

KIC 003550372

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})
003550372-01	OBS	4357.01	0.681180	131.634264	128.8	0.601	11.3	11.5	2.38	4939	2.99	14183.62

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003550372-01	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.

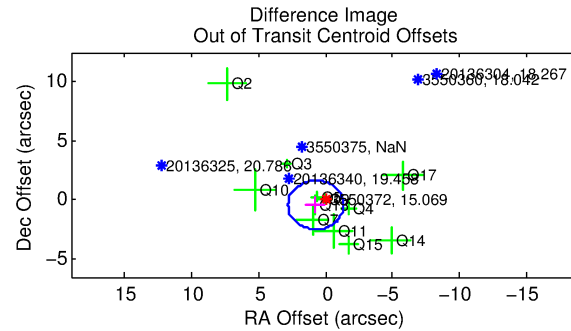
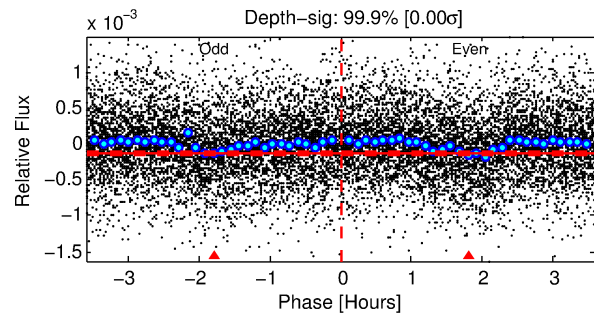
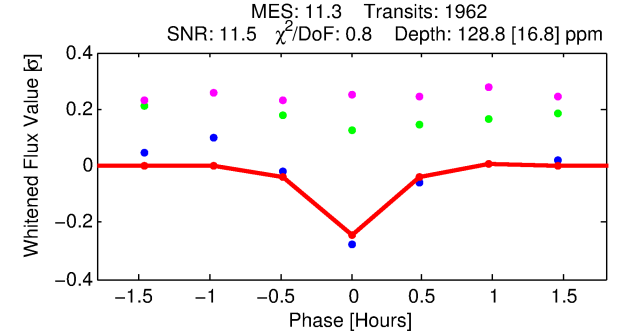
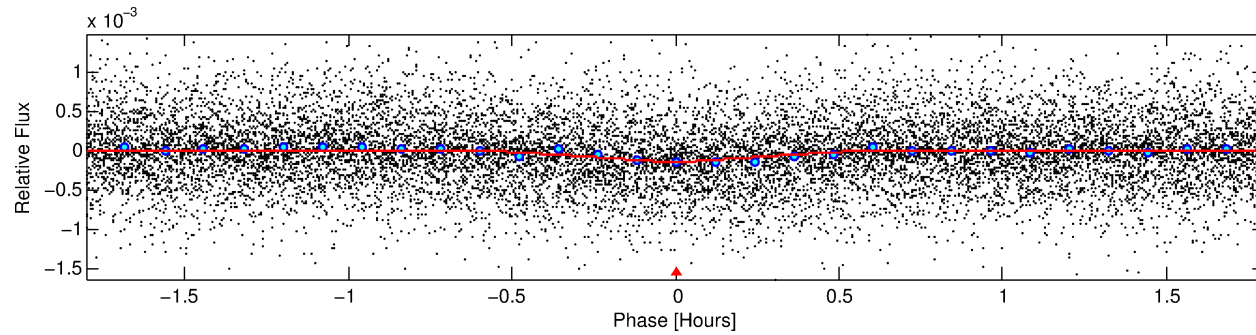
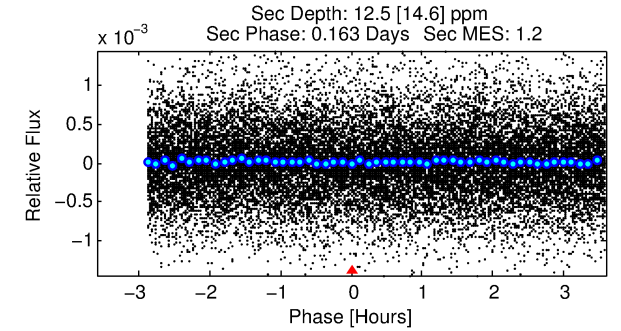
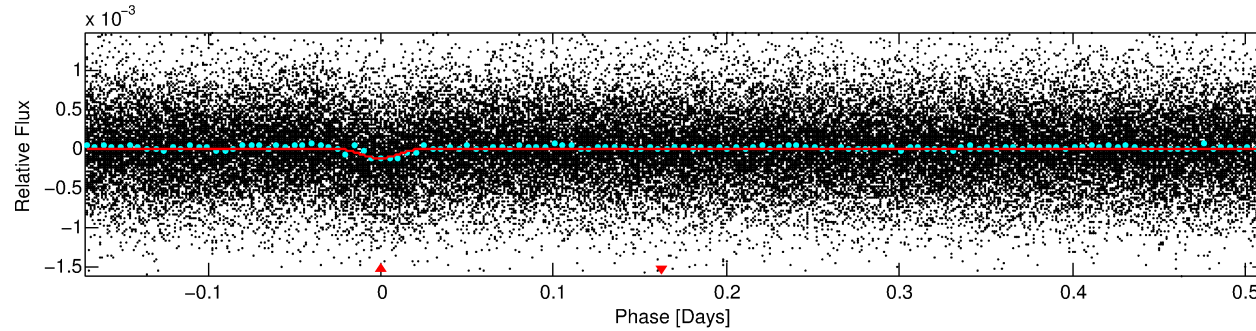
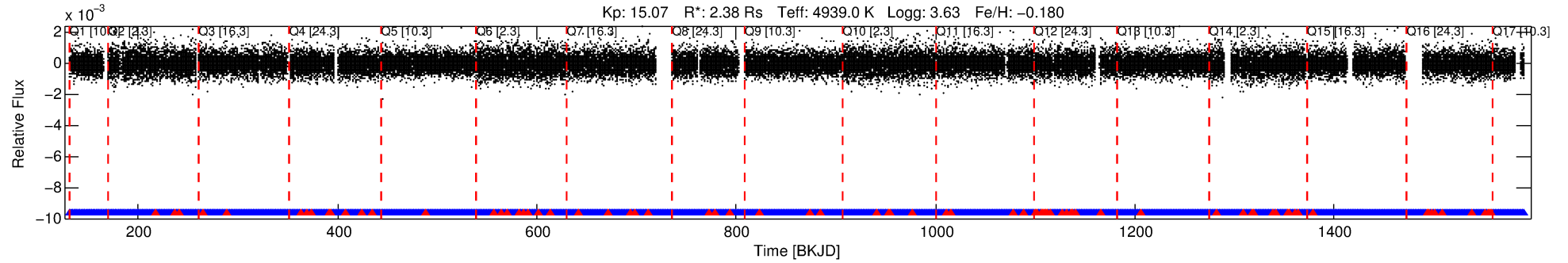
Ephemeris Match Information For 003550372-01

No Significant Match Found

DV One-Page Summary

KIC: 3550372 Candidate: 1 of 1 Period: 0.681 d

KOI: K04357.01 Corr: 0.776



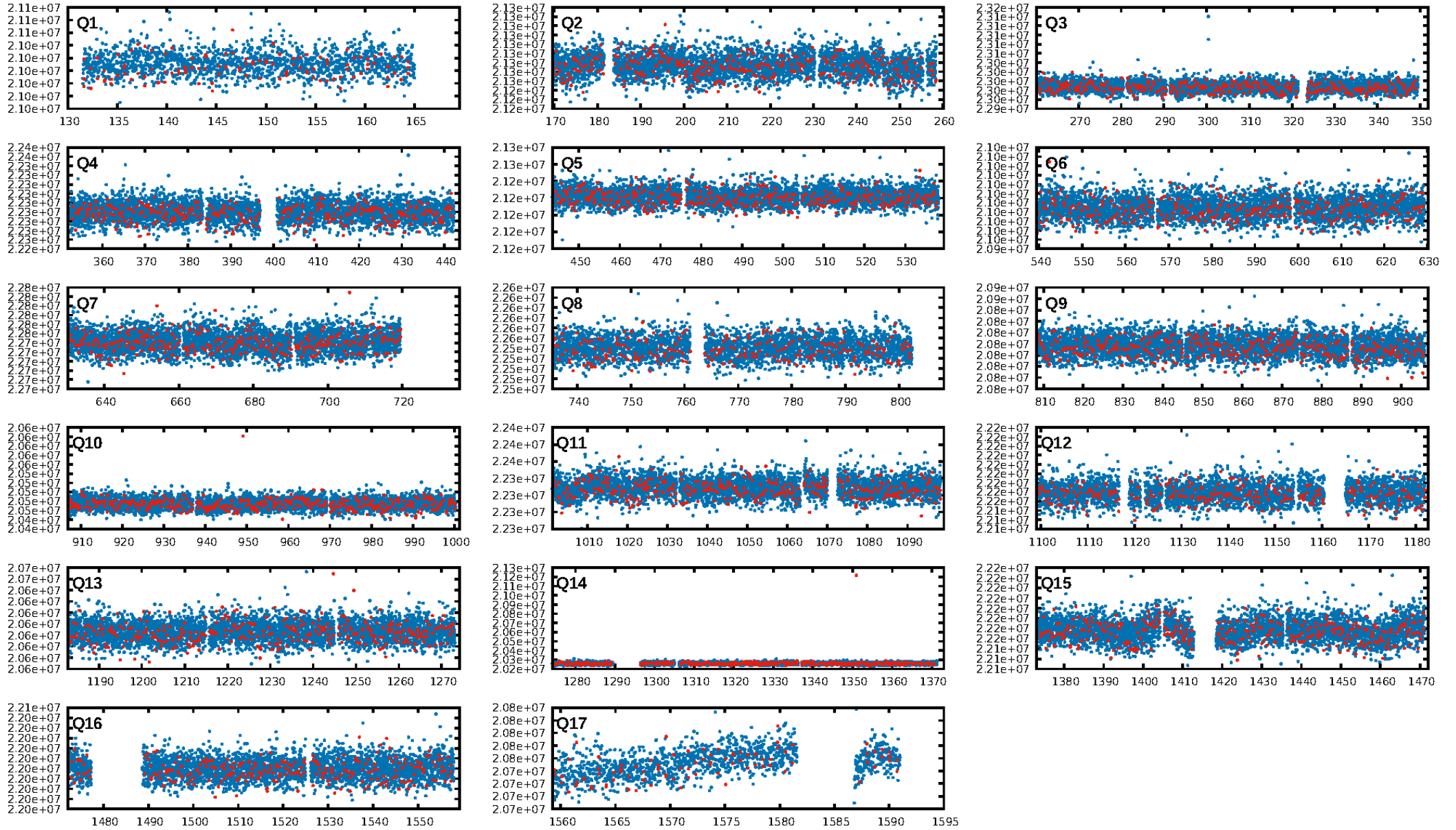
DV Fit Results:

Period = 0.68118 [0.00001] d
Epoch = 131.6343 [0.0011] BKJD
Rp/R* = 0.0115 [0.0071]
a/R* = 6.38 [13.69]
b = 0.70 [1.62]
Seff = 14183.62 [4113.00]
Teff = 2783 [202] K
Rp = 2.99 [1.99] Re
a = 0.0146 [0.0030] AU
Ag = 0.16 [0.28] [-2.99σ]
Teffp = 2735 [1156] K [-0.04σ]

