

KIC 009532445

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})
009532445-01	OBS	No	0.940056	132.206822	5.9	7.984	8.6	7.7	2.42	7901	0.63	37295.21

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009532445-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_FEW_DIFFS

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

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

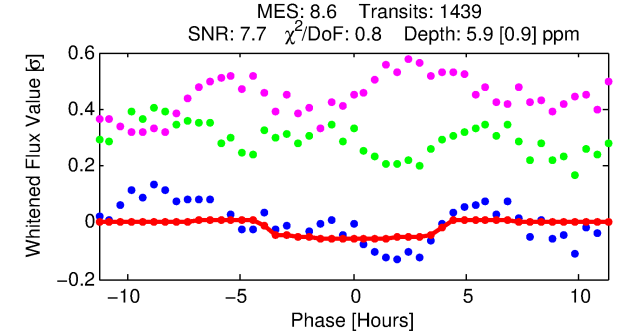
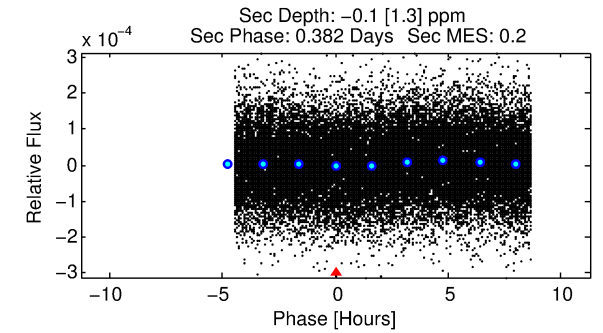
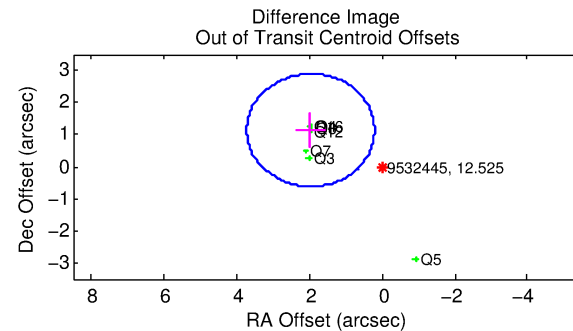
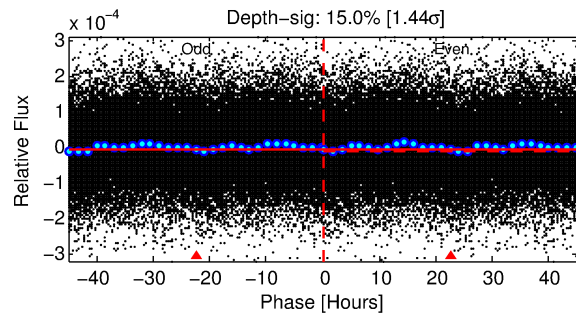
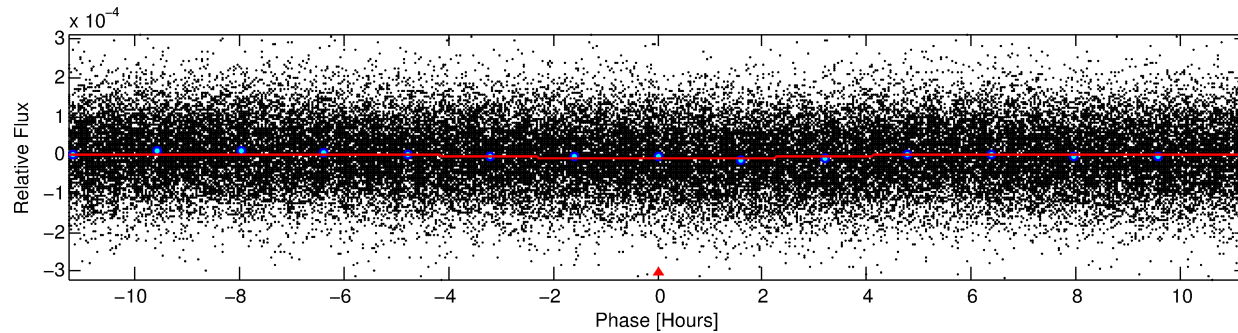
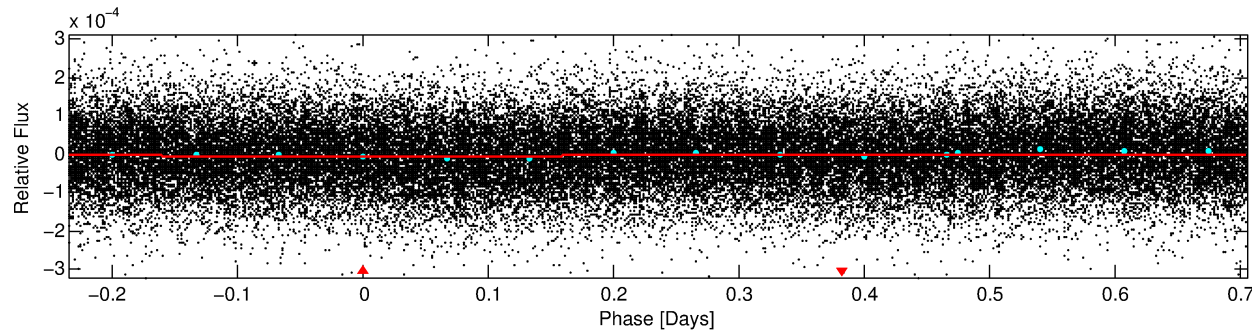
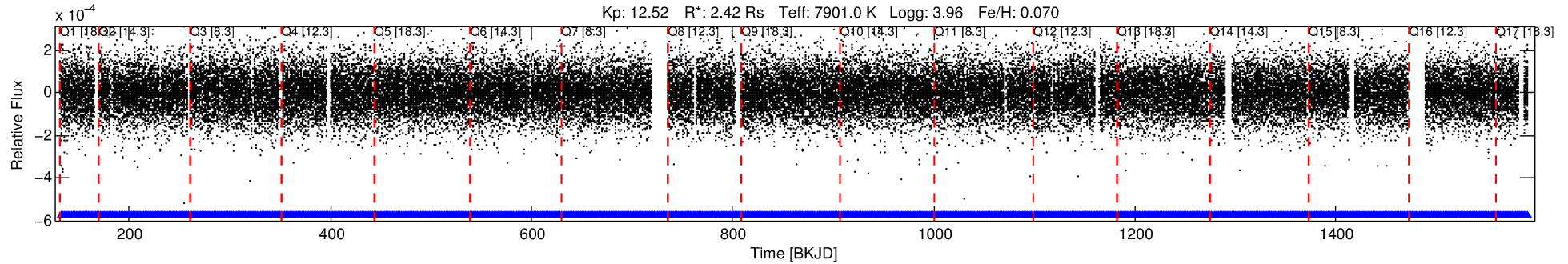
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009532445-01

No Significant Match Found

DV One-Page Summary

KIC: 9532445 Candidate: 1 of 1 Period: 0.940 d



DV Fit Results:

Period = 0.94006 [0.00002] d
Epoch = 132.2068 [0.0086] BKJD
Rp/R* = 0.0024 [0.0023]
a/R* = 1.07 [0.77]
b = 0.67 [4.88]
Seff = 37295.22 [15950.04]
Teq = 3544 [379] K
Rp = 0.63 [0.65] Re
a = 0.0234 [0.0061] AU
Ag = N/A
Teffp = N/A

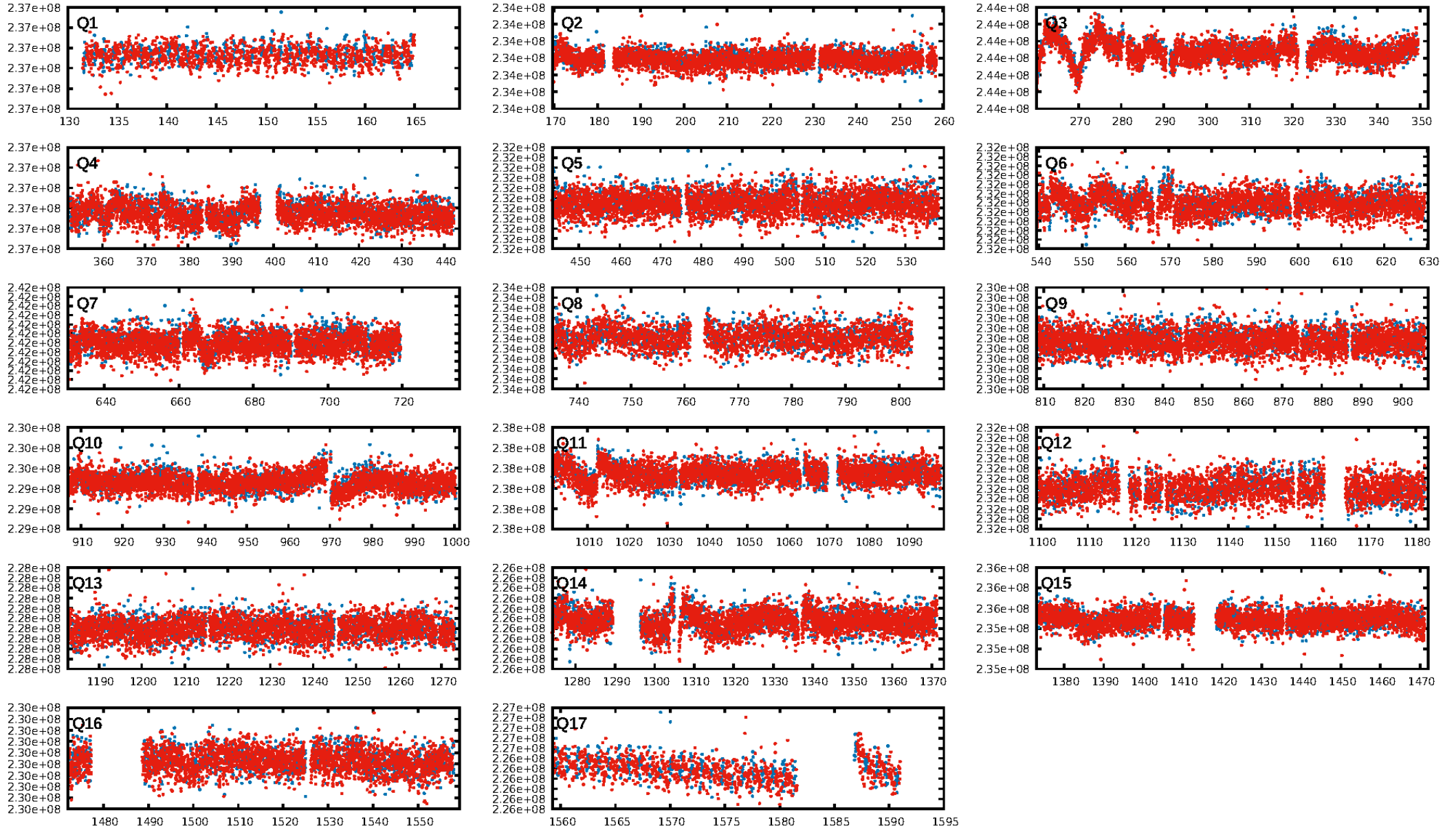
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1374/1374]
GhostDiagnostic-chr: 6.195
Centroid-sig: 0.0%
Centroid-so: 5.721 arcsec [3.31 σ]
OotOffset-rm: 2.270 arcsec [3.87 σ]
KicOffset-rm: 2.104 arcsec [3.15 σ]
OotOffset-st: 0/2/4/1 [7]
KicOffset-st: 0/2/4/1 [7]
DiffImageQuality-fgm: 0.00 [0/7]
DiffImageOverlap-fno: 1.00 [17/17]

