

KIC 003655332

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})
003655332-01	OBS	1179.01	15.066486	140.655665	30363.2	5.989	1413.8	762.8	1.63	5751	31.22	178.35

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003655332-01	OBS	FP	0.00	0	1	1	1	MOD_SEC_DV—MOD_SEC_ALT—MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—SEASONAL_DEPTH_DV—SEASONAL_DEPTH_ALT—CENT_UNRESOLVED_OFFSET—HALO_GHOST—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 003655332-01

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
003655332-01	3655332	6348.01	3655326	1:1	4.2	-1	0	14.21	13.85	3.72	Direct-PRF	0	0.01	0.01

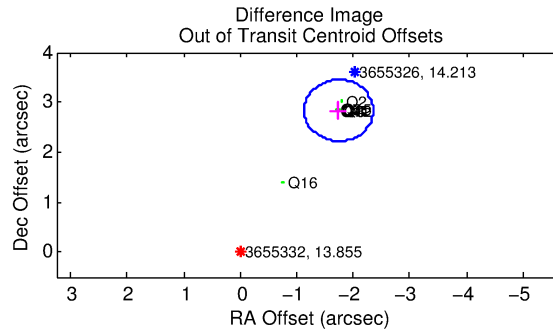
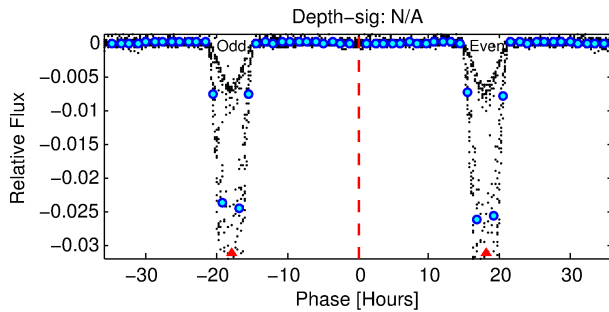
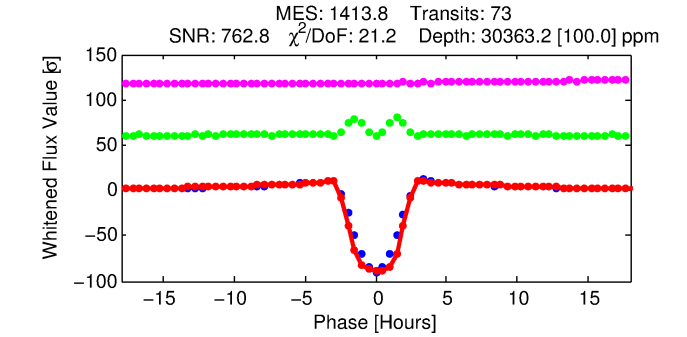
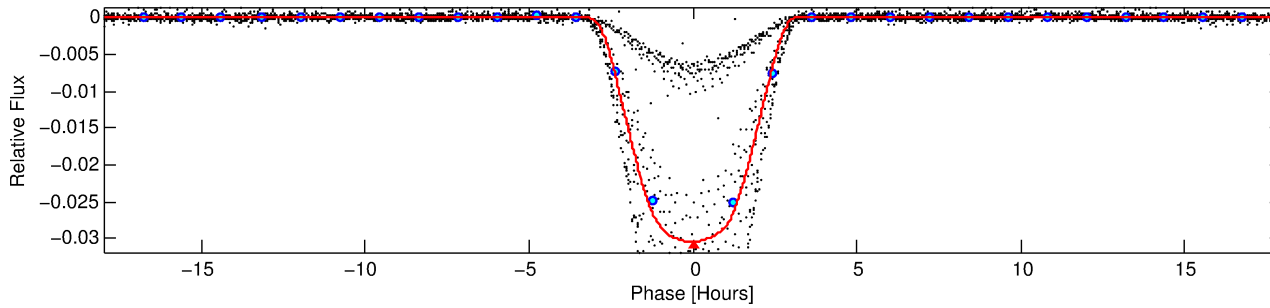
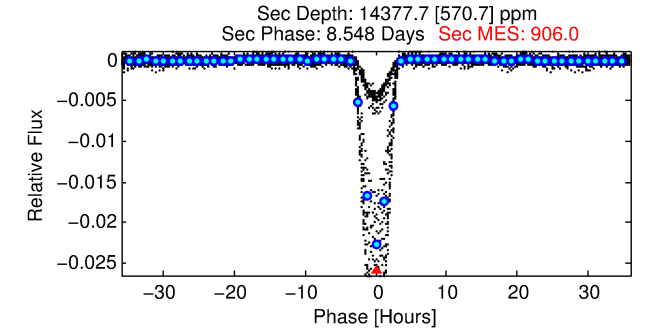
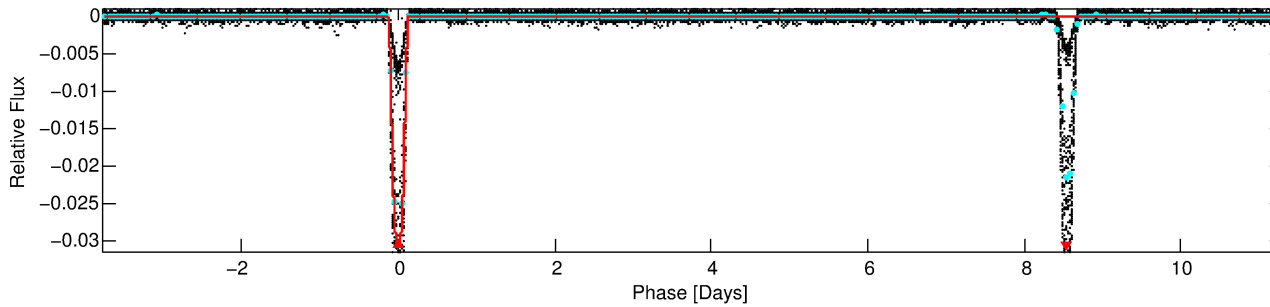
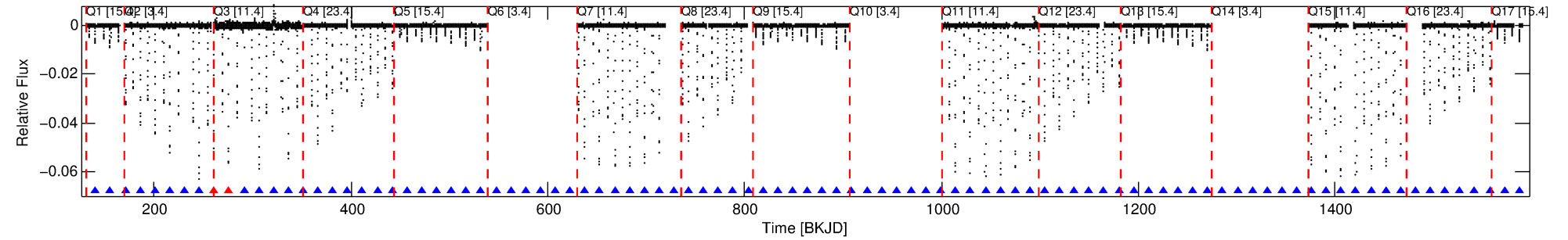
Notes: P₁:P₂ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period 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: 3655332 Candidate: 1 of 1 Period: 15.066 d

KOI: K01179.01 Corr: 0.985

Kp: 13.85 R*: 1.63 Rs Teff: 5751.0 K Logg: 4.03 Fe/H: -0.040



DV Fit Results:

Period = 15.06649 [0.00001] d
Epoch = 140.6557 [0.0004] BKJD
Rp/R* = 0.1760 [0.0005]
a/R* = 17.21 [0.09]
b = 0.76 [0.00]
Seff = 178.35 [65.27]
Teff = 932 [85] K
Rp = 31.22 [7.72] Re
a = 0.1205 [0.0278] AU
Ag = 117.88 [42.94] [2.72σ]
Teffp = 4747 [79] K [32.75σ]

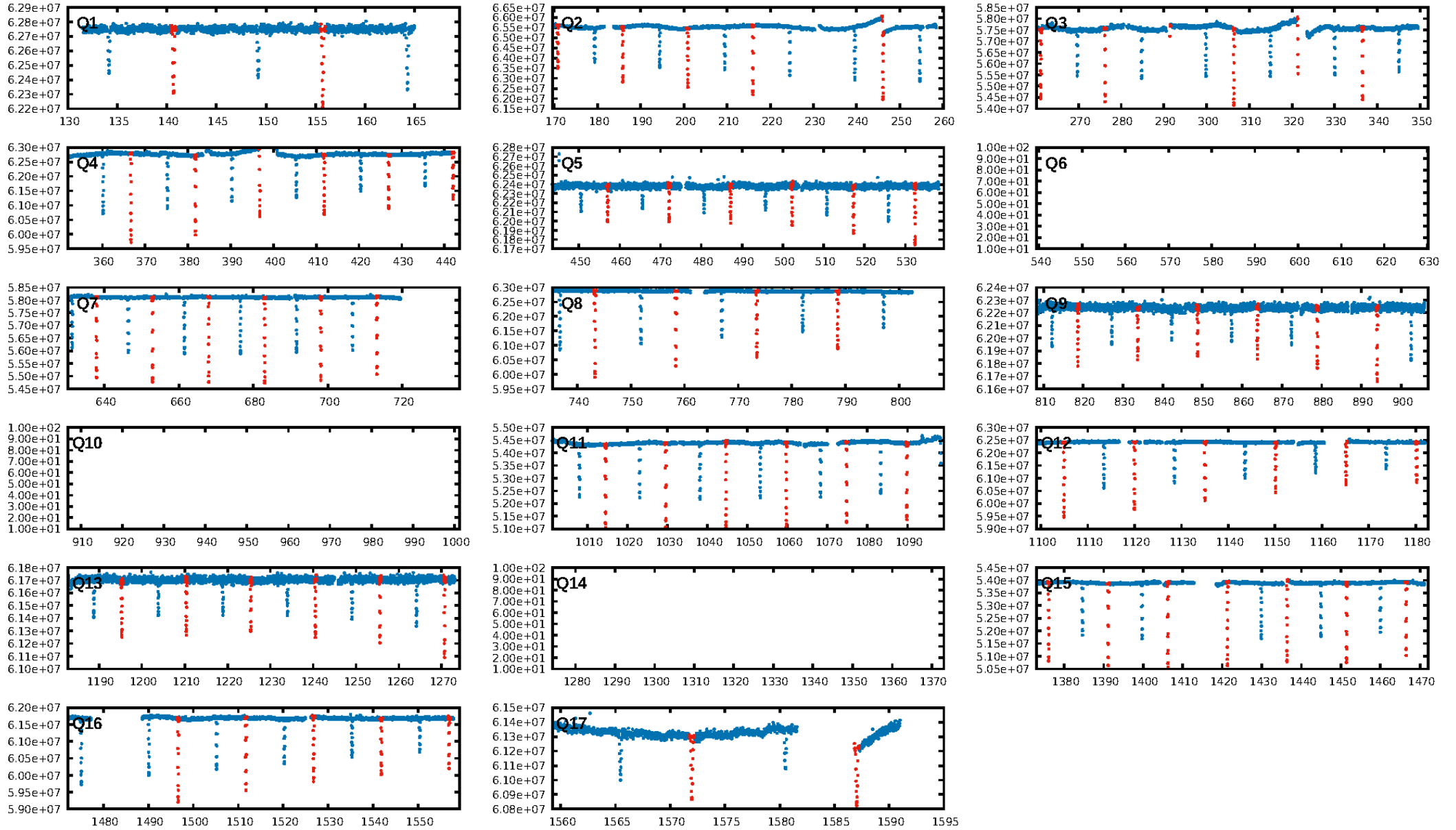
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 0.97 [67/69]
GhostDiagnostic-chr: 0.09167
Centroid-sig: 0.0%
Centroid-so: 3.629 arcsec [979.51σ]
OotOffset-rm: 3.327 arcsec [16.24σ]
KicOffset-rm: 4.030 arcsec [57.76σ]
OotOffset-st: 1/4/4/0 [9]
KicOffset-st: 1/4/4/0 [9]
DiffImageQuality-fgm: 1.00 [9/9]
DiffImageOverlap-fno: 1.00 [14/14]

