

KIC 010147276

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})
010147276-01	OBS	7987.01	0.681399	132.183407	96.9	0.951	9.7	12.1	1.04	6173	1.22	5736.47

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010147276-01	OBS	FP	0.02	0	0	1	0	CENT_RESOLVED_OFFSET

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

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

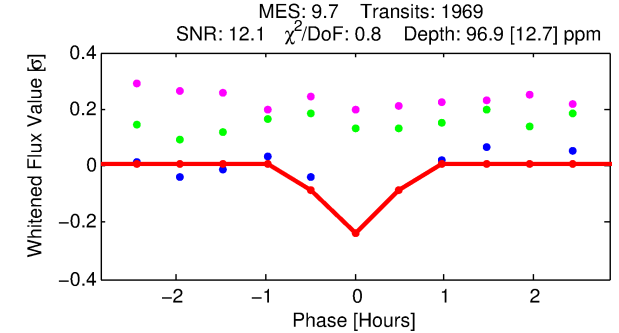
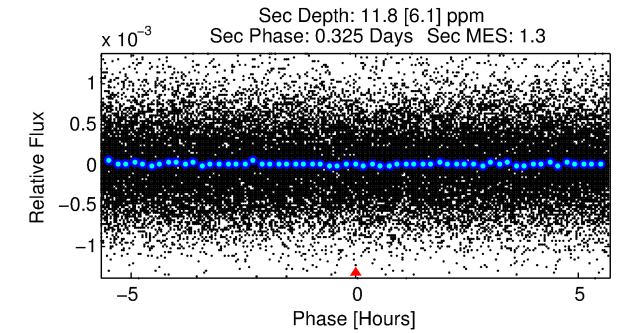
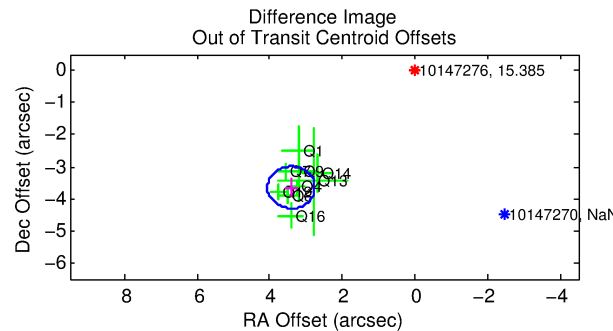
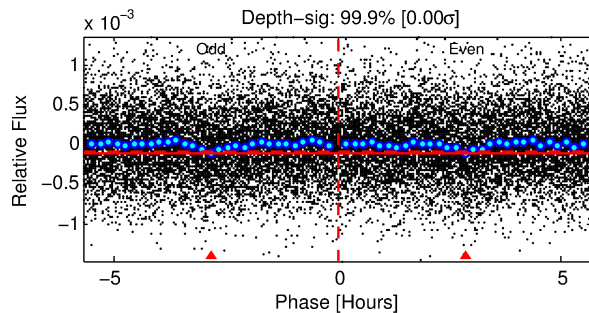
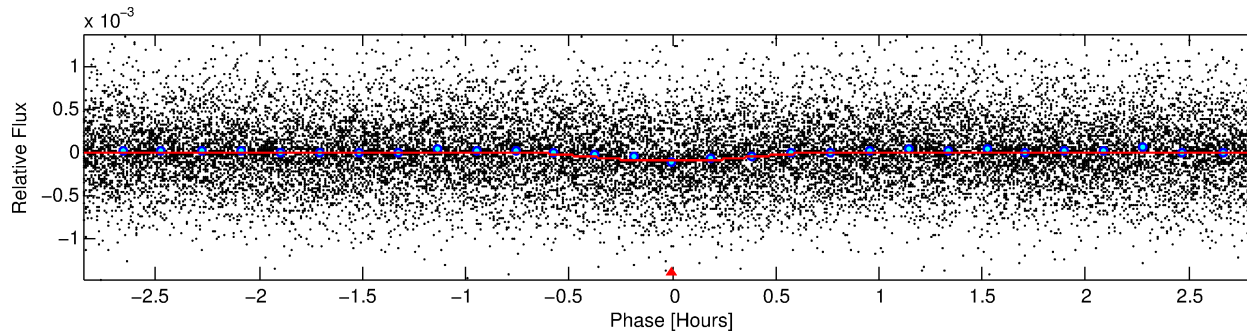
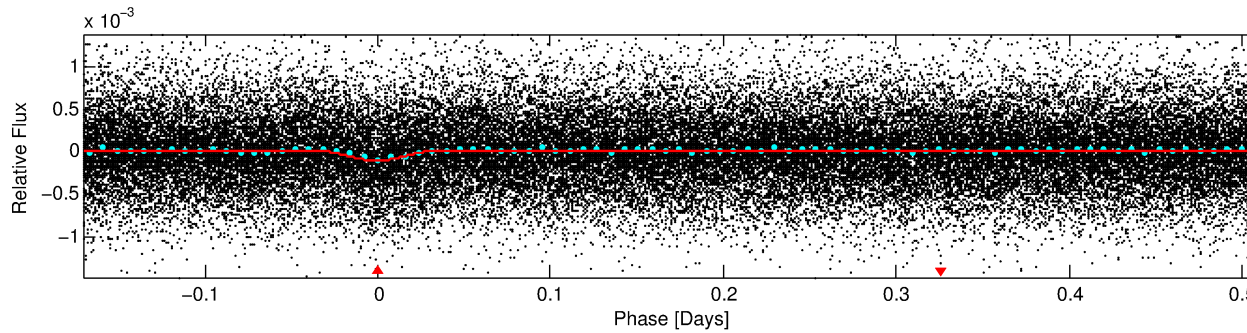
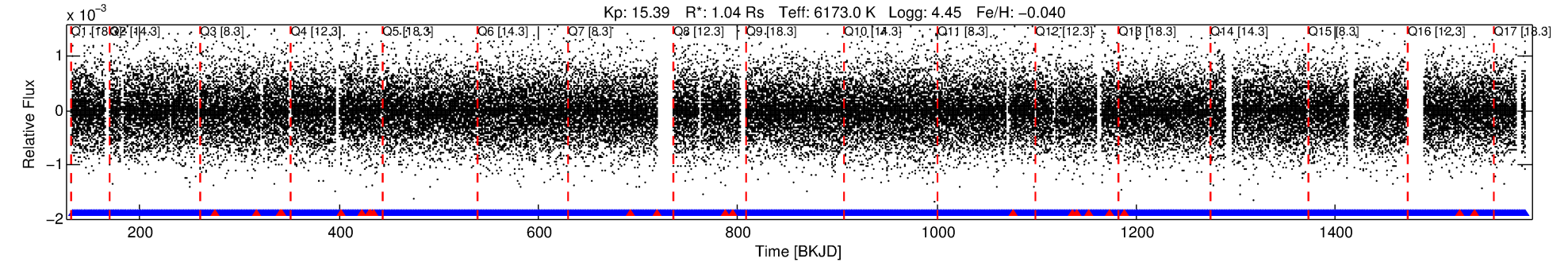
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010147276-01

No Significant Match Found

DV One-Page Summary

KIC: 10147276 Candidate: 1 of 1 Period: 0.681 d



DV Fit Results:

Period = 0.68140 [0.00001] d
Epoch = 132.1834 [0.0014] BKJD
Rp/R* = 0.0107 [0.0044]
a/R* = 2.67 [4.98]
b = 0.90 [0.46]
Seff = 5736.47 [2495.93]
Teq = 2219 [241] K
Rp = 1.22 [0.64] Re
a = 0.0157 [0.0044] AU
Ag = 1.07 [1.13] [0.06σ]
Teffp = 3490 [862] K [1.42σ]

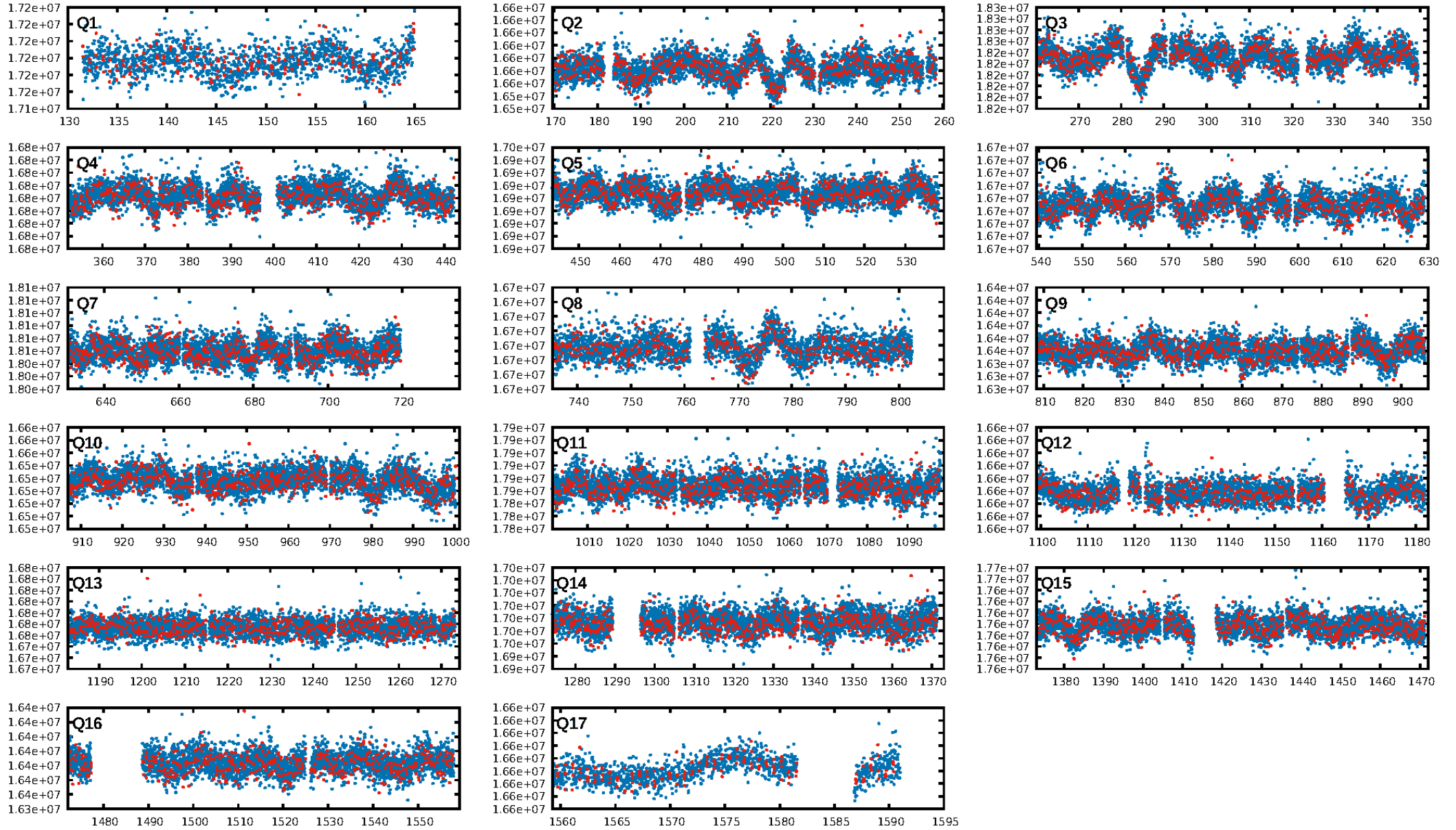
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.75e-22
RollingBand-fgt: 0.99 [1858/1880]
GhostDiagnostic-chr: 0.3276
Centroid-sig: 0.0%
Centroid-so: 9.095 arcsec [8.43σ]
OotOffset-rm: 4.997 arcsec [22.96σ]
KicOffset-rm: 5.157 arcsec [23.35σ]
OotOffset-st: 1/1/4/3 [9]
KicOffset-st: 1/1/4/3 [9]
DiffImageQuality-fgm: 1.00 [9/9]
DiffImageOverlap-fno: 1.00 [17/17]

