

KIC 006102550

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})
006102550-01	OBS	No	408.491505	316.802943	697.8	12.186	10.6	9.5	1.07	5934	2.90	1.14

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006102550-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—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.

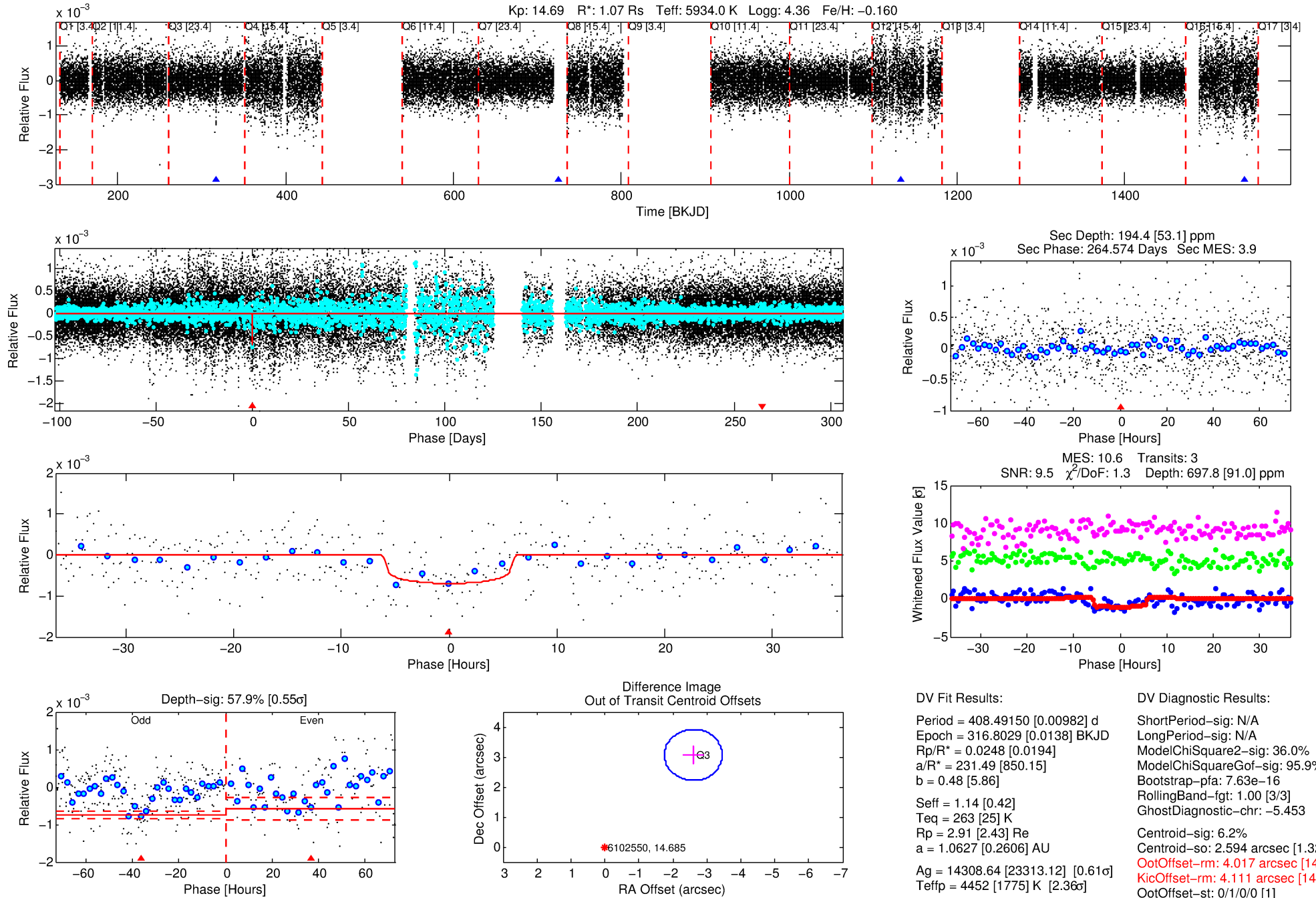
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006102550-01

No Significant Match Found

DV One-Page Summary

KIC: 6102550 Candidate: 1 of 1 Period: 408.492 d



DV Fit Results:

Period = 408.49150 [0.00982] d
Epoch = 316.8029 [0.0138] BKJD
Rp/R* = 0.0248 [0.0194]
a/R* = 231.49 [850.15]
b = 0.48 [5.86]
Seff = 1.14 [0.42]
Teq = 263 [25] K
Rp = 2.91 [2.43] Re
a = 1.0627 [0.2606] AU
Ag = 14308.64 [23313.12] [0.61σ]
Teffp = 4452 [1775] K [2.36σ]

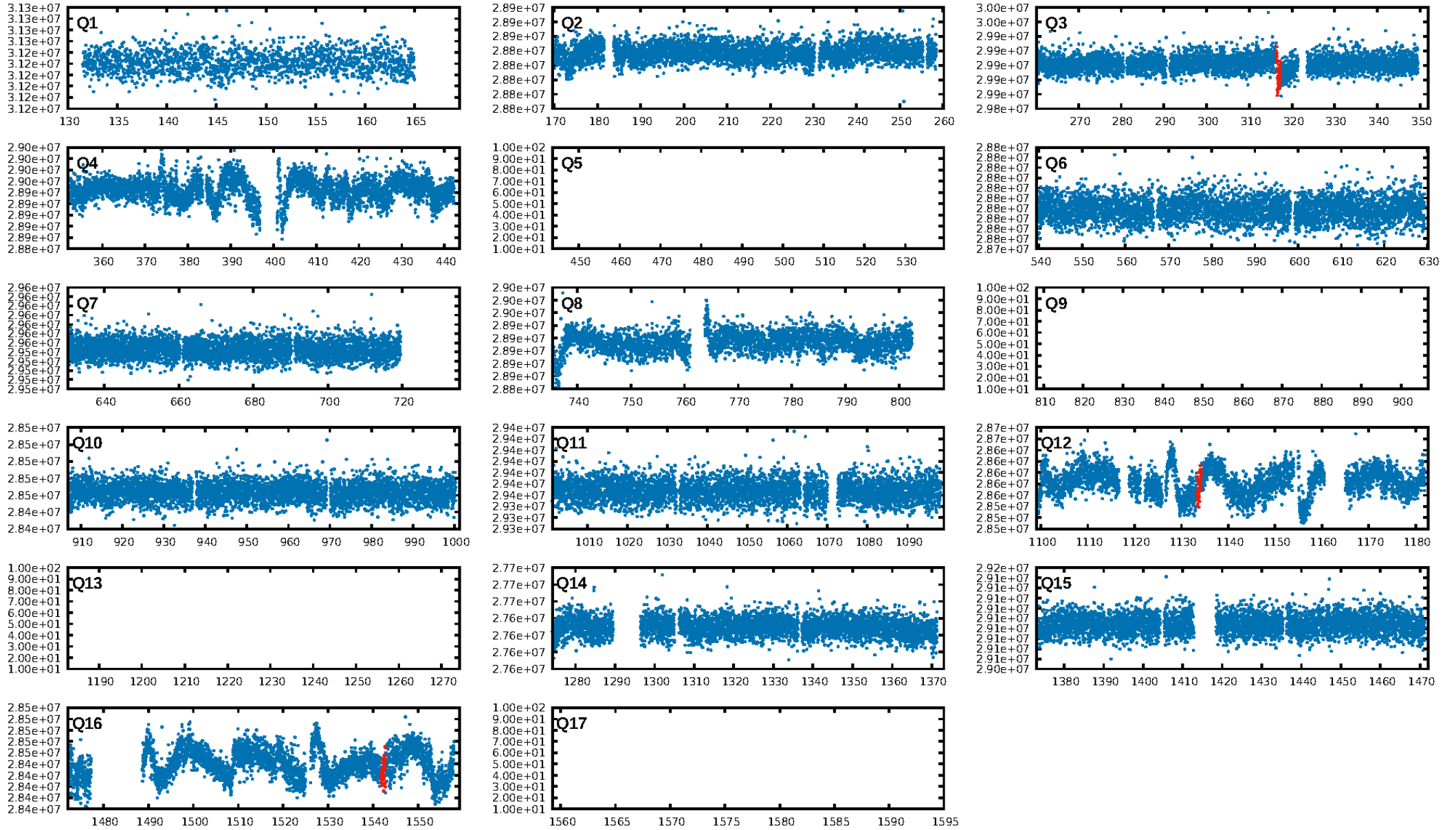
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 36.0%
ModelChiSquareGof-sig: 95.9%
Bootstrap-pfa: 7.63e-16
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -5.453
Centroid-sig: 6.2%
Centroid-so: 2.594 arcsec [1.32σ]
OotOffset-rm: 4.017 arcsec [14.16σ]
KicOffset-rm: 4.111 arcsec [14.51σ]
OotOffset-st: 0/1/0/0 [1]
KicOffset-st: 0/1/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [2/2]

