

KIC 010454313

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})
010454313-01	OBS	0532.01	4.221621	135.705643	635.9	3.157	69.1	78.6	0.99	6123	2.92	453.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010454313-01	OBS	PC	1.00	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.

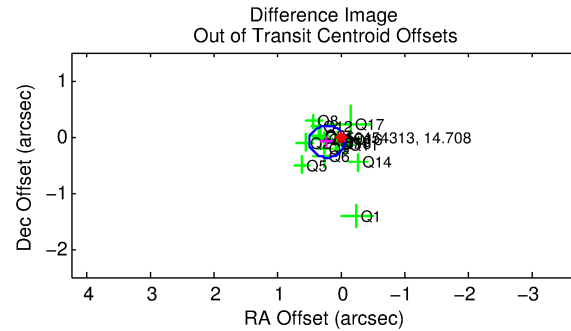
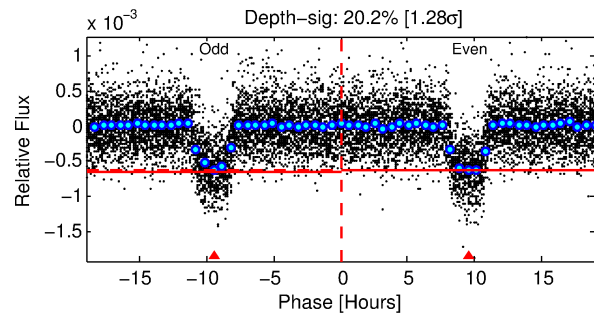
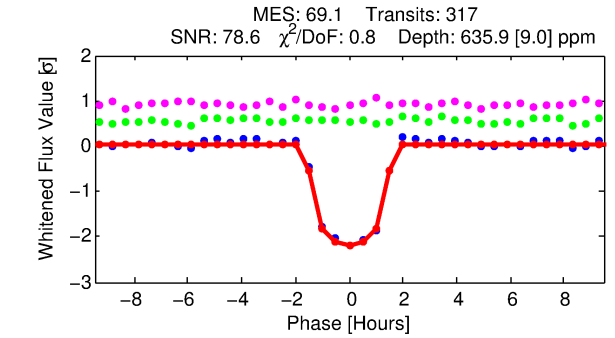
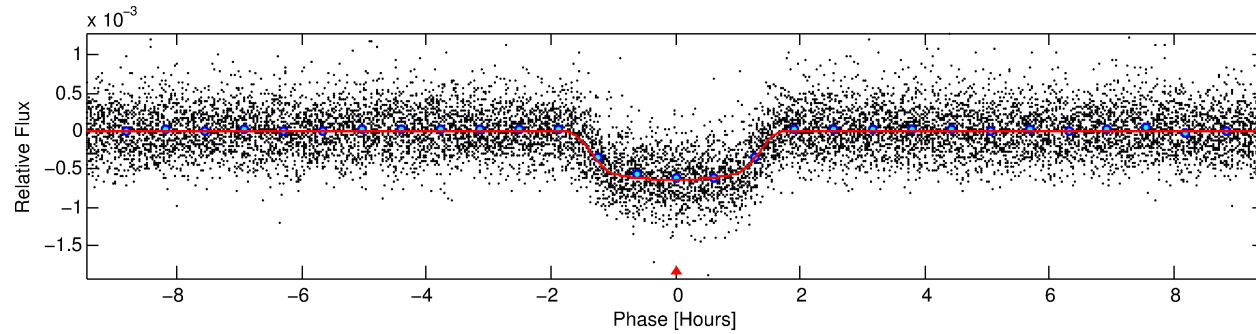
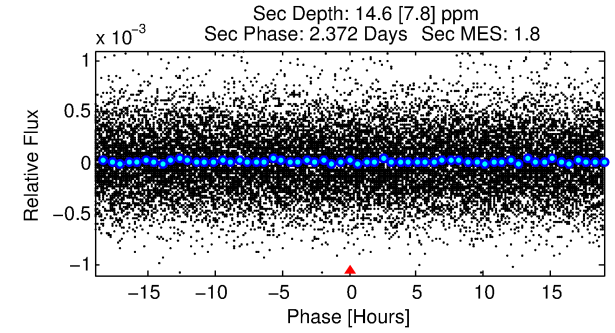
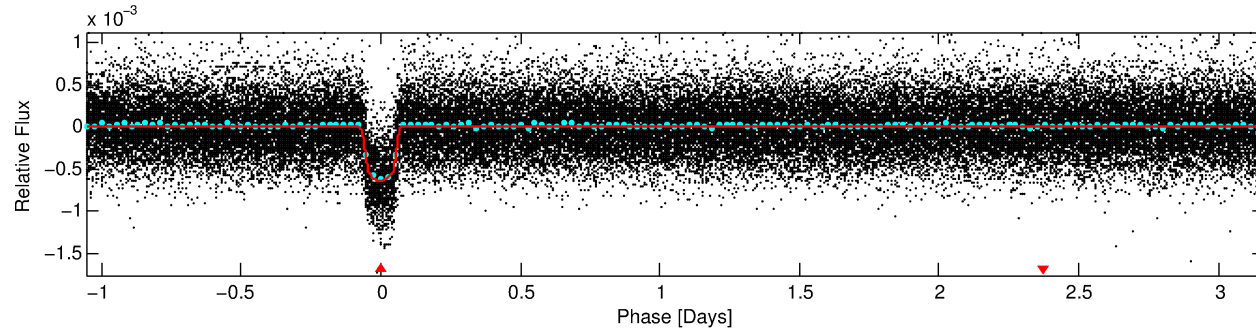
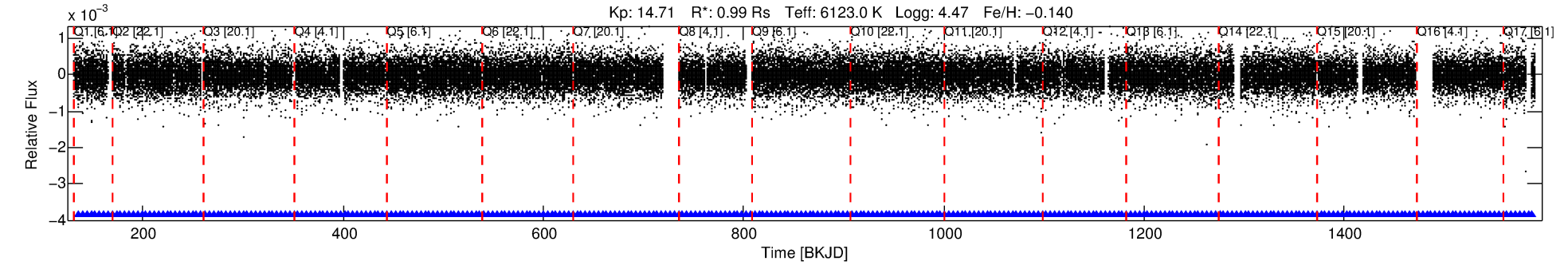
Ephemeris Match Information For 010454313-01

No Significant Match Found

DV One-Page Summary

KIC: 10454313 Candidate: 1 of 1 Period: 4.222 d

KOI: K00532.01 Corr: 0.958



DV Fit Results:

Period = 4.22162 [0.00000] d
Epoch = 135.7056 [0.0007] BKJD
Rp/R* = 0.0271 [0.0009]
a/R* = 5.20 [0.85]
b = 0.90 [0.04]
Seff = 453.24 [192.40]
Teq = 1177 [125] K
Rp = 2.92 [0.98] Re
a = 0.0520 [0.0145] AU
Ag = 2.54 [1.71] [0.90 σ]
Teffp = 2296 [317] K [3.29 σ]

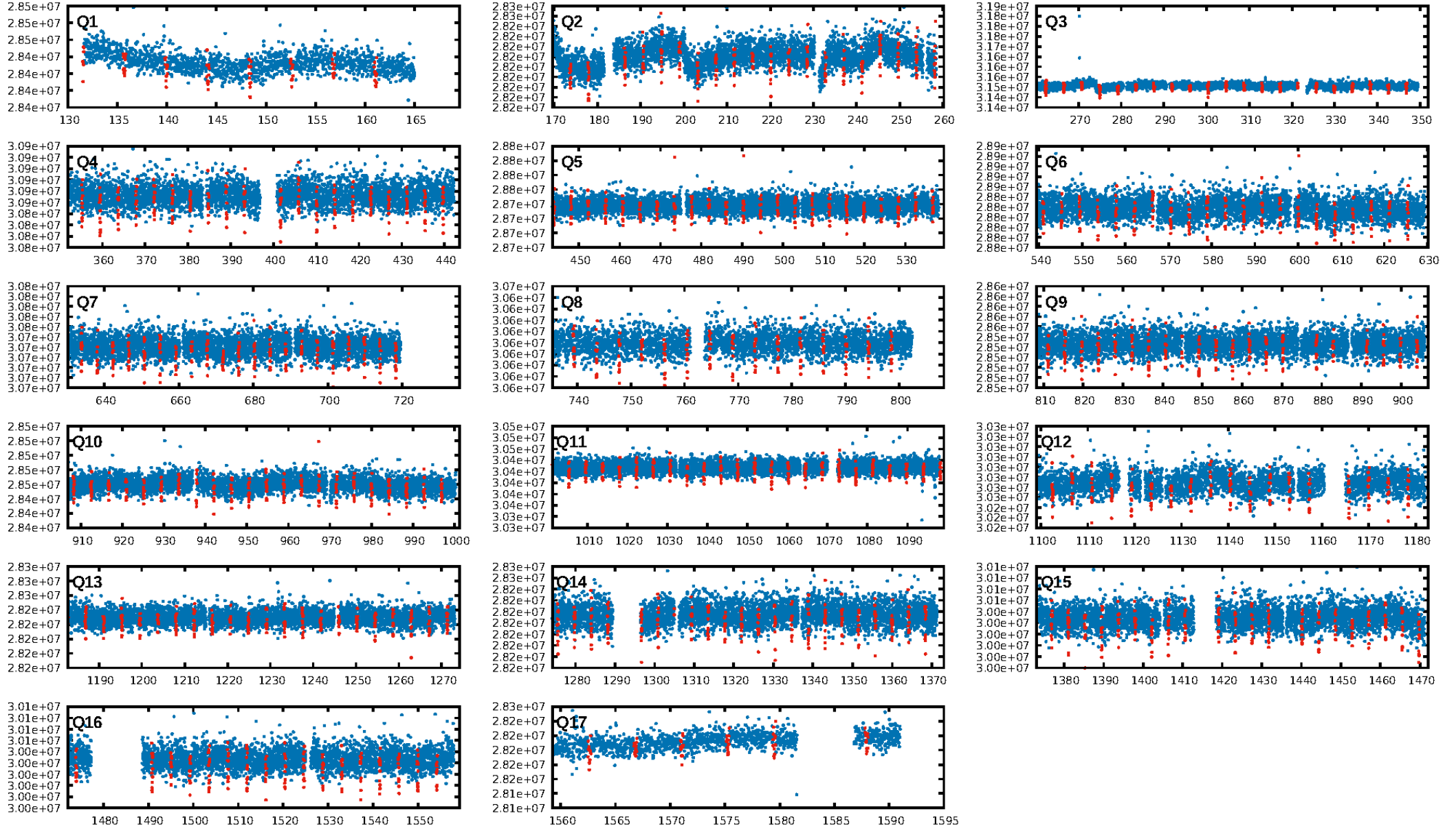
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [303/303]
GhostDiagnostic-chr: 3.663
Centroid-sig: 9.5%
Centroid-so: 0.211 arcsec [1.27 σ]
OotOffset-rm: 0.245 arcsec [2.62 σ]
KicOffset-rm: 0.227 arcsec [2.41 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

