

KIC 006364064

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})
006364064-01	OBS	5271.01	5.243273	132.801718	114.9	16.122	15.5	18.5	0.73	5430	1.50	138.94

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006364064-01	OBS	FP	0.00	0	0	1	1	CENT_RESOLVED_OFFSET—HALO_GHOST—EPHEM_MATCH

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 006364064-01

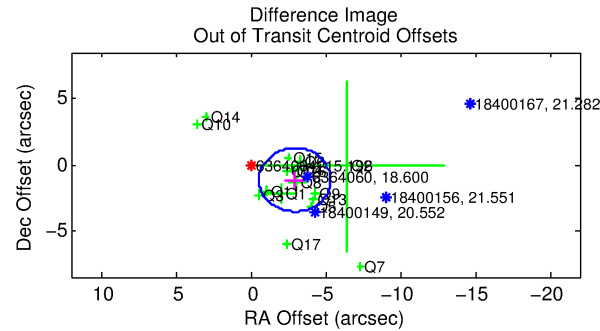
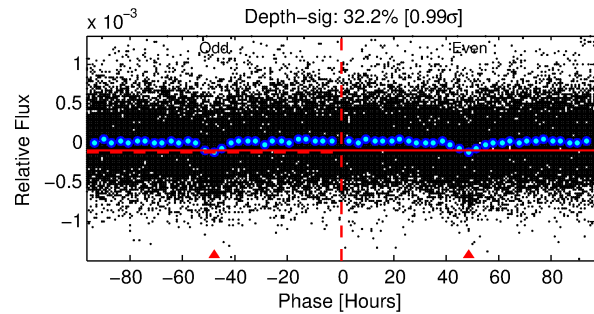
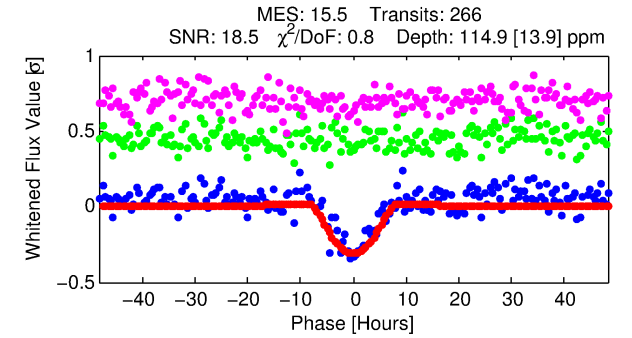
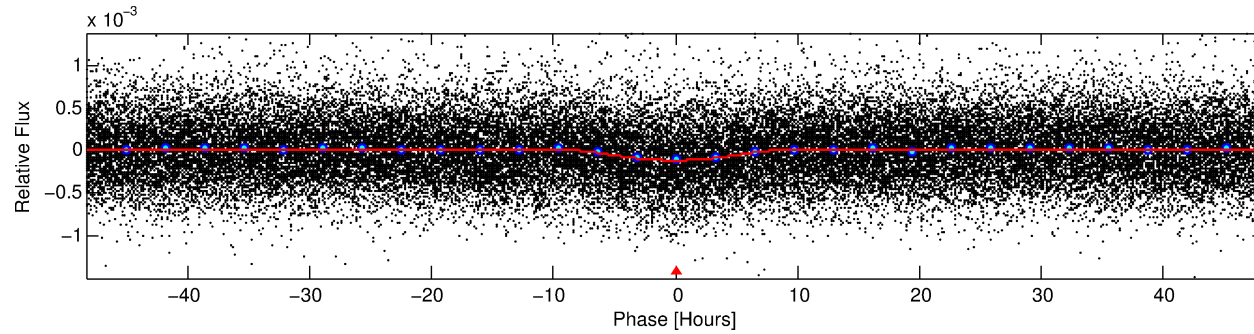
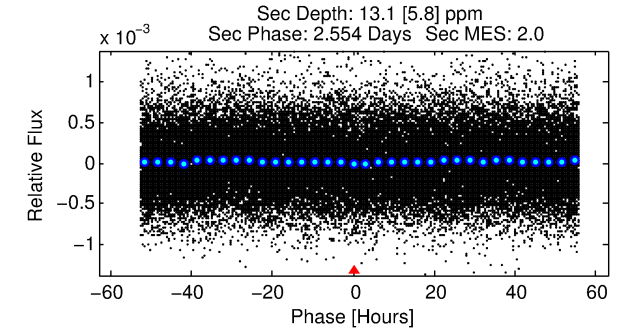
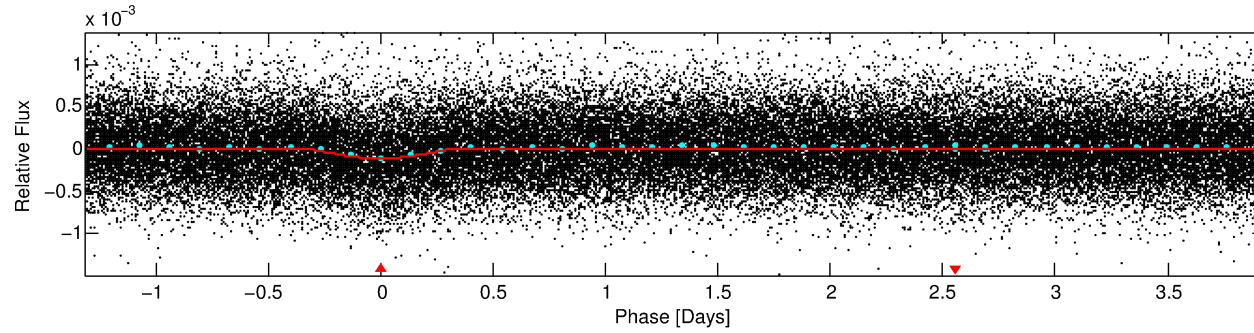
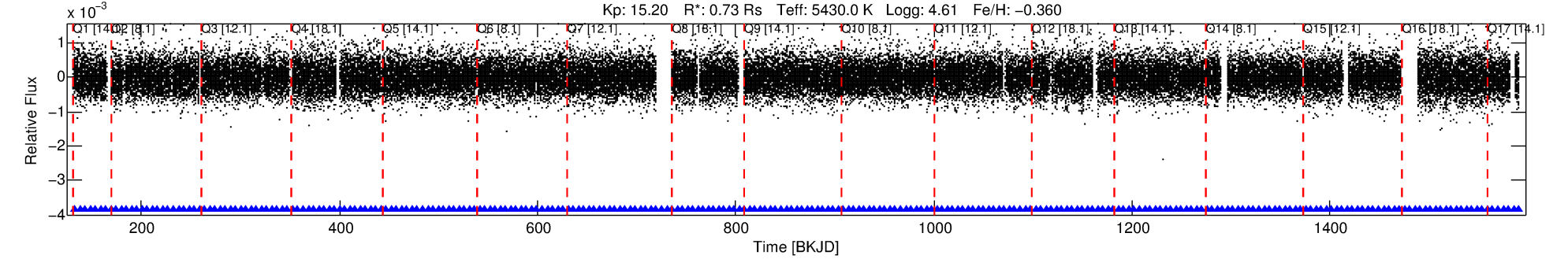
TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist ($''$)	Δ Row	Δ Col	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ_P	σ_T
006364064-01	6364064	TT-Lyr-pri	6364290	1:1	209.5	-39	-36	9.49	15.19	7427.10	Direct-PRF	0	4.27	4.50

Notes: P₁:P₂ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 6364064 Candidate: 1 of 1 Period: 5.243 d

KOI: K05271.01 Corr: 0.881



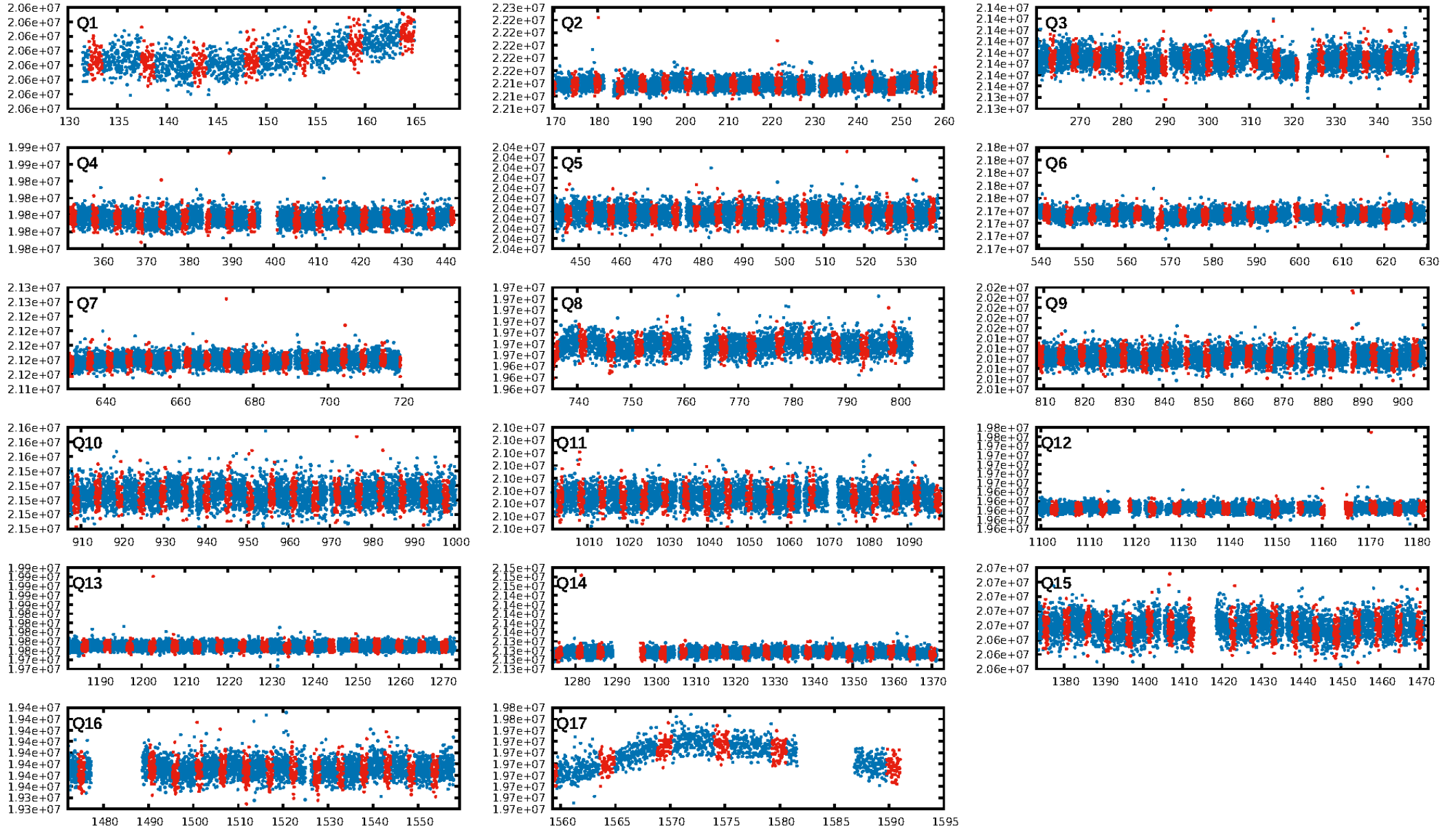
DV Fit Results:

