

KIC 011098013

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})
011098013-01	OBS	2712.01	7.507852	138.709819	153.1	5.623	25.7	27.7	1.34	6408	1.95	396.75

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011098013-01	OBS	PC	1.00	0	0	0	0	CENT_SATURATED

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

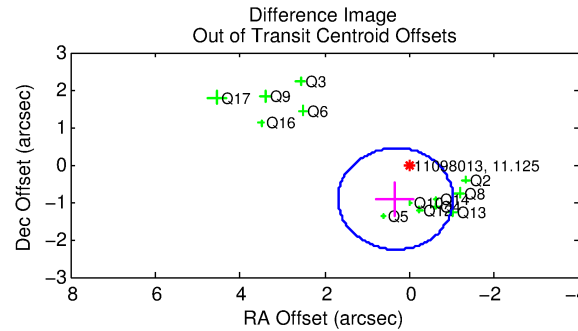
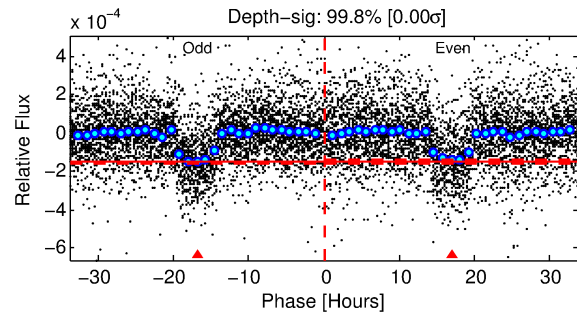
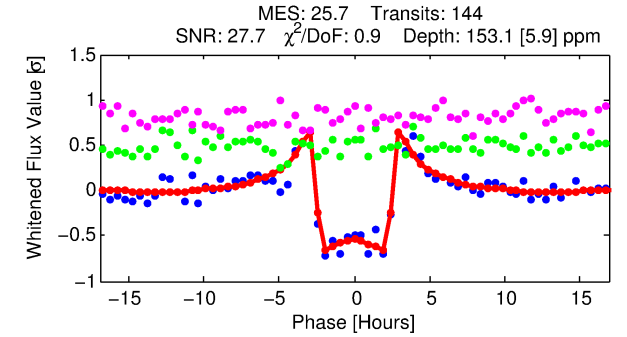
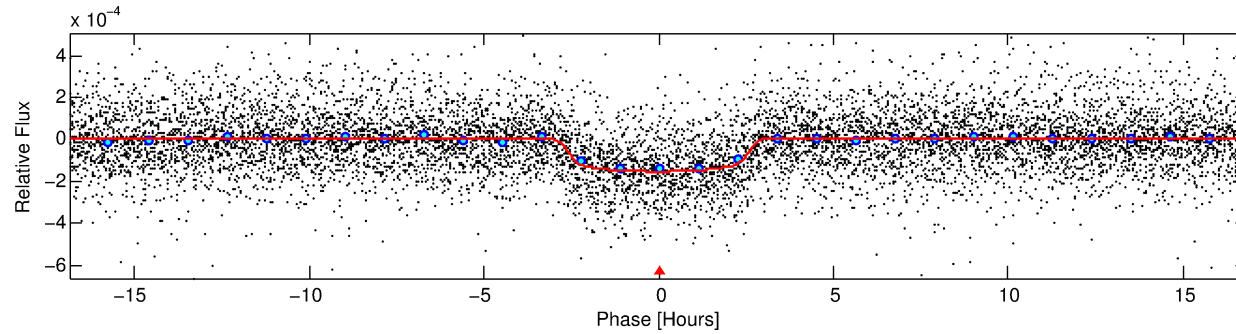
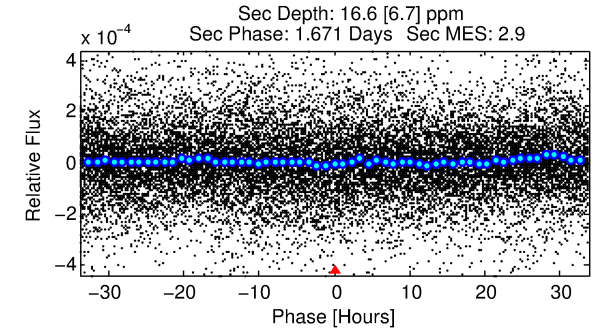
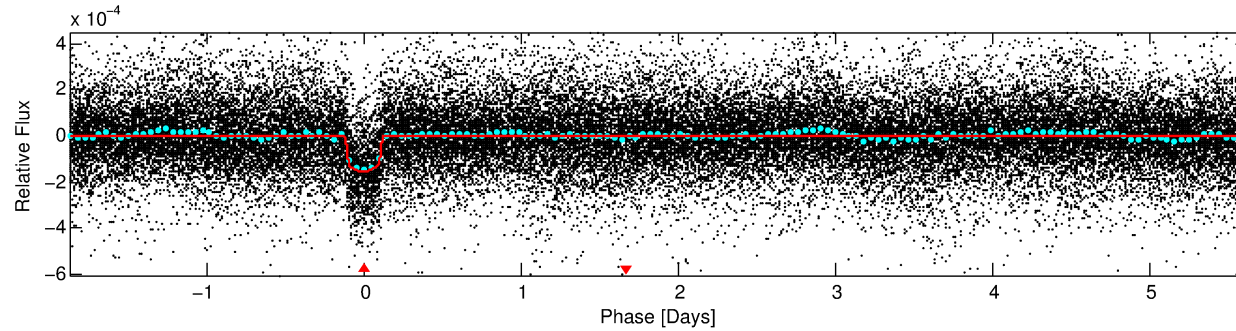
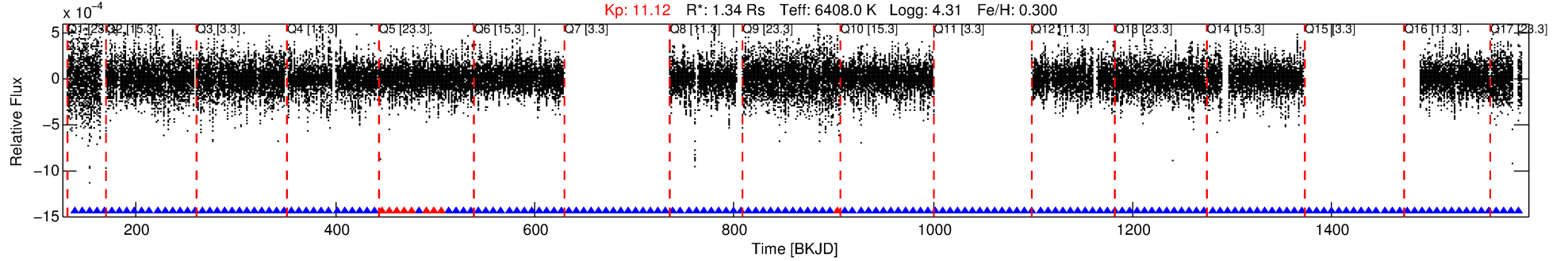
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011098013-01

No Significant Match Found

DV One-Page Summary

KIC: 11098013 Candidate: 1 of 1 Period: 7.508 d
KOI: K02712.01 Corr: 0.972



DV Fit Results:

Period = 7.50785 [0.00002] d
Epoch = 138.7098 [0.0016] BKJD
 $R_p/R^* = 0.0134$ [0.0007]
 $a/R^* = 4.72$ [1.06]
 $b = 0.91$ [0.05]
 $S_{\text{eff}} = 396.75$ [92.71]
 $T_{\text{eq}} = 1138$ [66] K
 $R_p = 1.95$ [0.35] R_e
 $a = 0.0825$ [0.0121] AU
 $A_g = 16.33$ [7.63] [2.01σ]
 $T_{\text{eff}} = 3537$ [374] K [6.31σ]

