

KIC 007026412

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})
007026412-01	OBS	No	541.283508	245.818437	337.3	4.559	8.7	4.6	1.26	6454	2.63	1.25

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007026412-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS

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

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

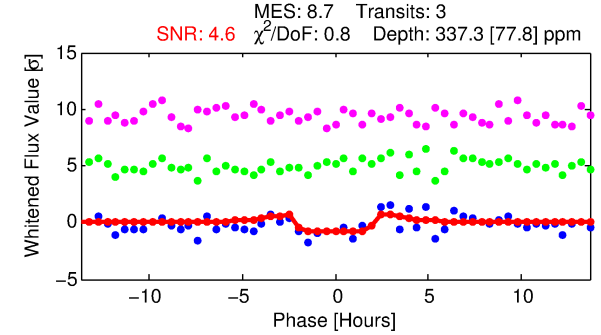
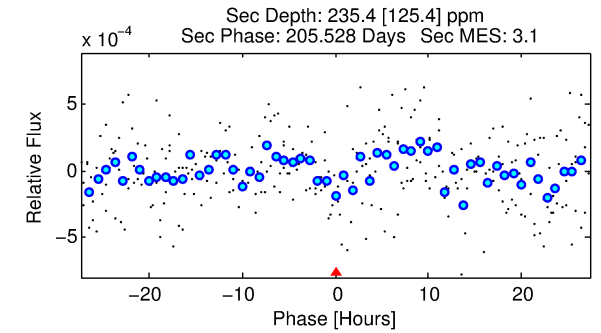
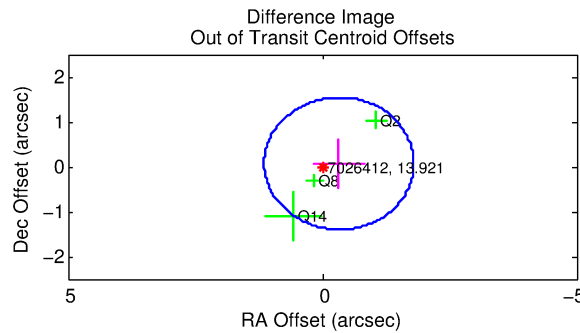
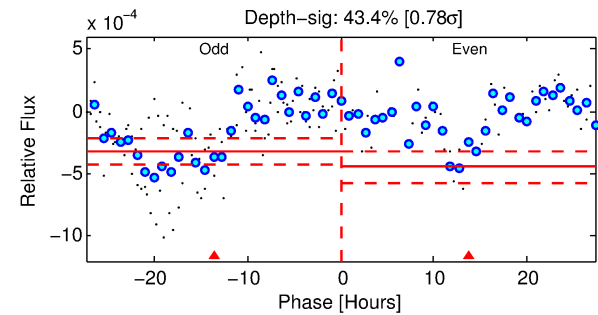
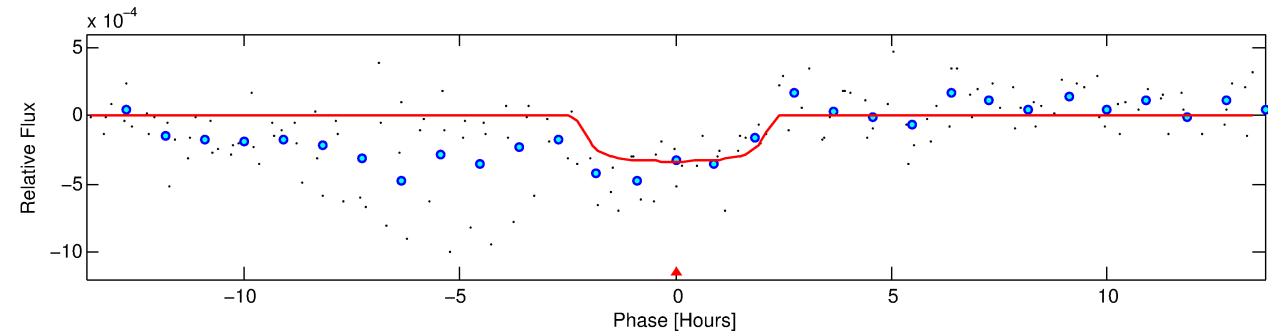
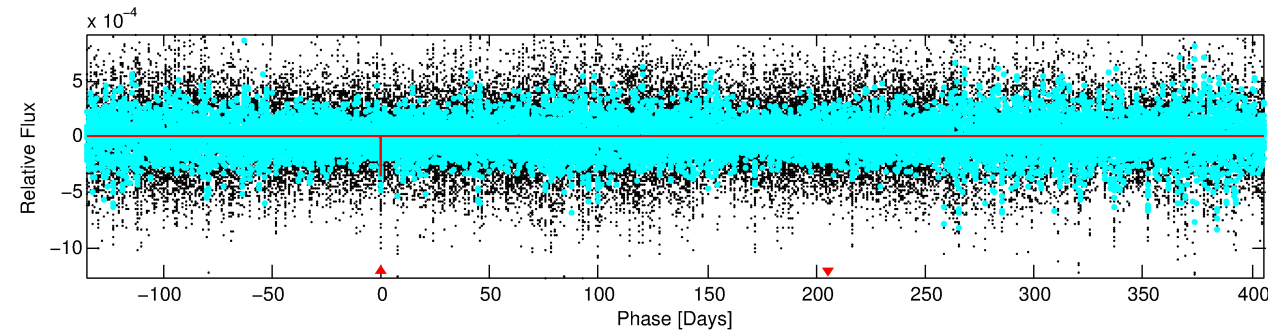
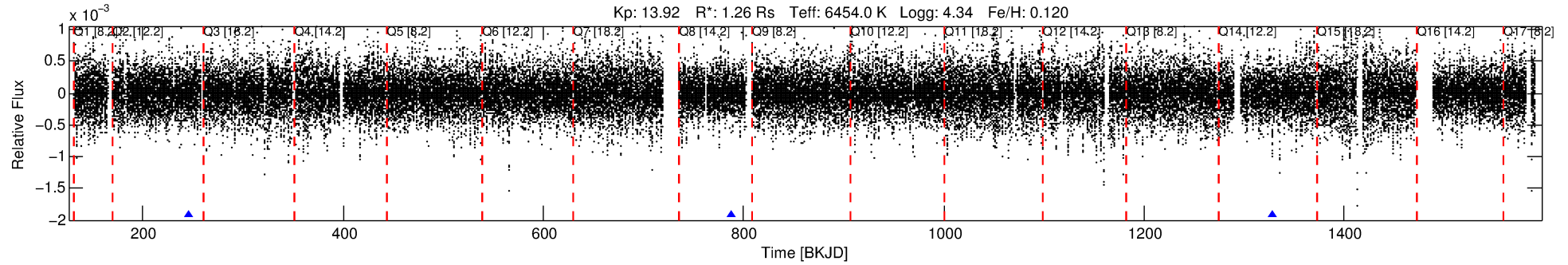
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007026412-01

No Significant Match Found

DV One-Page Summary

KIC: 7026412 Candidate: 1 of 1 Period: 541.284 d



DV Fit Results:

Period = 541.28351 [0.00803] d
Epoch = 245.8184 [0.0104] BKJD
Rp/R* = 0.0191 [0.0106]
a/R* = 504.14 [1412.30]
b = 0.85 [0.89]
Seff = 1.25 [0.52]
Teff = 270 [28] K
Rp = 2.63 [1.71] Re
a = 1.4079 [0.3925] AU
Ag = 37028.53 [47725.88] [0.78 σ]
Teffp = 5784 [1784] K [3.09 σ]

