

KIC 010274413

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})
010274413-01	OBS	No	471.727505	150.358176	146.6	4.823	7.7	3.4	1.20	6204	1.65	1.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010274413-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—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.

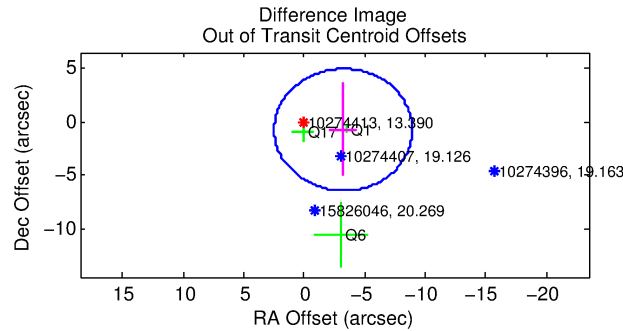
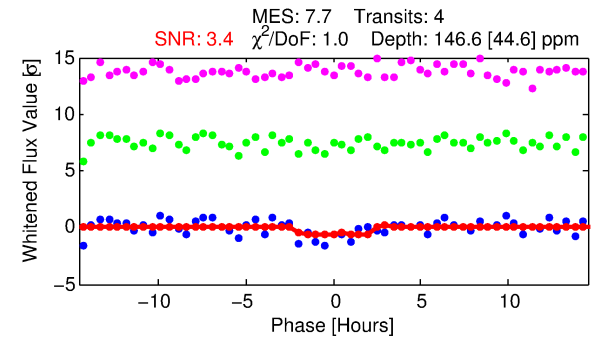
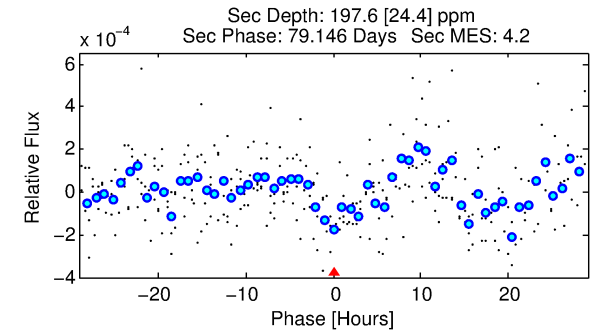
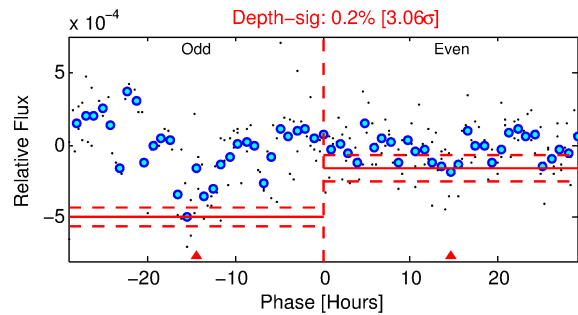
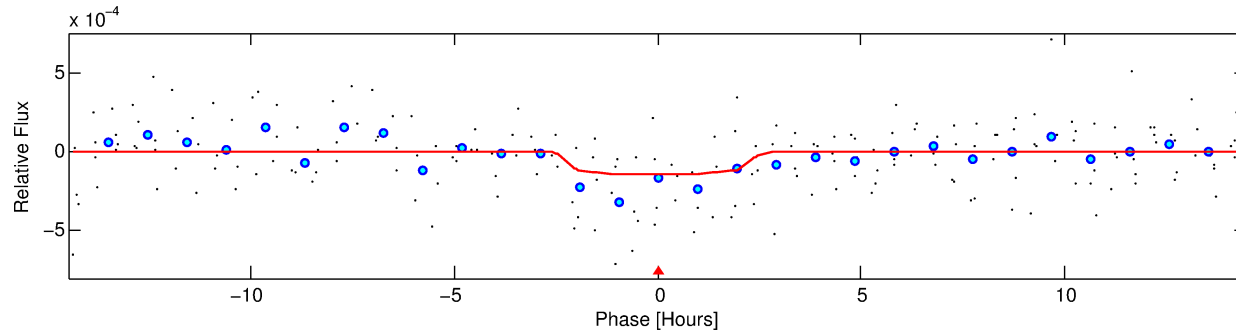
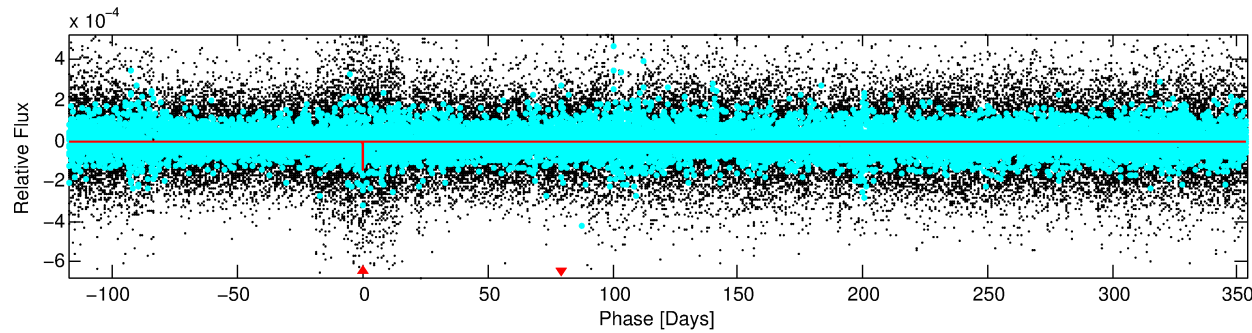
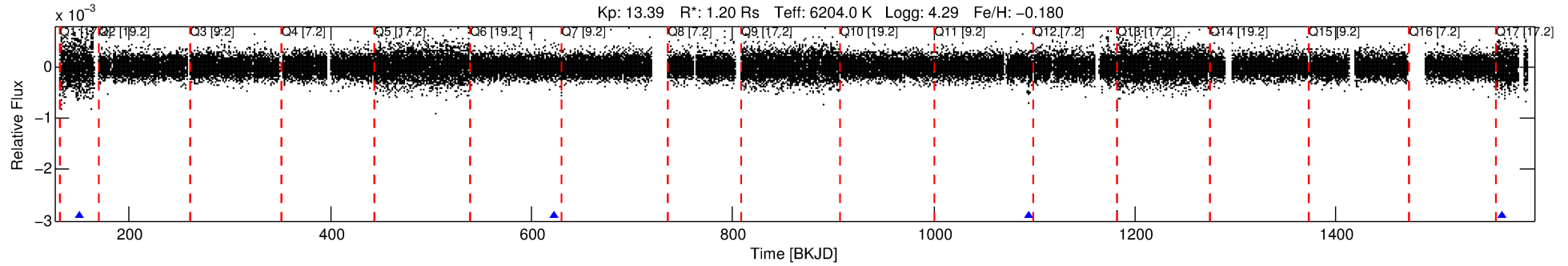
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010274413-01

No Significant Match Found

DV One-Page Summary

KIC: 10274413 Candidate: 1 of 1 Period: 471.728 d



DV Fit Results:

Period = 471.72751 [0.01415] d
Epoch = 150.3582 [0.0253] BKJD
Rp/R* = 0.0126 [0.0191]
a/R* = 409.65 [3323.87]
b = 0.85 [2.64]
Seff = 1.33 [0.38]
Teq = 274 [19] K
Rp = 1.65 [2.53] Re
a = 1.1984 [0.2109] AU
Ag = 57491.22 [175441.25] [0.33σ]
Teffp = 6557 [4990] K [1.26σ]

