

KIC 007419157

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})
007419157-01	OBS	No	332.727663	451.097021	158.2	5.791	7.1	4.8	0.93	5956	1.28	1.10

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007419157-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—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.

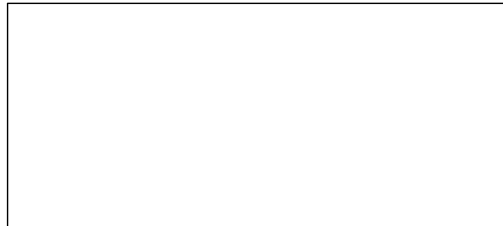
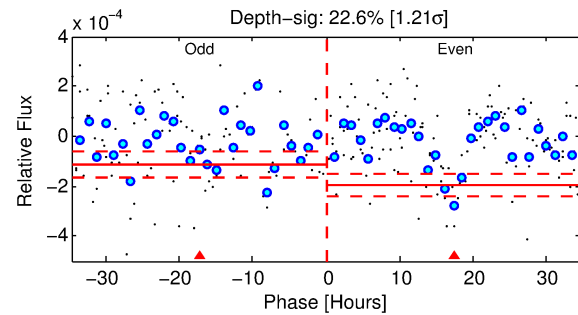
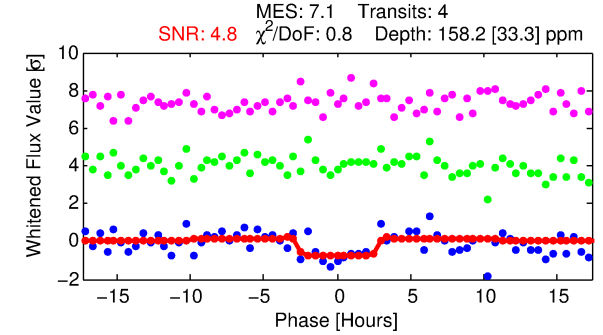
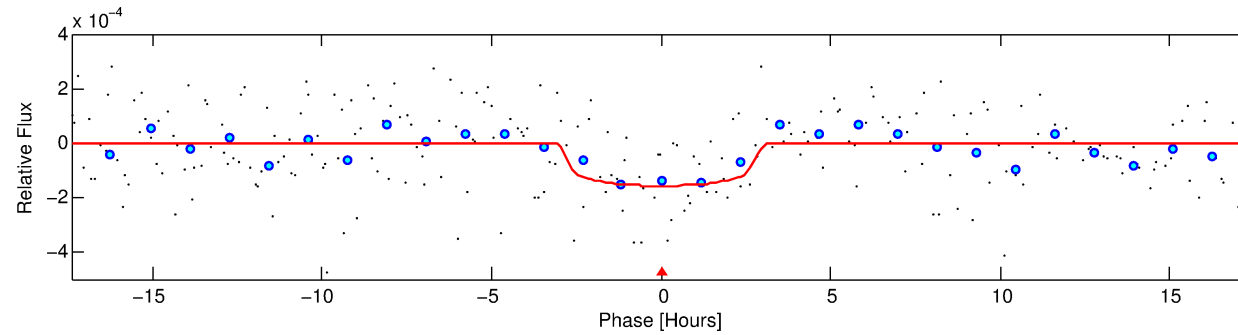
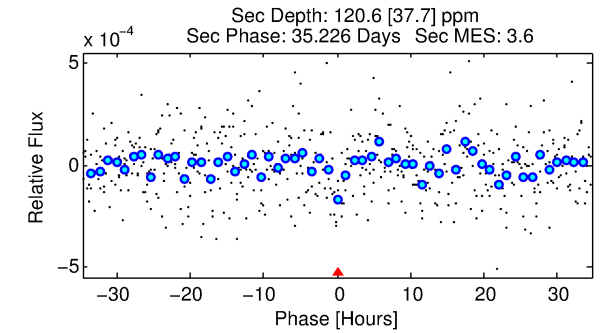
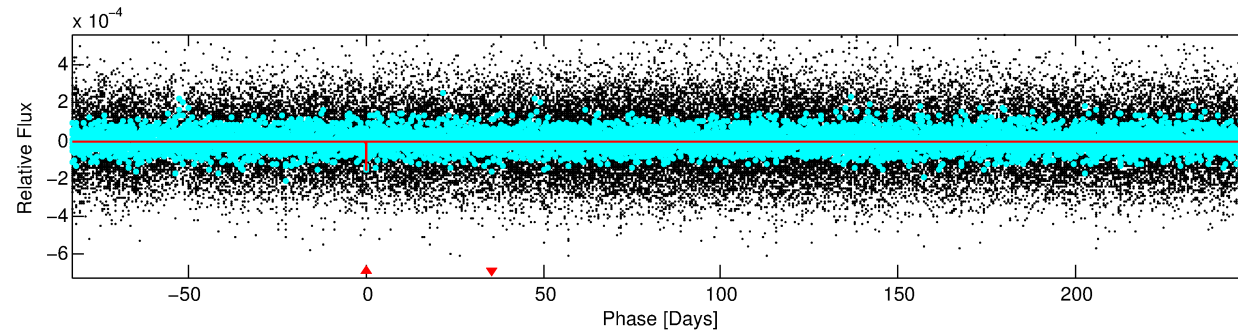
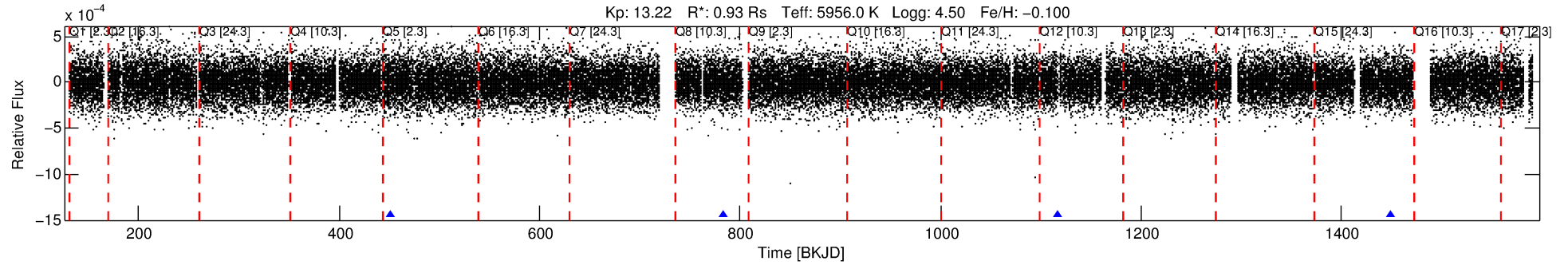
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007419157-01

No Significant Match Found

DV One-Page Summary

KIC: 7419157 Candidate: 1 of 1 Period: 332.728 d



DV Fit Results:

Period = 332.72766 [0.00825] d
Epoch = 451.0970 [0.0170] BKJD
Rp/R* = 0.0126 [0.0134]
a/R* = 292.56 [1504.50]
b = 0.76 [2.84]
Seff = 1.10 [0.46]
Teq = 261 [27] K
Rp = 1.28 [1.42] Re
a = 0.9448 [0.2549] AU
Ag = 36073.47 [78952.81] [0.46σ]
Teffp = 5567 [3000] K [1.77σ]

