

KIC 005309849

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})
005309849-01	OBS	No	1.035491	131.819256	31.4	2.602	10.1	8.3	2.28	9315	1.48	50681.27

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005309849-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_CROWDED

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

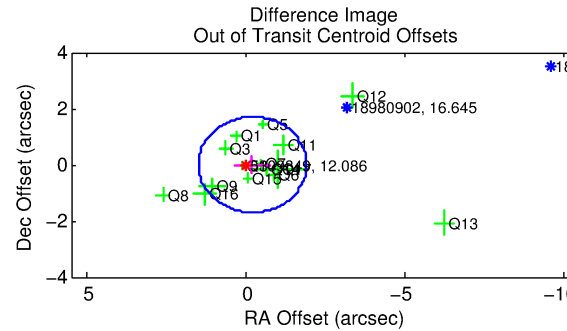
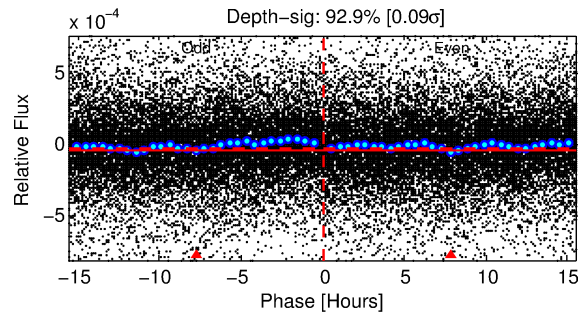
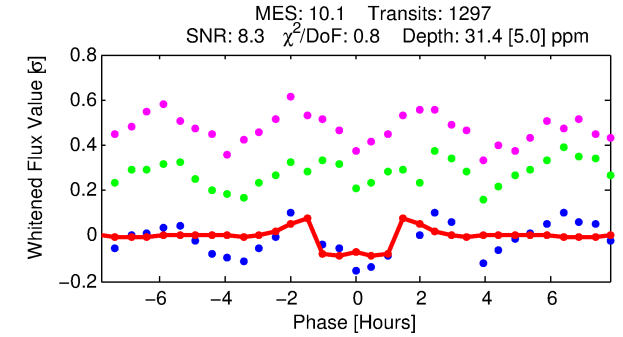
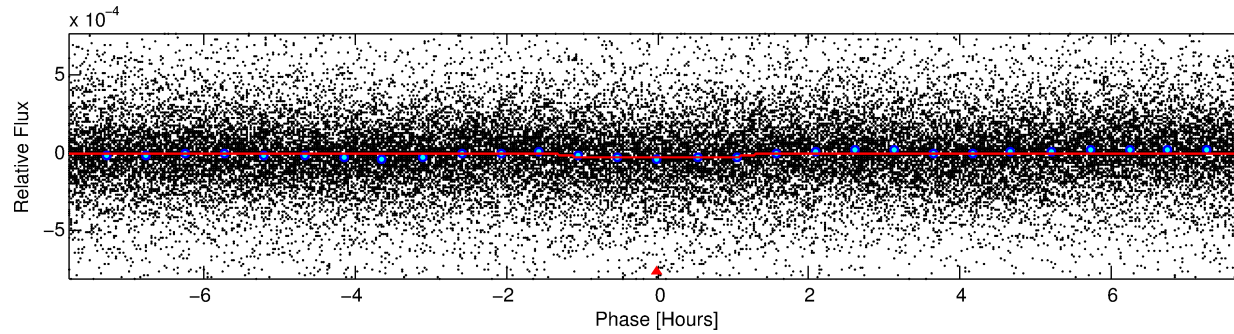
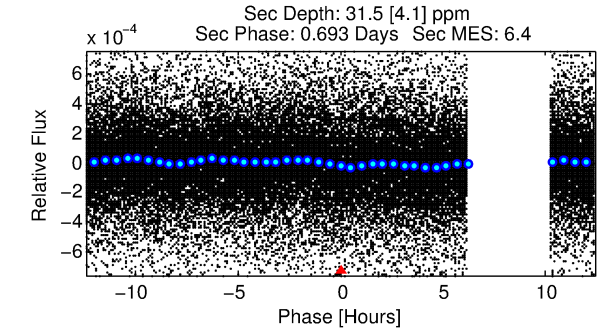
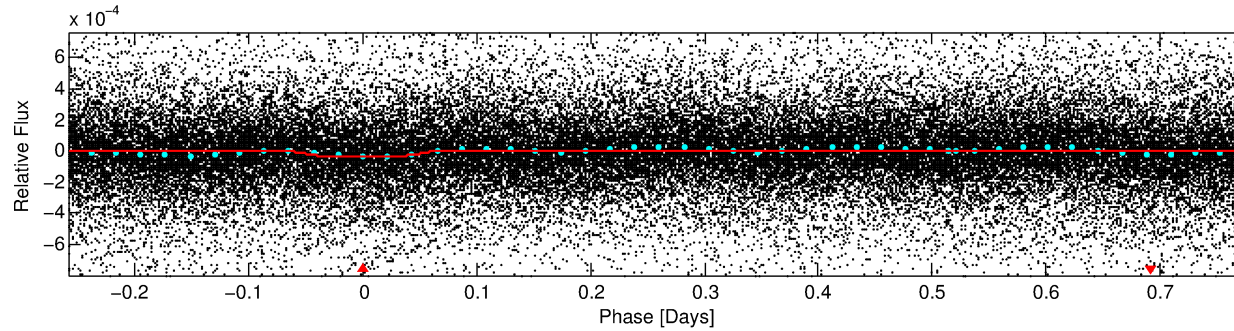
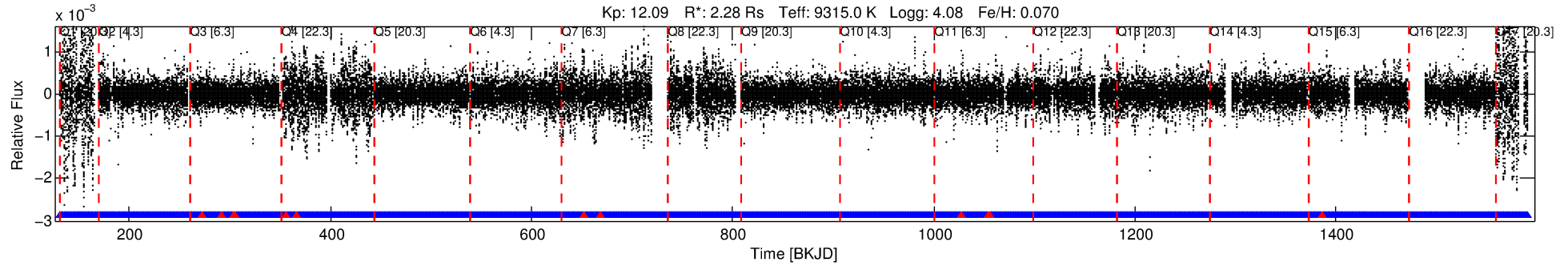
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005309849-01

No Significant Match Found

DV One-Page Summary

KIC: 5309849 Candidate: 1 of 1 Period: 1.035 d



DV Fit Results:

Period = 1.03549 [0.00001] d
Epoch = 131.8193 [0.0018] BKJD
Rp/R* = 0.0059 [0.0009]
a/R* = 1.63 [0.94]
b = 0.91 [0.19]
Seff = 50681.27 [22649.28]
Teq = 3826 [427] K
Rp = 1.48 [0.61] Re
a = 0.0263 [0.0079] AU
Ag = 5.49 [2.87] [1.57σ]
Teffp = 9056 [830] K [5.60σ]

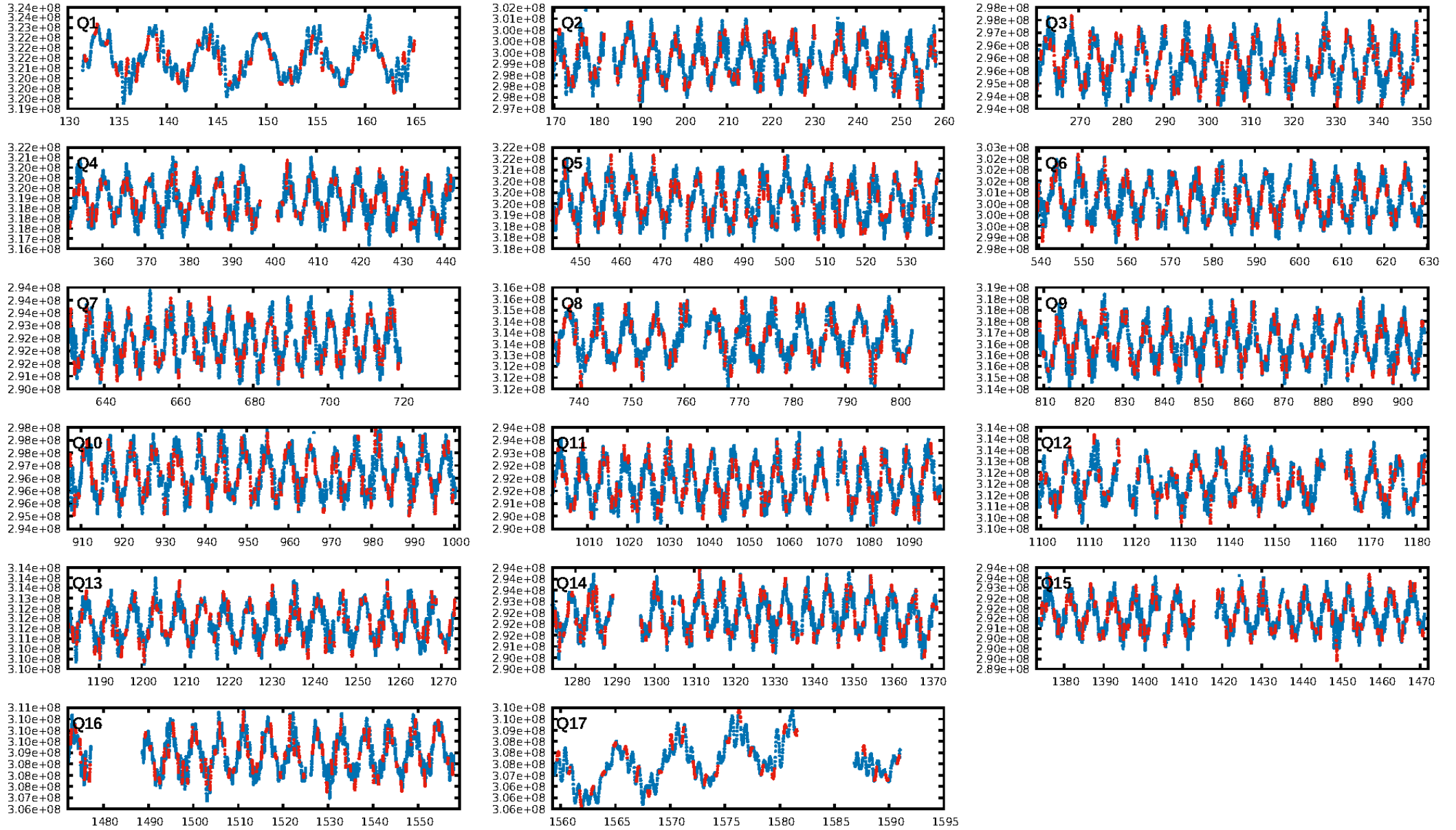
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.21e-23
RollingBand-fgt: 0.99 [1226/1238]
GhostDiagnostic-chr: 1.377
Centroid-sig: 80.3%
Centroid-so: 0.121 arcsec [0.18σ]
OotOffset-rm: 0.203 arcsec [0.36σ]
KicOffset-rm: 0.403 arcsec [0.77σ]
OotOffset-st: 3/4/3/5 [15]
KicOffset-st: 3/4/3/5 [15]
DiffImageQuality-fgm: 0.73 [11/15]
DiffImageOverlap-fno: 1.00 [17/17]