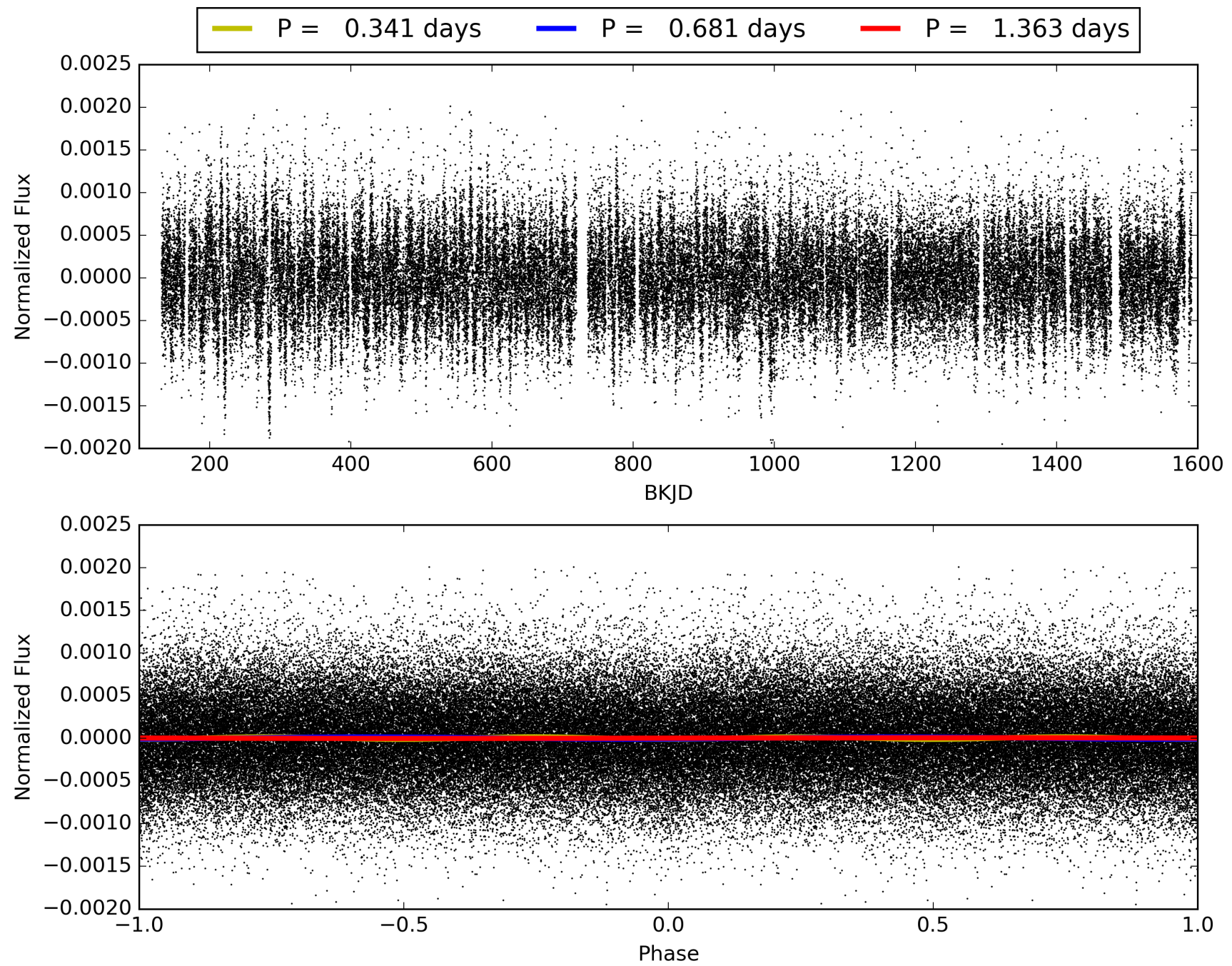
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 20:25:38 Z

