

KIC 009655799

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})
009655799-01	OBS	No	0.659867	131.620419	168.6	1.022	9.5	8.9	0.64	5147	1.02	1580.55

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009655799-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT

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

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

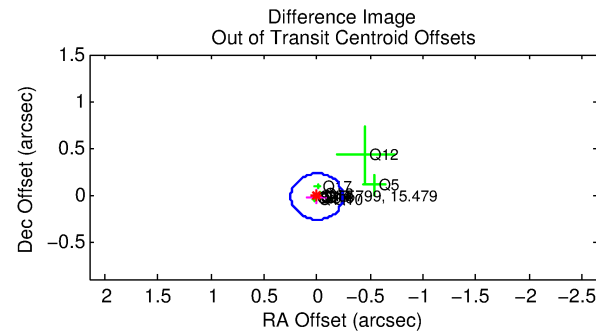
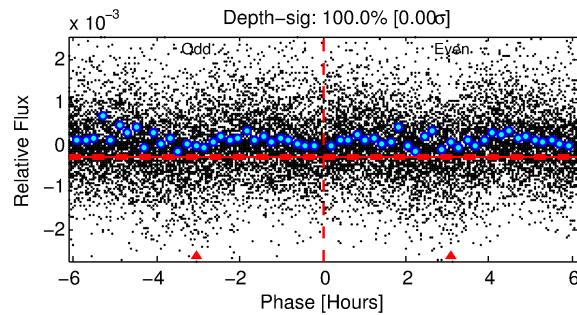
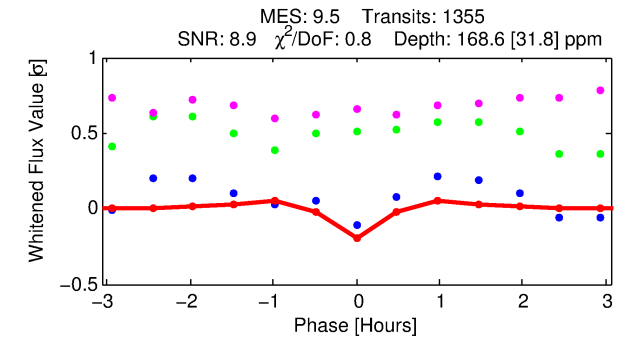
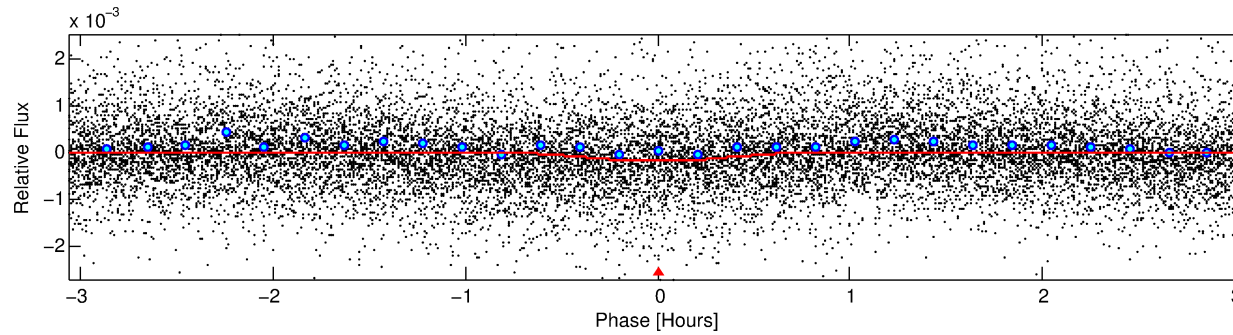
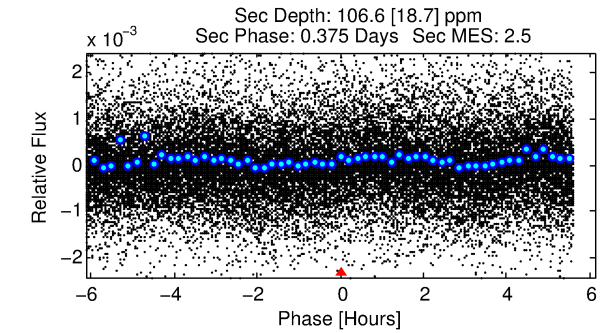
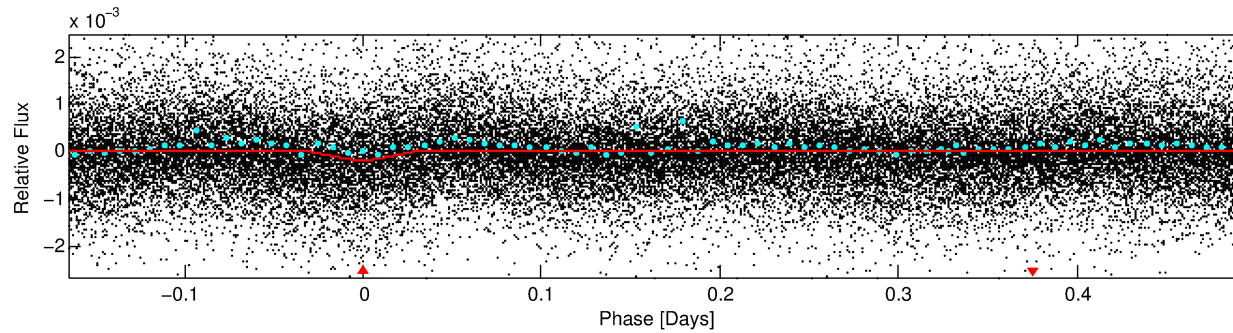
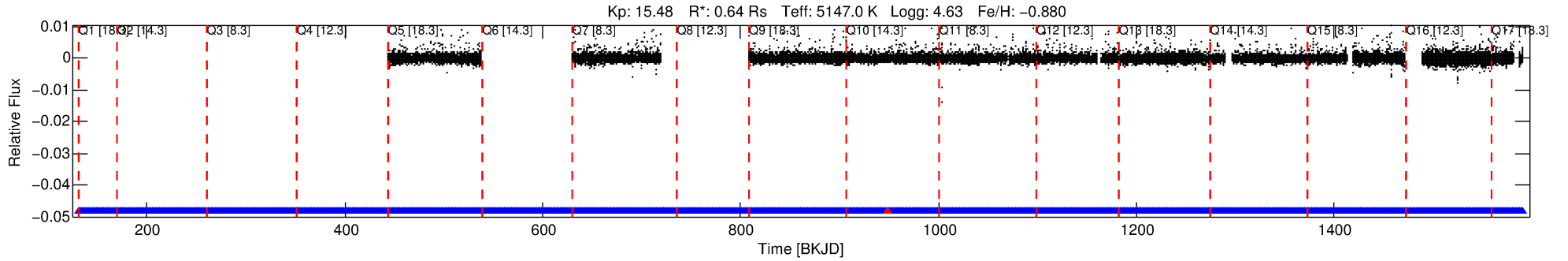
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009655799-01

No Significant Match Found

DV One-Page Summary

KIC: 9655799 Candidate: 1 of 1 Period: 0.660 d



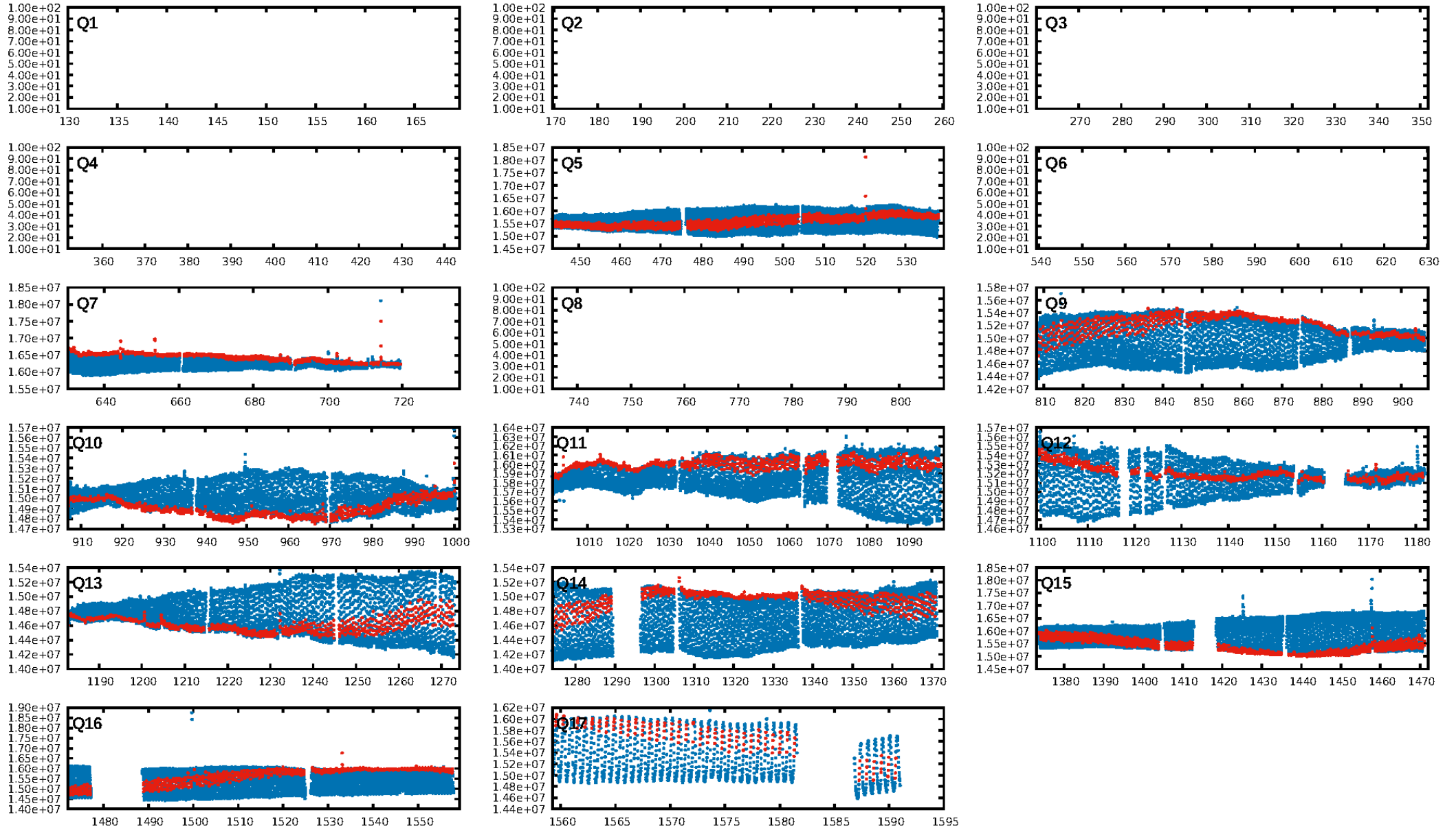
DV Fit Results:

Period = 0.65987 [0.00001] d
Epoch = 131.6204 [0.0014] BKJD
Rp/R* = 0.0148 [0.0091]
a/R* = 2.28 [5.12]
b = 0.92 [0.45]
Seff = 1580.55 [291.68]
Teq = 1608 [74] K
Rp = 1.03 [0.64] Re
a = 0.0127 [0.0010] AU
Ag = 8.97 [11.25] [0.71σ]
Teffp = 4302 [1351] K [1.99σ]

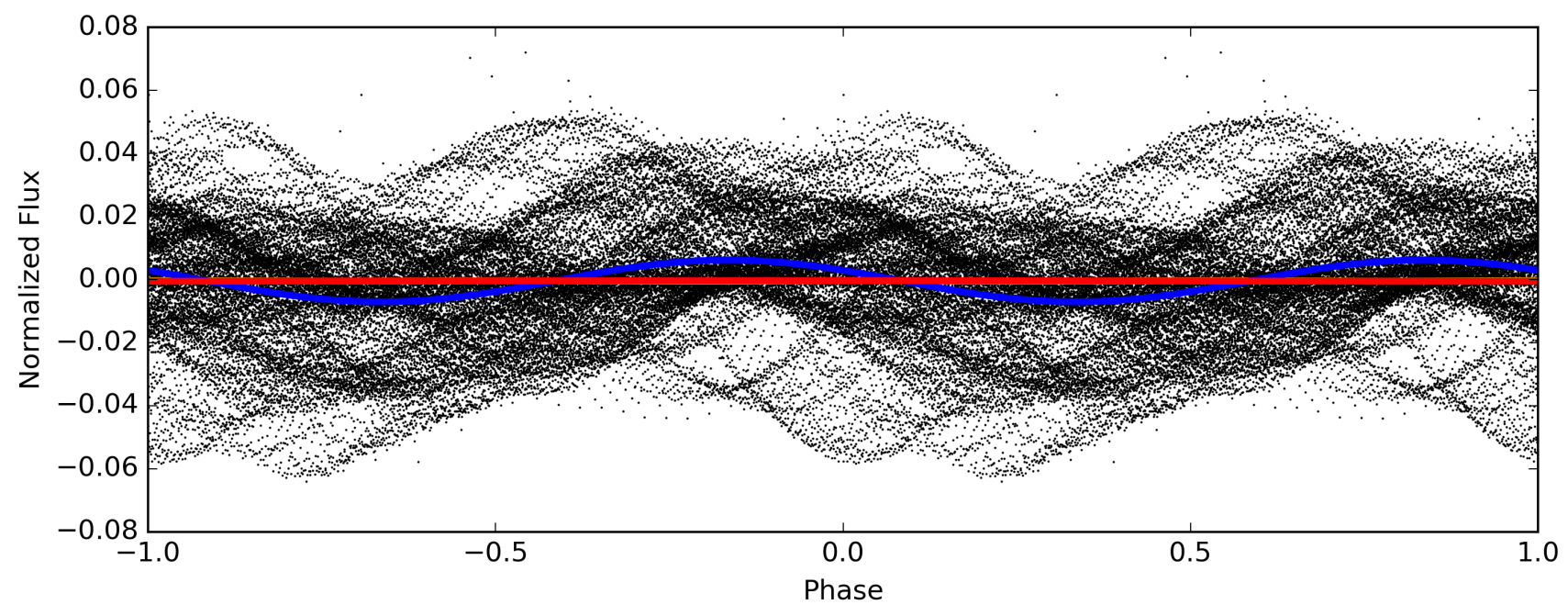
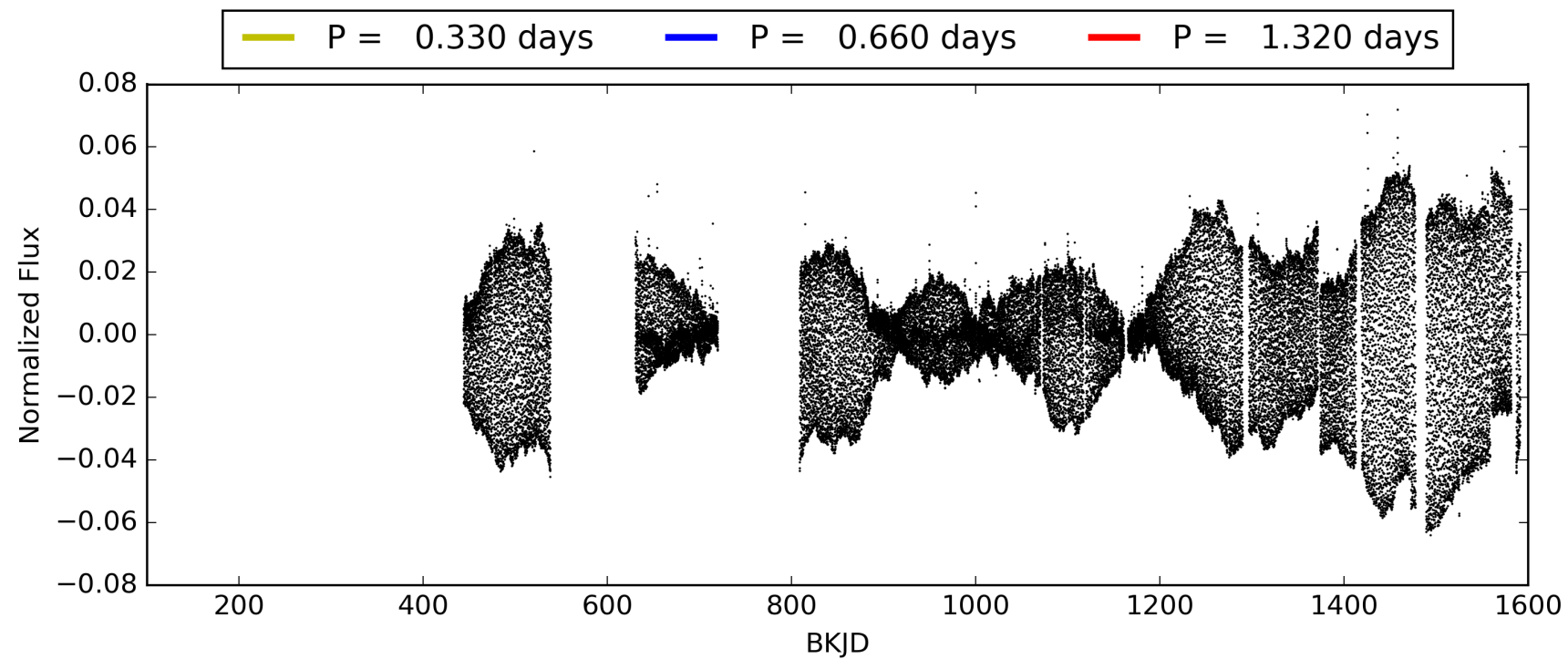
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.54e-18
RollingBand-fgt: 1.00 [1315/1316]
GhostDiagnostic-chr: -0.8574
Centroid-sig: 6.1%
Centroid-so: 1.060 arcsec [1.39σ]
OotOffset-rm: 0.020 arcsec [0.25σ]
KicOffset-rm: 0.030 arcsec [0.29σ]
OotOffset-st: 2/3/2/4 [11]
KicOffset-st: 2/3/2/4 [11]
DiffImageQuality-fgm: 0.36 [4/11]
DiffImageOverlap-fno: 1.00 [11/11]