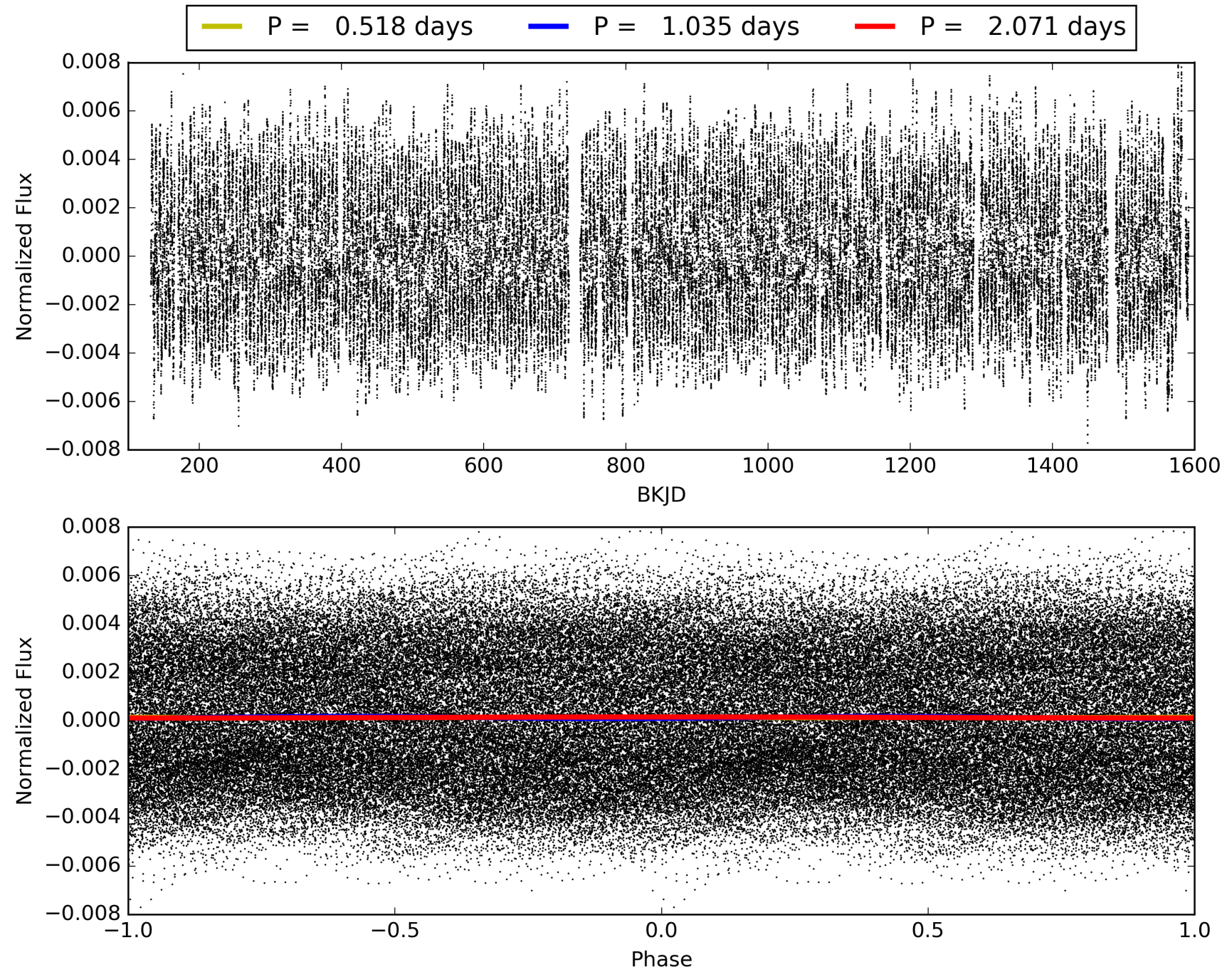
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 13:34:35 Z

