

KIC 004274071

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})
004274071-01	OBS	6399.01	6.768863	133.081937	118.5	3.827	8.6	9.4	1.12	5737	1.46	253.74

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004274071-01	OBS	PC	0.83	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.

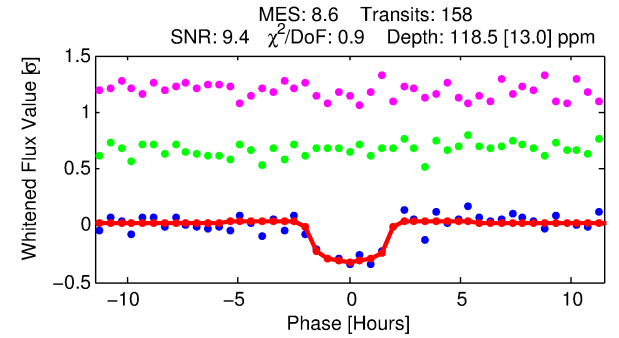
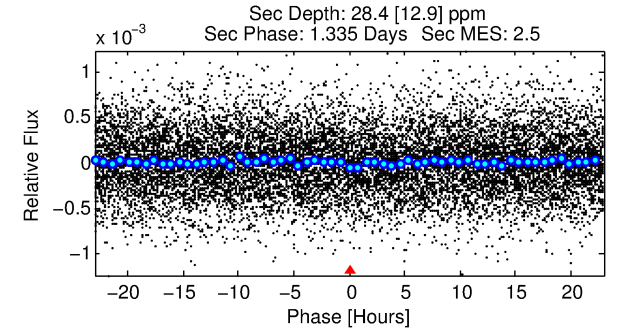
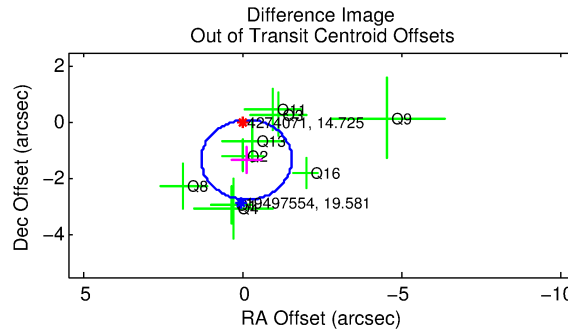
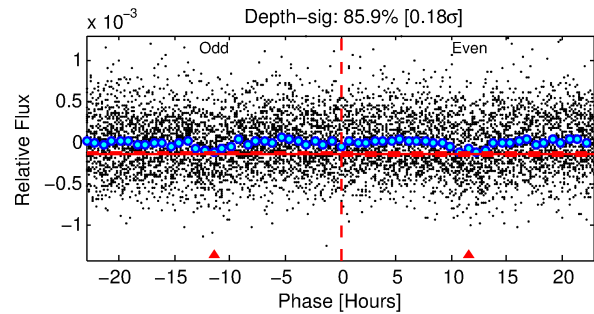
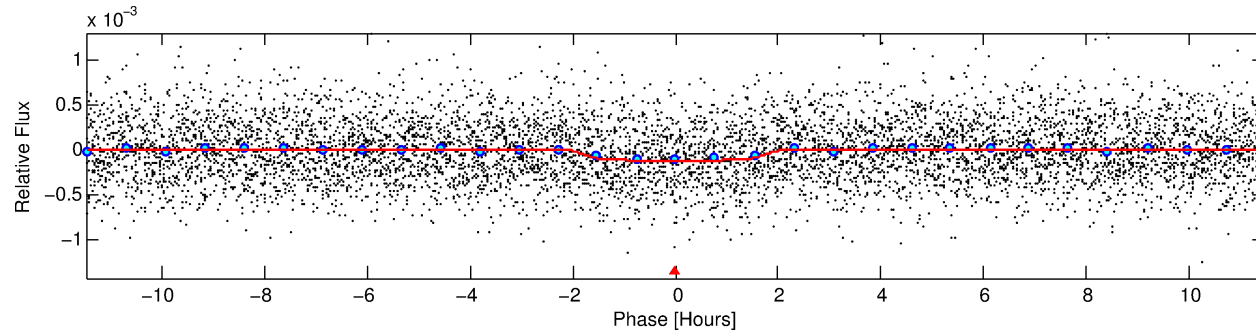
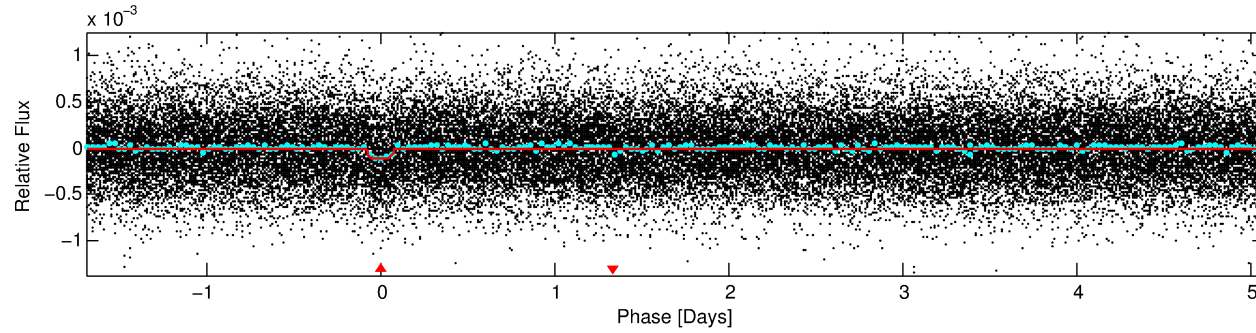
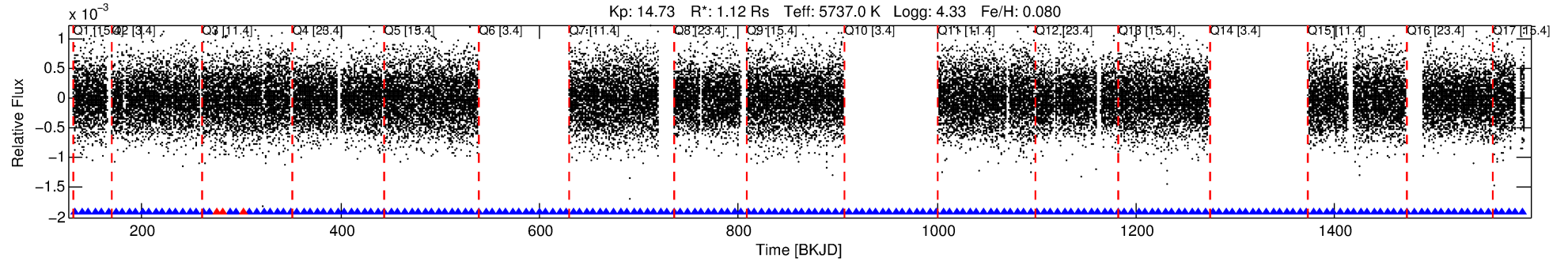
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004274071-01

No Significant Match Found

DV One-Page Summary

KIC: 4274071 Candidate: 1 of 1 Period: 6.769 d
KOI: K06399.01 Corr: 0.973



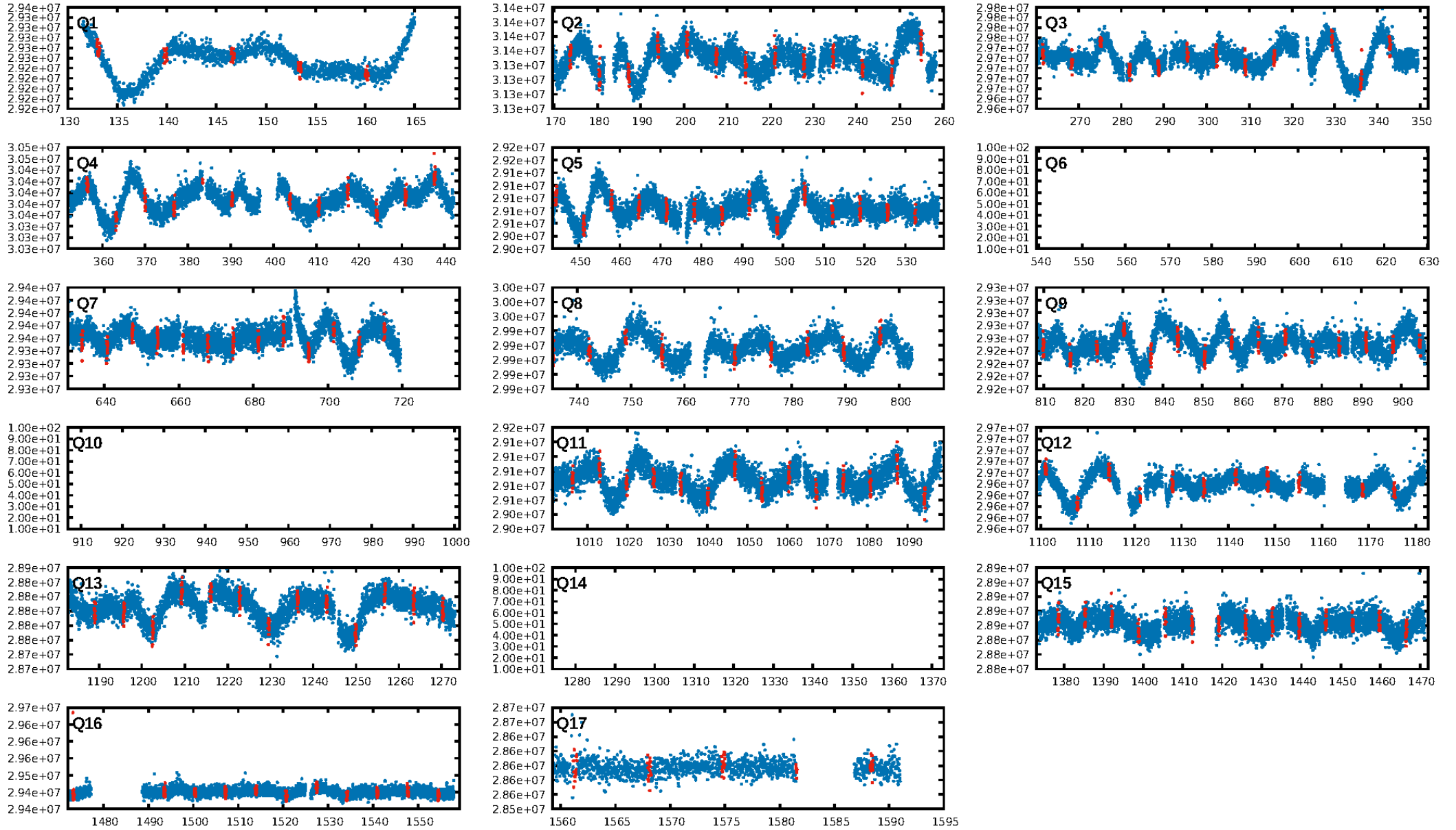
DV Fit Results:

Period = 6.76886 [0.00006] d
Epoch = 133.0819 [0.0068] BKJD
Rp/R* = 0.0119 [0.0068]
a/R* = 6.32 [16.82]
b = 0.90 [0.59]
Seff = 253.74 [91.61]
Teff = 1018 [92] K
Rp = 1.46 [0.93] Re
a = 0.0696 [0.0162] AU
Ag = 35.55 [45.60] [0.76 σ]
Teffp = 3842 [1193] K [2.36 σ]

