

KIC 004949797

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})
004949797-01	OBS	No	2.345913	132.315618	27.1	10.711	7.1	6.1	0.84	5581	0.53	540.21

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004949797-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—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.

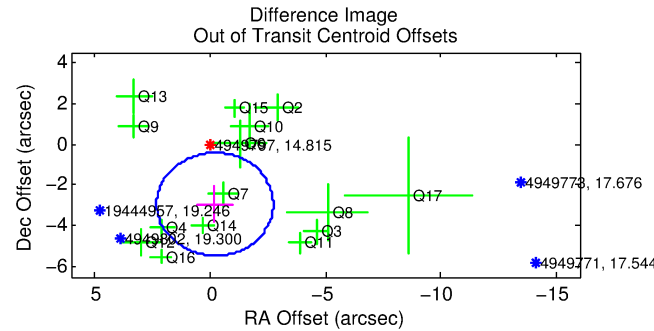
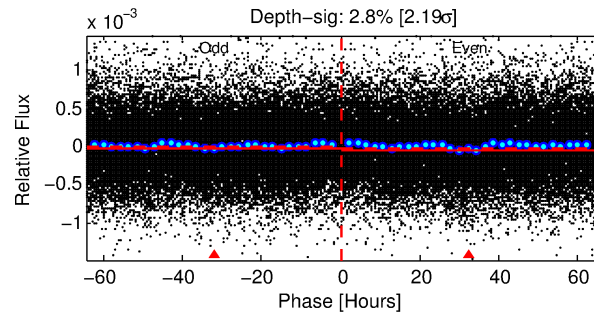
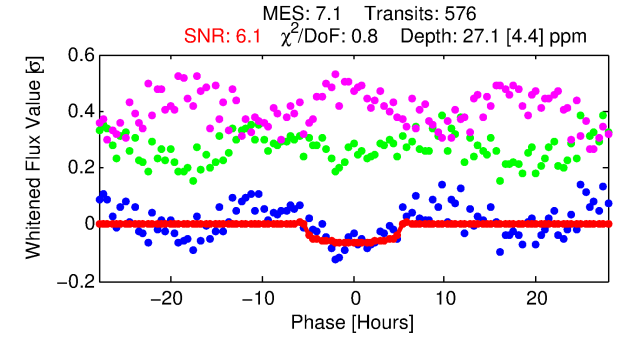
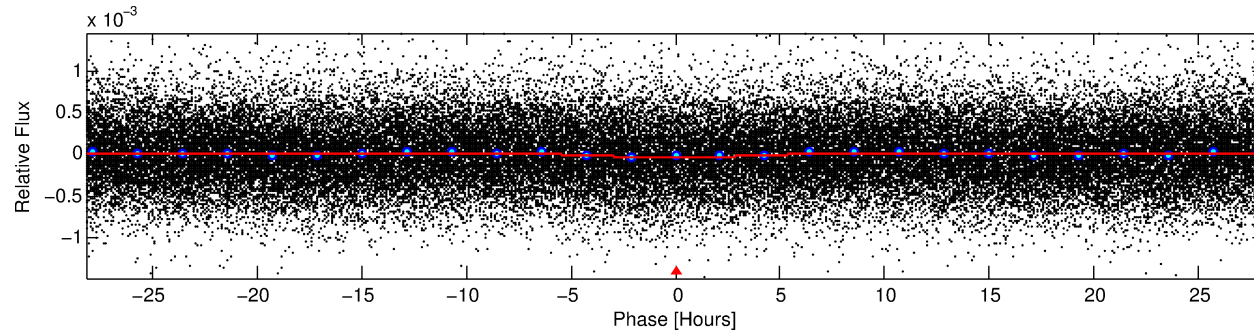
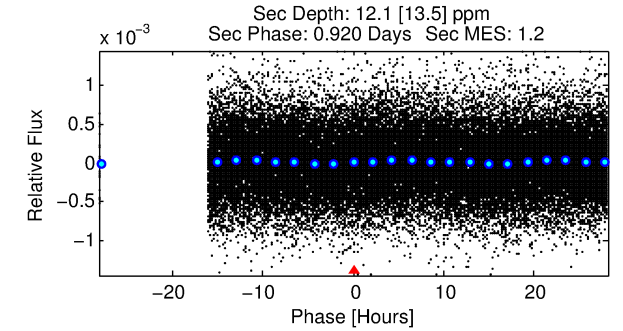
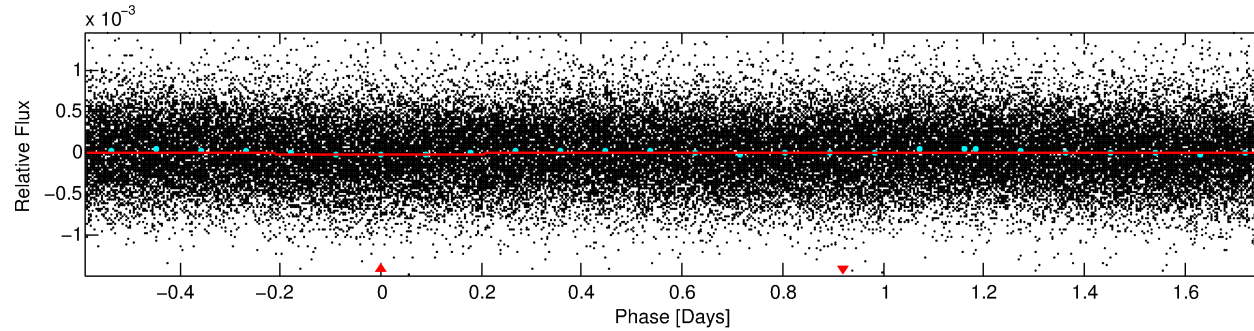
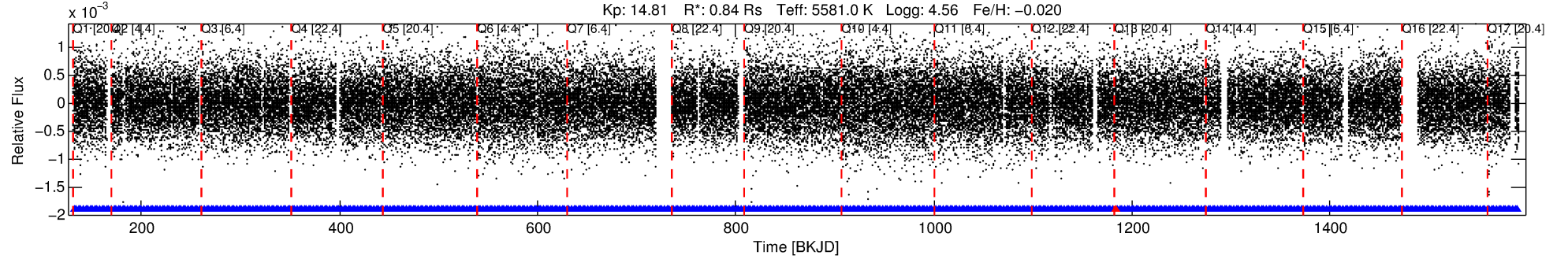
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004949797-01

No Significant Match Found

DV One-Page Summary

KIC: 4949797 Candidate: 1 of 1 Period: 2.346 d



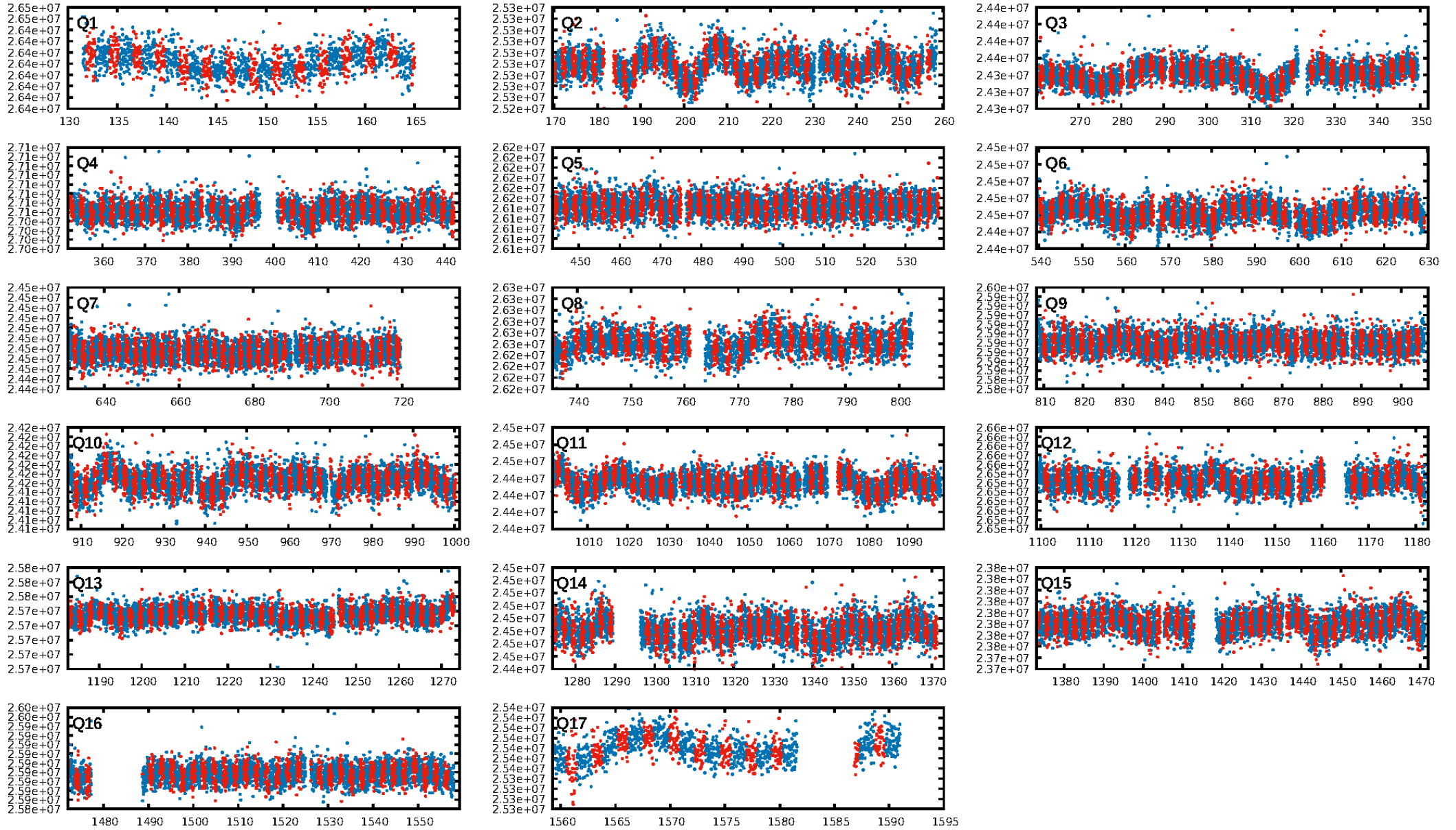
DV Fit Results:

Period = 2.34591 [0.00007] d
Epoch = 132.3156 [0.0175] BKJD
Rp/R* = 0.0057 [0.0034]
a/R* = 1.20 [1.03]
b = 0.90 [0.59]
Seff = 540.21 [166.72]
Teff = 1229 [95] K
Rp = 0.53 [0.33] Re
a = 0.0339 [0.0066] AU
Ag = 27.83 [45.70] [0.59σ]
Teffp = 4365 [1768] K [1.77σ]

