

KIC 009664142

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})
009664142-01	OBS	2654.01	13.563137	140.652924	332.7	5.537	13.2	13.8	0.90	5853	1.80	68.52

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009664142-01	OBS	PC	0.98	0	0	0	0	NO_COMMENT

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 009664142-01

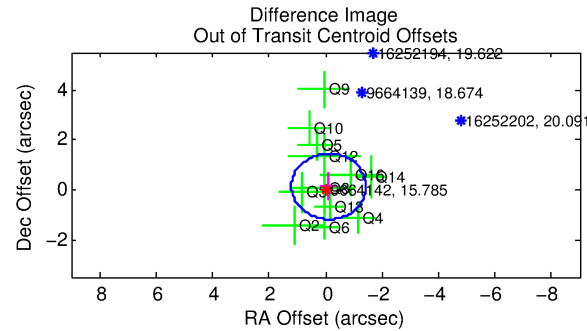
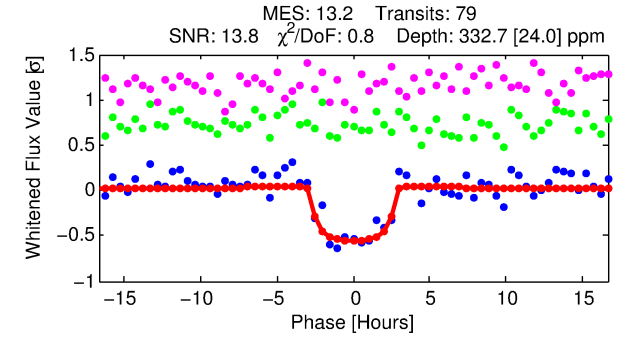
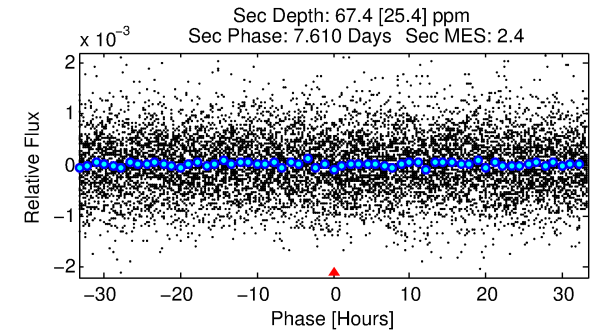
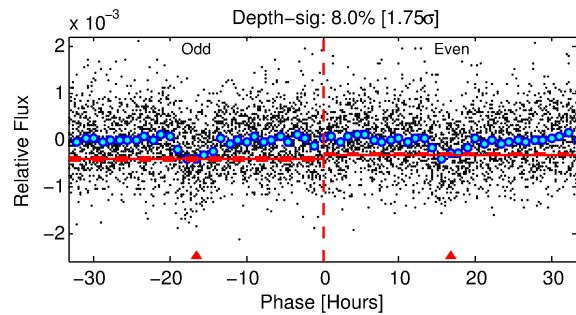
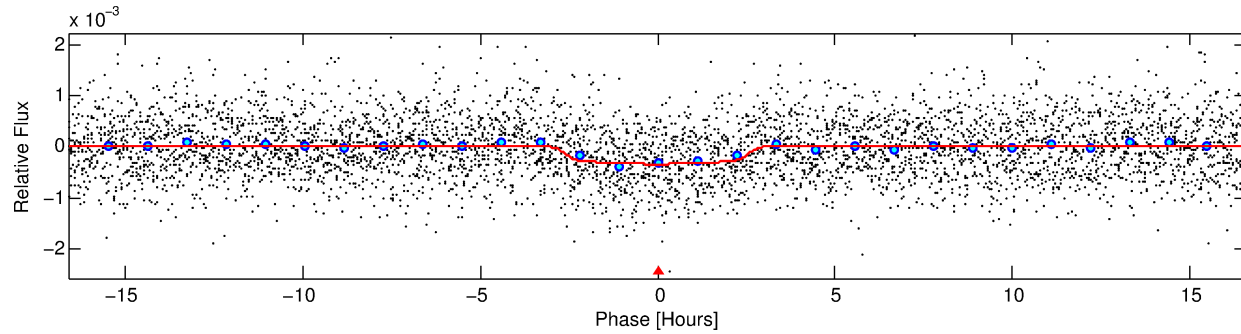
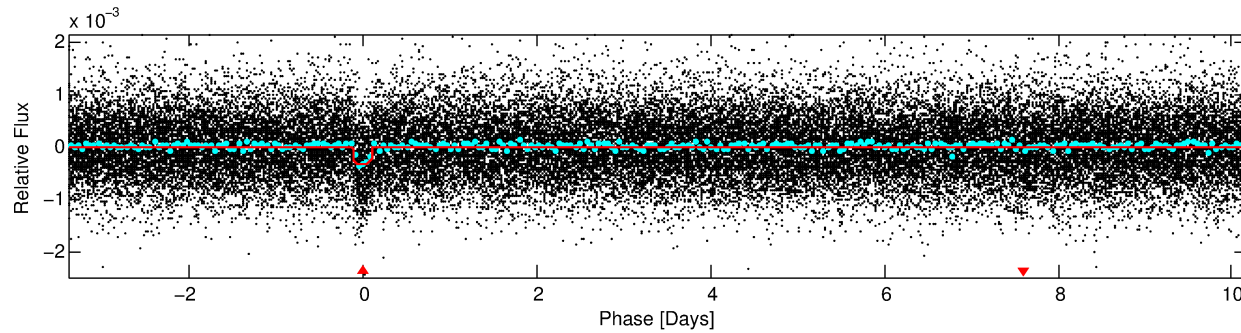
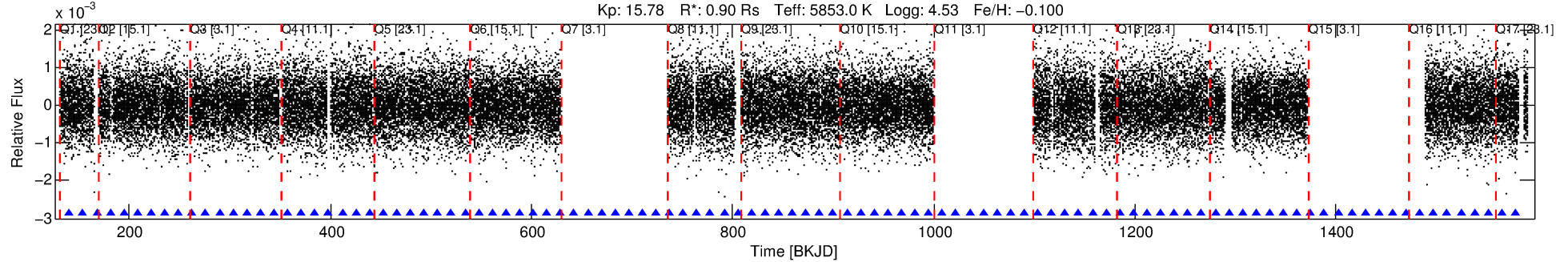
No Significant Match Found

DV One-Page Summary

KIC: 9664142 Candidate: 1 of 1 Period: 13.563 d

KOI: K02654.01 Corr: 0.989

Kp: 15.78 R*: 0.90 Rs Teff: 5853.0 K Logg: 4.53 Fe/H: -0.100



DV Fit Results:

Period = 13.56314 [0.00013] d
Epoch = 140.6529 [0.0072] BKJD
Rp/R* = 0.0184 [0.0090]
a/R* = 12.18 [27.44]
b = 0.78 [1.13]
Seff = 68.52 [25.78]
Teq = 734 [69] K
Rp = 1.80 [1.02] Re
a = 0.1109 [0.0270] AU
Ag = 141.09 [155.74] [0.90σ]
Teffp = 3909 [1030] K [3.08σ]

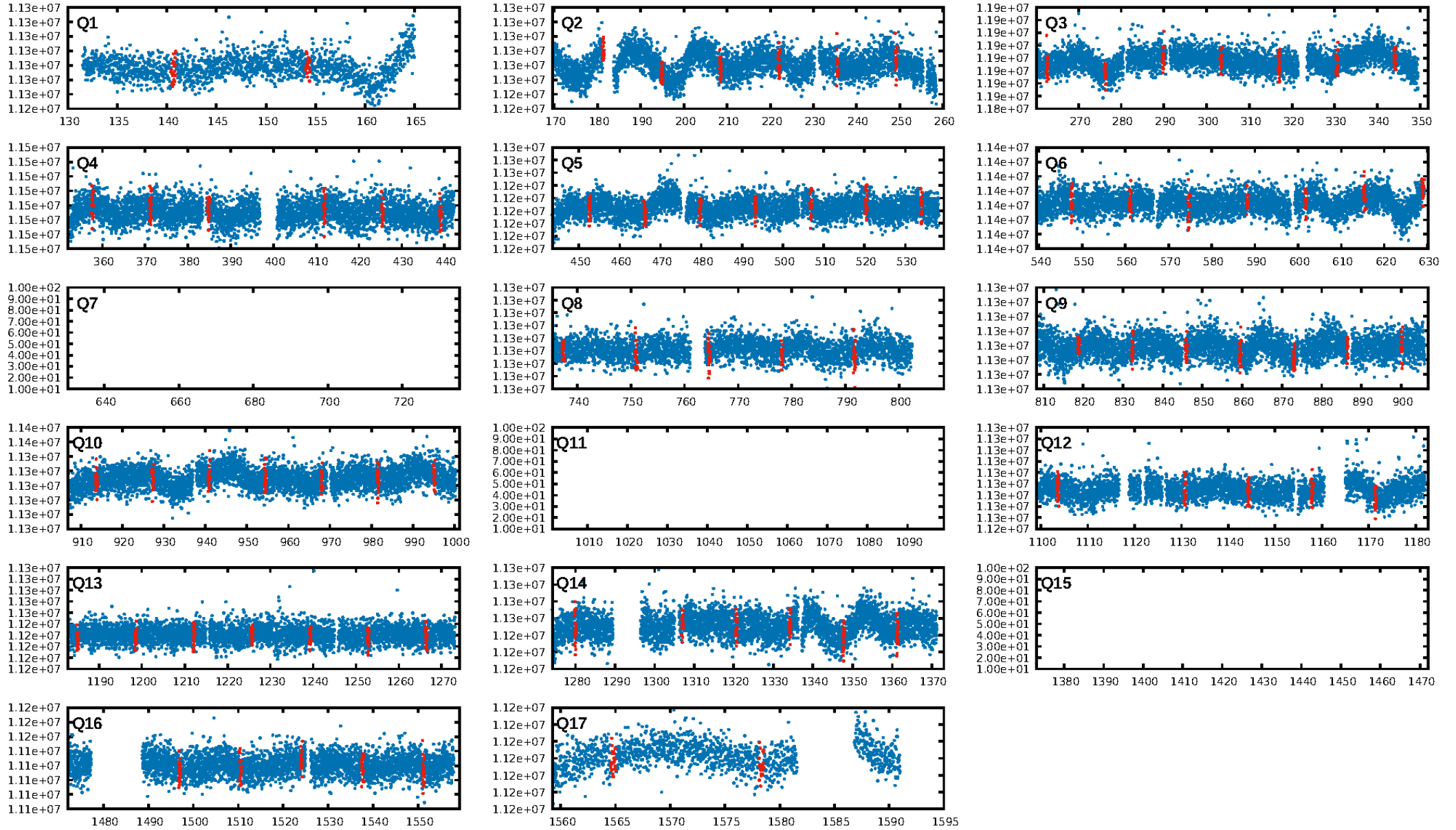
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 9.24e-39
RollingBand-fgt: 1.00 [75/75]
GhostDiagnostic-chr: -10.24
Centroid-sig: 3.9%
Centroid-so: 1.634 arcsec [1.47σ]
OotOffset-rm: 0.163 arcsec [0.37σ]
KicOffset-rm: 0.217 arcsec [0.41σ]
OotOffset-st: 4/1/4/3 [12]
KicOffset-st: 4/1/4/3 [12]
DiffImageQuality-fgm: 0.67 [8/12]
DiffImageOverlap-fno: 1.00 [14/14]

