

KIC 005871082

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})
005871082-01	OBS	No	346.750175	201.294109	668.7	44.413	8.5	10.1	0.98	6167	3.19	1.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005871082-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—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.

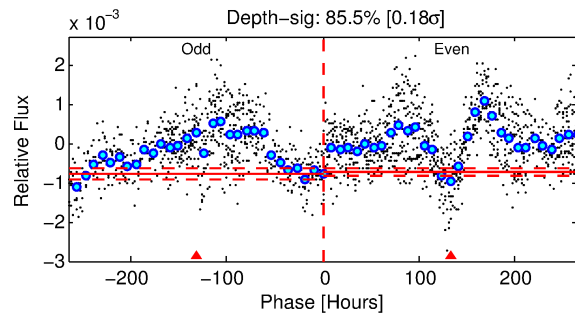
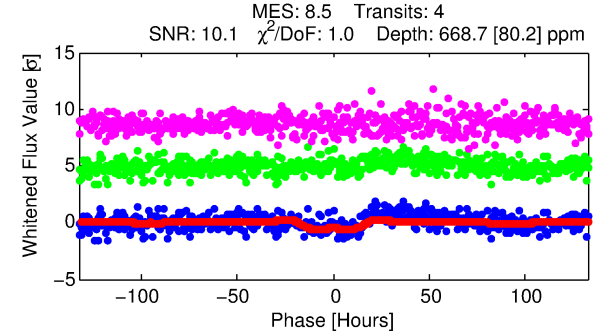
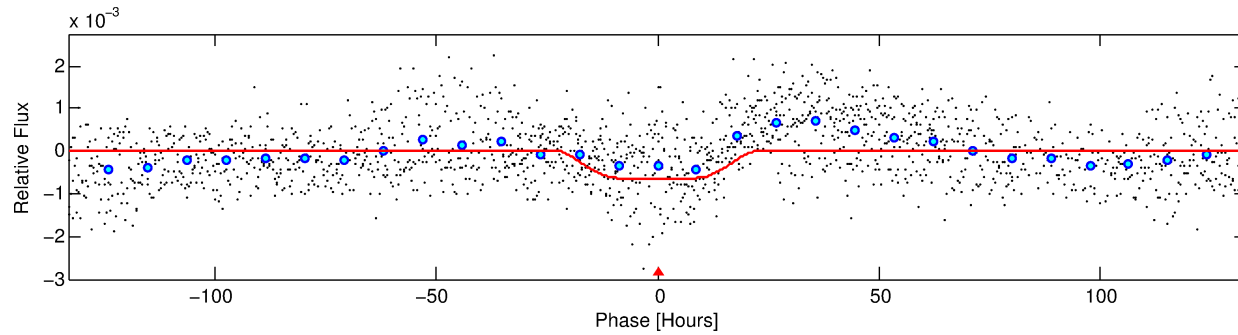
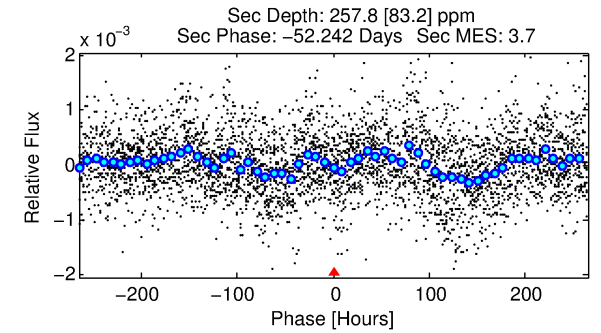
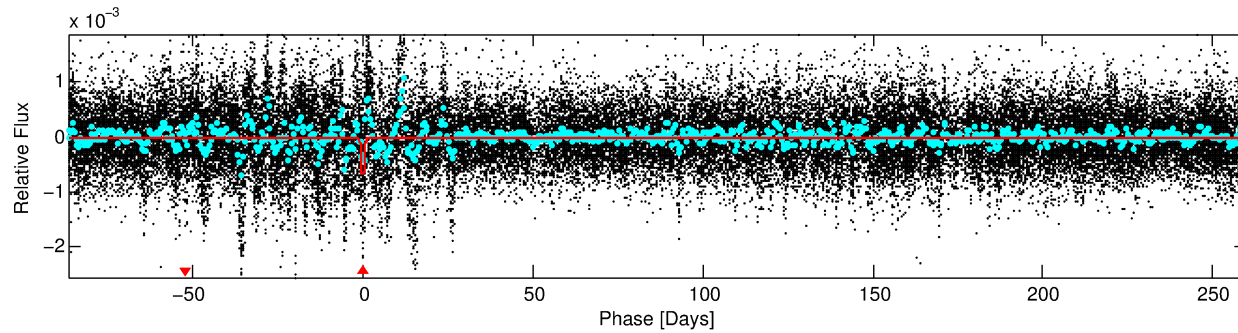
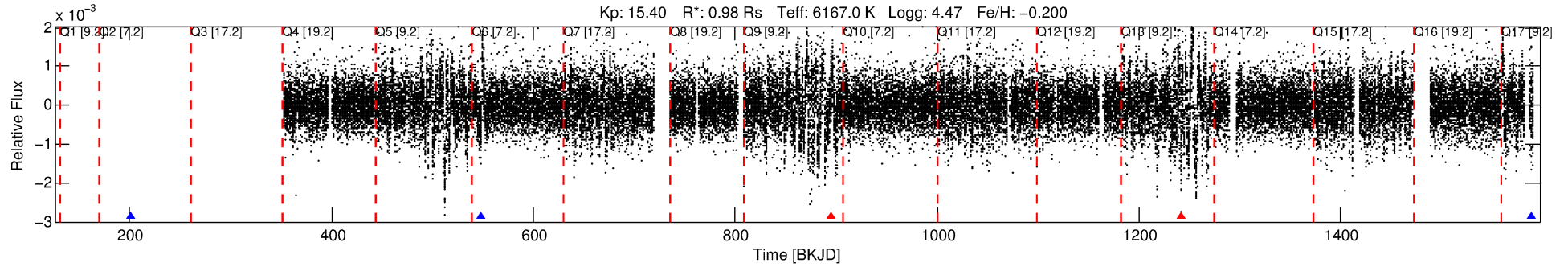
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005871082-01

No Significant Match Found

DV One-Page Summary

KIC: 5871082 Candidate: 1 of 1 Period: 346.750 d



DV Fit Results:

Period = 346.75017 [0.03491] d
Epoch = 201.2941 [0.0752] BKJD
Rp/R* = 0.0298 [0.0022]
a/R* = 23.20 [3.76]
b = 0.95 [0.02]
Seff = 1.30 [0.56]
Teq = 272 [29] K
Rp = 3.19 [1.05] Re
a = 0.9806 [0.2682] AU
Ag = 13408.15 [7221.24] [1.86σ]
Teffp = 4527 [440] K [9.66σ]

