

KIC 006783732

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})
006783732-01	OBS	7790.01	0.721335	131.573976	22.7	1.388	8.4	8.0	0.95	6328	0.53	5171.90

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006783732-01	OBS	FP	0.00	0	0	1	0	CENT_RESOLVED_OFFSET

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

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

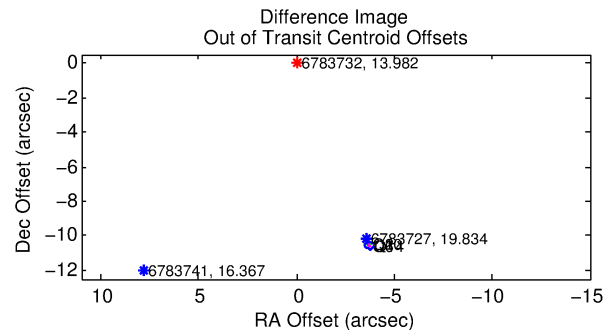
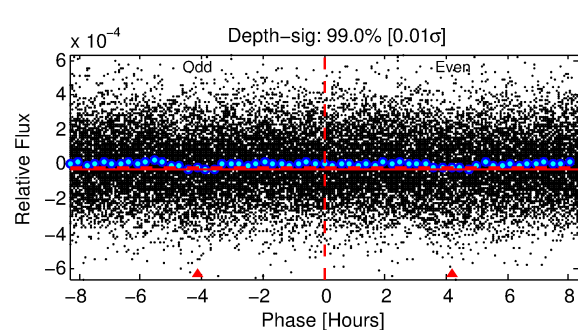
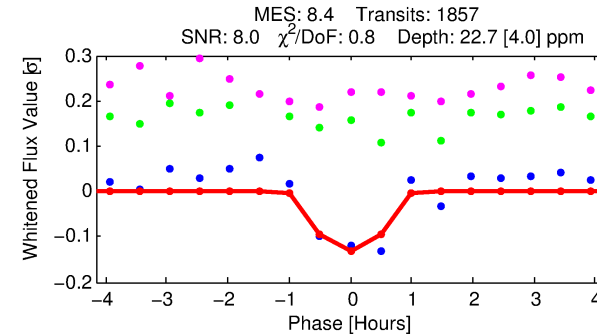
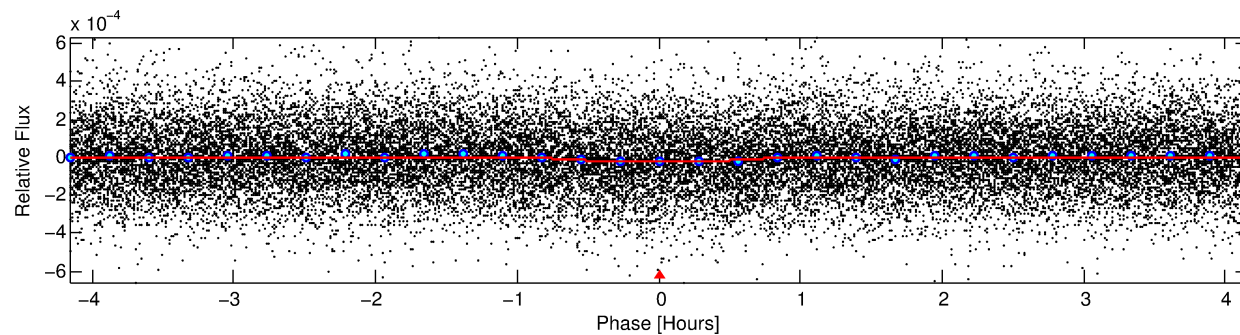
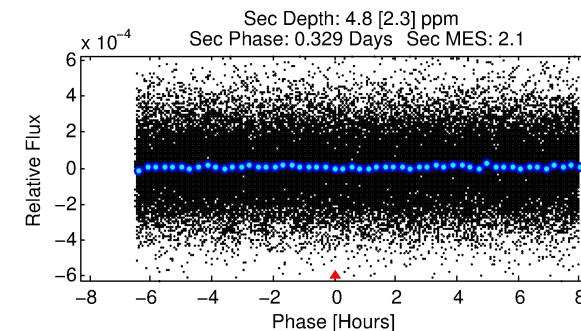
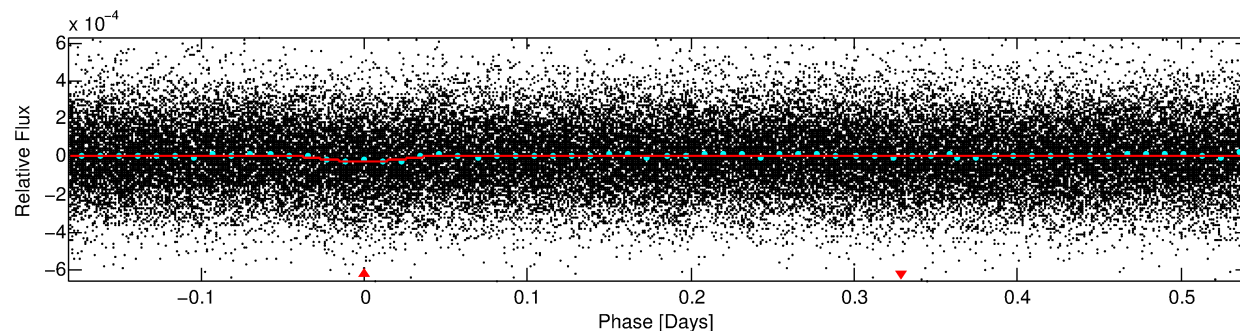
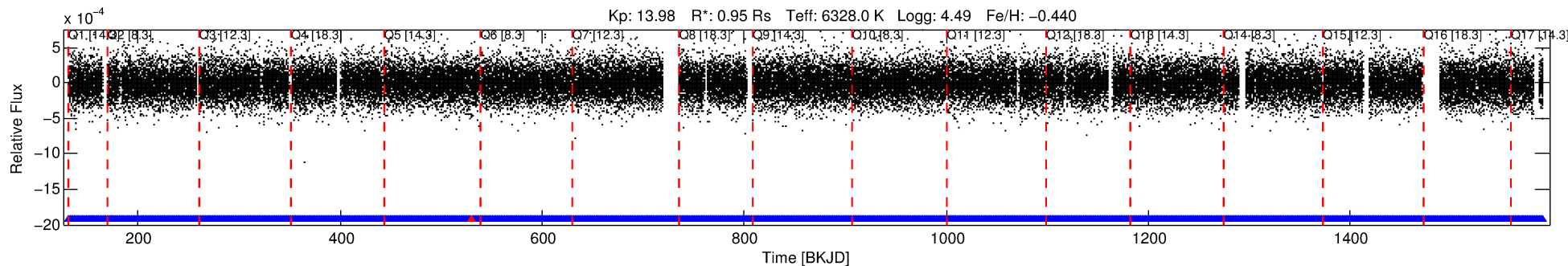
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006783732-01

No Significant Match Found

DV One-Page Summary

KIC: 6783732 Candidate: 1 of 1 Period: 0.721 d



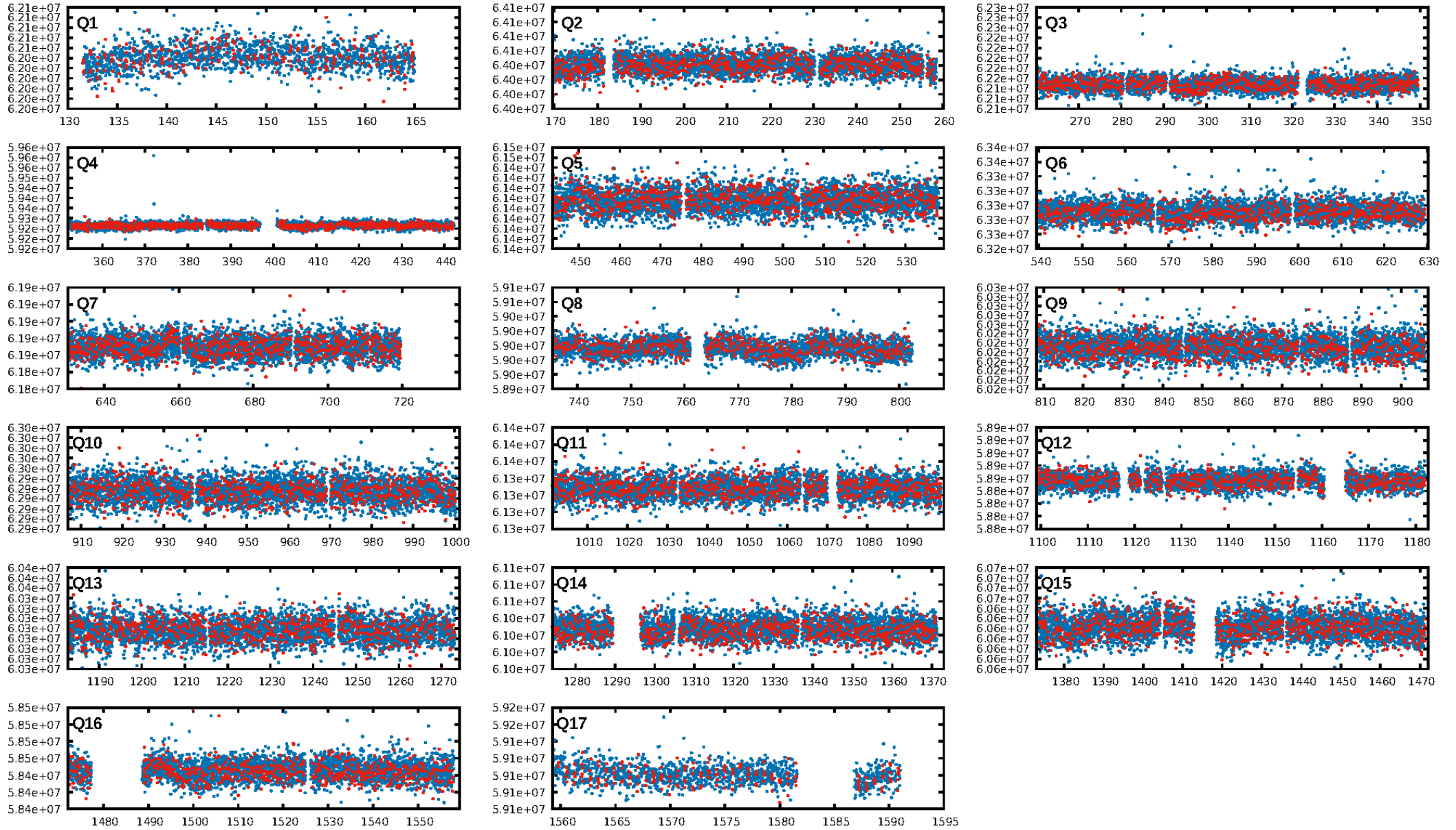
DV Fit Results:

Period = 0.72133 [0.00001] d
Epoch = 131.5740 [0.0028] BKJD
Rp/R* = 0.0051 [0.0015]
a/R* = 2.03 [2.50]
b = 0.90 [0.36]
Seff = 5171.90 [2070.10]
Teff = 2162 [216] K
Rp = 0.53 [0.23] Re
a = 0.0158 [0.0041] AU
Ag = 2.34 [2.00] [0.67σ]
Teffp = 4137 [802] K [2.38σ]