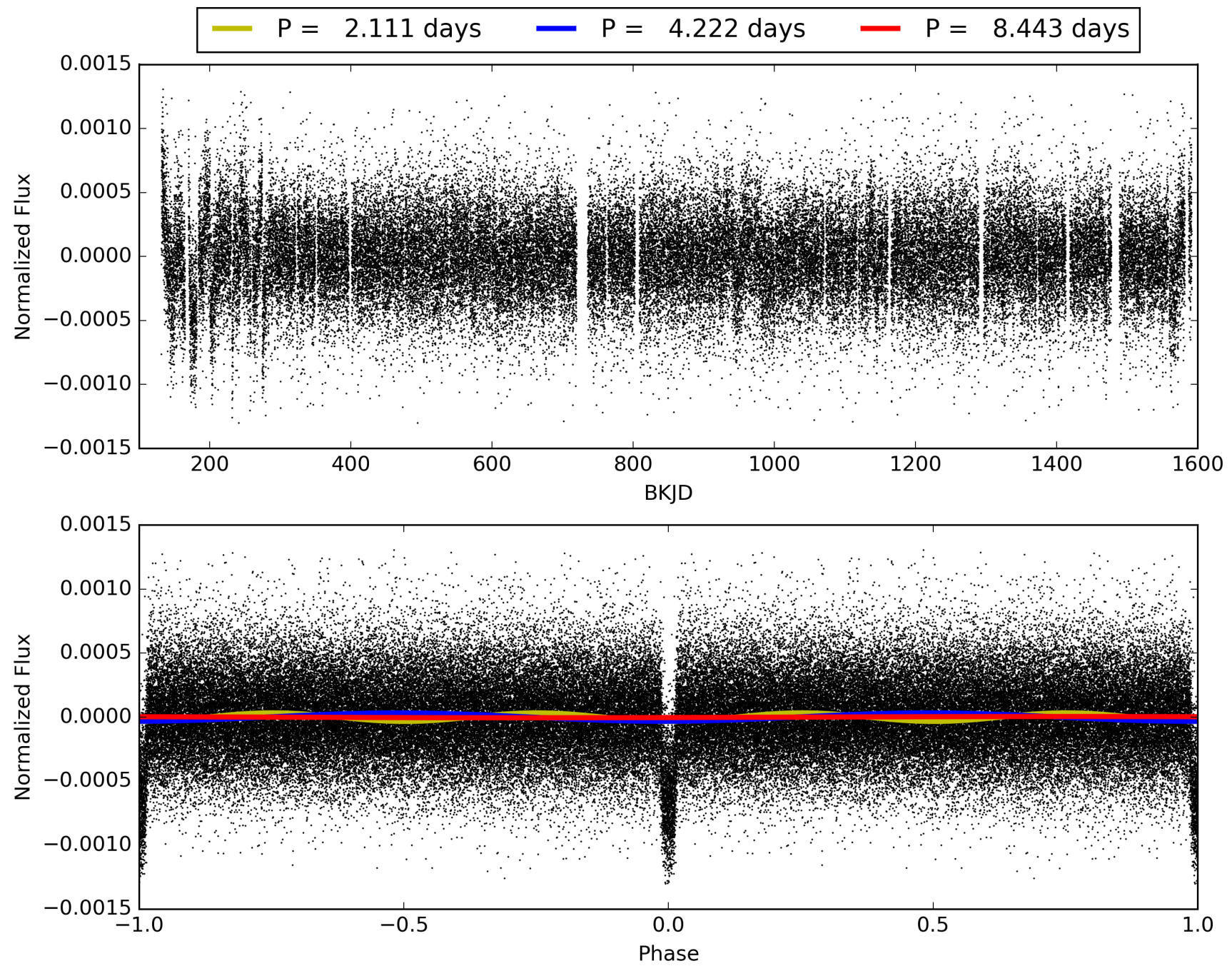
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 22:12:17 Z

