

KIC 009592575

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})
009592575-01	OBS	3565.01	2.637574	131.575528	174919.0	5.974	6294.3	4130.4	0.95	5639	60.31	563.41

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009592575-01	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.

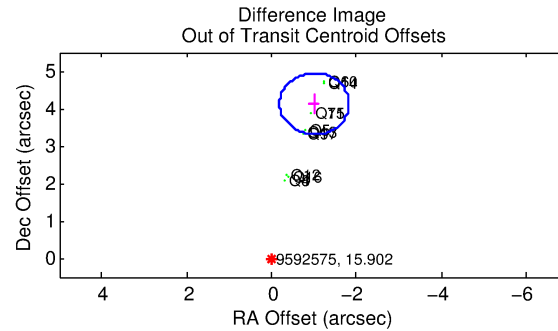
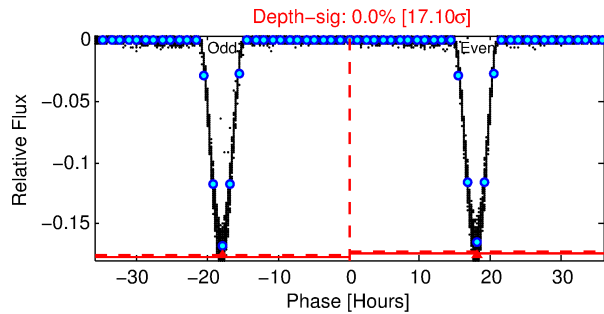
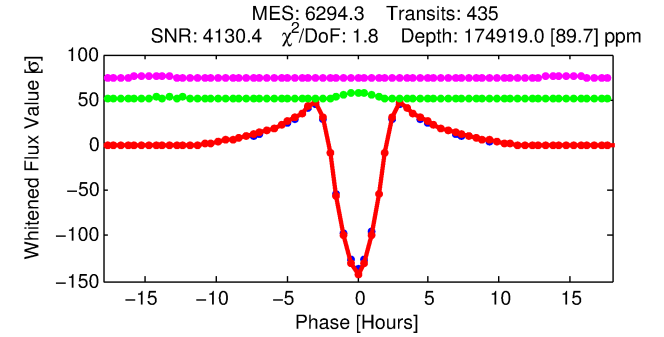
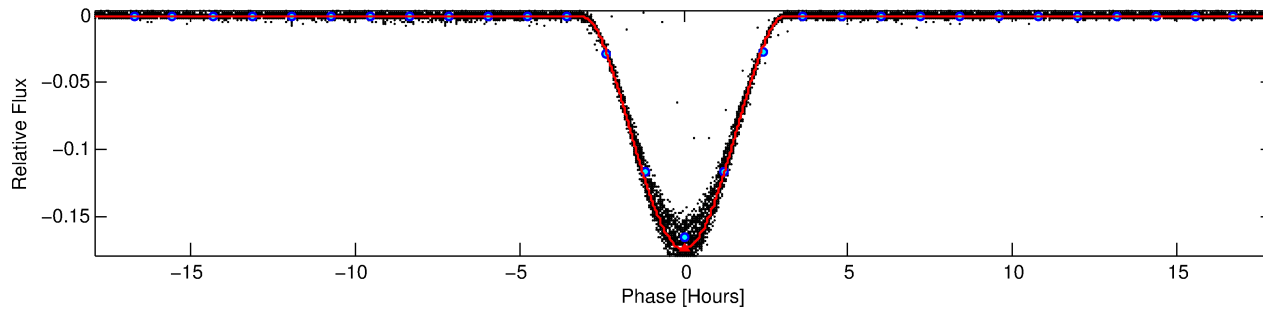
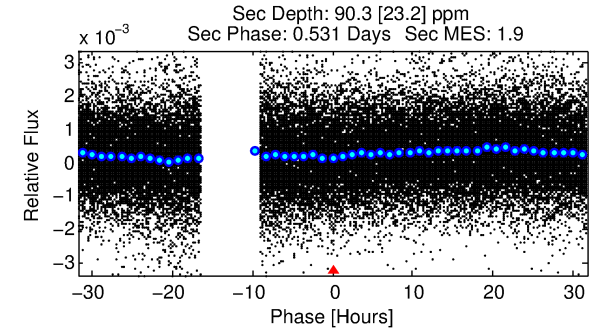
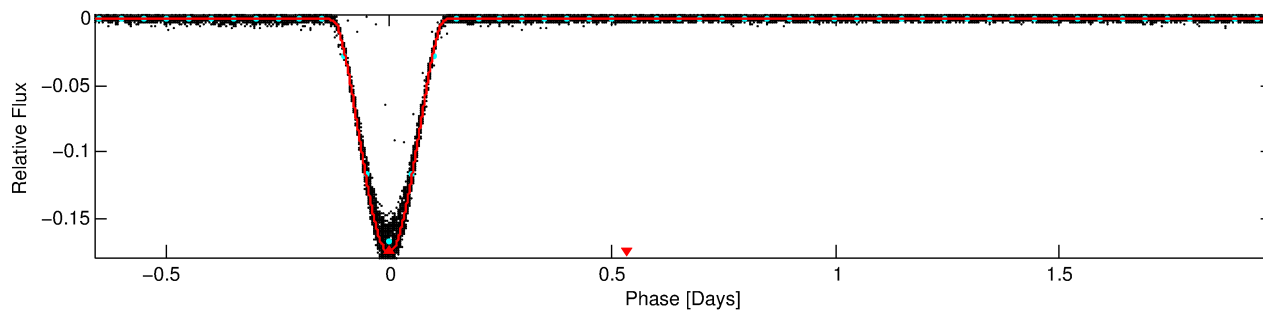
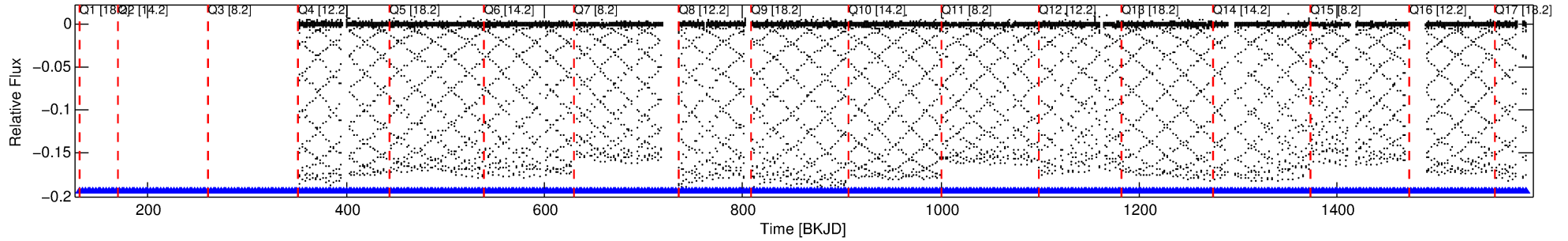
Ephemeris Match Information For 009592575-01

No Significant Match Found

DV One-Page Summary

KIC: 9592575 Candidate: 1 of 1 Period: 2.638 d
KOI: K03565.01 Corr: 0.997

Kp: 15.90 R*: 0.95 Rs Teff: 5639.0 K Logg: 4.51 Fe/H: 0.360



DV Fit Results:

Period = 2.63757 [0.00000] d
Epoch = 131.5755 [0.0000] BKJD
Rp/R* = 0.5799 [0.0136]
a/R* = 4.52 [0.02]
b = 0.90 [0.02]
Seff = 563.41 [209.87]
Teq = 1242 [116] K
Rp = 60.31 [16.77] Re
a = 0.0382 [0.0090] AU
Ag = 0.02 [0.01] [-112.97σ]
Teffp = 722 [53] K [-4.09σ]

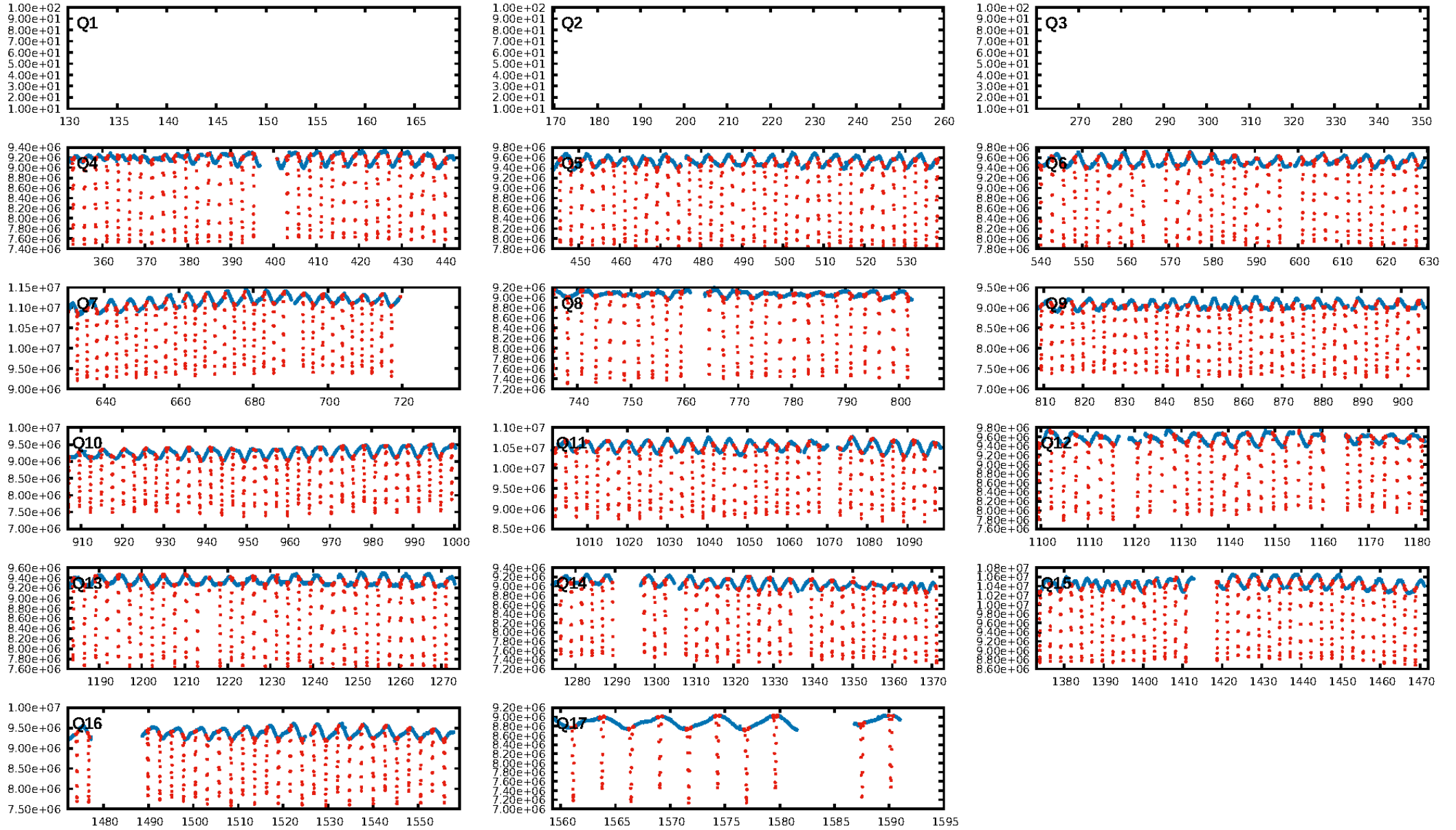
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [425/425]
GhostDiagnostic-chr: 2.017
Centroid-sig: 0.0%
Centroid-so: 1.635 arcsec [1101.23σ]
OotOffset-rm: 4.249 arcsec [15.57σ]
KicOffset-rm: 0.210 arcsec [3.13σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