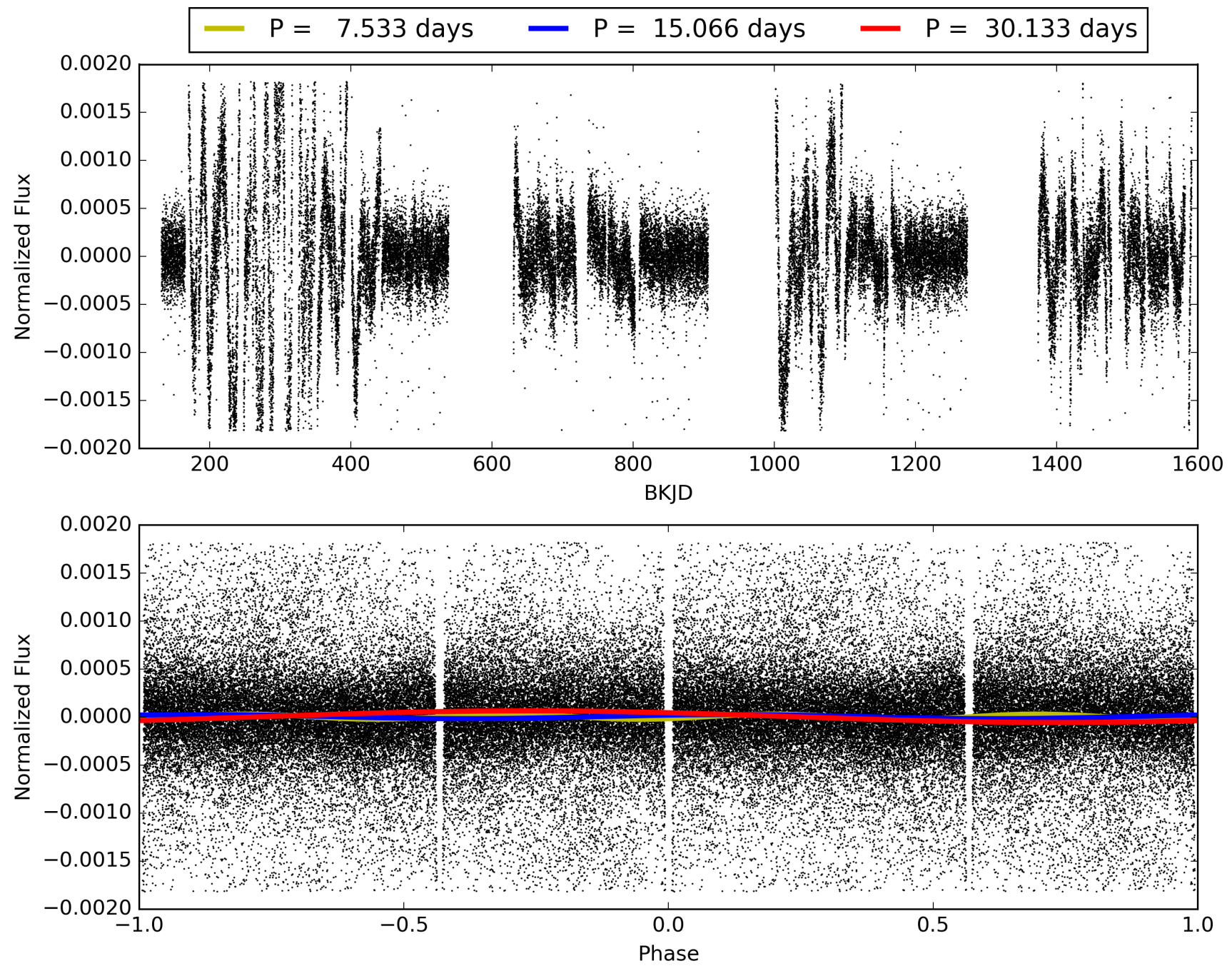
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 20:37:06 Z

