

KIC 007047824

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})
007047824-01	OBS	2806.01	24.754304	140.208200	553.1	3.582	16.0	17.6	0.80	4852	2.12	13.72

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007047824-01	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.

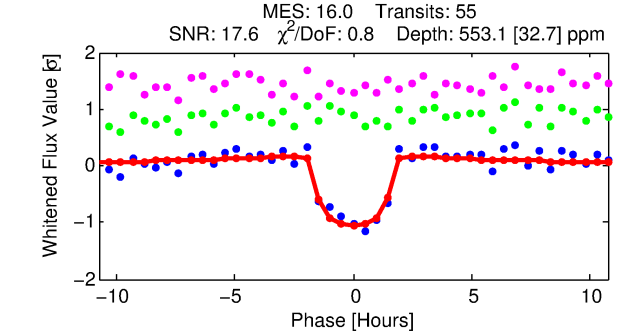
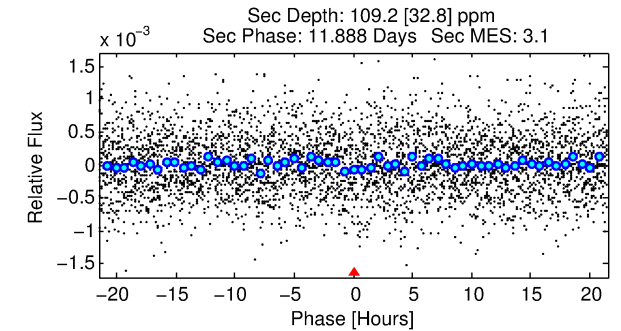
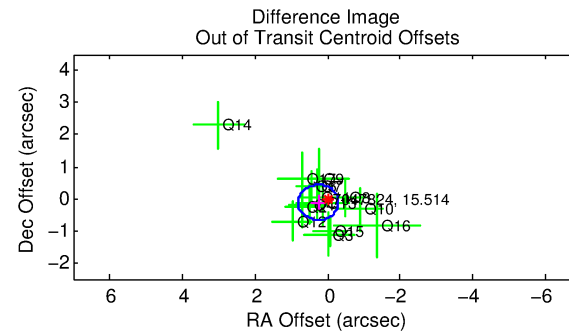
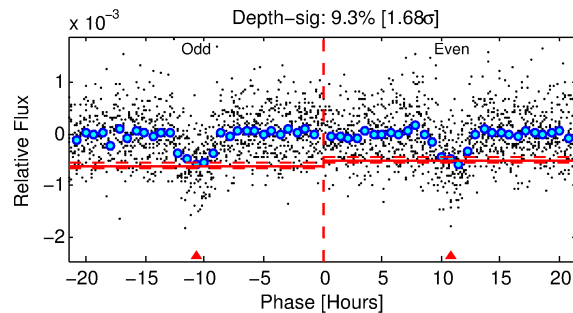
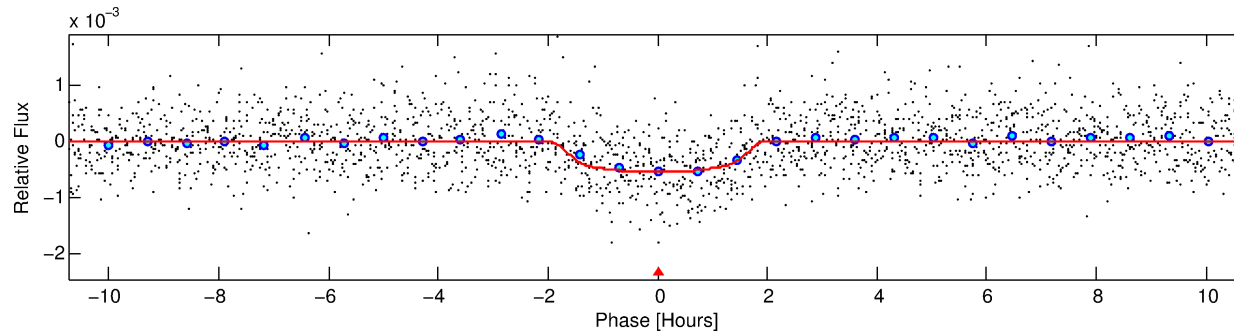
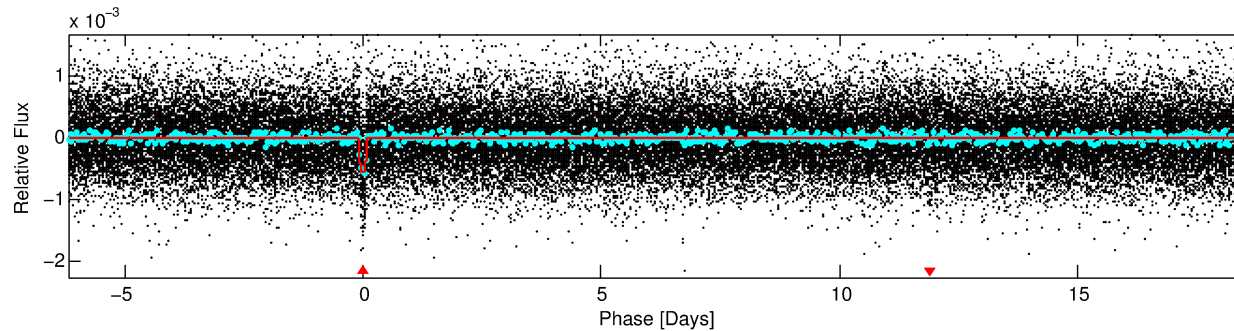
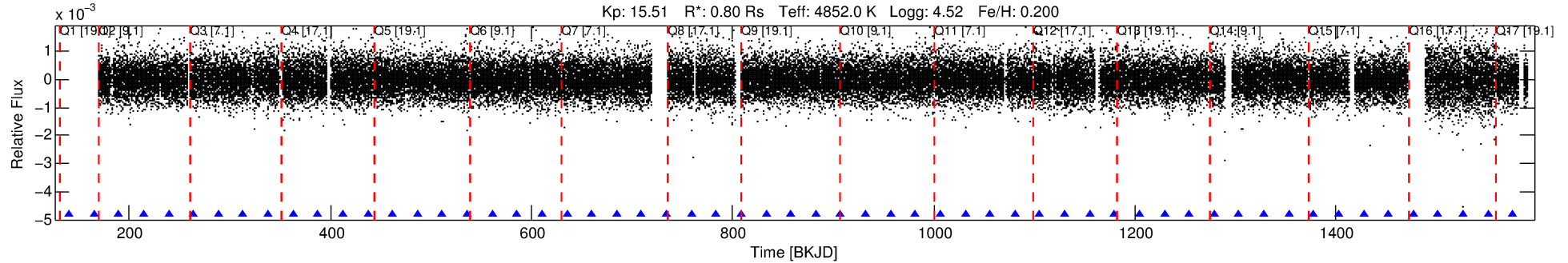
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007047824-01

No Significant Match Found

DV One-Page Summary

KIC: 7047824 Candidate: 1 of 1 Period: 24.754 d
KOI: K02806.01 Corr: 0.989



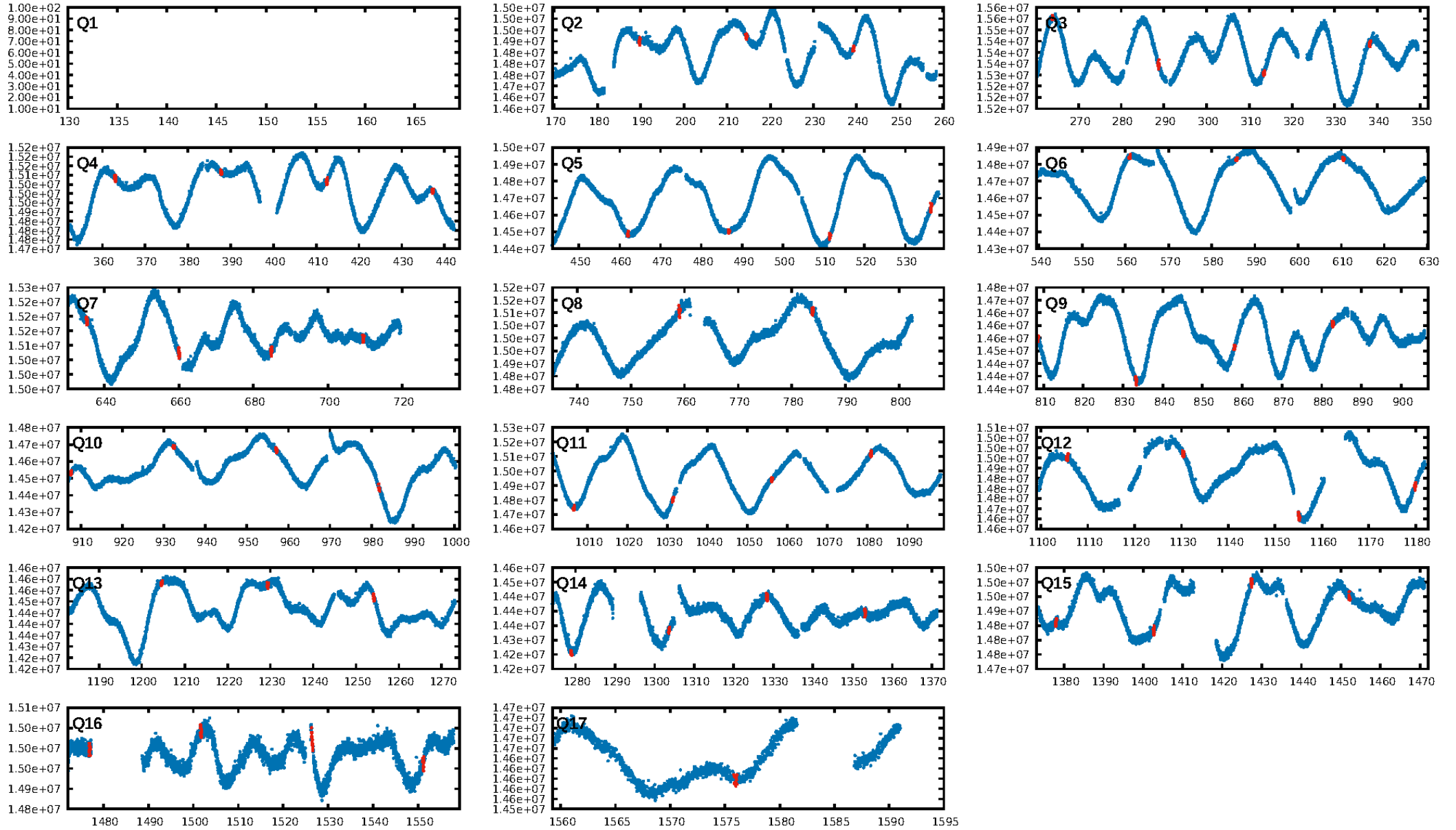
DV Fit Results:

Period = 24.75430 [0.00014] d
Epoch = 140.2082 [0.0044] BKJD
Rp/R* = 0.0242 [0.0128]
a/R* = 34.01 [61.95]
b = 0.80 [0.86]
Seff = 13.72 [2.47]
Teq = 491 [22] K
Rp = 2.12 [1.14] Re
a = 0.1530 [0.0133] AU
Ag = 312.82 [348.02] [0.90 σ]
Teffp = 3191 [886] K [3.05 σ]

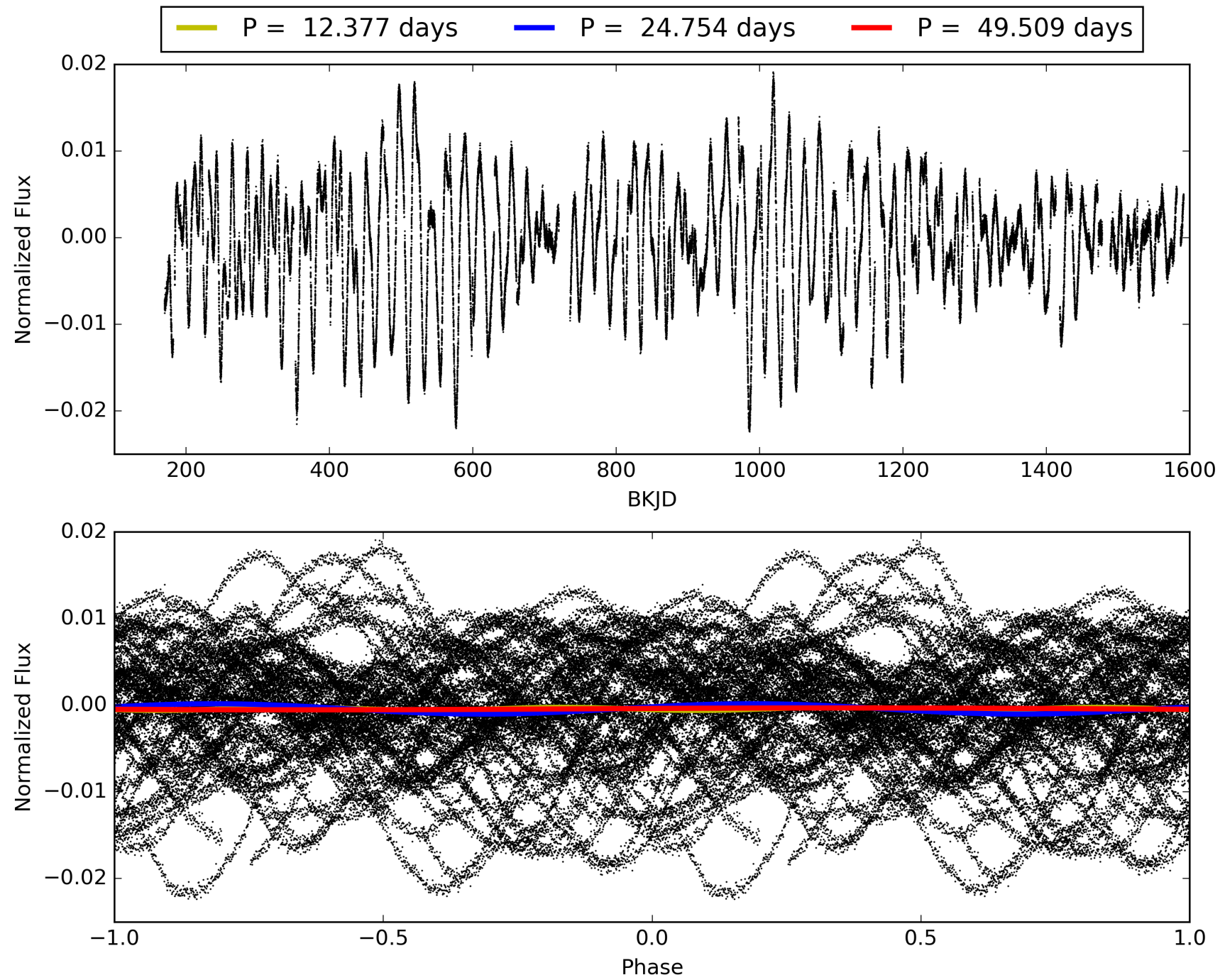
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 79.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 9.78e-56
RollingBand-fgt: 1.00 [54/54]
GhostDiagnostic-chr: 1.915
Centroid-sig: 7.0%
Centroid-so: 1.178 arcsec [1.56 σ]
OotOffset-rm: 0.280 arcsec [1.54 σ]
KicOffset-rm: 0.375 arcsec [1.76 σ]
OotOffset-st: 4/4/4/3 [15]
KicOffset-st: 4/4/4/3 [15]
DiffImageQuality-fgm: 0.93 [14/15]
DiffImageOverlap-fno: 1.00 [16/16]