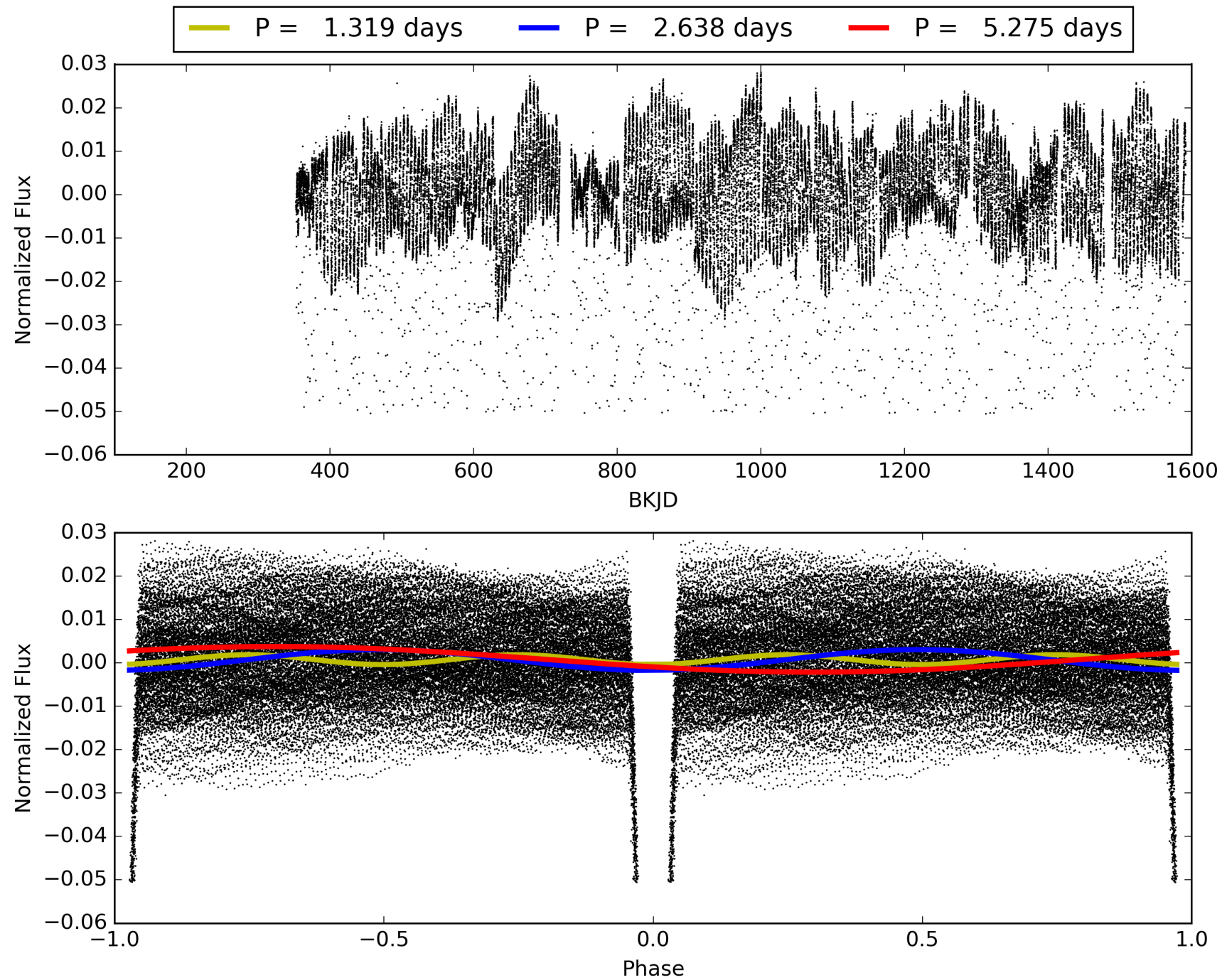
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:24:20 Z