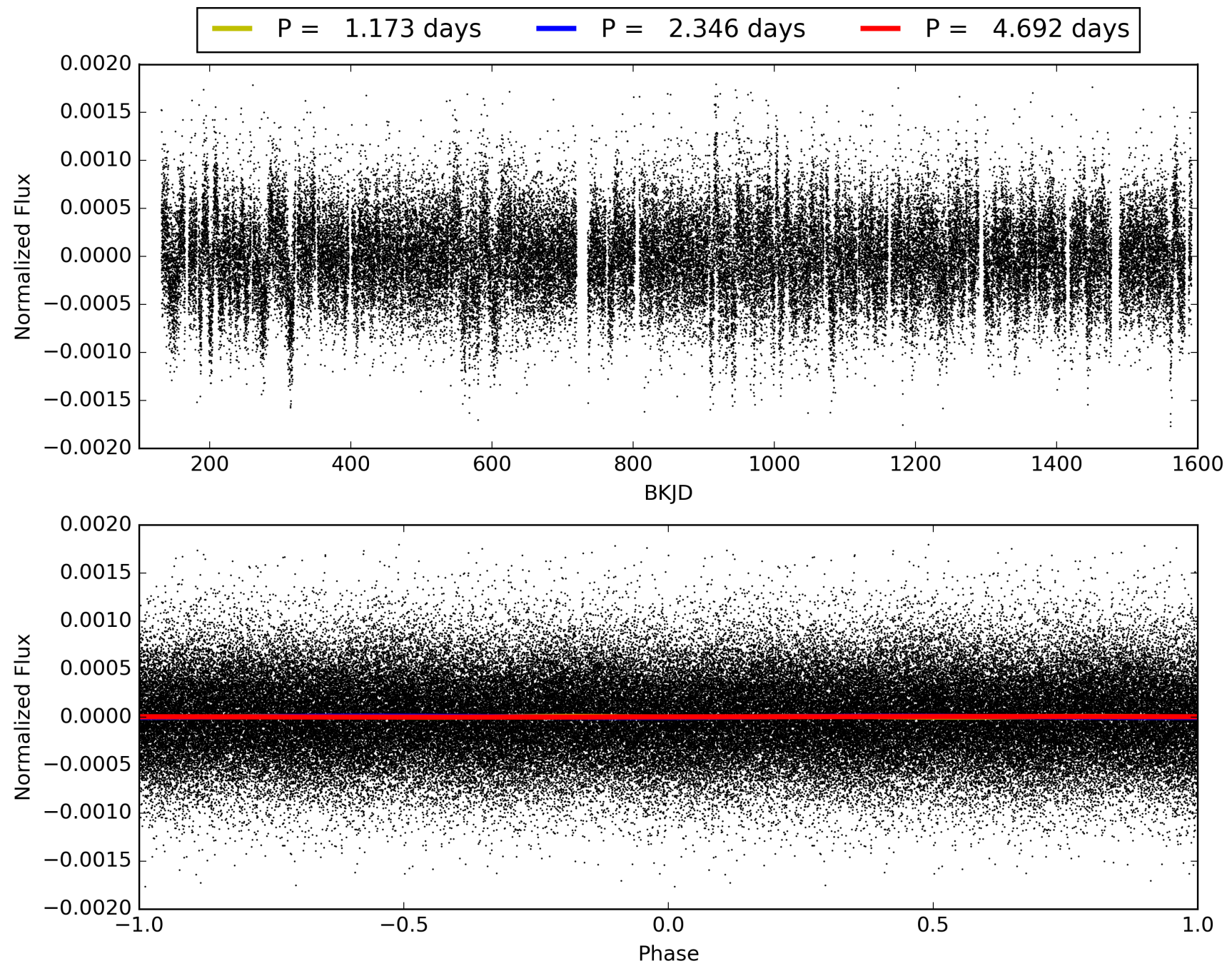
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.38e-14
RollingBand-fgt: 1.00 [549/550]
GhostDiagnostic-chr: 0.6128
Centroid-sig: 17.8%
Centroid-so: 2.918 arcsec [1.31σ]
OotOffset-rm: 2.945 arcsec [3.51σ]
KicOffset-rm: 2.935 arcsec [3.54σ]
OotOffset-st: 4/4/4/3 [15]
KicOffset-st: 4/4/4/3 [15]
DiffImageQuality-fgm: 0.27 [4/15]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 004949797-01, PDC Light Curves

