

KIC 010090854

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})
010090854-01	OBS	5762.01	12.630619	136.702800	271.2	2.462	8.4	8.6	0.80	5579	1.57	53.28

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010090854-01	OBS	PC	1.00	0	0	0	0	CENT_FEW_MEAS

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 010090854-01

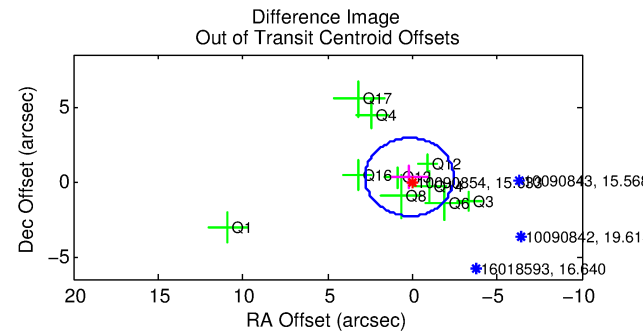
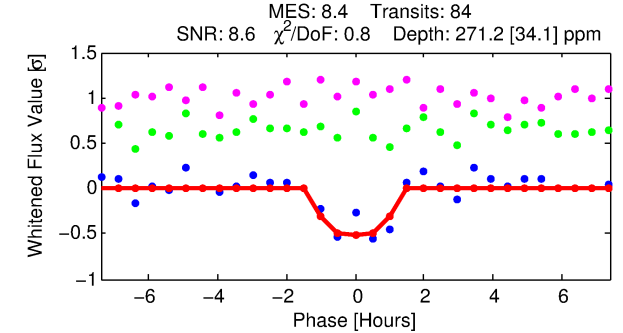
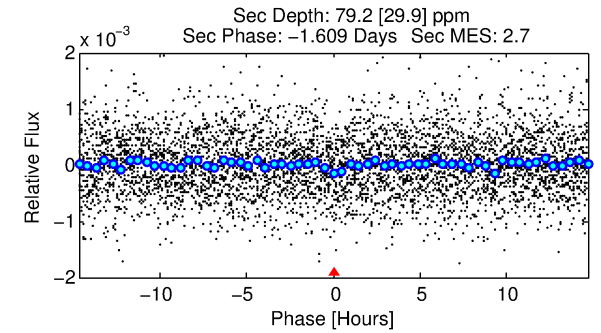
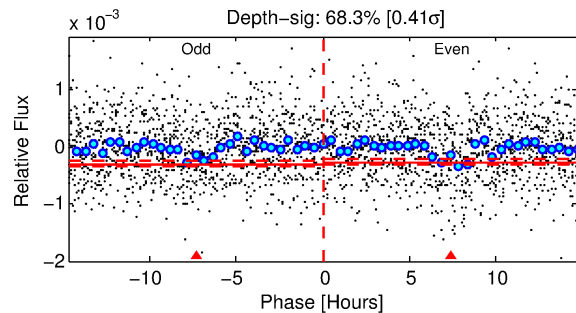
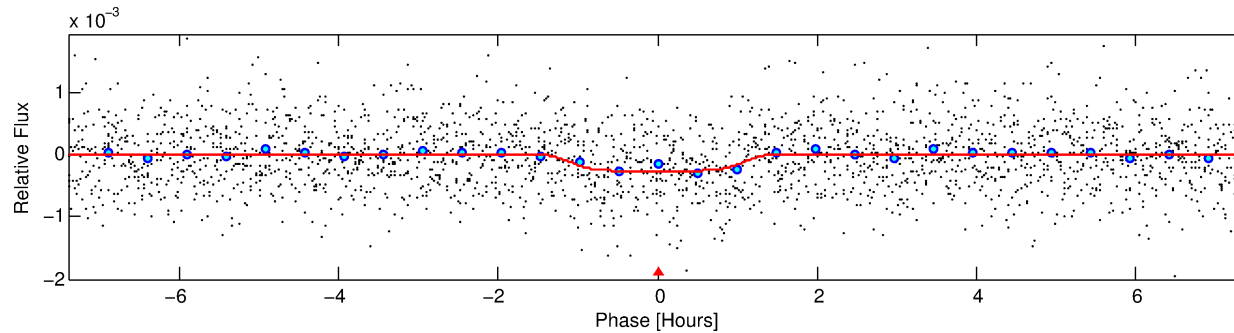
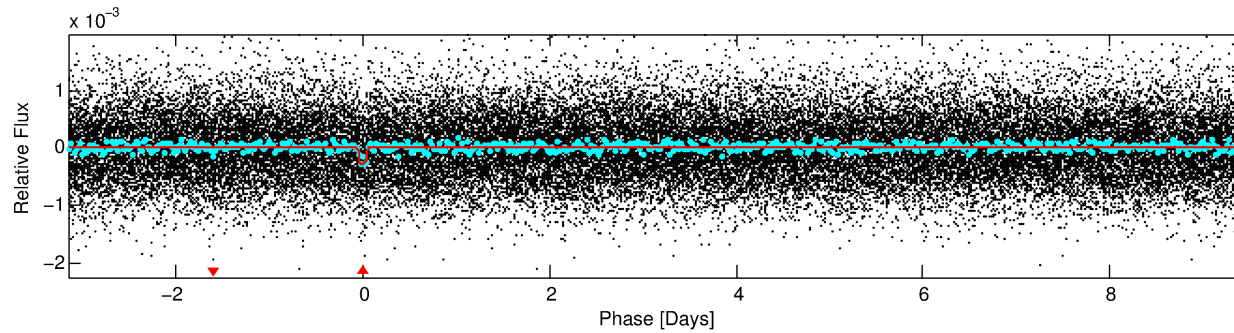
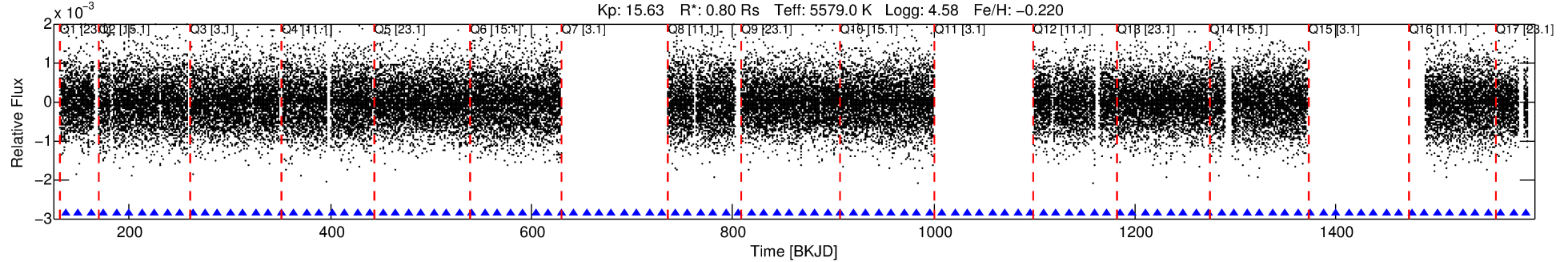
No Significant Match Found

DV One-Page Summary

KIC: 10090854 Candidate: 1 of 1 Period: 12.631 d

KOI: K05762.01 Corr: 0.933

Kp: 15.63 R*: 0.80 Rs Teff: 5579.0 K Logg: 4.58 Fe/H: -0.220



DV Fit Results:

Period = 12.63062 [0.00011] d
Epoch = 136.7028 [0.0064] BKJD
Rp/R* = 0.0181 [0.0122]
a/R* = 18.51 [57.30]
b = 0.90 [0.65]
Seff = 53.28 [14.69]
Teq = 689 [47] K
Rp = 1.57 [1.11] Re
a = 0.1019 [0.0173] AU
Ag = 182.82 [260.11] [0.70σ]
Teffp = 3917 [1377] K [2.34σ]

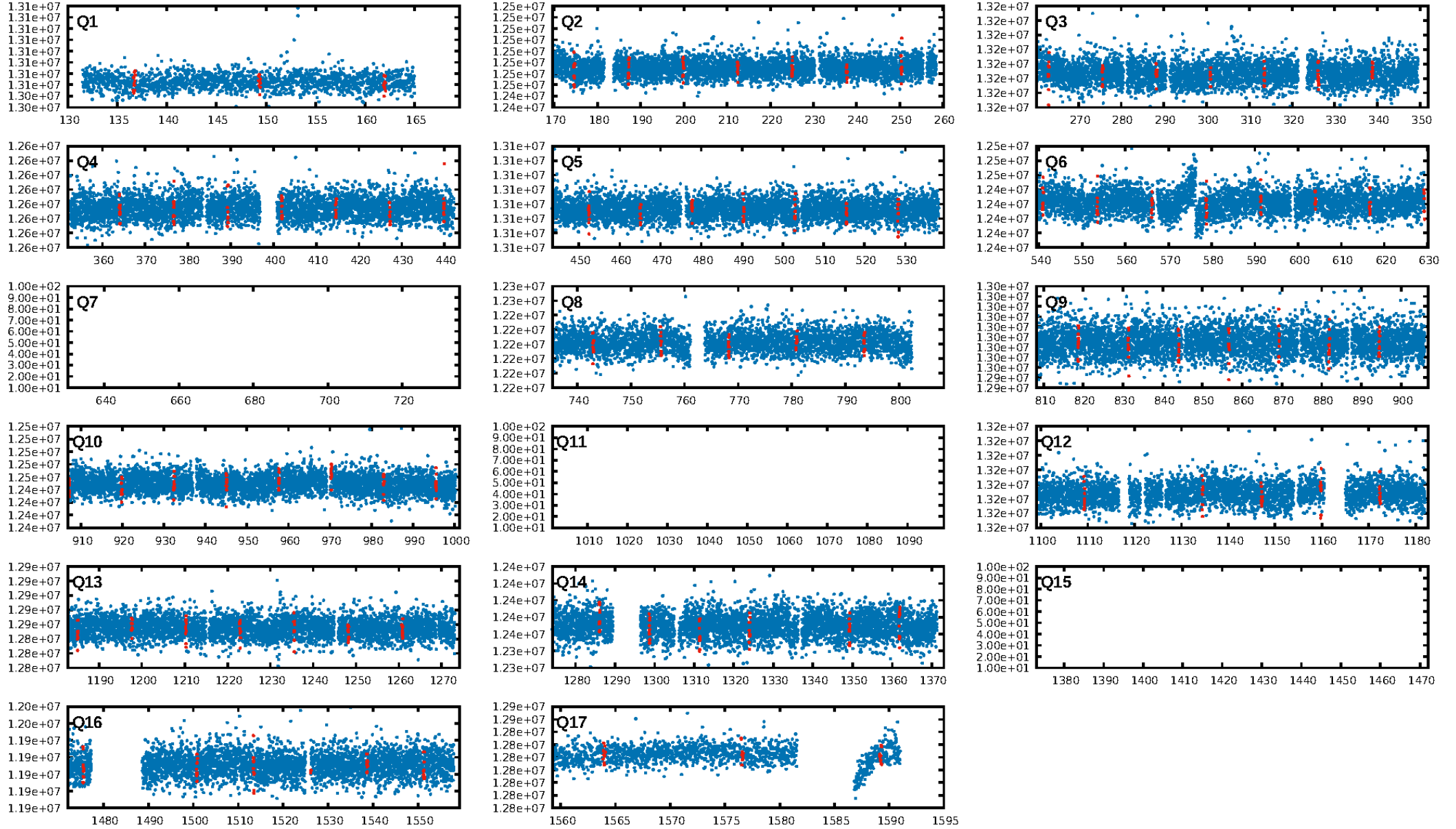
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.77e-17
RollingBand-fgt: 1.00 [78/78]
GhostDiagnostic-chr: 5.577
Centroid-sig: 9.8%
Centroid-so: 0.458 arcsec [0.32σ]
OotOffset-rm: 0.354 arcsec [0.41σ]
OotOffset-st: 2/1/4/3 [10]
KicOffset-rm: 0.997 arcsec [1.18σ]
KicOffset-st: 2/1/4/3 [10]
DiffImageQuality-fgm: 0.20 [2/10]
DiffImageOverlap-fno: 1.00 [14/14]

