

KIC 005031804

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})
005031804-01	OBS	No	0.644149	131.980889	34.5	2.407	9.5	10.2	1.75	6877	1.20	25646.62

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005031804-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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.

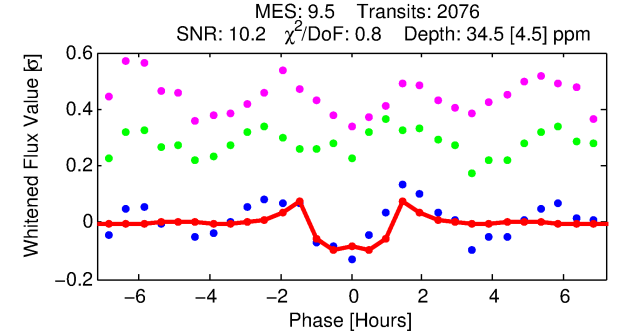
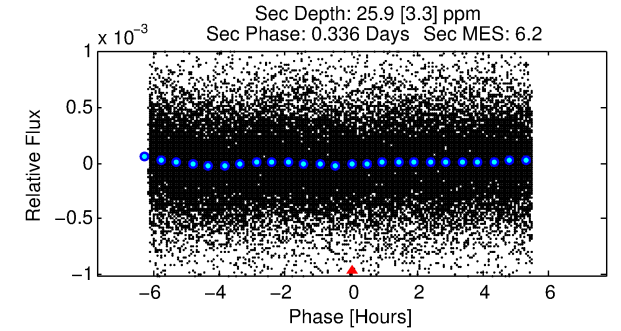
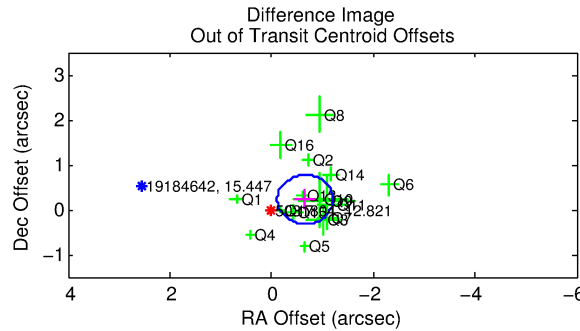
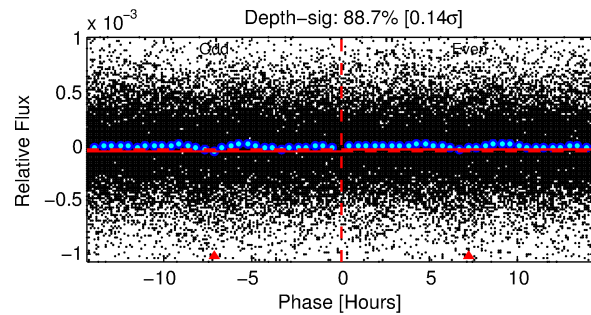
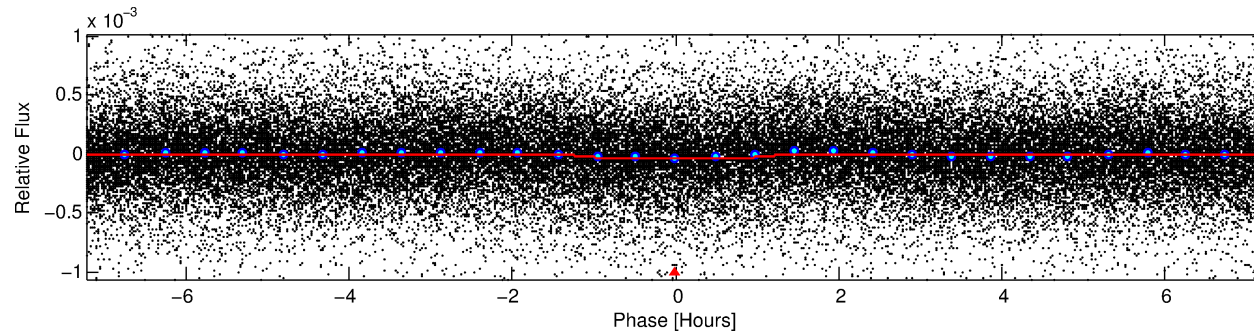
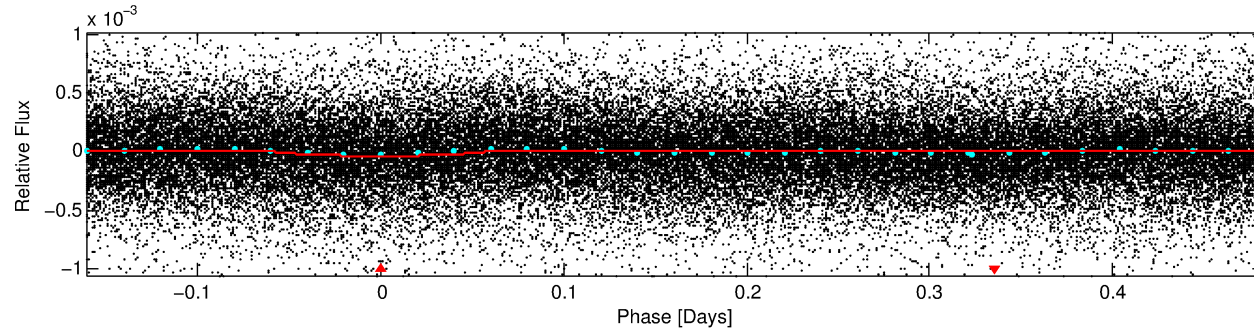
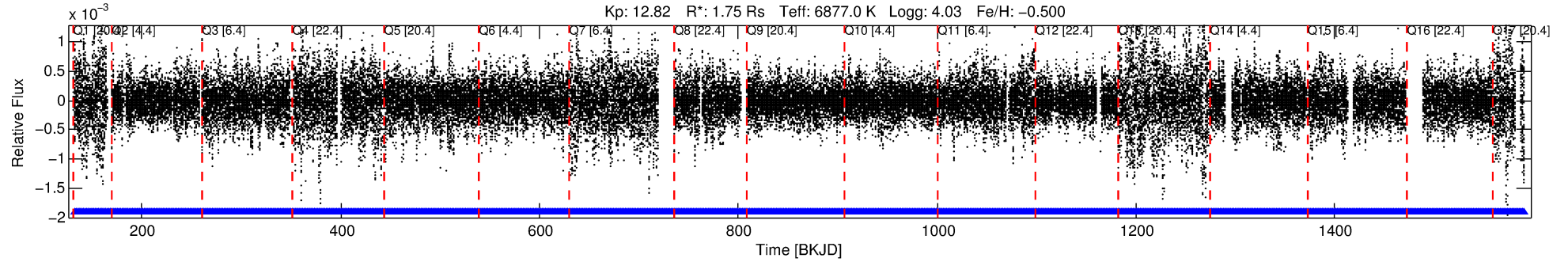
Ephemeris Match Information For 005031804-01

No Significant Match Found

DV One-Page Summary

KIC: 5031804 Candidate: 1 of 1 Period: 0.644 d

KOI: K06500 Corr: No Ephemeris Match



DV Fit Results:

Period = 0.64415 [0.00001] d
Epoch = 131.9809 [0.0015] BKJD
Rp/R* = 0.0063 [0.0013]
a/R* = 1.31 [0.66]
b = 0.90 [0.25]
Seff = 25646.62 [13404.36]
Teff = 3227 [422] K
Rp = 1.20 [0.46] Re
a = 0.0155 [0.0049] AU
Ag = 2.38 [1.57] [0.88 σ]
Teffp = 6199 [705] K [3.62 σ]