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

TCE 009592575-01, PDC Light Curves

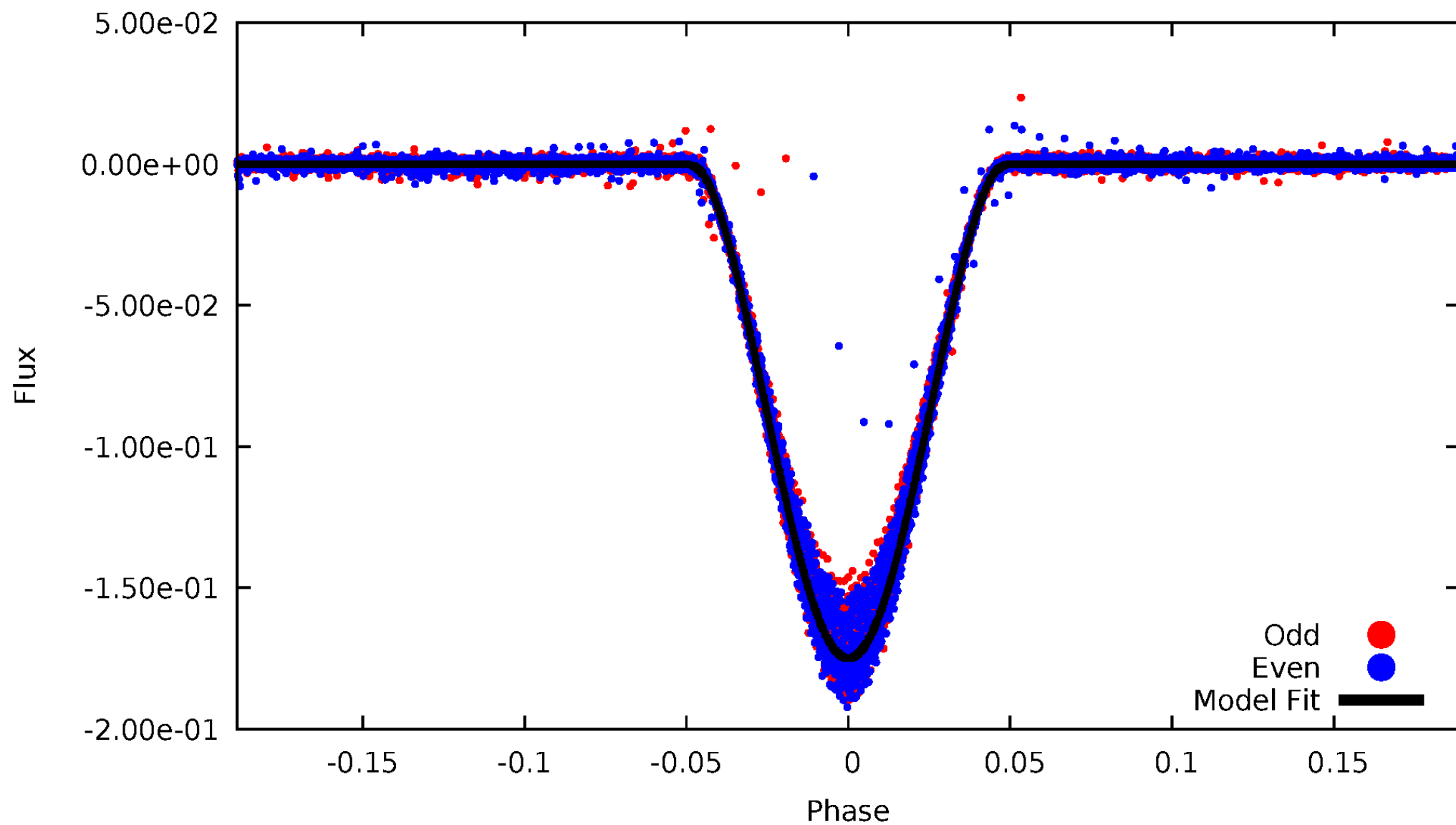


TCE 009592575-01



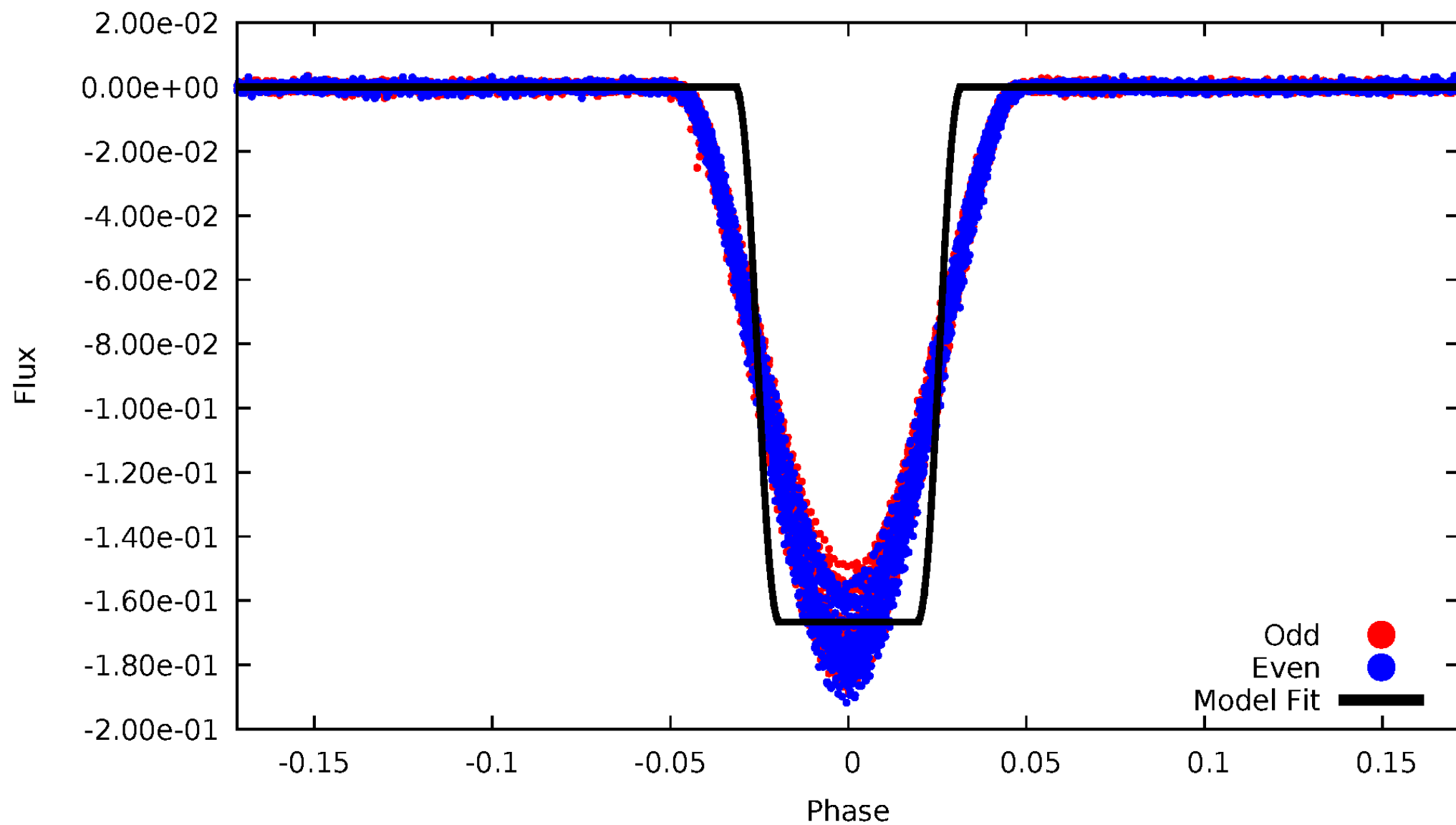
DV Odd/Even

TCE 009592575-01



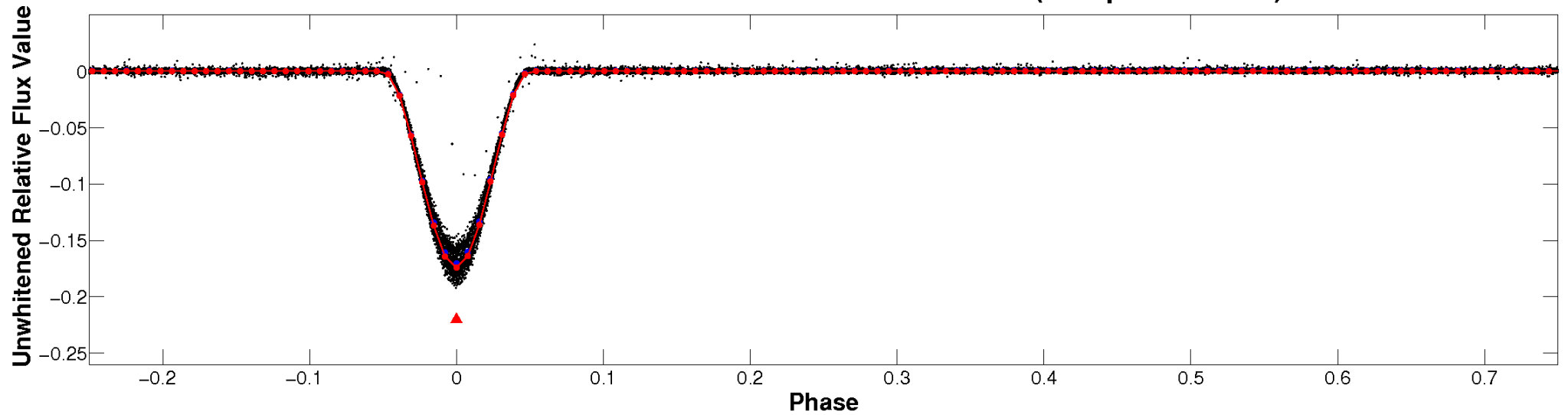
ALT Odd/Even

TCE 009592575-01

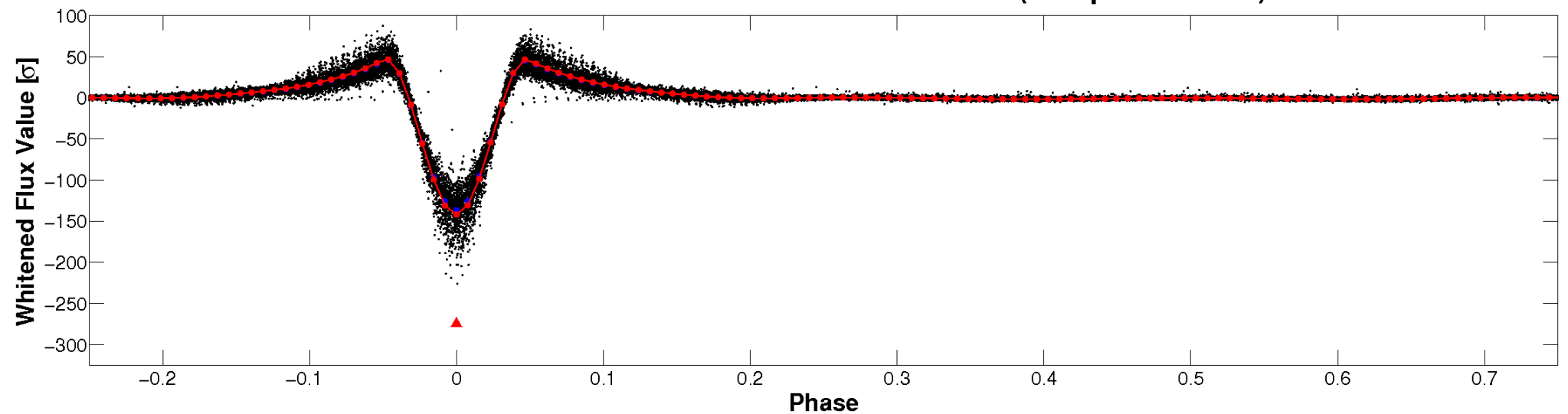


Non-Whitened Vs. Whitened Light Curve

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

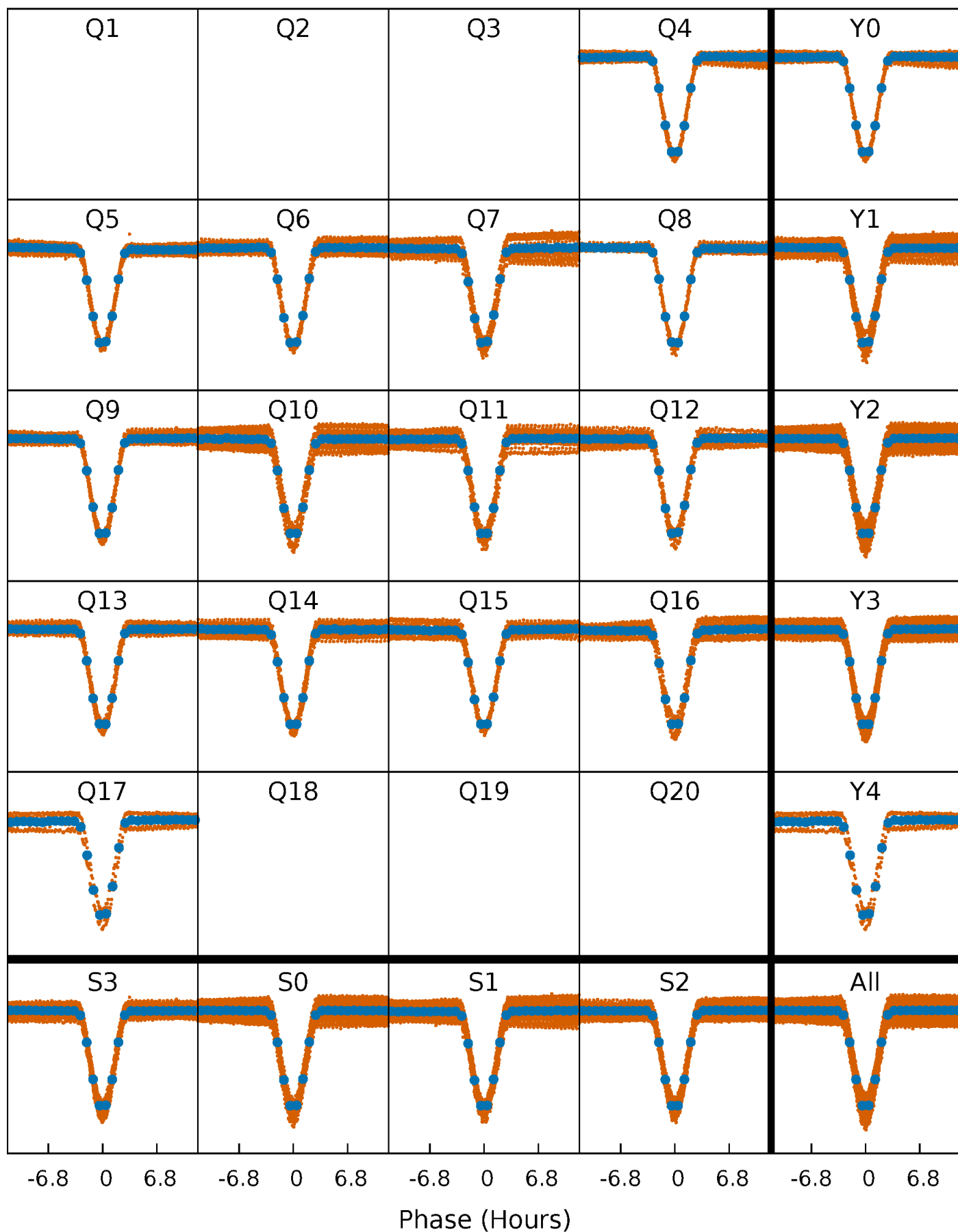


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



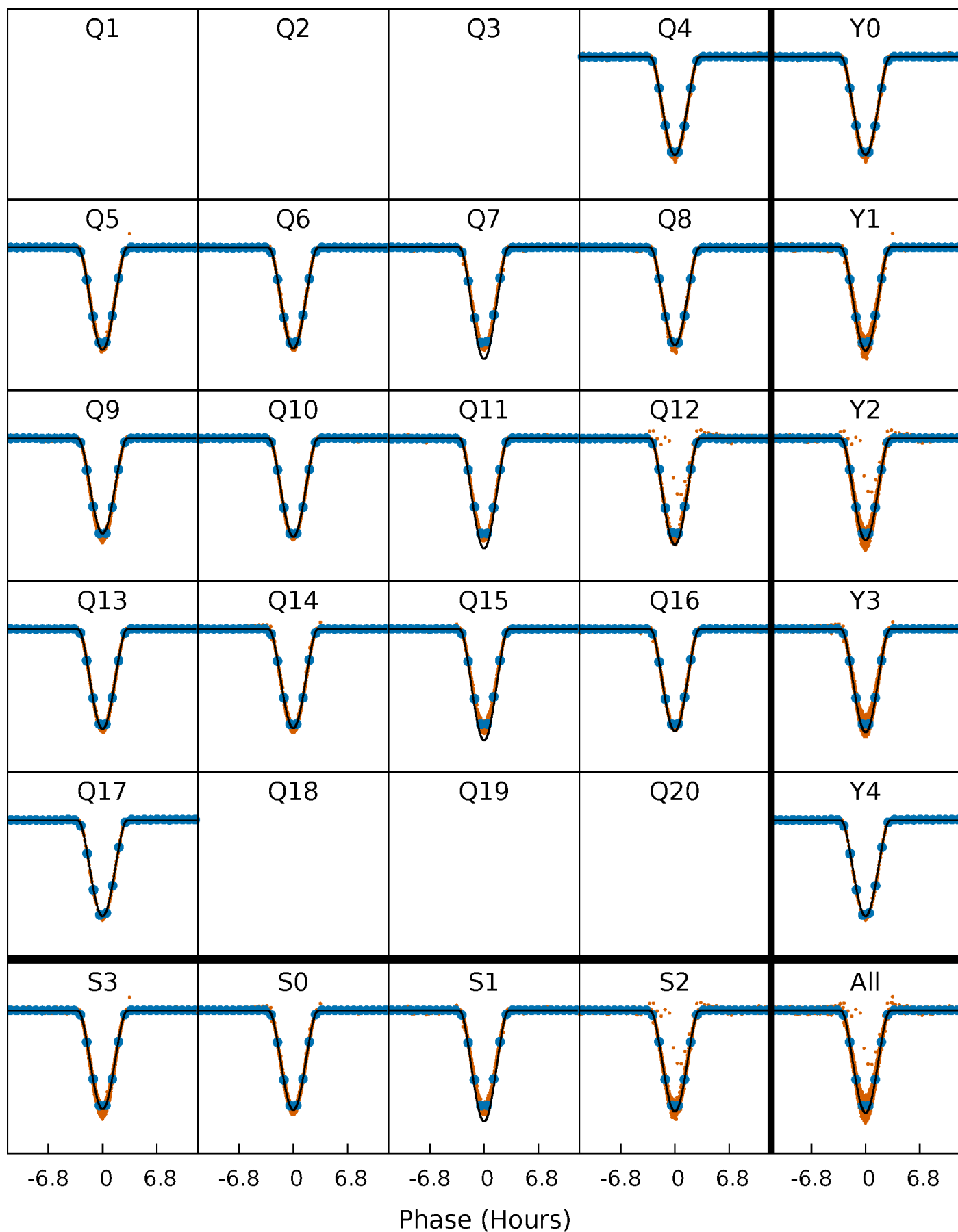
PDC Quarter-Phased Transit Curves

TCE 009592575-01 P= 2.637574 Days $T_0=131.575528$ (BKJD)