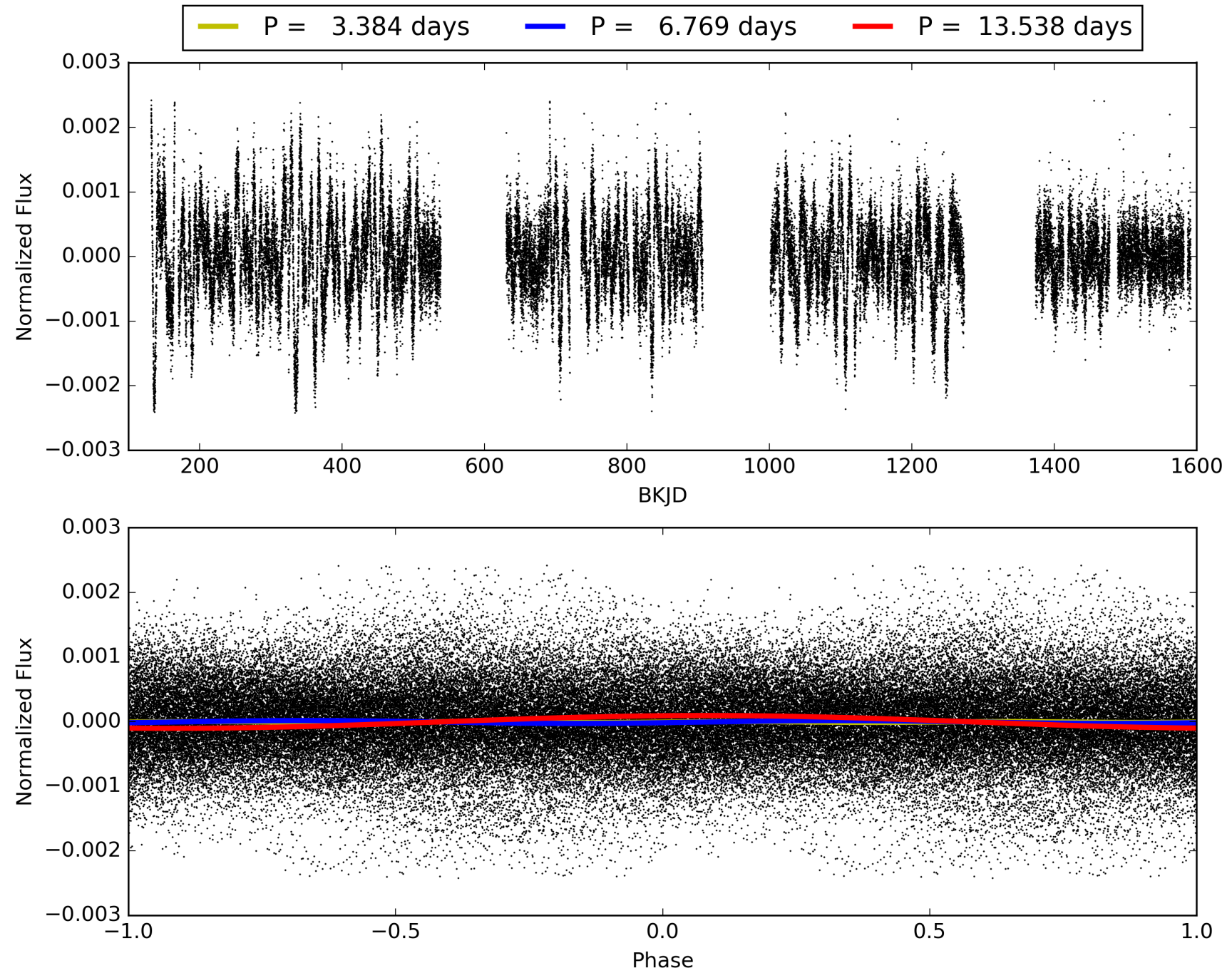
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.17e-17
RollingBand-fgt: 0.98 [145/148]
GhostDiagnostic-chr: -3.269
Centroid-sig: 83.8%
Centroid-so: 0.553 arcsec [0.39 σ]
OotOffset-rm: 1.330 arcsec [2.80 σ]
KicOffset-rm: 1.346 arcsec [2.90 σ]
OotOffset-st: 1/2/3/3 [9]
KicOffset-st: 1/2/3/3 [9]
DiffImageQuality-fgm: 0.56 [5/9]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 004274071-01, PDC Light Curves

