

KIC 008307553

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})
008307553-01	OBS	No	374.300932	224.706636	1393.6	19.905	7.5	7.6	0.68	5131	4.73	0.34

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008307553-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—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.

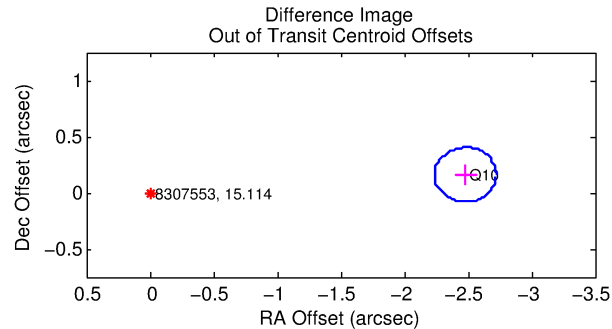
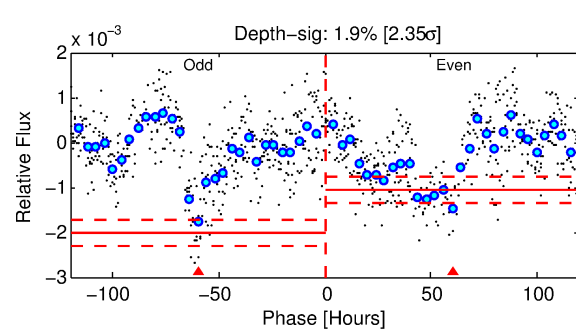
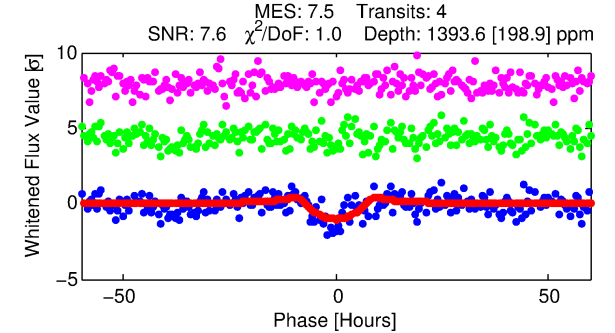
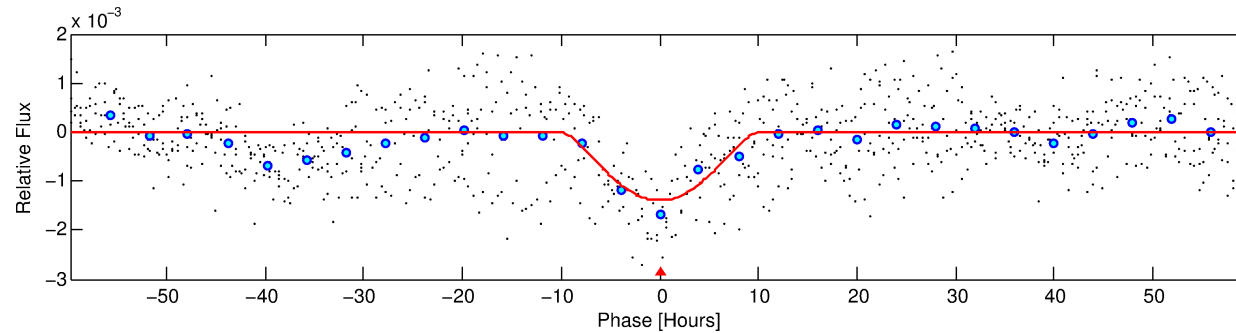
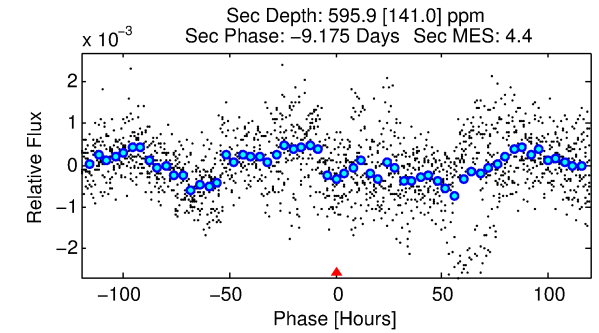
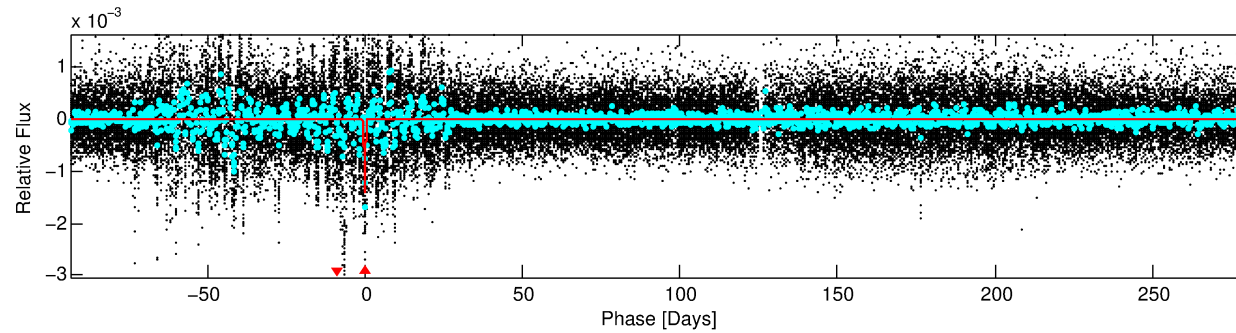
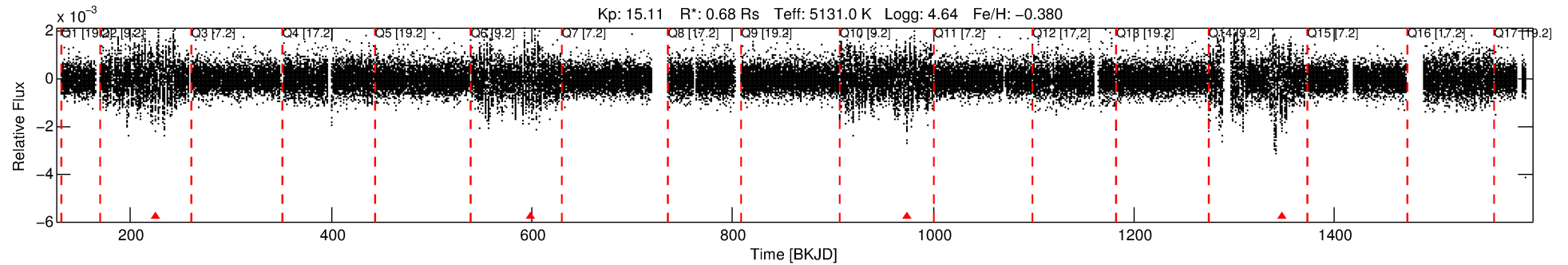
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008307553-01

No Significant Match Found

DV One-Page Summary

KIC: 8307553 Candidate: 1 of 1 Period: 374.301 d



DV Fit Results:

Period = 374.30093 [0.01972] d
Epoch = 224.7066 [0.0423] BKJD
Rp/R* = 0.0635 [0.1275]
a/R* = 54.43 [26.24]
b = 0.99 [0.19]
Seff = 0.34 [0.06]
Teq = 195 [9] K
Rp = 4.73 [9.51] Re
a = 0.9234 [0.0949] AU
Ag = 12505.49 [50329.05] [0.25σ]
Teff = 3181 [3200] K [0.93σ]