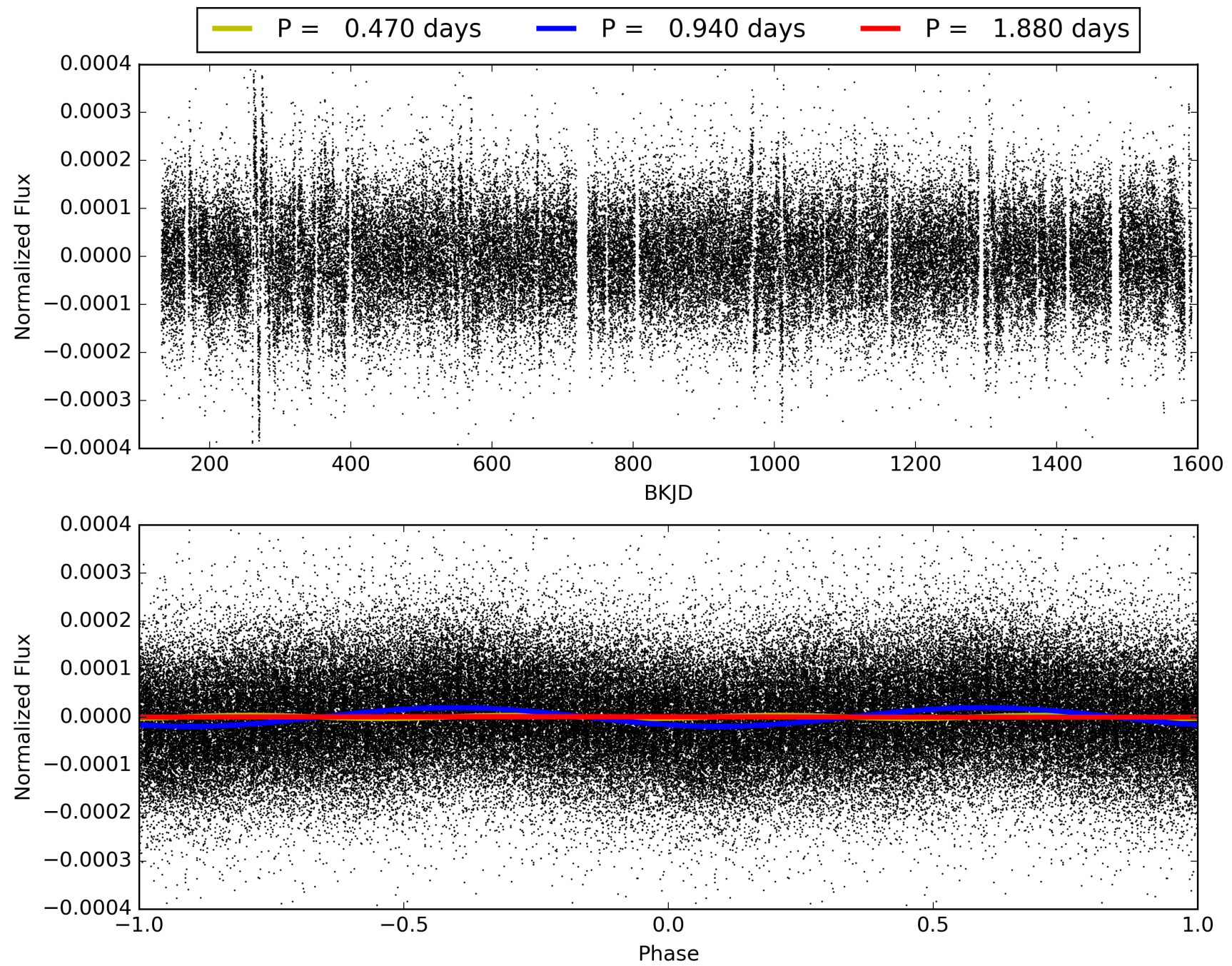
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 19:06:50 Z

