

KIC 005383615

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})
005383615-01	OBS	No	0.745912	131.841789	29.6	3.297	10.2	7.5	0.96	5724	0.62	4054.97

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005383615-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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

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

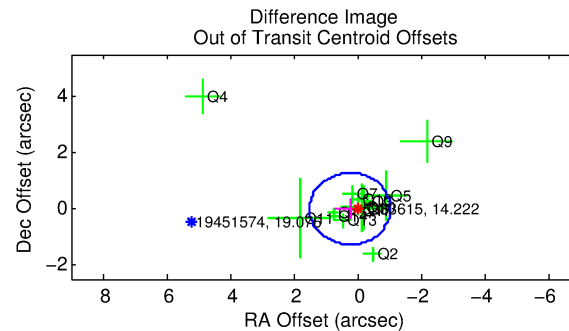
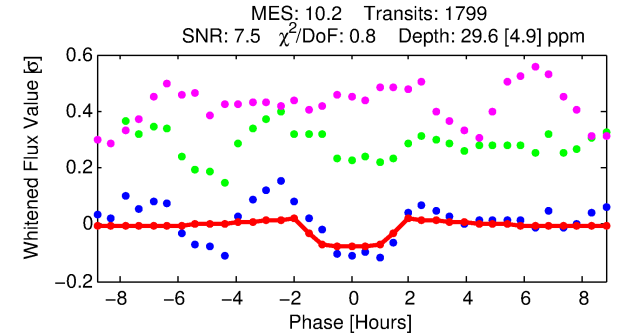
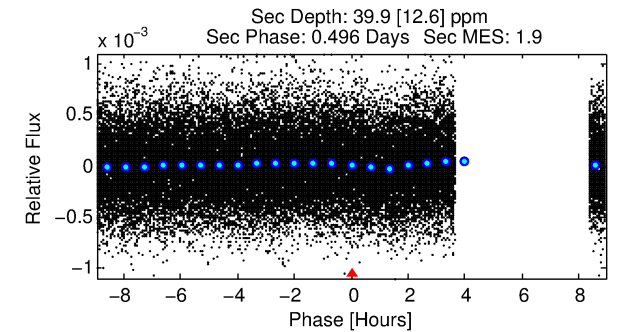
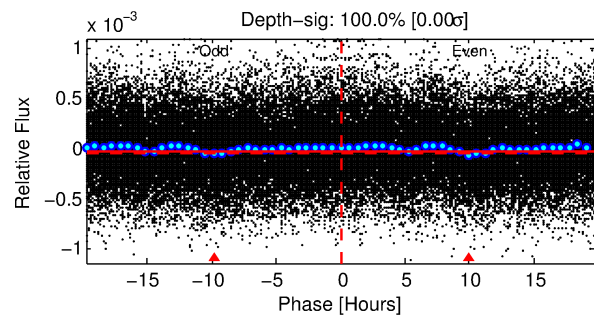
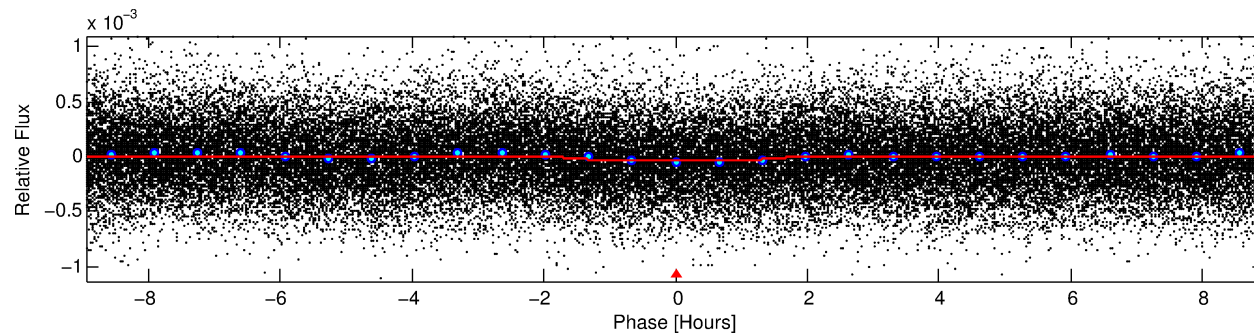
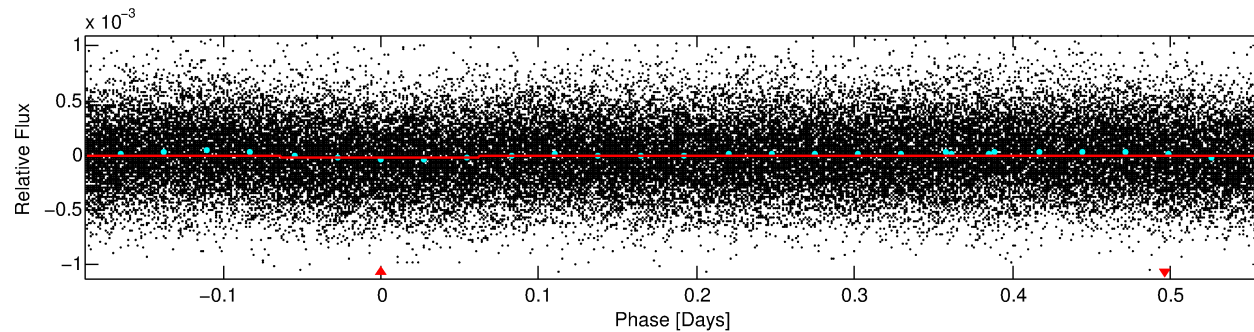
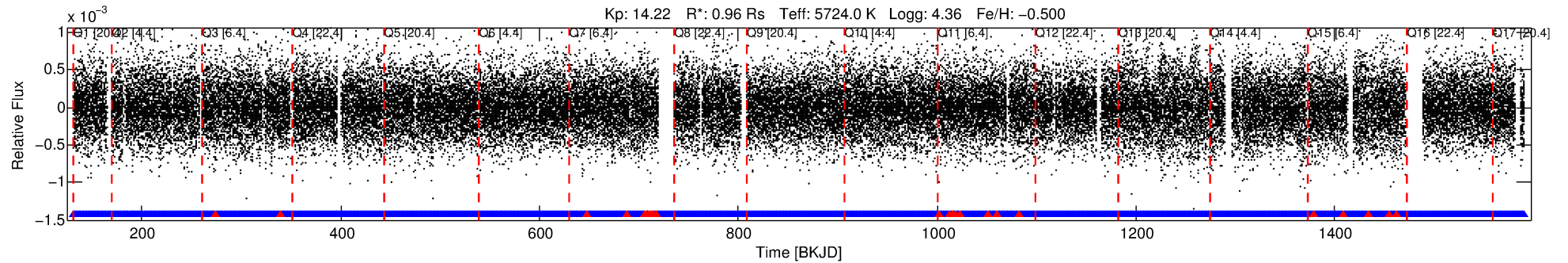
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005383615-01

No Significant Match Found

DV One-Page Summary

KIC: 5383615 Candidate: 1 of 1 Period: 0.746 d



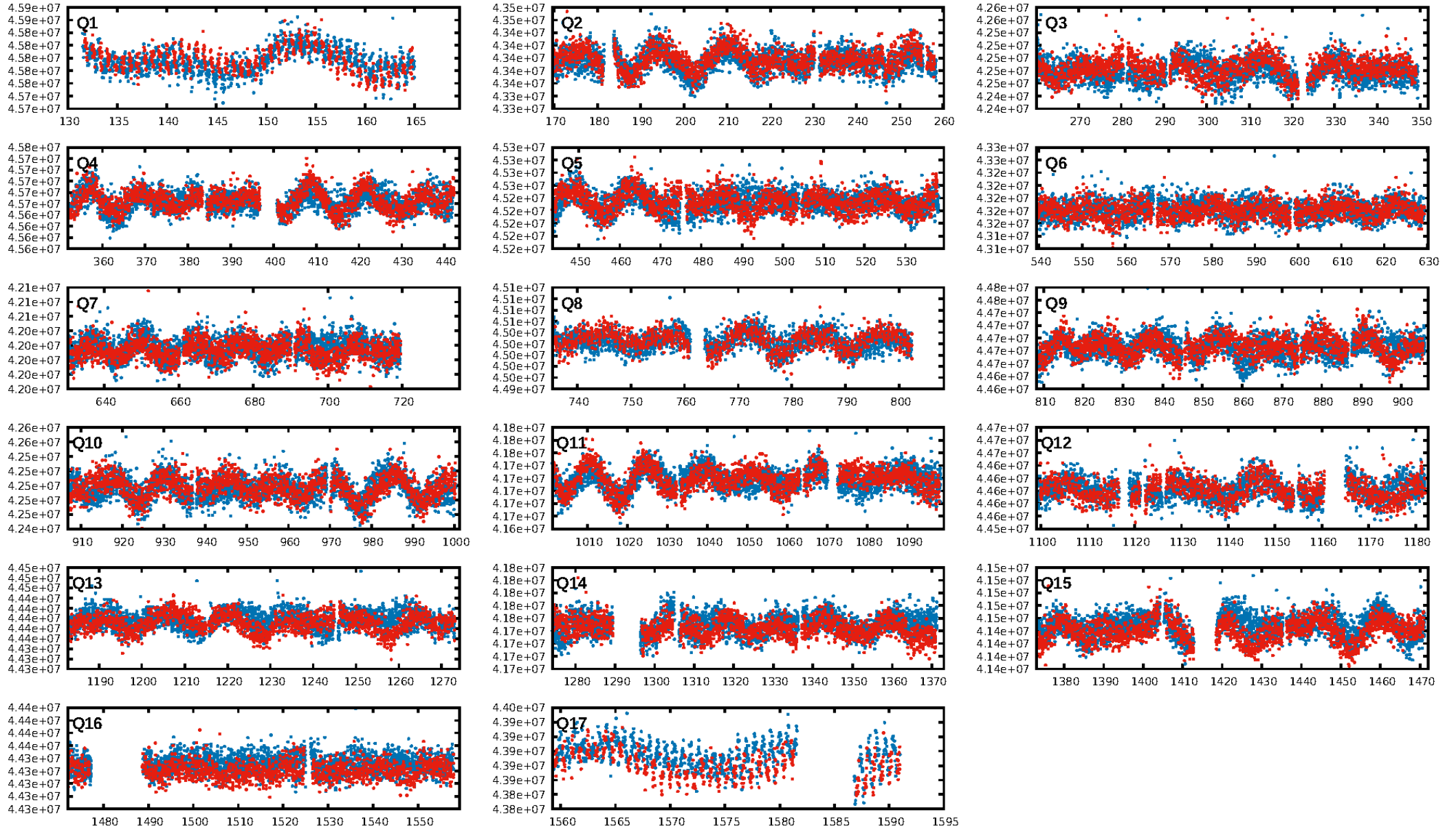
DV Fit Results:

Period = 0.74591 [0.00001] d
Epoch = 131.8418 [0.0040] BKJD
Rp/R* = 0.0059 [0.0040]
a/R* = 1.22 [1.39]
b = 0.90 [0.75]
Seff = 4054.97 [1851.19]
Teff = 2035 [232] K
Rp = 0.62 [0.47] Re
a = 0.0148 [0.0043] AU
Ag = 12.62 [18.54] [0.63σ]
Teffp = 5930 [2085] K [1.86σ]