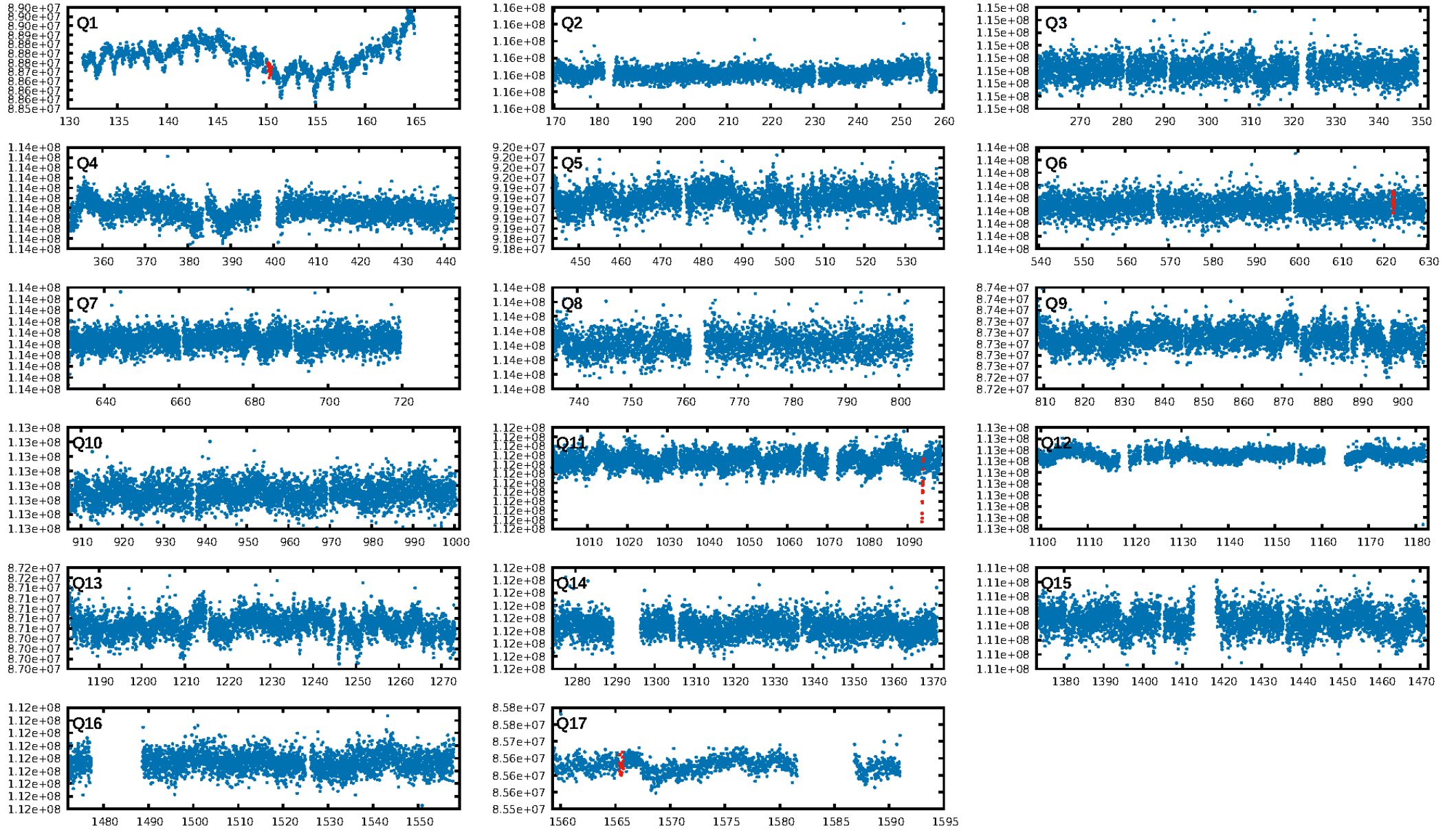
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 75.2%
Bootstrap-pfa: 3.89e-13
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 8.805
Centroid-sig: 10.7%
Centroid-so: 6.363 arcsec [2.19σ]
OotOffset-rm: 3.297 arcsec [1.74σ]
OotOffset-st: 1/0/0/2 [3]
KicOffset-rm: 3.216 arcsec [3.27σ]
KicOffset-st: 1/0/0/2 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

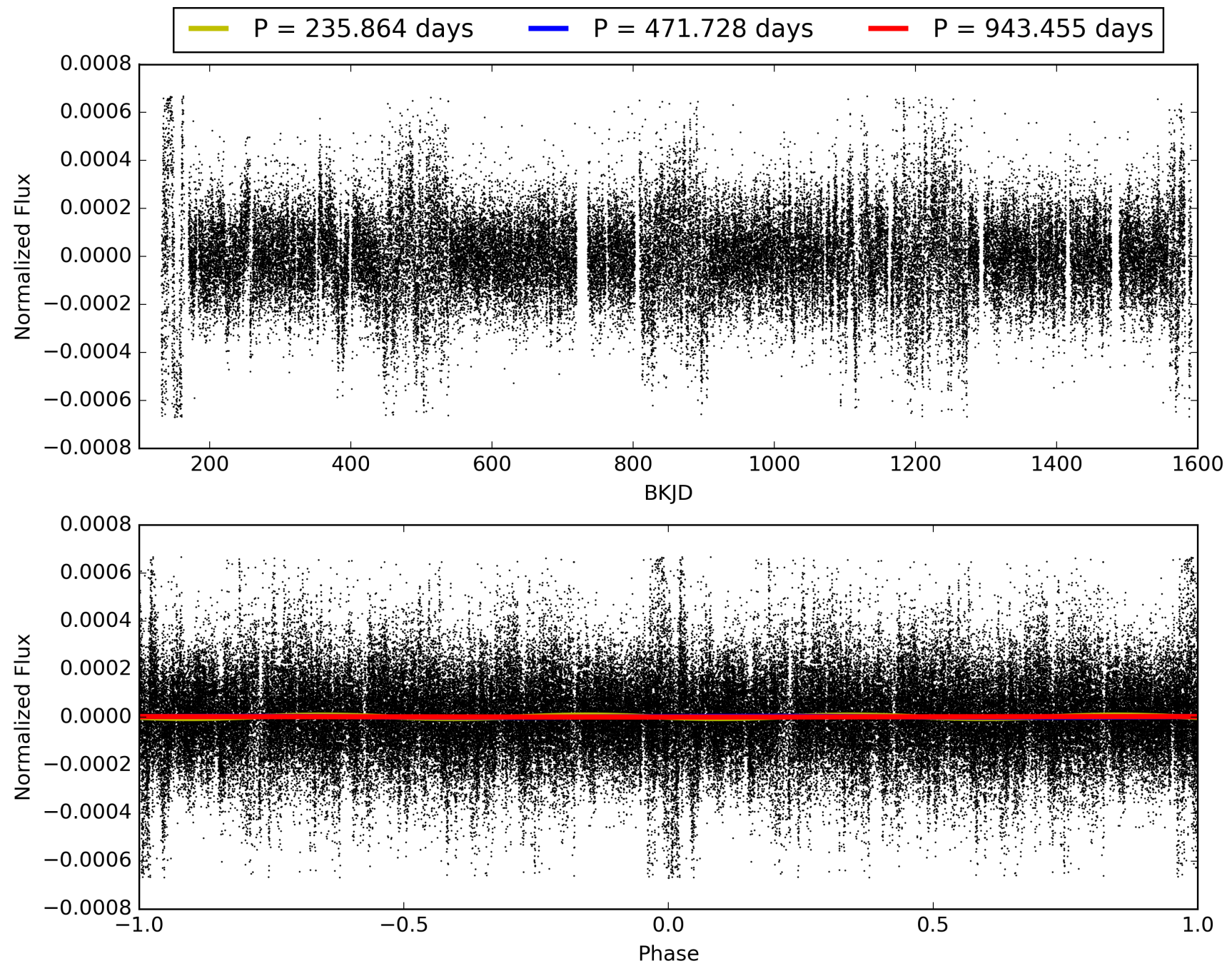
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:29:06 Z

