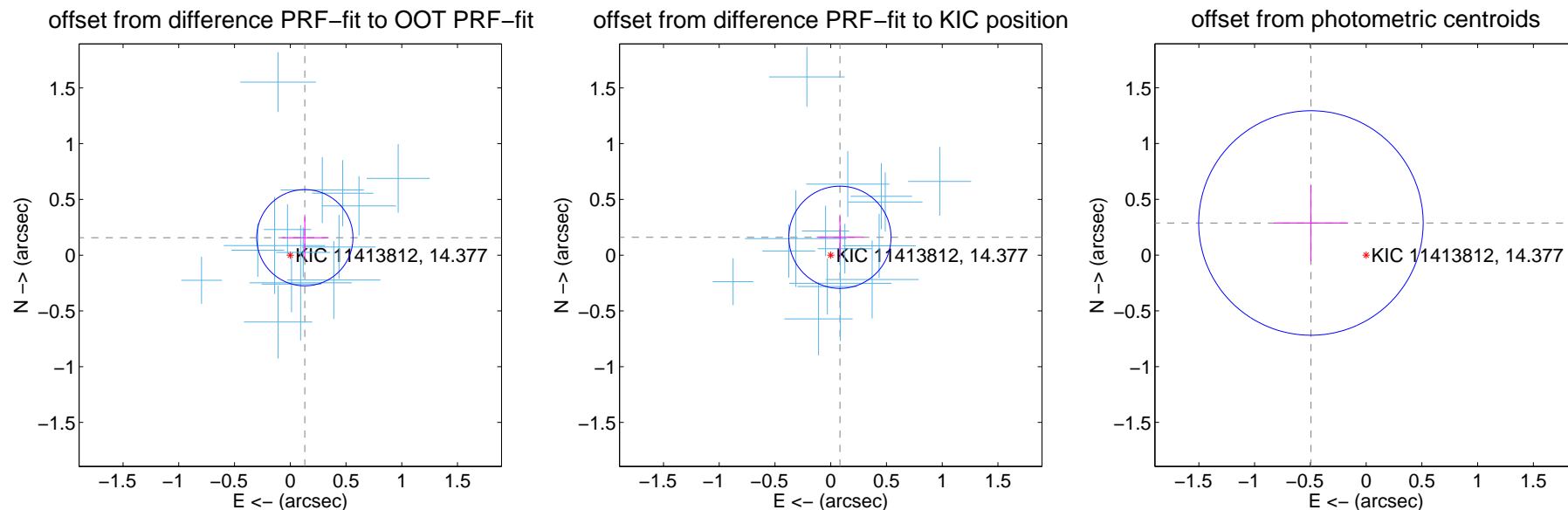
DV Centroid Data

Supplemental centroid analysis for 011413812-01. Kepler magnitude: 14.38. Transit SNR 37.25

There are 15 quarters with good PRF difference image offsets