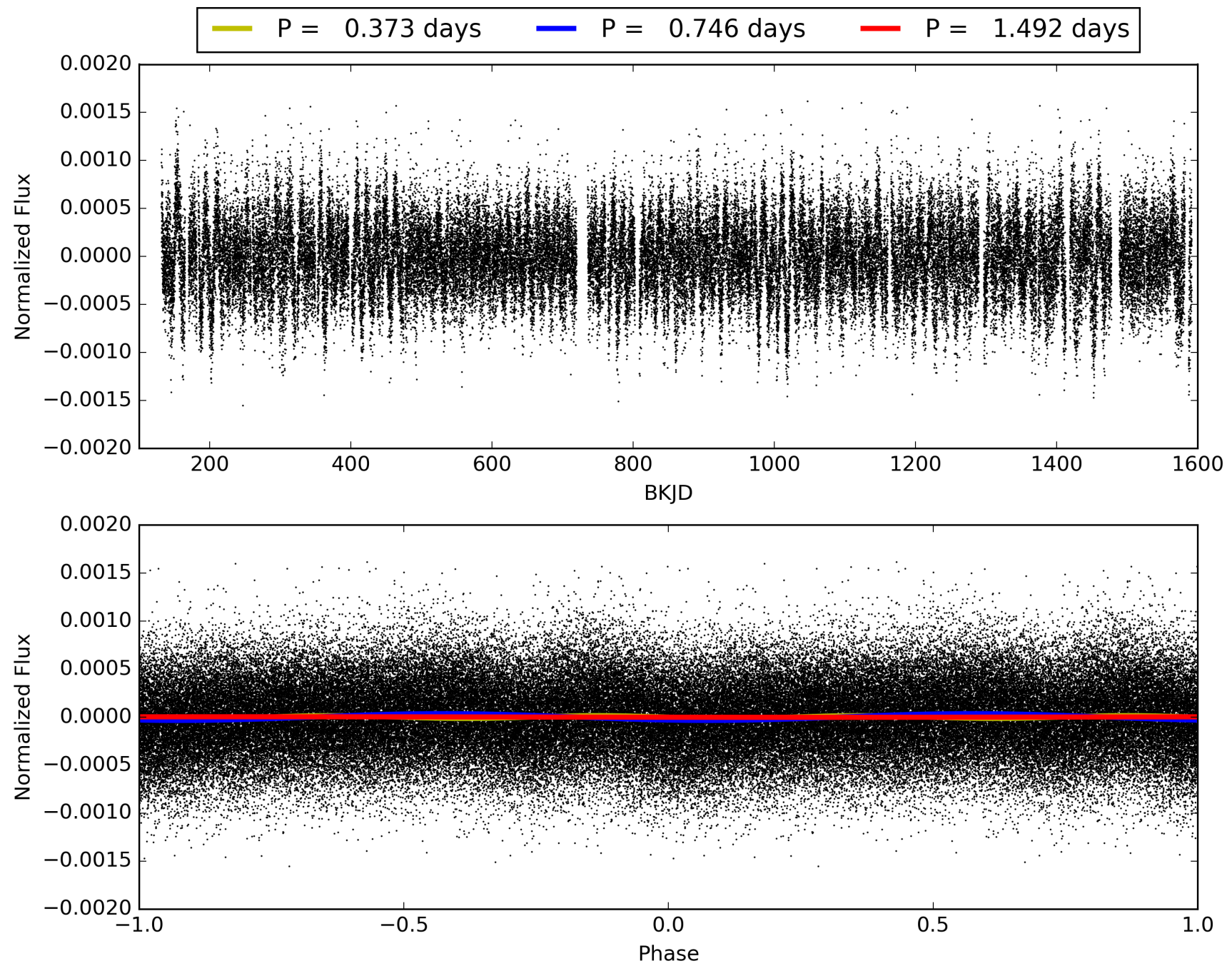
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.89e-22
RollingBand-fgt: 0.99 [1694/1718]
GhostDiagnostic-chr: 0.797
Centroid-sig: 0.0%
Centroid-so: 2.539 arcsec [1.90σ]
OotOffset-rm: 0.231 arcsec [0.54σ]
KicOffset-rm: 0.360 arcsec [0.97σ]
OotOffset-st: 4/4/2/4 [14]
KicOffset-st: 4/4/2/4 [14]
DiffImageQuality-fgm: 0.64 [9/14]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 005383615-01, PDC Light Curves