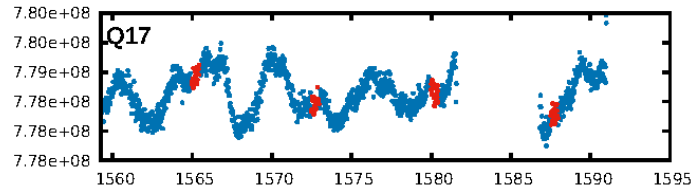
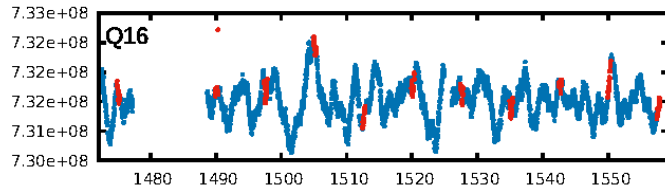
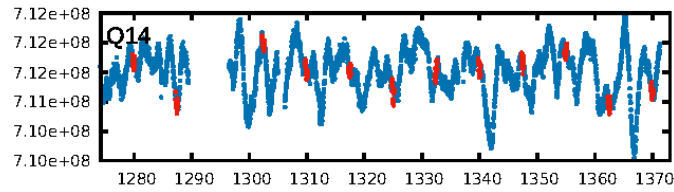
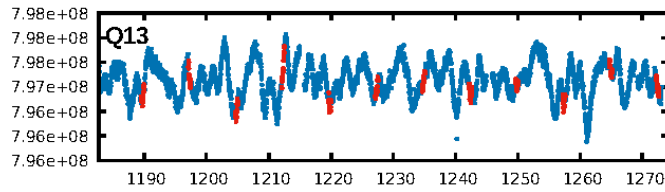
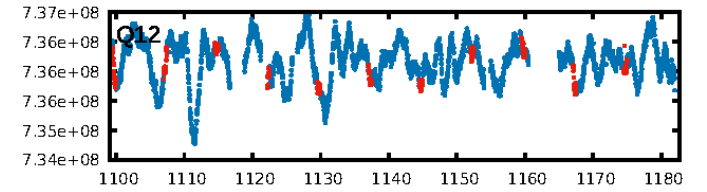
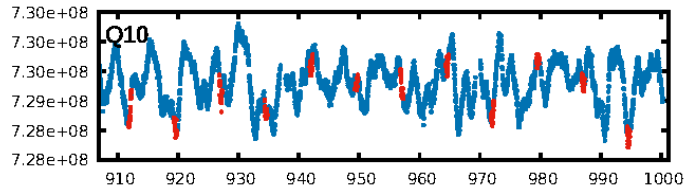
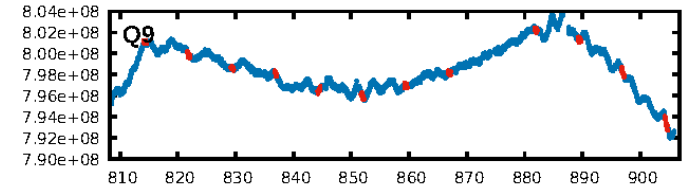
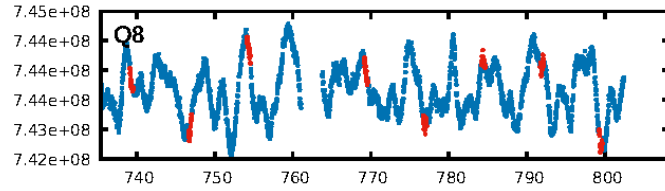
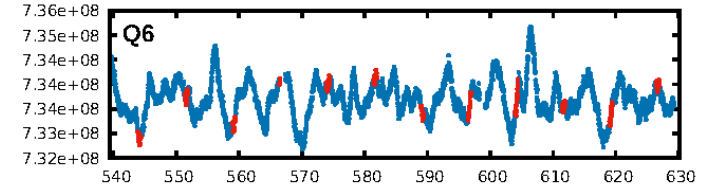
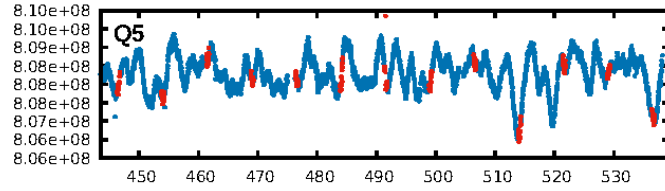
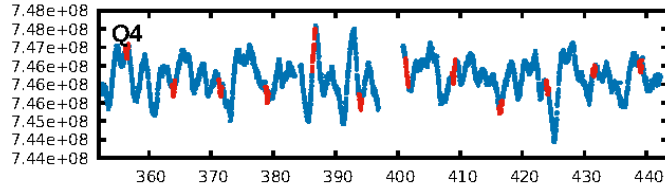
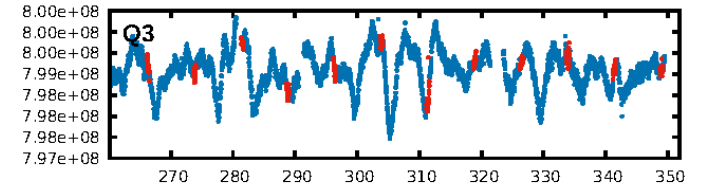
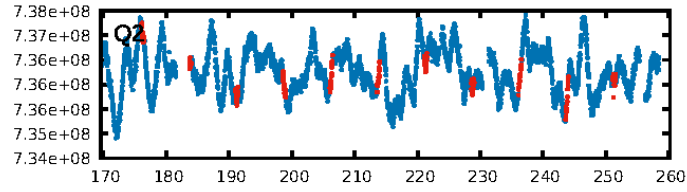
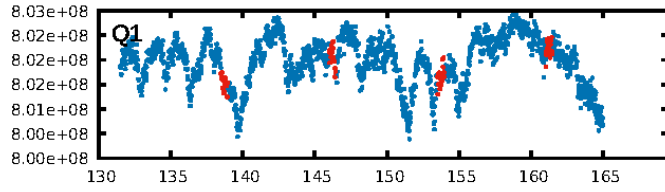
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 88.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.85e-132
RollingBand-fgt: 0.93 [127/136]
GhostDiagnostic-chr: 3.798
Centroid-sig: 0.0%
Centroid-so: 0.585 arcsec [2.68σ]
OotOffset-rm: 0.969 arcsec [2.14σ]
KicOffset-rm: 1.348 arcsec [2.36σ]
OotOffset-st: 4/1/4/4 [13]
KicOffset-st: 4/1/4/4 [13]
DiffImageQuality-fgm: 0.69 [9/13]
DiffImageOverlap-fno: 1.00 [14/14]

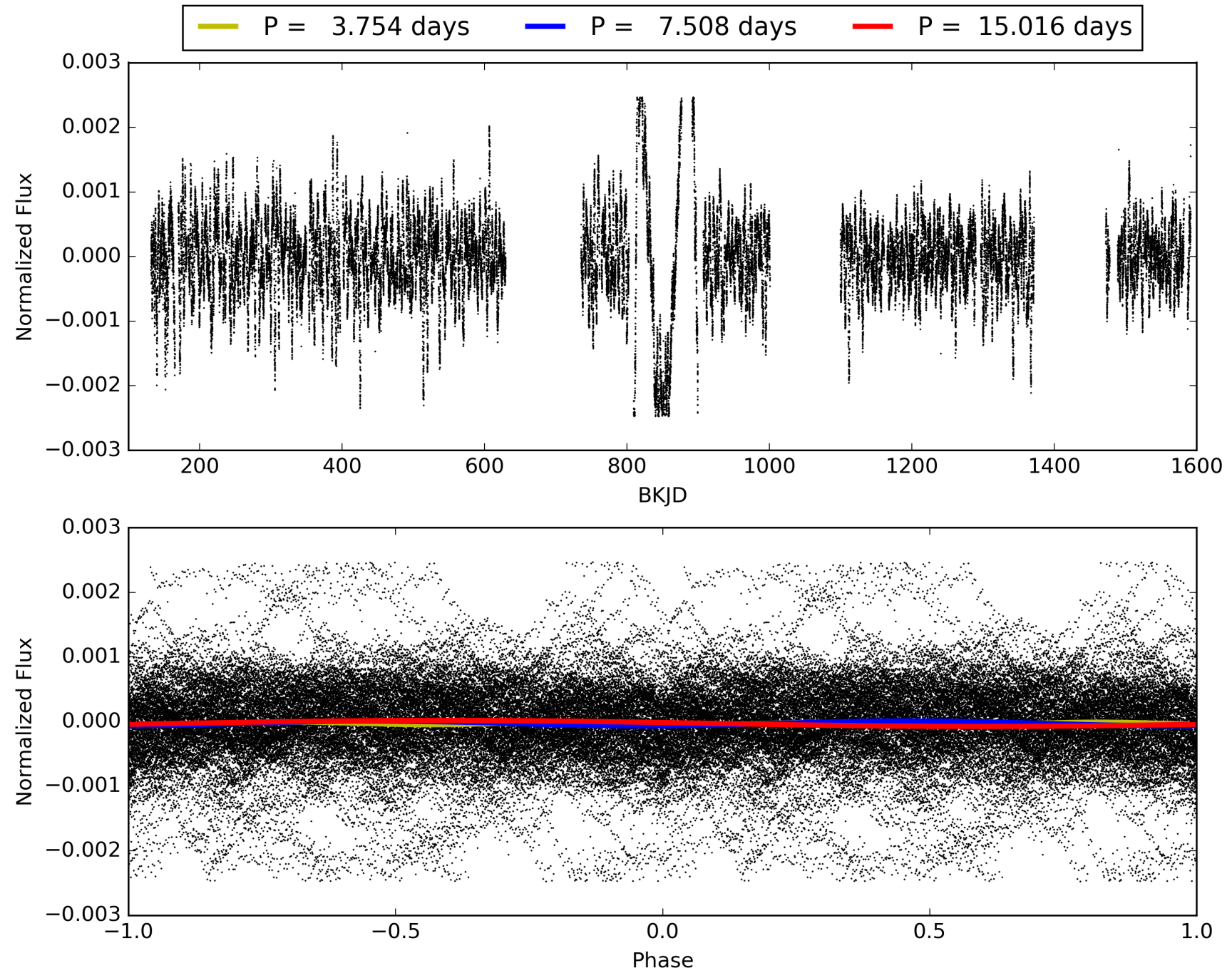
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 01:53:21 Z