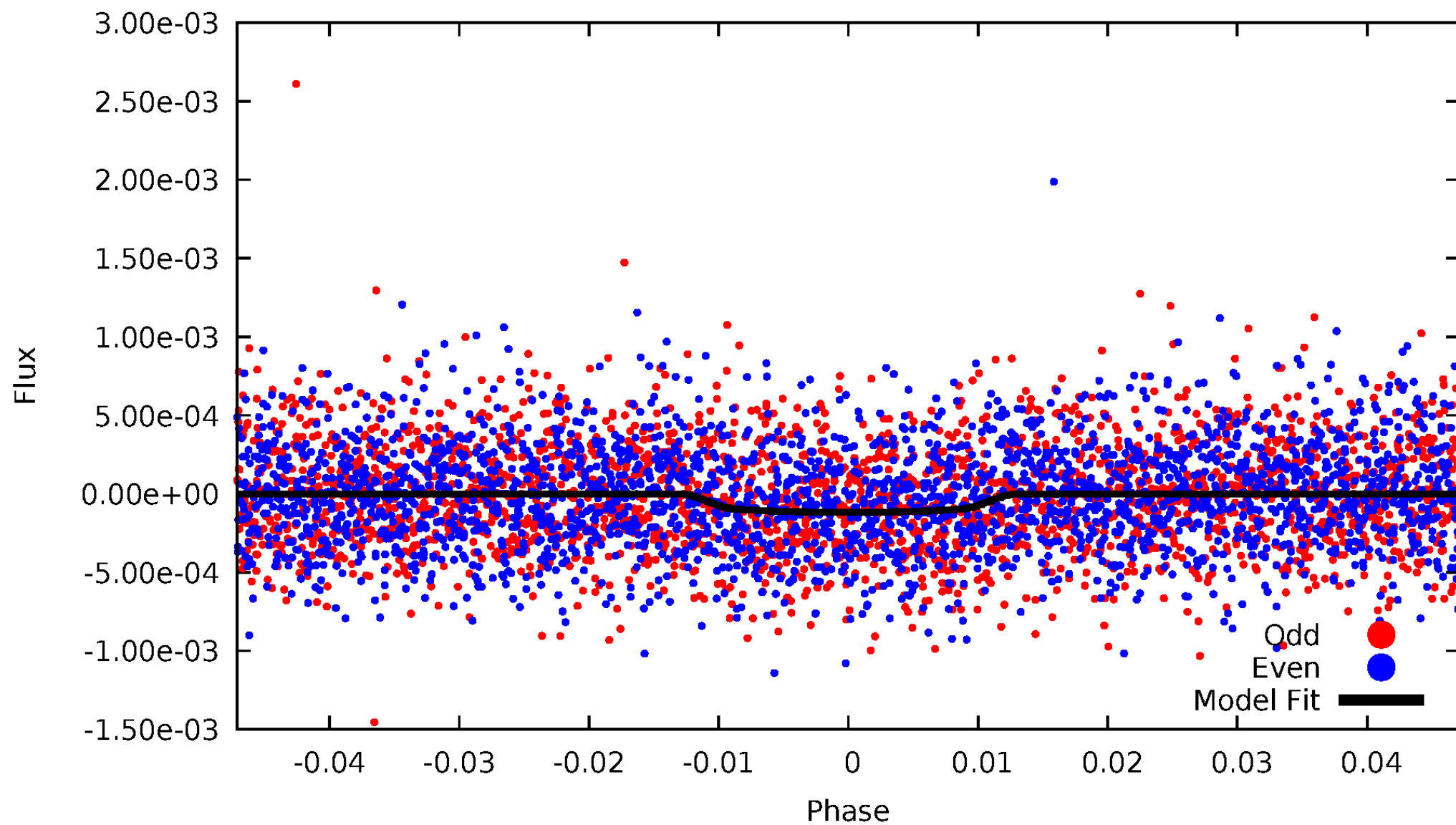


TCE 004274071-01



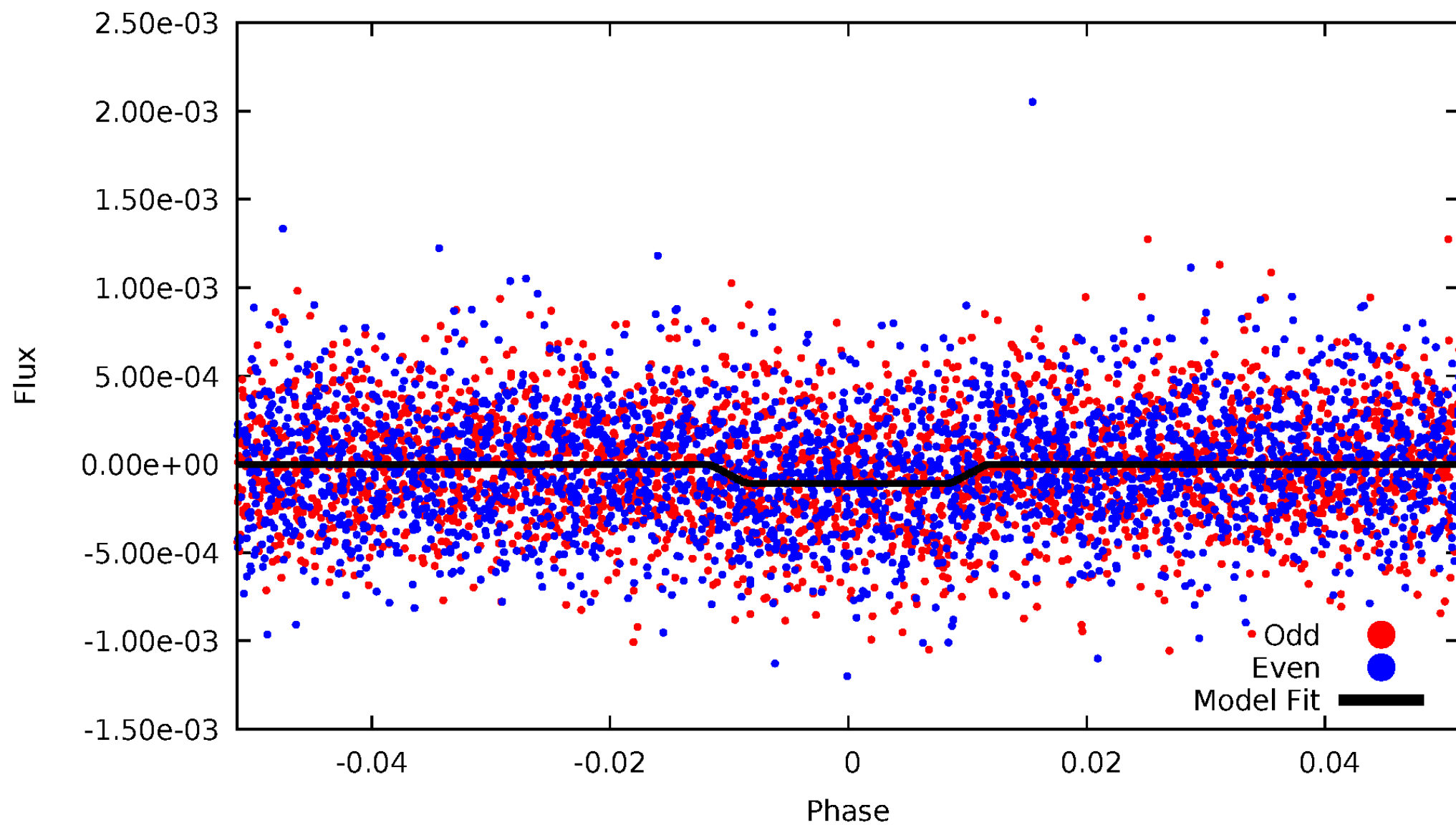
DV Odd/Even

TCE 004274071-01



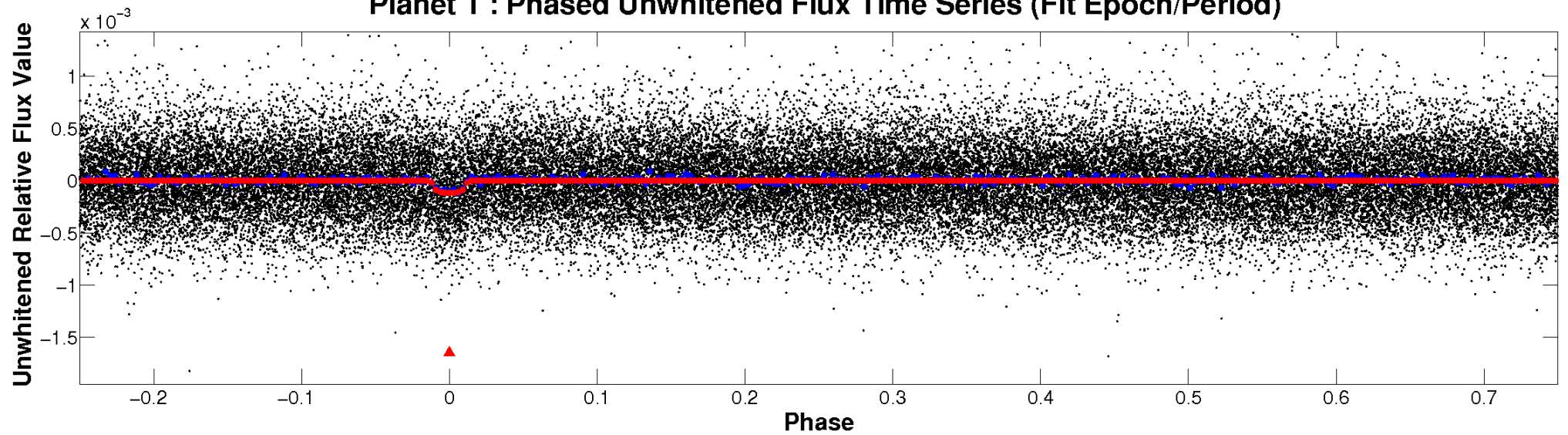
ALT Odd/Even

TCE 004274071-01

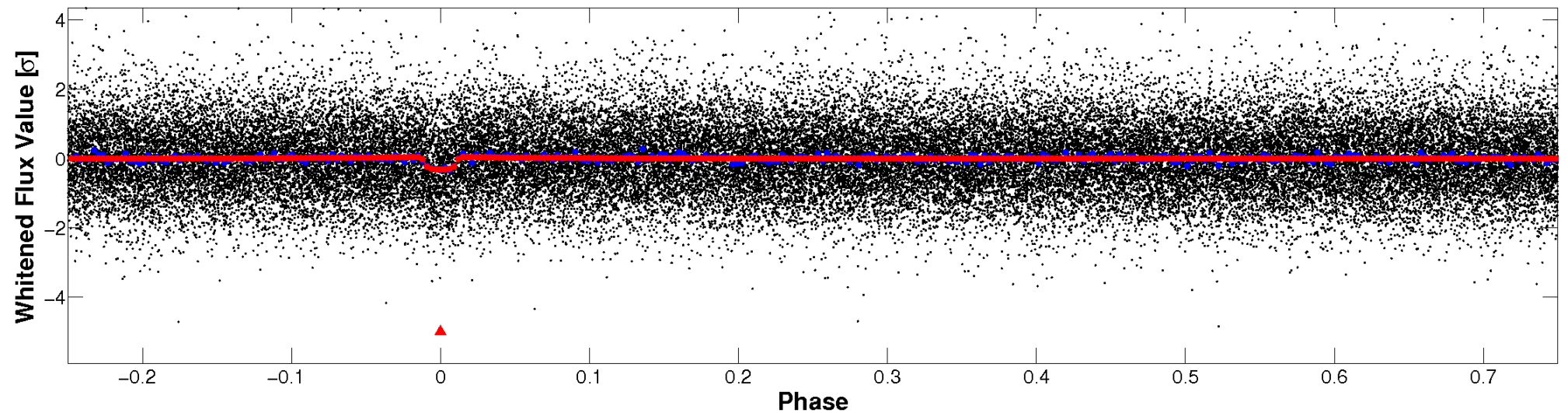


Non-Whitened Vs. Whitened Light Curve

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

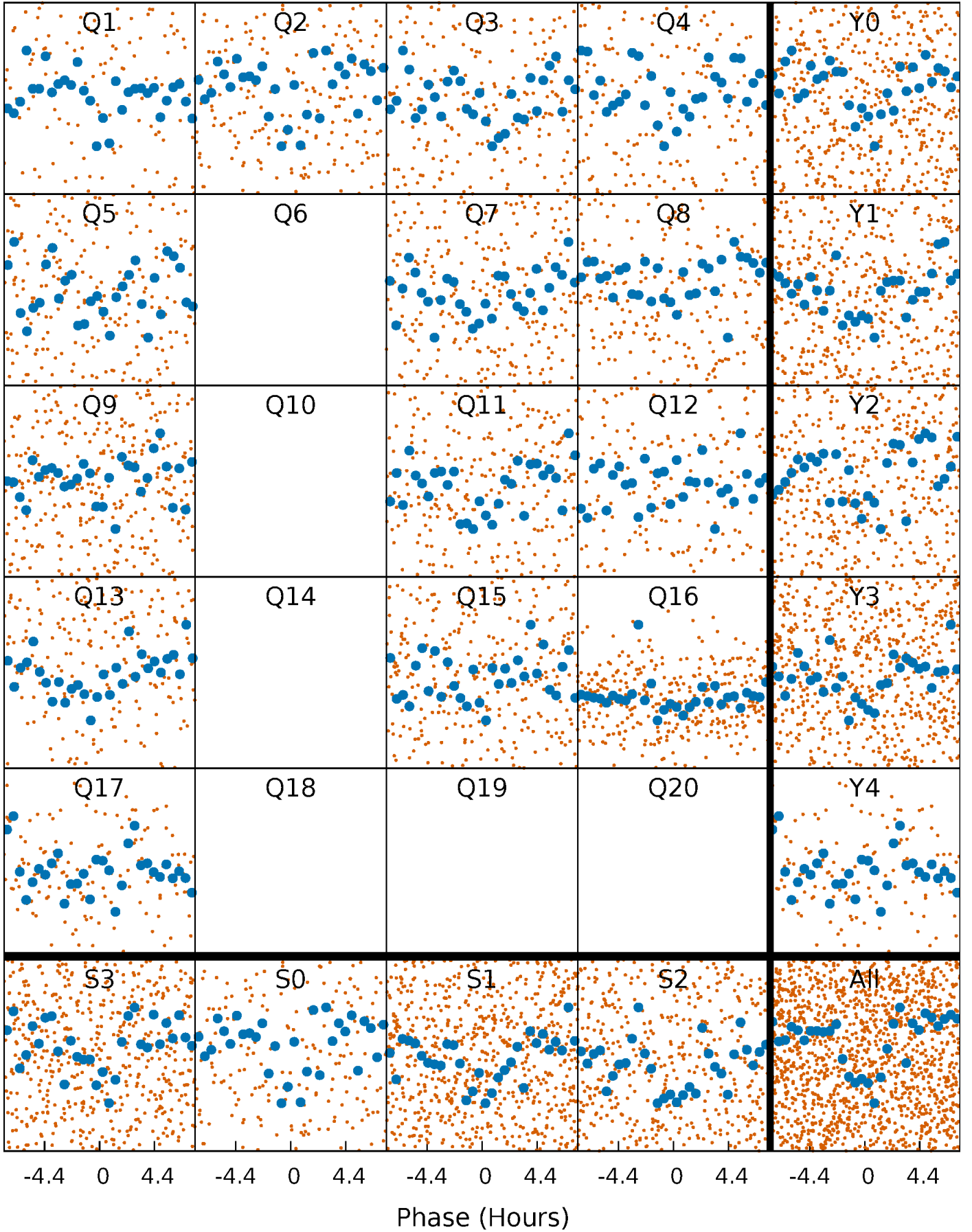


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



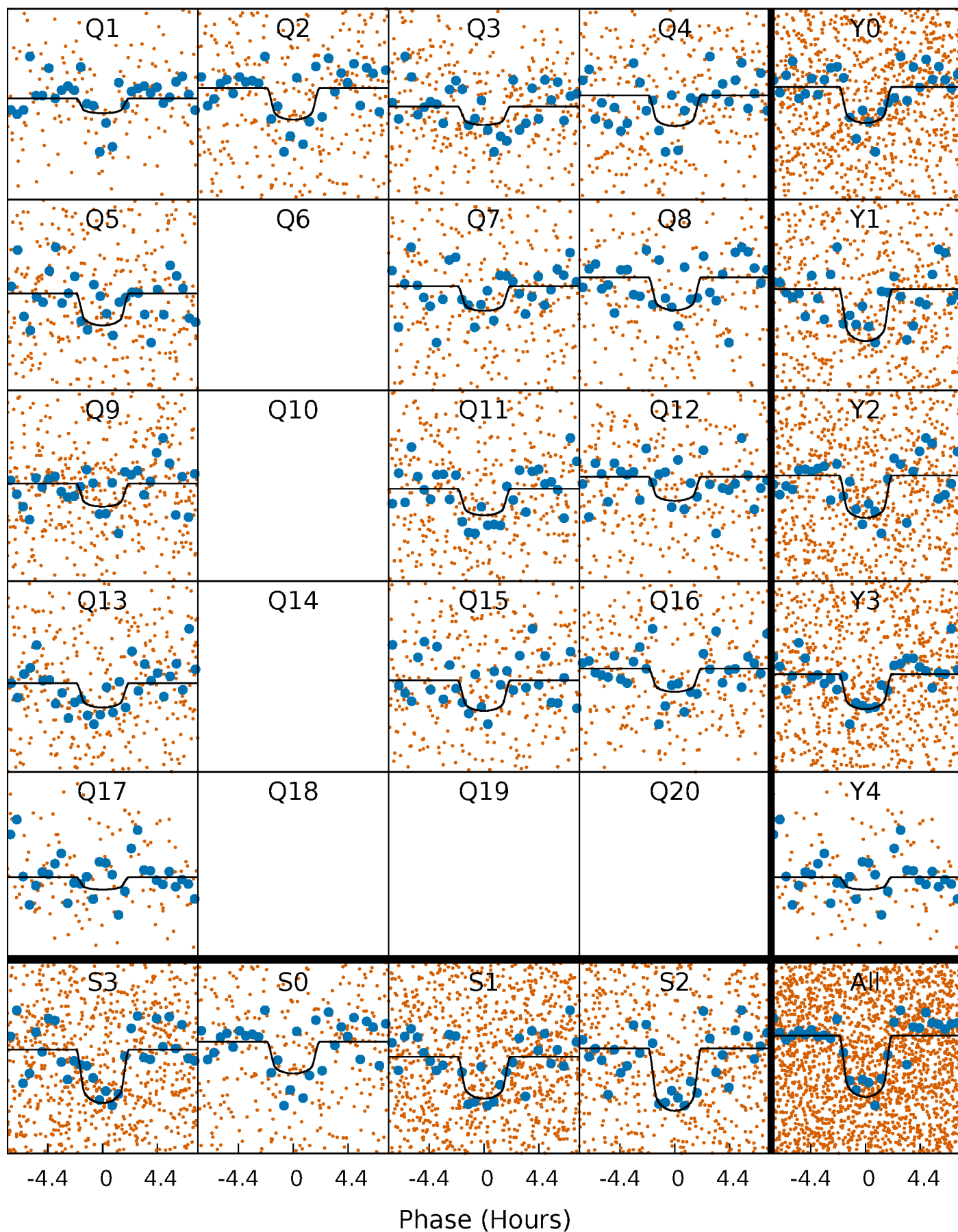
PDC Quarter-Phased Transit Curves

TCE 004274071-01 P= 6.768863 Days $T_0=133.081937$ (BKJD)