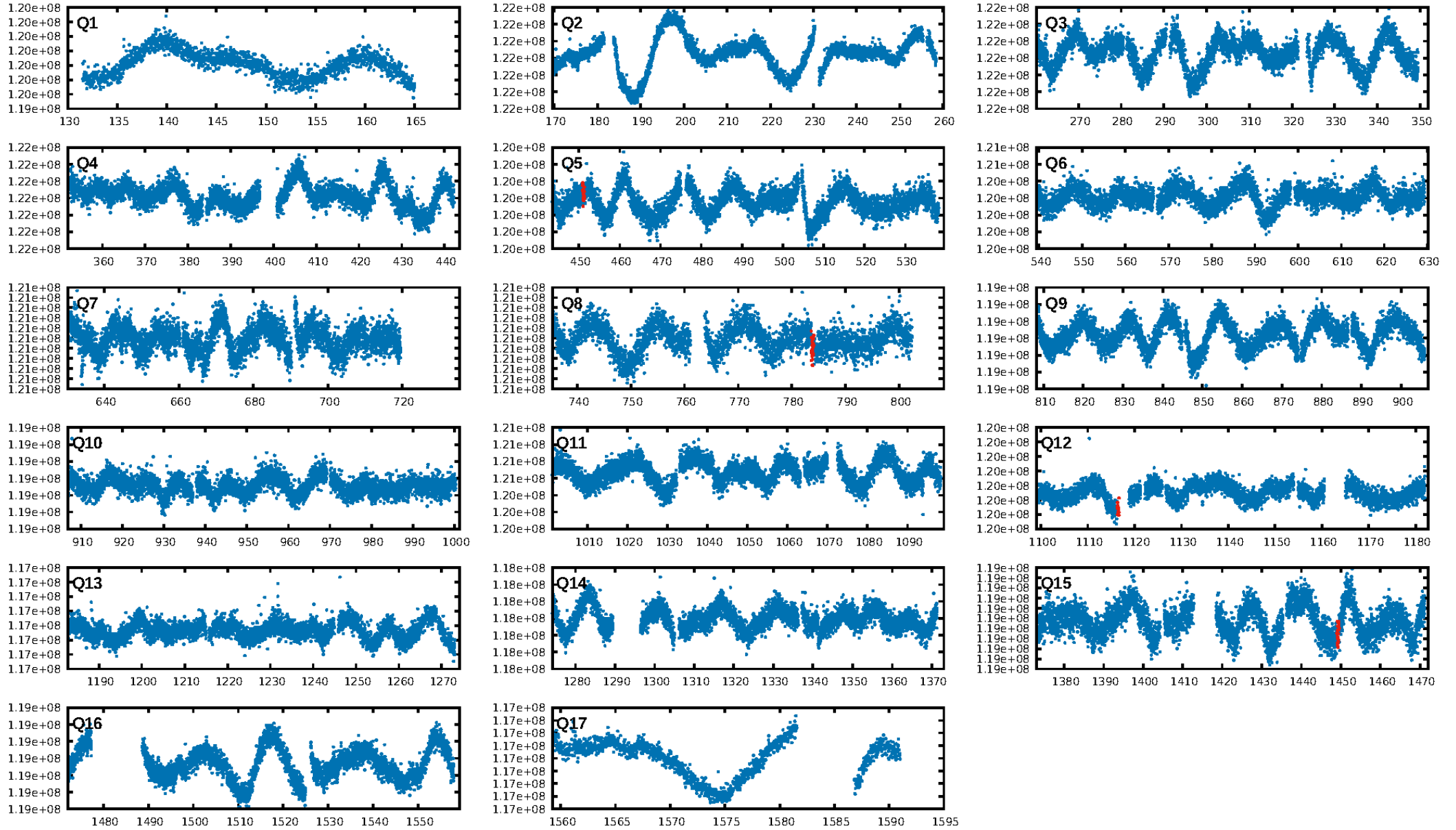
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 51.2%
ModelChiSquareGof-sig: 99.7%
Bootstrap-pfa: 1.10e-10
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -3.591
Centroid-sig: 12.9%
Centroid-so: 1.999 arcsec [0.96σ]
OotOffset-rm: N/A
OotOffset-st: 0/0/0 [0]
KicOffset-rm: N/A
KicOffset-st: 0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [3/3]

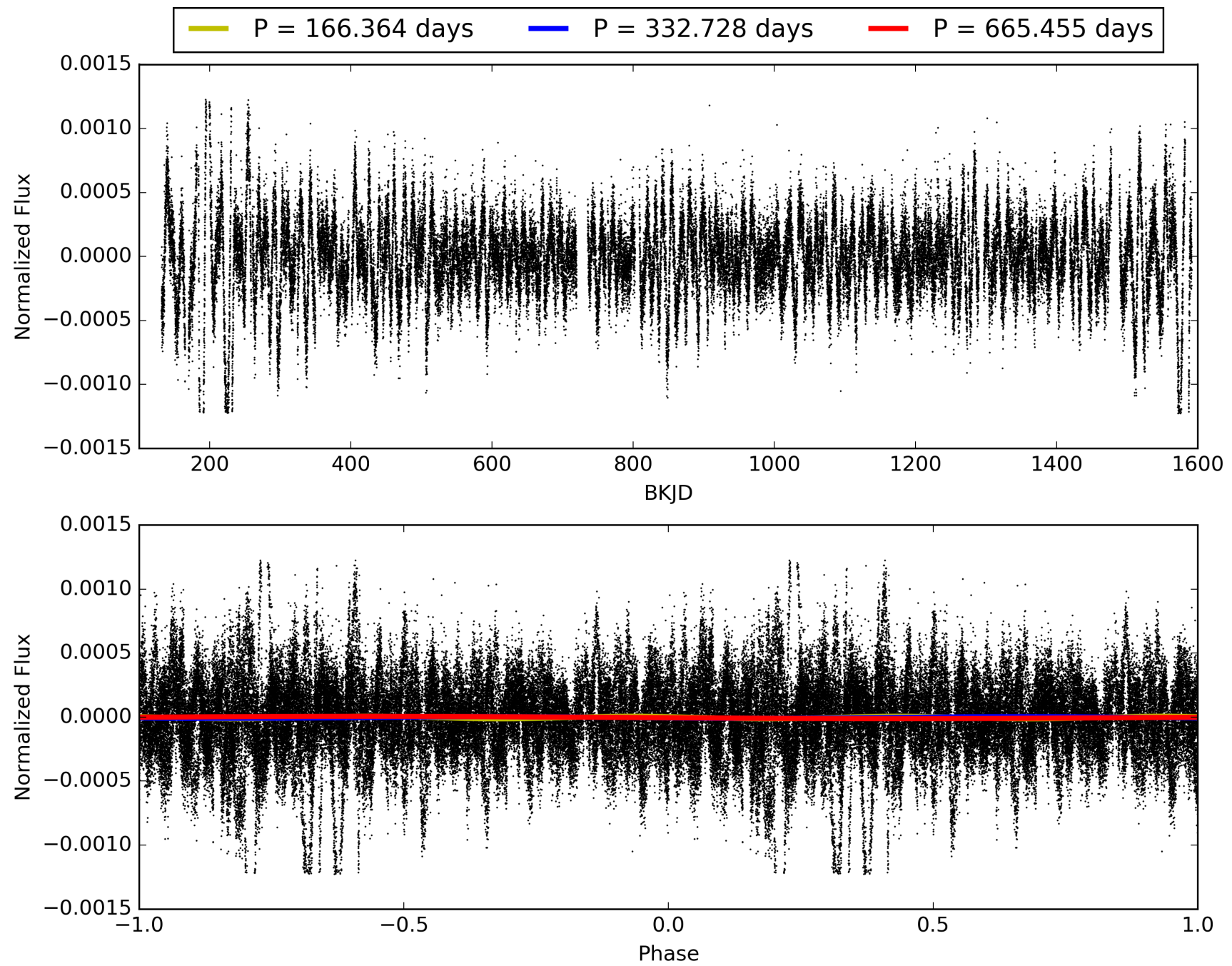
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:08:44 Z