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

TCE 010454313-01, PDC Light Curves

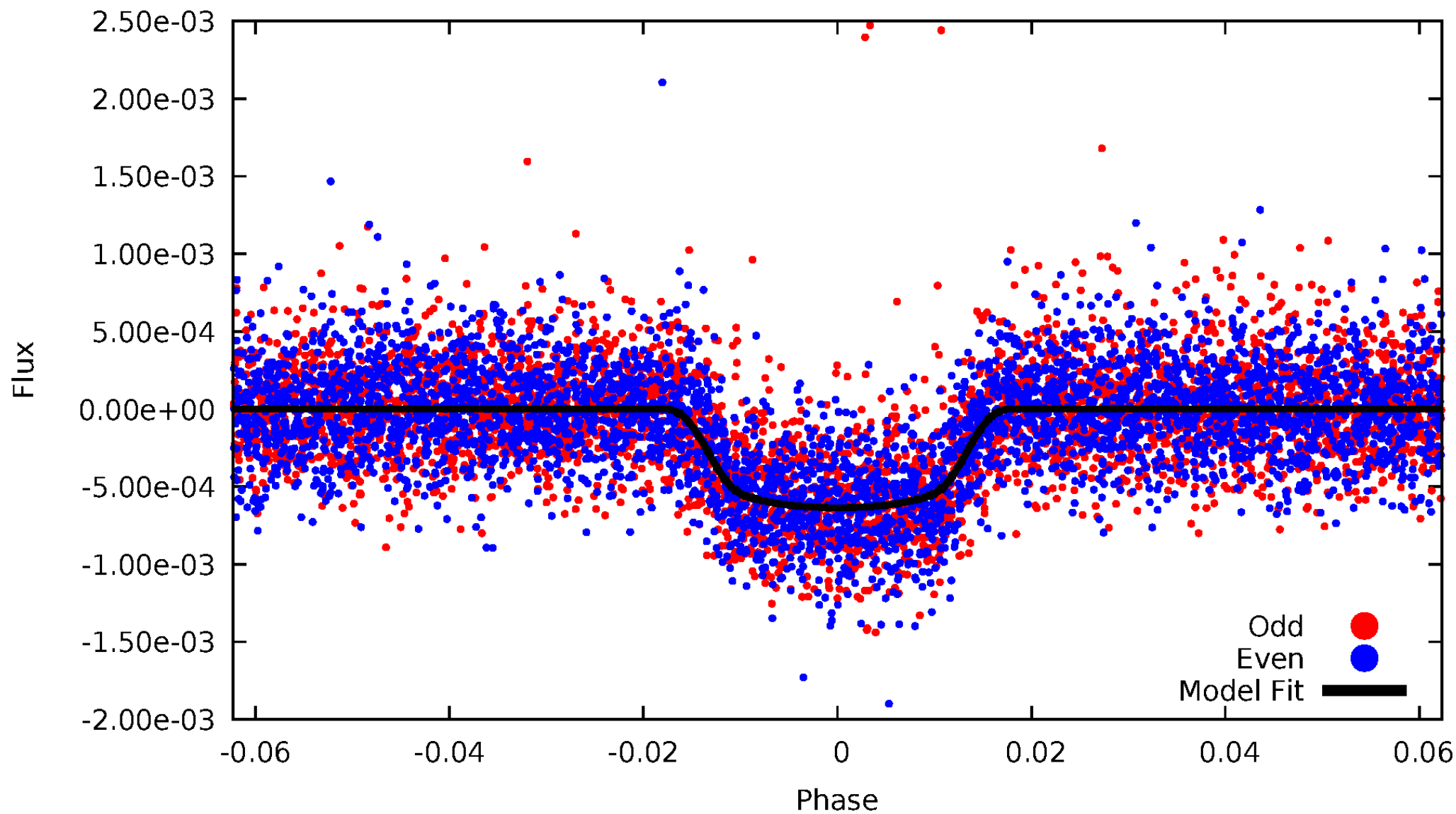


TCE 010454313-01



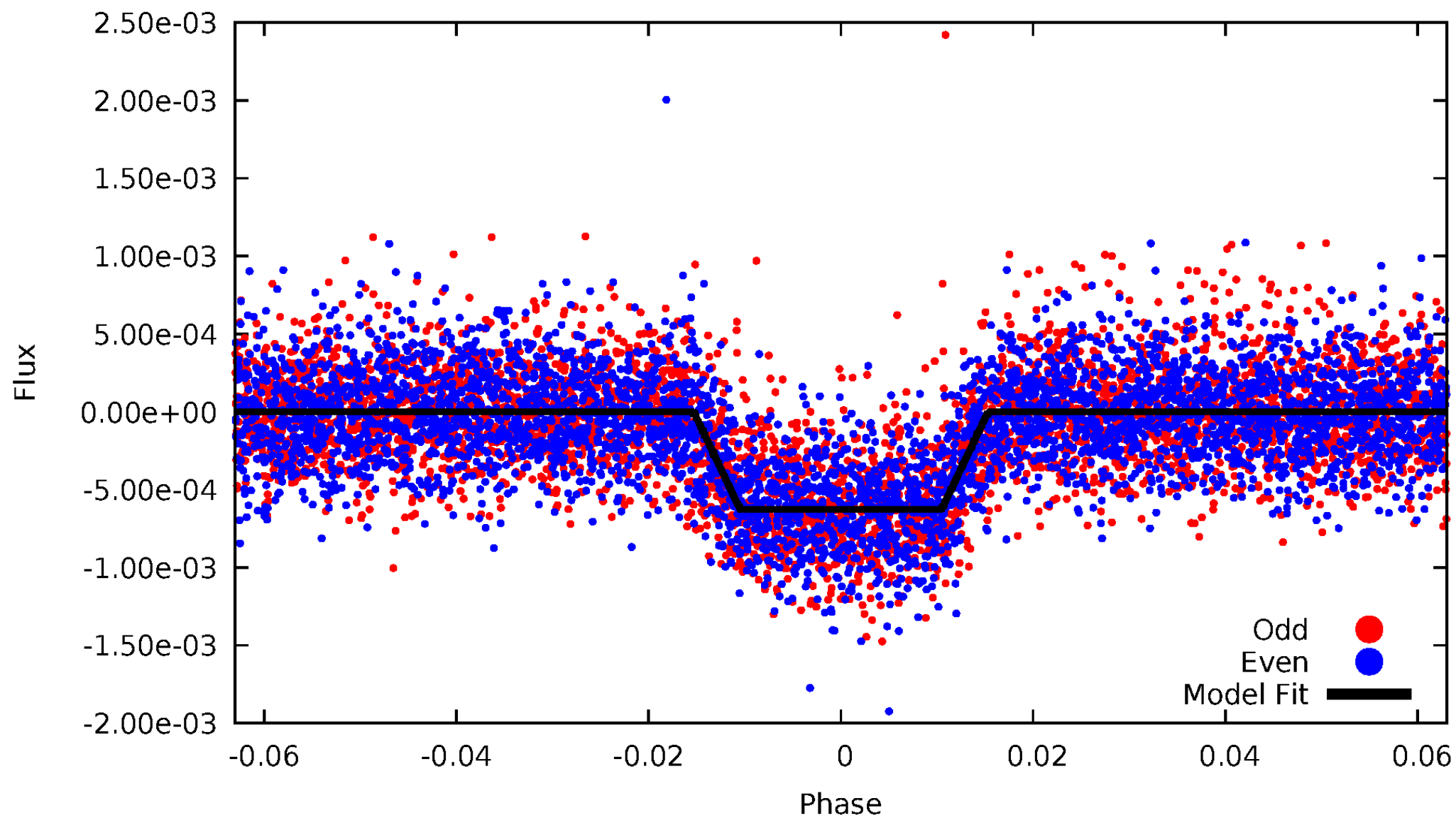
DV Odd/Even

TCE 010454313-01



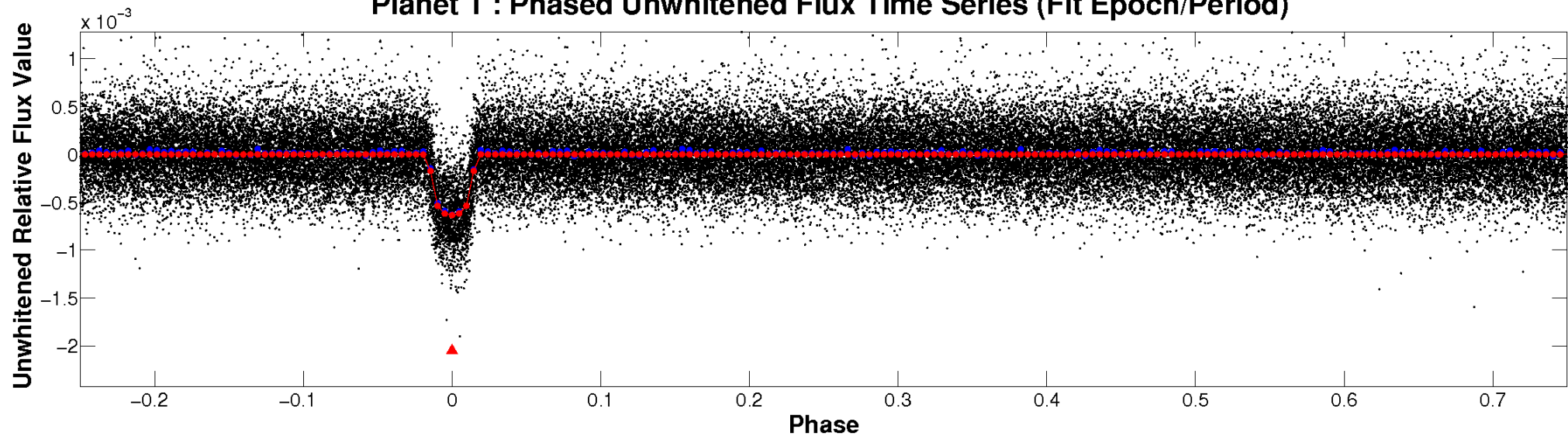
ALT Odd/Even

TCE 010454313-01

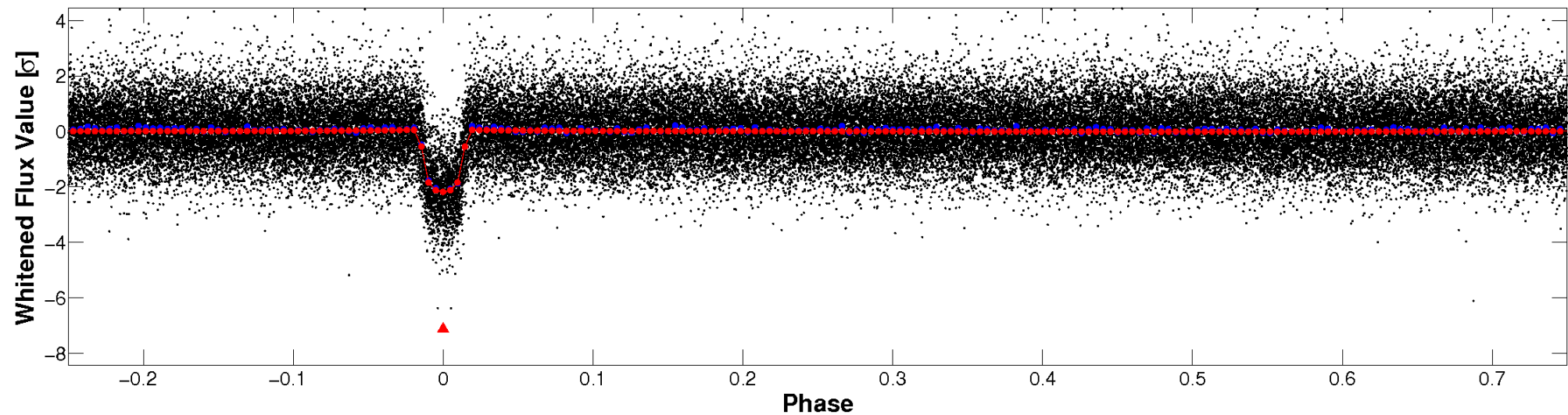


Non-Whitened Vs. Whitened Light Curve

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

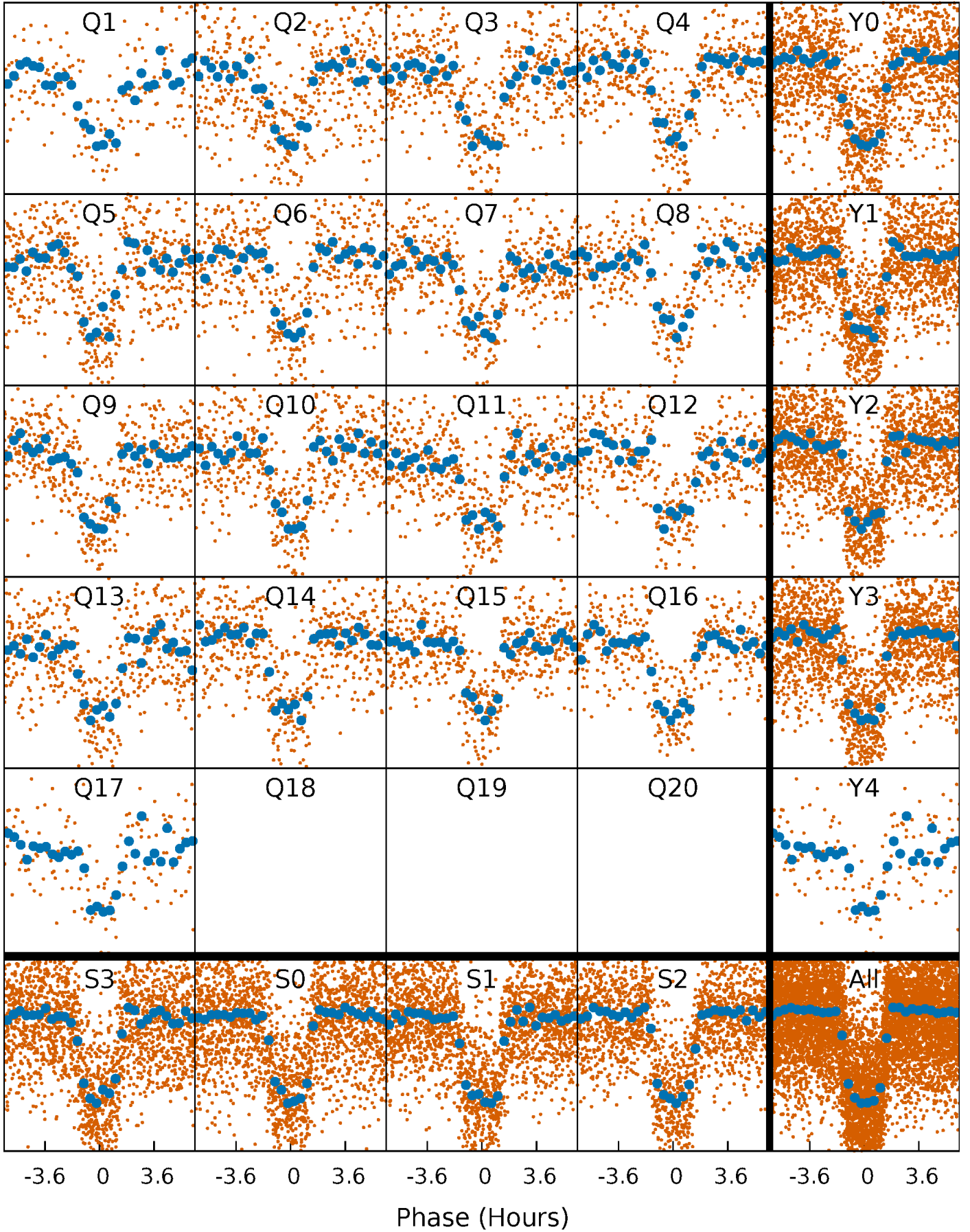