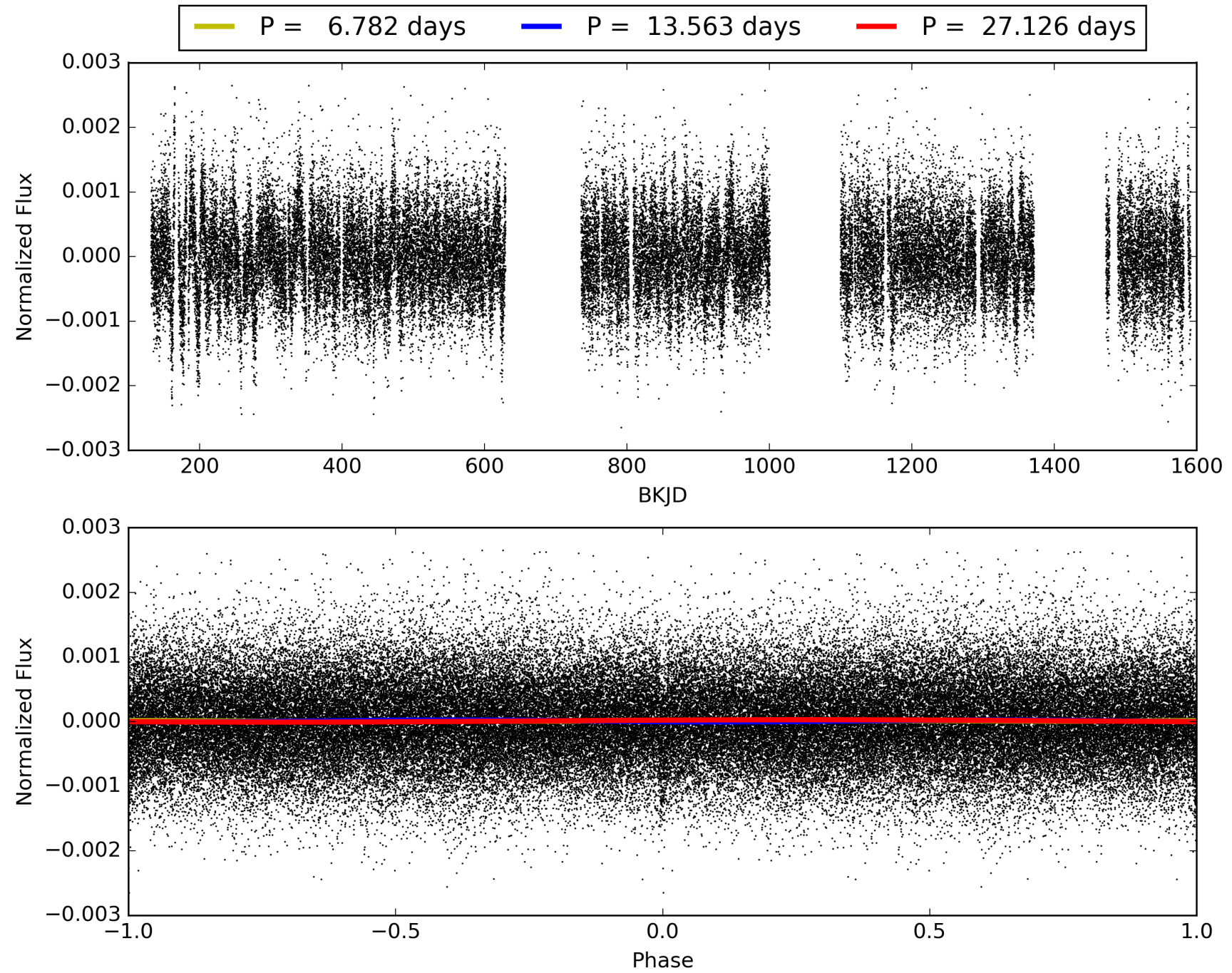
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 08:07:22 Z

