

KIC 005866138

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})
005866138-01	OBS	No	342.254336	436.135106	3961.7	54.873	18.9	65.7	9.47	4999	59.30	30.03

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005866138-01	OBS	FP	0.00	1	0	0	0	ALL_TRANS_CHASES—CENT_SATURATED

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

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

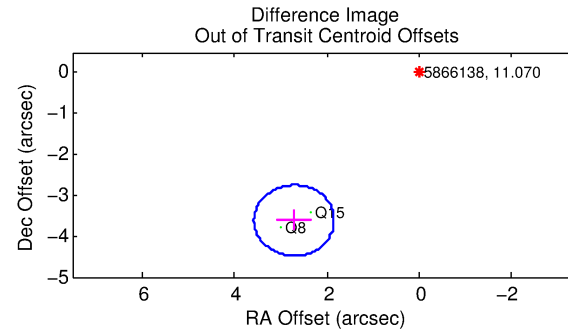
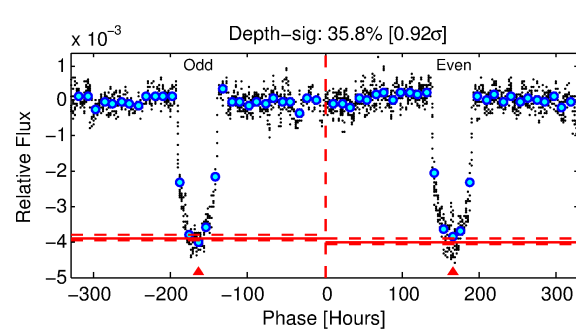
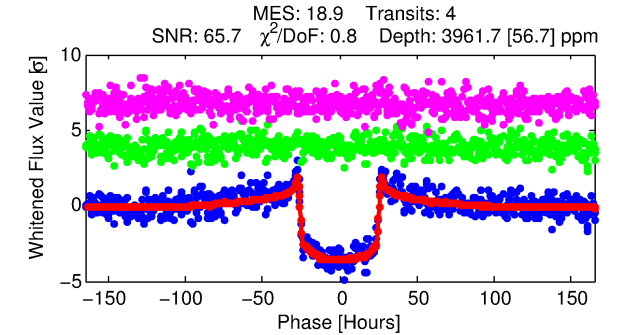
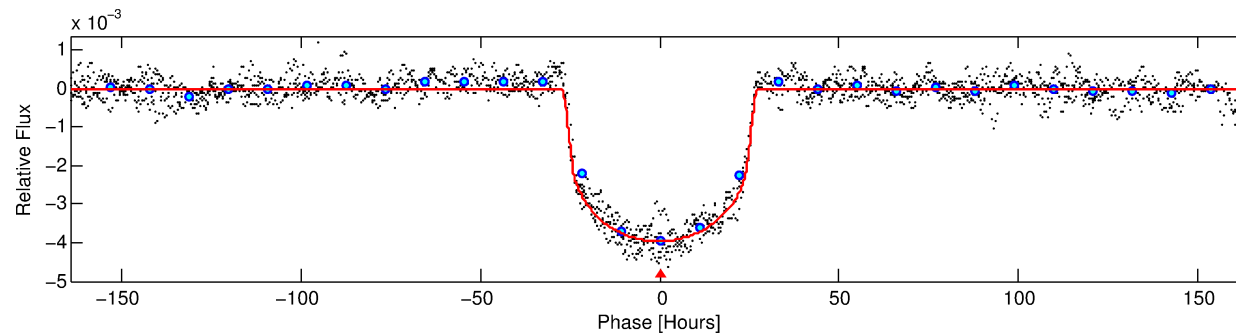
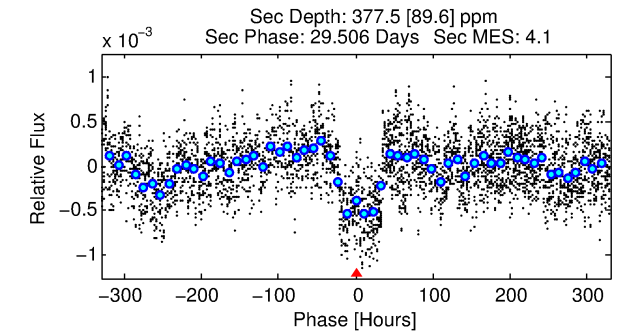
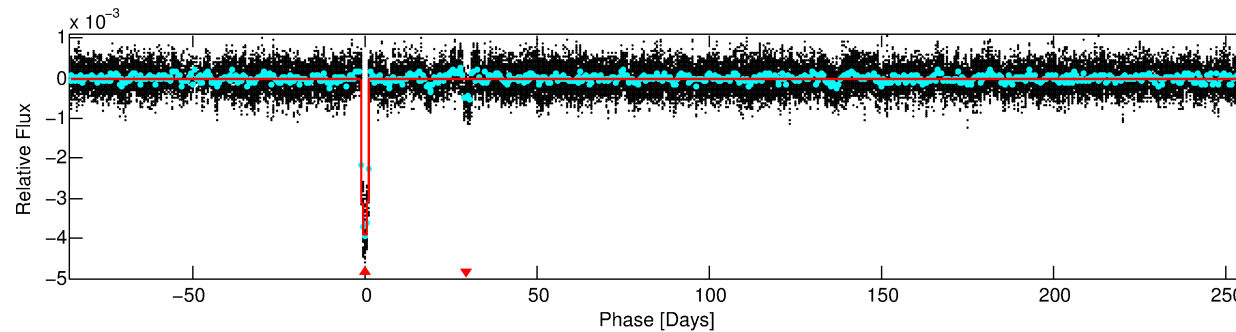
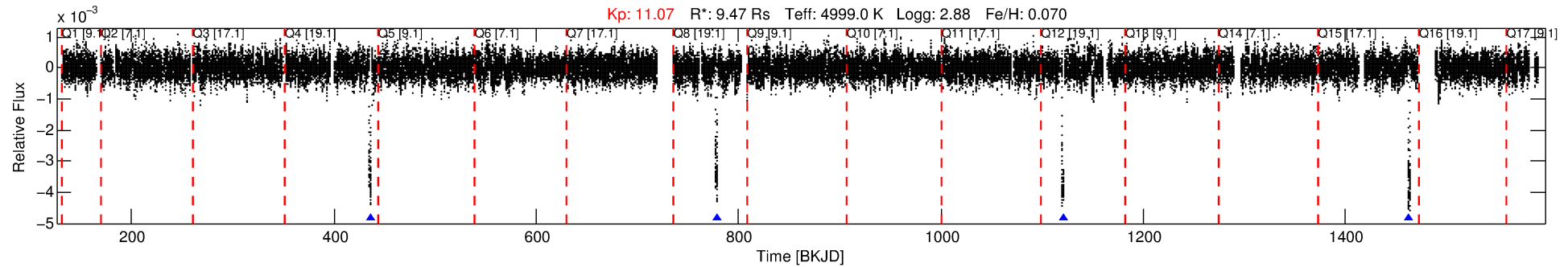
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005866138-01

No Significant Match Found

DV One-Page Summary

KIC: 5866138 Candidate: 1 of 1 Period: 342.254 d



DV Fit Results:

Period = 342.25434 [0.00324] d
Epoch = 436.1351 [0.0059] BKJD
Rp/R* = 0.0574 [0.0007]
a/R* = 46.30 [1.72]
b = 0.42 [0.07]
Seff = 30.03 [5.22]
Teq = 597 [26] K
Rp = 59.30 [12.17] Re
a = 1.2928 [0.1807] AU
Ag = 98.70 [27.78] [3.52σ]
Teff = 2909 [185] K [12.35σ]

