

KIC 006231721

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})
006231721-01	OBS	7773.01	2.693371	131.907079	126.1	2.085	7.4	7.7	0.86	5355	1.17	415.79

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006231721-01	OBS	PC	0.95	0	0	0	0	NO_COMMENT

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

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

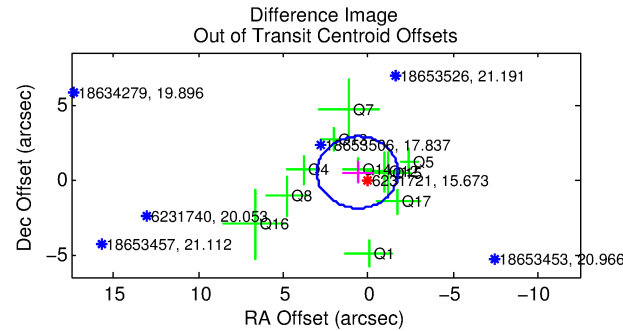
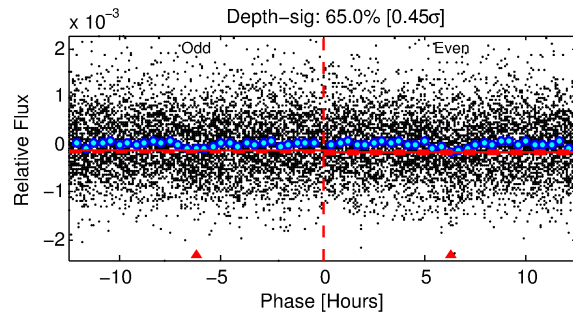
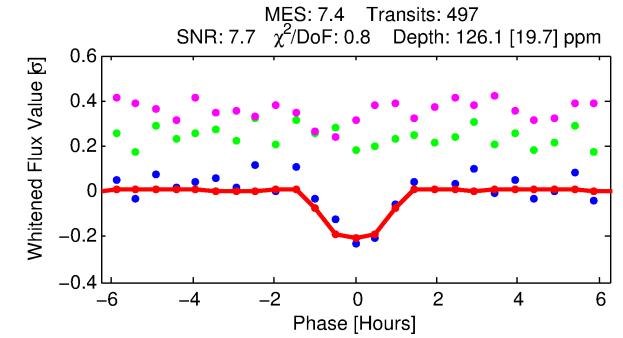
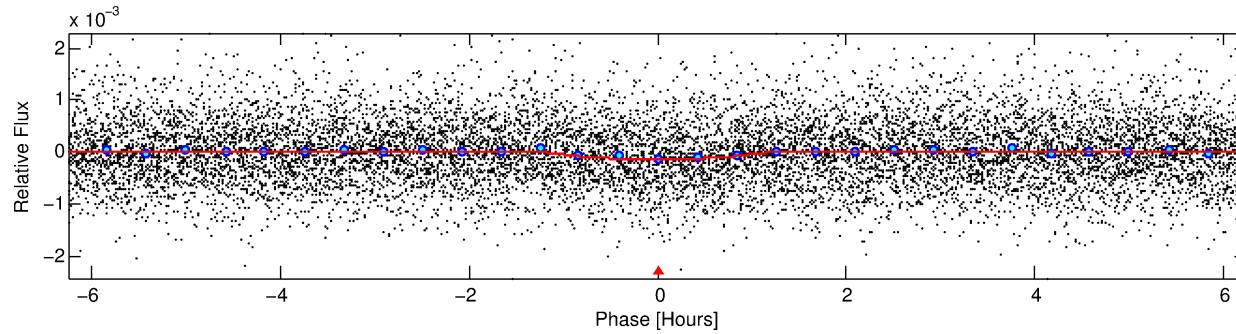
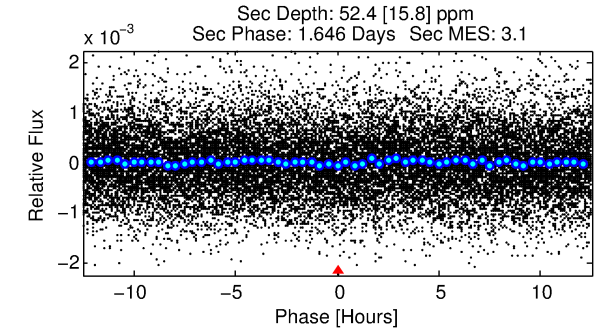
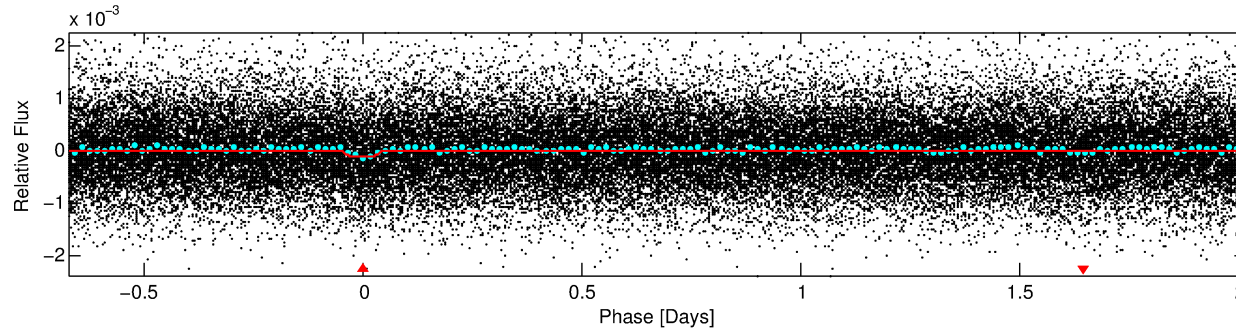
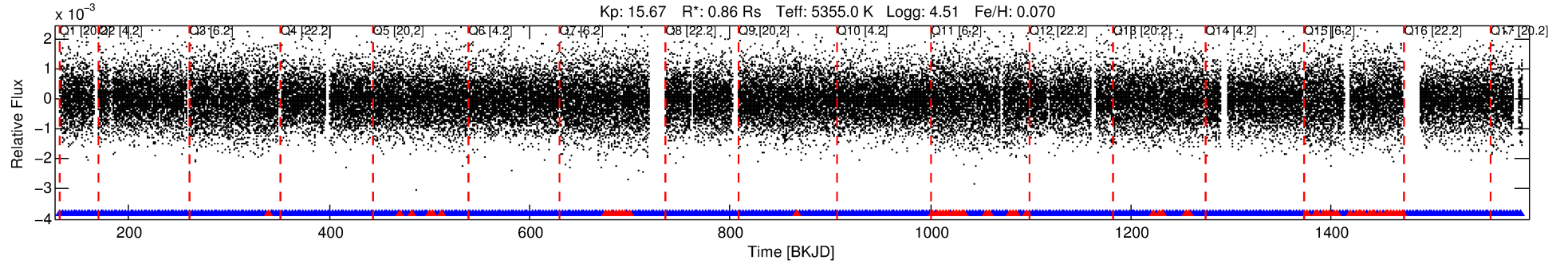
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006231721-01

No Significant Match Found

DV One-Page Summary

KIC: 6231721 Candidate: 1 of 1 Period: 2.693 d



DV Fit Results:

Period = 2.69337 [0.00002] d
Epoch = 131.9071 [0.0046] BKJD
Rp/R* = 0.0124 [0.0131]
a/R* = 4.64 [20.22]
b = 0.90 [0.98]
Seff = 415.79 [113.14]
Teq = 1151 [78] K
Rp = 1.17 [1.26] Re
a = 0.0363 [0.0058] AU
Ag = 27.70 [59.43] [0.45σ]
Teff = 4084 [2181] K [1.34σ]

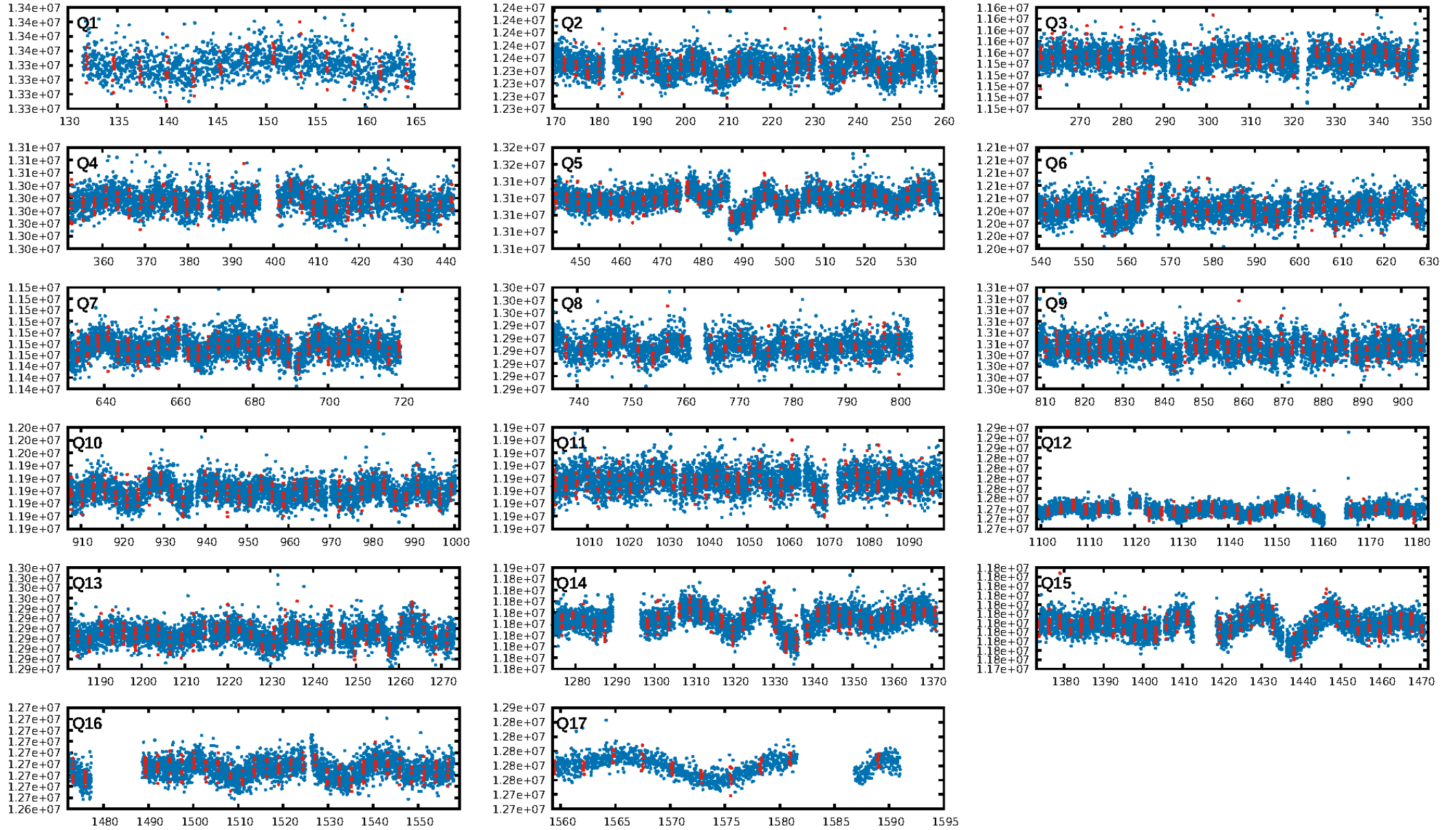
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 8.06e-14
RollingBand-fgt: 0.87 [413/474]
GhostDiagnostic-chr: 2.824
Centroid-sig: 48.3%
Centroid-so: 1.043 arcsec [0.52σ]
OotOffset-rm: 0.782 arcsec [0.98σ]
KicOffset-rm: 0.992 arcsec [1.22σ]
OotOffset-st: 1/2/4/4 [11]
KicOffset-st: 1/2/4/4 [11]
DiffImageQuality-fgm: 0.00 [0/11]
DiffImageOverlap-fno: 1.00 [17/17]

