

KIC 006373680

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})
006373680-01	OBS	2127.01	2.870662	133.664562	427.2	1.748	24.7	27.5	0.80	5910	1.94	484.41

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006373680-01	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 006373680-01

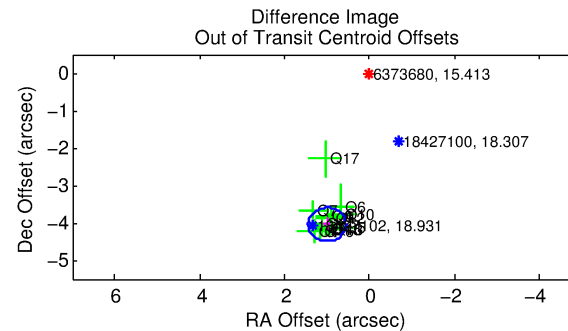
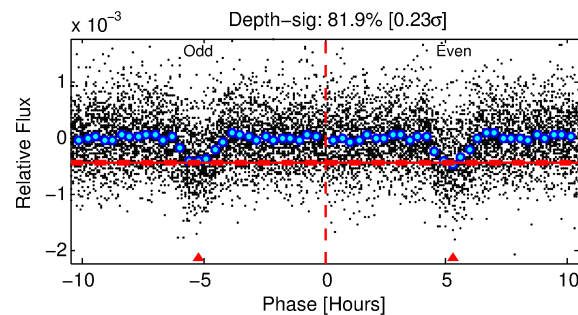
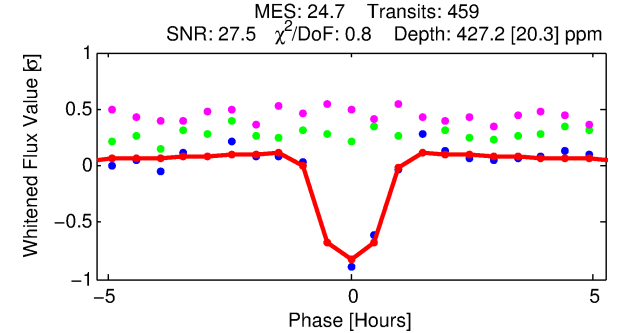
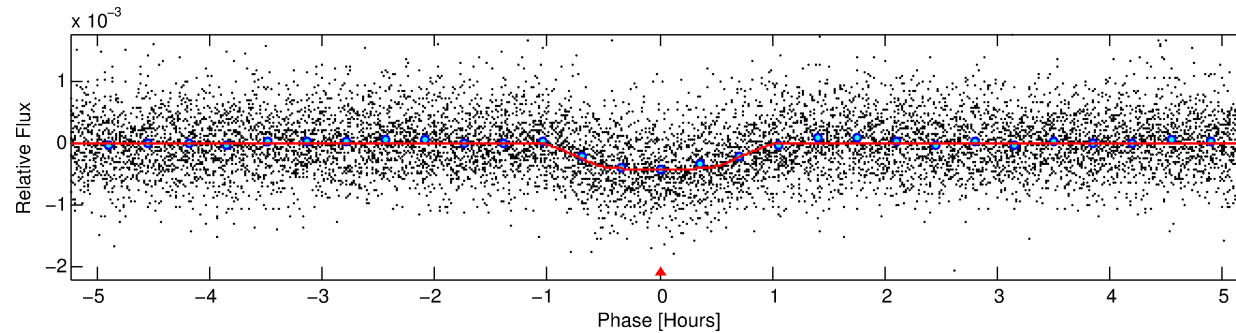
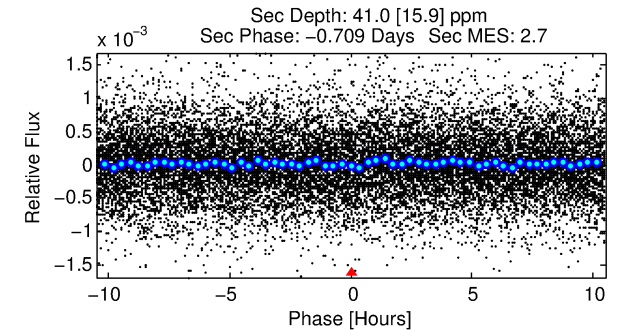
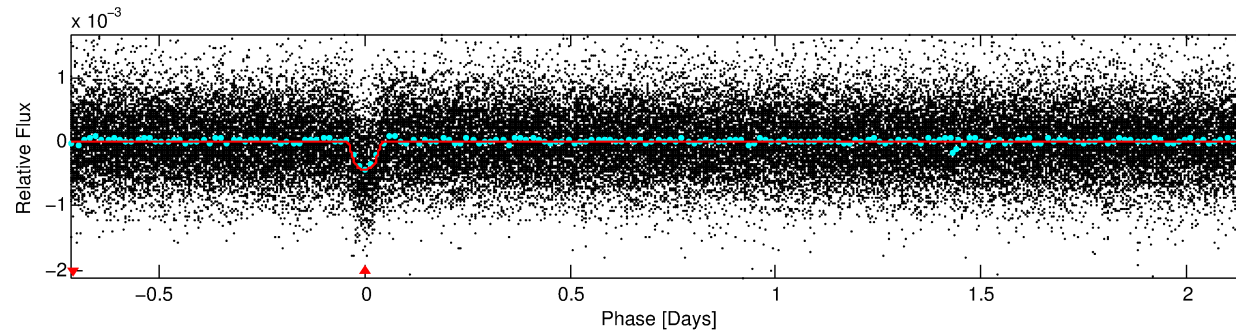
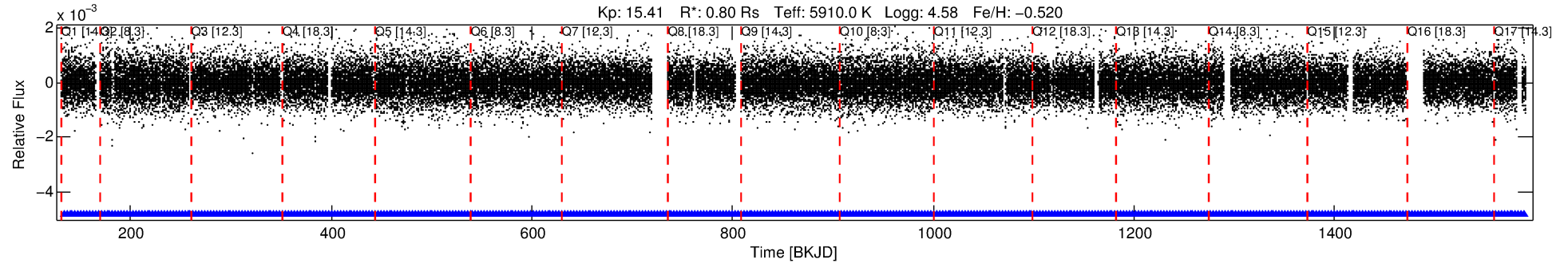
No Significant Match Found

DV One-Page Summary

KIC: 6373680 Candidate: 1 of 1 Period: 2.871 d

KOI: K02127.01 Corr: 0.950

Kp: 15.41 R*: 0.80 Rs Teff: 5910.0 K Logg: 4.58 Fe/H: -0.520



DV Fit Results:

Period = 2.87066 [0.00001] d
Epoch = 133.6646 [0.0010] BKJD
Rp/R* = 0.0223 [0.0038]
a/R* = 6.15 [5.24]
b = 0.90 [0.19]
Seff = 484.41 [172.30]
Teq = 1196 [106] K
Rp = 1.94 [0.60] Re
a = 0.0378 [0.0085] AU
Ag = 8.55 [5.28] [1.43σ]
Teff = 3163 [421] K [4.53σ]

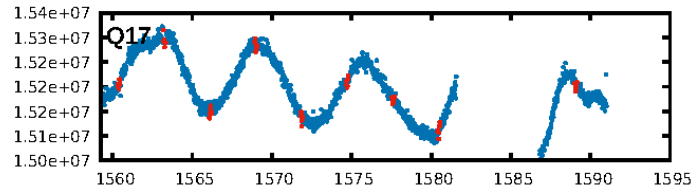
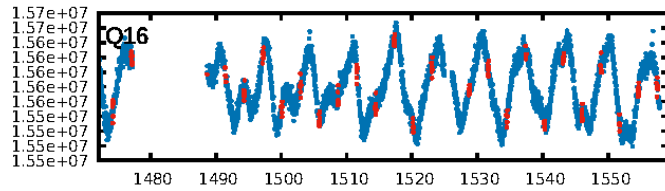
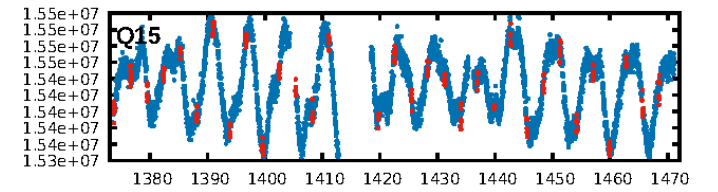
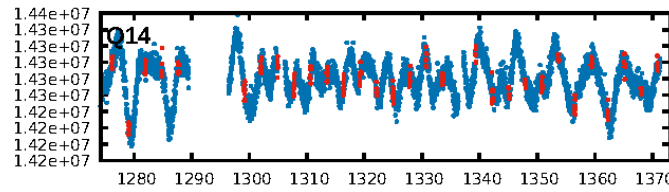
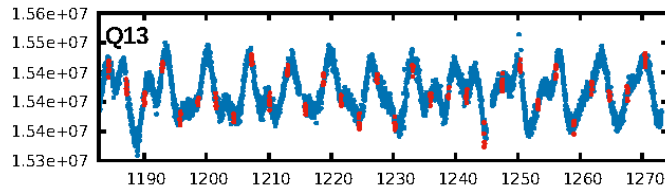
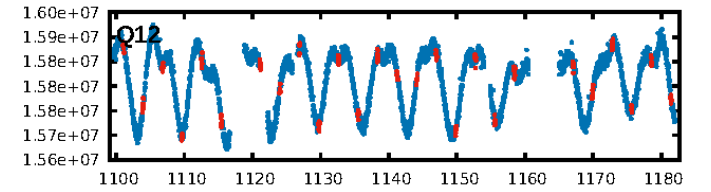
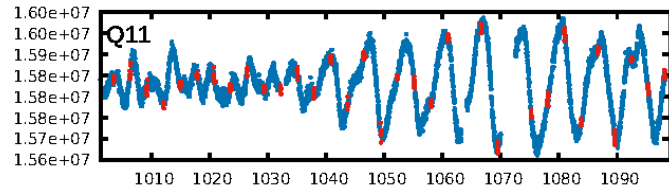
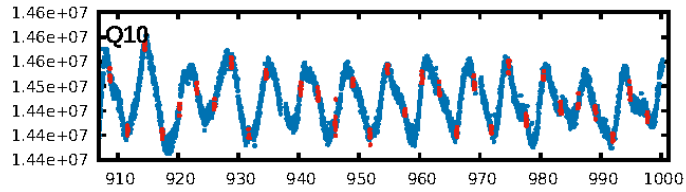
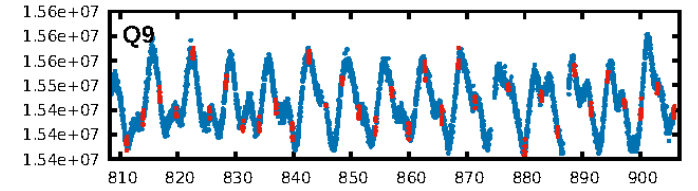
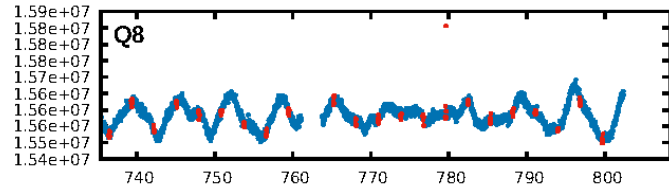
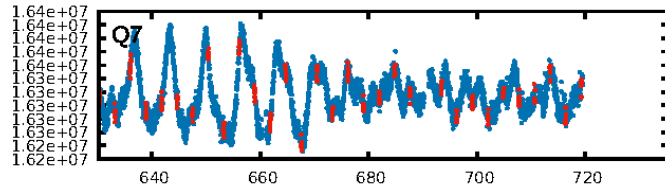
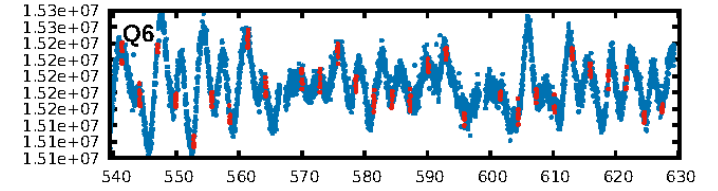
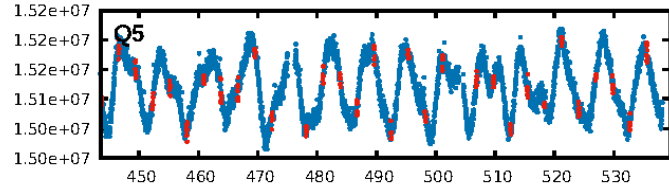
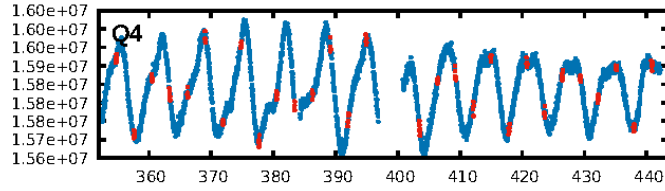
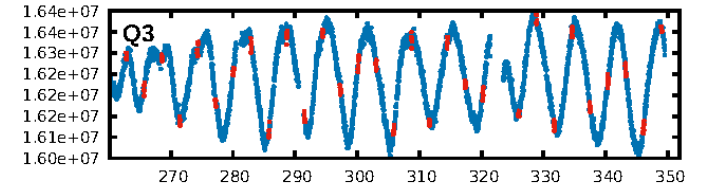
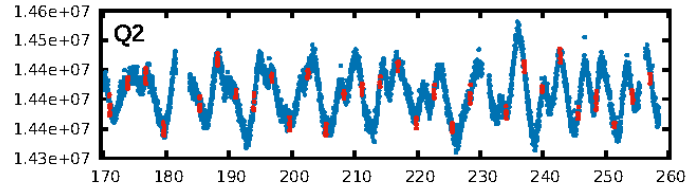
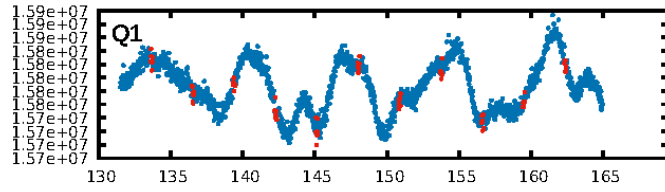
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.26e-130
RollingBand-fgt: 1.00 [439/439]
GhostDiagnostic-chr: 0.477
Centroid-sig: 0.0%
Centroid-so: 4.075 arcsec [9.06σ]
OotOffset-rm: 4.163 arcsec [27.97σ]
KicOffset-rm: 4.189 arcsec [33.41σ]
OotOffset-st: 2/4/4/5 [15]
KicOffset-st: 2/4/4/5 [15]
DiffImageQuality-fgm: 1.00 [15/15]
DiffImageOverlap-fno: 1.00 [17/17]

