

KIC 009143254

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})
009143254-01	OBS	1386.01	1.137520	131.533598	17427.6	2.632	1758.9	1288.1	0.94	5912	15.87	2203.16

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009143254-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—DEEP_V_SHAPED

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.

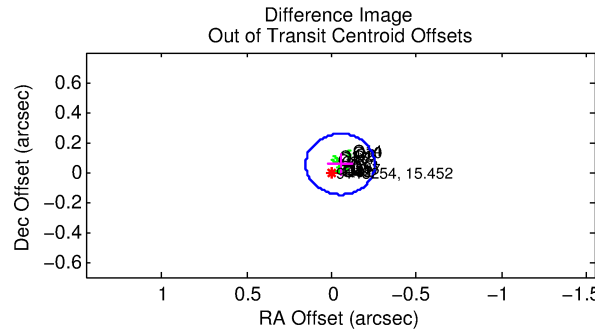
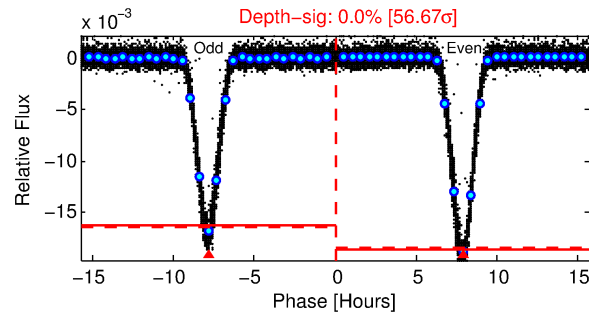
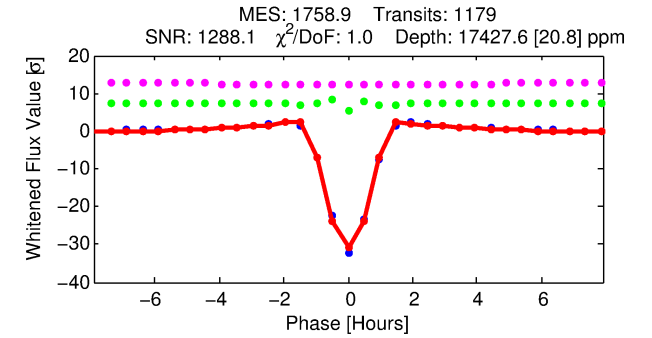
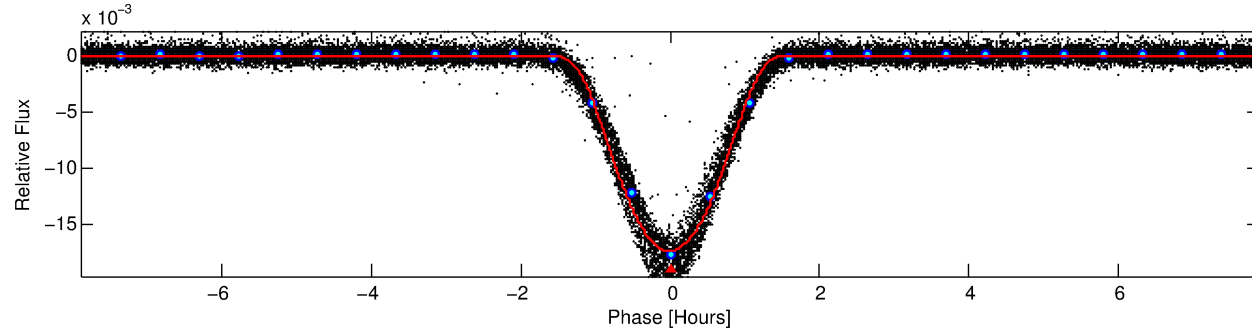
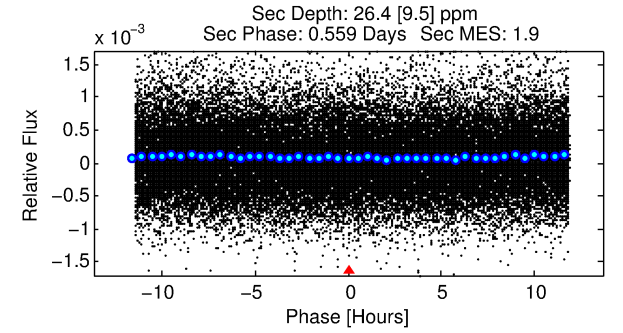
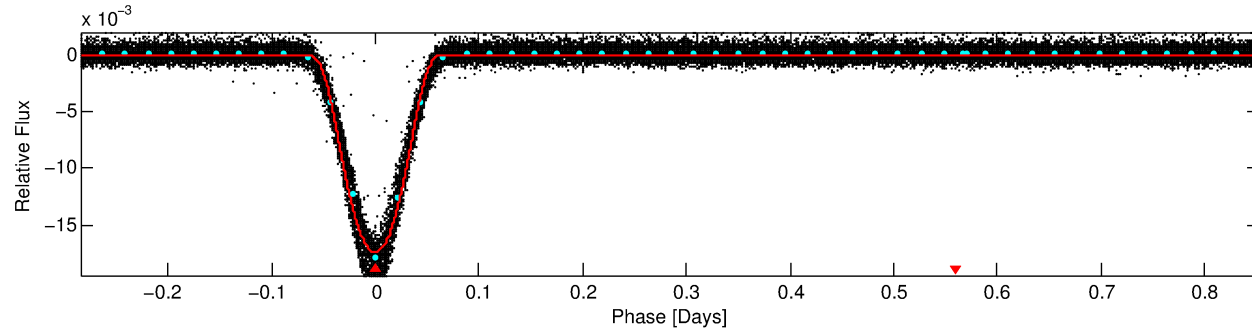
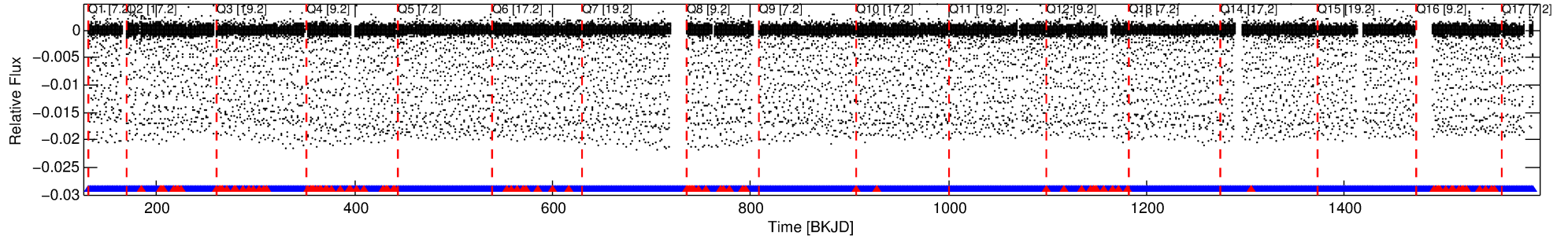
Ephemeris Match Information For 009143254-01

No Significant Match Found

DV One-Page Summary

KIC: 9143254 Candidate: 1 of 1 Period: 1.138 d
KOI: K01386.01 Corr: 0.983

Kp: 15.45 R*: 0.94 Rs Teff: 5912.0 K Logg: 4.47 Fe/H: -0.240



DV Fit Results:

Period = 1.13752 [0.00000] d
Epoch = 131.5336 [0.0000] BKJD
Rp/R* = 0.1552 [0.0013]
a/R* = 2.59 [0.01]
b = 0.90 [0.00]
Seff = 2203.16 [808.79]
Teq = 1747 [160] K
Rp = 15.87 [4.52] Re
a = 0.0209 [0.0050] AU
Ag = 0.03 [0.01] [-77.39σ]
Teff = 1076 [102] K [-3.53σ]

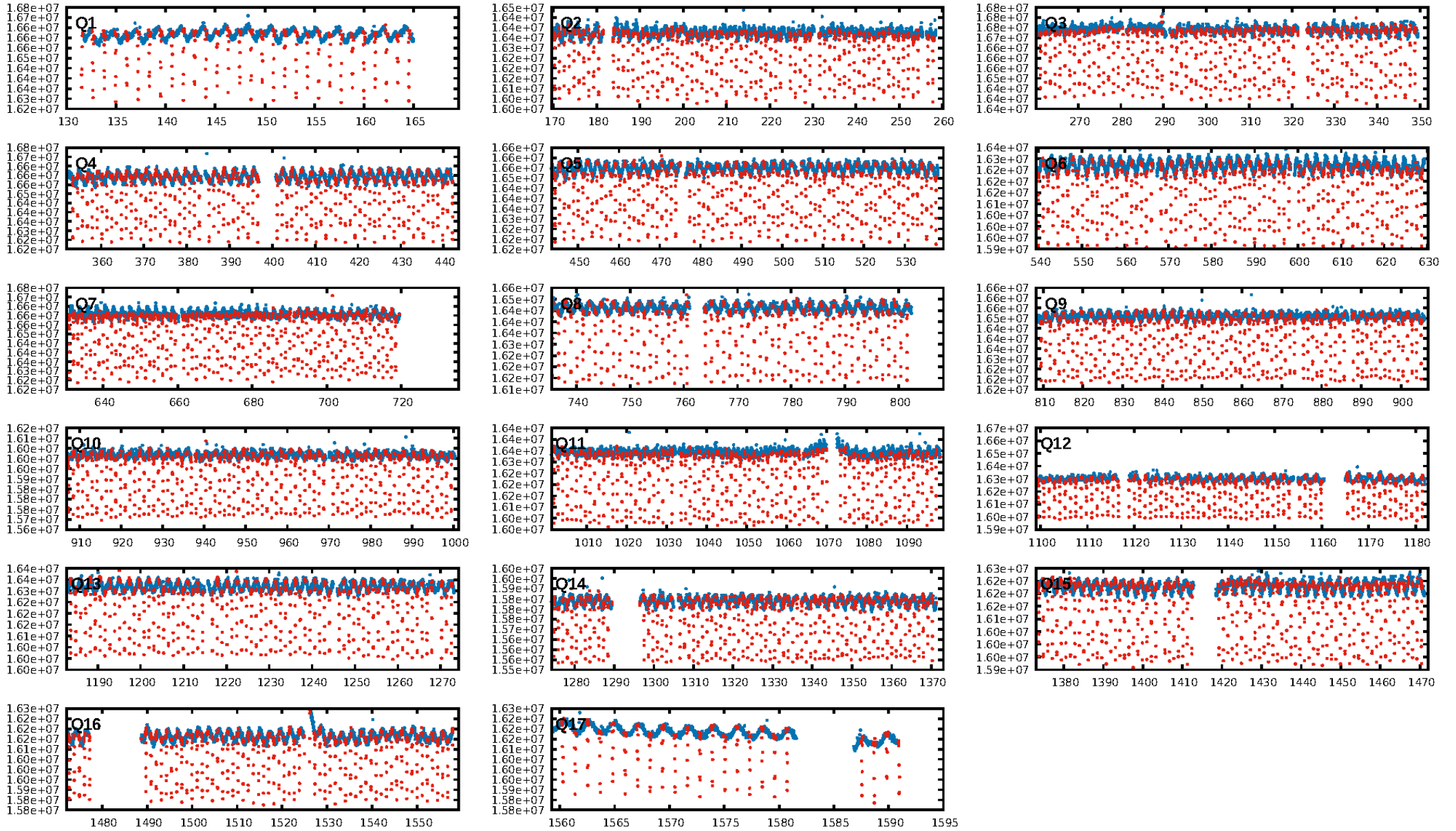
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.92 [1033/1126]
GhostDiagnostic-chr: 20.7
Centroid-sig: 0.0%
Centroid-so: 0.113 arcsec [13.71σ]
OotOffset-rm: 0.073 arcsec [1.07σ]
KicOffset-rm: 0.212 arcsec [3.12σ]
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]

