

KIC 005905728

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})
005905728-01	OBS	5209.01	7.871678	132.367411	30.3	2.902	9.2	9.4	0.94	5428	0.61	131.05

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005905728-01	OBS	FP	0.00	0	0	1	0	CENT_SATURATED—HALO_GHOST

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 005905728-01

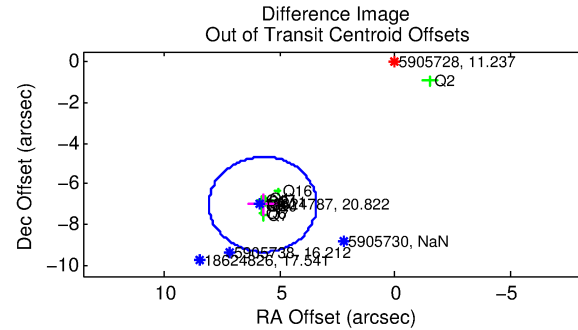
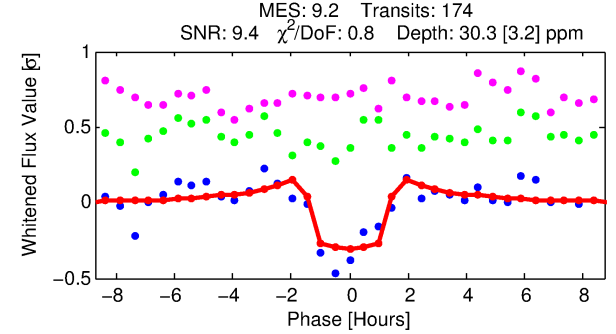
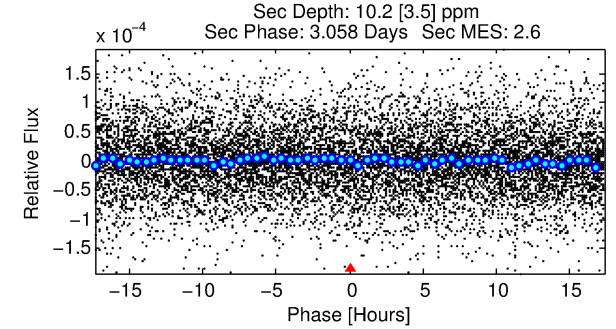
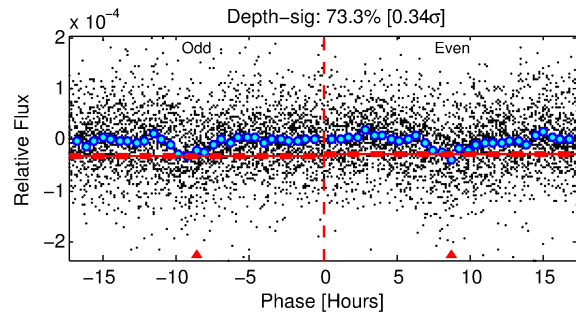
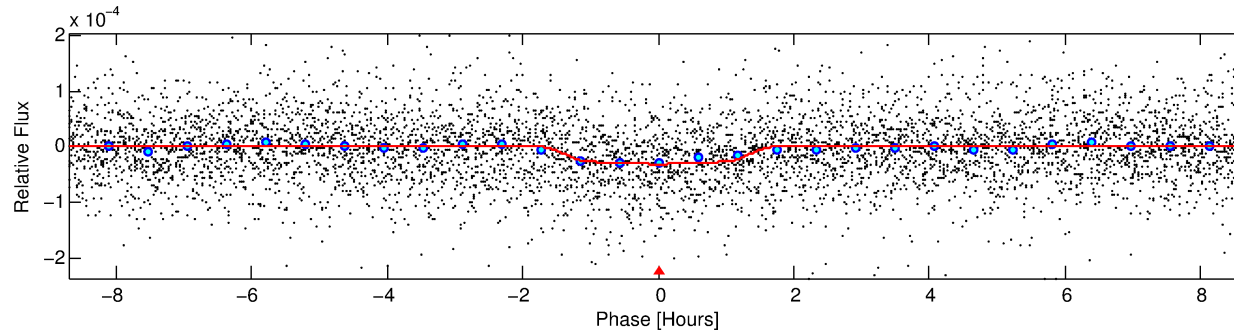
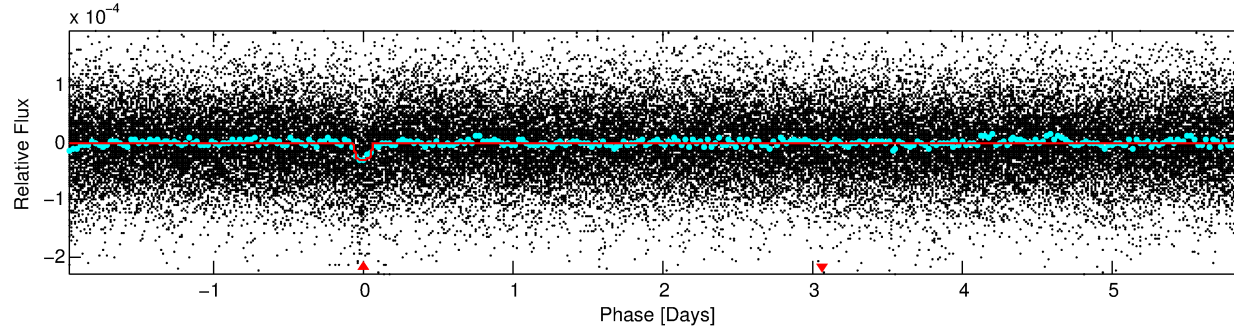
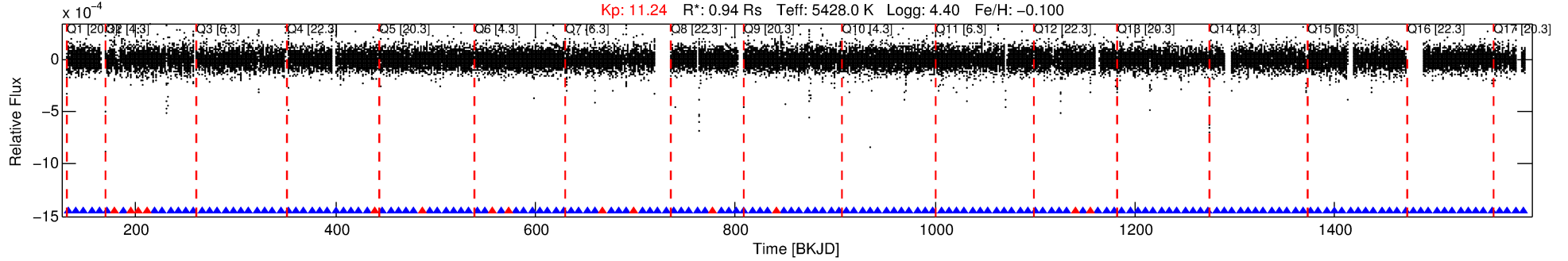
No Significant Match Found

DV One-Page Summary

KIC: 5905728 Candidate: 1 of 1 Period: 7.872 d

KOI: K05209.01 Corr: 0.898

Kp: 11.24 R*: 0.94 Rs Teff: 5428.0 K Logg: 4.40 Fe/H: -0.100



DV Fit Results:

Period = 7.87168 [0.00005] d
Epoch = 132.3674 [0.0044] BKJD
Rp/R* = 0.0060 [0.0018]
a/R* = 9.78 [13.16]
b = 0.89 [0.33]
Seff = 131.05 [37.62]
Teq = 863 [62] K
Rp = 0.61 [0.23] Re
a = 0.0724 [0.0133] AU
Ag = 77.95 [58.98] [1.30σ]
Teffp = 3964 [710] K [4.35σ]