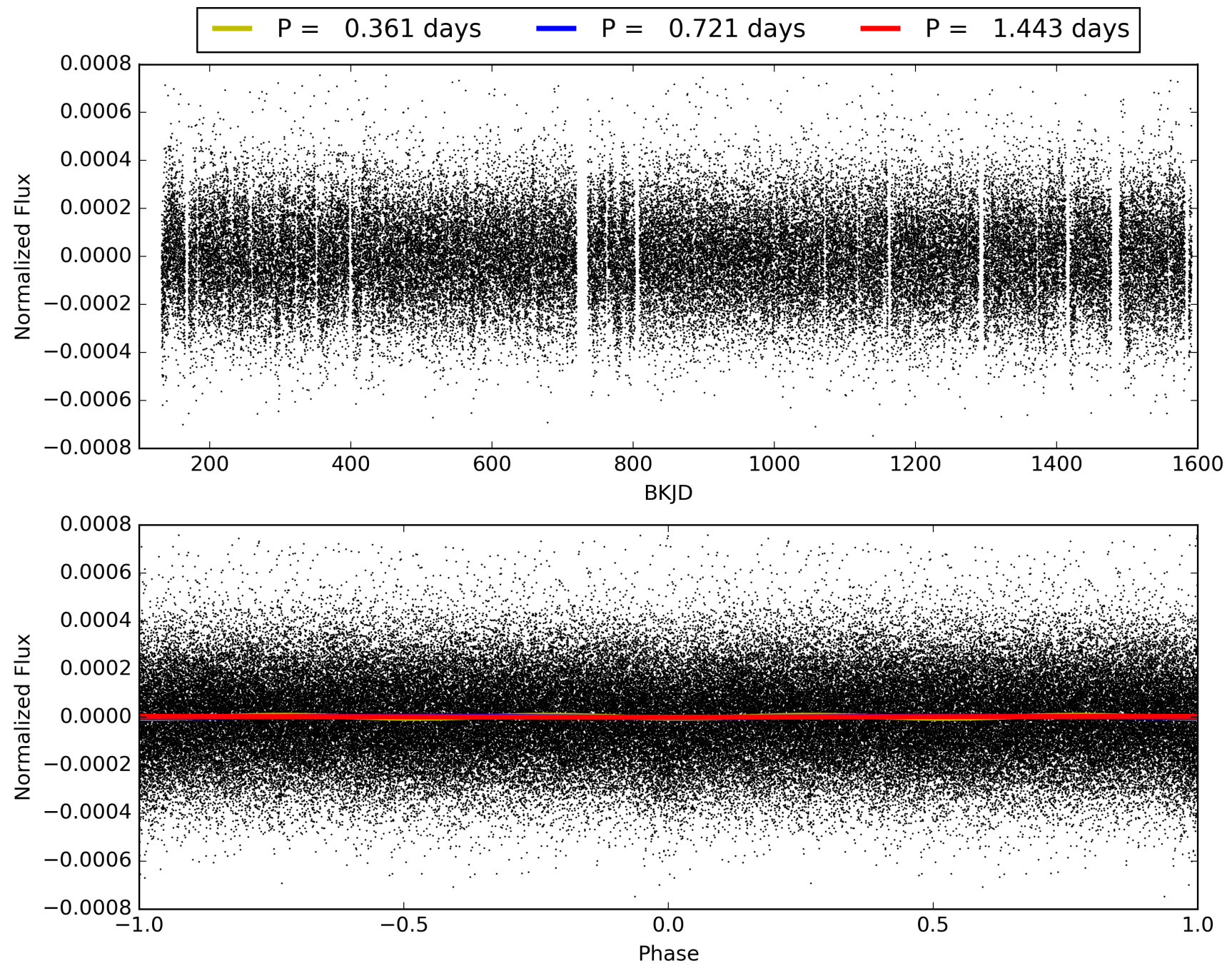
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.09e-18
RollingBand-fgt: 1.00 [1772/1773]
GhostDiagnostic-chr: -0.5434
Centroid-sig: 0.0%
Centroid-so: 29.483 arcsec [18.77σ]
OotOffset-rm: 11.187 arcsec [155.94σ]
KicOffset-rm: 11.026 arcsec [151.54σ]
OotOffset-st: 4/0/0/0 [4]
KicOffset-st: 4/0/0/0 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 006783732-01, PDC Light Curves