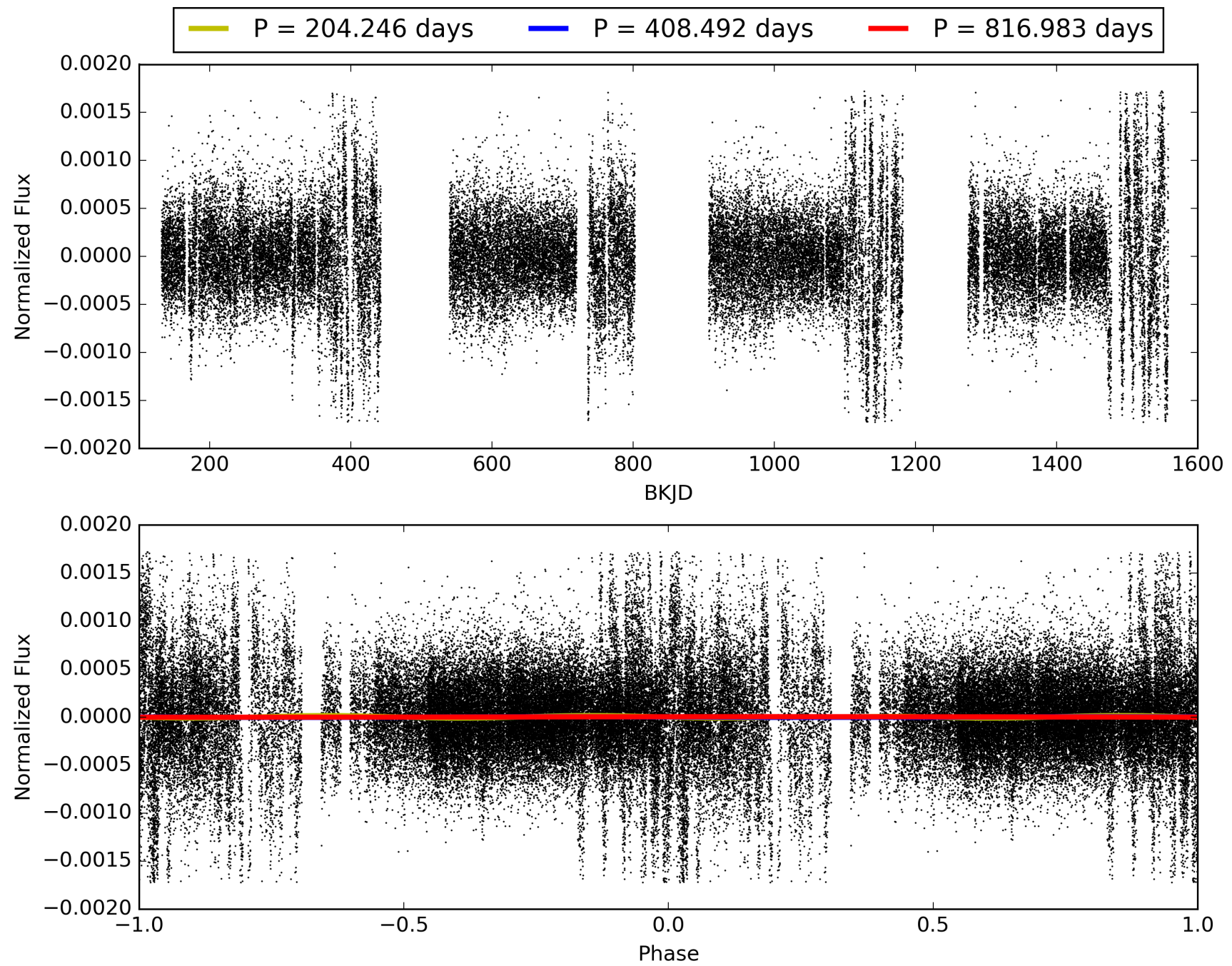
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 00:22:47 Z

