

KIC 010266615

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})
010266615-01	OBS	0530.01	10.940243	137.486244	530.1	2.494	24.9	27.8	0.86	5749	2.31	80.71

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010266615-01	OBS	PC	1.00	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.

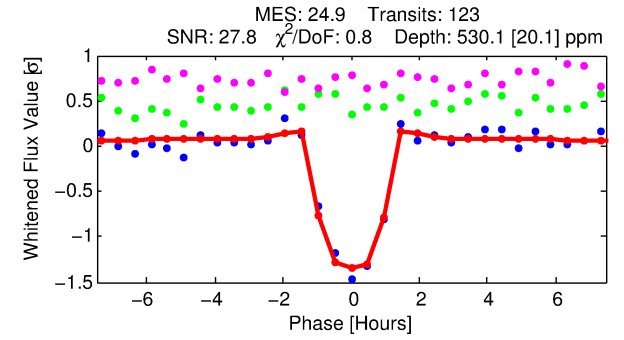
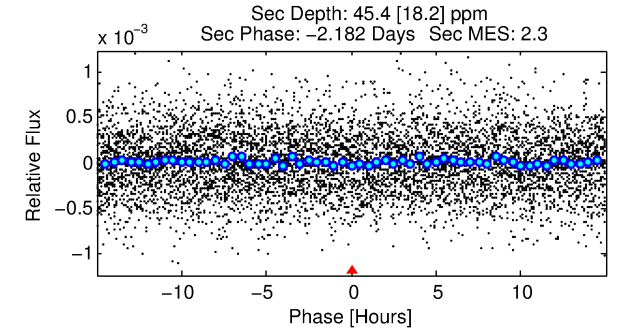
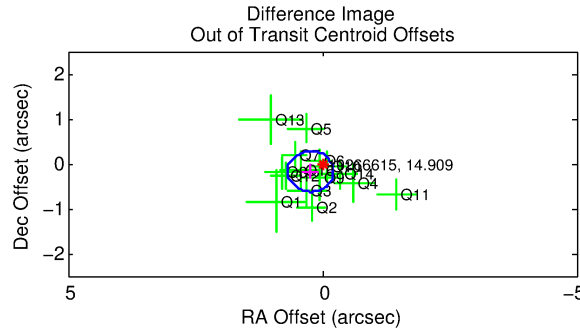
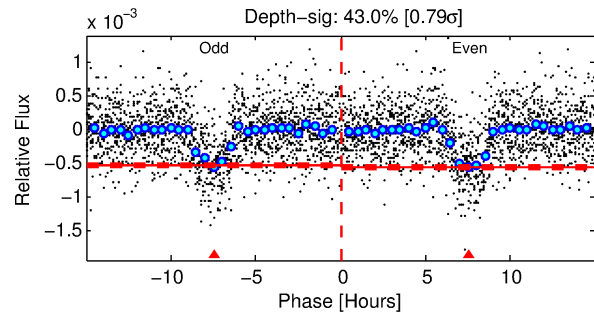
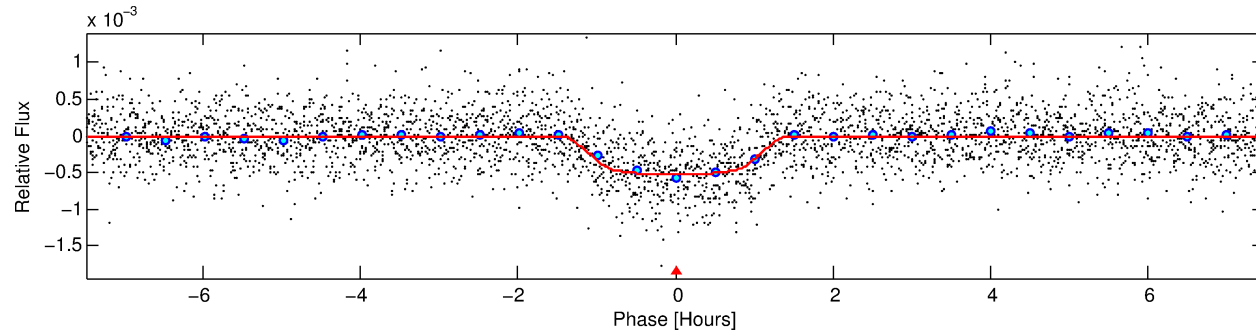
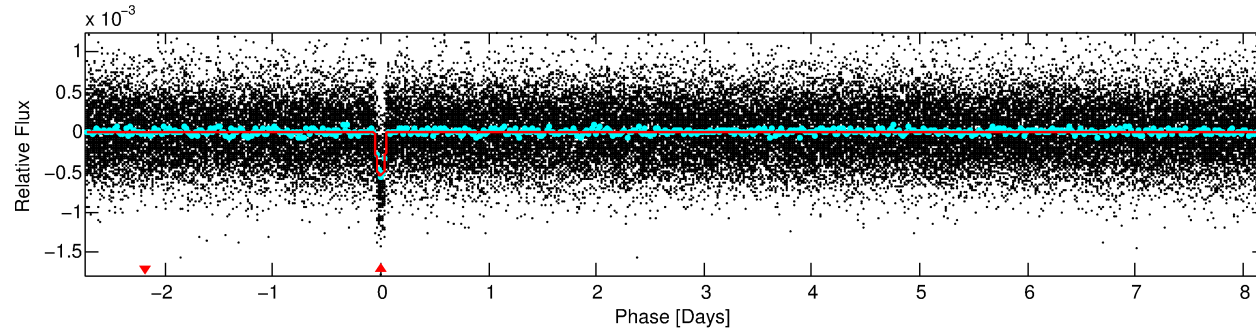
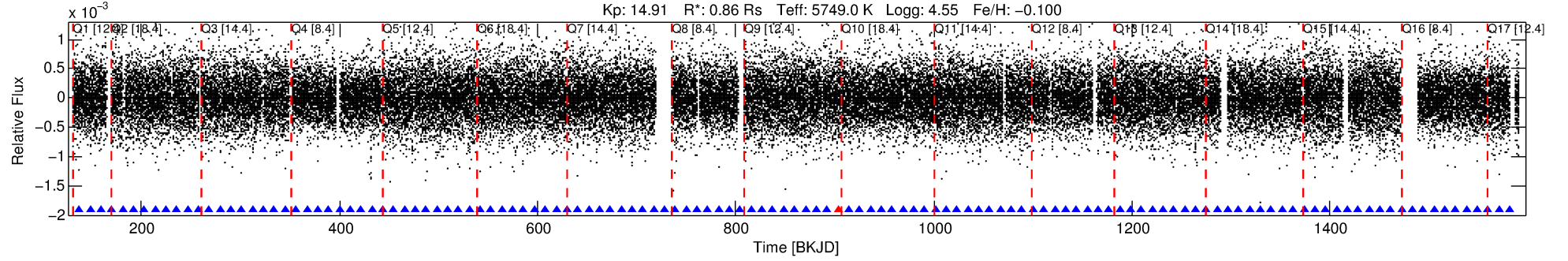
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010266615-01

No Significant Match Found

DV One-Page Summary

KIC: 10266615 Candidate: 1 of 1 Period: 10.940 d
KOI: K00530.01 Corr: 0.958



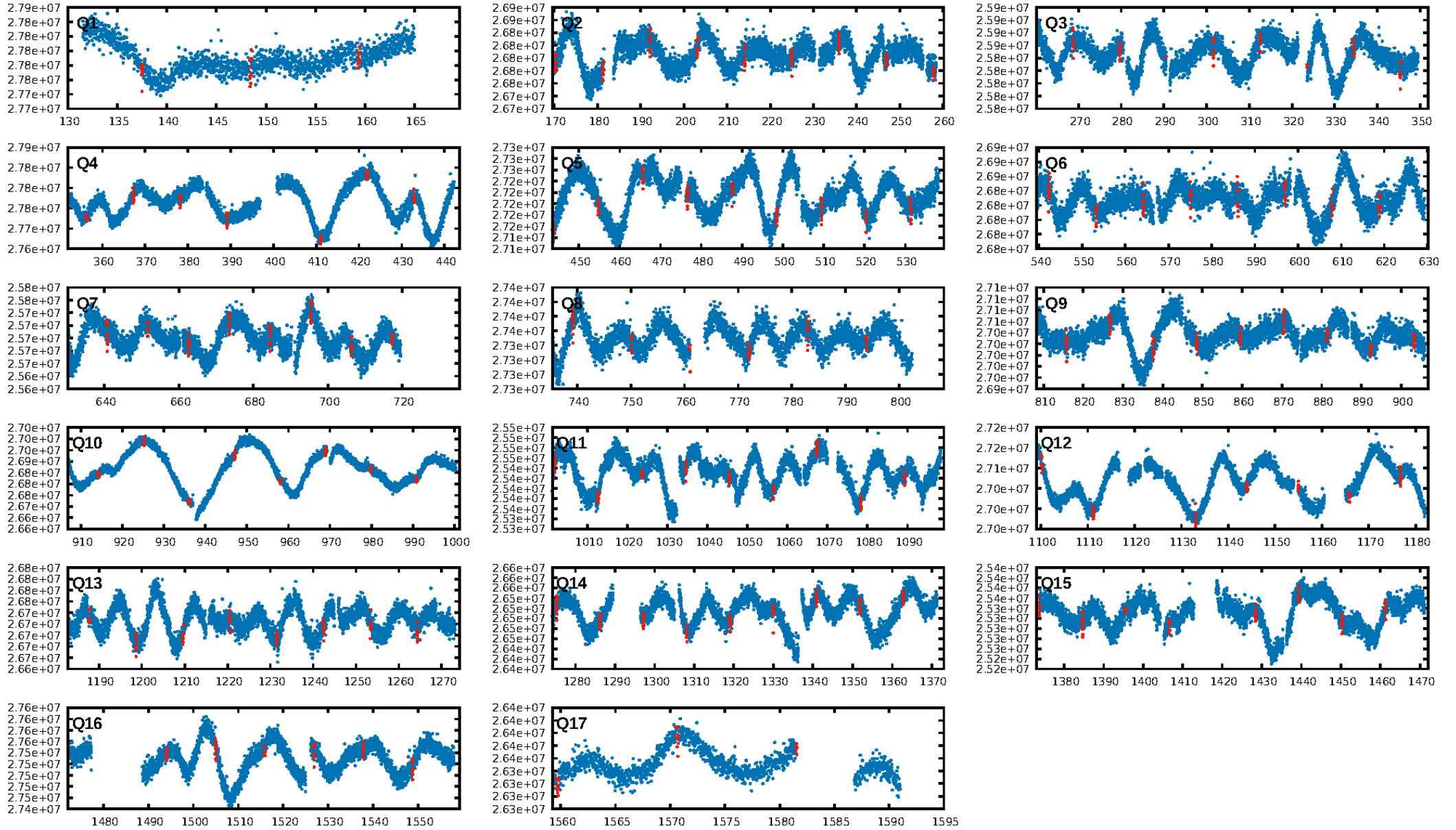
DV Fit Results:

Period = 10.94024 [0.00003] d
Epoch = 137.4862 [0.0019] BKJD
Rp/R* = 0.0245 [0.0042]
a/R* = 18.18 [14.31]
b = 0.87 [0.23]
Seff = 80.71 [26.55]
Teff = 764 [63] K
Rp = 2.31 [0.70] Re
a = 0.0951 [0.0199] AU
Ag = 42.54 [26.05] [1.59 σ]
Teffp = 3018 [410] K [5.43 σ]