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

TCE 010274413-01, PDC Light Curves

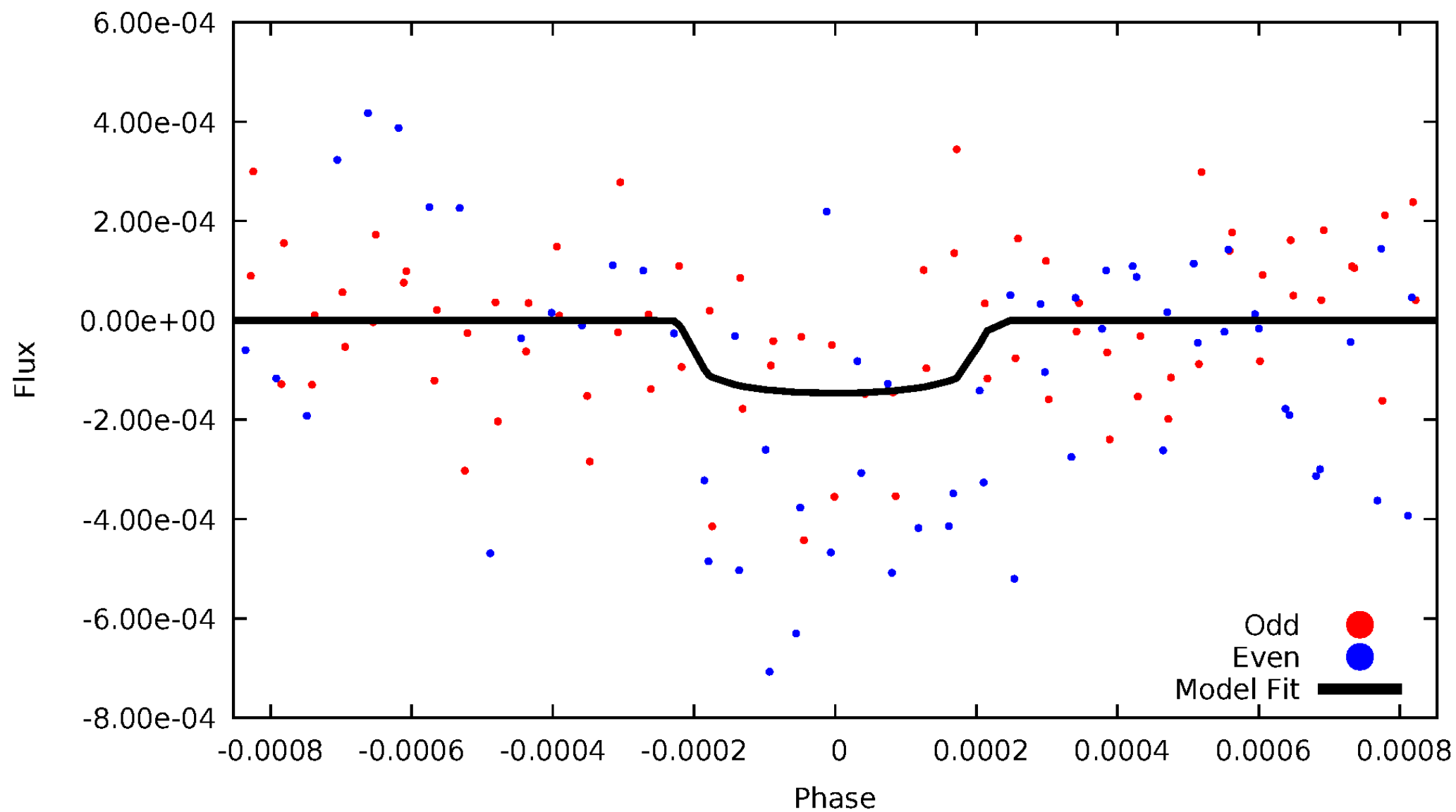


TCE 010274413-01



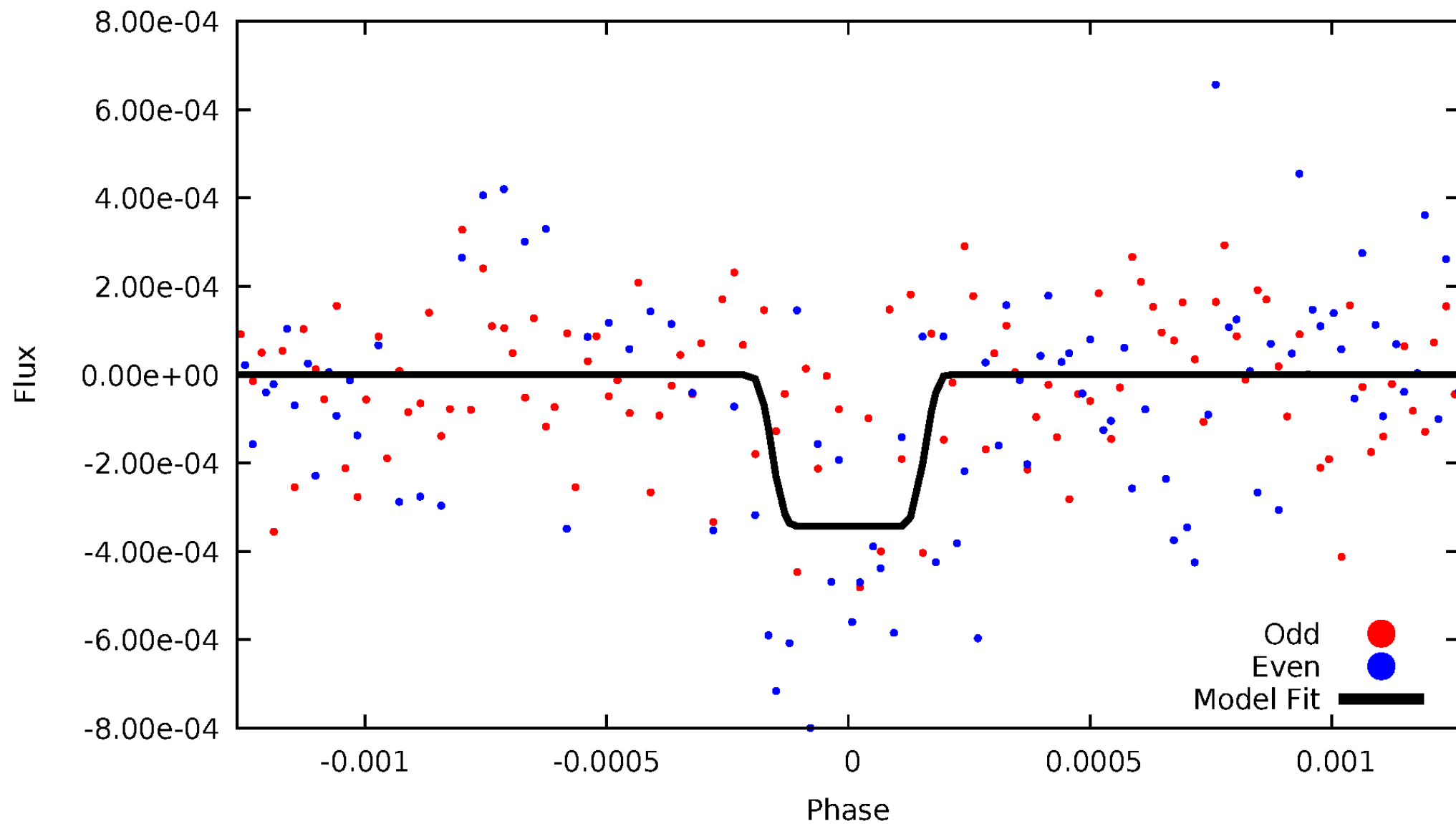
DV Odd/Even

TCE 010274413-01



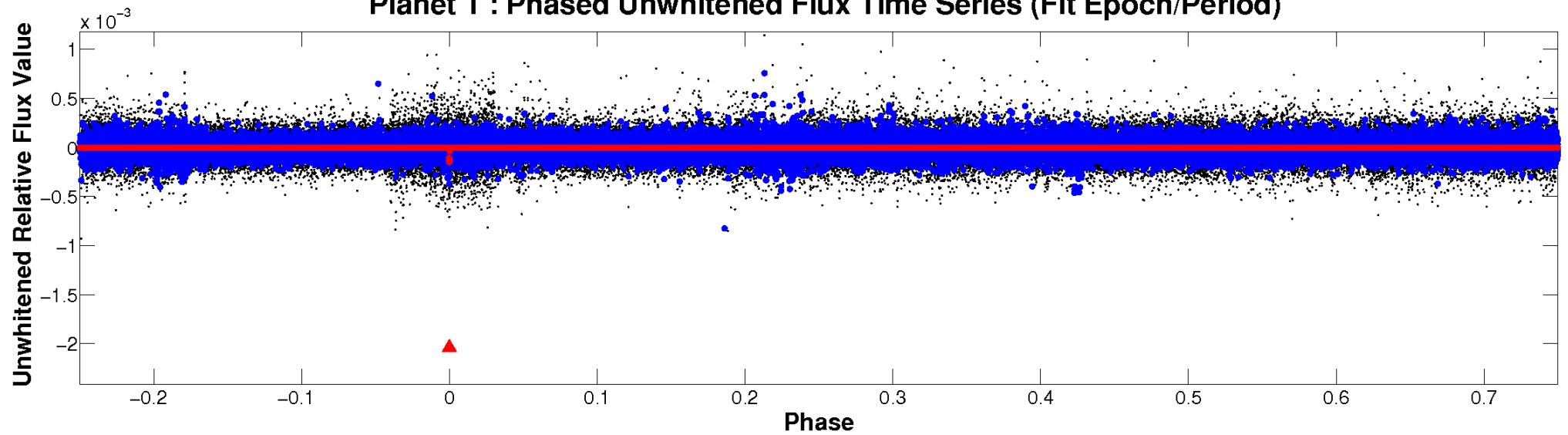