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

TCE 006102550-01, PDC Light Curves

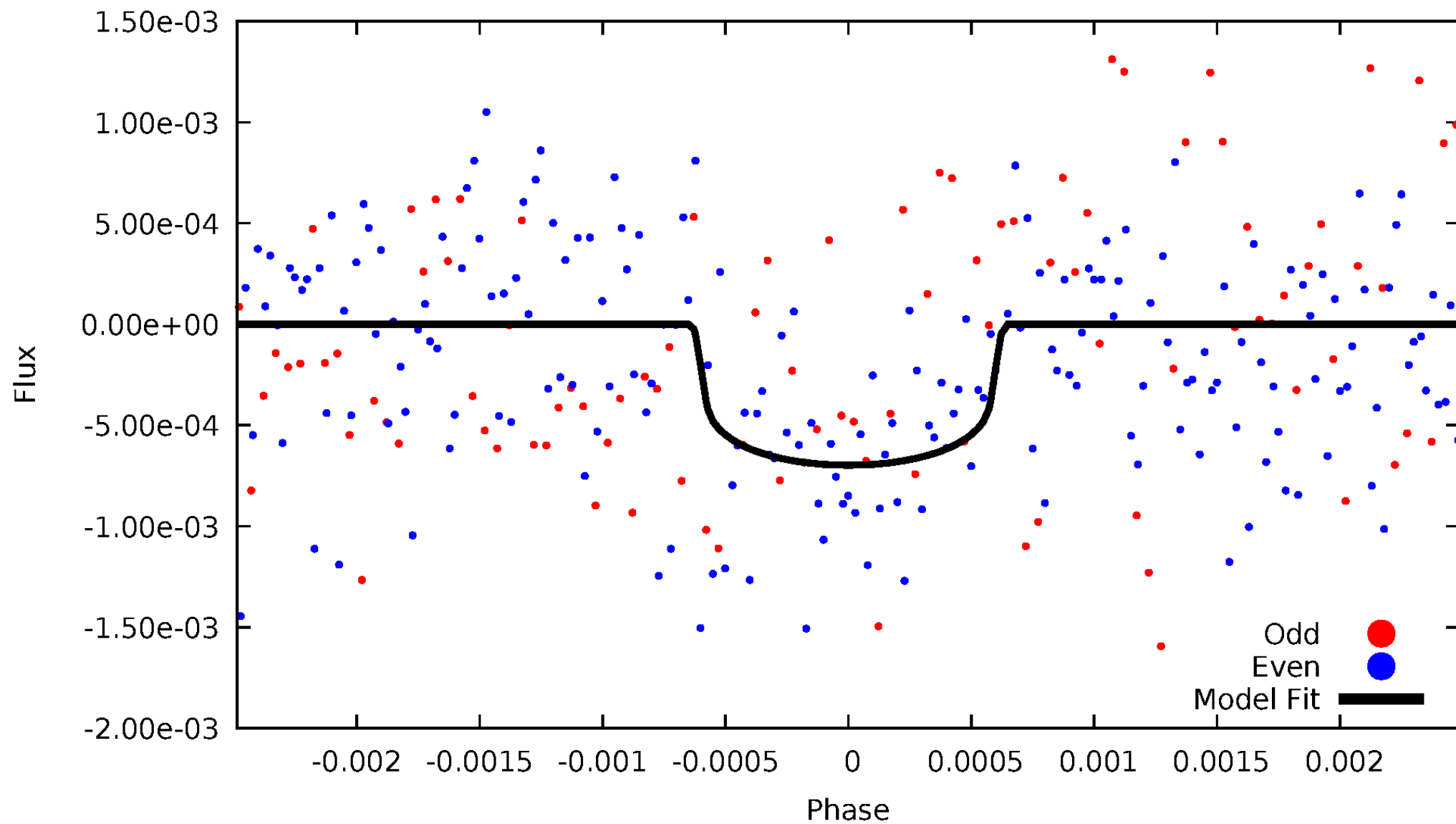


TCE 006102550-01



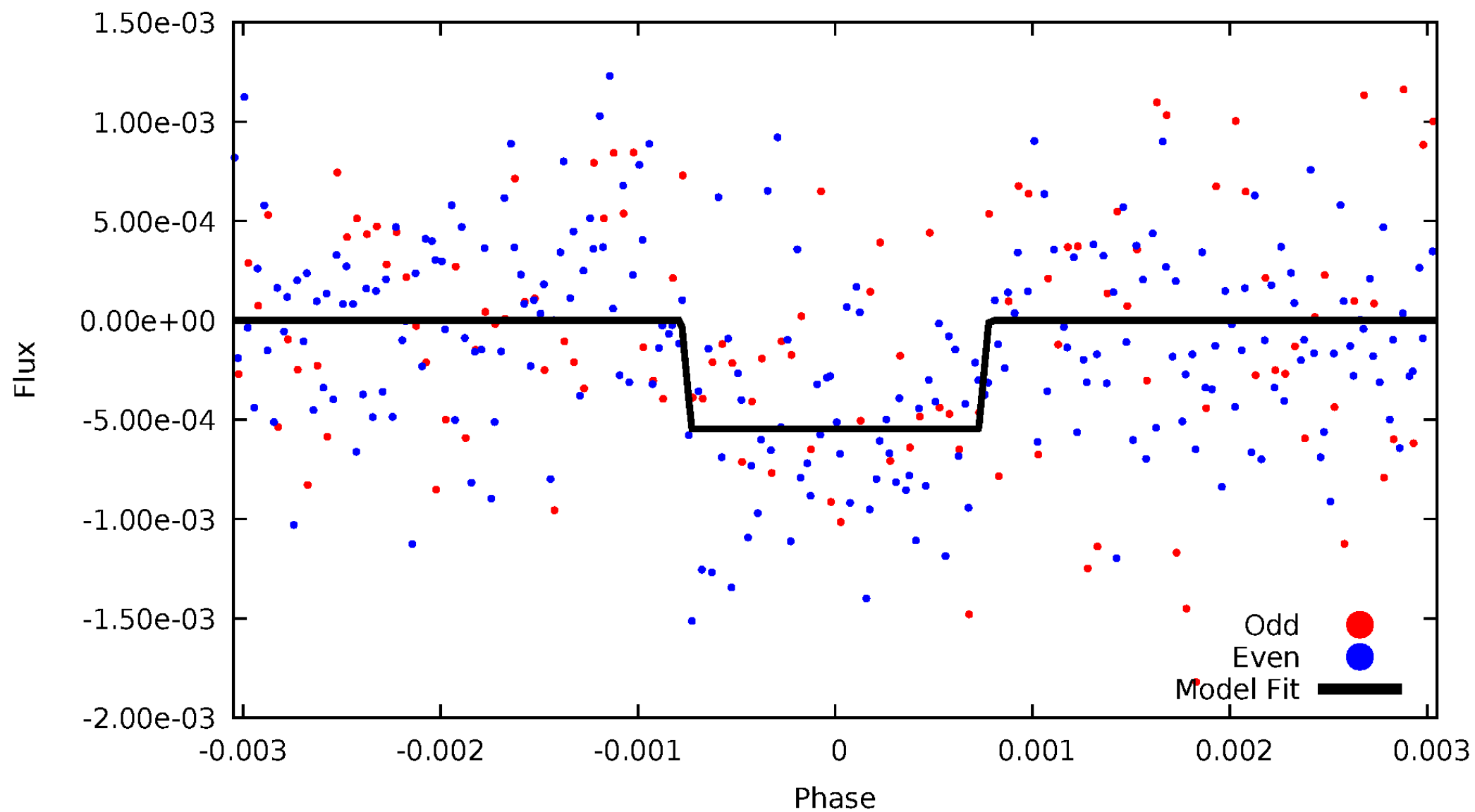
DV Odd/Even

TCE 006102550-01



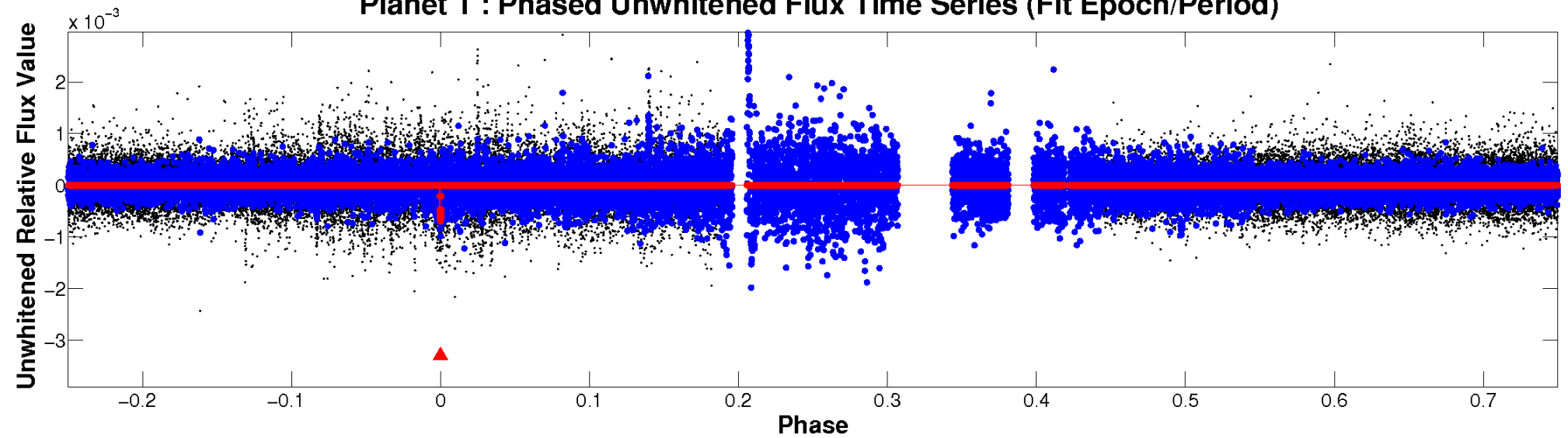
ALT Odd/Even

TCE 006102550-01

