

KIC 006037623

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})
006037623-01	OBS	No	541.594759	373.064082	871.8	27.042	8.5	9.9	1.16	6131	5.37	0.93

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006037623-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—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.

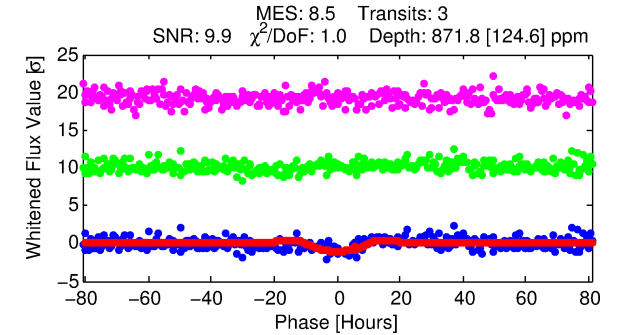
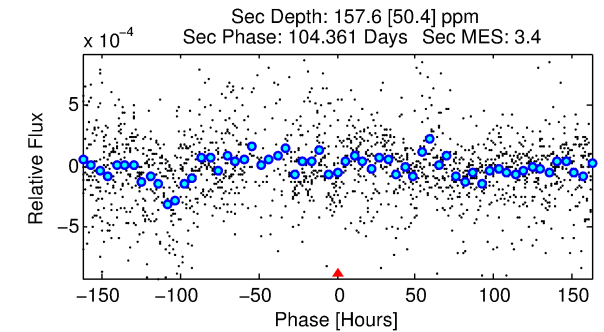
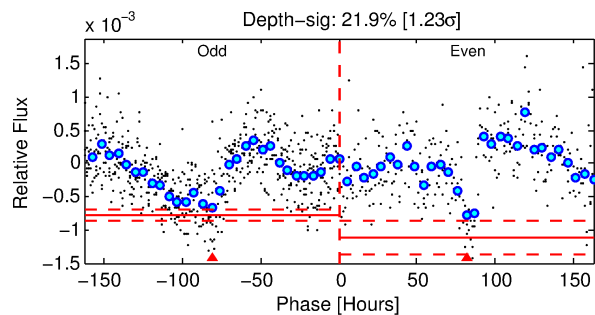
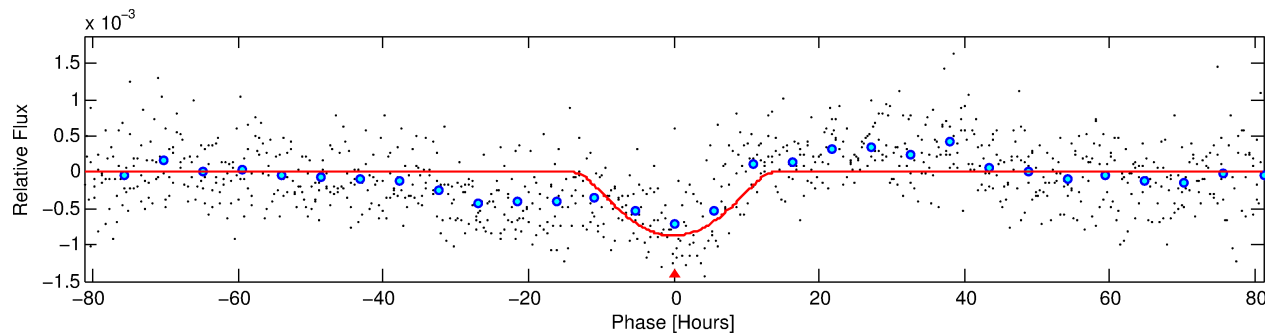
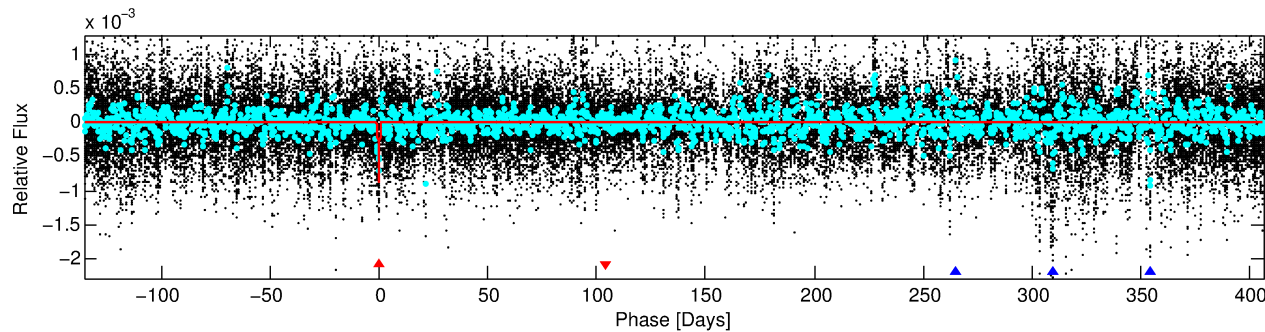
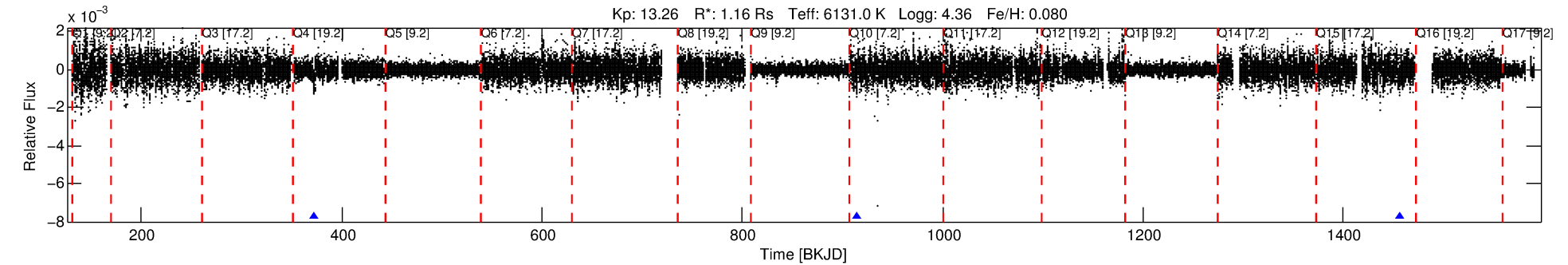
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006037623-01

No Significant Match Found

DV One-Page Summary

KIC: 6037623 Candidate: 1 of 2 Period: 541.595 d



DV Fit Results:

Period = 541.59476 [0.03501] d
Epoch = 373.0641 [0.0312] BKJD
Rp/R* = 0.0423 [0.0410]
a/R* = 52.73 [18.35]
b = 0.98 [0.08]
Seff = 0.93 [0.39]
Teq = 251 [26] K
Rp = 5.37 [5.49] Re
a = 1.3548 [0.3684] AU
Ag = 5512.58 [11034.32] [0.50σ]
Teffp = 3339 [1643] K [1.88σ]