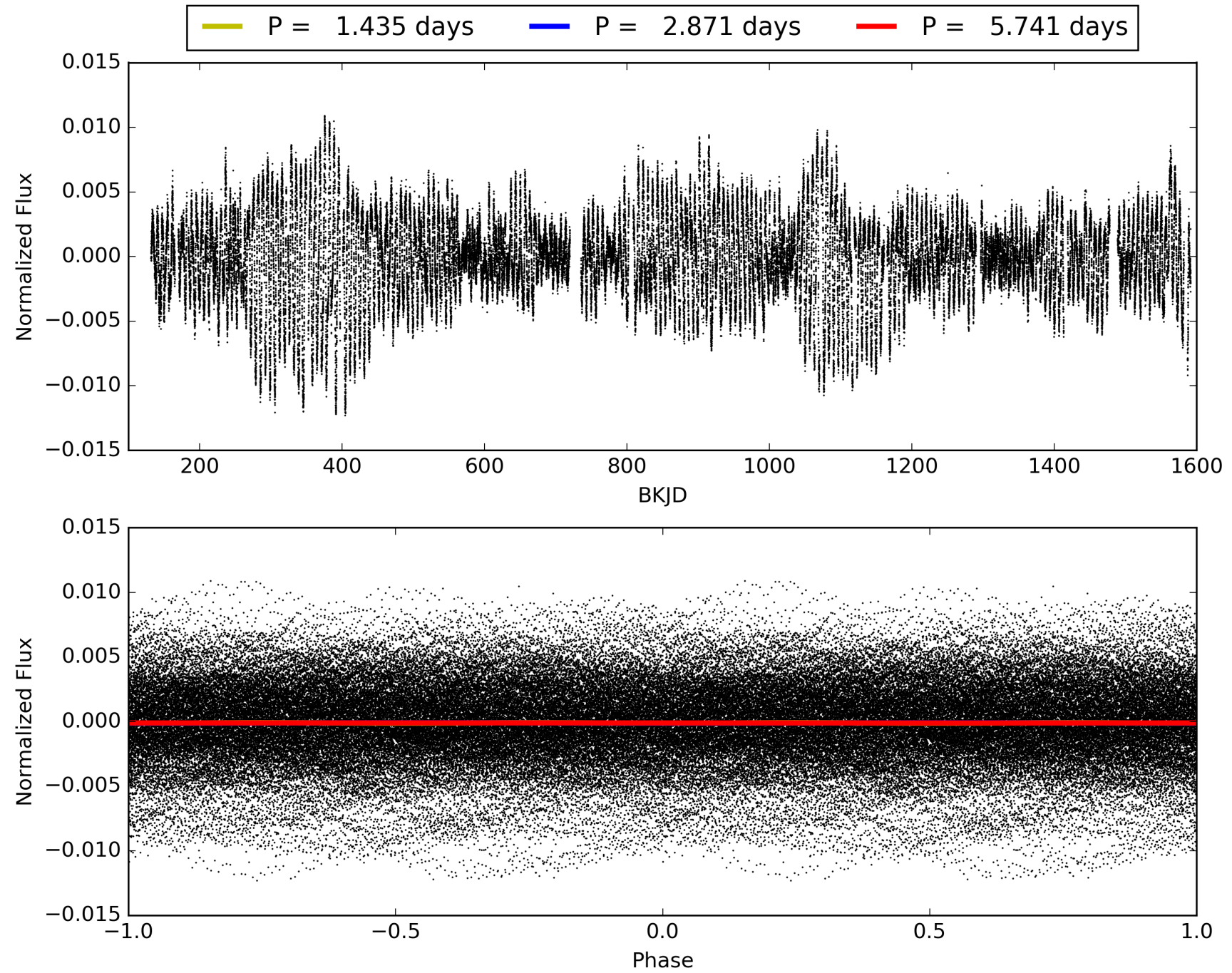
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:13:32 Z