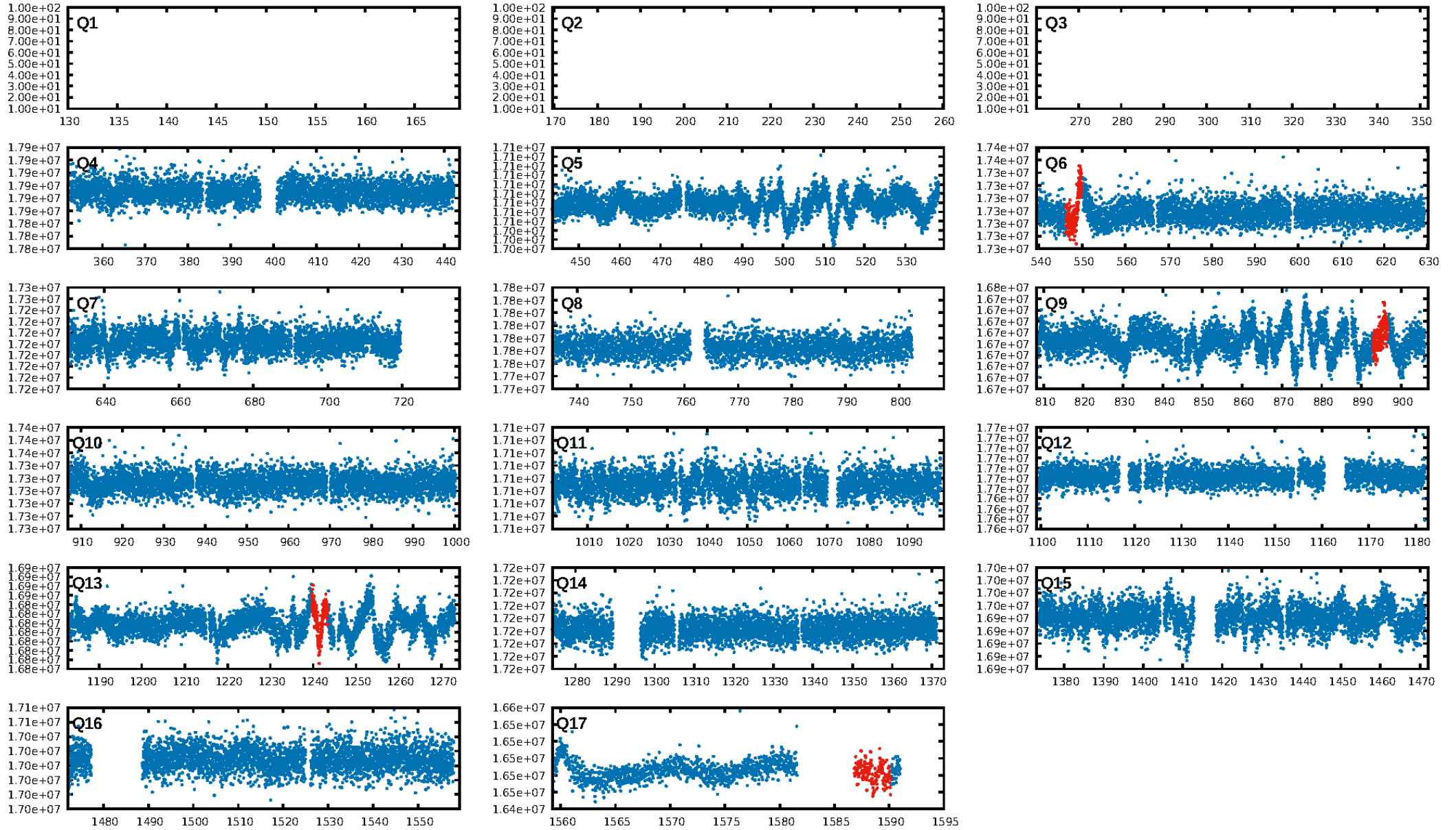
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 1.3%
ModelChiSquareGoF-sig: 100.0%
Bootstrap-pfa: 2.14e-11
RollingBand-fgt: 0.33 [1/3]
GhostDiagnostic-chr: -0.8681
Centroid-sig: 3.4%
Centroid-so: 1.517 arcsec [1.57σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [2/2]

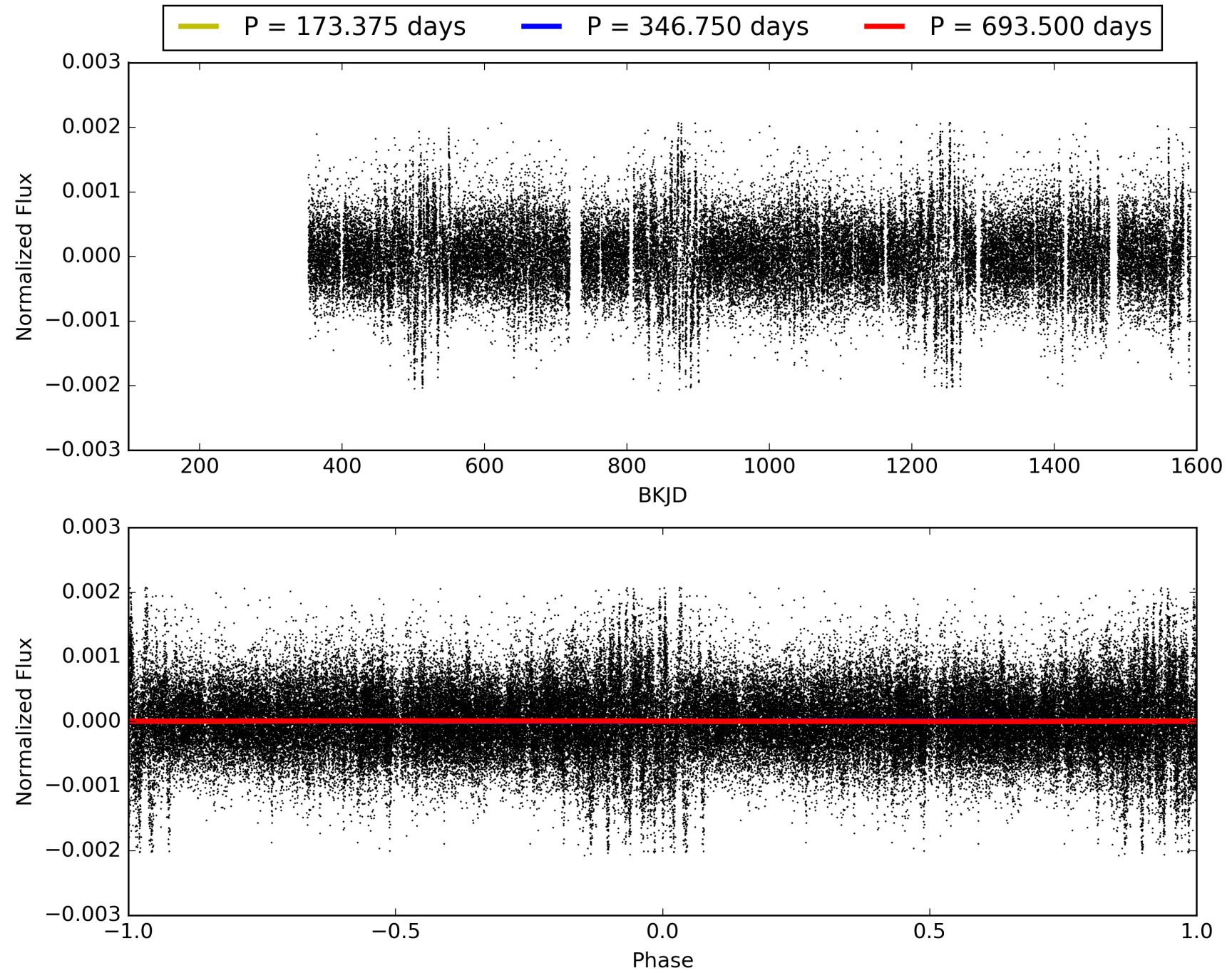
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 15:43:11 Z