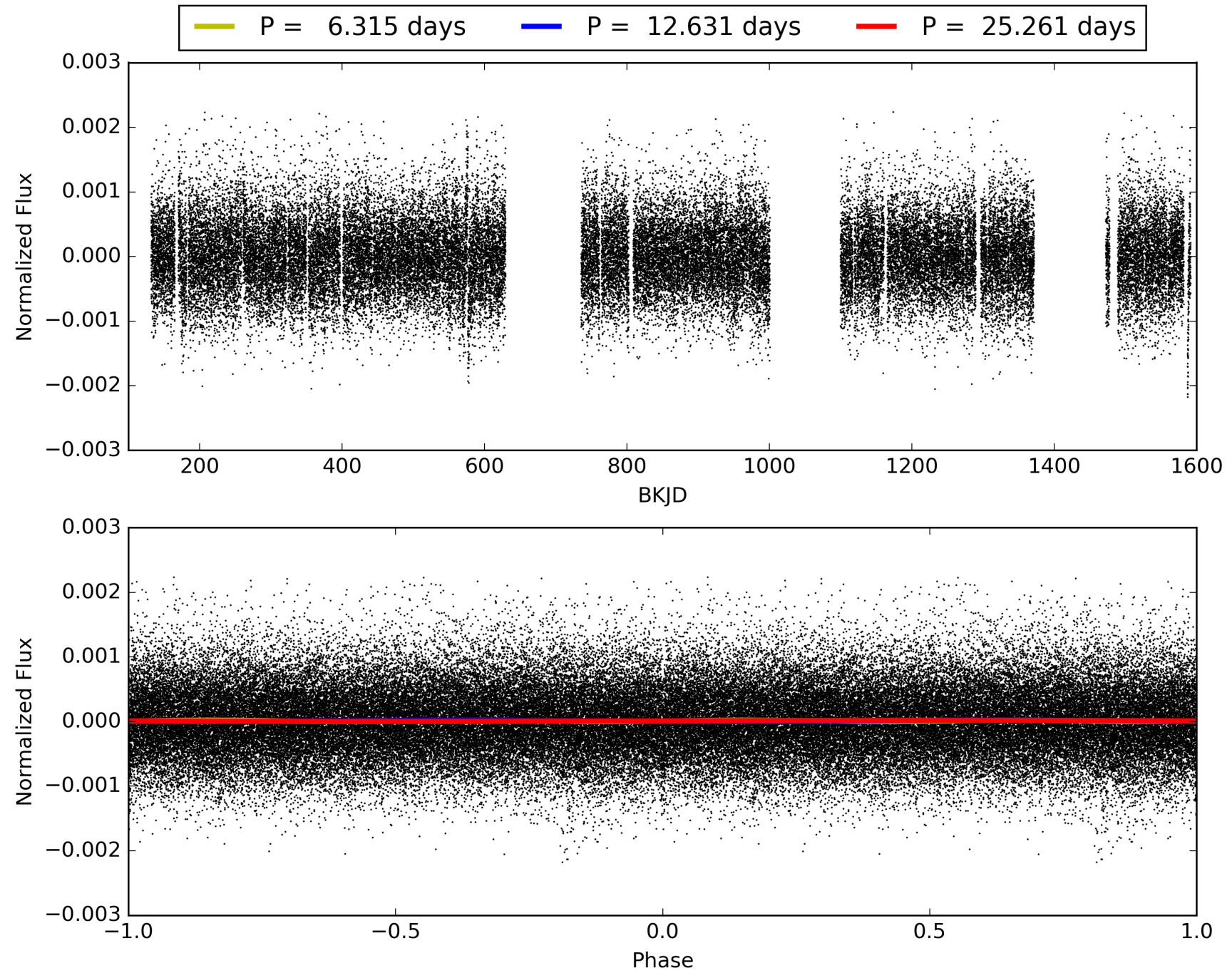
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 07:44:55 Z

