

KIC 005385647

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})
005385647-01	OBS	No	12.425125	133.998892	117.4	28.501	8.1	9.8	1.50	5349	2.34	159.93

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005385647-01	OBS	FP	0.00	1	0	0	1	LPP_DV—EPHEM_MATCH

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 005385647-01

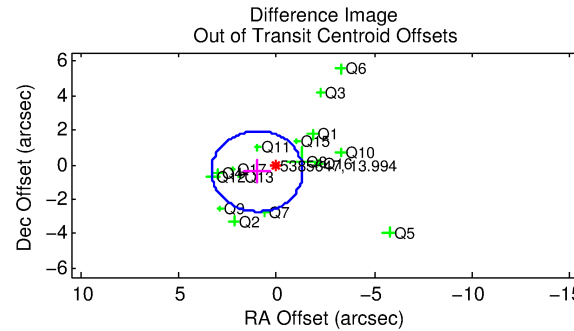
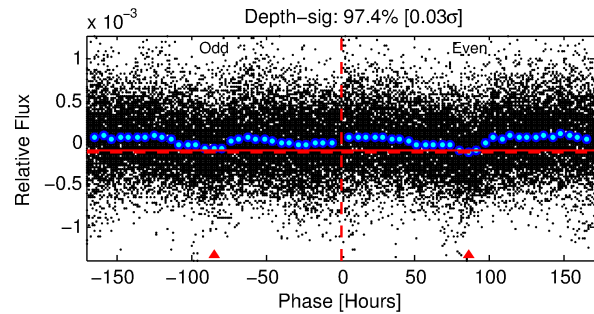
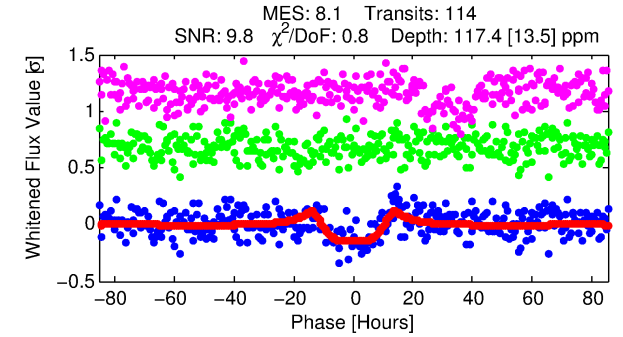
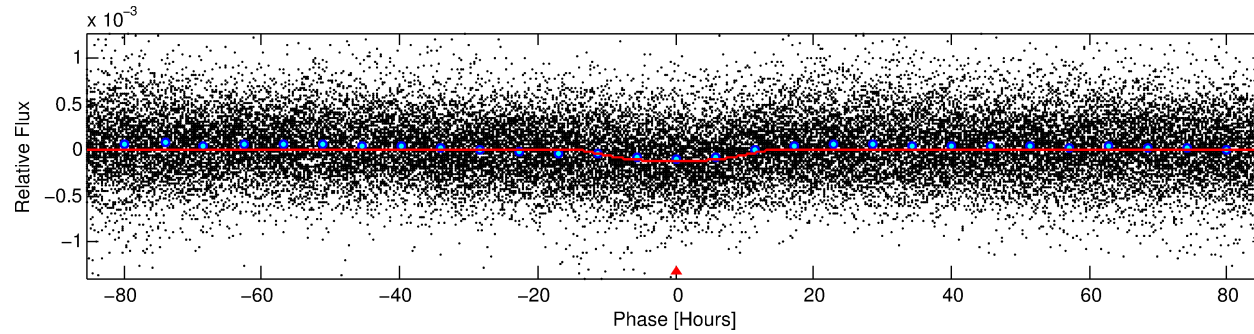
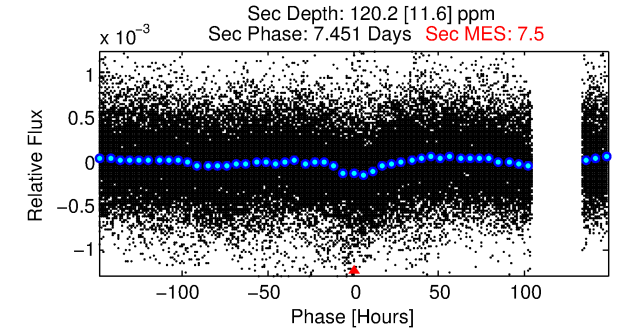
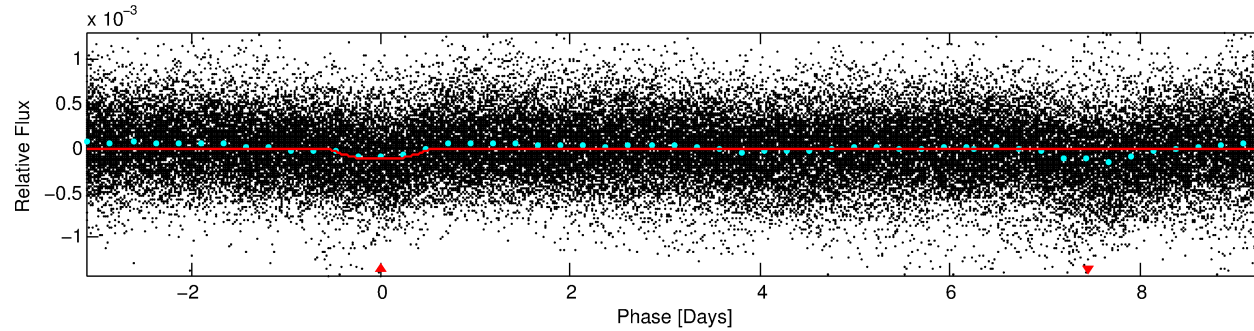
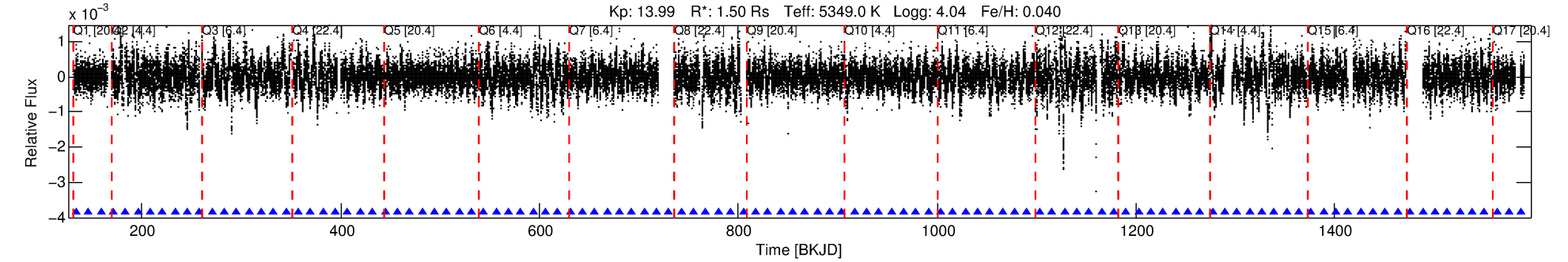
TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
005385647-01	5385647	V380-Cyg-sec	5385723	1:1	269.9	-52	-44	5.77	13.99	1102.90	Direct-PRF	0	1.03	1.57

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 5385647 Candidate: 1 of 1 Period: 12.425 d

KOI: K06572 Corr: No Ephemeris Match



DV Fit Results:

Period = 12.42512 [0.00063] d
Epoch = 133.9989 [0.0394] BKJD
Rp/R* = 0.0143 [0.0009]
a/R* = 1.29 [0.04]
b = 0.98 [0.00]
Seff = 159.93 [130.45]
Teff = 907 [185] K
Rp = 2.34 [1.04] Re
a = 0.1019 [0.0485] AU
Ag = 125.24 [103.10] [1.21σ]
Teffp = 4690 [237] K [12.57σ]

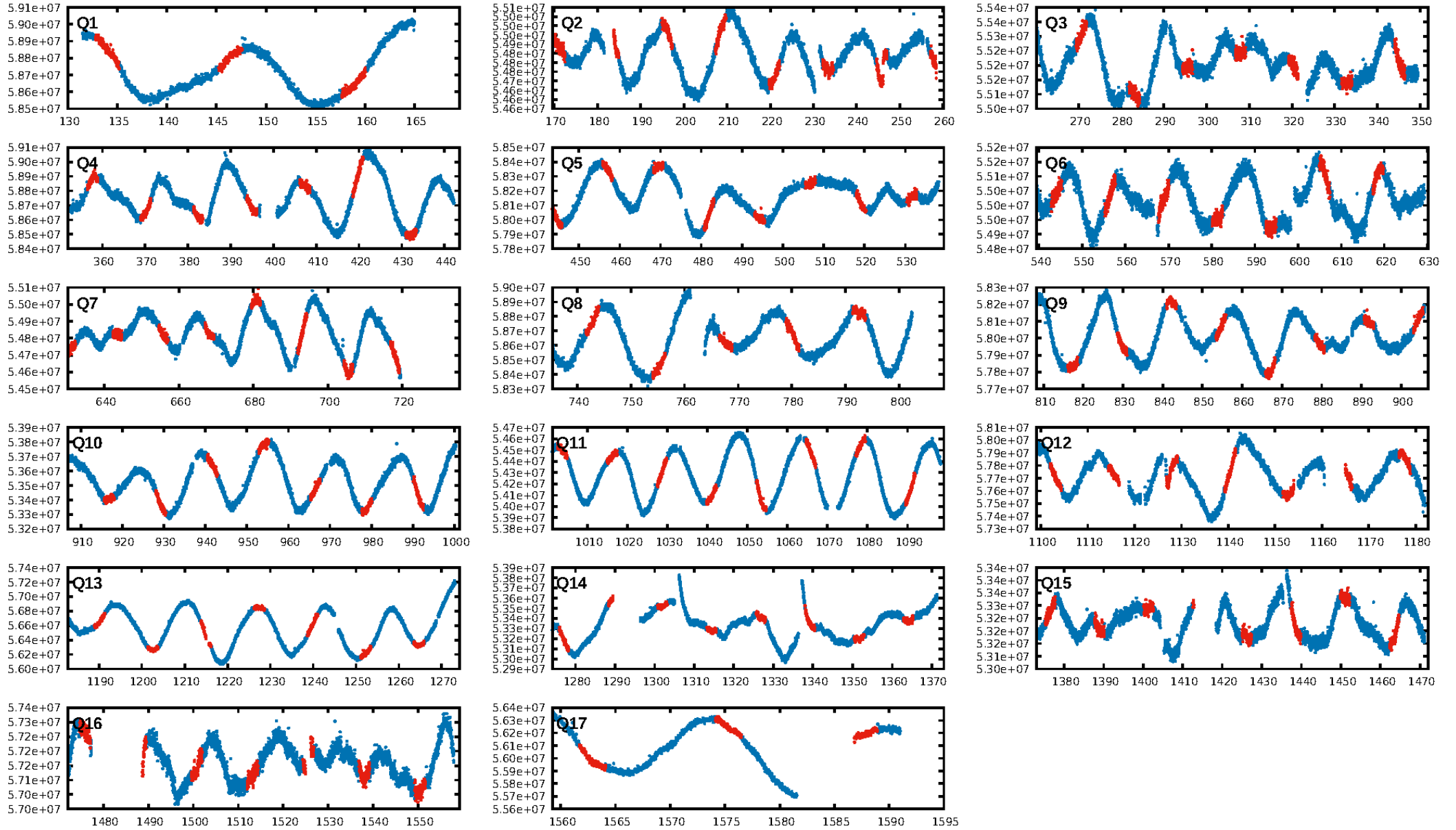
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 94.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.57e-17
RollingBand-fgt: 1.00 [108/108]
GhostDiagnostic-chr: 0.3865
Centroid-sig: 7.7%
Centroid-so: 1.028 arcsec [1.74σ]
OotOffset-rm: 1.062 arcsec [1.36σ]
KicOffset-rm: 0.965 arcsec [1.46σ]
OotOffset-st: 3/4/4/5 [16]
KicOffset-st: 3/4/4/5 [16]
DiffImageQuality-fgm: 0.19 [3/16]
DiffImageOverlap-fno: 1.00 [17/17]