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

TCE 005871082-01, PDC Light Curves

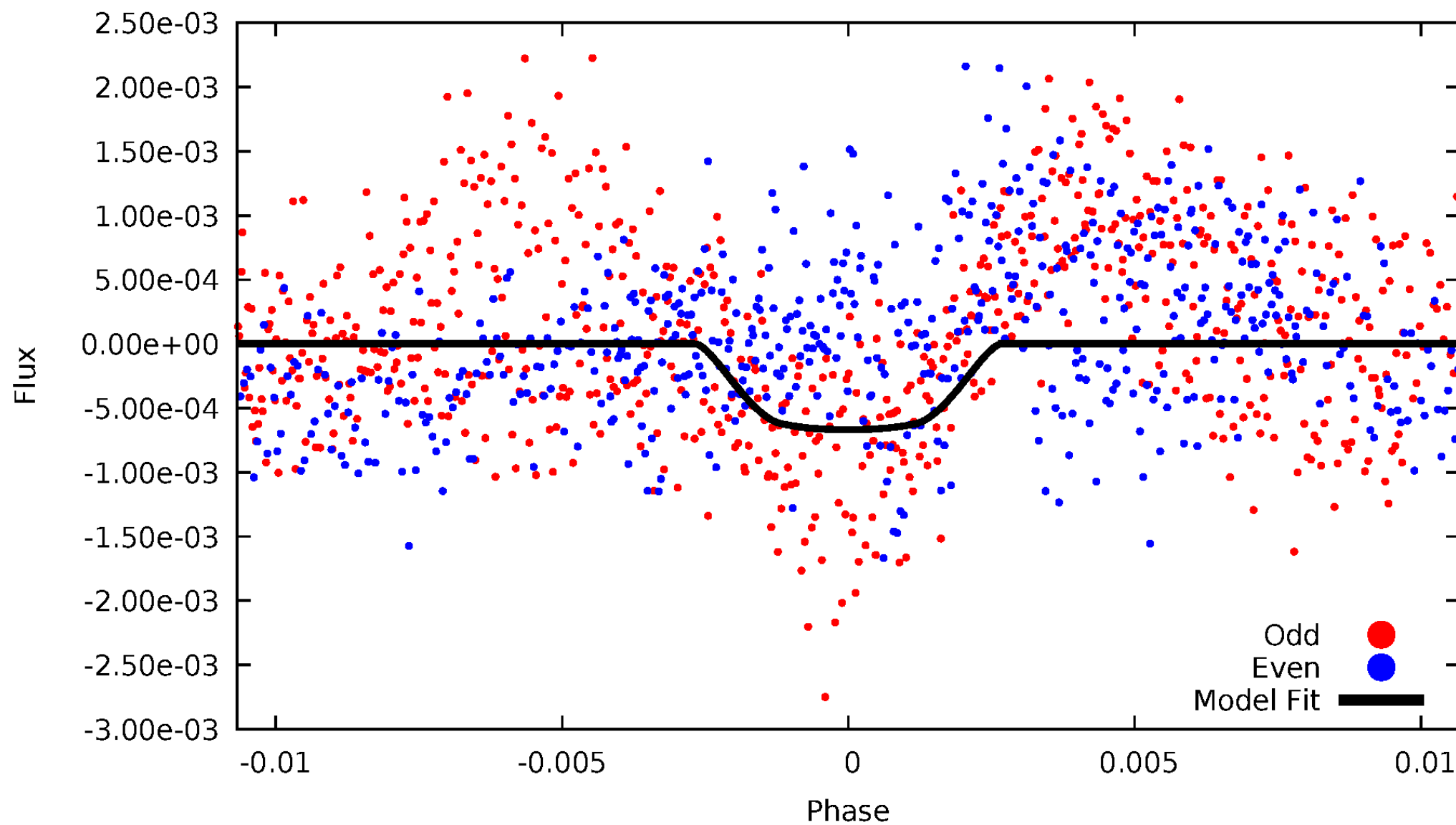


TCE 005871082-01



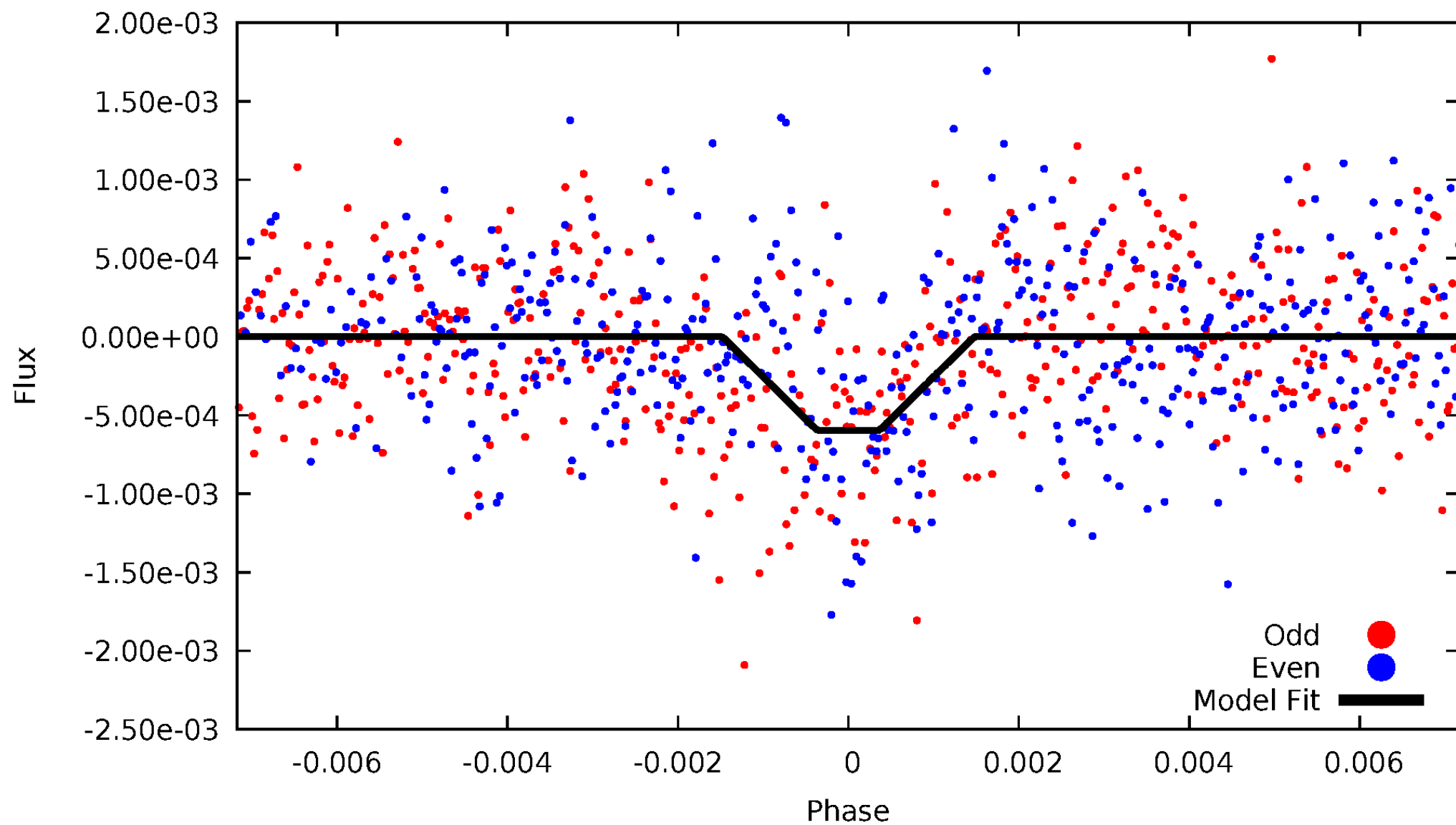
DV Odd/Even

TCE 005871082-01



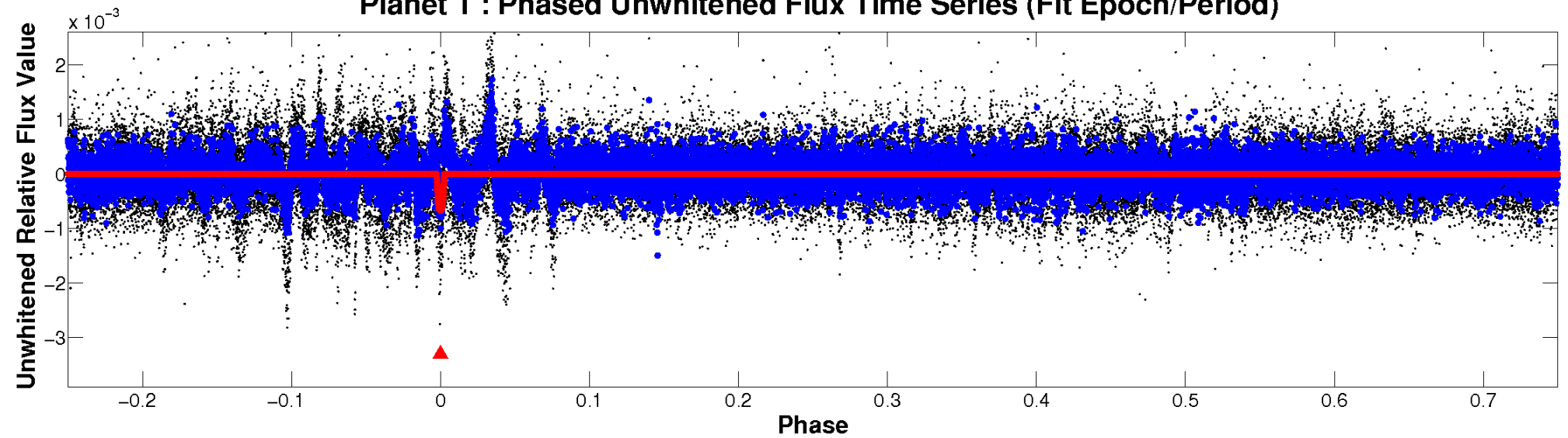
ALT Odd/Even

TCE 005871082-01