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

TCE 006373680-01, PDC Light Curves

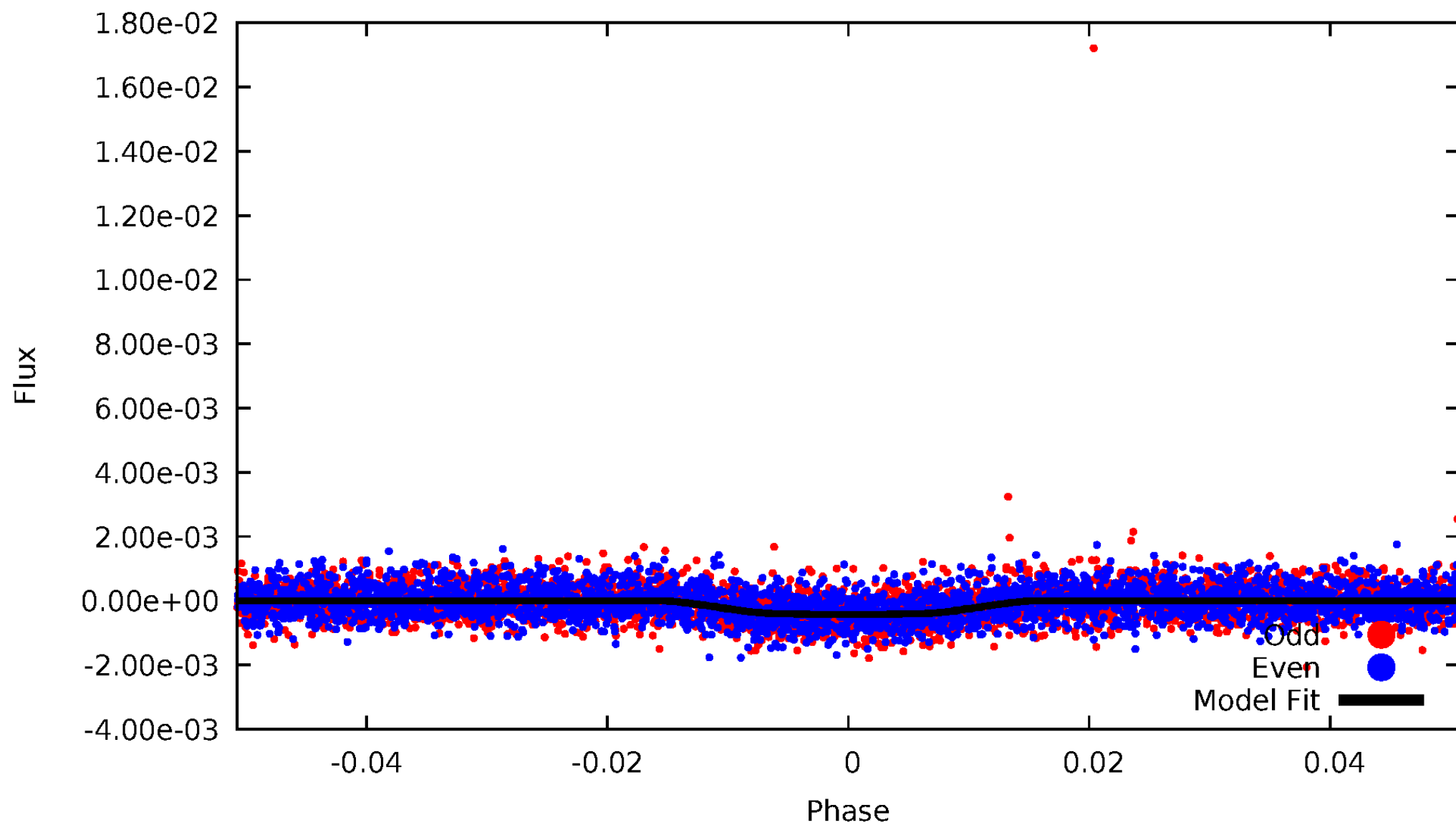


TCE 006373680-01



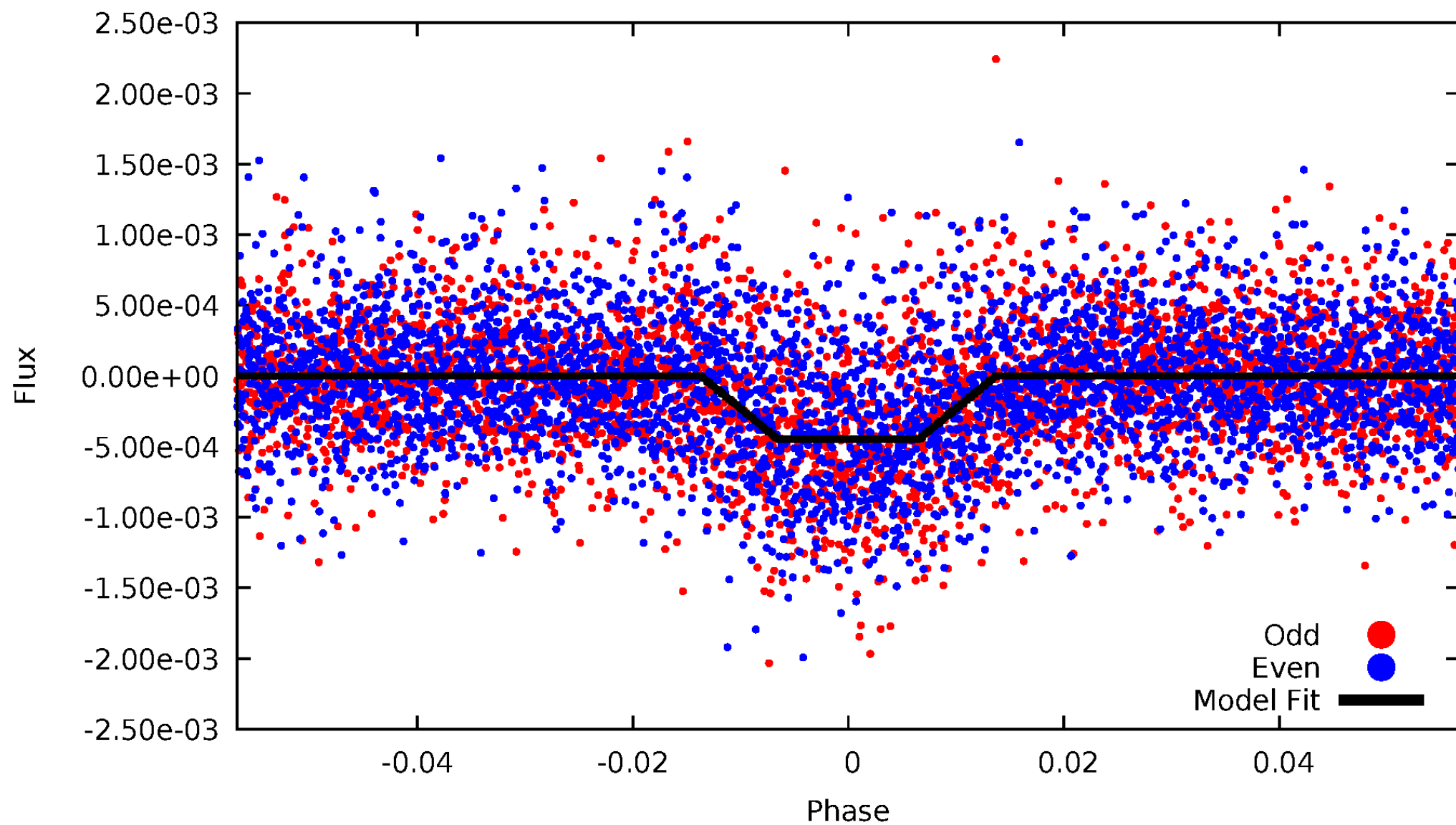
DV Odd/Even

TCE 006373680-01



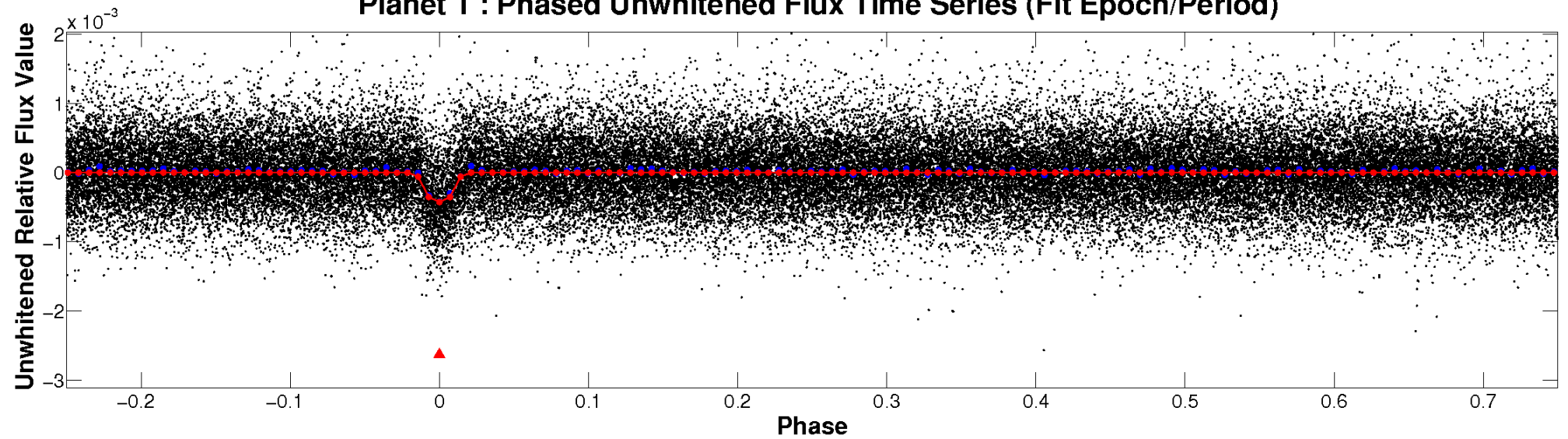
ALT Odd/Even

TCE 006373680-01

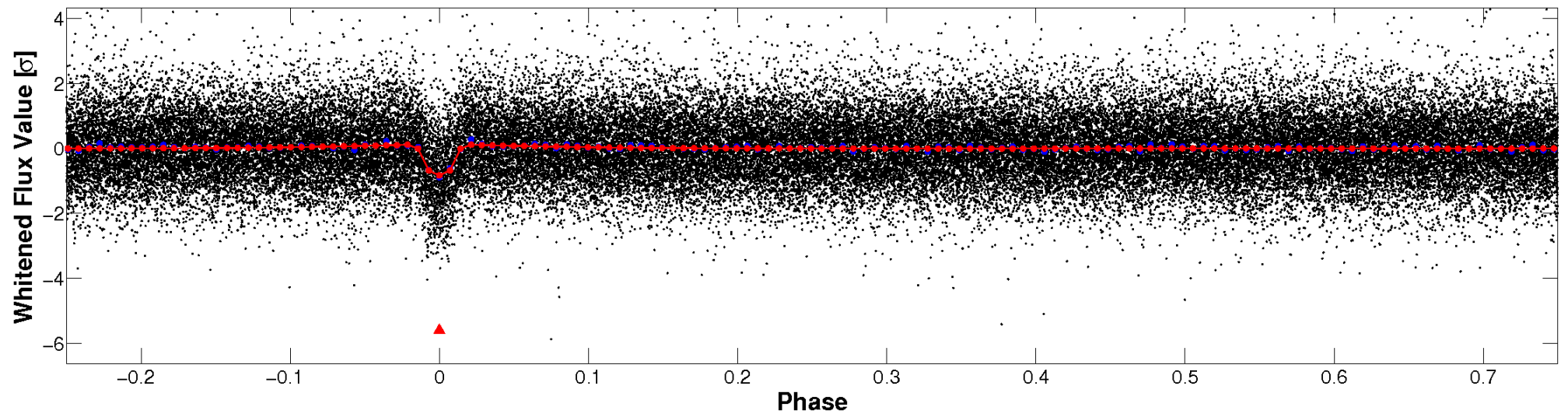


Non-Whitened Vs. Whitened Light Curve

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

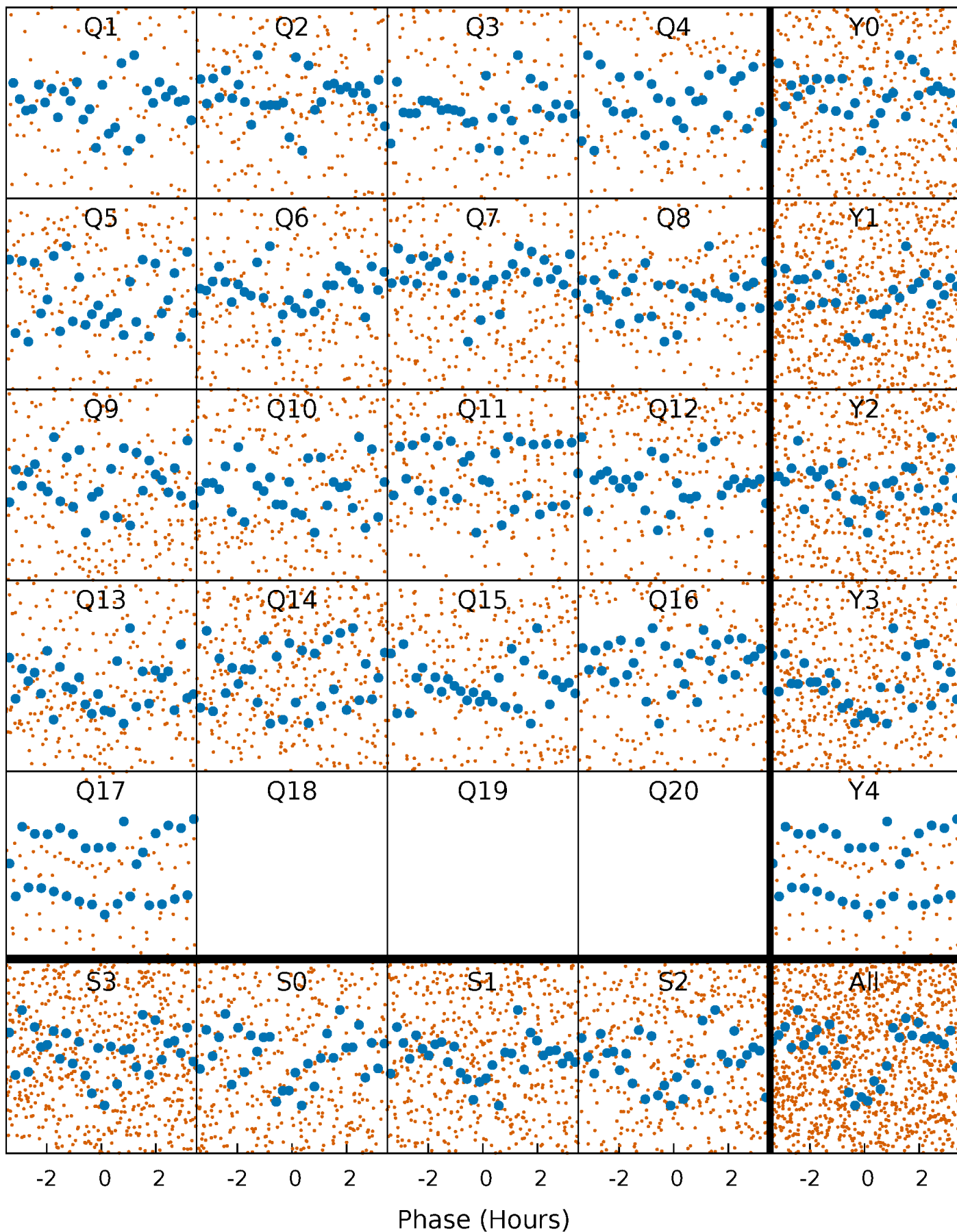