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



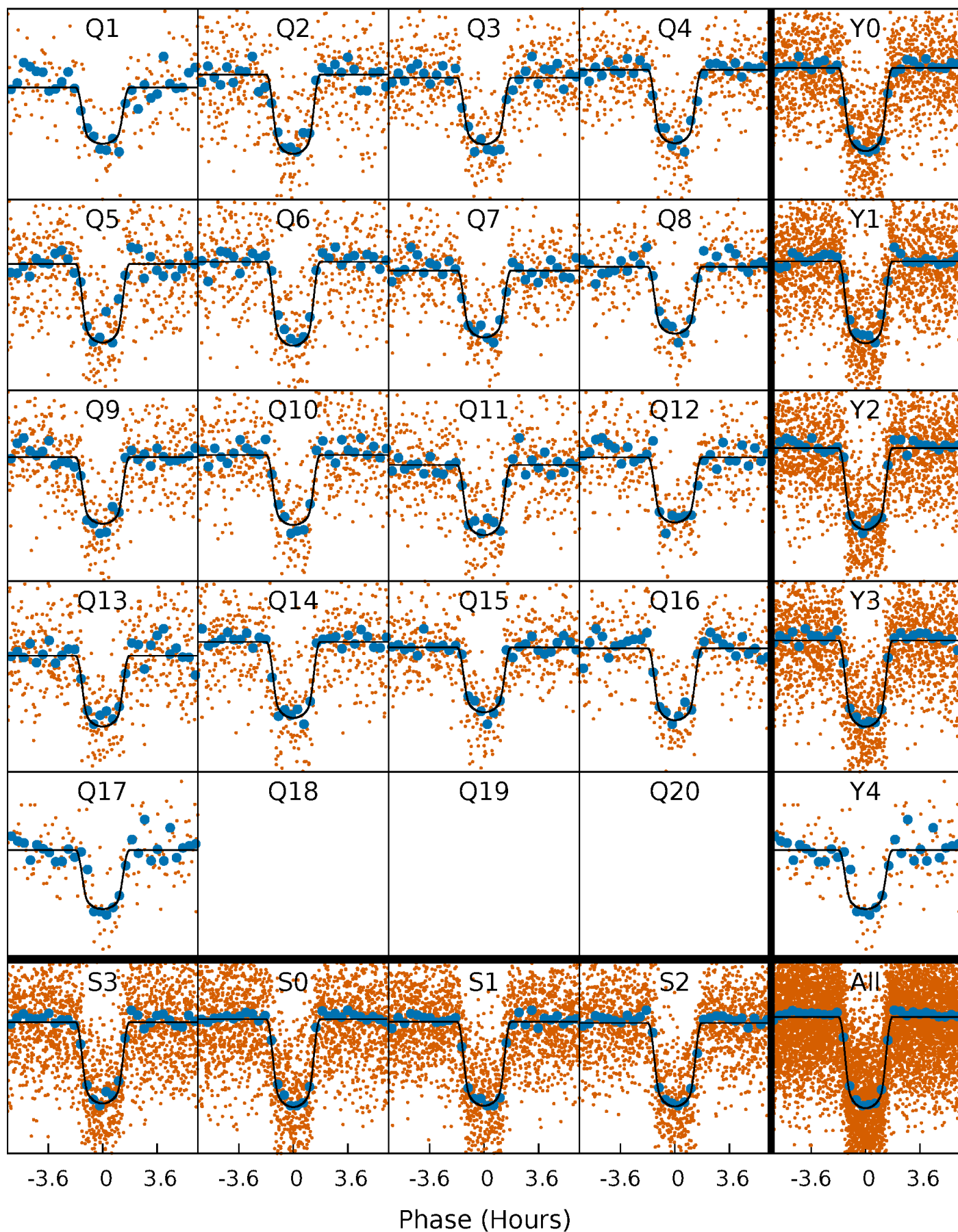
PDC Quarter-Phased Transit Curves

TCE 010454313-01 P= 4.221621 Days $T_0=135.705643$ (BKJD)



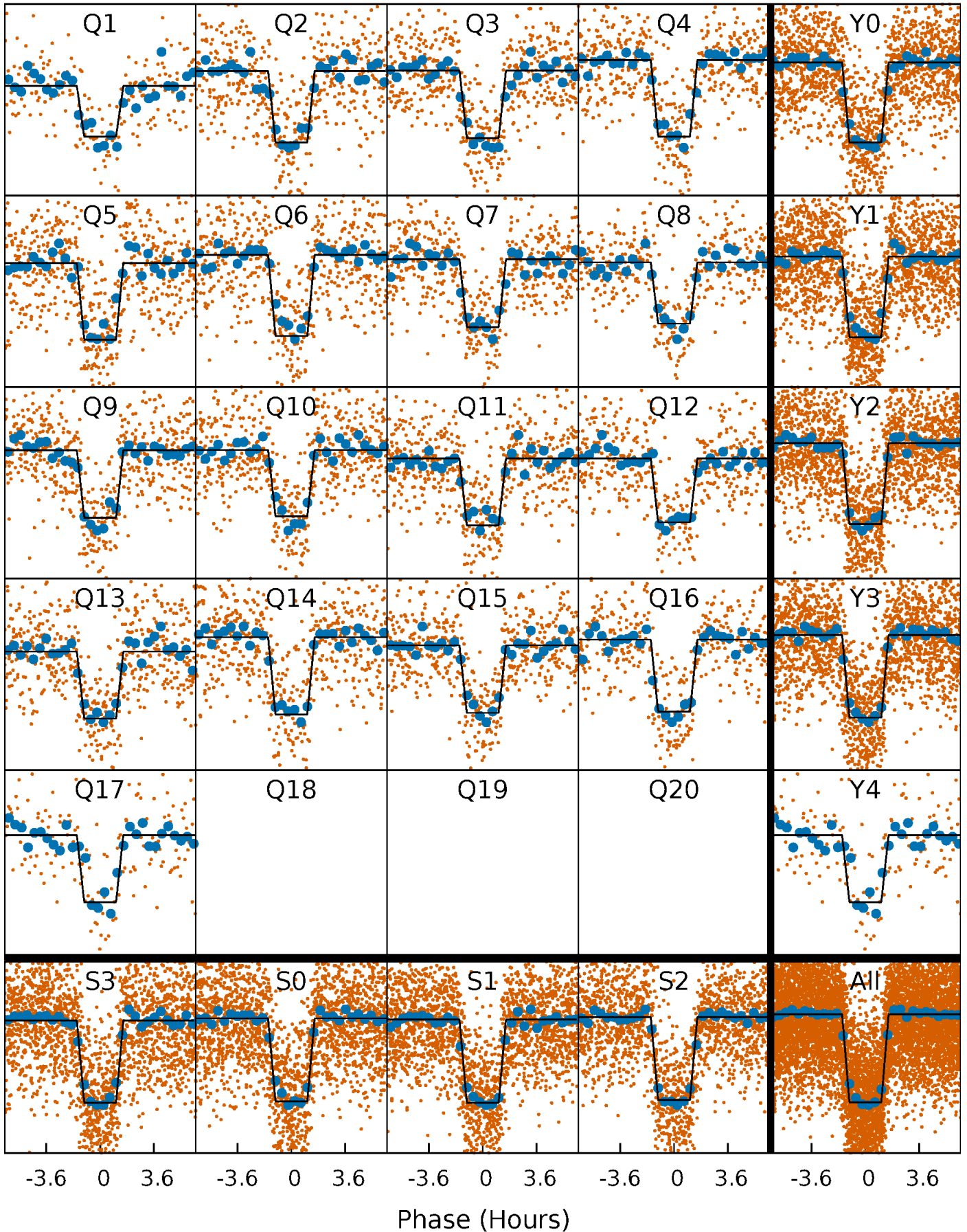
DV Quarter-Phased Transit Curves

TCE 010454313-01 P= 4.221621 Days $T_0=135.705643$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

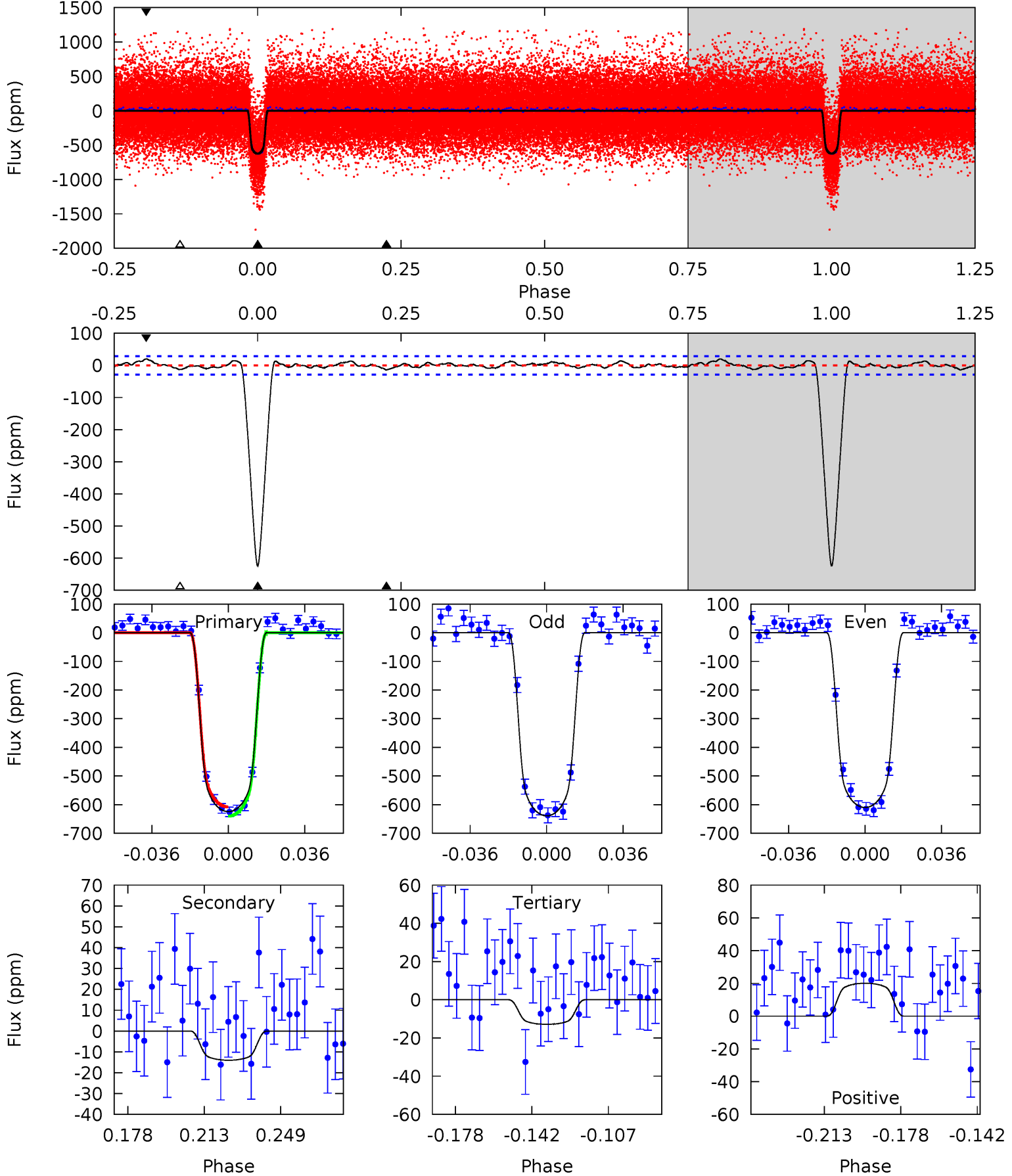
TCE 010454313-01 P= 4.221633 Days $T_0=135.703900$ (BKJD)