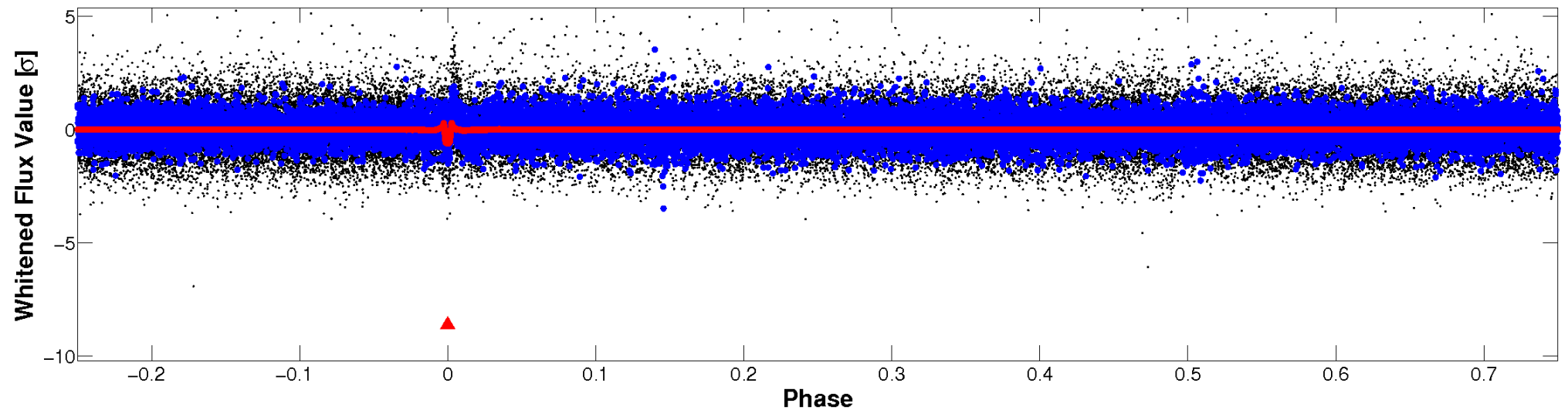


Non-Whitened Vs. Whitened Light Curve

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

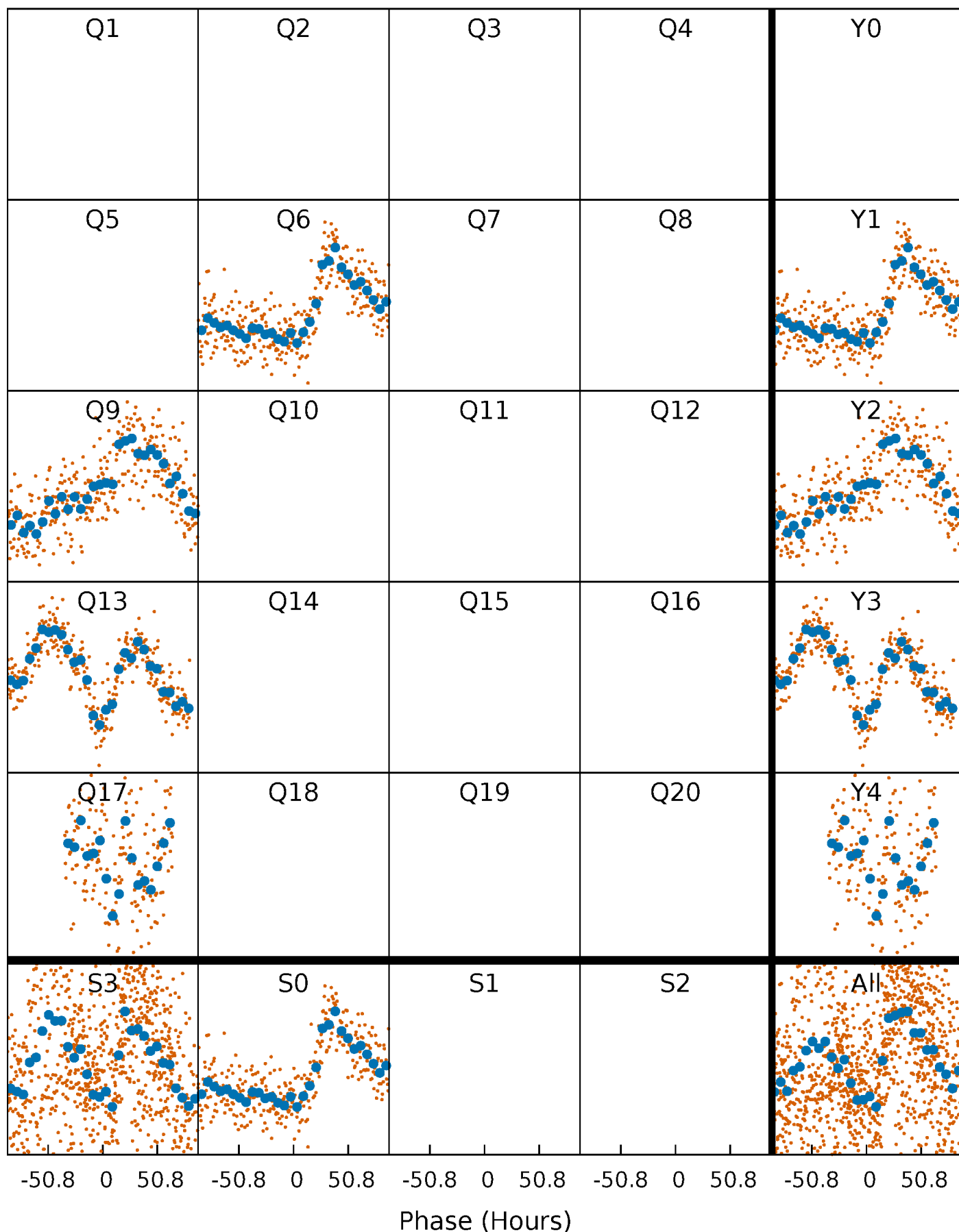


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



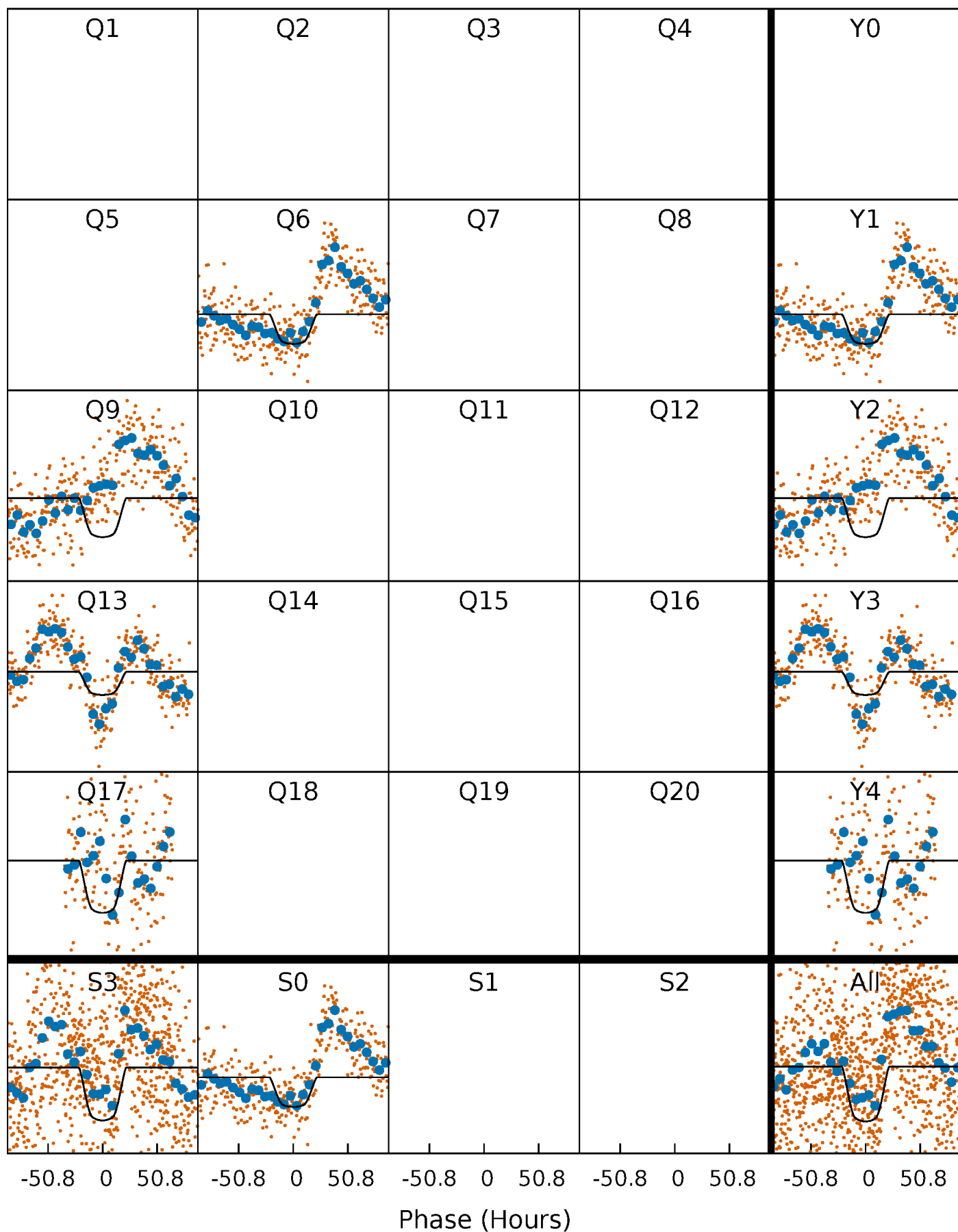
PDC Quarter-Phased Transit Curves

