

KIC 002985054

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})
002985054-01	OBS	No	0.912878	131.549697	33.5	1.547	9.1	8.5	1.46	6600	0.85	9151.51

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002985054-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—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.

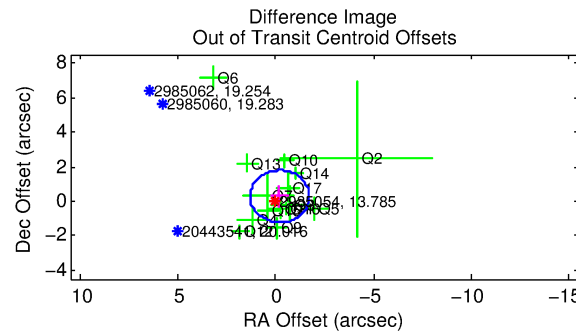
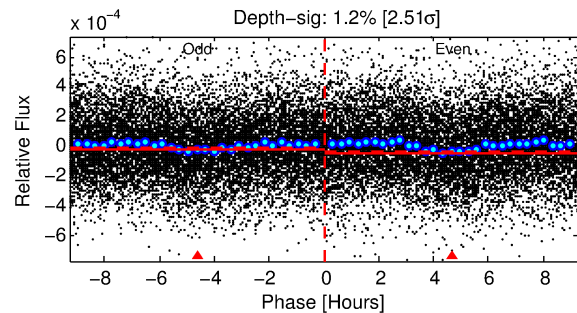
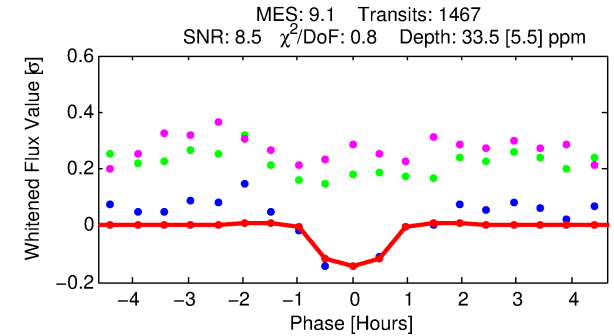
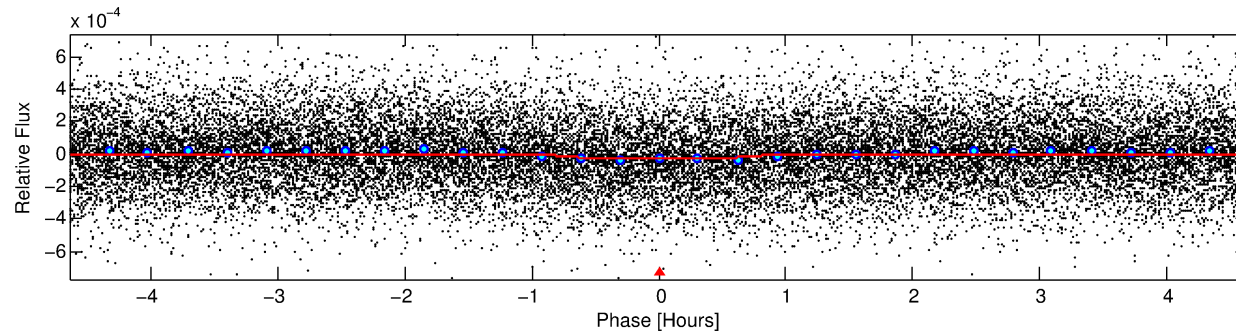
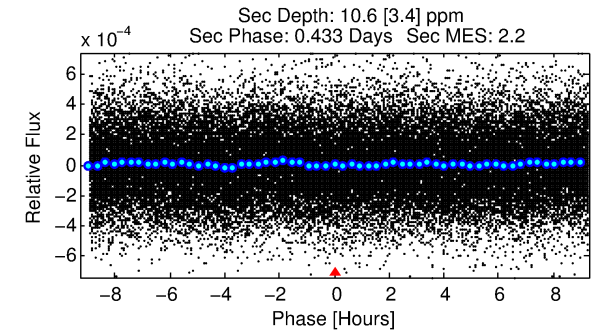
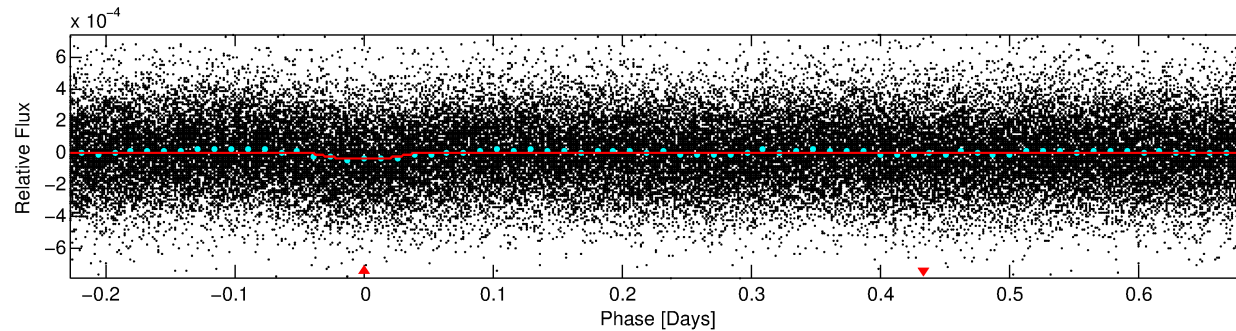
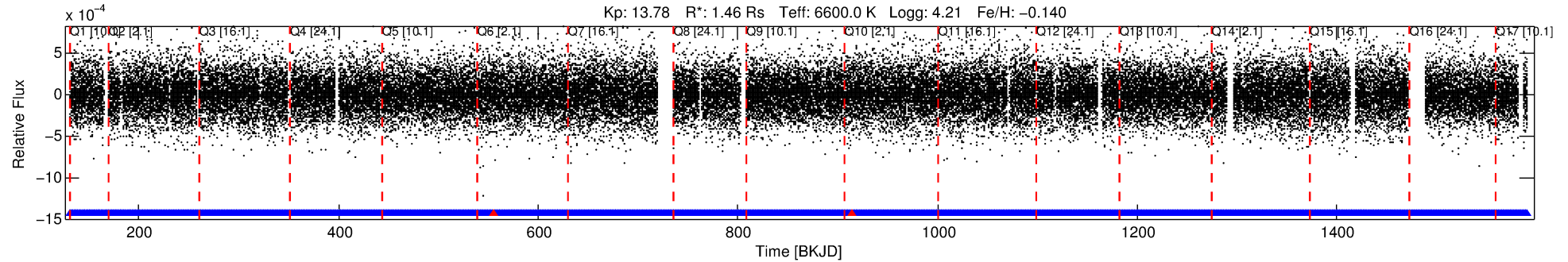
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002985054-01

No Significant Match Found

DV One-Page Summary

KIC: 2985054 Candidate: 1 of 1 Period: 0.913 d



DV Fit Results:

Period = 0.91288 [0.00001] d
Epoch = 131.5497 [0.0026] BKJD
Rp/R* = 0.0053 [0.0067]
a/R* = 4.57 [29.14]
b = 0.01 [668.87]
Seff = 9151.51 [3407.17]
Teff = 2494 [232] K
Rp = 0.85 [1.09] Re
a = 0.0199 [0.0048] AU
Ag = 3.17 [8.08] [0.27σ]
Teffp = 5144 [3253] K [0.81σ]

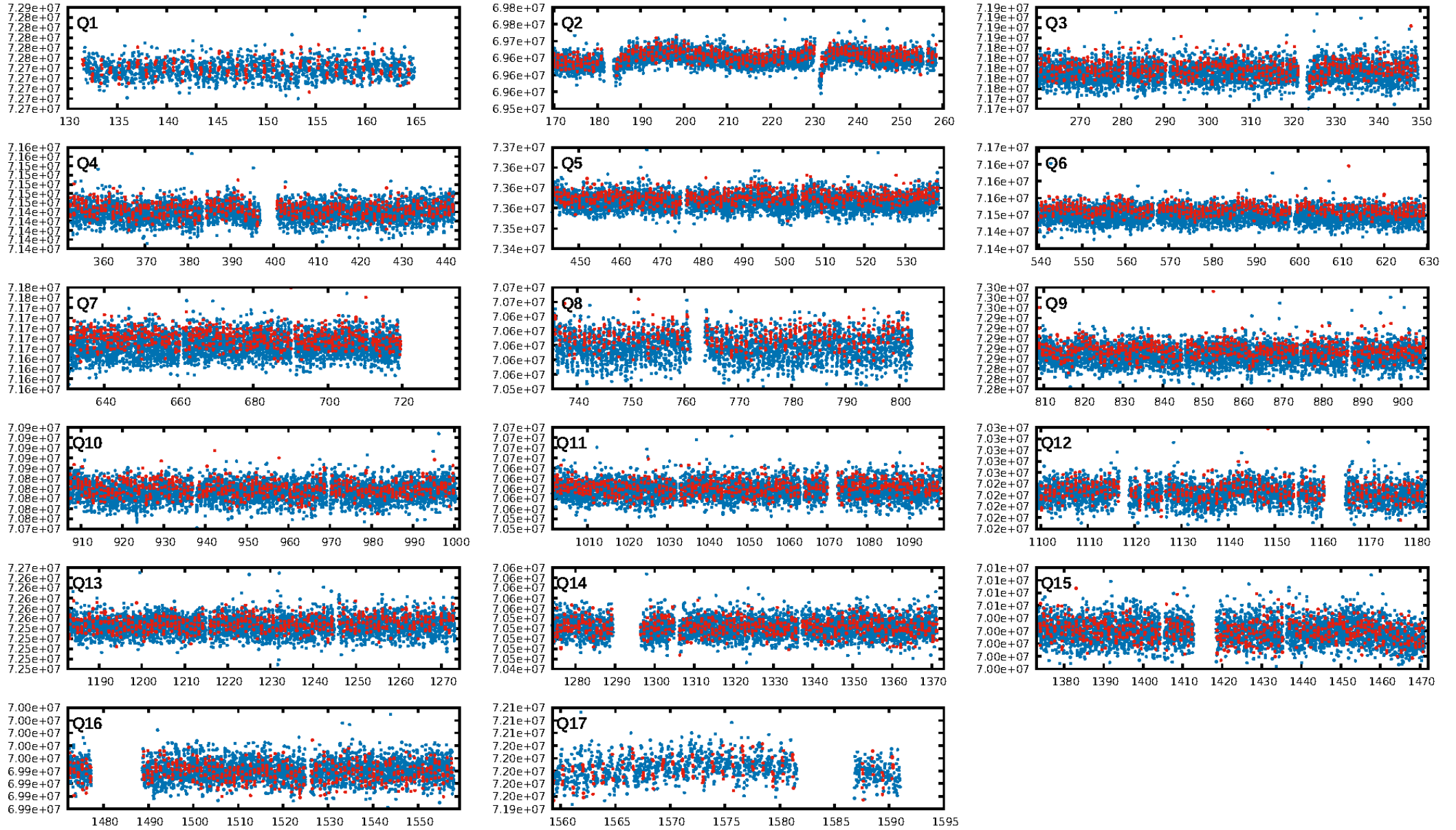
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.40e-19
RollingBand-fgt: 1.00 [1399/1401]
GhostDiagnostic-chr: 40.73
Centroid-sig: 0.0%
Centroid-so: 3.476 arcsec [2.51σ]
OotOffset-rm: 0.340 arcsec [0.67σ]
KicOffset-rm: 0.285 arcsec [0.67σ]
OotOffset-st: 4/4/3/4 [15]
KicOffset-st: 4/4/3/4 [15]
DiffImageQuality-fgm: 0.67 [10/15]
DiffImageOverlap-fno: 1.00 [17/17]