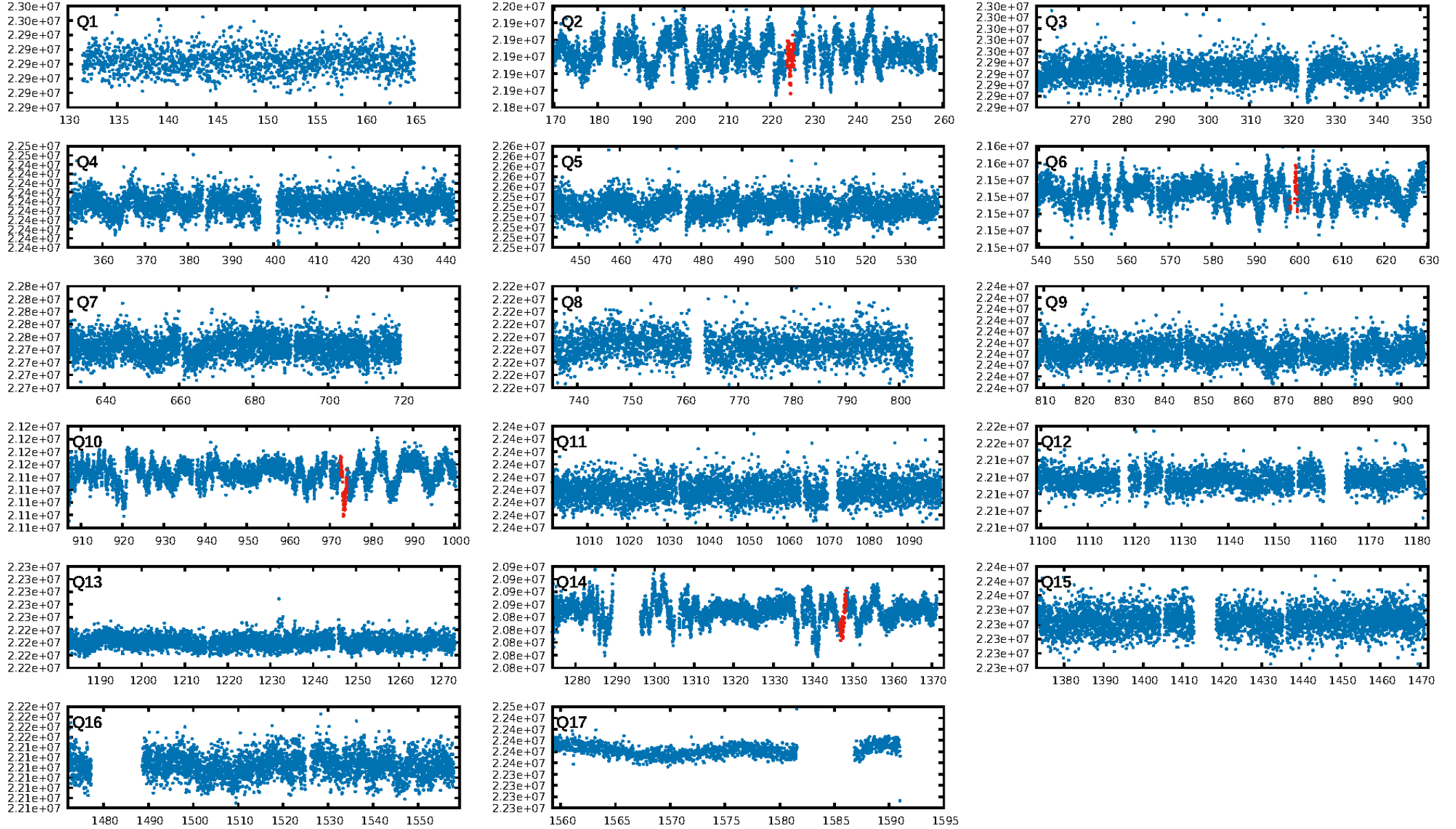
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 7.6%
ModelChiSquareGoF-sig: 100.0%
Bootstrap-pfa: 8.65e-10
RollingBand-fgt: 0.00 [0/4]
GhostDiagnostic-chr: 0.8423
Centroid-sig: 17.4%
Centroid-so: 4.543 arcsec [1.71σ]
OotOffset-rm: 2.485 arcsec [30.74σ]
KicOffset-rm: 2.212 arcsec [27.37σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [2/2]

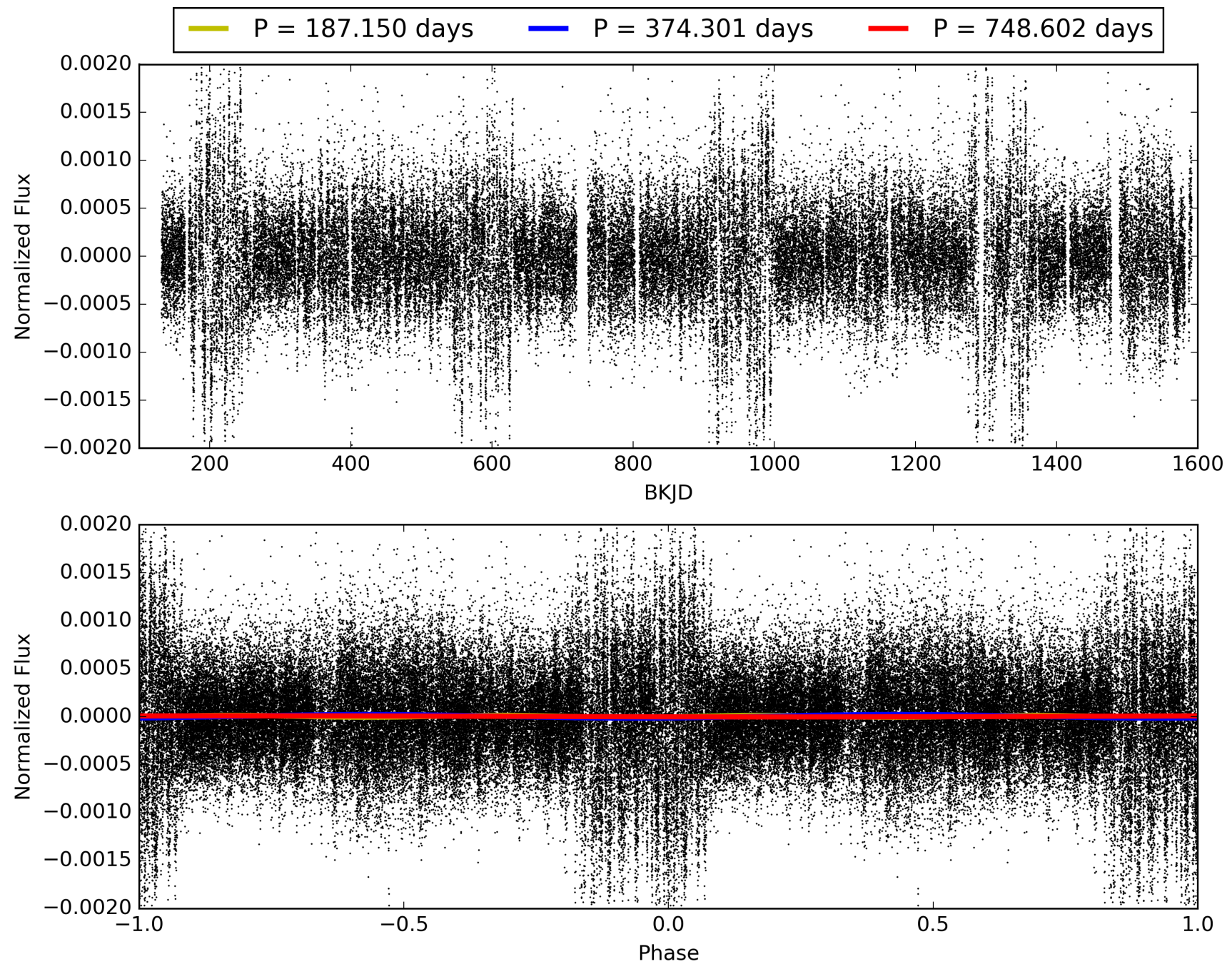
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:21:17 Z

