

KIC 005353938

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})
005353938-01	OBS	6568.01	6.276431	136.192251	166.6	1.903	7.6	8.5	0.52	3914	0.71	18.92

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005353938-01	OBS	PC	0.95	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.

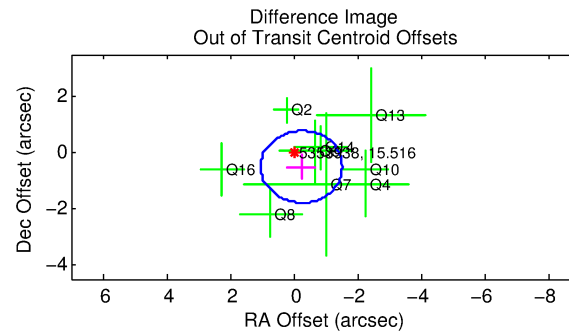
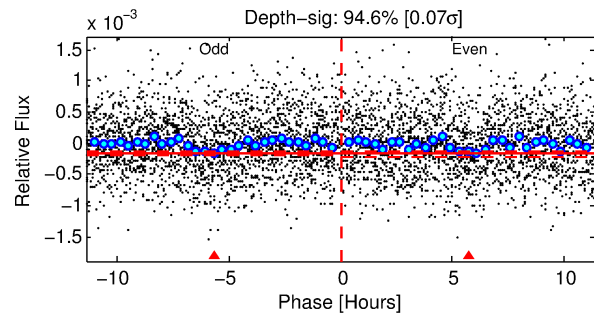
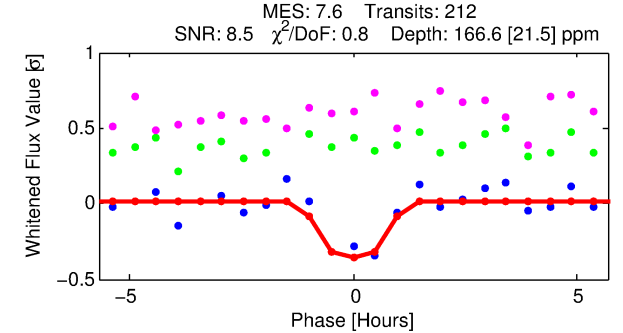
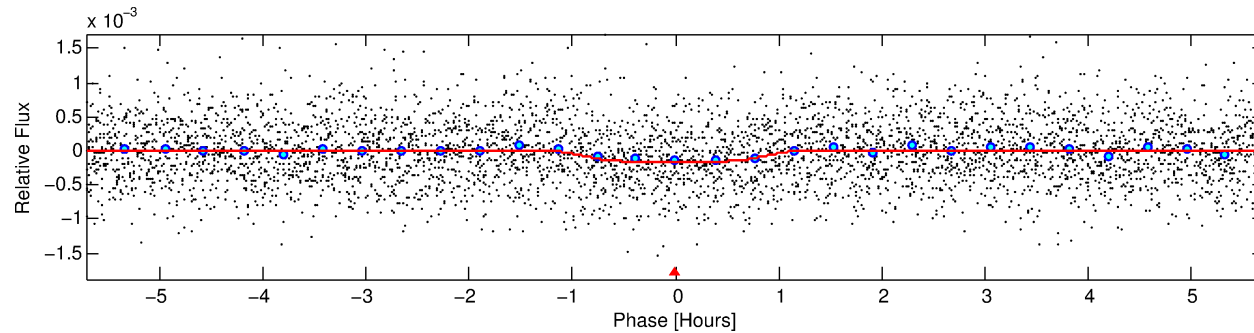
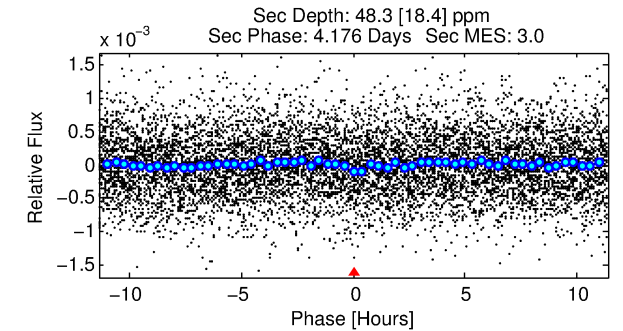
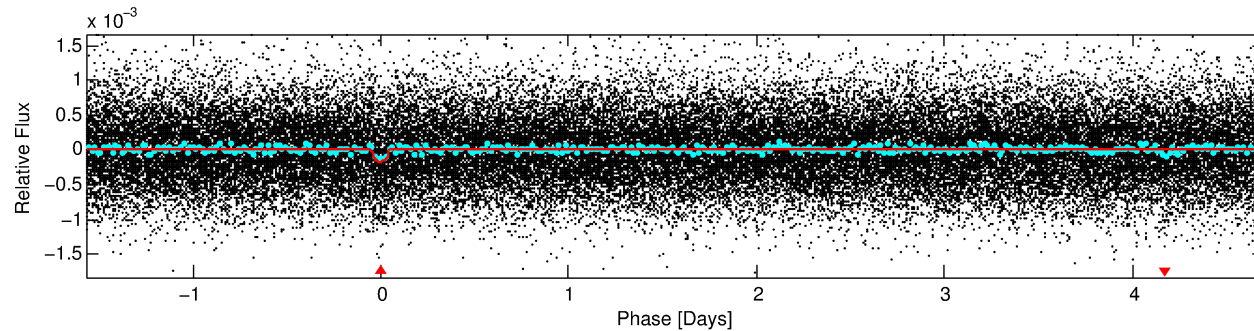
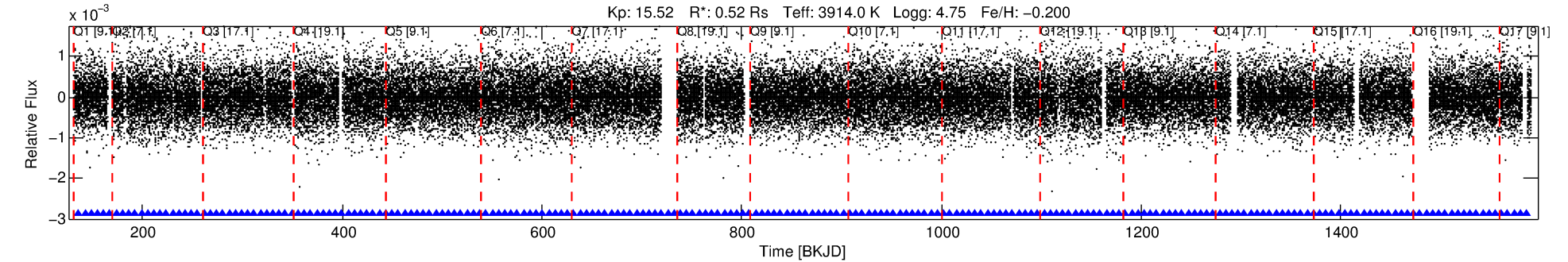
Ephemeris Match Information For 005353938-01

