

KIC 006470917

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})
006470917-01	OBS	1690.01	1.506009	131.526963	123.2	2.496	15.5	16.7	0.90	6065	1.17	1662.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006470917-01	OBS	FP	0.01	0	0	1	0	CENT_RESOLVED_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.

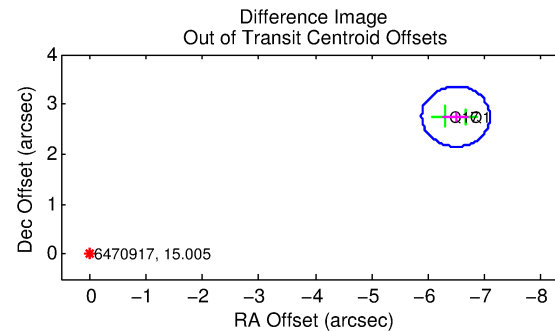
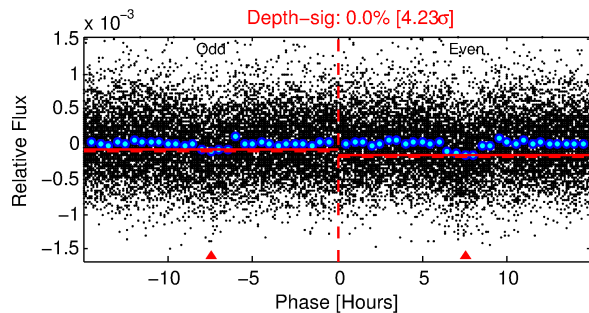
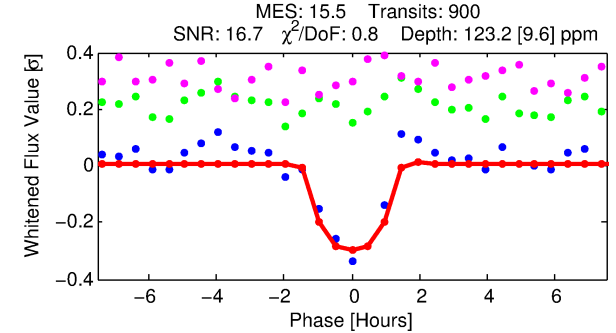
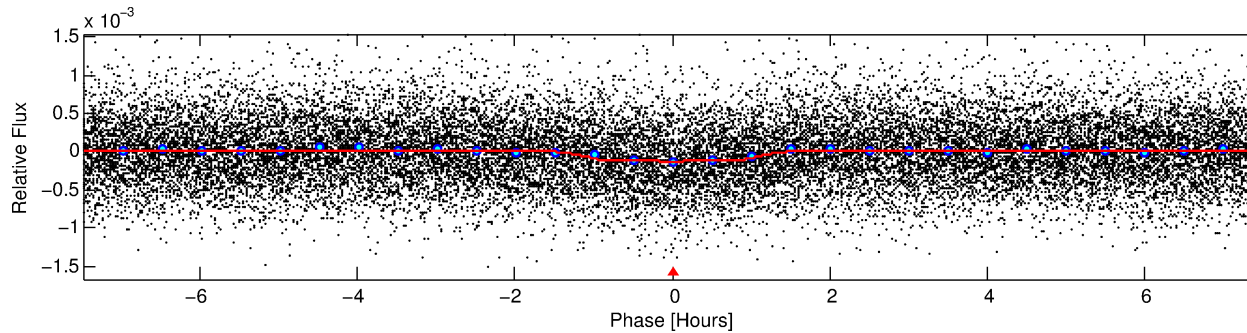
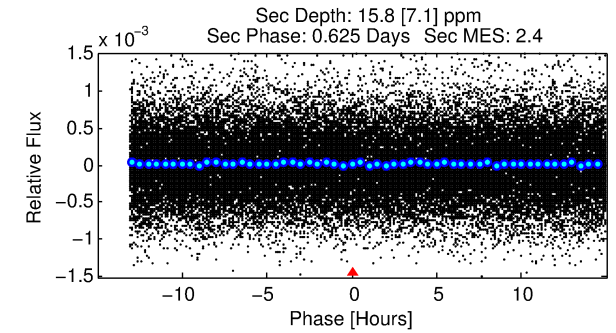
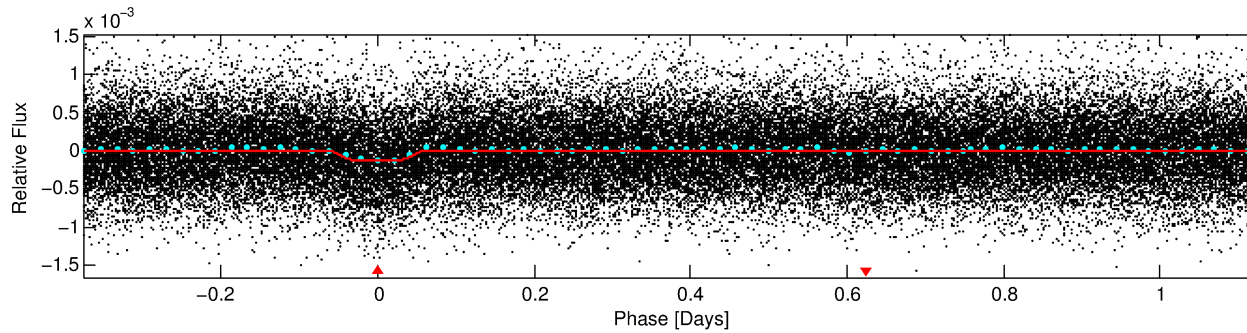
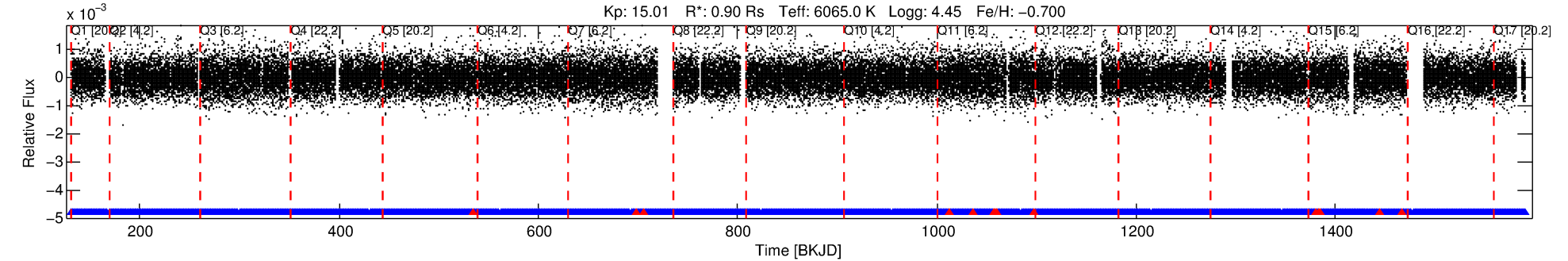
Ephemeris Match Information For 006470917-01

No Significant Match Found

DV One-Page Summary

KIC: 6470917 Candidate: 1 of 1 Period: 1.506 d

KOI: K01690.01 Corr: 0.965



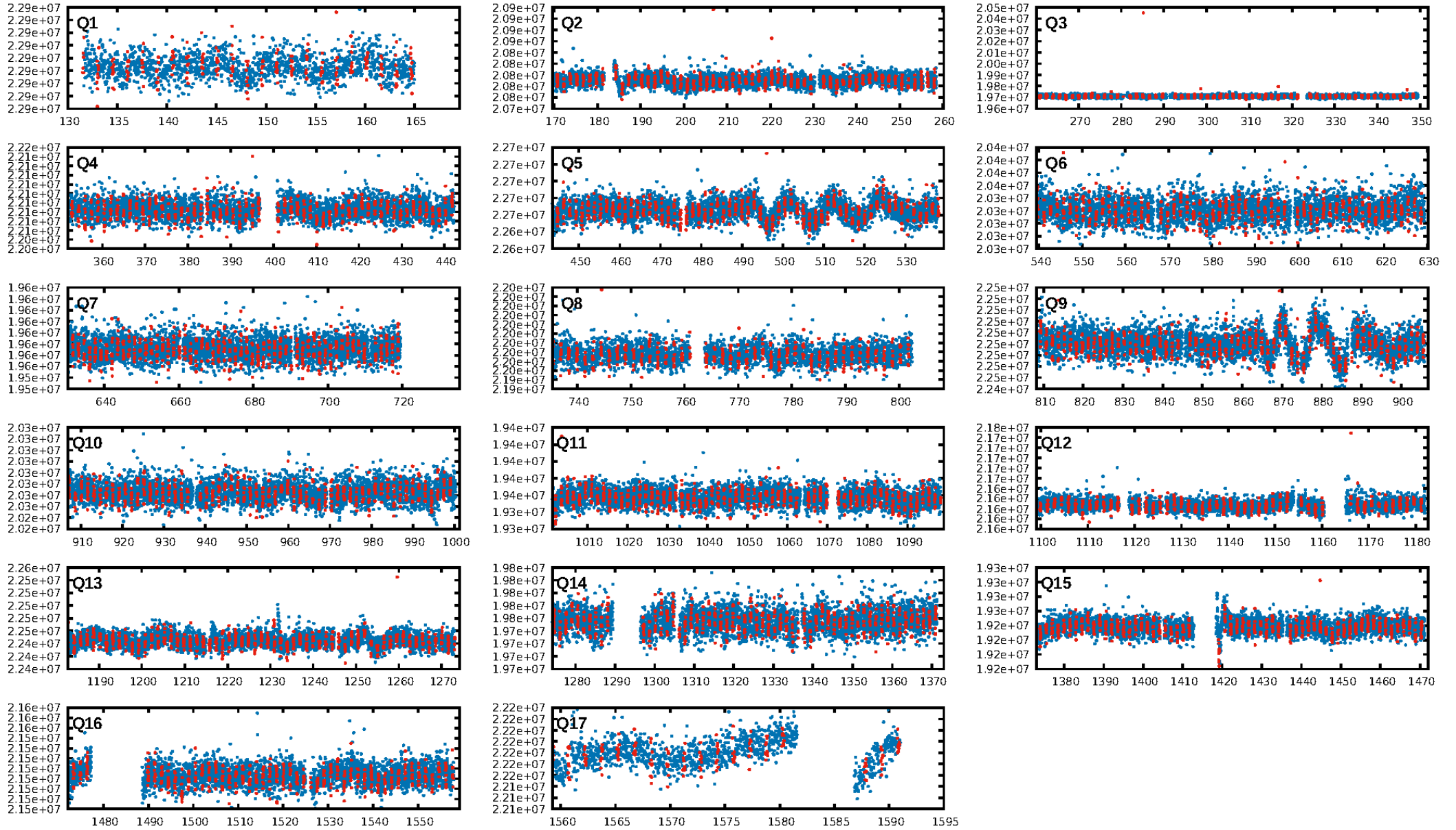
DV Fit Results:

Period = 1.50601 [0.00001] d
Epoch = 131.5270 [0.0022] BKJD
Rp/R* = 0.0120 [0.0045]
a/R* = 2.29 [3.87]
b = 0.90 [0.43]
Seff = 1662.08 [543.03]
Teq = 1628 [133] K
Rp = 1.17 [0.52] Re
a = 0.0242 [0.0050] AU
Ag = 3.71 [3.43] [0.79σ]
Teffp = 3493 [772] K [2.38σ]

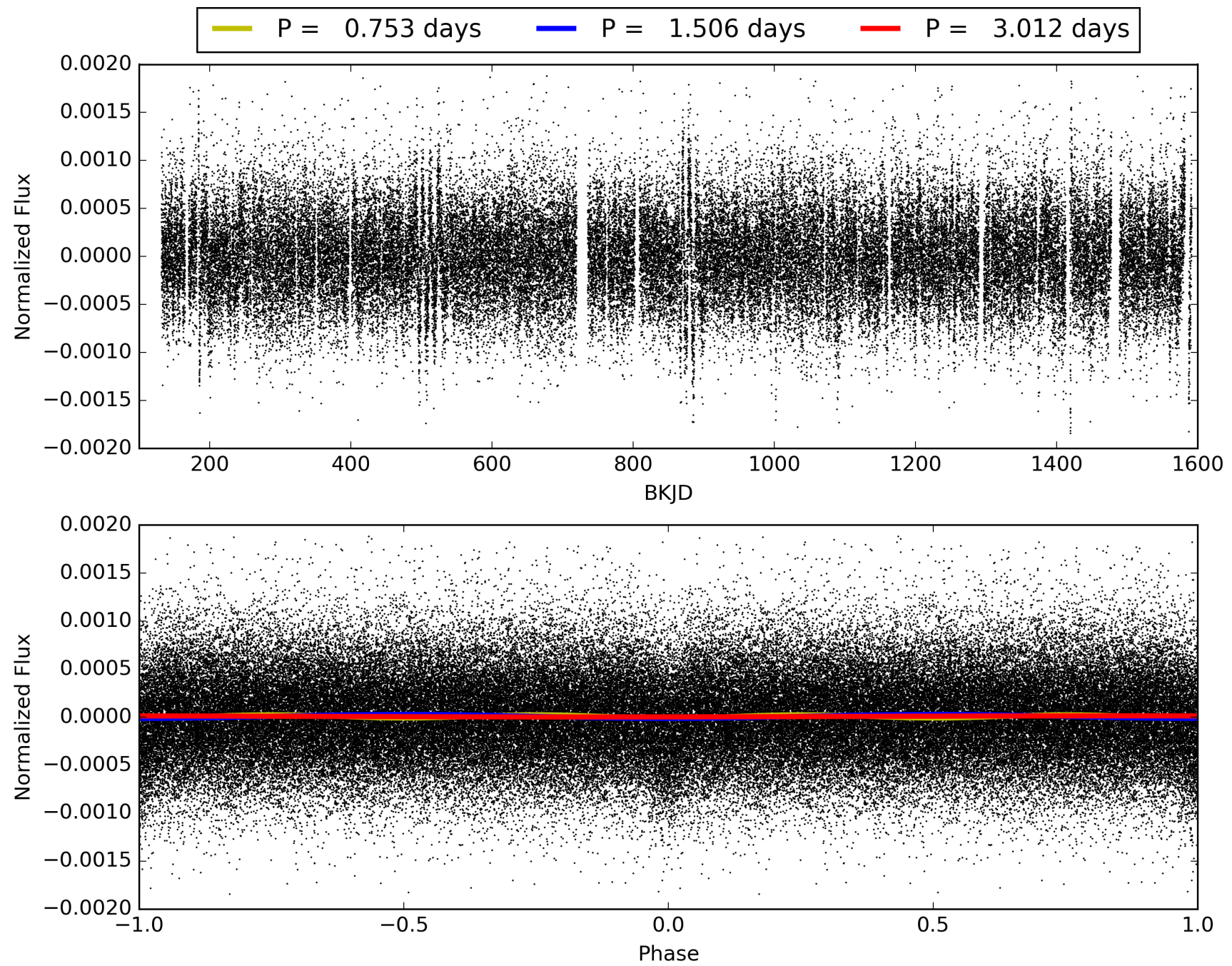
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.21e-54
RollingBand-fgt: 0.98 [845/859]
GhostDiagnostic-chr: -0.2948
Centroid-sig: 0.0%
Centroid-so: 16.329 arcsec [15.90σ]
OotOffset-rm: 7.047 arcsec [35.04σ]
KicOffset-rm: 7.074 arcsec [37.43σ]
OotOffset-st: 0/0/0/2 [2]
KicOffset-st: 0/0/0/2 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 006470917-01, PDC Light Curves