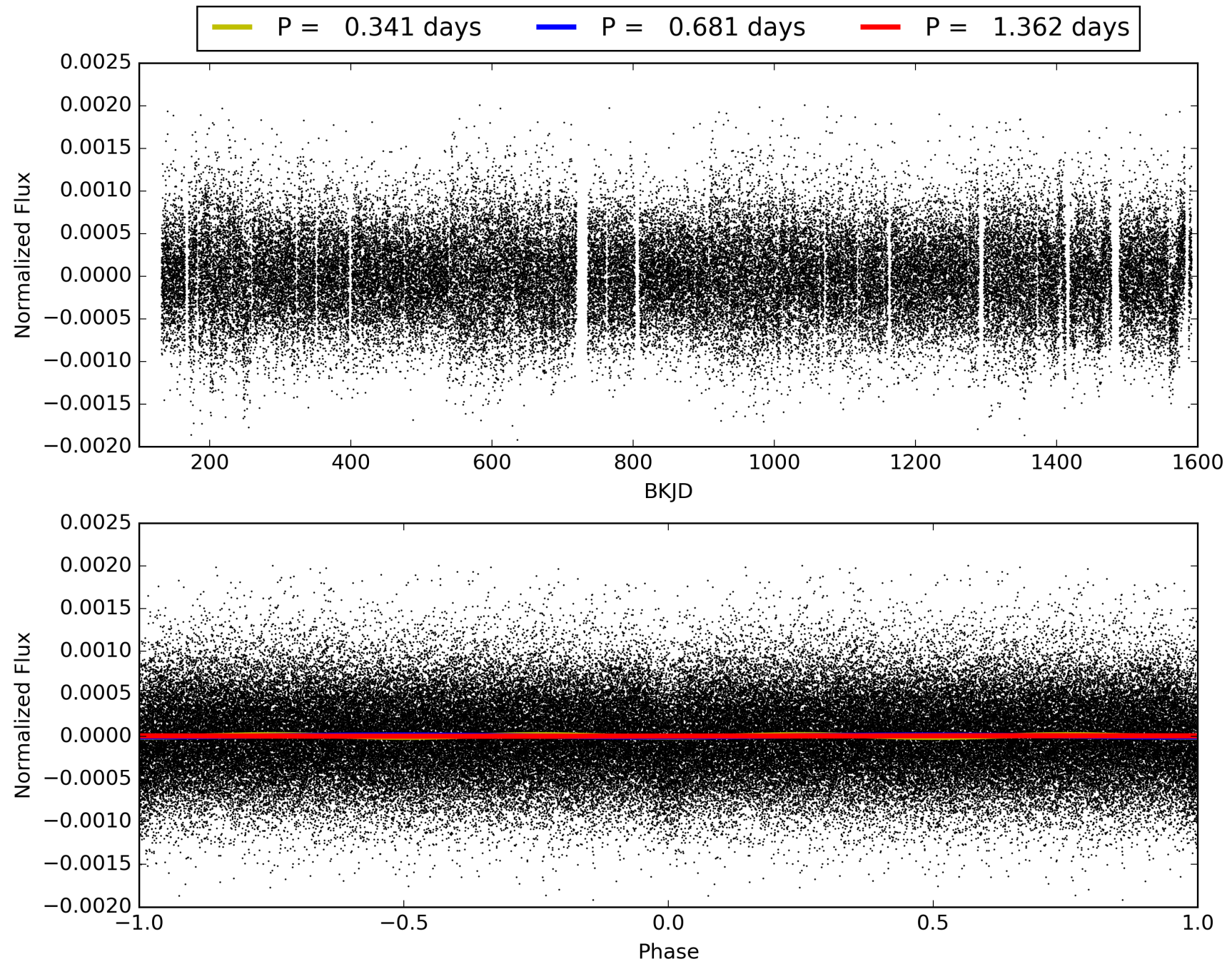
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.24e-28
RollingBand-fgt: 0.96 [1791/1873]
GhostDiagnostic-chr: 10.9
Centroid-sig: 0.0%
Centroid-so: 2.041 arcsec [2.23σ]
OotOffset-rm: 0.840 arcsec [1.22σ]
KicOffset-rm: 1.014 arcsec [0.95σ]
OotOffset-st: 3/4/1/4 [12]
KicOffset-st: 3/4/1/4 [12]
DiffImageQuality-fgm: 0.25 [3/12]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 003550372-01, PDC Light Curves