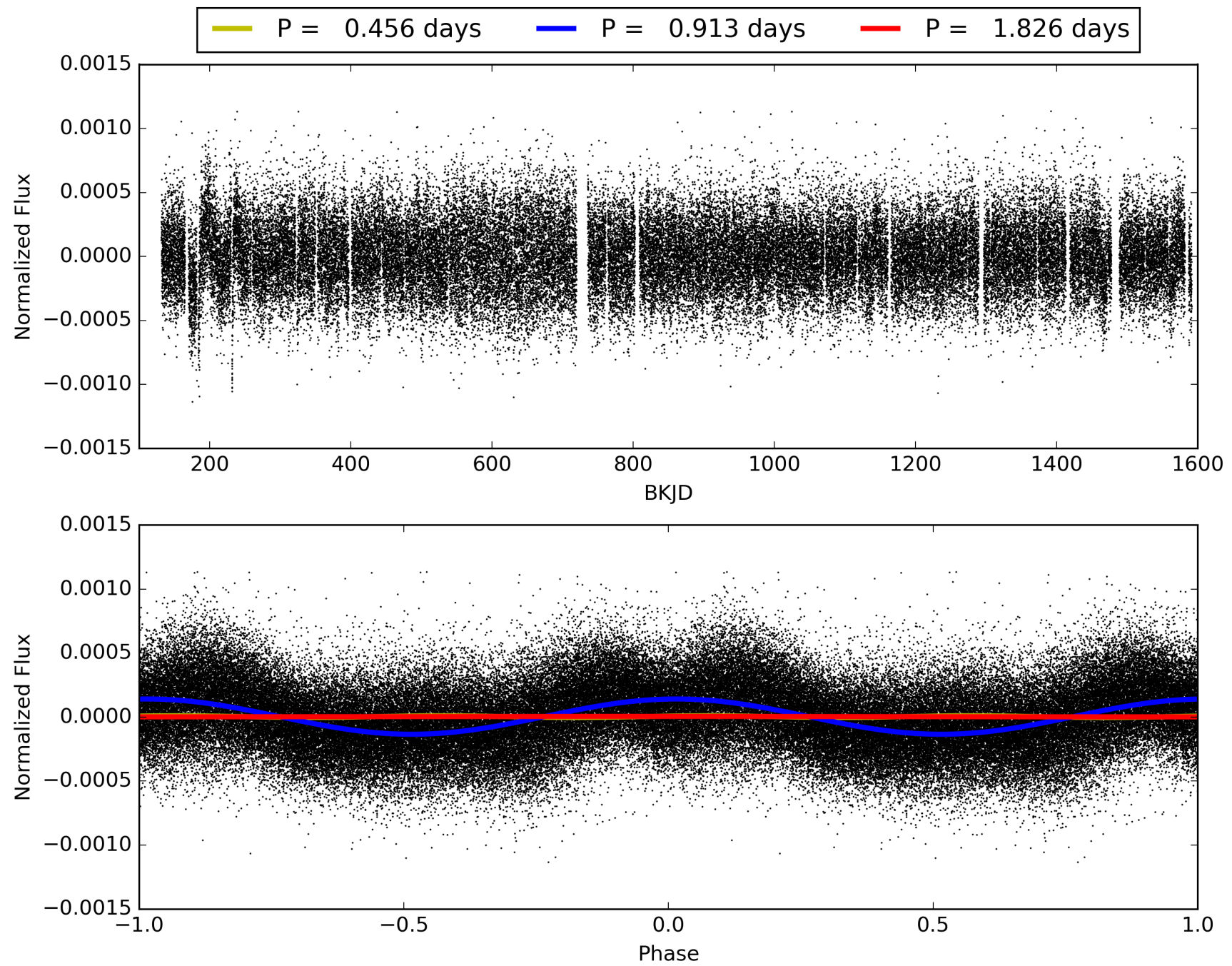
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 18:22:16 Z

