

KIC 003547315

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})
003547315-01	OBS	3736.01	0.642346	131.914957	37930.6	2.053	857.9	482.6	0.79	5441	21.53	2650.74

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003547315-01	OBS	FP	0.00	0	1	0	0	MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—DEEP_V_SHAPED—CENT_KIC_POS

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.

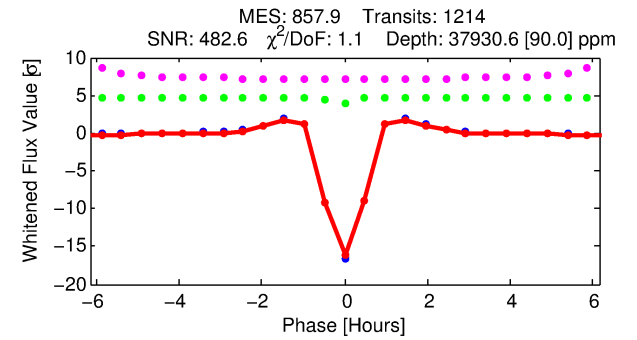
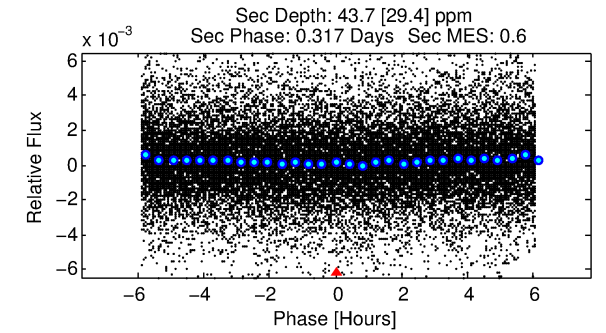
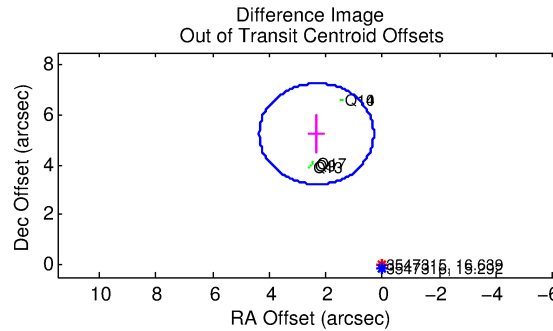
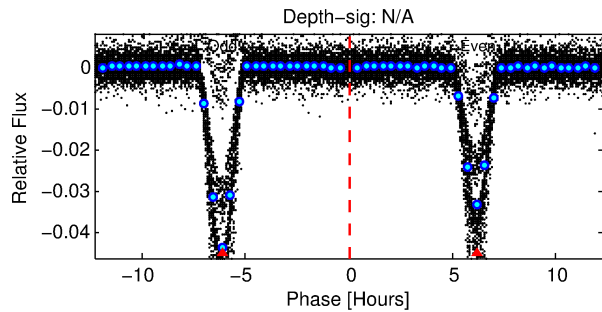
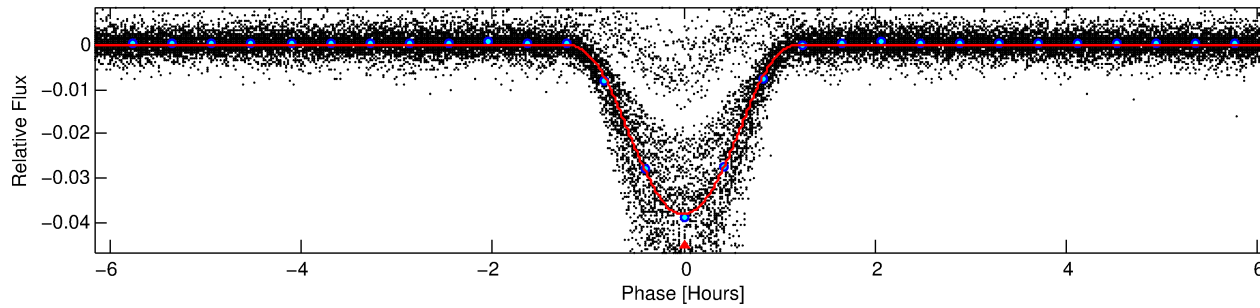
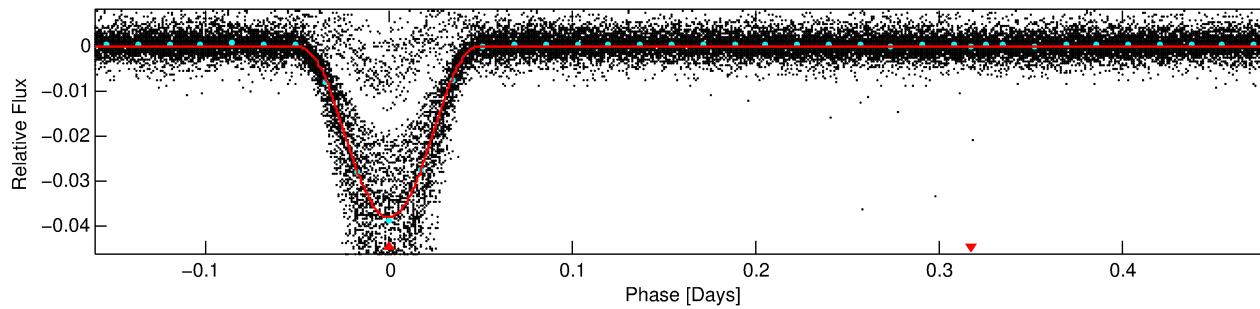
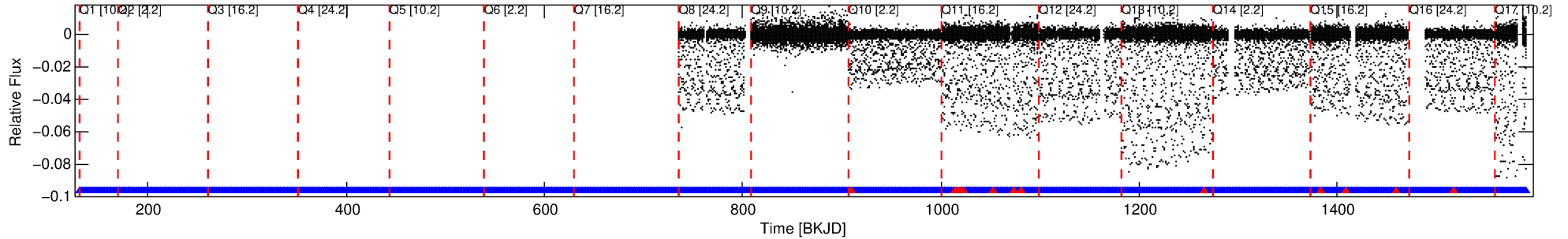
Ephemeris Match Information For 003547315-01

No Significant Match Found

DV One-Page Summary

KIC: 3547315 Candidate: 1 of 1 Period: 0.642 d
KOI: K03736.01 Corr: 0.979

Kp: 16.64 R*: 0.79 Rs Teff: 5441.0 K Logg: 4.55 Fe/H: -0.260



DV Fit Results:

Period = 0.64235 [0.00000] d
Epoch = 131.9150 [0.0000] BKJD
Rp/R* = 0.2494 [0.0123]
a/R* = 2.32 [0.01]
b = 0.90 [0.02]
Seff = 2650.74 [702.24]
Teff = 1830 [121] K
Rp = 21.53 [4.40] Re
a = 0.0136 [0.0022] AU
Ag = 0.01 [0.01] [-143.99σ]
Teffp = 886 [153] K [-4.83σ]

