

KIC 006846911

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})
006846911-01	OBS	2477.01	14.026374	135.173683	387.3	1.252	15.6	18.5	1.13	5970	2.60	108.27

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006846911-01	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.

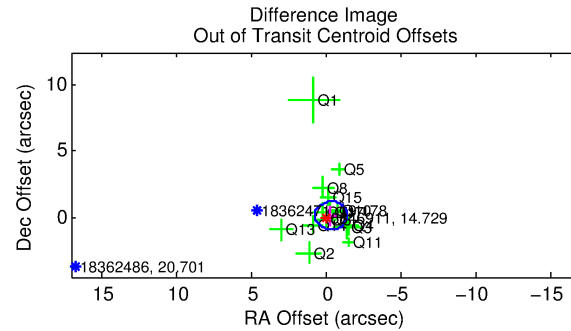
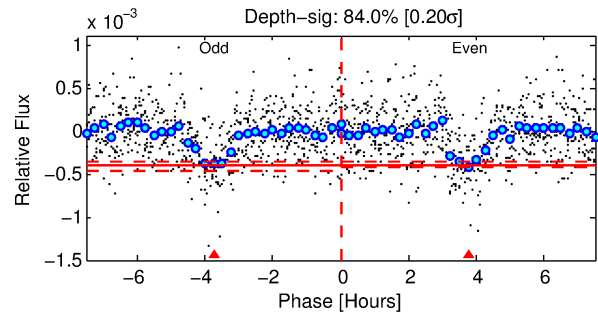
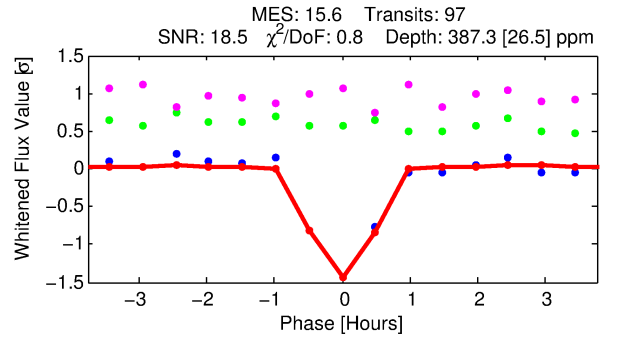
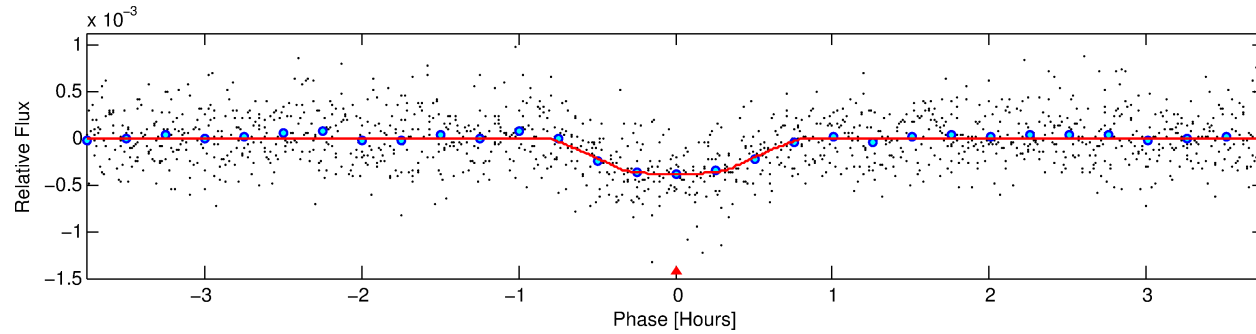
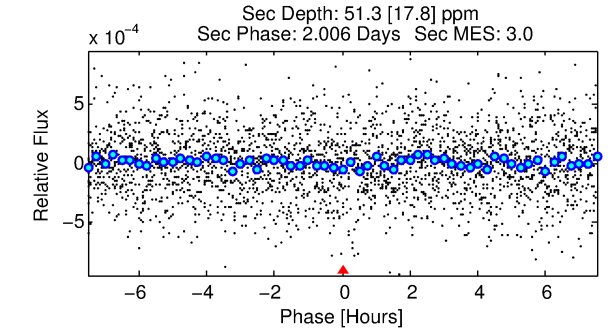
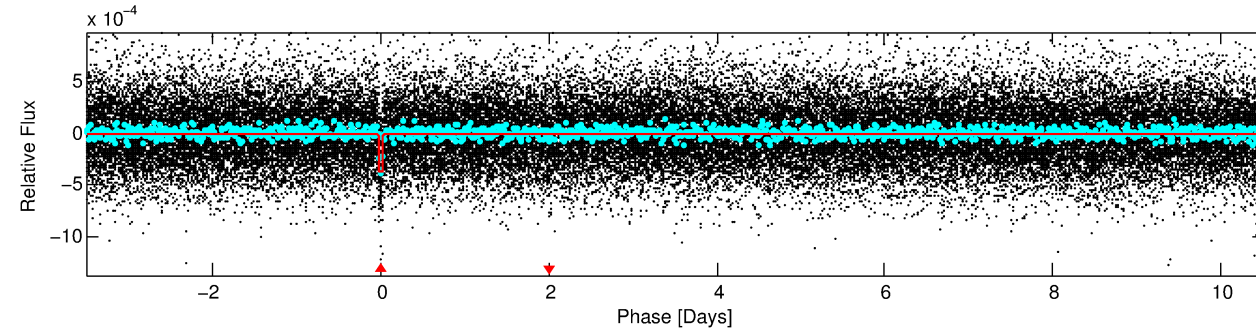
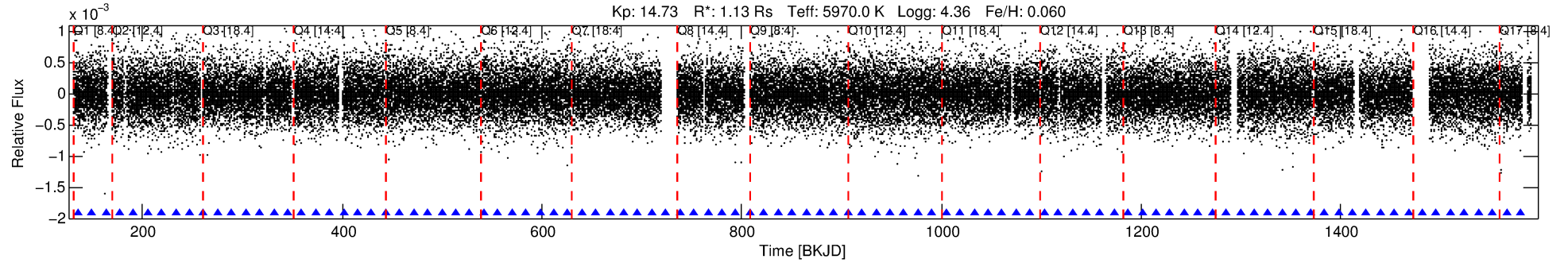
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006846911-01

No Significant Match Found

DV One-Page Summary

KIC: 6846911 Candidate: 1 of 1 Period: 14.026 d
KOI: K02477.01 Corr: 0.987



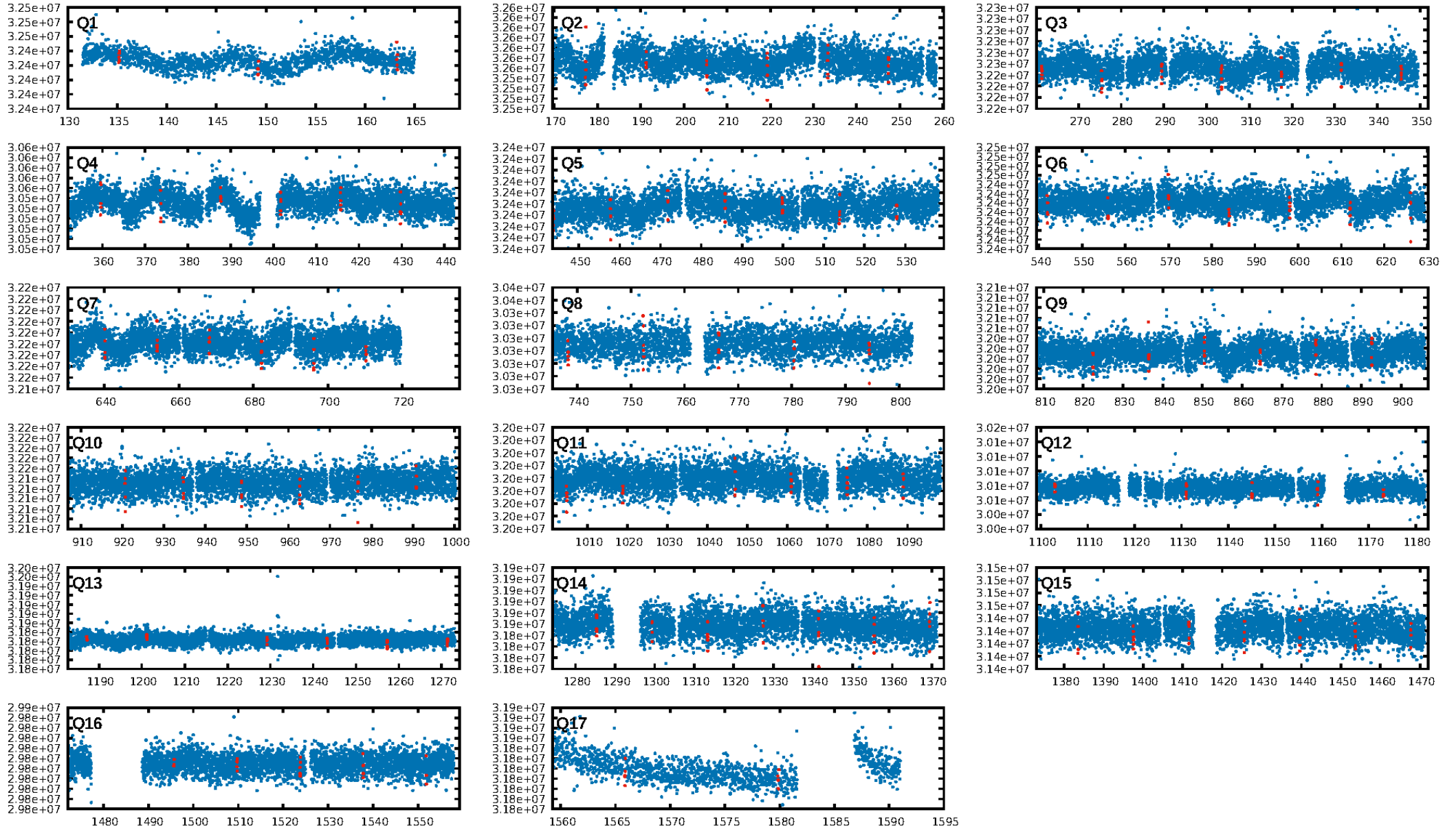
DV Fit Results:

Period = 14.02637 [0.00003] d
Epoch = 135.1737 [0.0019] BKJD
Rp/R* = 0.0211 [0.0102]
a/R* = 44.41 [103.03]
b = 0.88 [0.61]
Seff = 108.27 [41.19]
Teff = 823 [78] K
Rp = 2.60 [1.47] Re
a = 0.1160 [0.0286] AU
Ag = 56.02 [60.68] [0.91σ]
Teffp = 3479 [898] K [2.95σ]

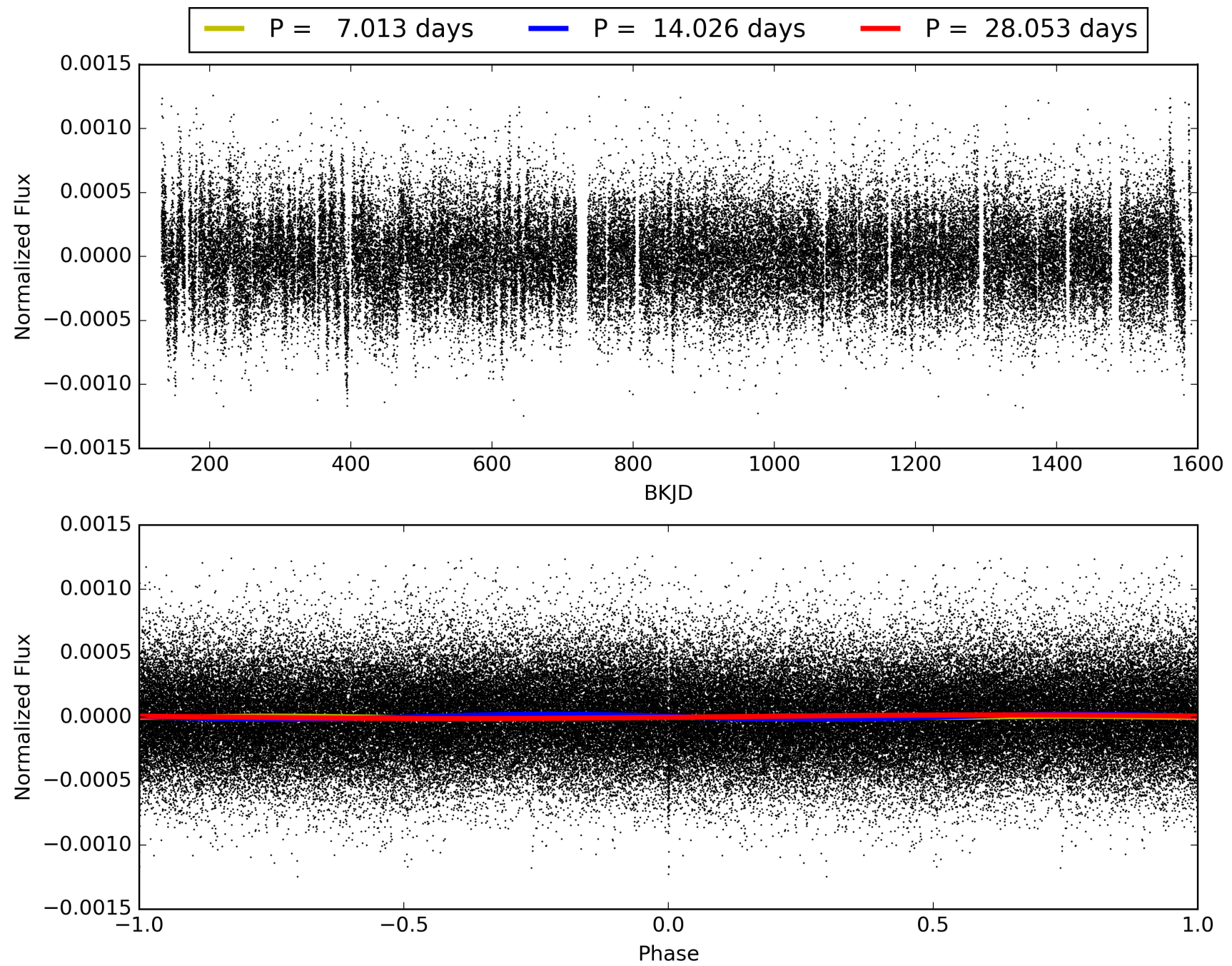
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.16e-53
RollingBand-fgt: 1.00 [92/92]
GhostDiagnostic-chr: -16.57
Centroid-sig: 0.0%
Centroid-so: 1.914 arcsec [2.37σ]
OotOffset-rm: 0.391 arcsec [1.10σ]
KicOffset-rm: 0.427 arcsec [1.38σ]
OotOffset-st: 4/4/2/5 [15]
KicOffset-st: 4/4/2/5 [15]
DiffImageQuality-fgm: 0.87 [13/15]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 006846911-01, PDC Light Curves