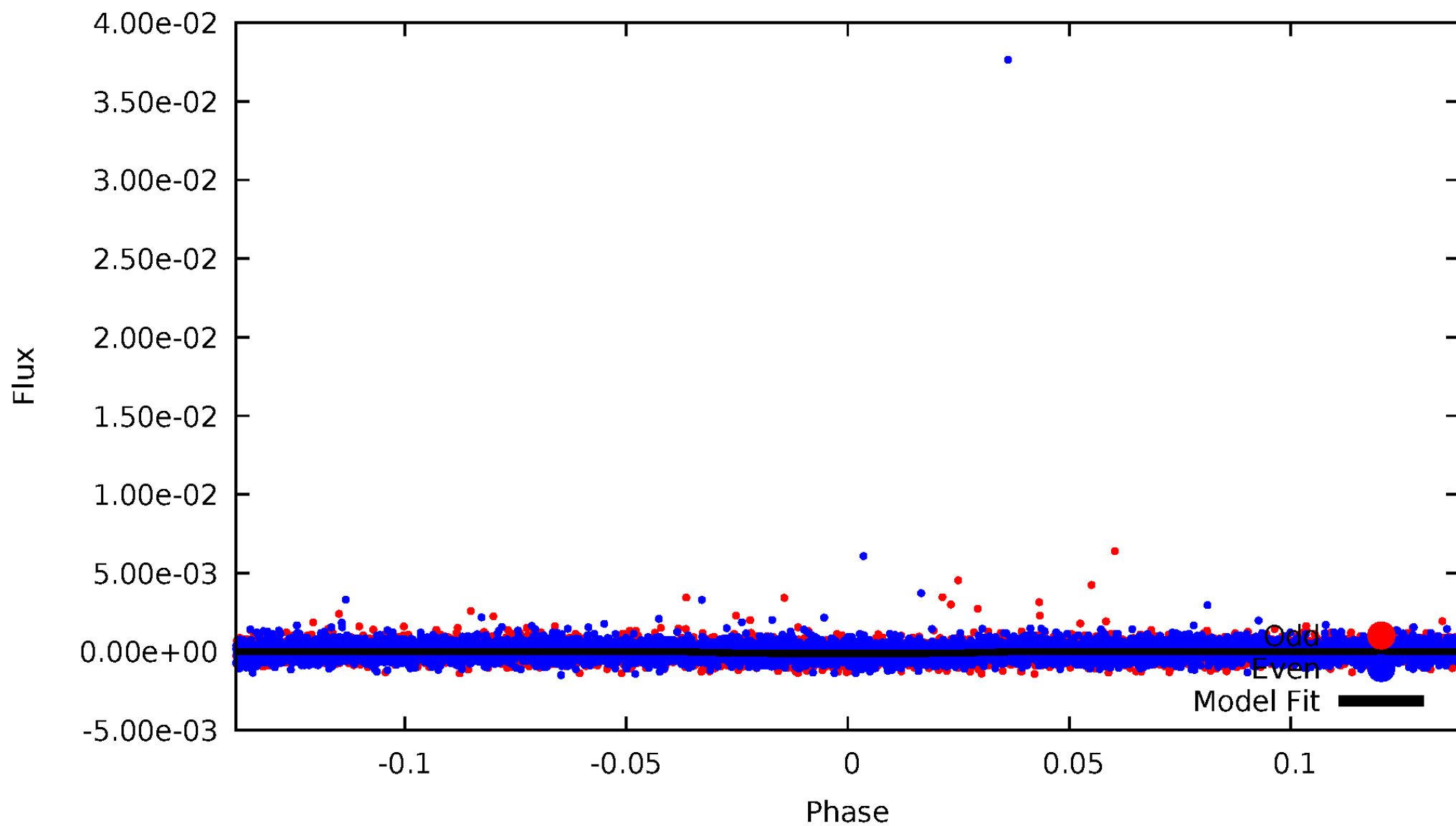


TCE 006470917-01



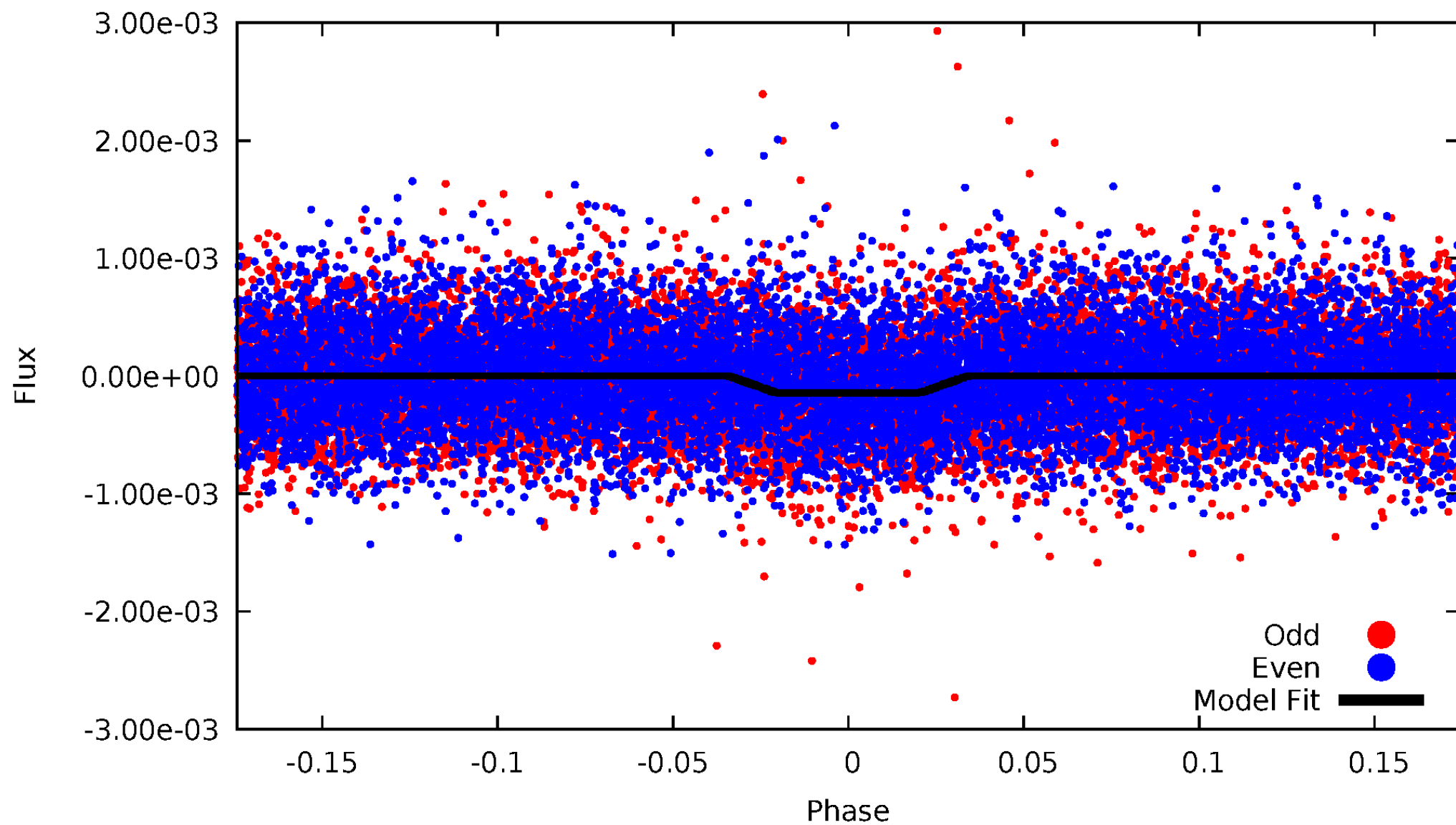
DV Odd/Even

TCE 006470917-01

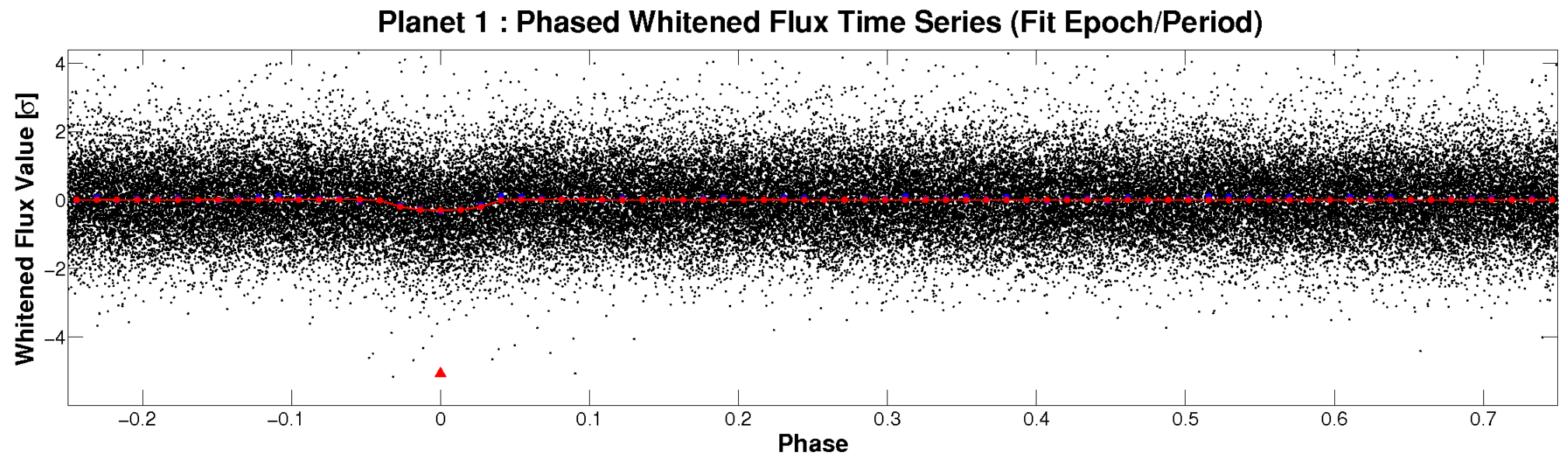
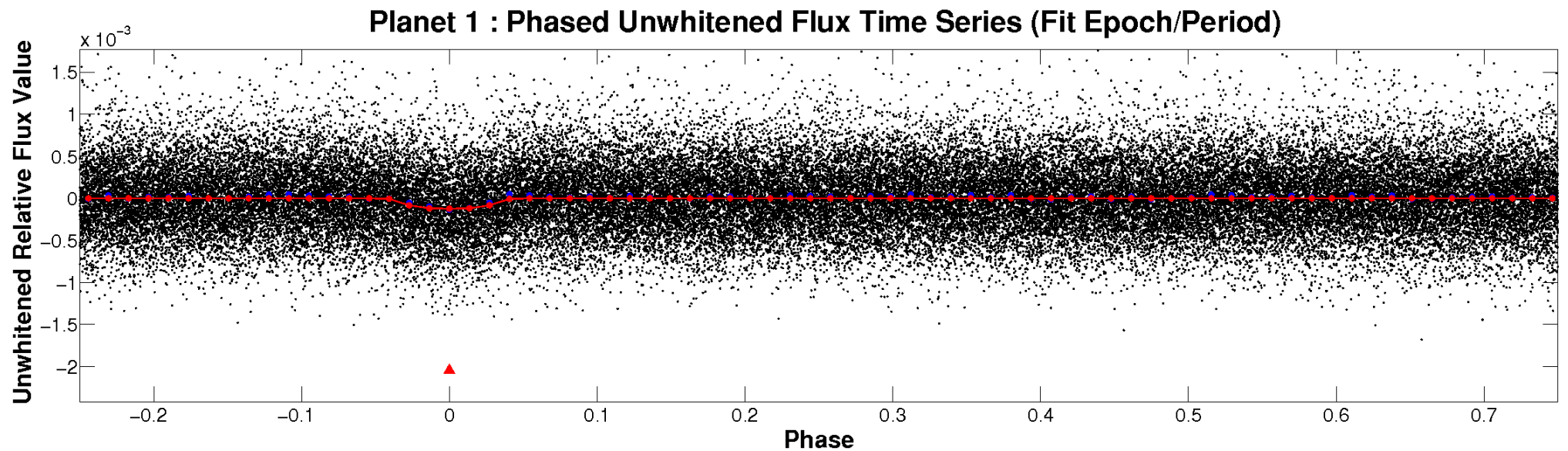