TCE 005871082-01 $P=346.750175$ Days $T_0=201.294109$ (BKJD)



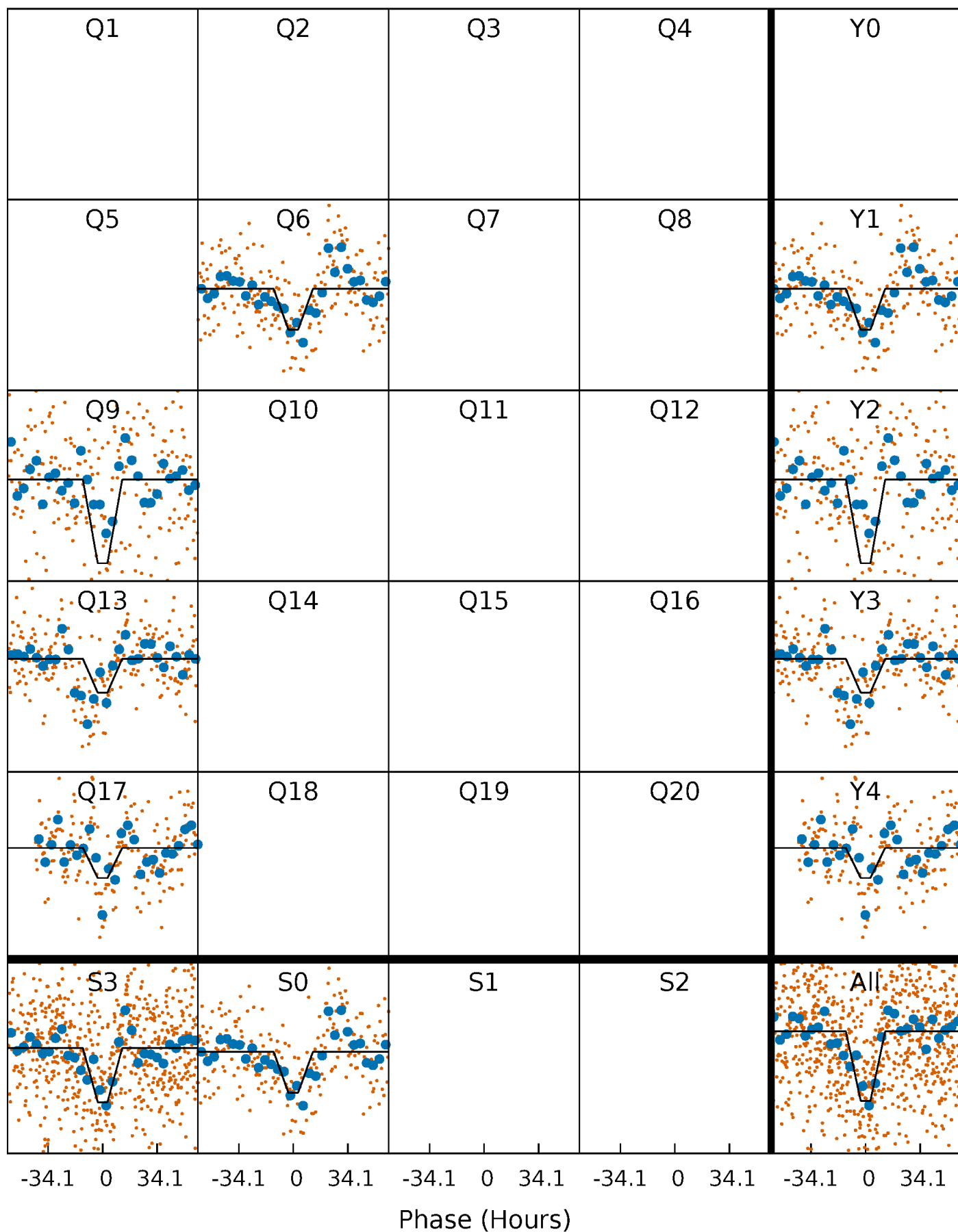
DV Quarter-Phased Transit Curves

TCE 005871082-01 $P=346.750175$ Days $T_0=201.294109$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

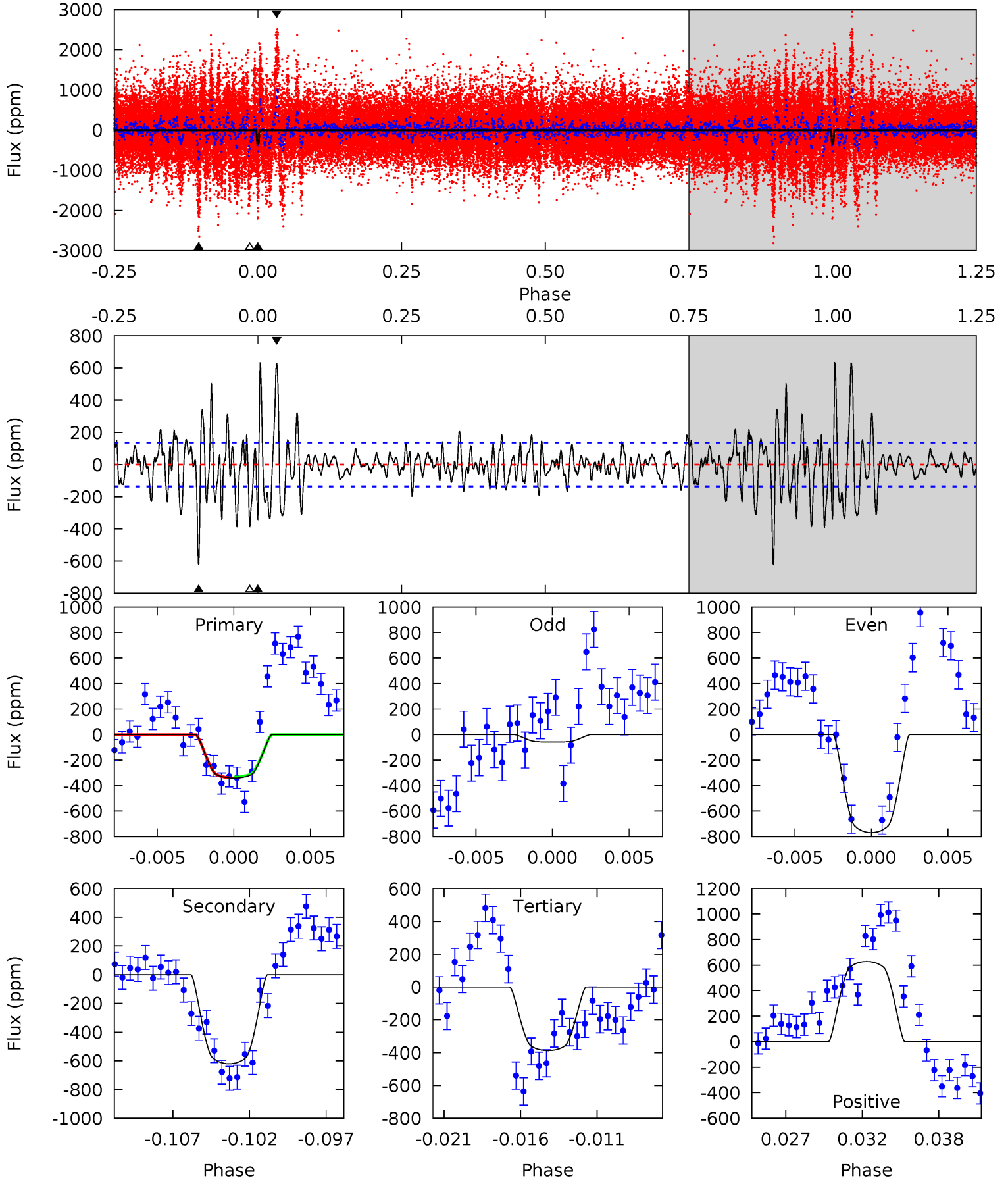
TCE 005871082-01 P=346.750702 Days $T_0=201.575186$ (BKJD)