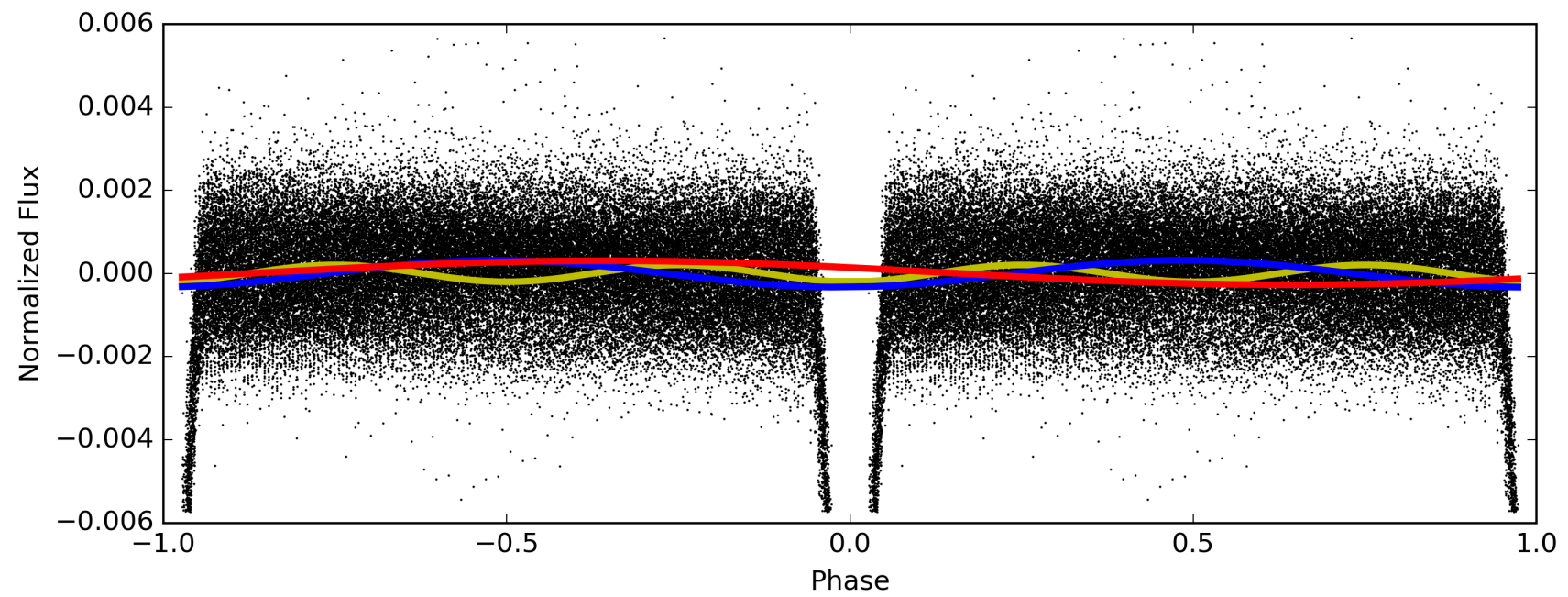
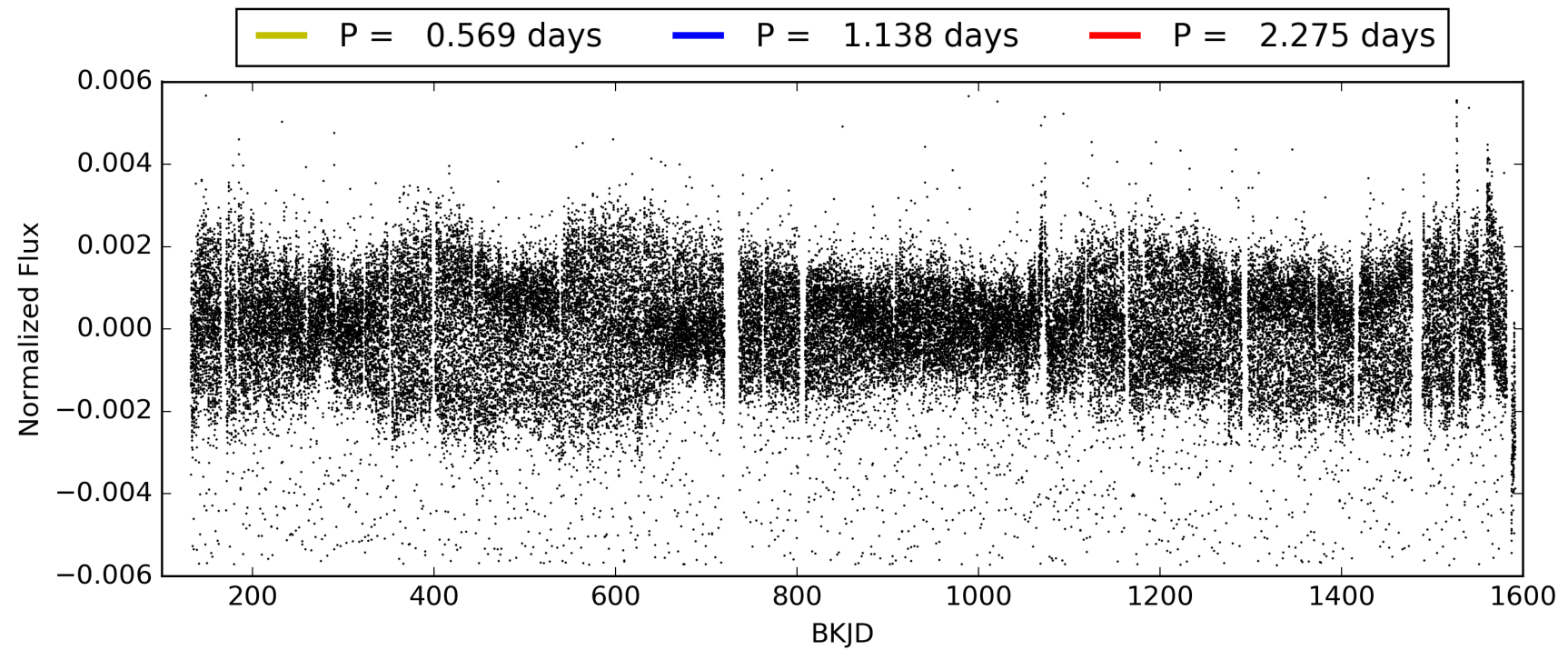
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 14:59:00 Z