ALT Odd/Even

TCE 006470917-01

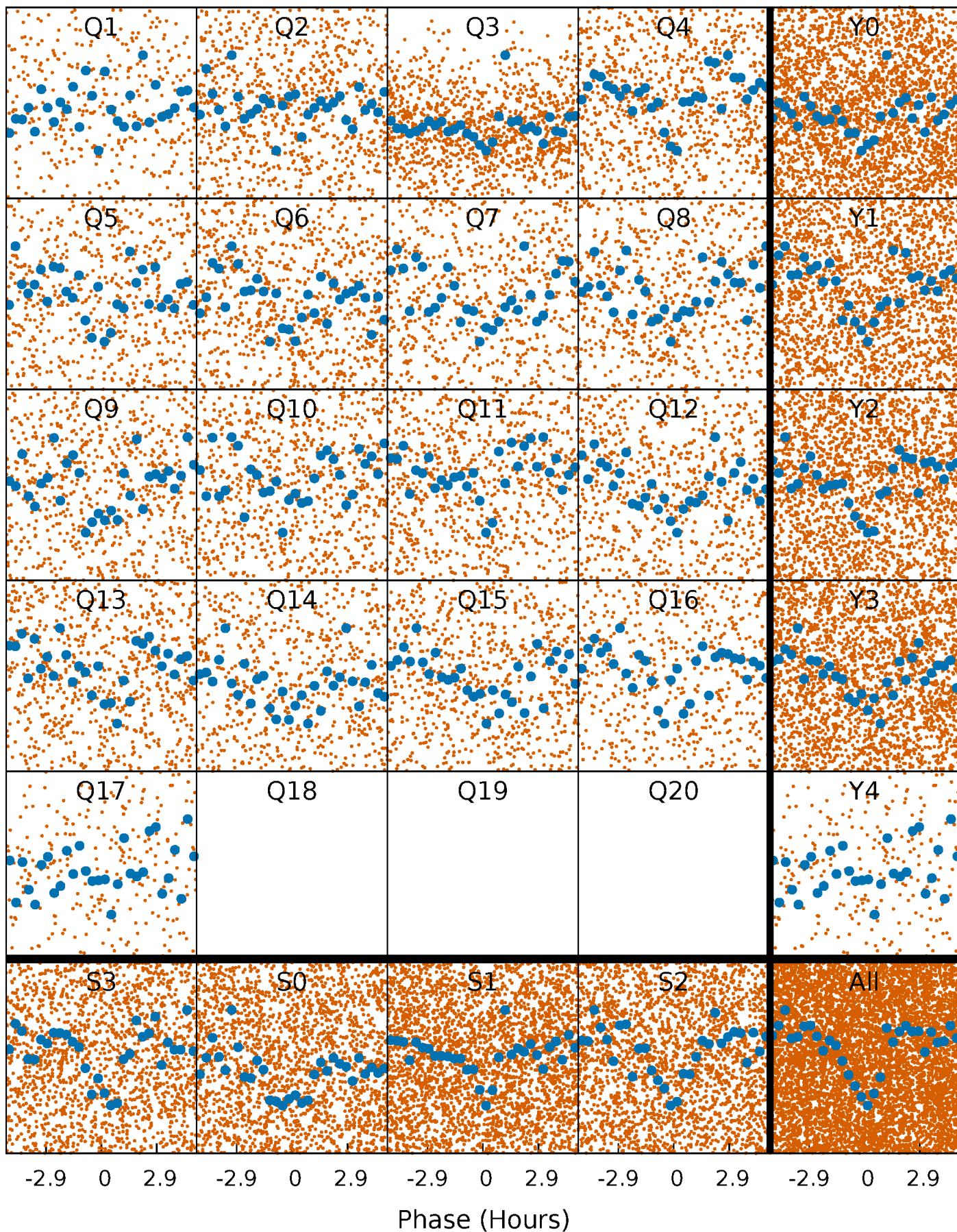


Non-Whitened Vs. Whitened Light Curve



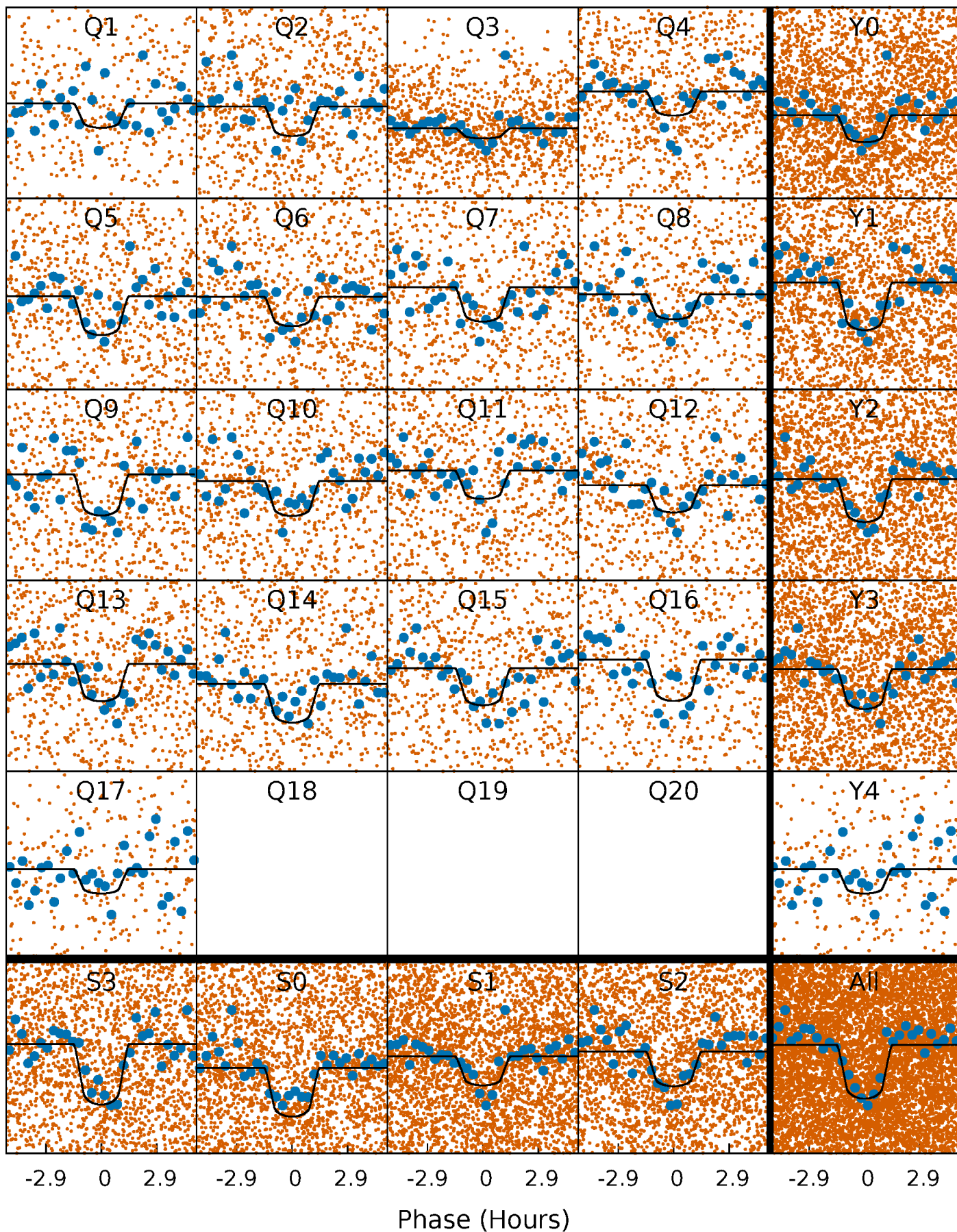
PDC Quarter-Phased Transit Curves

TCE 006470917-01 P= 1.506009 Days $T_0=131.526963$ (BKJD)



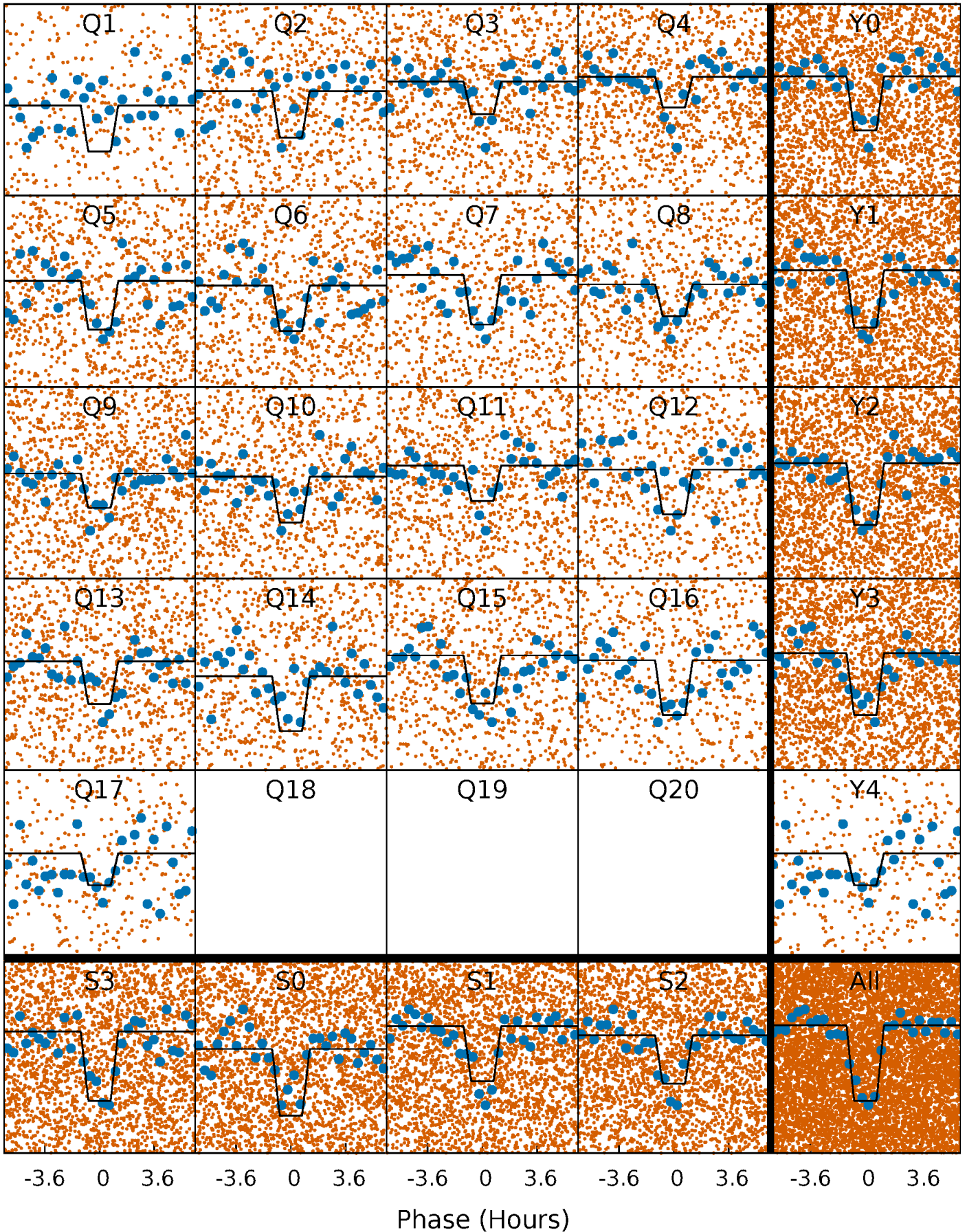
DV Quarter-Phased Transit Curves

TCE 006470917-01 P= 1.506009 Days $T_0=131.526963$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