DV Model-Shift Uniqueness Test

005871082-01, P = 346.750175 Days, E = 201.294109 Days

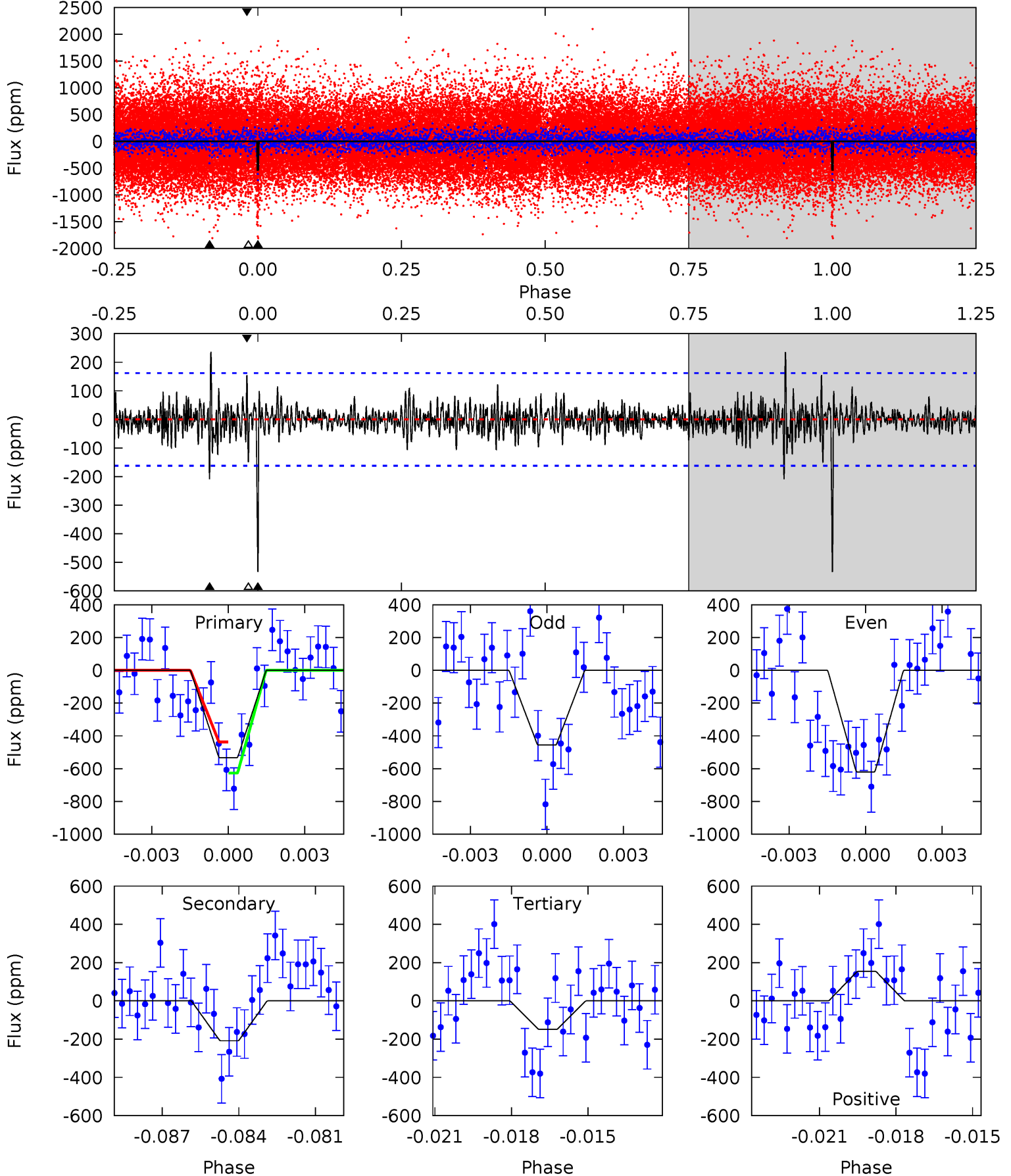
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.8	23.3	14.6	23.6	5.14	2.78	4.38	-1.77	-10.9	8.76	-0.32	13.3	0.99	0.50	0.12



Alt Model-Shift Uniqueness Test

005871082-01, P = 346.750702 Days, E = 201.575186 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.3	6.77	4.84	5.00	5.25	2.97	1.14	12.5	12.3	1.93	1.77	2.67	0.88	0.31	3.08



Stellar Parameters For KIC 005871082

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6167^{+197}_{-240}	$4.474^{+0.056}_{-0.224}$	$-0.200^{+0.250}_{-0.300}$	$0.981^{+0.313}_{-0.112}$	$1.045^{+0.144}_{-0.144}$	$1.558^{+0.471}_{-0.861}$
	+3%/-4%	+1%/-5%	+125%/-150%	+32%/-11%	+14%/-14%	+30%/-55%
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 005871082-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-620 ± 27	$3.32^{+0.56}_{-0.37}$	388^{+28}_{-21}	5630^{+281}_{-292}	28996^{+7867}_{-7052}
Alt.	-209 ± 31	$2.71^{+0.47}_{-0.37}$	388^{+31}_{-21}	4844^{+267}_{-272}	14487^{+5127}_{-4355}

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

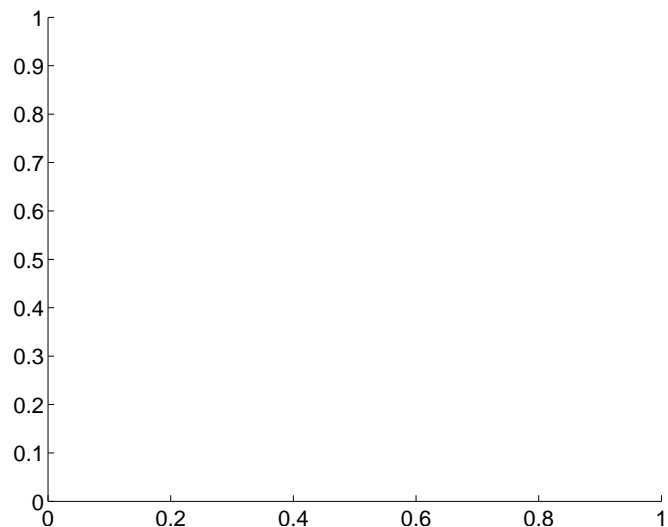
Supplemental centroid analysis for 005871082-01. Kepler magnitude: 15.40. Transit SNR 10.10