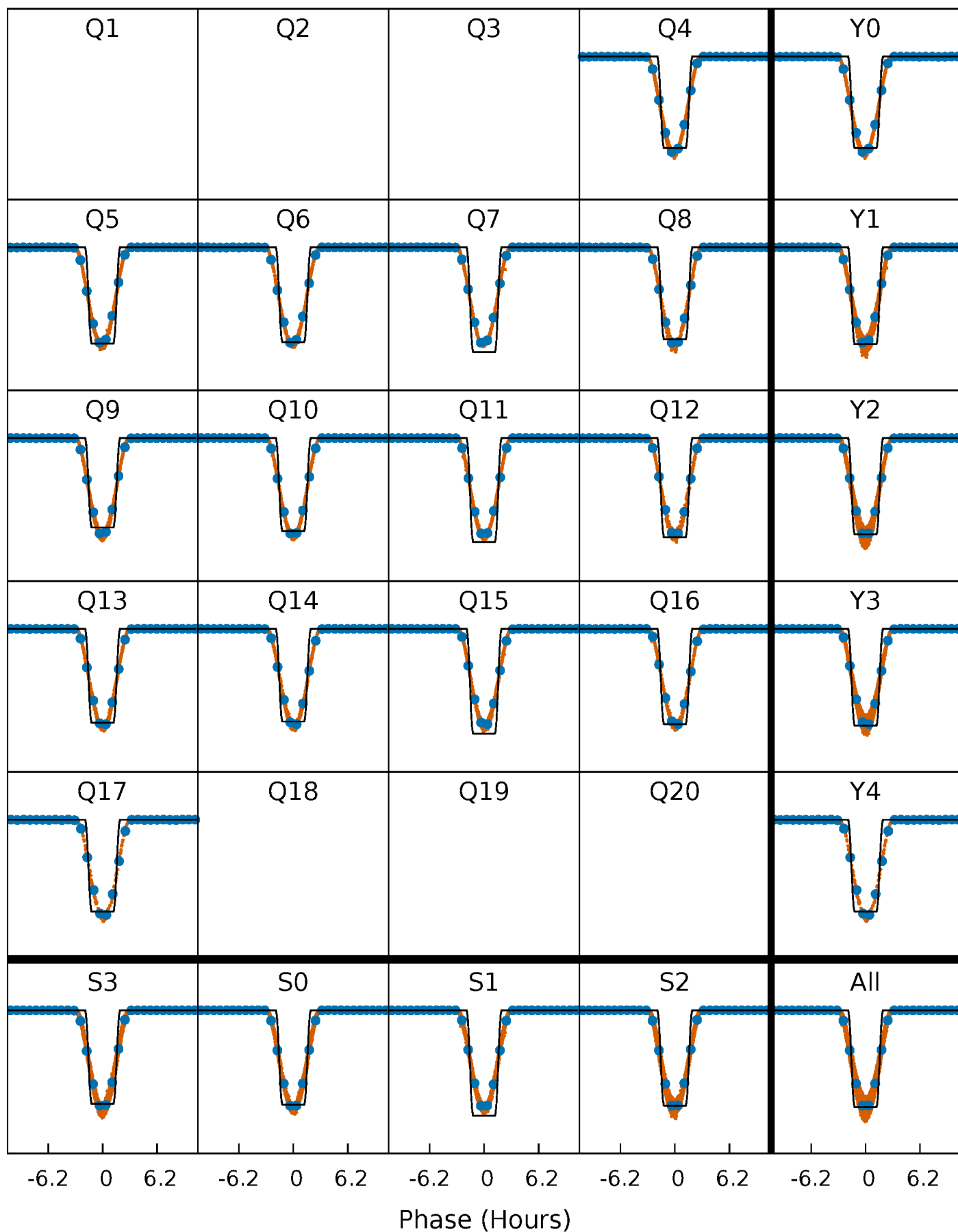
DV Quarter-Phased Transit Curves

TCE 009592575-01 P= 2.637574 Days $T_0=131.575528$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

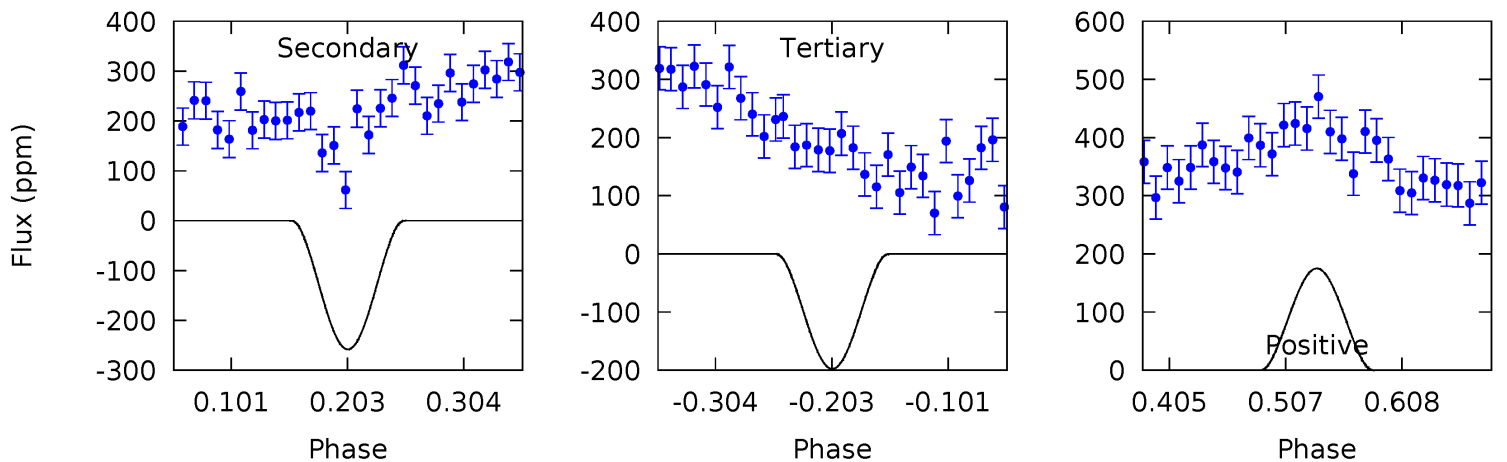
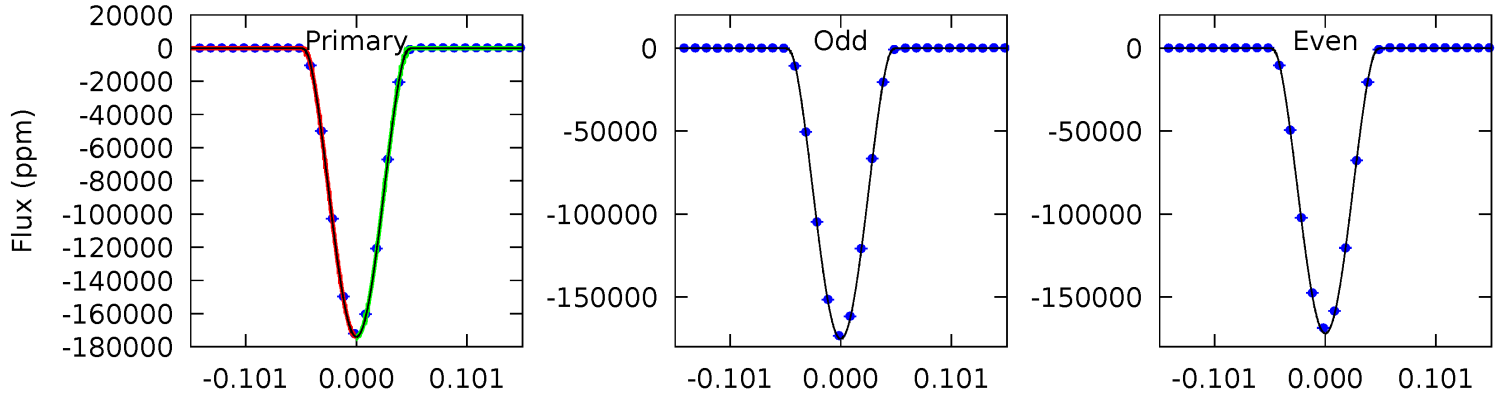
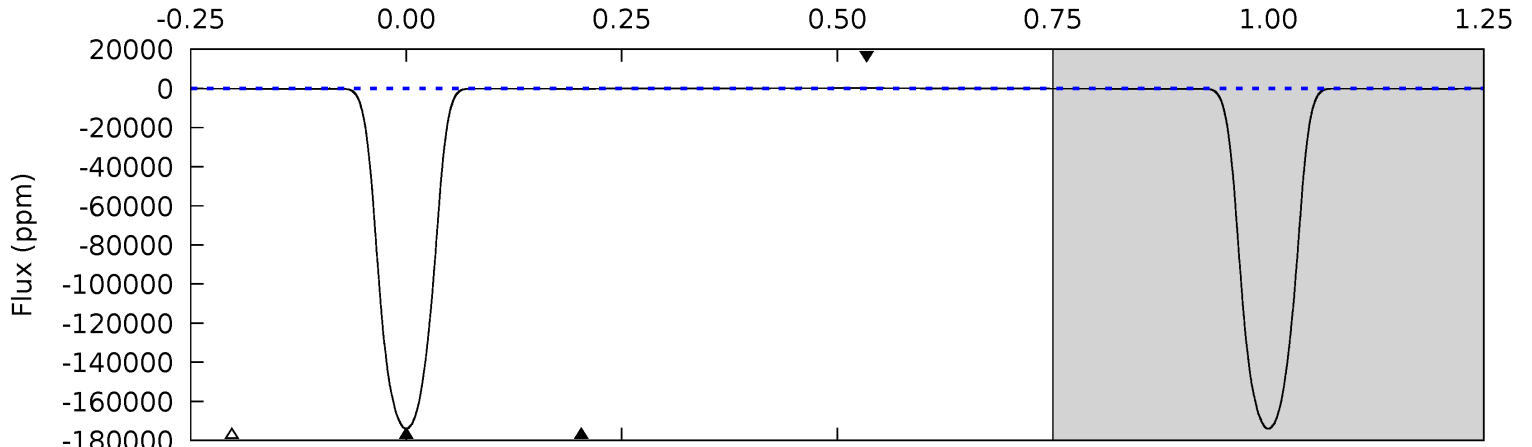
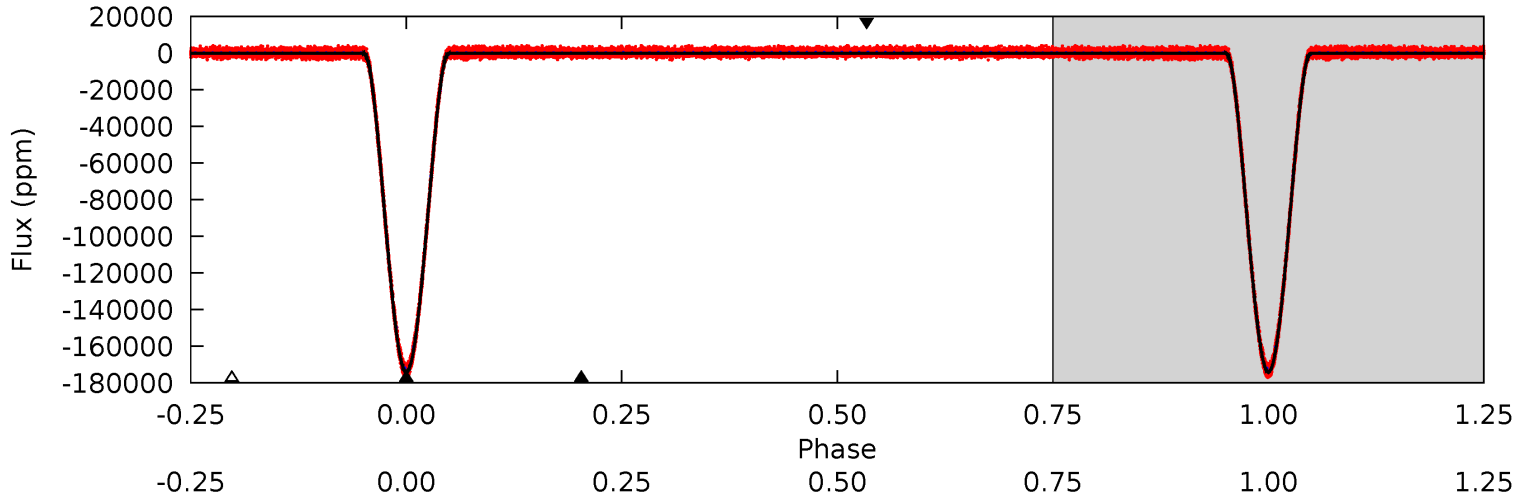
TCE 009592575-01 P= 2.637556 Days $T_0=131.581517$ (BKJD)