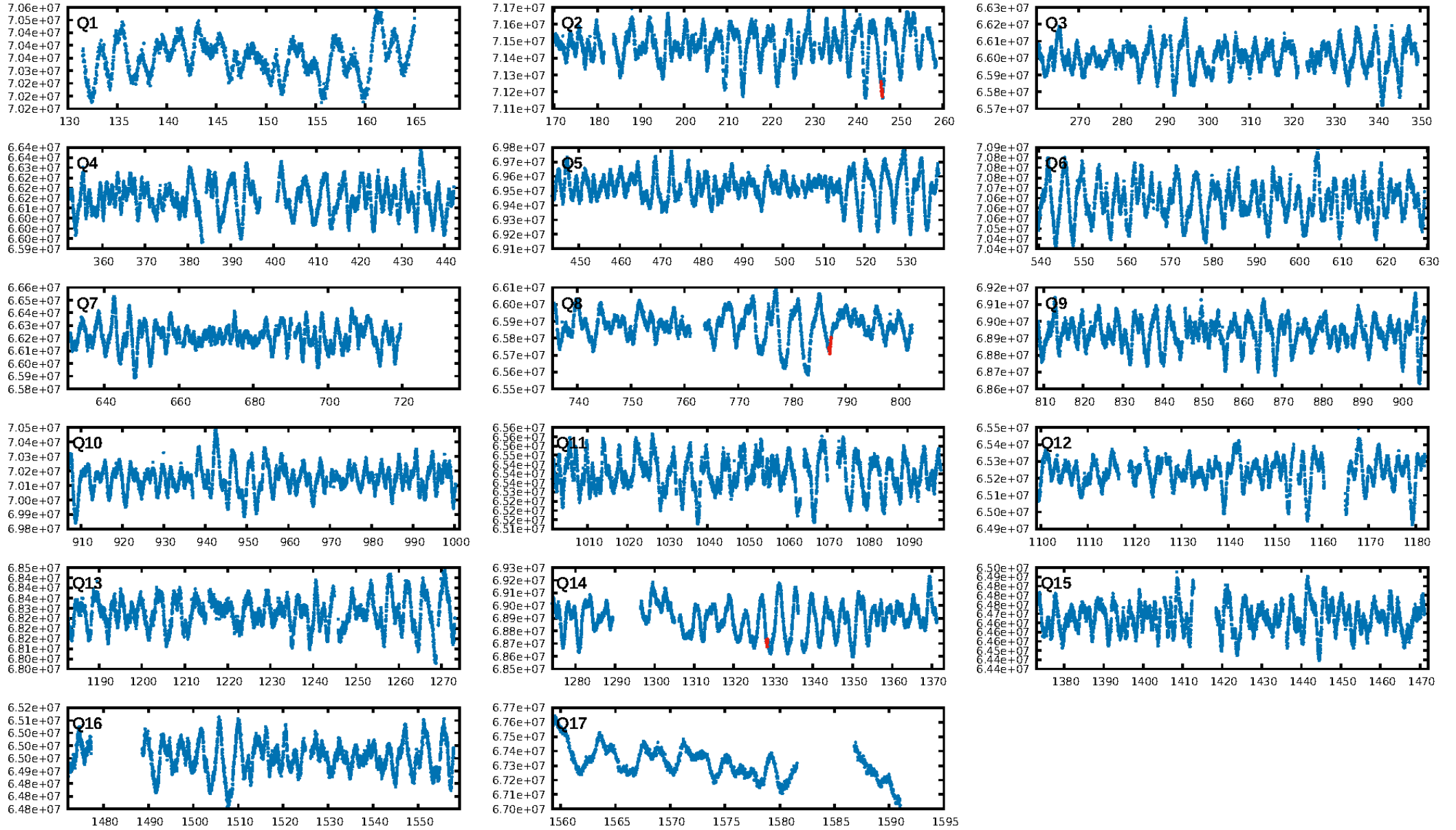
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 57.1%
ModelChiSquareGof-sig: 98.3%
Bootstrap-pfa: 2.11e-12
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -10.75
Centroid-sig: 31.3%
Centroid-so: 1.289 arcsec [0.77 σ]
OotOffset-rm: 0.331 arcsec [0.67 σ]
OotOffset-st: 2/0/1/0 [3]
KicOffset-rm: 0.463 arcsec [1.05 σ]
KicOffset-st: 2/0/1/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

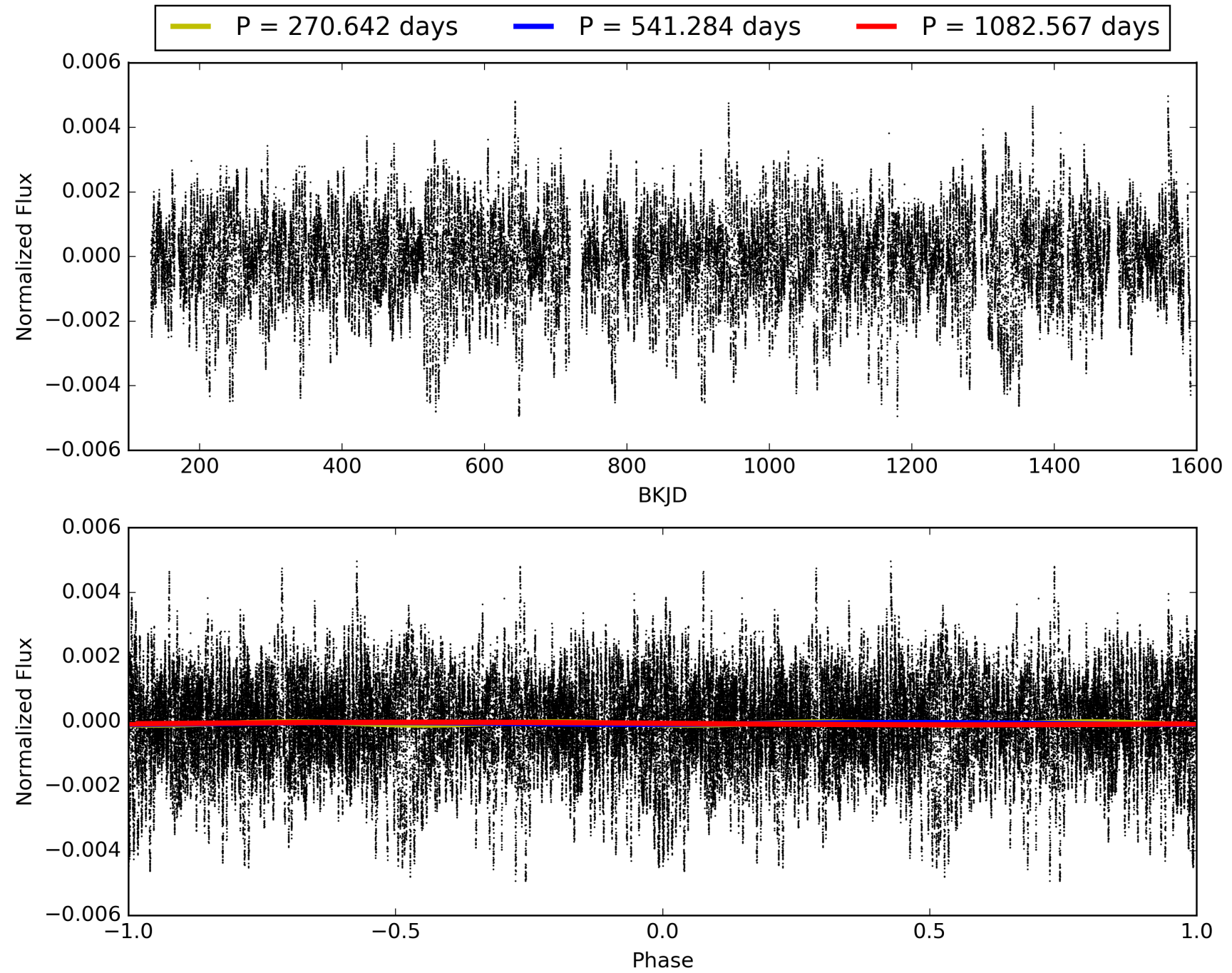
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 14:40:03 Z