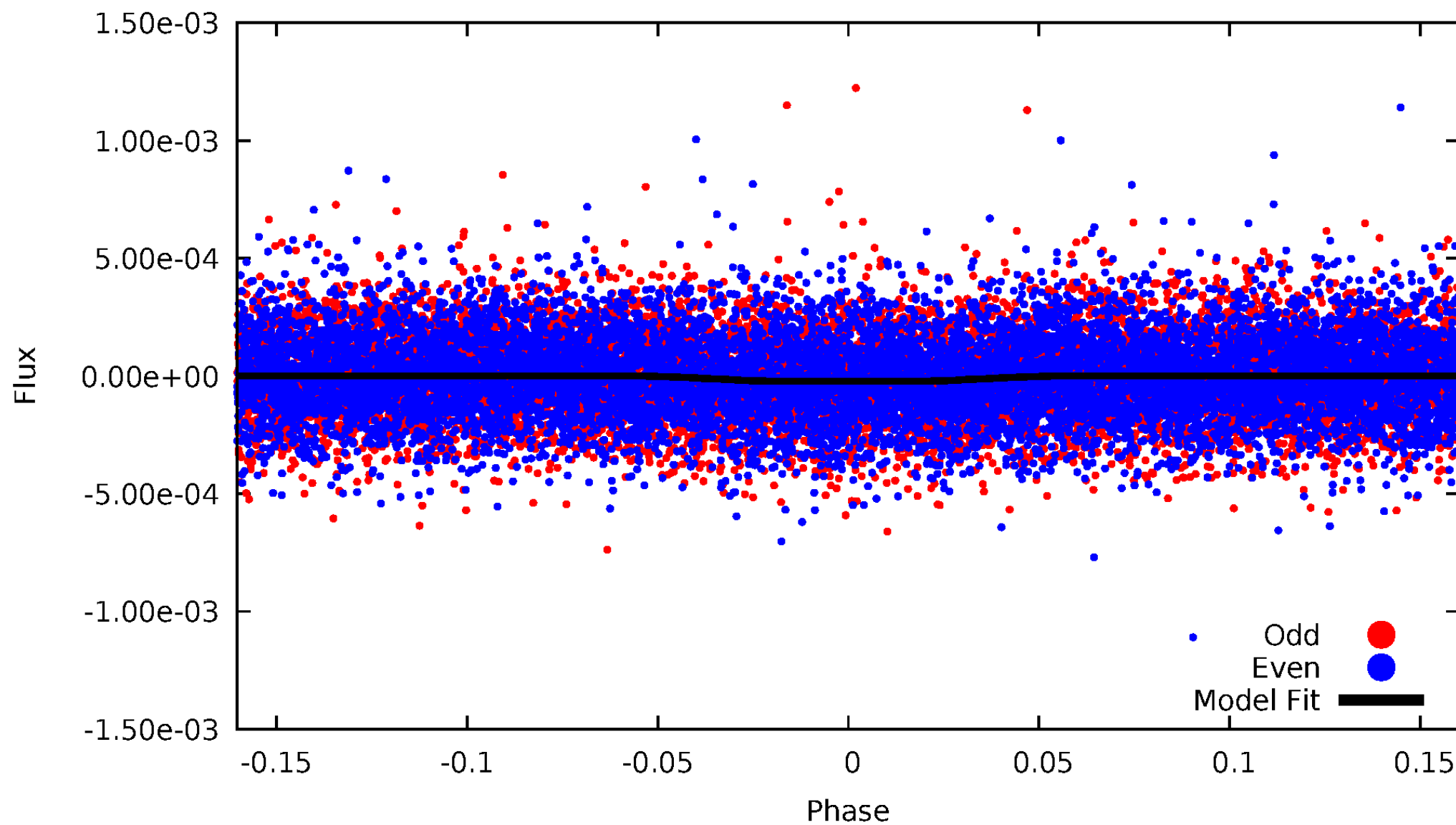


TCE 006783732-01



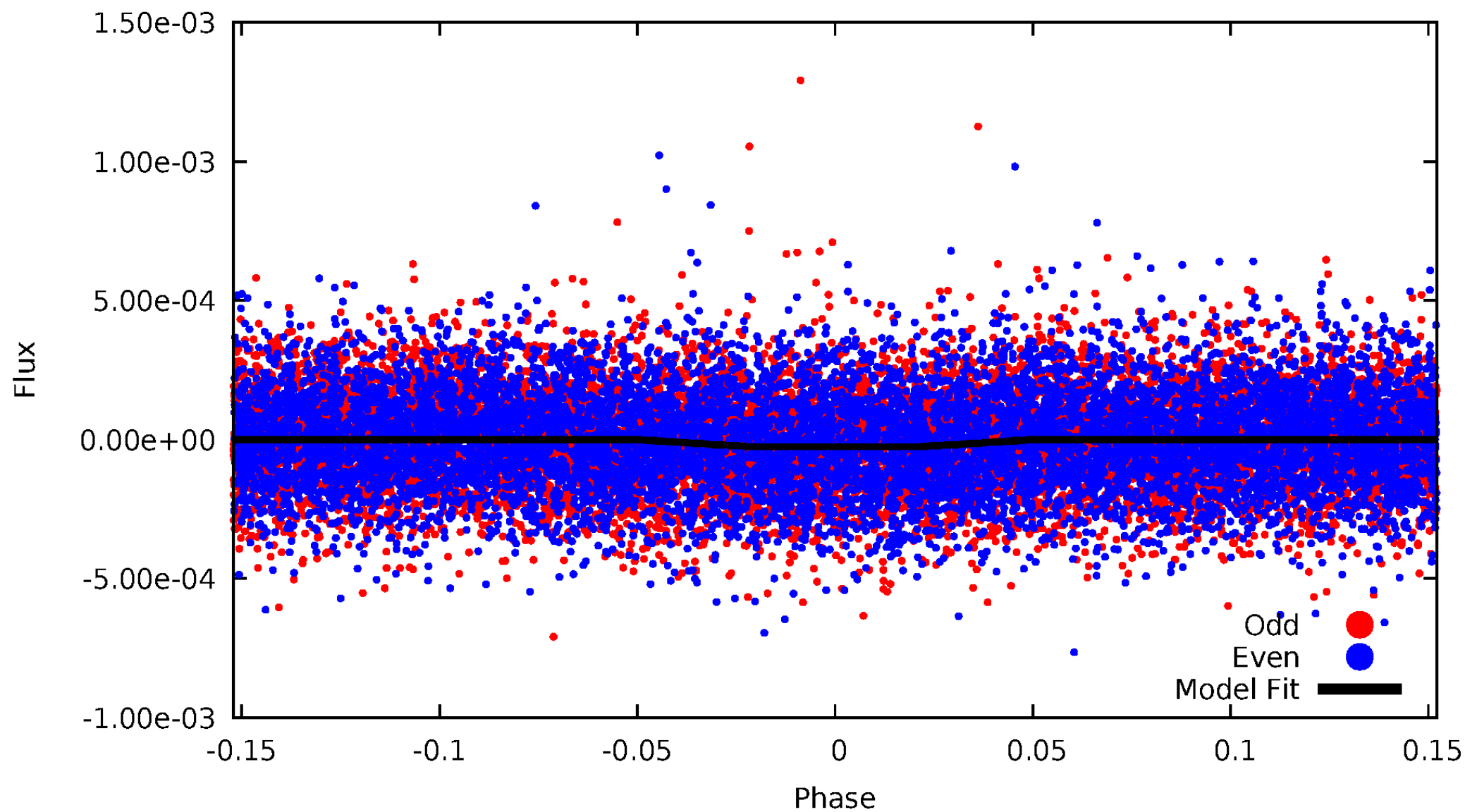
DV Odd/Even

TCE 006783732-01



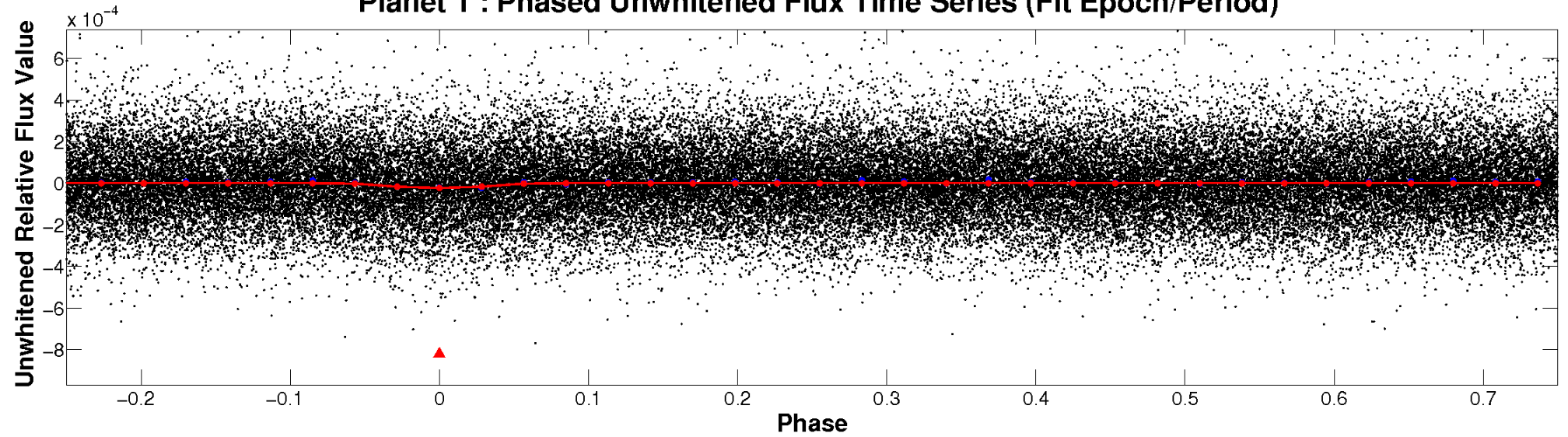
ALT Odd/Even

TCE 006783732-01

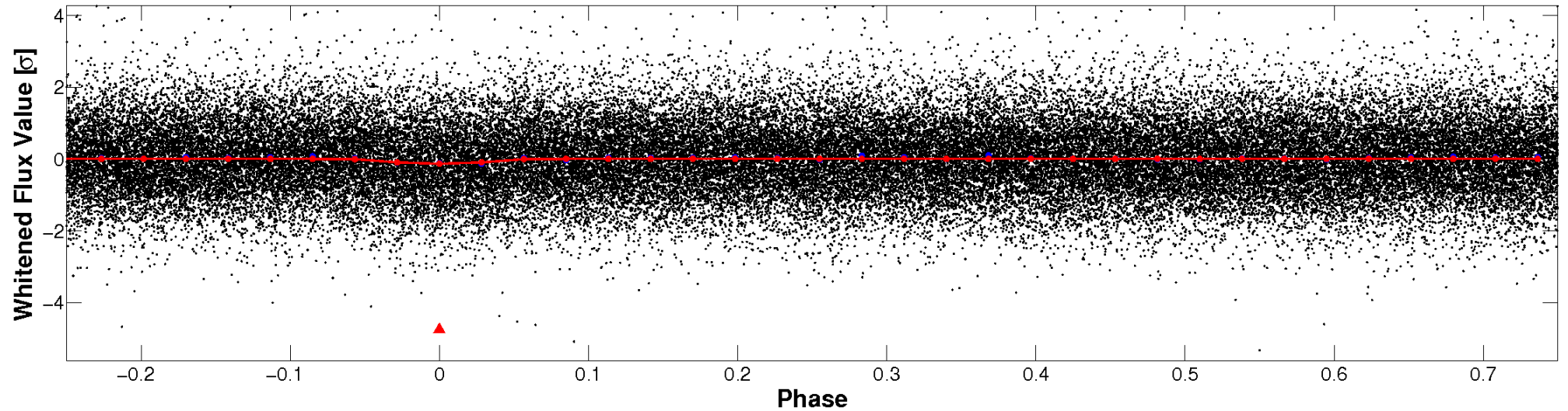


Non-Whitened Vs. Whitened Light Curve

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

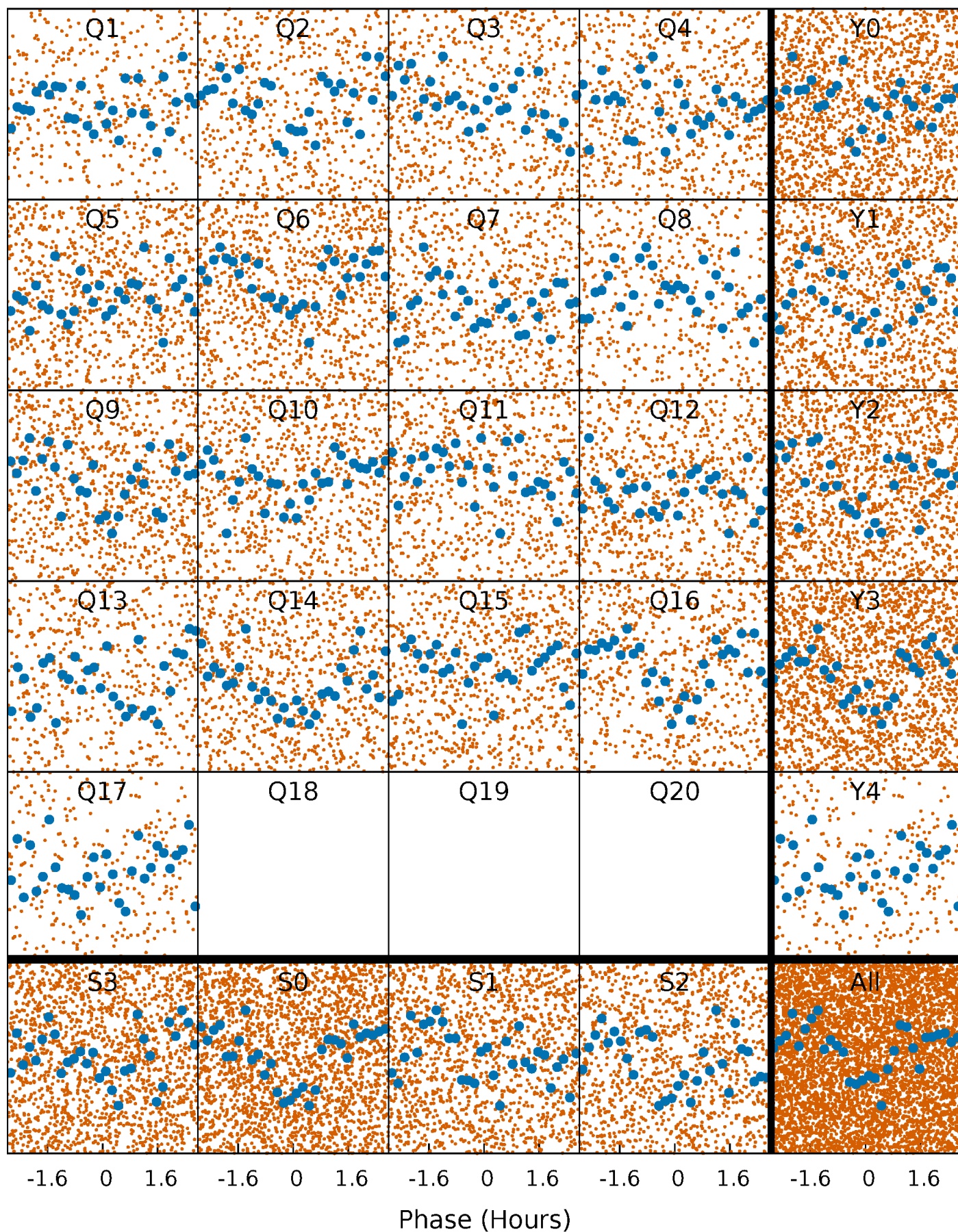


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



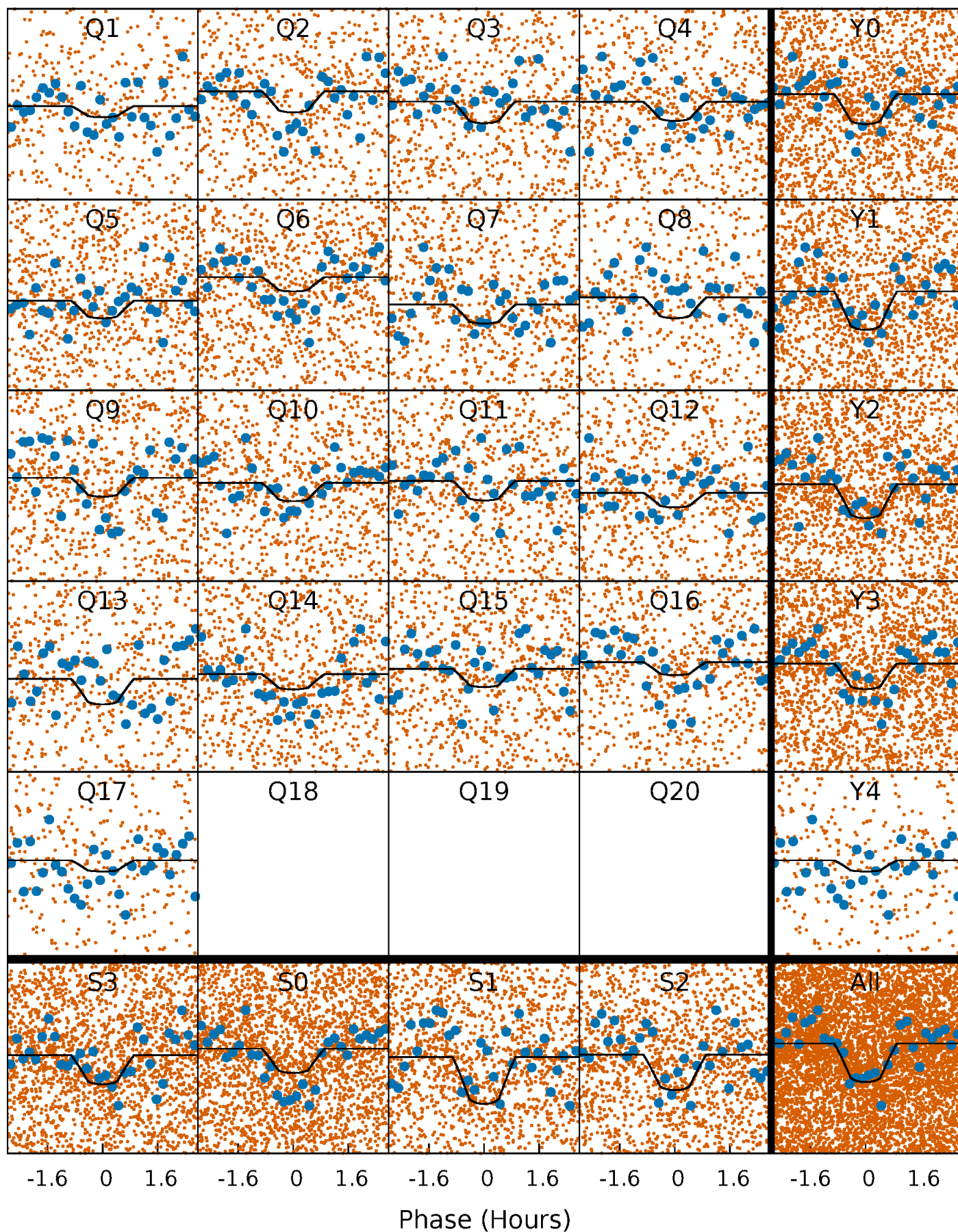
PDC Quarter-Phased Transit Curves

TCE 006783732-01 P= 0.721335 Days $T_0=131.573976$ (BKJD)