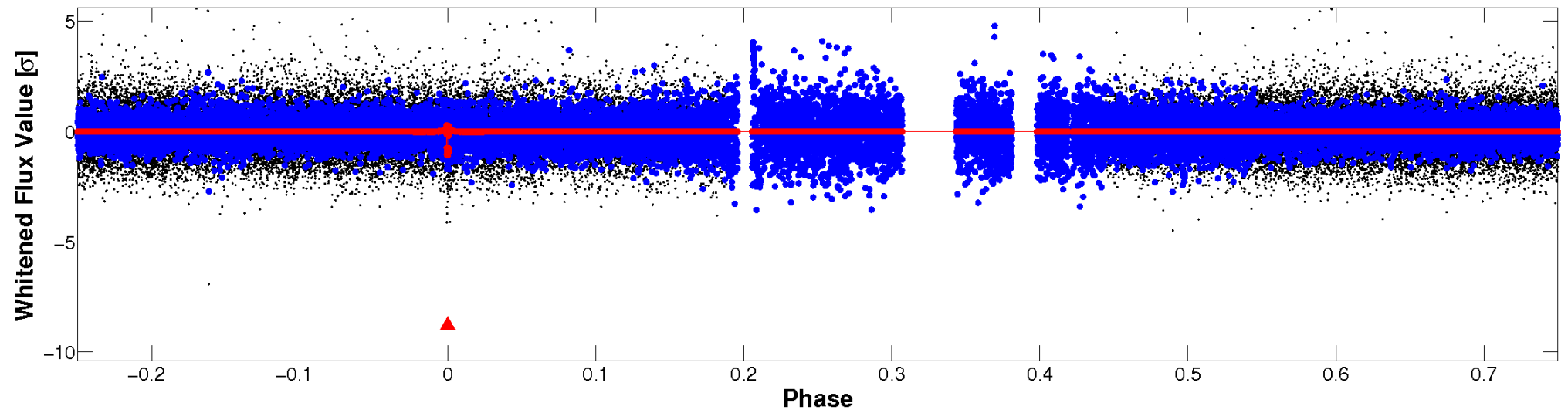


Non-Whitened Vs. Whitened Light Curve

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

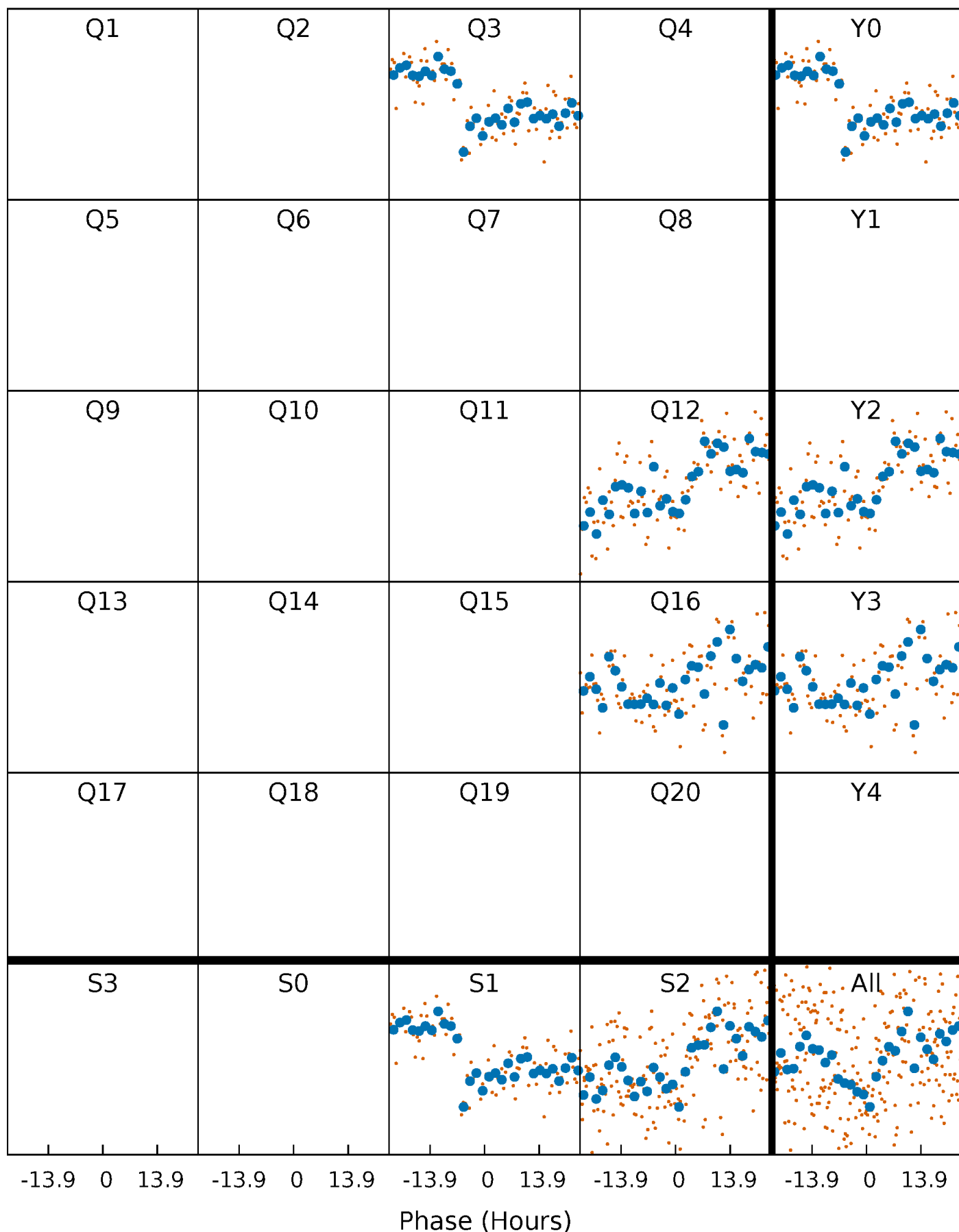


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



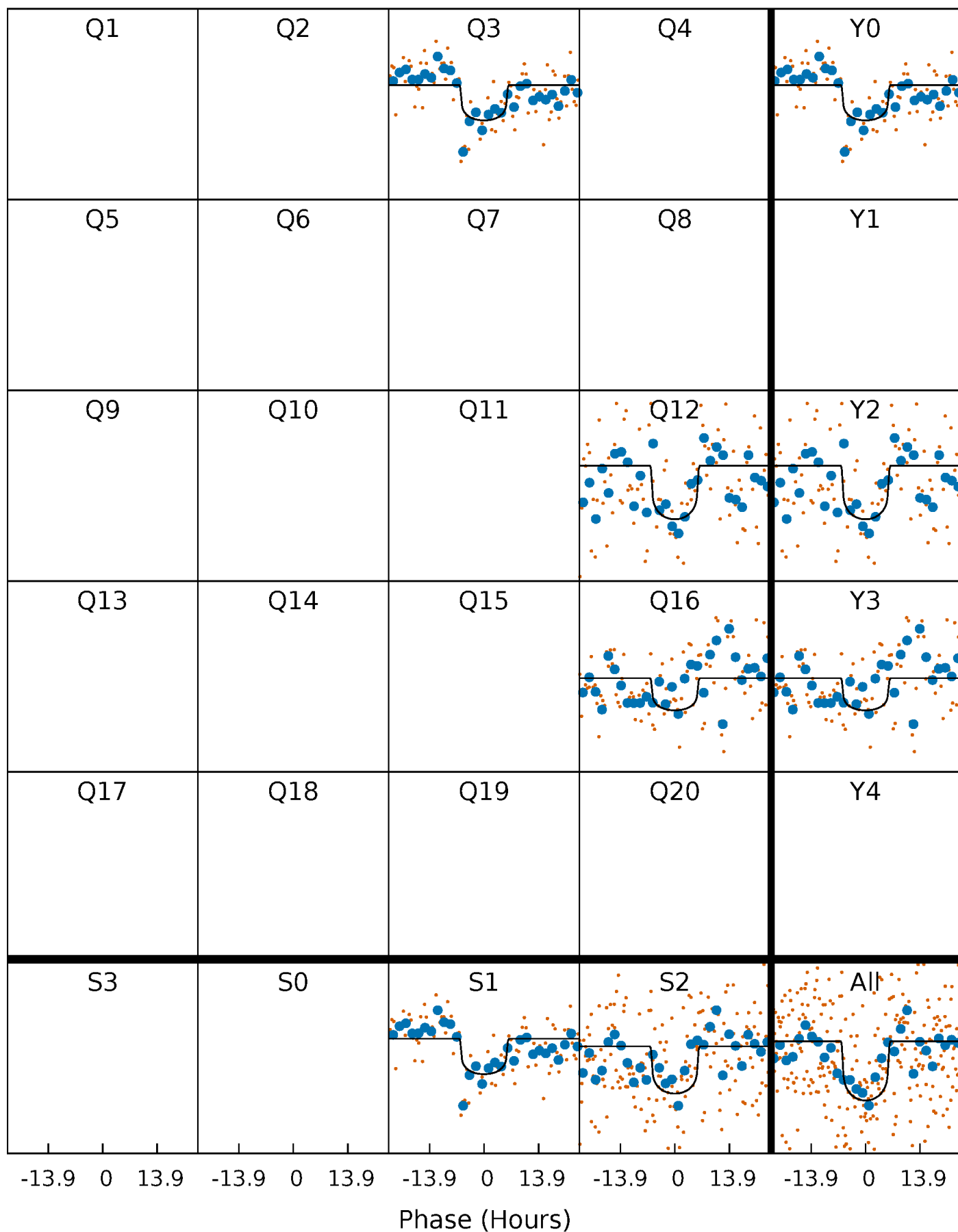
PDC Quarter-Phased Transit Curves