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

TCE 007026412-01, PDC Light Curves

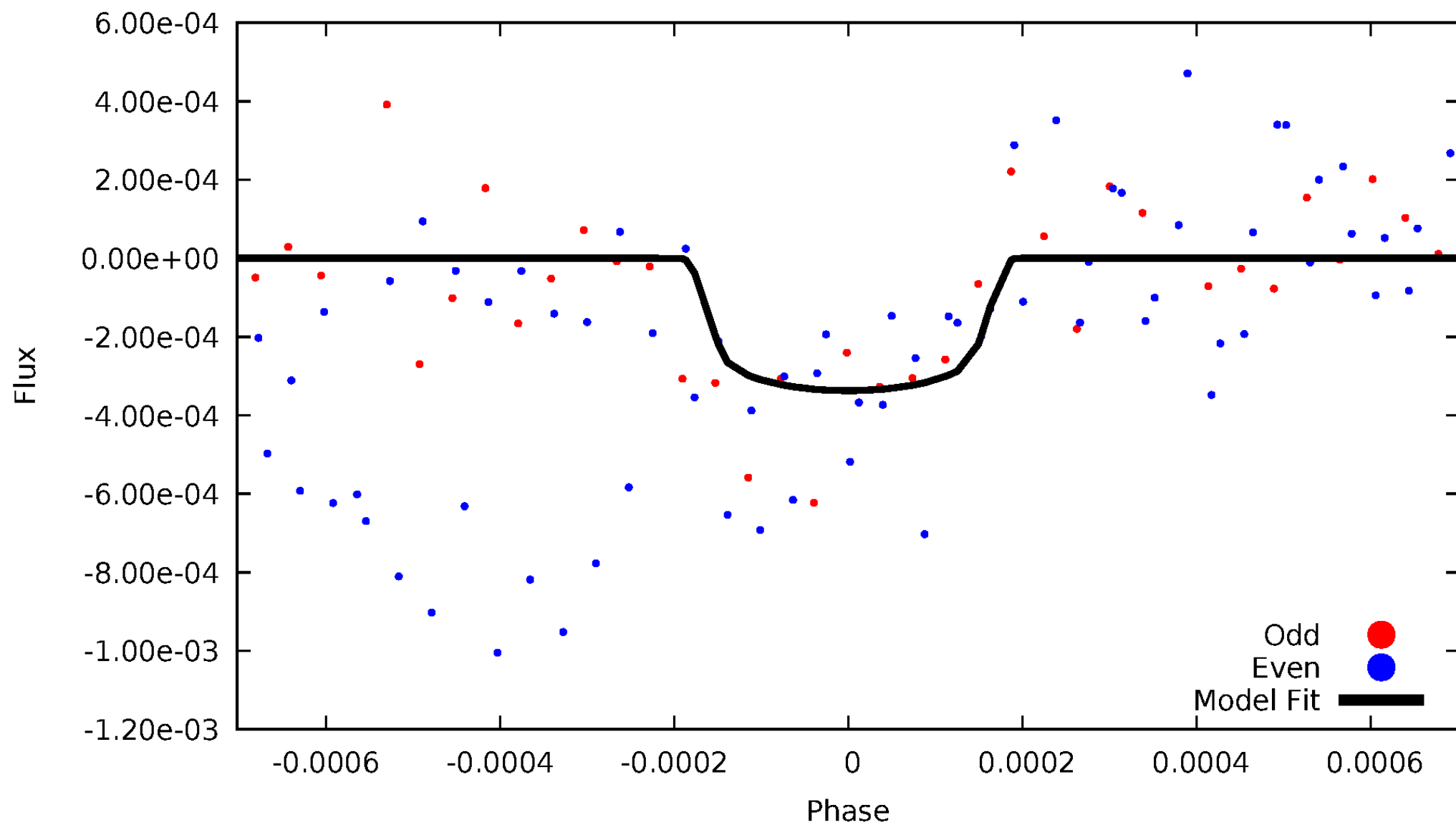


TCE 007026412-01



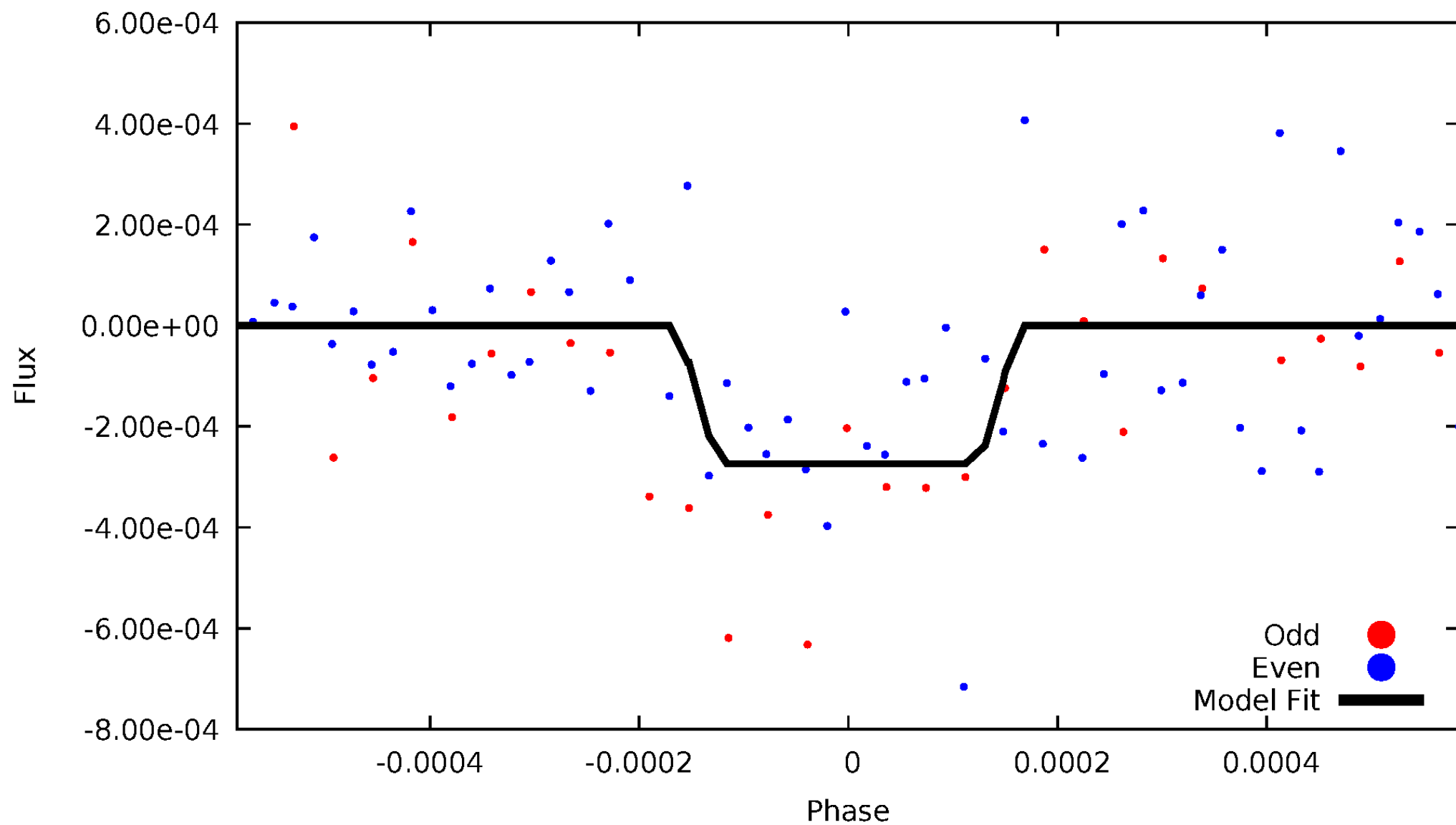
DV Odd/Even

TCE 007026412-01



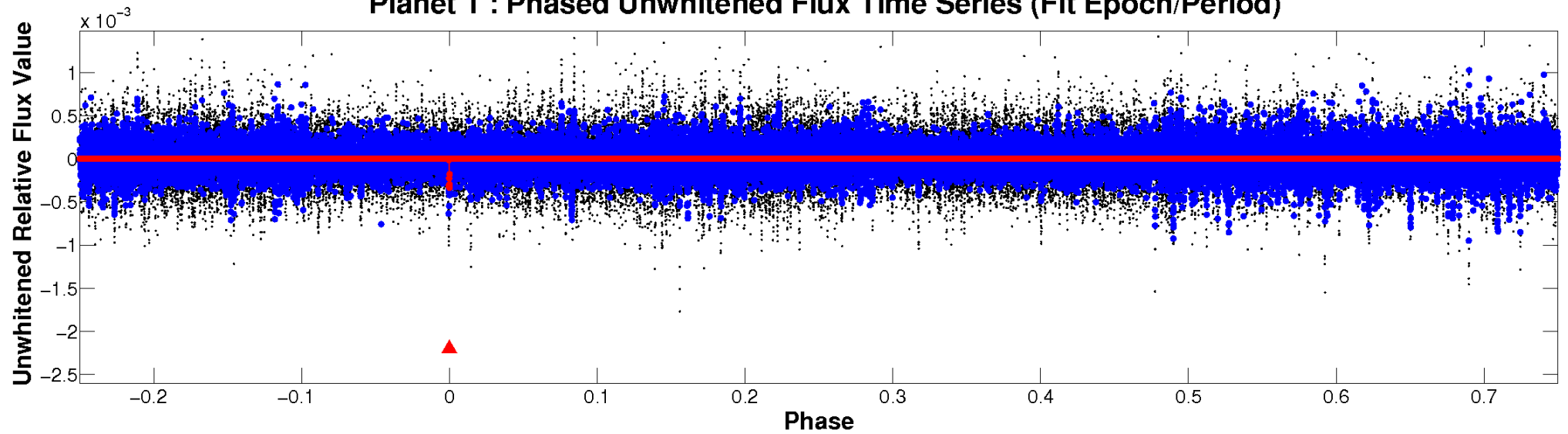
ALT Odd/Even

TCE 007026412-01

