

KIC 011859158

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})
011859158-01	OBS	No	284.728337	154.267546	1091.3	0.666	28.5	23.3	152.97	3287	489.89	3181.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011859158-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—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.

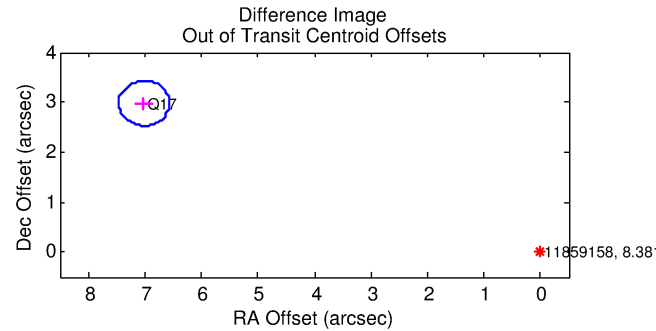
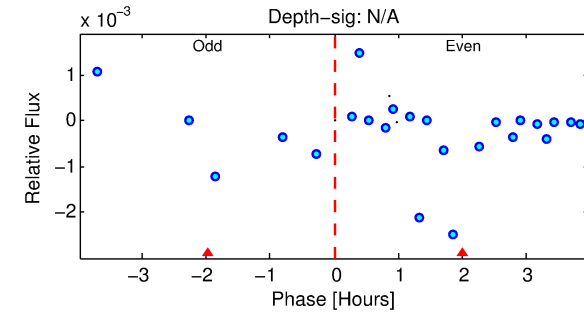
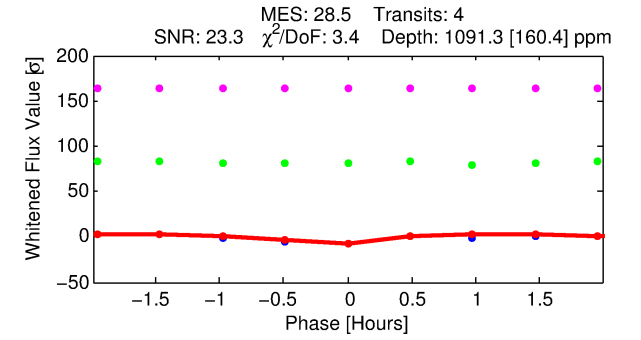
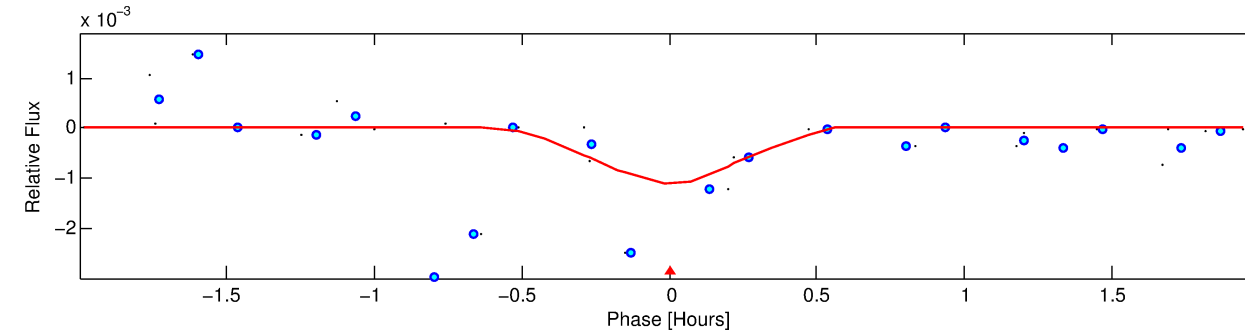
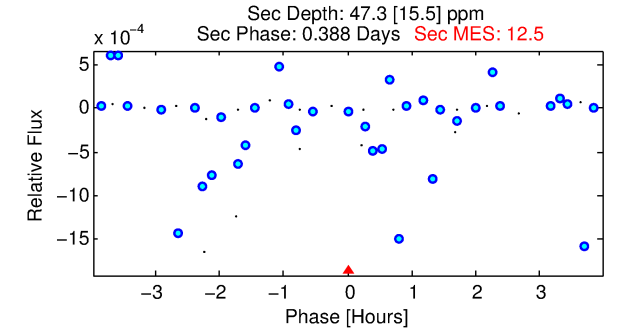
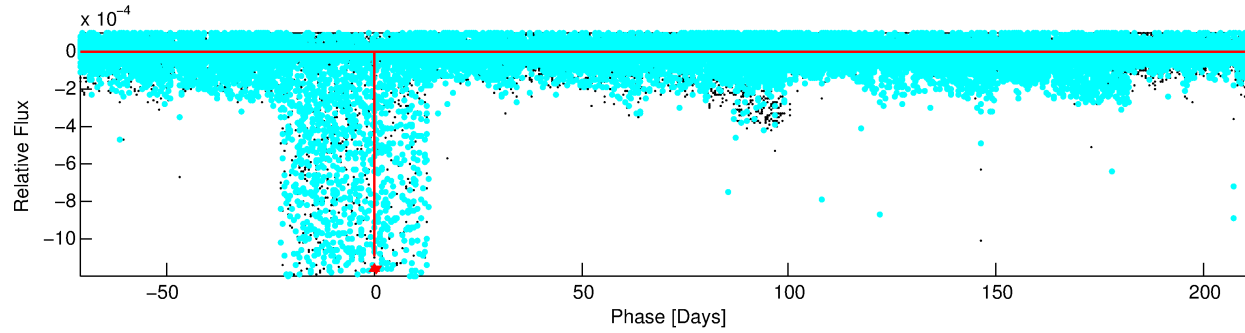
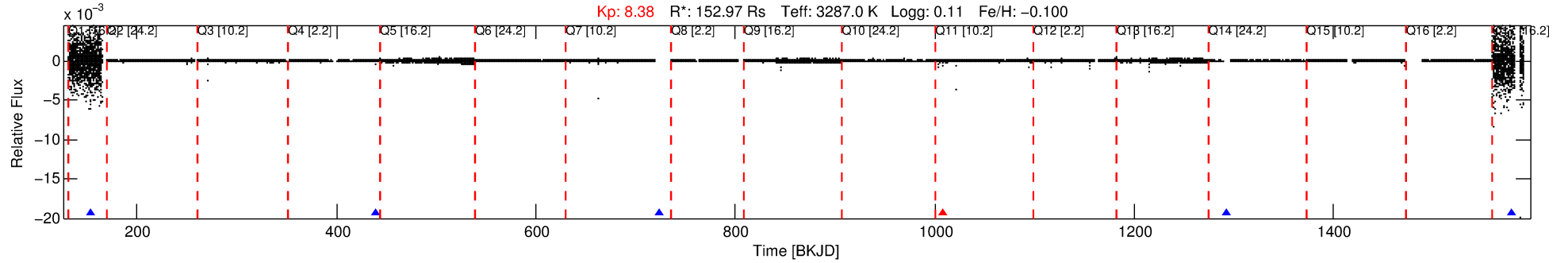
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011859158-01

No Significant Match Found

DV One-Page Summary

KIC: 11859158 Candidate: 1 of 1 Period: 284.728 d



DV Fit Results:

Period = 284.72834 [0.00097] d
Epoch = 154.2675 [0.0044] BKJD
 $R_p/R^* = 0.0293$ [0.2593]
 $a/R^* = 3338.61$ [55693.37]
 $b = 0.12$ [154.62]
 $\text{Seff} = 3181.18$ [1142.44]
 $T_{\text{eq}} = 1915$ [172] K
 $R_p = 489.89$ [4329.02] R_e
 $a = 0.8771$ [0.1710] AU
 $\text{Ag} = 0.08$ [1.47] [-0.62σ]
 $T_{\text{effp}} = 1591$ [7030] K [-0.05σ]