TCE 009655799-01, PDC Light Curves

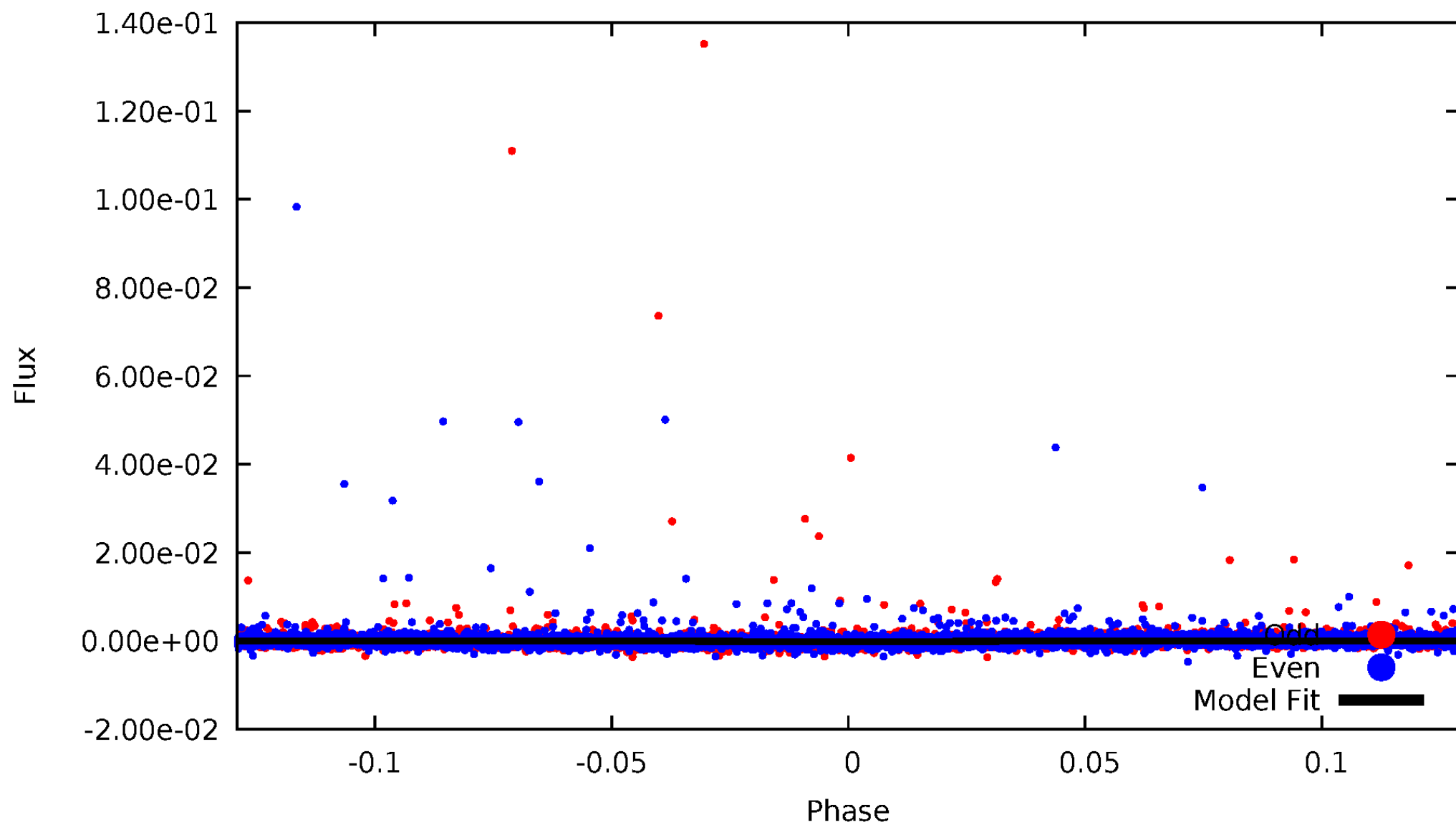


TCE 009655799-01



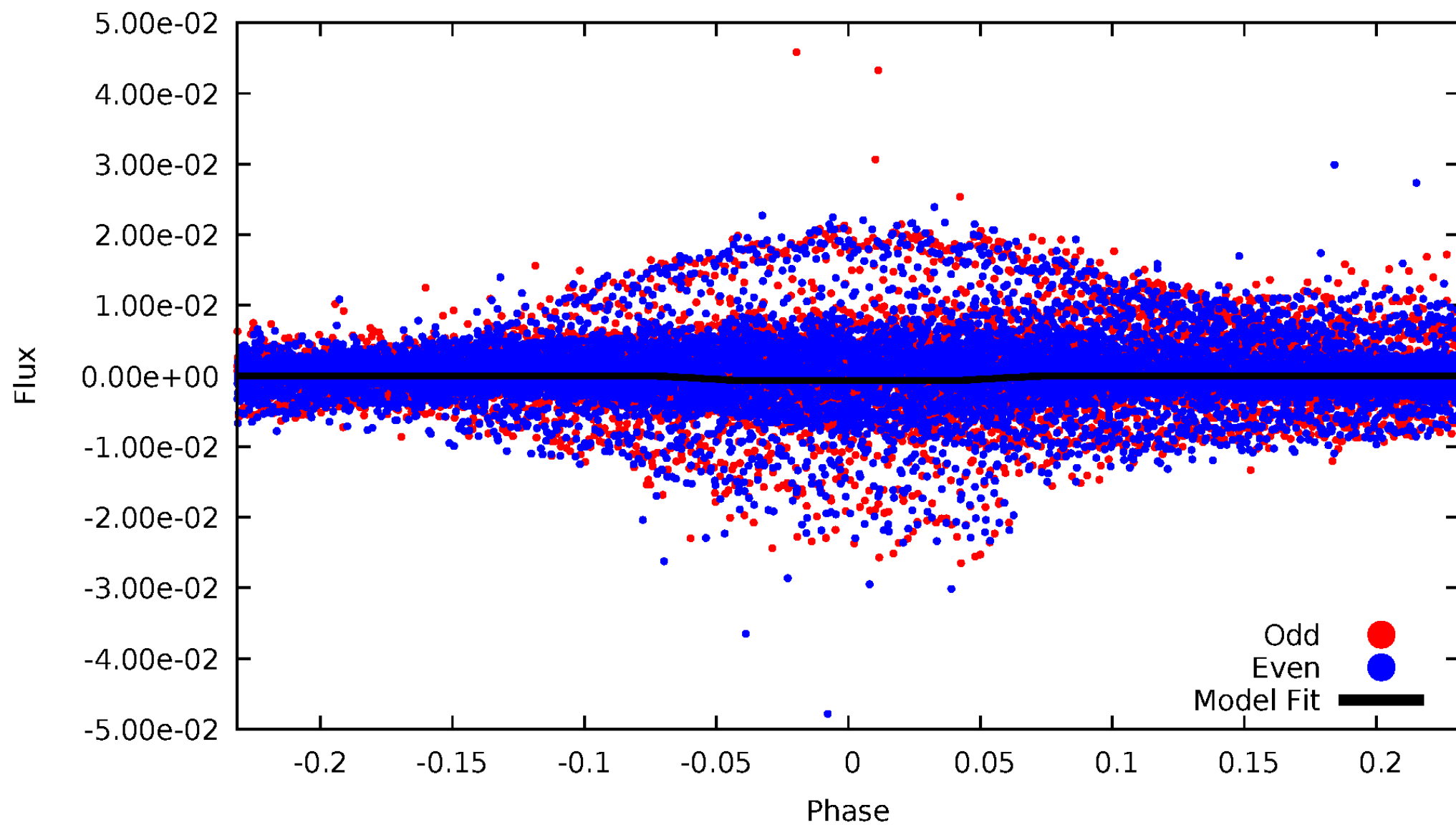
DV Odd/Even

TCE 009655799-01



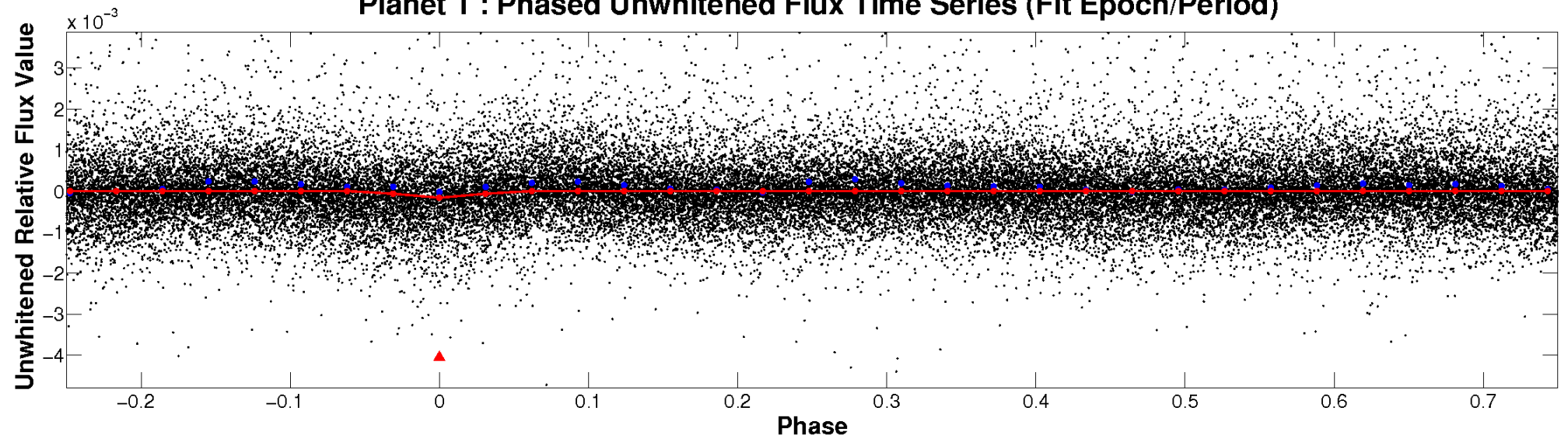
ALT Odd/Even

TCE 009655799-01

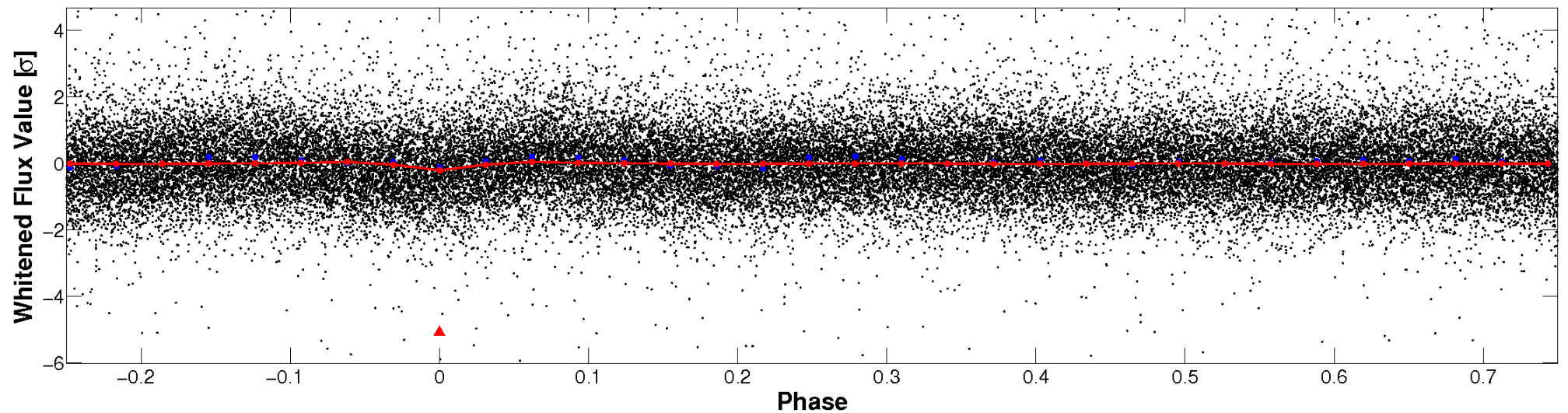


Non-Whitened Vs. Whitened Light Curve

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

