

KIC 007259249

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})
007259249-01	OBS	4237.01	0.950728	131.785743	167.7	1.073	11.1	16.2	1.00	6039	1.57	3138.99

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007259249-01	OBS	FP	0.00	0	0	1	0	CENT_UNRESOLVED_OFFSET

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.

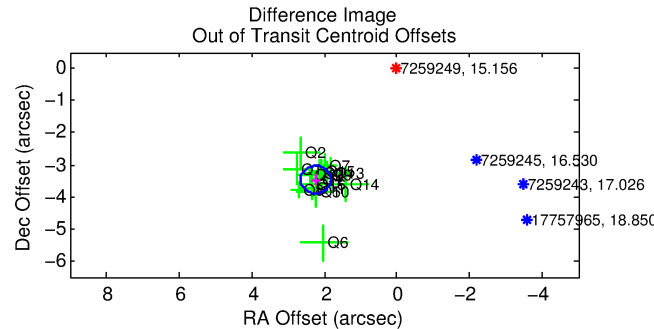
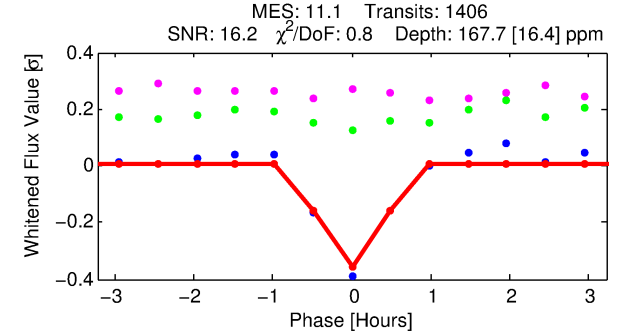
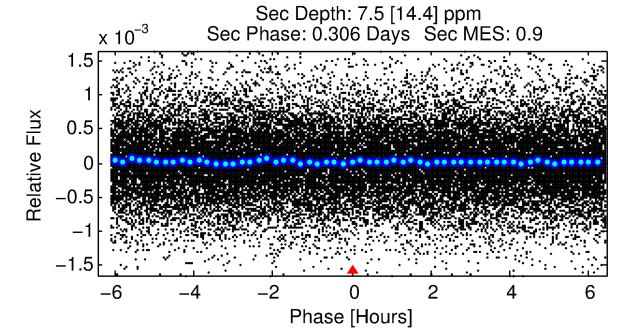
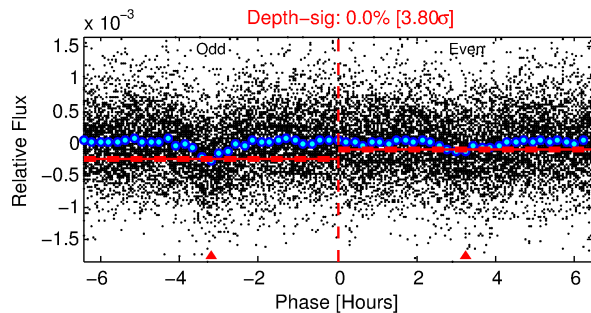
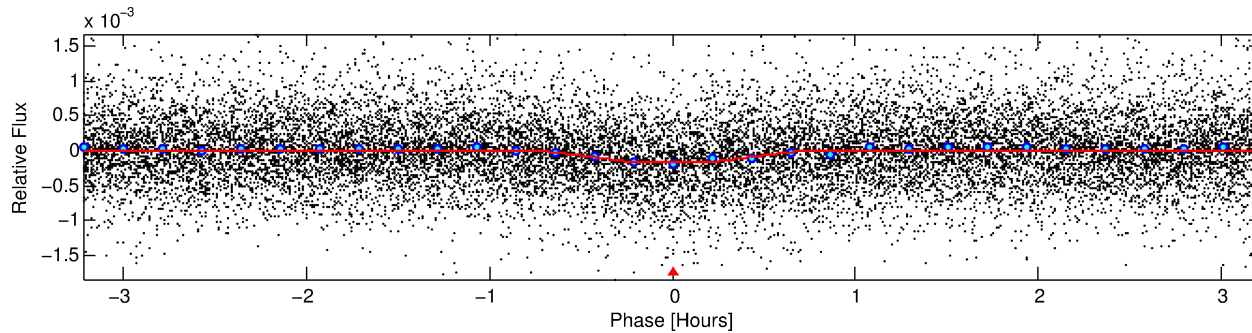
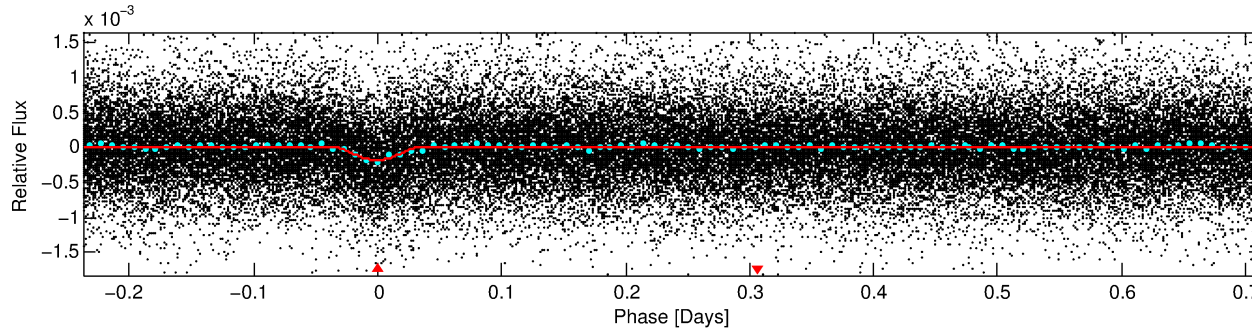
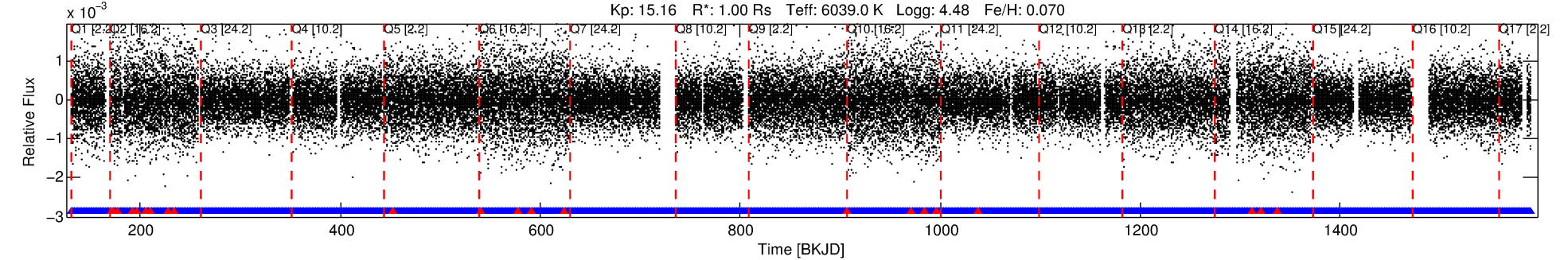
Ephemeris Match Information For 007259249-01

No Significant Match Found

DV One-Page Summary

KIC: 7259249 Candidate: 1 of 1 Period: 0.951 d
KOI: K04237.01 Corr: 0.934

Kp: 15.16 R*: 1.00 Rs Teff: 6039.0 K Logg: 4.48 Fe/H: 0.070



DV Fit Results:

Period = 0.95073 [0.00001] d
Epoch = 131.7857 [0.0011] BKJD
Rp/R* = 0.0143 [0.0055]
a/R* = 3.11 [5.40]
b = 0.91 [0.35]
Seff = 3138.99 [1396.19]
Teq = 1909 [212] K
Rp = 1.57 [0.80] Re
a = 0.0196 [0.0055] AU
Ag = 0.64 [1.34] [-0.27σ]
Teffp = 2638 [1365] K [0.53σ]

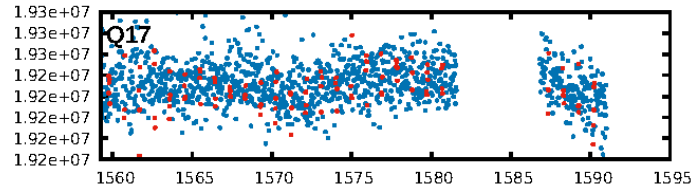
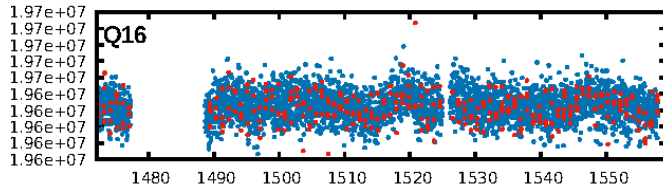
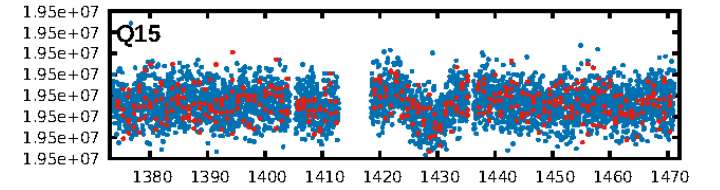
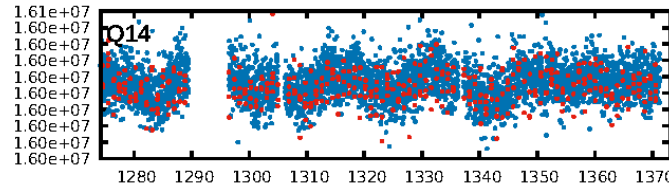
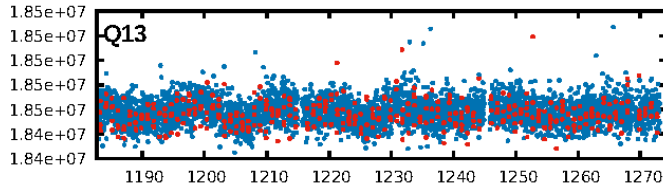
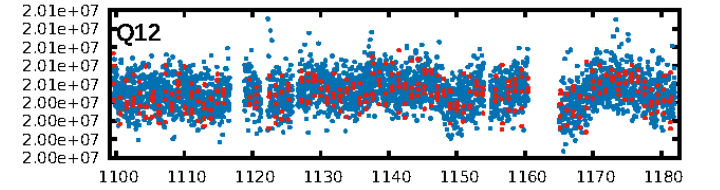
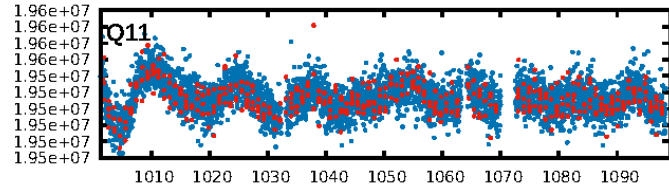
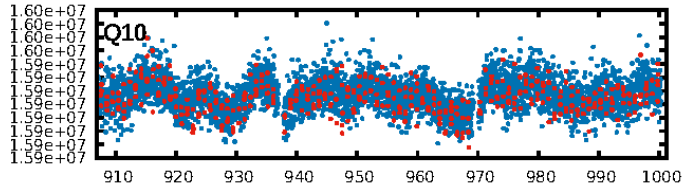
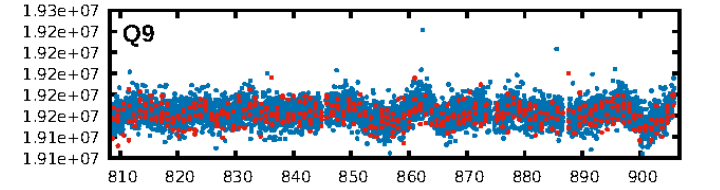
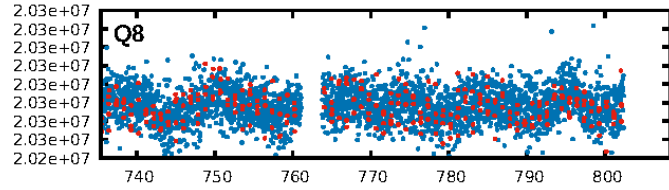
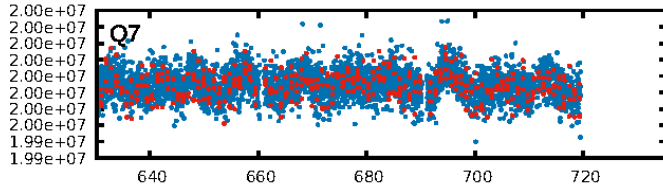
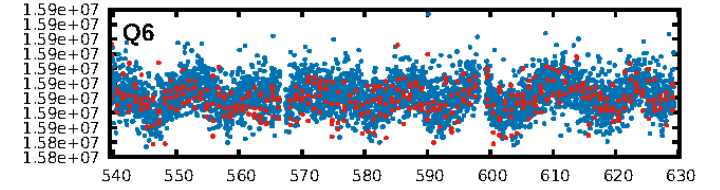
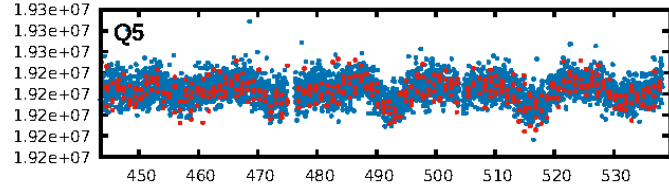
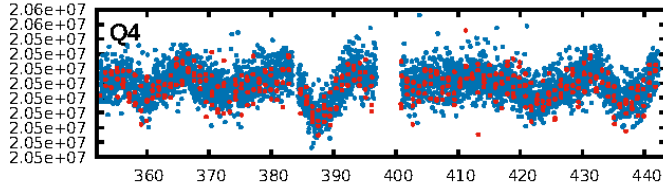
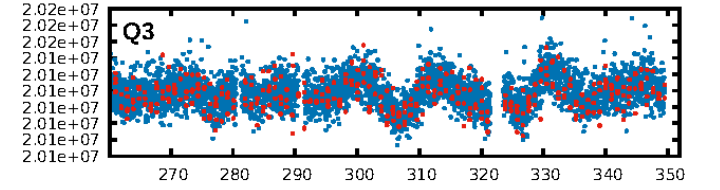
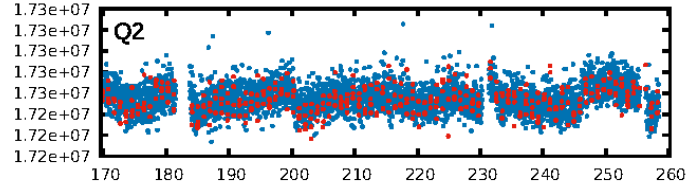
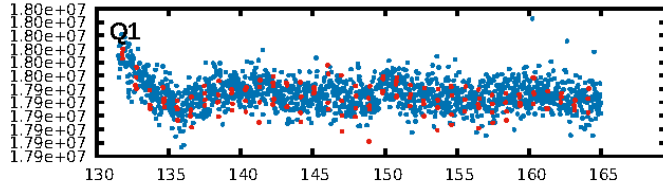
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.04e-29
RollingBand-fgt: 0.98 [1321/1344]
GhostDiagnostic-chr: 0.6071
Centroid-sig: 0.0%
Centroid-so: 6.328 arcsec [7.56σ]
OotOffset-rm: 4.132 arcsec [29.29σ]
KicOffset-rm: 4.345 arcsec [26.56σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.88 [14/16]
DiffImageOverlap-fno: 1.00 [17/17]