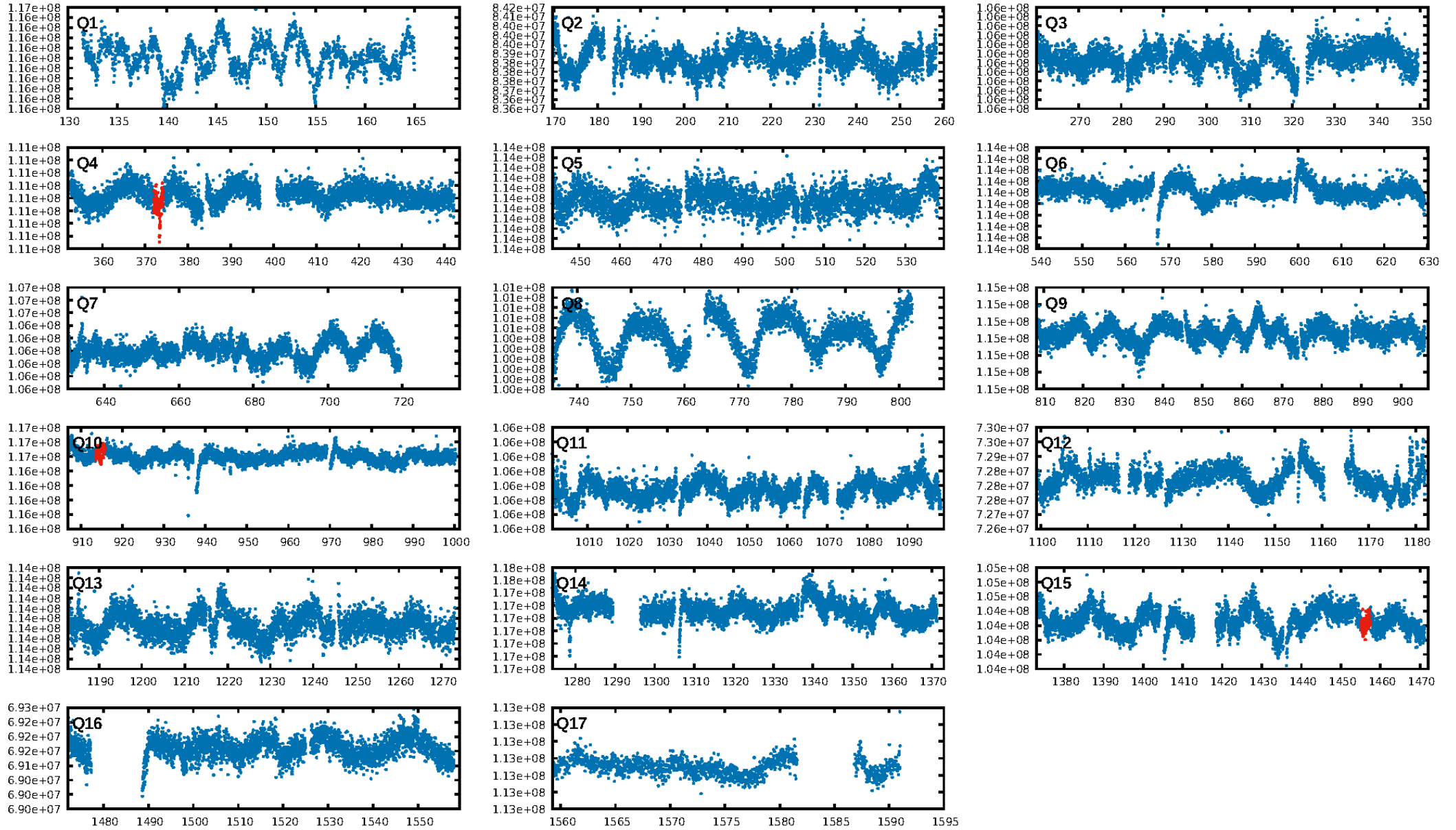
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [31.13σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 27.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.74e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.5319
Centroid-sig: 28.9%
Centroid-so: 2.676 arcsec [1.83σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [2/2]

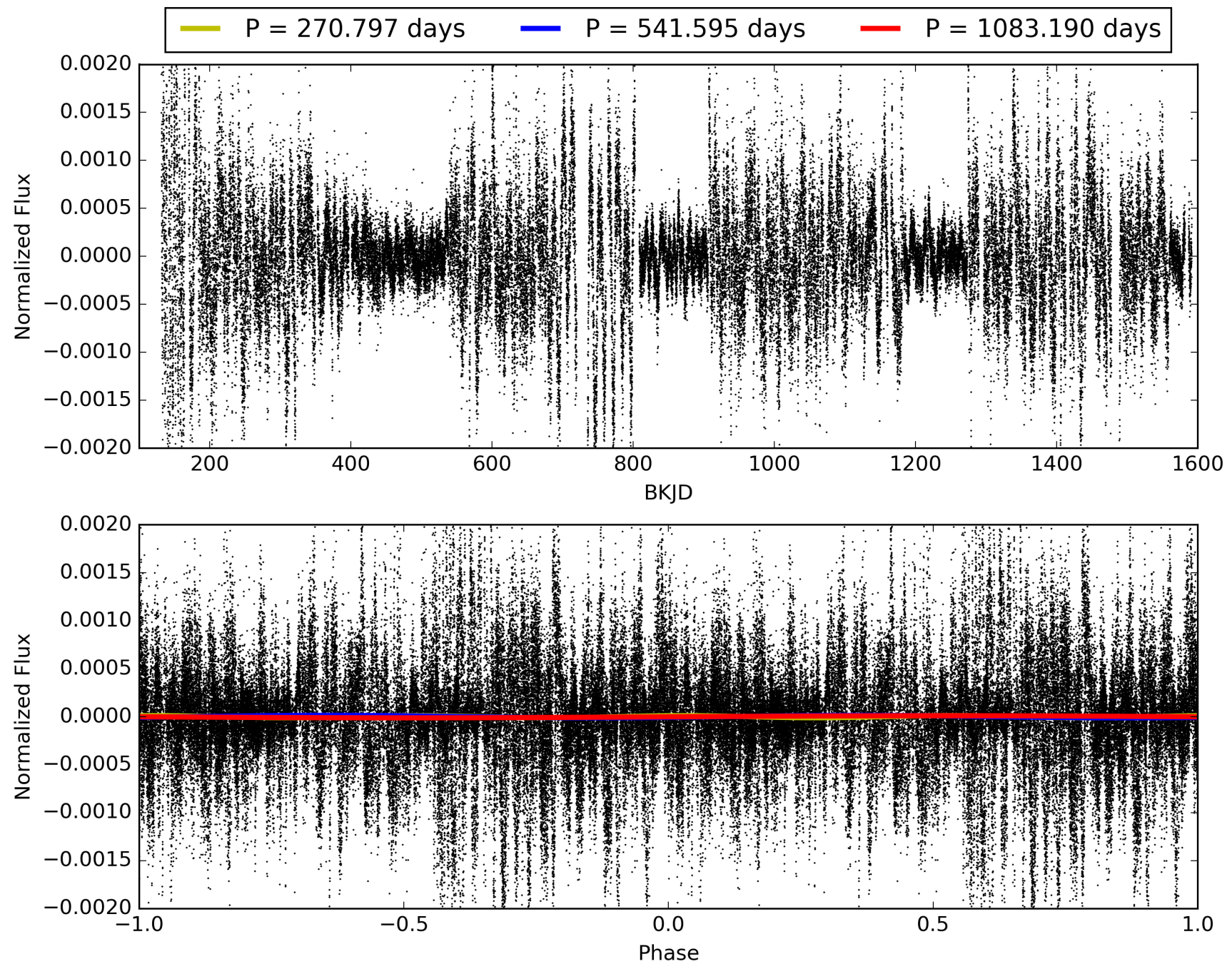
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 23:34:09 Z