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

TCE 005309849-01, PDC Light Curves

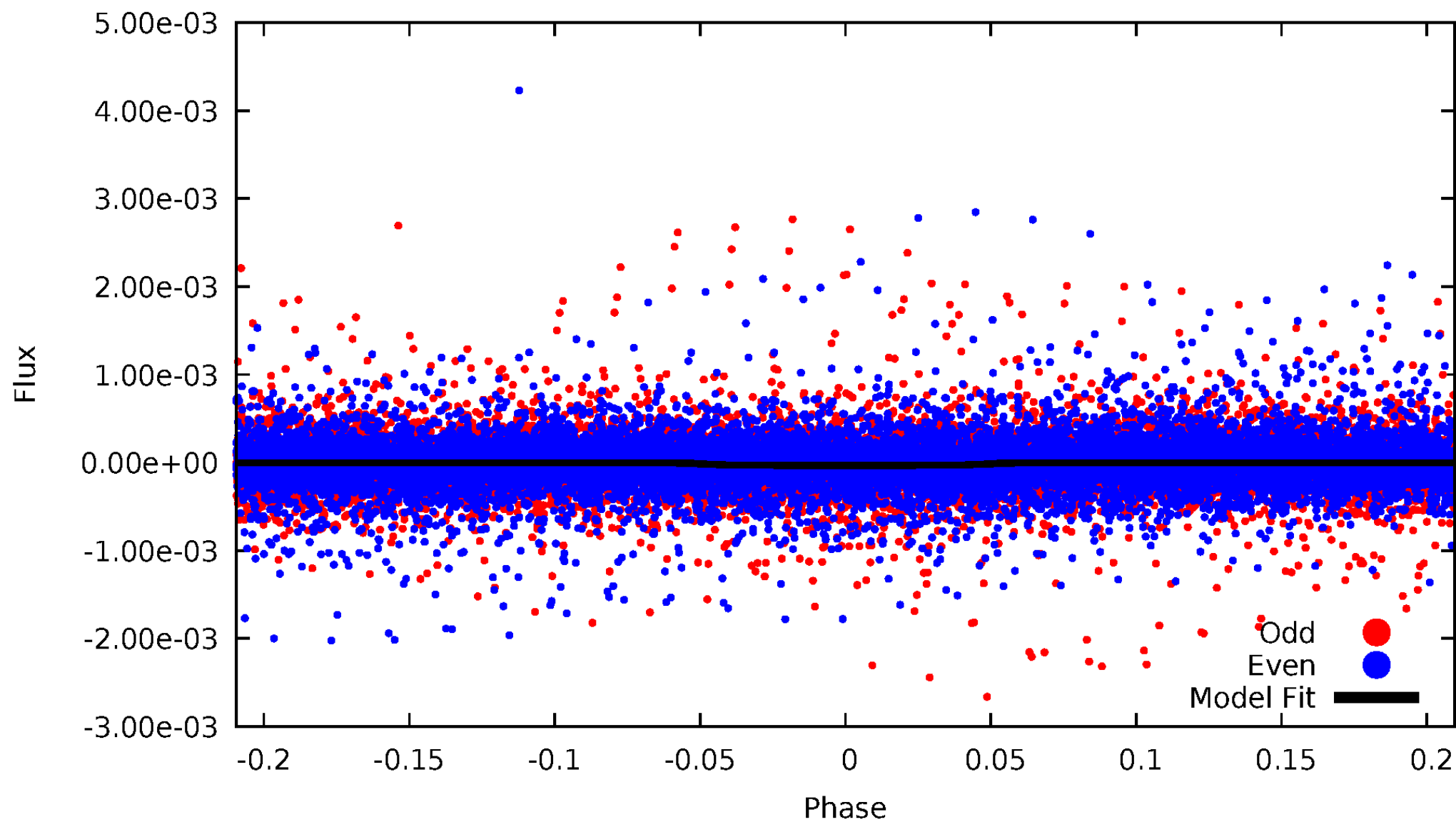


TCE 005309849-01



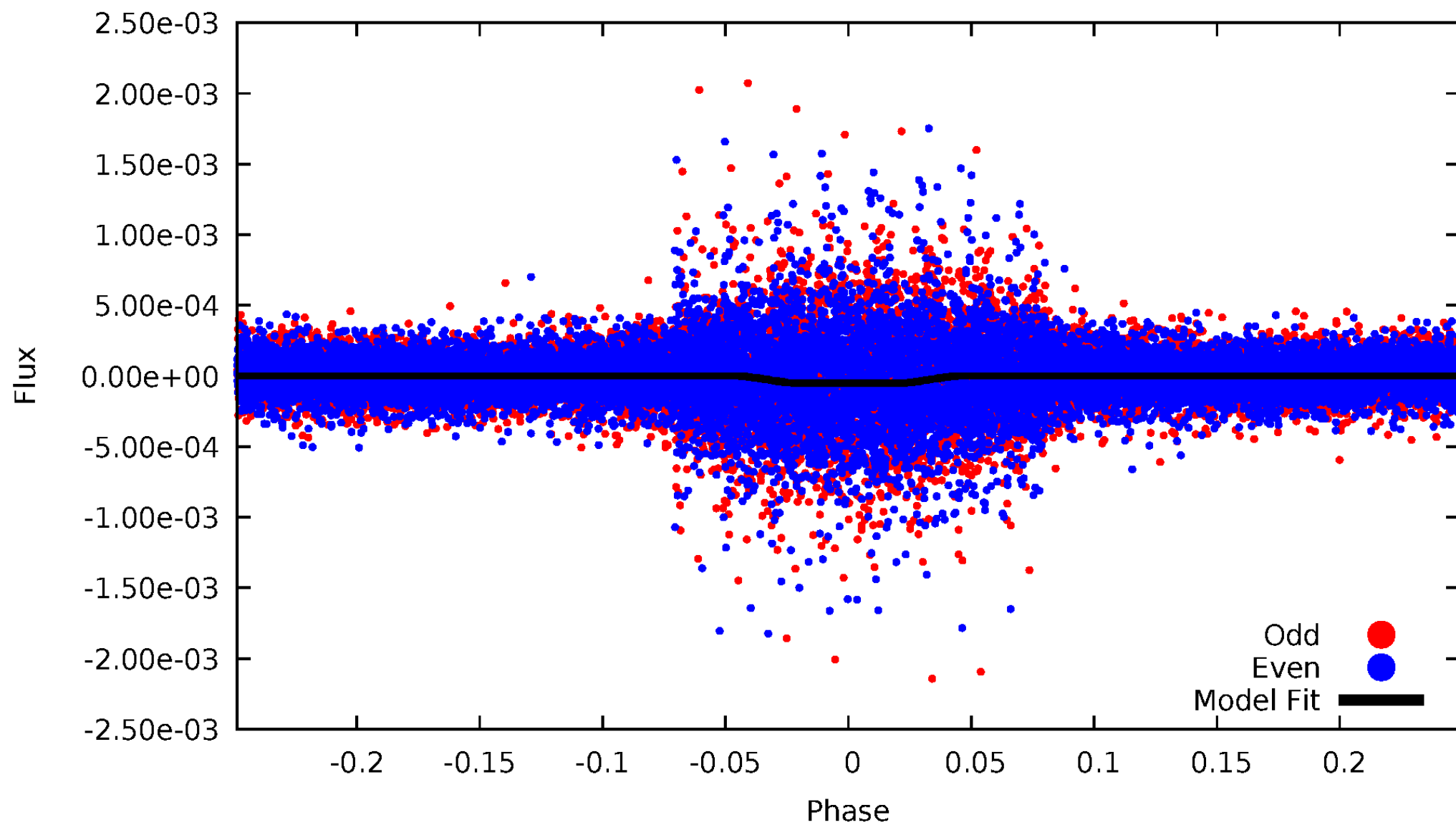
DV Odd/Even

TCE 005309849-01

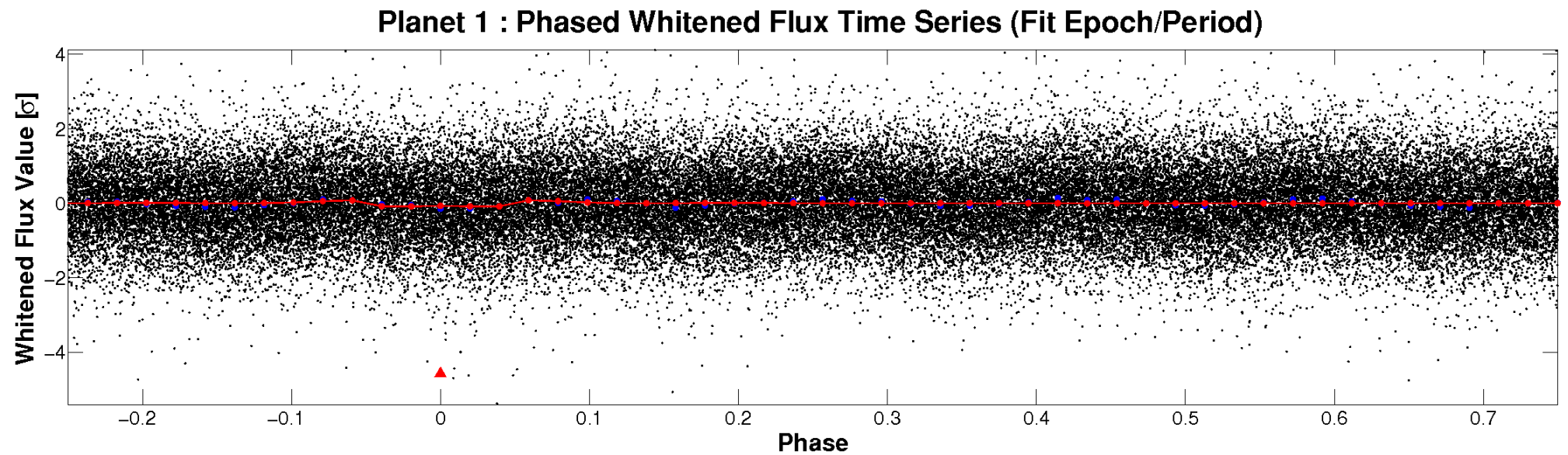
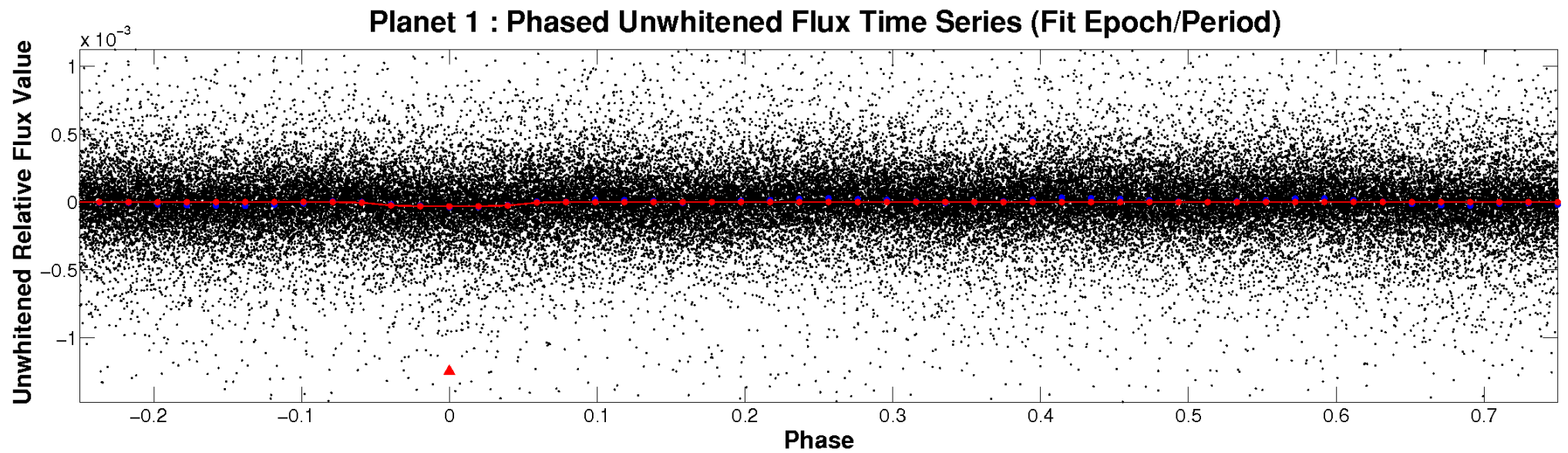