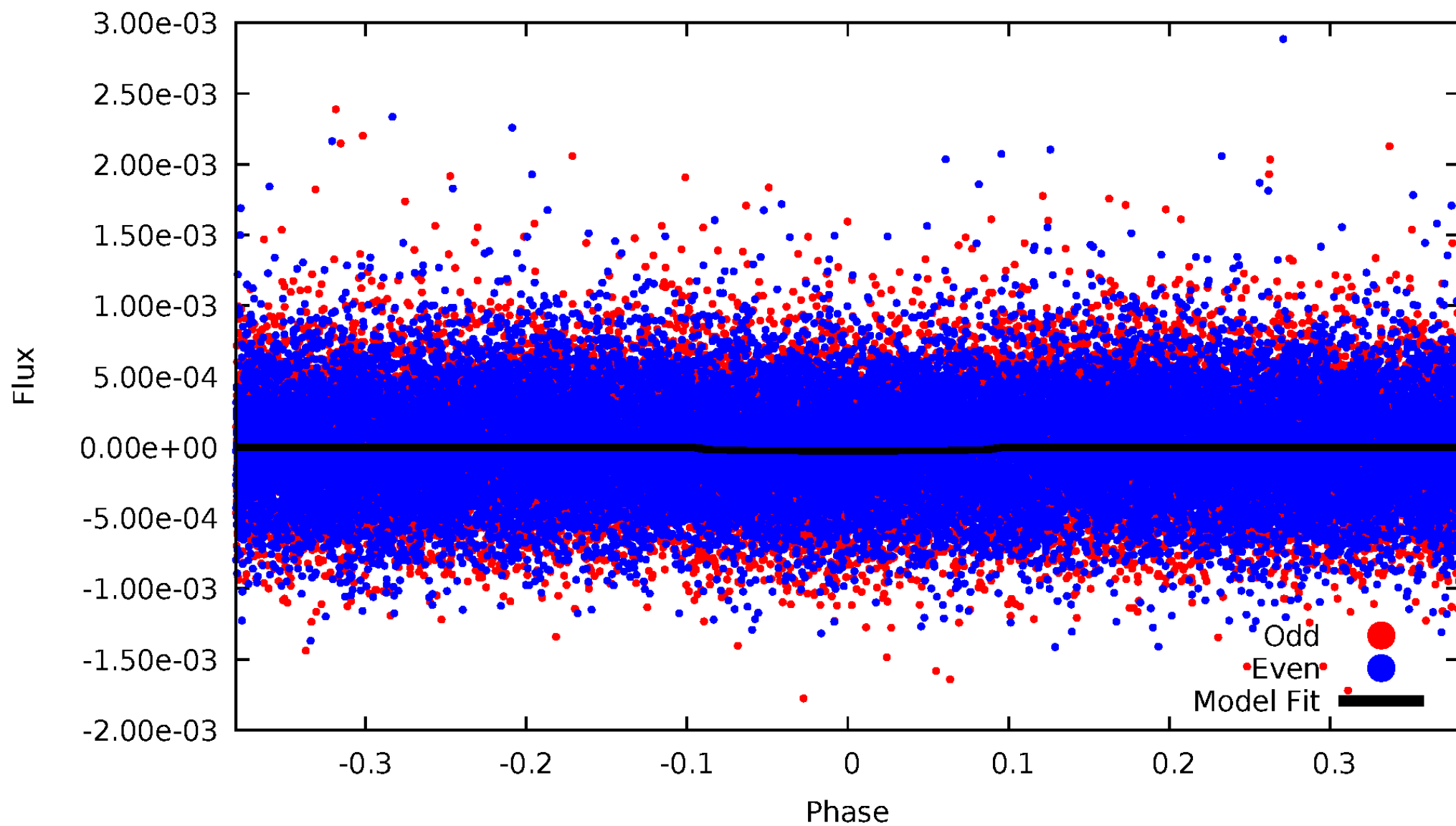


TCE 004949797-01



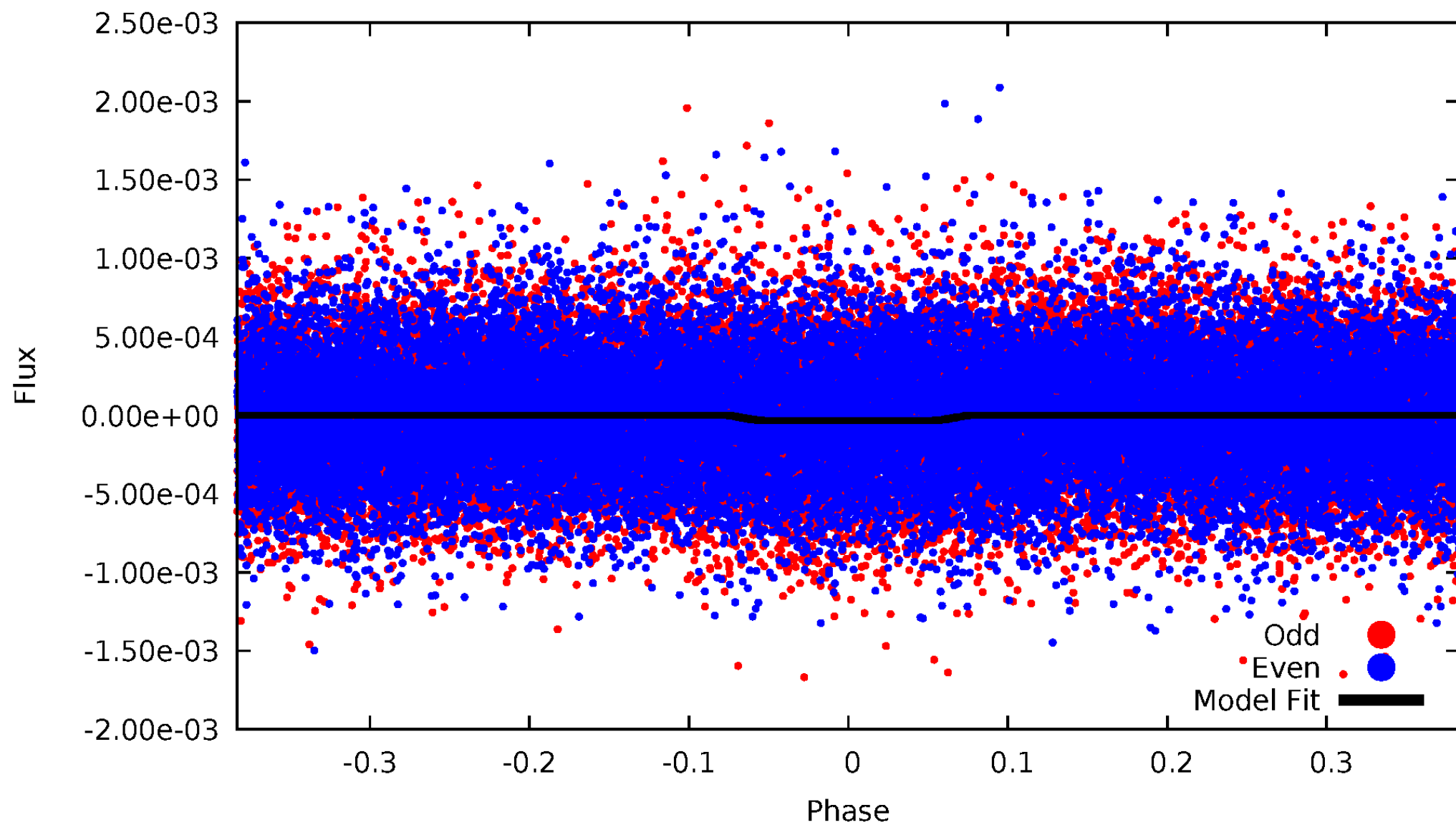
DV Odd/Even

TCE 004949797-01



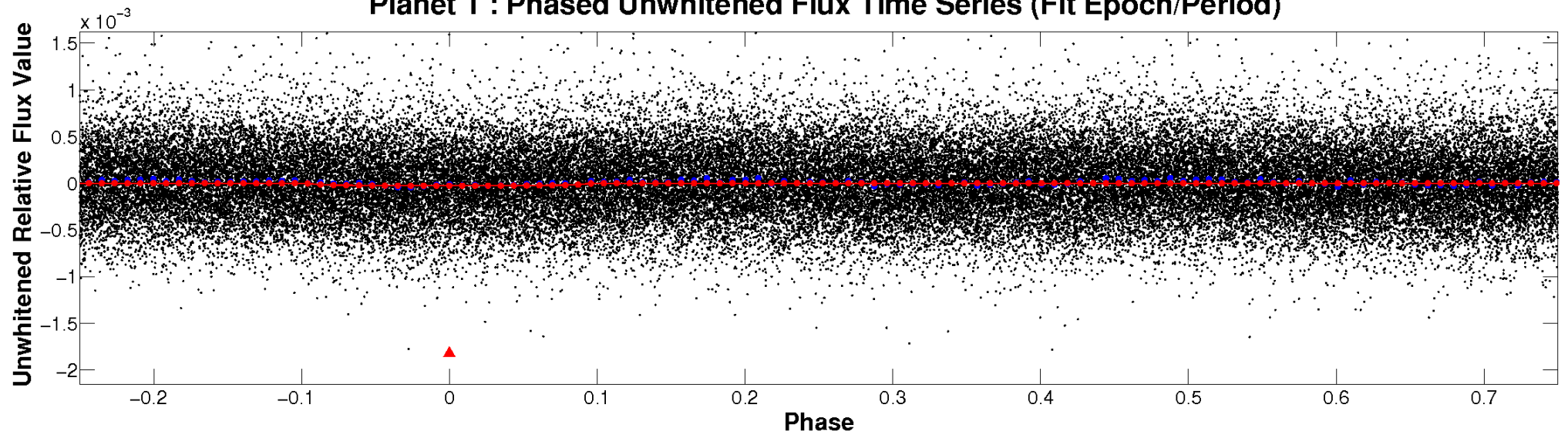
ALT Odd/Even

TCE 004949797-01

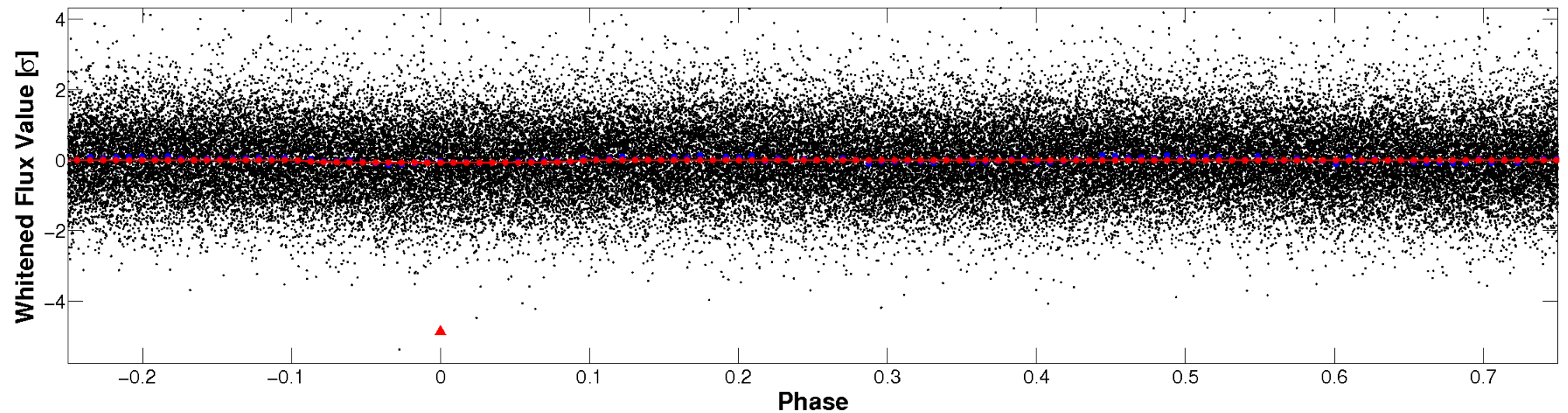


Non-Whitened Vs. Whitened Light Curve

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

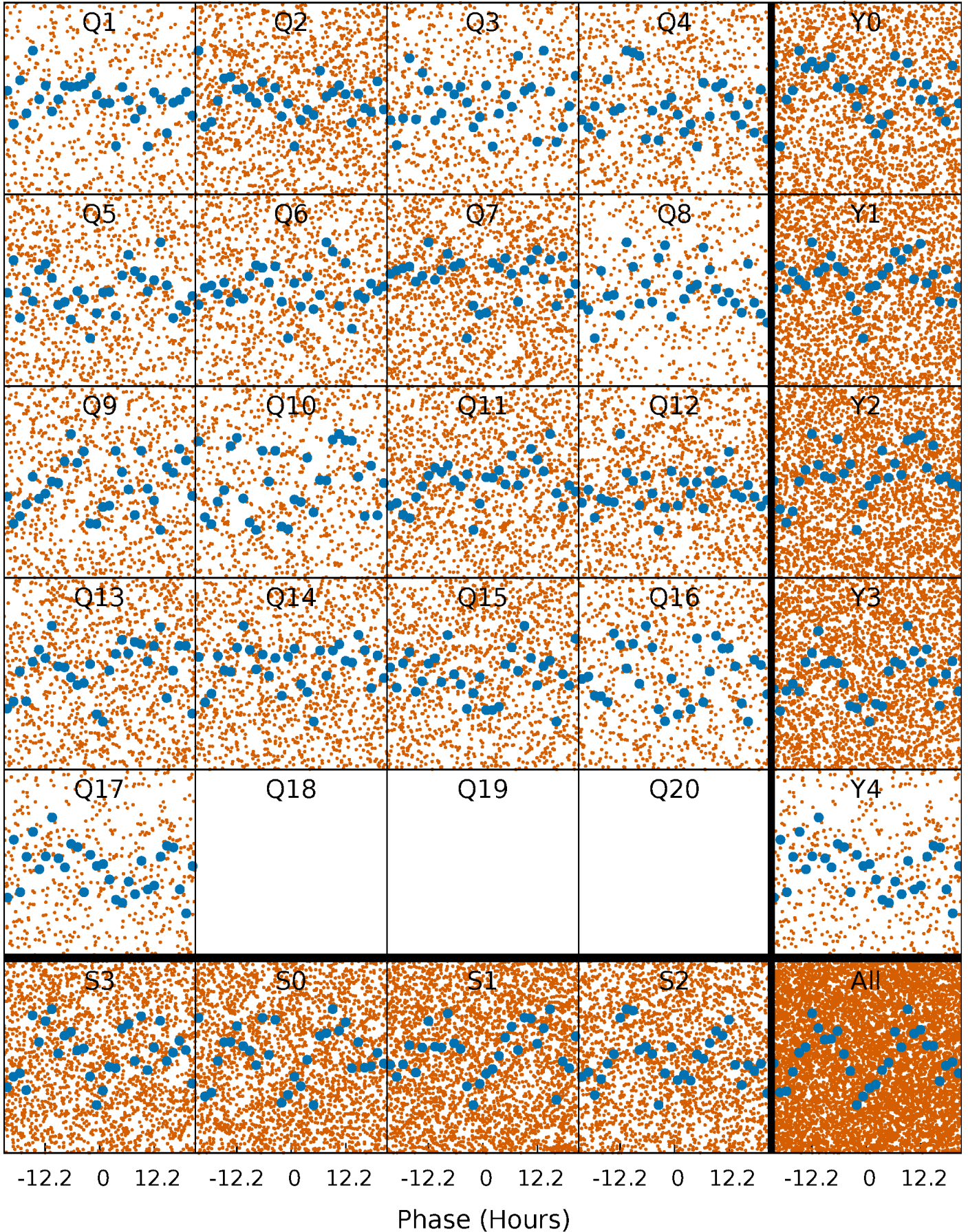


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



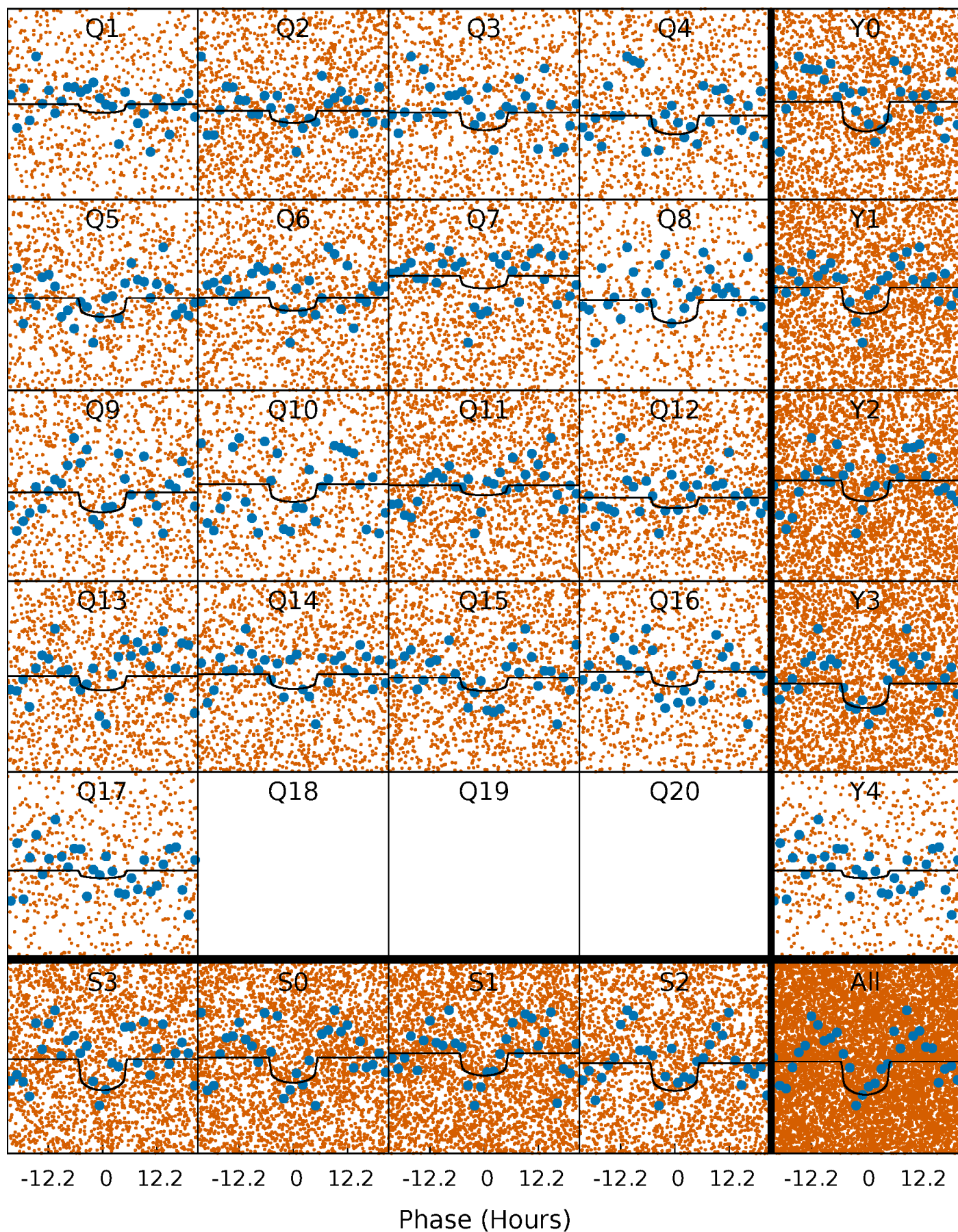
PDC Quarter-Phased Transit Curves

TCE 004949797-01 P= 2.345913 Days $T_0=132.315618$ (BKJD)