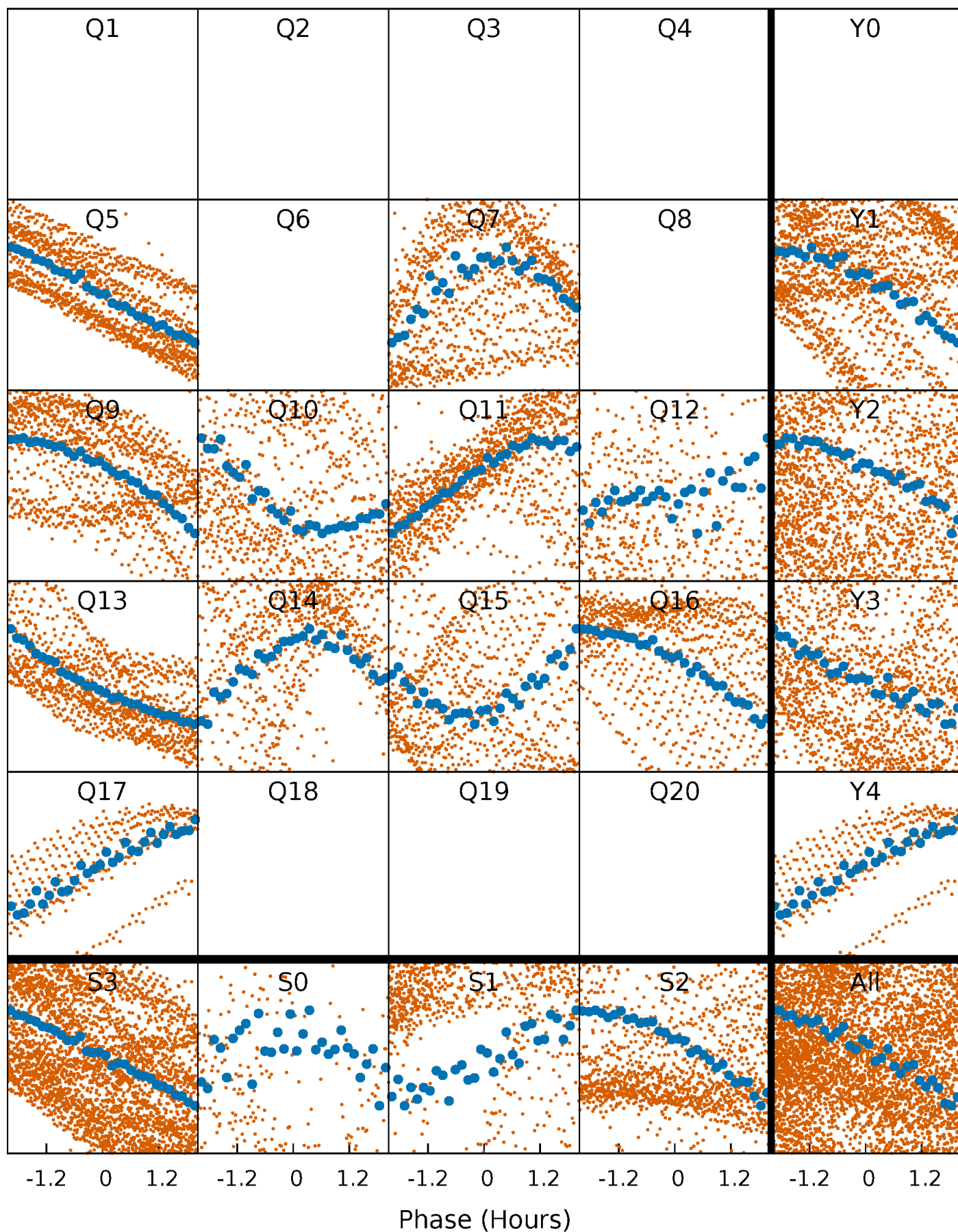


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



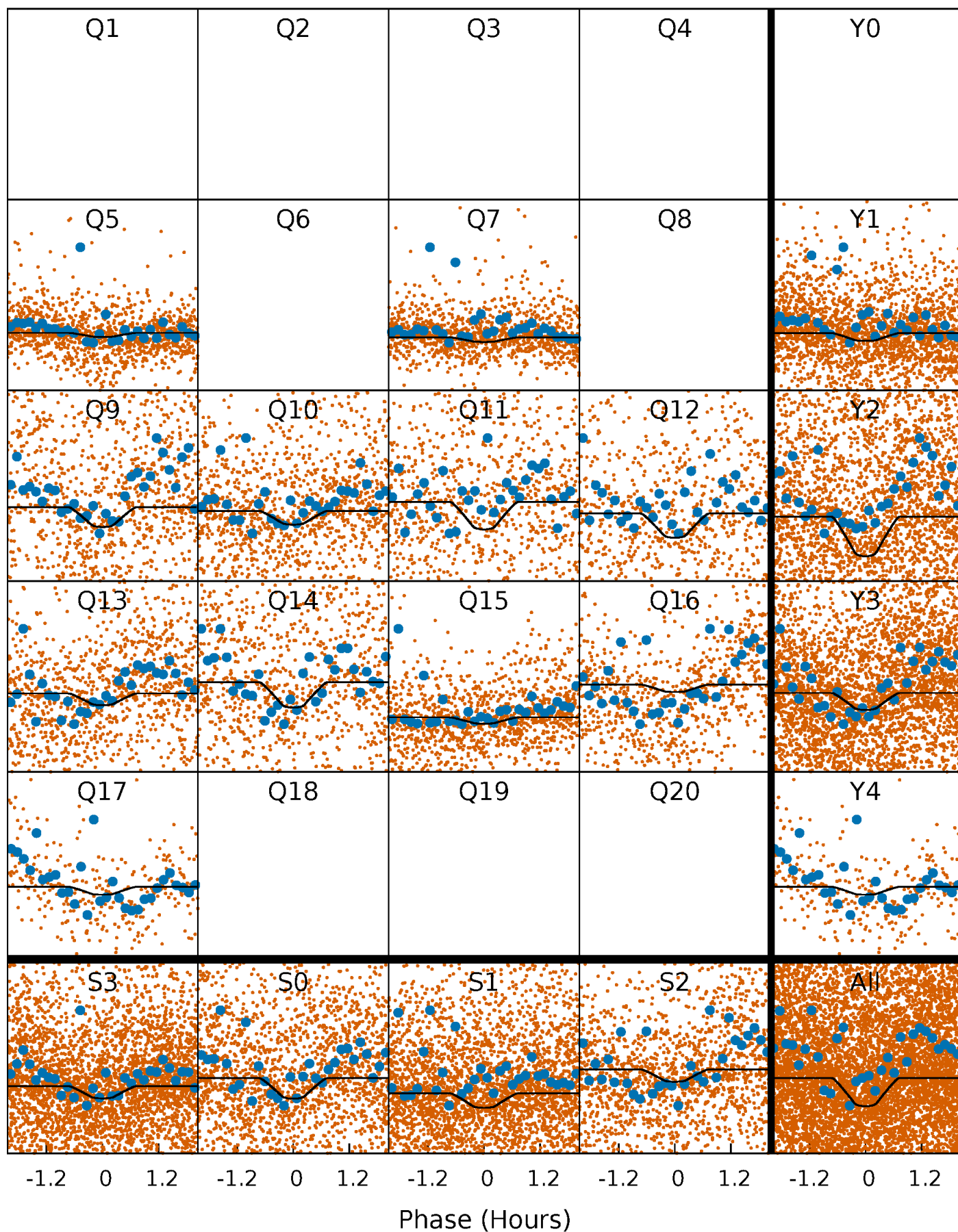
PDC Quarter-Phased Transit Curves

TCE 009655799-01 P= 0.659867 Days $T_0=131.620419$ (BKJD)



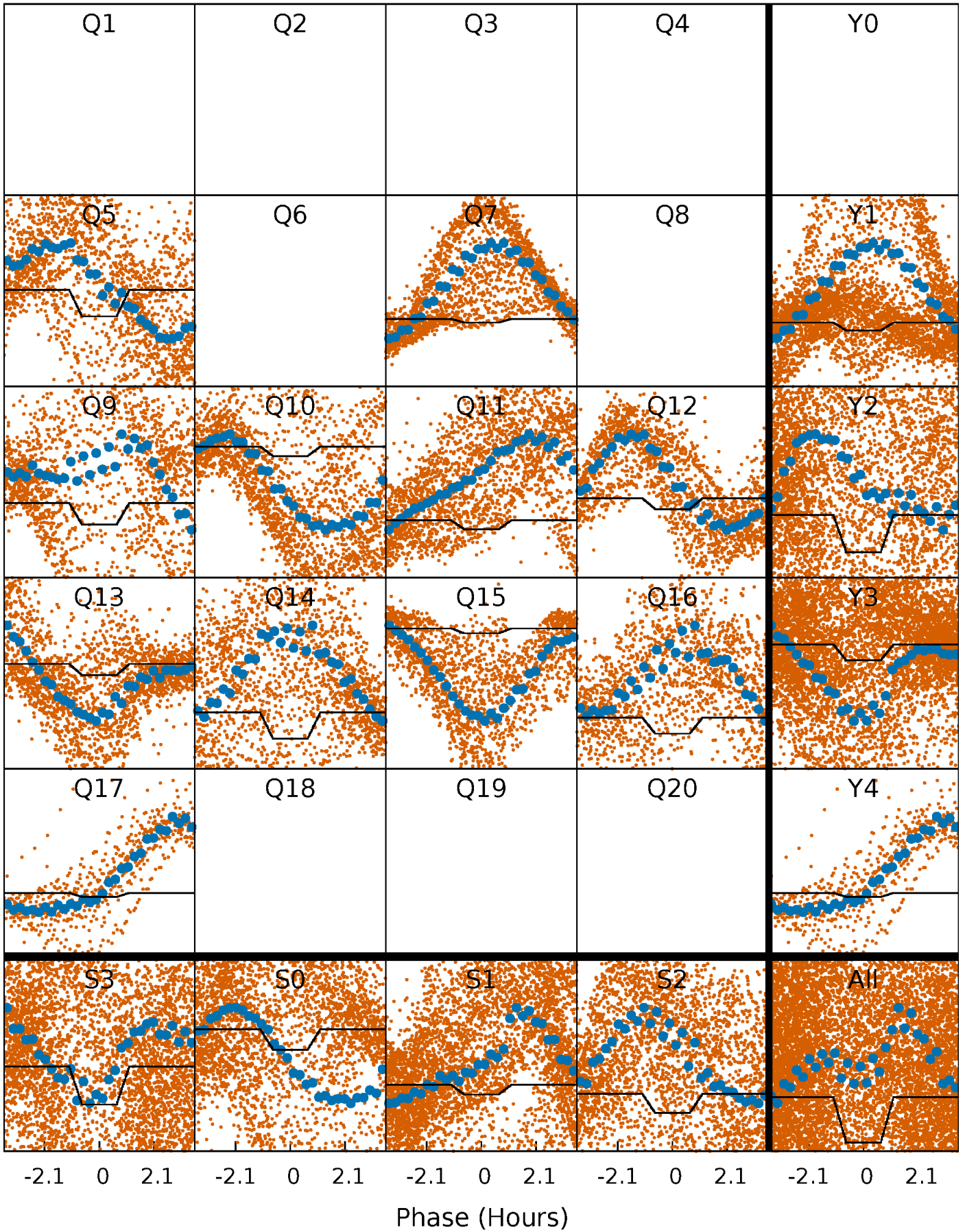
DV Quarter-Phased Transit Curves

TCE 009655799-01 P= 0.659867 Days $T_0=131.620419$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