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

TCE 003655332-01, PDC Light Curves

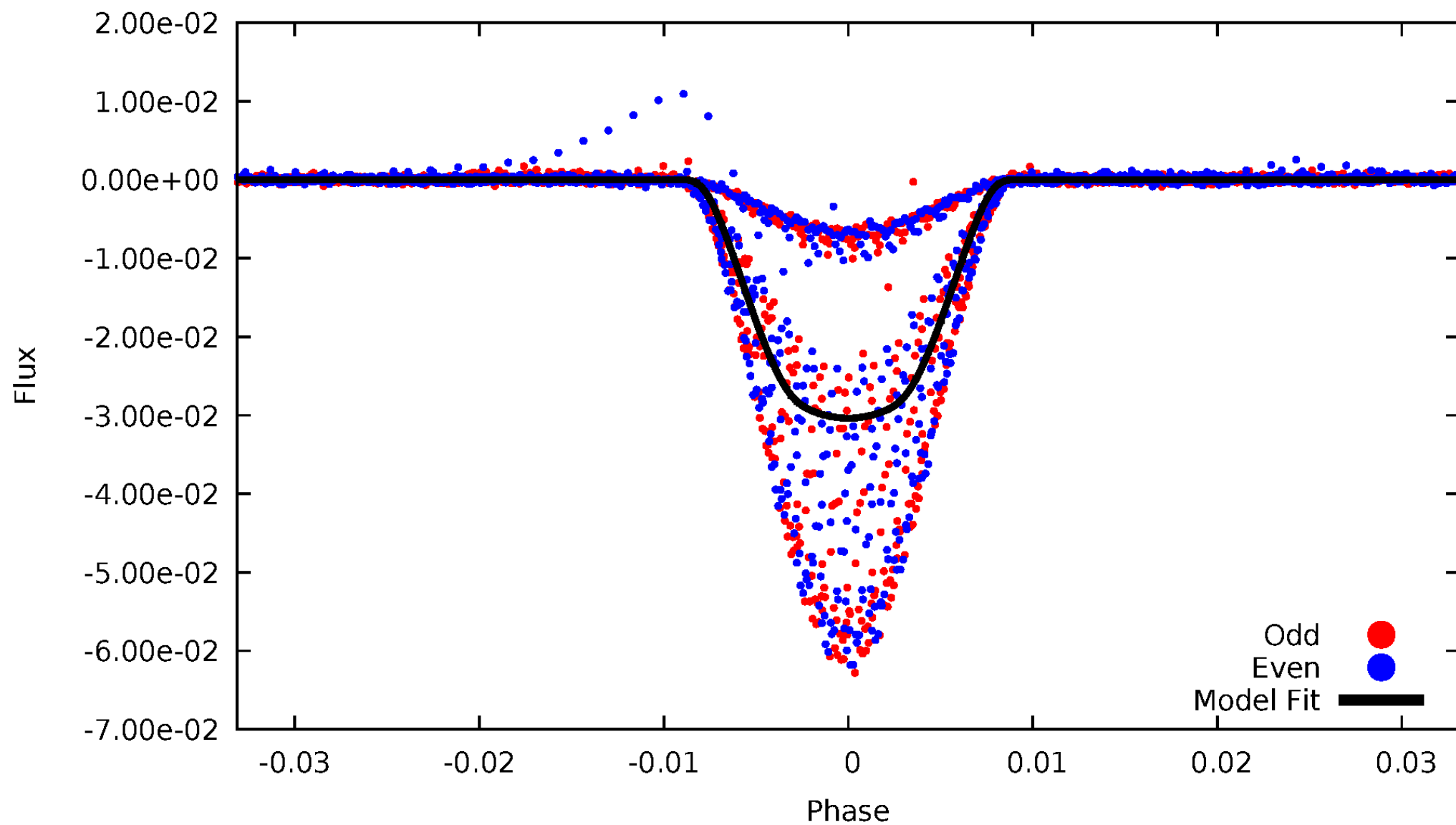


TCE 003655332-01



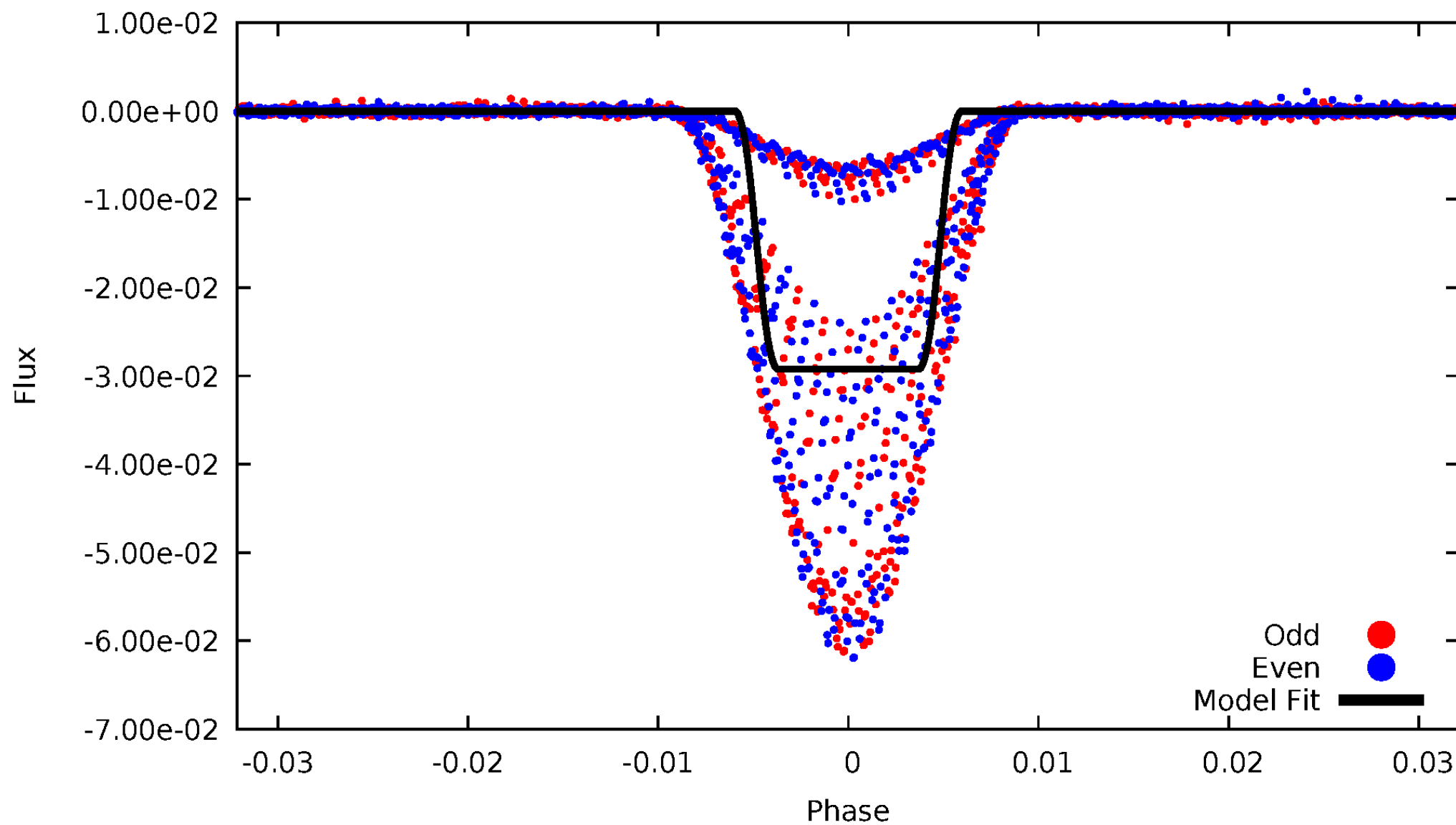
DV Odd/Even

TCE 003655332-01



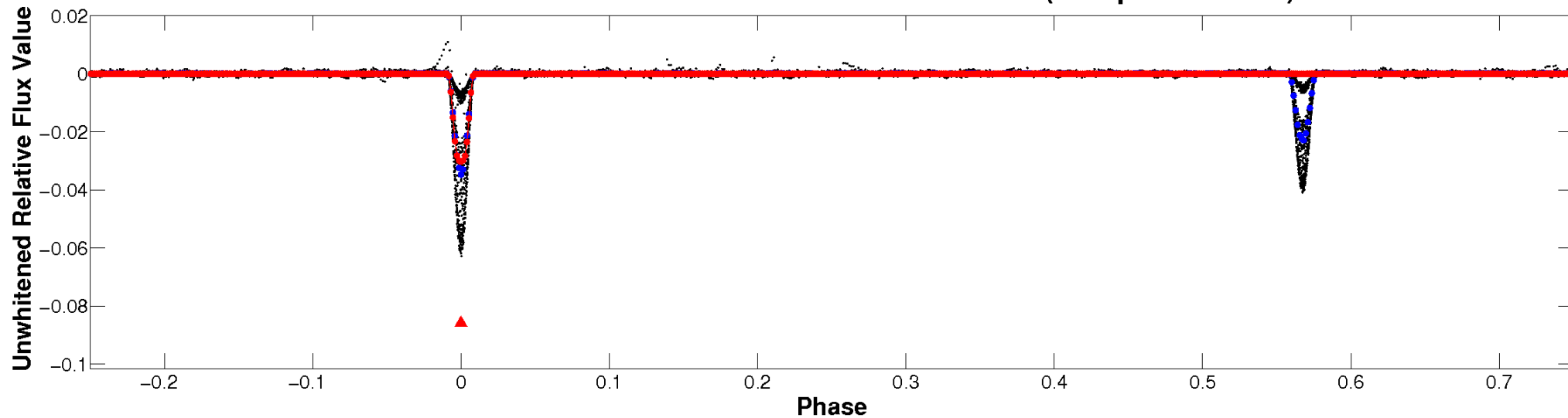
ALT Odd/Even

TCE 003655332-01

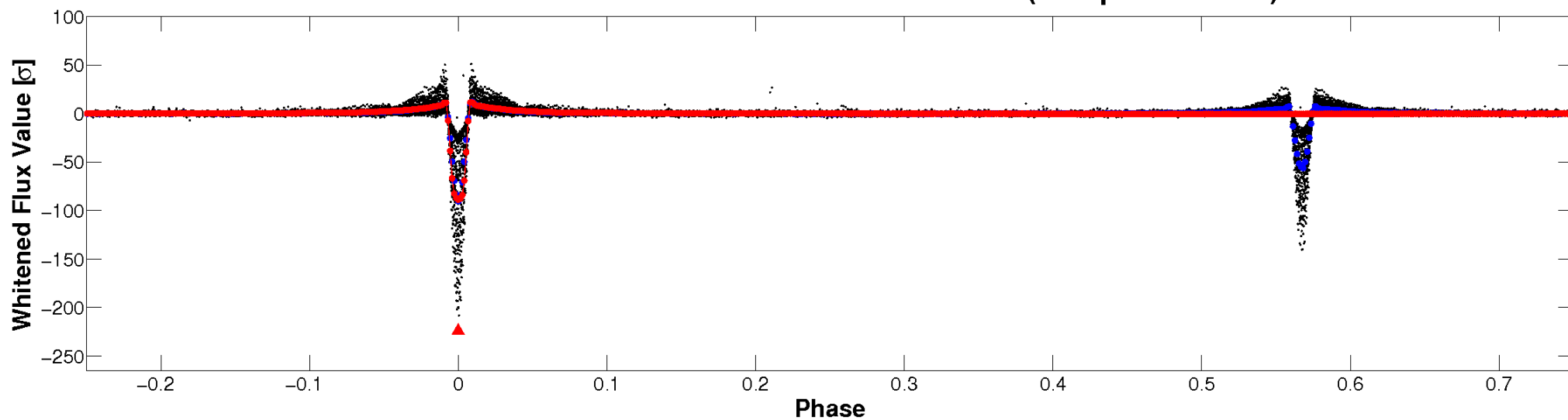


Non-Whitened Vs. Whitened Light Curve

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