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

TCE 006037623-01, PDC Light Curves

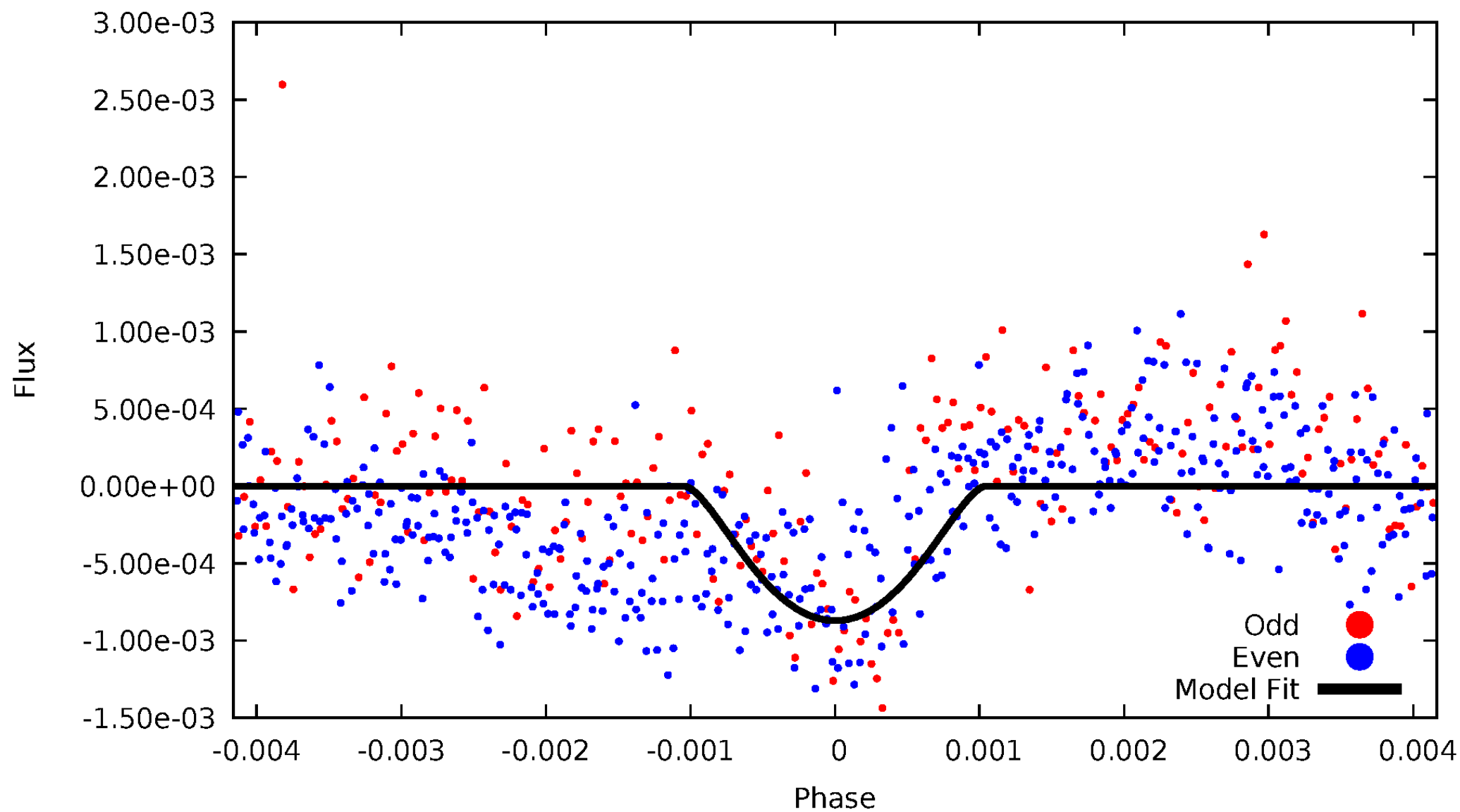


TCE 006037623-01