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

TCE 009143254-01, PDC Light Curves

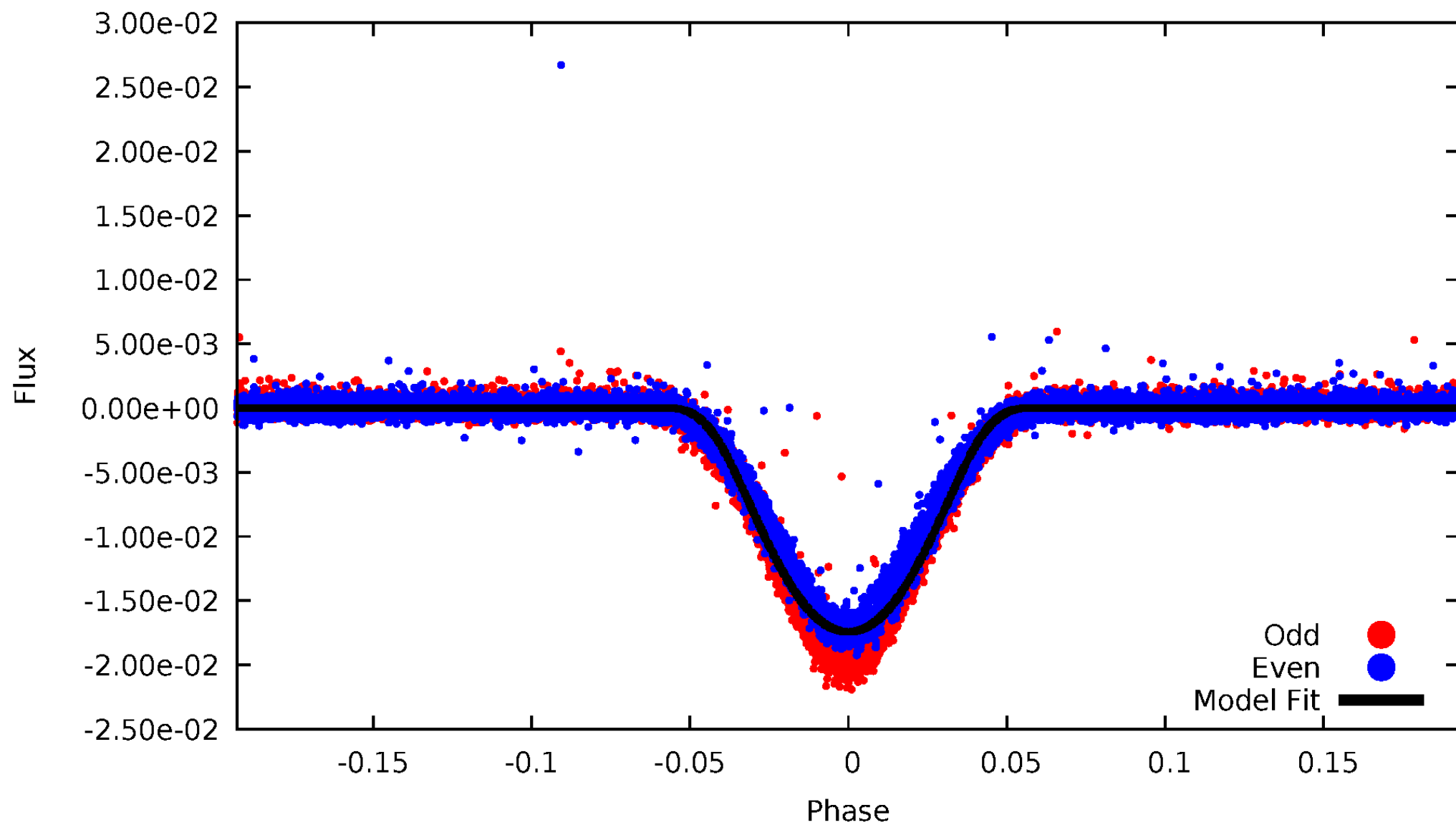


TCE 009143254-01



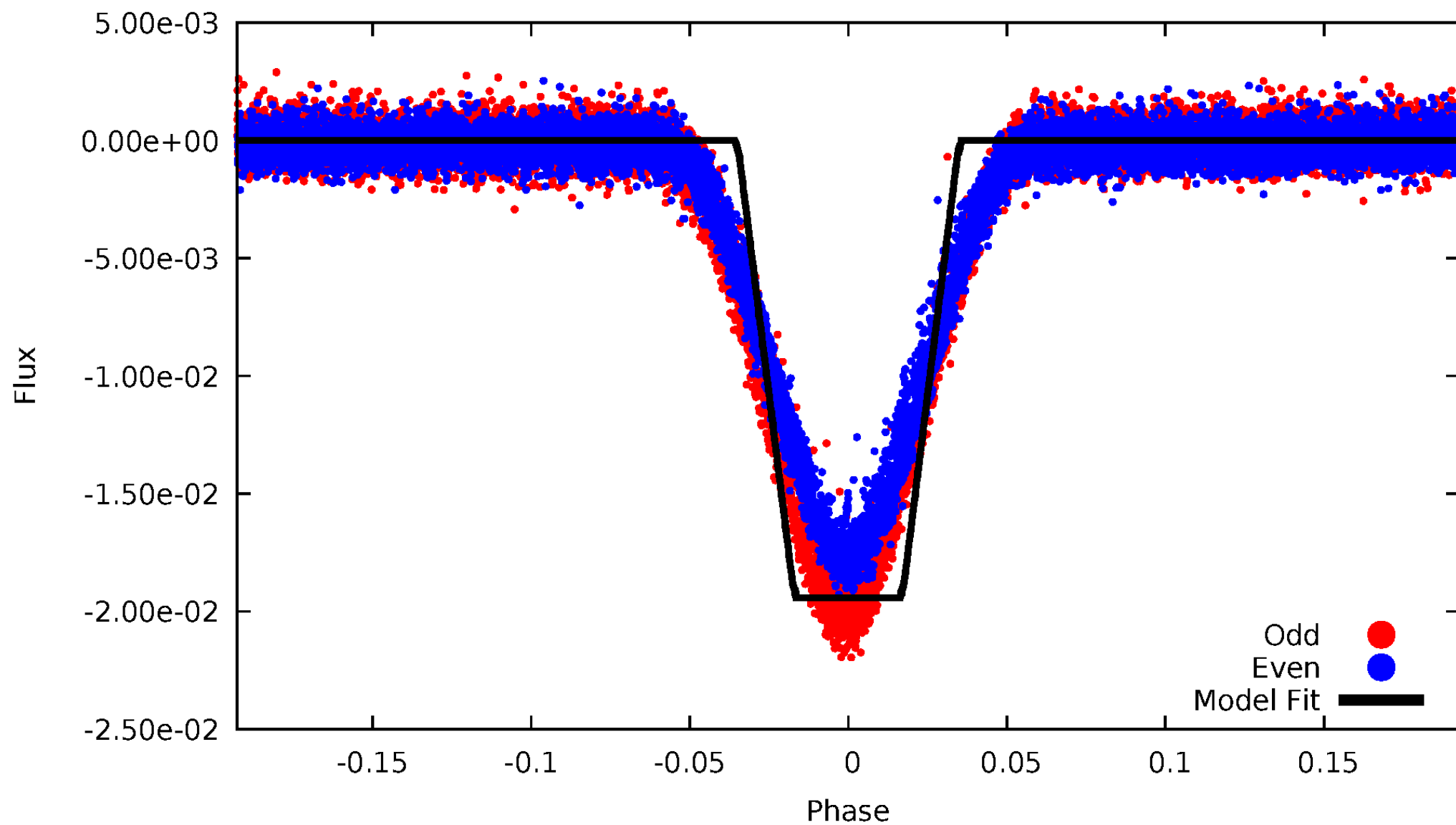
DV Odd/Even

TCE 009143254-01



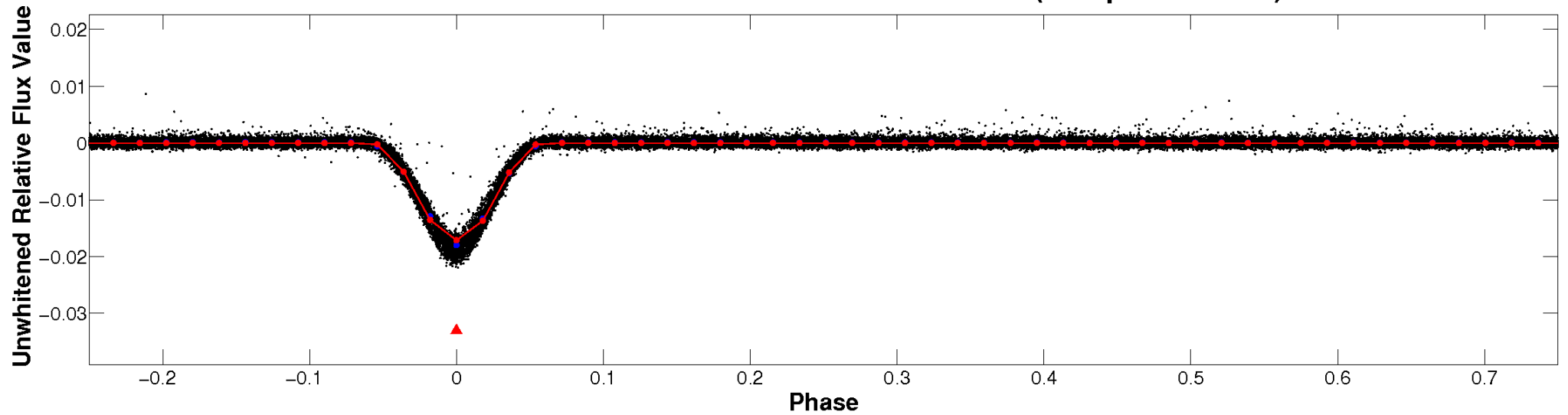
ALT Odd/Even

TCE 009143254-01

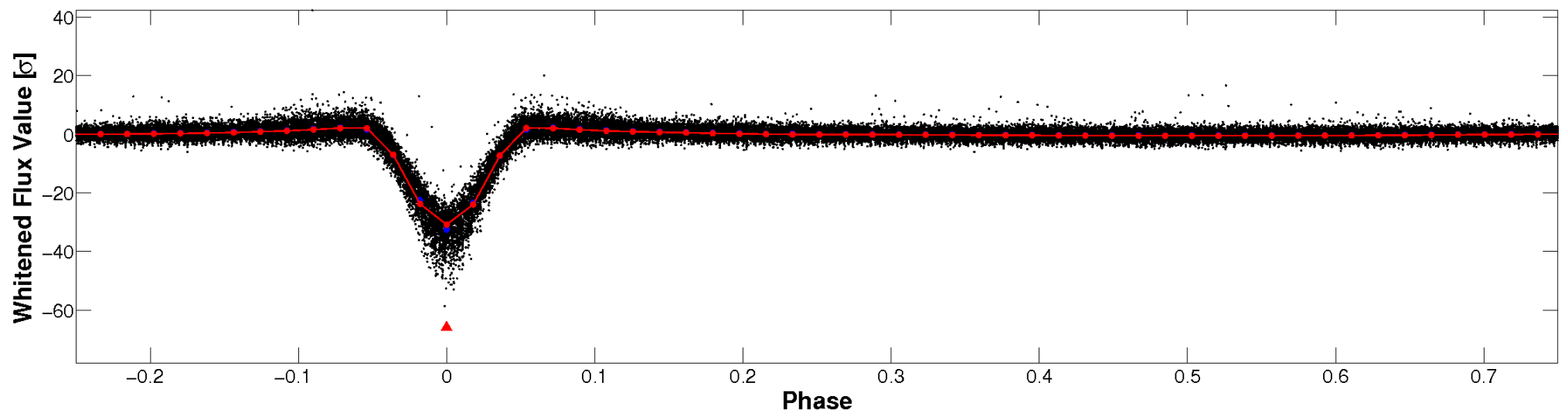


Non-Whitened Vs. Whitened Light Curve

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

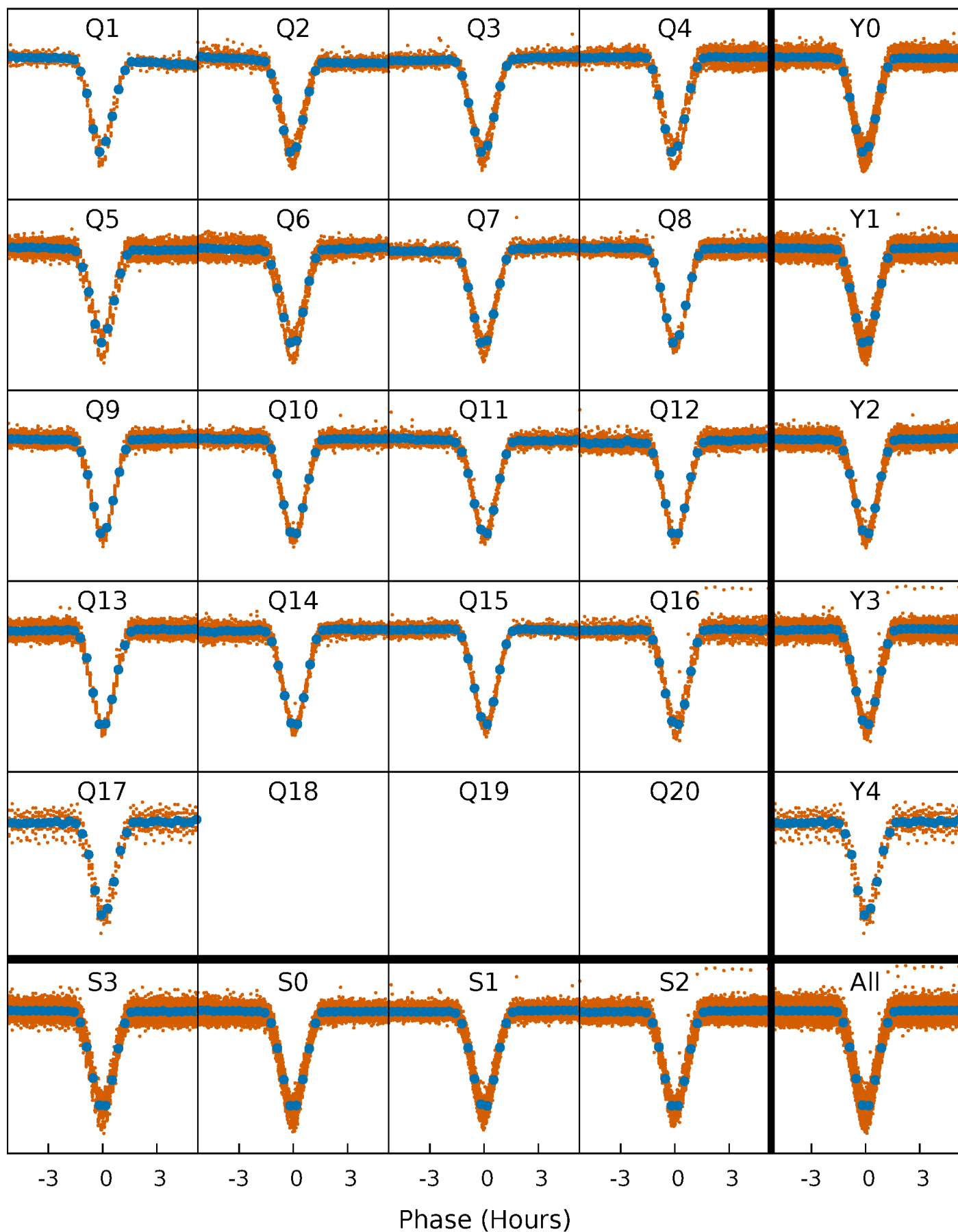