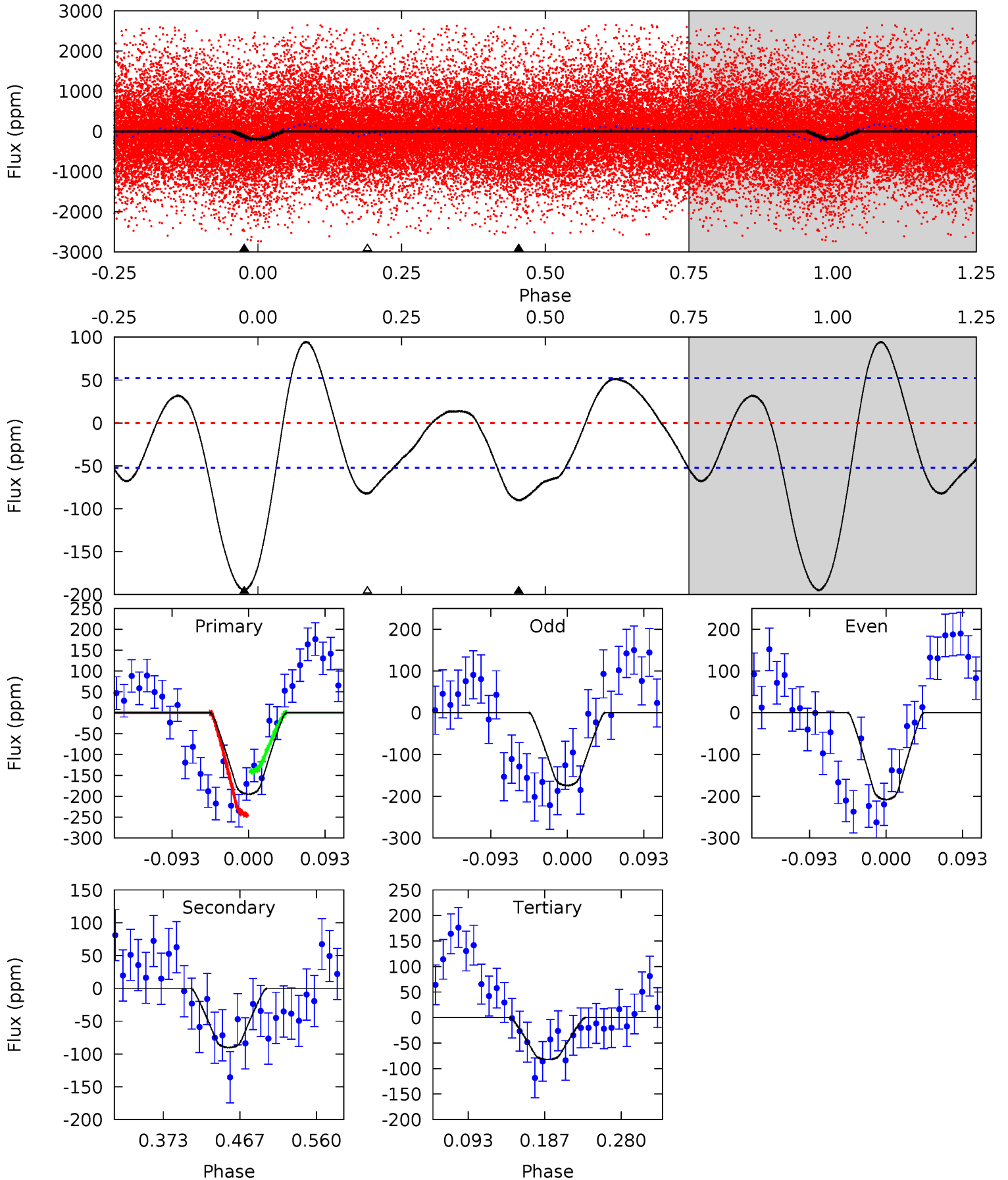
TCE 009655799-01 $P = 0.659853$ Days $T_0 = 131.619690$ (BKJD)



DV Model-Shift Uniqueness Test

009655799-01, P = 0.659867 Days, E = 131.620419 Days

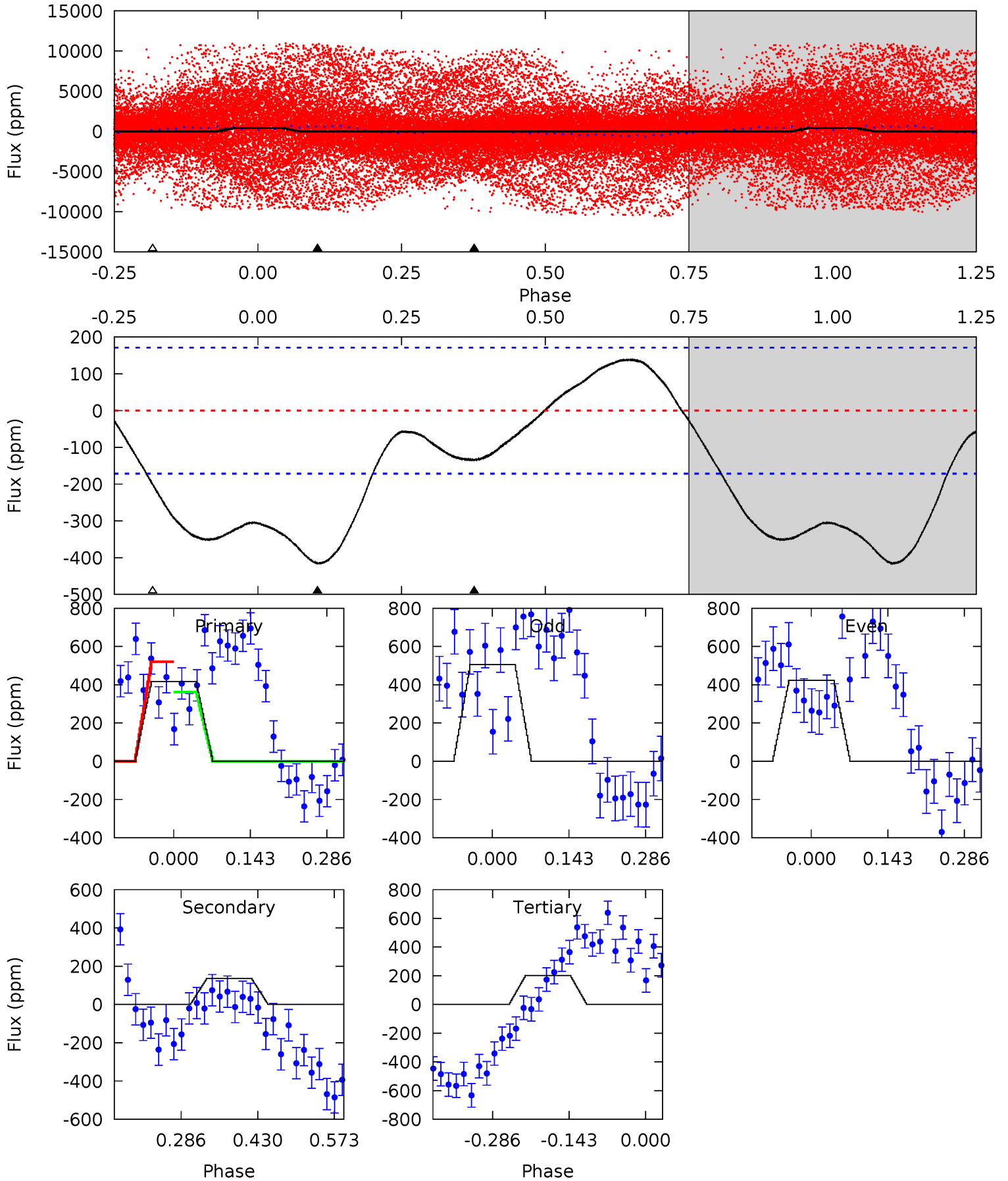
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.1	7.88	7.20	0	4.58	1.68	3.92	9.86	17.1	0.68	7.88	1.47	-0.07	0.33	4.58



Alt Model-Shift Uniqueness Test

009655799-01, P = 0.659853 Days, E = 131.619690 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.9	3.56	5.30	0	4.49	1.46	4.82	5.62	10.9	-1.74	3.56	1.09	0.55	0.25	2.05



Stellar Parameters For KIC 009655799

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5147^{+180}_{-180}	$4.627^{+0.066}_{-0.048}$	$-0.880^{+0.350}_{-0.300}$	$0.636^{+0.062}_{-0.050}$	$0.625^{+0.068}_{-0.027}$	$3.415^{+0.935}_{-0.615}$
	+3%/-3%	+1%/-1%	+40%/-34%	+10%/-8%	+11%/-4%	+27%/-18%
Source	KIC0	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 009655799-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-90 ± 11	$1.08^{+0.64}_{-0.59}$	2236^{+93}_{-88}	4194^{+1617}_{-668}	$6.861^{+26.236}_{-4.099}$
Alt.	-136 ± 38	$1.73^{+0.62}_{-0.60}$	2239^{+94}_{-86}	3762^{+695}_{-437}	$3.939^{+5.251}_{-2.031}$

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

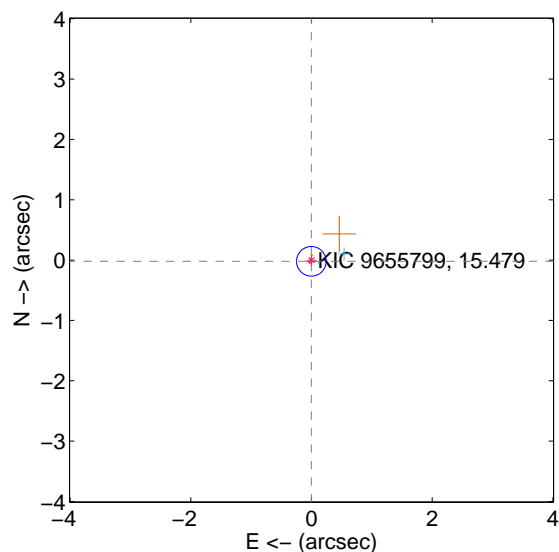
Supplemental centroid analysis for 009655799-01. Kepler magnitude: 15.48. Transit SNR 8.92

There are 4 quarters with good PRF difference image offsets

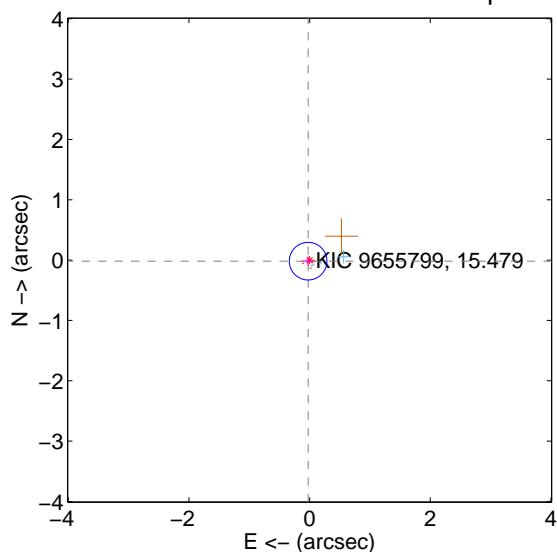
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.020 ± 0.082	0.25	0.002 ± 0.091	-0.020 ± 0.079
PRF-fit source offset from KIC position	0.030 ± 0.104	0.29	0.024 ± 0.099	-0.018 ± 0.078
photometric centroid source offset	1.06 ± 0.76	1.39	-0.70 ± 0.73	0.80 ± 0.79