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

TCE 009532445-01, PDC Light Curves

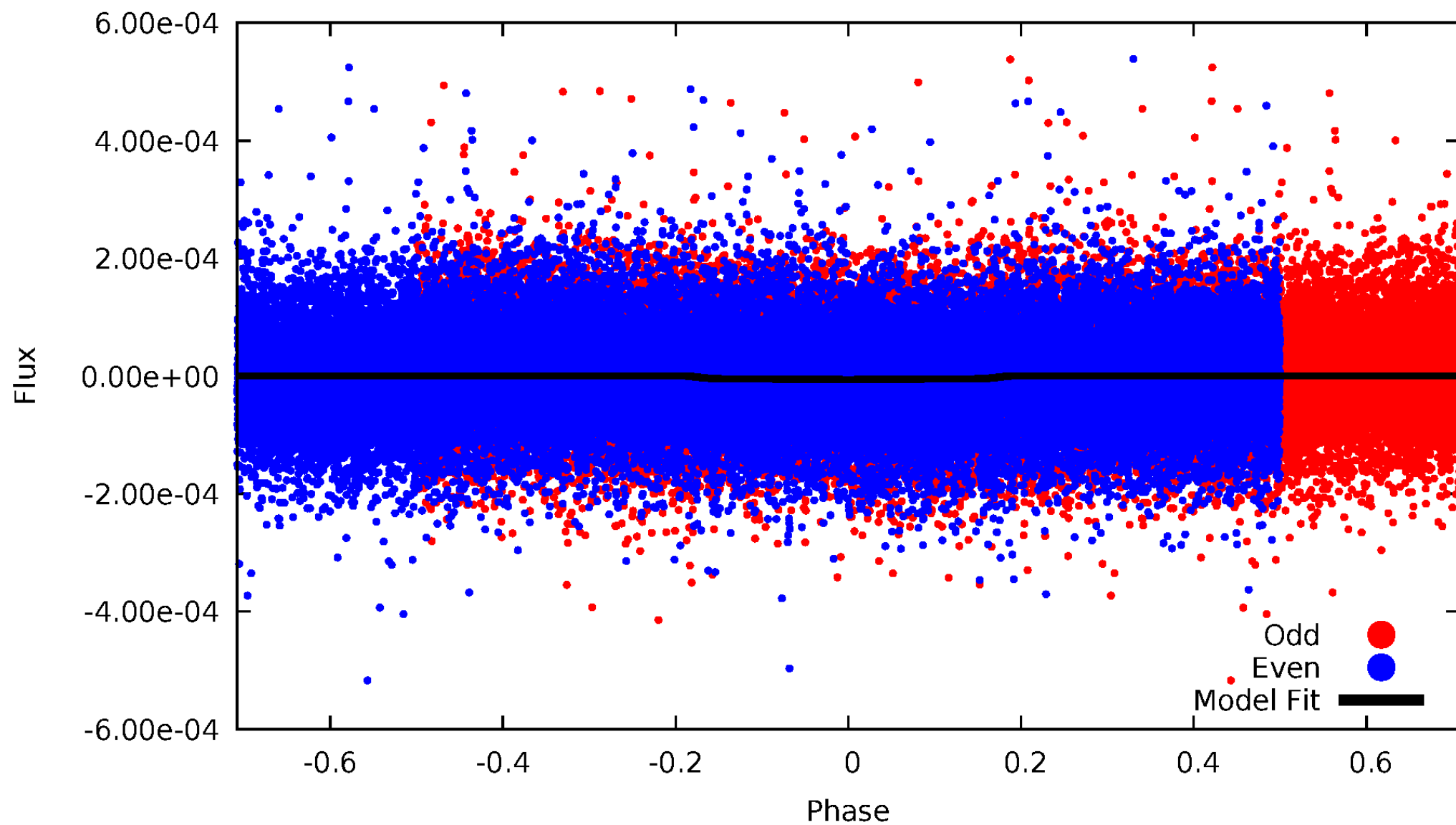


TCE 009532445-01



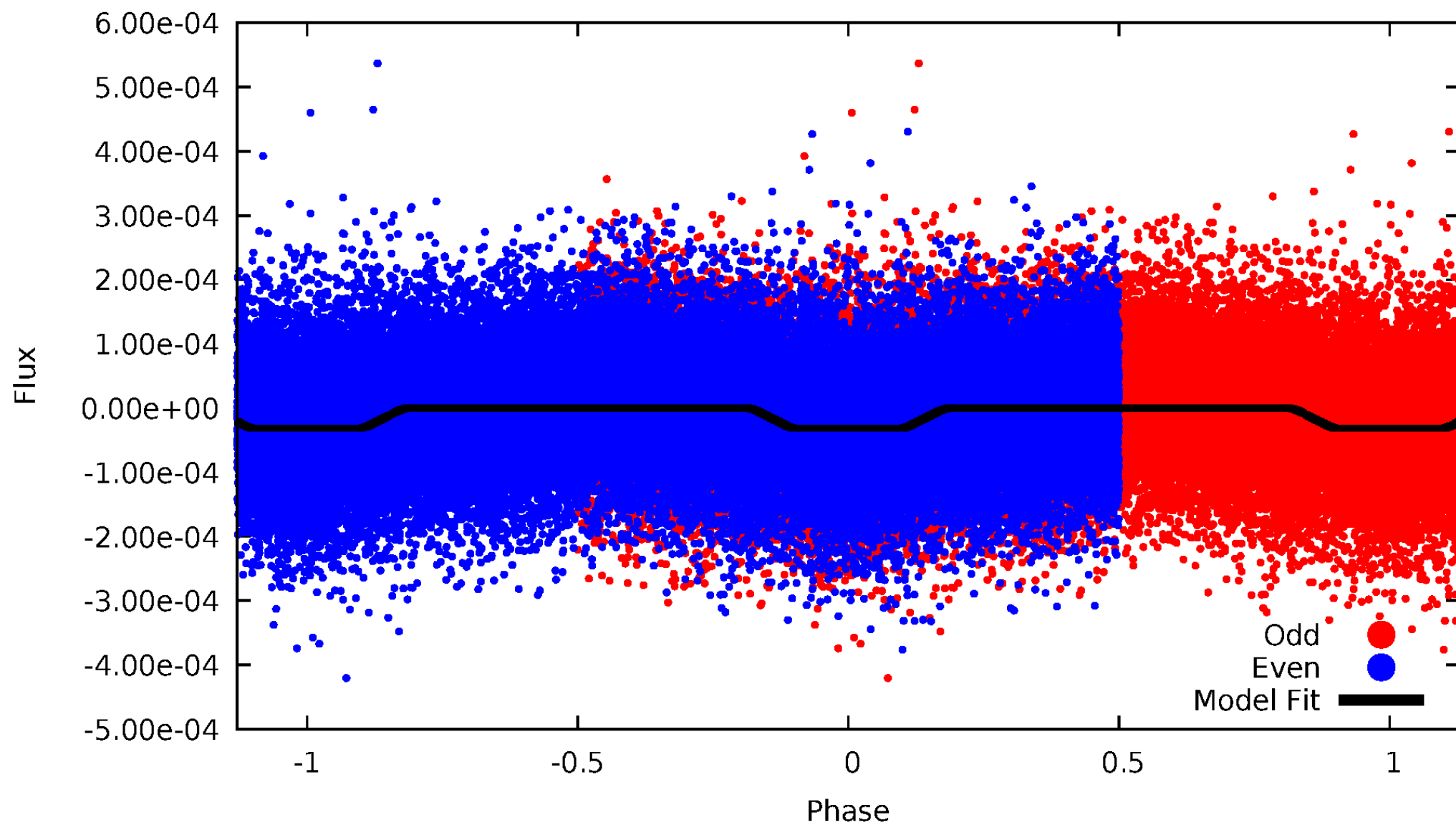
DV Odd/Even

TCE 009532445-01



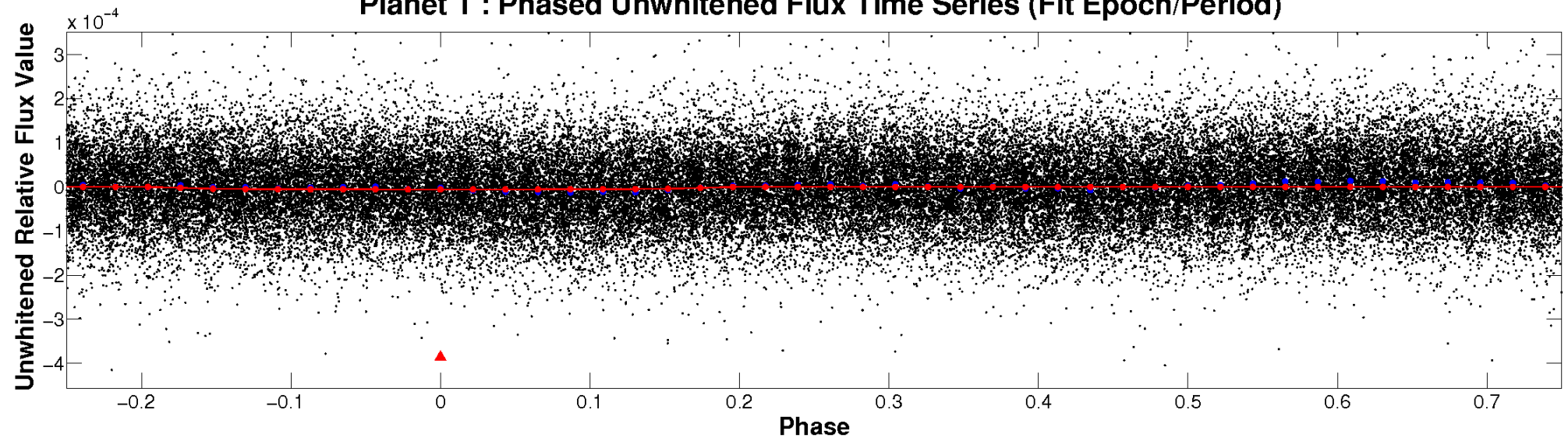
ALT Odd/Even

TCE 009532445-01

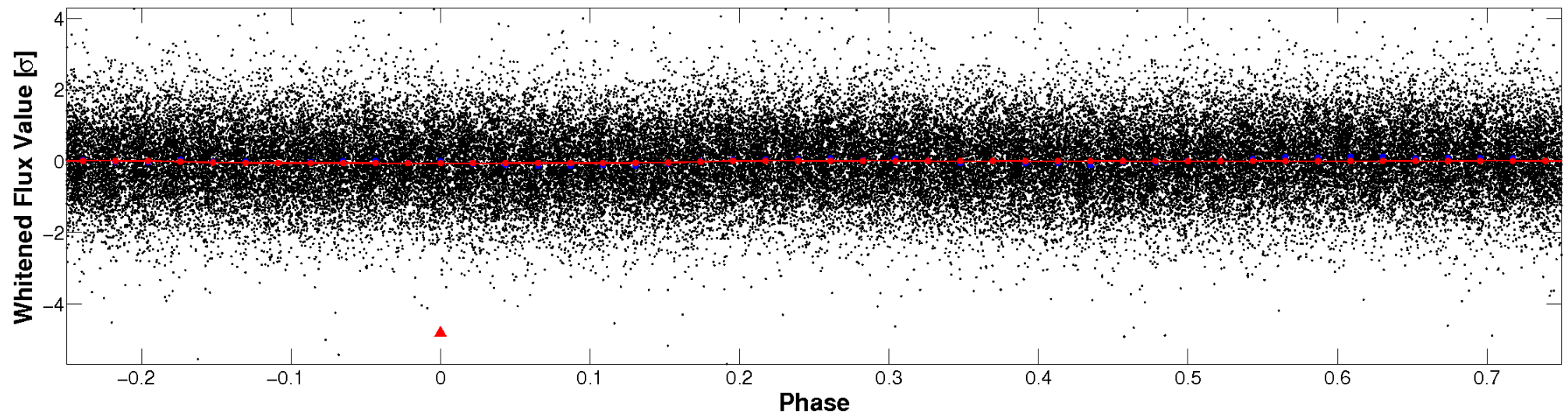


Non-Whitened Vs. Whitened Light Curve

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