There are 0 quarters with good PRF difference image offsets

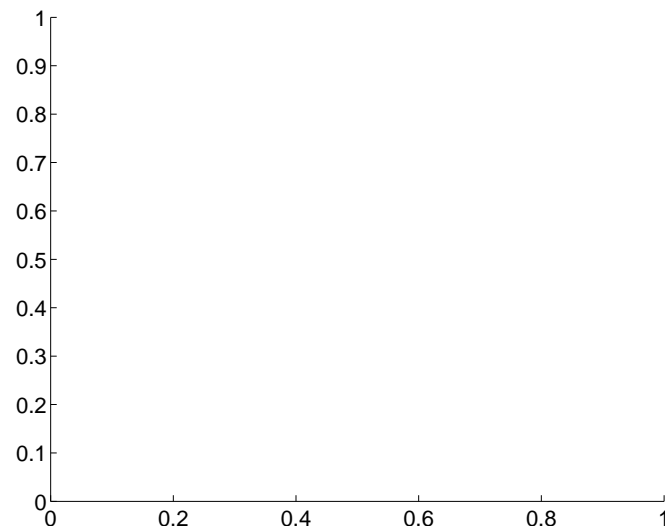
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	1.52 ± 0.96	1.57	-0.38 ± 1.08	-1.47 ± 0.96

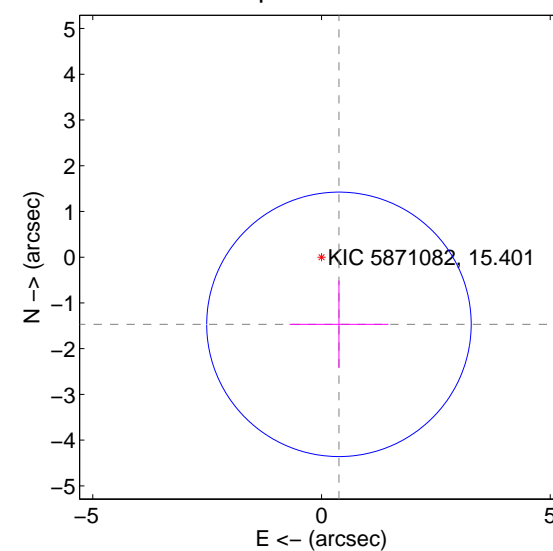
There is no PRF-fit offset from OOT-fit



There is no PRF-fit offset from KIC



offset from photometric centroids

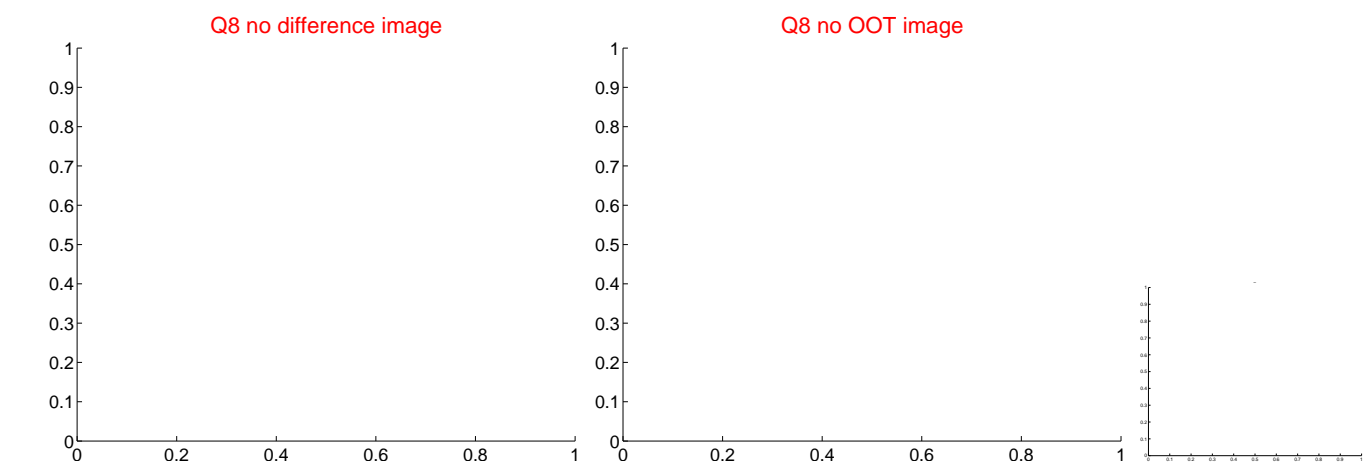
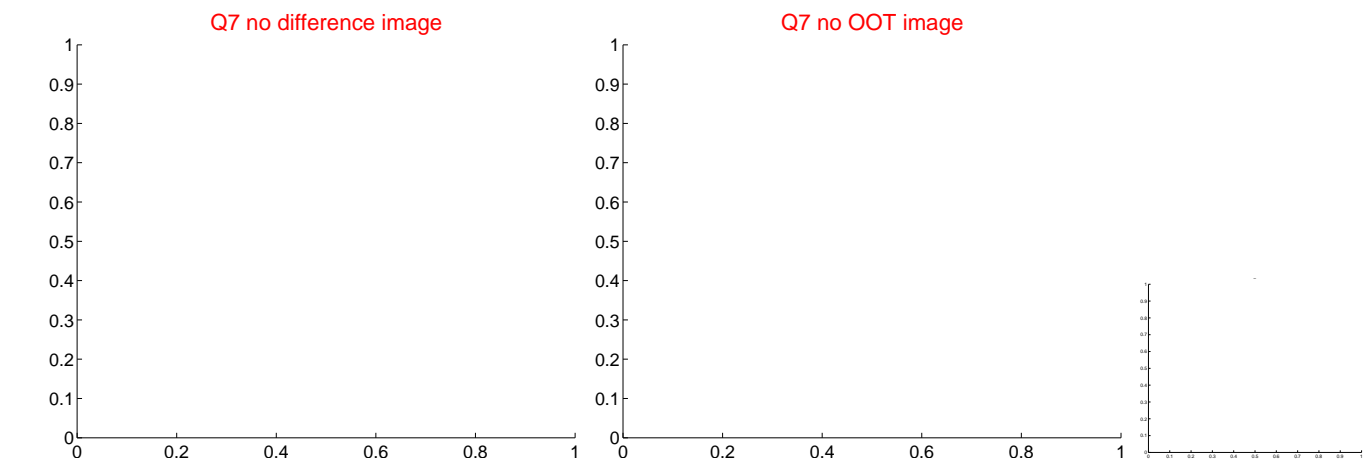
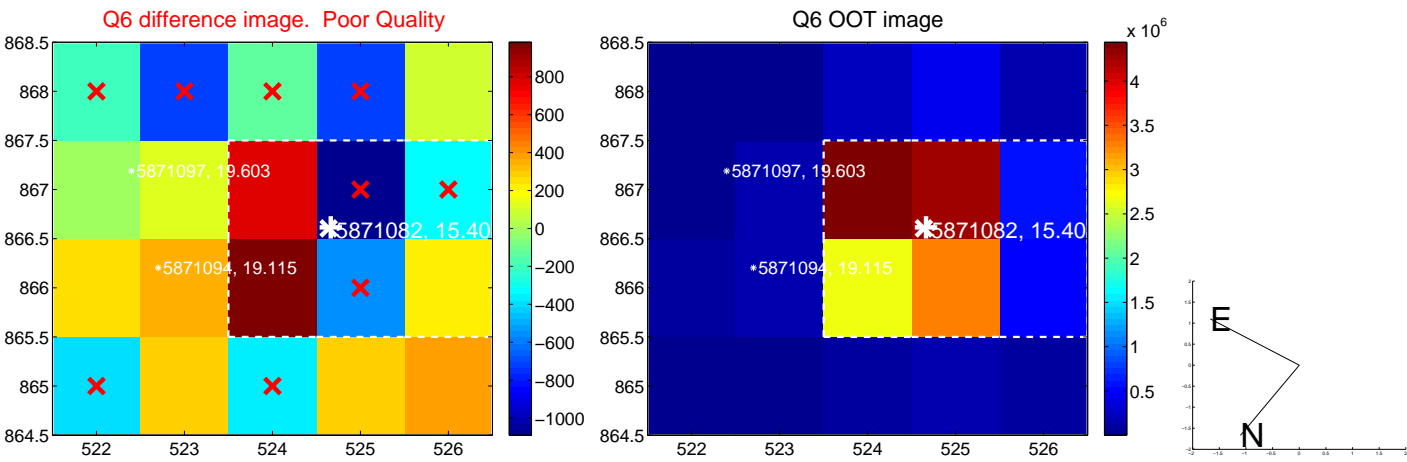
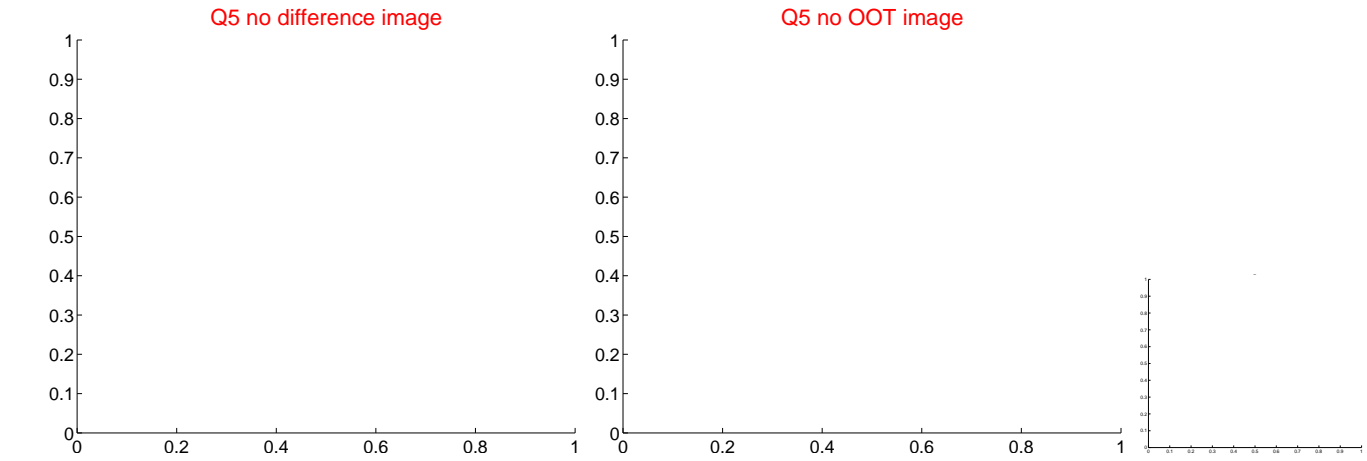