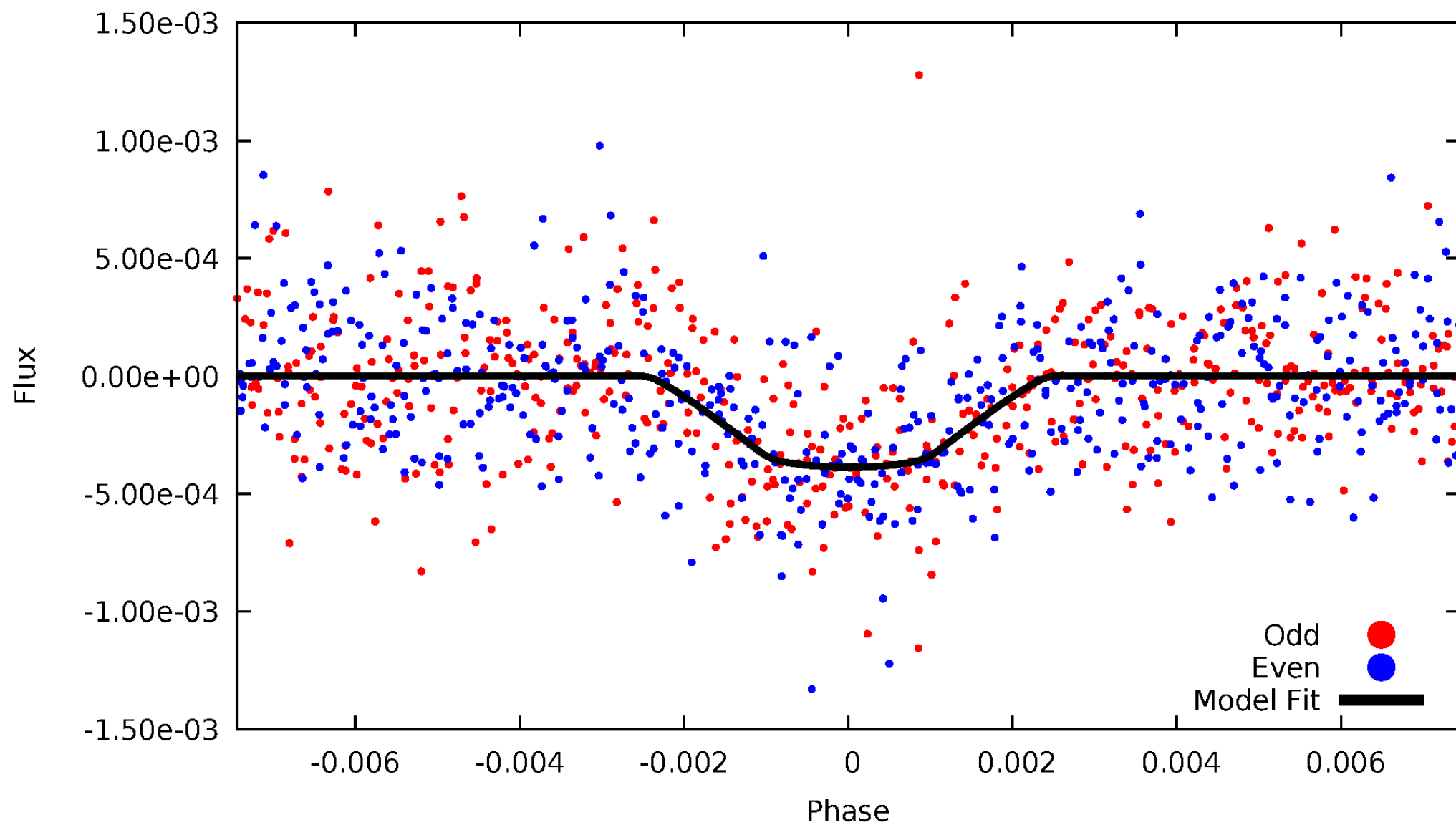


TCE 006846911-01



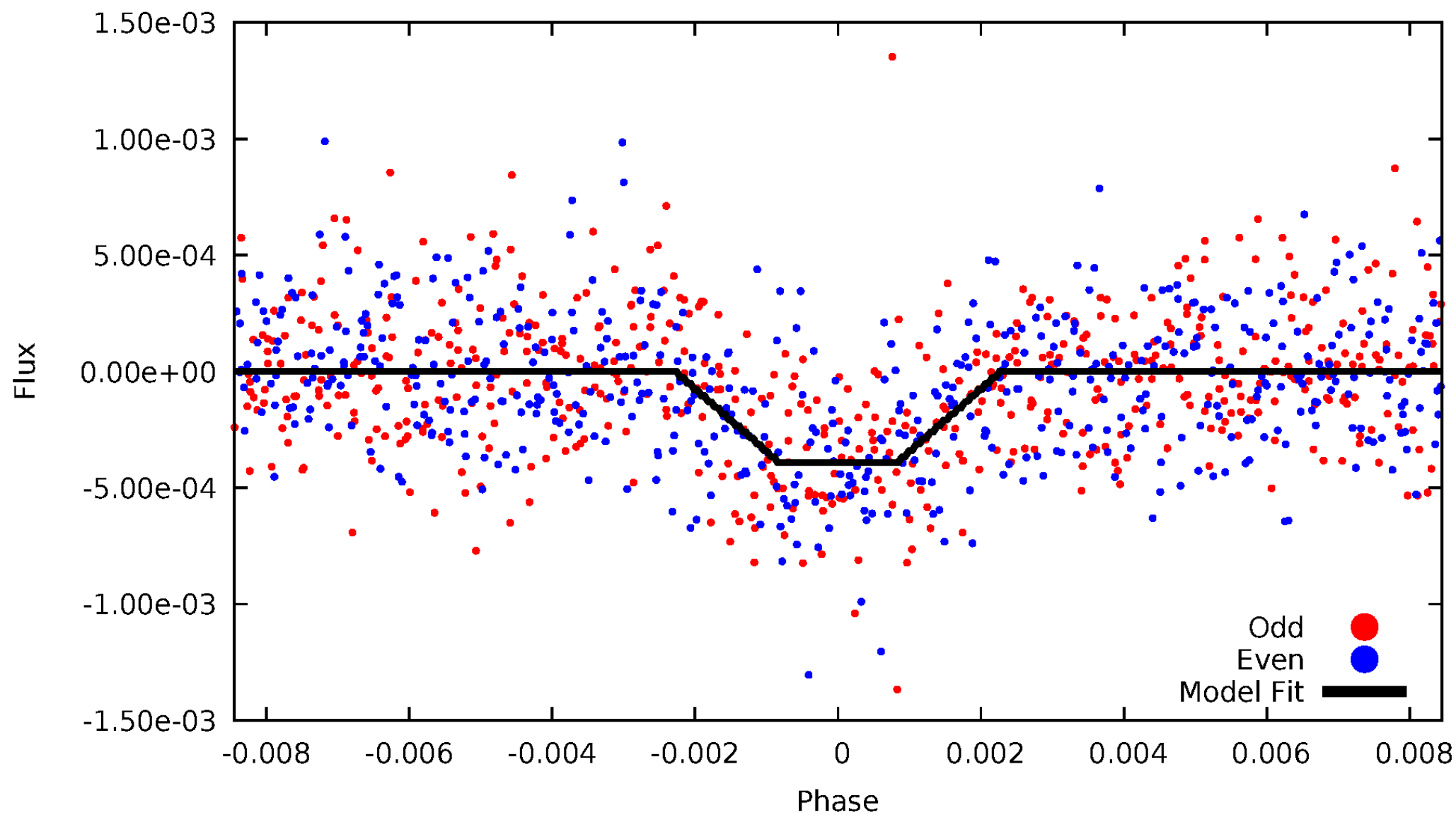
DV Odd/Even

TCE 006846911-01

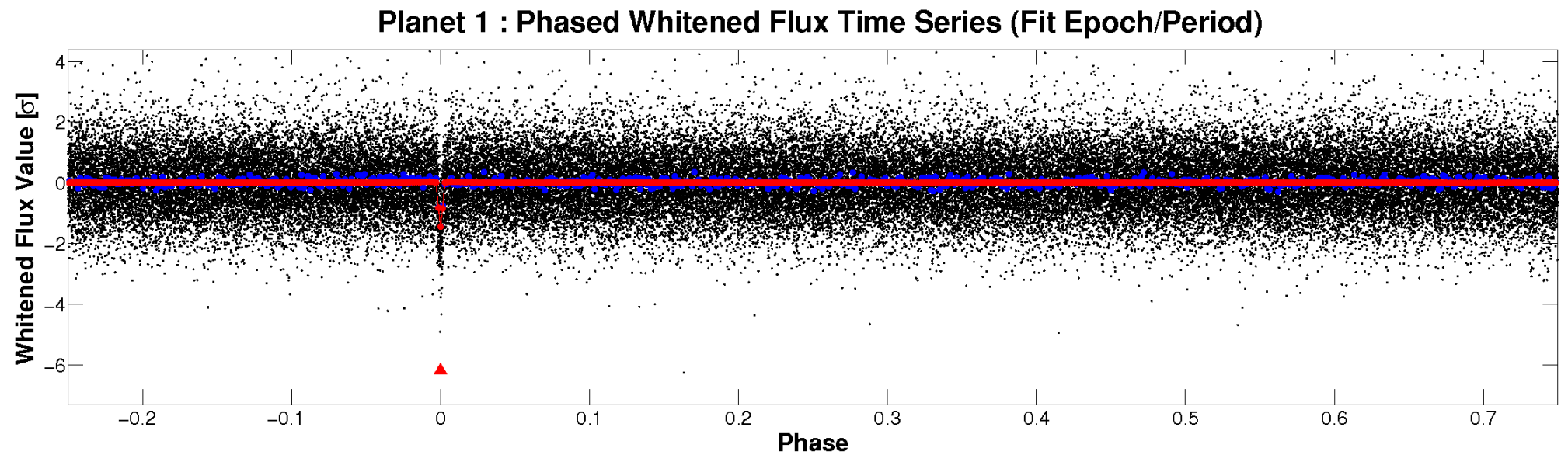
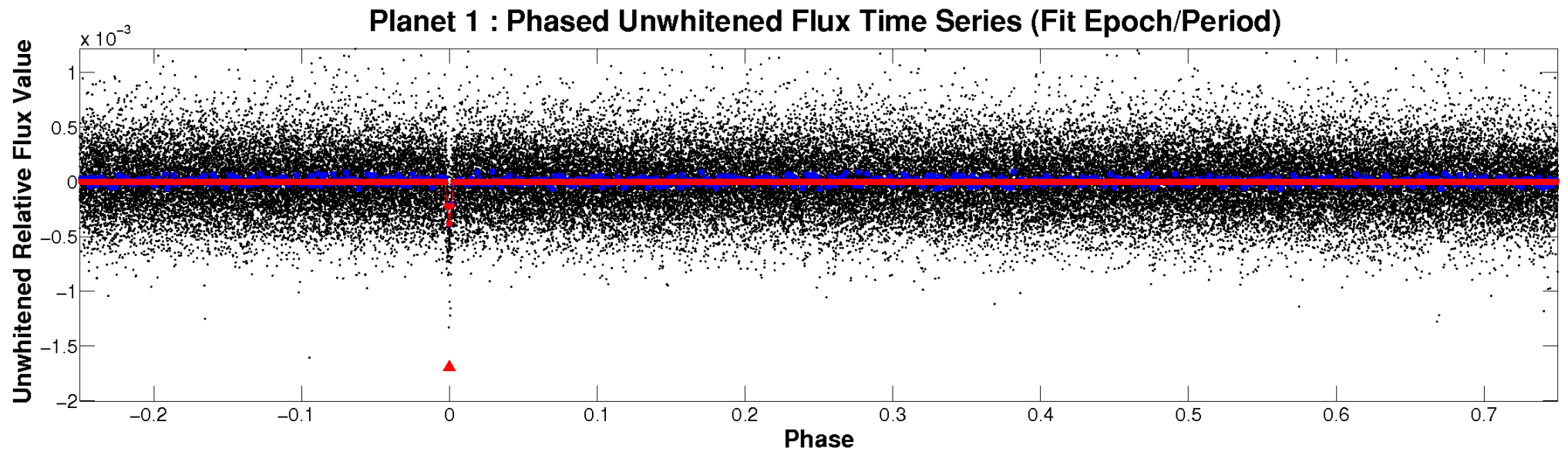