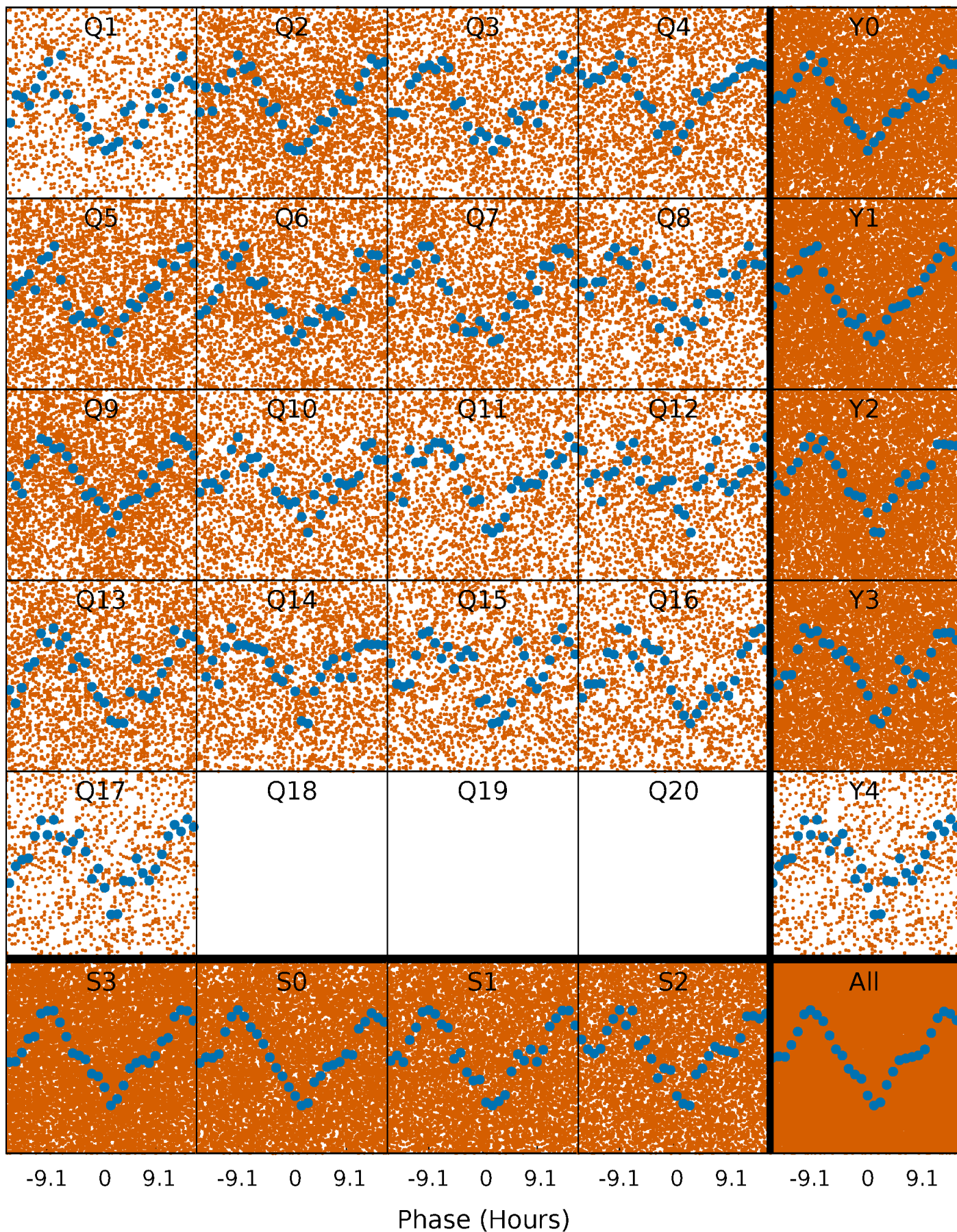


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



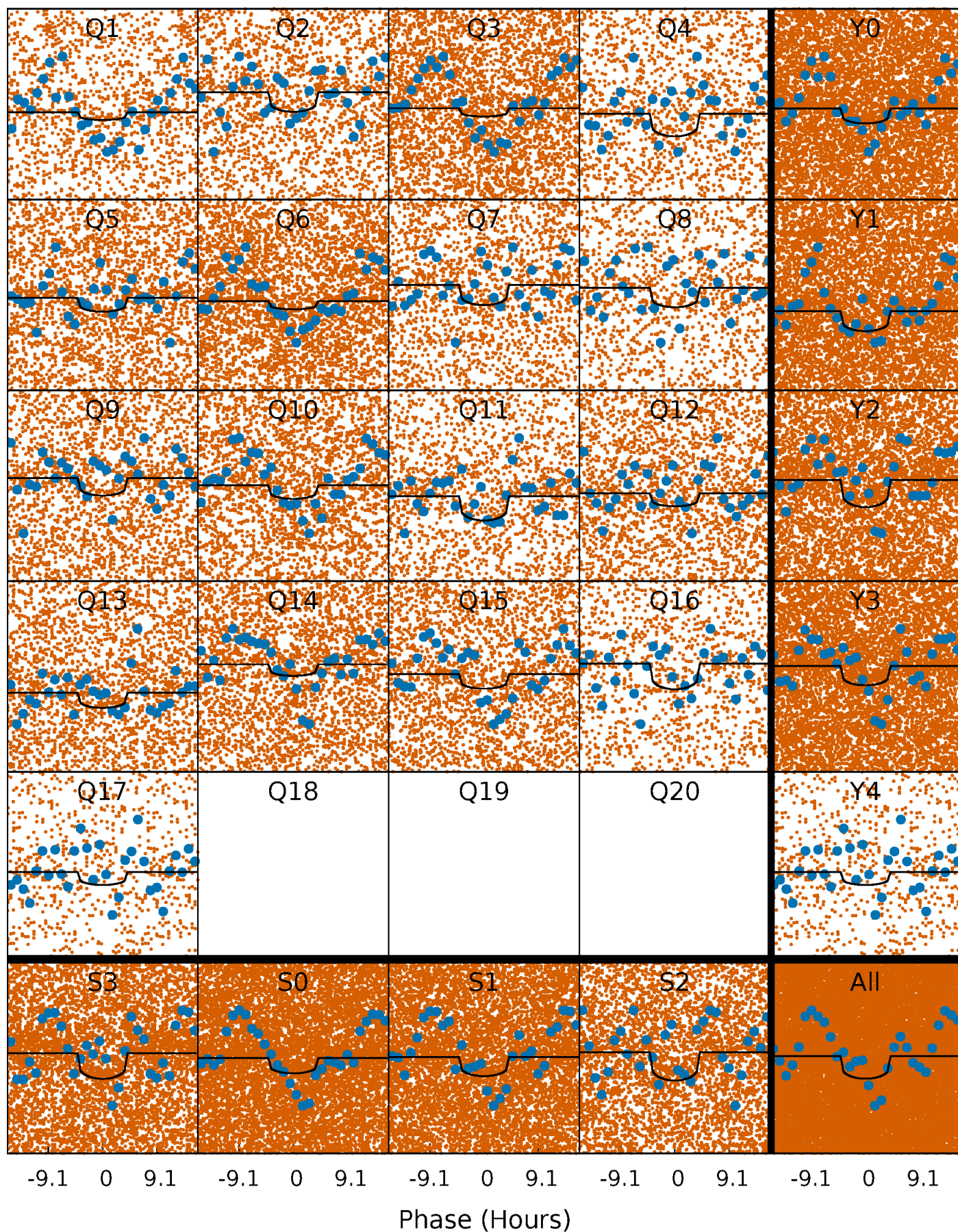
PDC Quarter-Phased Transit Curves

TCE 009532445-01 P= 0.940056 Days $T_0=132.206821$ (BKJD)



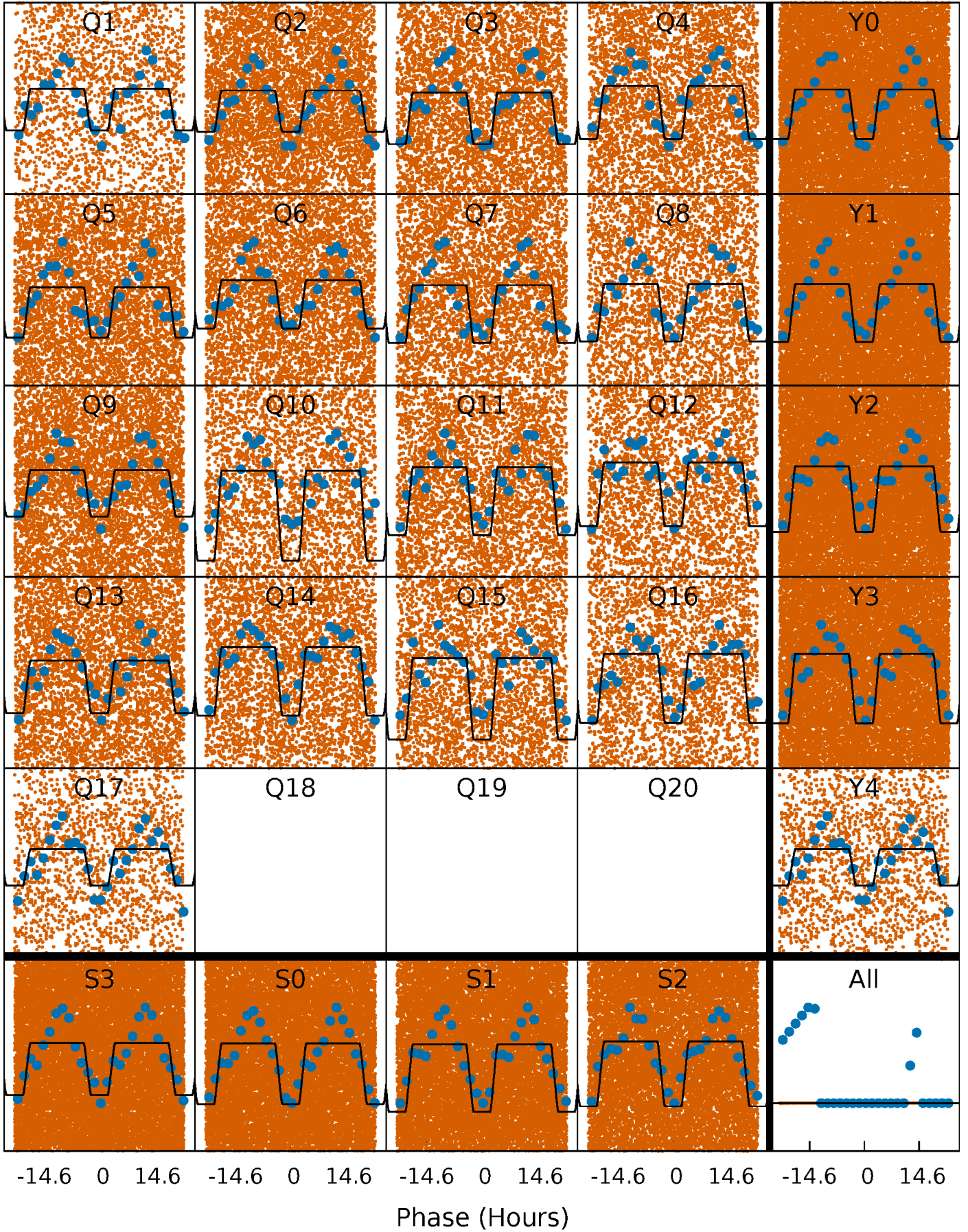
DV Quarter-Phased Transit Curves

TCE 009532445-01 P= 0.940056 Days $T_0=132.206821$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