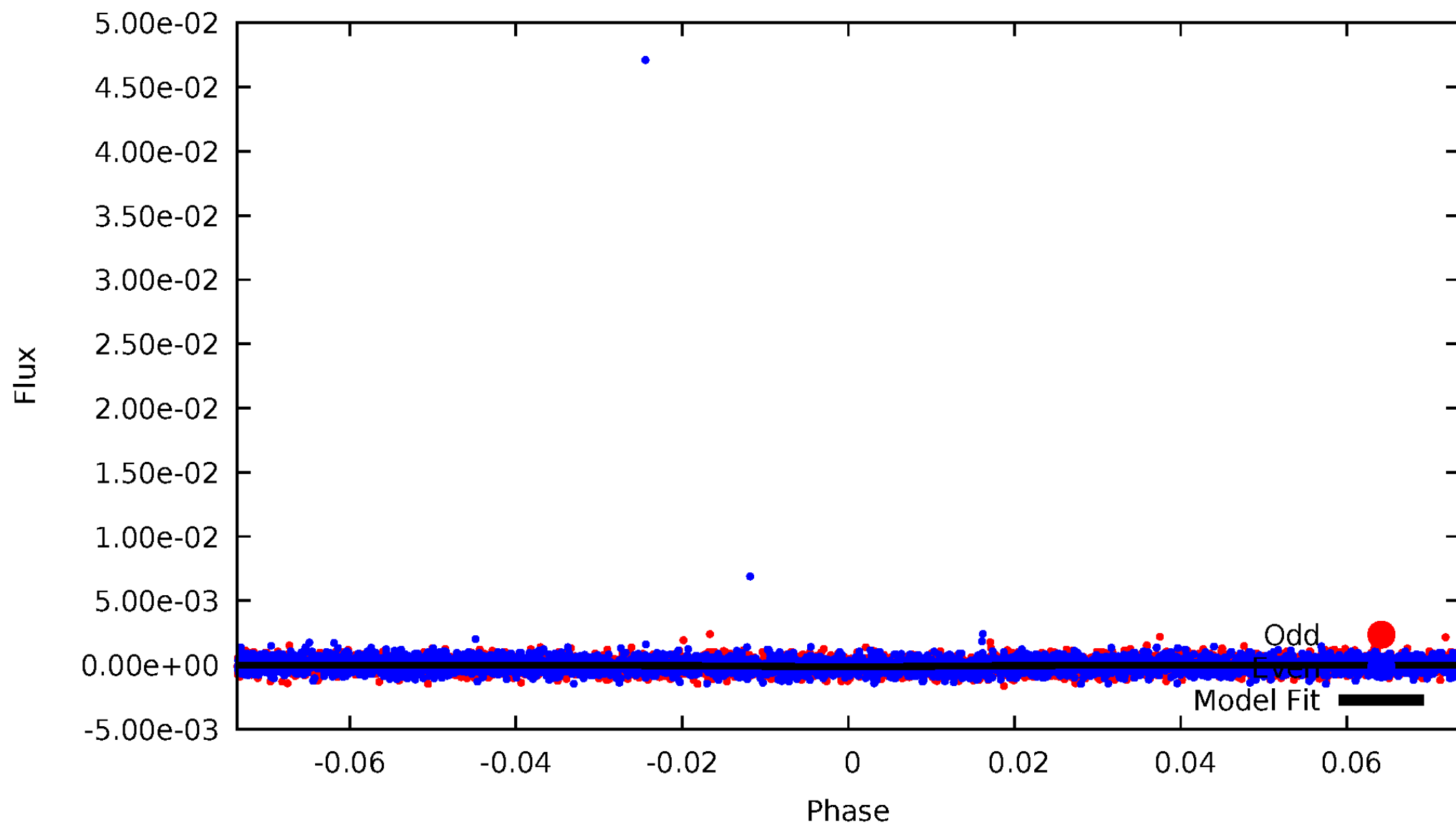


TCE 003550372-01



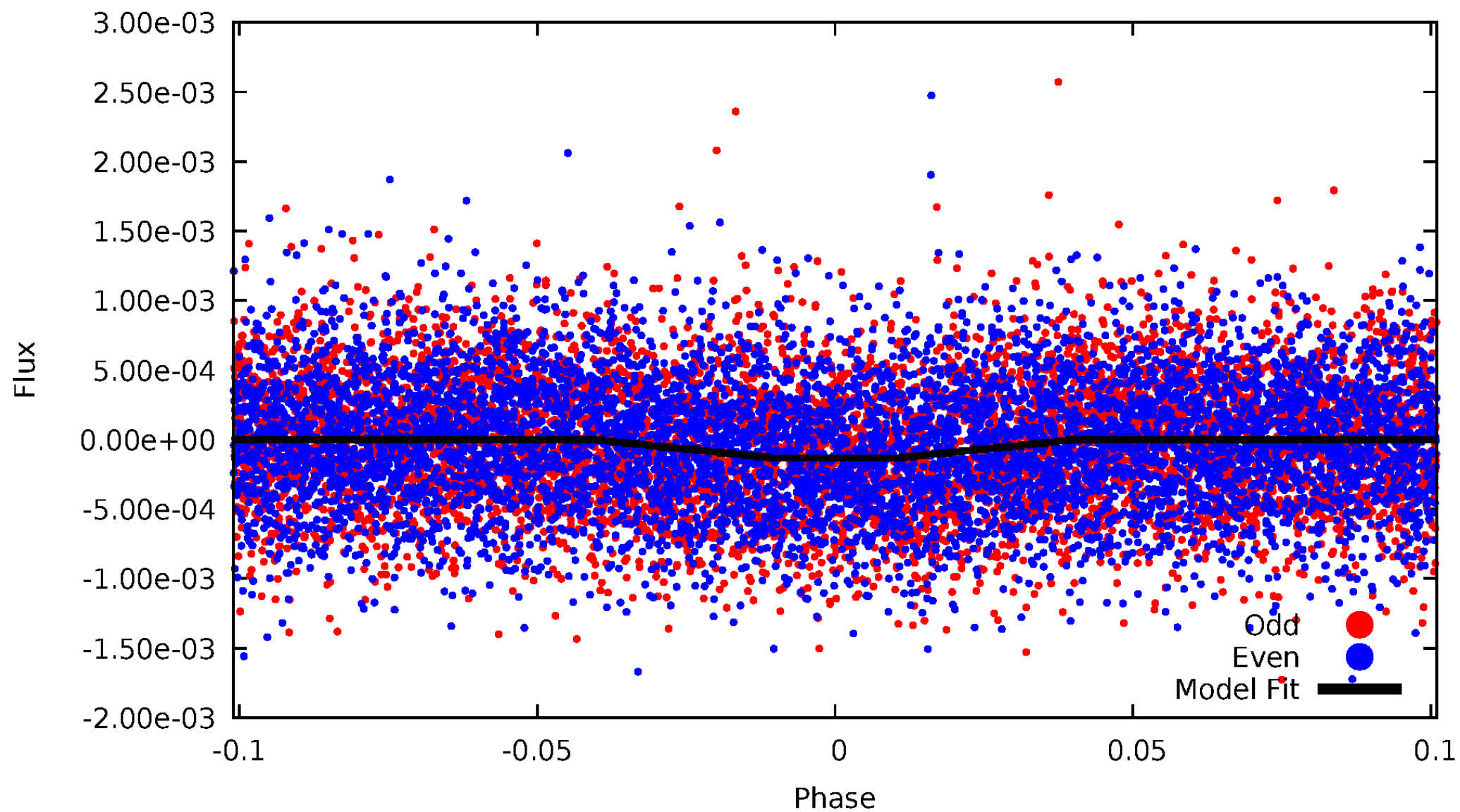
DV Odd/Even

TCE 003550372-01

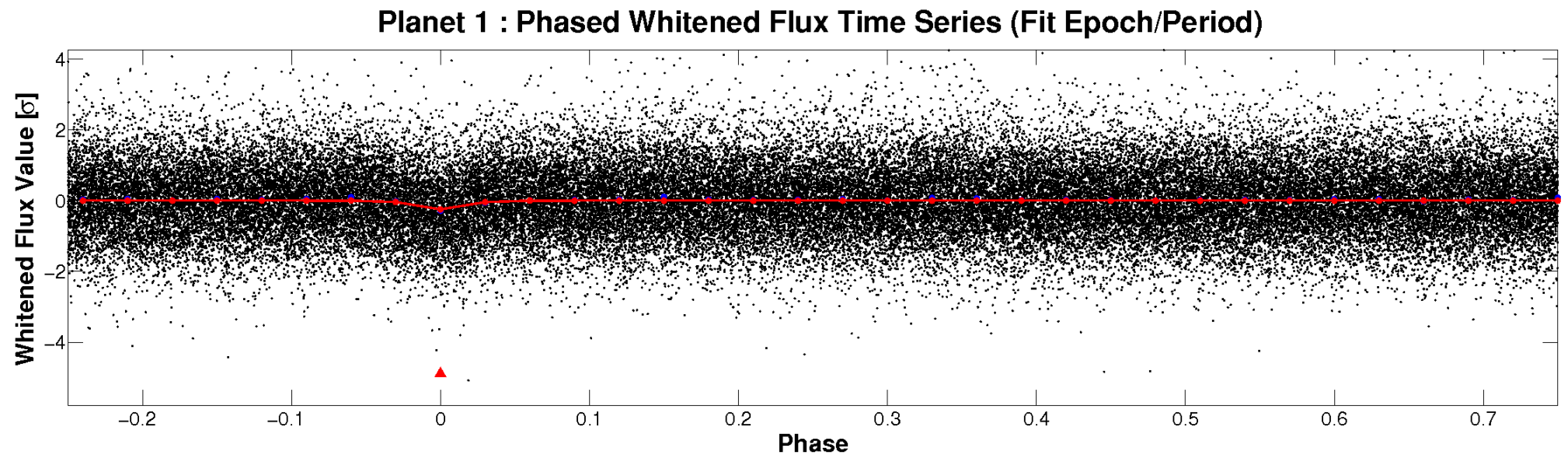
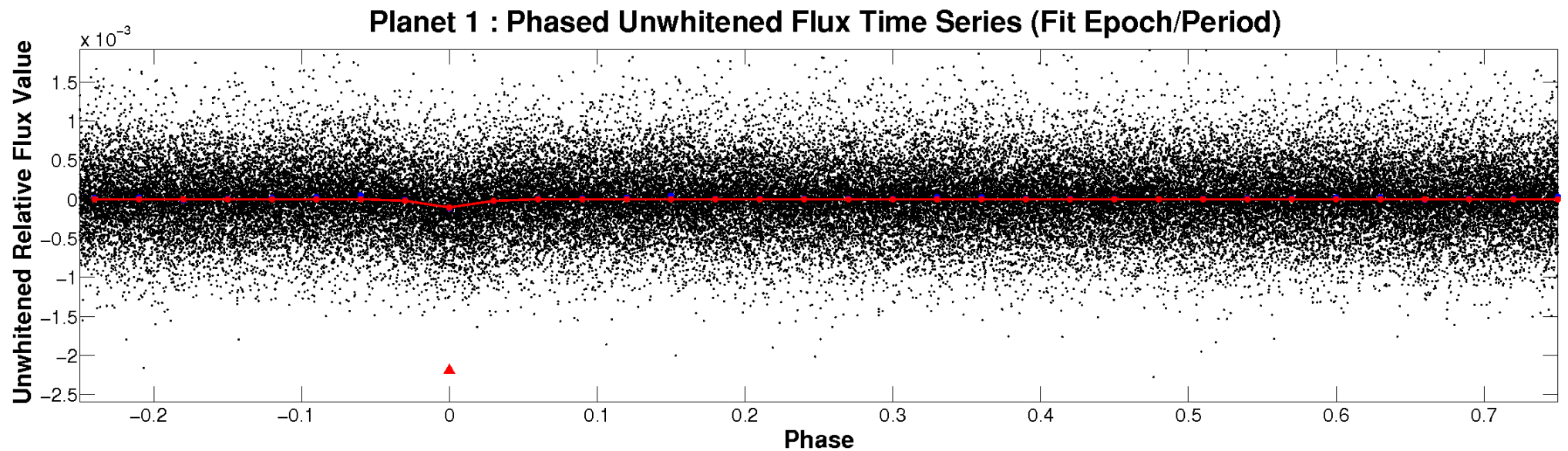


ALT Odd/Even

TCE 003550372-01

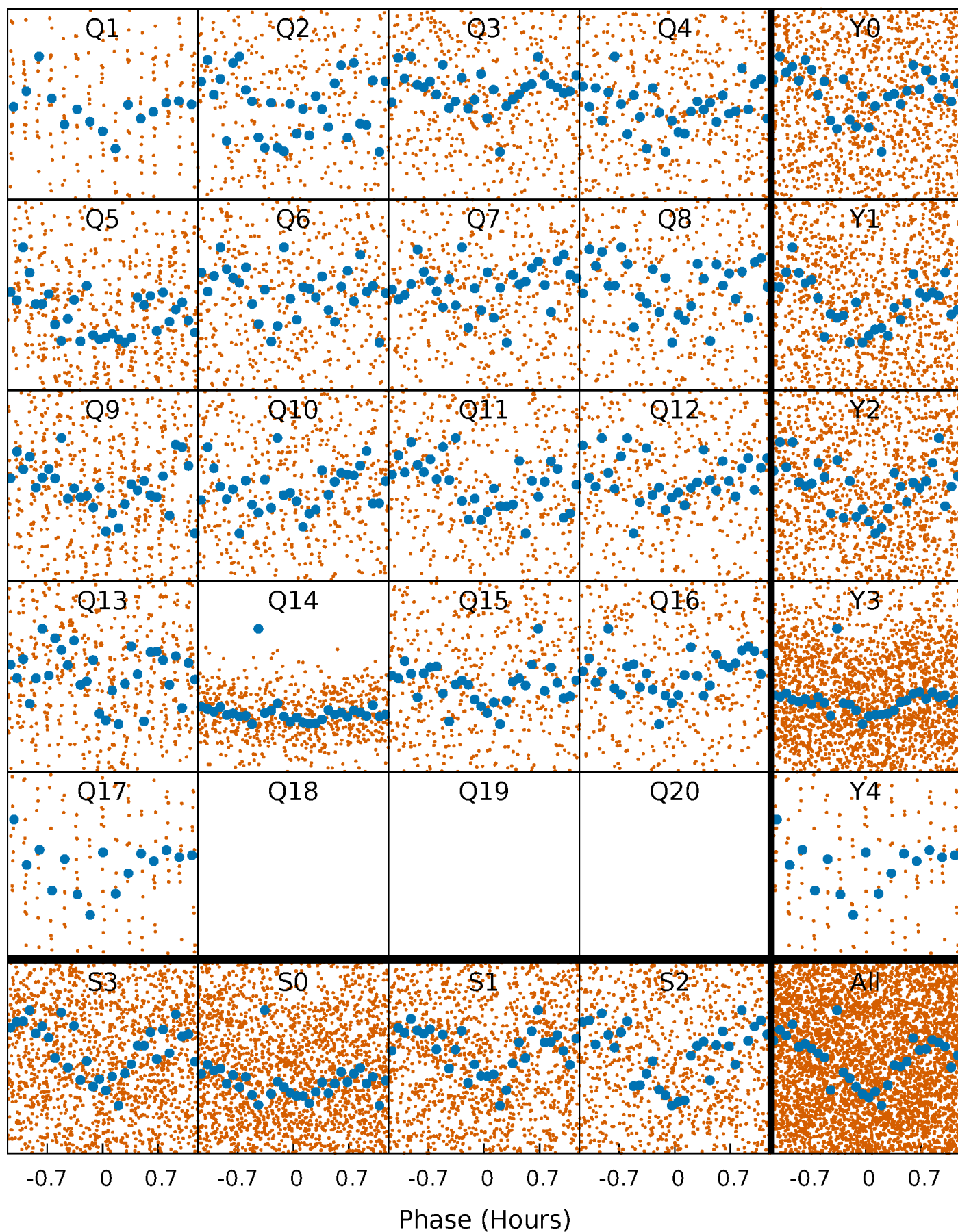


Non-Whitened Vs. Whitened Light Curve



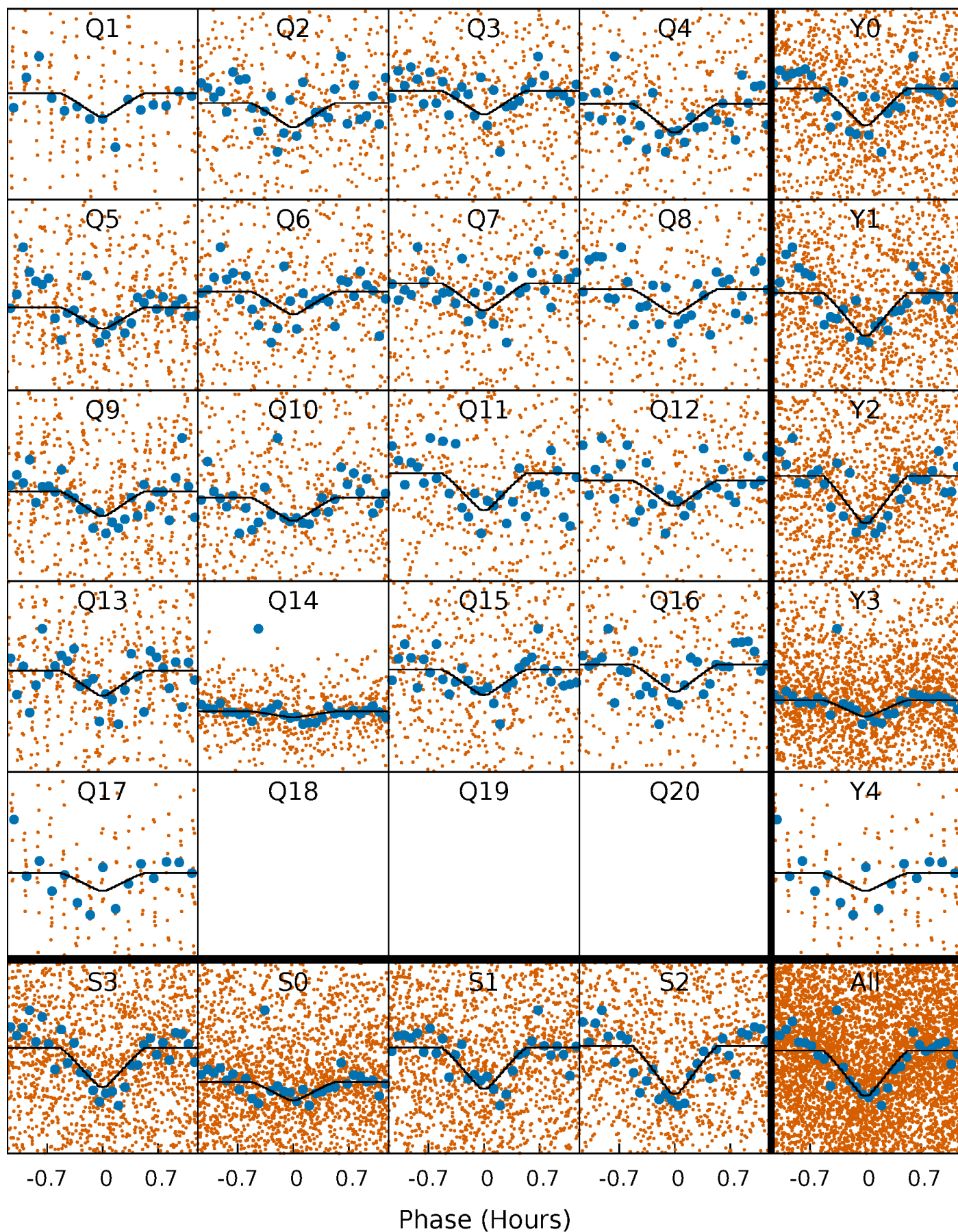
PDC Quarter-Phased Transit Curves

TCE 003550372-01 P= 0.681180 Days $T_0=131.634264$ (BKJD)