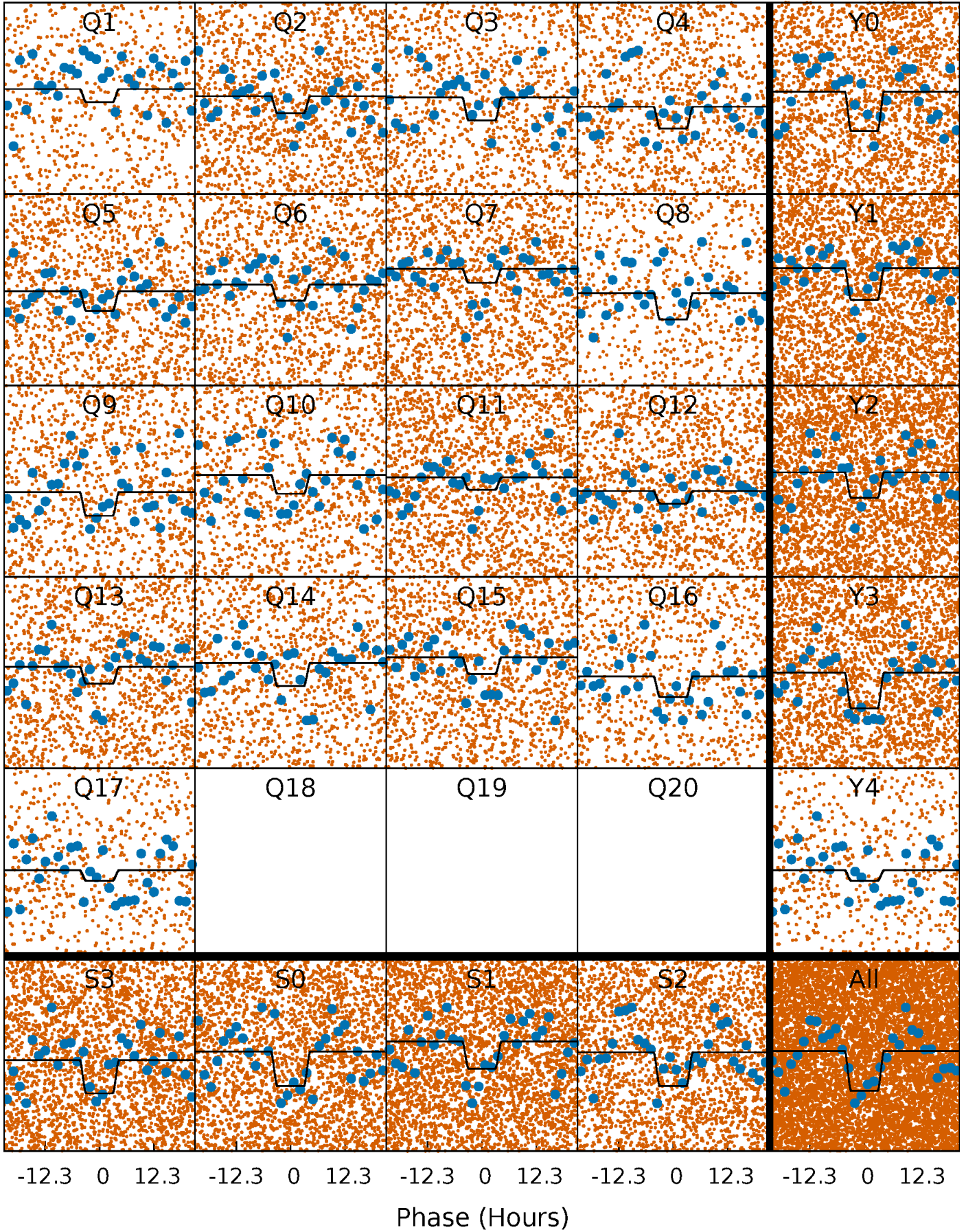
DV Quarter-Phased Transit Curves

TCE 004949797-01 P= 2.345913 Days $T_0=132.315618$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

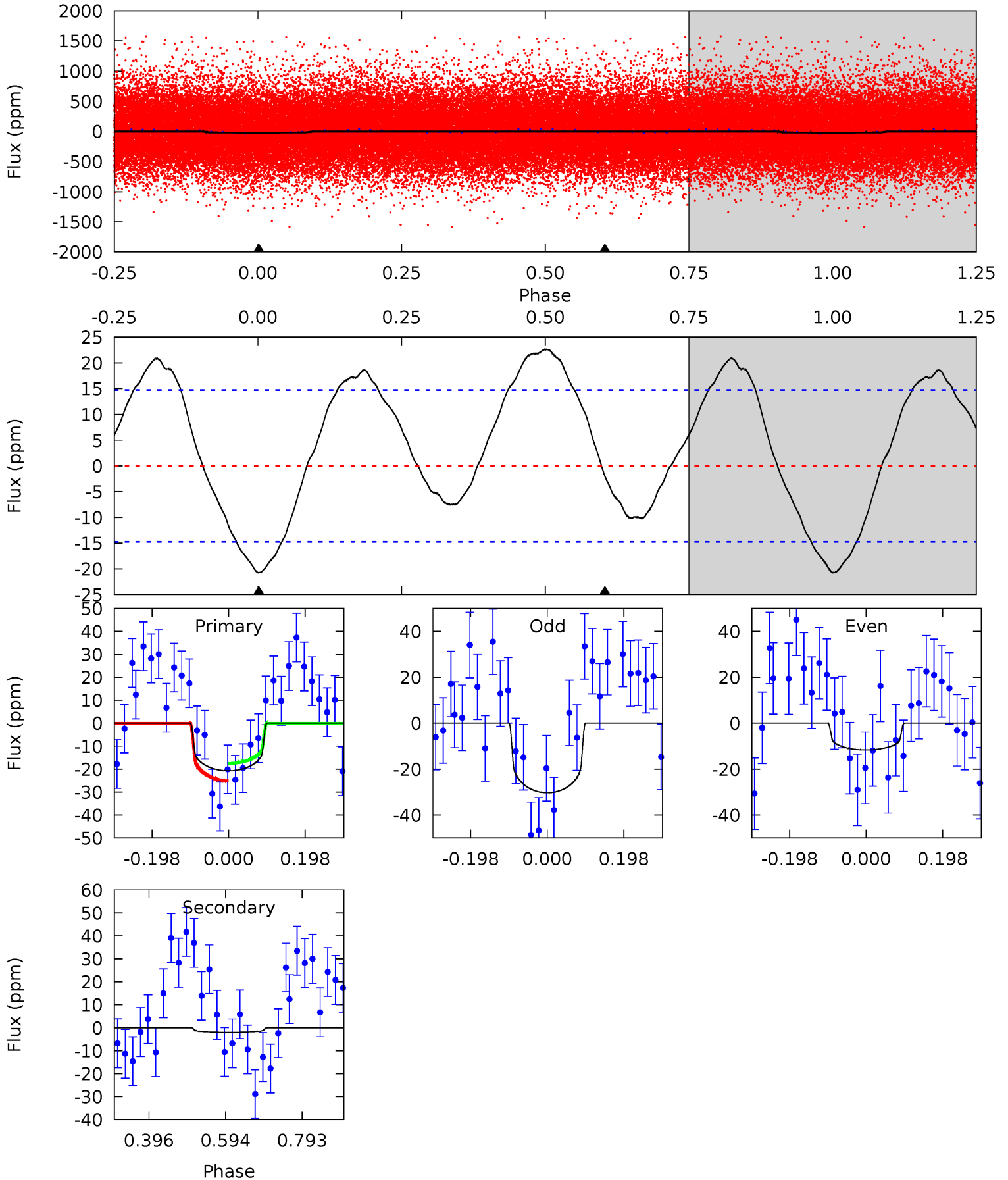
TCE 004949797-01 P= 2.345917 Days $T_0=132.315795$ (BKJD)



DV Model-Shift Uniqueness Test

004949797-01, P = 2.345913 Days, E = 129.969705 Days

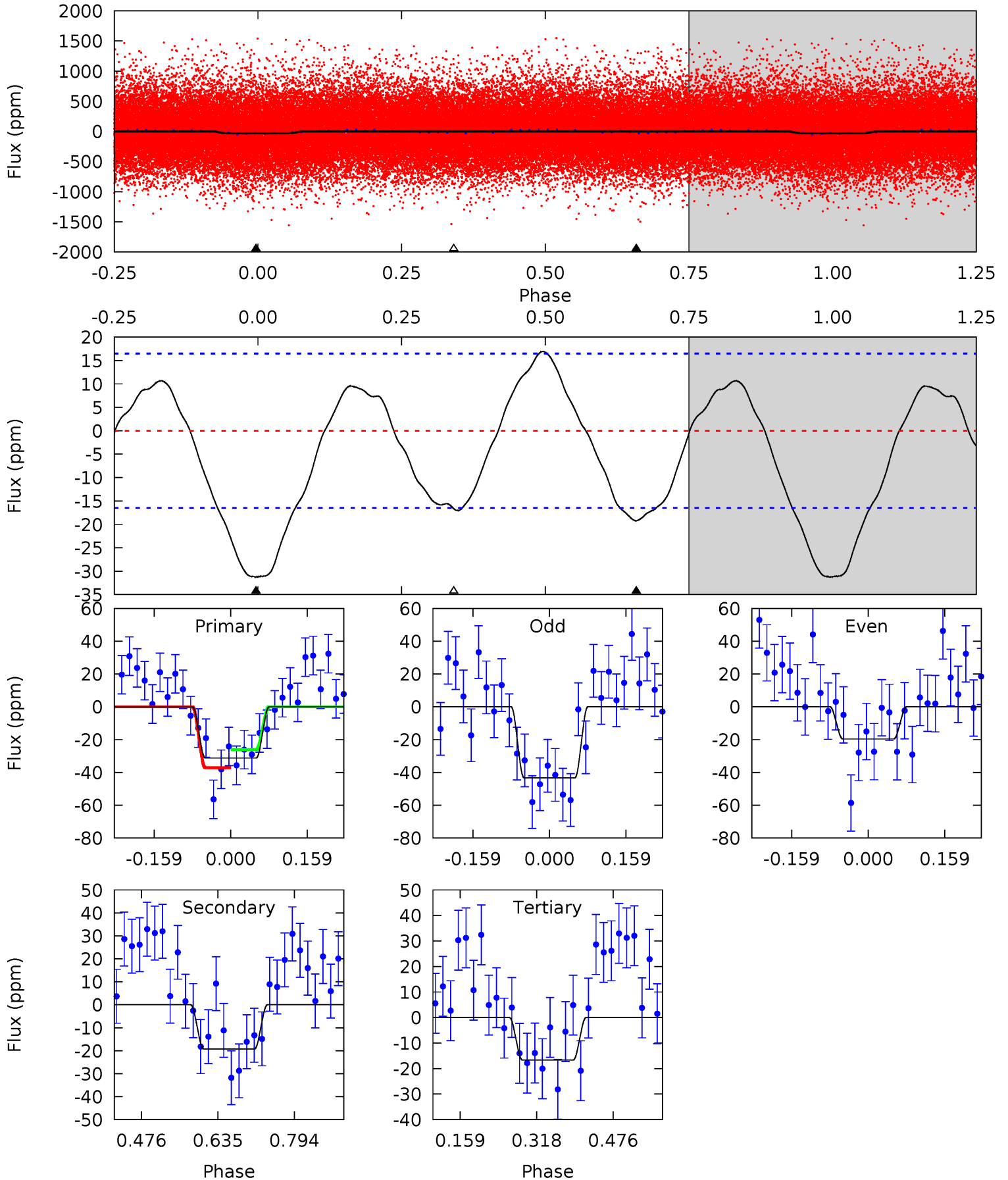
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.22	0.59	0	0	4.42	1.29	2.23	6.22	6.22	0.59	0.59	2.80	0.98	0.52	1.12