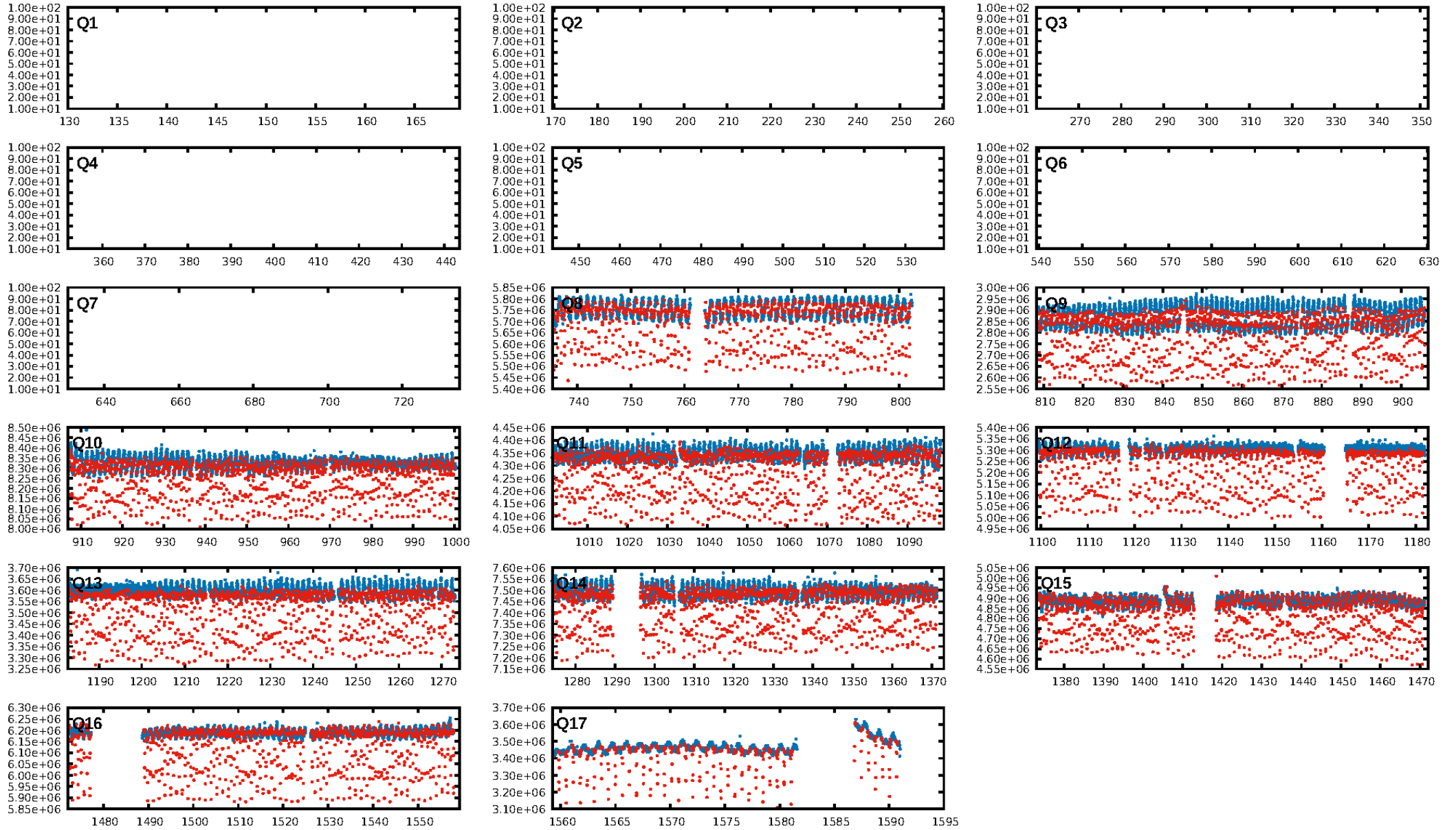
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fig: 0.99 [1158/1172]
GhostDiagnostic-chr: 2.73
Centroid-sig: 0.0%
Centroid-so: 3.921 arcsec [1563.86σ]
OotOffset-rm: 5.731 arcsec [8.50σ]
KicOffset-rm: 0.067 arcsec [0.88σ]
OotOffset-st: 2/0/0/3 [5]
KicOffset-st: 2/2/3/3 [10]
DiffImageQuality-fgm: 1.00 [10/10]
DiffImageOverlap-fno: 1.00 [10/10]

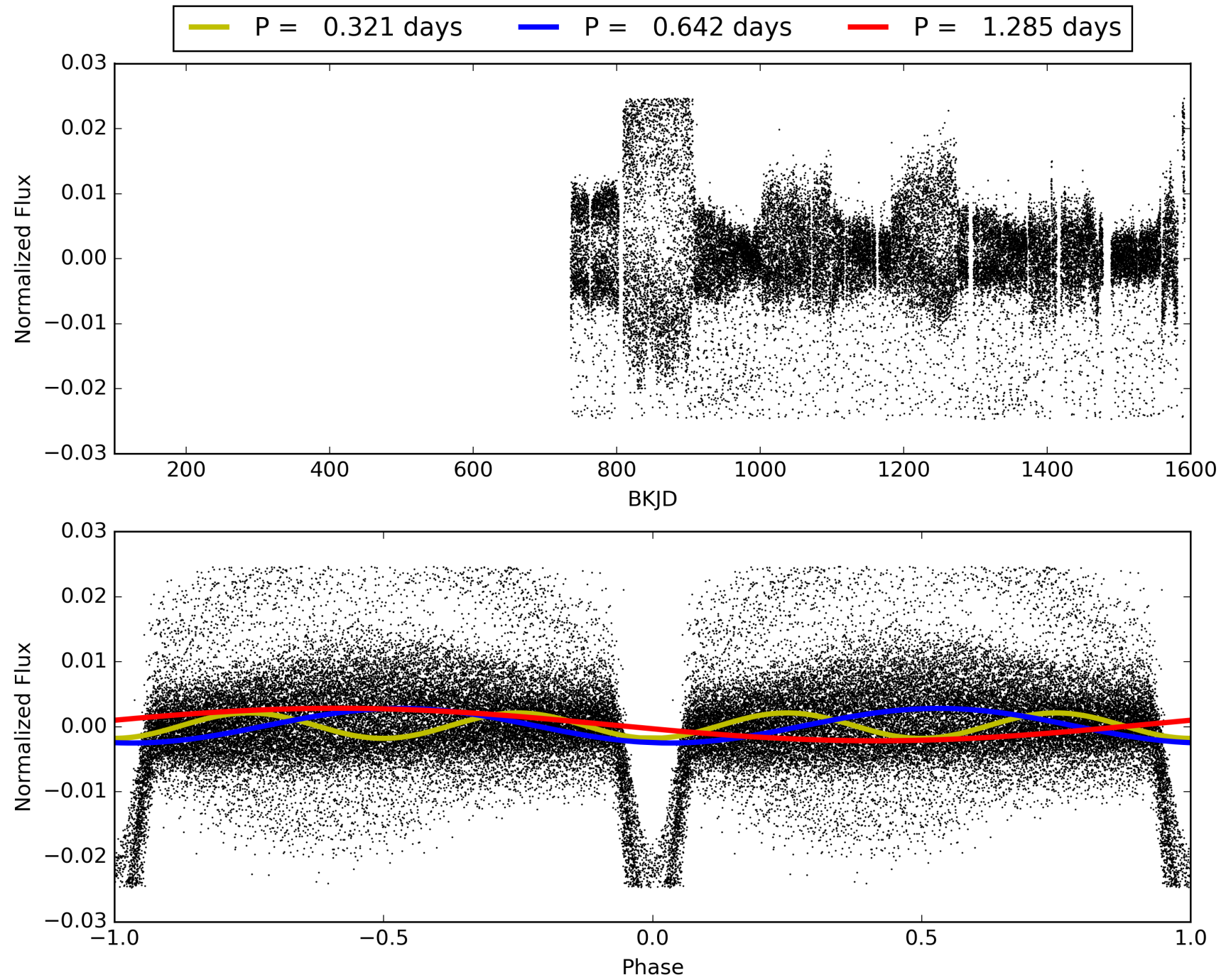
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 06:54:06 Z