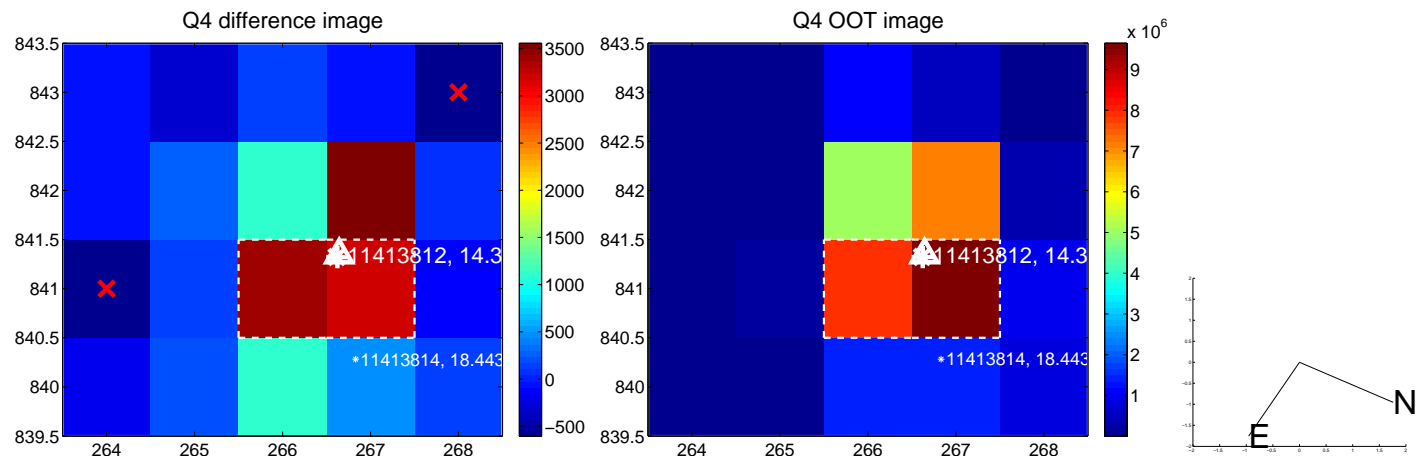
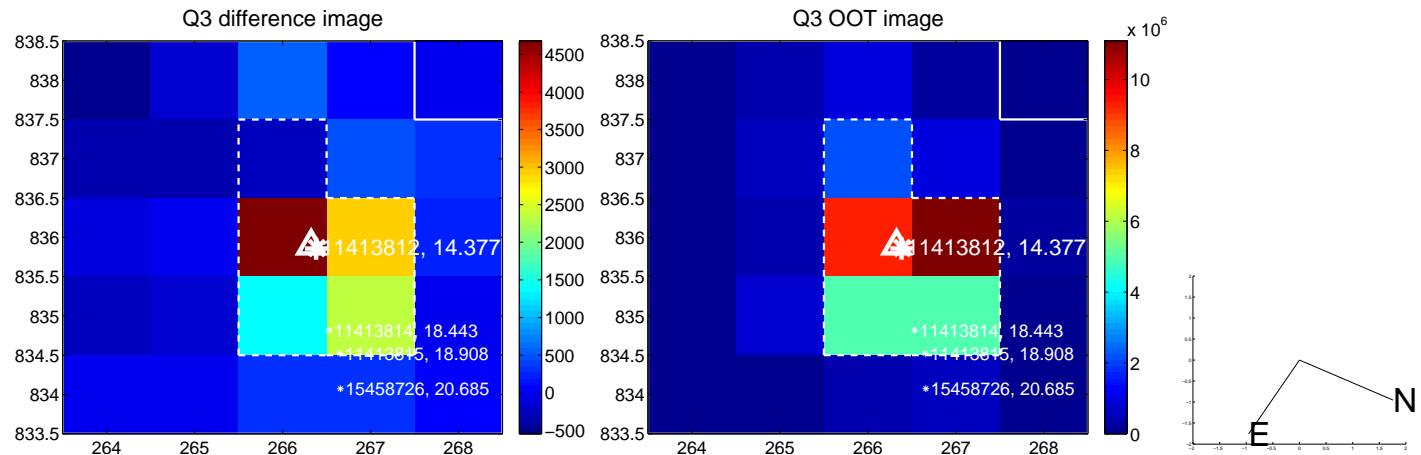
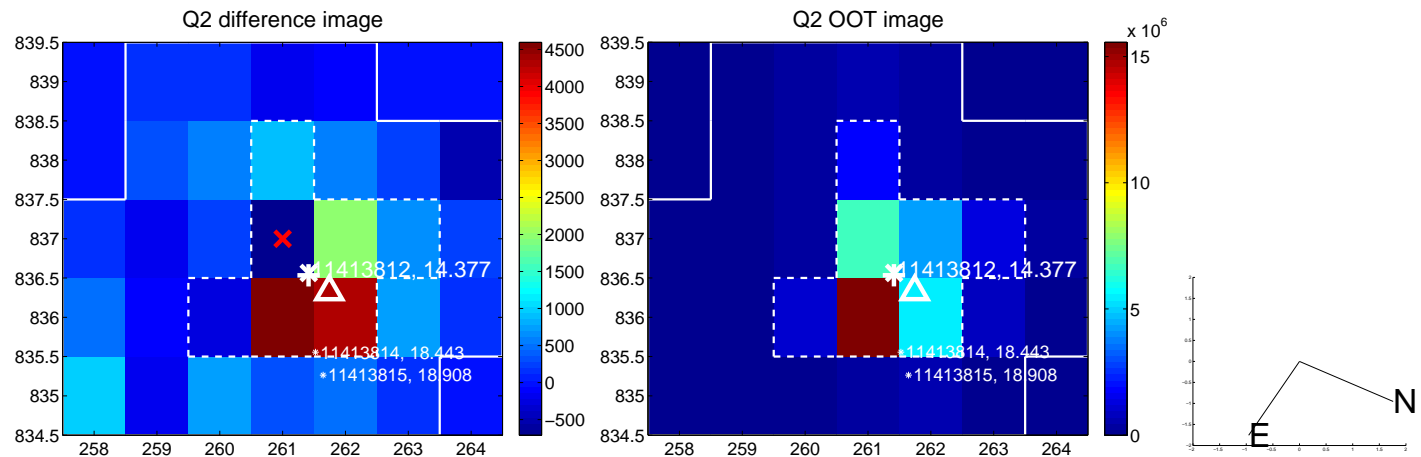
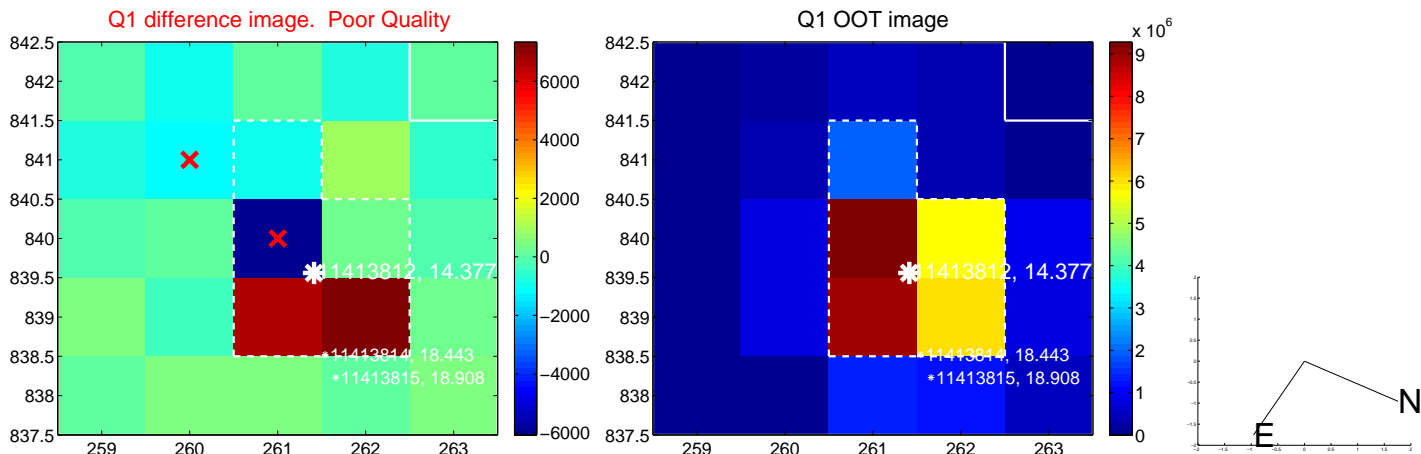