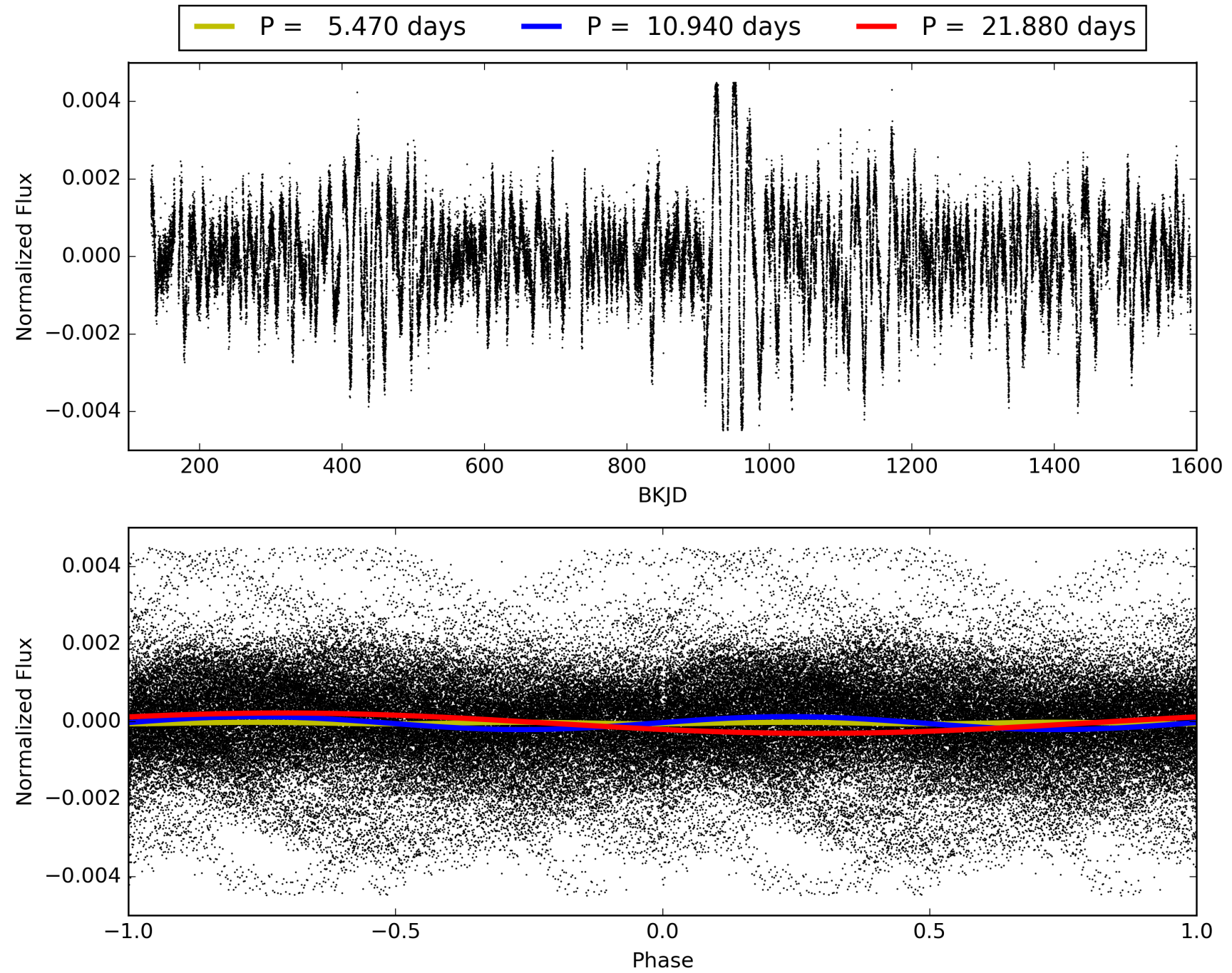
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 94.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.49e-130
RollingBand-fgt: 0.99 [116/117]
GhostDiagnostic-chr: 4.341
Centroid-sig: 1.9%
Centroid-so: 0.803 arcsec [2.03 σ]
OotOffset-rm: 0.294 arcsec [1.95 σ]
KicOffset-rm: 0.242 arcsec [1.64 σ]
OotOffset-st: 4/3/4/4 [15]
KicOffset-st: 4/3/4/4 [15]
DiffImageQuality-fgm: 1.00 [15/15]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 010266615-01, PDC Light Curves