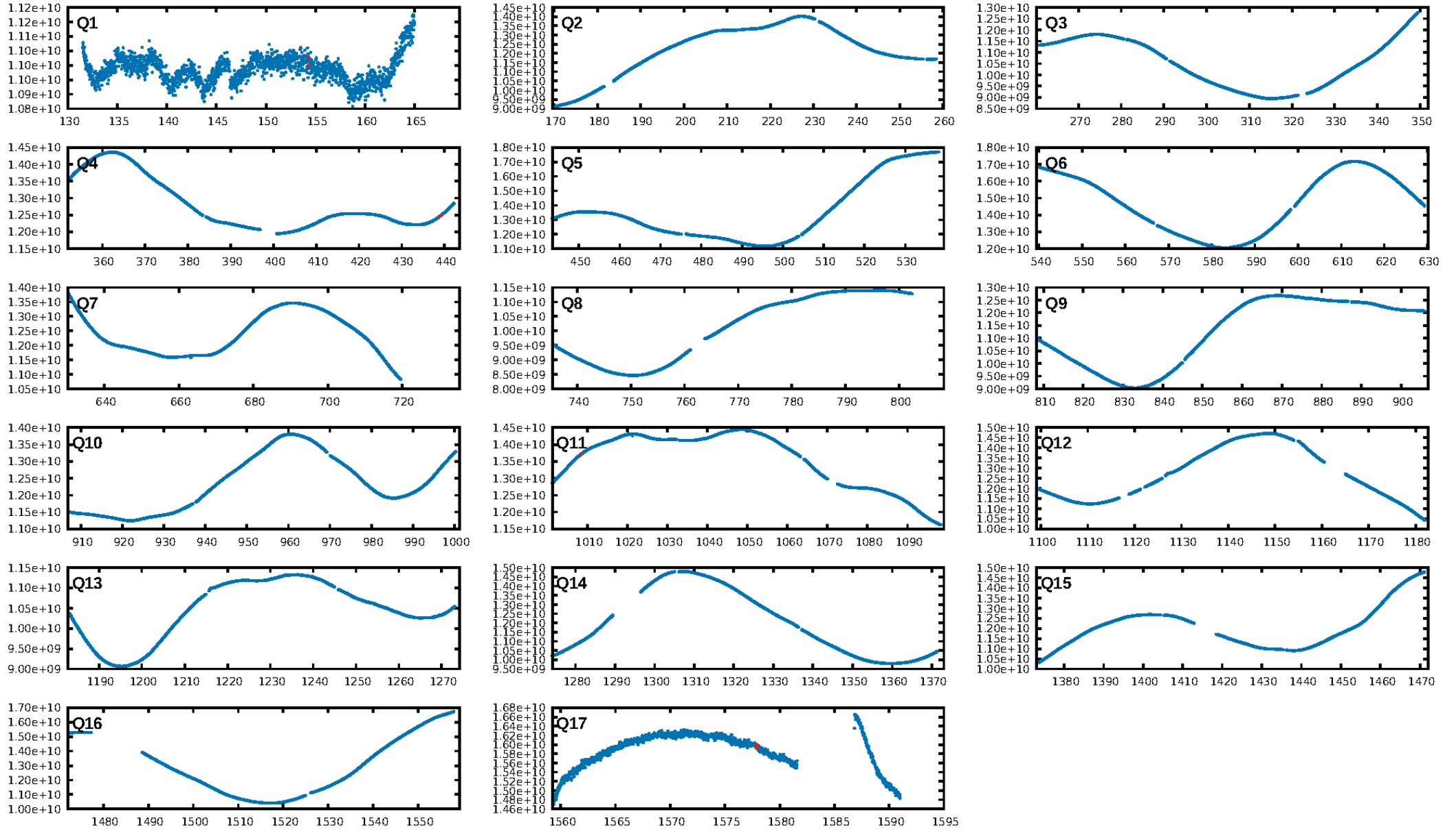
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 87.3%
ModelChiSquareGof-sig: 87.6%
Bootstrap-pfa: 4.12e-05
RollingBand-fgt: 0.50 [1/2]
GhostDiagnostic-chr: N/A
Centroid-sig: 84.3%
Centroid-so: 1.291 arcsec [0.80σ]
OotOffset-rm: 7.618 arcsec [50.83σ]
KicOffset-rm: 7.234 arcsec [46.62σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [1/1]

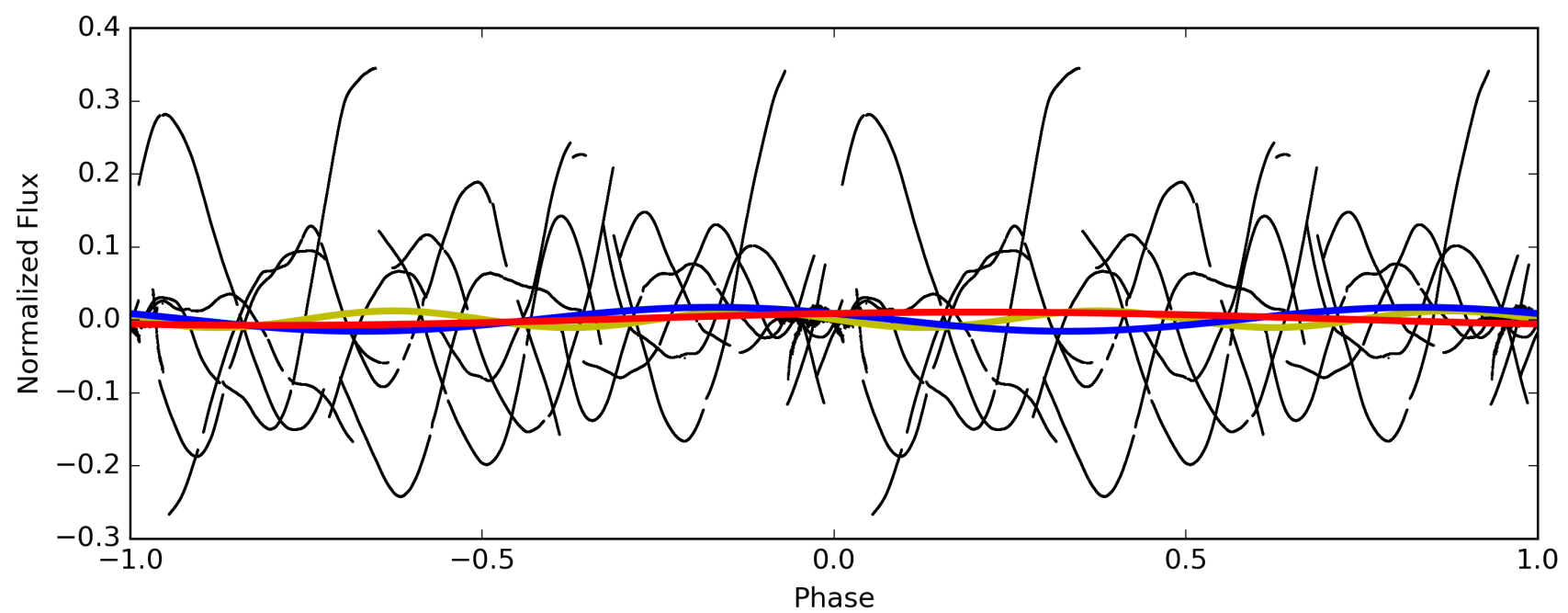
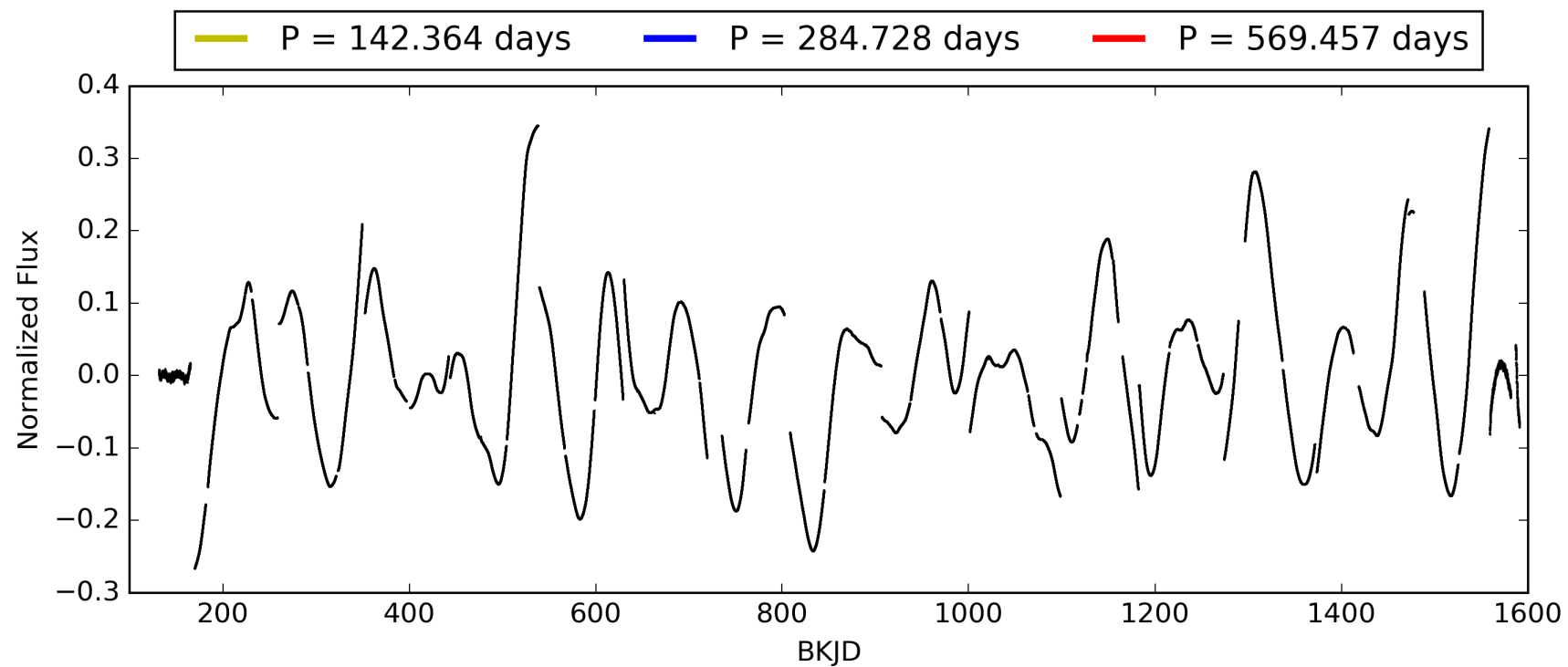
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 22:40:51 Z

