

KIC 010613718

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})
010613718-01	OBS	7350.01	0.587805	132.031633	298.1	3.820	1141.6	46.2	0.74	5237	1.25	2487.34

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010613718-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT

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.

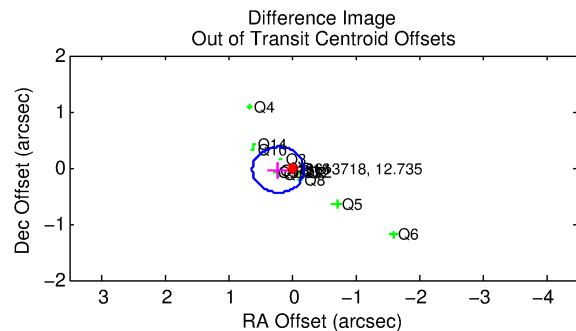
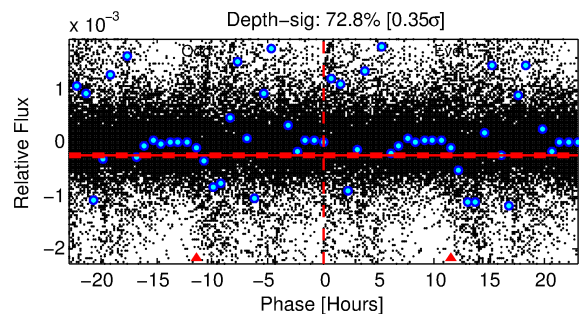
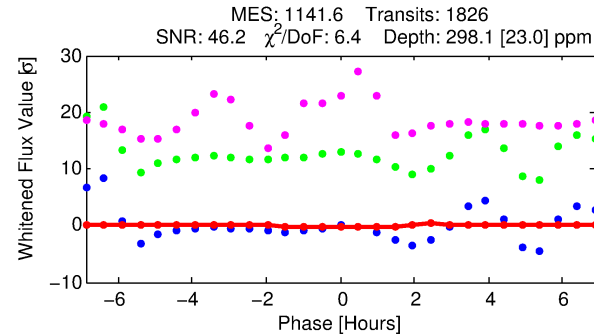
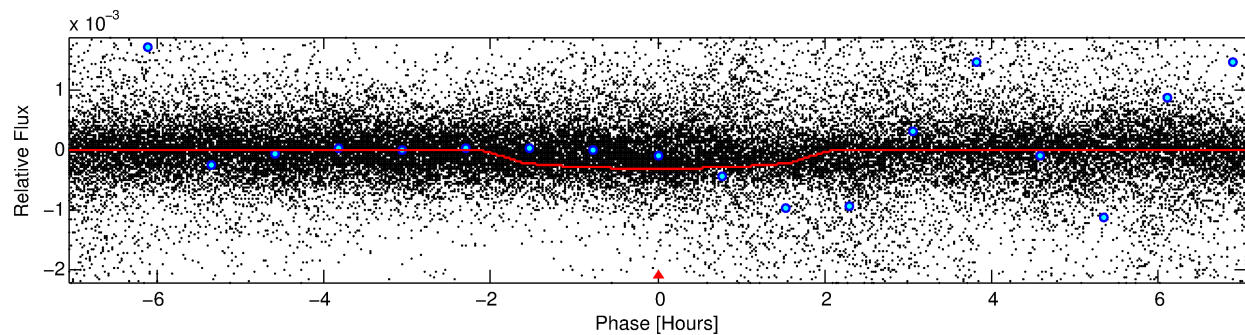
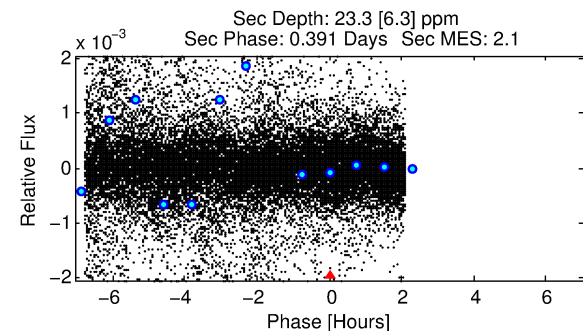
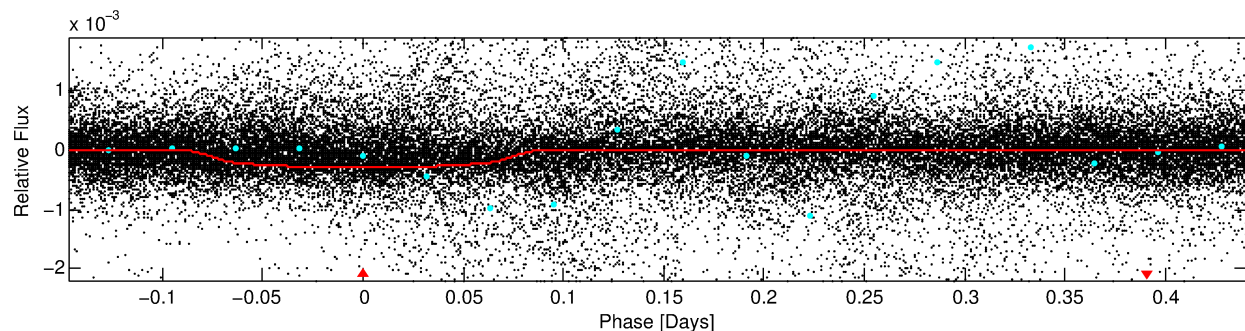
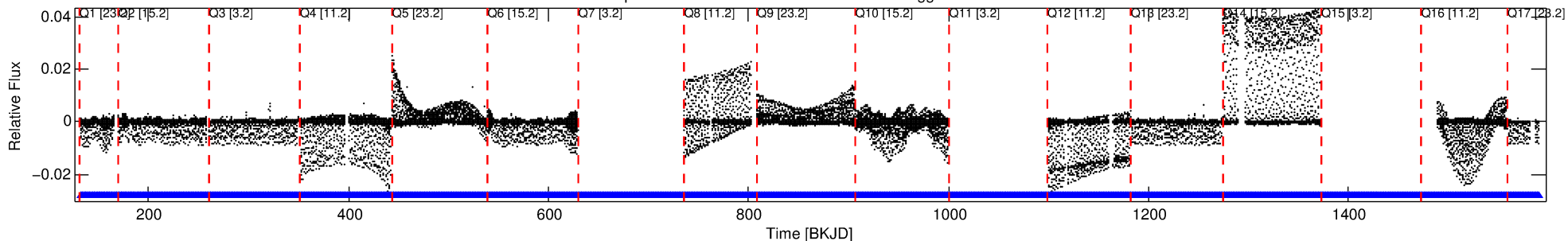
Ephemeris Match Information For 010613718-01

No Significant Match Found

DV One-Page Summary

KIC: 10613718 Candidate: 1 of 1 Period: 0.588 d
KOI: K07350 Corr: No Ephemeris Match

Kp: 12.73 R*: 0.74 Rs Teff: 5237.0 K Logg: 4.54 Fe/H: -0.460



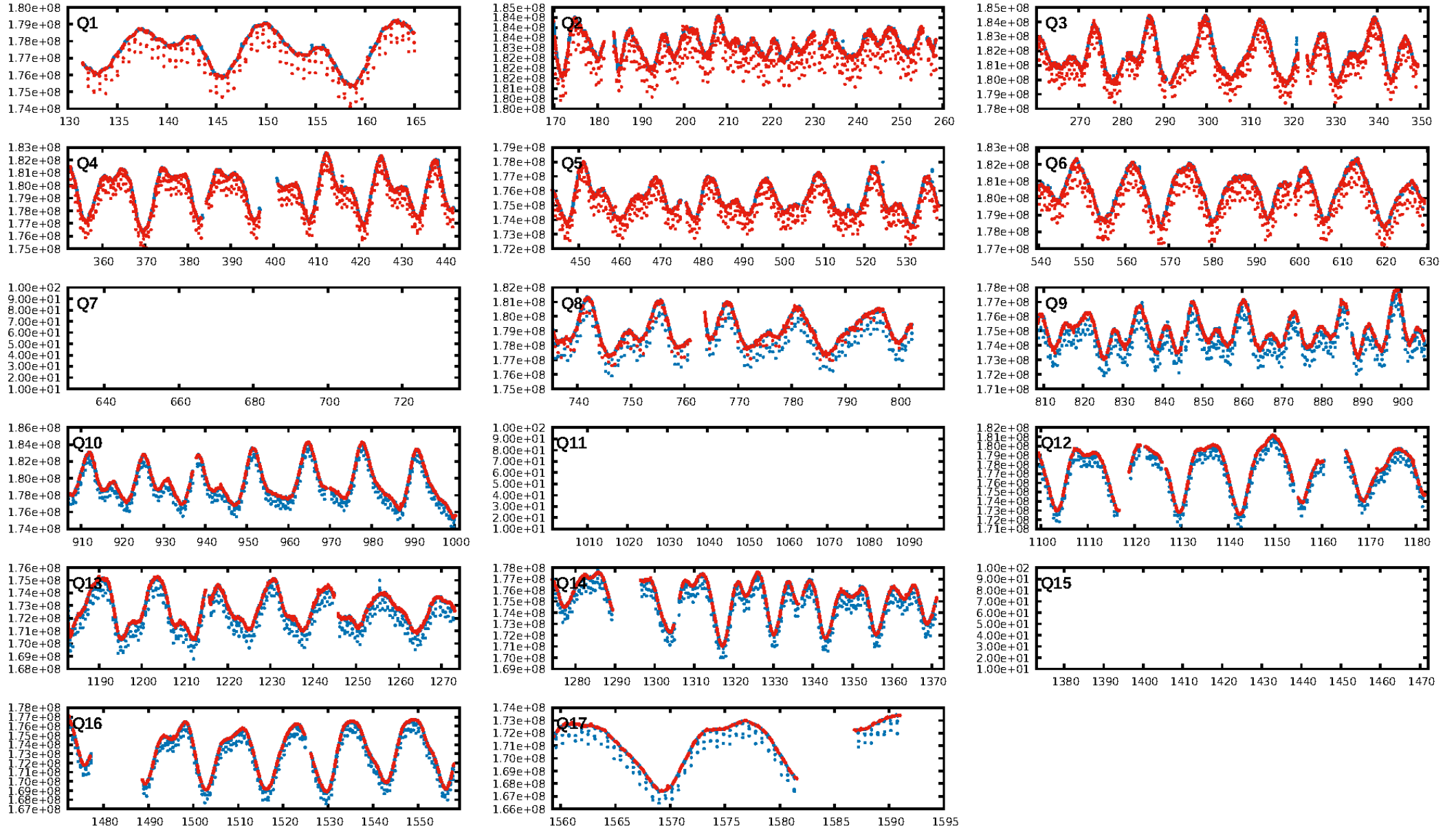
DV Fit Results:

Period = 0.58781 [0.00001] d
Epoch = 132.0316 [0.0013] BKJD
Rp/R* = 0.0155 [0.0103]
a/R* = 1.35 [1.60]
b = 0.00 [585.63]
Seff = 2487.34 [490.42]
Teq = 1801 [89] K
Rp = 1.25 [0.85] Re
a = 0.0122 [0.0013] AU
Ag = 1.21 [1.65] [0.13σ]
Teffp = 2920 [993] K [1.12σ]

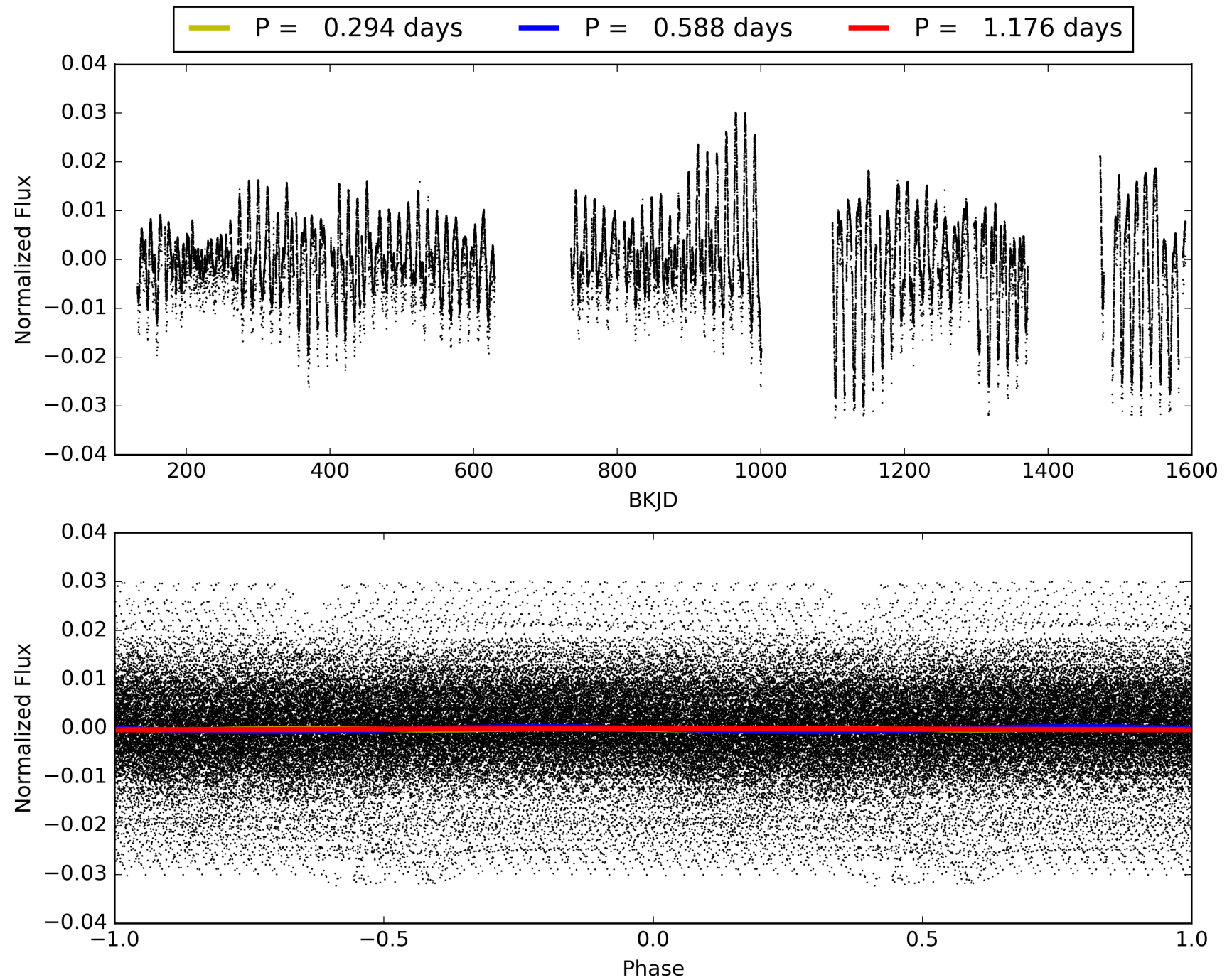
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [1721/1721]
GhostDiagnostic-chr: 0.9093
Centroid-sig: 0.1%
Centroid-so: 0.328 arcsec [7.11σ]
OotOffset-rm: 0.219 arcsec [1.62σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-rm: 0.300 arcsec [3.39σ]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 0.43 [6/14]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 010613718-01, PDC Light Curves