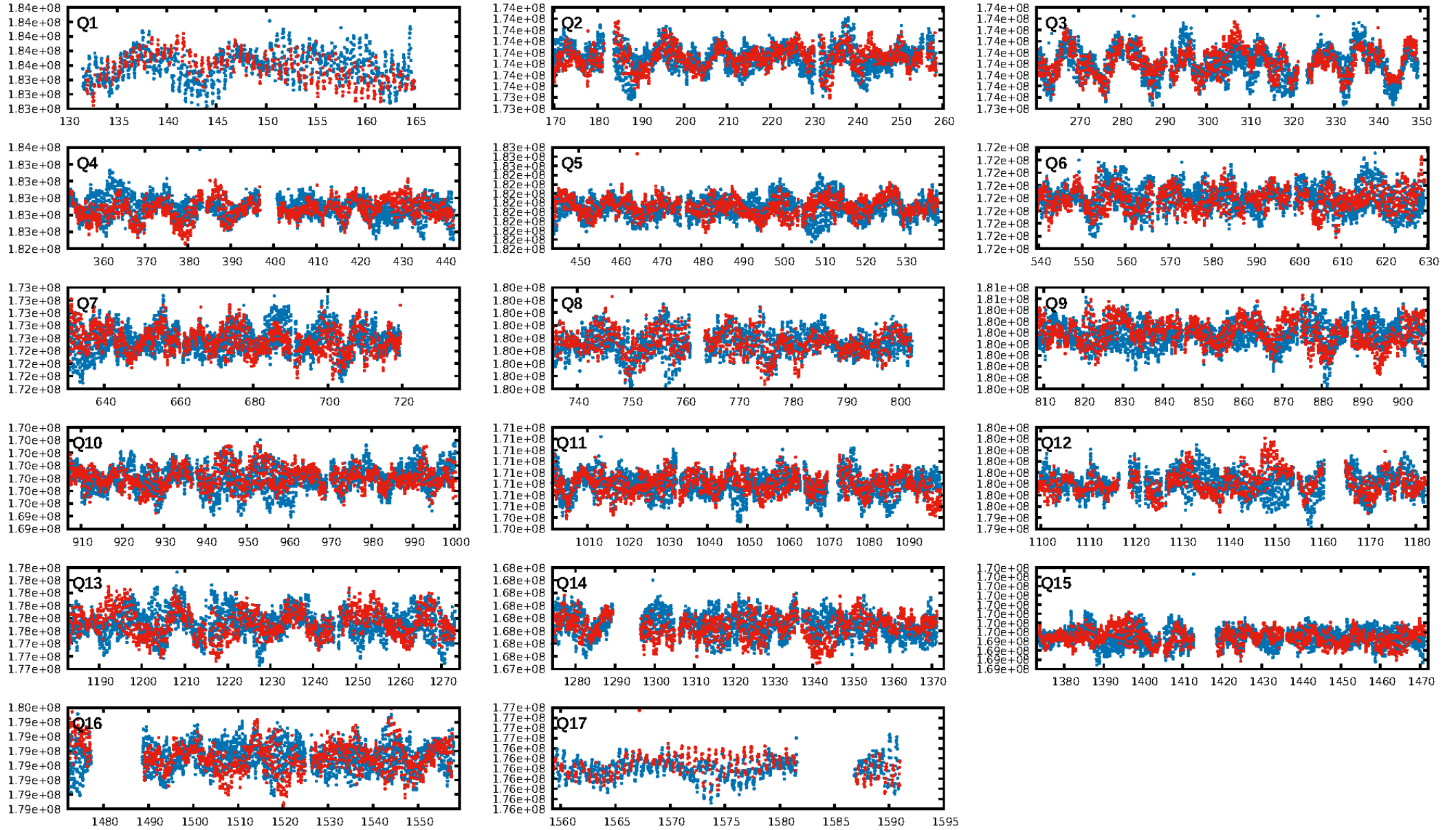
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.78e-22
RollingBand-fgt: 1.00 [1982/1982]
GhostDiagnostic-chr: 1.288
Centroid-sig: 22.4%
Centroid-so: 0.374 arcsec [0.81 σ]
OotOffset-rm: 0.694 arcsec [3.81 σ]
KicOffset-rm: 0.656 arcsec [3.37 σ]
OotOffset-st: 4/4/3/5 [16]
KicOffset-st: 4/4/3/5 [16]
DiffImageQuality-fgm: 0.56 [9/16]
DiffImageOverlap-fno: 1.00 [17/17]

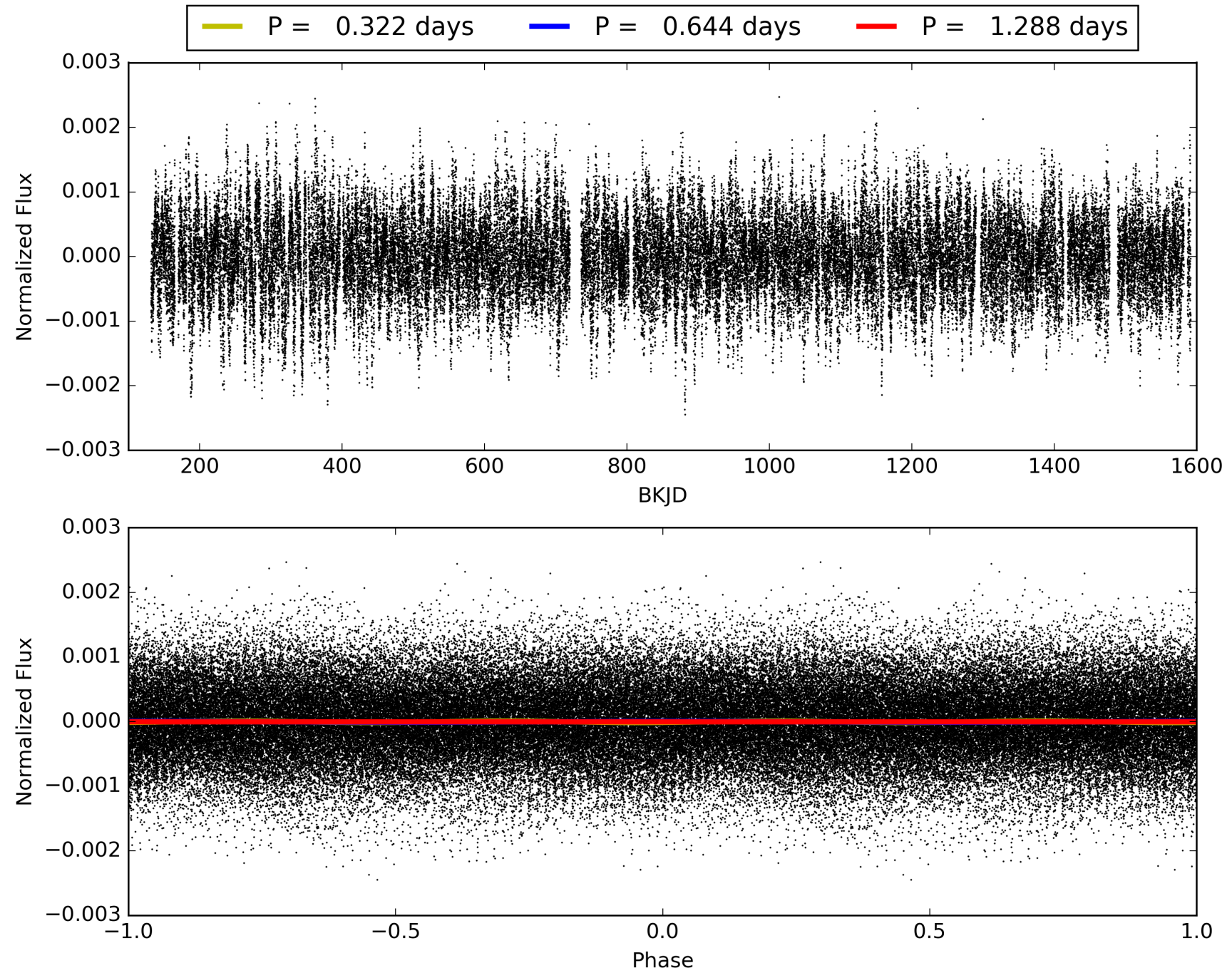
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 15:42:32 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 005031804-01, PDC Light Curves