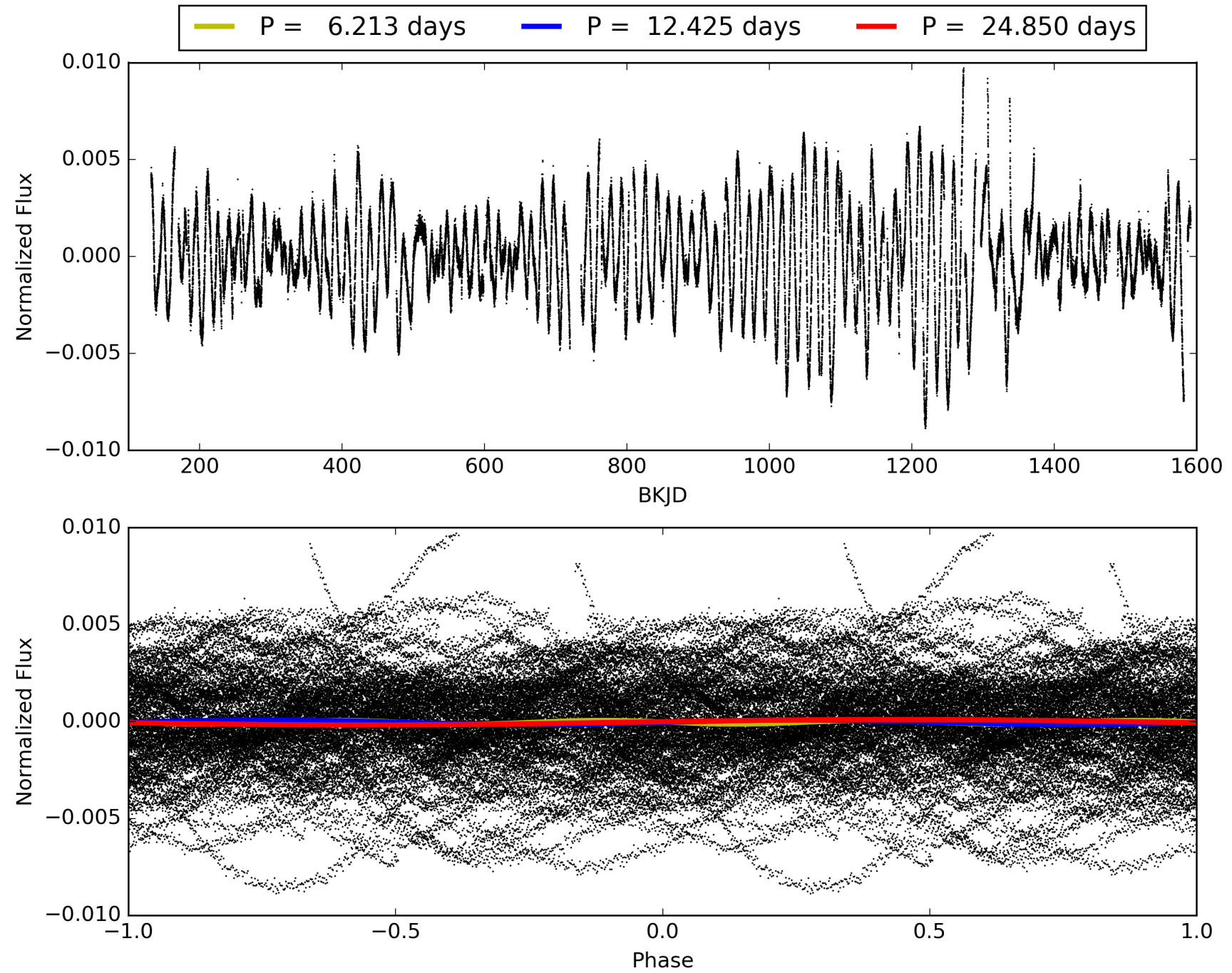
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 09:18:58 Z