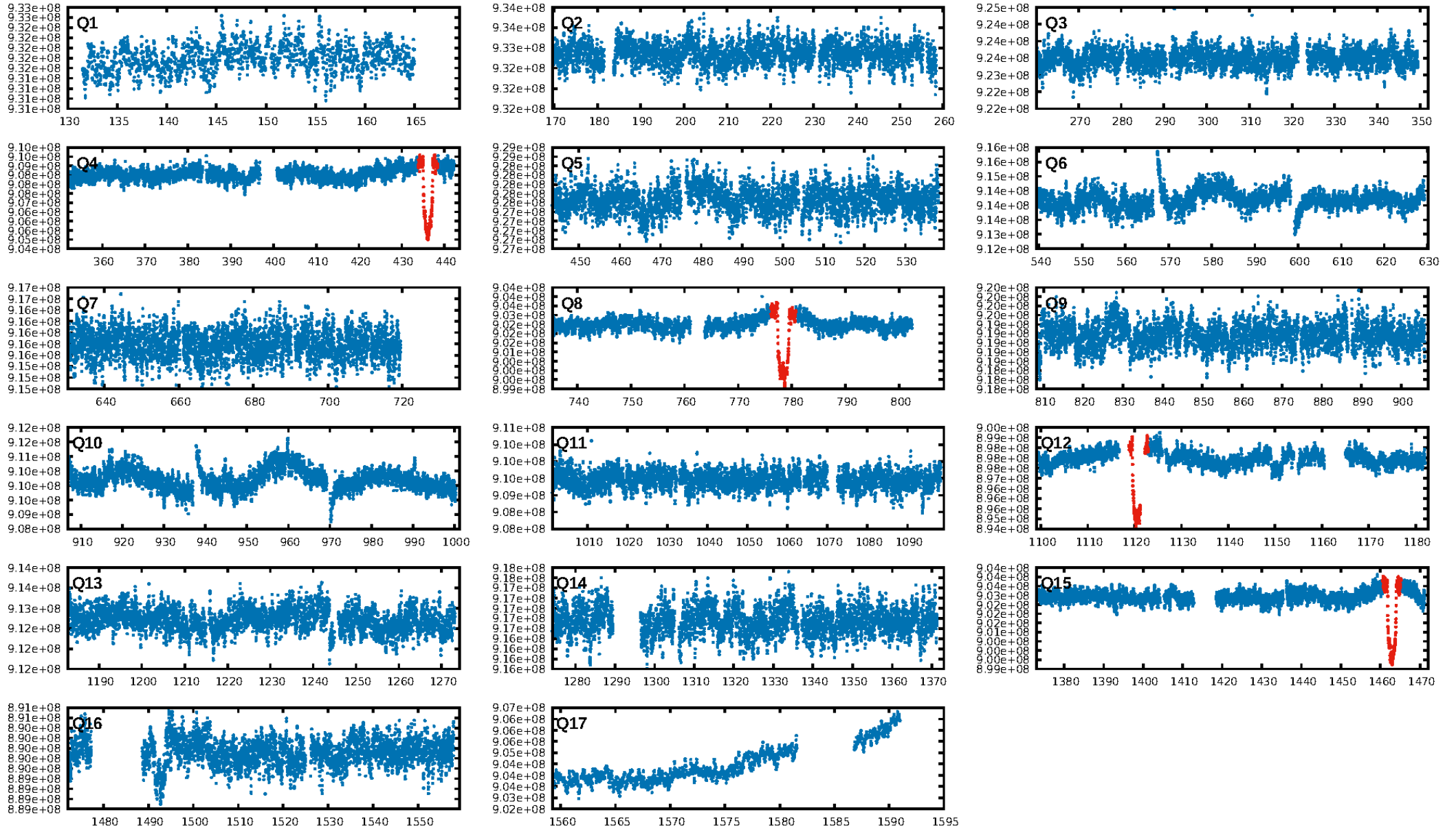
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 15.6%
ModelChiSquareGoF-sig: 100.0%
Bootstrap-pfa: 2.62e-36
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 1.844
Centroid-sig: 0.0%
Centroid-so: 0.076 arcsec [2.35σ]
OotOffset-rm: 4.519 arcsec [15.59σ]
KicOffset-rm: 4.459 arcsec [10.60σ]
OotOffset-st: 0/1/1/0 [2]
KicOffset-st: 0/1/1/0 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [2/2]

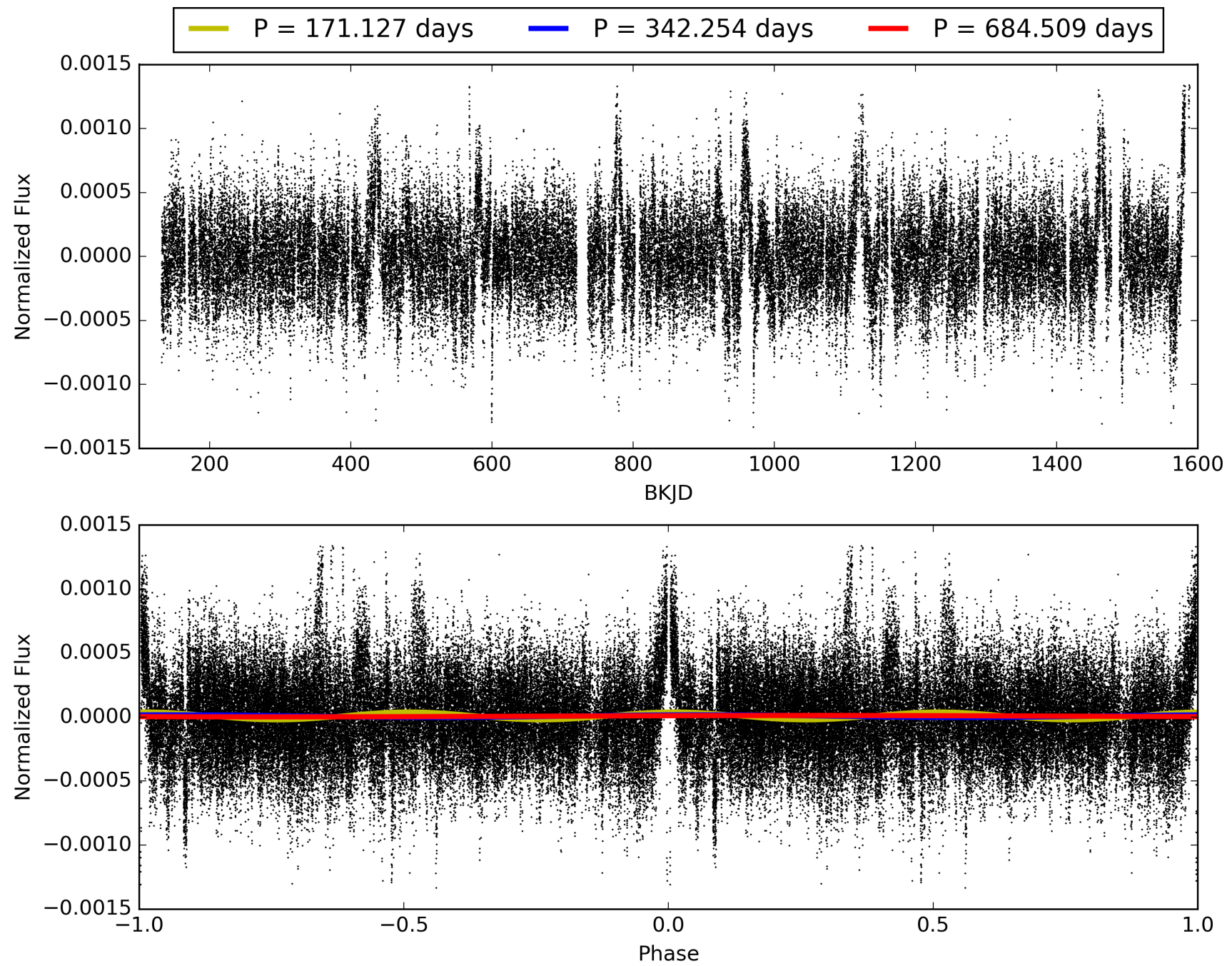
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 18:09:37 Z