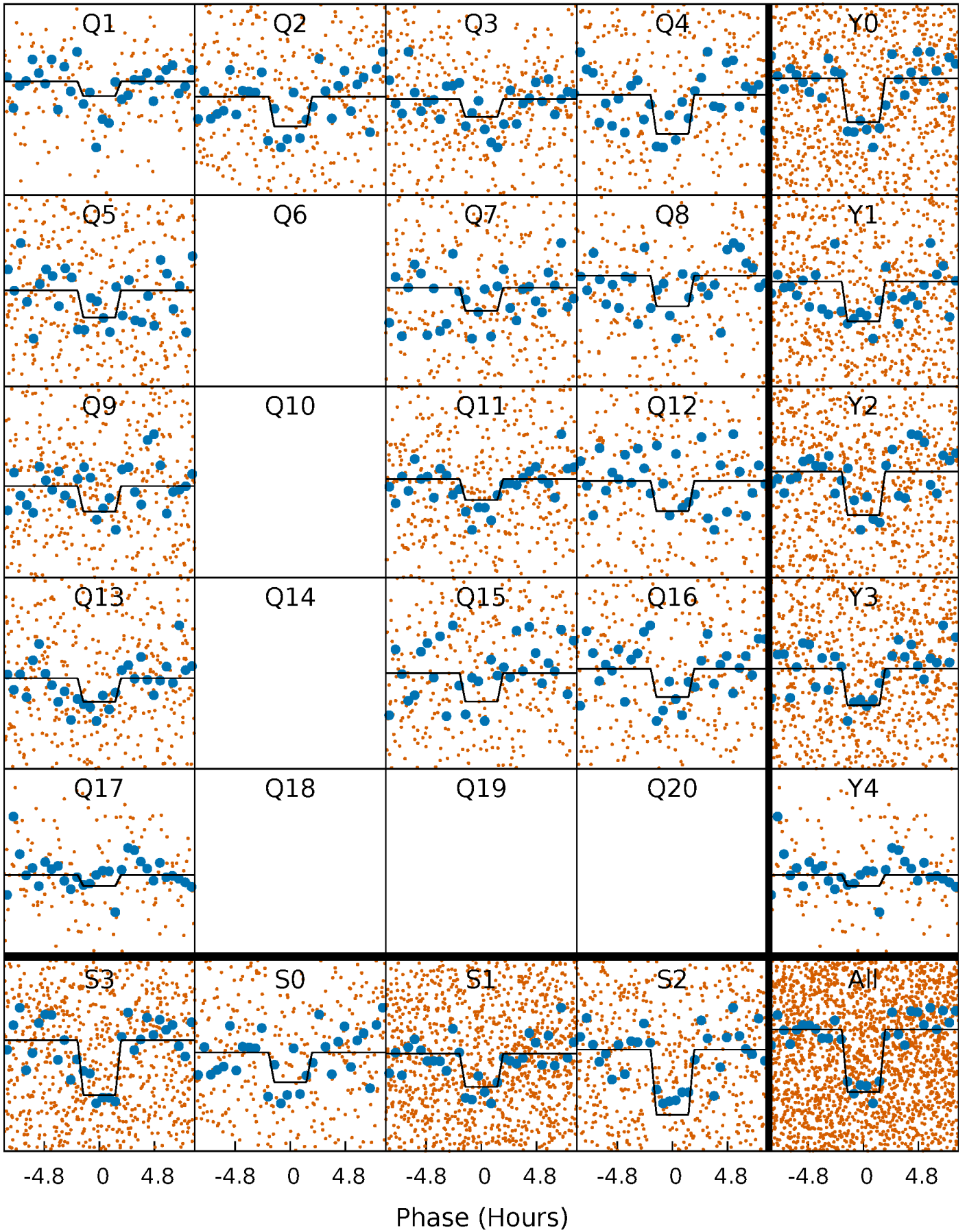
DV Quarter-Phased Transit Curves

TCE 004274071-01 P= 6.768863 Days $T_0=133.081937$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

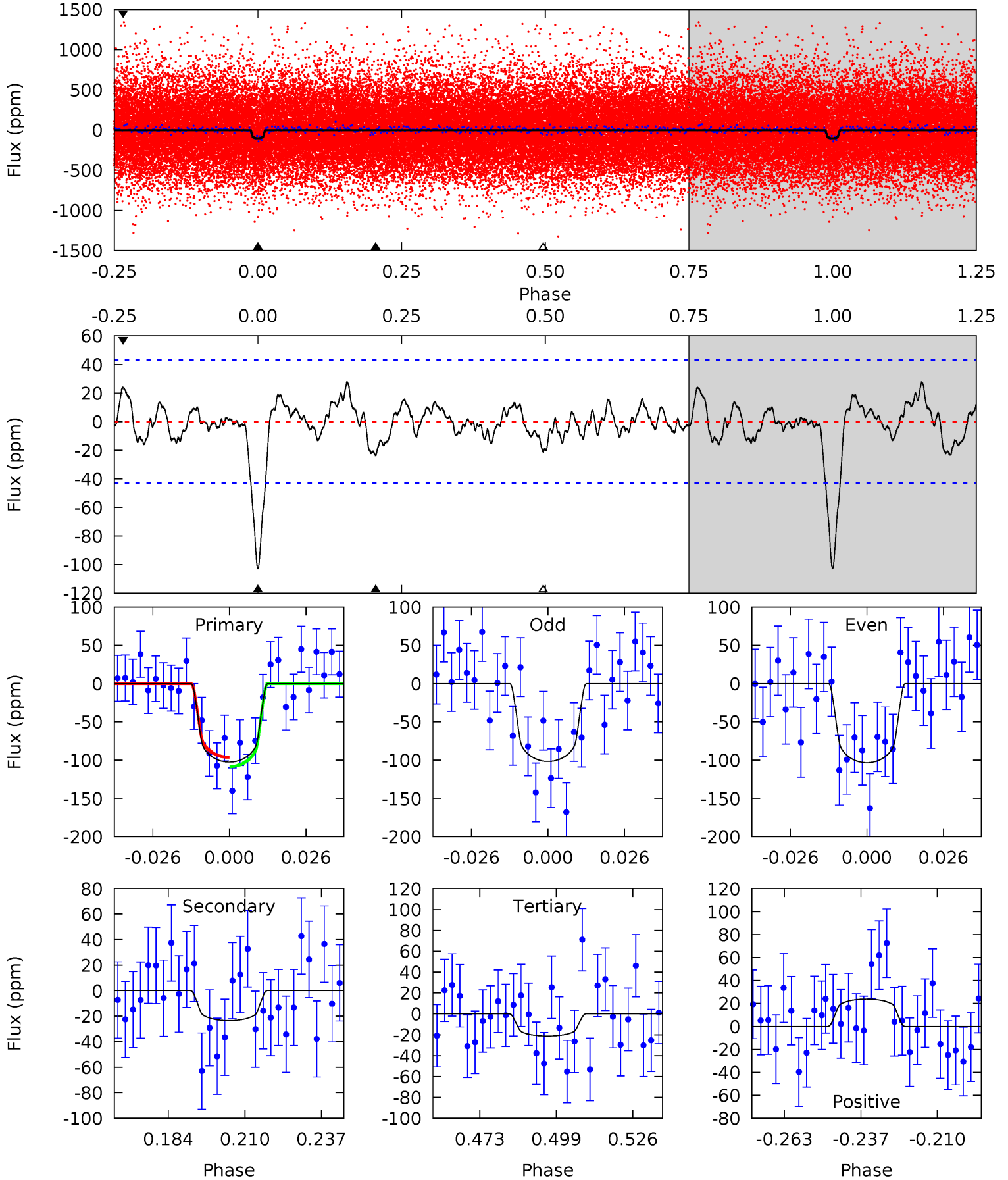
TCE 004274071-01 P= 6.768834 Days $T_0=133.085361$ (BKJD)



DV Model-Shift Uniqueness Test

004274071-01, P = 6.768863 Days, E = 126.313074 Days

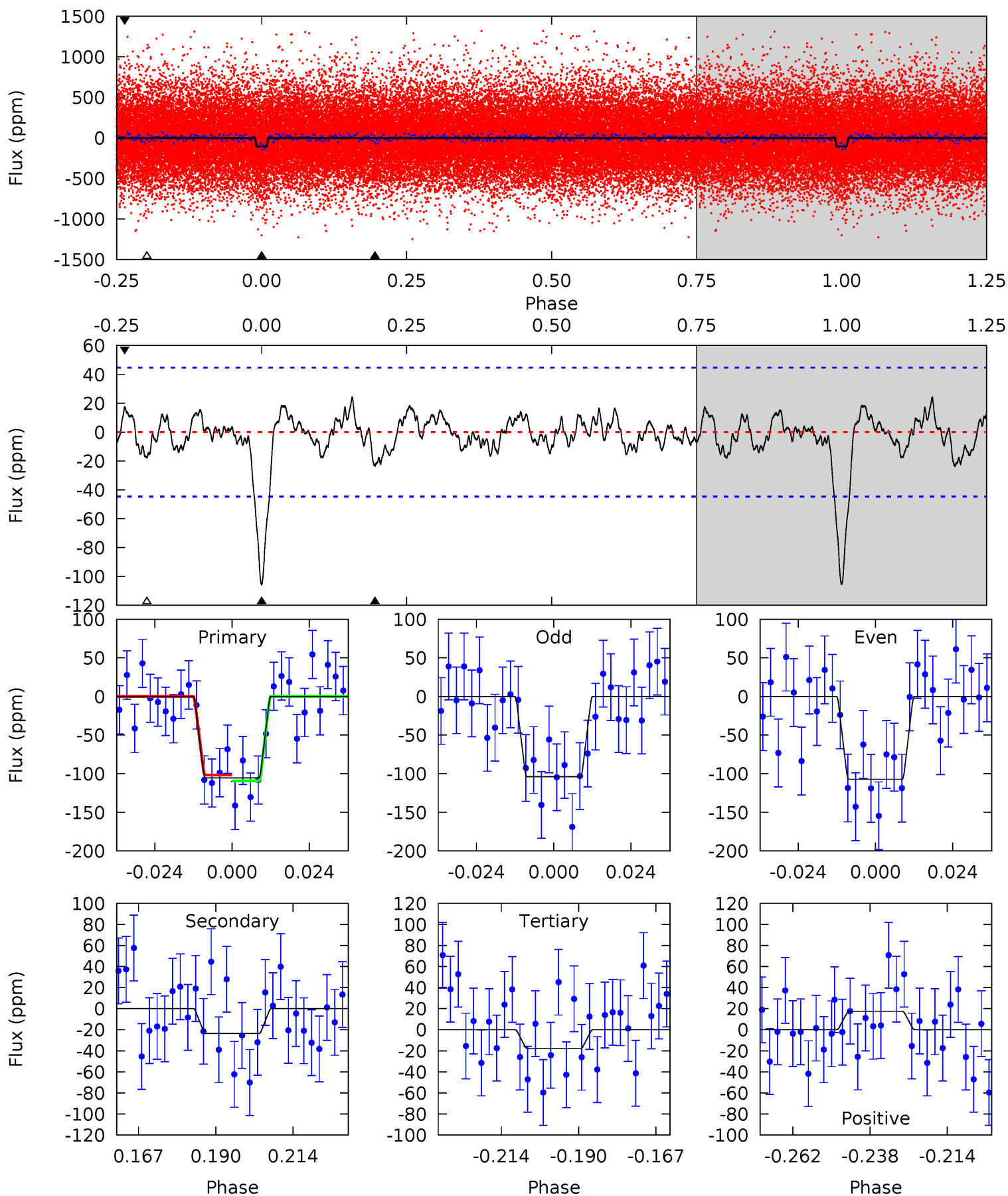
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.5	2.64	2.39	2.68	4.84	2.22	1.00	9.15	8.85	0.26	-0.04	0.10	1.08	0.21	0.69