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

TCE 005385647-01, PDC Light Curves

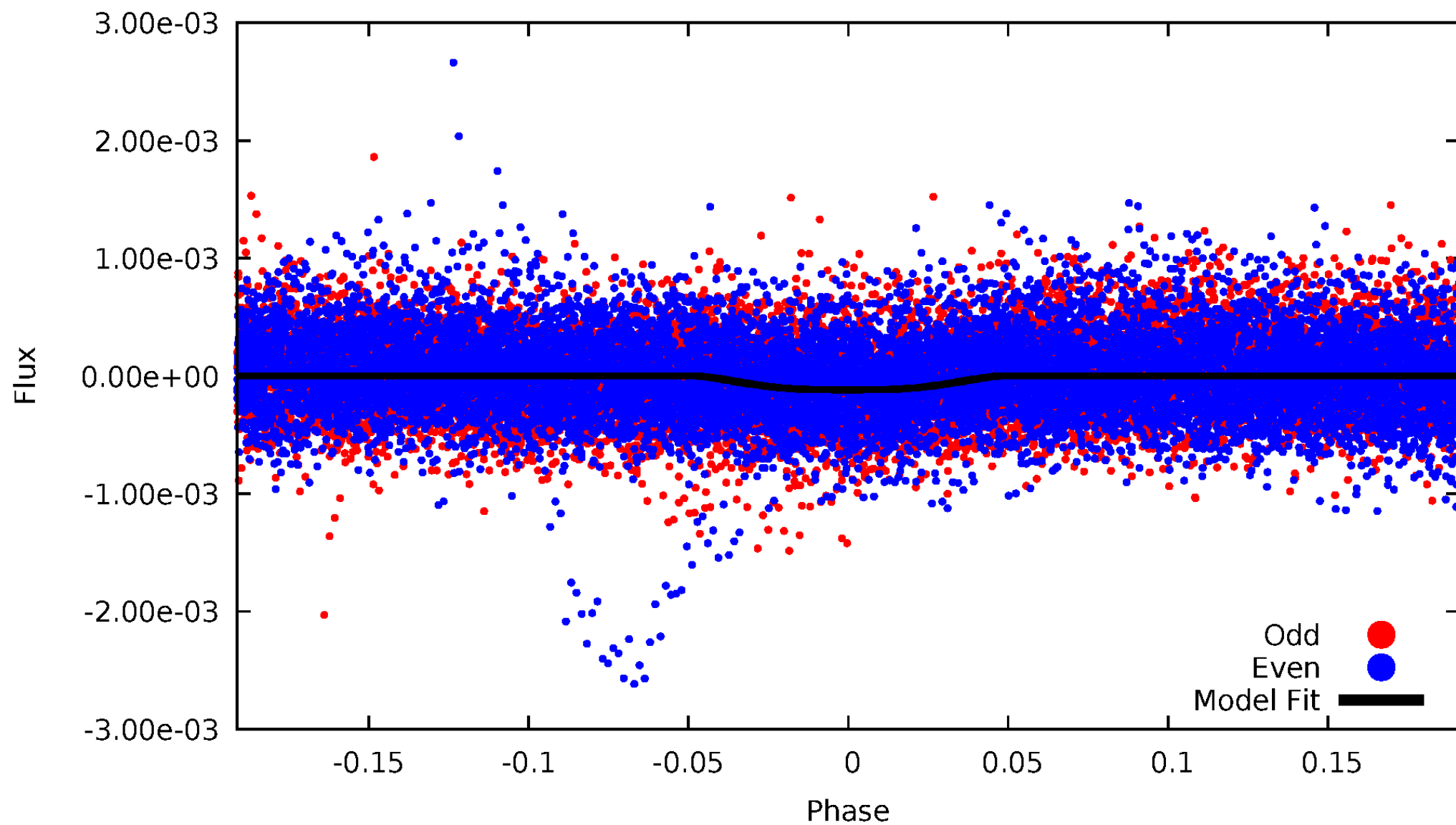


TCE 005385647-01



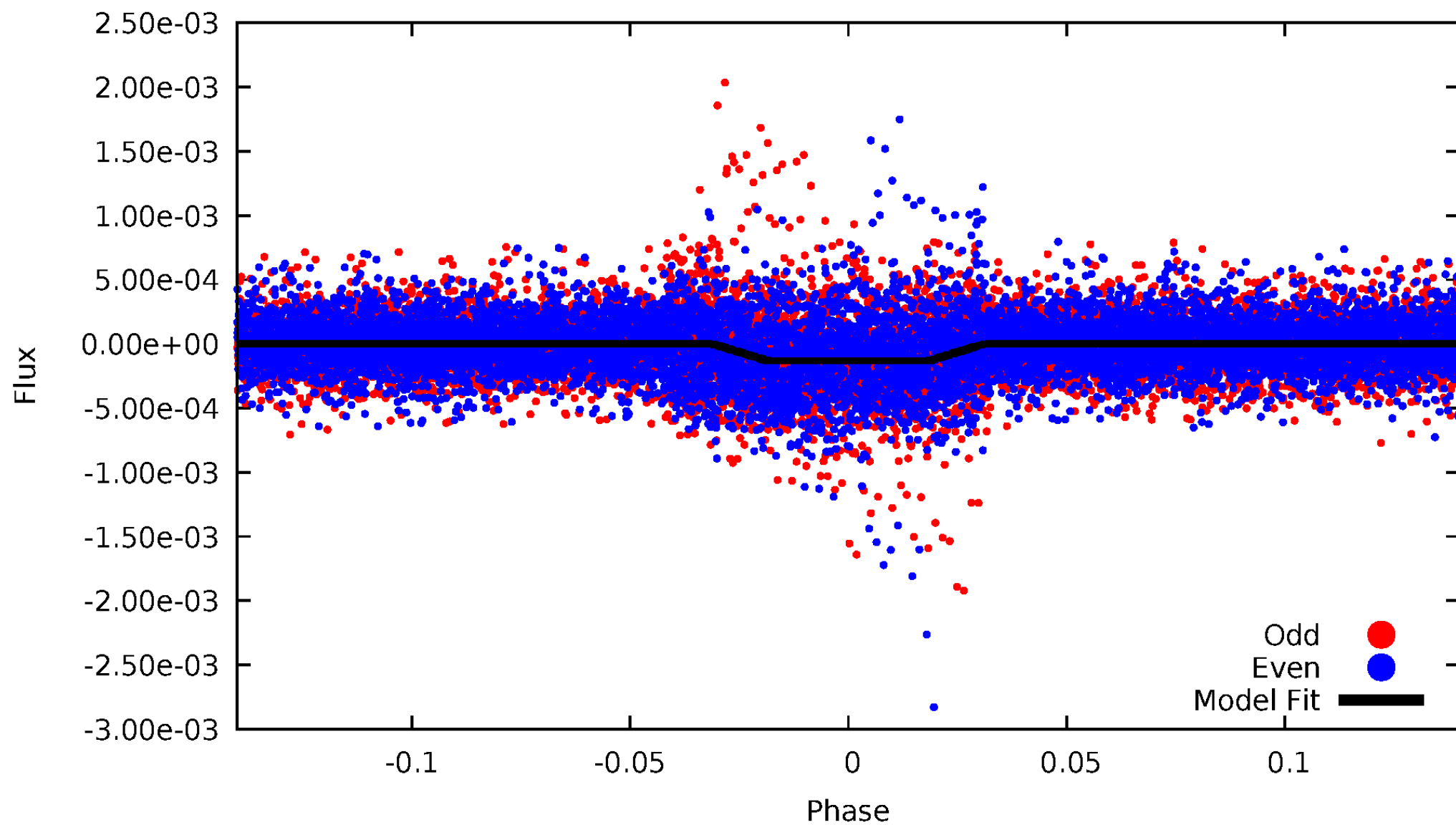
DV Odd/Even

TCE 005385647-01



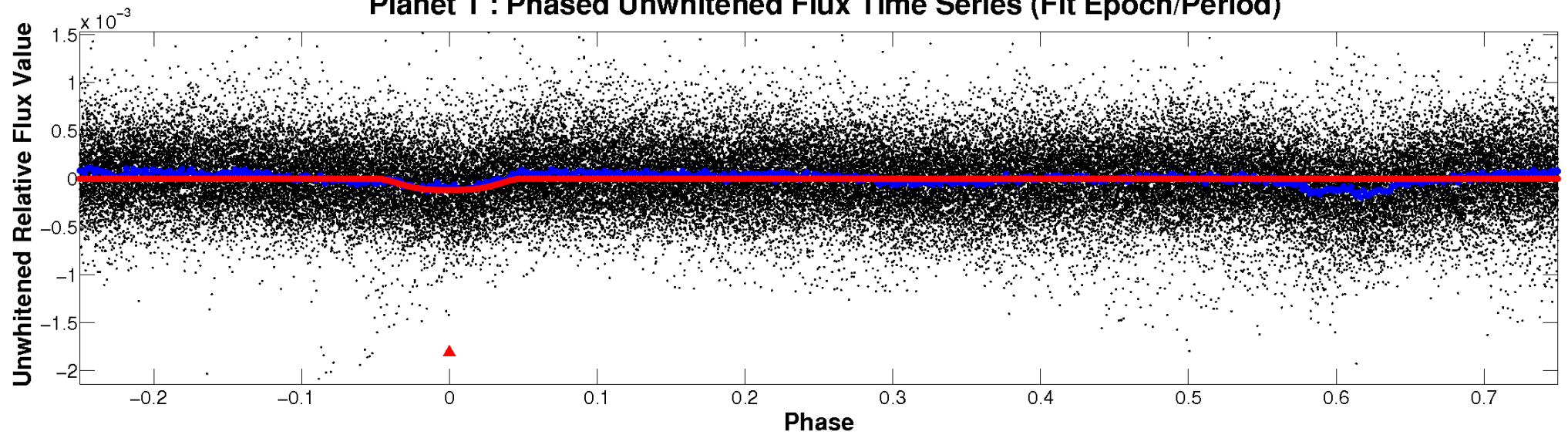
ALT Odd/Even

TCE 005385647-01

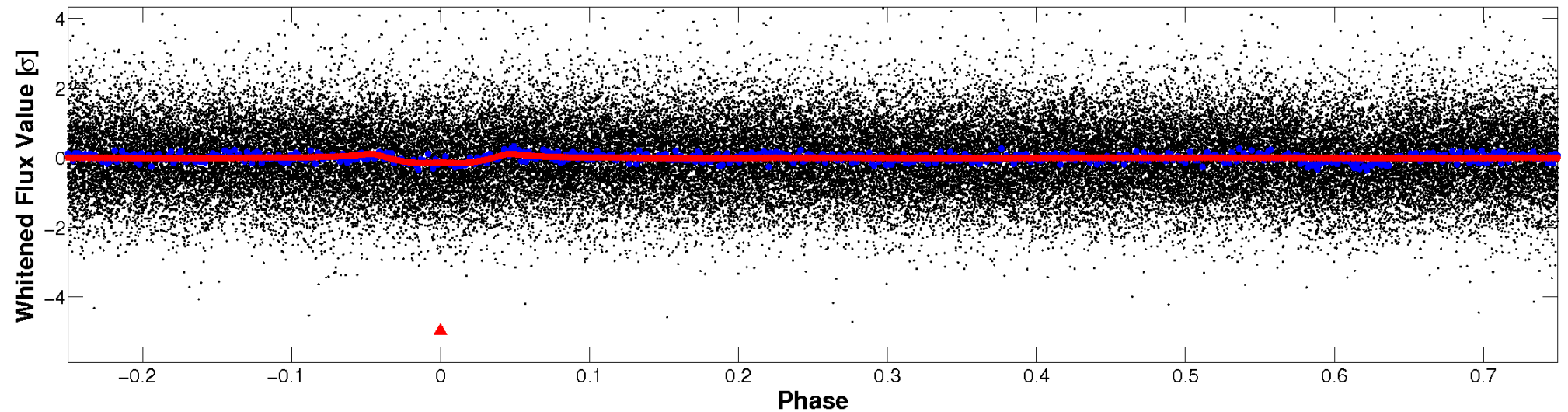


Non-Whitened Vs. Whitened Light Curve

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

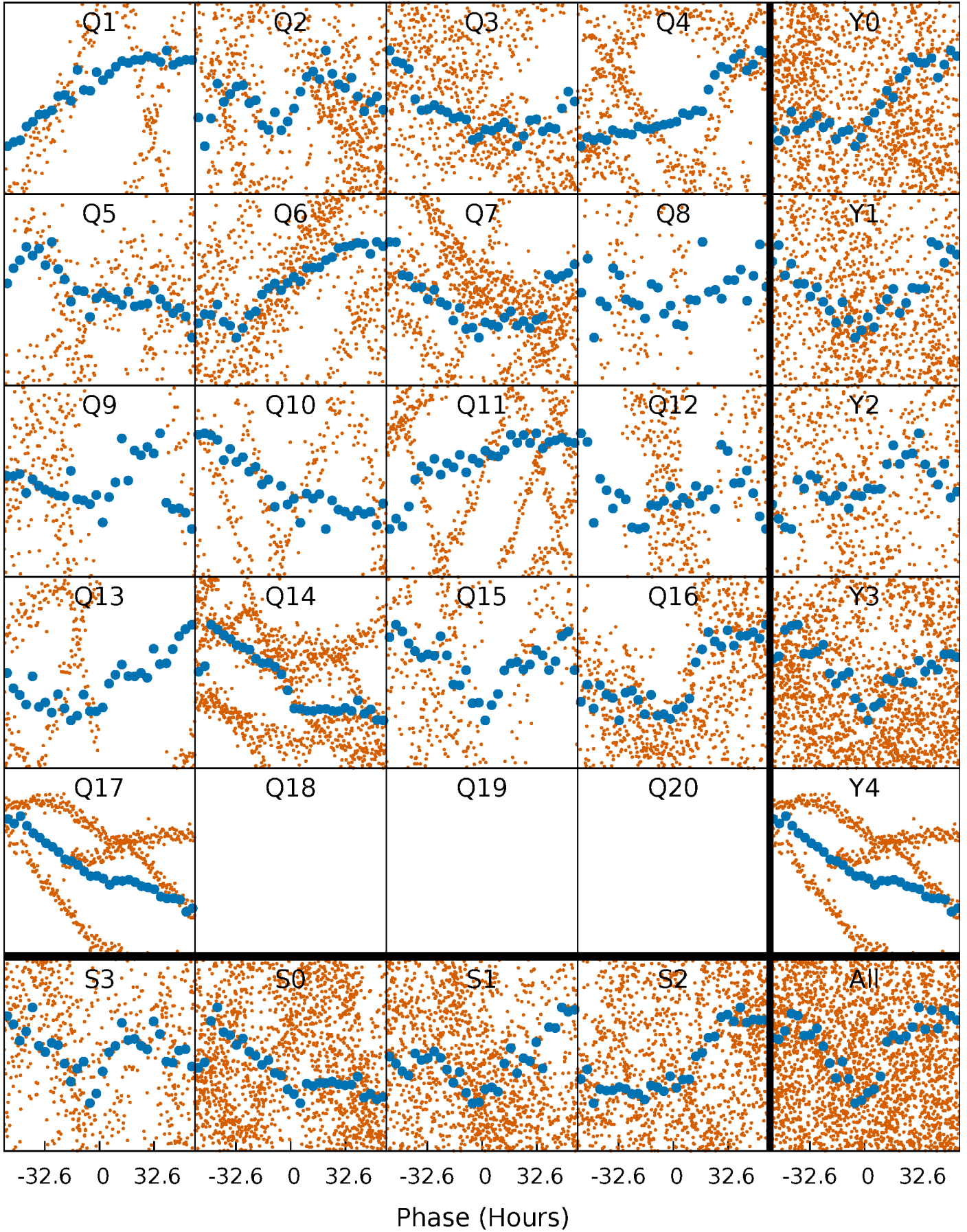


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



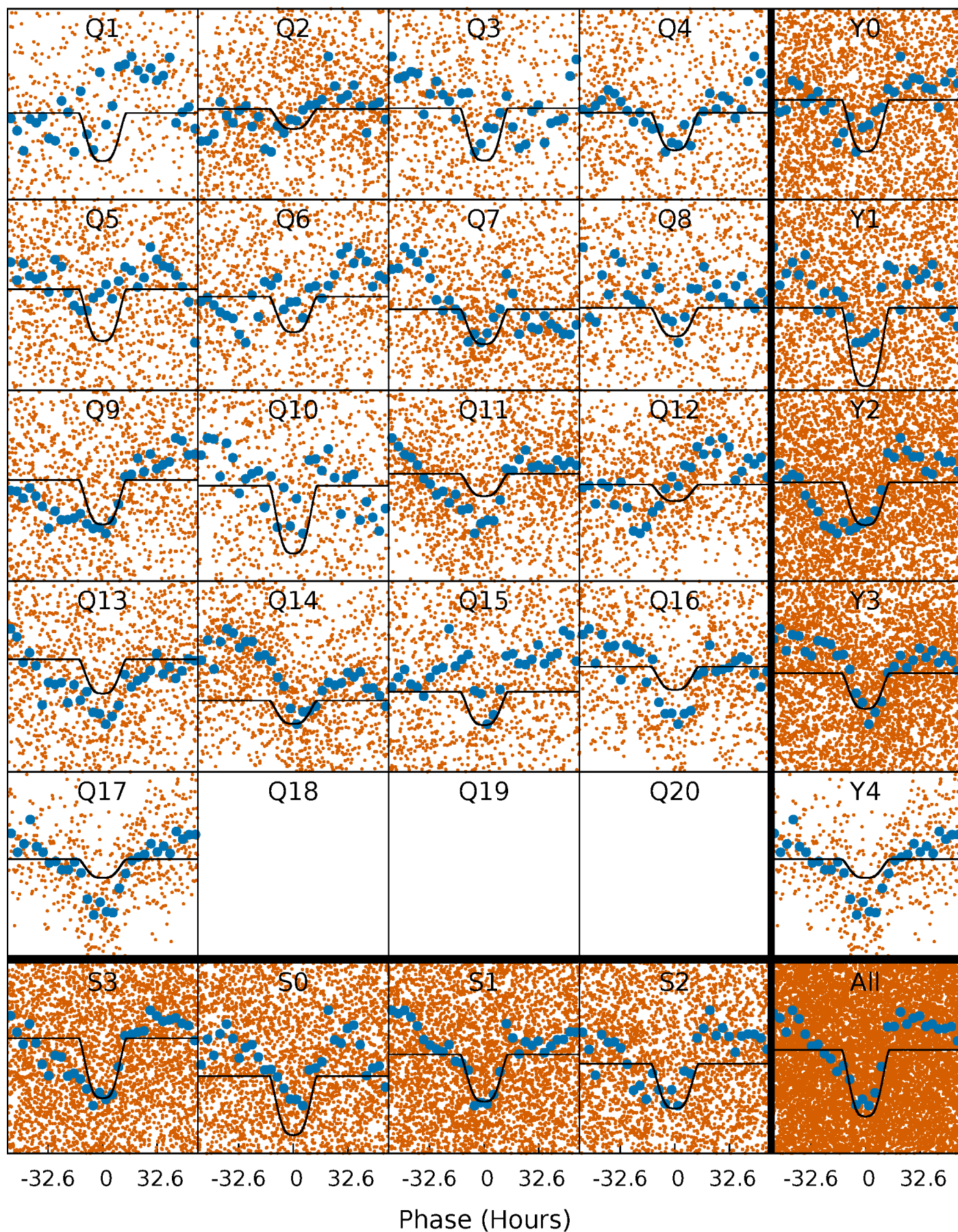
PDC Quarter-Phased Transit Curves

TCE 005385647-01 P= 12.425125 Days $T_0=133.998892$ (BKJD)