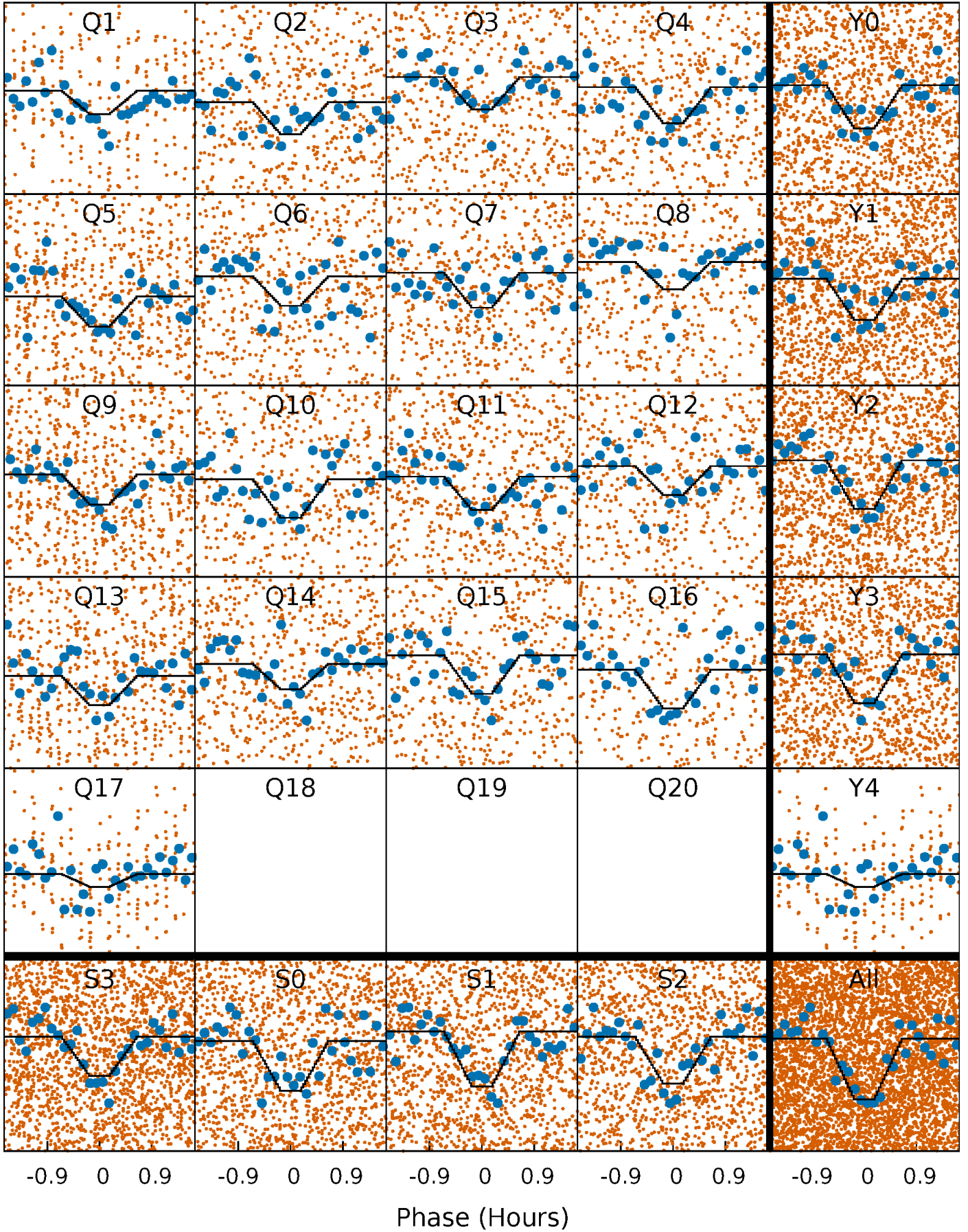
DV Quarter-Phased Transit Curves

TCE 003550372-01 P= 0.681180 Days $T_0=131.634264$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

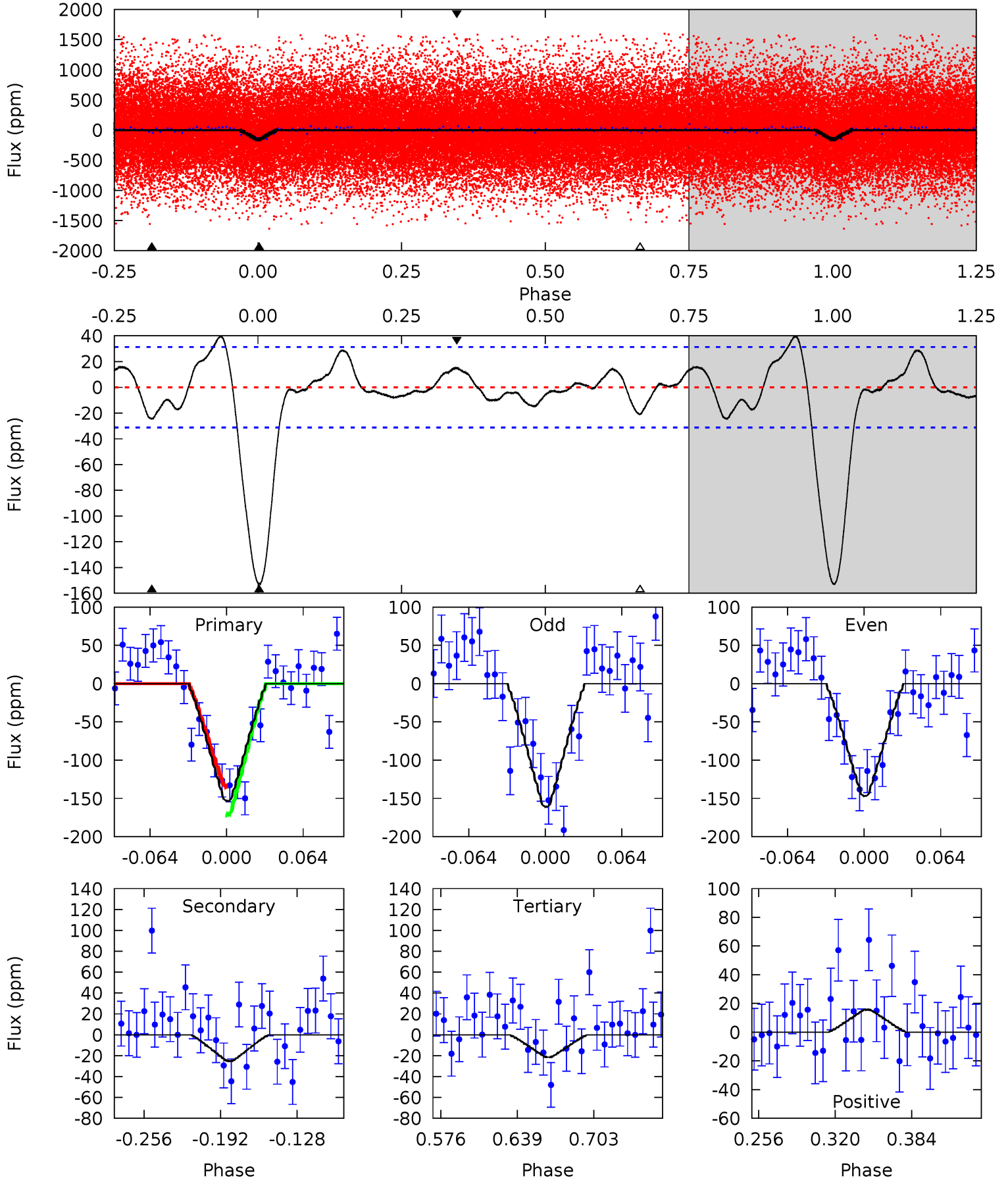
TCE 003550372-01 P= 0.681180 Days $T_0=131.634264$ (BKJD)