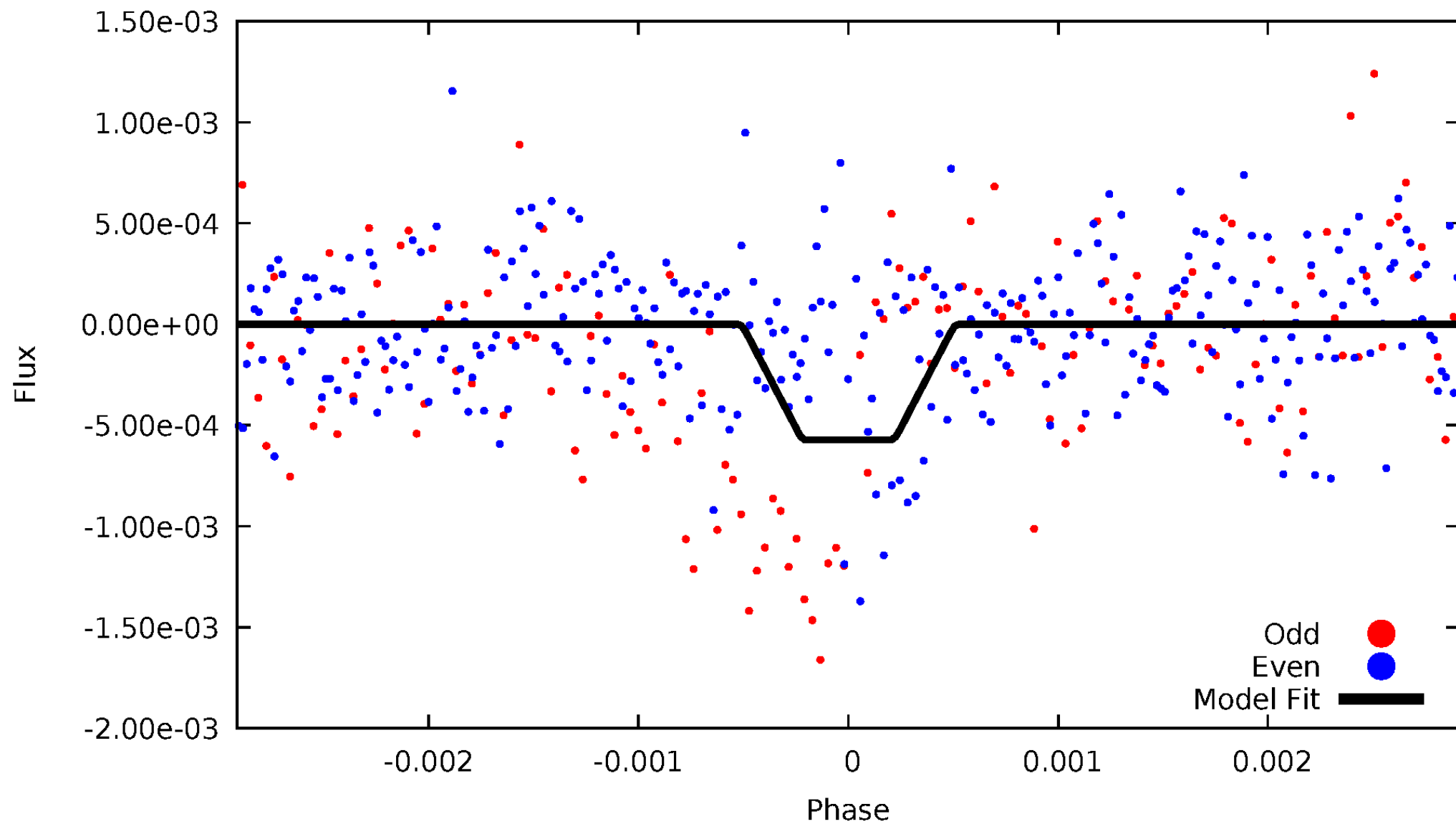
DV Odd/Even

TCE 006037623-01

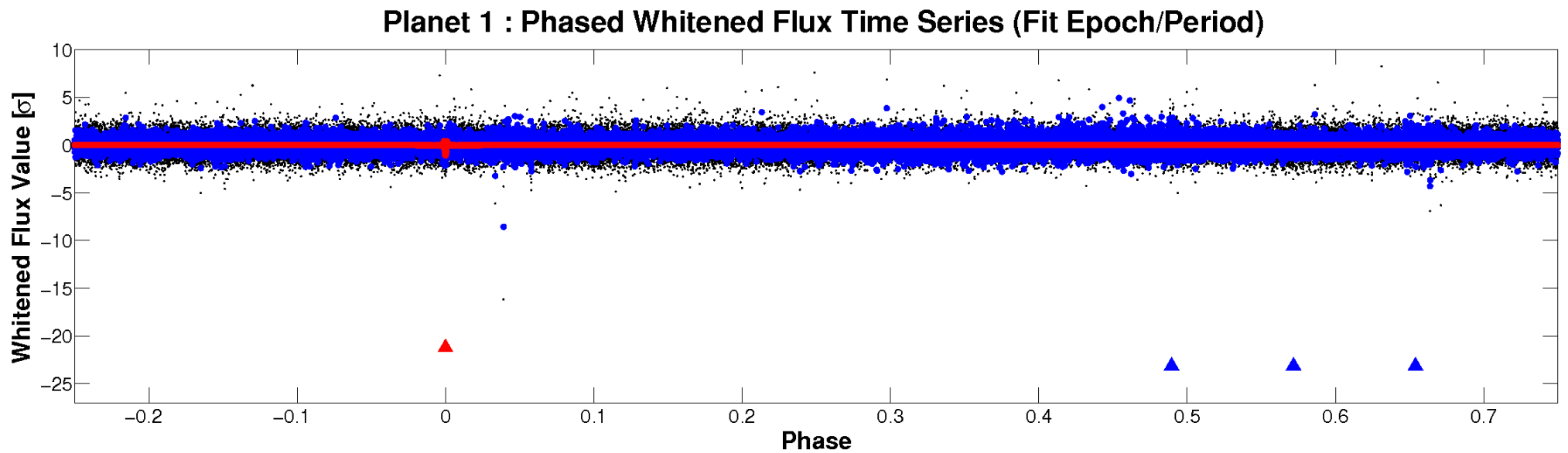
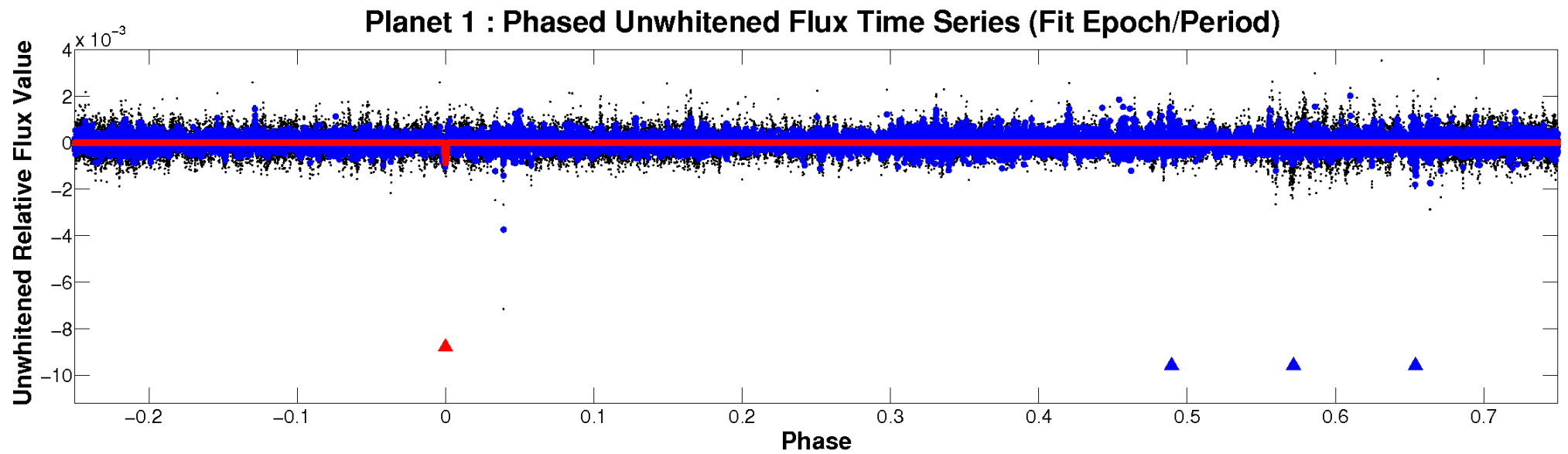


