

KIC 009450647

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})
009450647-01	OBS	0110.01	9.940661	135.215822	521.4	4.075	144.3	146.0	1.26	6215	3.20	233.41

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009450647-01	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.

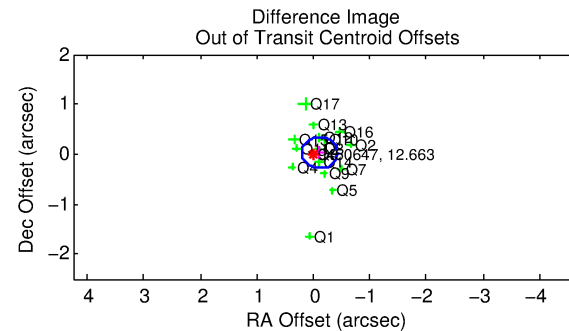
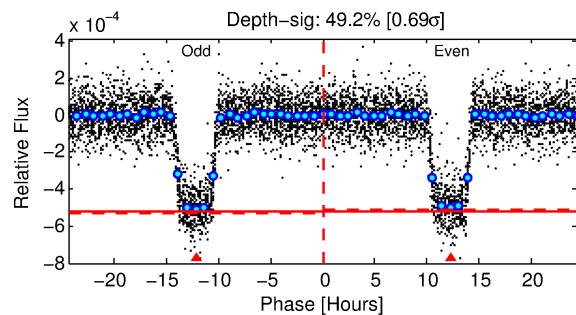
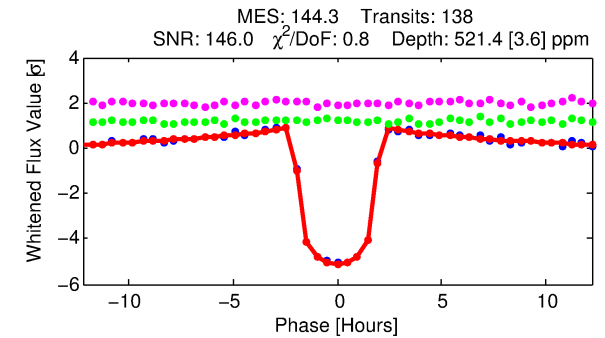
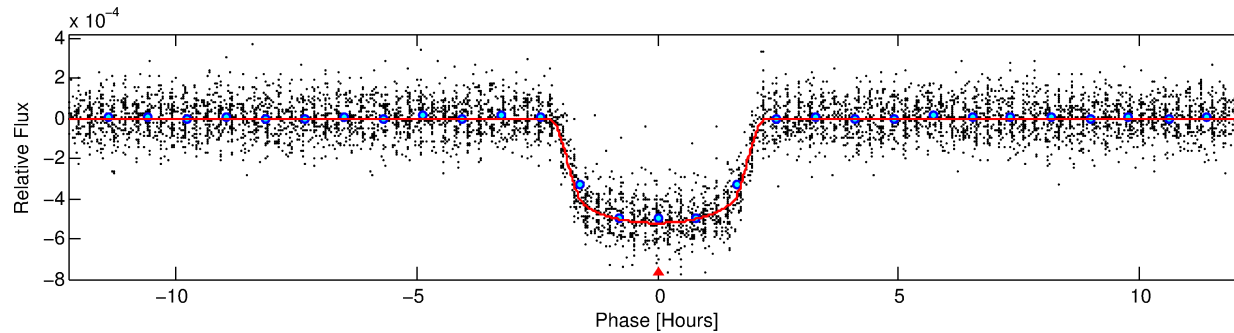
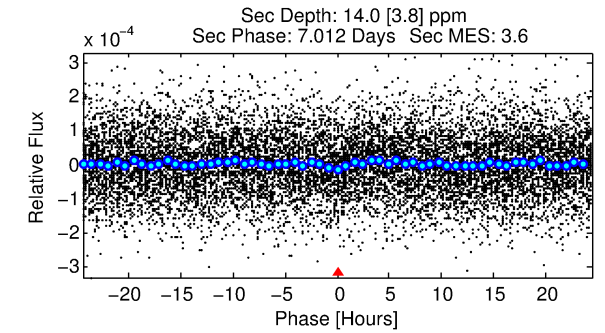
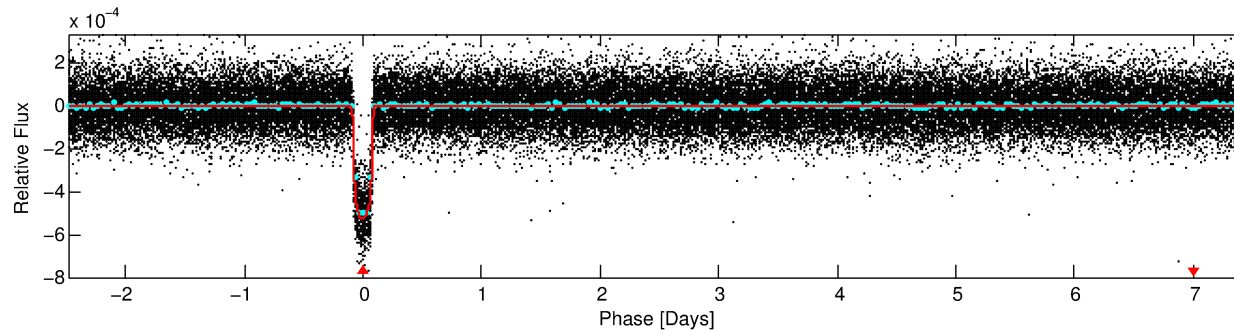
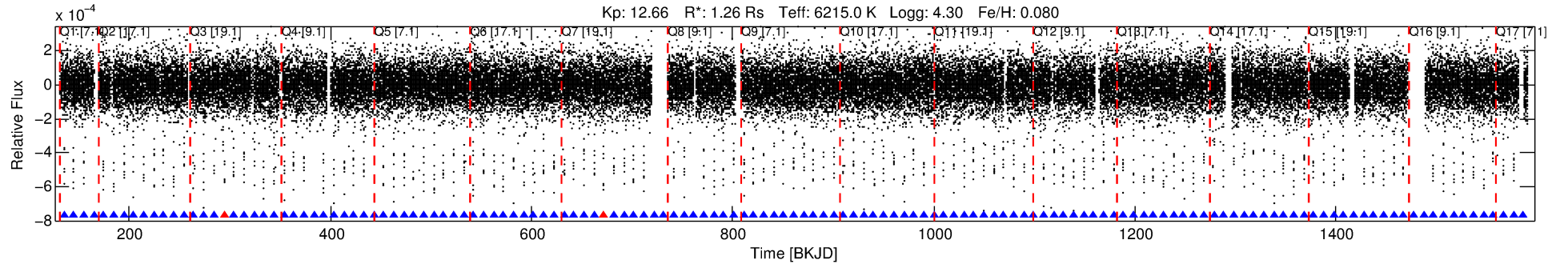
Ephemeris Match Information For 009450647-01

No Significant Match Found

DV One-Page Summary

KIC: 9450647 Candidate: 1 of 1 Period: 9.941 d

KOI: K00110.01 Corr: 0.978



DV Fit Results:

Period = 9.94066 [0.00001] d
Epoch = 135.2158 [0.0005] BKJD
Rp/R* = 0.0233 [0.0008]
a/R* = 11.60 [1.98]
b = 0.81 [0.07]
Seff = 233.41 [54.76]
Teff = 997 [58] K
Rp = 3.20 [0.57] Re
a = 0.0953 [0.0141] AU
Ag = 6.83 [2.42] [2.41σ]
Teffp = 2491 [183] K [7.79σ]

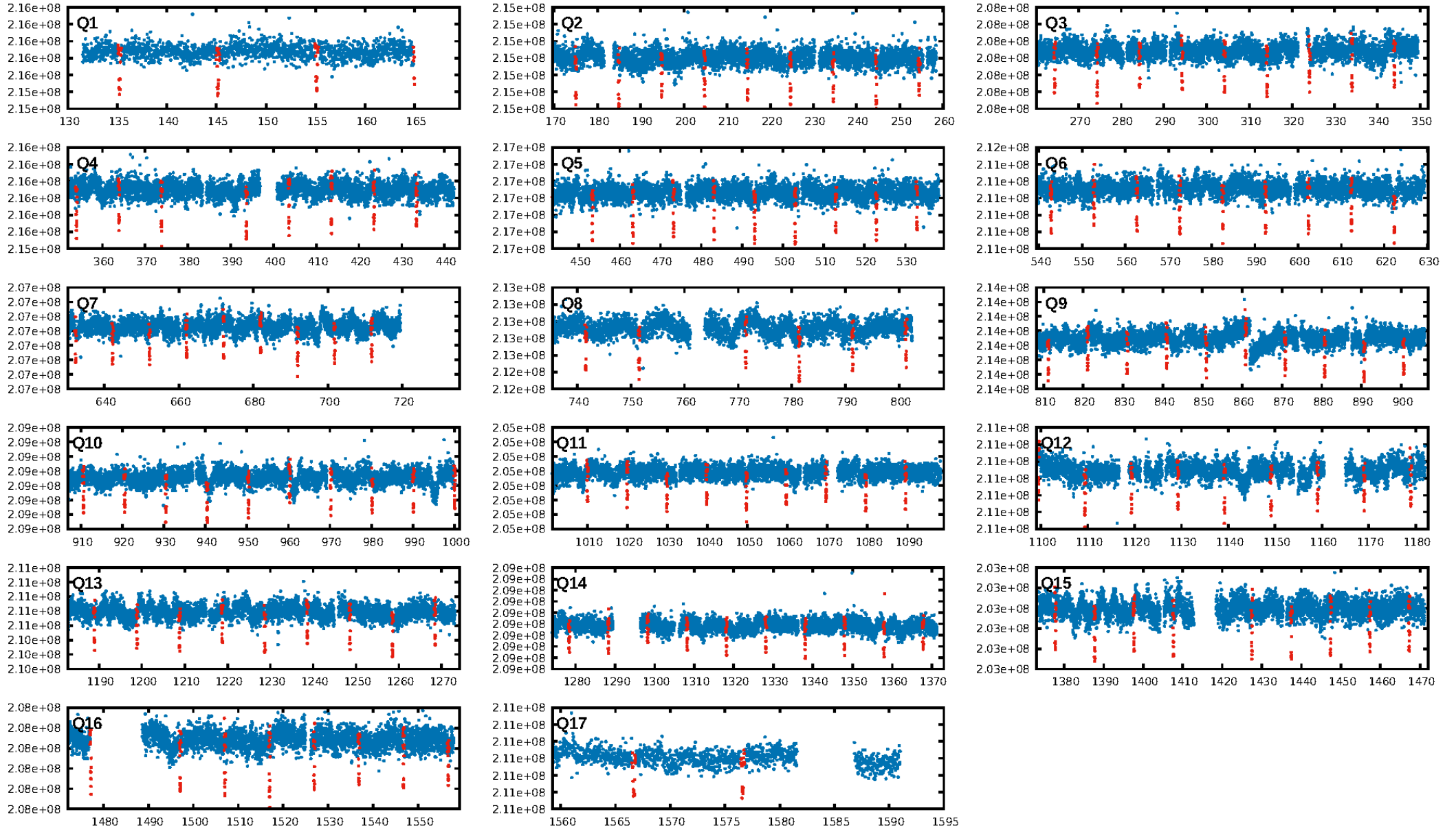
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 98.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.98 [130/132]
GhostDiagnostic-chr: 8.626
Centroid-sig: 4.9%
Centroid-so: 0.266 arcsec [3.88σ]
OotOffset-rm: 0.112 arcsec [1.07σ]
KicOffset-rm: 0.262 arcsec [1.62σ]
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]