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



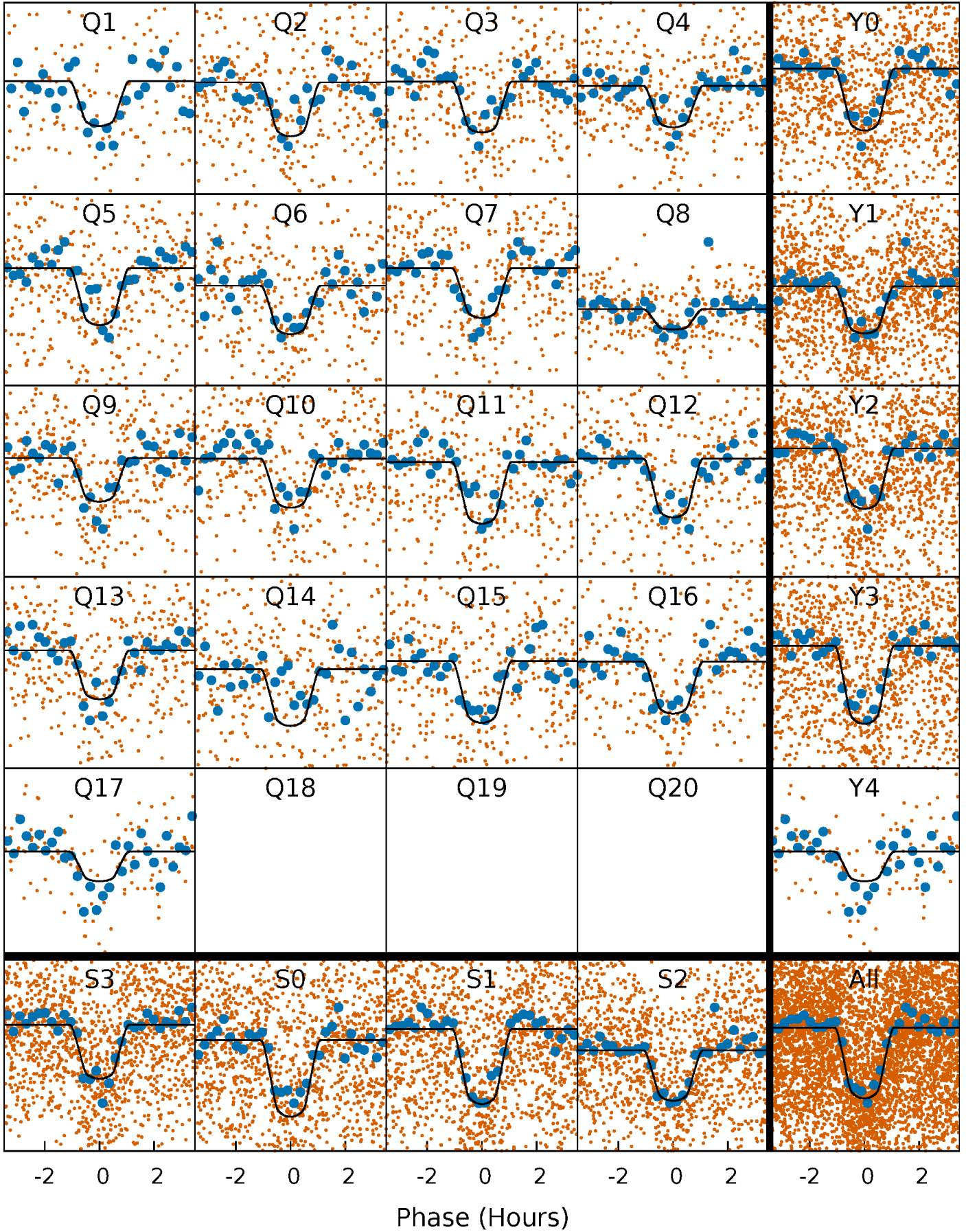
PDC Quarter-Phased Transit Curves

TCE 006373680-01 P= 2.870662 Days $T_0=133.664562$ (BKJD)



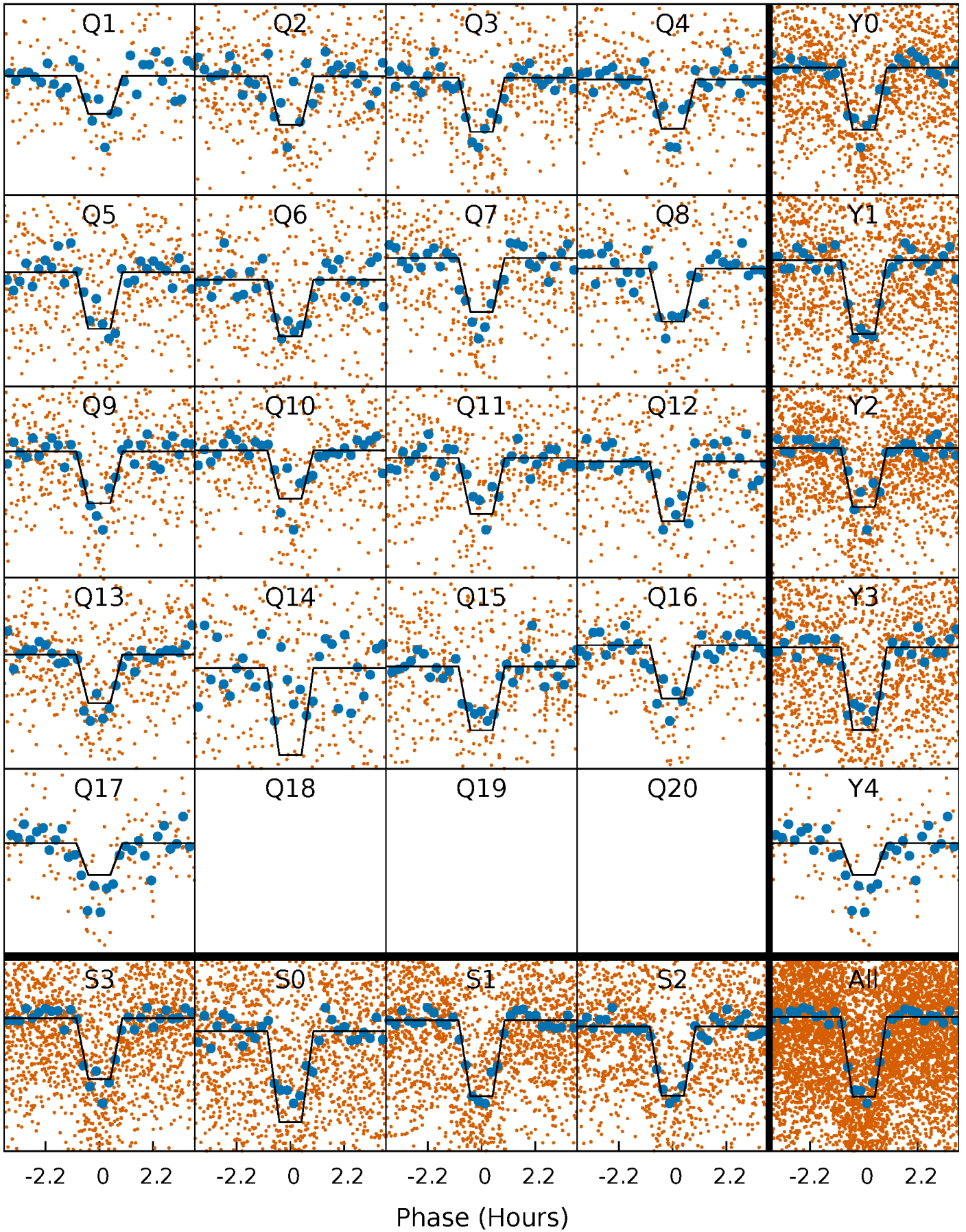
DV Quarter-Phased Transit Curves

TCE 006373680-01 P= 2.870662 Days $T_0=133.664562$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

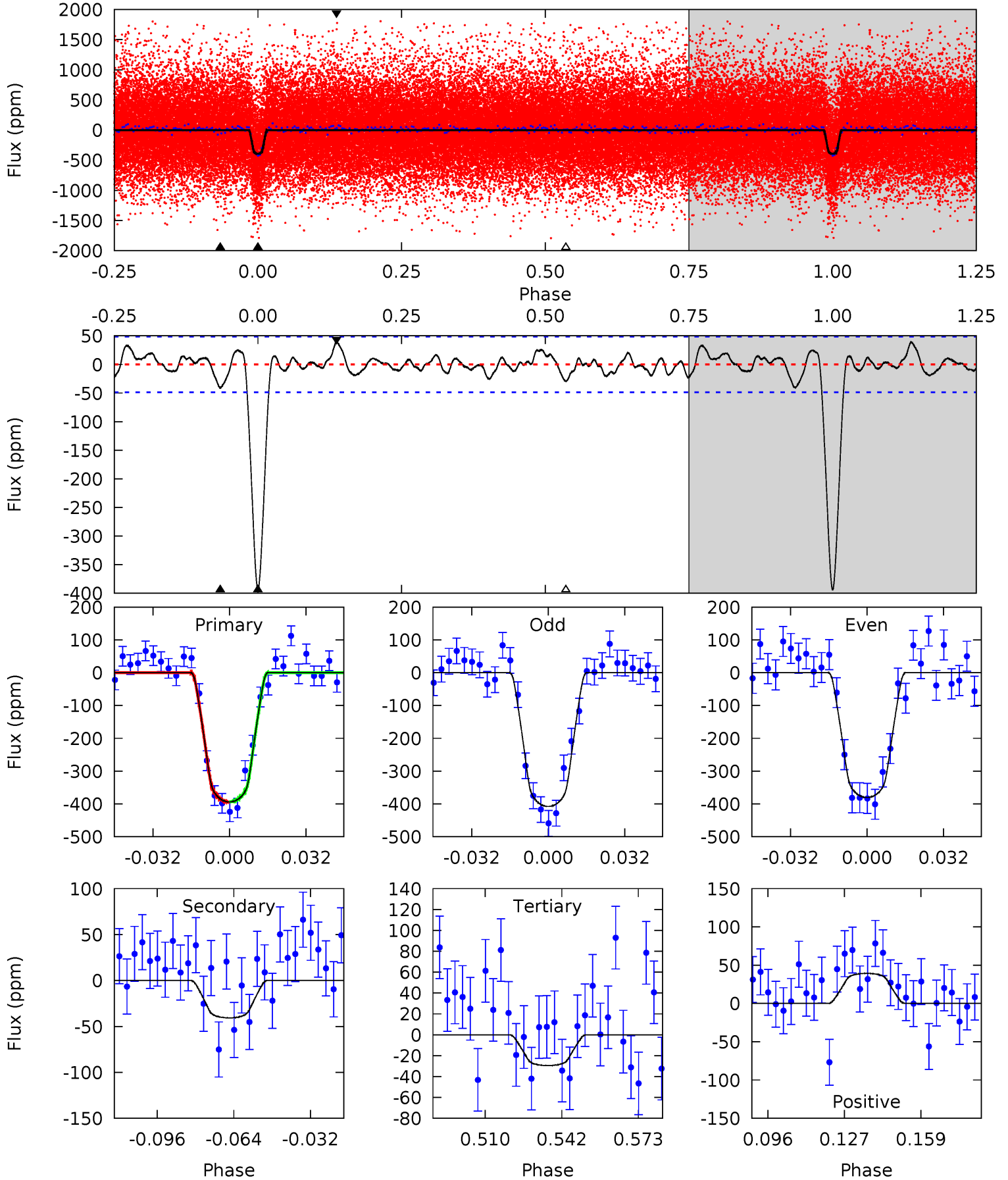
TCE 006373680-01 P= 2.870662 Days $T_0=133.663629$ (BKJD)



