

KIC 006037983

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})
006037983-01	OBS	No	378.549725	364.639922	1181.4	29.913	9.4	12.1	71.30	4008	526.00	537.66

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006037983-01	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—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.

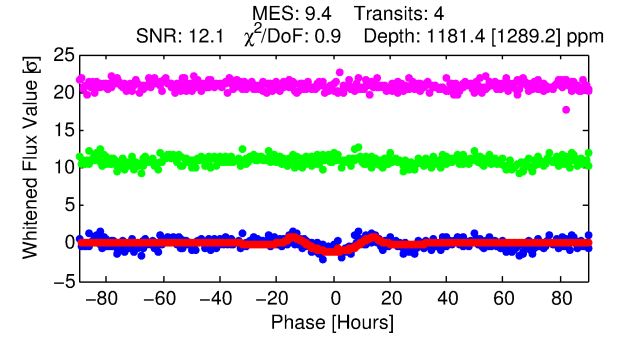
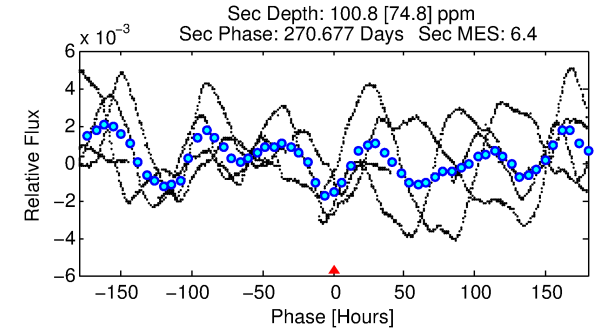
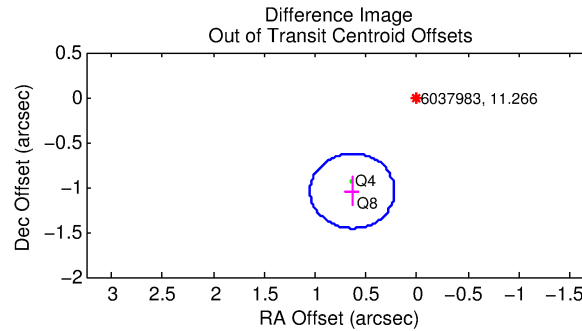
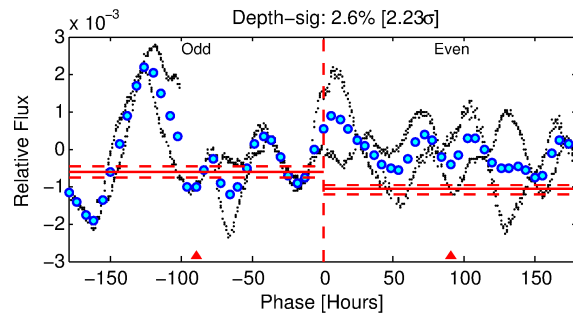
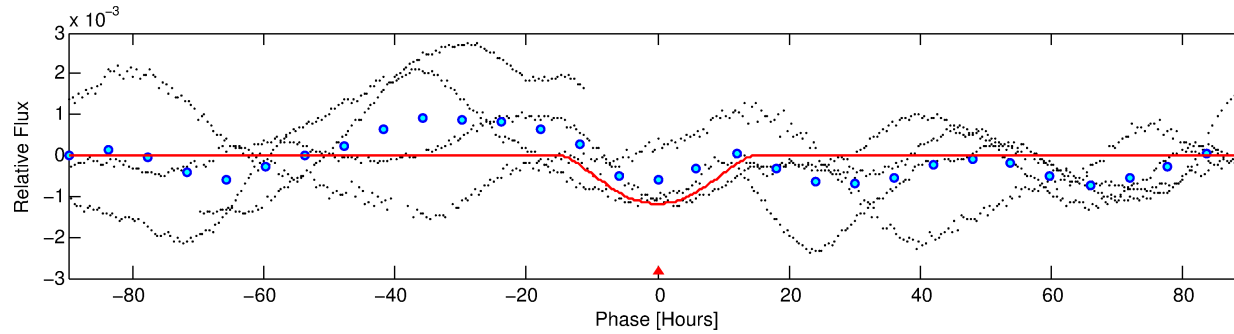
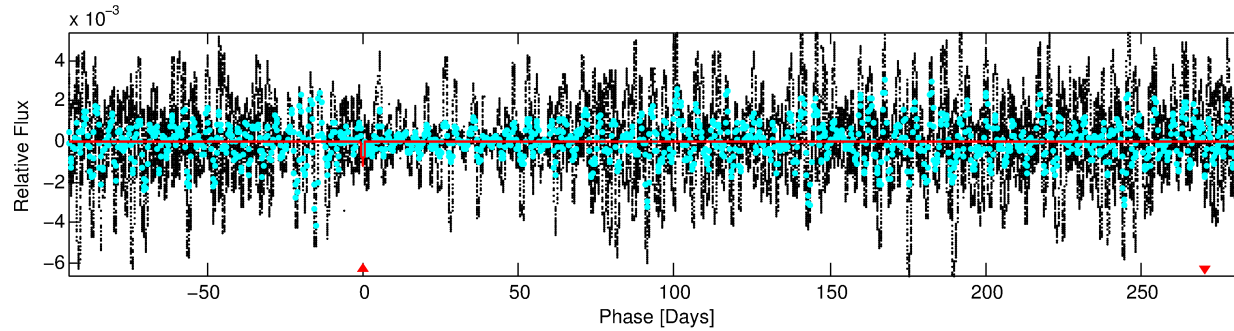
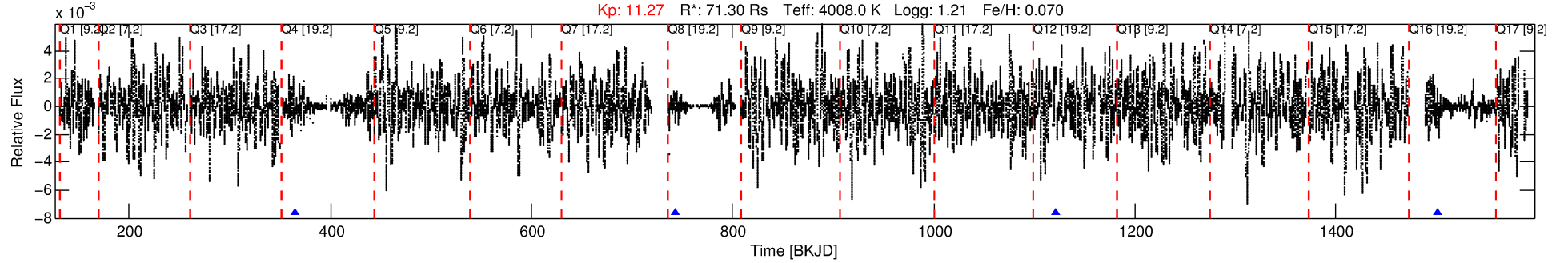
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006037983-01

No Significant Match Found

DV One-Page Summary

KIC: 6037983 Candidate: 1 of 1 Period: 378.550 d



DV Fit Results:

Period = 378.54973 [0.01461] d
Epoch = 364.6399 [0.0233] BKJD
Rp/R* = 0.0676 [0.0497]
a/R* = 36.16 [5.19]
b = 1.00 [0.02]
Seff = 537.66 [346.43]
Teq = 1228 [198] K
Rp = 526.00 [473.83] Re
a = 1.4786 [0.6484] AU
Ag = 0.44 [0.77] [-0.73 σ]
Teffp = 1545 [637] K [0.47 σ]