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

TCE 011098013-01, PDC Light Curves

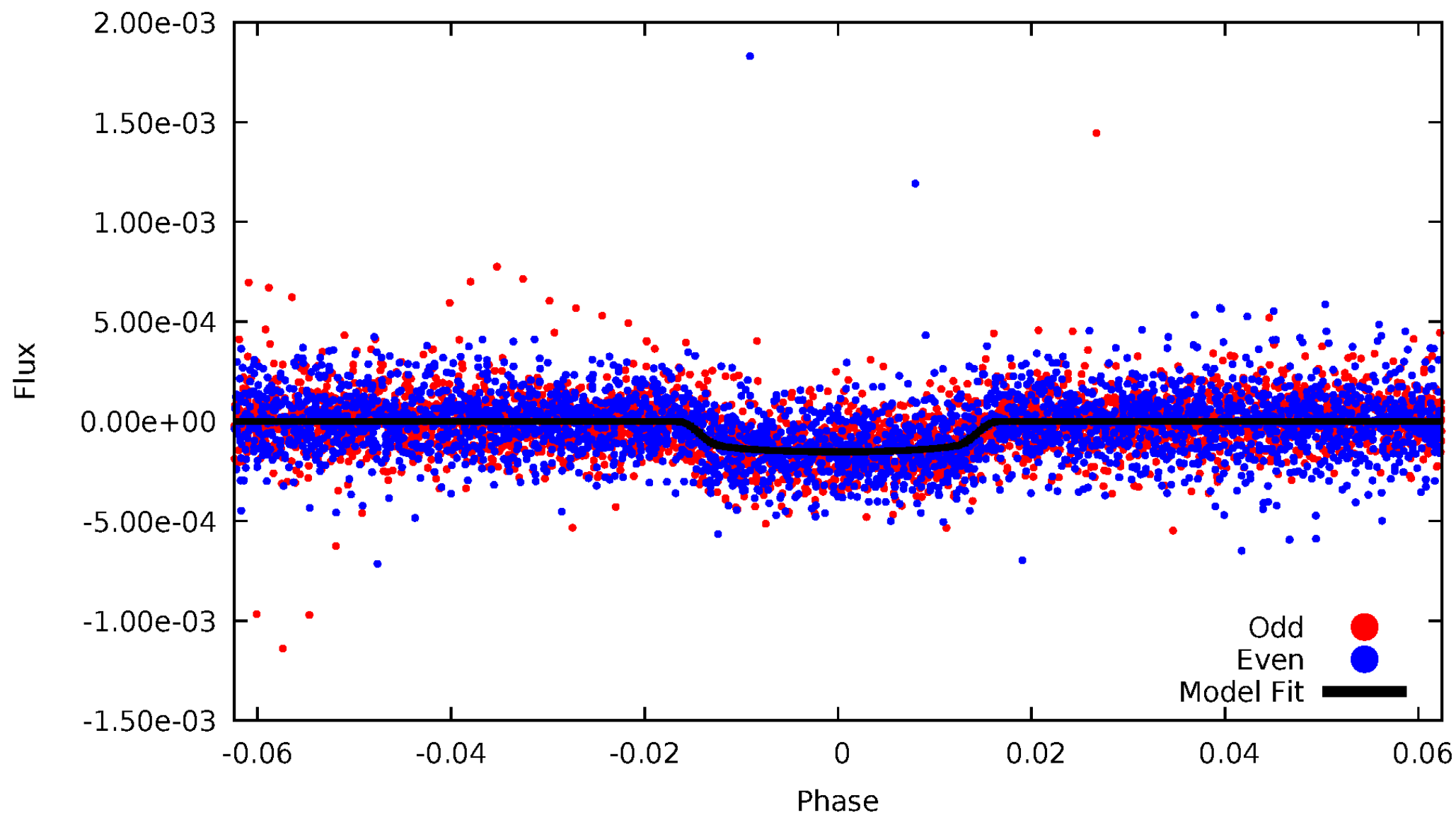


TCE 011098013-01



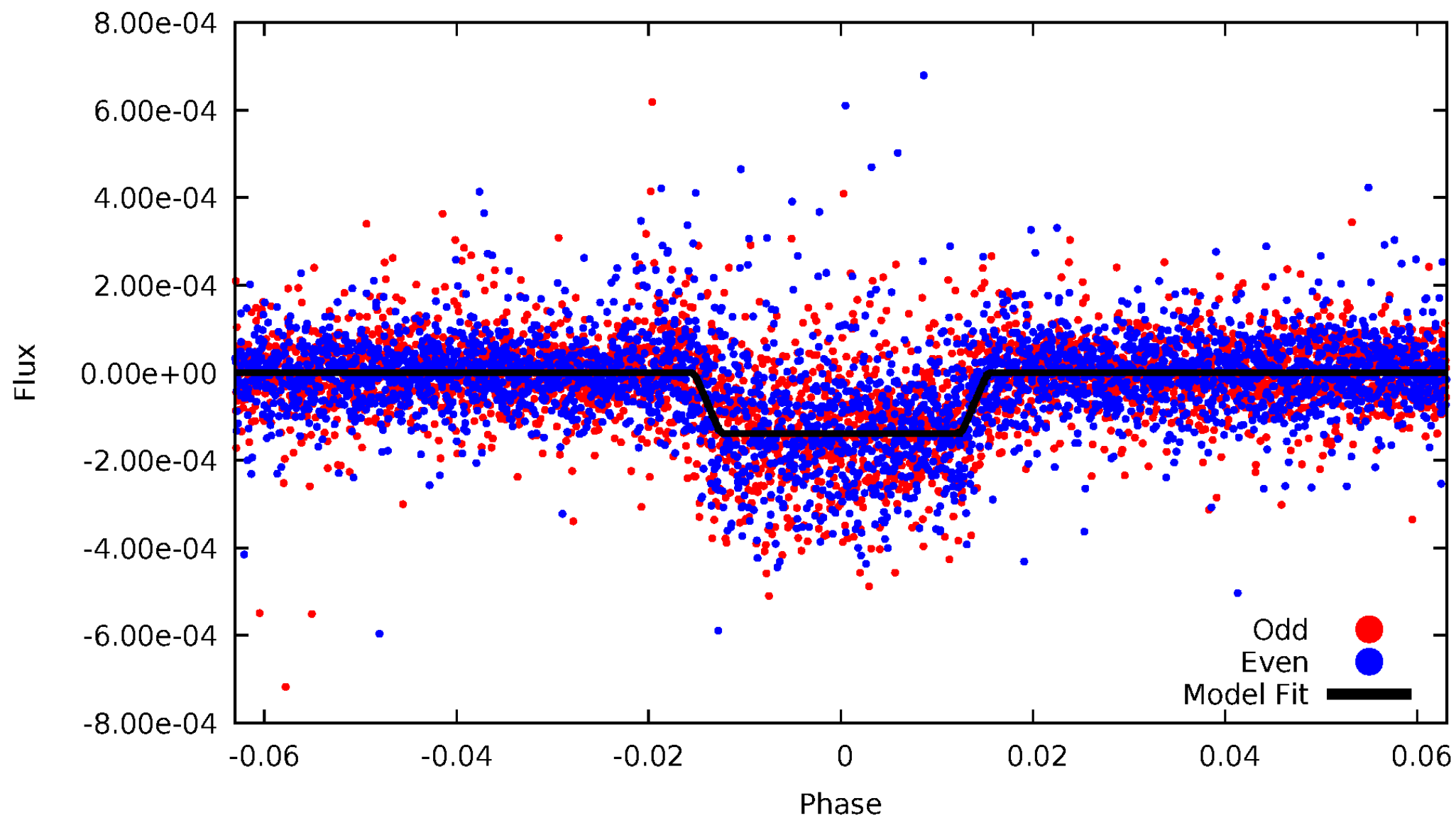
DV Odd/Even

TCE 011098013-01



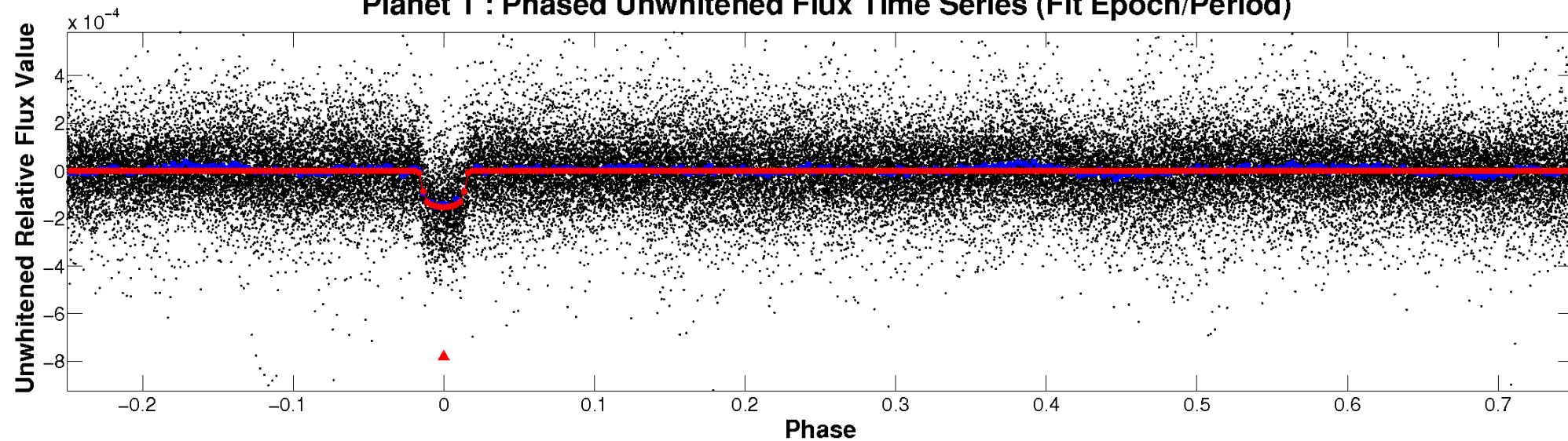
ALT Odd/Even

TCE 011098013-01

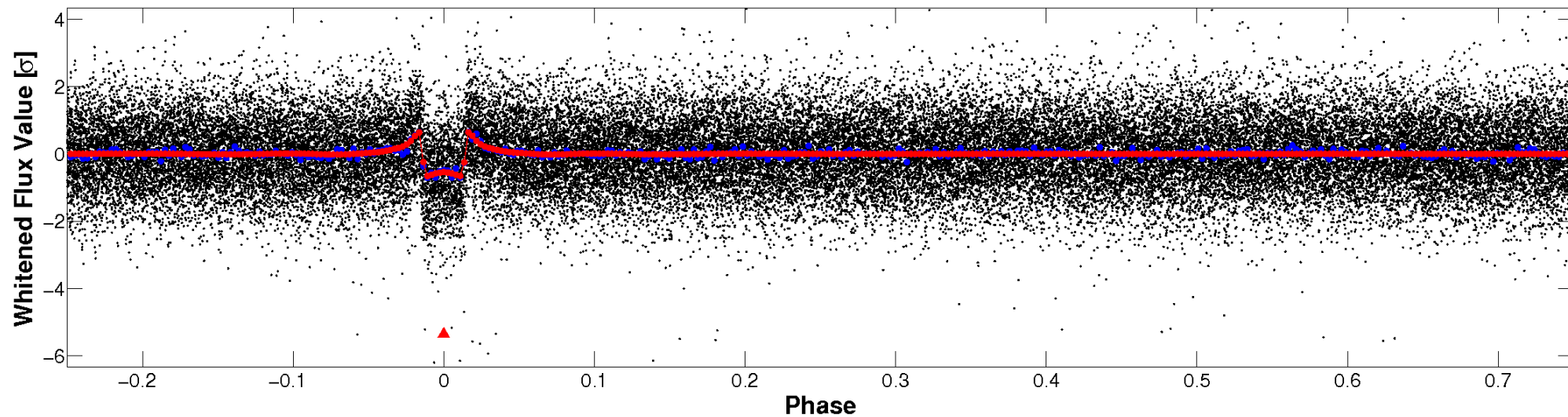


Non-Whitened Vs. Whitened Light Curve

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

