

KIC 003559933

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})
003559933-01	OBS	No	0.564155	131.758736	19.7	0.778	8.5	3.9	5.78	6845	2.77	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003559933-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

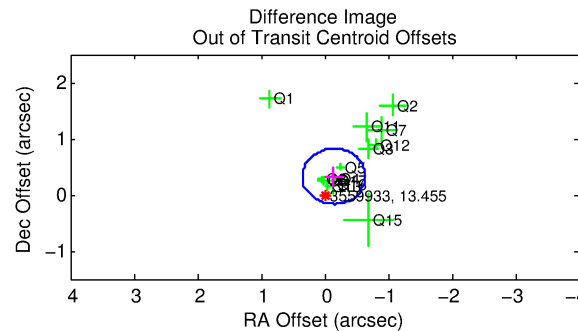
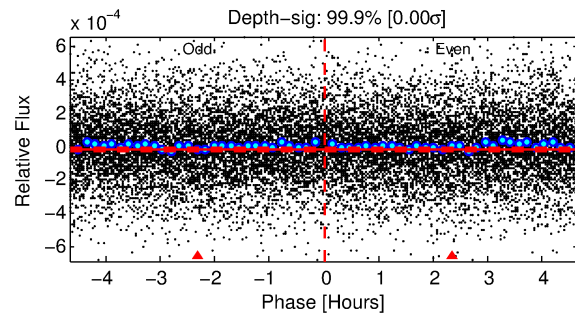
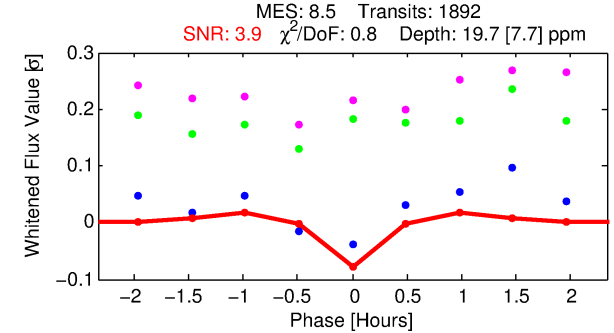
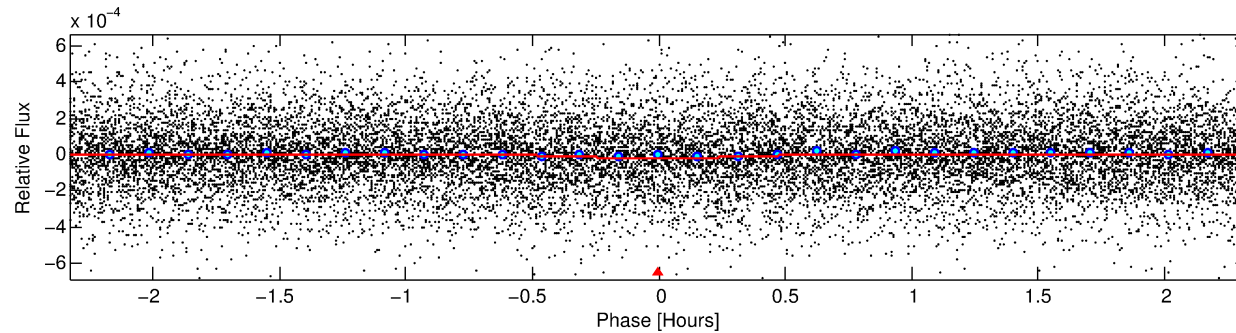
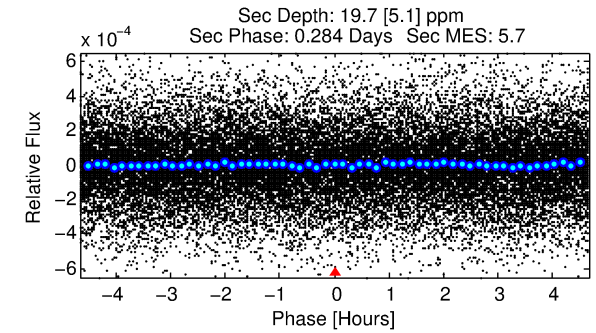
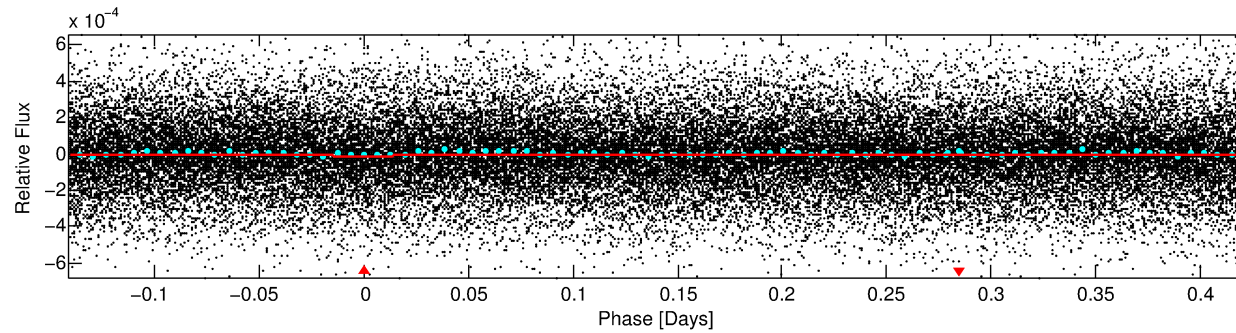
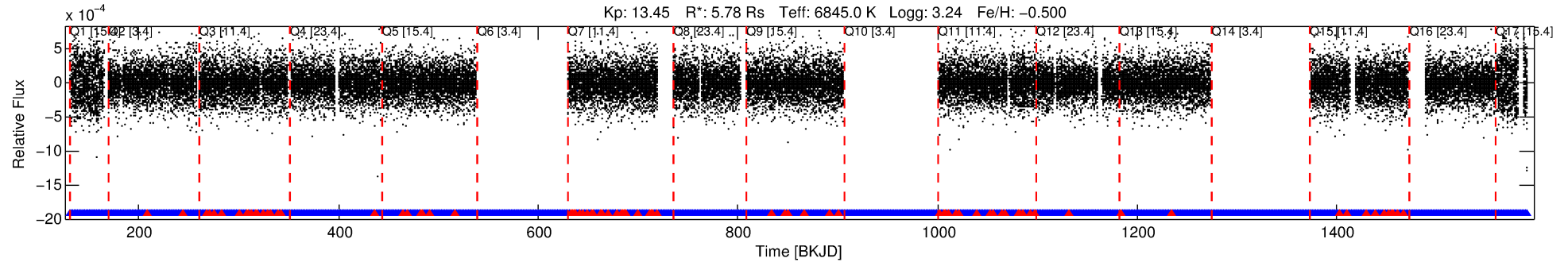
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003559933-01

No Significant Match Found

DV One-Page Summary

KIC: 3559933 Candidate: 1 of 1 Period: 0.564 d



DV Fit Results:

Period = 0.56416 [0.00003] d
Epoch = 131.7587 [0.0030] BKJD
Rp/R* = 0.0044 [0.0018]
a/R* = 4.17 [8.25]
b = 0.68 [1.66]
Seff = N/A
Teq = N/A
Rp = 2.77 [1.82] Re
a = N/A
Ag = N/A
Teffp = N/A

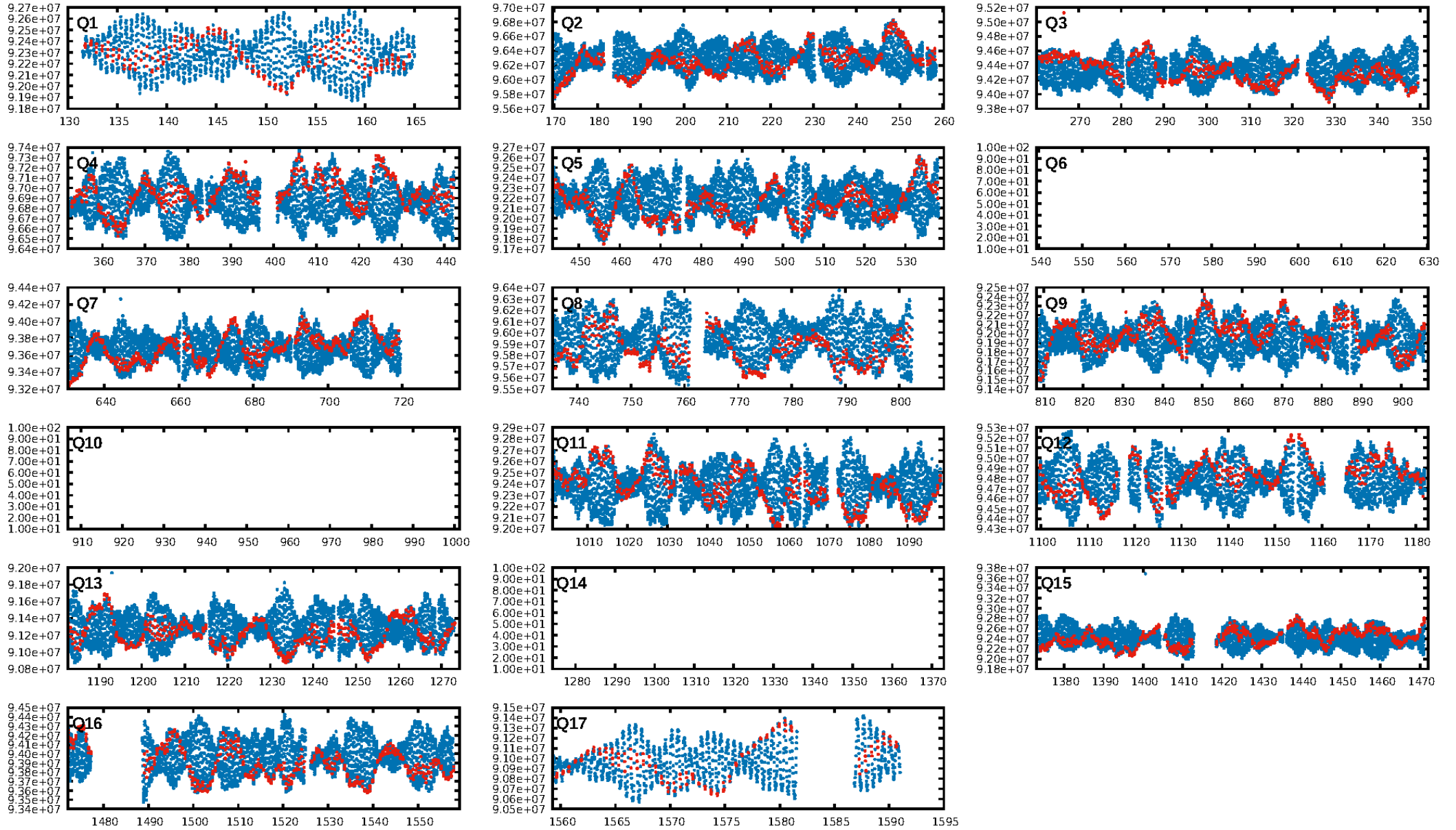
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.79e-18
RollingBand-fgt: 0.95 [1695/1787]
GhostDiagnostic-chr: 1.219
Centroid-sig: 35.3%
Centroid-so: 2.228 arcsec [0.83σ]
OotOffset-rm: 0.358 arcsec [2.17σ]
KicOffset-rm: 0.372 arcsec [2.23σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 0.57 [8/14]
DiffImageOverlap-fno: 1.00 [14/14]

