

KIC 005871653

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})
005871653-01	OBS	No	558.491226	309.719363	345.8	12.178	8.4	8.3	1.48	5571	2.99	1.21

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005871653-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—ALL_TRANS_CHASES—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.

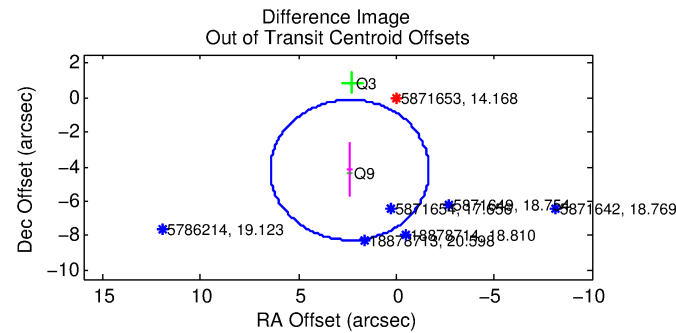
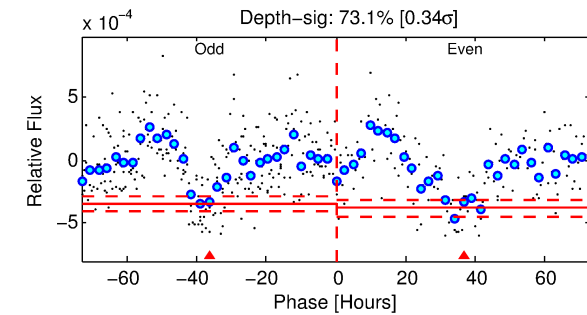
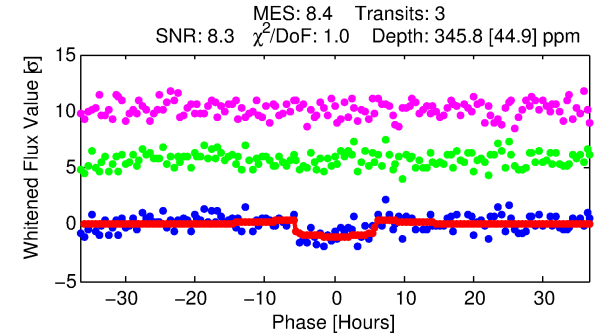
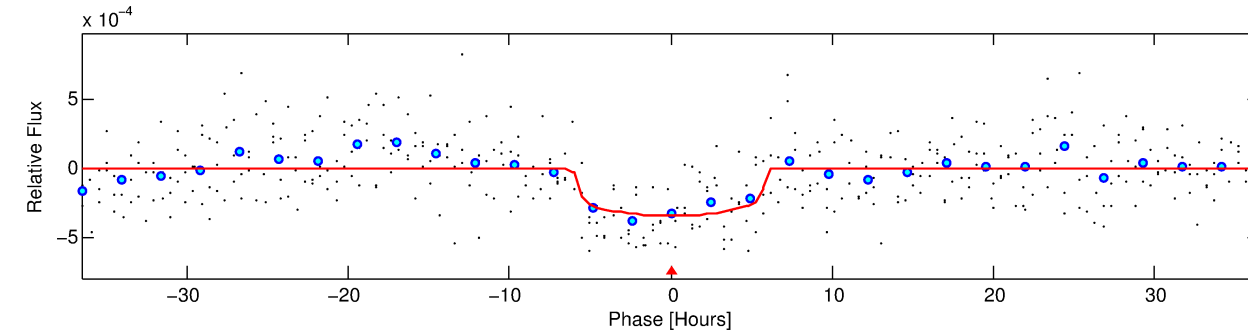
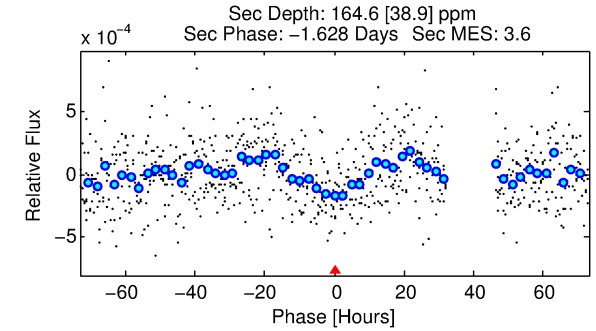
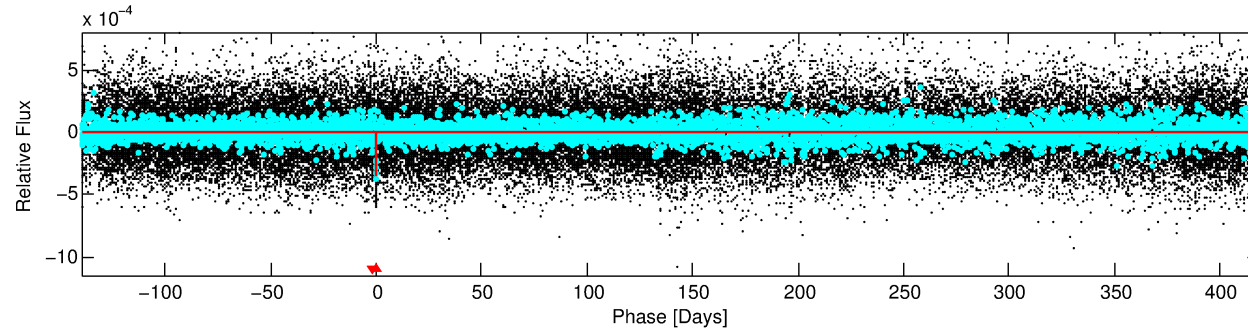
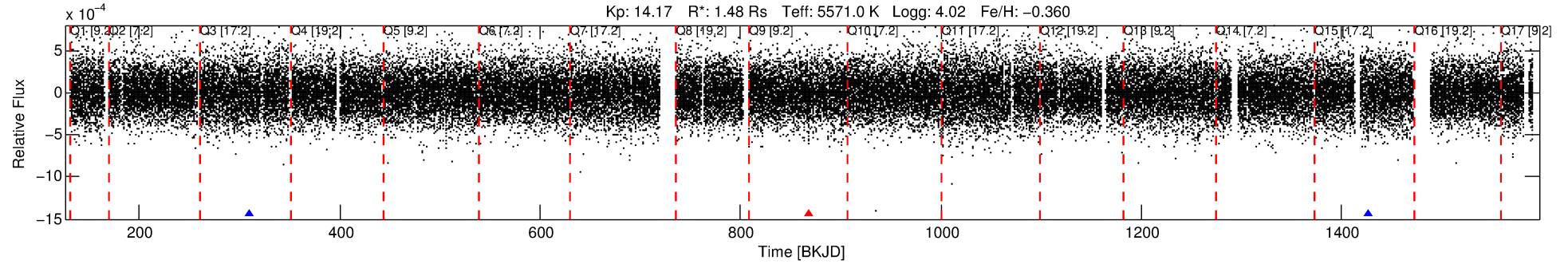
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005871653-01

No Significant Match Found

DV One-Page Summary

KIC: 5871653 Candidate: 1 of 1 Period: 558.491 d



DV Fit Results:

Period = 558.49123 [0.01240] d
Epoch = 309.7194 [0.0165] BKJD
Rp/R* = 0.0185 [0.0058]
a/R* = 241.57 [326.21]
b = 0.75 [0.79]
Seff = 1.21 [0.55]
Teff = 267 [30] K
Rp = 2.99 [1.25] Re
a = 1.2545 [0.3469] AU
Ag = 15899.55 [12789.56] [1.24σ]
Teffp = 4639 [779] K [5.60σ]