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

TCE 007419157-01, PDC Light Curves

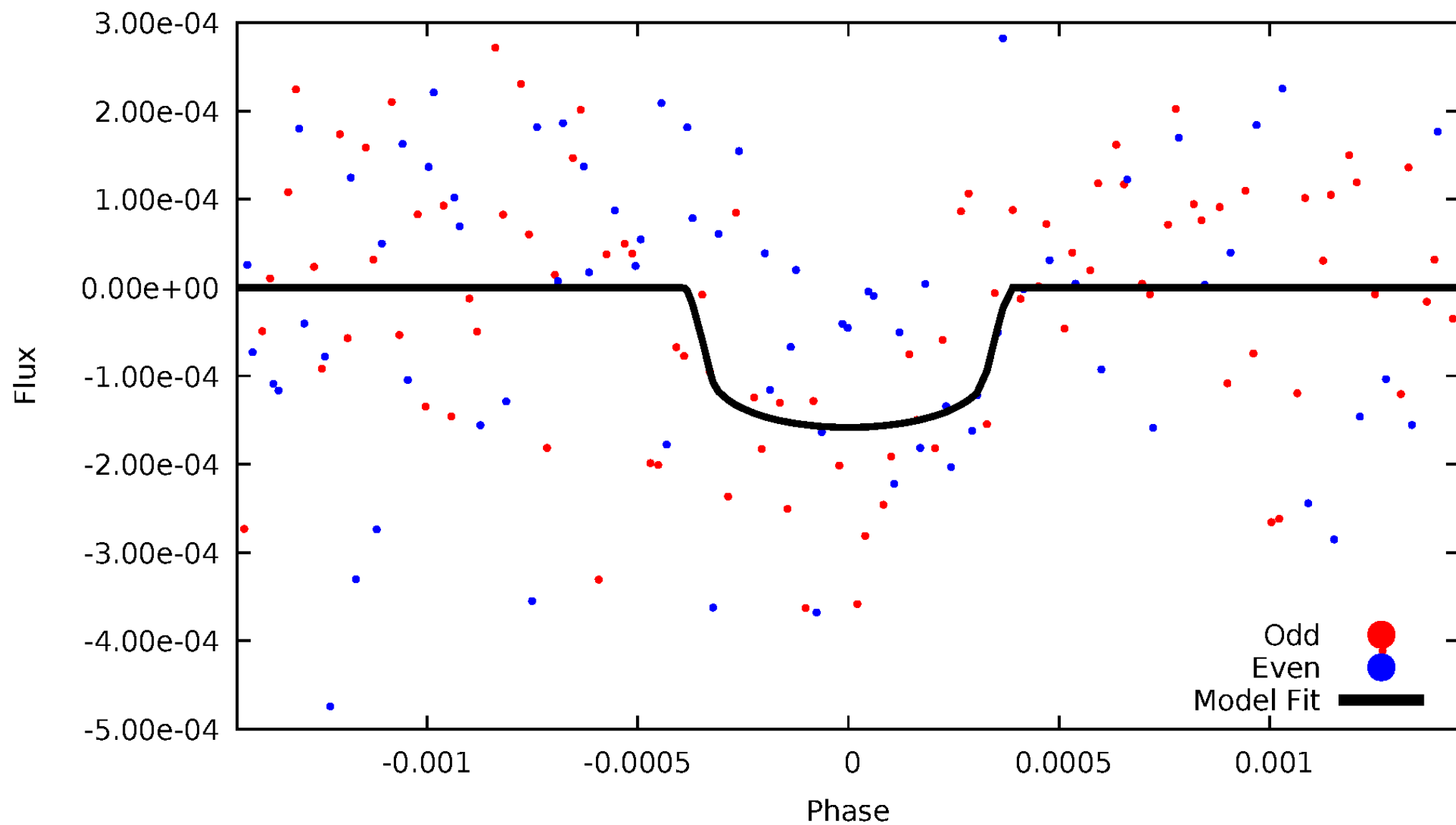


TCE 007419157-01



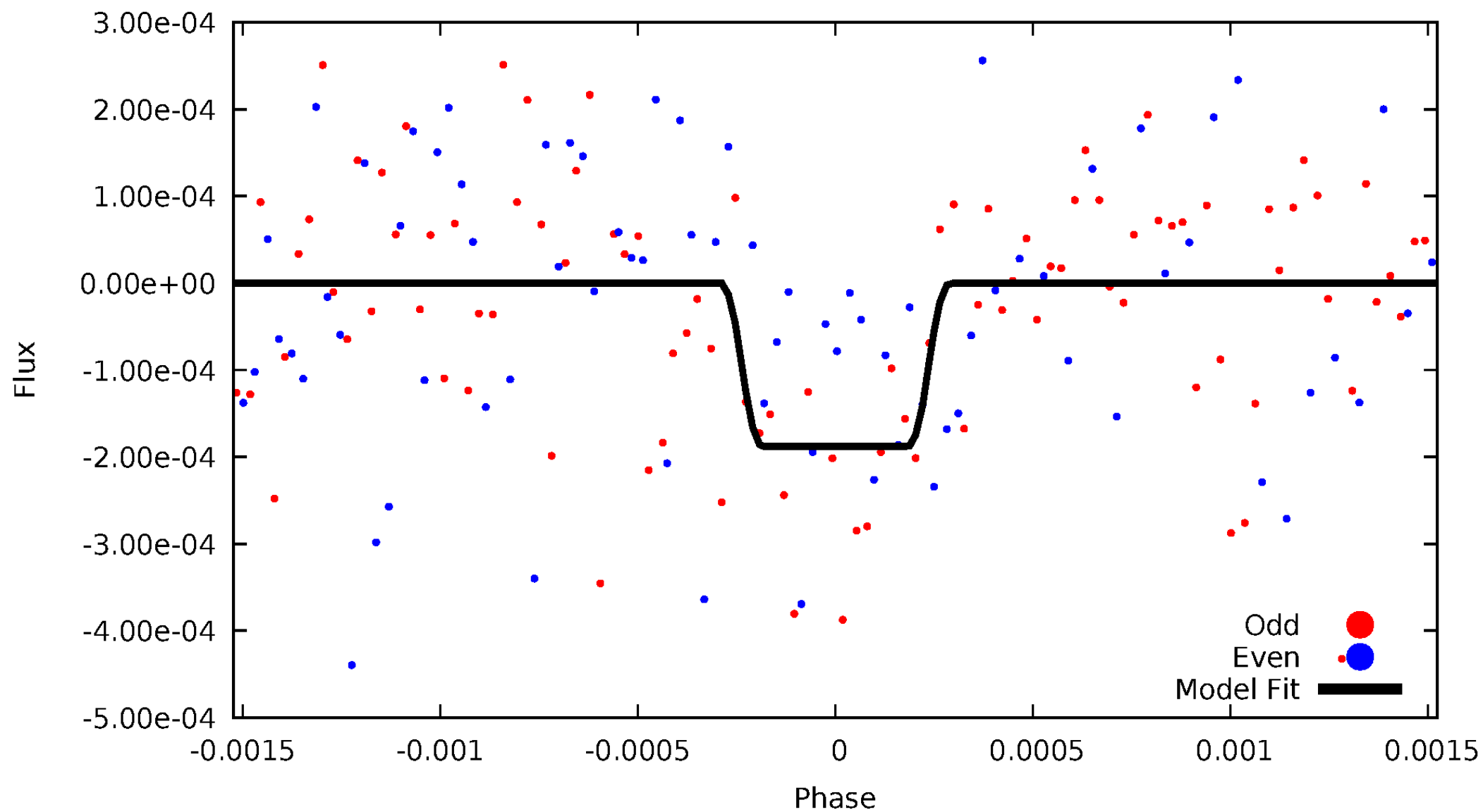
DV Odd/Even

TCE 007419157-01

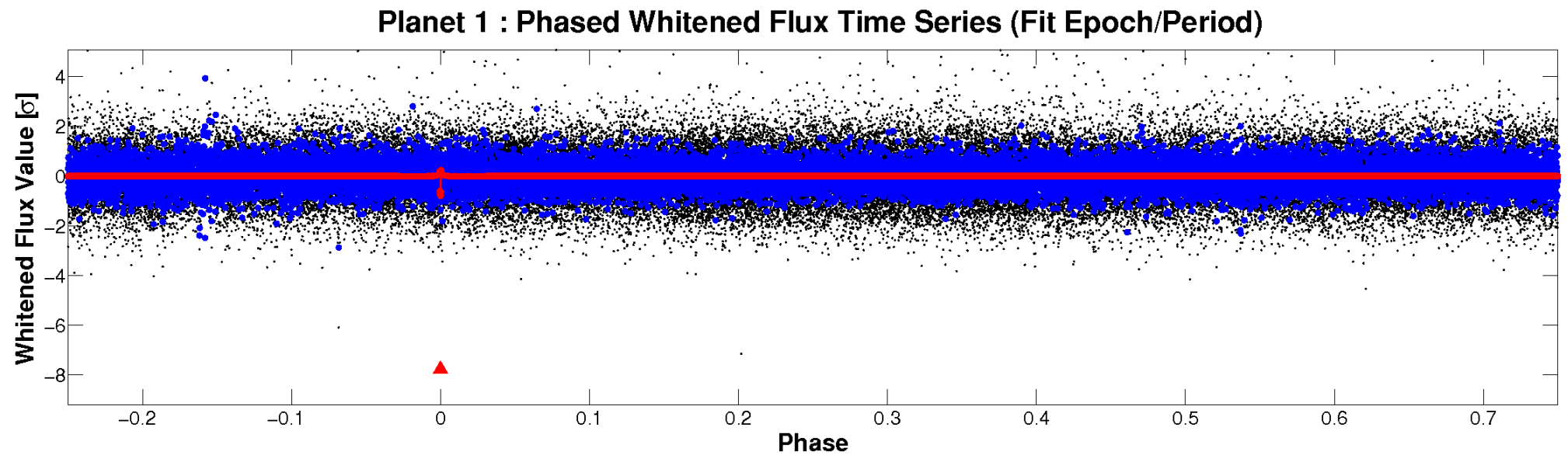