No Significant Match Found

DV One-Page Summary

KIC: 5353938 Candidate: 1 of 1 Period: 6.276 d

KOI: K06568.01 Corr: 0.950



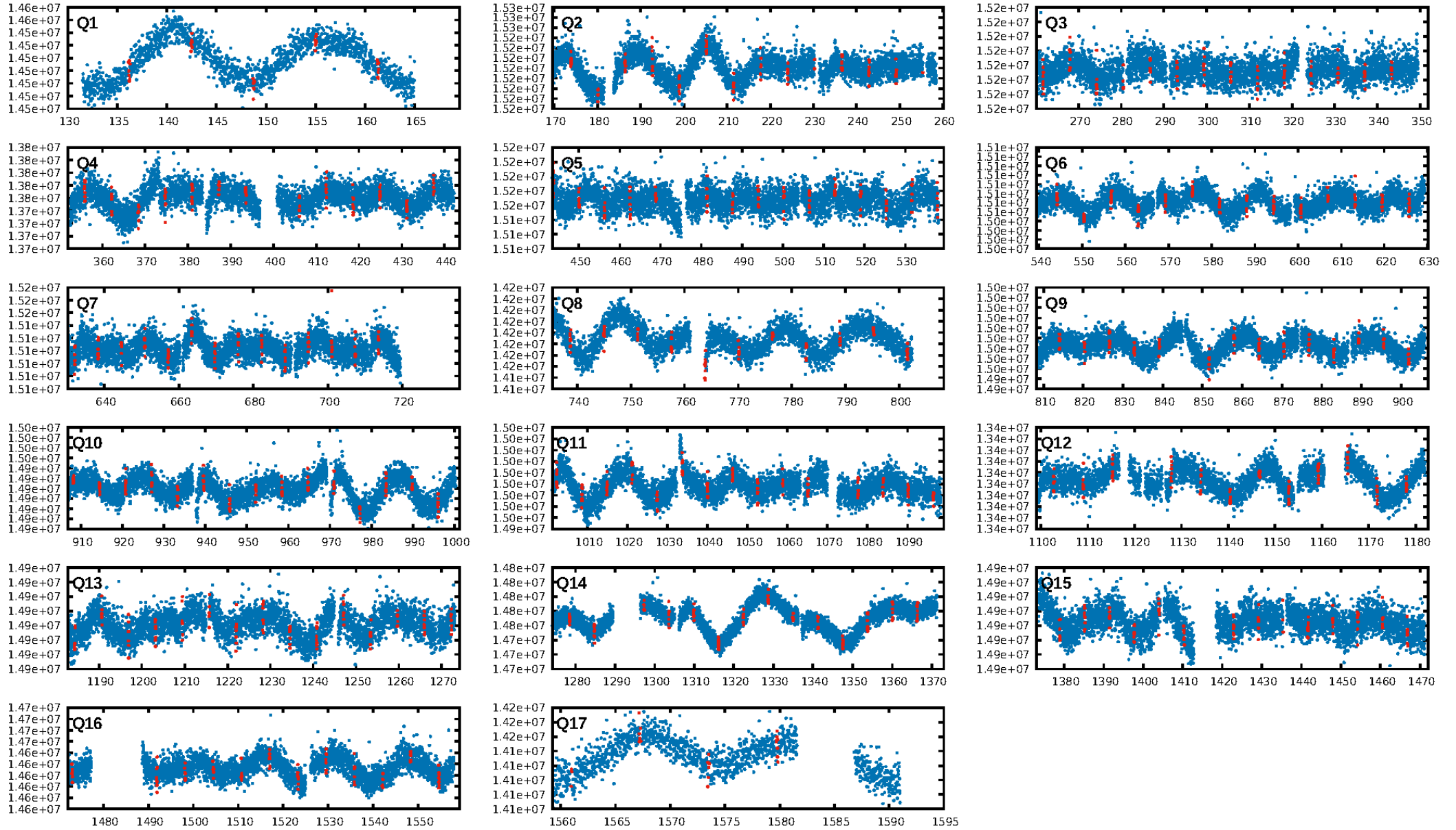
DV Fit Results:

Period = 6.27643 [0.00004] d
Epoch = 136.1923 [0.0051] BKJD
Rp/R* = 0.0126 [0.0116]
a/R* = 18.49 [74.19]
b = 0.70 [2.98]
Seff = 18.92 [2.85]
Teq = 532 [20] K
Rp = 0.71 [0.66] Re
a = 0.0543 [0.0043] AU
Ag = 154.95 [290.34] [0.53σ]
Teffp = 2901 [1359] K [1.74σ]