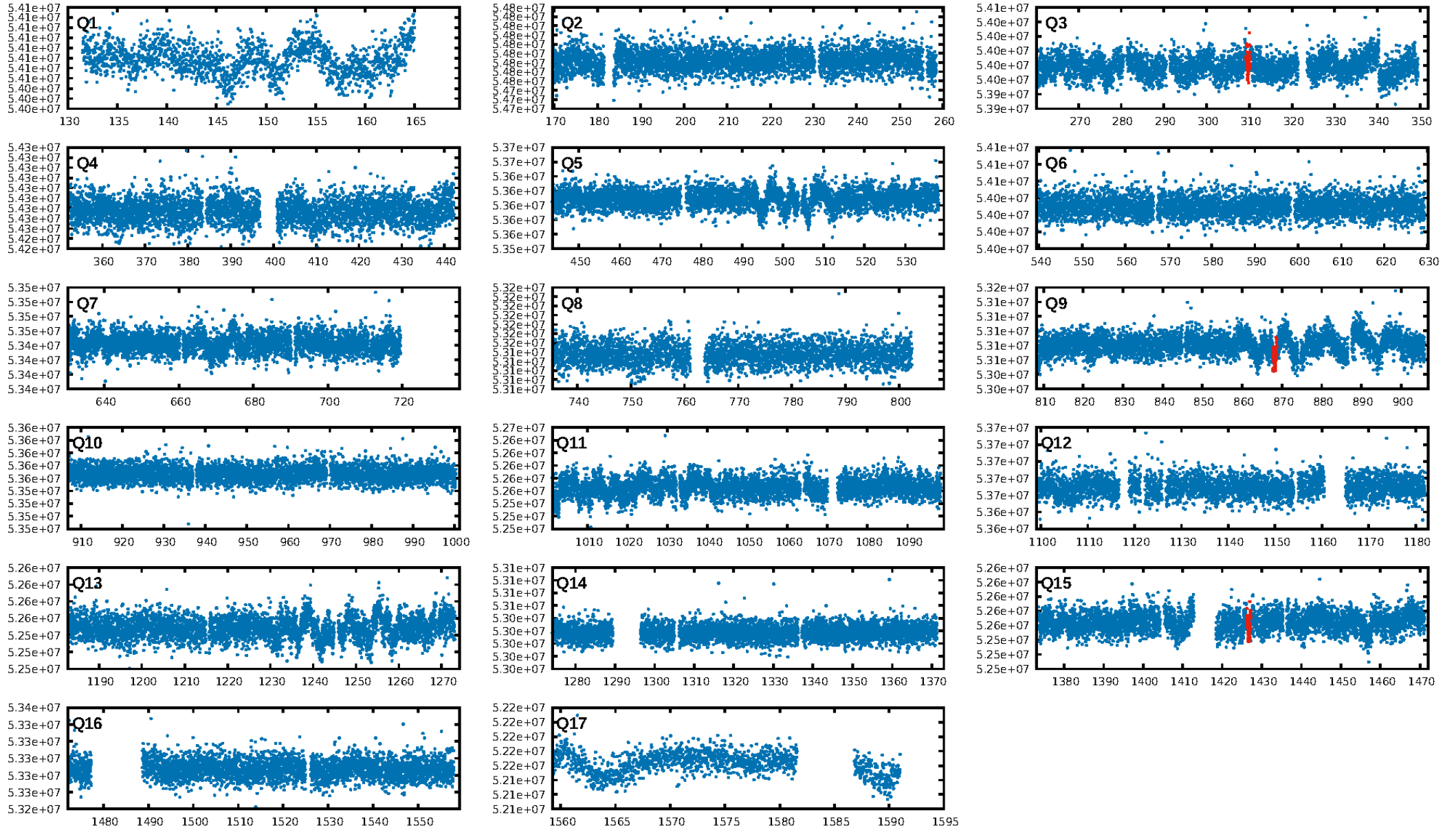
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 52.6%
ModelChiSquareGof-sig: 97.1%
Bootstrap-pfa: 5.67e-11
RollingBand-fgt: 0.67 [2/3]
GhostDiagnostic-chr: -3.603
Centroid-sig: 98.6%
Centroid-so: 0.027 arcsec [0.01σ]
OotOffset-rm: 4.822 arcsec [3.56σ]
KicOffset-rm: 4.822 arcsec [4.09σ]
OotOffset-st: 0/1/0/1 [2]
KicOffset-st: 0/1/0/1 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [3/3]

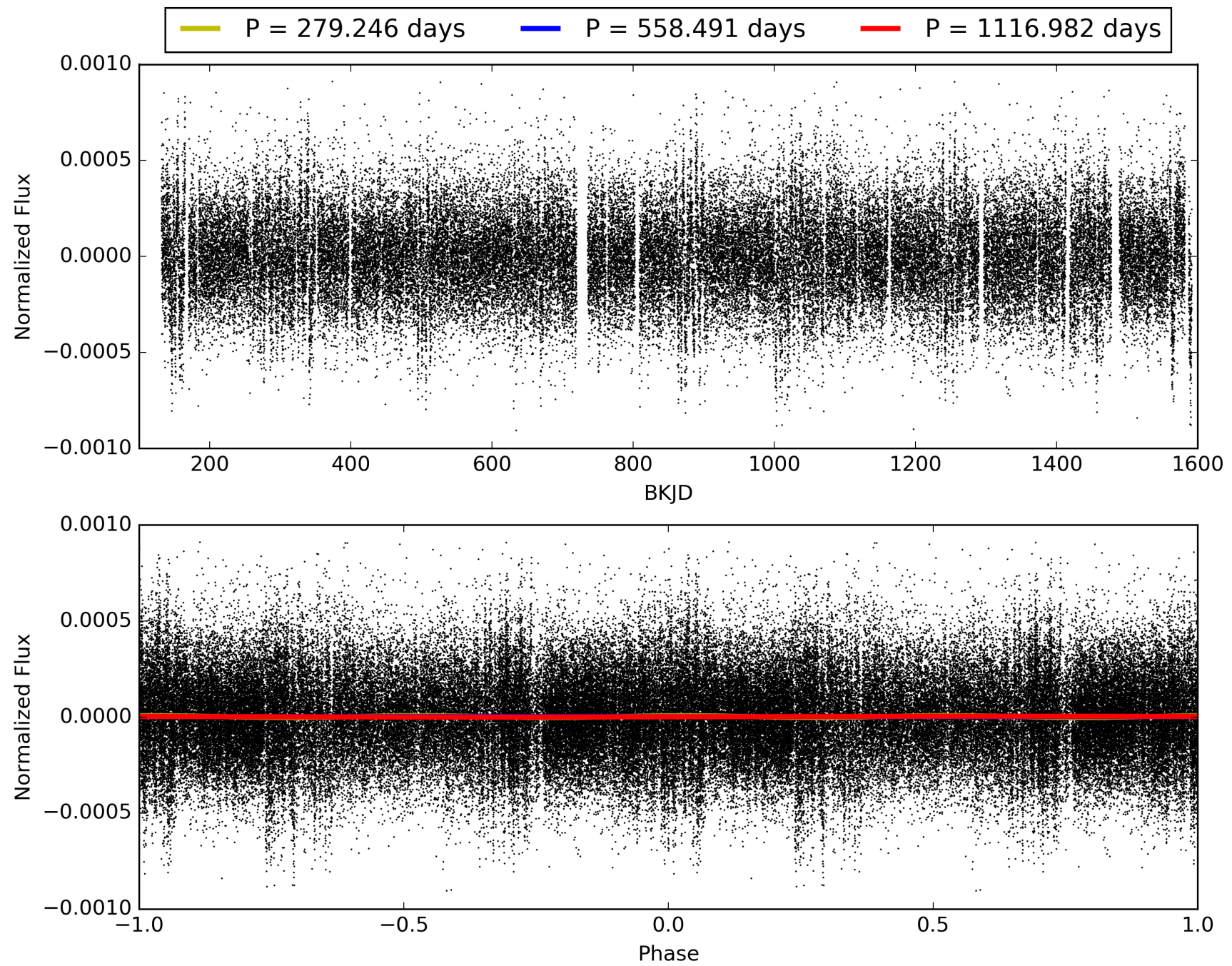
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 15:29:24 Z