ALT Odd/Even

TCE 006846911-01

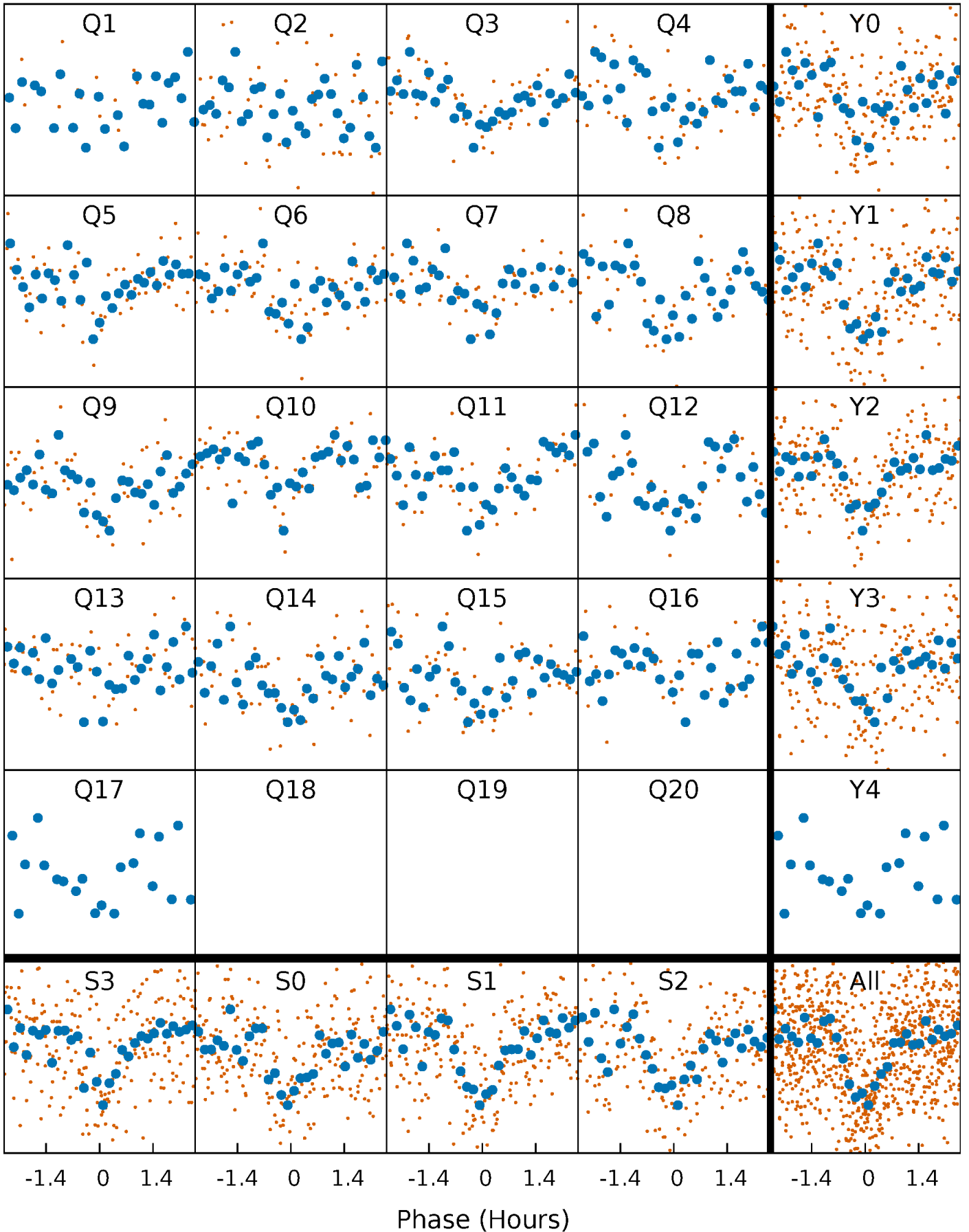


Non-Whitened Vs. Whitened Light Curve



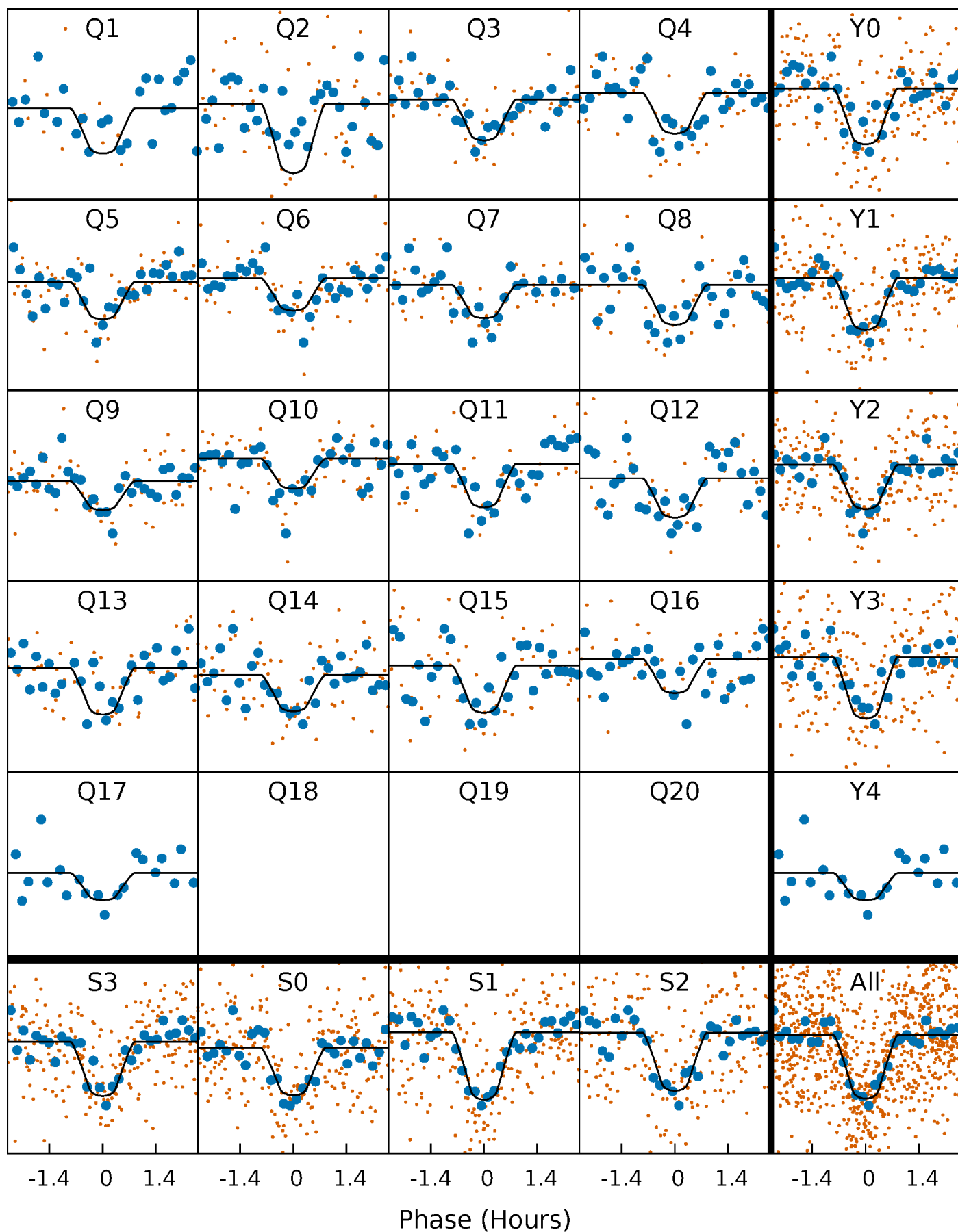
PDC Quarter-Phased Transit Curves

TCE 006846911-01 P= 14.026374 Days $T_0=135.173684$ (BKJD)



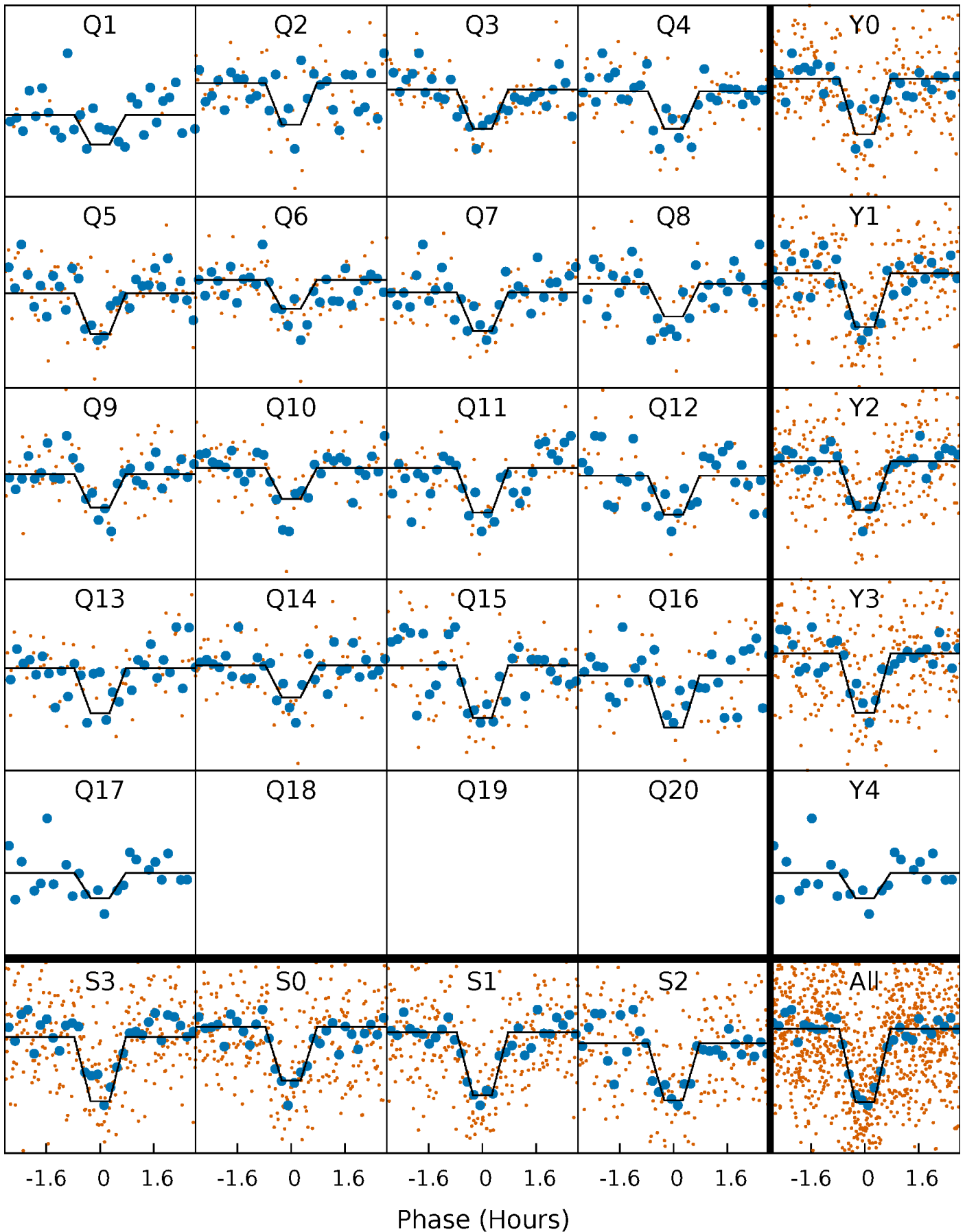
DV Quarter-Phased Transit Curves

TCE 006846911-01 P= 14.026374 Days $T_0=135.173684$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