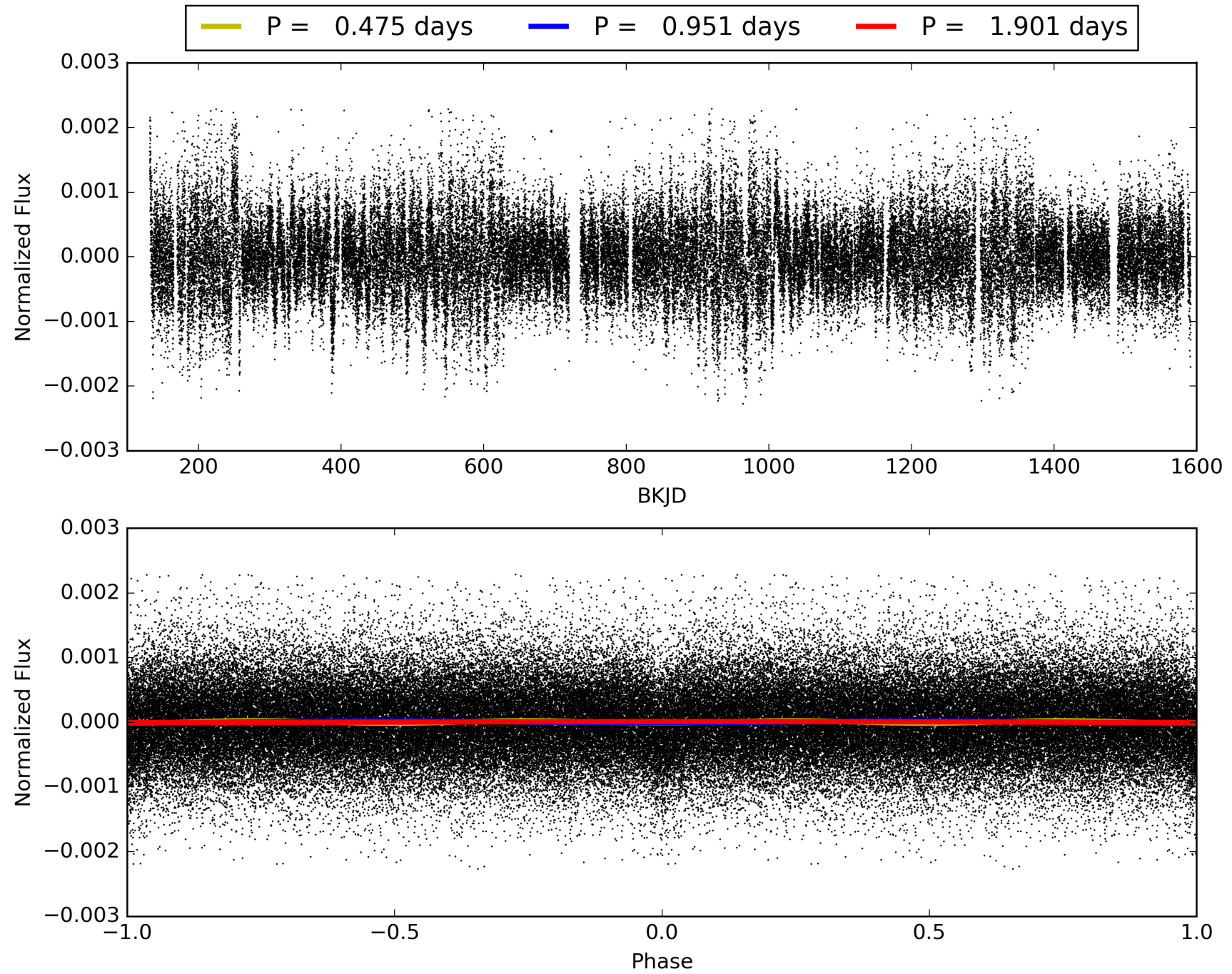
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 03:32:26 Z