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

TCE 002985054-01, PDC Light Curves

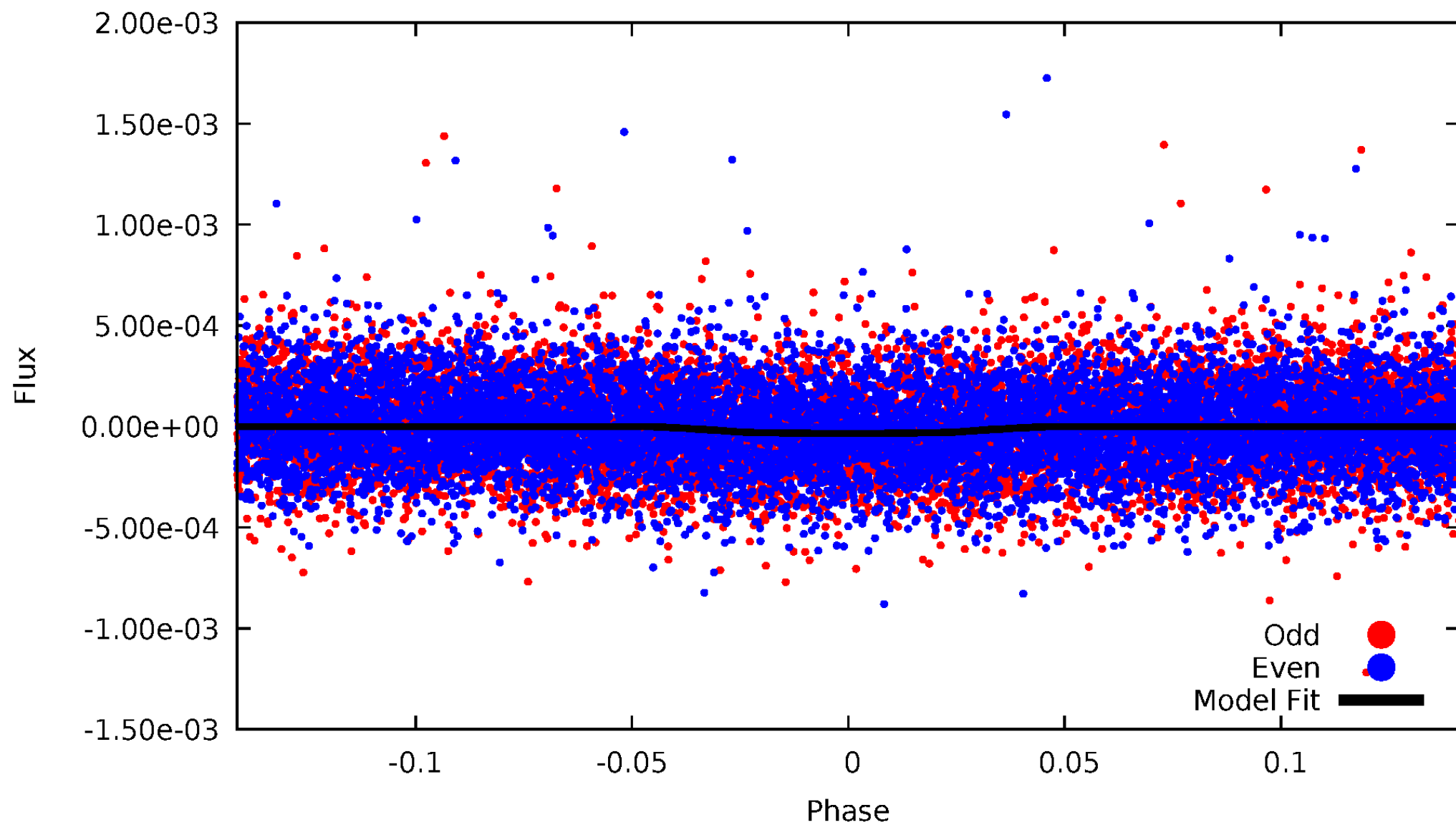


TCE 002985054-01



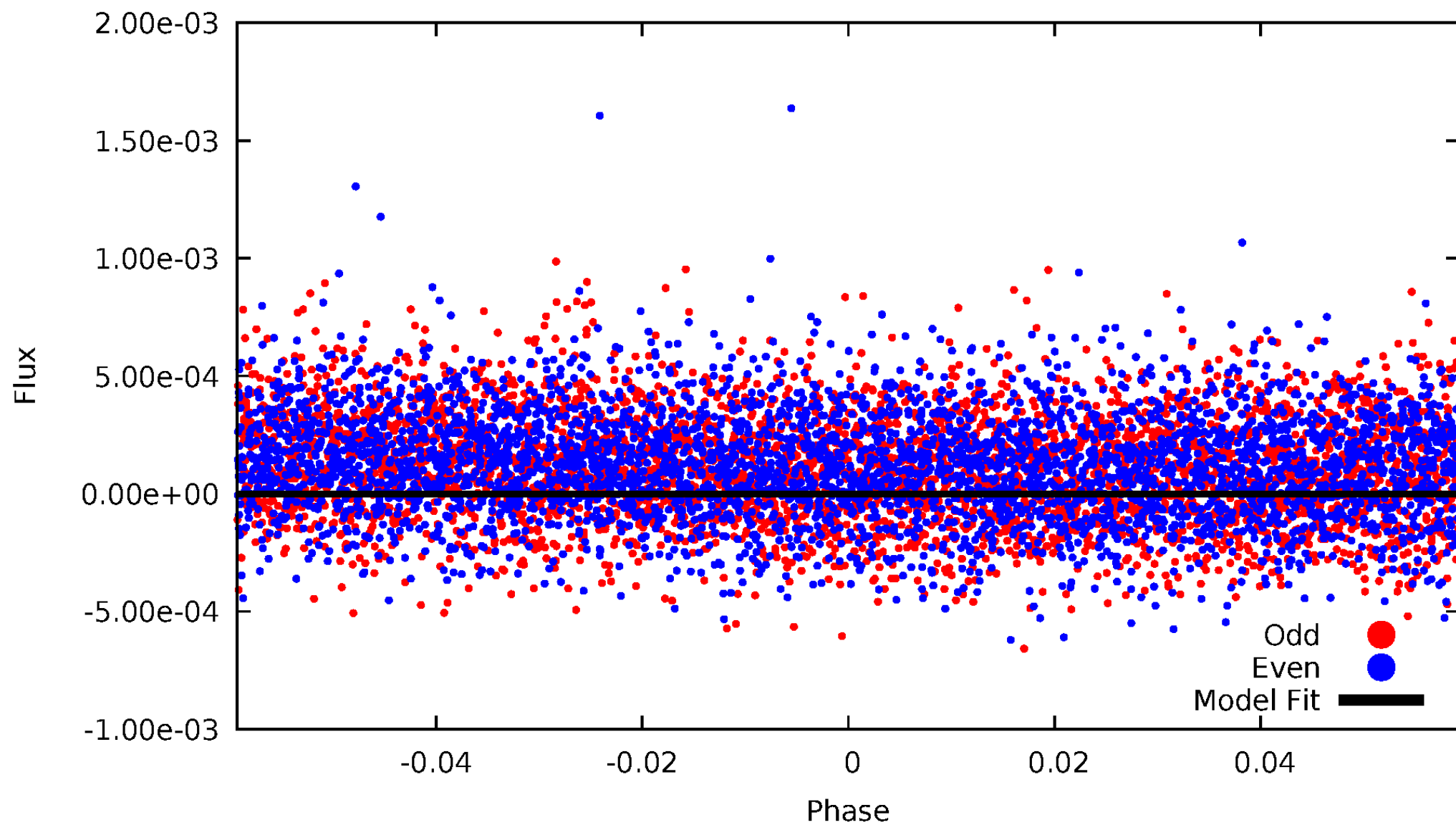
DV Odd/Even

TCE 002985054-01

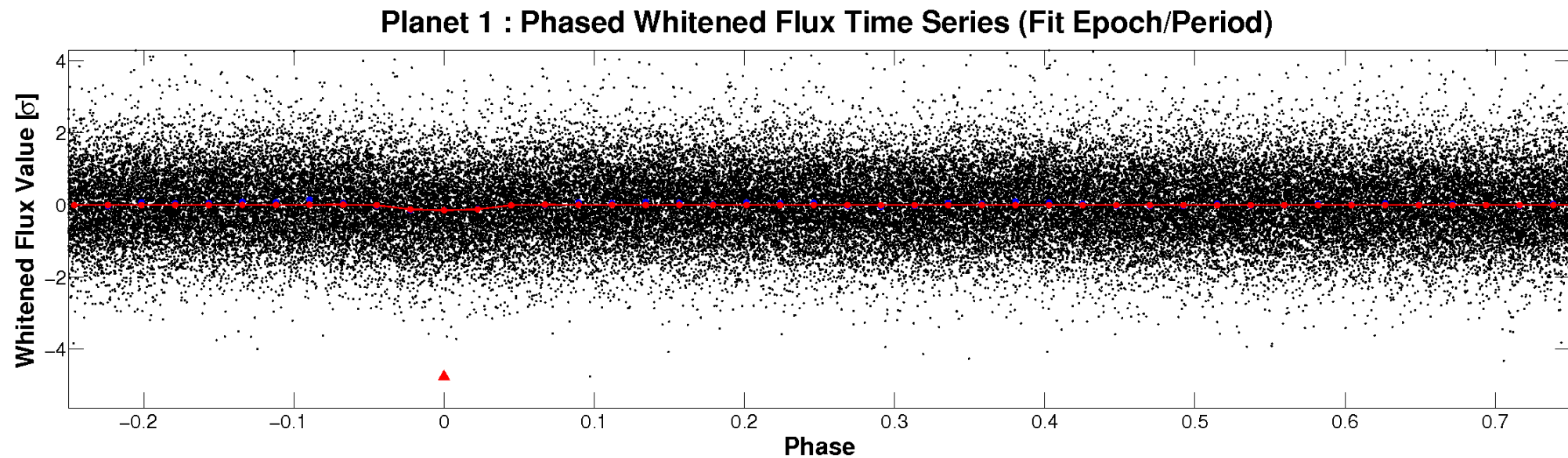
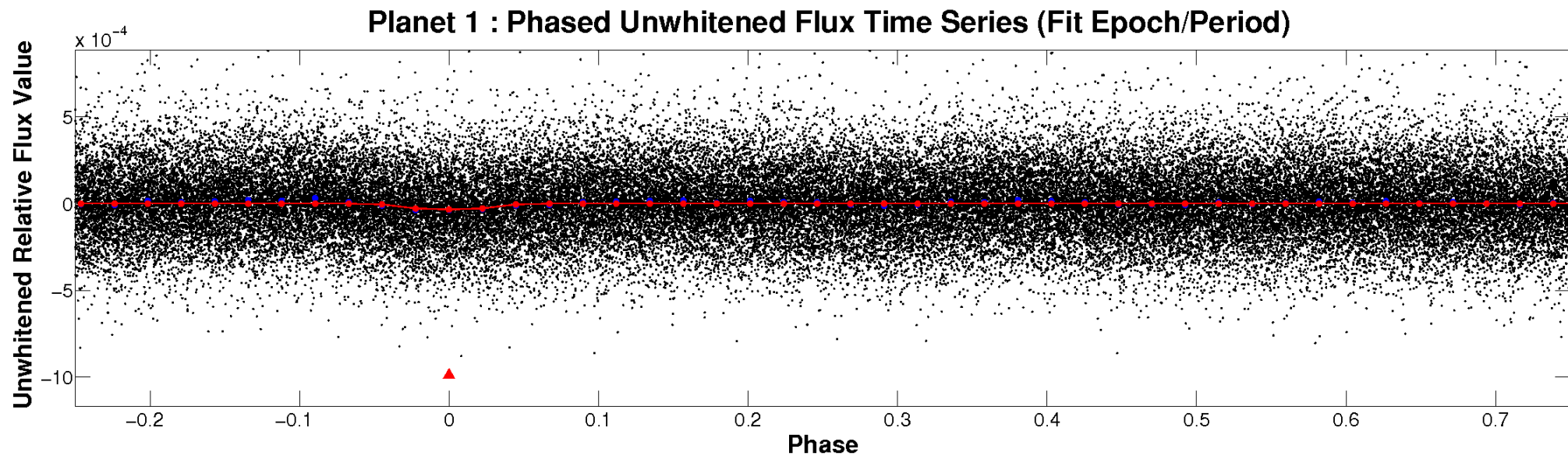


ALT Odd/Even

TCE 002985054-01

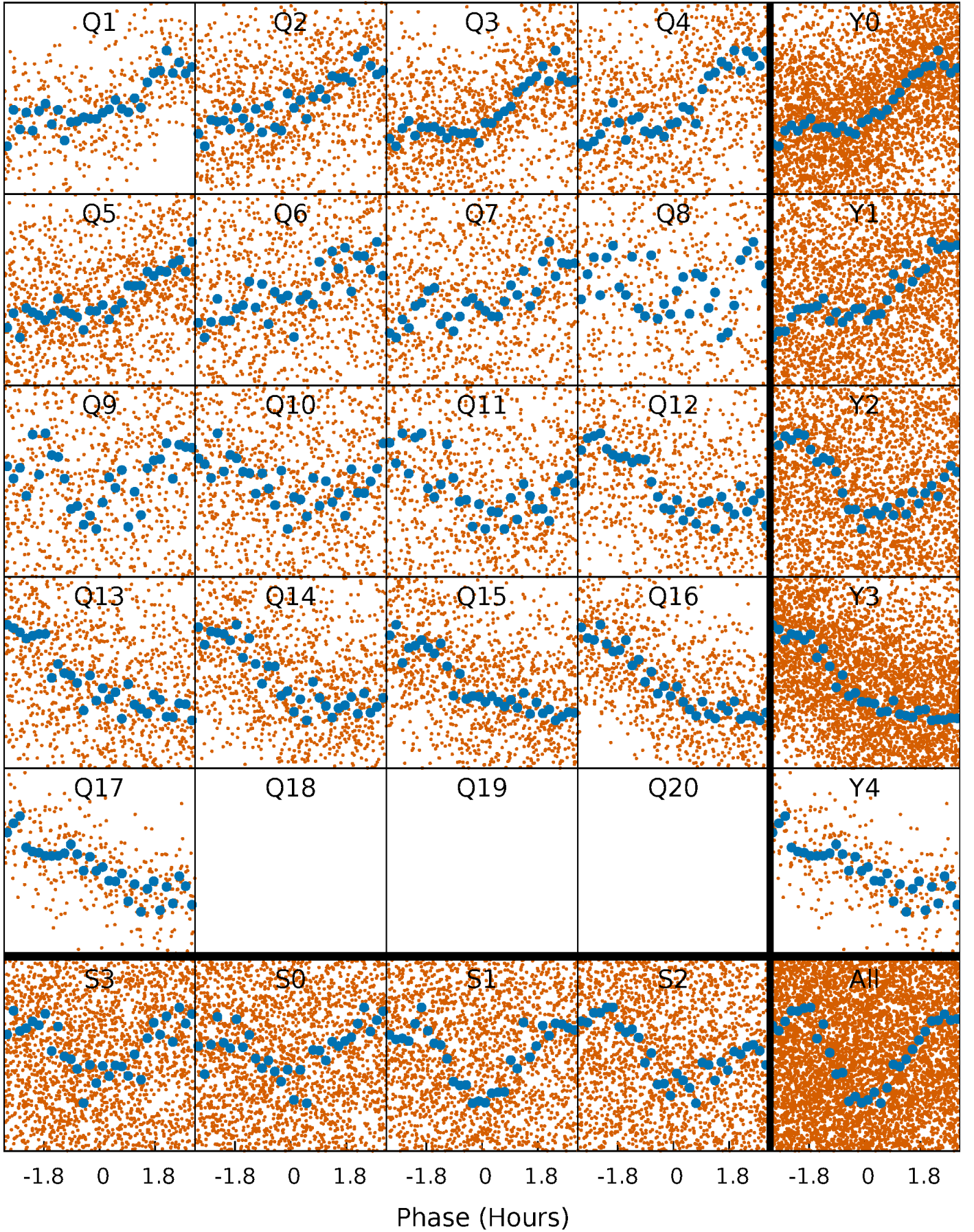


Non-Whitened Vs. Whitened Light Curve



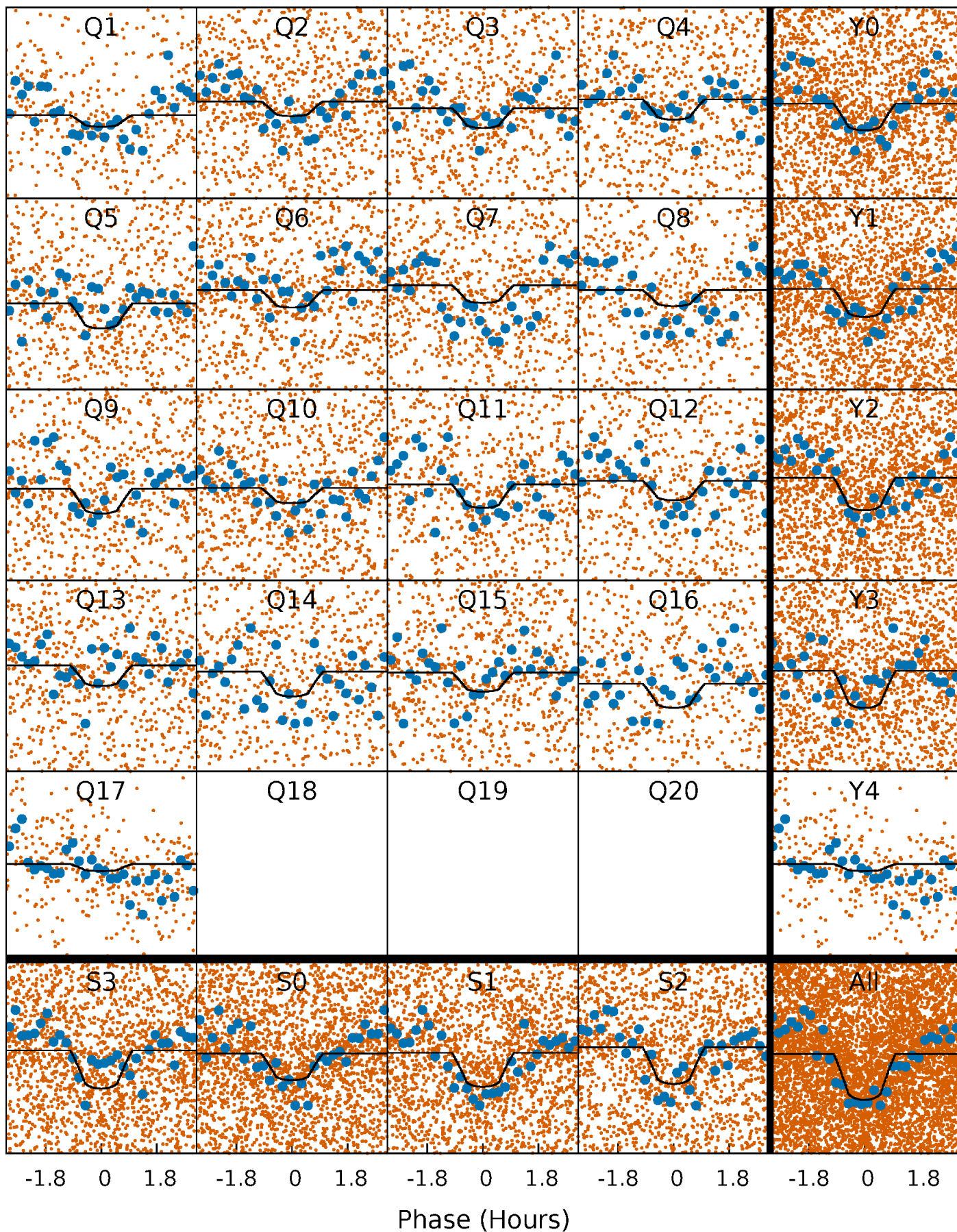
PDC Quarter-Phased Transit Curves

TCE 002985054-01 P= 0.912878 Days $T_0=131.549697$ (BKJD)