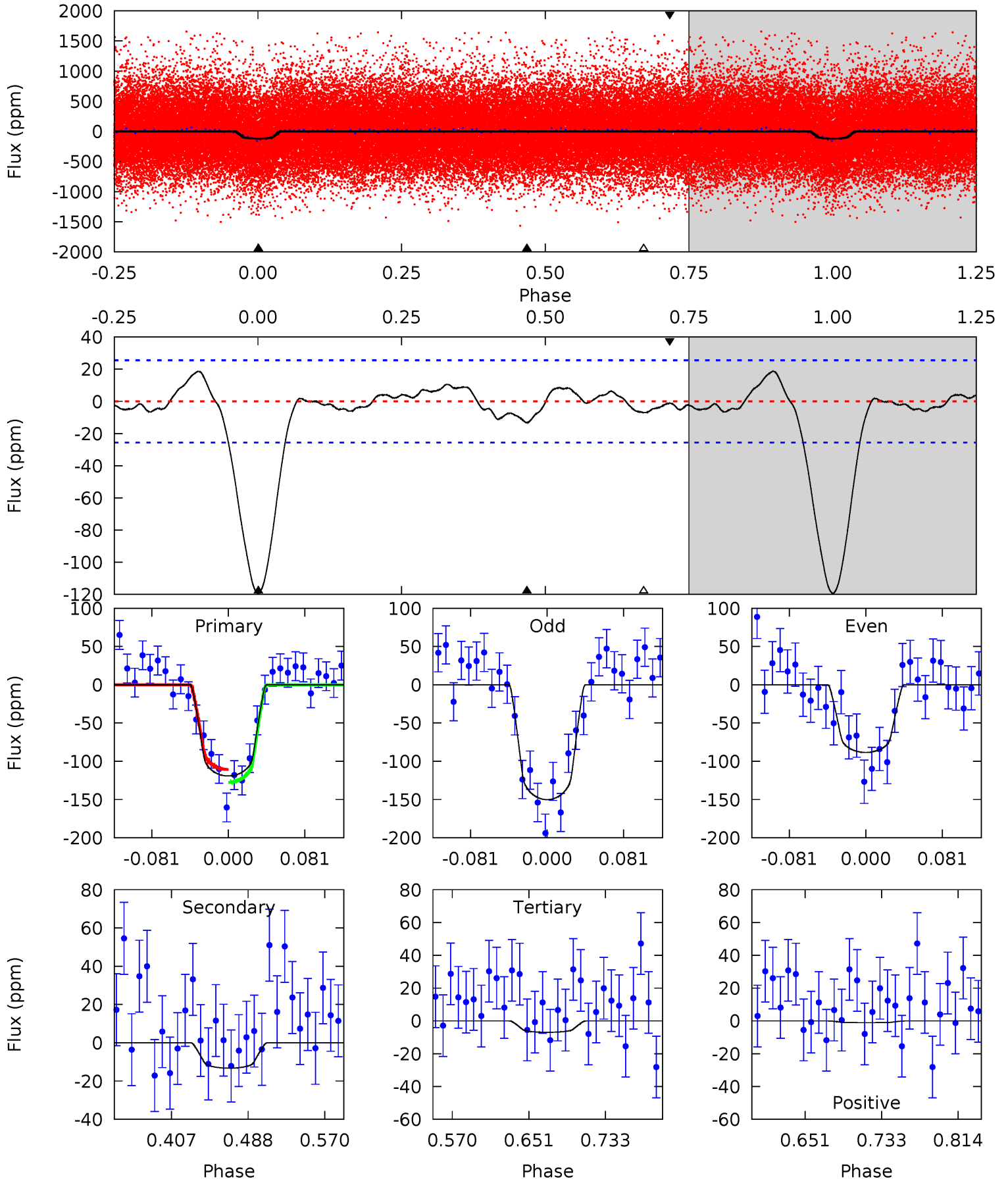
TCE 006470917-01 P= 1.506023 Days $T_0=131.521778$ (BKJD)



DV Model-Shift Uniqueness Test

006470917-01, P = 1.506009 Days, E = 130.020954 Days

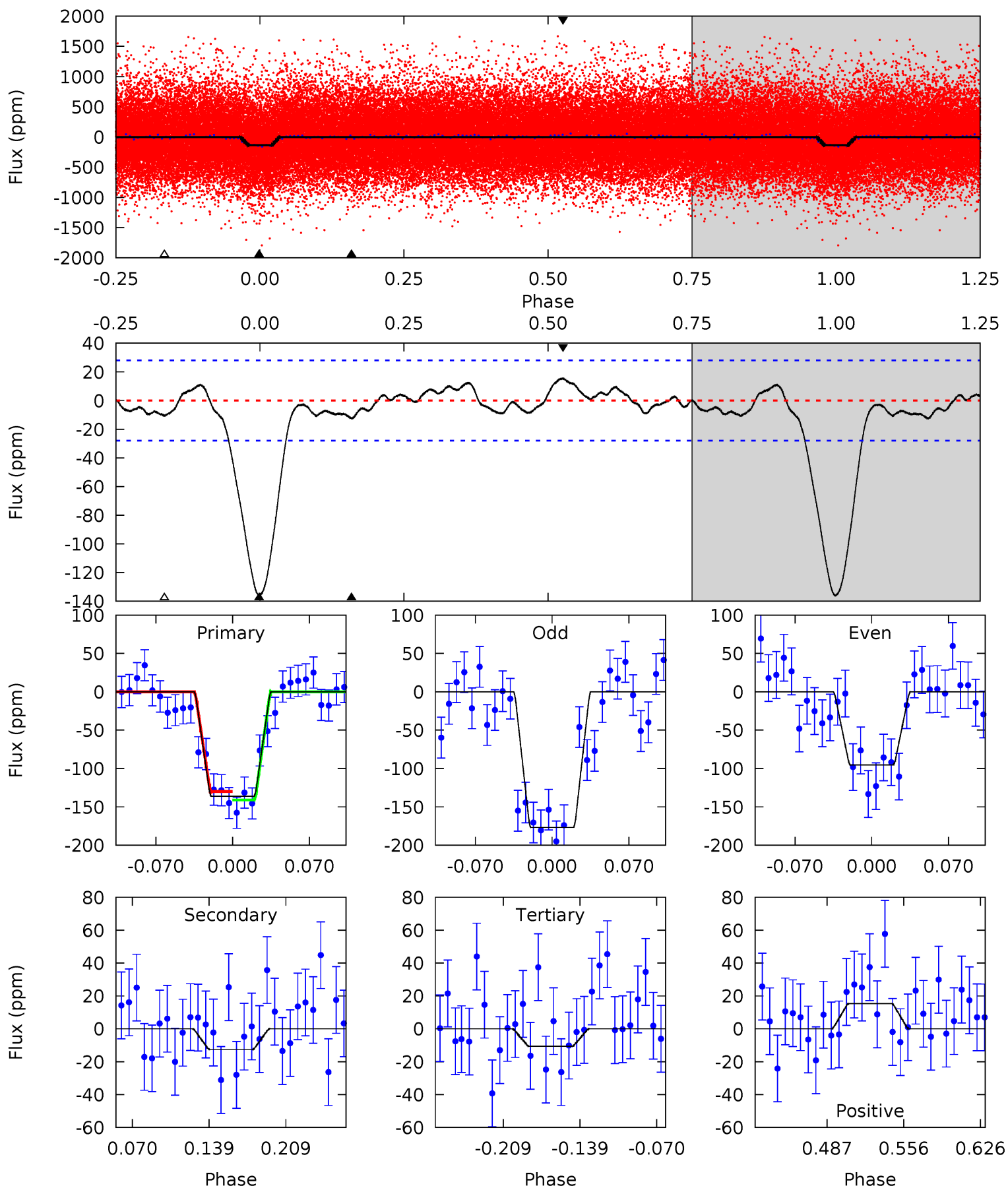
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.5	2.39	1.25	-0.20	4.61	1.74	1.06	20.3	21.7	1.14	2.59	5.57	0.97	0.14	1.52



Alt Model-Shift Uniqueness Test

006470917-01, P = 1.506023 Days, E = 130.015755 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.6	2.08	1.76	2.54	4.64	1.81	1.11	20.8	20.0	0.32	-0.46	6.75	1.07	0.10	0.91



Stellar Parameters For KIC 006470917

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6065^{+182}_{-182}	$4.454^{+0.098}_{-0.168}$	$-0.700^{+0.300}_{-0.300}$	$0.896^{+0.216}_{-0.116}$	$0.833^{+0.097}_{-0.073}$	$1.631^{+0.827}_{-0.754}$
	+3%/-3%	+2%/-4%	+43%/-43%	+24%/-13%	+12%/-9%	+51%/-46%
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 006470917-01 / KOI 1690.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-13 ± 6	$1.20^{+0.52}_{-0.44}$	2292^{+149}_{-126}	3604^{+780}_{-510}	$2.712^{+4.754}_{-1.591}$
Alt.	-13 ± 6	$1.16^{+0.49}_{-0.43}$	2298^{+150}_{-120}	3635^{+808}_{-608}	$2.749^{+5.164}_{-1.699}$

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

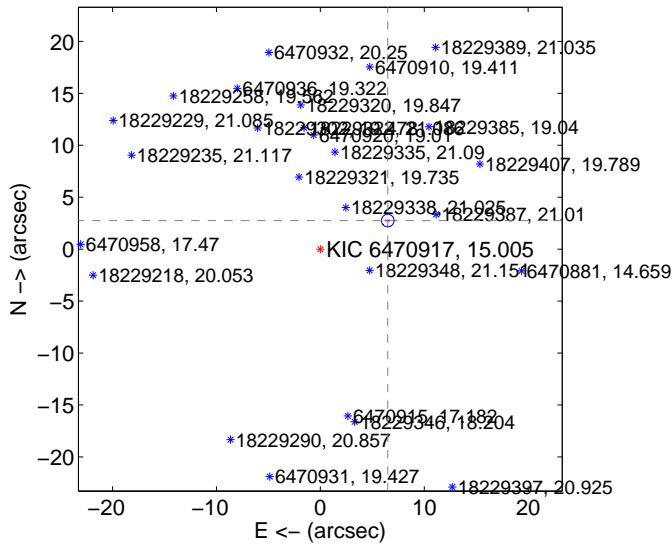
Supplemental centroid analysis for 006470917-01. Kepler magnitude: 15.01. Transit SNR 16.73

There are 2 quarters with good PRF difference image offsets

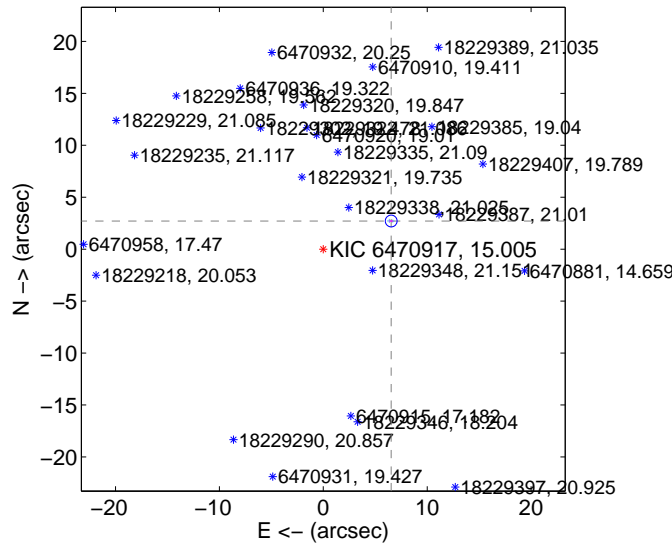
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.047 ± 0.201	35.04	-6.486 ± 0.217	2.754 ± 0.067
PRF-fit source offset from KIC position	7.074 ± 0.189	37.43	-6.534 ± 0.203	2.711 ± 0.067
photometric centroid source offset	16.33 ± 1.03	15.90	-16.09 ± 1.03	-2.79 ± 0.89