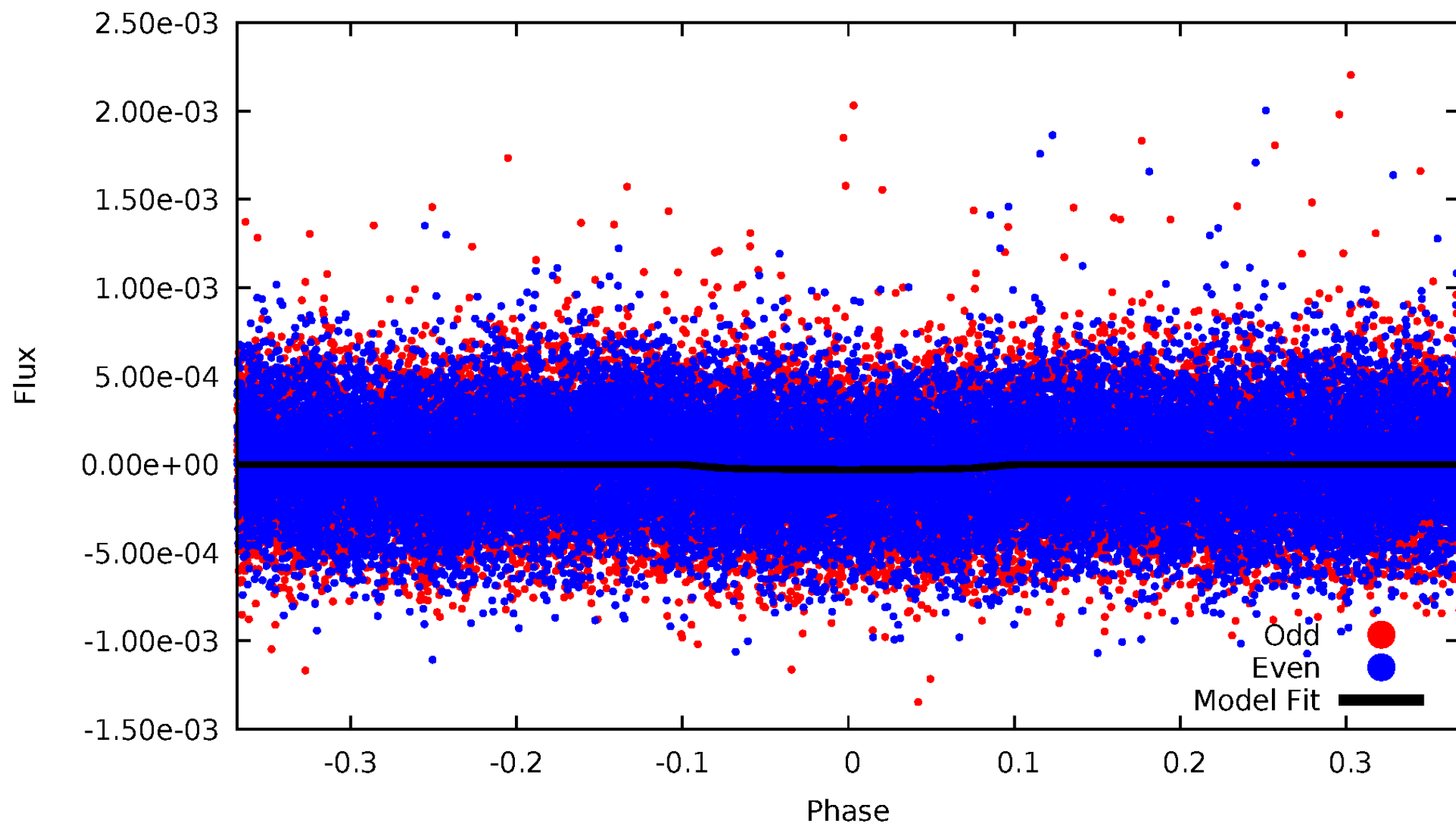


TCE 005383615-01



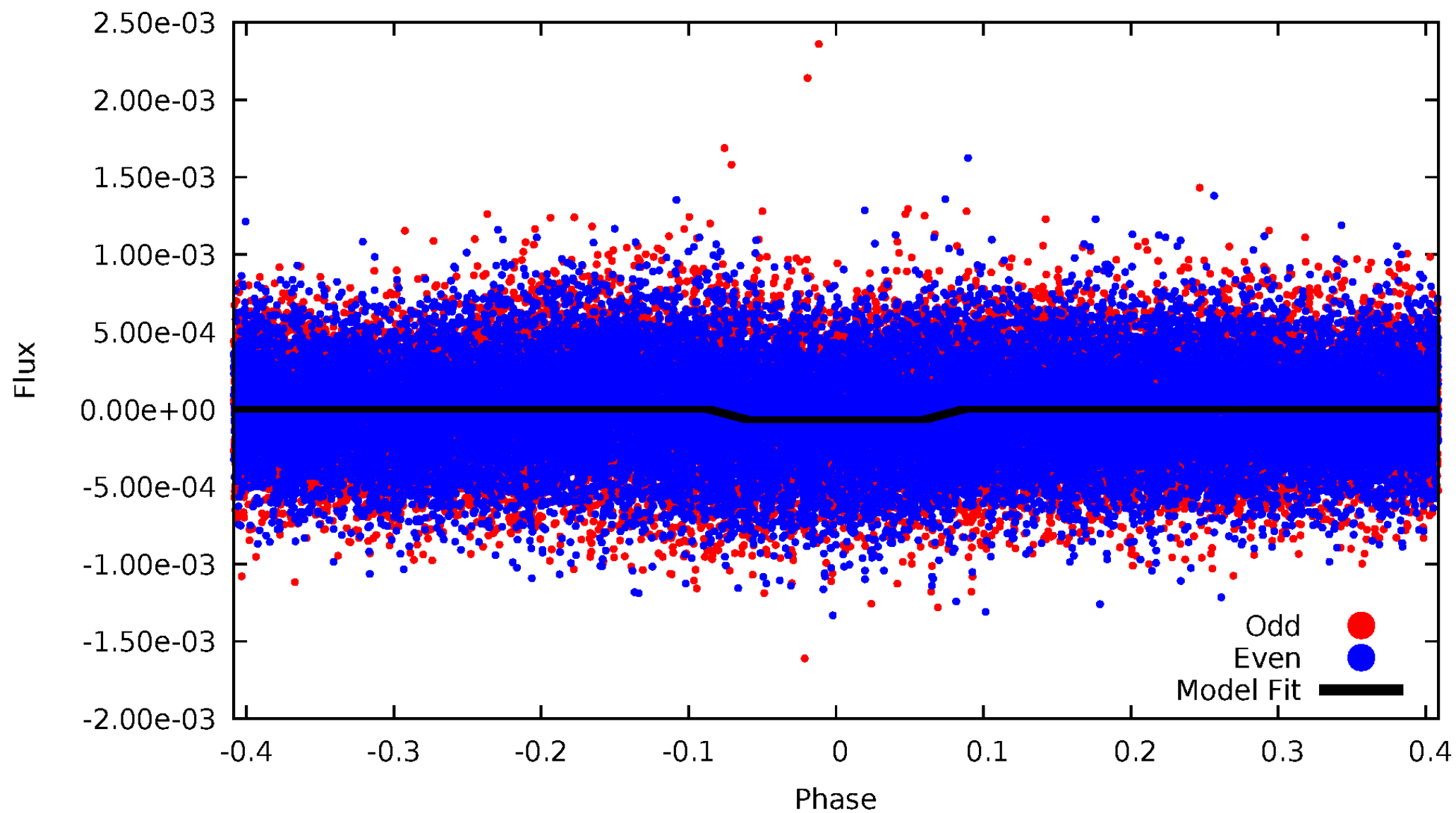
DV Odd/Even

TCE 005383615-01



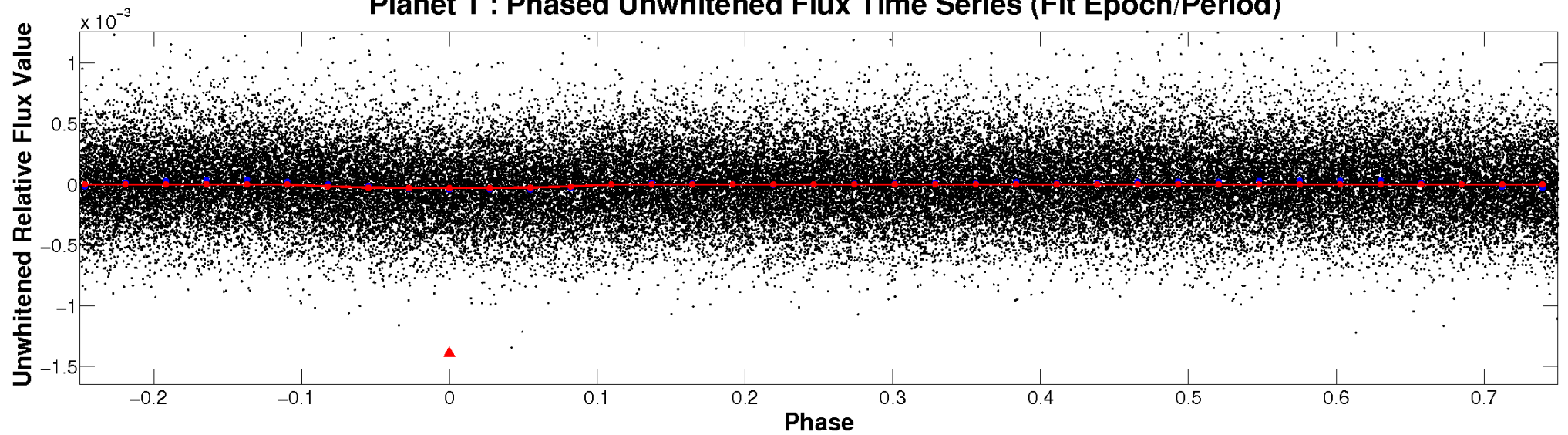
ALT Odd/Even

TCE 005383615-01

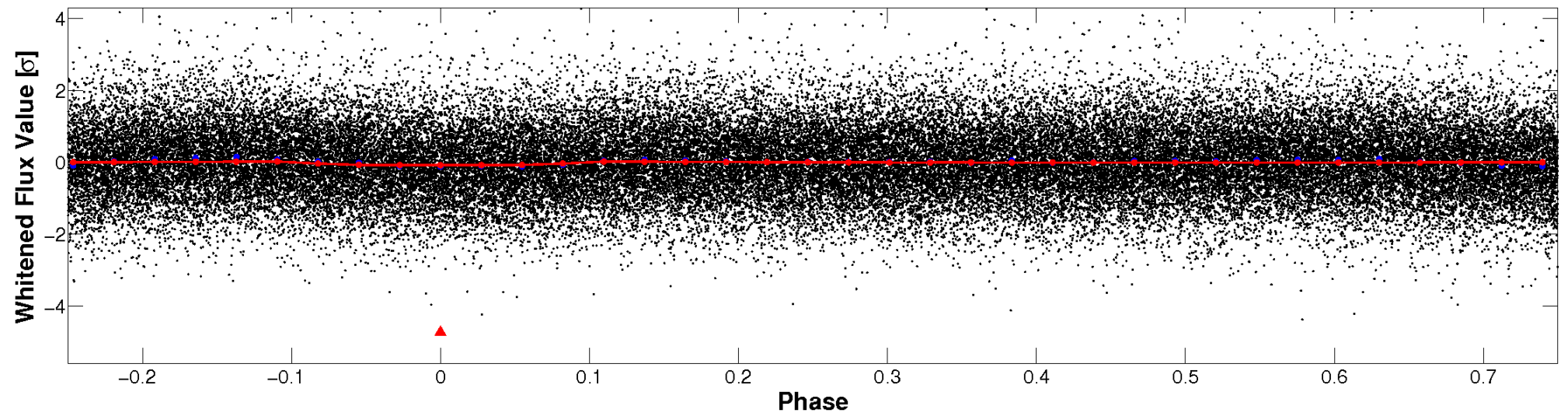


Non-Whitened Vs. Whitened Light Curve

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

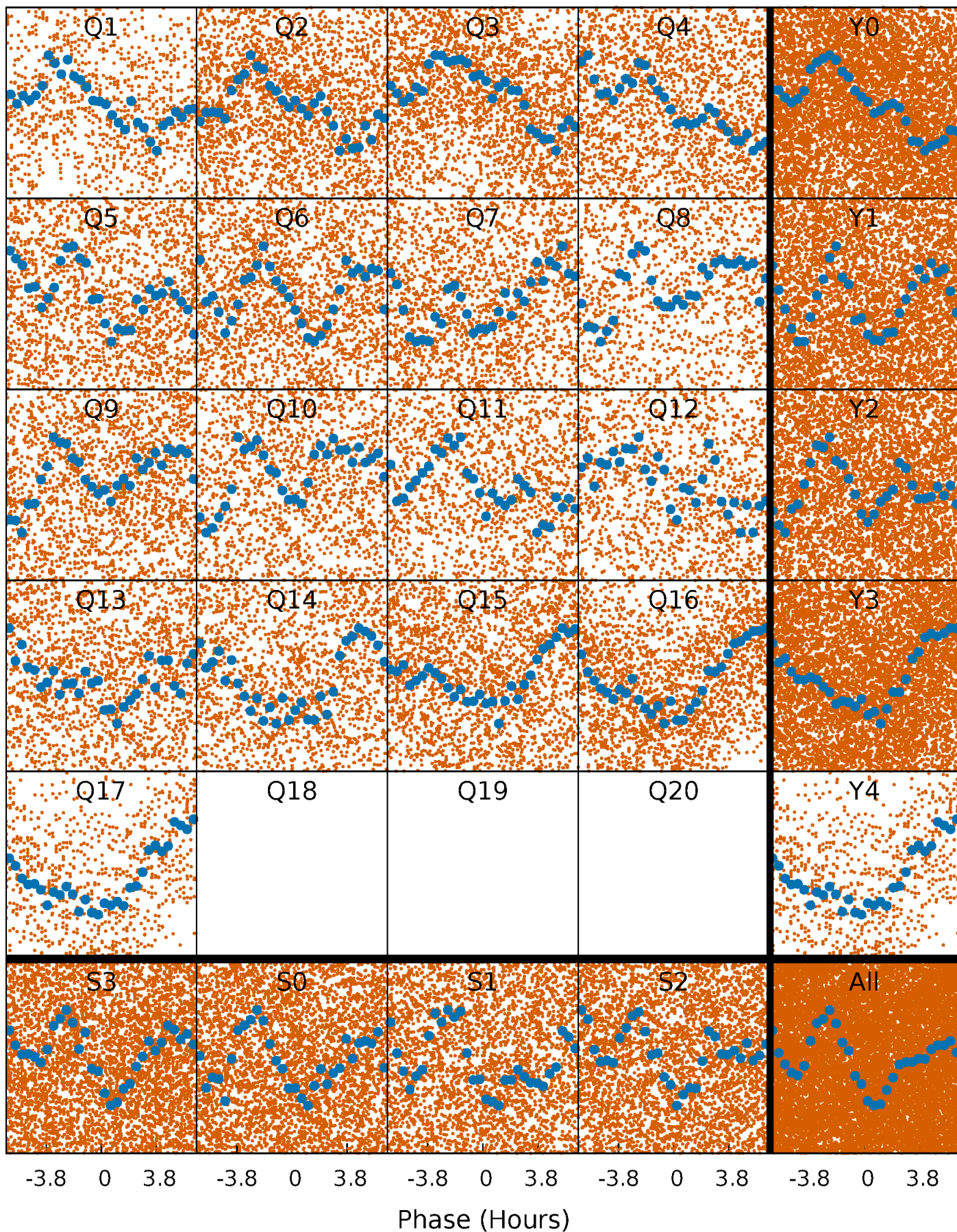


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



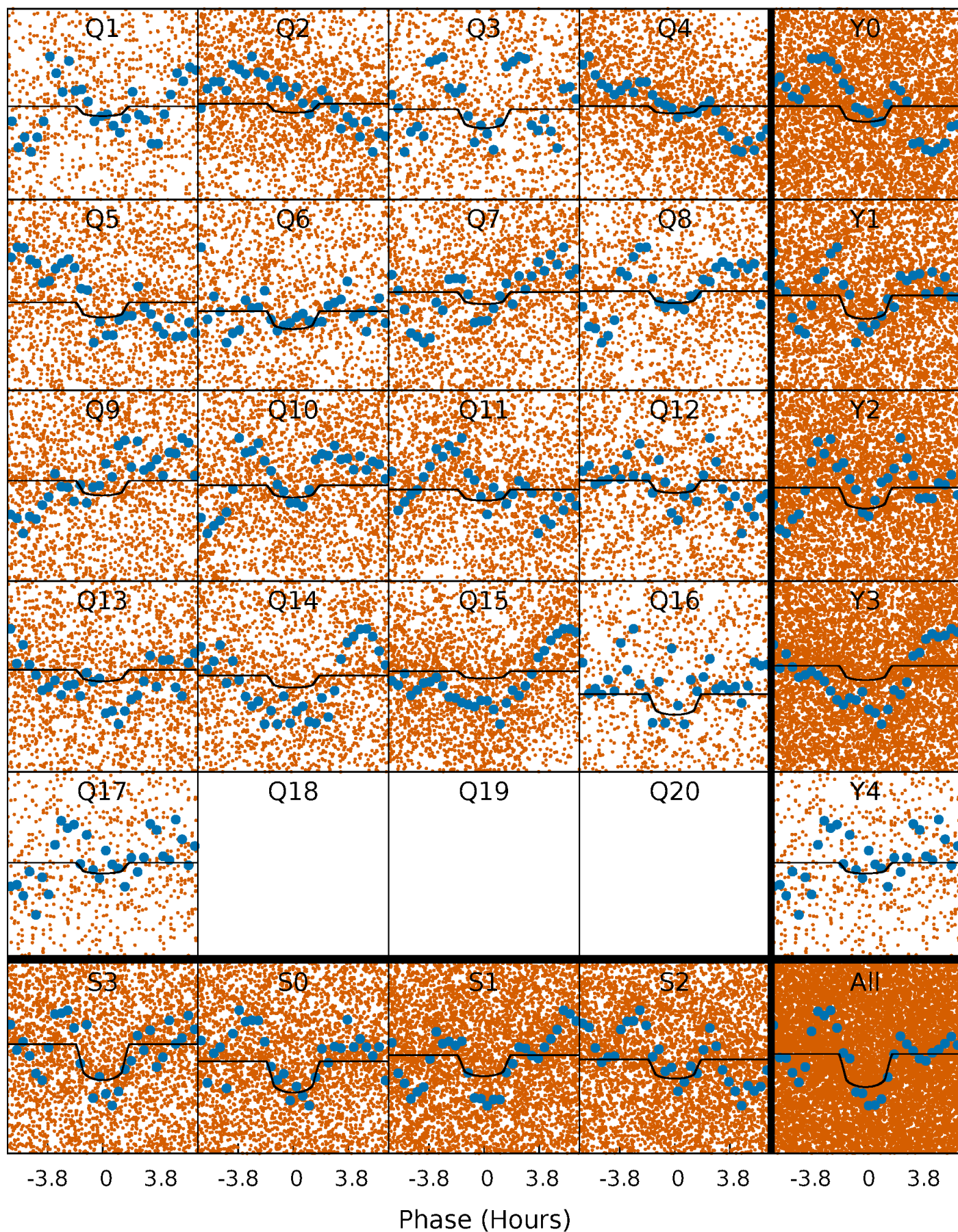
PDC Quarter-Phased Transit Curves

TCE 005383615-01 P= 0.745912 Days $T_0=131.841789$ (BKJD)