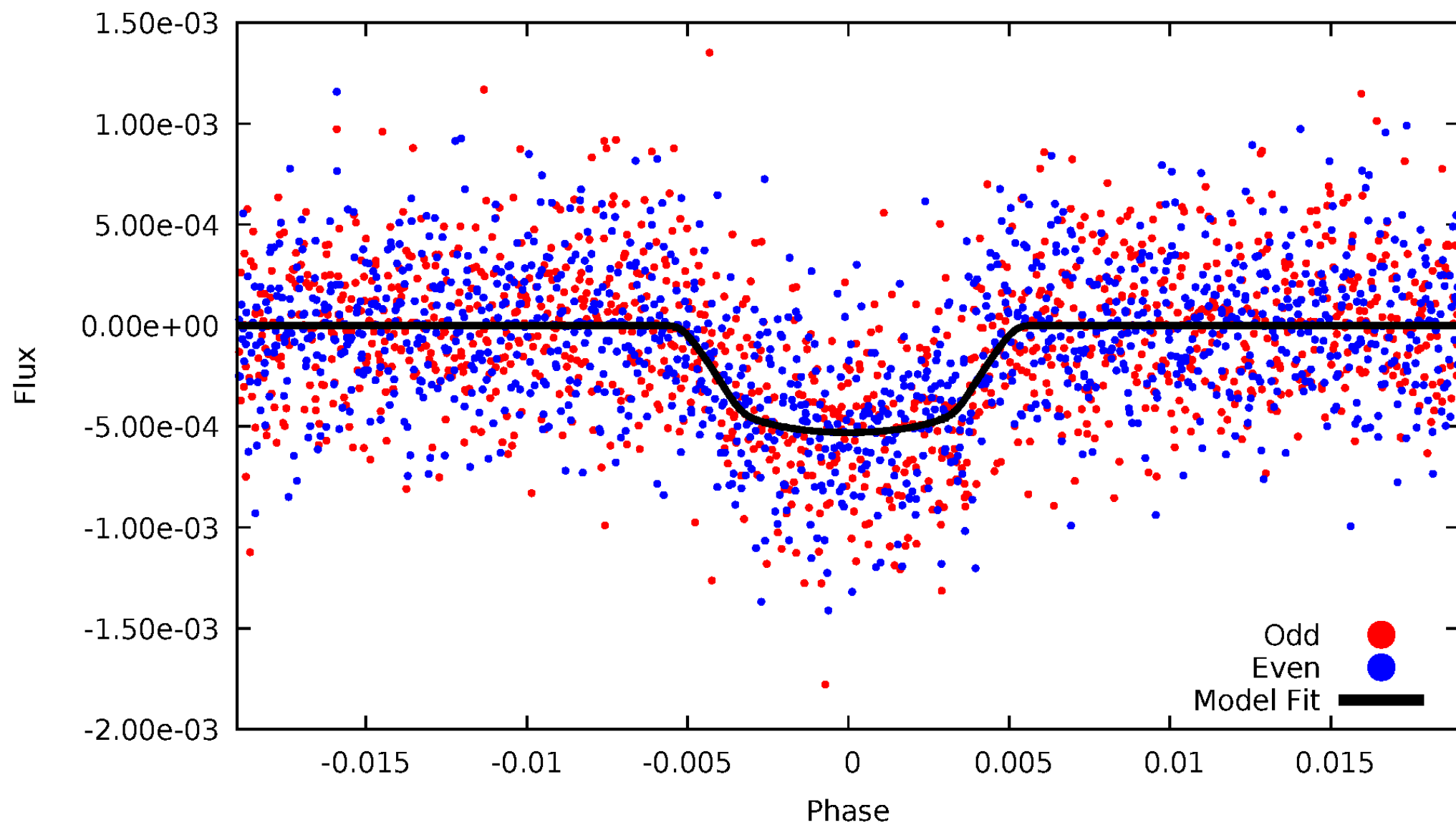


TCE 010266615-01



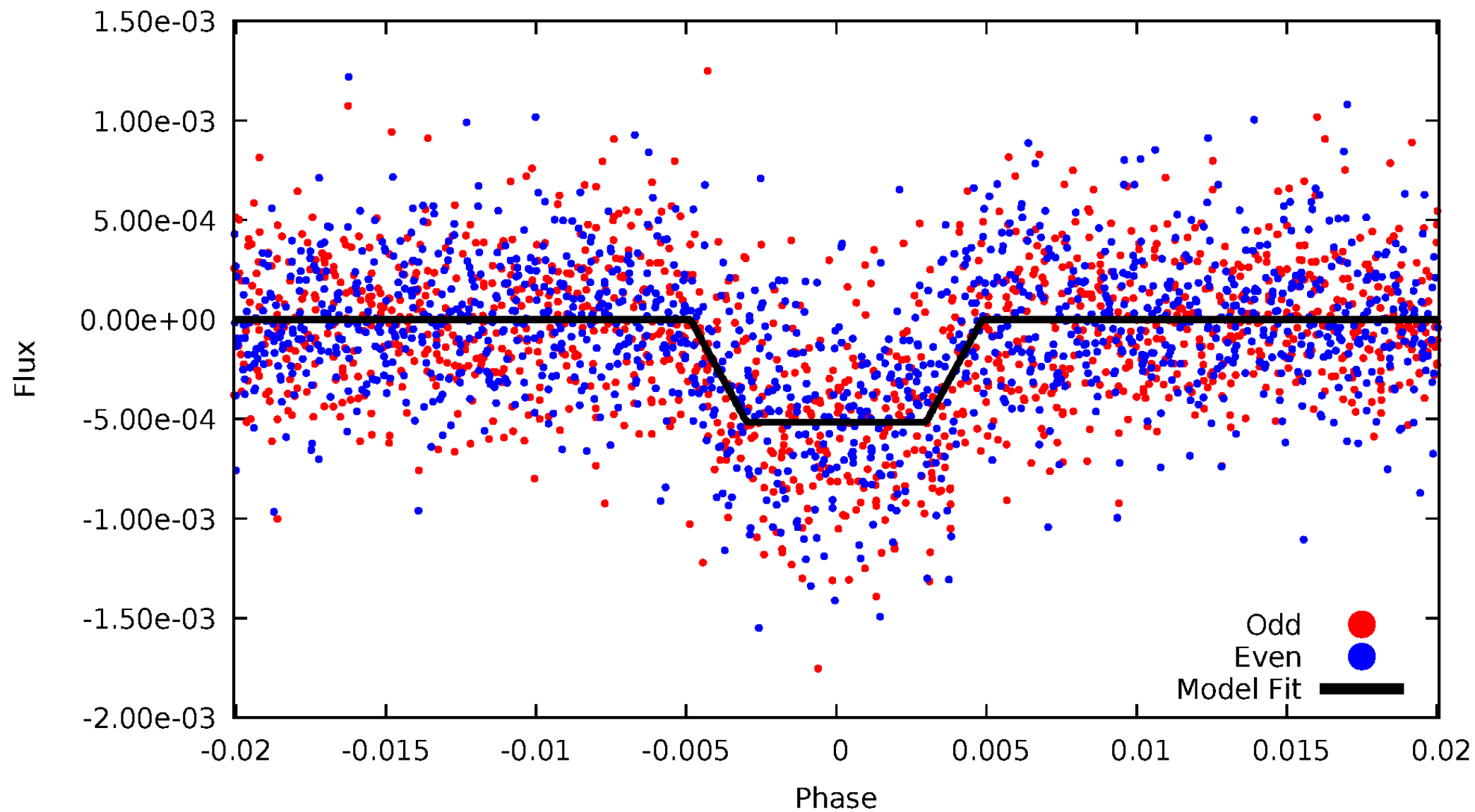
DV Odd/Even

TCE 010266615-01

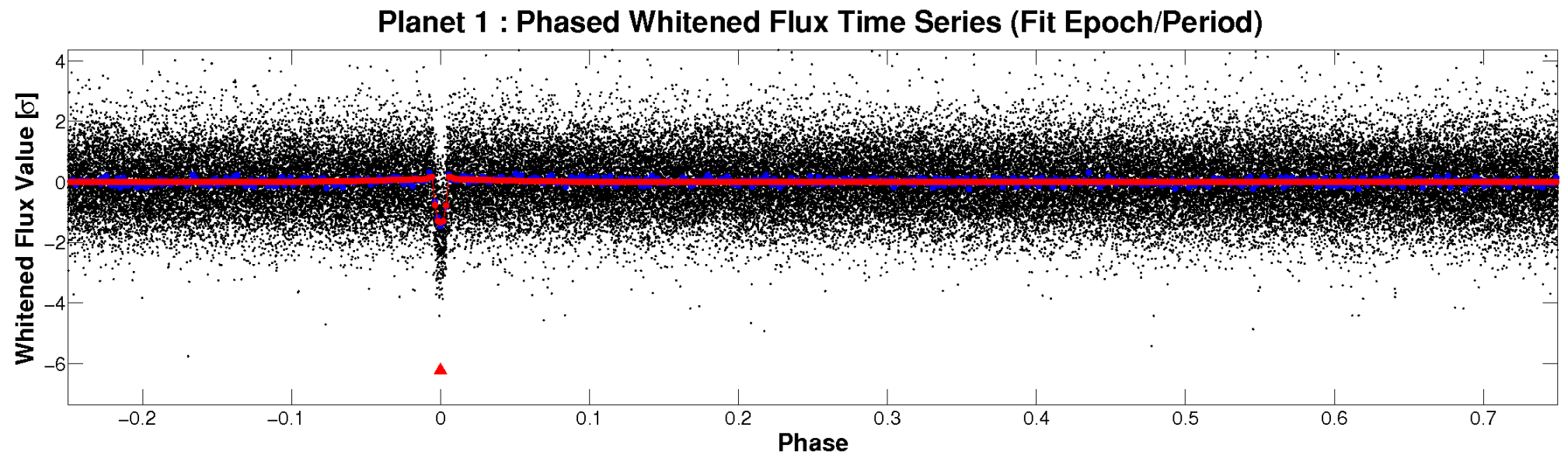
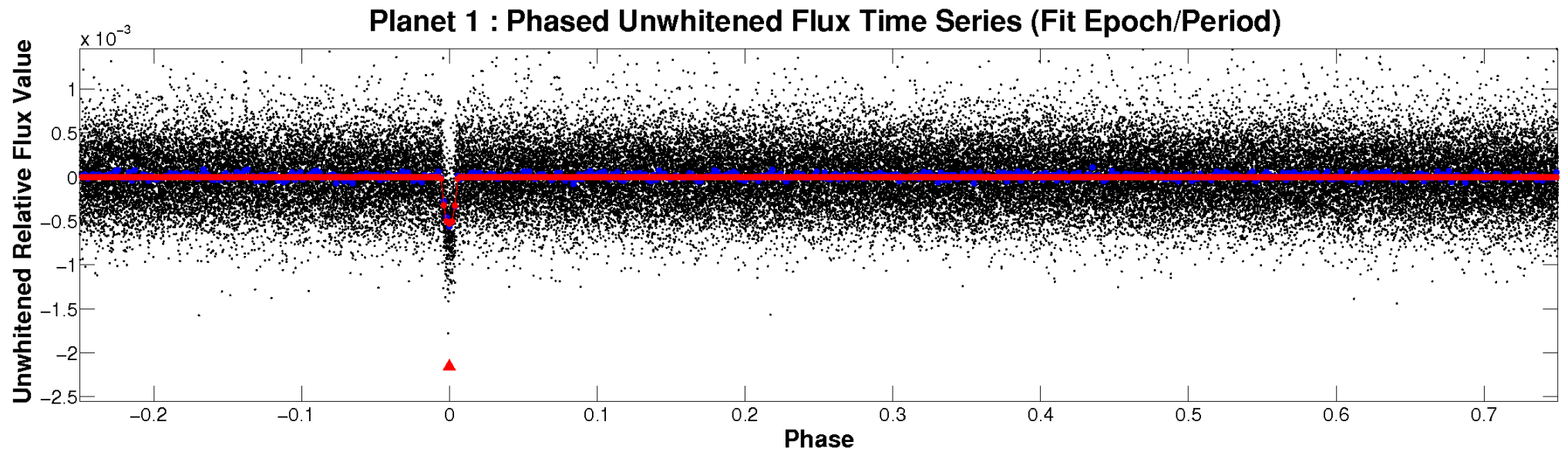


ALT Odd/Even

TCE 010266615-01

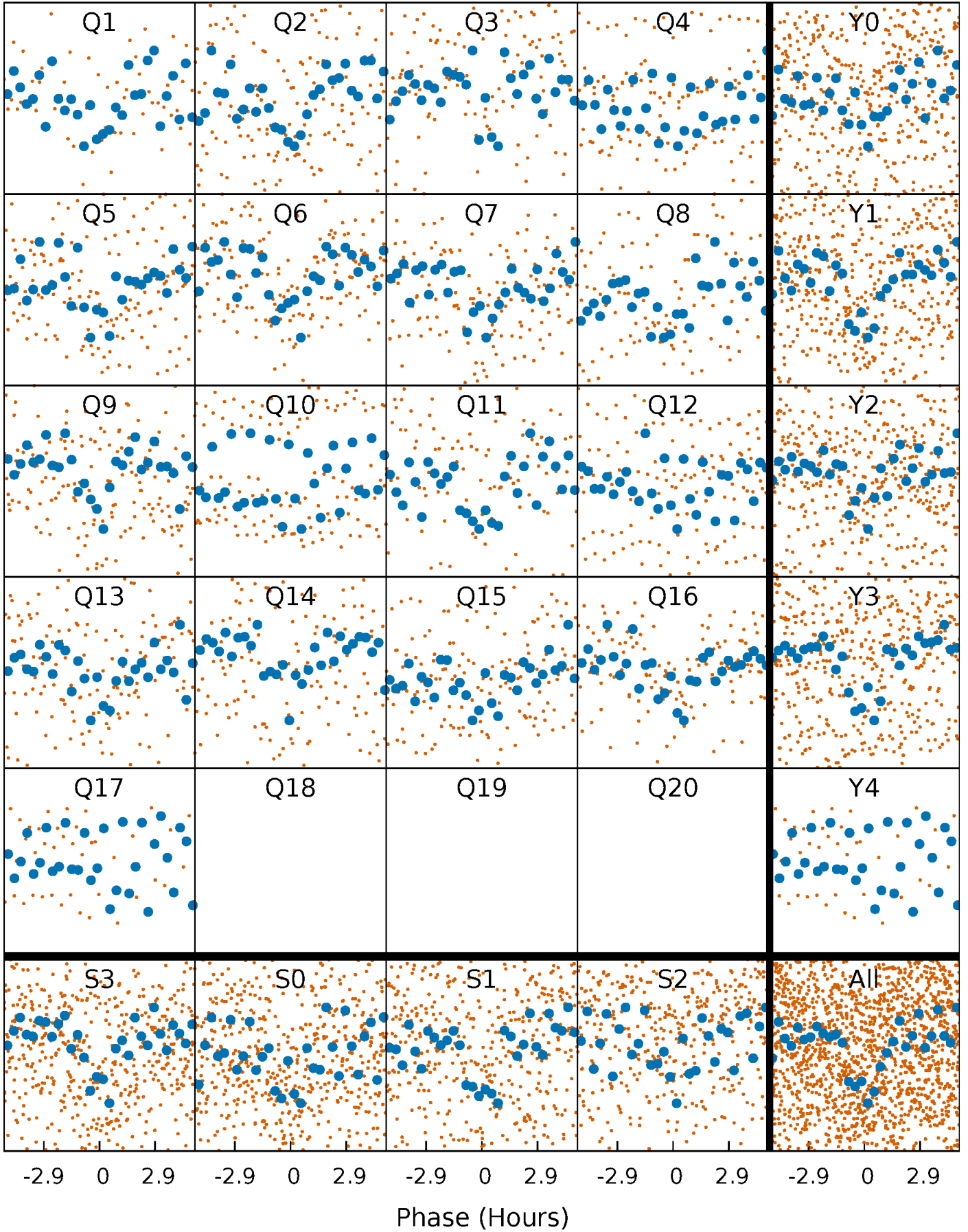


Non-Whitened Vs. Whitened Light Curve



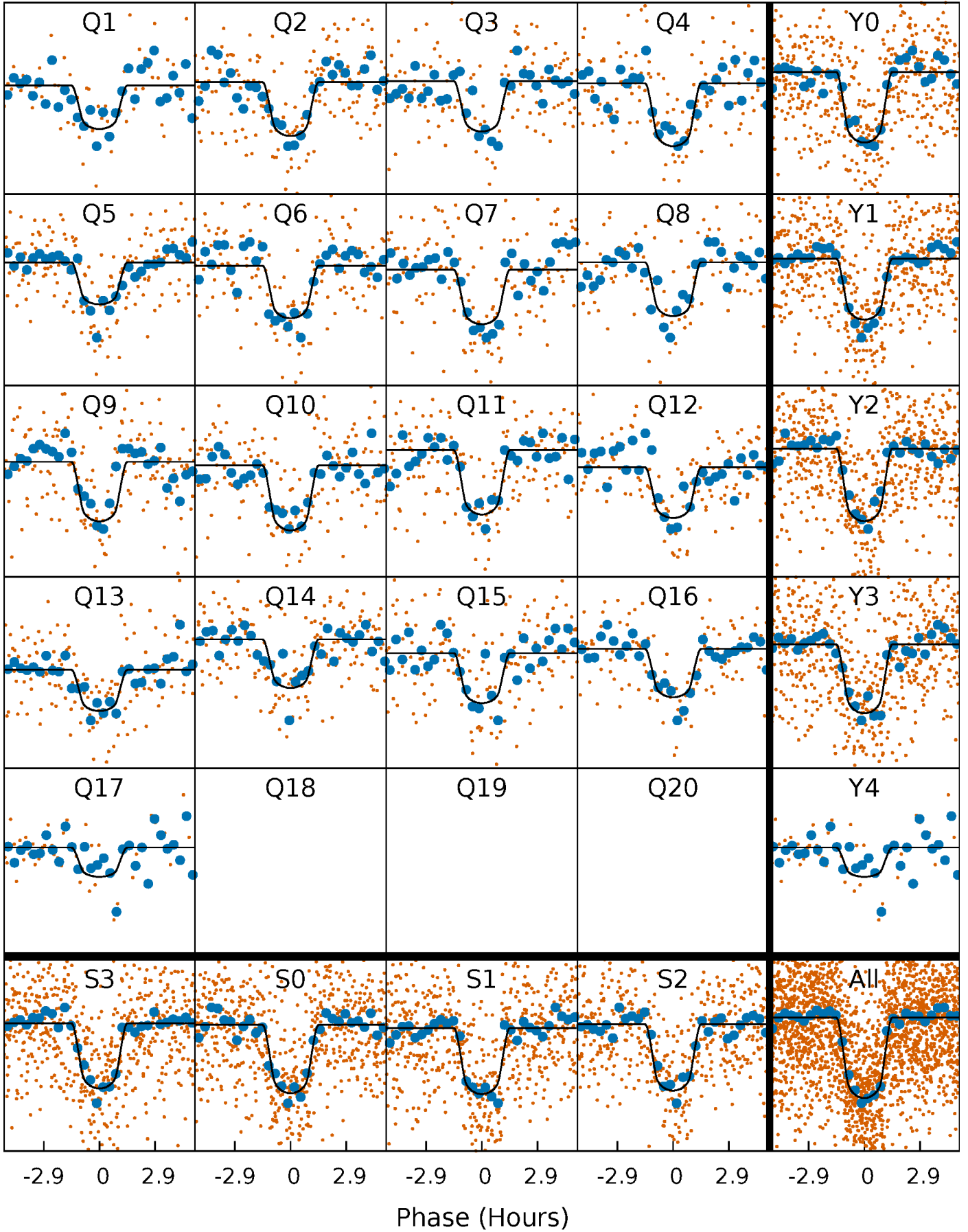
PDC Quarter-Phased Transit Curves

TCE 010266615-01 $P = 10.940243$ Days $T_0 = 137.486244$ (BKJD)