TCE 007047824-01, PDC Light Curves

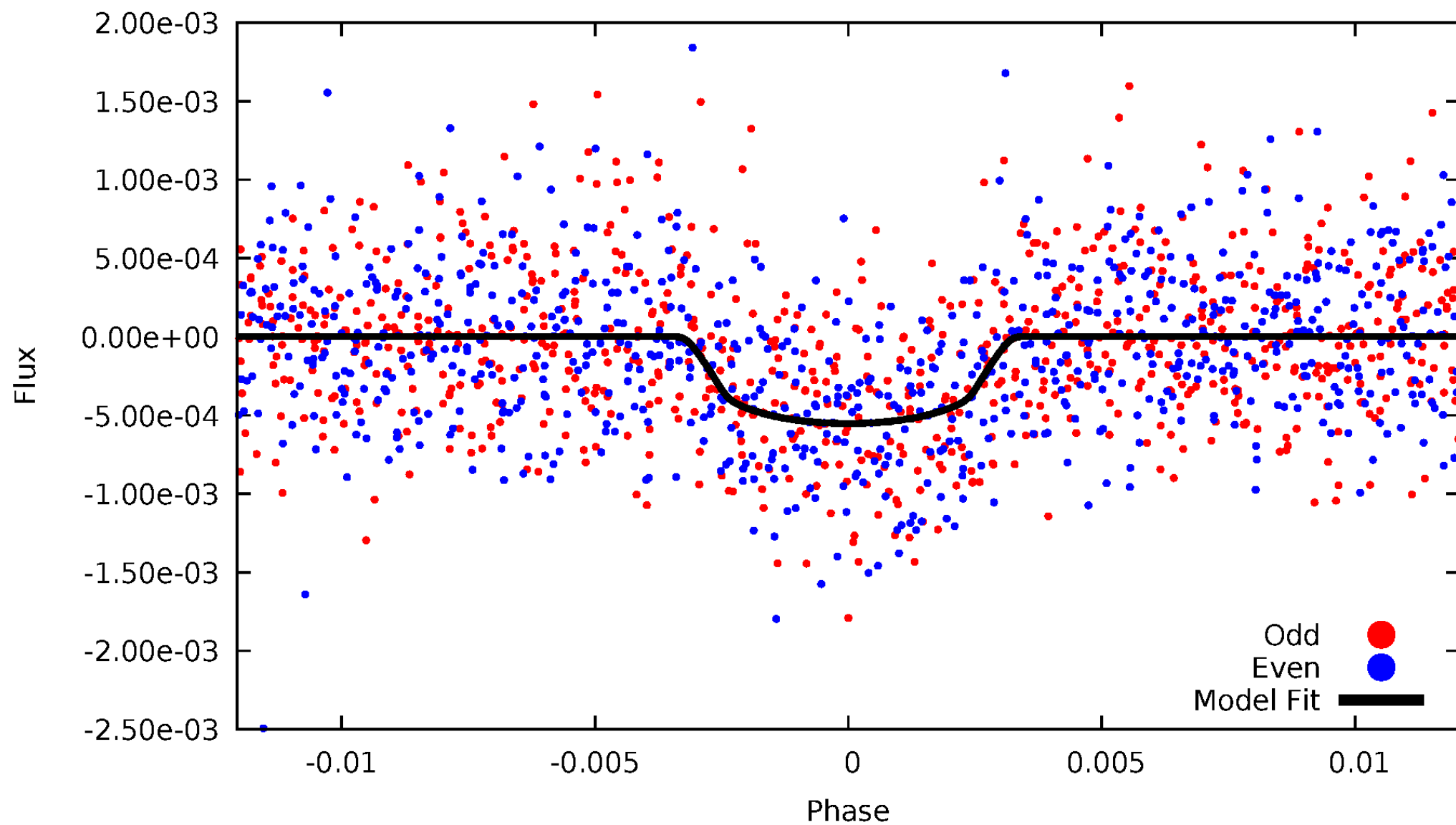


TCE 007047824-01



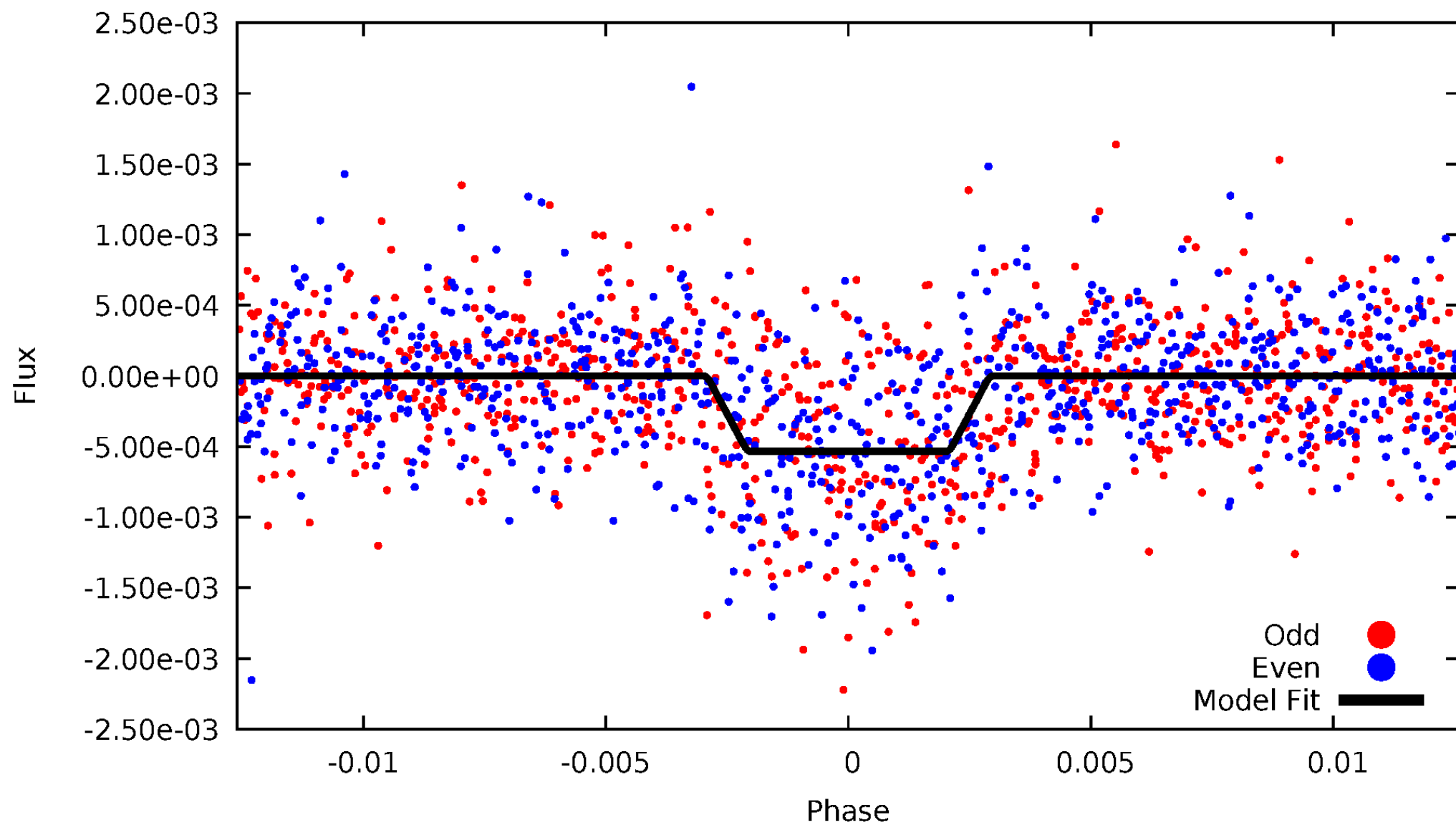
DV Odd/Even

TCE 007047824-01

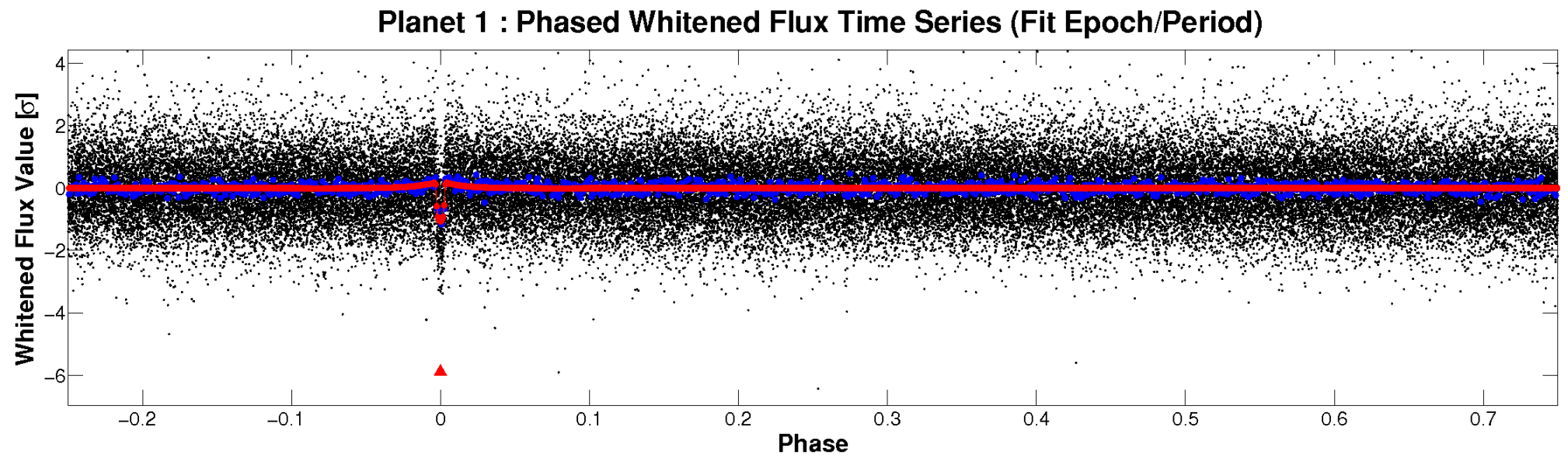
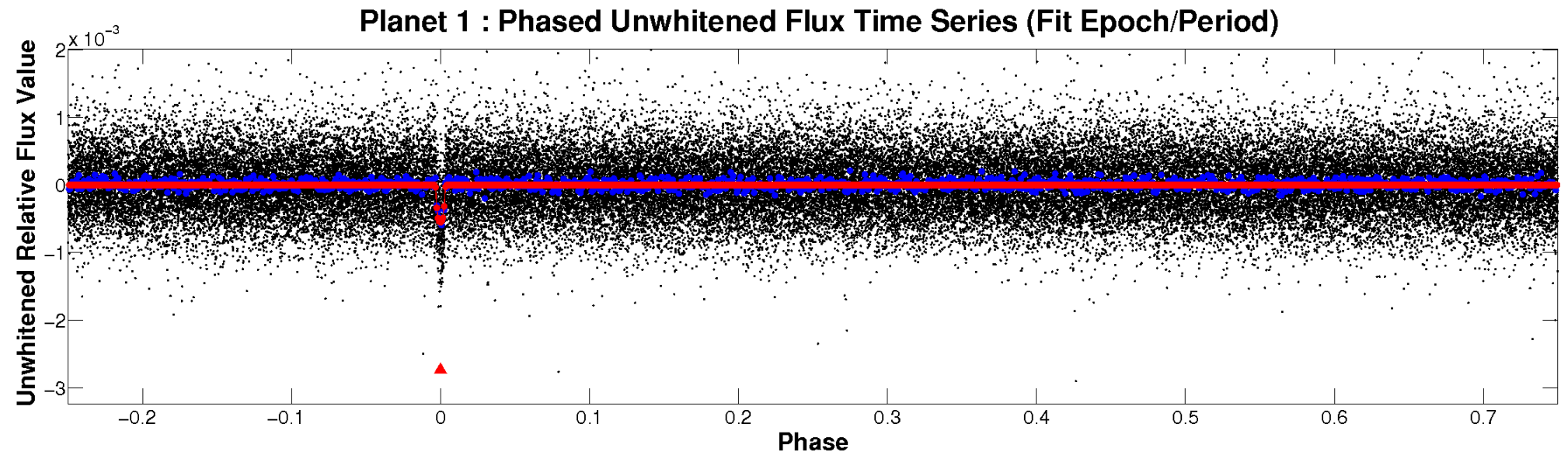