DV Model-Shift Uniqueness Test

006373680-01, P = 2.870662 Days, E = 130.793900 Days

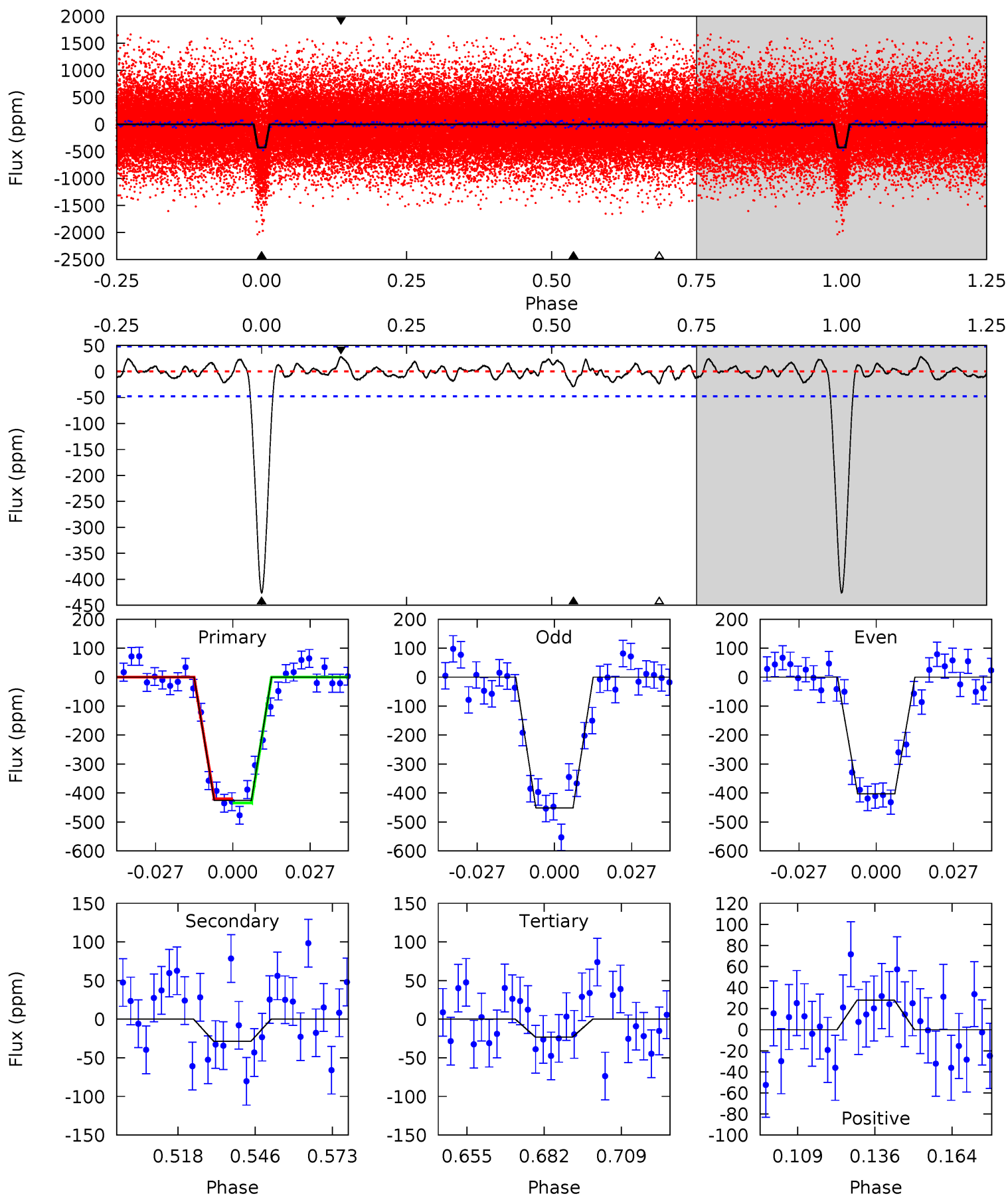
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
39.0	4.03	2.92	3.89	4.80	2.15	1.22	36.1	35.1	1.11	0.14	1.36	0.99	0.09	0.03



Alt Model-Shift Uniqueness Test

006373680-01, P = 2.870662 Days, E = 130.792967 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
42.9	2.89	2.33	2.84	4.83	2.21	1.03	40.6	40.1	0.56	0.05	2.44	1.03	0.06	0.73



Stellar Parameters For KIC 006373680

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5910^{+159}_{-177}	$4.578^{+0.044}_{-0.187}$	$-0.520^{+0.300}_{-0.300}$	$0.796^{+0.206}_{-0.069}$	$0.875^{+0.088}_{-0.096}$	$2.444^{+0.439}_{-1.179}$
	+3%/-3%	+1%/-4%	+58%/-58%	+26%/-9%	+10%/-11%	+18%/-48%
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 006373680-01 / KOI 2127.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-41 ± 10	$2.02^{+0.44}_{-0.39}$	1705^{+108}_{-80}	3575^{+311}_{-240}	$7.612^{+4.844}_{-2.826}$
Alt.	-29 ± 10	$1.94^{+0.41}_{-0.37}$	1706^{+114}_{-75}	3432^{+292}_{-305}	$5.823^{+4.062}_{-2.563}$

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

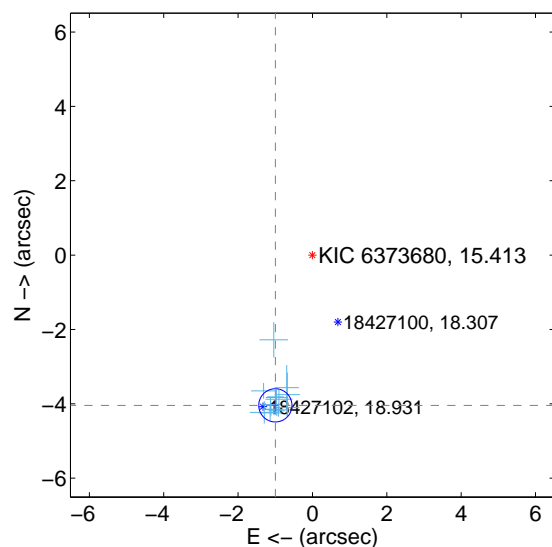
Supplemental centroid analysis for 006373680-01. Kepler magnitude: 15.41. Transit SNR 27.47

There are 15 quarters with good PRF difference image offsets

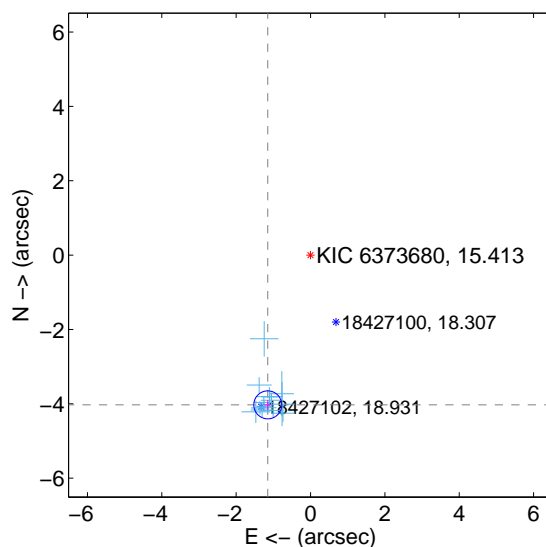
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.163 ± 0.149	27.97	0.997 ± 0.082	-4.042 ± 0.151
PRF-fit source offset from KIC position	4.189 ± 0.125	33.41	1.150 ± 0.090	-4.028 ± 0.130
photometric centroid source offset	4.07 ± 0.45	9.06	1.53 ± 0.43	-3.78 ± 0.45

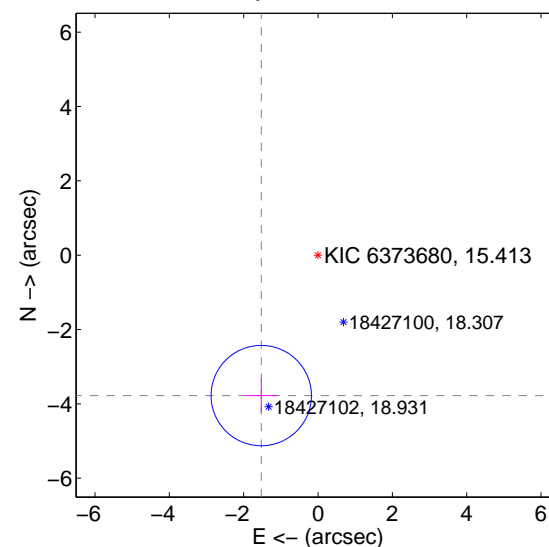
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