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

TCE 003547315-01, PDC Light Curves

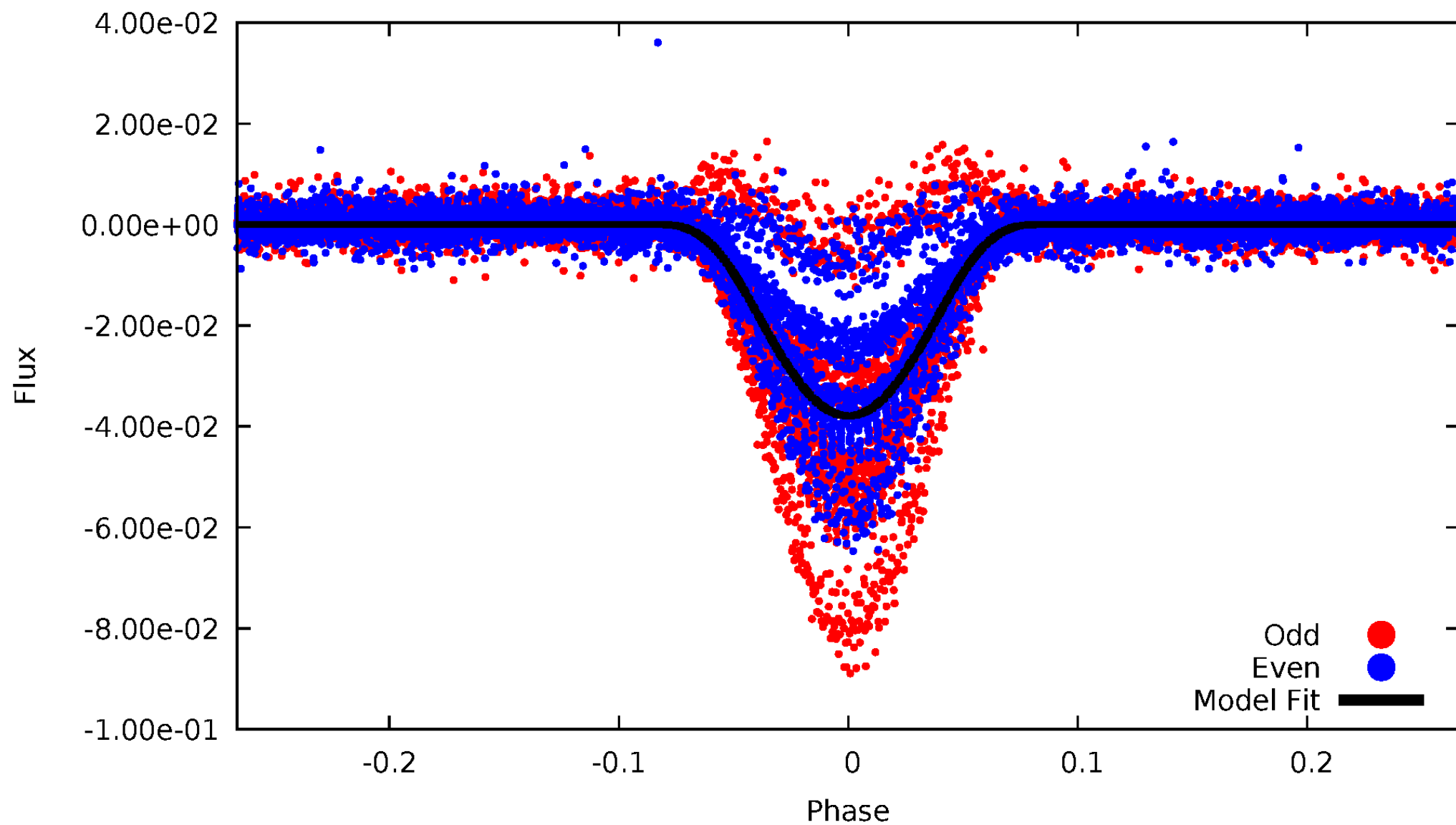


TCE 003547315-01



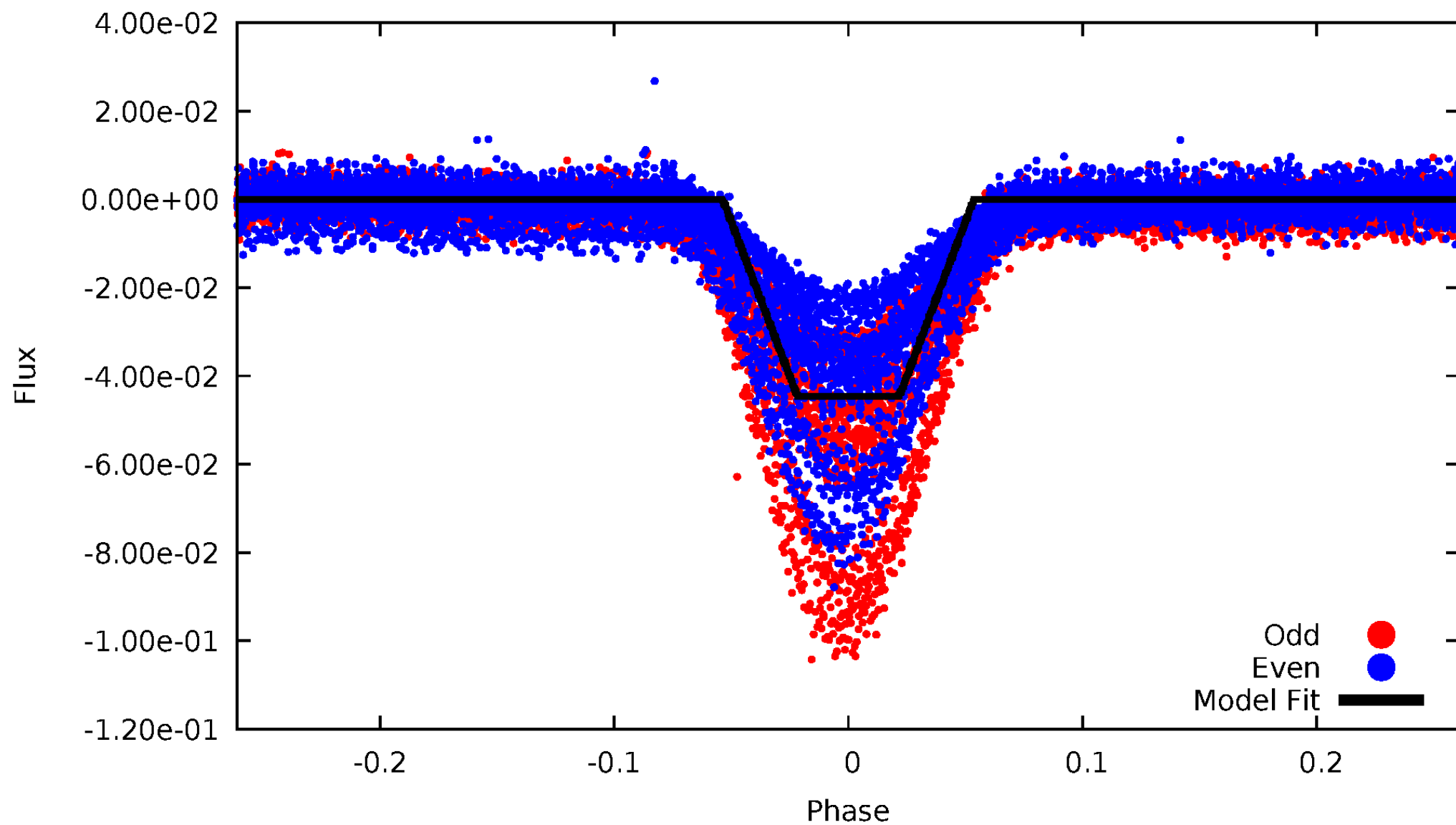
DV Odd/Even

TCE 003547315-01



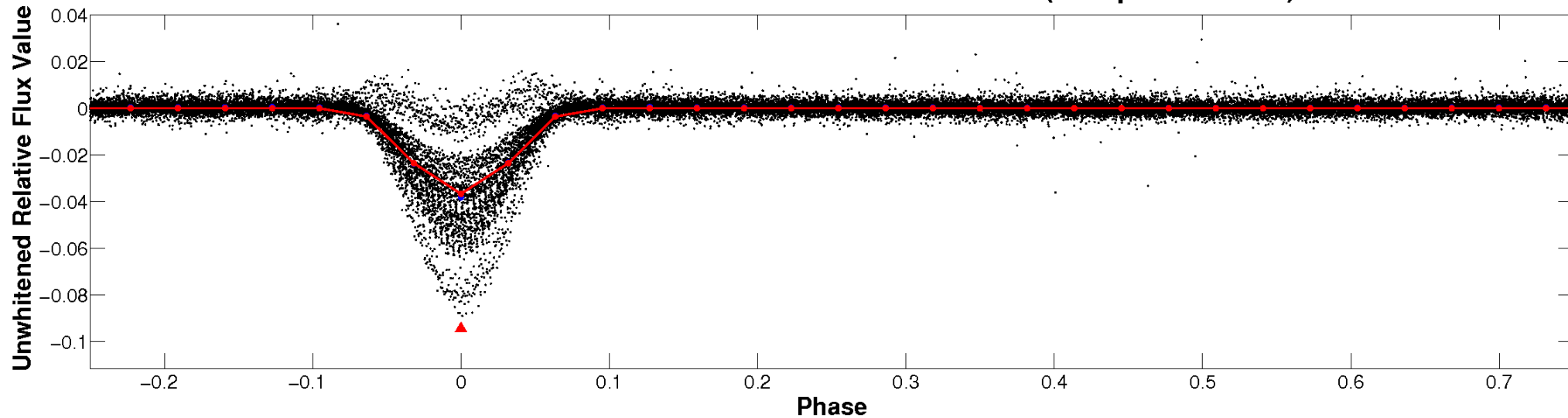
ALT Odd/Even

TCE 003547315-01

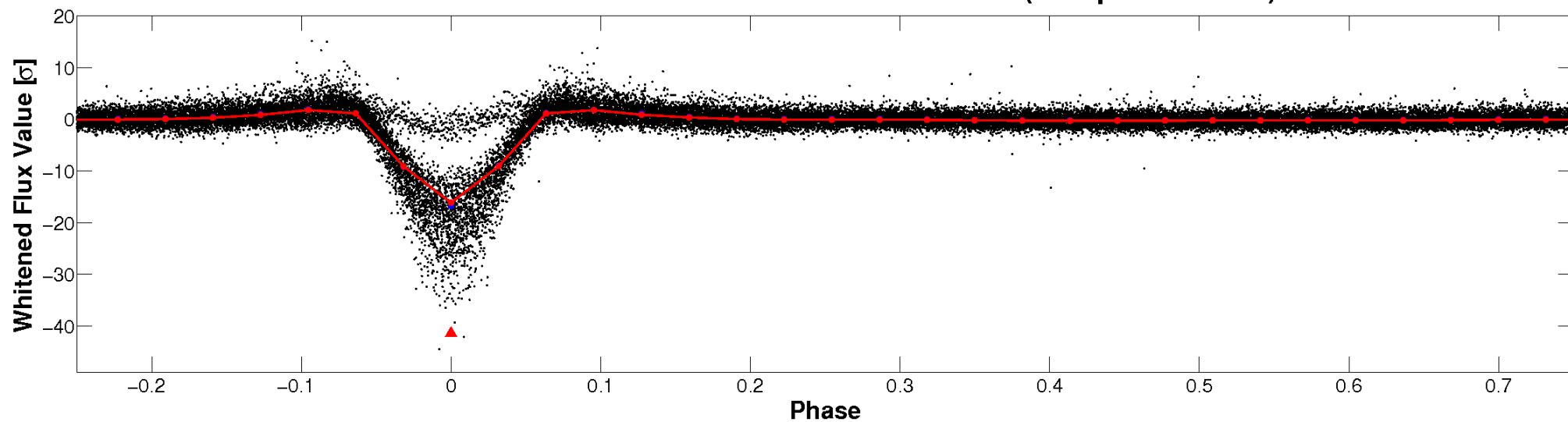