ALT Odd/Even

TCE 007047824-01

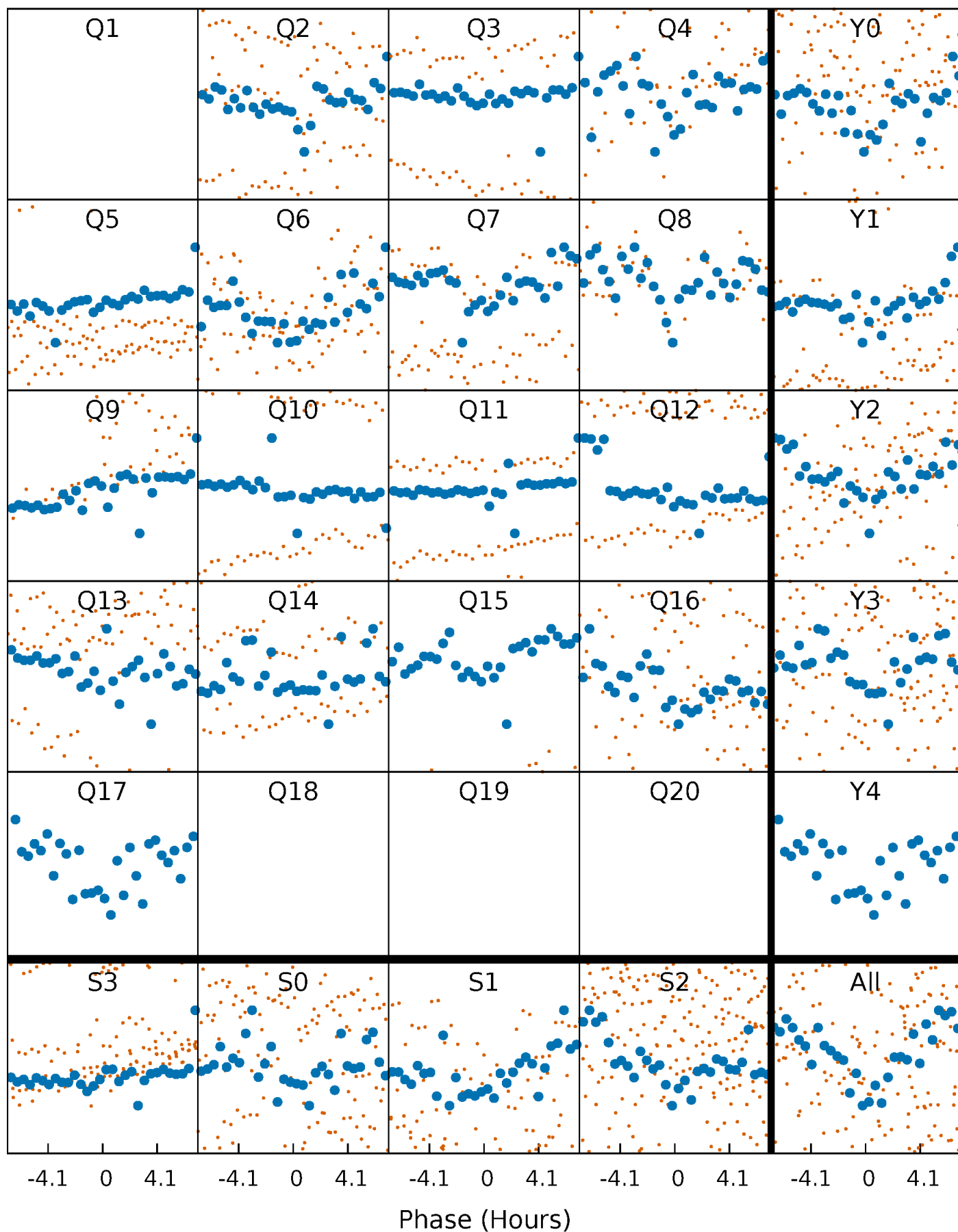


Non-Whitened Vs. Whitened Light Curve



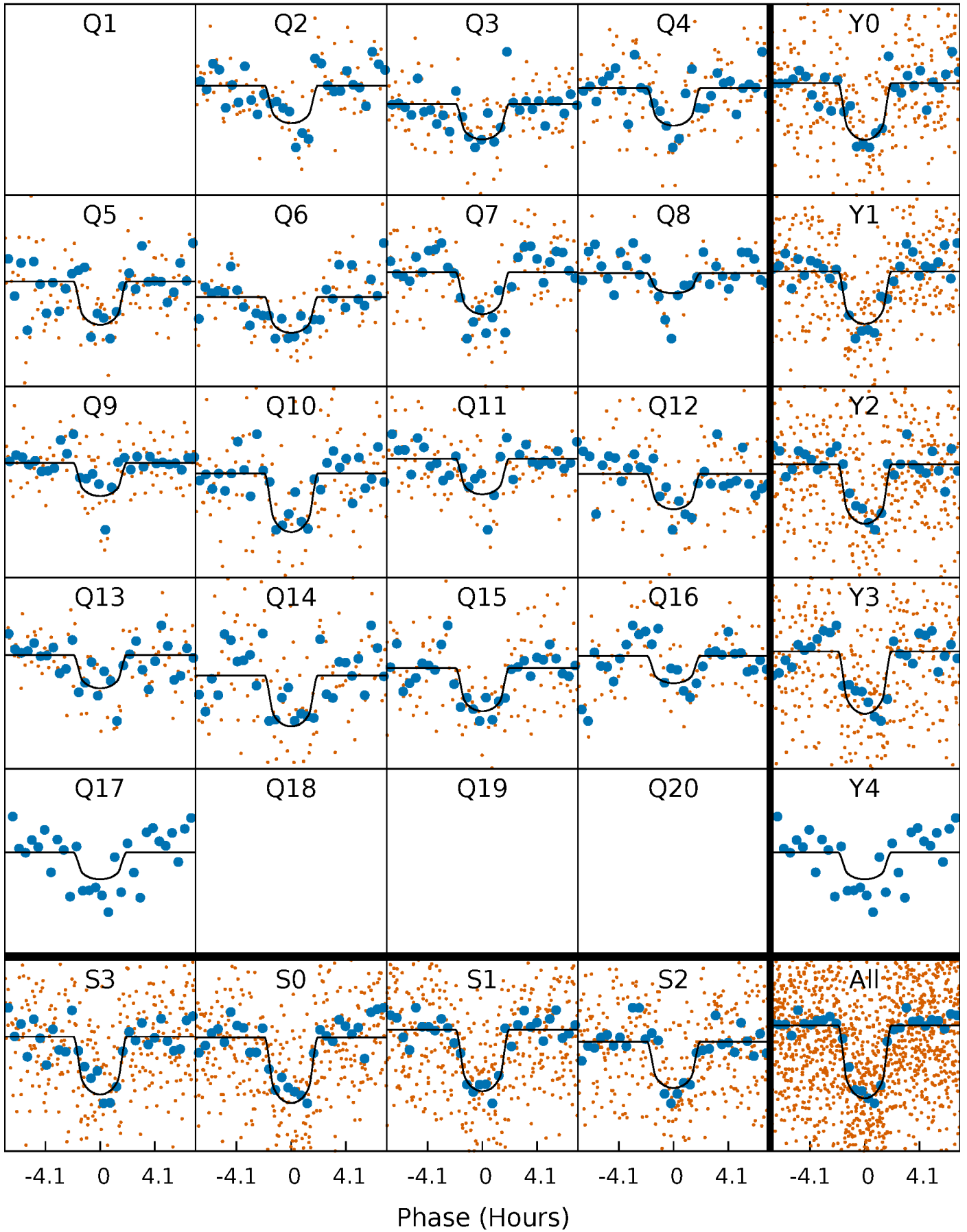
PDC Quarter-Phased Transit Curves

TCE 007047824-01 P= 24.754304 Days $T_0=140.208200$ (BKJD)



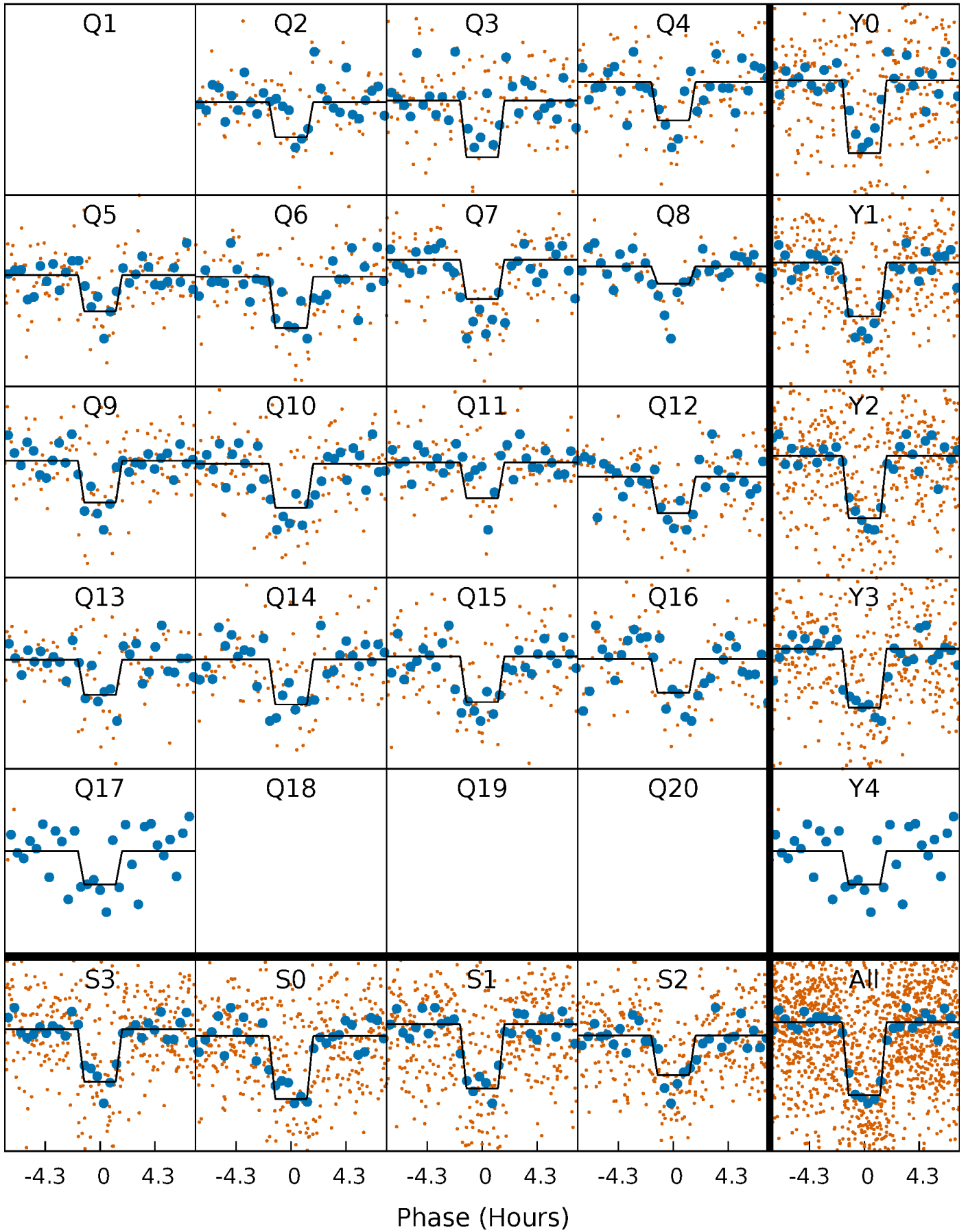
DV Quarter-Phased Transit Curves

TCE 007047824-01 P= 24.754304 Days $T_0=140.208200$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

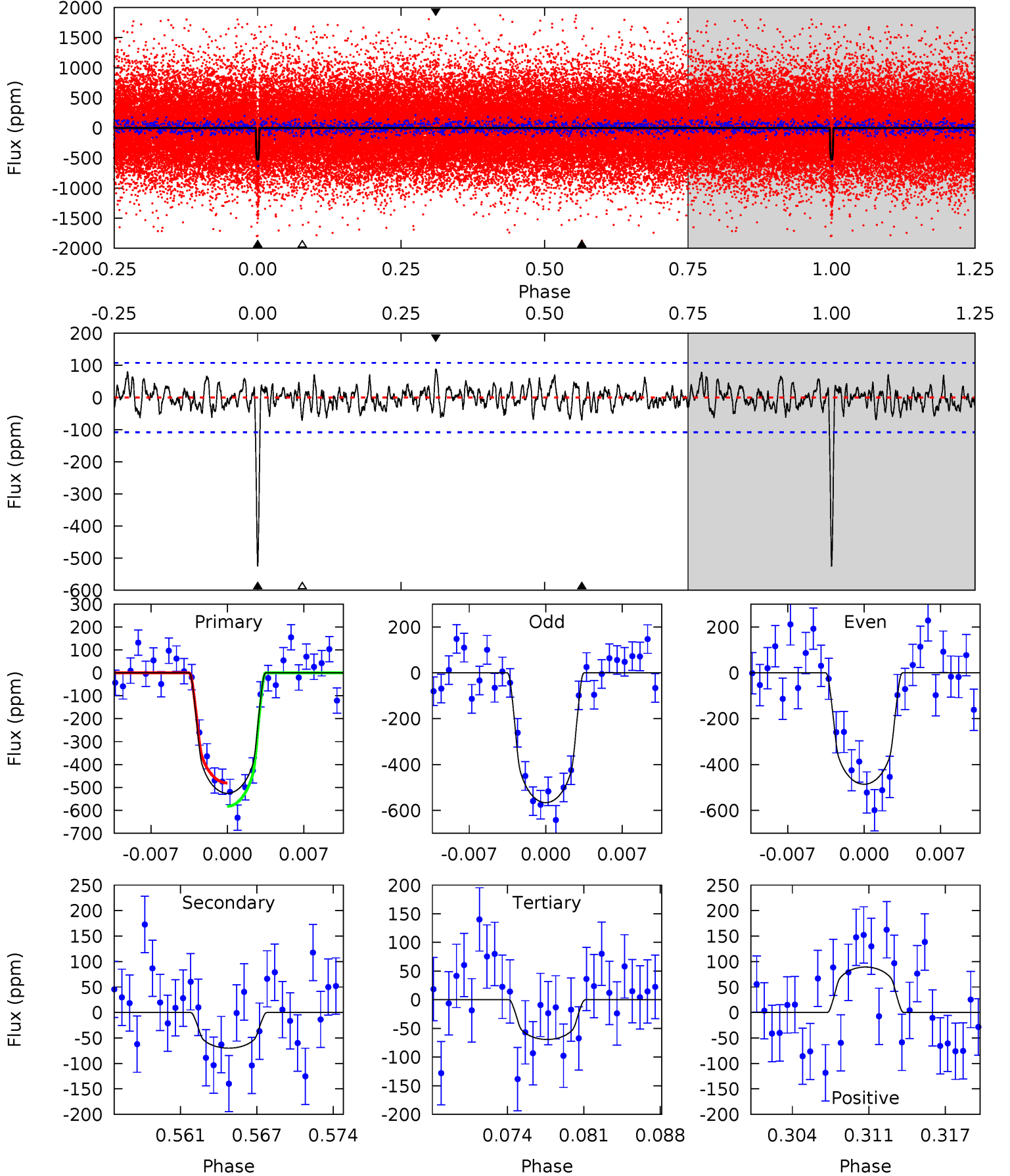
TCE 007047824-01 P= 24.754165 Days $T_0=140.214280$ (BKJD)