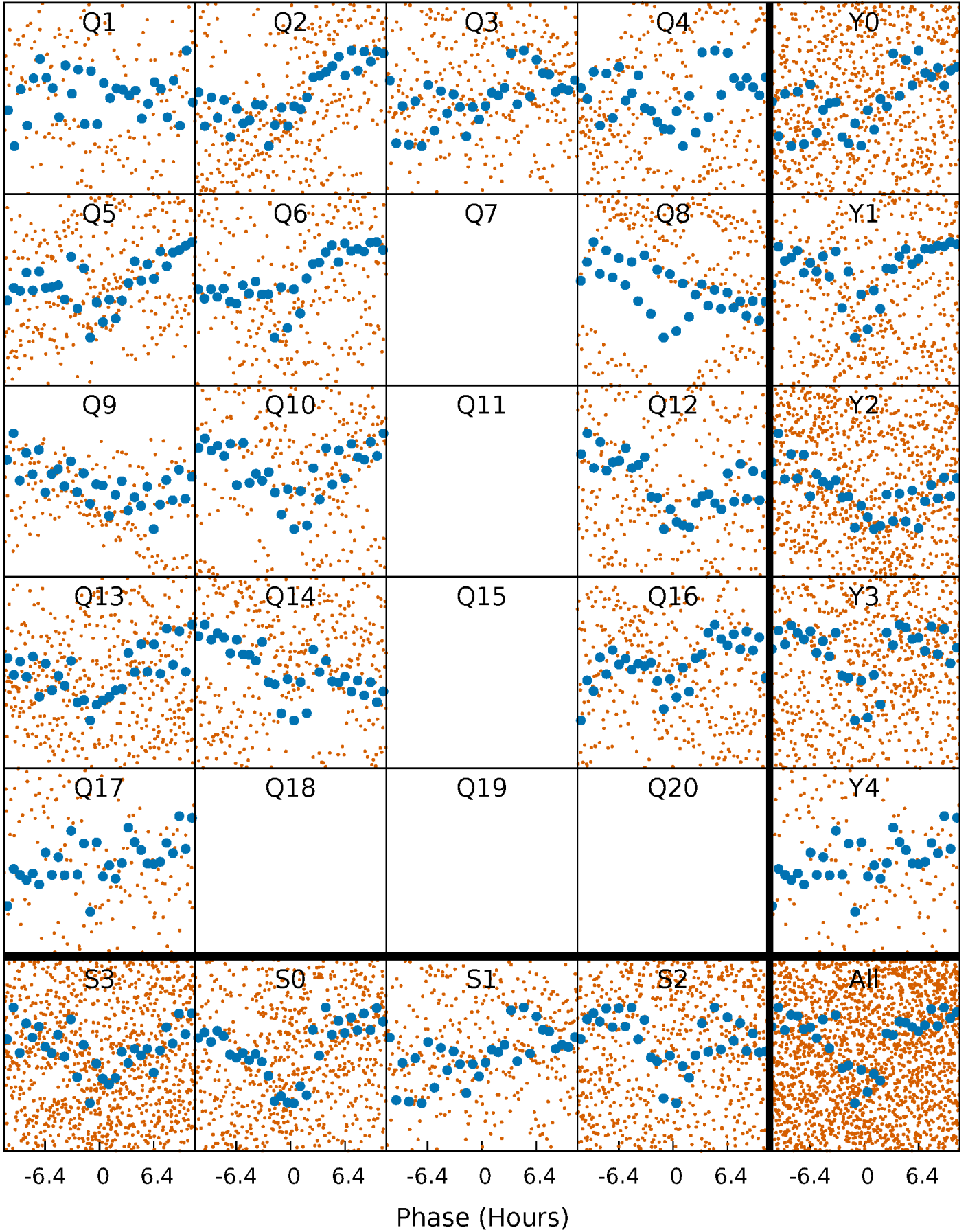


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



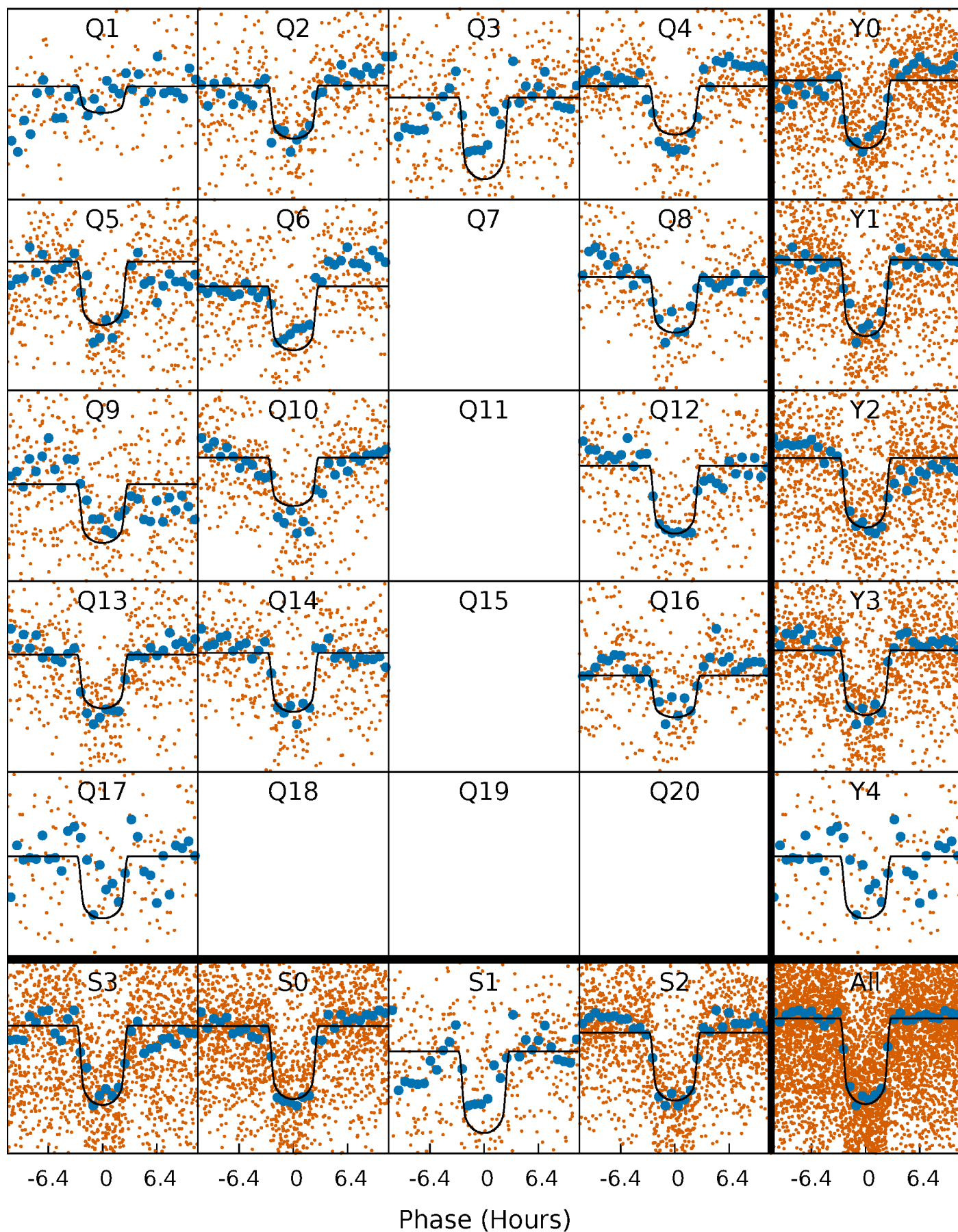
PDC Quarter-Phased Transit Curves

TCE 011098013-01 P= 7.507852 Days $T_0=138.709819$ (BKJD)



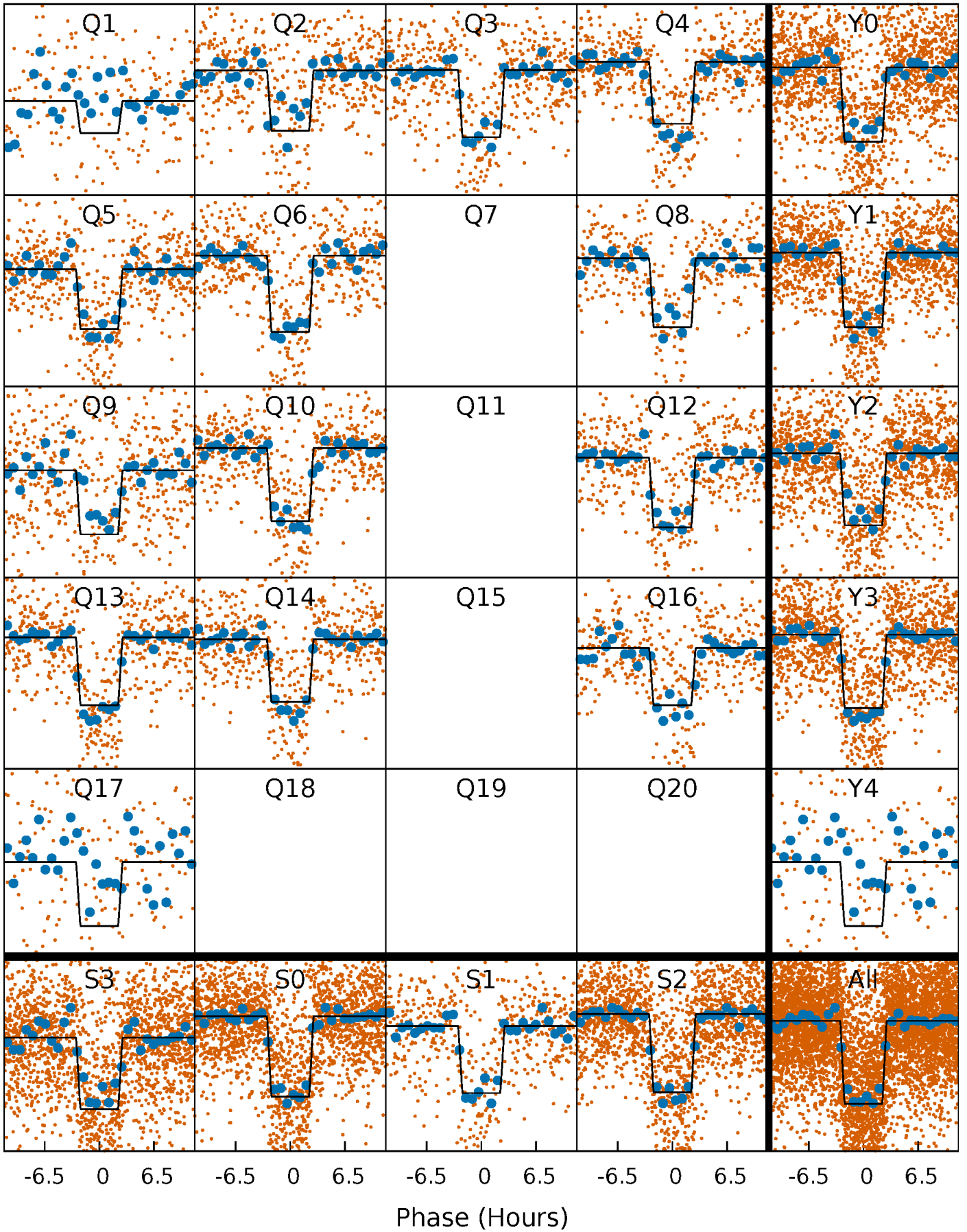
DV Quarter-Phased Transit Curves

TCE 011098013-01 P= 7.507852 Days $T_0=138.709819$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