Alt Model-Shift Uniqueness Test

004949797-01, P = 2.345917 Days, E = 129.969878 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.47	5.21	4.51	0	4.47	1.41	2.95	3.96	8.47	0.70	5.21	3.19	1.03	0.35	1.50



Stellar Parameters For KIC 004949797

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5581^{+149}_{-149}	$4.559^{+0.038}_{-0.162}$	$-0.020^{+0.250}_{-0.300}$	$0.845^{+0.188}_{-0.075}$	$0.946^{+0.083}_{-0.111}$	$2.204^{+0.431}_{-0.960}$
	+3%/-3%	+1%/-4%	+1250%/-1500%	+22%/-9%	+9%/-12%	+20%/-44%
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 004949797-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-2 ± 3	$0.56^{+0.32}_{-0.30}$	1758^{+93}_{-75}	3130^{+1155}_{-6240}	$2.979^{+16.598}_{-5.414}$
Alt.	-19 ± 4	$0.57^{+0.33}_{-0.31}$	1753^{+93}_{-72}	4837^{+2343}_{-790}	36^{+145}_{-22}

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

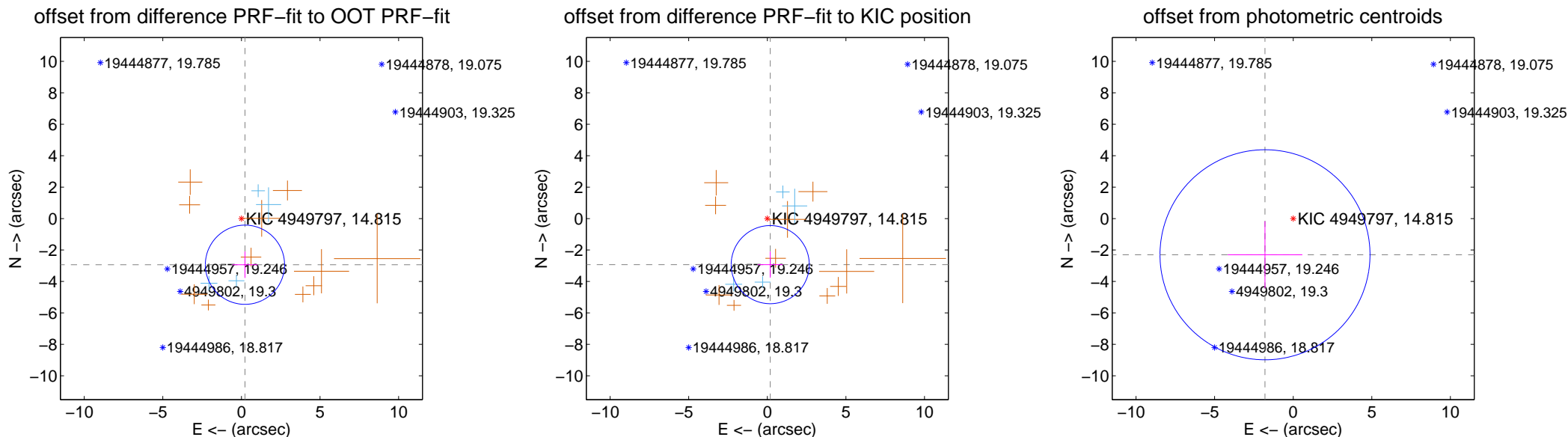
DV Centroid Data

Supplemental centroid analysis for 004949797-01. Kepler magnitude: 14.81. Transit SNR 6.11

There are 4 quarters with good PRF difference image offsets

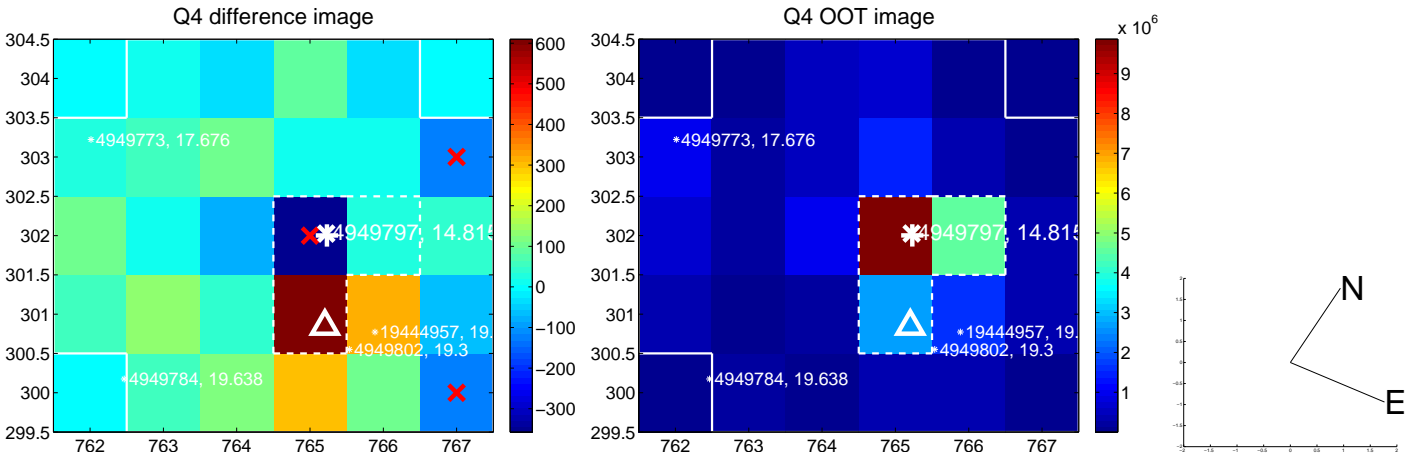
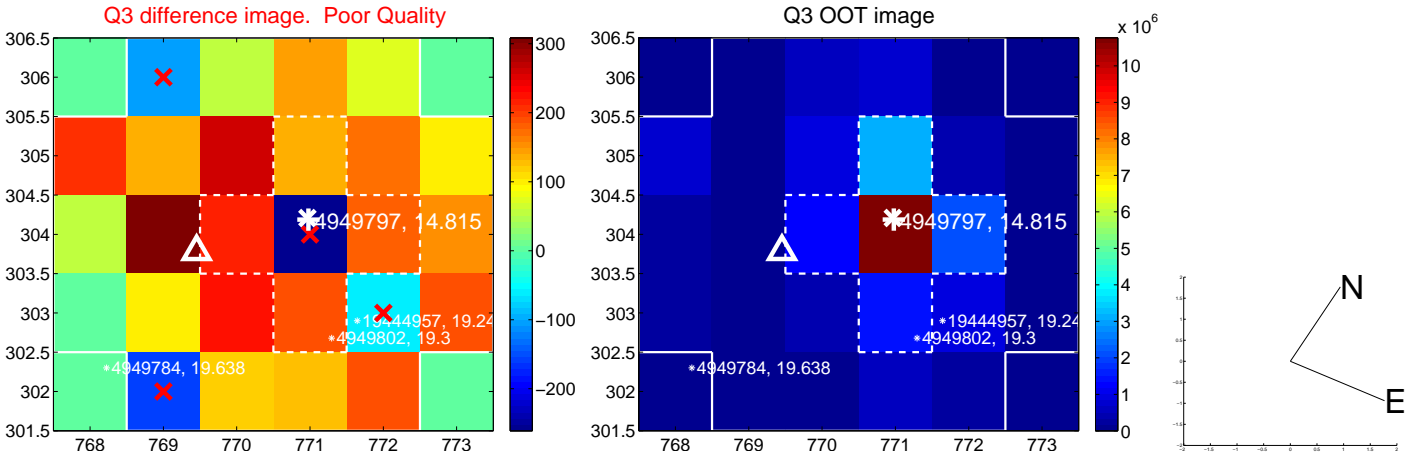
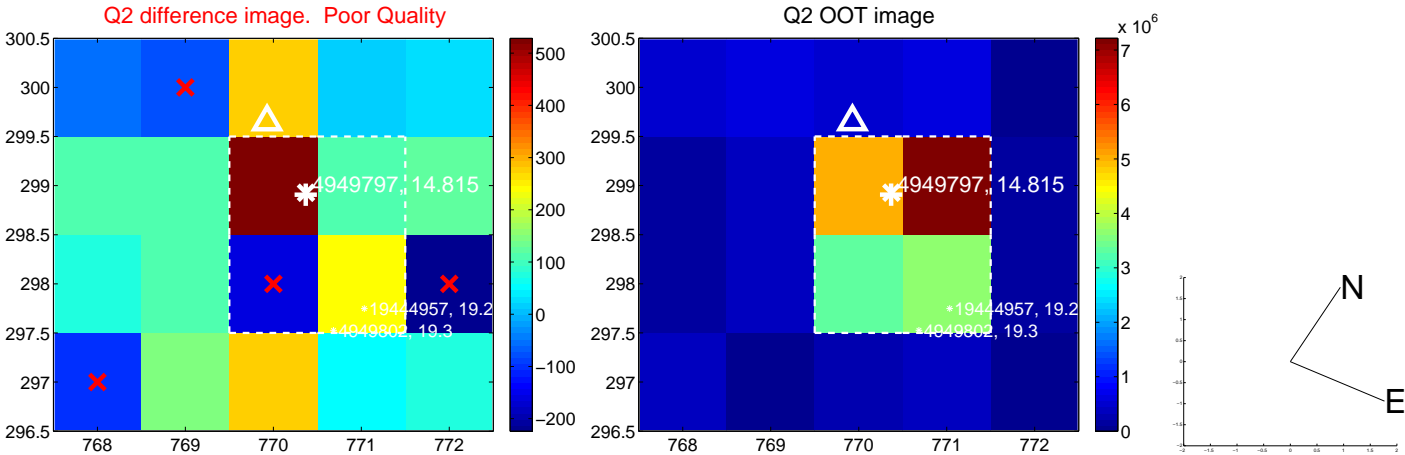
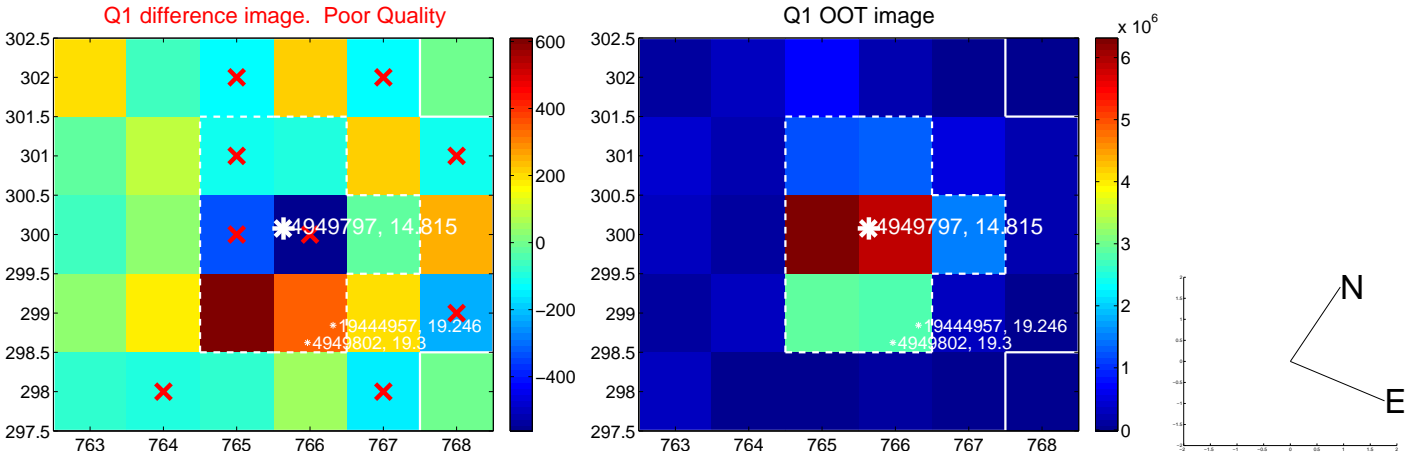
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.945 ± 0.840	3.51	-0.224 ± 0.799	-2.936 ± 0.840
PRF-fit source offset from KIC position	2.935 ± 0.828	3.54	-0.186 ± 0.792	-2.929 ± 0.828
photometric centroid source offset	2.92 ± 2.23	1.31	1.79 ± 2.37	-2.30 ± 2.13

