

KIC 009583631

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})
009583631-01	OBS	No	342.563251	290.998893	293.3	3.214	50.5	46.0	1.46	5982	2.99	2.76

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009583631-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_SATURATED

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

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

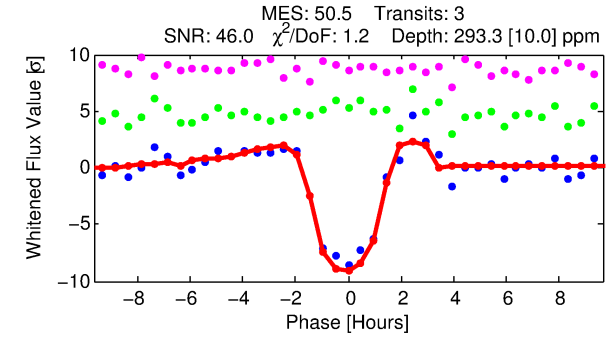
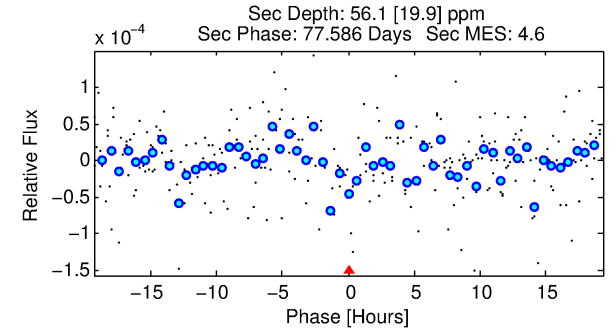
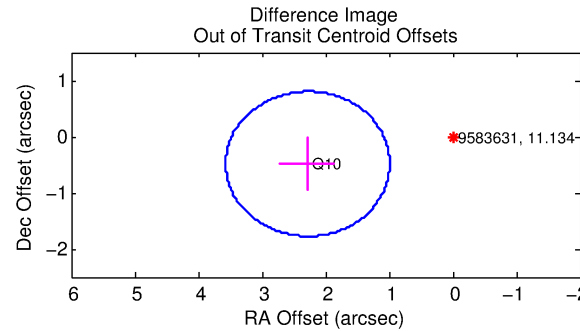
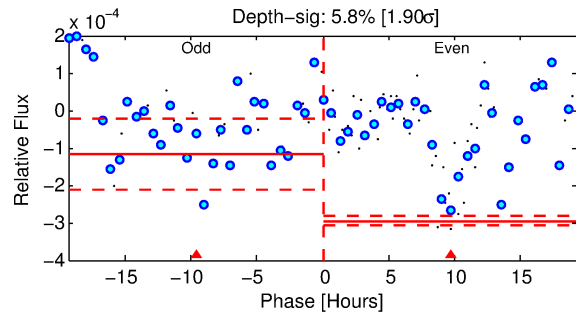
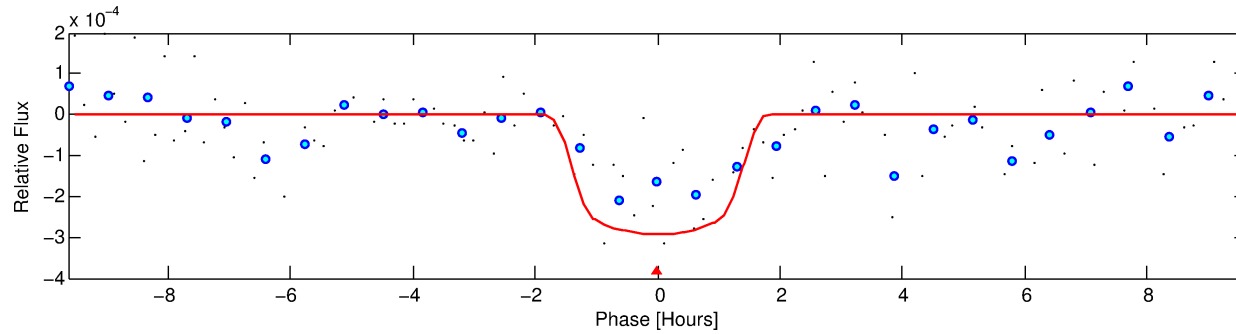
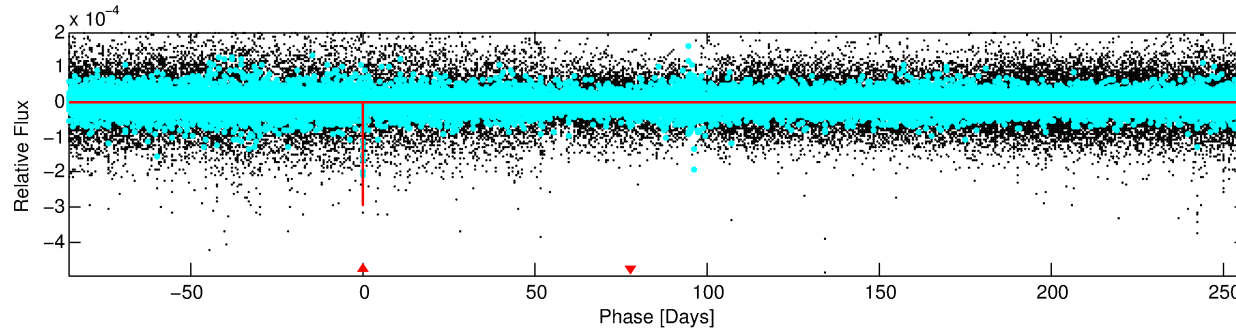
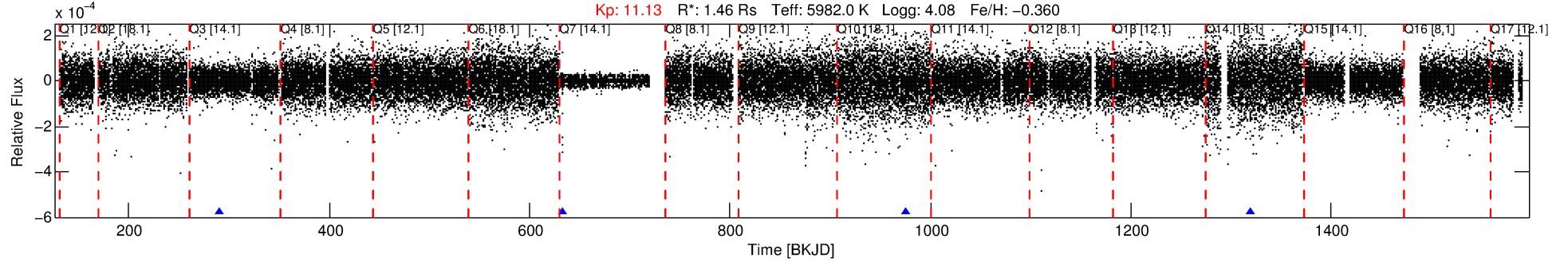
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009583631-01

No Significant Match Found

DV One-Page Summary

KIC: 9583631 Candidate: 1 of 1 Period: 342.563 d



DV Fit Results:

Period = 342.56325 [0.00294] d
Epoch = 290.9989 [0.0034] BKJD
Rp/R* = 0.0188 [0.0032]
a/R* = 360.57 [321.93]
b = 0.92 [0.16]
Seff = 2.76 [1.30]
Teq = 329 [39] K
Rp = 2.99 [0.98] Re
a = 0.9402 [0.2628] AU
Ag = 3046.77 [2055.03] [1.48 σ]
Teffp = 3776 [478] K [7.18 σ]