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

TCE 005871653-01, PDC Light Curves

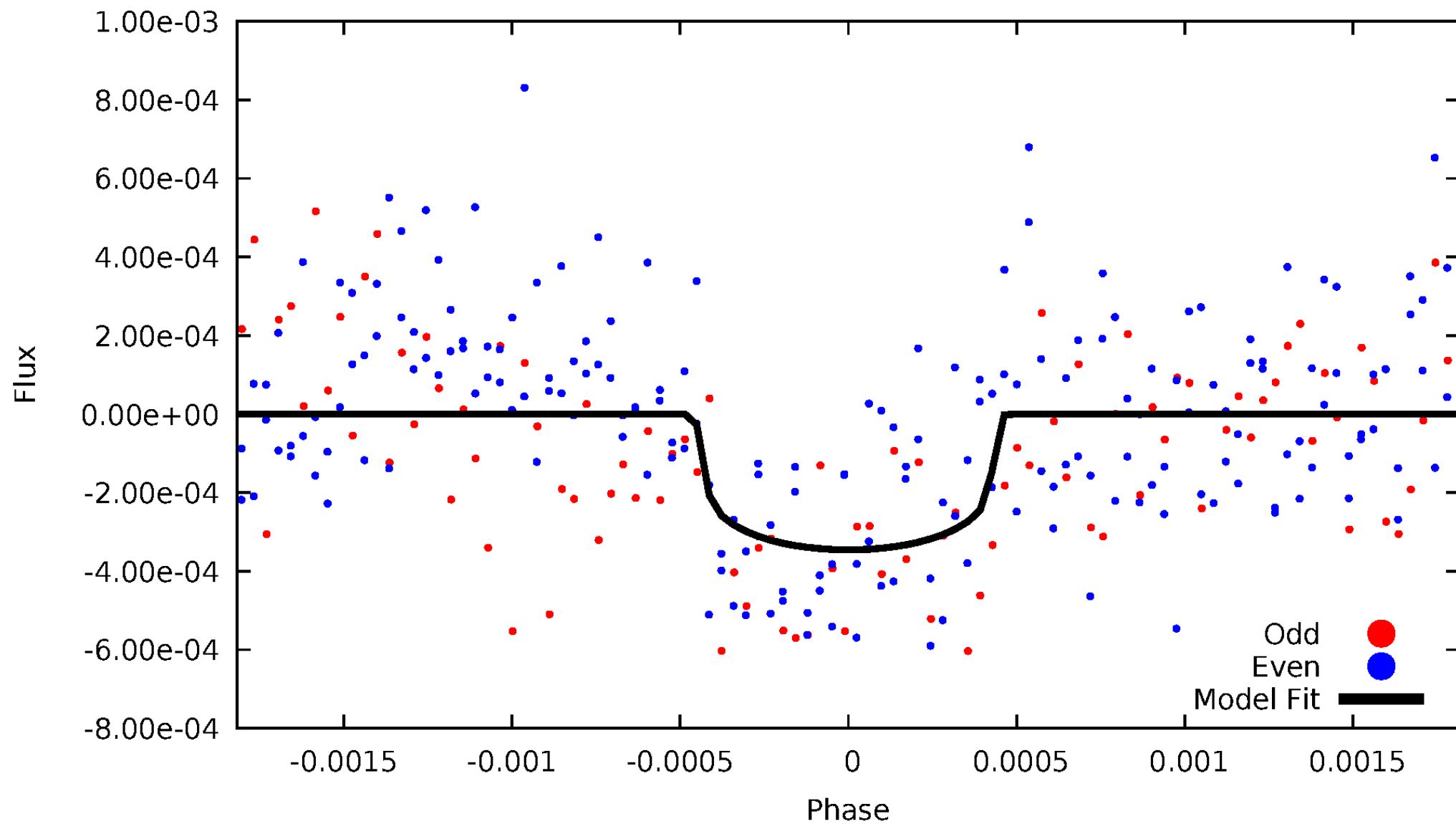


TCE 005871653-01