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

TCE 009664142-01, PDC Light Curves

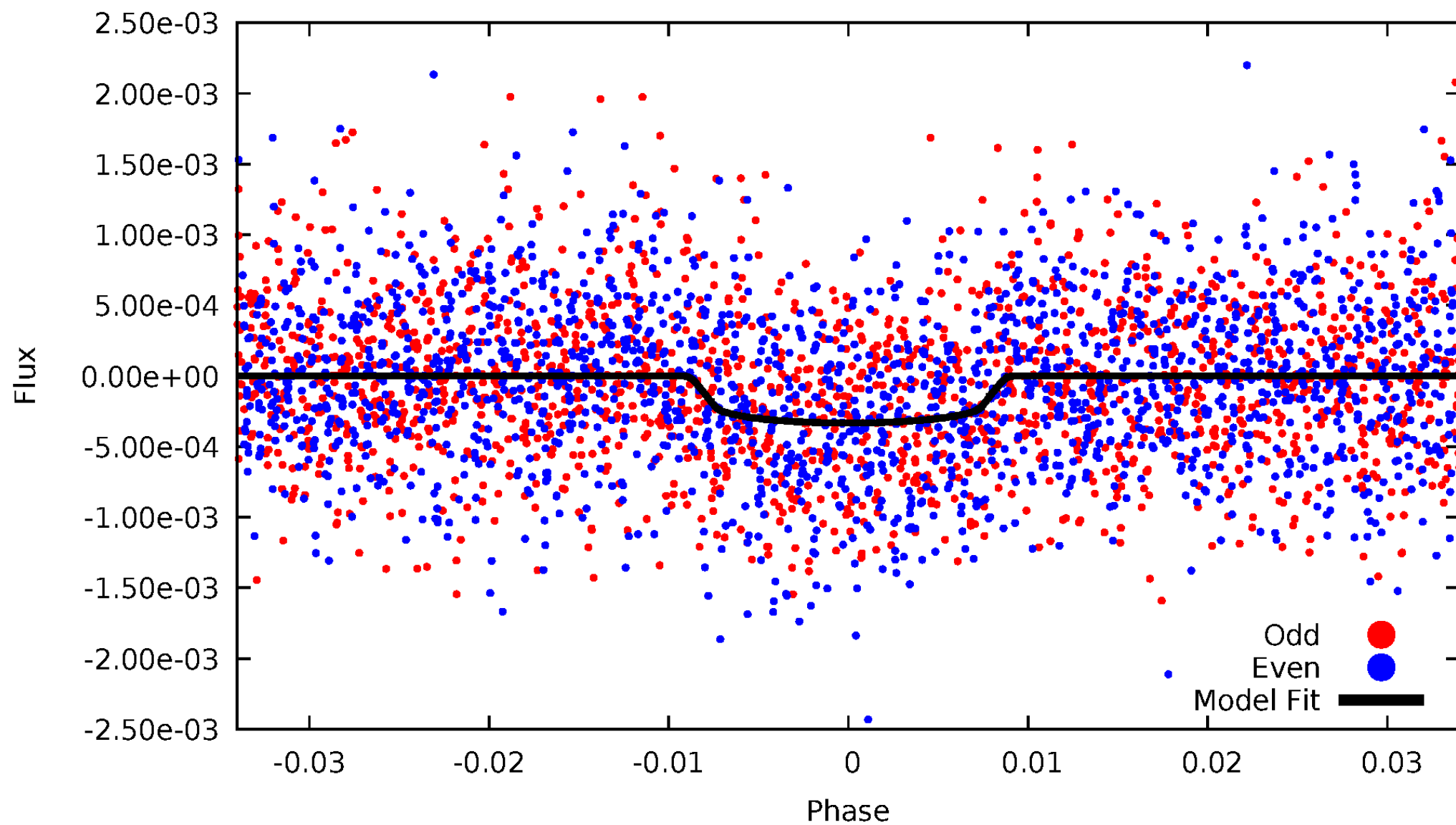


TCE 009664142-01



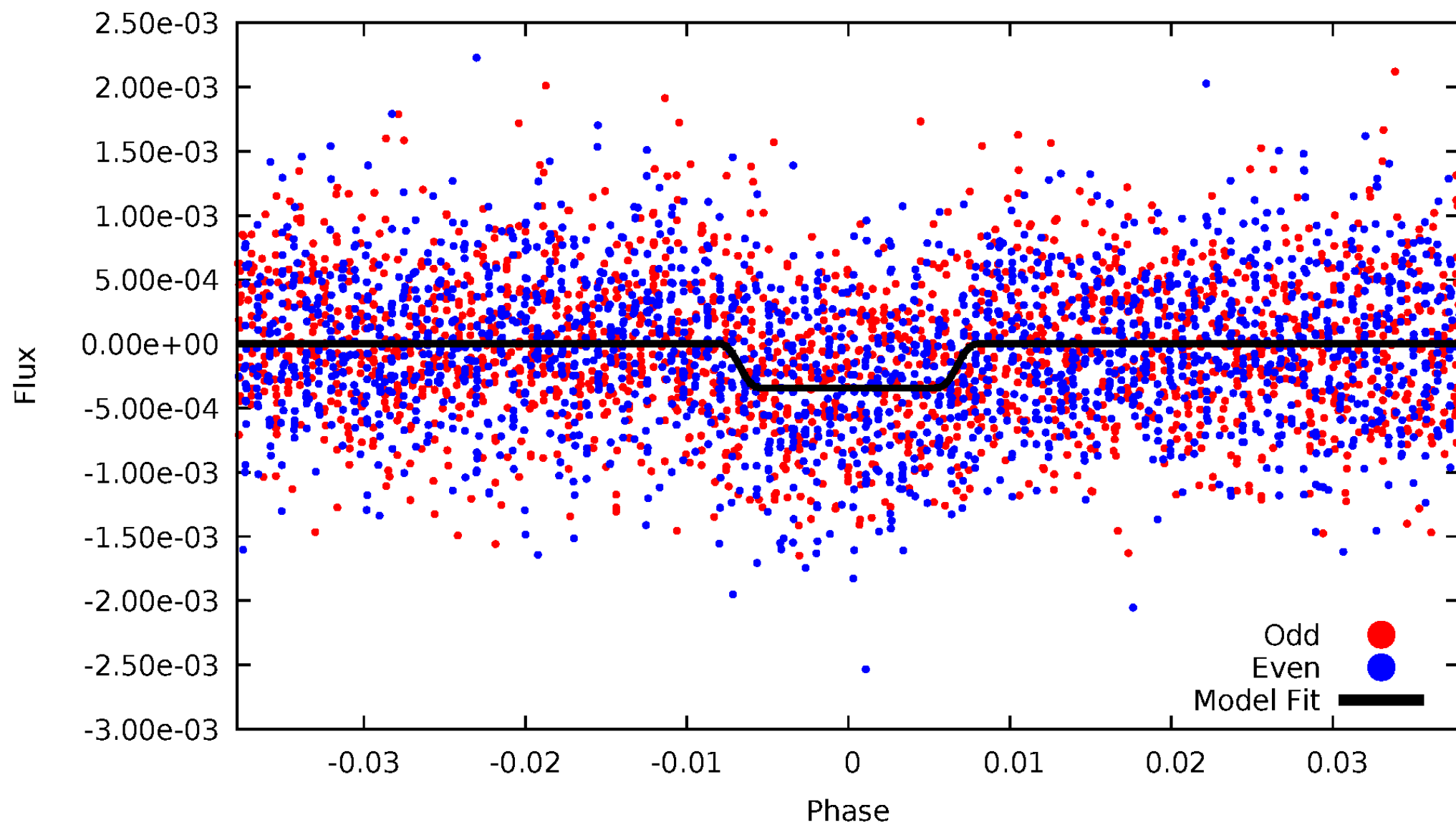
DV Odd/Even

TCE 009664142-01



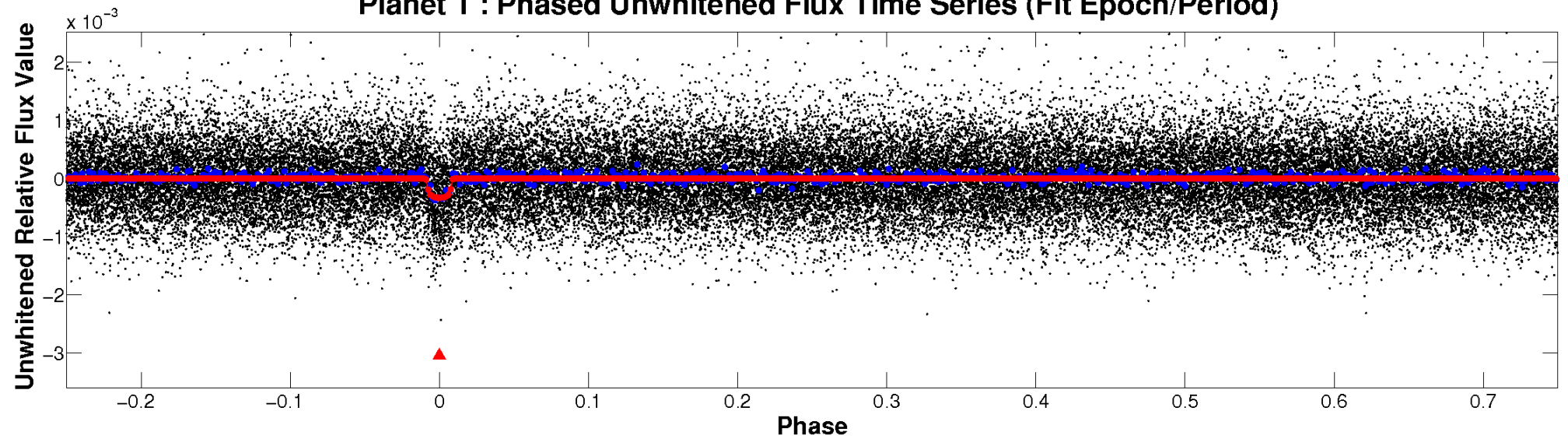
ALT Odd/Even

TCE 009664142-01

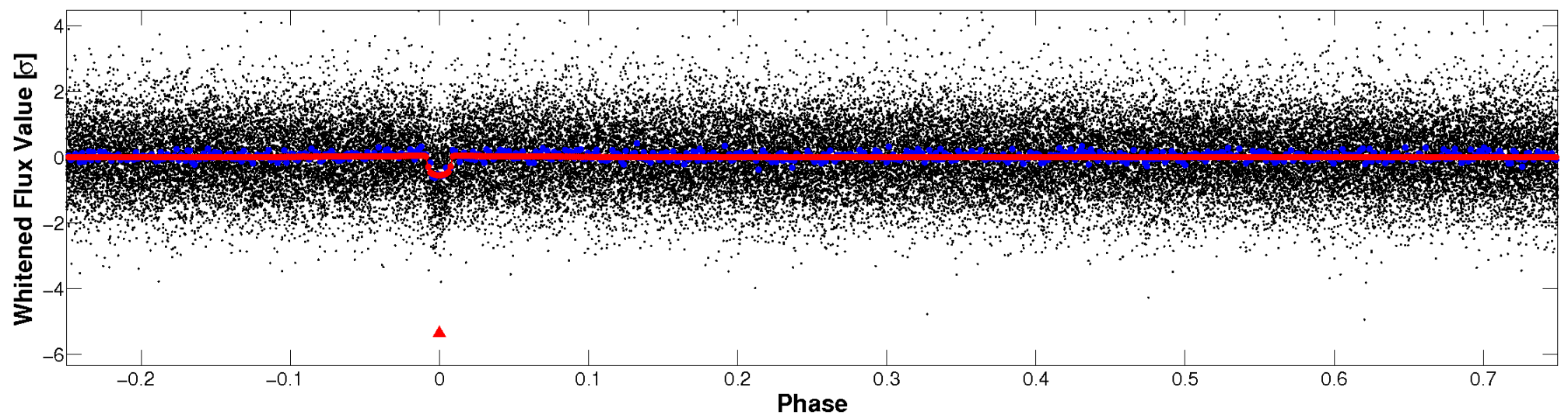


Non-Whitened Vs. Whitened Light Curve

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