DV Model-Shift Uniqueness Test

010454313-01, P = 4.221621 Days, E = 131.484022 Days

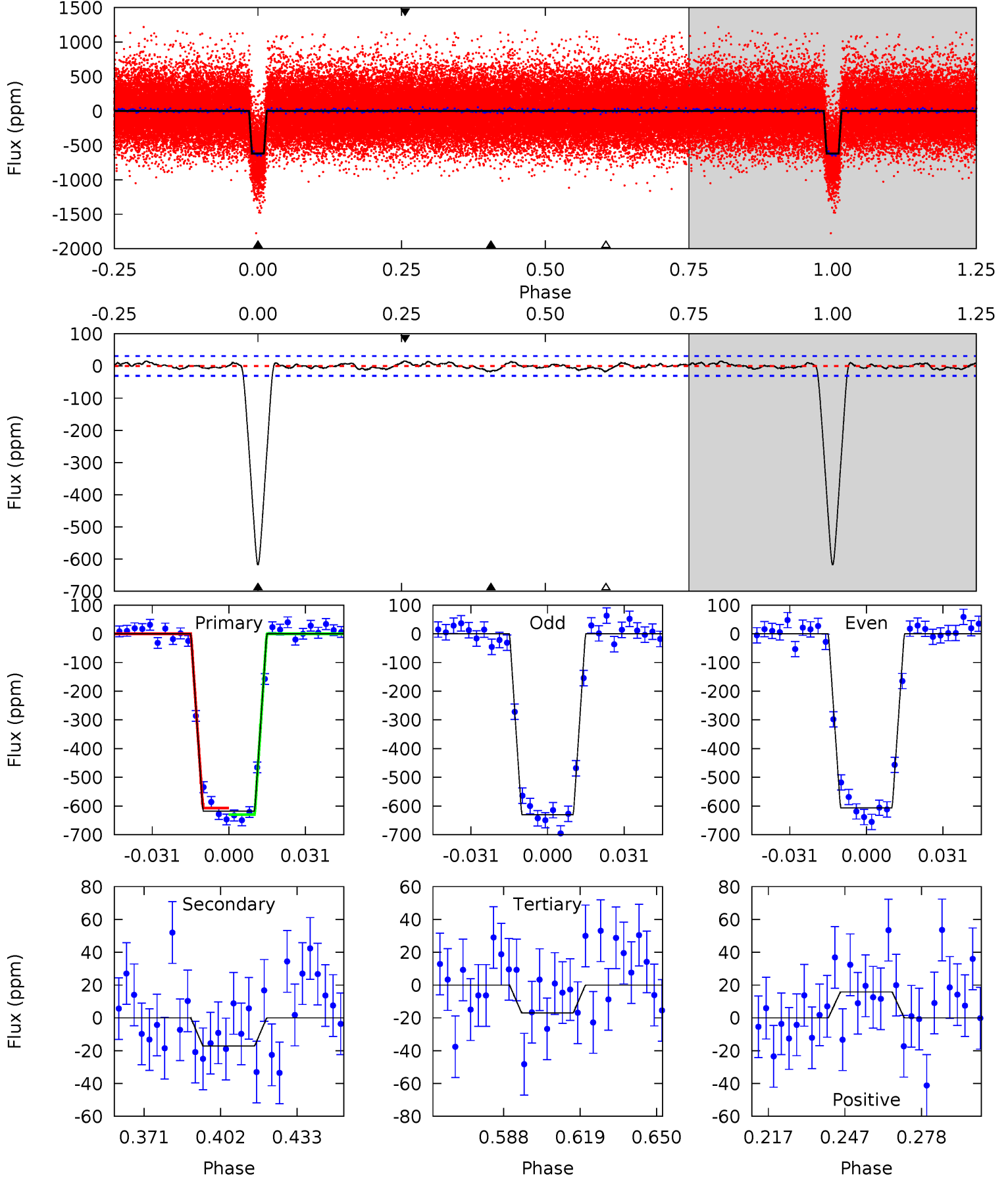
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
103.9	2.33	2.14	3.34	4.78	2.10	1.04	101.7	100.5	0.19	-1.01	2.43	0.98	0.03	2.71



Alt Model-Shift Uniqueness Test

010454313-01, P = 4.221633 Days, E = 131.482267 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
96.3	2.68	2.64	2.47	4.81	2.16	0.99	93.7	93.9	0.03	0.21	1.87	0.99	0.02	1.75



Stellar Parameters For KIC 010454313

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6123^{+171}_{-192}	$4.472^{+0.052}_{-0.221}$	$-0.140^{+0.250}_{-0.350}$	$0.987^{+0.329}_{-0.110}$	$1.053^{+0.150}_{-0.137}$	$1.544^{+0.438}_{-0.852}$
	+3%/-3%	+1%/-5%	+179%/-250%	+33%/-11%	+14%/-13%	+28%/-55%
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 010454313-01 / KOI 0532.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-14 ± 6	$3.02^{+0.53}_{-0.27}$	1685^{+118}_{-88}	2894^{+185}_{-304}	$2.139^{+1.064}_{-1.072}$
Alt.	-17 ± 6	$2.80^{+0.53}_{-0.26}$	1687^{+131}_{-90}	3052^{+180}_{-228}	$2.918^{+1.592}_{-1.201}$

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

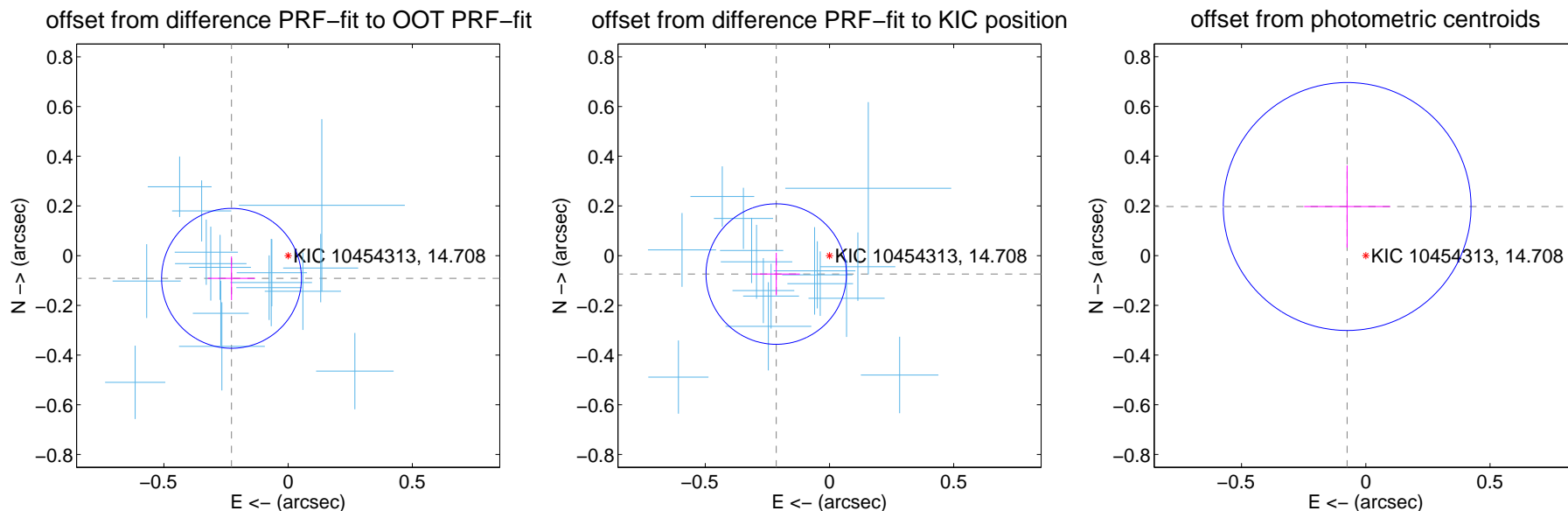
DV Centroid Data

Supplemental centroid analysis for 010454313-01. Kepler magnitude: 14.71. Transit SNR 78.63