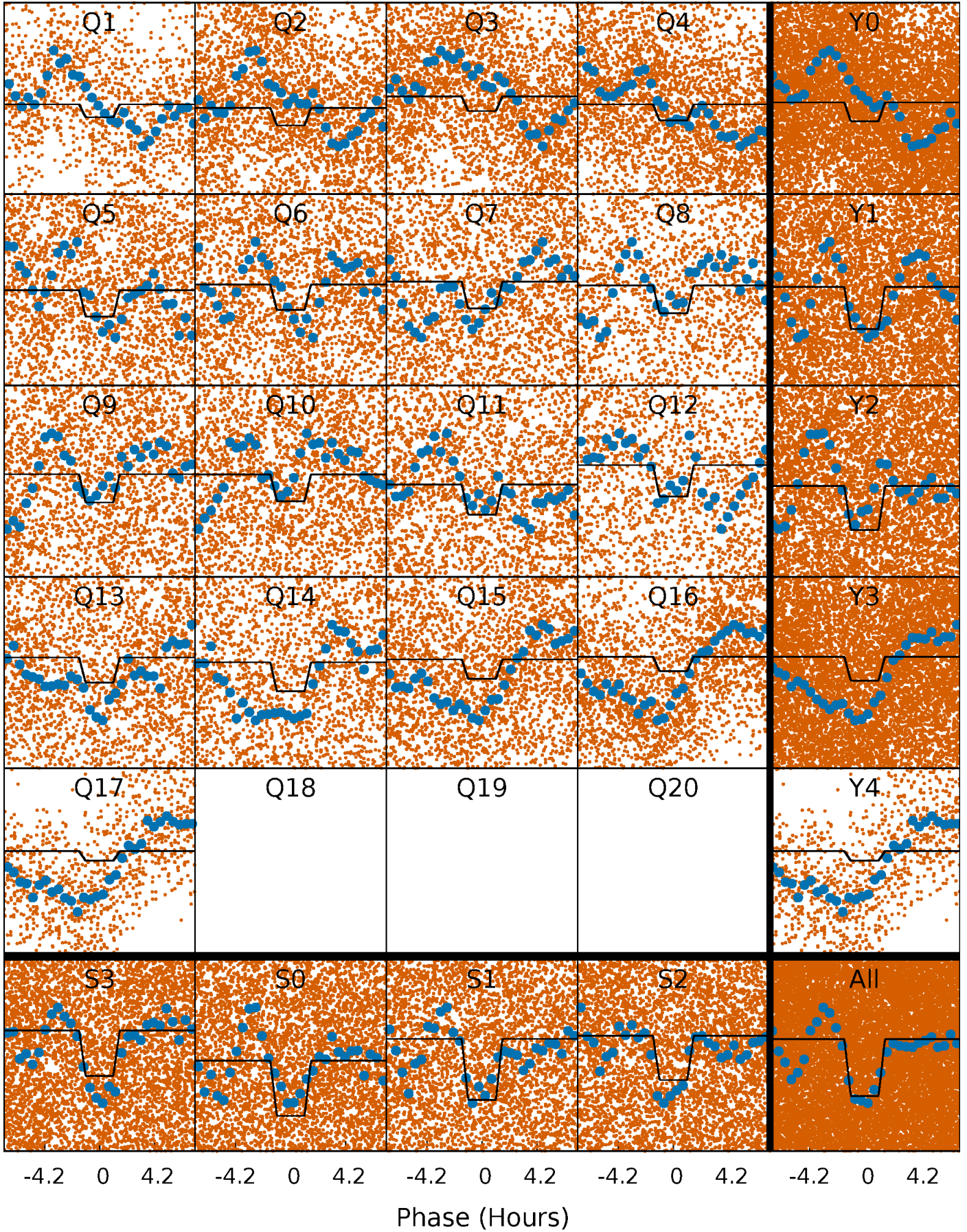
DV Quarter-Phased Transit Curves

TCE 005383615-01 P= 0.745912 Days $T_0=131.841789$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

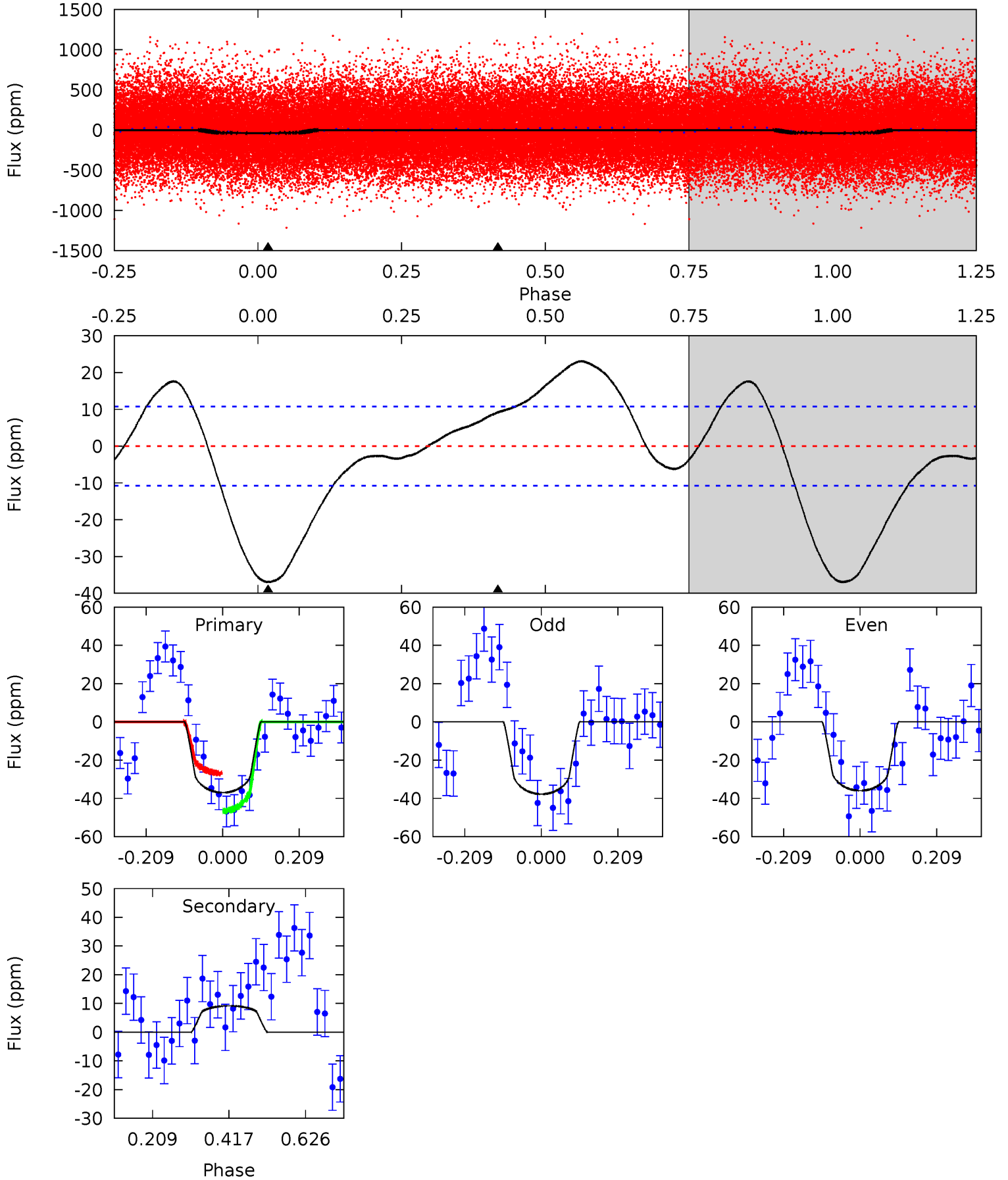
TCE 005383615-01 P= 0.745940 Days $T_0=131.847605$ (BKJD)



DV Model-Shift Uniqueness Test

005383615-01, P = 0.745912 Days, E = 131.095877 Days

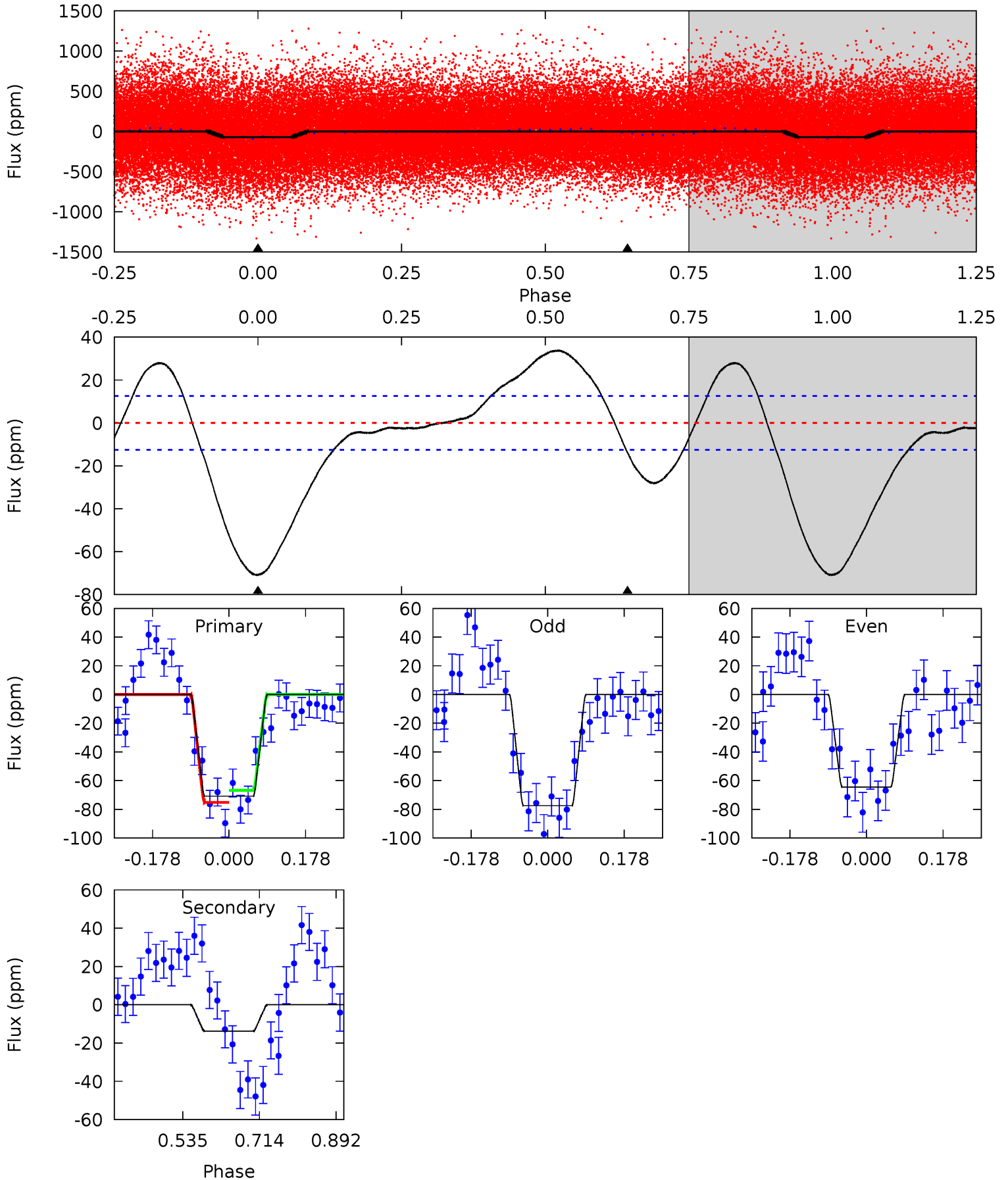
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.1	-3.75	0	0	4.41	1.26	2.61	15.1	15.1	-3.75	-3.75	0.37	1.05	0.38	3.99