Period = 5.24327 [0.00013] d
Epoch = 132.8017 [0.0203] BKJD
Rp/R* = 0.0187 [0.0235]
a/R* = 1.13 [0.07]
b = 1.00 [0.04]
Seff = 138.94 [31.78]
Teq = 875 [50] K
Rp = 1.50 [1.90] Re
a = 0.0550 [0.0076] AU
Ag = 9.75 [24.95] [0.35σ]
Teffp = 2392 [1527] K [0.99σ]

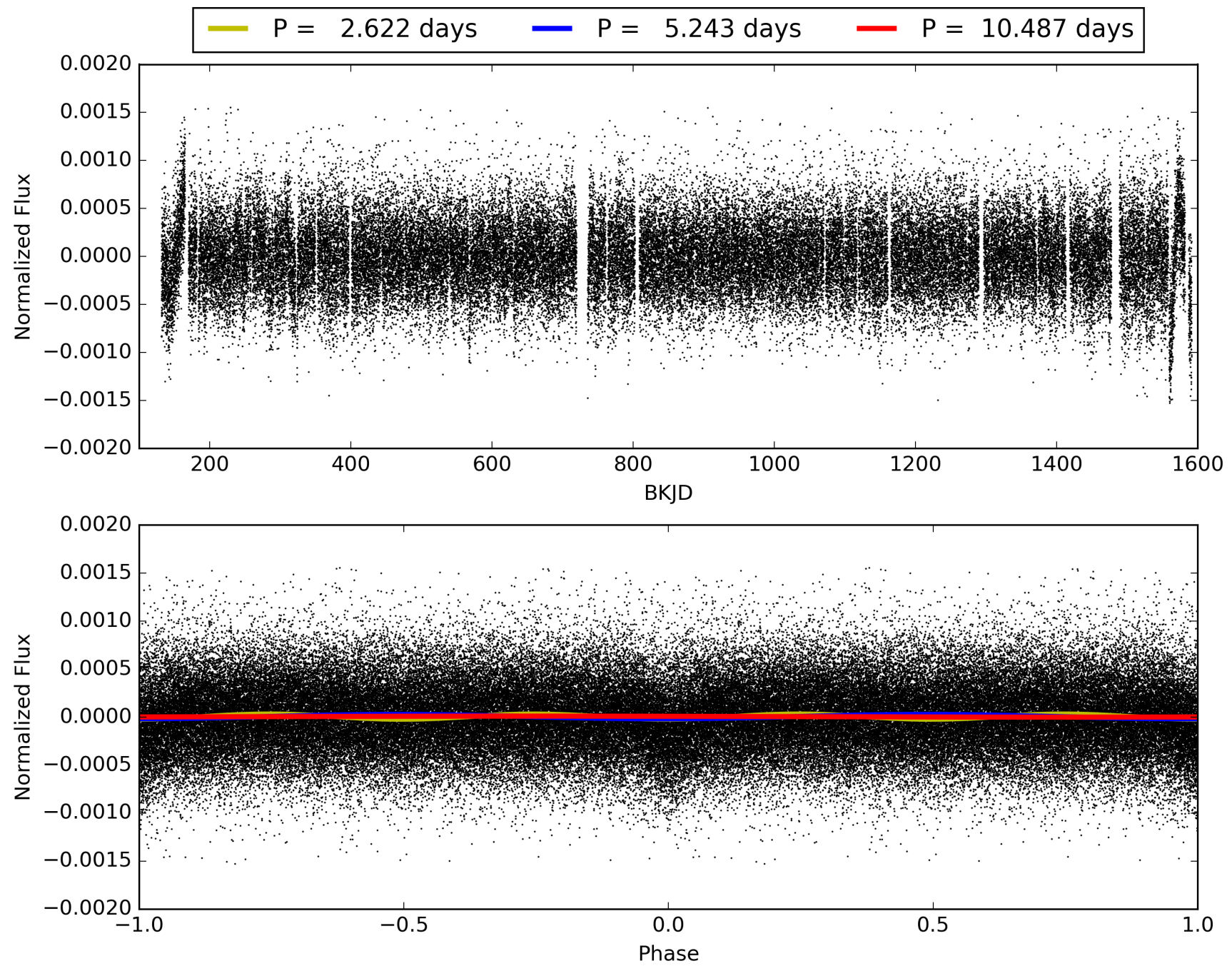
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.47e-52
RollingBand-fgt: 1.00 [253/253]
GhostDiagnostic-chr: 0.08832
Centroid-sig: 37.8%
Centroid-so: 0.824 arcsec [1.02σ]
OotOffset-rm: 3.159 arcsec [3.95σ]
KicOffset-rm: 3.486 arcsec [4.15σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.00 [0/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 006364064-01, PDC Light Curves