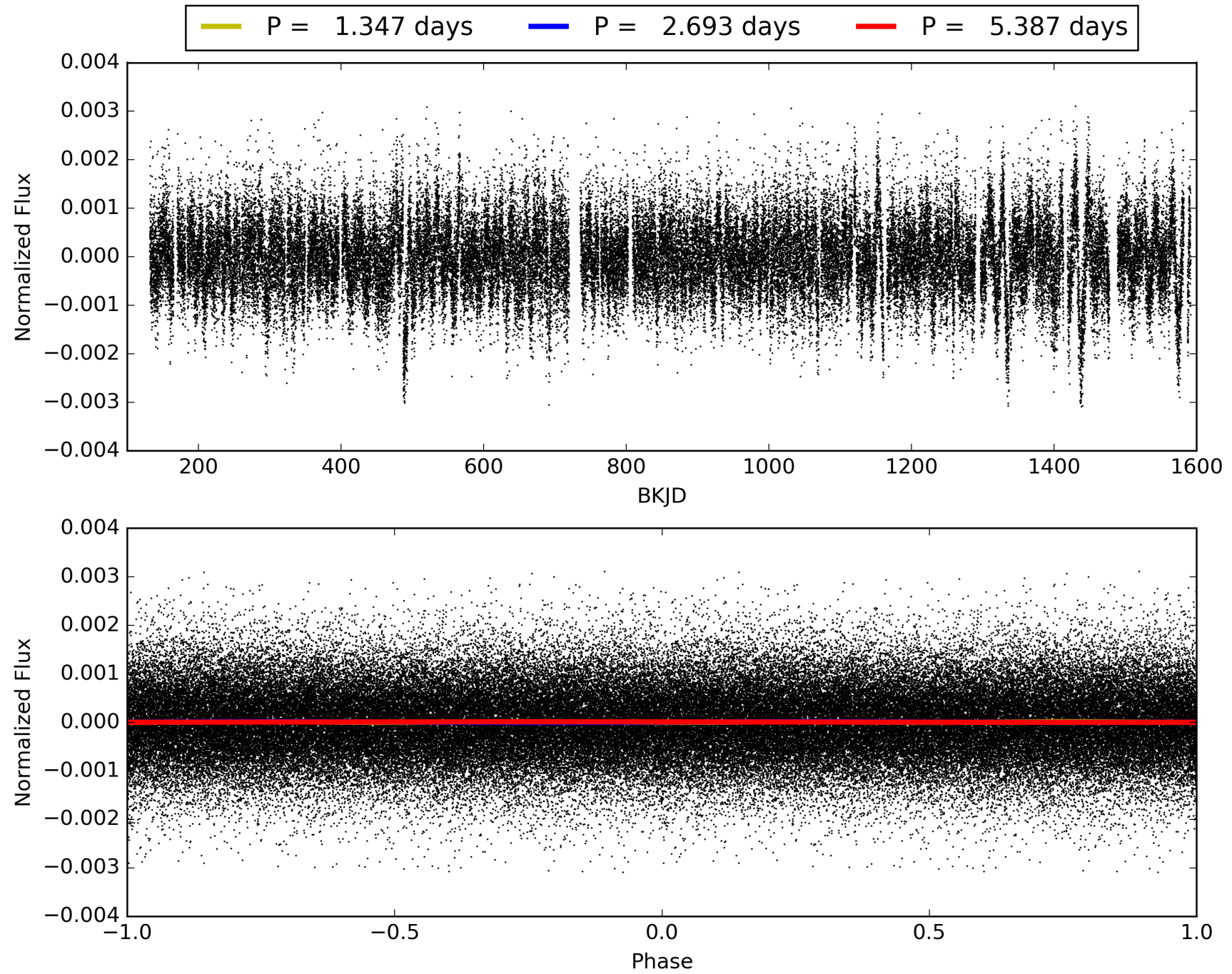
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 23:28:14 Z