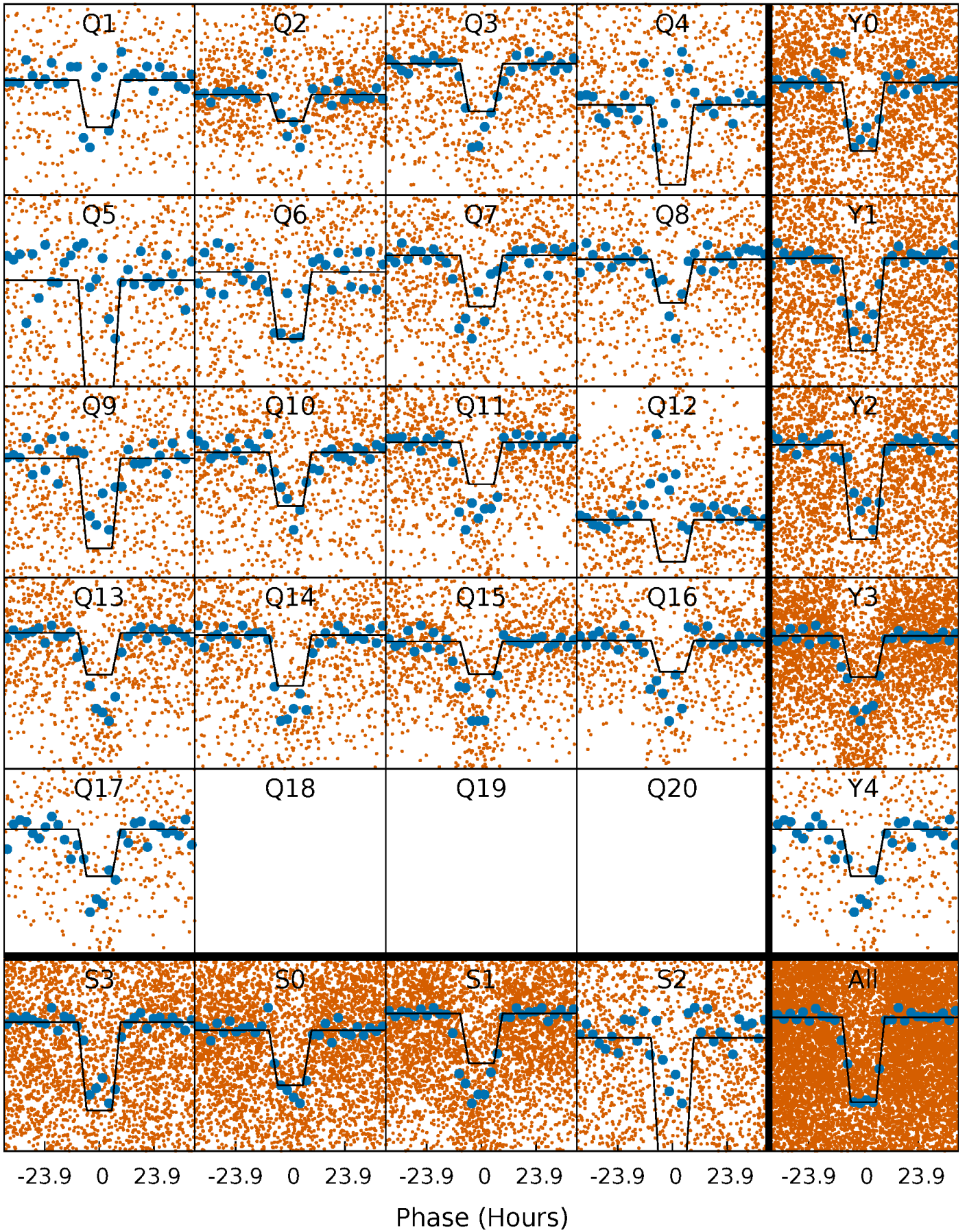
DV Quarter-Phased Transit Curves

TCE 005385647-01 P= 12.425125 Days $T_0=133.998892$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

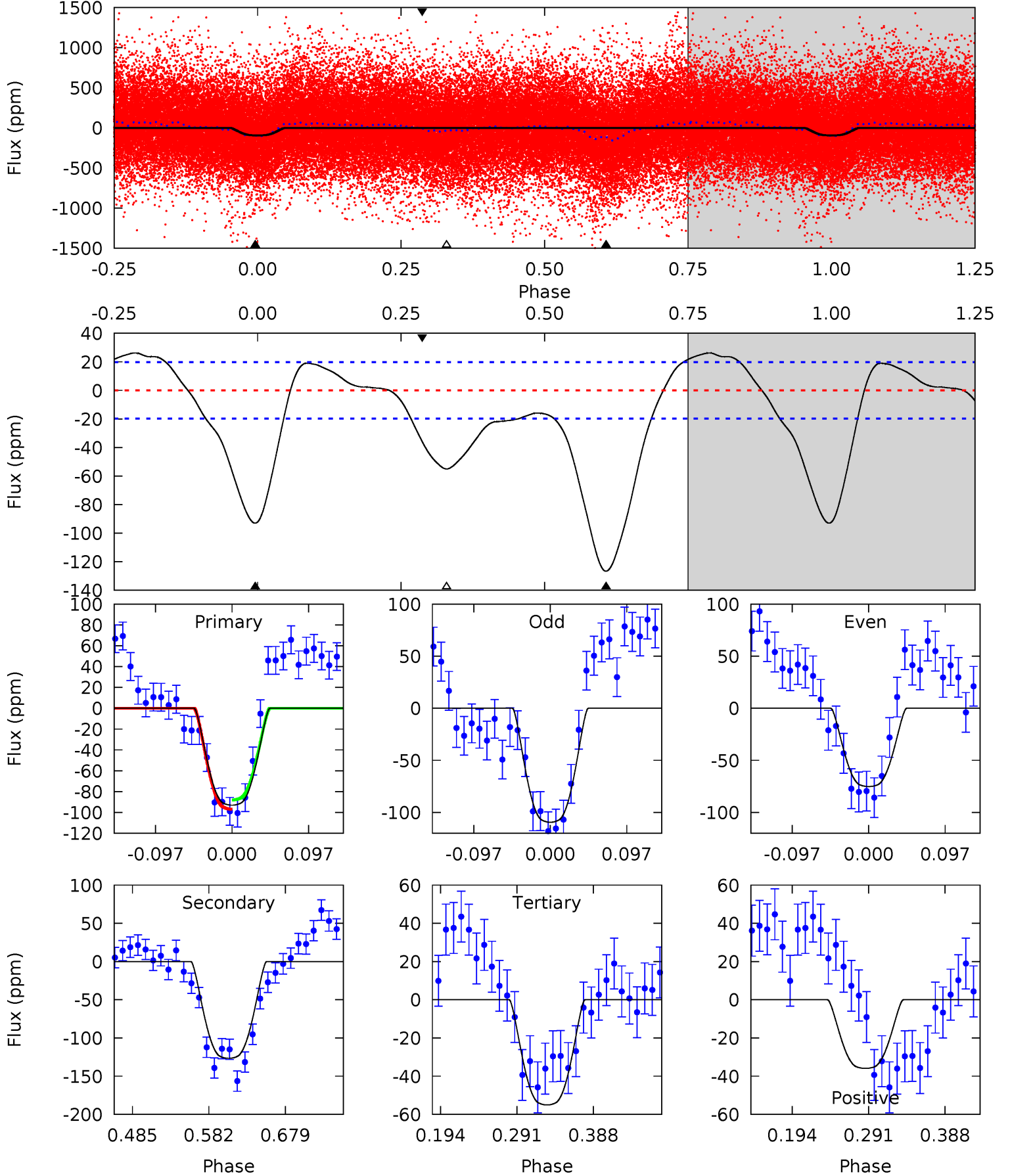
TCE 005385647-01 P= 12.427791 Days $T_0=133.946780$ (BKJD)



DV Model-Shift Uniqueness Test

005385647-01, P = 12.425125 Days, E = 121.573767 Days

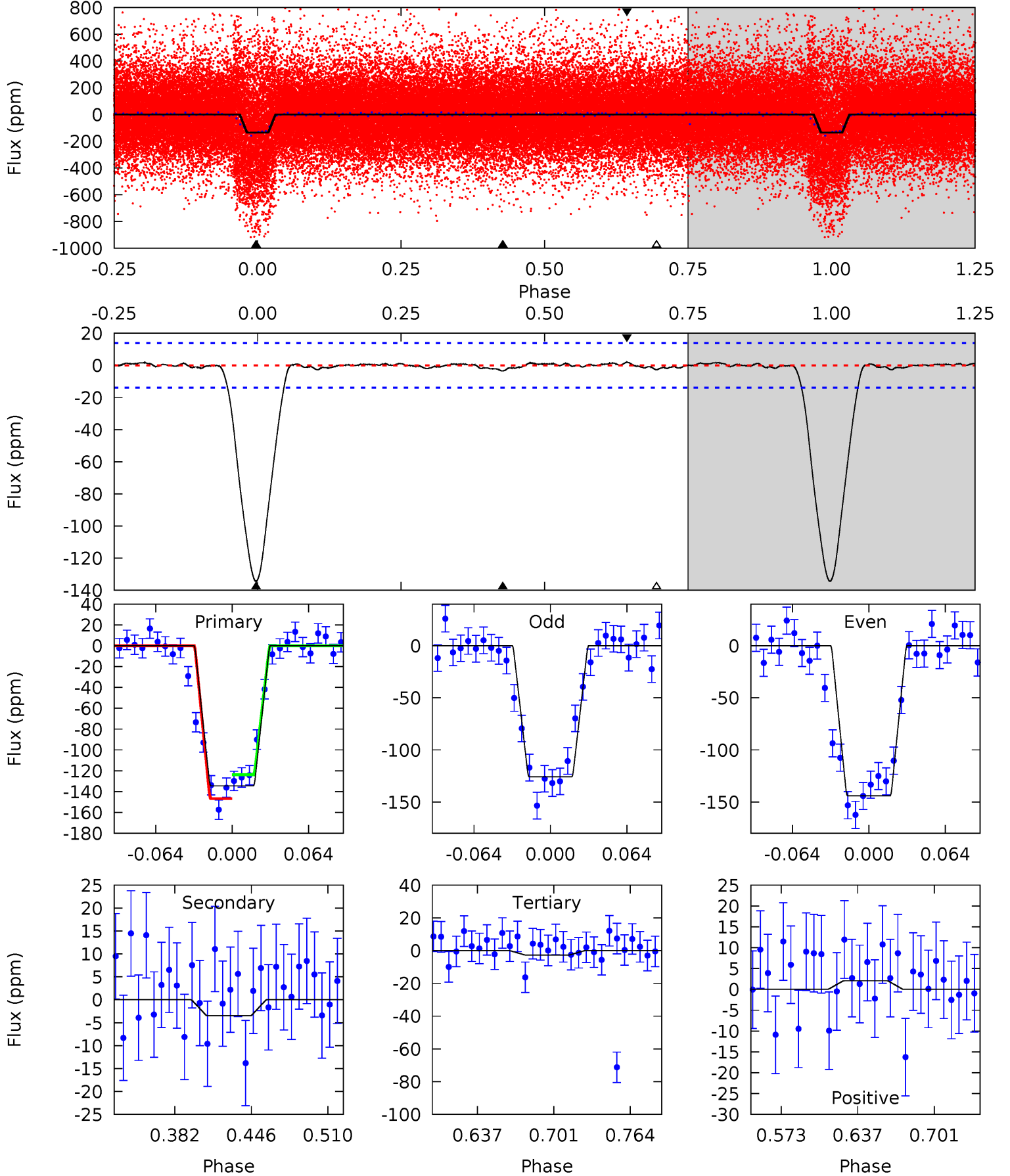
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.5	29.3	12.7	-8.31	4.57	1.66	5.48	8.79	29.8	16.6	37.6	3.98	1.18	0.17	1.04