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

TCE 005866138-01, PDC Light Curves

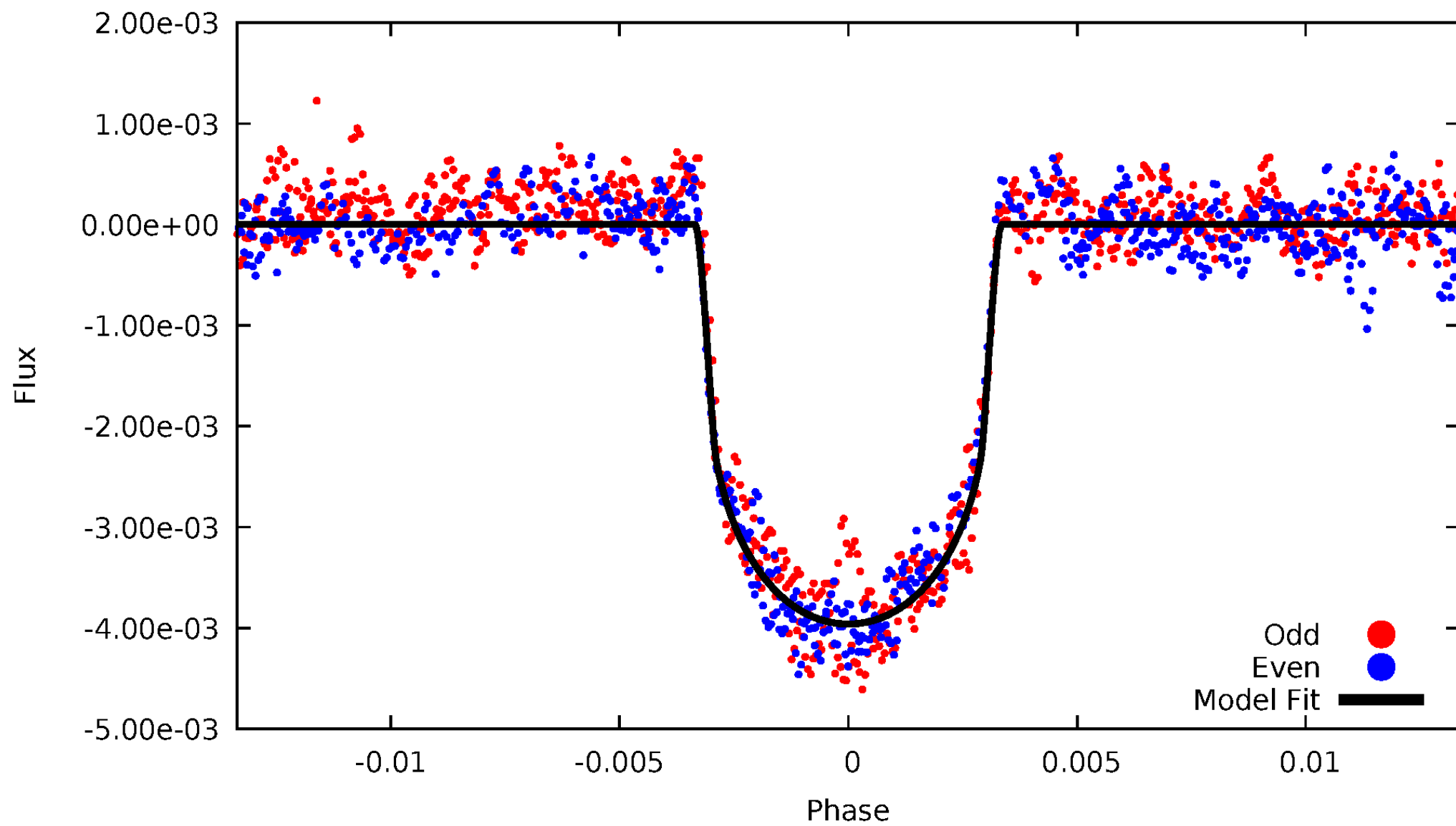


TCE 005866138-01



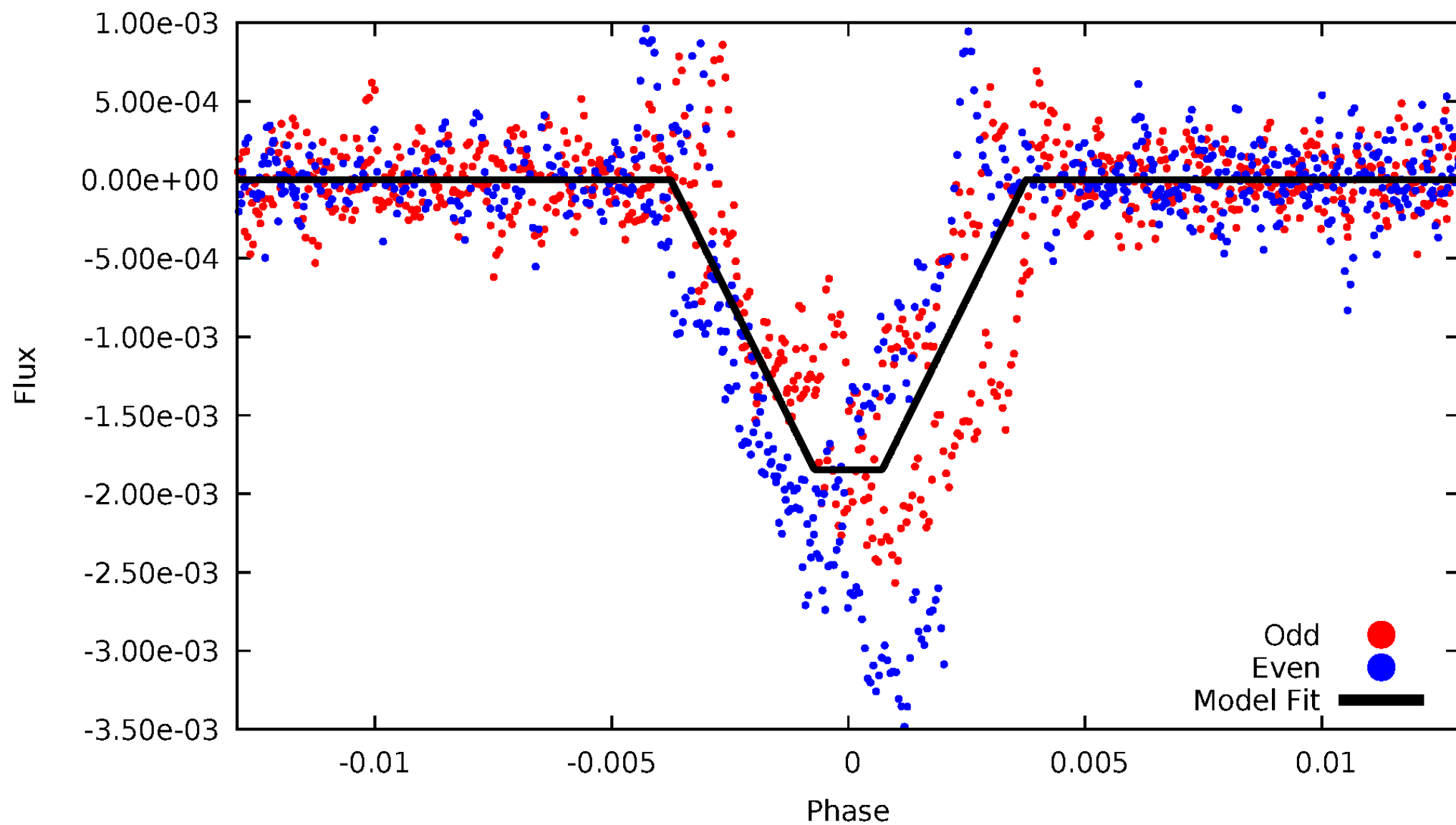
DV Odd/Even

TCE 005866138-01



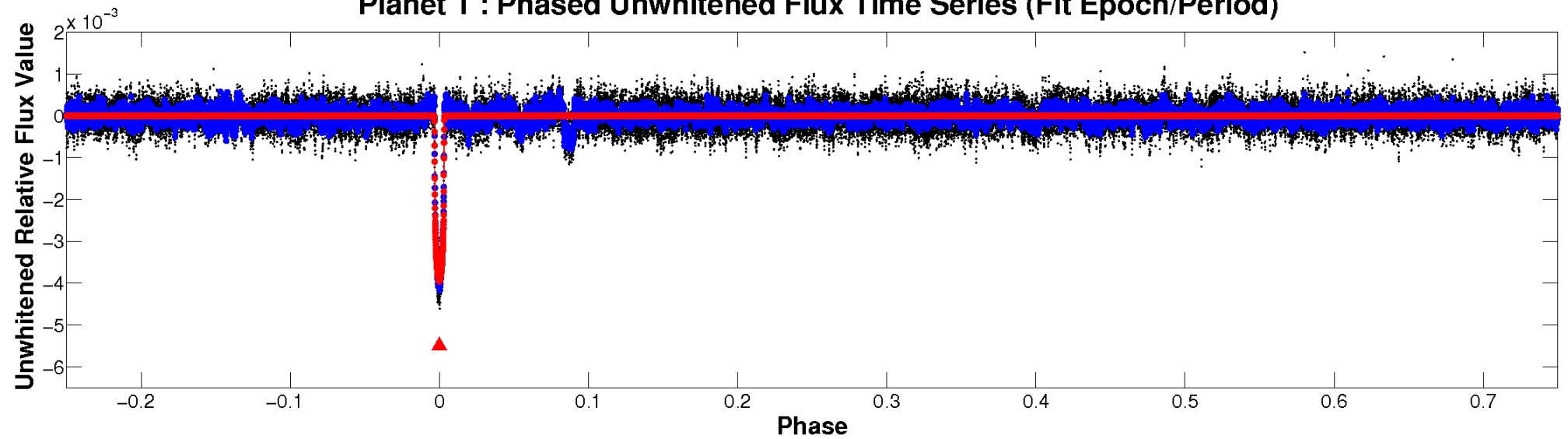
ALT Odd/Even

TCE 005866138-01