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

TCE 011859158-01, PDC Light Curves

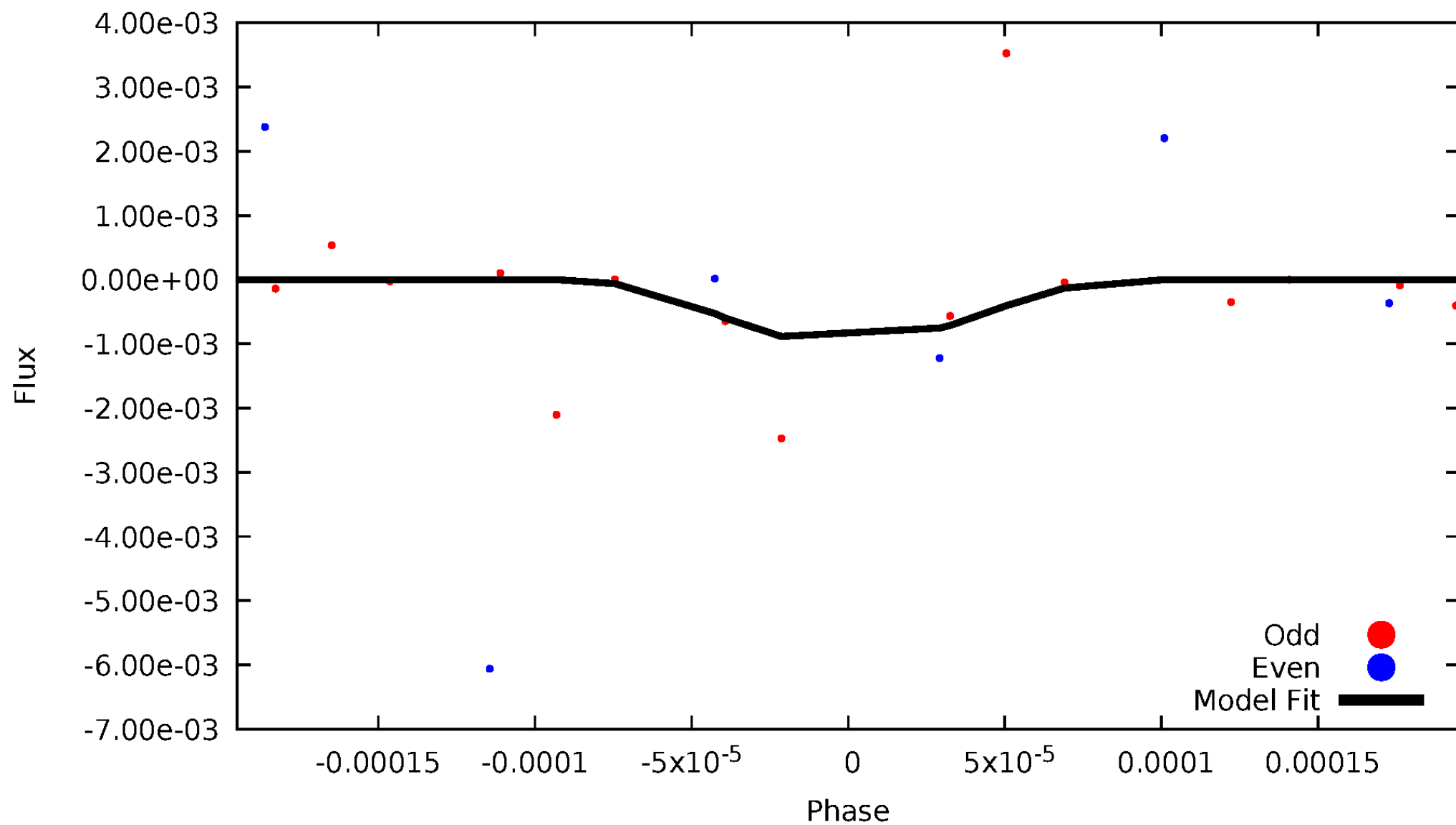


TCE 011859158-01