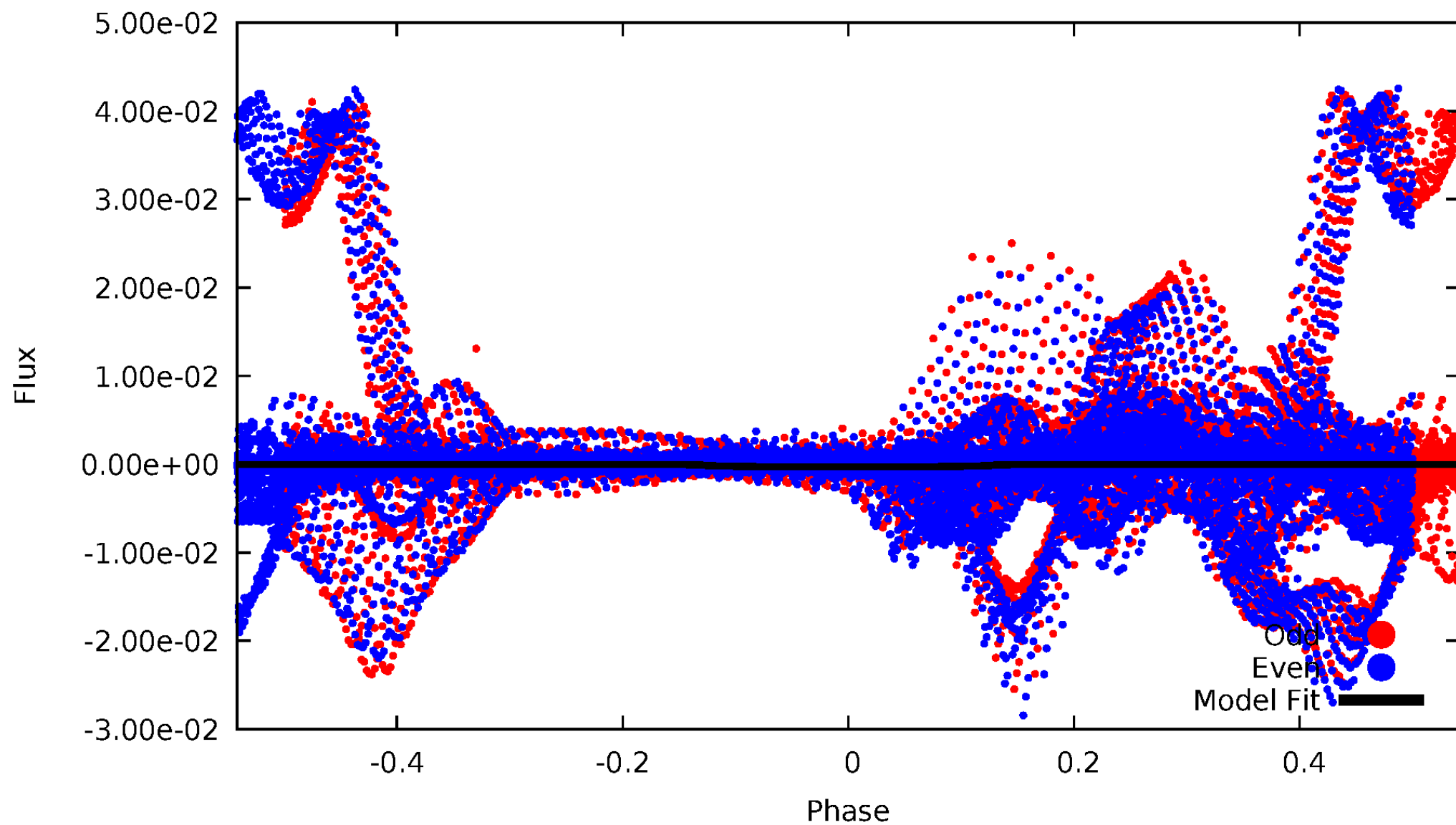


TCE 010613718-01



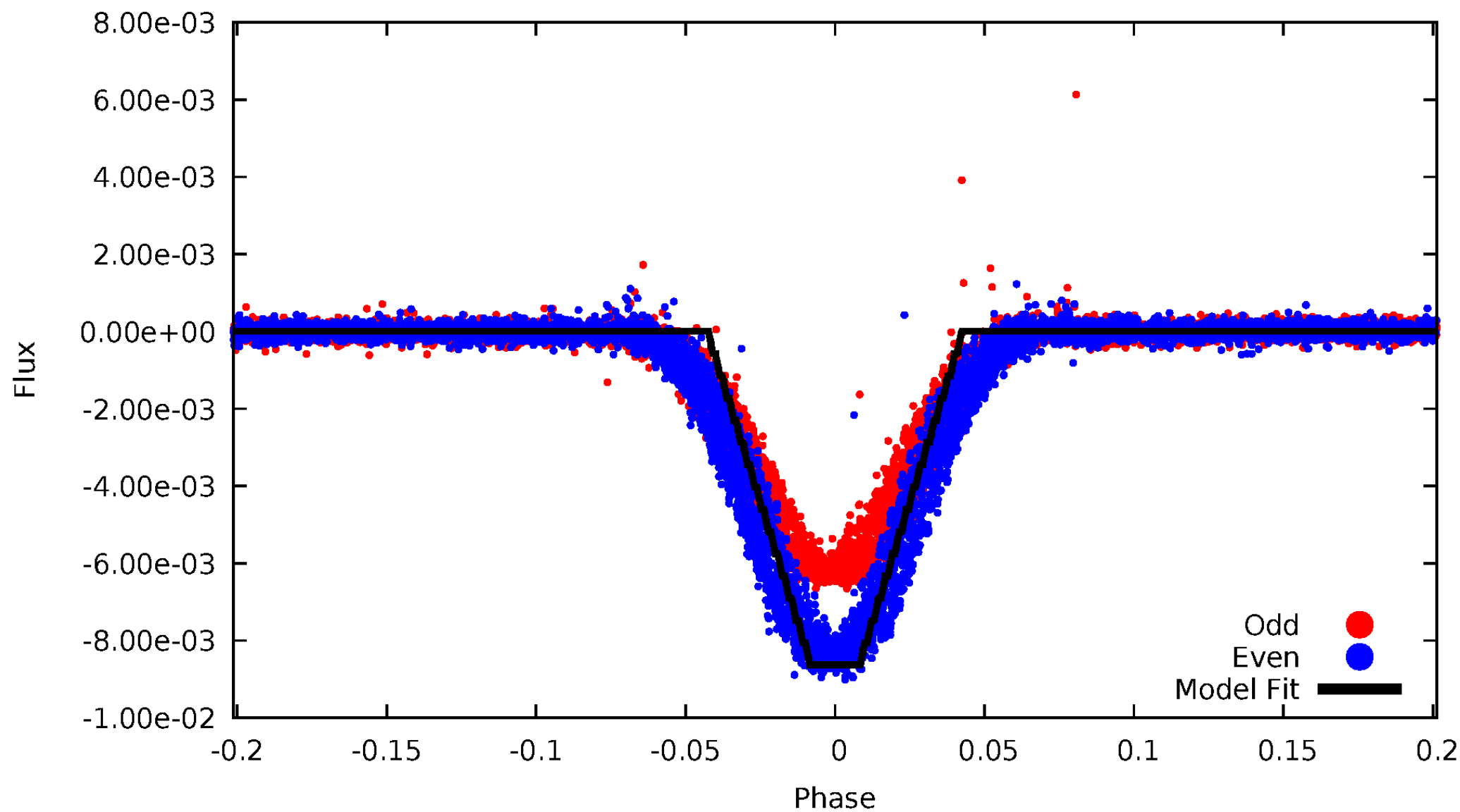
DV Odd/Even

TCE 010613718-01



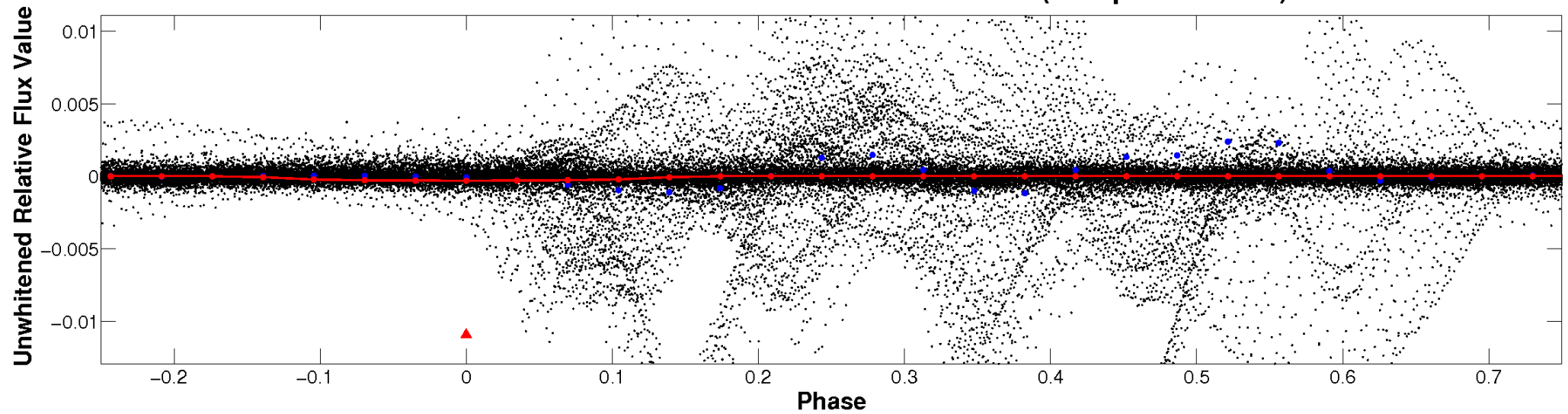
ALT Odd/Even

TCE 010613718-01

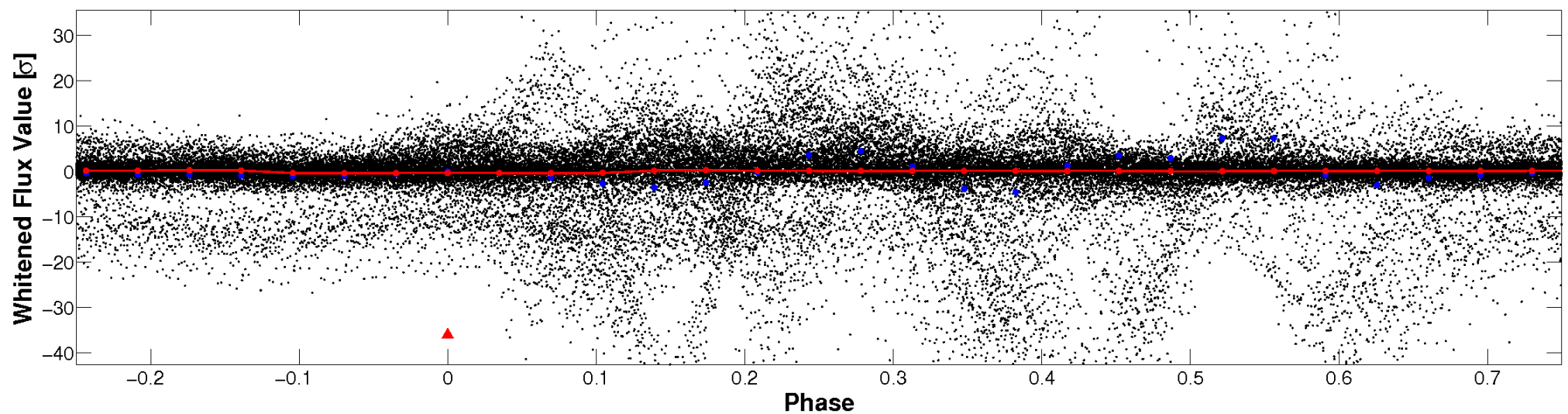


Non-Whitened Vs. Whitened Light Curve

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

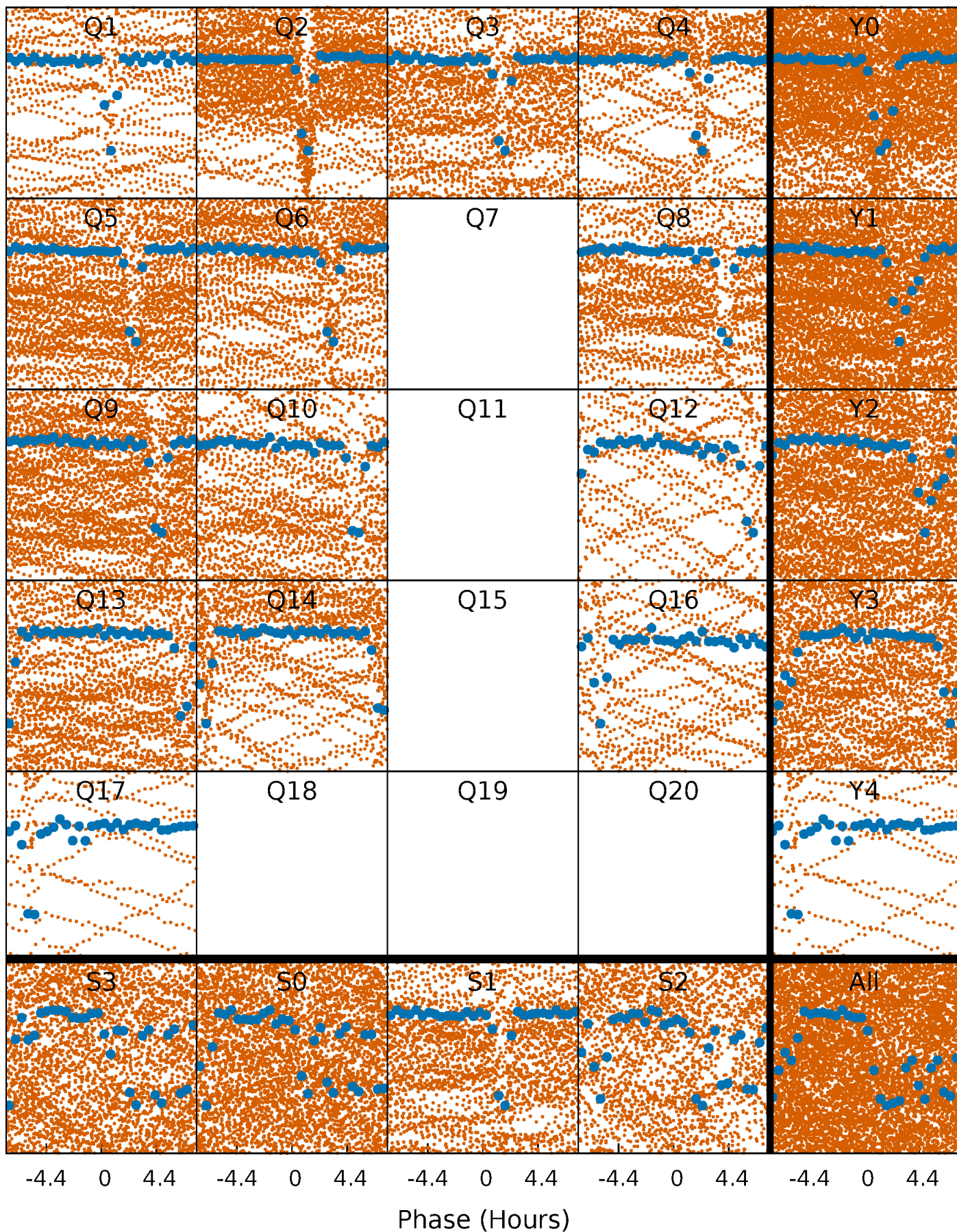


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