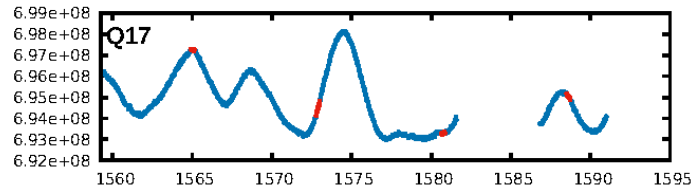
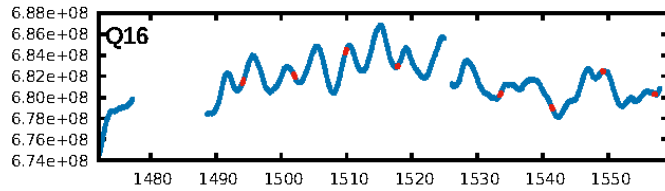
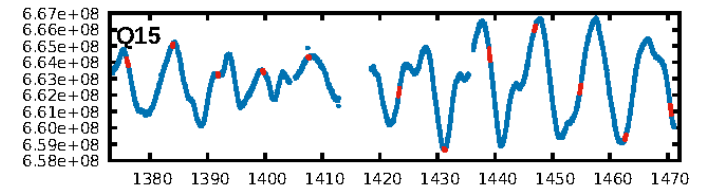
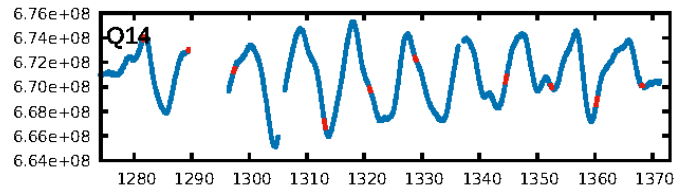
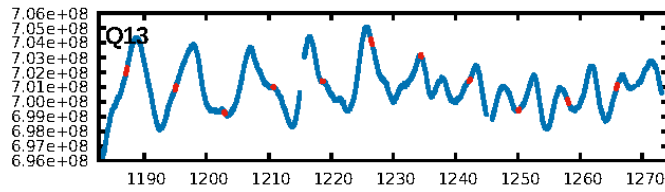
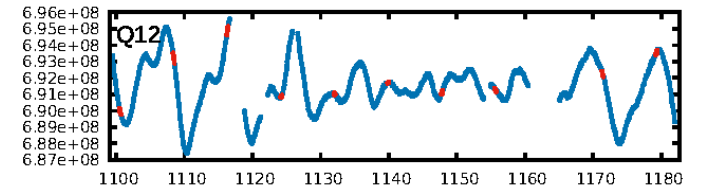
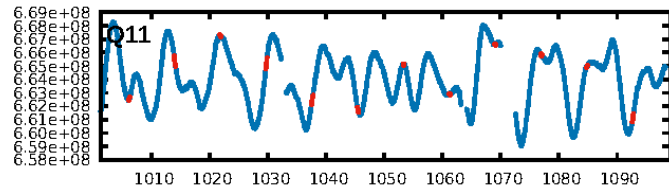
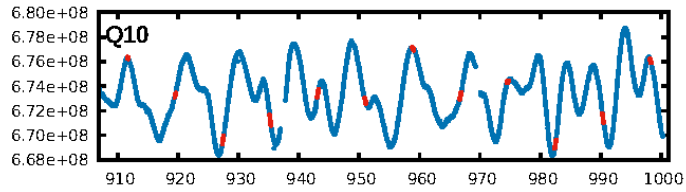
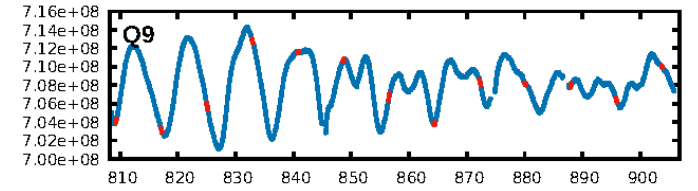
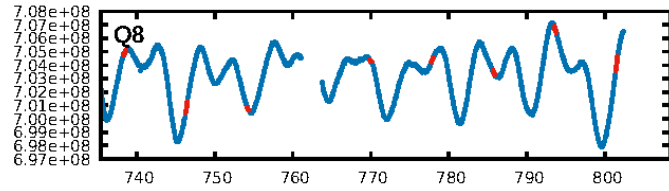
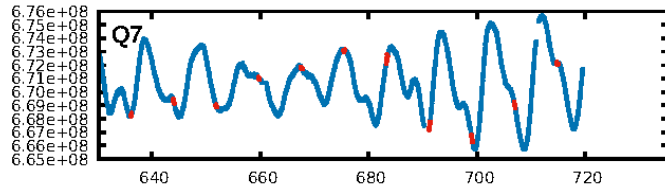
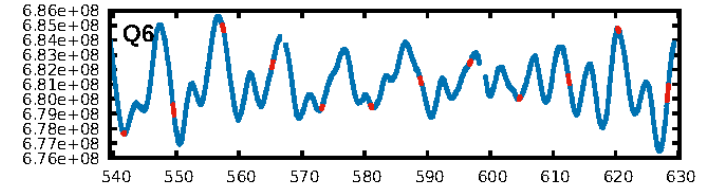
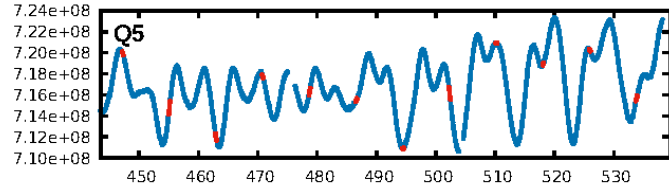
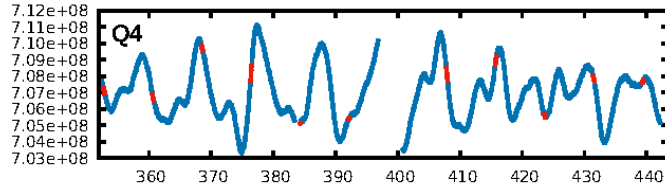
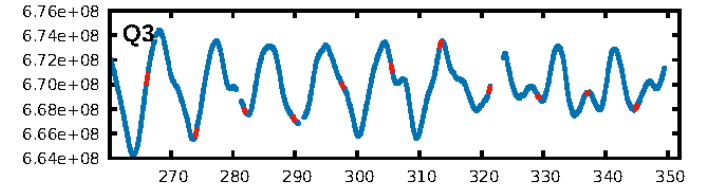
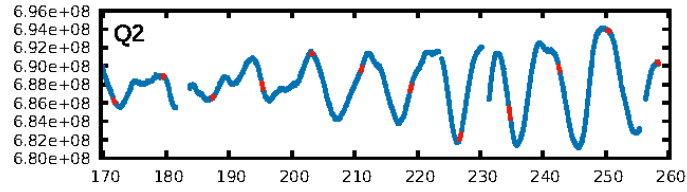
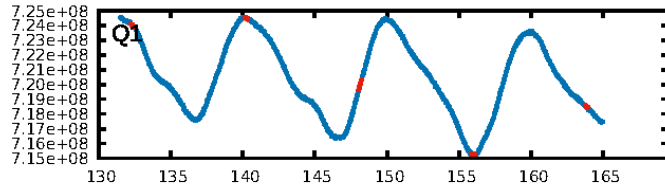
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.45e-18
RollingBand-fgt: 0.92 [151/165]
GhostDiagnostic-chr: 0.1277
Centroid-sig: 0.0%
Centroid-so: 15.655 arcsec [13.52σ]
OotOffset-rm: 9.041 arcsec [11.67σ]
KicOffset-rm: 8.968 arcsec [11.38σ]
OotOffset-st: 3/3/1/4 [11]
KicOffset-st: 3/3/1/4 [11]
DiffImageQuality-fgm: 0.36 [4/11]
DiffImageOverlap-fno: 1.00 [17/17]

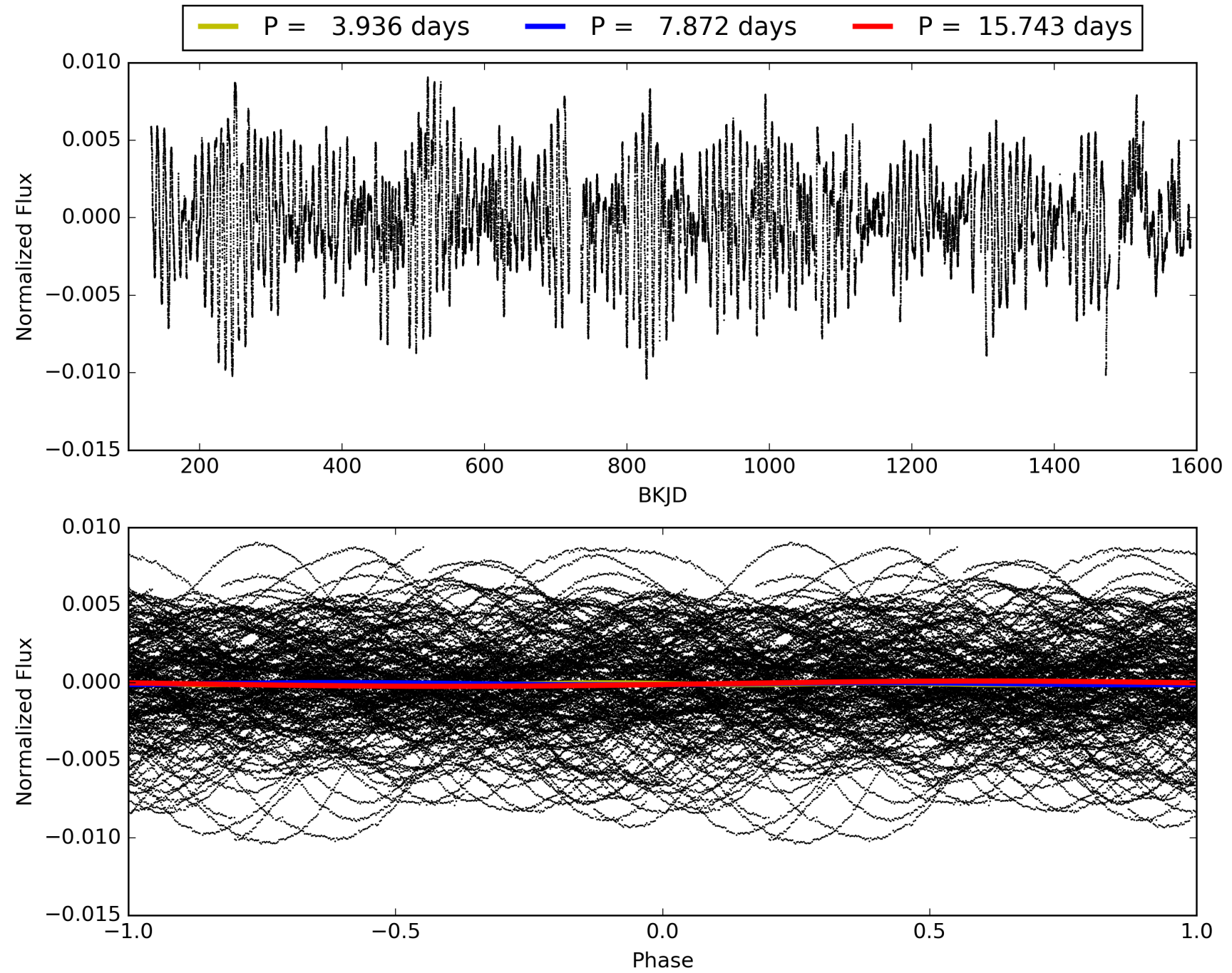
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 07:15:11 Z