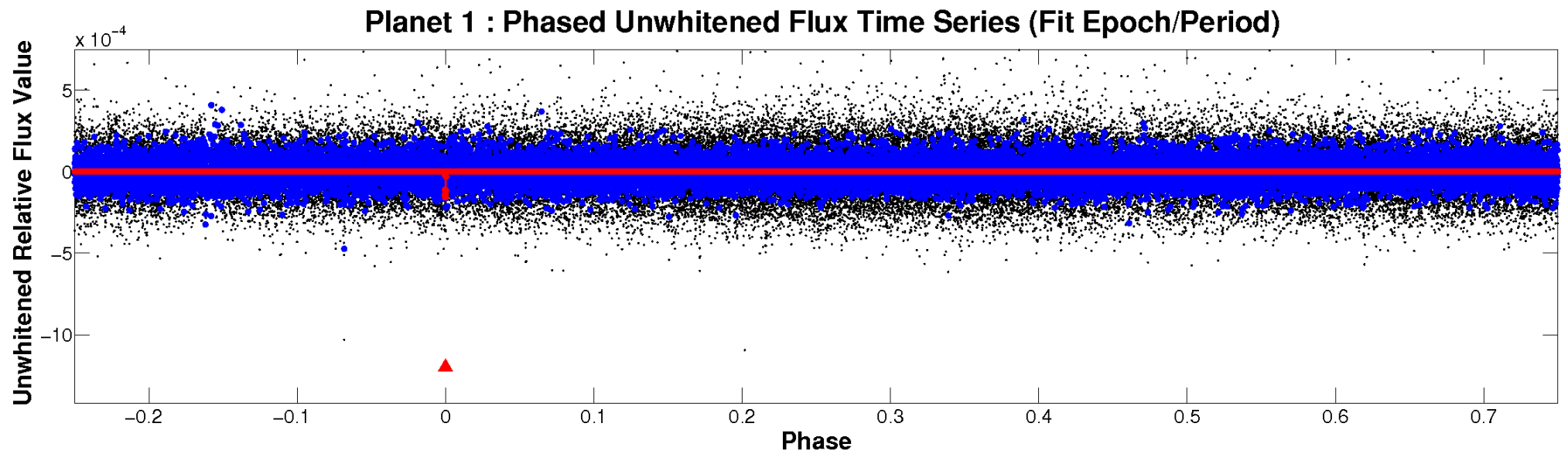


ALT Odd/Even

TCE 007419157-01

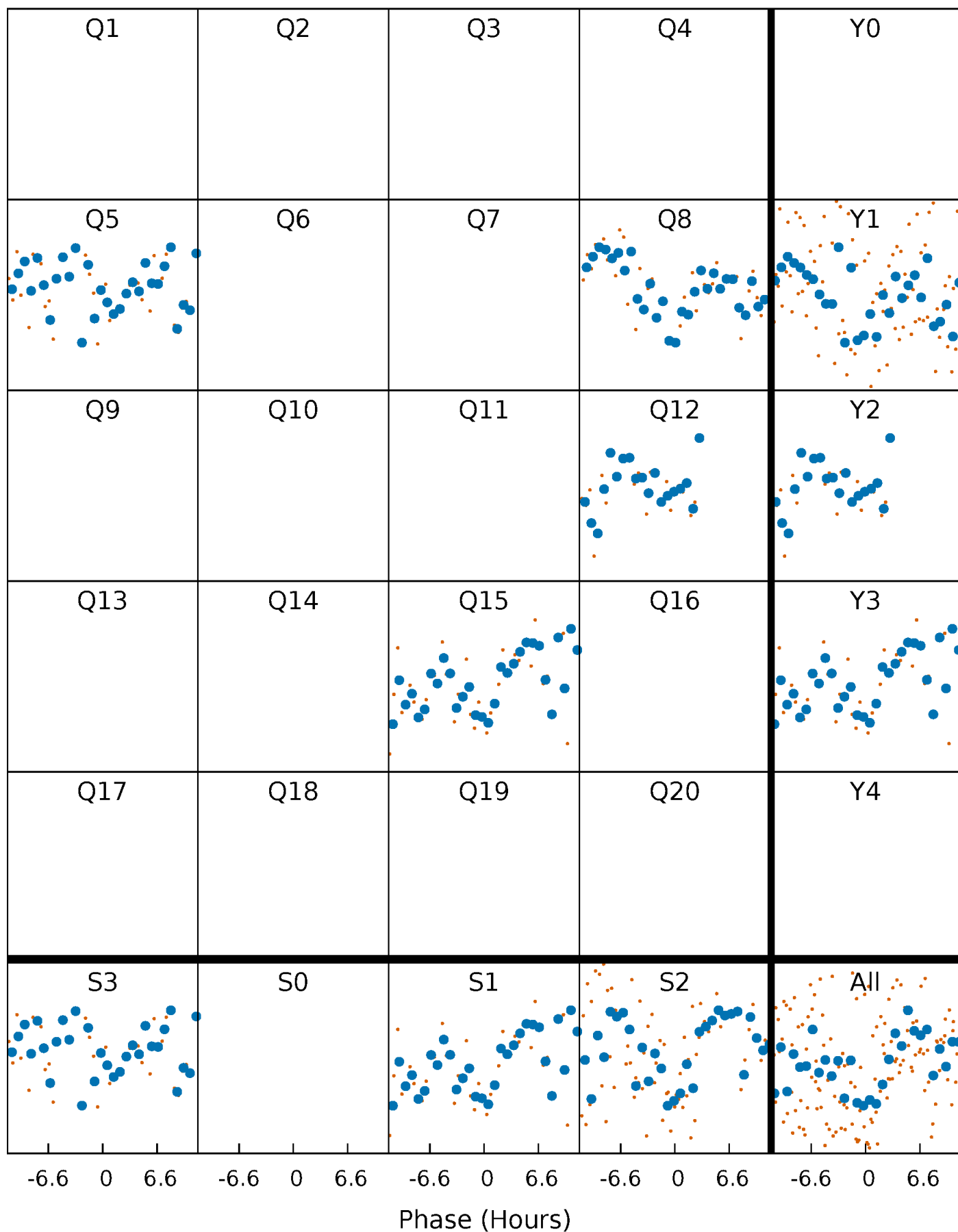


Non-Whitened Vs. Whitened Light Curve



PDC Quarter-Phased Transit Curves

TCE 007419157-01 P=332.727663 Days $T_0=451.097021$ (BKJD)