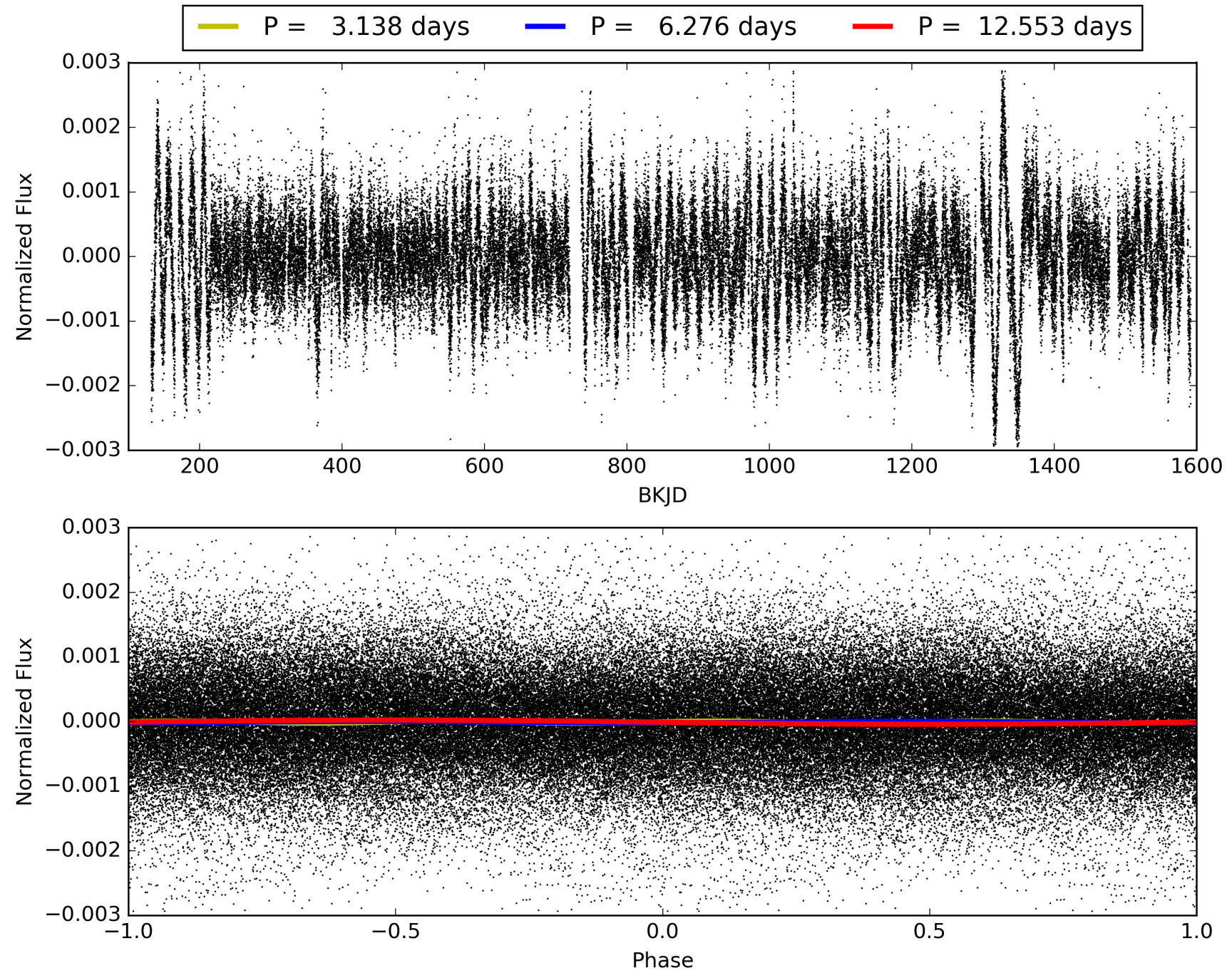
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.77e-14
RollingBand-fgt: 1.00 [203/203]
GhostDiagnostic-chr: 4.42
Centroid-sig: 93.4%
Centroid-so: 0.199 arcsec [0.13σ]
OotOffset-rm: 0.563 arcsec [1.32σ]
KicOffset-rm: 0.278 arcsec [0.61σ]
OotOffset-st: 3/2/3/1 [9]
KicOffset-st: 3/2/3/1 [9]
DiffImageQuality-fgm: 0.44 [4/9]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 005353938-01, PDC Light Curves