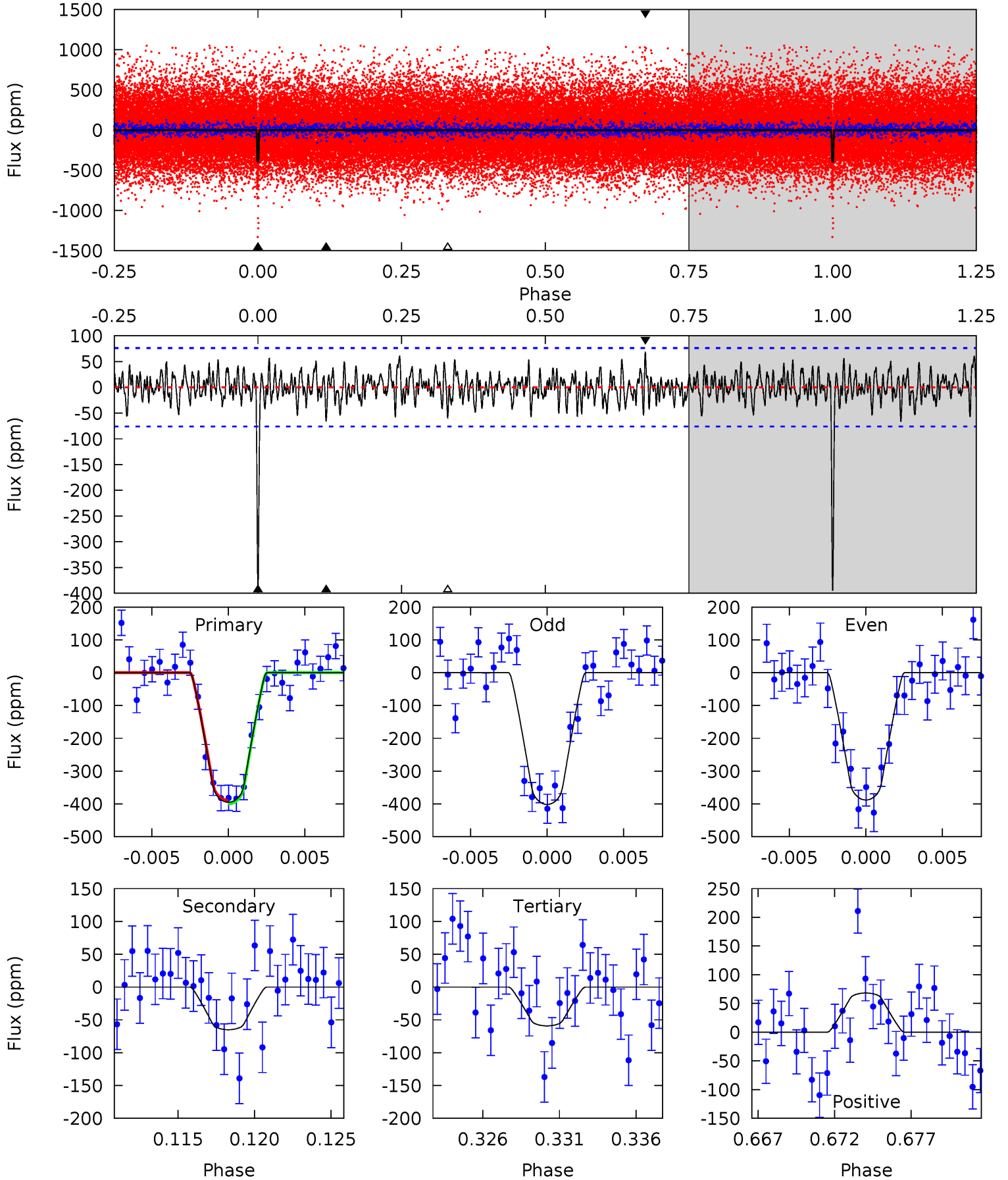
TCE 006846911-01 P= 14.026339 Days $T_0=135.175257$ (BKJD)



DV Model-Shift Uniqueness Test

006846911-01, $P = 14.026374$ Days, $E = 121.147310$ Days

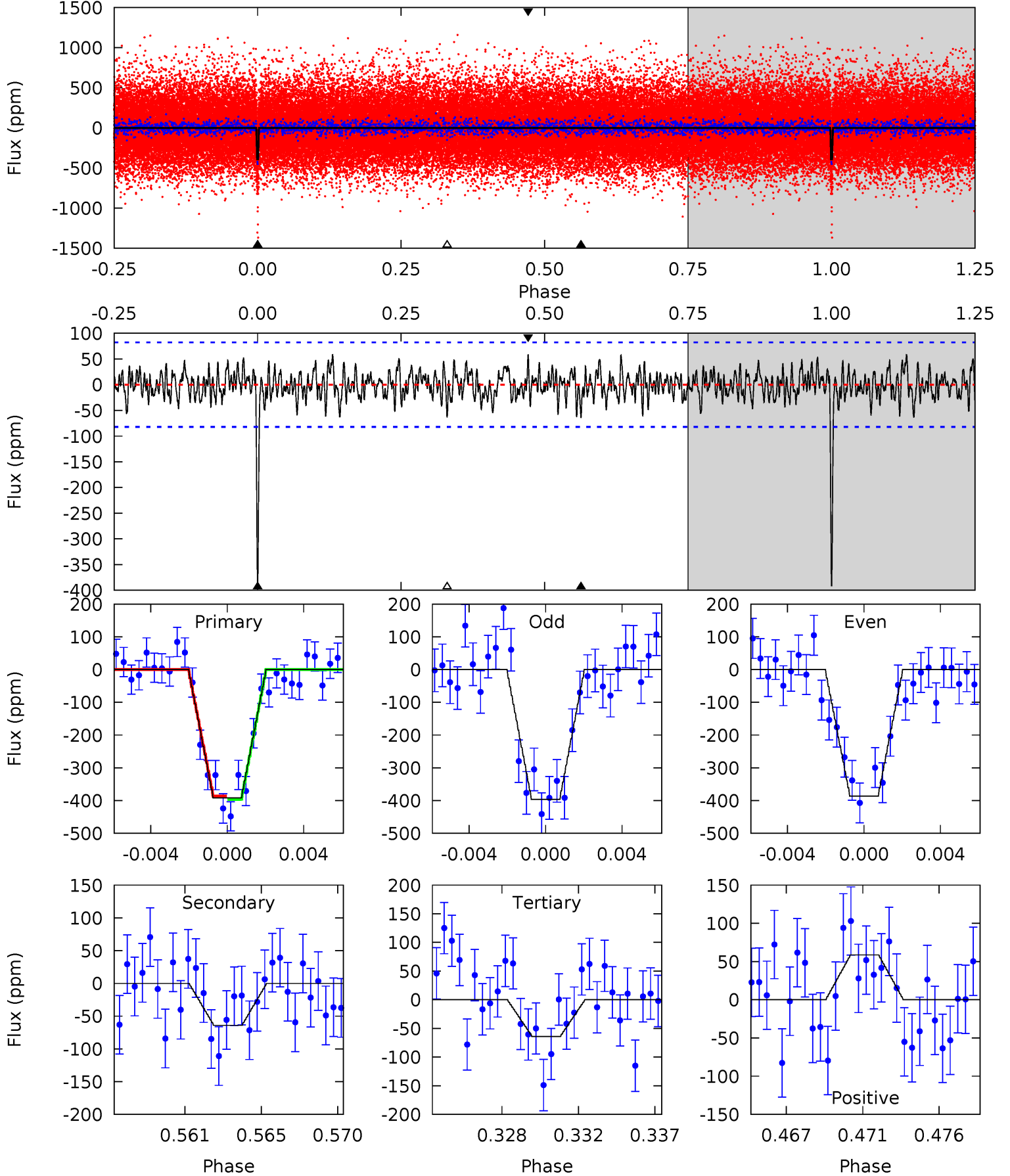
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.8	4.41	4.01	4.62	5.16	2.81	1.45	22.8	22.2	0.40	-0.21	0.46	0.95	0.15	0.35



Alt Model-Shift Uniqueness Test

006846911-01, P = 14.026339 Days, E = 121.148918 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.6	4.03	4.03	3.69	5.18	2.84	1.37	20.6	20.9	0.01	0.34	0.30	0.97	0.13	0.32



Stellar Parameters For KIC 006846911

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5970^{+184}_{-205}	$4.355^{+0.112}_{-0.192}$	$0.060^{+0.250}_{-0.300}$	$1.131^{+0.335}_{-0.180}$	$1.057^{+0.152}_{-0.124}$	$1.029^{+0.597}_{-0.509}$
	+3%/-3%	+3%/-4%	+417%/-500%	+30%/-16%	+14%/-12%	+58%/-50%
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 006846911-01 / KOI 2477.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-65 ± 15	$2.70^{+1.27}_{-1.19}$	1156^{+100}_{-65}	3972^{+998}_{-486}	67^{+140}_{-38}
Alt.	-64 ± 16	$2.50^{+1.42}_{-1.19}$	1164^{+87}_{-70}	4093^{+1210}_{-590}	74^{+188}_{-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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

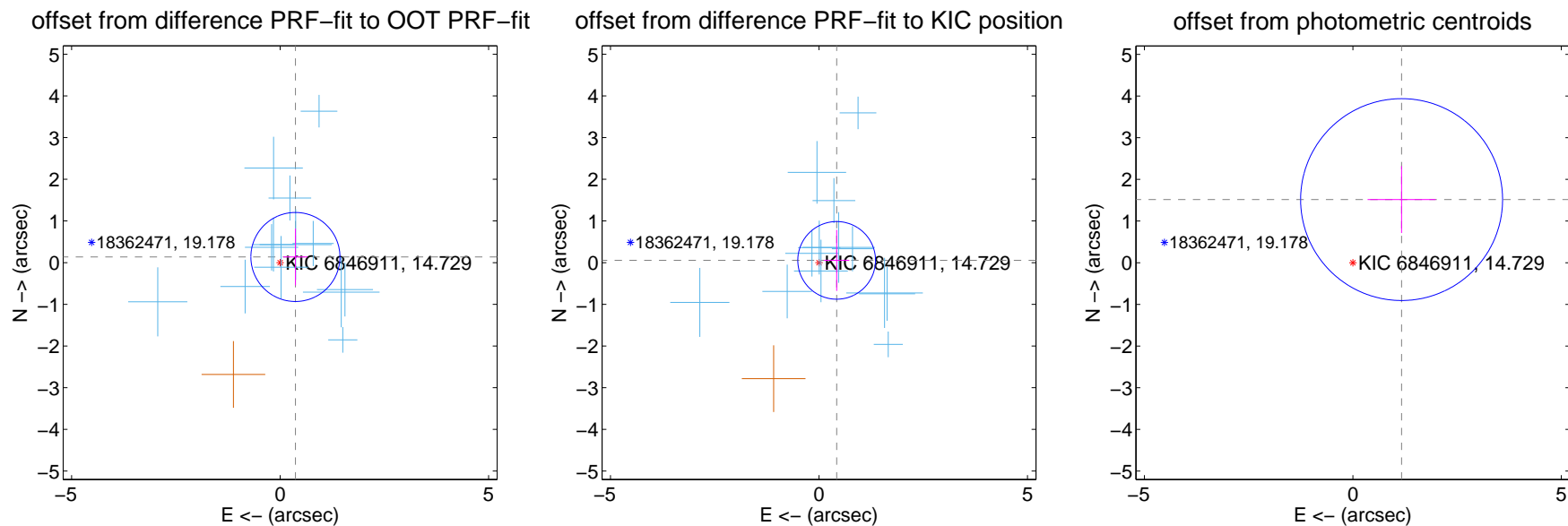
DV Centroid Data

Supplemental centroid analysis for 006846911-01. Kepler magnitude: 14.73. Transit SNR 18.48