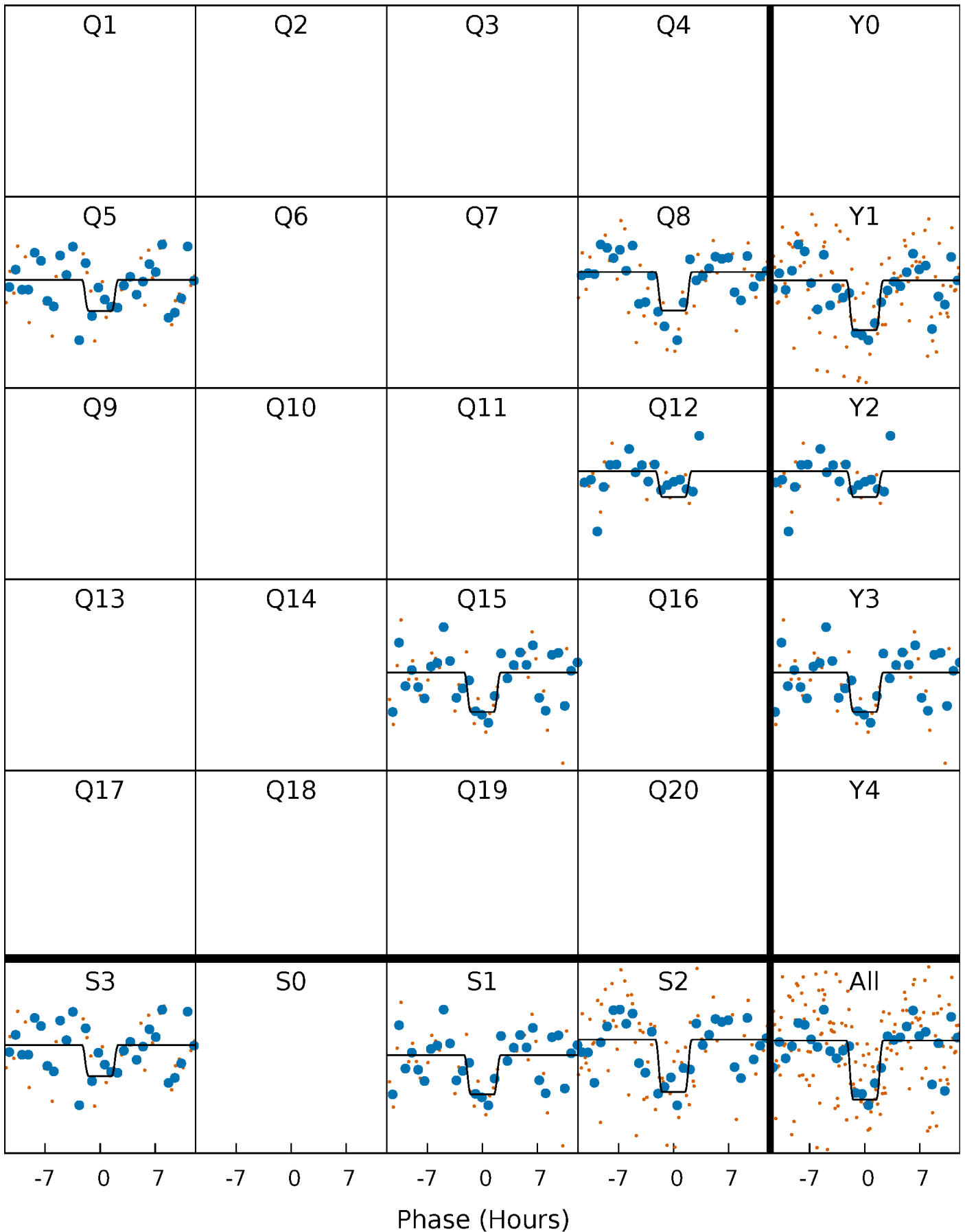
DV Quarter-Phased Transit Curves

TCE 007419157-01 P=332.727663 Days $T_0=451.097021$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

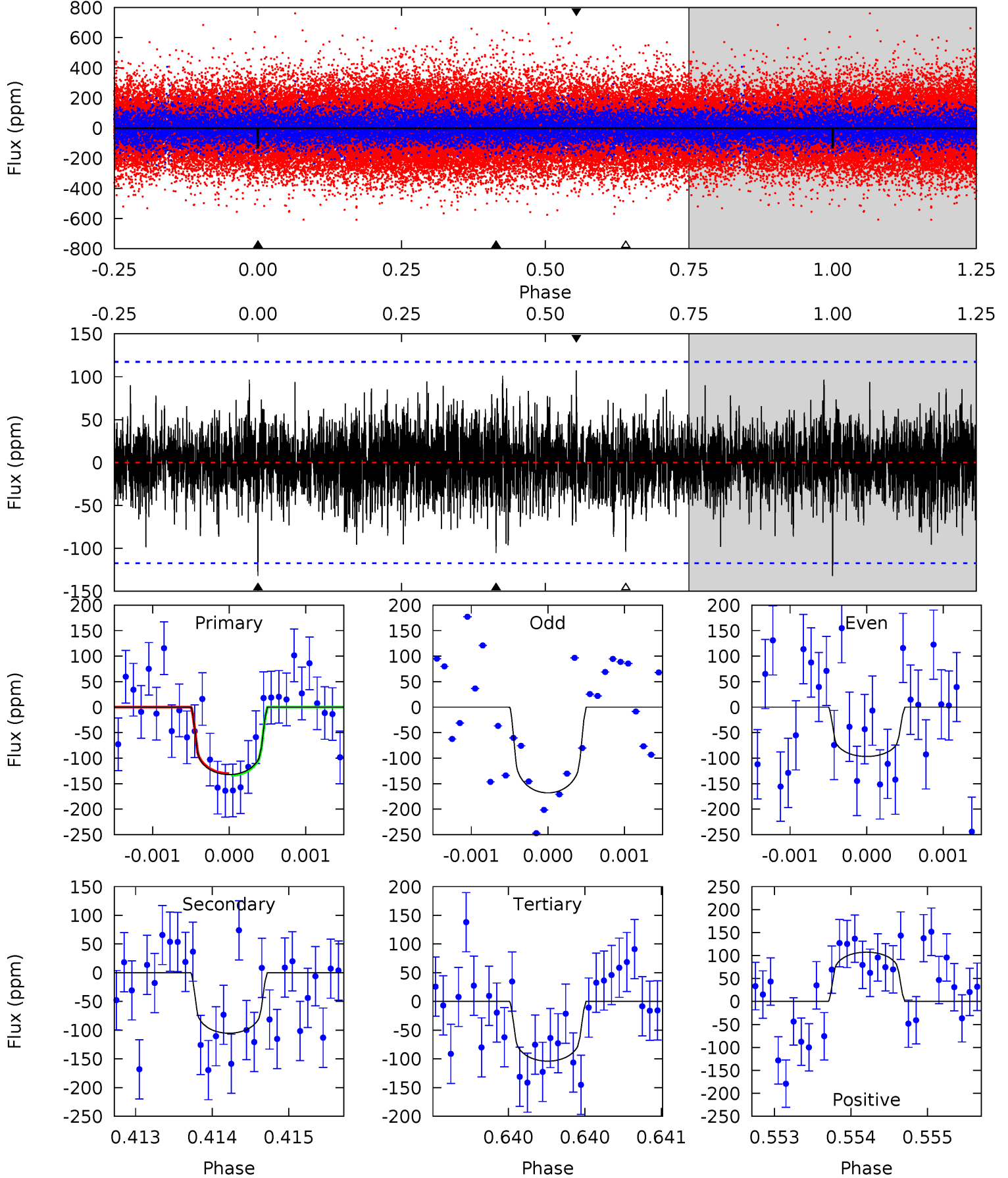
TCE 007419157-01 P=332.724906 Days $T_0=451.100660$ (BKJD)