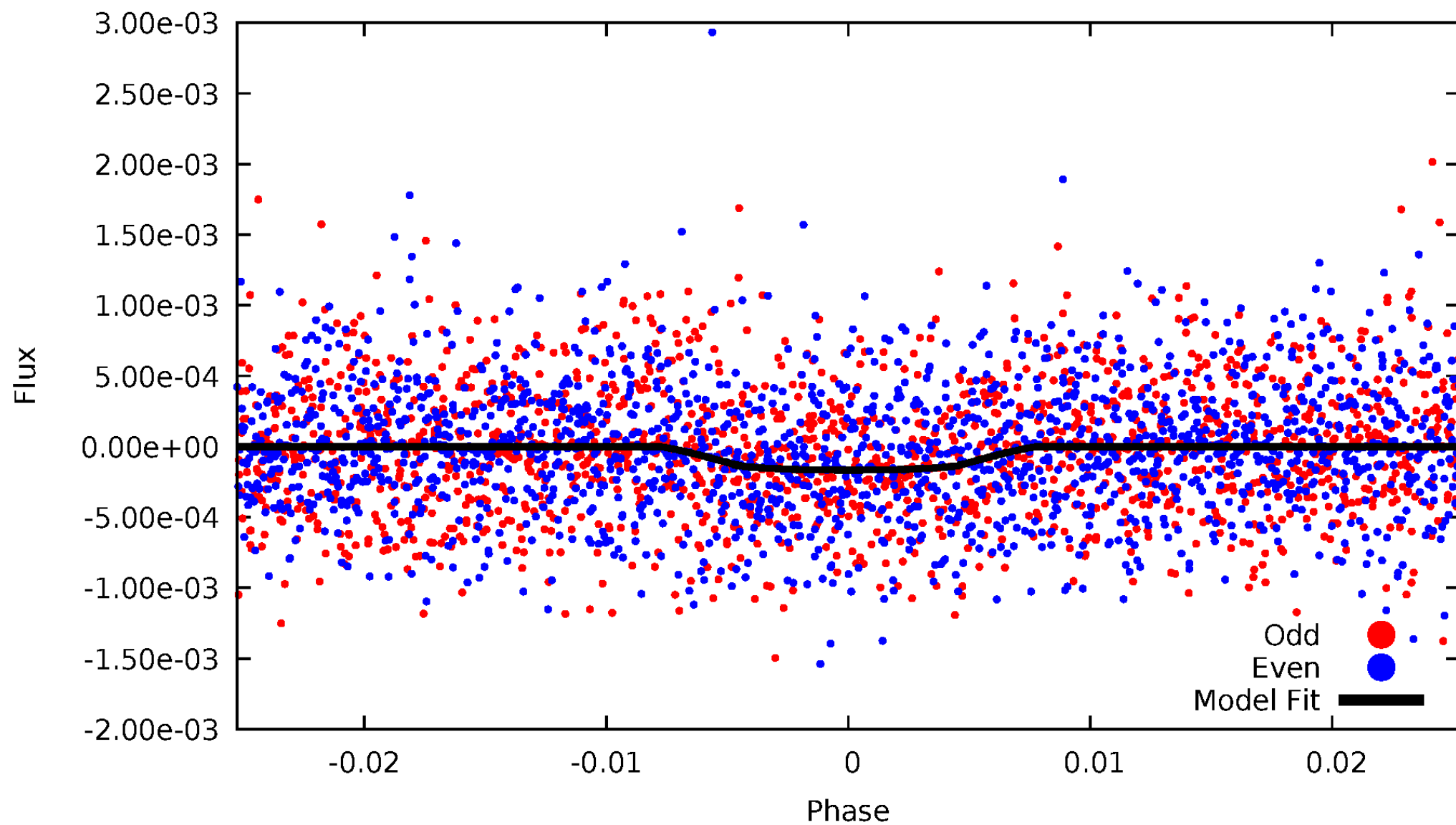


TCE 005353938-01



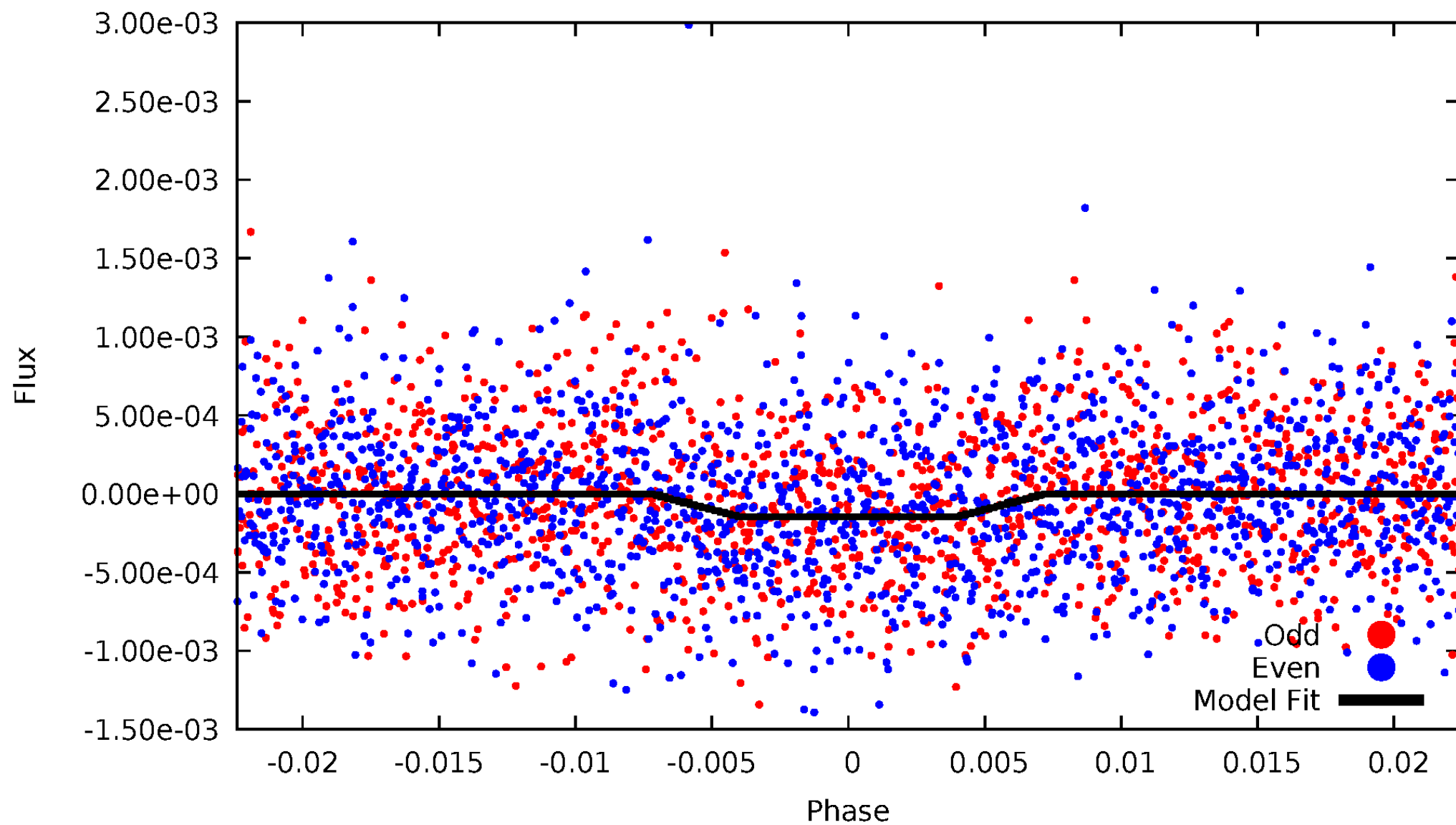
DV Odd/Even

TCE 005353938-01



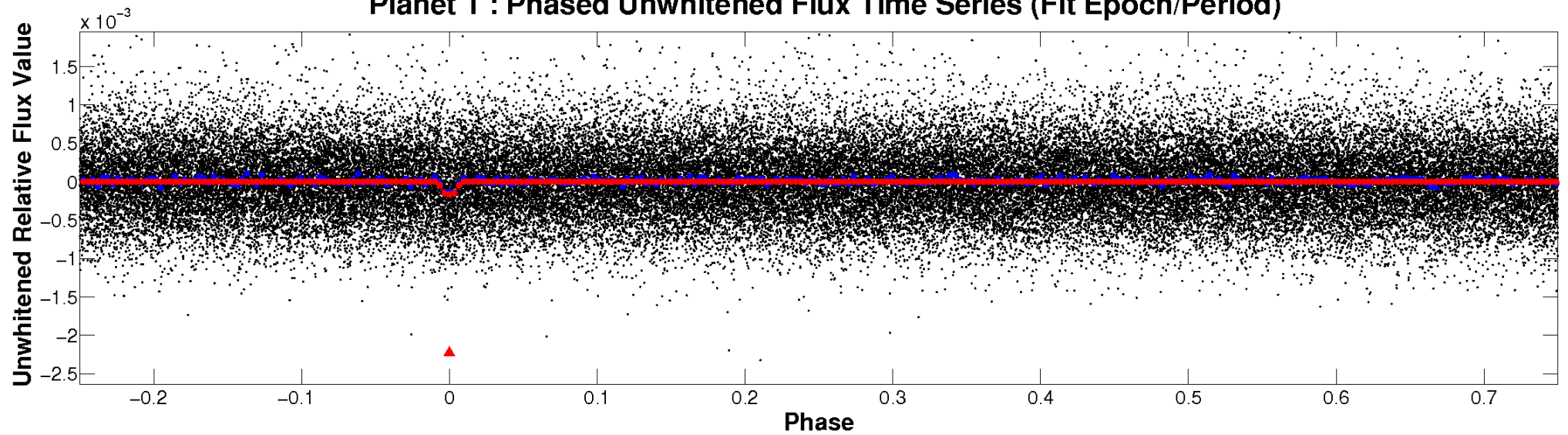
ALT Odd/Even