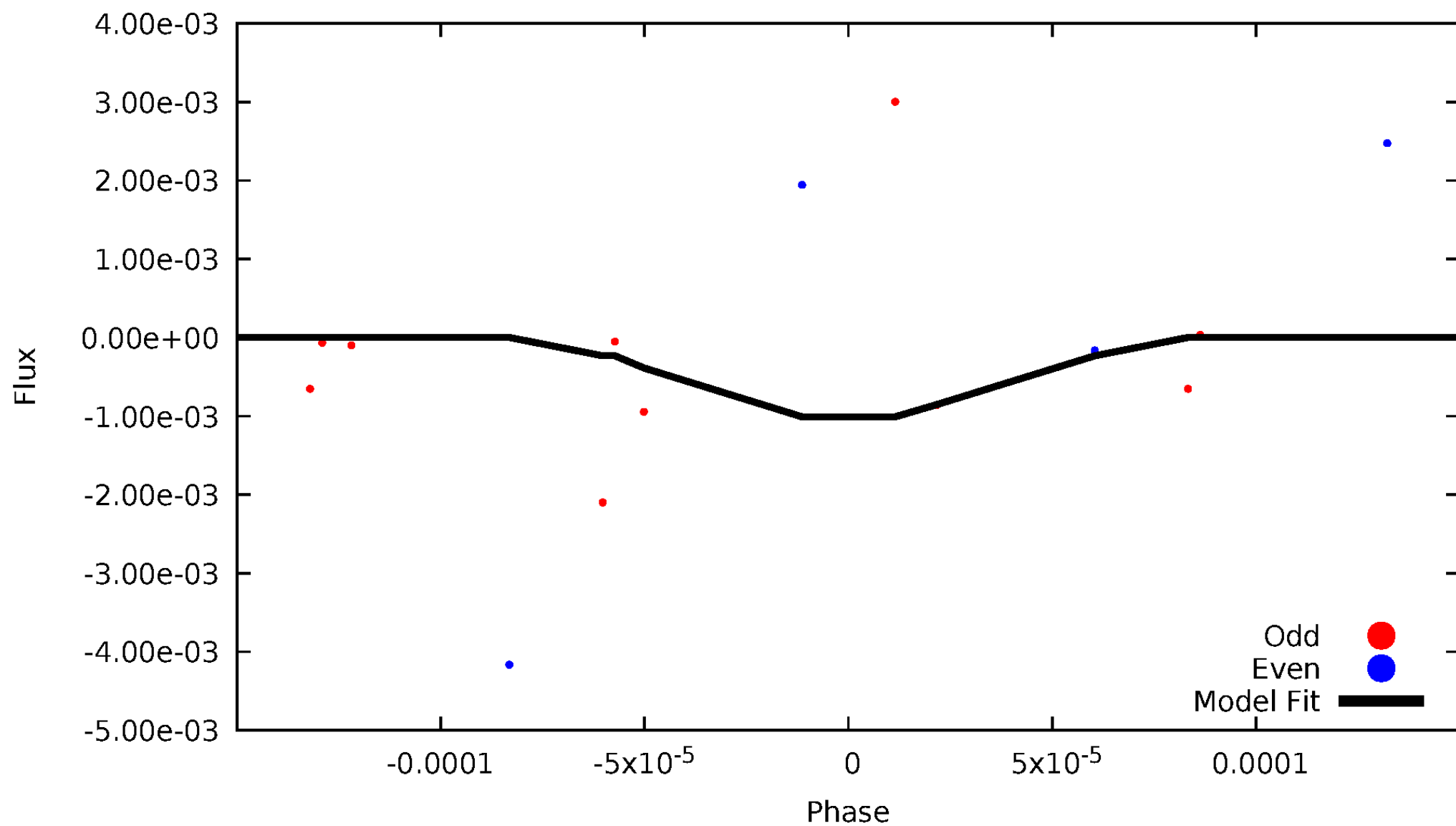
DV Odd/Even

TCE 011859158-01

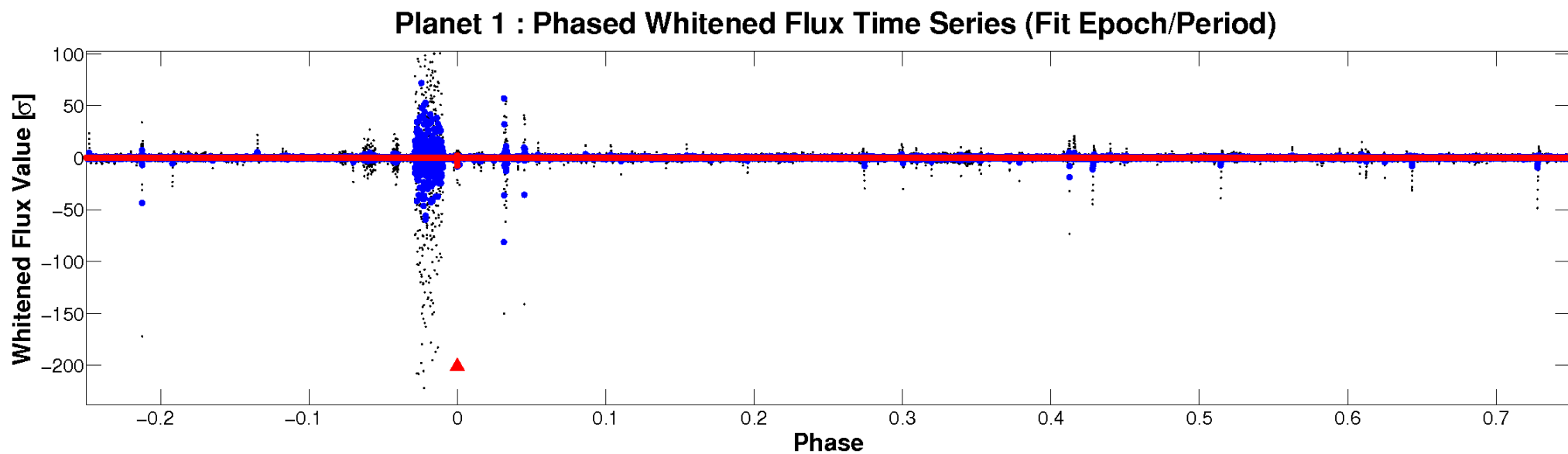
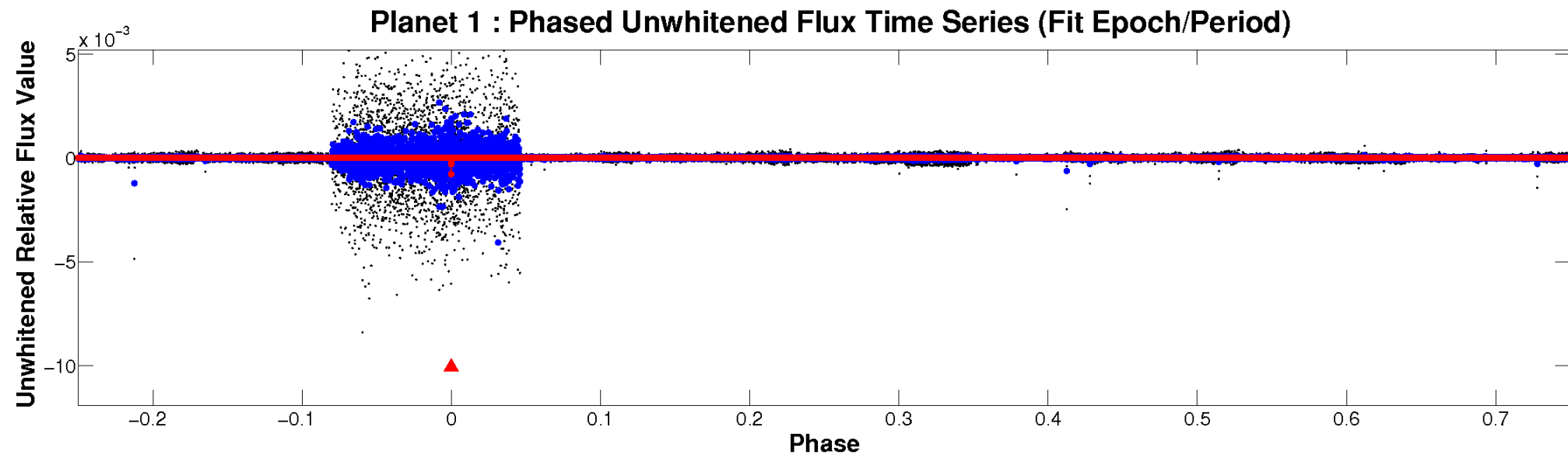