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

TCE 006231721-01, PDC Light Curves

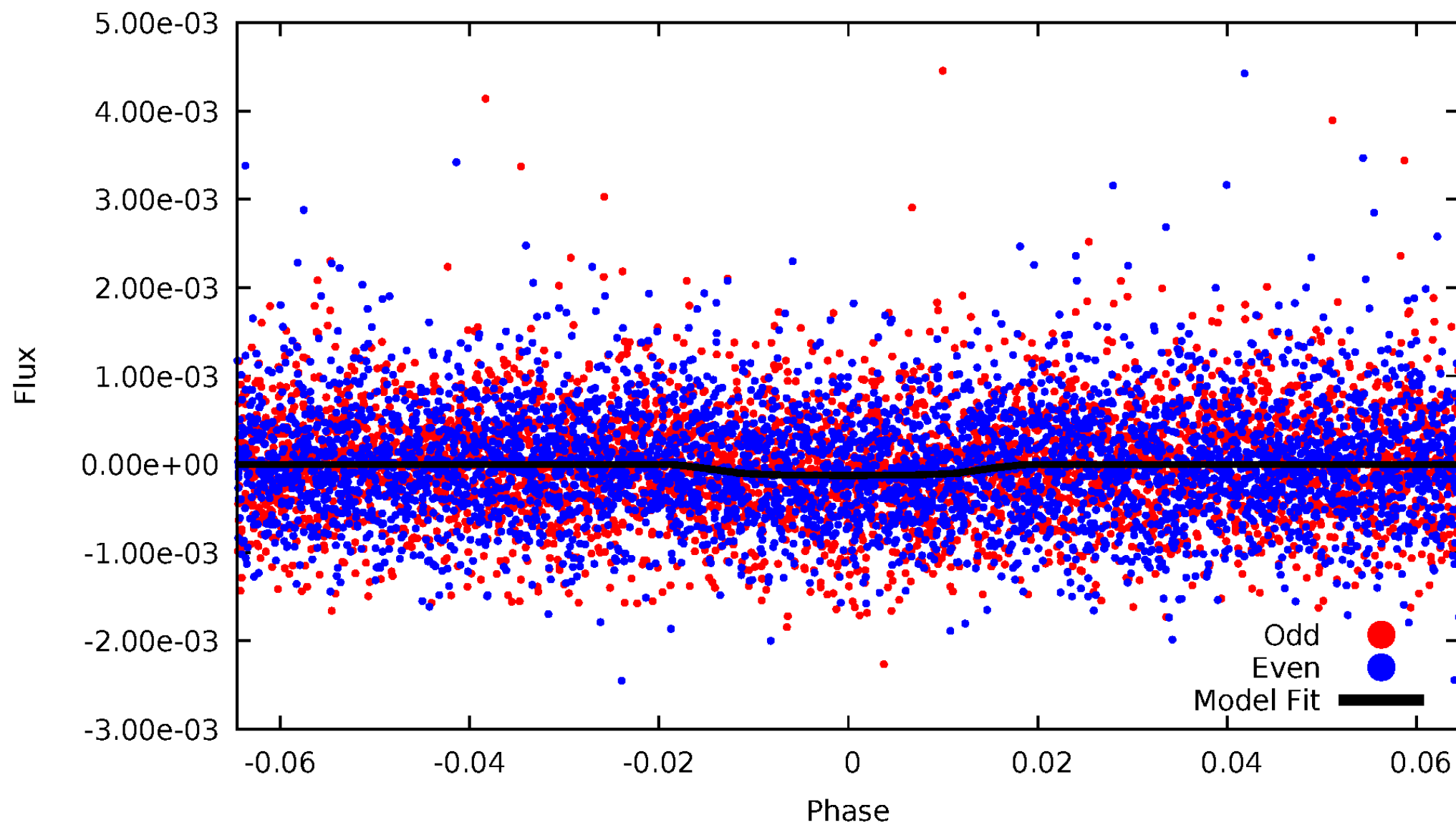


TCE 006231721-01



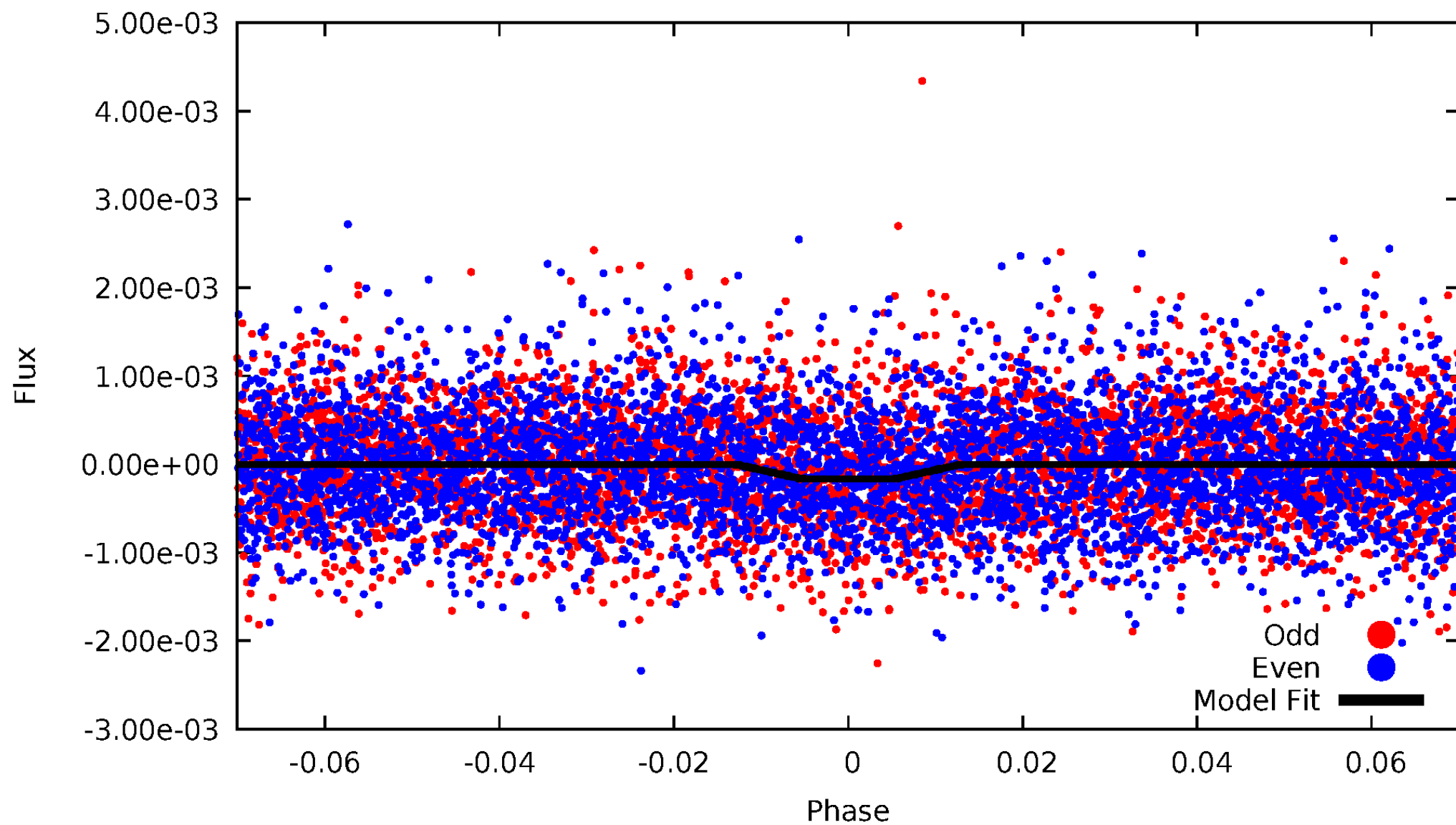
DV Odd/Even

TCE 006231721-01

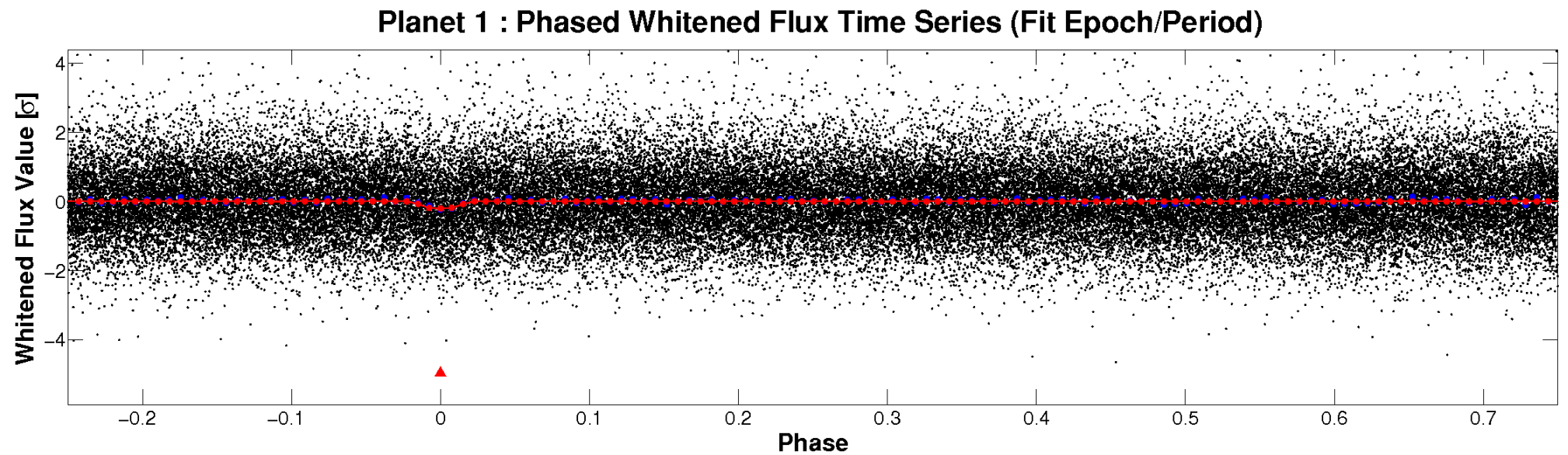
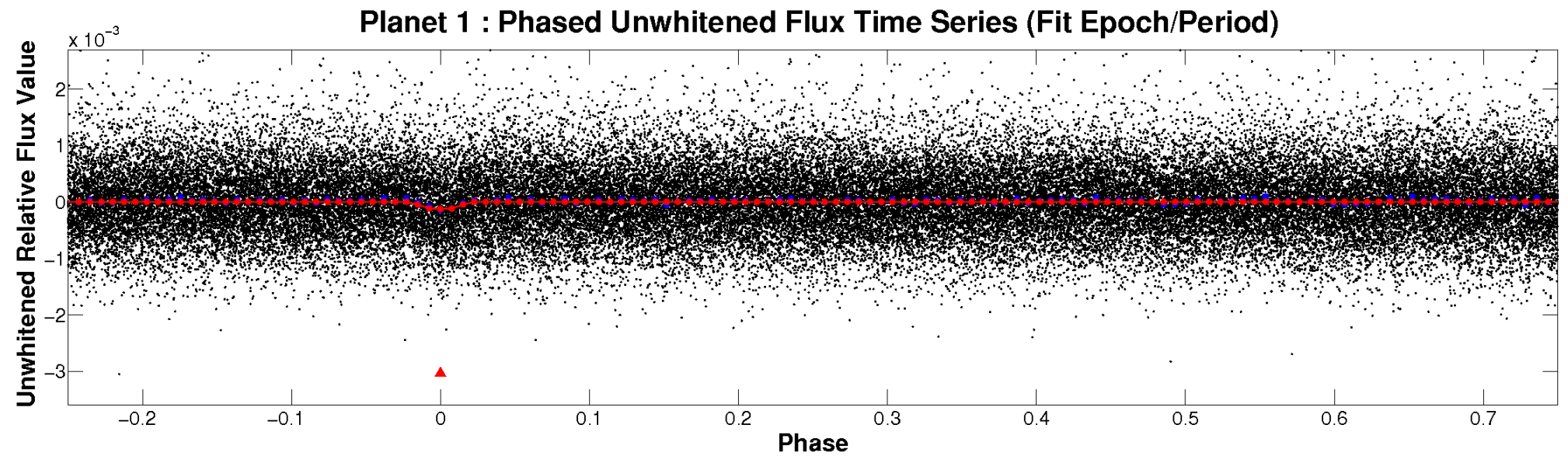