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

TCE 007259249-01, PDC Light Curves

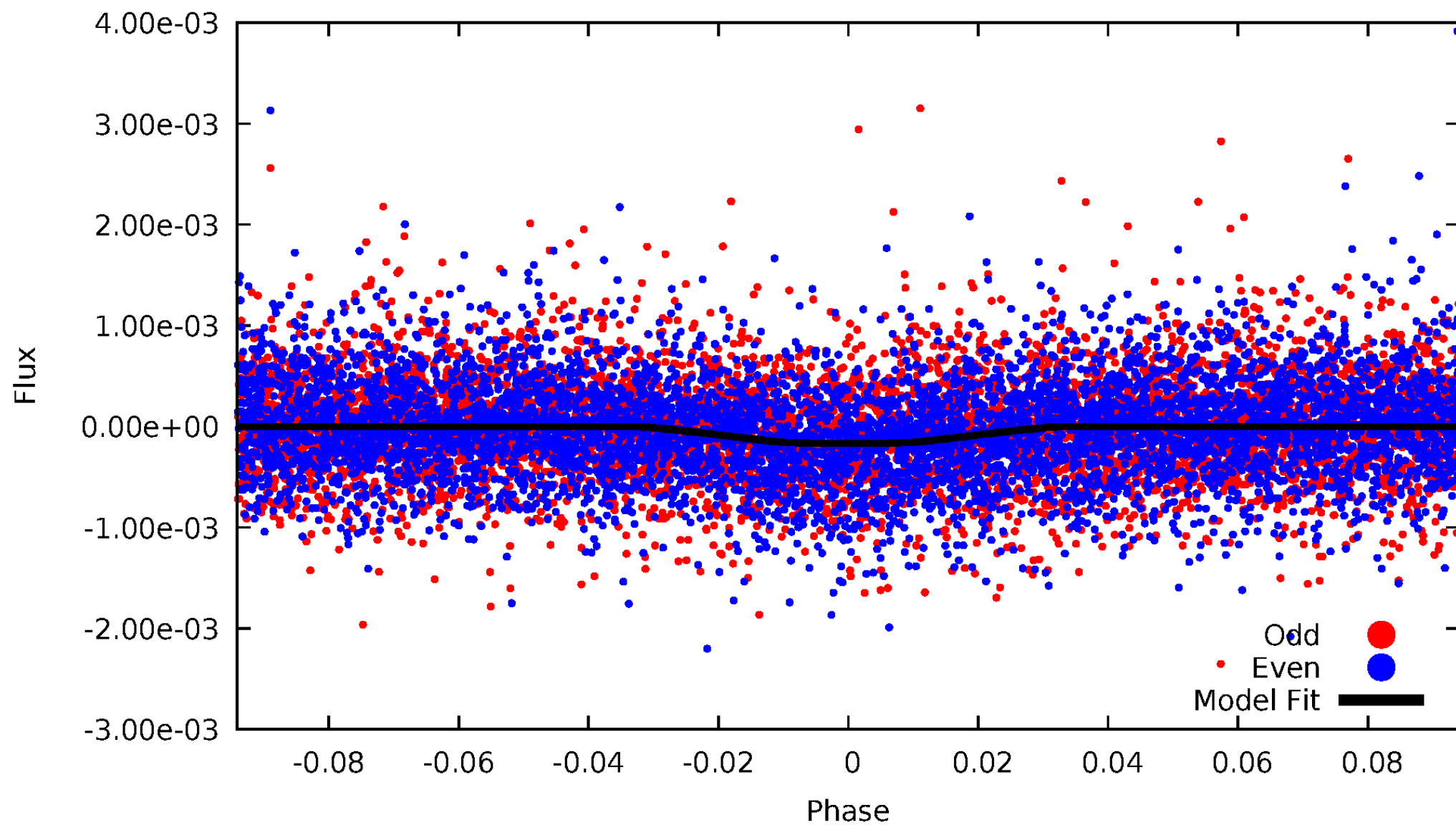


TCE 007259249-01



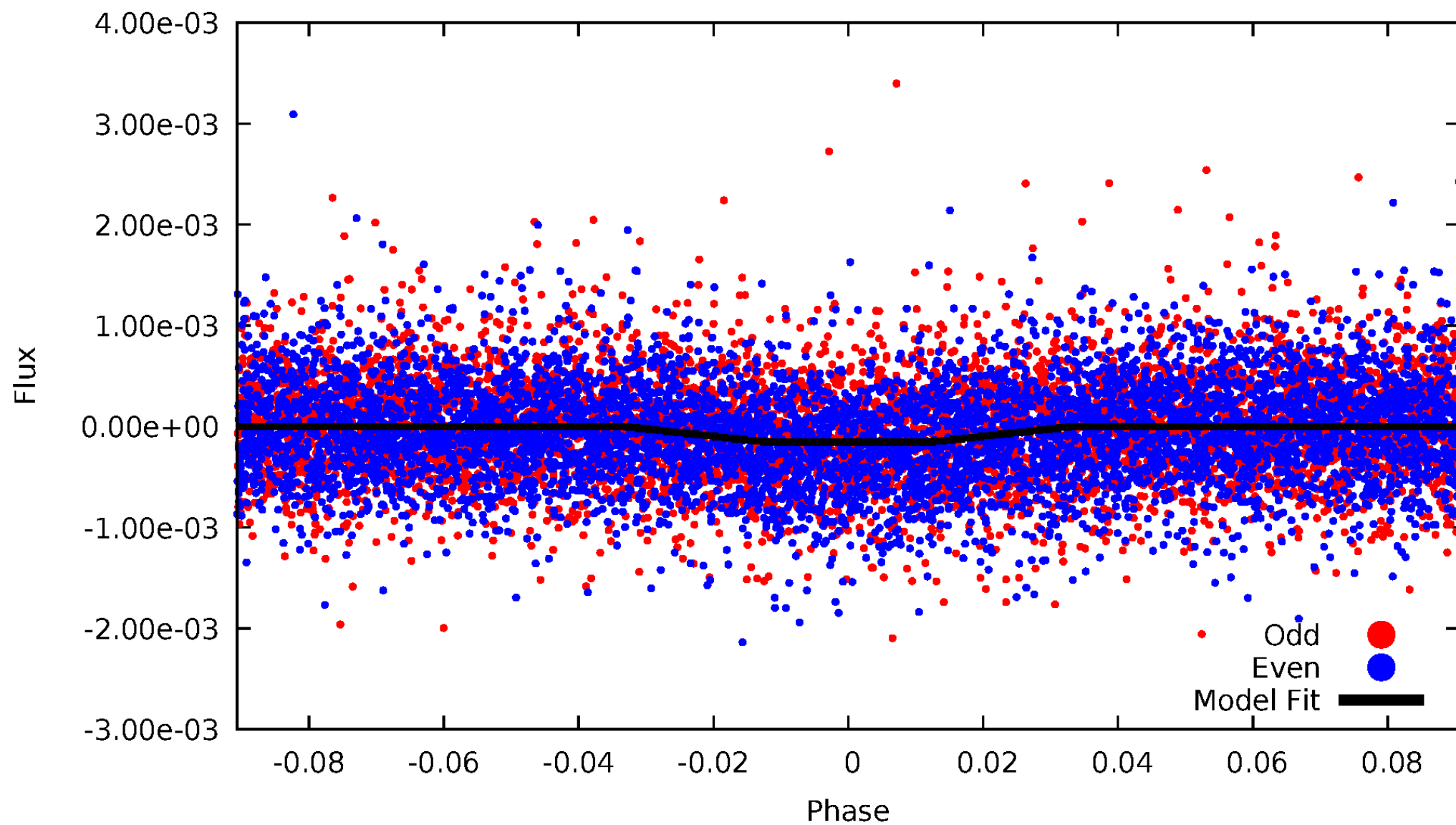
DV Odd/Even

TCE 007259249-01



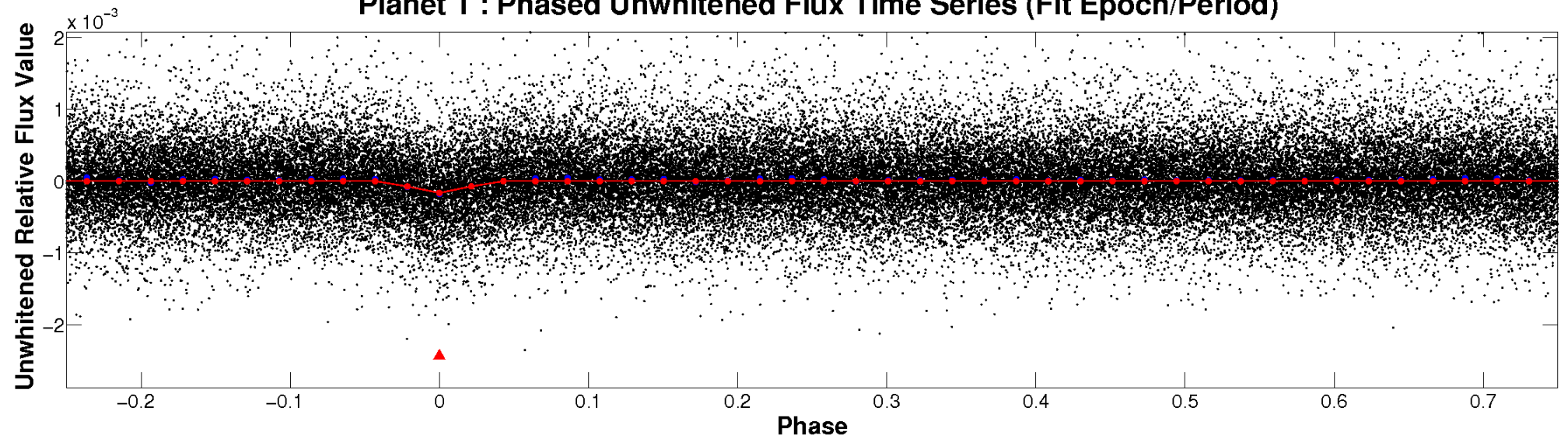
ALT Odd/Even

TCE 007259249-01

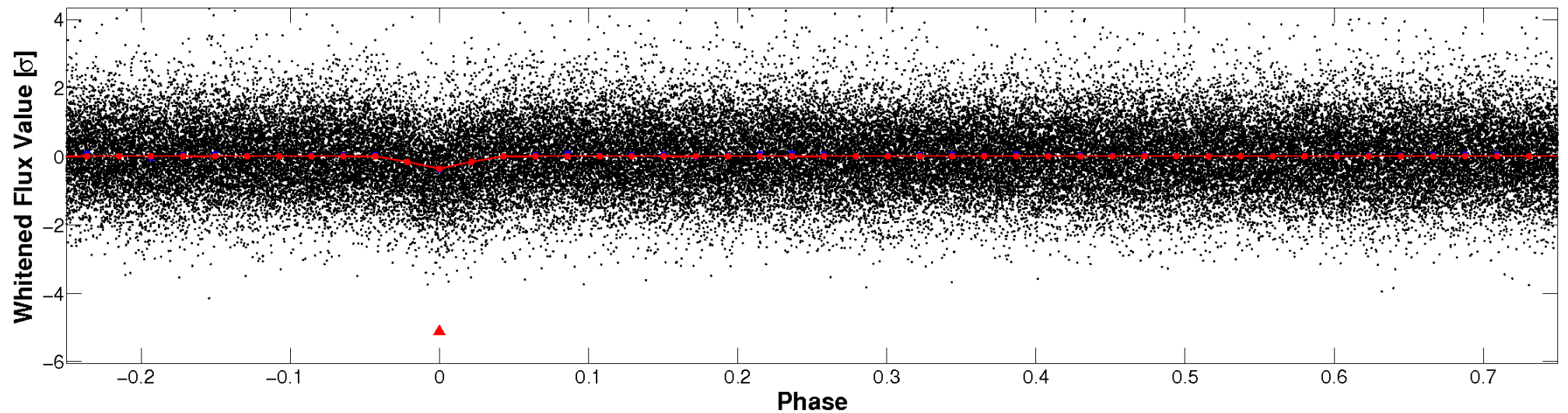


Non-Whitened Vs. Whitened Light Curve

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

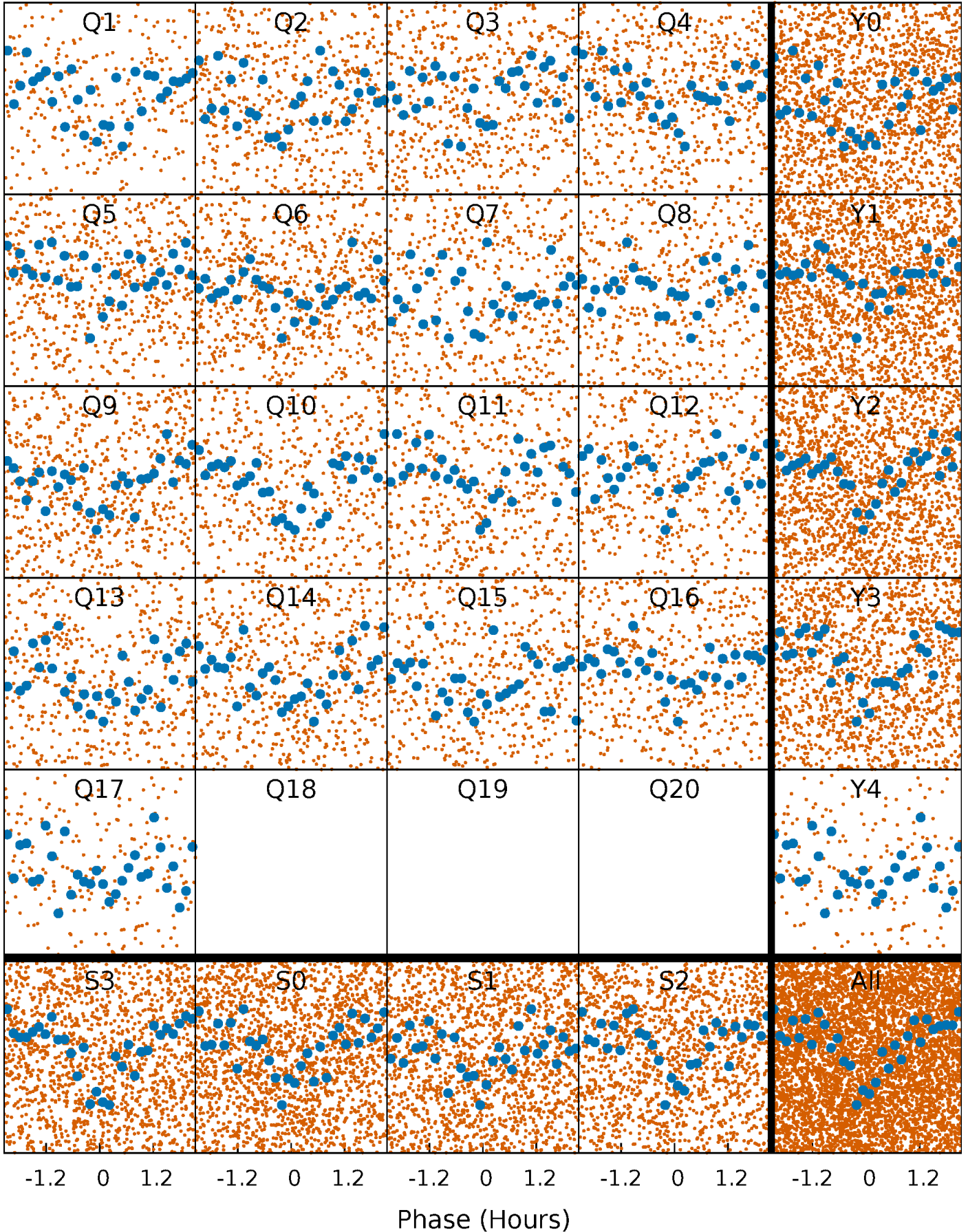