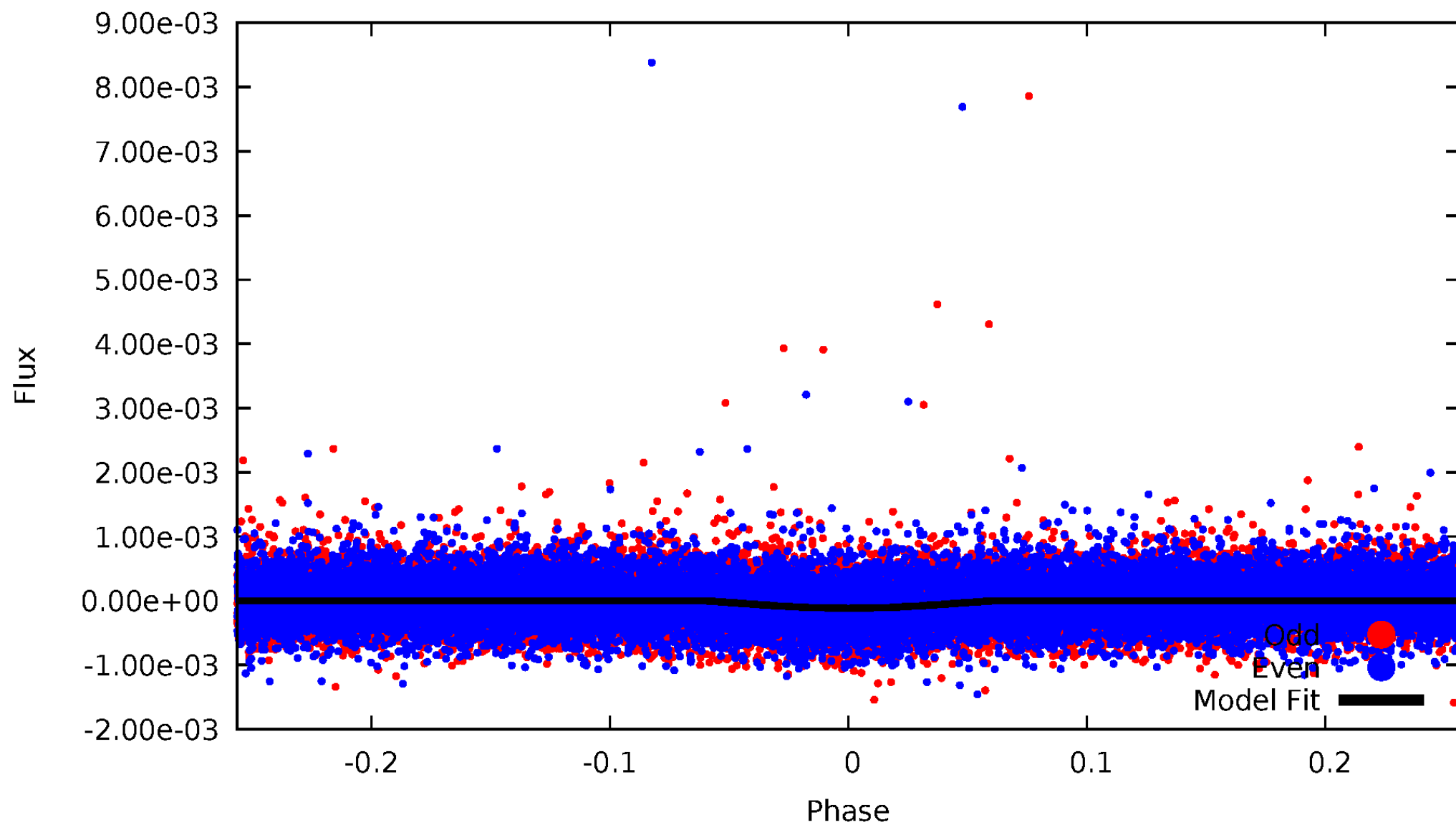


TCE 006364064-01



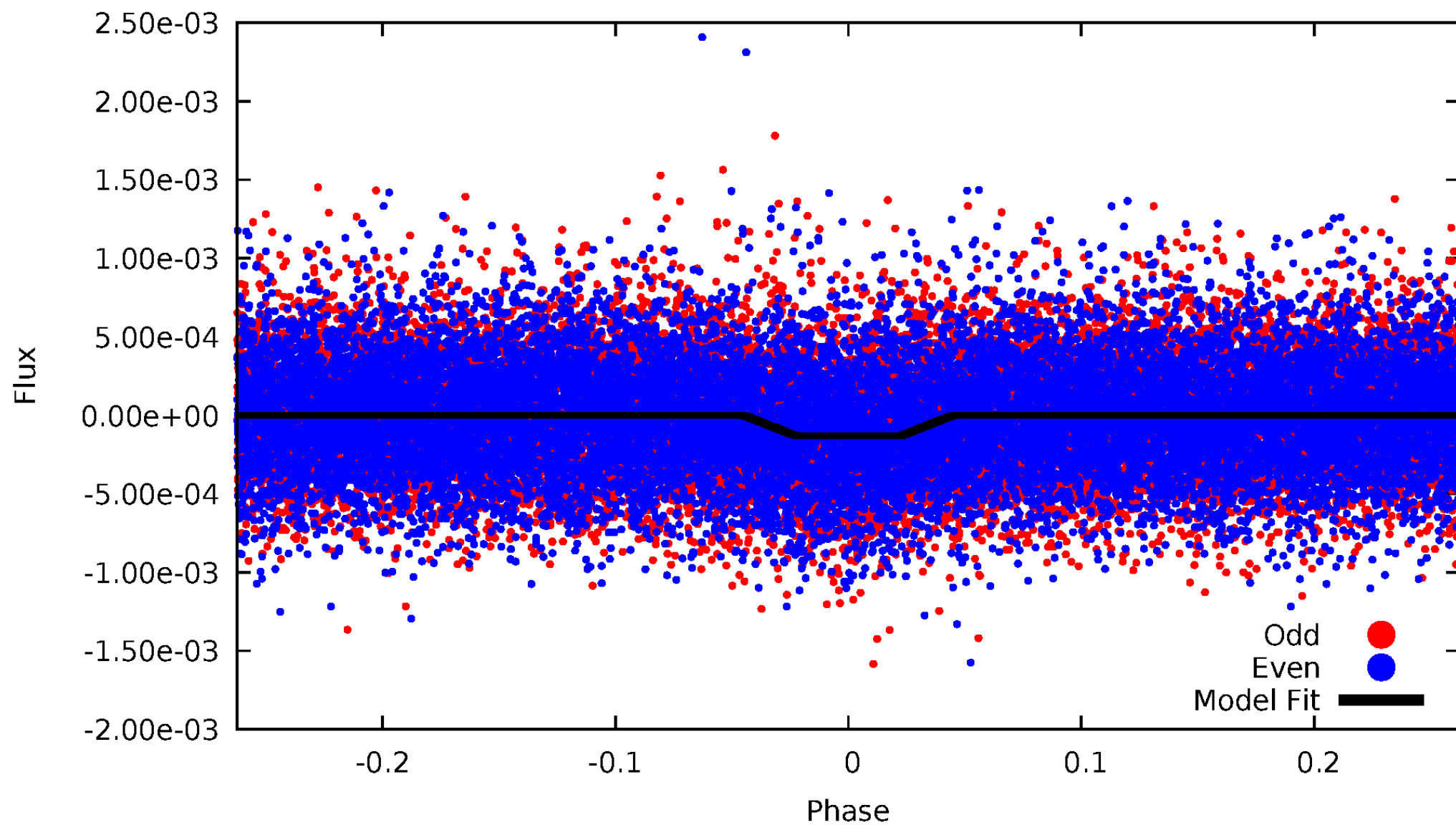
DV Odd/Even

TCE 006364064-01



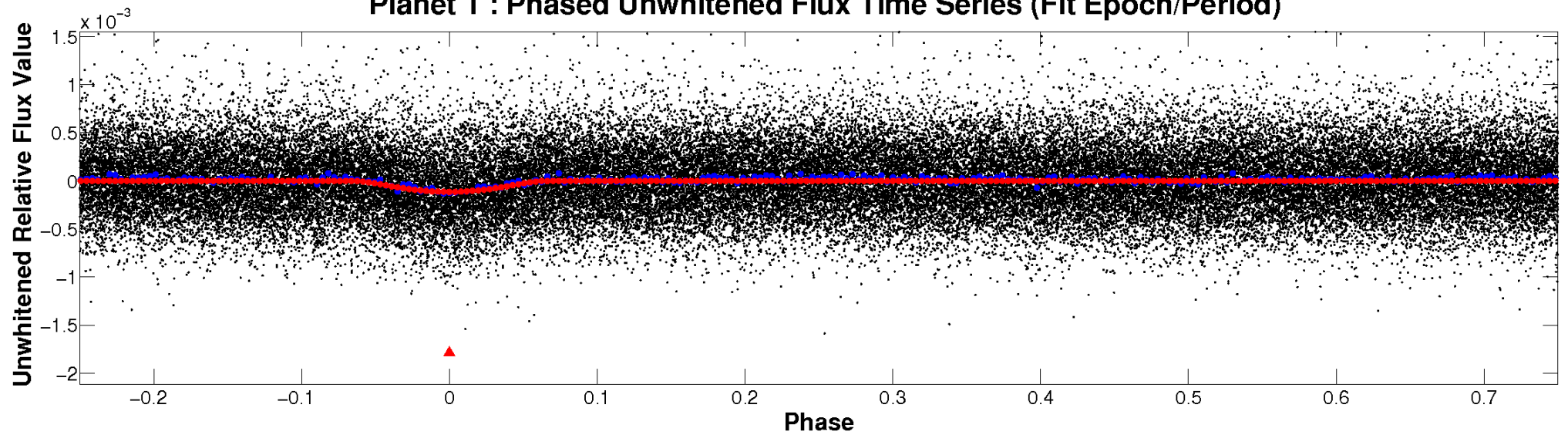
ALT Odd/Even

TCE 006364064-01

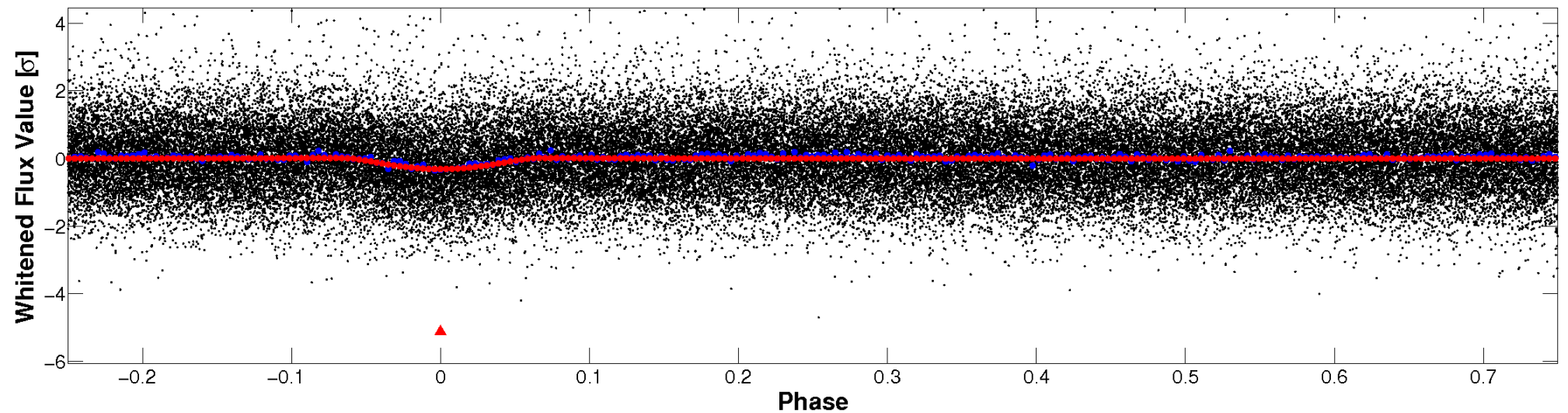


Non-Whitened Vs. Whitened Light Curve

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

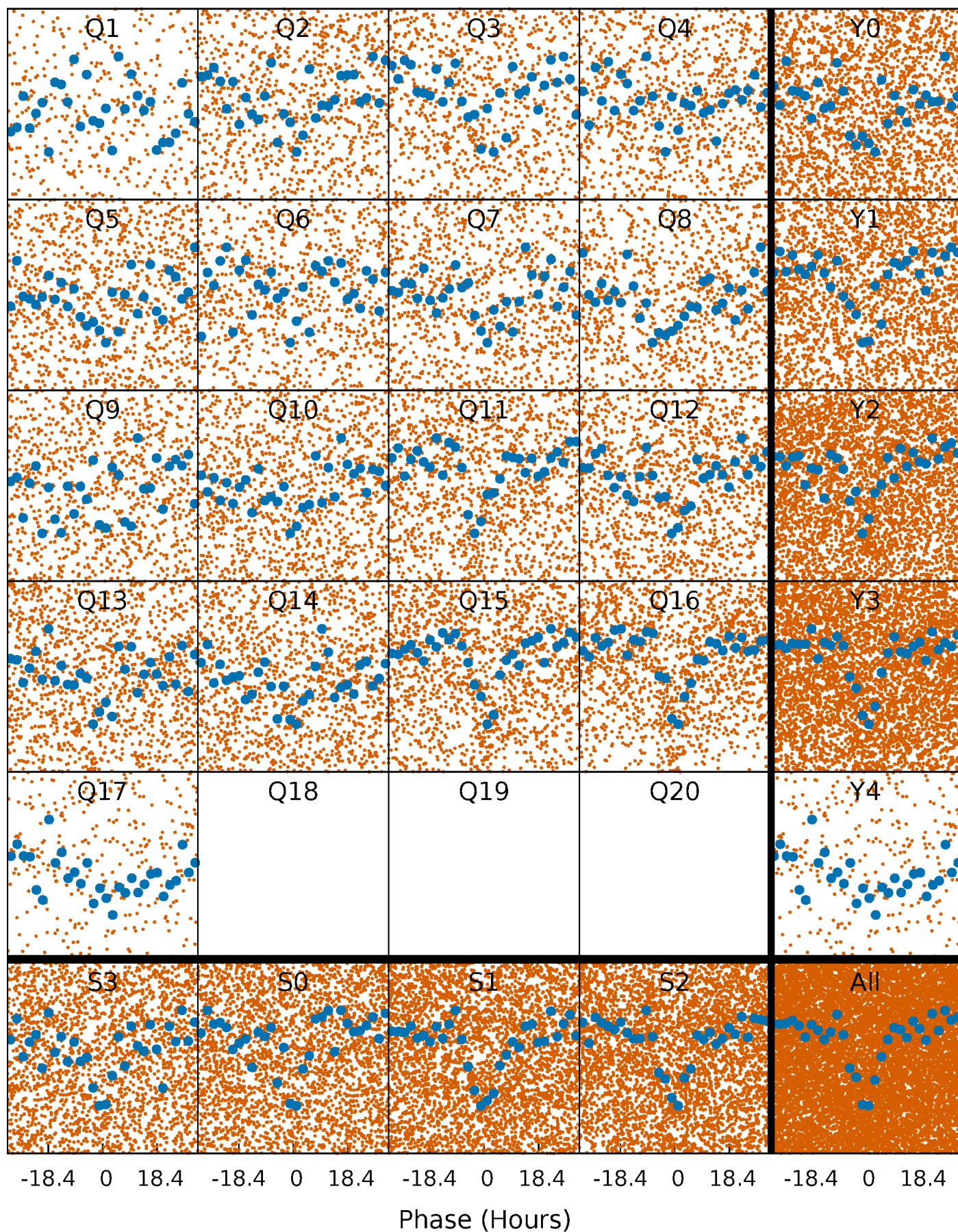


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



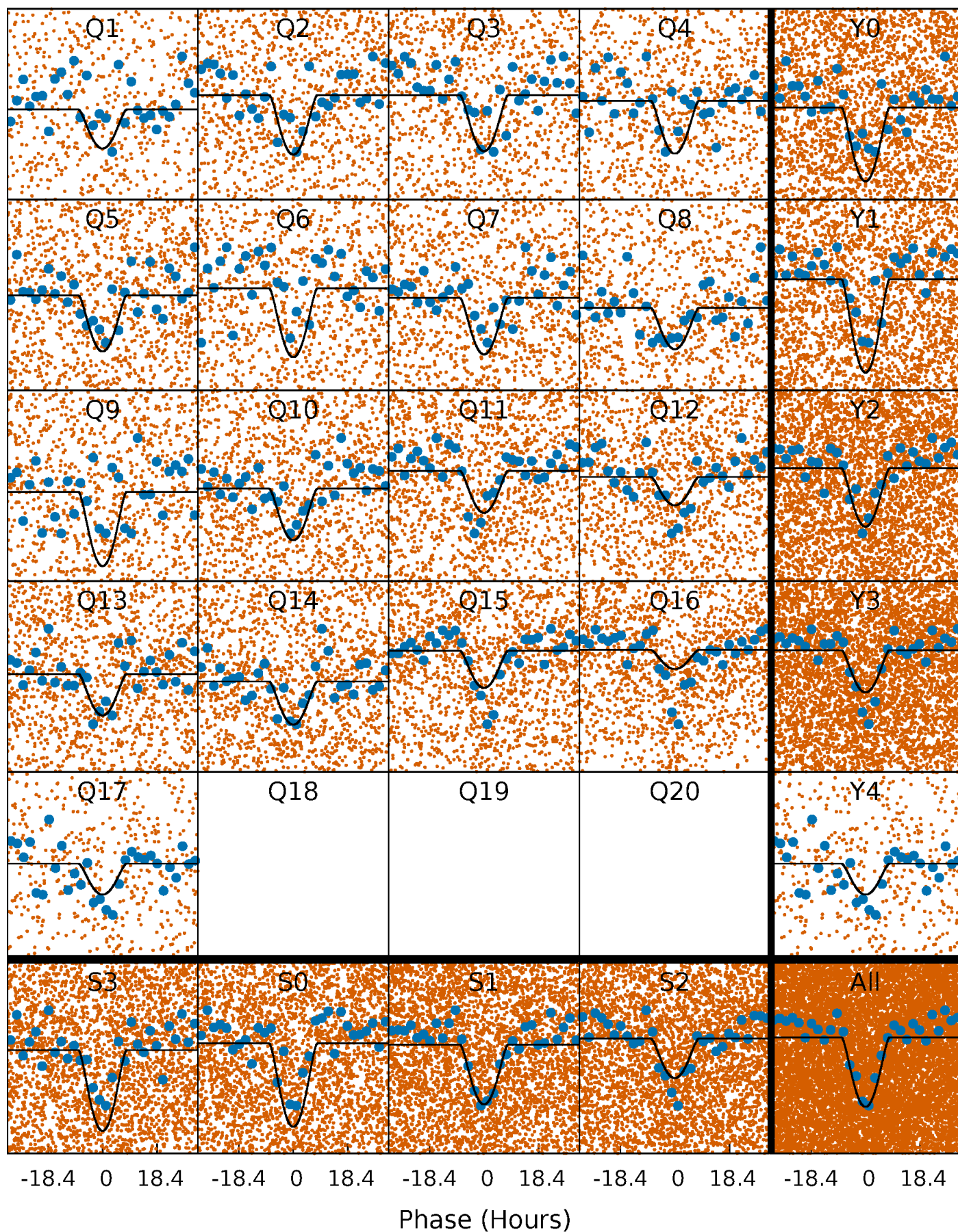
PDC Quarter-Phased Transit Curves

TCE 006364064-01 P= 5.243273 Days $T_0=132.801718$ (BKJD)