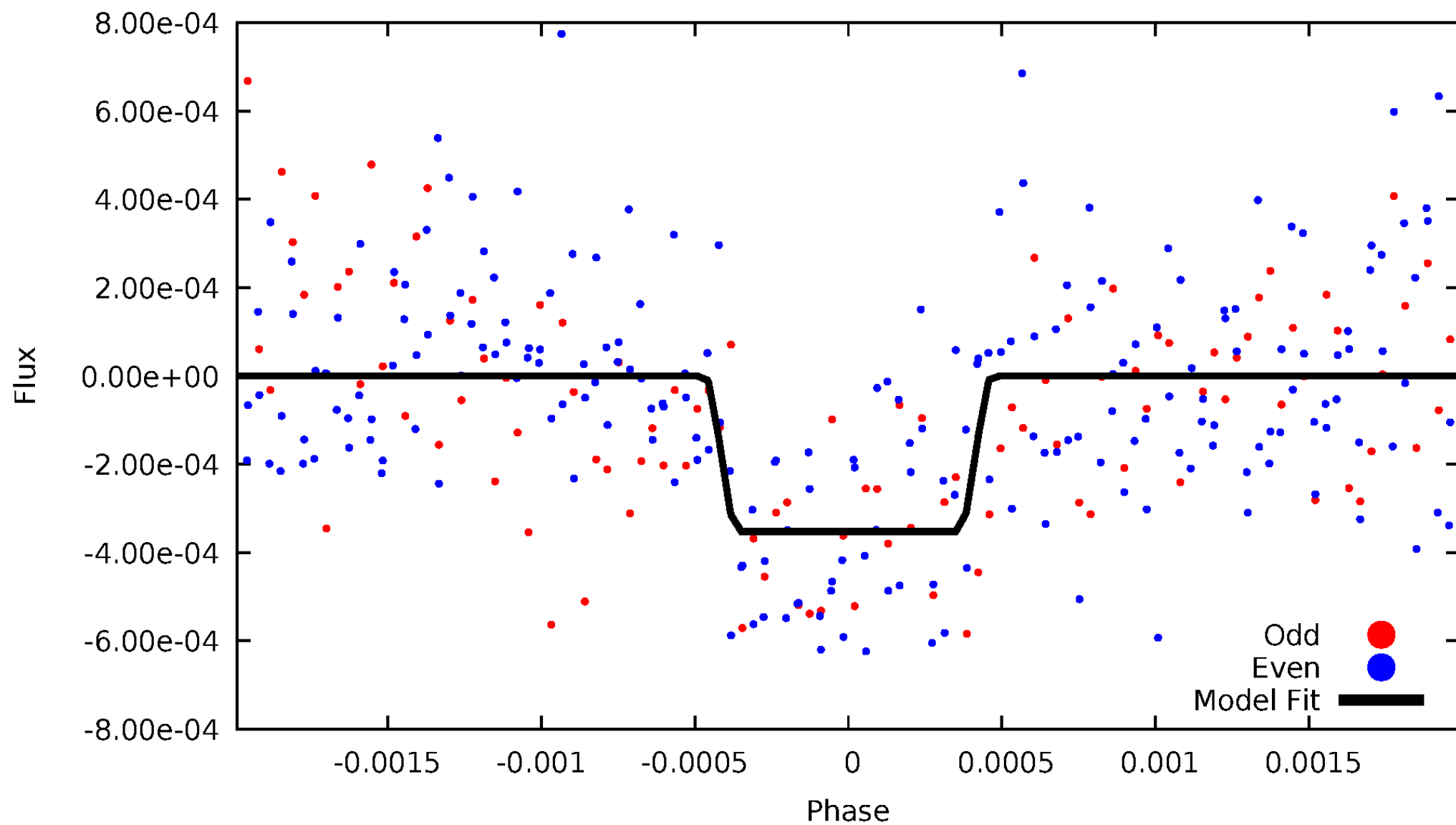
DV Odd/Even

TCE 005871653-01

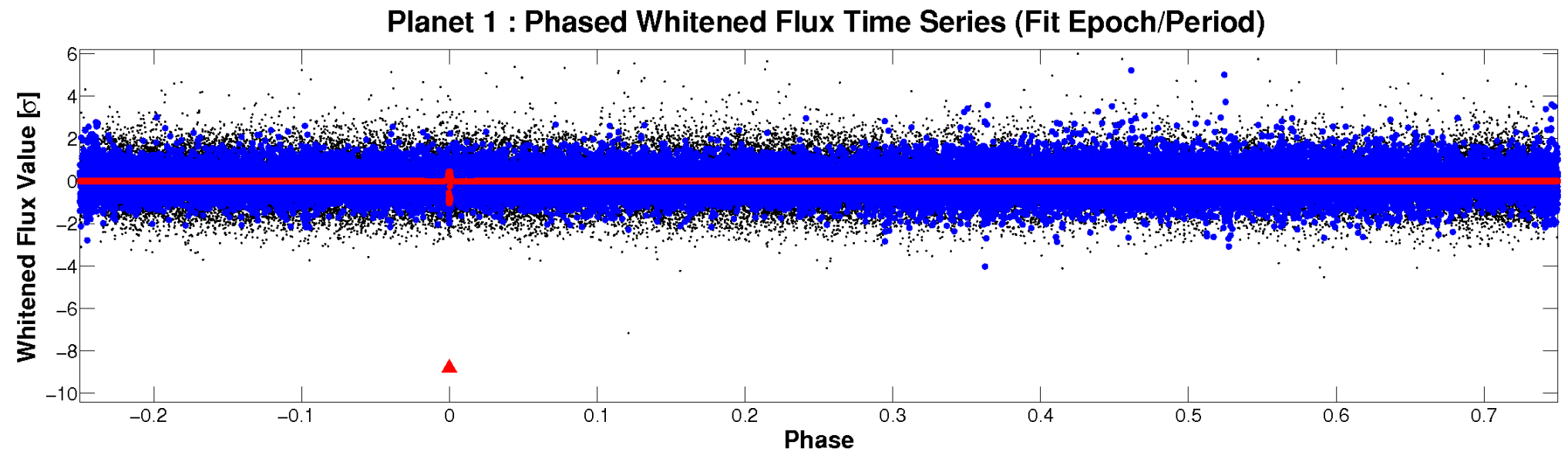
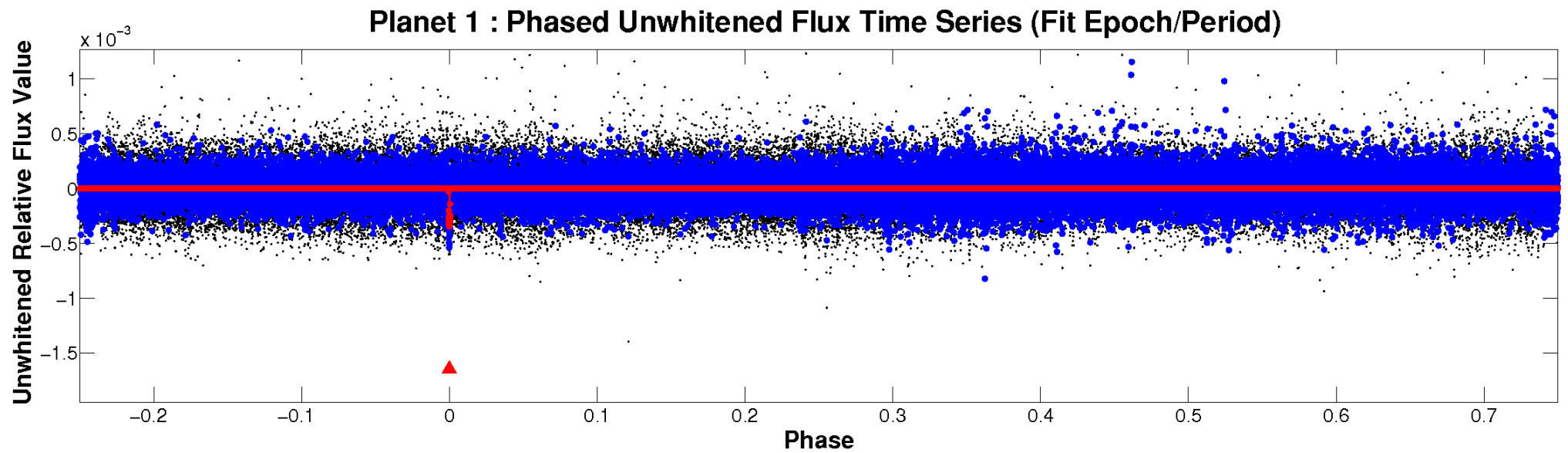