There are 17 quarters with good PRF difference image offsets

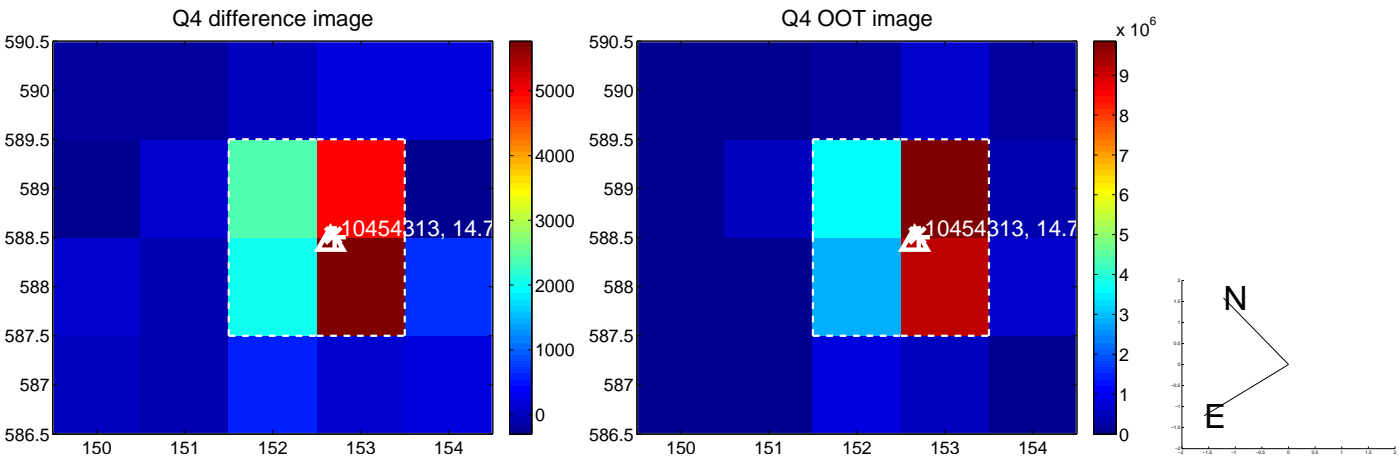
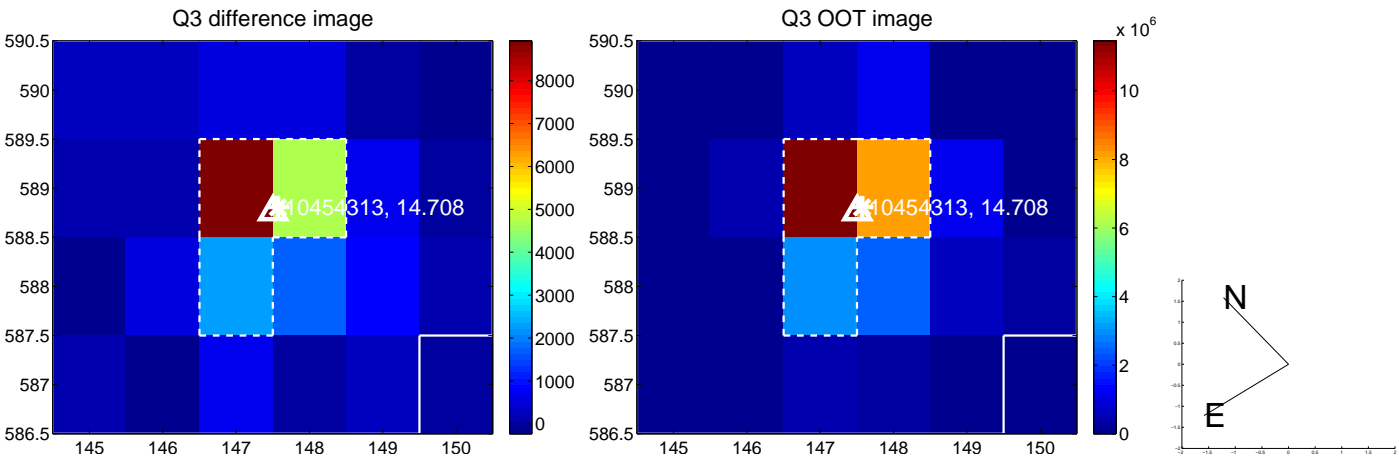
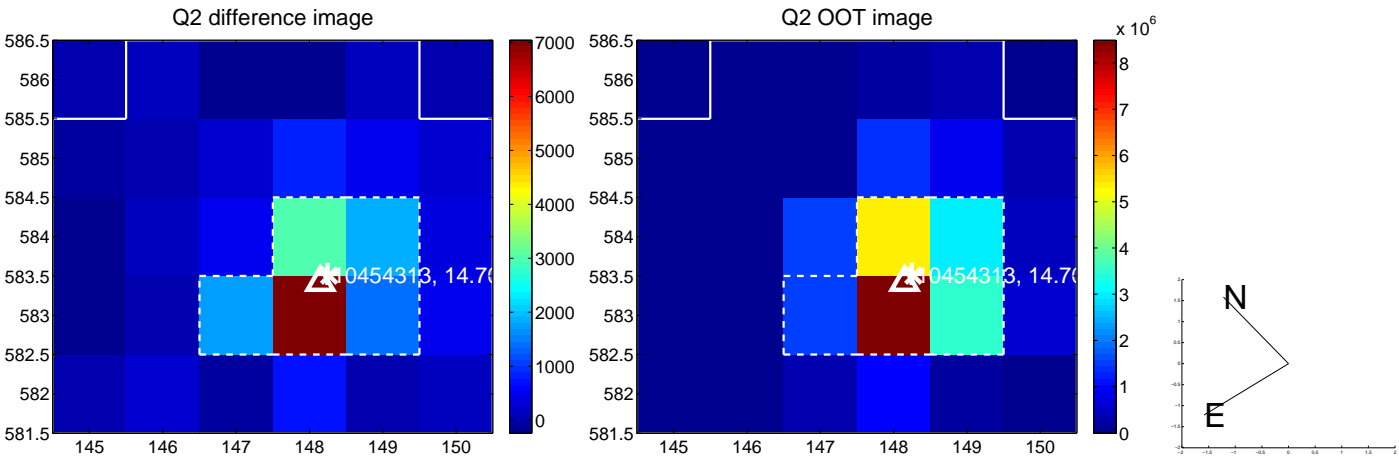
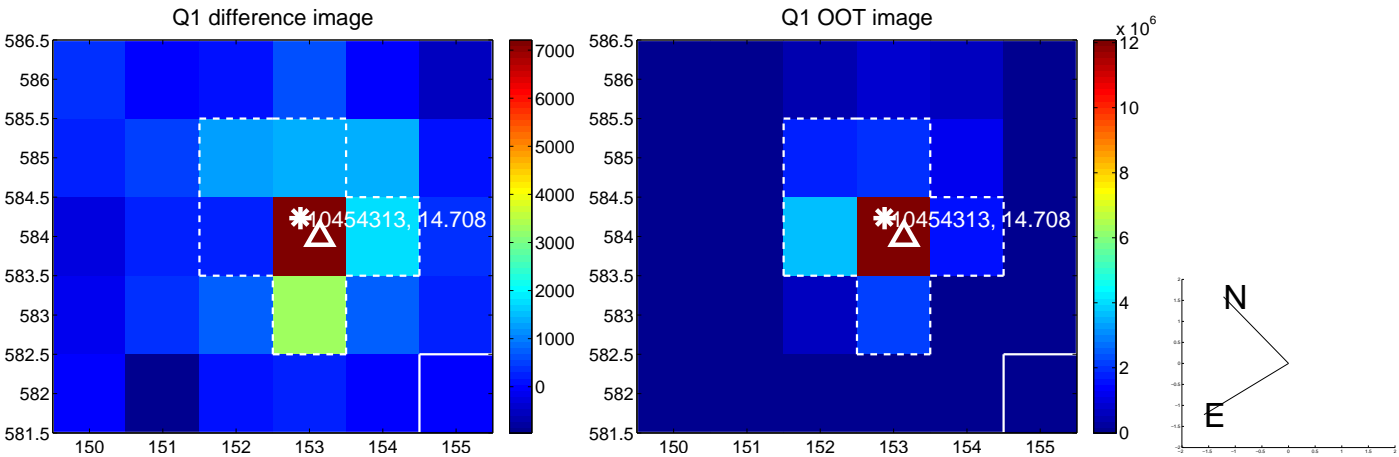
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.245 ± 0.094	2.62	0.228 ± 0.095	-0.091 ± 0.088
PRF-fit source offset from KIC position	0.227 ± 0.094	2.41	0.214 ± 0.095	-0.074 ± 0.086
photometric centroid source offset	0.21 ± 0.17	1.27	0.07 ± 0.17	0.20 ± 0.17