Non-Whitened Vs. Whitened Light Curve

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

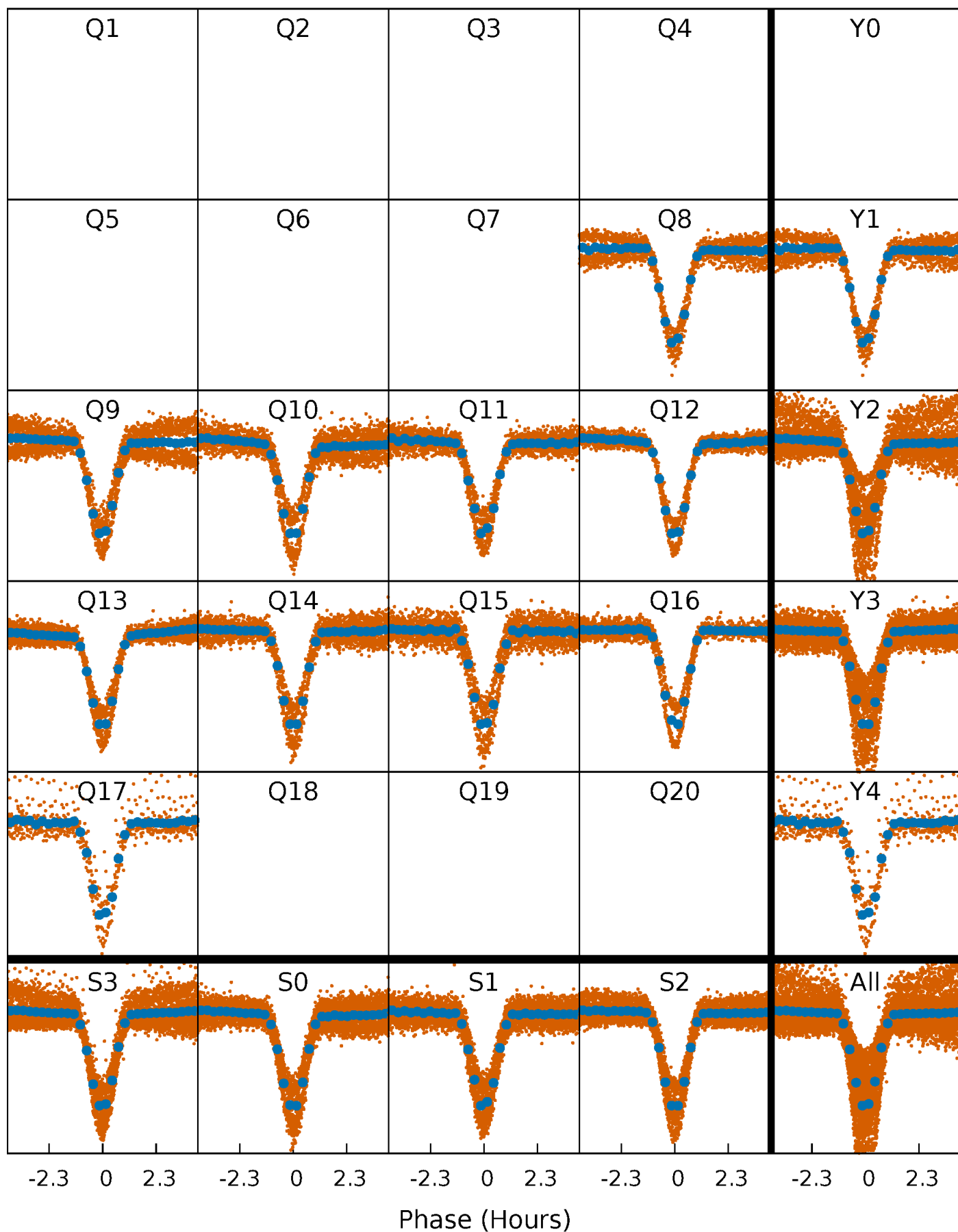


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



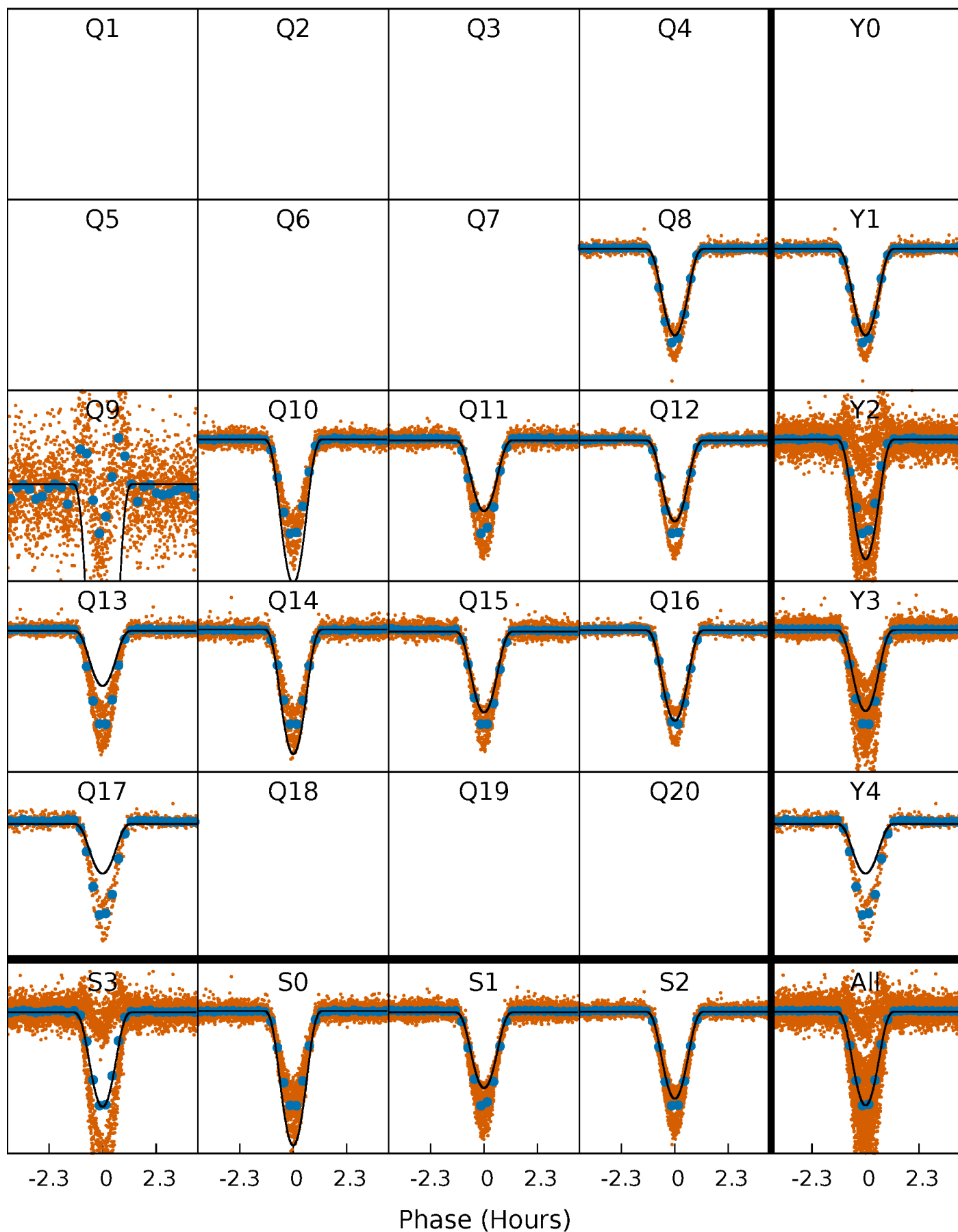
PDC Quarter-Phased Transit Curves

TCE 003547315-01 P= 0.642346 Days $T_0=131.914957$ (BKJD)