ALT Odd/Even

TCE 005871653-01

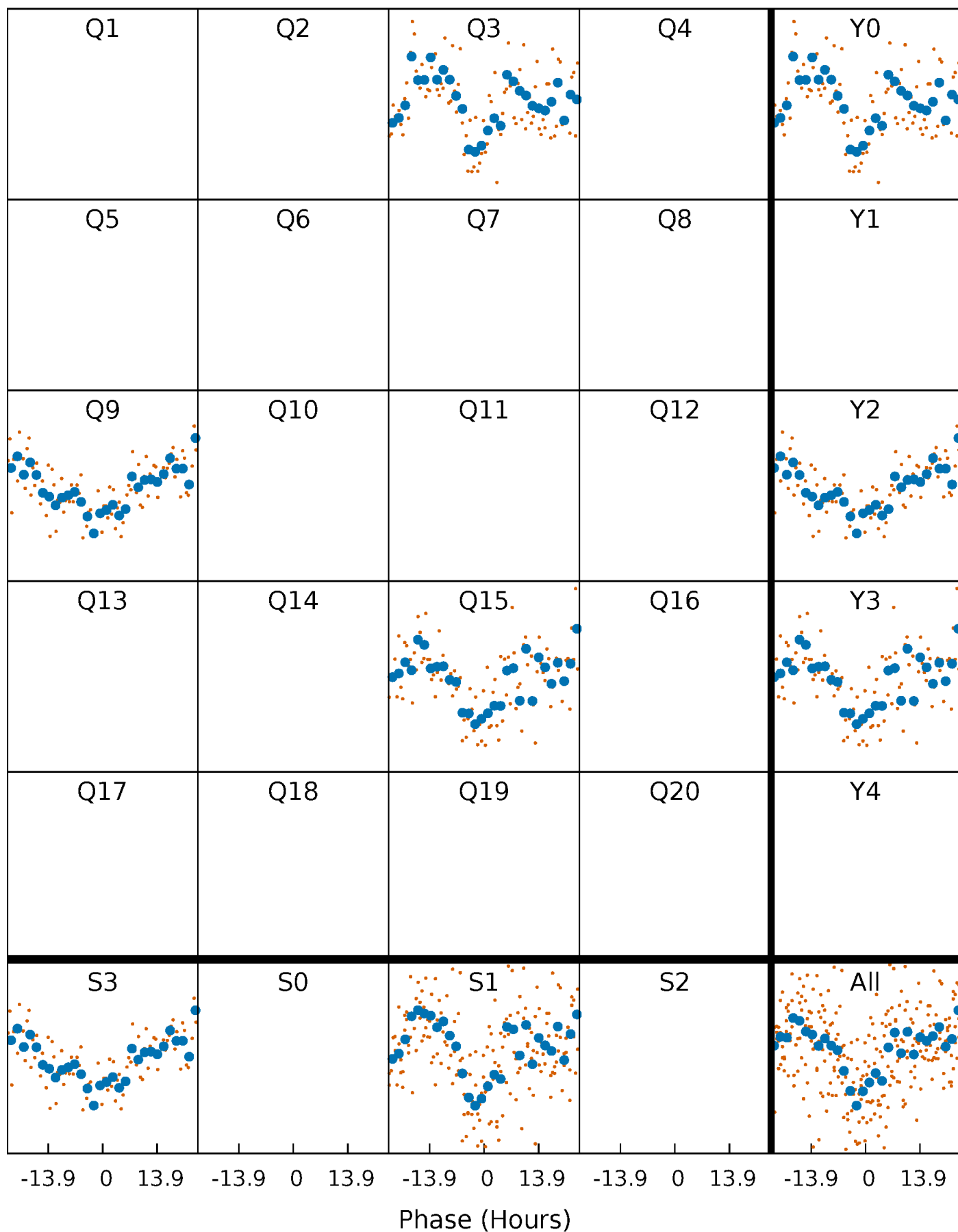


Non-Whitened Vs. Whitened Light Curve



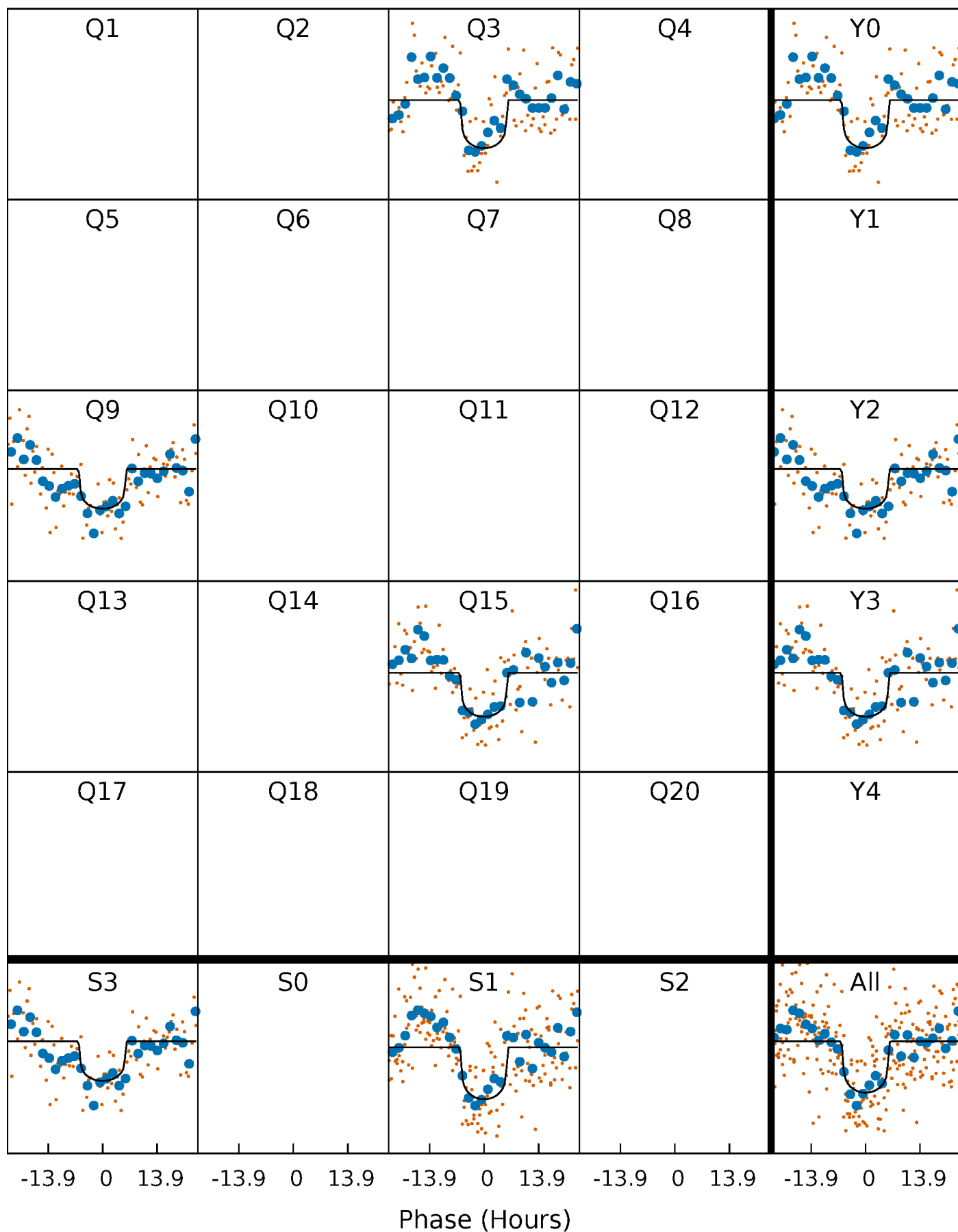
PDC Quarter-Phased Transit Curves

TCE 005871653-01 P=558.491226 Days $T_0=309.719363$ (BKJD)



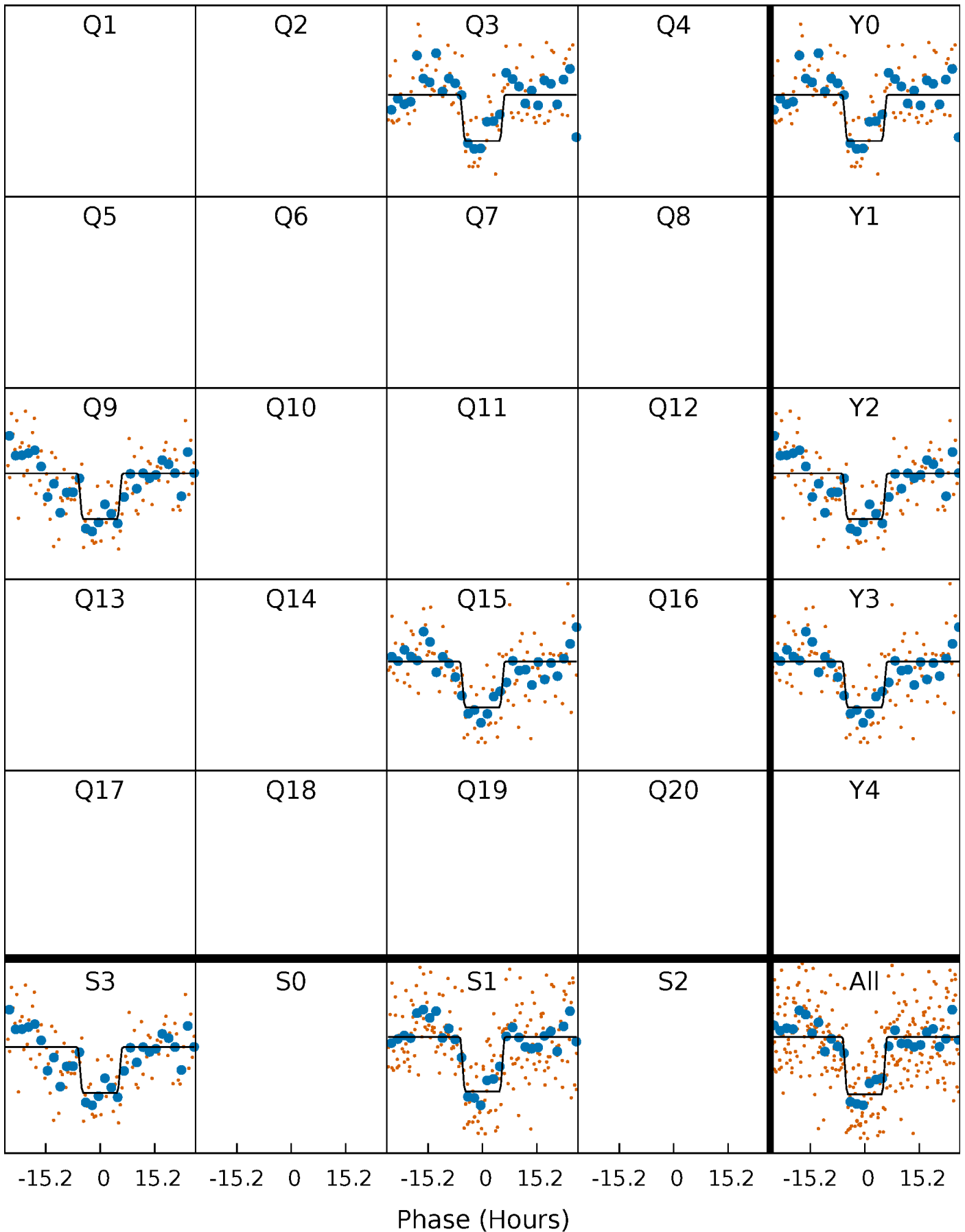
DV Quarter-Phased Transit Curves

TCE 005871653-01 P=558.491226 Days $T_0=309.719363$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