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

TCE 008307553-01, PDC Light Curves

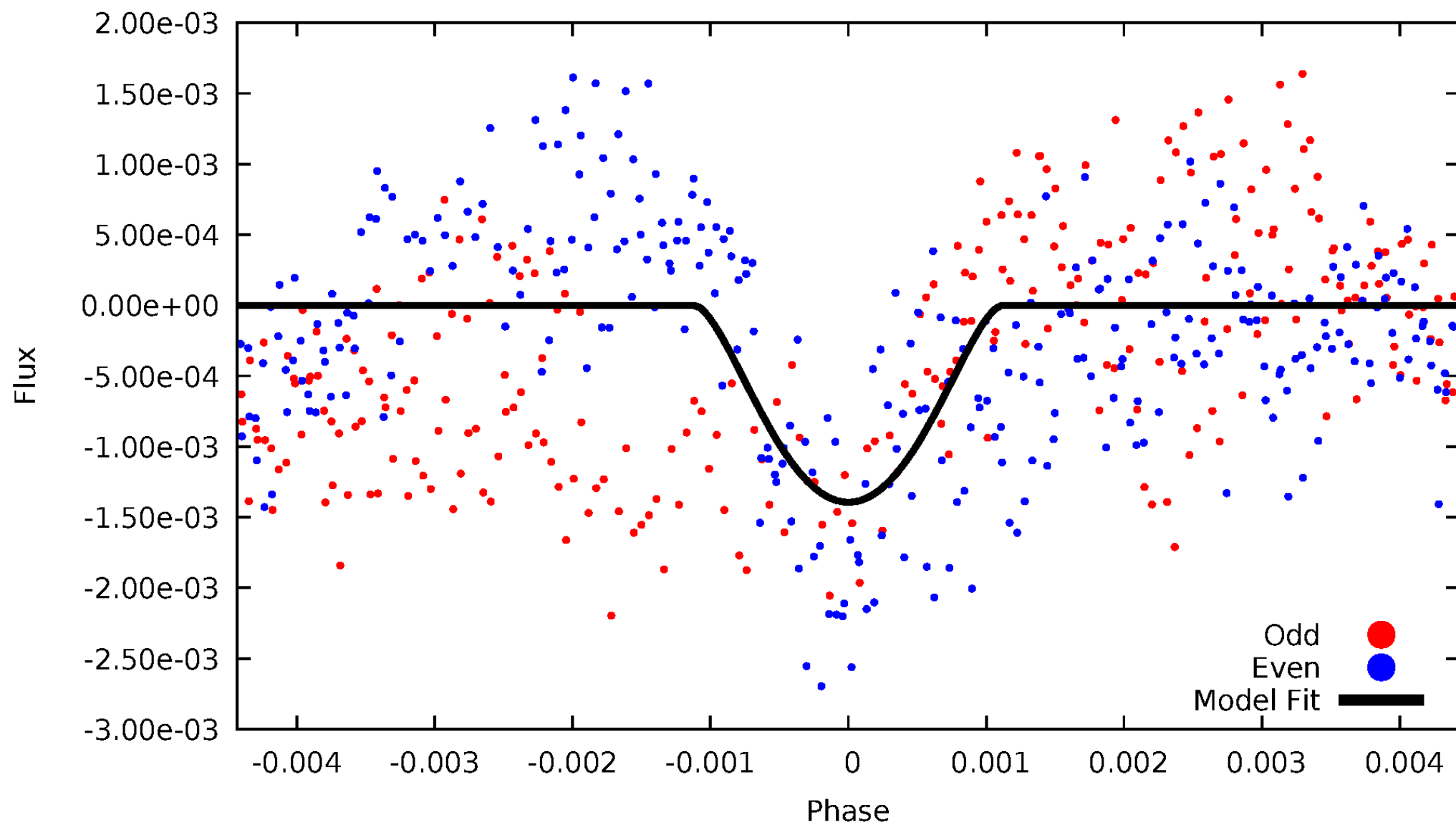


TCE 008307553-01