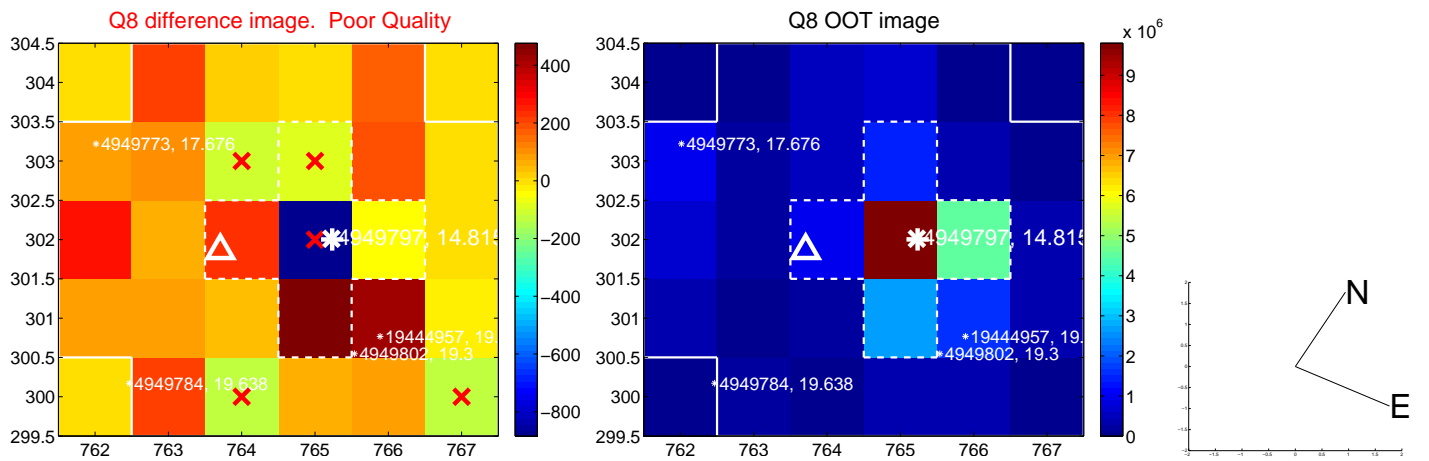
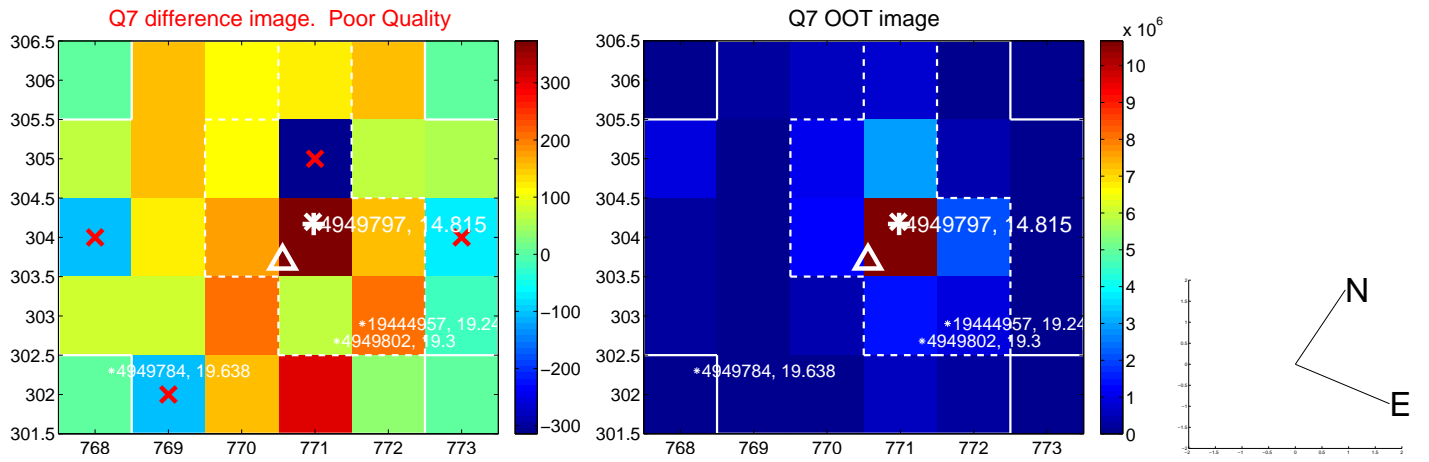
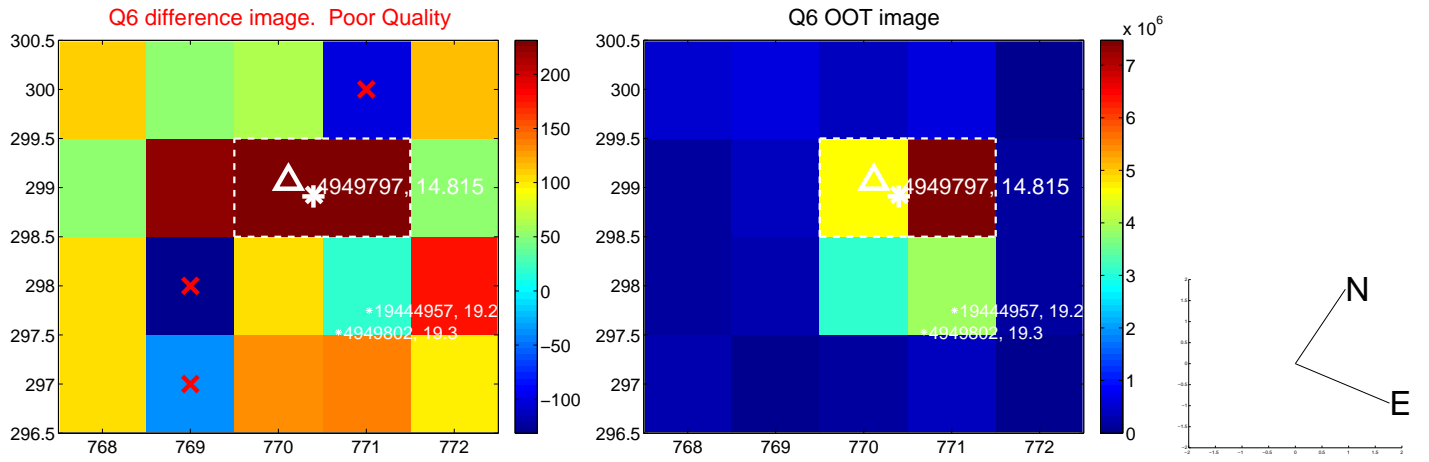
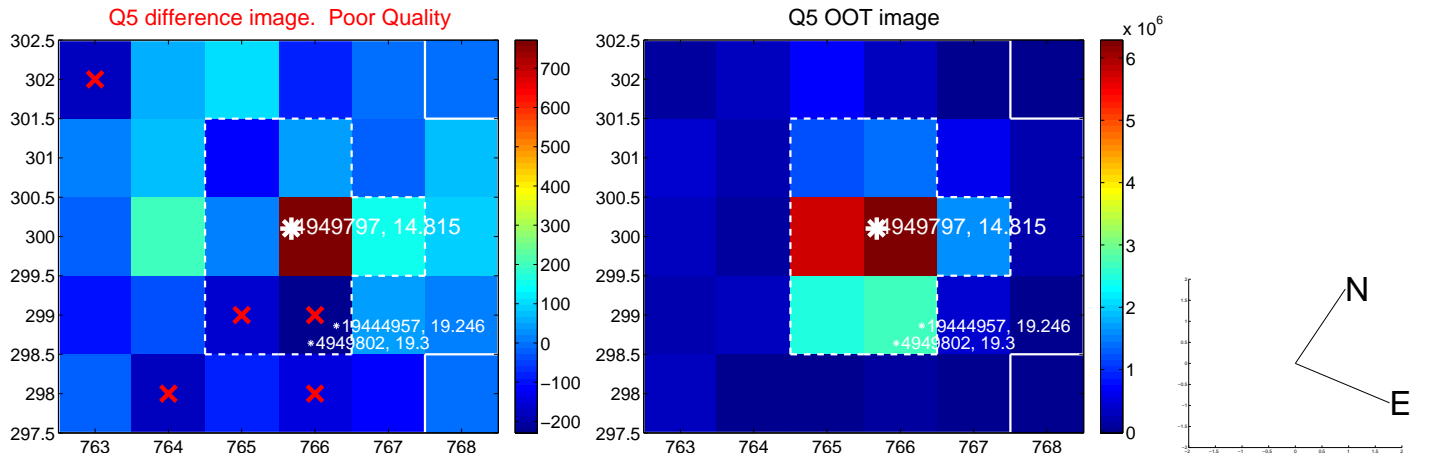