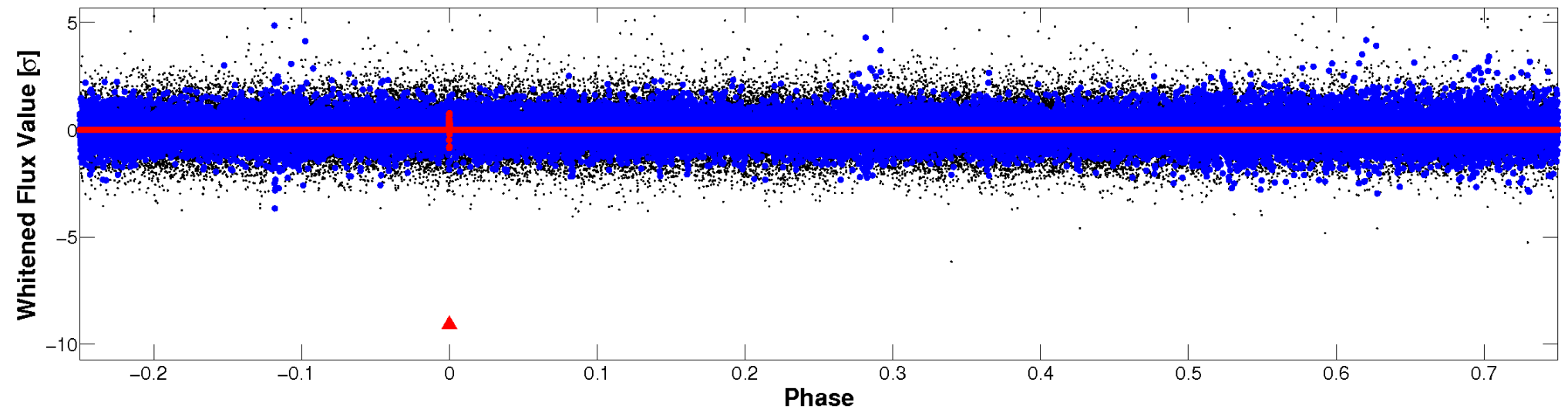


Non-Whitened Vs. Whitened Light Curve

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

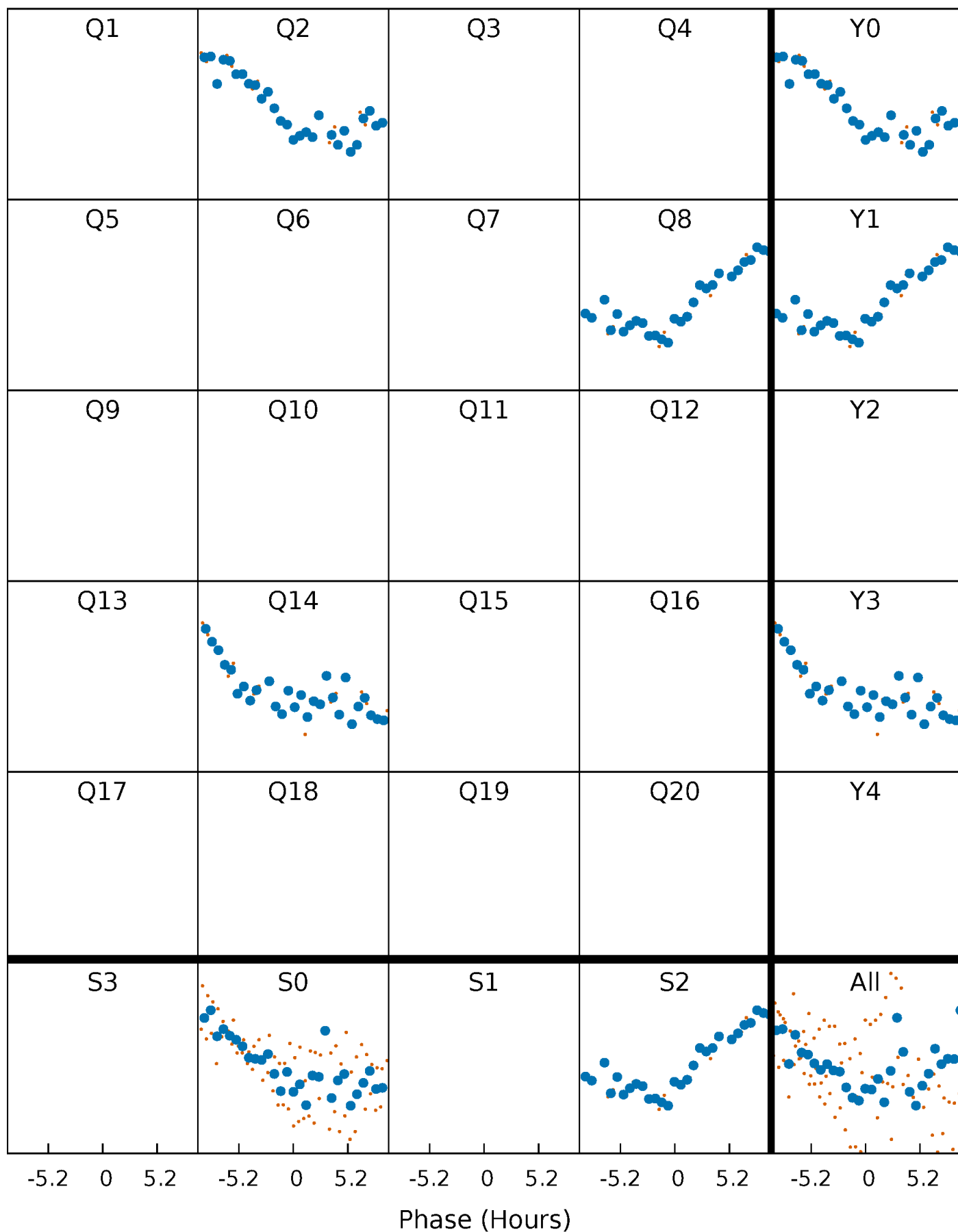


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



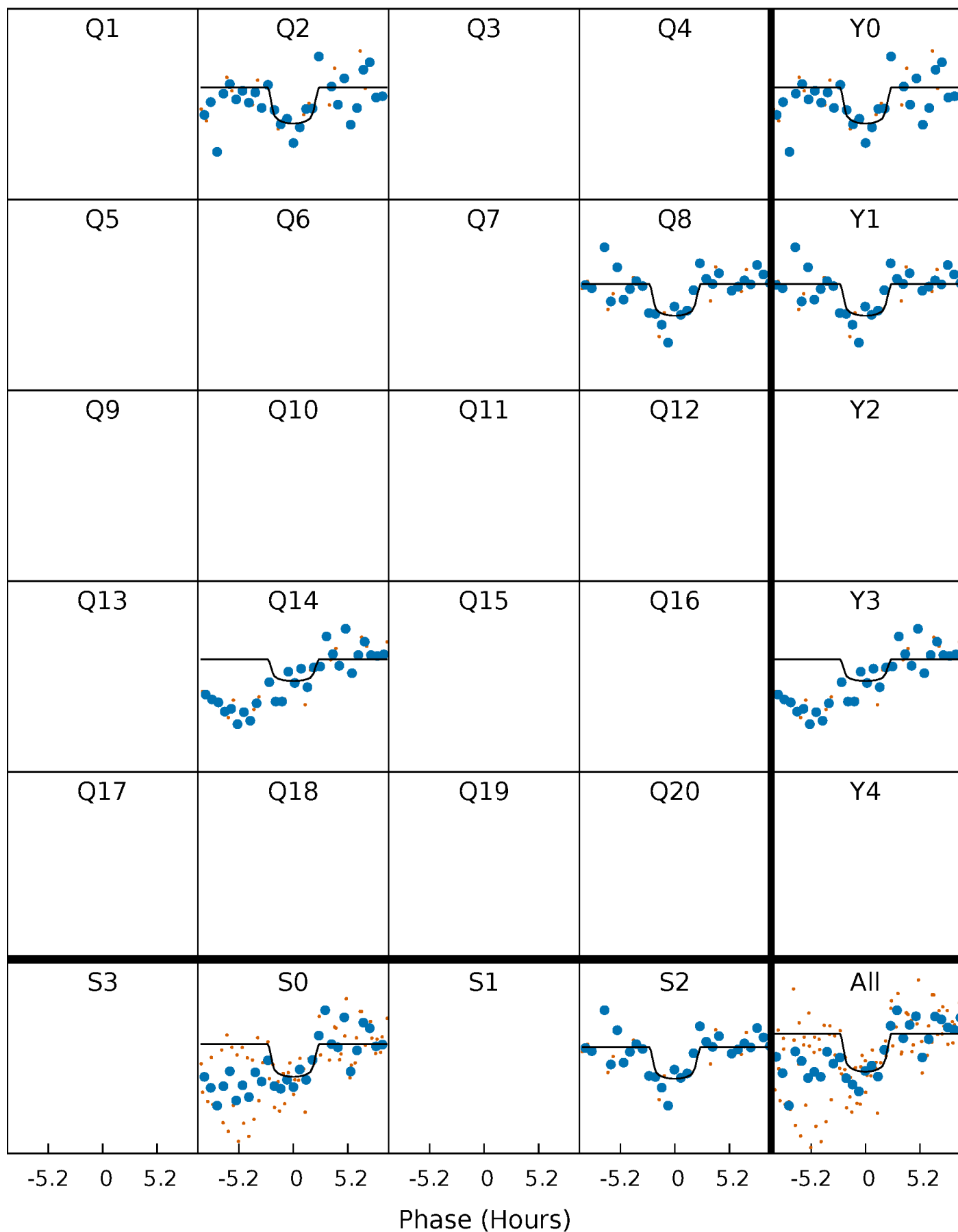
PDC Quarter-Phased Transit Curves