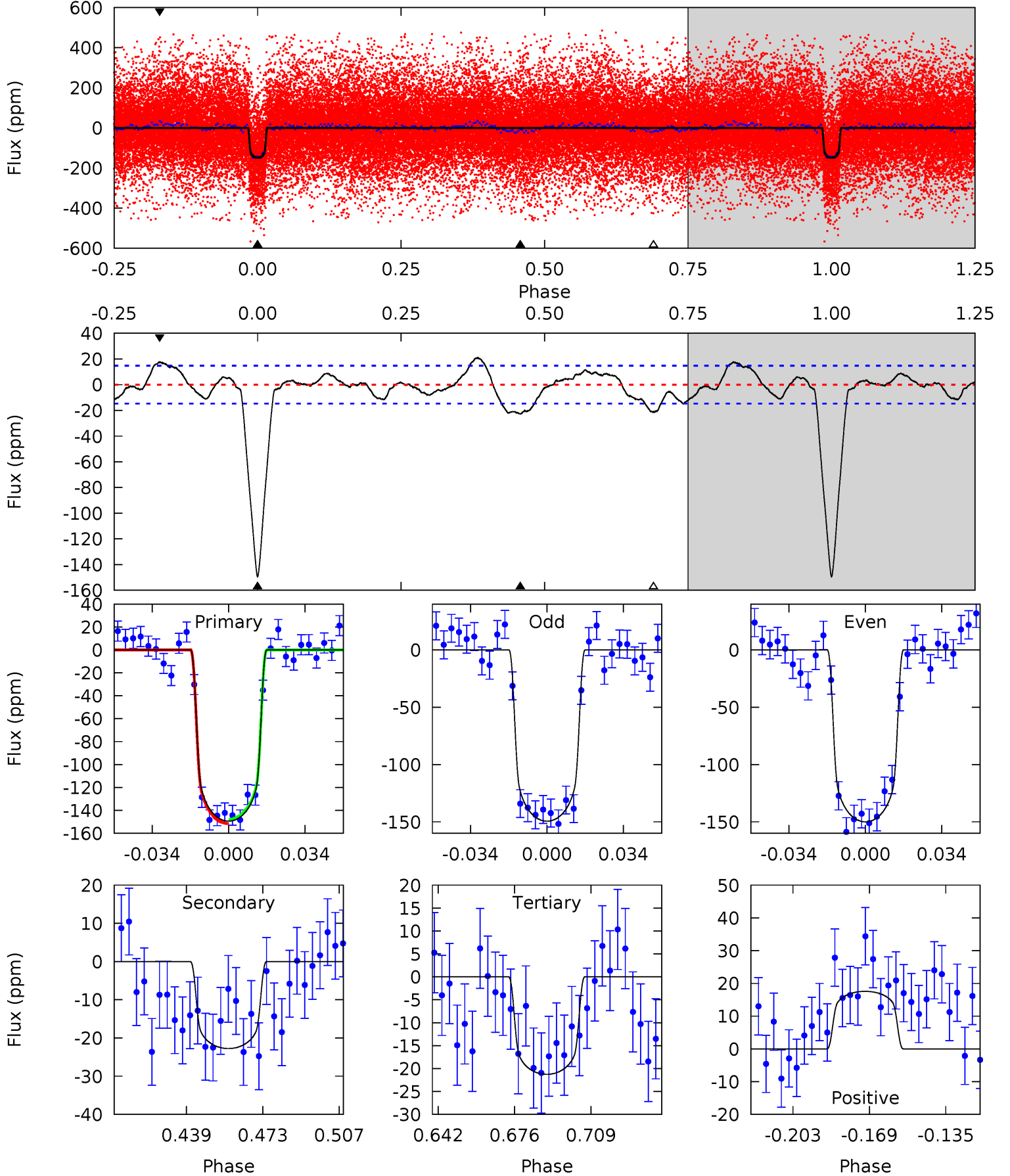
TCE 011098013-01 P= 7.507821 Days $T_0=138.713028$ (BKJD)



DV Model-Shift Uniqueness Test

011098013-01, P = 7.507852 Days, E = 131.201967 Days

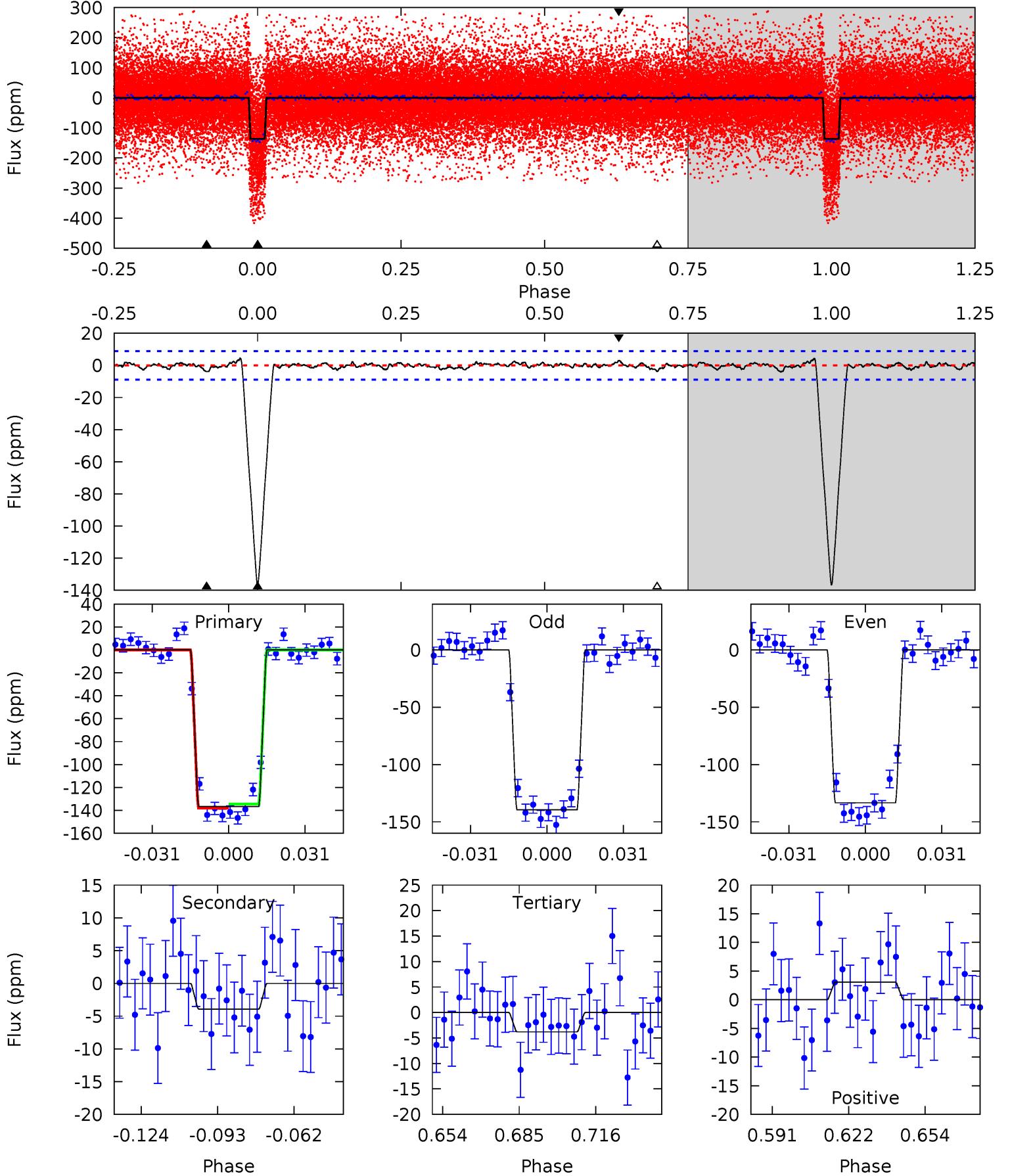
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
48.5	7.40	6.91	5.71	4.79	2.12	2.75	41.6	42.8	0.49	1.69	0.09	1.03	0.12	0.59



Alt Model-Shift Uniqueness Test

011098013-01, P = 7.507821 Days, E = 131.205207 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
73.8	2.12	2.06	1.67	4.80	2.16	0.63	71.8	72.2	0.06	0.45	1.63	0.89	0.03	1.03



Stellar Parameters For KIC 011098013

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6408^{+115}_{-140}	$4.309^{+0.040}_{-0.120}$	$0.300^{+0.100}_{-0.200}$	$1.337^{+0.229}_{-0.098}$	$1.329^{+0.092}_{-0.084}$	$0.783^{+0.132}_{-0.278}$
	+2%/-2%	+1%/-3%	+33%/-67%	+17%/-7%	+7%/-6%	+17%/-35%
Source	SPE59	SPE59	SPE59	DSEP		

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

Secondary Eclipse Parameters for KIC 011098013-01 / KOI 2712.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-23 ± 3	$1.98^{+0.18}_{-0.15}$	1603^{+62}_{-49}	4104^{+128}_{-153}	21^{+5}_{-5}
Alt.	-4 ± 2	$1.76^{+0.18}_{-0.14}$	1602^{+74}_{-54}	3156^{+242}_{-307}	$4.476^{+2.681}_{-2.181}$

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

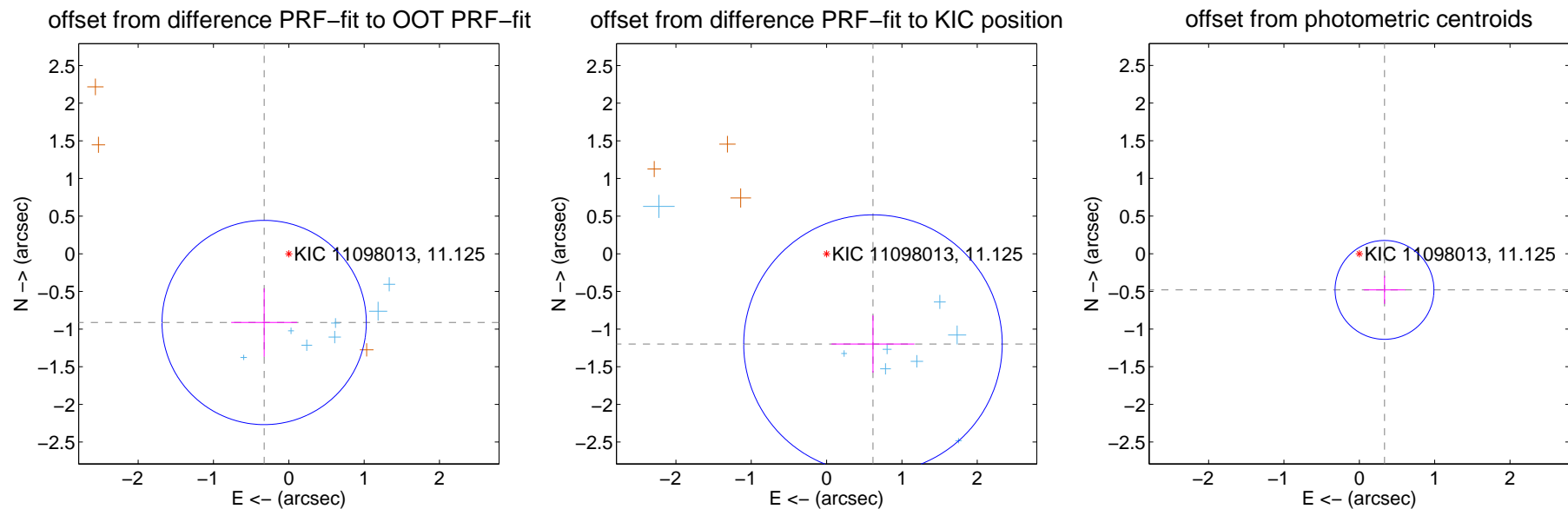
DV Centroid Data

Supplemental centroid analysis for 011098013-01. **Kepler magnitude: 11.12.** Transit SNR 27.70