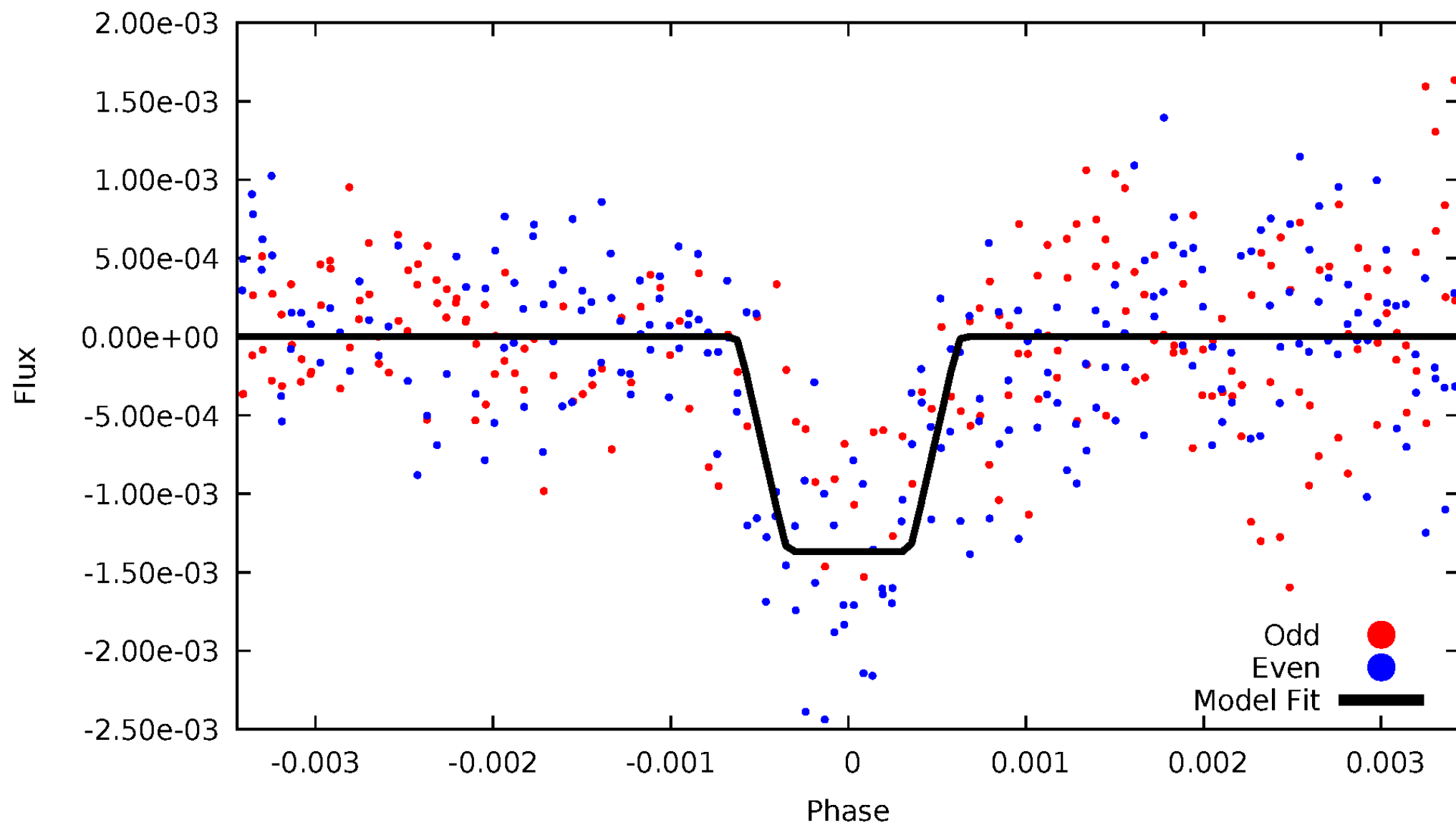
DV Odd/Even

TCE 008307553-01

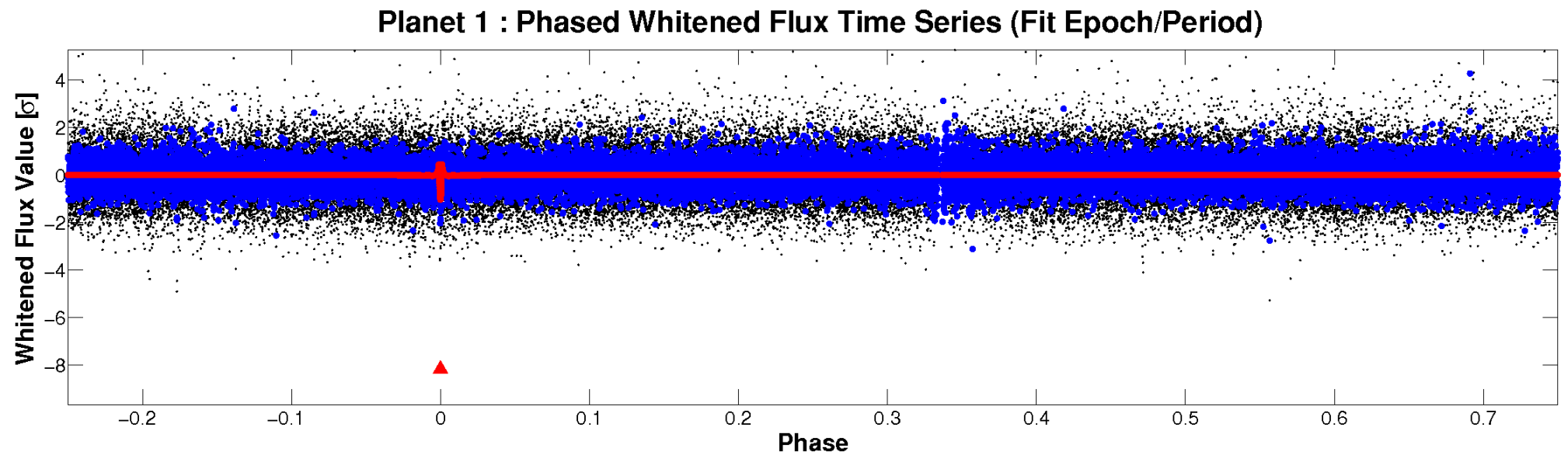
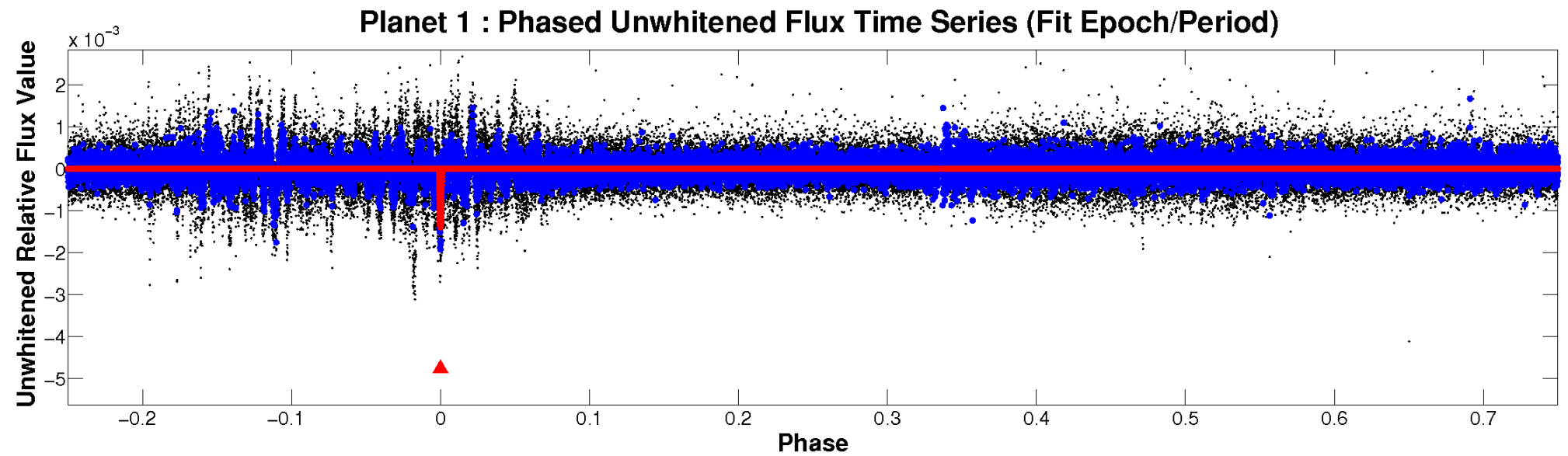