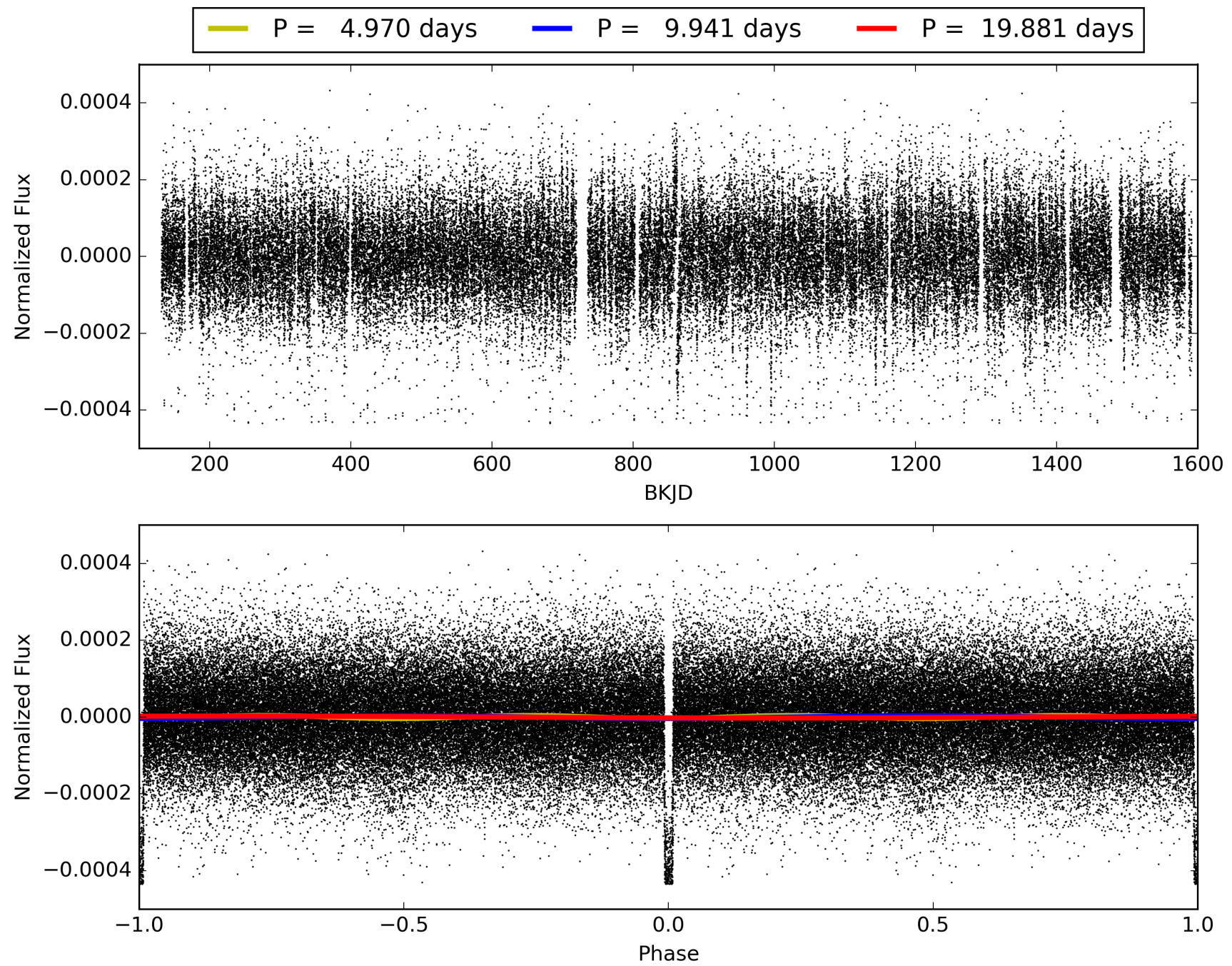
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 23:43:23 Z