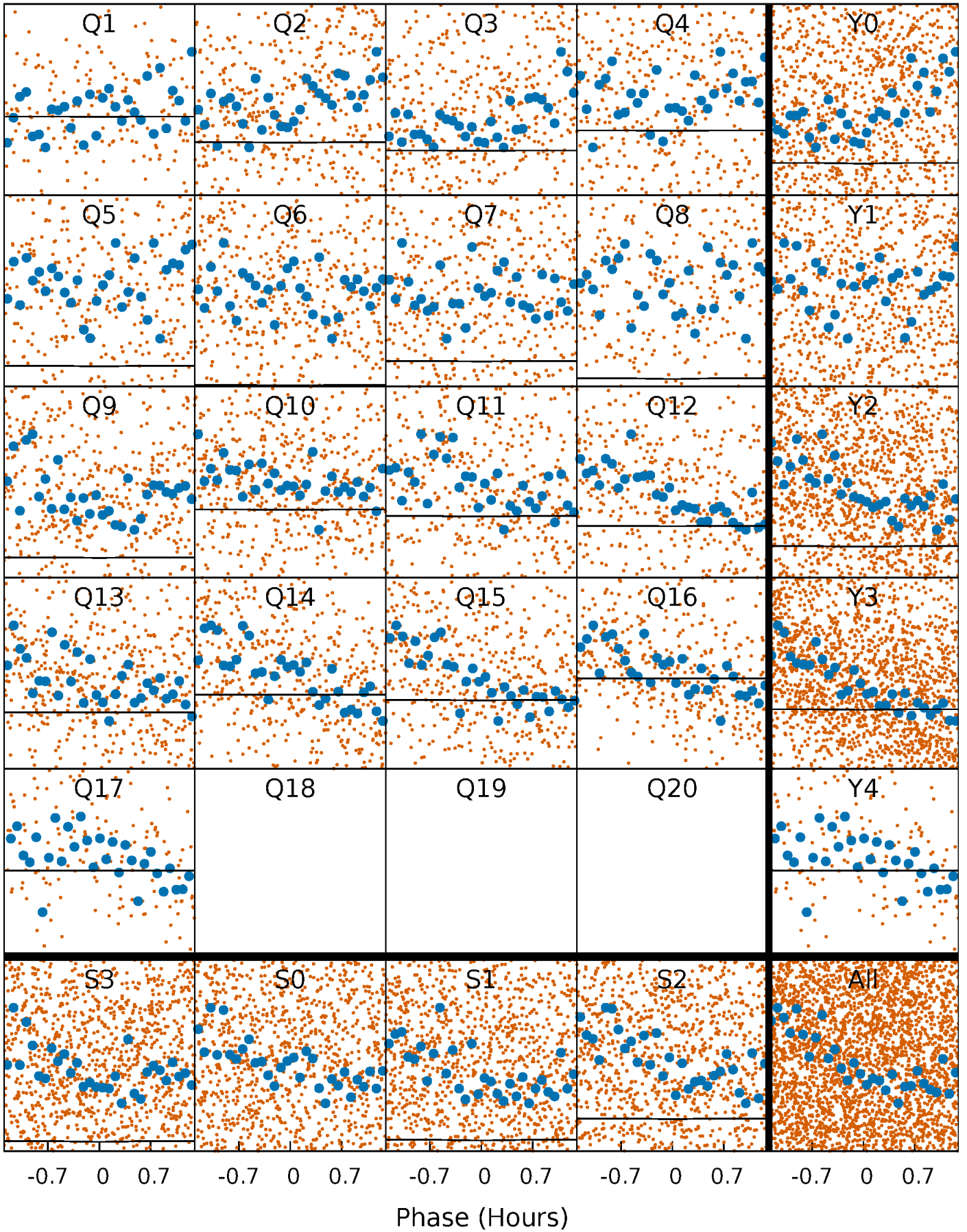
DV Quarter-Phased Transit Curves

TCE 002985054-01 P= 0.912878 Days $T_0=131.549697$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

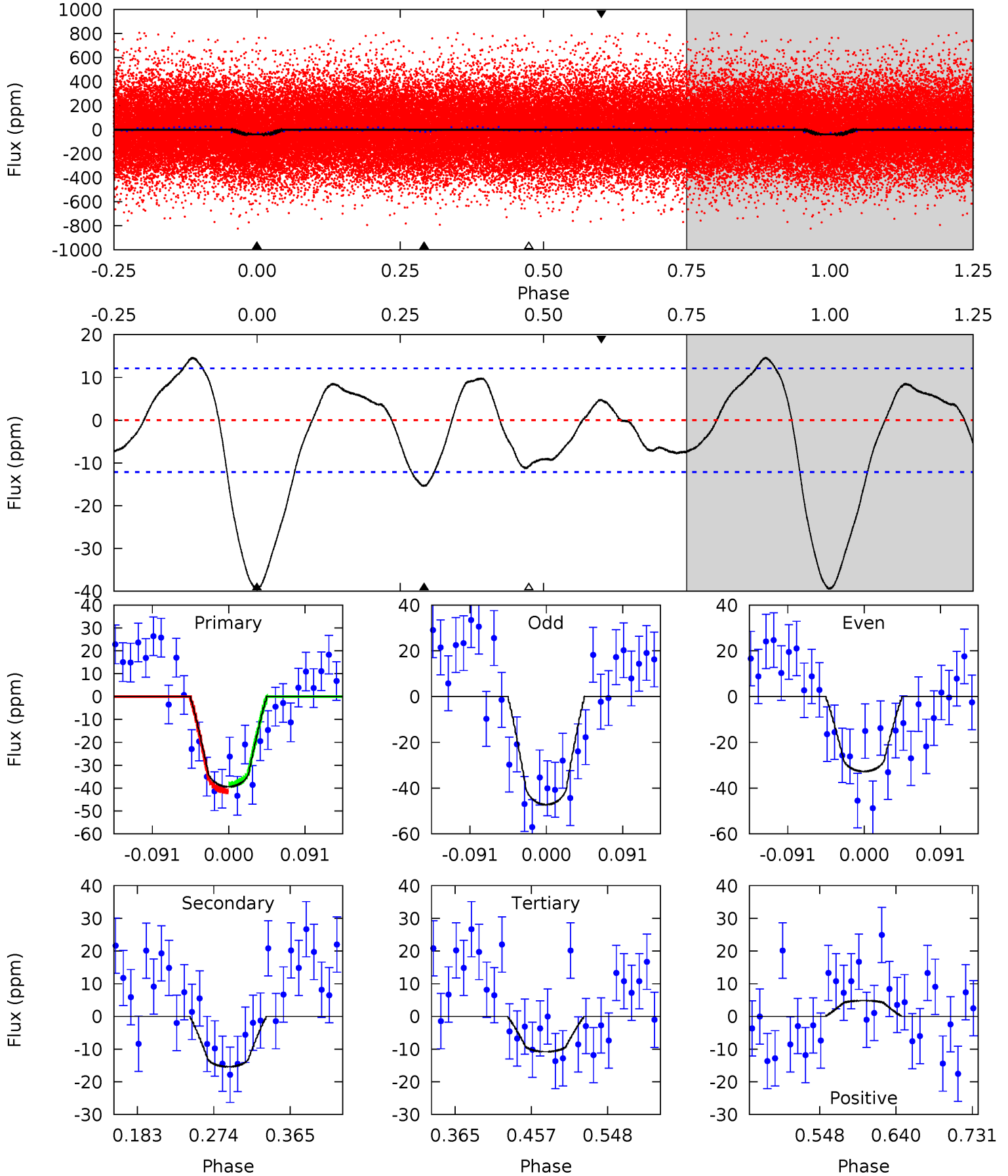
TCE 002985054-01 P= 0.912866 Days $T_0=131.537351$ (BKJD)



DV Model-Shift Uniqueness Test

002985054-01, P = 0.912878 Days, E = 130.636819 Days

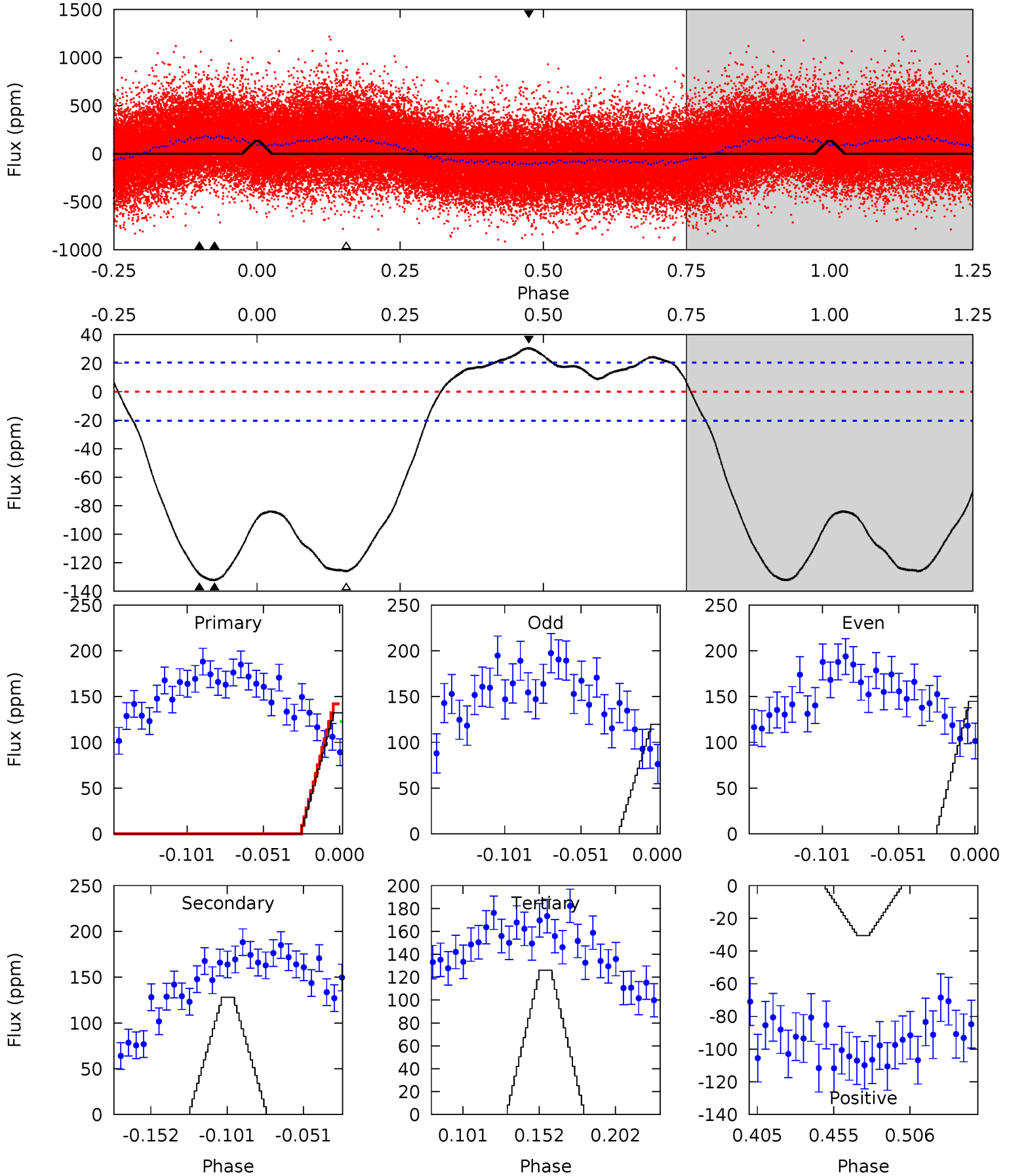
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.9	5.82	4.08	1.82	4.58	1.69	2.67	10.8	13.1	1.74	4.00	2.75	0.98	0.27	0.55