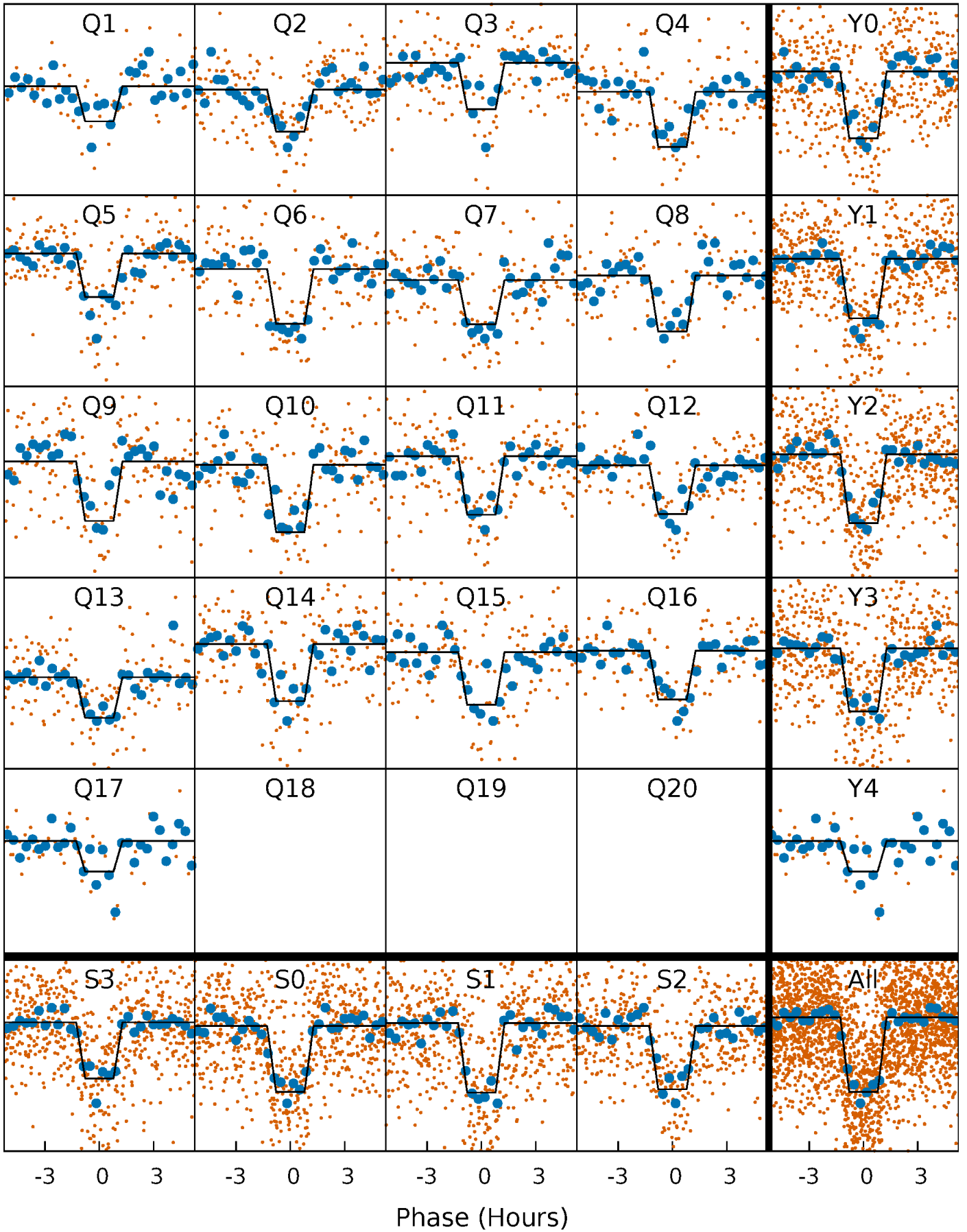
DV Quarter-Phased Transit Curves

TCE 010266615-01 P= 10.940243 Days $T_0=137.486244$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

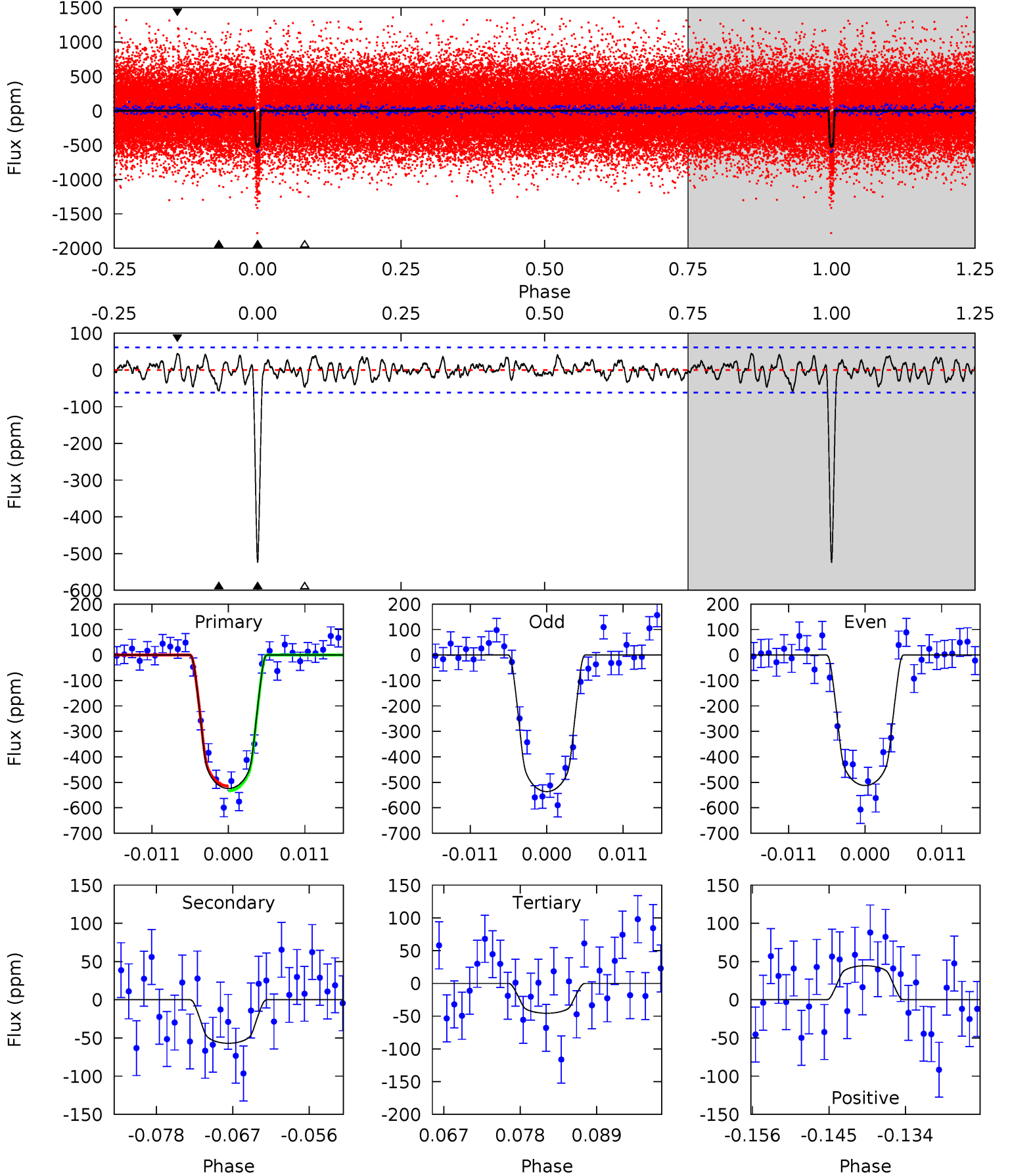
TCE 010266615-01 P= 10.940196 Days $T_0=137.490206$ (BKJD)



DV Model-Shift Uniqueness Test

010266615-01, P = 10.940243 Days, E = 126.546001 Days

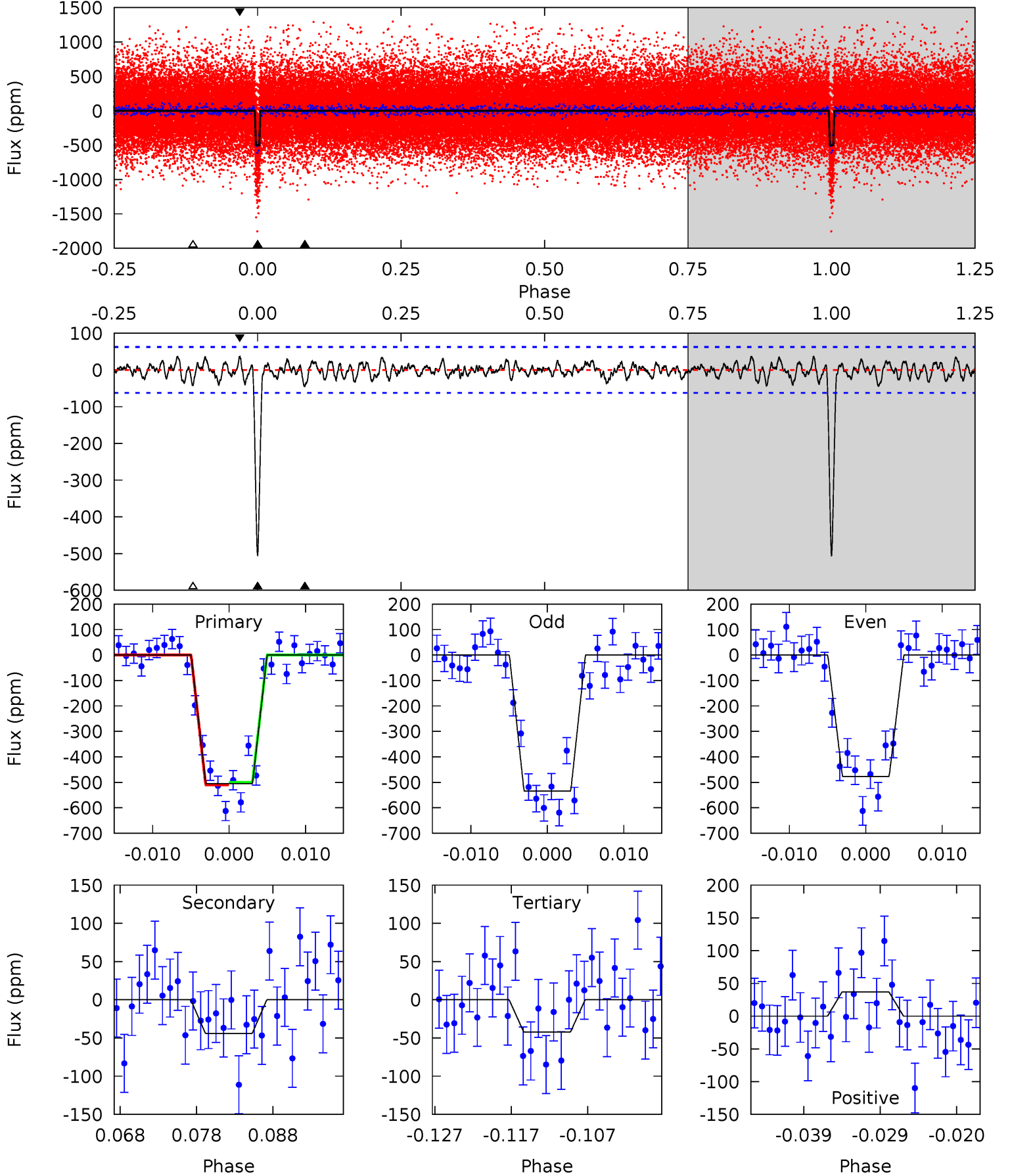
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
42.7	4.64	3.71	3.62	5.01	2.54	1.33	38.9	39.0	0.93	1.02	0.97	1.00	0.08	0.78