DV Model-Shift Uniqueness Test

007047824-01, P = 24.754304 Days, E = 140.208200 Days

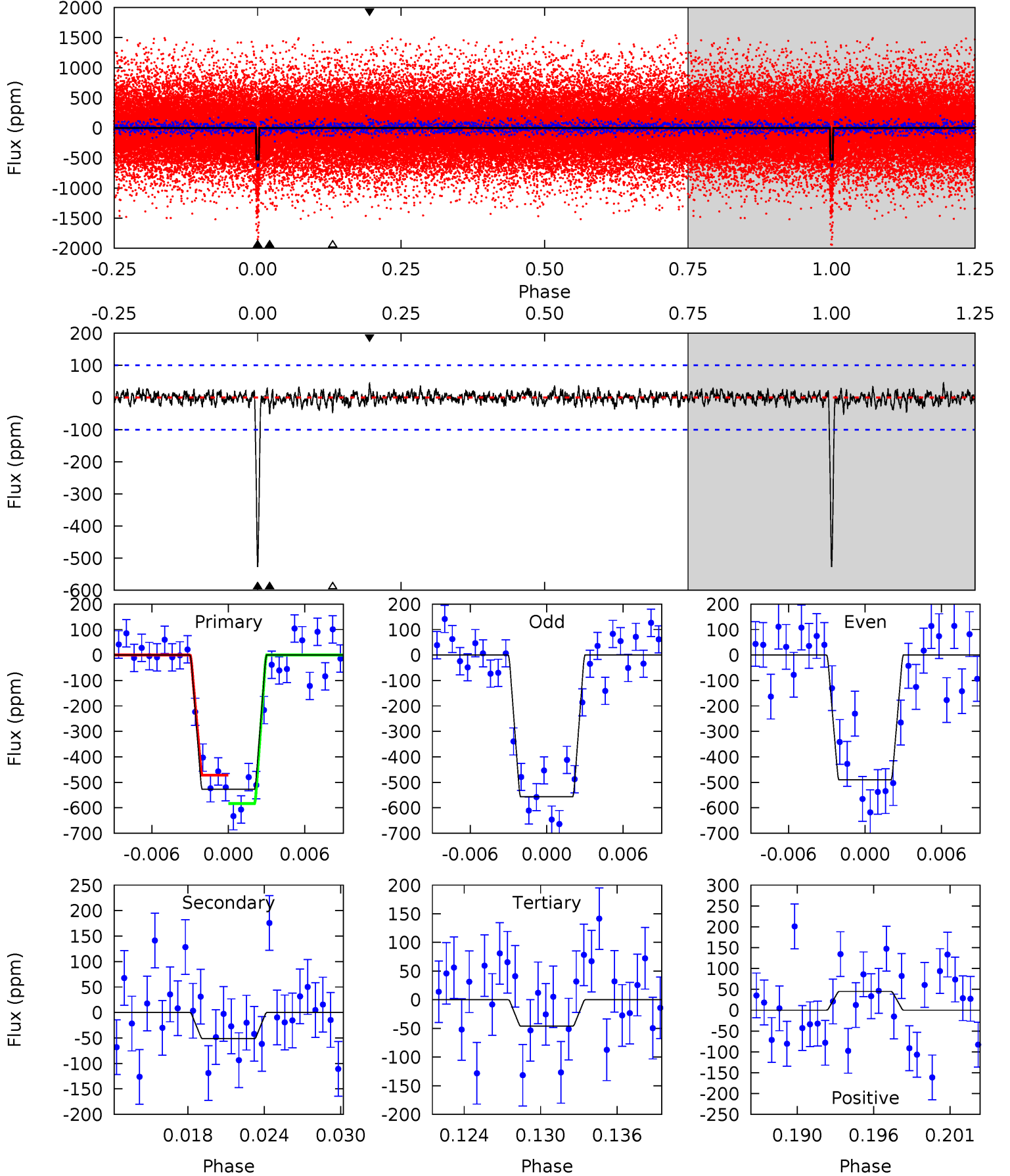
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.8	3.30	3.27	4.21	5.10	2.71	1.28	21.5	20.6	0.03	-0.90	1.90	1.07	0.15	2.40



Alt Model-Shift Uniqueness Test

007047824-01, P = 24.754165 Days, E = 140.214280 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.0	2.63	2.35	2.29	5.13	2.75	0.64	24.6	24.7	0.27	0.34	1.70	1.00	0.08	2.86



Stellar Parameters For KIC 007047824

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4852^{+144}_{-144}	$4.519^{+0.078}_{-0.052}$	$0.200^{+0.200}_{-0.300}$	$0.804^{+0.056}_{-0.076}$	$0.778^{+0.066}_{-0.054}$	$2.108^{+0.672}_{-0.355}$
	+3%/-3%	+2%/-1%	+100%/-150%	+7%/-9%	+8%/-7%	+32%/-17%
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 007047824-01 / KOI 2806.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-70 ± 21	$2.19^{+1.15}_{-1.04}$	682^{+26}_{-25}	3282^{+779}_{-397}	184^{+519}_{-110}
Alt.	-51 ± 20	$2.06^{+1.26}_{-1.07}$	684^{+26}_{-28}	3194^{+893}_{-446}	155^{+497}_{-104}

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 $A_{obs} \gg 1.0$

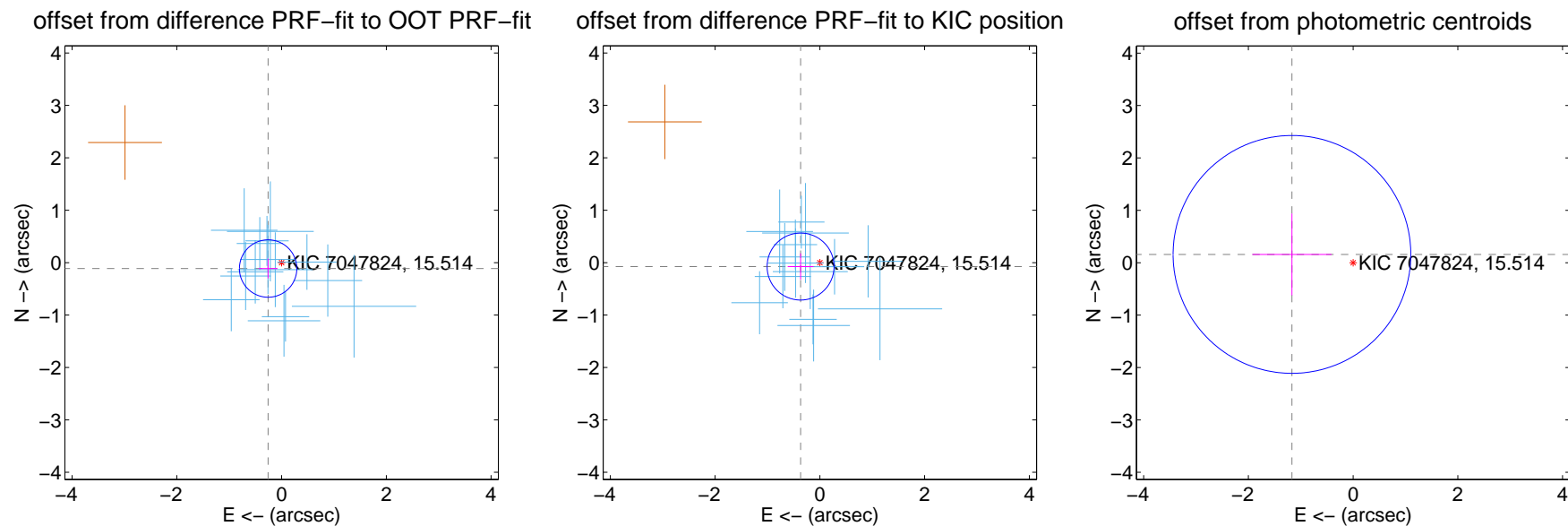
DV Centroid Data

Supplemental centroid analysis for 007047824-01. Kepler magnitude: 15.51. Transit SNR 17.58

There are 14 quarters with good PRF difference image offsets

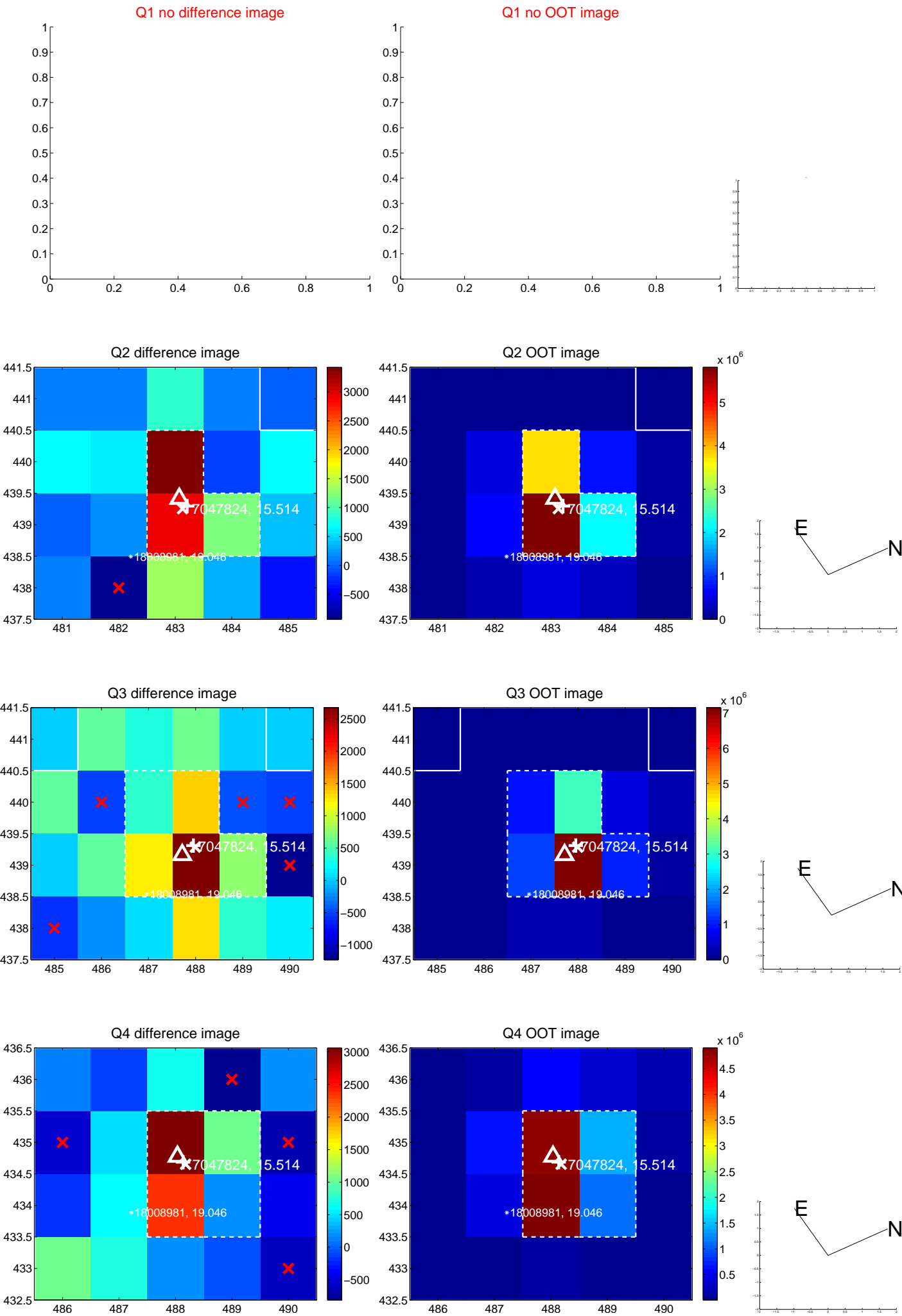
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.280 ± 0.183	1.54	0.257 ± 0.181	-0.112 ± 0.189
PRF-fit source offset from KIC position	0.375 ± 0.213	1.76	0.368 ± 0.246	-0.074 ± 0.252
photometric centroid source offset	1.18 ± 0.76	1.56	1.17 ± 0.76	0.16 ± 0.78