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



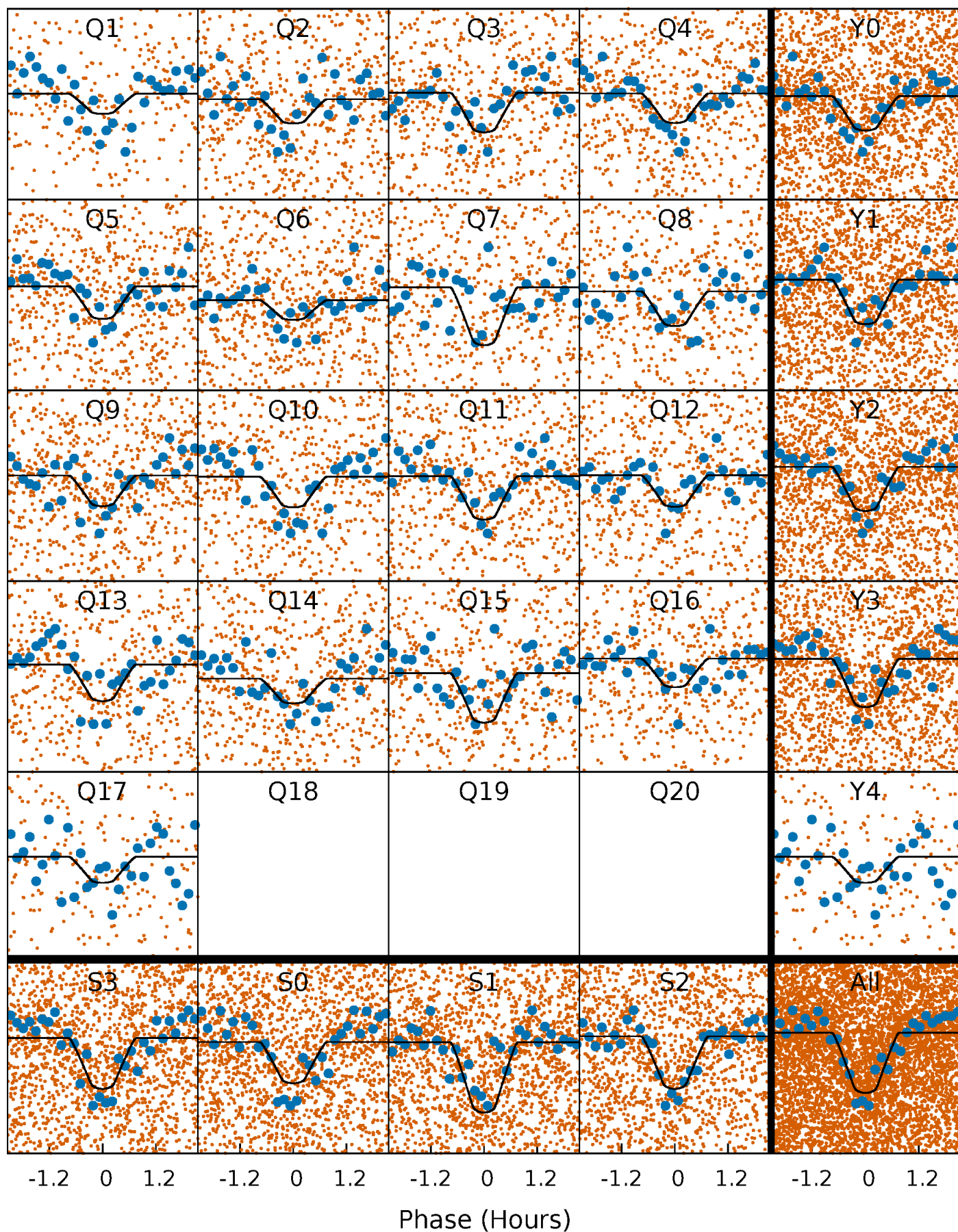
PDC Quarter-Phased Transit Curves

TCE 007259249-01 P= 0.950728 Days $T_0=131.785743$ (BKJD)



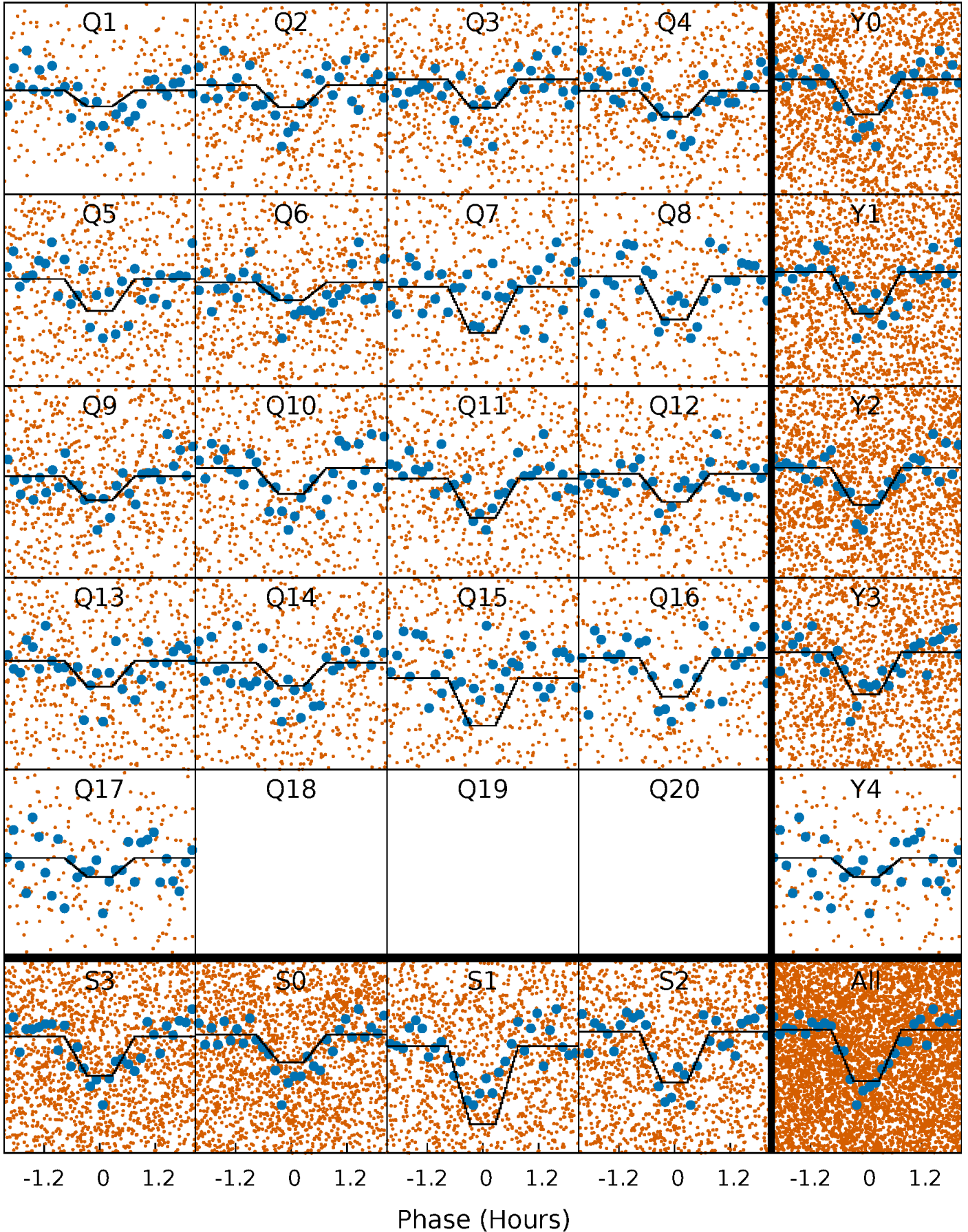
DV Quarter-Phased Transit Curves

TCE 007259249-01 P= 0.950728 Days $T_0=131.785743$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

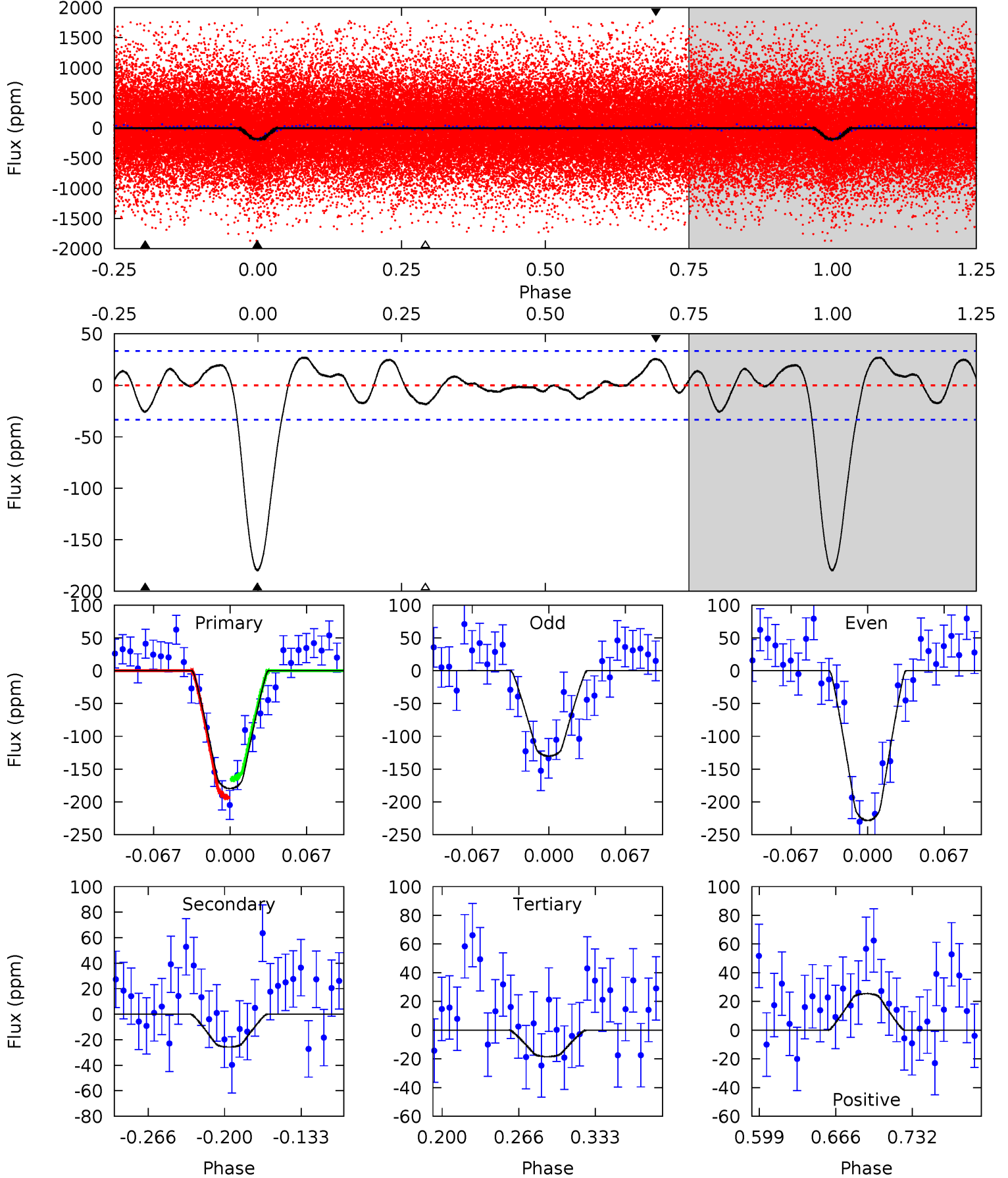
TCE 007259249-01 P= 0.950737 Days $T_0=131.779175$ (BKJD)