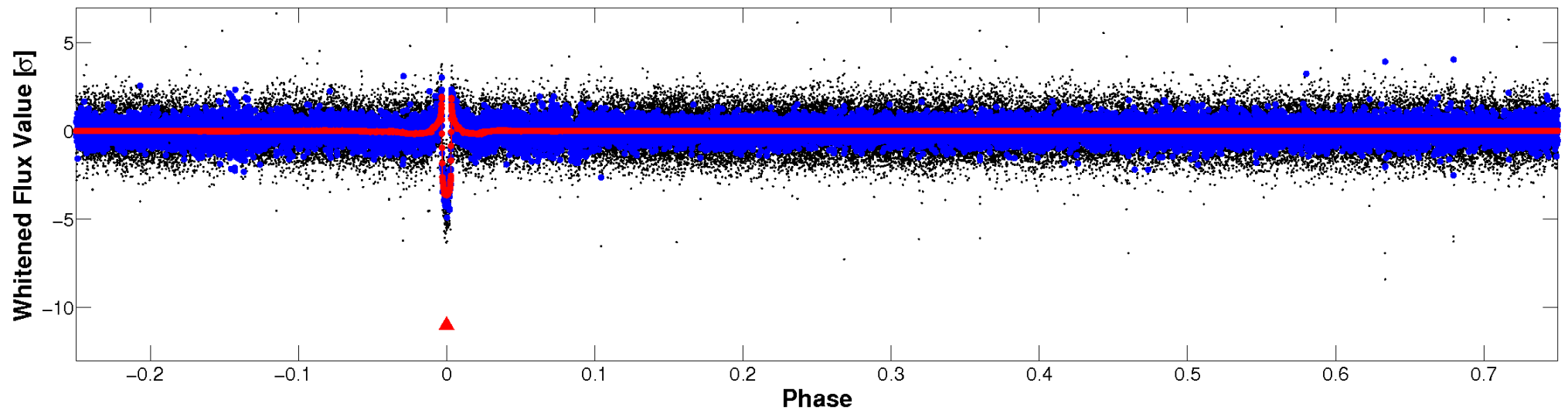


Non-Whitened Vs. Whitened Light Curve

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

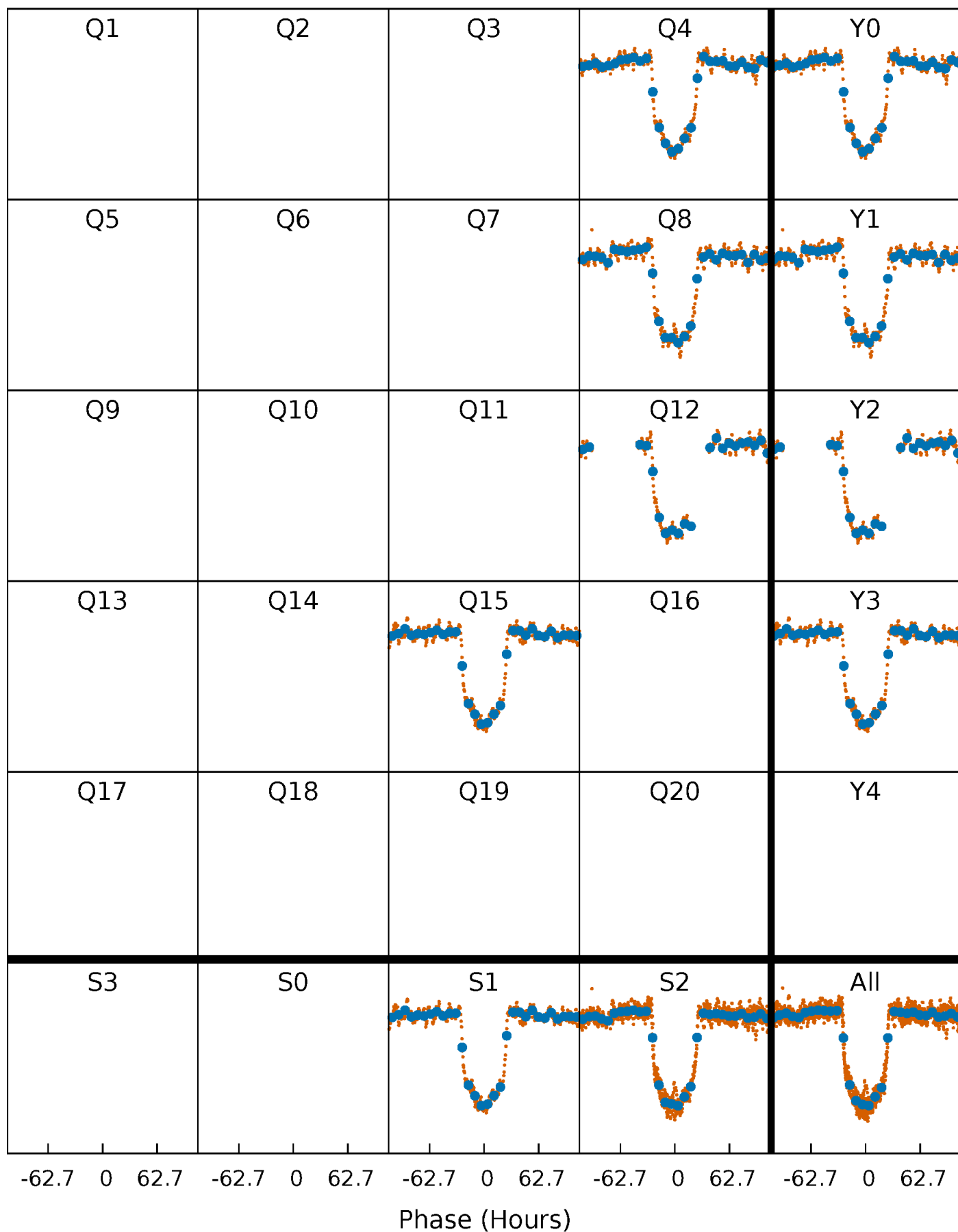


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



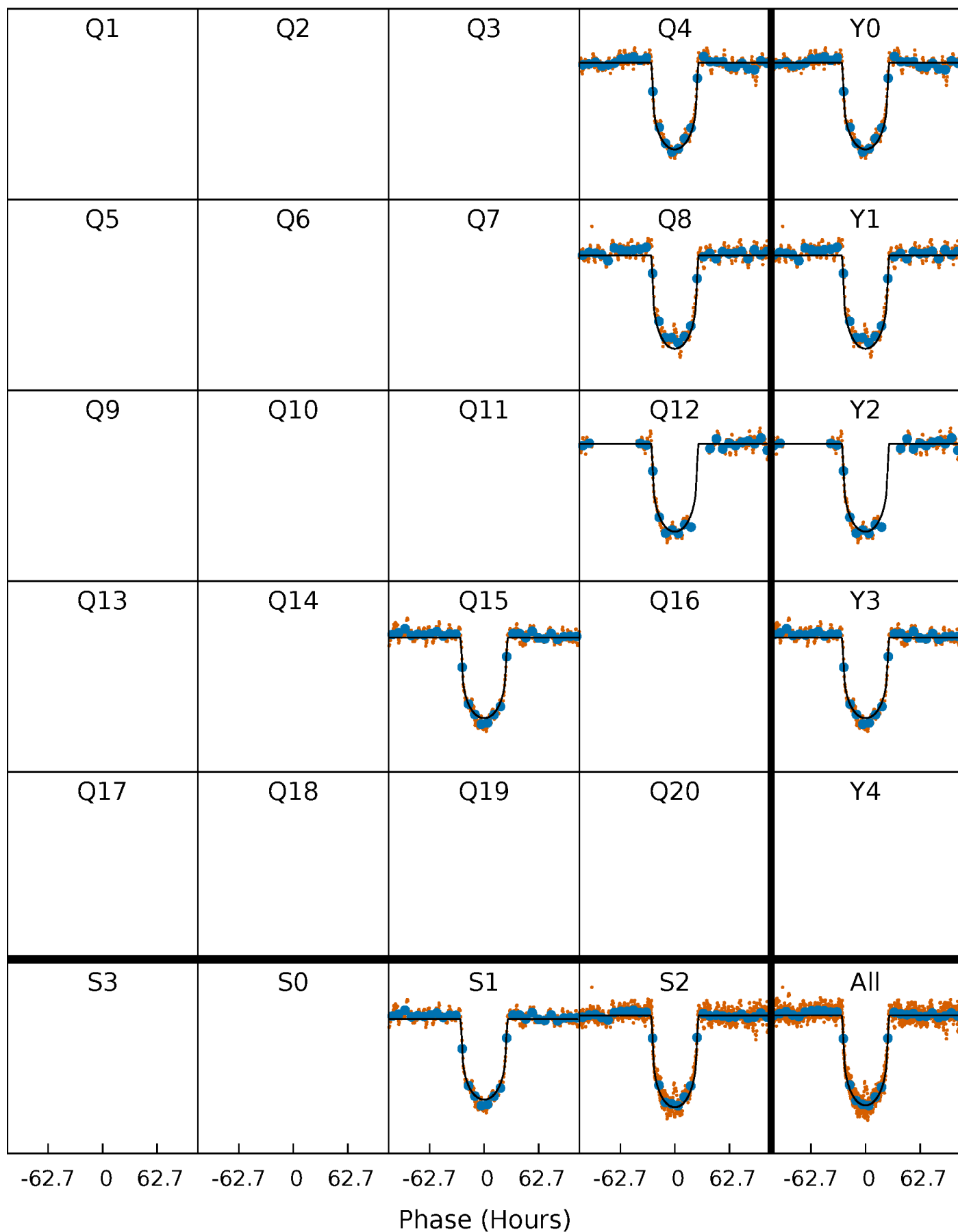
PDC Quarter-Phased Transit Curves