DV Model-Shift Uniqueness Test

007419157-01, P = 332.727663 Days, E = 118.369358 Days

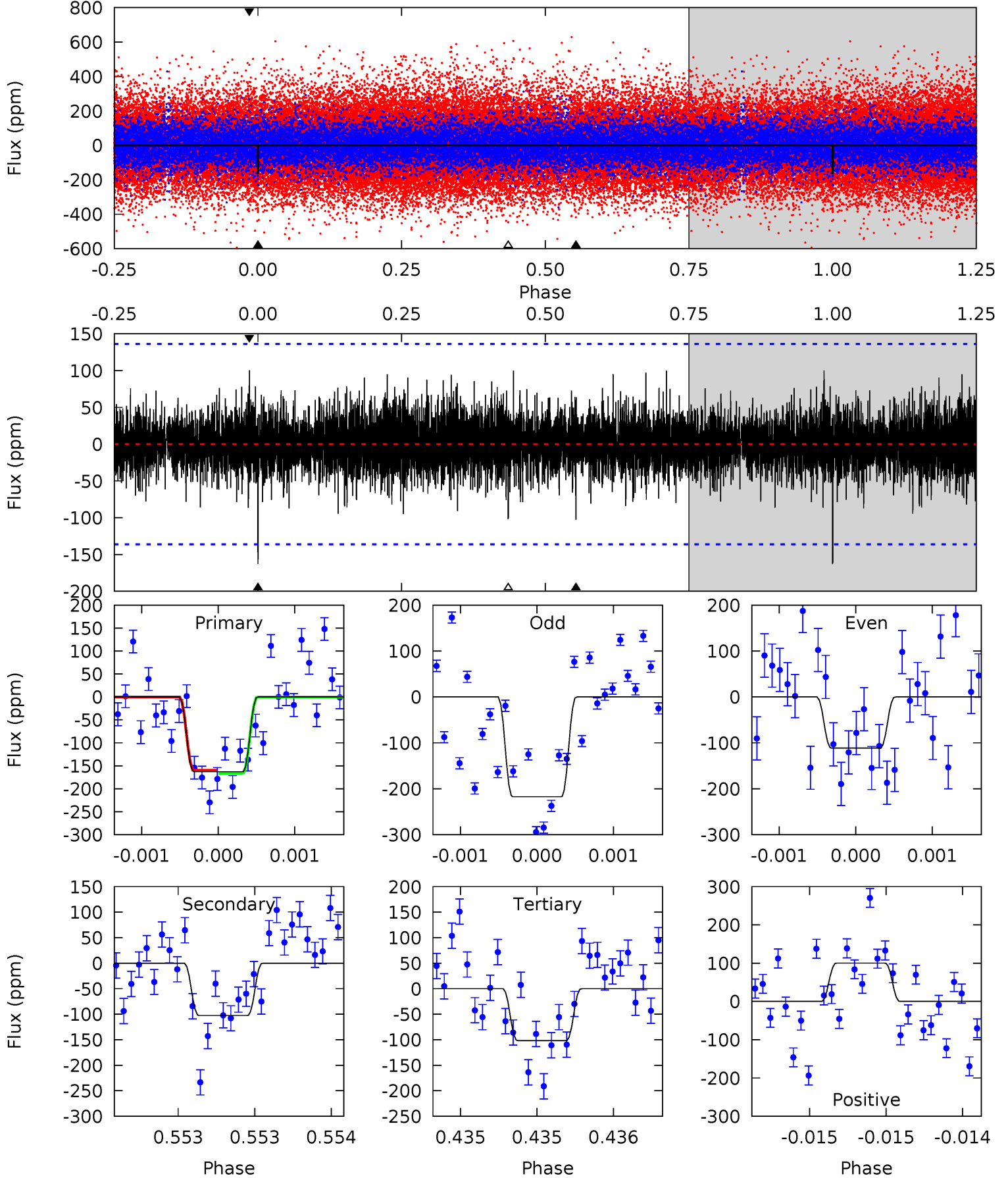
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.19	4.94	4.87	5.03	5.50	3.36	1.31	1.32	1.16	0.06	-0.09	1.67	0.98	0.45	0.08



Alt Model-Shift Uniqueness Test

007419157-01, P = 332.724906 Days, E = 118.375754 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.64	4.18	4.15	4.09	5.55	3.45	1.07	2.49	2.55	0.03	0.09	2.16	1.03	0.38	0.12



Stellar Parameters For KIC 007419157

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5956^{+142}_{-178}	$4.504^{+0.039}_{-0.221}$	$-0.100^{+0.250}_{-0.300}$	$0.934^{+0.294}_{-0.078}$	$1.017^{+0.134}_{-0.134}$	$1.759^{+0.383}_{-0.956}$
	+2%/-3%	+1%/-5%	+250%/-300%	+31%/-8%	+13%/-13%	+22%/-54%
Source	PHO1	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 007419157-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-105 ± 21	$1.62^{+1.46}_{-1.06}$	375^{+27}_{-17}	4979^{+3581}_{-1061}	$19186^{+134837}_{-13881}$
Alt.	-103 ± 25	$1.75^{+1.27}_{-1.05}$	374^{+25}_{-16}	4819^{+2791}_{-894}	16542^{+83199}_{-11156}

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 007419157-01. Kepler magnitude: 13.22. Transit SNR 4.80

There are 0 quarters with good PRF difference image offsets

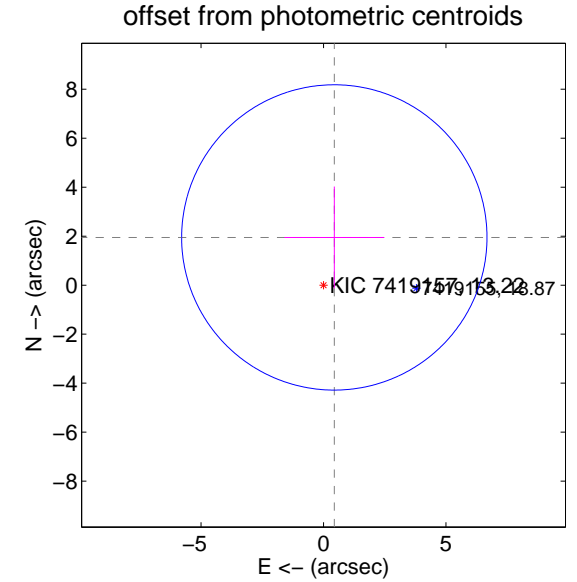
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	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	2.00 ± 2.08	0.96	-0.44 ± 2.04	1.95 ± 2.08