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

TCE 005905728-01, PDC Light Curves

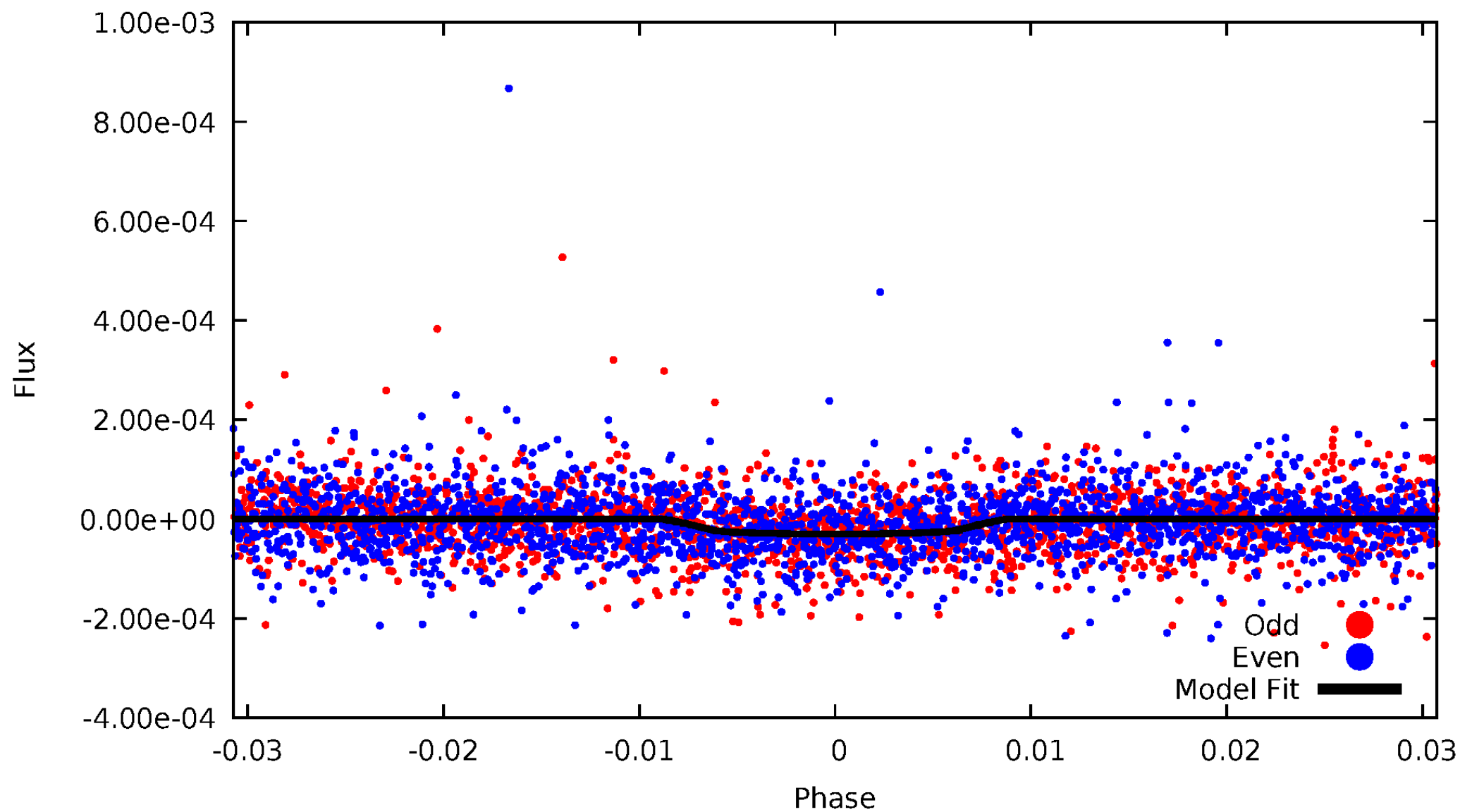


TCE 005905728-01



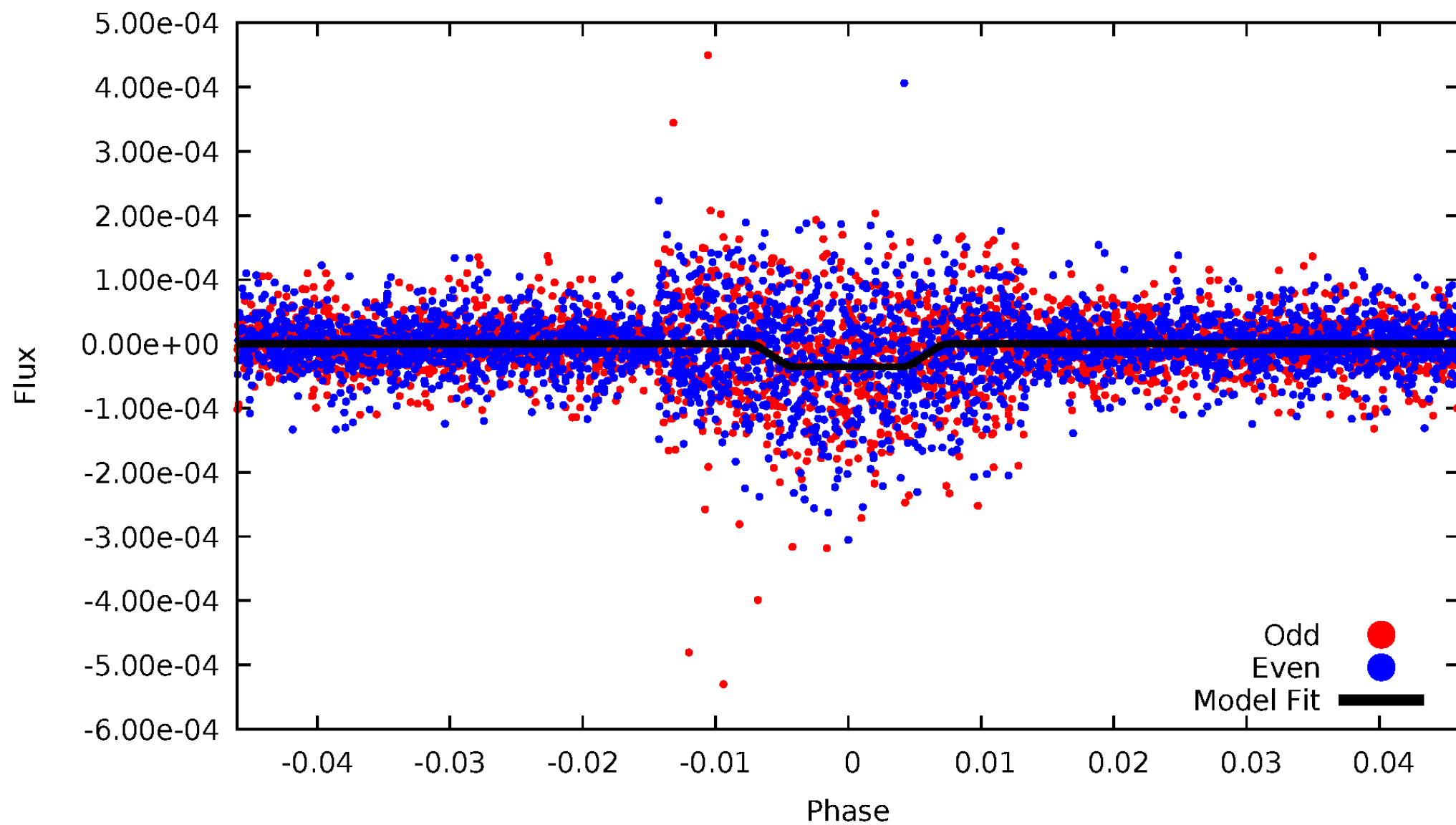
DV Odd/Even

TCE 005905728-01



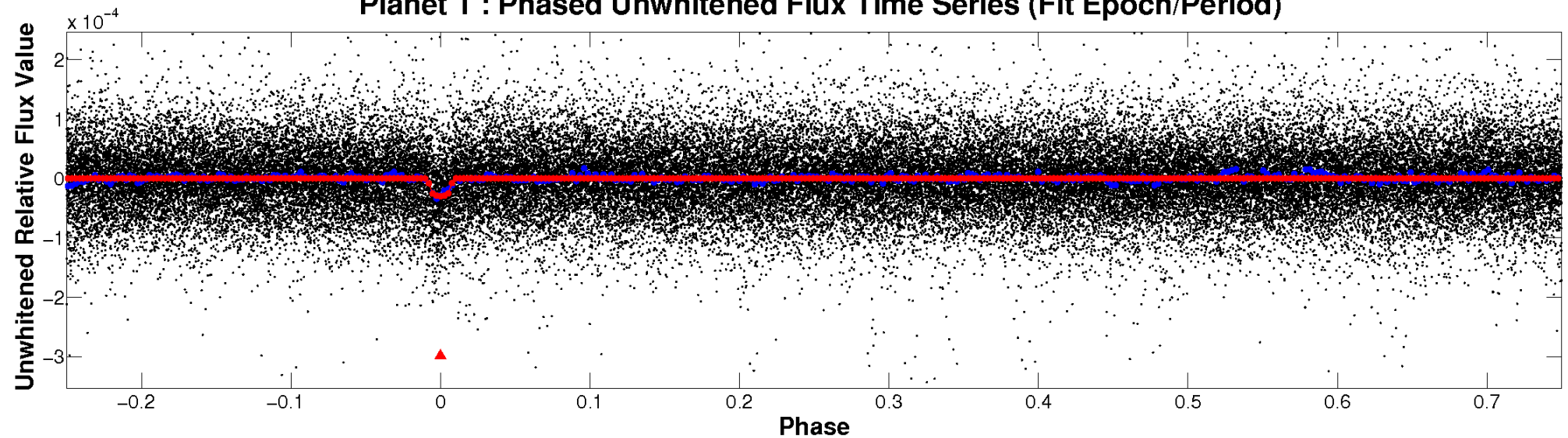
ALT Odd/Even

TCE 005905728-01

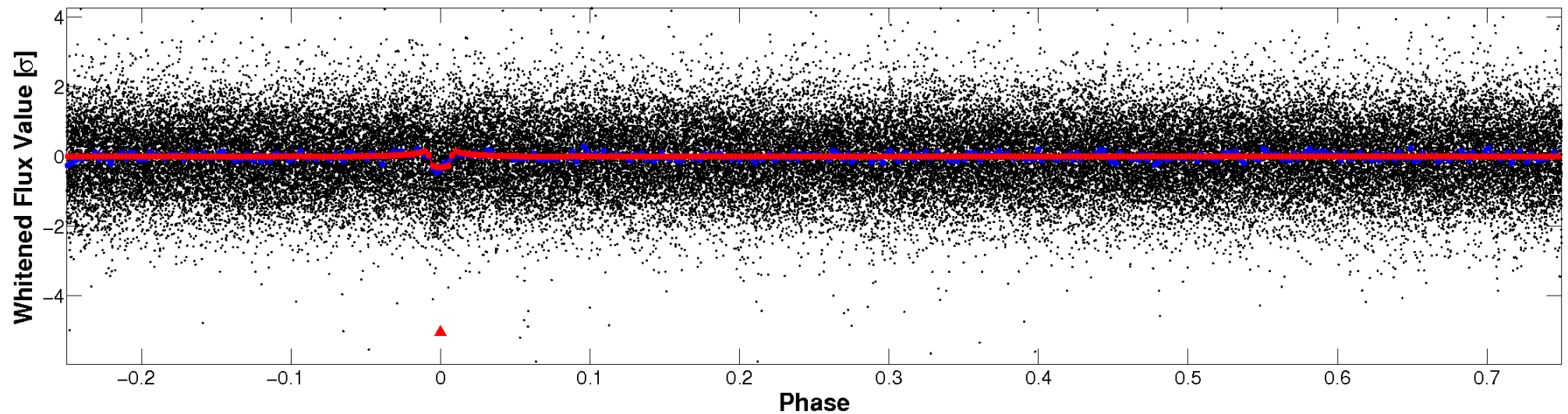


Non-Whitened Vs. Whitened Light Curve

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