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

TCE 010147276-01, PDC Light Curves

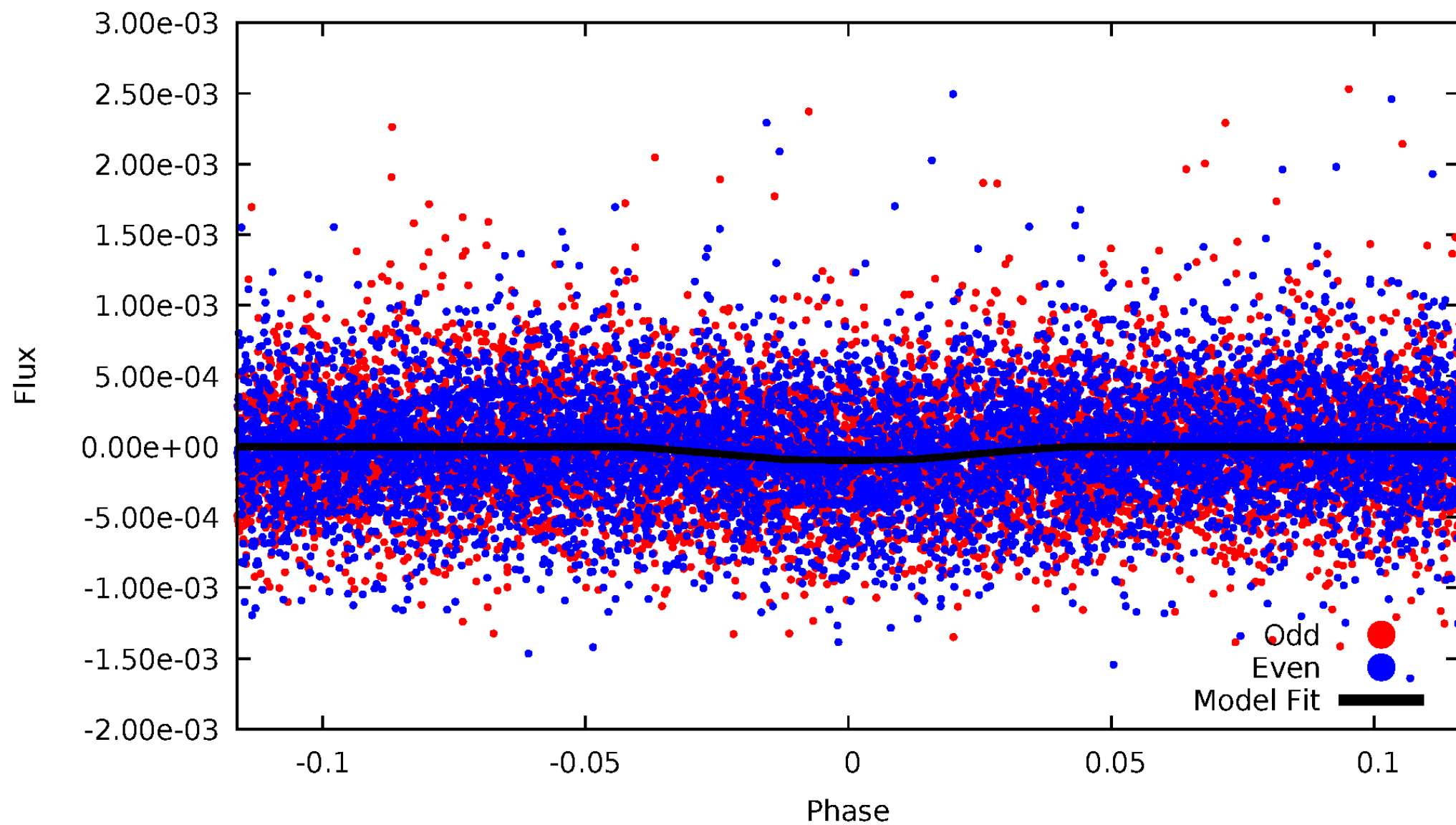


TCE 010147276-01



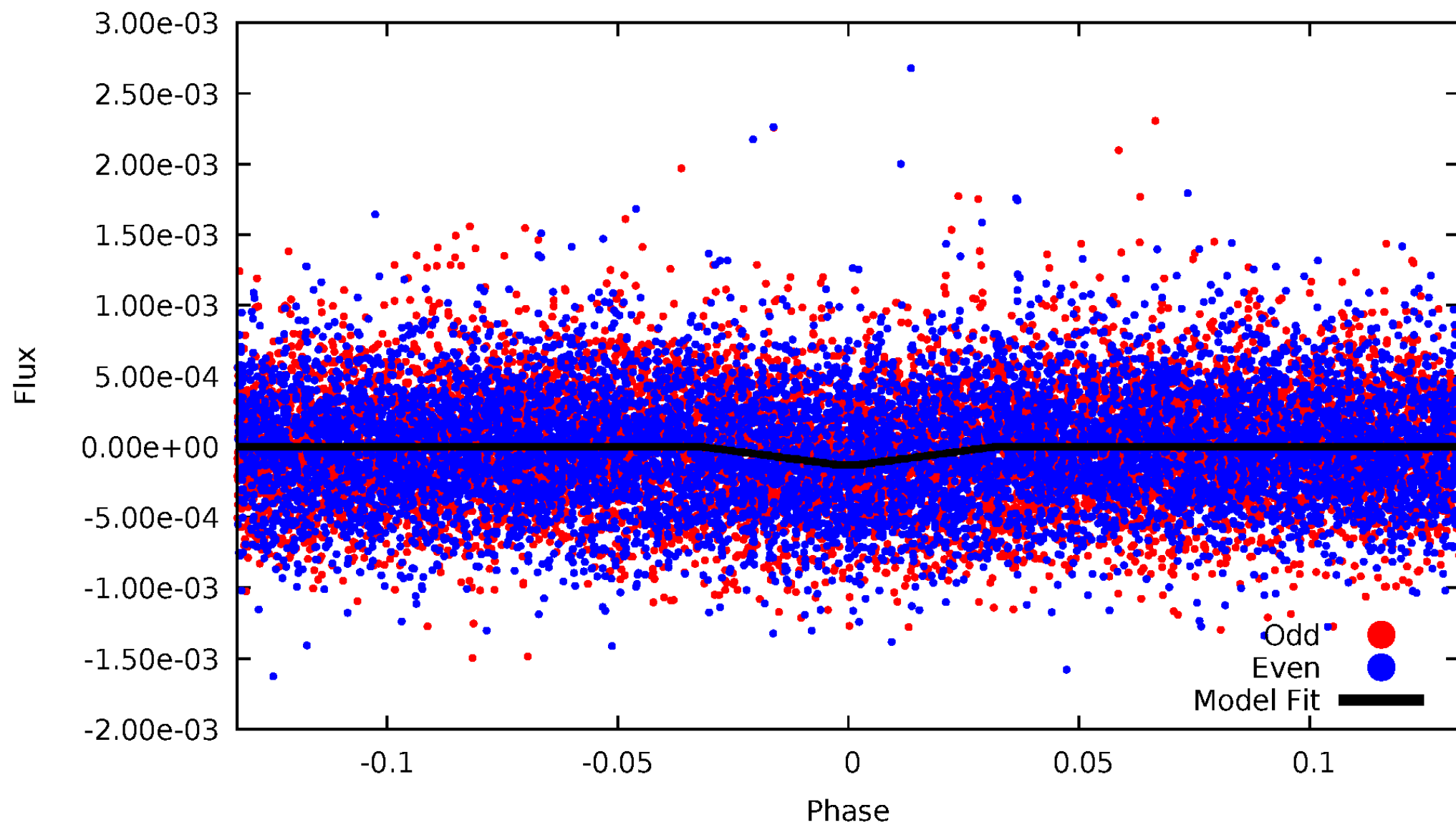
DV Odd/Even

TCE 010147276-01

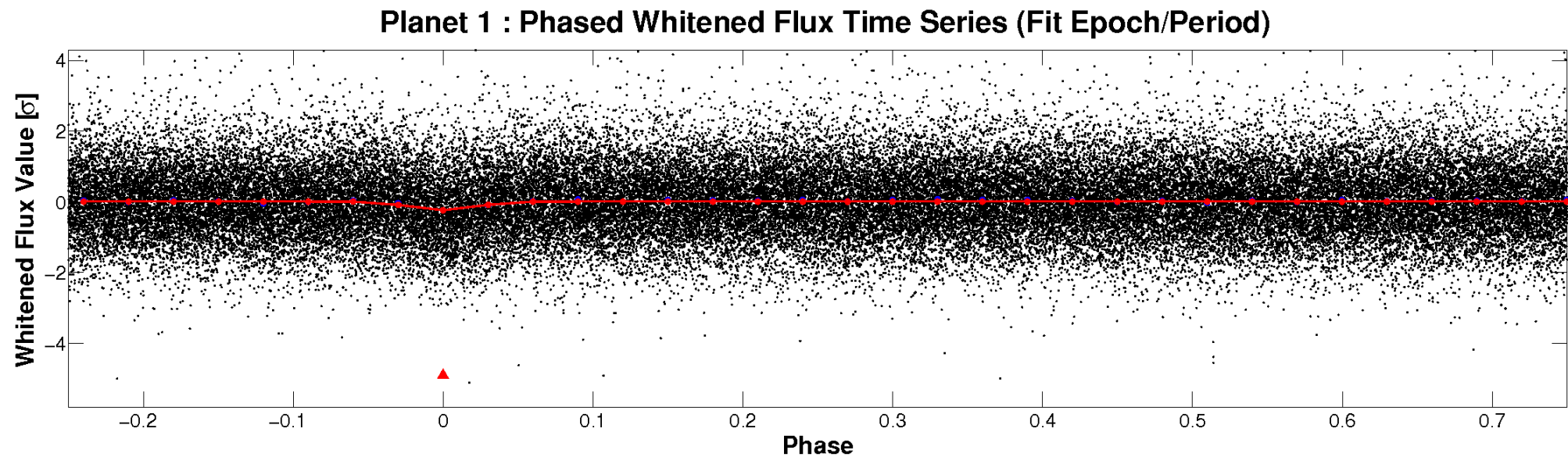
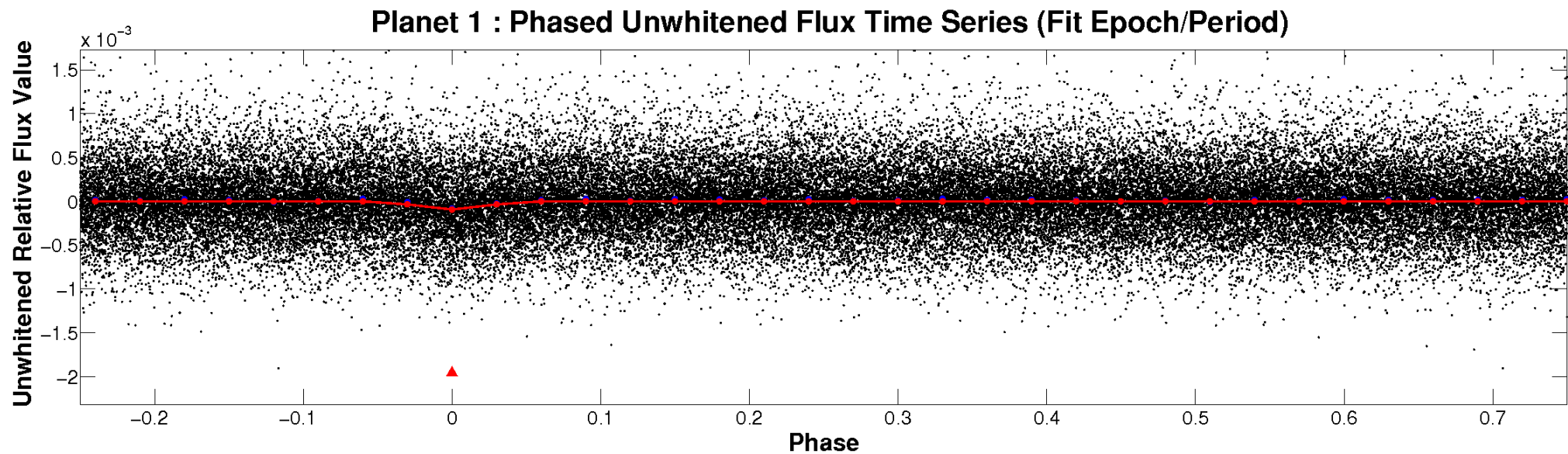