Alt Model-Shift Uniqueness Test

004274071-01, P = 6.768834 Days, E = 126.316527 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.5	2.56	1.92	1.89	4.86	2.26	0.93	9.55	9.59	0.64	0.67	0.18	1.21	0.19	0.41



Stellar Parameters For KIC 004274071

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5737^{+154}_{-171}	$4.327^{+0.153}_{-0.187}$	$0.080^{+0.250}_{-0.300}$	$1.125^{+0.310}_{-0.207}$	$0.979^{+0.122}_{-0.097}$	$0.968^{+0.704}_{-0.470}$
	+3%/-3%	+4%/-4%	+312%/-375%	+28%/-18%	+12%/-10%	+73%/-49%
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 004274071-01 / KOI 6399.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-23 ± 9	$1.42^{+0.86}_{-0.75}$	1426^{+98}_{-89}	3955^{+1299}_{-571}	29^{+97}_{-18}
Alt.	-24 ± 9	$1.34^{+0.83}_{-0.74}$	1424^{+99}_{-97}	4099^{+1629}_{-733}	34^{+143}_{-23}

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

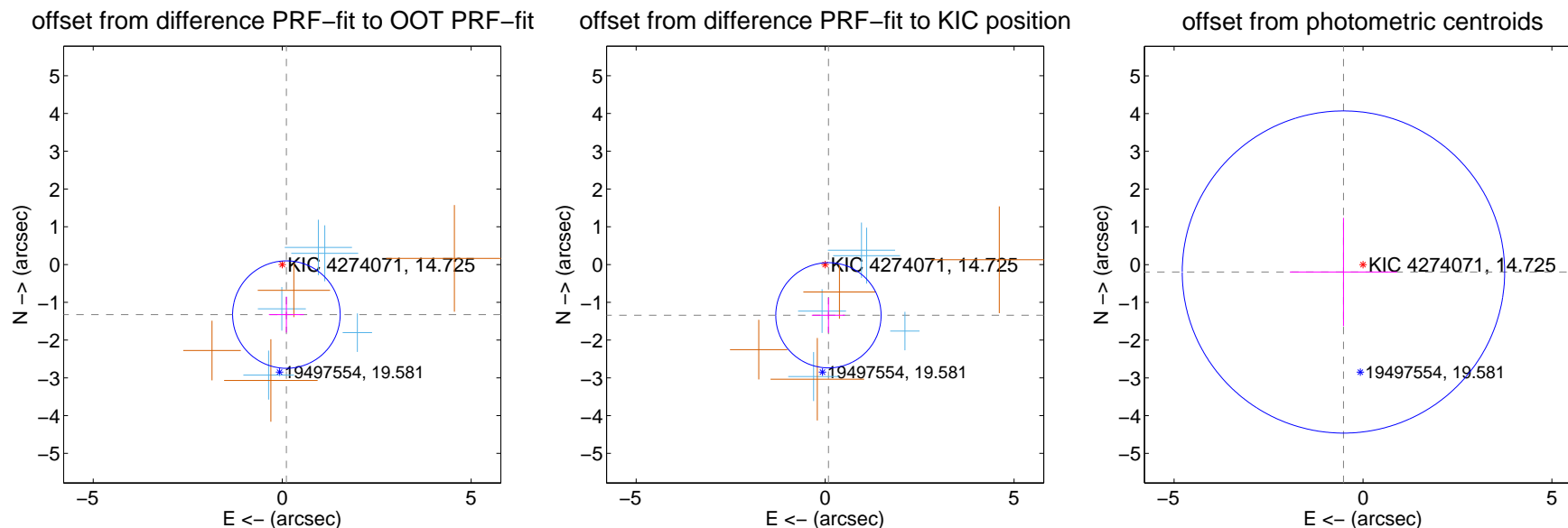
DV Centroid Data

Supplemental centroid analysis for 004274071-01. Kepler magnitude: 14.72. Transit SNR 9.39

There are 5 quarters with good PRF difference image offsets

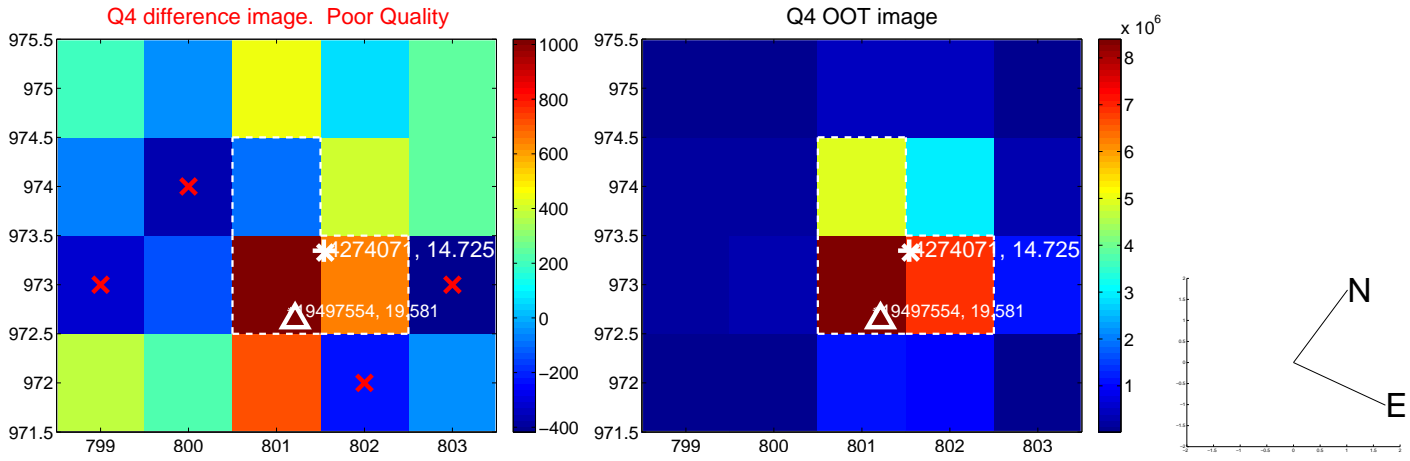
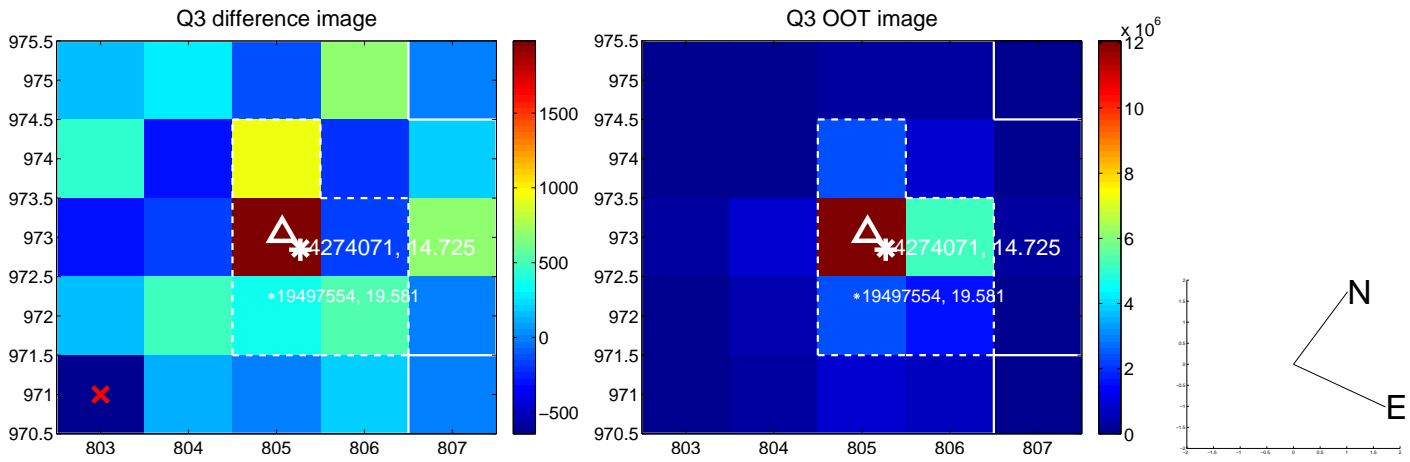
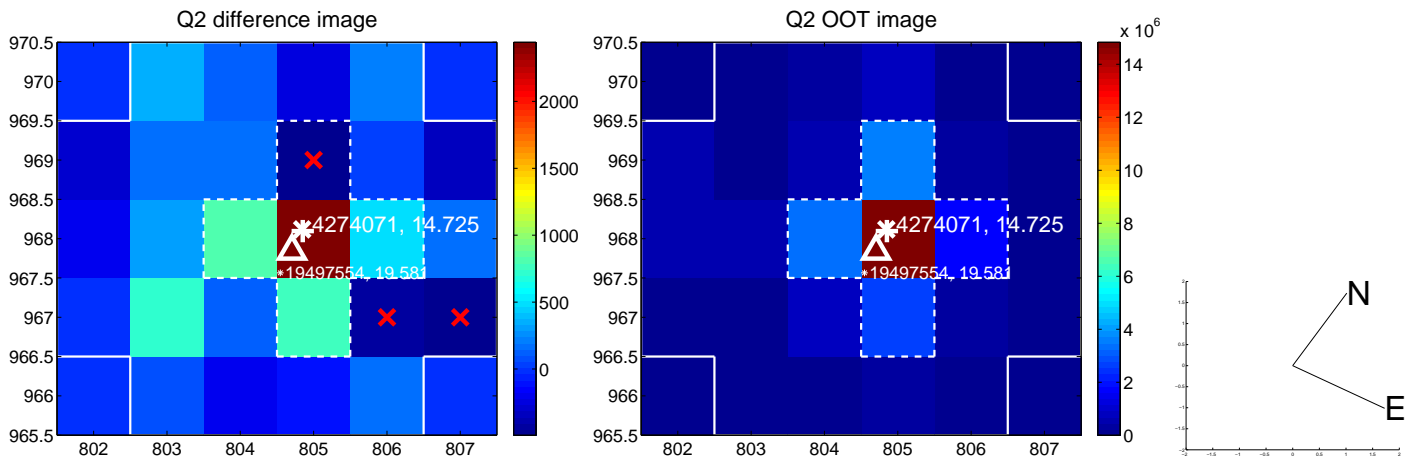
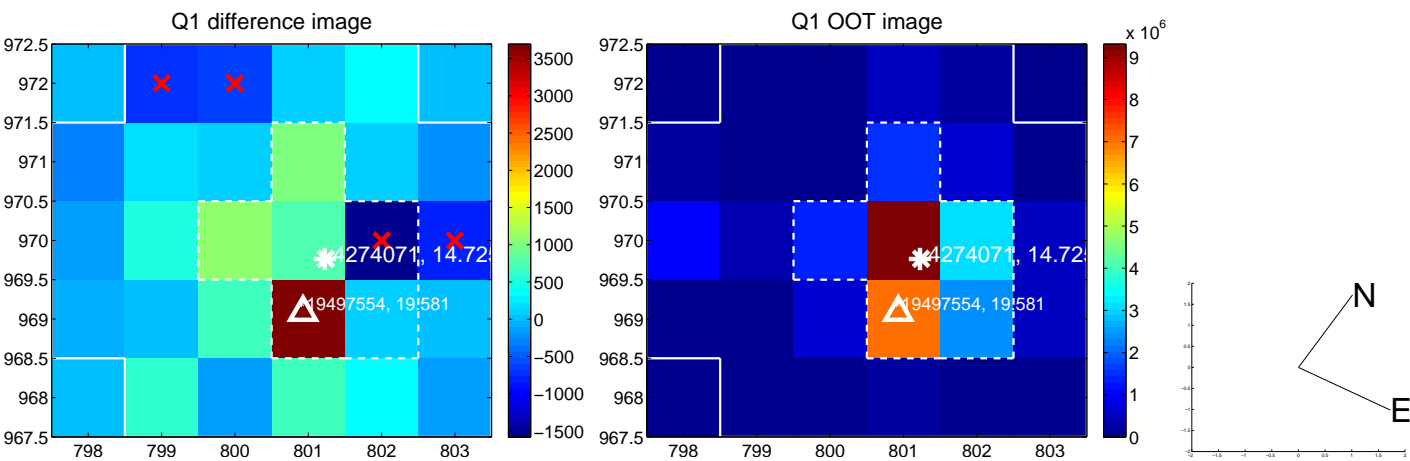
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.330 ± 0.474	2.80	-0.111 ± 0.464	-1.325 ± 0.474
PRF-fit source offset from KIC position	1.346 ± 0.464	2.90	-0.088 ± 0.439	-1.343 ± 0.464
photometric centroid source offset	0.55 ± 1.42	0.39	0.52 ± 1.42	-0.20 ± 1.43