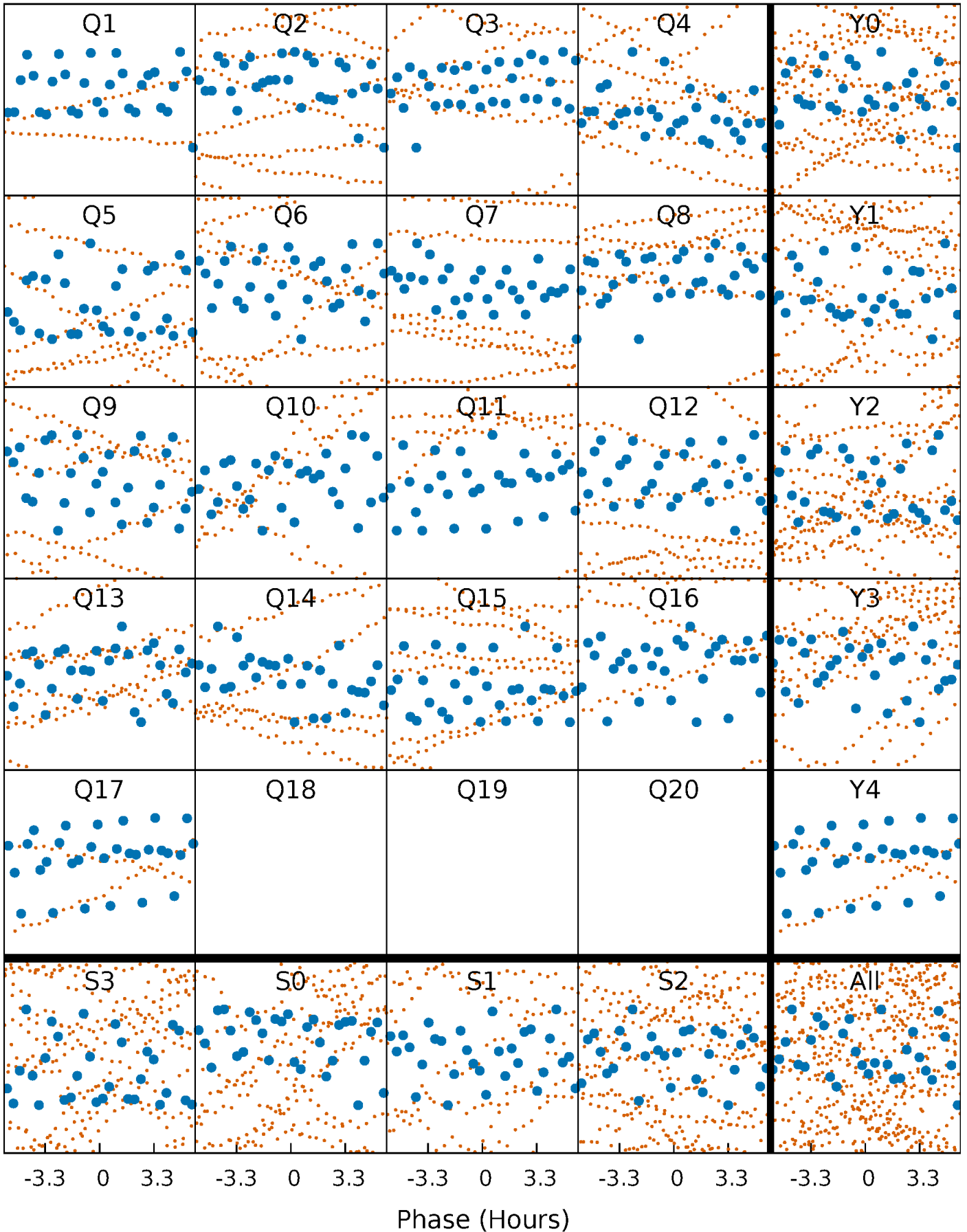


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



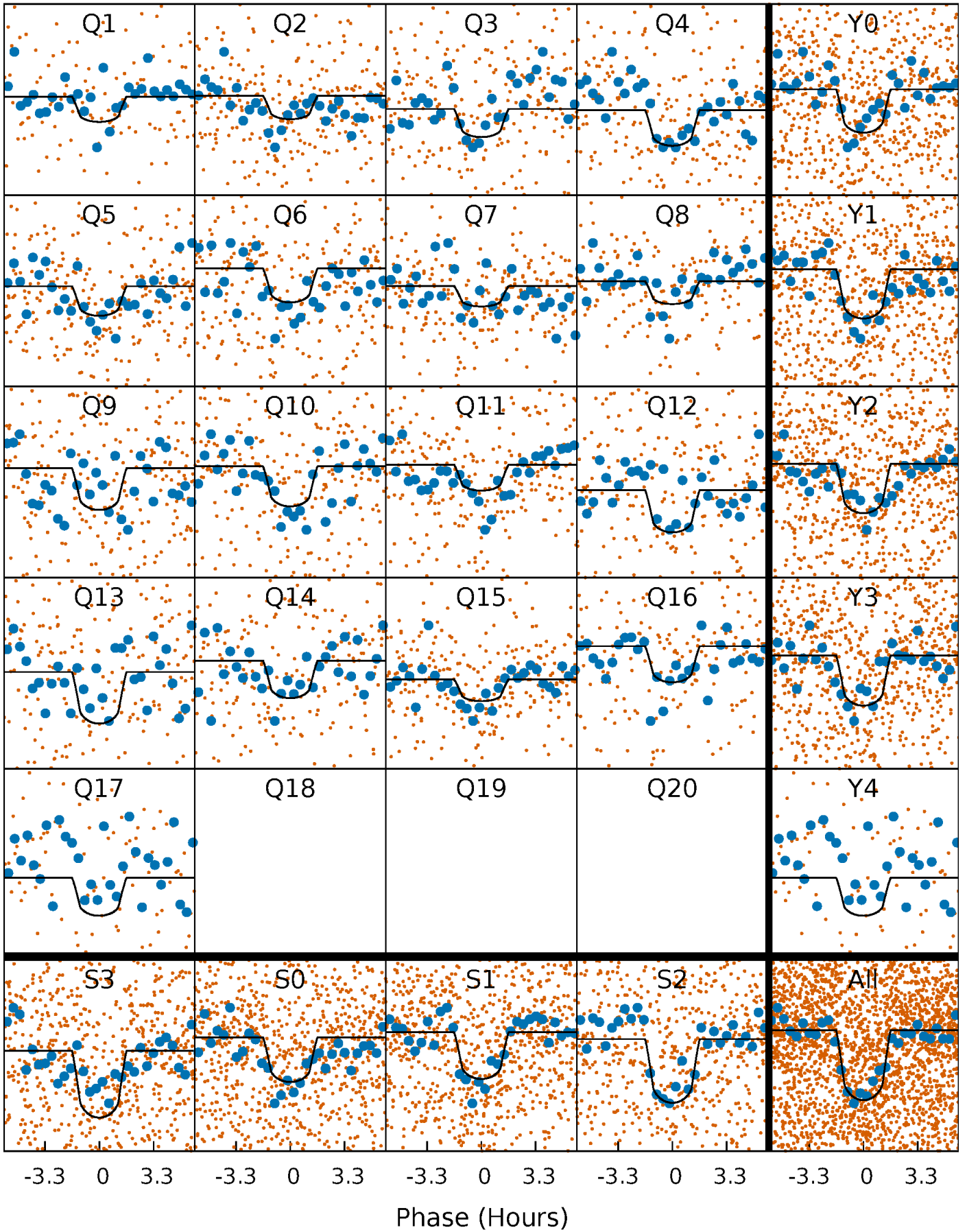
PDC Quarter-Phased Transit Curves

TCE 005905728-01 P= 7.871678 Days $T_0=132.367411$ (BKJD)



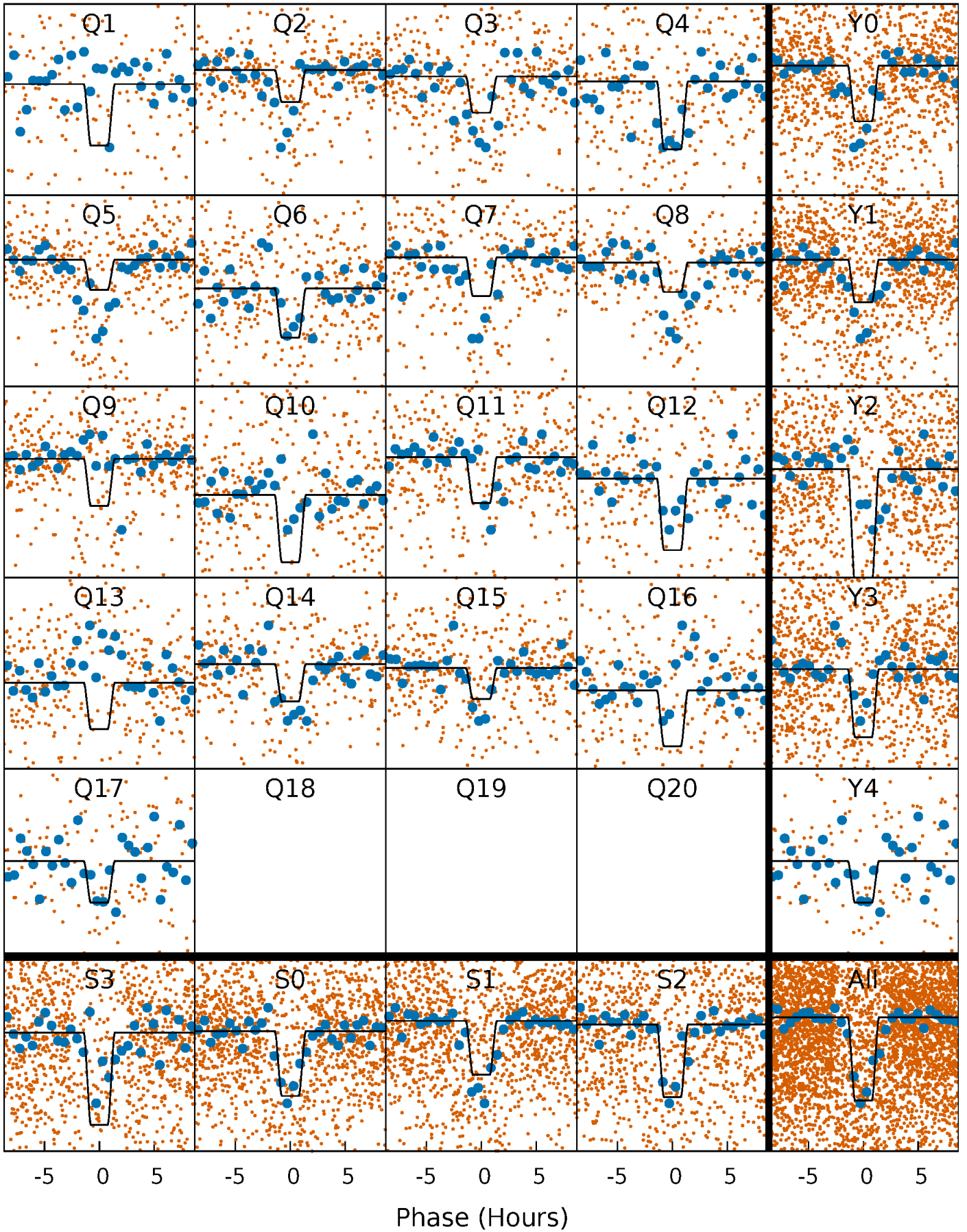
DV Quarter-Phased Transit Curves

TCE 005905728-01 P= 7.871678 Days $T_0=132.367411$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