ALT Odd/Even

TCE 006231721-01

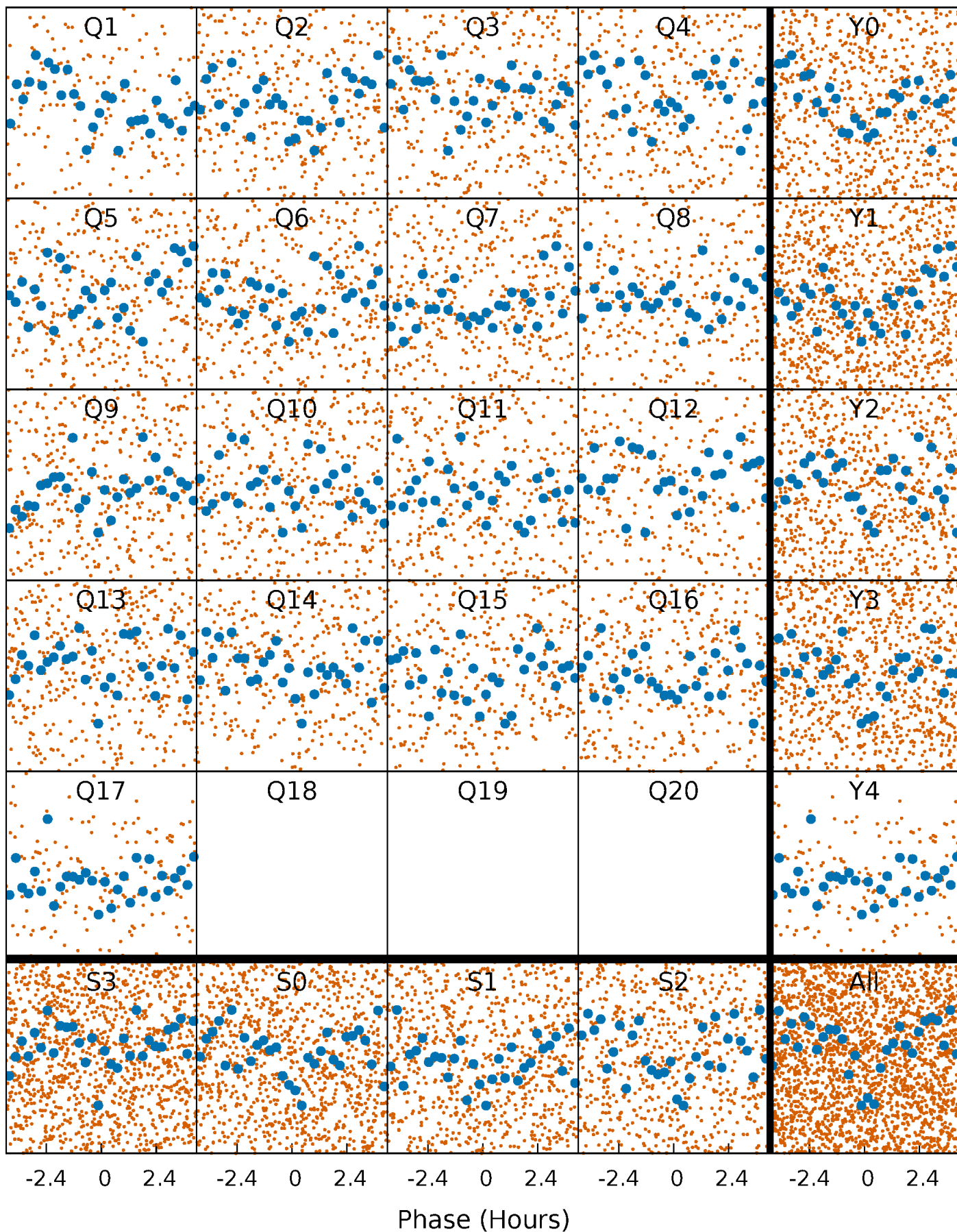


Non-Whitened Vs. Whitened Light Curve



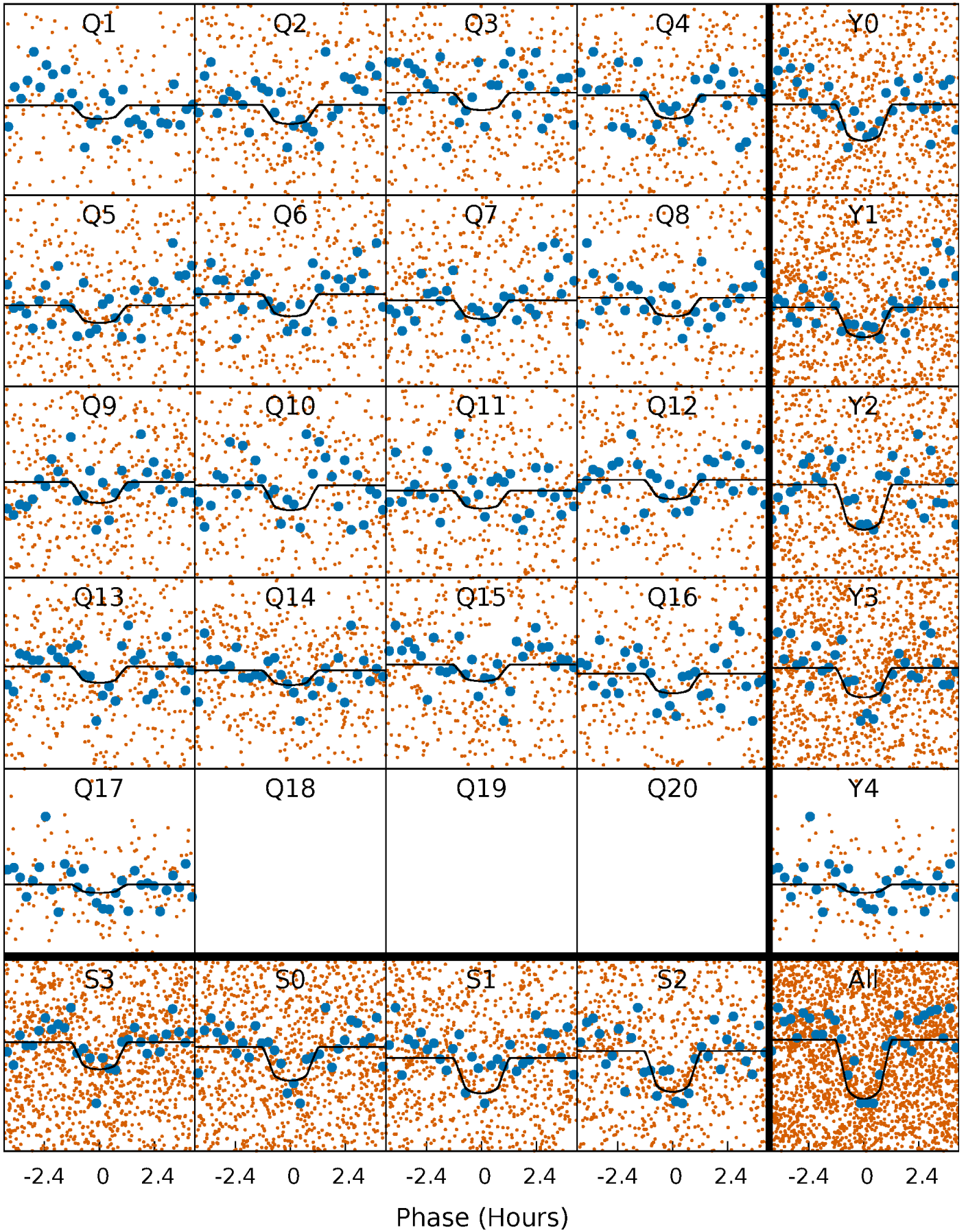
PDC Quarter-Phased Transit Curves

TCE 006231721-01 P= 2.693371 Days $T_0=131.907079$ (BKJD)



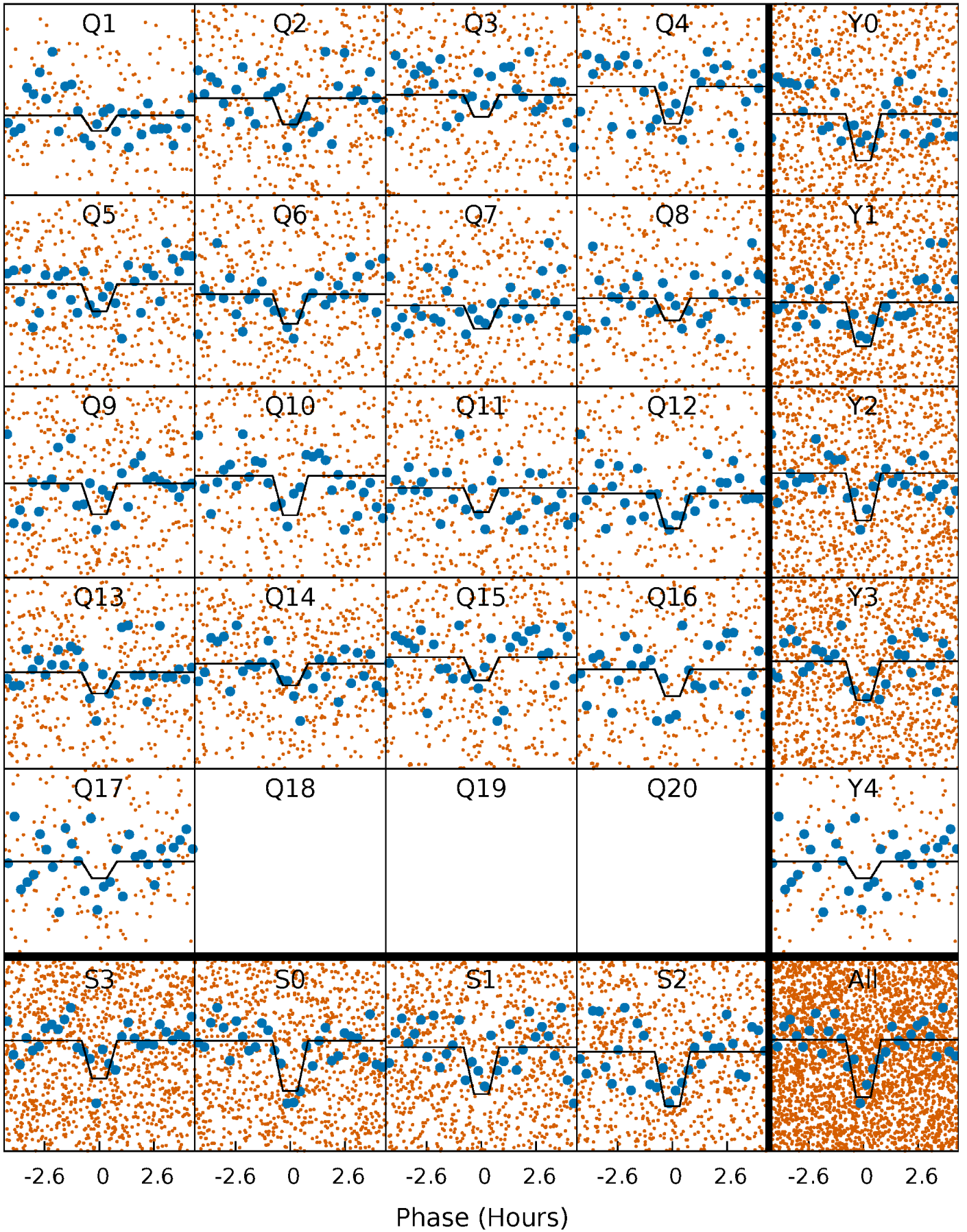
DV Quarter-Phased Transit Curves

TCE 006231721-01 P= 2.693371 Days $T_0=131.907079$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

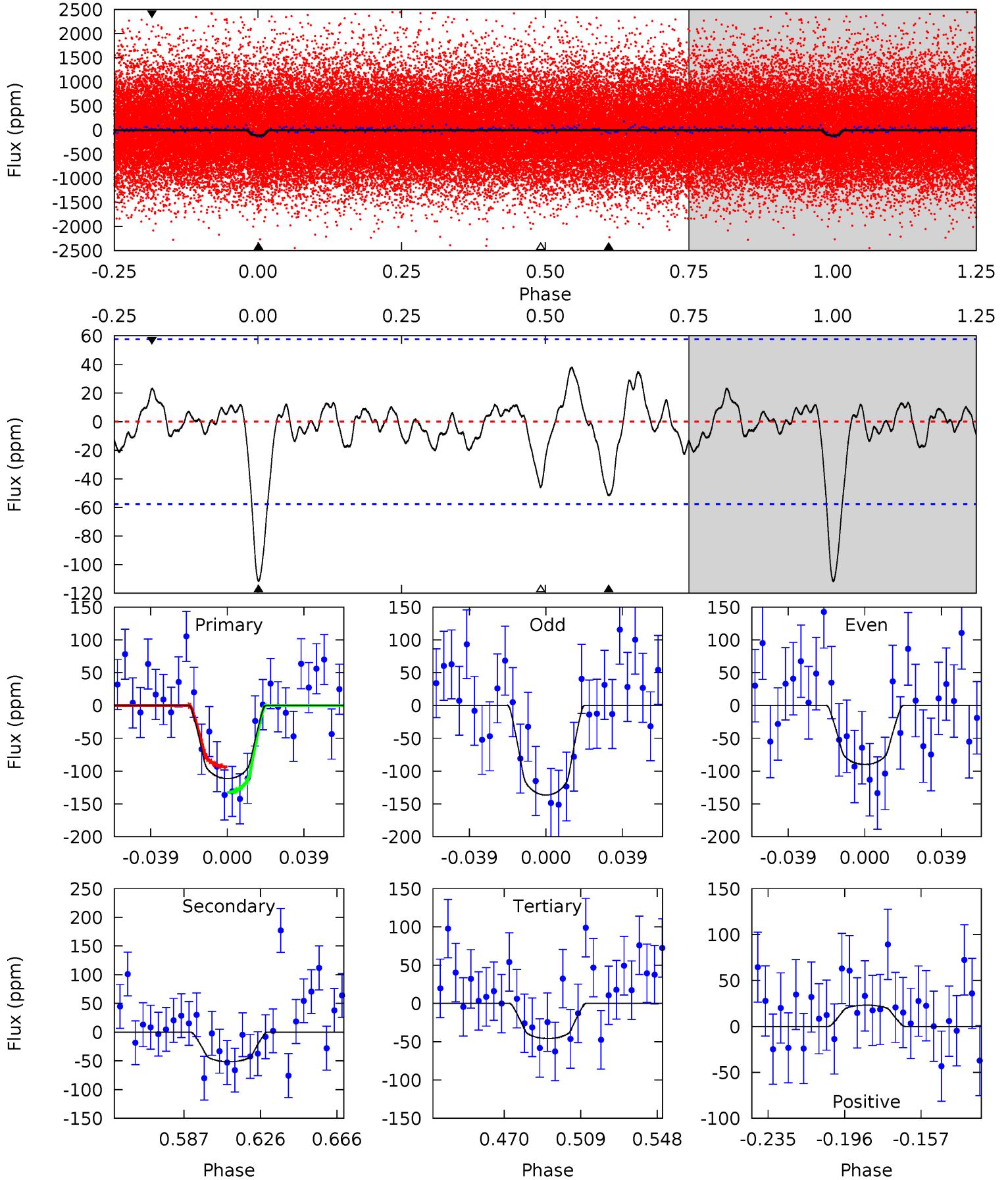
TCE 006231721-01 P= 2.693382 Days $T_0=131.906116$ (BKJD)