Alt Model-Shift Uniqueness Test

010266615-01, $P = 10.940196$ Days, $E = 126.550010$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
40.6	3.54	3.39	2.98	5.03	2.58	1.13	37.2	37.6	0.15	0.56	2.31	1.03	0.07	0.42



Stellar Parameters For KIC 010266615

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5749^{+156}_{-173}	$4.547^{+0.042}_{-0.168}$	$-0.100^{+0.300}_{-0.300}$	$0.864^{+0.214}_{-0.077}$	$0.961^{+0.103}_{-0.114}$	$2.097^{+0.448}_{-0.965}$
	+3%/-3%	+1%/-4%	+300%/-300%	+25%/-9%	+11%/-12%	+21%/-46%
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 010266615-01 / KOI 0530.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-57 ± 12	$2.38^{+0.48}_{-0.46}$	1088^{+65}_{-48}	3615^{+316}_{-244}	49^{+29}_{-19}
Alt.	-44 ± 12	$2.25^{+0.48}_{-0.45}$	1088^{+60}_{-47}	3552^{+297}_{-265}	43^{+25}_{-17}

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 $A_{obs} \gg 1.0$

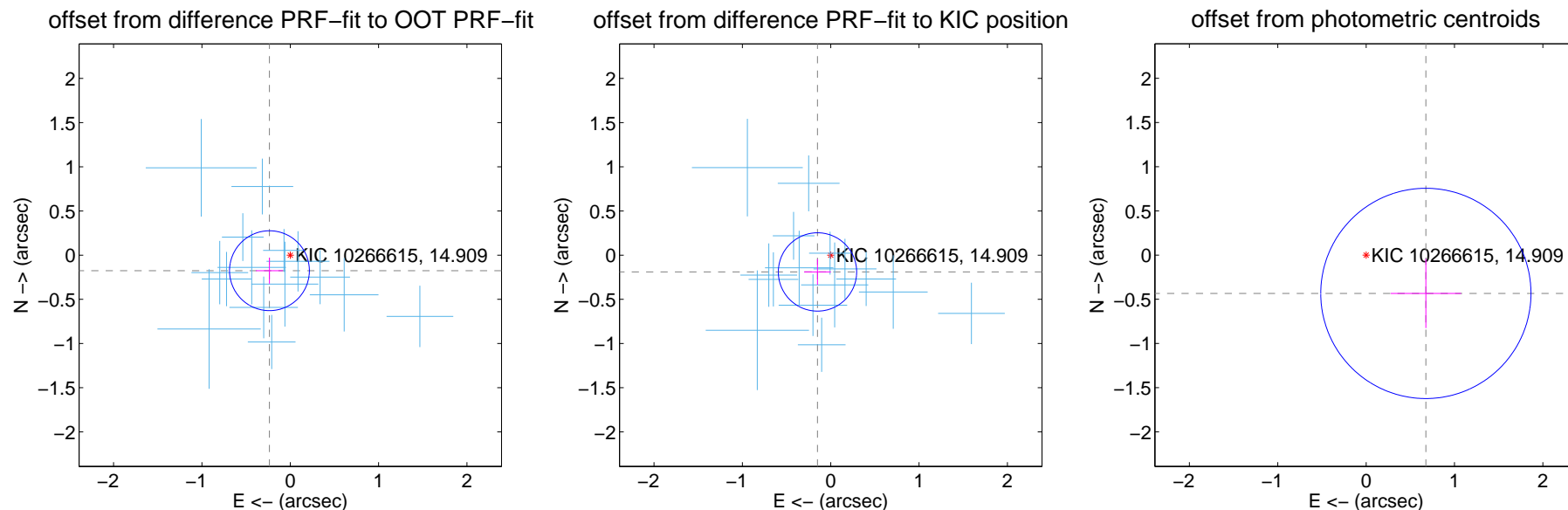
DV Centroid Data

Supplemental centroid analysis for 010266615-01. Kepler magnitude: 14.91. Transit SNR 27.85

There are 15 quarters with good PRF difference image offsets

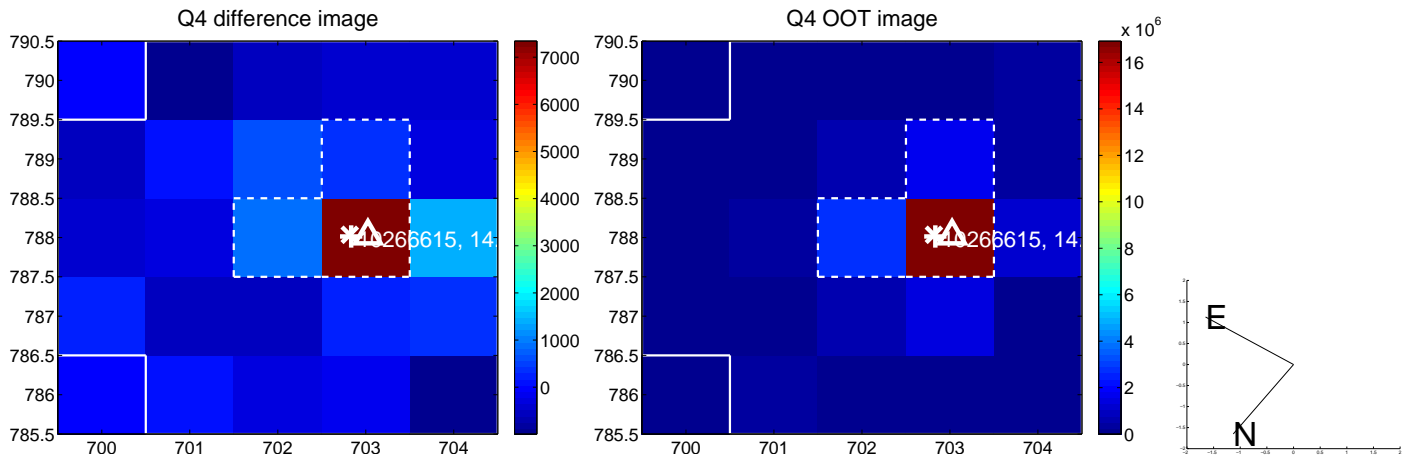
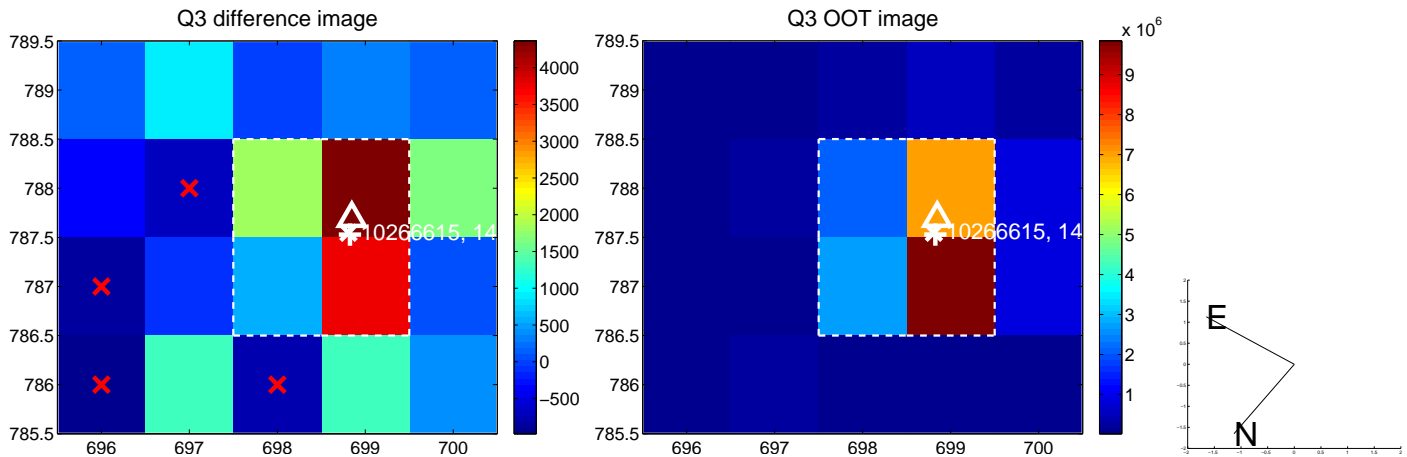
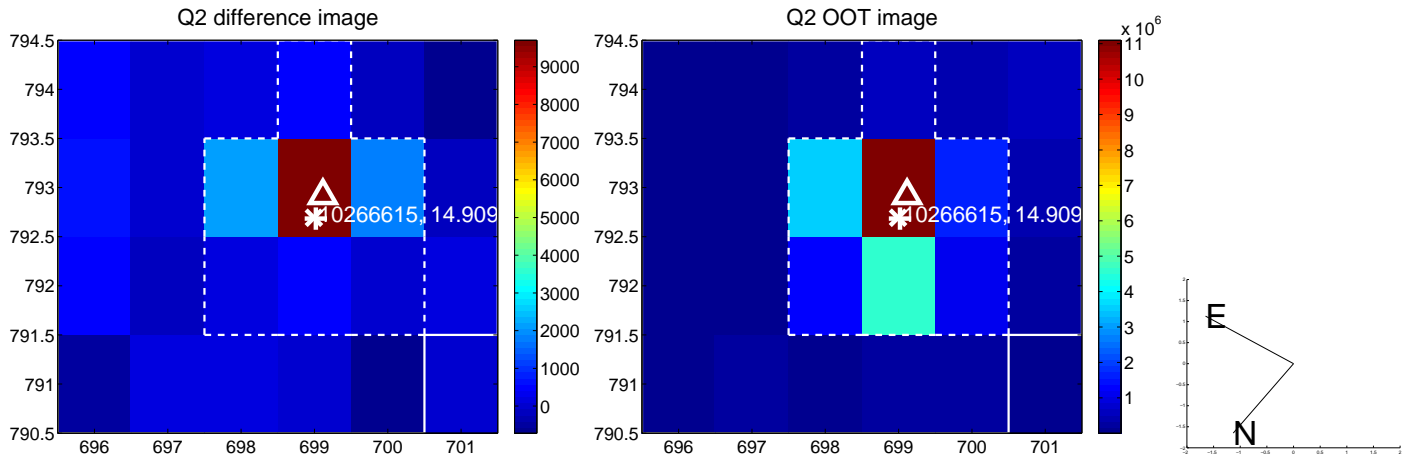
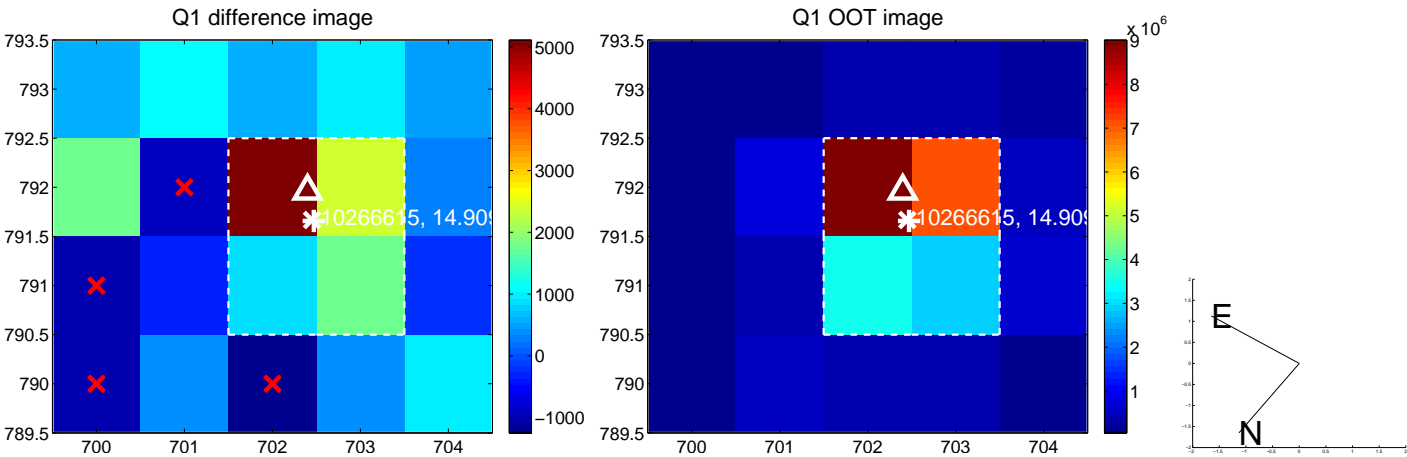
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.294 ± 0.151	1.95	0.235 ± 0.153	-0.176 ± 0.147
PRF-fit source offset from KIC position	0.242 ± 0.148	1.64	0.150 ± 0.151	-0.190 ± 0.145
photometric centroid source offset	0.80 ± 0.40	2.03	-0.68 ± 0.40	-0.43 ± 0.39