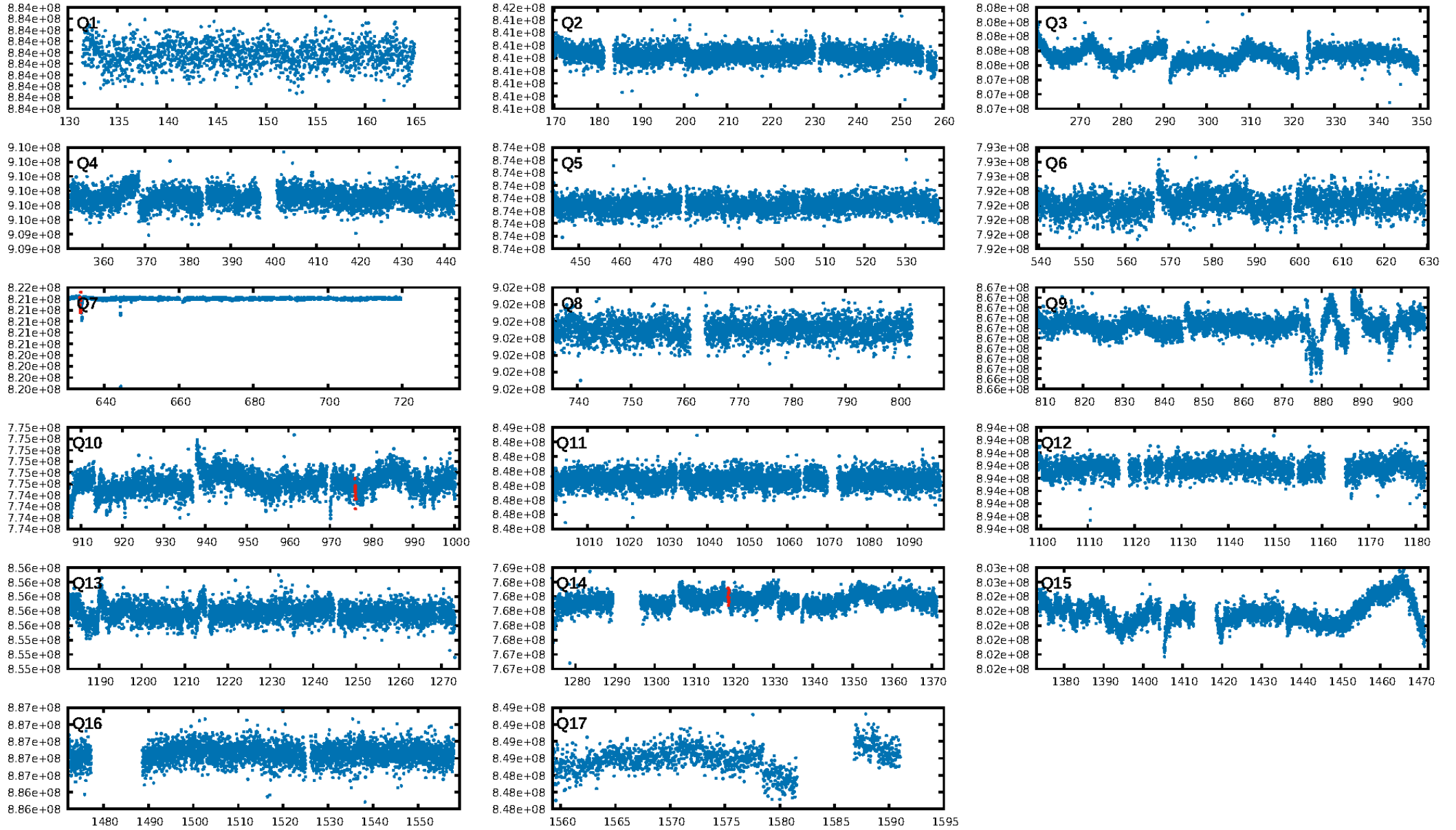
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 35.8%
Bootstrap-pfa: 6.48e-175
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -5.434
Centroid-sig: 4.6%
Centroid-so: 1.114 arcsec [1.77 σ]
OotOffset-rm: 2.332 arcsec [5.43 σ]
KicOffset-rm: 2.853 arcsec [6.66 σ]
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]

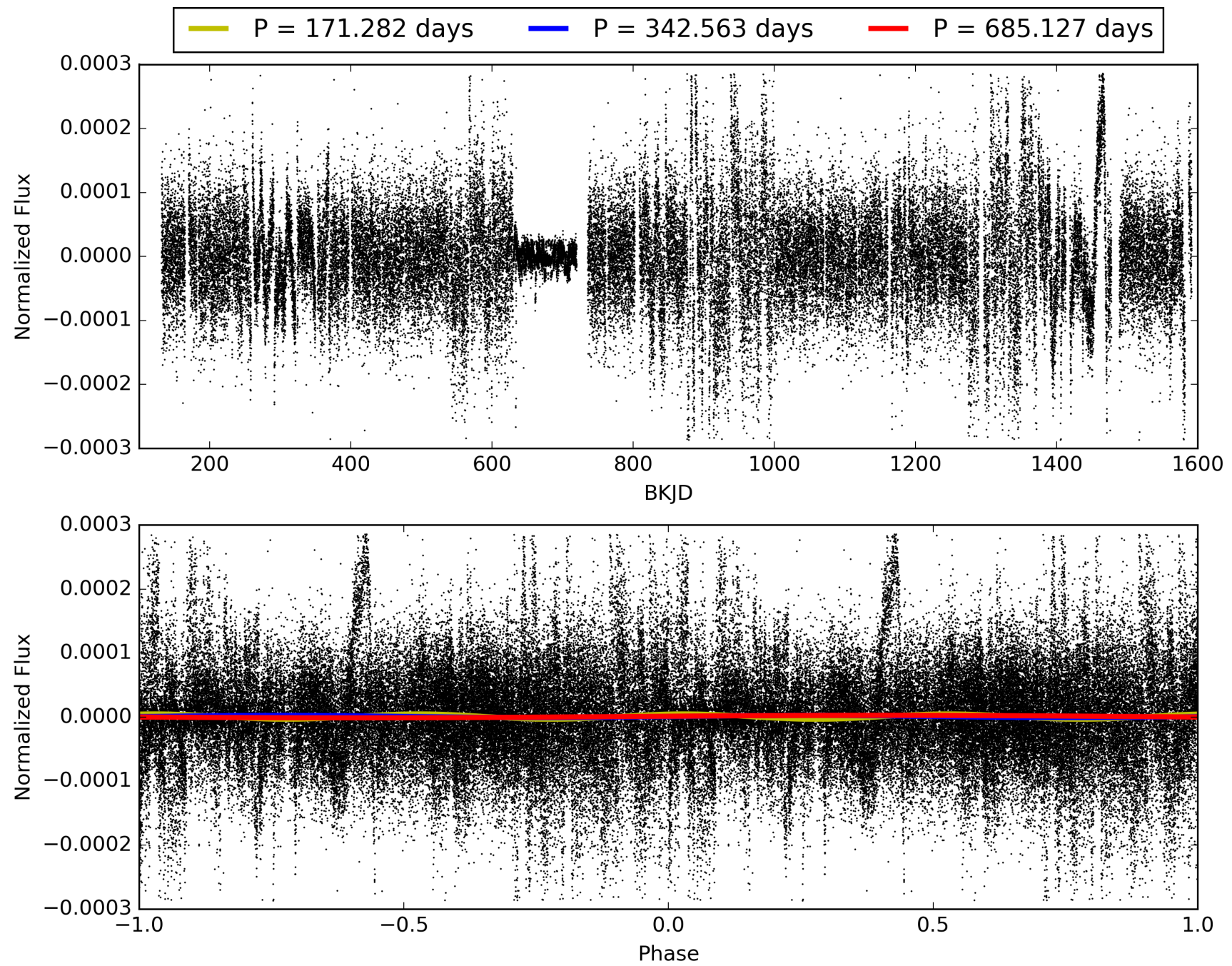
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:37:02 Z