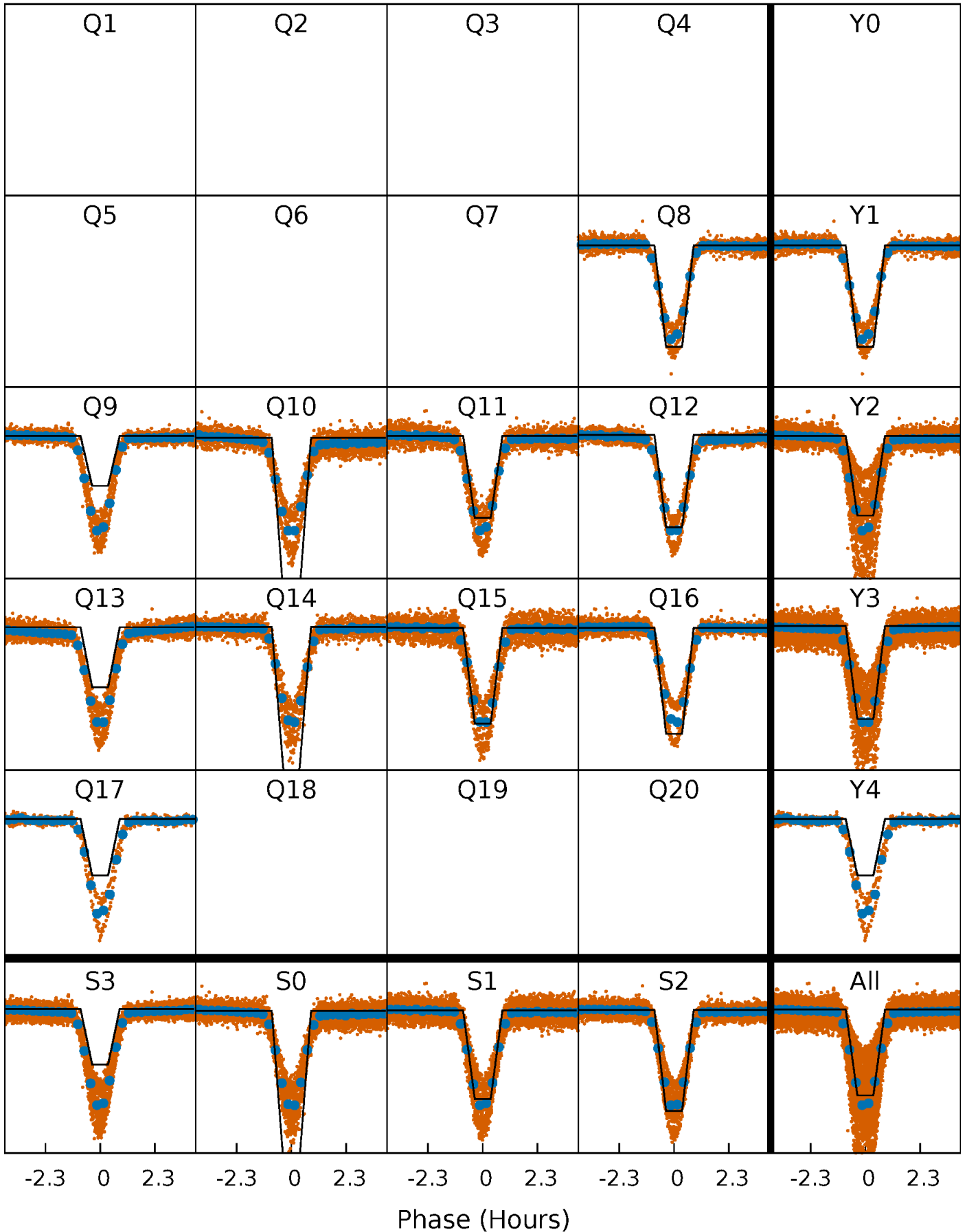
DV Quarter-Phased Transit Curves

TCE 003547315-01 P= 0.642346 Days $T_0=131.914957$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

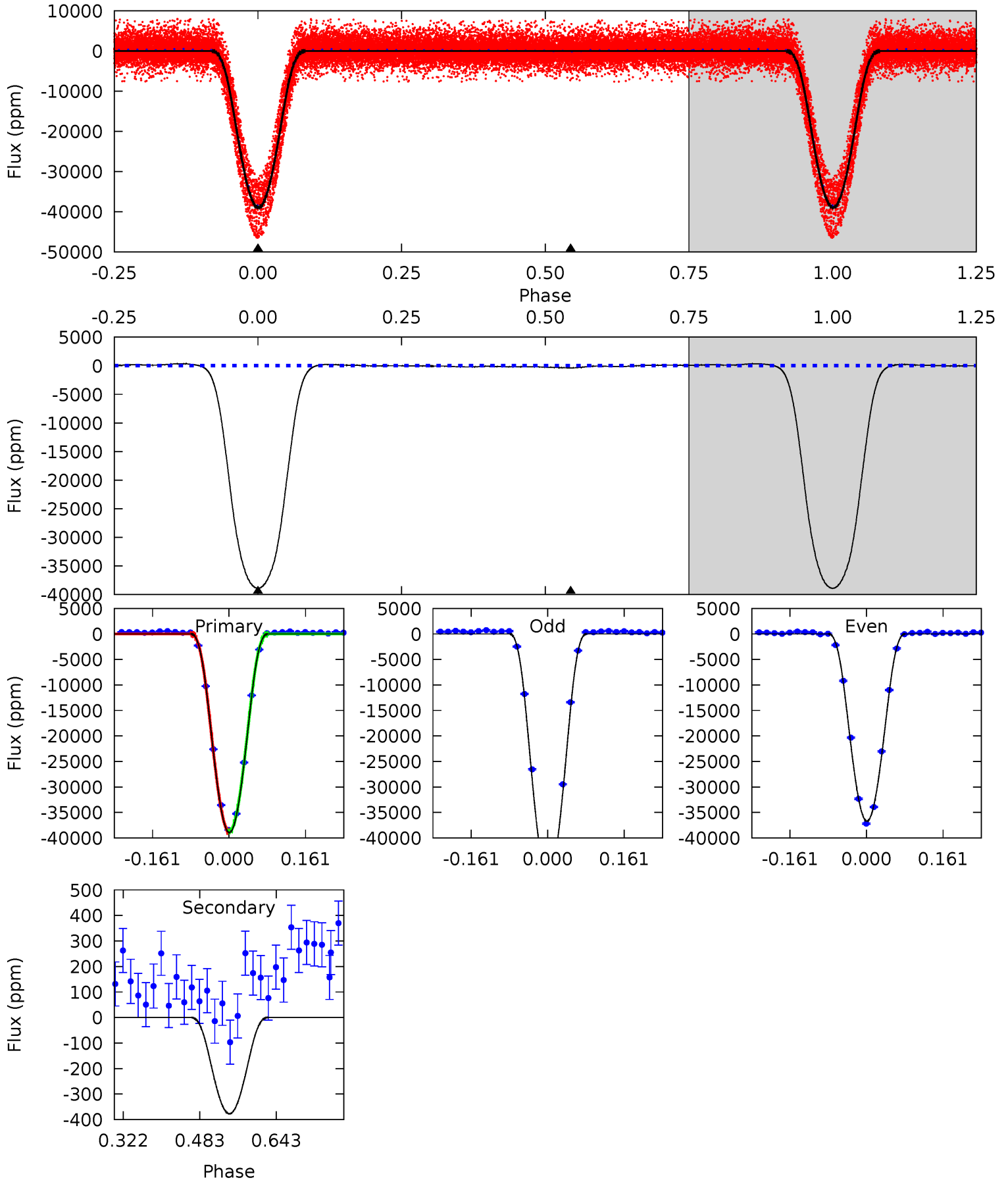
TCE 003547315-01 P= 0.642346 Days $T_0=131.915453$ (BKJD)



DV Model-Shift Uniqueness Test

003547315-01, P = 0.642346 Days, E = 131.914957 Days

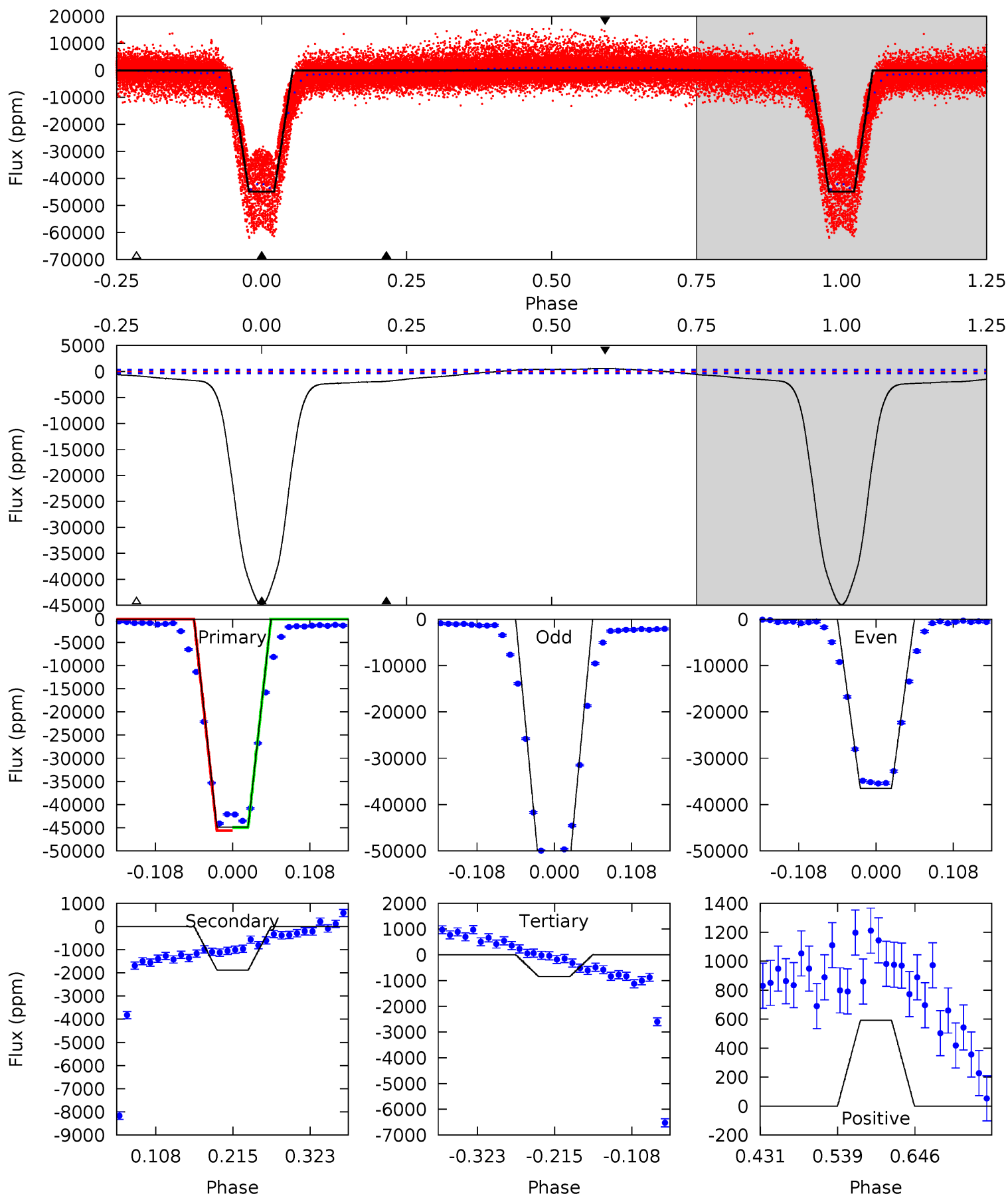
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1226	11.9	0	0	4.46	1.40	3.29	1226	1226	11.9	11.9	178.0	1.00	0.01	0