Alt Model-Shift Uniqueness Test

002985054-01, P = 0.912866 Days, E = 130.624485 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.5	29.5	29.0	7.04	4.71	1.96	12.8	1.43	23.4	0.42	22.4	2.92	1.10	0.19	2.32



Stellar Parameters For KIC 002985054

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6600^{+181}_{-227}	$4.209^{+0.153}_{-0.187}$	$-0.140^{+0.250}_{-0.300}$	$1.457^{+0.422}_{-0.307}$	$1.256^{+0.188}_{-0.206}$	$0.572^{+0.436}_{-0.285}$
	+3%/-3%	+4%/-4%	+179%/-214%	+29%/-21%	+15%/-16%	+76%/-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 002985054-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-15 ± 3	$1.09^{+1.02}_{-0.69}$	3499^{+268}_{-232}	4954^{+3547}_{-1345}	$2.894^{+17.701}_{-2.168}$
Alt.	-128 ± 4	$0.73^{+0.90}_{-0.52}$	3478^{+276}_{-229}	12080^{+41380}_{-5073}	55^{+626}_{-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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

DV Centroid Data

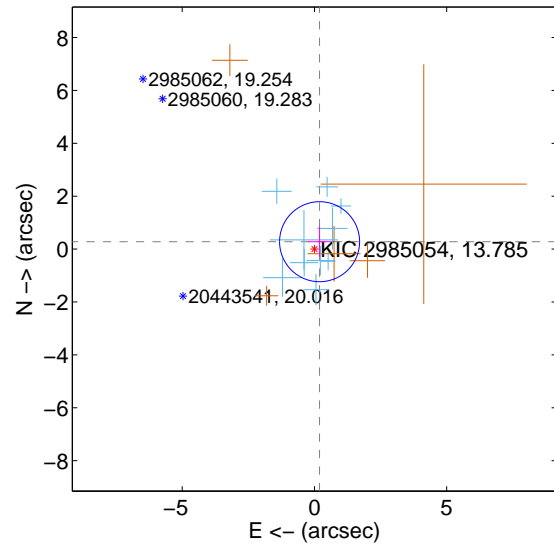
Supplemental centroid analysis for 002985054-01. Kepler magnitude: 13.79. Transit SNR 8.46

There are 10 quarters with good PRF difference image offsets

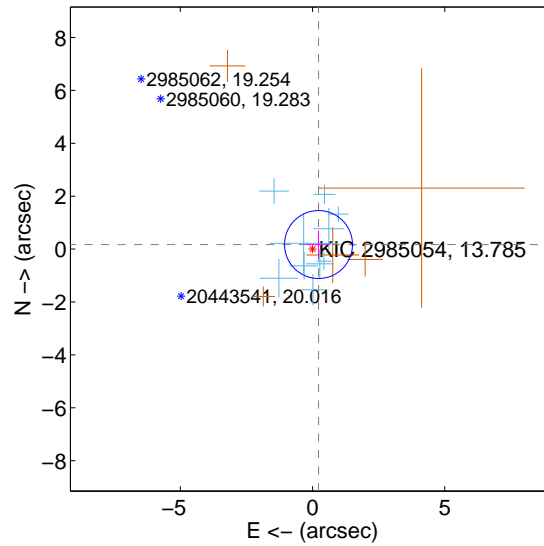
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.340 ± 0.504	0.67	-0.194 ± 0.439	0.279 ± 0.575
PRF-fit source offset from KIC position	0.285 ± 0.428	0.67	-0.227 ± 0.436	0.173 ± 0.521
photometric centroid source offset	3.48 ± 1.38	2.51	-2.58 ± 1.32	2.33 ± 1.46

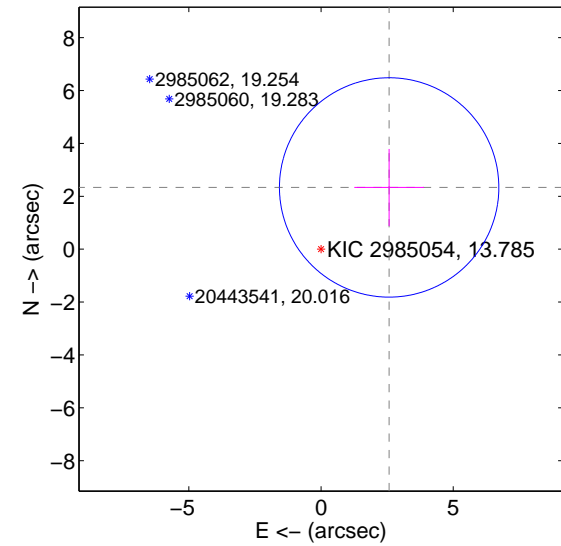
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

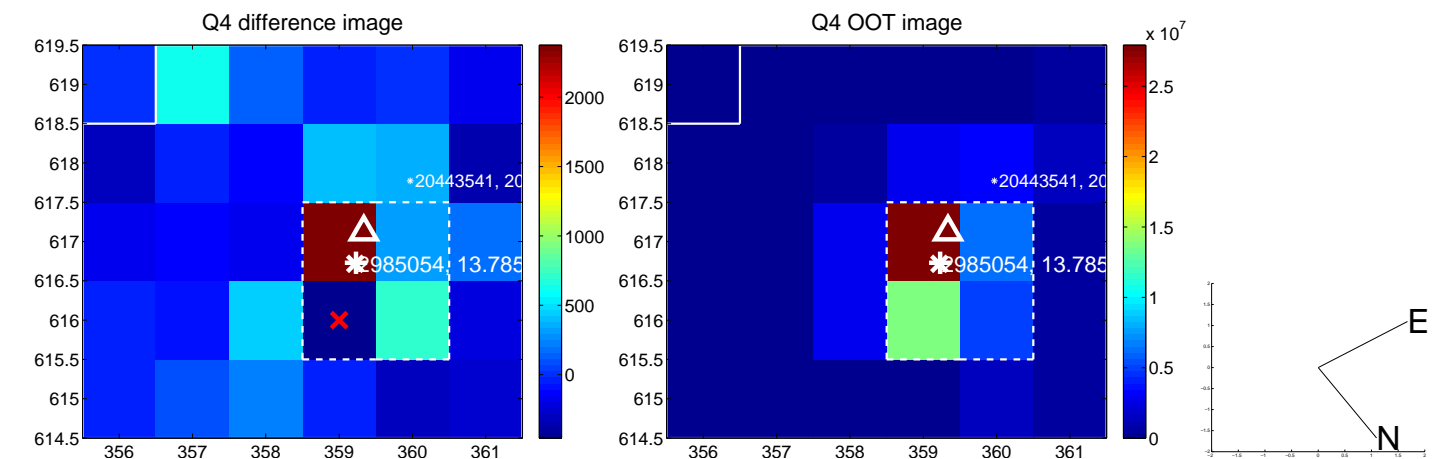
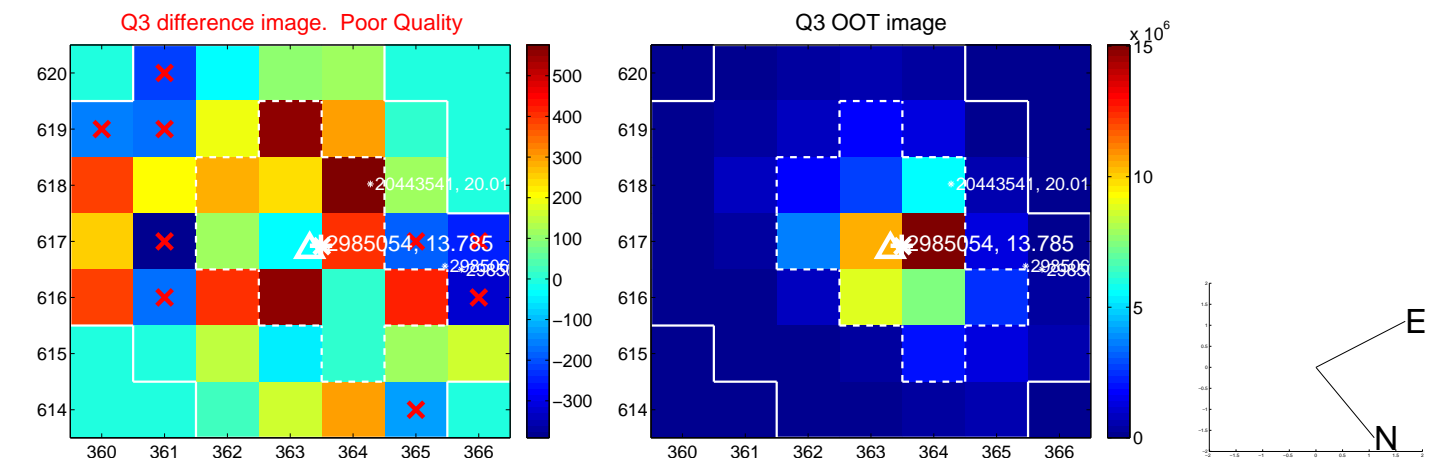
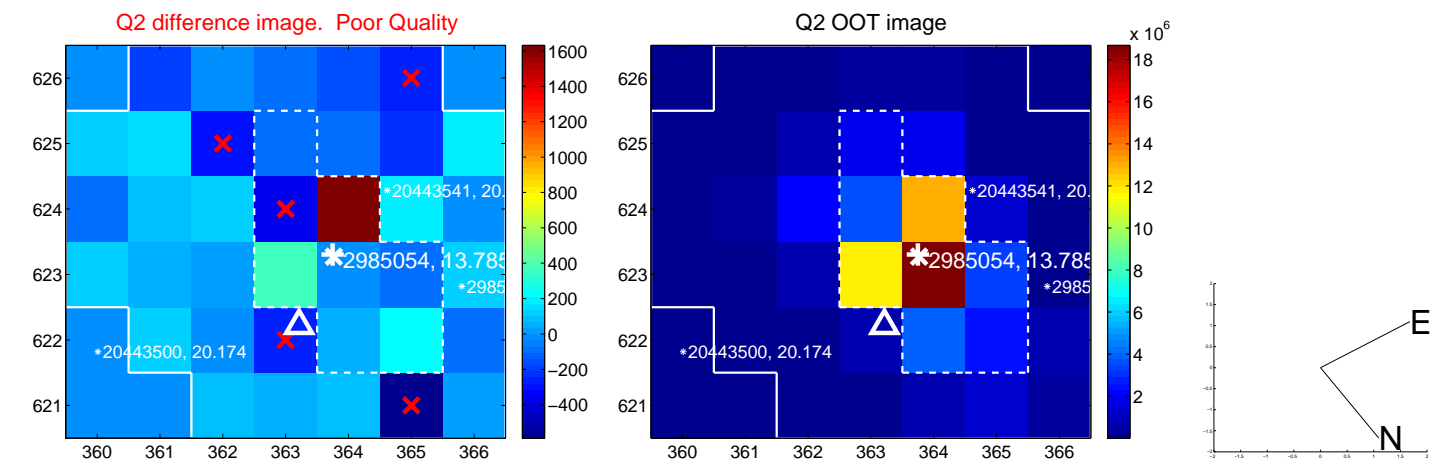
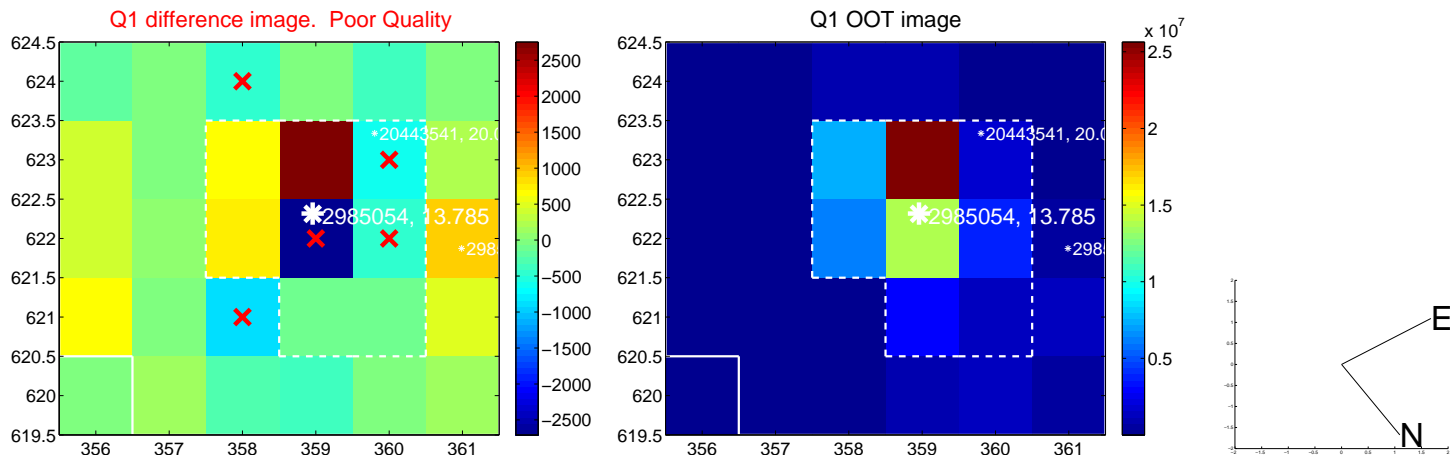