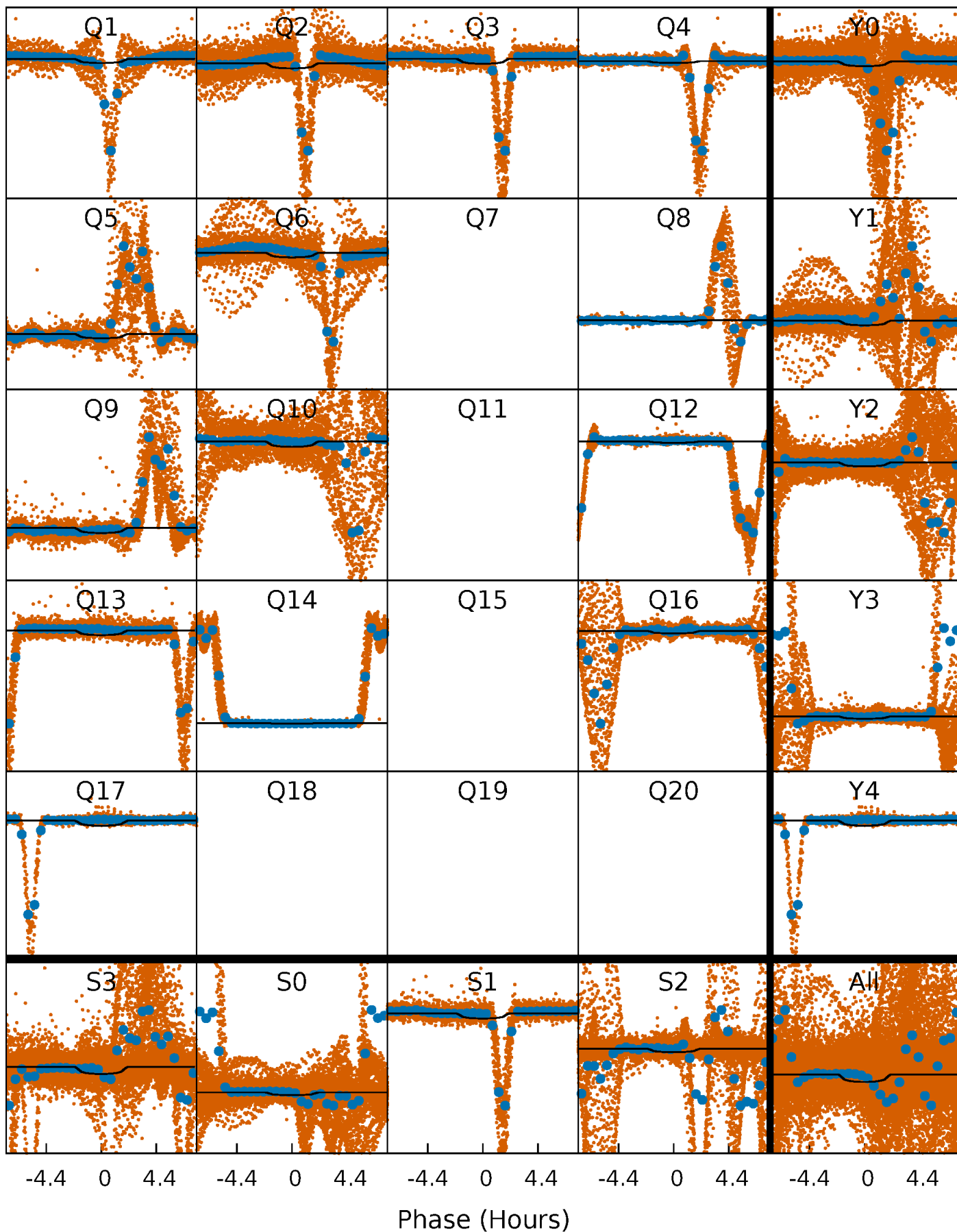
PDC Quarter-Phased Transit Curves

TCE 010613718-01 P= 0.587805 Days $T_0=132.031633$ (BKJD)



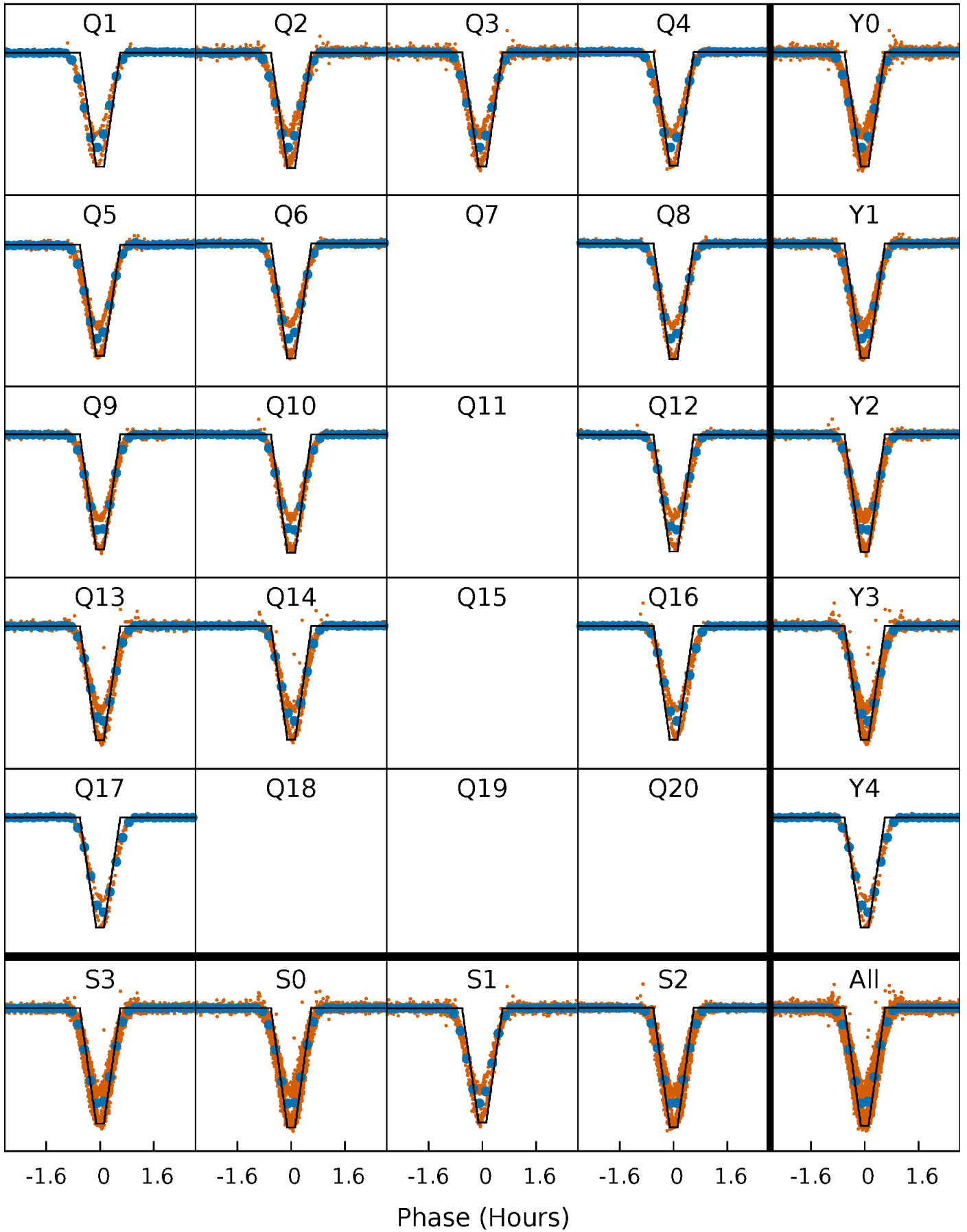
DV Quarter-Phased Transit Curves

TCE 010613718-01 P= 0.587805 Days $T_0=132.031633$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

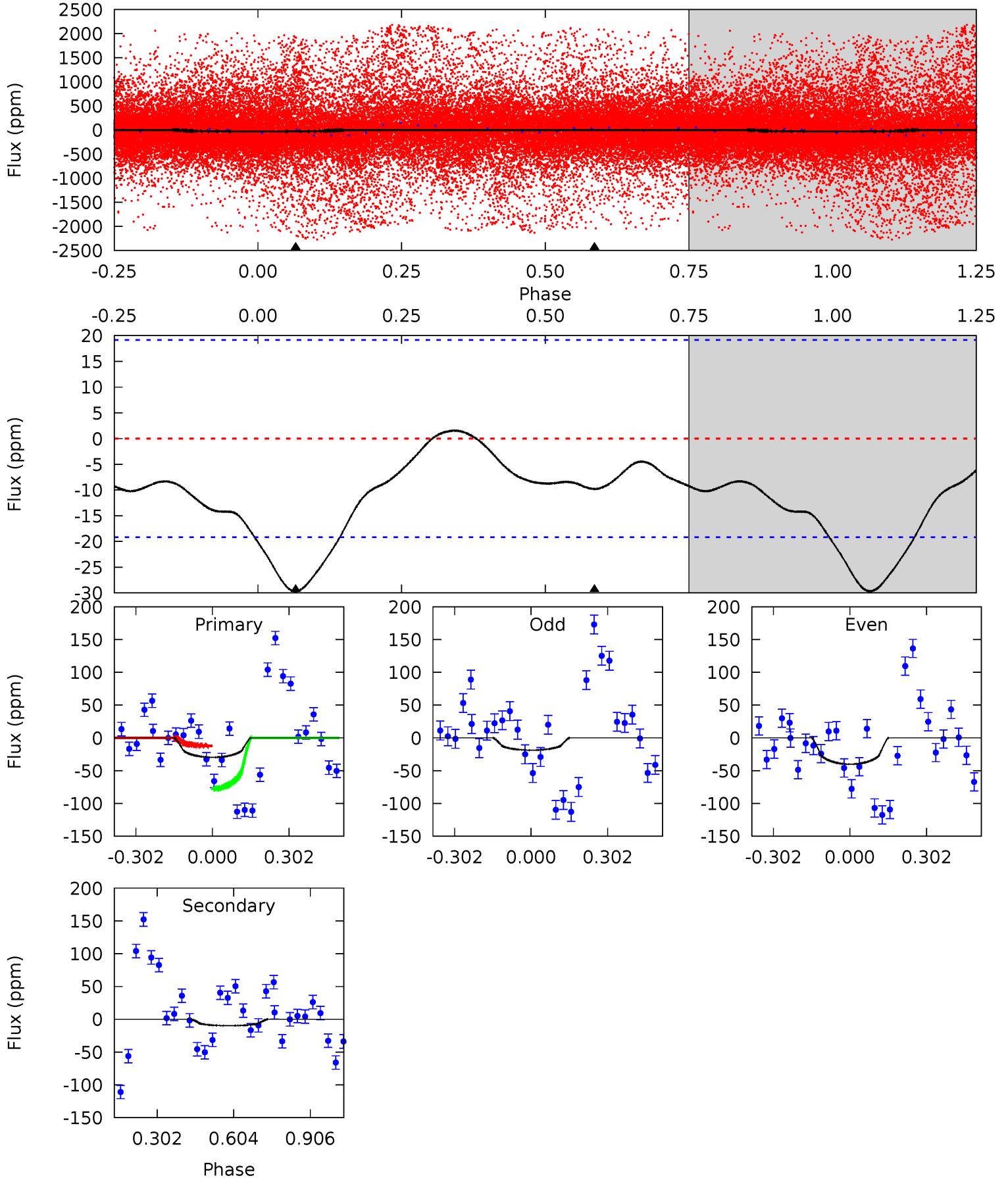
TCE 010613718-01 P= 0.587936 Days $T_0=132.061731$ (BKJD)