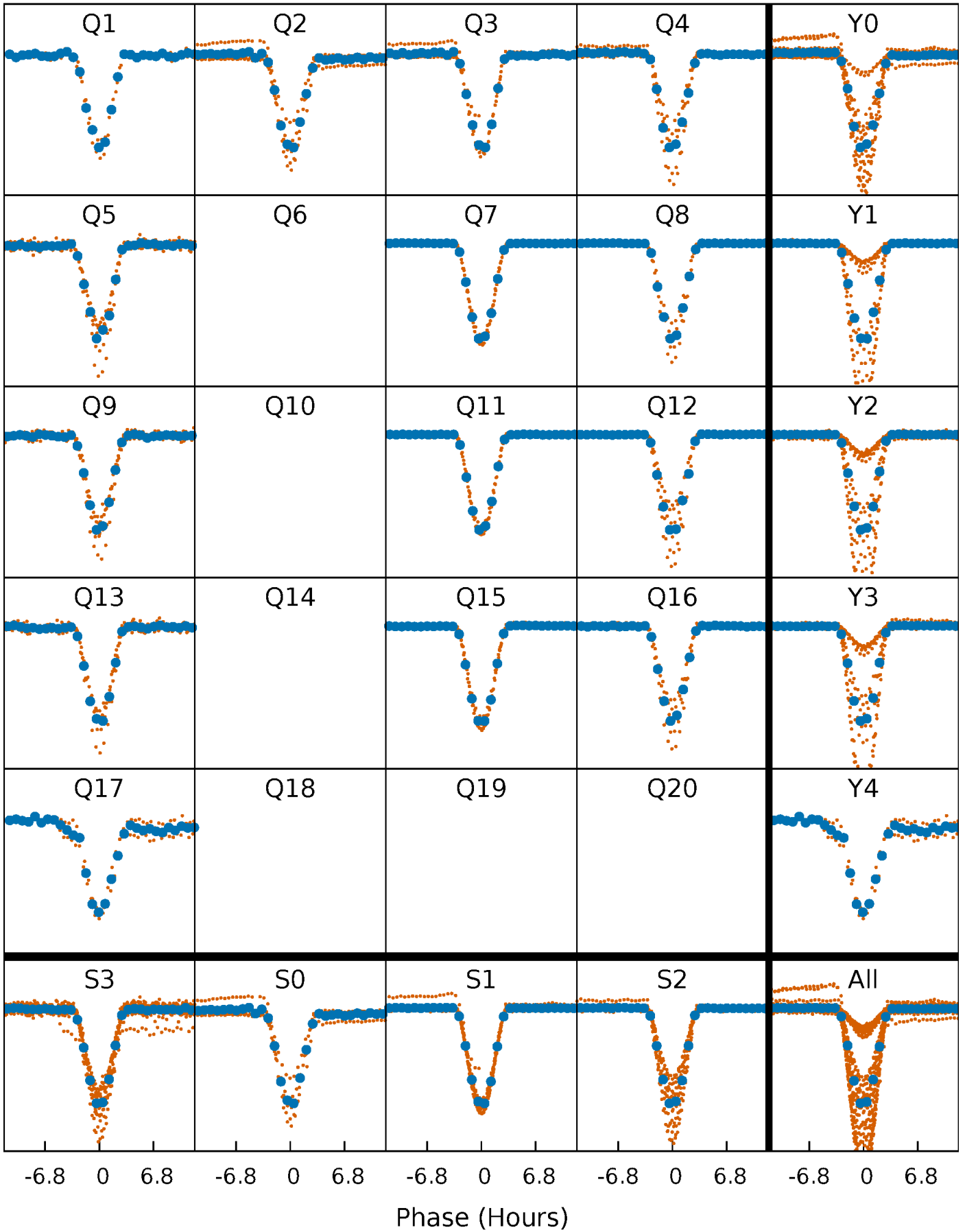


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



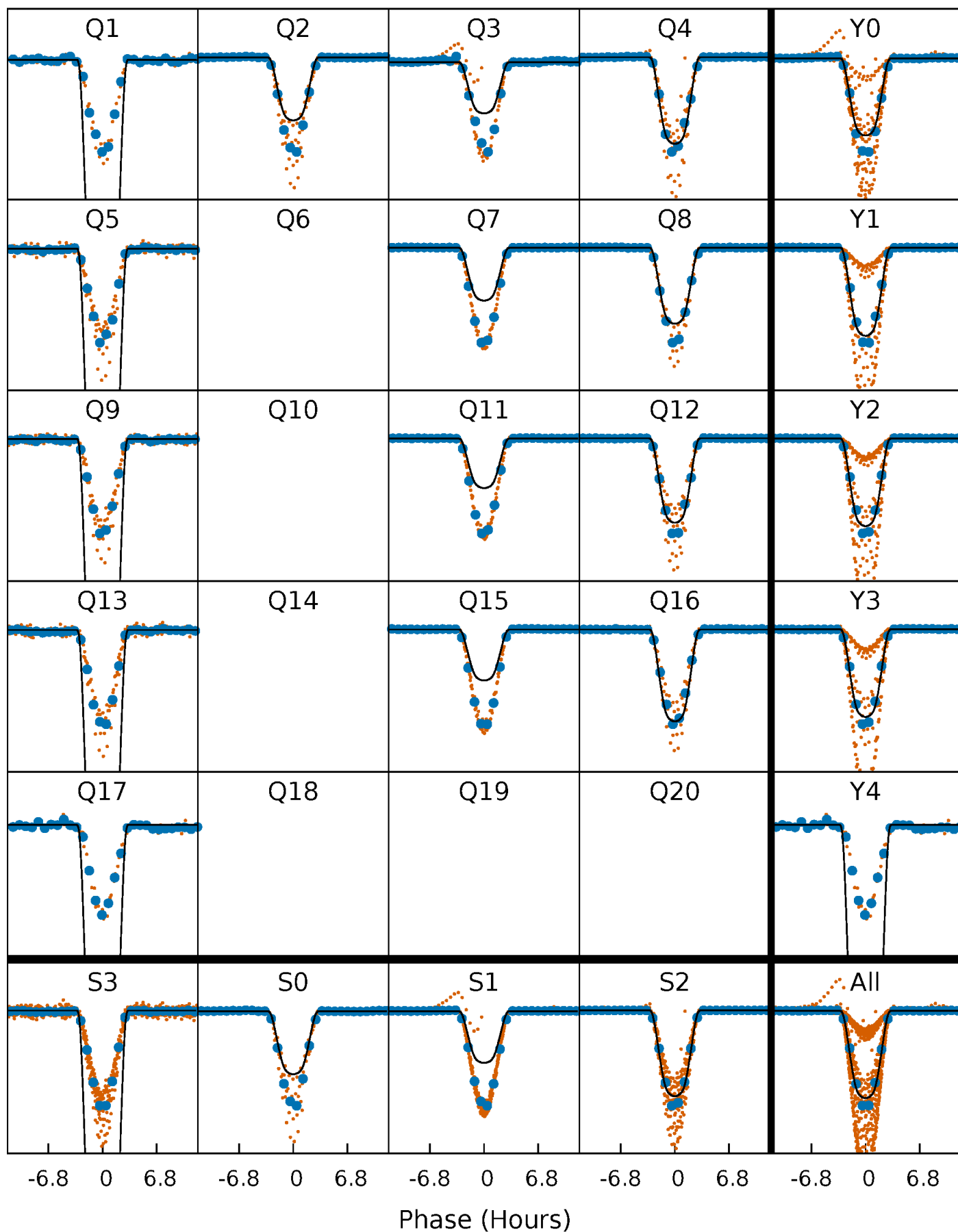
PDC Quarter-Phased Transit Curves

TCE 003655332-01 P= 15.066486 Days $T_0=140.655665$ (BKJD)



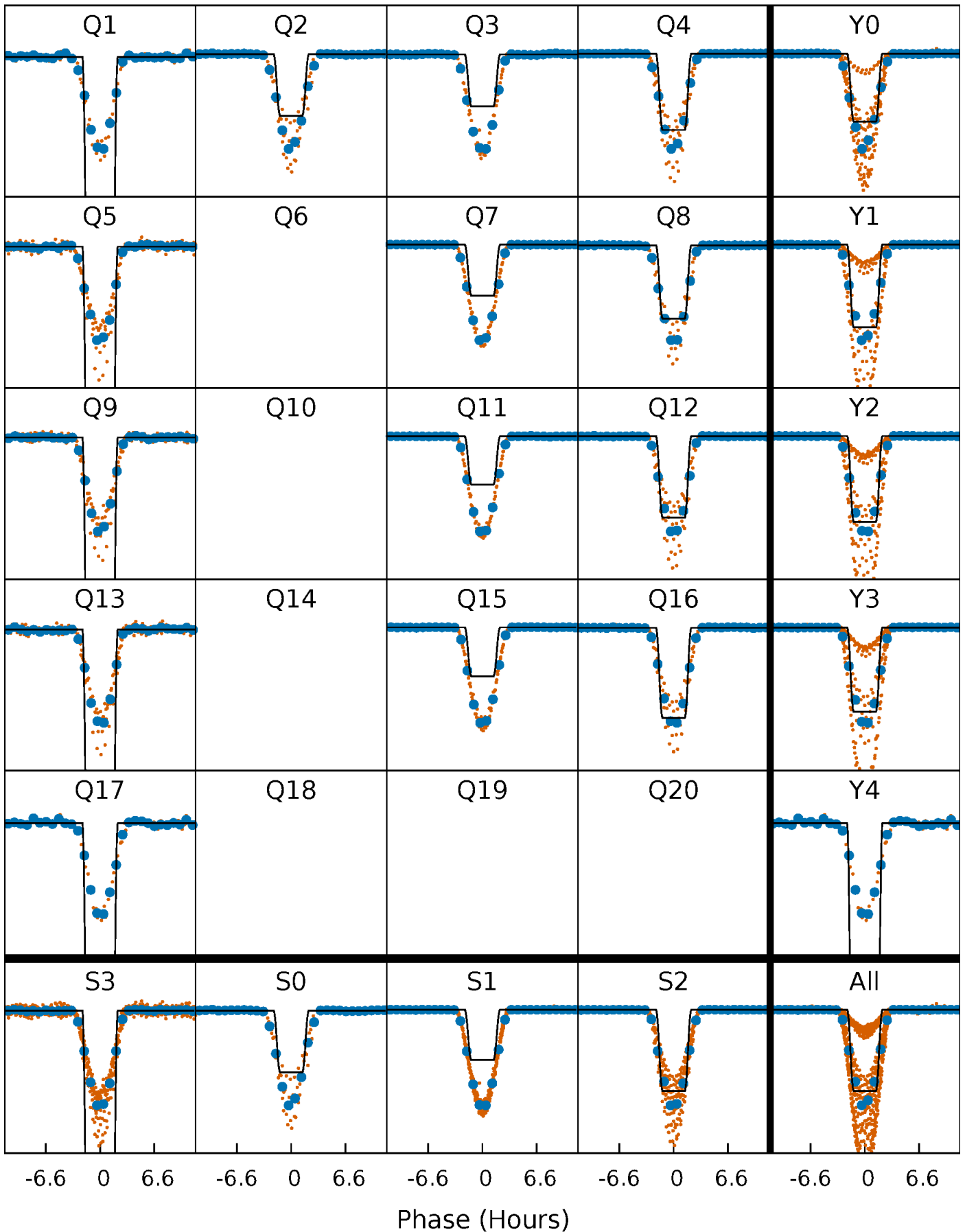
DV Quarter-Phased Transit Curves

TCE 003655332-01 P= 15.066486 Days $T_0=140.655665$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