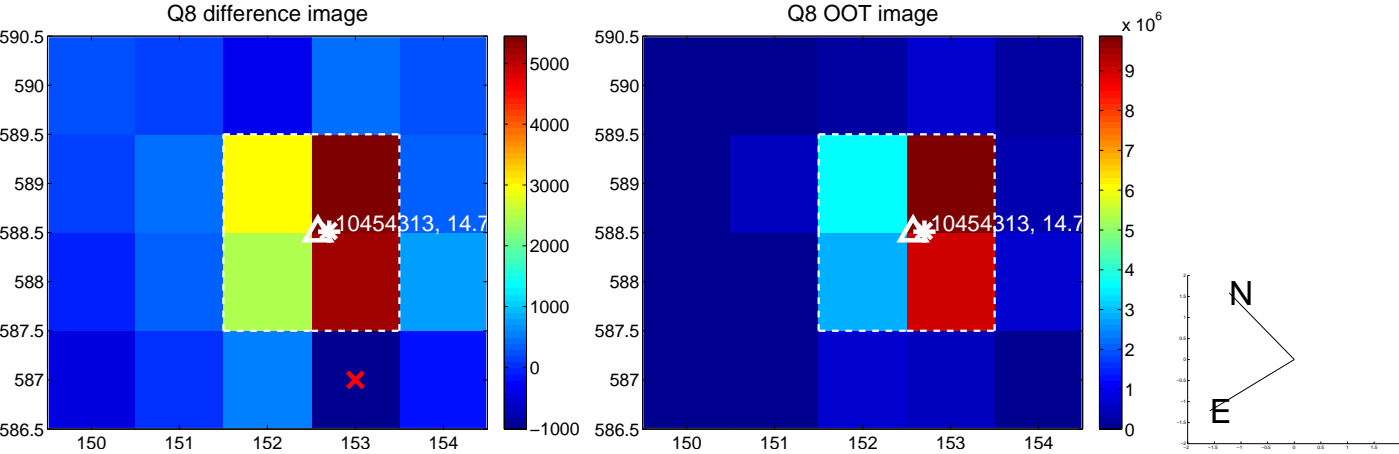
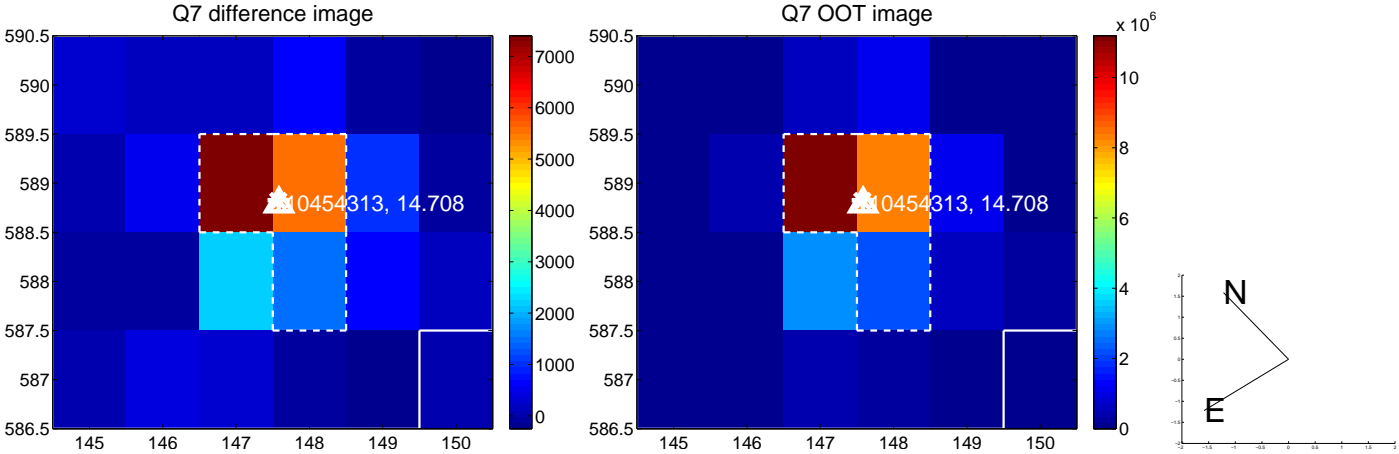
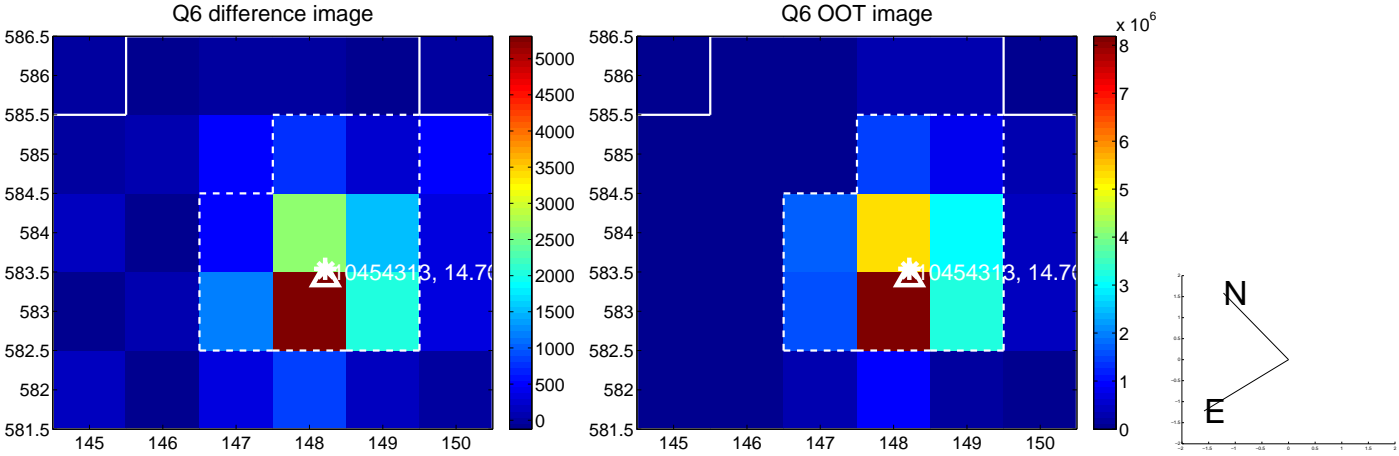
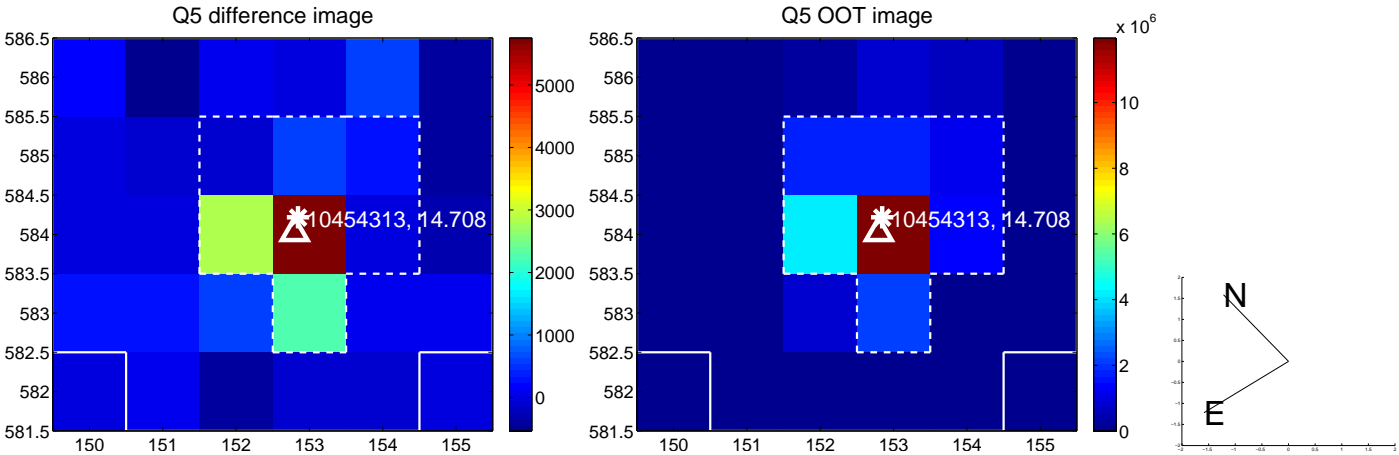