Alt Model-Shift Uniqueness Test

005383615-01, P = 0.745940 Days, E = 131.101665 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.0	4.88	0	0	4.44	1.35	3.01	25.0	25.0	4.88	4.88	2.29	1.08	0.32	1.43



Stellar Parameters For KIC 005383615

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5724^{+173}_{-173}	$4.362^{+0.203}_{-0.248}$	$-0.500^{+0.300}_{-0.300}$	$0.959^{+0.318}_{-0.212}$	$0.771^{+0.114}_{-0.053}$	$1.232^{+1.187}_{-0.685}$
	+3%/-3%	+5%/-6%	+60%/-60%	+33%/-22%	+15%/-7%	+96%/-56%
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 005383615-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	9 ± 2	$0.66^{+0.44}_{-0.36}$	2851^{+248}_{-218}	-4329^{+594}_{-1627}	$-2.558^{+1.673}_{-9.585}$
Alt.	-14 ± 3	$0.88^{+0.52}_{-0.39}$	2837^{+277}_{-200}	3974^{+1208}_{-666}	$2.116^{+5.031}_{-1.253}$

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 $A_{obs} \gg 1.0$

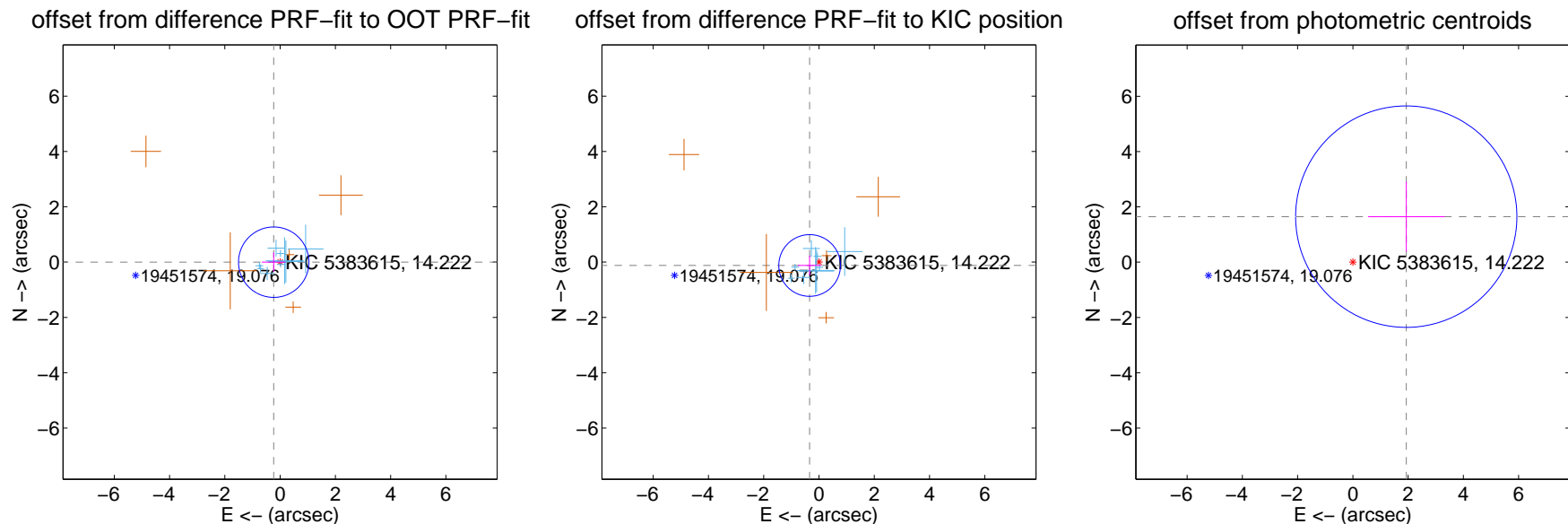
DV Centroid Data

Supplemental centroid analysis for 005383615-01. Kepler magnitude: 14.22. Transit SNR 7.53

There are 9 quarters with good PRF difference image offsets

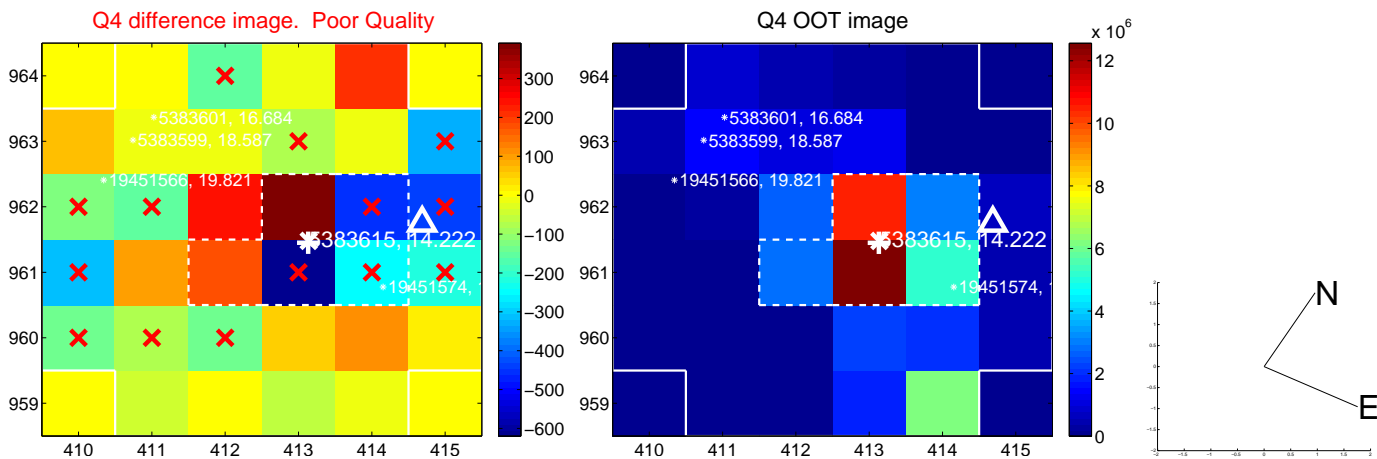
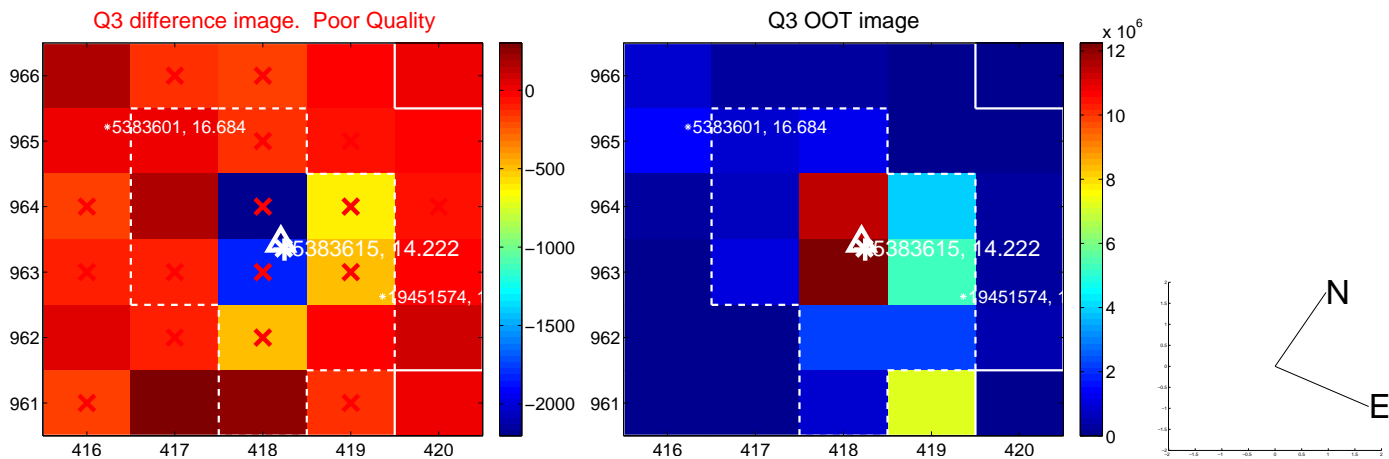
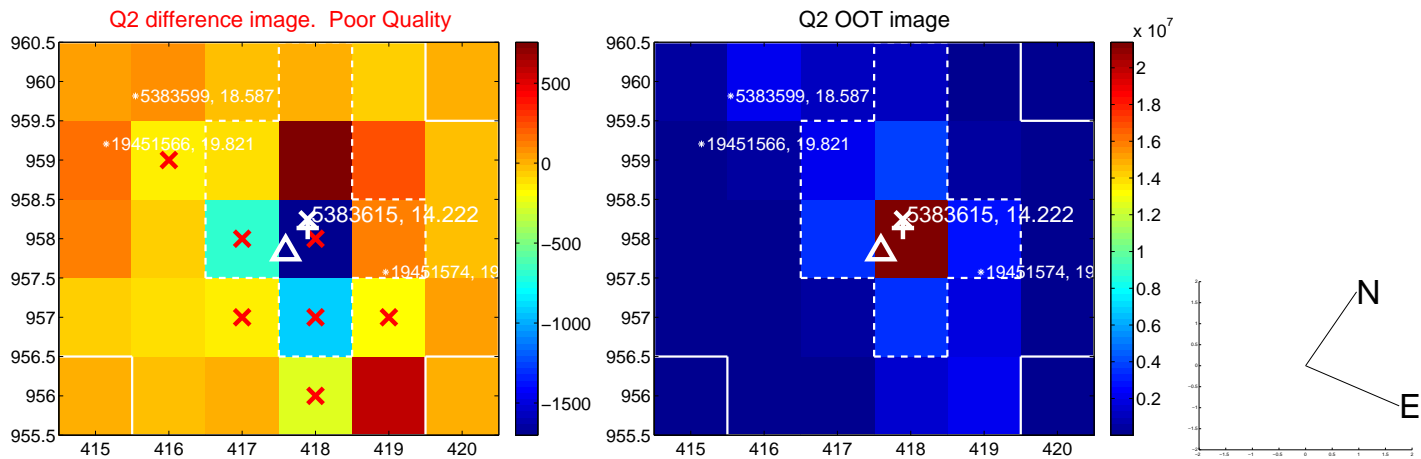
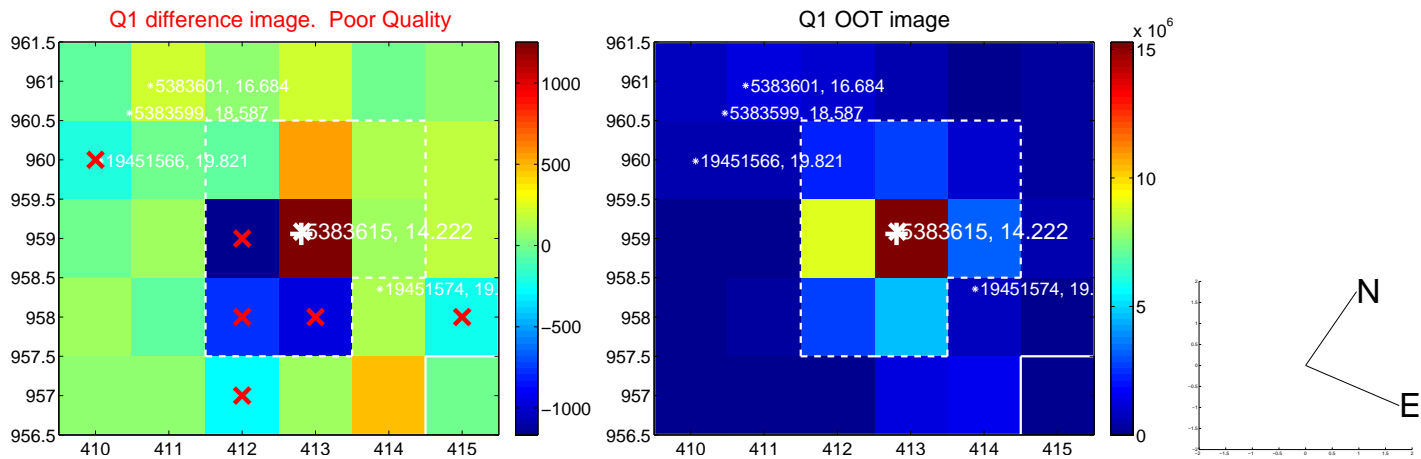
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.231 ± 0.425	0.54	0.231 ± 0.427	-0.003 ± 0.349
PRF-fit source offset from KIC position	0.360 ± 0.372	0.97	0.339 ± 0.419	-0.123 ± 0.358
photometric centroid source offset	2.54 ± 1.33	1.90	-1.93 ± 1.39	1.65 ± 1.26