ALT Odd/Even

TCE 005309849-01

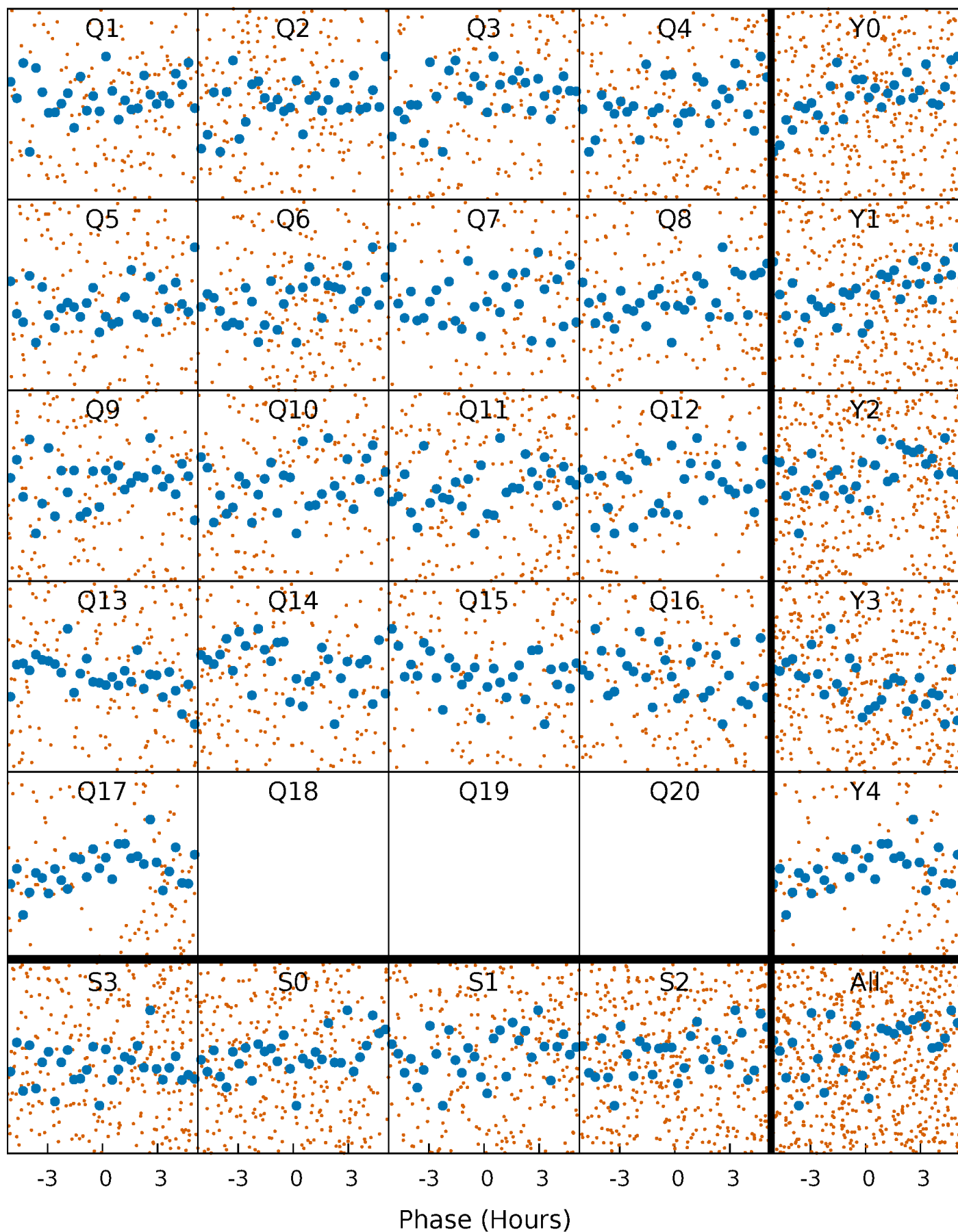


Non-Whitened Vs. Whitened Light Curve



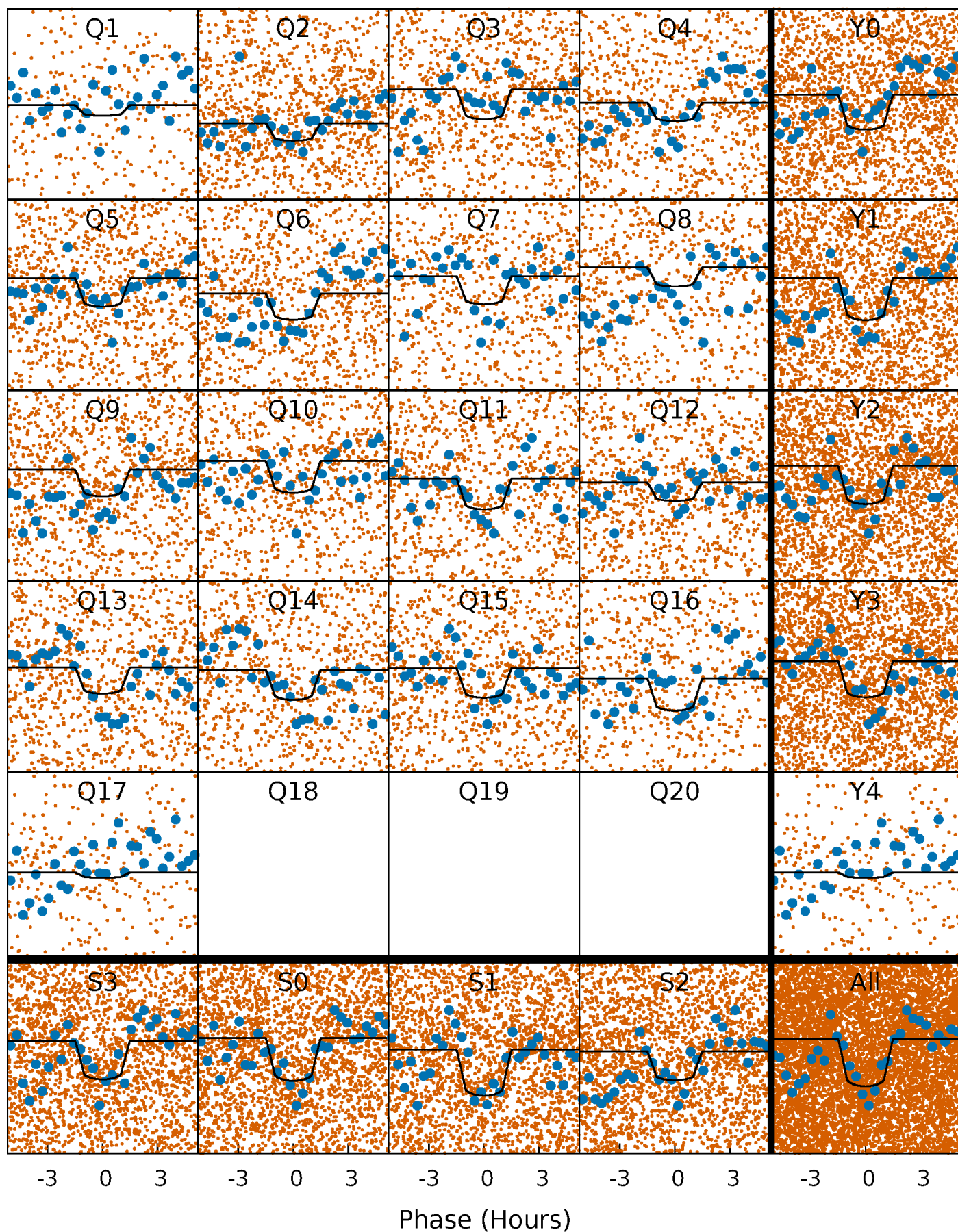
PDC Quarter-Phased Transit Curves

TCE 005309849-01 P= 1.035491 Days $T_0=131.819256$ (BKJD)



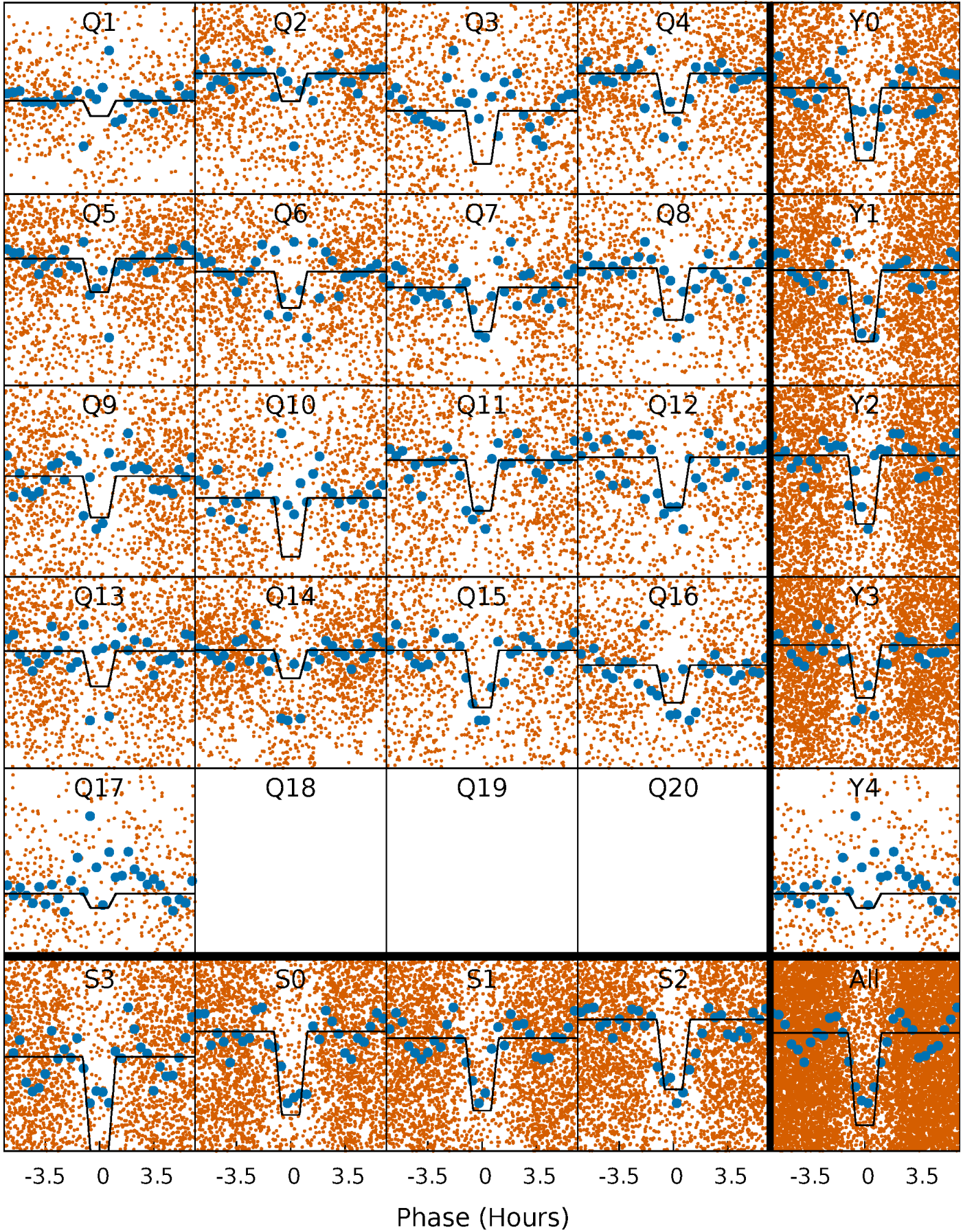
DV Quarter-Phased Transit Curves

TCE 005309849-01 P= 1.035491 Days $T_0=131.819256$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

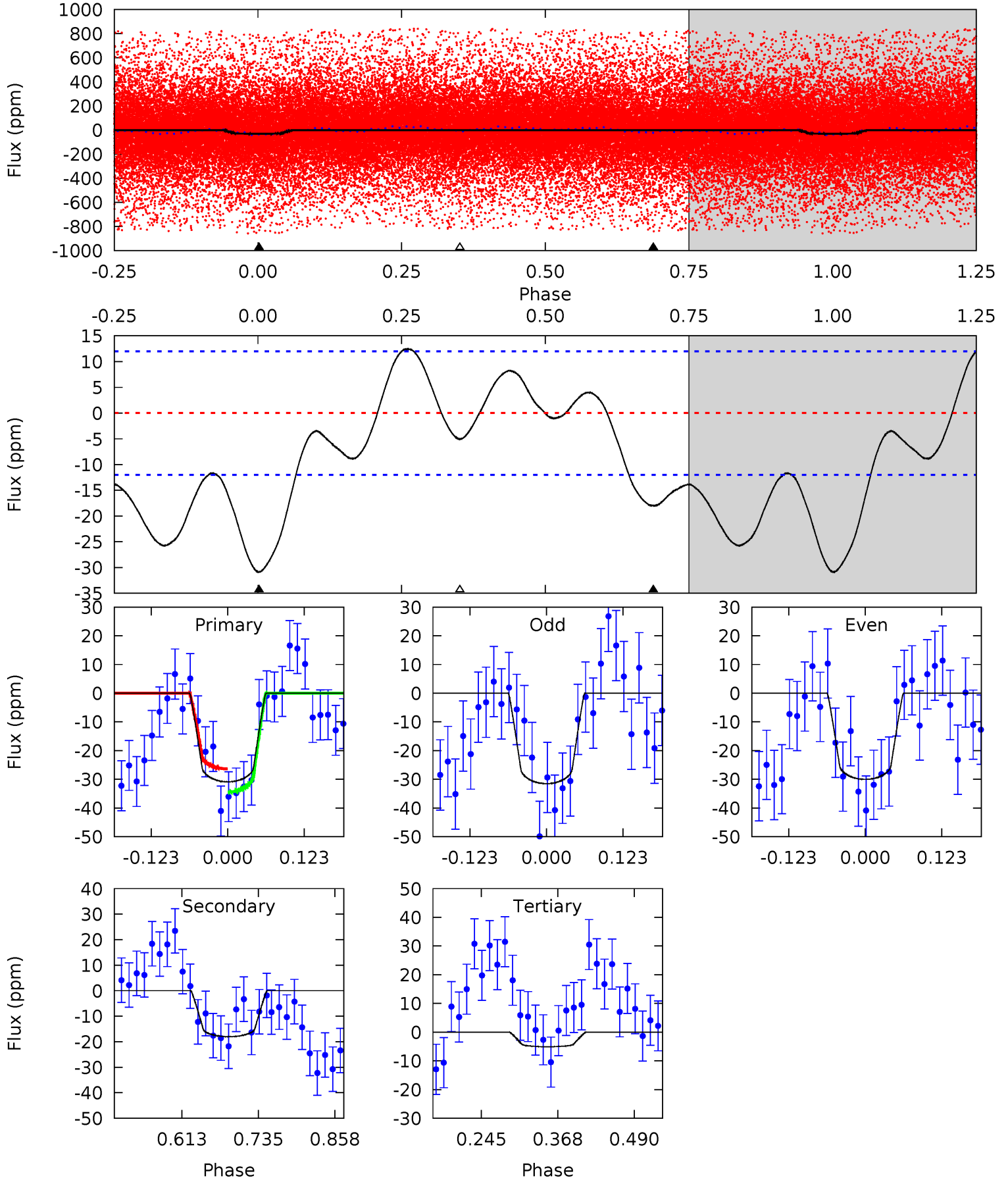
TCE 005309849-01 P= 1.035511 Days $T_0=131.813447$ (BKJD)