offset from photometric centroids

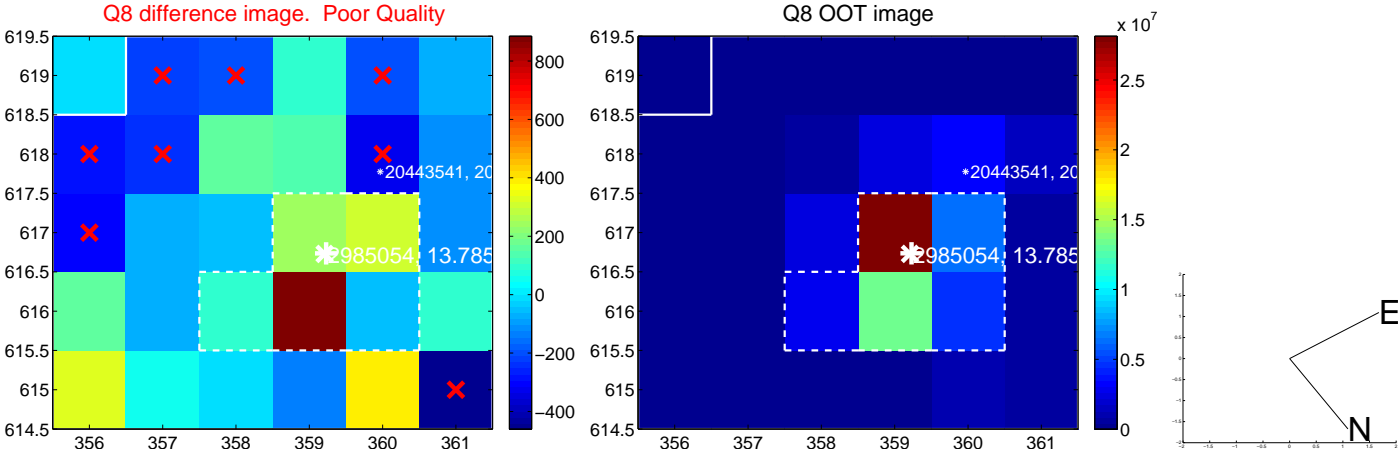
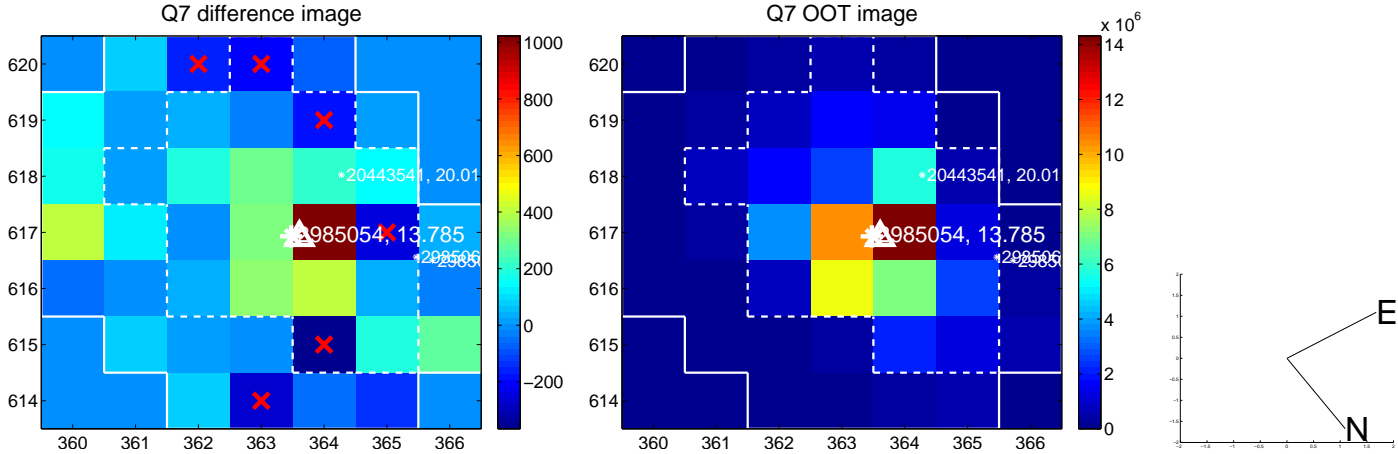
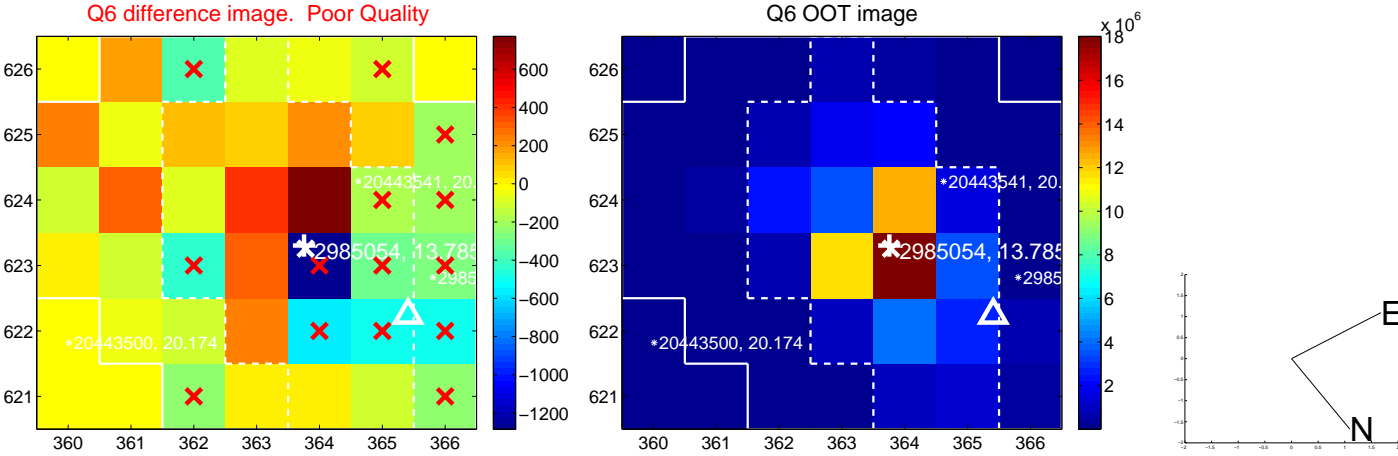
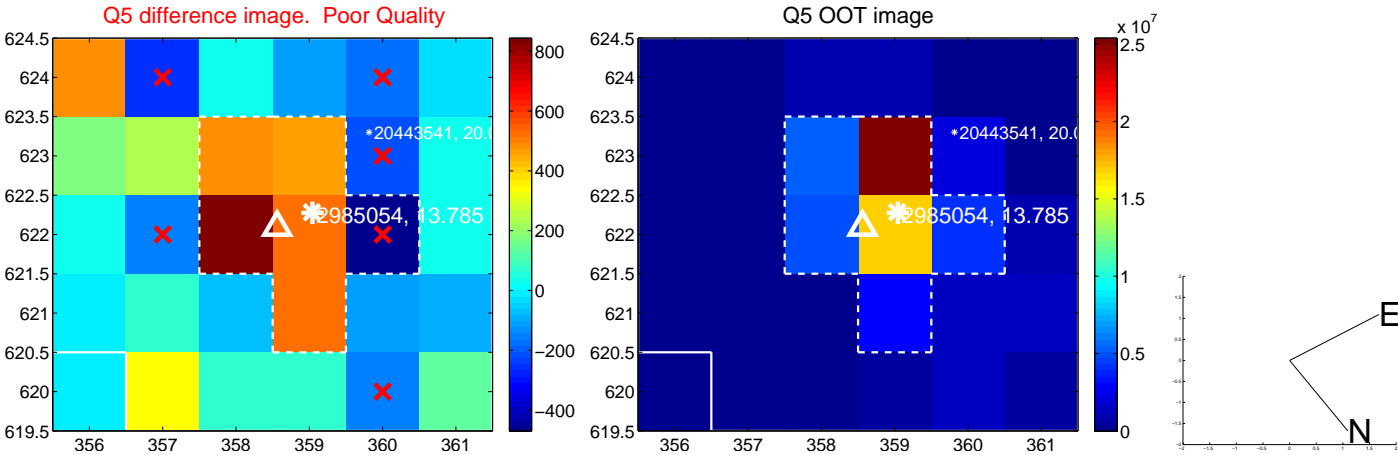