ALT Odd/Even

TCE 010274413-01

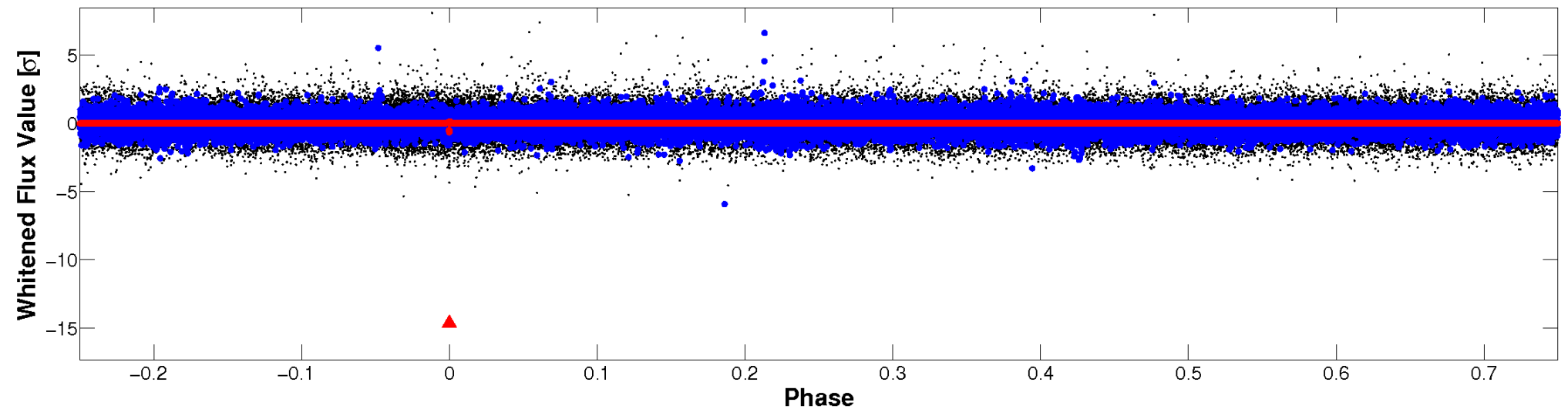


Non-Whitened Vs. Whitened Light Curve

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

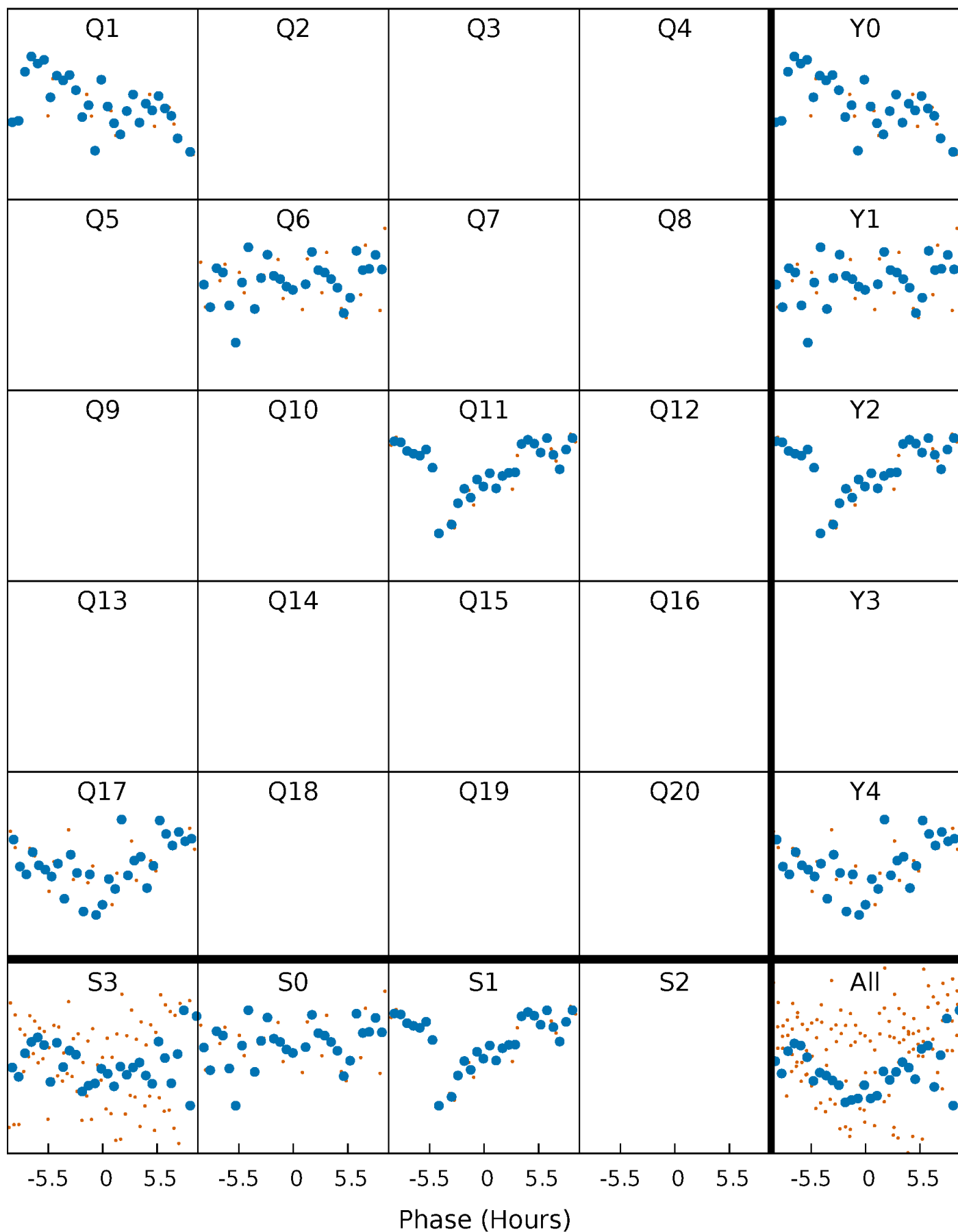


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