Alt Model-Shift Uniqueness Test

003547315-01, P = 0.642346 Days, E = 131.915453 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
660.8	27.7	12.4	8.71	4.55	1.61	10.1	648.3	652.0	15.3	19.0	118.5	1.10	0.01	0



Stellar Parameters For KIC 003547315

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5441^{+189}_{-189}	$4.553^{+0.059}_{-0.119}$	$-0.260^{+0.300}_{-0.300}$	$0.791^{+0.157}_{-0.085}$	$0.814^{+0.098}_{-0.080}$	$2.320^{+0.612}_{-0.819}$
	+3%/-3%	+1%/-3%	+115%/-115%	+20%/-11%	+12%/-10%	+26%/-35%
Source	KIC0	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 003547315-01 / KOI 3736.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-377 ± 32	$21.80^{+2.58}_{-1.83}$	2583^{+139}_{-112}	-2718^{+78}_{-99}	$0.080^{+0.015}_{-0.016}$
Alt.	-1883 ± 68	$18.56^{+1.96}_{-1.76}$	2590^{+131}_{-127}	2770^{+134}_{-134}	$0.559^{+0.105}_{-0.095}$

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

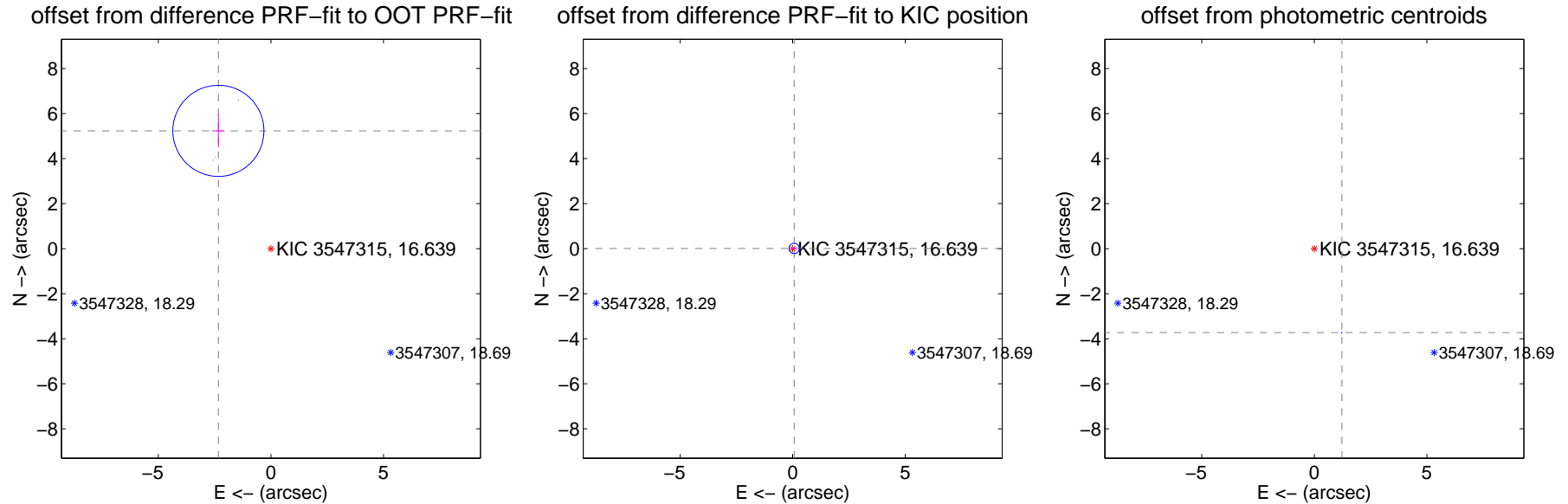
DV Centroid Data

Supplemental centroid analysis for 003547315-01. Kepler magnitude: 16.64. Transit SNR 482.56

There are 10 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 4.69 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.731 ± 0.674	8.50	2.333 ± 0.277	5.234 ± 0.728
PRF-fit source offset from KIC position	0.067 ± 0.076	0.88	-0.066 ± 0.076	0.011 ± 0.068
photometric centroid source offset	3.92 ± 0.00	1563.87	-1.23 ± 0.00	-3.72 ± 0.00