TCE 006102550-01 P=408.491505 Days $T_0=316.802943$ (BKJD)



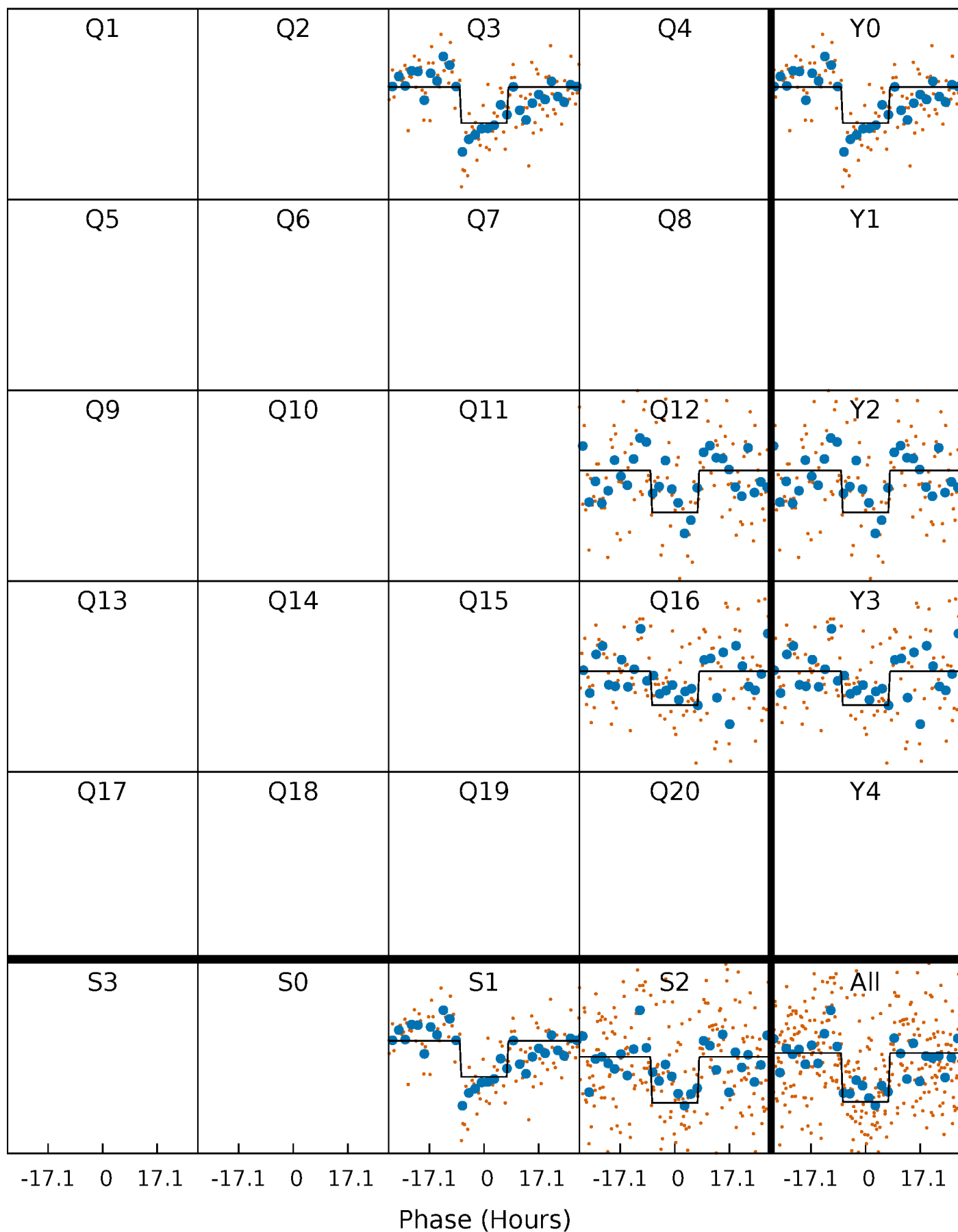
DV Quarter-Phased Transit Curves

TCE 006102550-01 P=408.491505 Days $T_0=316.802943$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

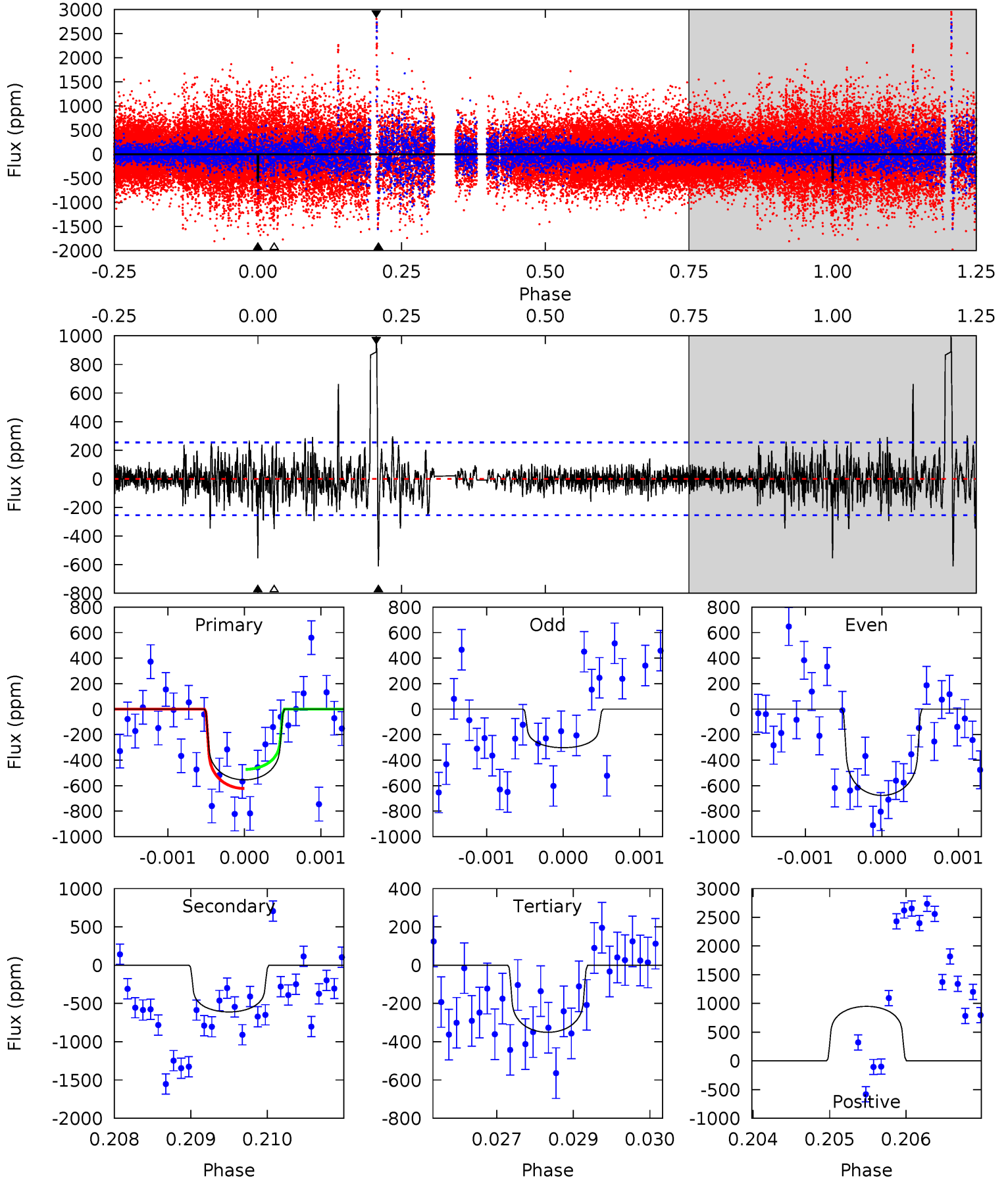
TCE 006102550-01 P=408.398753 Days $T_0=316.853679$ (BKJD)