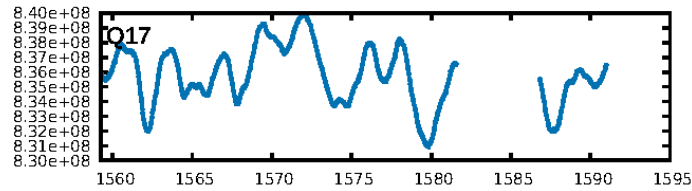
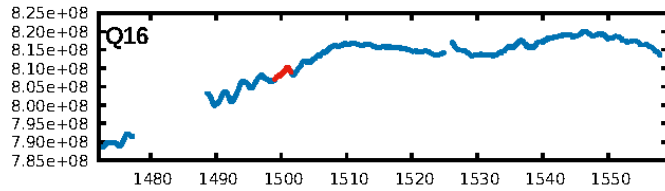
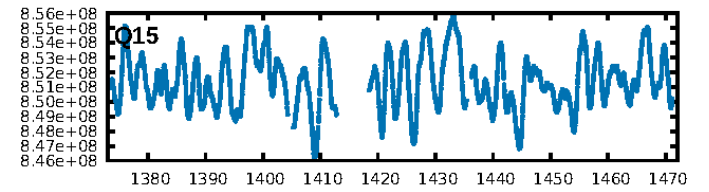
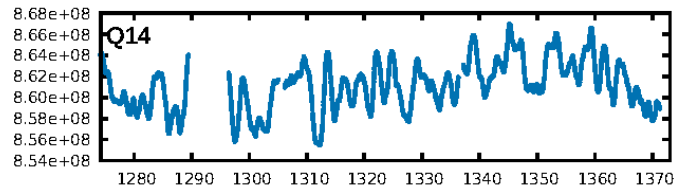
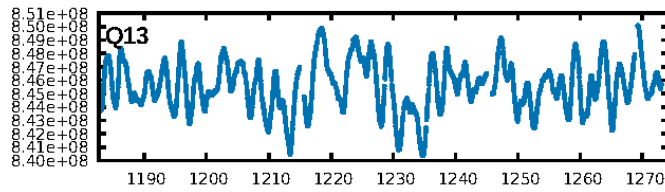
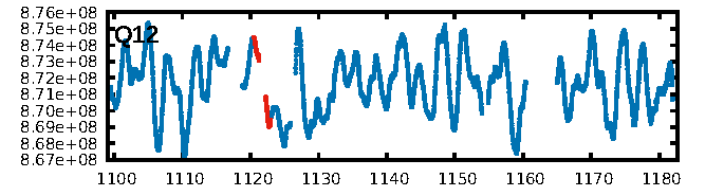
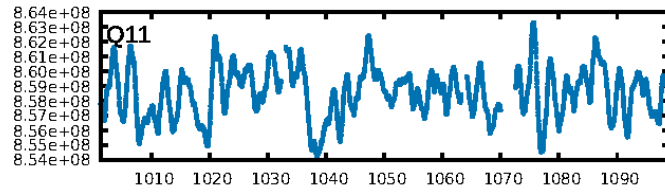
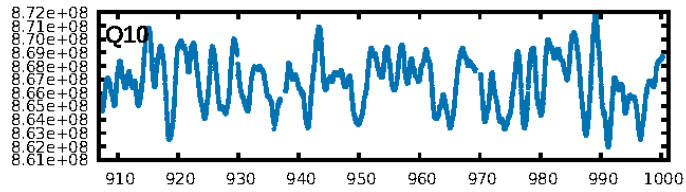
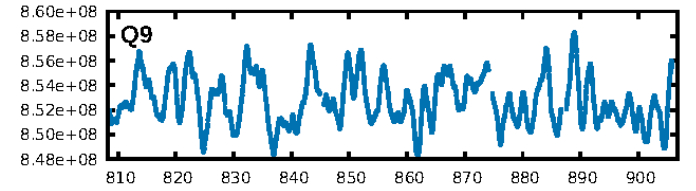
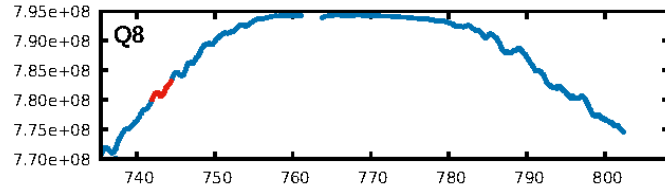
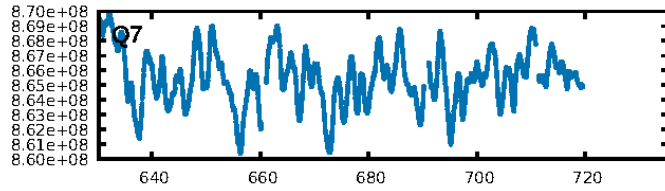
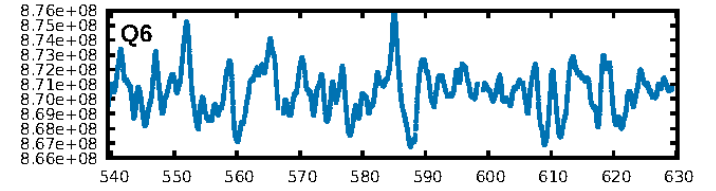
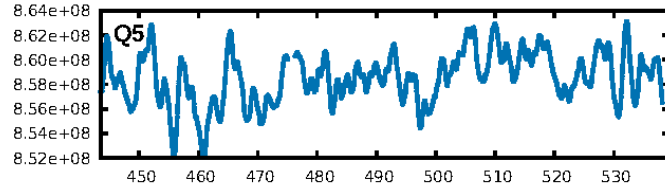
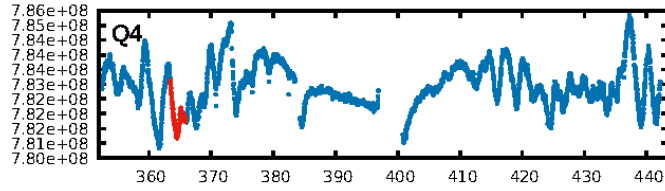
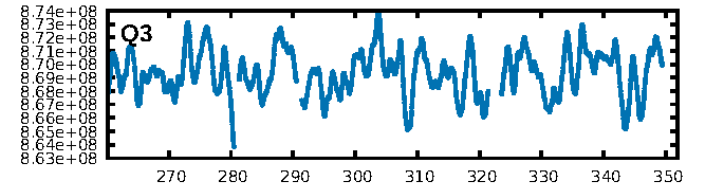
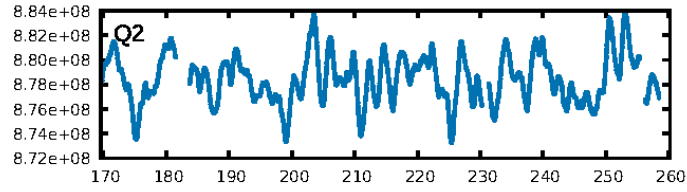
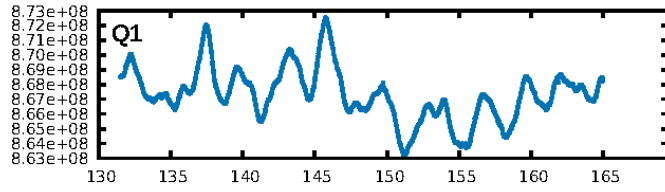
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 34.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.25e-07
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -0.3295
Centroid-sig: 2.0%
Centroid-so: 1.950 arcsec [1.72 σ]
OotOffset-rm: 1.221 arcsec [8.81 σ]
KicOffset-rm: 1.163 arcsec [7.89 σ]
OotOffset-st: 0/0/2/0 [2]
KicOffset-st: 0/0/2/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