DV Model-Shift Uniqueness Test

009592575-01, P = 2.637574 Days, E = 131.575528 Days

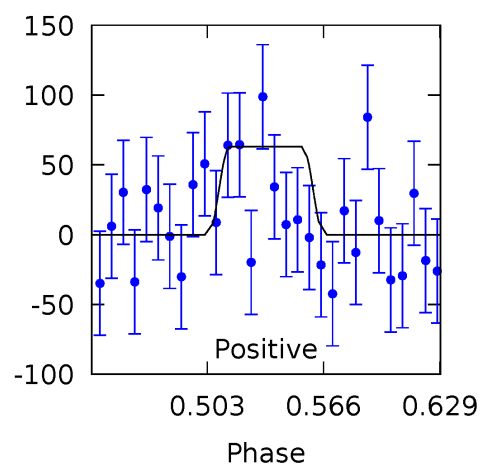
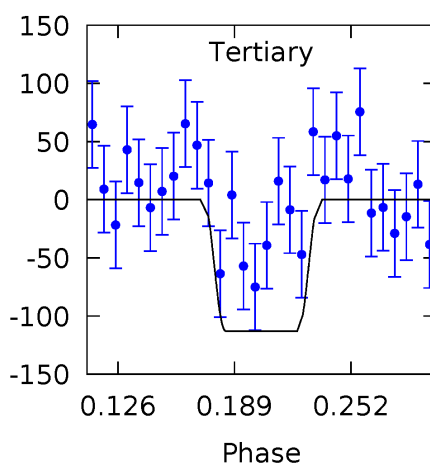
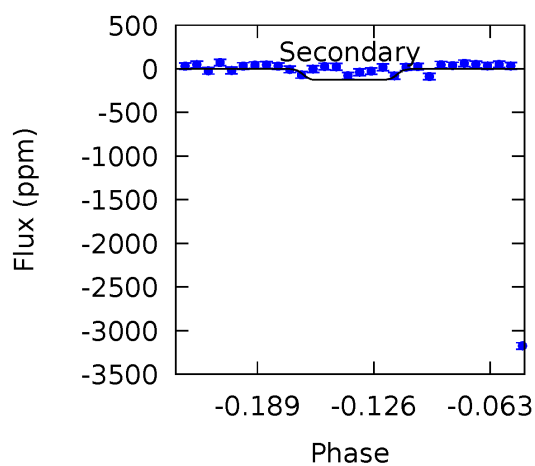
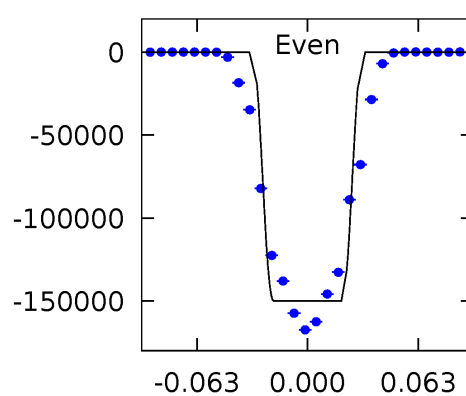
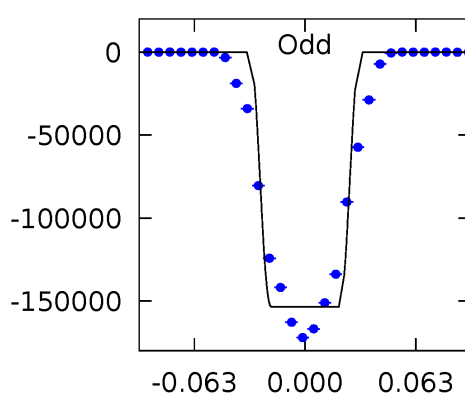
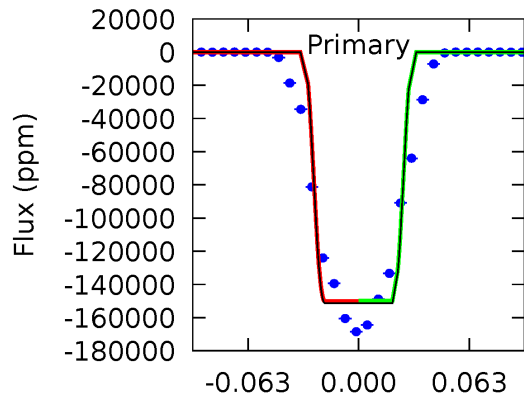
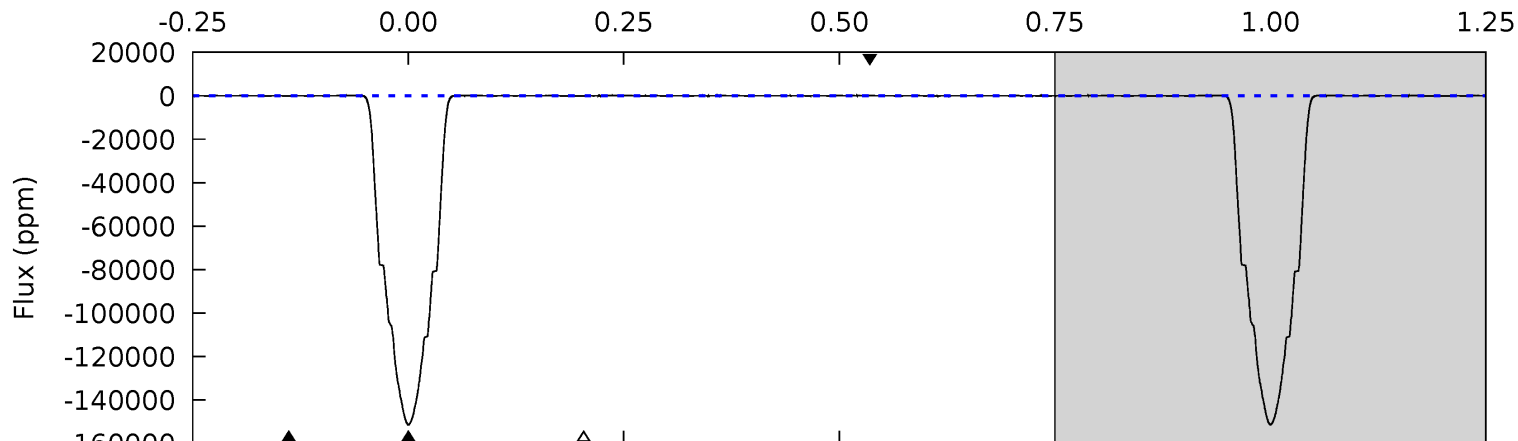
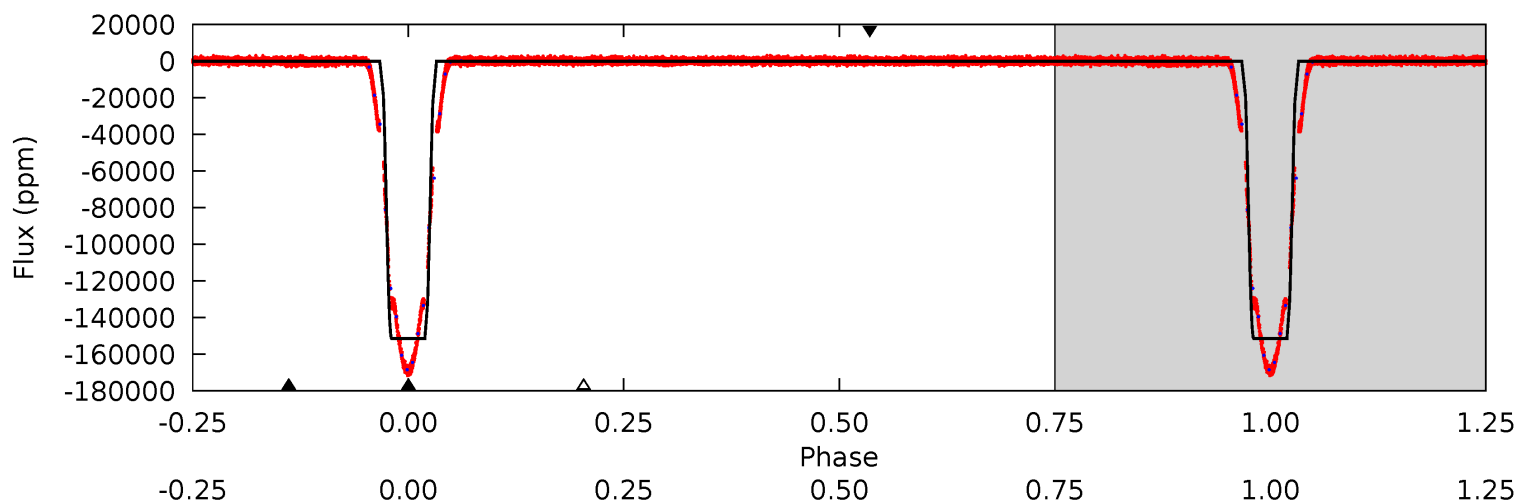
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11109	16.5	12.6	11.2	4.56	1.64	8.48	11096	11098	3.87	5.32	103.0	0.99	0.00	0



Alt Model-Shift Uniqueness Test

009592575-01, P = 2.637556 Days, E = 131.581517 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5300	4.37	3.96	2.21	4.66	1.86	1.09	5296	5298	0.41	2.16	58.6	0.99	0.00	0



Stellar Parameters For KIC 009592575

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5639^{+171}_{-188}	$4.509^{+0.036}_{-0.192}$	$0.360^{+0.100}_{-0.300}$	$0.953^{+0.264}_{-0.088}$	$1.071^{+0.089}_{-0.133}$	$1.742^{+0.335}_{-0.882}$
	+3%/-3%	+1%/-4%	+28%/-83%	+28%/-9%	+8%/-12%	+19%/-51%
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 009592575-01 / KOI 3565.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-258 ± 16	$61.87^{+8.96}_{-4.54}$	1781^{+118}_{-85}	-2307^{+57}_{-86}	$0.052^{+0.008}_{-0.012}$
Alt.	-125 ± 29	$43.89^{+5.78}_{-3.66}$	1774^{+115}_{-85}	-2305^{+59}_{-79}	$0.049^{+0.015}_{-0.014}$

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 $A_{obs} \gg 1.0$

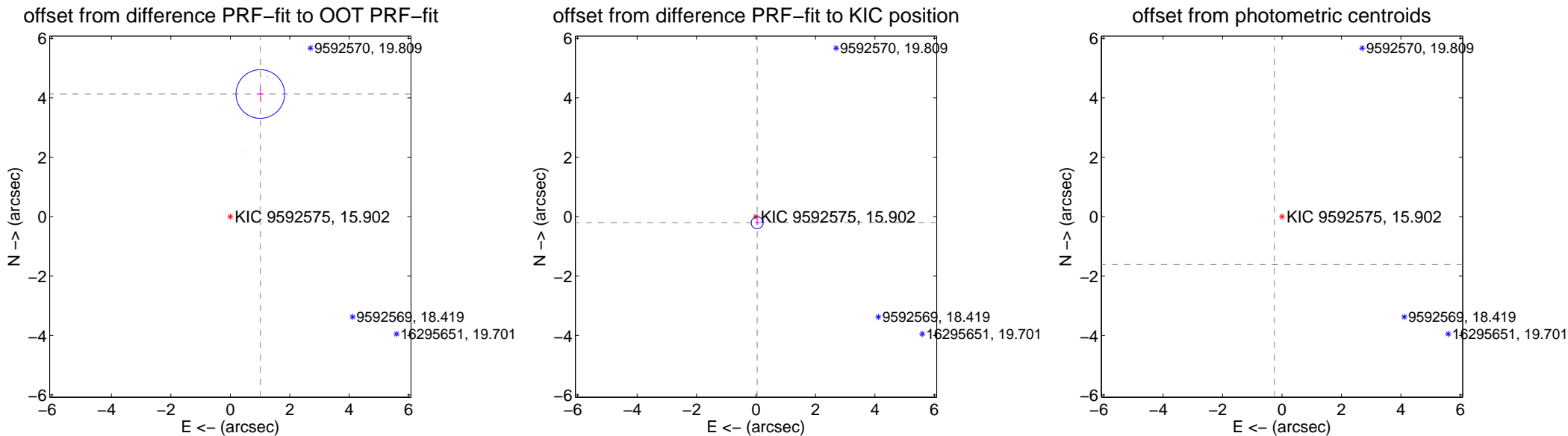
DV Centroid Data

Supplemental centroid analysis for 009592575-01. Kepler magnitude: 15.90. Transit SNR 4130.43