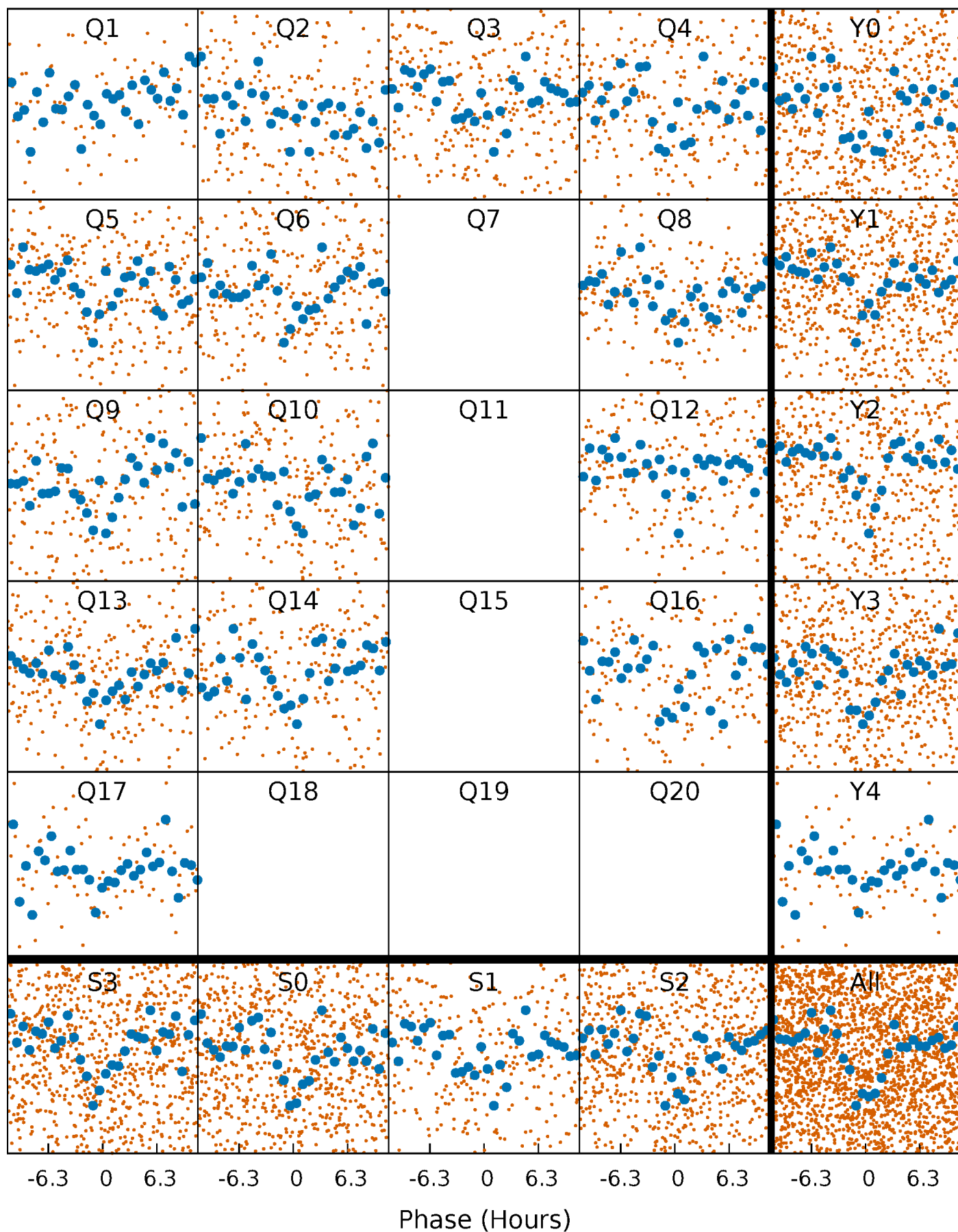


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



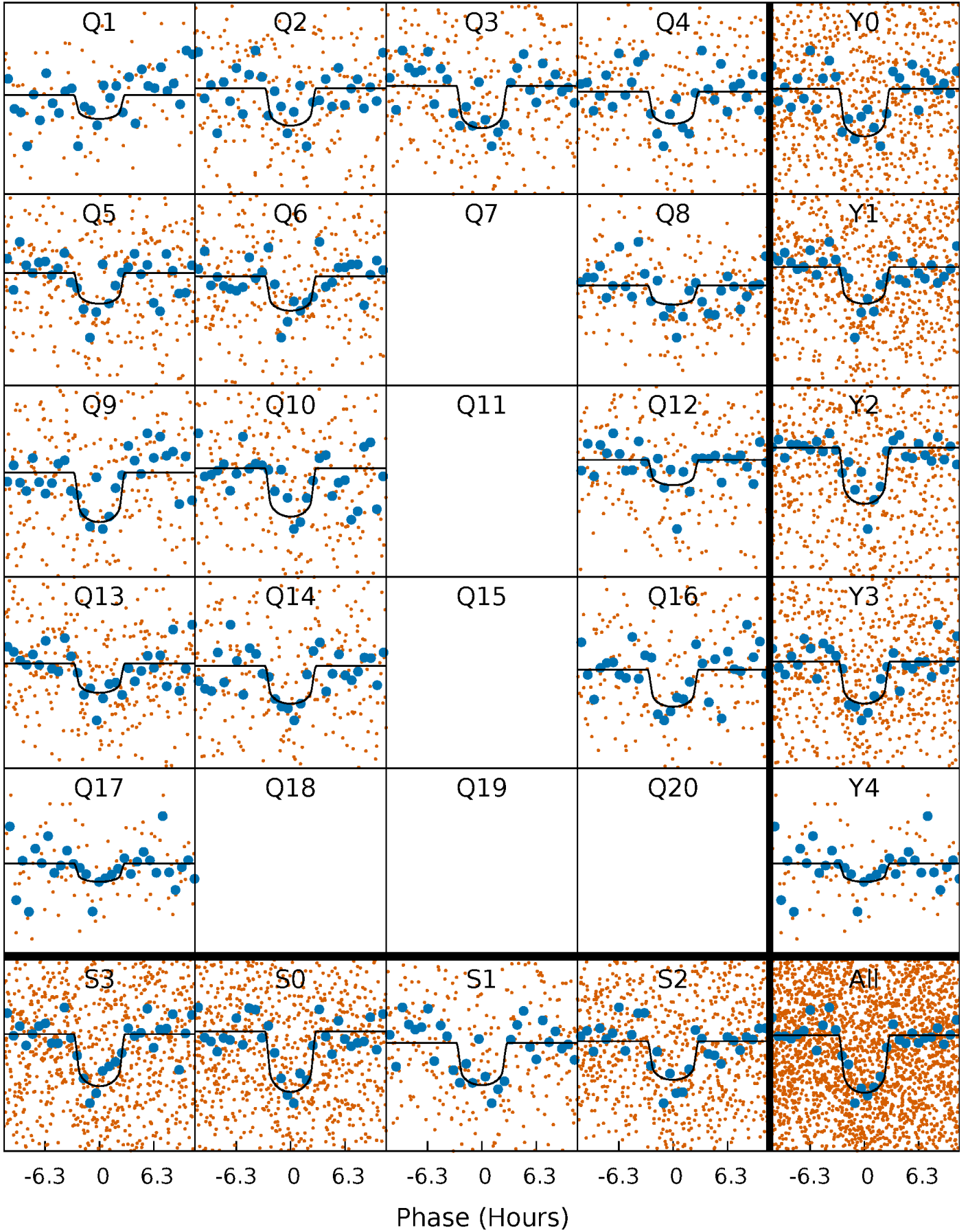
PDC Quarter-Phased Transit Curves

TCE 009664142-01 P= 13.563137 Days $T_0=140.652924$ (BKJD)



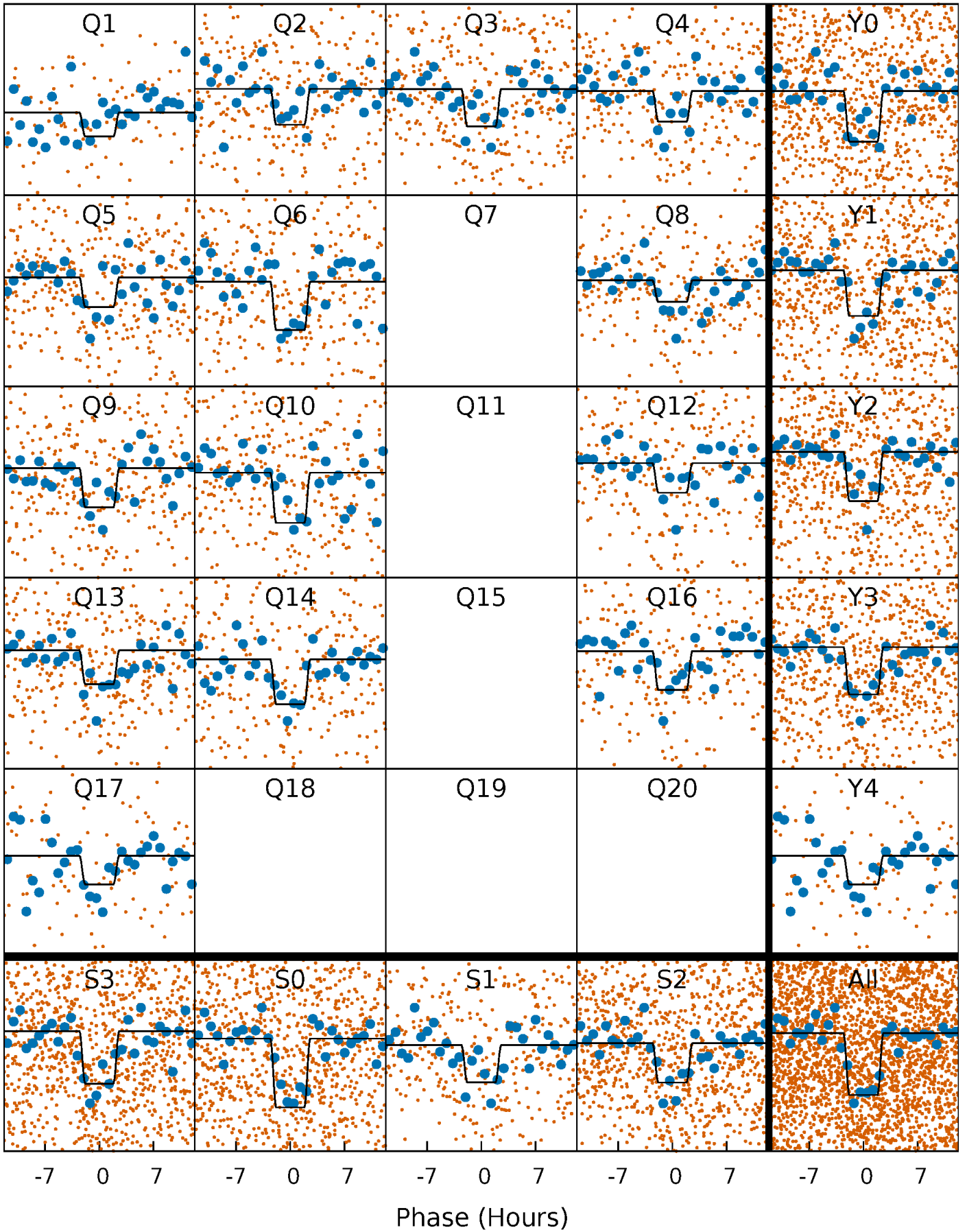
DV Quarter-Phased Transit Curves

TCE 009664142-01 P= 13.563137 Days $T_0=140.652924$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