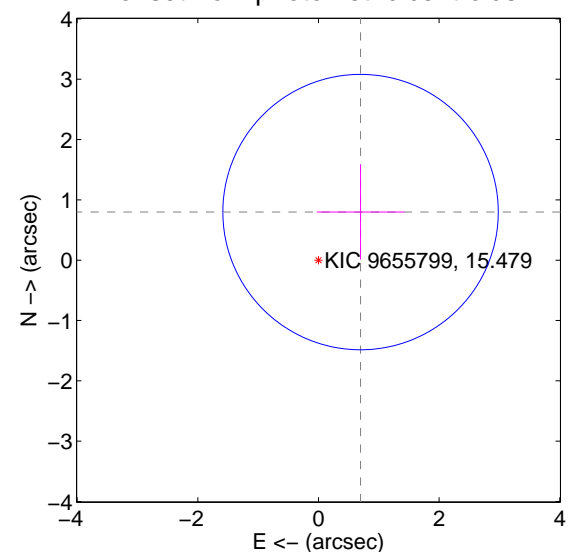
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

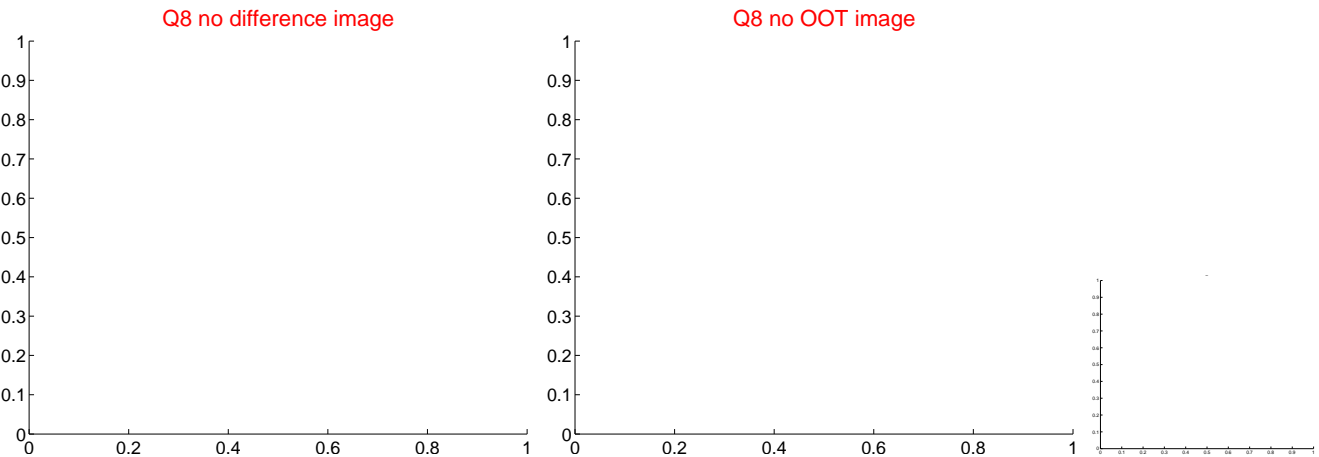
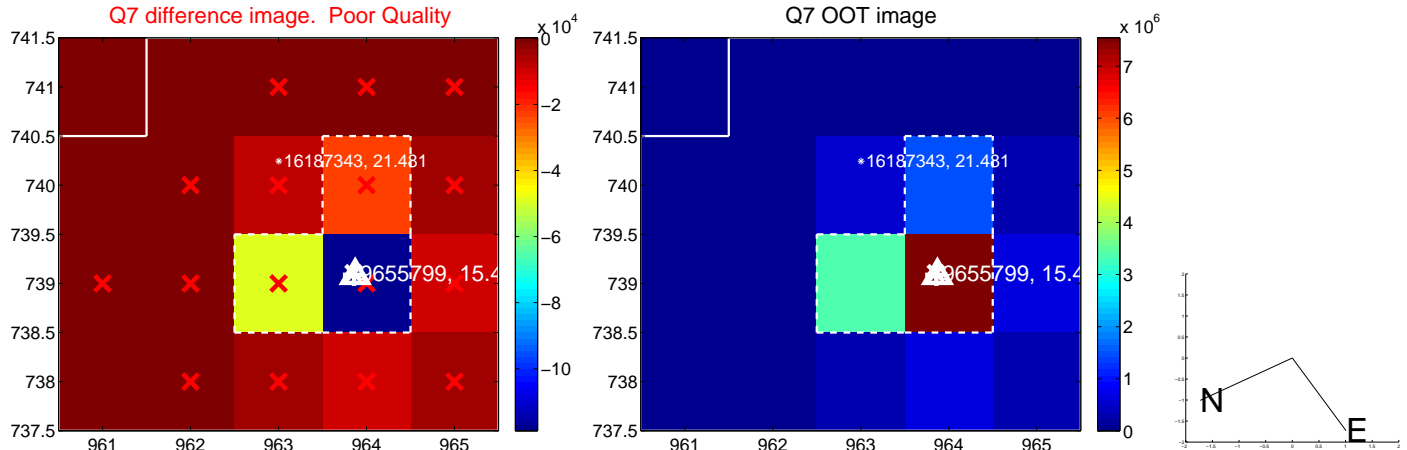
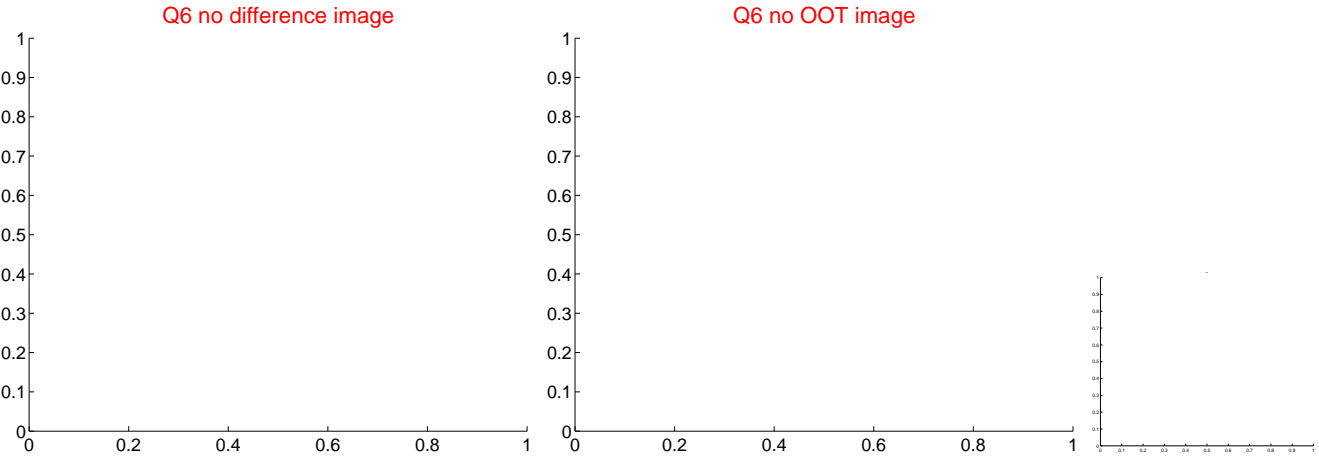
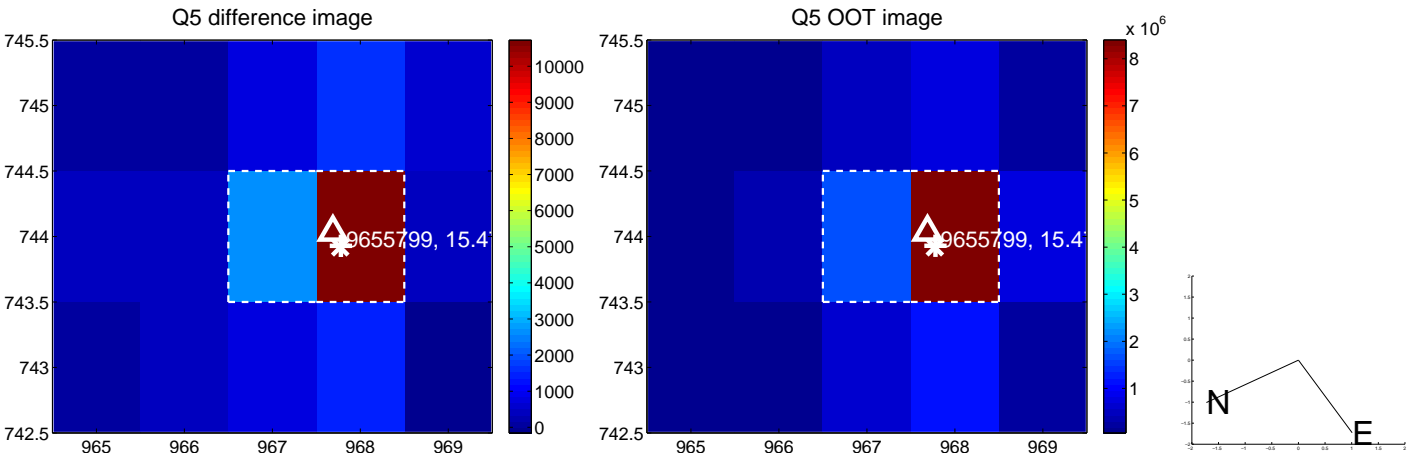