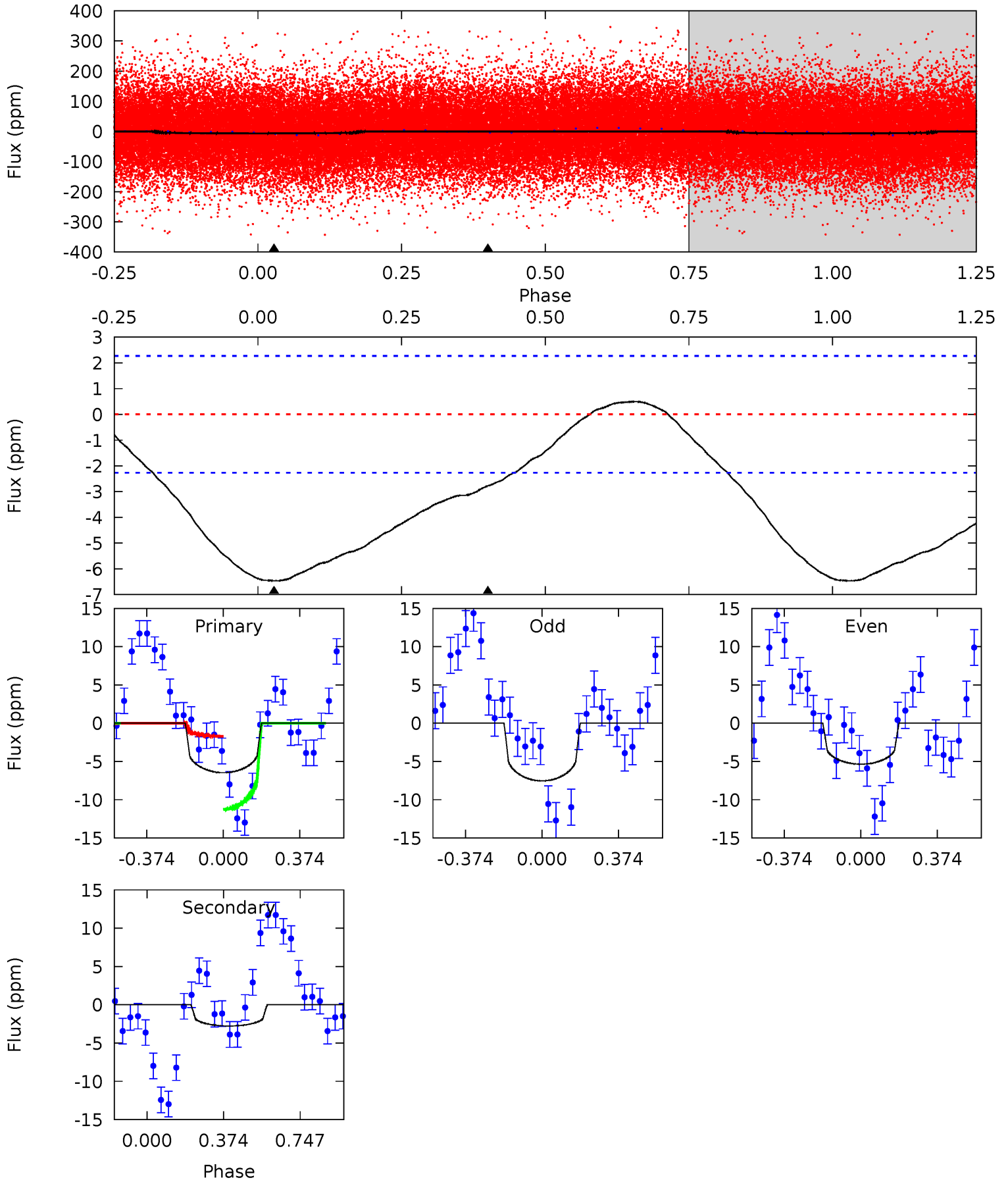
TCE 009532445-01 P= 0.940086 Days $T_0=132.253797$ (BKJD)



DV Model-Shift Uniqueness Test

009532445-01, P = 0.940056 Days, E = 131.266765 Days

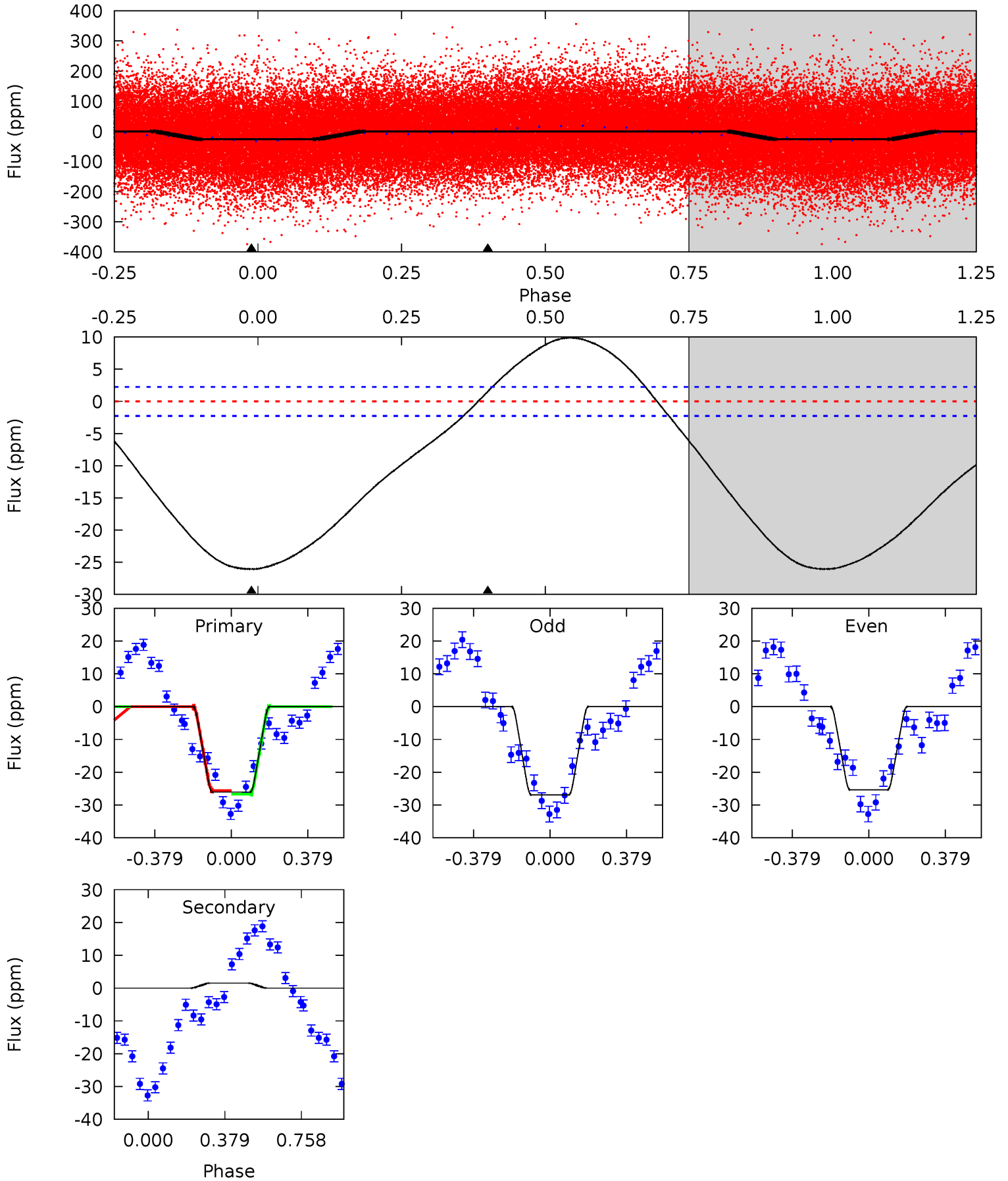
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.2	5.25	0	0	4.28	0.89	0.95	12.2	12.2	5.25	5.25	2.08	1.13	0.07	9.10



Alt Model-Shift Uniqueness Test

009532445-01, P = 0.940086 Days, E = 131.313711 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
49.6	-2.92	0	0	4.28	0.88	6.14	49.6	49.6	-2.92	-2.92	1.49	1.02	0.28	1.06



Stellar Parameters For KIC 009532445

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7901^{+220}_{-330}	$3.958^{+0.221}_{-0.136}$	$0.070^{+0.250}_{-0.400}$	$2.423^{+0.484}_{-0.726}$	$1.943^{+0.249}_{-0.405}$	$0.192^{+0.266}_{-0.072}$
	+3%/-4%	+6%/-3%	+357%/-571%	+20%/-30%	+13%/-21%	+138%/-37%
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 009532445-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-3 ± 1	$0.70^{+0.54}_{-0.45}$	4918^{+331}_{-387}	5677^{+5613}_{-1744}	$1.616^{+10.263}_{-1.097}$
Alt.	2 ± 1	$1.44^{+0.72}_{-0.63}$	4895^{+358}_{-356}	-4668^{+325}_{-609}	$-0.219^{+0.134}_{-0.477}$

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

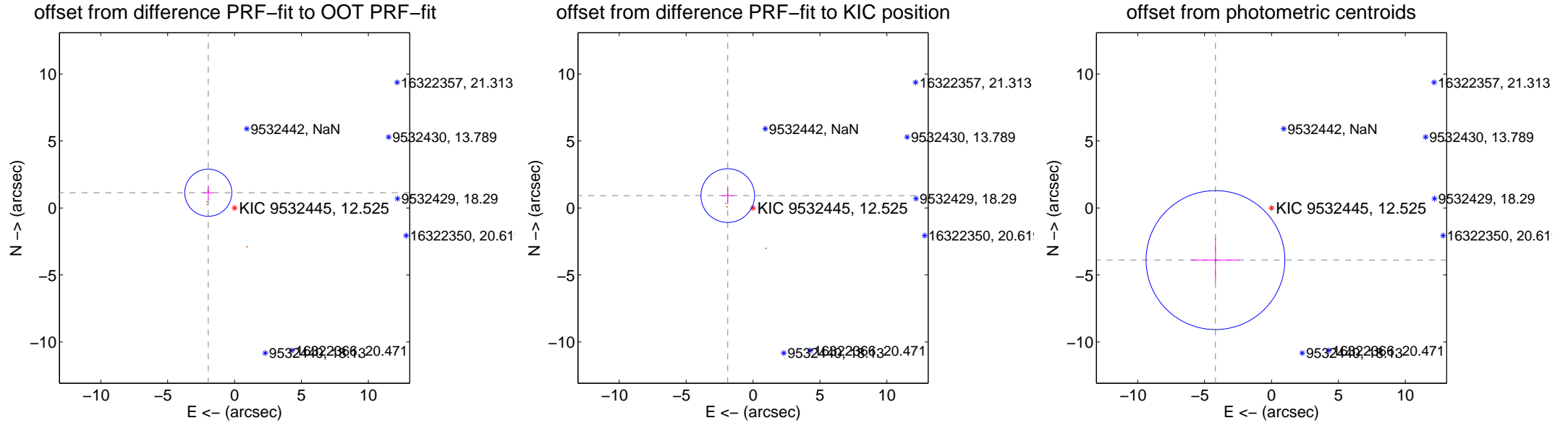
DV Centroid Data

Supplemental centroid analysis for 009532445-01. Kepler magnitude: 12.53. Transit SNR 7.67