There are 14 quarters with good PRF difference image offsets

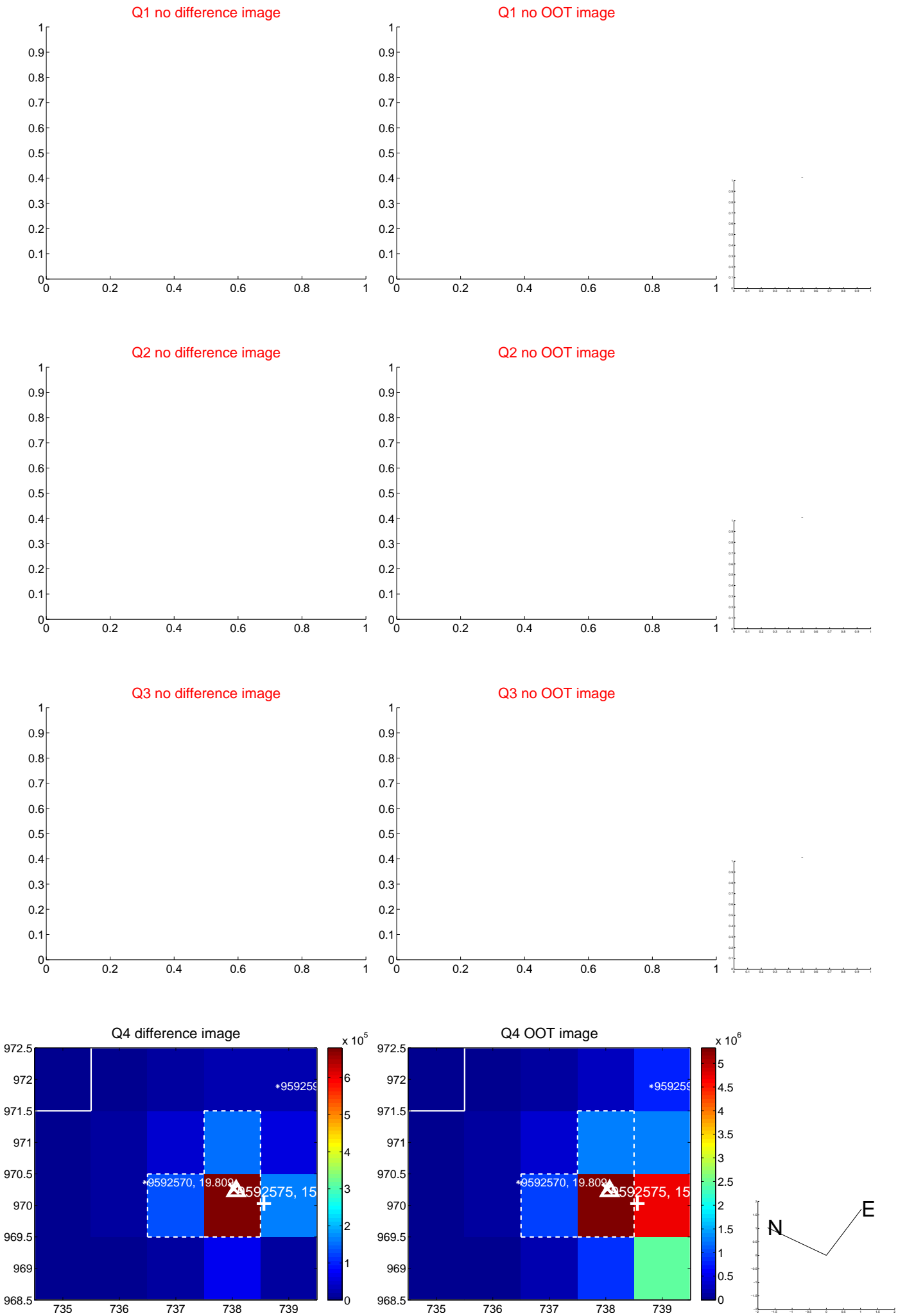
The OOT PRF centroid is offset from the target star catalog position by about 3.63 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.249 ± 0.273	15.57	-1.010 ± 0.110	4.127 ± 0.260
PRF-fit source offset from KIC position	0.210 ± 0.067	3.13	-0.040 ± 0.067	-0.206 ± 0.067
photometric centroid source offset	1.63 ± 0.00	1101.23	0.26 ± 0.00	-1.61 ± 0.00

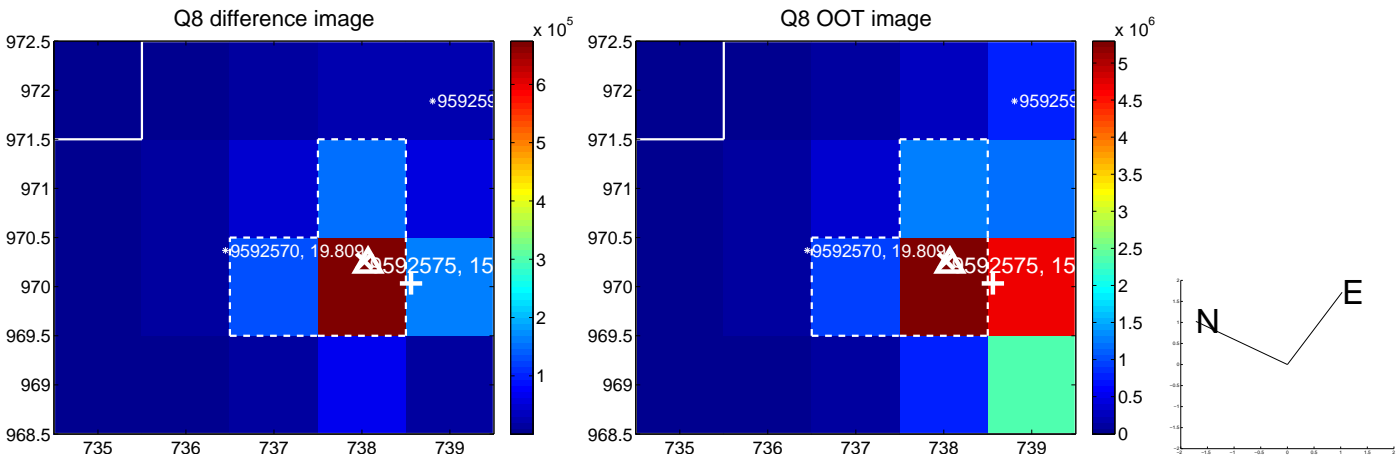
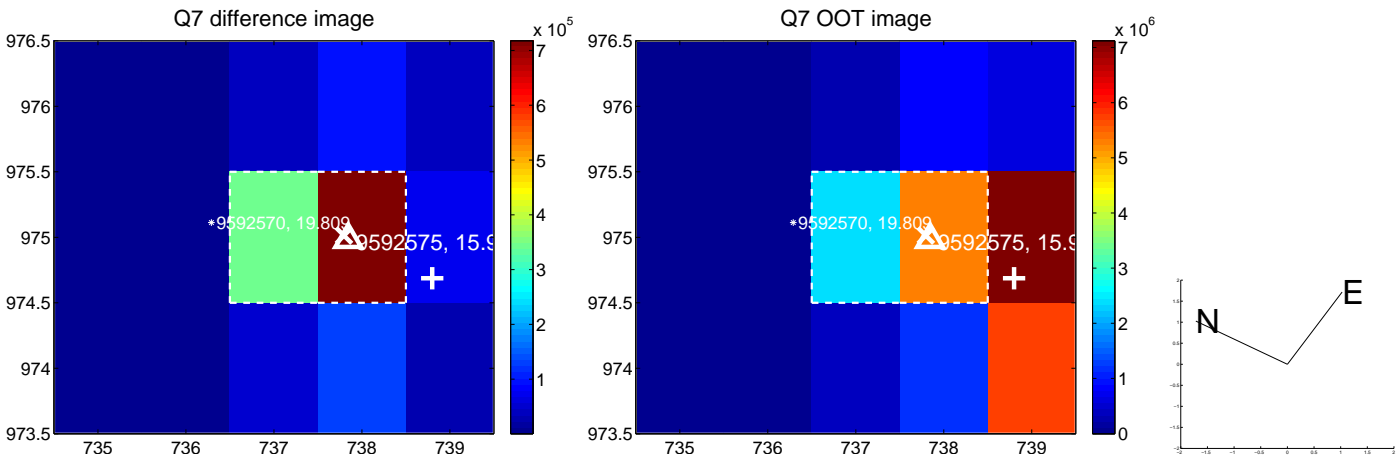
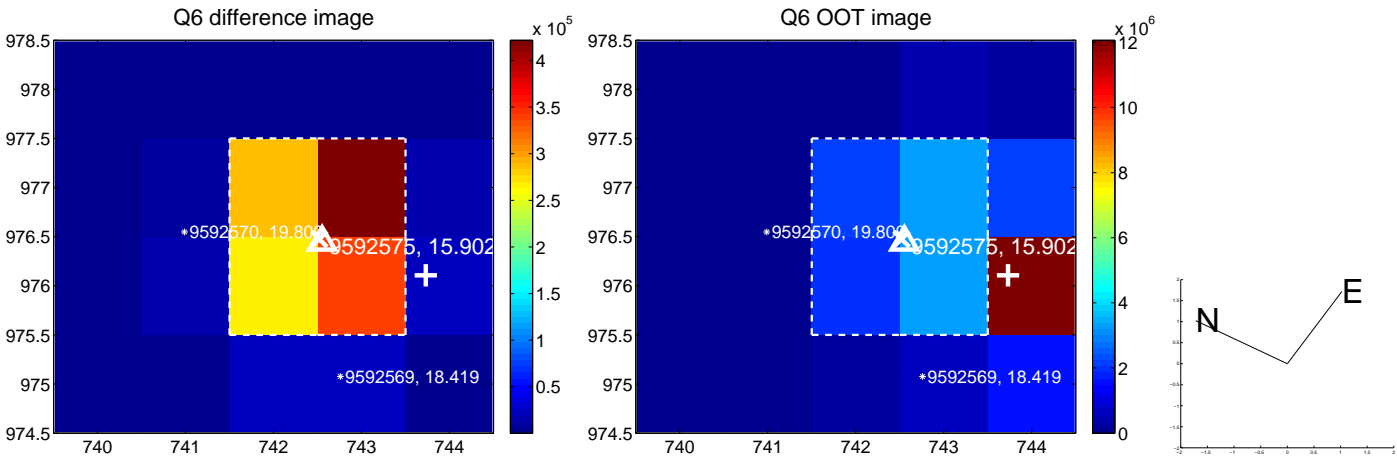
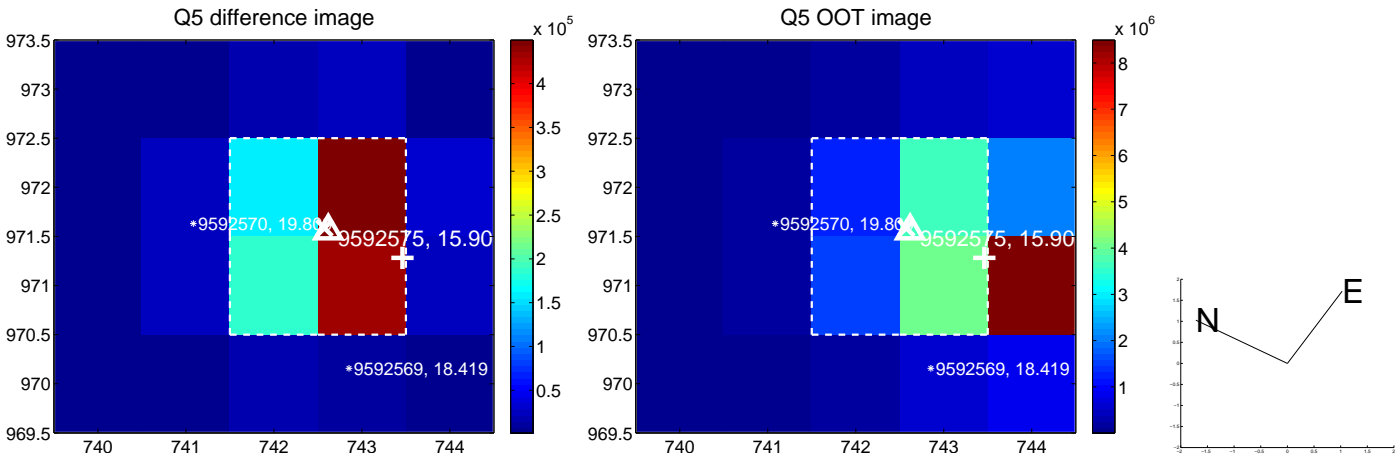