ALT Odd/Even

TCE 010147276-01

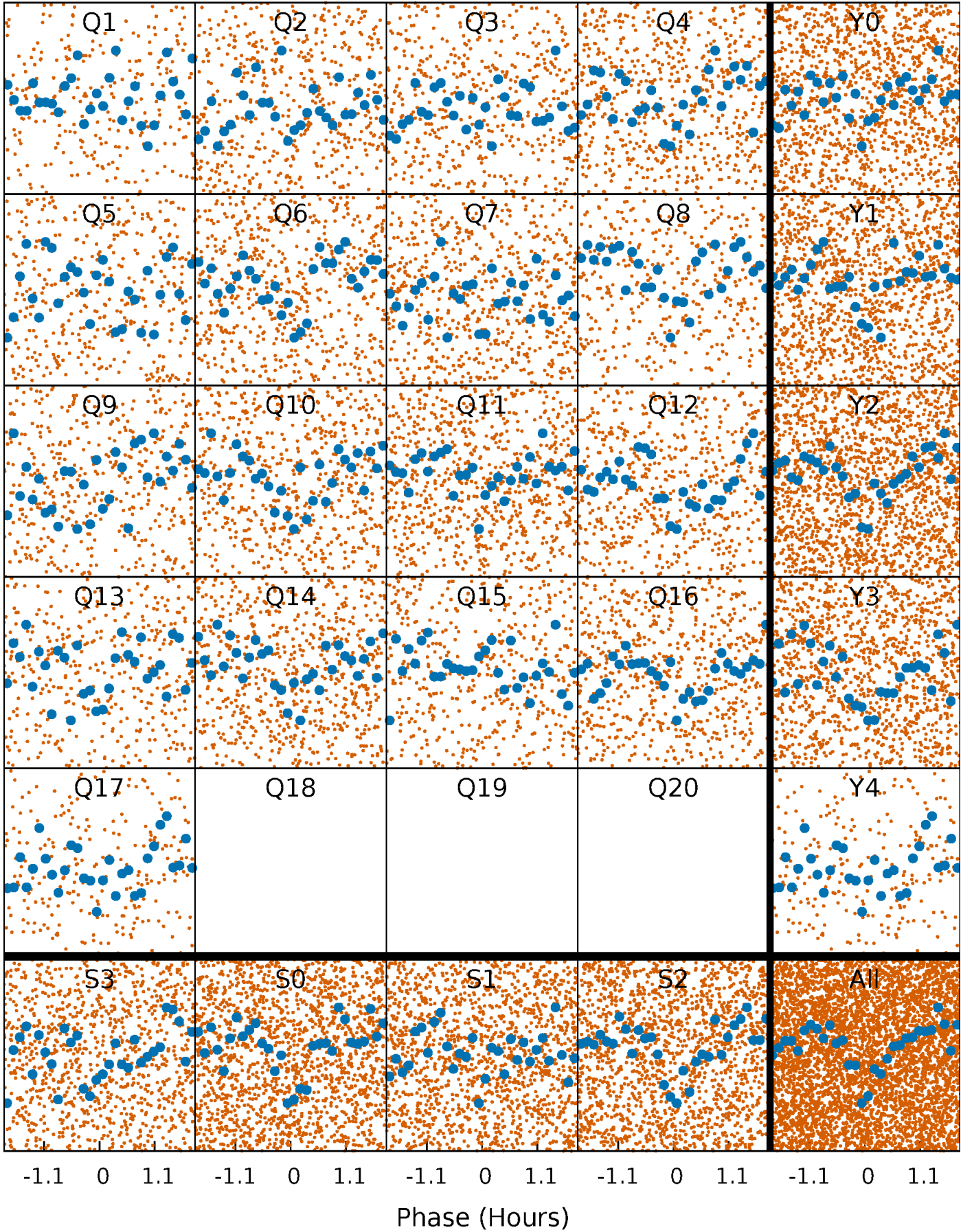


Non-Whitened Vs. Whitened Light Curve



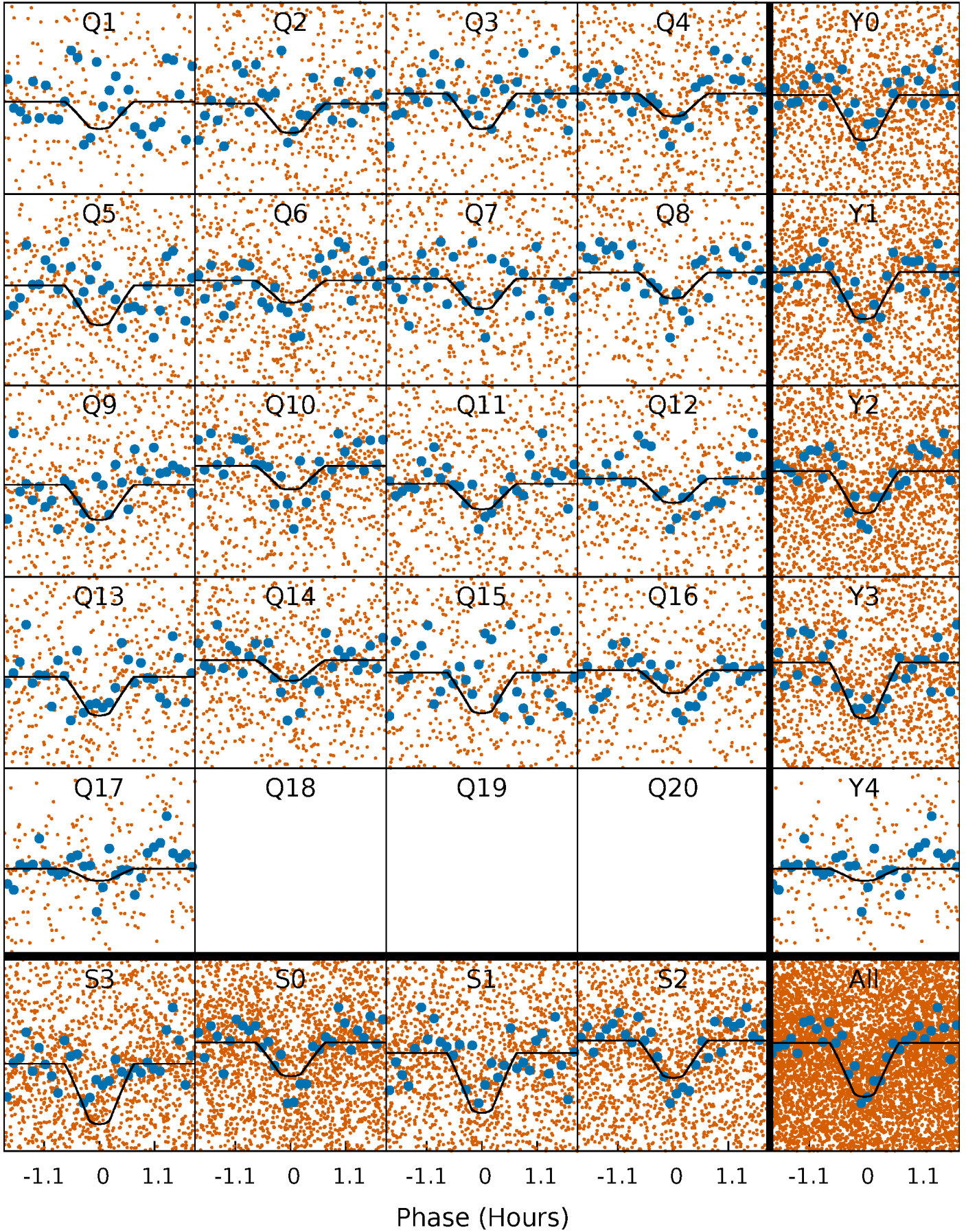
PDC Quarter-Phased Transit Curves

TCE 010147276-01 P= 0.681399 Days $T_0=132.183407$ (BKJD)



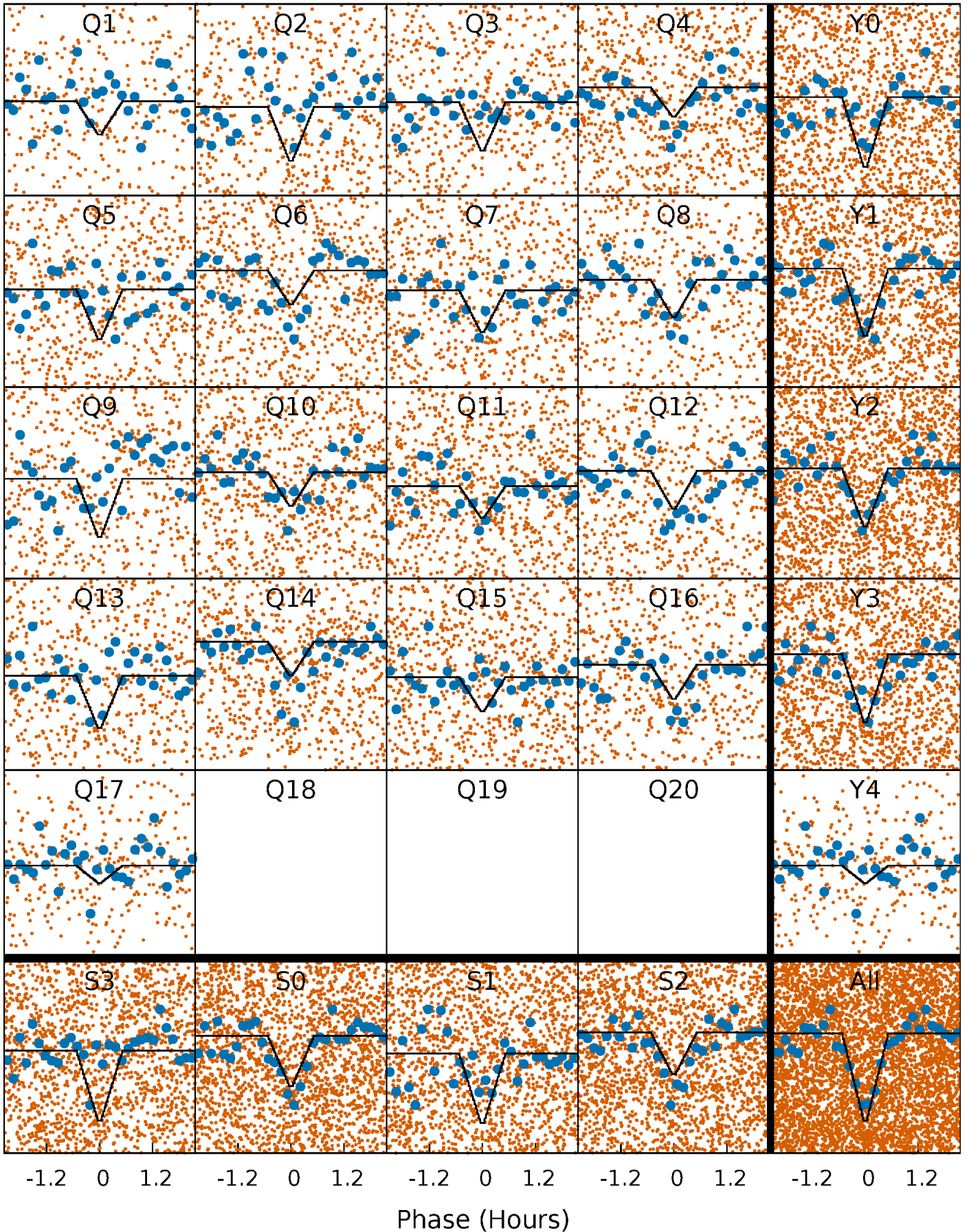
DV Quarter-Phased Transit Curves

TCE 010147276-01 P= 0.681399 Days $T_0=132.183407$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

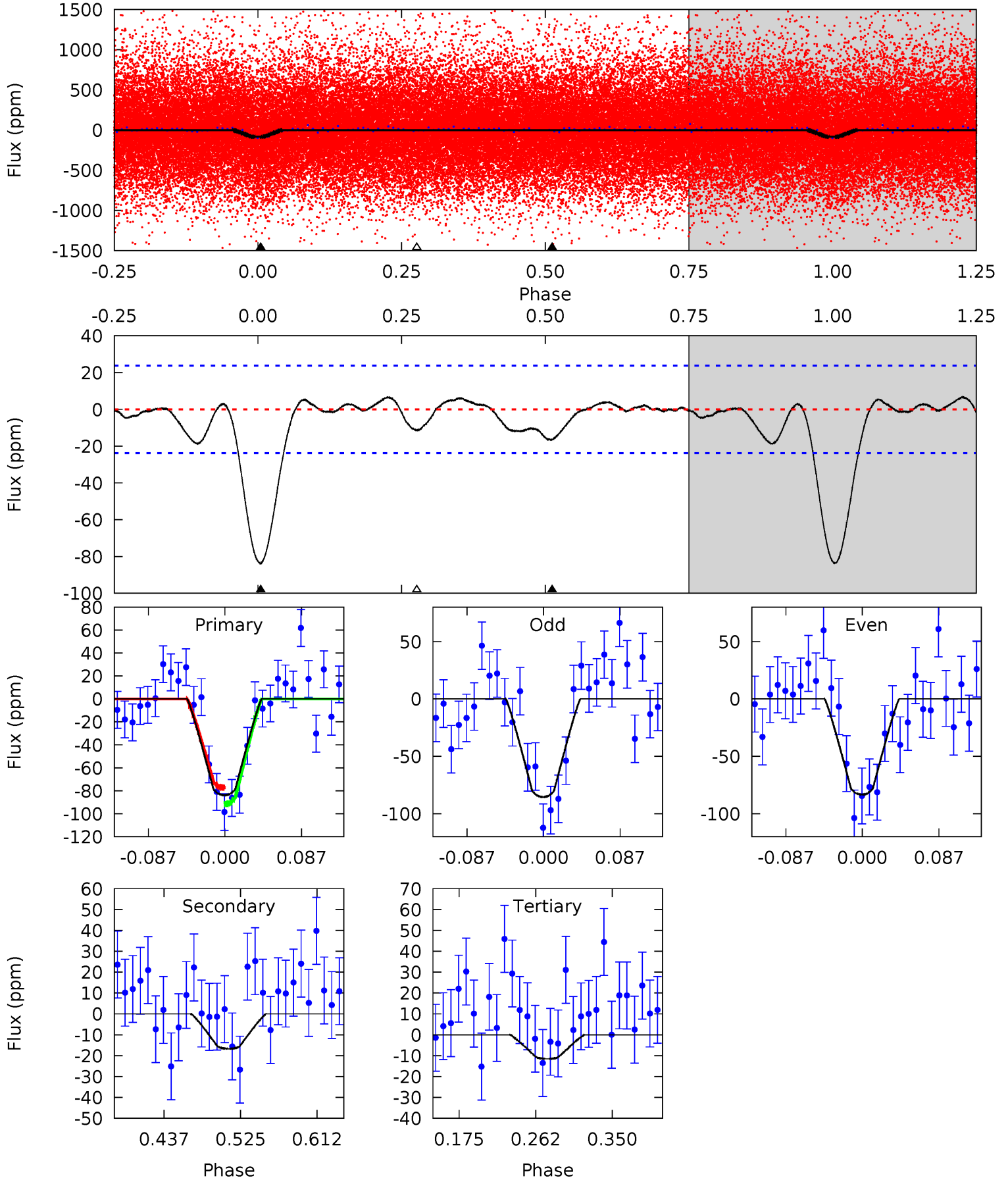
TCE 010147276-01 P= 0.681402 Days $T_0=132.182369$ (BKJD)