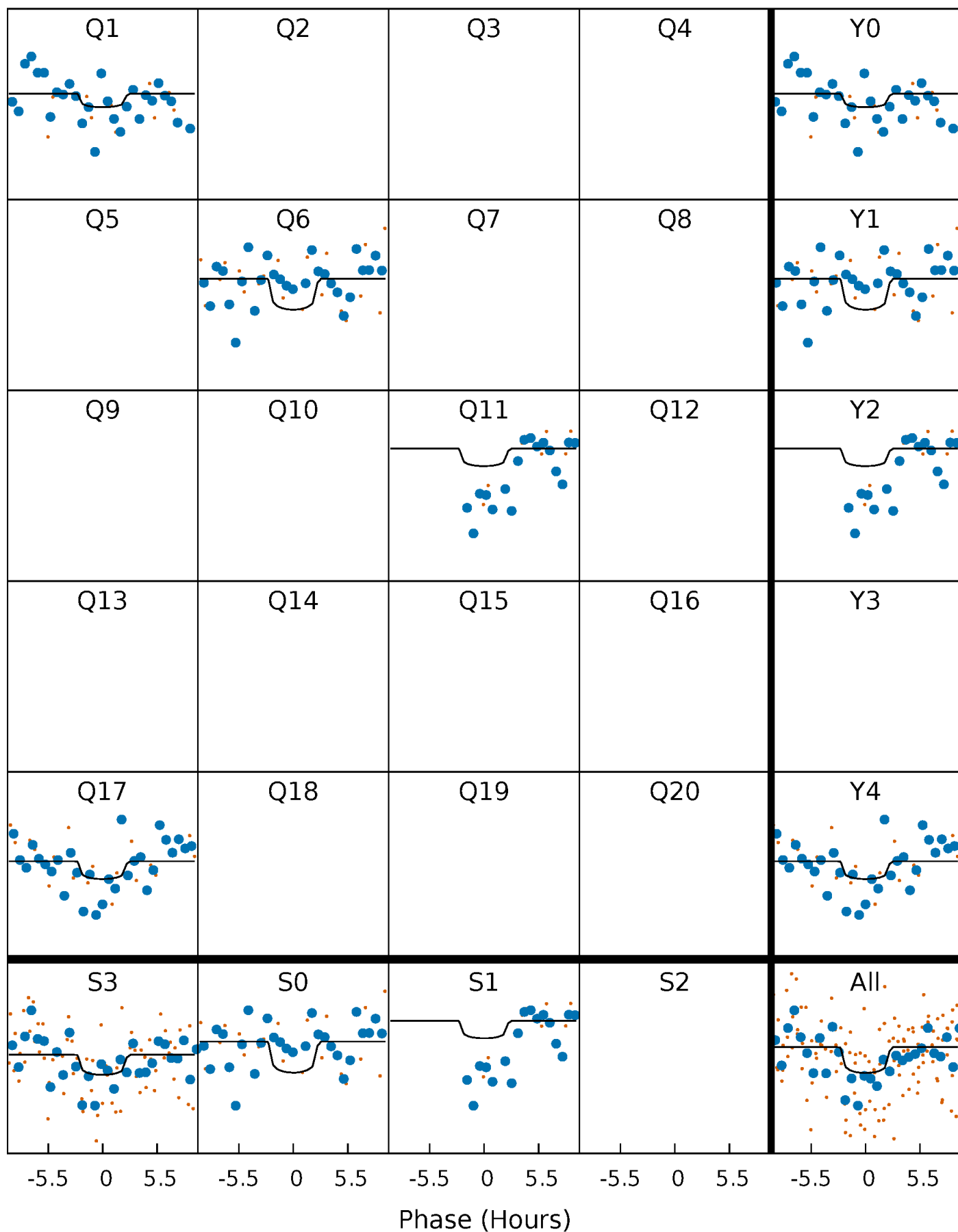
PDC Quarter-Phased Transit Curves

TCE 010274413-01 P=471.727505 Days $T_0=150.358176$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 010274413-01 P=471.727505 Days $T_0=150.358176$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