DV Model-Shift Uniqueness Test

007259249-01, P = 0.950728 Days, E = 130.835015 Days

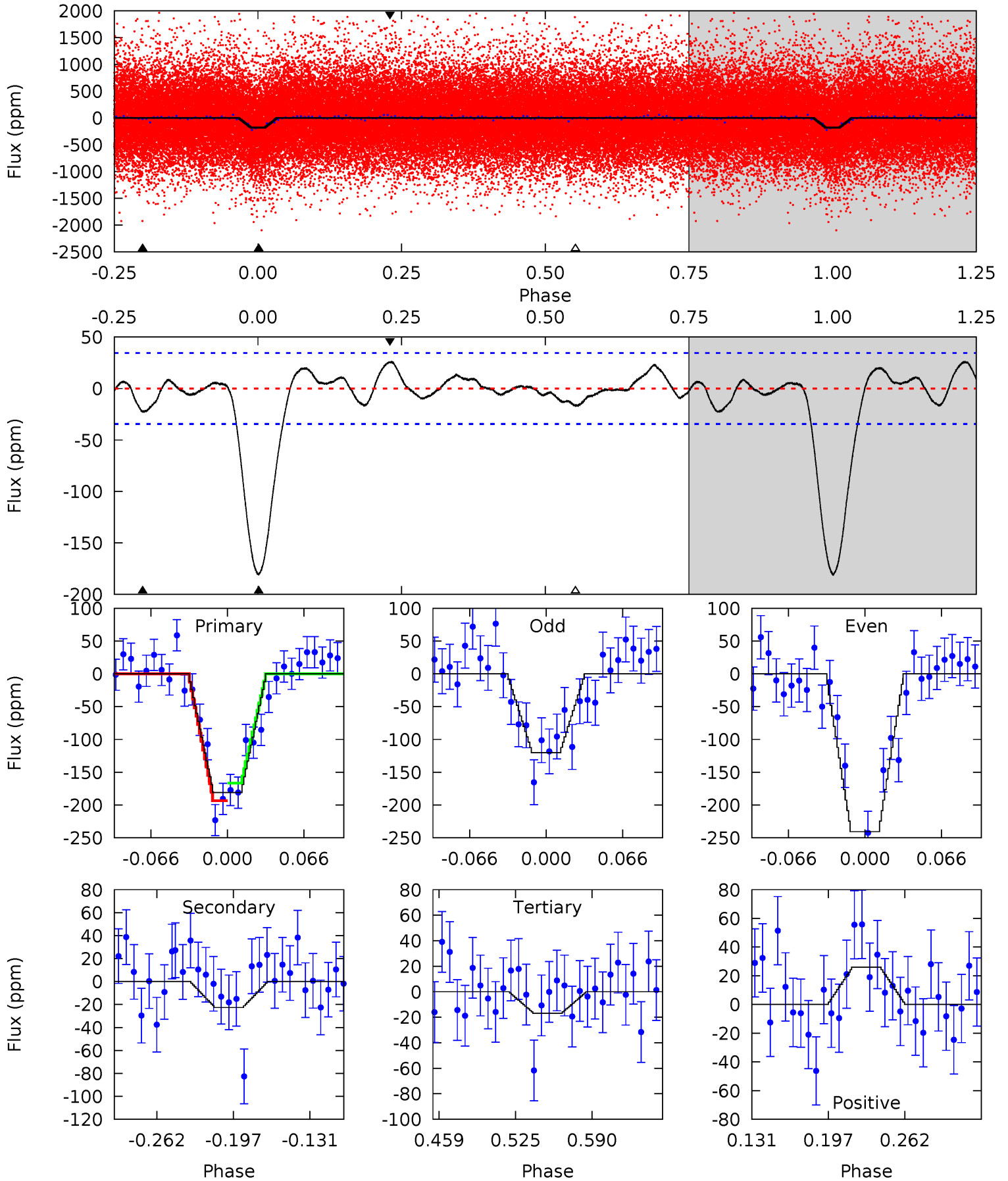
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.0	3.58	2.57	3.55	4.65	1.83	1.58	22.5	21.5	1.02	0.04	6.88	1.07	0.13	1.99



Alt Model-Shift Uniqueness Test

007259249-01, P = 0.950737 Days, E = 130.828438 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.5	3.06	2.29	3.52	4.65	1.84	1.31	22.2	21.0	0.77	-0.46	8.17	1.04	0.13	1.81



Stellar Parameters For KIC 007259249

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6039^{+217}_{-265}	$4.478^{+0.056}_{-0.224}$	$0.070^{+0.250}_{-0.300}$	$1.005^{+0.333}_{-0.111}$	$1.108^{+0.145}_{-0.159}$	$1.537^{+0.445}_{-0.812}$
	+4%/-4%	+1%/-5%	+357%/-429%	+33%/-11%	+13%/-14%	+29%/-53%
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 007259249-01 / KOI 4237.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-26 ± 7	$1.62^{+0.70}_{-0.60}$	2727^{+220}_{-154}	3803^{+805}_{-564}	$1.930^{+2.943}_{-1.067}$
Alt.	-23 ± 7	$1.44^{+0.68}_{-0.62}$	2724^{+232}_{-158}	3890^{+929}_{-609}	$2.238^{+4.026}_{-1.334}$

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

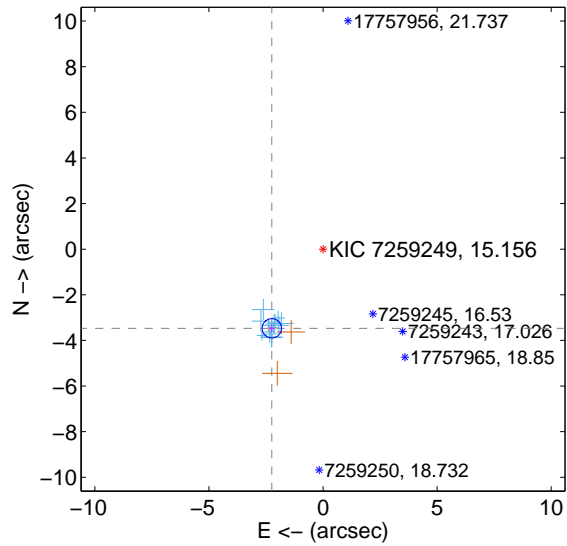
Supplemental centroid analysis for 007259249-01. Kepler magnitude: 15.16. Transit SNR 16.24

There are 14 quarters with good PRF difference image offsets

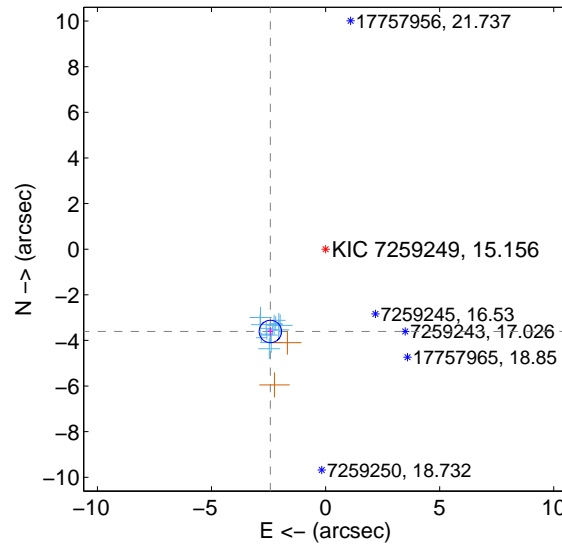
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.132 ± 0.141	29.29	2.245 ± 0.107	-3.469 ± 0.159
PRF-fit source offset from KIC position	4.345 ± 0.164	26.56	2.421 ± 0.107	-3.608 ± 0.186
photometric centroid source offset	6.33 ± 0.84	7.56	4.20 ± 0.78	-4.73 ± 0.88

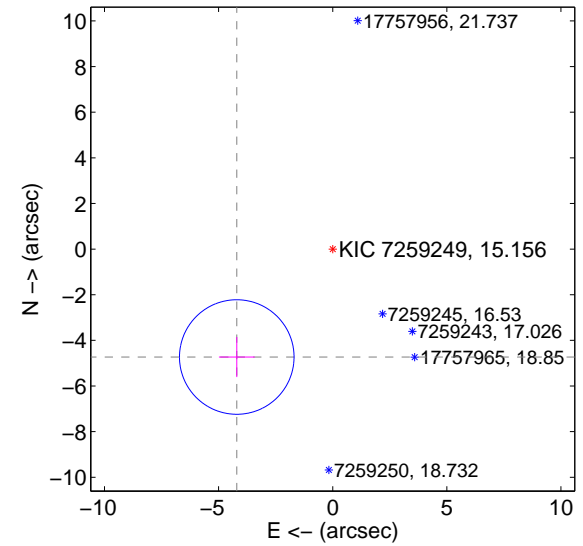
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