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

TCE 009583631-01, PDC Light Curves

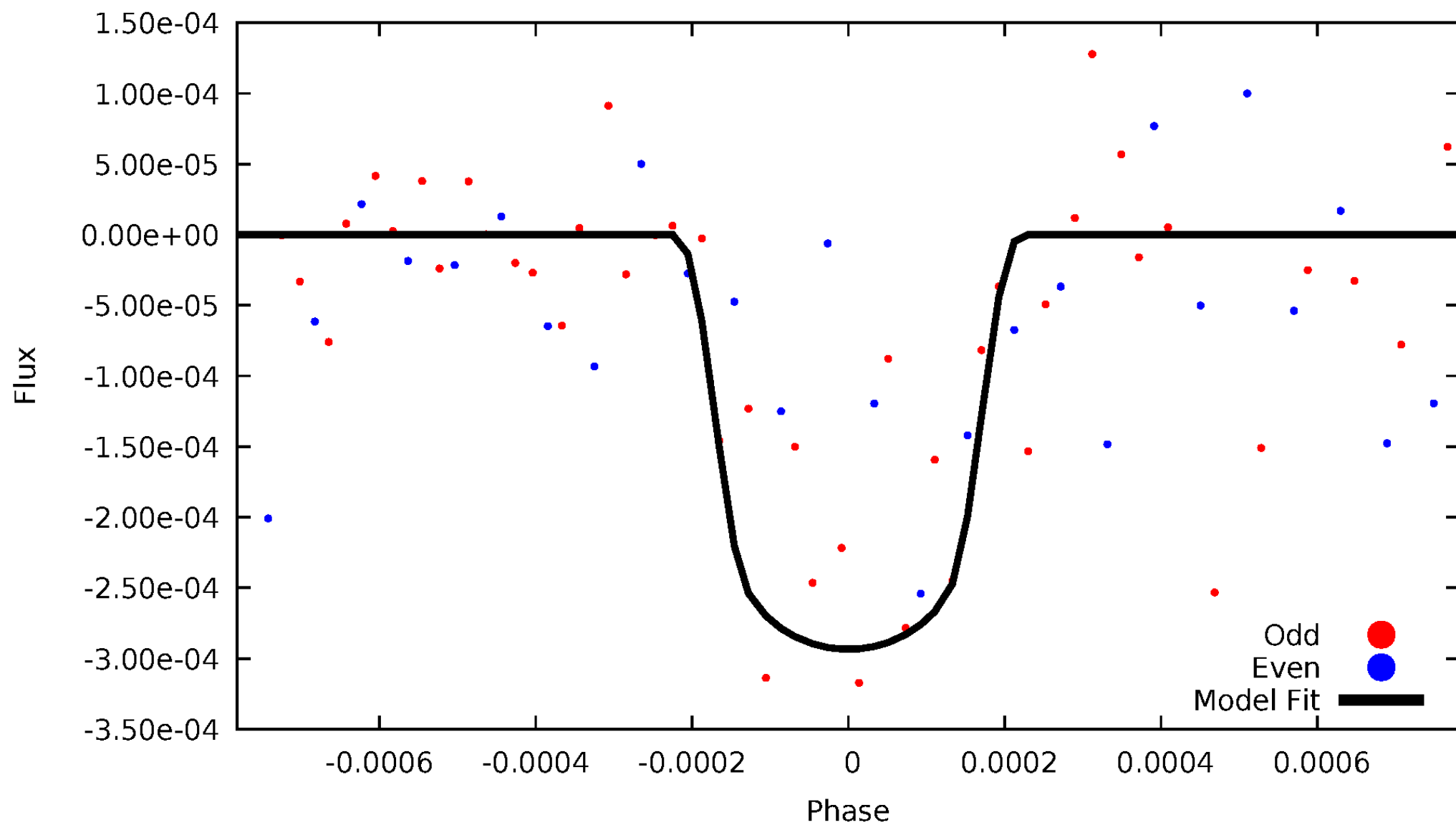


TCE 009583631-01



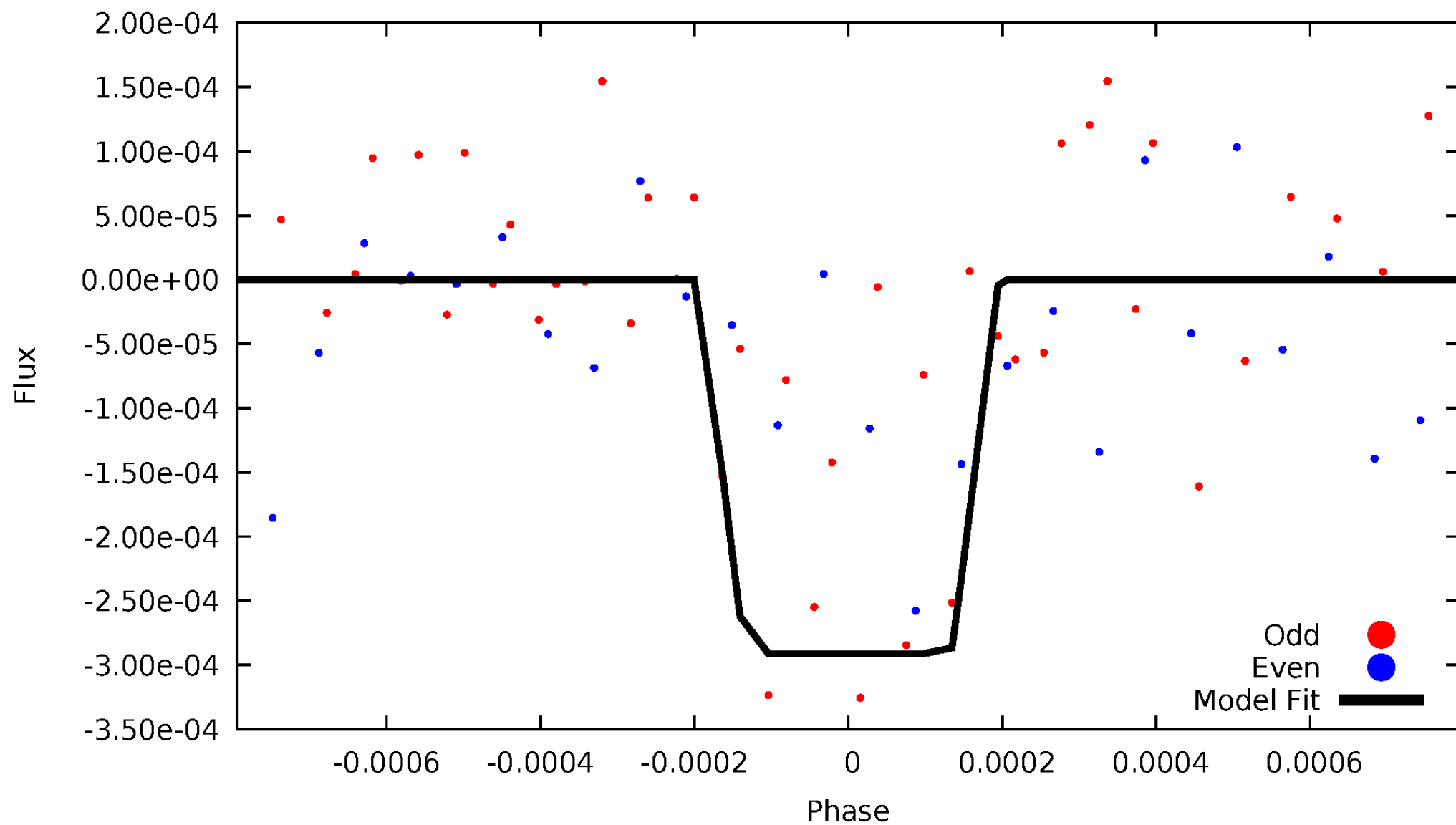
DV Odd/Even

TCE 009583631-01



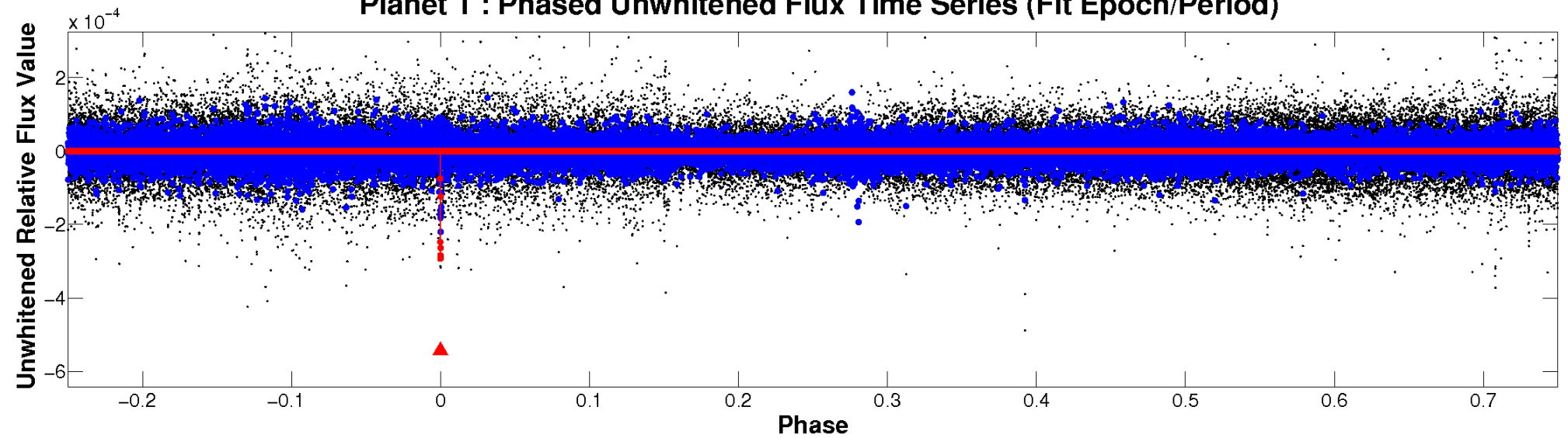
ALT Odd/Even

TCE 009583631-01