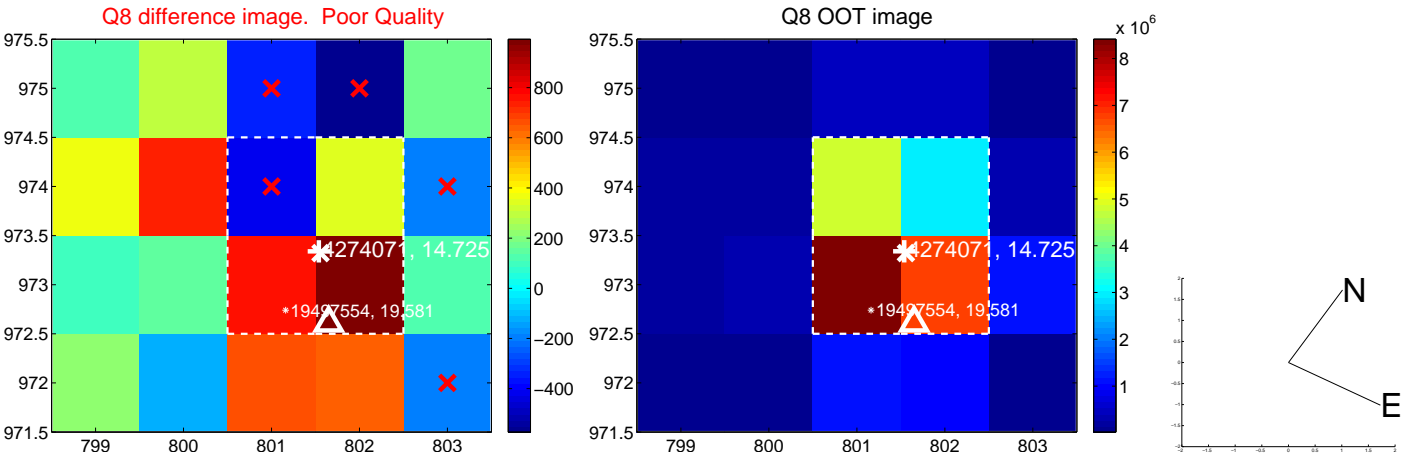
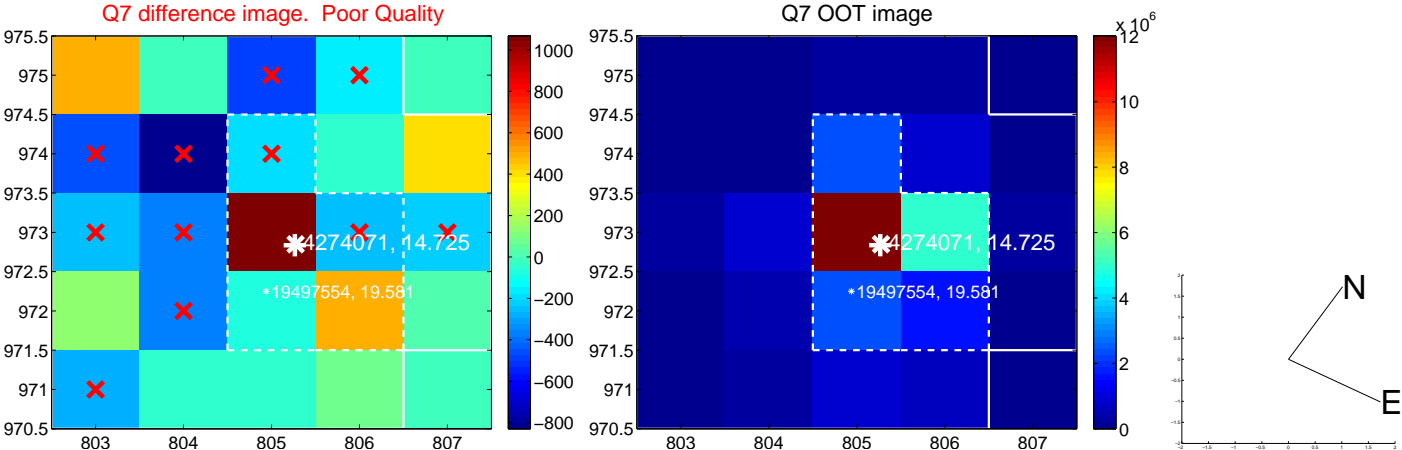
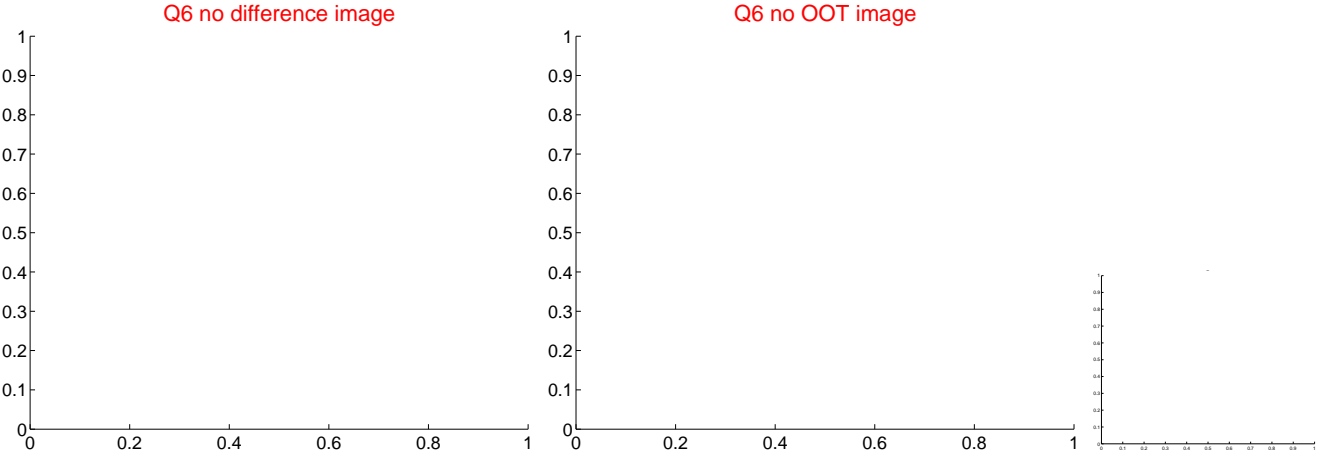
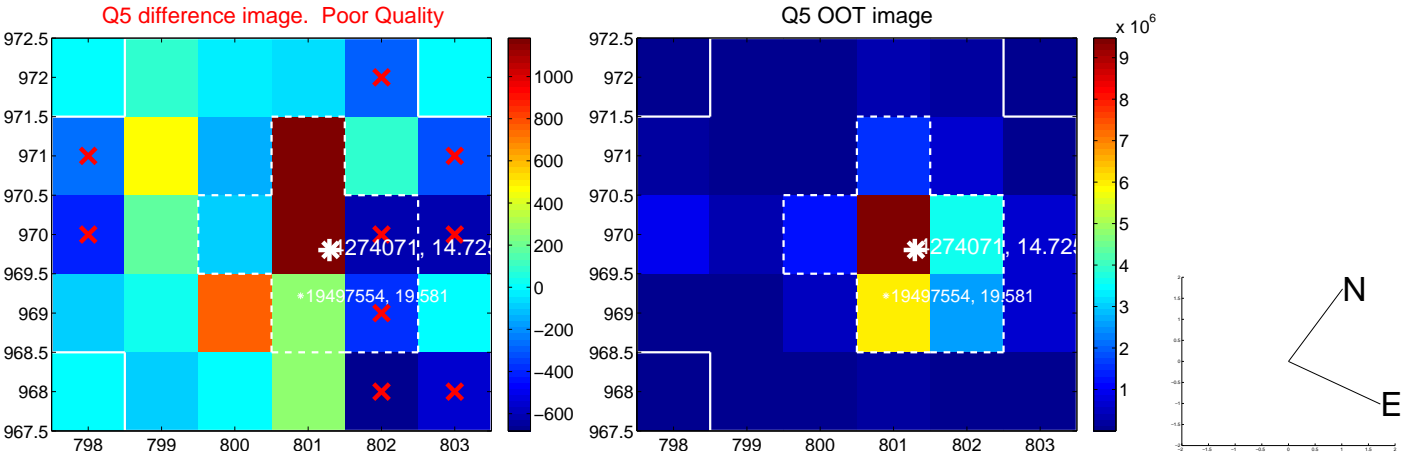