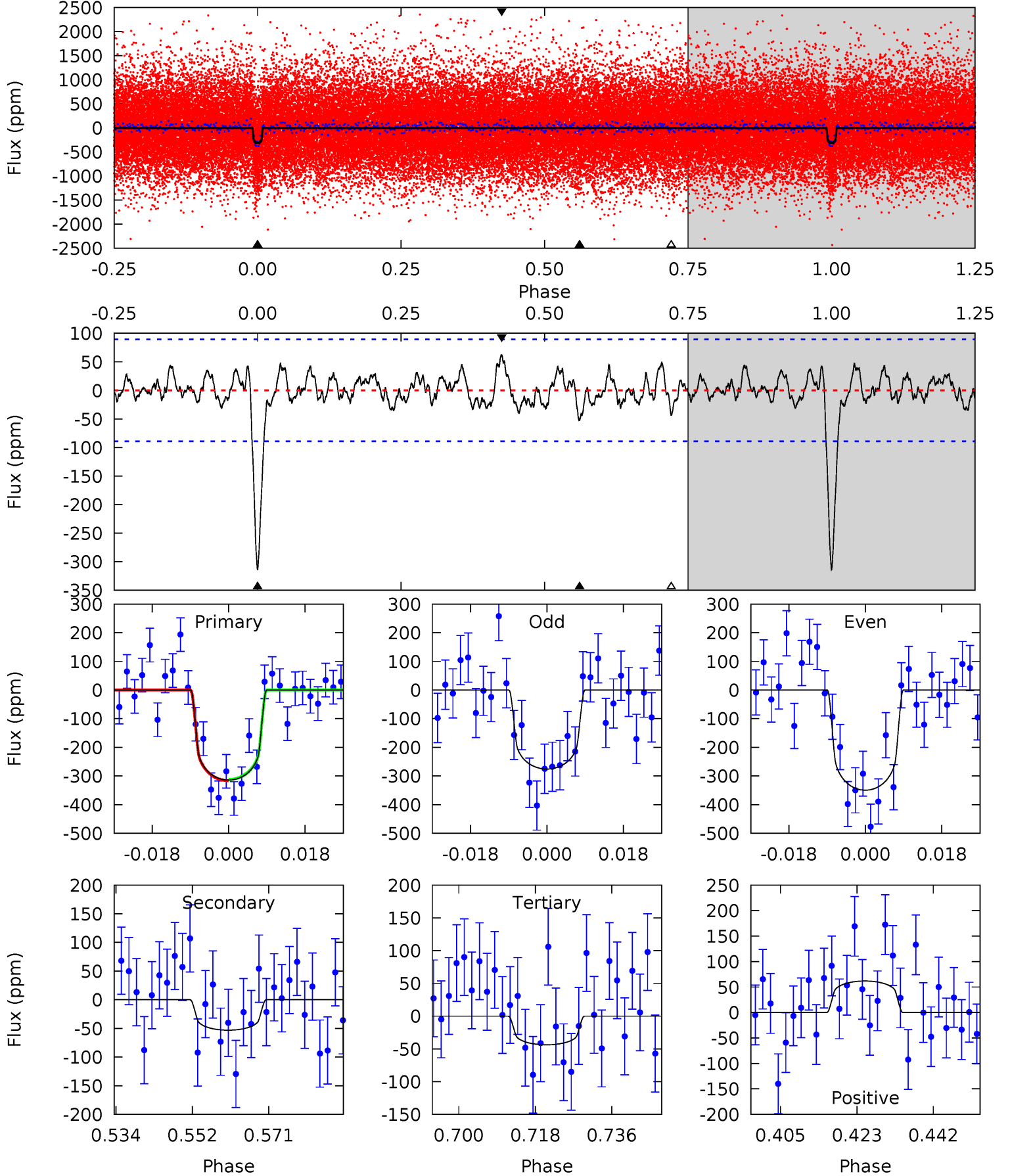
TCE 009664142-01 P= 13.563177 Days $T_0=140.651272$ (BKJD)



DV Model-Shift Uniqueness Test

009664142-01, $P = 13.563137$ Days, $E = 127.089787$ Days

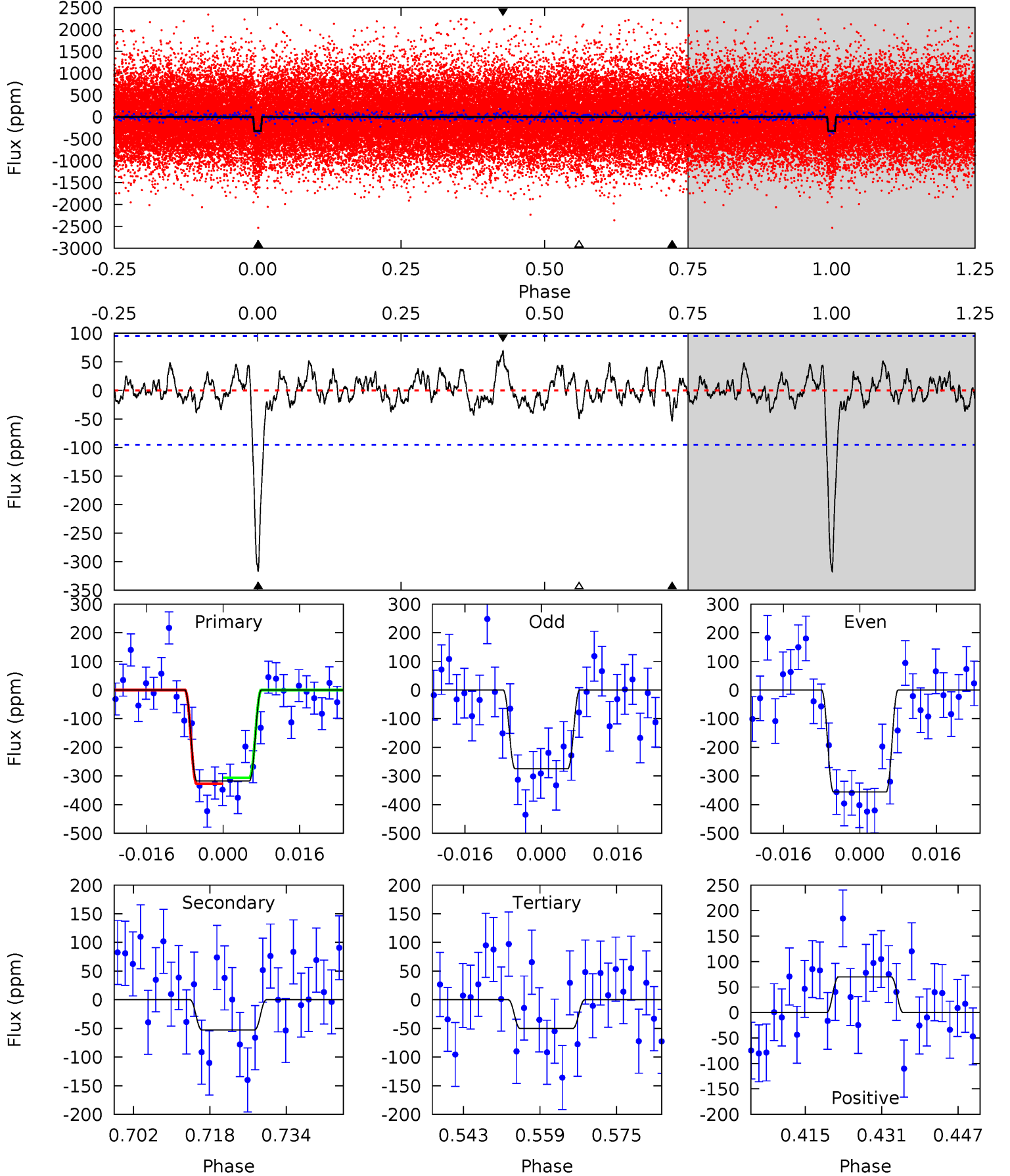
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.3	2.92	2.40	3.39	4.91	2.36	1.10	14.9	13.9	0.51	-0.48	2.03	0.92	0.16	0.12



Alt Model-Shift Uniqueness Test

009664142-01, P = 13.563177 Days, E = 127.088095 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.4	2.73	2.59	3.62	4.94	2.41	1.07	13.8	12.8	0.14	-0.89	2.10	0.93	0.18	0.54



Stellar Parameters For KIC 009664142

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5853^{+157}_{-192}	$4.529^{+0.048}_{-0.192}$	$-0.100^{+0.300}_{-0.300}$	$0.895^{+0.260}_{-0.087}$	$0.990^{+0.104}_{-0.127}$	$1.941^{+0.480}_{-0.934}$
	+3%/-3%	+1%/-4%	+300%/-300%	+29%/-10%	+11%/-13%	+25%/-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 009664142-01 / KOI 2654.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-53 ± 18	$1.93^{+0.91}_{-0.95}$	1049^{+65}_{-53}	3929^{+1146}_{-535}	90^{+256}_{-54}
Alt.	-53 ± 19	$1.91^{+0.94}_{-0.89}$	1042^{+62}_{-48}	3924^{+1139}_{-540}	90^{+261}_{-52}

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 $A_{\text{obs}} \gg 1.0$

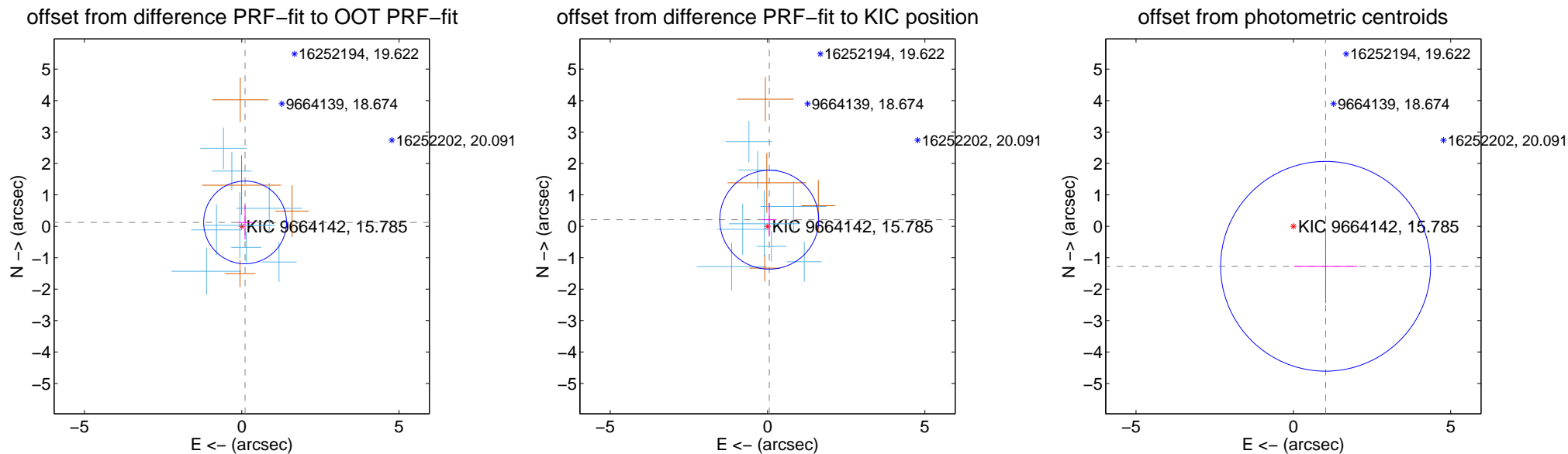
DV Centroid Data

Supplemental centroid analysis for 009664142-01. Kepler magnitude: 15.79. Transit SNR 13.79