There are 9 quarters with good PRF difference image offsets

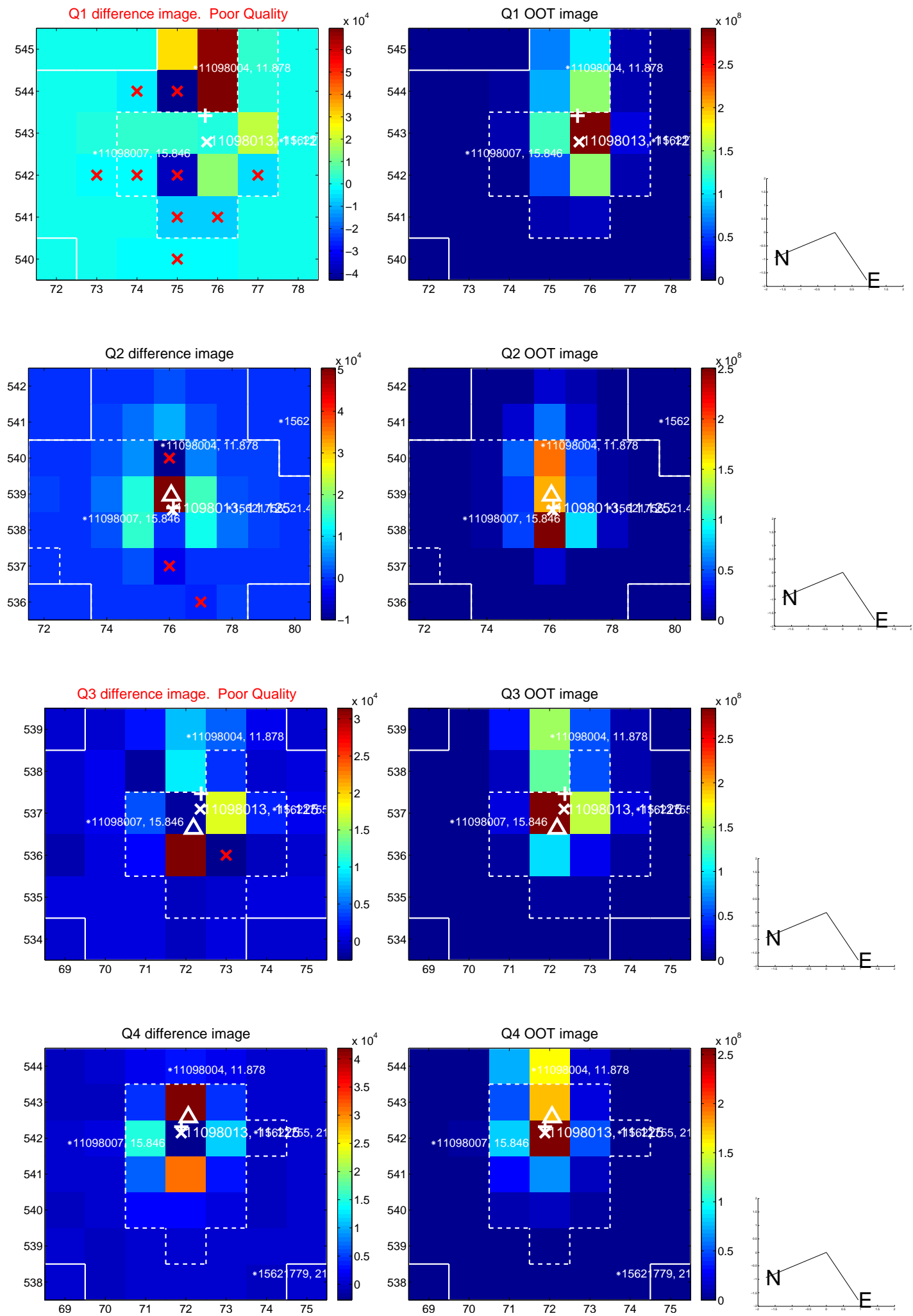
The OOT PRF centroid is offset from the target star catalog position by about 2.59 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.969 ± 0.452	2.14	0.327 ± 0.438	-0.913 ± 0.454
PRF-fit source offset from KIC position	1.348 ± 0.572	2.36	-0.616 ± 0.551	-1.199 ± 0.381
photometric centroid source offset	0.59 ± 0.22	2.68	-0.33 ± 0.27	-0.48 ± 0.19

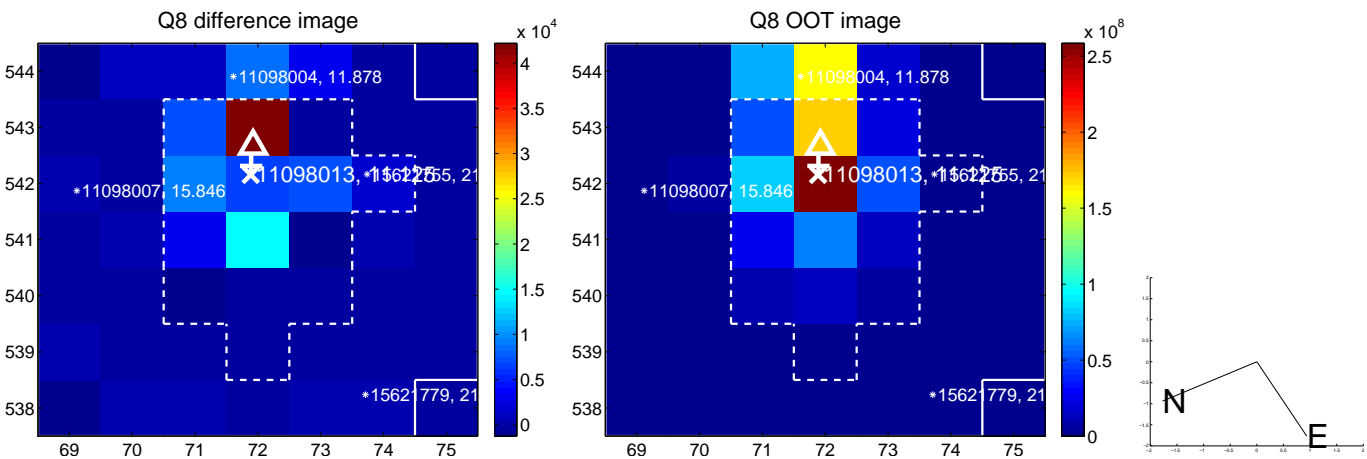
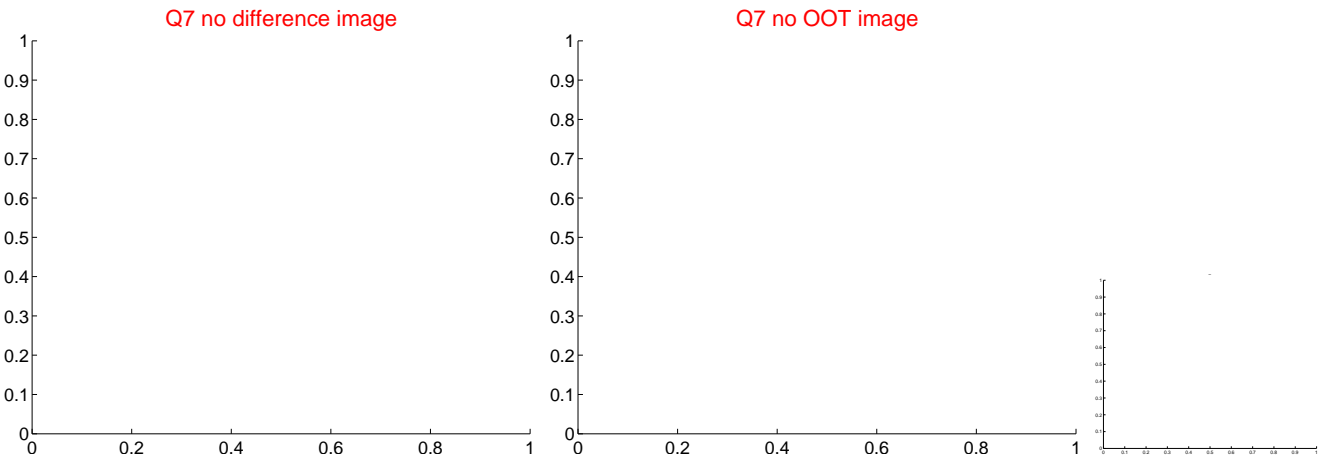
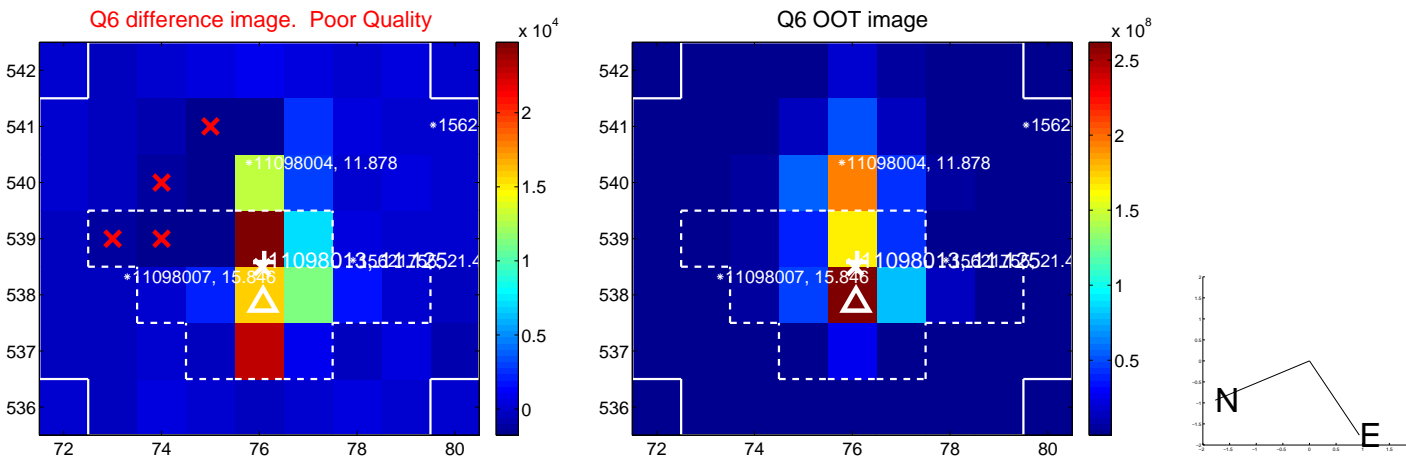
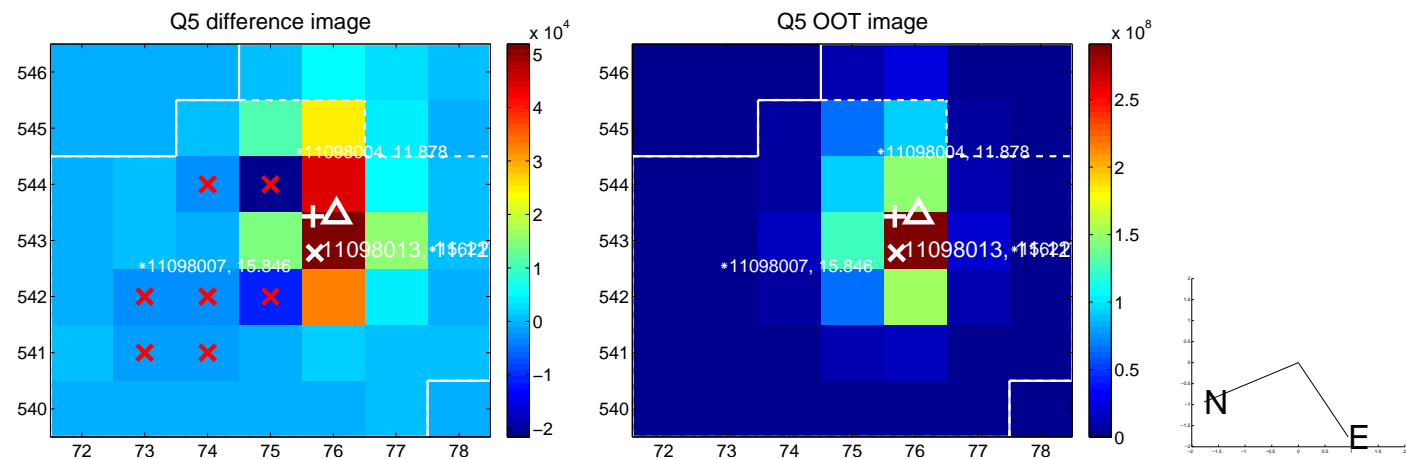