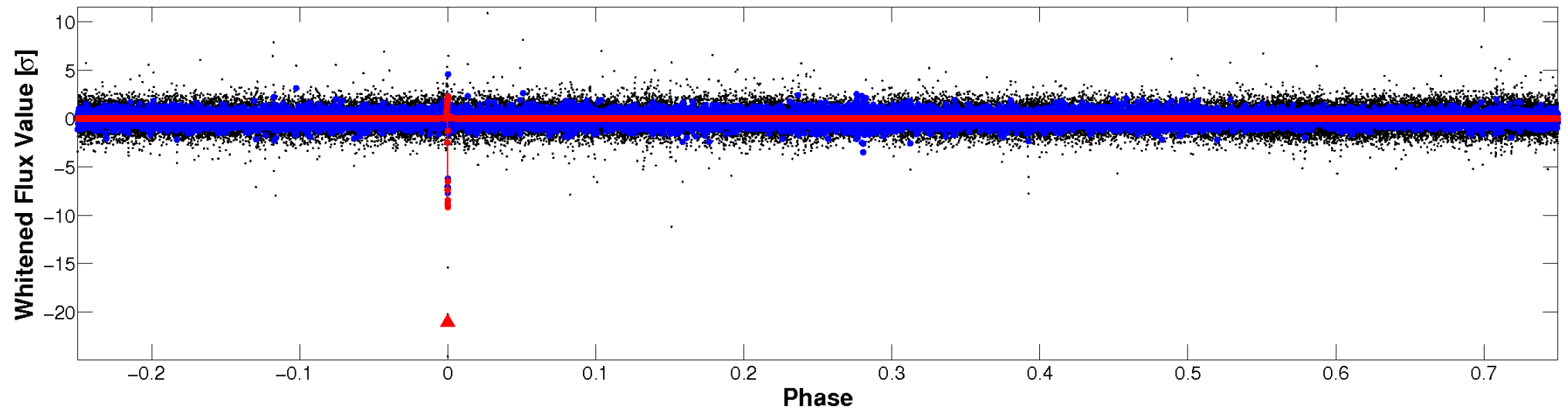


Non-Whitened Vs. Whitened Light Curve

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

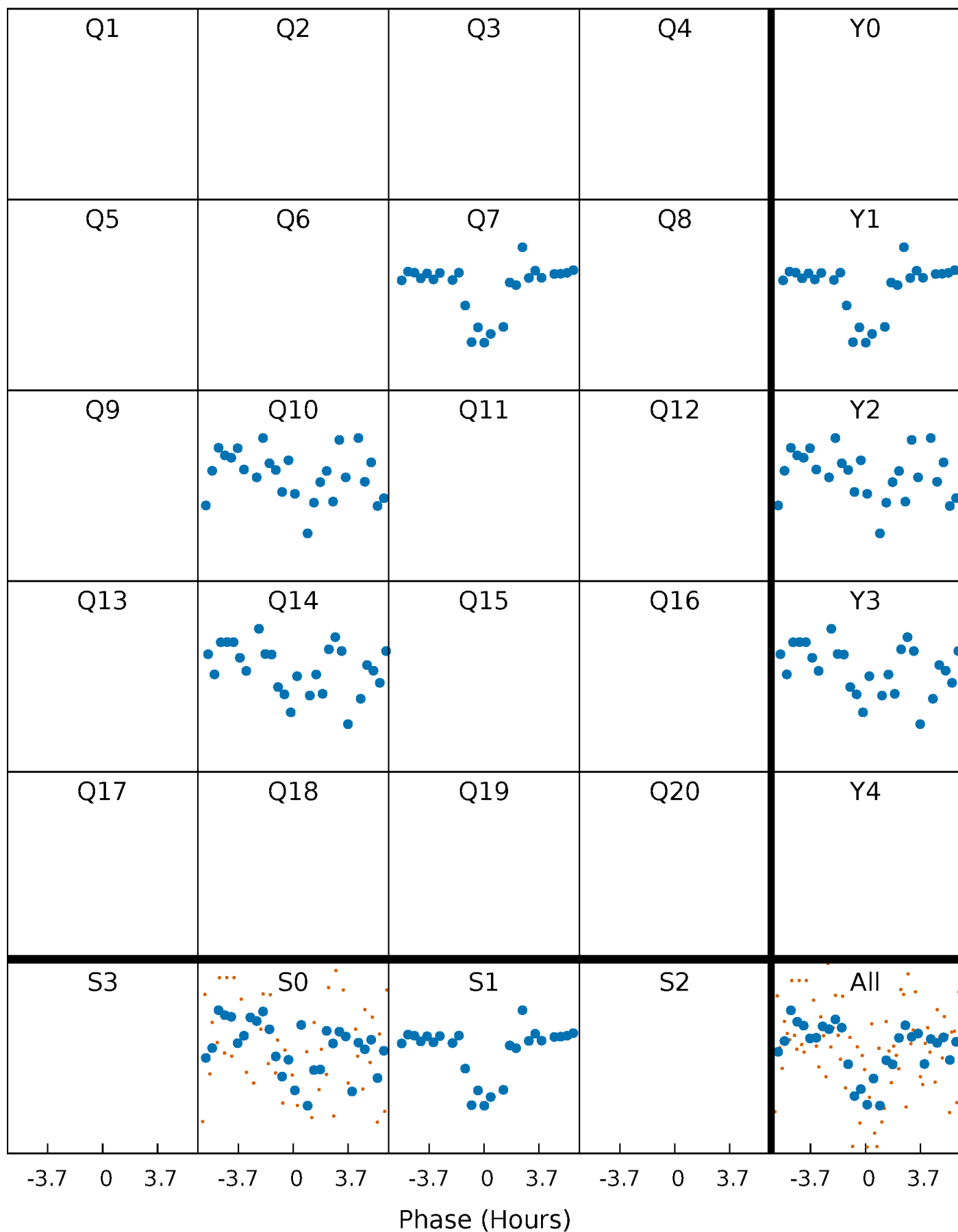


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



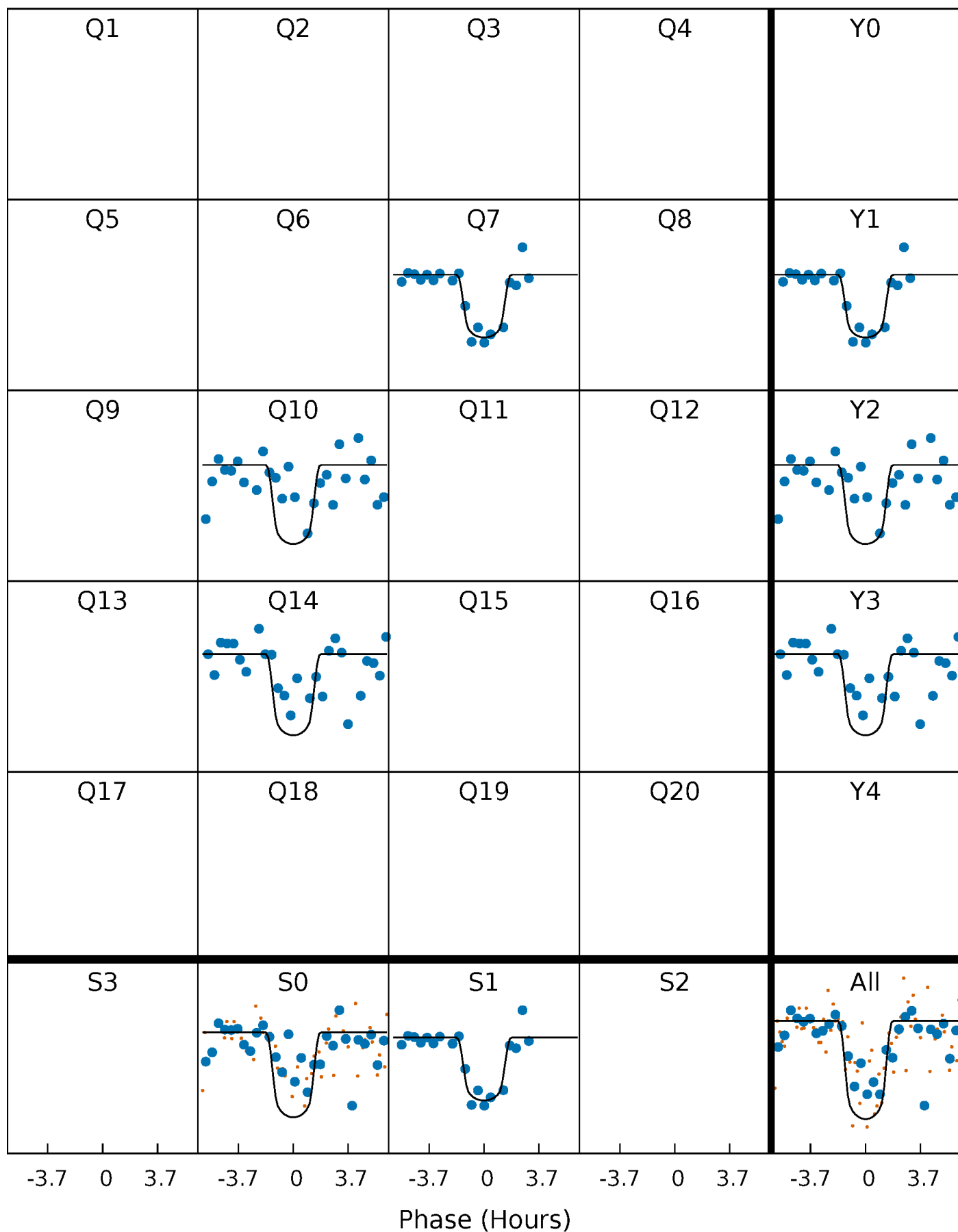
PDC Quarter-Phased Transit Curves