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

TCE 009450647-01, PDC Light Curves

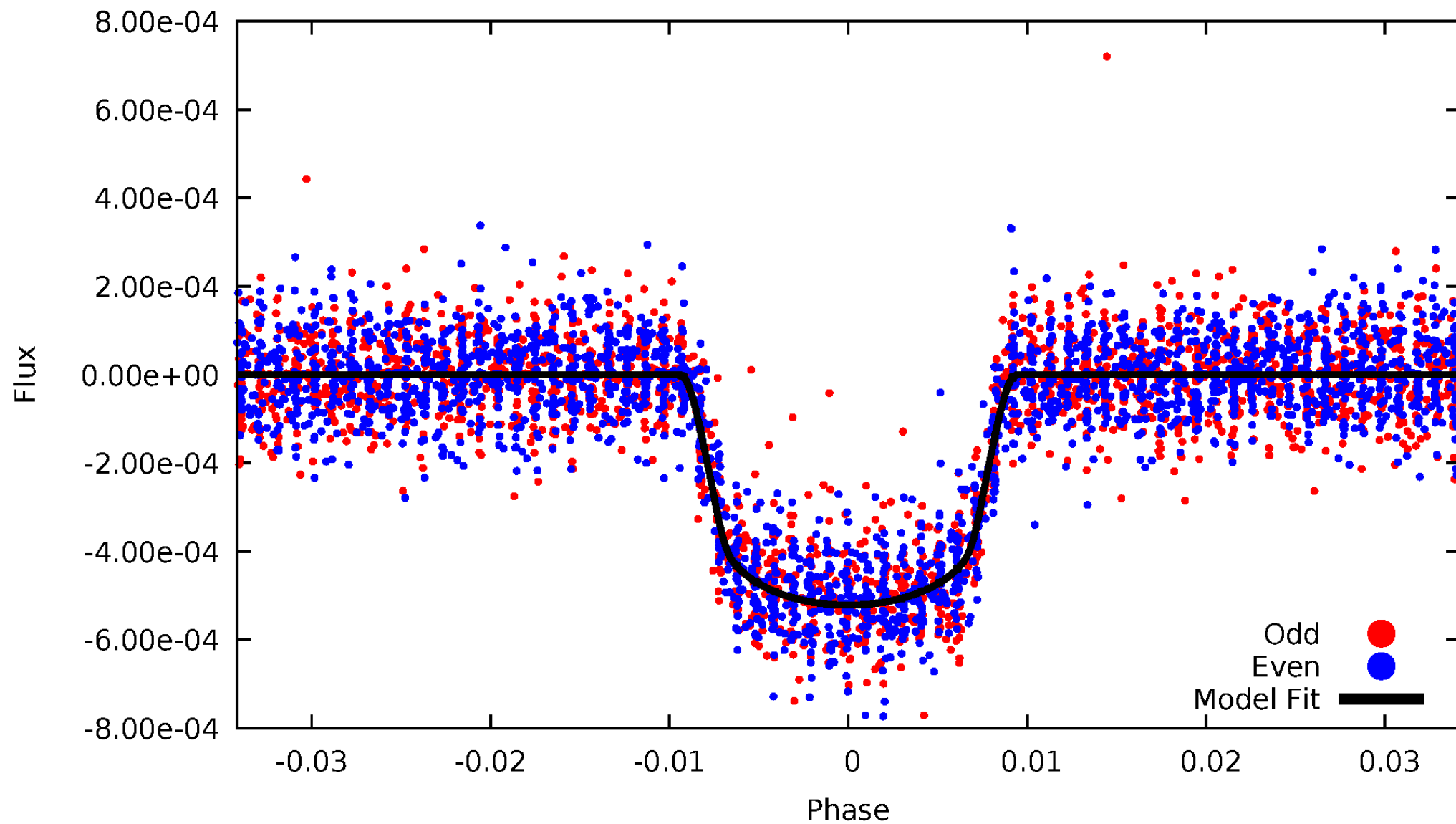


TCE 009450647-01



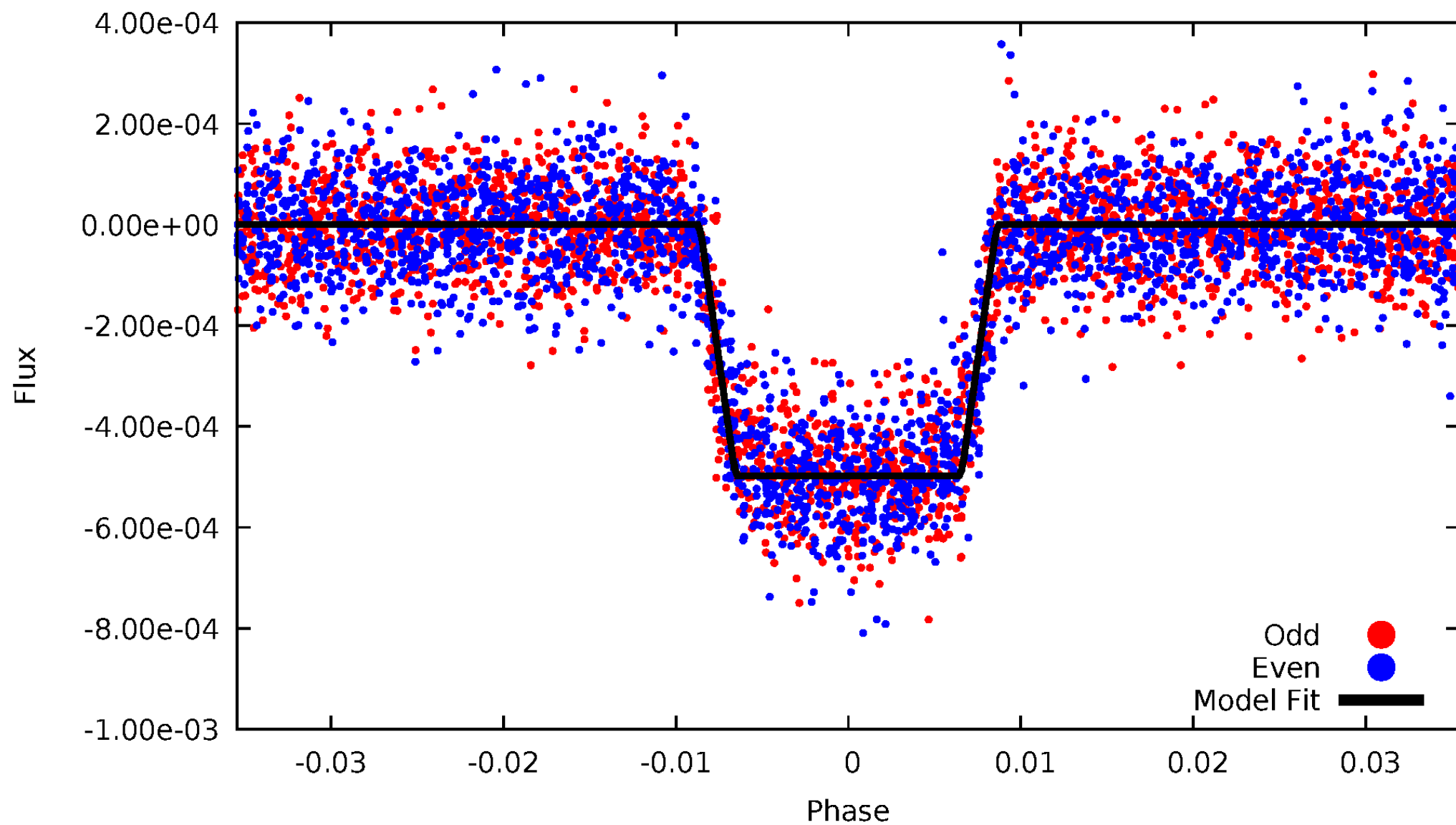
DV Odd/Even

TCE 009450647-01

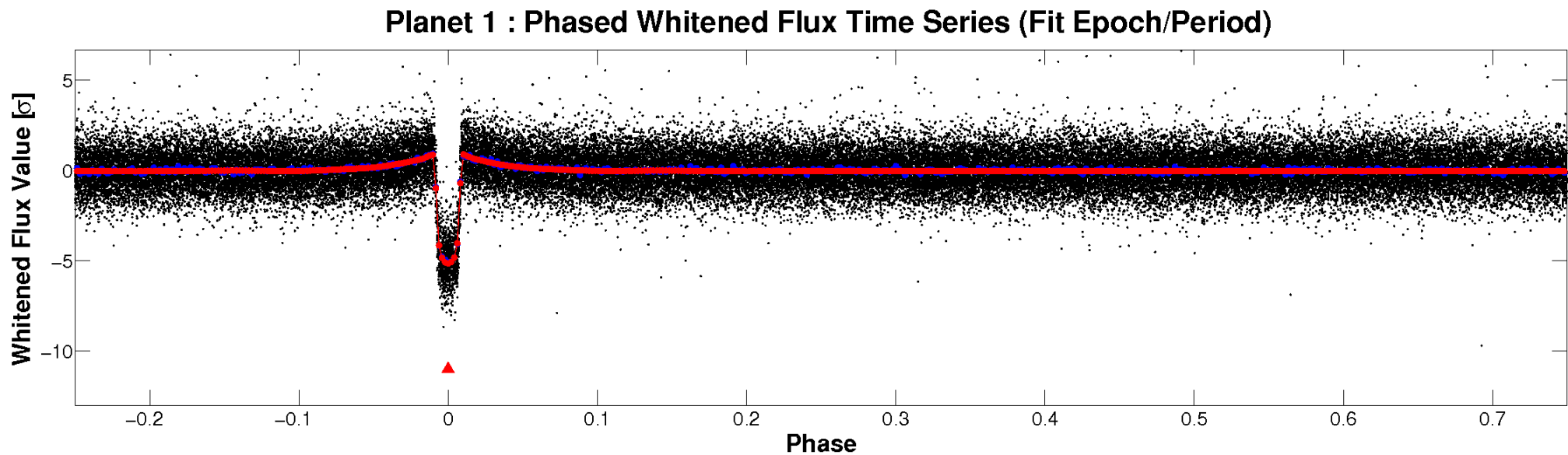
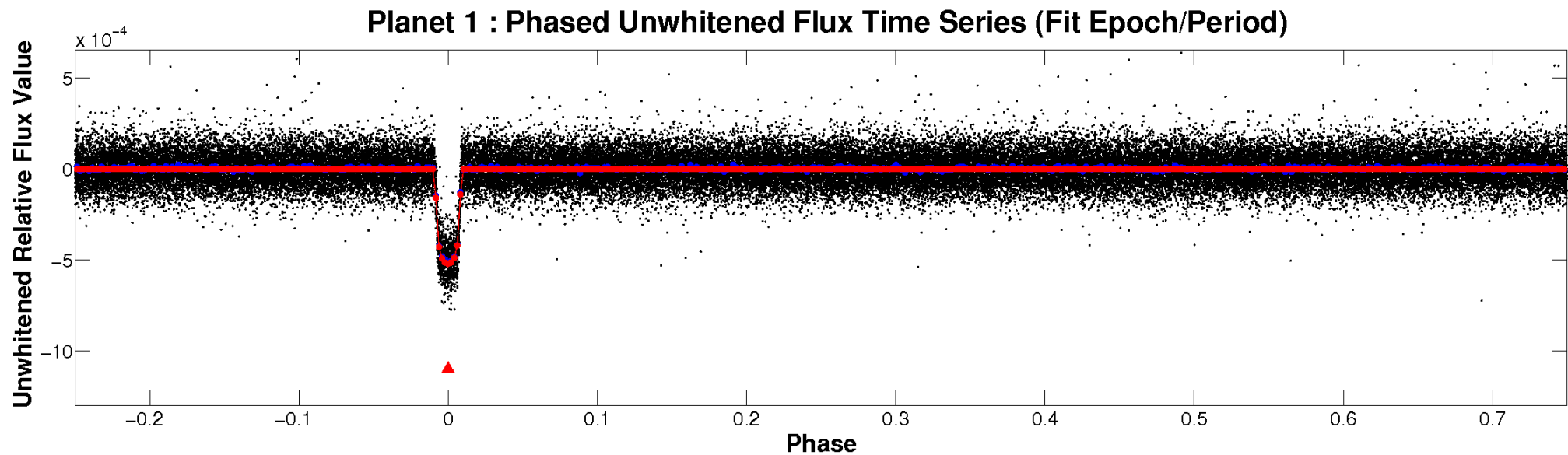


ALT Odd/Even

TCE 009450647-01

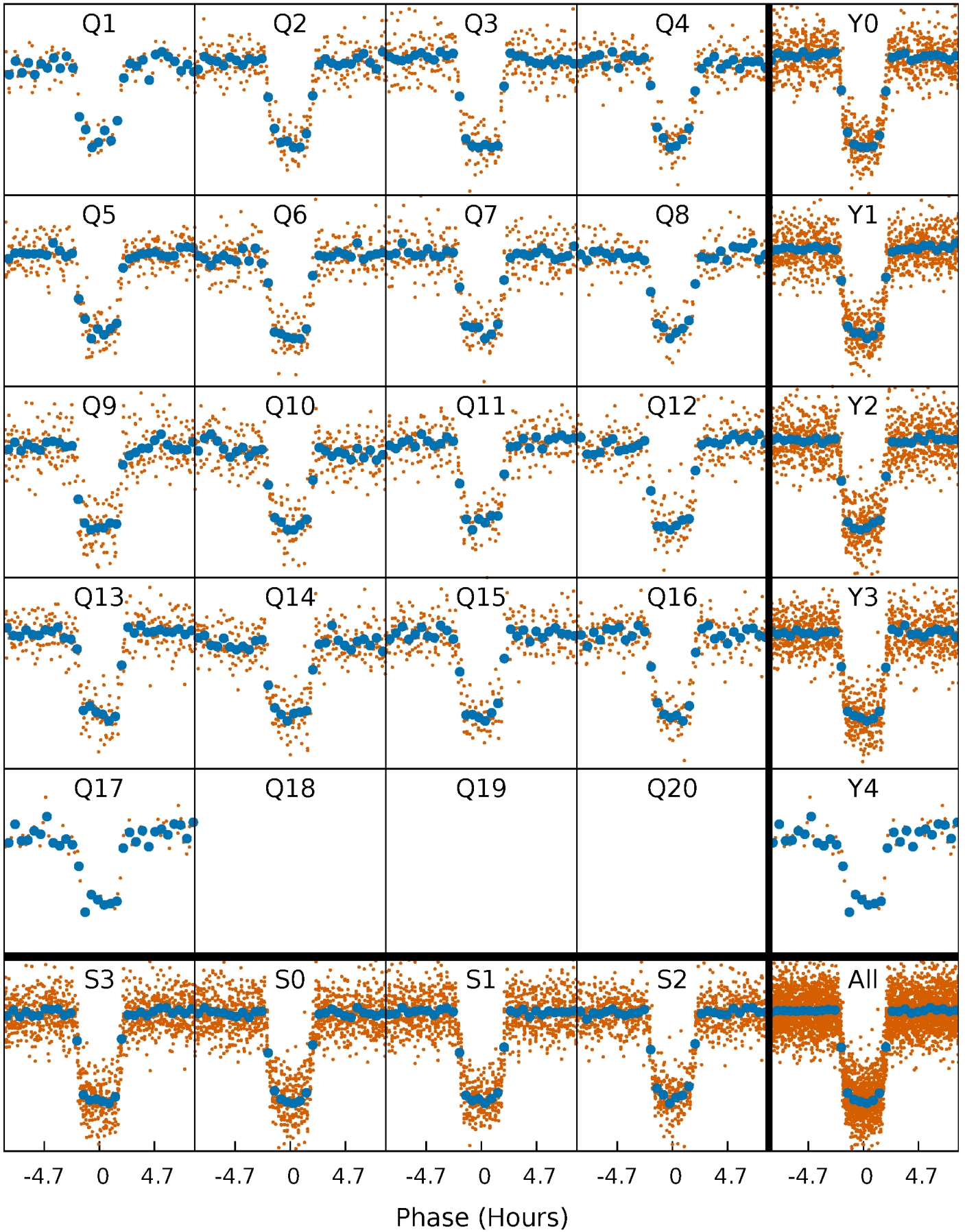


Non-Whitened Vs. Whitened Light Curve



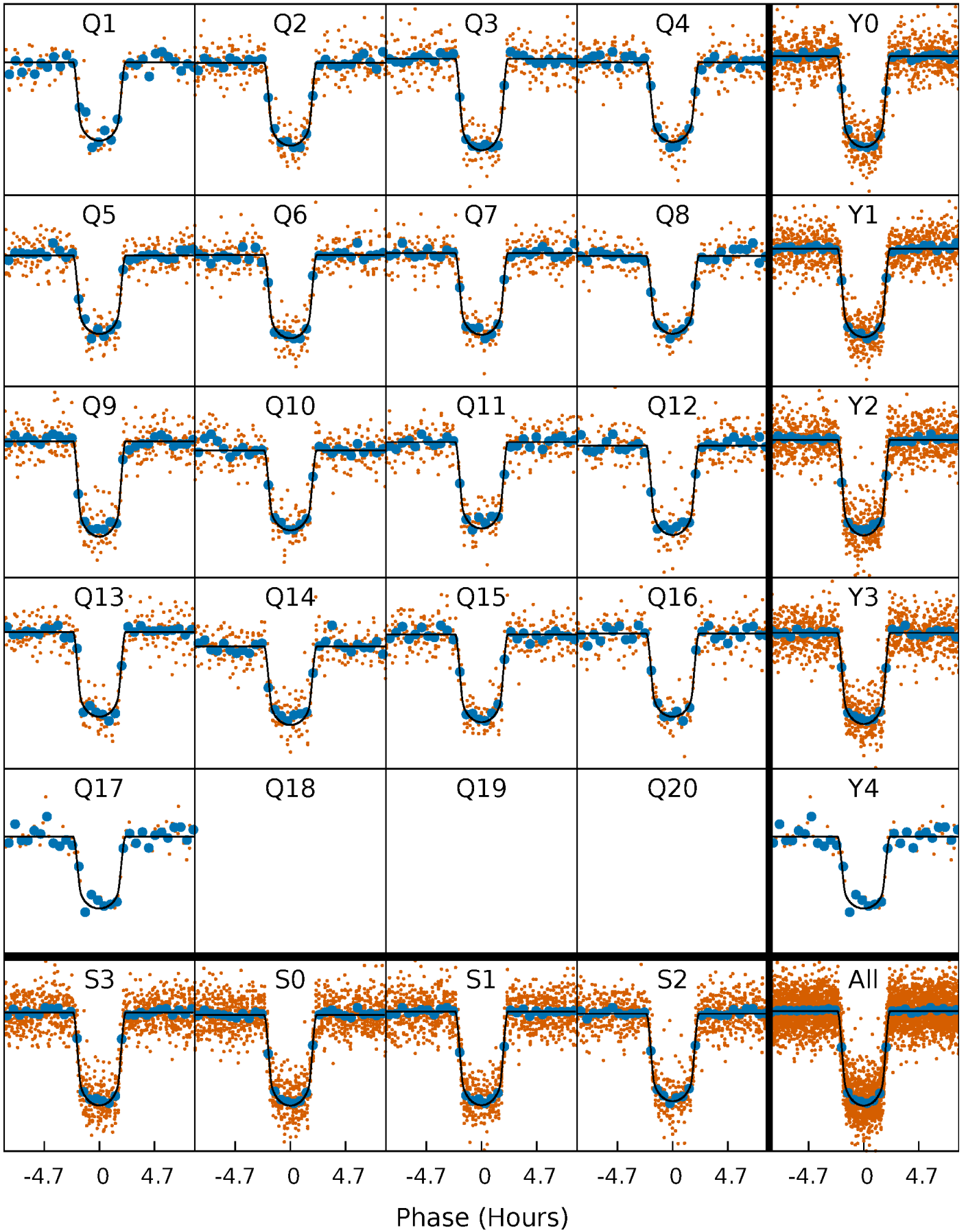
PDC Quarter-Phased Transit Curves

TCE 009450647-01 P= 9.940661 Days $T_0=135.215822$ (BKJD)