ALT Odd/Even

TCE 008307553-01

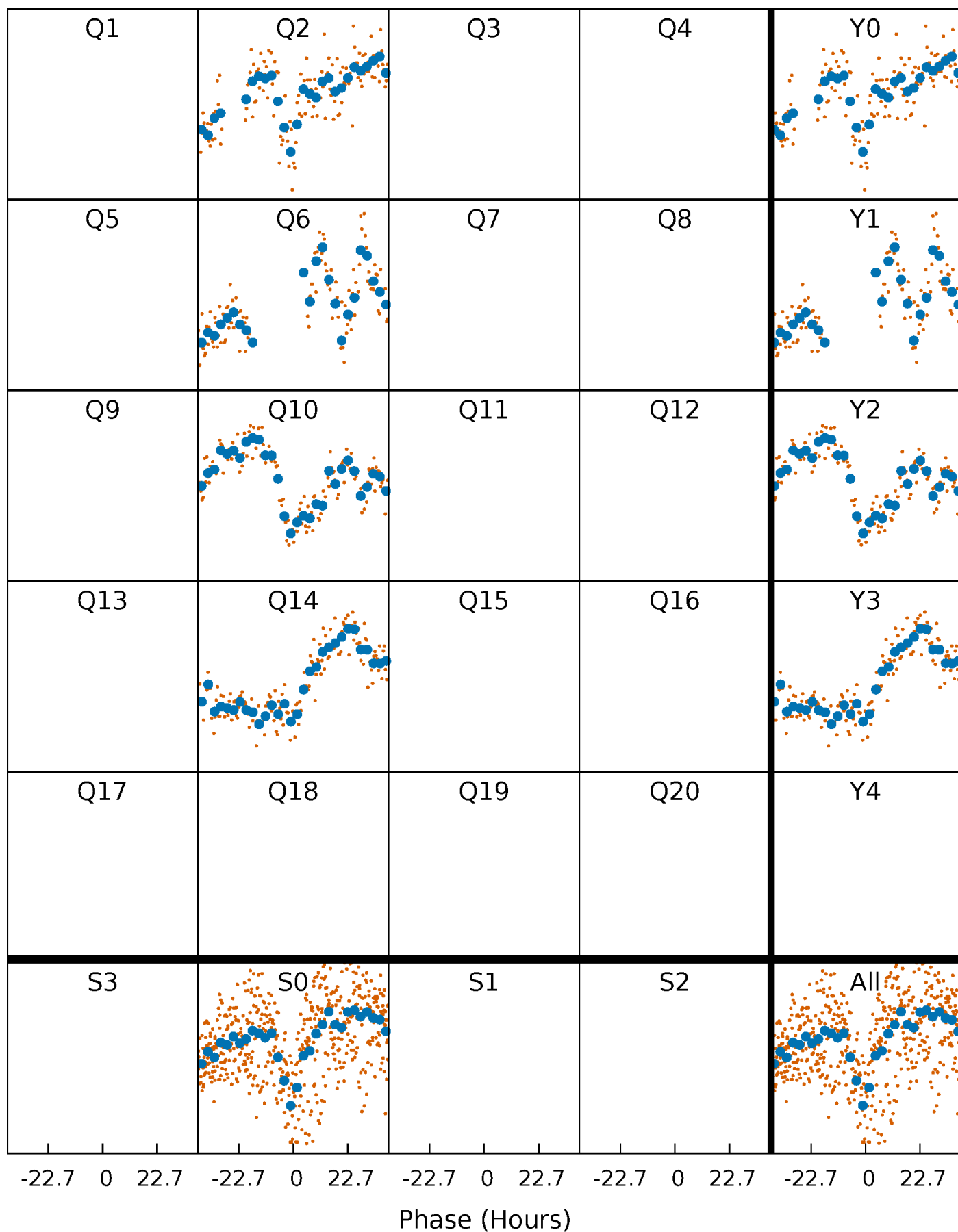


Non-Whitened Vs. Whitened Light Curve



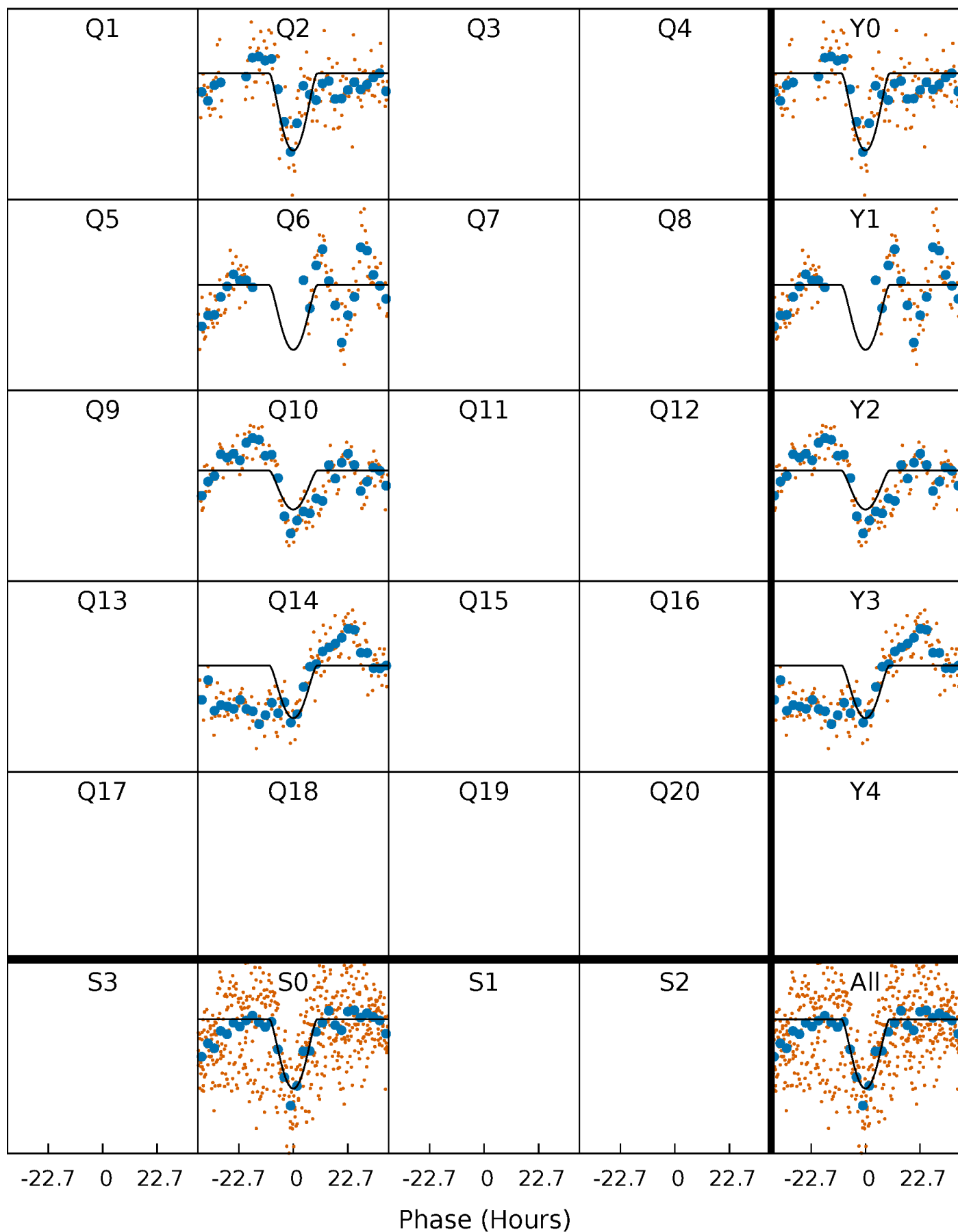
PDC Quarter-Phased Transit Curves

TCE 008307553-01 $P=374.300932$ Days $T_0=224.706636$ (BKJD)



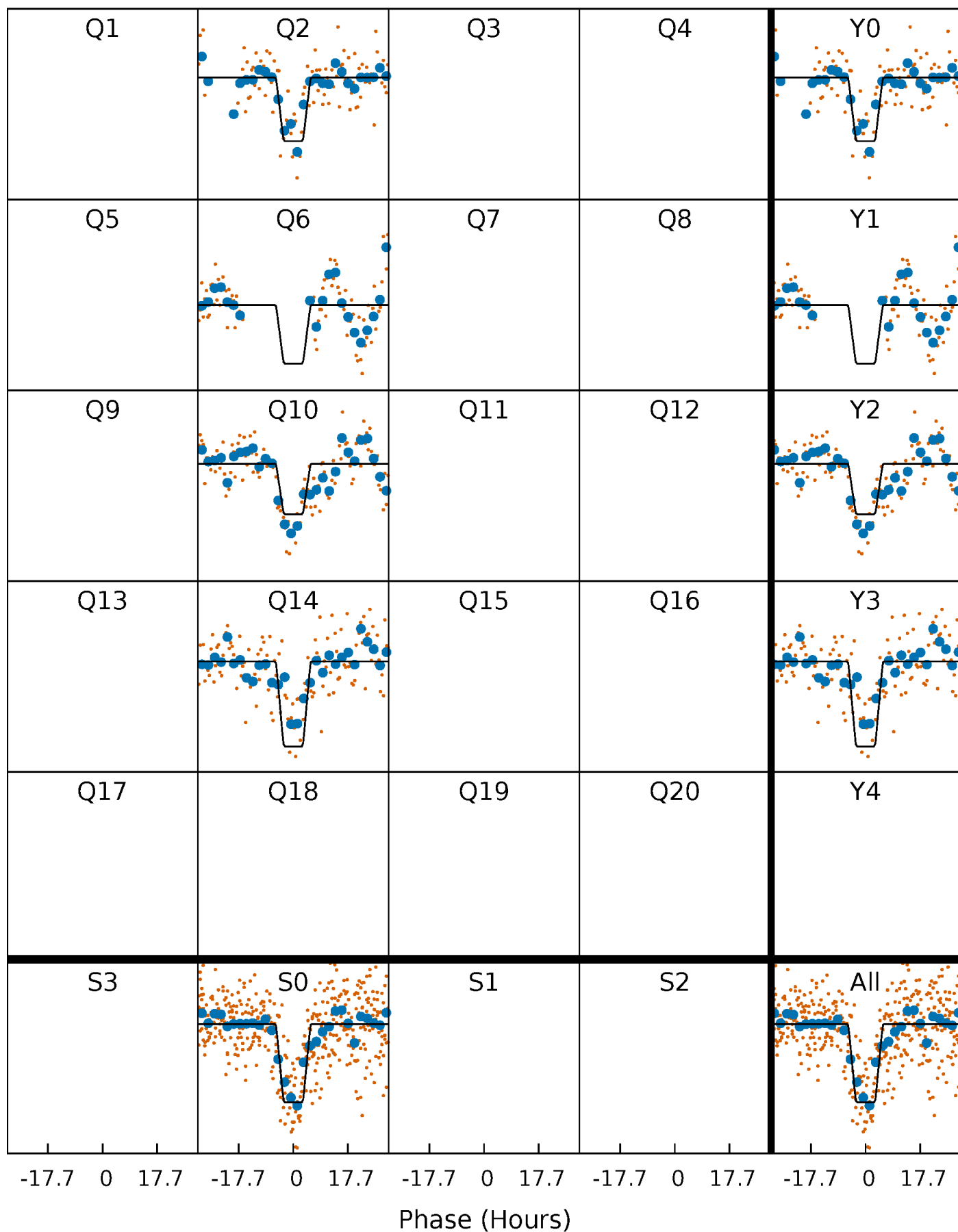
DV Quarter-Phased Transit Curves

TCE 008307553-01 P=374.300932 Days $T_0=224.706636$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