Alt Model-Shift Uniqueness Test

005385647-01, $P = 12.427791$ Days, $E = 121.518989$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
45.1	1.17	0.91	0.69	4.66	1.85	0.32	44.2	44.4	0.27	0.49	3.06	0.69	0.02	3.84



Stellar Parameters For KIC 005385647

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5349^{+160}_{-144}	$4.044^{+0.490}_{-0.210}$	$0.040^{+0.300}_{-0.250}$	$1.505^{+0.539}_{-0.659}$	$0.914^{+0.080}_{-0.097}$	$0.378^{+1.729}_{-0.191}$
	+3%/-3%	+12%/-5%	+750%/-625%	+36%/-44%	+9%/-11%	+458%/-51%
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 005385647-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-127 ± 4	$2.28^{+0.53}_{-0.57}$	1253^{+127}_{-169}	4827^{+200}_{-176}	138^{+110}_{-44}
Alt.	-3 ± 3	$1.84^{+0.38}_{-0.46}$	1250^{+120}_{-160}	2849^{+277}_{-738}	$5.798^{+7.757}_{-5.120}$

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

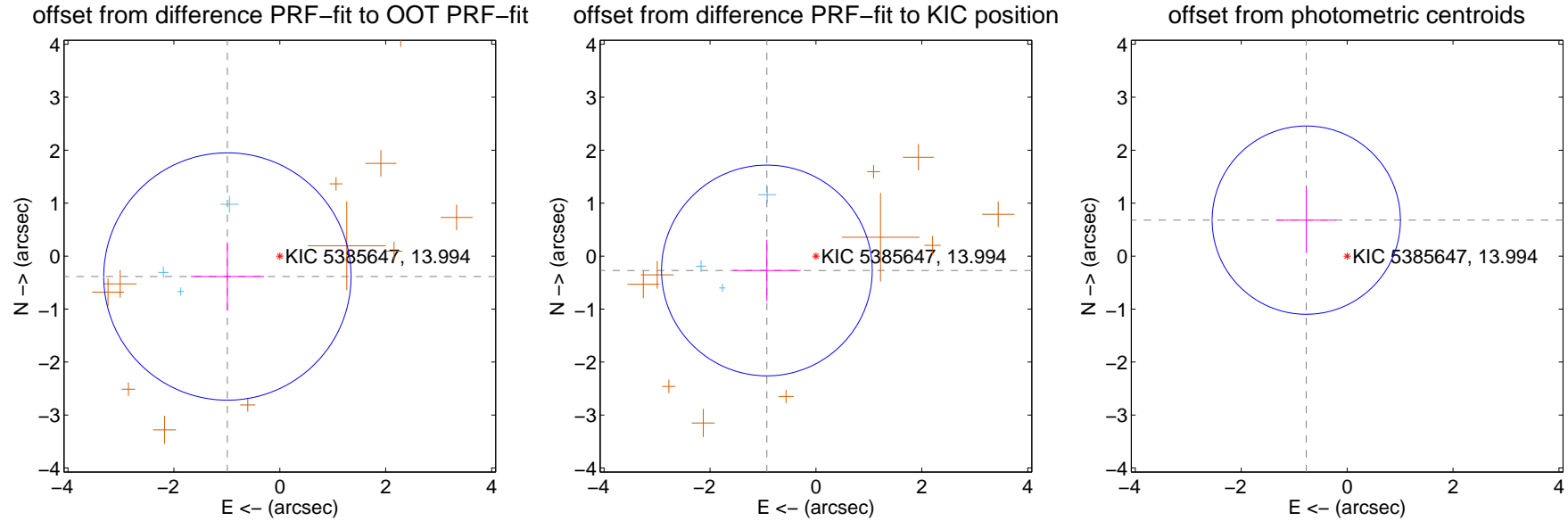
DV Centroid Data

Supplemental centroid analysis for 005385647-01. Kepler magnitude: 13.99. Transit SNR 9.78

There are 3 quarters with good PRF difference image offsets

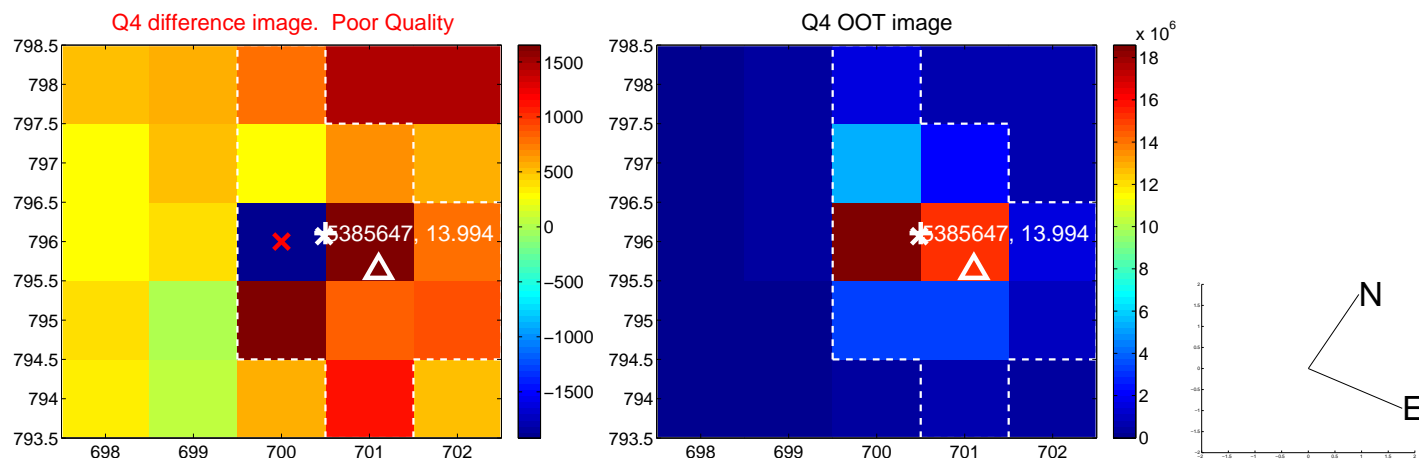
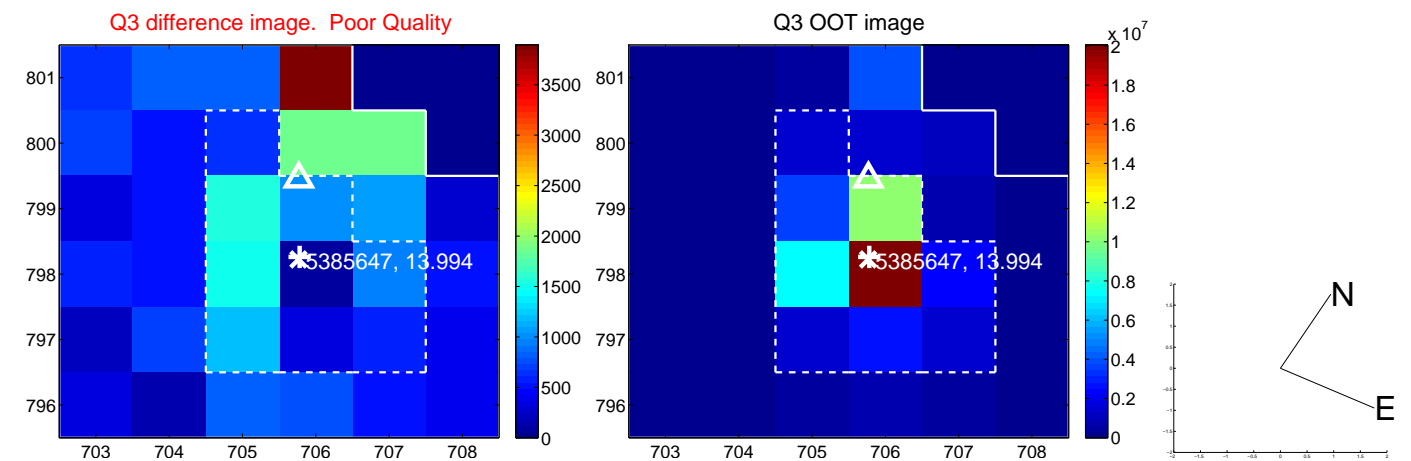
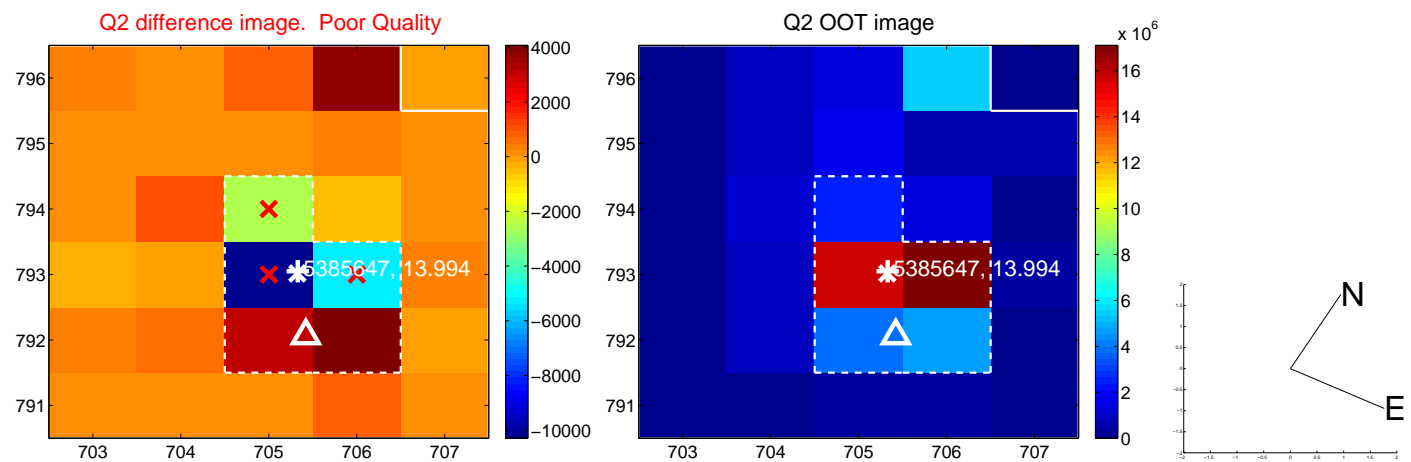
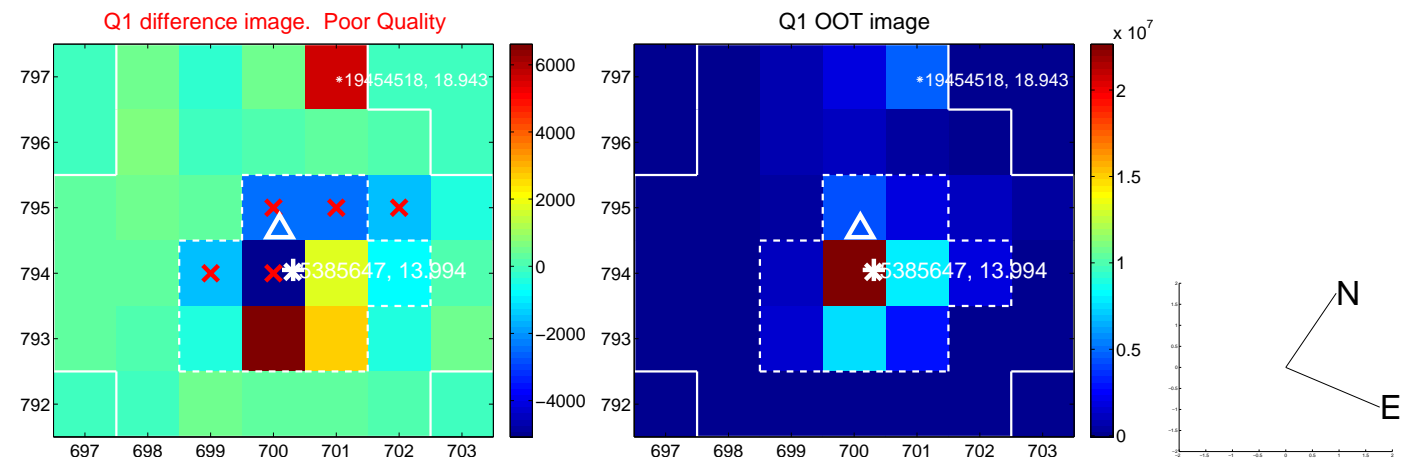
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.062 ± 0.778	1.36	0.989 ± 0.692	-0.385 ± 0.646
PRF-fit source offset from KIC position	0.965 ± 0.663	1.46	0.926 ± 0.639	-0.271 ± 0.581
photometric centroid source offset	1.03 ± 0.59	1.74	0.77 ± 0.57	0.68 ± 0.63