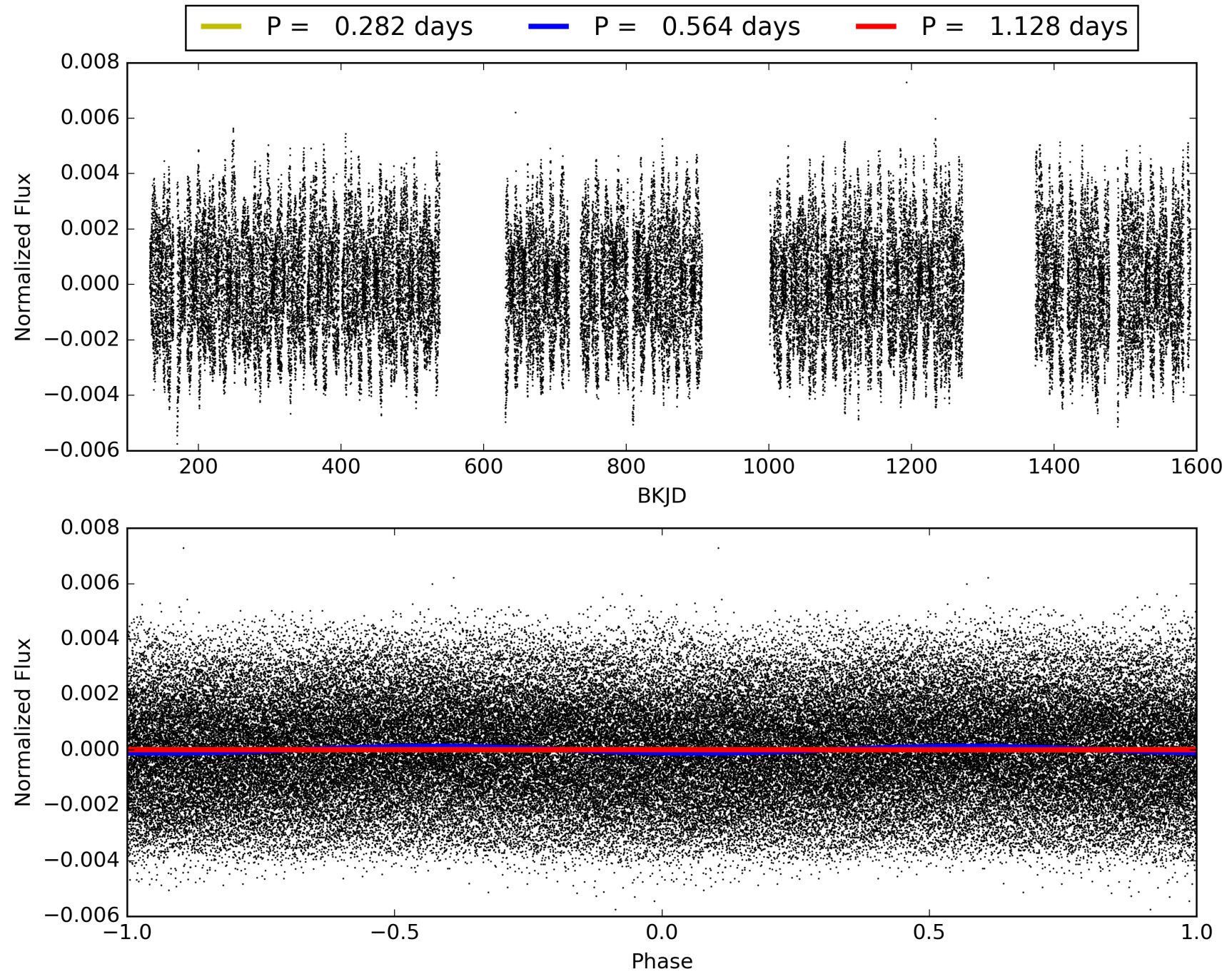
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 18:38:26 Z