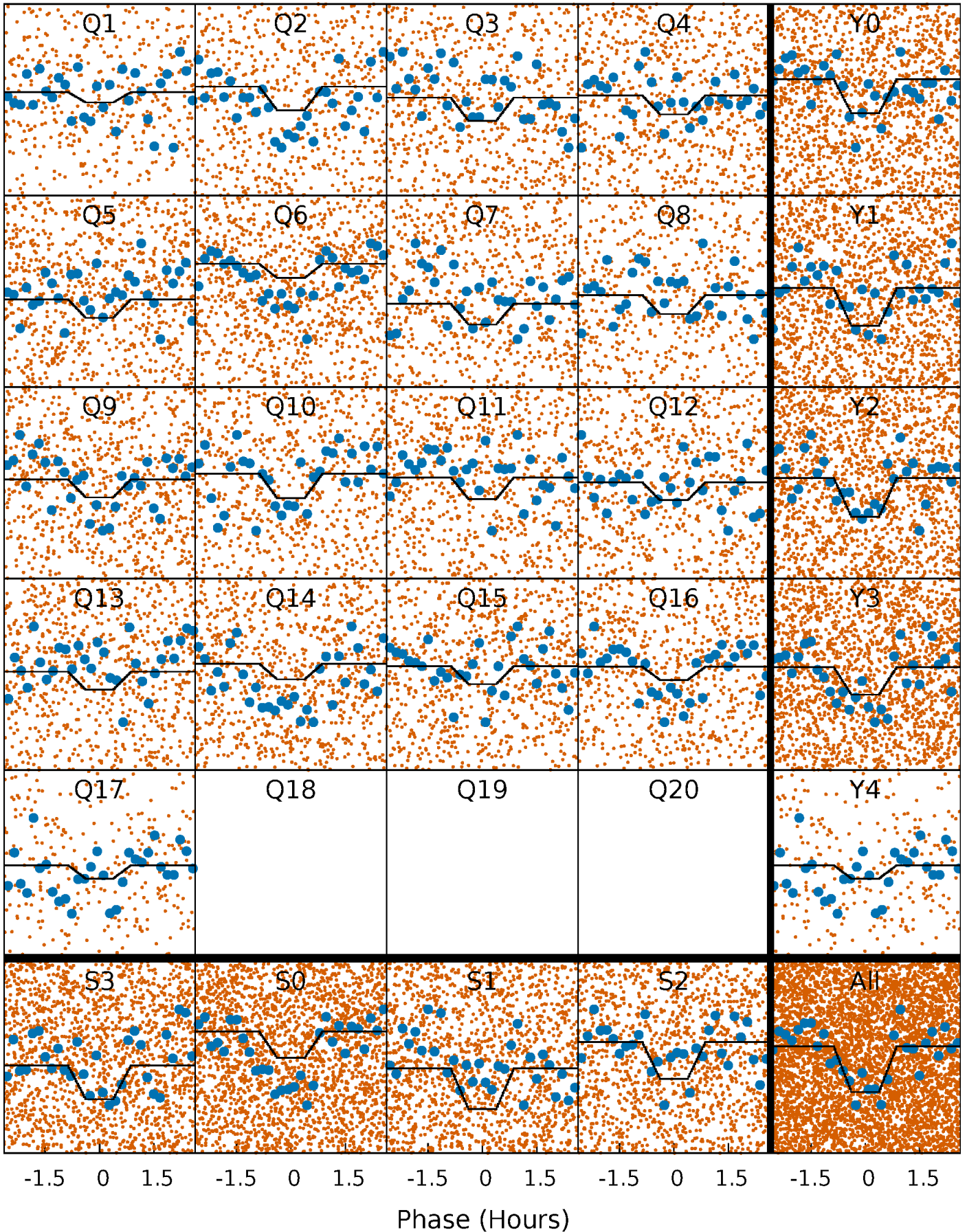
DV Quarter-Phased Transit Curves

TCE 006783732-01 P= 0.721335 Days $T_0=131.573976$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

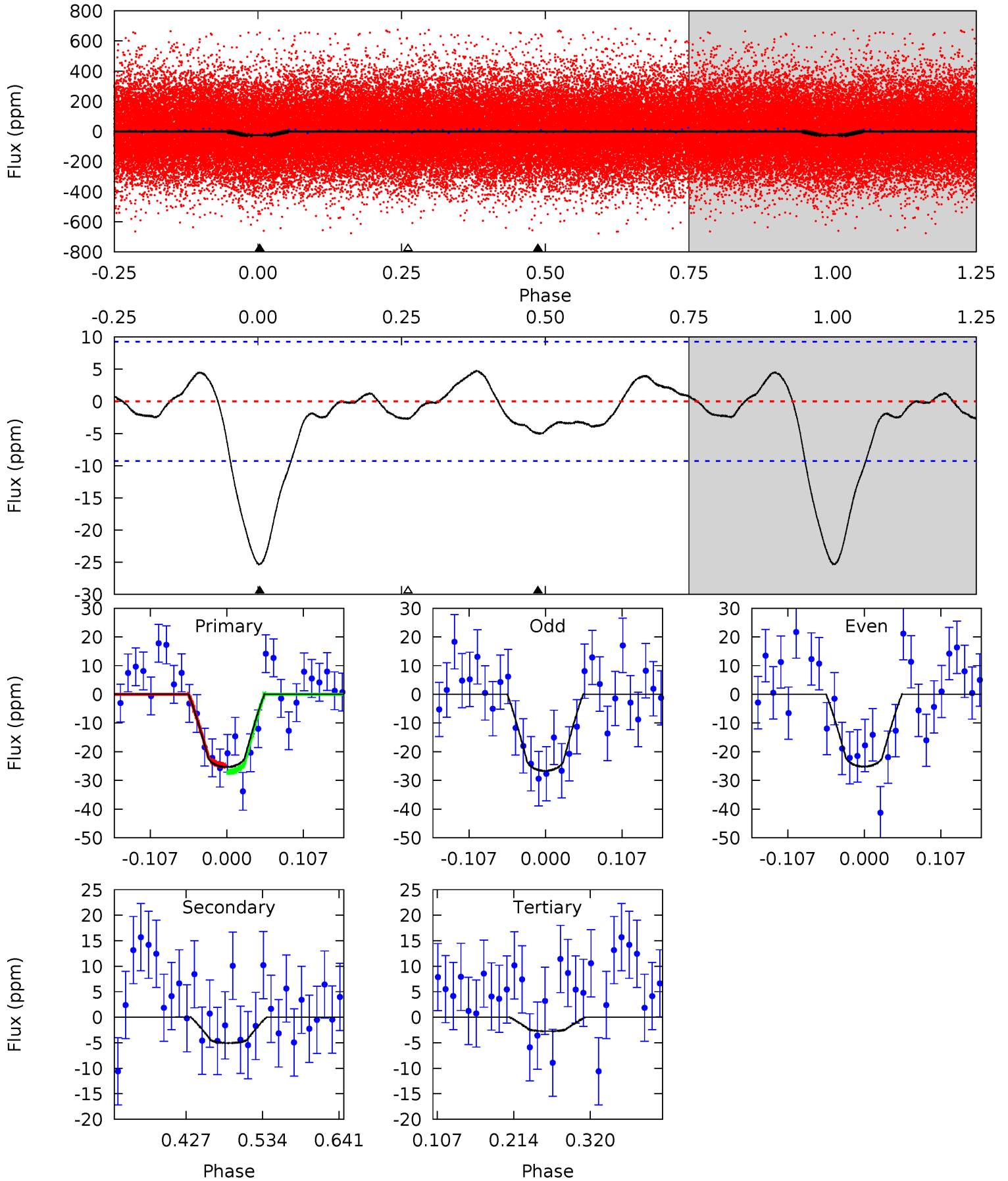
TCE 006783732-01 P= 0.721339 Days $T_0=131.574100$ (BKJD)



DV Model-Shift Uniqueness Test

006783732-01, P = 0.721335 Days, E = 130.852641 Days

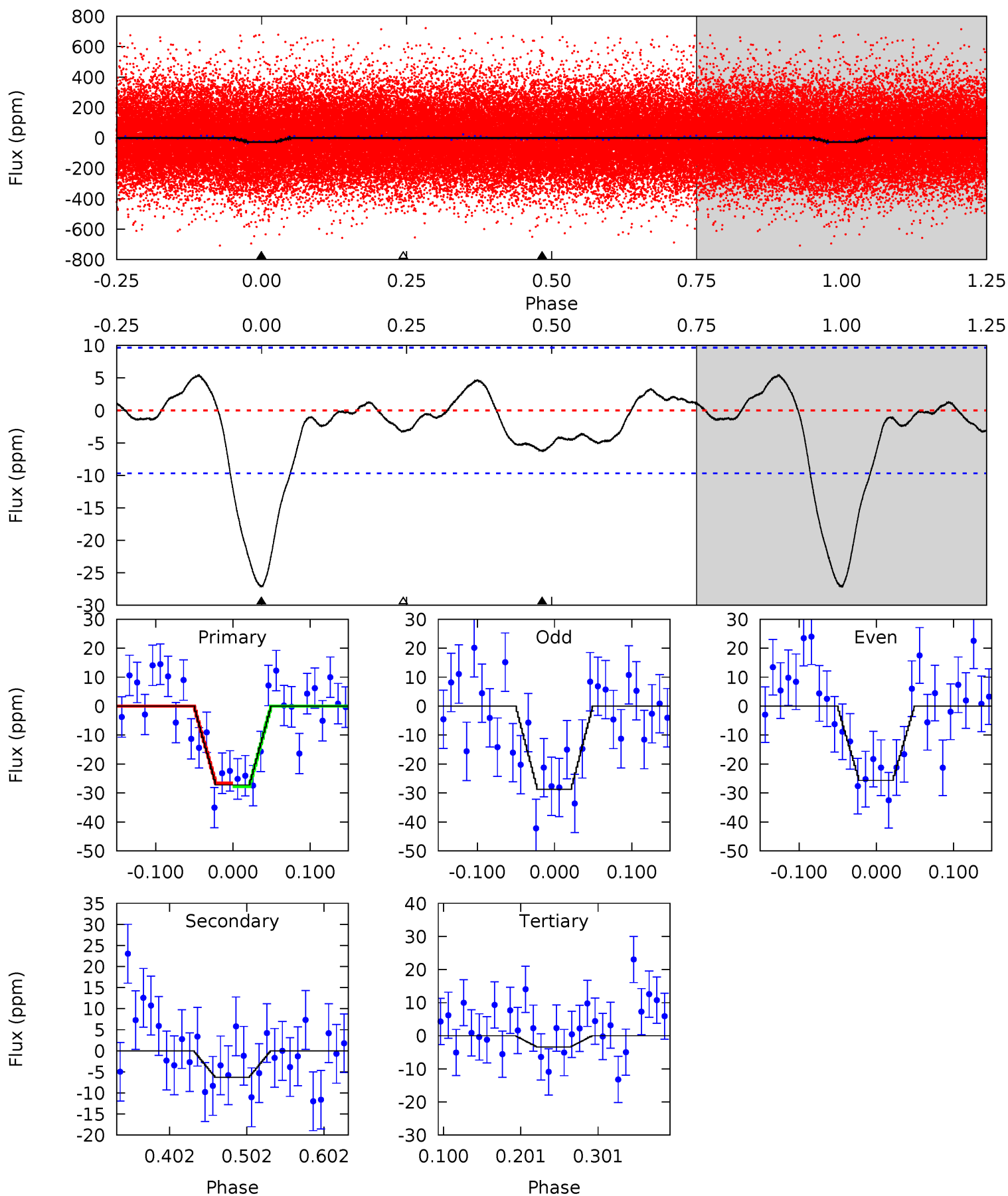
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.5	2.48	1.34	0	4.55	1.61	1.03	11.1	12.5	1.14	2.48	0.37	1.12	0.16	0.56