There are 13 quarters with good PRF difference image offsets

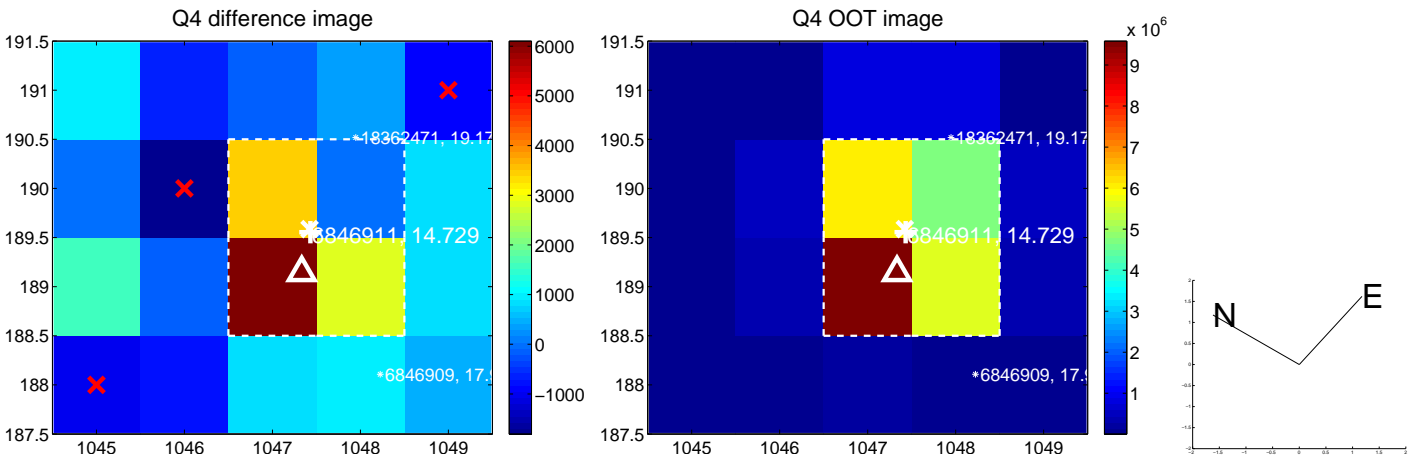
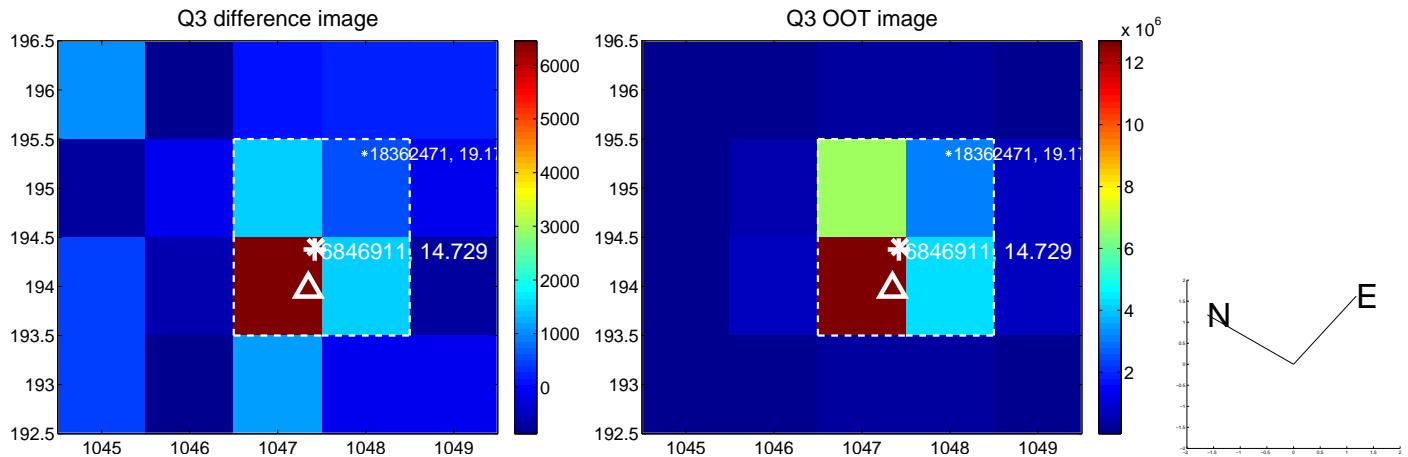
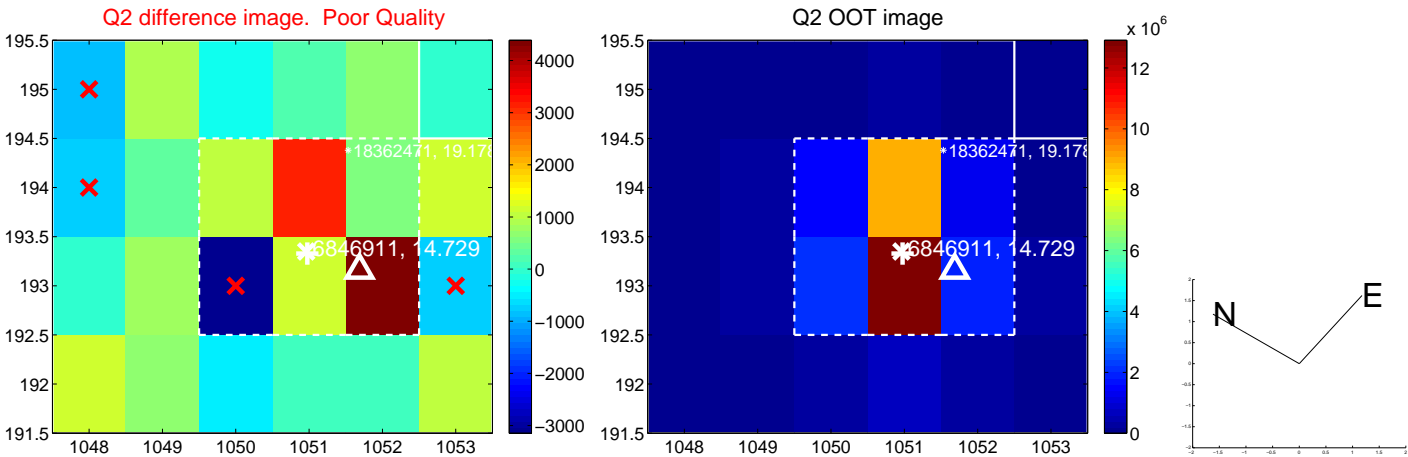
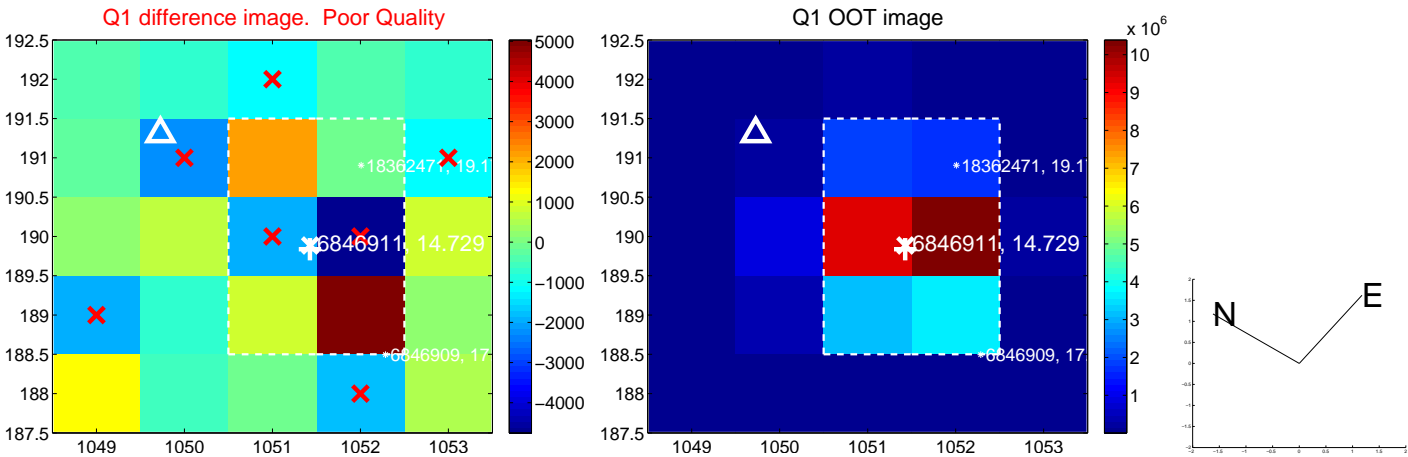
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.391 ± 0.356	1.10	-0.367 ± 0.292	0.136 ± 0.682
PRF-fit source offset from KIC position	0.427 ± 0.311	1.38	-0.424 ± 0.303	0.055 ± 0.733
photometric centroid source offset	1.91 ± 0.81	2.37	-1.17 ± 0.81	1.52 ± 0.80