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

TCE 003559933-01, PDC Light Curves

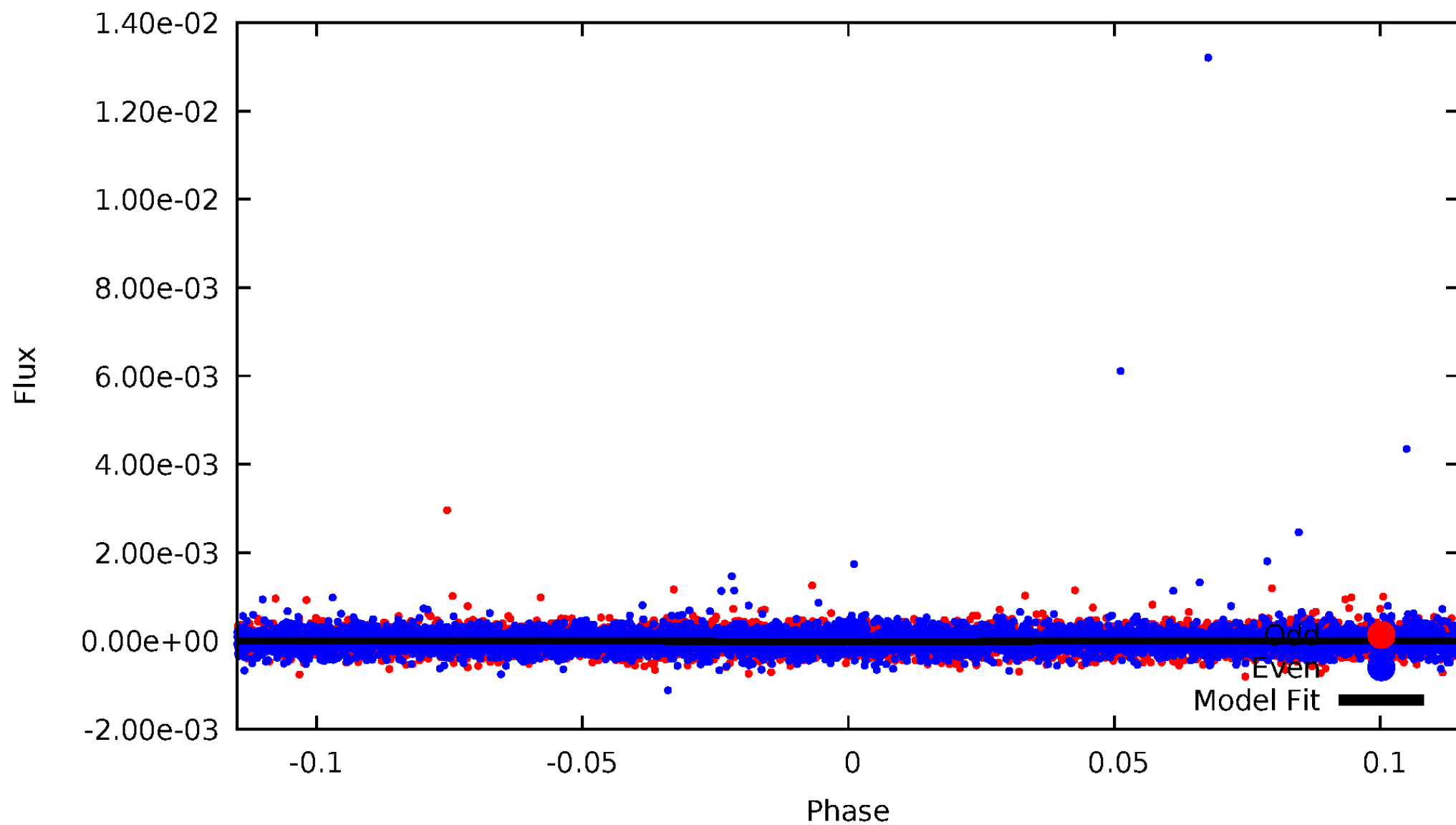


TCE 003559933-01



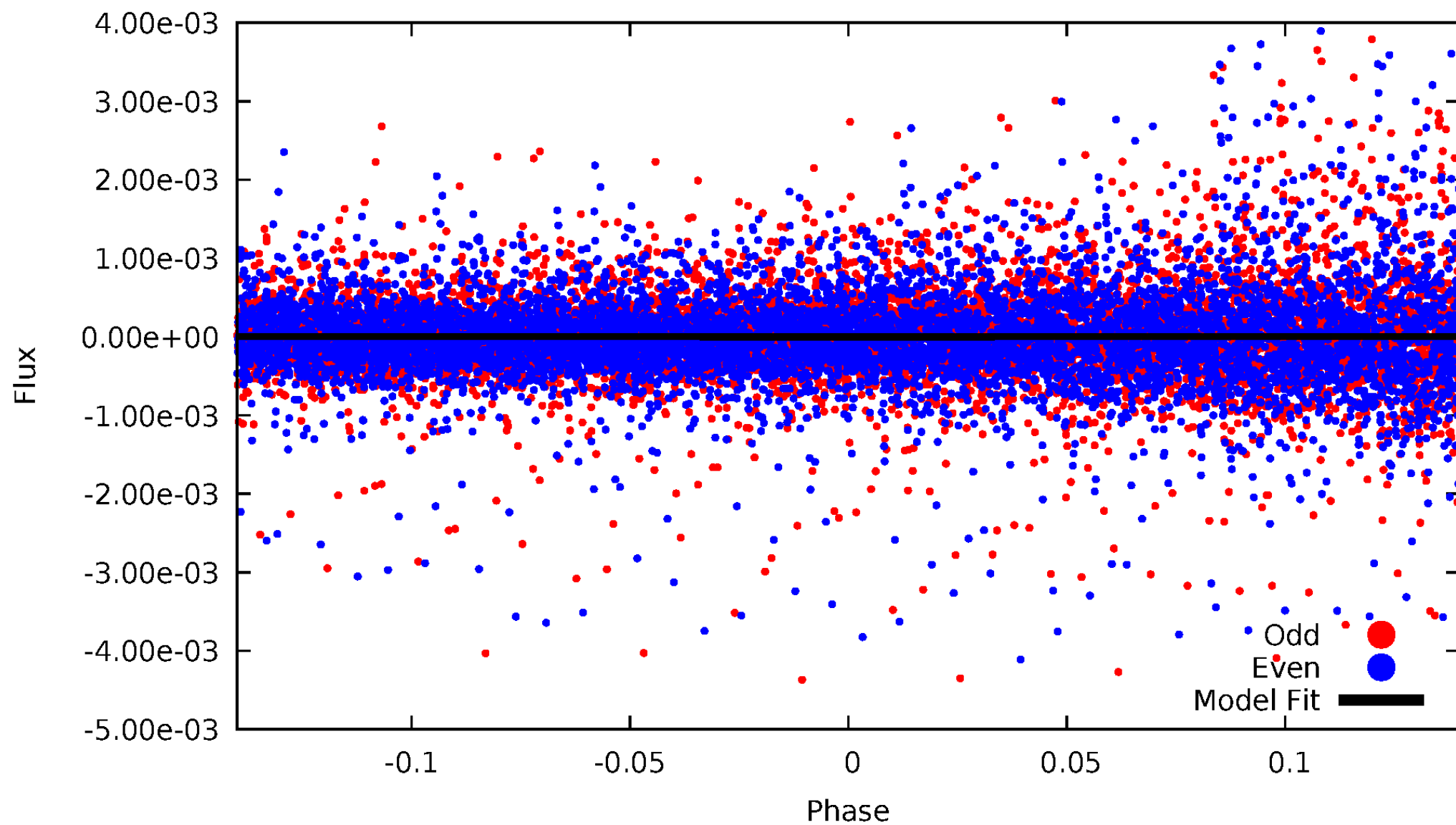
DV Odd/Even

TCE 003559933-01

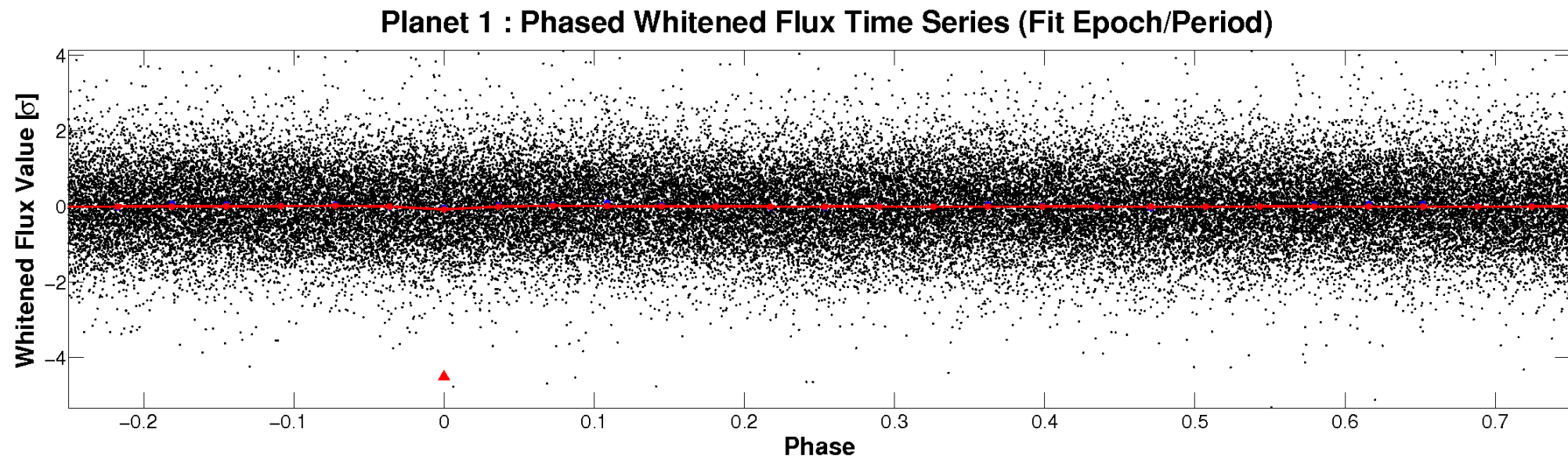
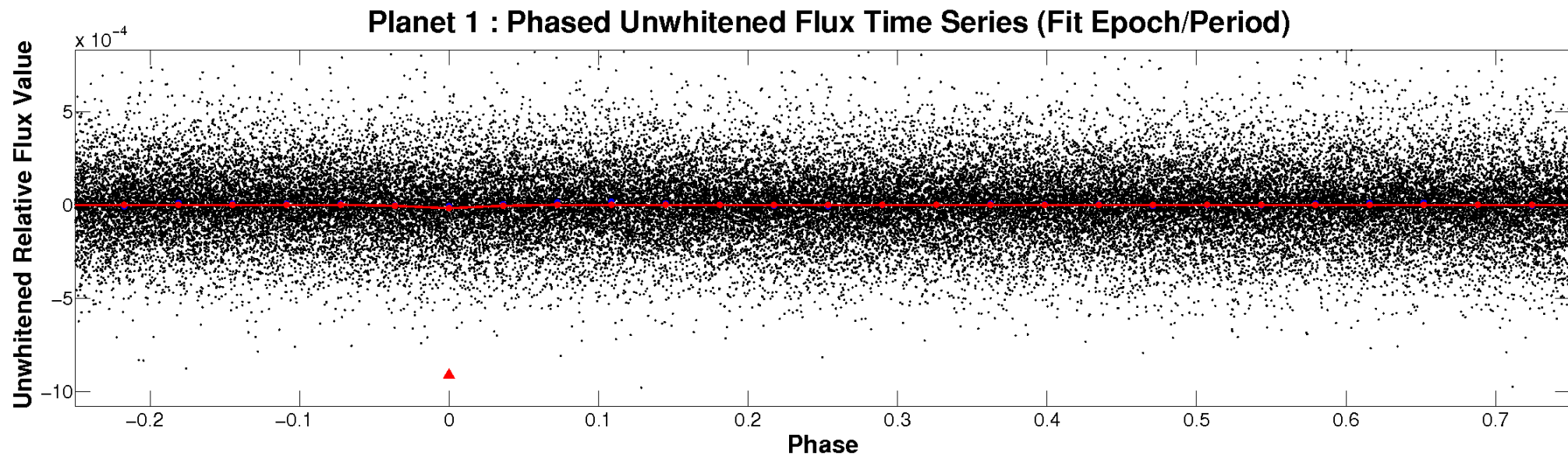