DV Model-Shift Uniqueness Test

003550372-01, P = 0.681180 Days, E = 130.953084 Days

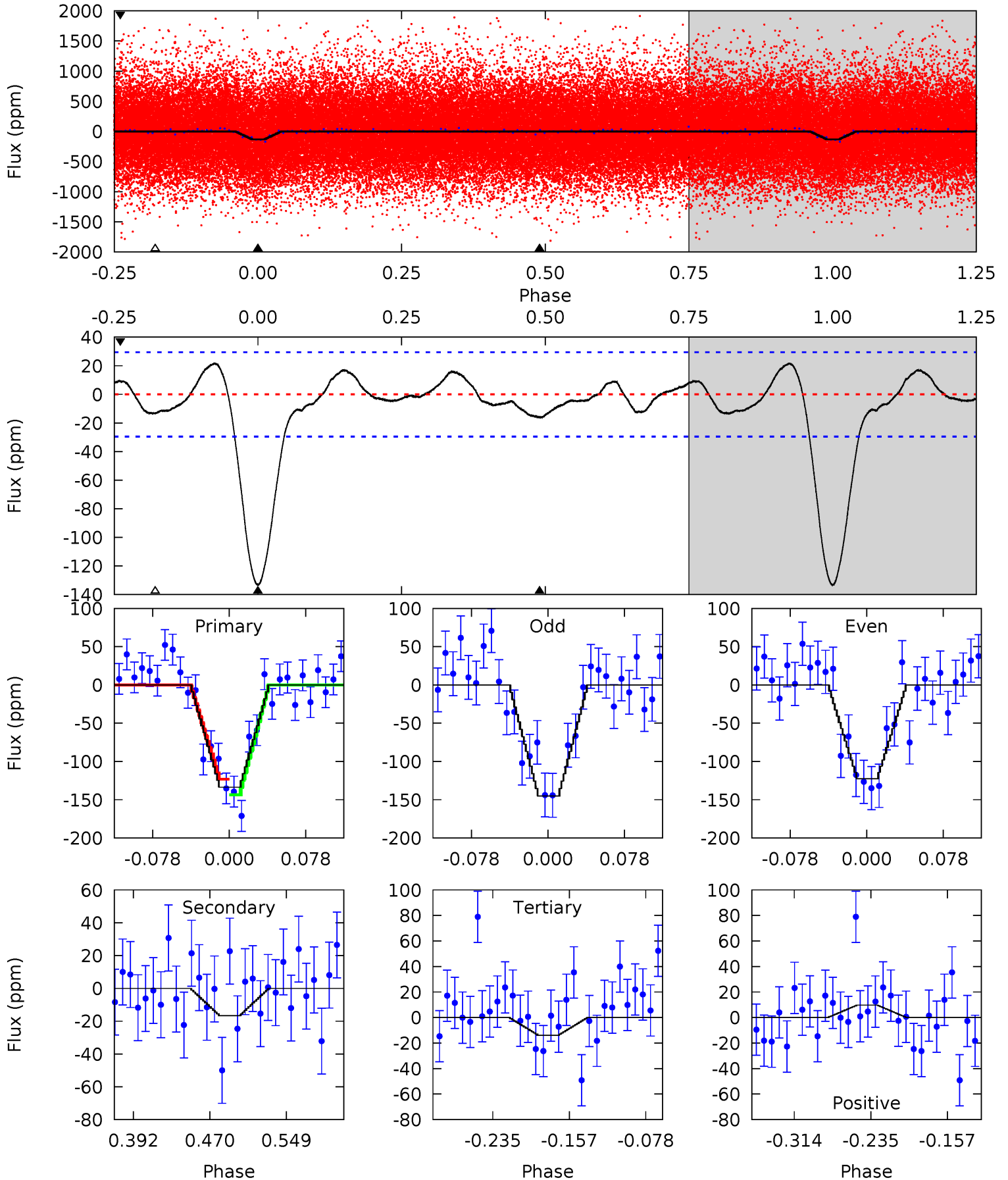
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.9	3.74	3.19	2.33	4.66	1.85	1.71	19.7	20.5	0.55	1.40	1.05	0.92	0.21	2.66



Alt Model-Shift Uniqueness Test

003550372-01, P = 0.681180 Days, E = 130.953084 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.9	2.62	2.18	1.53	4.62	1.76	1.31	18.8	19.4	0.44	1.08	1.77	0.90	0.14	1.61



Stellar Parameters For KIC 003550372

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4939^{+81}_{-44}	$3.635^{+0.096}_{-0.144}$	$-0.180^{+0.150}_{-0.100}$	$2.377^{+0.627}_{-0.209}$	$0.889^{+0.154}_{-0.016}$	$0.093^{+0.034}_{-0.041}$
	+2%/-1%	+3%/-4%	+83%/-56%	+26%/-9%	+17%/-2%	+36%/-44%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 003550372-01 / KOI 4357.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-25 ± 7	$3.18^{+1.87}_{-1.59}$	3894^{+215}_{-130}	2132^{+2244}_{-5478}	$0.306^{+0.890}_{-0.195}$
Alt.	-17 ± 6	$3.17^{+1.73}_{-1.72}$	3894^{+226}_{-139}	-3043^{+7023}_{-422}	$0.195^{+0.681}_{-0.127}$

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

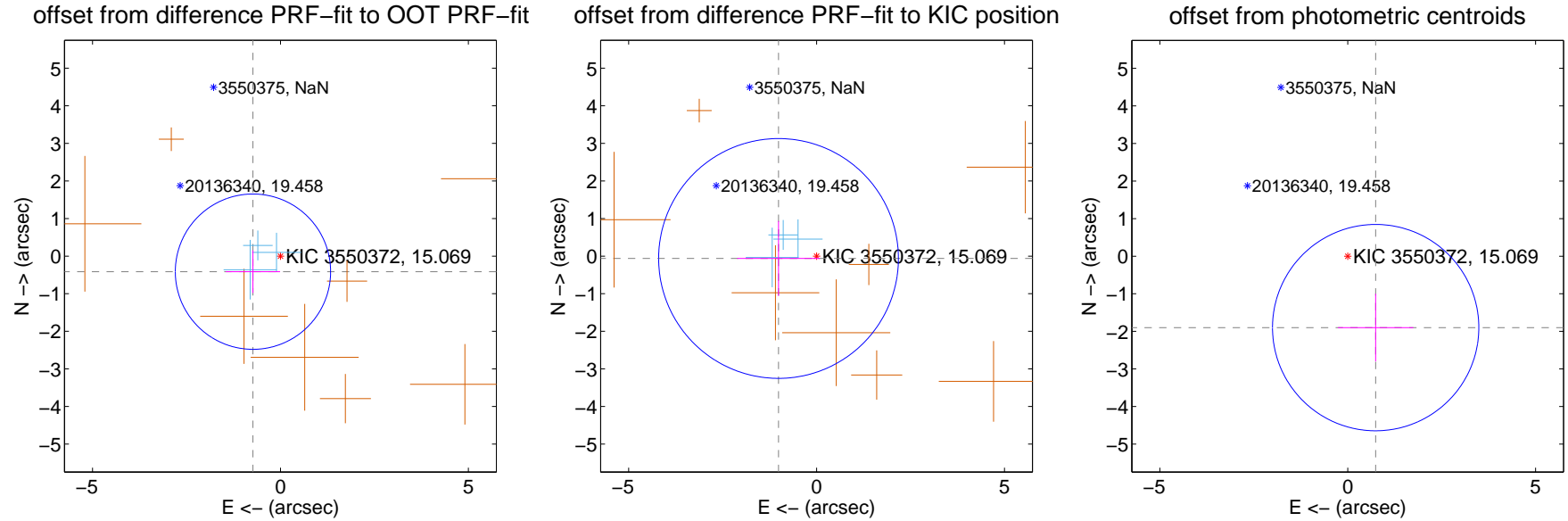
DV Centroid Data

Supplemental centroid analysis for 003550372-01. Kepler magnitude: 15.07. Transit SNR 11.46

There are 3 quarters with good PRF difference image offsets

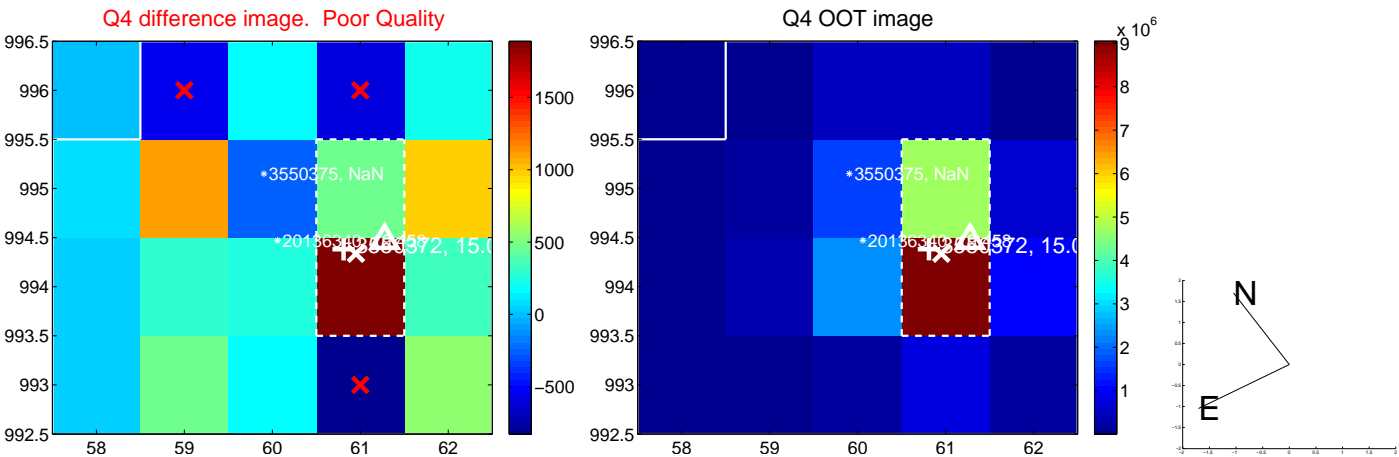
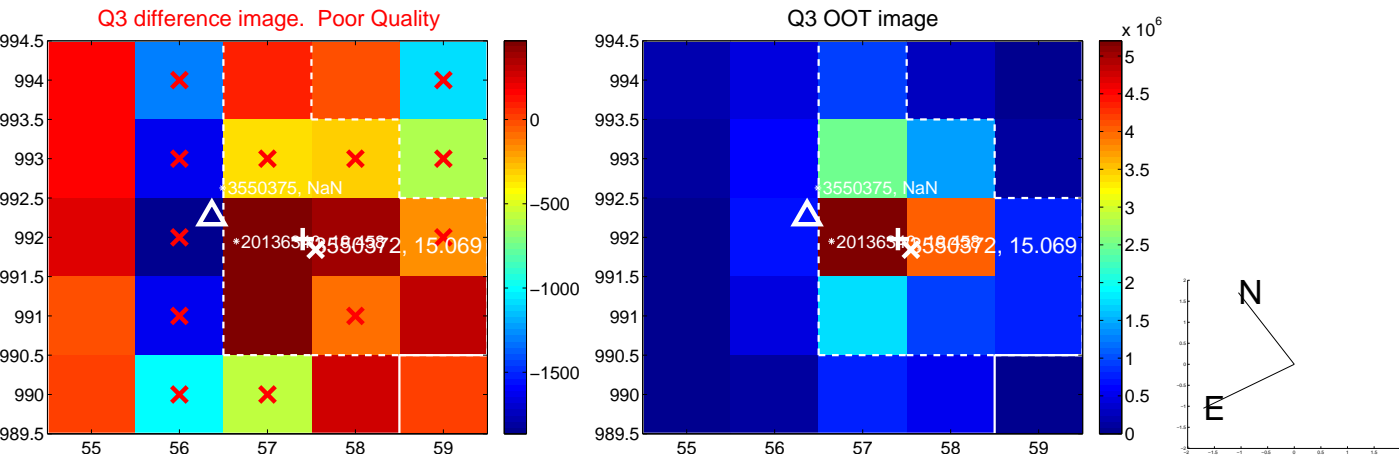
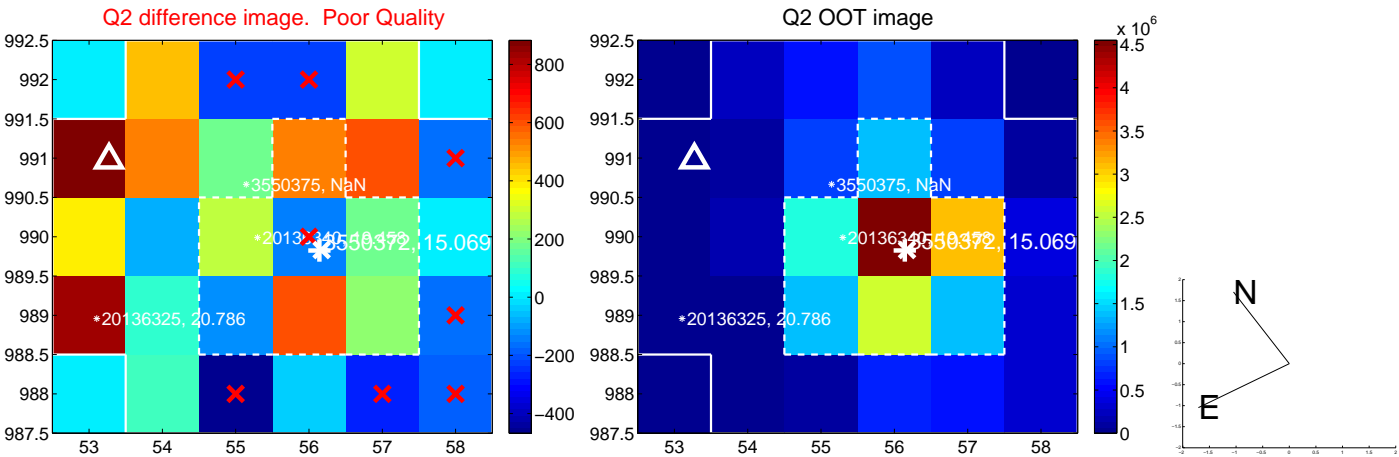
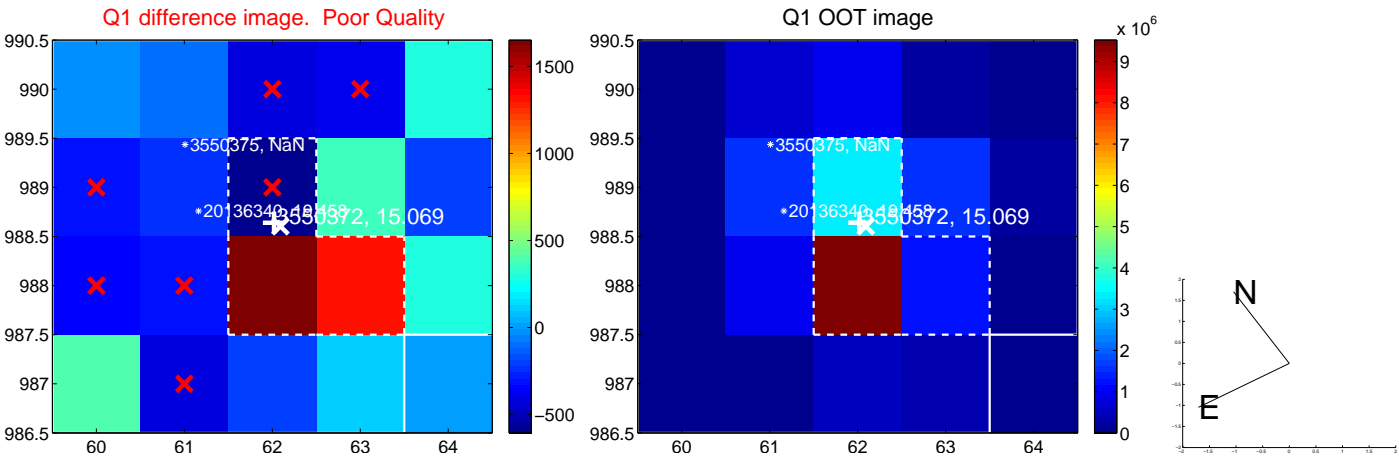
The direct PRF centroid is offset from the target star catalog position by about 0.41 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.840 ± 0.689	1.22	0.732 ± 0.723	-0.413 ± 0.566
PRF-fit source offset from KIC position	1.014 ± 1.063	0.95	1.013 ± 1.102	-0.062 ± 0.996
photometric centroid source offset	2.04 ± 0.92	2.23	-0.74 ± 1.00	-1.90 ± 0.90