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



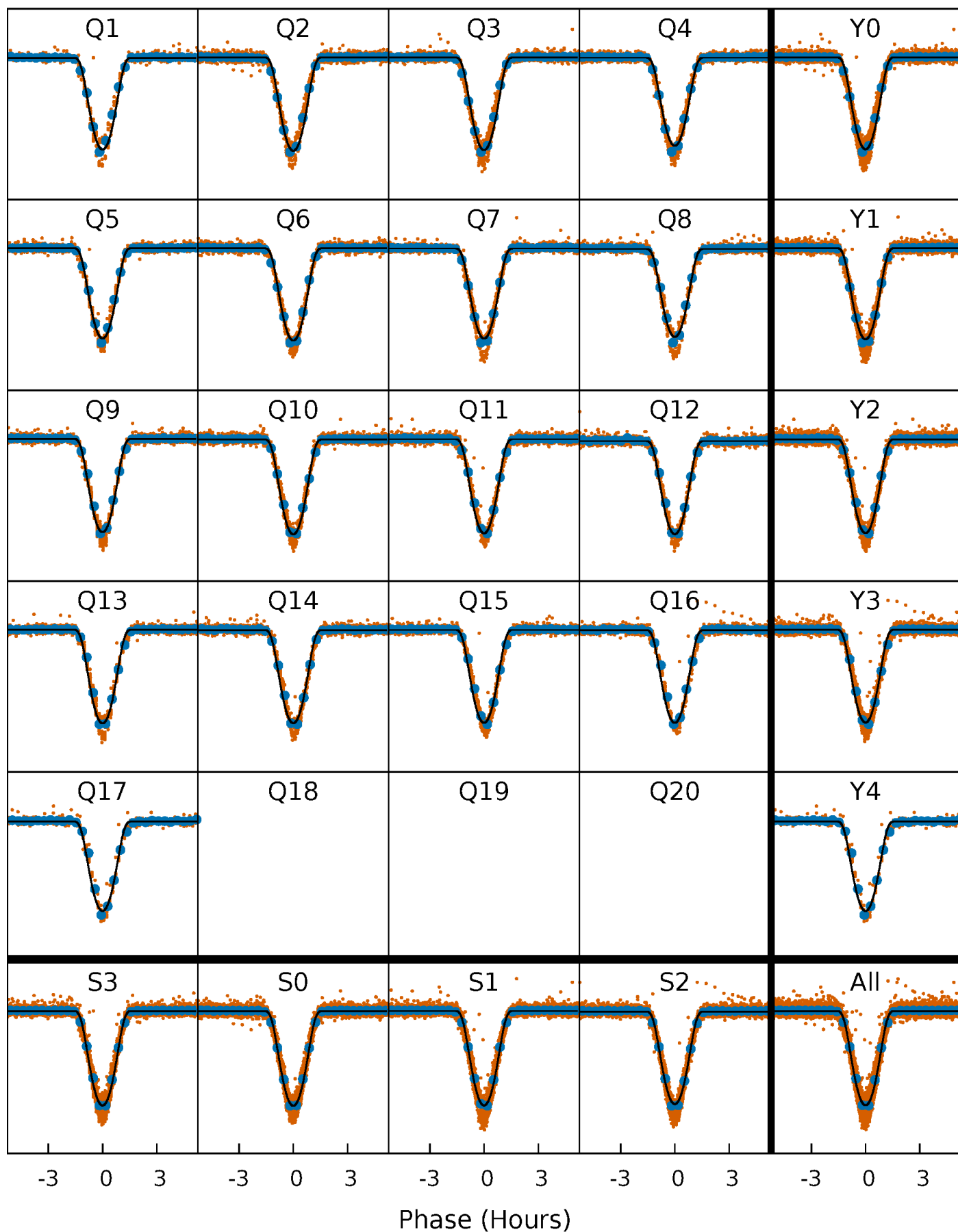
PDC Quarter-Phased Transit Curves

TCE 009143254-01 P= 1.137520 Days $T_0=131.533598$ (BKJD)



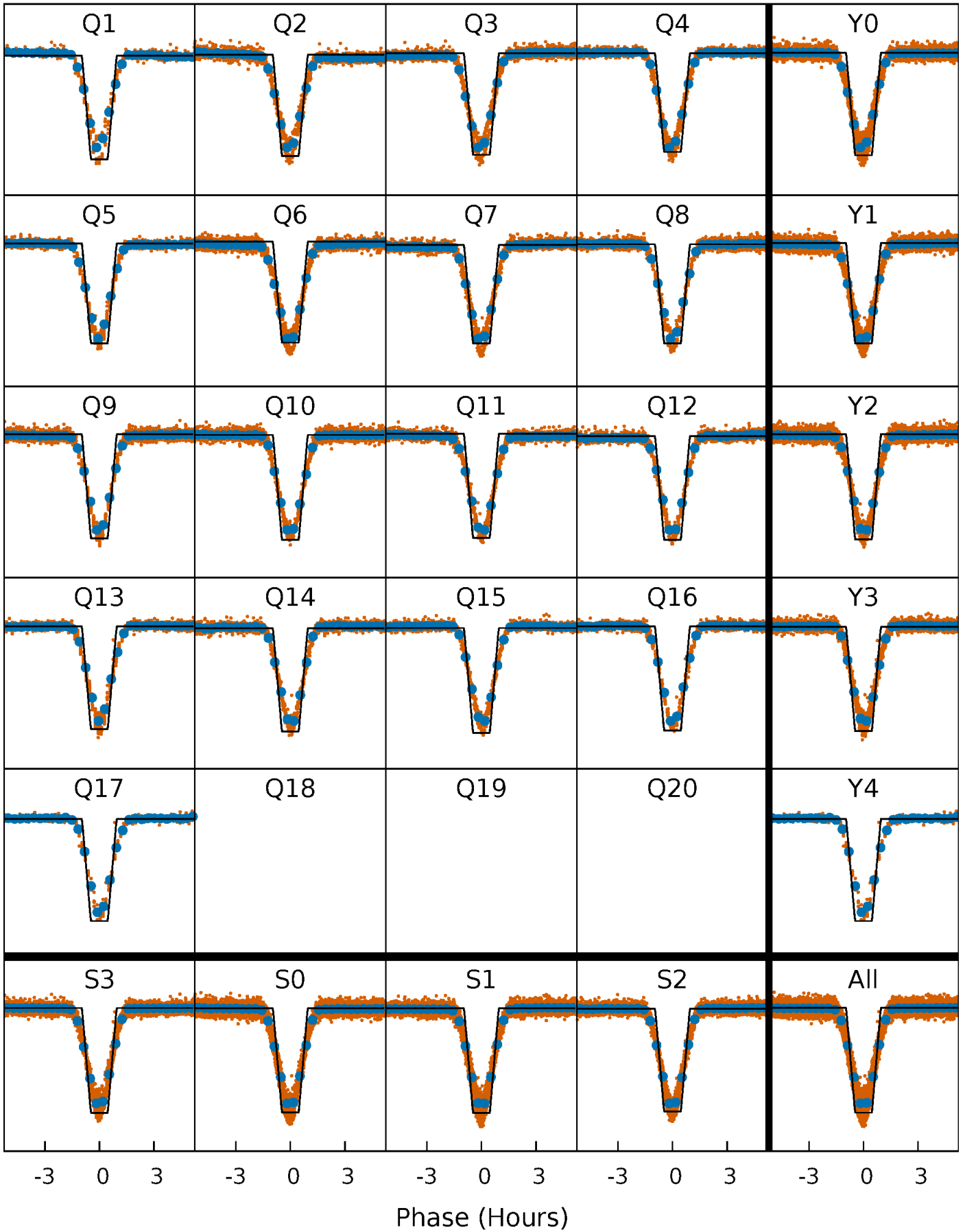
DV Quarter-Phased Transit Curves

TCE 009143254-01 P= 1.137520 Days $T_0=131.533598$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

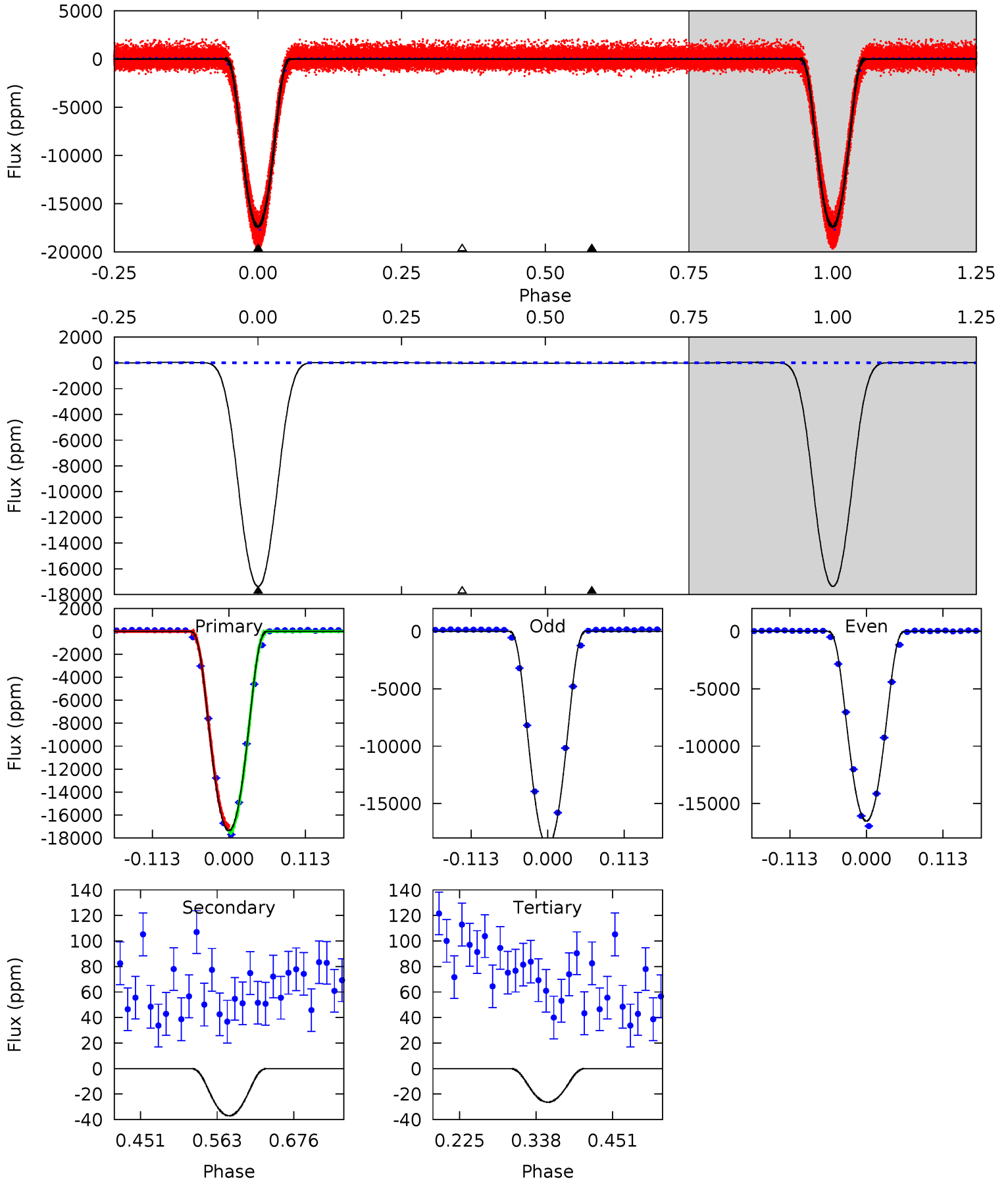
TCE 009143254-01 P= 1.137521 Days $T_0=131.532987$ (BKJD)