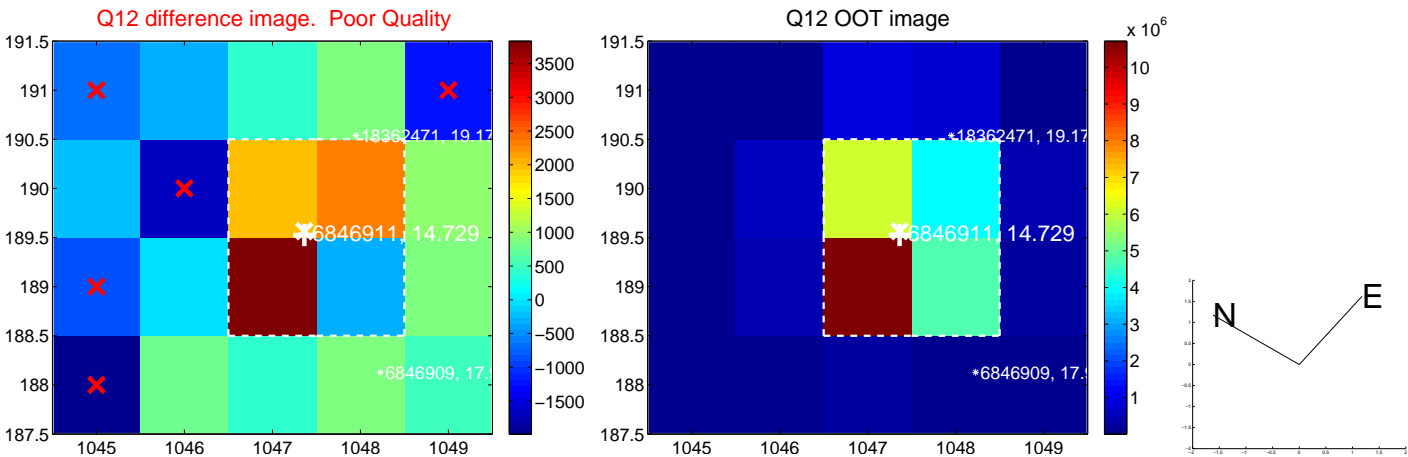
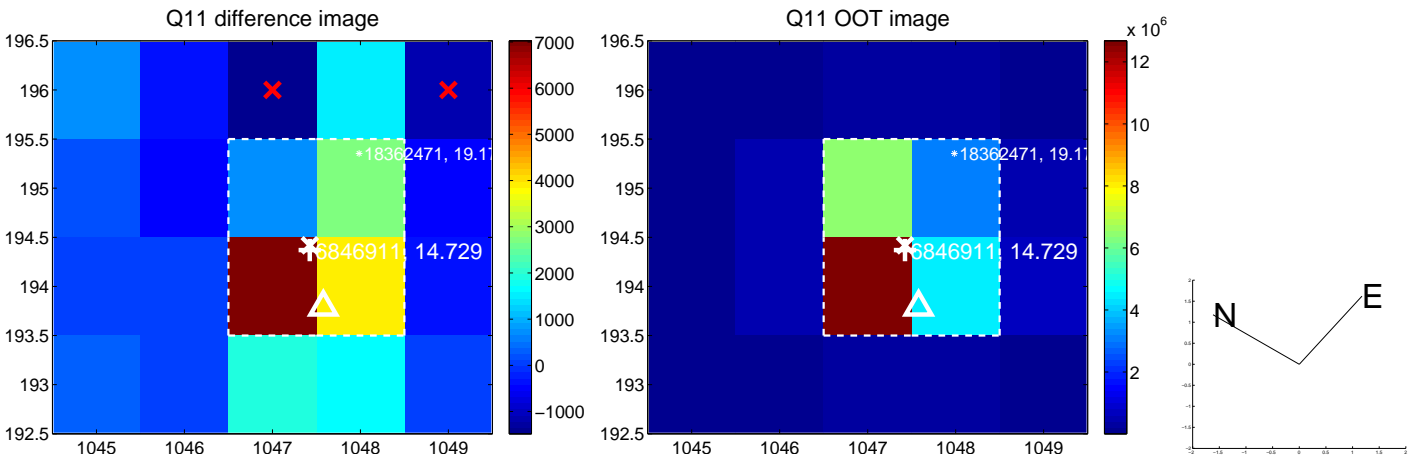
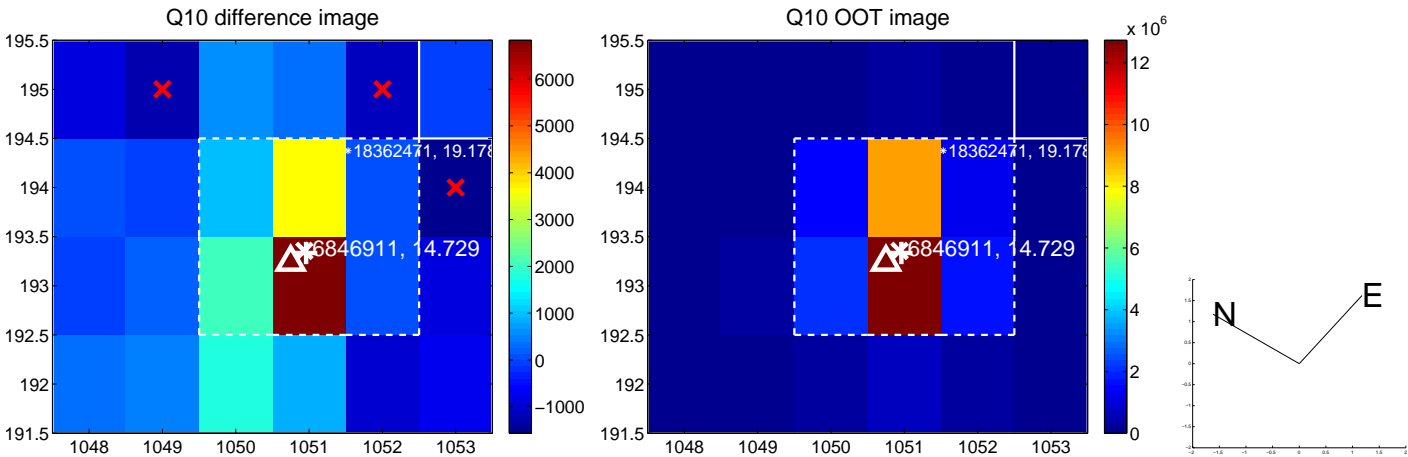
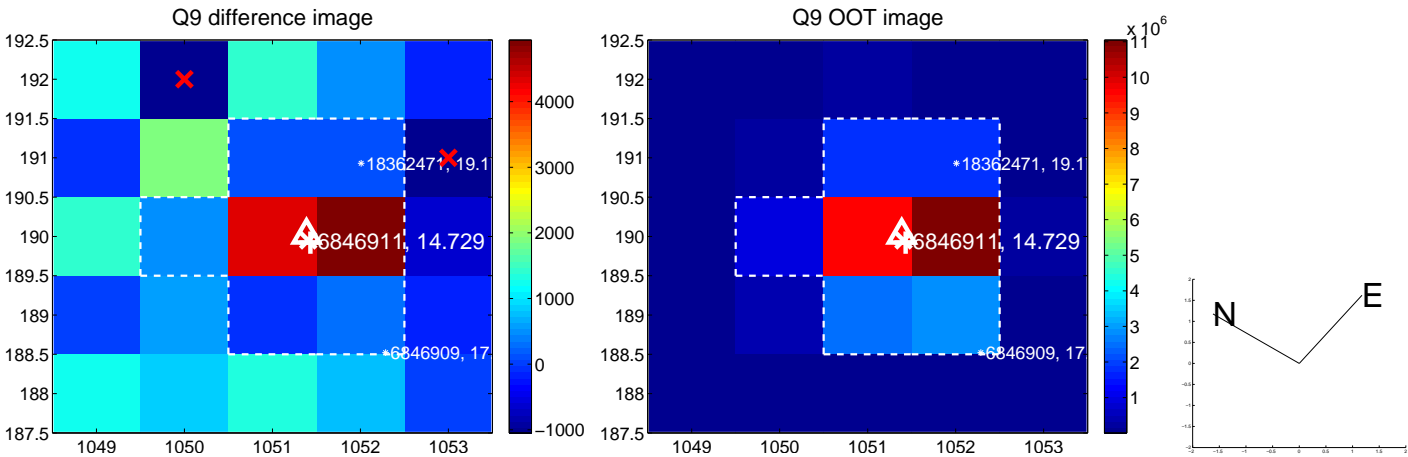