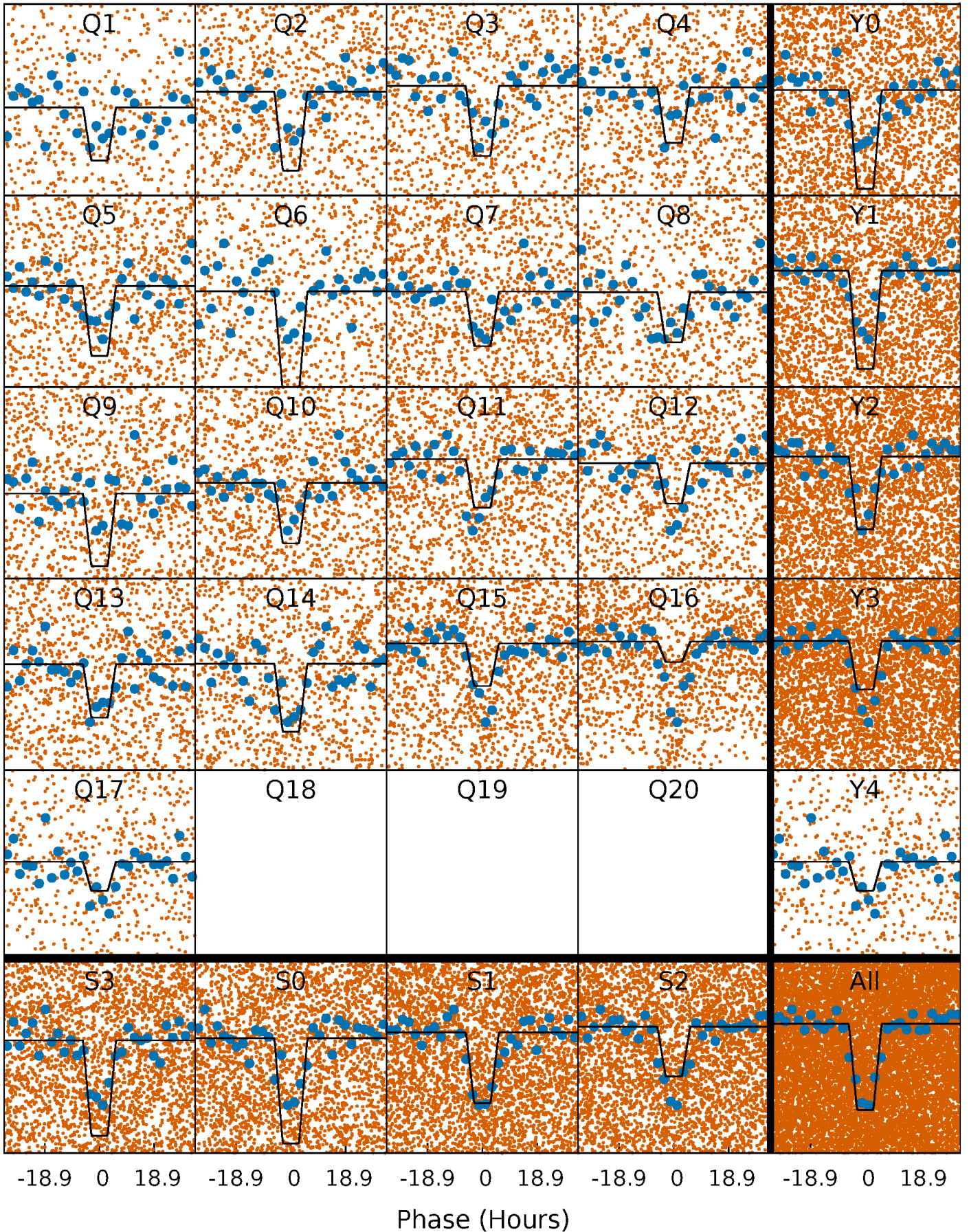
DV Quarter-Phased Transit Curves

TCE 006364064-01 P= 5.243273 Days $T_0=132.801718$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

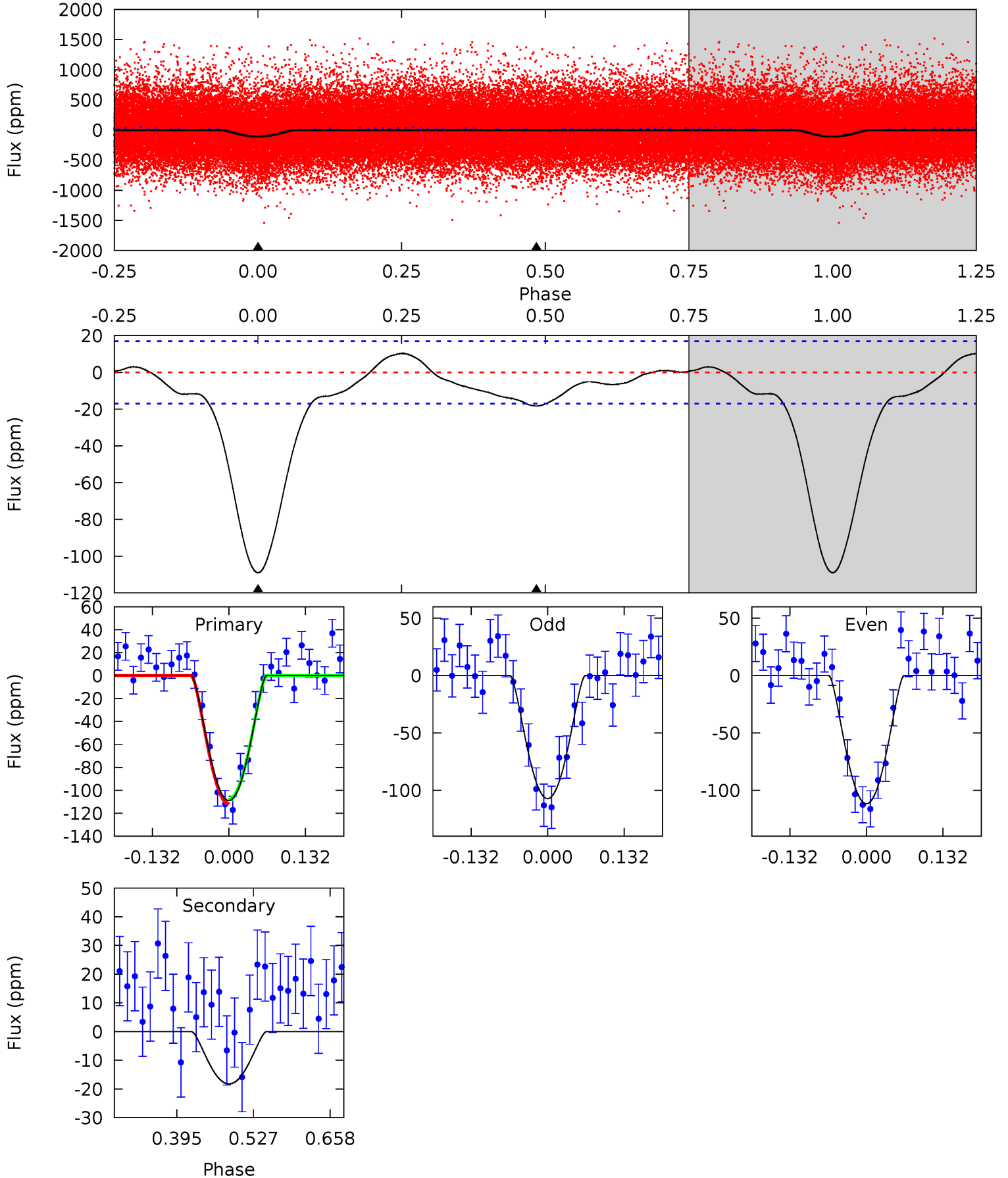
TCE 006364064-01 P= 5.243240 Days $T_0=132.811121$ (BKJD)



DV Model-Shift Uniqueness Test

006364064-01, P = 5.243273 Days, E = 127.558445 Days

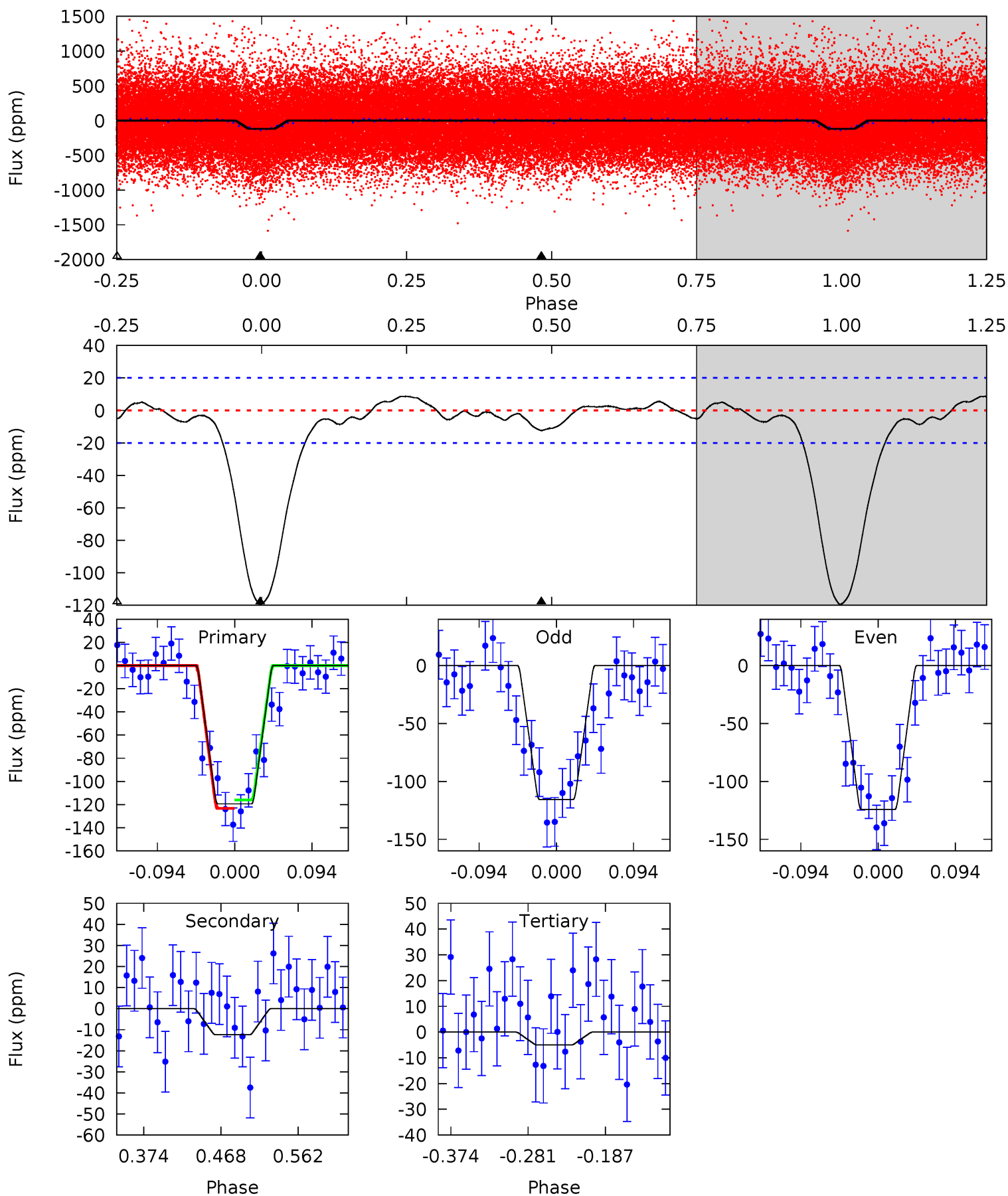
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.9	4.84	0	0	4.51	1.51	1.52	28.9	28.9	4.84	4.84	0.60	1.07	0.09	0.47