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

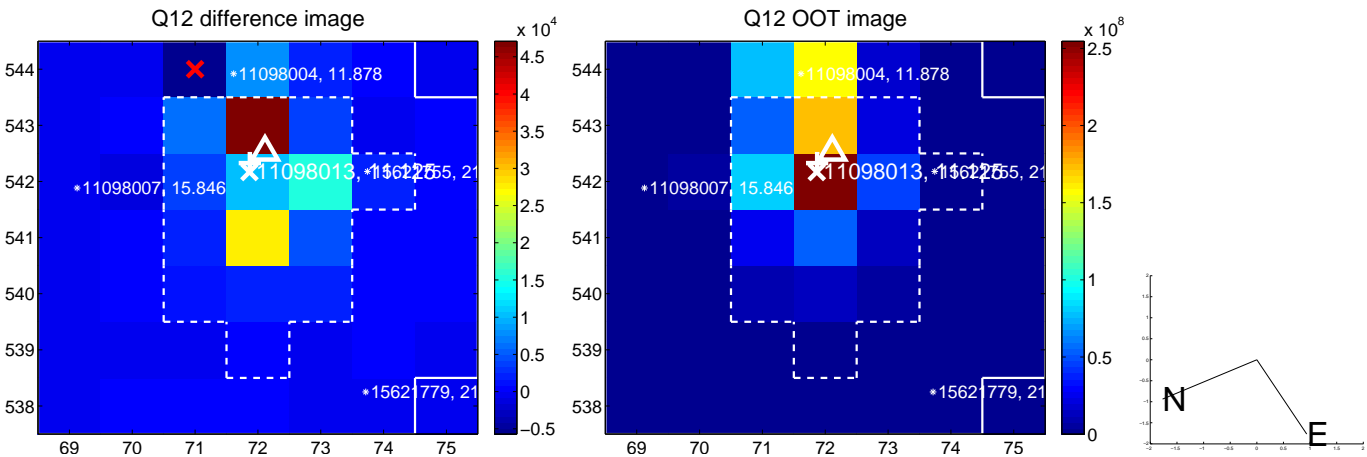
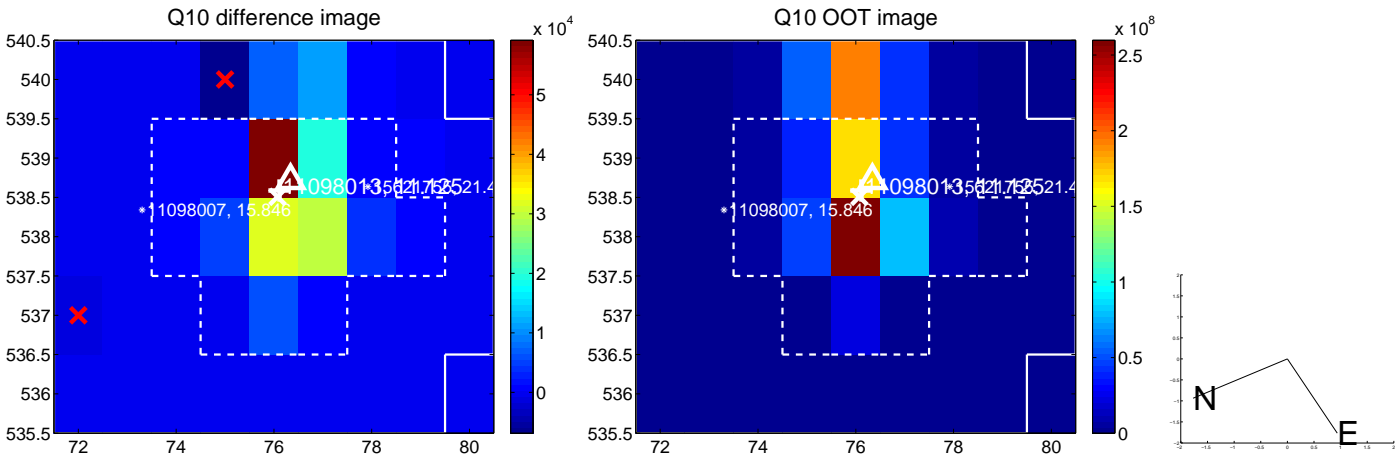
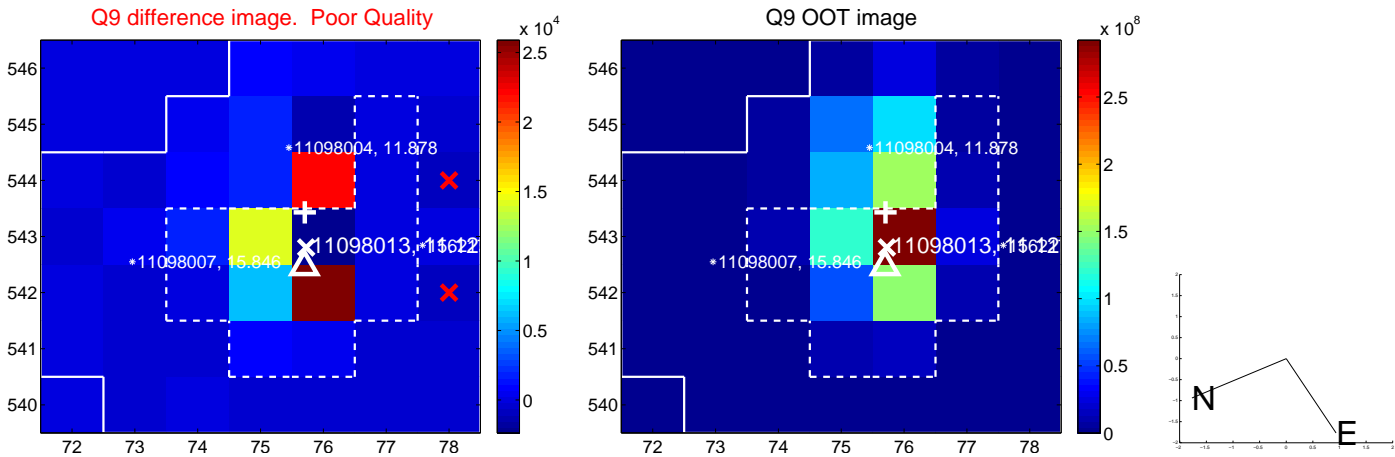
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