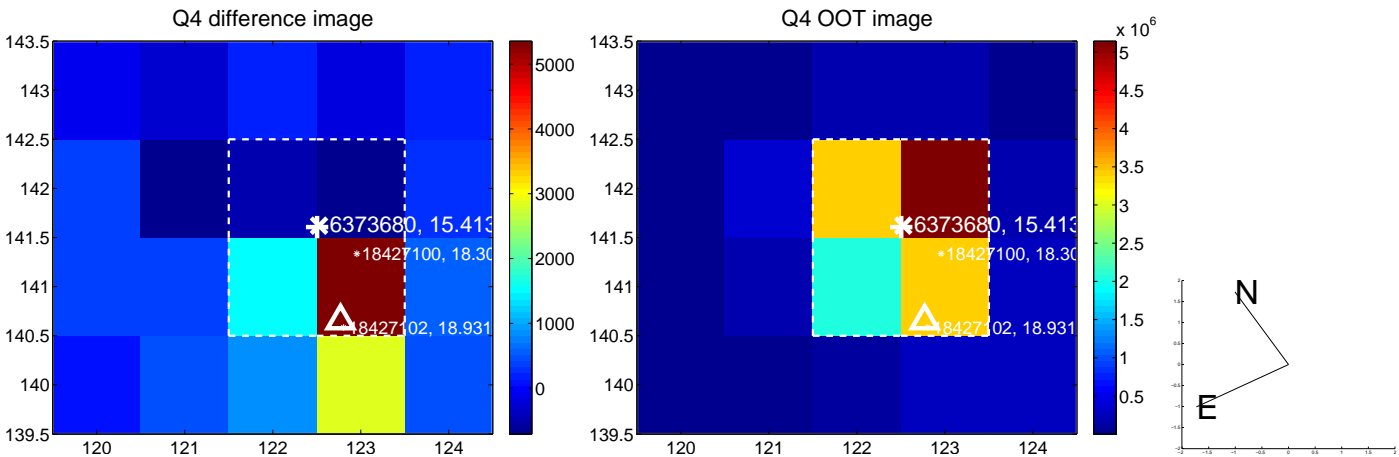
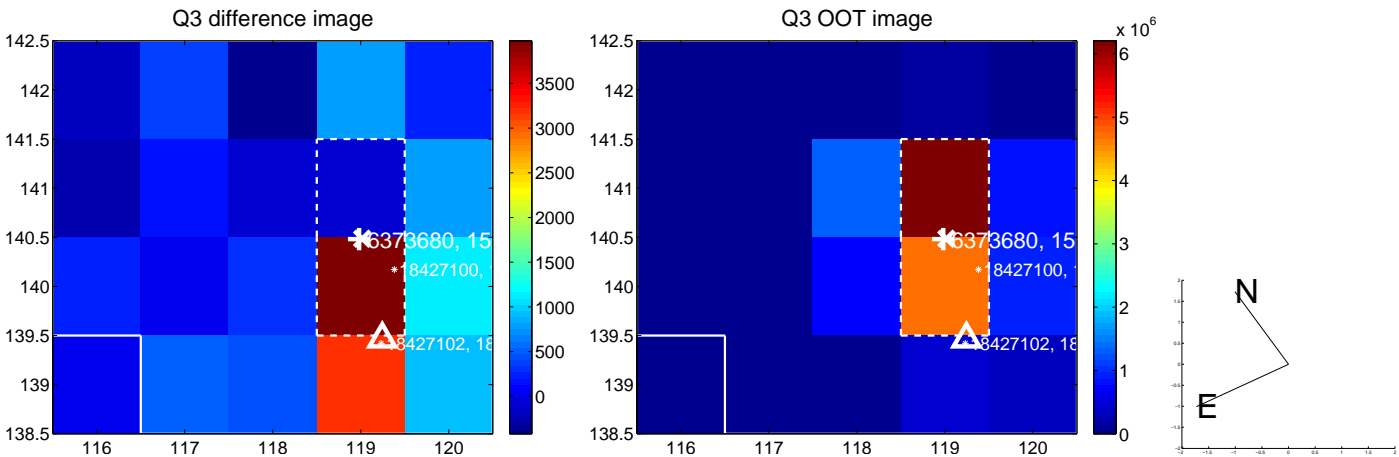
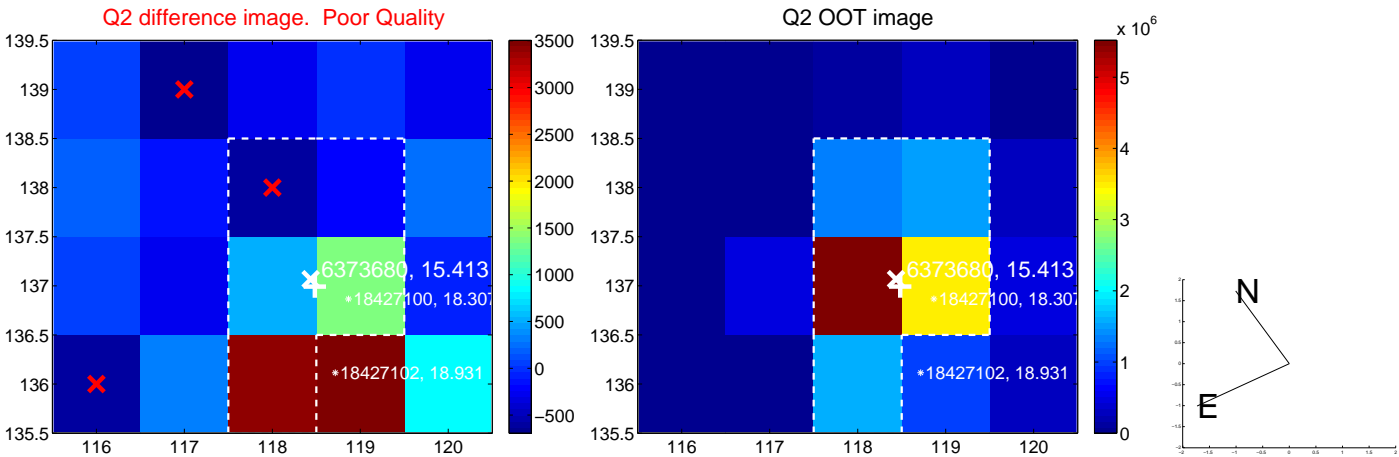
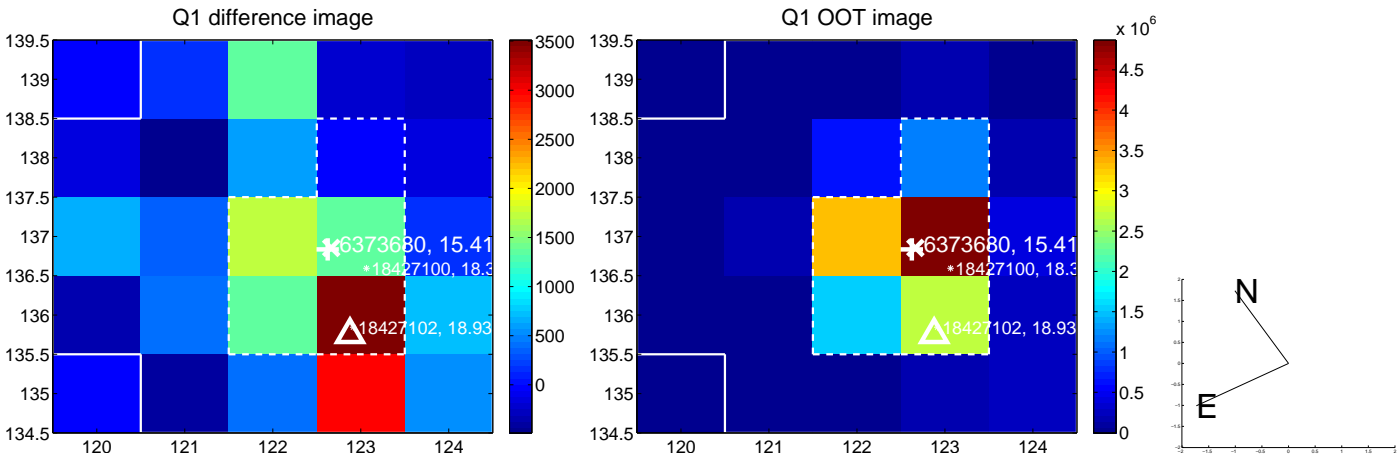


offset from photometric centroids

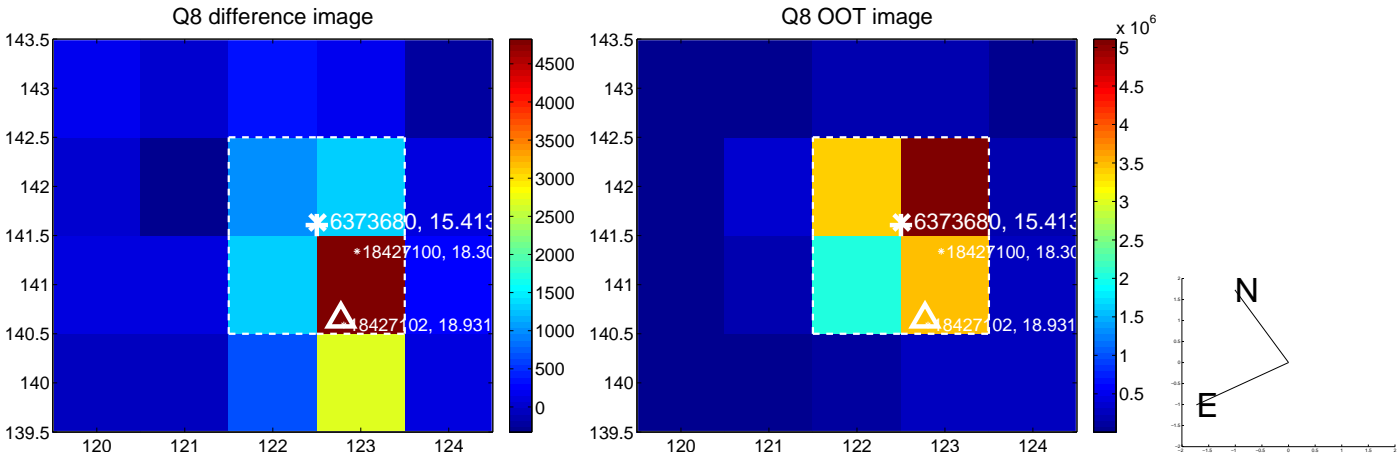
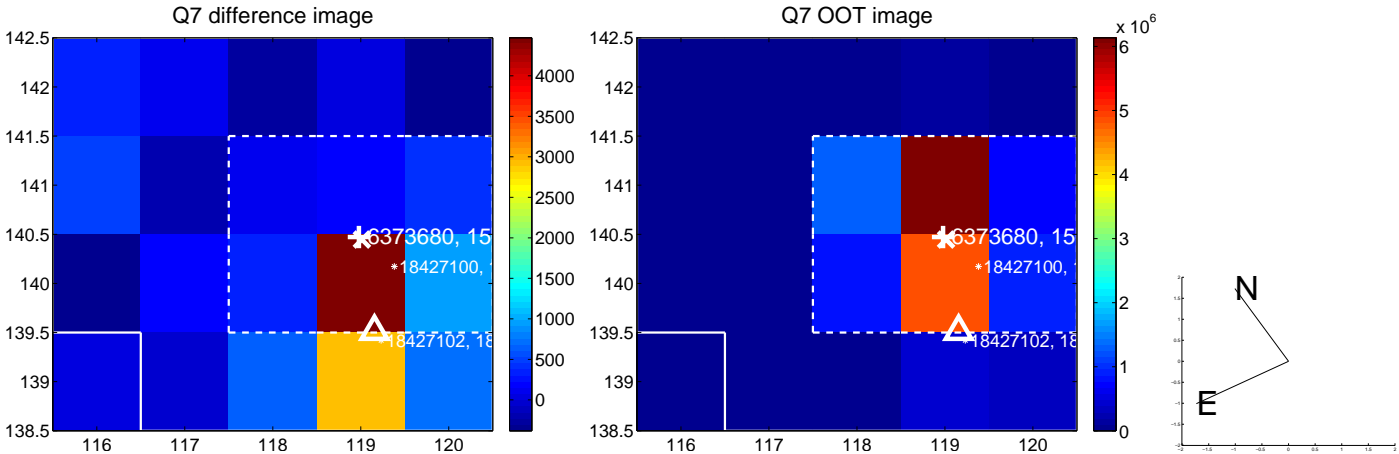
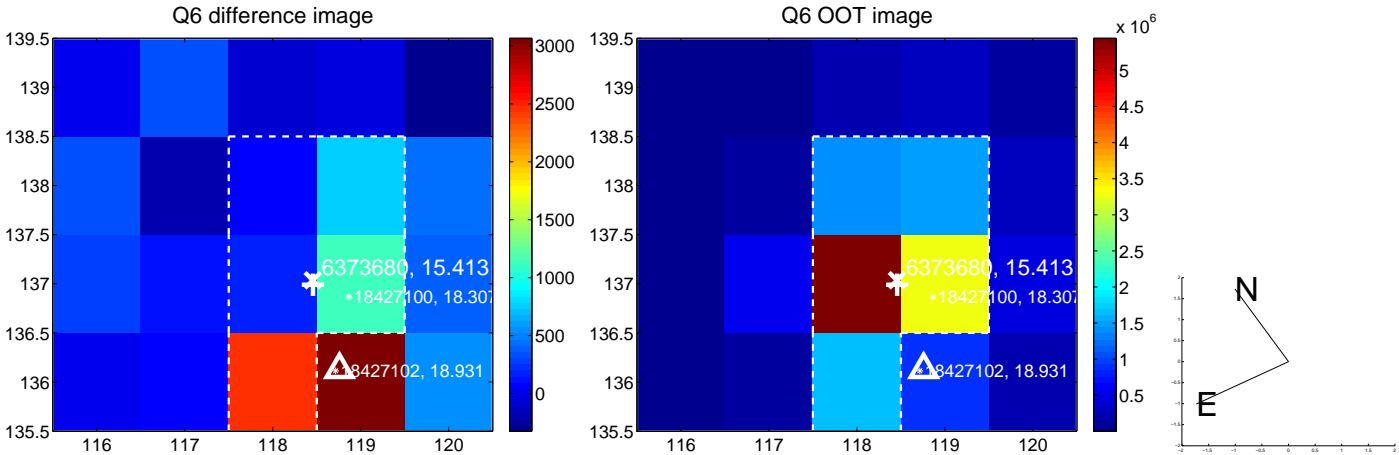
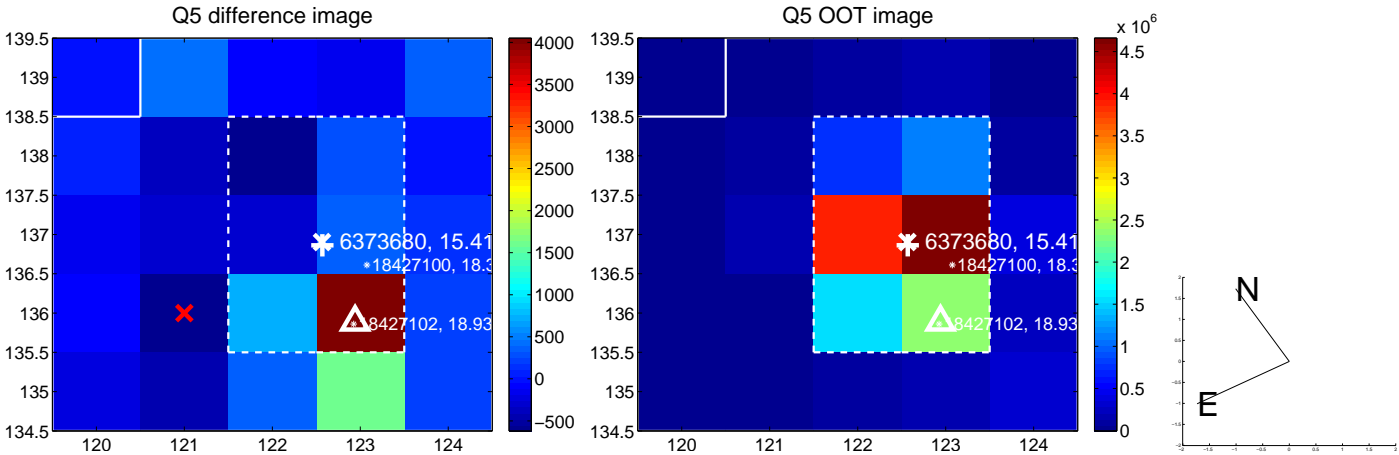