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.204 ± 0.144	1.42	-0.131 ± 0.205	0.156 ± 0.186
PRF-fit source offset from KIC position	0.180 ± 0.153	1.18	-0.083 ± 0.207	0.160 ± 0.189
photometric centroid source offset	0.57 ± 0.34	1.71	0.49 ± 0.33	0.29 ± 0.34

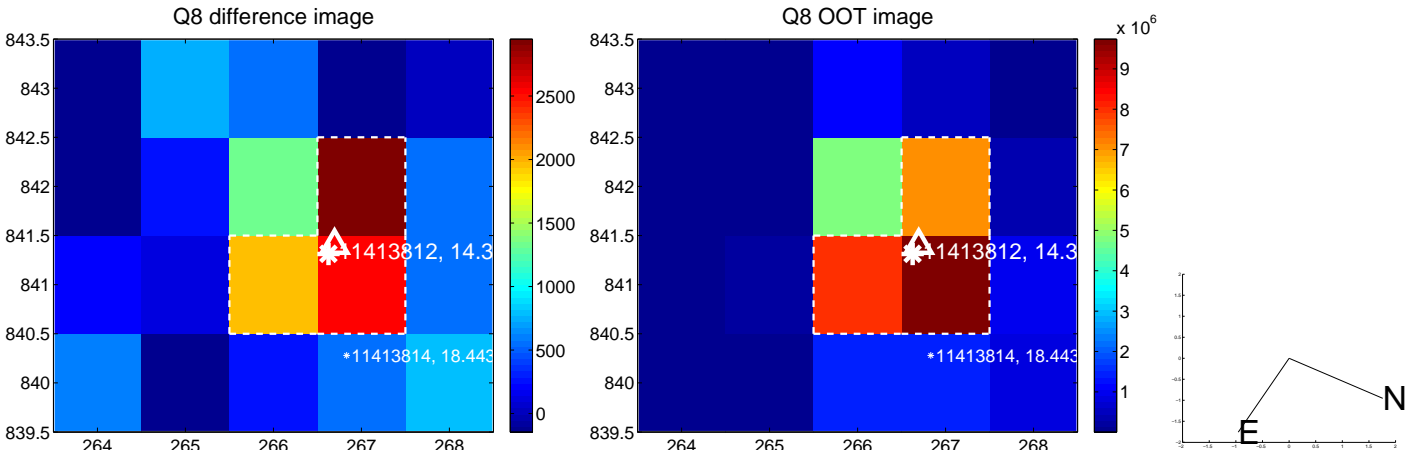
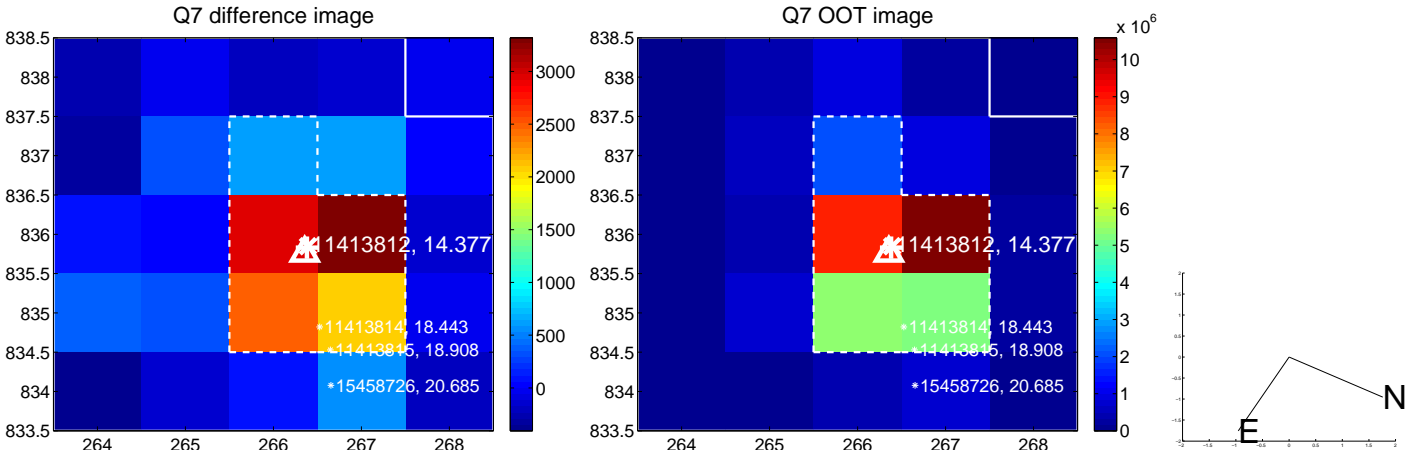
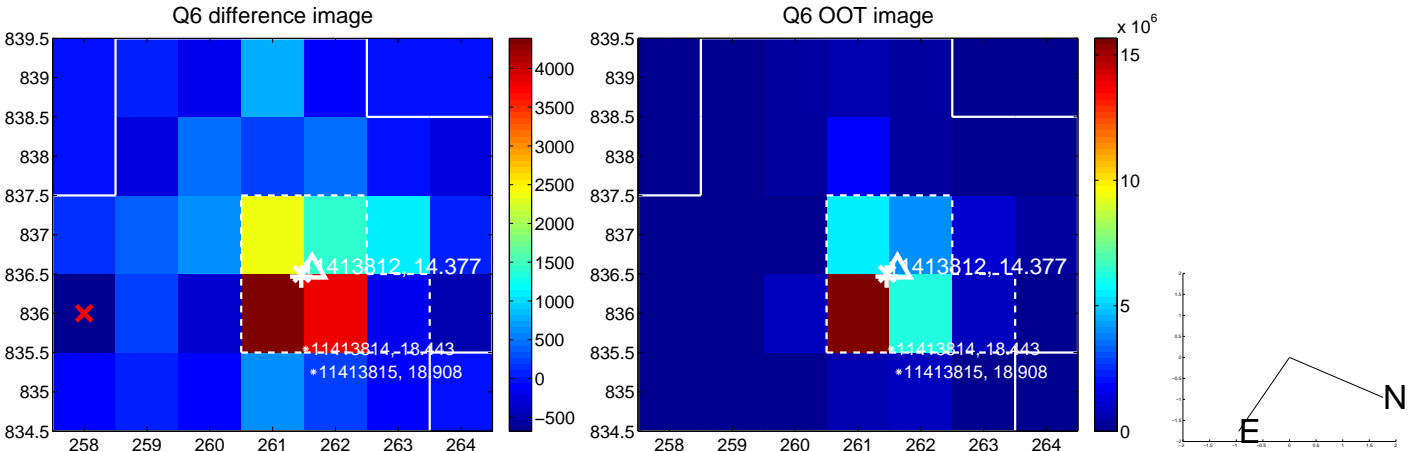