Alt Model-Shift Uniqueness Test

006364064-01, P = 5.243240 Days, E = 127.567881 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.2	2.83	1.14	0	4.58	1.68	1.02	26.1	27.2	1.68	2.83	0.98	1.08	0.07	0.83



Stellar Parameters For KIC 006364064

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5430^{+160}_{-144}	$4.613^{+0.035}_{-0.105}$	$-0.360^{+0.300}_{-0.300}$	$0.735^{+0.123}_{-0.057}$	$0.823^{+0.076}_{-0.093}$	$2.913^{+0.448}_{-0.960}$
	+3%/-3%	+1%/-2%	+83%/-83%	+17%/-8%	+9%/-11%	+15%/-33%
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 006364064-01 / KOI 5271.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-18 ± 4	$2.19^{+1.58}_{-1.43}$	1239^{+57}_{-44}	2874^{+1144}_{-426}	$6.268^{+45.387}_{-4.224}$
Alt.	-12 ± 4	$1.66^{+1.64}_{-1.15}$	1238^{+56}_{-44}	2941^{+1313}_{-575}	$7.289^{+66.573}_{-5.600}$

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 $A_{obs} \gg 1.0$

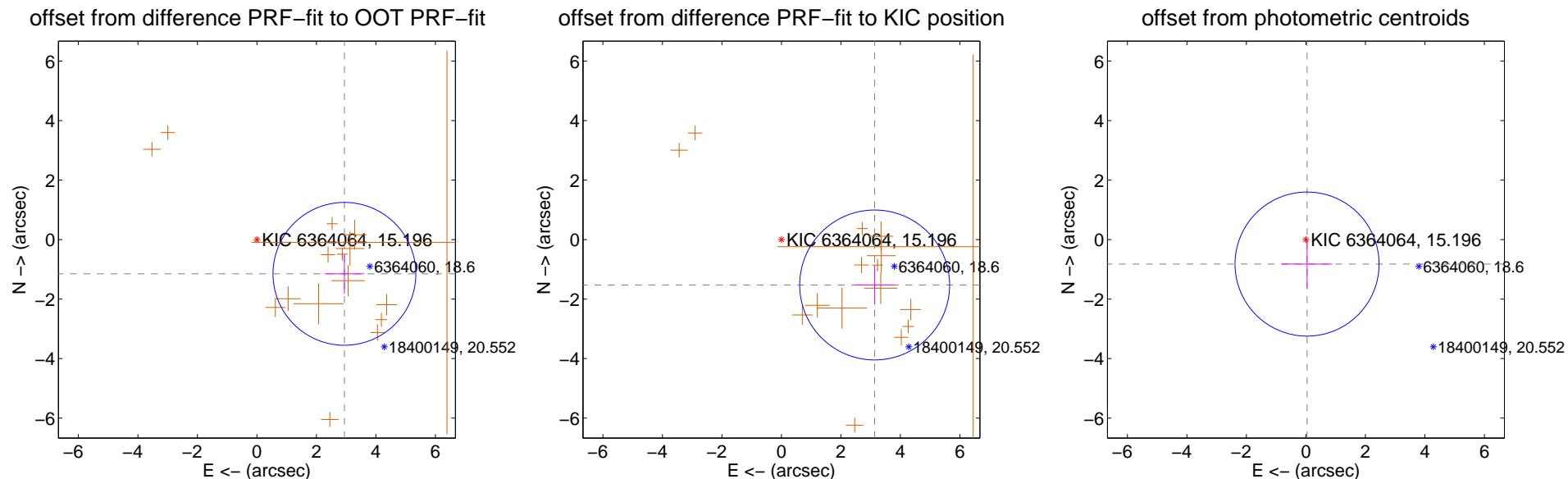
DV Centroid Data

Supplemental centroid analysis for 006364064-01. Kepler magnitude: 15.20. Transit SNR 18.49

There are 0 quarters with good PRF difference image offsets

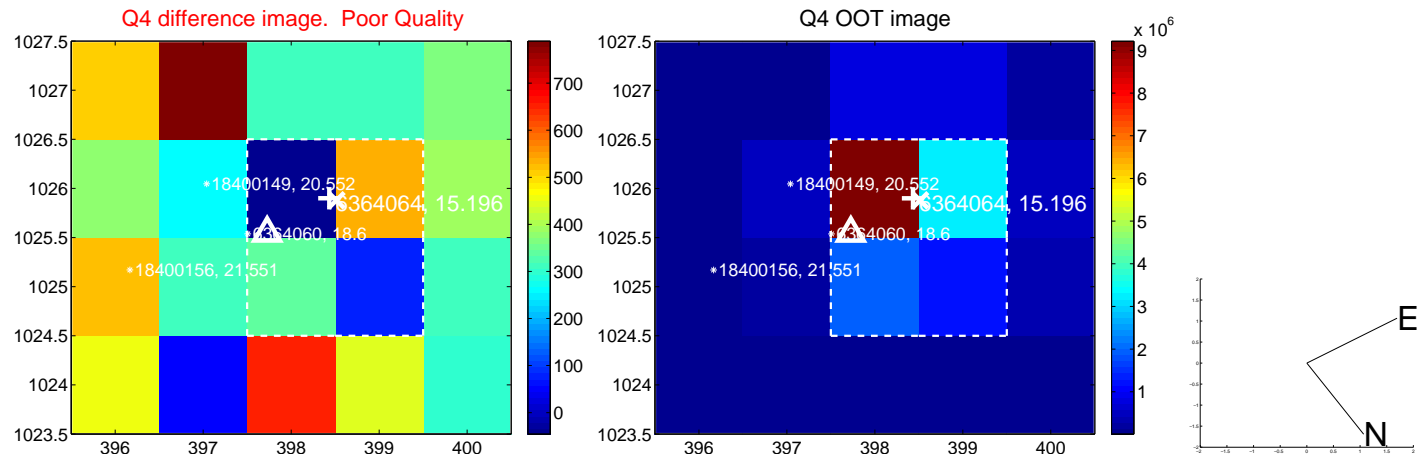
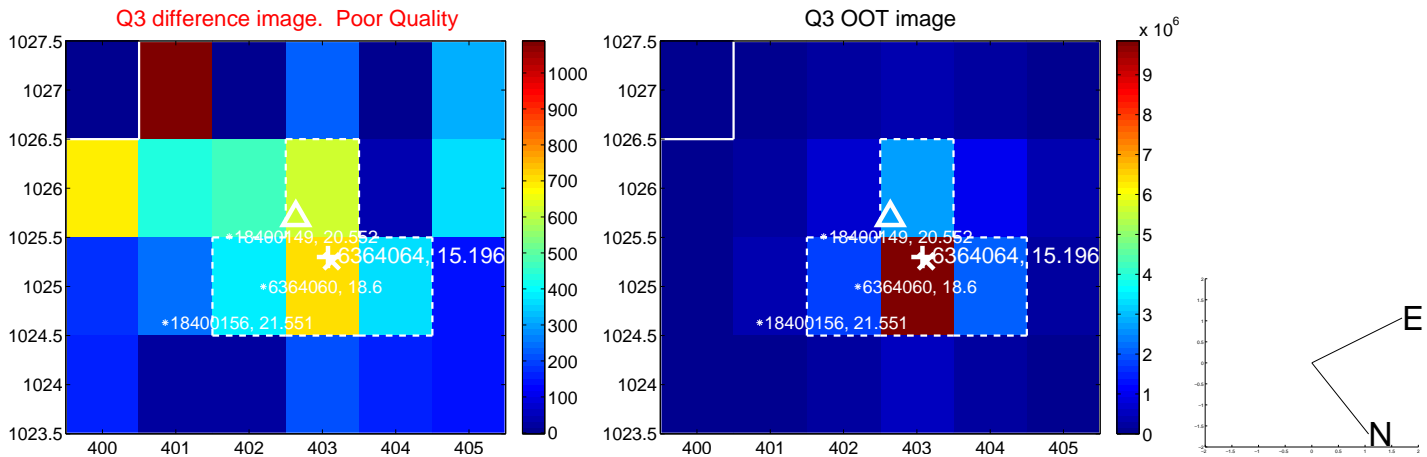
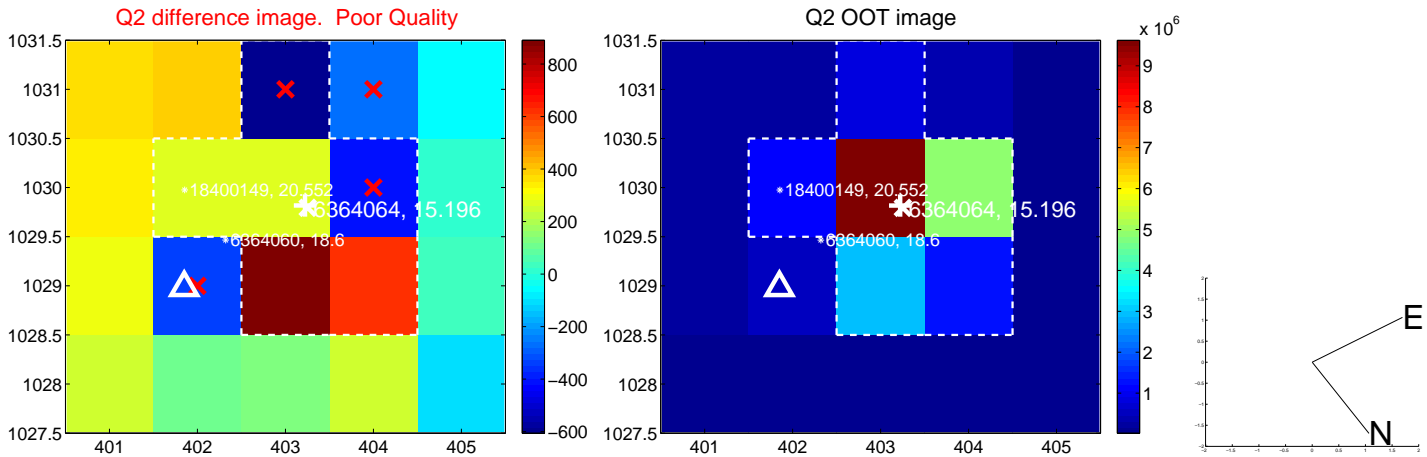
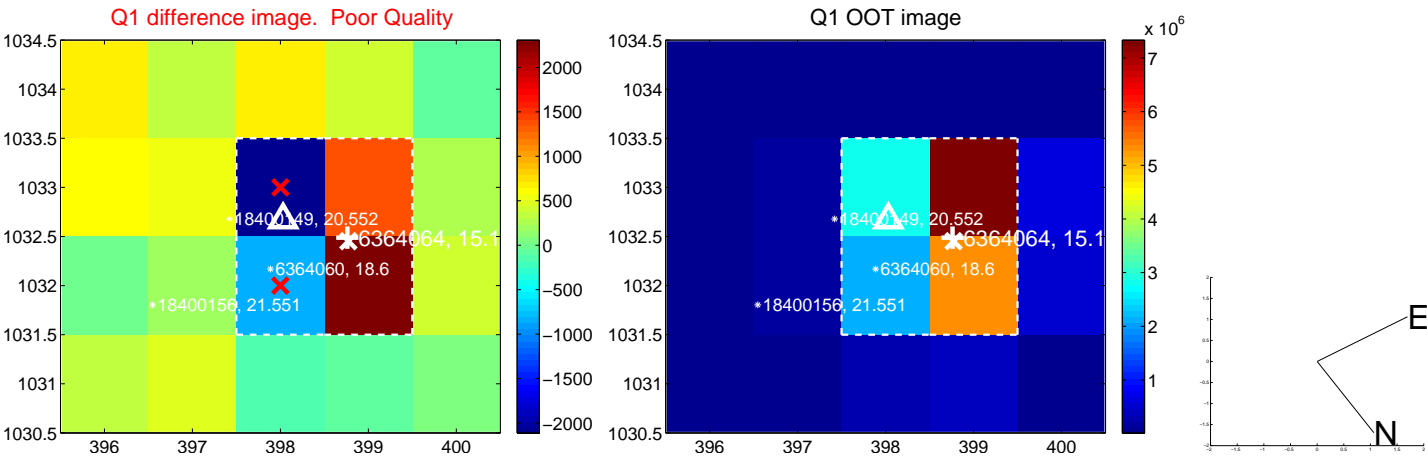
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.159 ± 0.800	3.95	-2.942 ± 0.664	-1.152 ± 0.665
PRF-fit source offset from KIC position	3.486 ± 0.840	4.15	-3.135 ± 0.684	-1.526 ± 0.663
photometric centroid source offset	0.82 ± 0.81	1.02	-0.04 ± 0.85	-0.82 ± 0.81