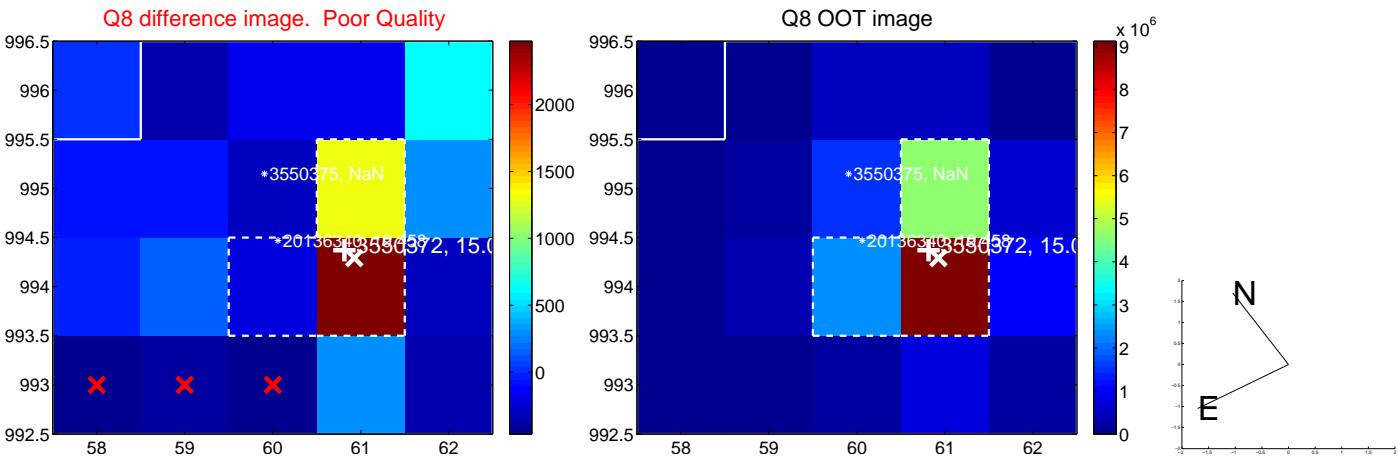
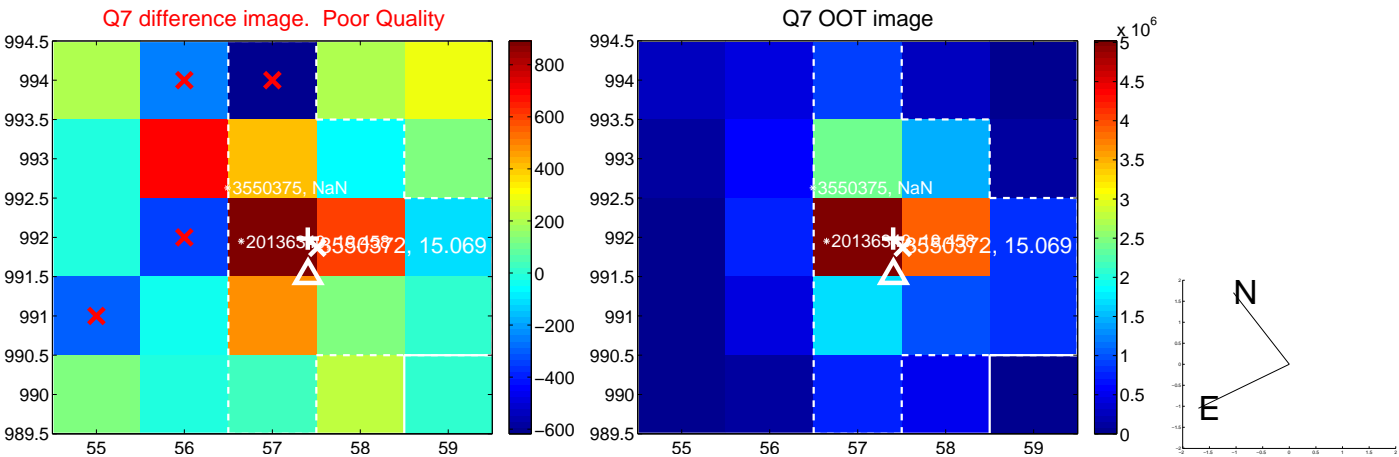
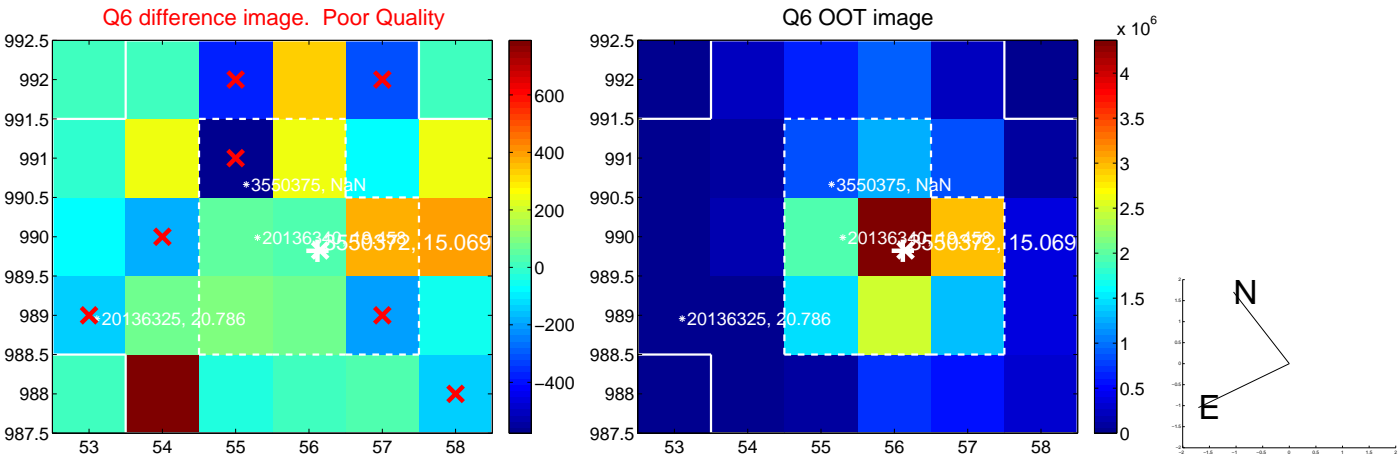
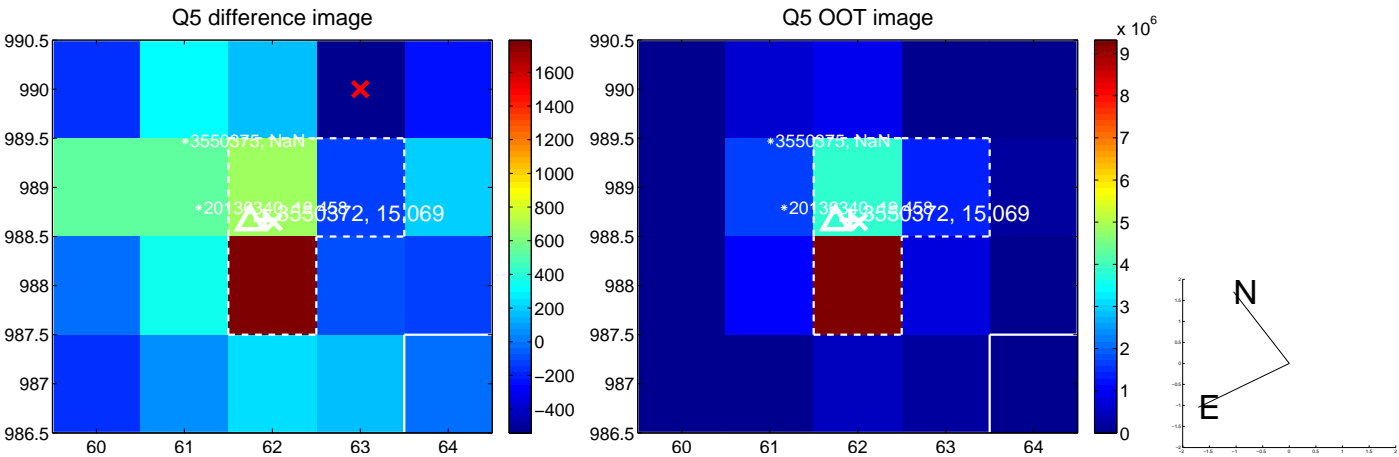