DV Model-Shift Uniqueness Test

006102550-01, P = 408.491505 Days, E = 316.802943 Days

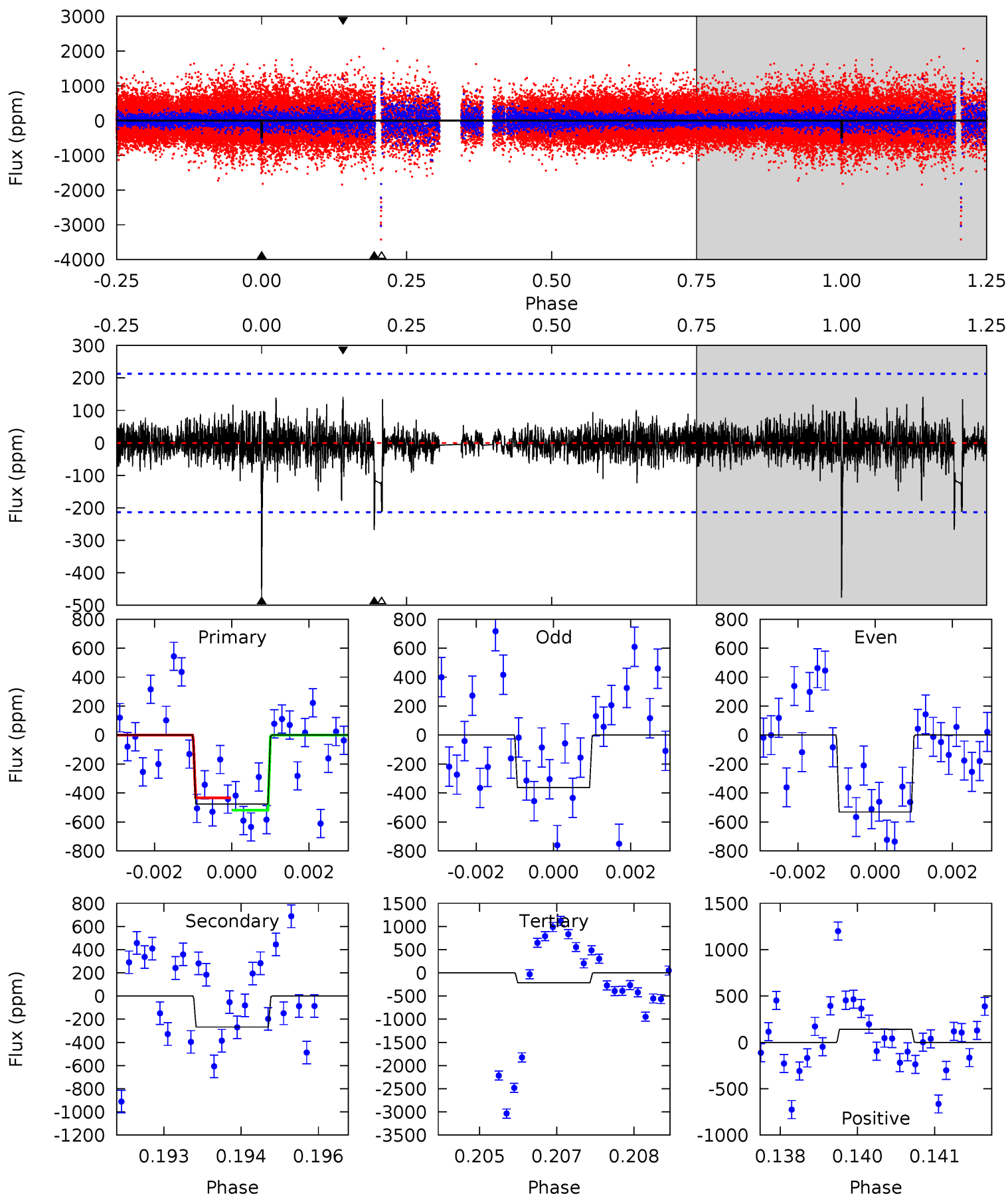
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.8	13.0	7.47	20.2	5.41	3.23	1.70	4.34	-8.41	5.54	-7.21	3.73	0.89	0.62	1.51



Alt Model-Shift Uniqueness Test

006102550-01, P = 408.398753 Days, E = 316.853679 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.0	6.74	5.36	3.56	5.37	3.16	0.82	6.63	8.43	1.38	3.18	2.00	1.24	0.23	1.02



Stellar Parameters For KIC 006102550

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5934^{+160}_{-178}	$4.357^{+0.128}_{-0.192}$	$-0.160^{+0.300}_{-0.300}$	$1.075^{+0.316}_{-0.194}$	$0.961^{+0.134}_{-0.110}$	$1.089^{+0.668}_{-0.524}$
	+3%/-3%	+3%/-4%	+188%/-188%	+29%/-18%	+14%/-11%	+61%/-48%
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 006102550-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-611 ± 47	$3.23^{+2.30}_{-1.96}$	371^{+27}_{-22}	5717^{+4083}_{-1160}	$36896^{+200519}_{-24907}$
Alt.	-268 ± 40	$3.08^{+2.10}_{-1.78}$	370^{+27}_{-21}	4861^{+2482}_{-885}	16988^{+79175}_{-10707}