ALT Odd/Even

TCE 006037623-01

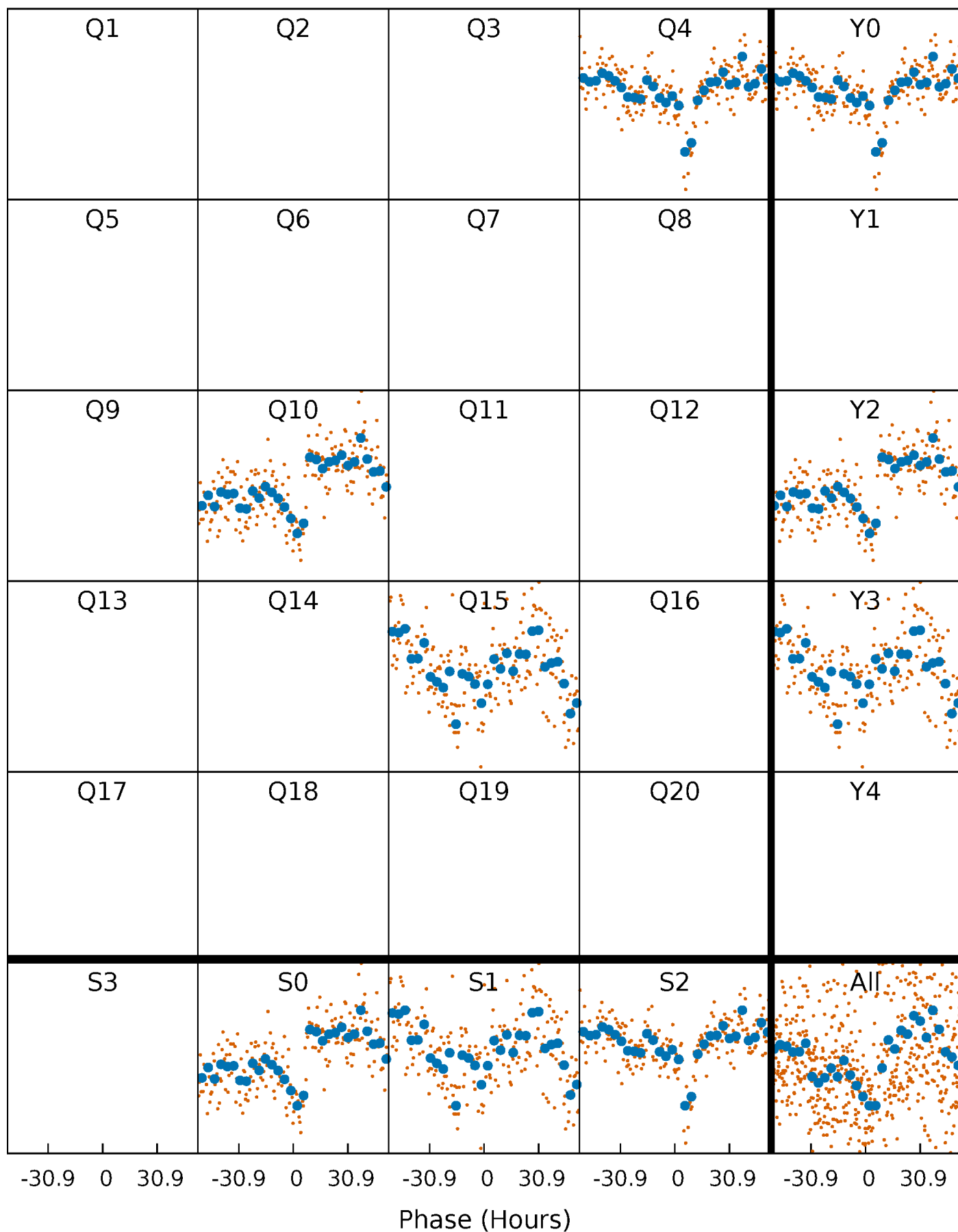


Non-Whitened Vs. Whitened Light Curve



PDC Quarter-Phased Transit Curves

TCE 006037623-01 P=541.594759 Days $T_0=373.064082$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 006037623-01 P=541.594759 Days $T_0=373.064082$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

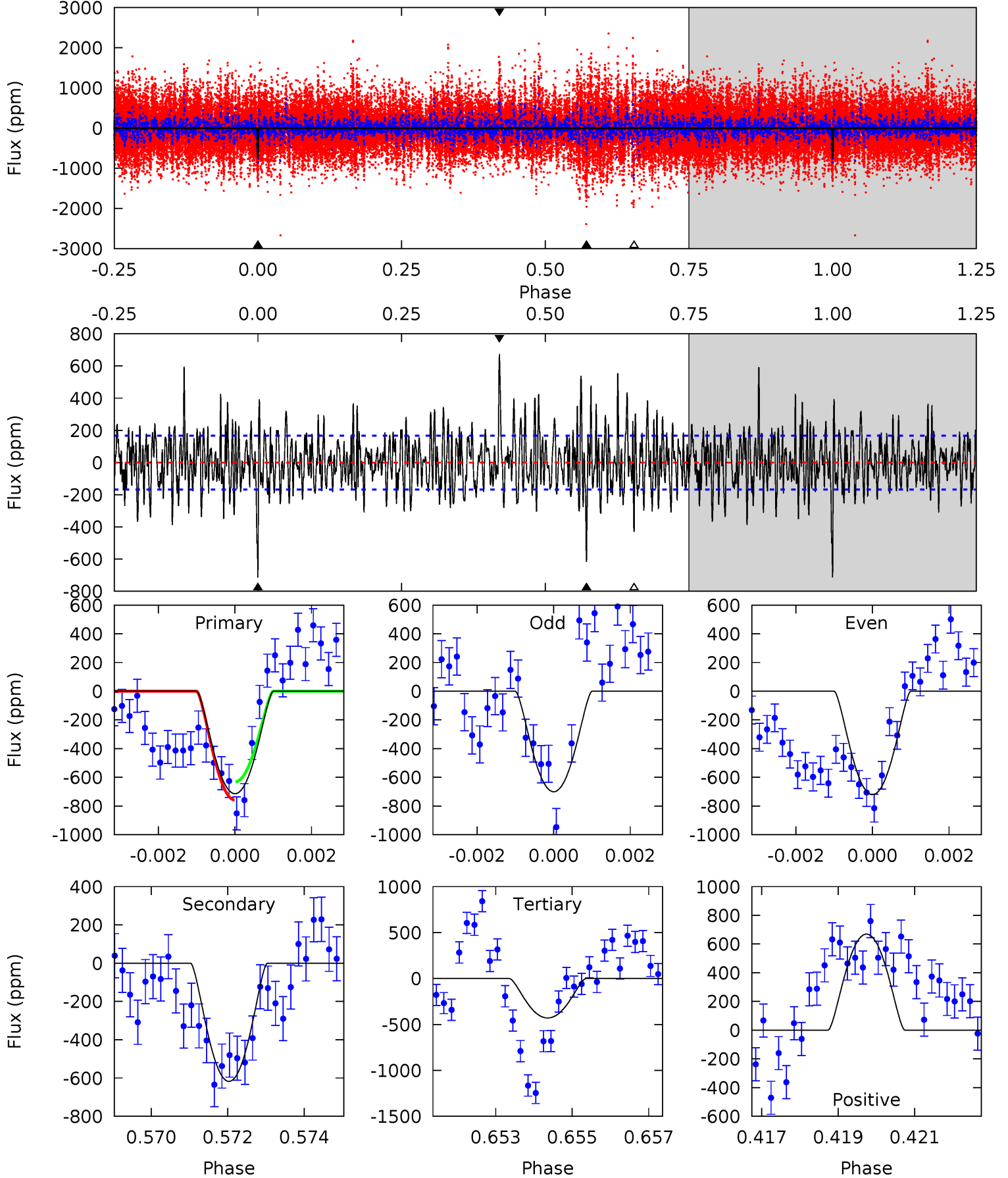
TCE 006037623-01 P=541.618753 Days $T_0=373.289738$ (BKJD)