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

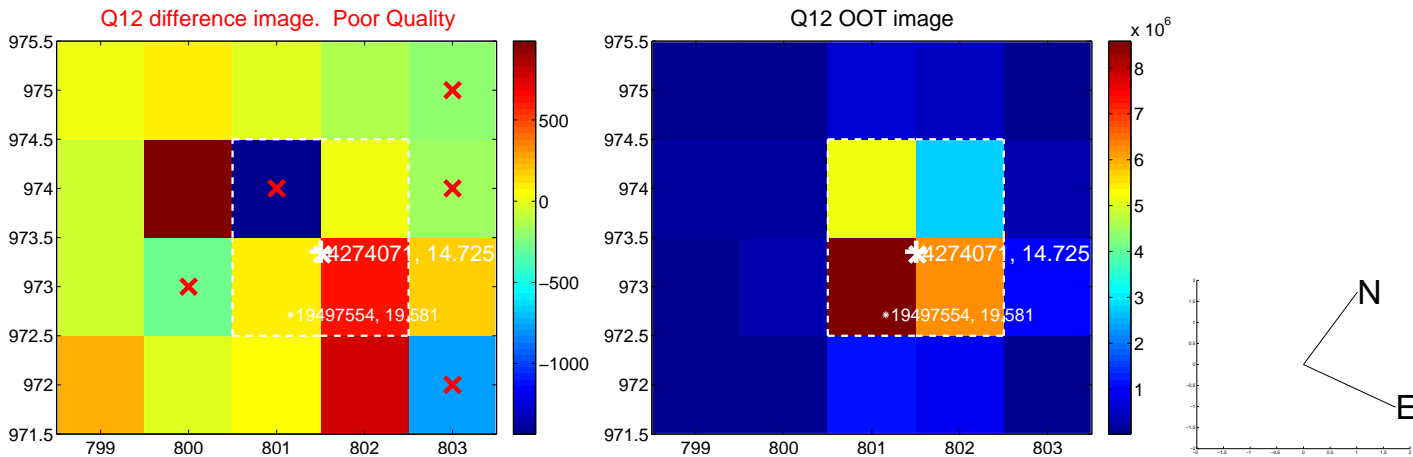
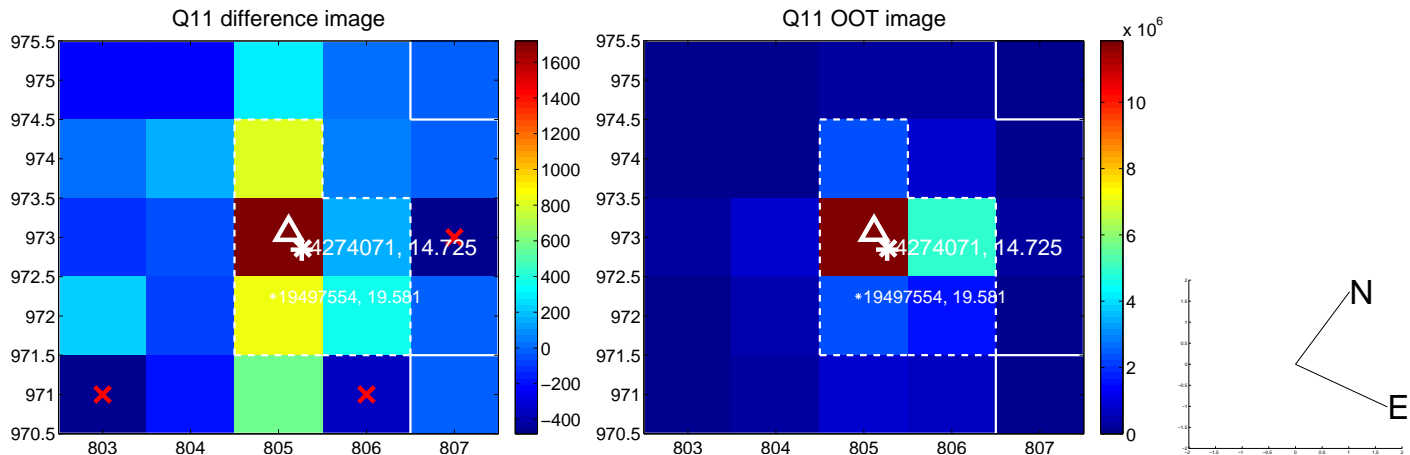
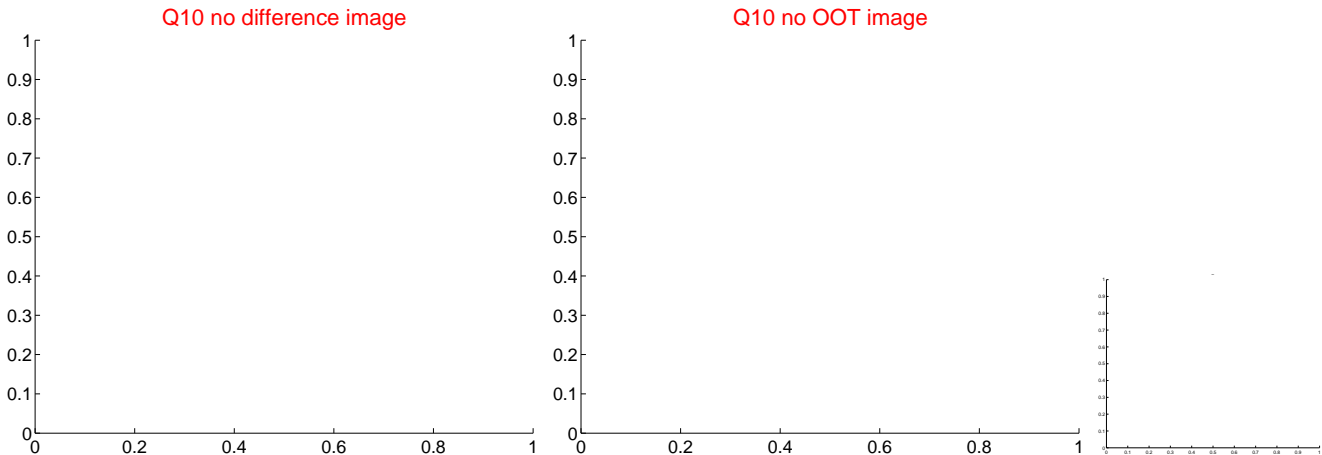
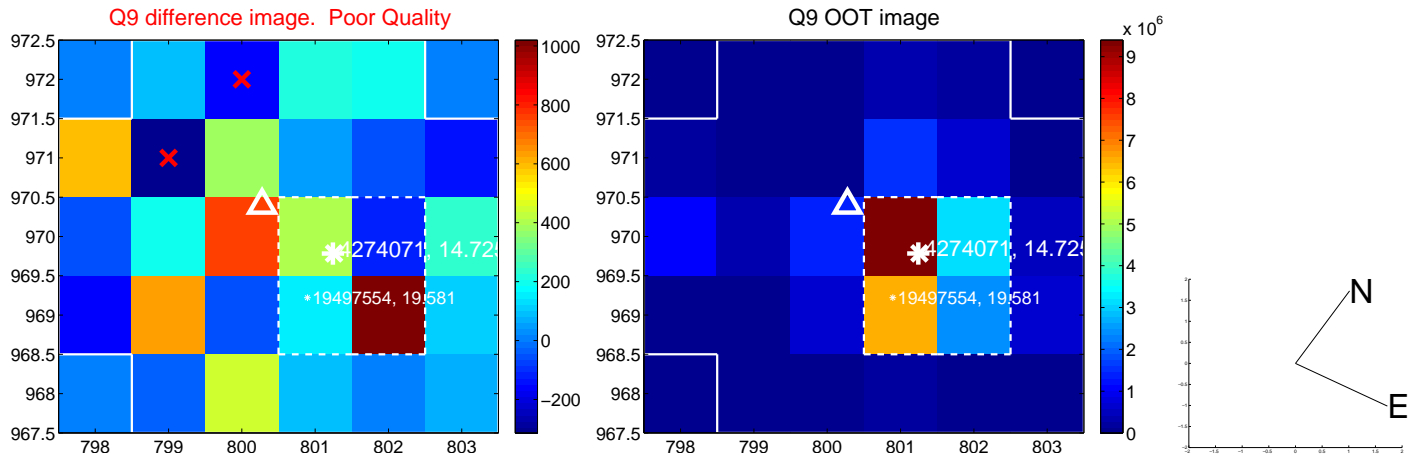
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