TCE 009583631-01 P=342.563251 Days $T_0=290.998893$ (BKJD)



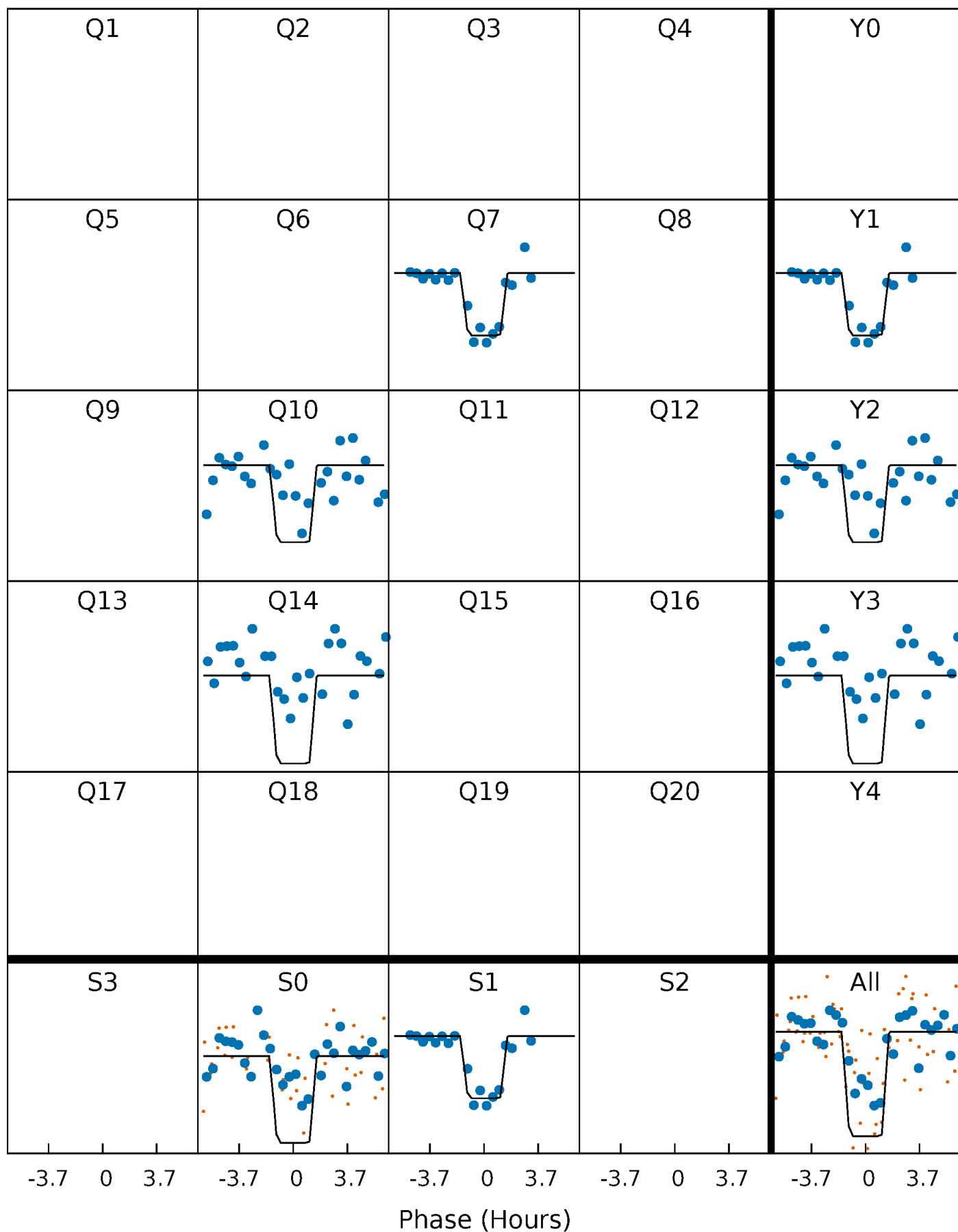
DV Quarter-Phased Transit Curves

TCE 009583631-01 P=342.563251 Days $T_0=290.998893$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

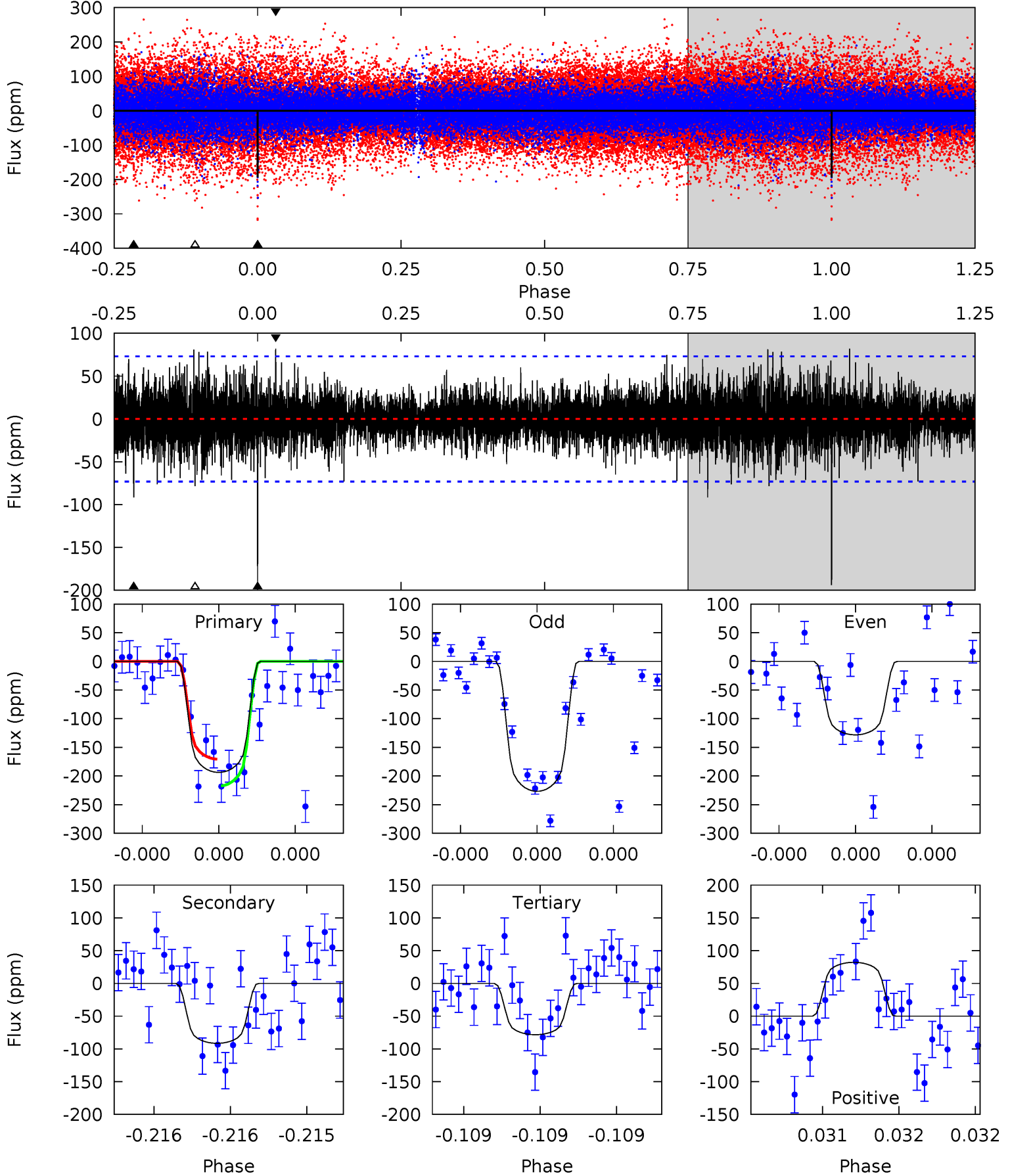
TCE 009583631-01 P=342.565742 Days $T_0=290.995817$ (BKJD)