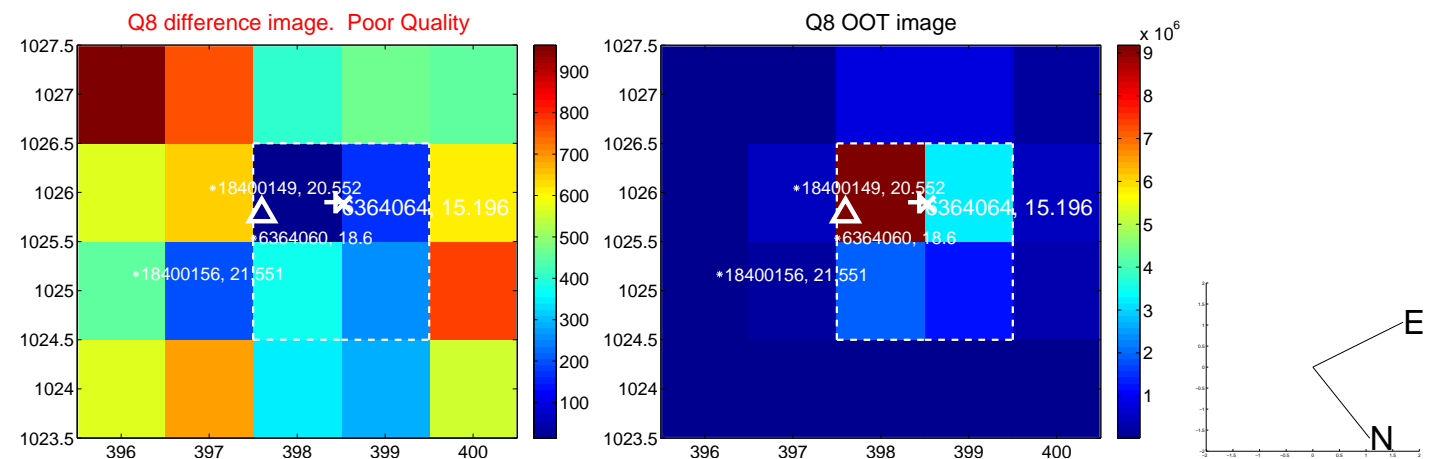
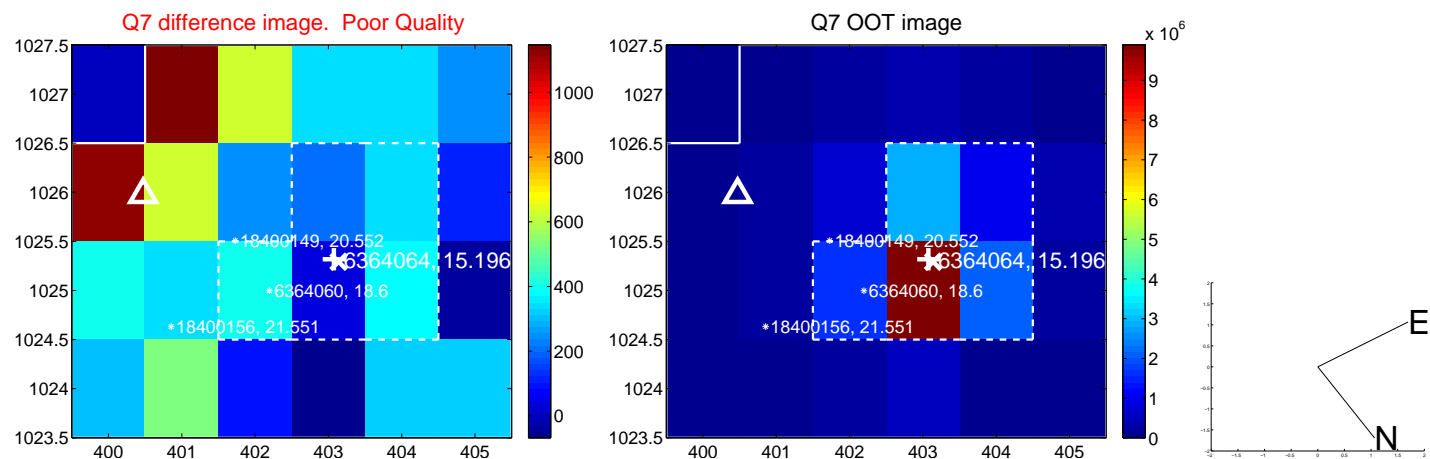
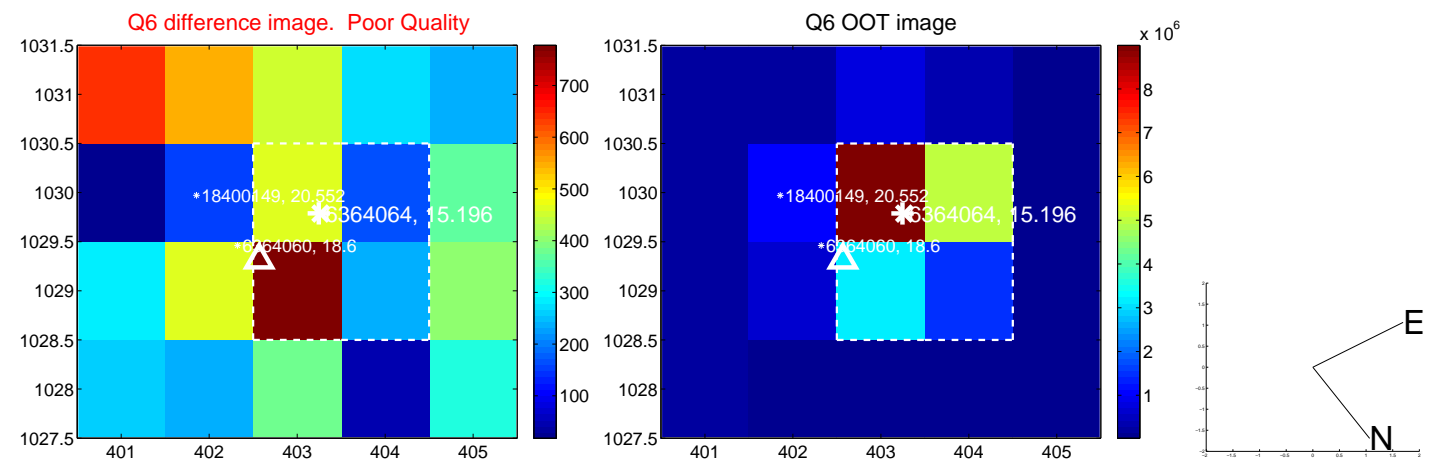
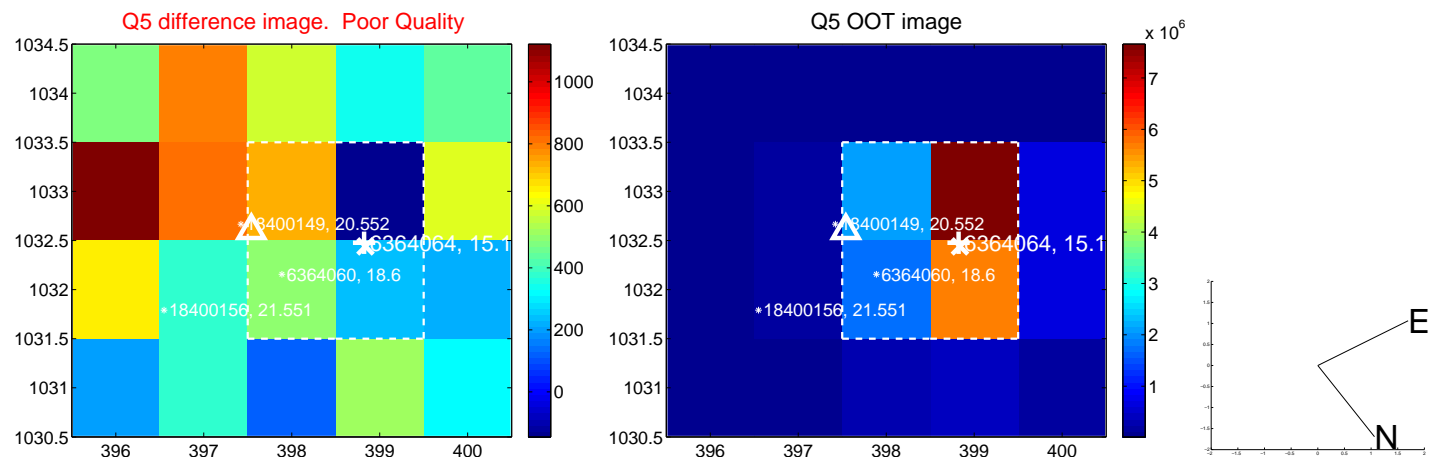