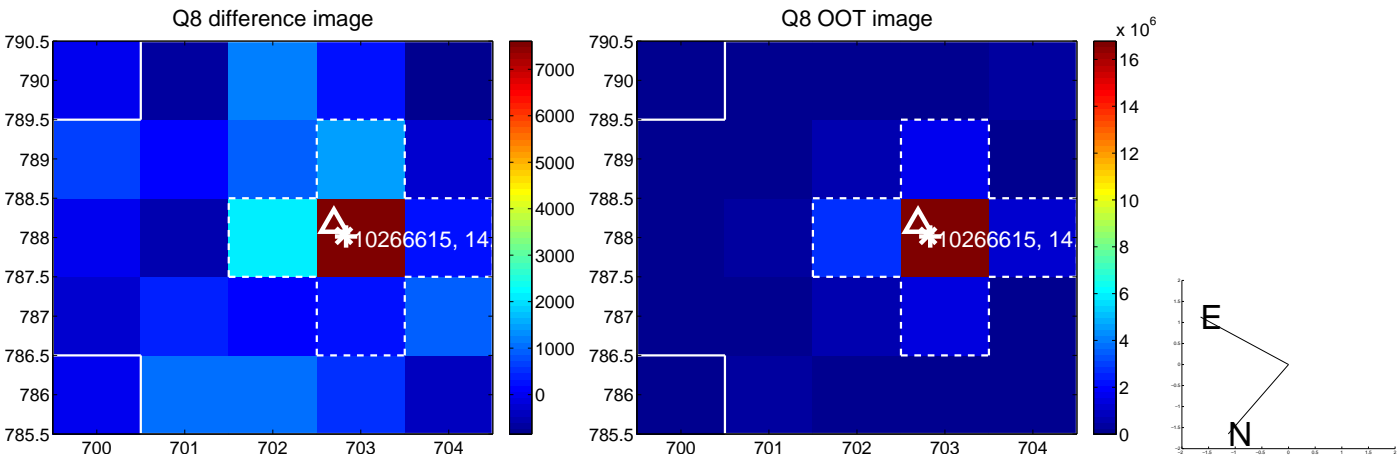
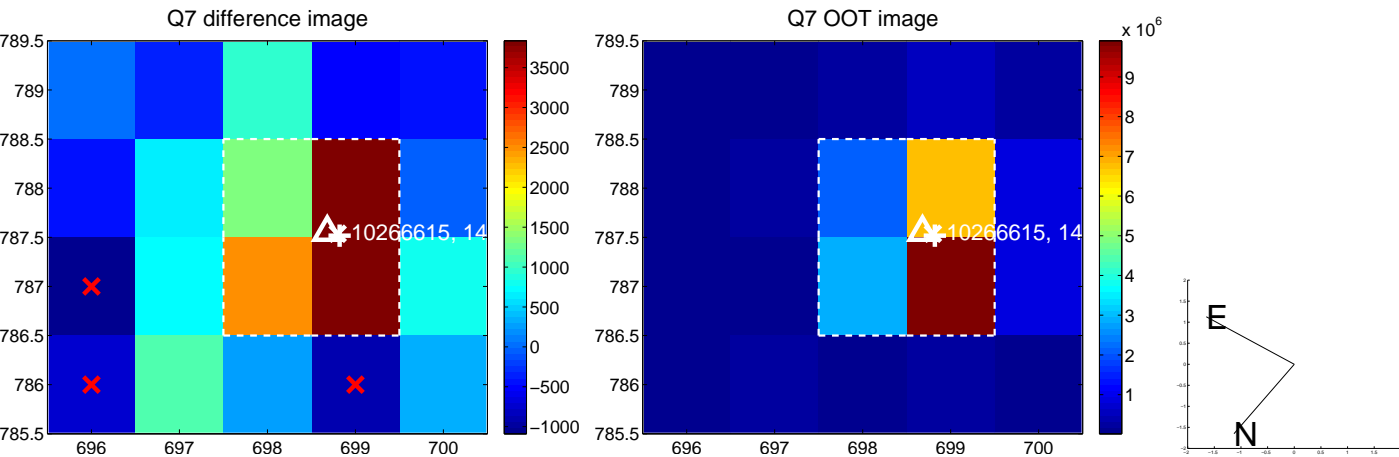
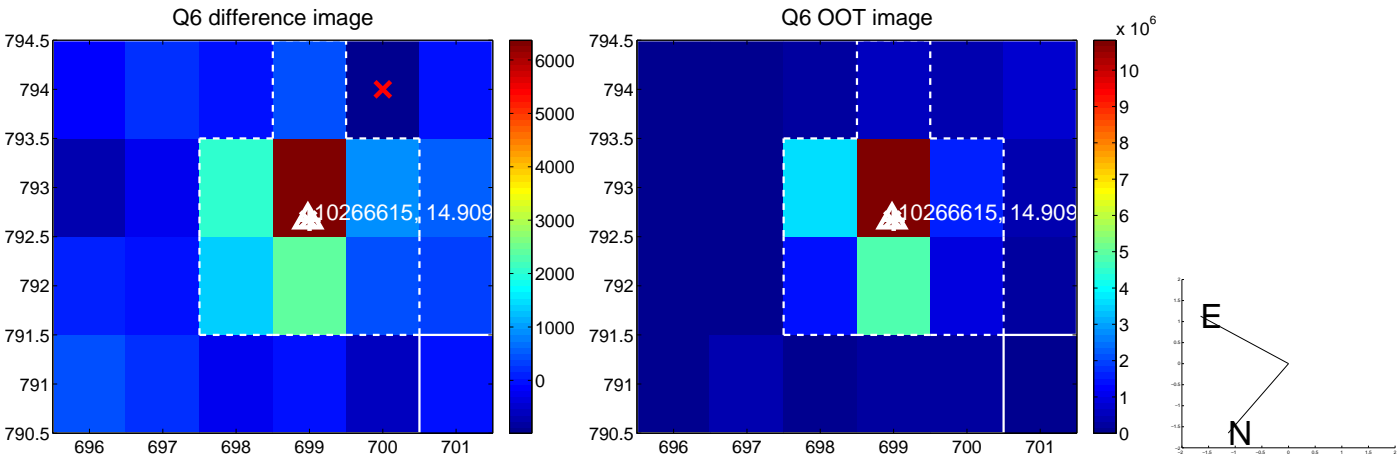
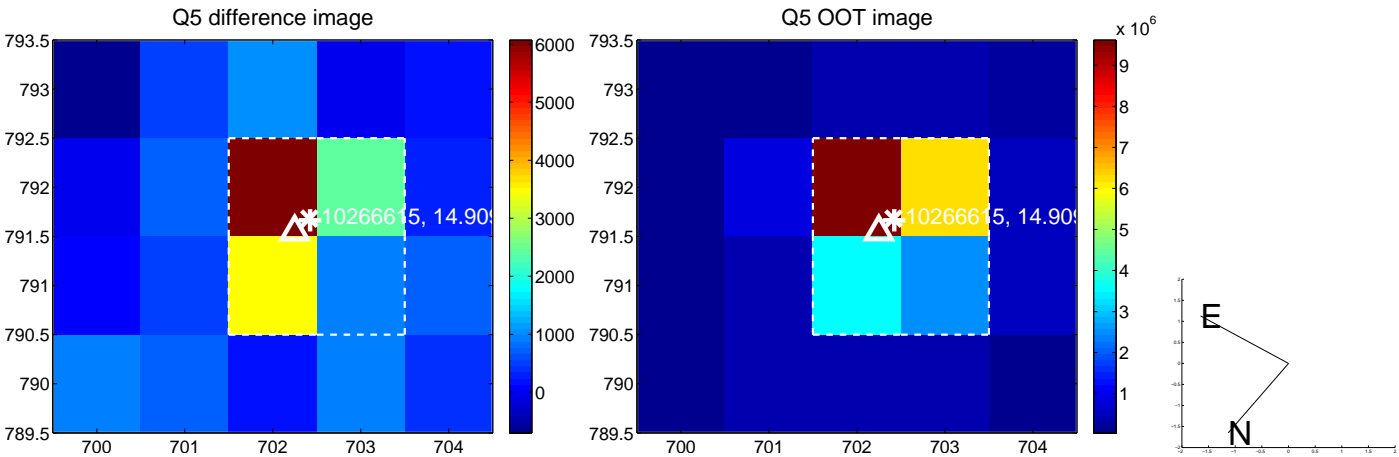