DV Model-Shift Uniqueness Test

009143254-01, P = 1.137520 Days, E = 130.396078 Days

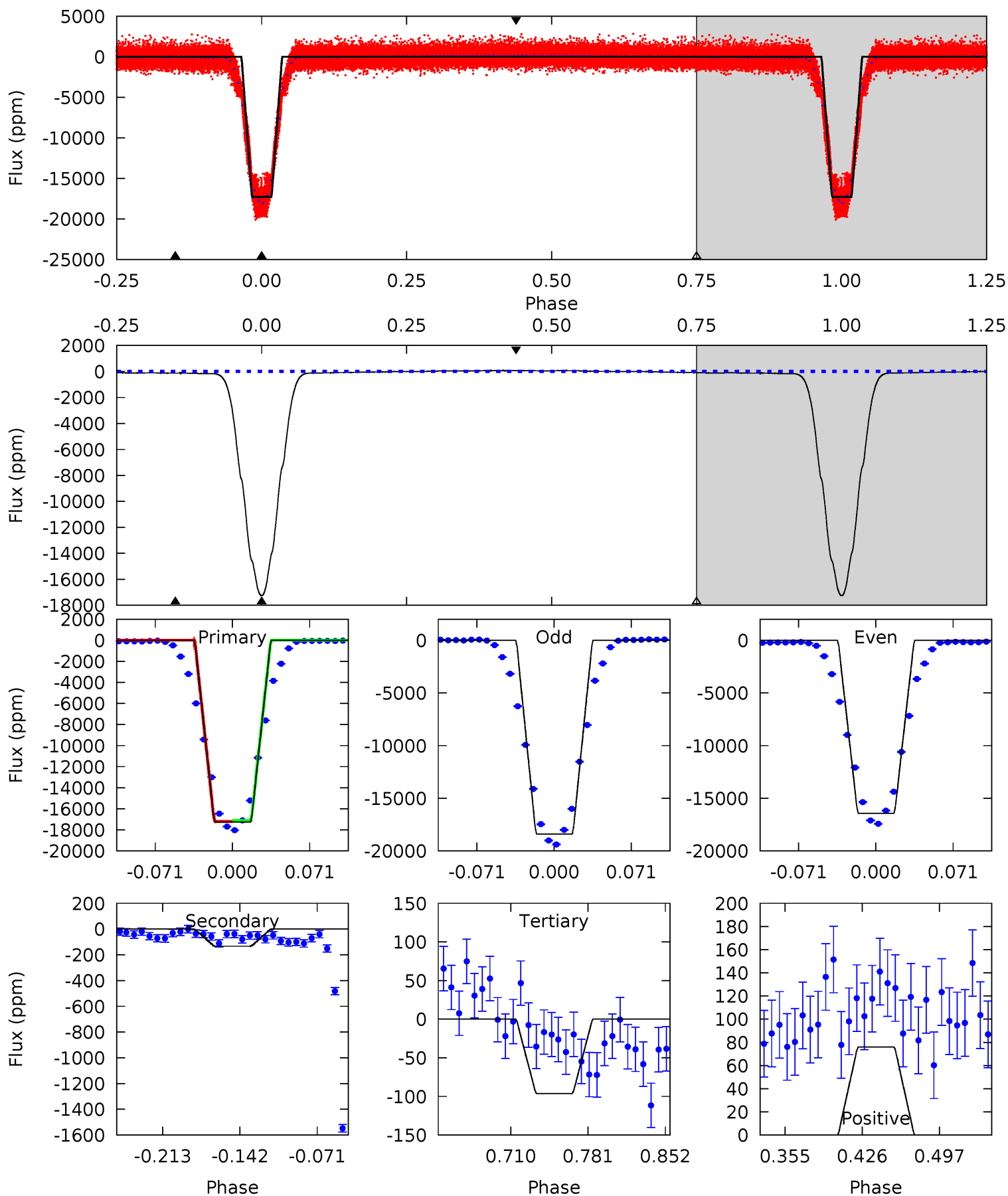
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2973	6.33	4.51	0	4.54	1.59	3.89	2969	2973	1.82	6.33	189.4	1.01	0.00	40.8



Alt Model-Shift Uniqueness Test

009143254-01, P = 1.137521 Days, E = 130.395466 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1674	12.9	9.33	7.38	4.64	1.81	6.31	1664	1666	3.61	5.56	95.5	1.00	0.00	0



Stellar Parameters For KIC 009143254

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5912^{+160}_{-178}	$4.467^{+0.081}_{-0.189}$	$-0.240^{+0.300}_{-0.300}$	$0.937^{+0.267}_{-0.114}$	$0.939^{+0.119}_{-0.107}$	$1.609^{+0.582}_{-0.833}$
	+3%/-3%	+2%/-4%	+125%/-125%	+28%/-12%	+13%/-11%	+36%/-52%
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 009143254-01 / KOI 1386.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-37 ± 6	$16.25^{+2.44}_{-1.42}$	2482^{+161}_{-134}	-2742^{+85}_{-104}	$0.032^{+0.009}_{-0.008}$
Alt.	-133 ± 10	$14.28^{+2.39}_{-1.11}$	2460^{+182}_{-134}	-2531^{+128}_{-164}	$0.150^{+0.033}_{-0.033}$

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

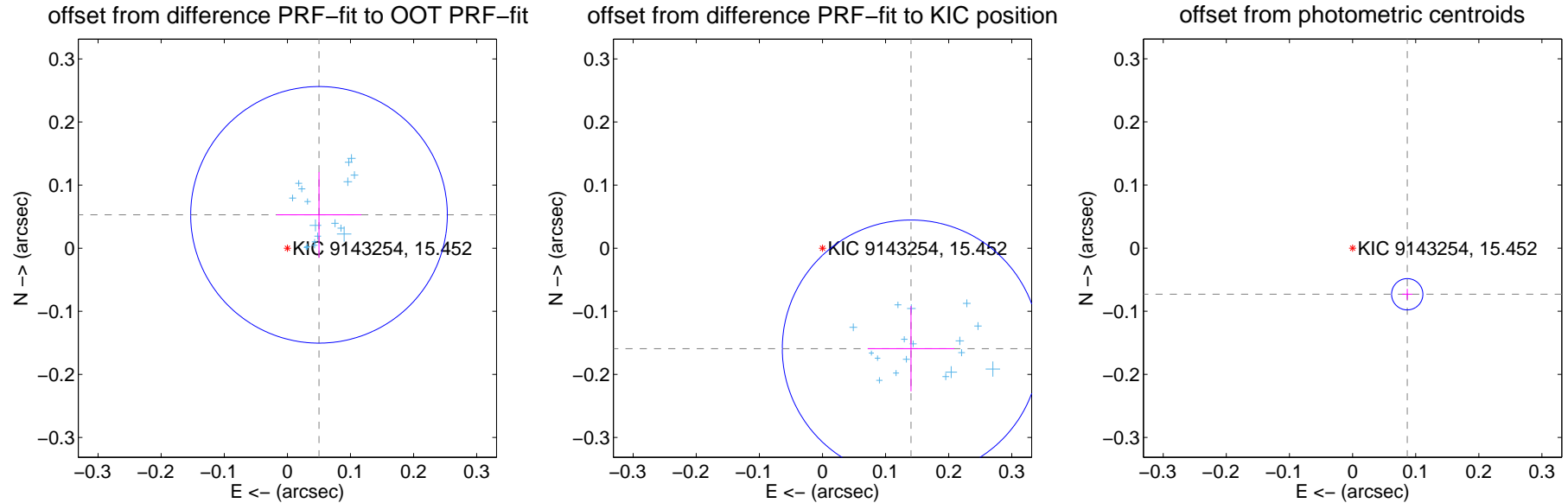
DV Centroid Data

Supplemental centroid analysis for 009143254-01. Kepler magnitude: 15.45. Transit SNR 1288.13