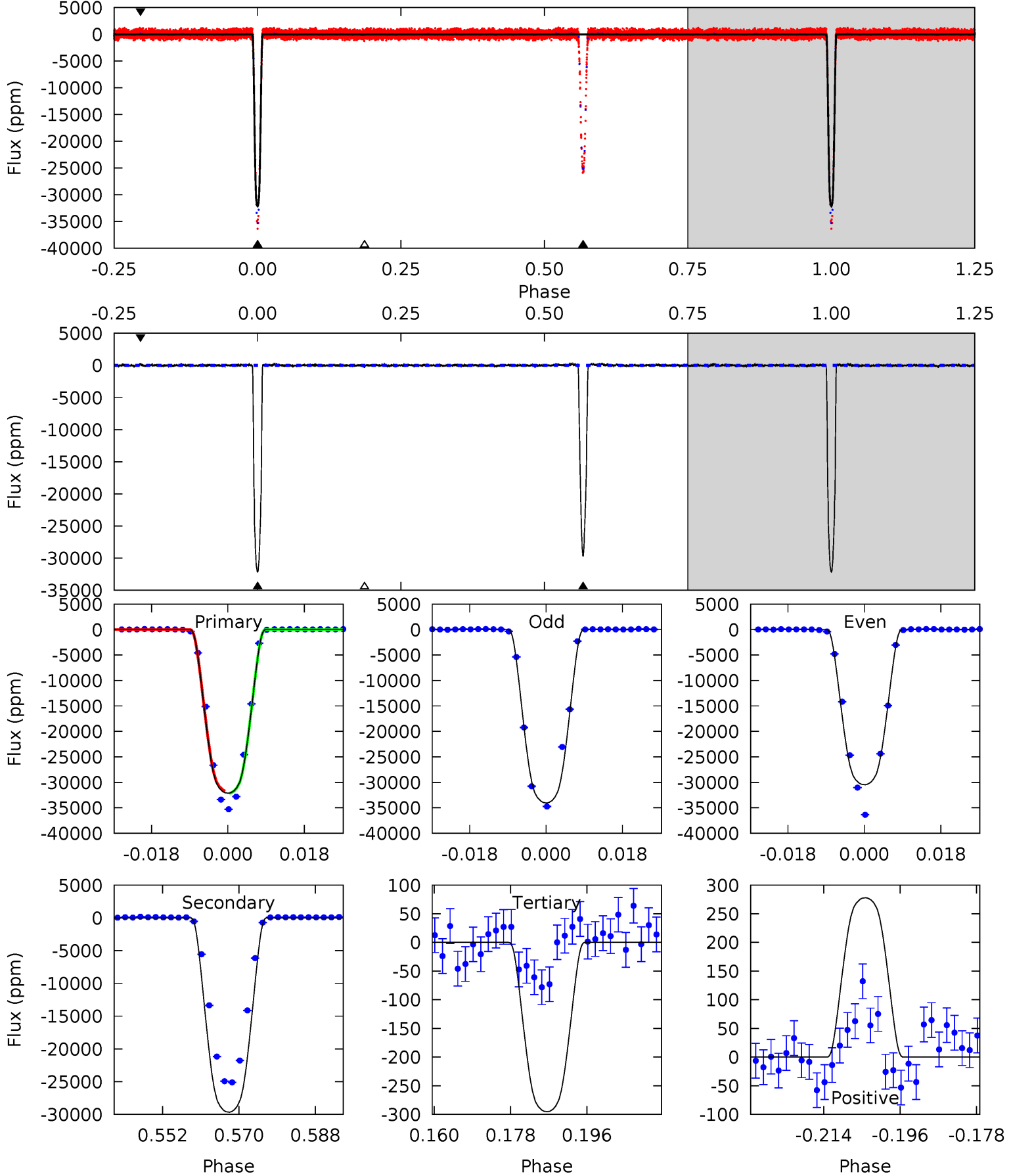
TCE 003655332-01 P= 15.066426 Days $T_0=140.658722$ (BKJD)



DV Model-Shift Uniqueness Test

003655332-01, P = 15.066486 Days, E = 125.589179 Days

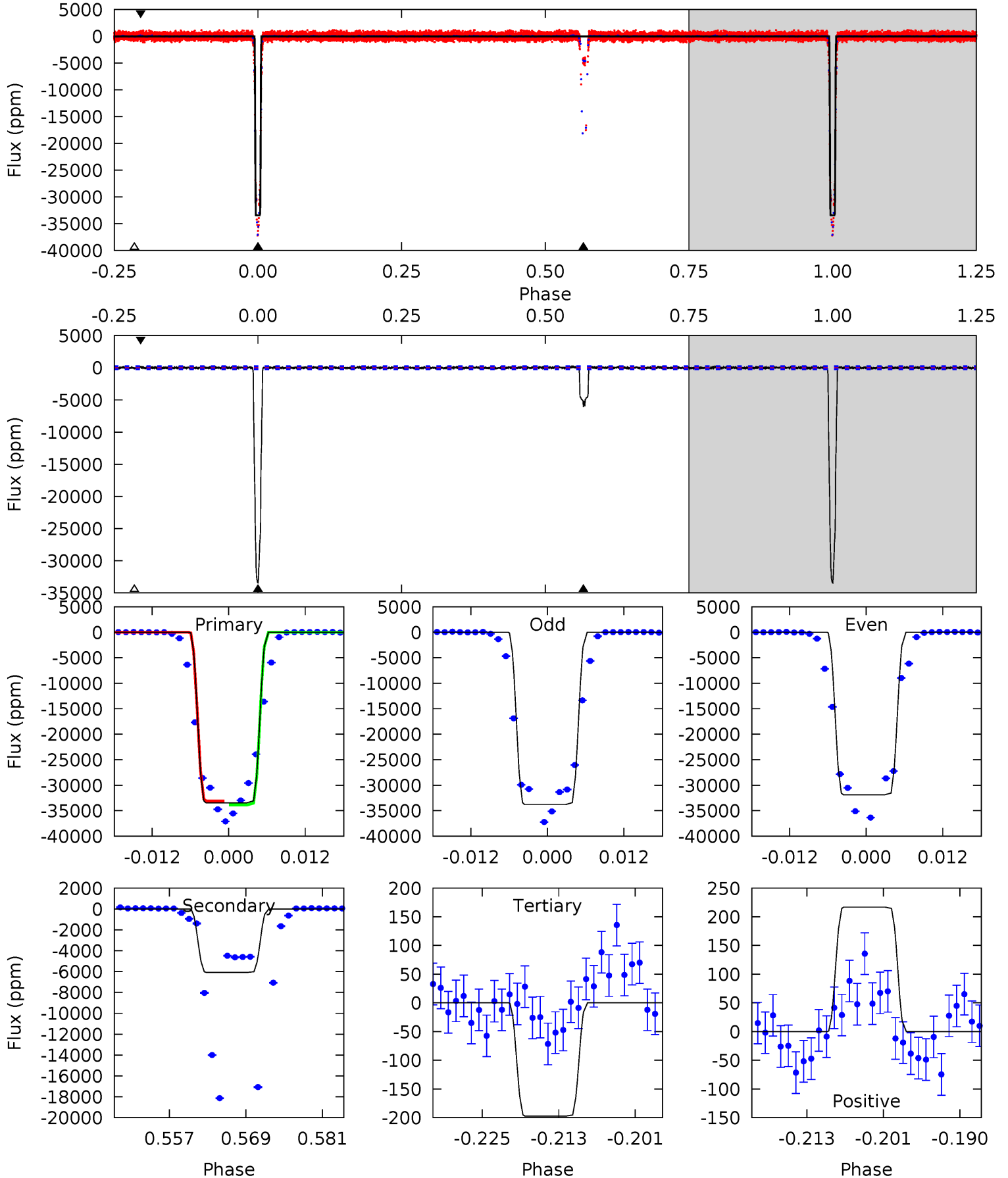
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1391	1284	12.8	12.0	4.91	2.37	3.31	1378	1379	1271	1272	78.1	0.96	0.01	0



Alt Model-Shift Uniqueness Test

003655332-01, P = 15.066426 Days, E = 125.592296 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
736.9	134.0	4.35	4.78	4.99	2.52	1.29	732.6	732.2	129.7	129.2	20.3	0.95	0.01	0



Stellar Parameters For KIC 003655332

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5751^{+77}_{-77}	$4.028^{+0.210}_{-0.090}$	$-0.040^{+0.150}_{-0.150}$	$1.626^{+0.268}_{-0.402}$	$1.028^{+0.100}_{-0.100}$	$0.337^{+0.374}_{-0.113}$
	+1%/-1%	+5%/-2%	+375%/-375%	+16%/-25%	+10%/-10%	+111%/-33%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 003655332-01 / KOI 1179.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-29671 ± 23	$30.72^{+2.92}_{-4.07}$	1290^{+56}_{-85}	5730^{+86}_{-90}	259^{+82}_{-38}
Alt.	-6080 ± 45	$30.03^{+2.47}_{-4.07}$	1288^{+59}_{-81}	4157^{+44}_{-44}	55^{+17}_{-8}

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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

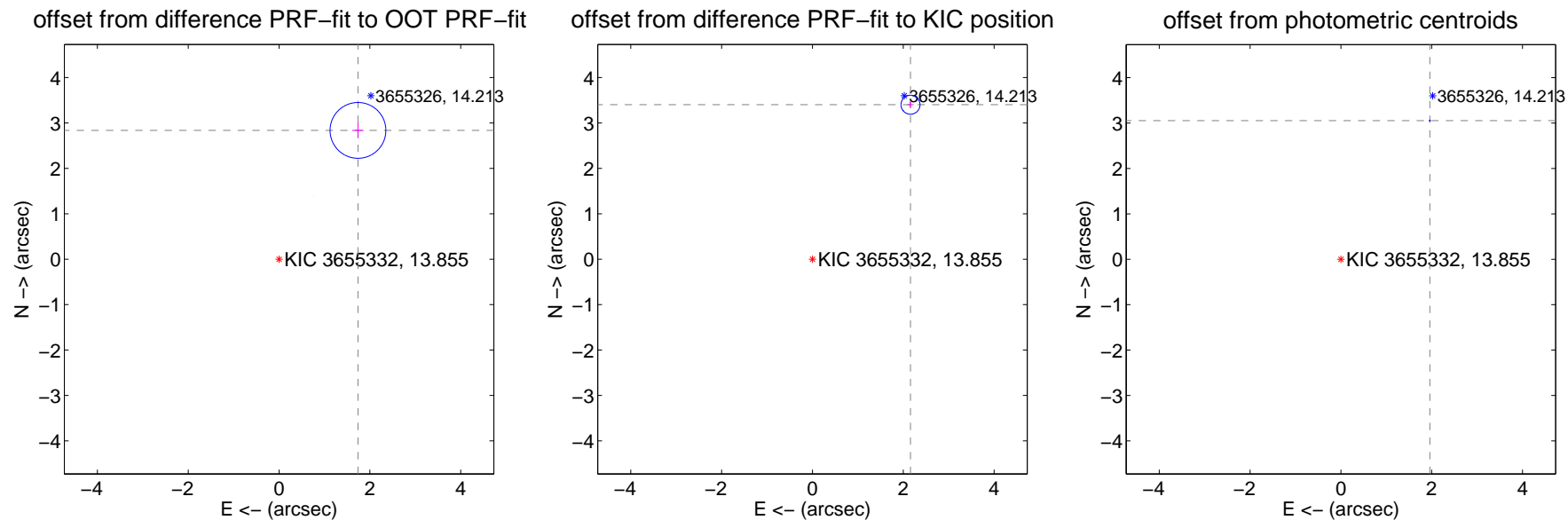
DV Centroid Data

Supplemental centroid analysis for 003655332-01. Kepler magnitude: 13.86. Transit SNR 762.83