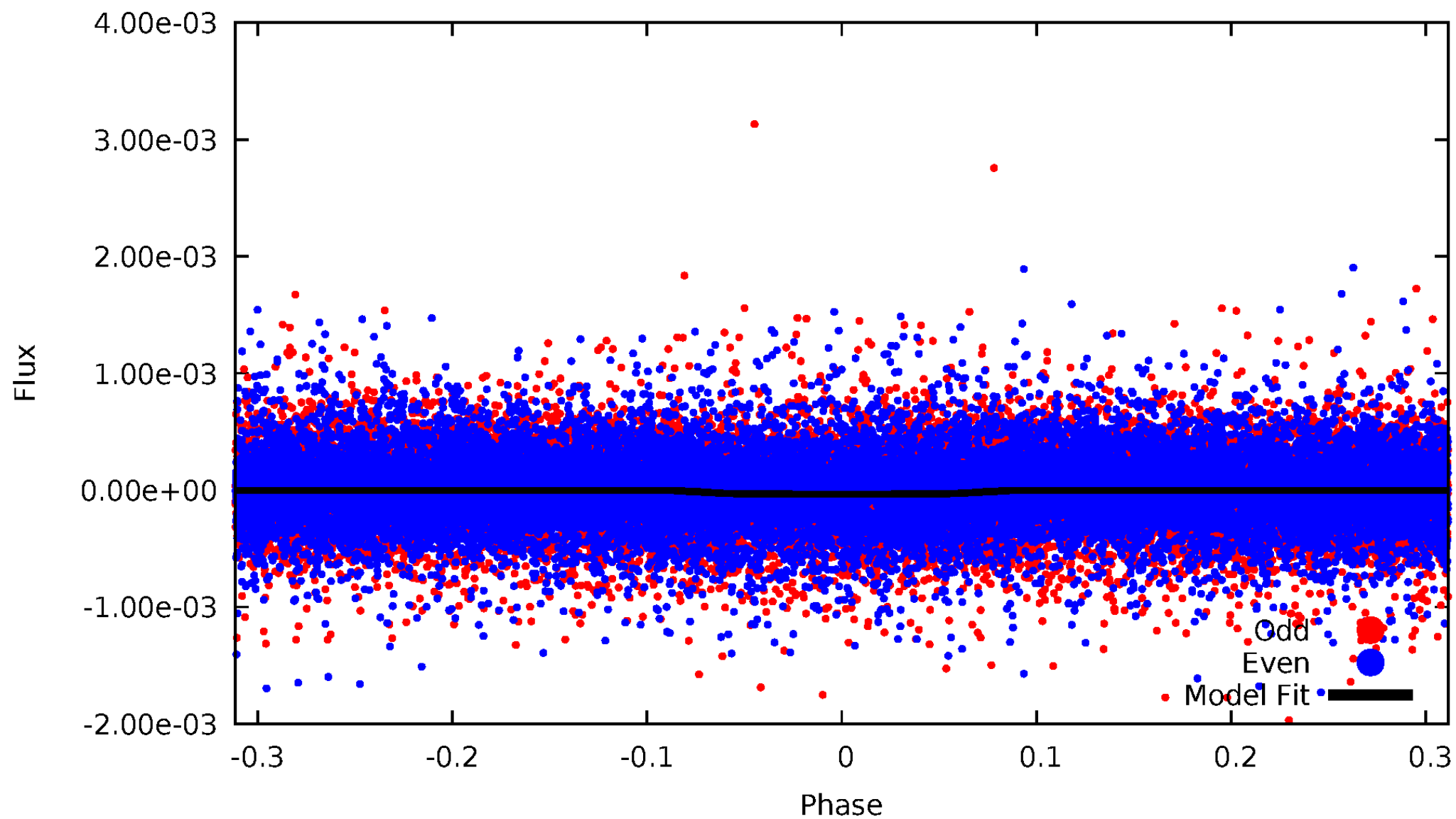


TCE 005031804-01



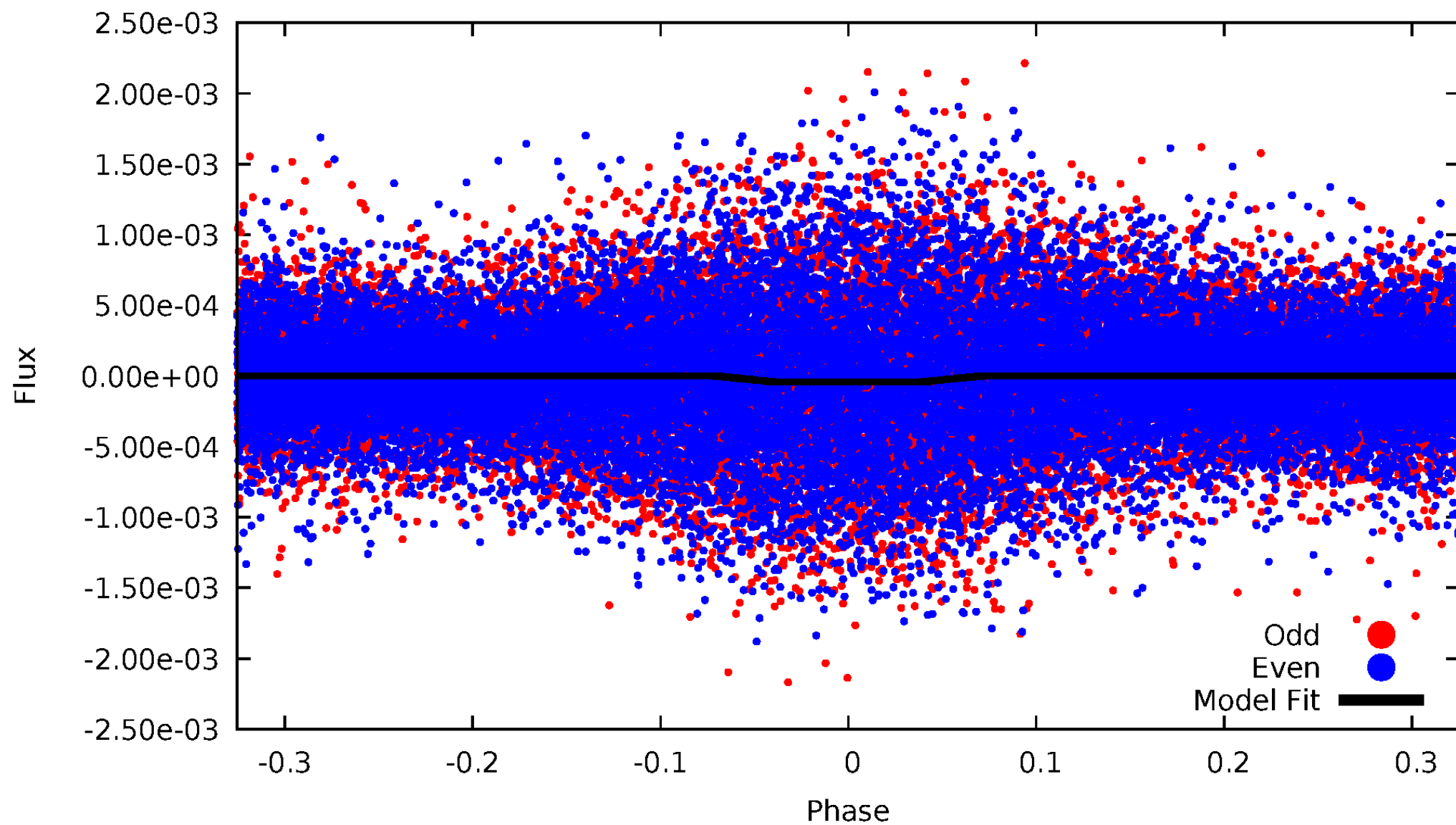
DV Odd/Even

TCE 005031804-01



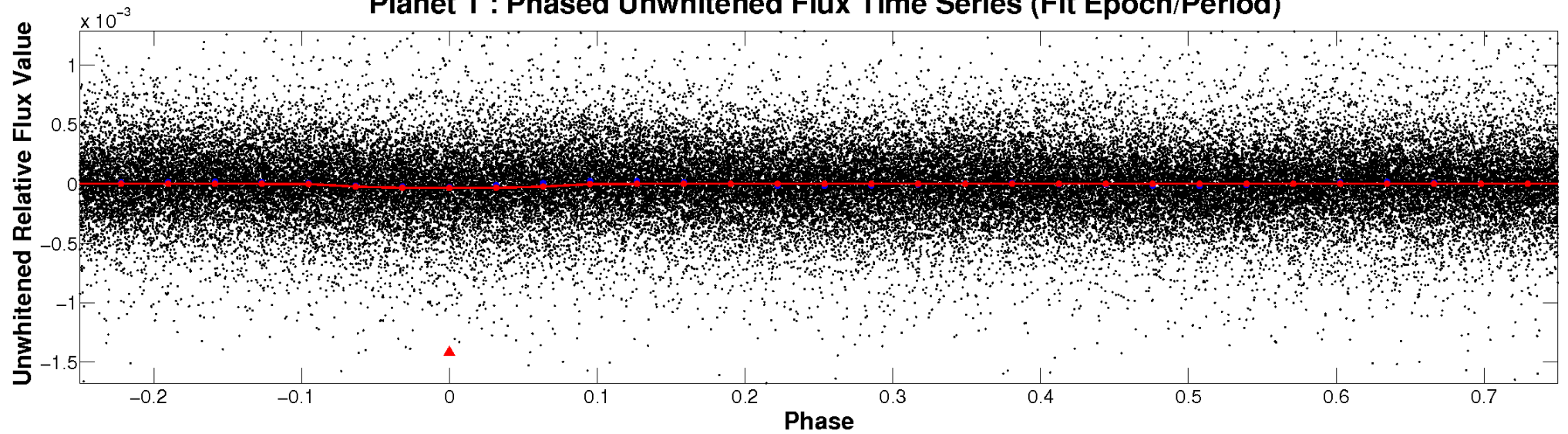
ALT Odd/Even

TCE 005031804-01

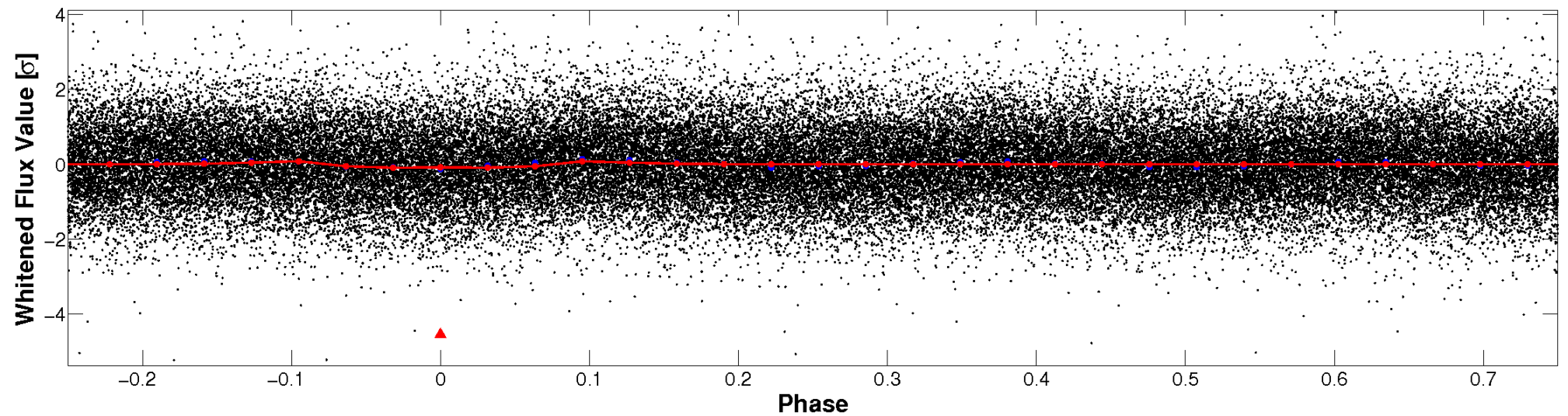


Non-Whitened Vs. Whitened Light Curve

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

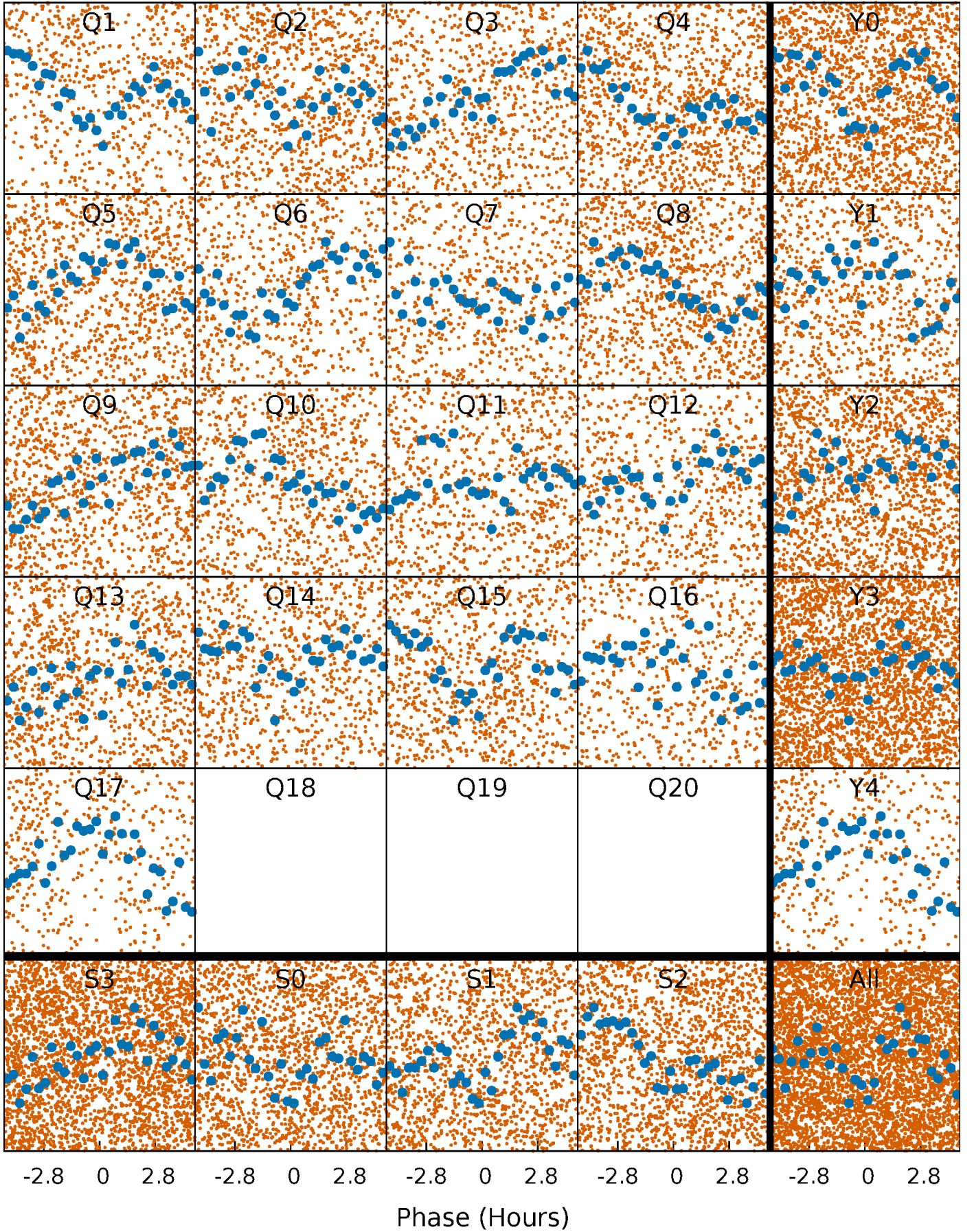