DV Model-Shift Uniqueness Test

005309849-01, P = 1.035491 Days, E = 130.783765 Days

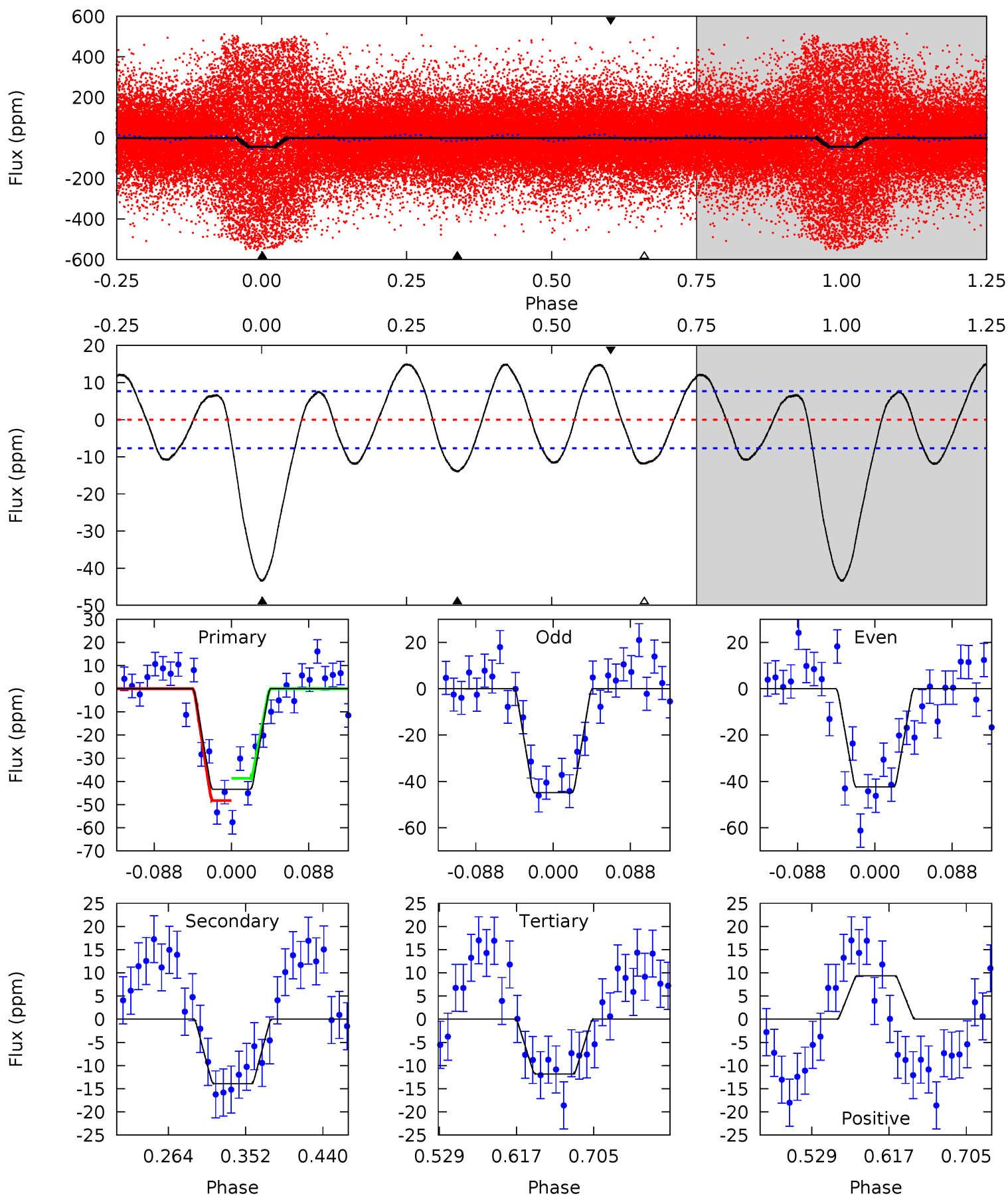
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.6	6.79	1.92	0	4.52	1.54	3.93	9.73	11.6	4.88	6.79	0.28	1.60	0.29	1.52



Alt Model-Shift Uniqueness Test

005309849-01, P = 1.035511 Days, E = 130.777936 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.9	8.31	7.05	5.58	4.59	1.71	5.07	18.8	20.3	1.26	2.74	0.72	0.81	0.26	2.88



Stellar Parameters For KIC 005309849

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	9315^{+260}_{-409}	$4.077^{+0.140}_{-0.210}$	$0.070^{+0.150}_{-0.650}$	$2.281^{+0.872}_{-0.509}$	$2.266^{+0.389}_{-0.583}$	$0.269^{+0.207}_{-0.157}$
	+3%/-4%	+3%/-5%	+214%/-929%	+38%/-22%	+17%/-26%	+77%/-58%
Source	KIC0	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 005309849-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-18 ± 3	$1.49^{+0.35}_{-0.31}$	5363^{+433}_{-374}	7230^{+871}_{-689}	$3.023^{+1.581}_{-1.081}$
Alt.	-14 ± 2	$1.78^{+0.40}_{-0.33}$	5364^{+484}_{-388}	6007^{+528}_{-489}	$1.627^{+0.779}_{-0.545}$

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 $A_{obs} \gg 1.0$

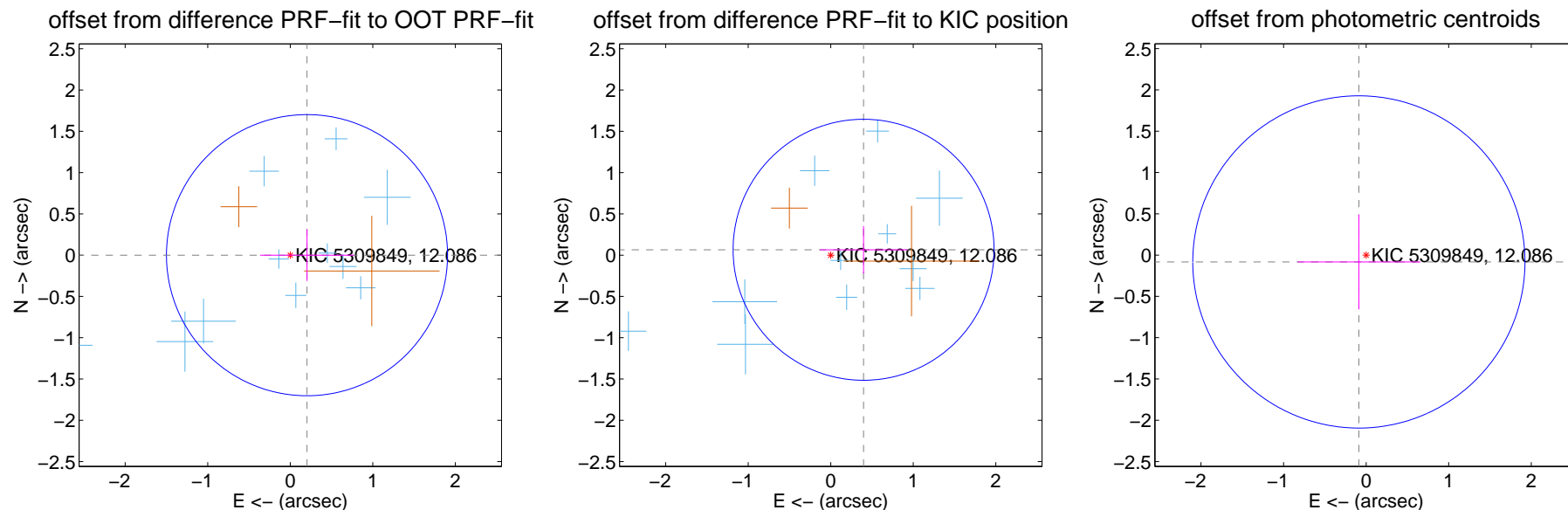
DV Centroid Data

Supplemental centroid analysis for 005309849-01. Kepler magnitude: 12.09. Transit SNR 8.33