DV Model-Shift Uniqueness Test

009583631-01, $P = 342.563251$ Days, $E = 290.998893$ Days

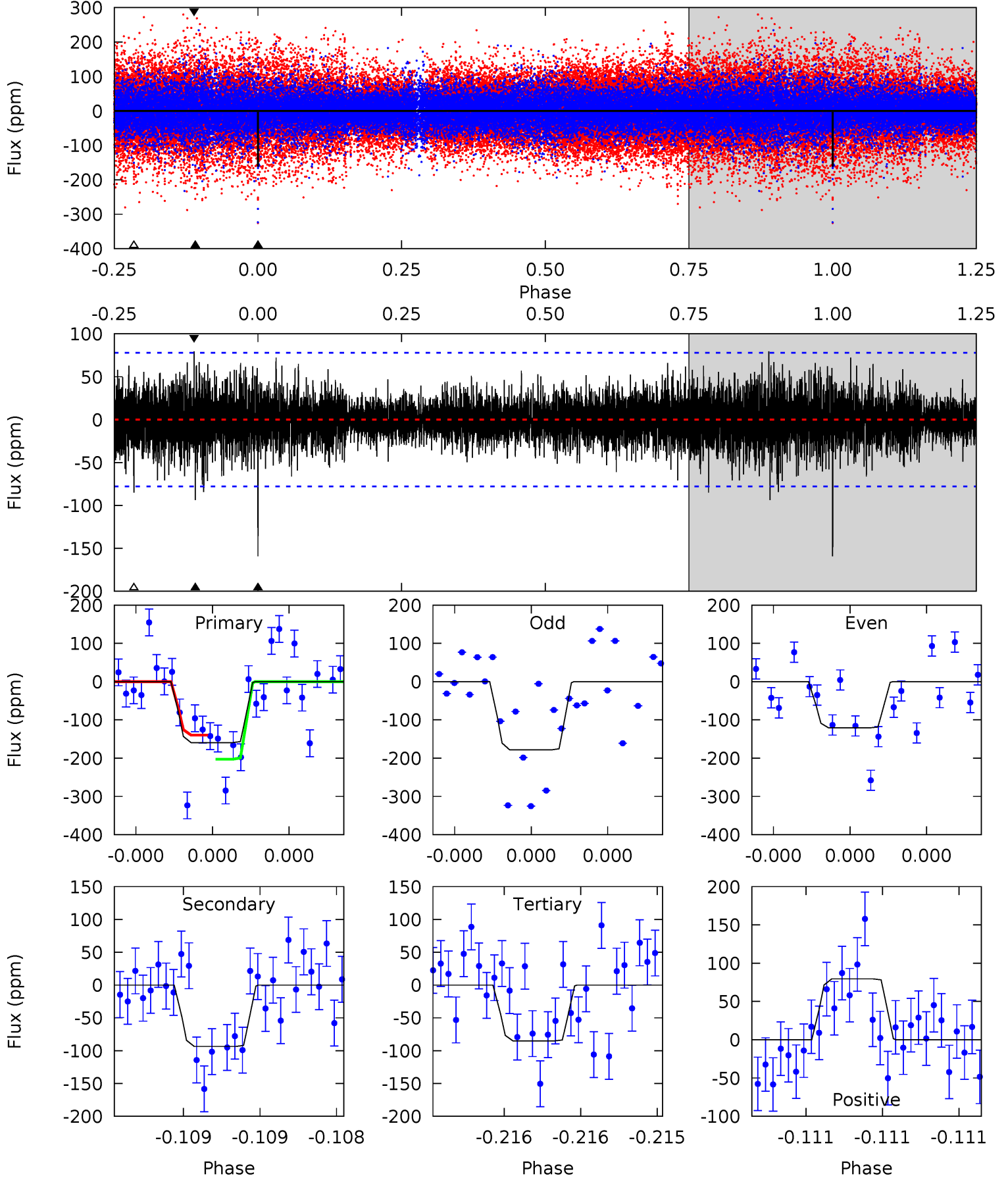
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.9	7.02	6.01	6.29	5.60	3.53	1.42	8.85	8.56	1.01	0.72	3.58	1.23	0.30	1.79



Alt Model-Shift Uniqueness Test

009583631-01, P = 342.565742 Days, E = 290.995817 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.5	6.76	6.15	5.74	5.63	3.56	1.30	5.36	5.77	0.61	1.02	1.96	1.32	0.33	2.23



Stellar Parameters For KIC 009583631

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5982^{+162}_{-144}	$4.085^{+0.273}_{-0.117}$	$-0.360^{+0.350}_{-0.250}$	$1.459^{+0.294}_{-0.405}$	$0.944^{+0.157}_{-0.097}$	$0.428^{+0.639}_{-0.146}$
	+3%/-2%	+7%/-3%	+97%/-69%	+20%/-28%	+17%/-10%	+149%/-34%
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 009583631-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-92 ± 13	$2.86^{+0.72}_{-0.60}$	452^{+27}_{-30}	4483^{+399}_{-316}	5487^{+3525}_{-2005}
Alt.	-94 ± 14	$2.60^{+0.69}_{-0.60}$	454^{+28}_{-38}	4684^{+427}_{-365}	6764^{+5199}_{-2506}

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

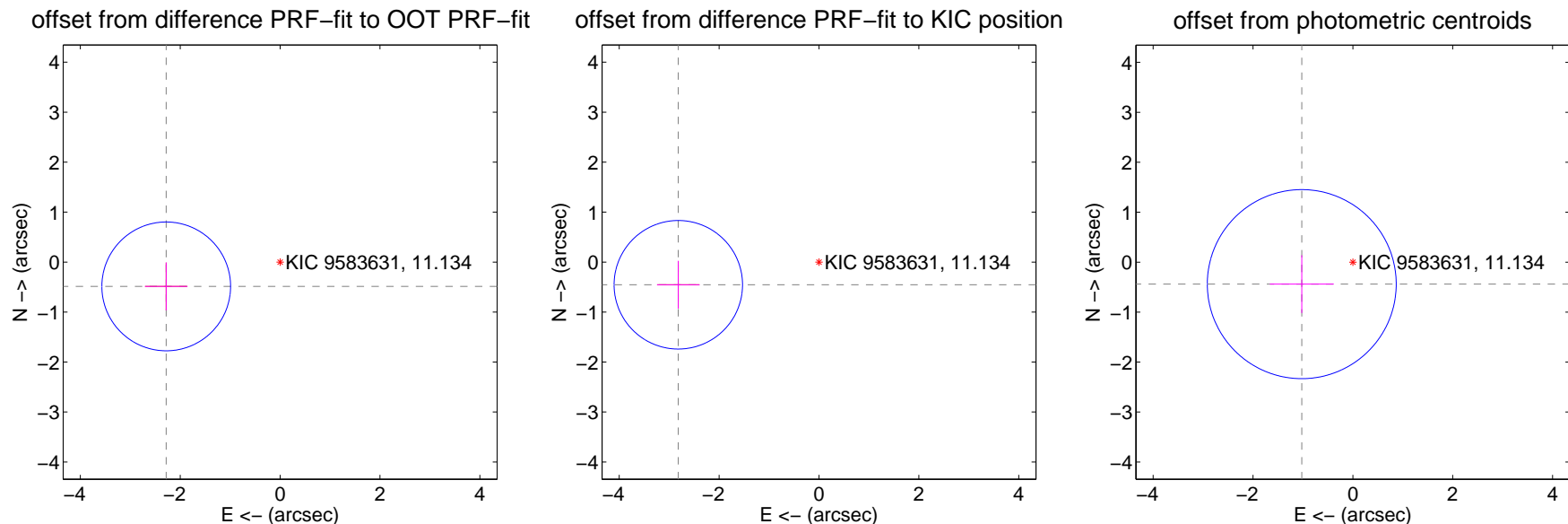
DV Centroid Data

Supplemental centroid analysis for 009583631-01. **Kepler magnitude: 11.13.** Transit SNR 46.02

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.54 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.332 \pm 0.430	5.43	2.281 \pm 0.427	-0.486 \pm 0.479
PRF-fit source offset from KIC position	2.853 \pm 0.429	6.66	2.817 \pm 0.427	-0.454 \pm 0.479
photometric centroid source offset	1.11 \pm 0.63	1.77	1.02 \pm 0.64	-0.44 \pm 0.58



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.