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

TCE 010090854-01, PDC Light Curves

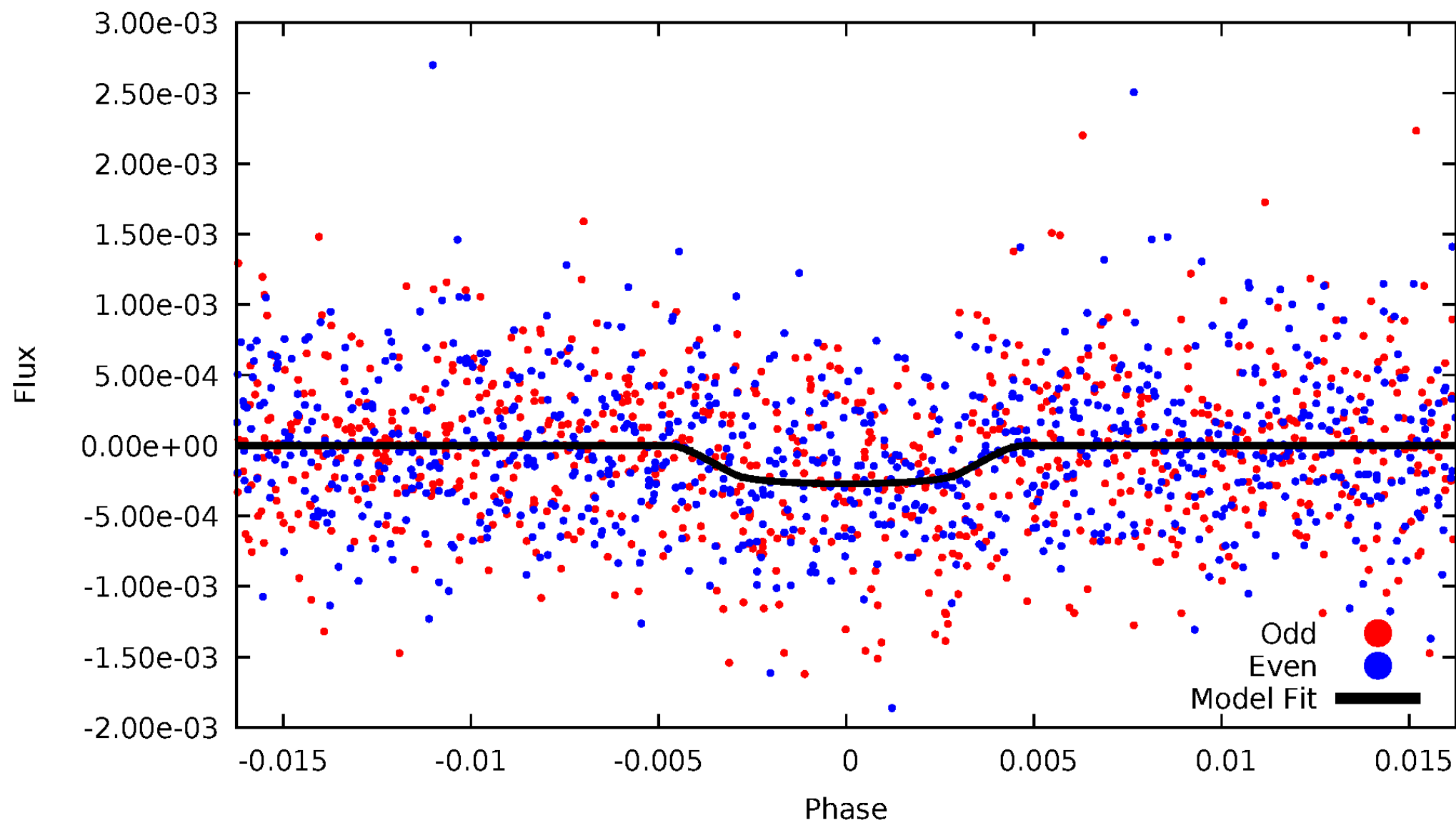


TCE 010090854-01



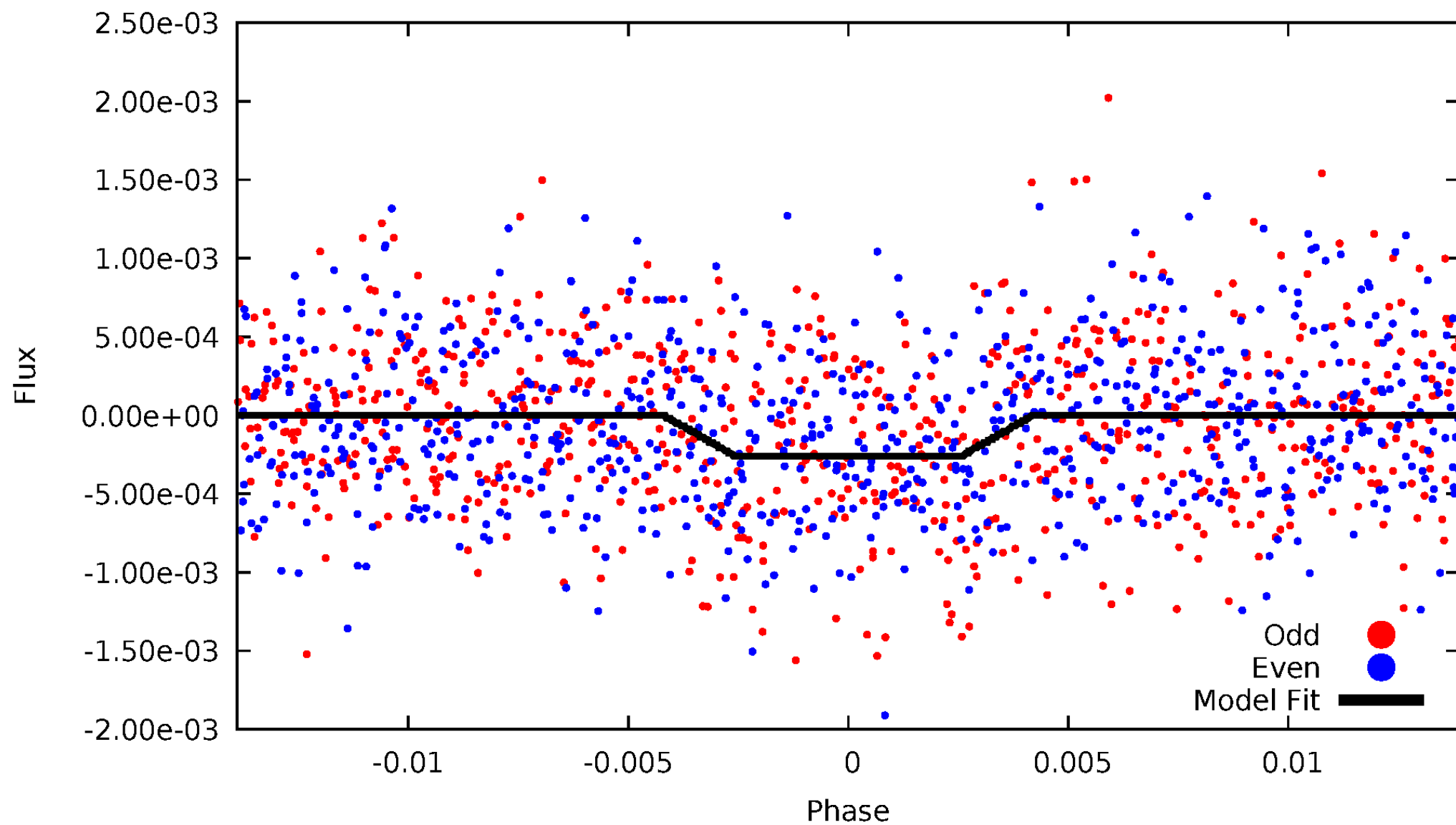
DV Odd/Even

TCE 010090854-01

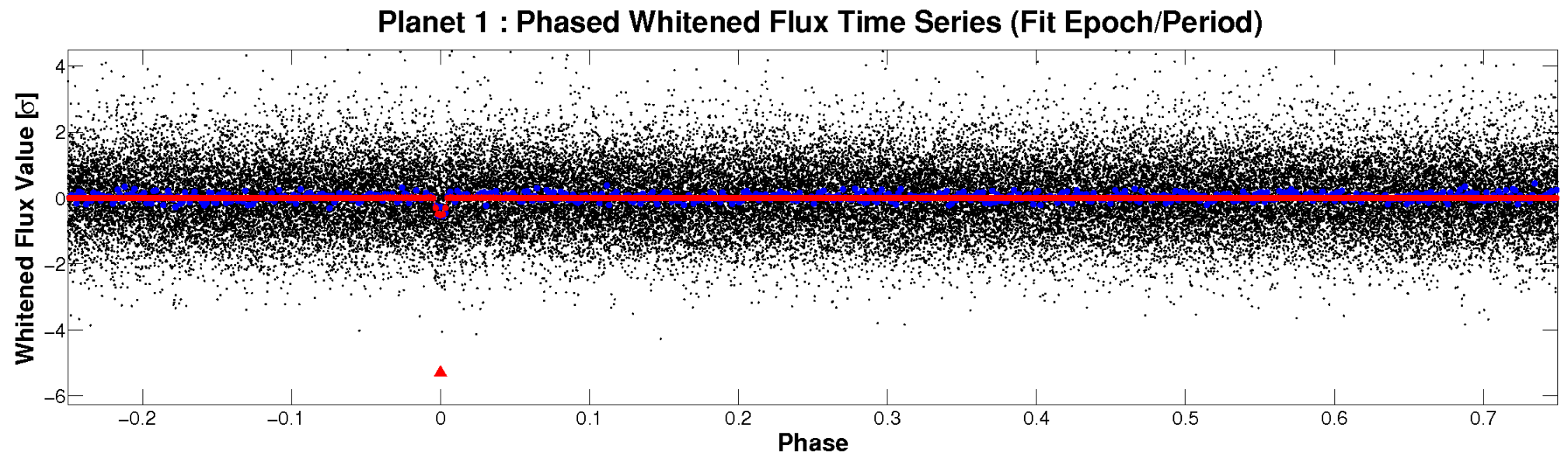
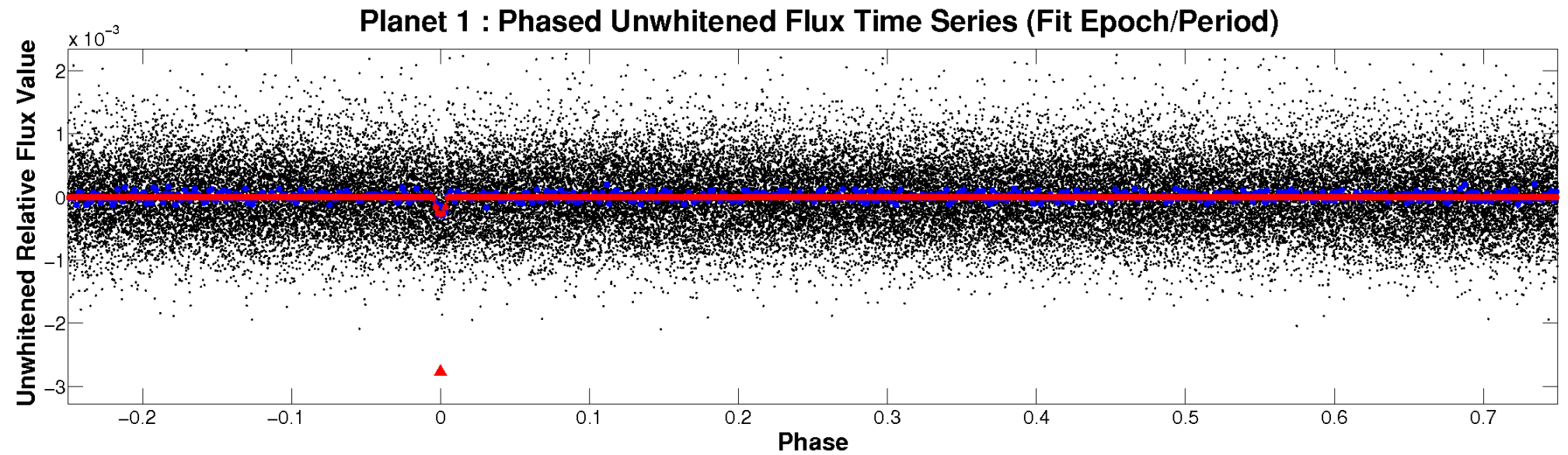


ALT Odd/Even

TCE 010090854-01

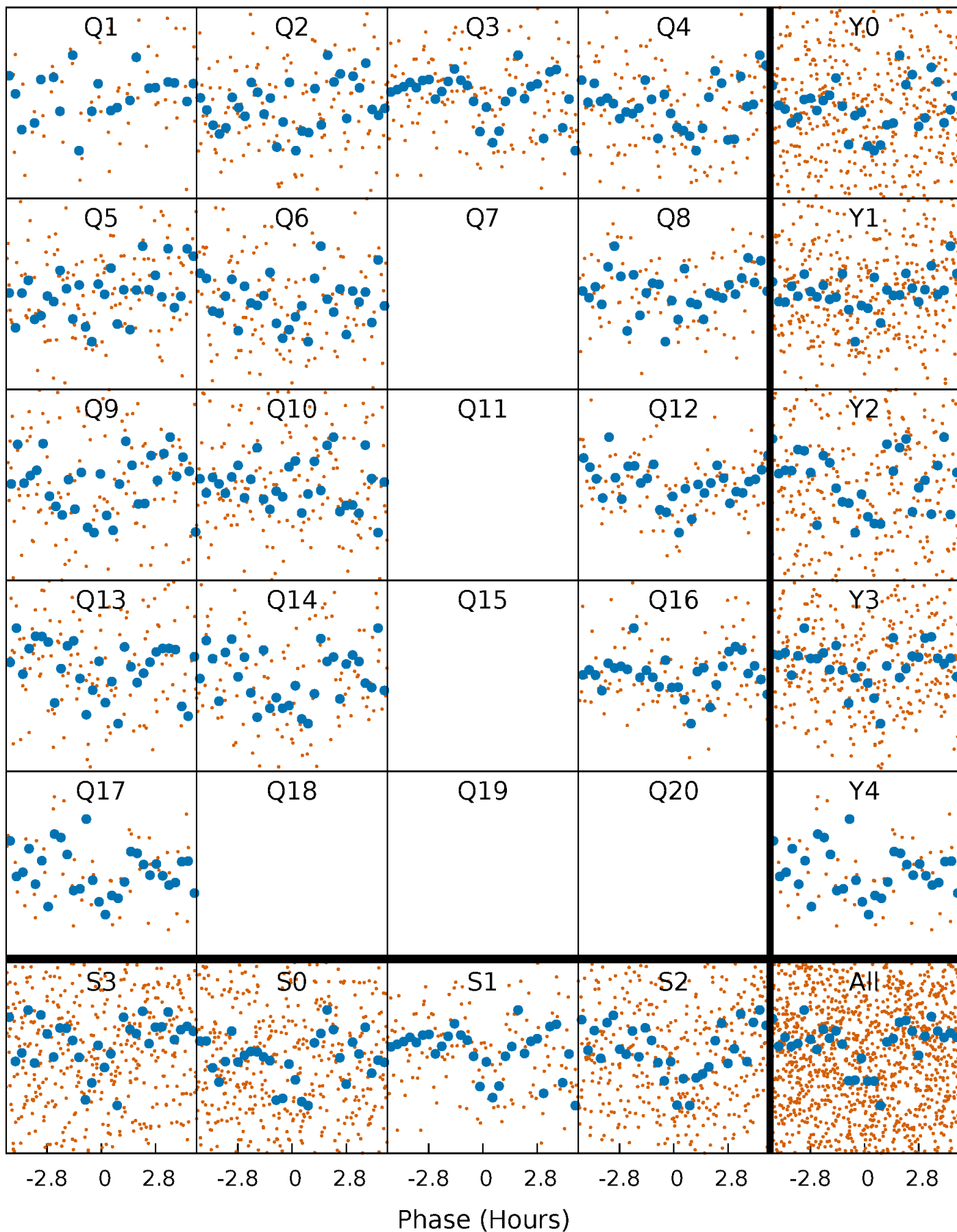


Non-Whitened Vs. Whitened Light Curve



PDC Quarter-Phased Transit Curves

TCE 010090854-01 P= 12.630619 Days $T_0=136.702799$ (BKJD)