ALT Odd/Even

TCE 003559933-01

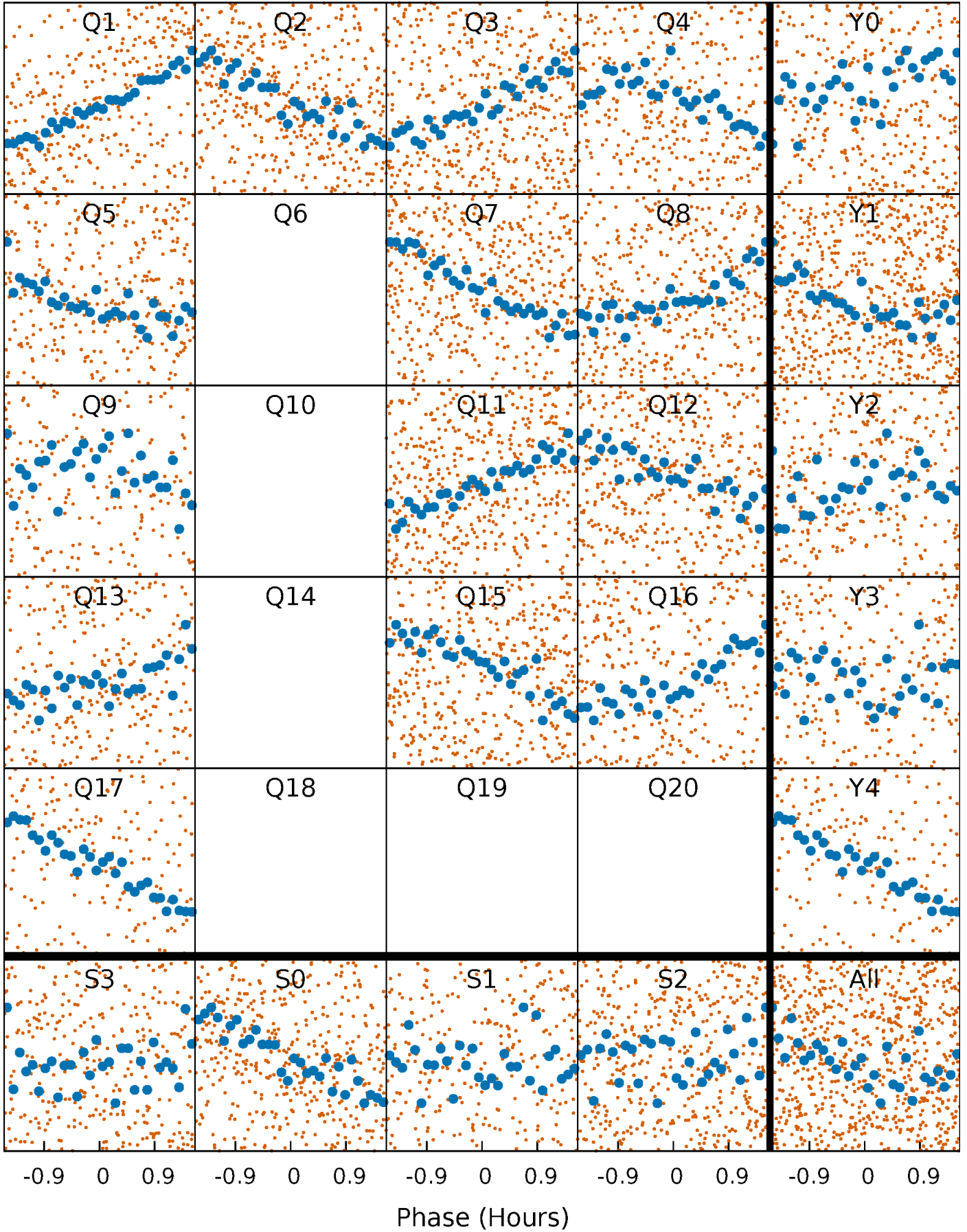


Non-Whitened Vs. Whitened Light Curve



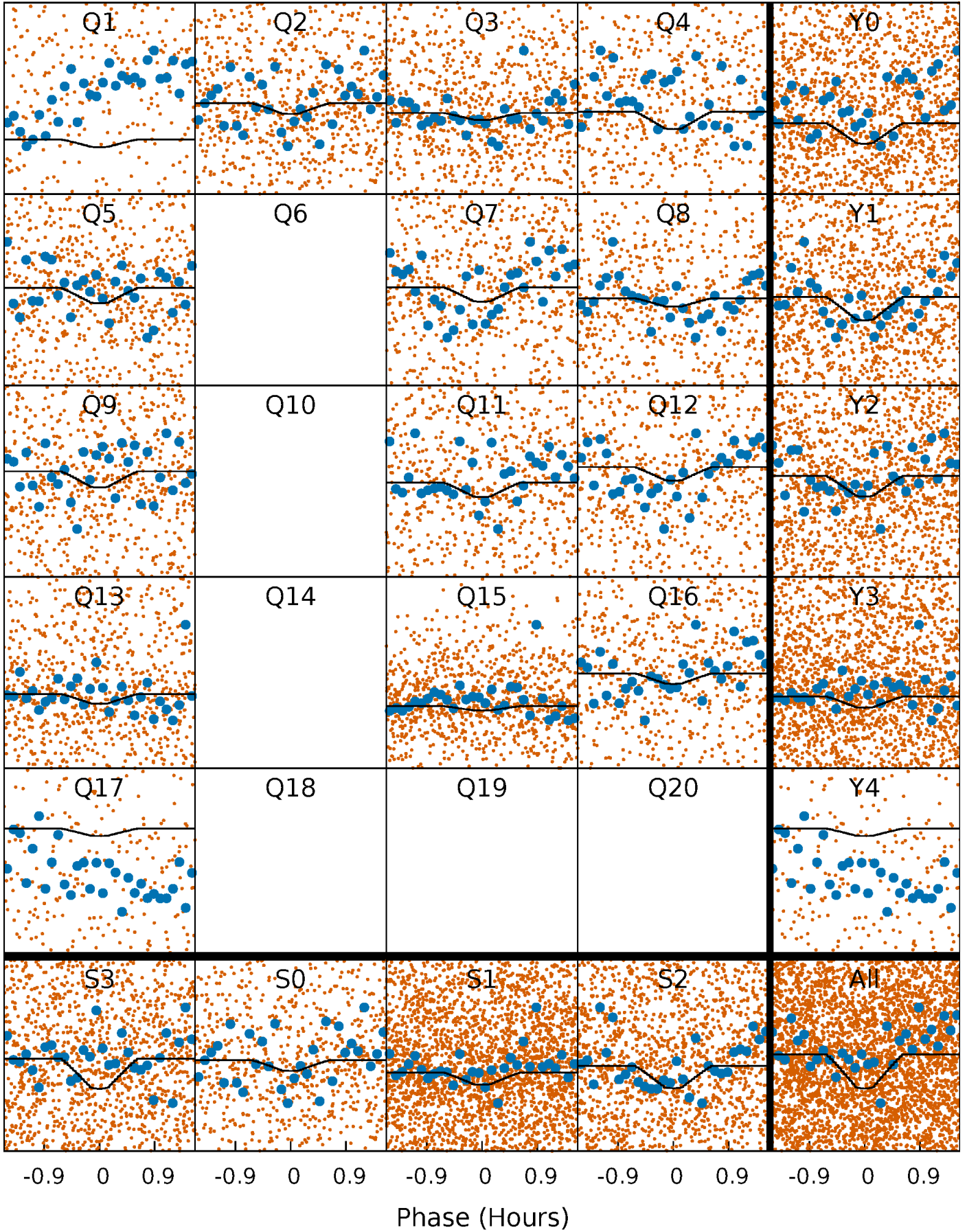
PDC Quarter-Phased Transit Curves

TCE 003559933-01 P= 0.564155 Days $T_0=131.758736$ (BKJD)



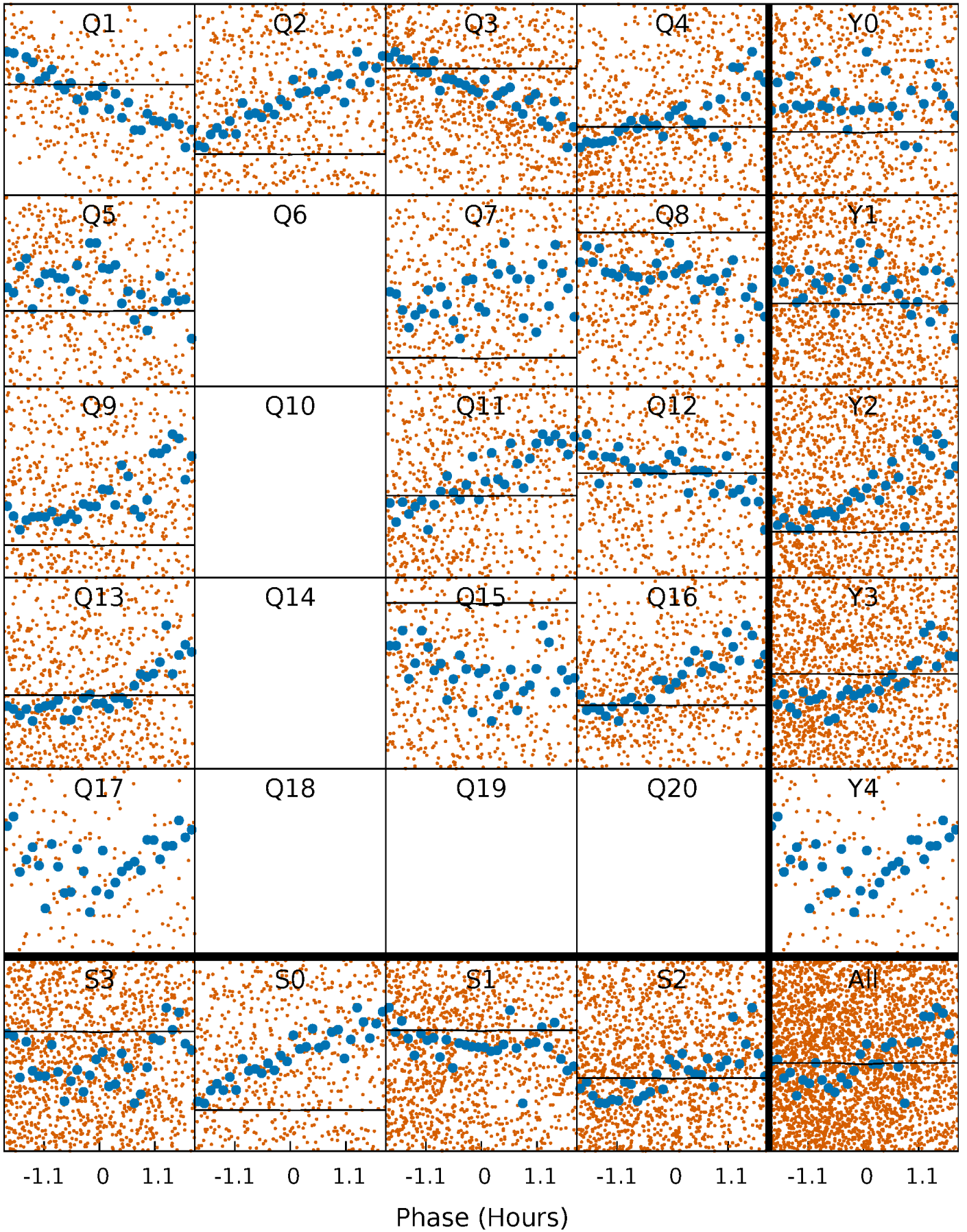
DV Quarter-Phased Transit Curves

TCE 003559933-01 P= 0.564155 Days $T_0=131.758736$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