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

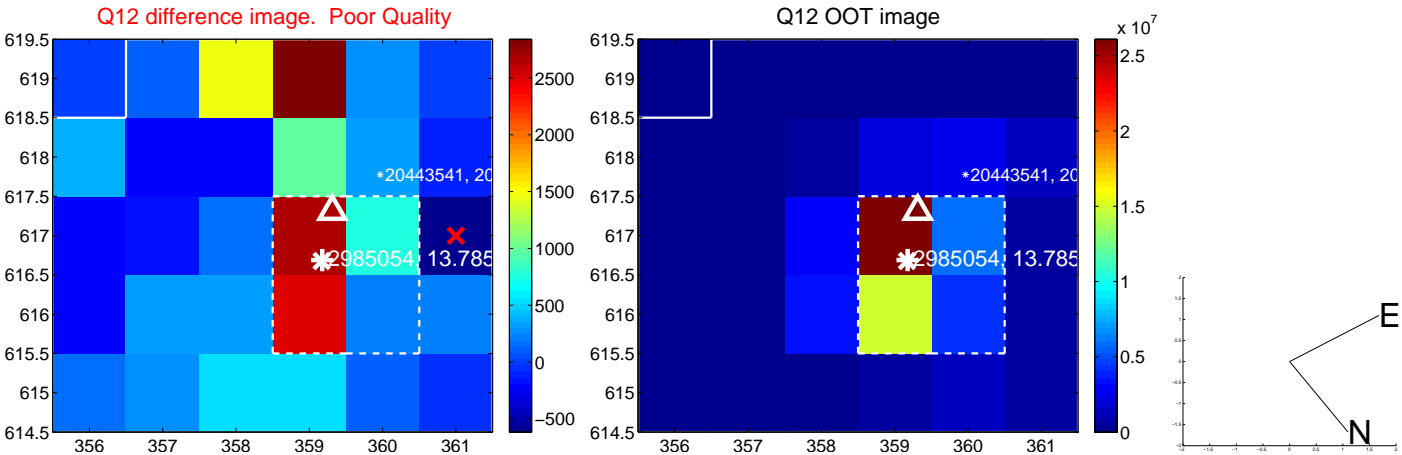
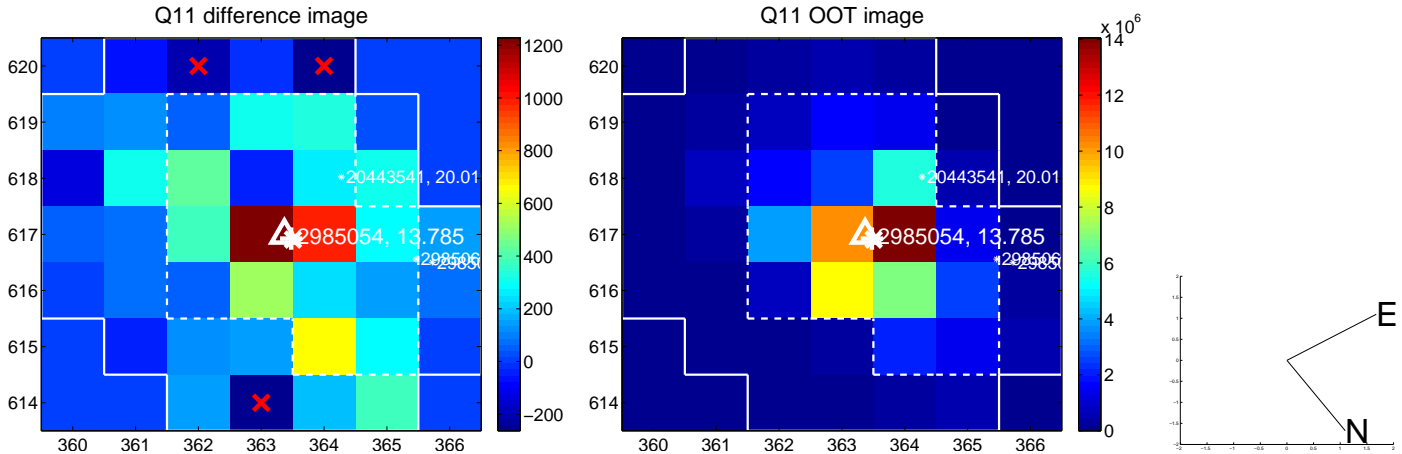
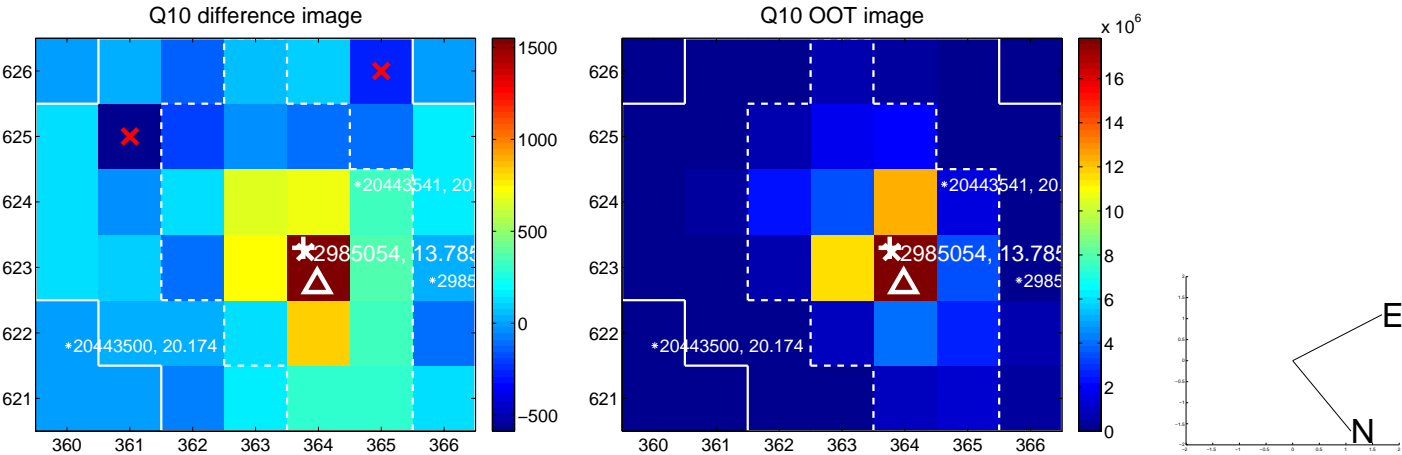
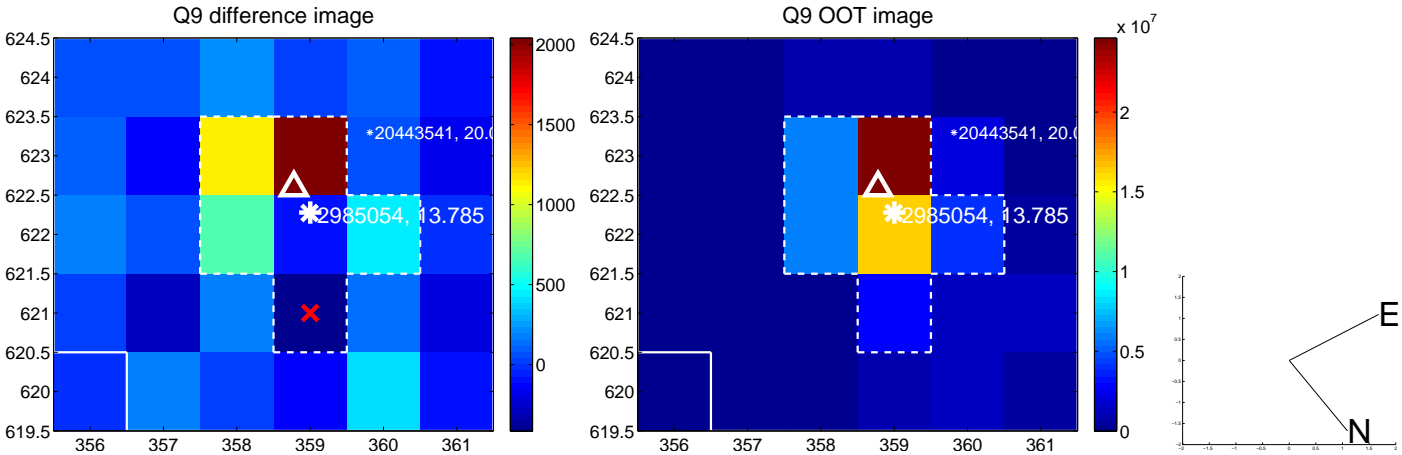
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