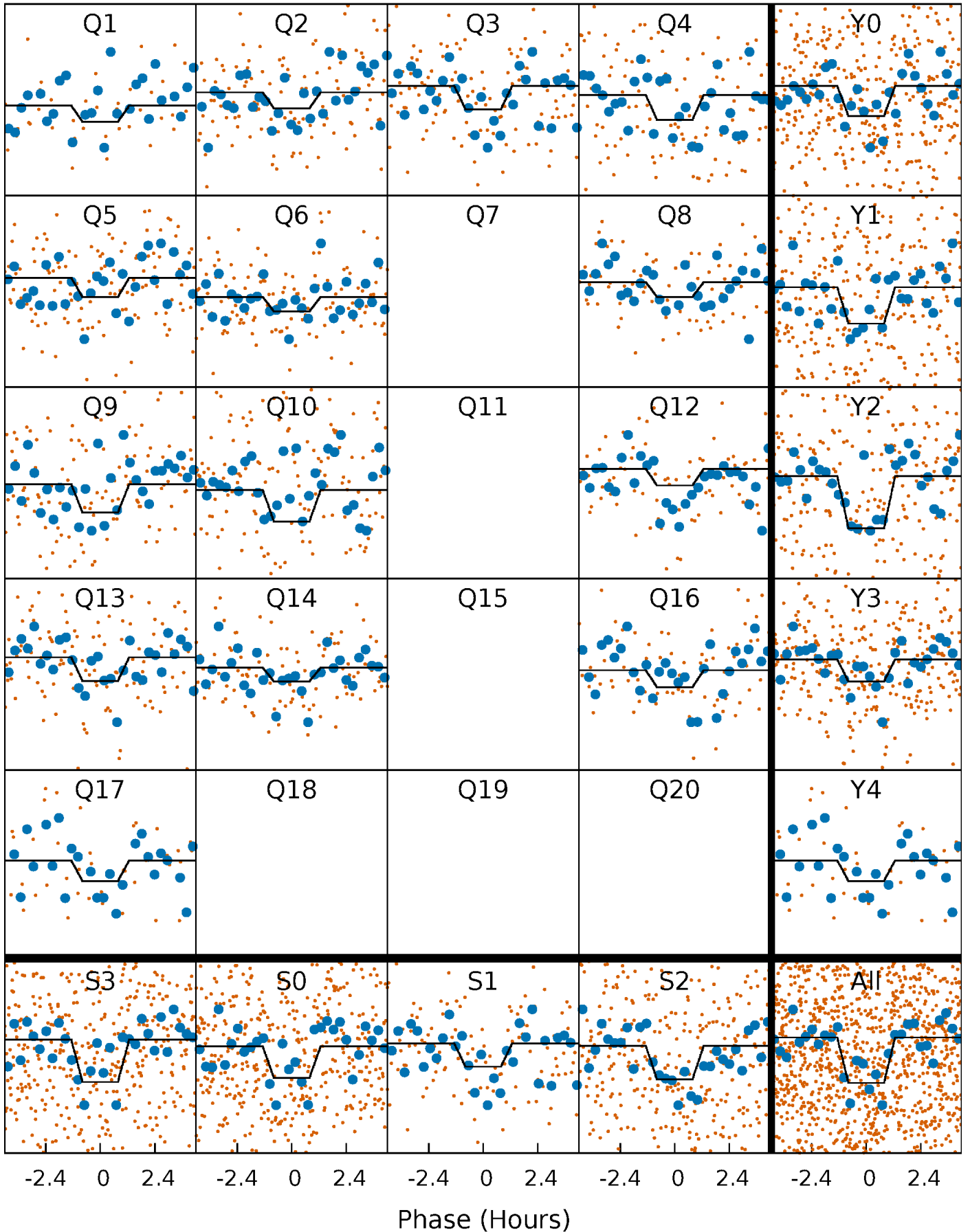
DV Quarter-Phased Transit Curves

TCE 010090854-01 P= 12.630619 Days $T_0=136.702799$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

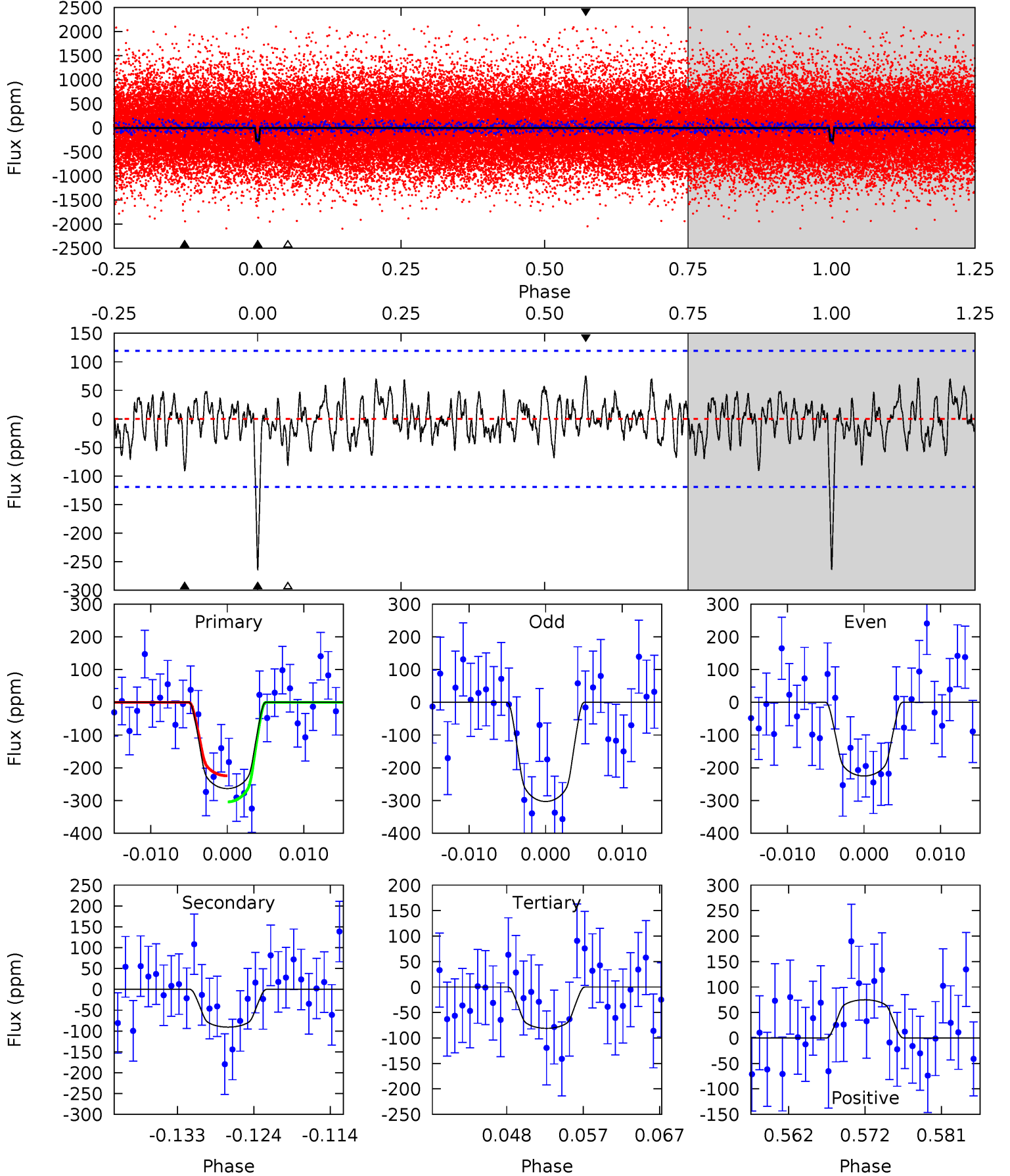
TCE 010090854-01 P= 12.630566 Days $T_0=136.708189$ (BKJD)



DV Model-Shift Uniqueness Test

010090854-01, P = 12.630619 Days, E = 124.072180 Days

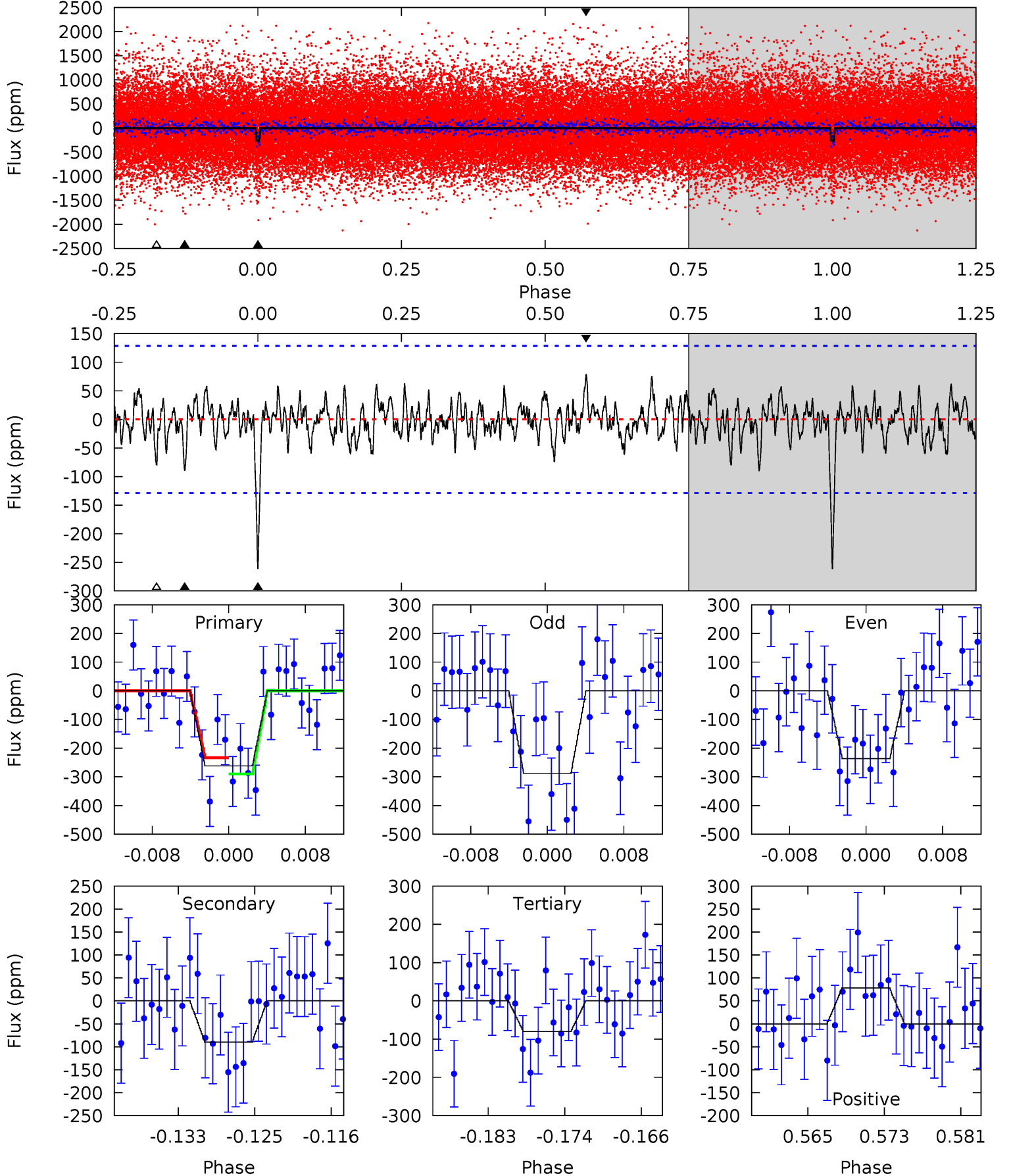
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.1	3.83	3.43	3.17	5.04	2.59	1.15	7.71	7.97	0.40	0.66	1.65	1.16	0.22	1.69