There are 0 quarters with good PRF difference image offsets

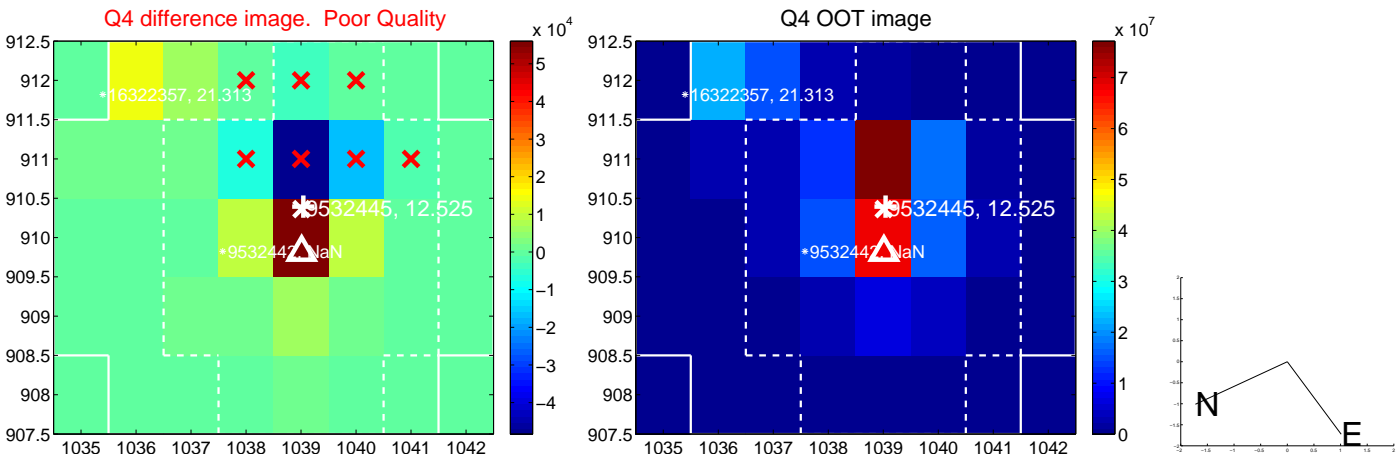
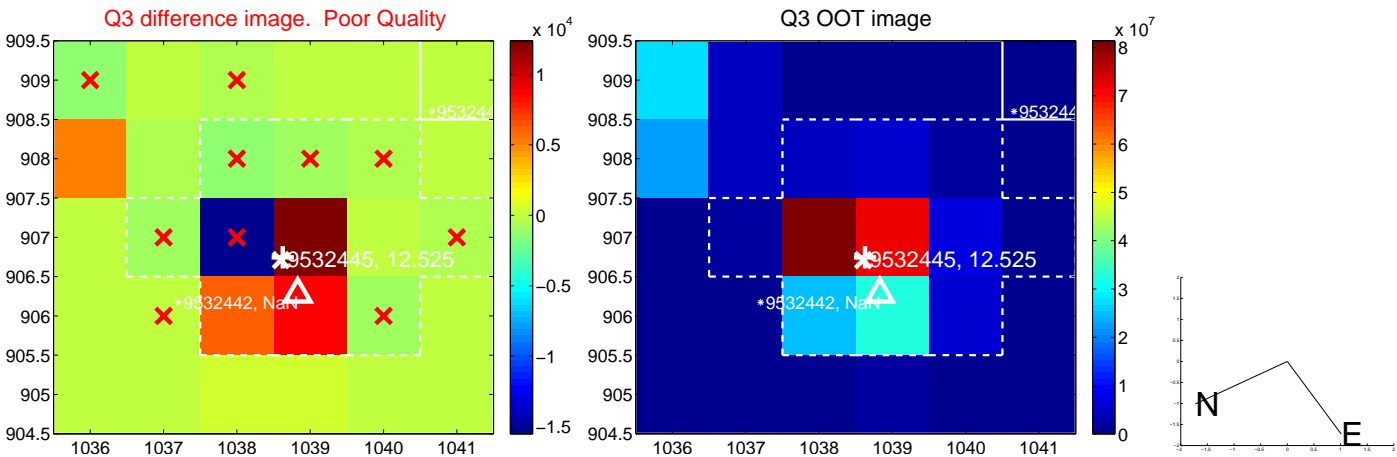
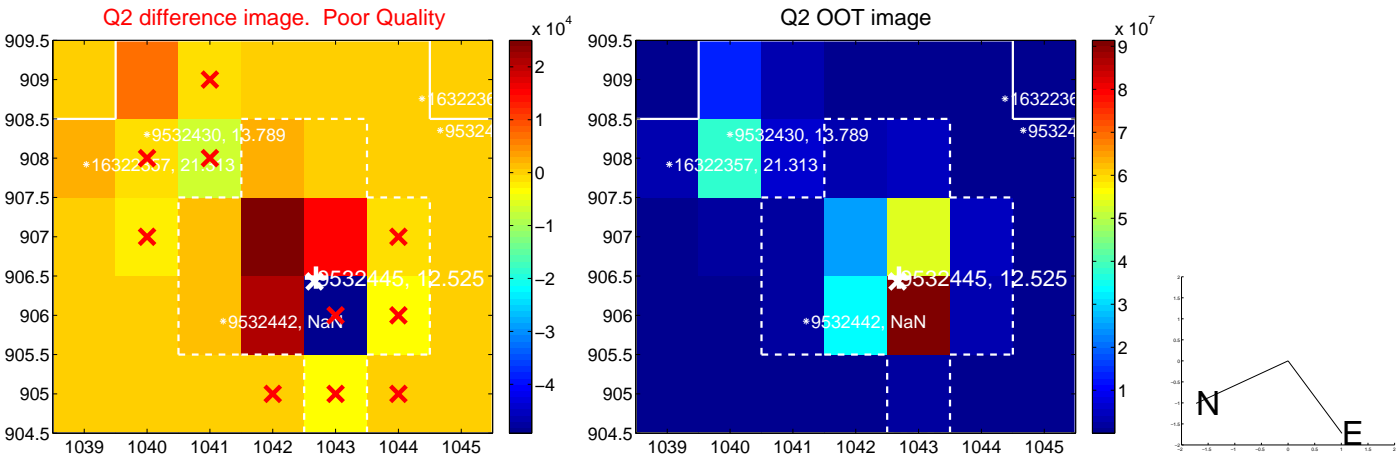
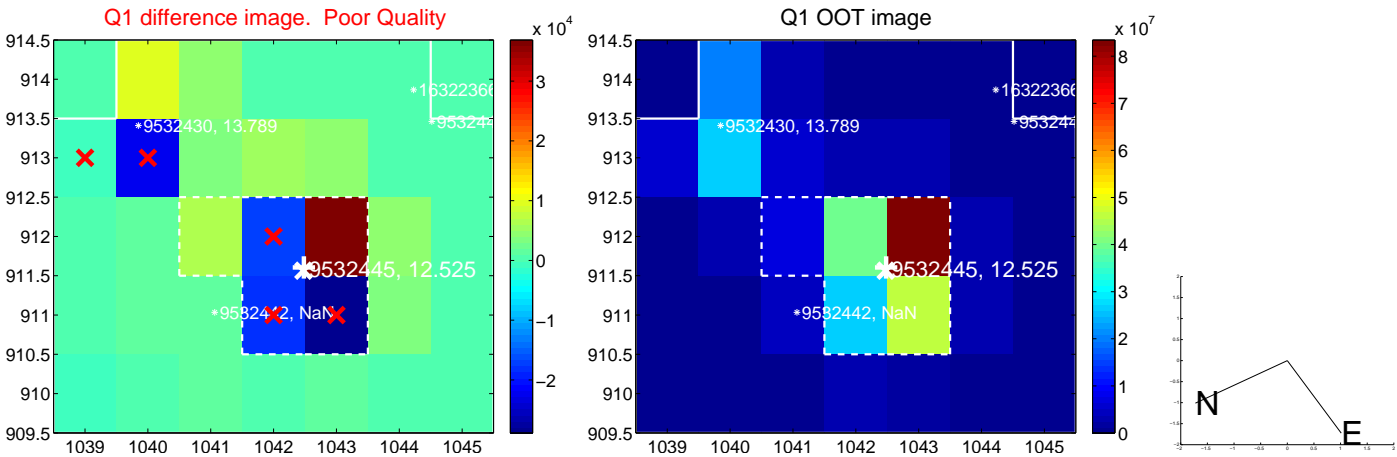
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.270 ± 0.586	3.87	1.965 ± 0.381	1.137 ± 0.532
PRF-fit source offset from KIC position	2.104 ± 0.669	3.15	1.891 ± 0.456	0.923 ± 0.606
photometric centroid source offset	5.72 ± 1.73	3.31	4.19 ± 1.81	-3.89 ± 1.63