There are 8 quarters with good PRF difference image offsets

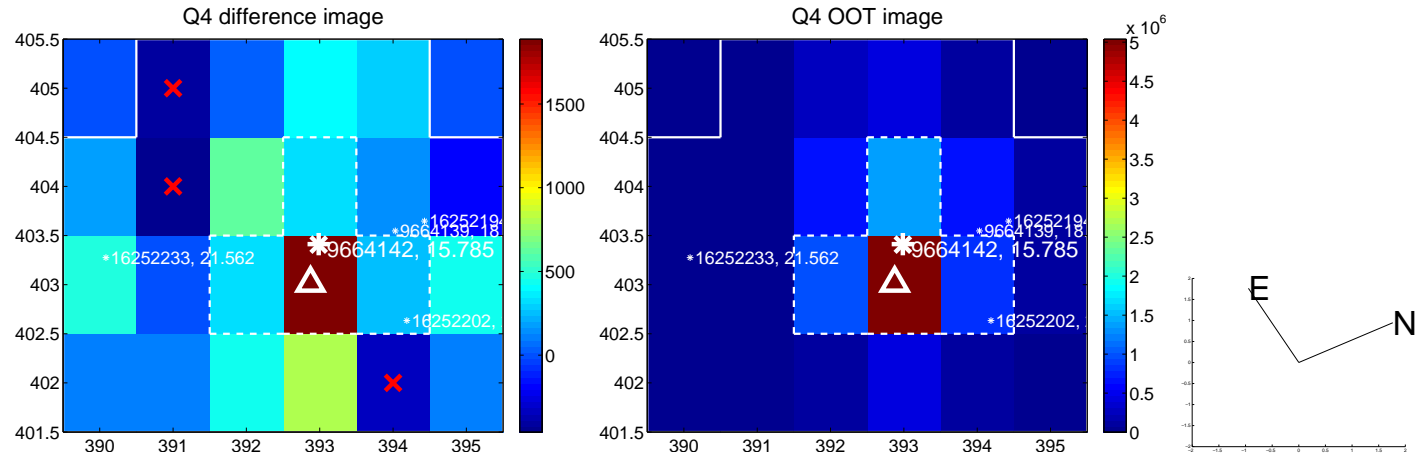
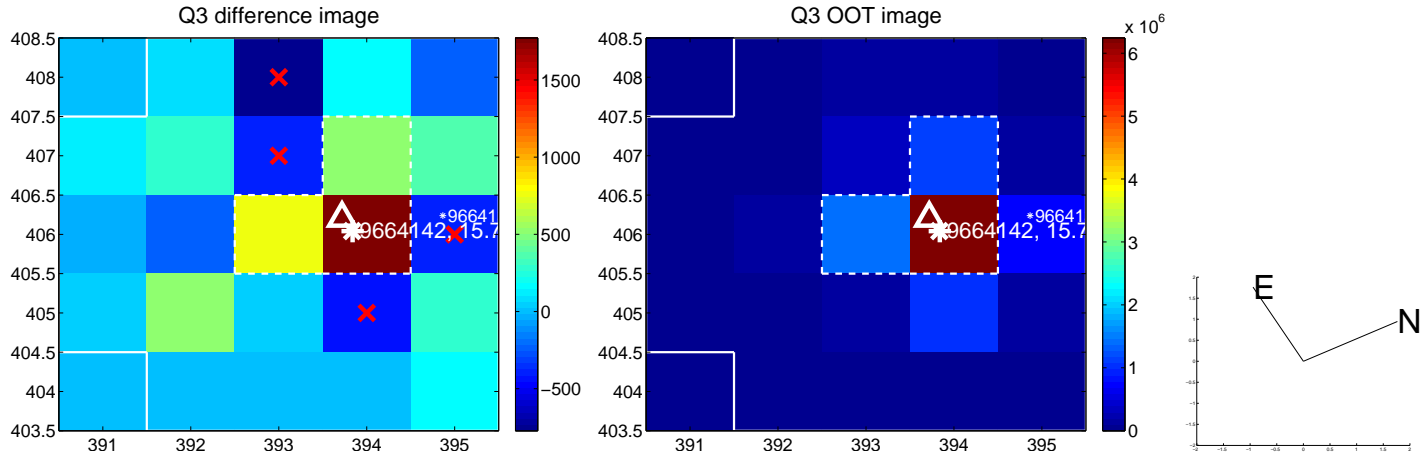
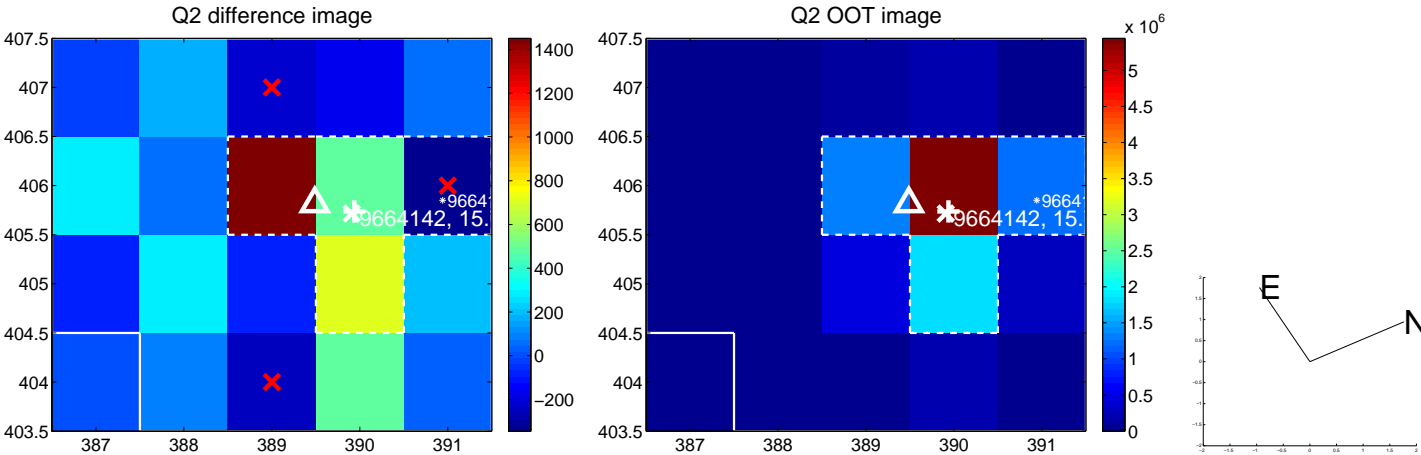
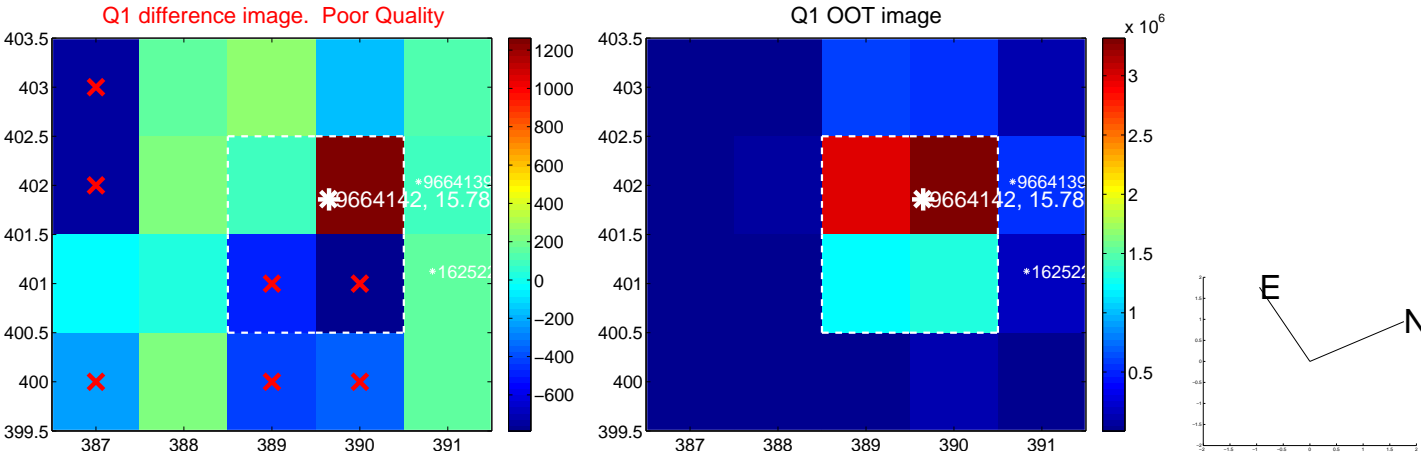
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.163 ± 0.439	0.37	-0.106 ± 0.239	0.124 ± 0.540
PRF-fit source offset from KIC position	0.217 ± 0.524	0.41	-0.054 ± 0.230	0.210 ± 0.538
photometric centroid source offset	1.63 ± 1.11	1.47	-1.03 ± 1.01	-1.27 ± 1.18