There are 17 quarters with good PRF difference image offsets

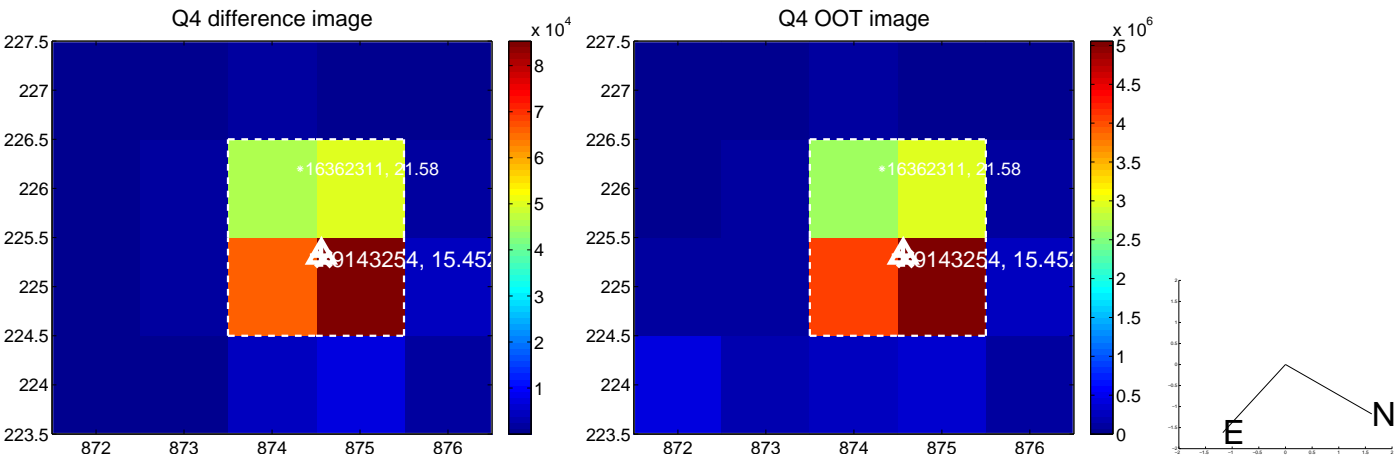
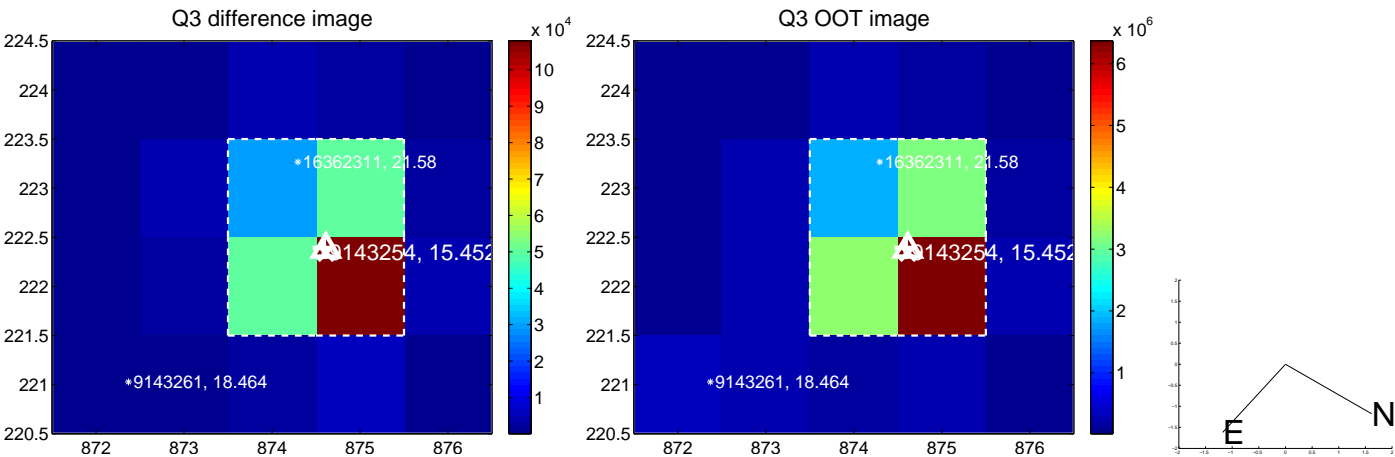
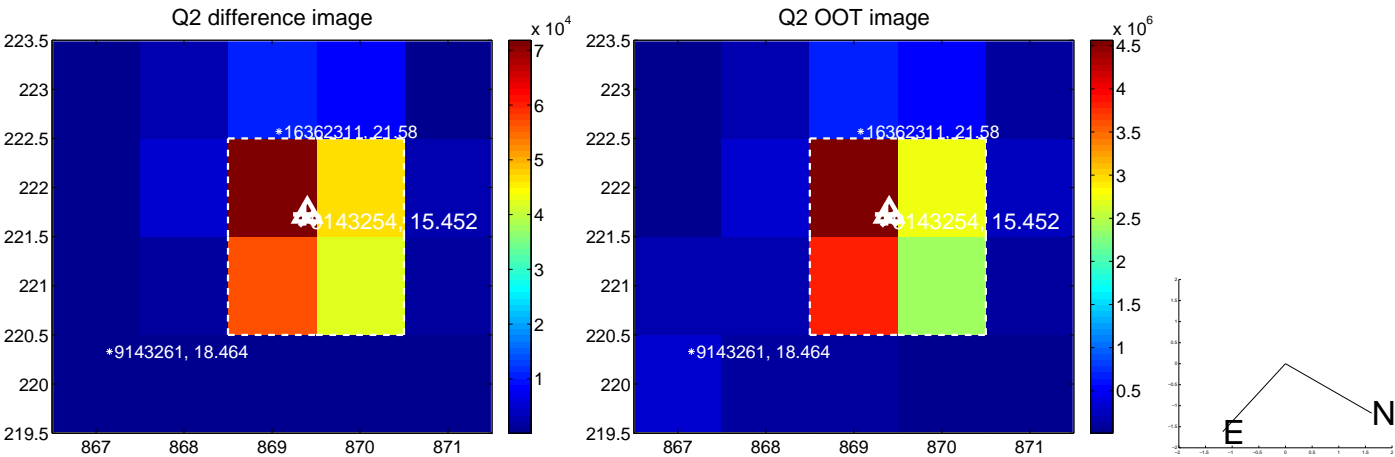
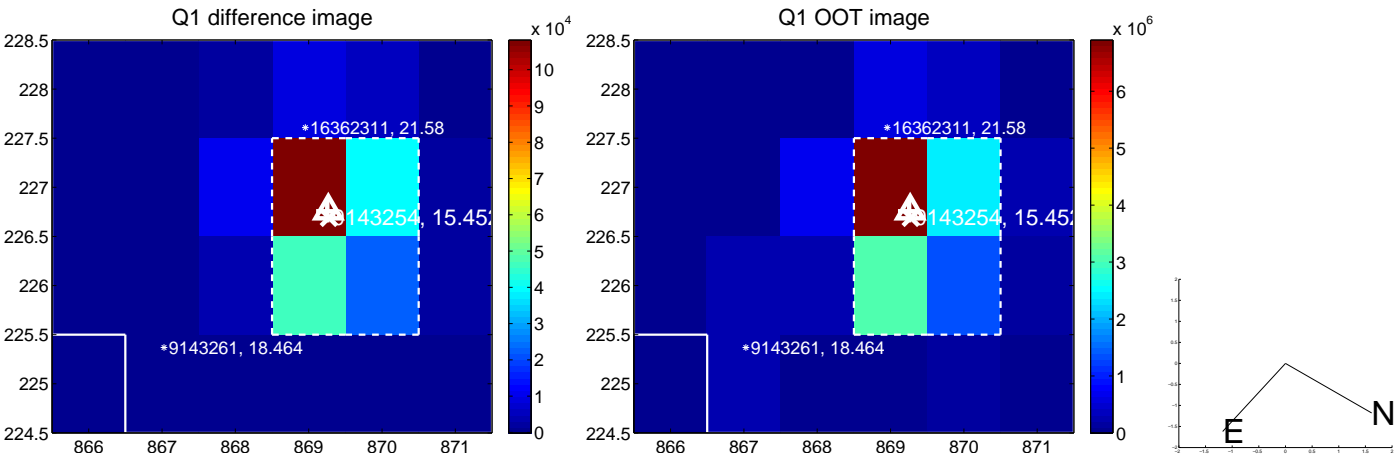
The direct PRF centroid is offset from the target star catalog position by about 0.28 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.073 ± 0.068	1.07	-0.050 ± 0.067	0.053 ± 0.068
PRF-fit source offset from KIC position	0.212 ± 0.068	3.12	-0.140 ± 0.069	-0.159 ± 0.068
photometric centroid source offset	0.11 ± 0.01	13.71	-0.09 ± 0.01	-0.07 ± 0.01