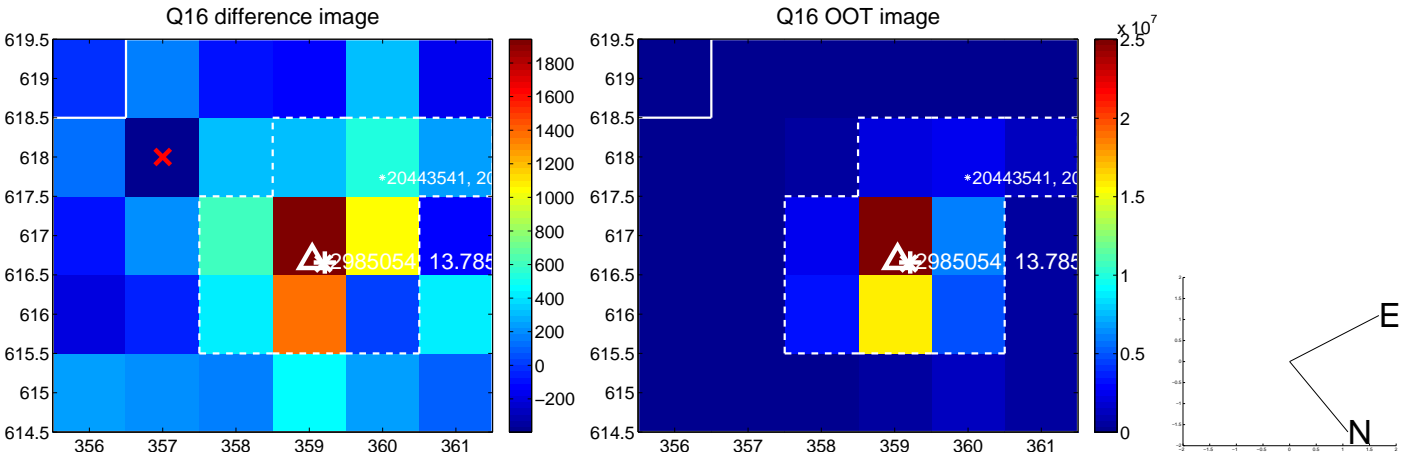
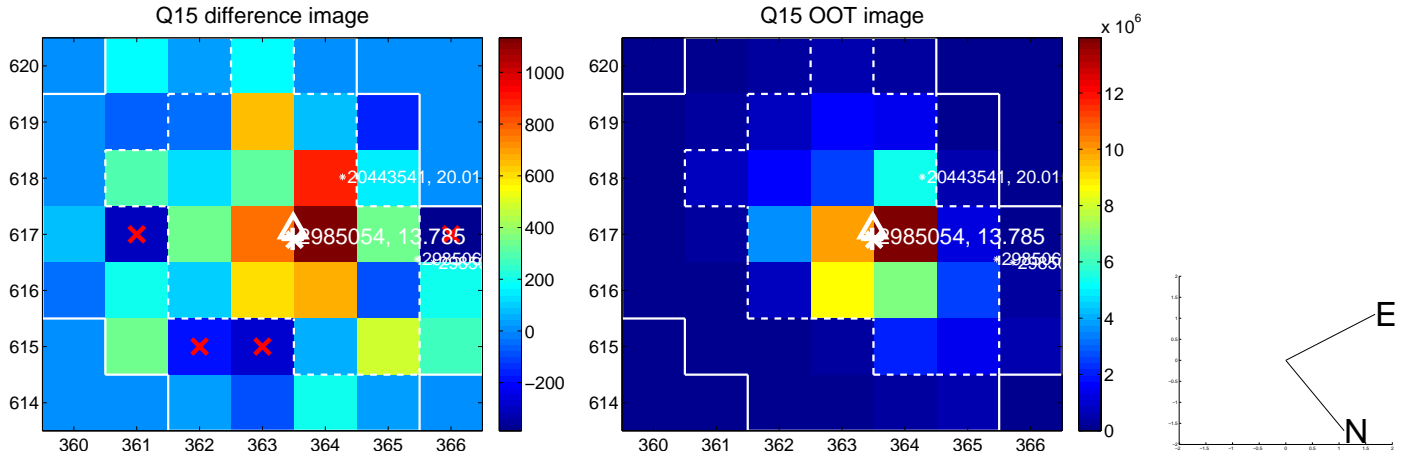
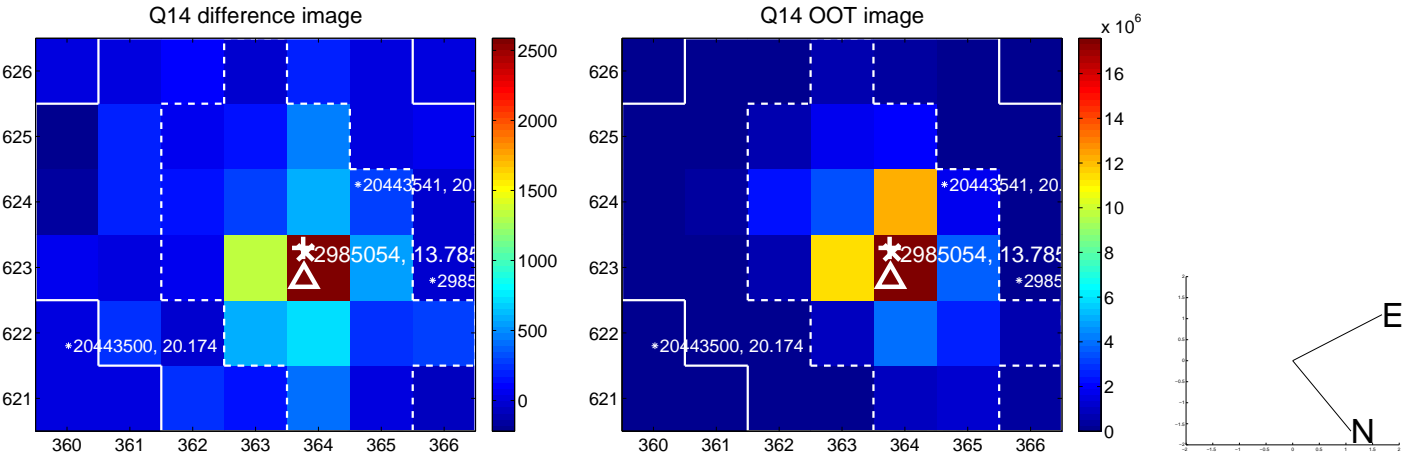
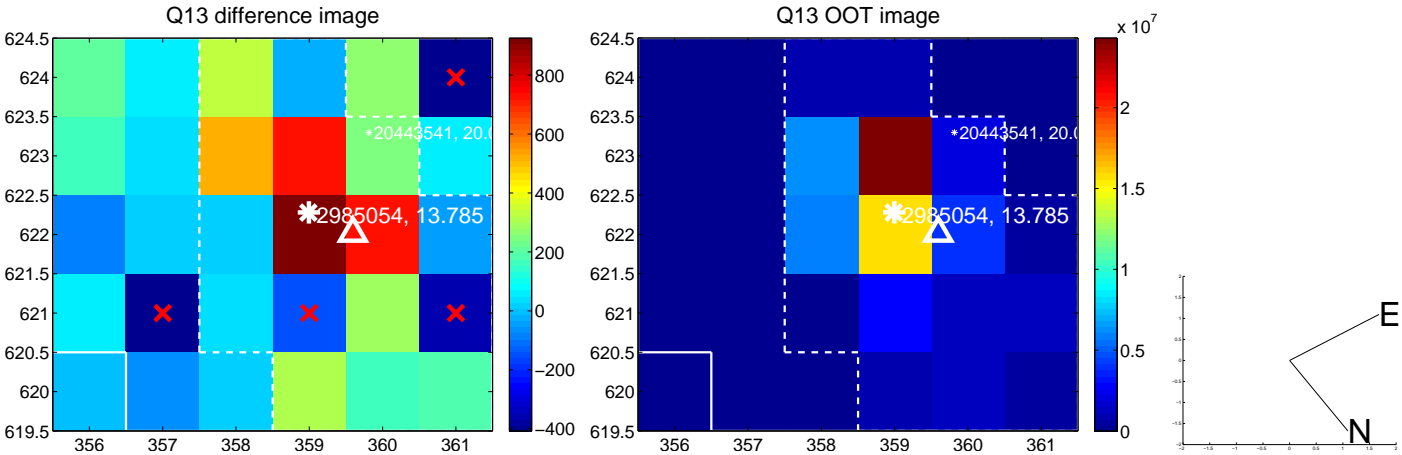
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



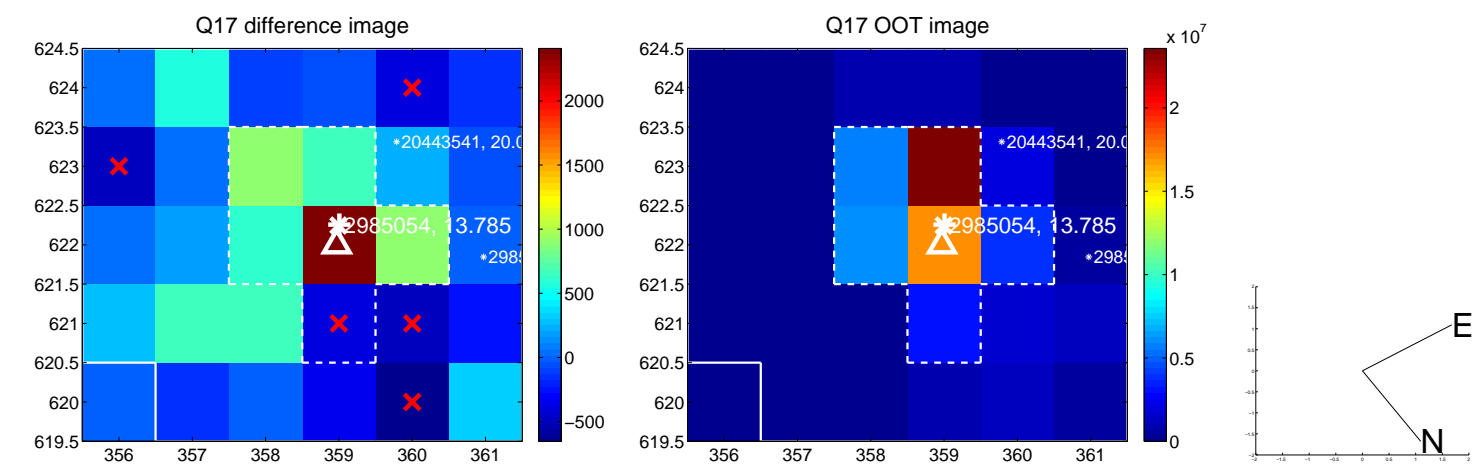
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



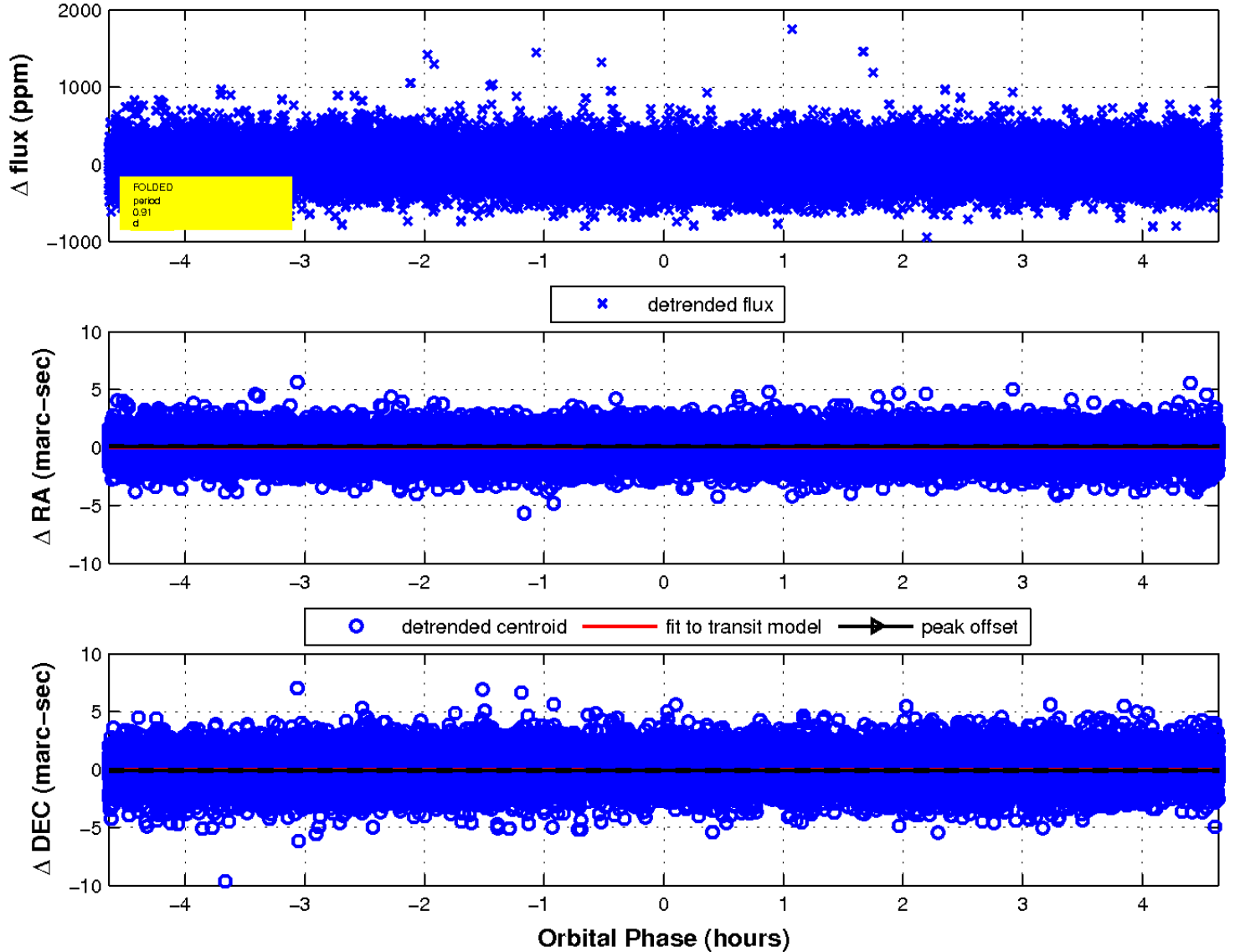
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