DV Model-Shift Uniqueness Test

006231721-01, P = 2.693371 Days, E = 129.213708 Days

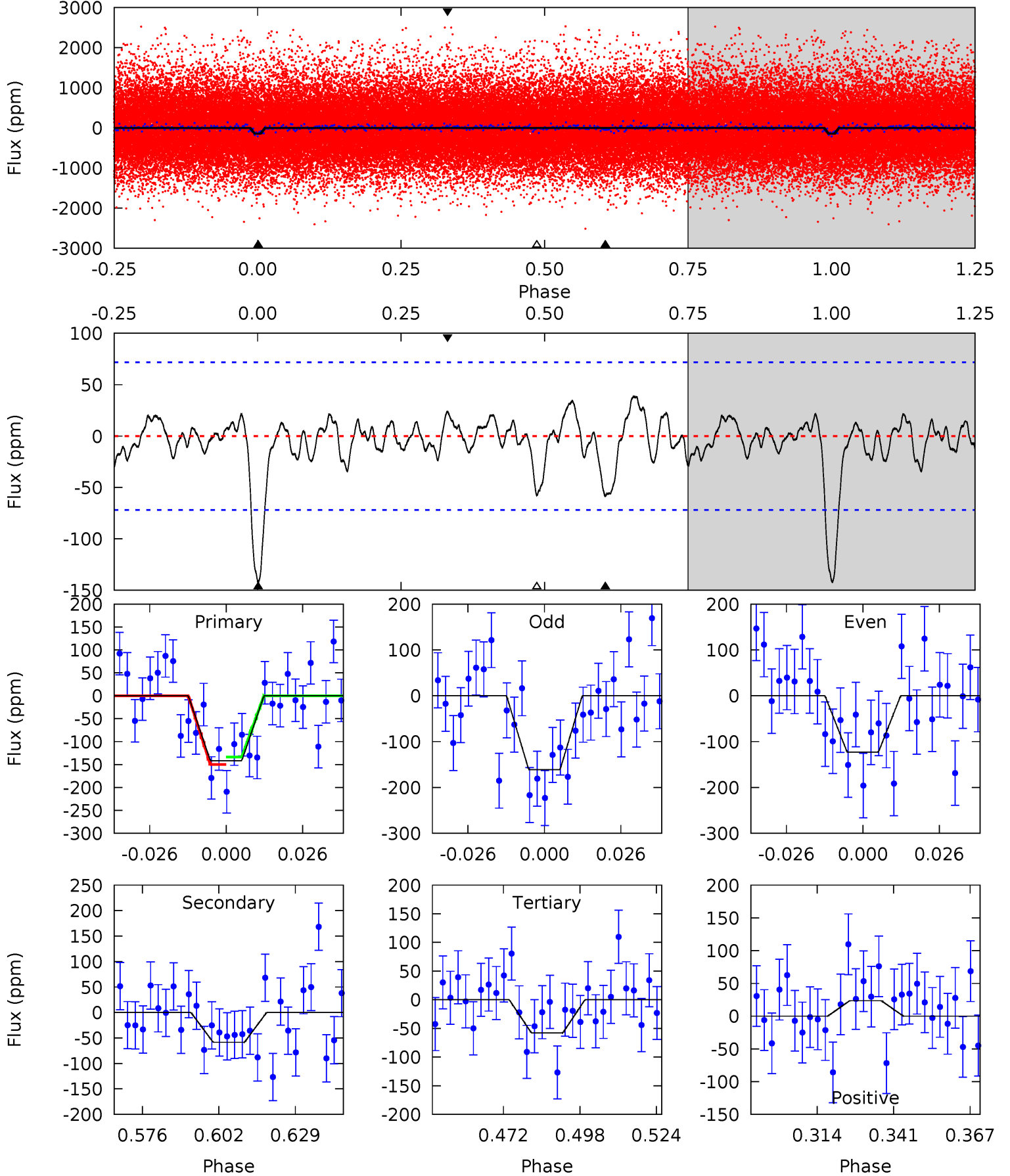
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.22	4.26	3.79	1.91	4.76	2.06	1.09	5.43	7.30	0.48	2.35	1.93	0.86	0.25	1.61



Alt Model-Shift Uniqueness Test

006231721-01, P = 2.693382 Days, E = 129.212734 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.56	3.94	3.90	1.59	4.84	2.22	1.06	5.65	7.96	0.03	2.34	1.29	0.91	0.21	0.54



Stellar Parameters For KIC 006231721

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5355^{+175}_{-159}	$4.511^{+0.057}_{-0.133}$	$0.070^{+0.250}_{-0.300}$	$0.863^{+0.160}_{-0.086}$	$0.880^{+0.082}_{-0.082}$	$1.930^{+0.521}_{-0.730}$
	+3%/-3%	+1%/-3%	+357%/-429%	+19%/-10%	+9%/-9%	+27%/-38%
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 006231721-01 / KOI 7773.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-52 ± 12	$1.44^{+1.14}_{-0.93}$	1635^{+83}_{-72}	4009^{+2149}_{-722}	17^{+121}_{-12}
Alt.	-58 ± 15	$1.53^{+1.15}_{-0.94}$	1632^{+81}_{-71}	4009^{+1897}_{-731}	18^{+96}_{-13}

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 $A_{obs} \gg 1.0$

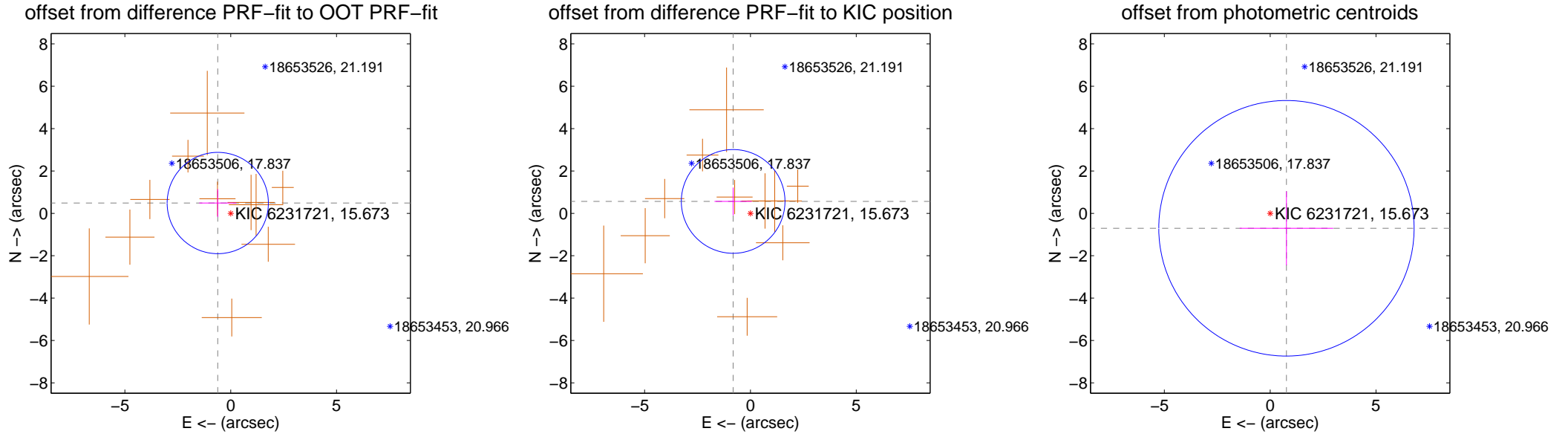
DV Centroid Data

Supplemental centroid analysis for 006231721-01. Kepler magnitude: 15.67. Transit SNR 7.68

There are 0 quarters with good PRF difference image offsets

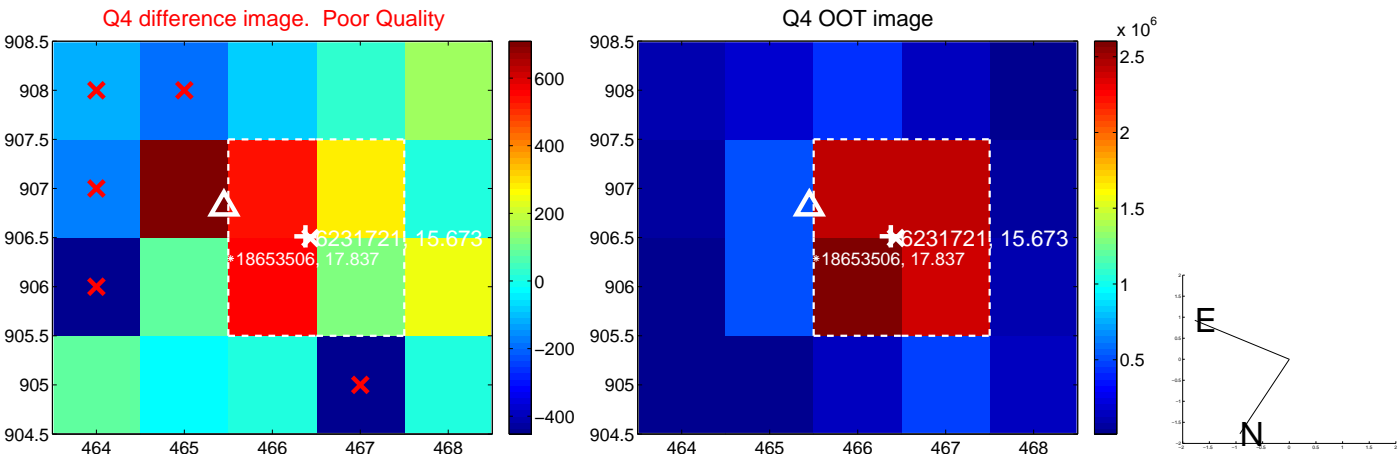
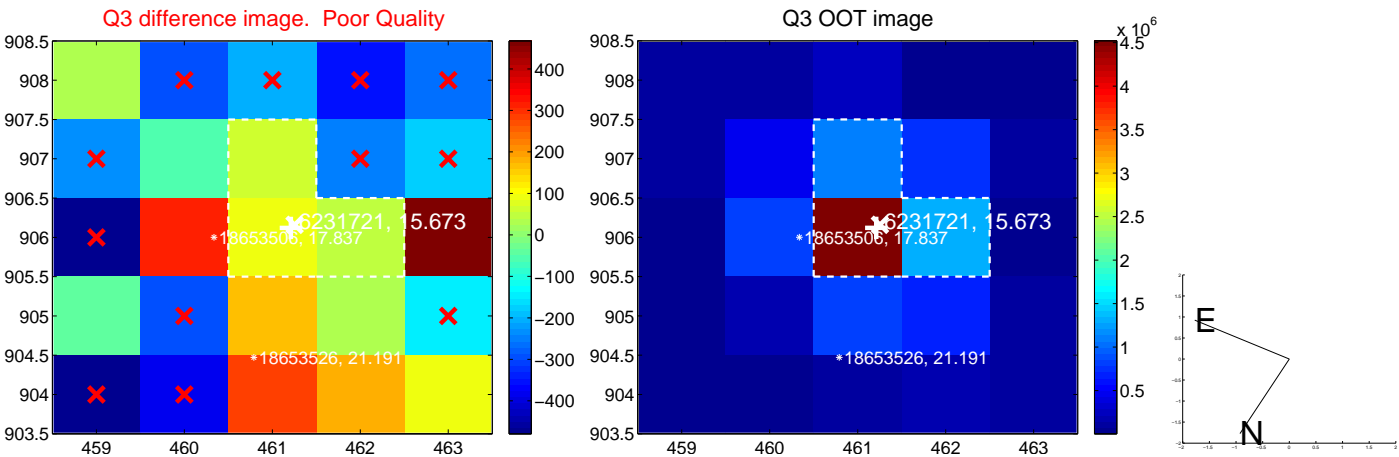
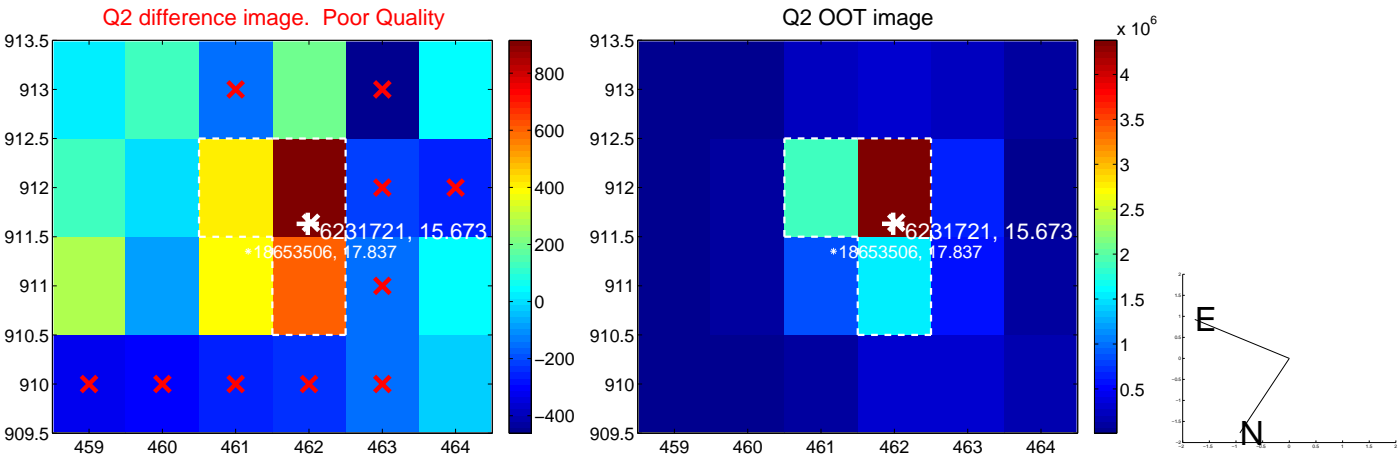
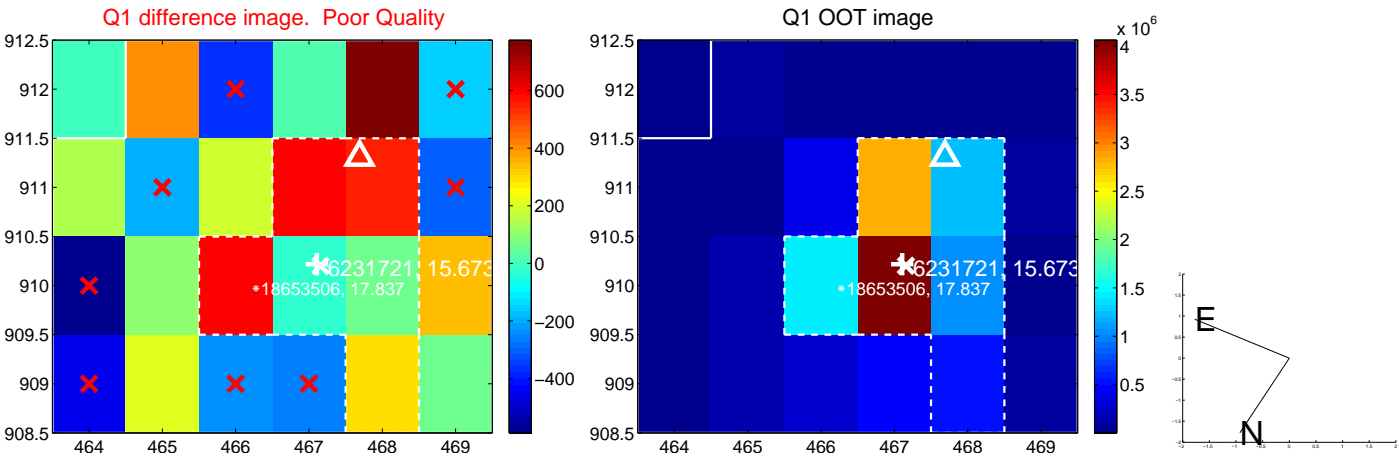
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.782 ± 0.797	0.98	0.611 ± 0.875	0.488 ± 0.657
PRF-fit source offset from KIC position	0.992 ± 0.816	1.22	0.817 ± 0.883	0.563 ± 0.655
photometric centroid source offset	1.04 ± 2.01	0.52	-0.77 ± 2.21	-0.70 ± 1.74