TCE 005866138-01 P=342.254336 Days $T_0=436.135106$ (BKJD)



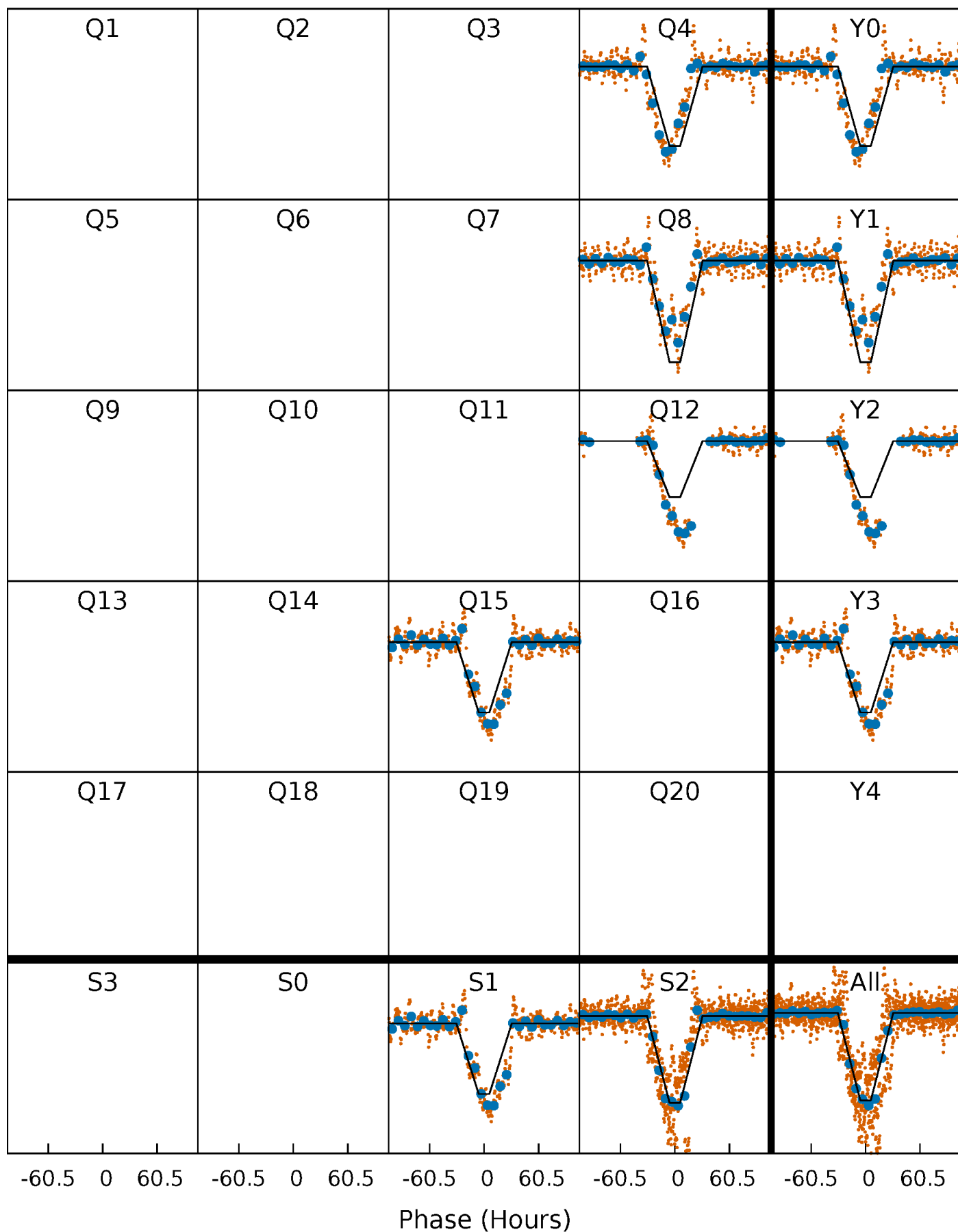
DV Quarter-Phased Transit Curves

TCE 005866138-01 P=342.254336 Days $T_0=436.135106$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

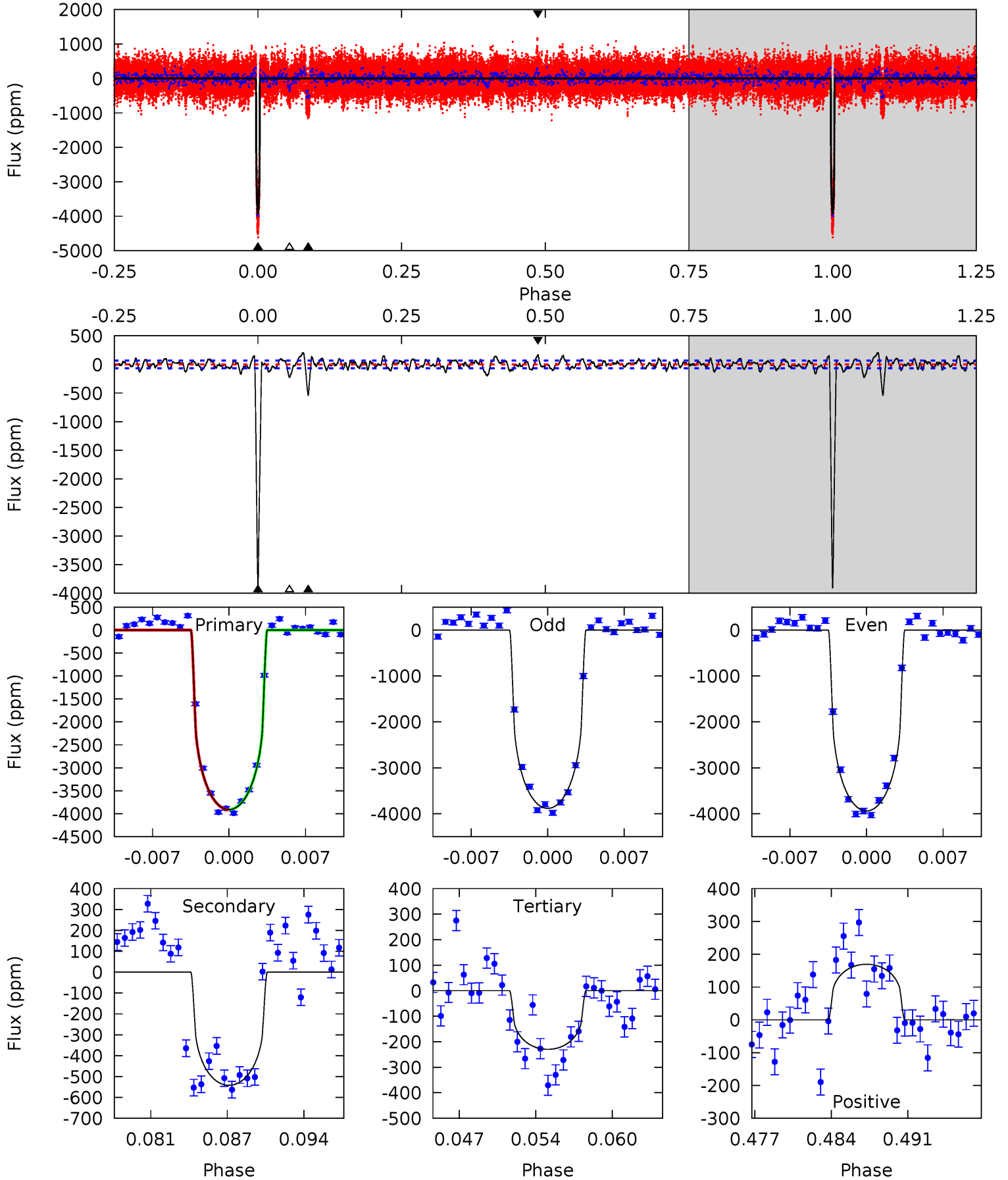
TCE 005866138-01 P=342.085039 Days $T_0=436.410213$ (BKJD)