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

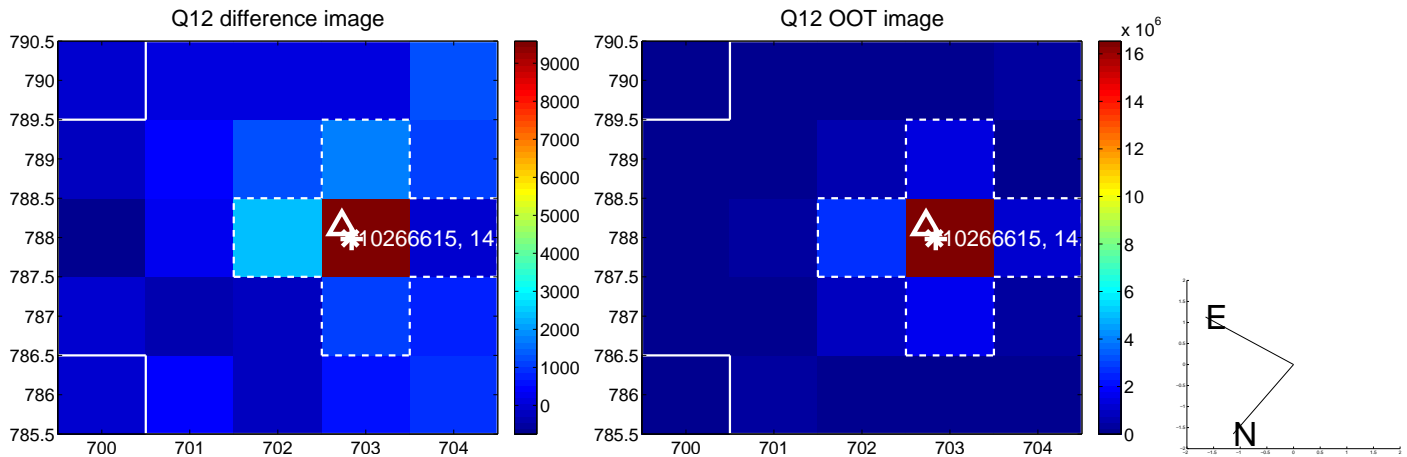
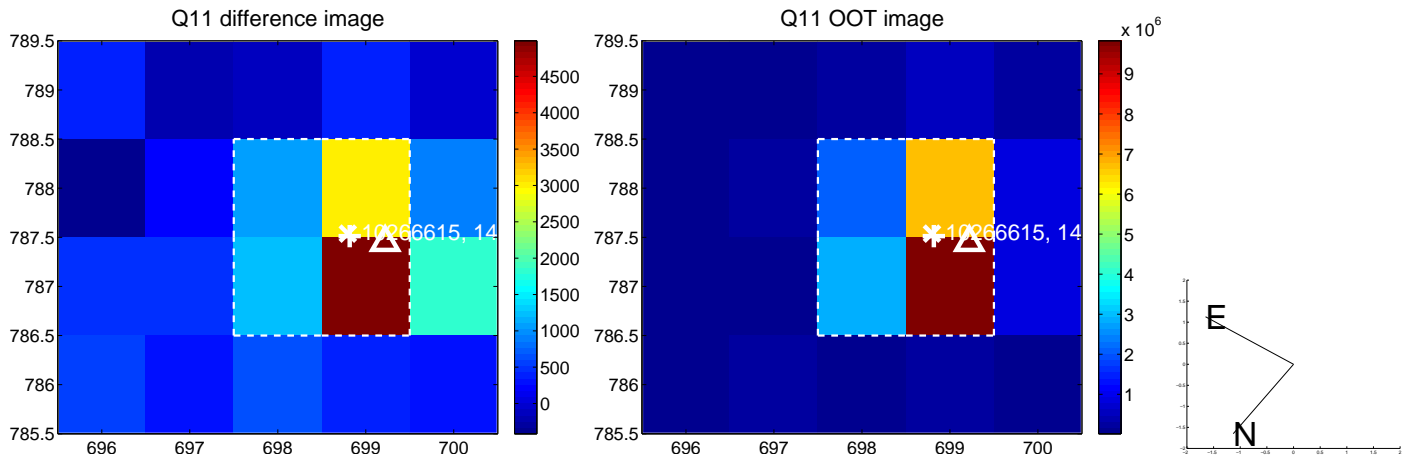
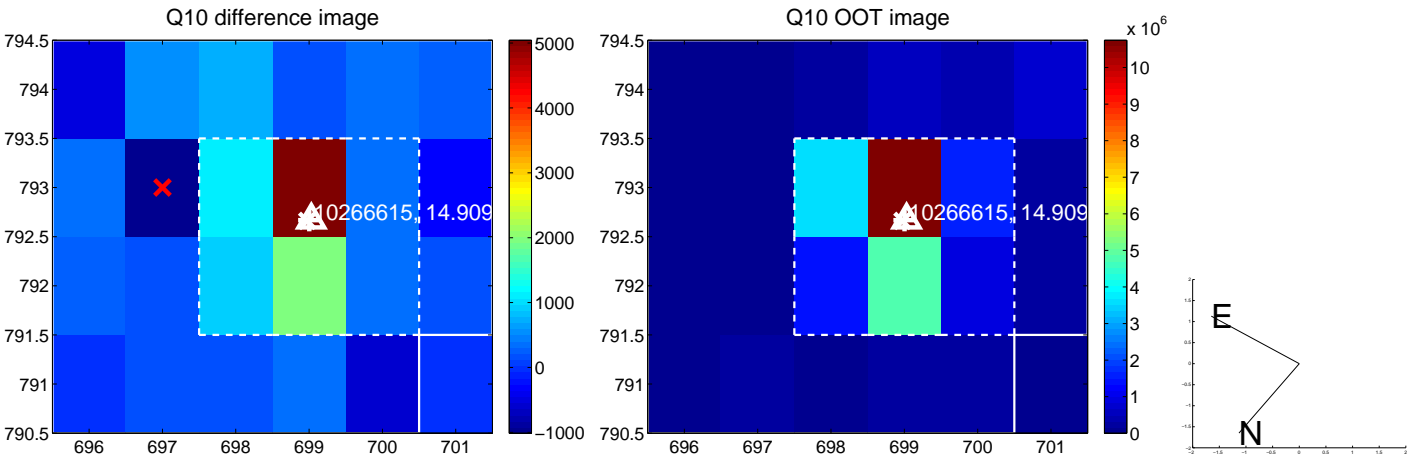
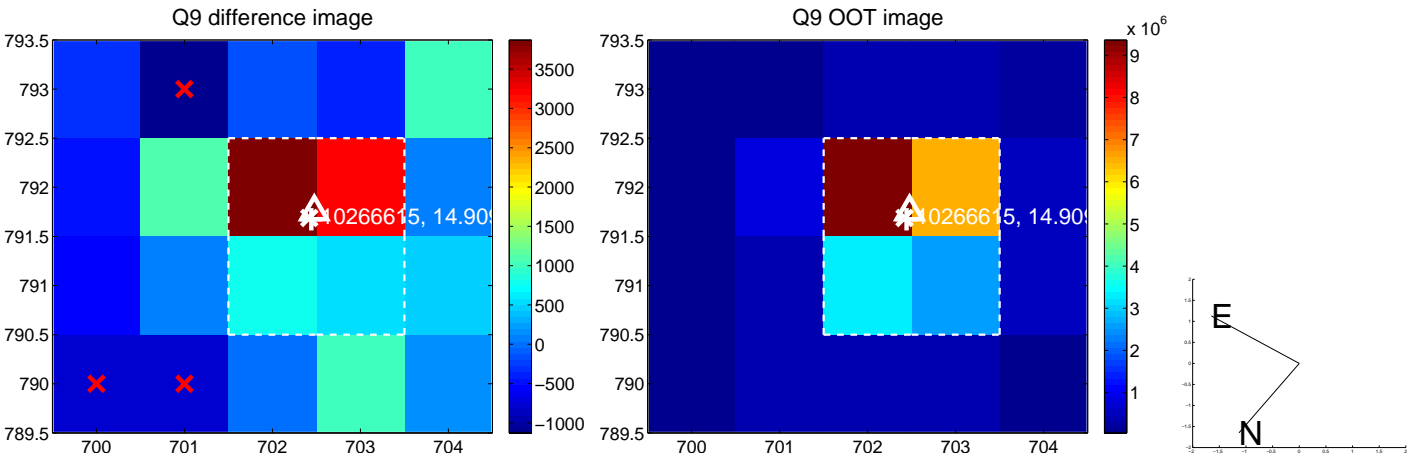
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