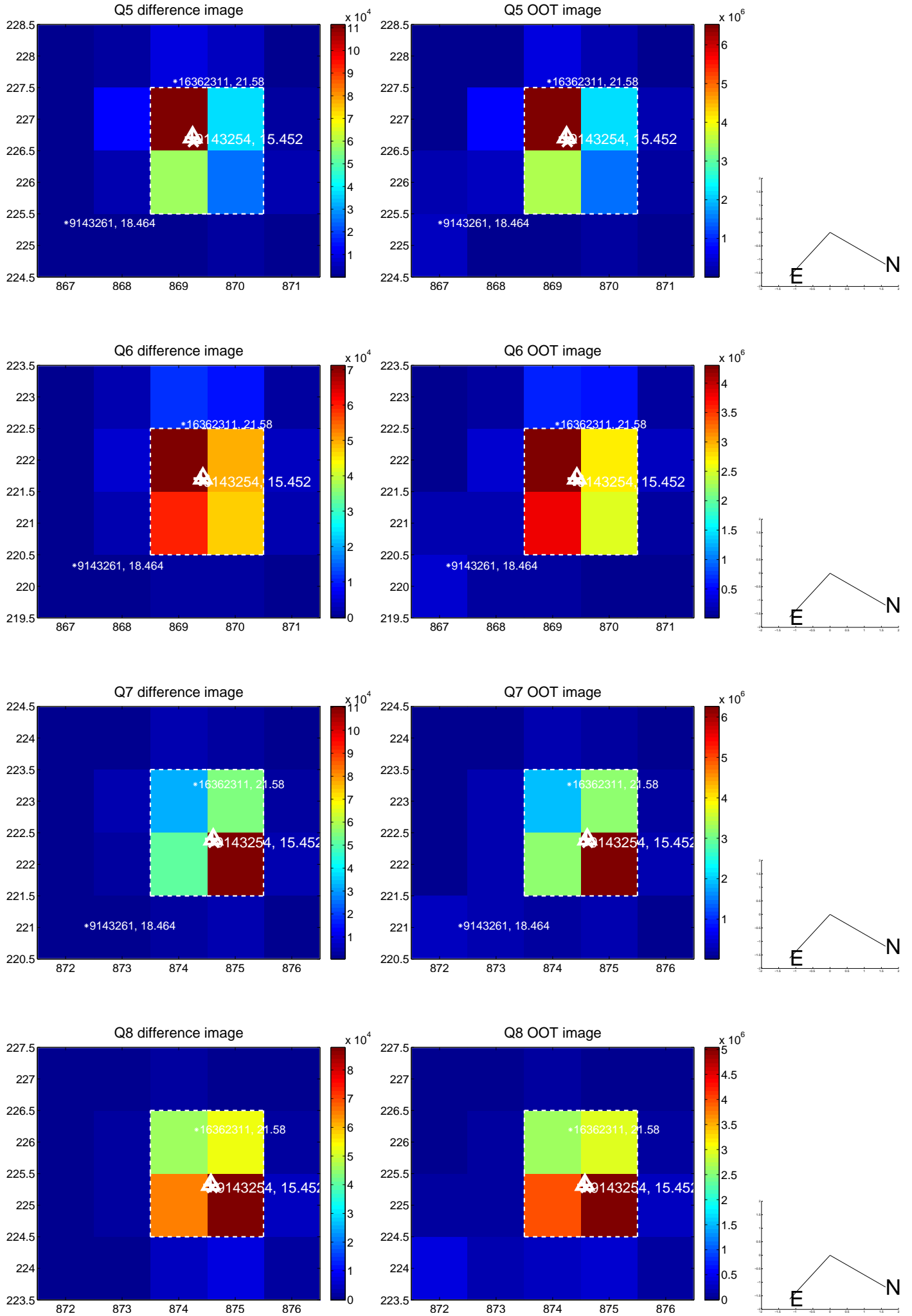


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

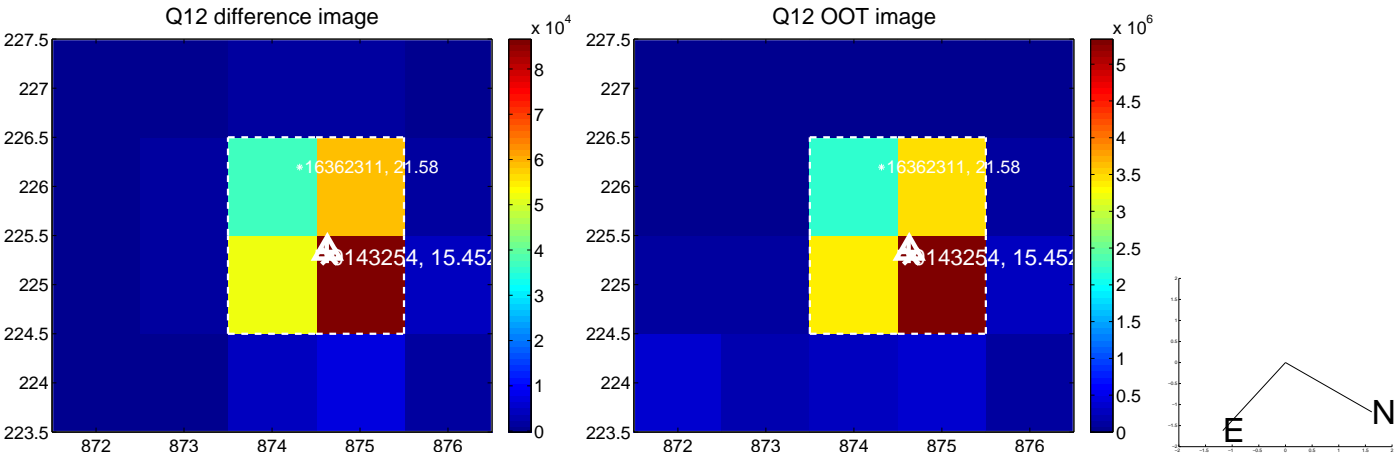
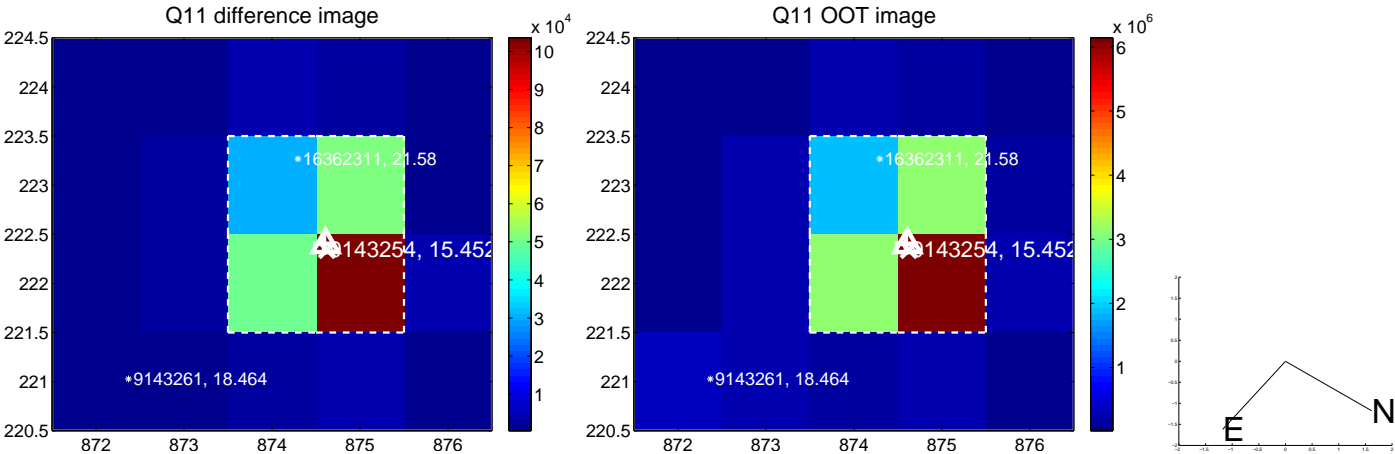
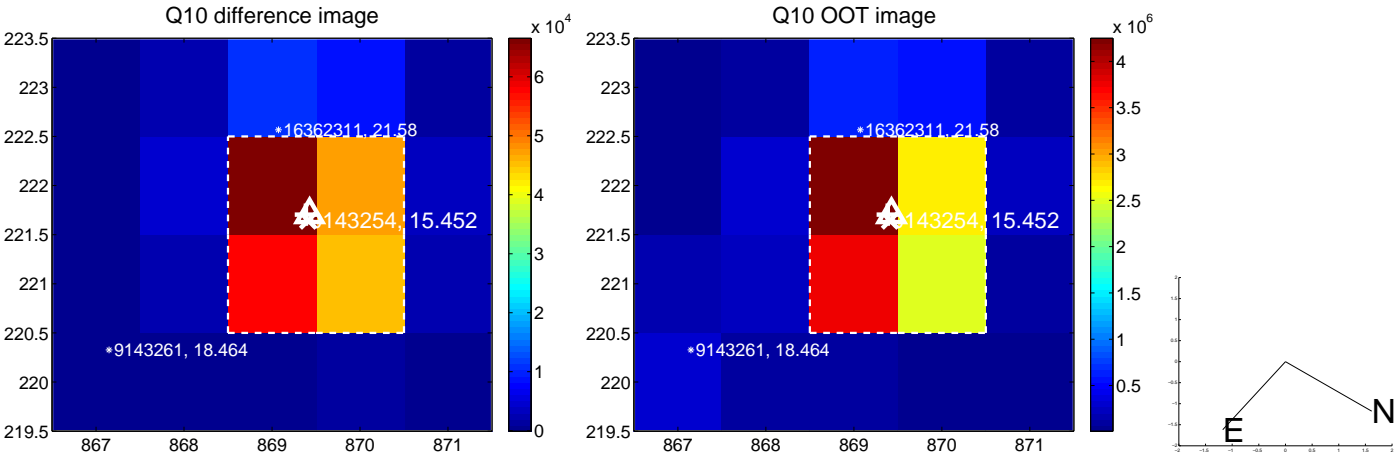
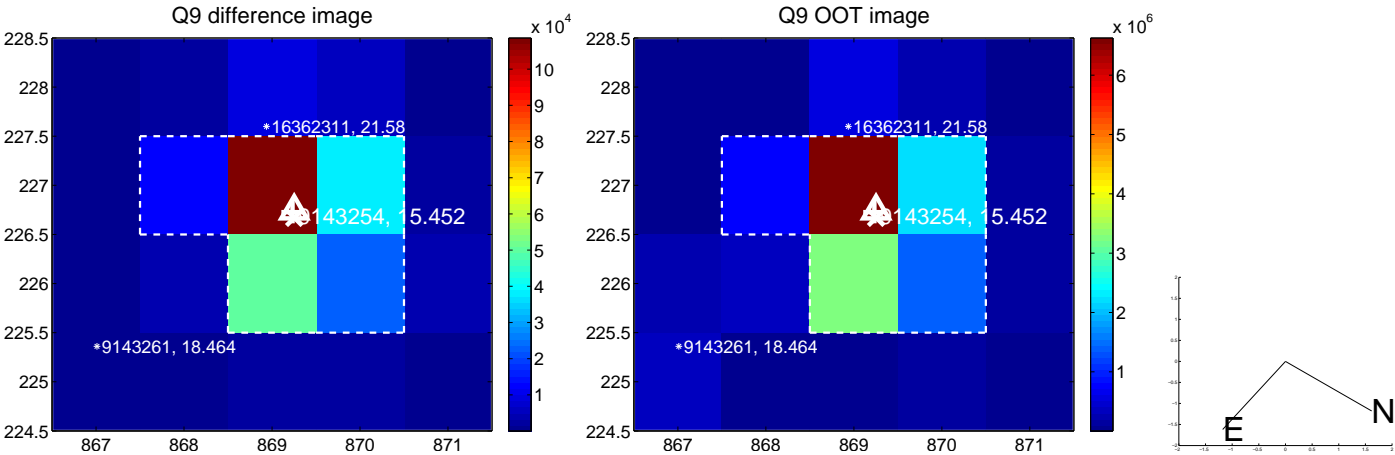
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