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 $A_{obs} \gg 1.0$

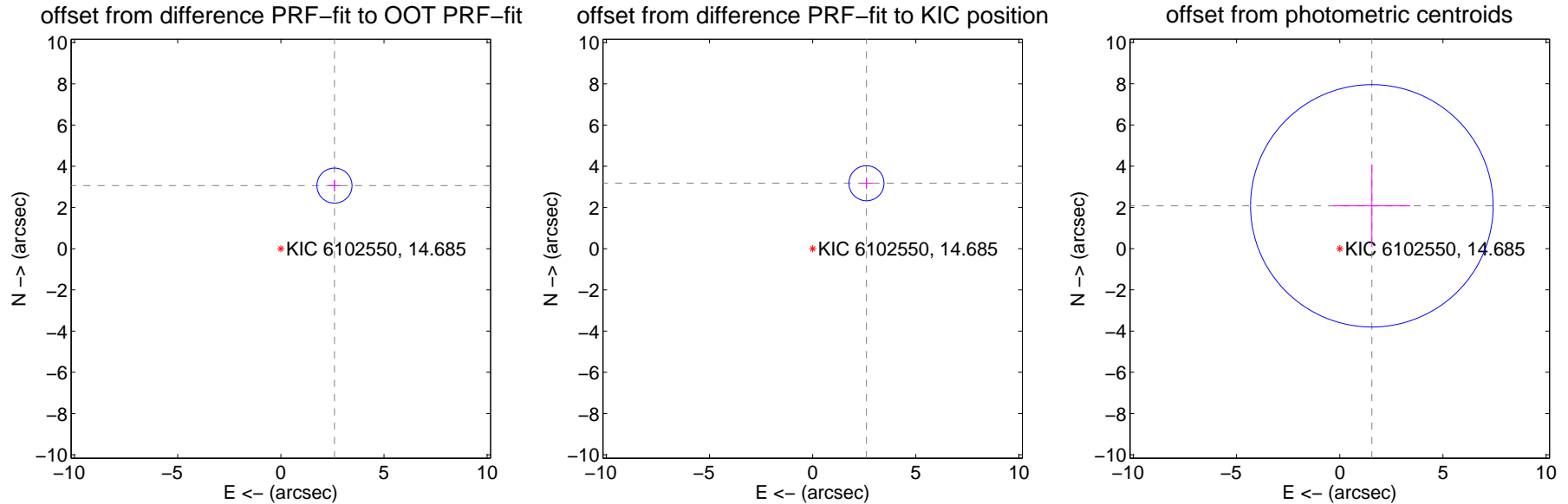
DV Centroid Data

Supplemental centroid analysis for 006102550-01. Kepler magnitude: 14.69. Transit SNR 9.53

There are 1 quarters with good PRF difference image offsets

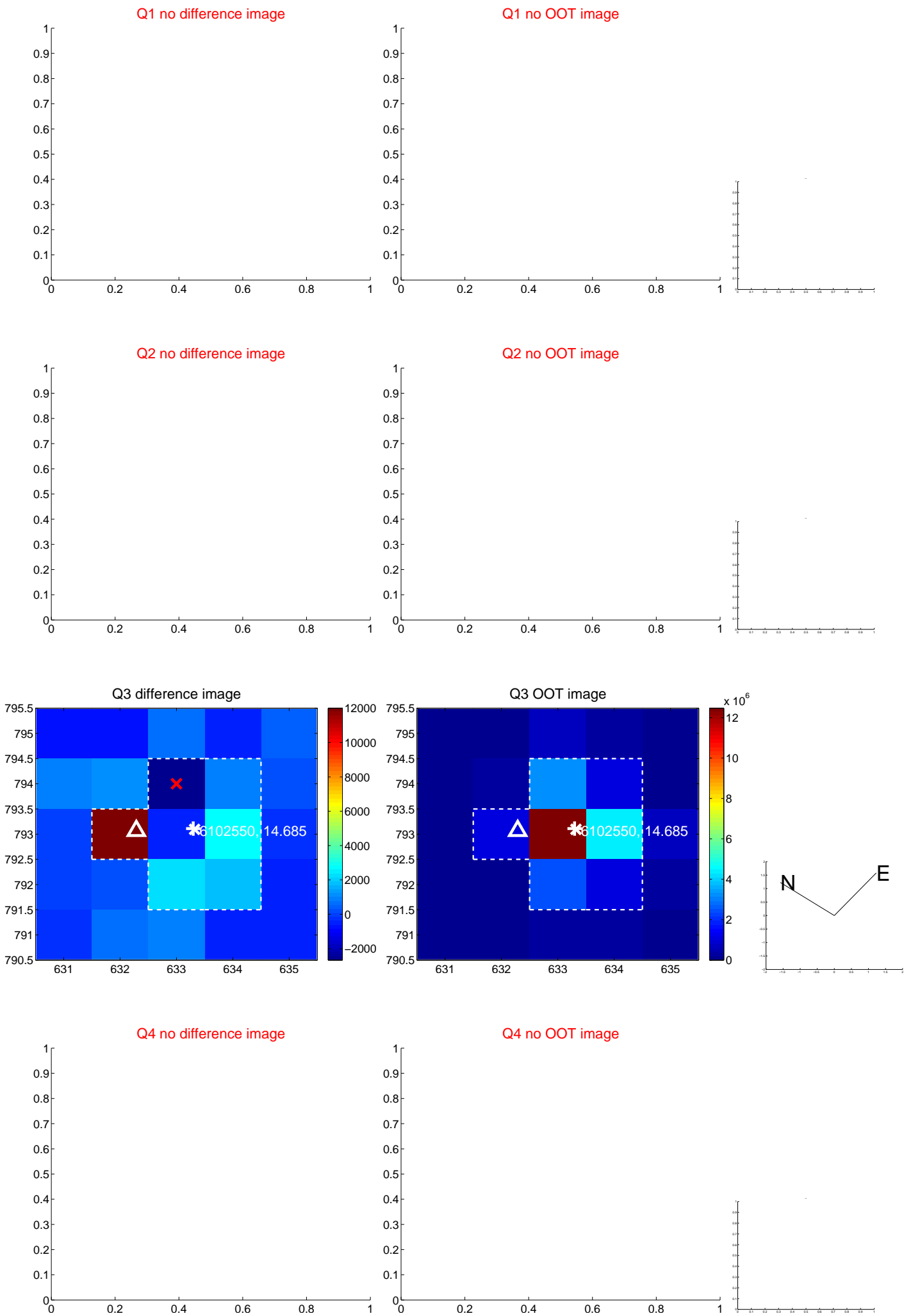
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.017 ± 0.284	14.16	-2.600 ± 0.295	3.062 ± 0.275
PRF-fit source offset from KIC position	4.111 ± 0.283	14.51	-2.610 ± 0.295	3.177 ± 0.275
photometric centroid source offset	2.59 ± 1.96	1.32	-1.56 ± 1.86	2.08 ± 2.01



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.