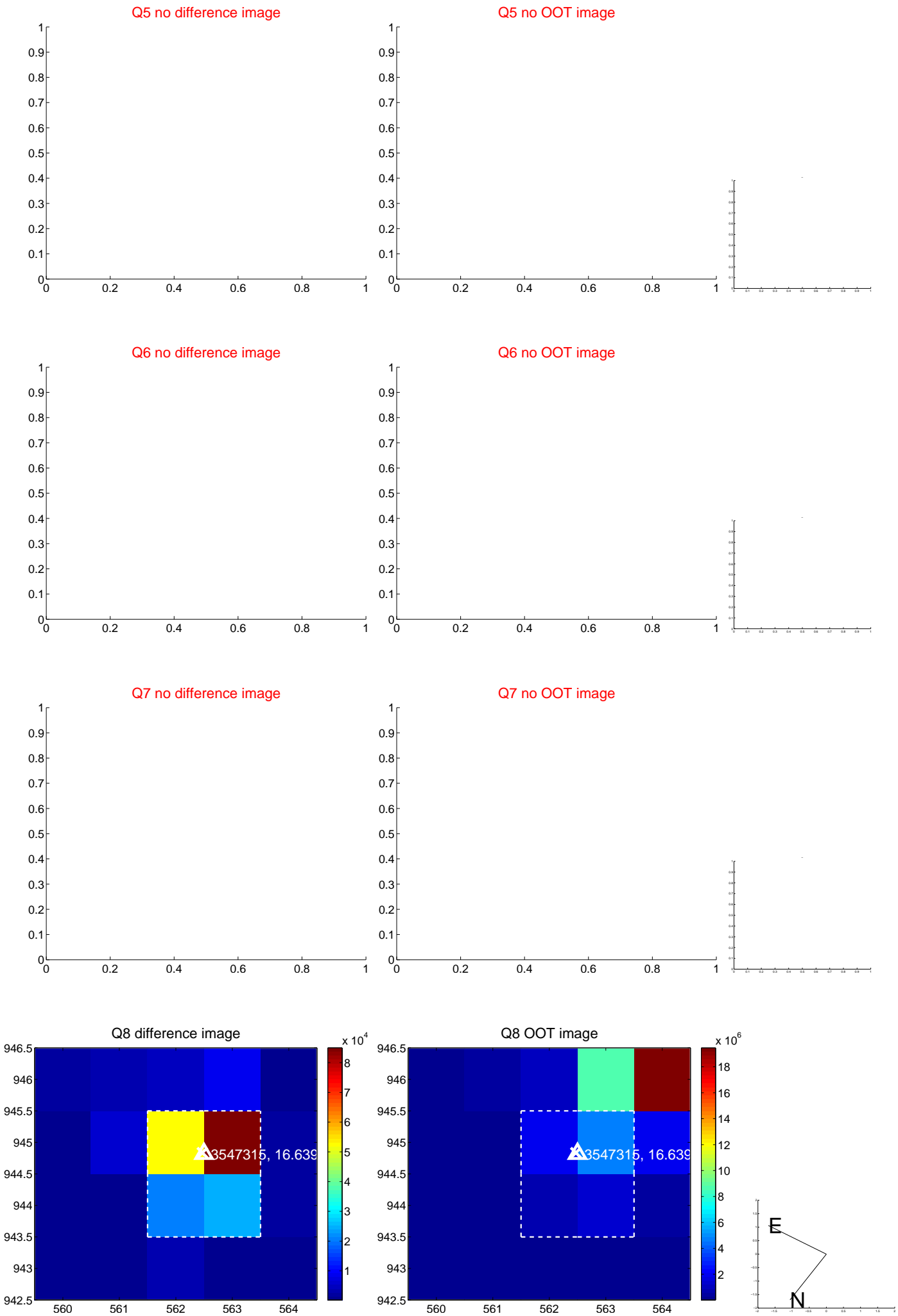


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

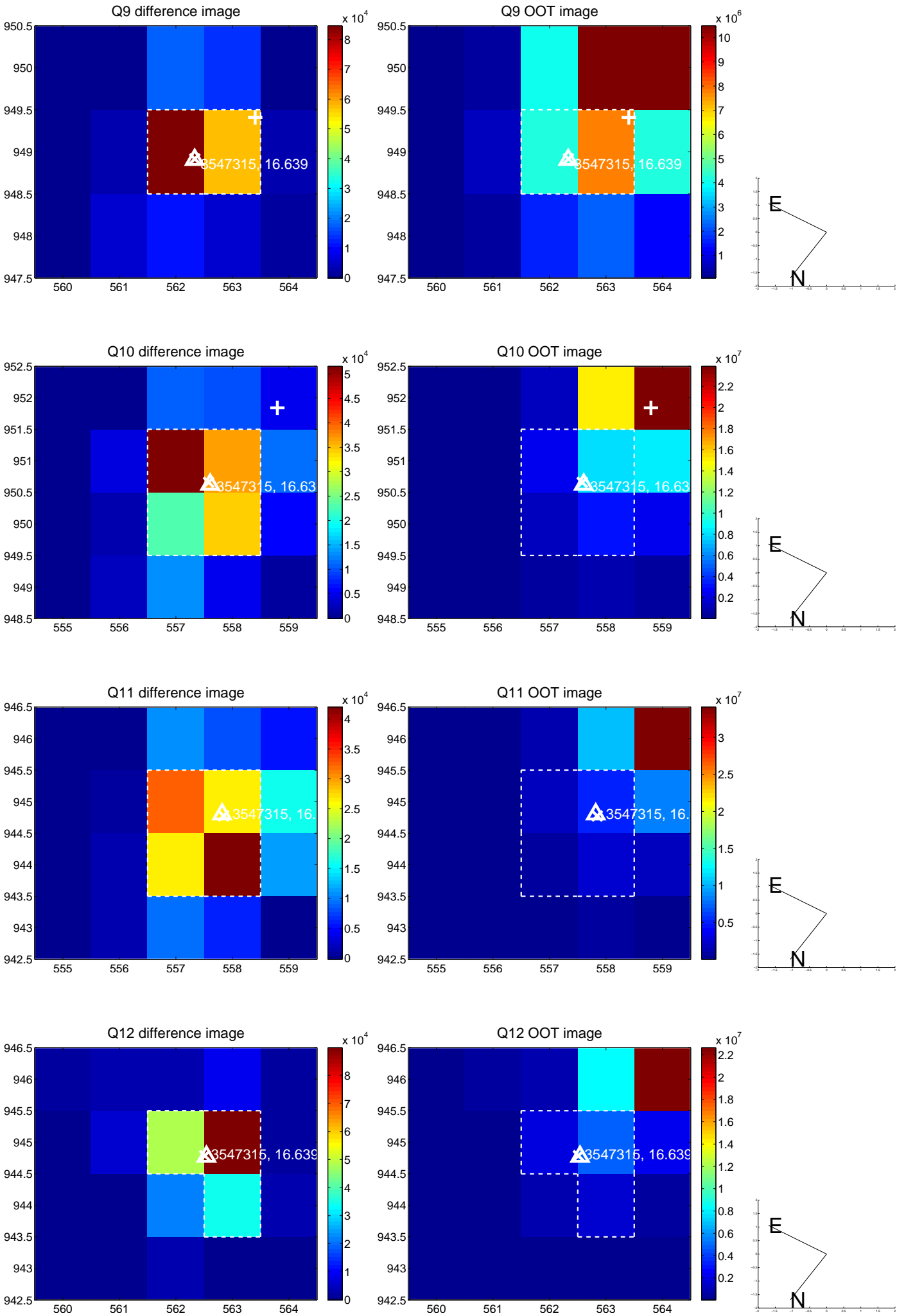
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



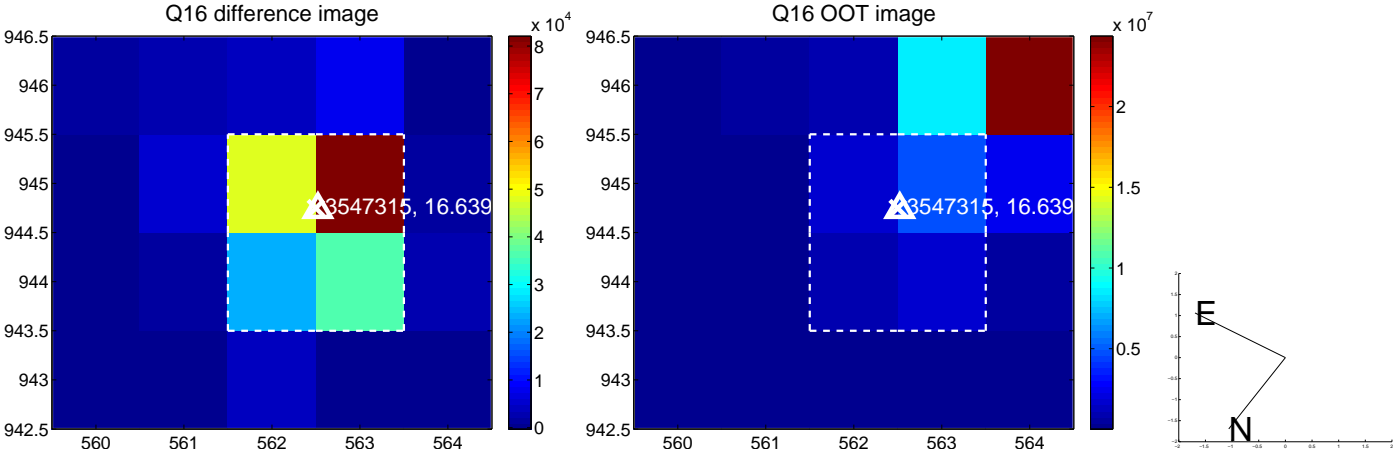
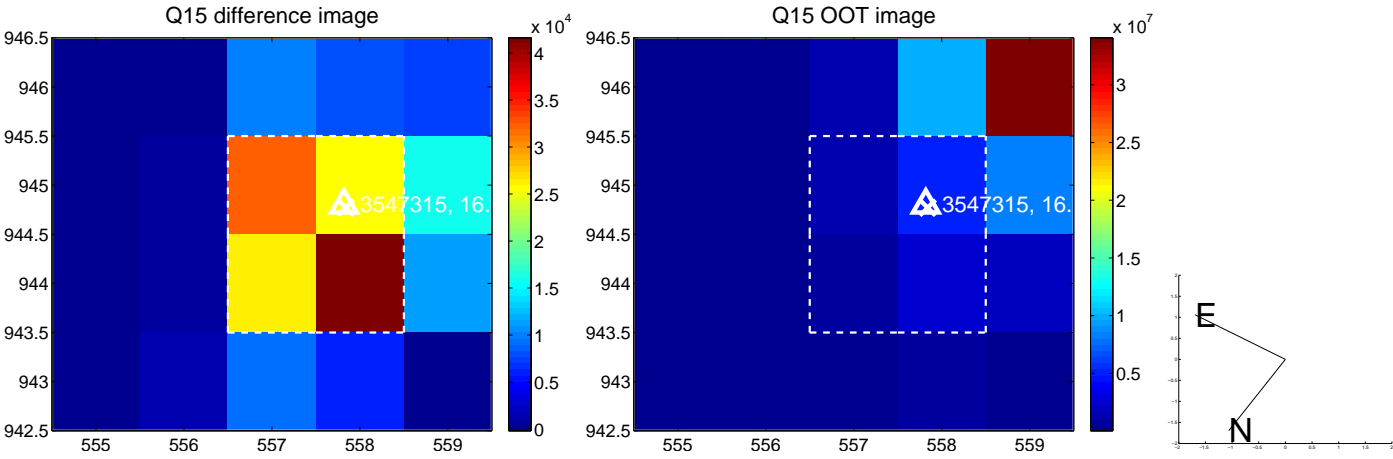
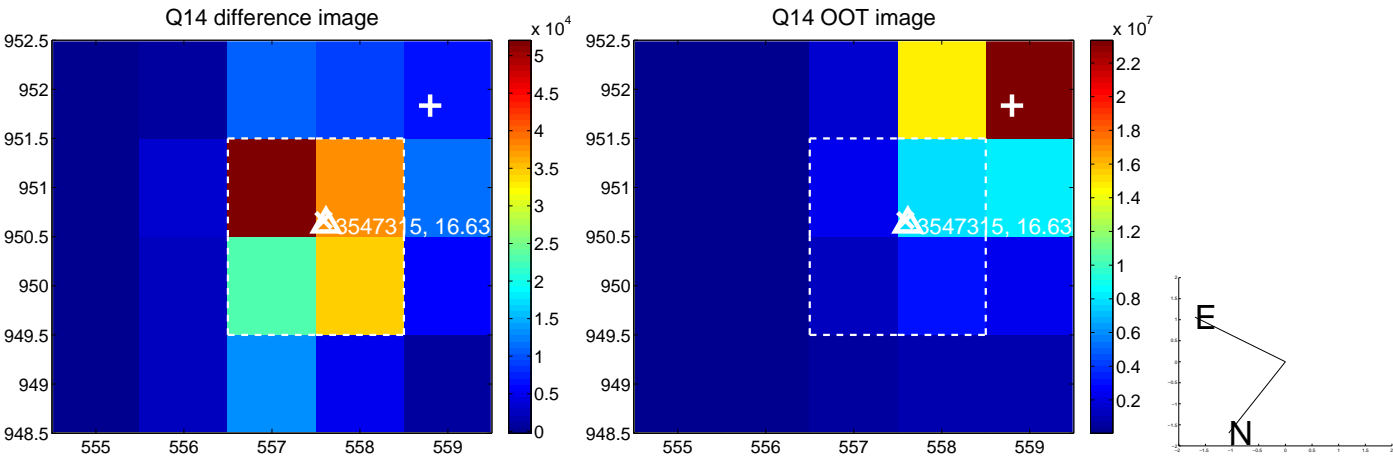
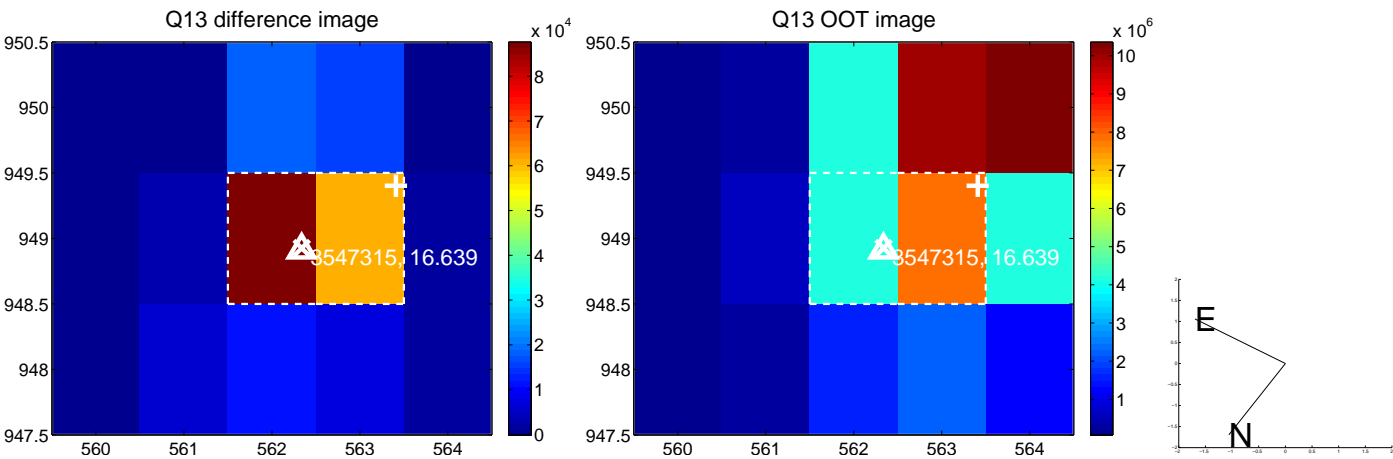
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