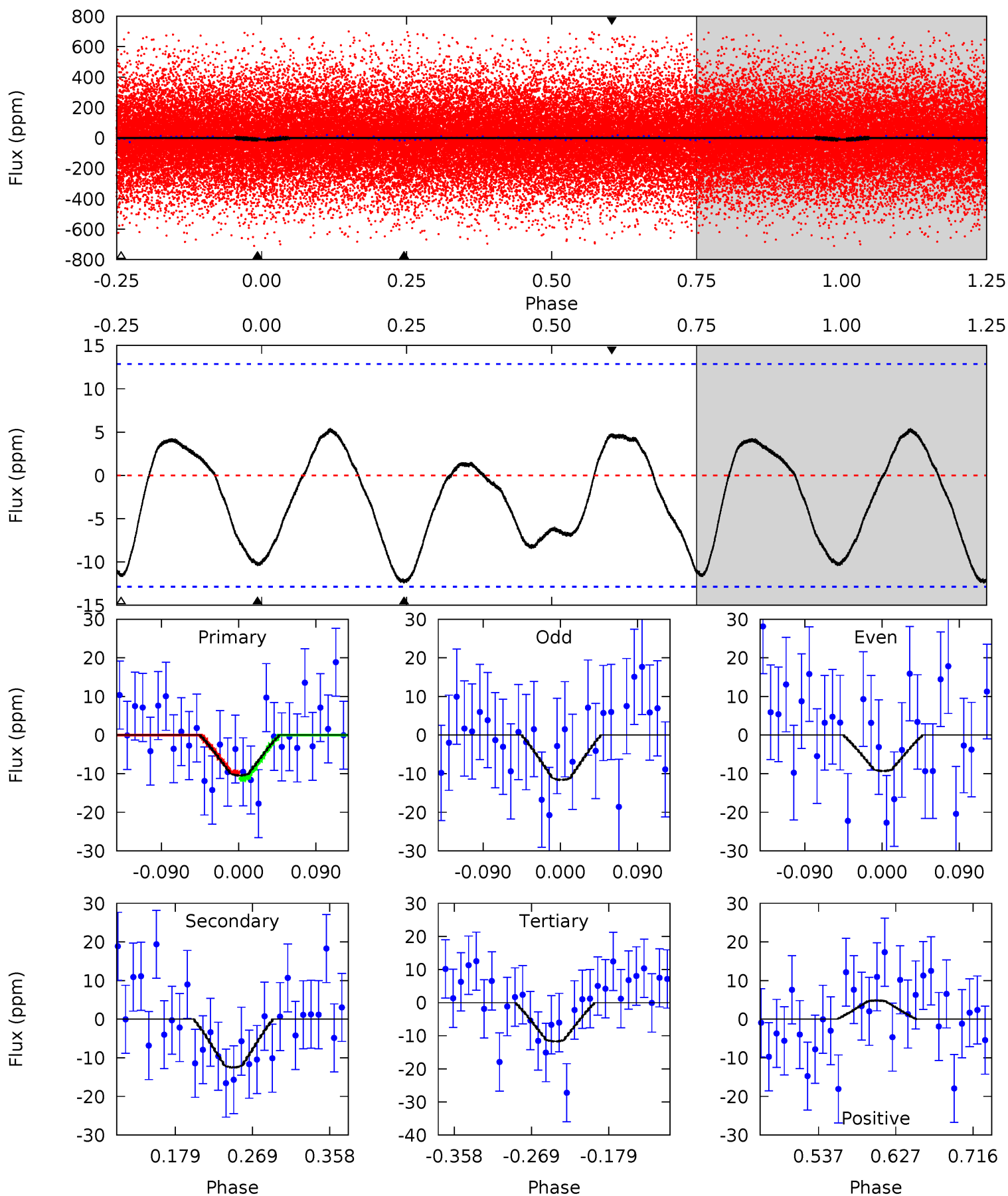
TCE 003559933-01 P= 0.564329 Days $T_0=132.044209$ (BKJD)



DV Model-Shift Uniqueness Test

003559933-01, P = 0.564155 Days, E = 131.194581 Days

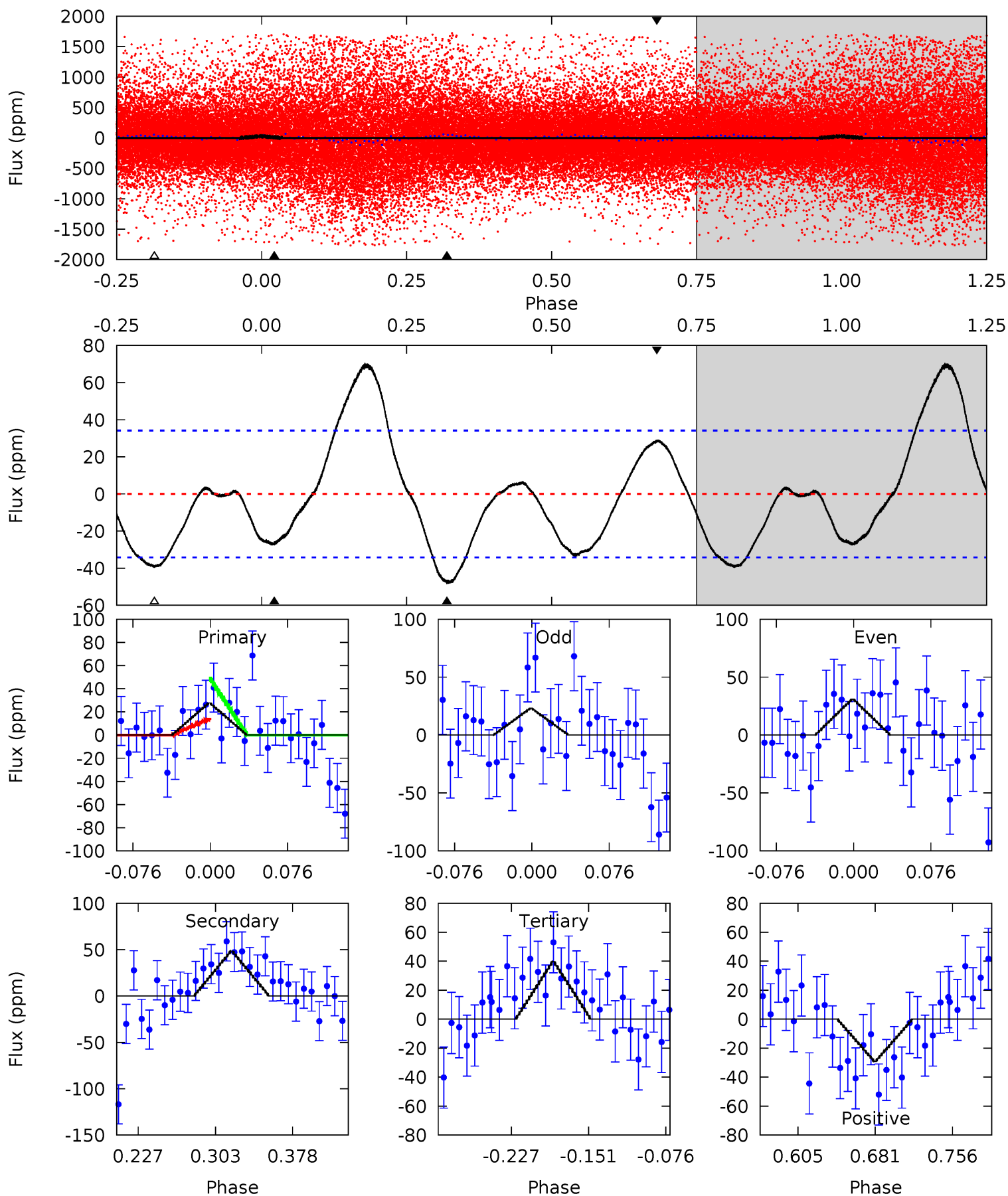
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.73	4.45	4.18	1.72	4.59	1.70	1.74	-0.45	2.01	0.27	2.73	0.41	1.08	0.30	0.25



Alt Model-Shift Uniqueness Test

003559933-01, P = 0.564329 Days, E = 131.479880 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.75	6.56	5.37	3.94	4.62	1.78	3.78	-1.63	-0.20	1.18	2.62	0.52	0.33	0.59	2.26



Stellar Parameters For KIC 003559933

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6845^{+205}_{-226}	$3.239^{+0.464}_{-0.087}$	$-0.500^{+0.350}_{-0.350}$	$5.778^{+1.282}_{-2.991}$	$2.113^{+0.080}_{-0.641}$	$0.015^{+0.078}_{-0.005}$
	+3%/-3%	+14%/-3%	+70%/-70%	+22%/-52%	+4%/-30%	+504%/-35%
Source	PHO1	FLK73	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 003559933-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-12 ± 3	$2.31^{+1.35}_{-1.04}$	7432^{+559}_{-898}	4162^{+3316}_{-9500}	$0.358^{+0.800}_{-0.217}$
Alt.	-48 ± 7	$0.98^{+0.87}_{-0.65}$	7389^{+624}_{-911}	17942^{+67478}_{-7543}	$7.395^{+56.529}_{-5.201}$

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

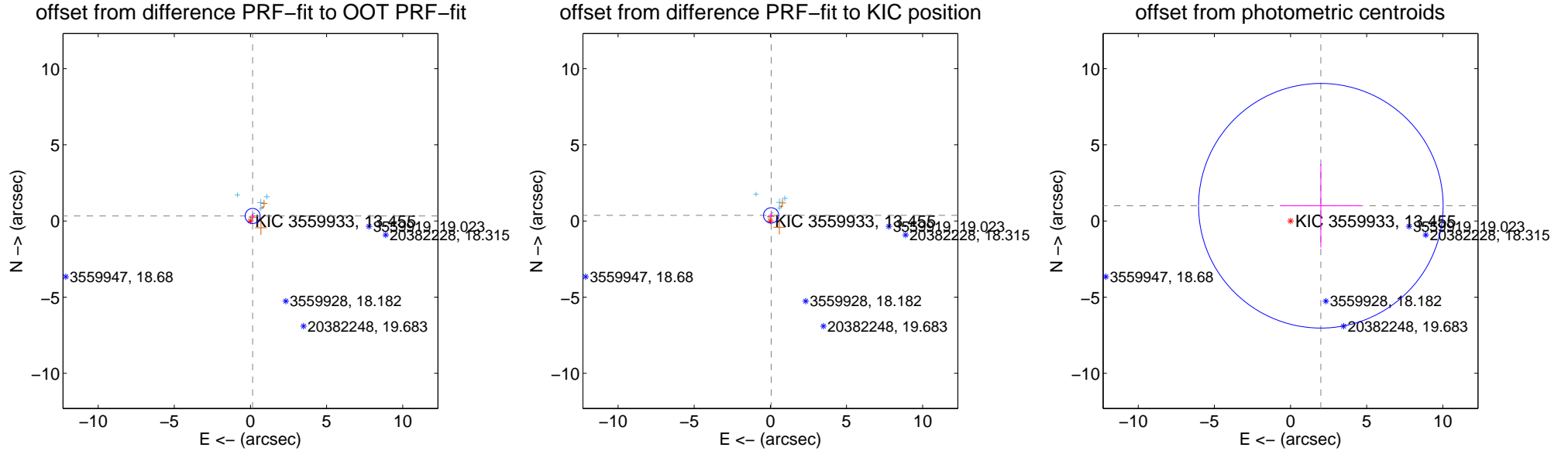
DV Centroid Data

Supplemental centroid analysis for 003559933-01. Kepler magnitude: 13.46. Transit SNR 3.86