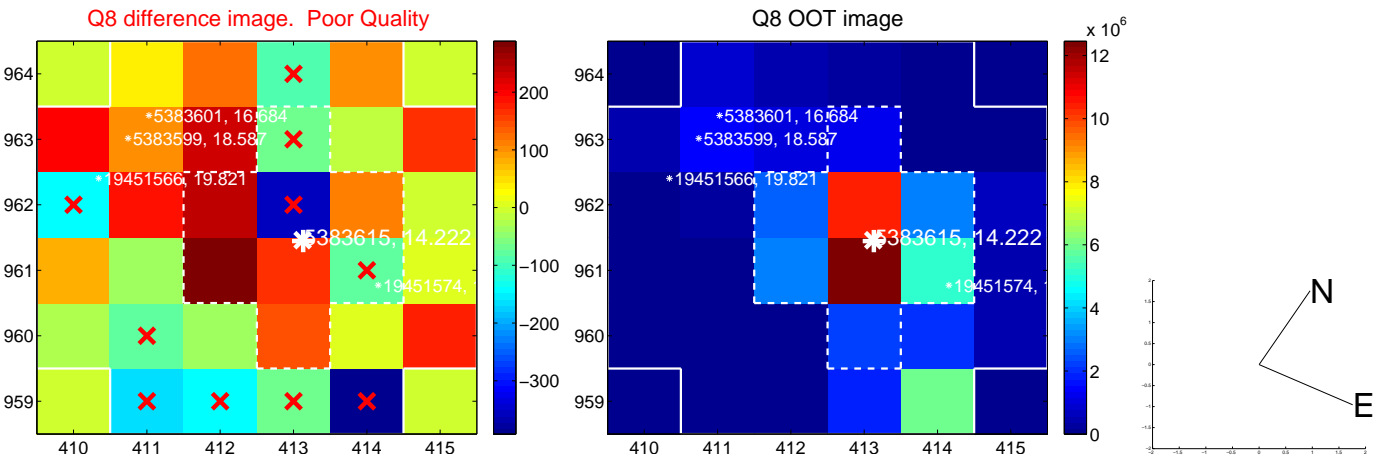
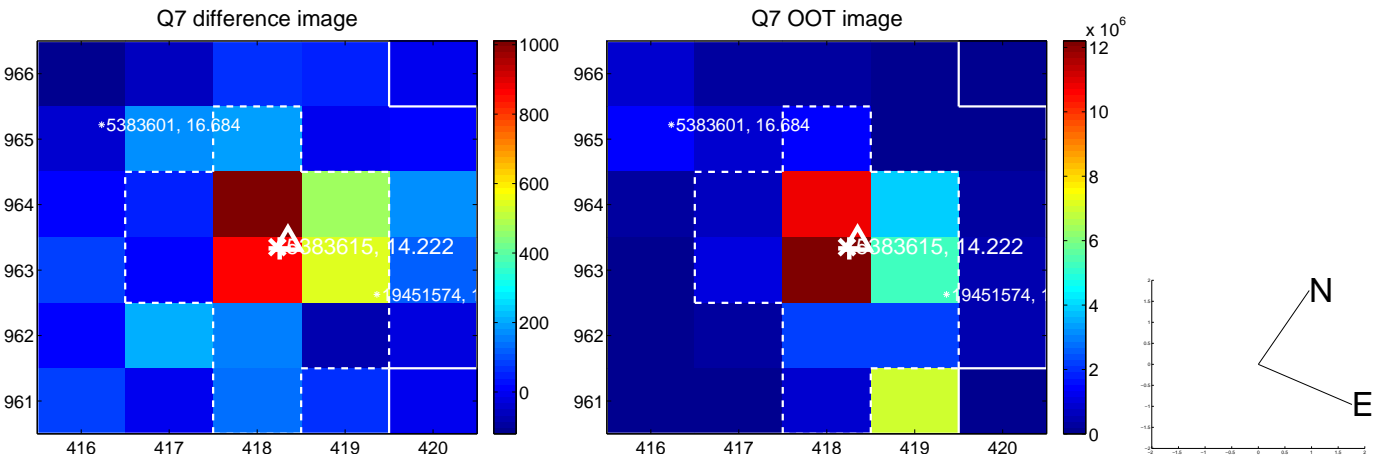
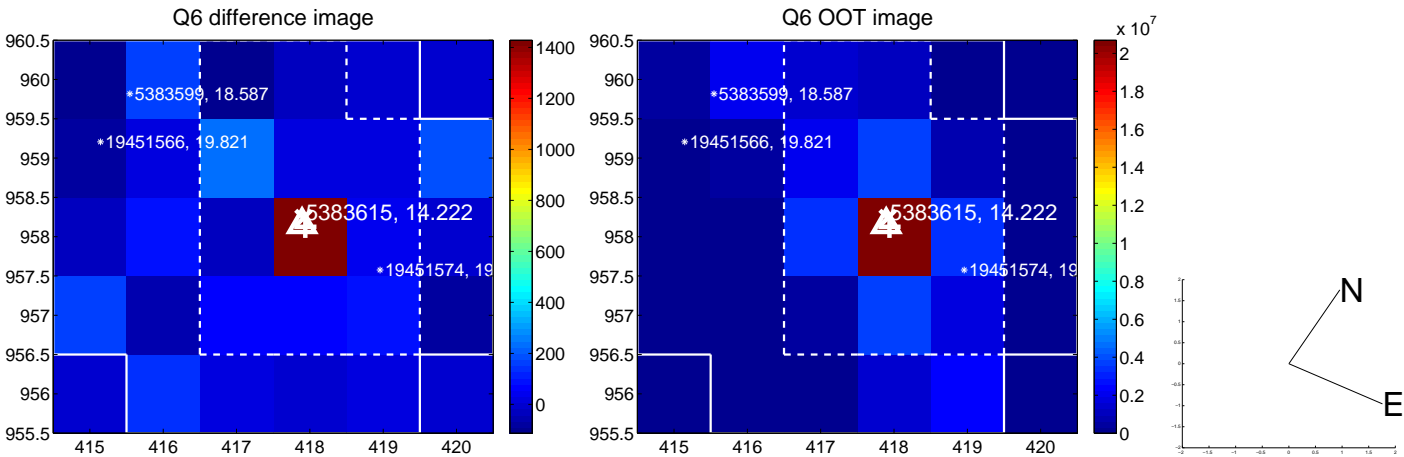
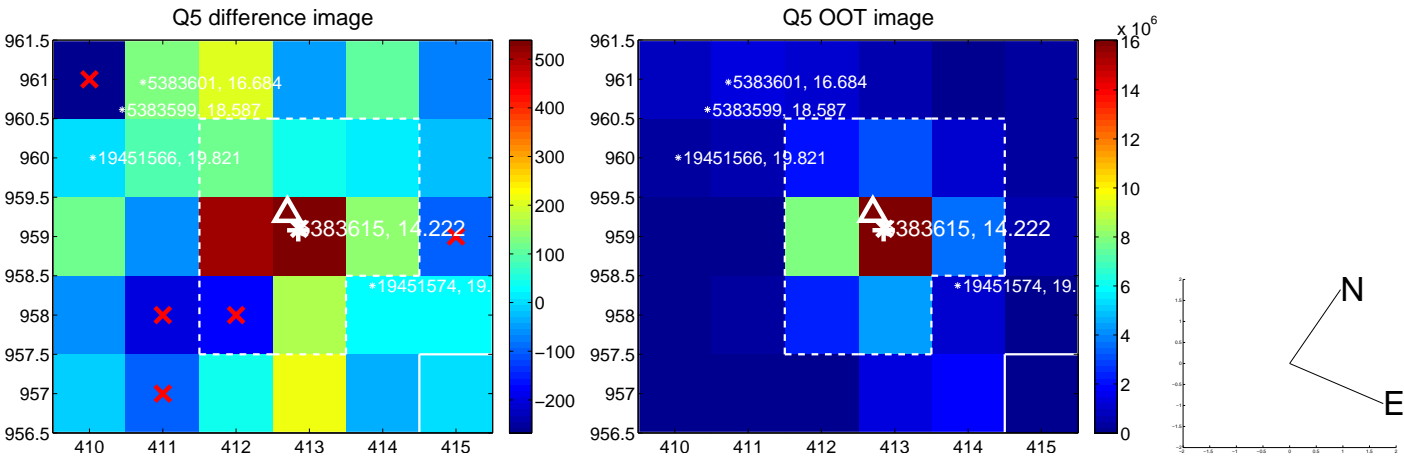