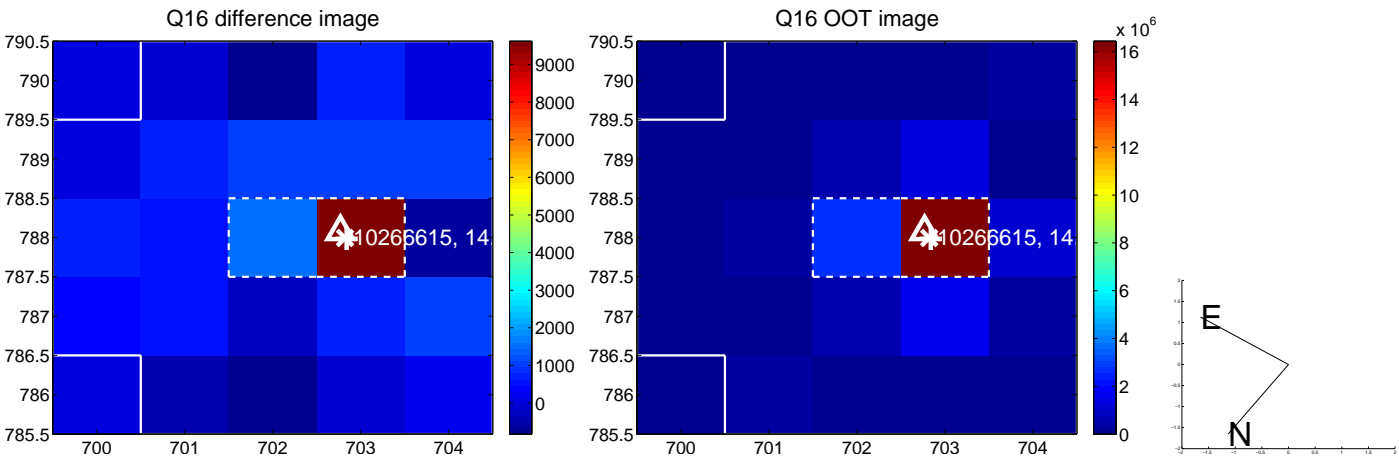
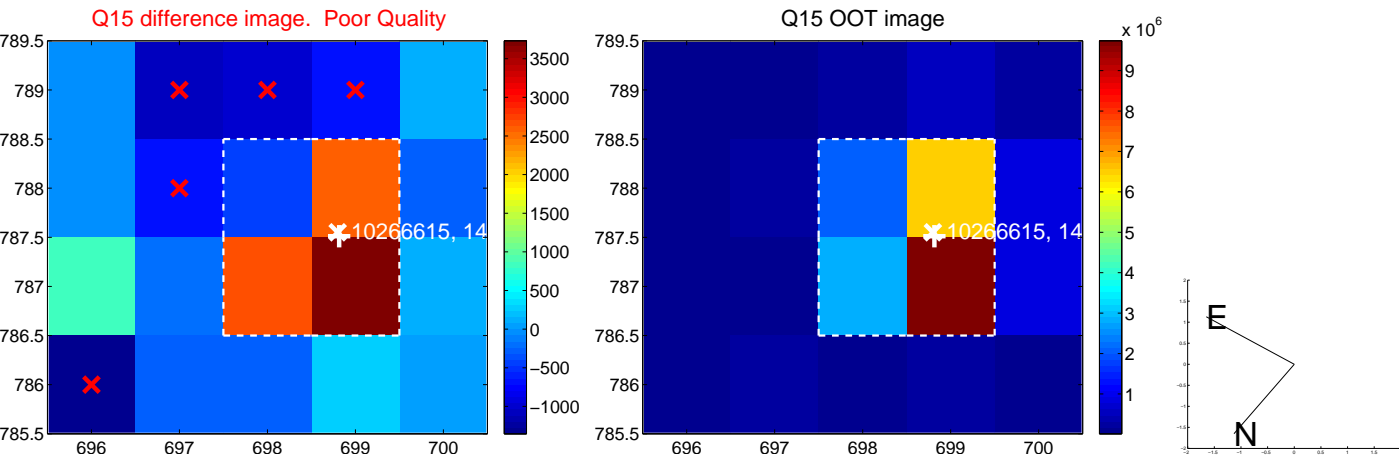
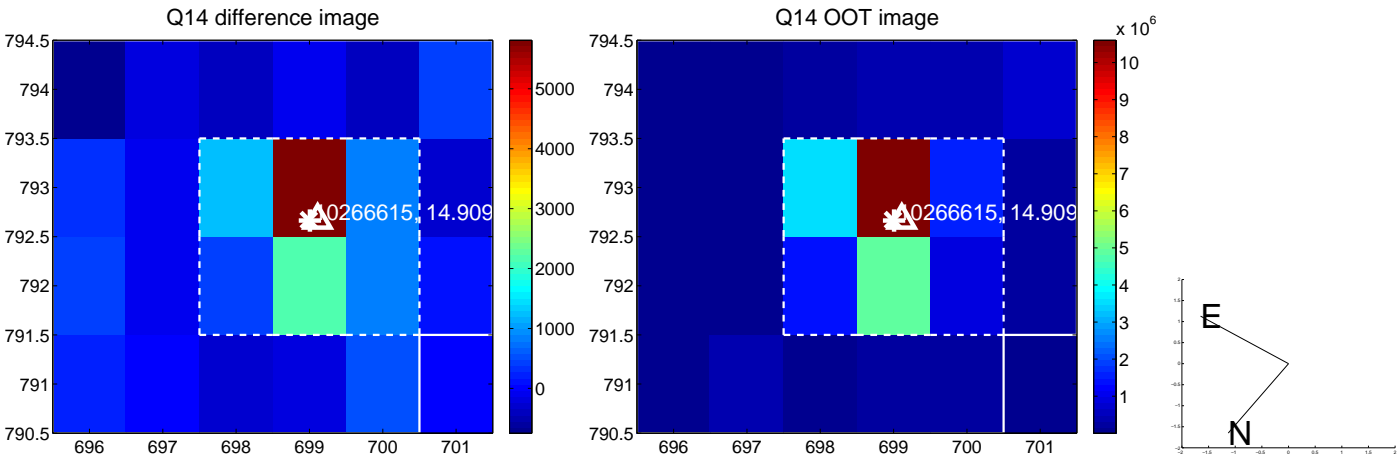
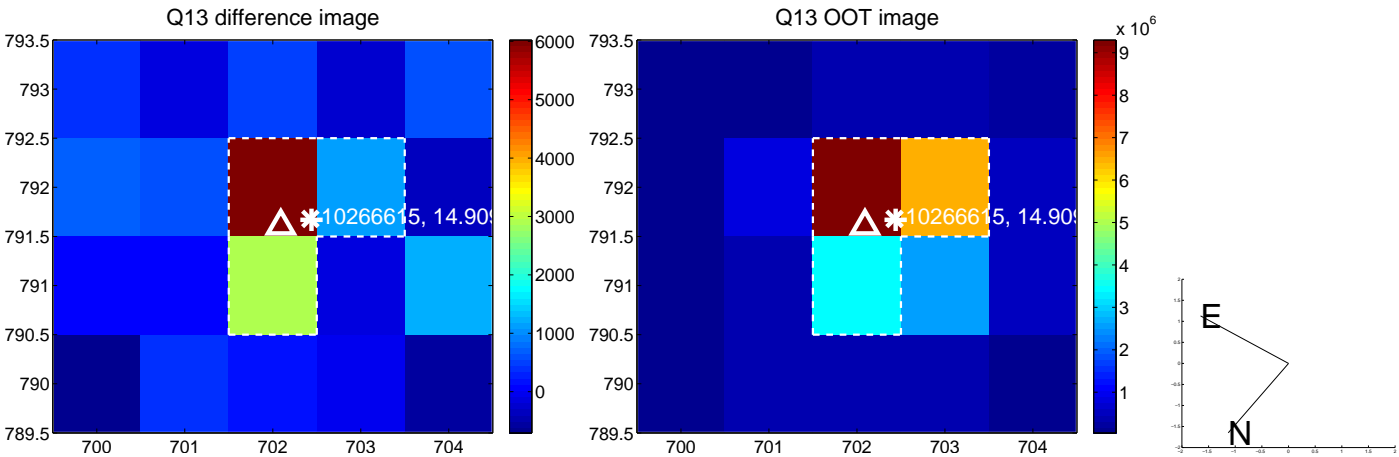
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



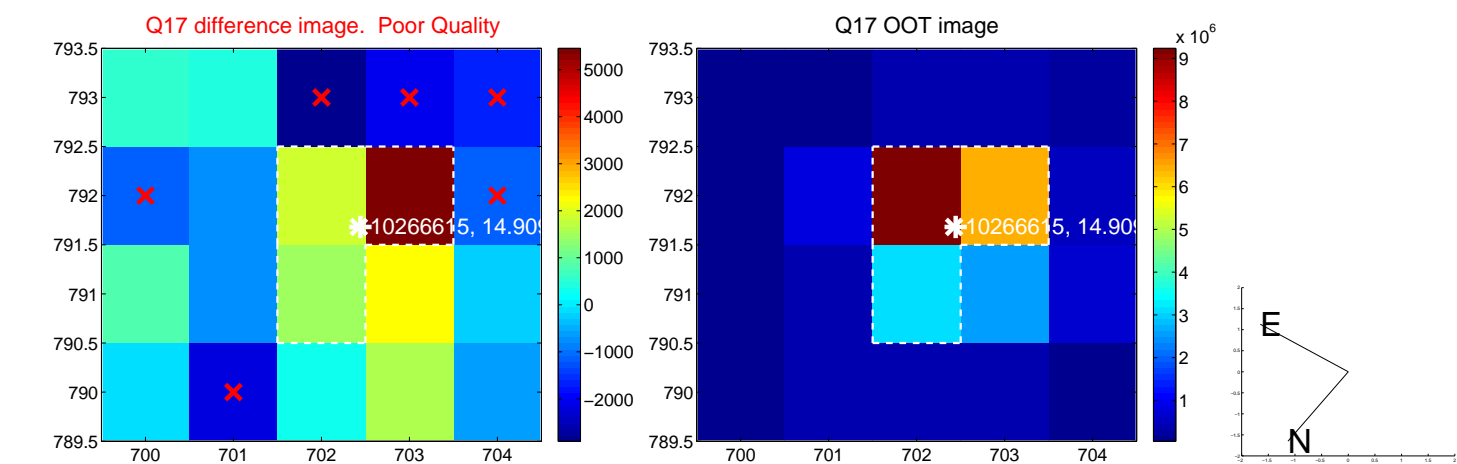
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



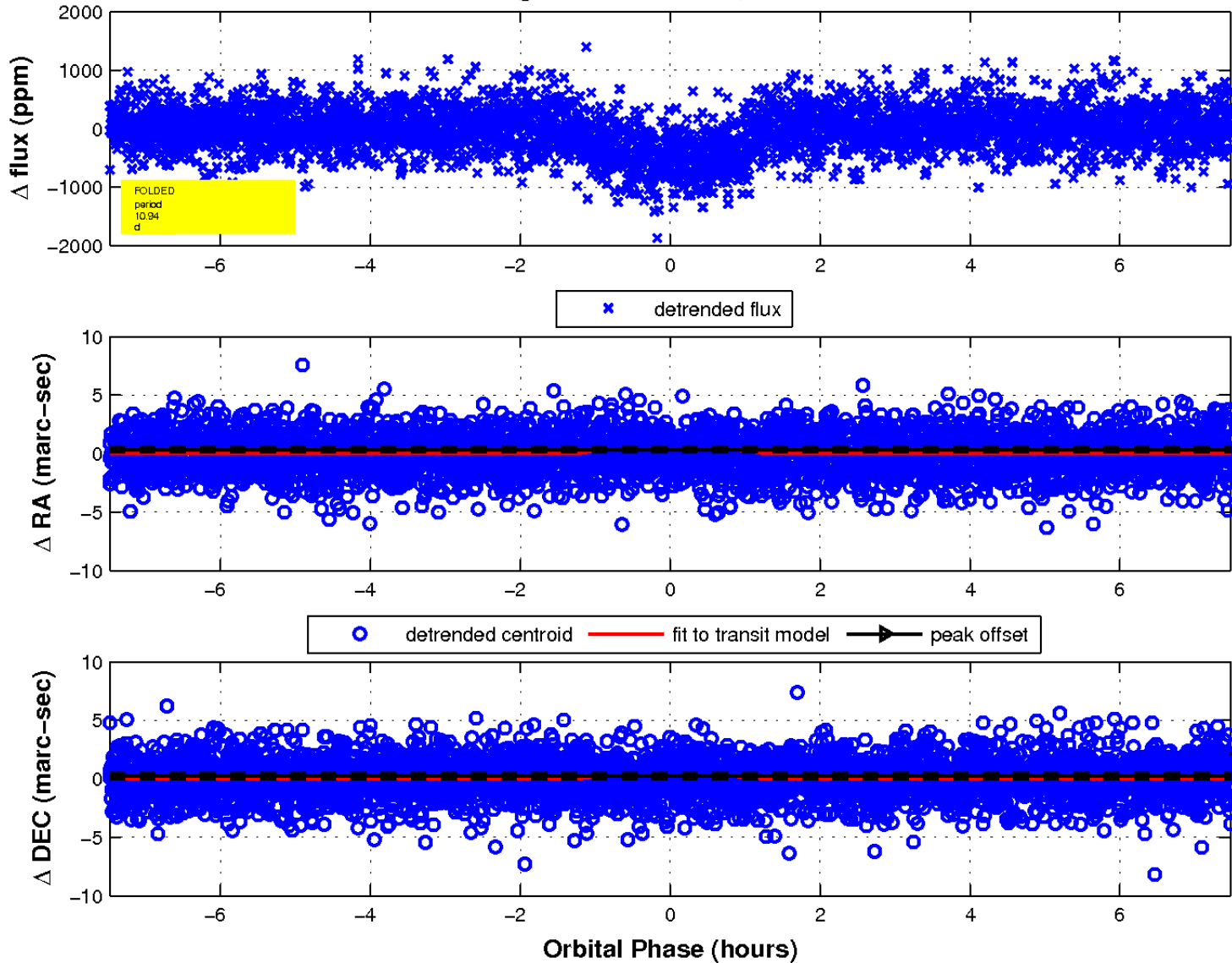
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