ALT Odd/Even

TCE 011859158-01

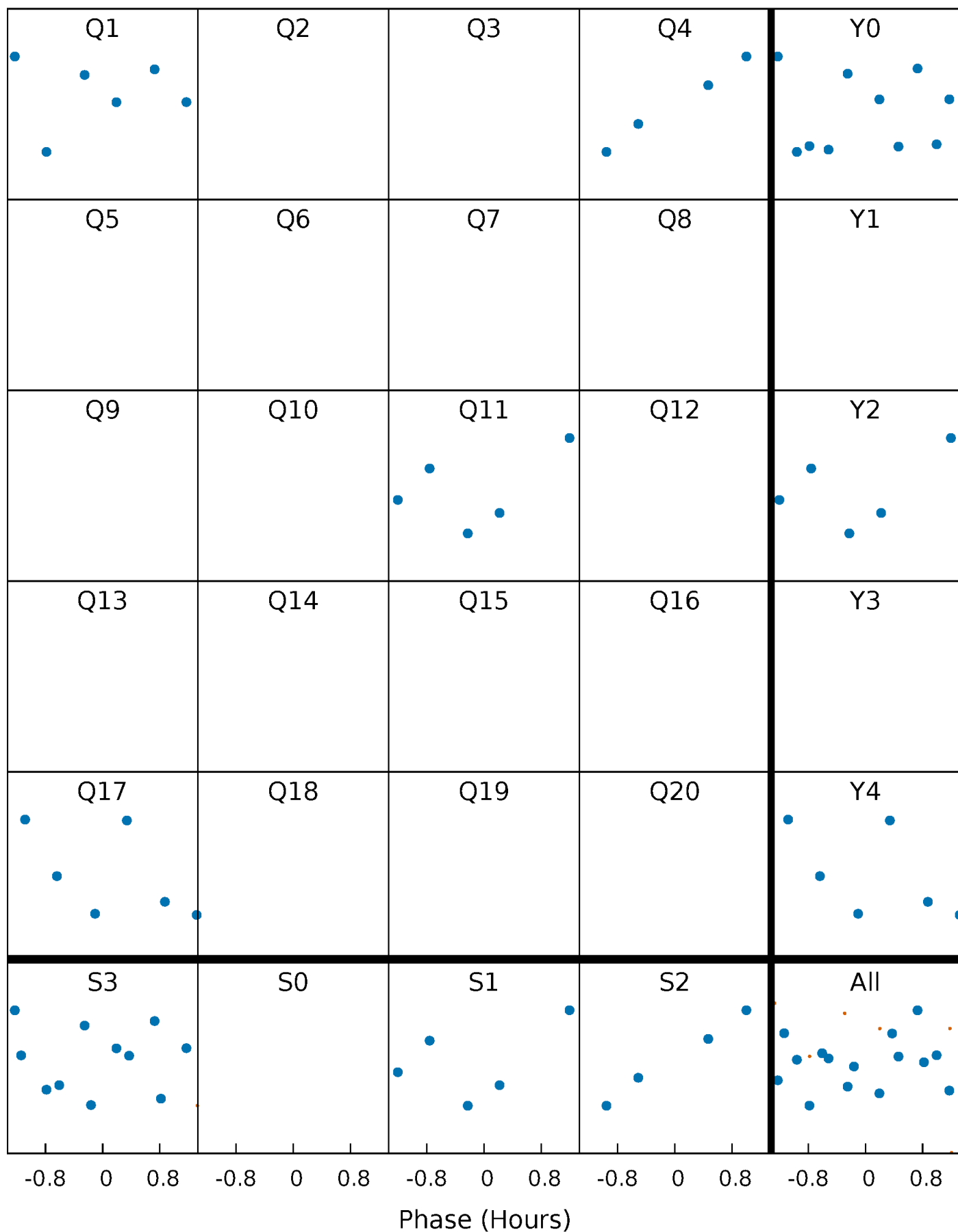


Non-Whitened Vs. Whitened Light Curve



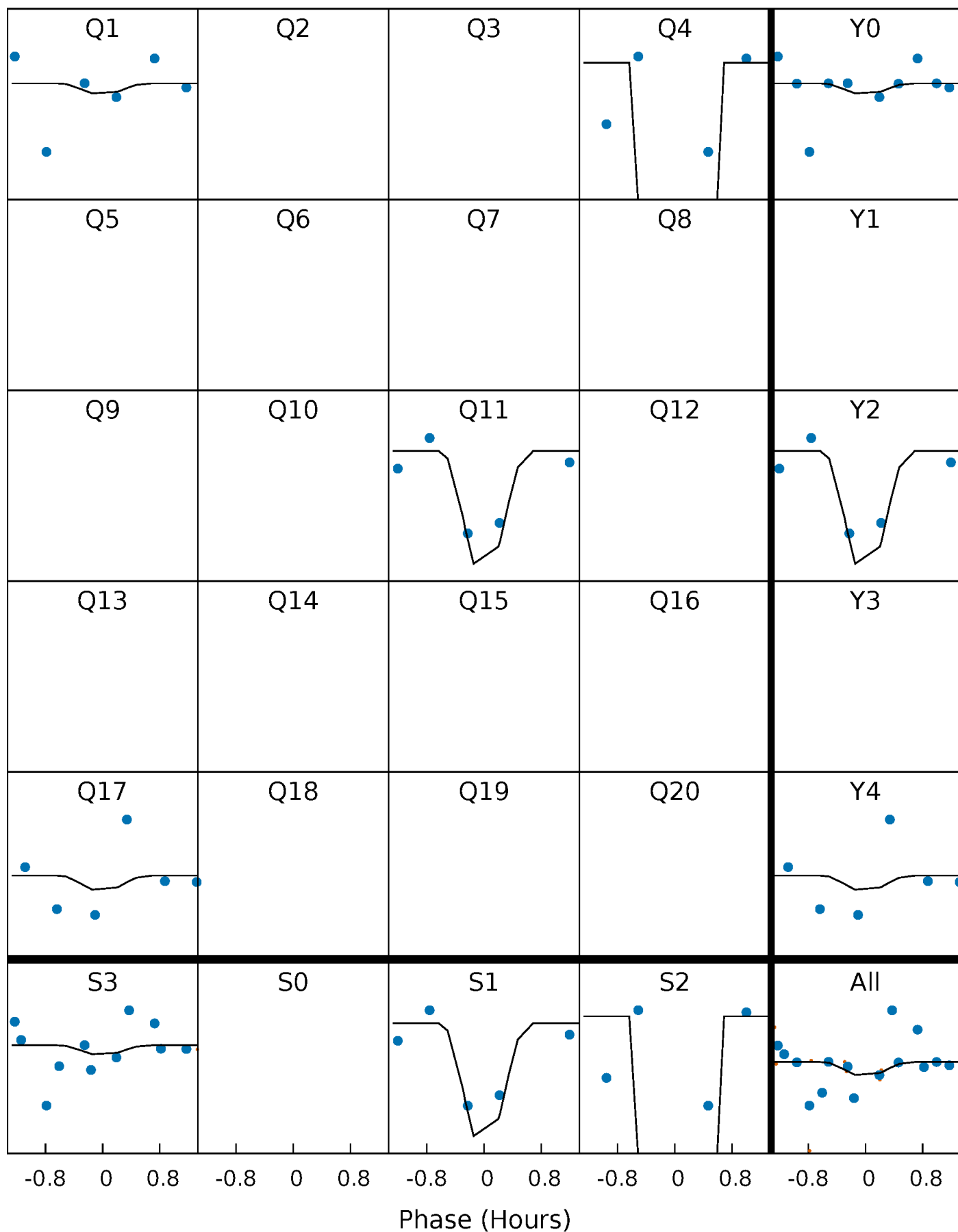
PDC Quarter-Phased Transit Curves

TCE 011859158-01 P=284.728337 Days $T_0=154.267546$ (BKJD)