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

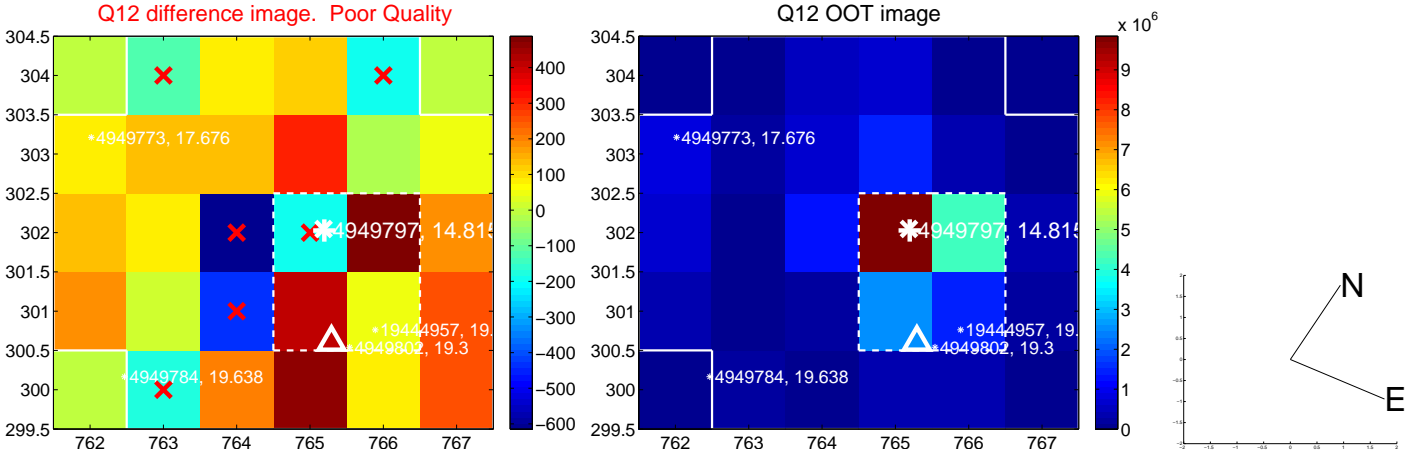
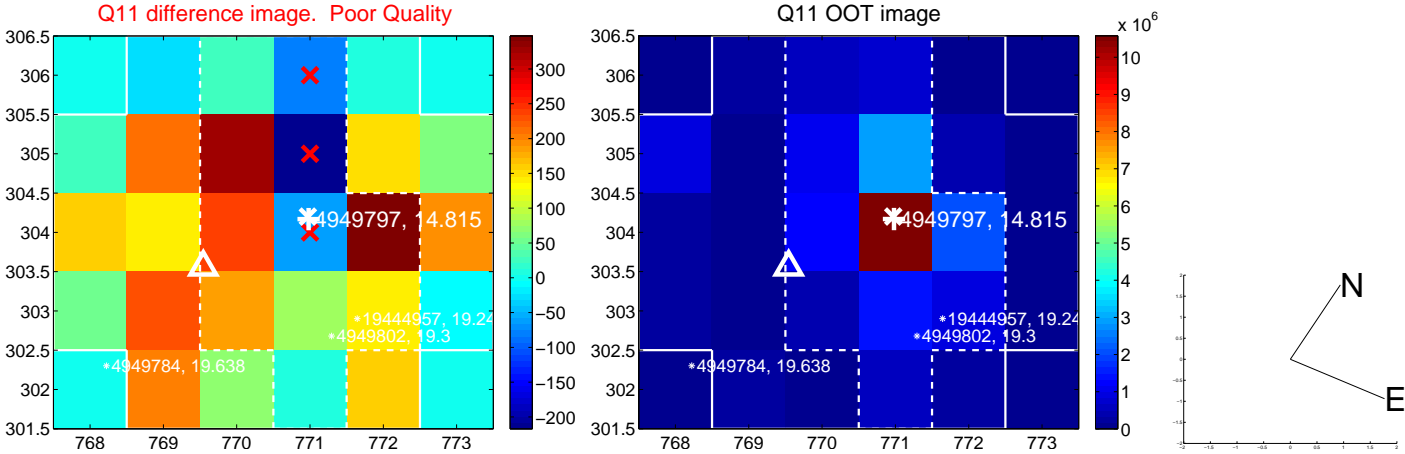
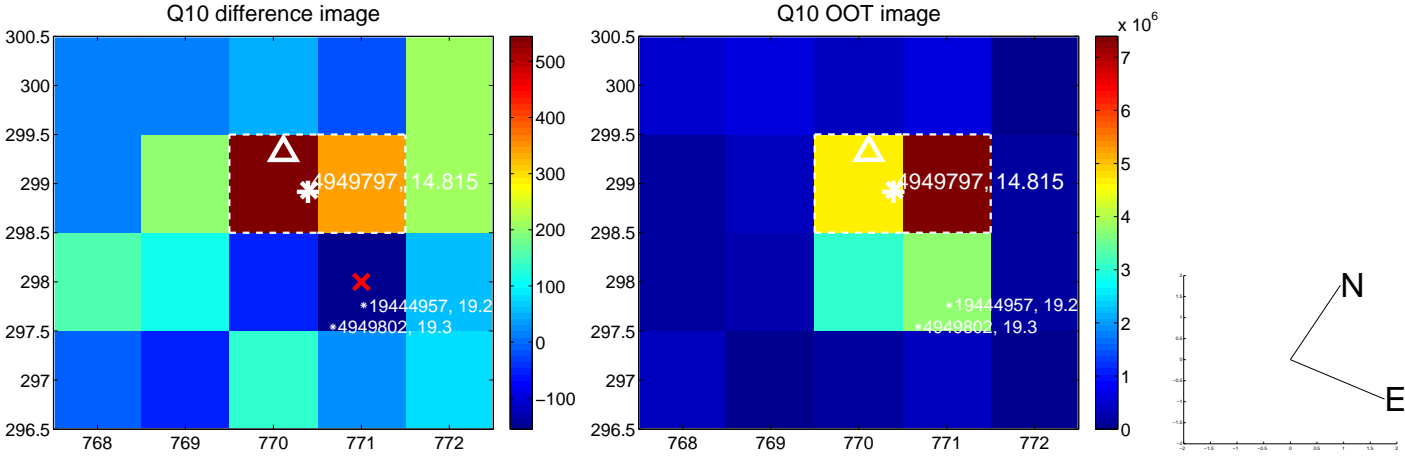
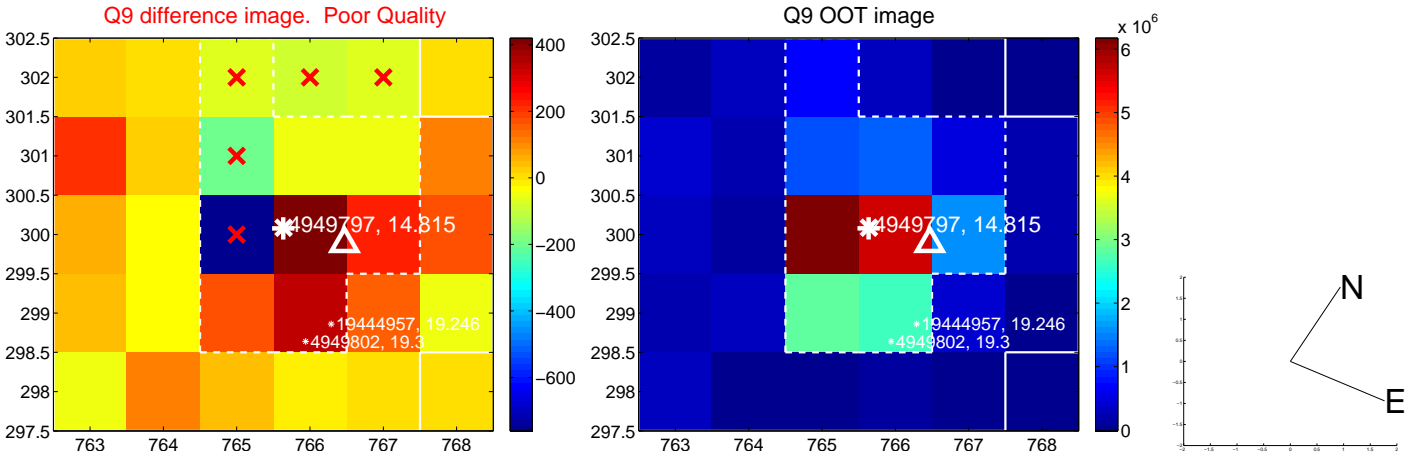
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