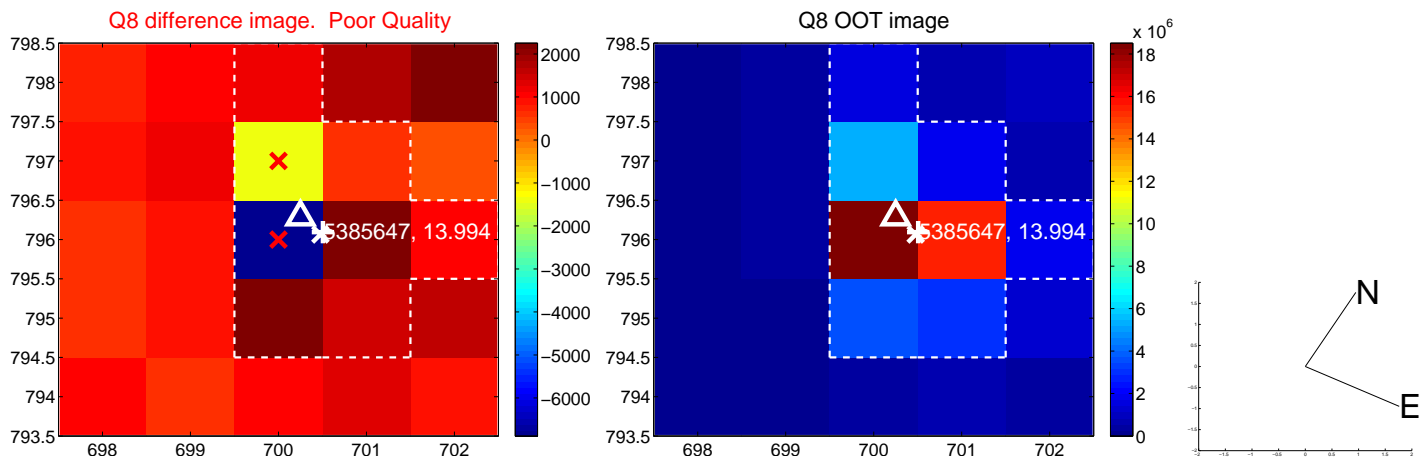
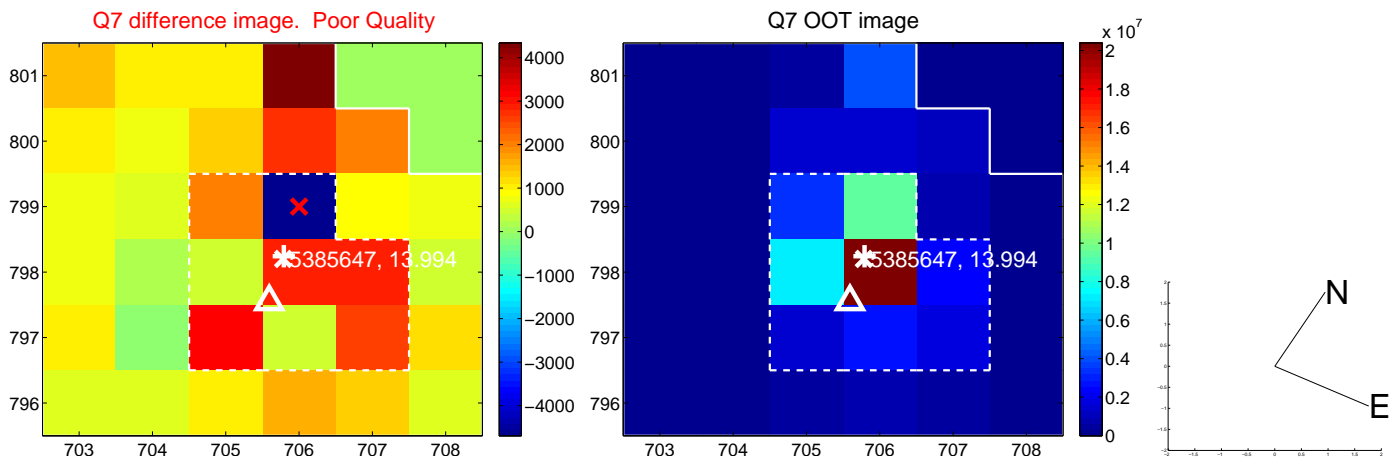
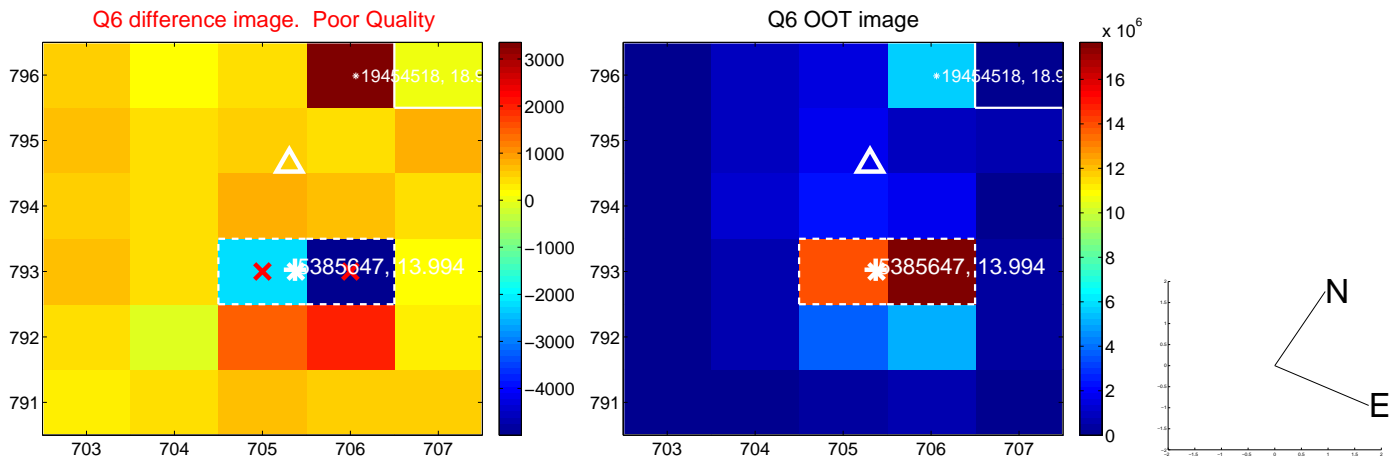
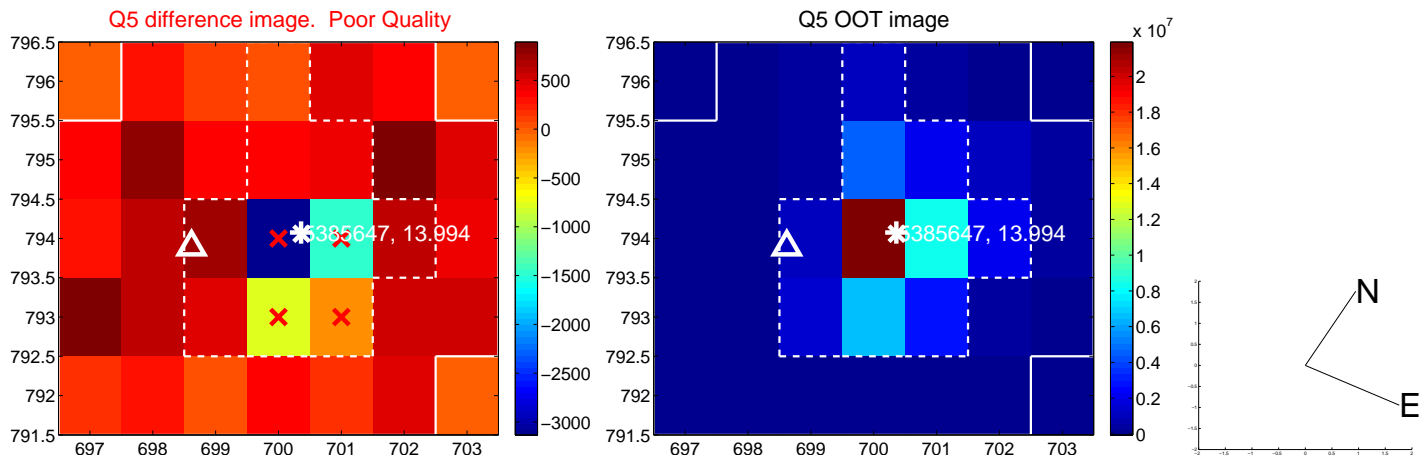