TCE 007026412-01 P=541.283508 Days $T_0=245.818437$ (BKJD)



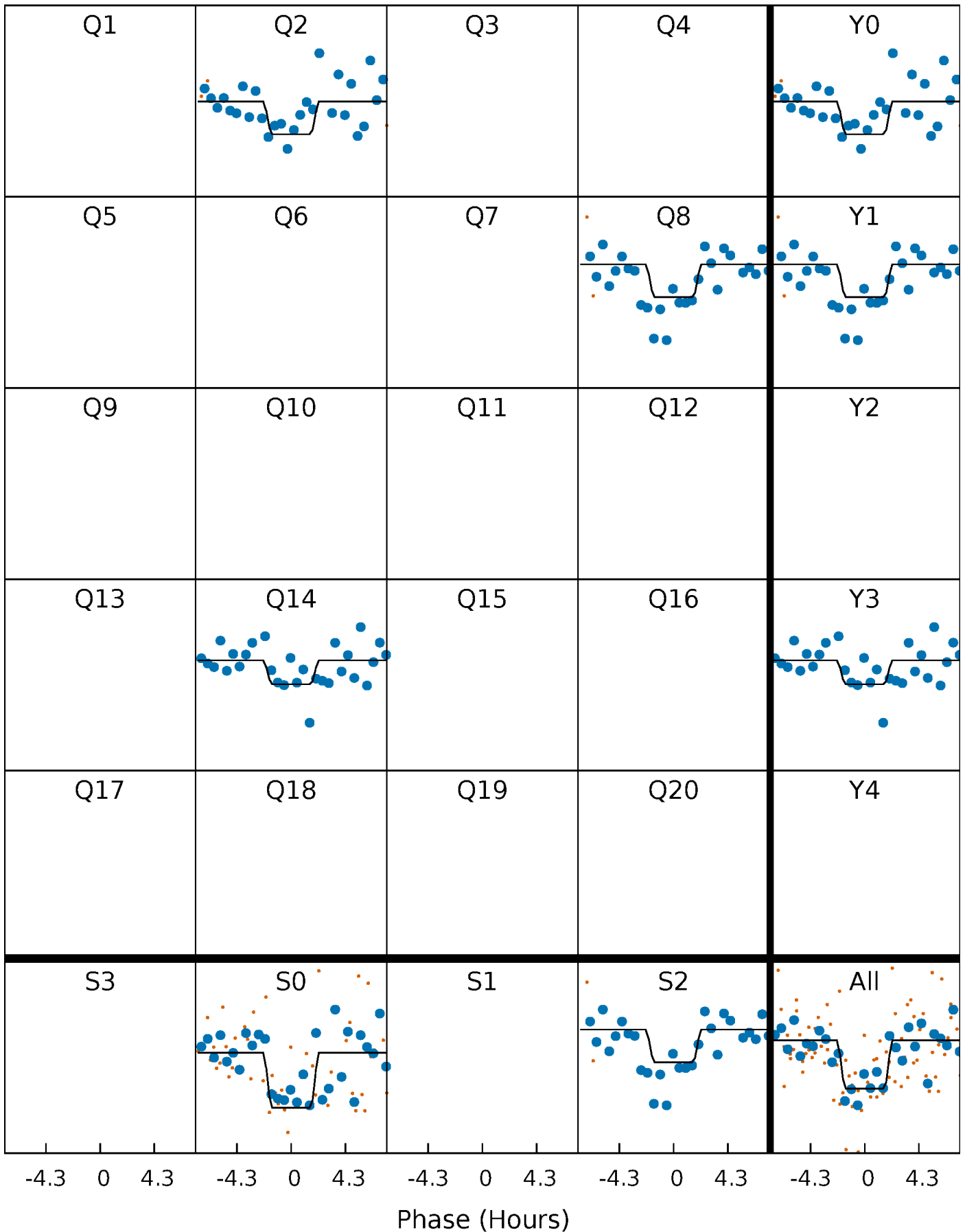
DV Quarter-Phased Transit Curves

TCE 007026412-01 P=541.283508 Days $T_0=245.818437$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

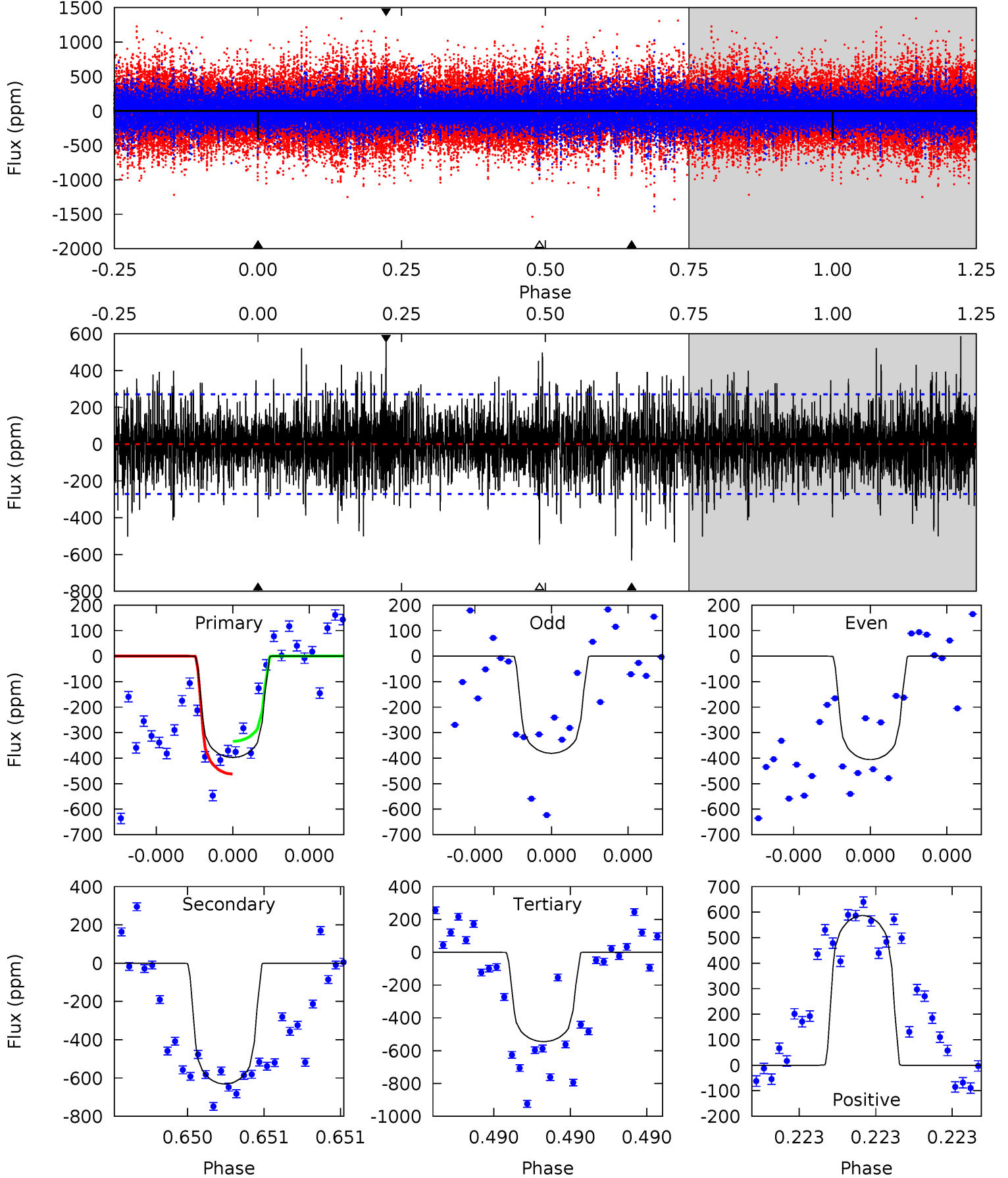
TCE 007026412-01 P=541.271382 Days $T_0=245.830322$ (BKJD)