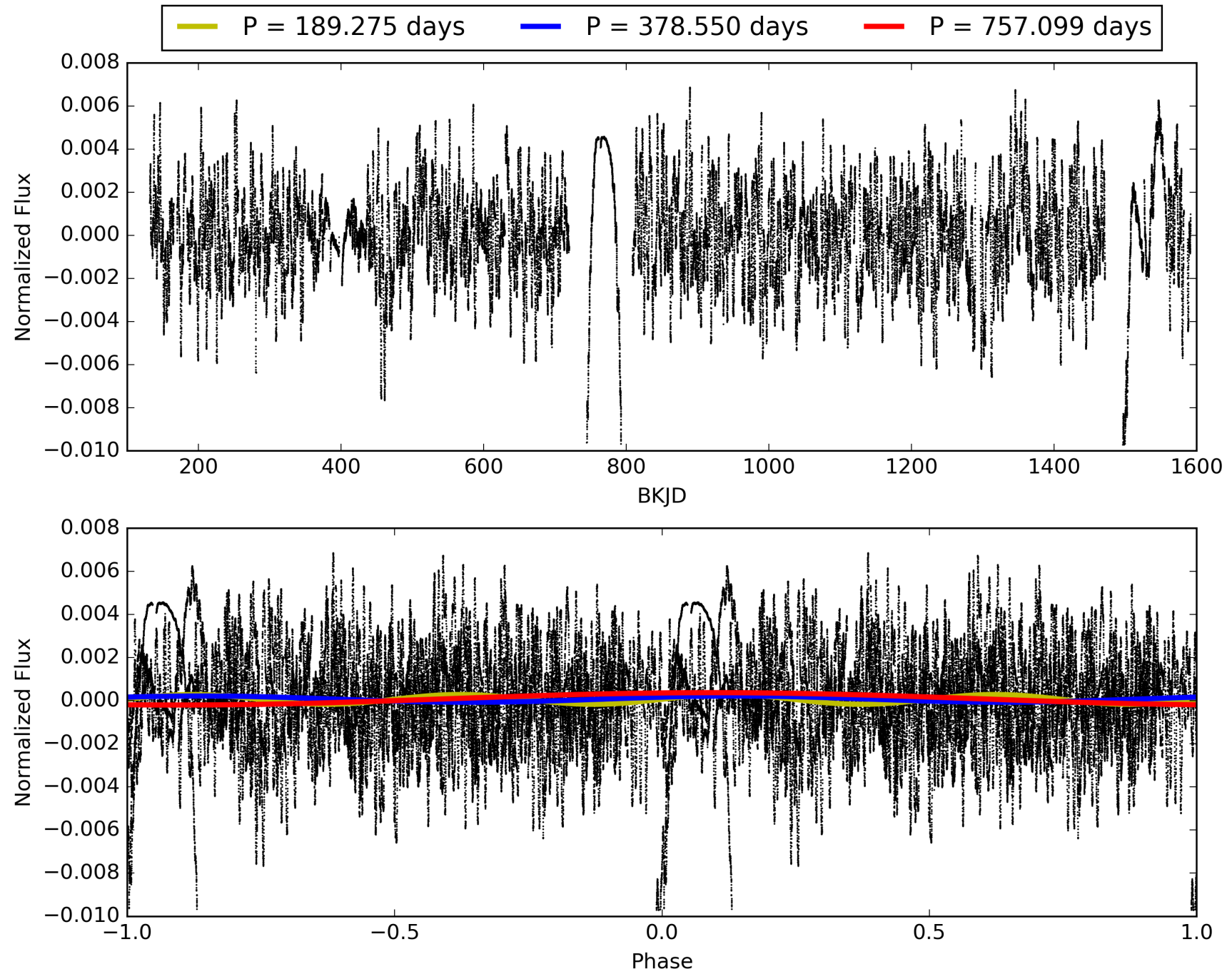
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 04:42:28 Z