There are 9 quarters with good PRF difference image offsets

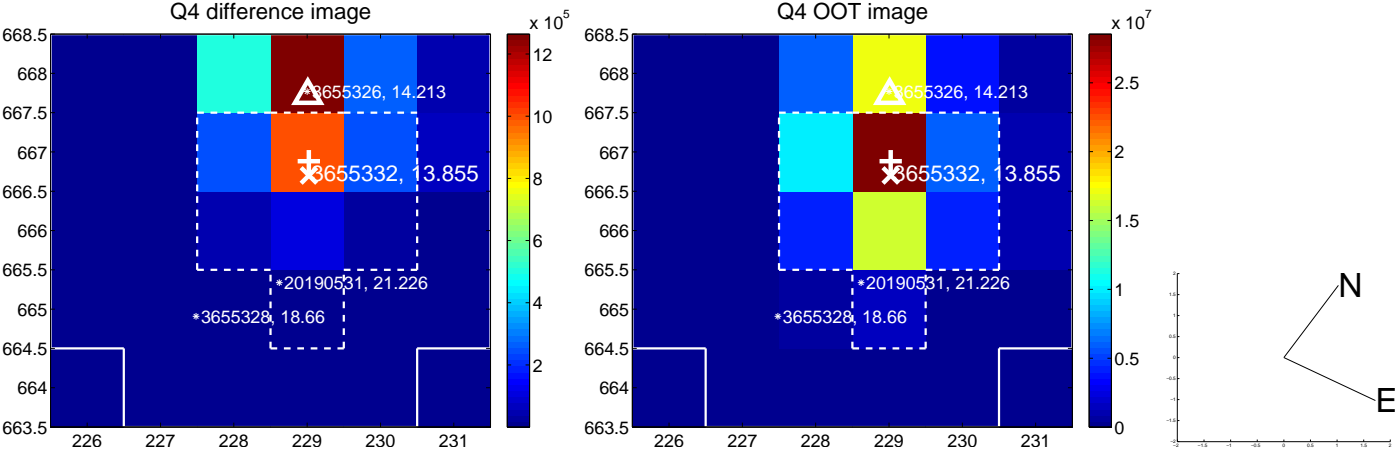
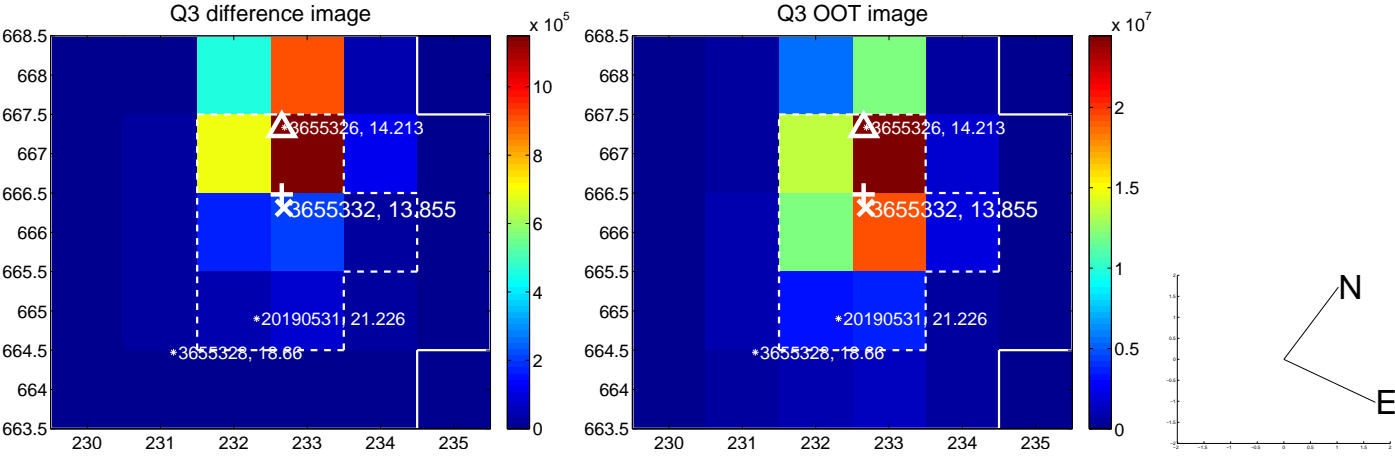
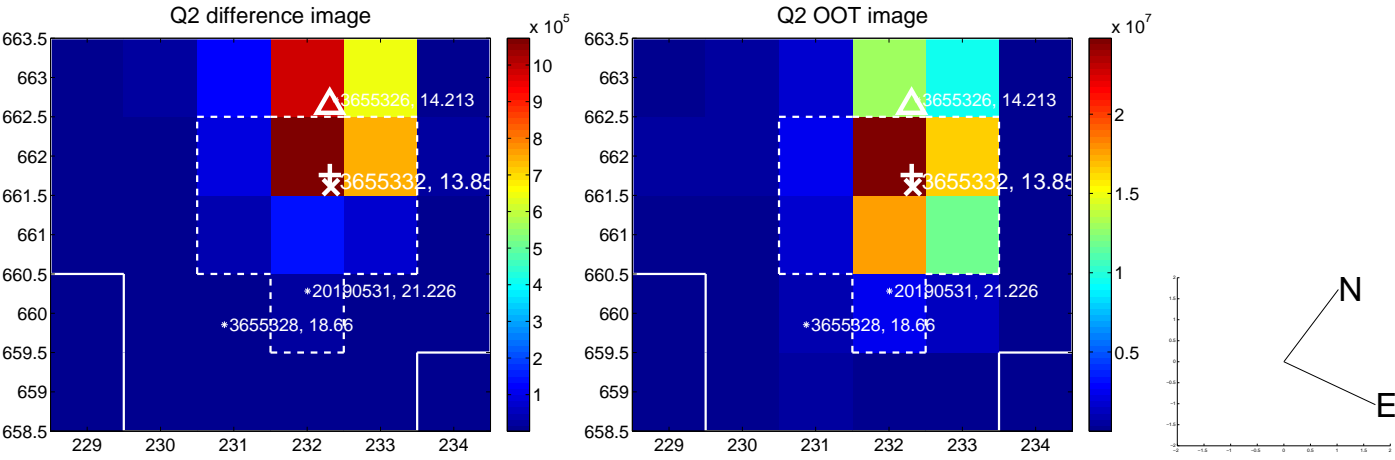
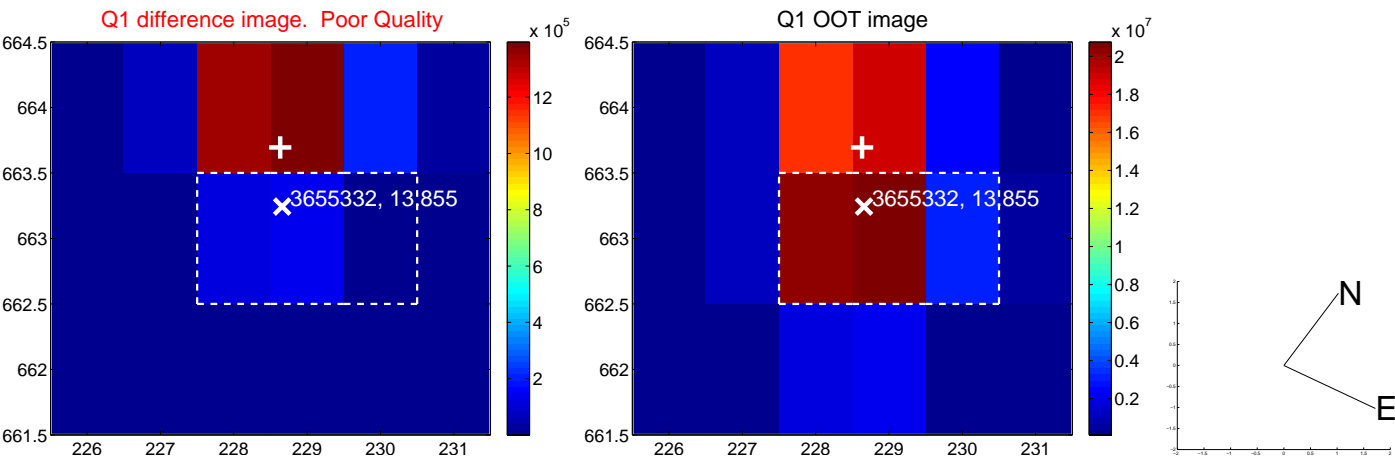
The OOT PRF centroid is offset from the target star catalog position by about 2.48 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.327 ± 0.205	16.24	-1.738 ± 0.126	2.837 ± 0.175
PRF-fit source offset from KIC position	4.030 ± 0.070	57.76	-2.159 ± 0.068	3.403 ± 0.070
photometric centroid source offset	3.63 ± 0.00	979.51	-1.96 ± 0.00	3.06 ± 0.00