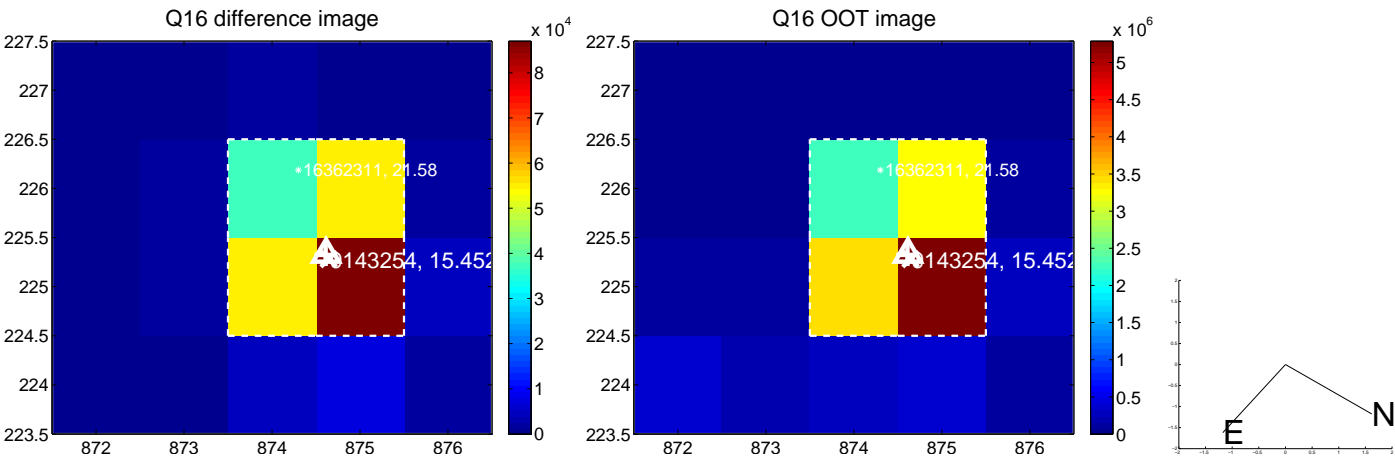
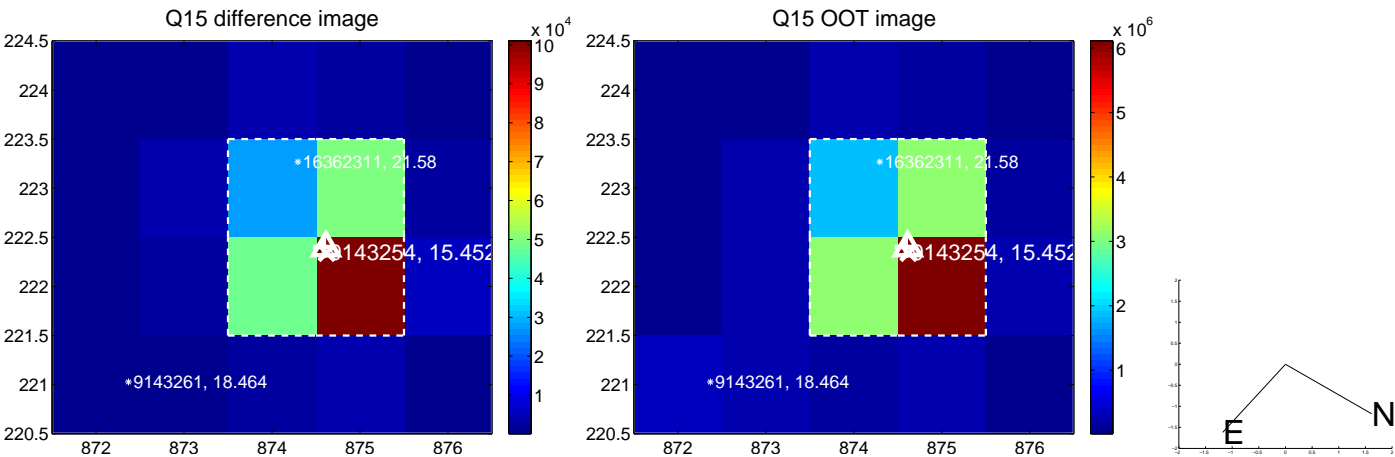
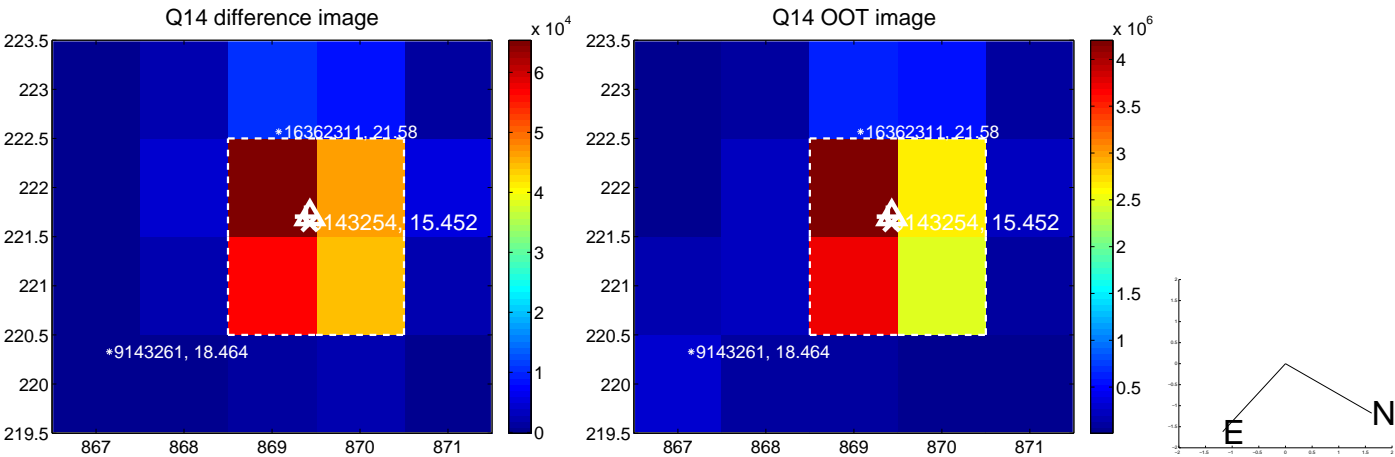
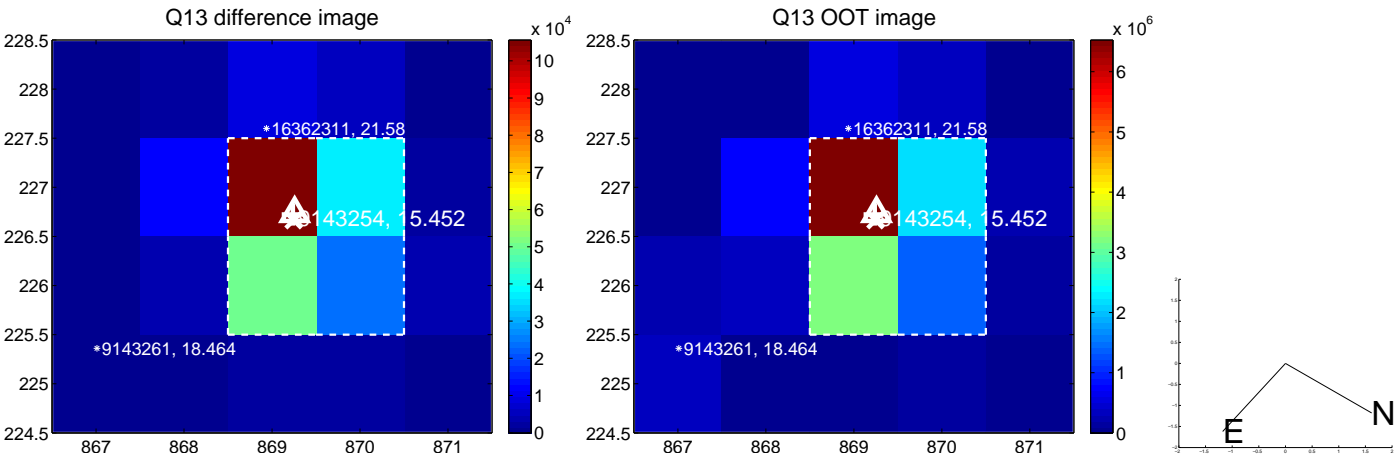
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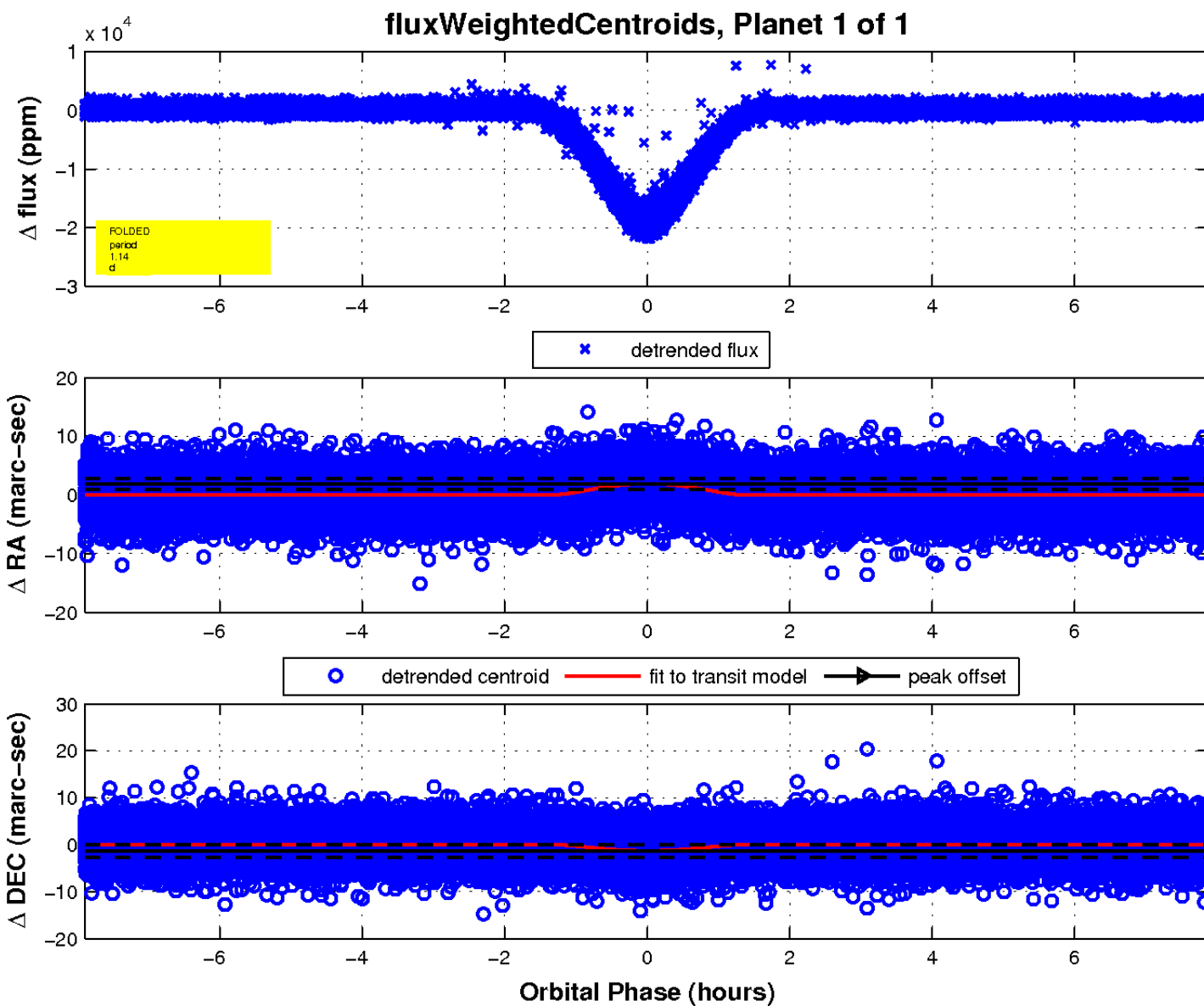
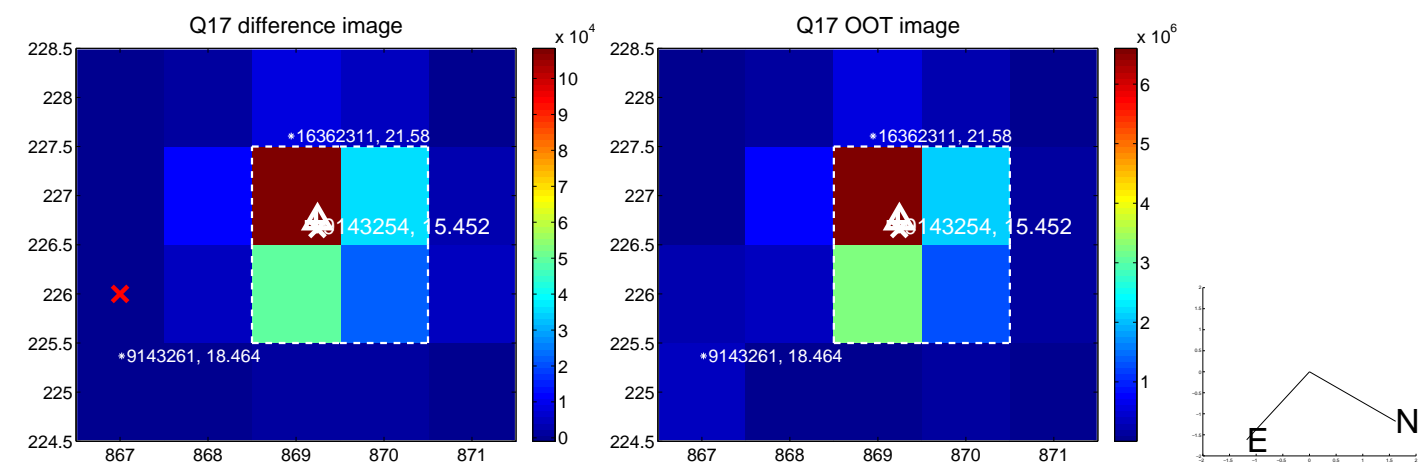
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UKIRT Image

Declination