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

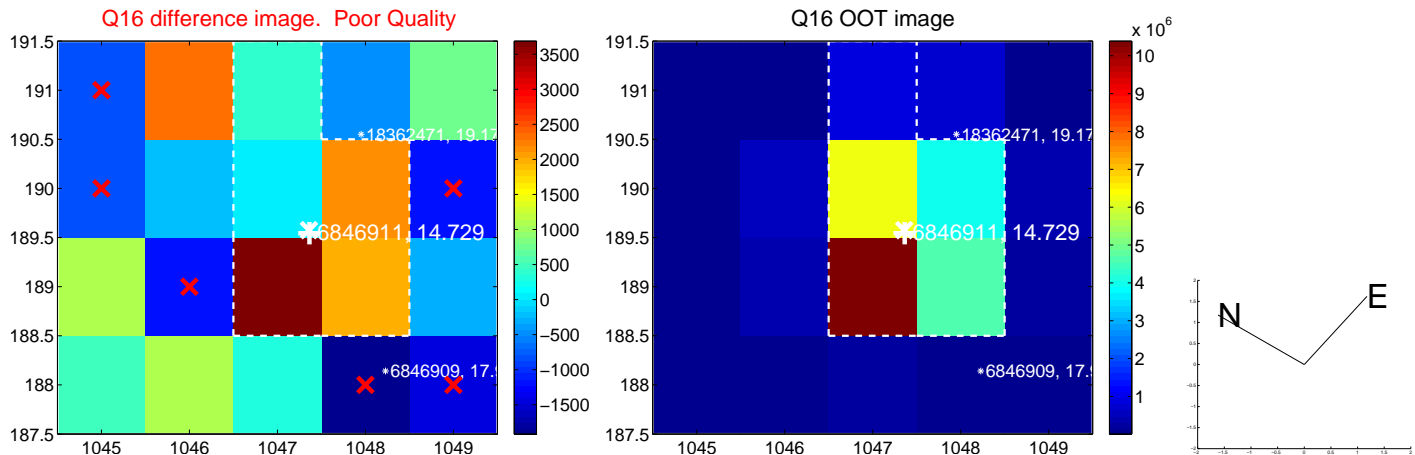
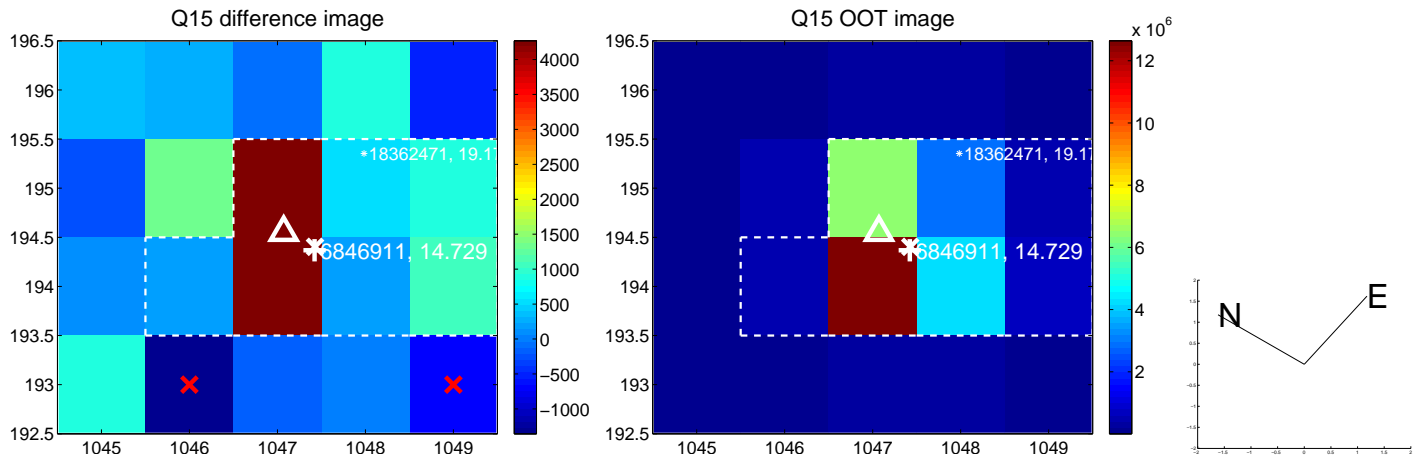
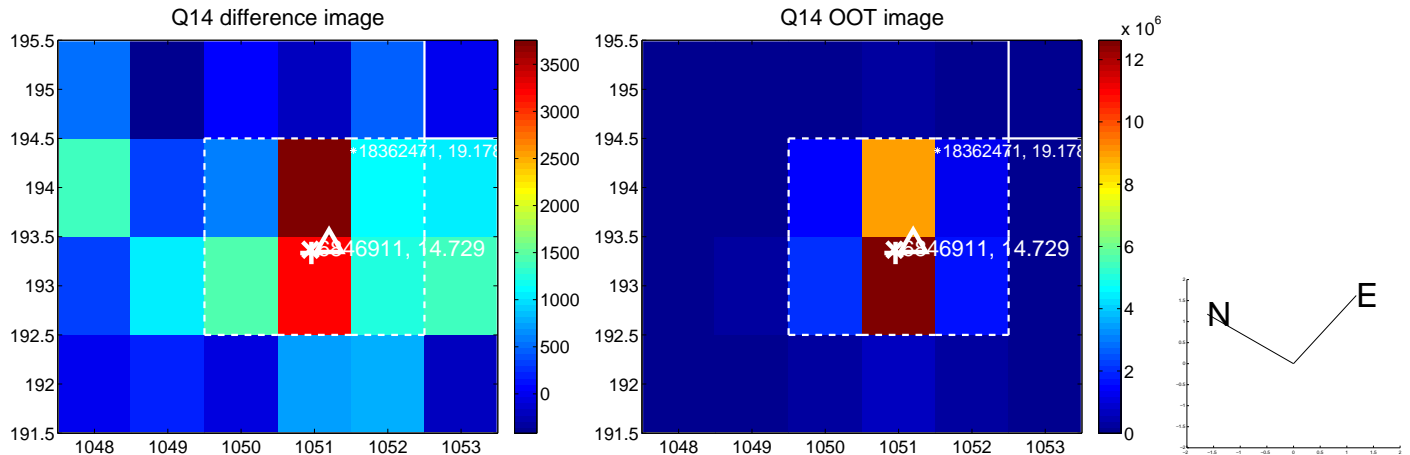
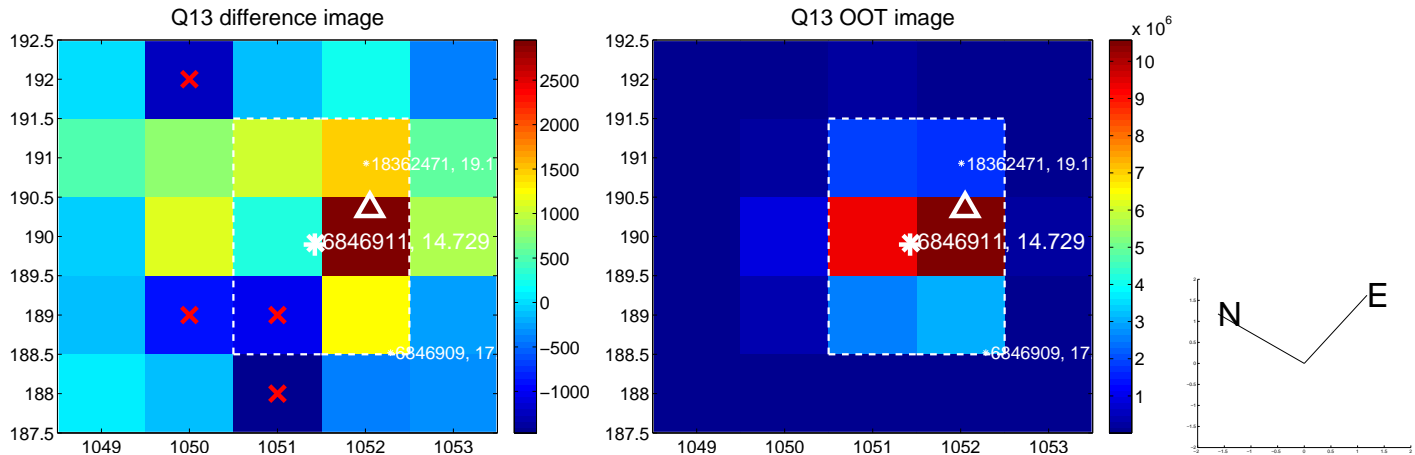
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



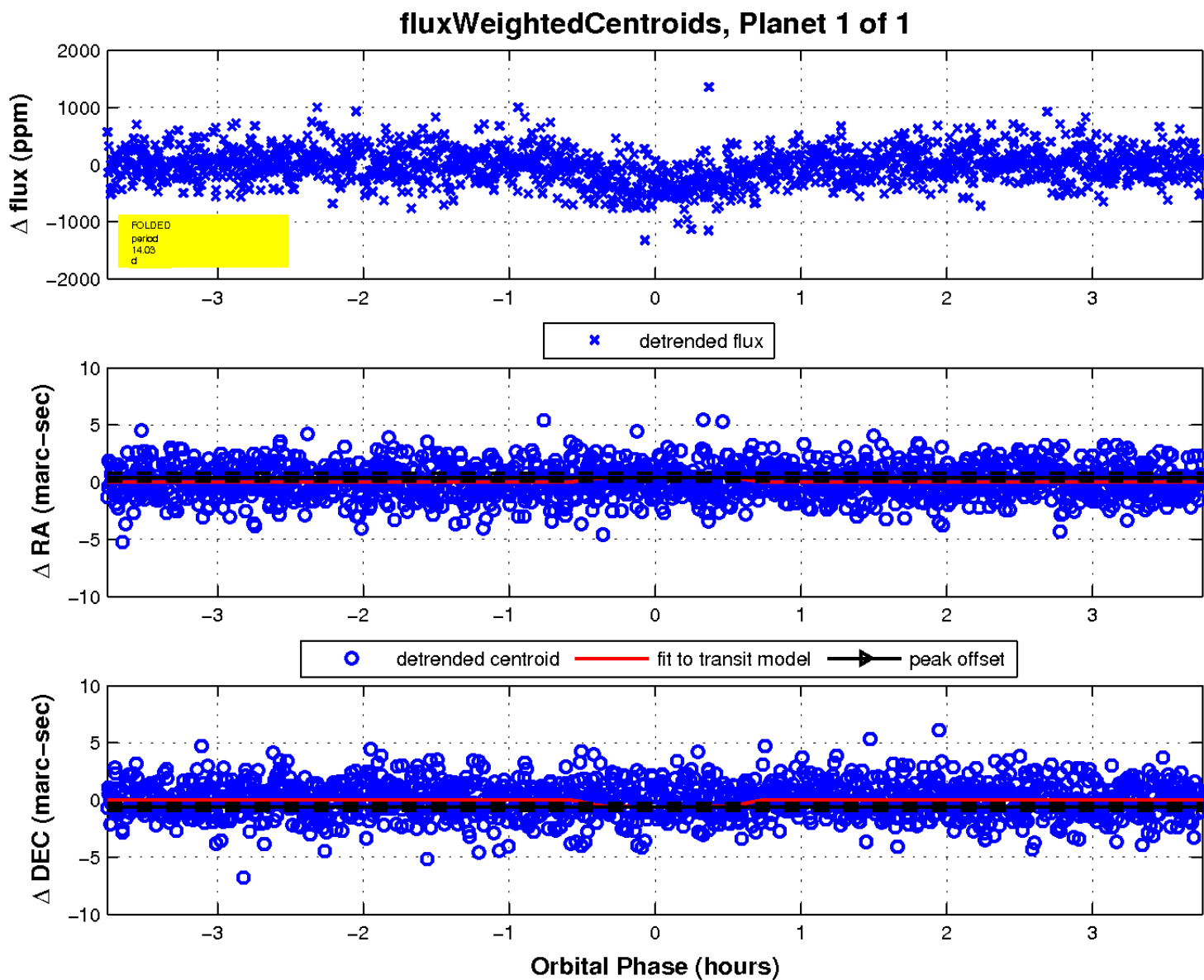
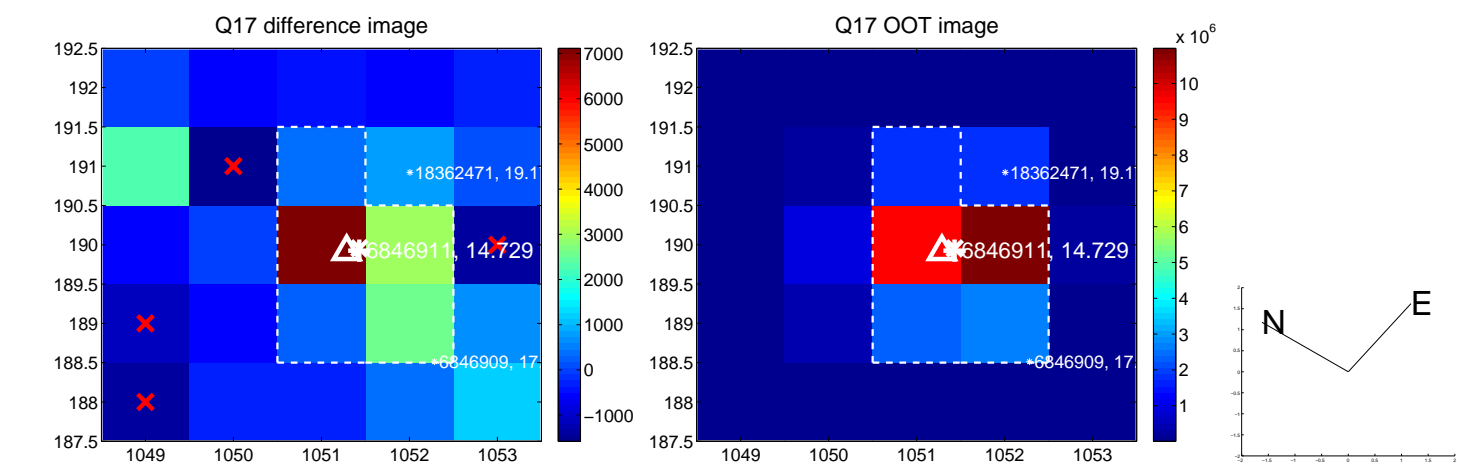
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