Alt Model-Shift Uniqueness Test

010090854-01, $P = 12.630566$ Days, $E = 124.077623$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	3.53	3.15	3.07	5.06	2.64	1.00	7.15	7.23	0.38	0.46	1.02	0.99	0.23	1.12



Stellar Parameters For KIC 010090854

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5579^{+150}_{-167}	$4.580^{+0.034}_{-0.136}$	$-0.220^{+0.300}_{-0.300}$	$0.798^{+0.161}_{-0.069}$	$0.892^{+0.080}_{-0.110}$	$2.477^{+0.455}_{-0.987}$
	+3%/-3%	+1%/-3%	+136%/-136%	+20%/-9%	+9%/-12%	+18%/-40%
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 010090854-01 / KOI 5762.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-91 ± 24	$1.78^{+0.96}_{-0.96}$	976^{+49}_{-35}	4133^{+1534}_{-624}	160^{+585}_{-97}
Alt.	-90 ± 25	$1.64^{+0.98}_{-1.02}$	983^{+50}_{-40}	4242^{+2181}_{-679}	184^{+1087}_{-118}

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

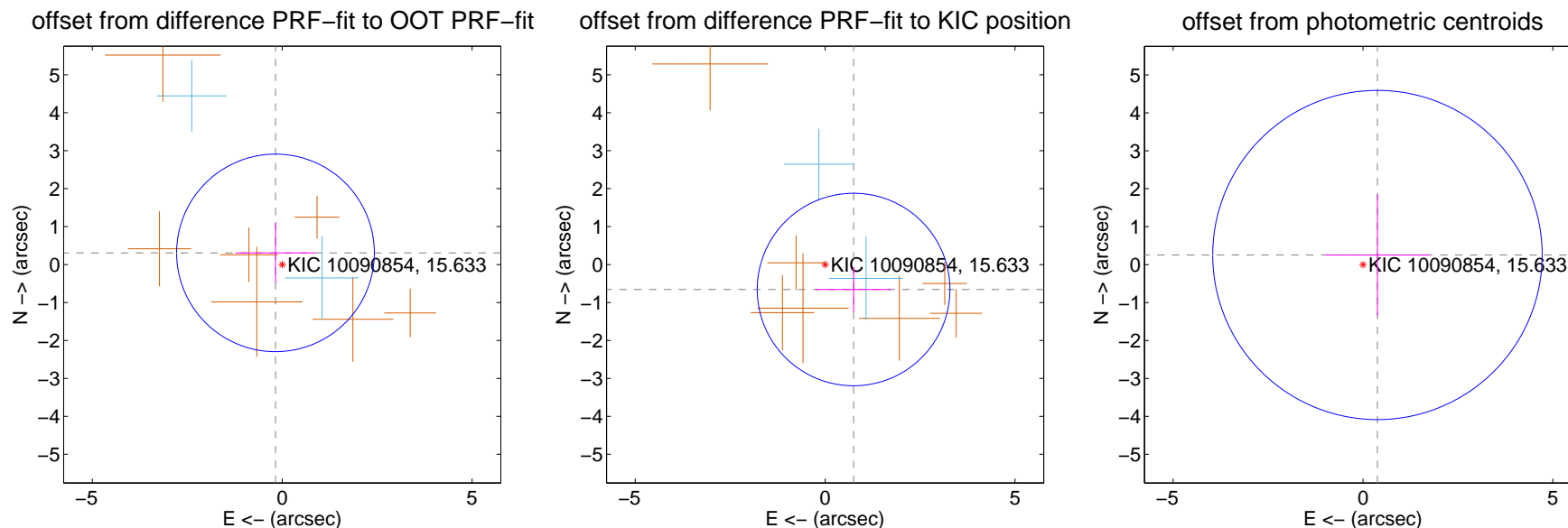
DV Centroid Data

Supplemental centroid analysis for 010090854-01. Kepler magnitude: 15.63. Transit SNR 8.61

There are 2 quarters with good PRF difference image offsets

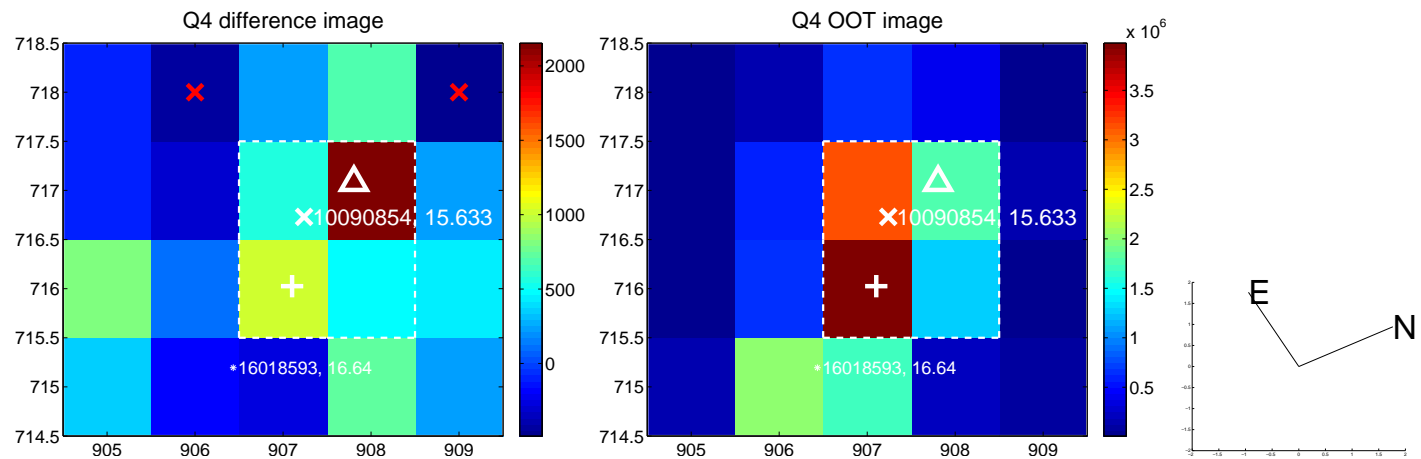
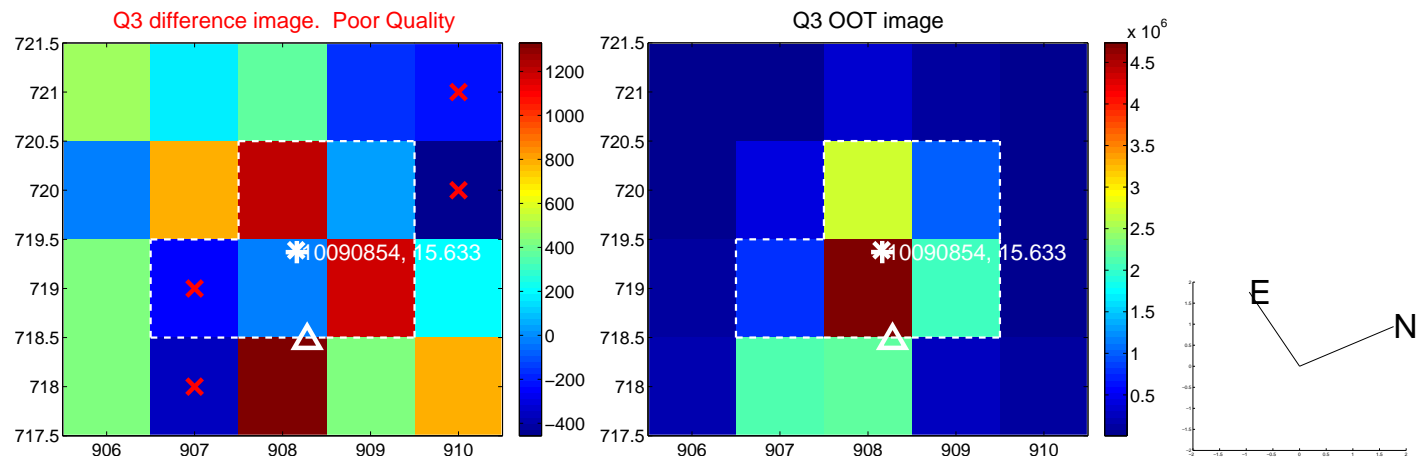
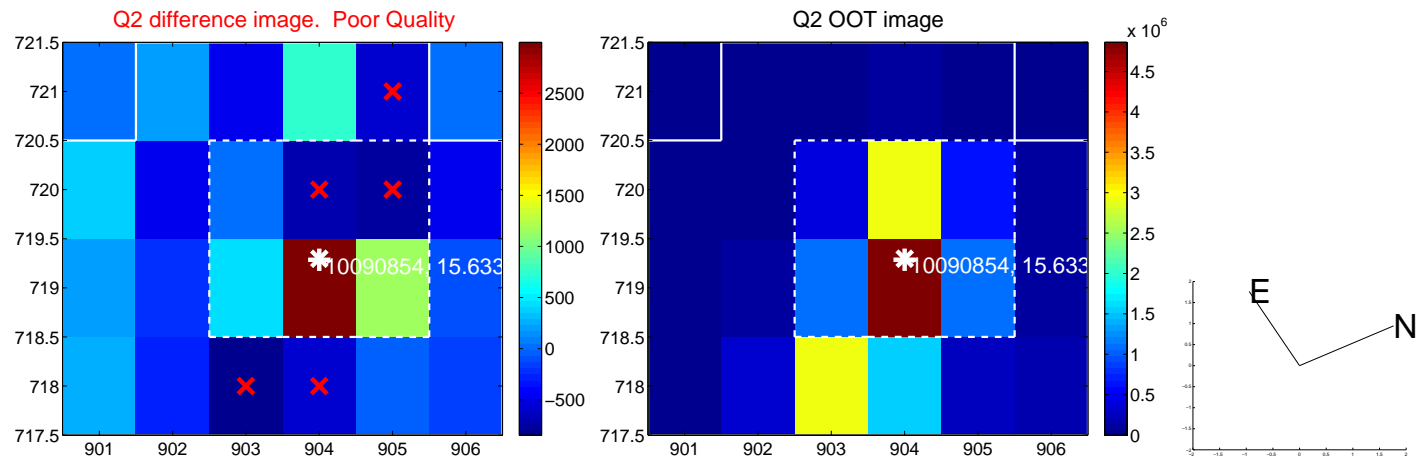
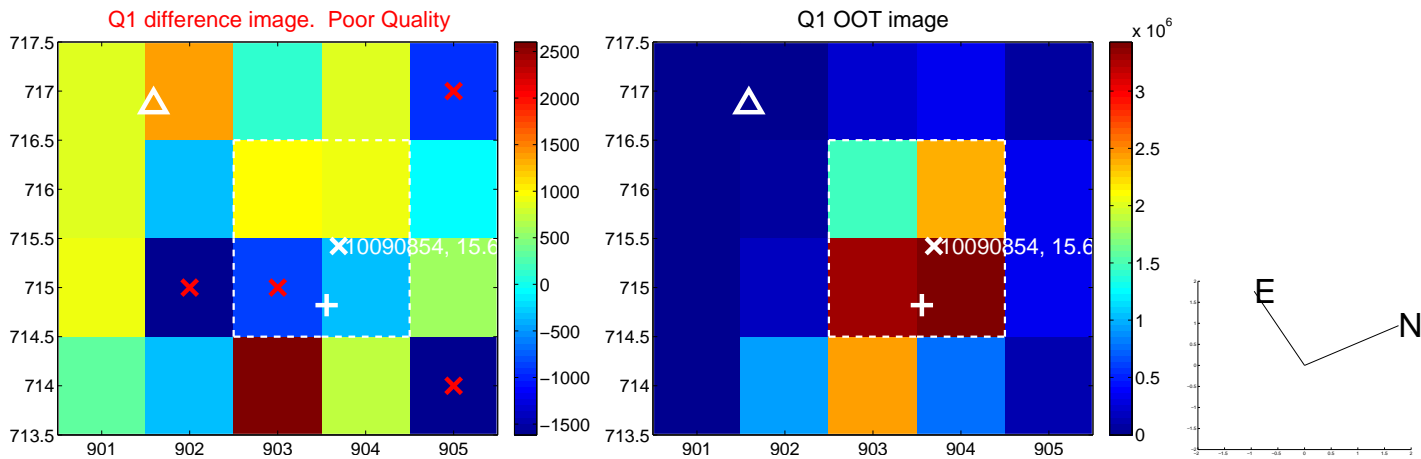
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.354 ± 0.868	0.41	0.177 ± 1.057	0.307 ± 0.795
PRF-fit source offset from KIC position	0.997 ± 0.846	1.18	-0.749 ± 0.997	-0.658 ± 0.595
photometric centroid source offset	0.46 ± 1.45	0.32	-0.38 ± 1.37	0.25 ± 1.60