DV Model-Shift Uniqueness Test

010147276-01, P = 0.681399 Days, E = 131.502008 Days

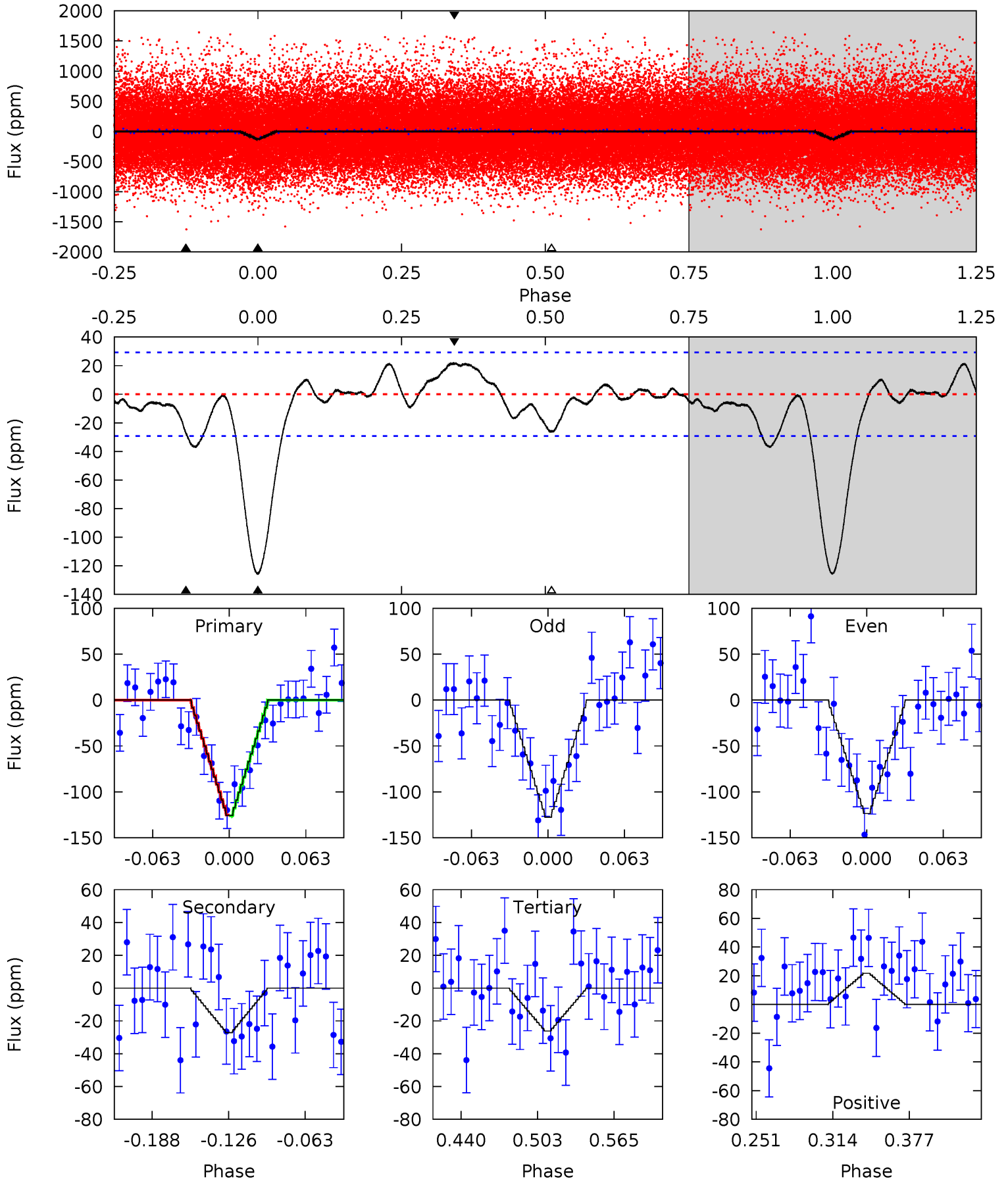
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.2	3.22	2.23	0	4.59	1.71	1.04	13.9	16.2	1.00	3.22	0.20	0.78	0.08	1.38



Alt Model-Shift Uniqueness Test

010147276-01, P = 0.681402 Days, E = 131.500967 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.0	4.33	4.17	3.47	4.66	1.86	1.65	15.8	16.5	0.15	0.86	0.32	0.82	0.15	0.07



Stellar Parameters For KIC 010147276

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6173^{+193}_{-236}	$4.447^{+0.056}_{-0.224}$	$-0.040^{+0.250}_{-0.350}$	$1.041^{+0.341}_{-0.114}$	$1.104^{+0.146}_{-0.162}$	$1.379^{+0.398}_{-0.727}$
	+3%/-4%	+1%/-5%	+625%/-875%	+33%/-11%	+13%/-15%	+29%/-53%
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 010147276-01 / KOI 7987.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-17 ± 5	$1.24^{+0.58}_{-0.52}$	3173^{+262}_{-174}	3930^{+1109}_{-708}	$1.345^{+3.111}_{-0.751}$
Alt.	-27 ± 6	$1.38^{+0.57}_{-0.52}$	3176^{+256}_{-167}	4178^{+959}_{-578}	$1.837^{+2.831}_{-0.919}$

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 $A_{obs} \gg 1.0$

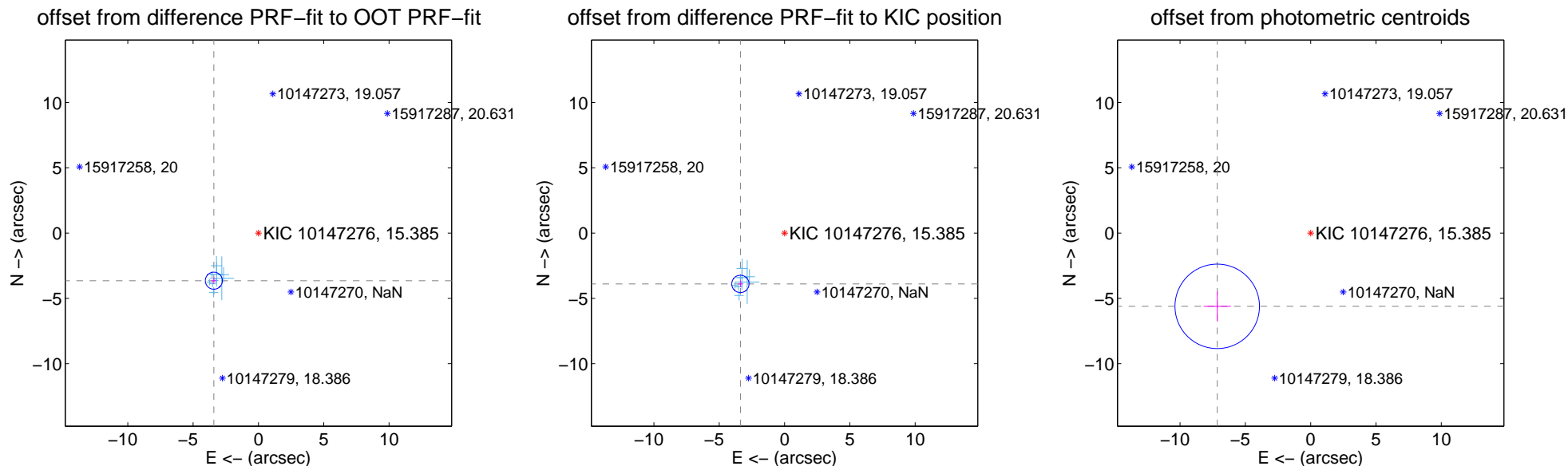
DV Centroid Data

Supplemental centroid analysis for 010147276-01. Kepler magnitude: 15.38. Transit SNR 12.14

There are 9 quarters with good PRF difference image offsets

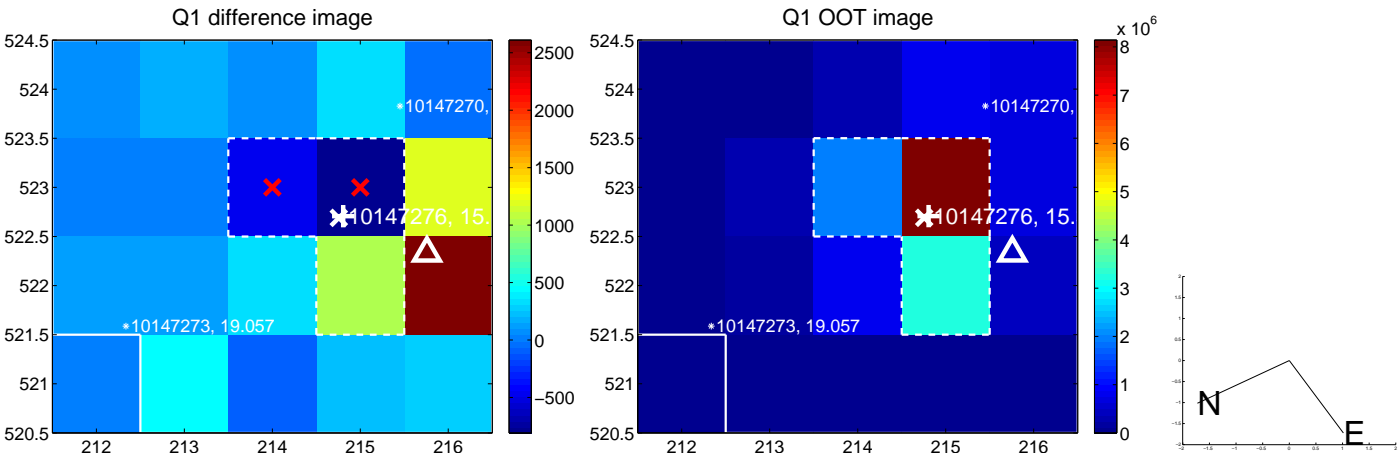
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.997 ± 0.218	22.96	3.414 ± 0.164	-3.649 ± 0.255
PRF-fit source offset from KIC position	5.157 ± 0.221	23.35	3.381 ± 0.164	-3.894 ± 0.255
photometric centroid source offset	9.10 ± 1.08	8.43	7.16 ± 1.04	-5.61 ± 1.14