Alt Model-Shift Uniqueness Test

006783732-01, P = 0.721339 Days, E = 130.852761 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.8	2.97	1.58	0	4.56	1.64	1.11	11.2	12.8	1.39	2.97	0.73	1.04	0.17	0.31



Stellar Parameters For KIC 006783732

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6328^{+158}_{-206}	$4.489^{+0.052}_{-0.208}$	$-0.440^{+0.300}_{-0.350}$	$0.948^{+0.289}_{-0.096}$	$1.012^{+0.132}_{-0.132}$	$1.671^{+0.459}_{-0.857}$
	+2%/-3%	+1%/-5%	+68%/-80%	+30%/-10%	+13%/-13%	+27%/-51%
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 006783732-01 / KOI 7790.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-5 ± 2	$0.55^{+0.18}_{-0.17}$	3074^{+209}_{-139}	4261^{+809}_{-600}	$2.231^{+2.692}_{-1.162}$
Alt.	-6 ± 2	$0.56^{+0.18}_{-0.17}$	3083^{+228}_{-161}	4469^{+812}_{-625}	$2.685^{+3.160}_{-1.347}$

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

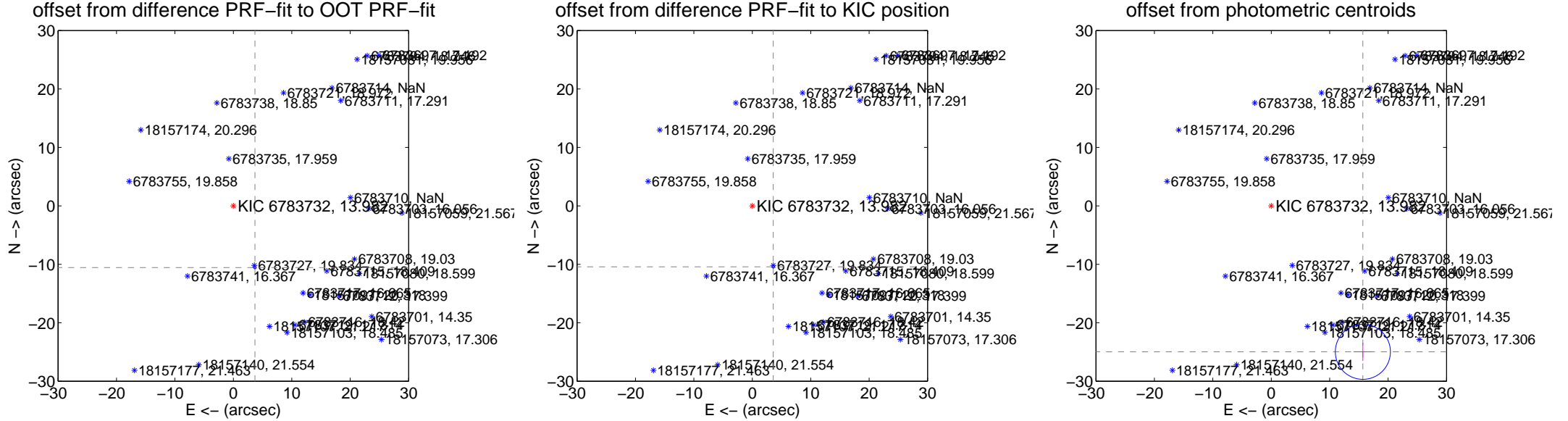
DV Centroid Data

Supplemental centroid analysis for 006783732-01. Kepler magnitude: 13.98. Transit SNR 8.04

There are 4 quarters with good PRF difference image offsets

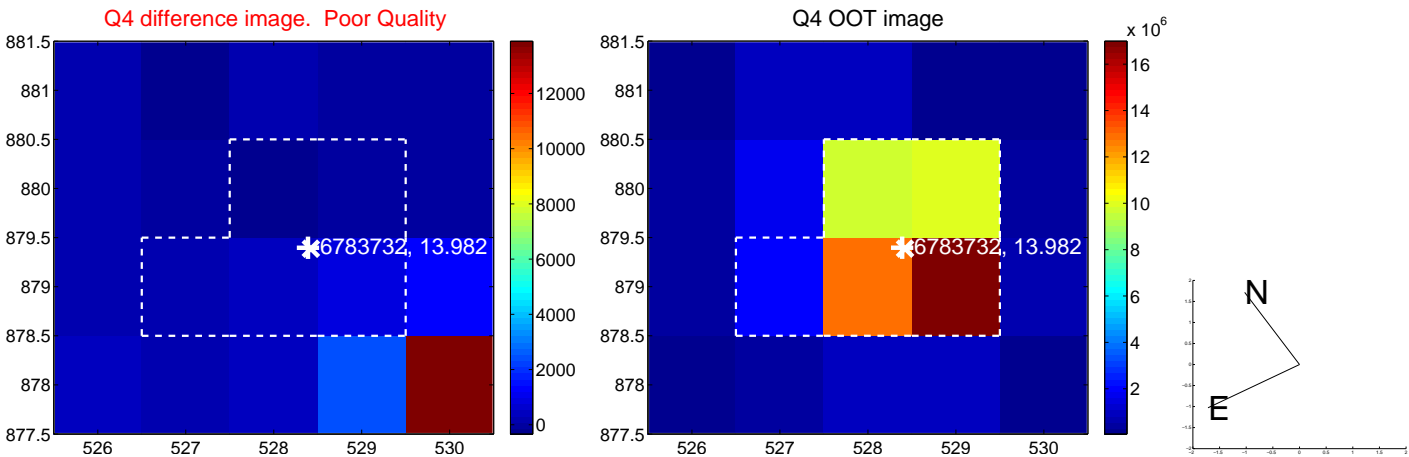
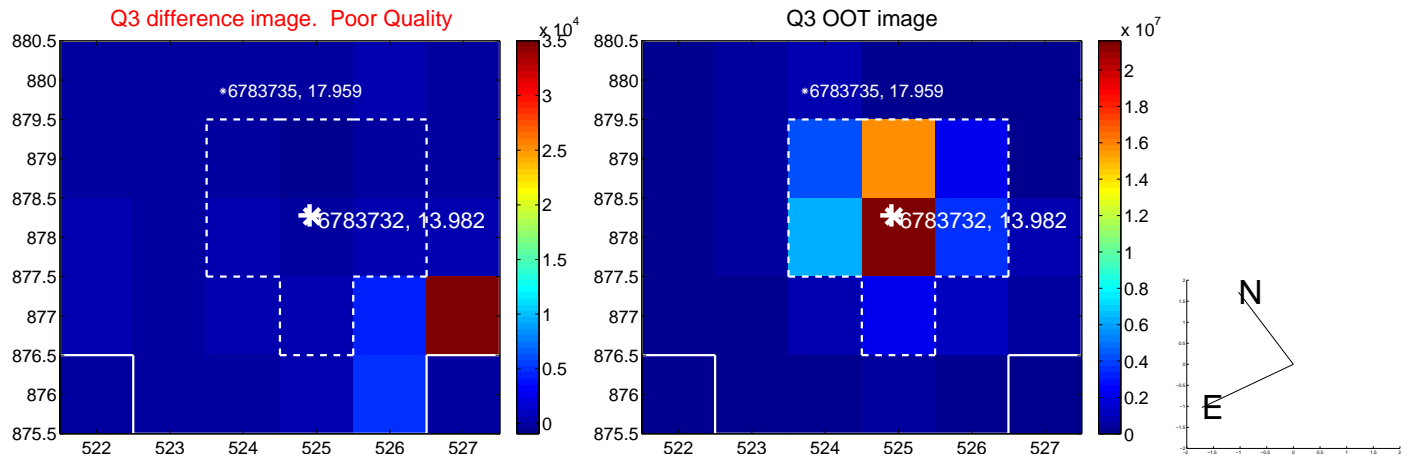
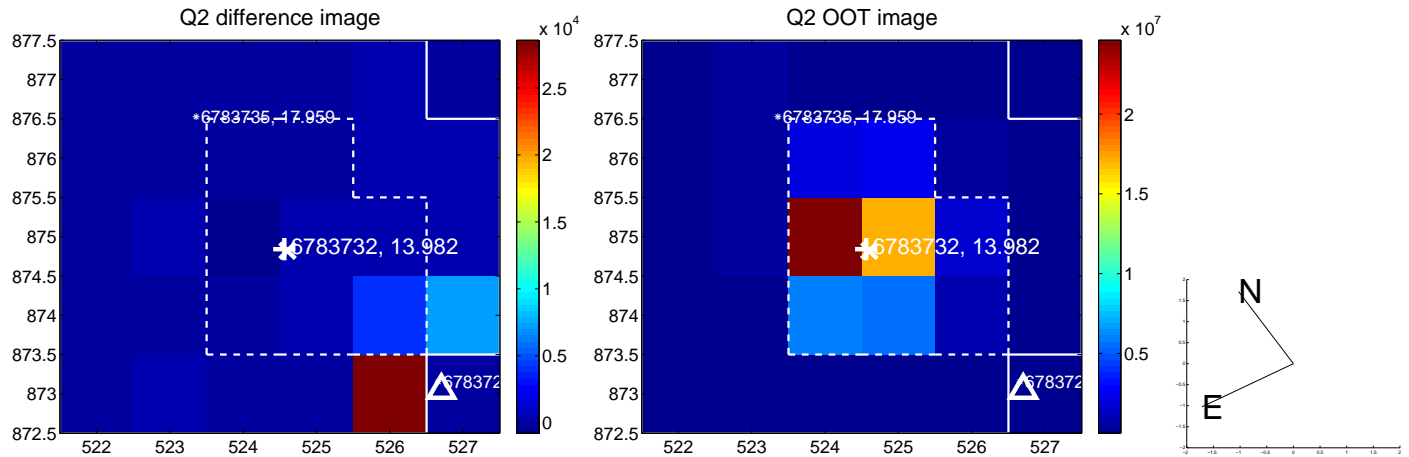
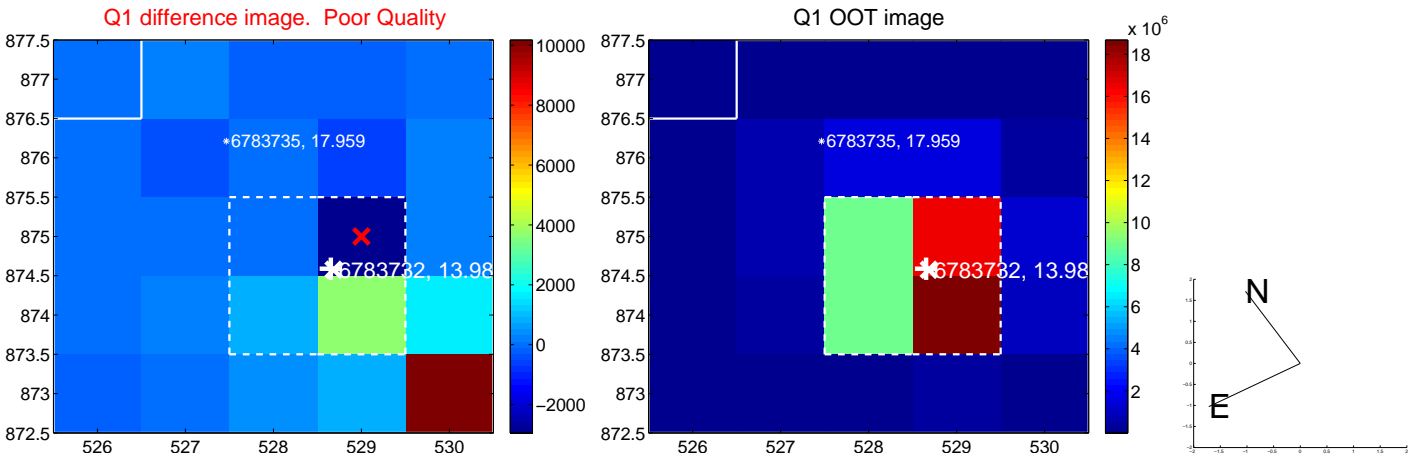
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	11.187 ± 0.072	155.94	-3.698 ± 0.071	-10.558 ± 0.070
PRF-fit source offset from KIC position	11.026 ± 0.073	151.54	-3.588 ± 0.073	-10.425 ± 0.073
photometric centroid source offset	29.48 ± 1.57	18.77	-15.68 ± 1.58	-24.97 ± 1.57