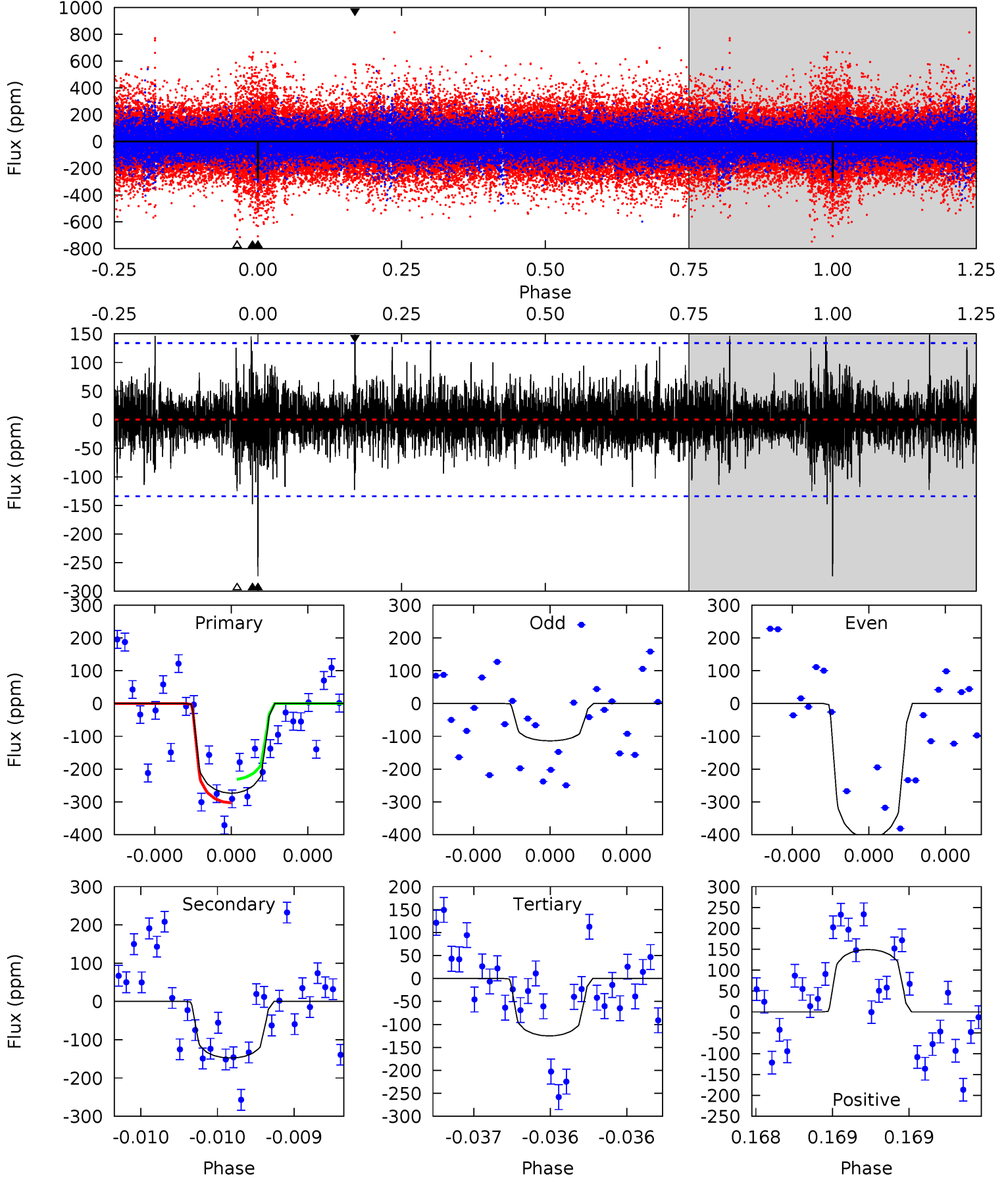
TCE 010274413-01 P=471.701921 Days $T_0=150.402644$ (BKJD)



DV Model-Shift Uniqueness Test

010274413-01, P = 471.727505 Days, E = 150.358176 Days

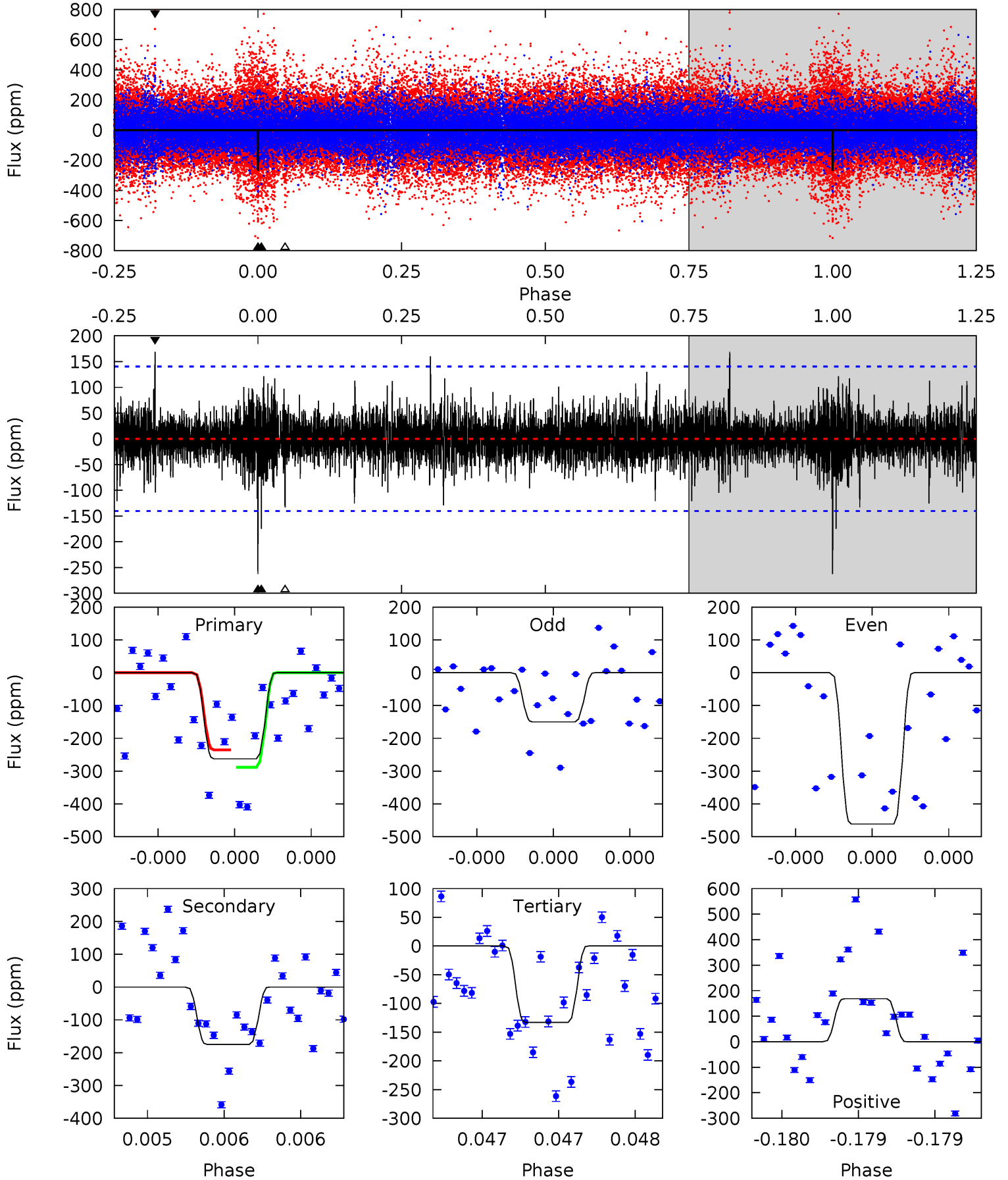
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.4	6.18	5.23	6.24	5.60	3.52	1.24	6.20	5.19	0.95	-0.06	6.29	1.05	0.35	1.49



Alt Model-Shift Uniqueness Test

010274413-01, P = 471.701921 Days, E = 150.402644 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.5	7.00	5.32	6.75	5.62	3.55	1.21	5.19	3.77	1.68	0.25	6.22	1.00	0.39	1.07



Stellar Parameters For KIC 010274413

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6204^{+166}_{-203}	$4.293^{+0.135}_{-0.135}$	$-0.180^{+0.250}_{-0.300}$	$1.200^{+0.256}_{-0.209}$	$1.030^{+0.155}_{-0.113}$	$0.839^{+0.534}_{-0.326}$
	+3%/-3%	+3%/-3%	+139%/-167%	+21%/-17%	+15%/-11%	+64%/-39%
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 010274413-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-148 ± 24	$2.50^{+2.23}_{-1.58}$	382^{+24}_{-20}	5060^{+3421}_{-1122}	$18860^{+126888}_{-13634}$
Alt.	-175 ± 25	$3.03^{+2.31}_{-1.85}$	383^{+23}_{-21}	4781^{+3062}_{-884}	15171^{+86778}_{-10226}