There is no PRF-fit offset from OOT-fit



There is no PRF-fit offset from KIC

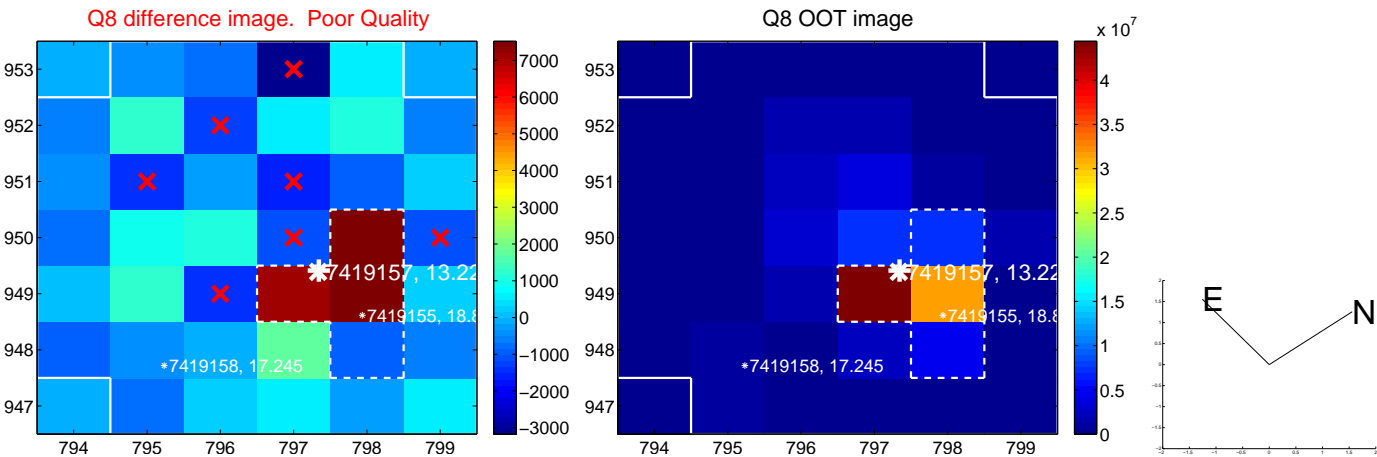
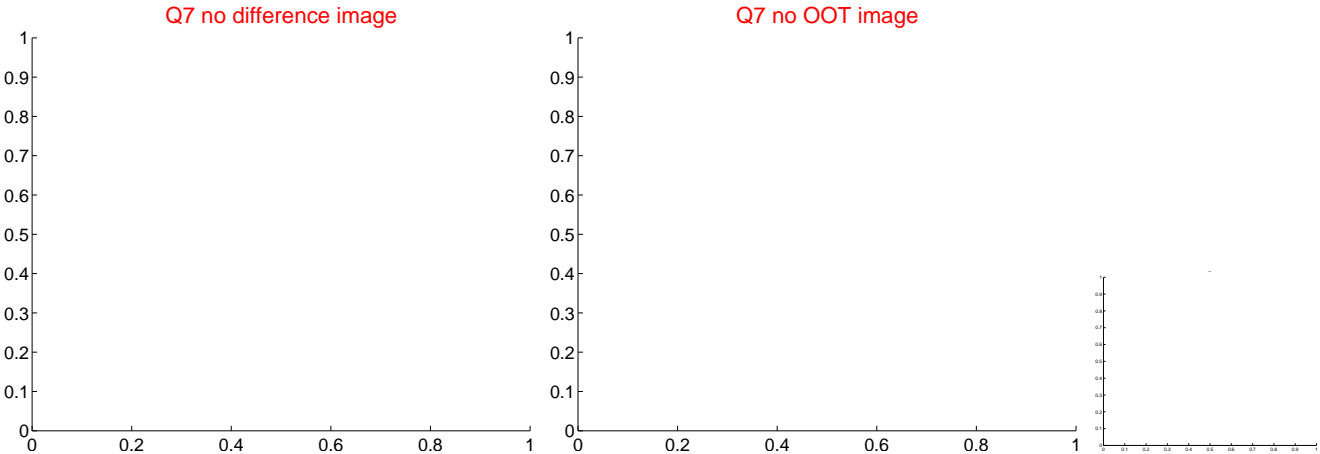
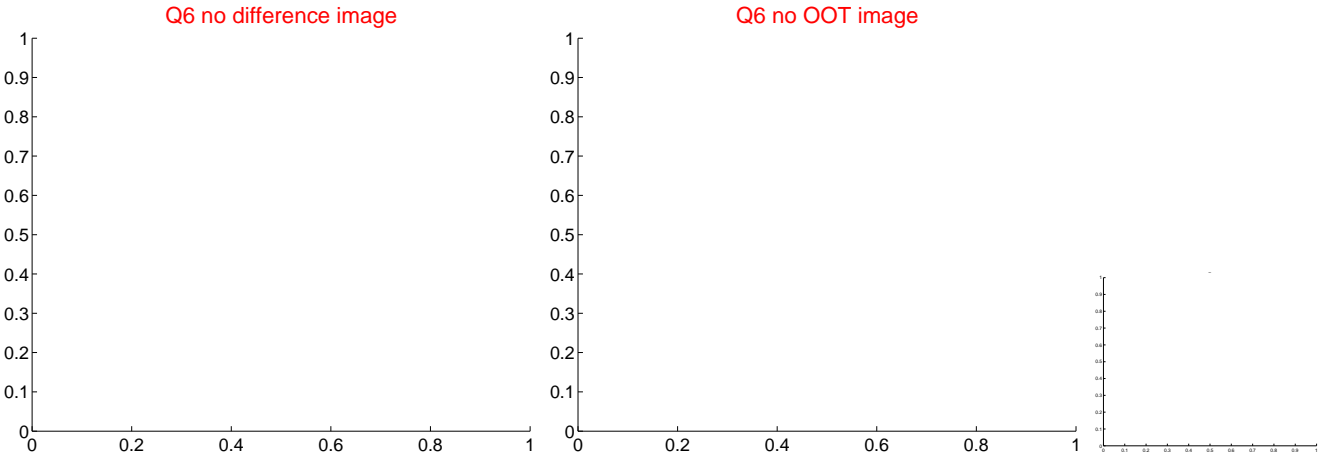
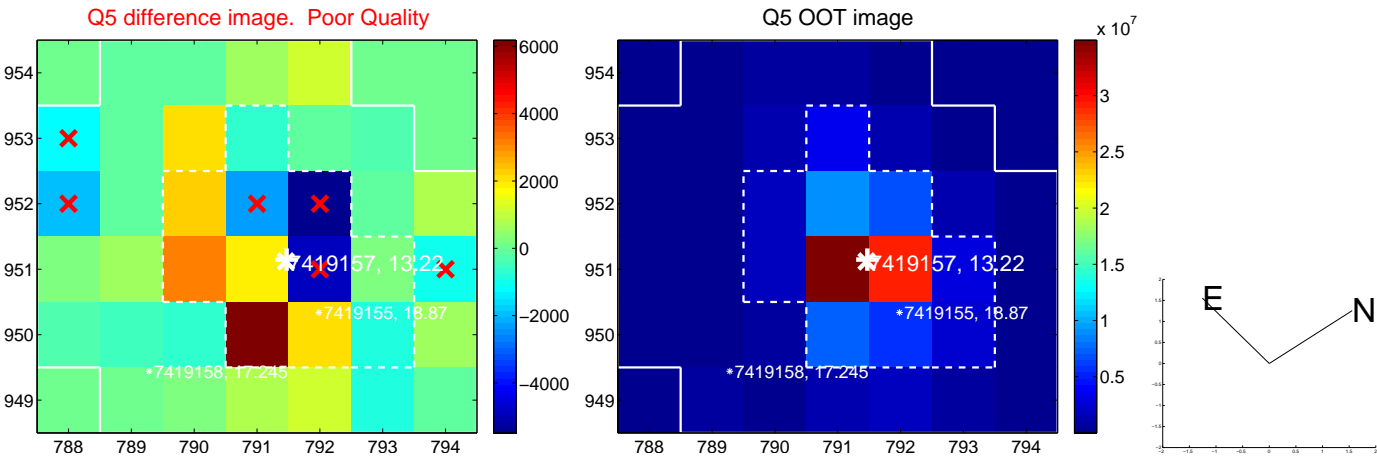