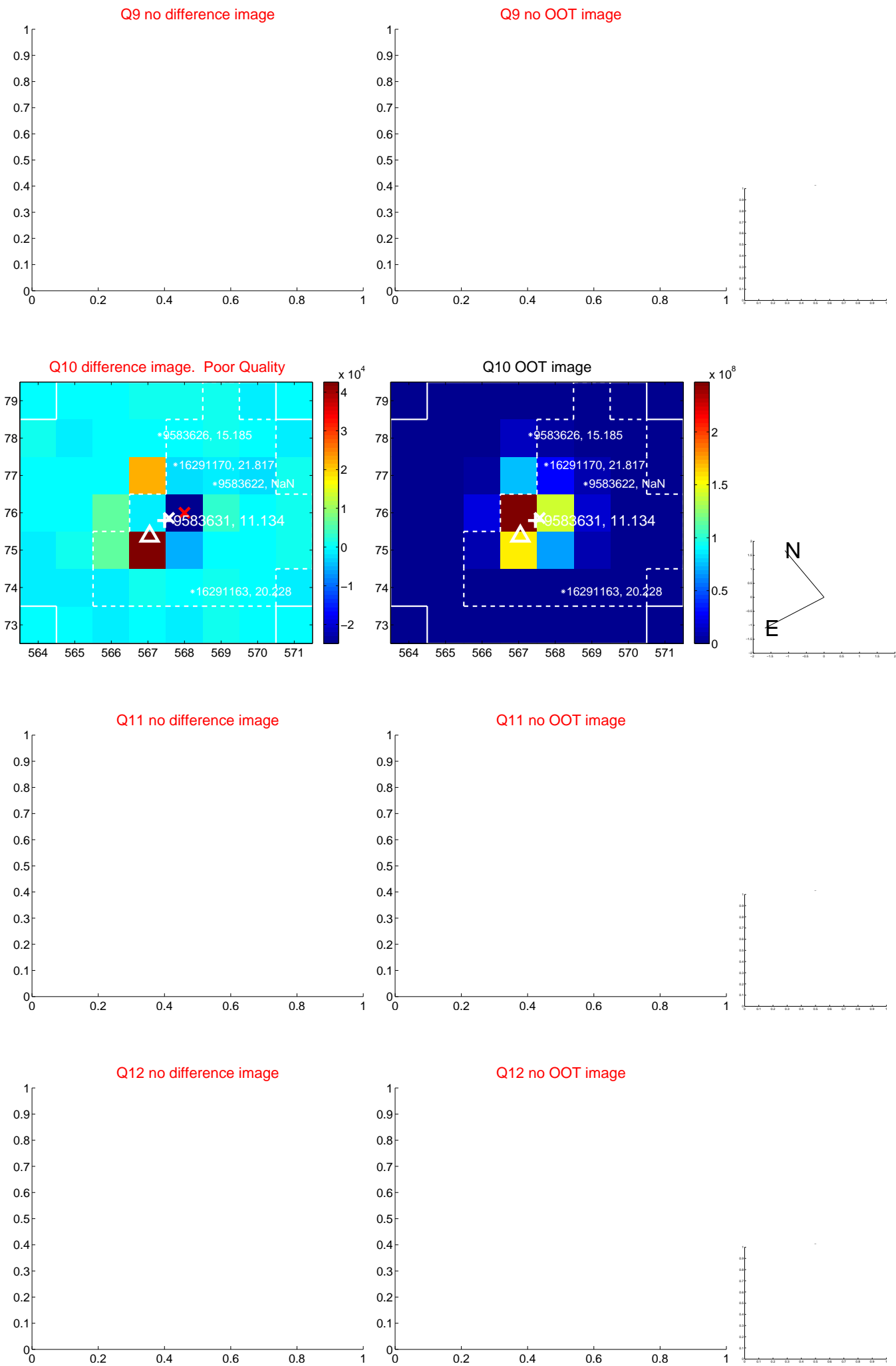
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