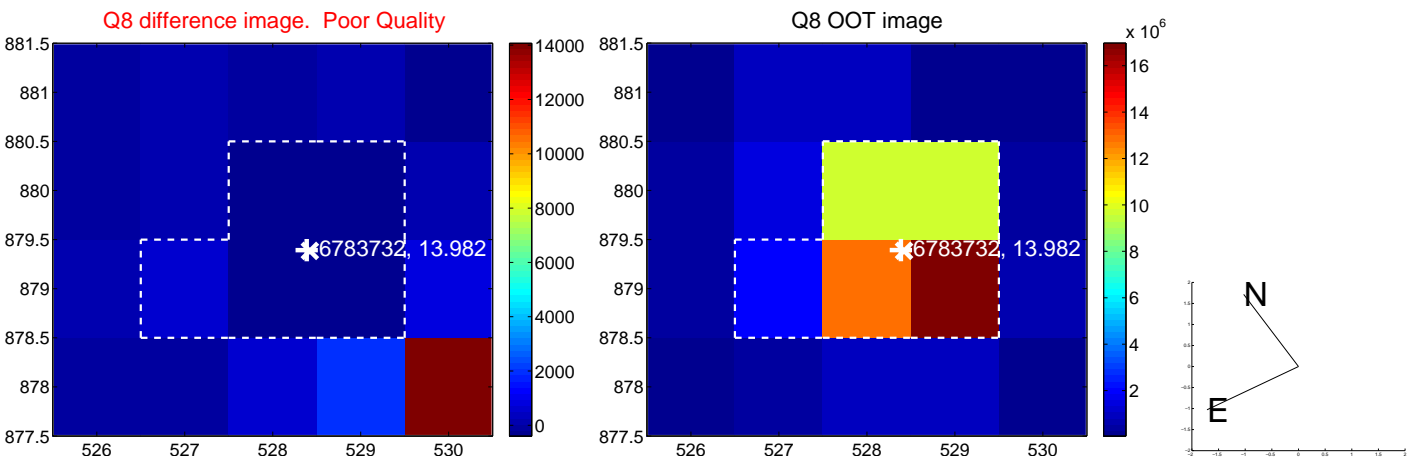
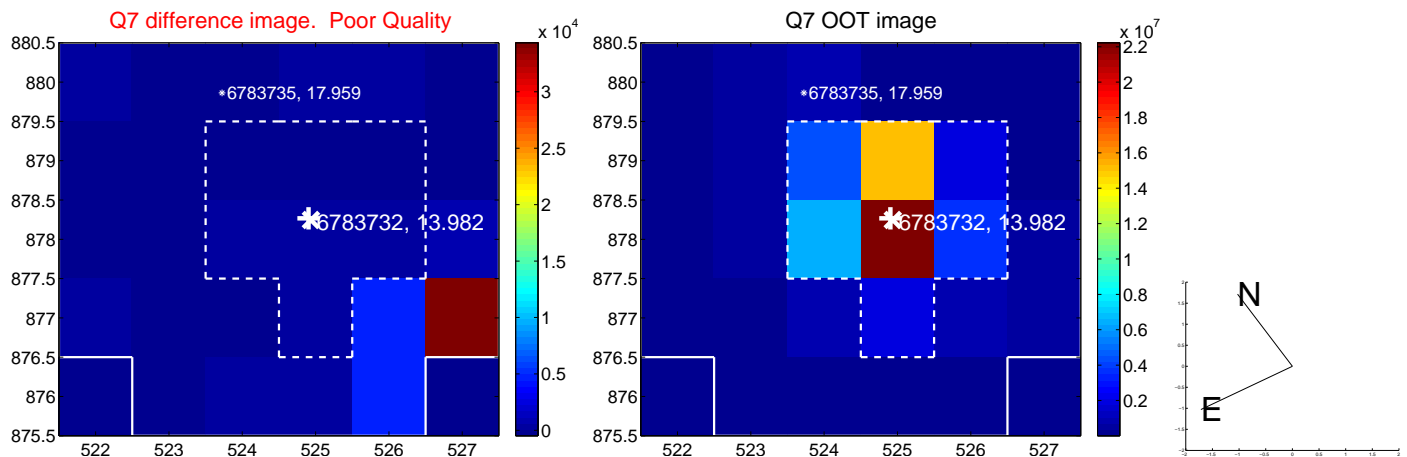
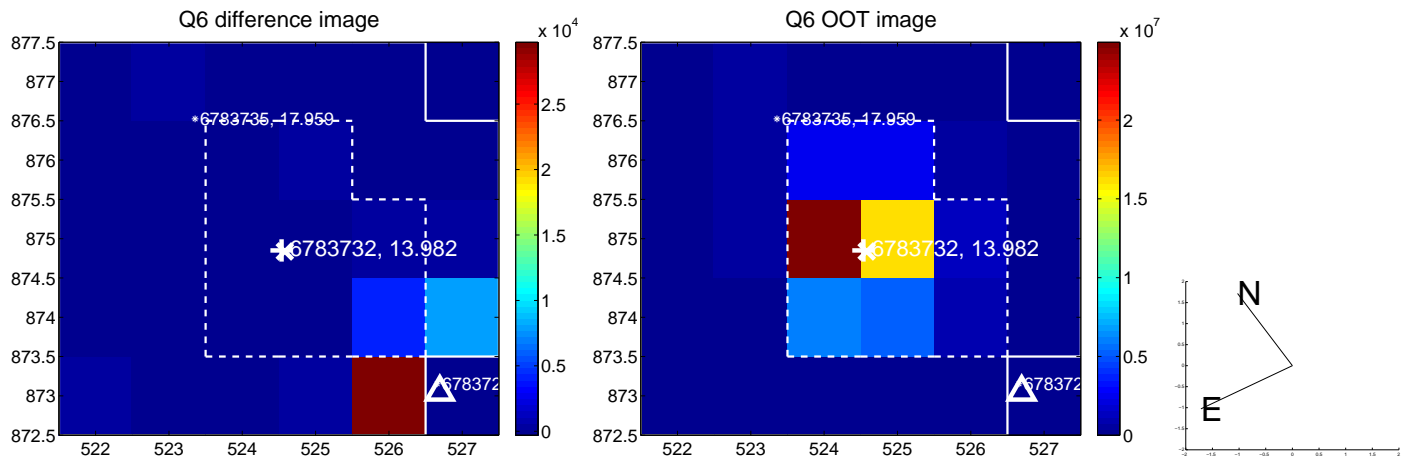
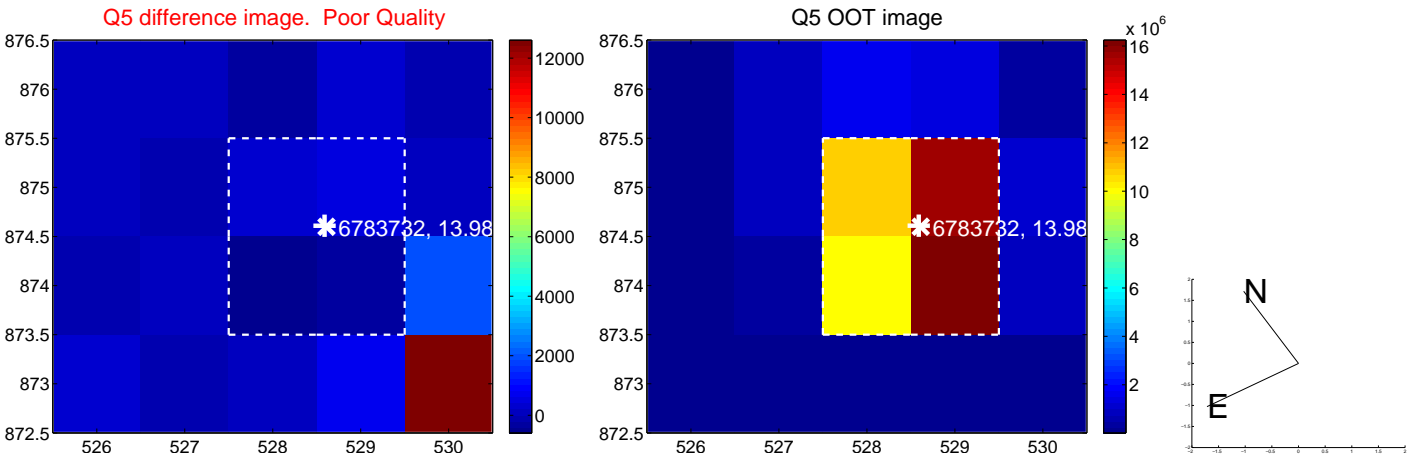