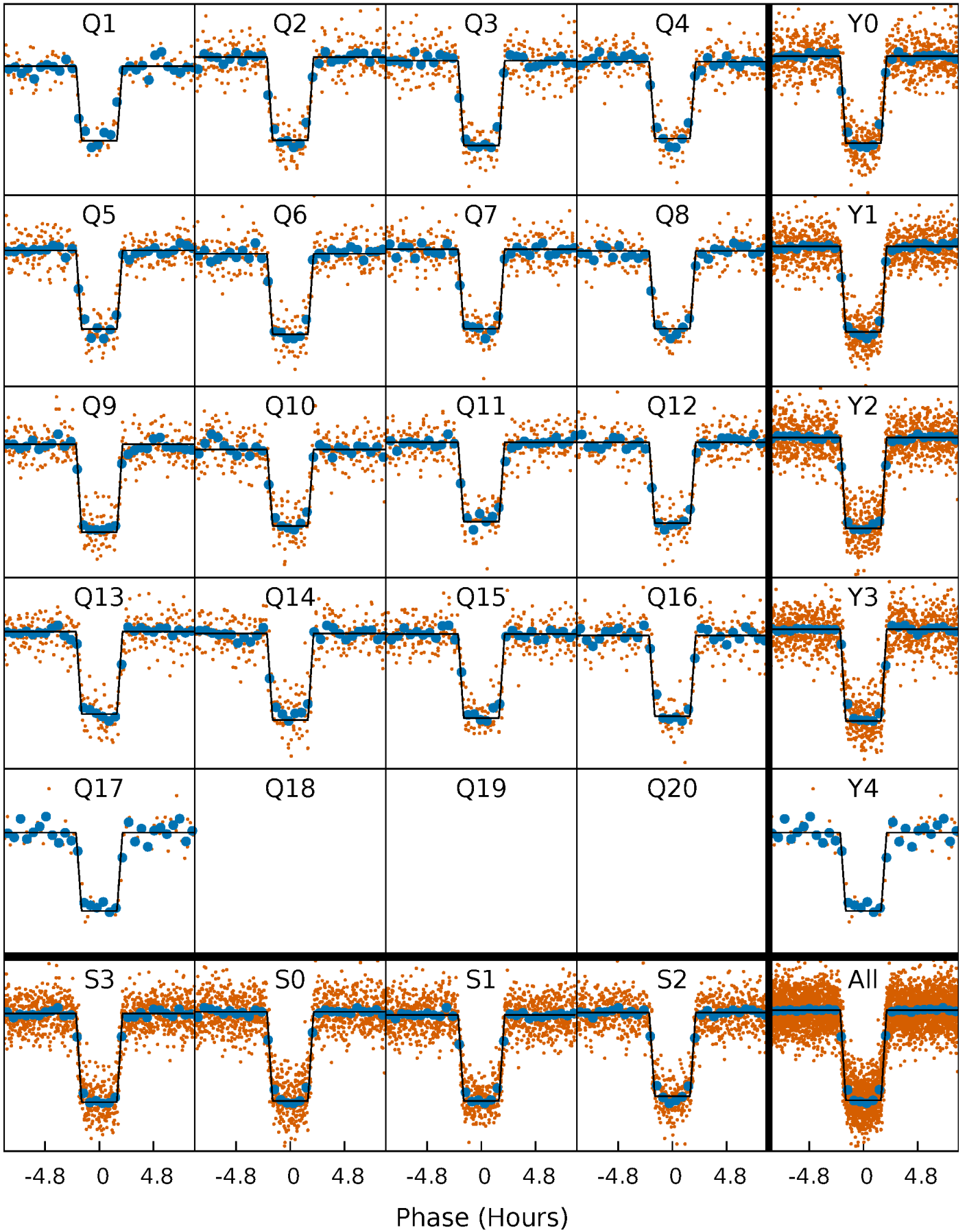
DV Quarter-Phased Transit Curves

TCE 009450647-01 P= 9.940661 Days $T_0=135.215822$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

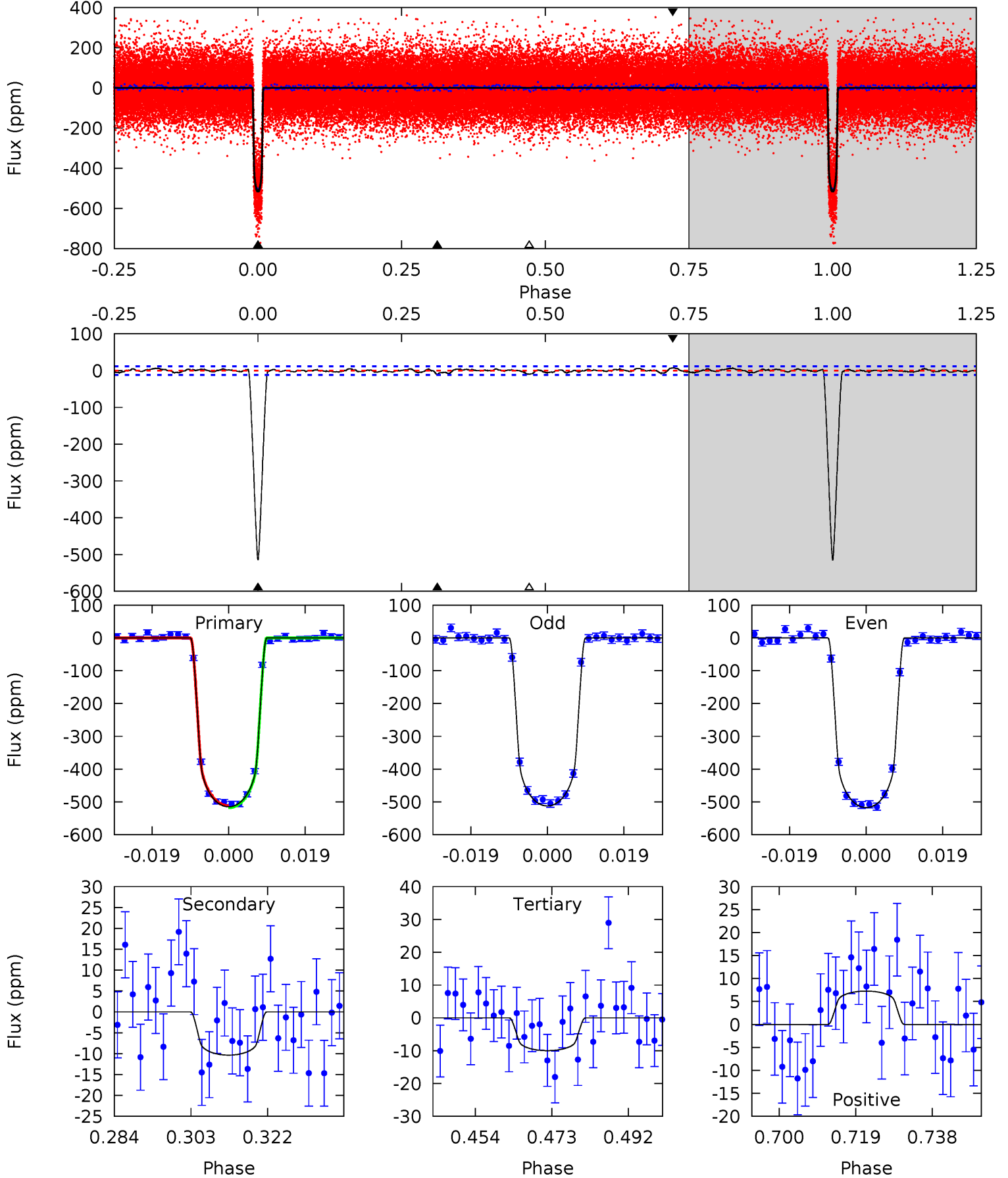
TCE 009450647-01 P= 9.940598 Days $T_0=135.220393$ (BKJD)