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

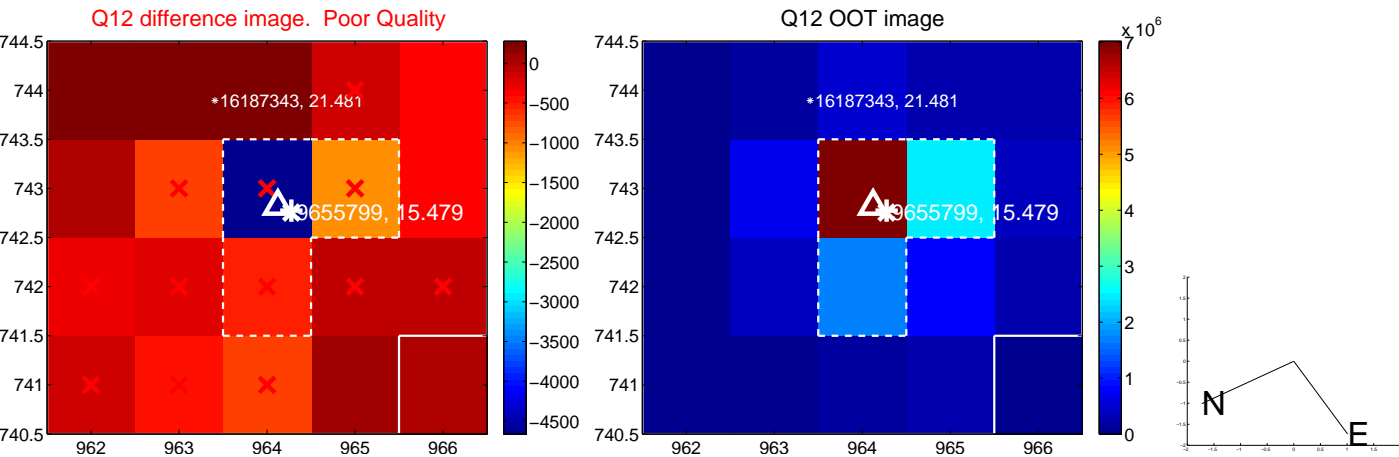
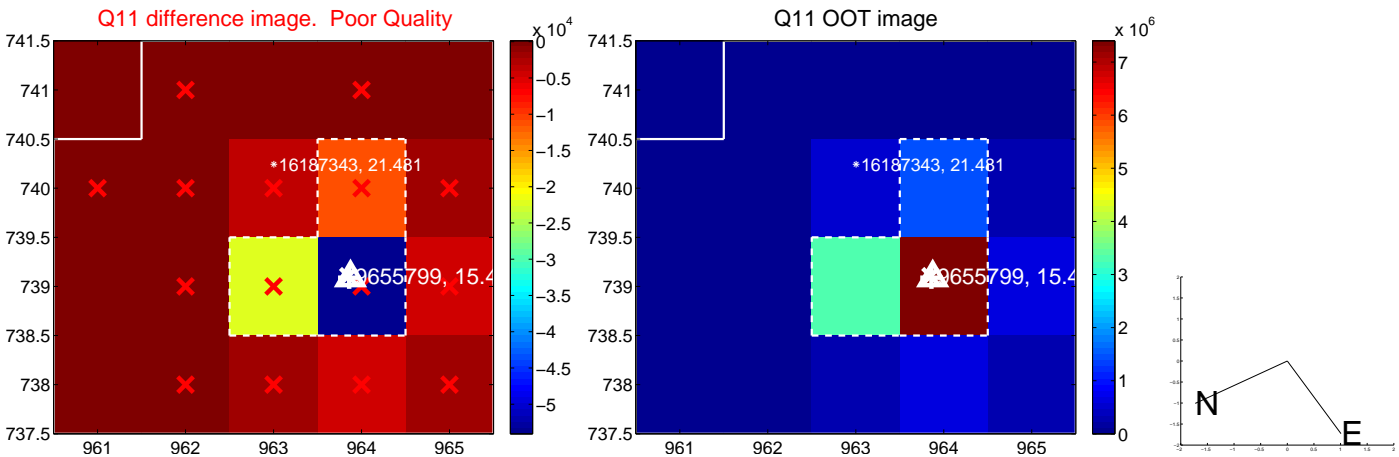
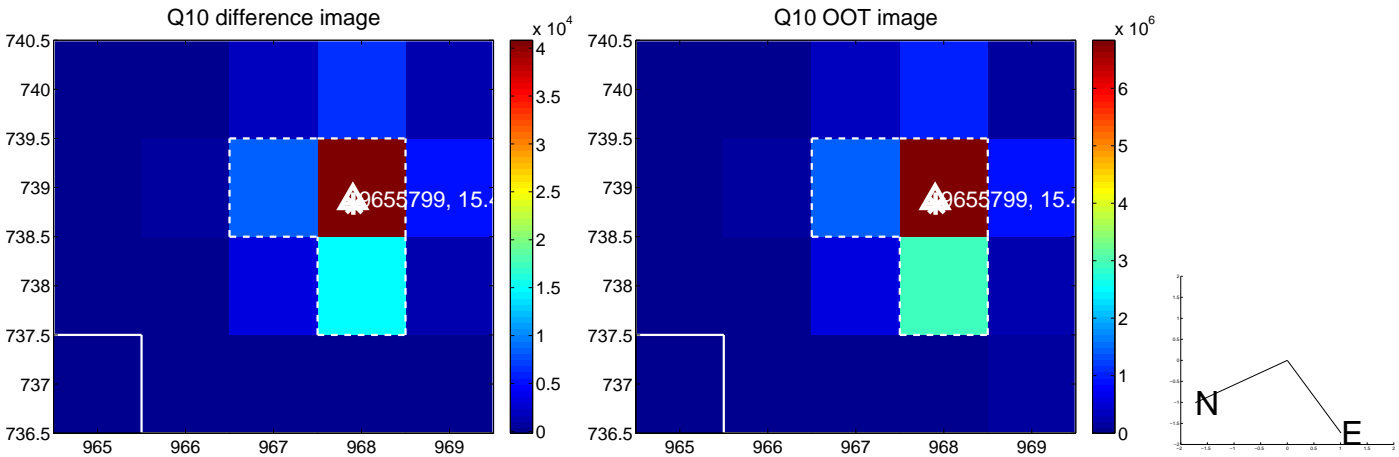
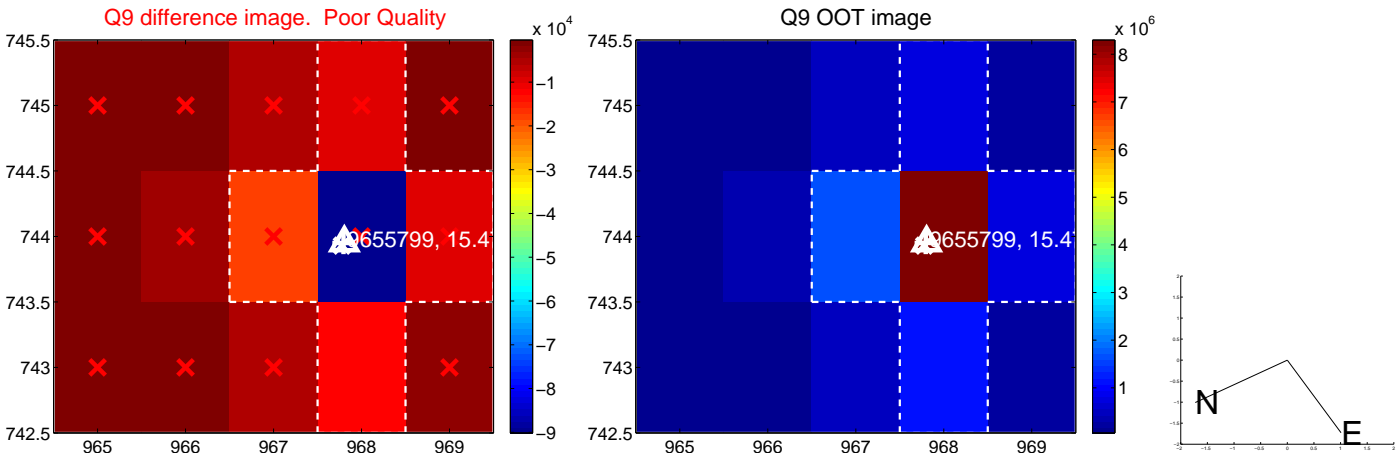
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