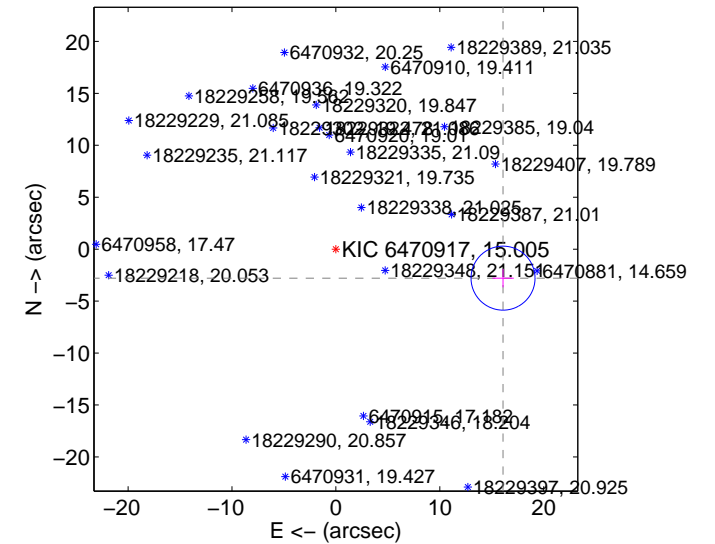
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

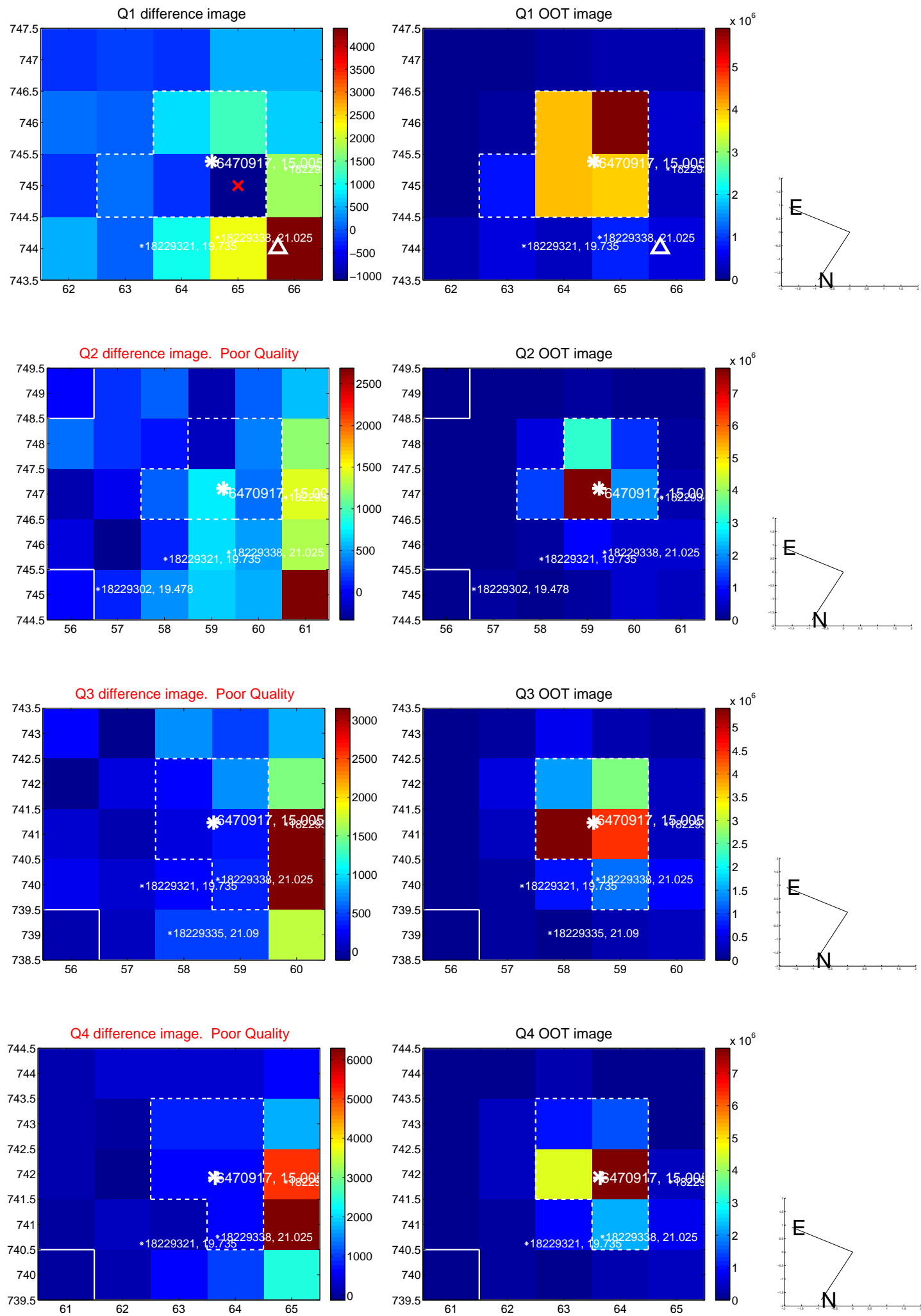


offset from photometric centroids

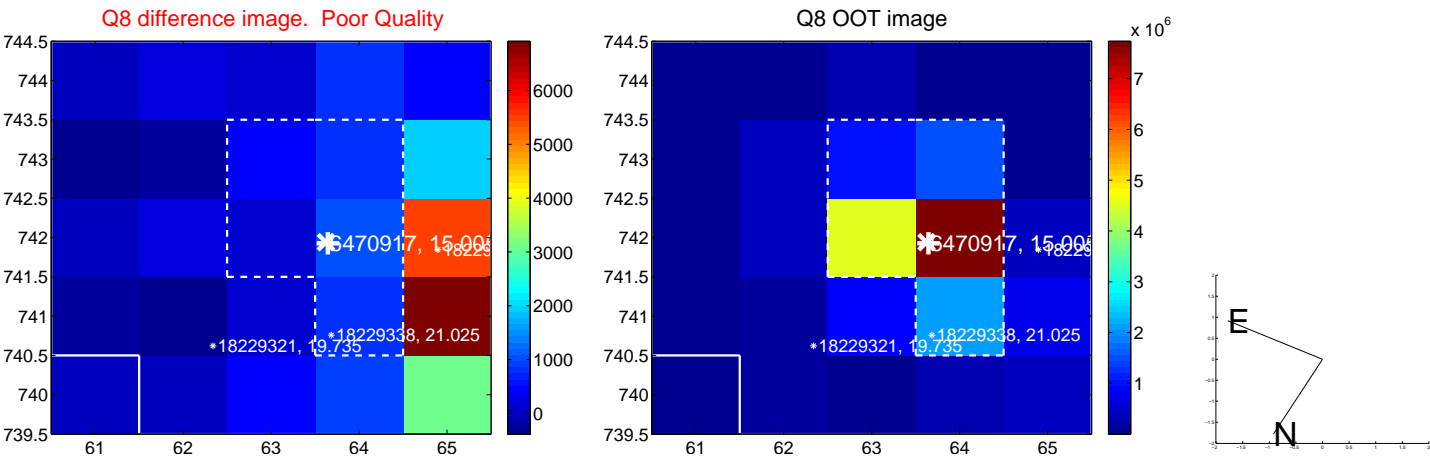
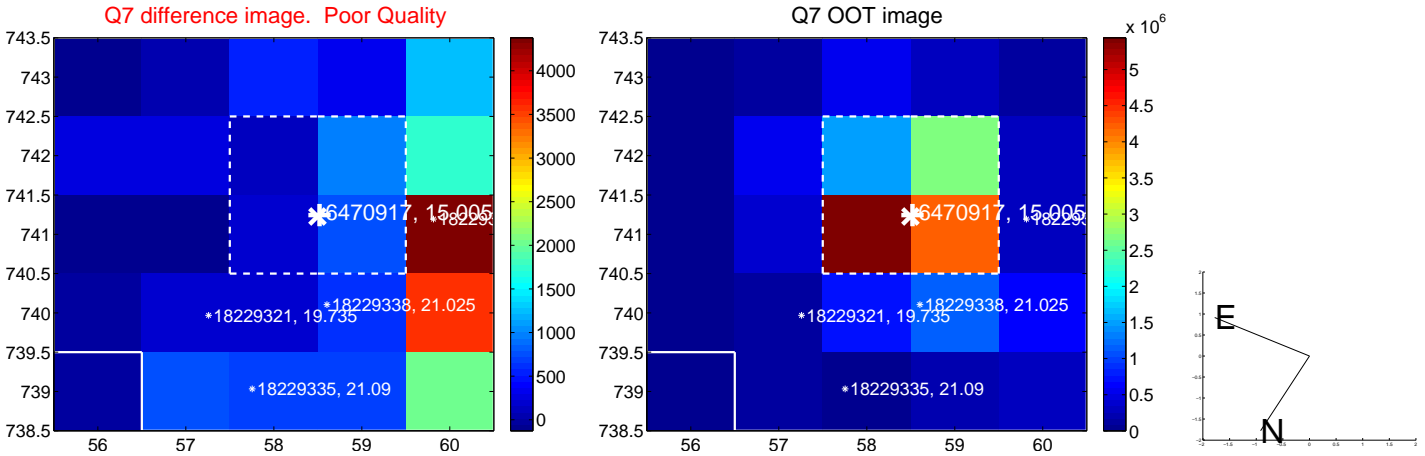
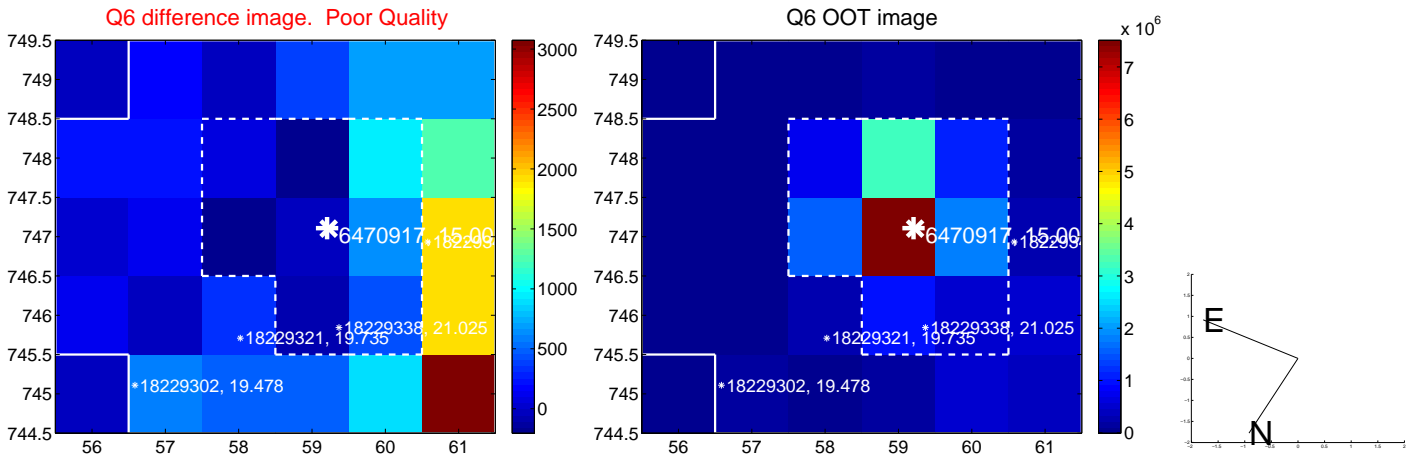
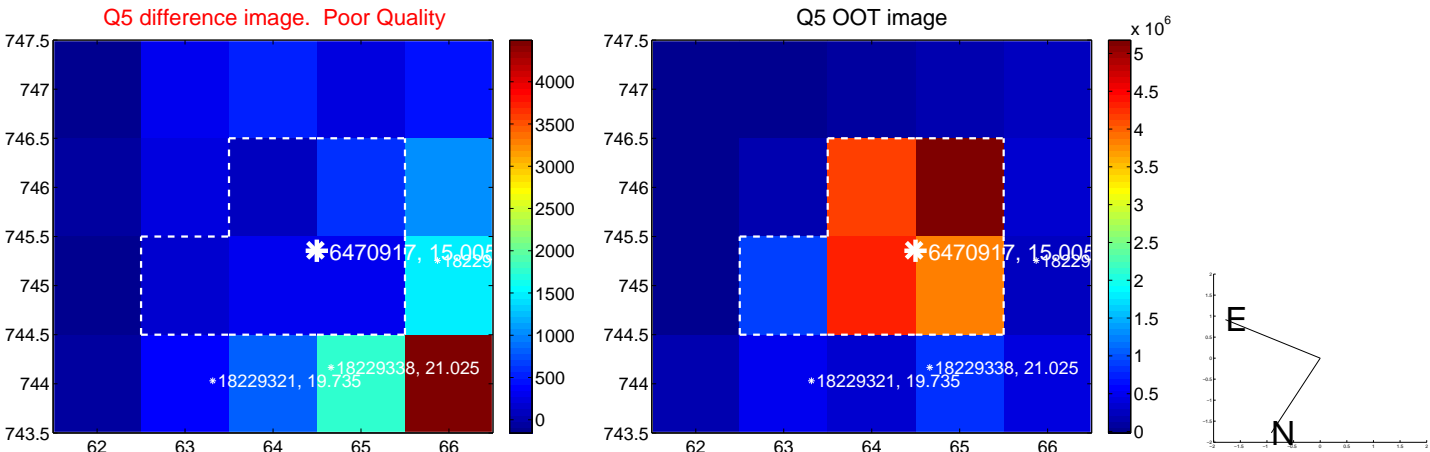