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

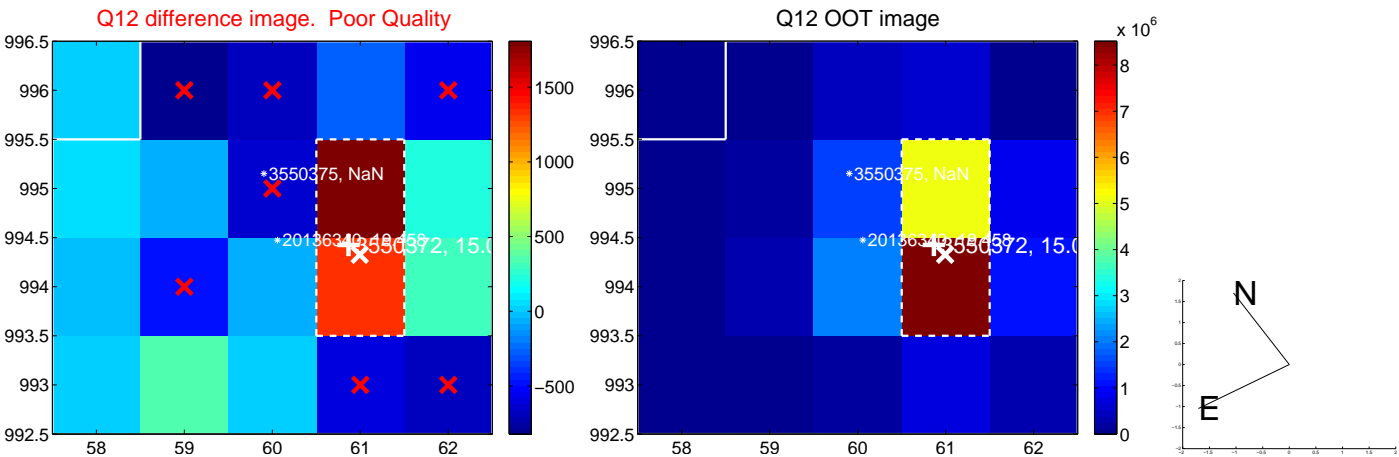
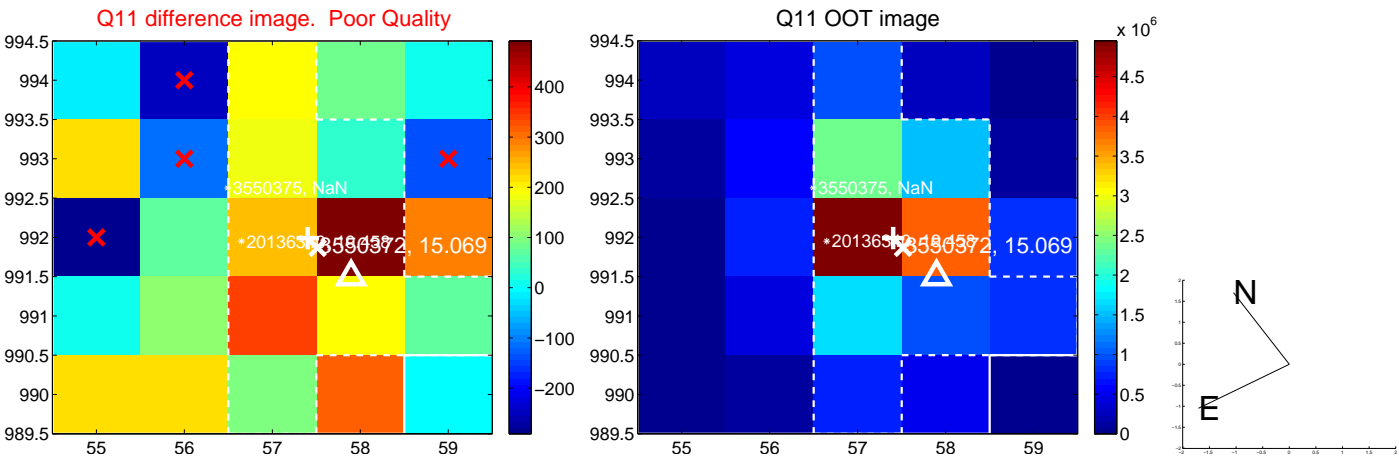
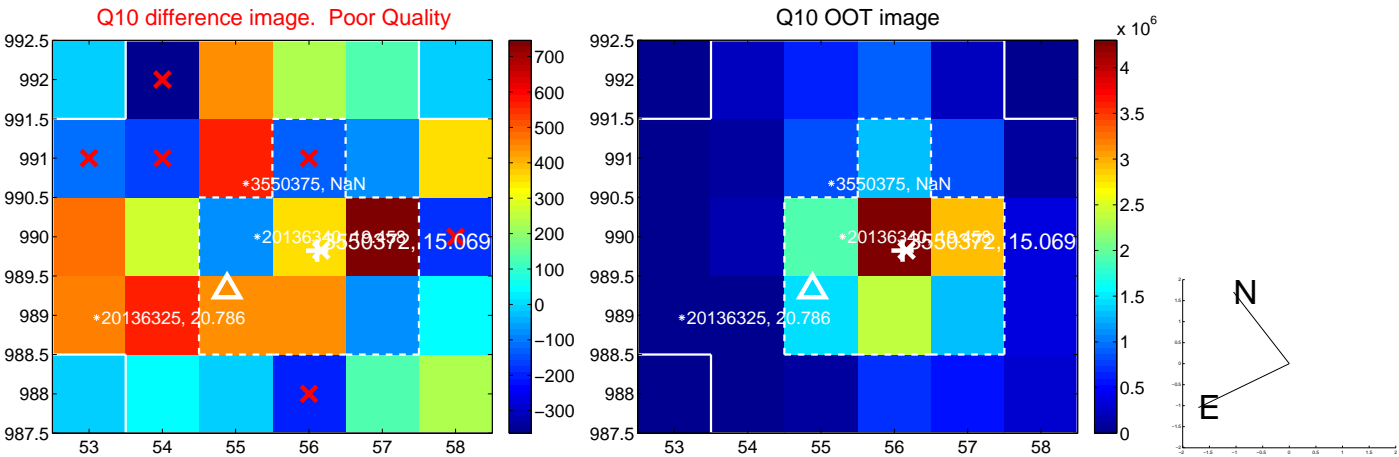
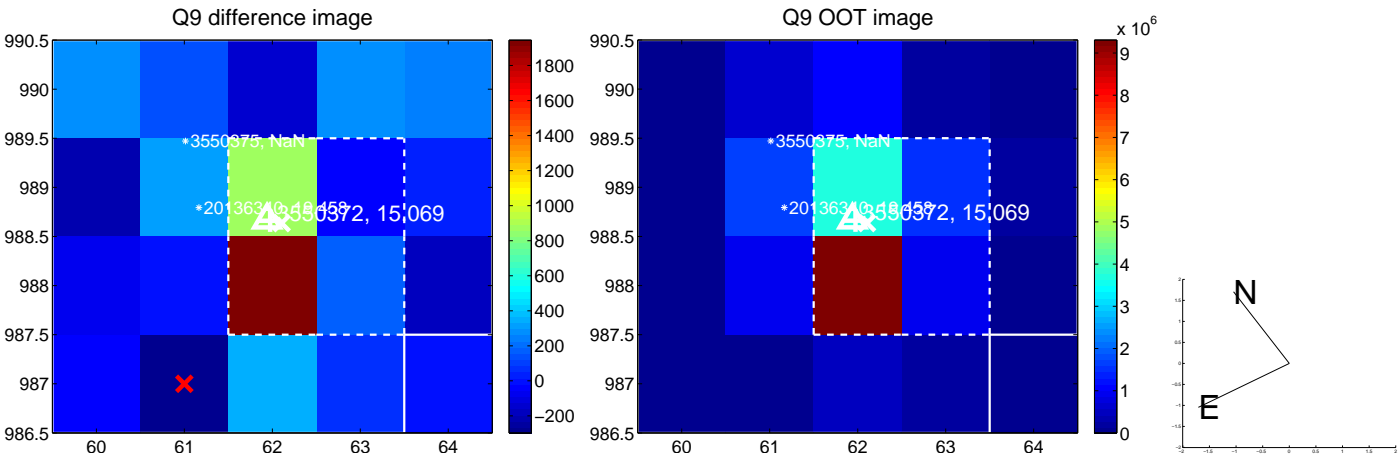
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