DV Model-Shift Uniqueness Test

009450647-01, P = 9.940661 Days, E = 125.275161 Days

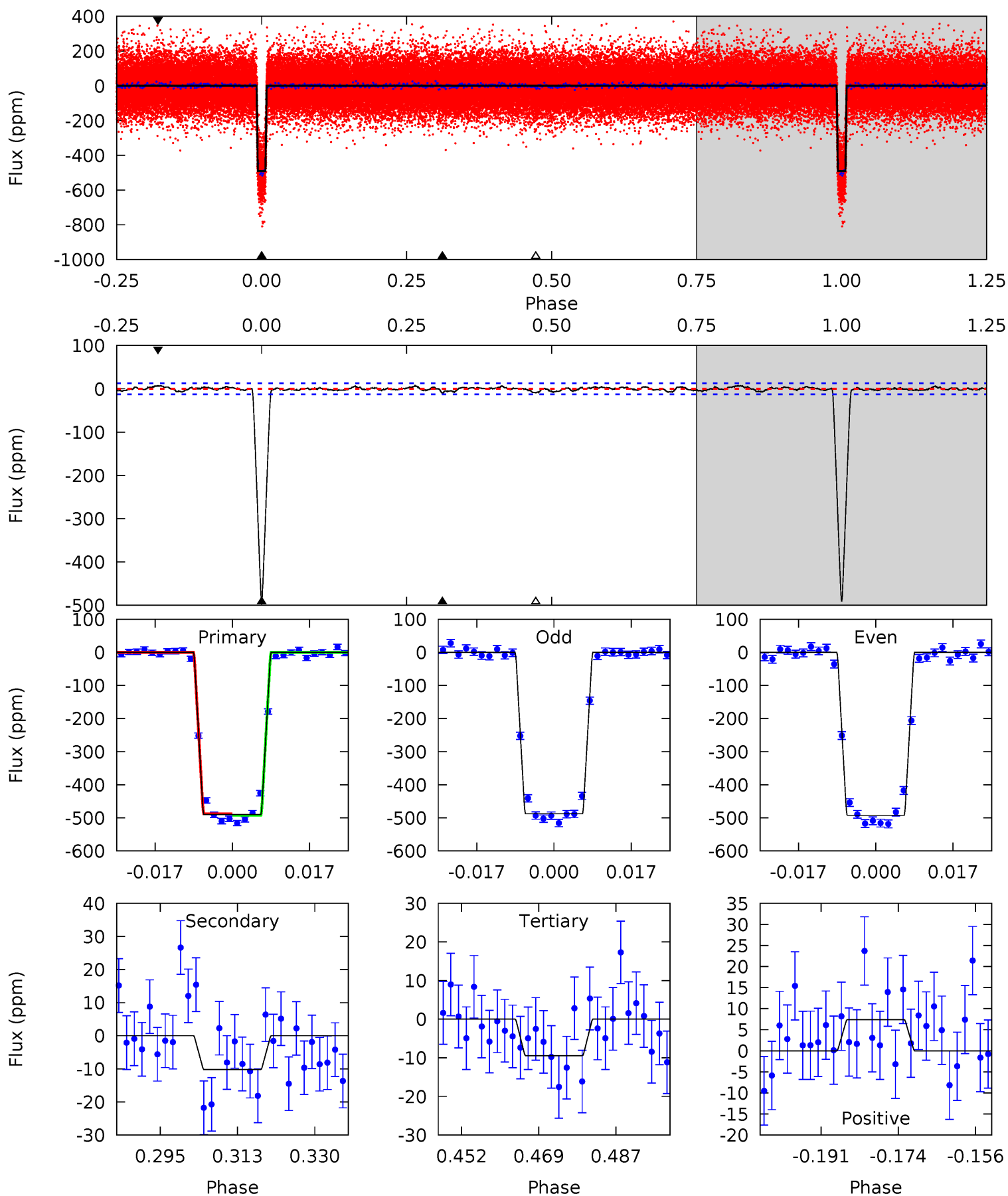
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
211.7	4.25	4.11	2.98	4.90	2.35	1.23	207.5	208.7	0.15	1.27	1.04	0.99	0.01	1.13



Alt Model-Shift Uniqueness Test

009450647-01, P = 9.940598 Days, E = 125.279795 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
190.4	3.95	3.66	2.87	4.92	2.38	1.20	186.7	187.5	0.29	1.08	0.88	1.00	0.01	0.98



Stellar Parameters For KIC 009450647

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6215^{+111}_{-136}	$4.305^{+0.080}_{-0.120}$	$0.080^{+0.150}_{-0.150}$	$1.259^{+0.219}_{-0.128}$	$1.170^{+0.093}_{-0.093}$	$0.825^{+0.287}_{-0.299}$
	+2%/-2%	+2%/-3%	+188%/-188%	+17%/-10%	+8%/-8%	+35%/-36%
Source	SPE59	SPE59	SPE59	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 009450647-01 / KOI 0110.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-10 ± 2	$3.20^{+0.33}_{-0.23}$	1394^{+61}_{-53}	2951^{+106}_{-115}	$4.938^{+1.297}_{-1.332}$
Alt.	-10 ± 3	$3.09^{+0.32}_{-0.23}$	1400^{+65}_{-51}	2991^{+114}_{-140}	$5.203^{+1.838}_{-1.517}$

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

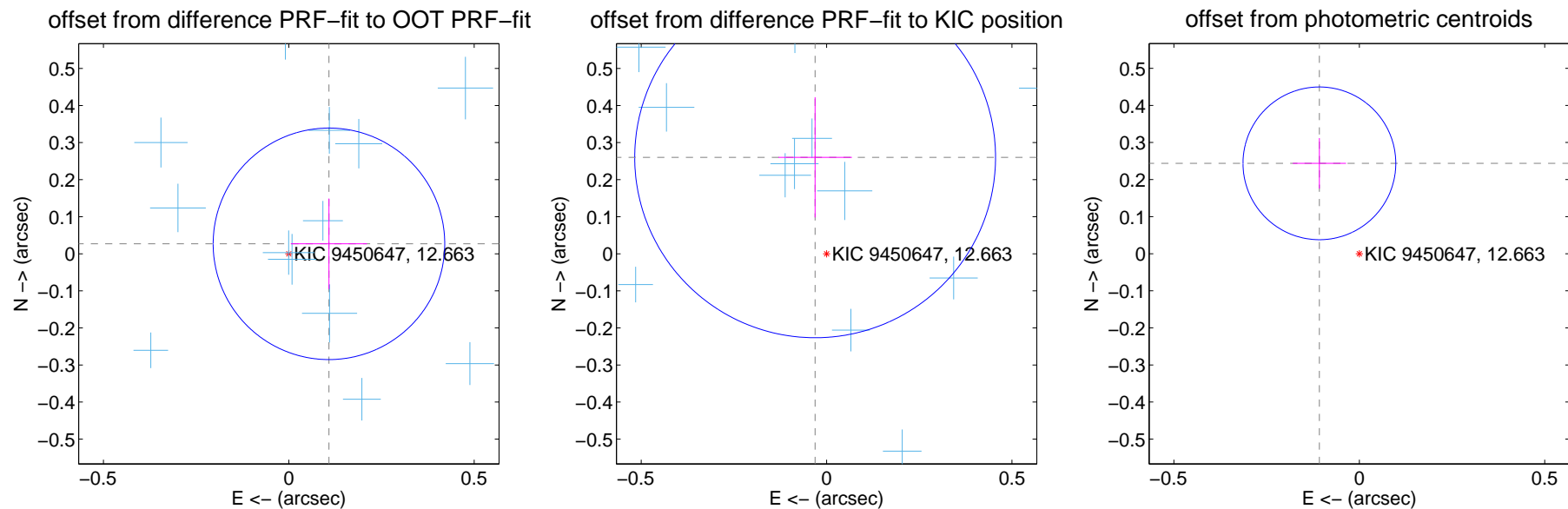
DV Centroid Data

Supplemental centroid analysis for 009450647-01. Kepler magnitude: 12.66. Transit SNR 146.03

There are 17 quarters with good PRF difference image offsets

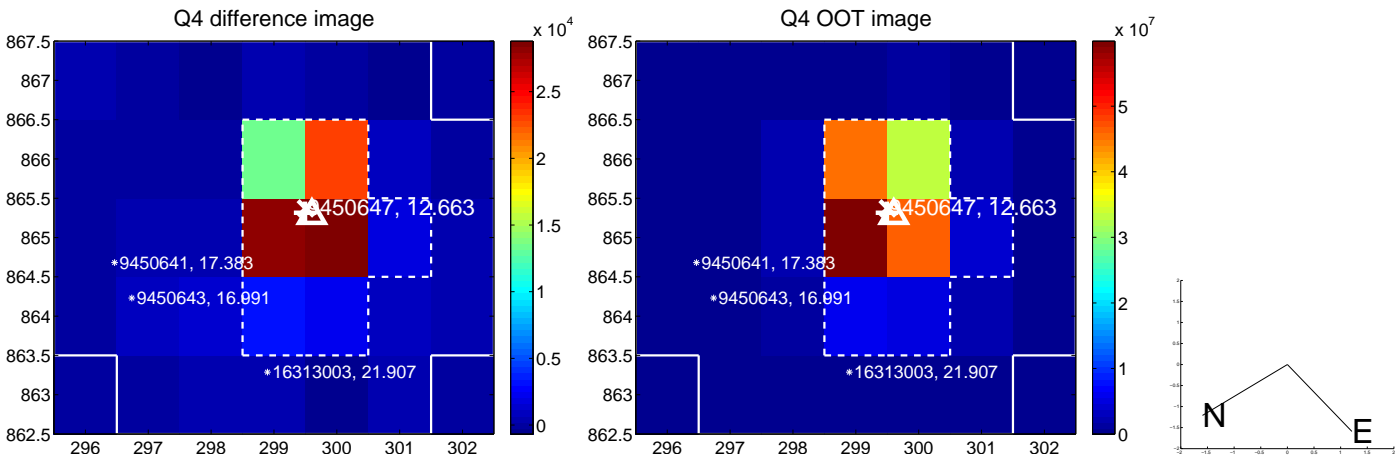
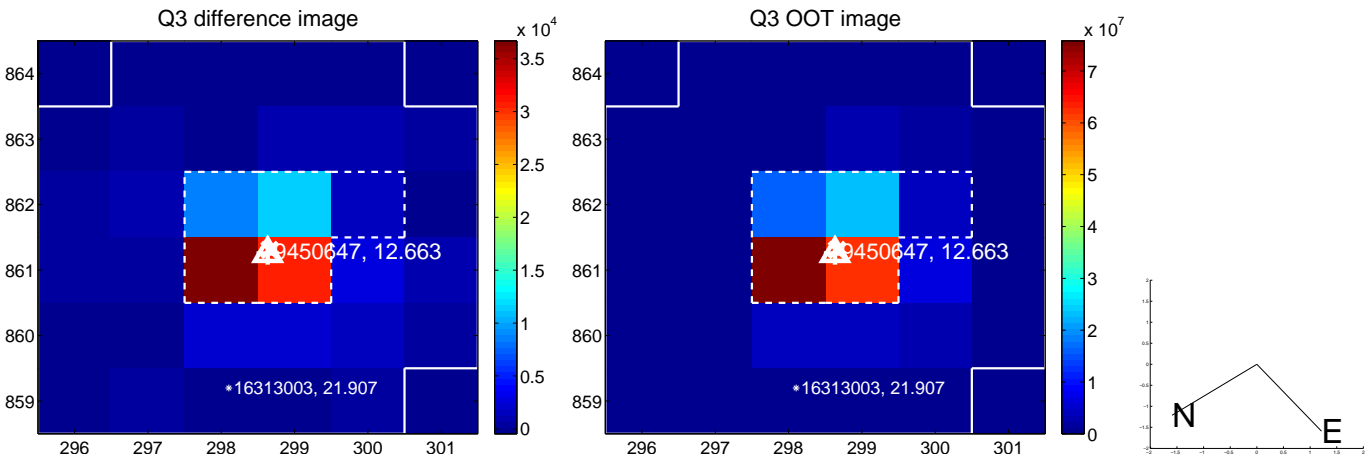
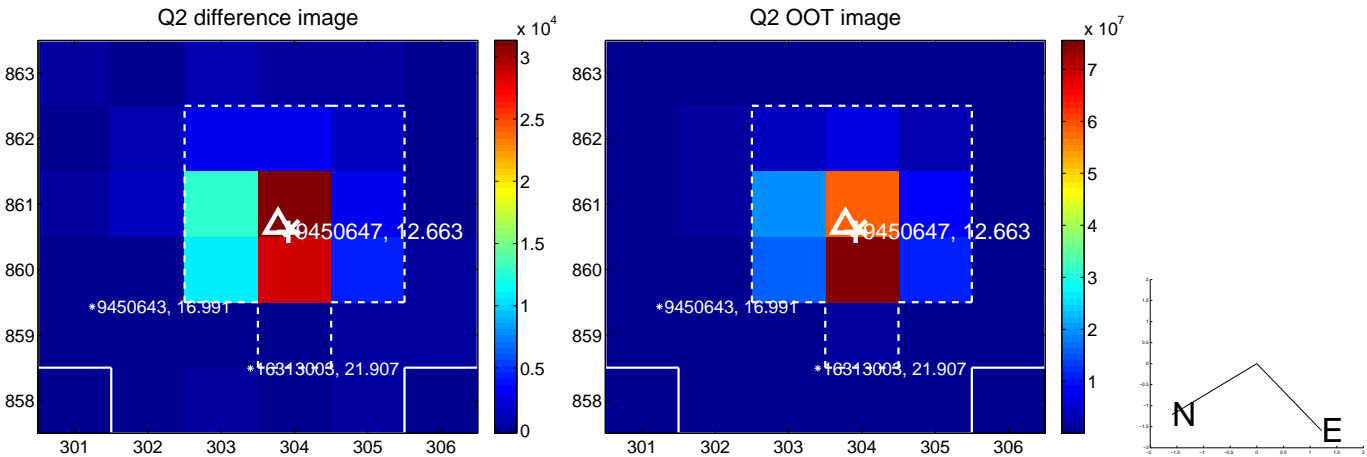
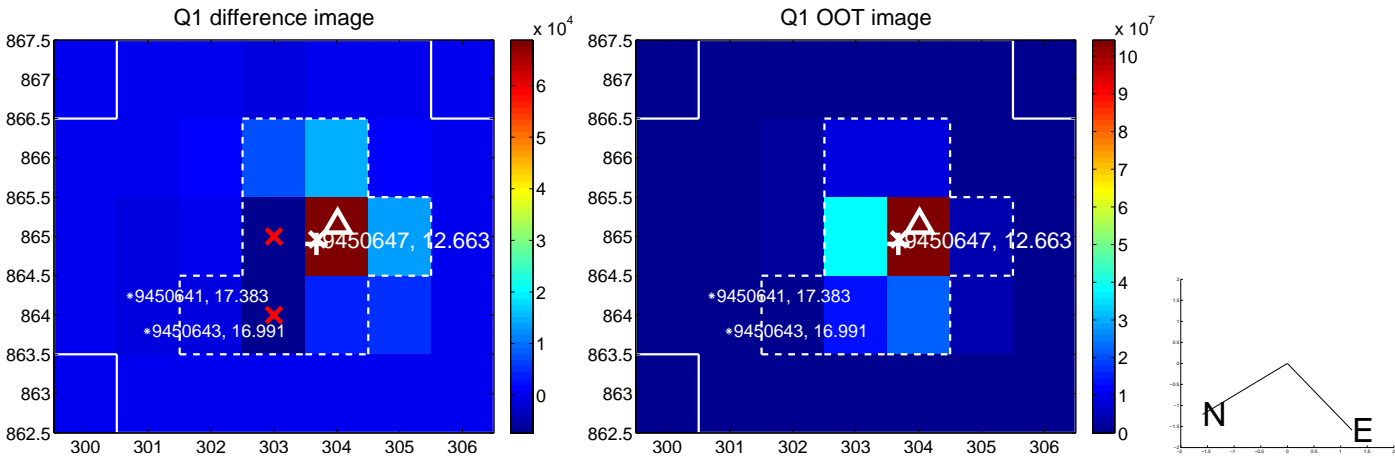
The direct PRF centroid is offset from the target star catalog position by about 0.33 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.112 ± 0.104	1.07	-0.108 ± 0.103	0.027 ± 0.122
PRF-fit source offset from KIC position	0.262 ± 0.162	1.62	0.031 ± 0.099	0.260 ± 0.162
photometric centroid source offset	0.27 ± 0.07	3.88	0.11 ± 0.07	0.24 ± 0.07