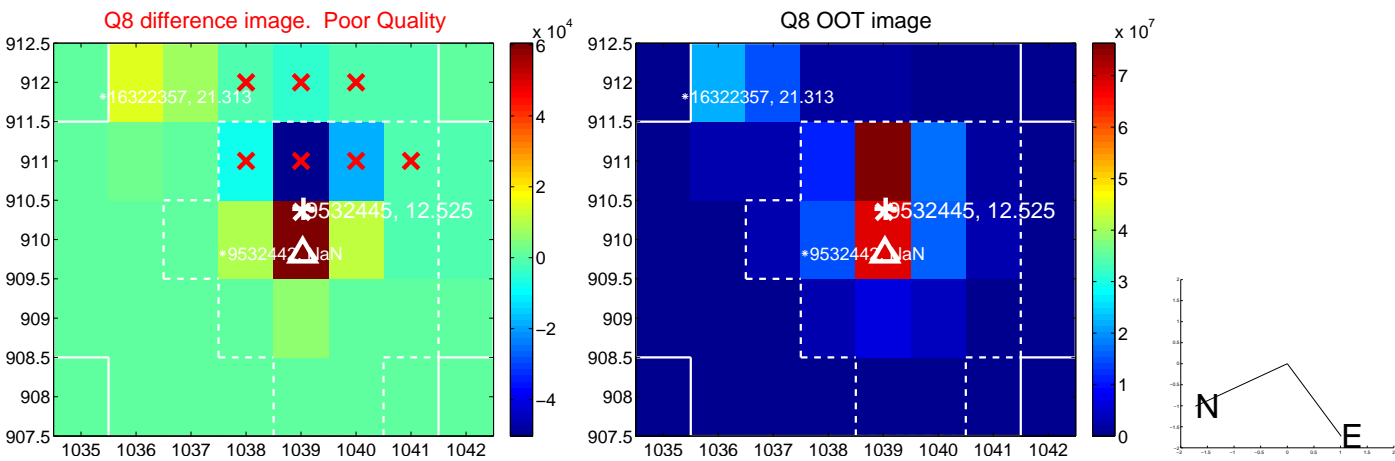
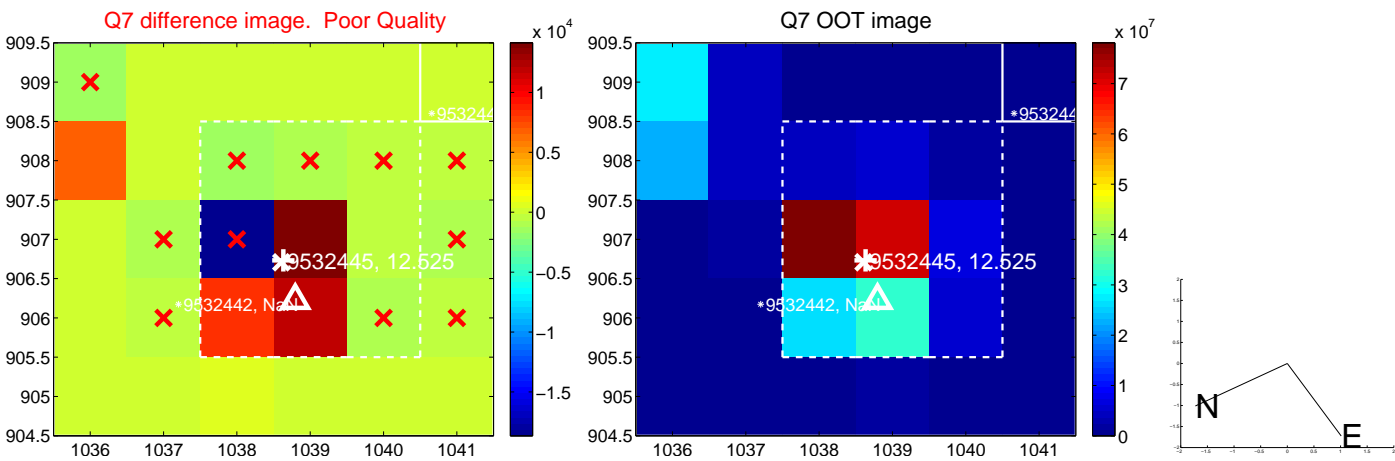
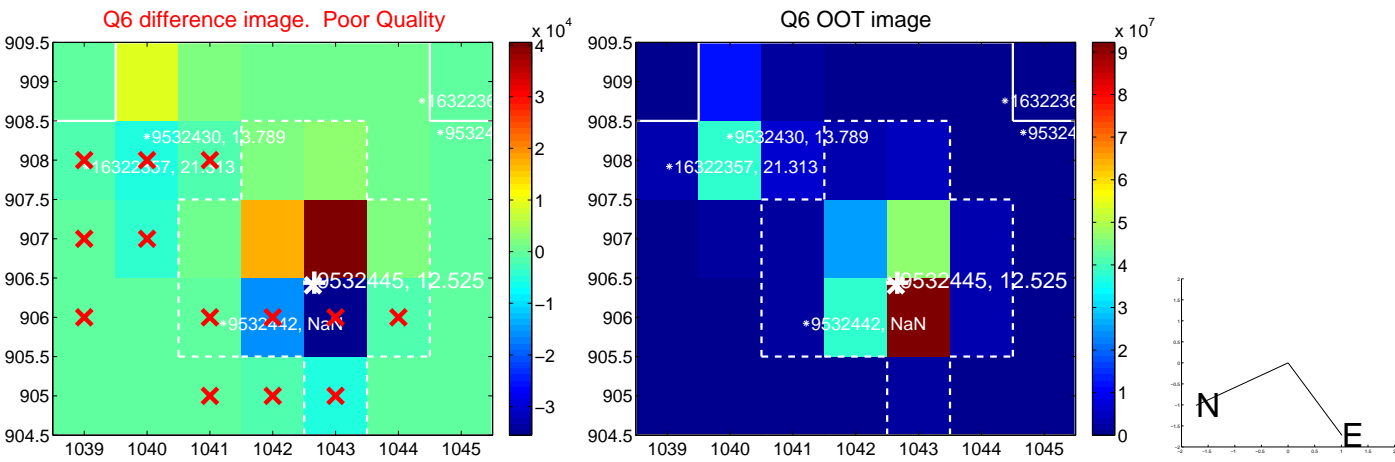
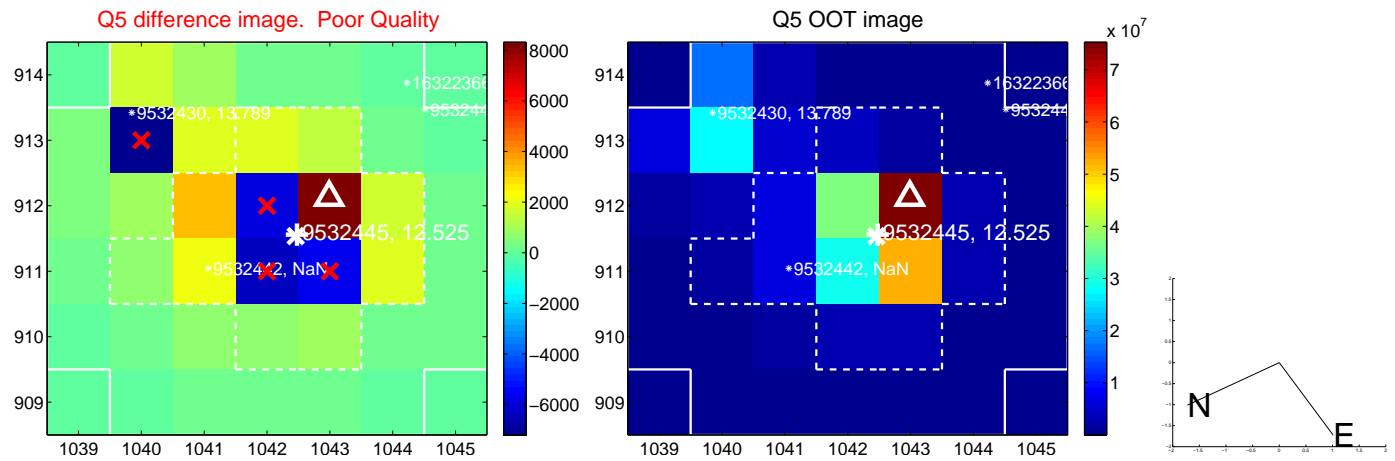


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

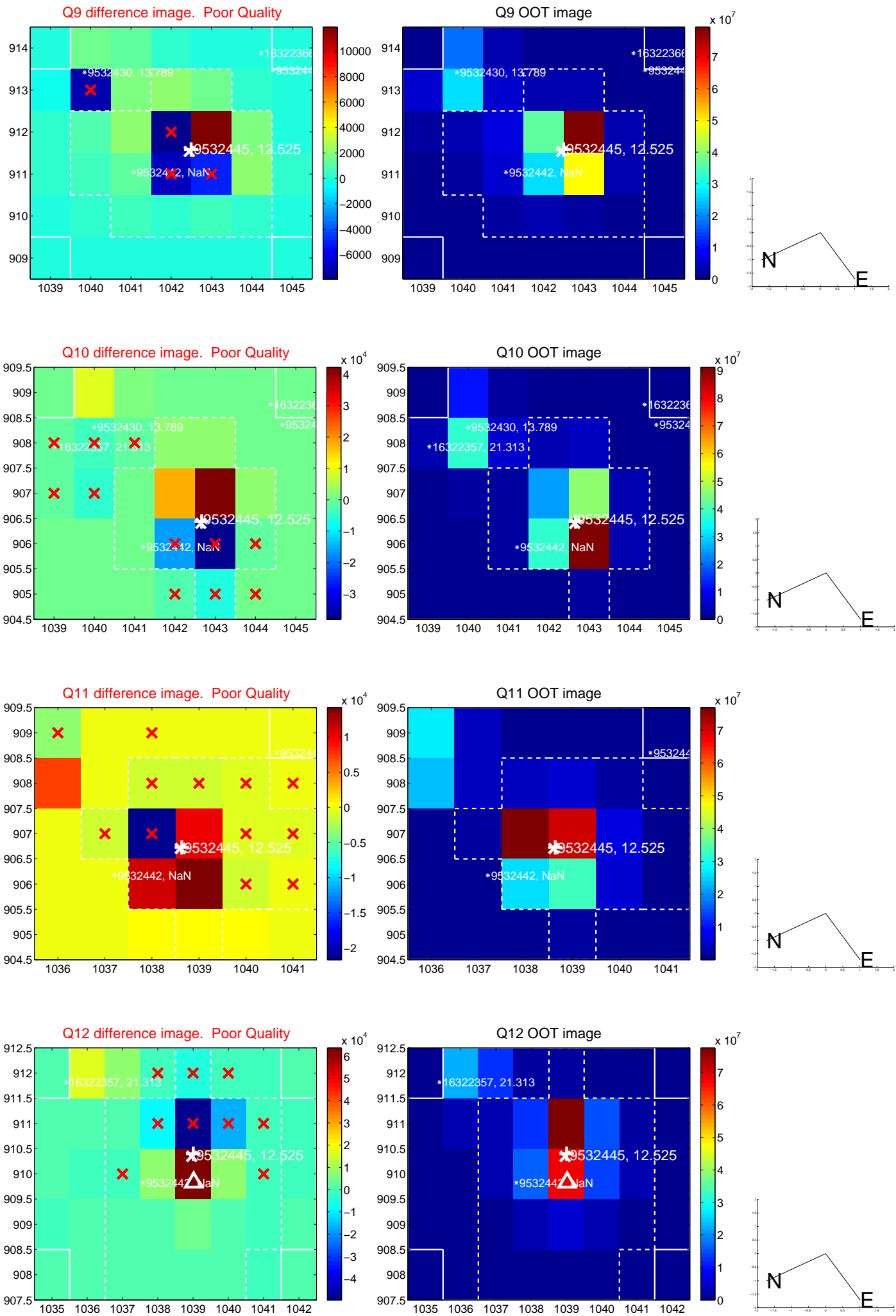
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