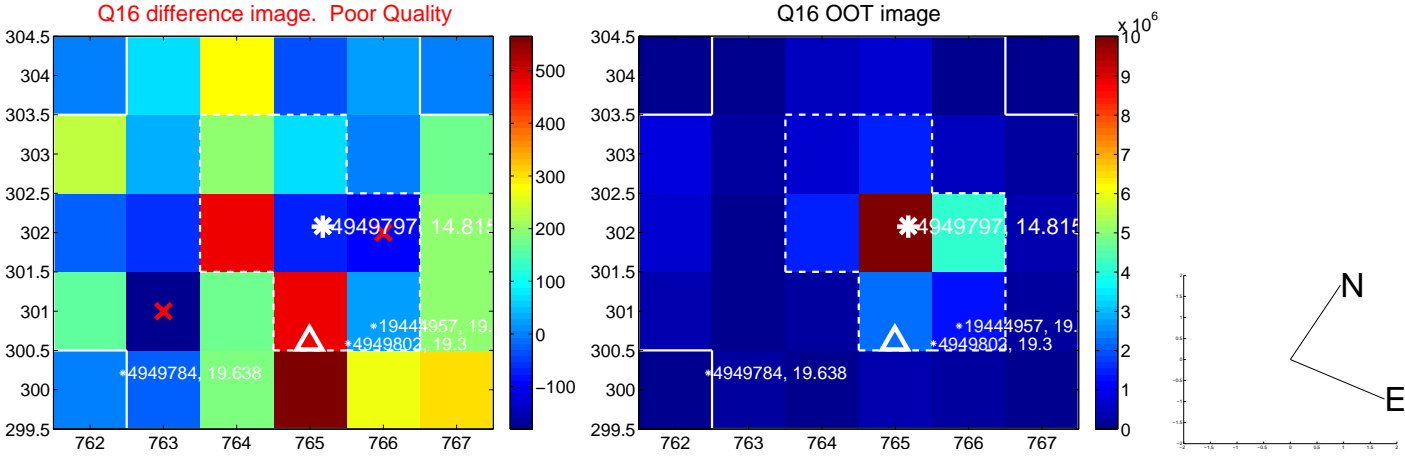
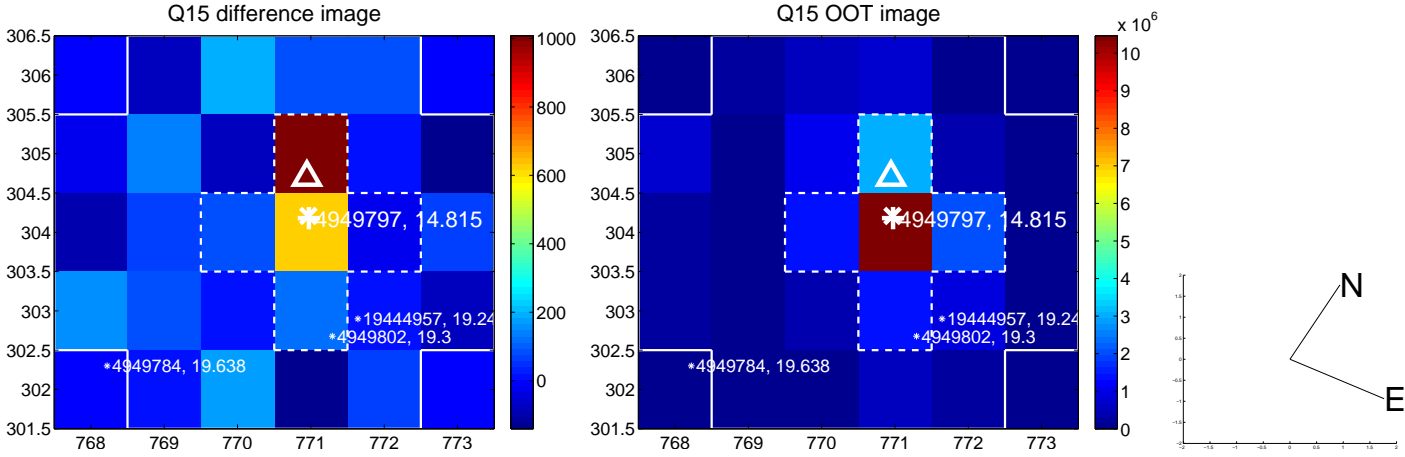
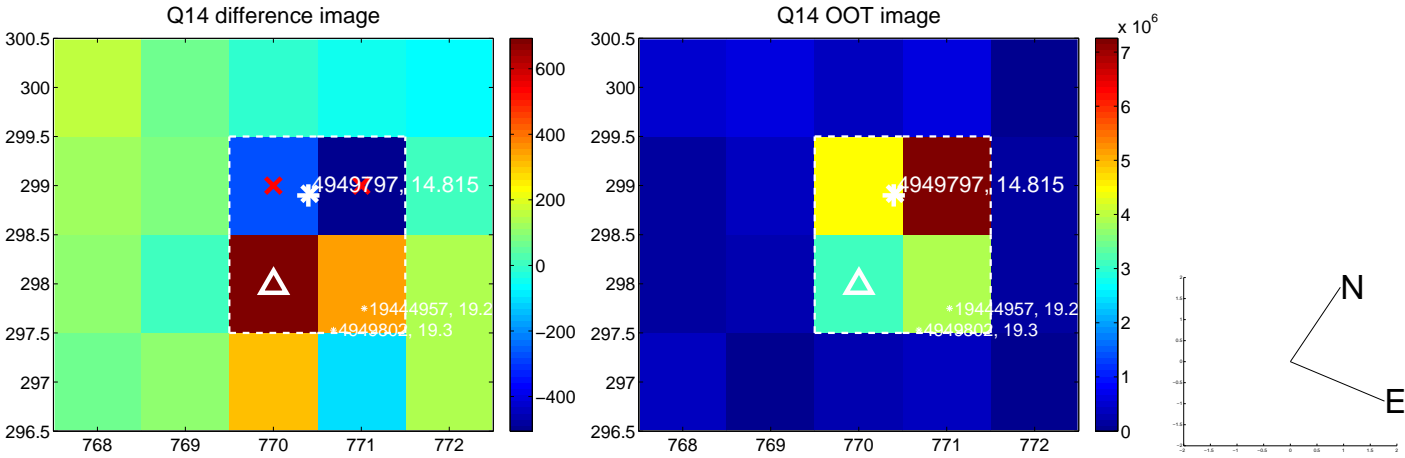
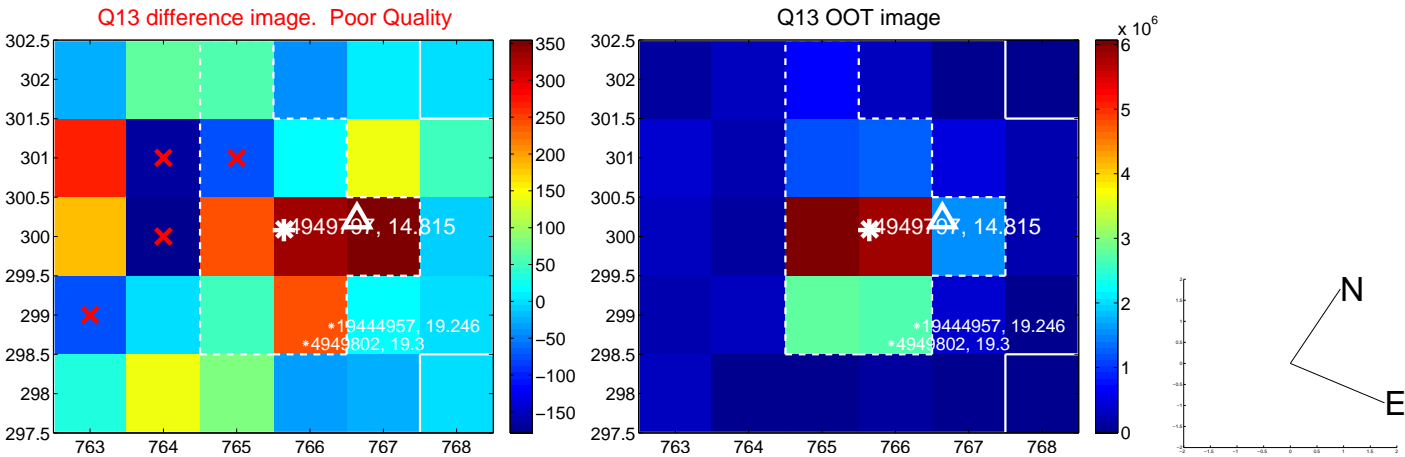
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



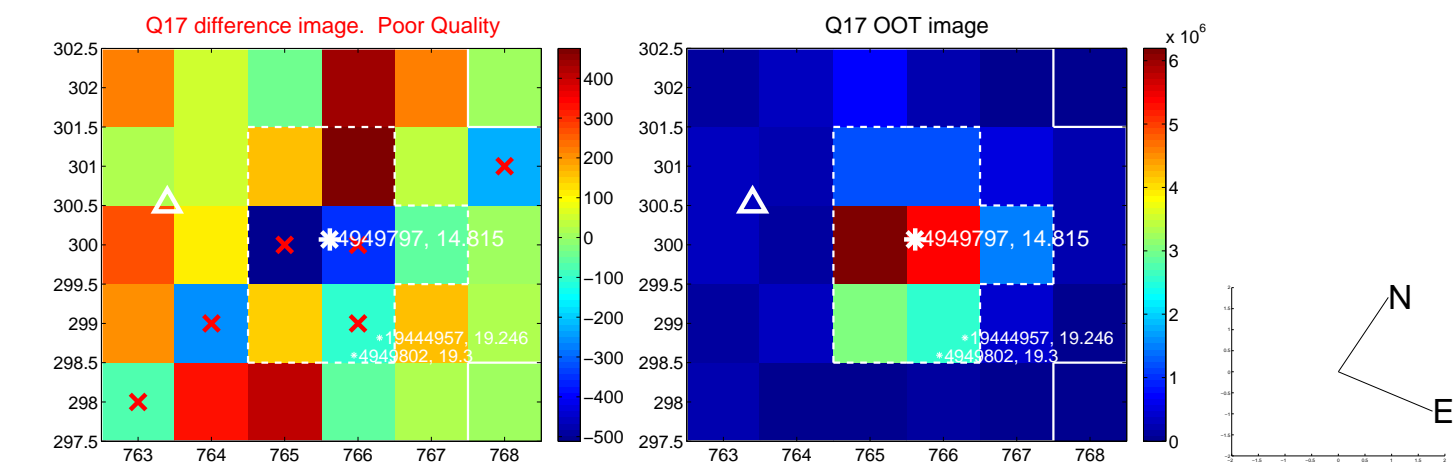
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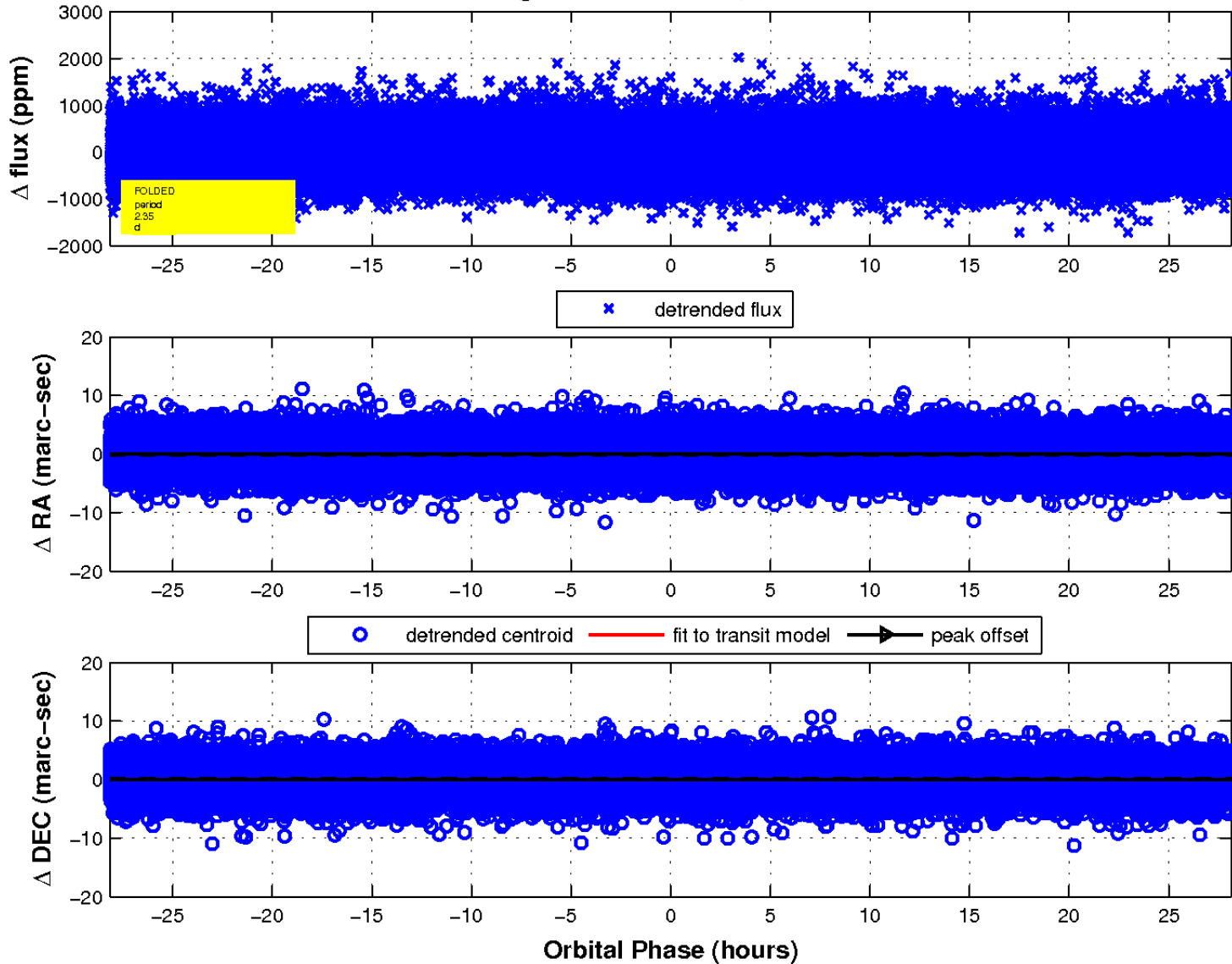
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