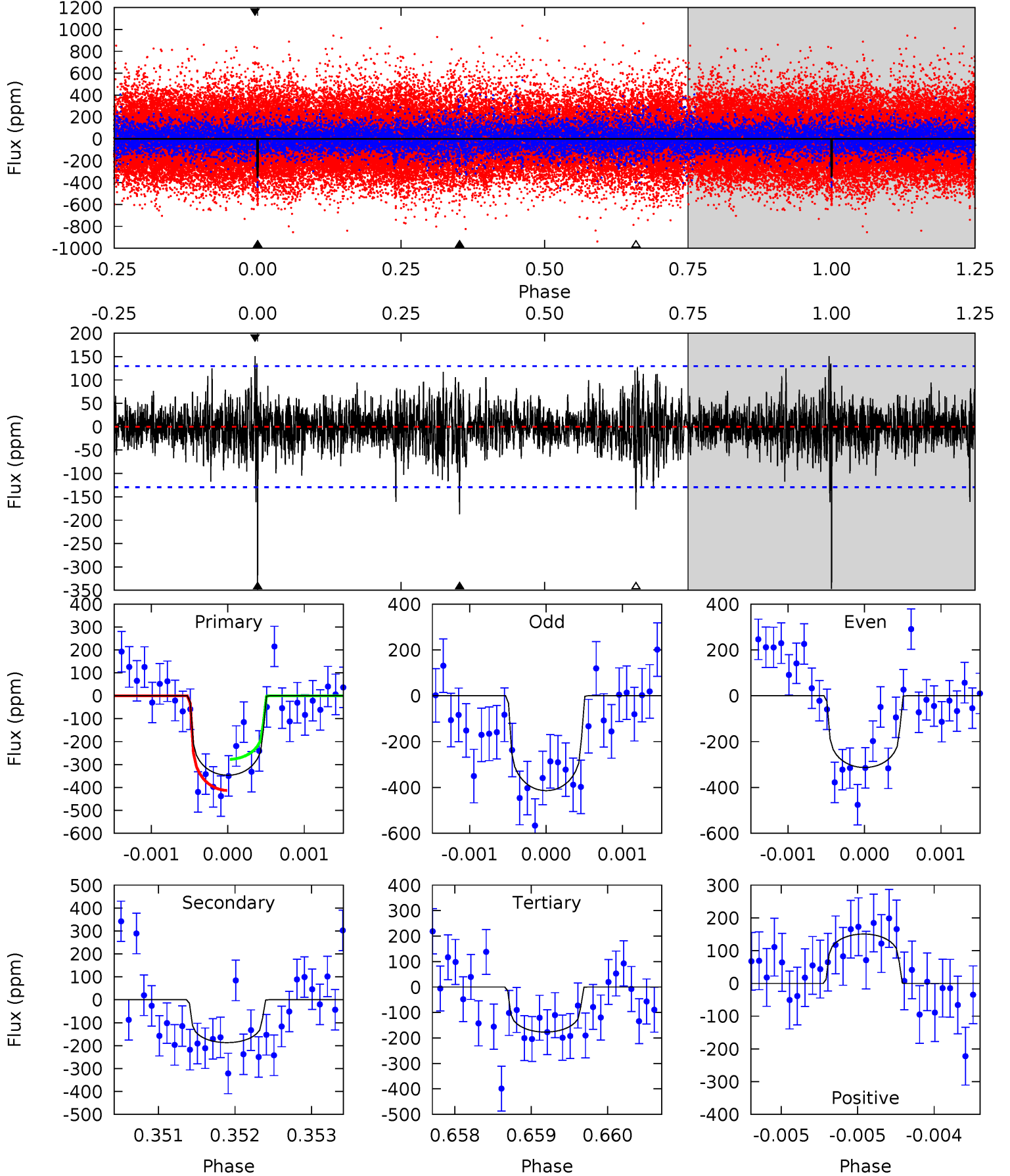
TCE 005871653-01 P=558.490062 Days $T_0=309.703384$ (BKJD)



DV Model-Shift Uniqueness Test

005871653-01, P = 558.491226 Days, E = 309.719363 Days

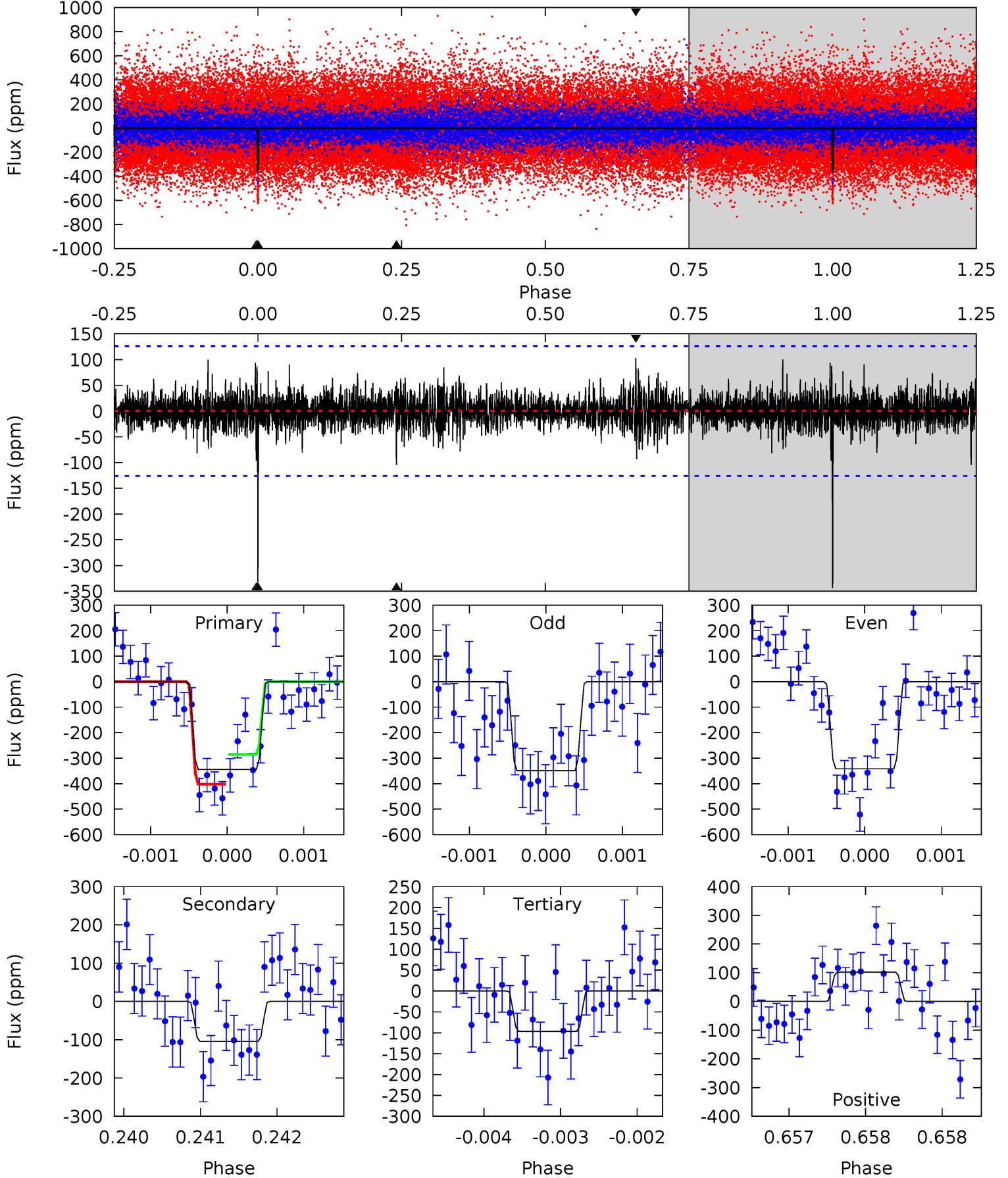
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.6	7.90	7.47	6.36	5.47	3.31	1.49	7.18	8.28	0.43	1.54	2.00	1.01	0.30	2.86



Alt Model-Shift Uniqueness Test

005871653-01, P = 558.490062 Days, E = 309.703384 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.9	4.52	4.18	4.43	5.47	3.31	0.97	10.7	10.5	0.34	0.09	0.16	0.99	0.23	2.54



Stellar Parameters For KIC 005871653

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5571^{+109}_{-58}	$4.022^{+0.266}_{-0.133}$	$-0.360^{+0.200}_{-0.100}$	$1.483^{+0.312}_{-0.415}$	$0.845^{+0.089}_{-0.032}$	$0.365^{+0.514}_{-0.137}$
	+2%/-1%	+7%/-3%	+56%/-28%	+21%/-28%	+11%/-4%	+141%/-38%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 005871653-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-187 ± 24	$2.94^{+1.09}_{-0.96}$	373^{+19}_{-28}	4908^{+808}_{-542}	19420^{+23459}_{-9146}
Alt.	-104 ± 23	$2.98^{+1.10}_{-1.00}$	372^{+23}_{-28}	4346^{+656}_{-460}	10674^{+13671}_{-5334}