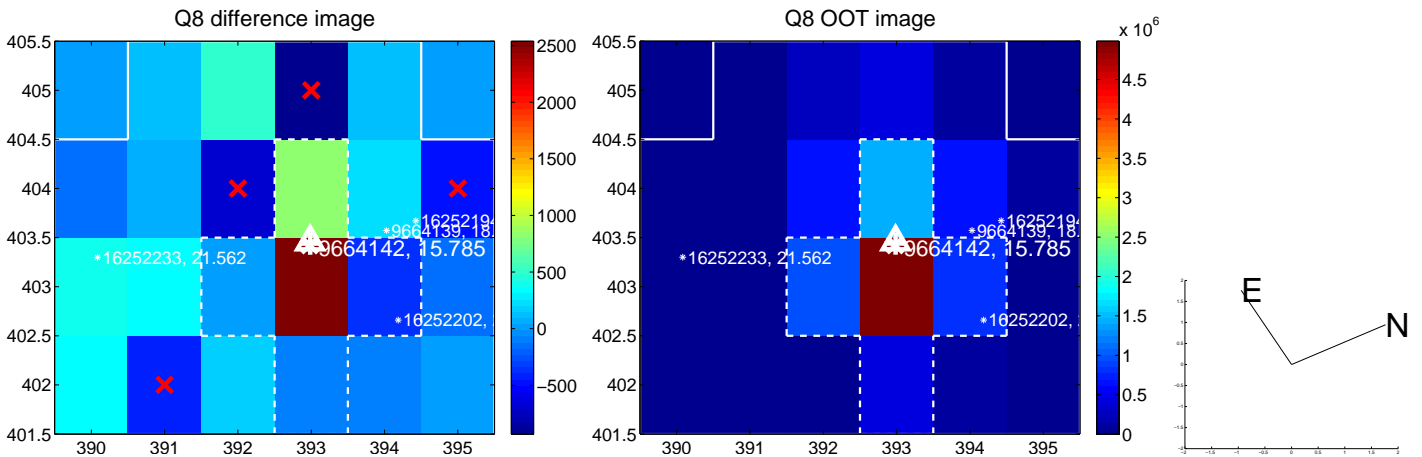
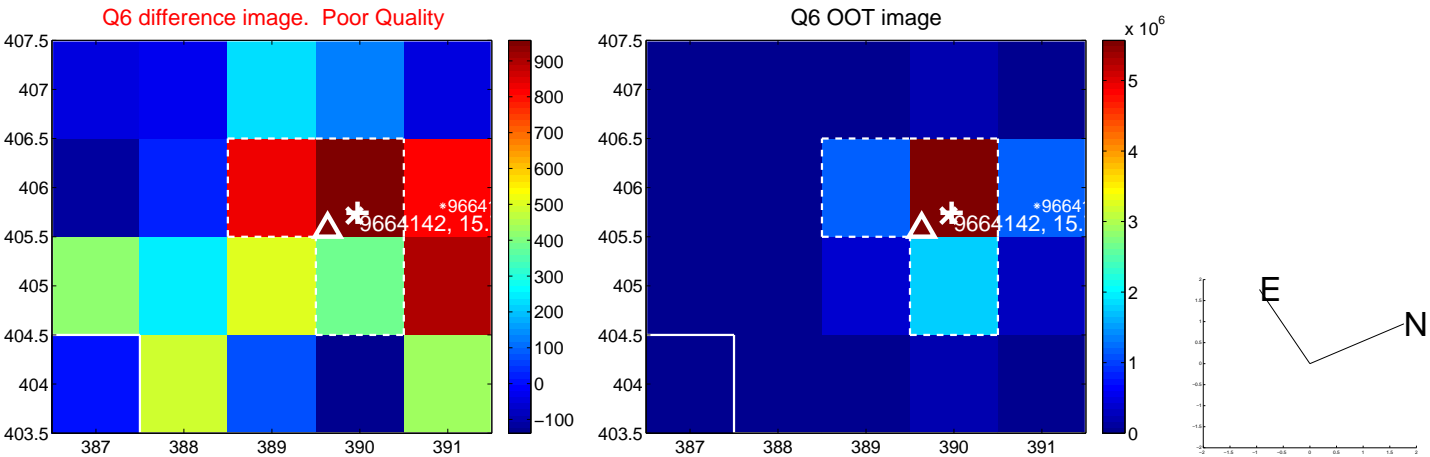
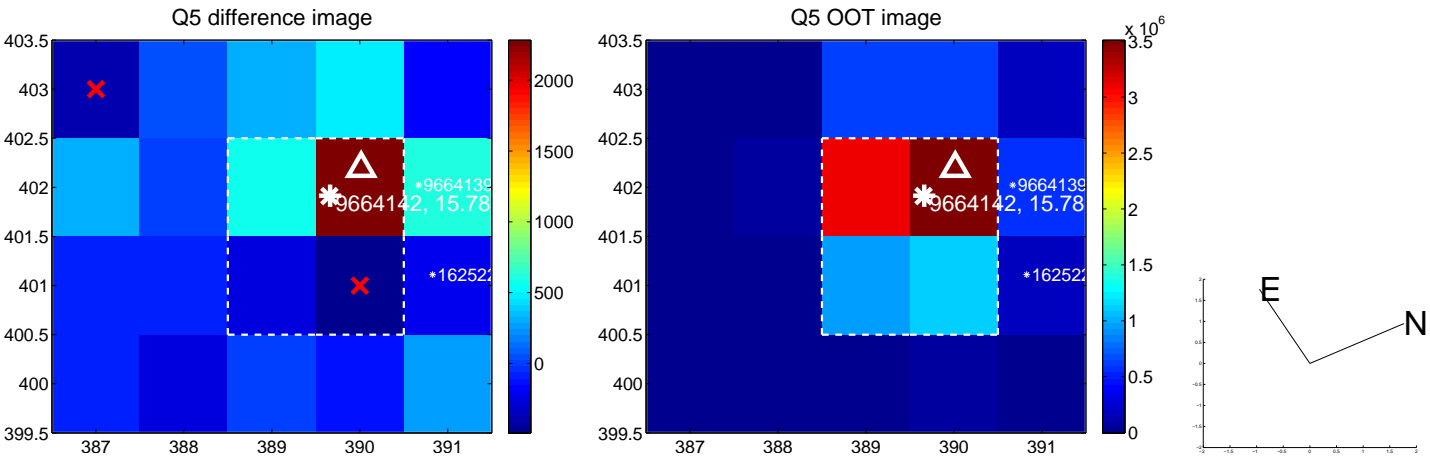


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

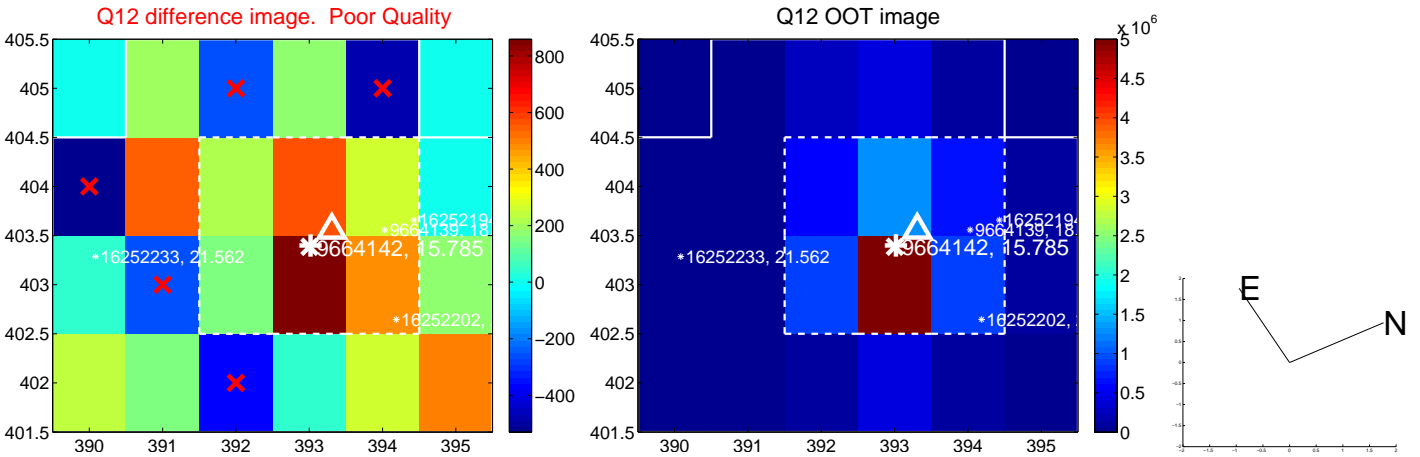
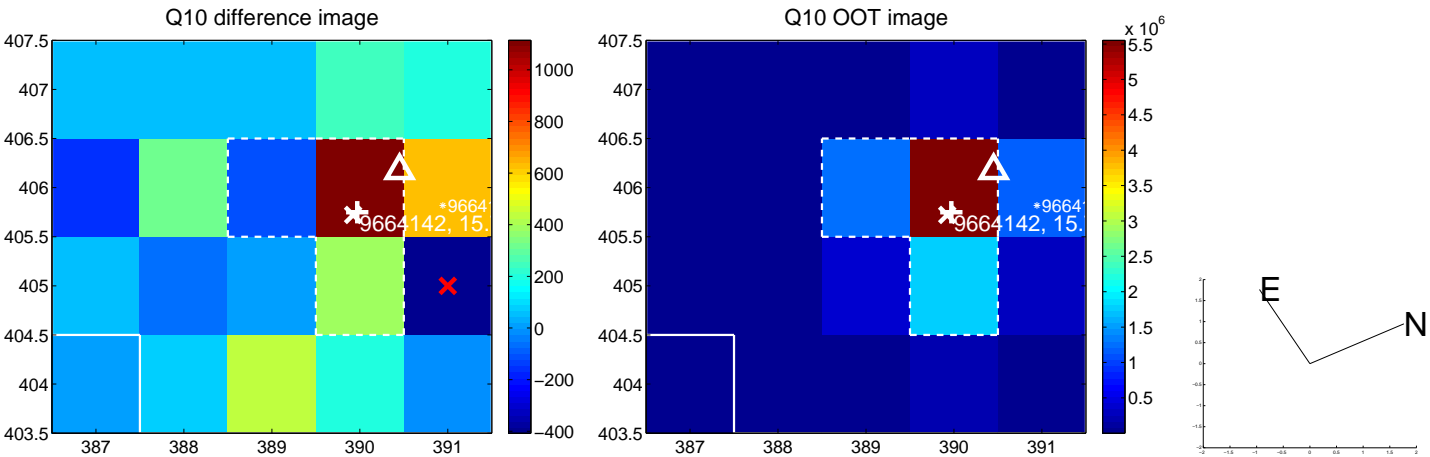
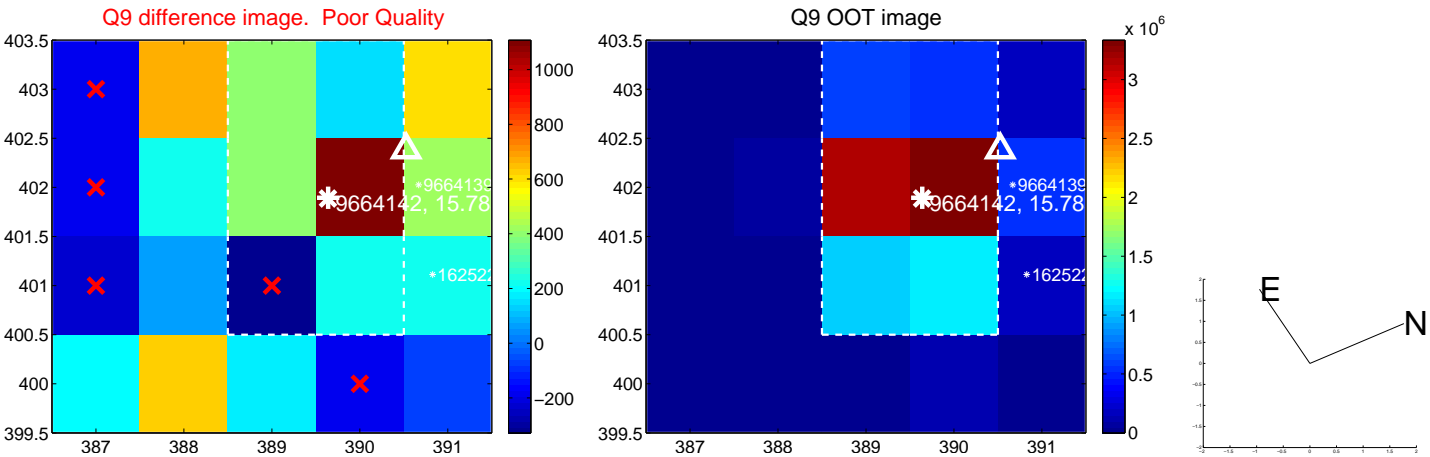
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