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

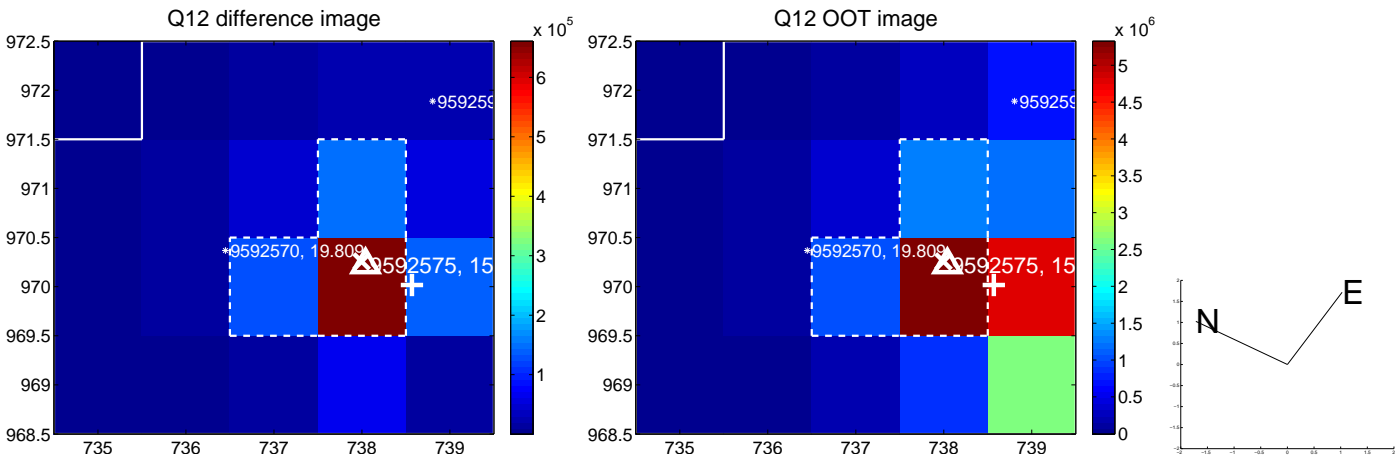
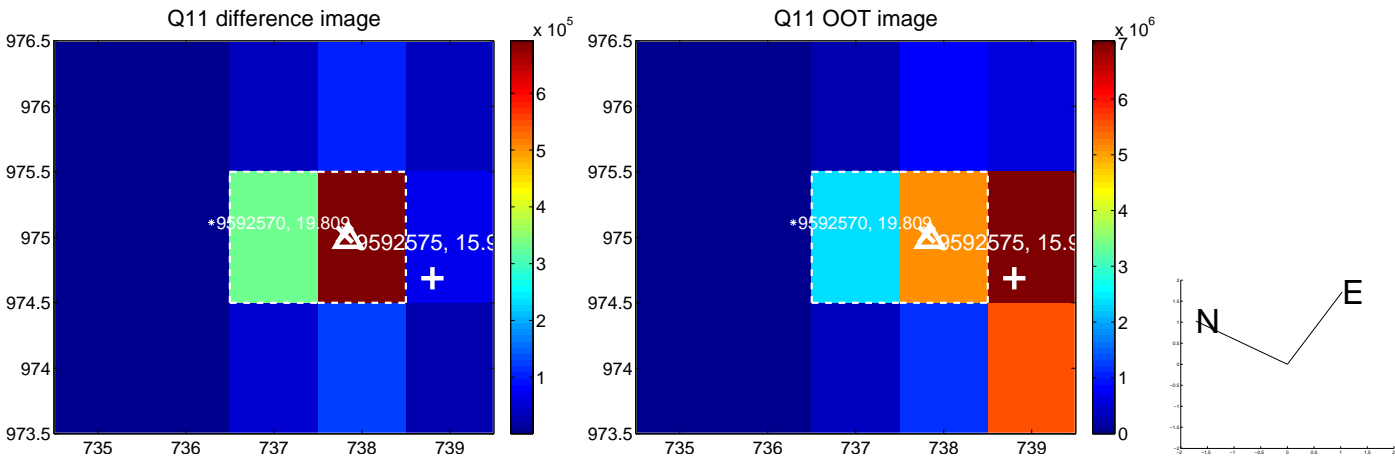
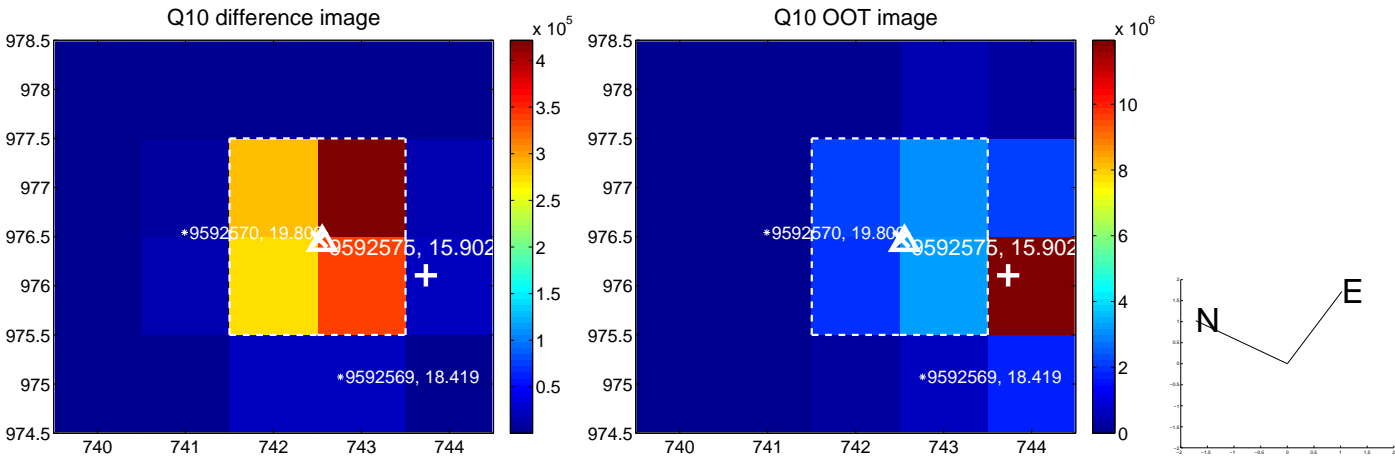
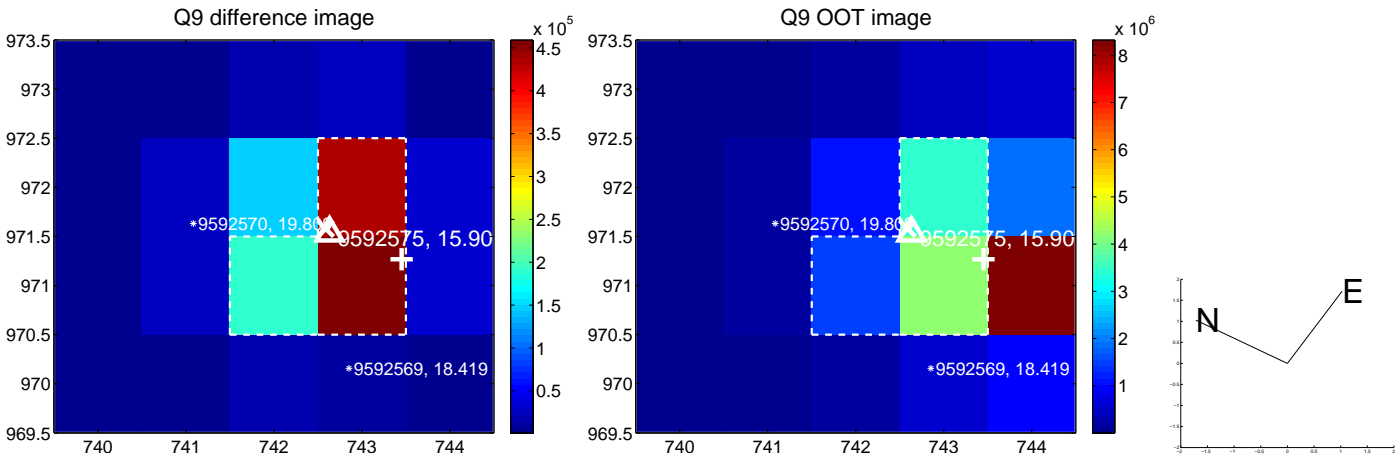
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