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

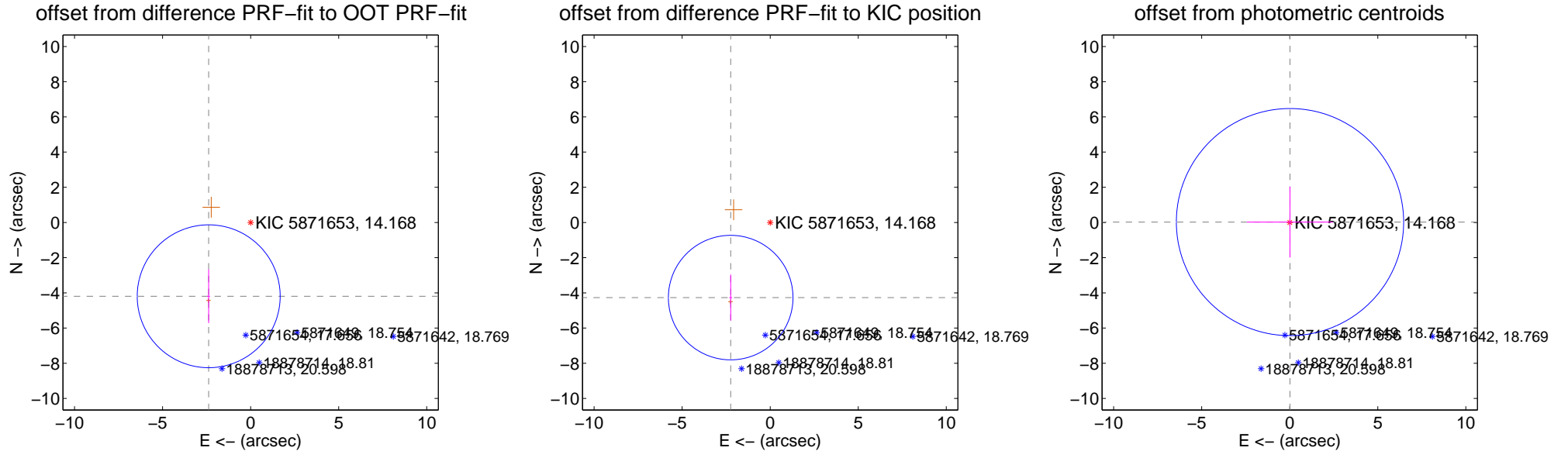
DV Centroid Data

Supplemental centroid analysis for 005871653-01. Kepler magnitude: 14.17. Transit SNR 8.25

There are 0 quarters with good PRF difference image offsets

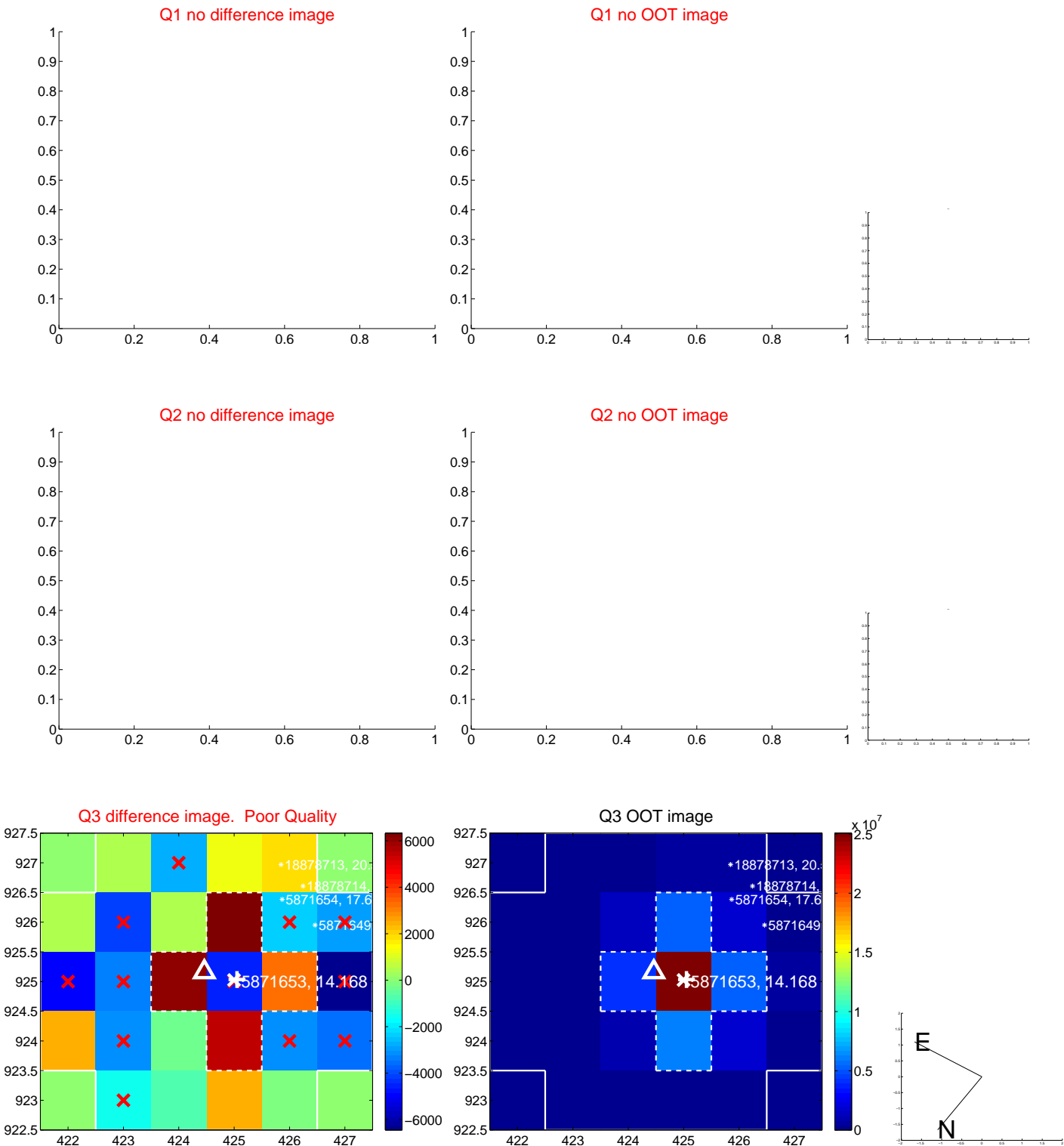
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.822 ± 1.353	3.56	2.381 ± 0.080	-4.193 ± 1.530
PRF-fit source offset from KIC position	4.822 ± 1.179	4.09	2.242 ± 0.080	-4.269 ± 1.308
photometric centroid source offset	0.03 ± 2.15	0.01	-0.01 ± 2.44	0.02 ± 2.01



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.

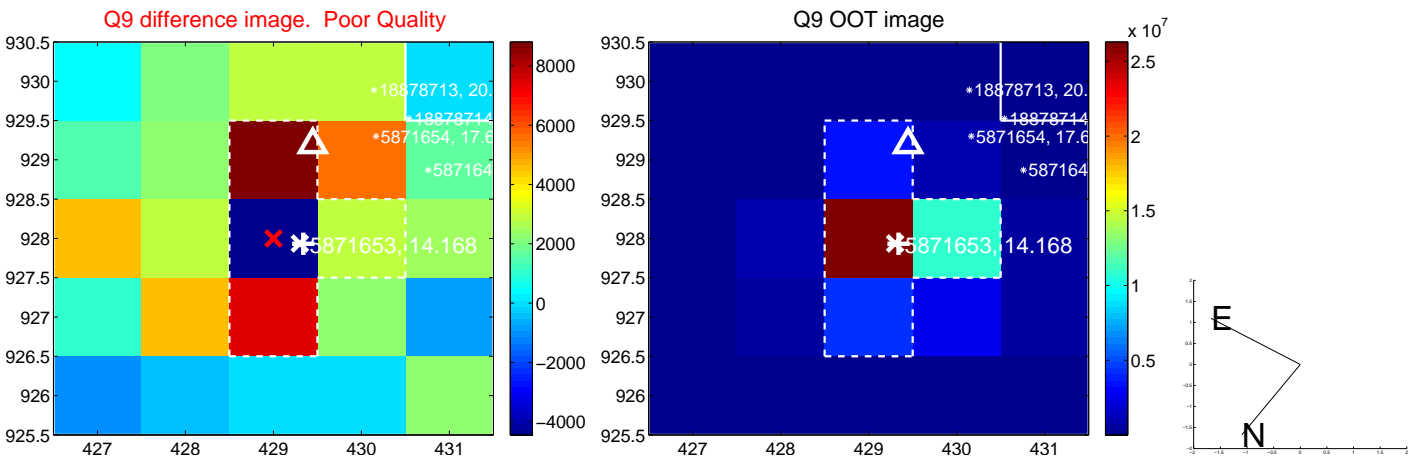
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