DV Model-Shift Uniqueness Test

005866138-01, P = 342.254336 Days, E = 93.880770 Days

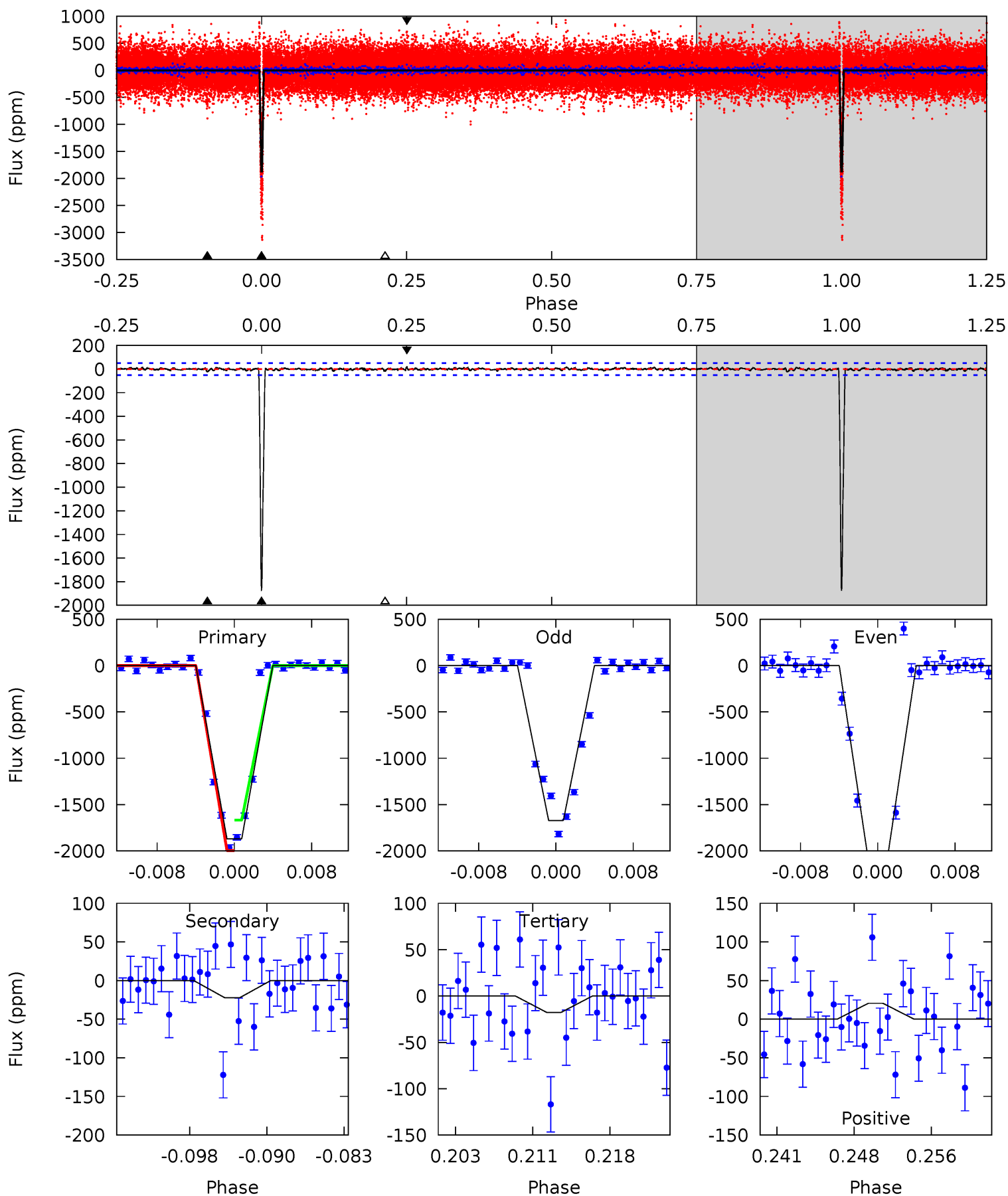
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
292.8	40.6	17.2	12.7	5.10	2.71	4.45	275.6	280.1	23.4	27.9	2.09	0.99	0.05	0.27



Alt Model-Shift Uniqueness Test

005866138-01, P = 342.085039 Days, E = 94.325174 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
186.0	2.22	1.75	2.04	5.08	2.67	0.54	184.2	183.9	0.47	0.18	31.0	1.05	0.01	16.0



Stellar Parameters For KIC 005866138

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4999^{+15}_{-112}	$2.876^{+0.032}_{-0.039}$	$0.070^{+0.150}_{-0.200}$	$9.471^{+0.832}_{-1.940}$	$2.459^{+0.102}_{-0.921}$	$0.004^{+0.001}_{-0.001}$
	+0%/-2%	+1%/-1%	+214%/-286%	+9%/-20%	+4%/-37%	+32%/-17%
Source	SPE74	AST9	SPE74	DSEP		

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

Secondary Eclipse Parameters for KIC 005866138-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-542 ± 13	$60.09^{+2.22}_{-3.57}$	831^{+15}_{-23}	3569^{+32}_{-53}	140^{+13}_{-9}
Alt.	-22 ± 10	$45.05^{+1.67}_{-3.04}$	833^{+14}_{-22}	2454^{+127}_{-172}	$9.919^{+4.897}_{-4.717}$

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

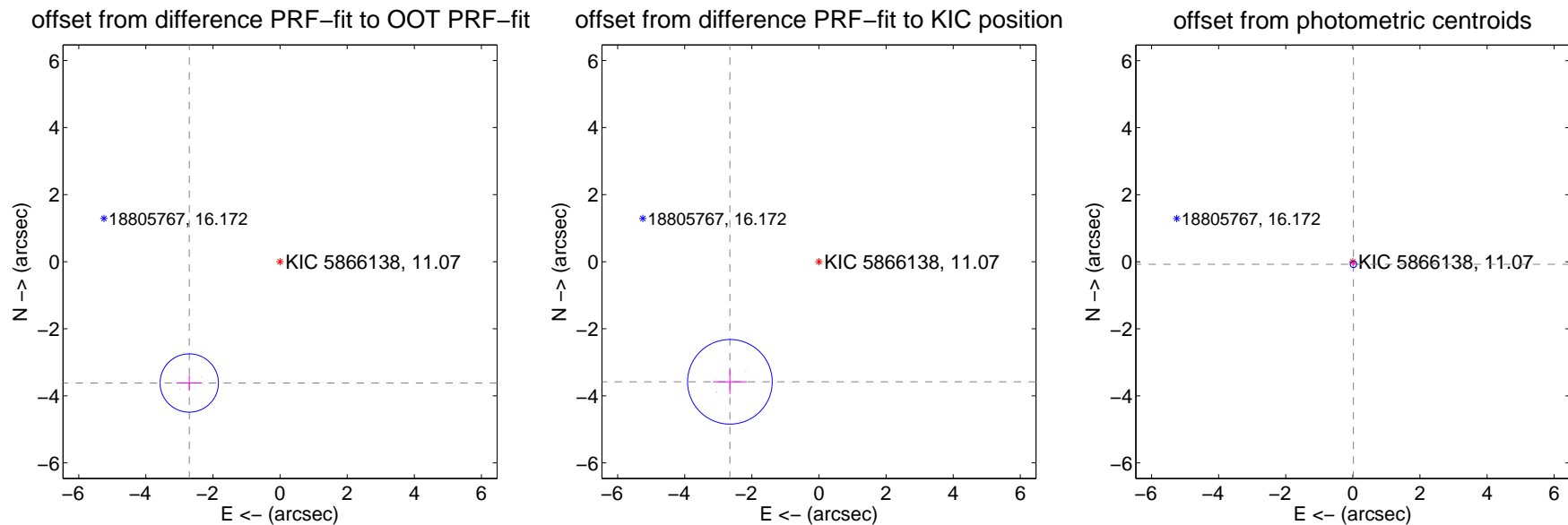
DV Centroid Data

Supplemental centroid analysis for 005866138-01. **Kepler magnitude: 11.07.** Transit SNR 65.74