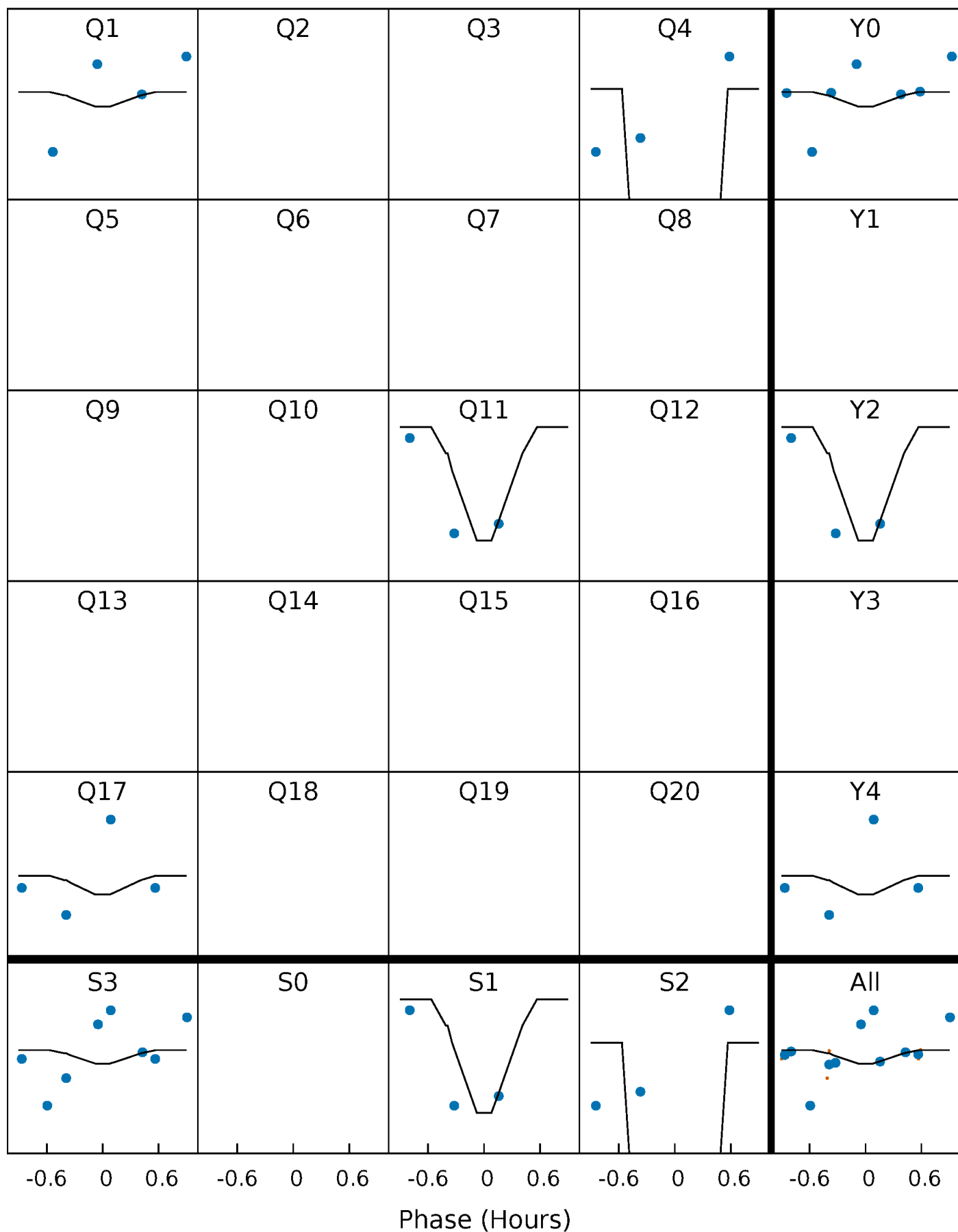
DV Quarter-Phased Transit Curves

TCE 011859158-01 P=284.728337 Days $T_0=154.267546$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

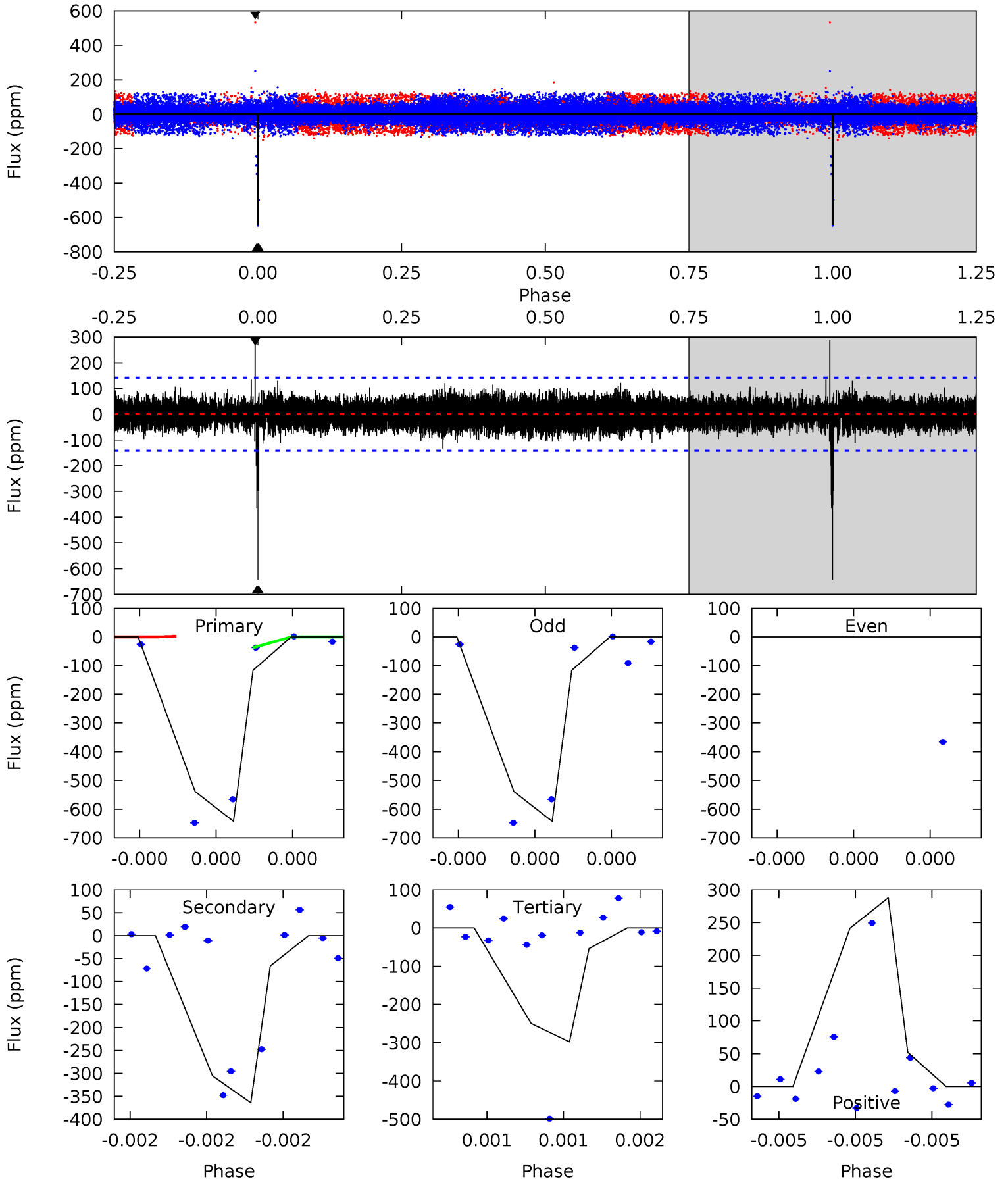
TCE 011859158-01 P=284.732334 Days $T_0=154.258631$ (BKJD)