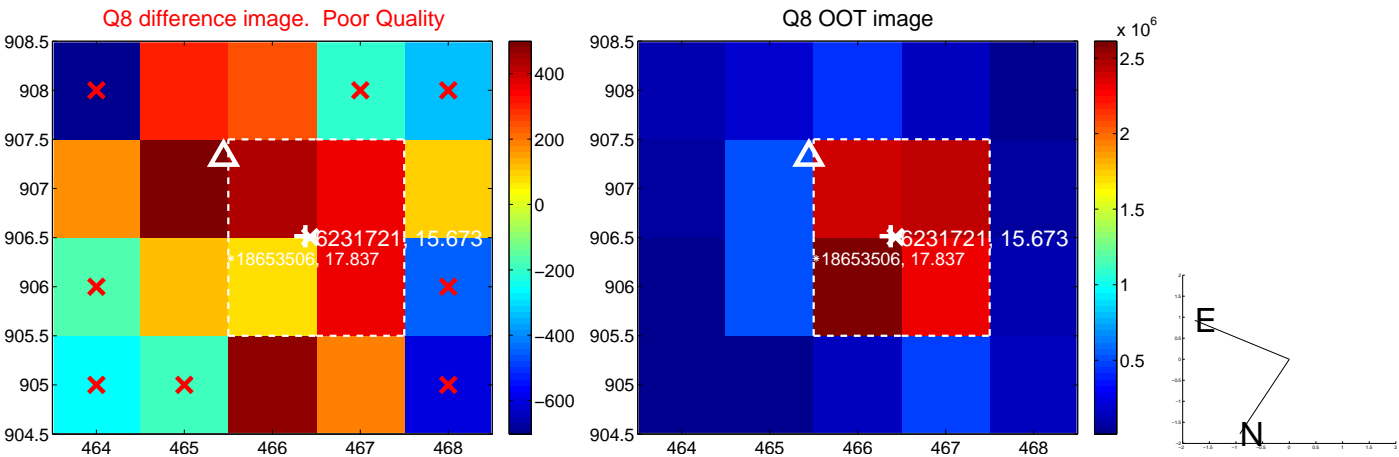
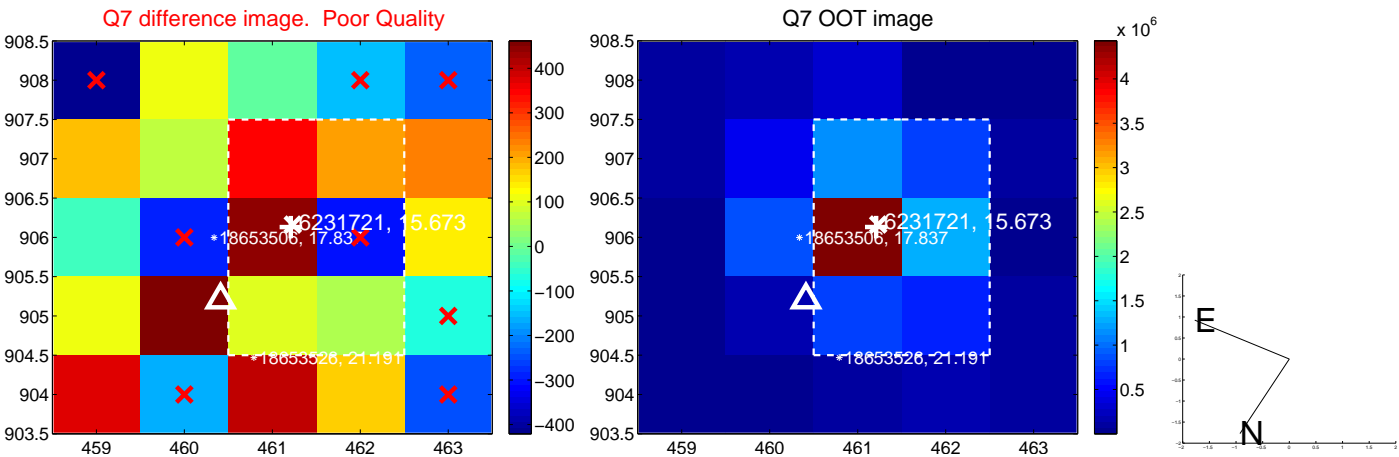
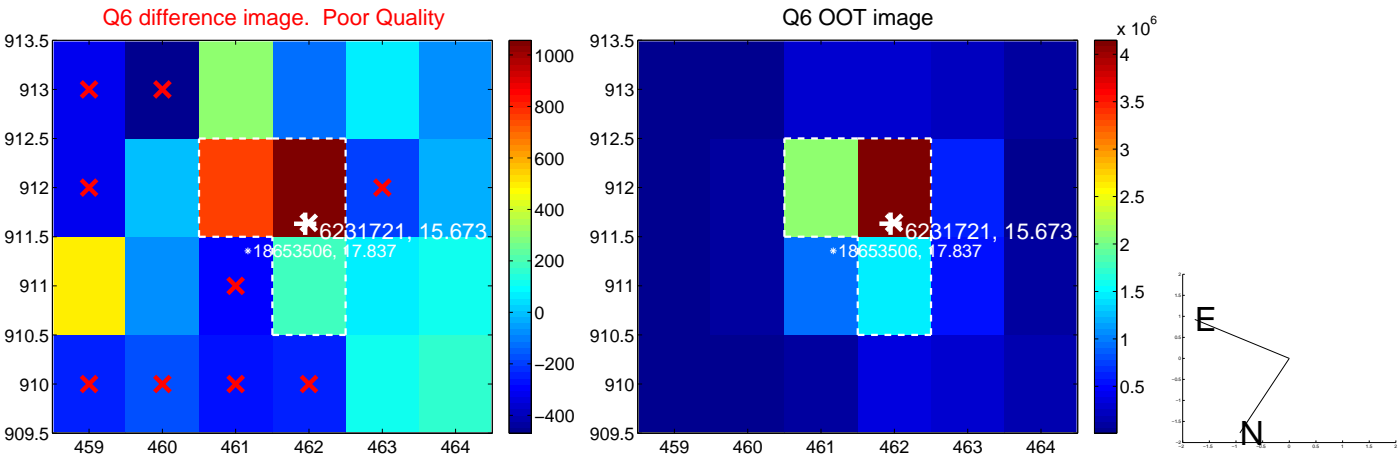
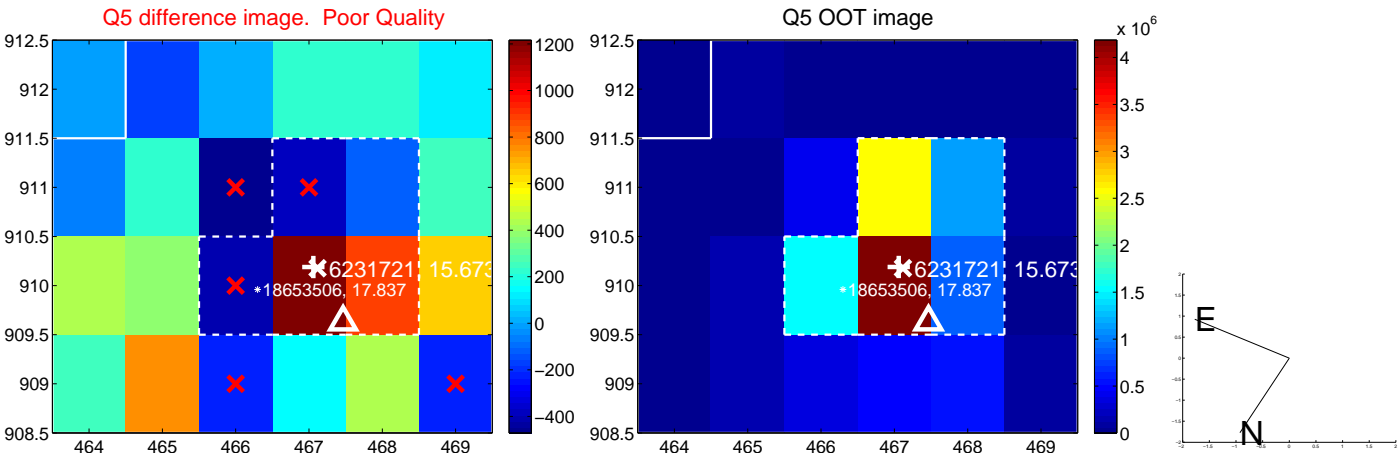