DV Model-Shift Uniqueness Test

006037623-01, P = 541.594759 Days, E = 373.064082 Days

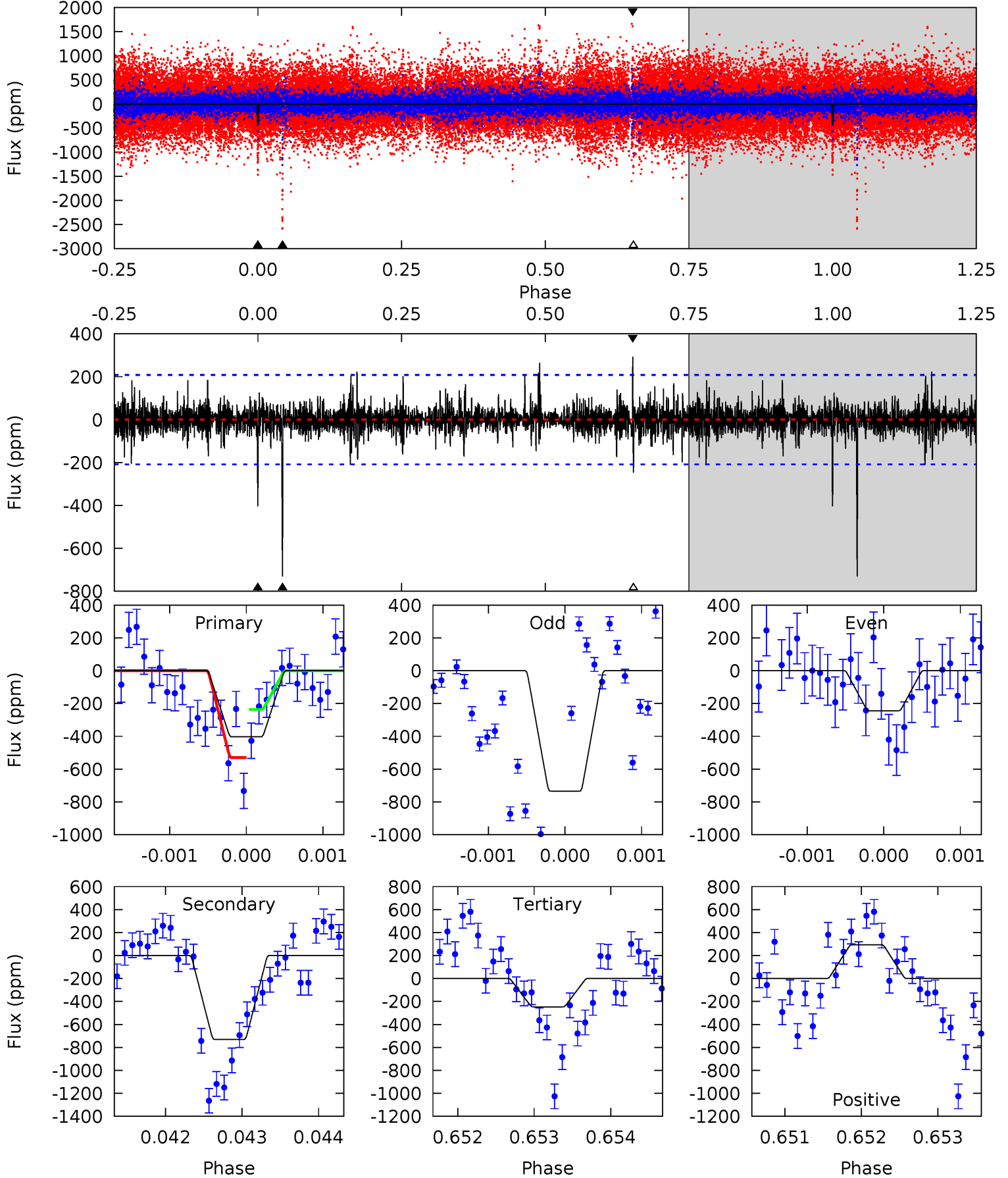
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.7	19.6	13.7	21.3	5.32	3.08	4.65	9.05	1.44	5.98	-1.64	0.31	1.00	0.48	2.04



Alt Model-Shift Uniqueness Test

006037623-01, P = 541.618753 Days, E = 373.289738 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	19.1	6.46	7.68	5.45	3.28	1.23	4.07	2.85	12.6	11.4	6.16	0.67	0.29	3.82



Stellar Parameters For KIC 006037623

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6131^{+171}_{-214}	$4.360^{+0.090}_{-0.210}$	$0.080^{+0.250}_{-0.300}$	$1.163^{+0.382}_{-0.164}$	$1.132^{+0.162}_{-0.146}$	$1.013^{+0.408}_{-0.527}$
	+3%/-3%	+2%/-5%	+312%/-375%	+33%/-14%	+14%/-13%	+40%/-52%
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 006037623-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-618 ± 31	$6.75^{+5.50}_{-4.28}$	356^{+25}_{-19}	4483^{+2834}_{-846}	13876^{+85119}_{-9750}
Alt.	-730 ± 38	$5.06^{+4.86}_{-3.38}$	355^{+29}_{-20}	5190^{+4224}_{-1170}	$28582^{+229608}_{-21144}$

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 006037623-01. Kepler magnitude: 13.26. Transit SNR 9.87

There are 0 quarters with good PRF difference image offsets

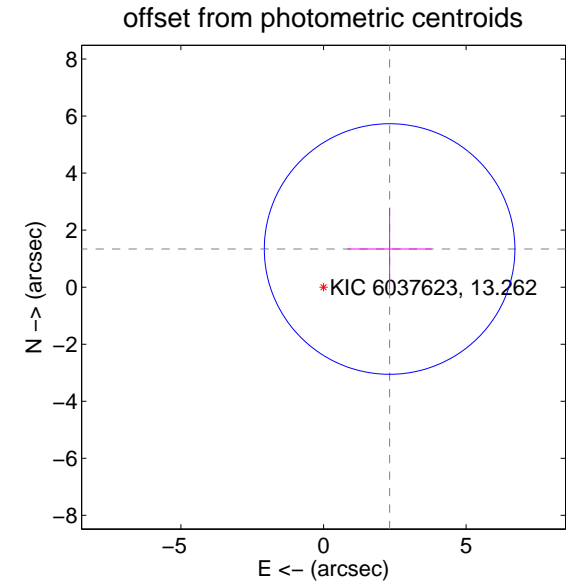
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	2.68 ± 1.46	1.83	-2.32 ± 1.48	1.34 ± 1.43

There is no PRF-fit offset from OOT-fit



There is no PRF-fit offset from KIC



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.