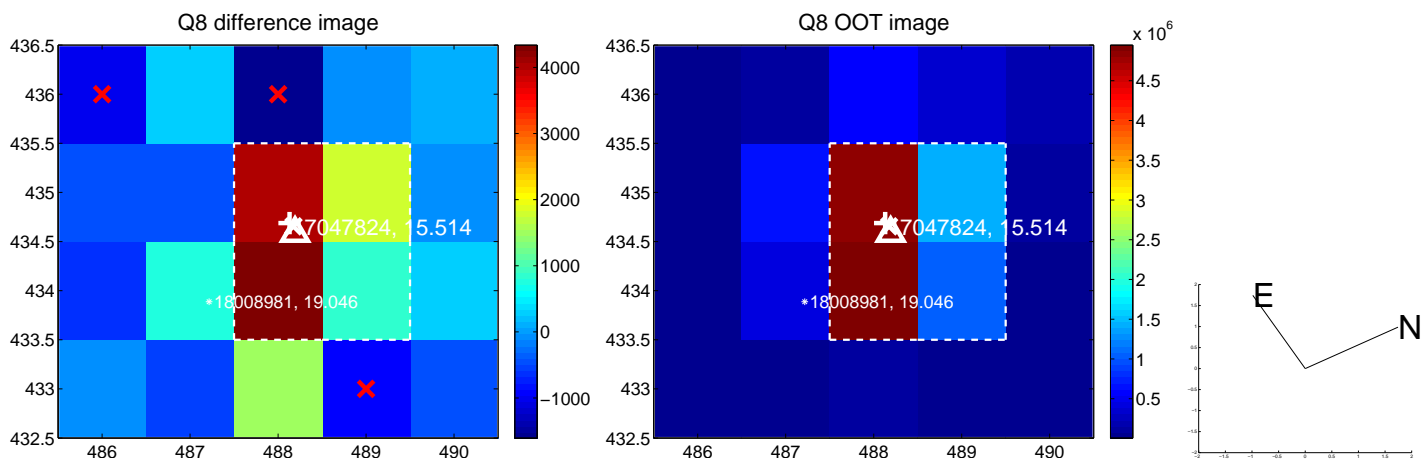
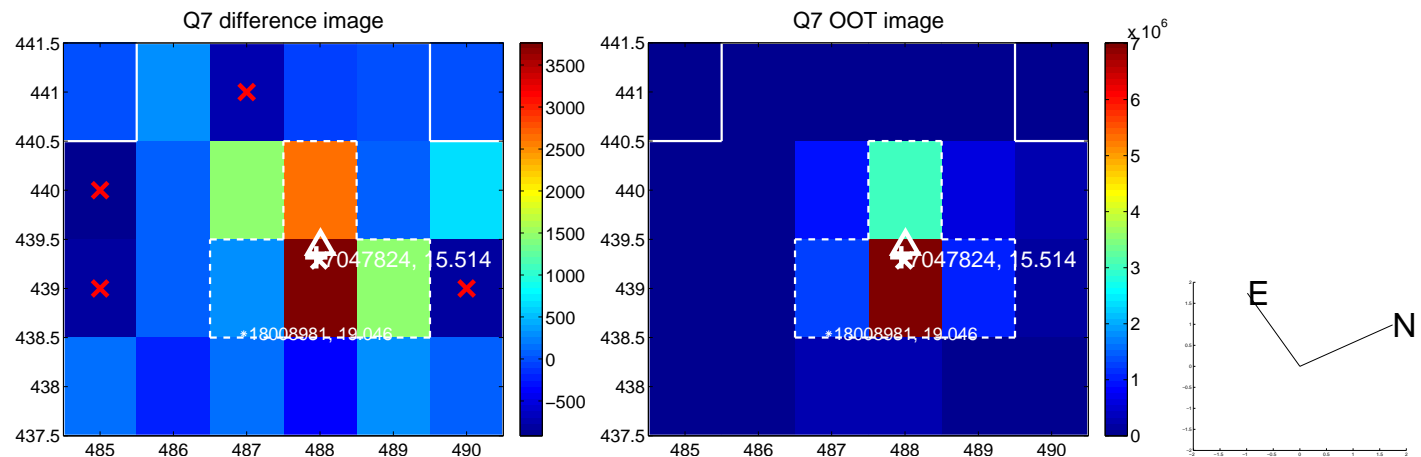
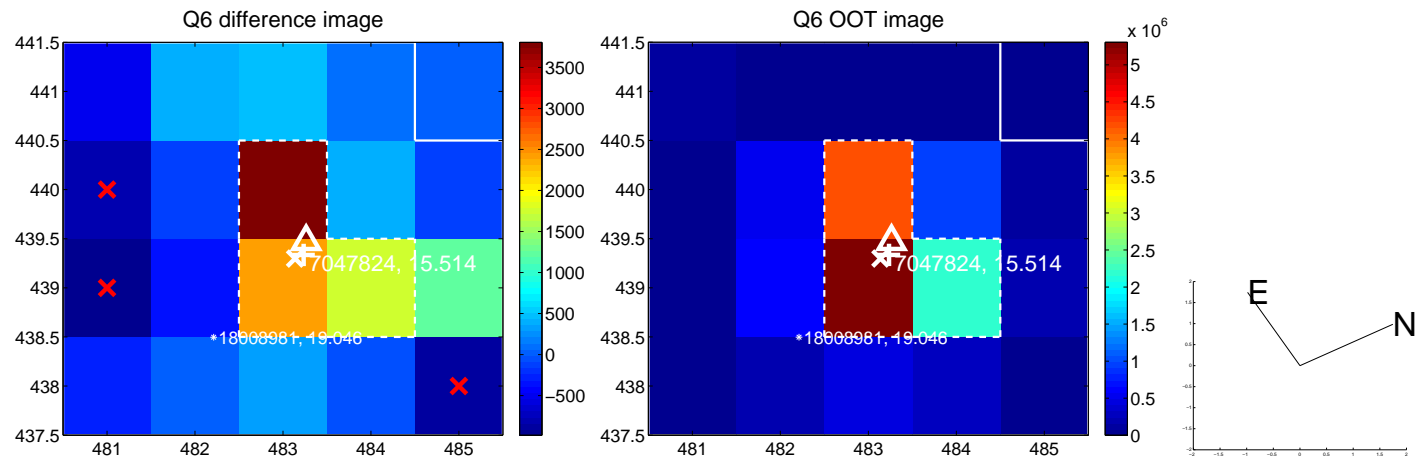
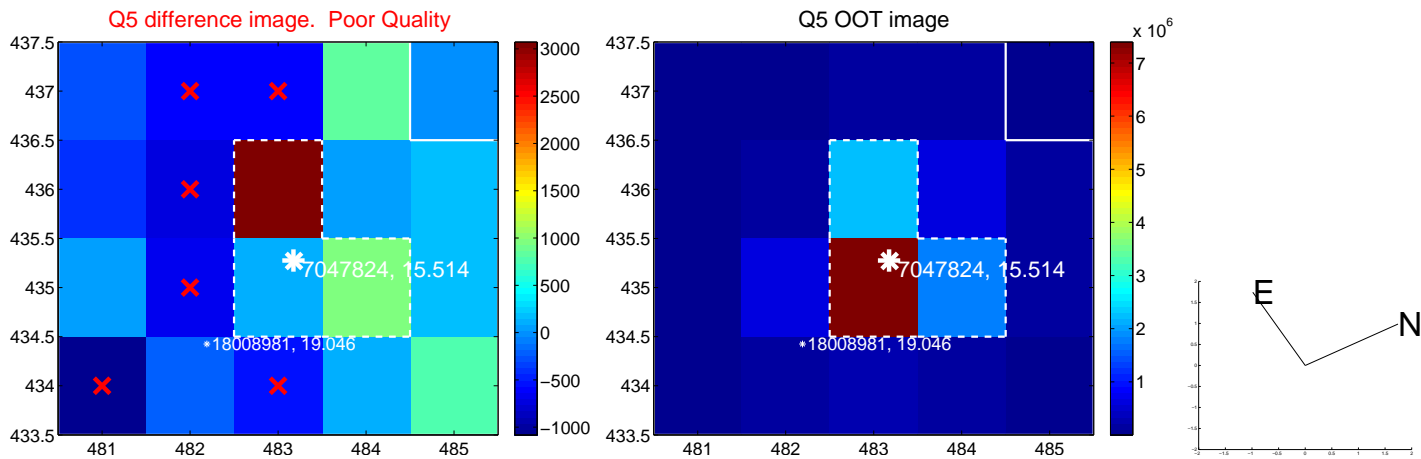