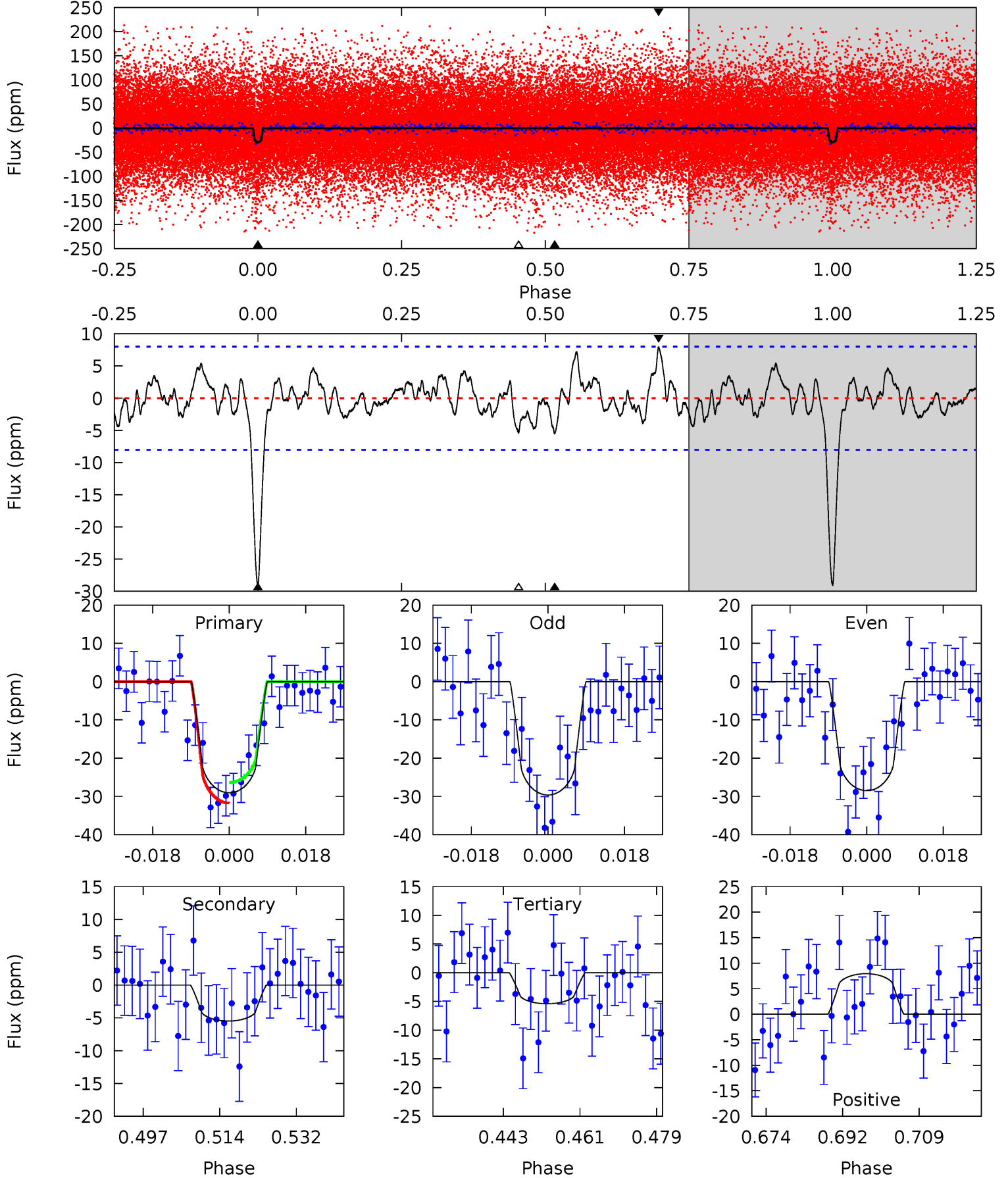
TCE 005905728-01 P= 7.871656 Days $T_0=132.353924$ (BKJD)



DV Model-Shift Uniqueness Test

005905728-01, P = 7.871678 Days, E = 124.495733 Days

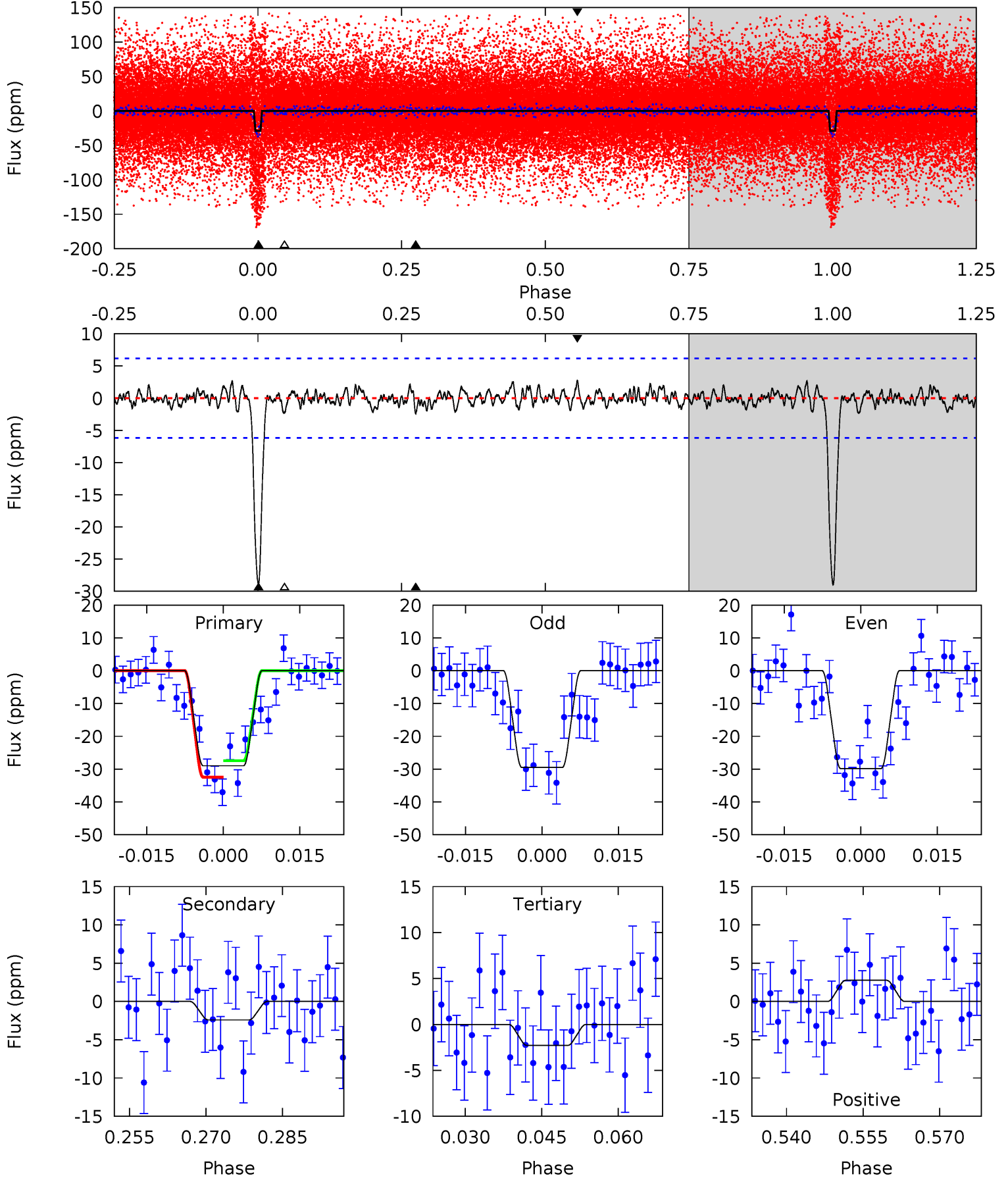
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.8	3.37	3.32	4.88	4.92	2.37	1.43	14.5	13.0	0.05	-1.51	0.35	0.96	0.21	1.65



Alt Model-Shift Uniqueness Test

005905728-01, P = 7.871656 Days, E = 124.482268 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.2	1.93	1.83	2.22	4.95	2.43	0.72	21.4	21.0	0.11	-0.28	0.13	1.20	0.09	2.01



Stellar Parameters For KIC 005905728

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5428^{+147}_{-147}	$4.404^{+0.145}_{-0.145}$	$-0.100^{+0.300}_{-0.250}$	$0.940^{+0.205}_{-0.153}$	$0.816^{+0.107}_{-0.063}$	$1.385^{+0.894}_{-0.539}$
	+3%/-3%	+3%/-3%	+300%/-250%	+22%/-16%	+13%/-8%	+65%/-39%
Source	PHO1	FLK73	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 005905728-01 / KOI 5209.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-5 ± 2	$0.62^{+0.20}_{-0.19}$	1207^{+67}_{-71}	3736^{+533}_{-357}	42^{+49}_{-20}
Alt.	-2 ± 1	$0.61^{+0.22}_{-0.20}$	1205^{+69}_{-66}	3306^{+514}_{-440}	19^{+27}_{-12}

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 $A_{obs} \gg 1.0$

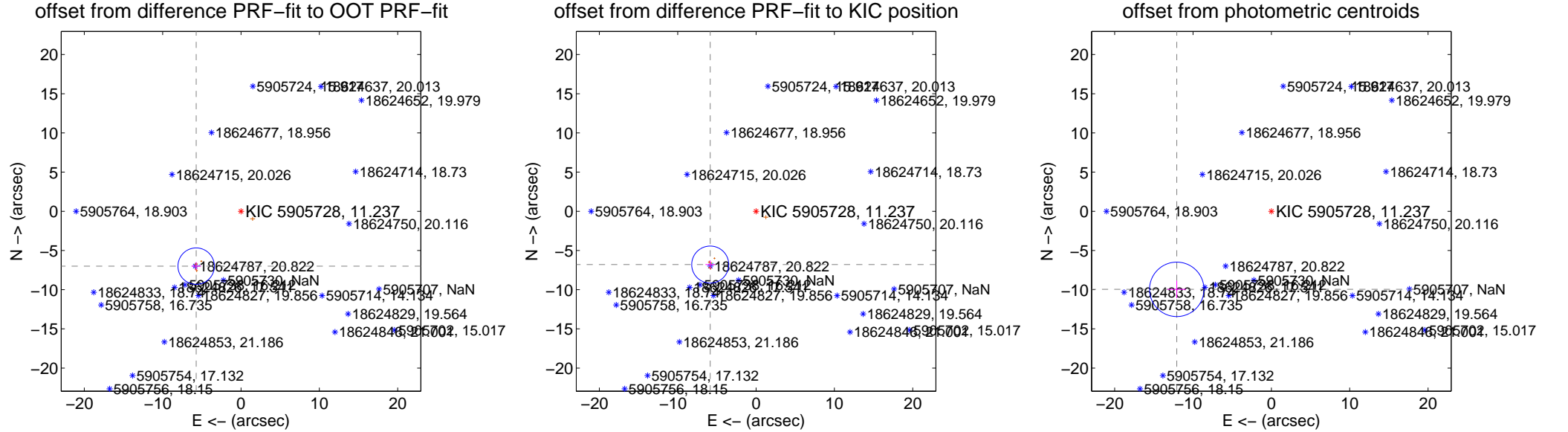
DV Centroid Data

Supplemental centroid analysis for 005905728-01. **Kepler magnitude: 11.24**. Transit SNR 9.41