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

TCE 006037983-01, PDC Light Curves

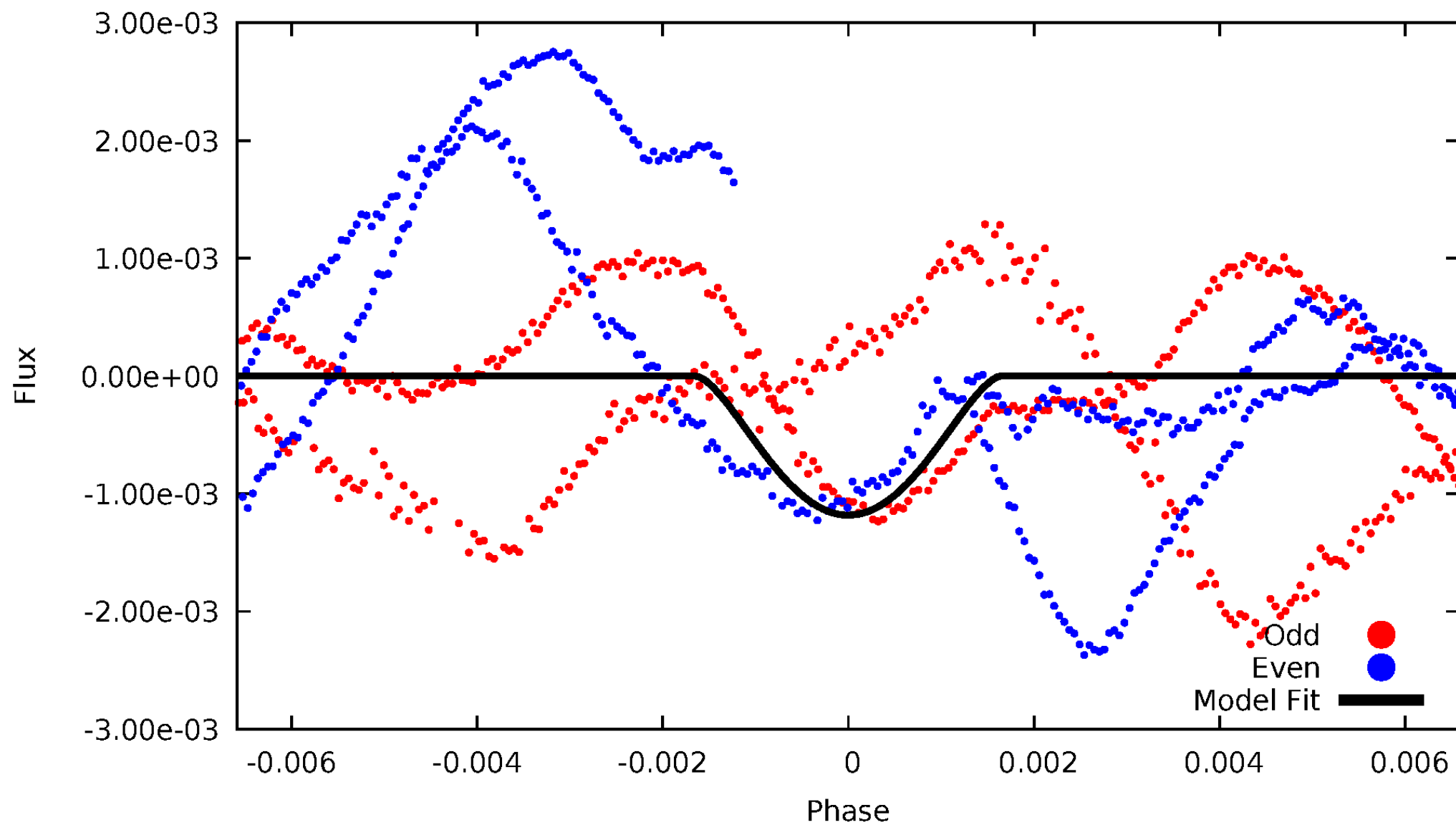


TCE 006037983-01



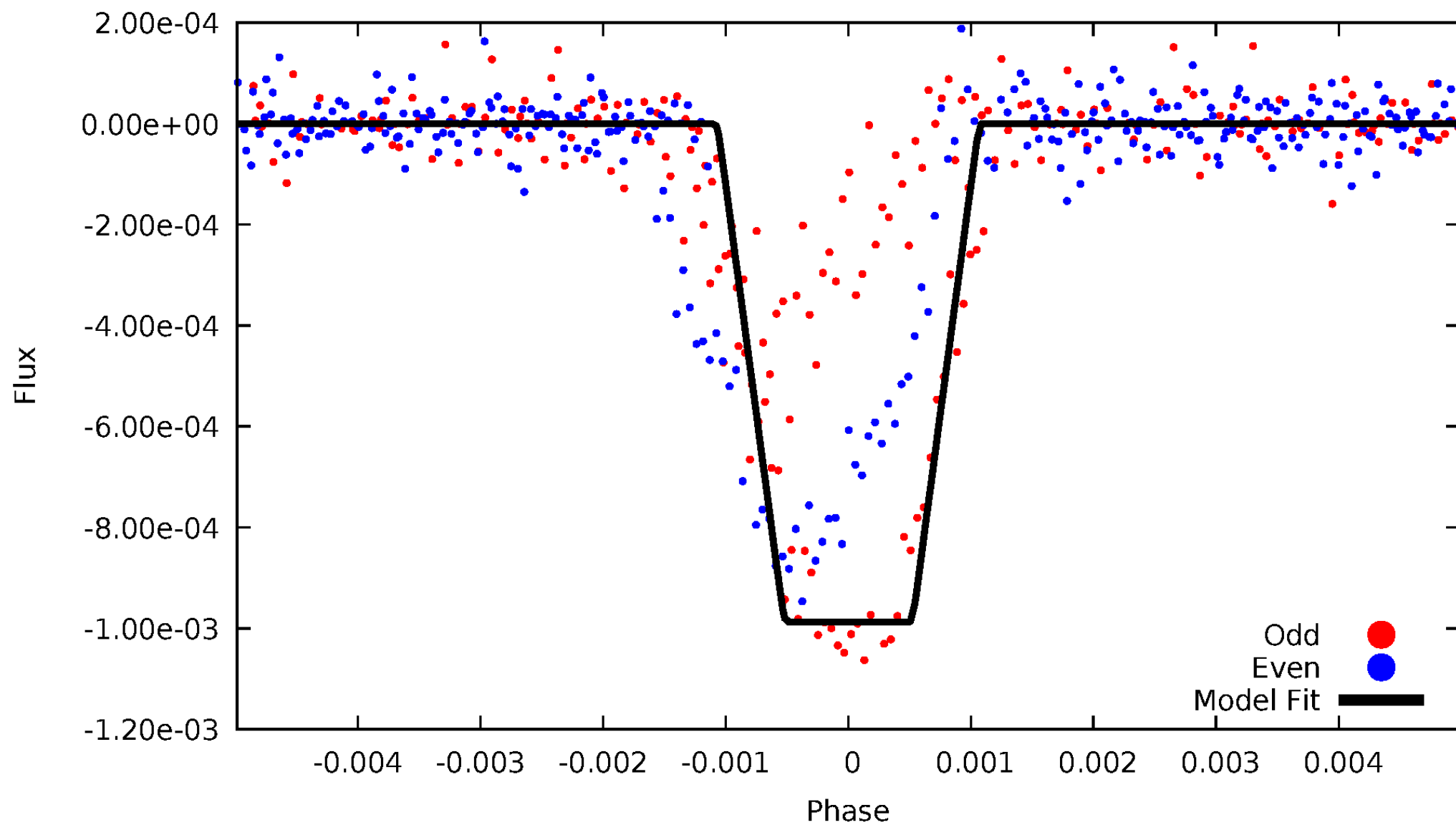
DV Odd/Even

TCE 006037983-01



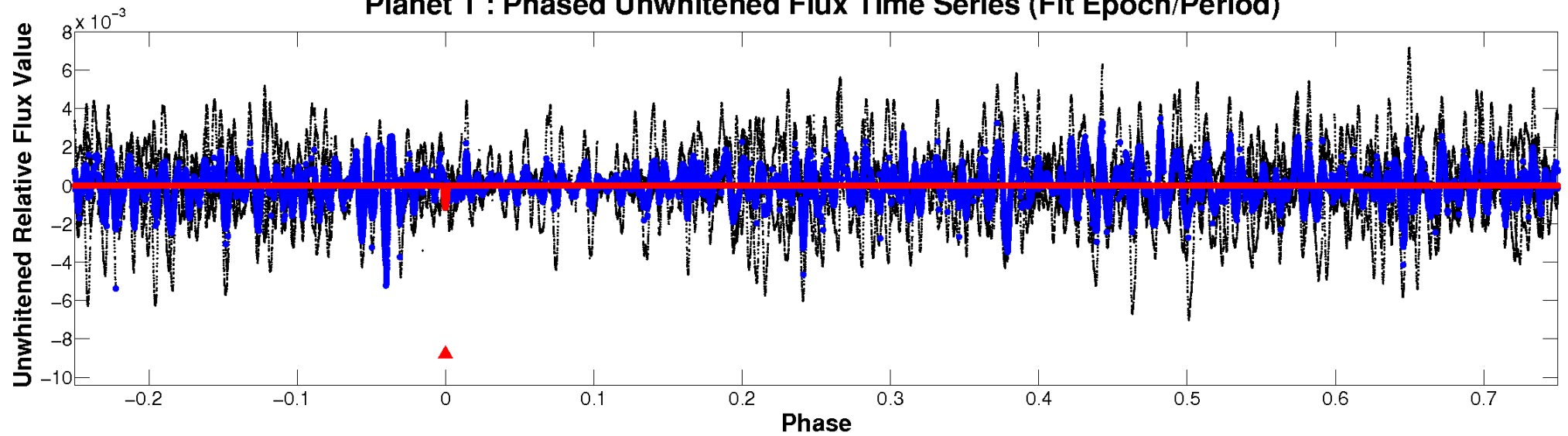
ALT Odd/Even

TCE 006037983-01

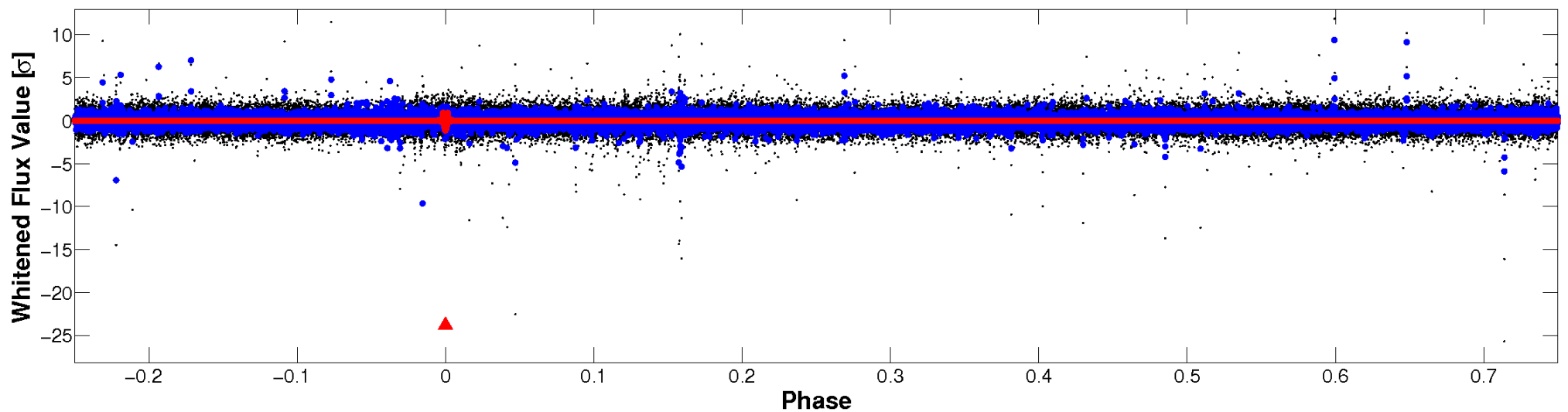