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

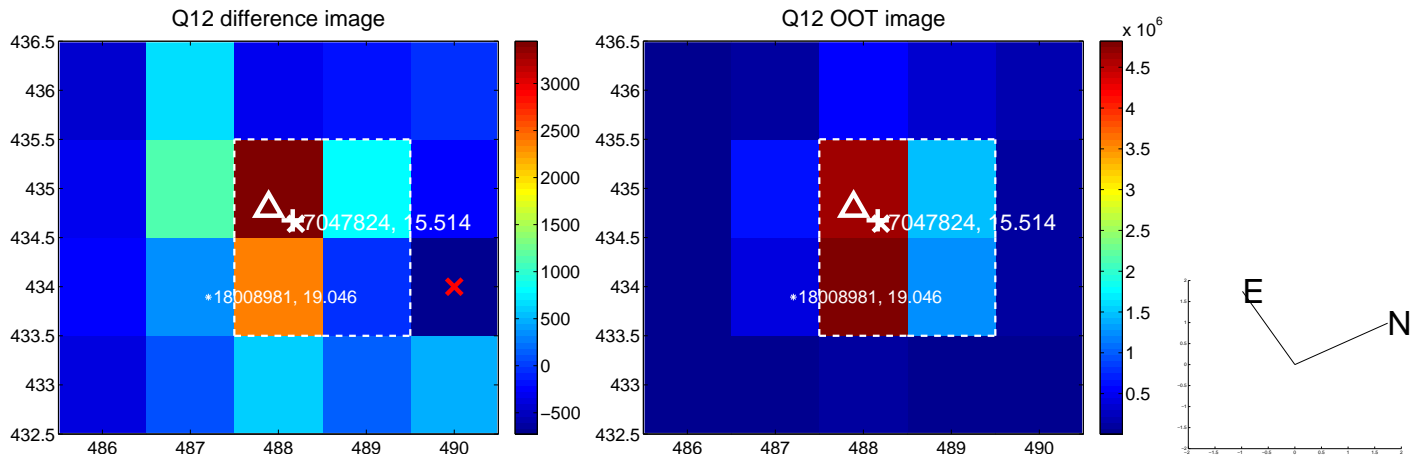
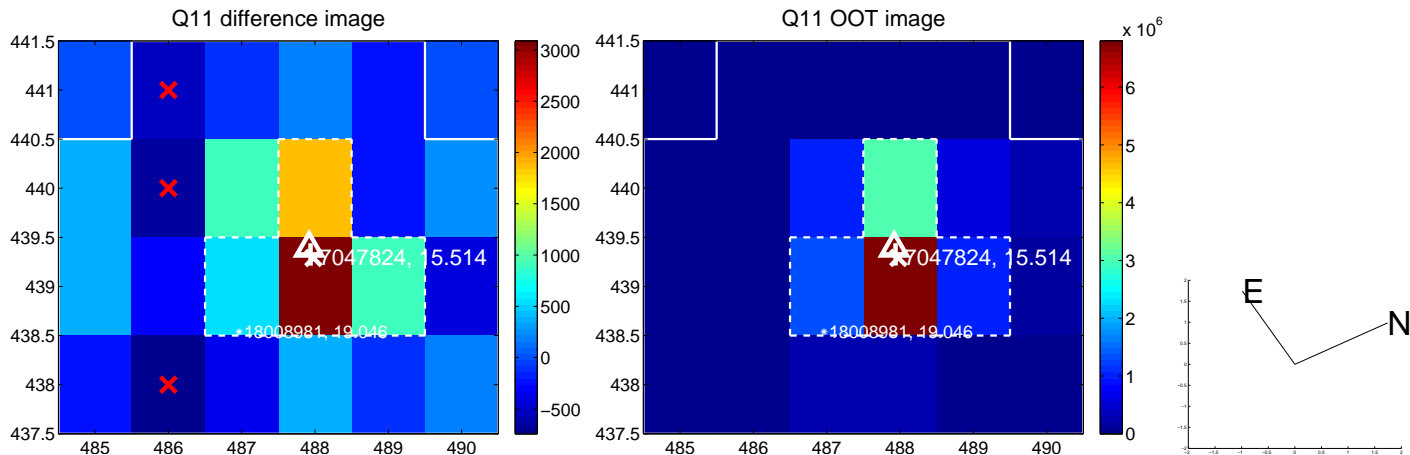
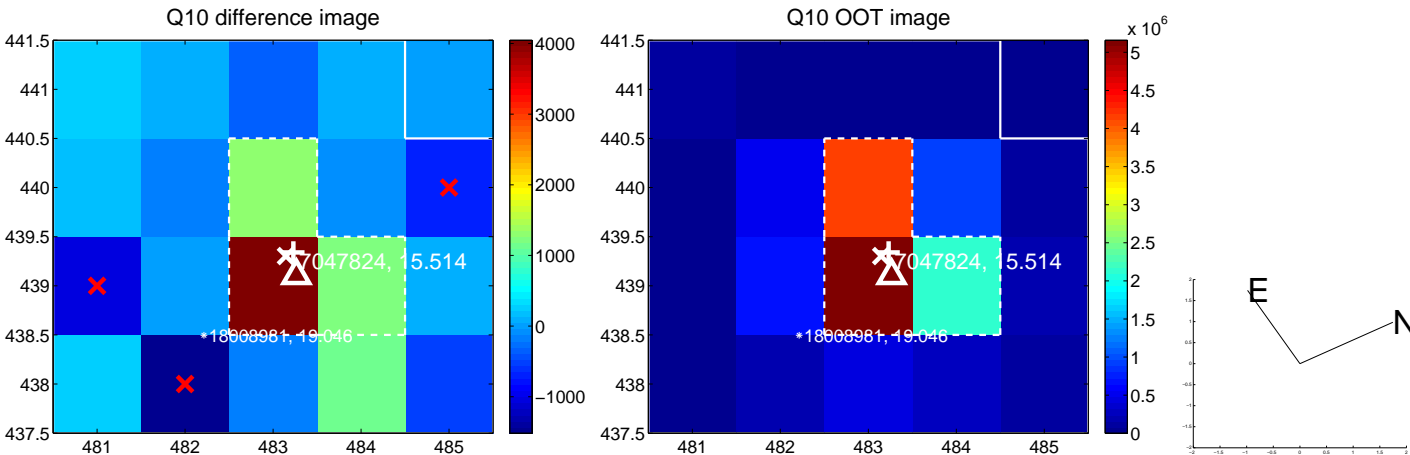
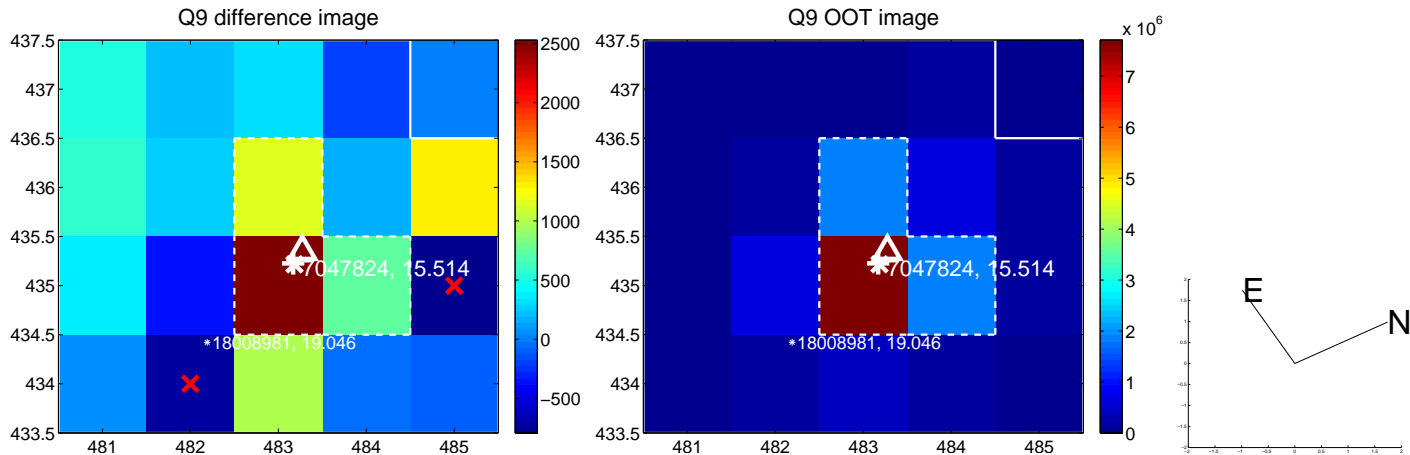
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