TCE 005353938-01

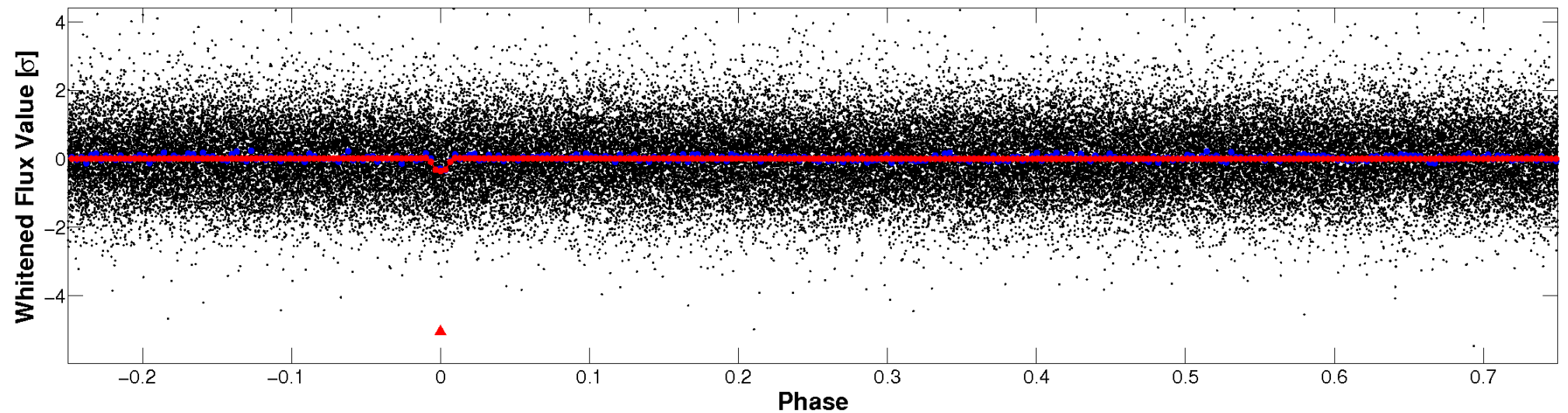


Non-Whitened Vs. Whitened Light Curve

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

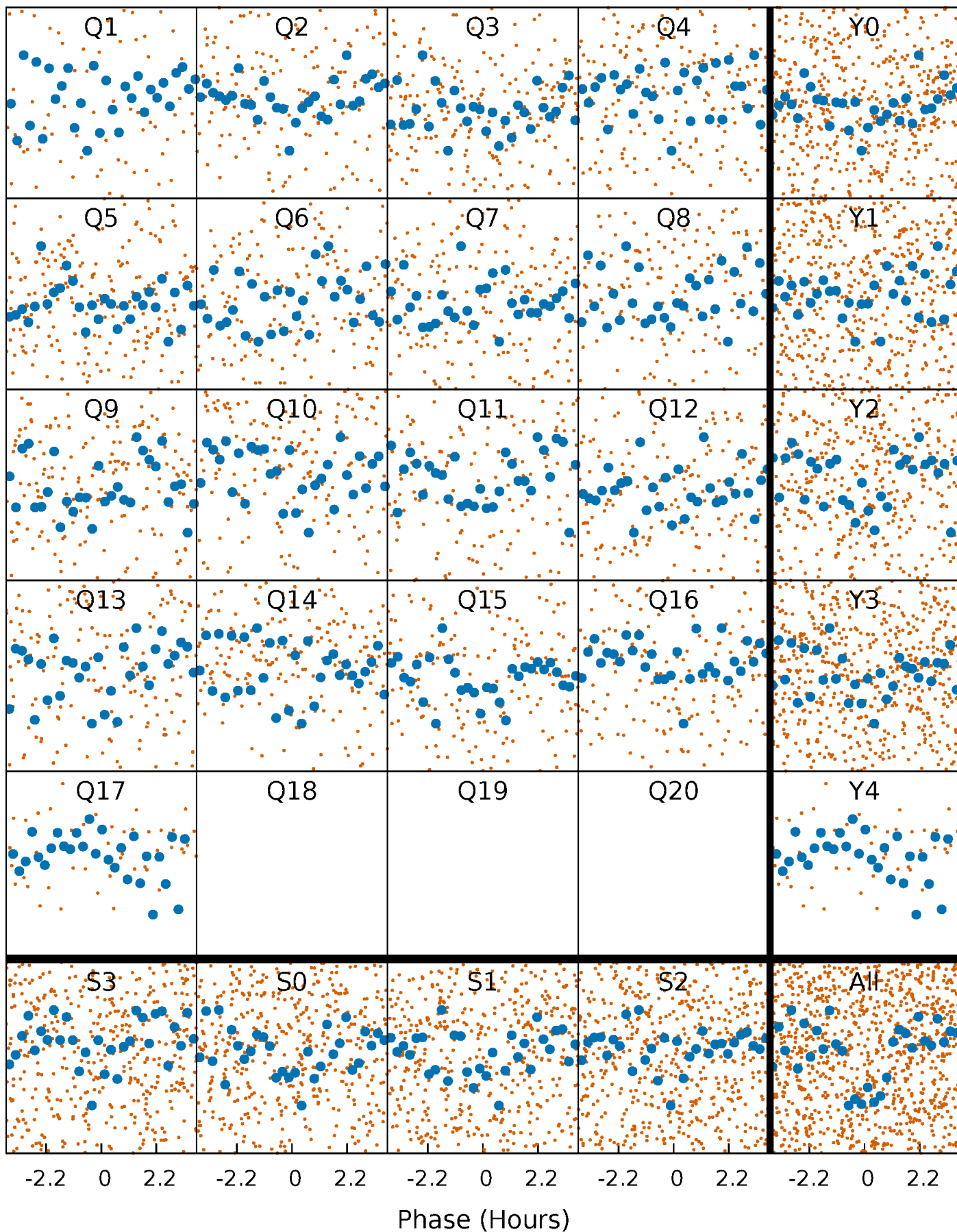