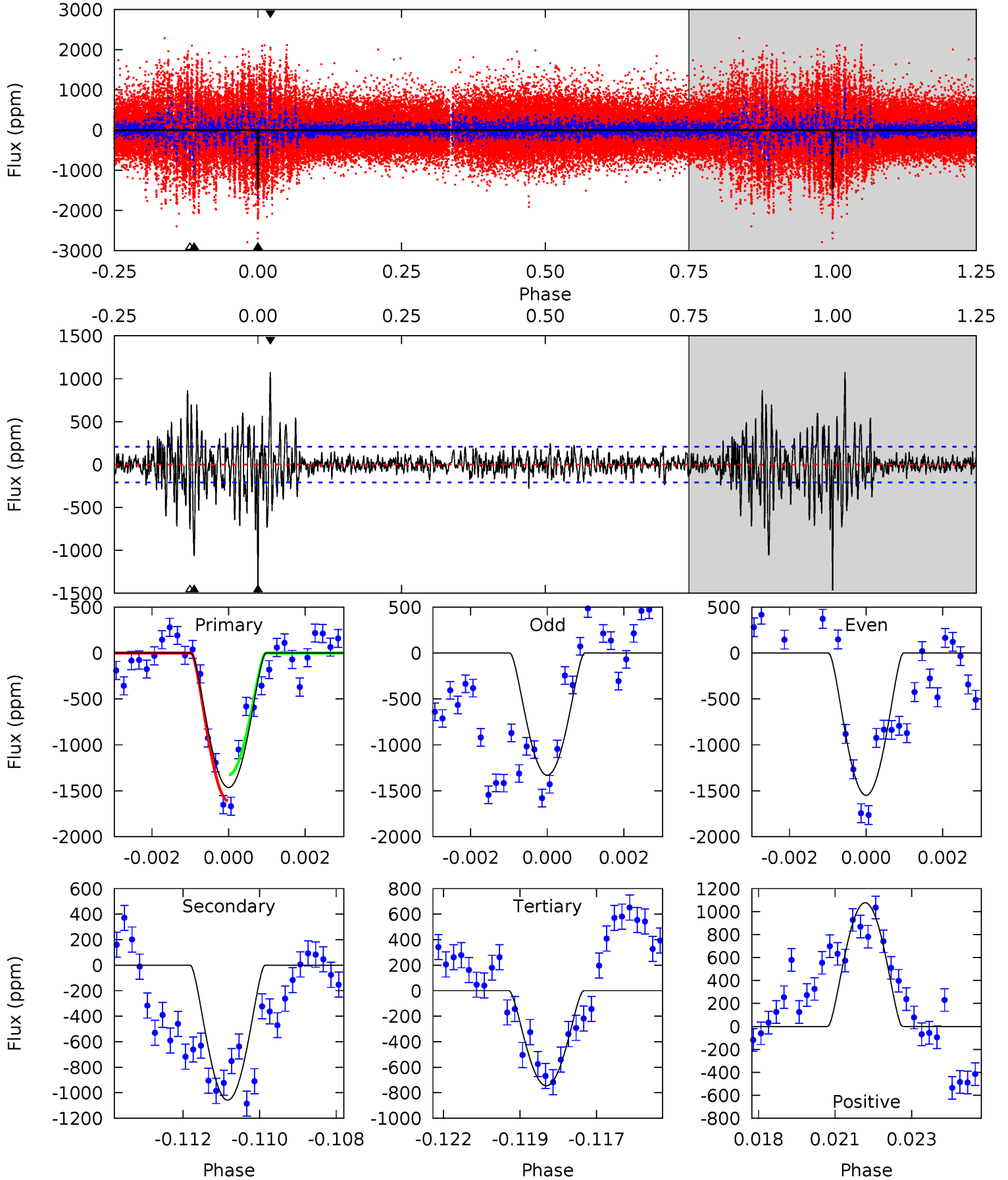
TCE 008307553-01 P=374.322386 Days $T_0=224.640538$ (BKJD)



DV Model-Shift Uniqueness Test

008307553-01, P = 374.300932 Days, E = 224.706636 Days

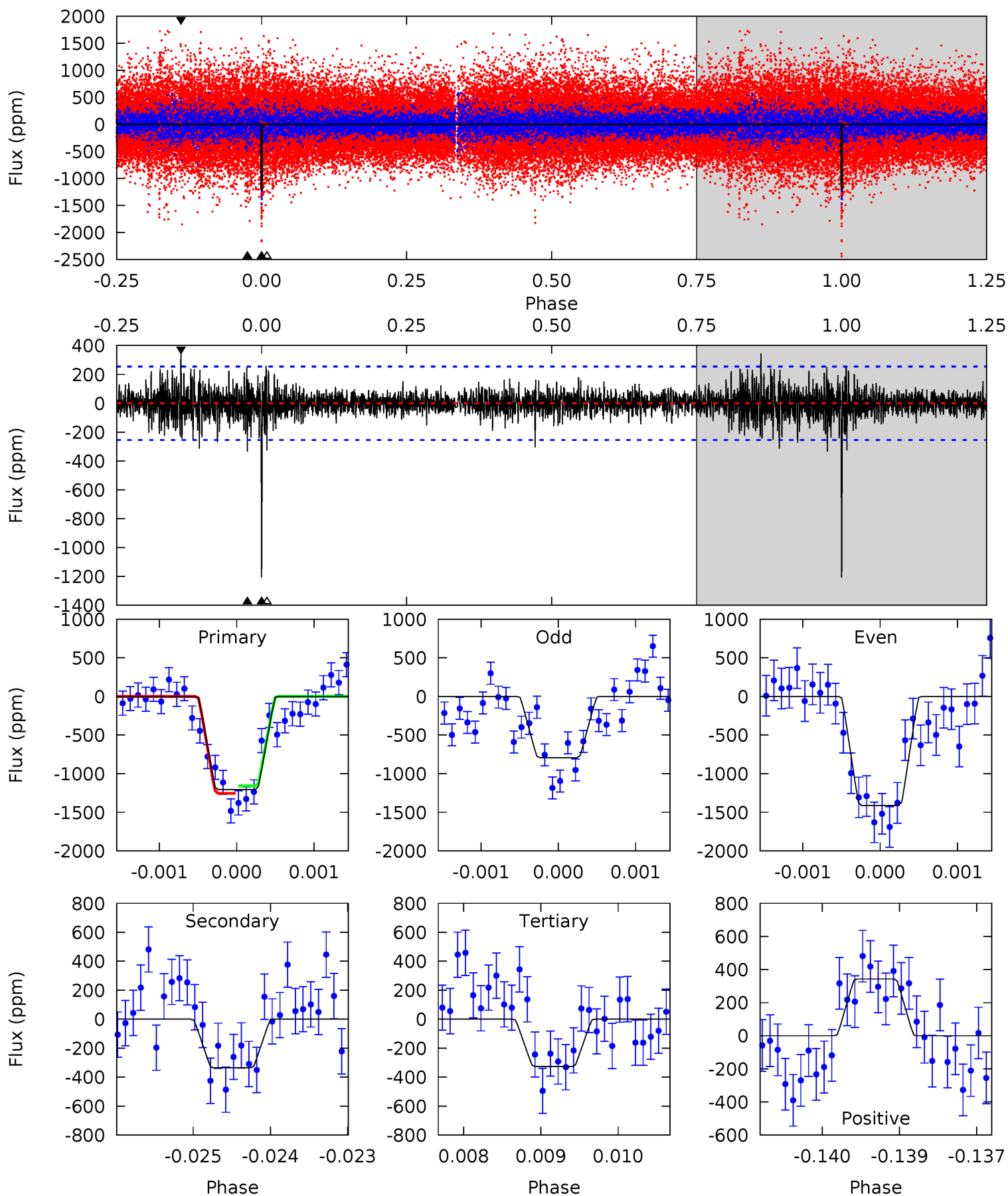
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
37.4	27.0	19.0	27.5	5.30	3.05	4.17	18.4	9.88	7.98	-0.49	2.70	1.05	0.42	3.55



Alt Model-Shift Uniqueness Test

008307553-01, P = 374.322386 Days, E = 224.640538 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.7	7.15	6.95	7.30	5.41	3.22	1.36	18.7	18.4	0.20	-0.15	6.19	1.04	0.22	1.01



Stellar Parameters For KIC 008307553

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5131^{+153}_{-138}	$4.645^{+0.033}_{-0.077}$	$-0.380^{+0.300}_{-0.300}$	$0.682^{+0.086}_{-0.053}$	$0.758^{+0.073}_{-0.081}$	$3.358^{+0.474}_{-0.891}$
	+3%/-3%	+1%/-2%	+79%/-79%	+13%/-8%	+10%/-11%	+14%/-27%
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 008307553-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1058 ± 39	$8.85^{+8.29}_{-5.58}$	274^{+10}_{-9}	3254^{+1357}_{-561}	6327^{+41392}_{-4690}
Alt.	-336 ± 47	$8.02^{+7.17}_{-5.58}$	274^{+11}_{-9}	2839^{+1236}_{-429}	2407^{+22809}_{-1733}