There are 4 quarters with good PRF difference image offsets

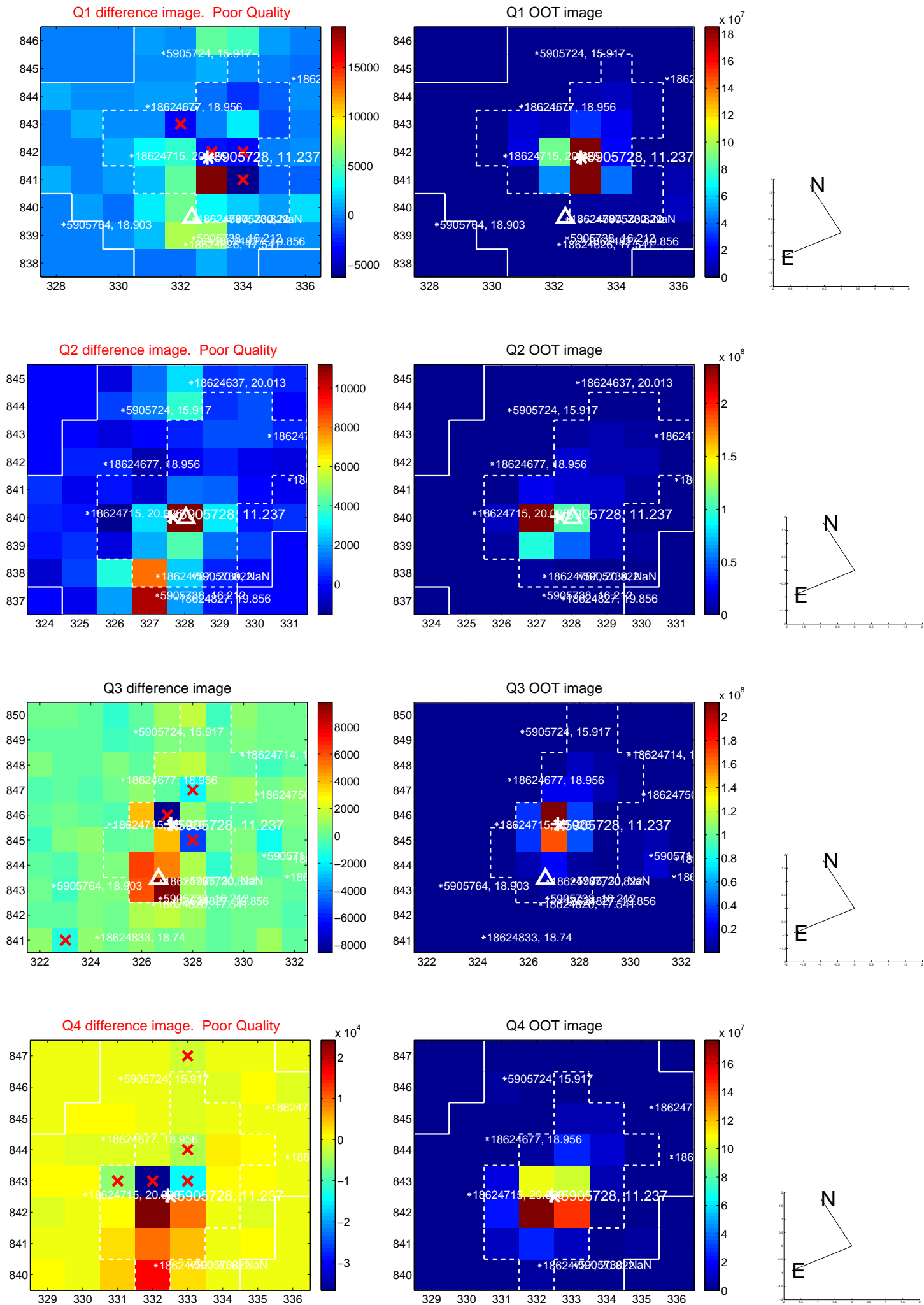
The direct PRF centroid is offset from the target star catalog position by about 0.34 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	9.041 \pm 0.775	11.67	5.724 \pm 0.608	-6.998 \pm 0.510
PRF-fit source offset from KIC position	8.968 \pm 0.788	11.38	5.849 \pm 0.604	-6.798 \pm 0.525
photometric centroid source offset	15.66 \pm 1.16	13.52	12.08 \pm 1.19	-9.96 \pm 1.11

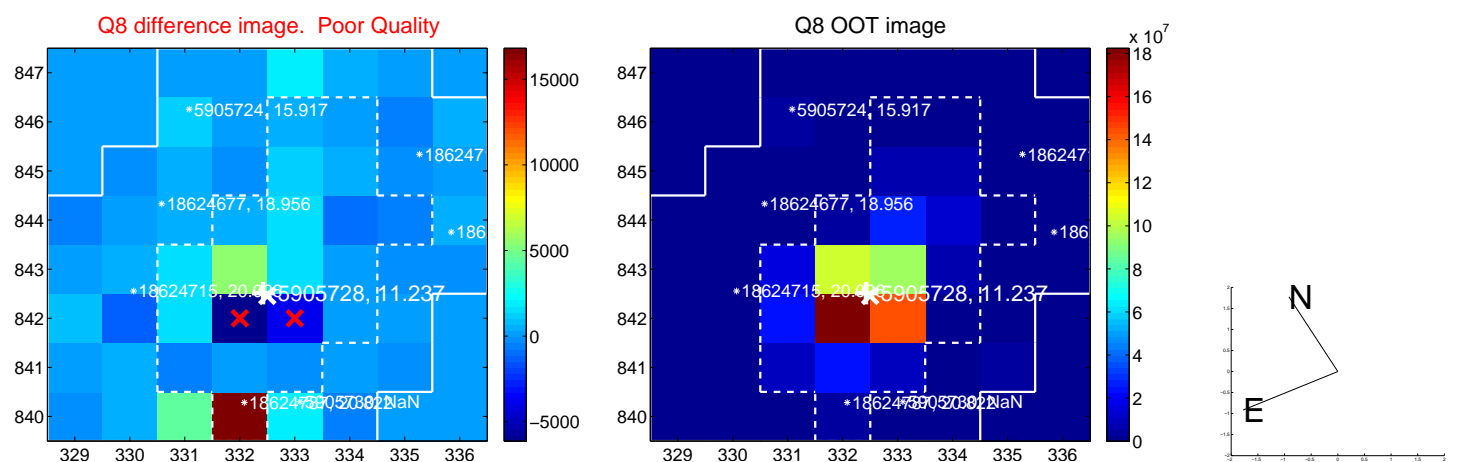
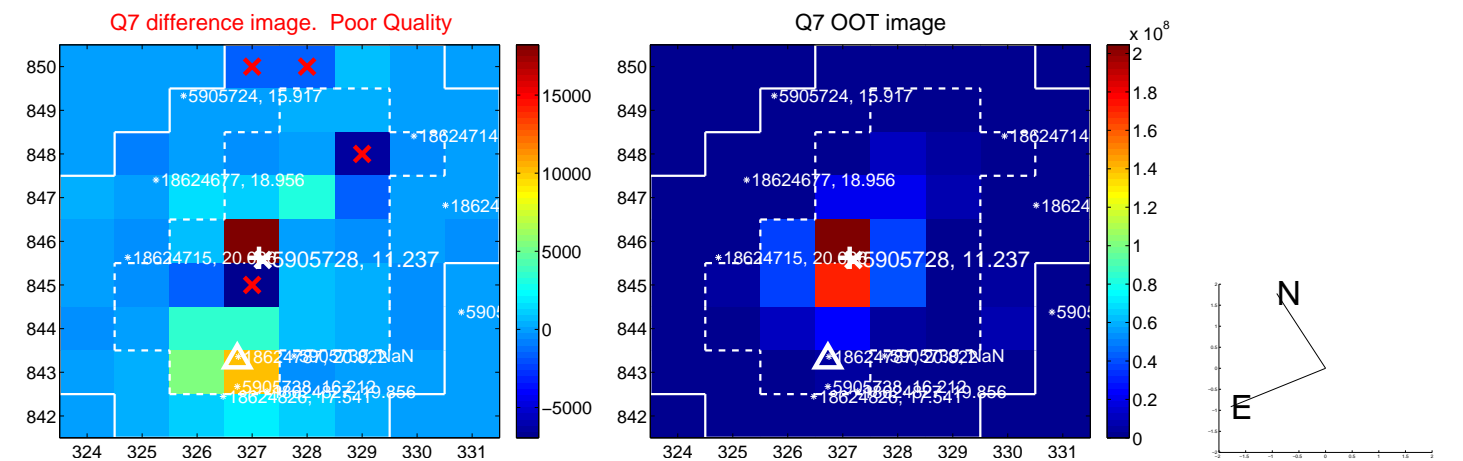
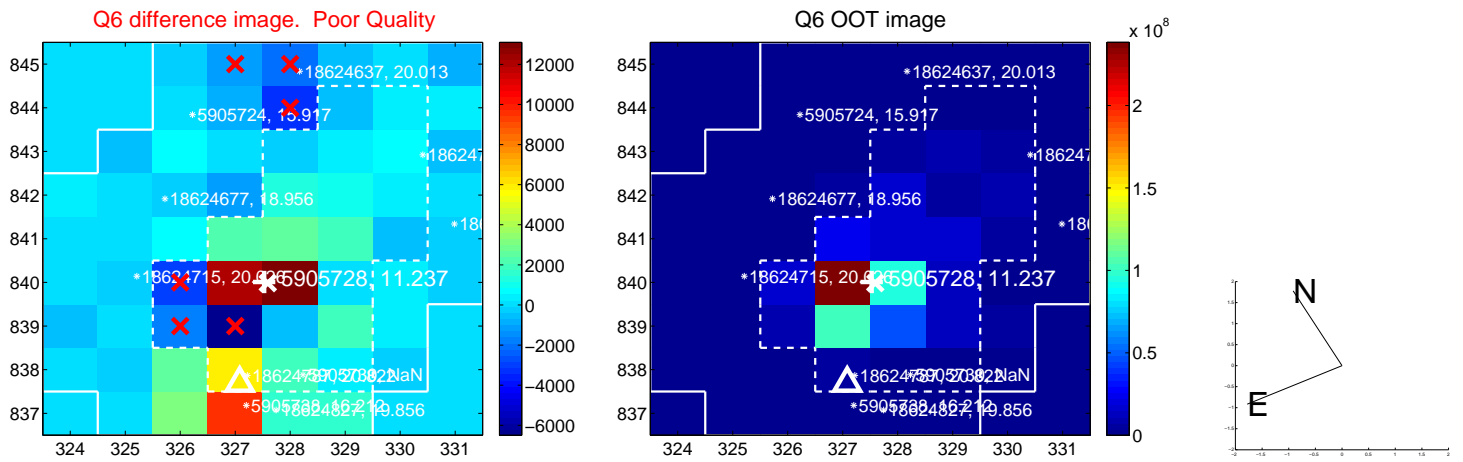
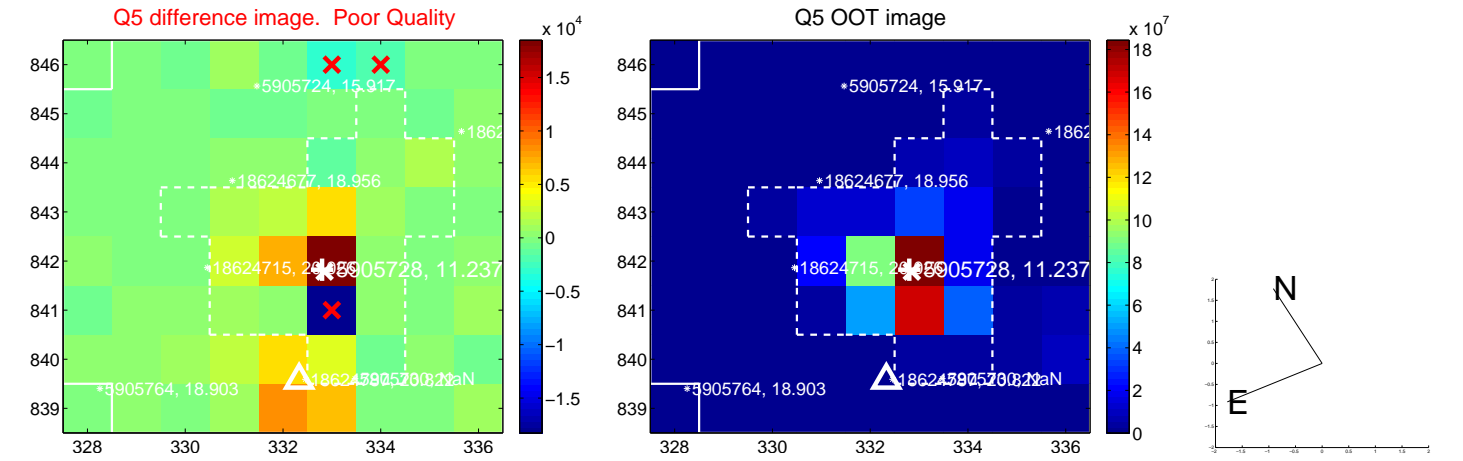