Non-Whitened Vs. Whitened Light Curve

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

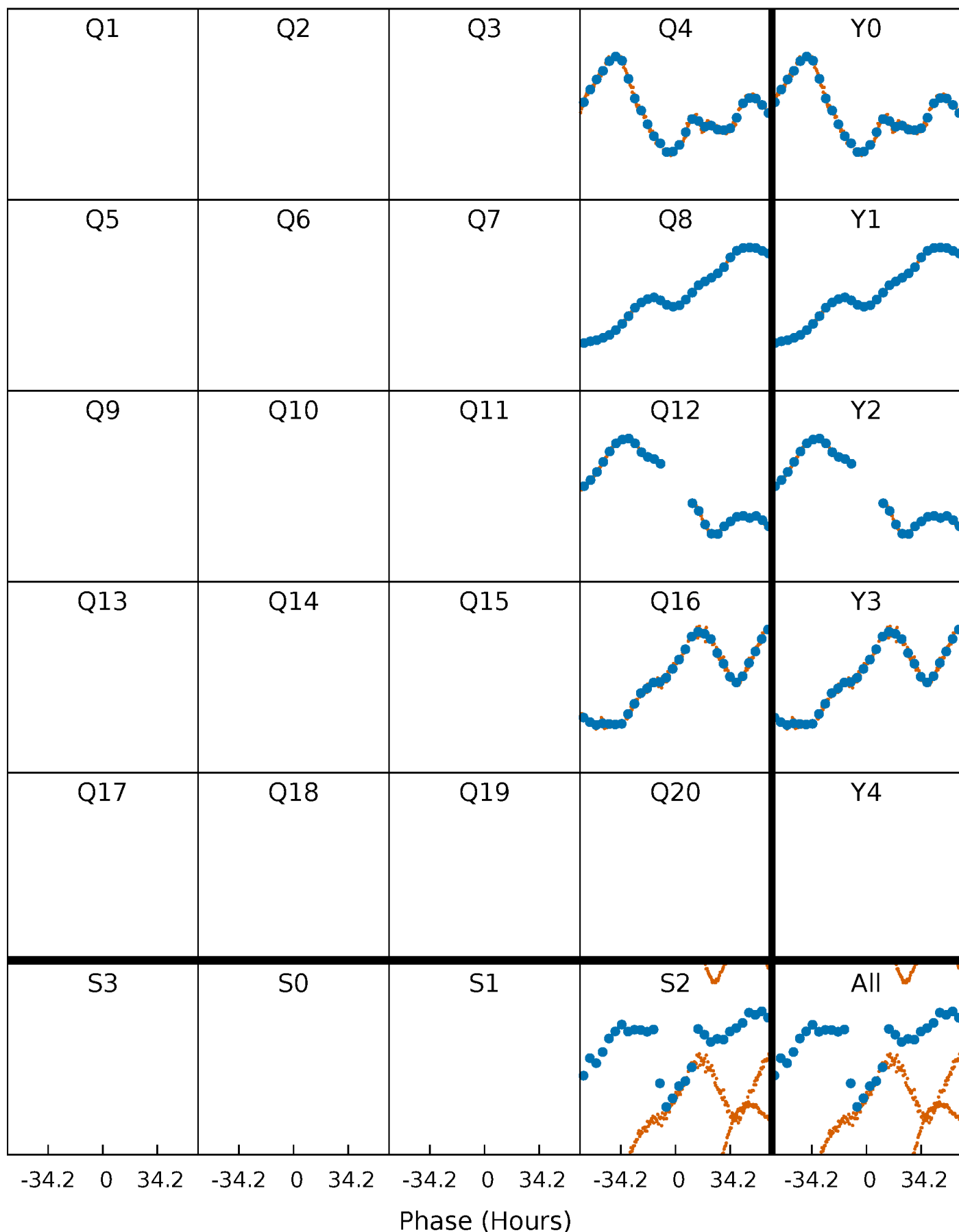


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



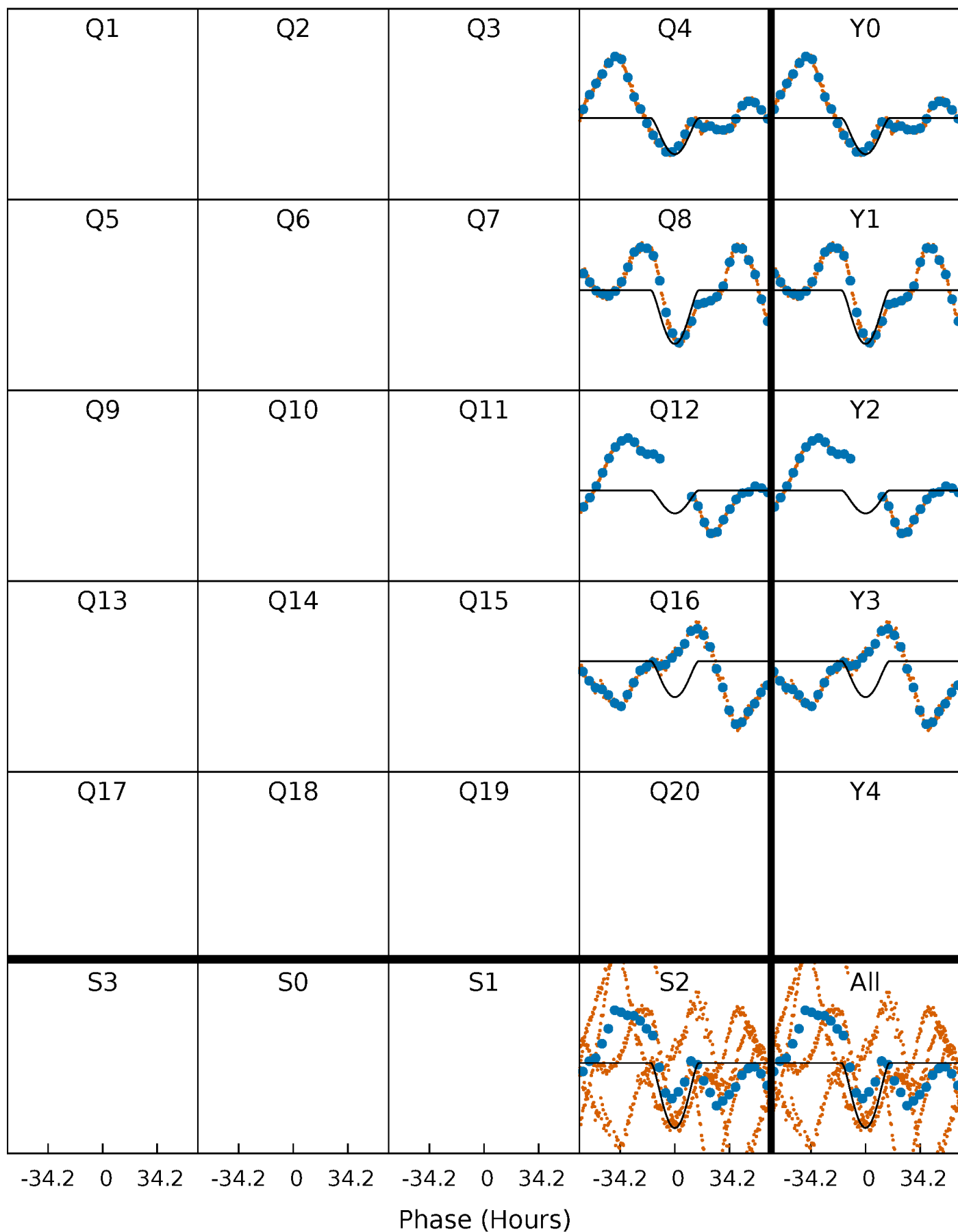
PDC Quarter-Phased Transit Curves

TCE 006037983-01 P=378.549725 Days $T_0=364.639922$ (BKJD)