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



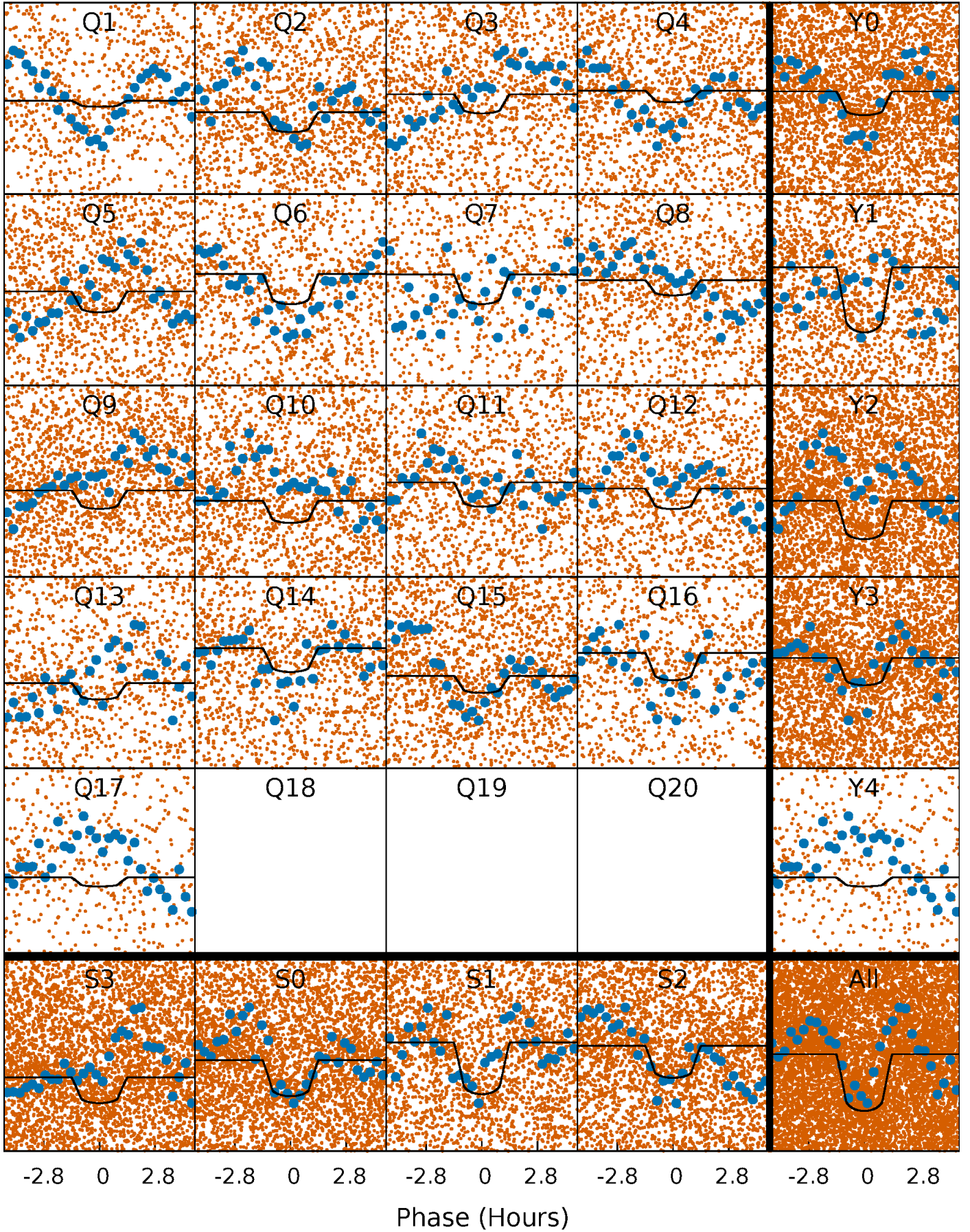
PDC Quarter-Phased Transit Curves

TCE 005031804-01 P= 0.644149 Days $T_0=131.980889$ (BKJD)



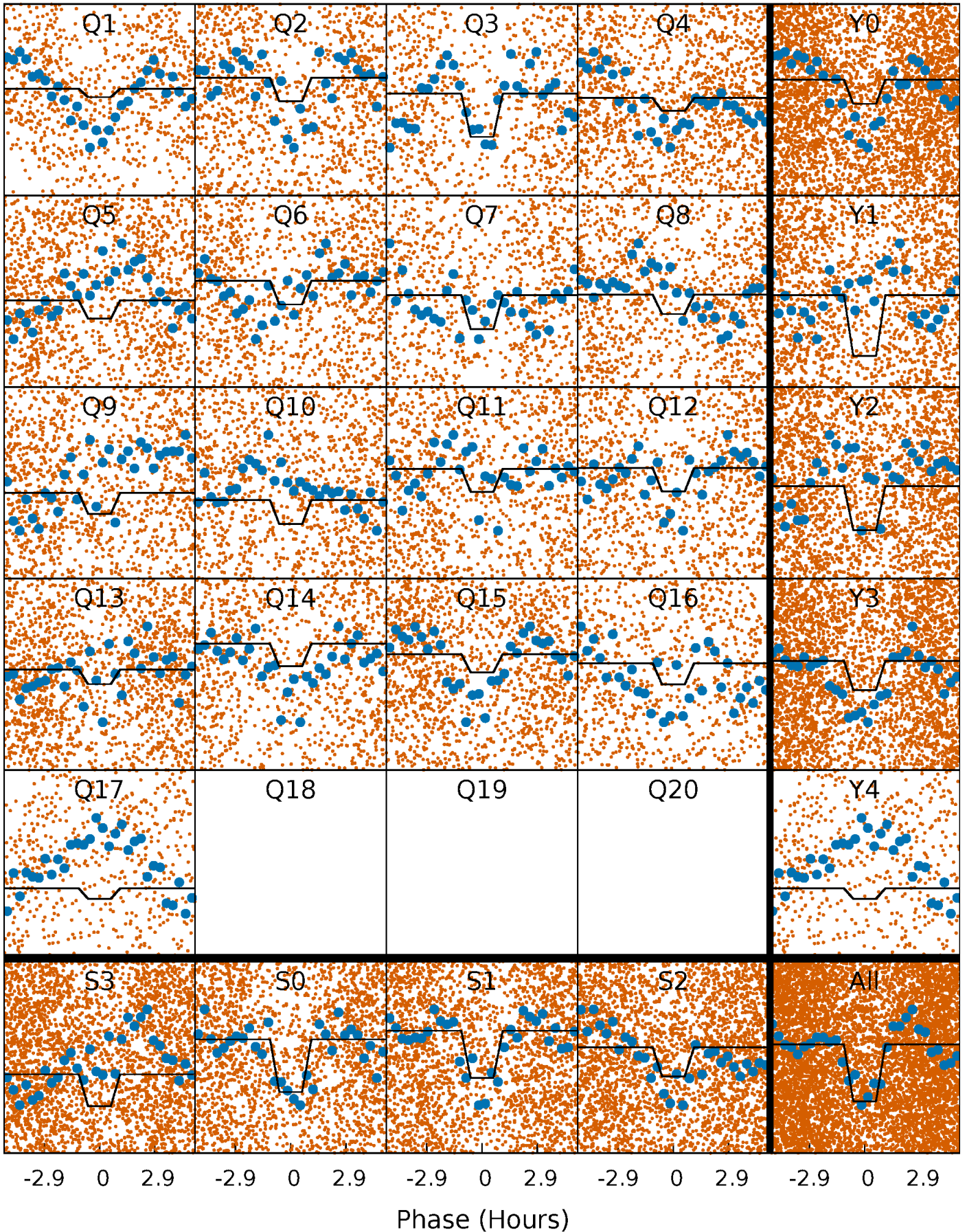
DV Quarter-Phased Transit Curves

TCE 005031804-01 P= 0.644149 Days $T_0=131.980889$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