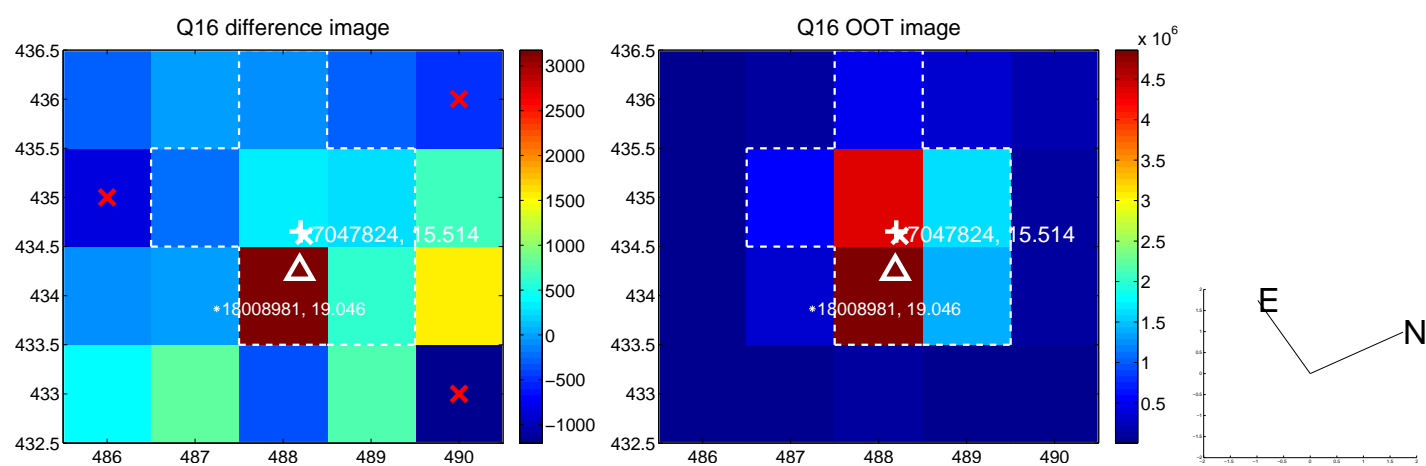
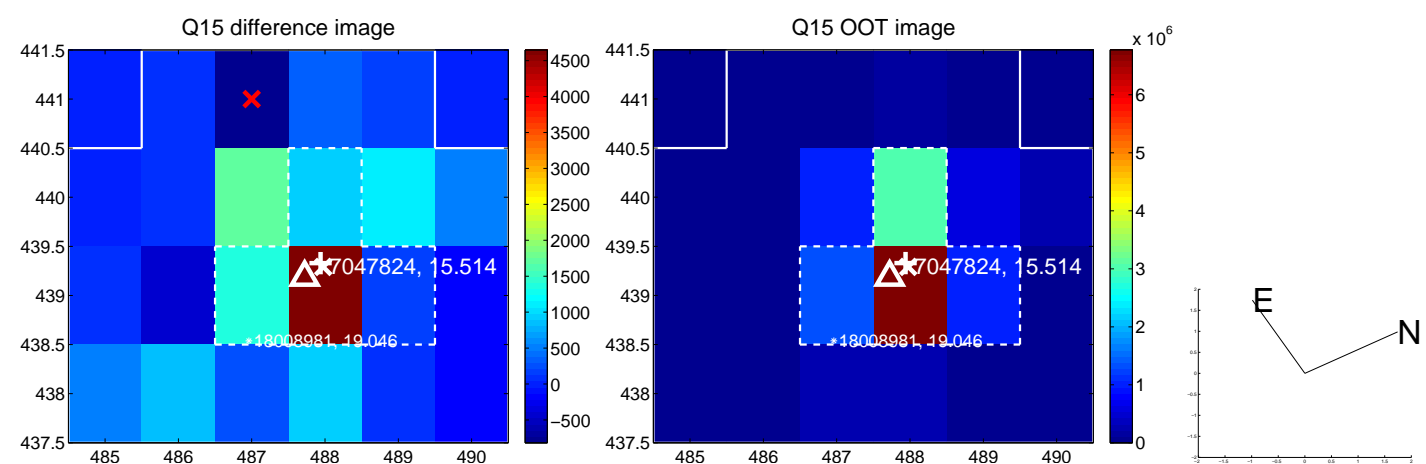
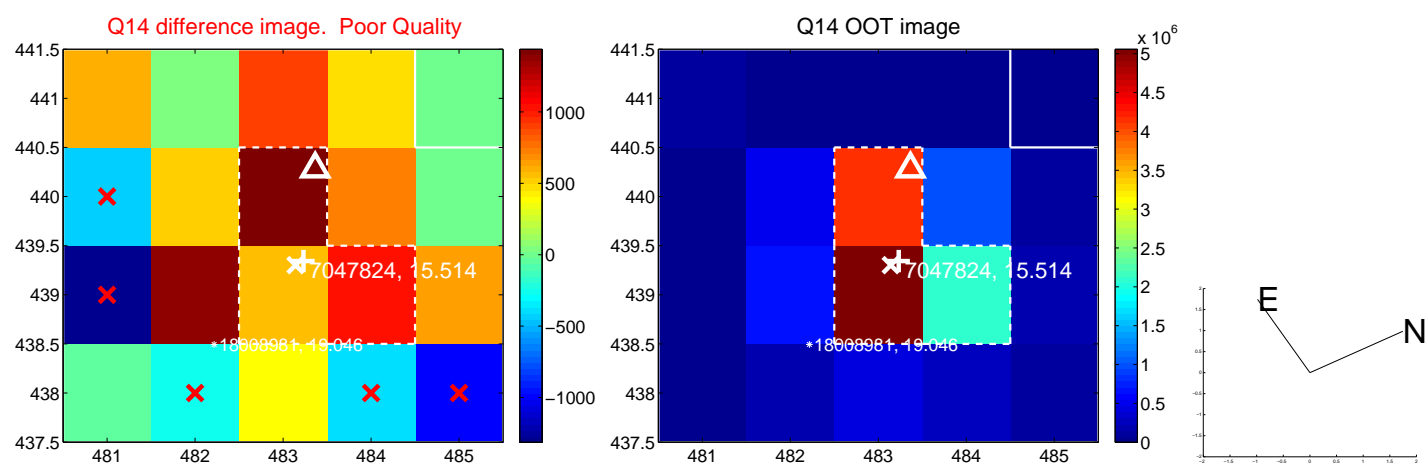
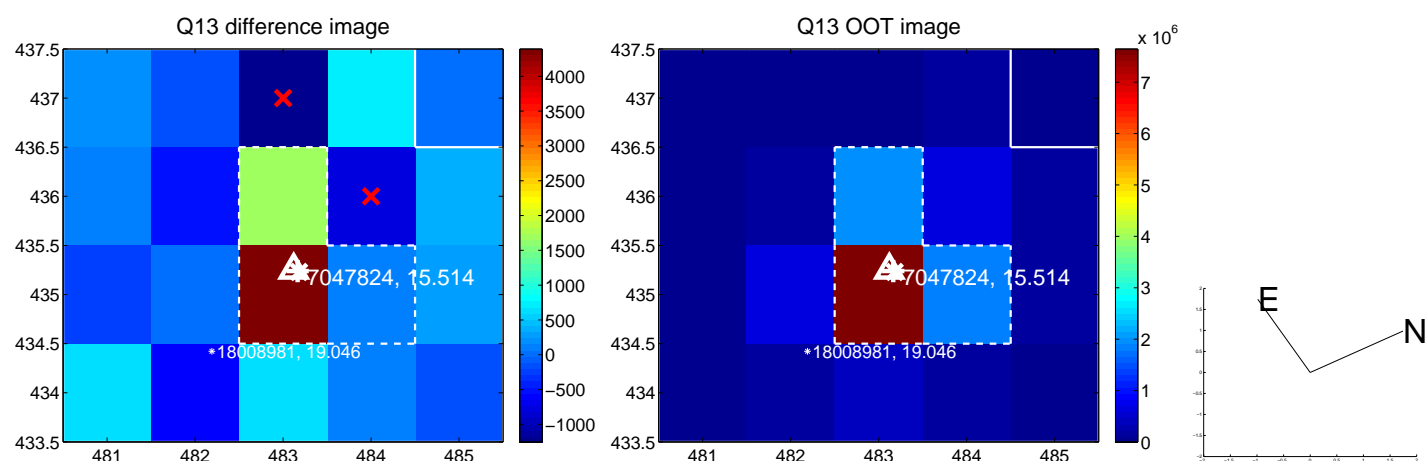
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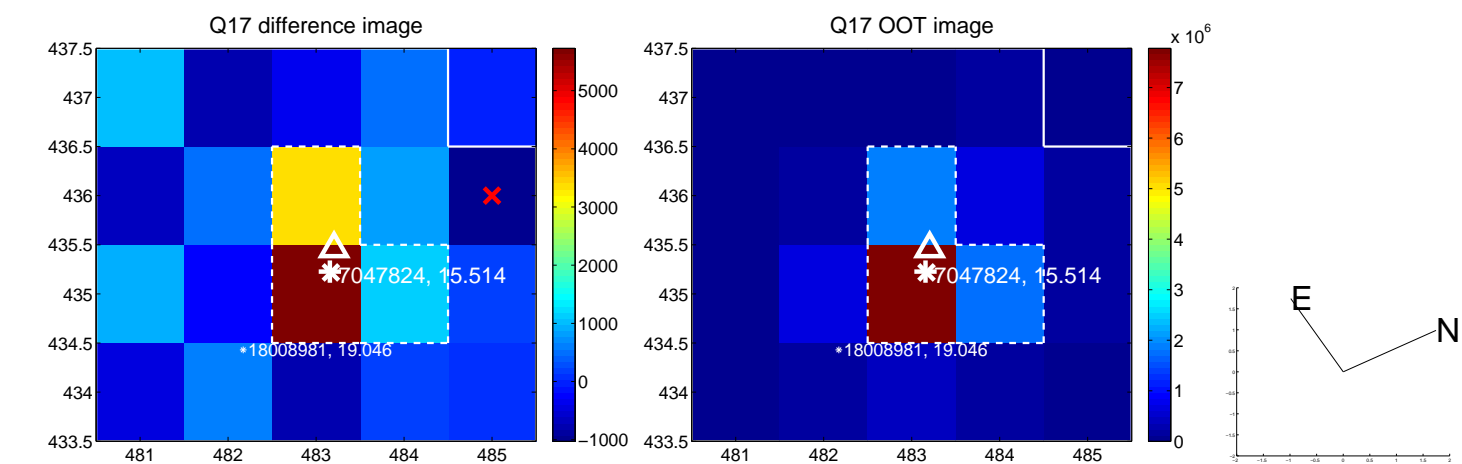
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



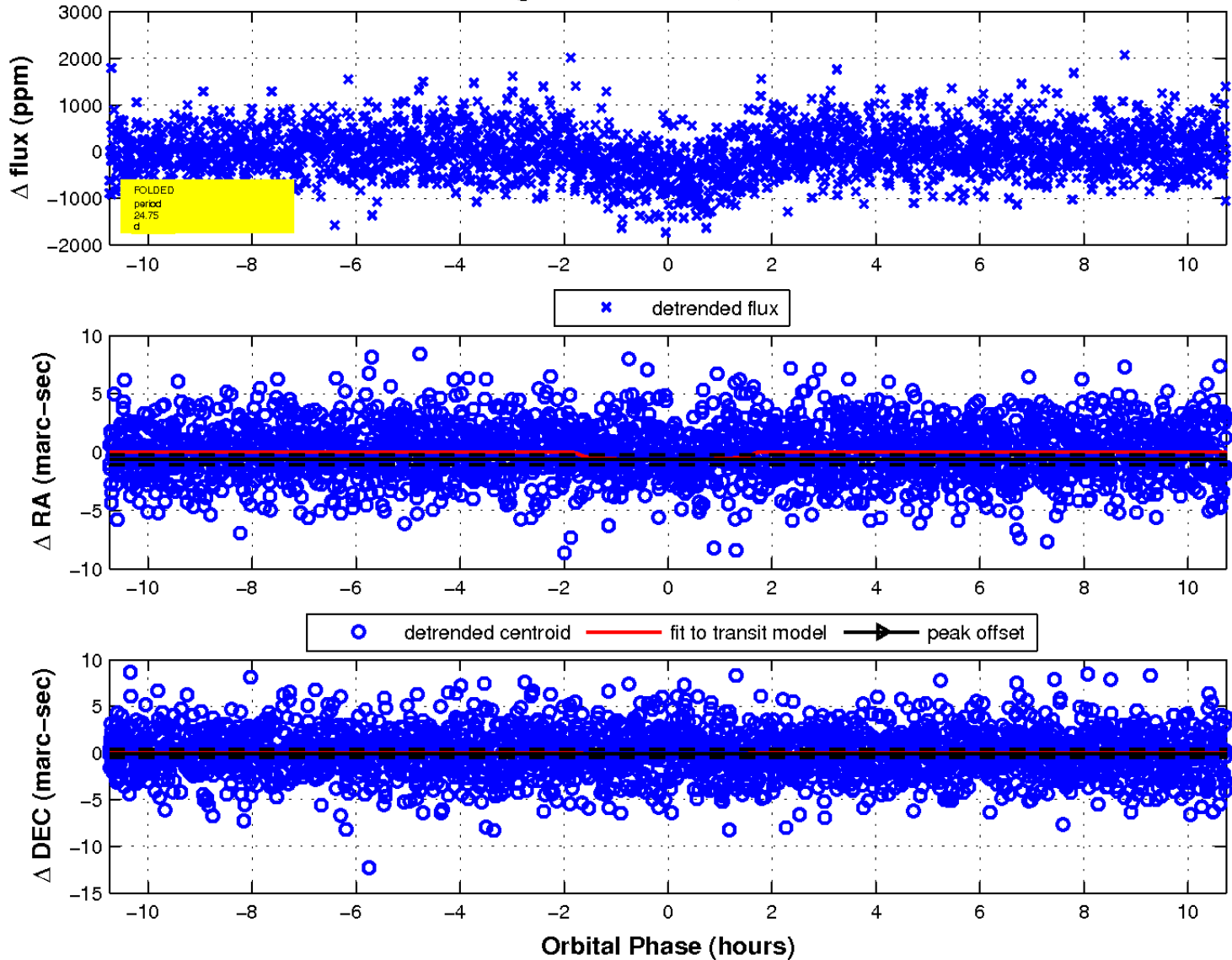
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