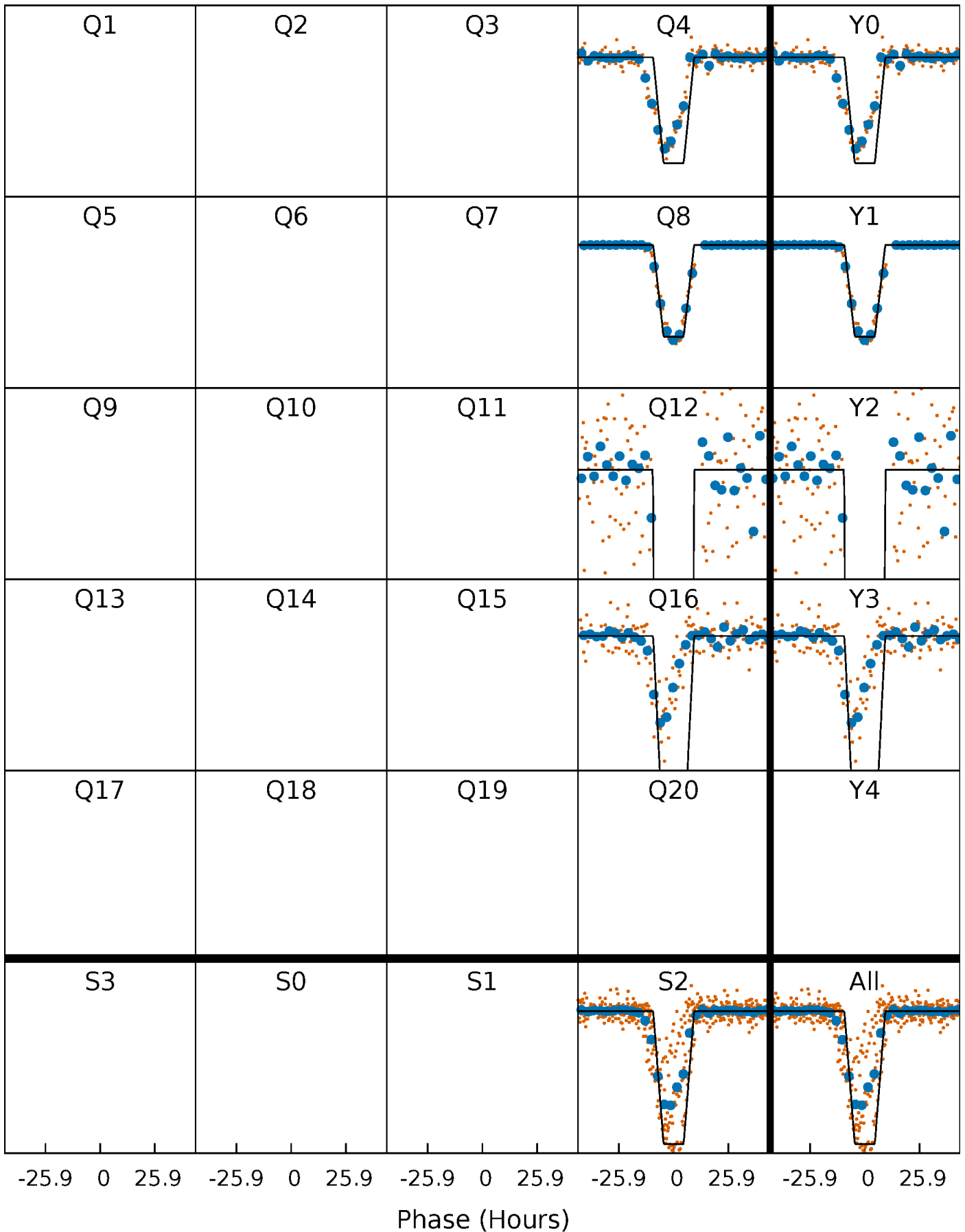
DV Quarter-Phased Transit Curves

TCE 006037983-01 P=378.549725 Days $T_0=364.639922$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

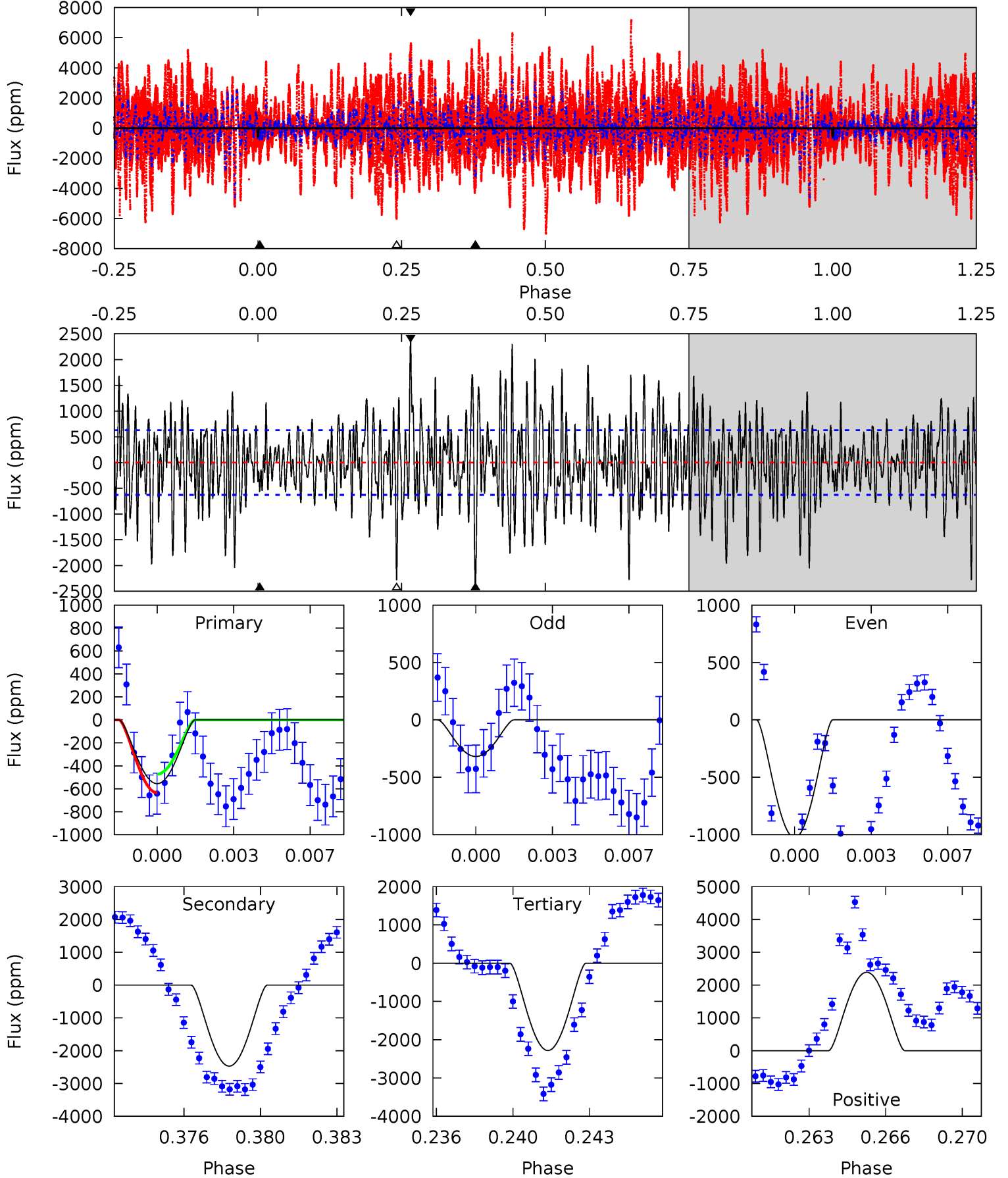
TCE 006037983-01 P=378.524888 Days $T_0=364.655711$ (BKJD)



DV Model-Shift Uniqueness Test

006037983-01, P = 378.549725 Days, E = 364.639922 Days

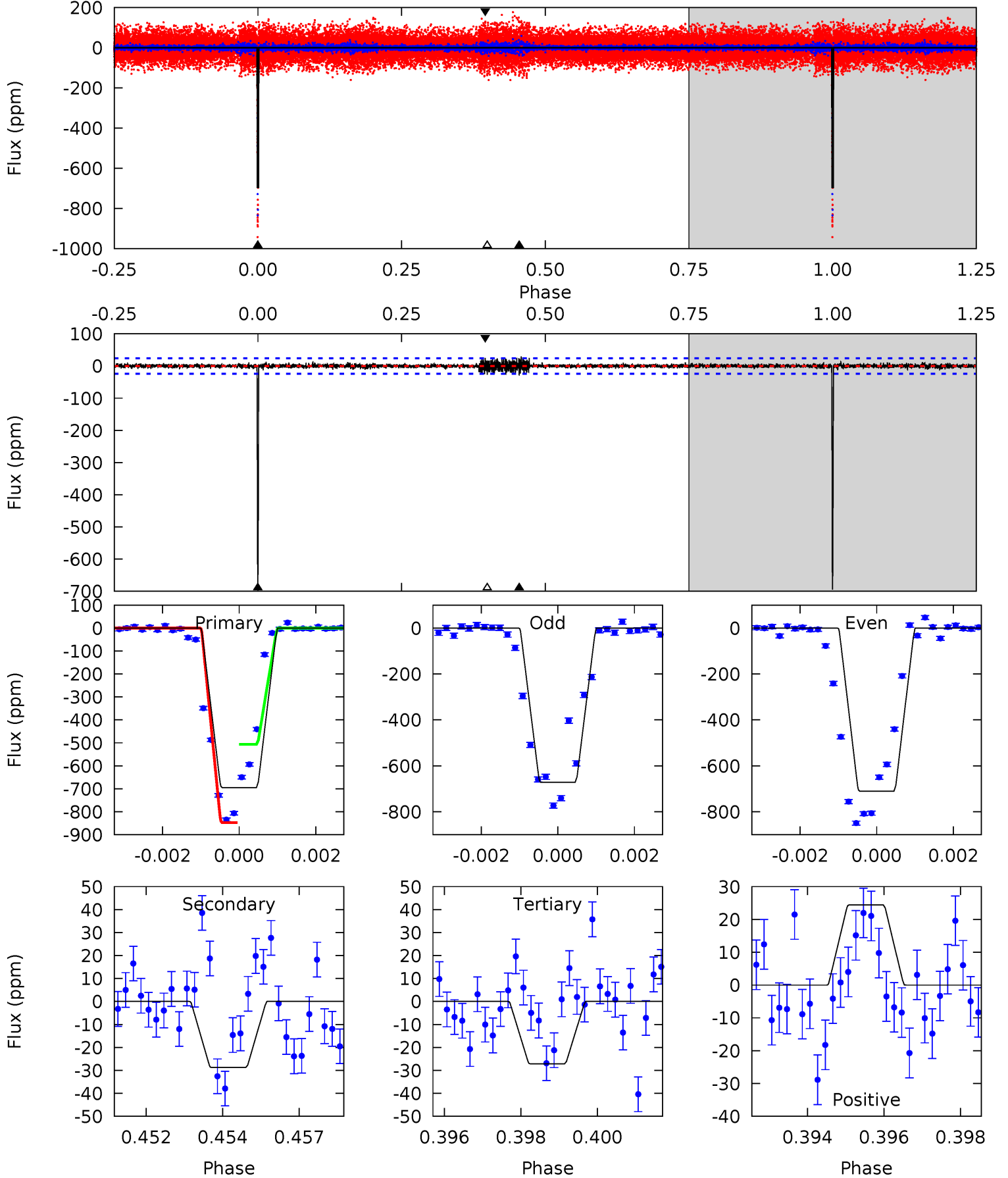
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.62	20.5	18.9	19.9	5.23	2.94	5.70	-14.3	-15.2	1.58	0.68	2.86	-3.83	0.49	0.68