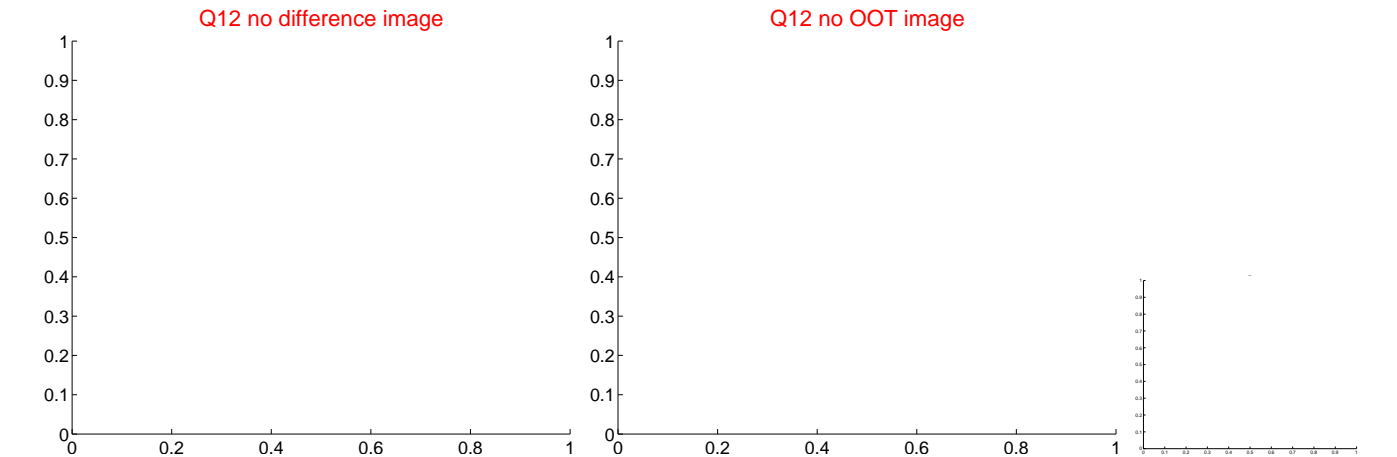
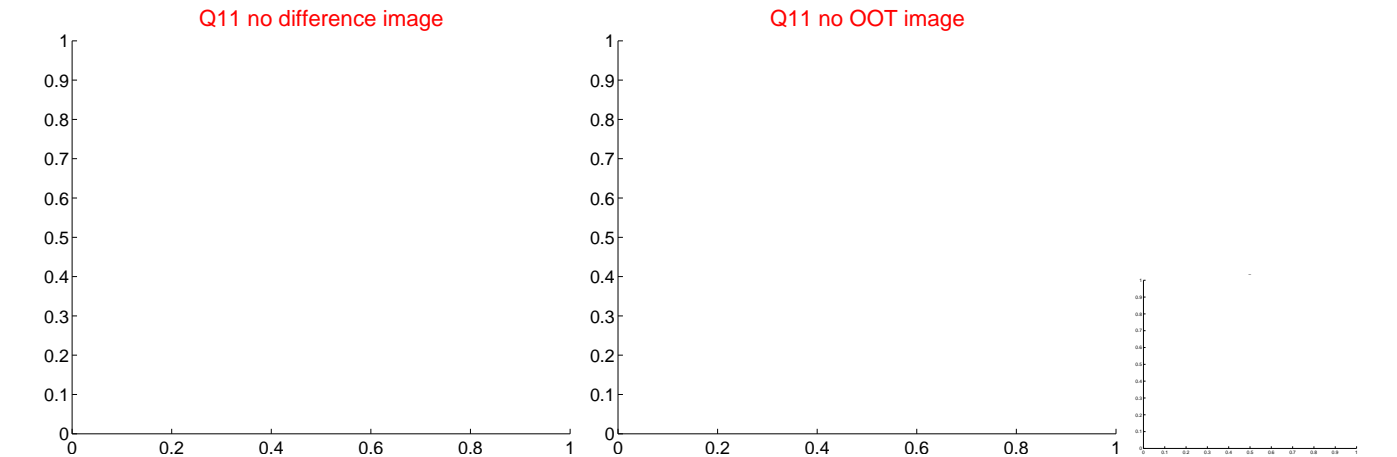
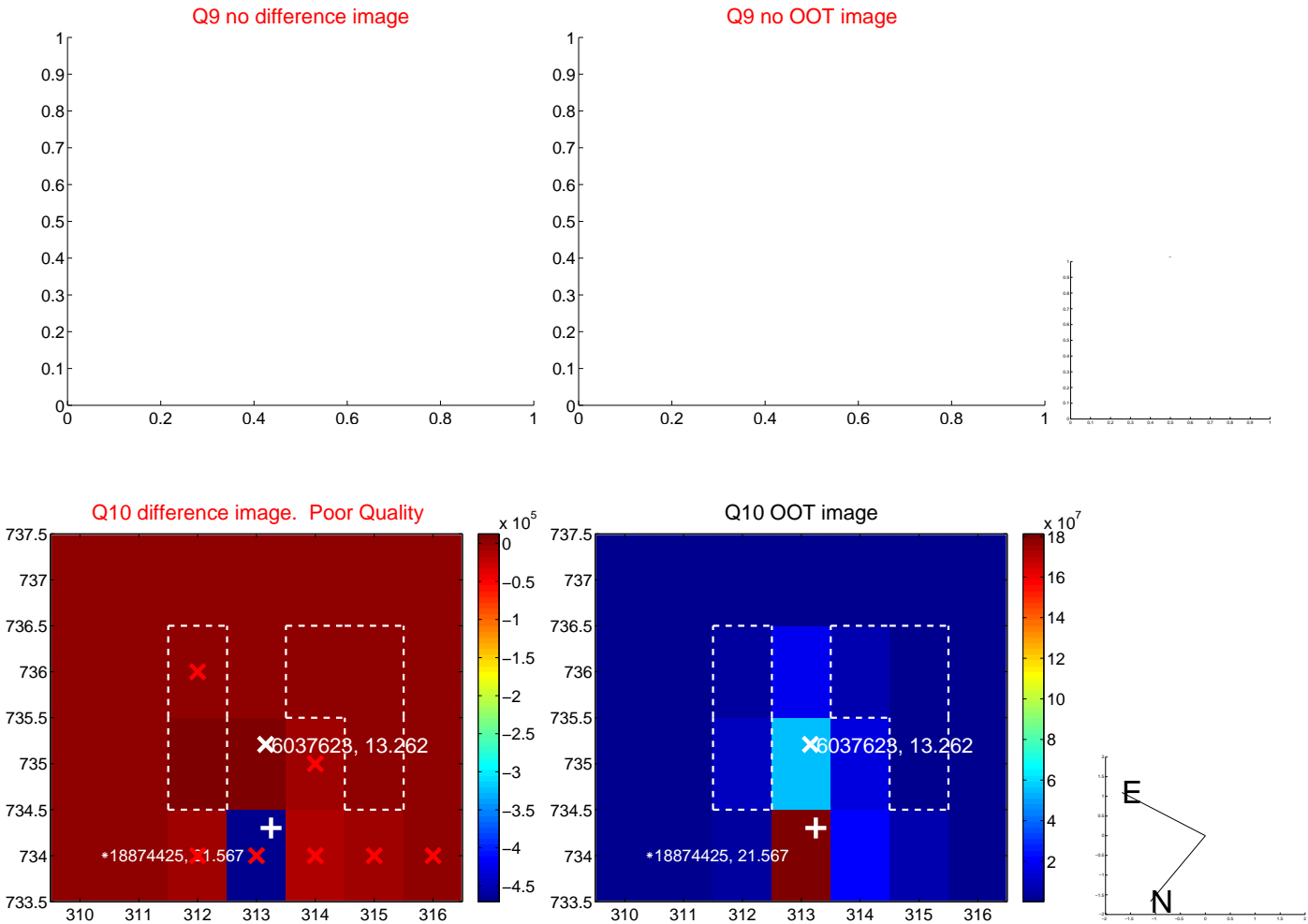
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