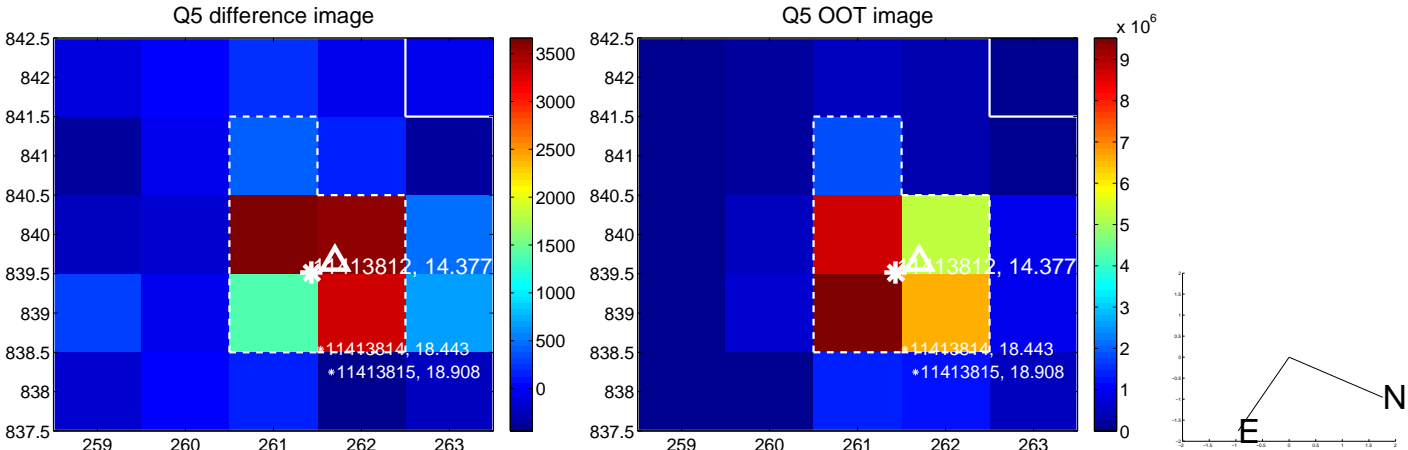


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

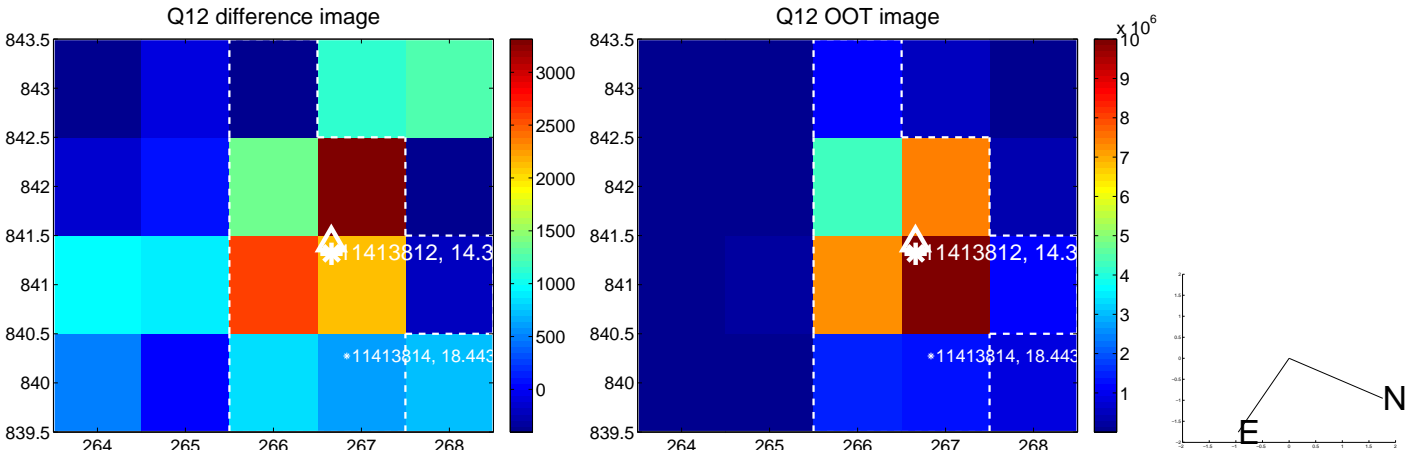
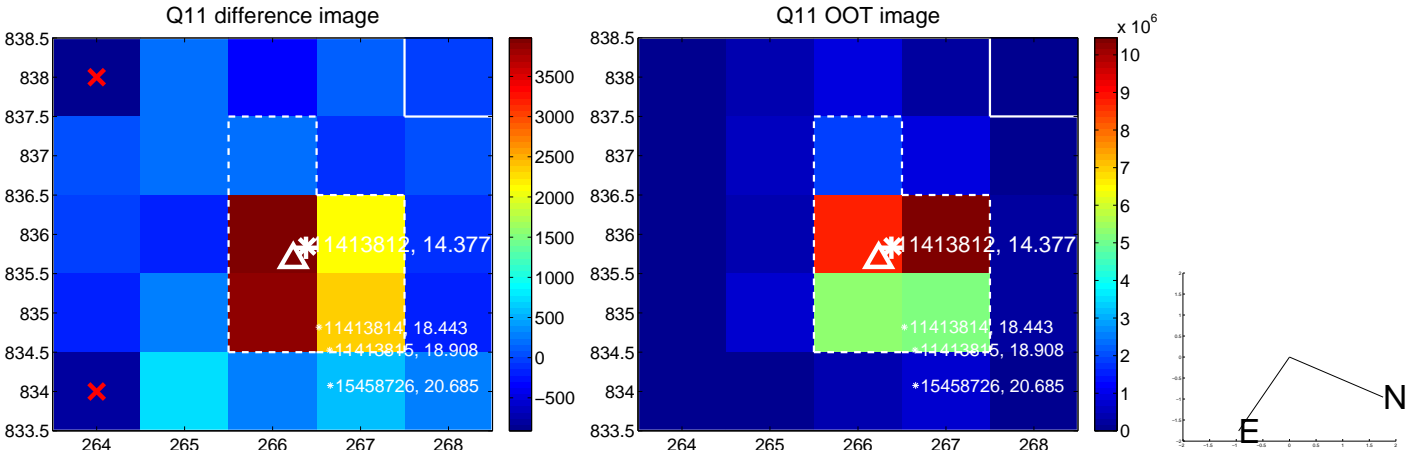