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

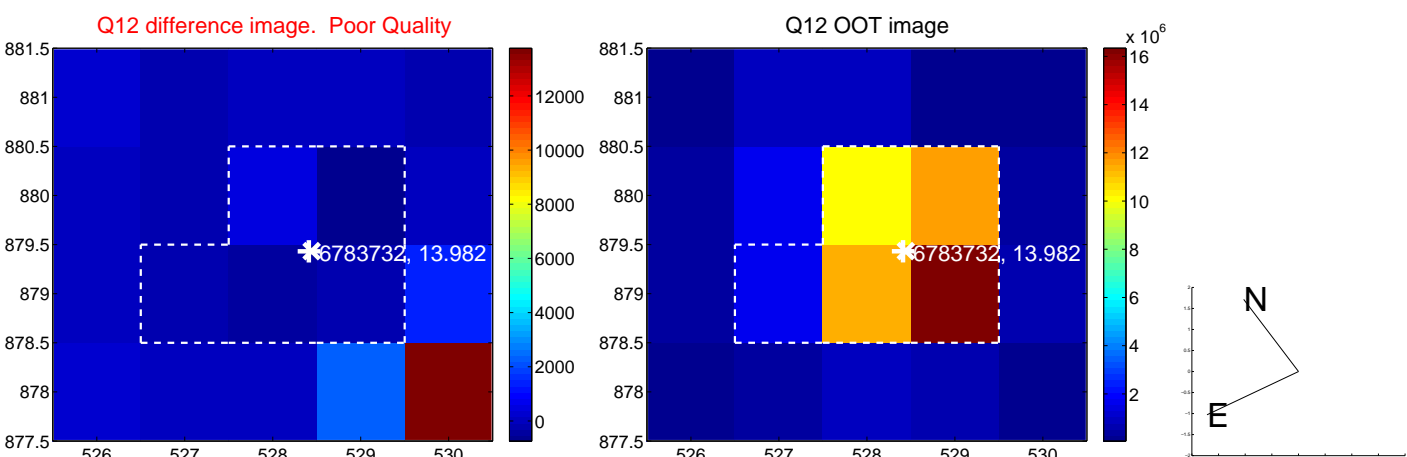
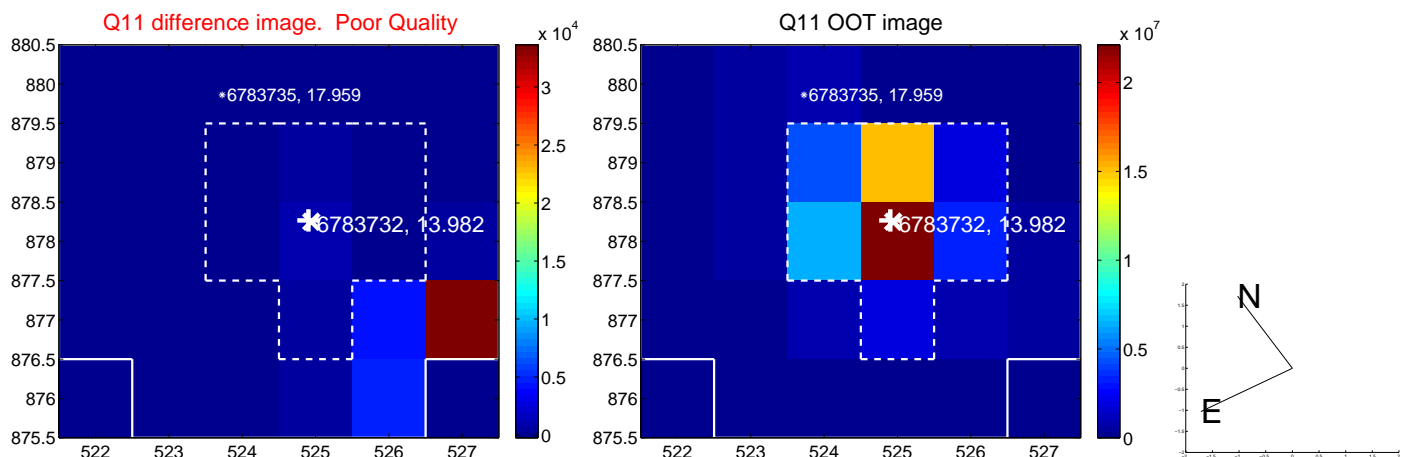
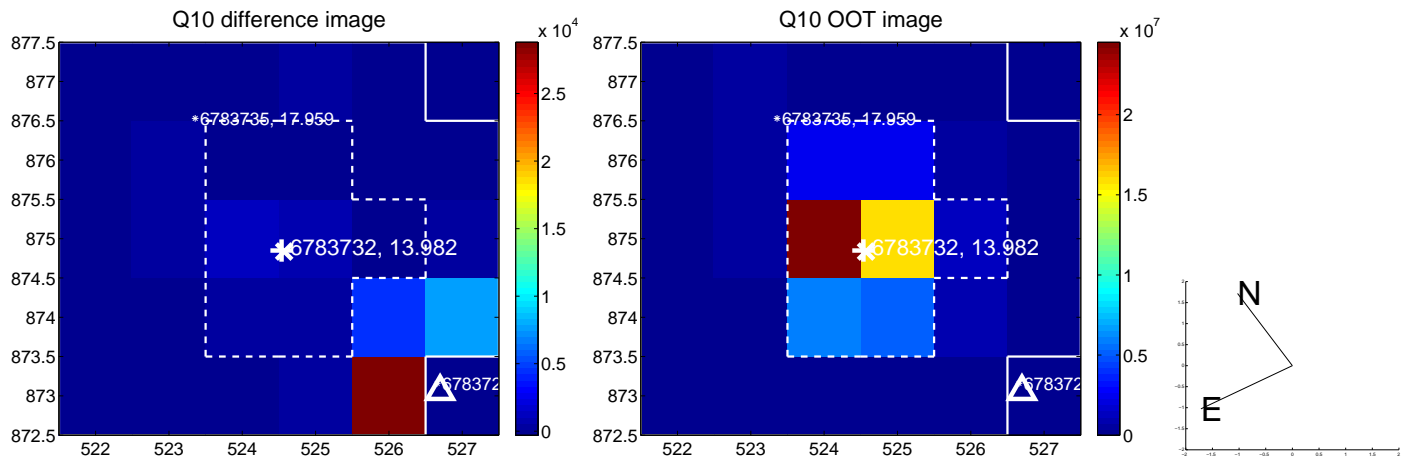
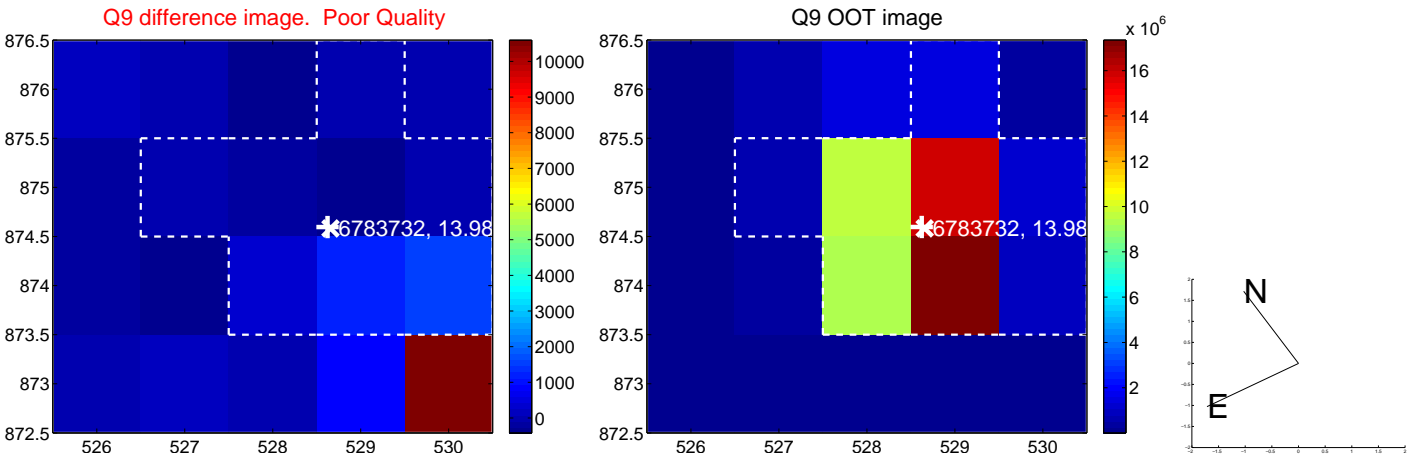
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