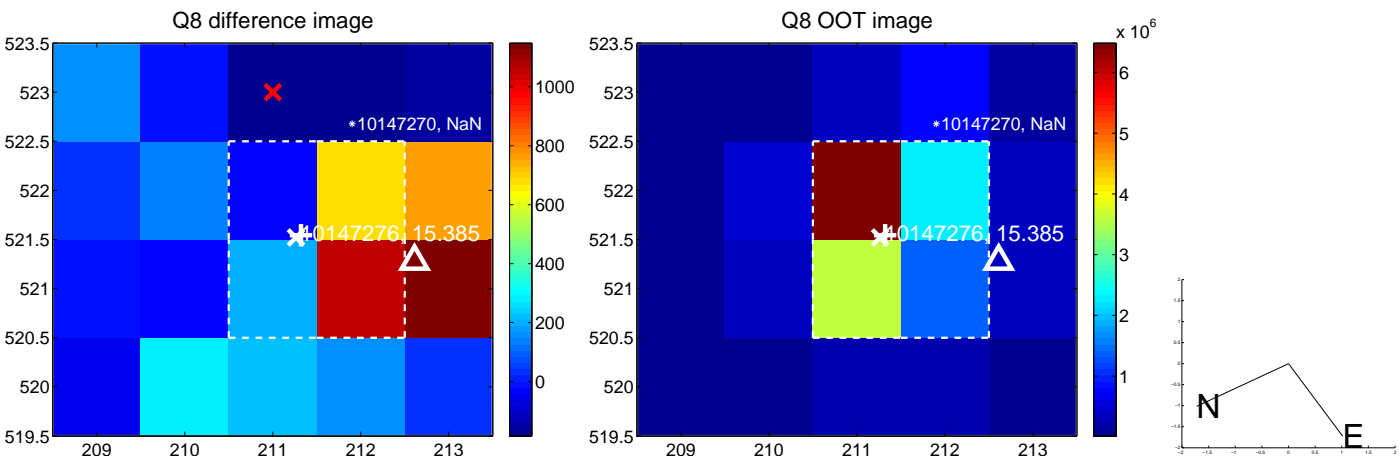
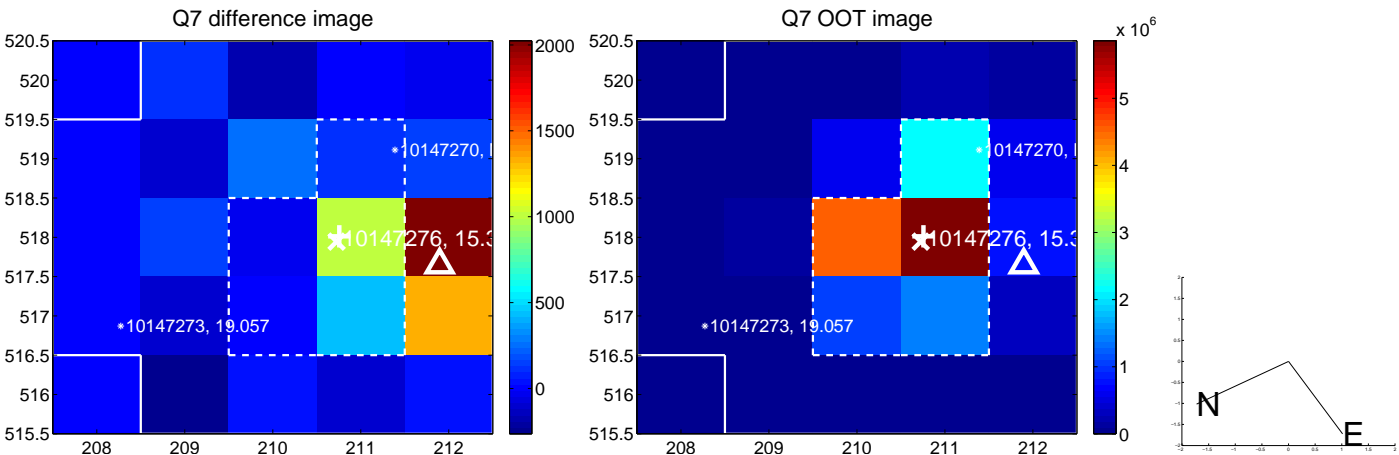
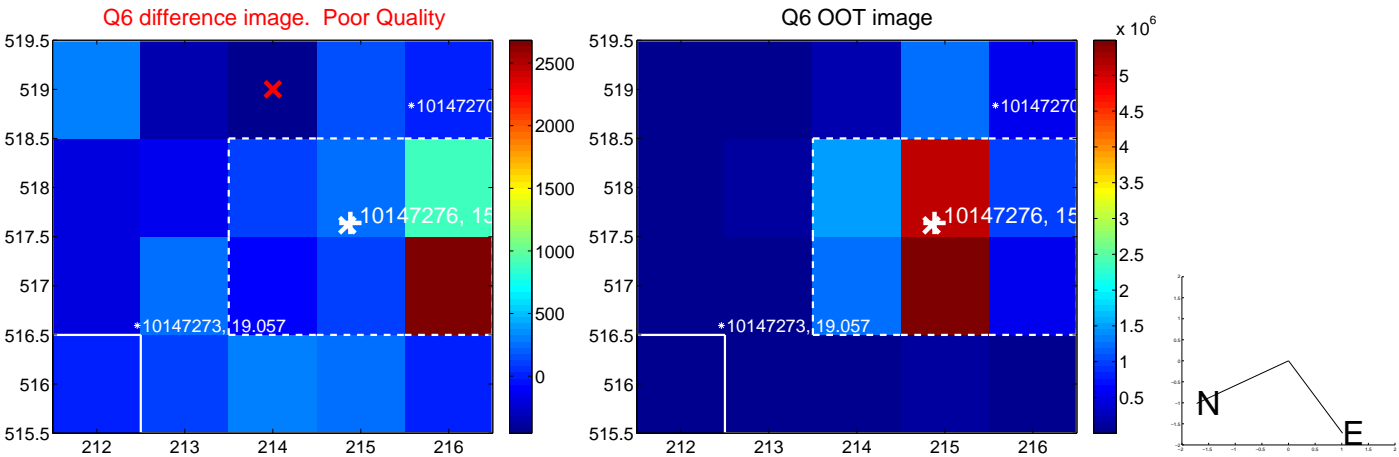
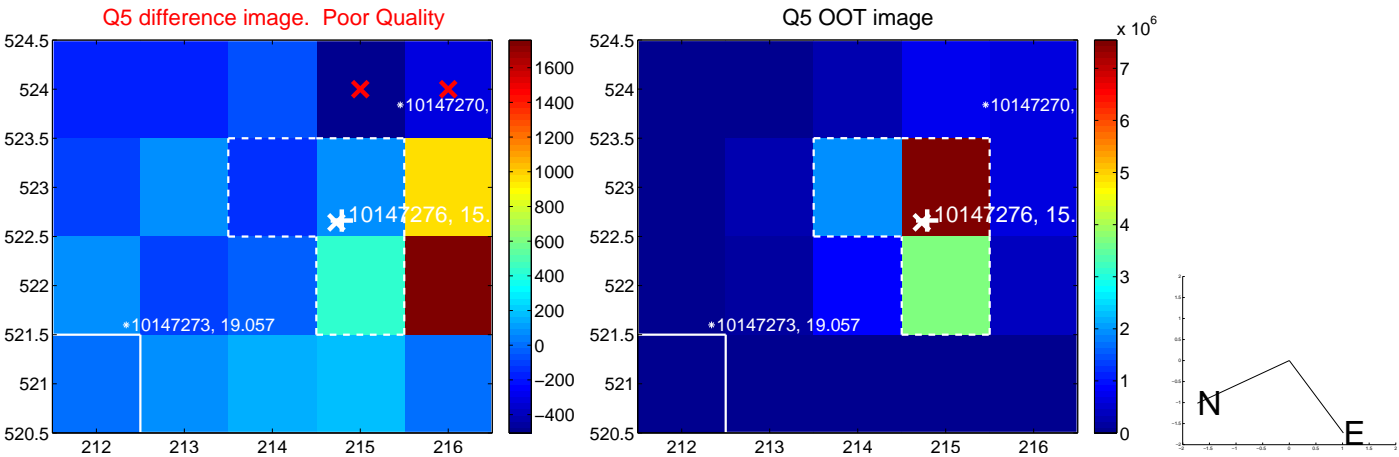