DV Model-Shift Uniqueness Test

007026412-01, P = 541.283508 Days, E = 245.818437 Days

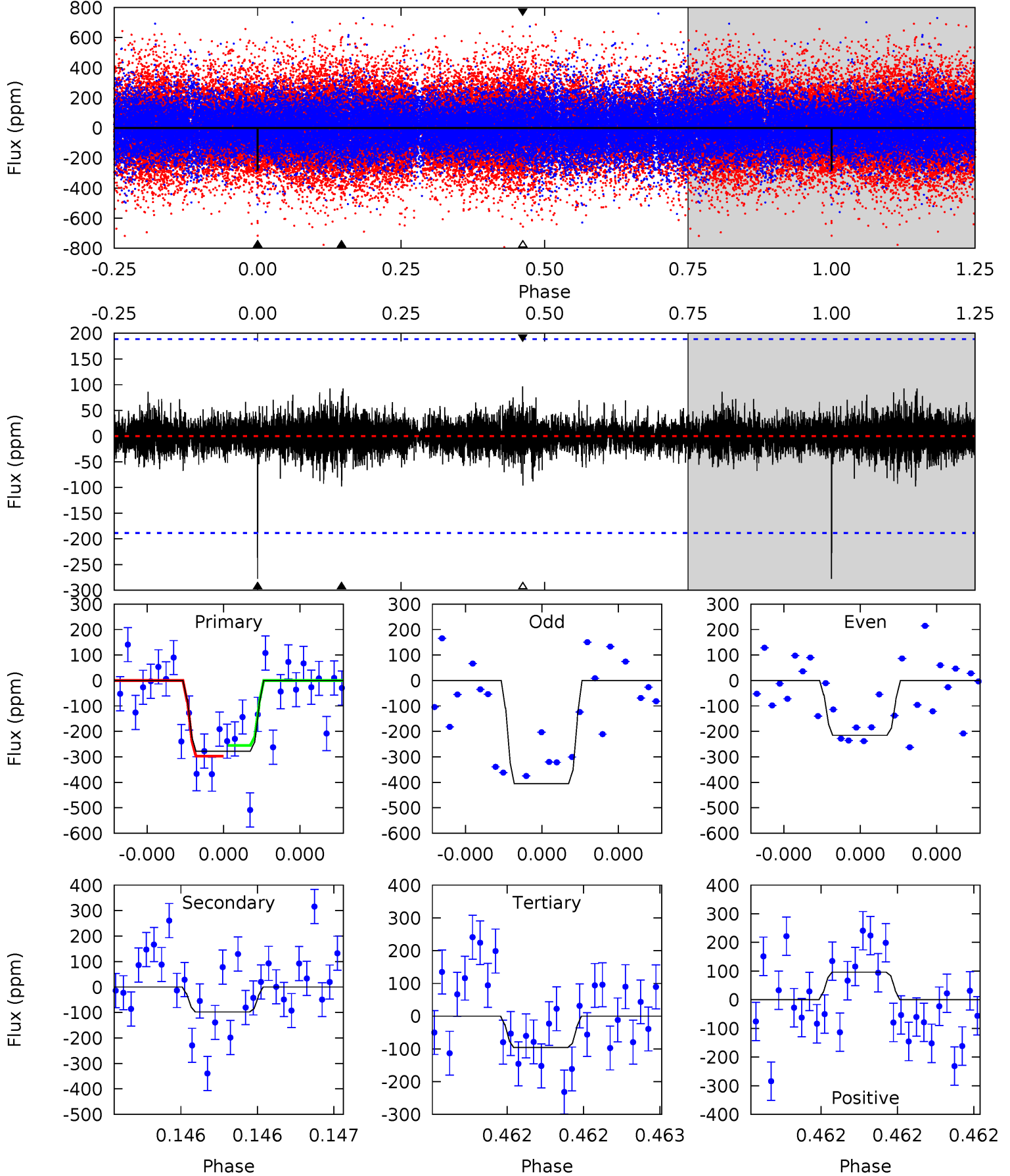
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.23	13.1	11.3	12.2	5.62	3.55	2.59	-3.06	-3.92	1.79	0.92	0.24	1.04	0.48	1.33



Alt Model-Shift Uniqueness Test

007026412-01, P = 541.271382 Days, E = 245.830322 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.32	2.94	2.87	2.88	5.65	3.60	0.57	5.46	5.44	0.07	0.05	2.74	1.18	0.26	0.63



Stellar Parameters For KIC 007026412

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6454^{+174}_{-212}	$4.339^{+0.070}_{-0.210}$	$0.120^{+0.200}_{-0.350}$	$1.263^{+0.431}_{-0.144}$	$1.271^{+0.184}_{-0.184}$	$0.889^{+0.327}_{-0.479}$
	+3%/-3%	+2%/-5%	+167%/-292%	+34%/-11%	+14%/-14%	+37%/-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 007026412-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-631 ± 48	$2.95^{+1.46}_{-1.42}$	384^{+31}_{-20}	7252^{+4022}_{-1449}	$78296^{+203536}_{-43239}$
Alt.	-98 ± 33	$2.46^{+1.52}_{-1.34}$	383^{+28}_{-20}	4937^{+2290}_{-866}	16638^{+61847}_{-10710}

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 $A_{obs} \gg 1.0$

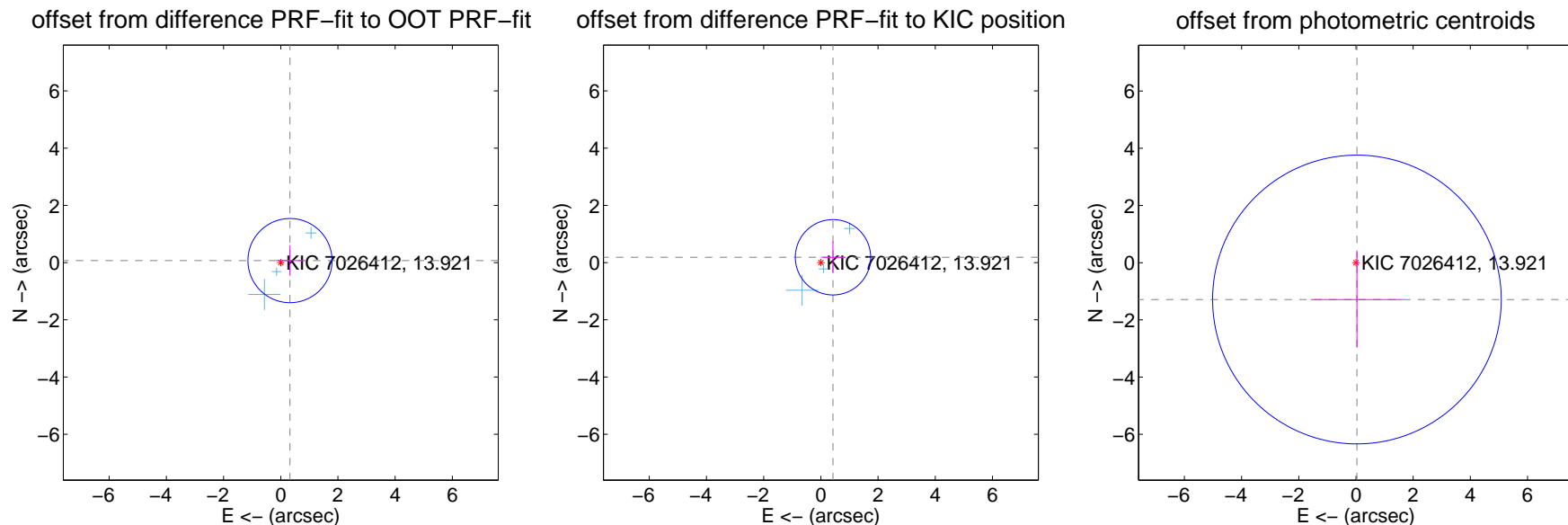
DV Centroid Data

Supplemental centroid analysis for 007026412-01. Kepler magnitude: 13.92. Transit SNR 4.62