DV Model-Shift Uniqueness Test

010613718-01, P = 0.587805 Days, E = 131.443828 Days

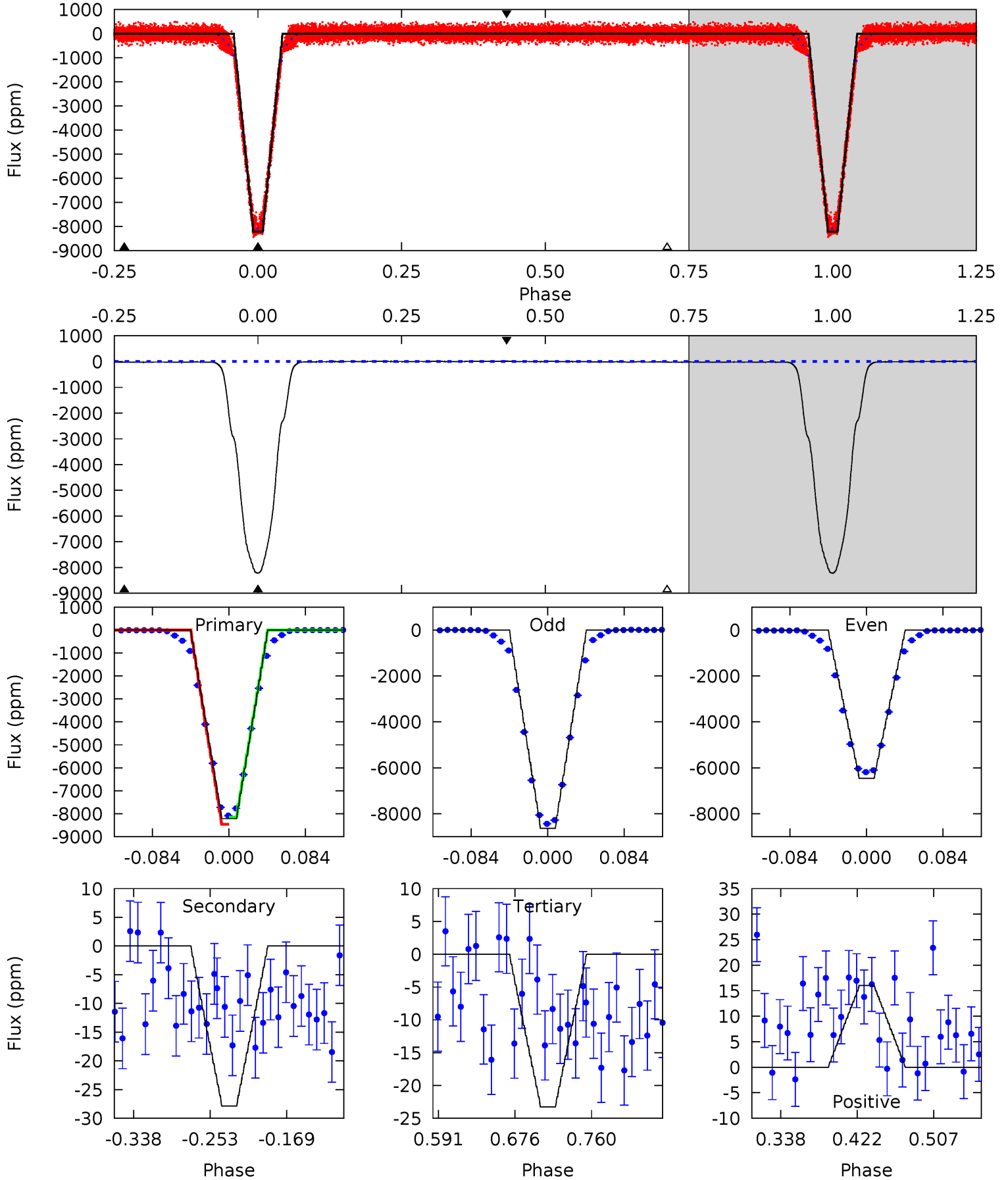
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.70	2.22	0	0	4.33	1.03	1.04	6.70	6.70	2.22	2.22	2.48	1.78	0.05	5.66



Alt Model-Shift Uniqueness Test

010613718-01, P = 0.587936 Days, E = 131.473795 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2704	9.17	7.66	5.27	4.60	1.73	3.69	2697	2699	1.51	3.90	423.7	1.00	0.00	0



Stellar Parameters For KIC 010613718

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5237^{+156}_{-140}	$4.543^{+0.088}_{-0.072}$	$-0.460^{+0.300}_{-0.300}$	$0.740^{+0.089}_{-0.080}$	$0.698^{+0.100}_{-0.043}$	$2.422^{+0.948}_{-0.574}$
	+3%/-3%	+2%/-2%	+65%/-65%	+12%/-11%	+14%/-6%	+39%/-24%
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 010613718-01 / KOI 7350.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-10 ± 4	$1.34^{+0.81}_{-0.73}$	2518^{+102}_{-107}	2467^{+1156}_{-5057}	$0.412^{+1.813}_{-0.276}$
Alt.	-28 ± 3	$7.50^{+1.04}_{-0.95}$	2511^{+97}_{-100}	-2732^{+72}_{-70}	$0.041^{+0.014}_{-0.010}$

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 $A_{obs} \gg 1.0$

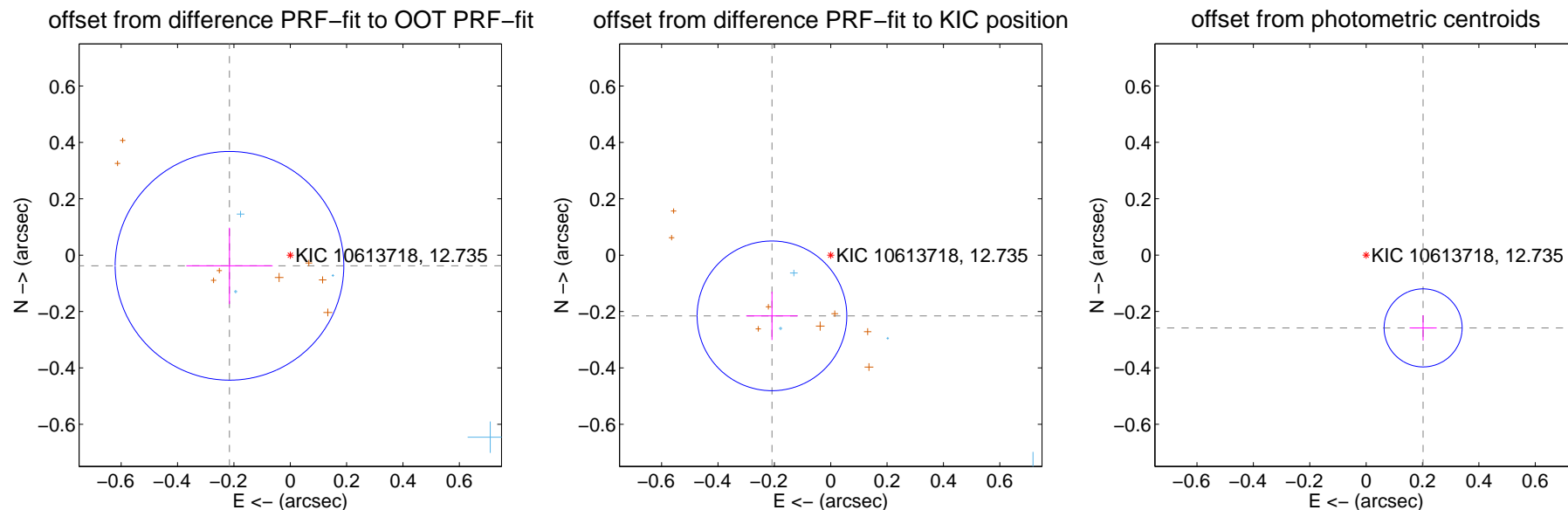
DV Centroid Data

Supplemental centroid analysis for 010613718-01. Kepler magnitude: 12.73. Transit SNR 46.21

There are 6 quarters with good PRF difference image offsets

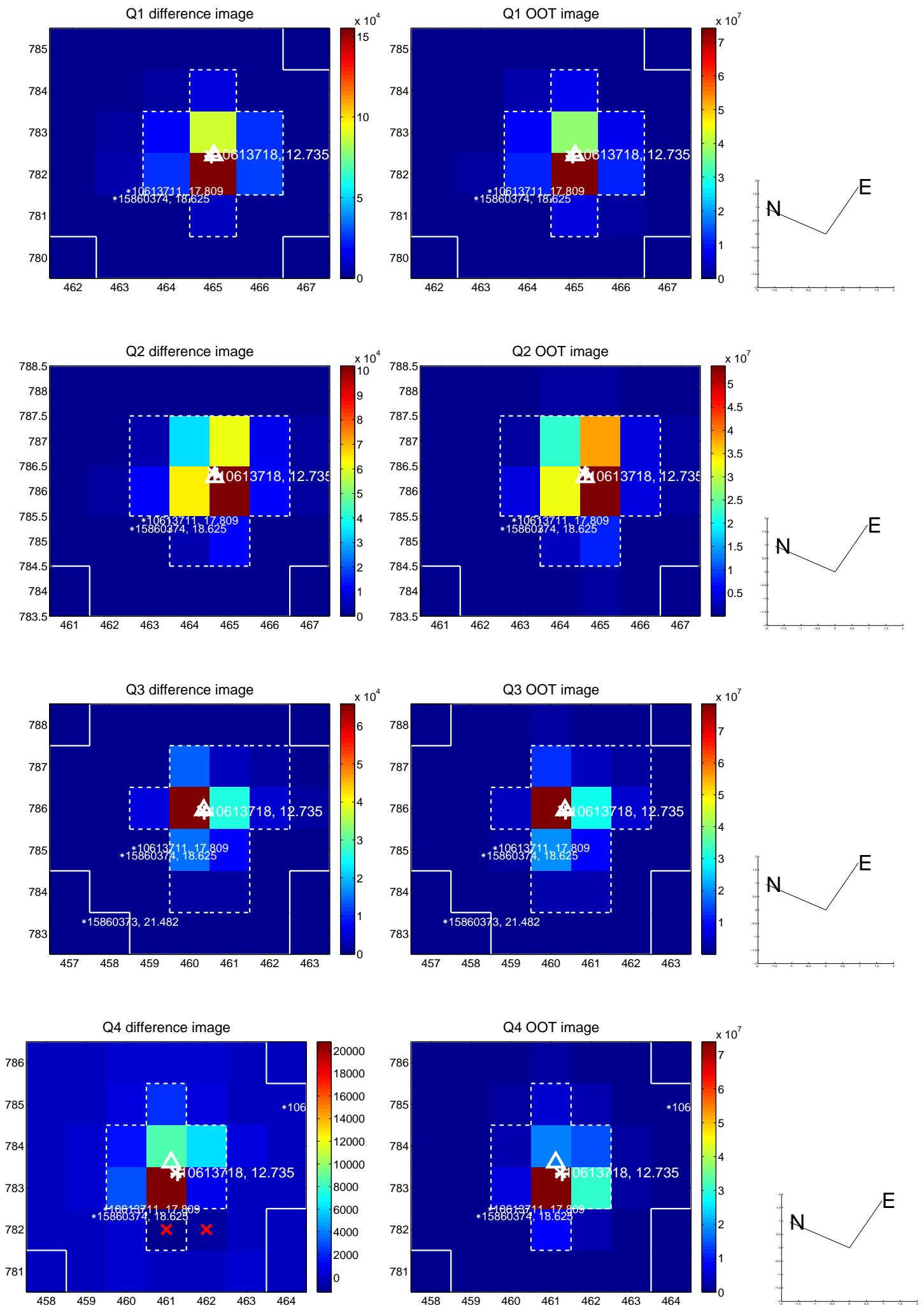
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.219 ± 0.135	1.62	0.216 ± 0.153	-0.038 ± 0.135
PRF-fit source offset from KIC position	0.300 ± 0.088	3.39	0.208 ± 0.091	-0.215 ± 0.086
photometric centroid source offset	0.33 ± 0.05	7.11	-0.20 ± 0.05	-0.26 ± 0.04