Alt Model-Shift Uniqueness Test

006037983-01, P = 378.524888 Days, E = 364.655711 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
152.6	6.32	5.97	5.36	5.31	3.07	0.92	146.7	147.3	0.36	0.96	5.30	0.91	0.04	0



Stellar Parameters For KIC 006037983

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4008^{+72}_{-80}	$1.210^{+0.350}_{-0.150}$	$0.070^{+0.200}_{-0.300}$	$71.302^{+6.951}_{-37.070}$	$3.006^{+0.458}_{-1.830}$	$0.000^{+0.000}_{-0.000}$
	+2%/-2%	+29%/-12%	+286%/-429%	+10%/-52%	+15%/-61%	+393%/-34%
Source	SPE14	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 006037983-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-2471 ± 120	$526.65^{+413.80}_{-313.78}$	1714^{+77}_{-158}	3509^{+1378}_{-516}	10^{+51}_{-7}
Alt.	-29 ± 5	$357.60^{+334.80}_{-245.12}$	1710^{+83}_{-164}	-1764^{+4566}_{-410}	$0.268^{+2.265}_{-0.195}$

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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

DV Centroid Data

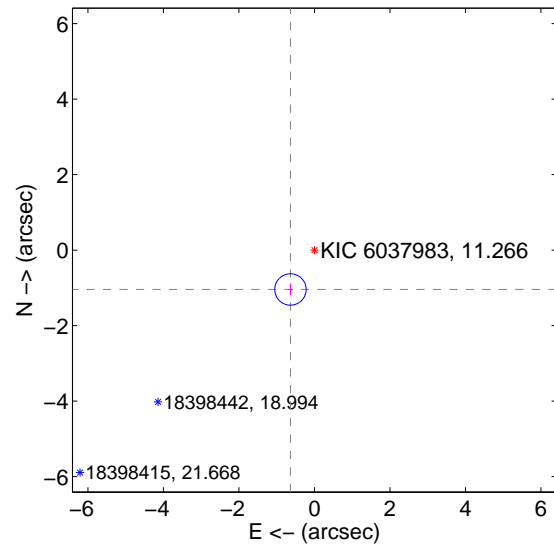
Supplemental centroid analysis for 006037983-01. **Kepler magnitude: 11.27.** Transit SNR 12.07

There are 2 quarters with good PRF difference image offsets

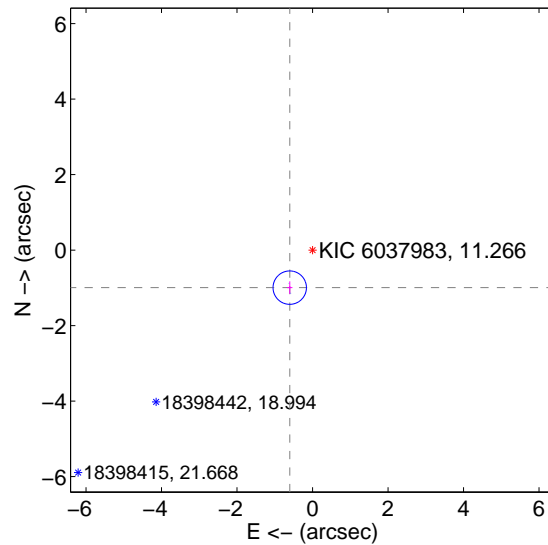
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.221 ± 0.139	8.81	0.636 ± 0.067	-1.043 ± 0.157
PRF-fit source offset from KIC position	1.163 ± 0.147	7.89	0.604 ± 0.072	-0.994 ± 0.167
photometric centroid source offset	1.95 ± 1.13	1.72	-0.94 ± 0.89	1.71 ± 1.19

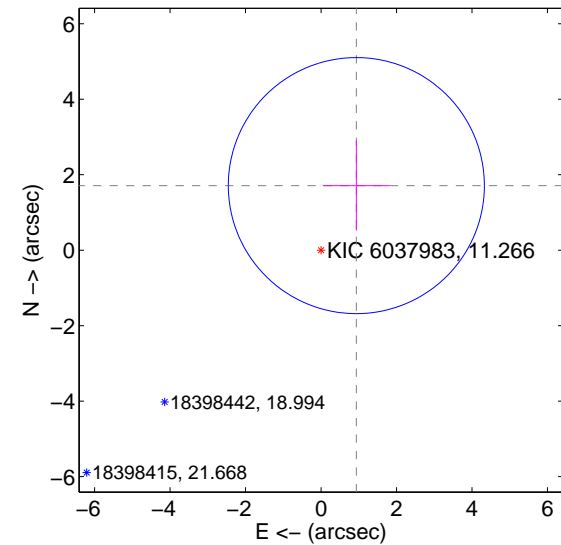
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