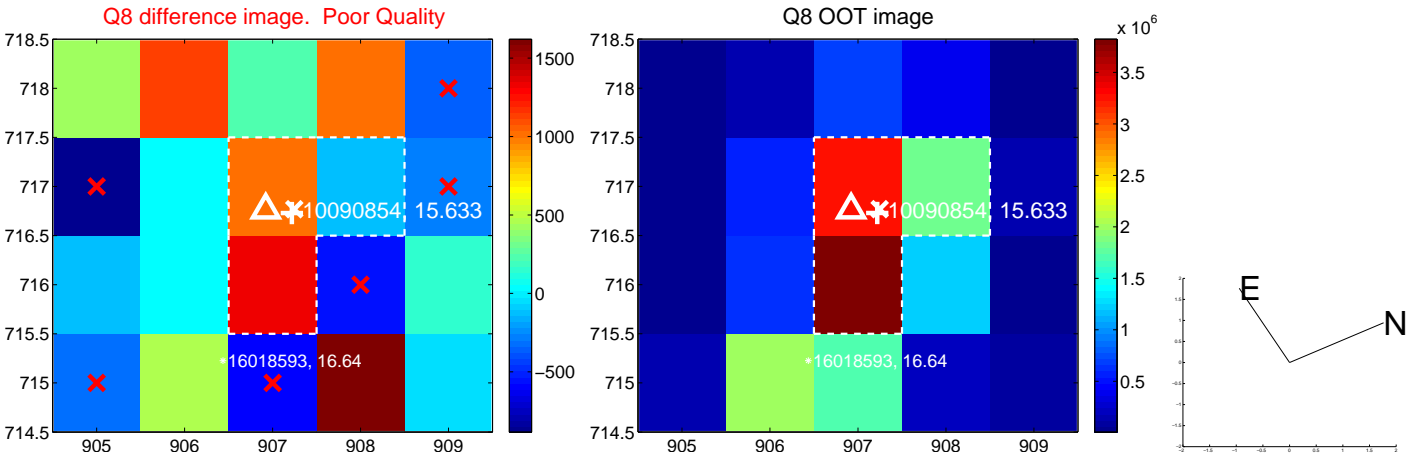
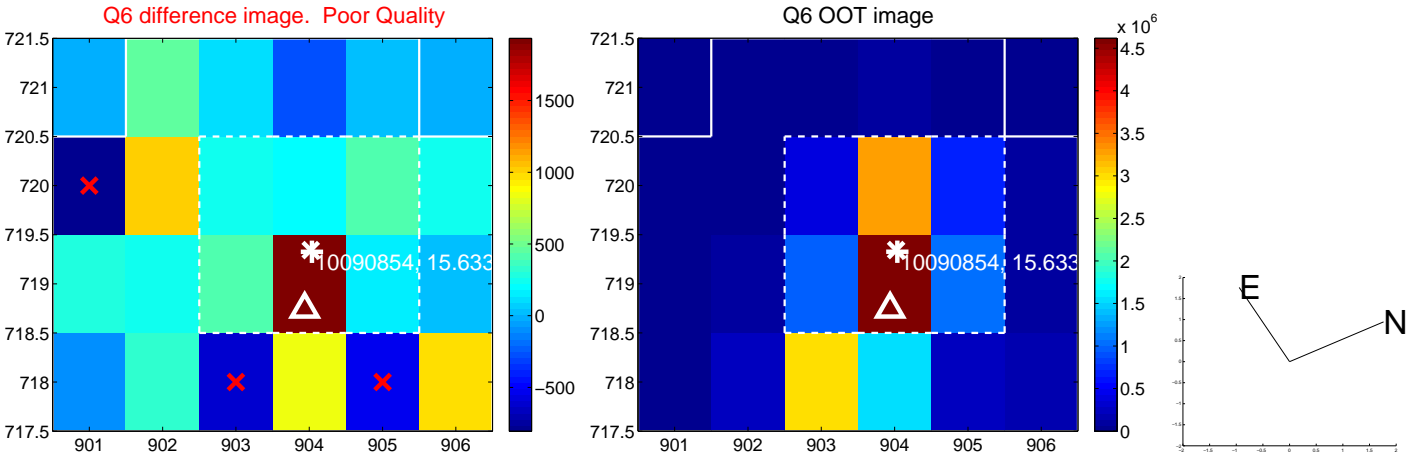
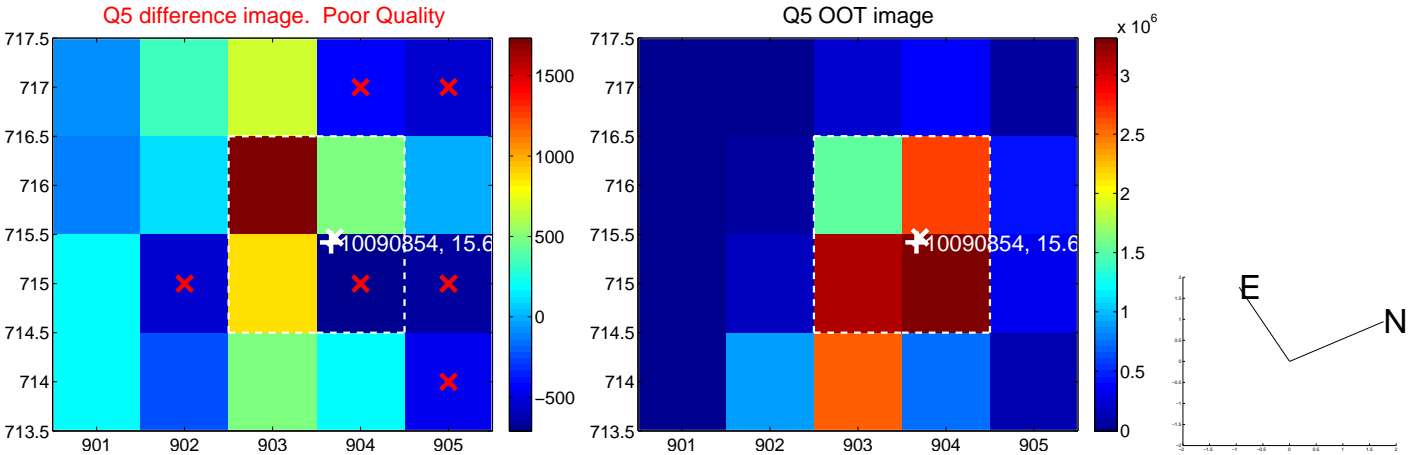