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

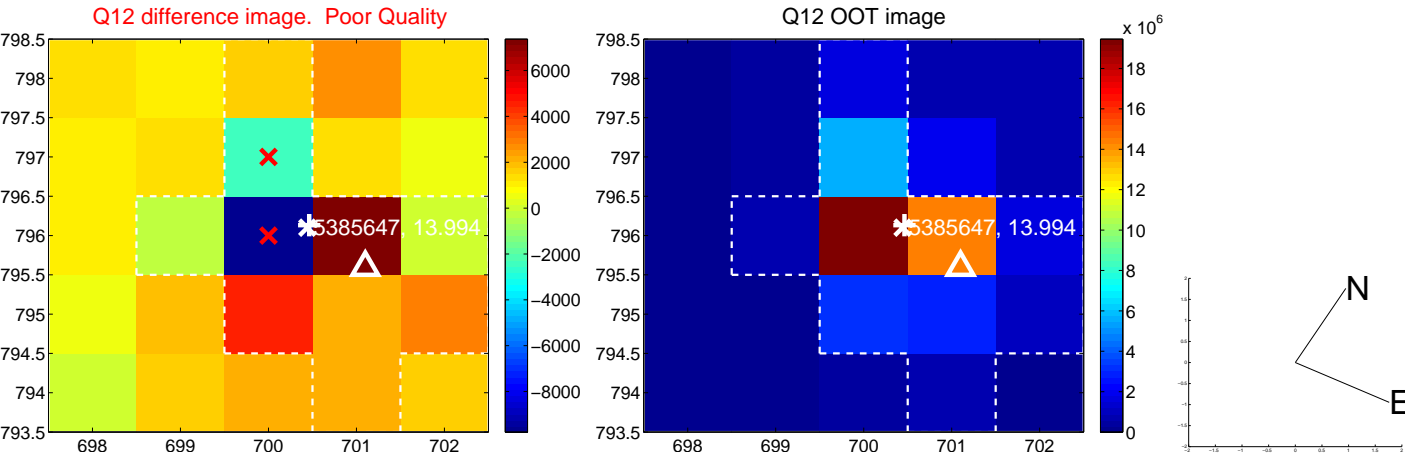
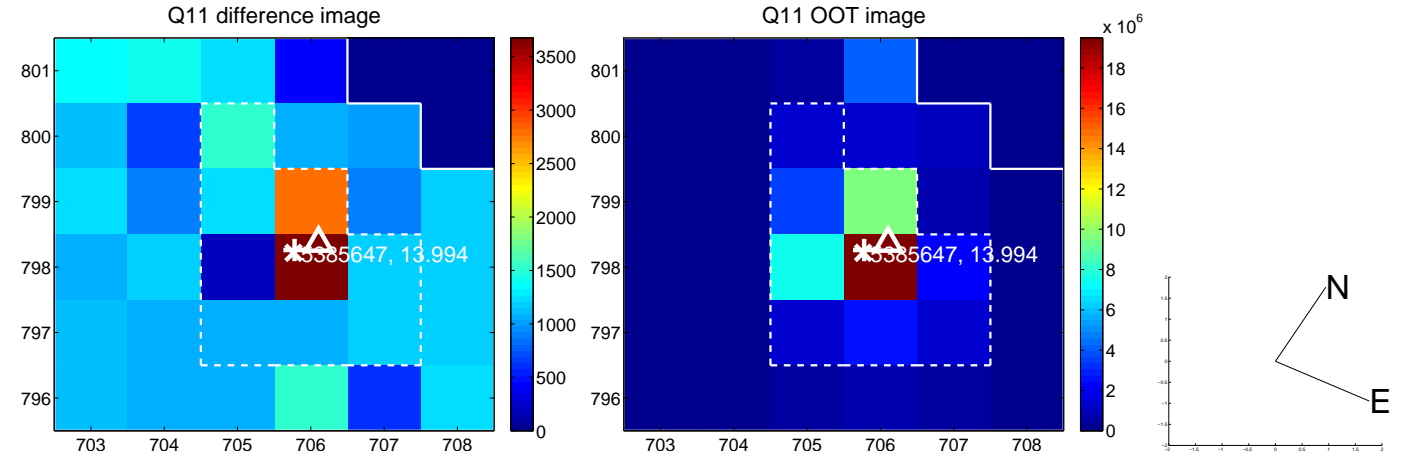
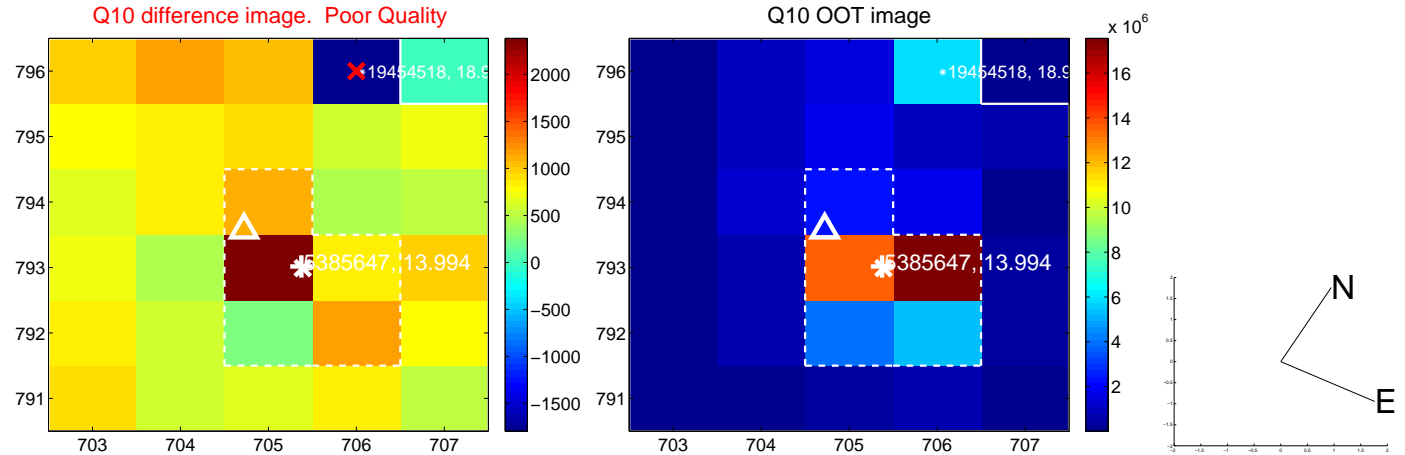
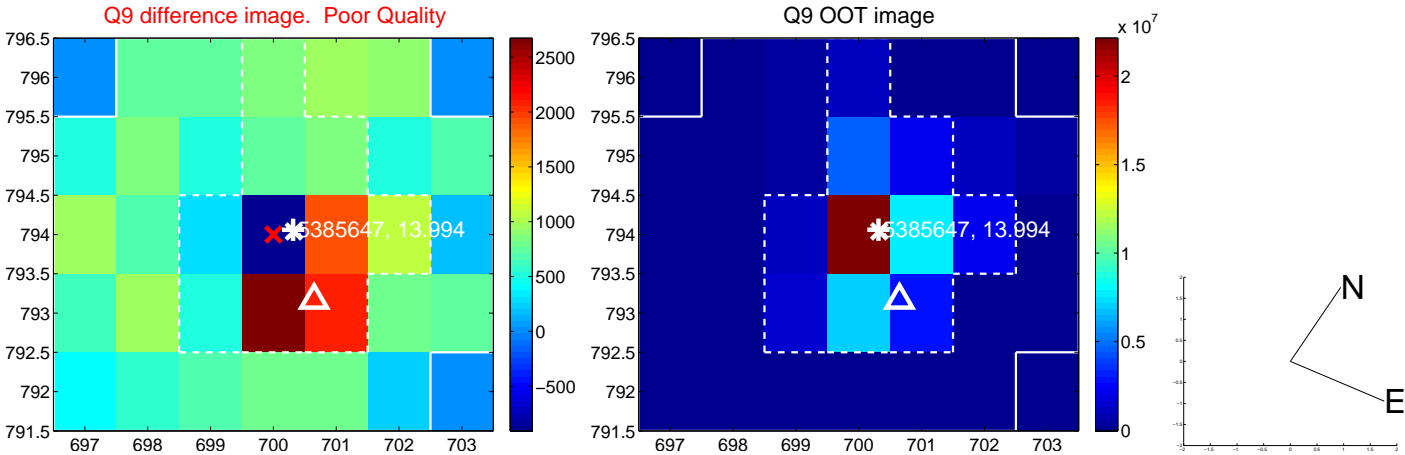
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