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

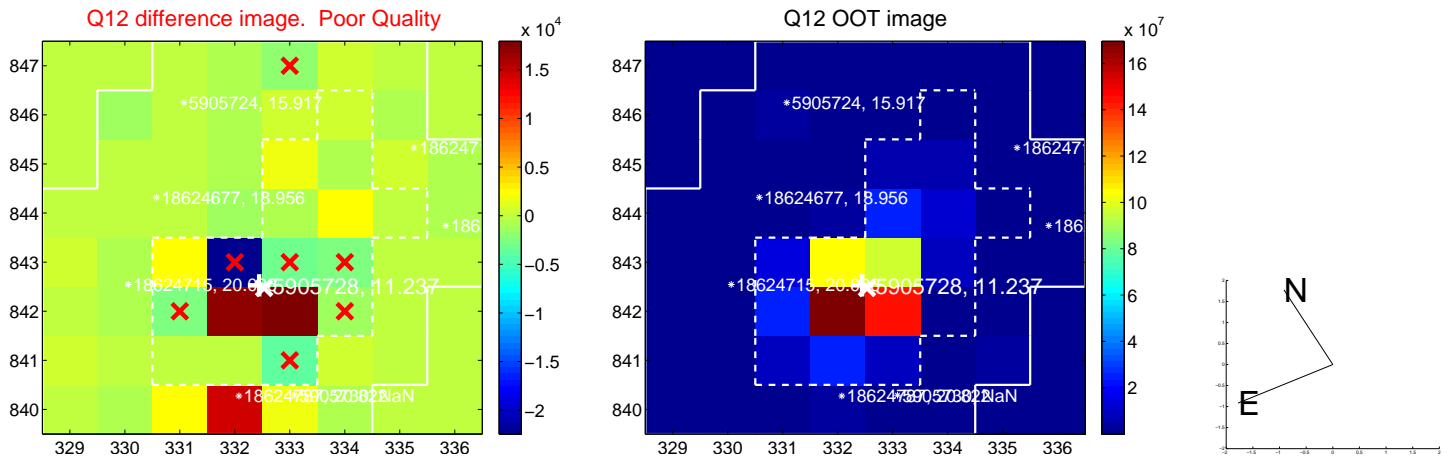
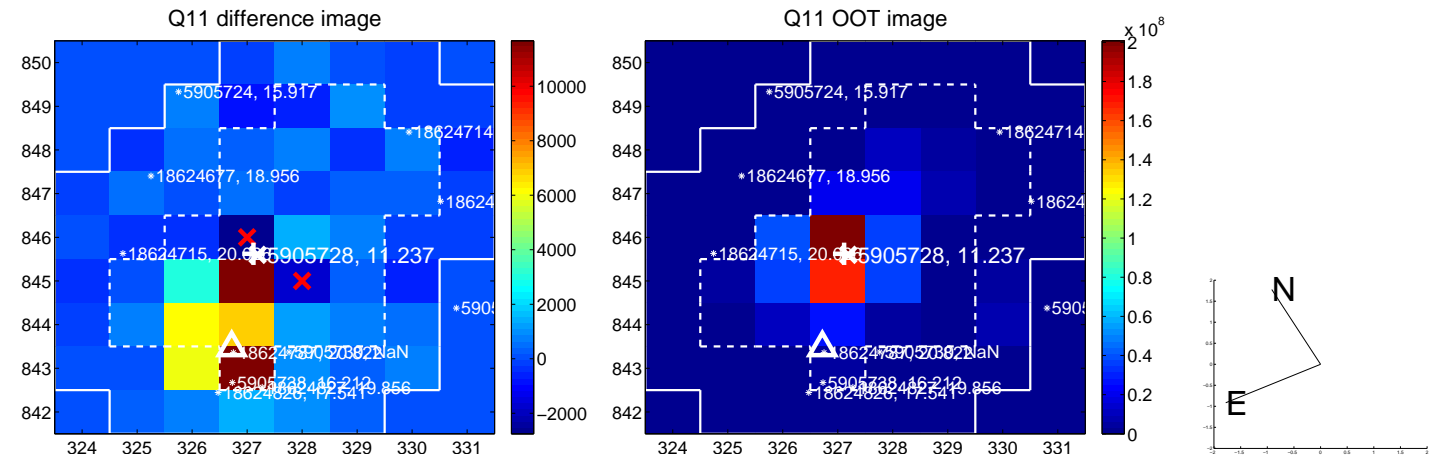
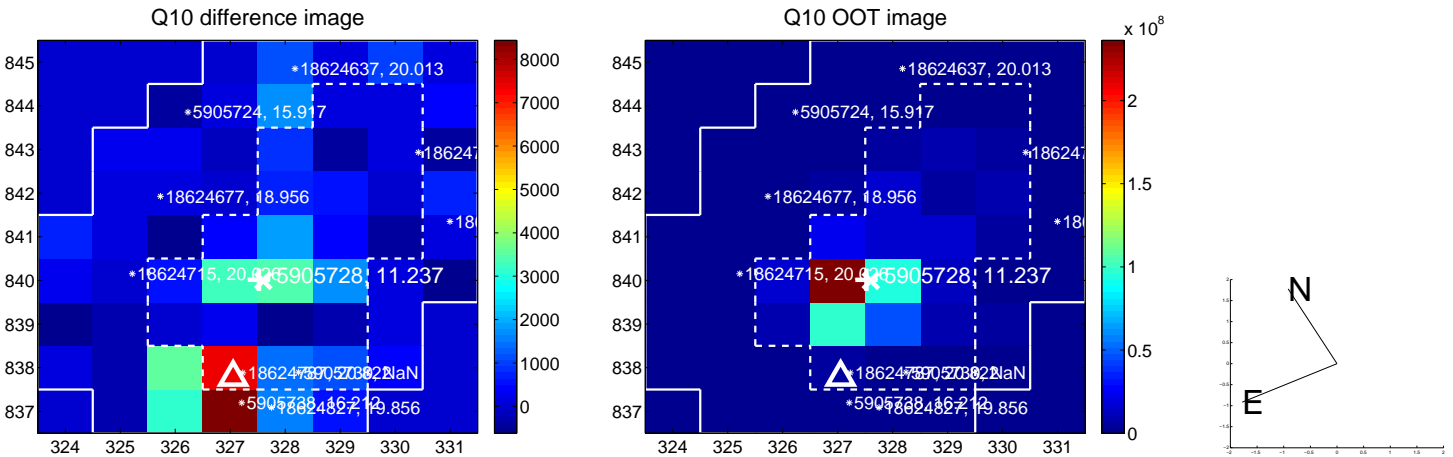
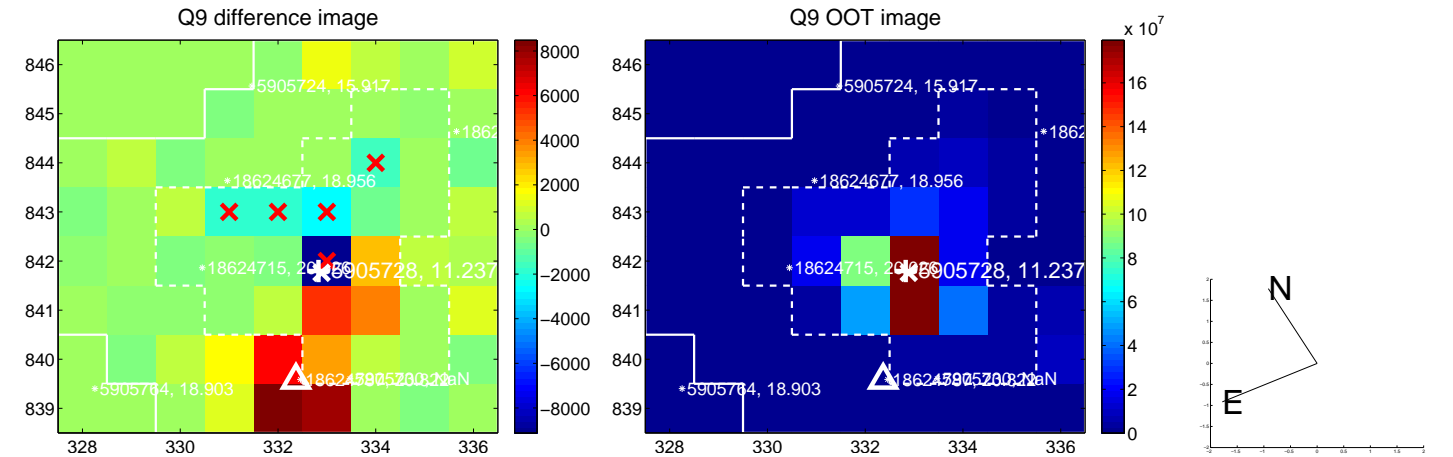
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