There are 11 quarters with good PRF difference image offsets

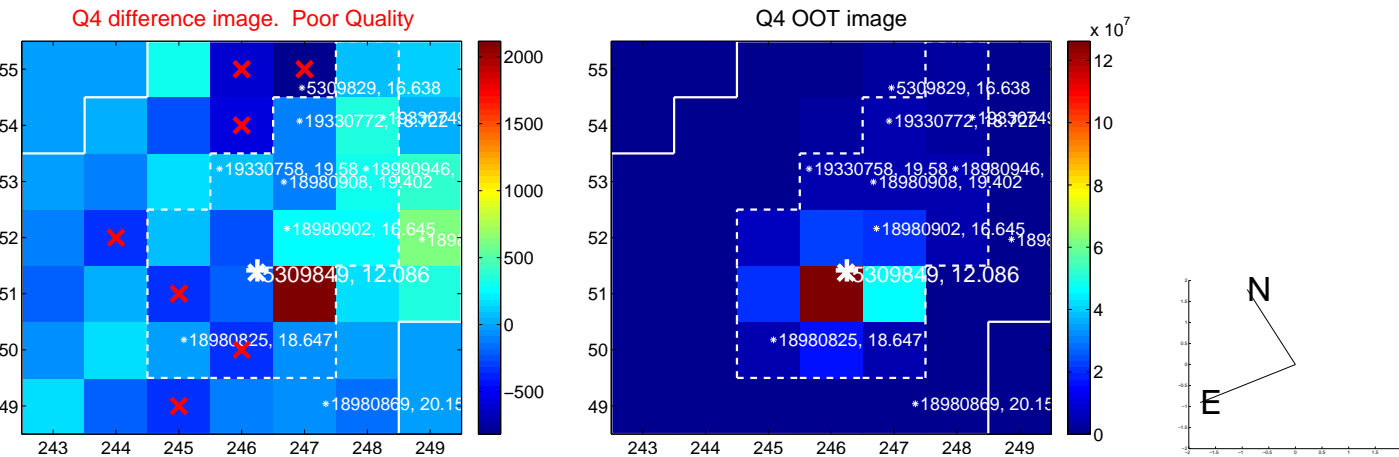
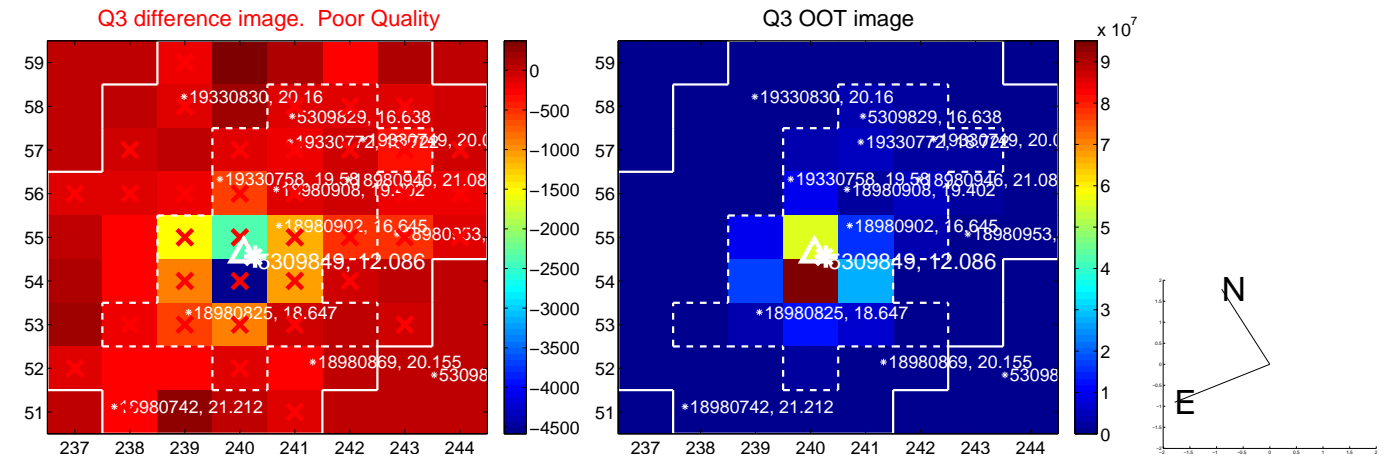
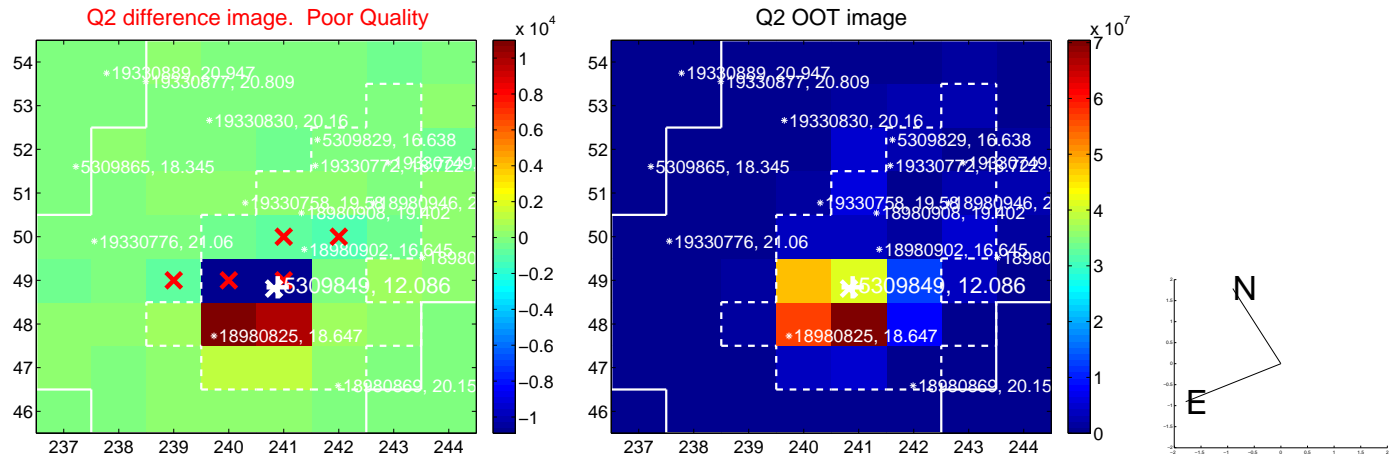
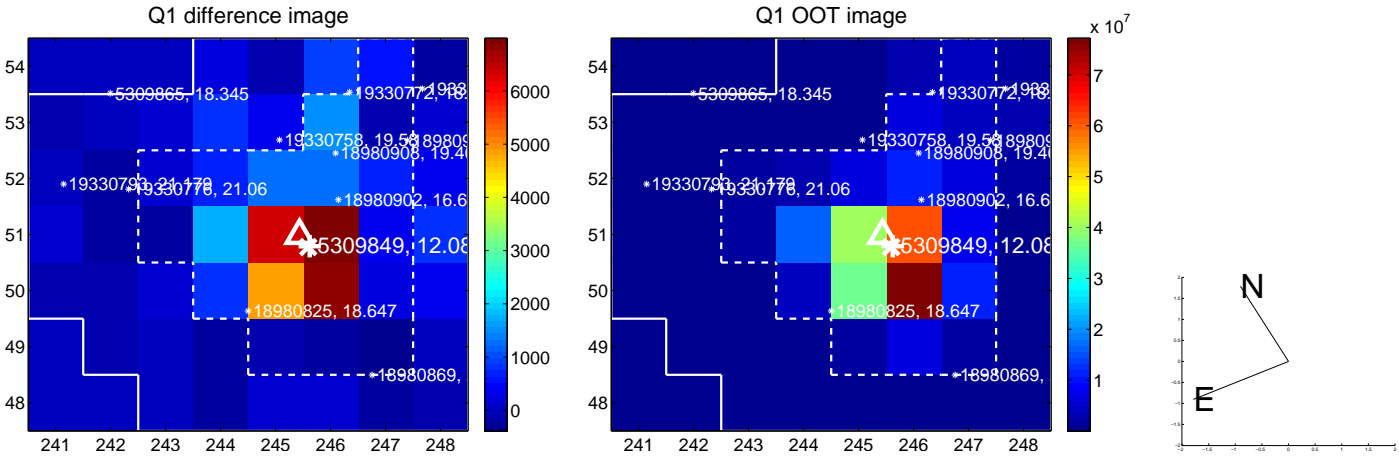
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.203 ± 0.567	0.36	-0.203 ± 0.567	-0.000 ± 0.313
PRF-fit source offset from KIC position	0.403 ± 0.527	0.77	-0.398 ± 0.529	0.065 ± 0.287
photometric centroid source offset	0.12 ± 0.67	0.18	0.09 ± 0.75	-0.08 ± 0.58

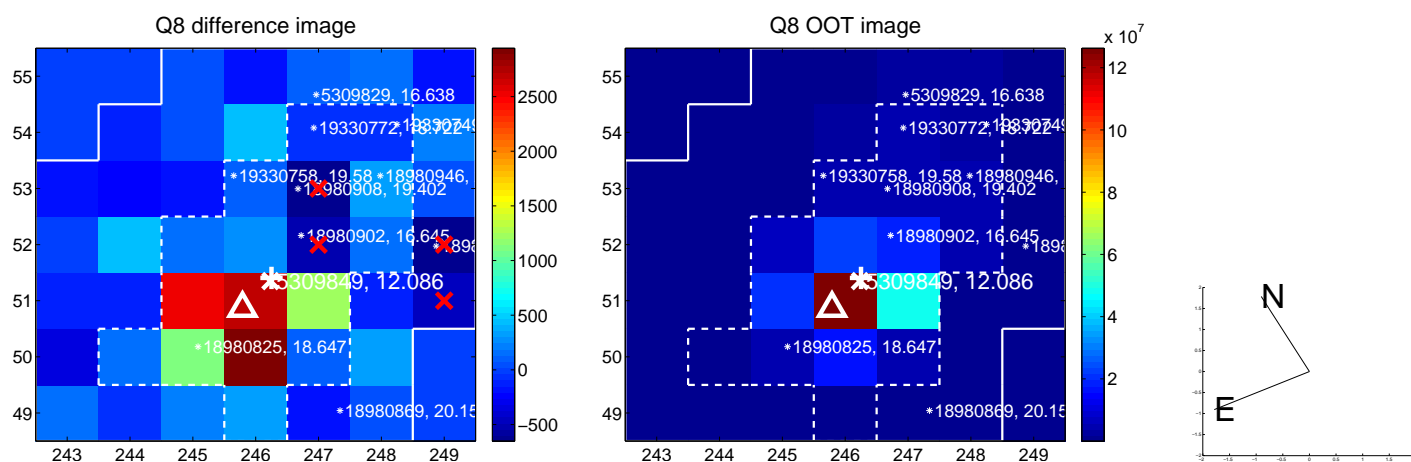
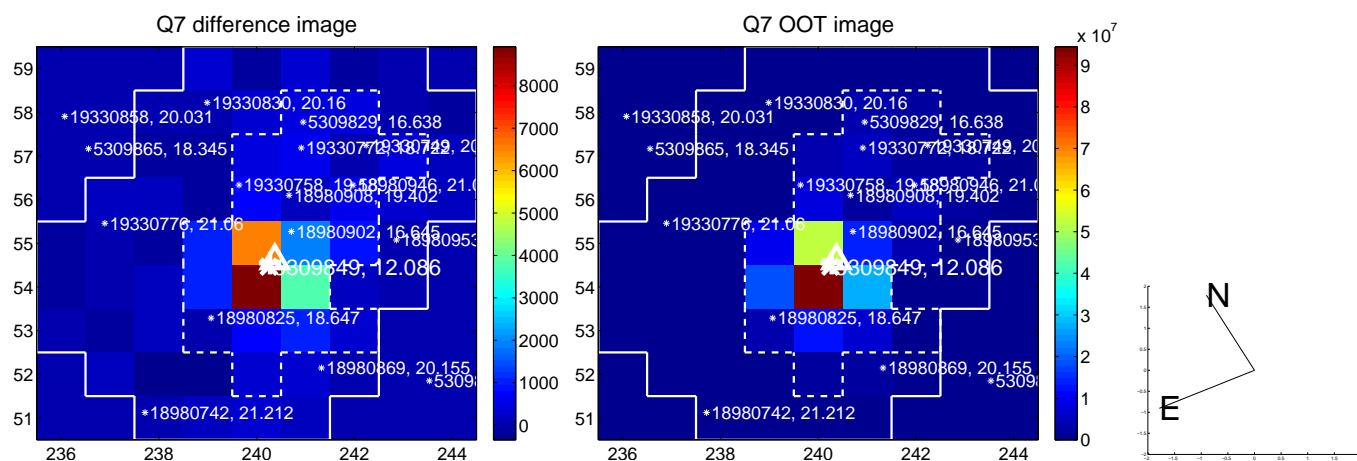
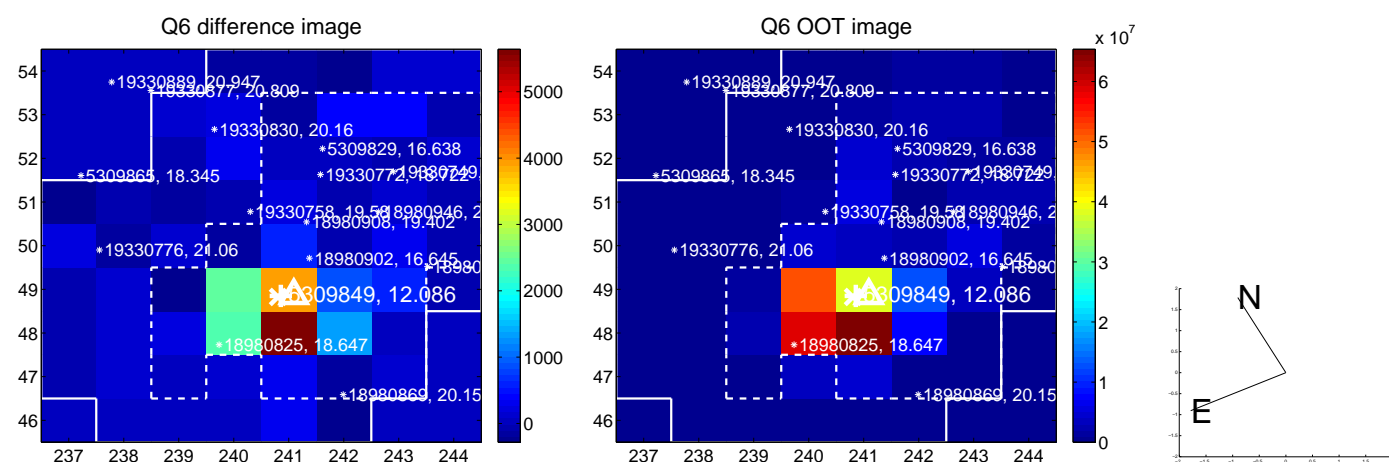
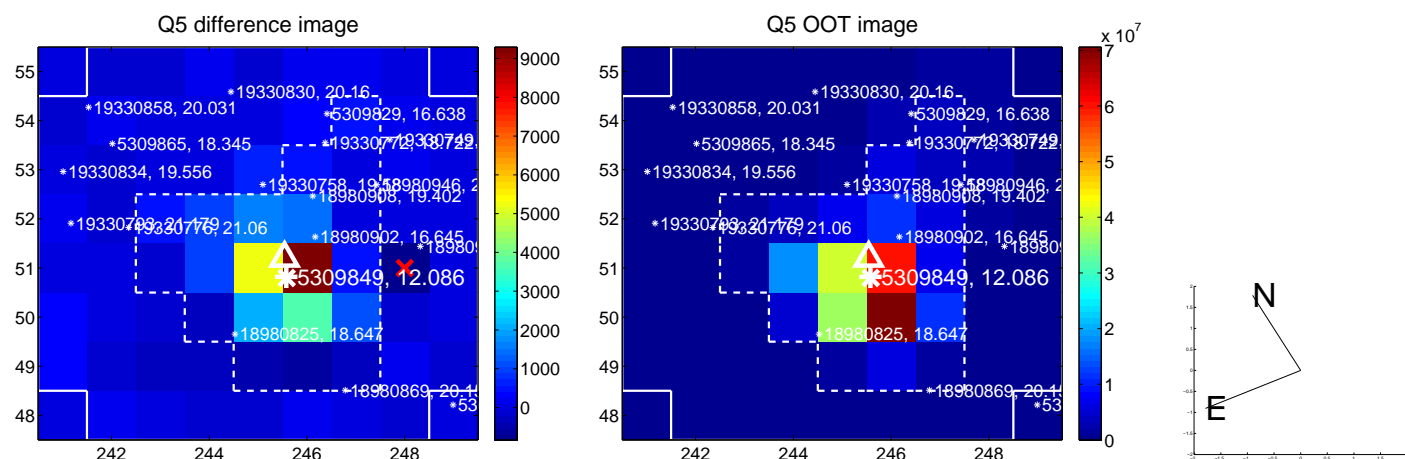