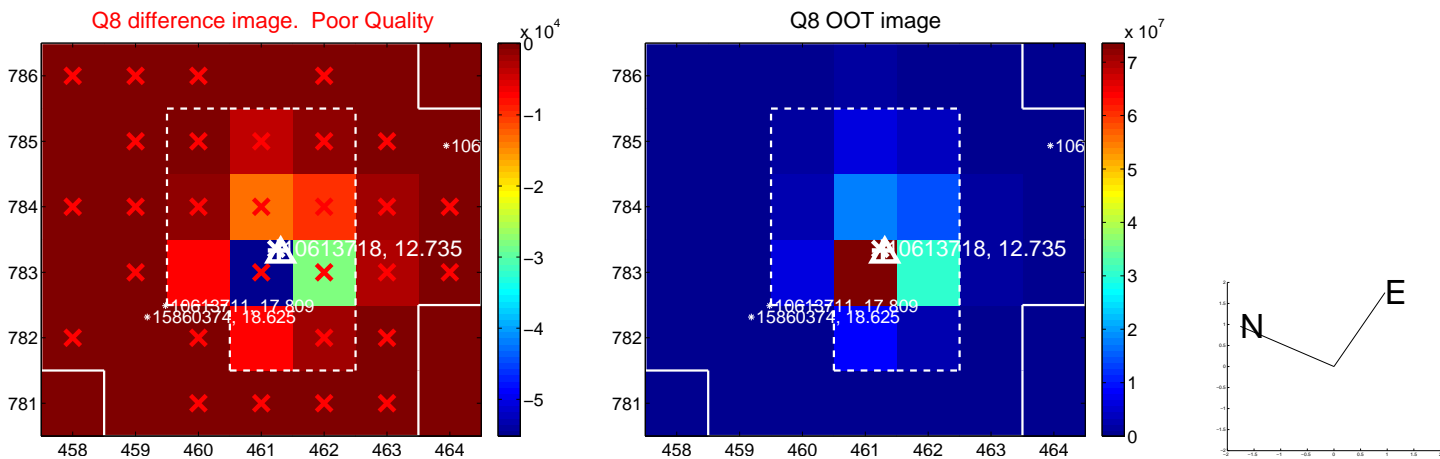
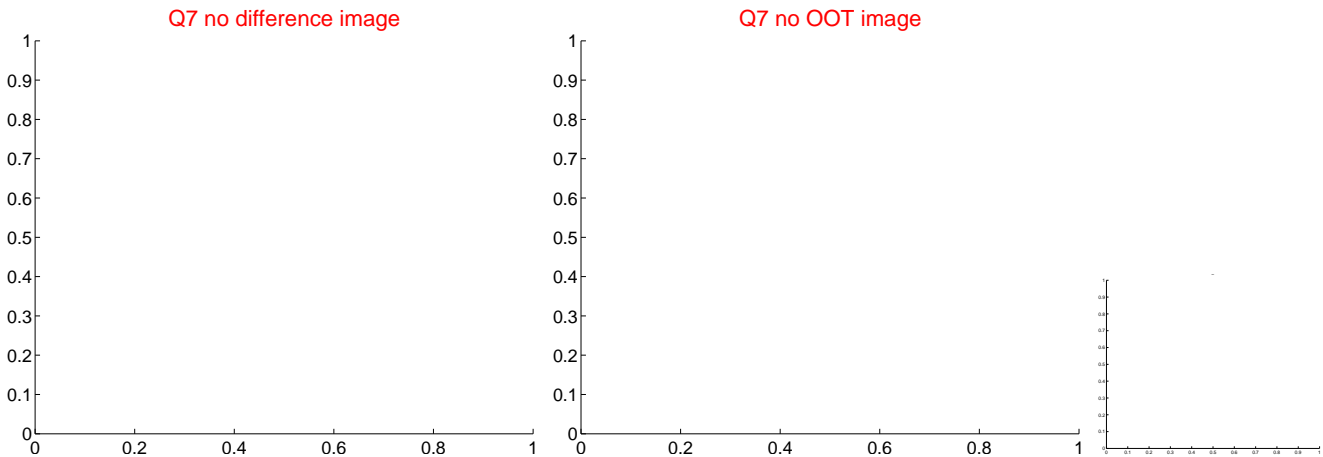
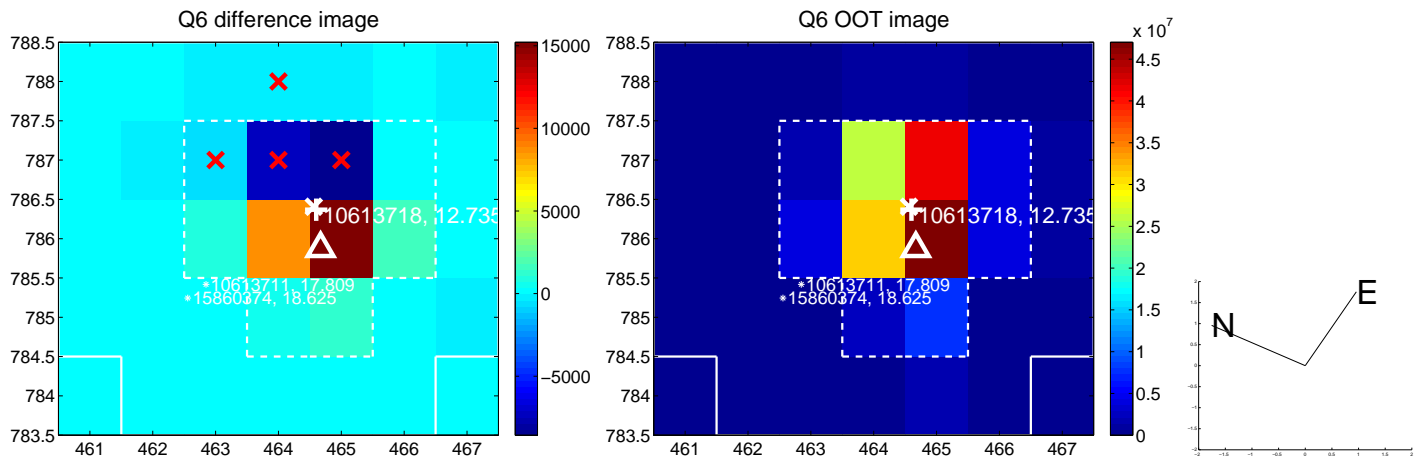
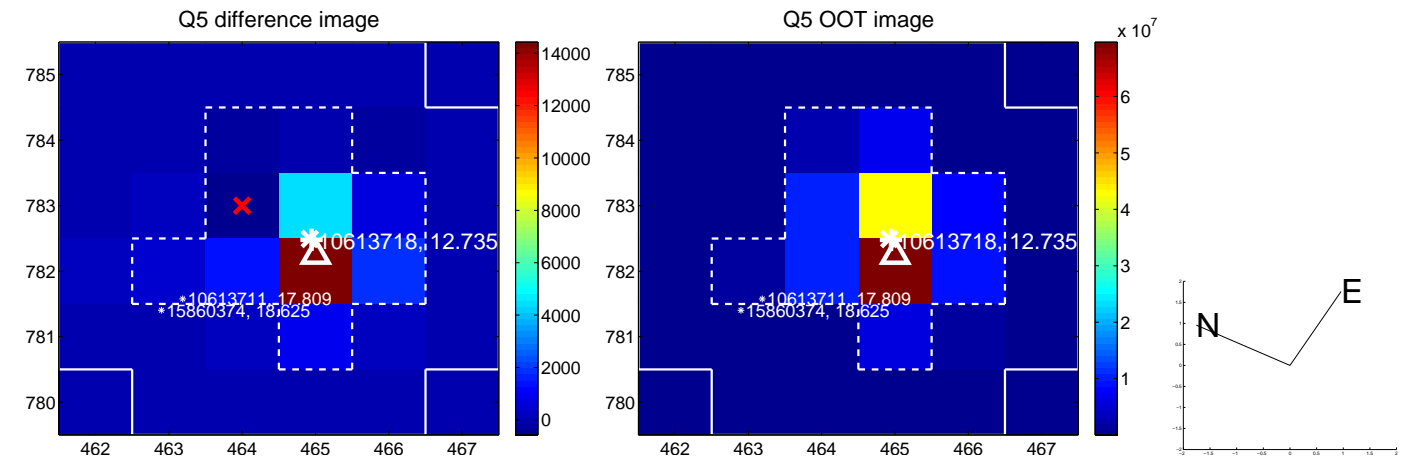