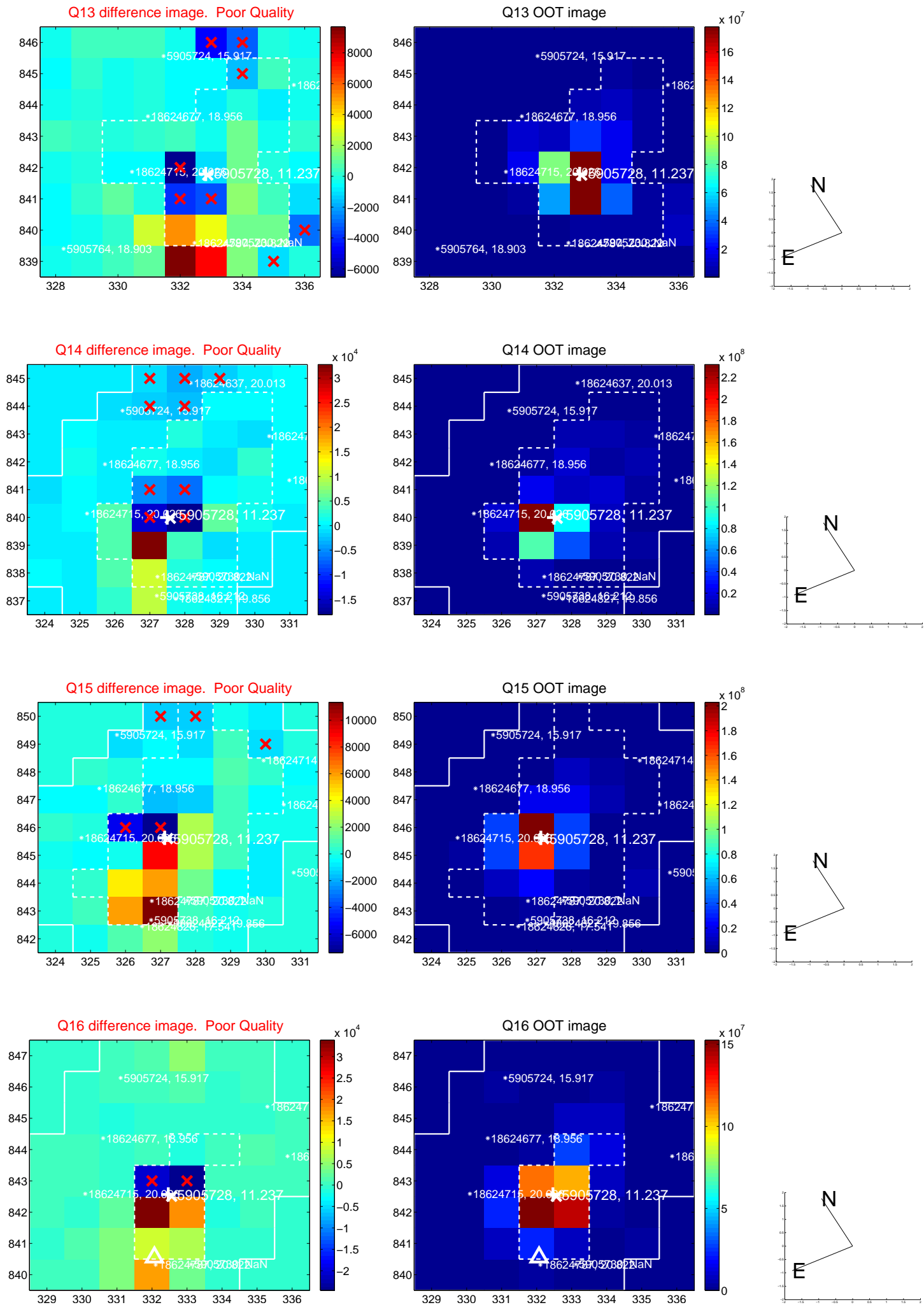
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



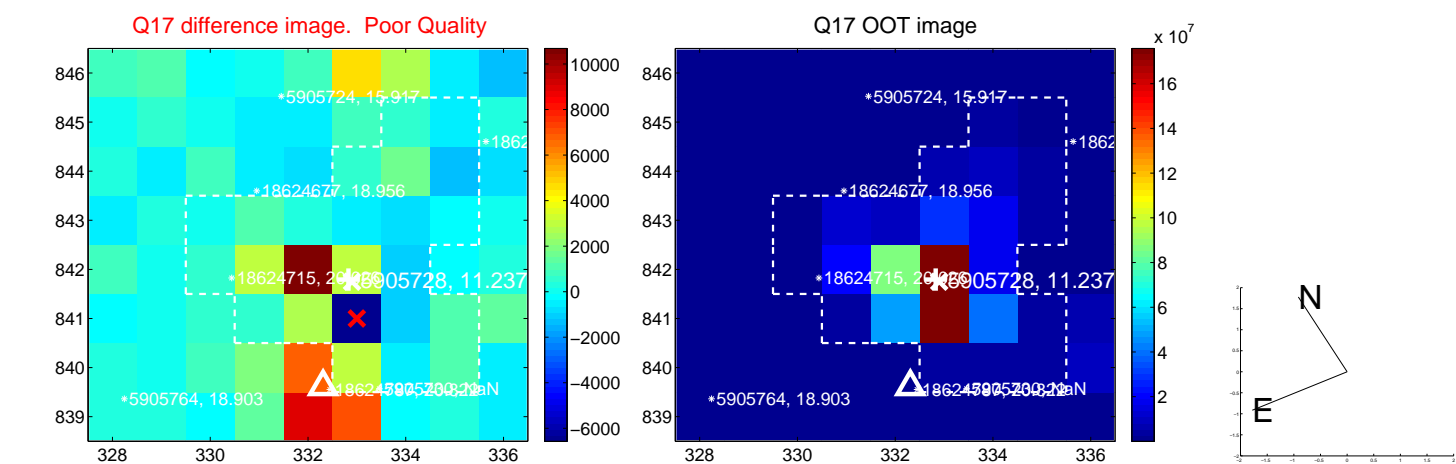
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



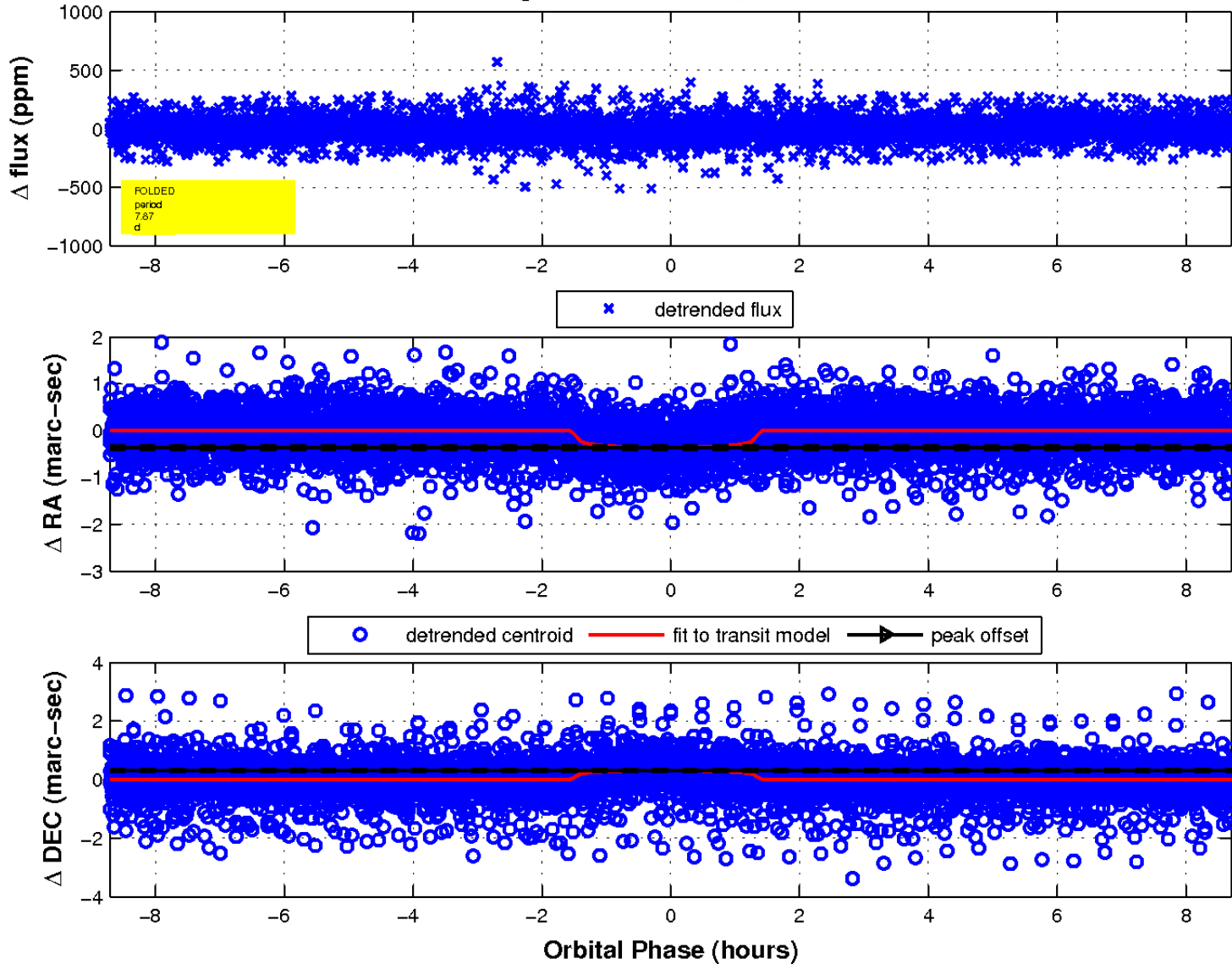
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