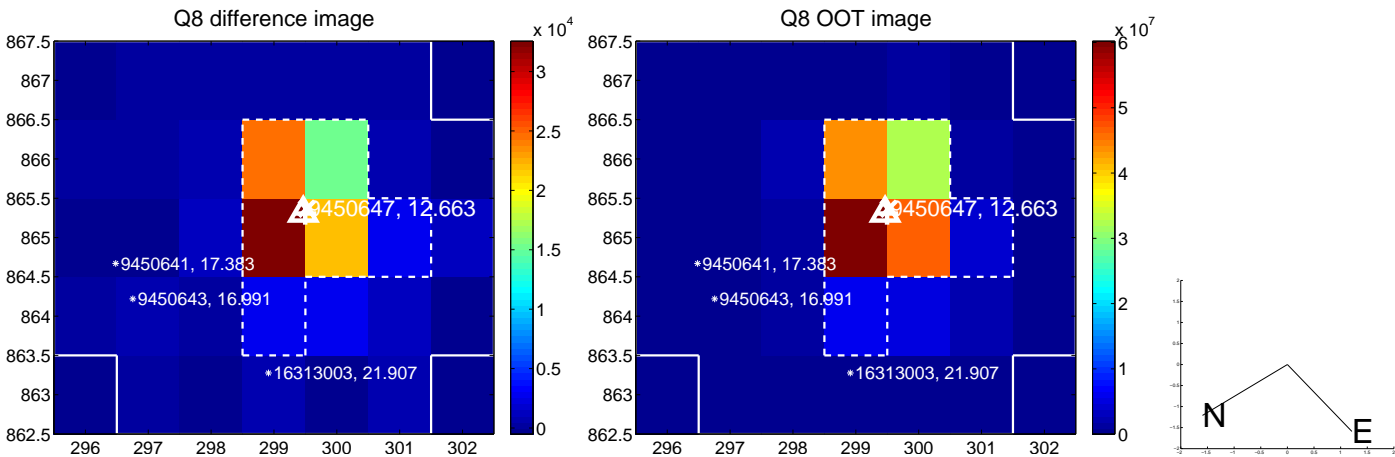
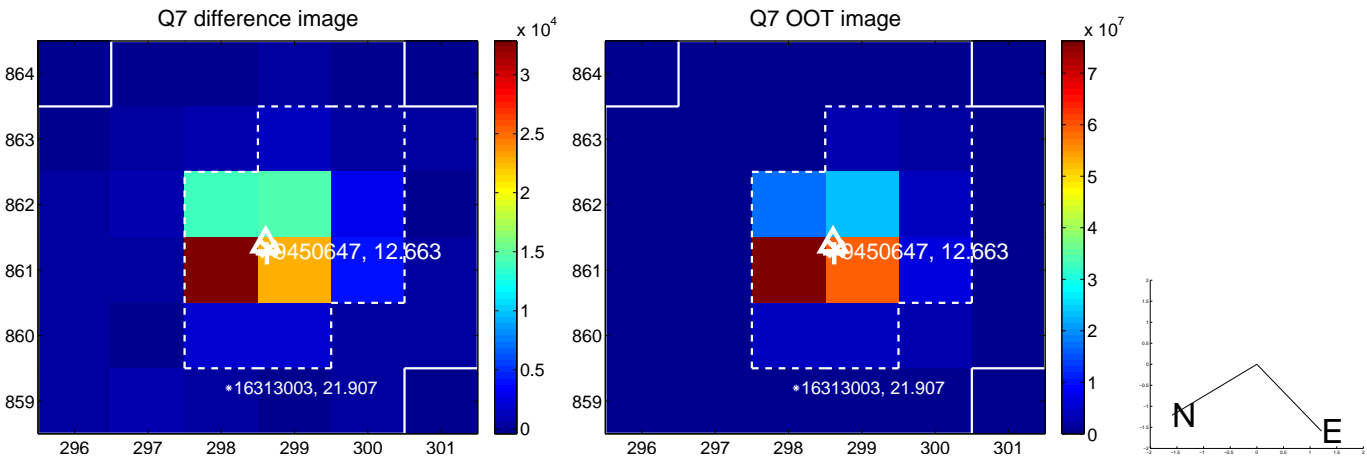
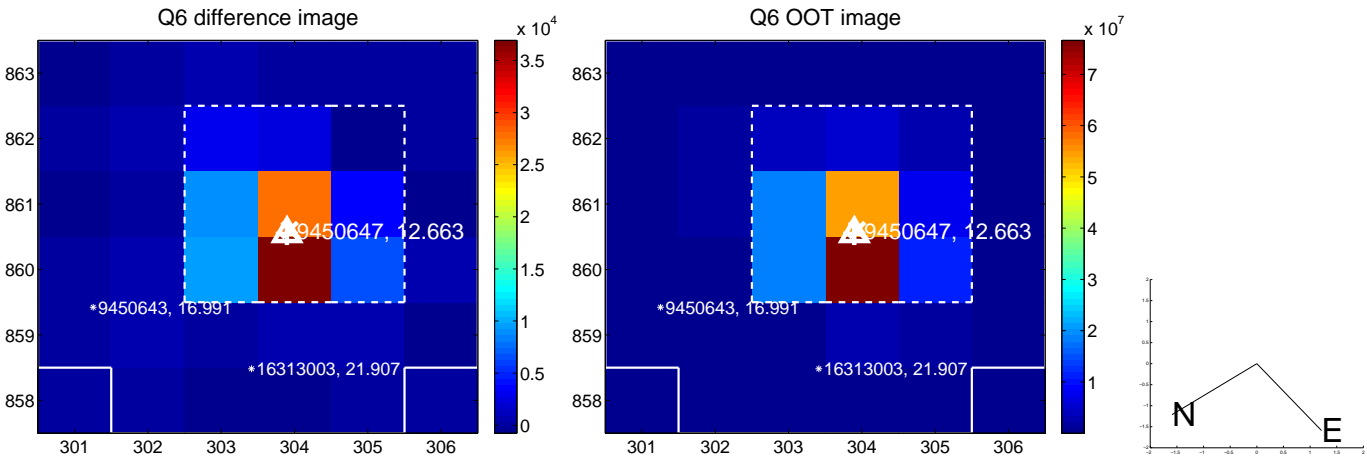
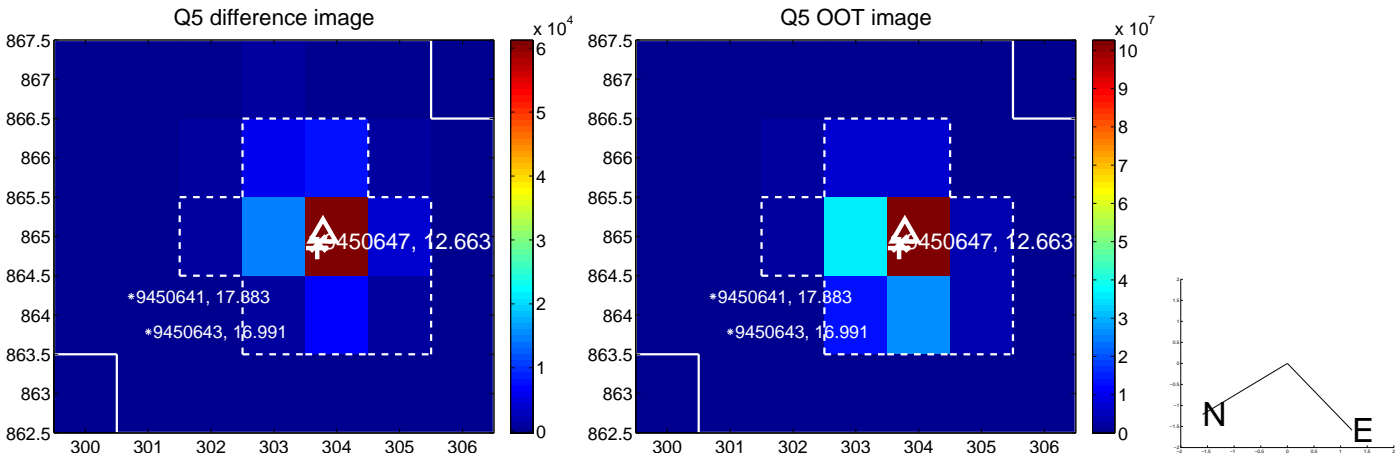