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

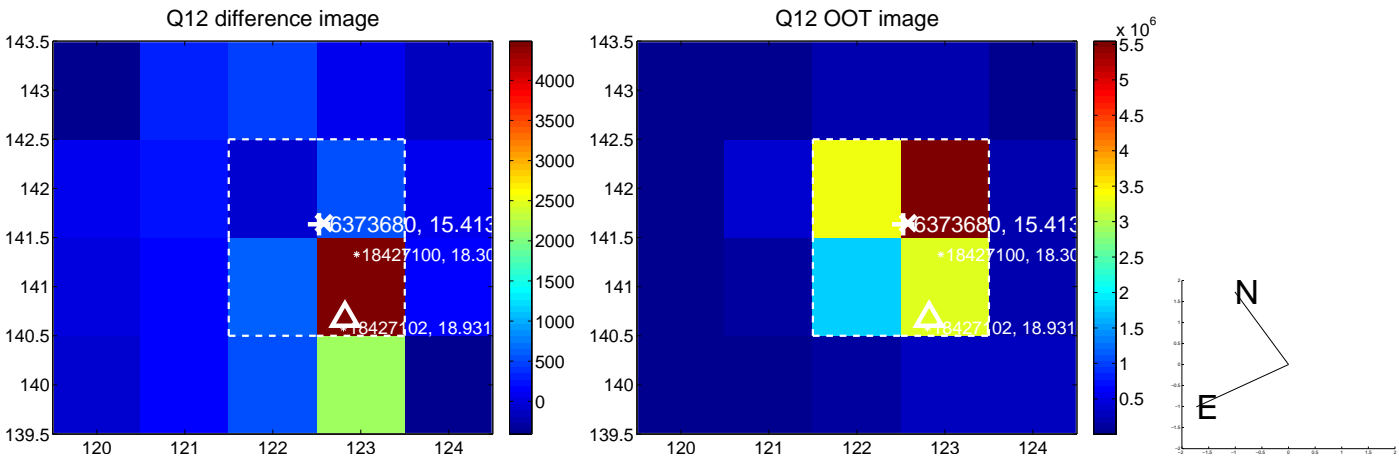
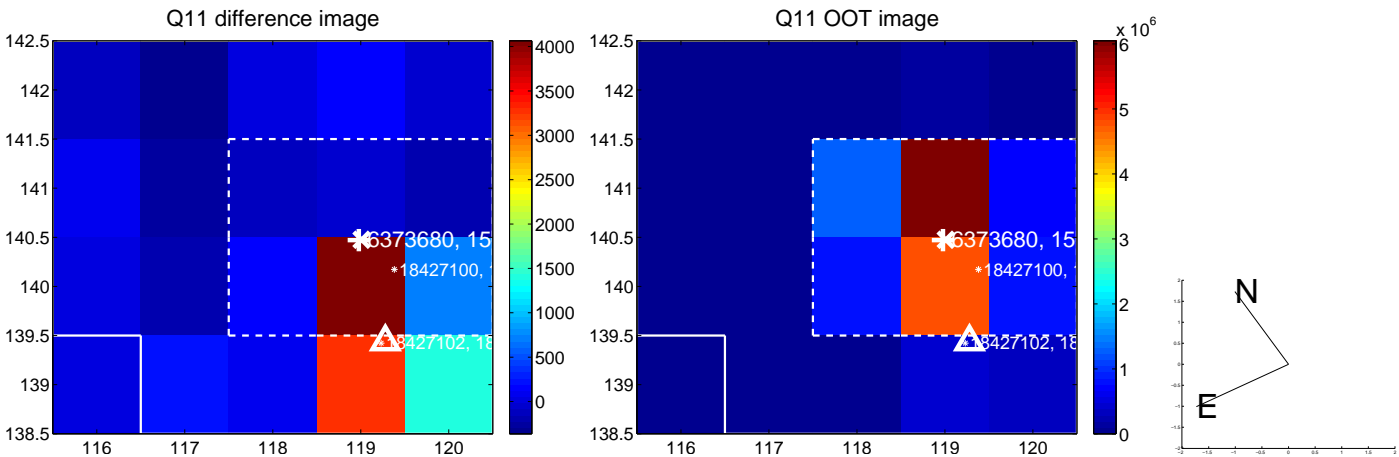
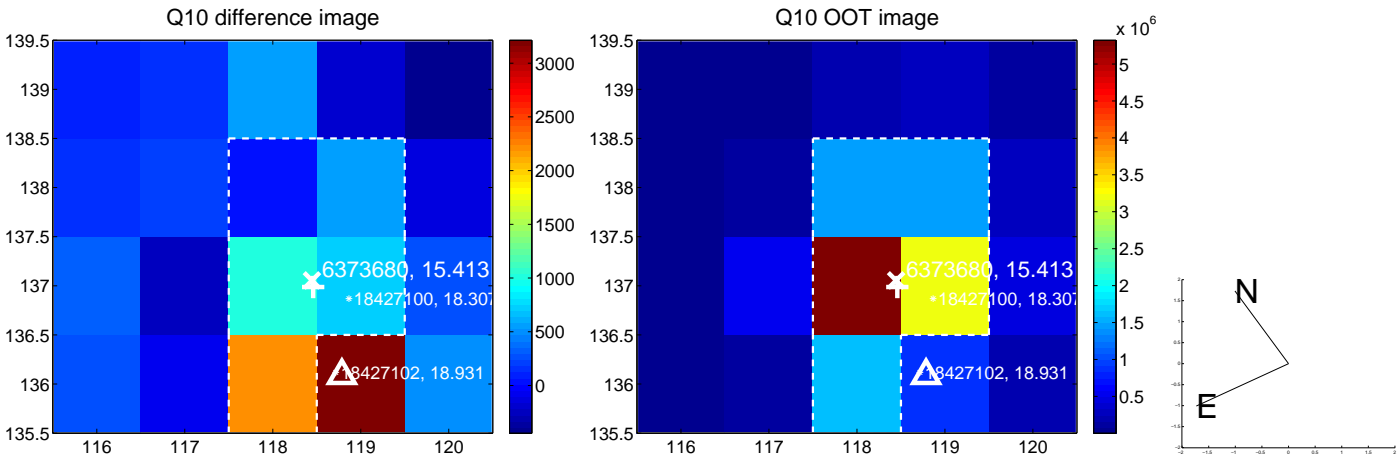
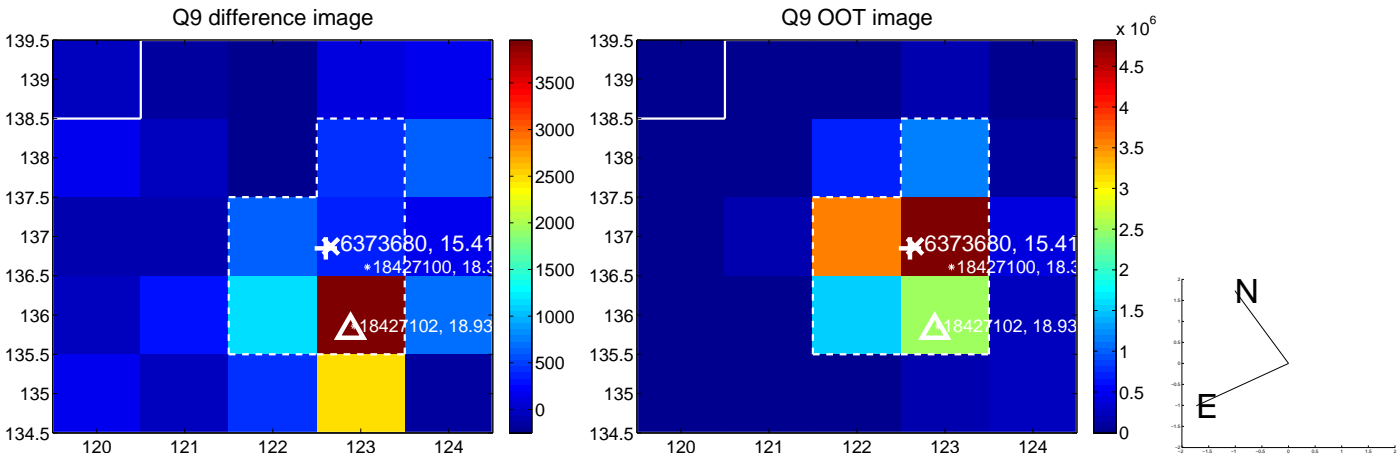
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