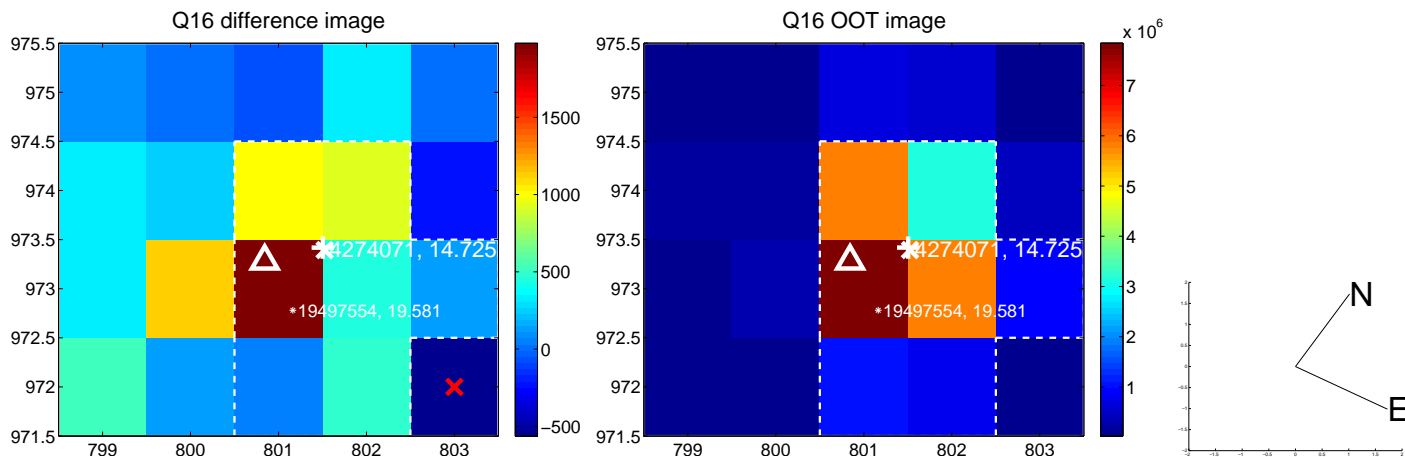
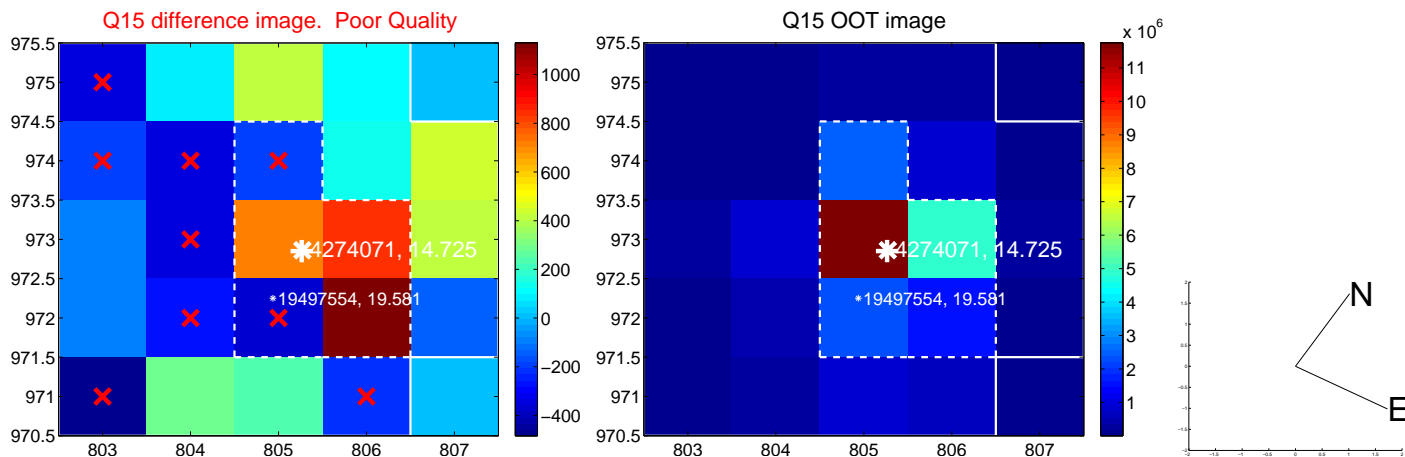
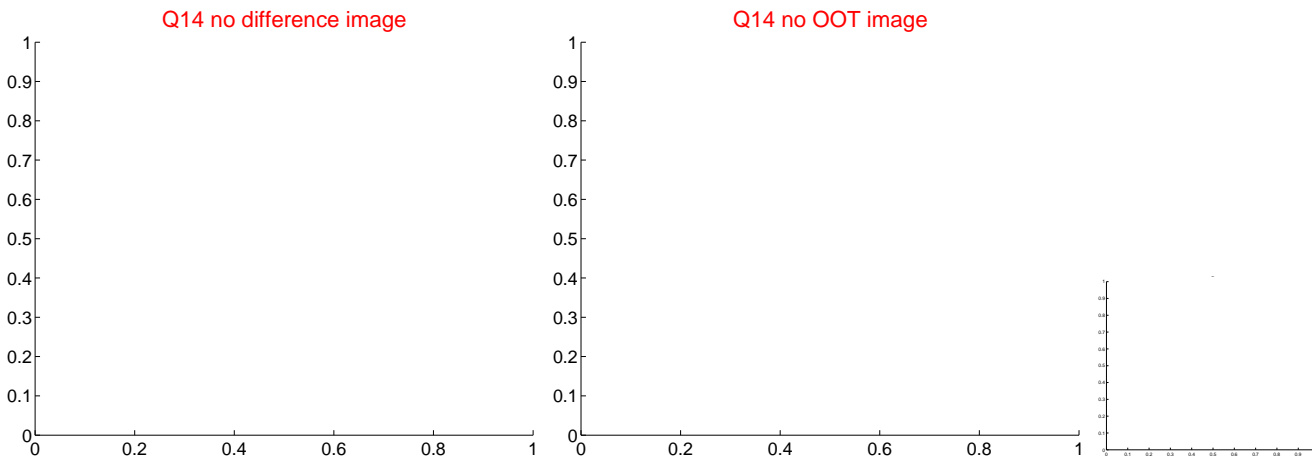
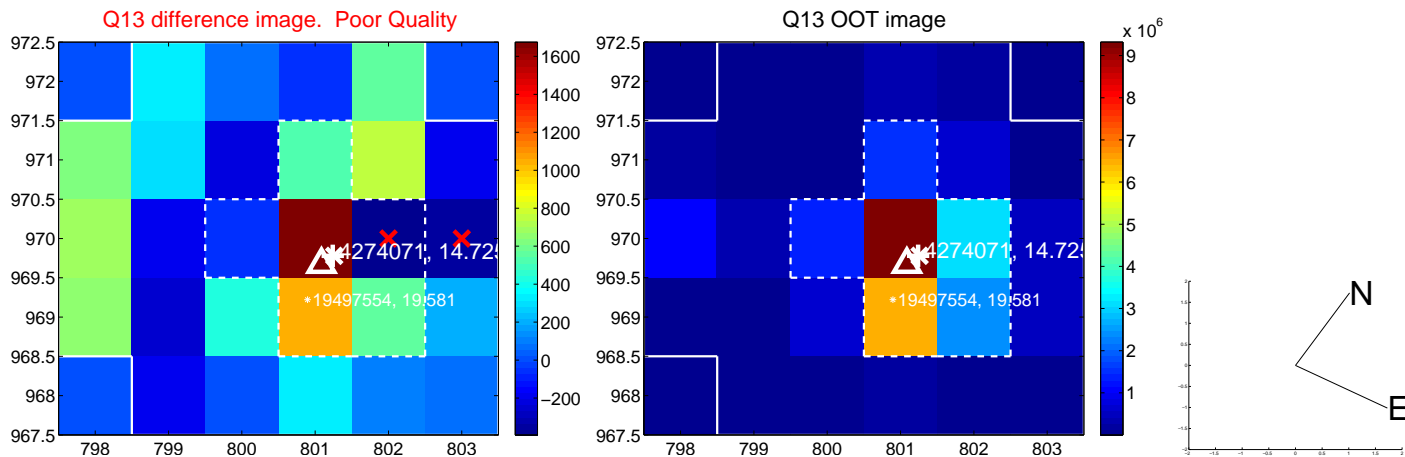
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



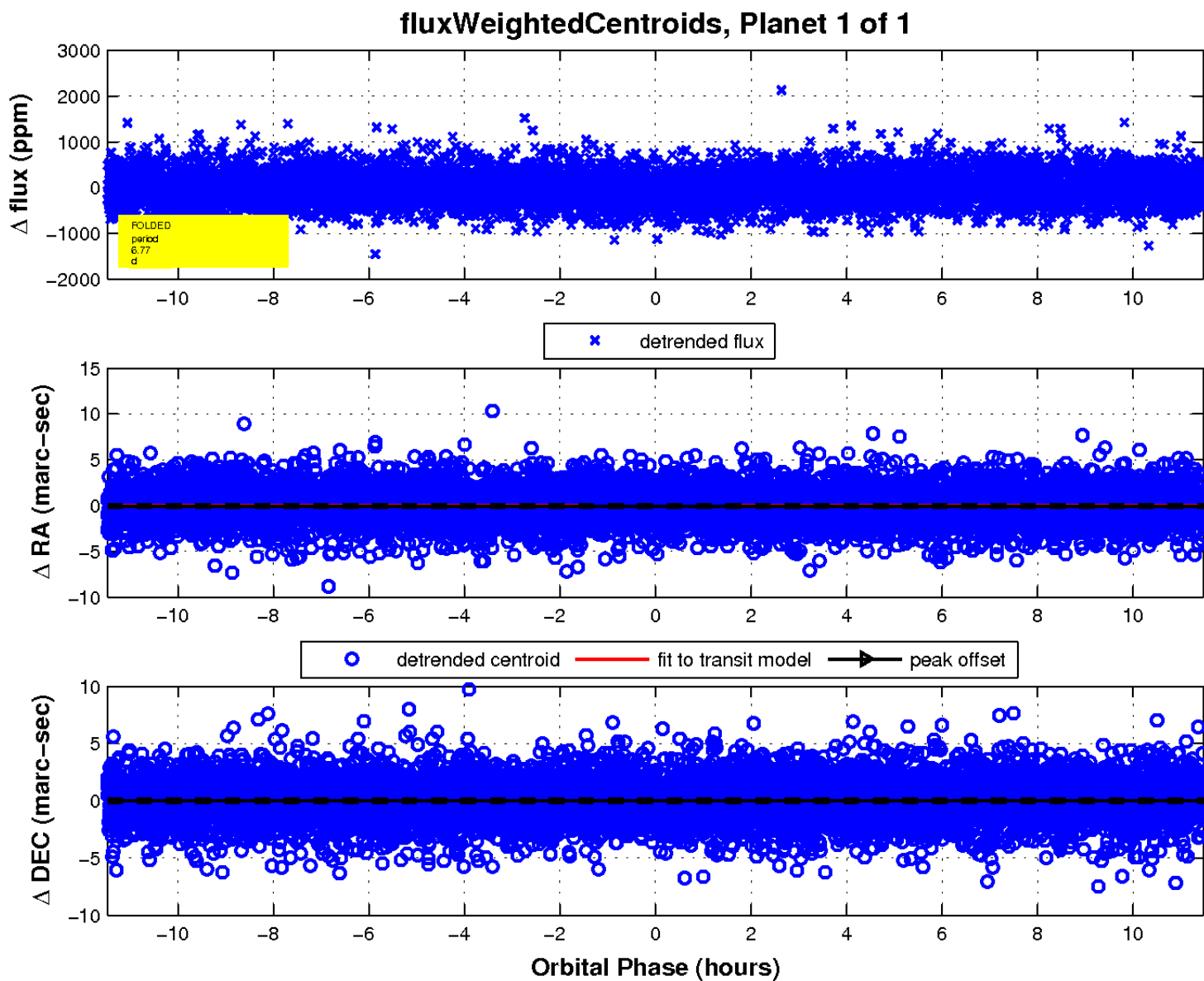
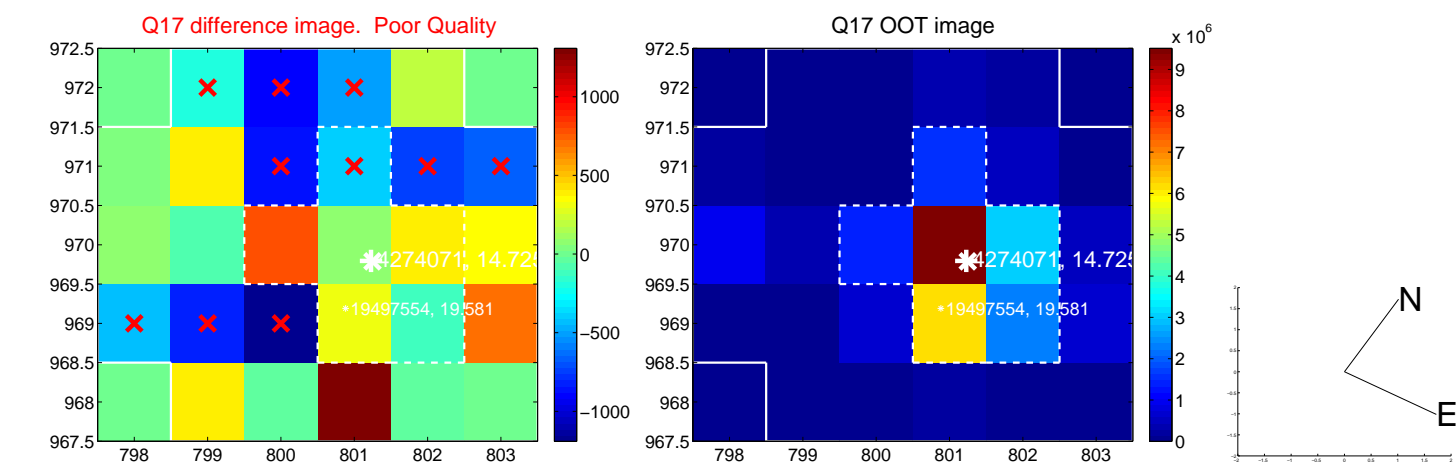
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UKIRT Image