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 $A_{obs} \gg 1.0$

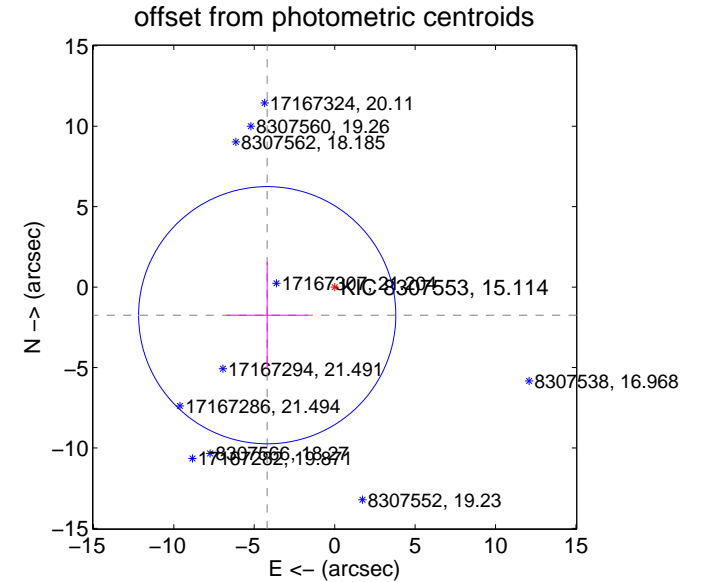
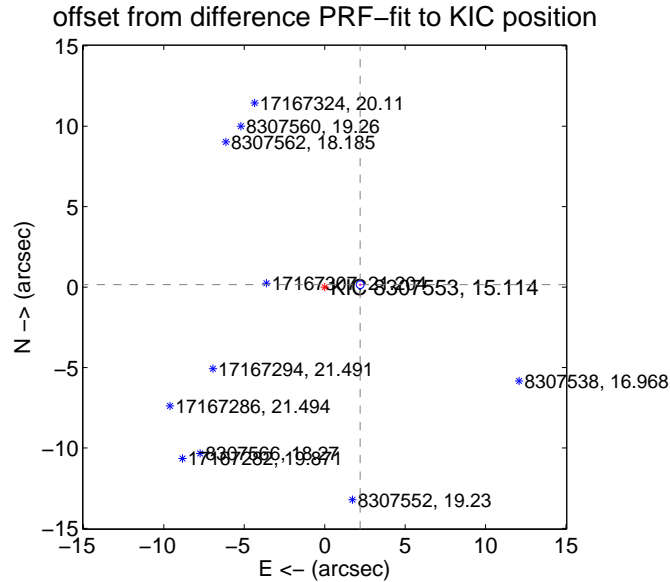
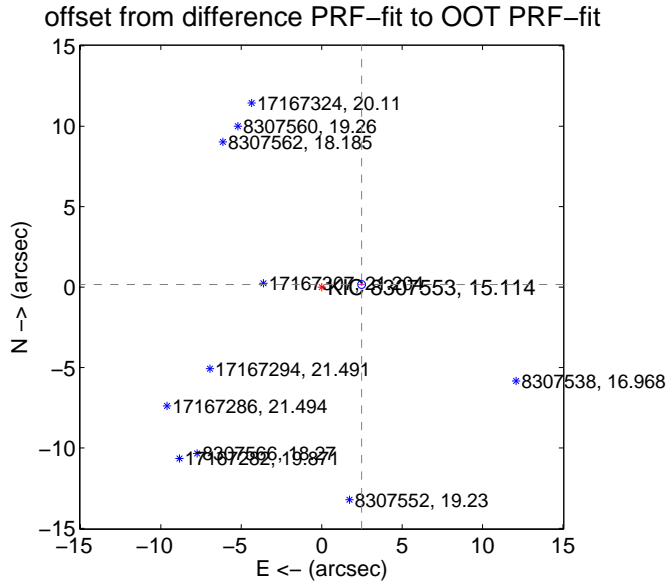
DV Centroid Data

Supplemental centroid analysis for 008307553-01. Kepler magnitude: 15.11. Transit SNR 7.62

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	2.485 \pm 0.081	30.74	-2.479 \pm 0.081	0.160 \pm 0.084
PRF-fit source offset from KIC position	2.212 \pm 0.081	27.37	-2.207 \pm 0.081	0.150 \pm 0.084
photometric centroid source offset	4.54 \pm 2.66	1.71	4.19 \pm 2.53	-1.75 \pm 3.32



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.

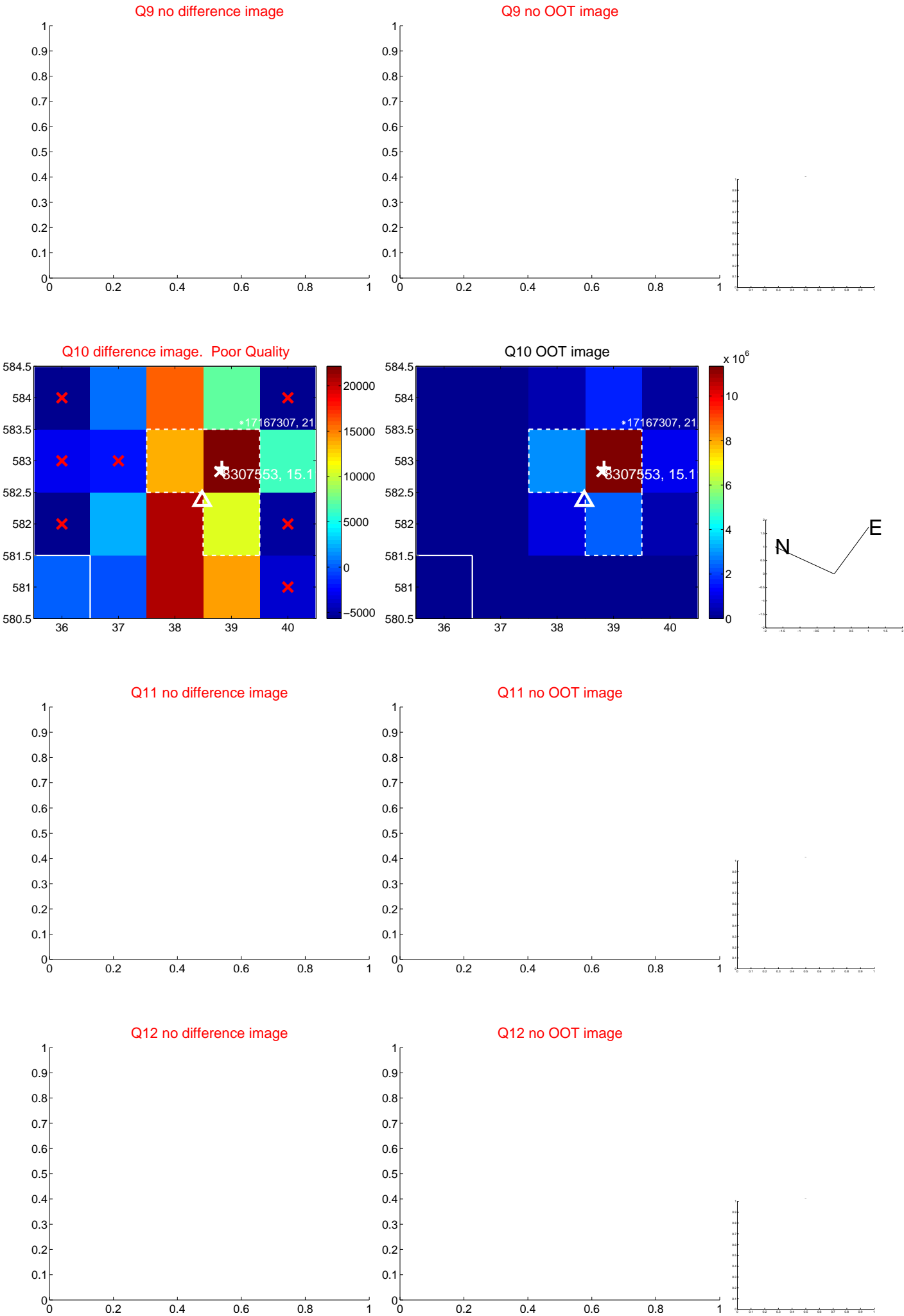
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