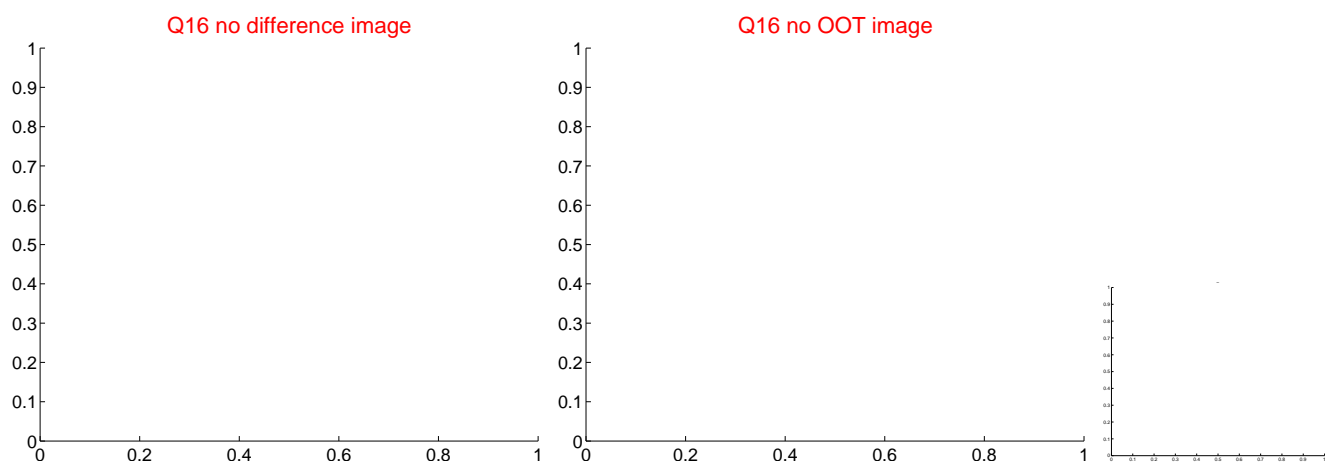
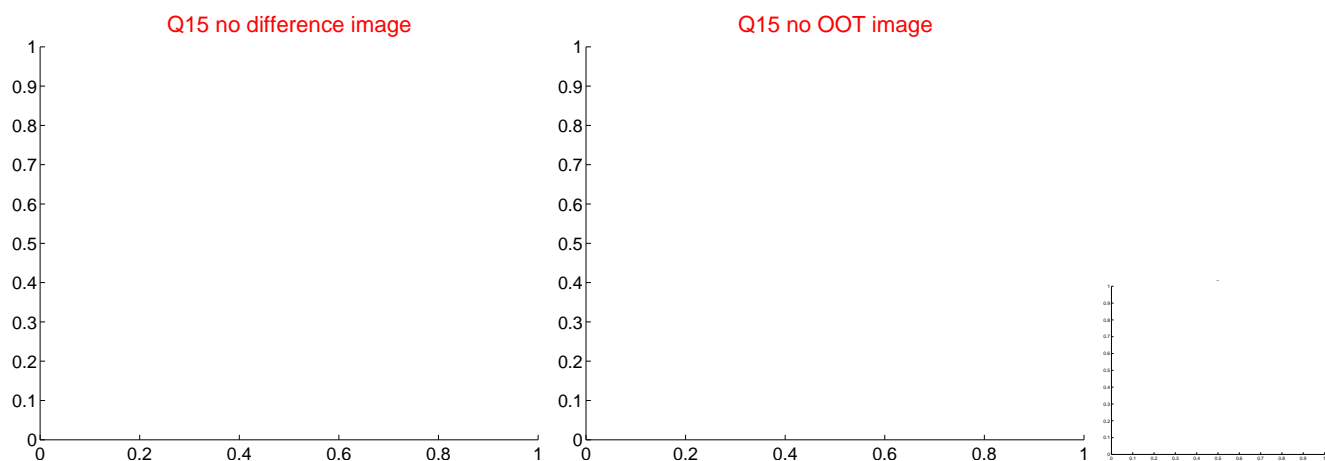
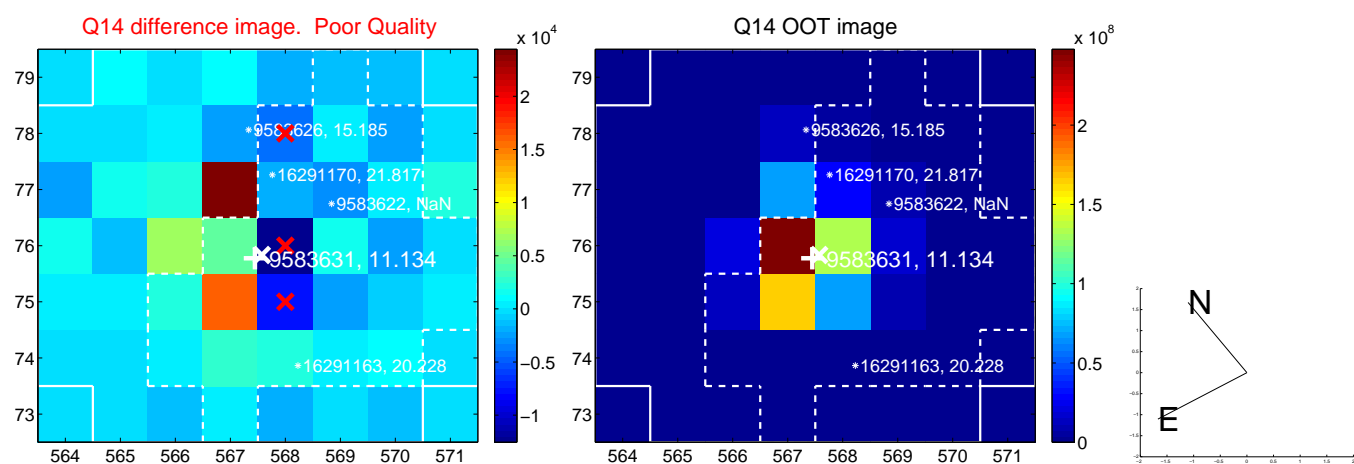
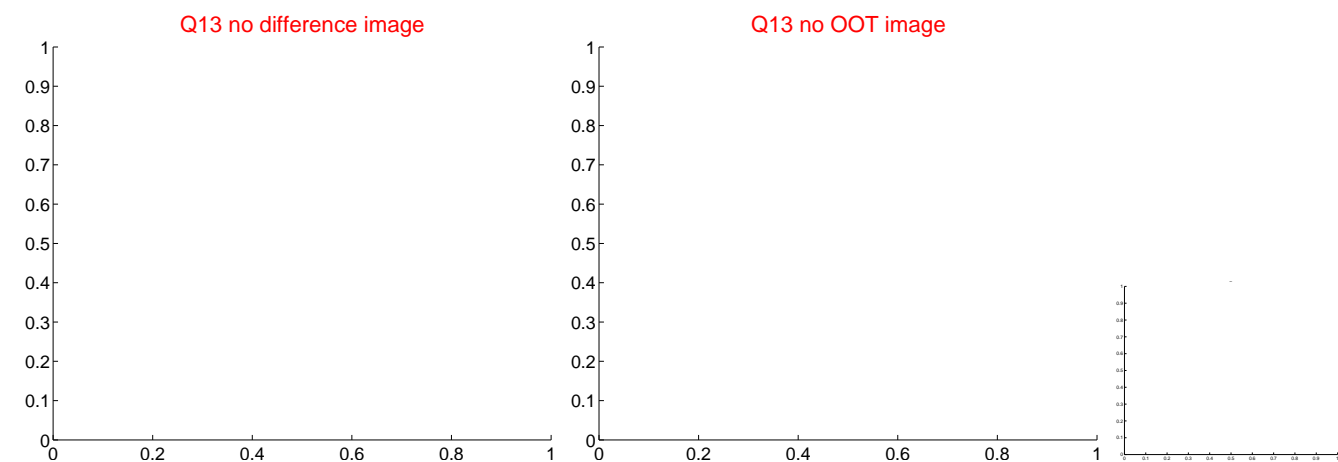
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



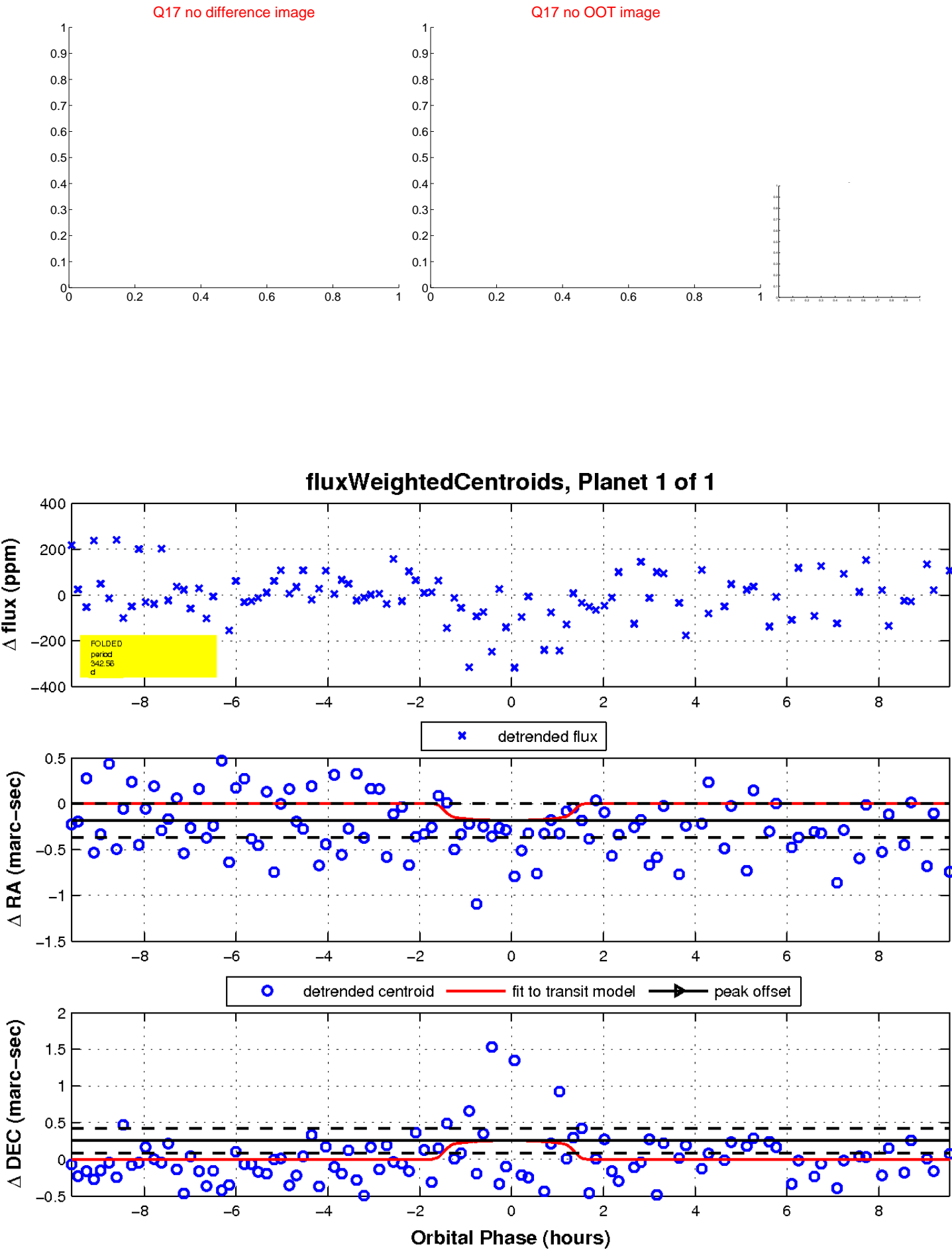
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