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

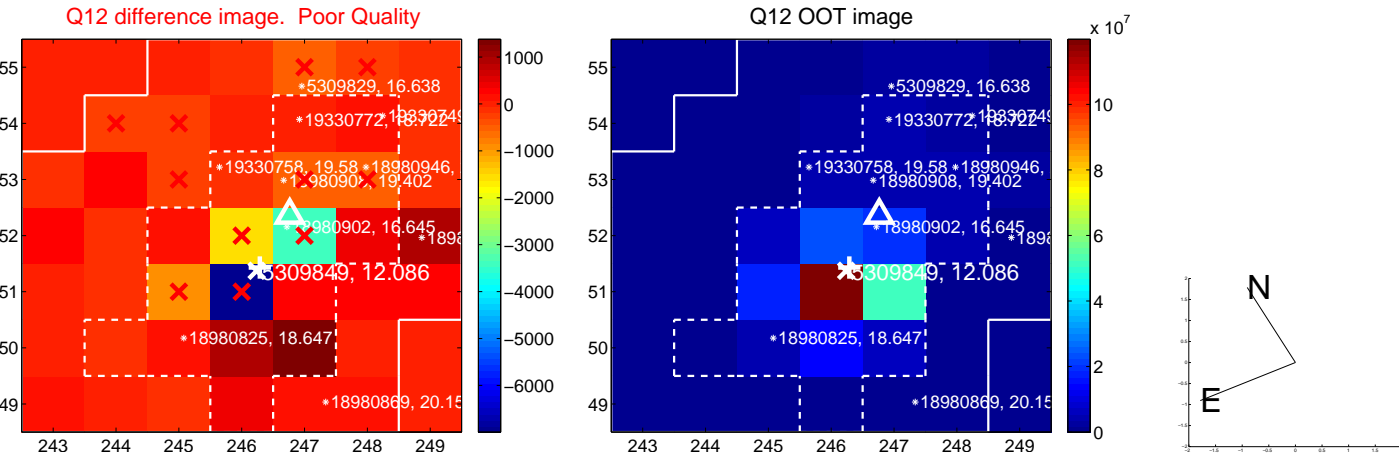
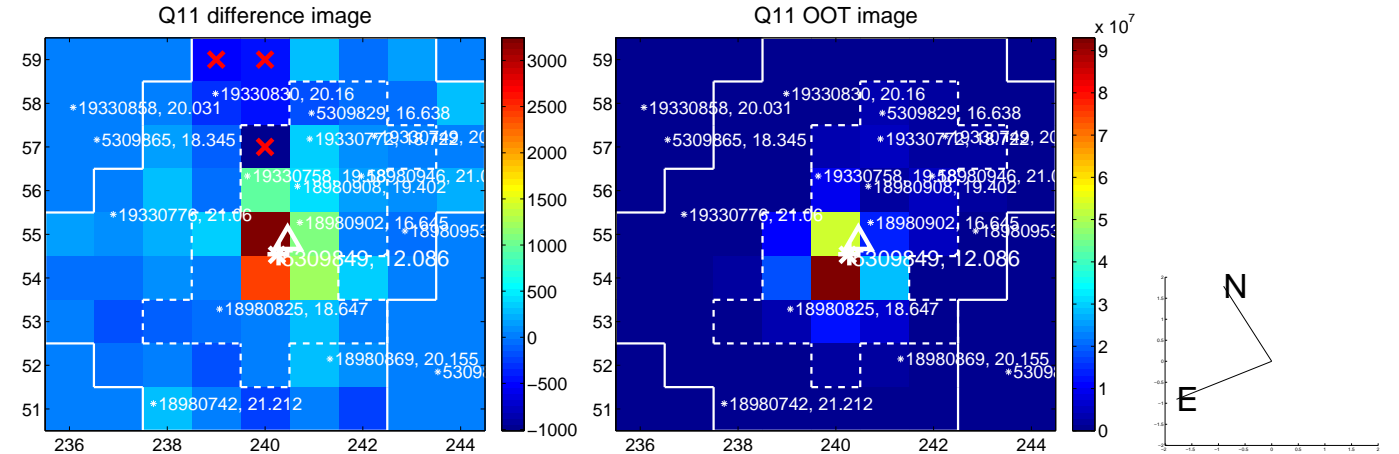
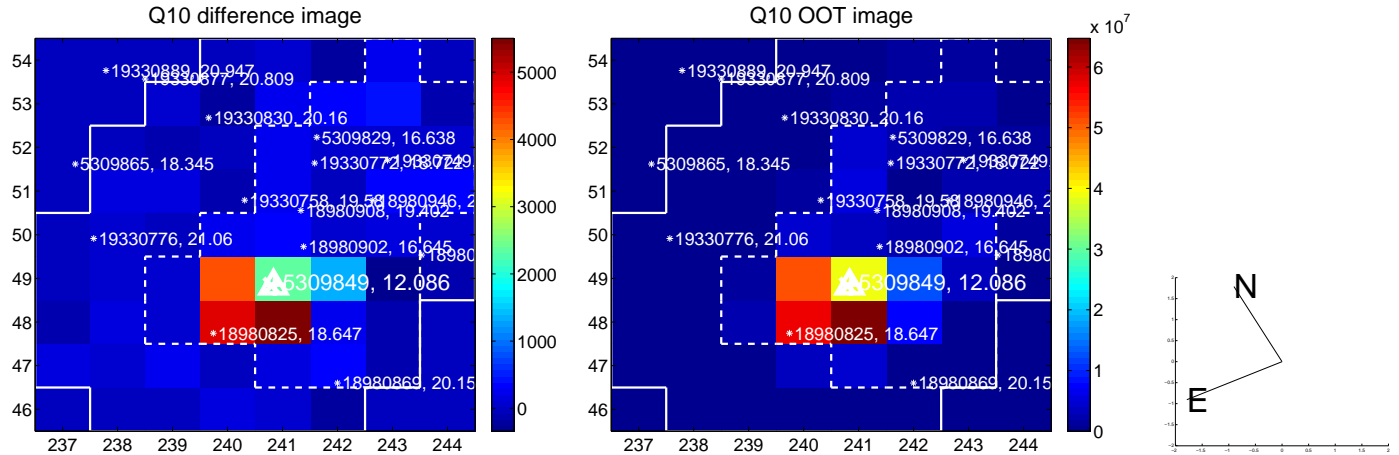
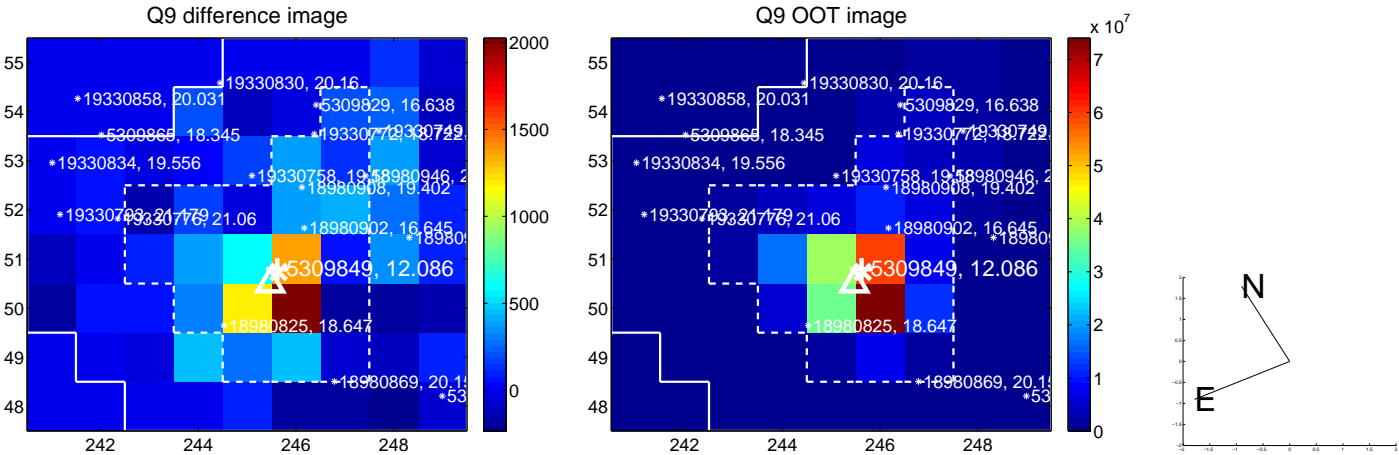
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