There are 3 quarters with good PRF difference image offsets

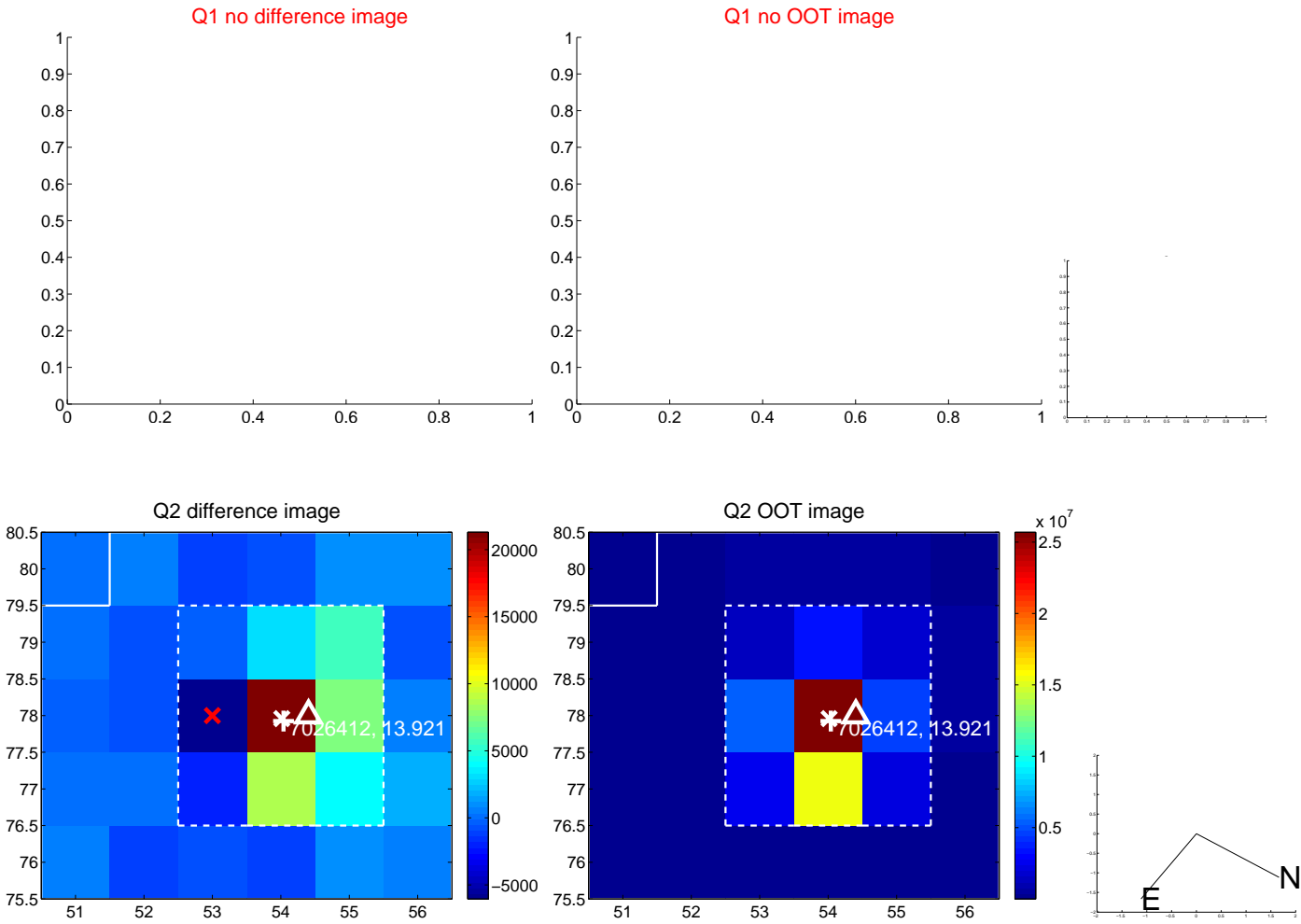
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.331 ± 0.490	0.67	-0.323 ± 0.488	0.069 ± 0.537
PRF-fit source offset from KIC position	0.463 ± 0.439	1.05	-0.424 ± 0.413	0.186 ± 0.553
photometric centroid source offset	1.29 ± 1.68	0.77	-0.03 ± 1.61	-1.29 ± 1.68

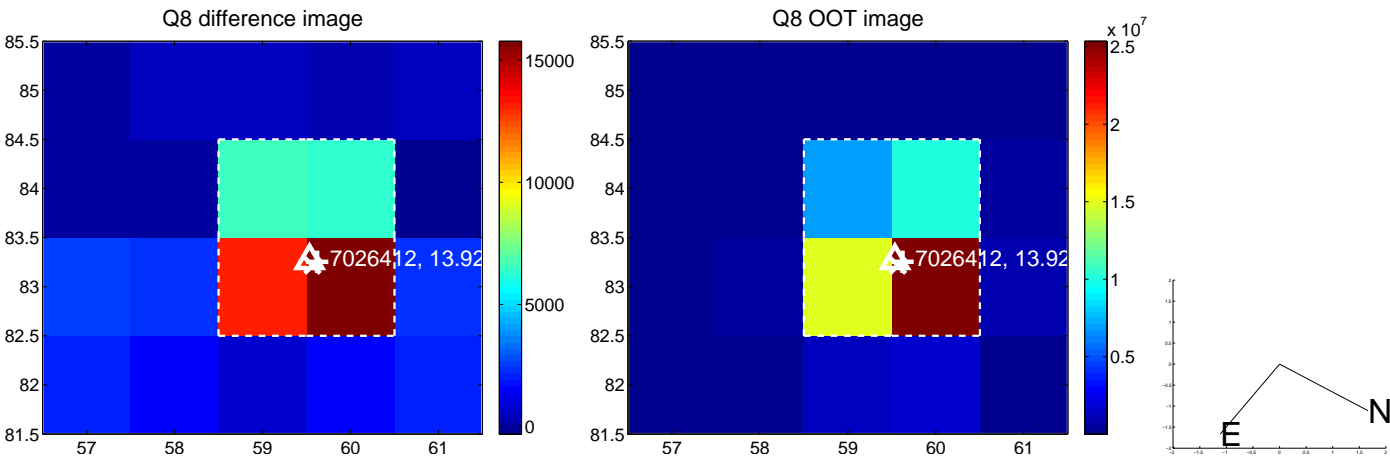


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



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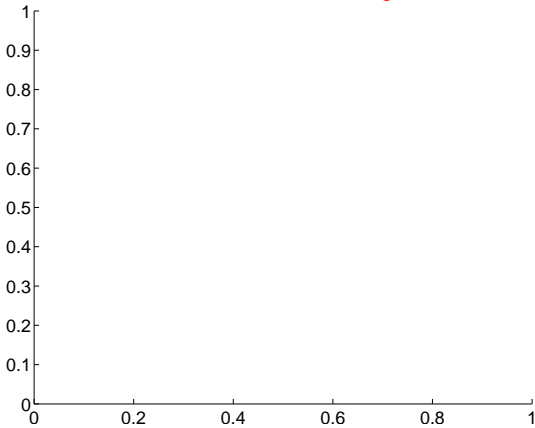


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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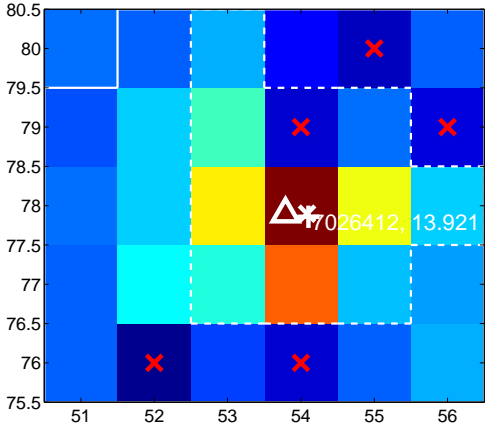
Q13 no difference image