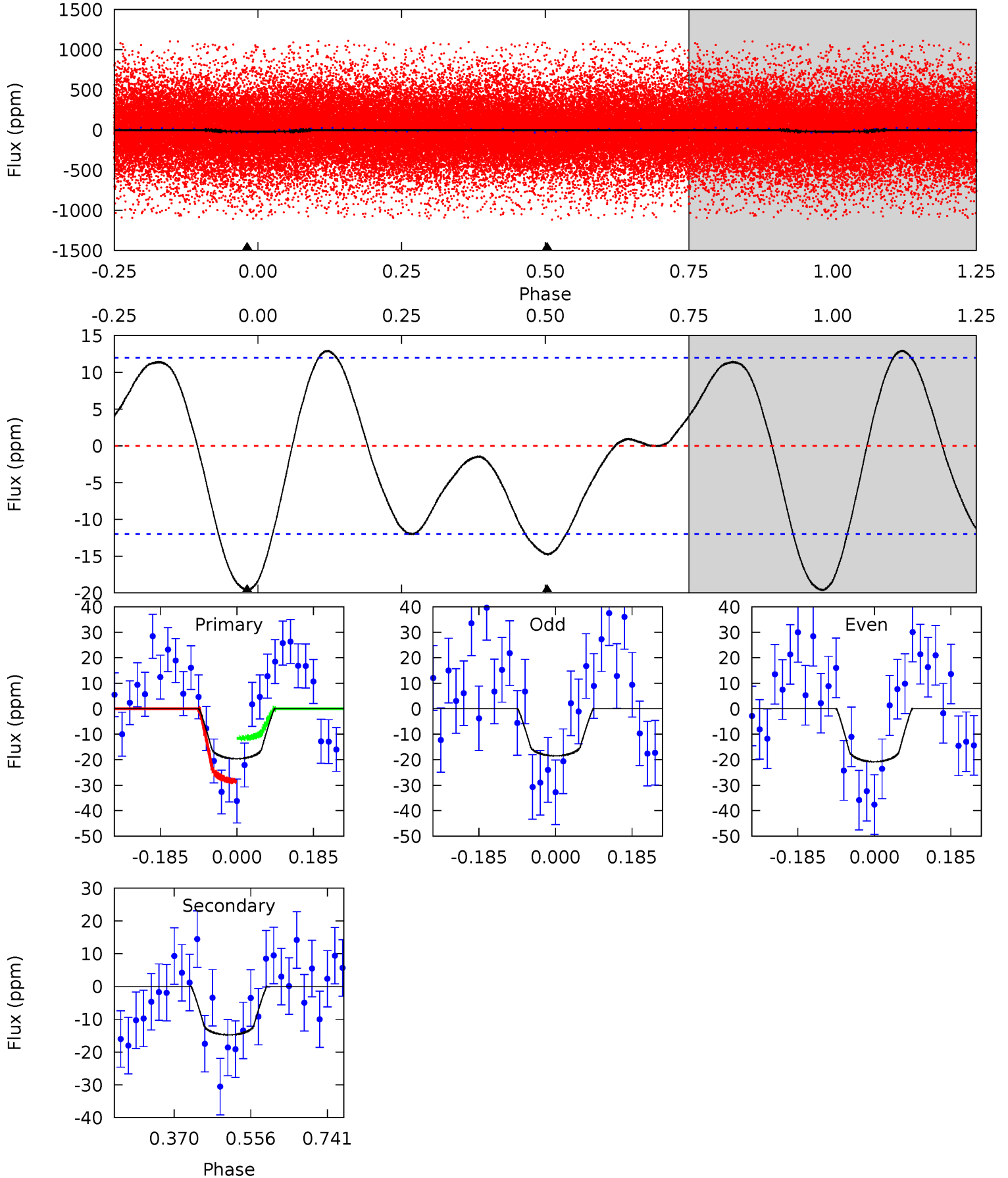
TCE 005031804-01 P= 0.644138 Days $T_0=131.979098$ (BKJD)



DV Model-Shift Uniqueness Test

005031804-01, P = 0.644149 Days, E = 131.336740 Days

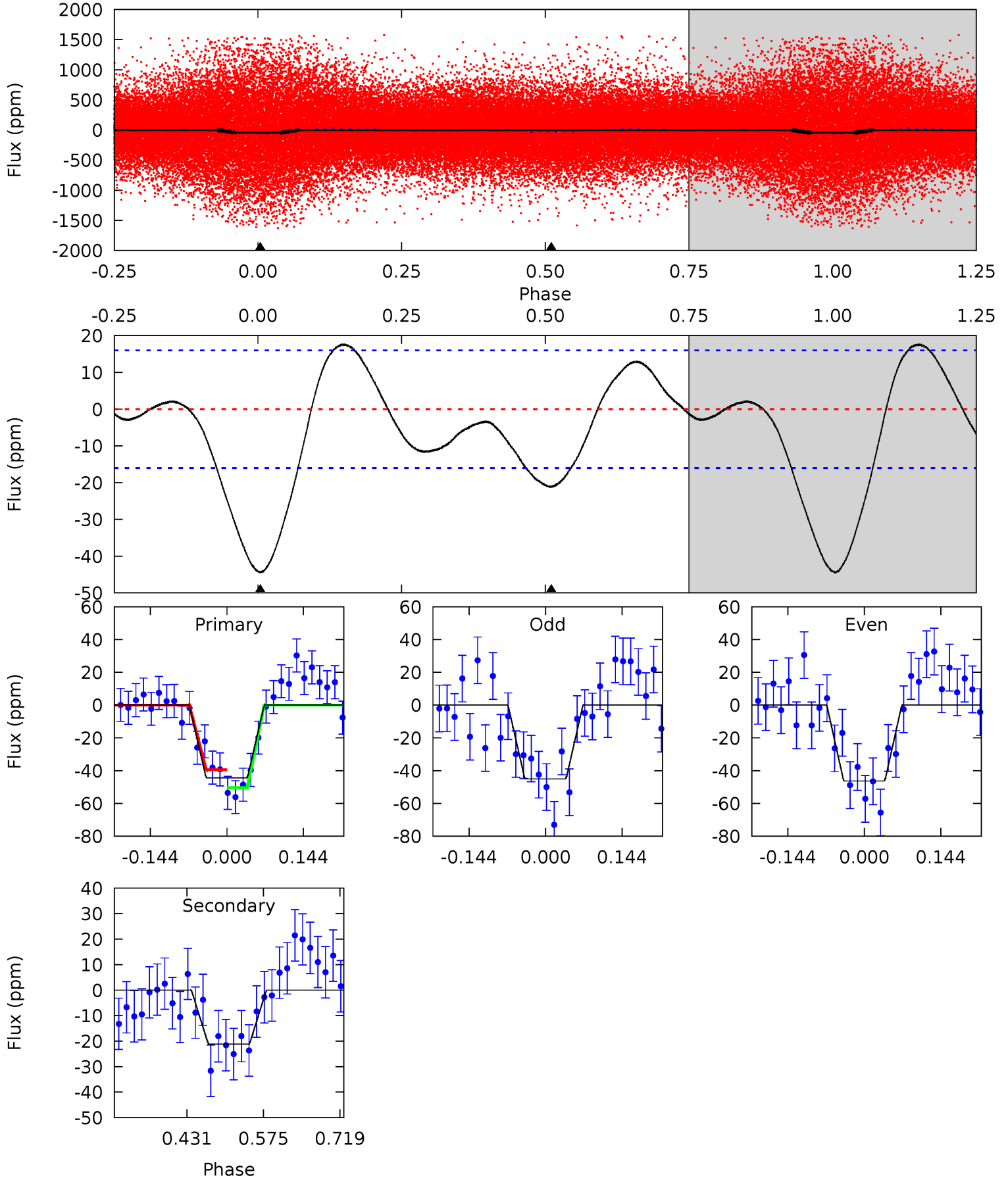
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.27	5.47	0	0	4.43	1.32	2.52	7.27	7.27	5.47	5.47	0.43	1.97	0.40	3.06



Alt Model-Shift Uniqueness Test

005031804-01, P = 0.644138 Days, E = 131.334960 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.5	5.94	0	0	4.49	1.46	2.32	12.5	12.5	5.94	5.94	0.17	0.98	0.28	1.55



Stellar Parameters For KIC 005031804

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6877^{+190}_{-262}	$4.028^{+0.293}_{-0.158}$	$-0.500^{+0.300}_{-0.300}$	$1.753^{+0.470}_{-0.574}$	$1.196^{+0.193}_{-0.158}$	$0.313^{+0.643}_{-0.131}$
	+3%/-4%	+7%/-4%	+60%/-60%	+27%/-33%	+16%/-13%	+206%/-42%
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 005031804-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-15 ± 3	$1.16^{+0.32}_{-0.29}$	4446^{+351}_{-402}	5110^{+759}_{-624}	$1.451^{+1.140}_{-0.590}$
Alt.	-21 ± 4	$1.22^{+0.36}_{-0.31}$	4440^{+354}_{-398}	5454^{+790}_{-638}	$1.853^{+1.451}_{-0.763}$