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.519 \pm 0.290	15.59	2.708 \pm 0.381	-3.618 \pm 0.223
PRF-fit source offset from KIC position	4.459 \pm 0.421	10.60	2.655 \pm 0.506	-3.583 \pm 0.366
photometric centroid source offset	0.08 \pm 0.03	2.35	-0.02 \pm 0.03	-0.07 \pm 0.03

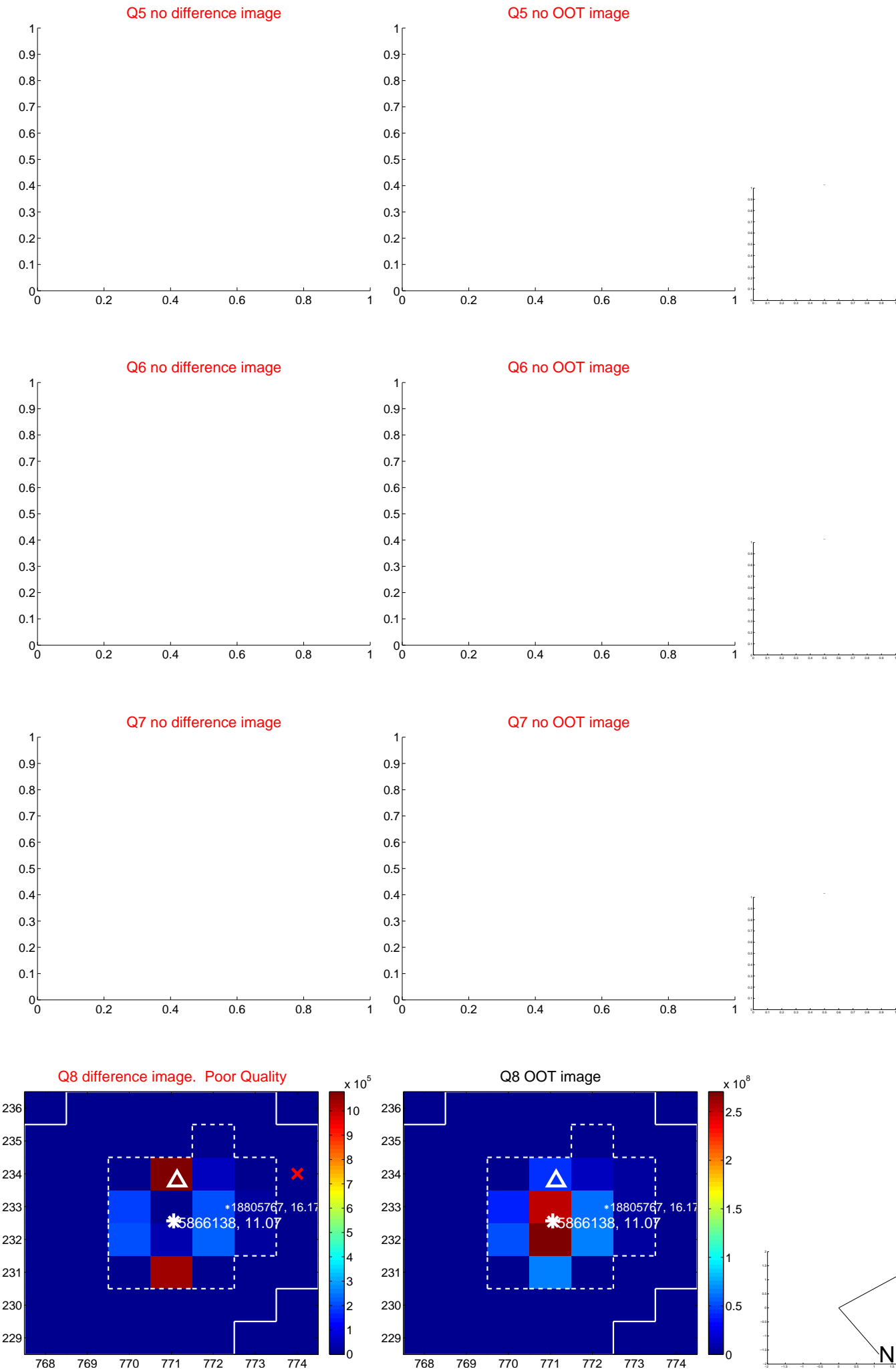


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- 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.