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

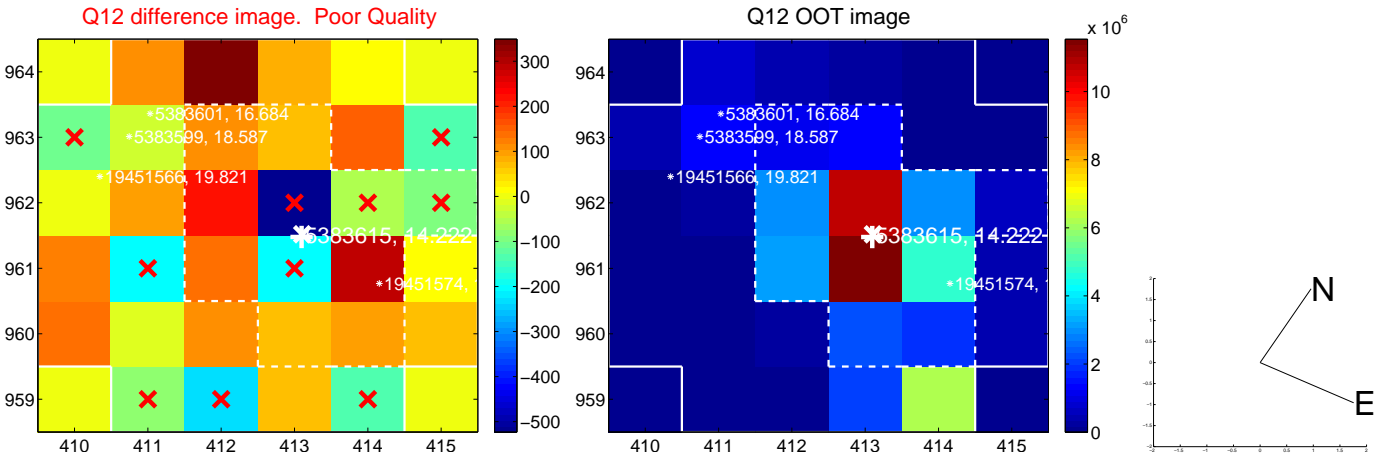
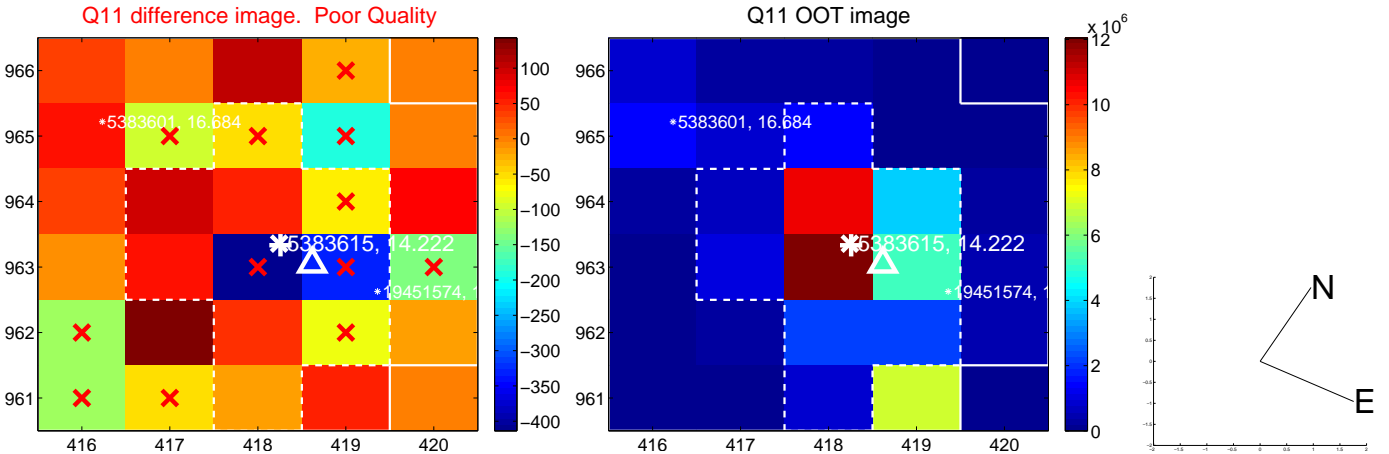
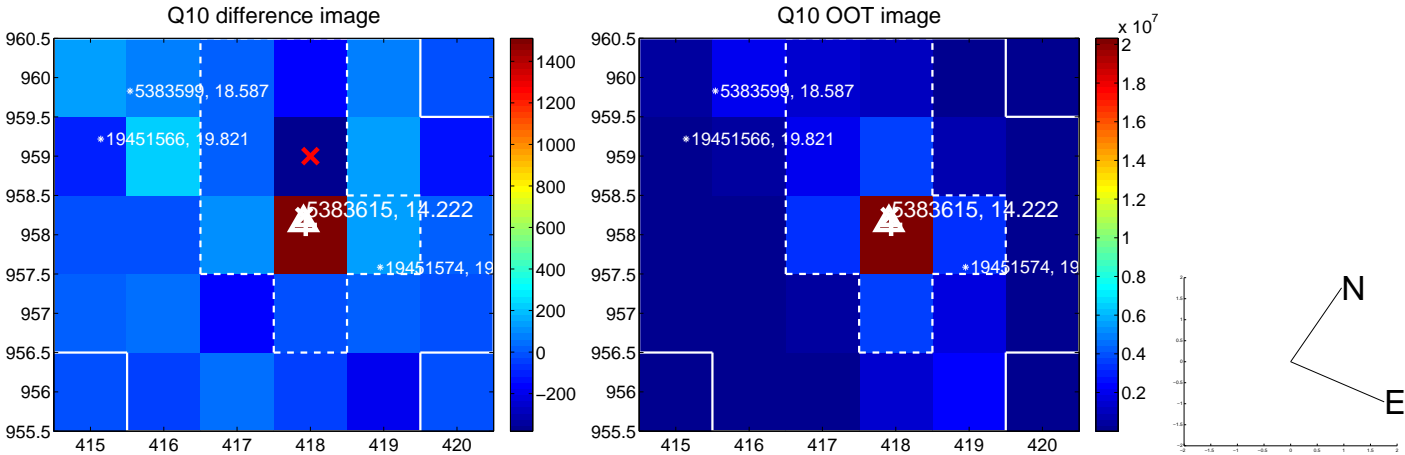
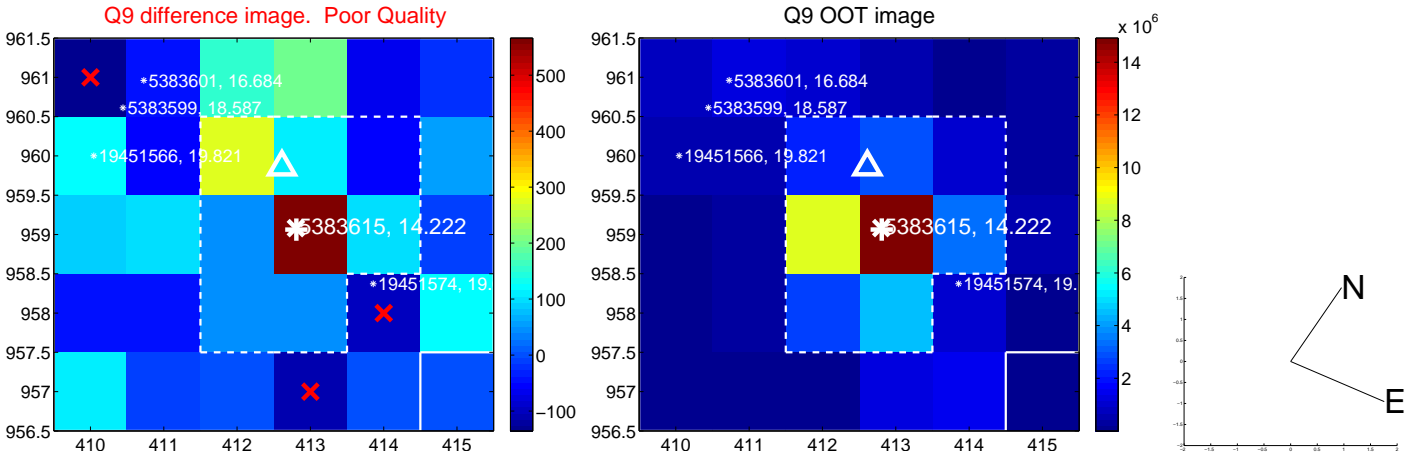
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