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

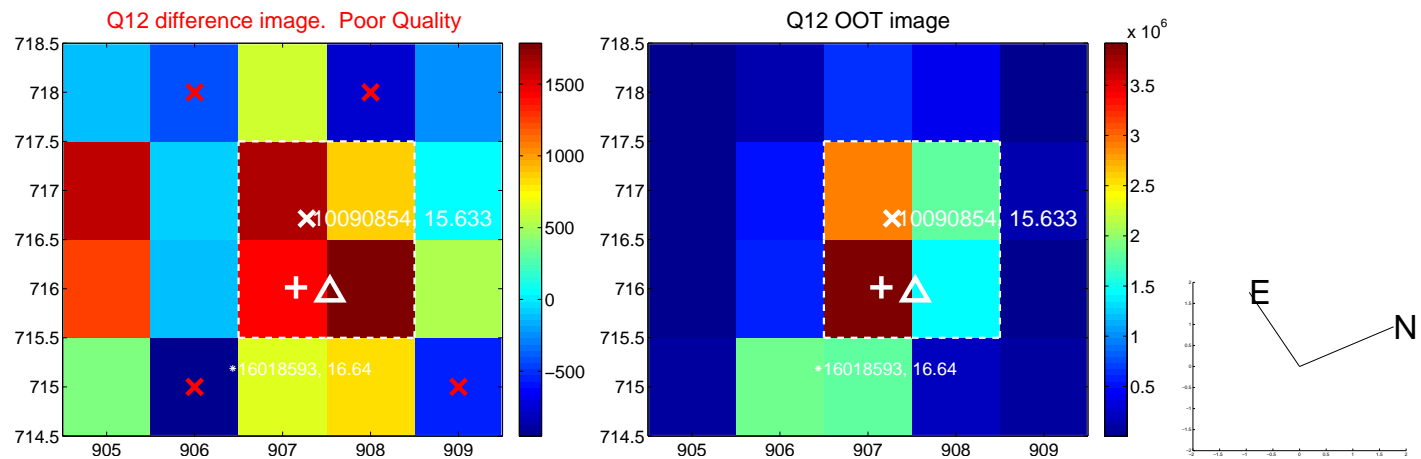
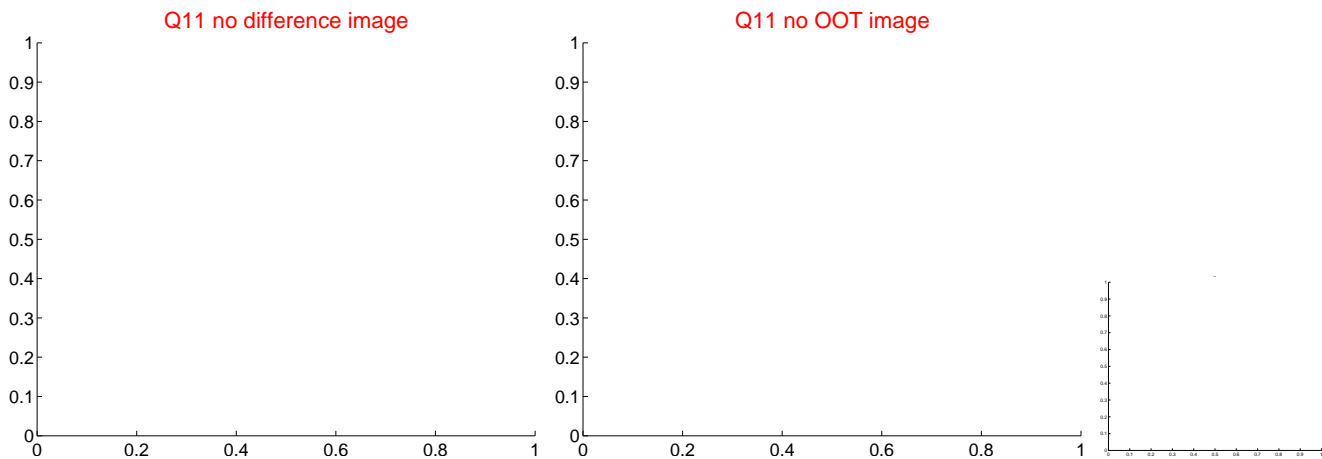
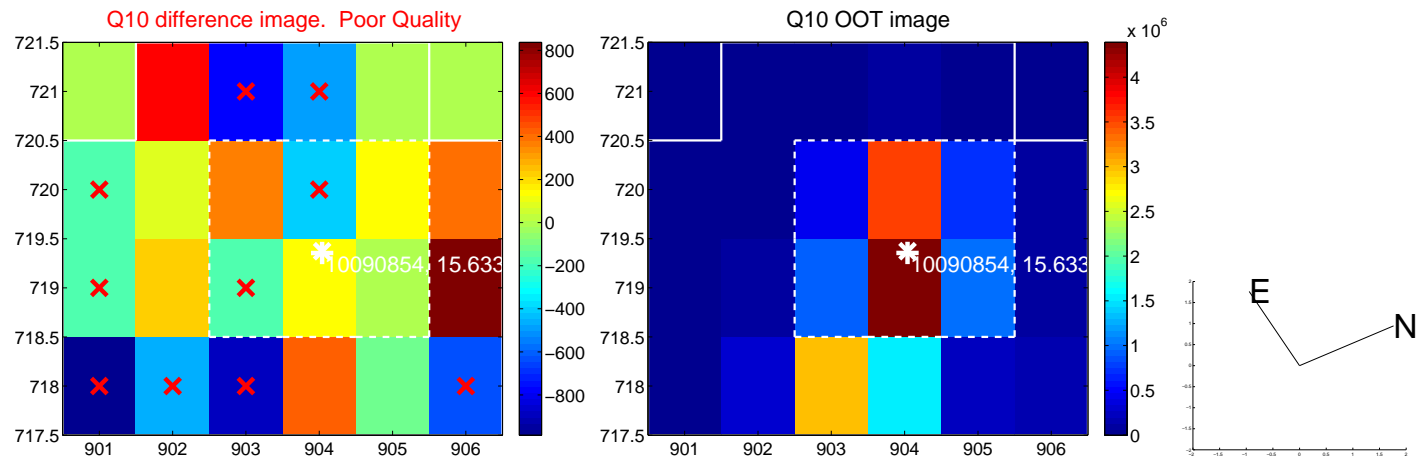
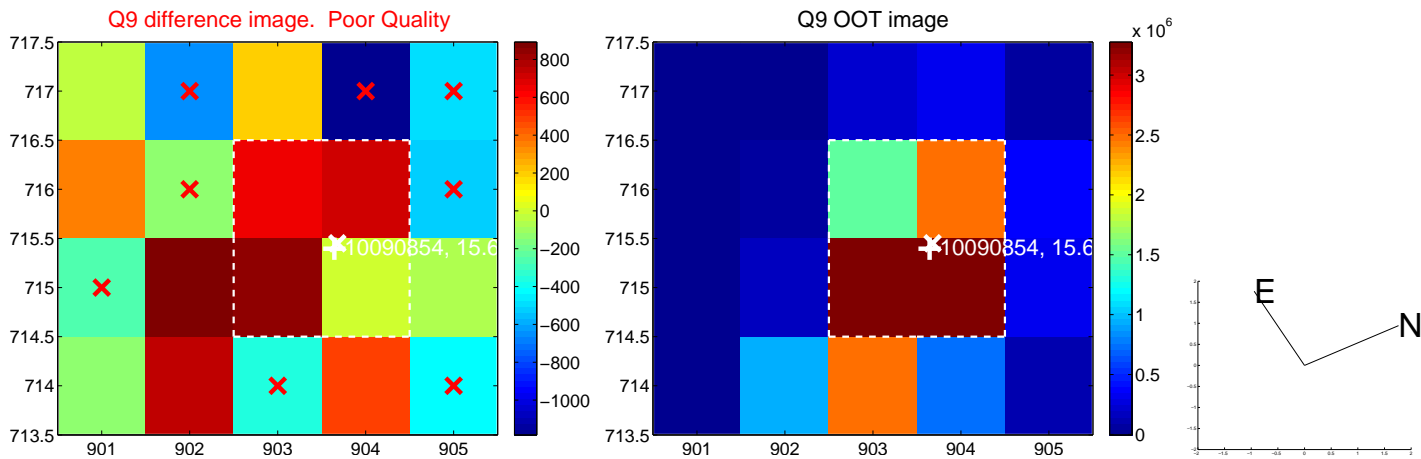
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