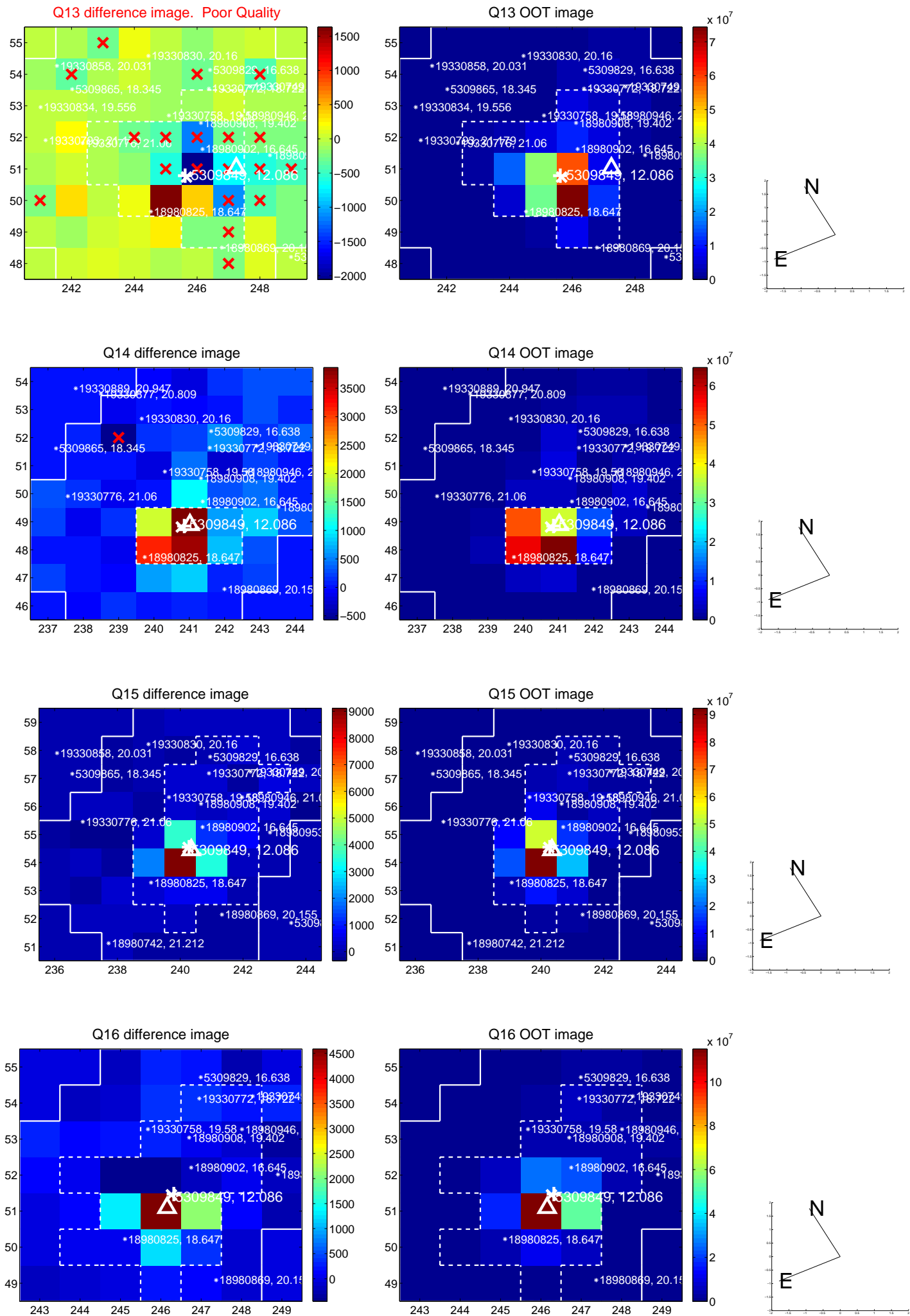
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



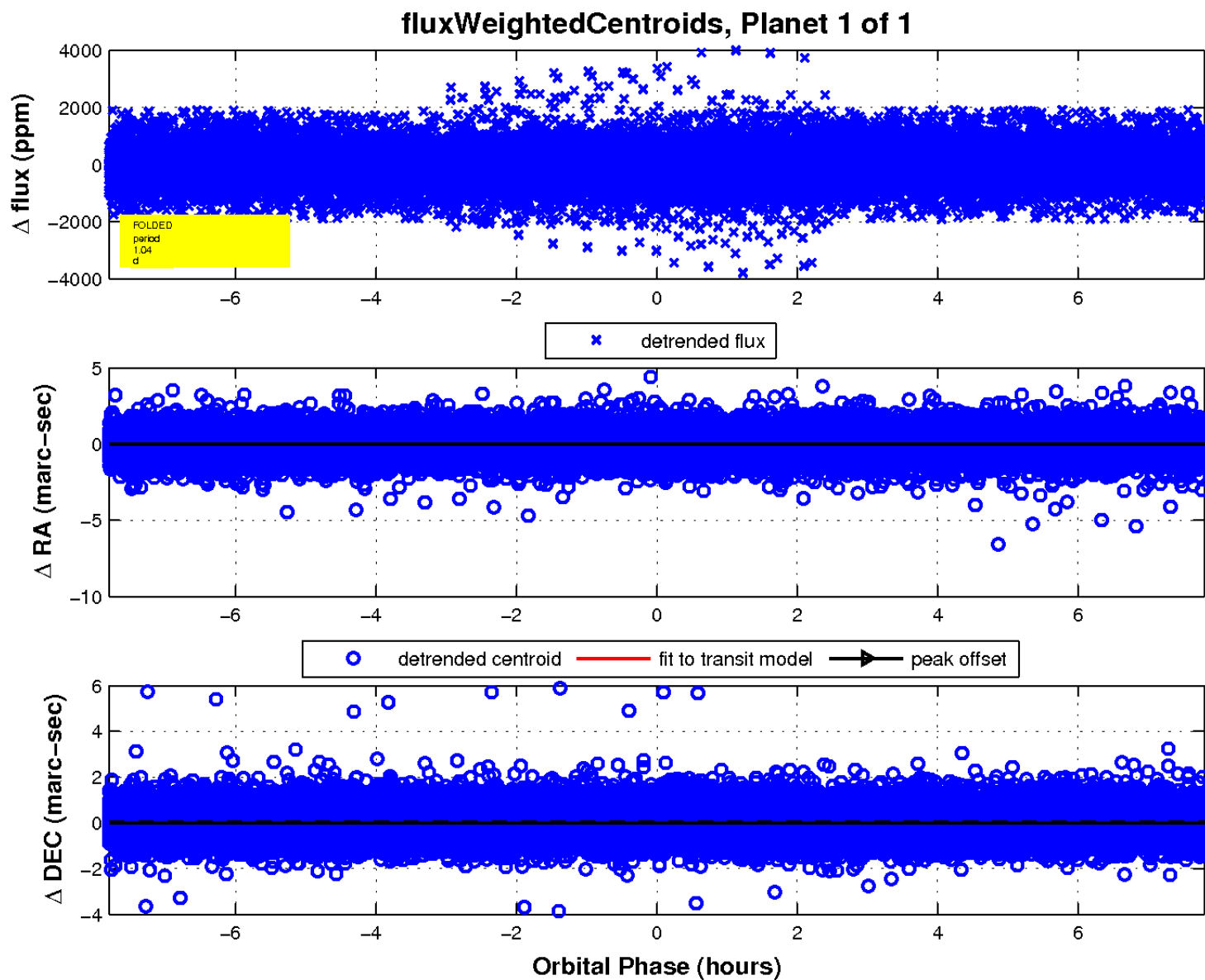
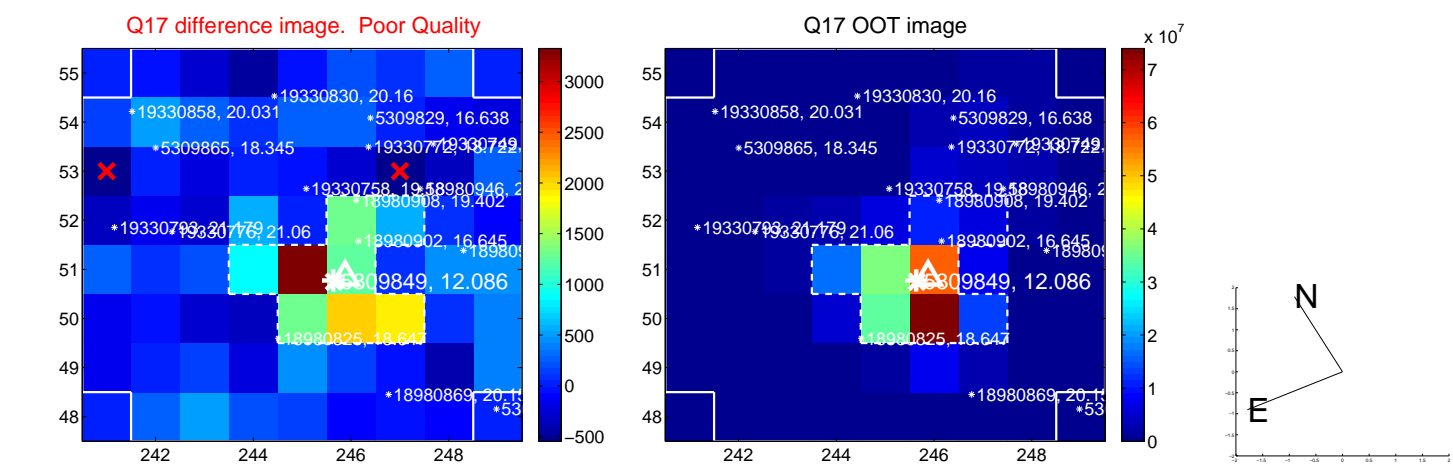
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