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 $A_{\text{obs}} \gg 1.0$

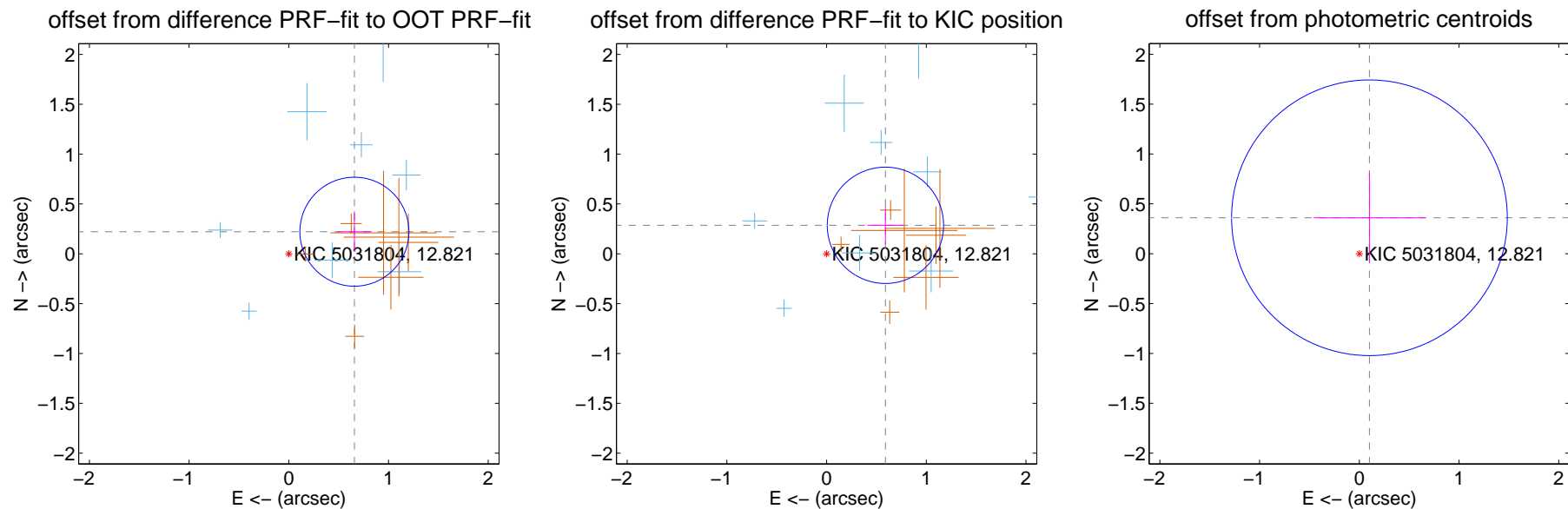
DV Centroid Data

Supplemental centroid analysis for 005031804-01. Kepler magnitude: 12.82. Transit SNR 10.21

There are 9 quarters with good PRF difference image offsets

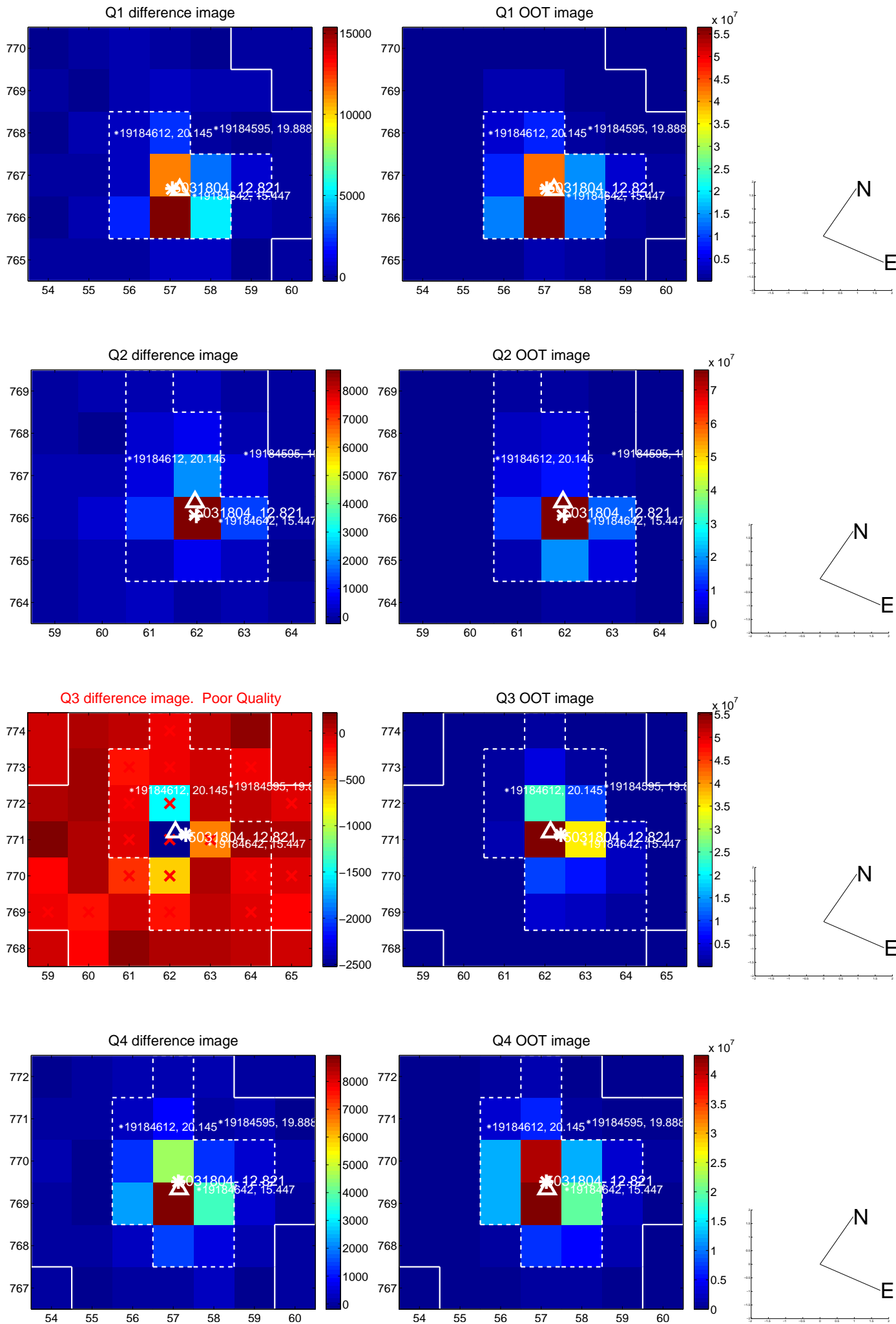
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.694 ± 0.182	3.81	-0.658 ± 0.173	0.221 ± 0.204
PRF-fit source offset from KIC position	0.656 ± 0.194	3.37	-0.590 ± 0.181	0.286 ± 0.191
photometric centroid source offset	0.37 ± 0.46	0.81	-0.10 ± 0.56	0.36 ± 0.45