DV Model-Shift Uniqueness Test

011859158-01, P = 284.728337 Days, E = 154.267546 Days

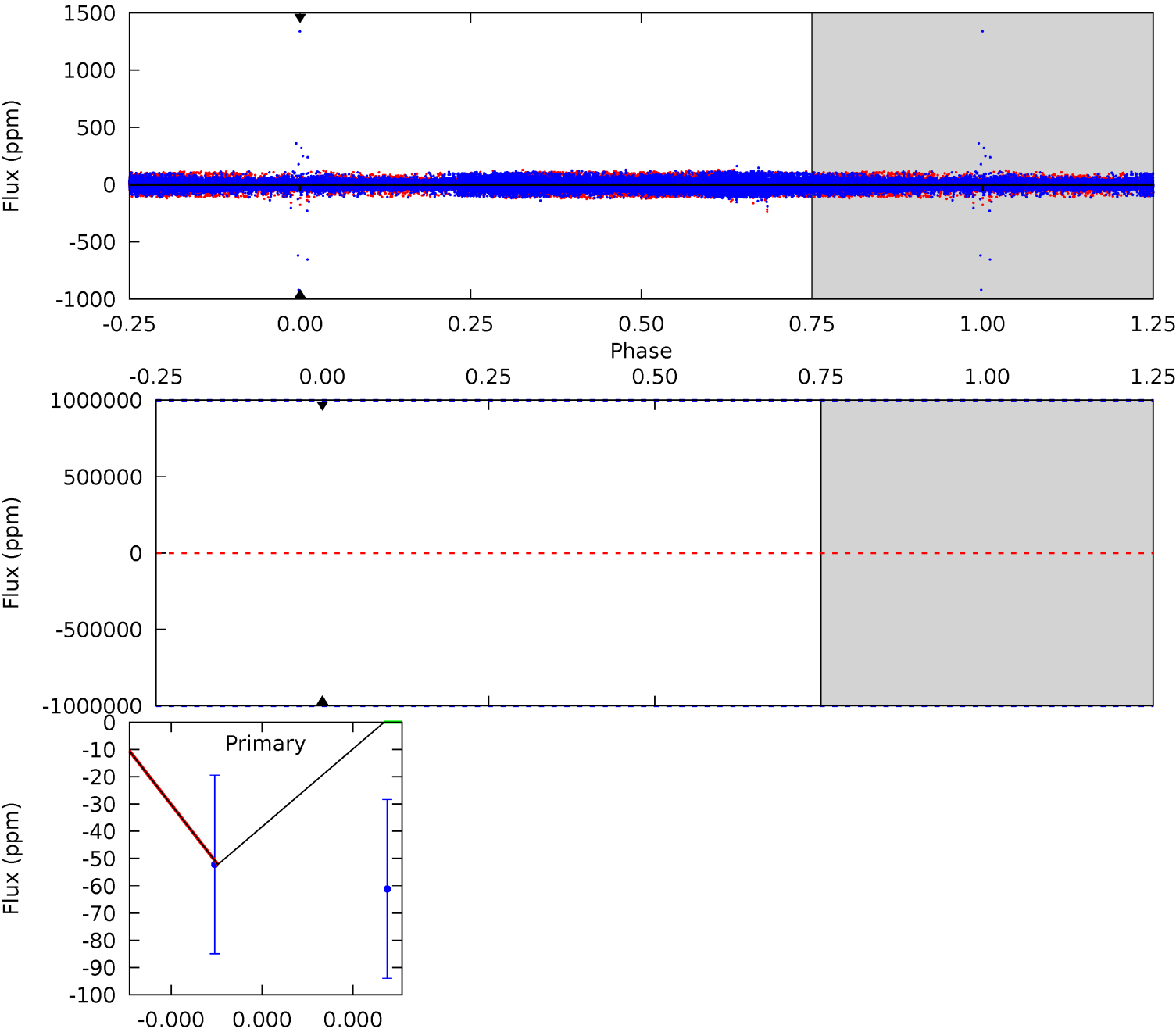
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.3	14.9	12.2	11.8	5.79	3.80	1.08	14.1	14.5	2.71	3.12	0	0.88	0.31	0



Alt Model-Shift Uniqueness Test

011859158-01, P = 284.732334 Days, E = 154.258631 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0.54	0	0



Stellar Parameters For KIC 011859158

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	3287^{+117}_{-78}	$0.114^{+0.200}_{-0.050}$	$-0.100^{+0.250}_{-0.150}$	$152.969^{+9.192}_{-27.576}$	$1.110^{+0.207}_{-0.128}$	$0.000^{+0.000}_{-0.000}$
	+4%/-2%	+175%/-44%	+250%/-150%	+6%/-18%	+19%/-12%	+91%/-14%
Source	KIC0	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 011859158-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-364 ± 24	$3031.66^{+3112.91}_{-2029.46}$	2637^{+124}_{-136}	-2561^{+227}_{-97}	$0.017^{+0.141}_{-0.013}$
Alt.	-0 ± 1000000	$3128.65^{+3192.05}_{-2173.04}$	2639^{+126}_{-142}	-2514^{+6964}_{-1674}	$0.105^{+9.797}_{-6.599}$

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

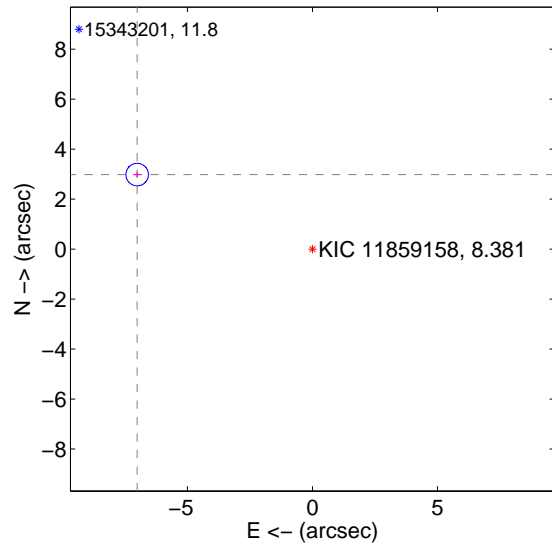
Supplemental centroid analysis for 011859158-01. **Kepler magnitude: 8.38.** Transit SNR 23.29

There are 0 quarters with good PRF difference image offsets

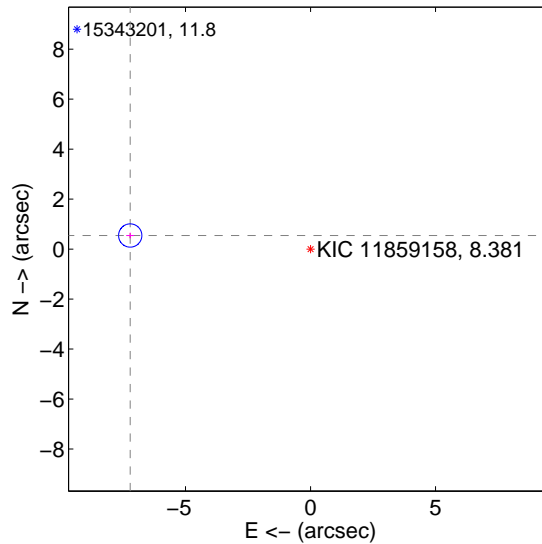
The OOT PRF centroid is offset from the target star catalog position by about 2.45 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.618 \pm 0.150	50.83	7.011 \pm 0.155	2.981 \pm 0.115
PRF-fit source offset from KIC position	7.234 \pm 0.155	46.62	7.213 \pm 0.155	0.544 \pm 0.115
photometric centroid source offset	1.29 \pm 1.61	0.80	0.74 \pm 1.20	-1.06 \pm 1.78