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

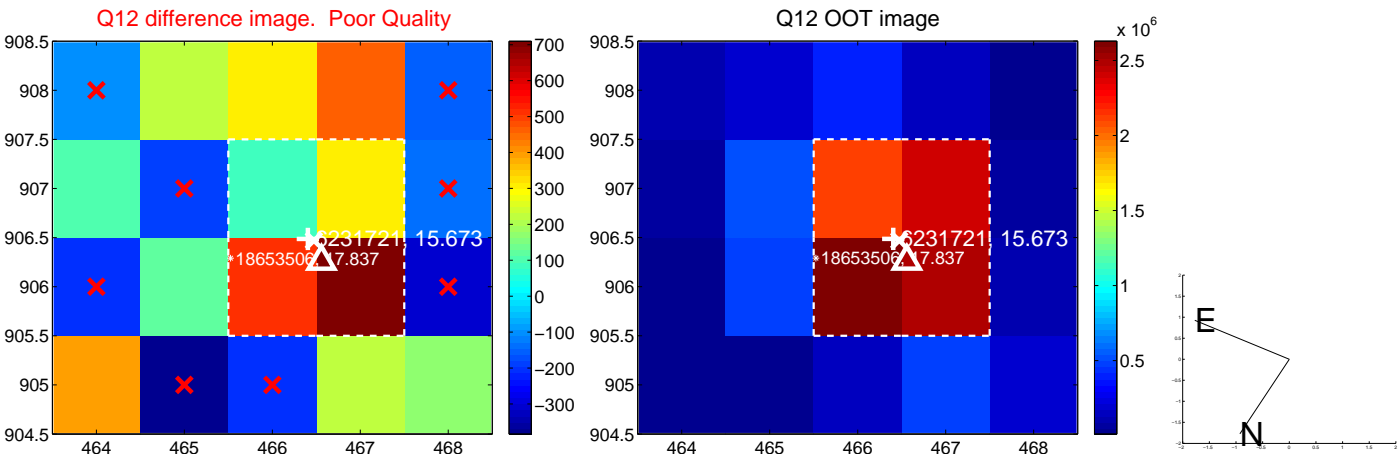
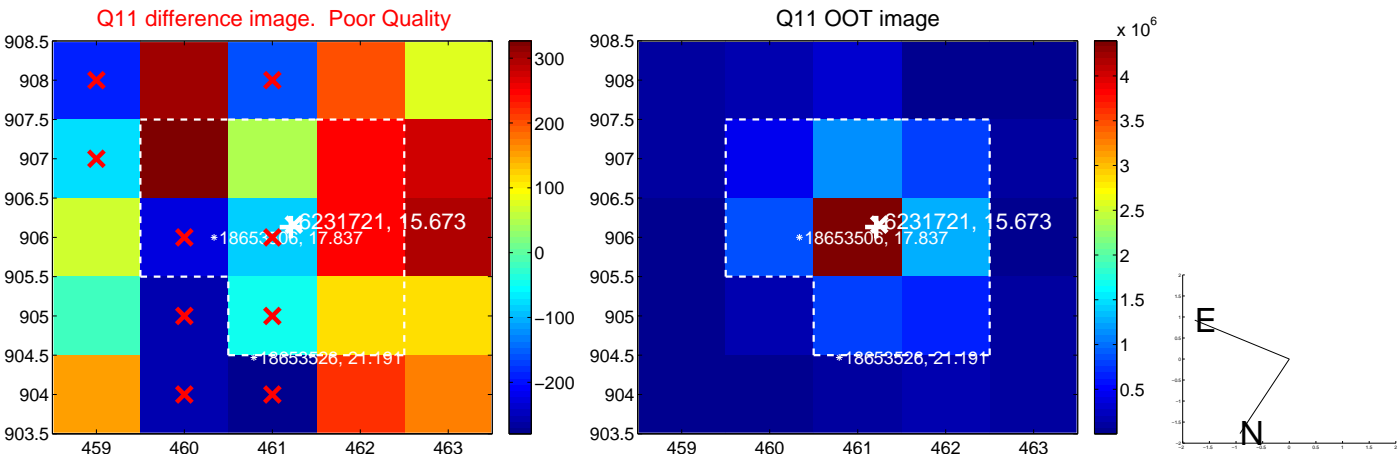
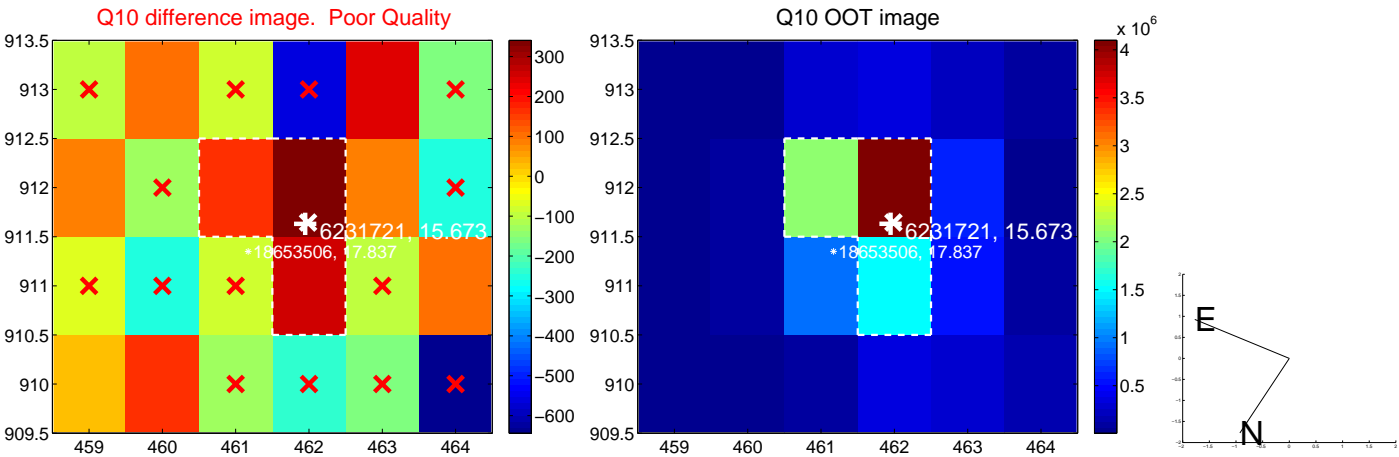
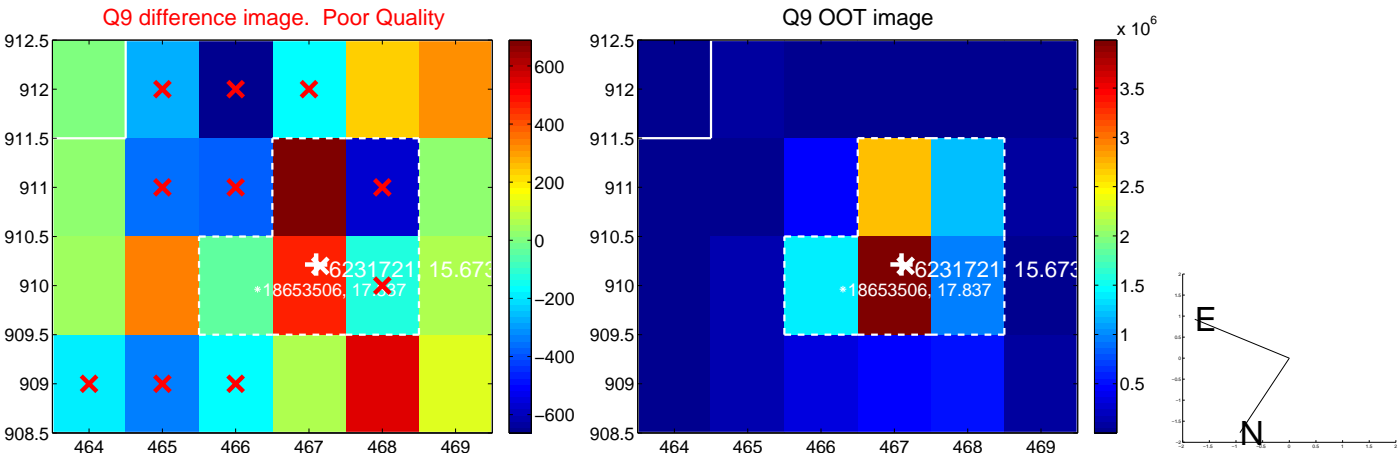
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