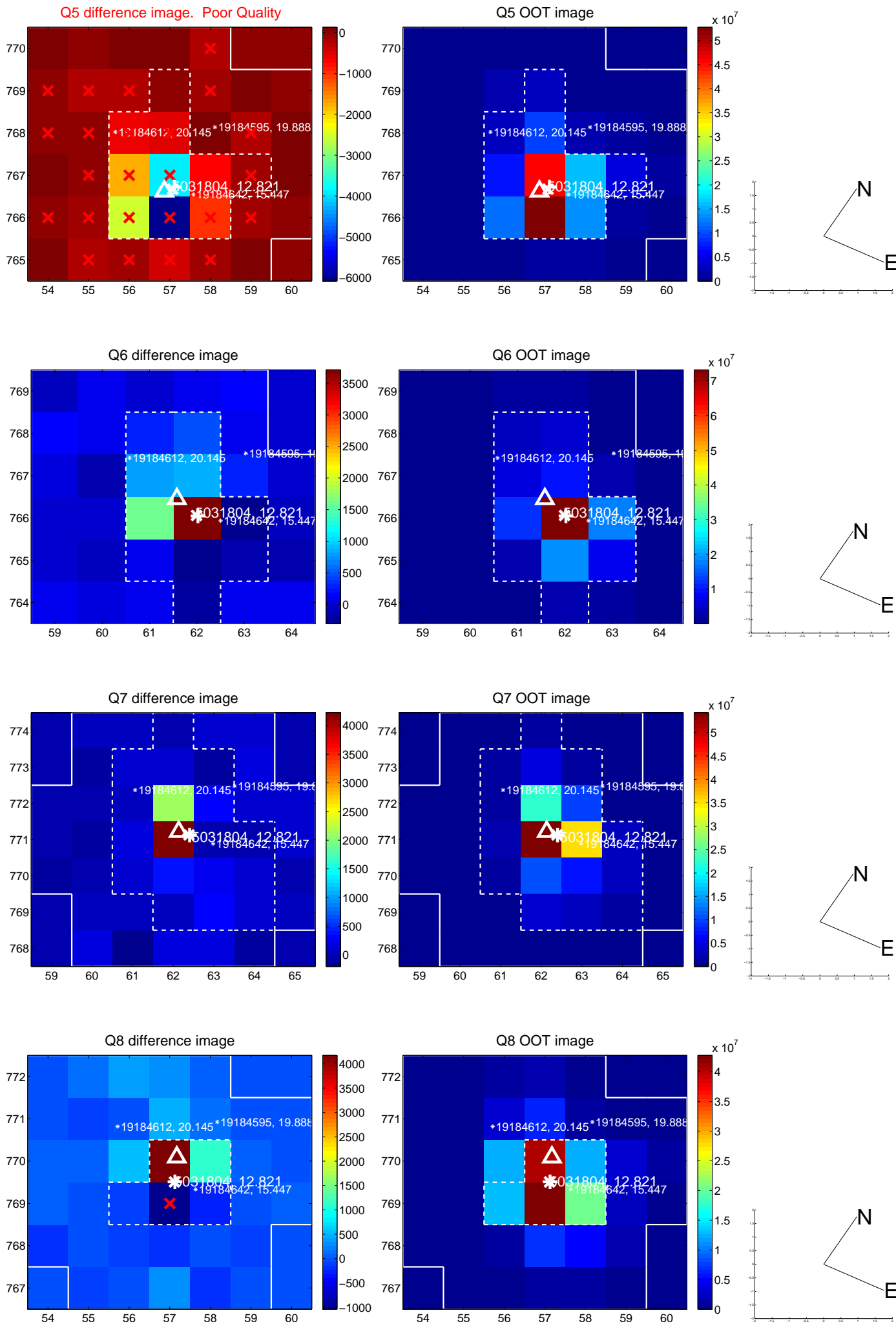


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

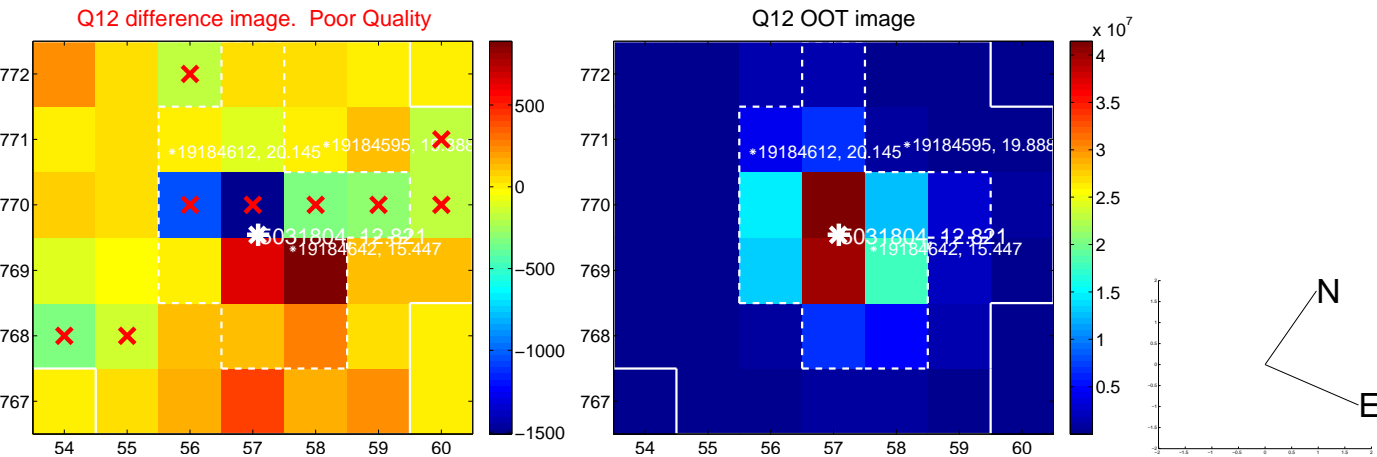
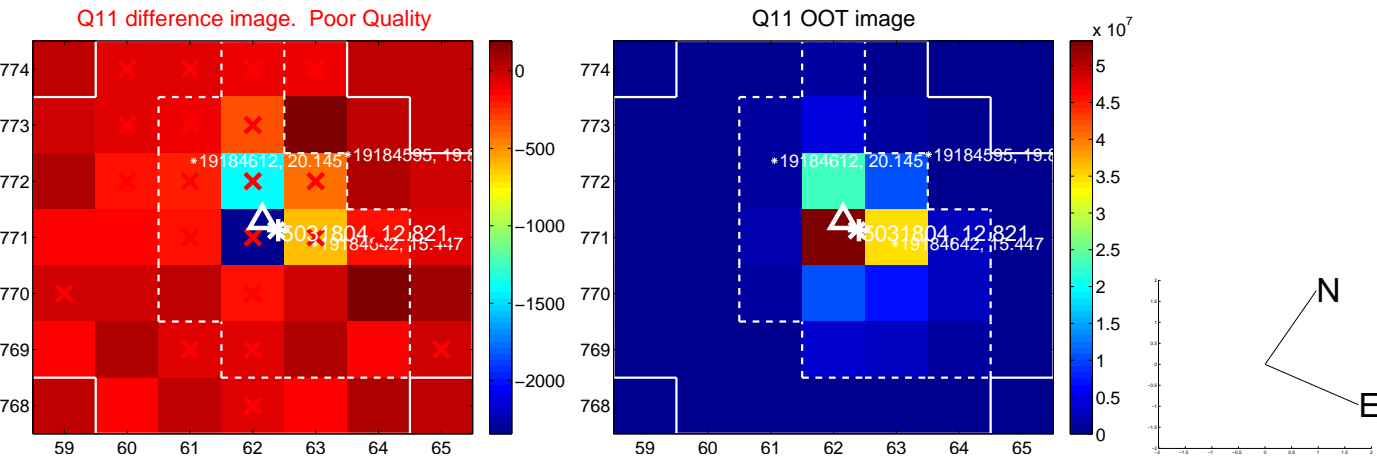
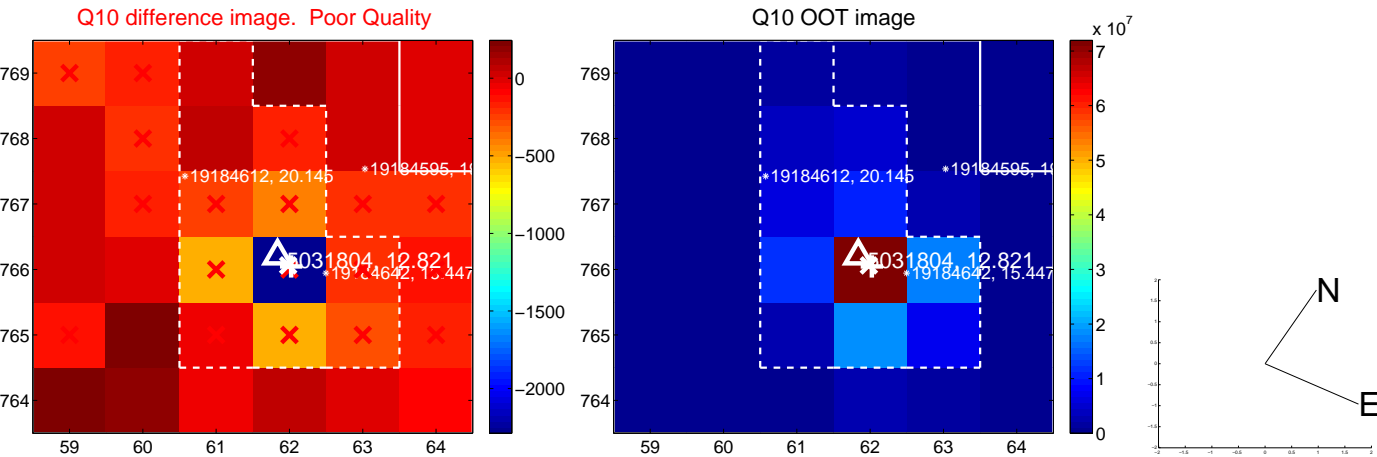
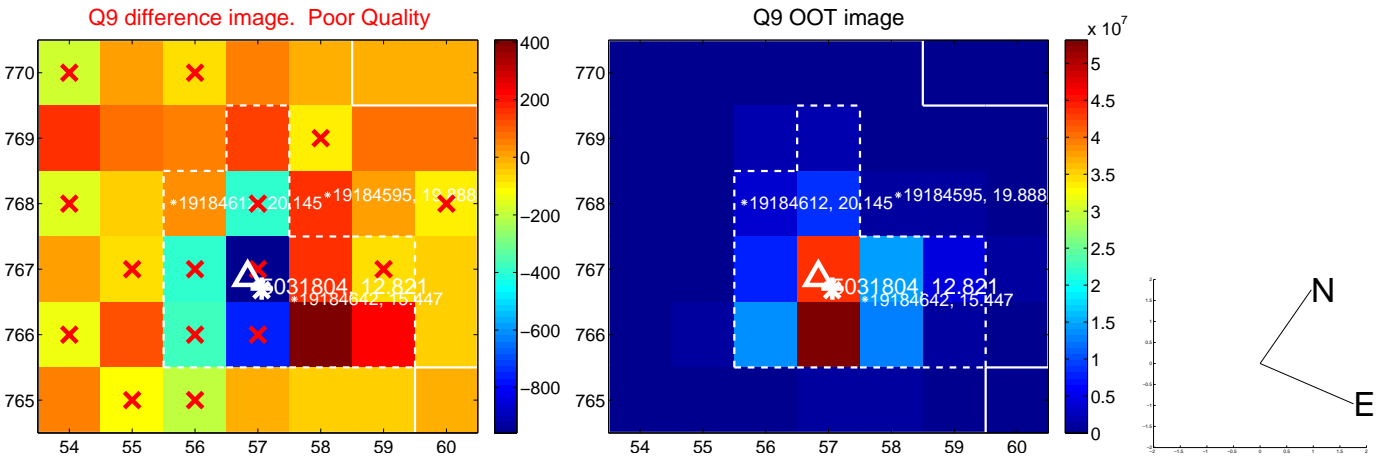
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