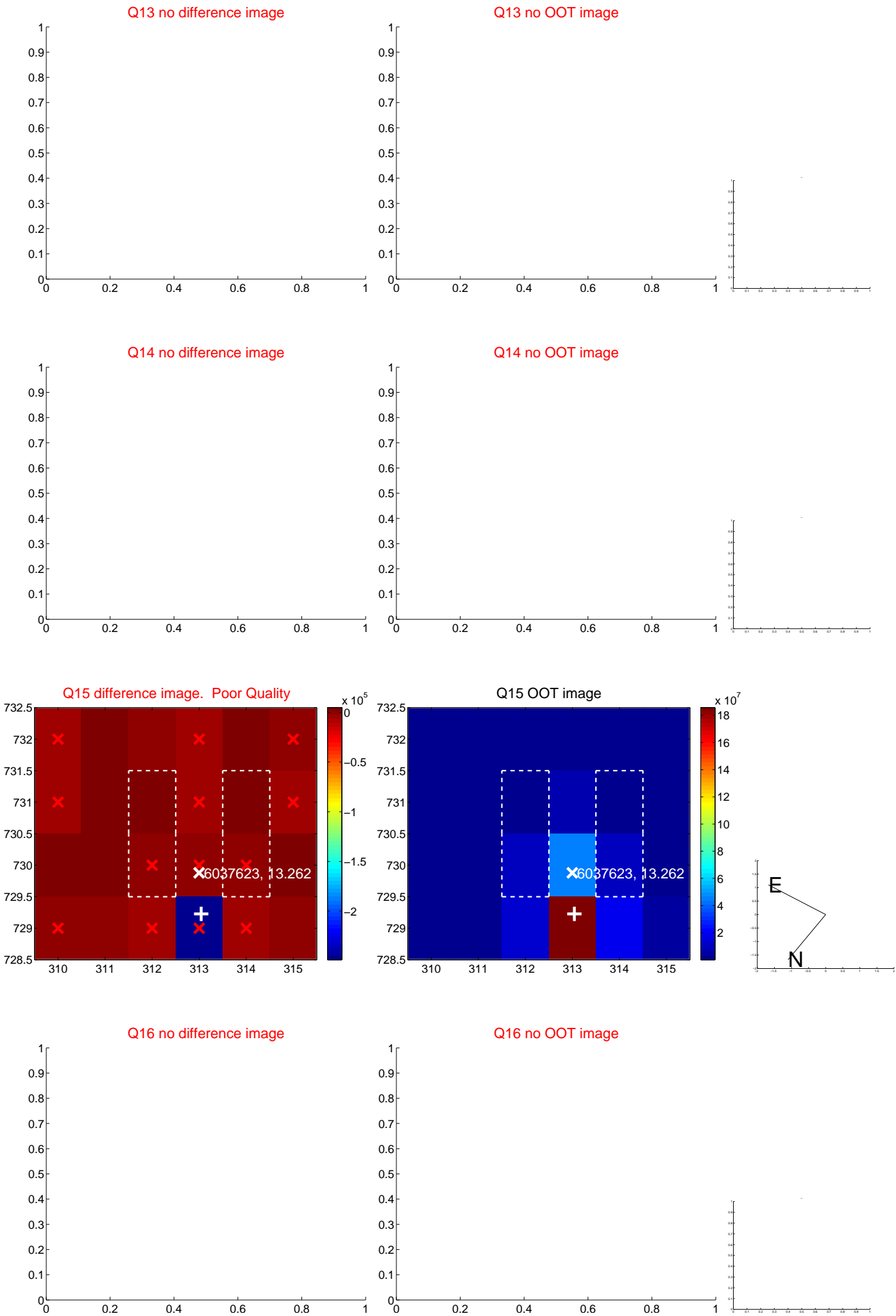
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



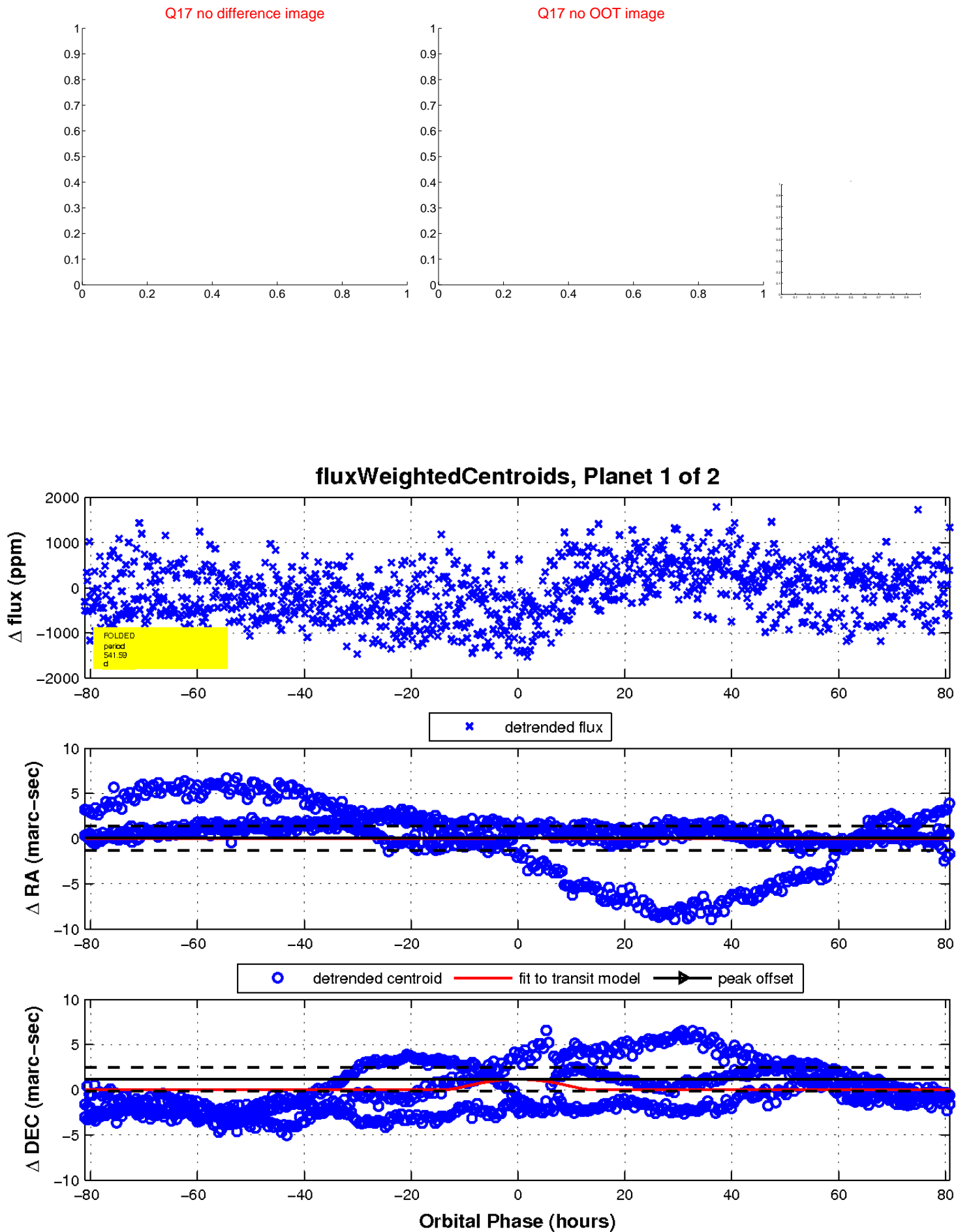
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



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



UKIRT Image

Declination