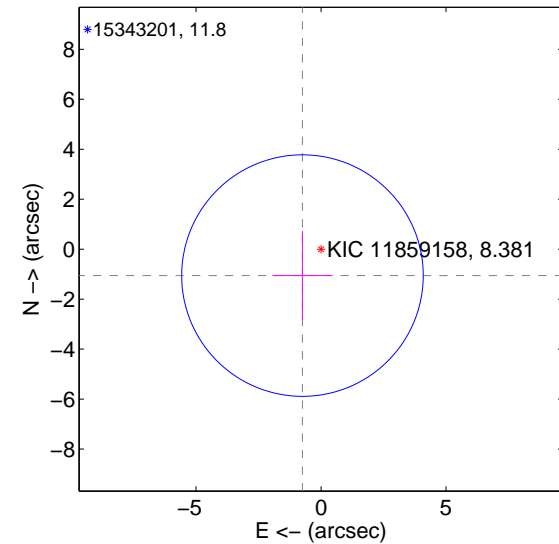
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids



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.



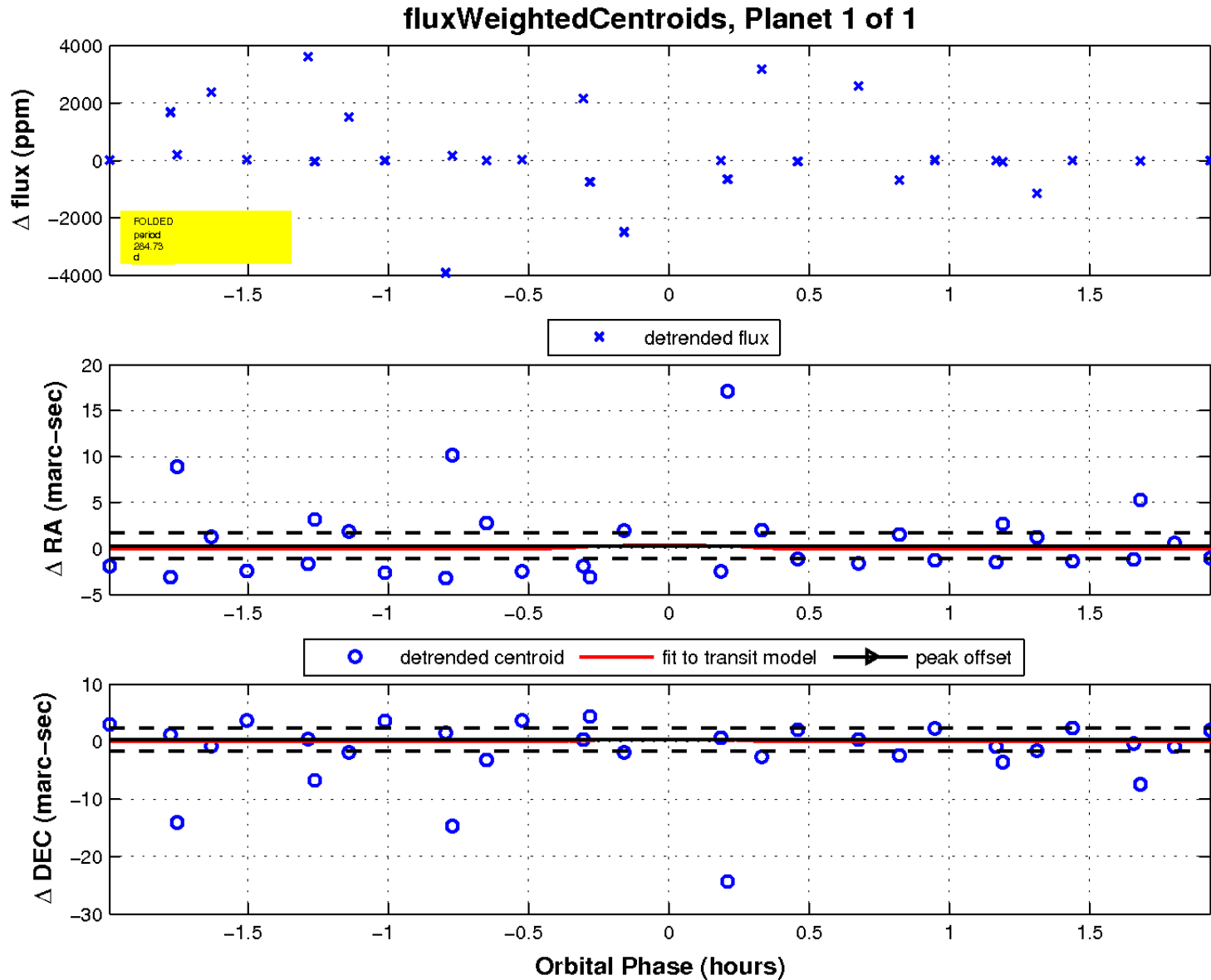
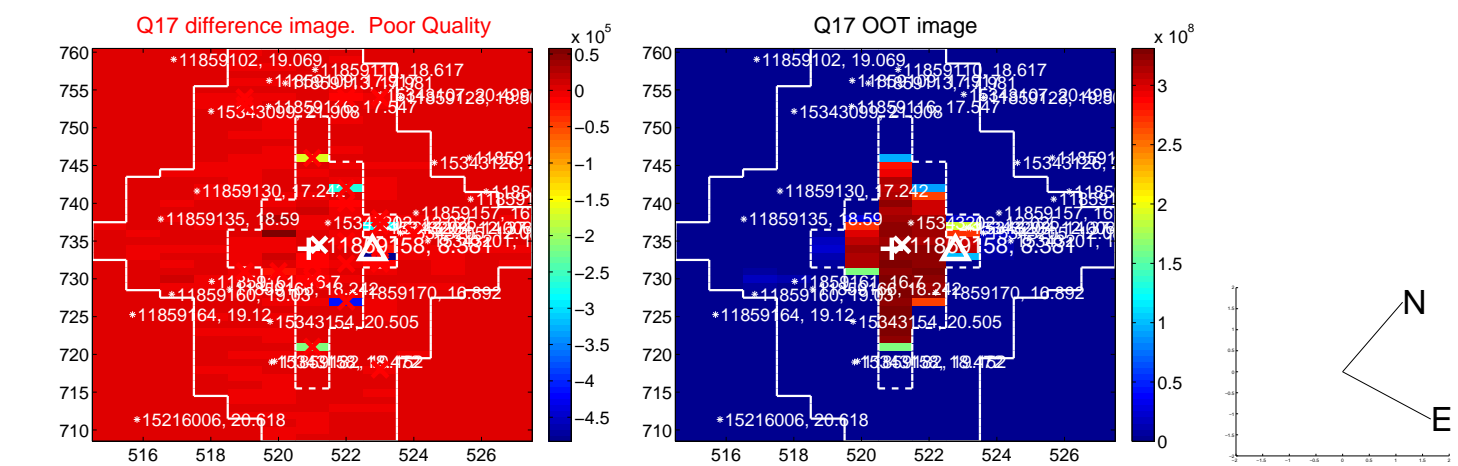
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