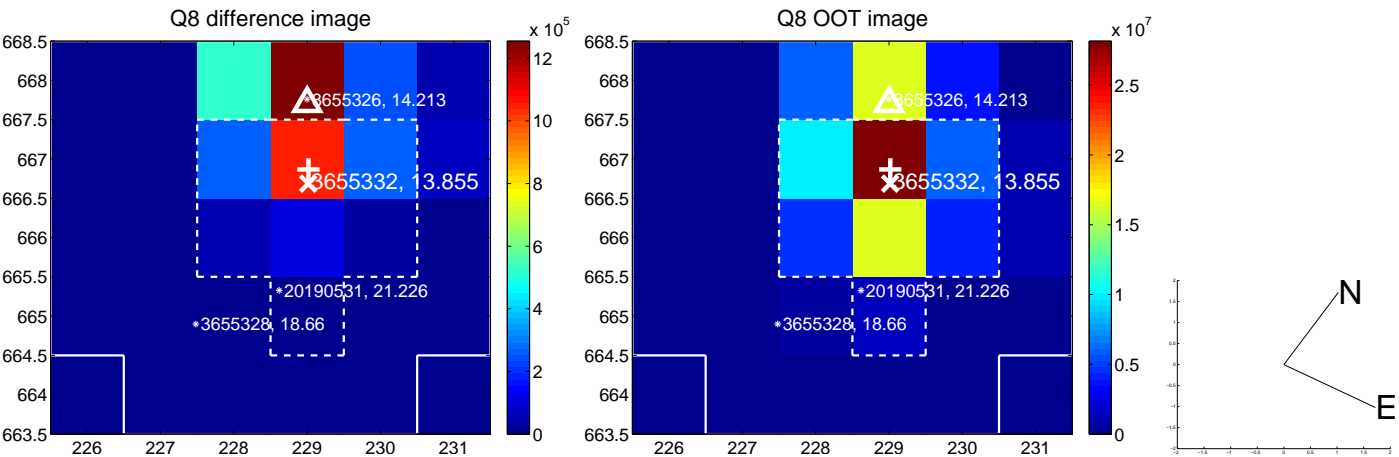
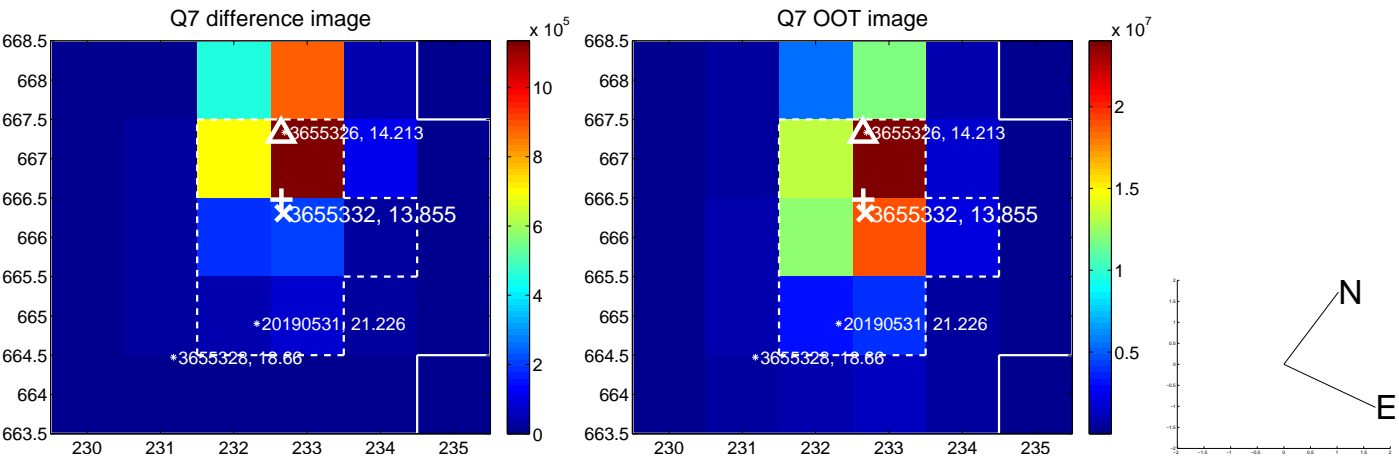
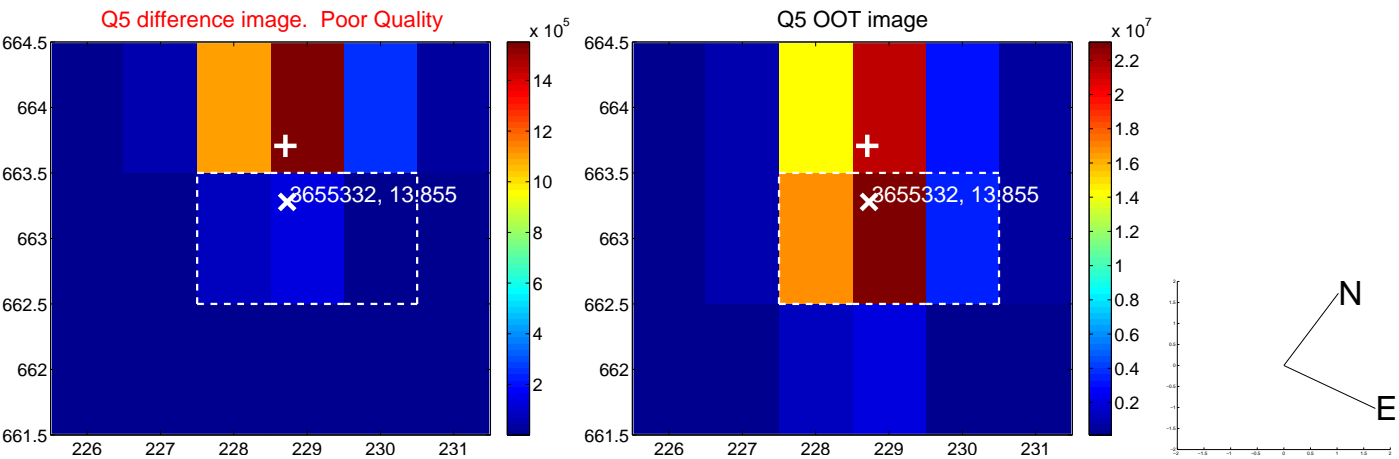


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

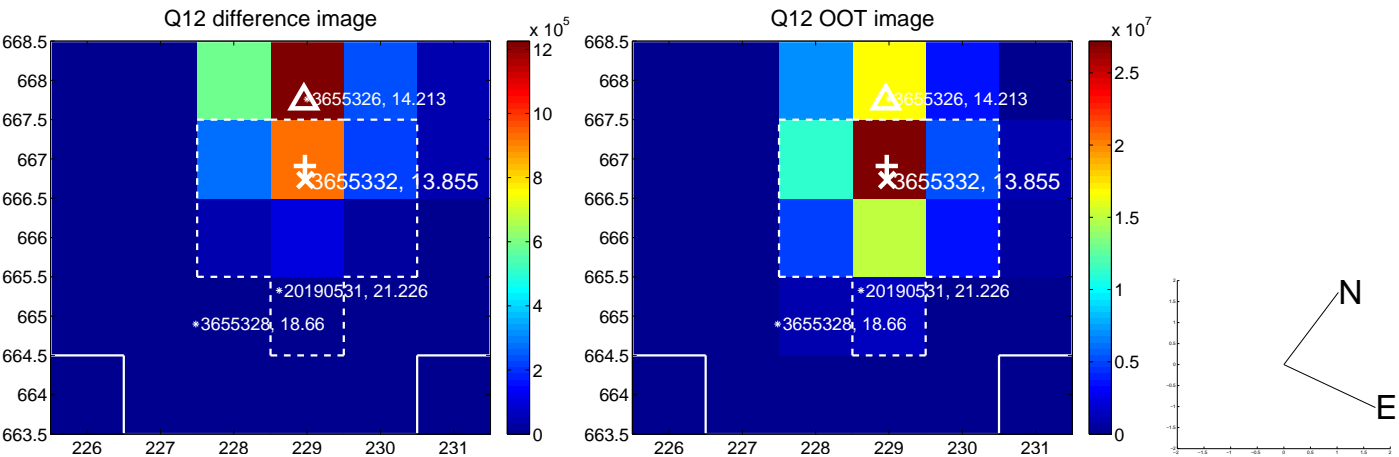
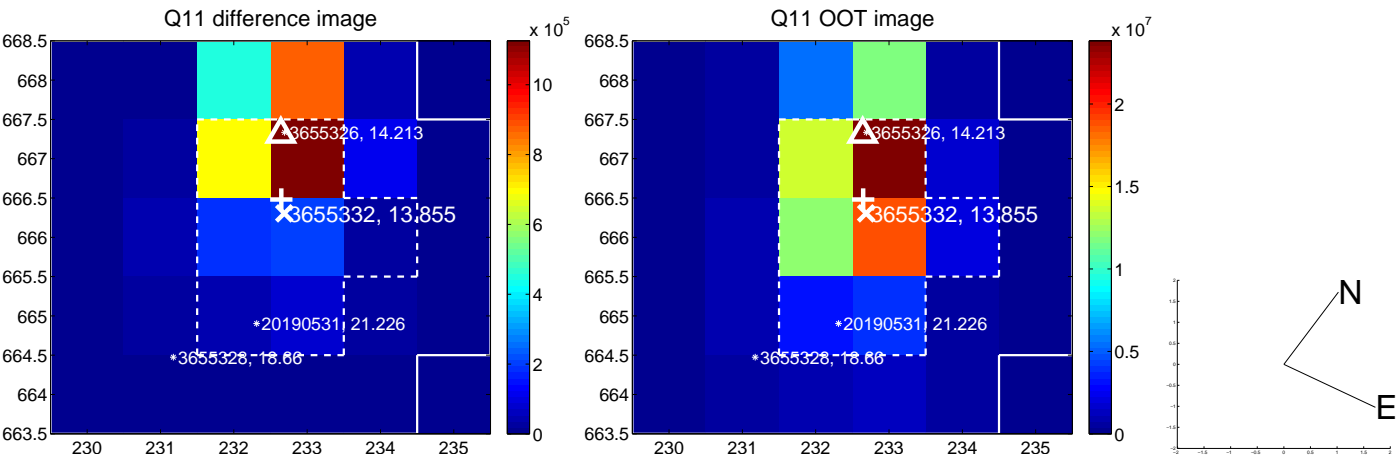
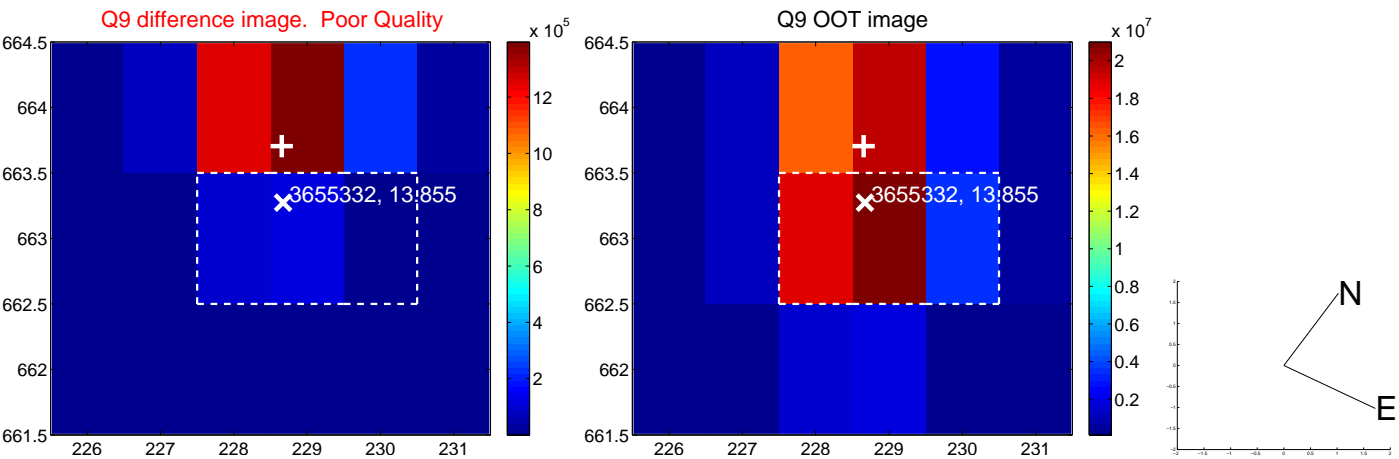
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