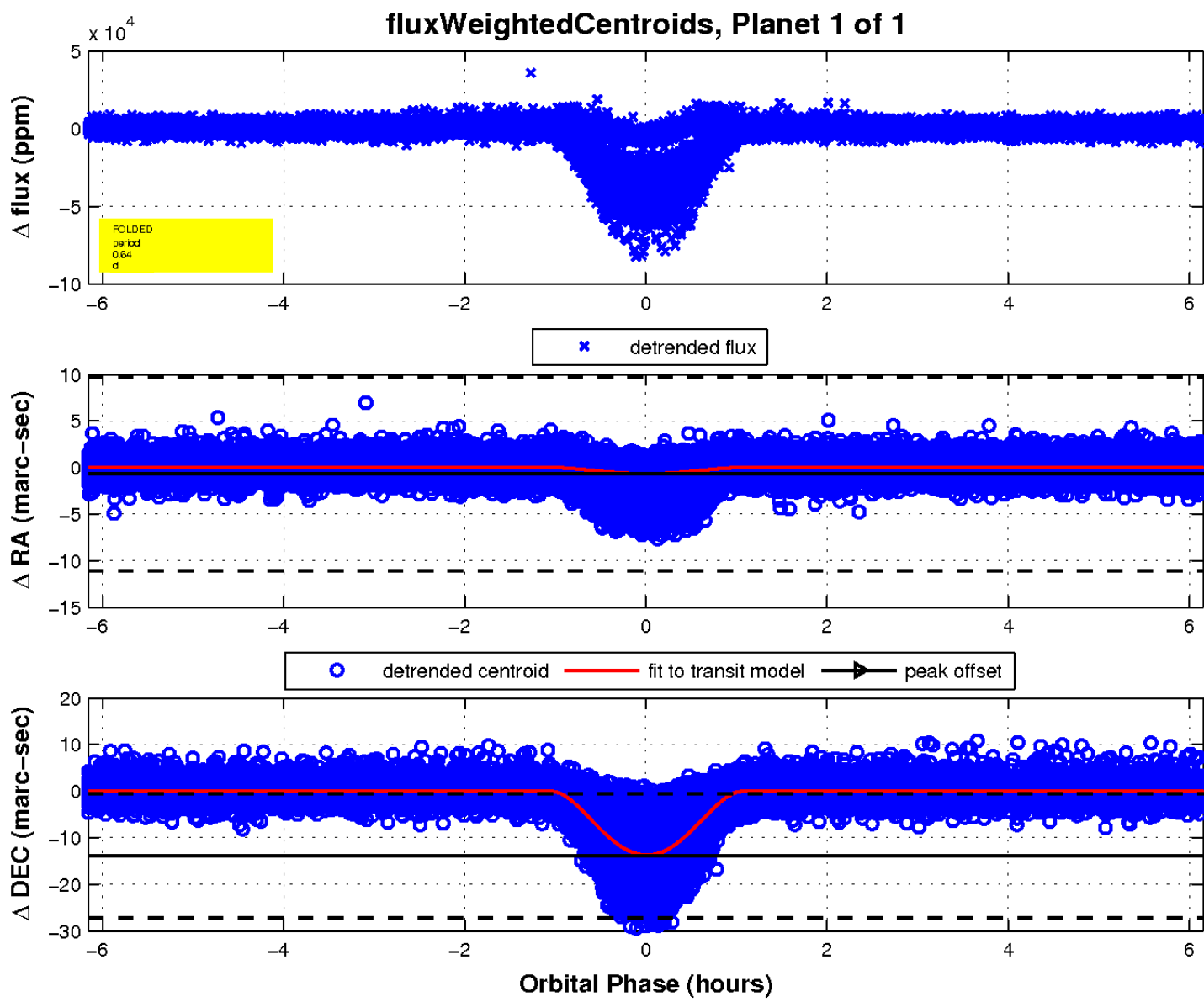
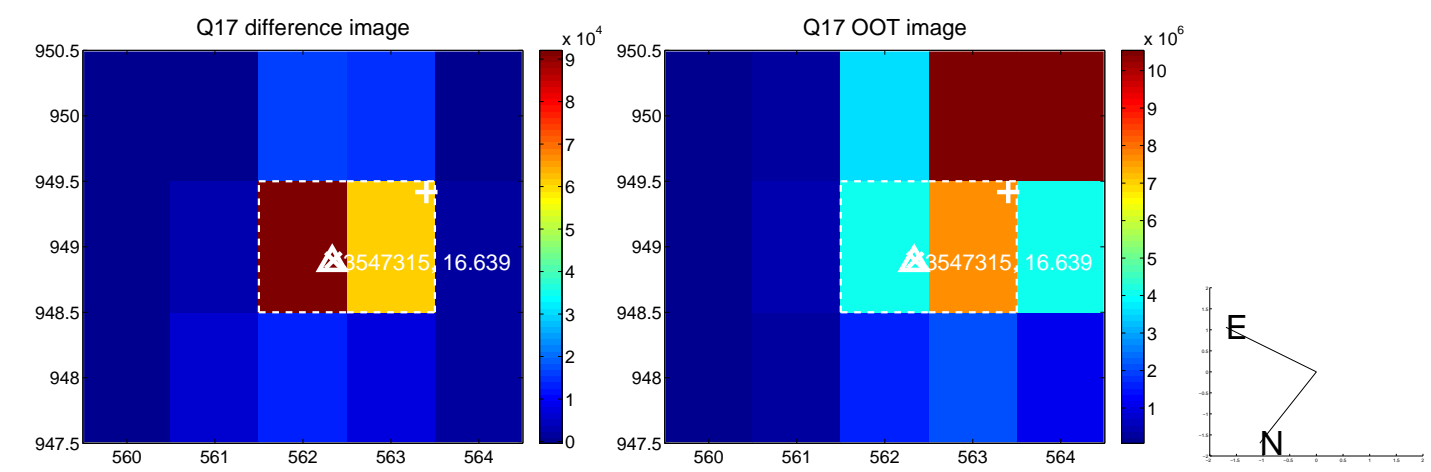
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