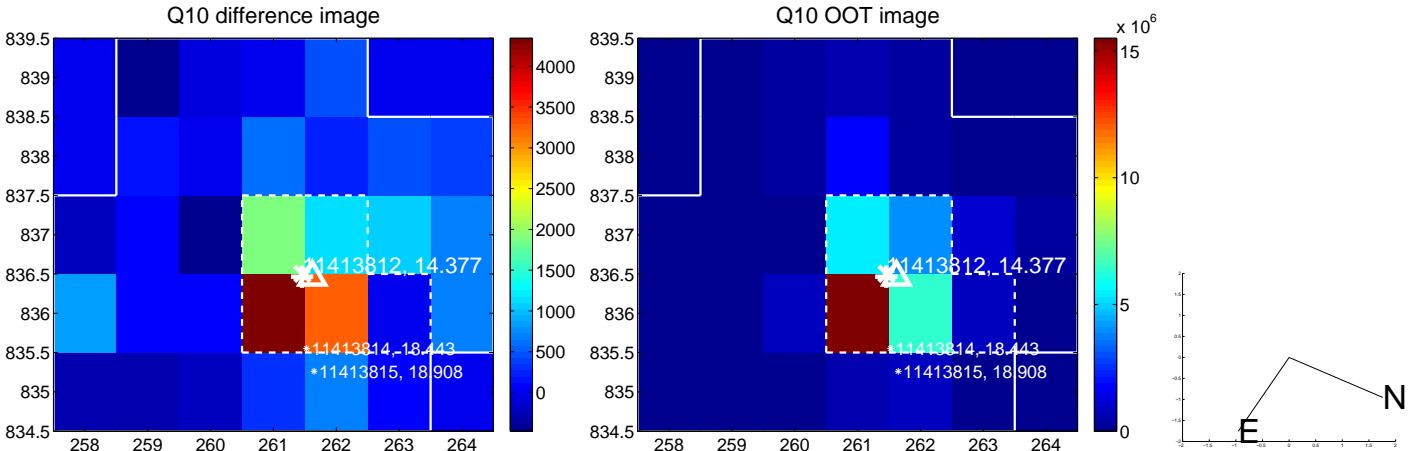
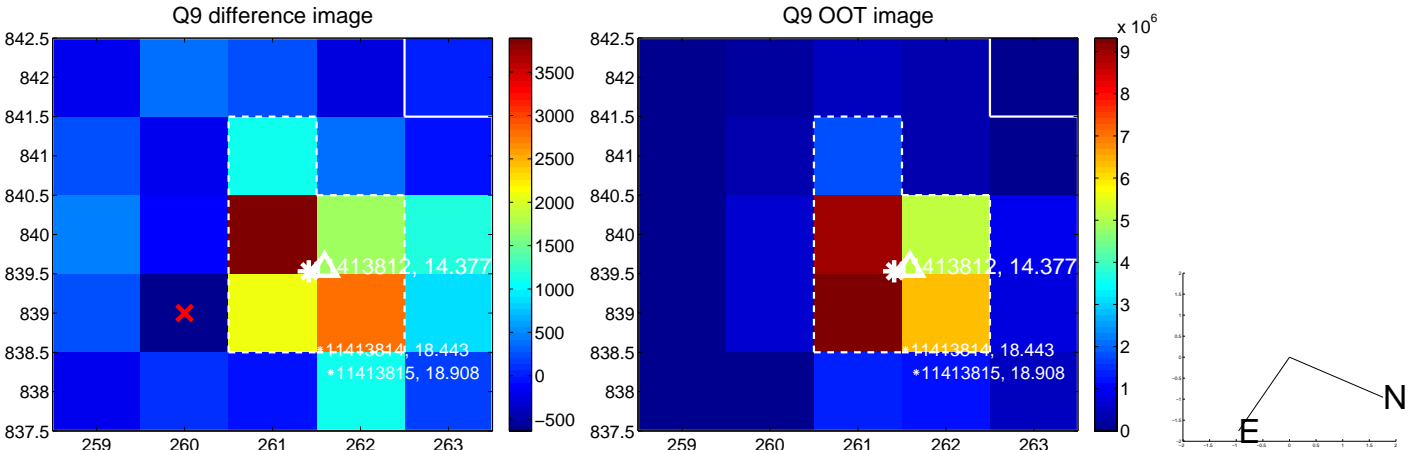
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



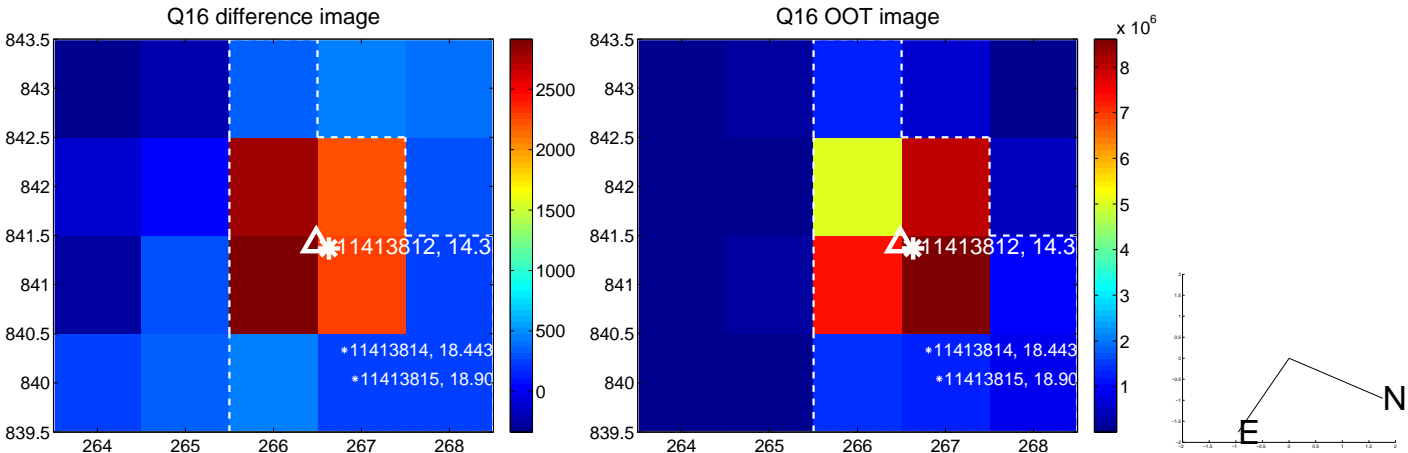