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

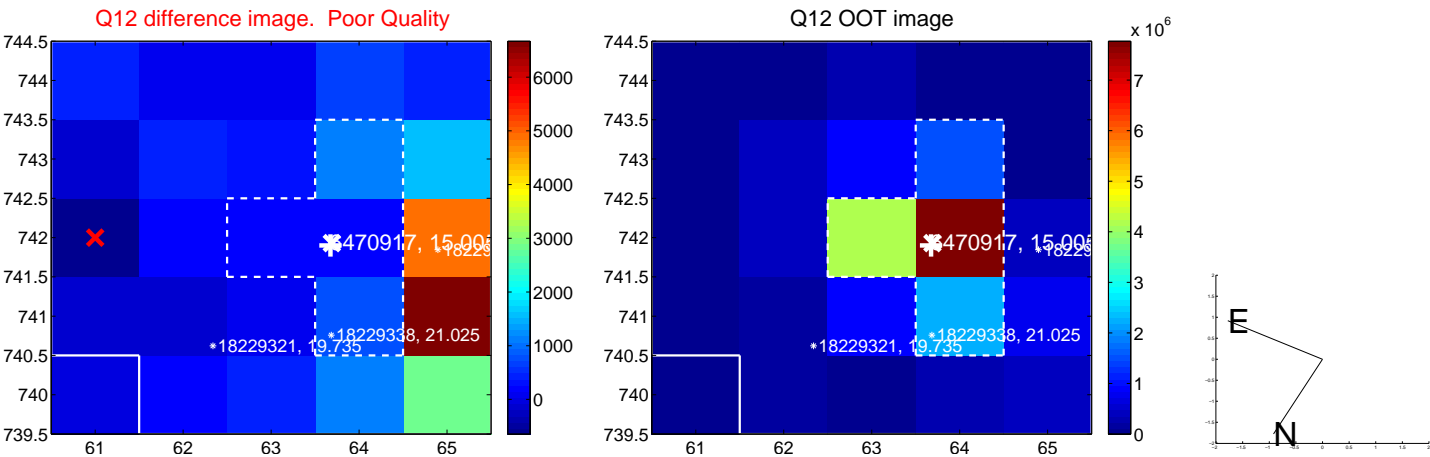
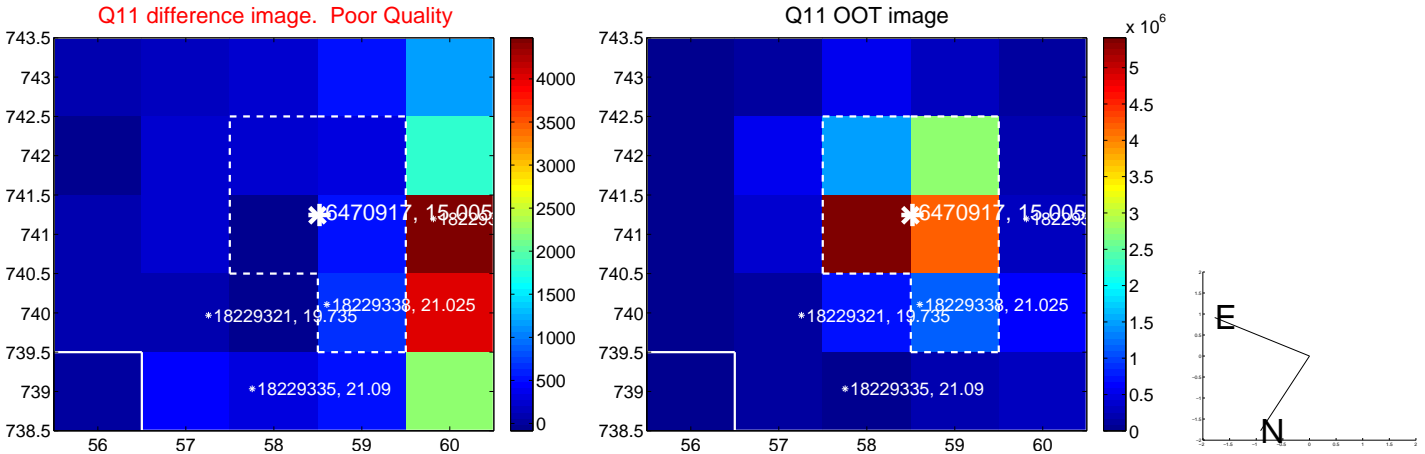
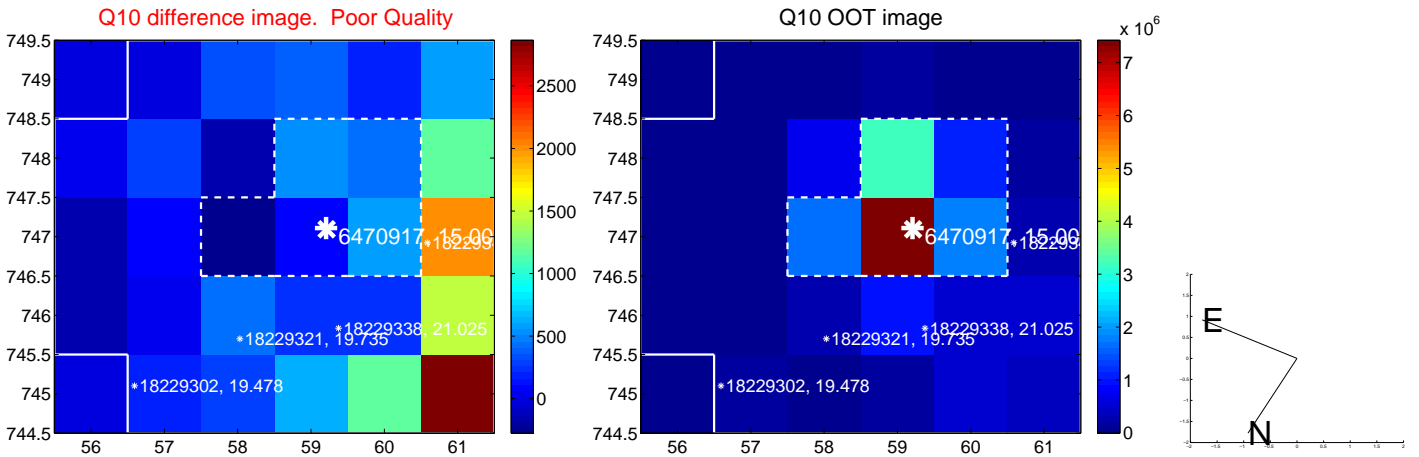
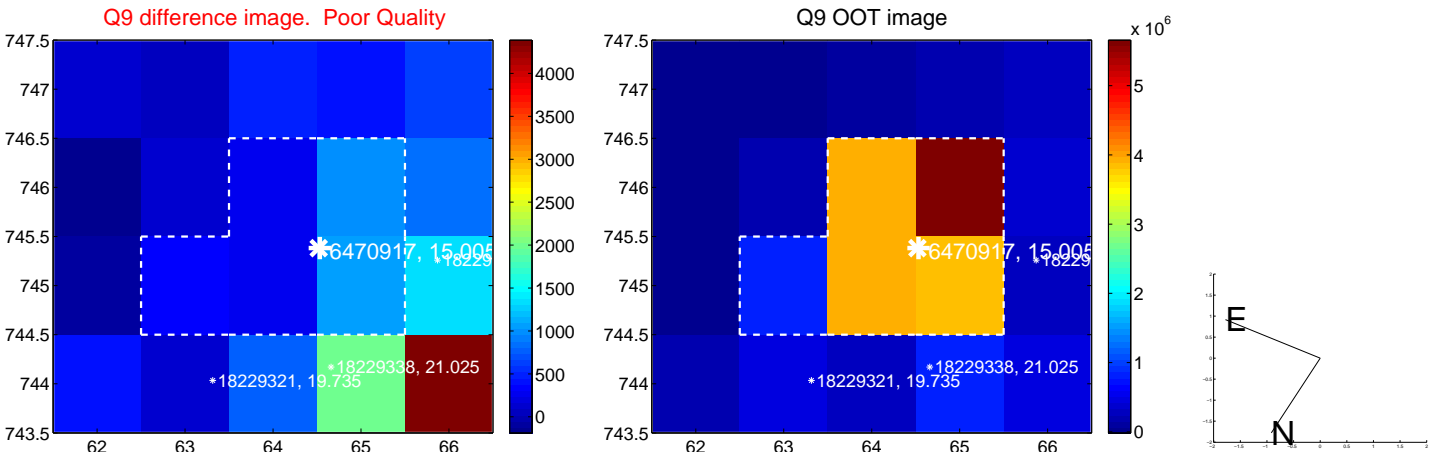
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