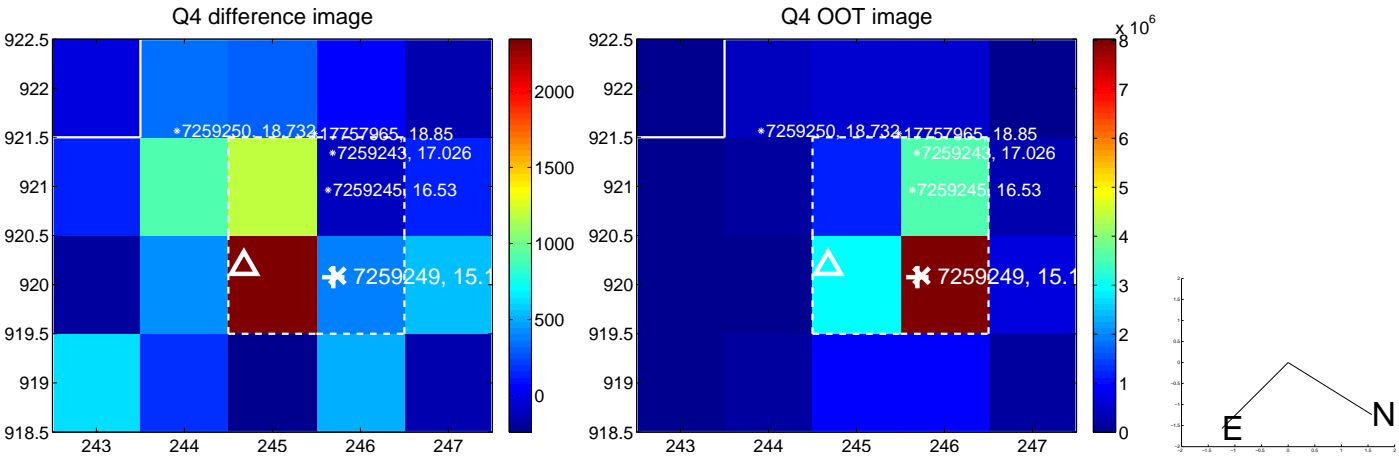
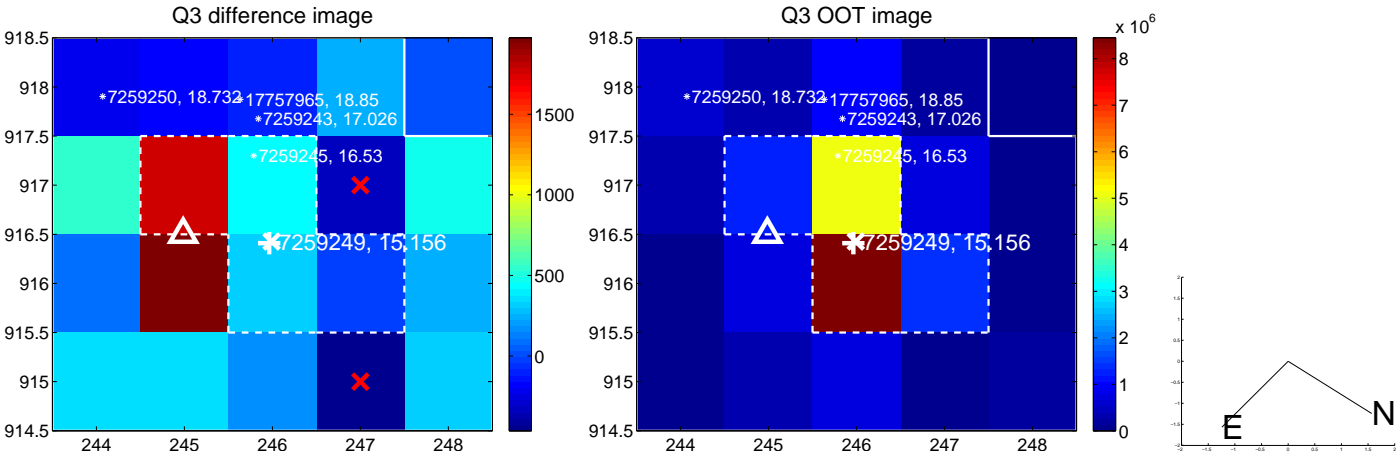
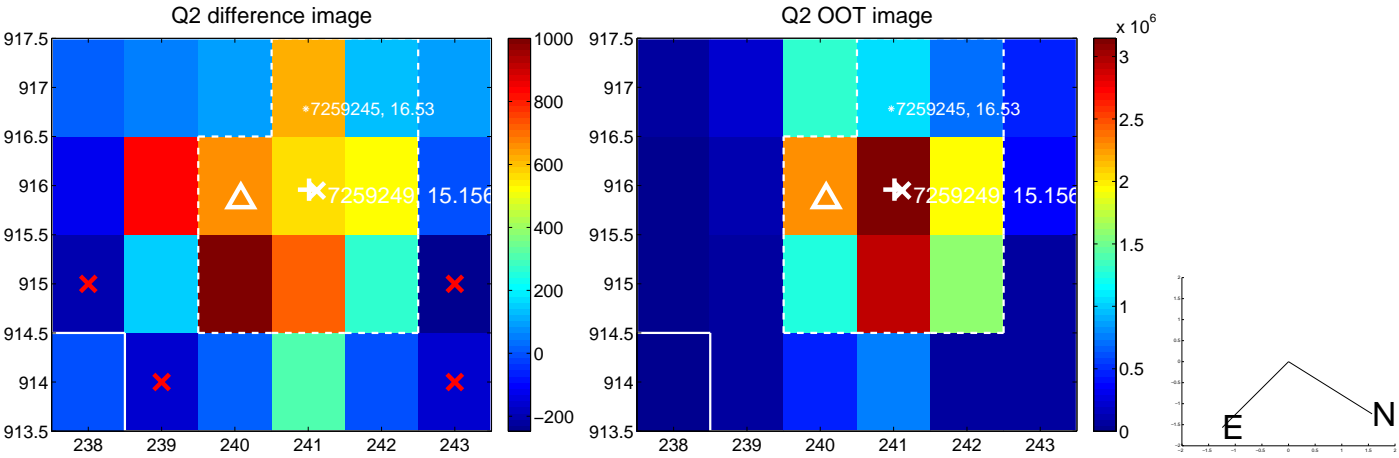
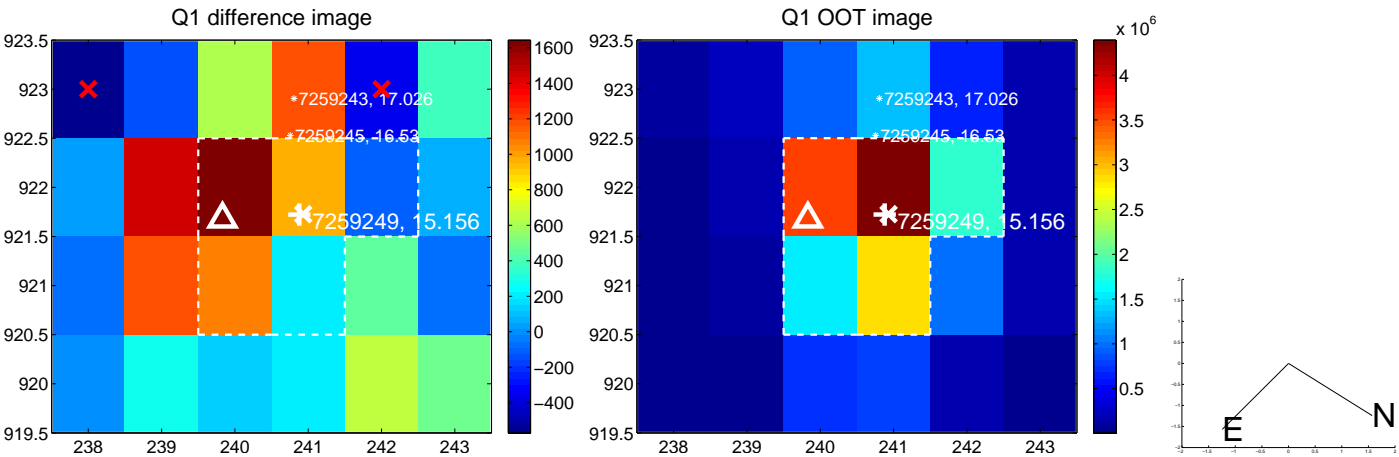


offset from photometric centroids

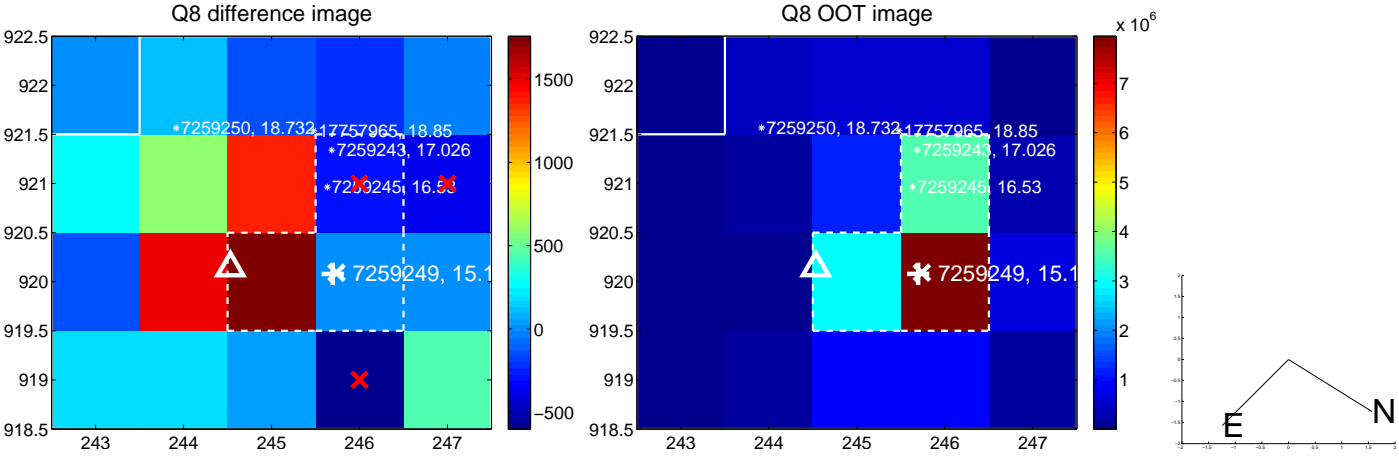
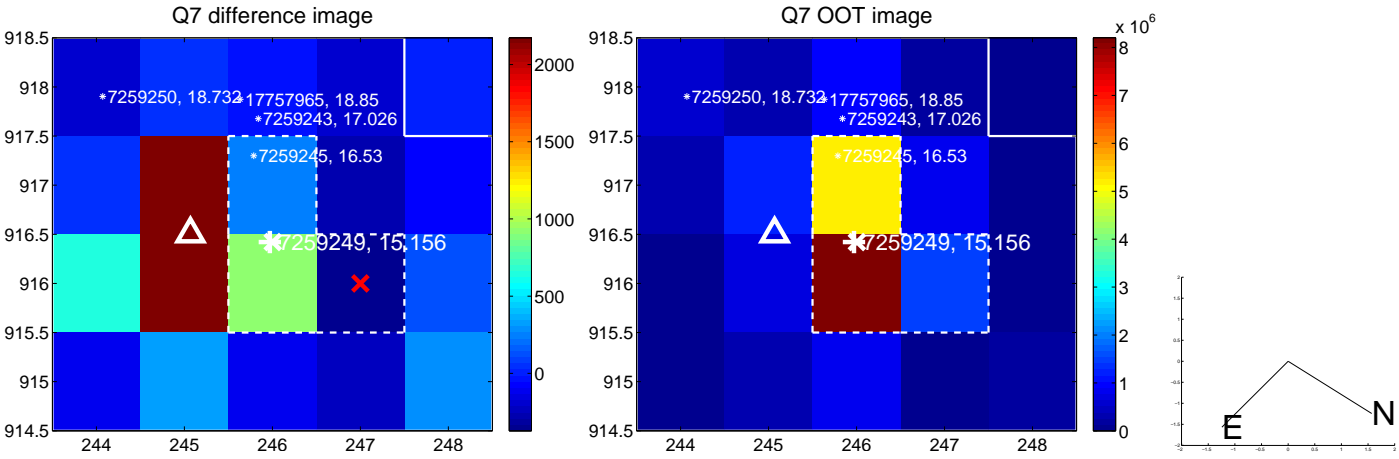
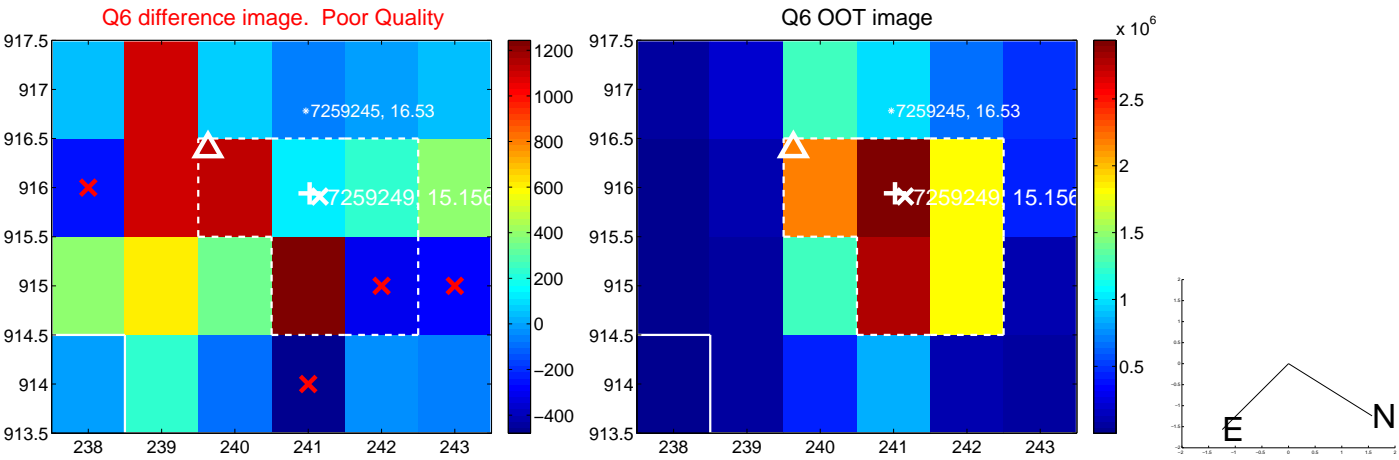
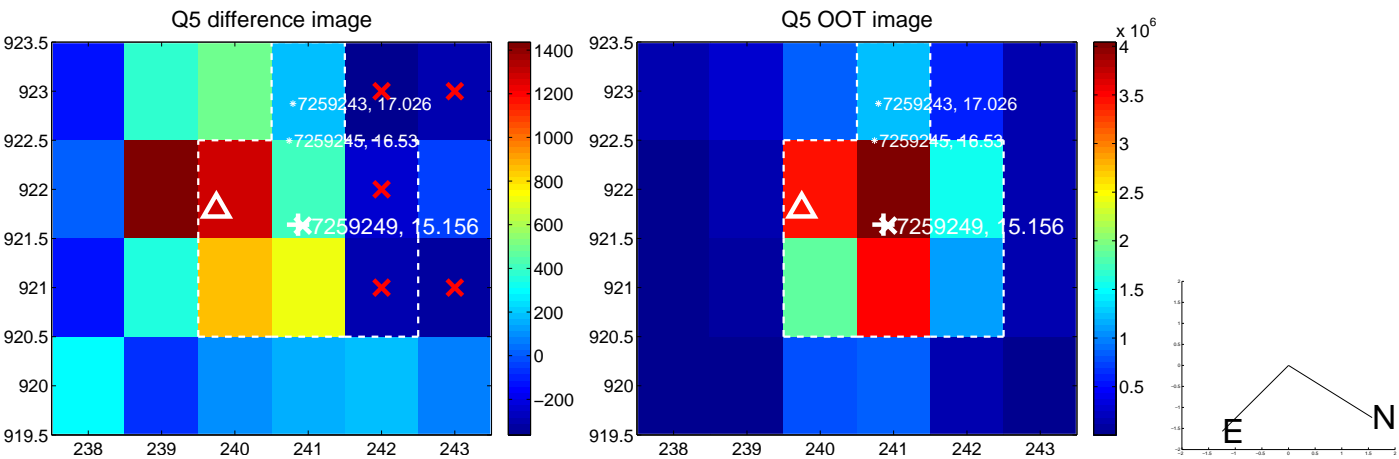