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 $A_{obs} \gg 1.0$

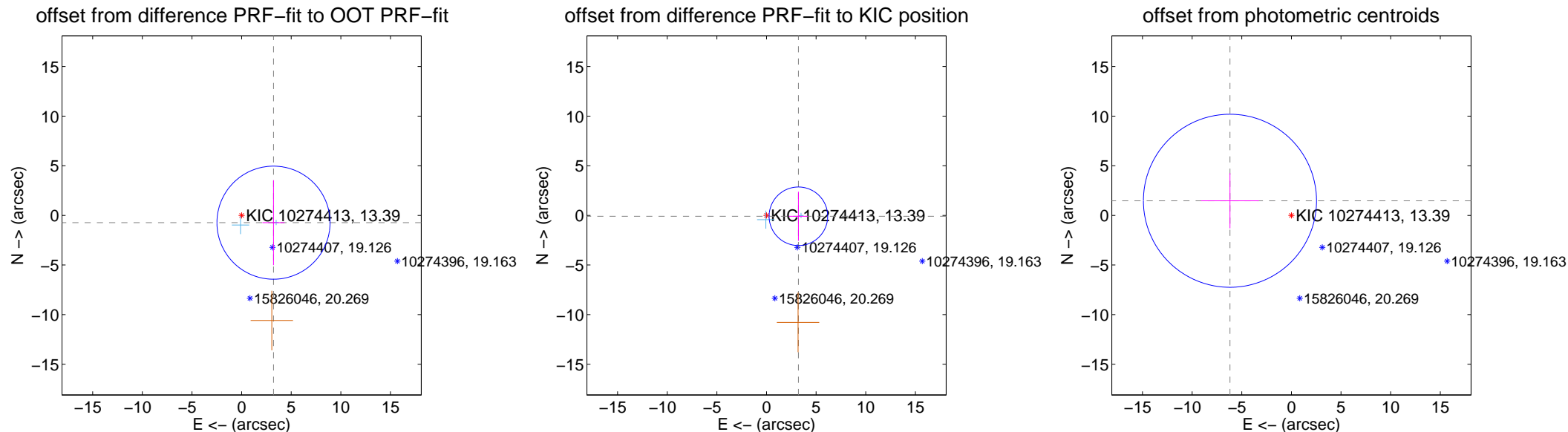
DV Centroid Data

Supplemental centroid analysis for 010274413-01. Kepler magnitude: 13.39. Transit SNR 3.45

There are 2 quarters with good PRF difference image offsets

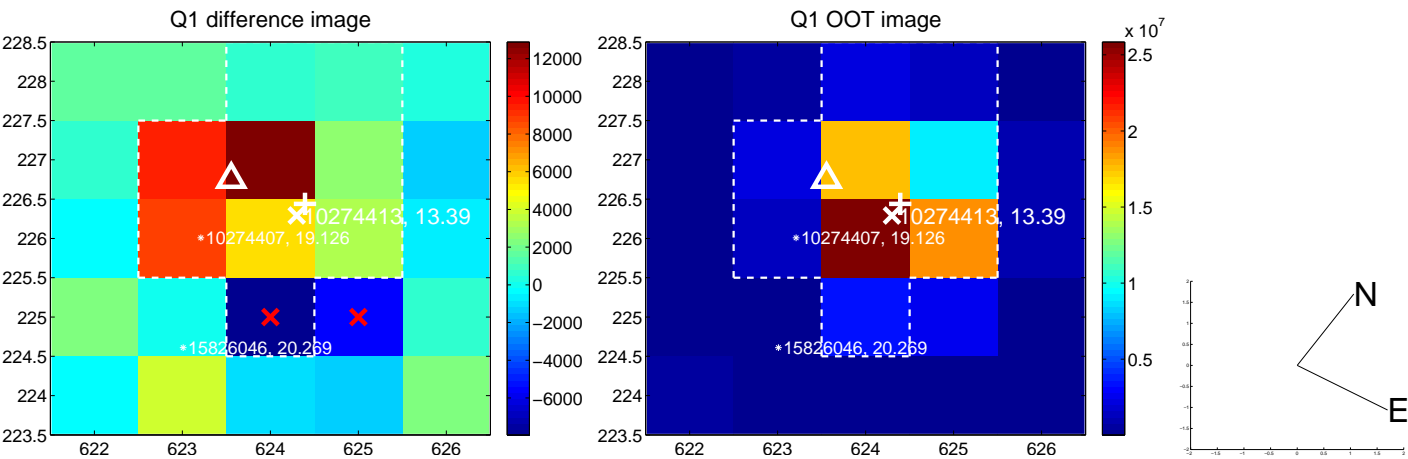
The direct PRF centroid is offset from the target star catalog position by about 0.55 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.297 ± 1.900	1.74	-3.214 ± 1.114	-0.735 ± 4.285
PRF-fit source offset from KIC position	3.216 ± 0.984	3.27	-3.214 ± 0.949	-0.089 ± 2.476
photometric centroid source offset	6.36 ± 2.91	2.19	6.19 ± 2.91	1.47 ± 2.78