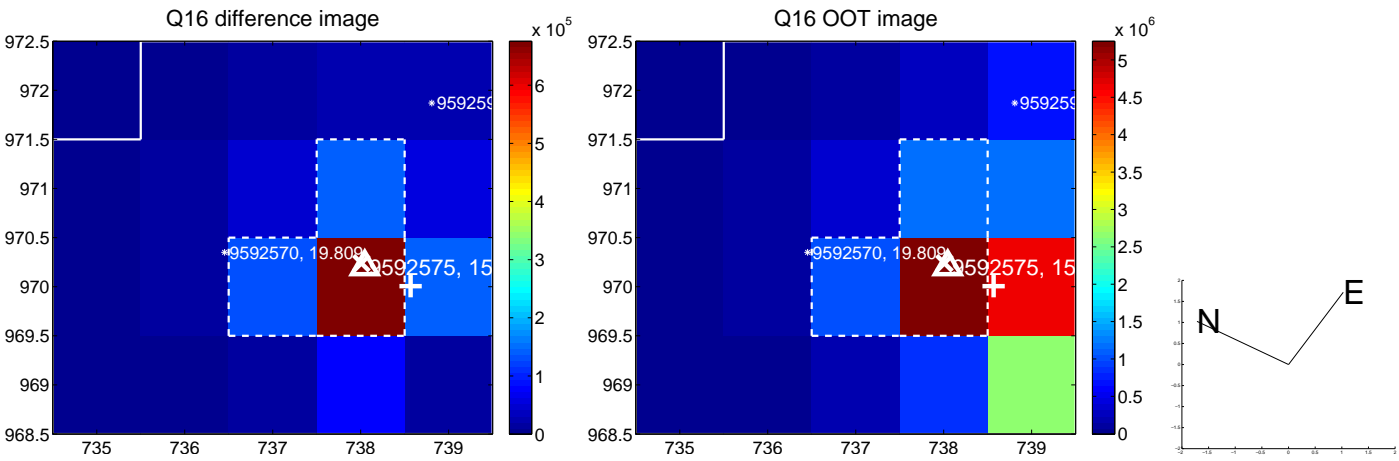
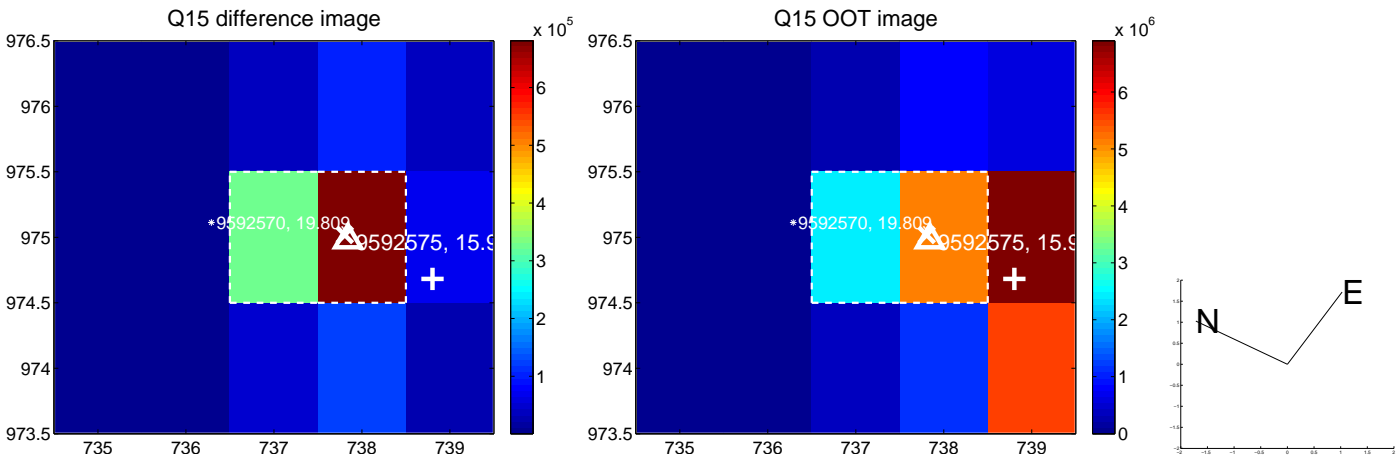
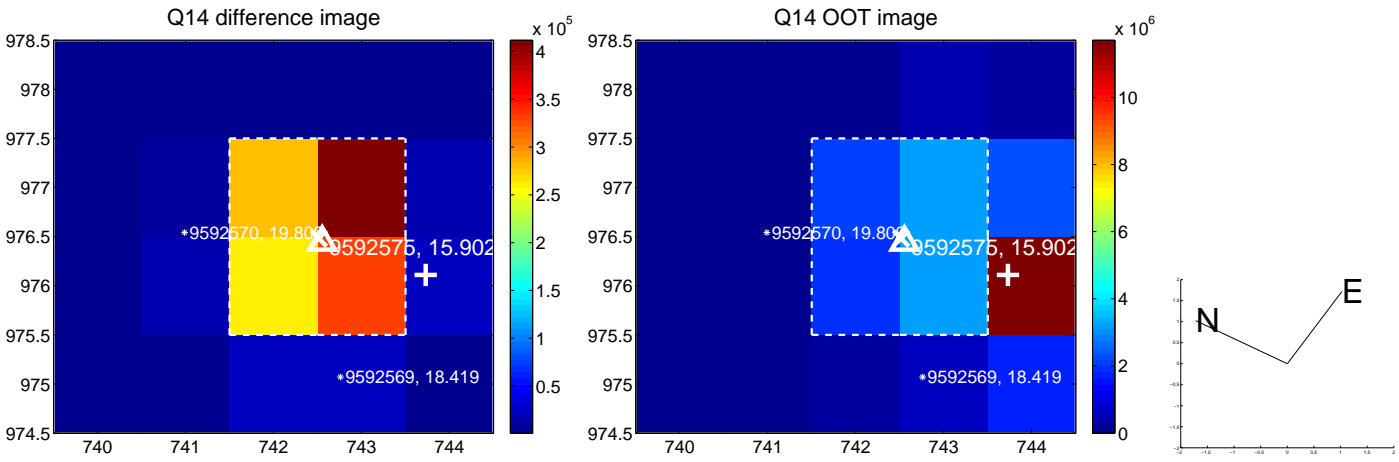
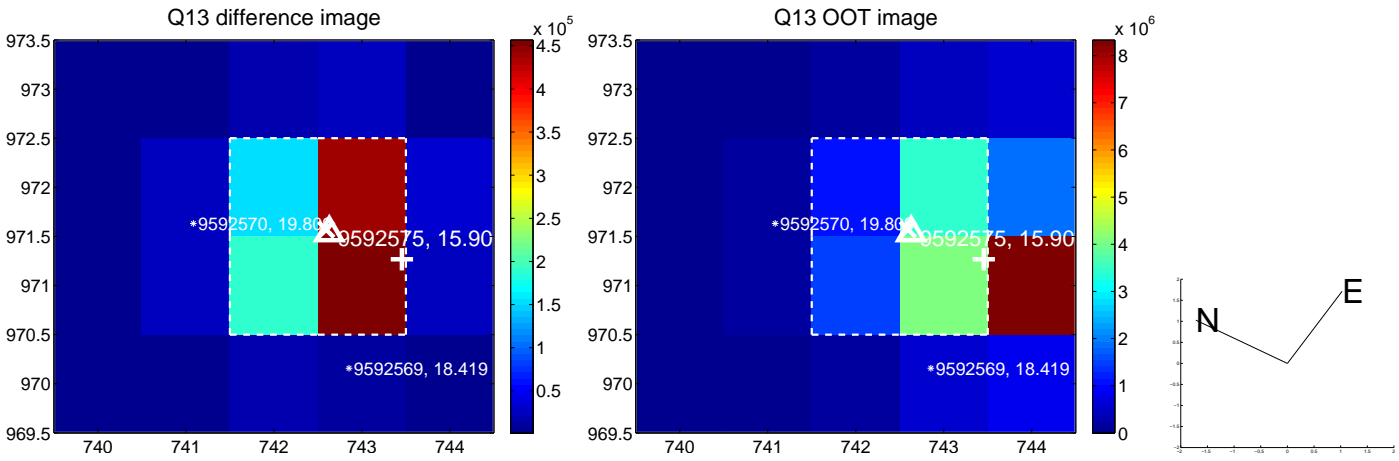
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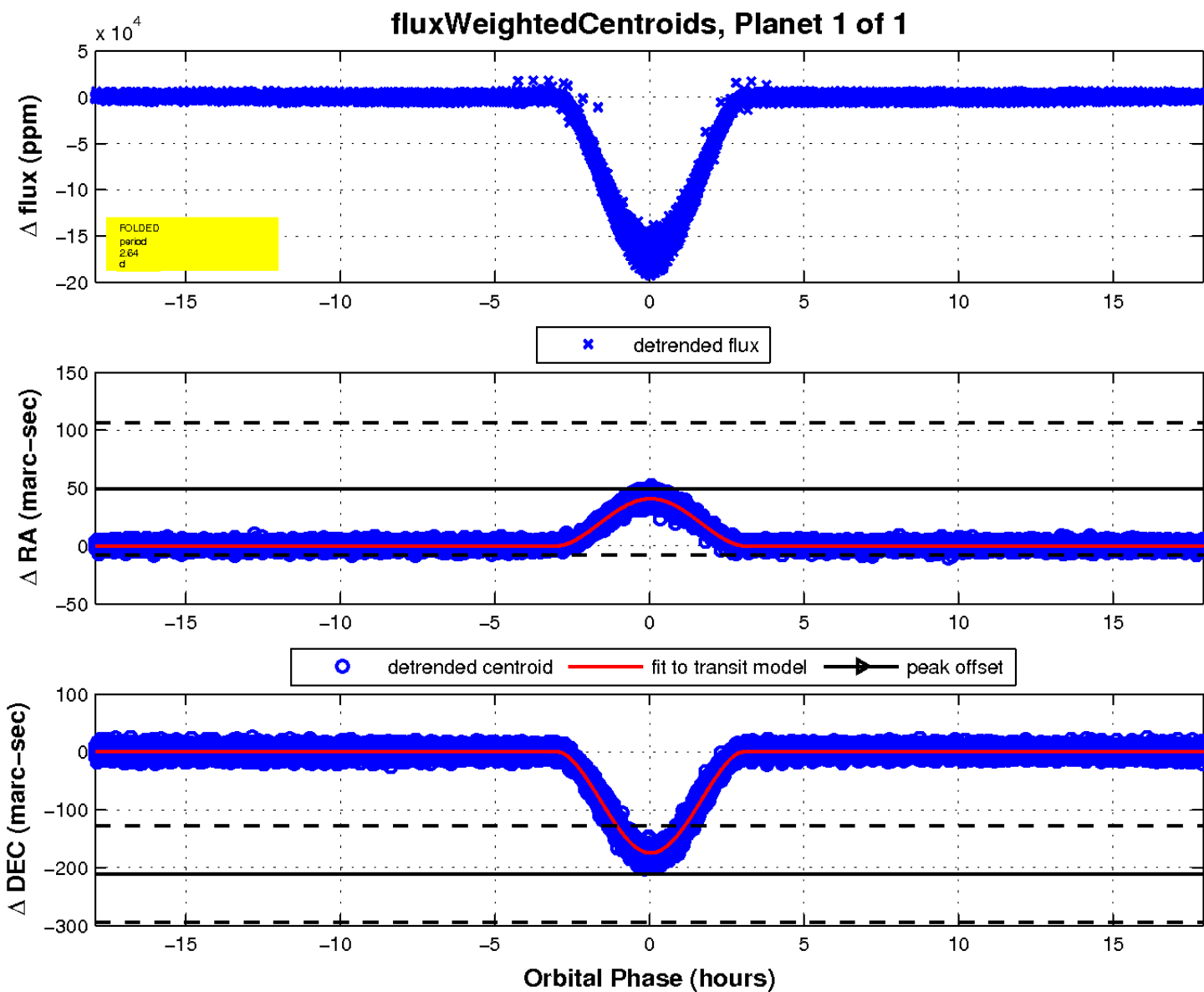
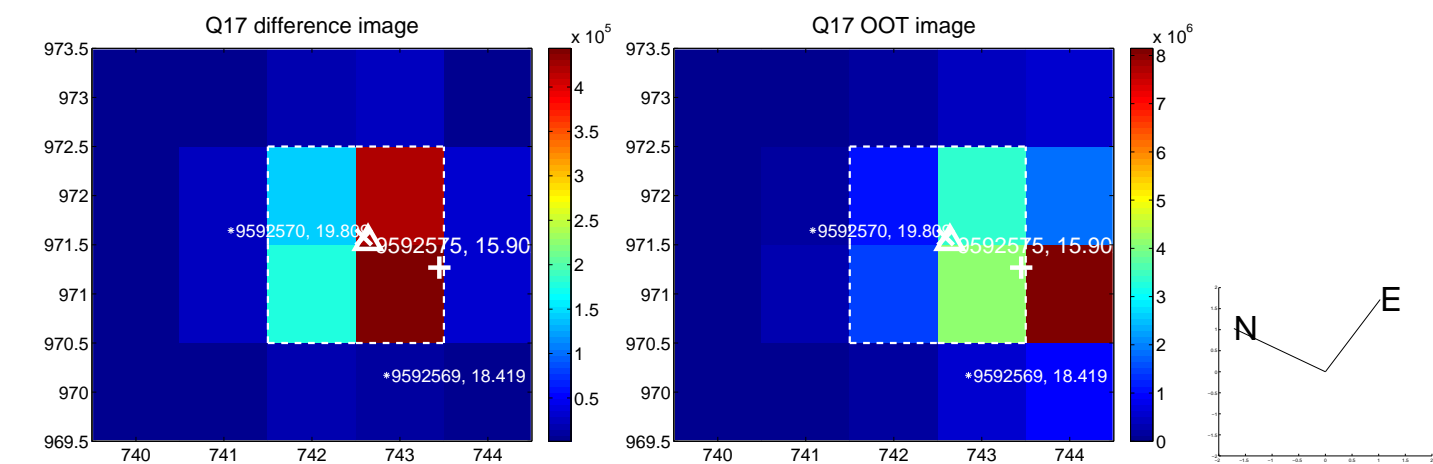
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