There are 8 quarters with good PRF difference image offsets

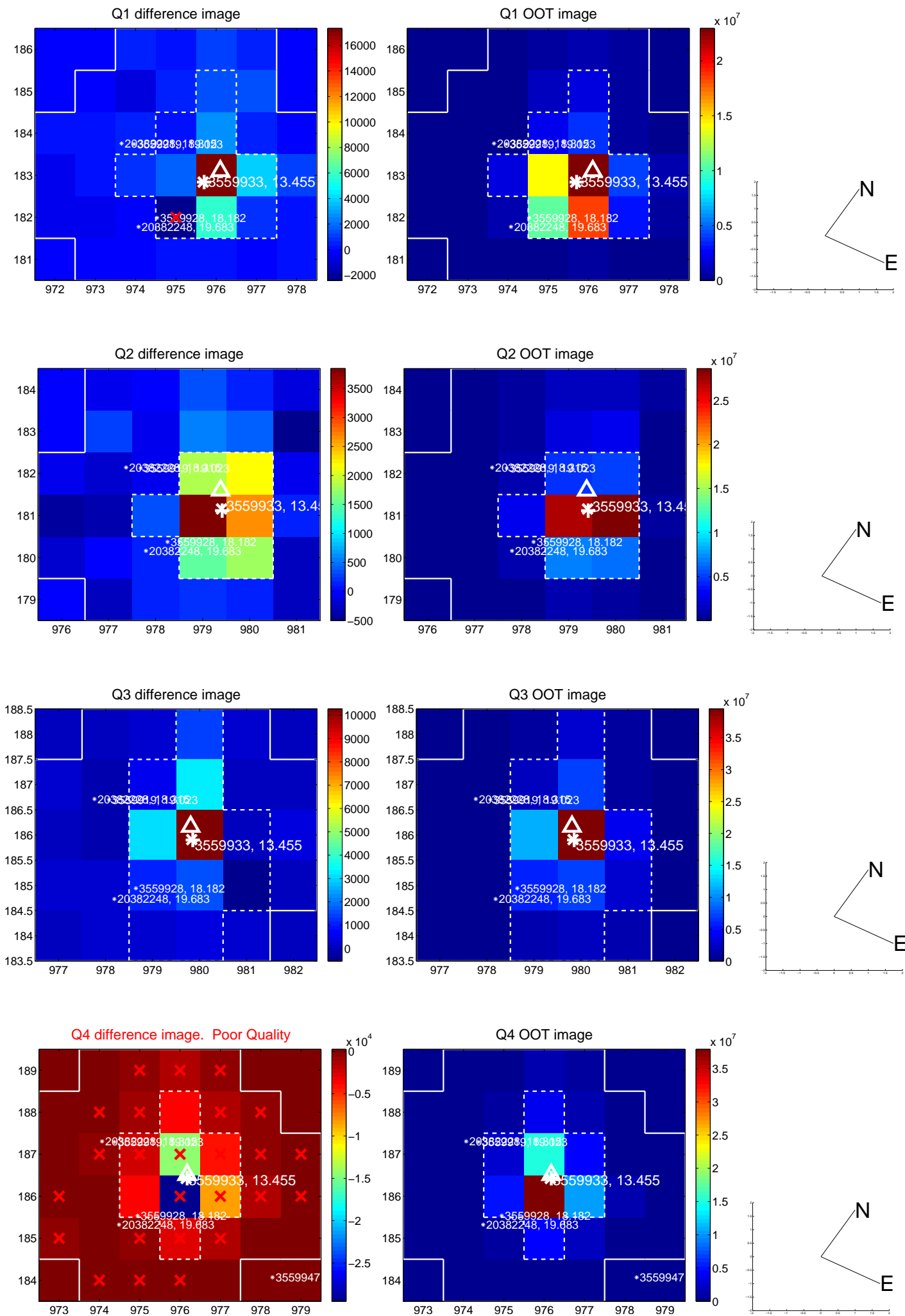
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.358 ± 0.165	2.17	-0.143 ± 0.136	0.328 ± 0.167
PRF-fit source offset from KIC position	0.372 ± 0.167	2.23	-0.052 ± 0.147	0.369 ± 0.167
photometric centroid source offset	2.23 ± 2.68	0.83	-1.99 ± 2.66	1.00 ± 2.74

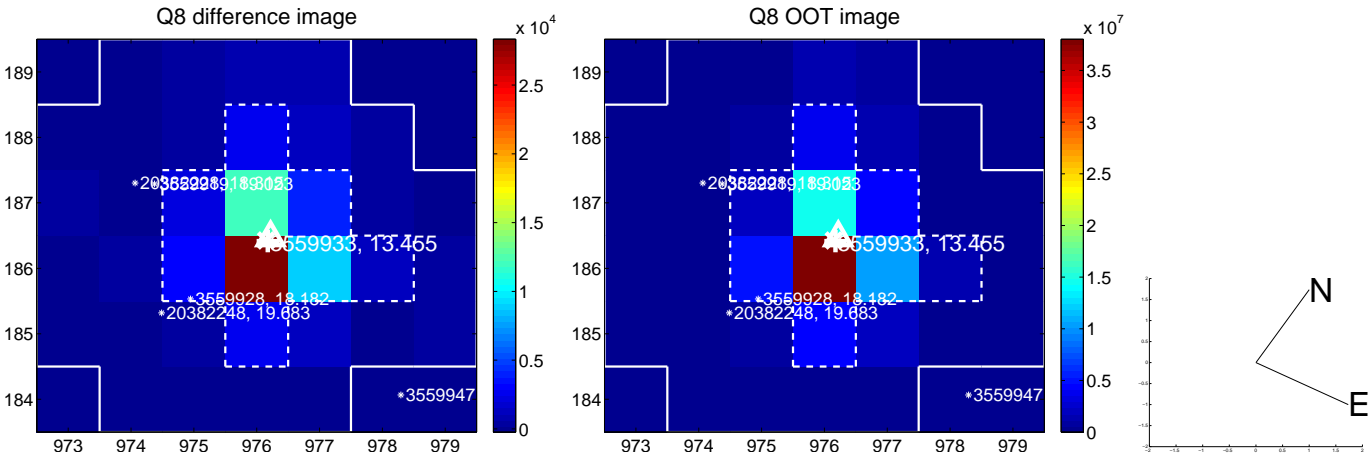
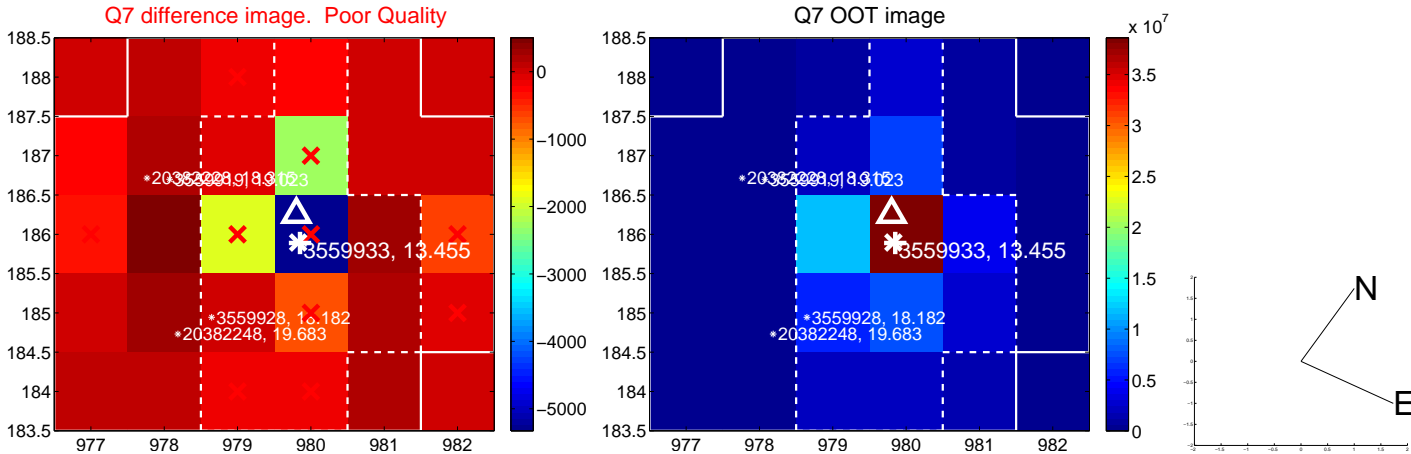
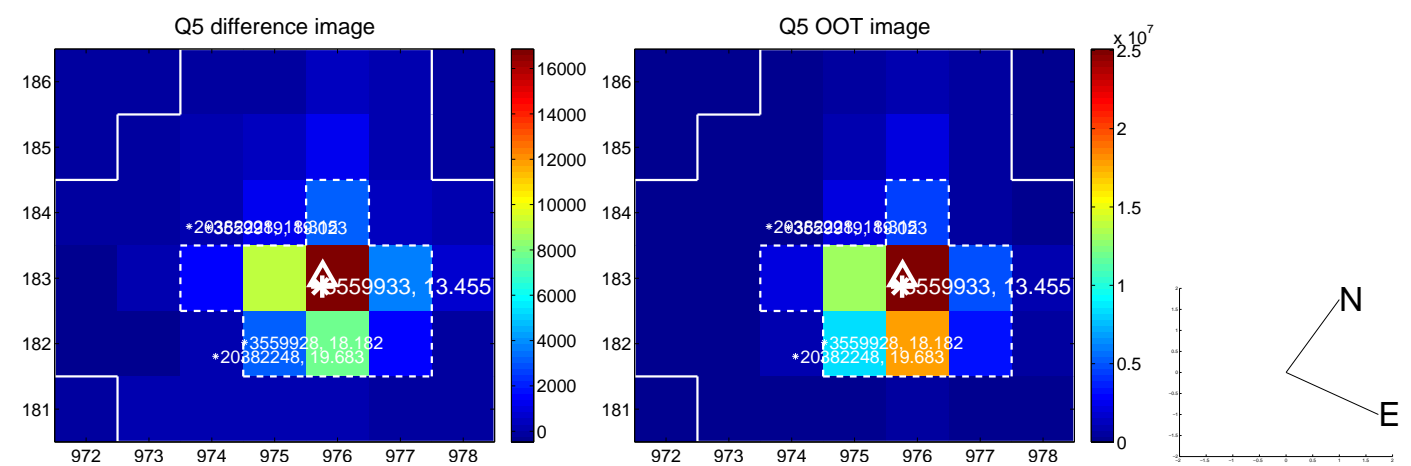