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



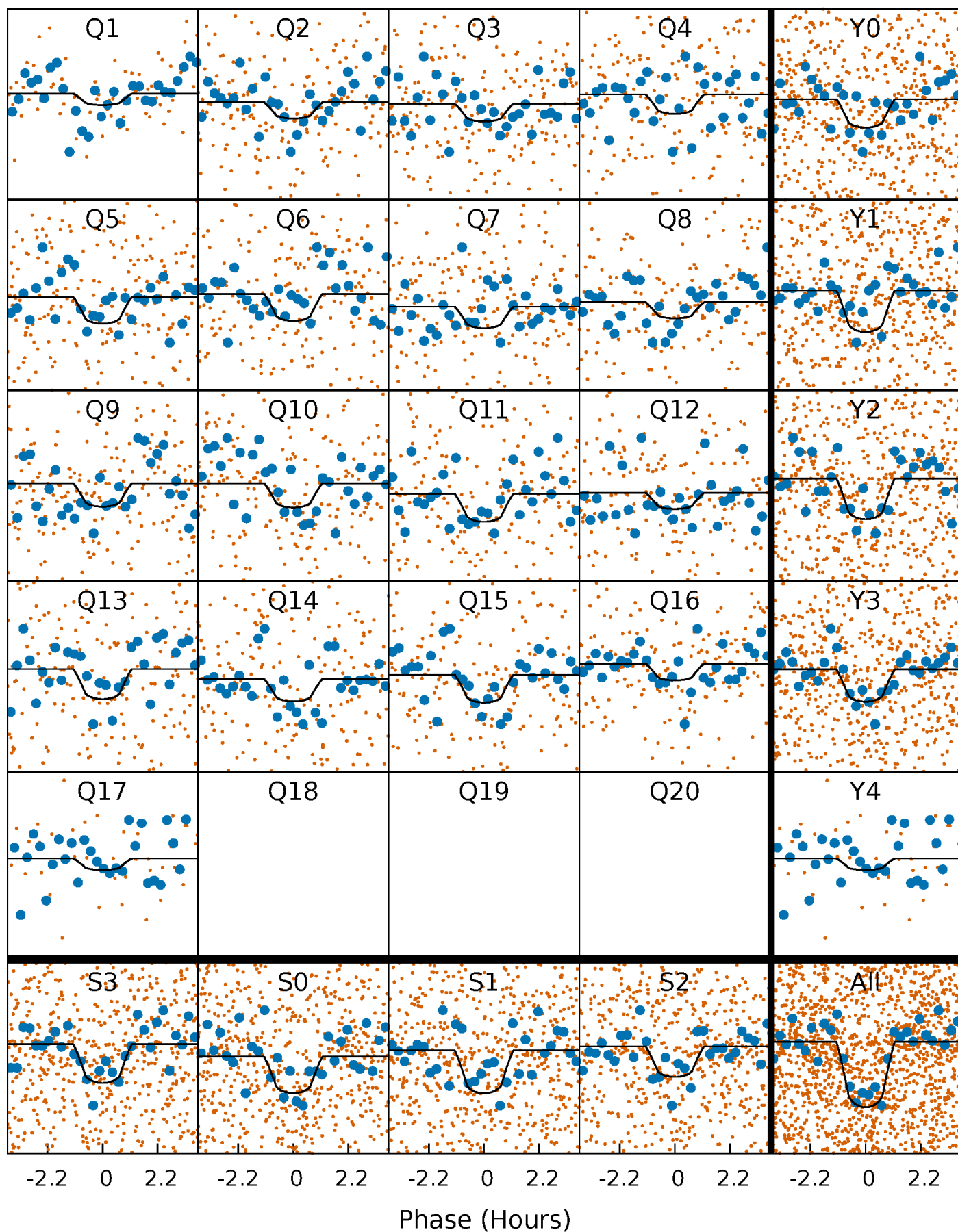
PDC Quarter-Phased Transit Curves

TCE 005353938-01 P= 6.276431 Days $T_0=136.192251$ (BKJD)