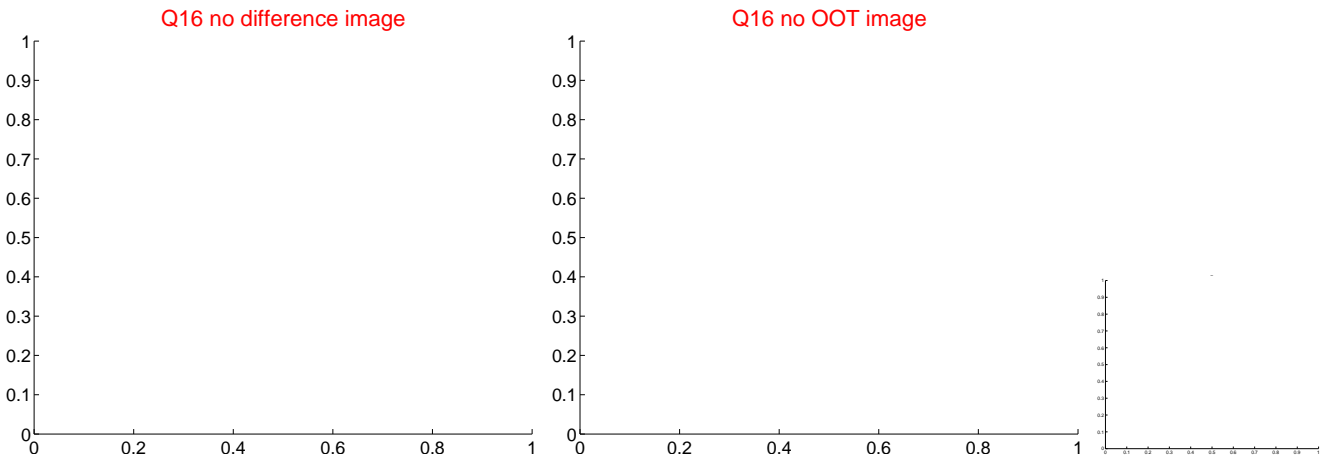
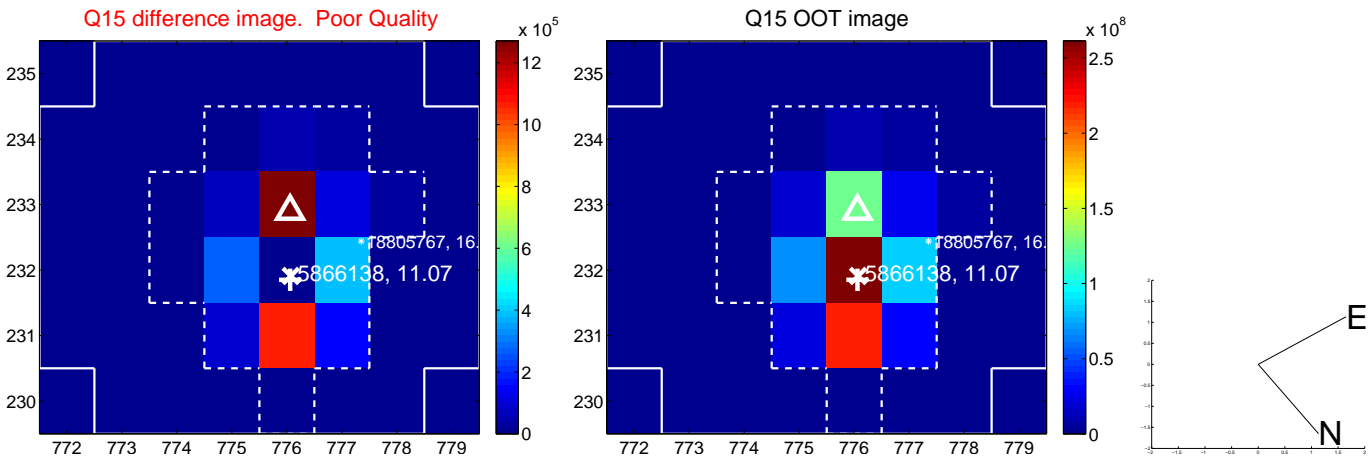
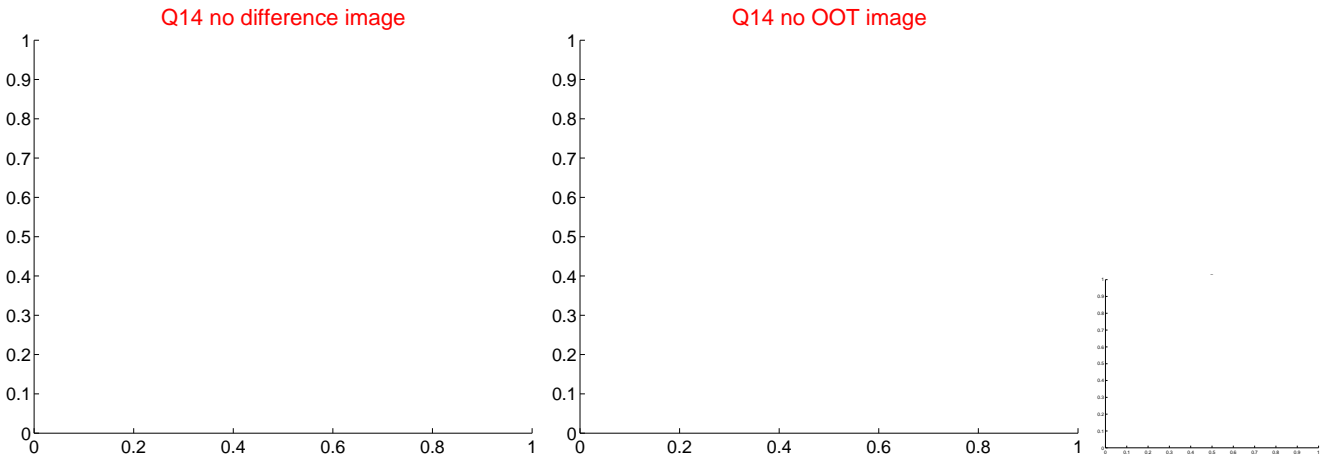
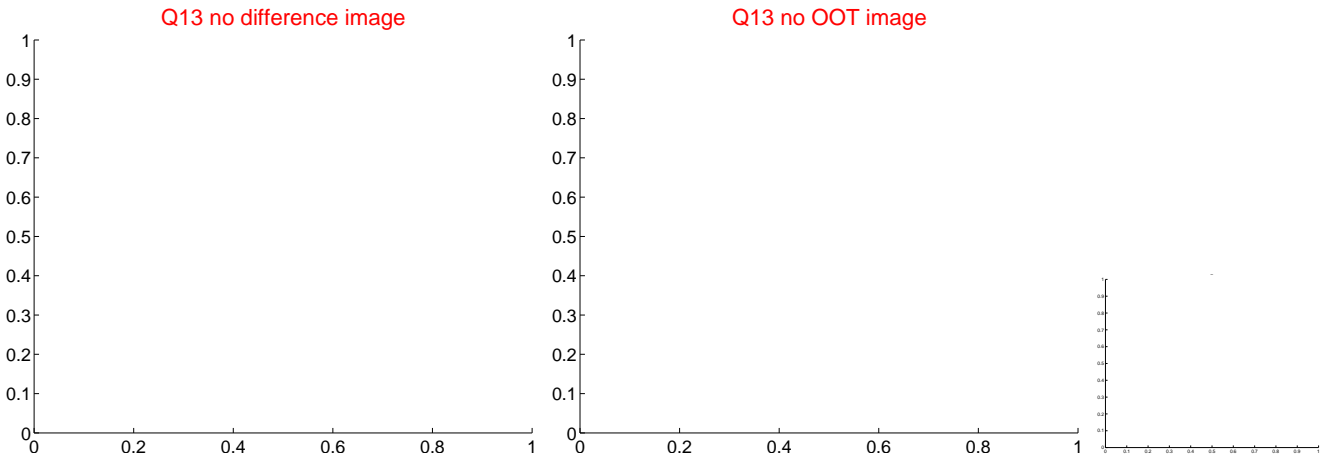
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



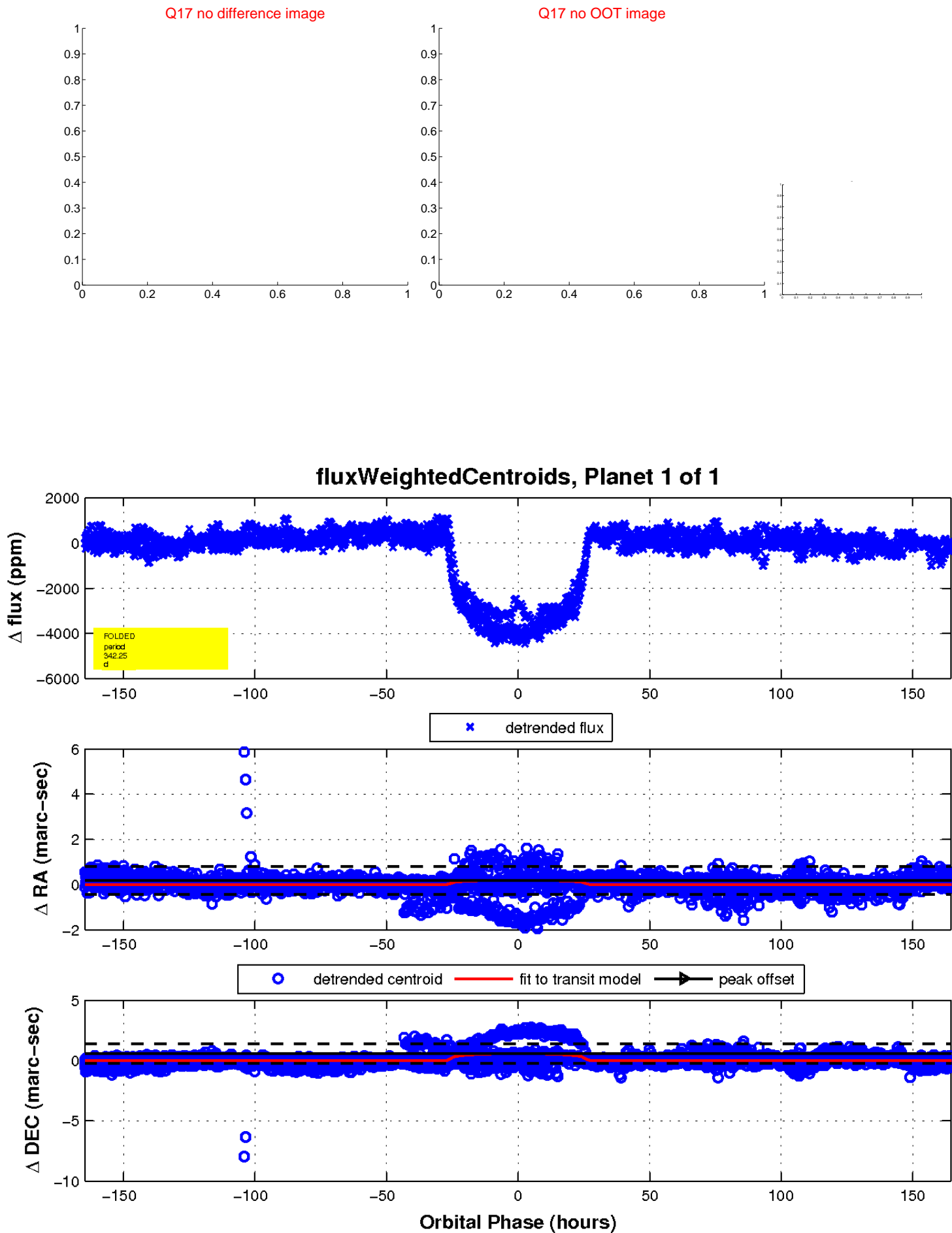
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UKIRT Image

Declination