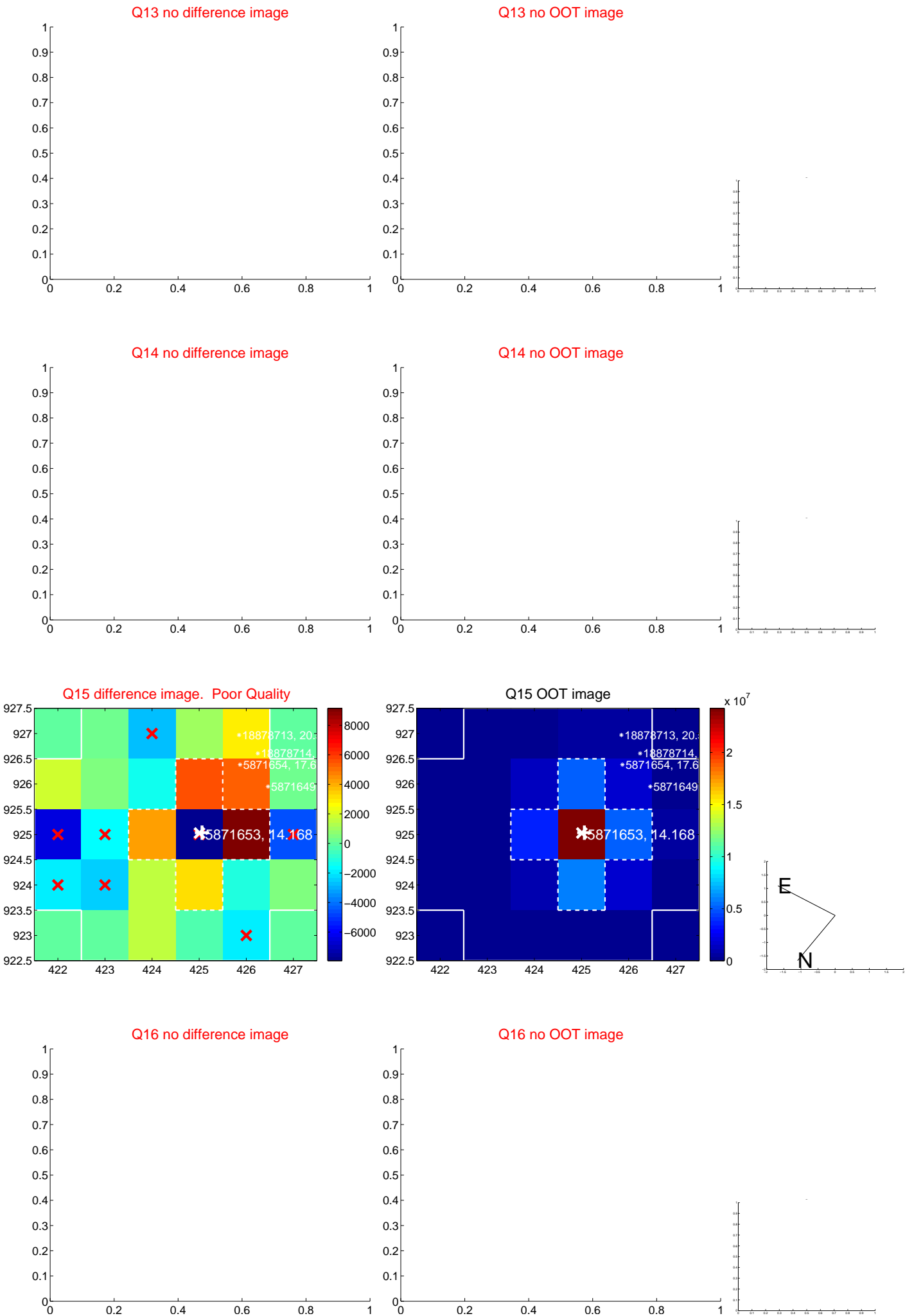
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



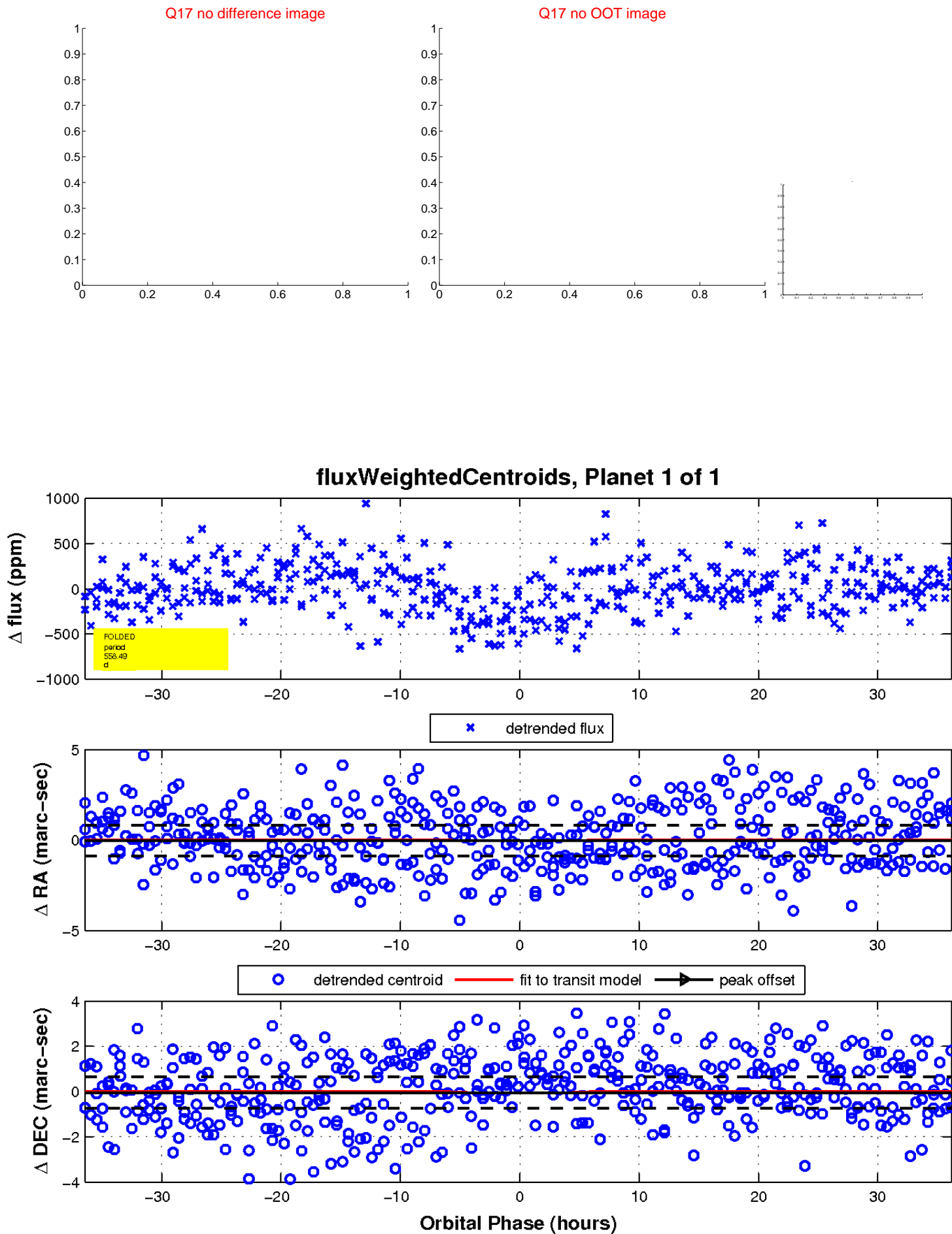
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