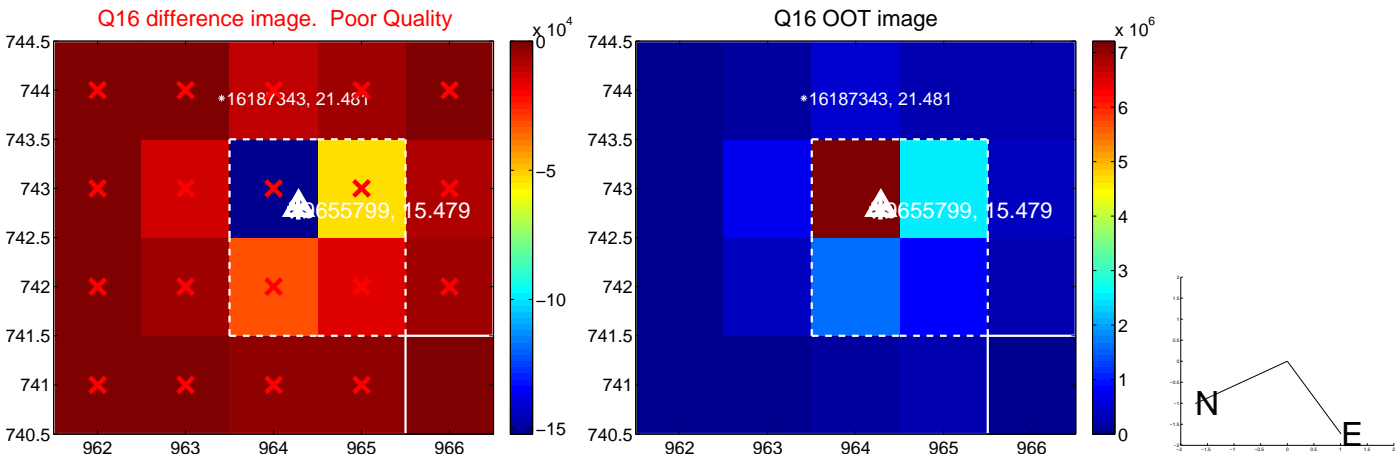
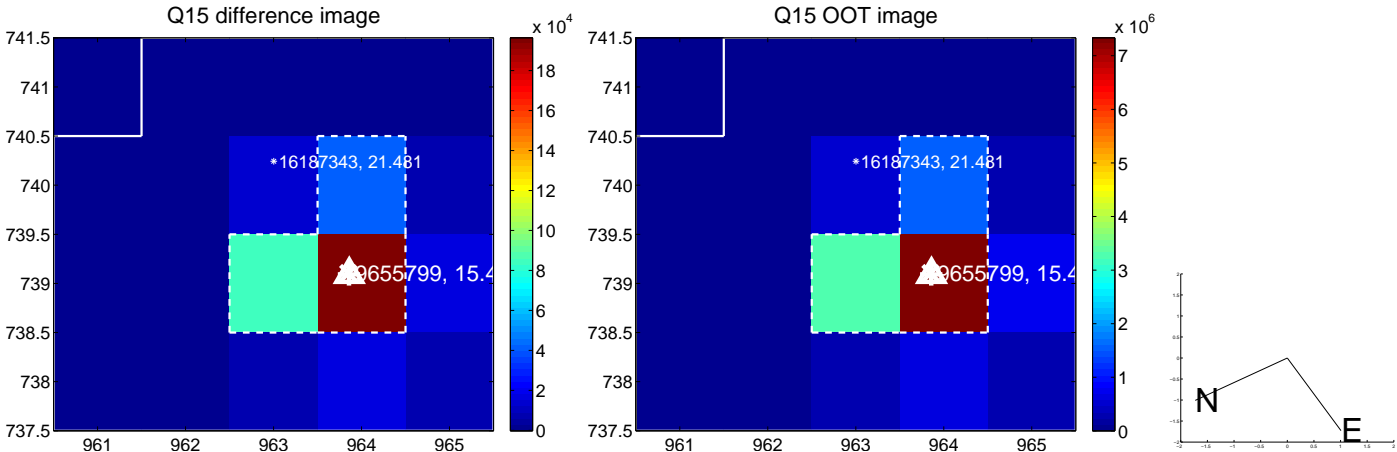
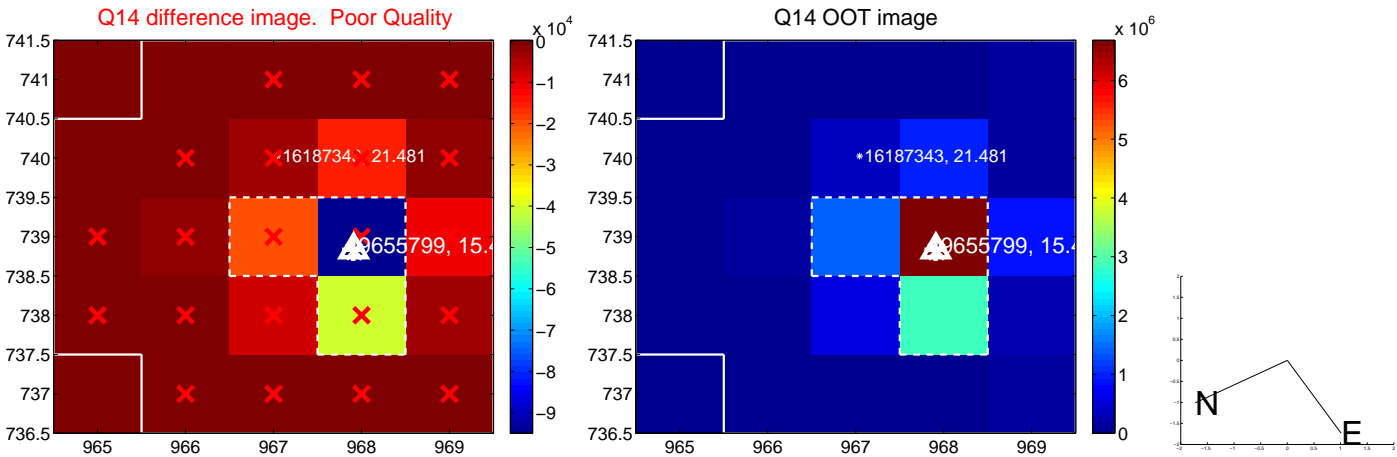
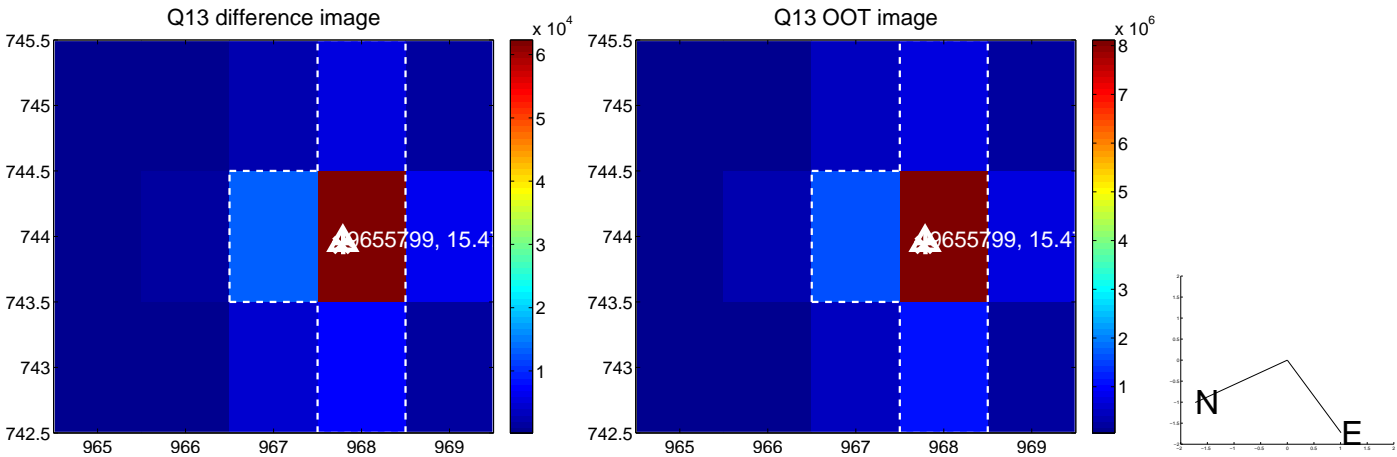
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



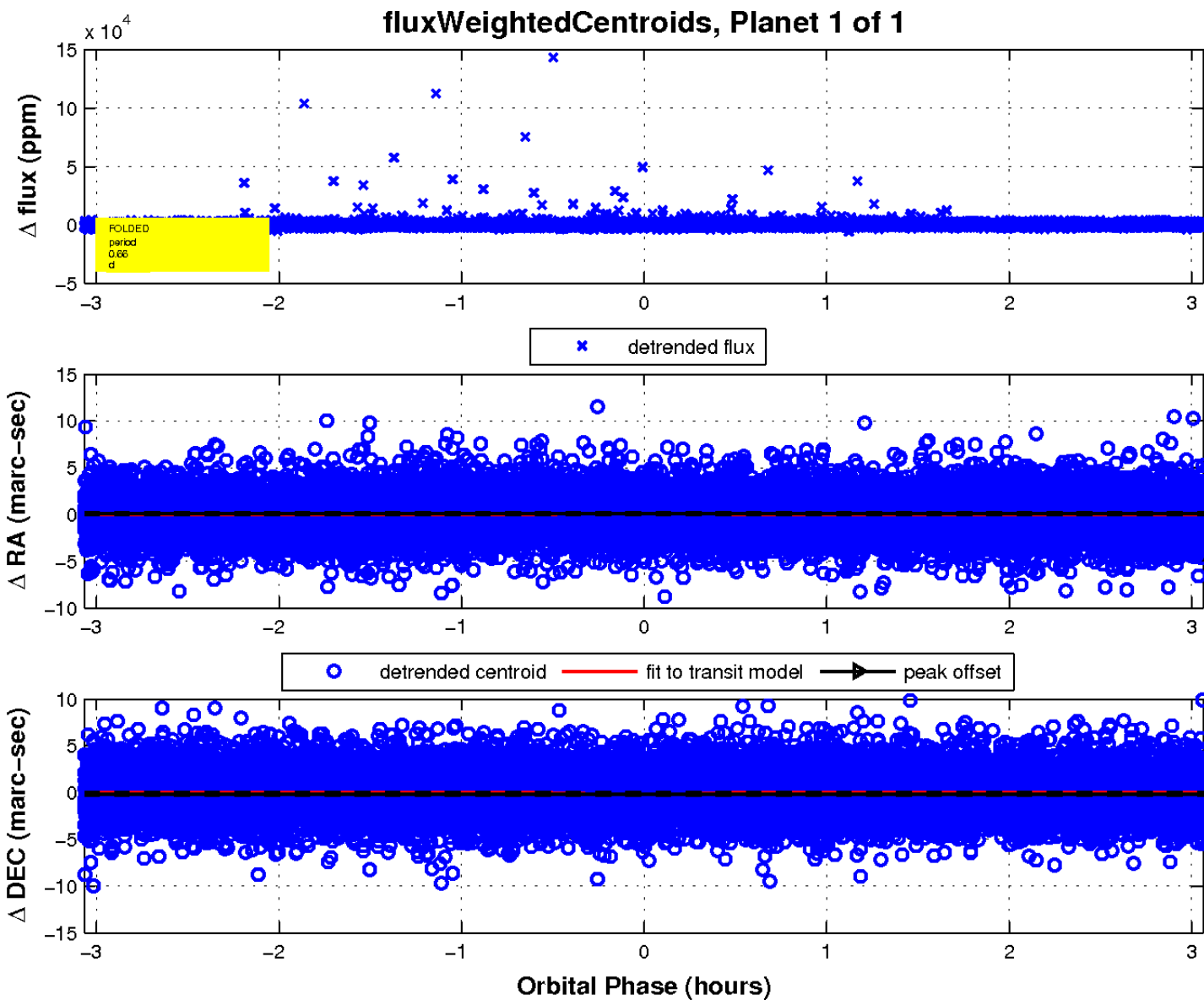
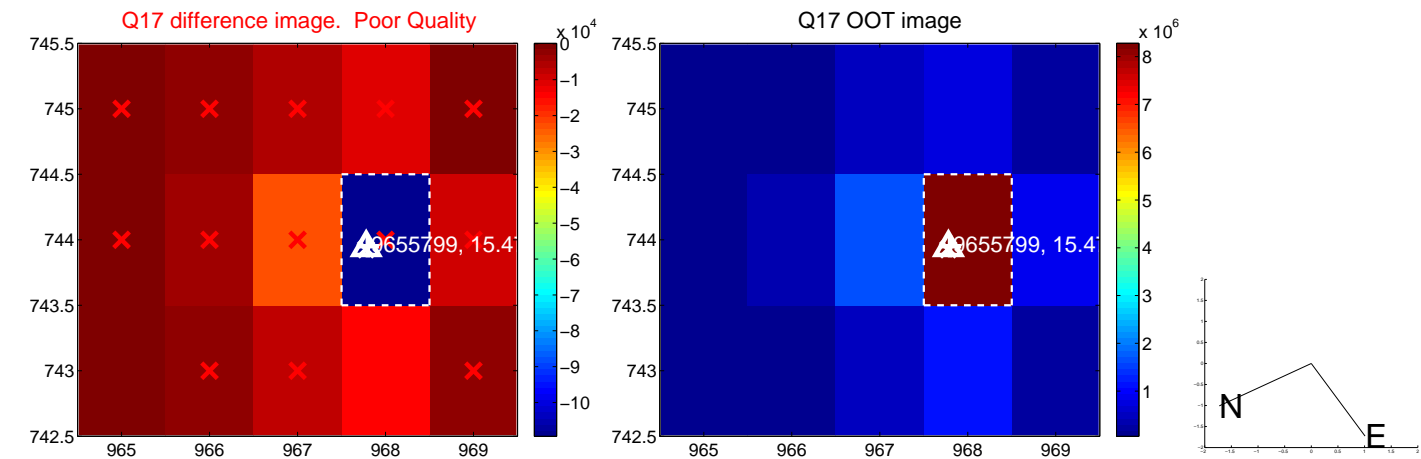
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UKIRT Image