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

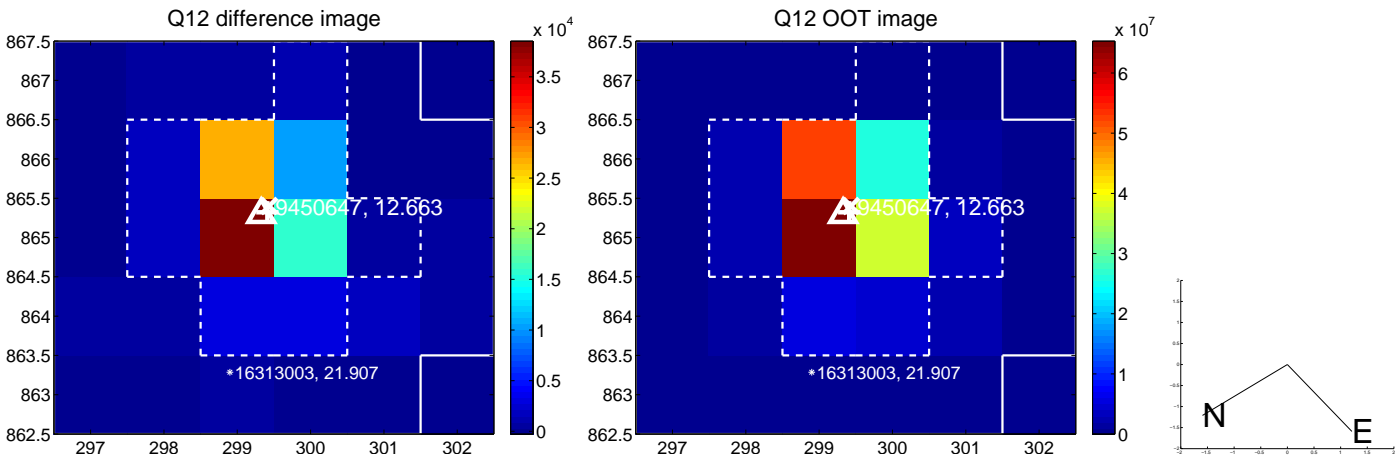
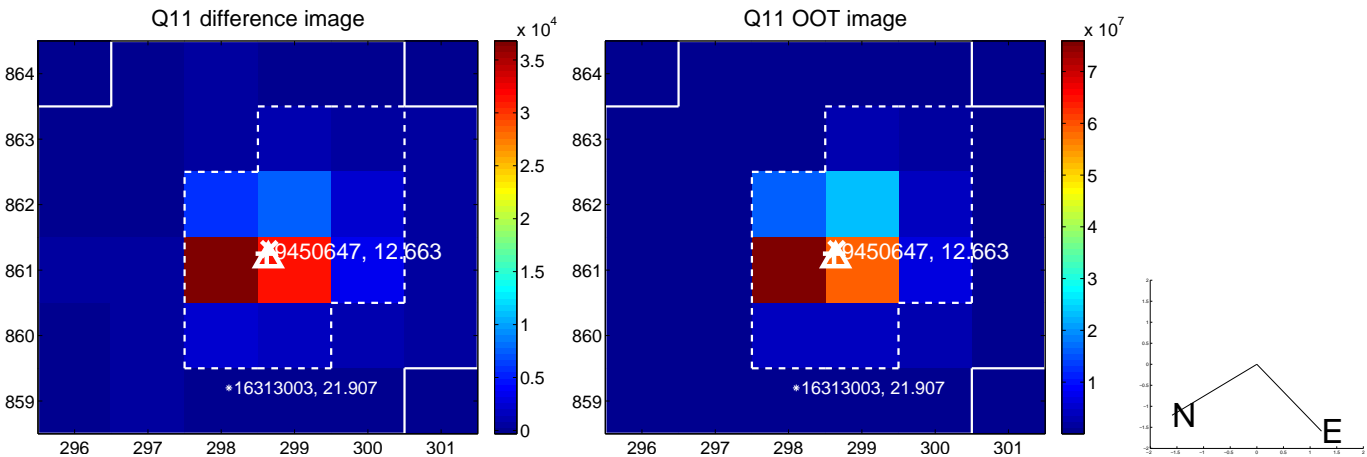
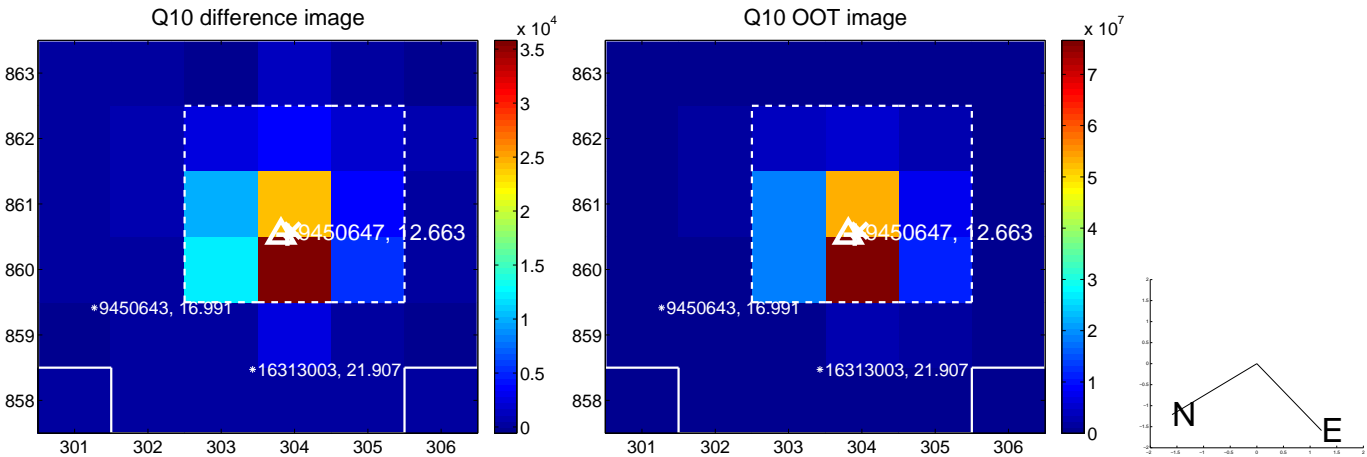
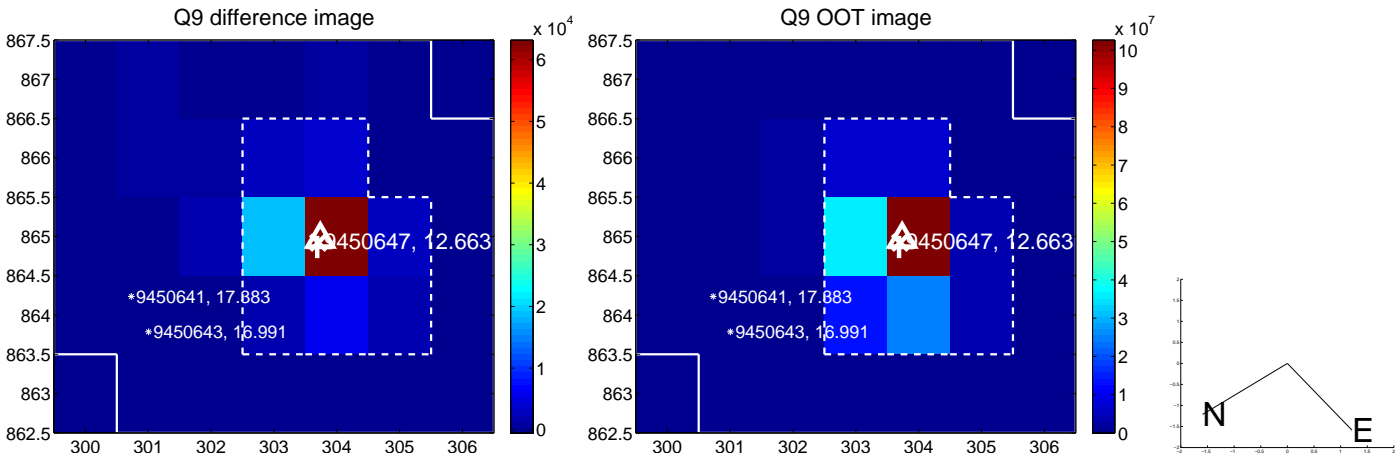
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