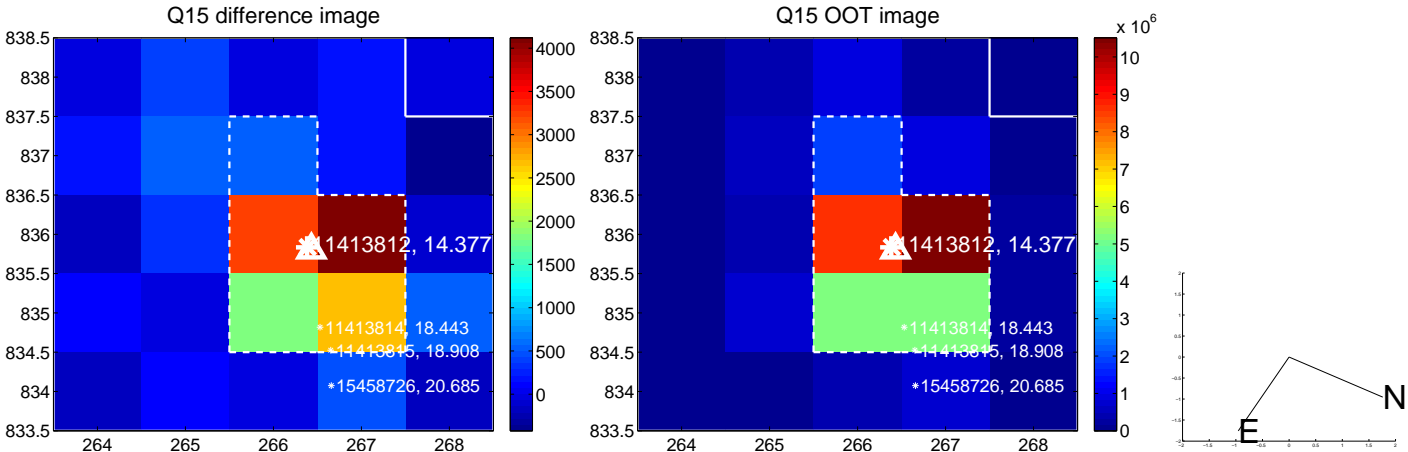
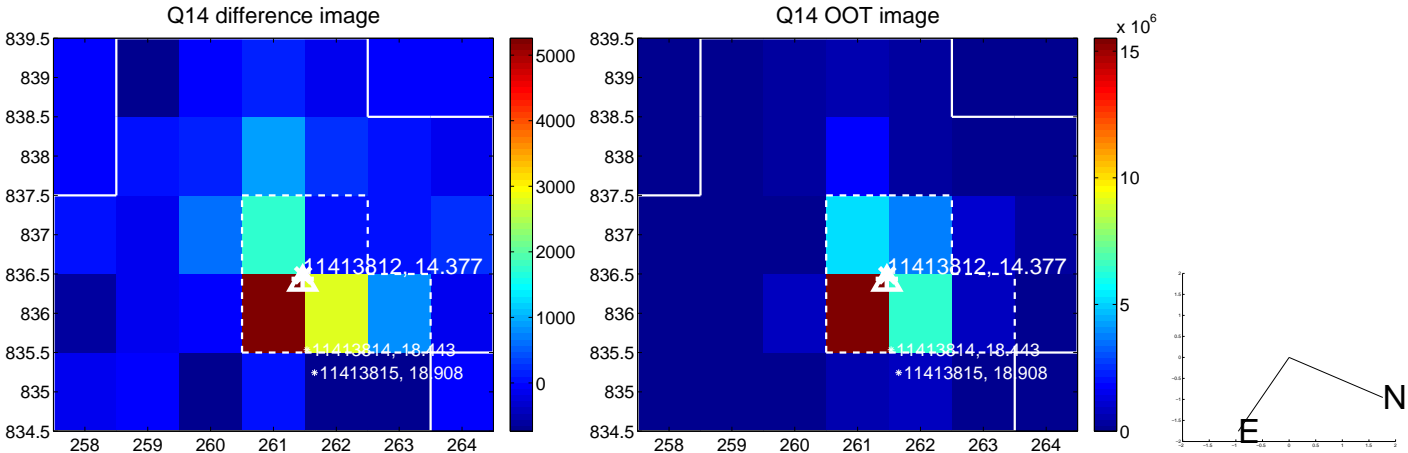
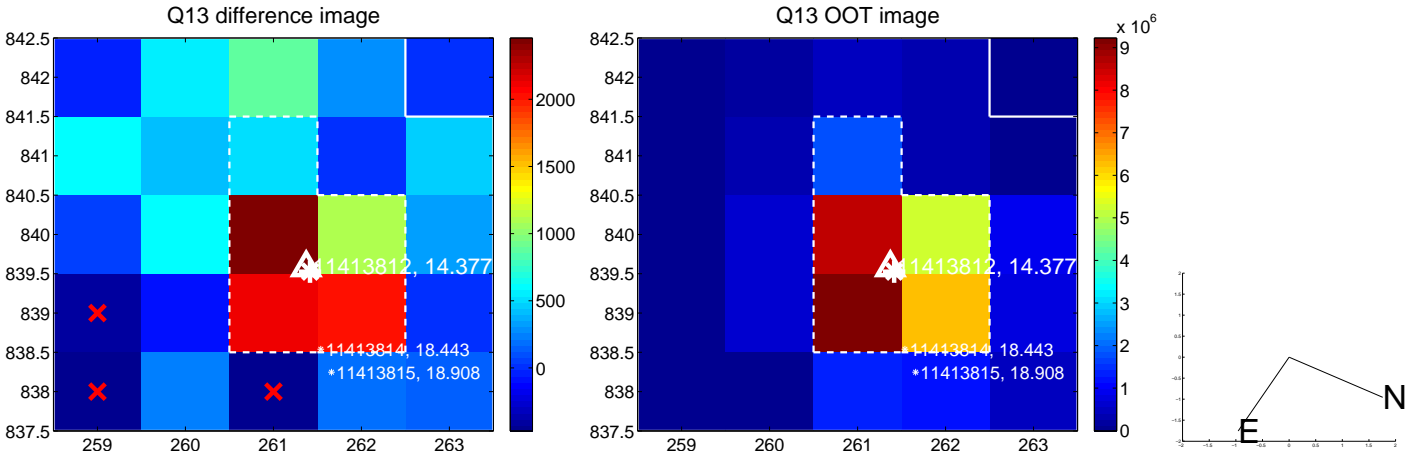
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