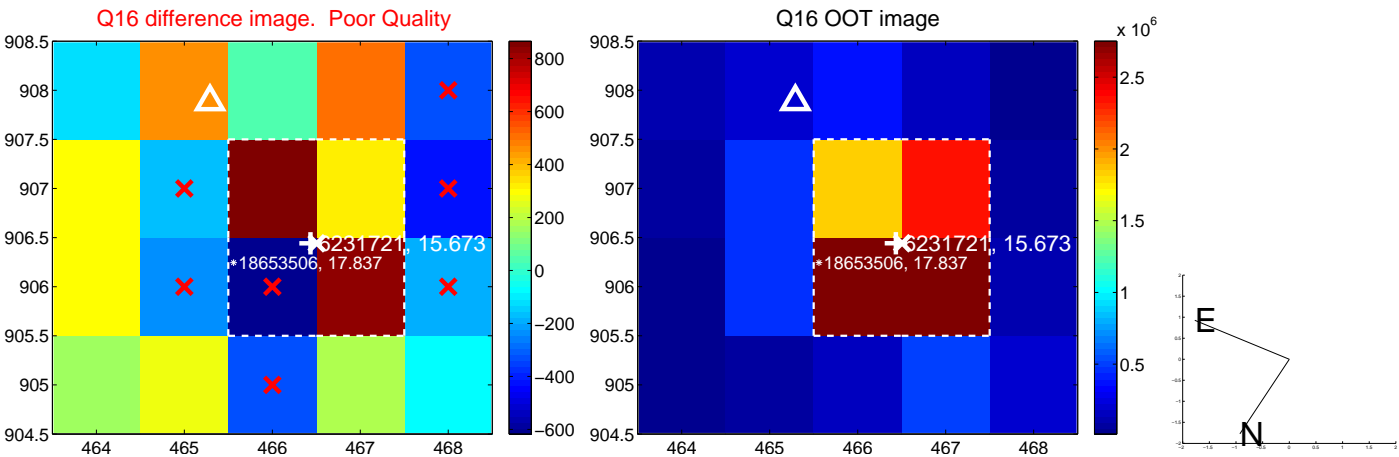
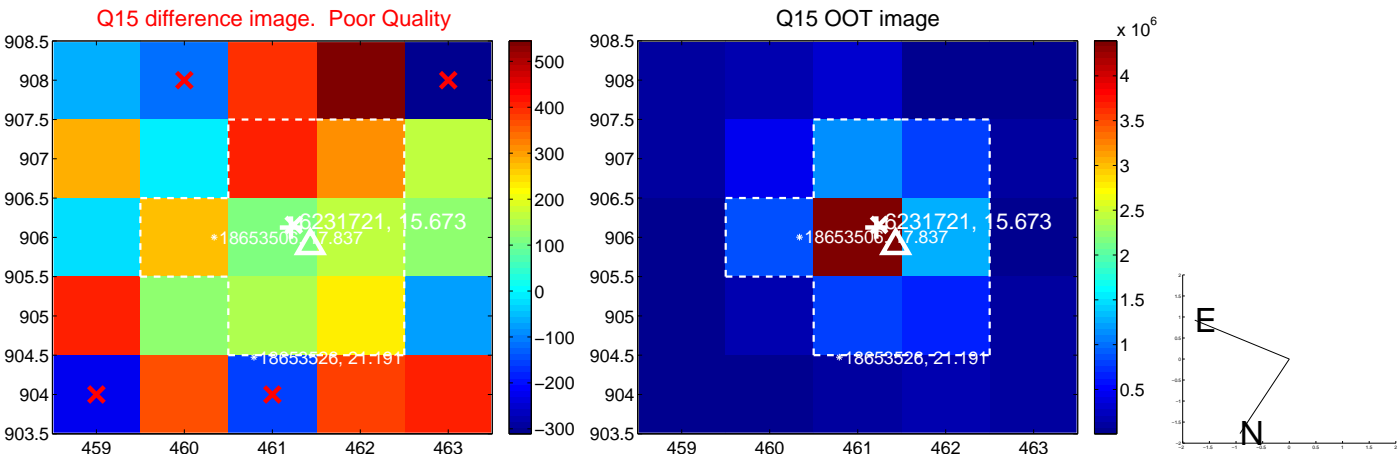
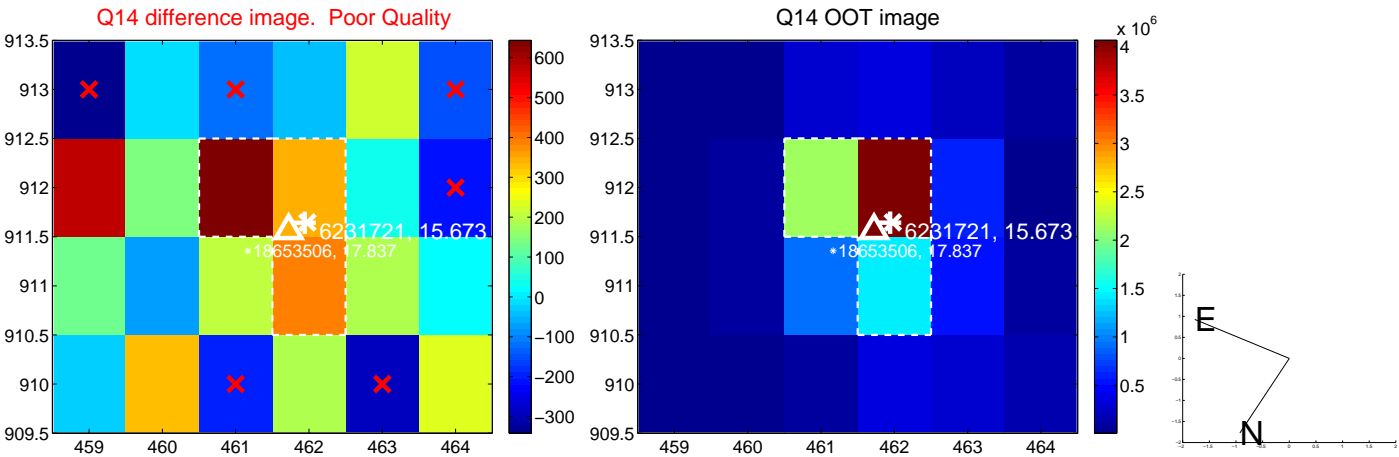
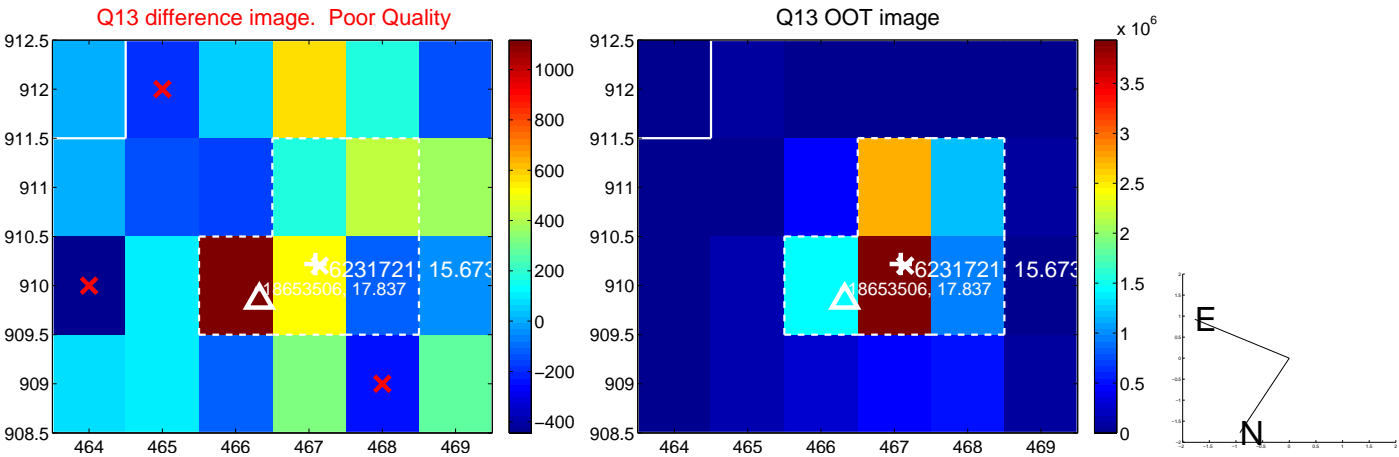
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



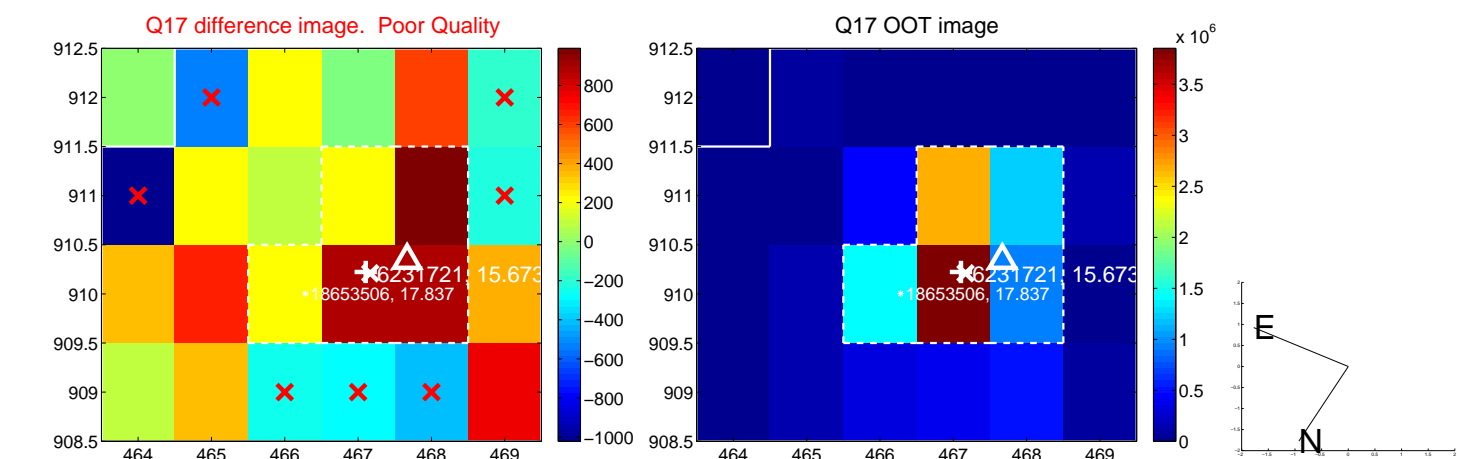
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



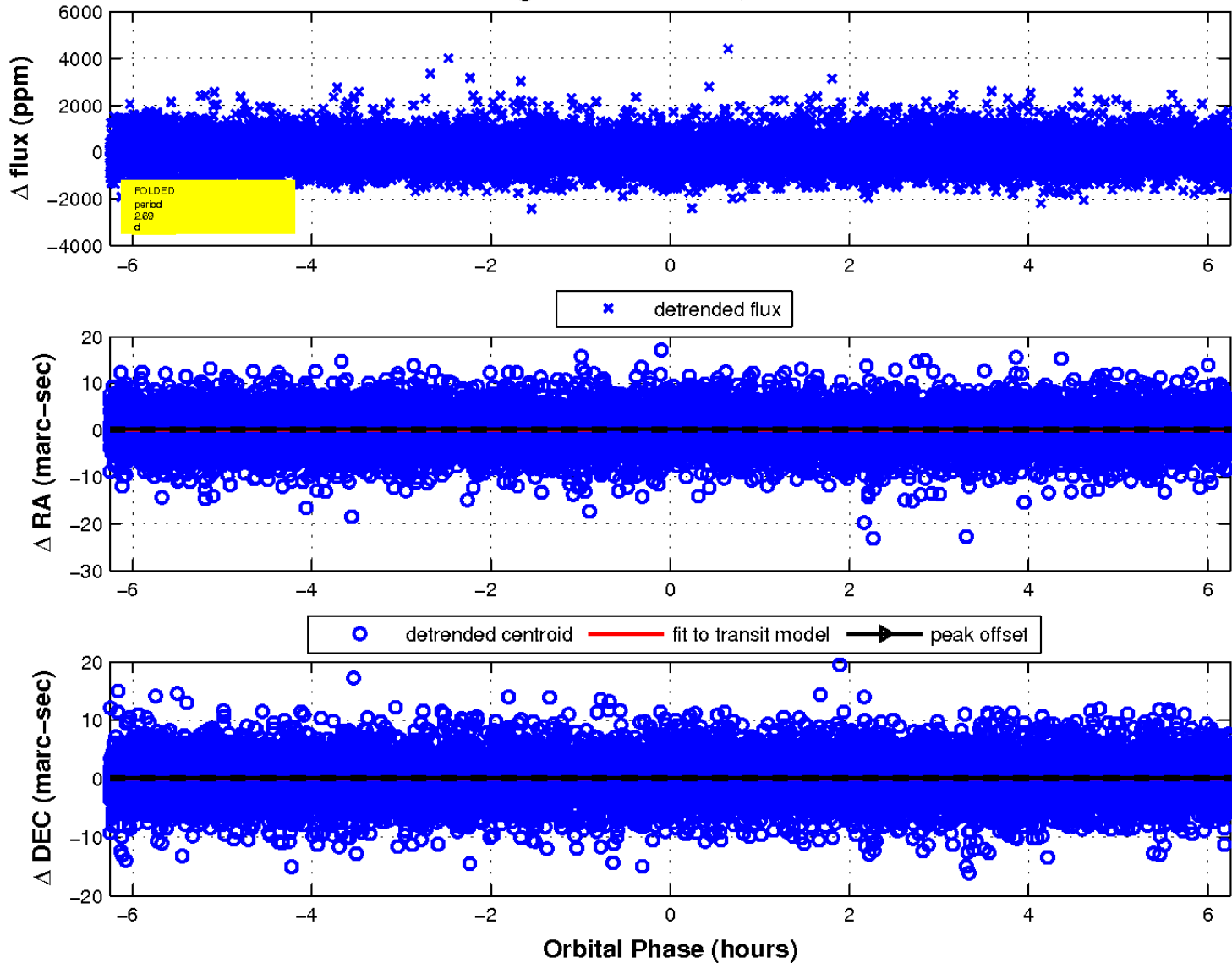
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