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

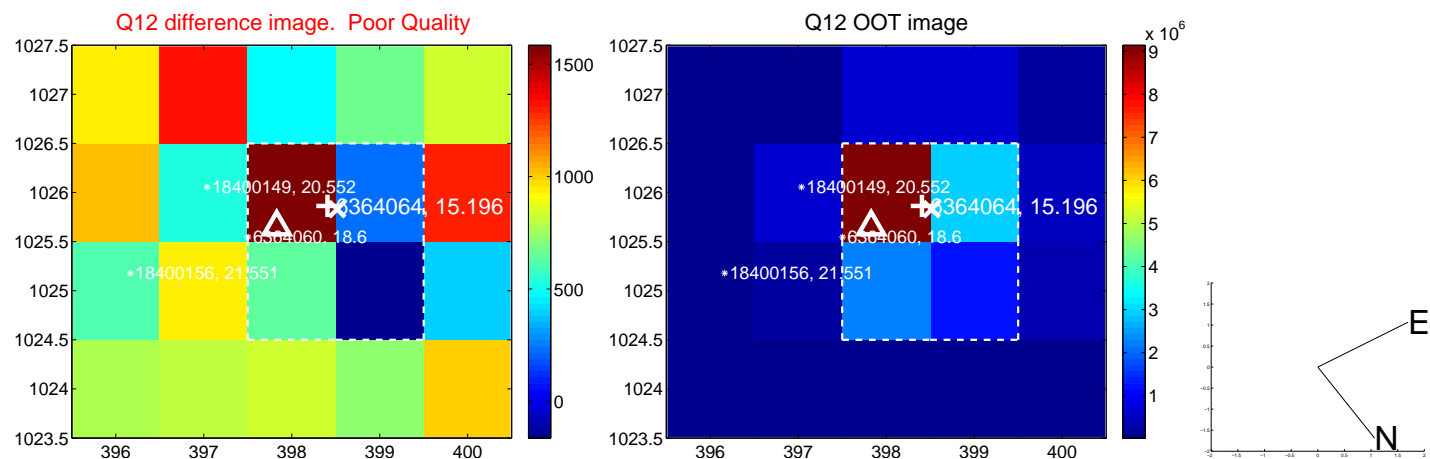
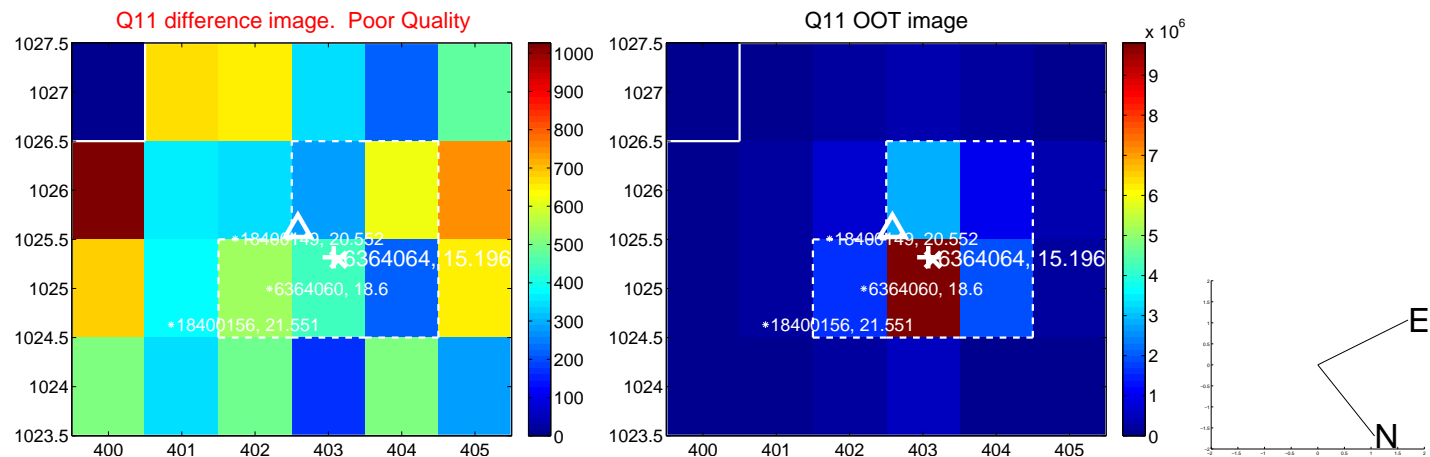
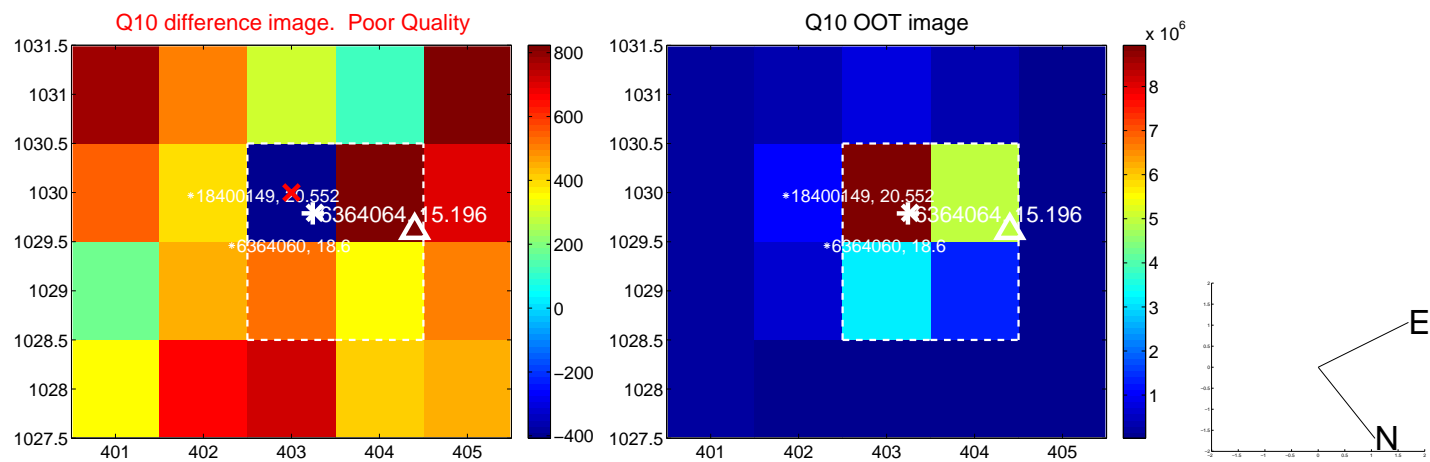
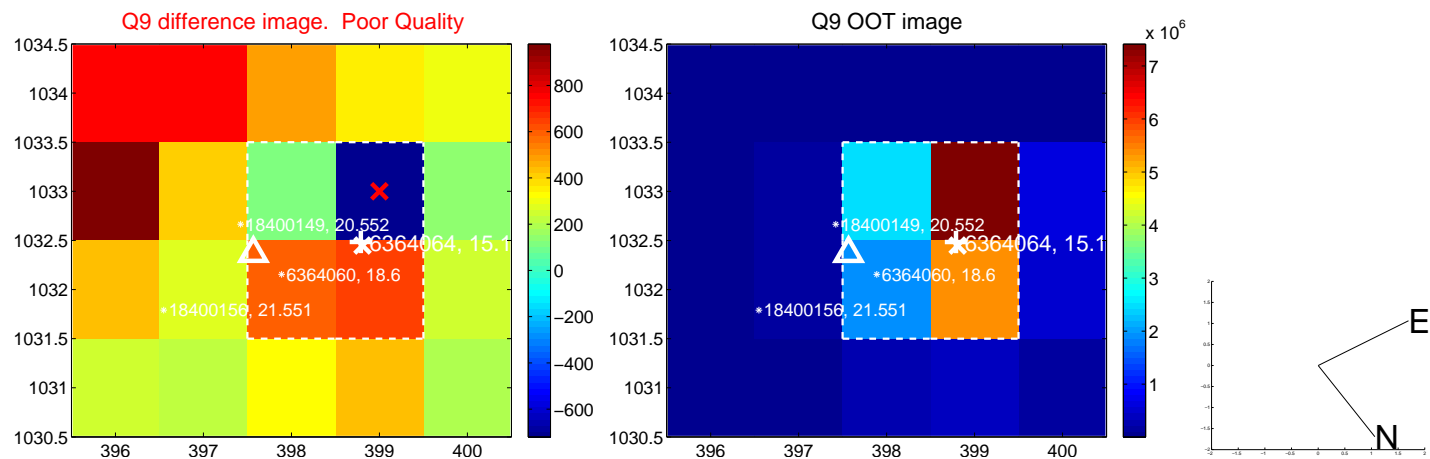
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