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

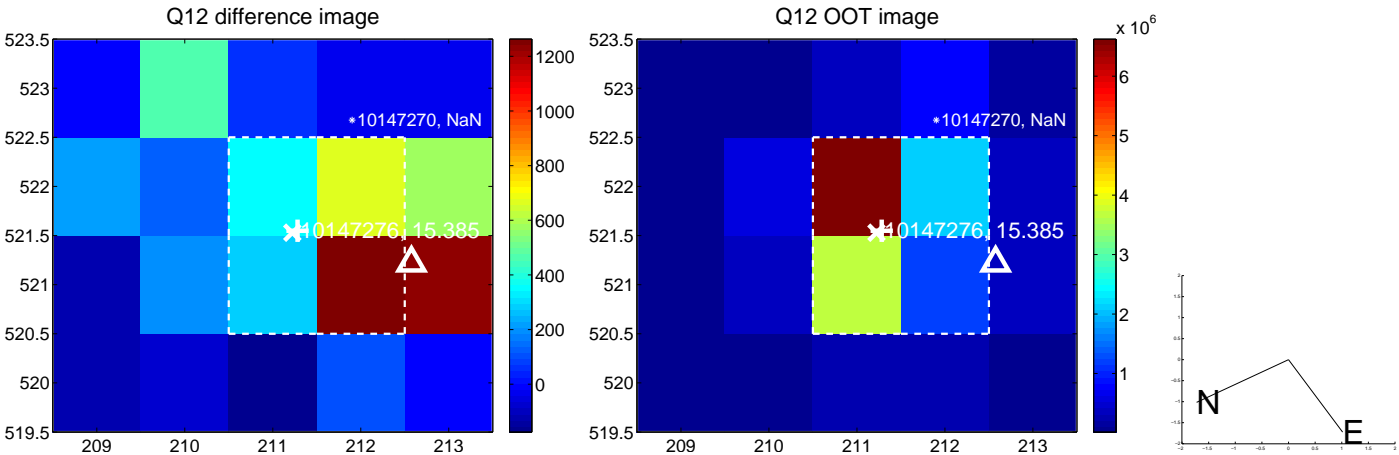
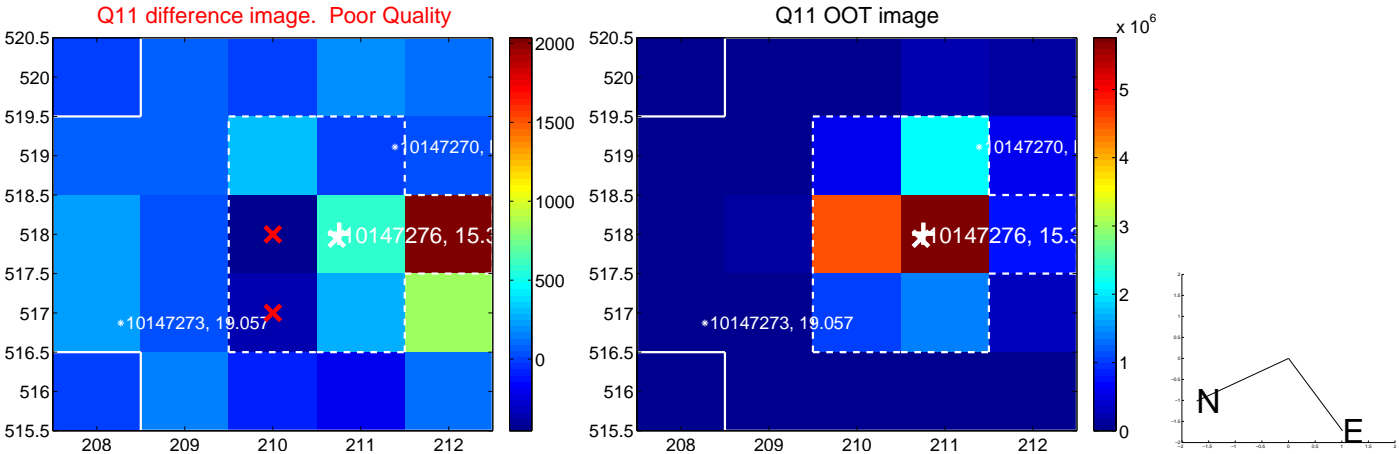
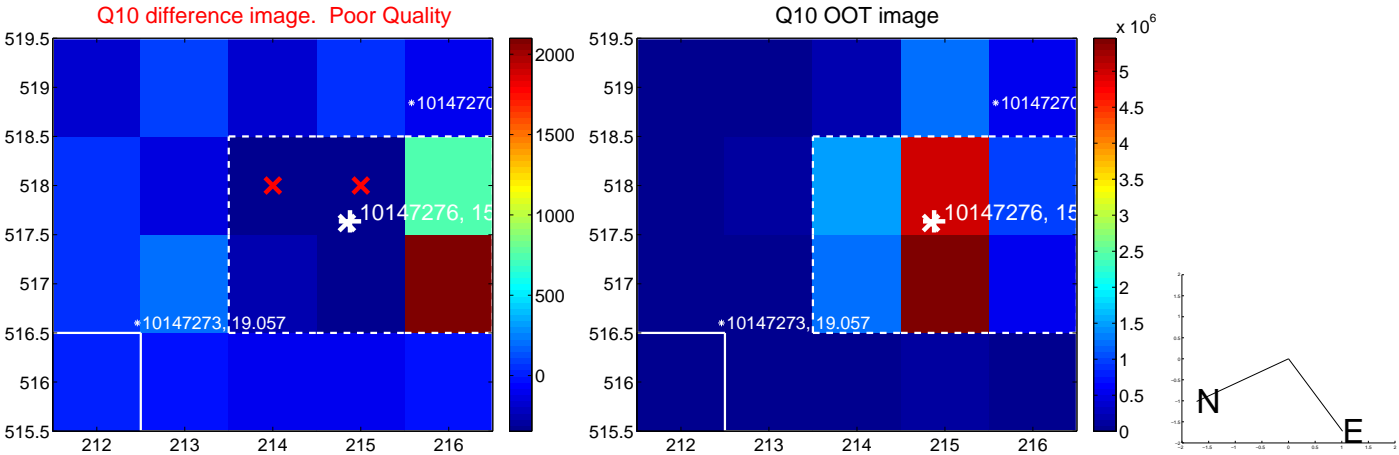
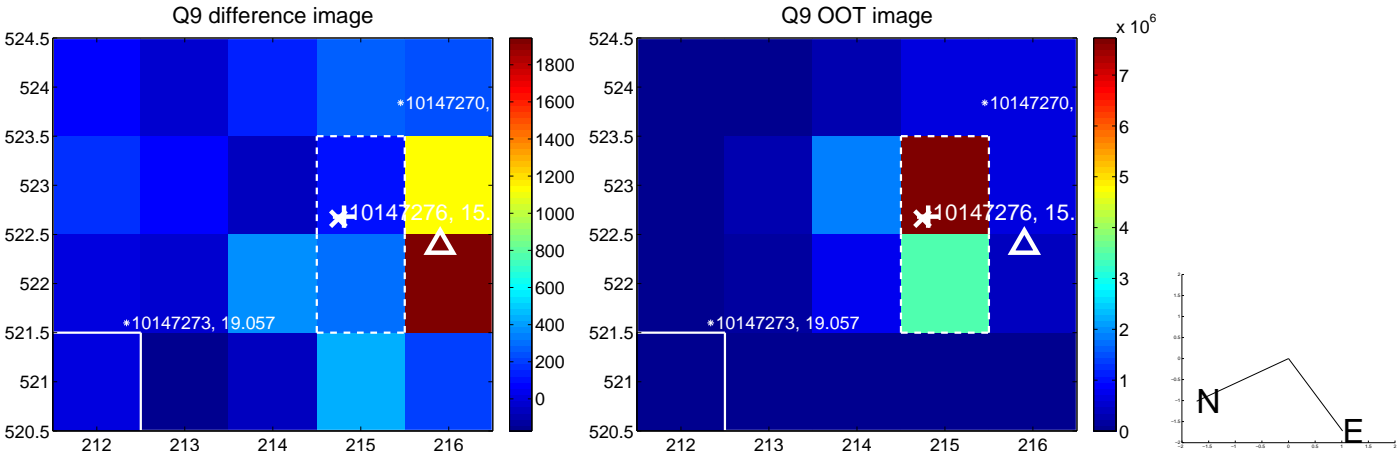
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