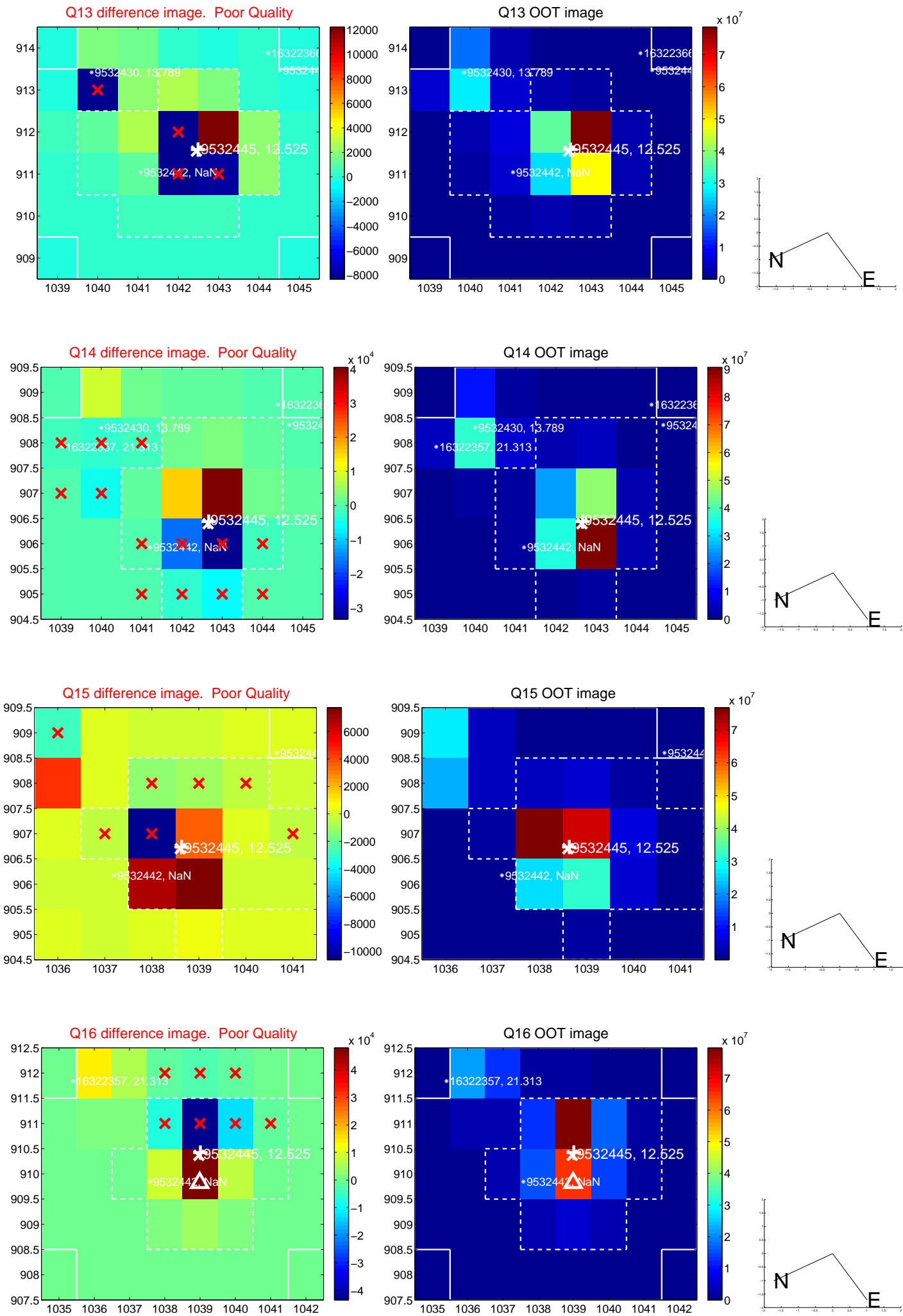
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



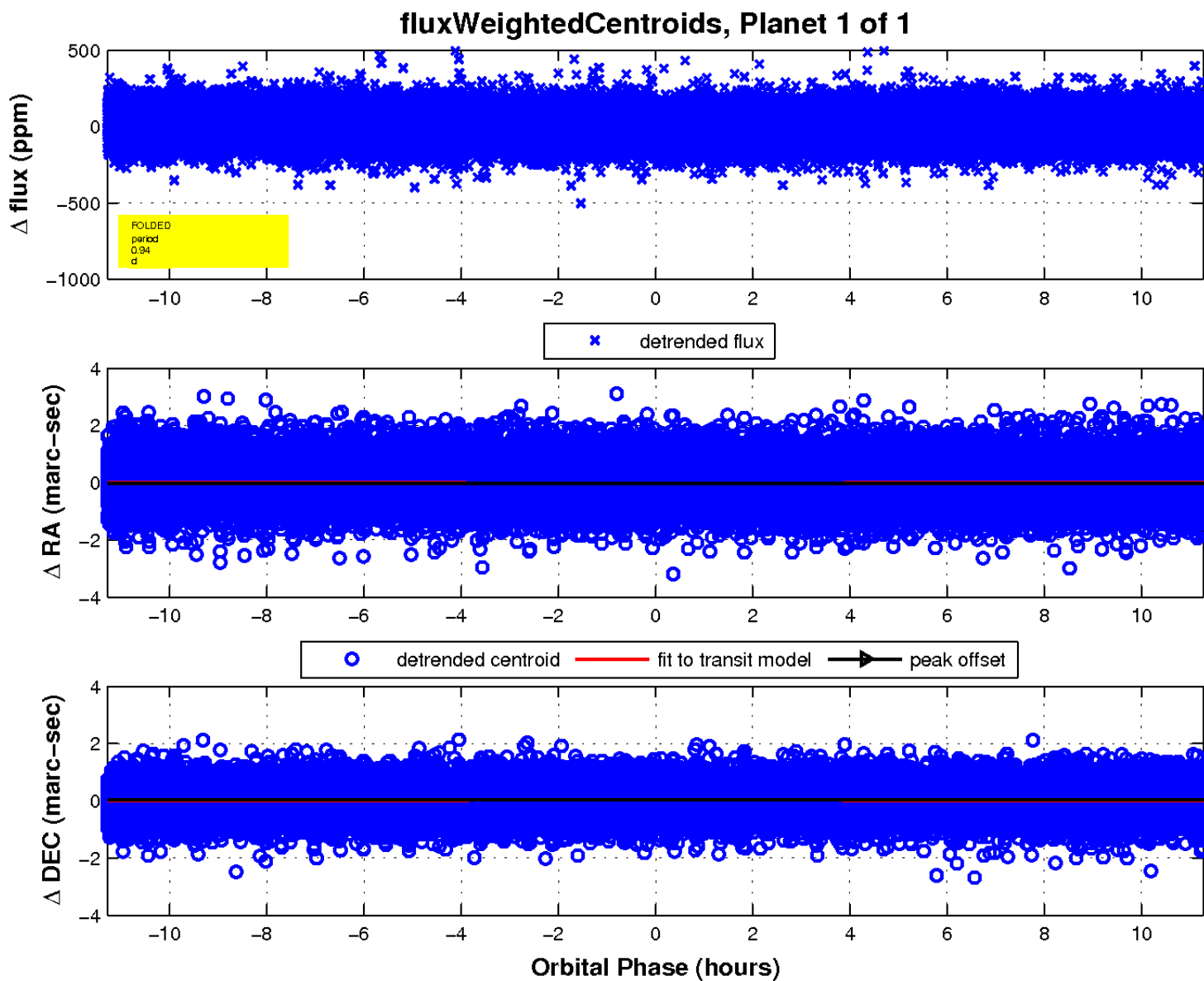
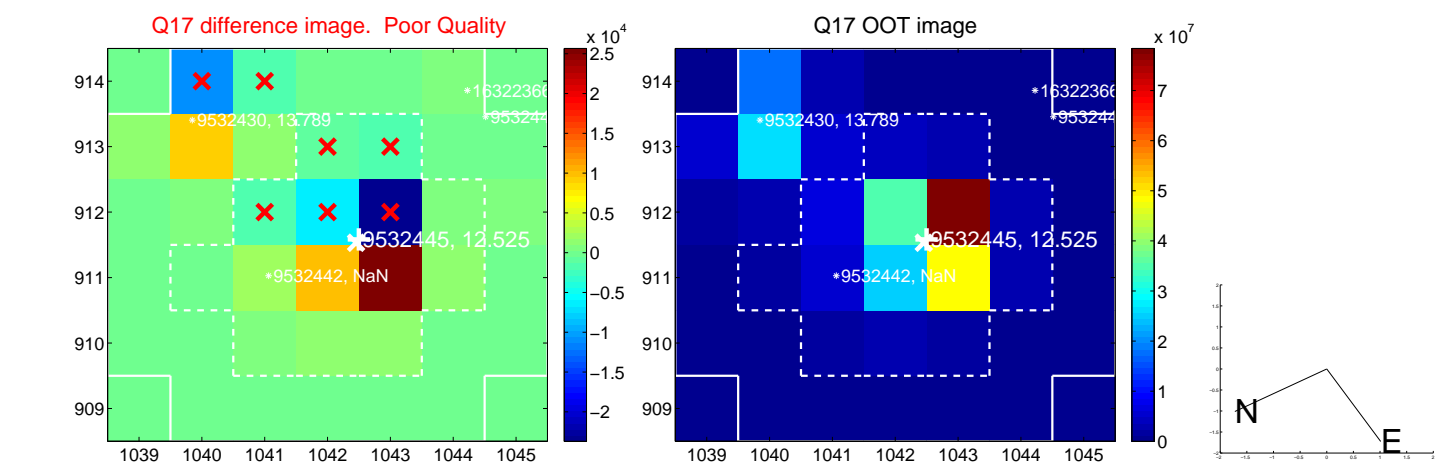
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