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

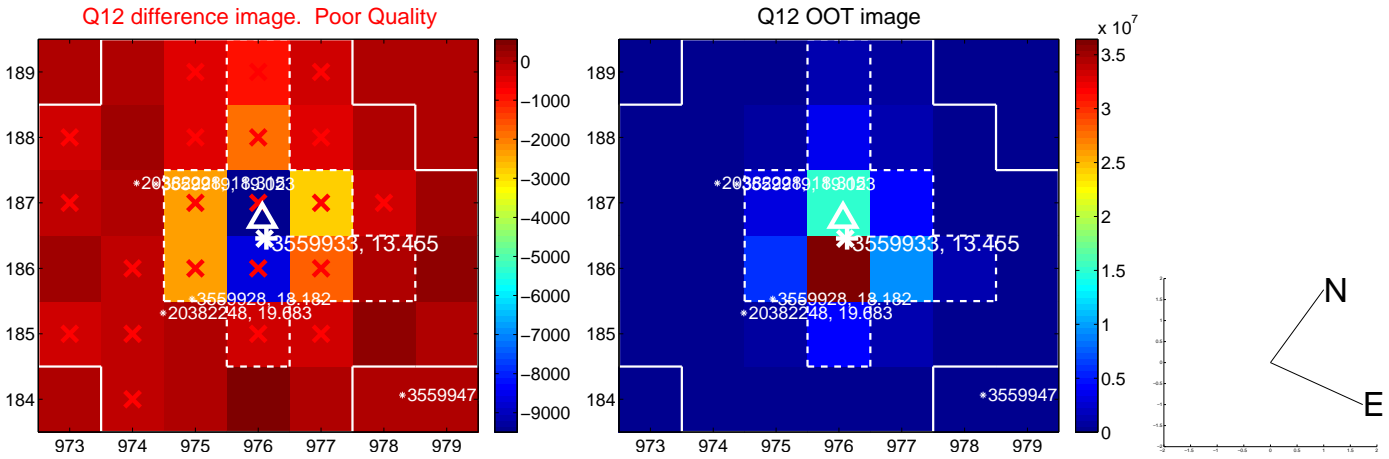
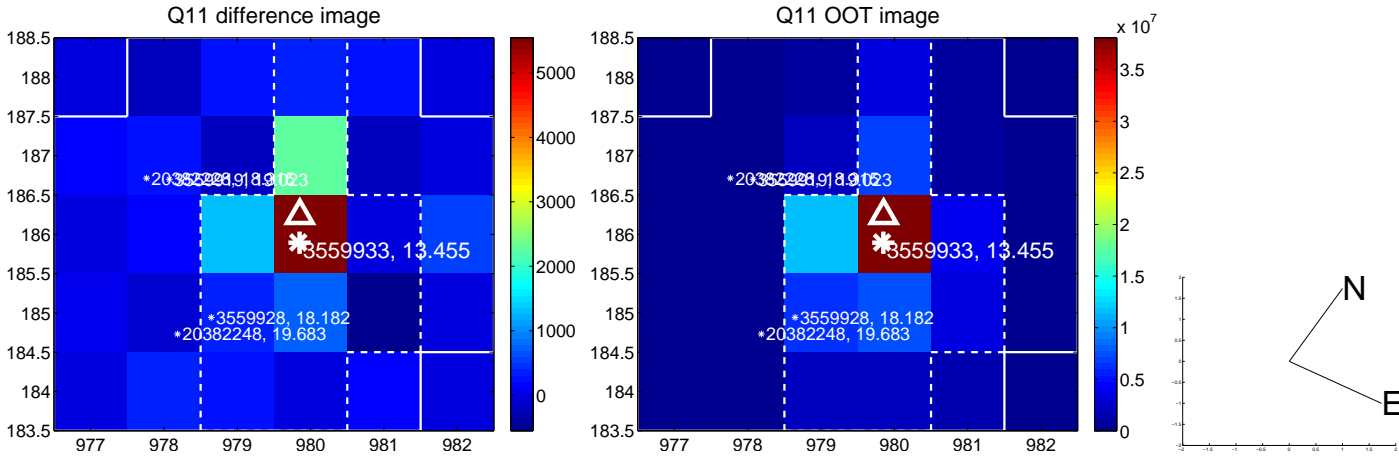
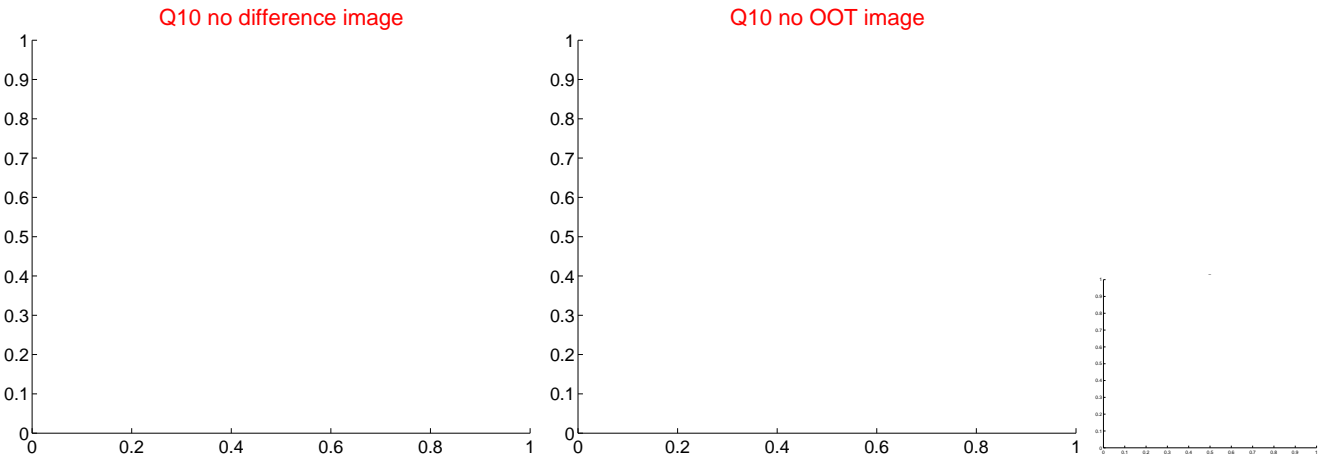
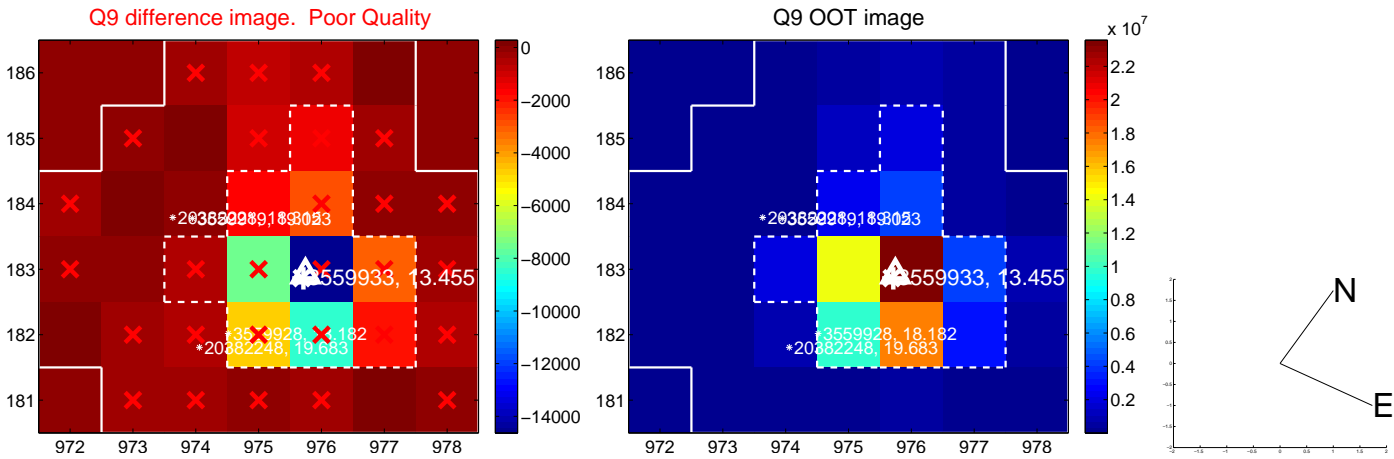
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