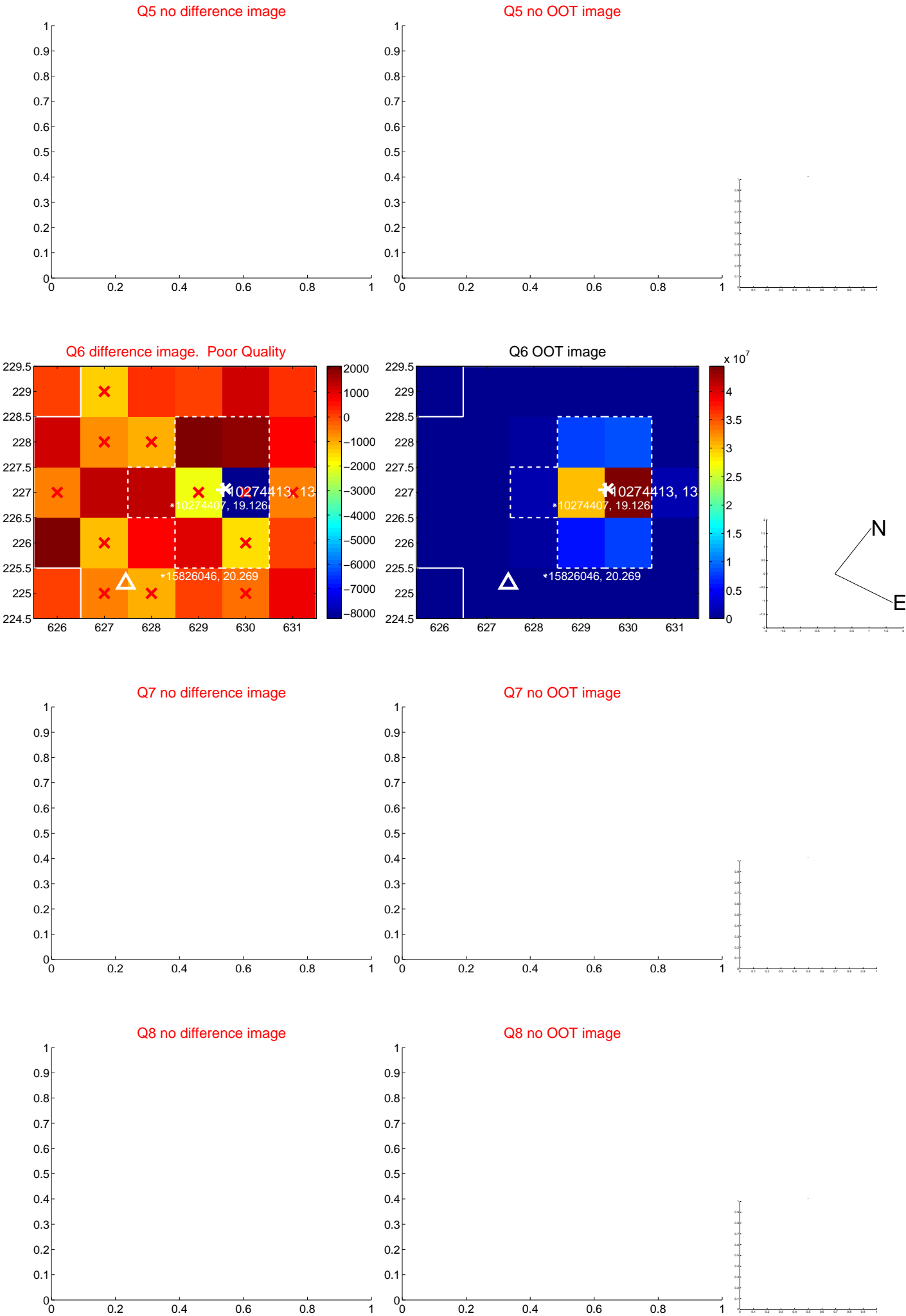


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



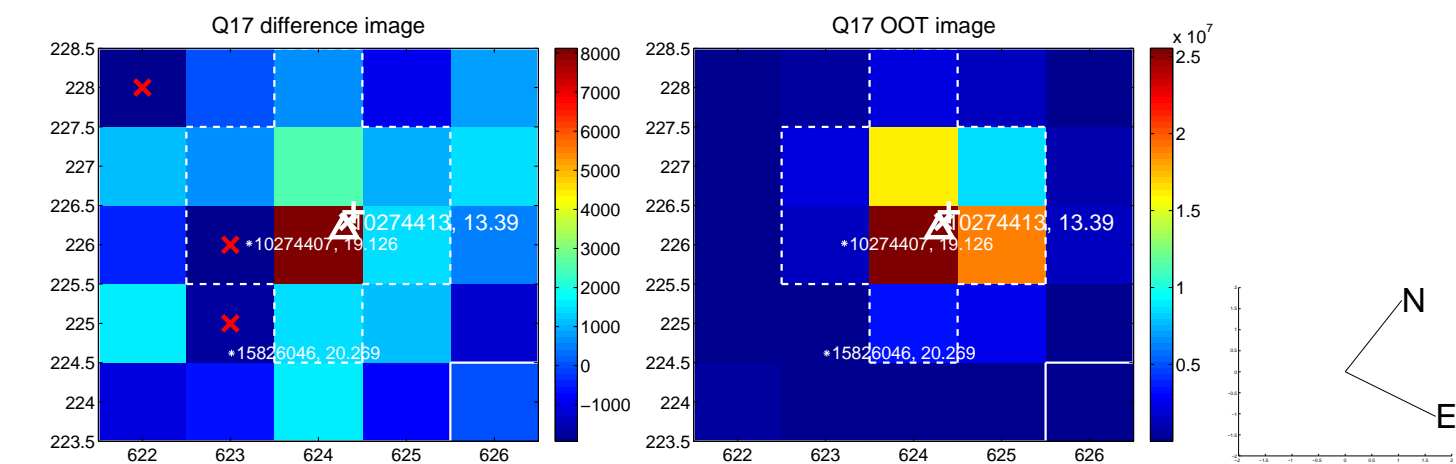
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



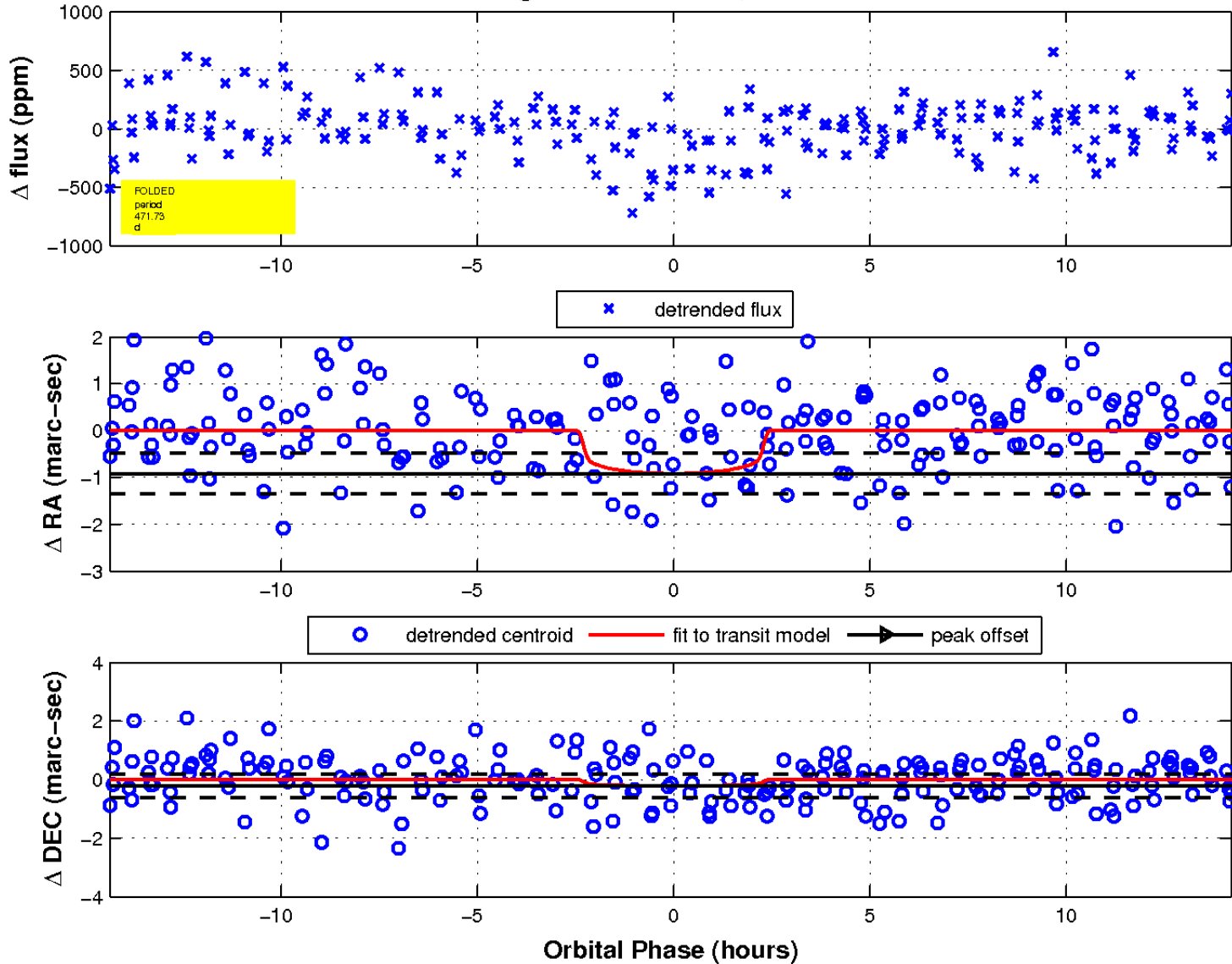
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