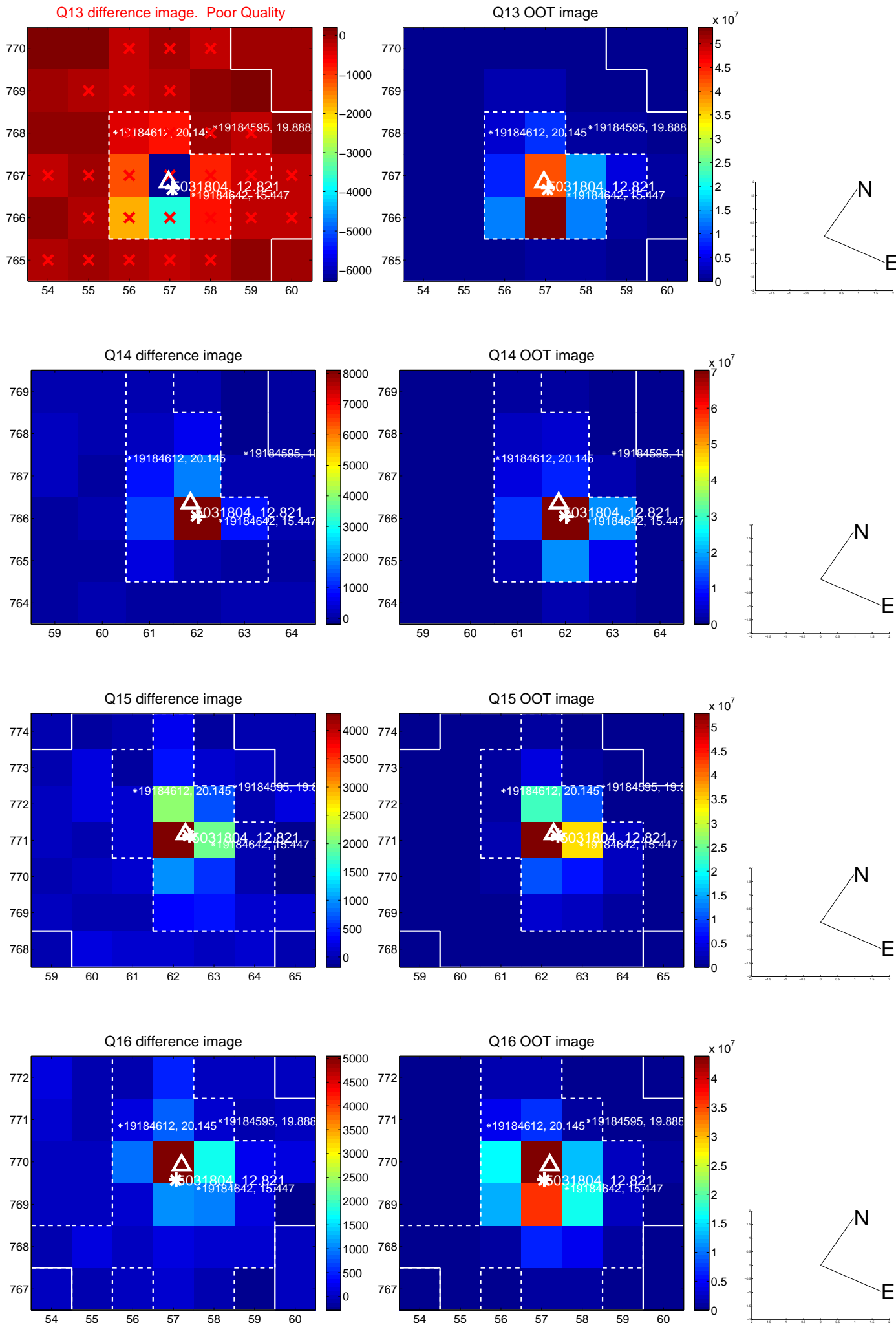
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



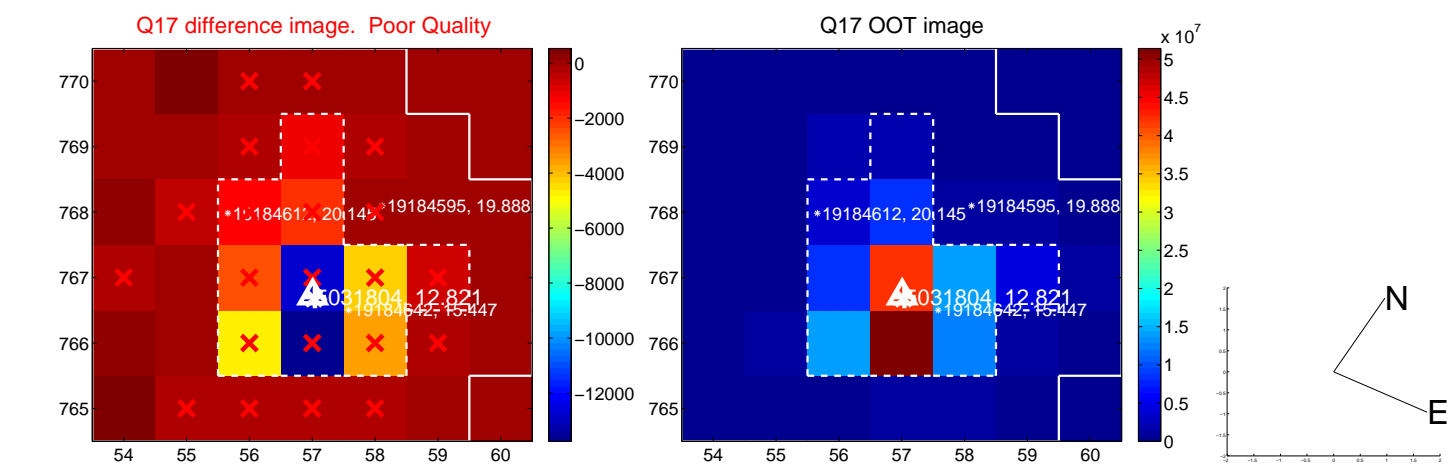
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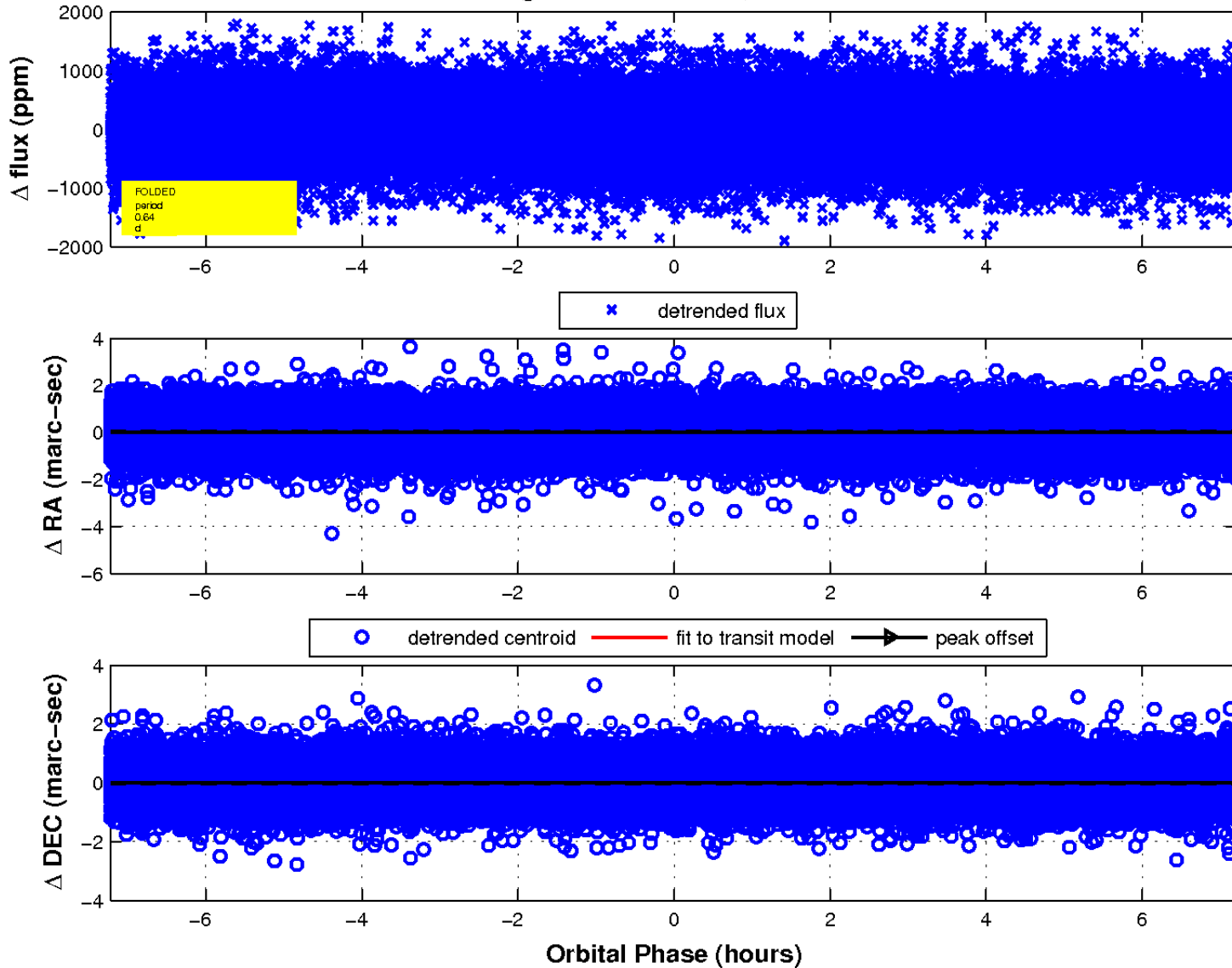
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