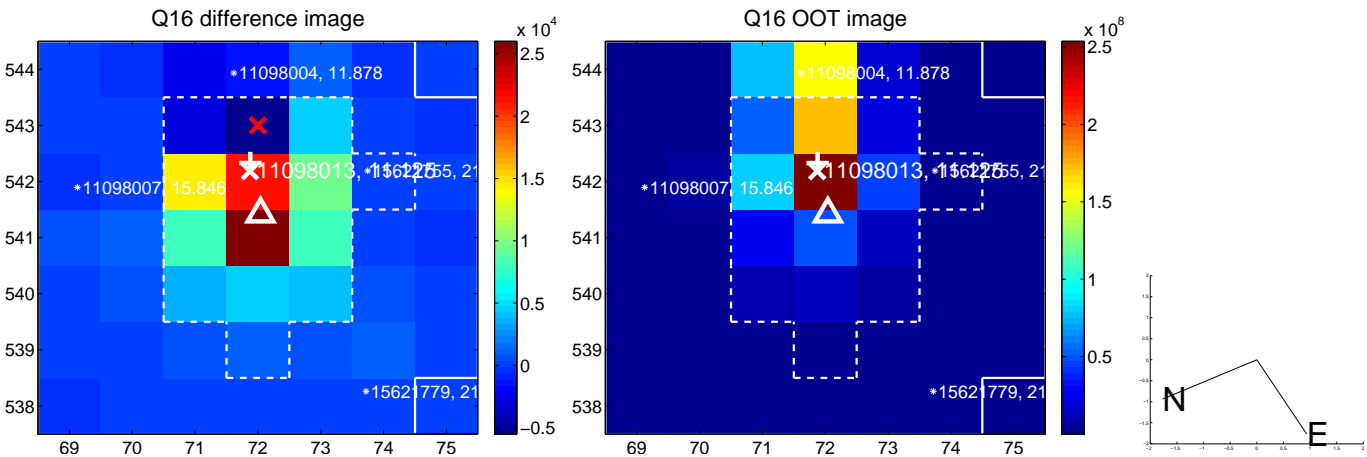
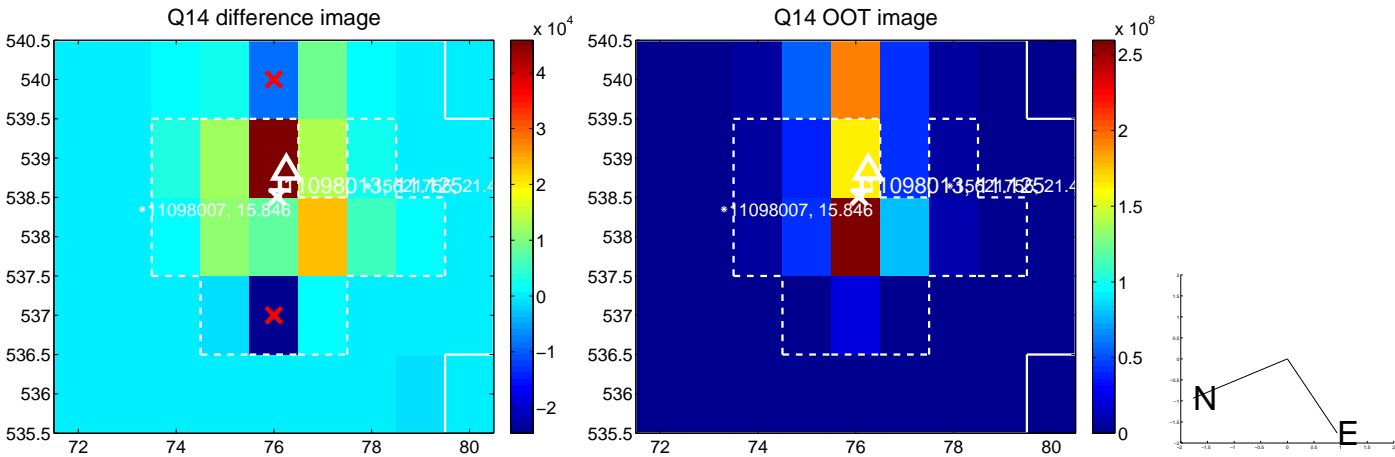
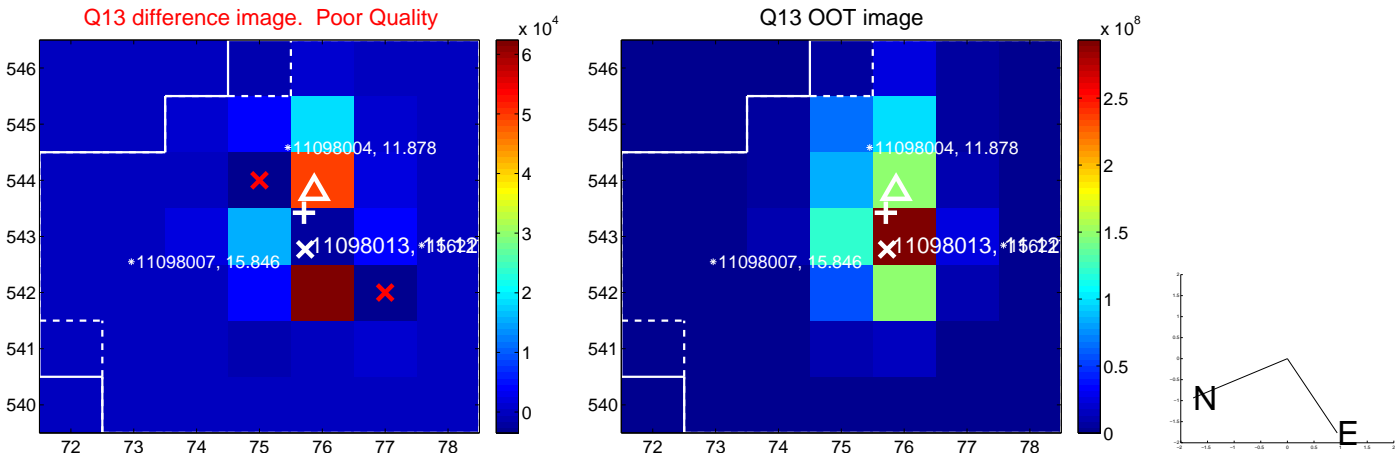
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



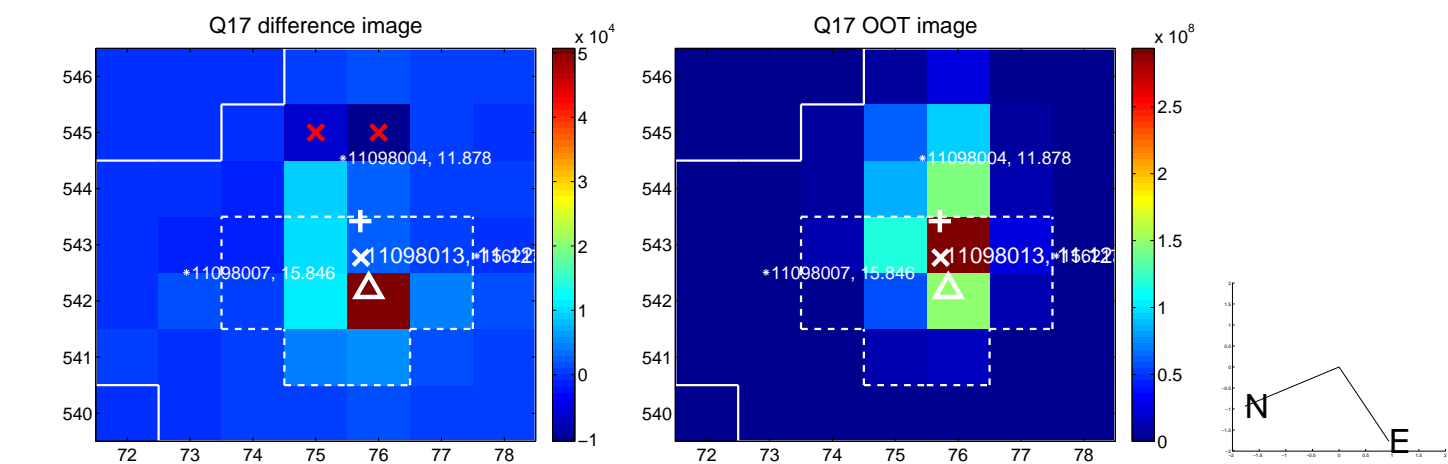
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



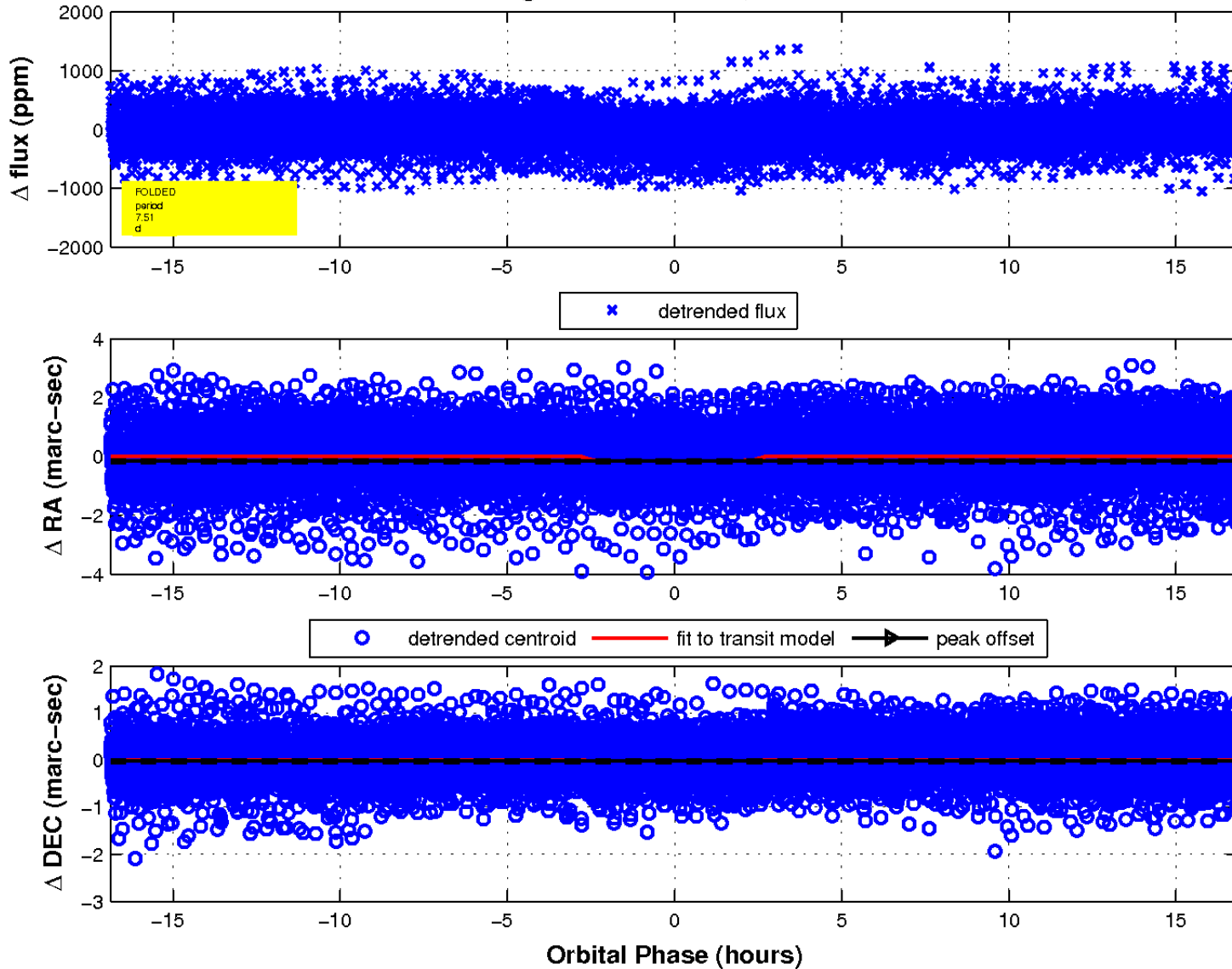
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