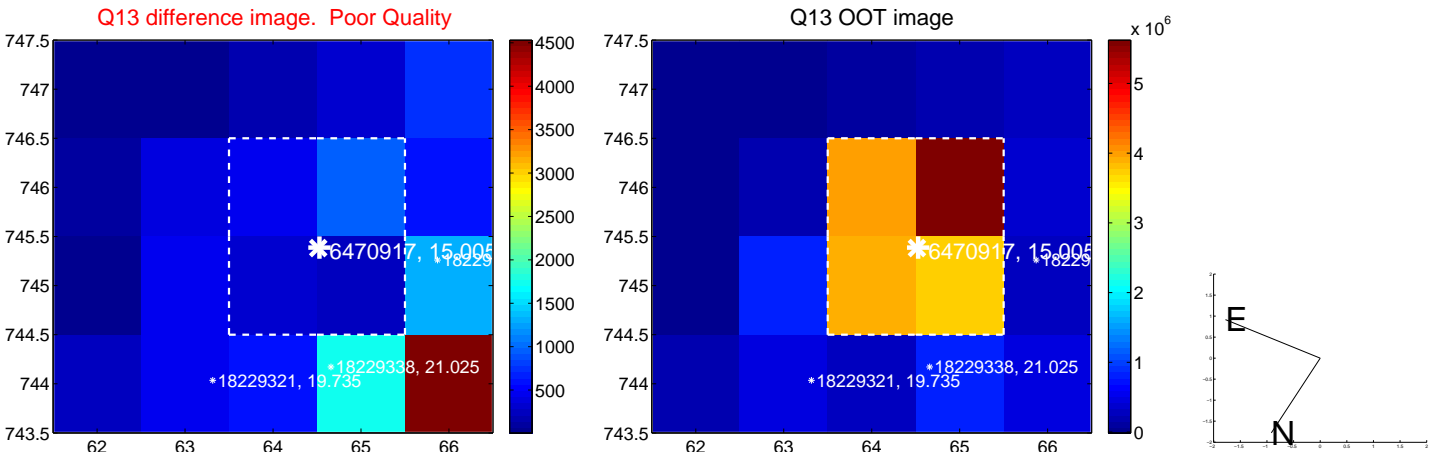
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



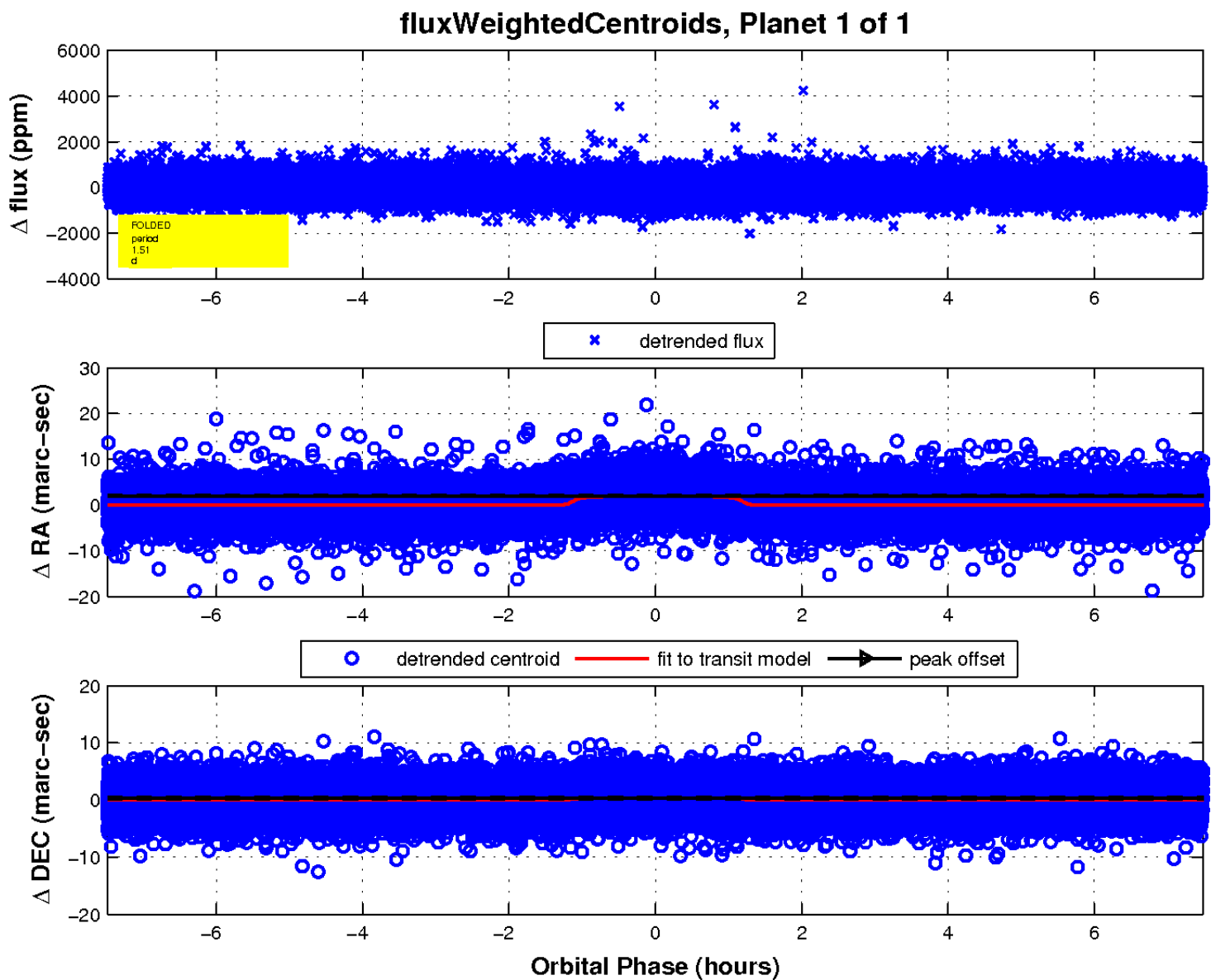
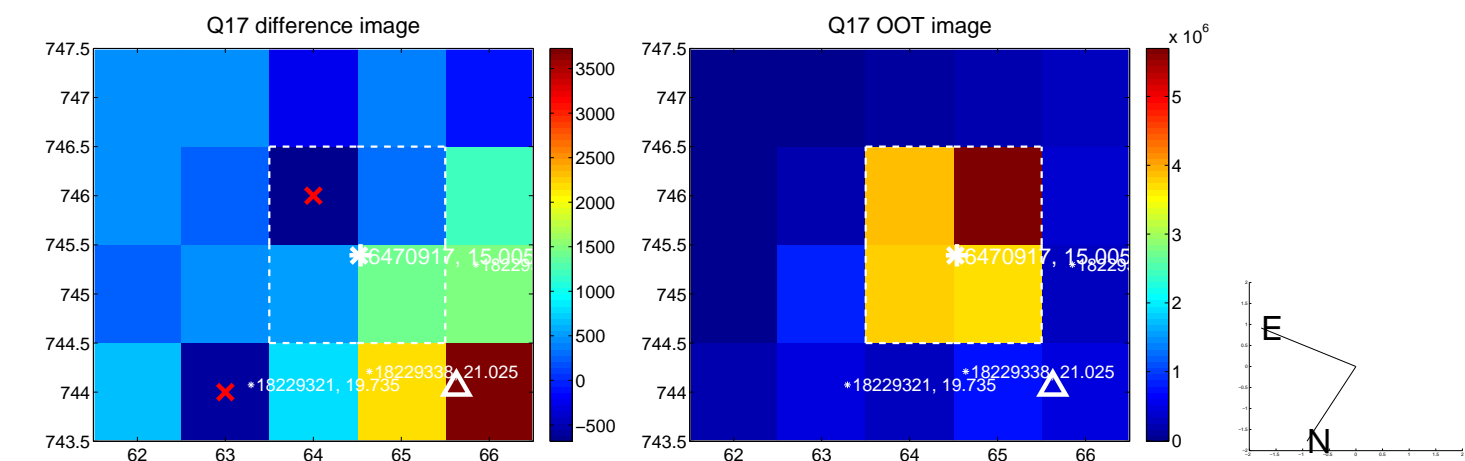
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: 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.



UKIRT Image

Declination