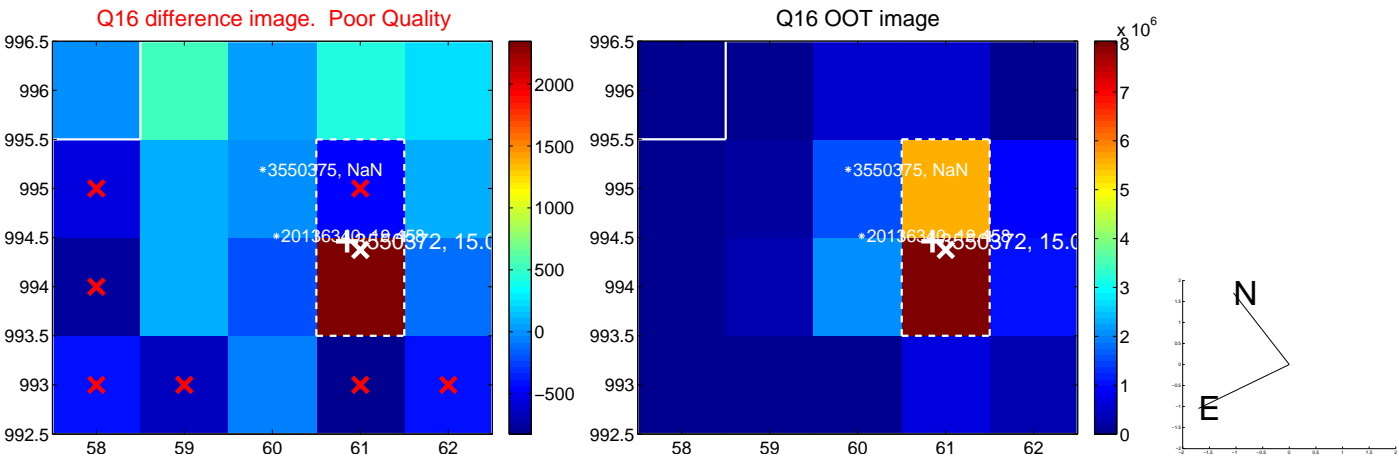
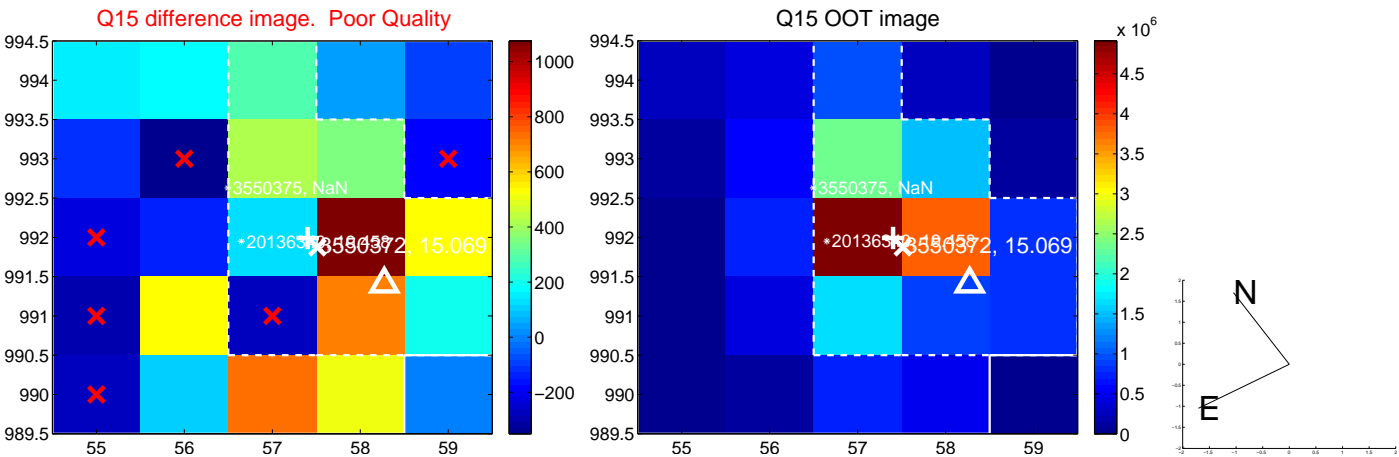
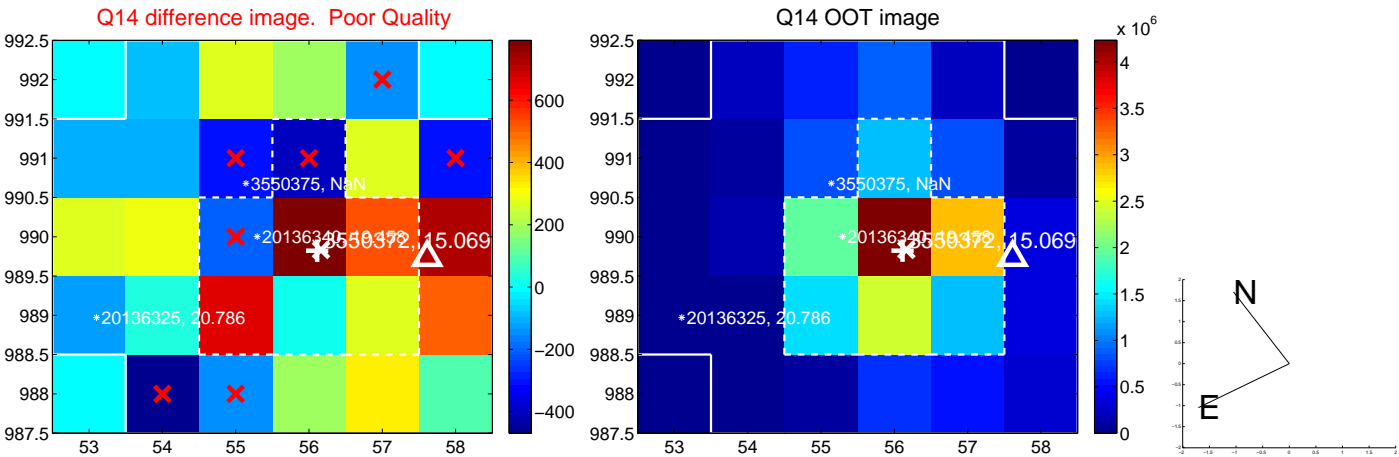
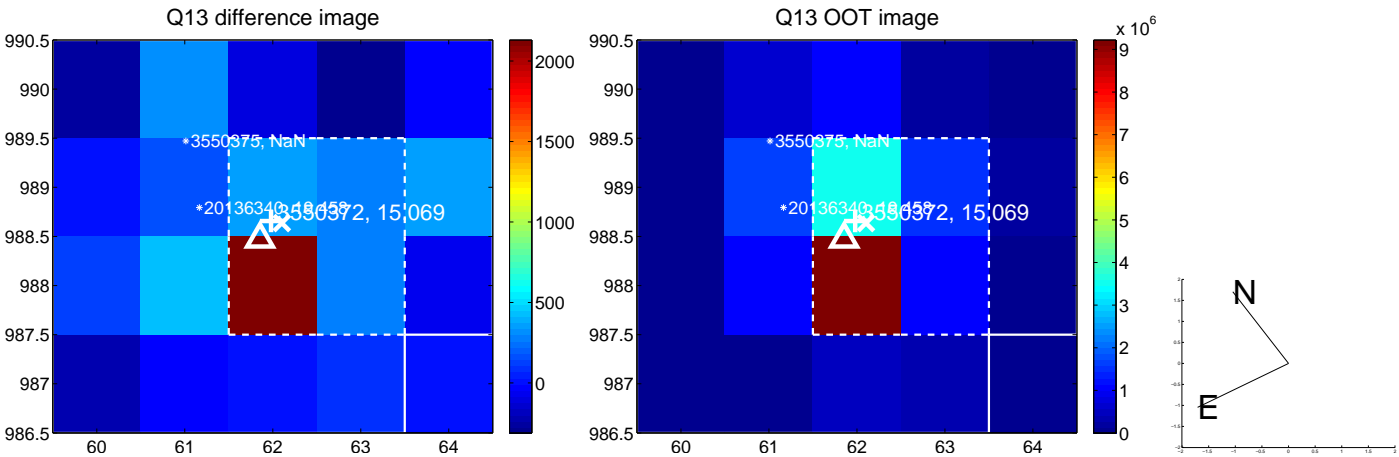
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



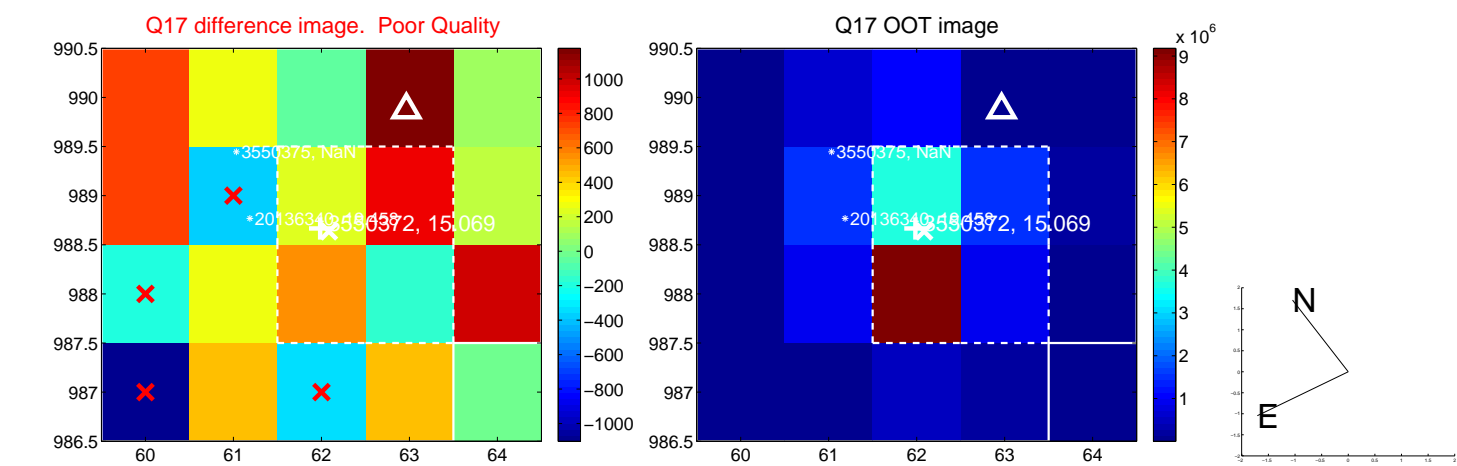
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



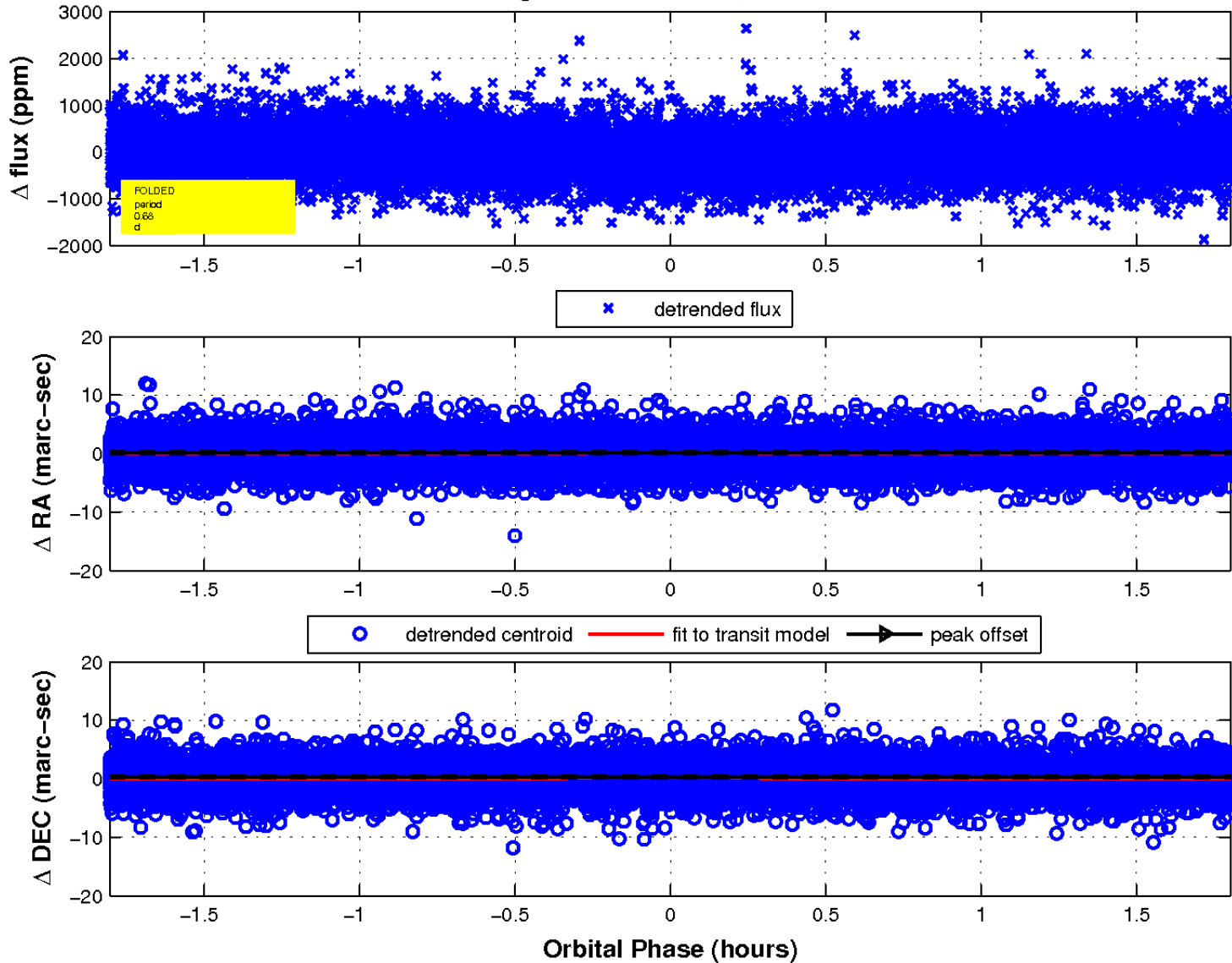
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