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

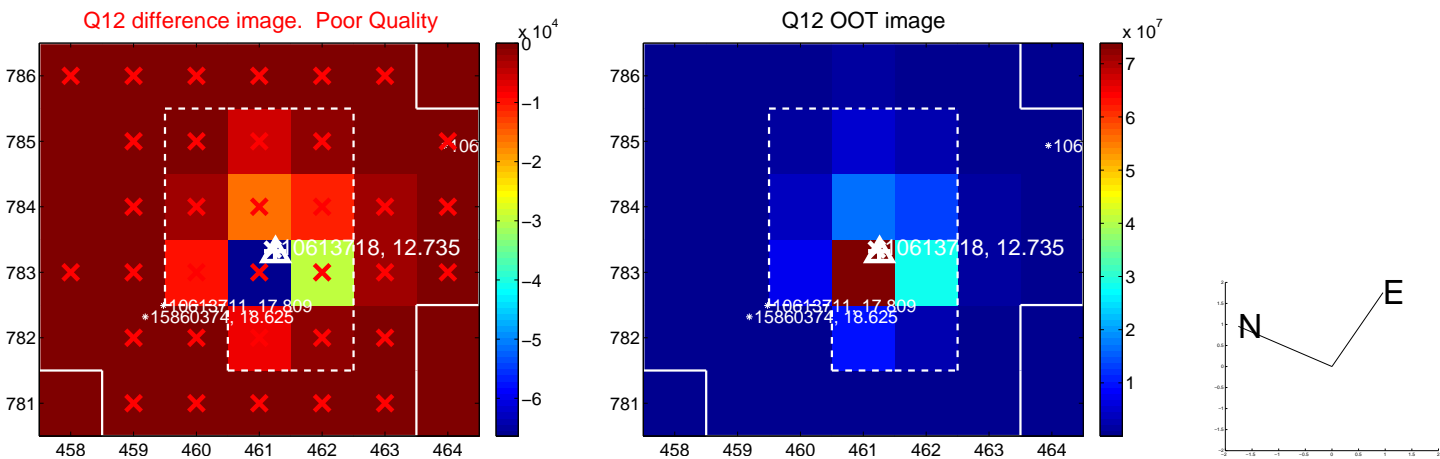
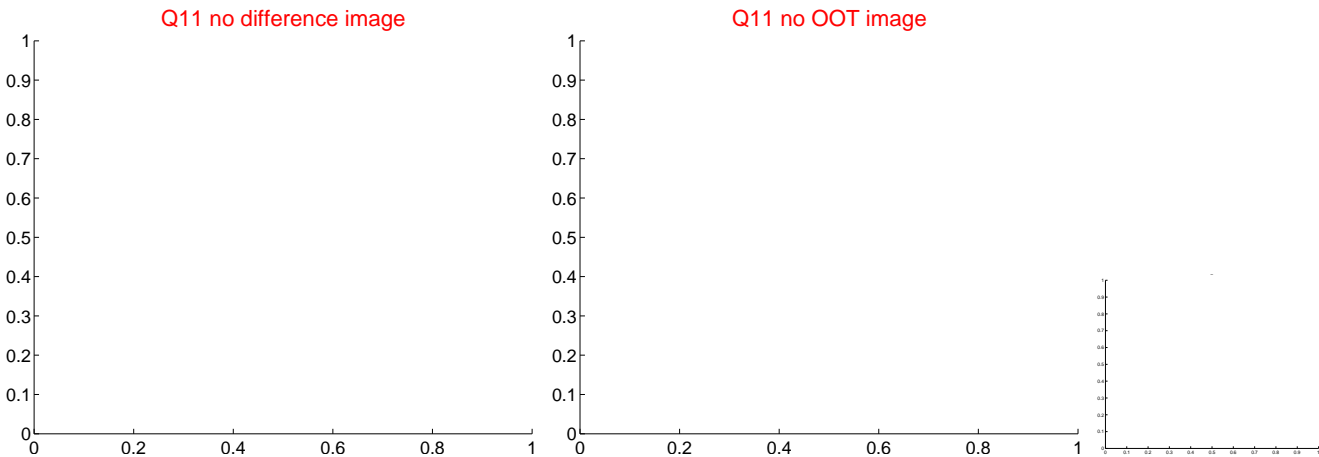
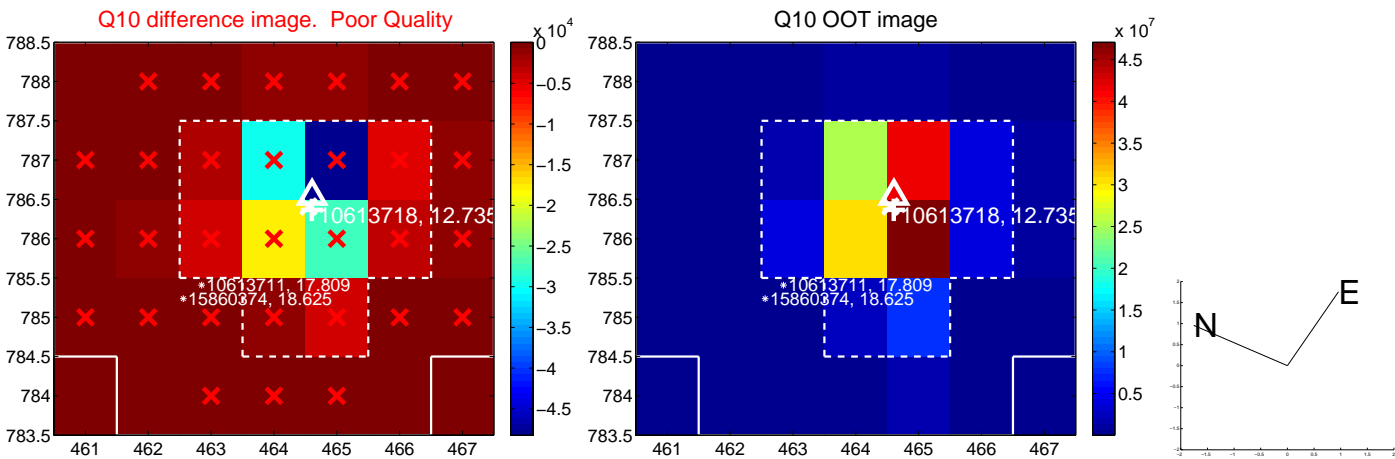
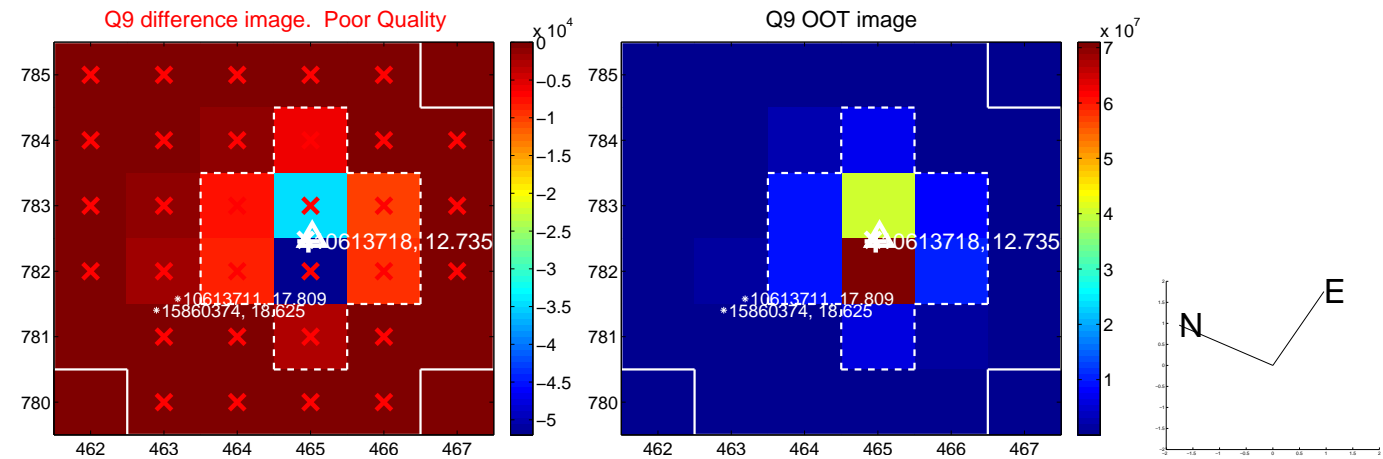
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