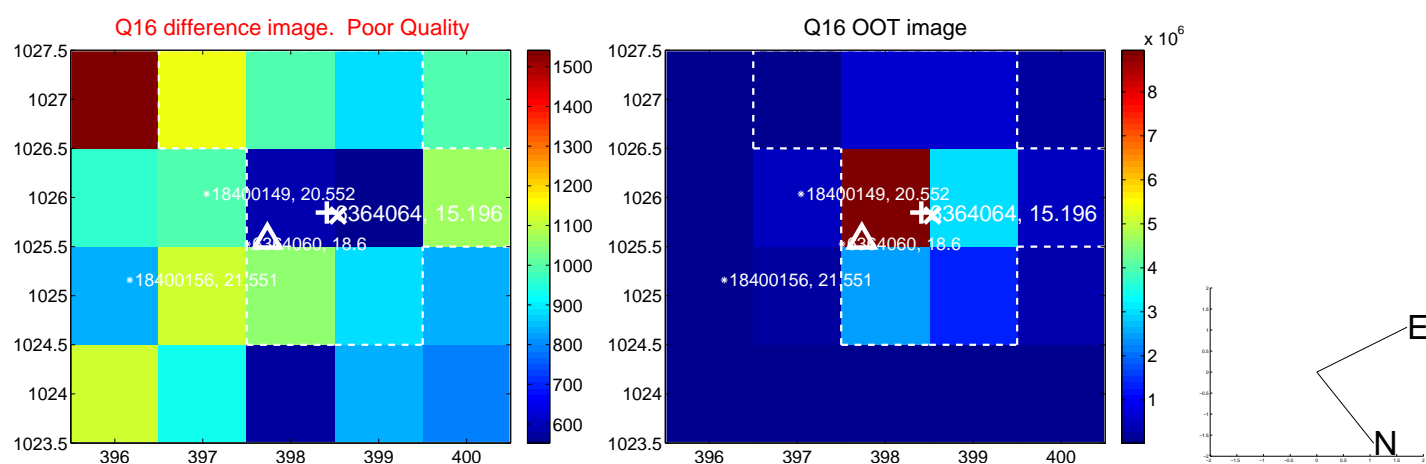
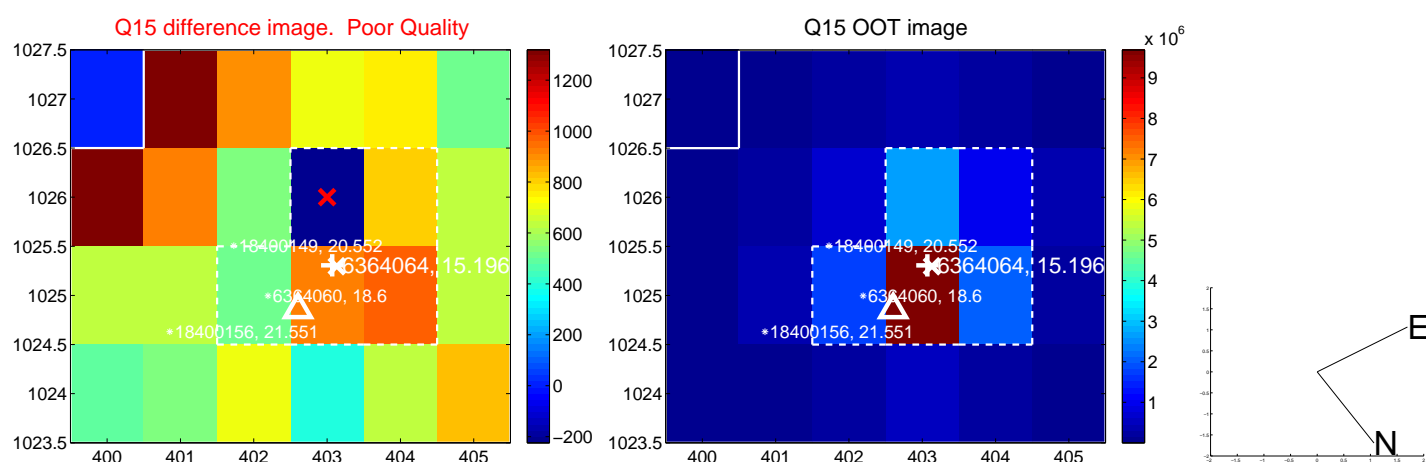
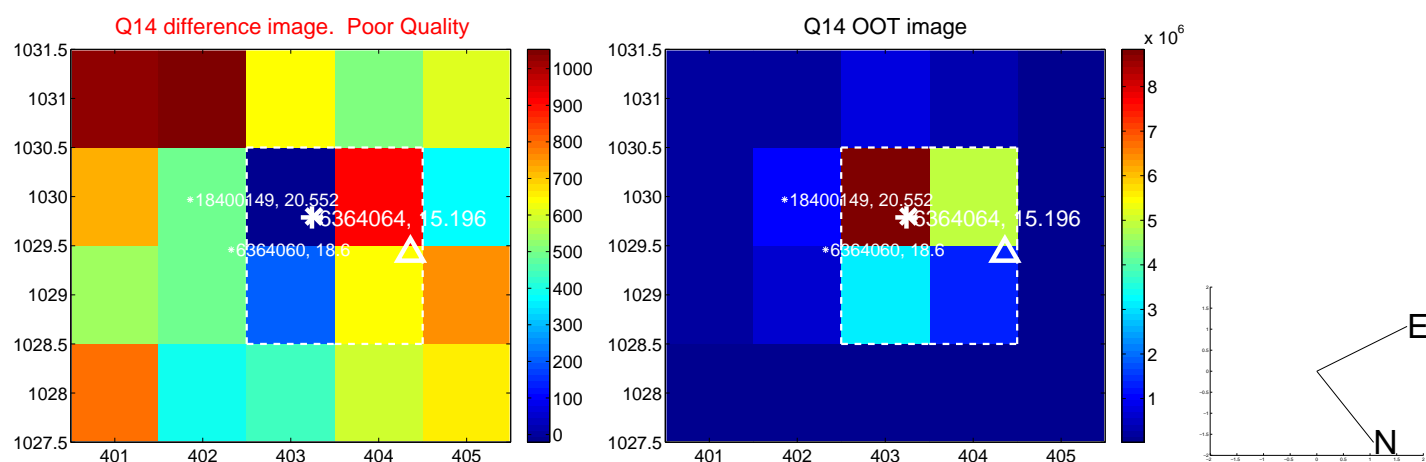
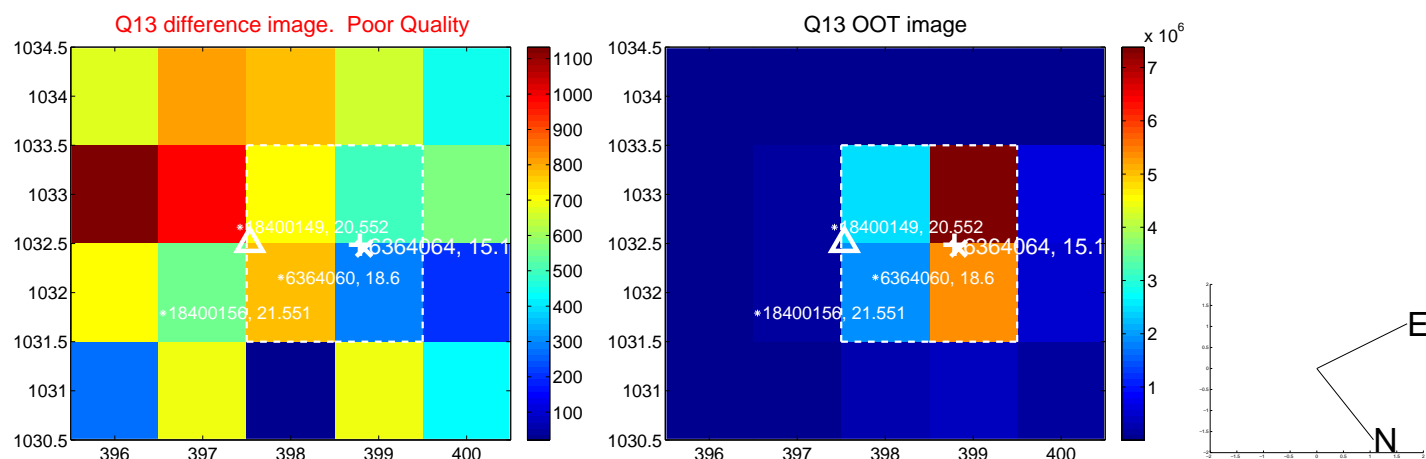
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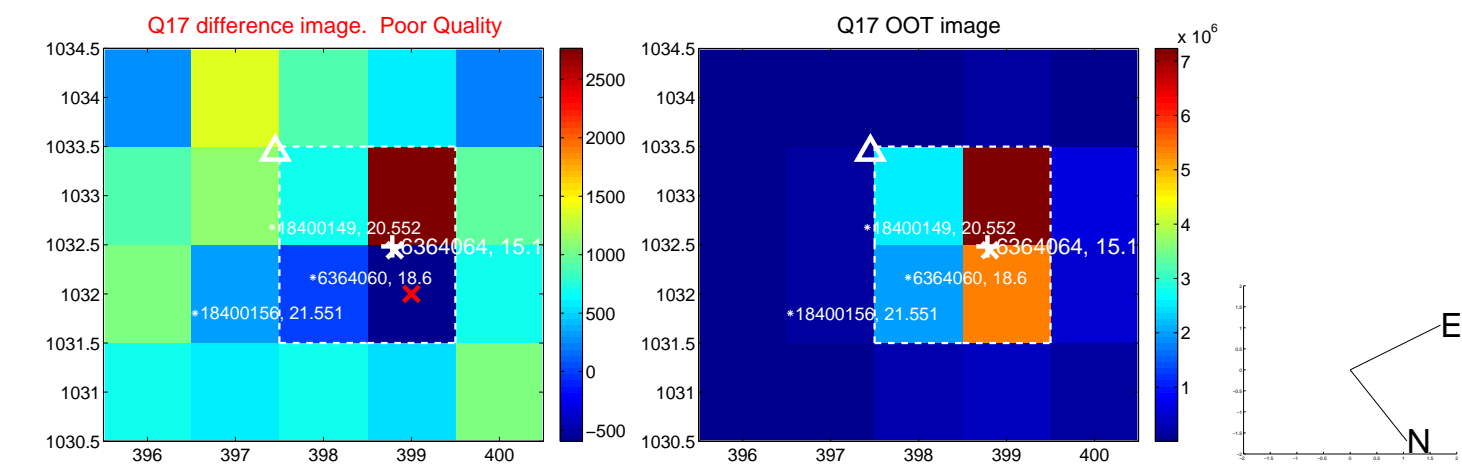
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



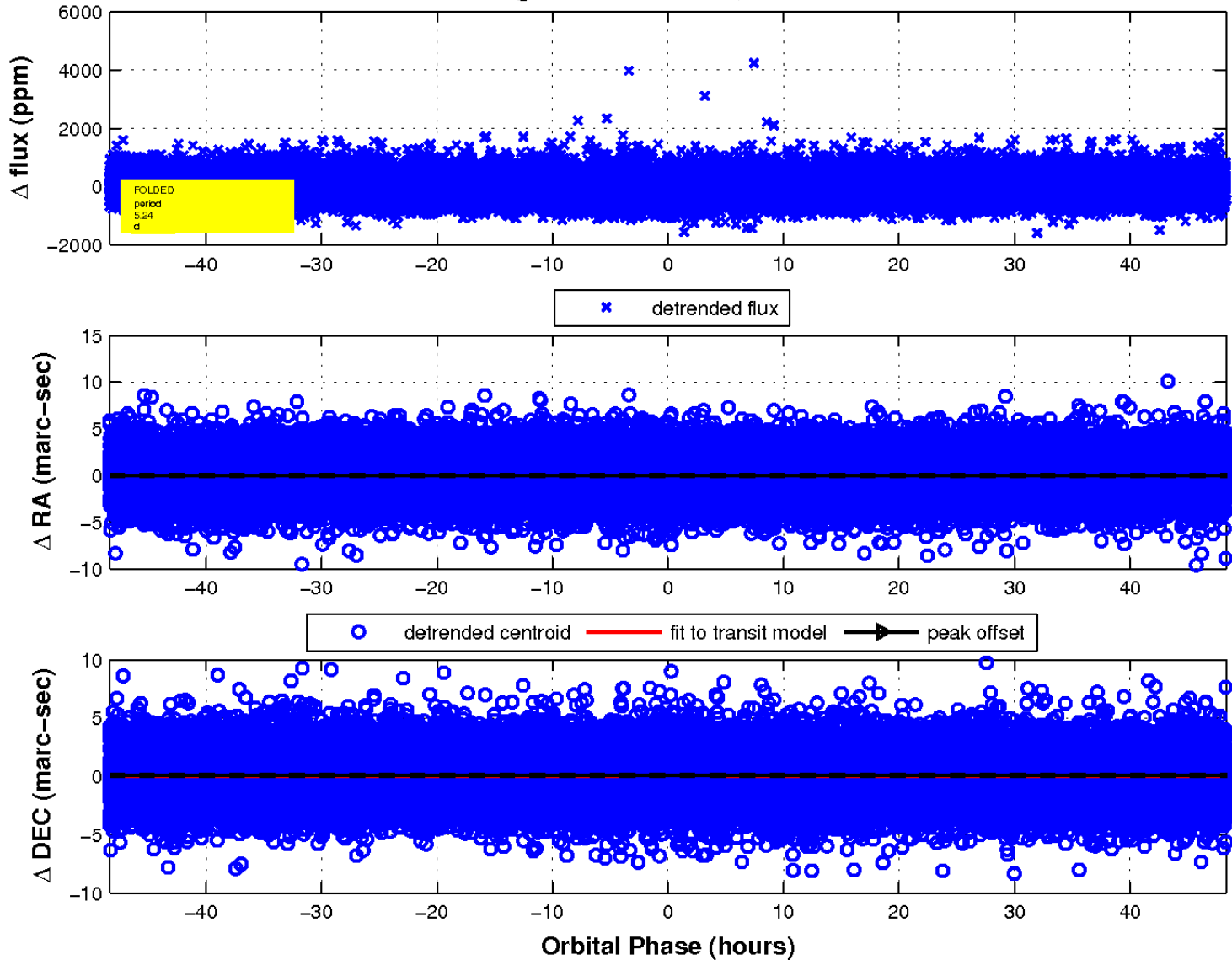
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