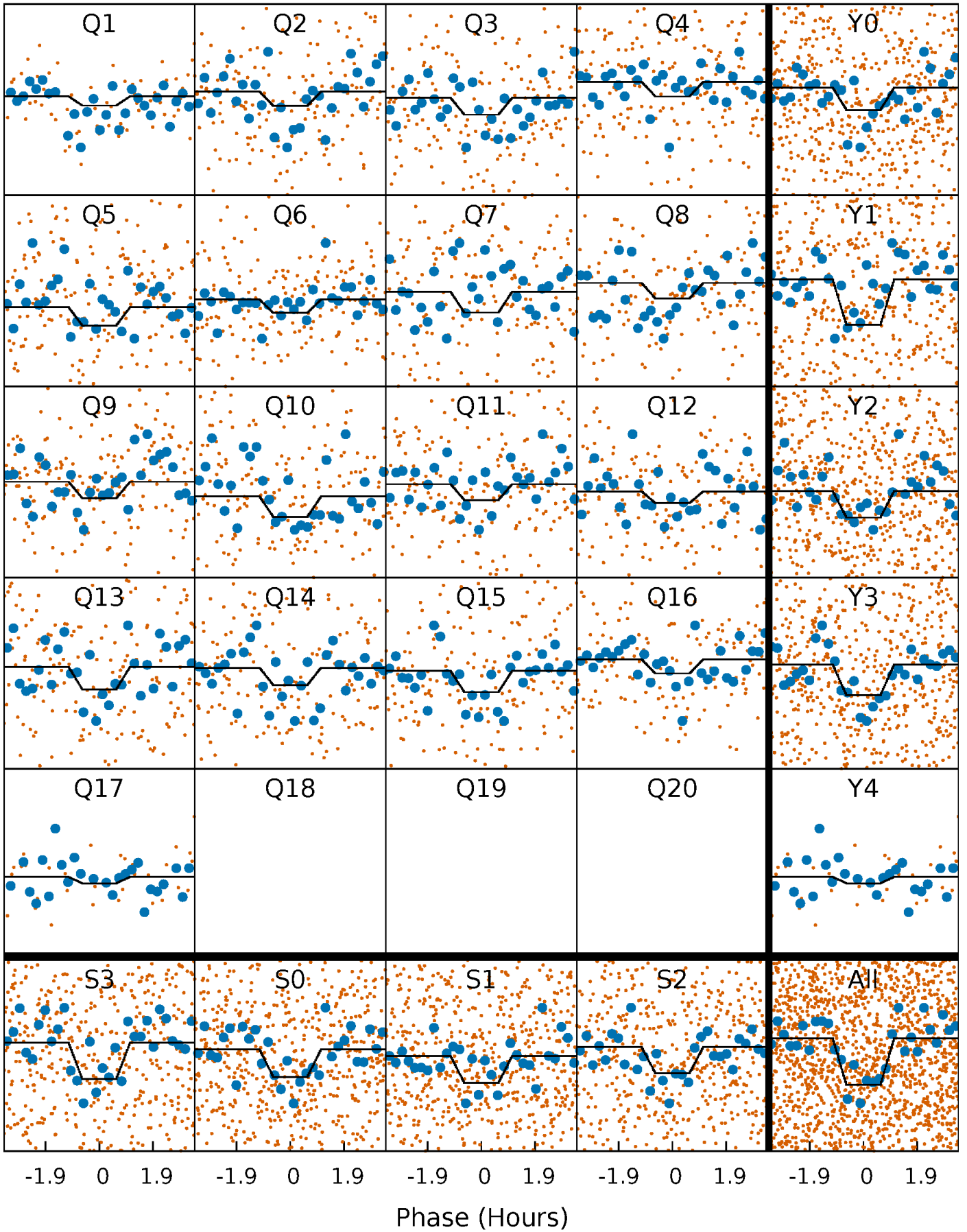
DV Quarter-Phased Transit Curves

TCE 005353938-01 P= 6.276431 Days $T_0=136.192251$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

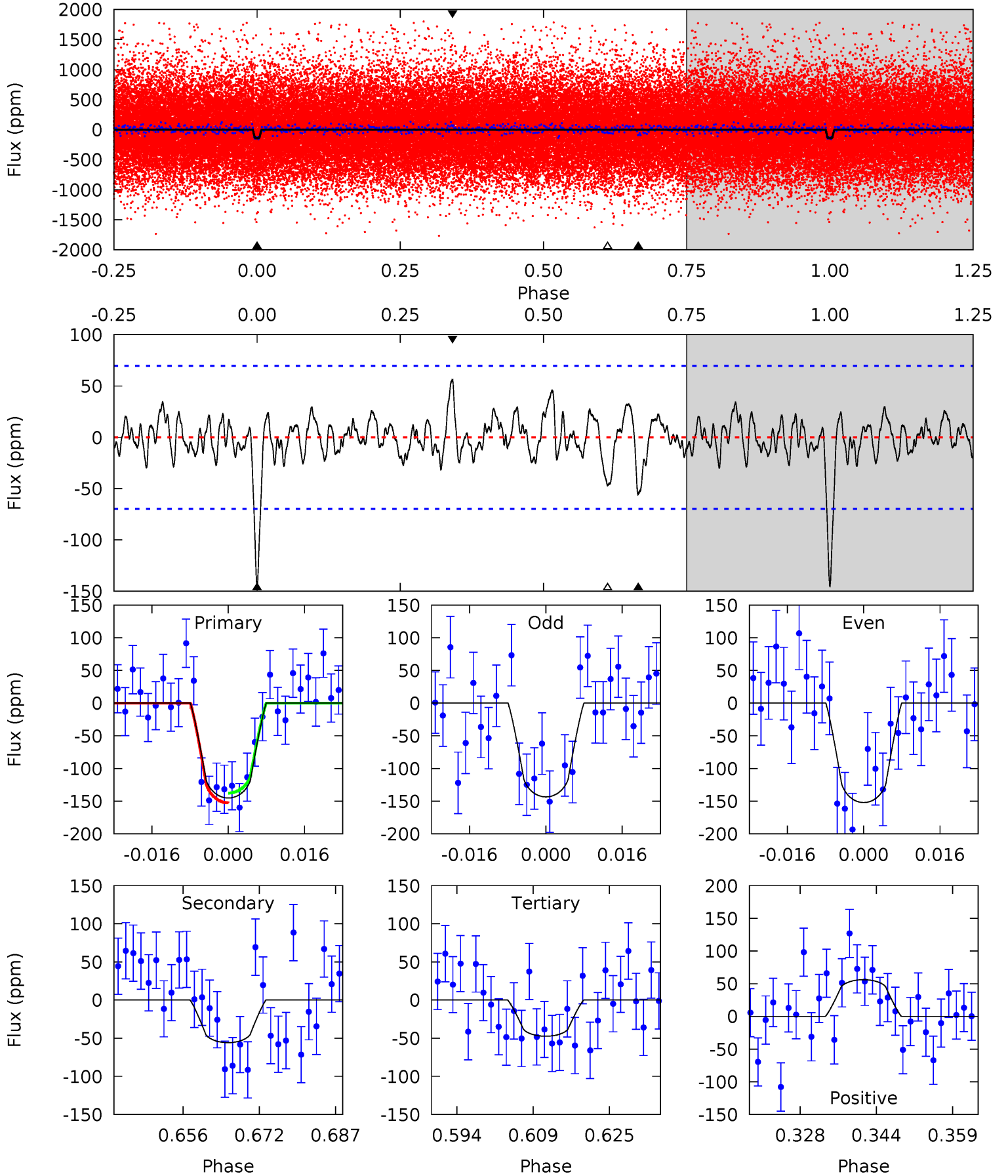
TCE 005353938-01 P= 6.276447 Days $T_0=136.192182$ (BKJD)