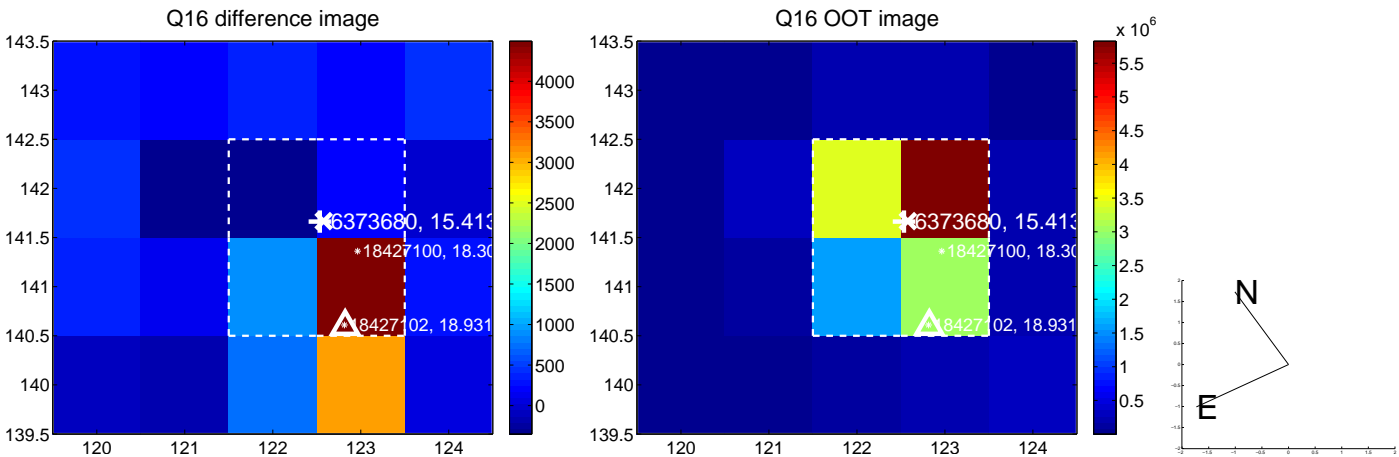
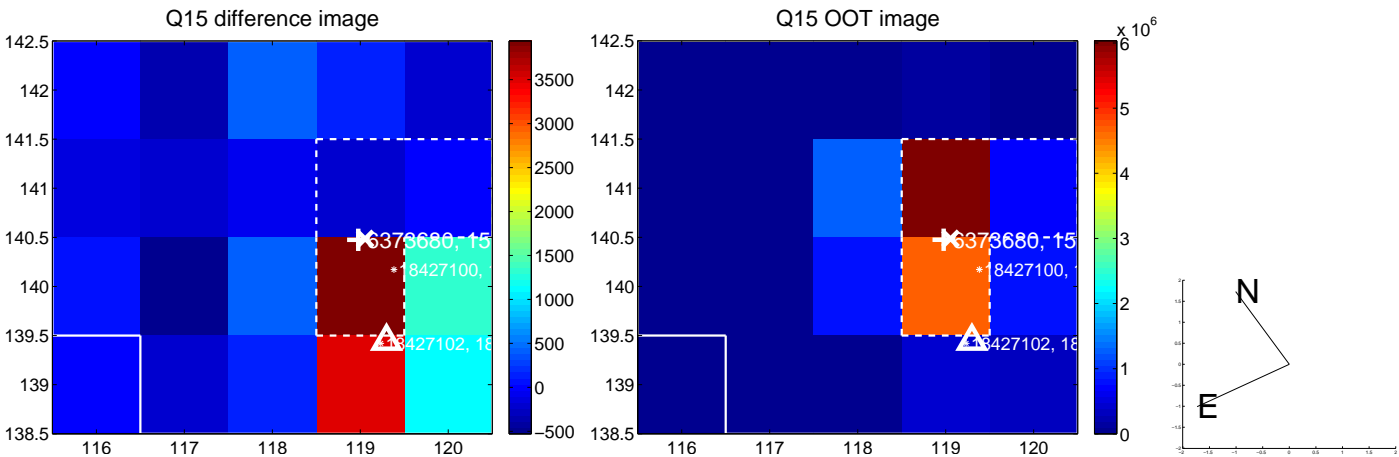
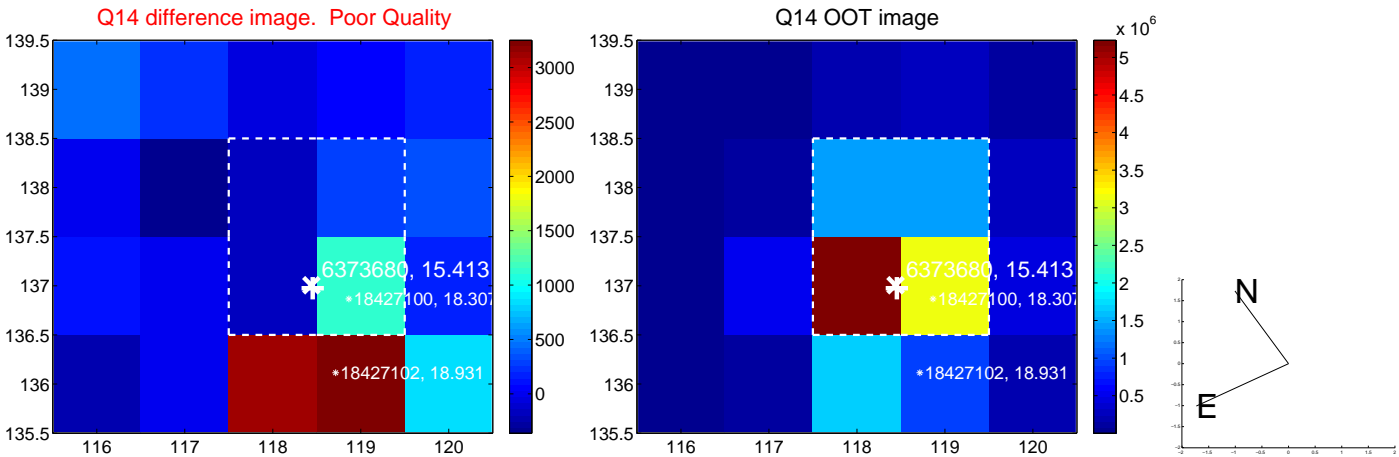
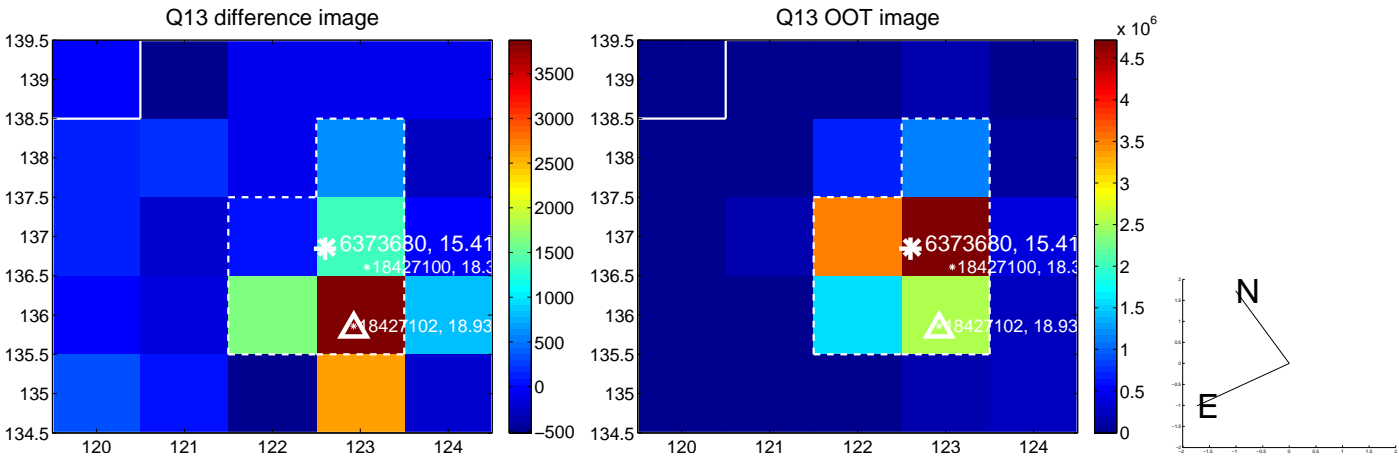
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



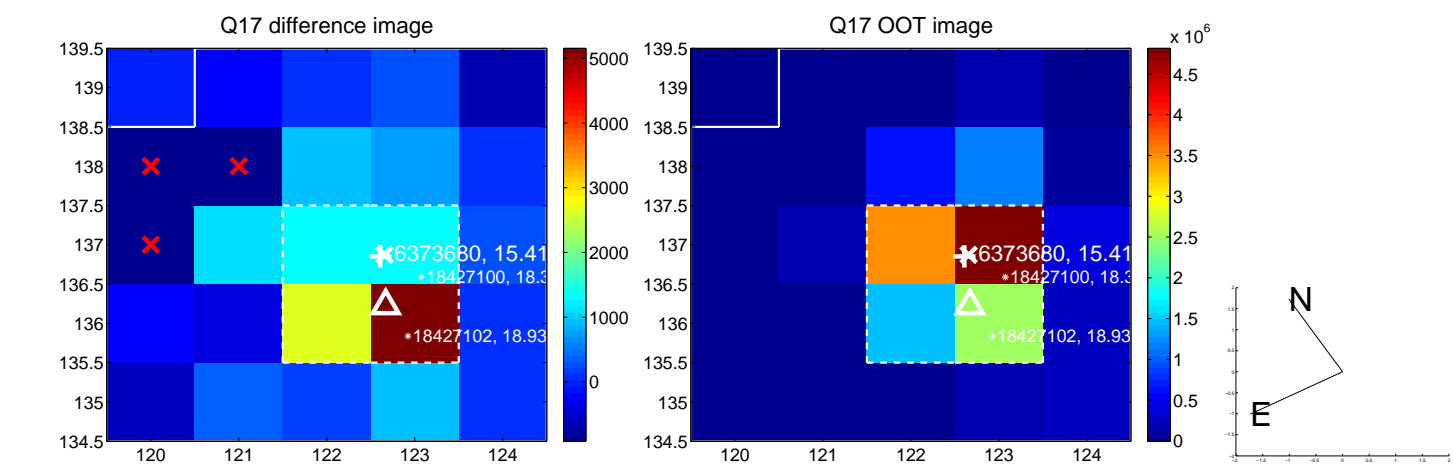
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



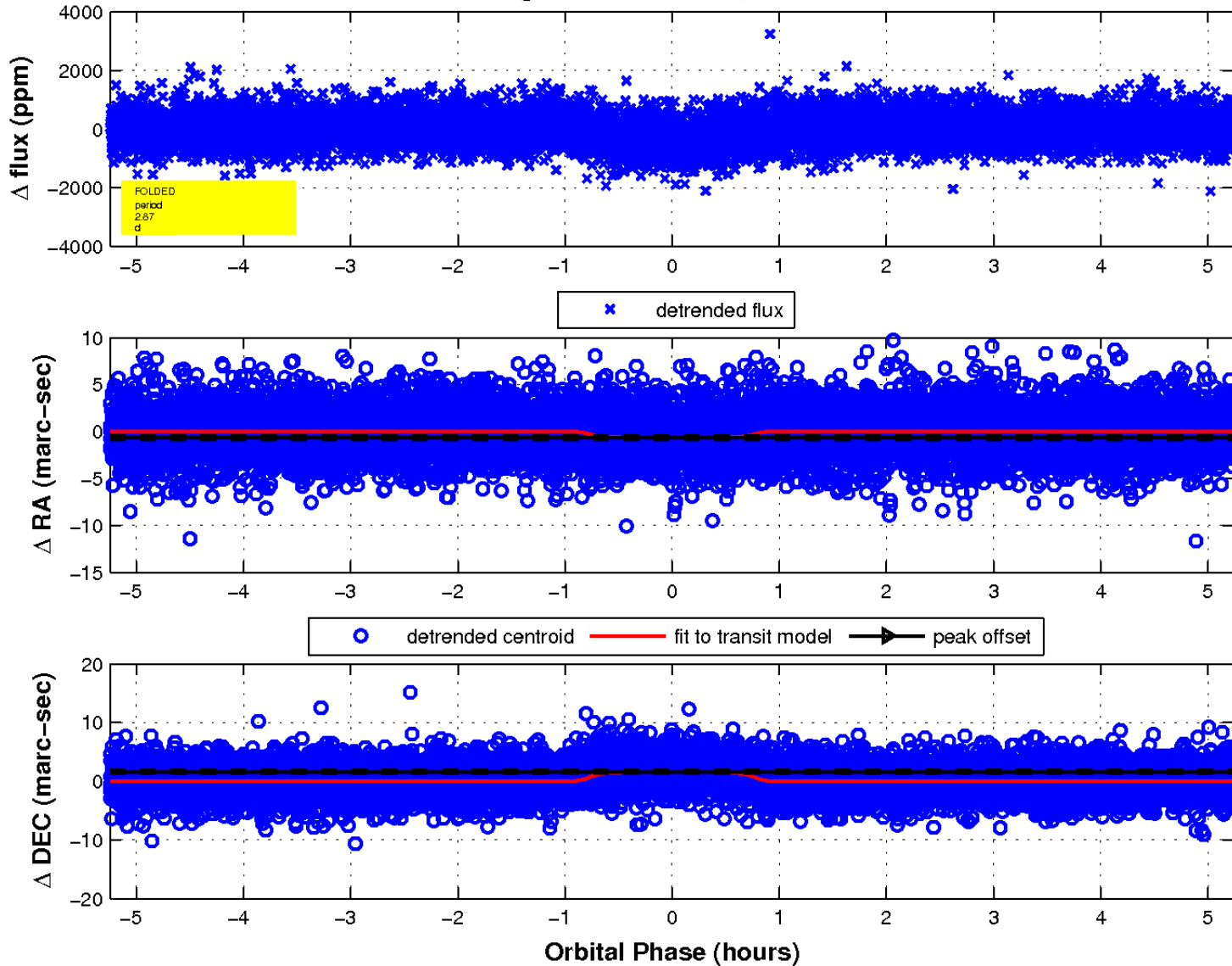
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