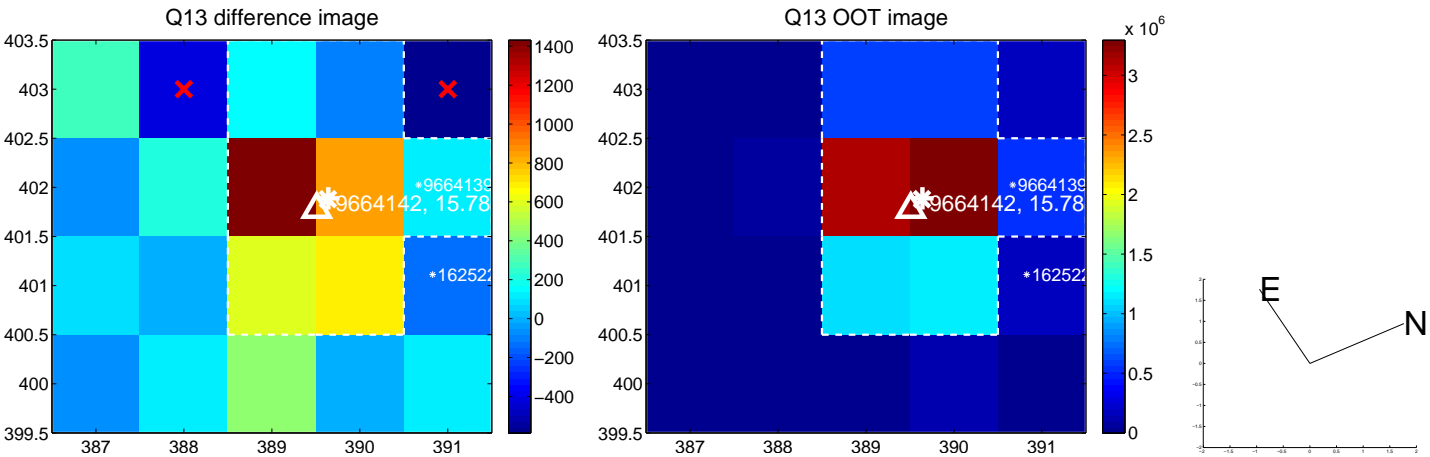
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



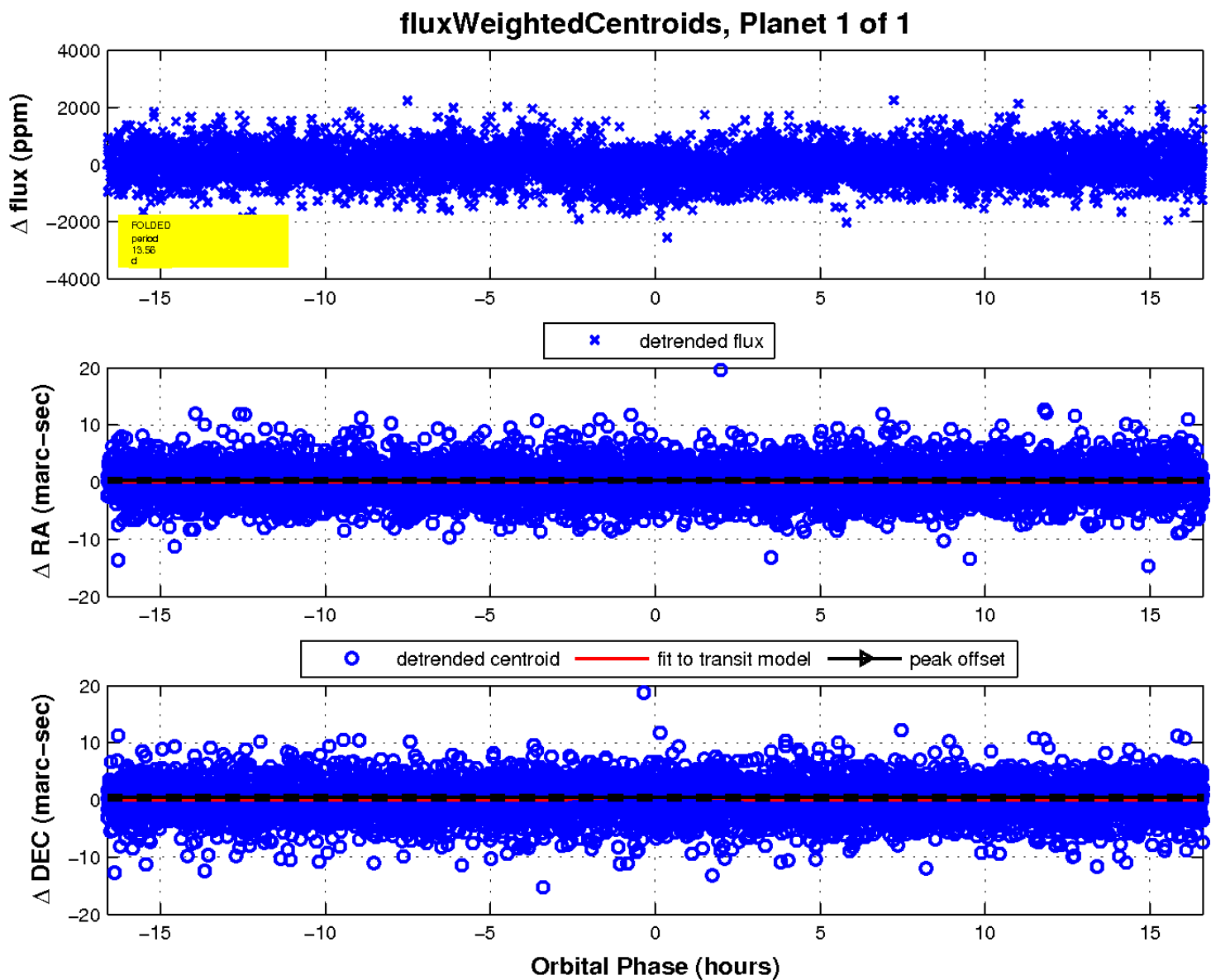
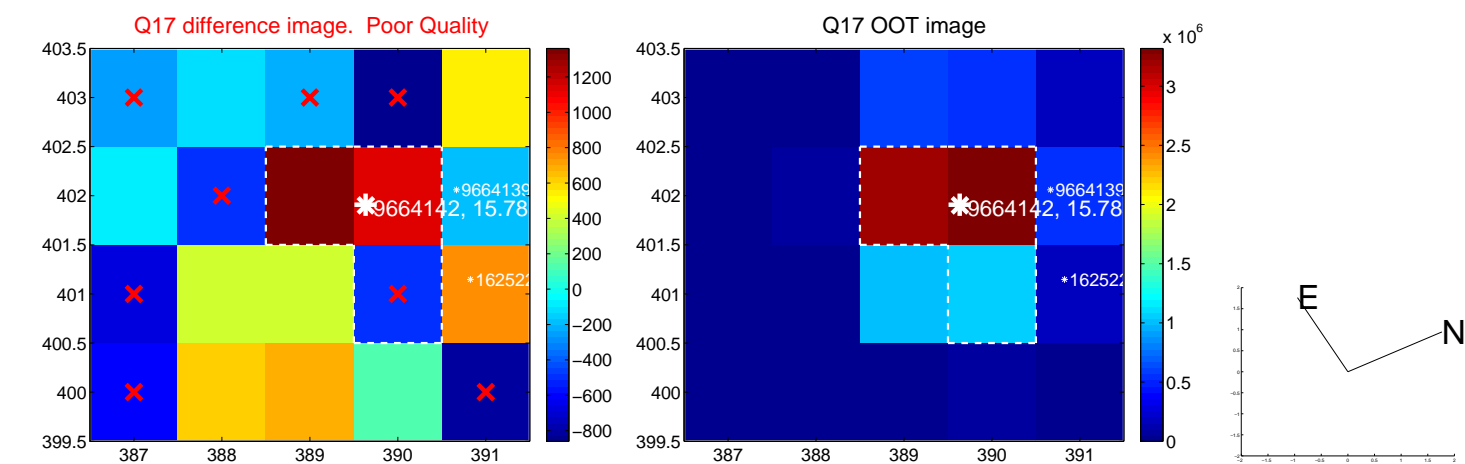
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UKIRT Image

Declination