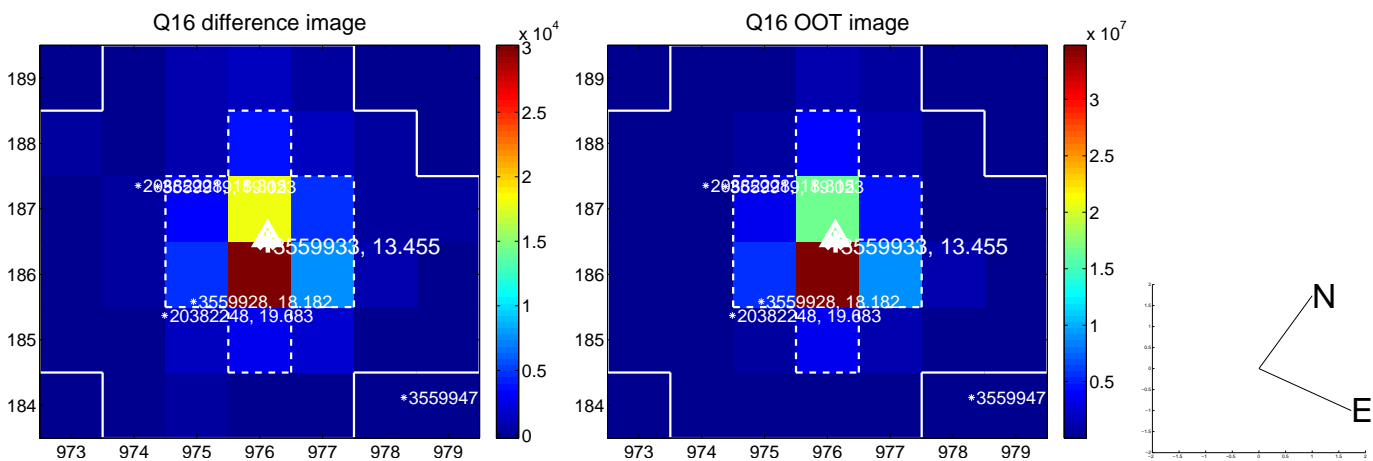
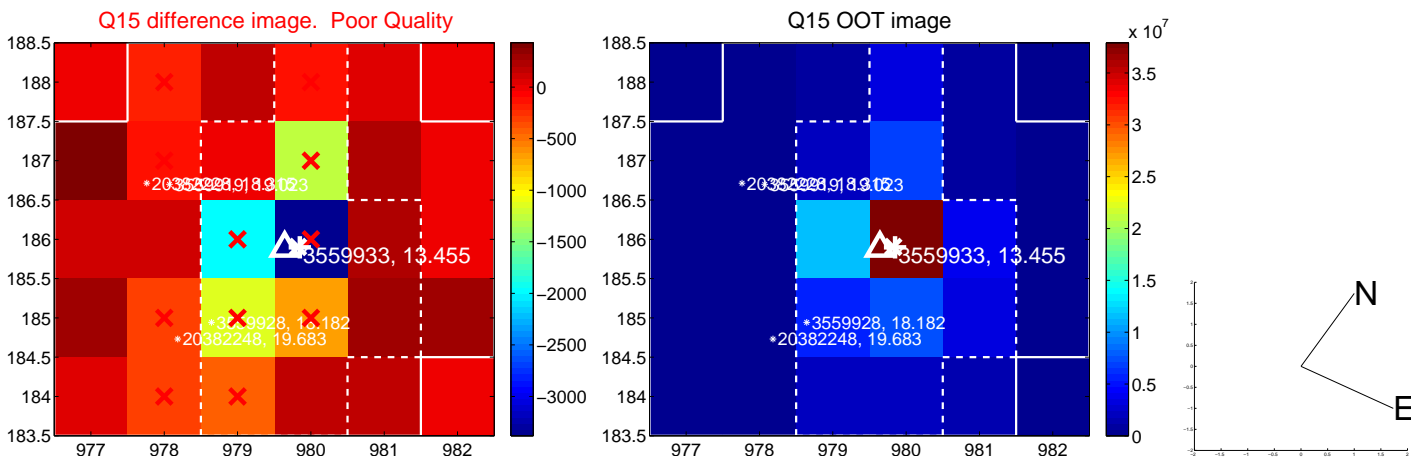
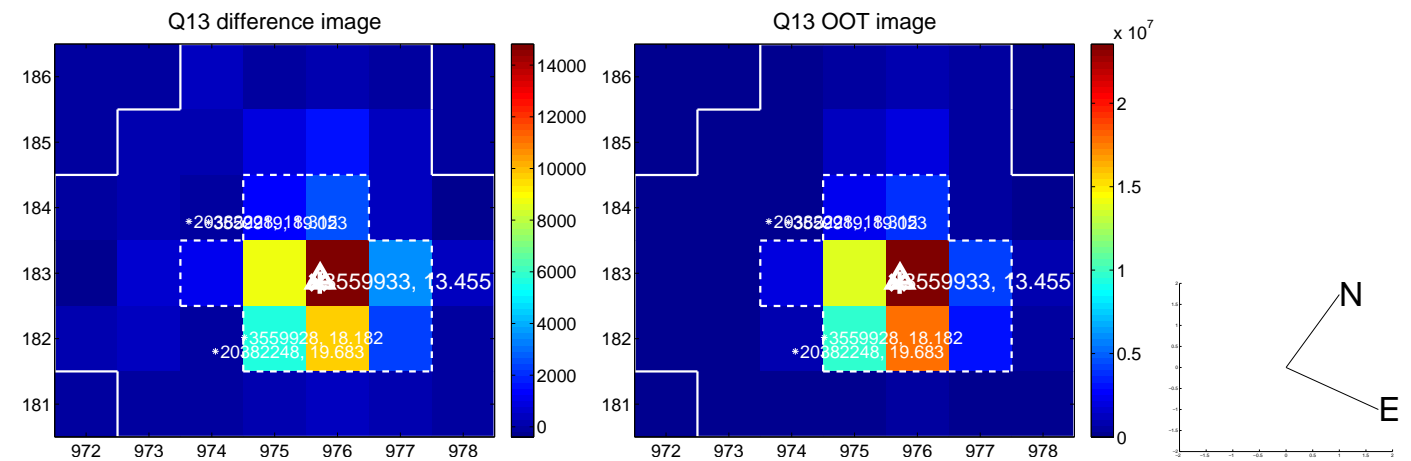
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



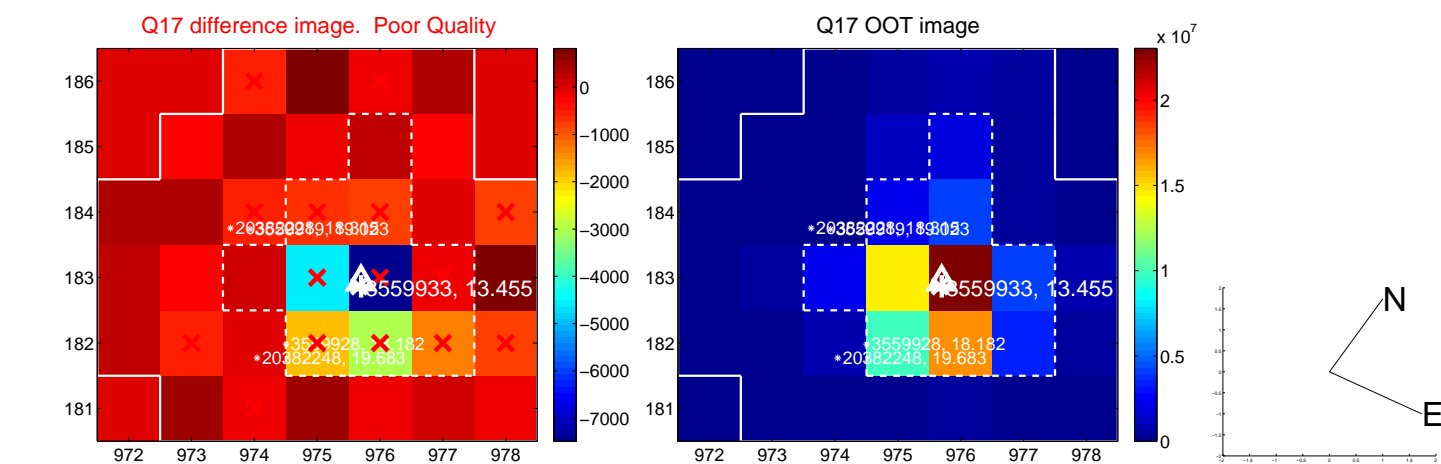
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



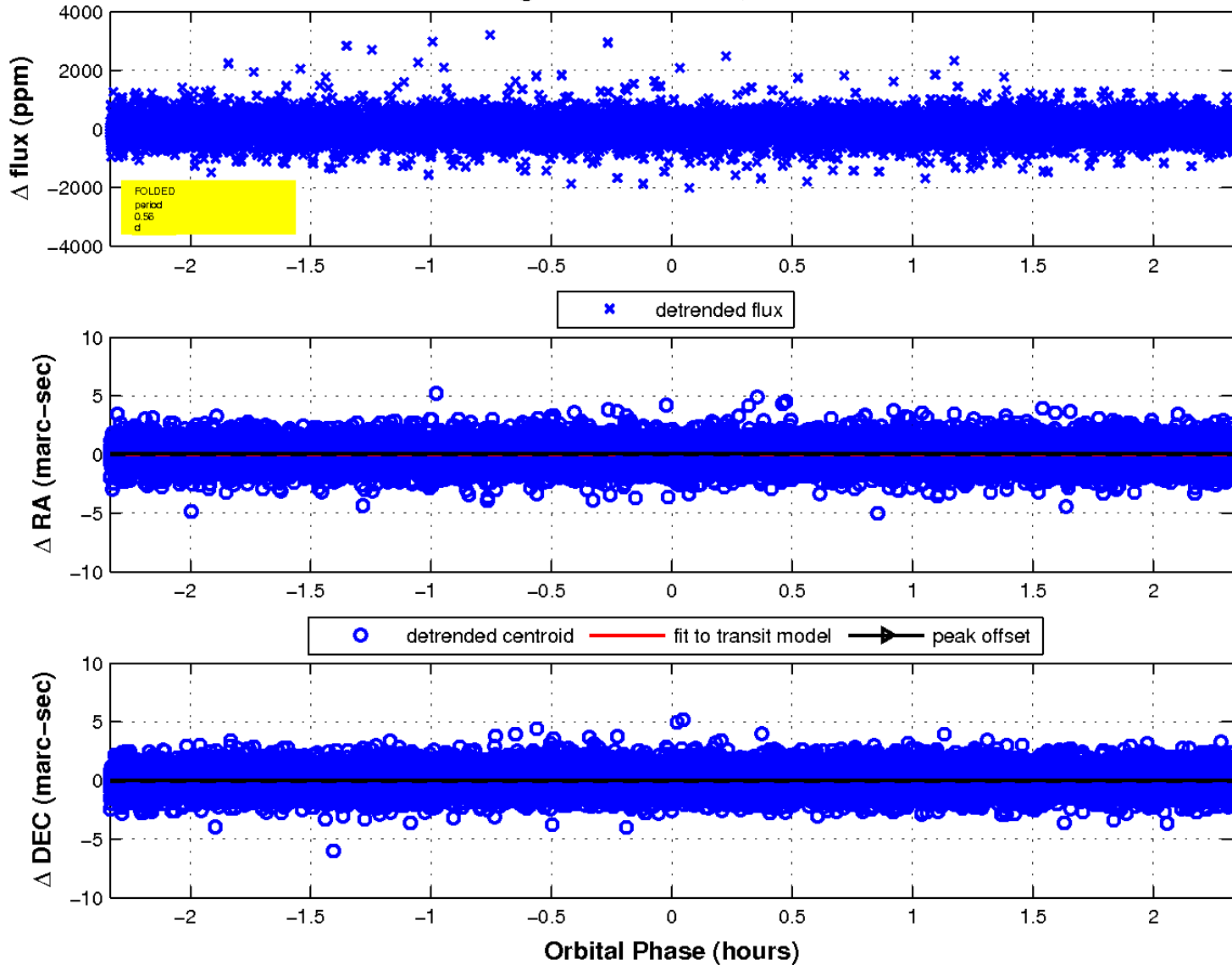
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