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

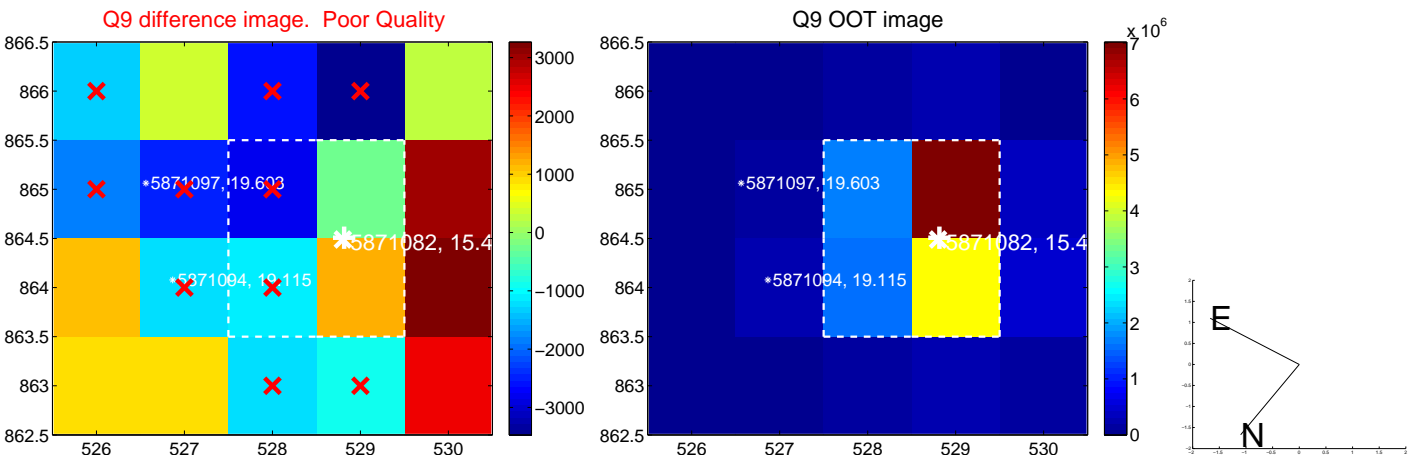
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



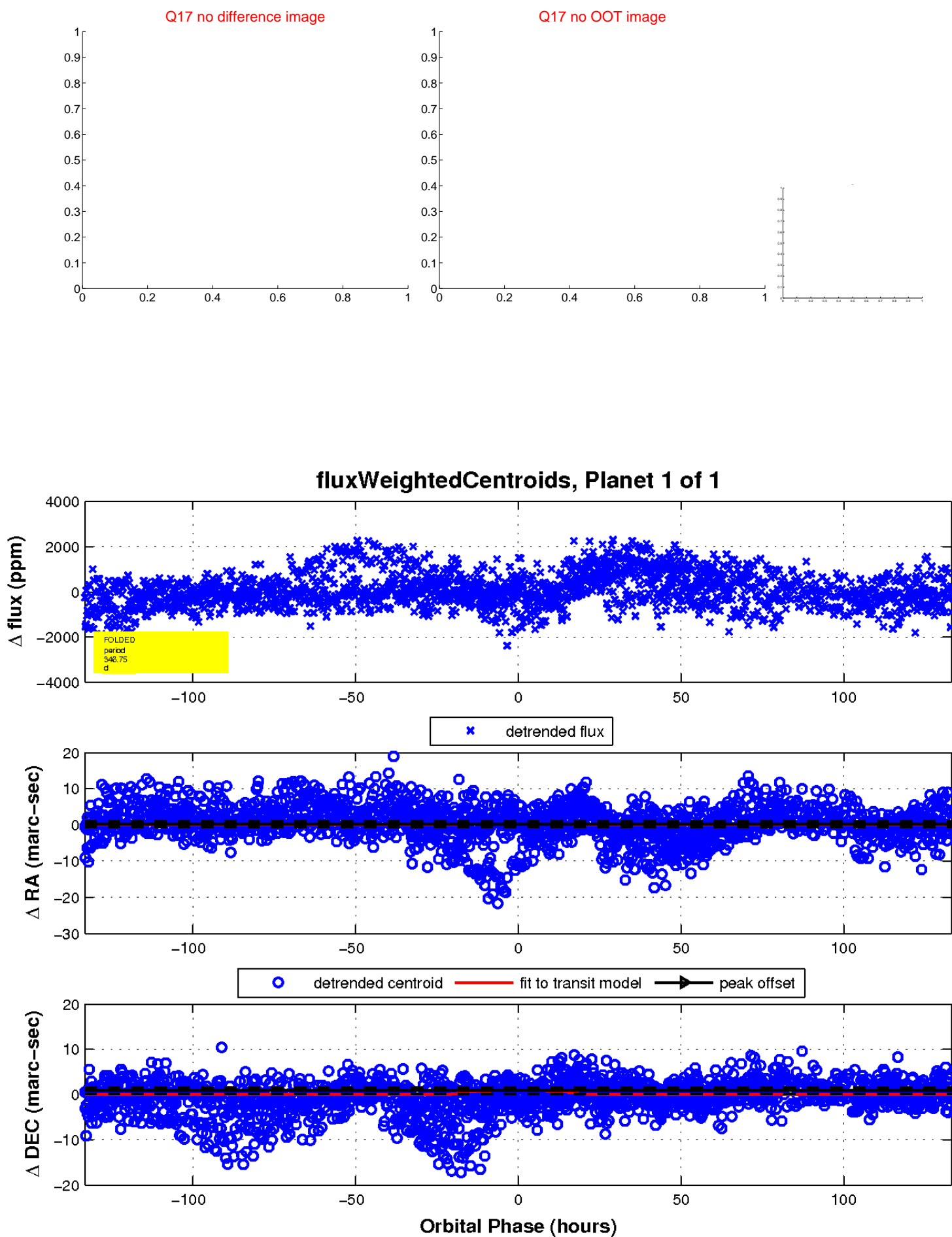
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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.



UKIRT Image

Declination