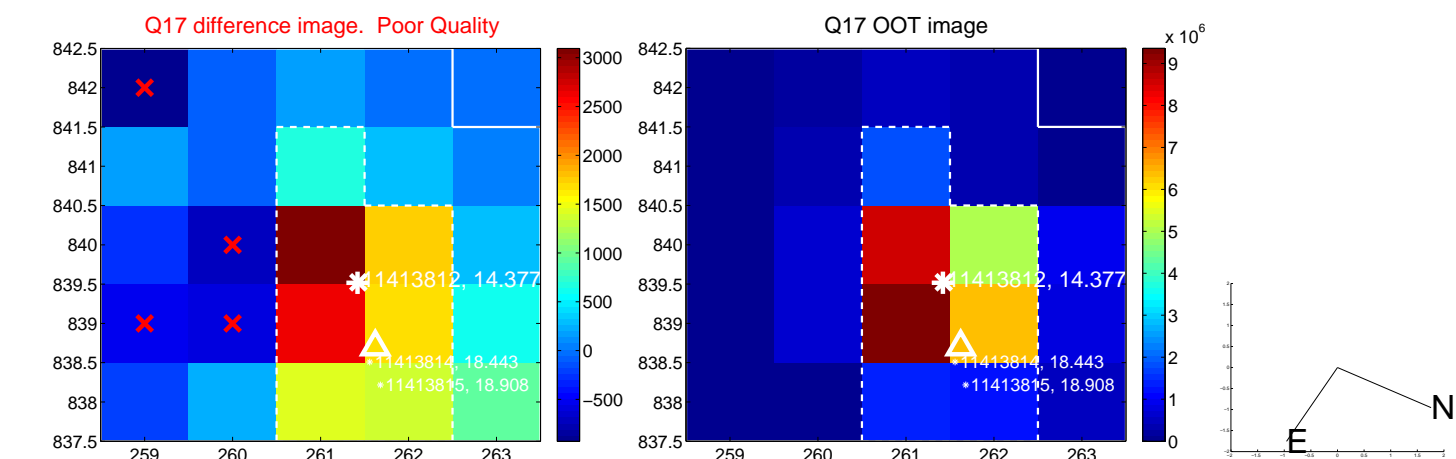
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



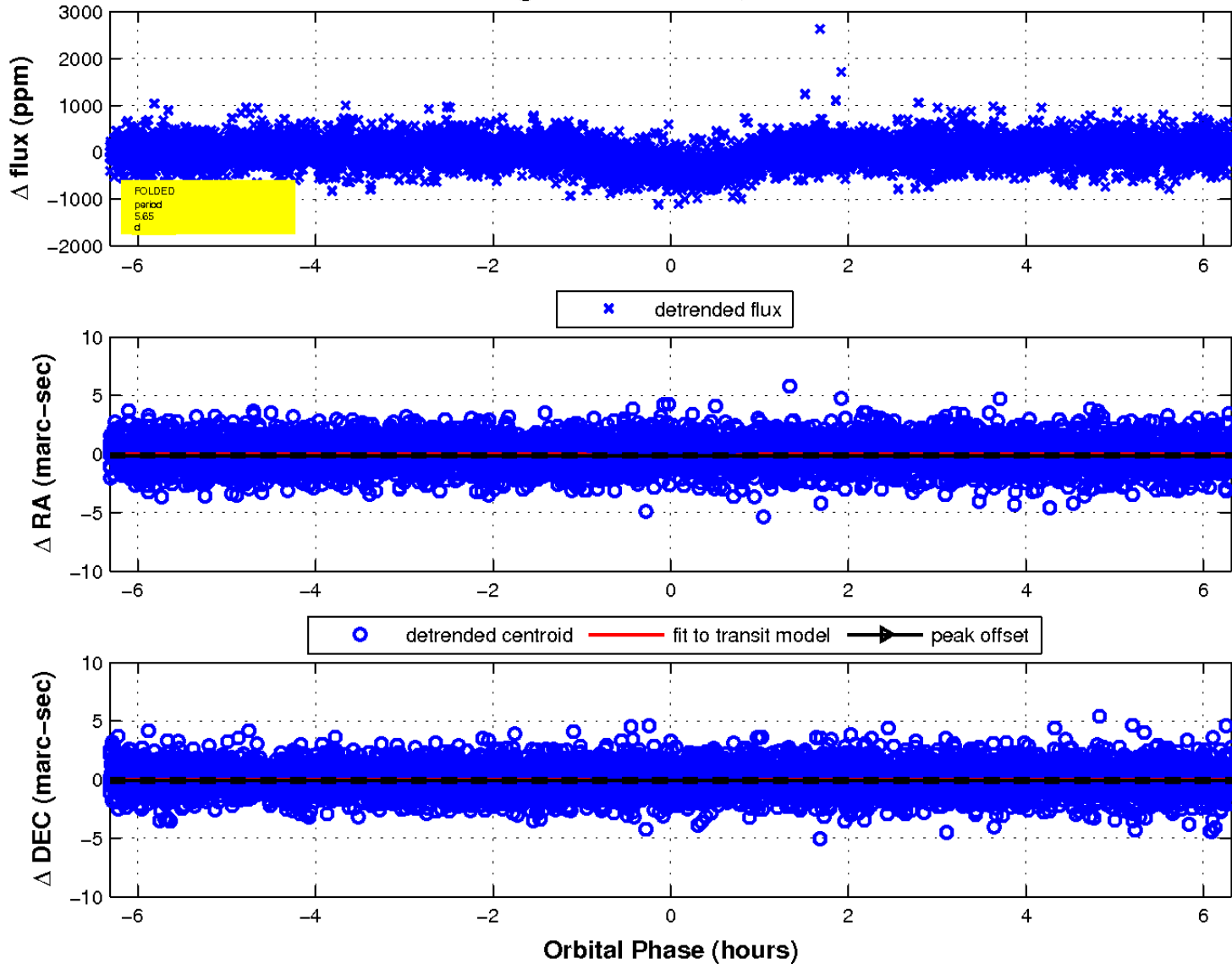
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