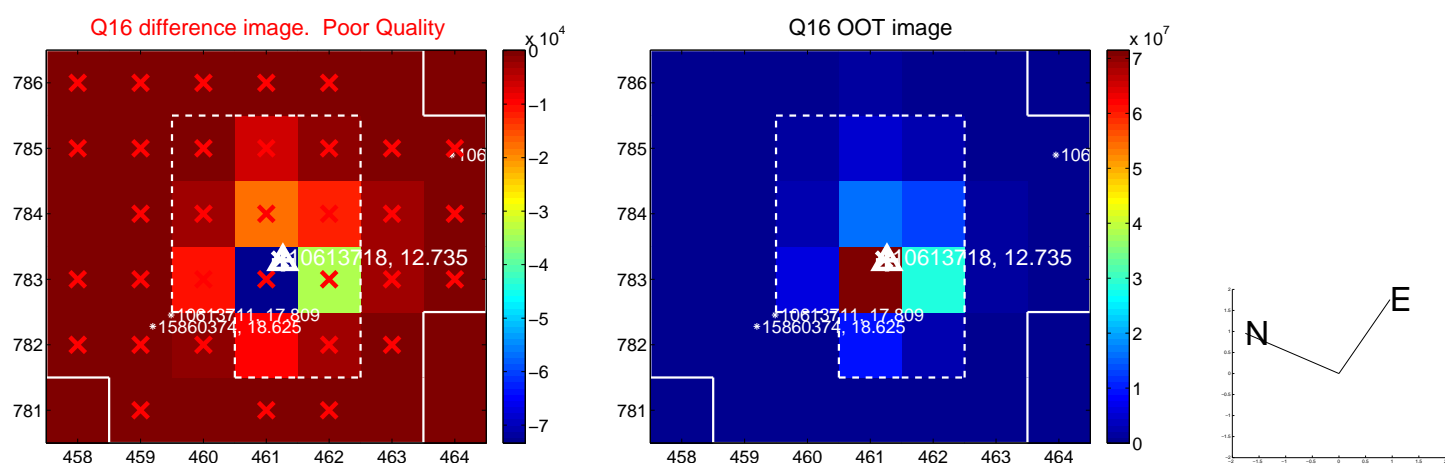
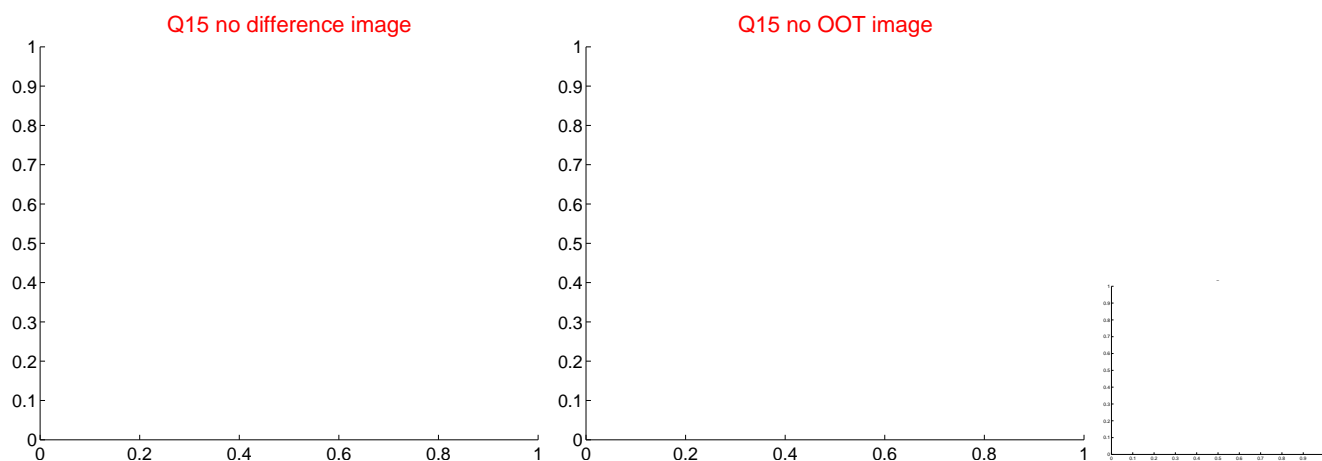
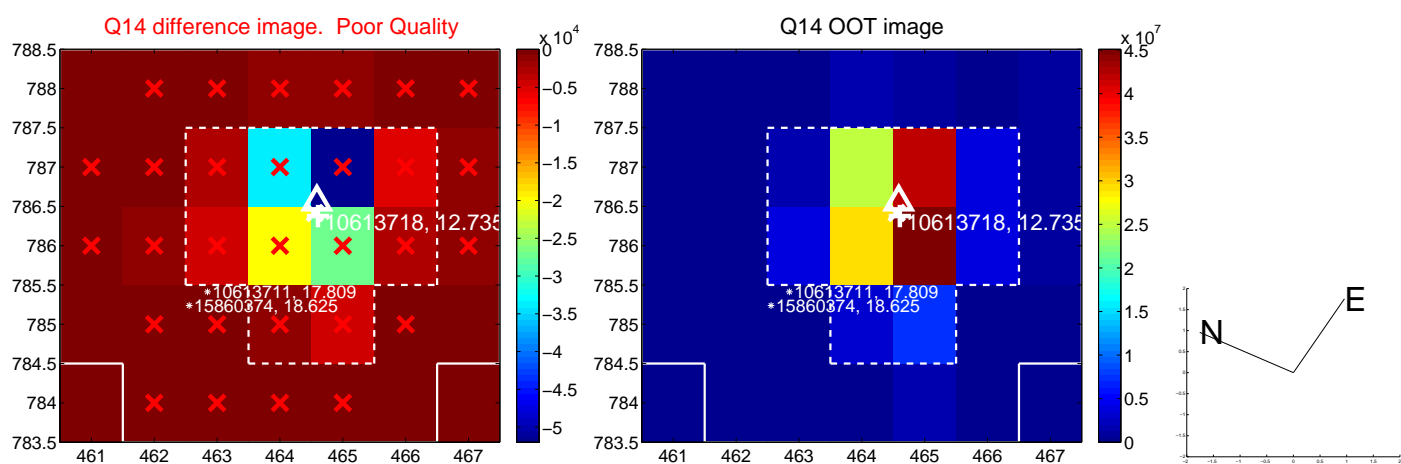
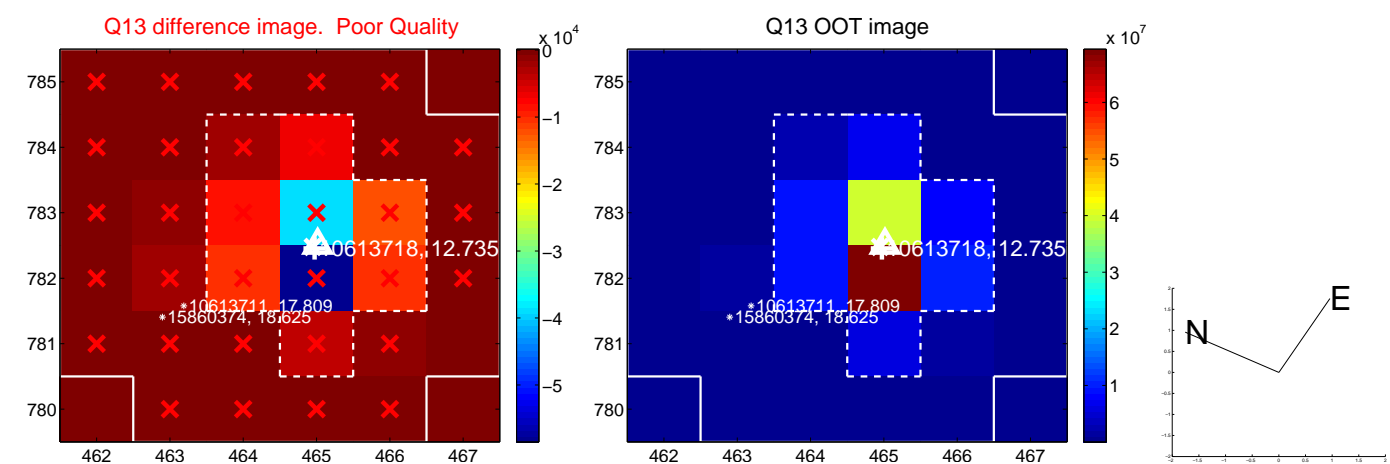
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



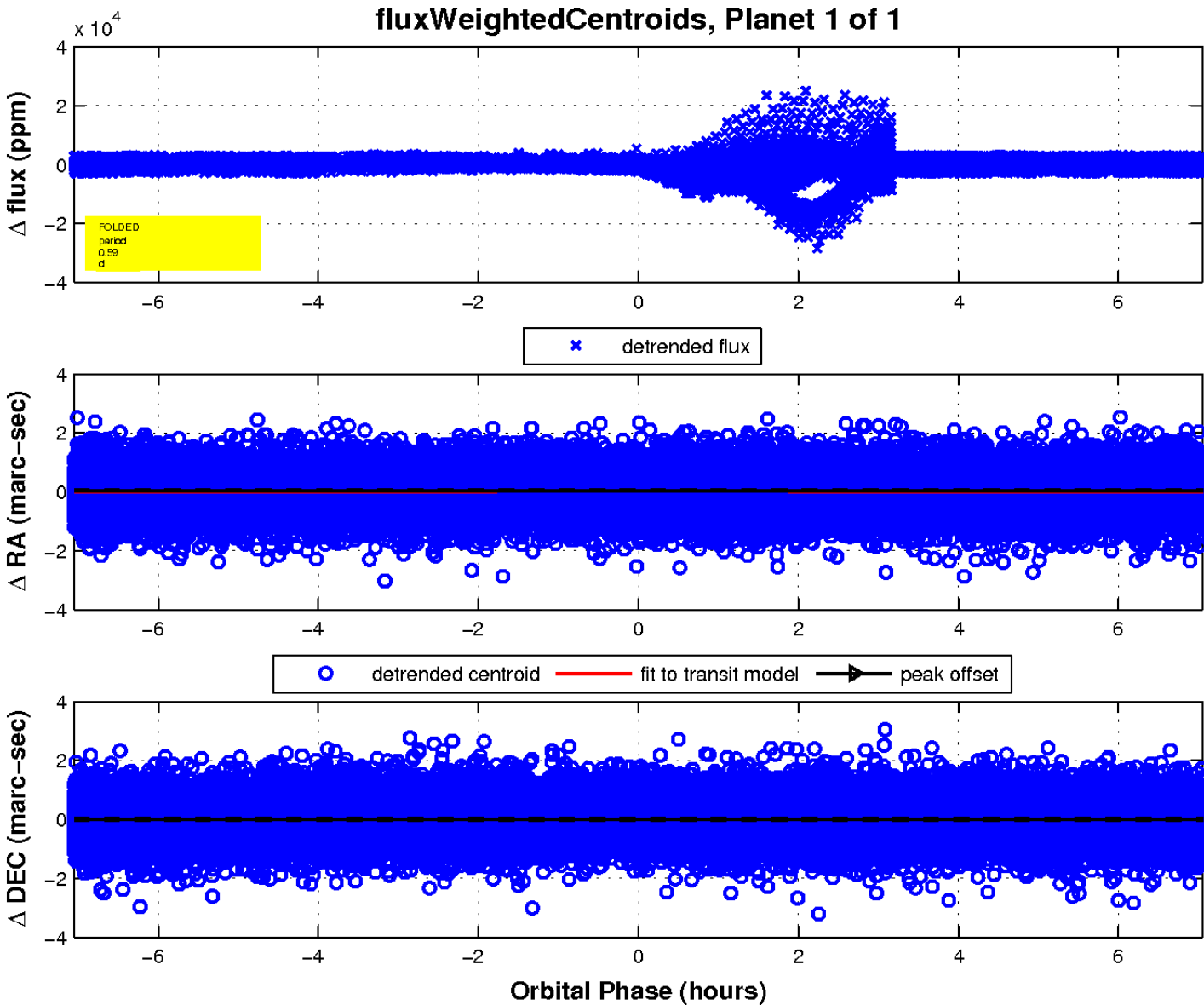
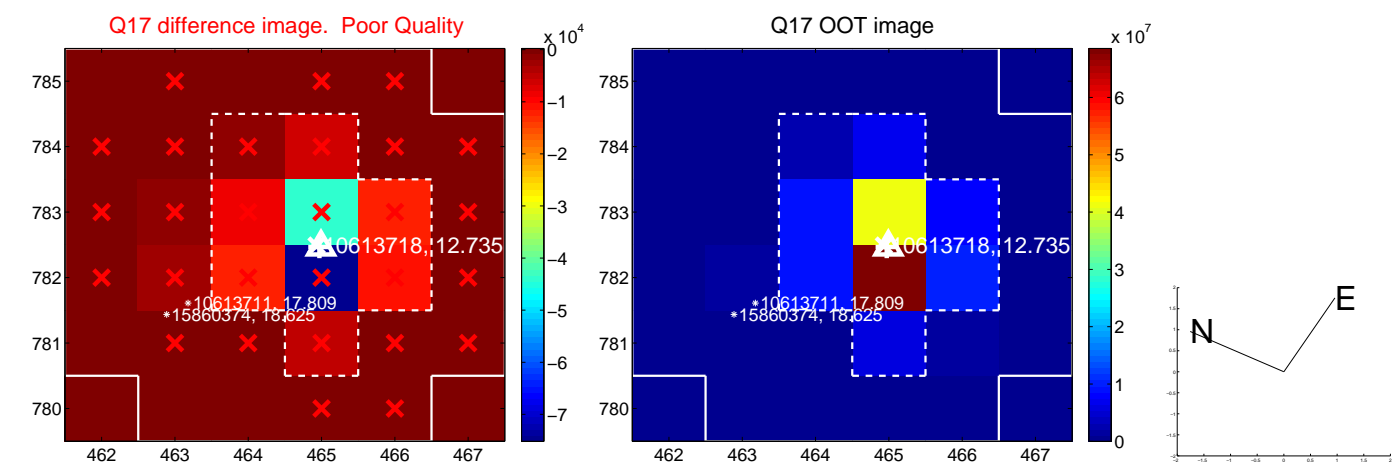
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