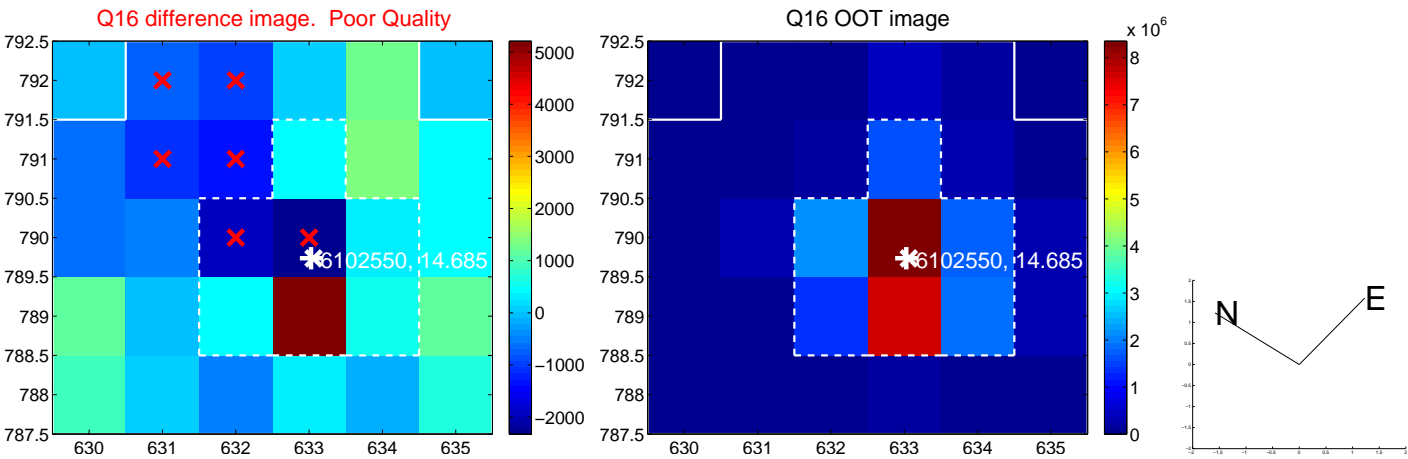
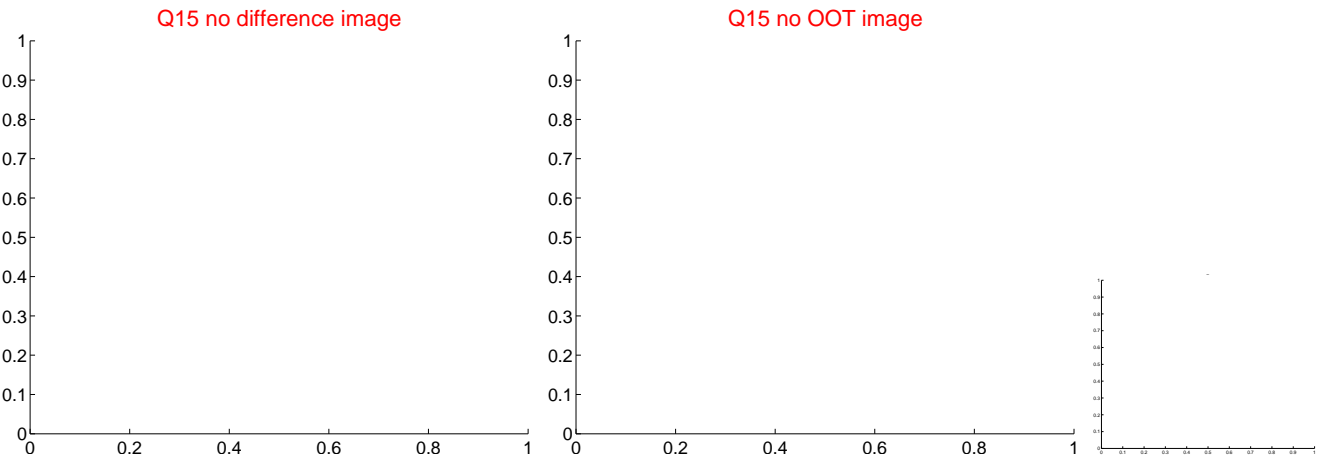
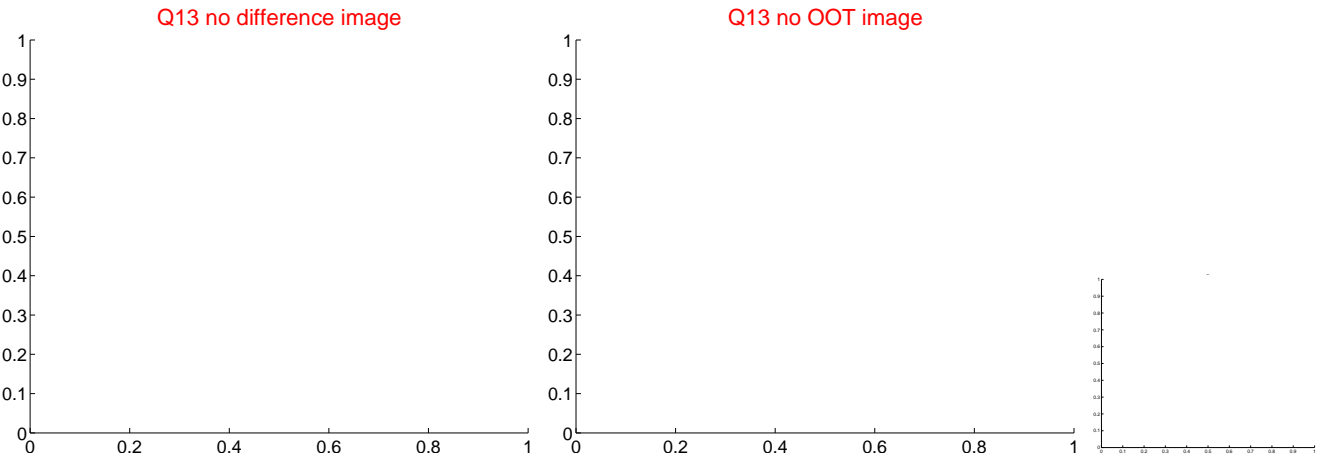
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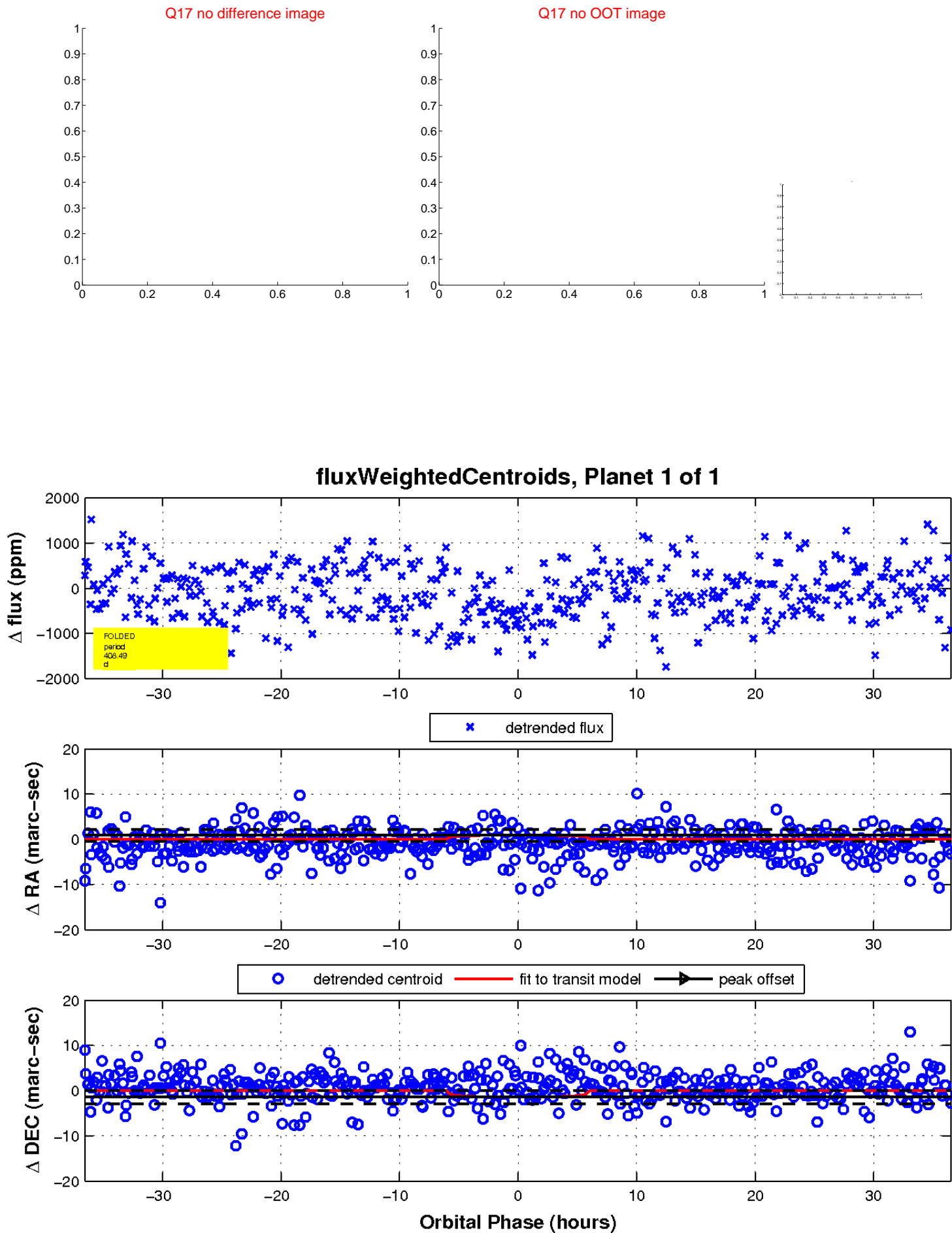
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UKIRT Image

Declination