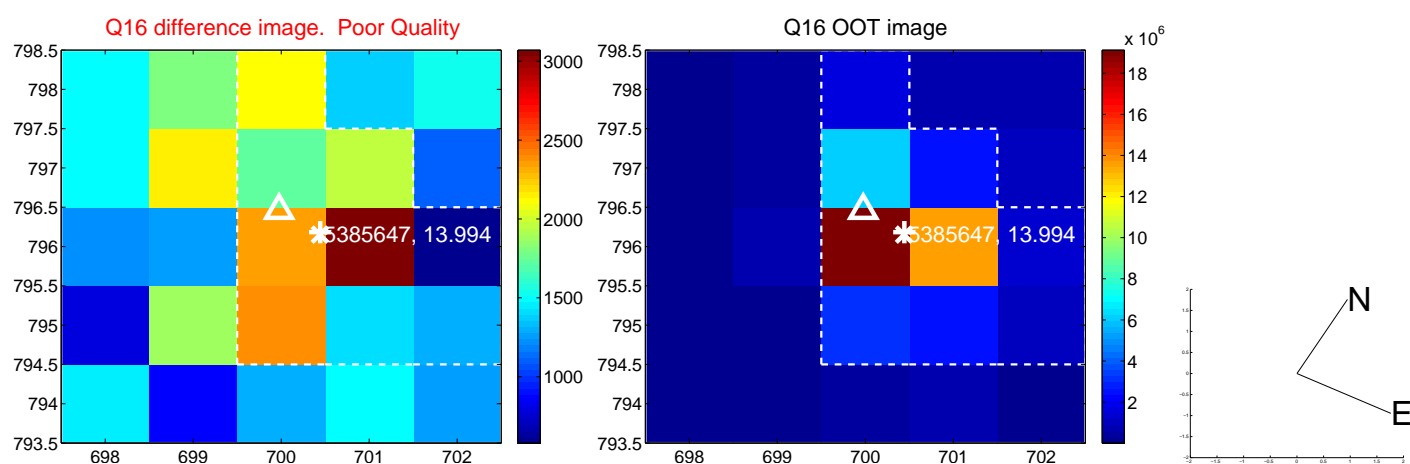
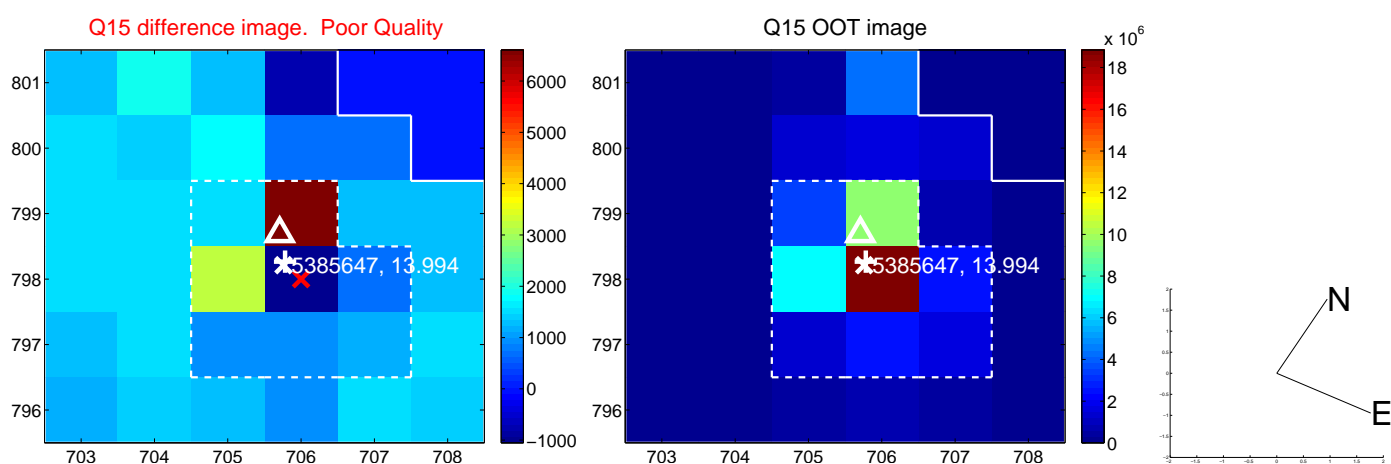
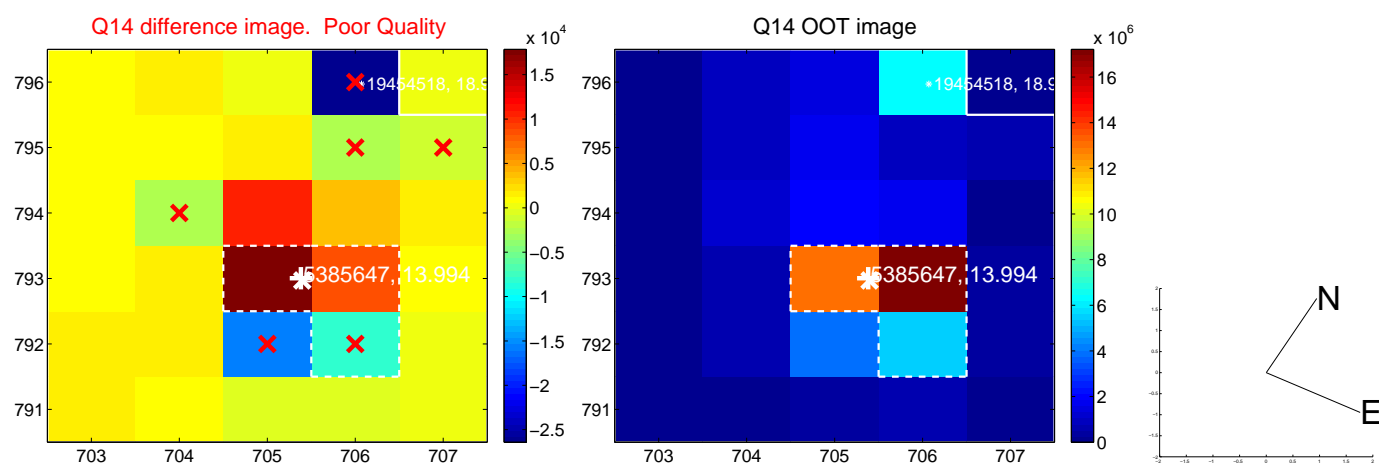
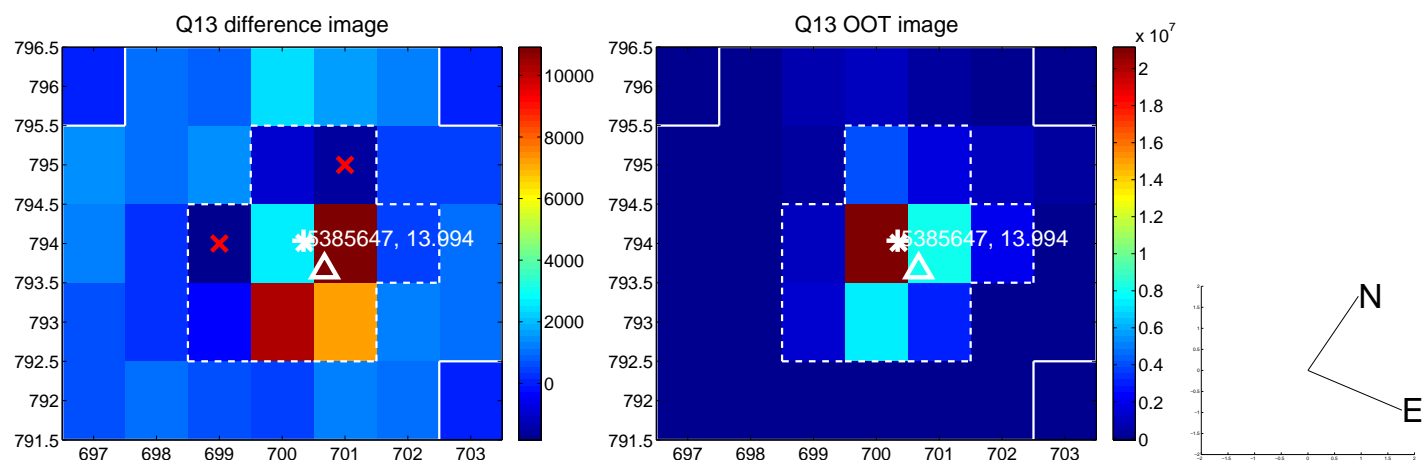
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



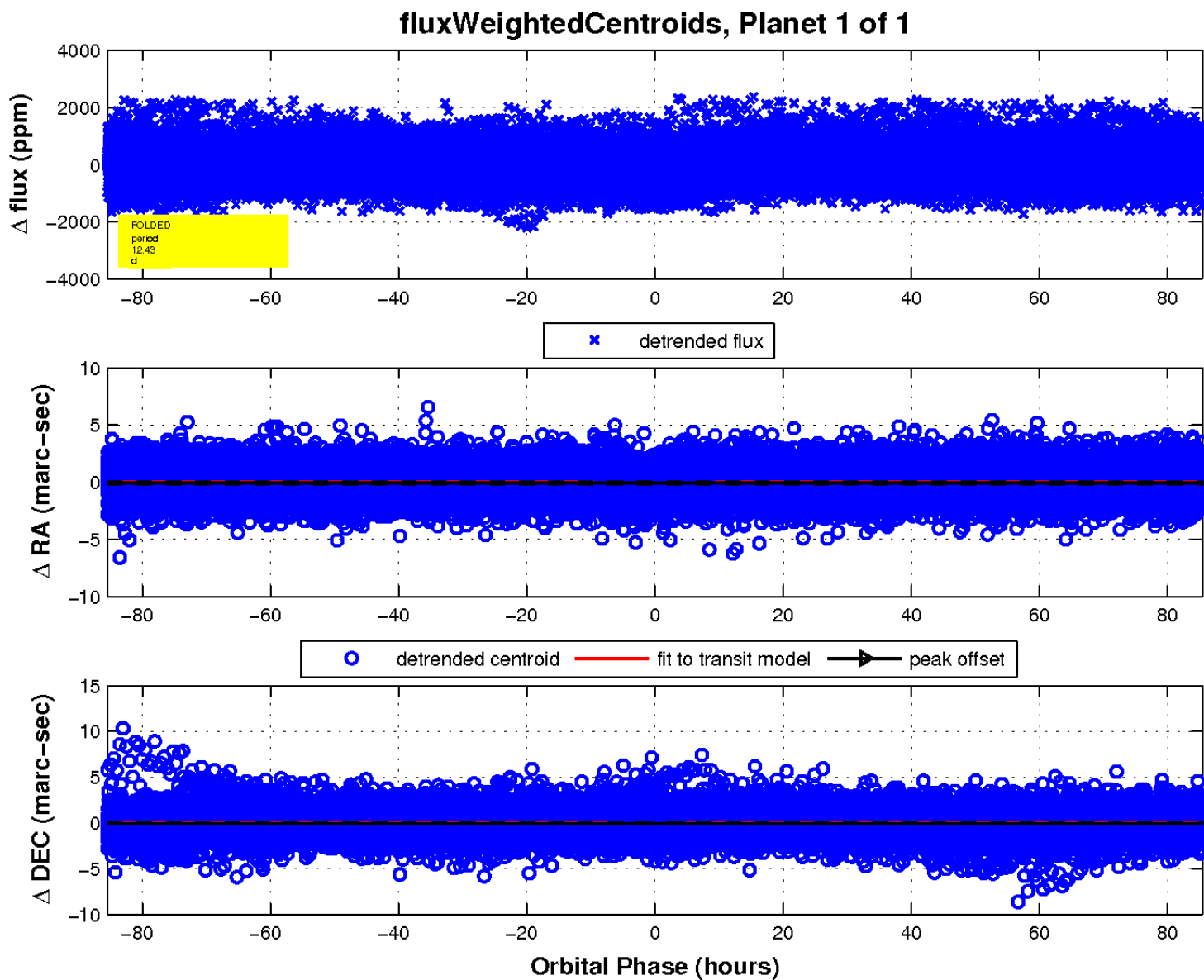
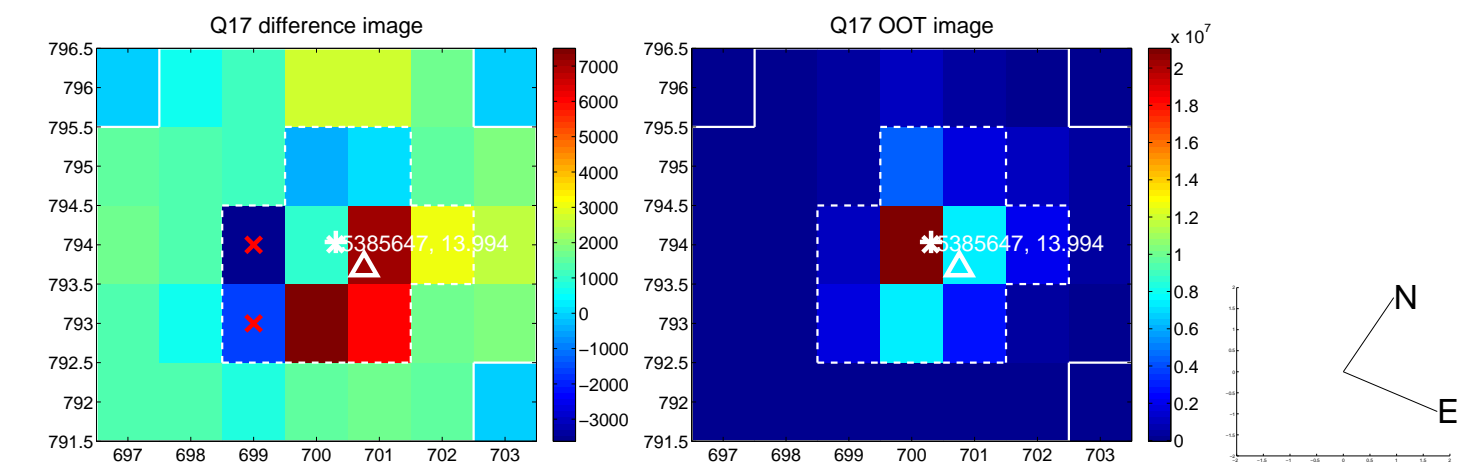
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UKIRT Image

Declination