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



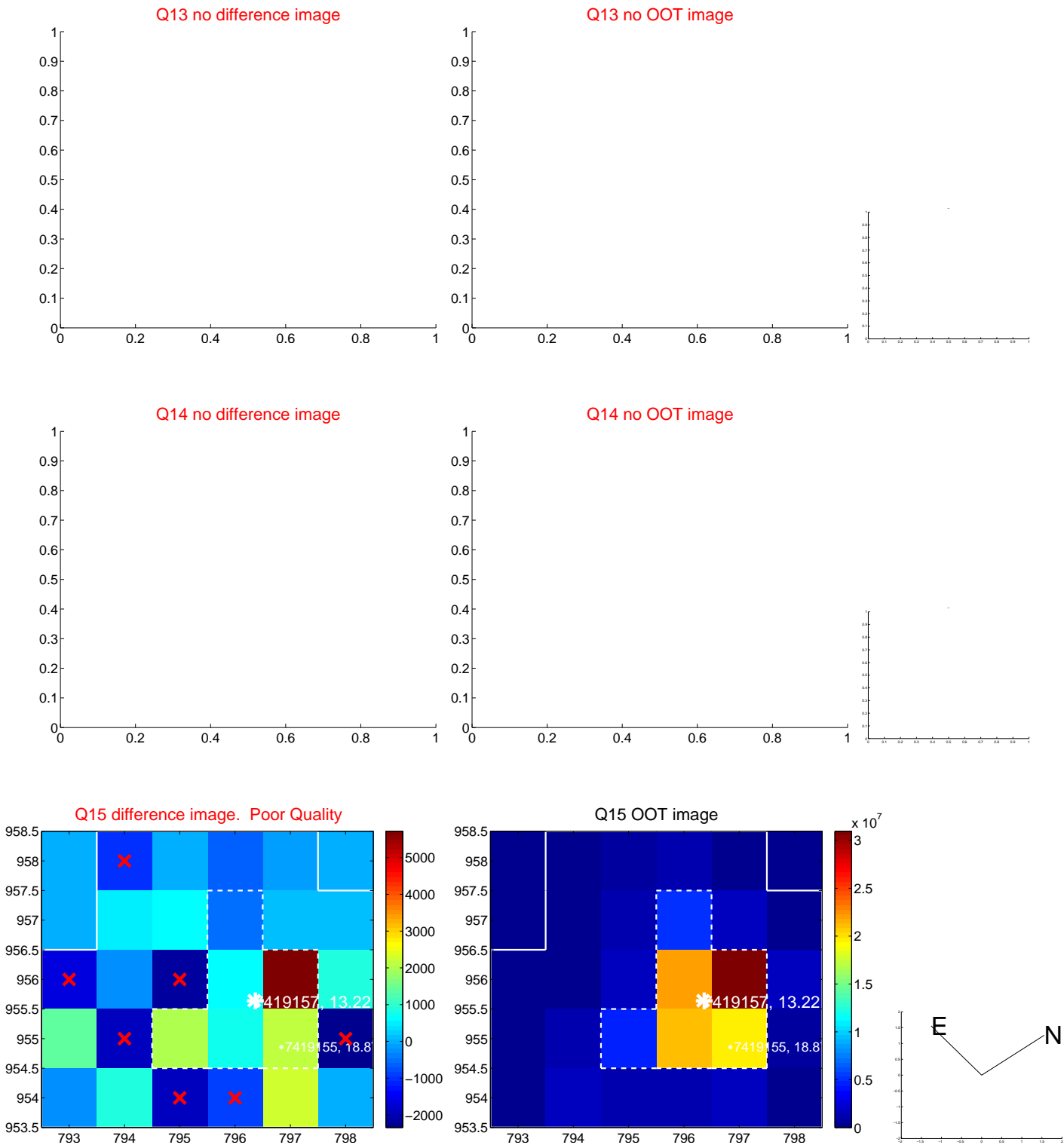
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



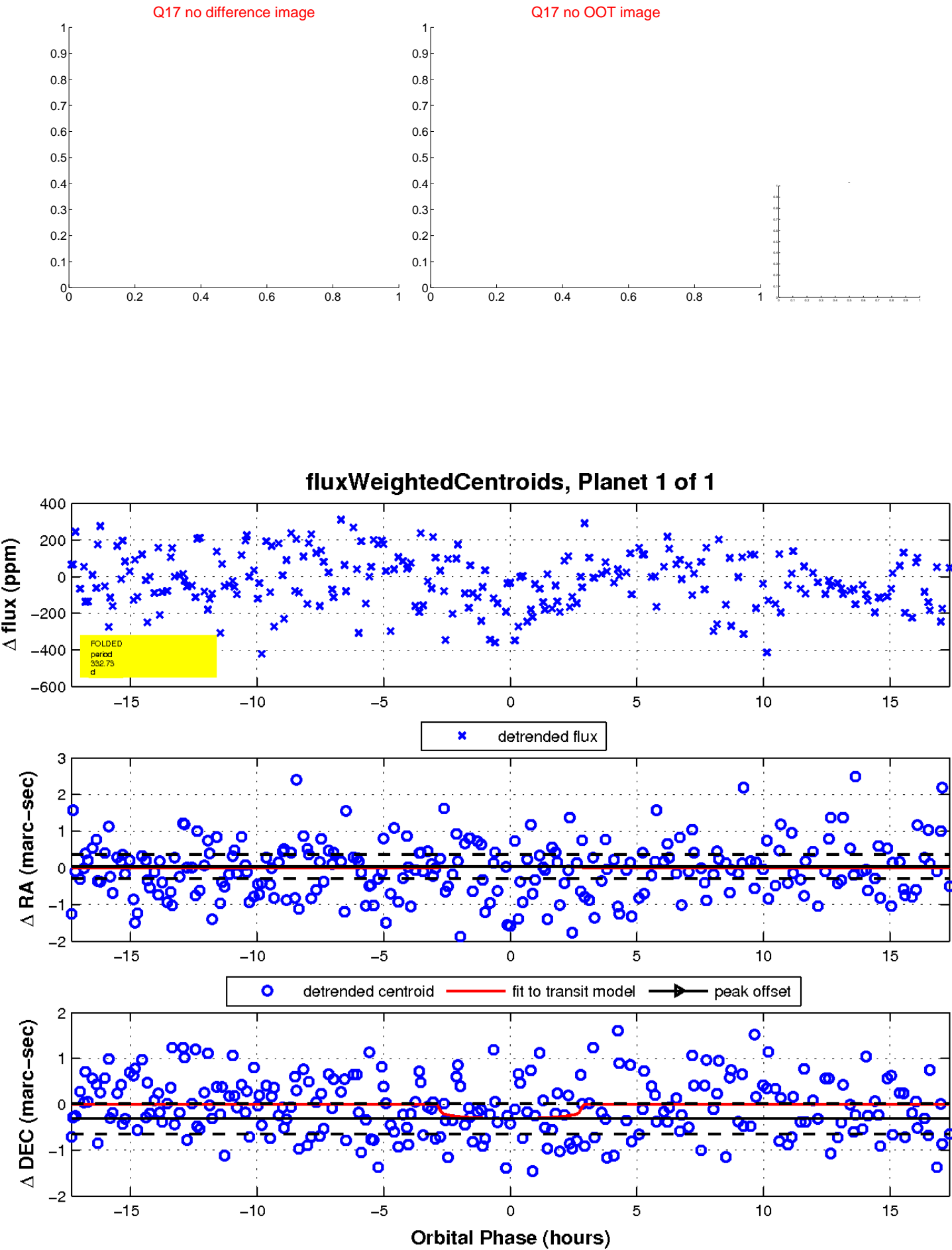
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