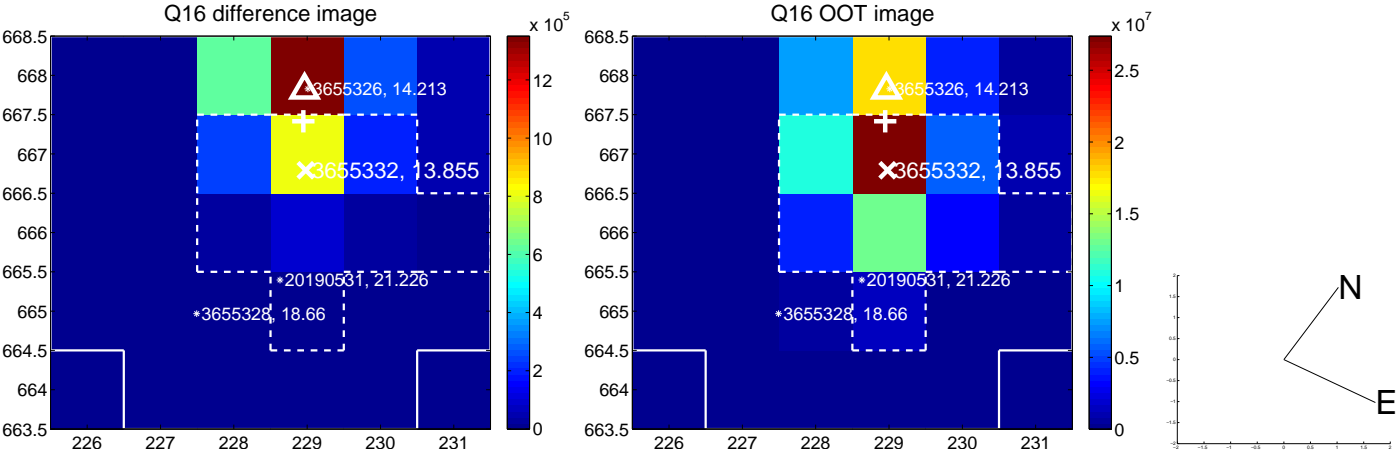
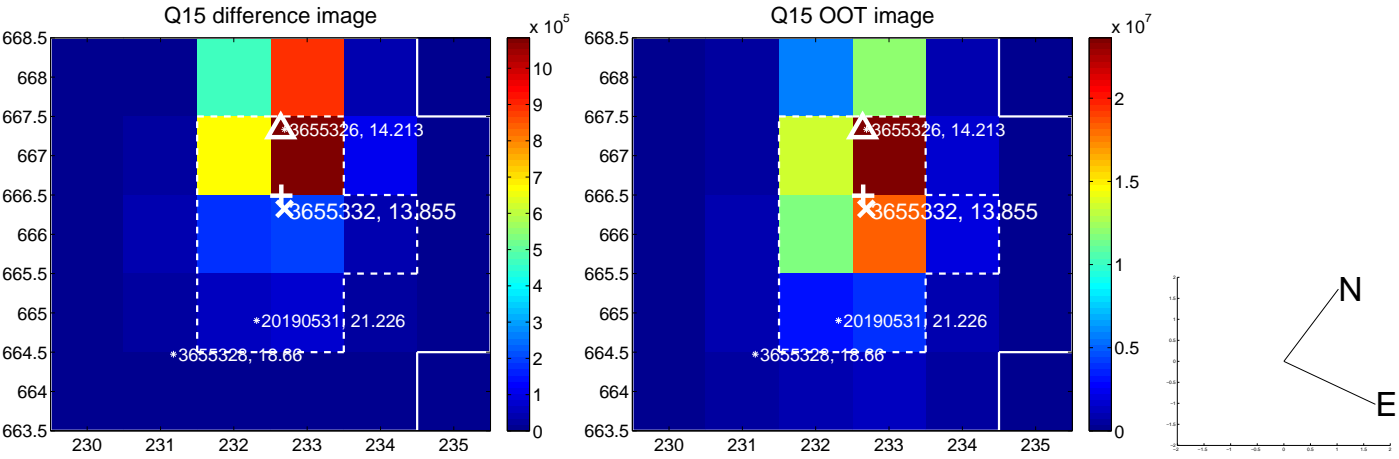
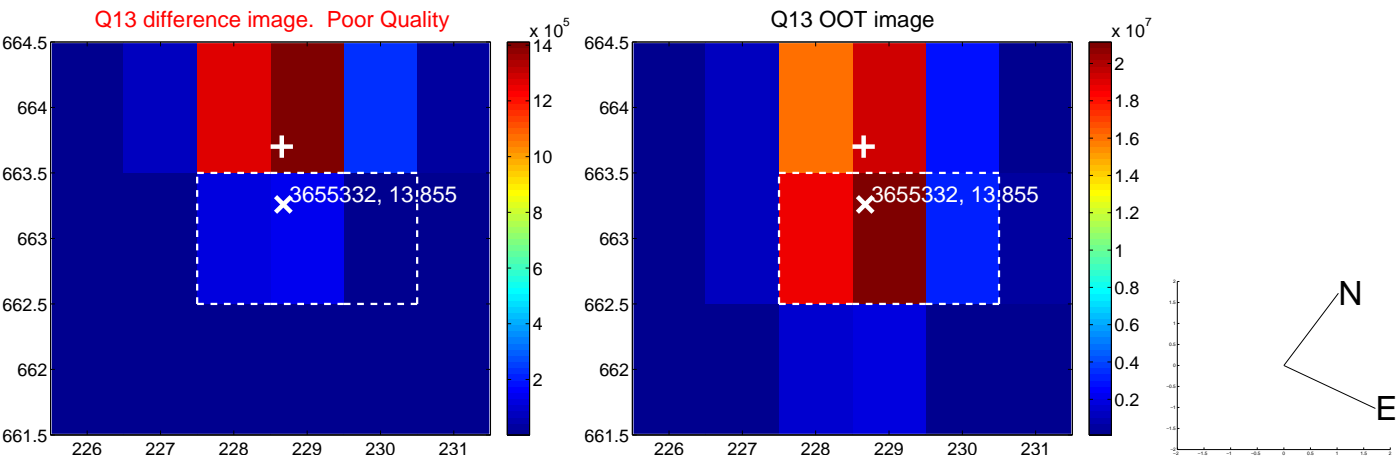
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



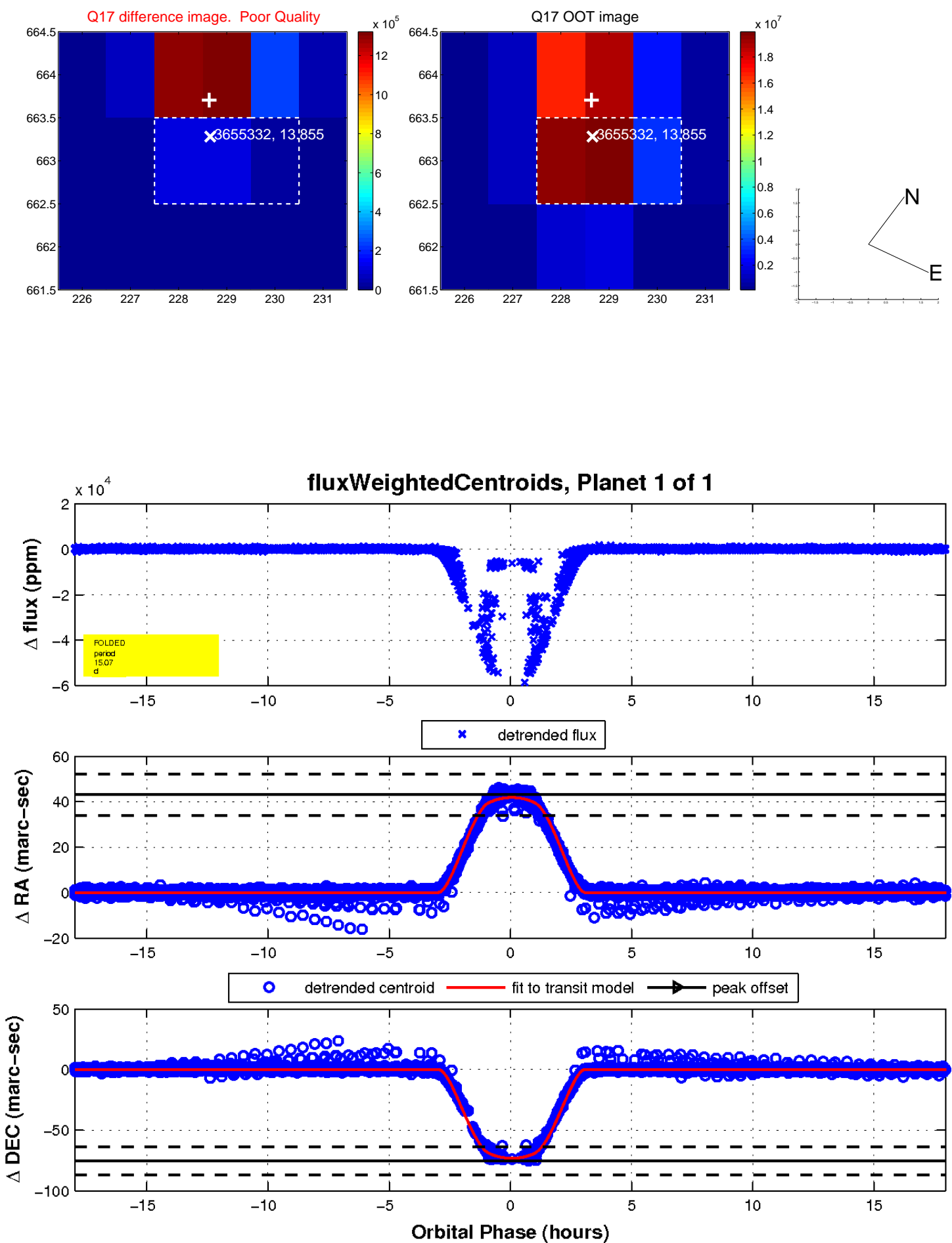
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UKIRT Image

Declination