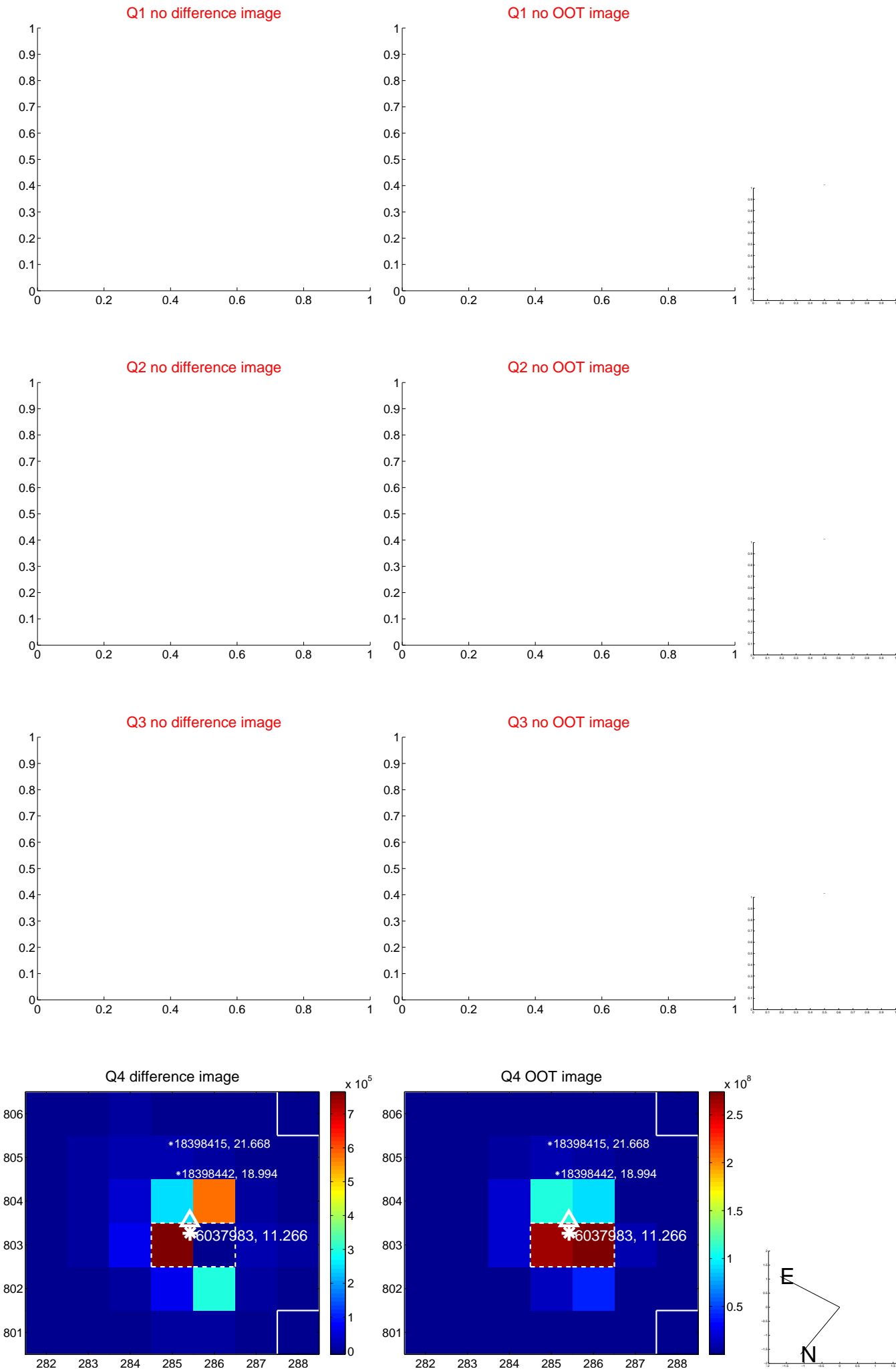


offset from photometric centroids

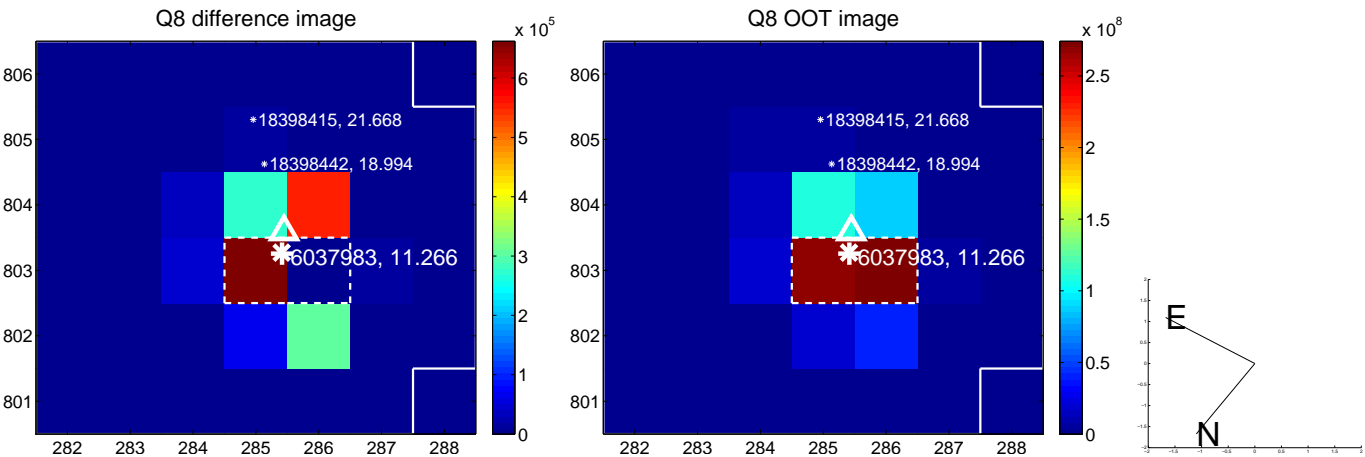


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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



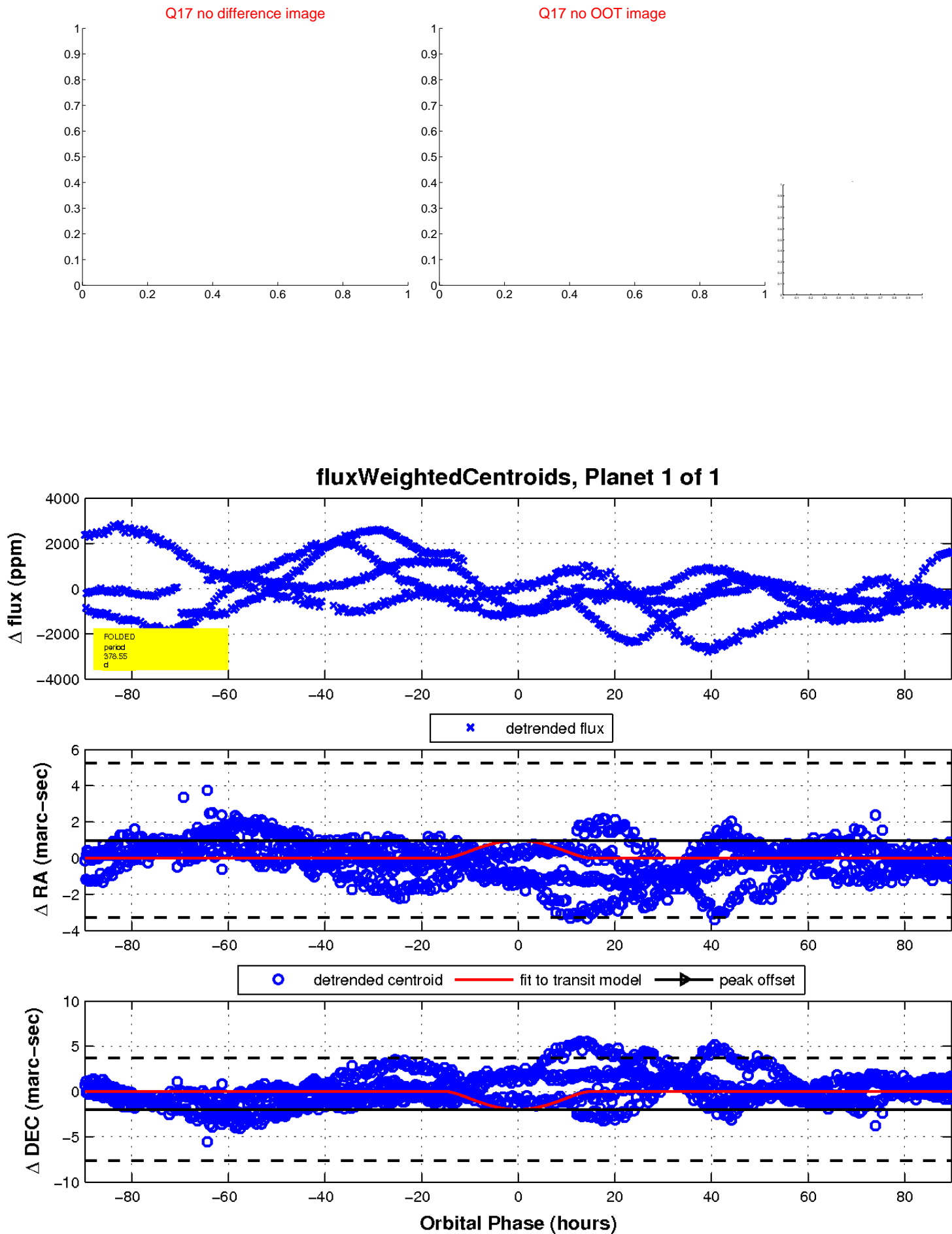
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