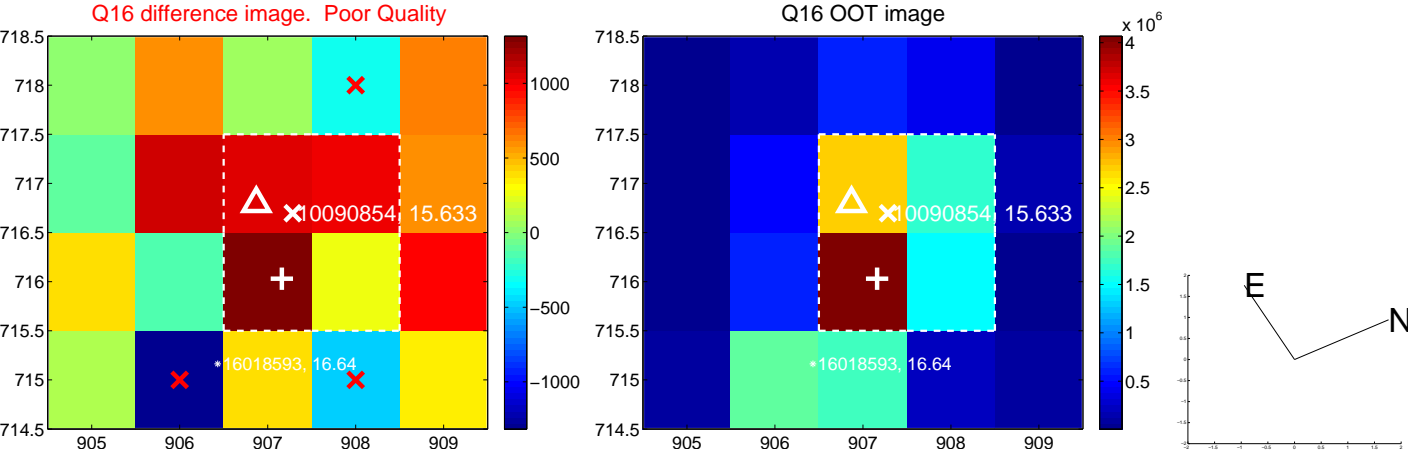
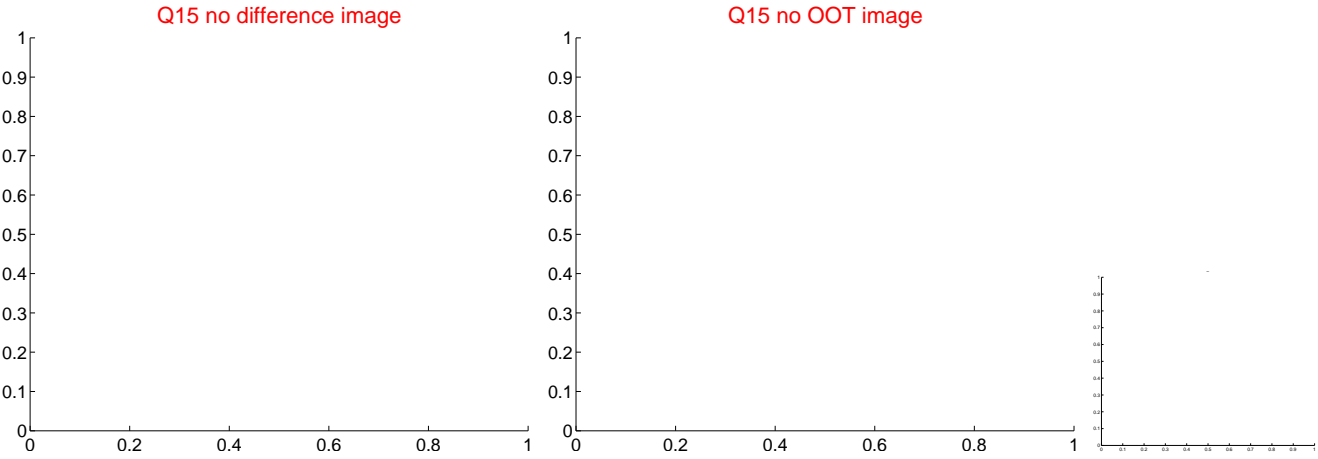
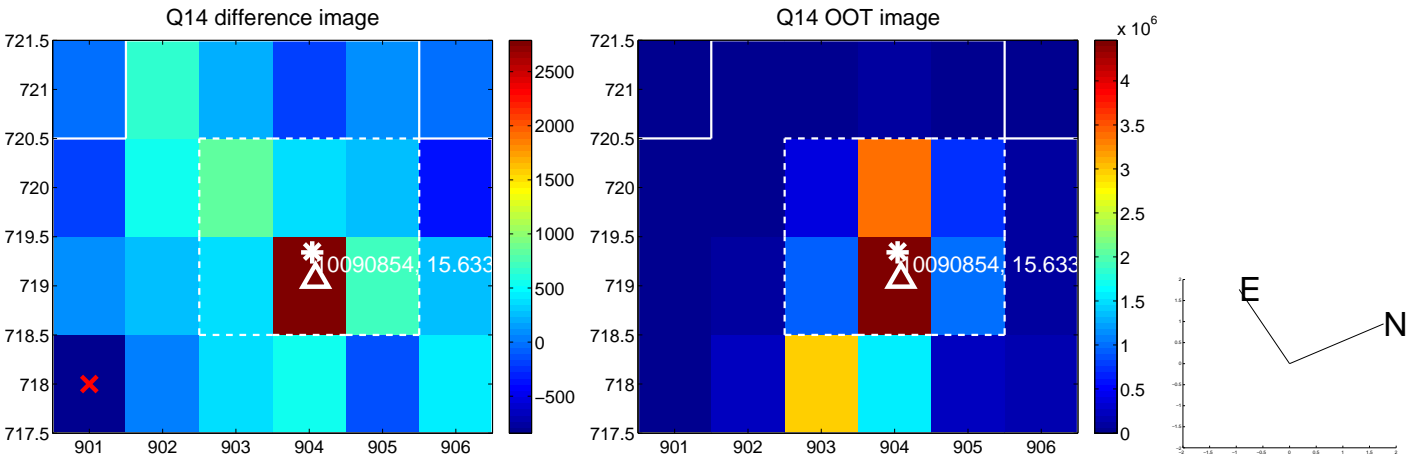
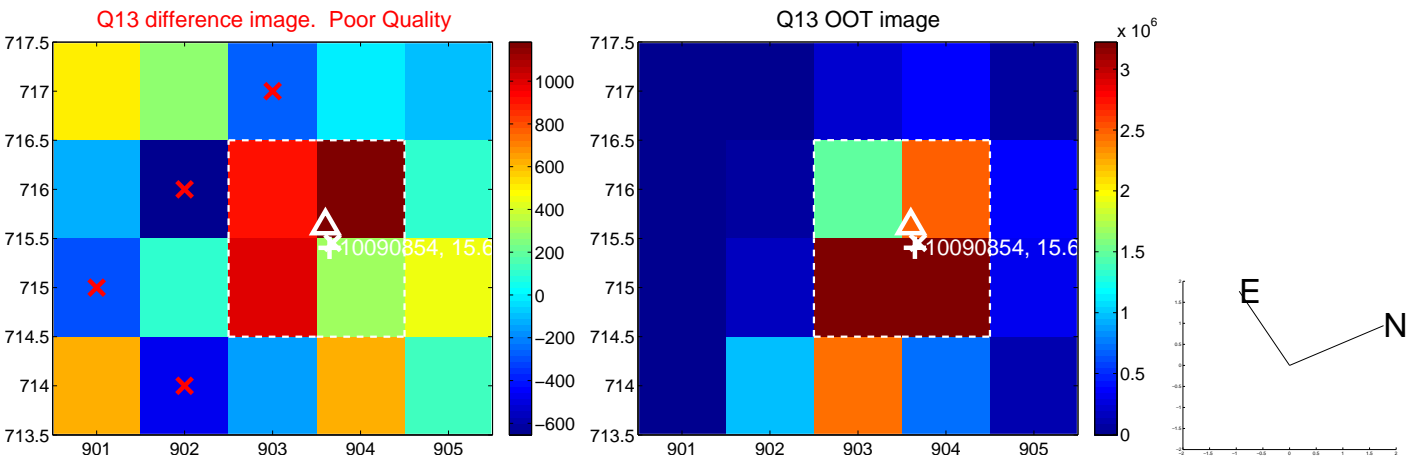
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



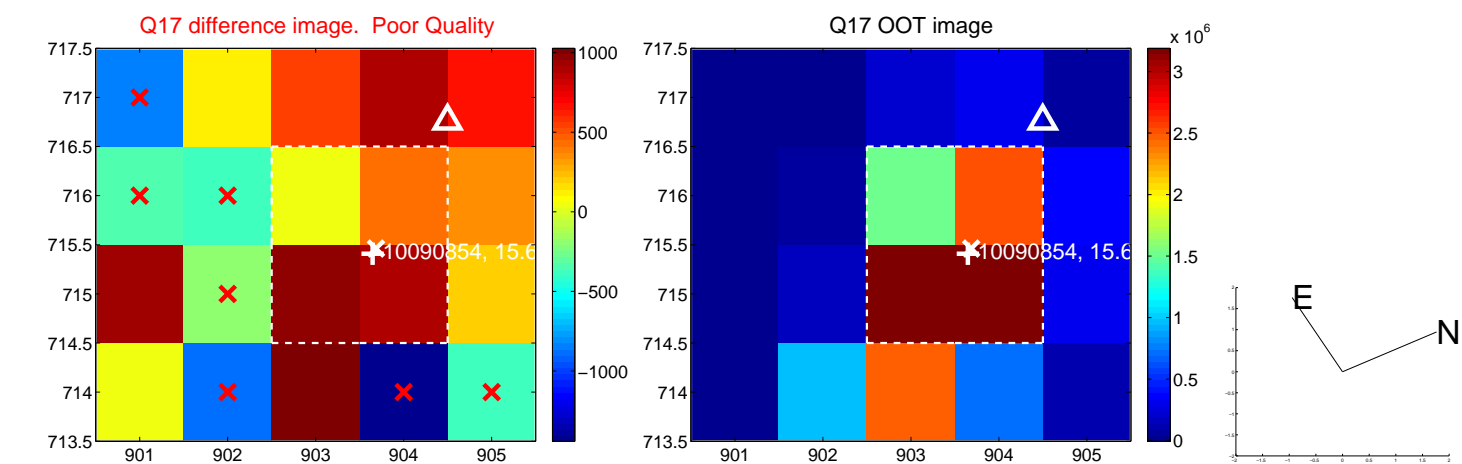
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



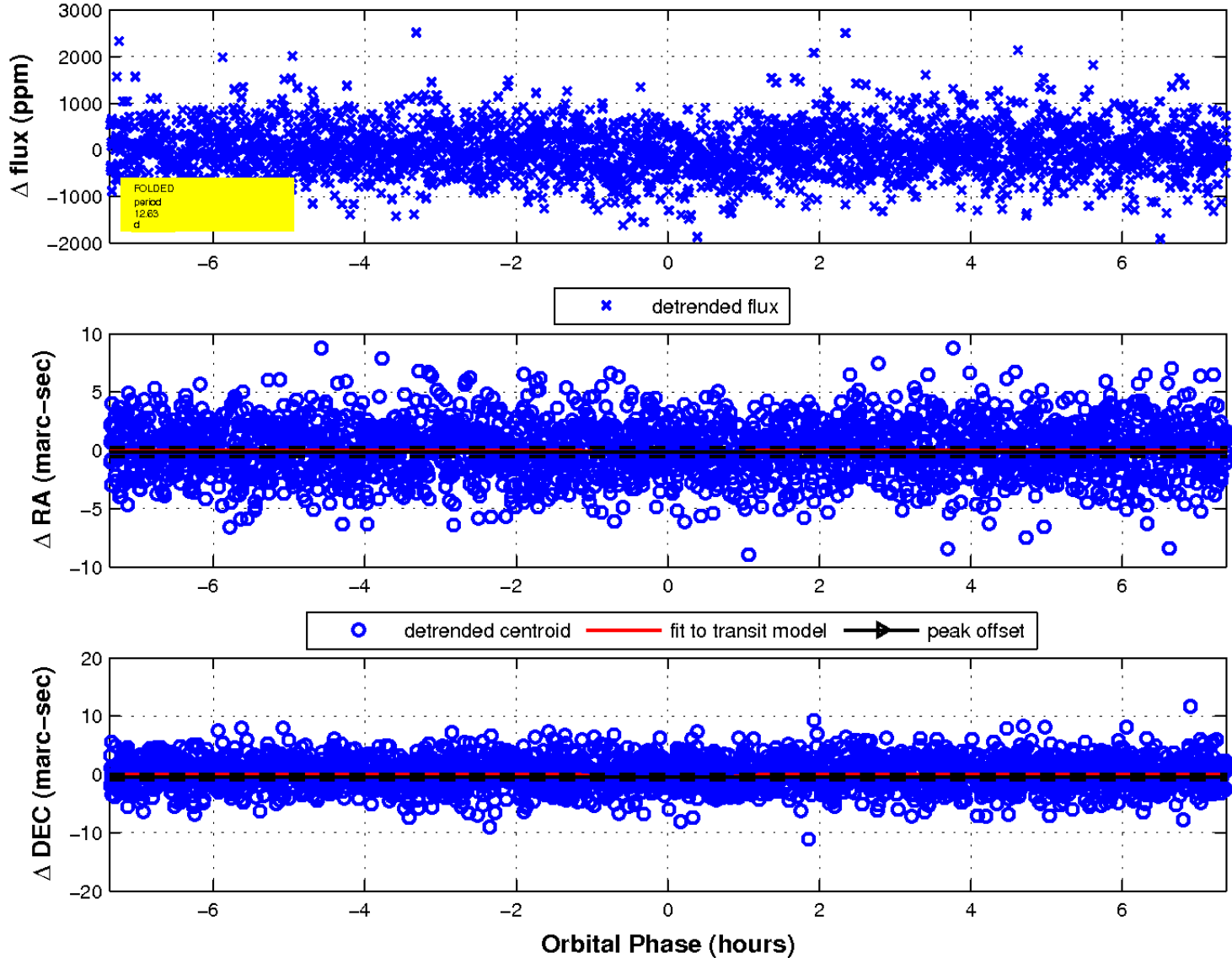
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