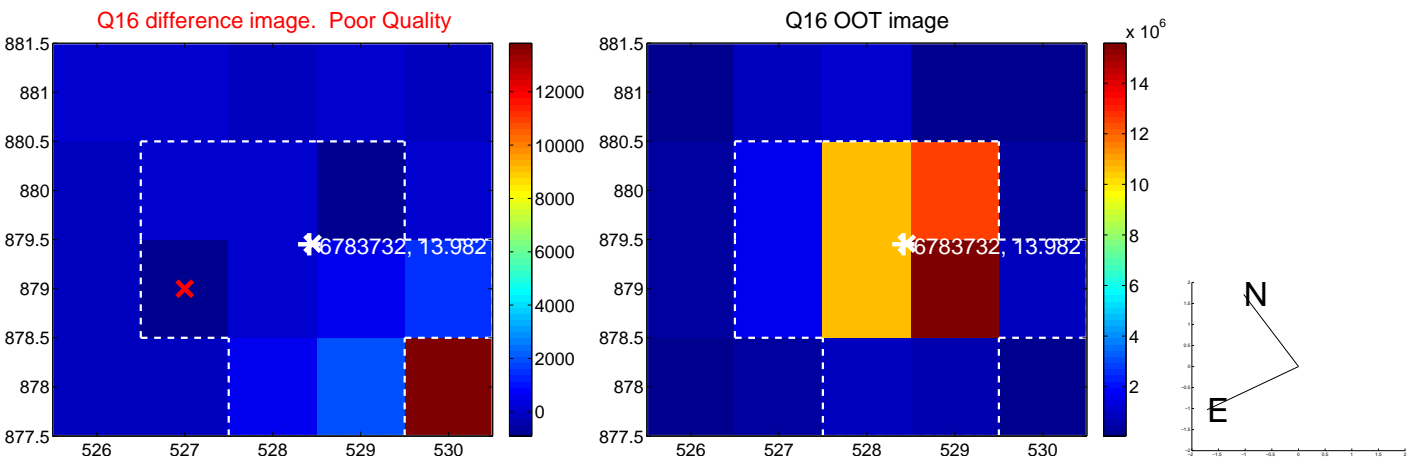
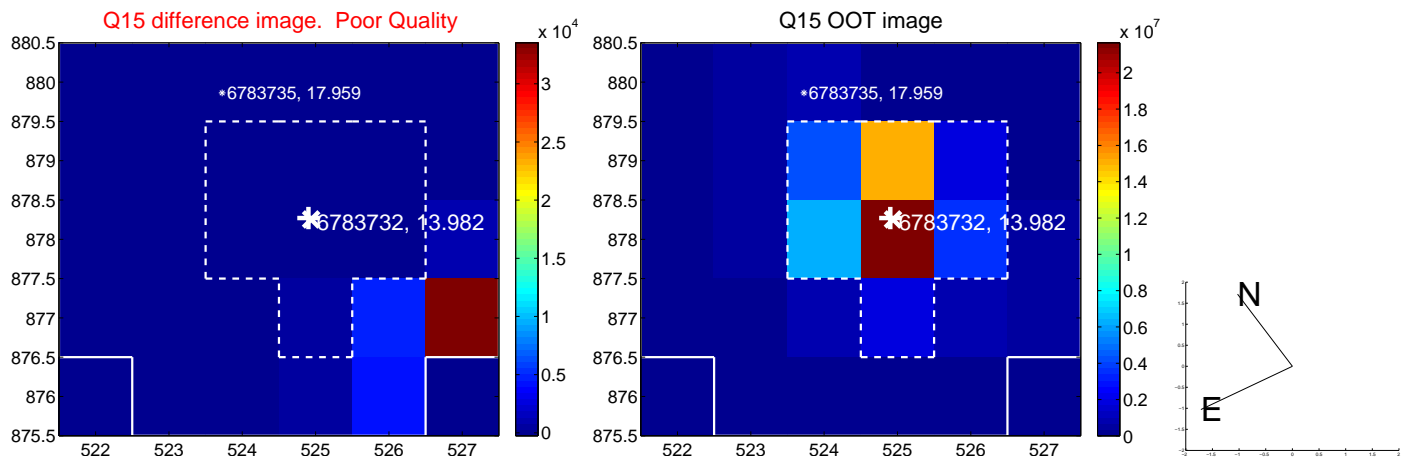
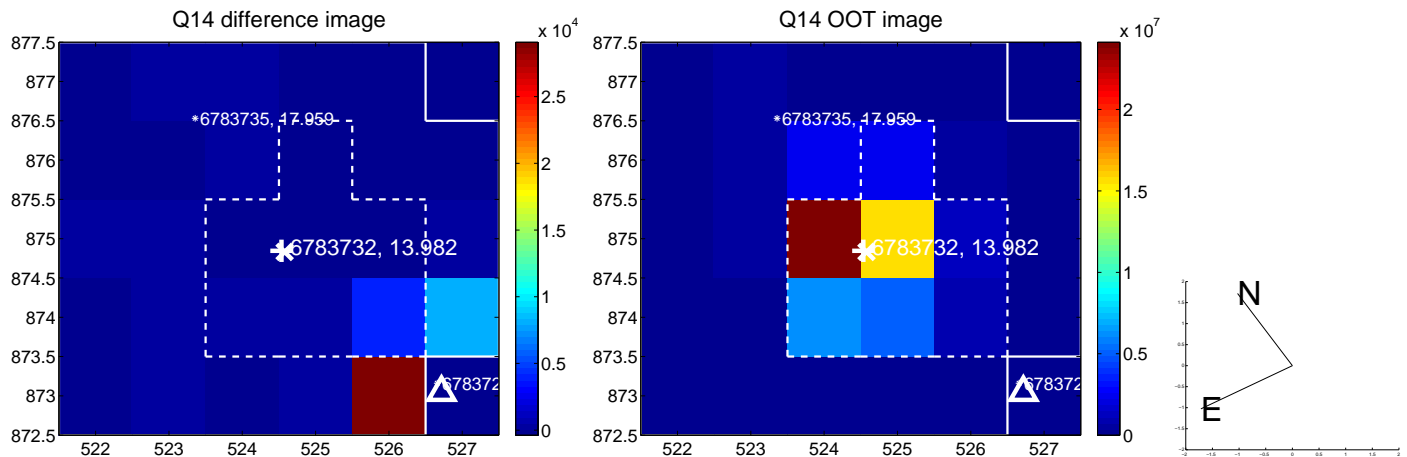
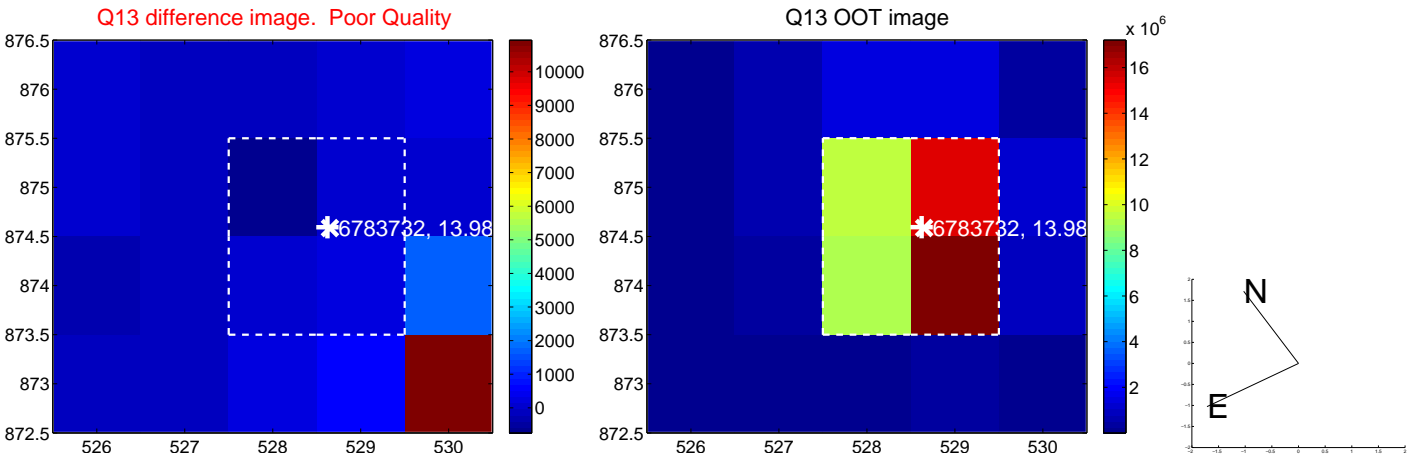
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



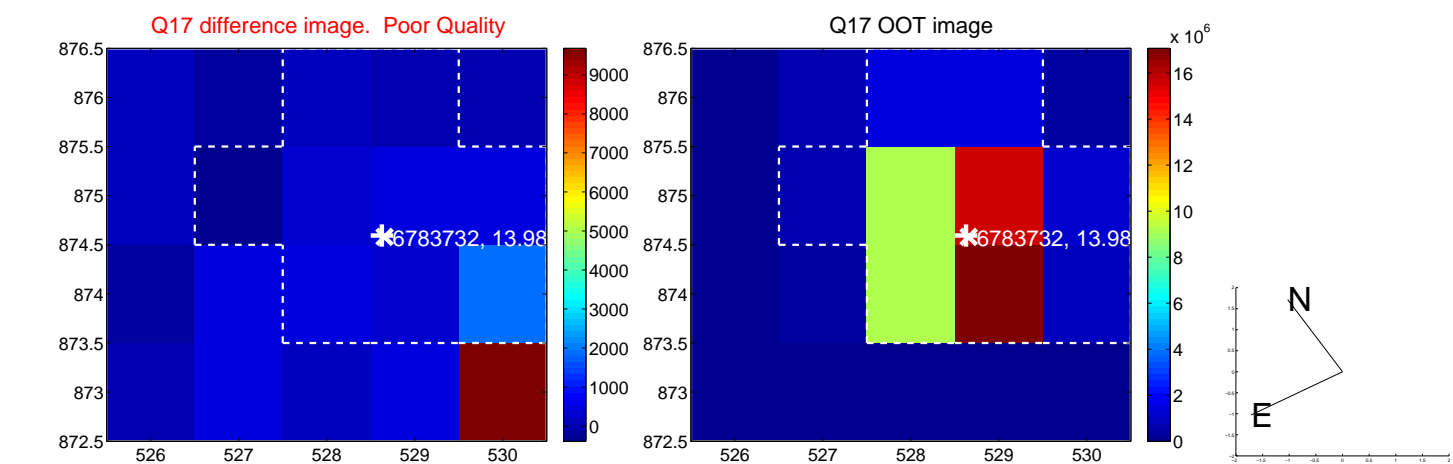
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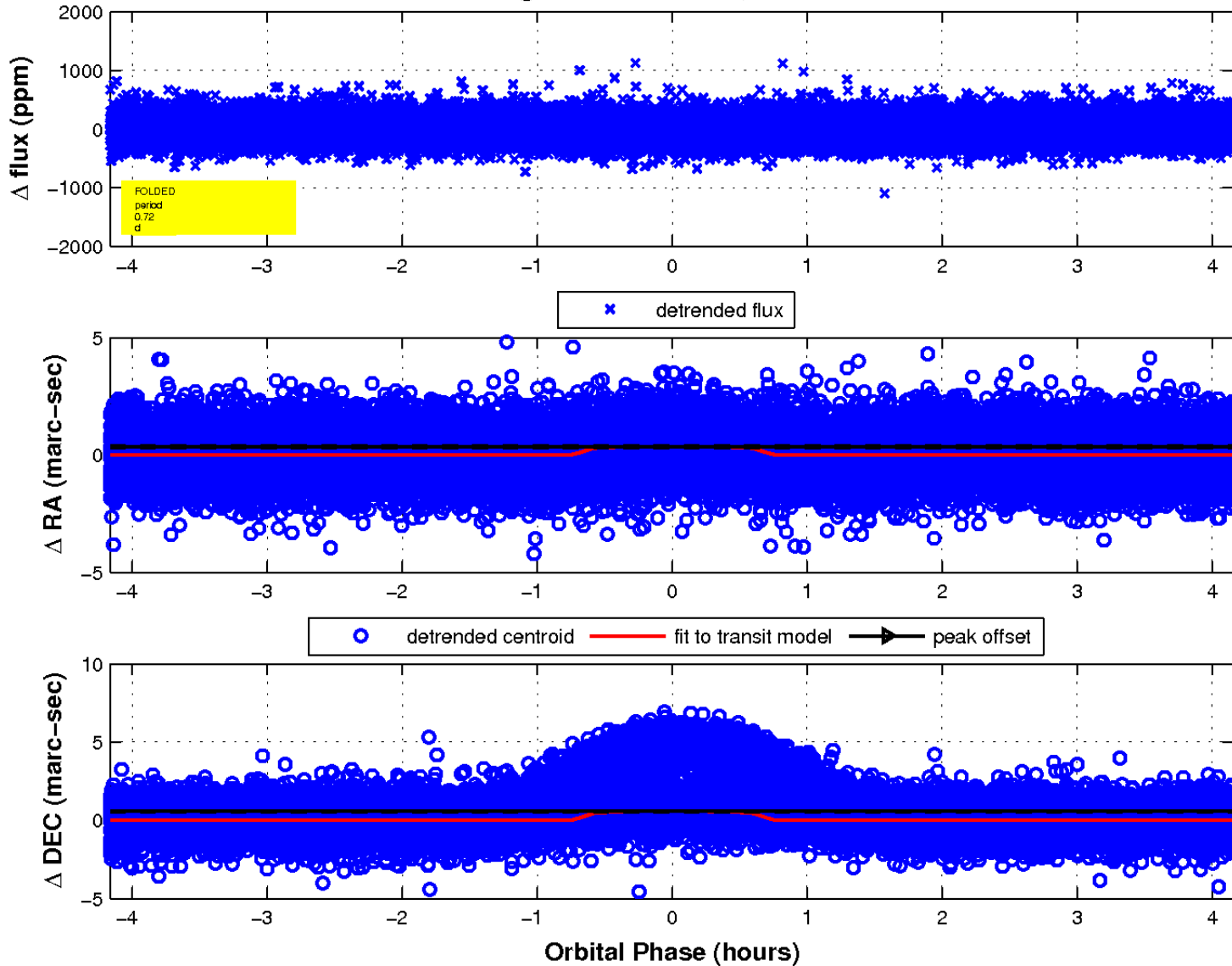
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