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

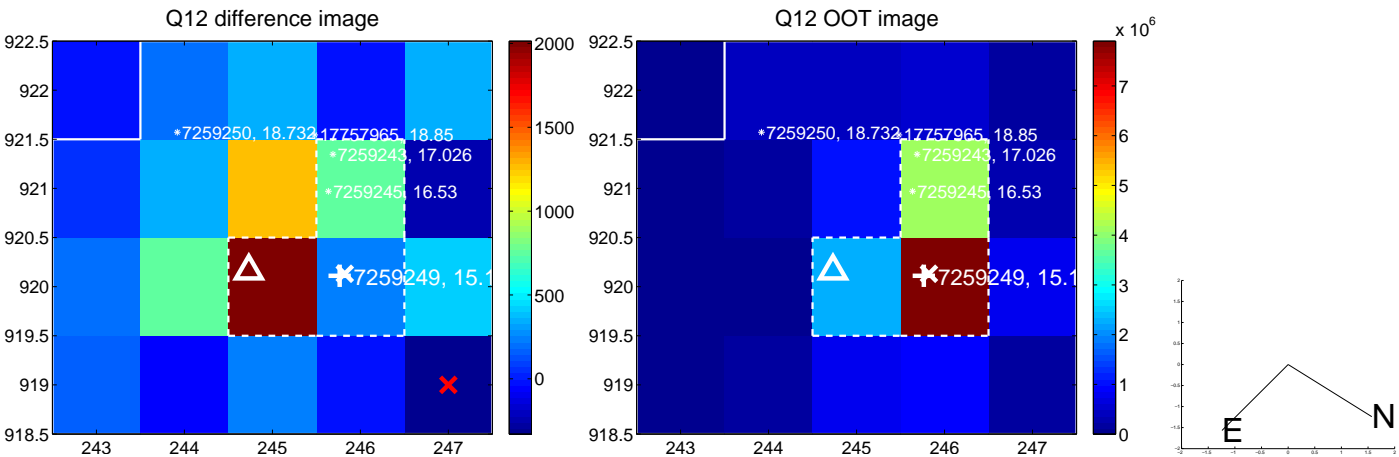
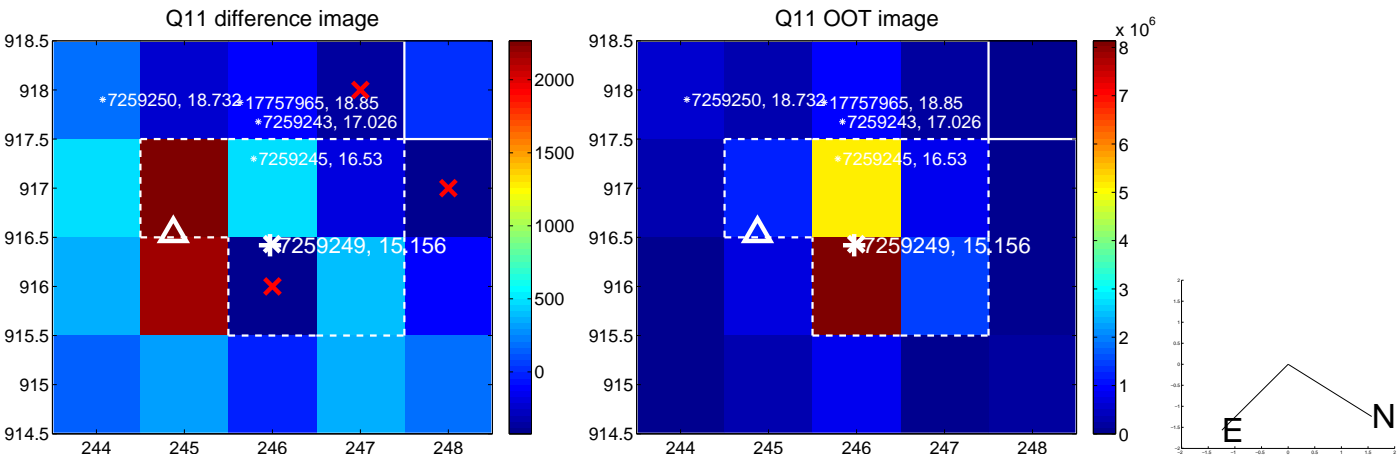
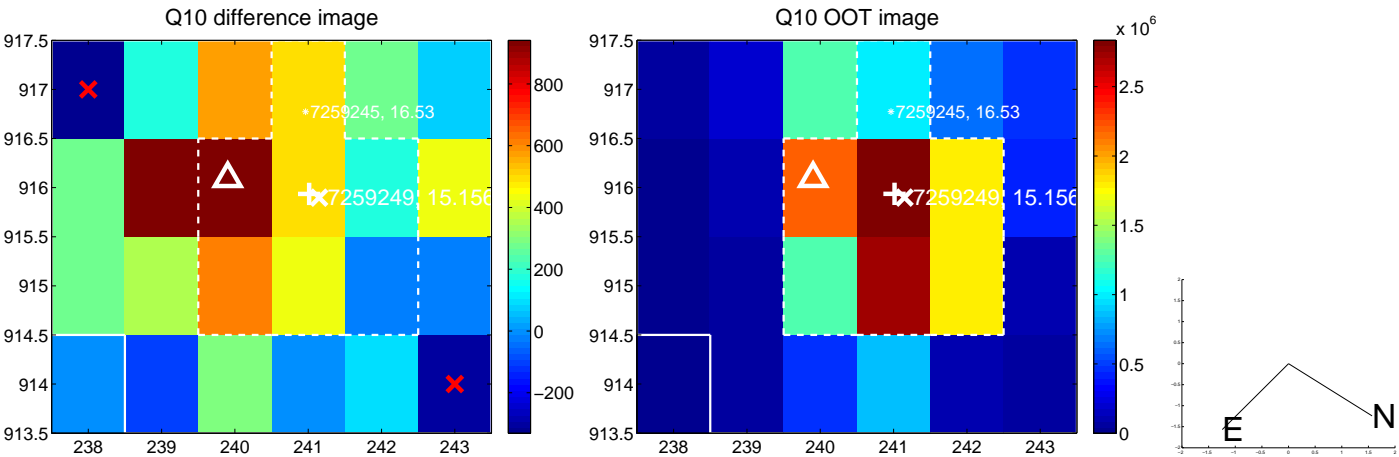
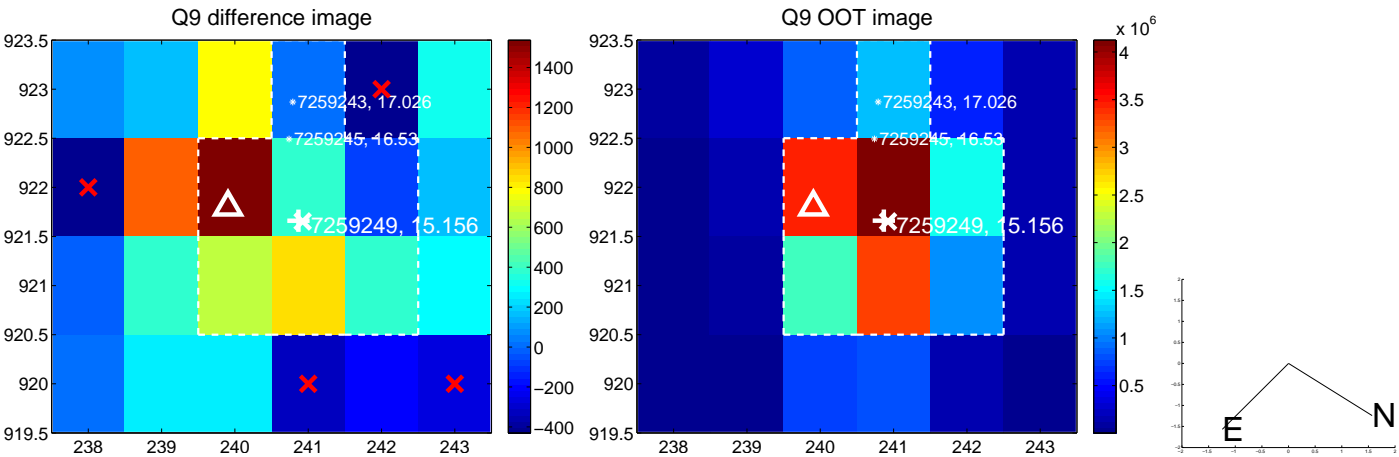
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