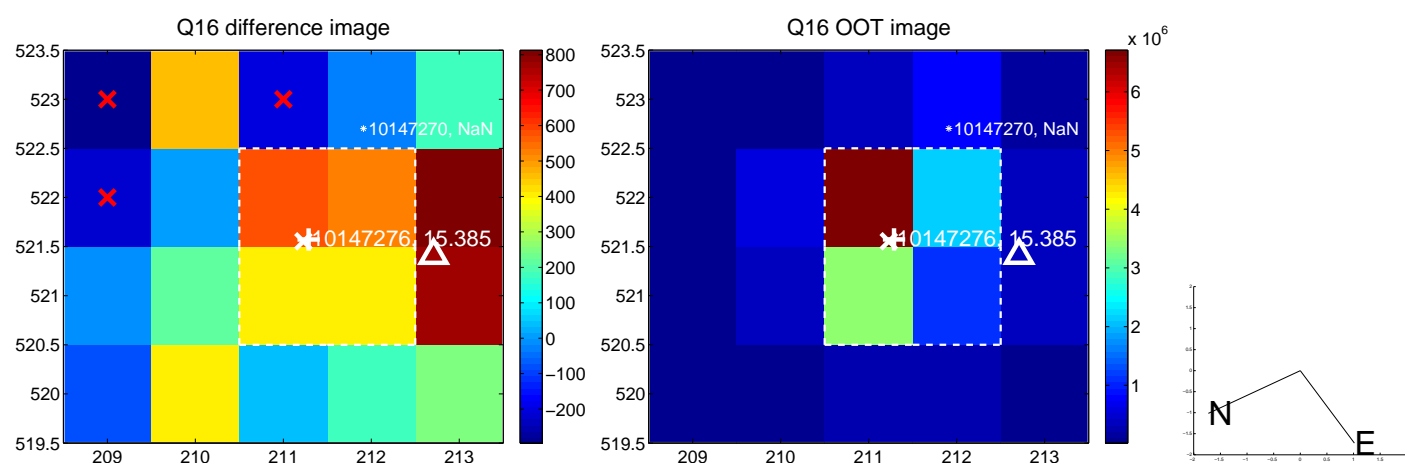
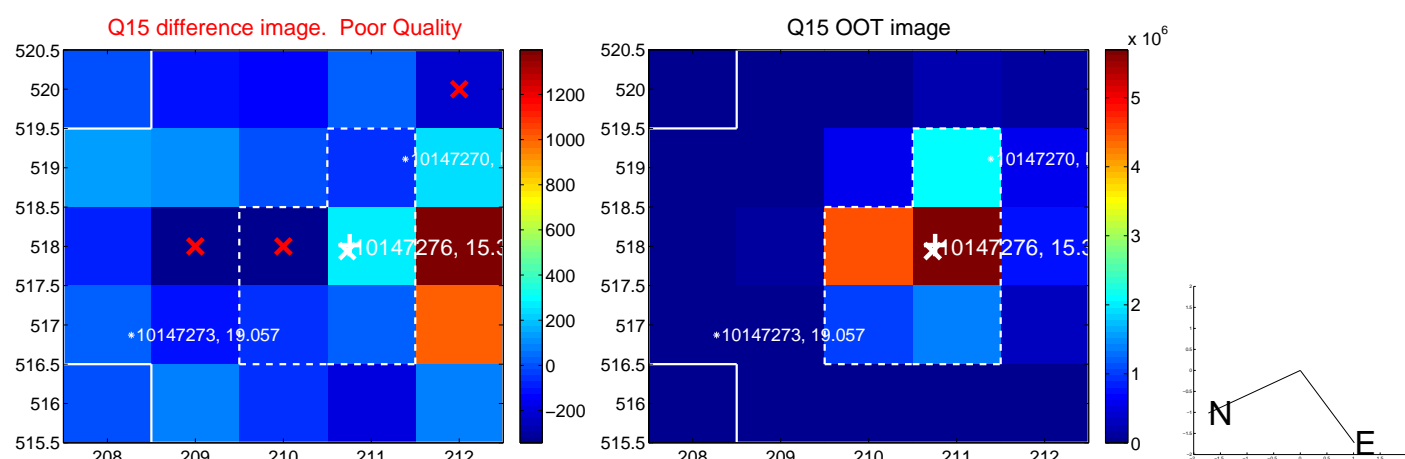
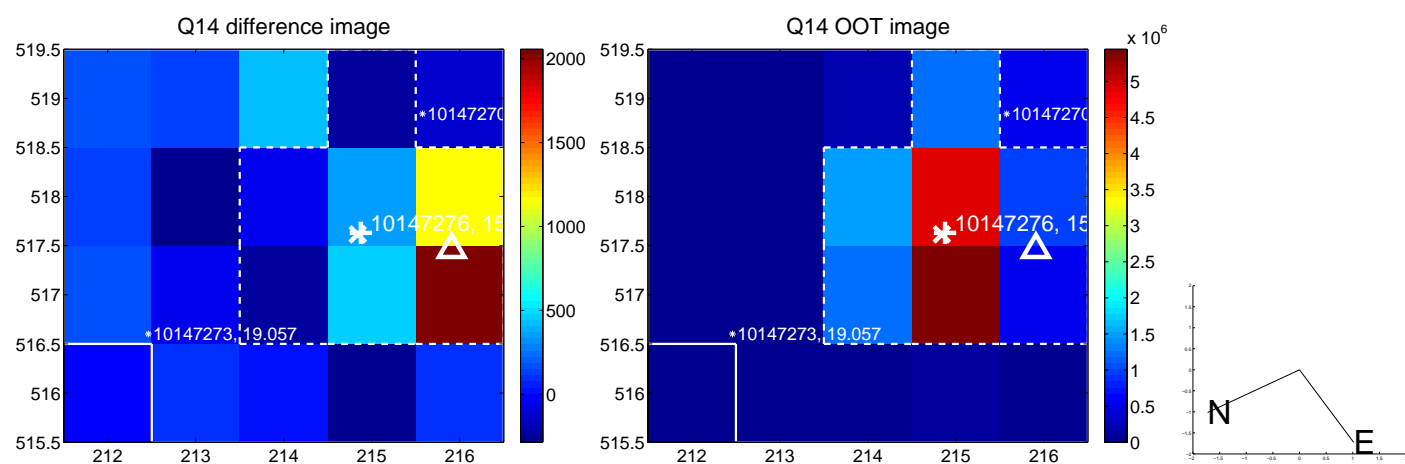
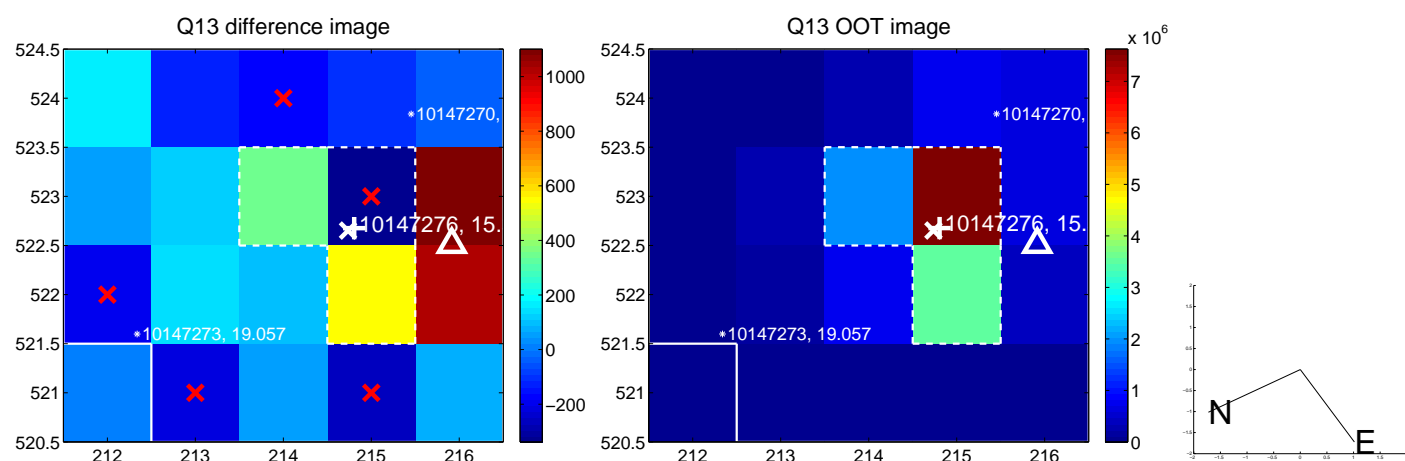
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



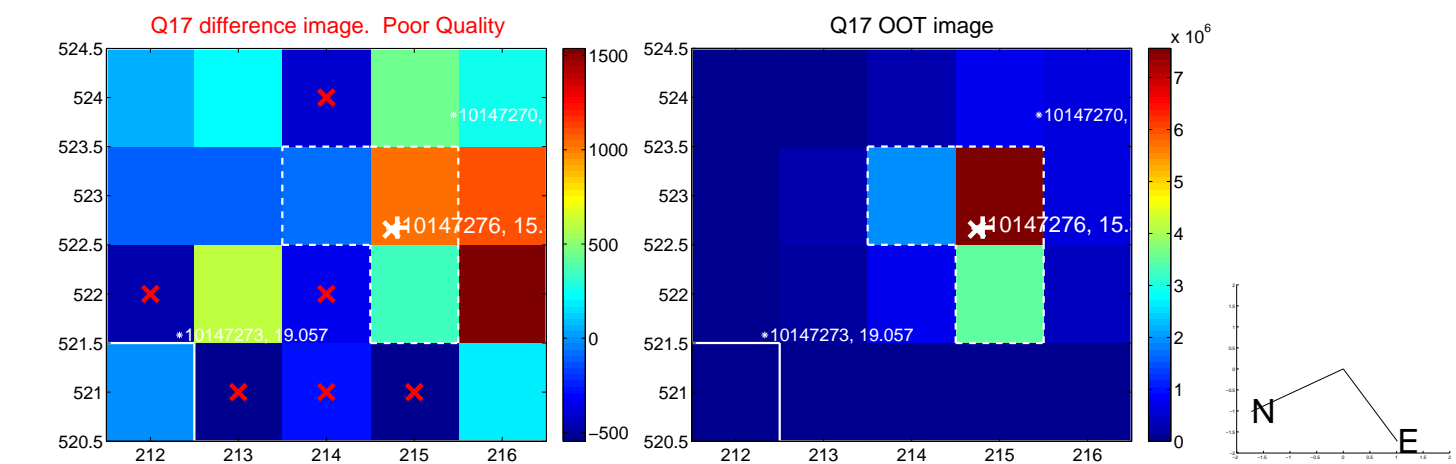
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



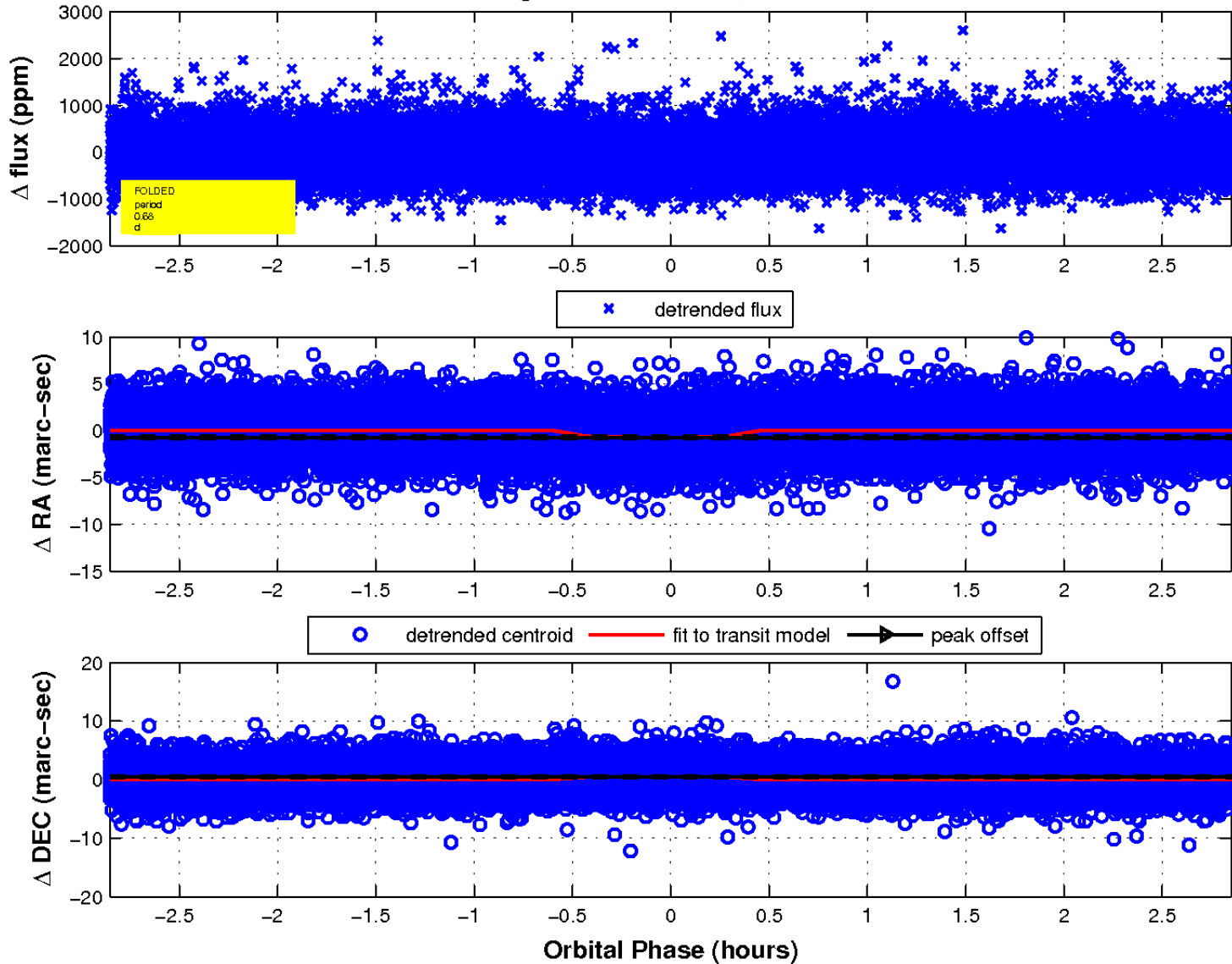
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