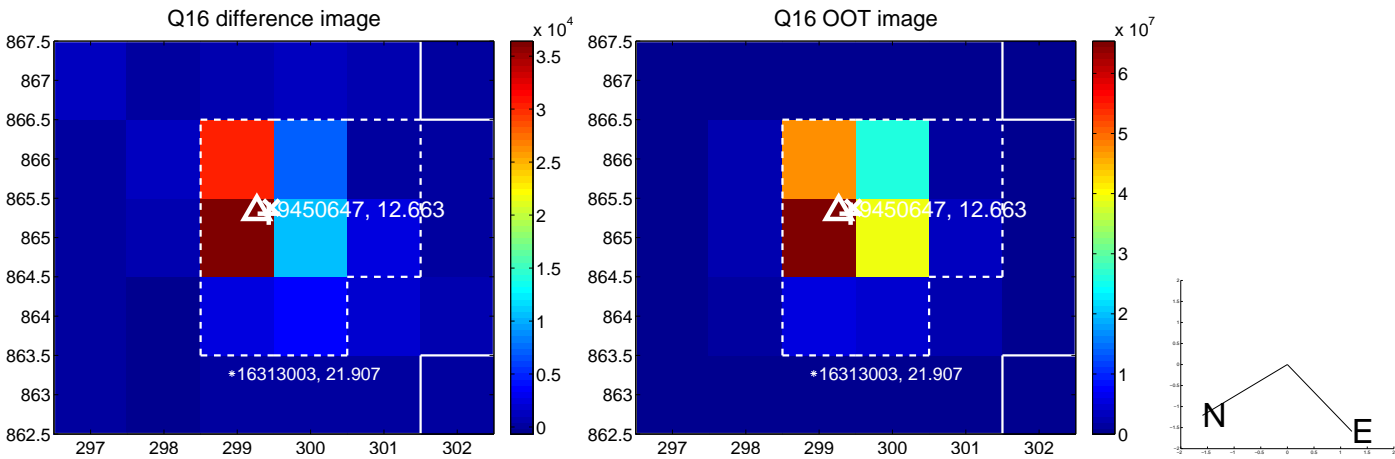
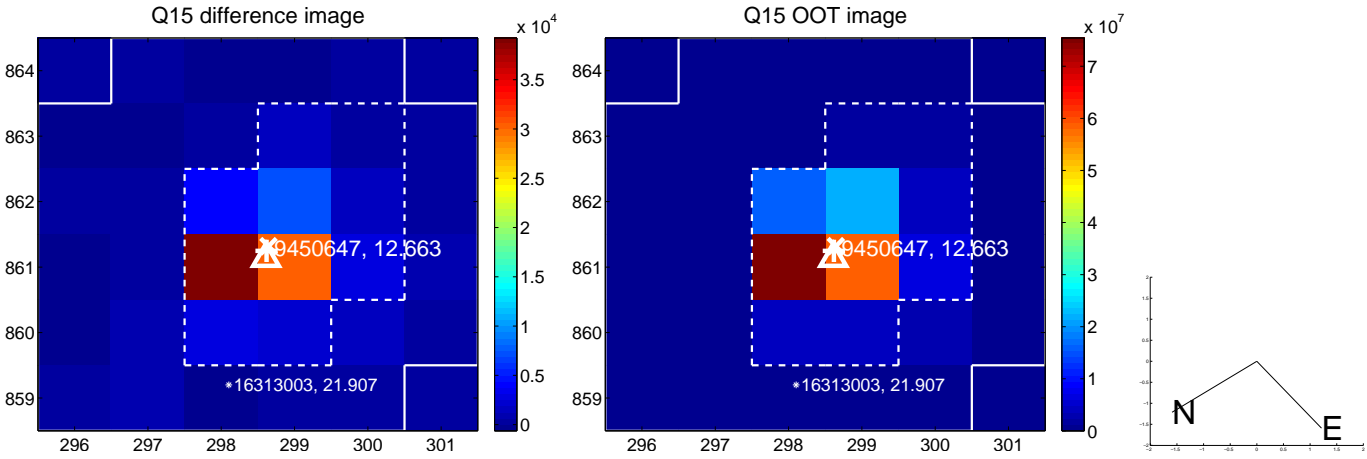
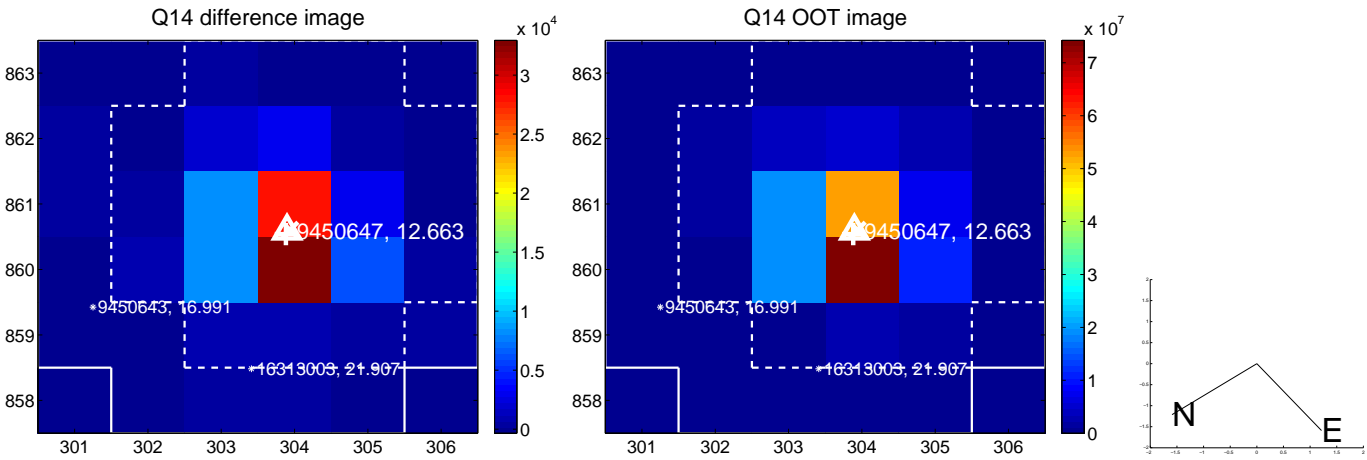
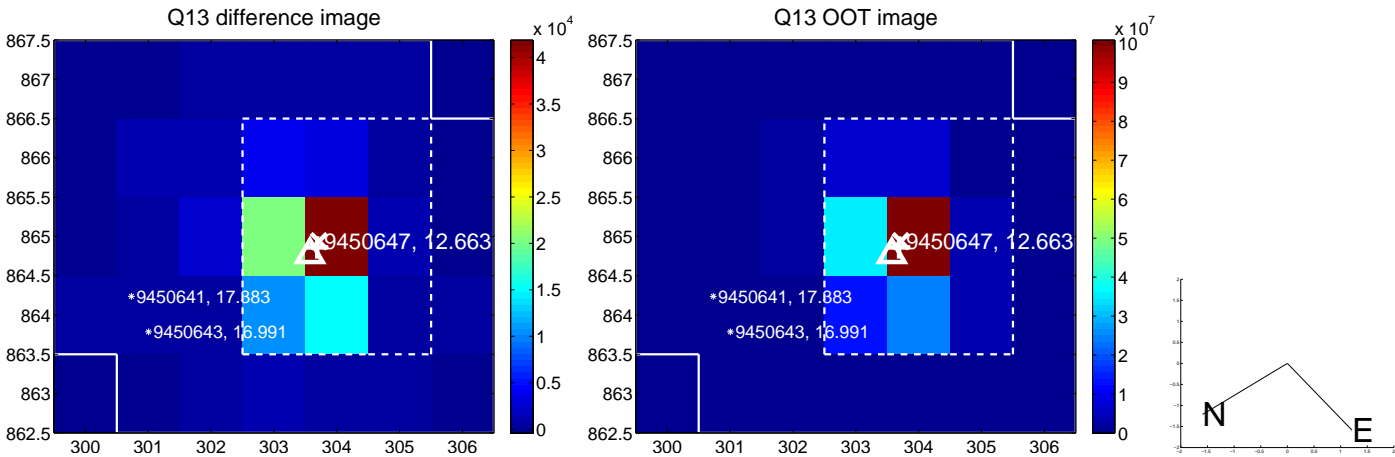
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



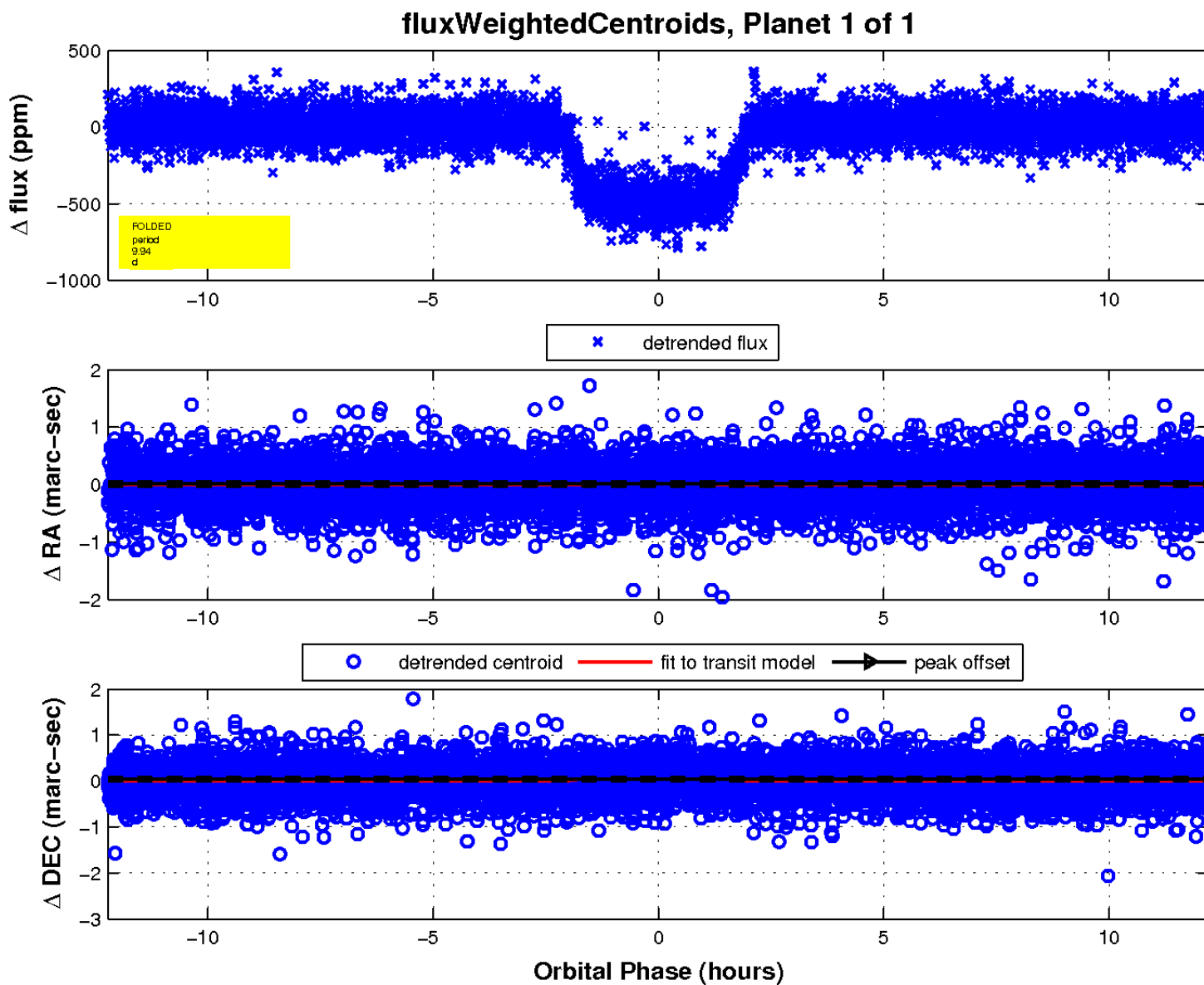
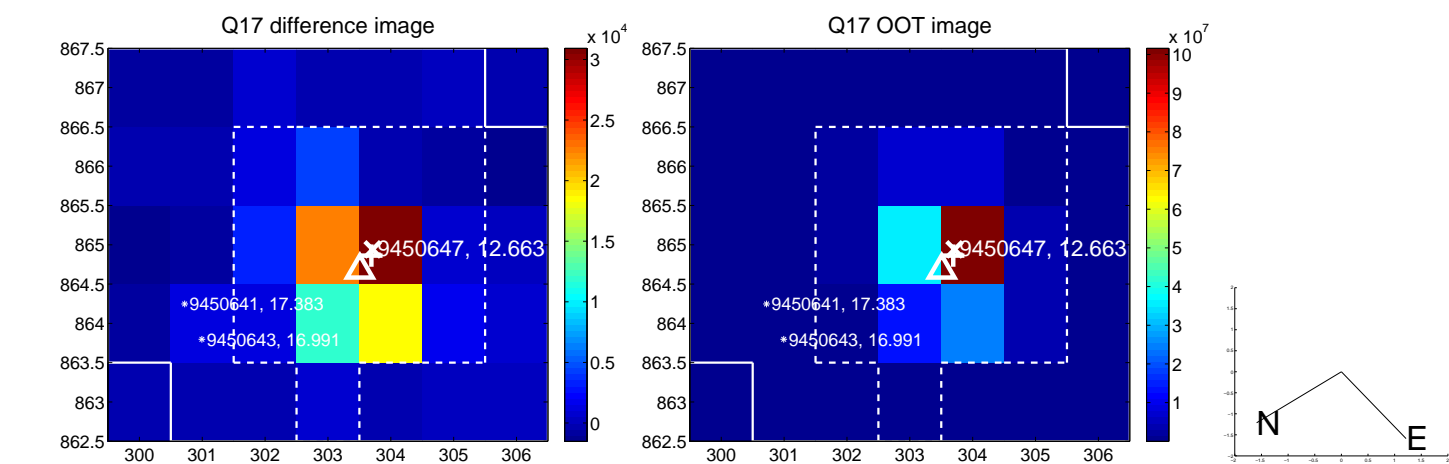
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UKIRT Image

Declination