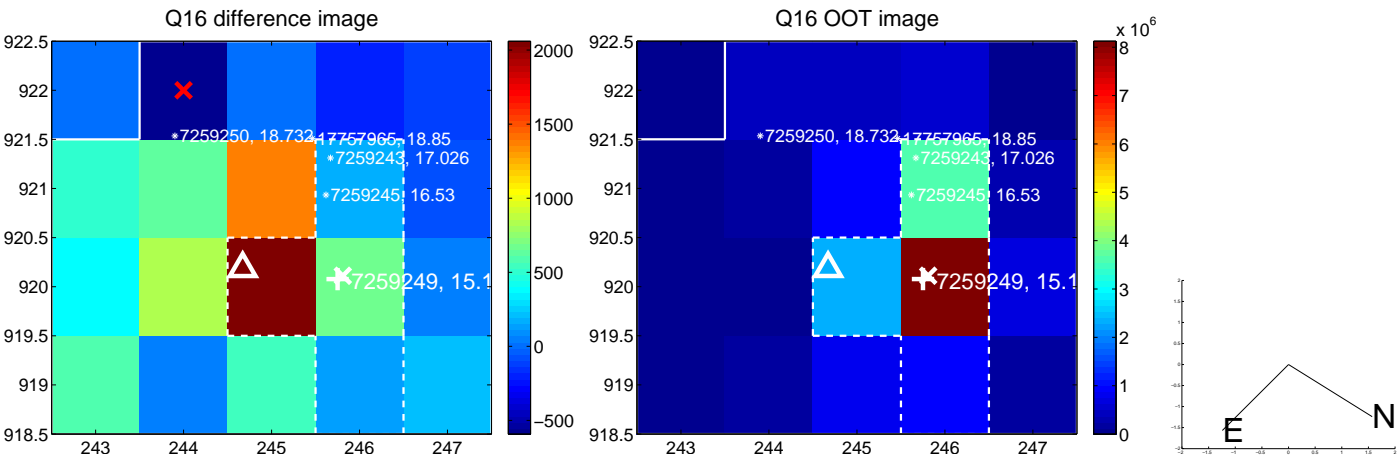
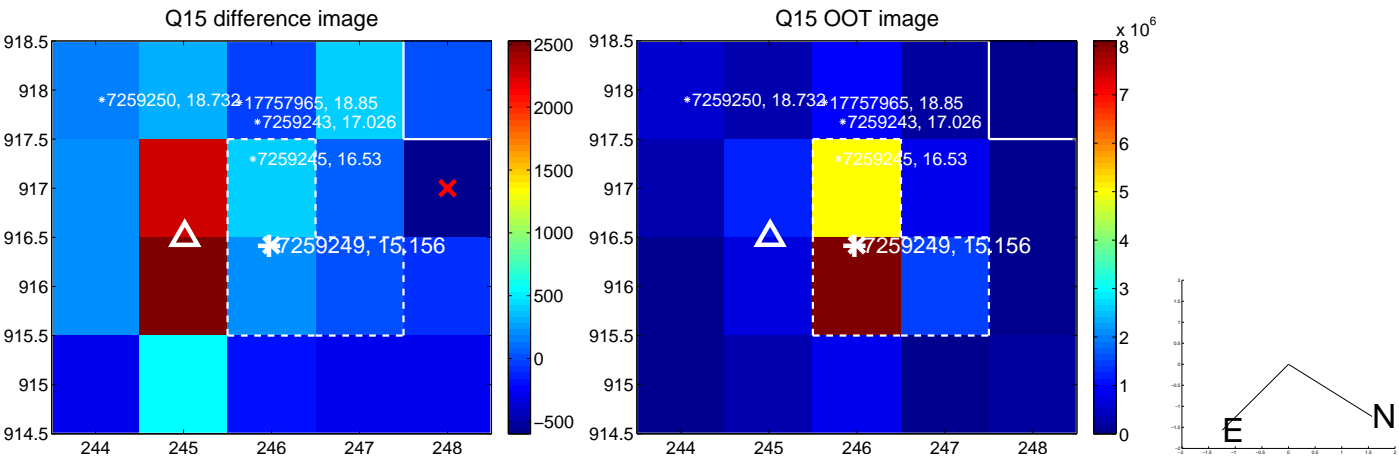
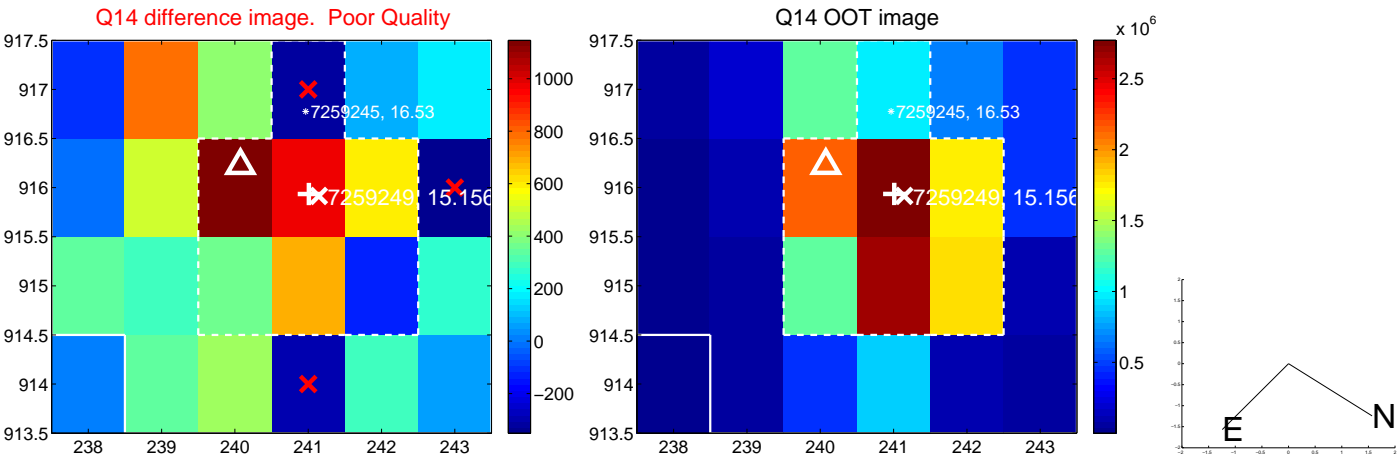
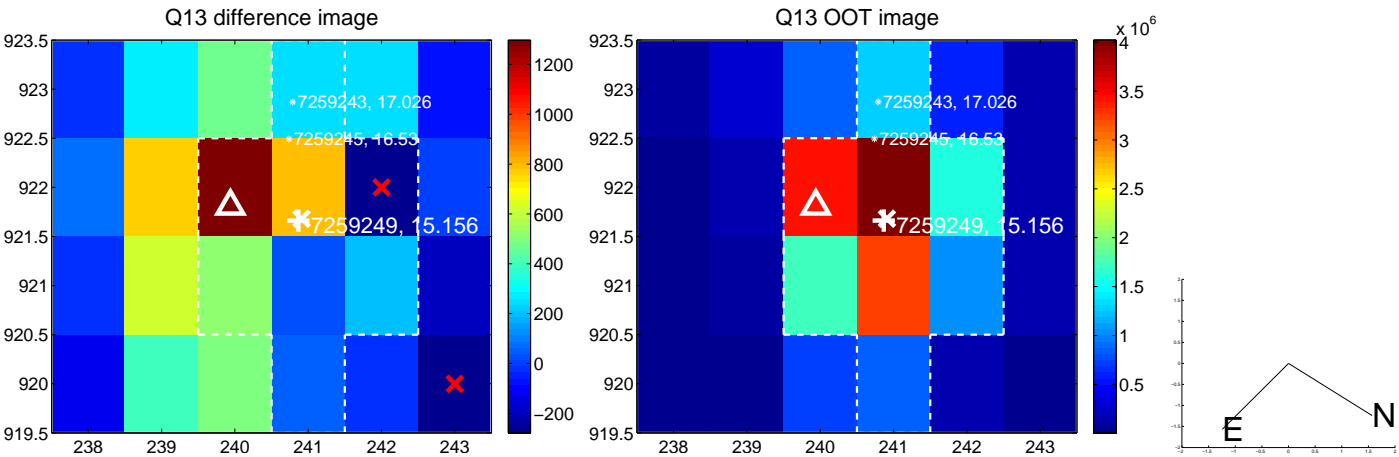
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



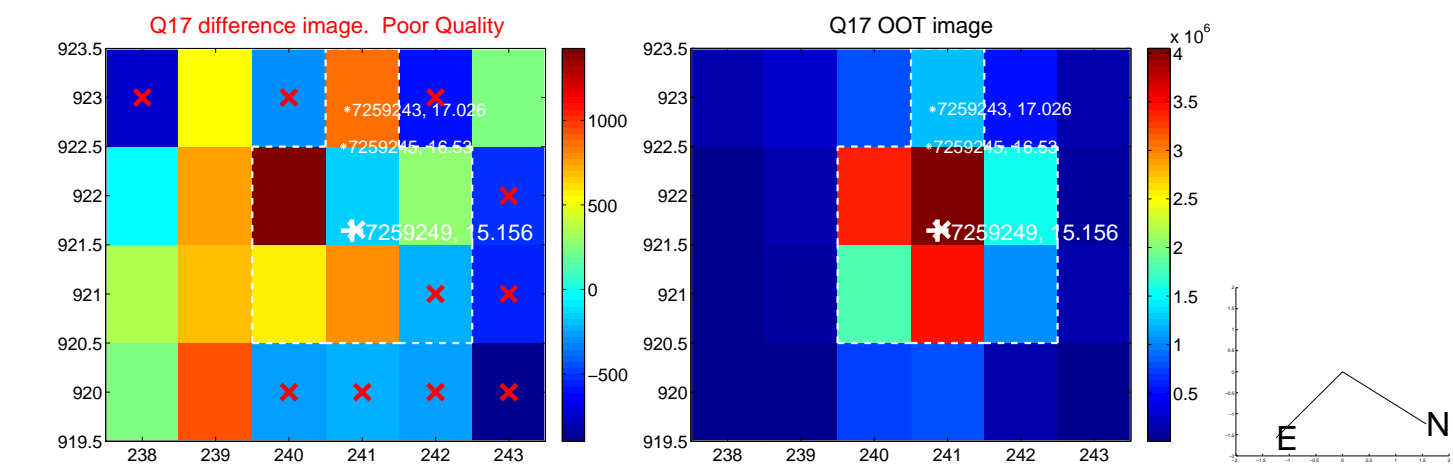
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



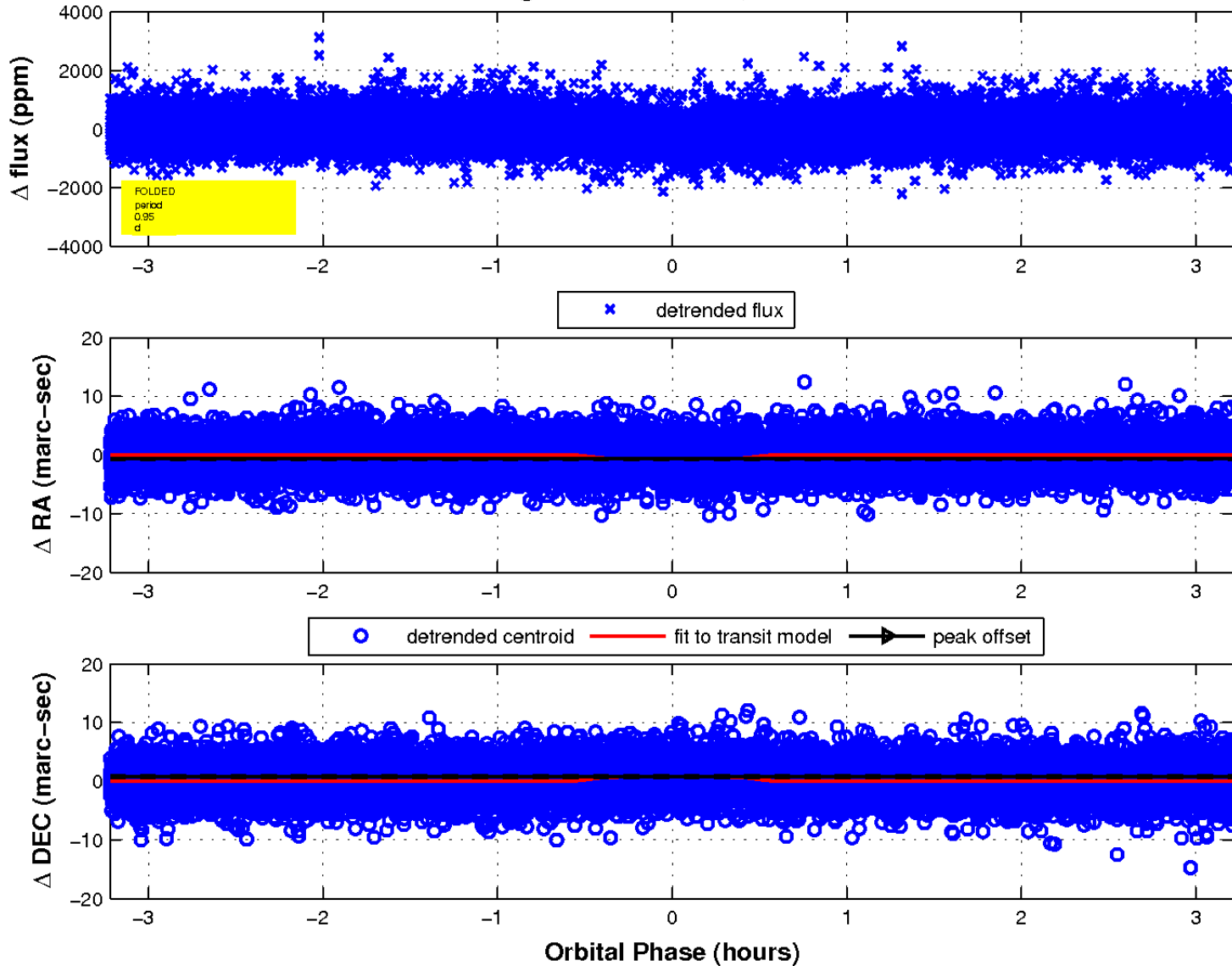
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