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

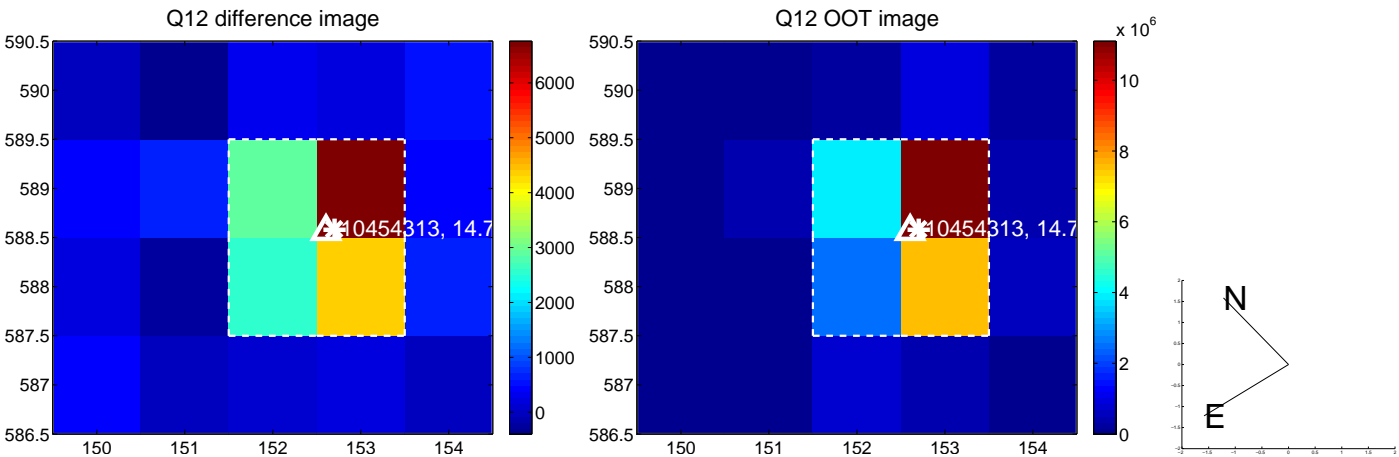
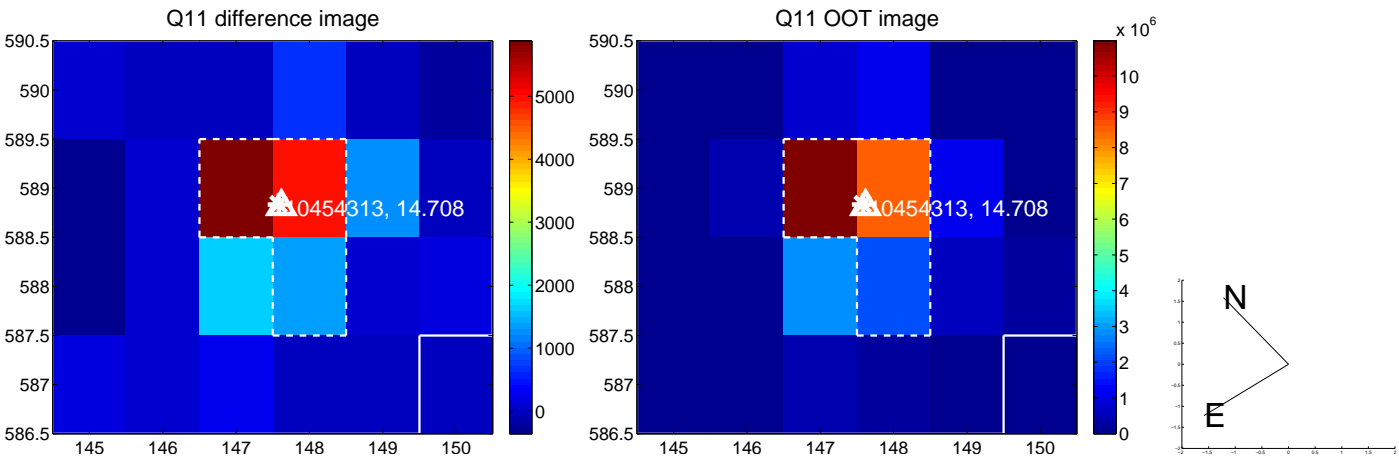
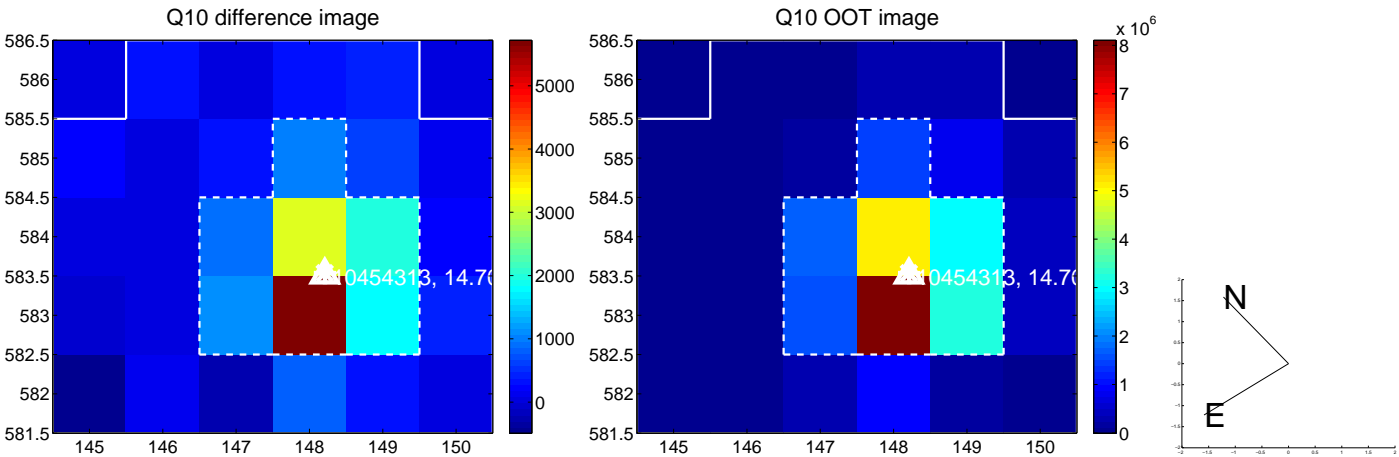
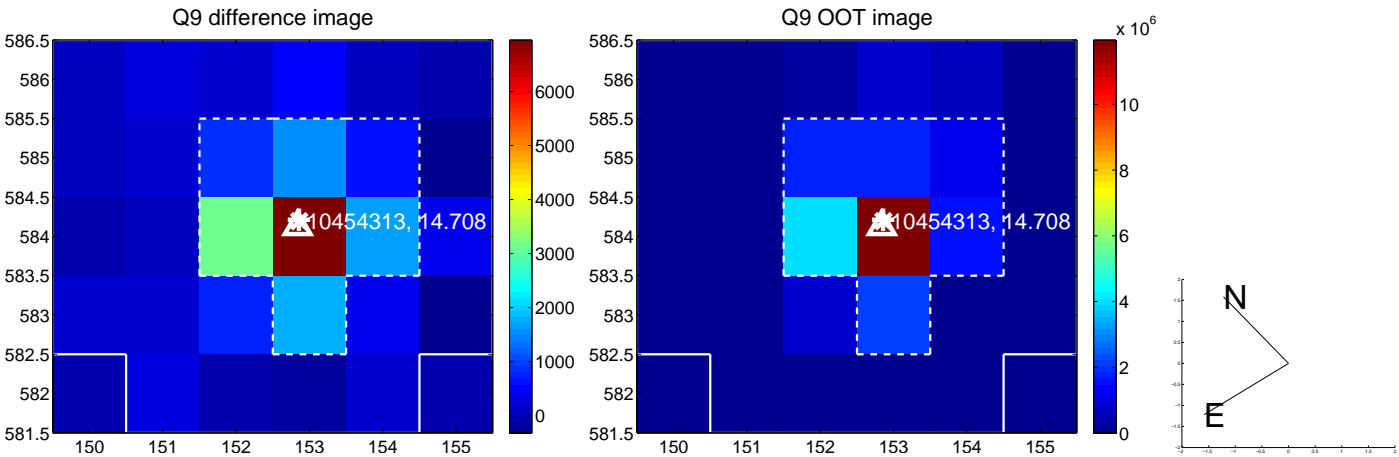
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



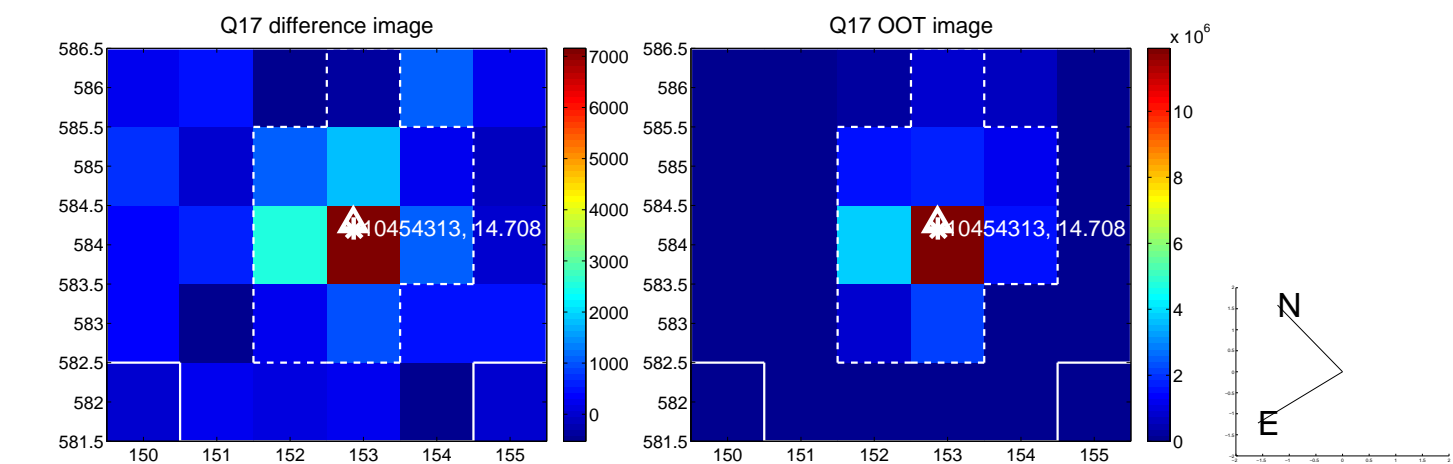
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



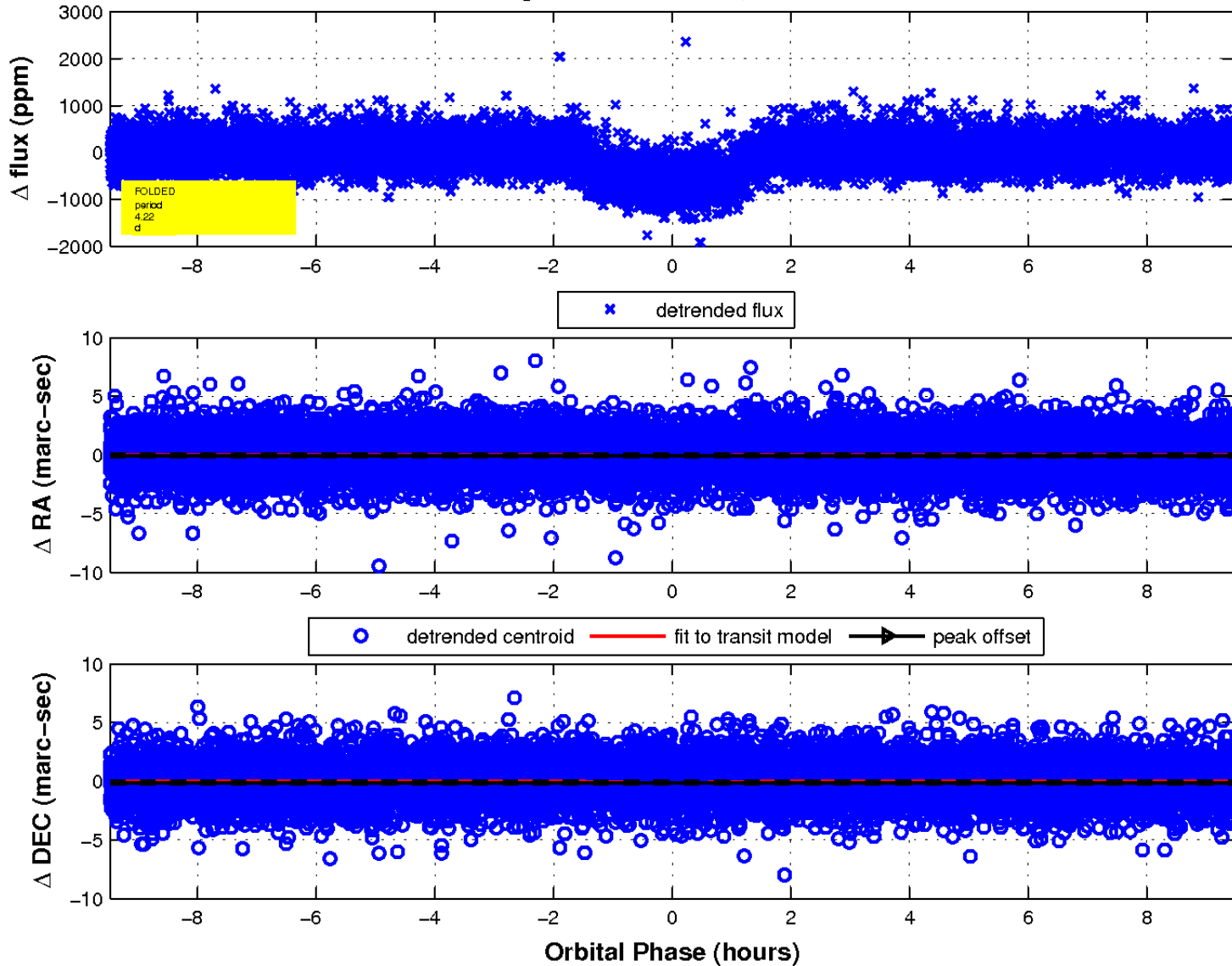
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