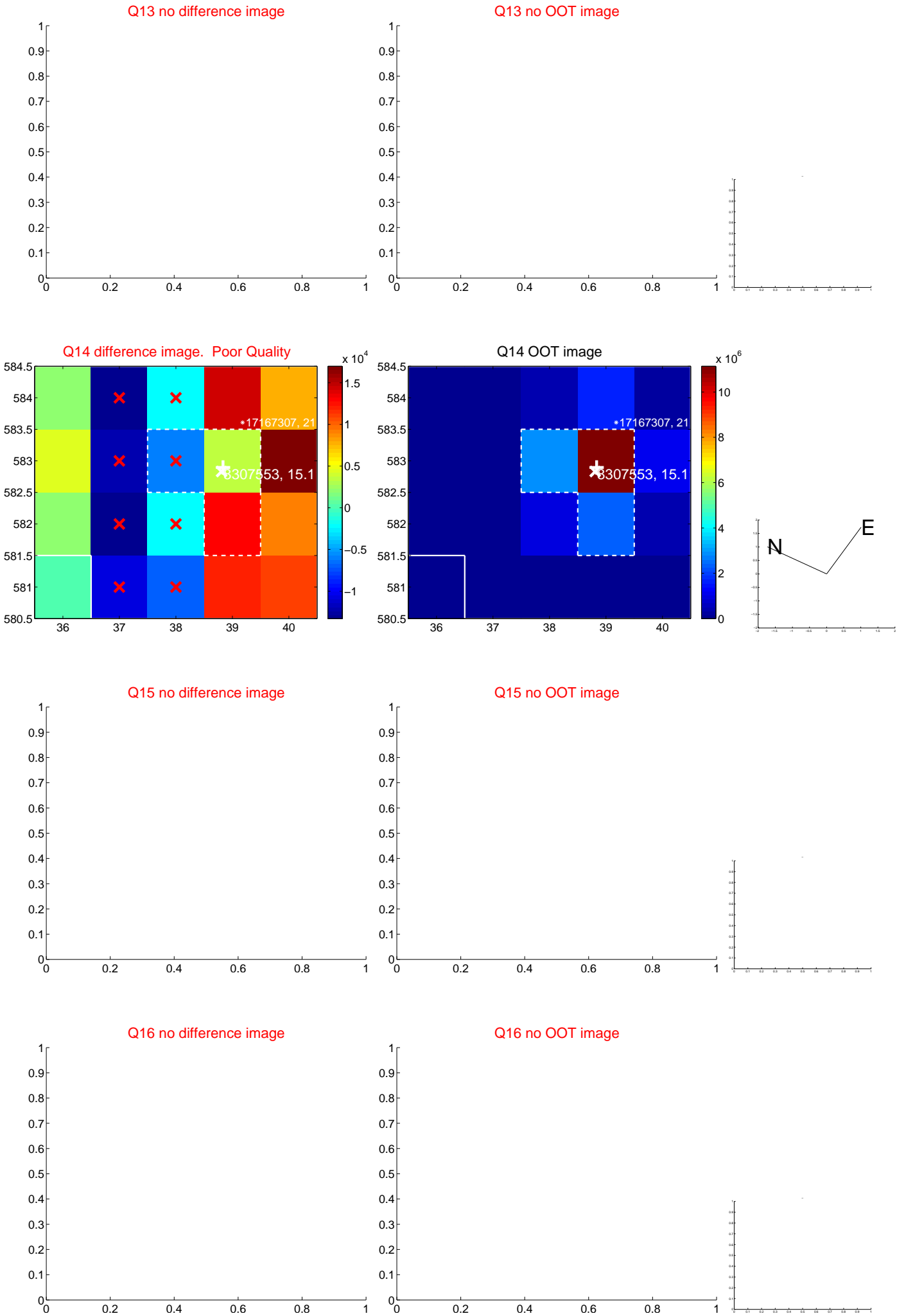
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



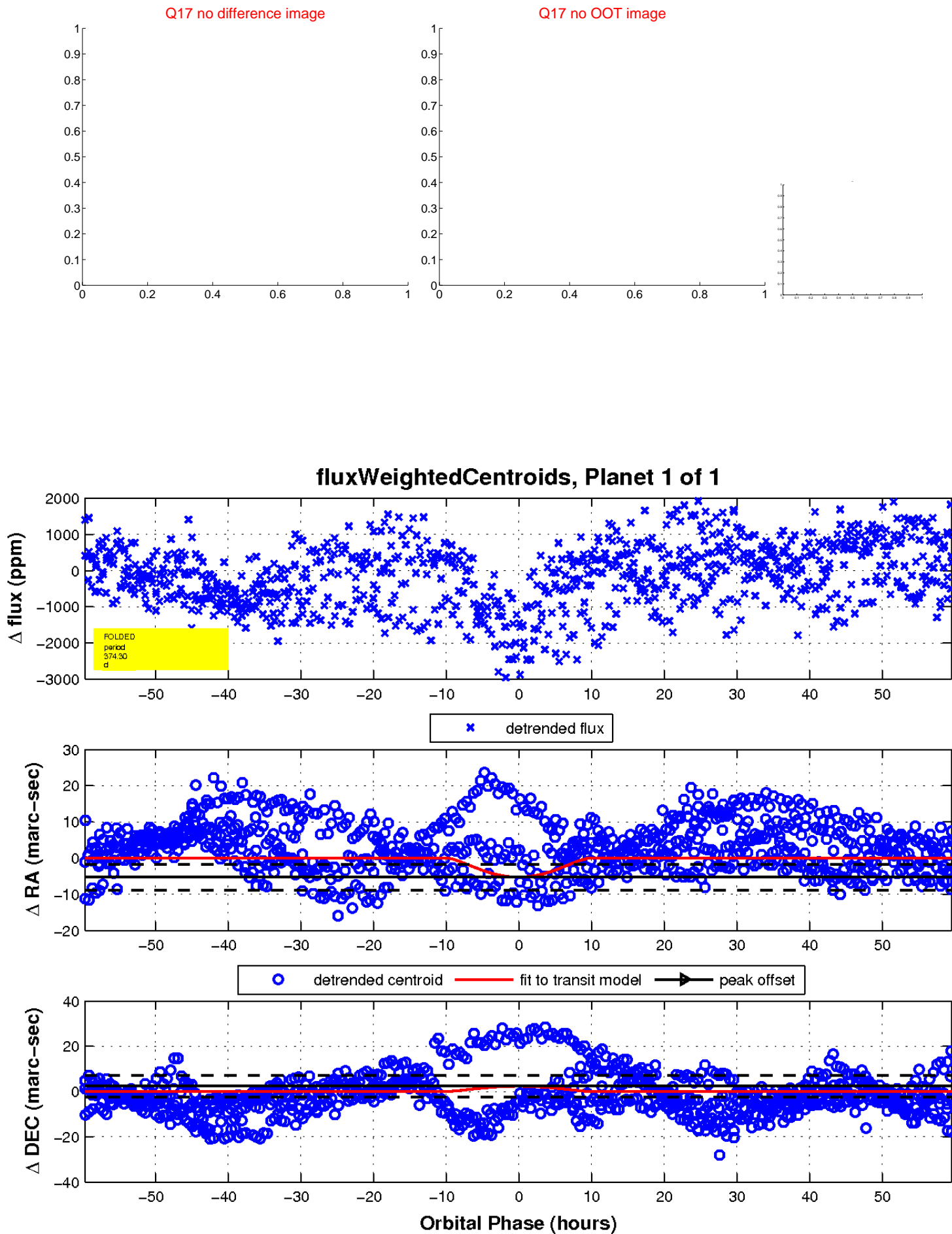
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