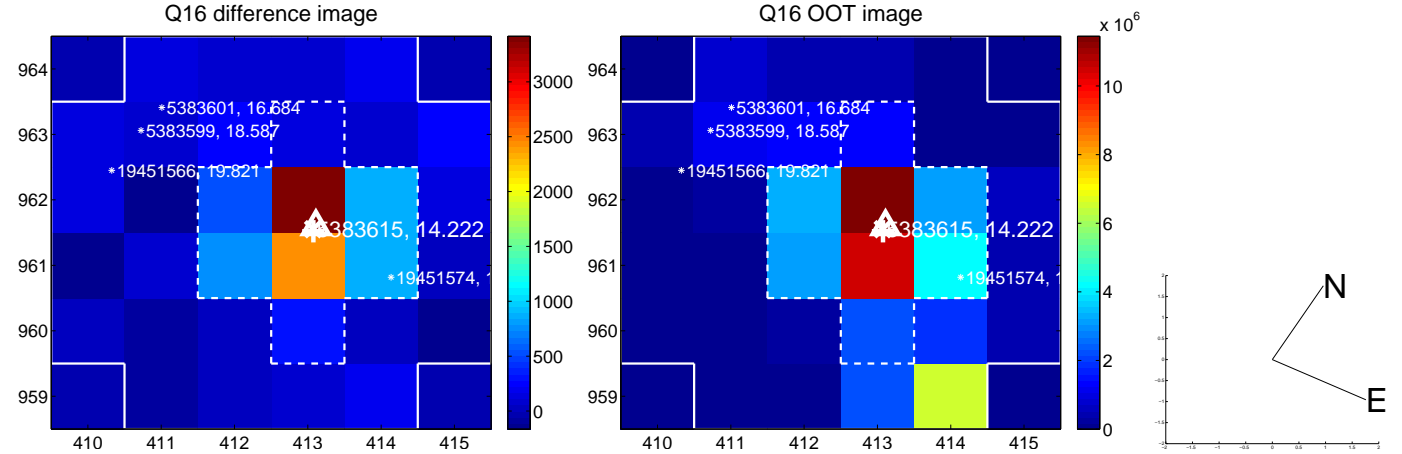
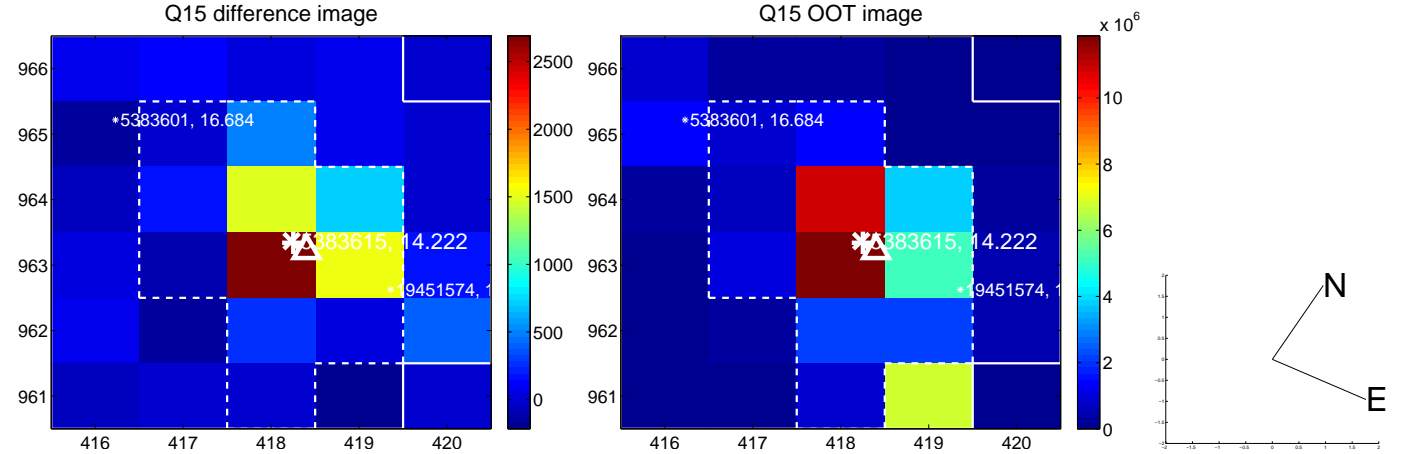
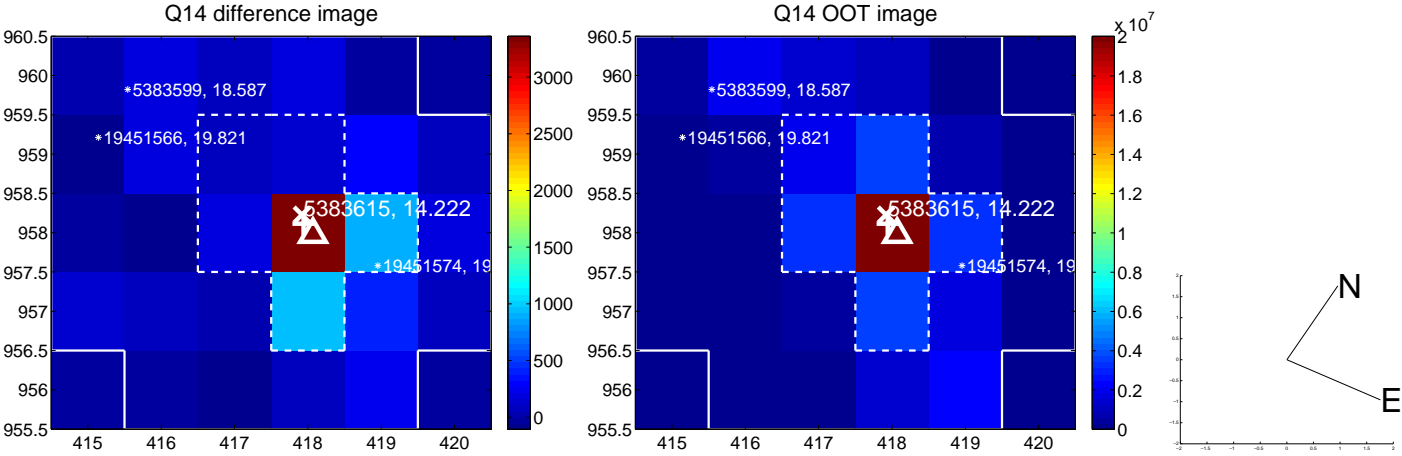
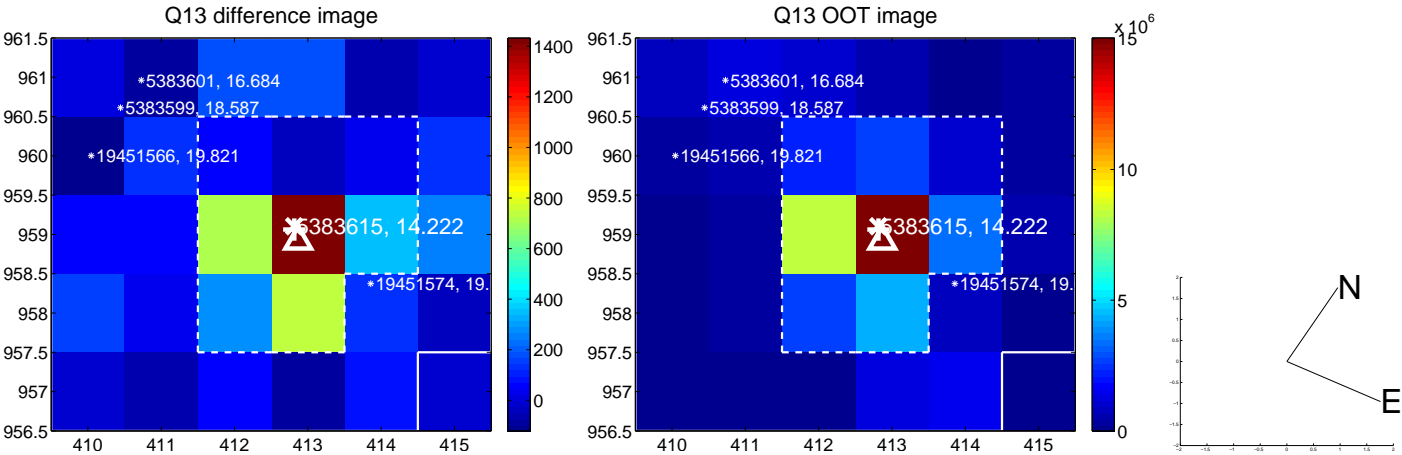
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



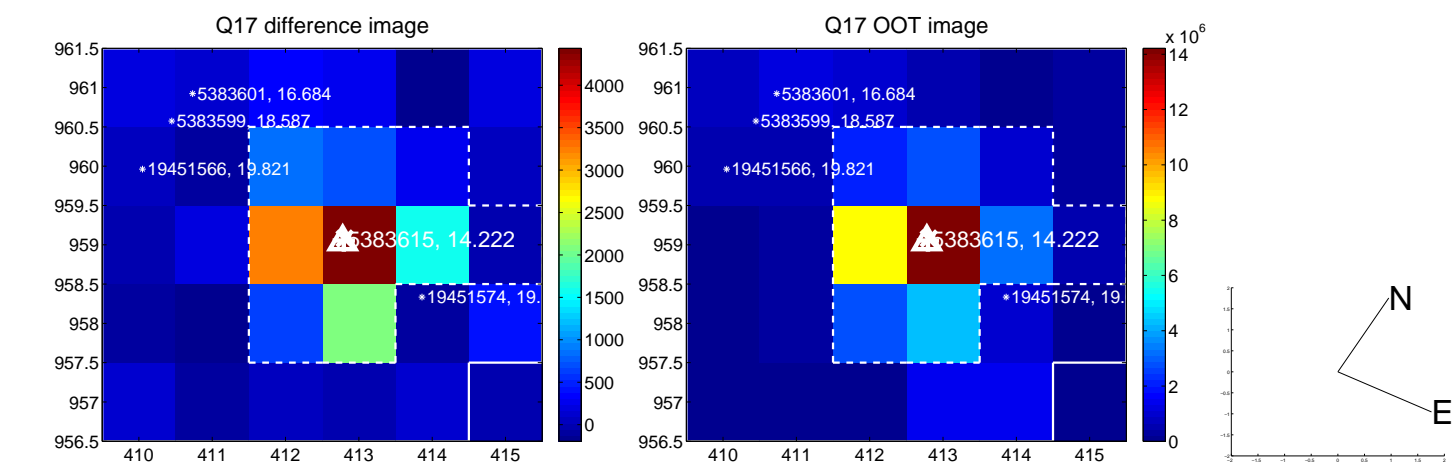
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



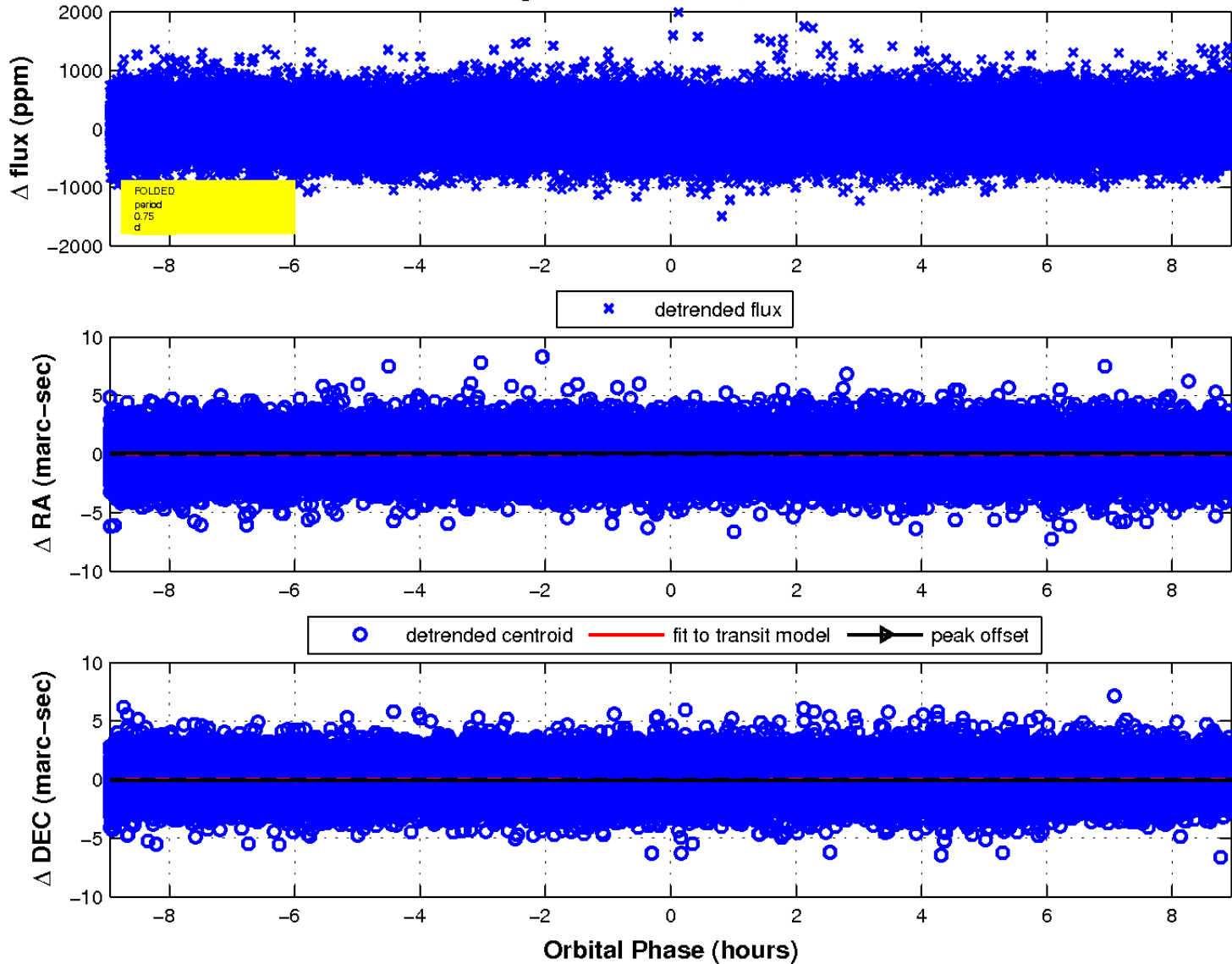
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