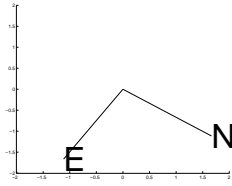
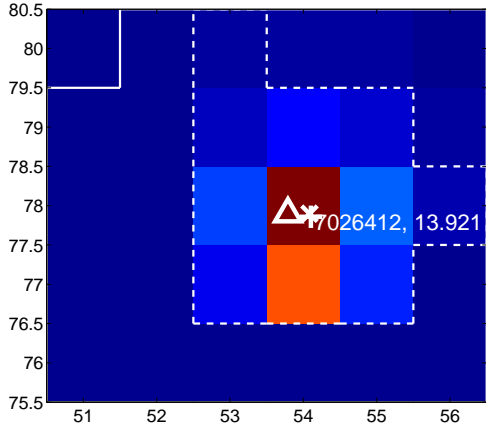
Q13 no OOT image



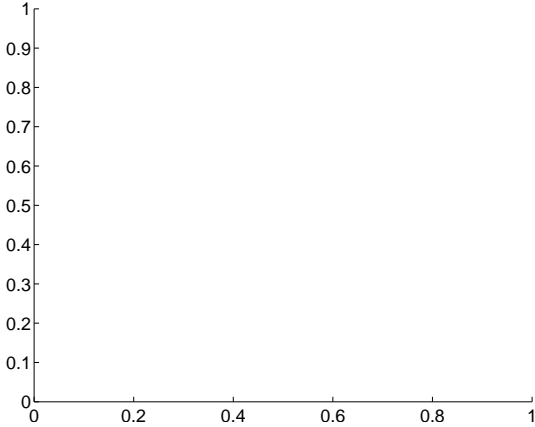
Q14 difference image



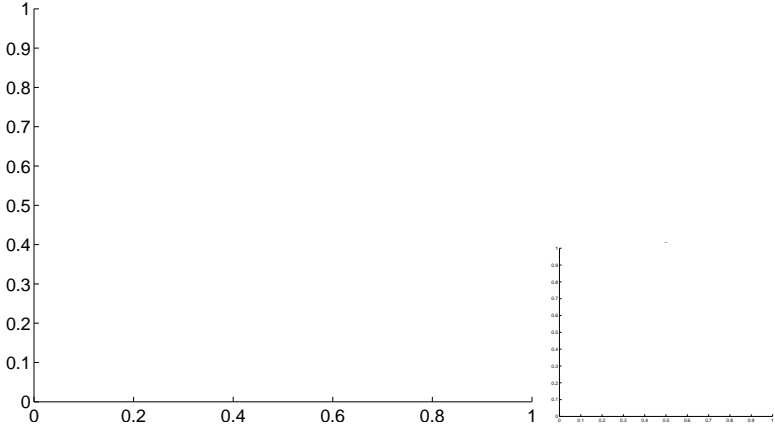
Q14 OOT image



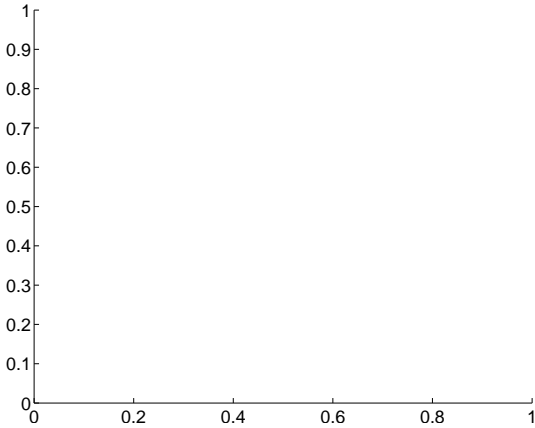
Q15 no difference image



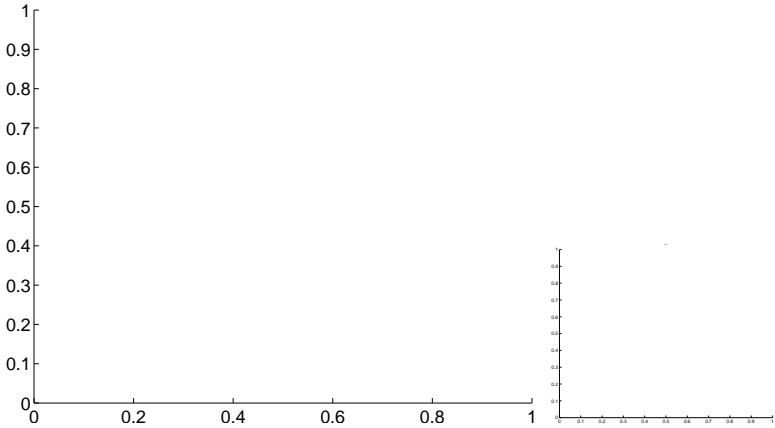
Q15 no OOT image



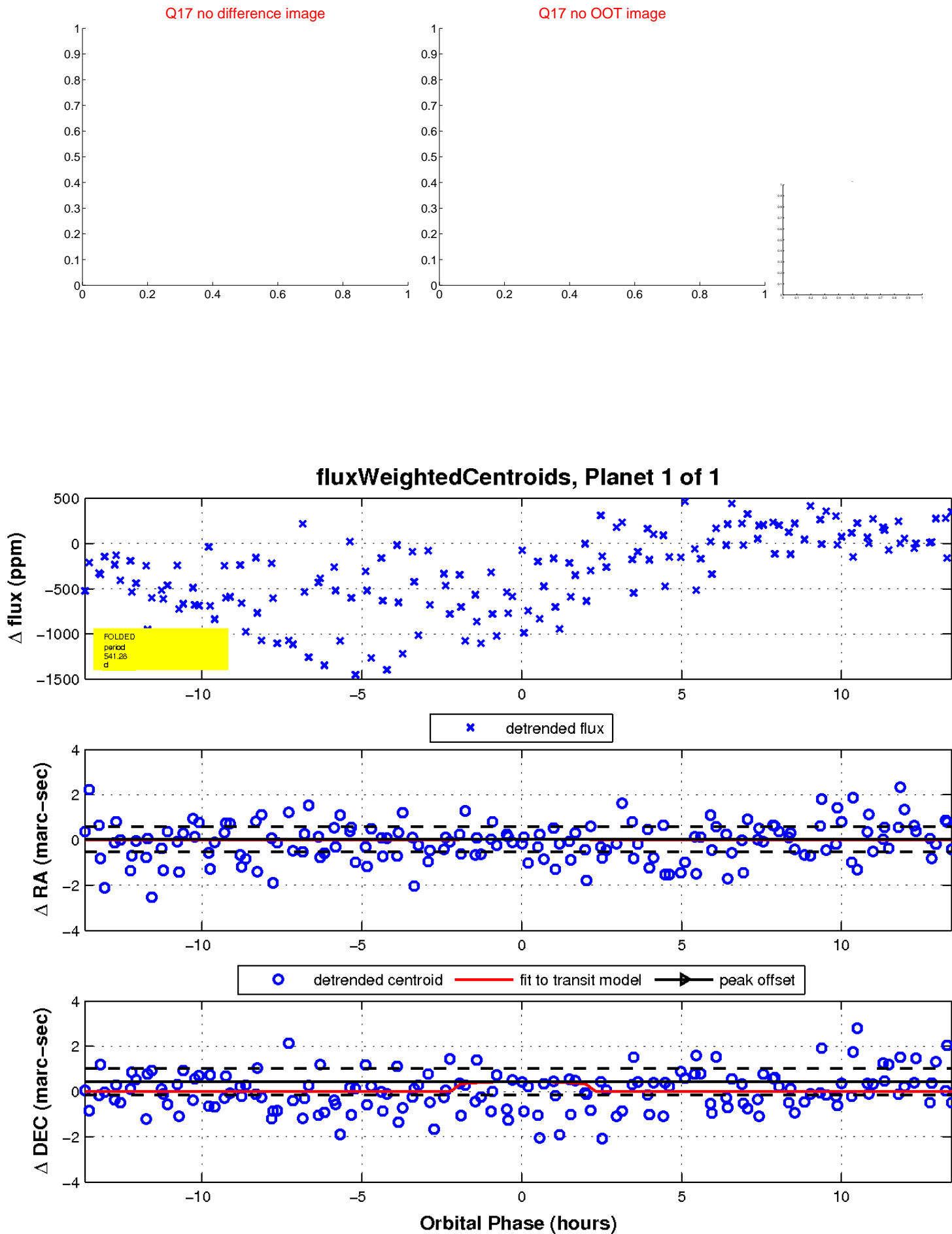
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