DV Model-Shift Uniqueness Test

005353938-01, P = 6.276431 Days, E = 129.915820 Days

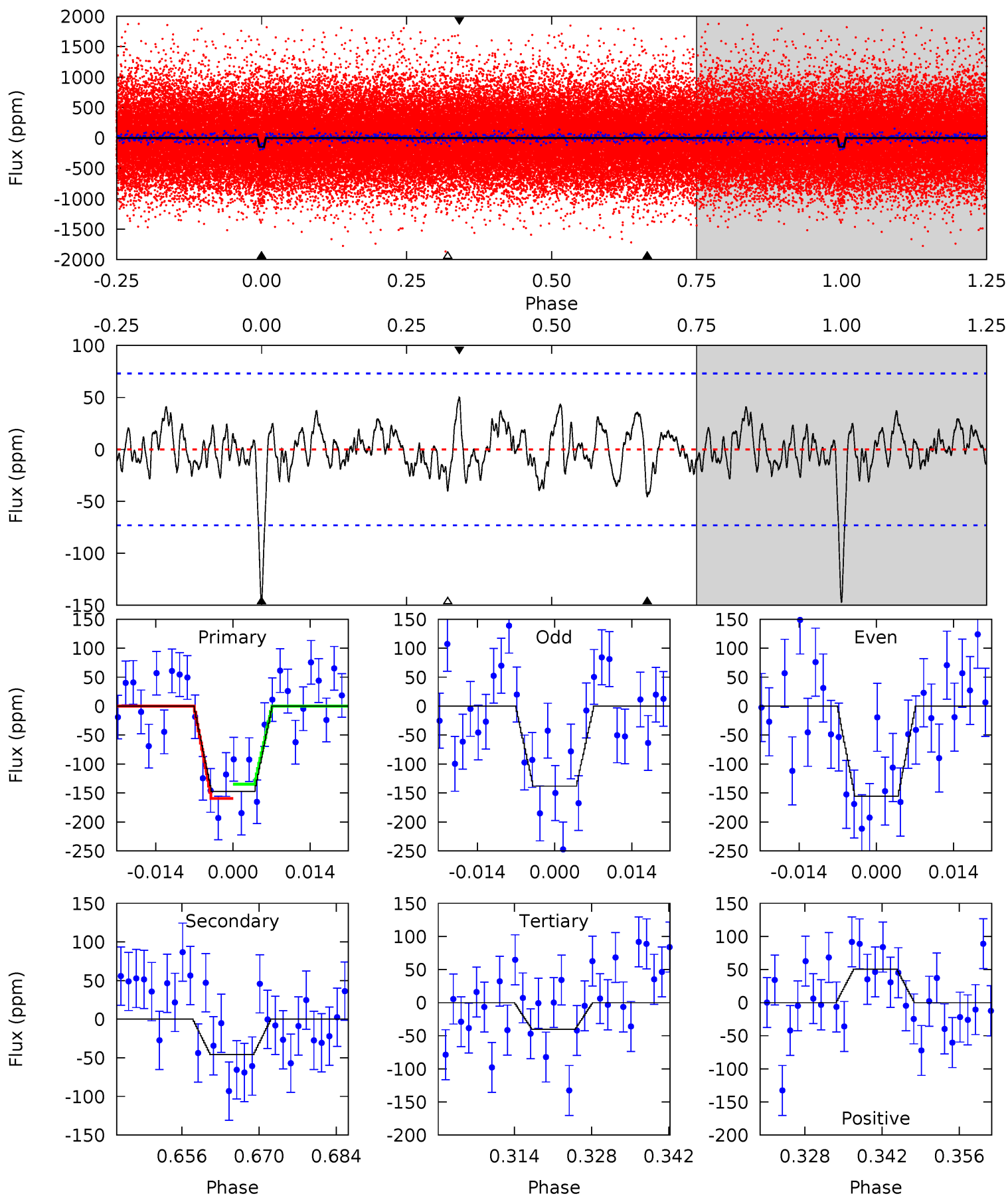
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	3.96	3.36	3.98	4.94	2.42	1.15	6.93	6.31	0.60	-0.02	0.31	0.84	0.28	0.53



Alt Model-Shift Uniqueness Test

005353938-01, P = 6.276447 Days, E = 129.915735 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.99	3.11	2.74	3.41	4.96	2.45	1.15	7.25	6.58	0.37	-0.31	0.59	0.89	0.25	0.84



Stellar Parameters For KIC 005353938

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3914^{+97}_{-107}	$4.748^{+0.050}_{-0.050}$	$-0.200^{+0.250}_{-0.300}$	$0.515^{+0.054}_{-0.054}$	$0.543^{+0.046}_{-0.061}$	$5.583^{+1.367}_{-0.999}$
	+2%/-3%	+1%/-1%	+125%/-150%	+10%/-10%	+8%/-11%	+24%/-18%
Source	PHO2	PHO2	PHO2	DSEP		

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

Secondary Eclipse Parameters for KIC 005353938-01 / KOI 6568.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-56 ± 14	$0.81^{+0.64}_{-0.50}$	741^{+25}_{-24}	3123^{+1279}_{-449}	125^{+850}_{-83}
Alt.	-46 ± 15	$0.76^{+0.58}_{-0.47}$	742^{+25}_{-23}	3126^{+1176}_{-482}	126^{+704}_{-88}

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 $A_{obs} \gg 1.0$

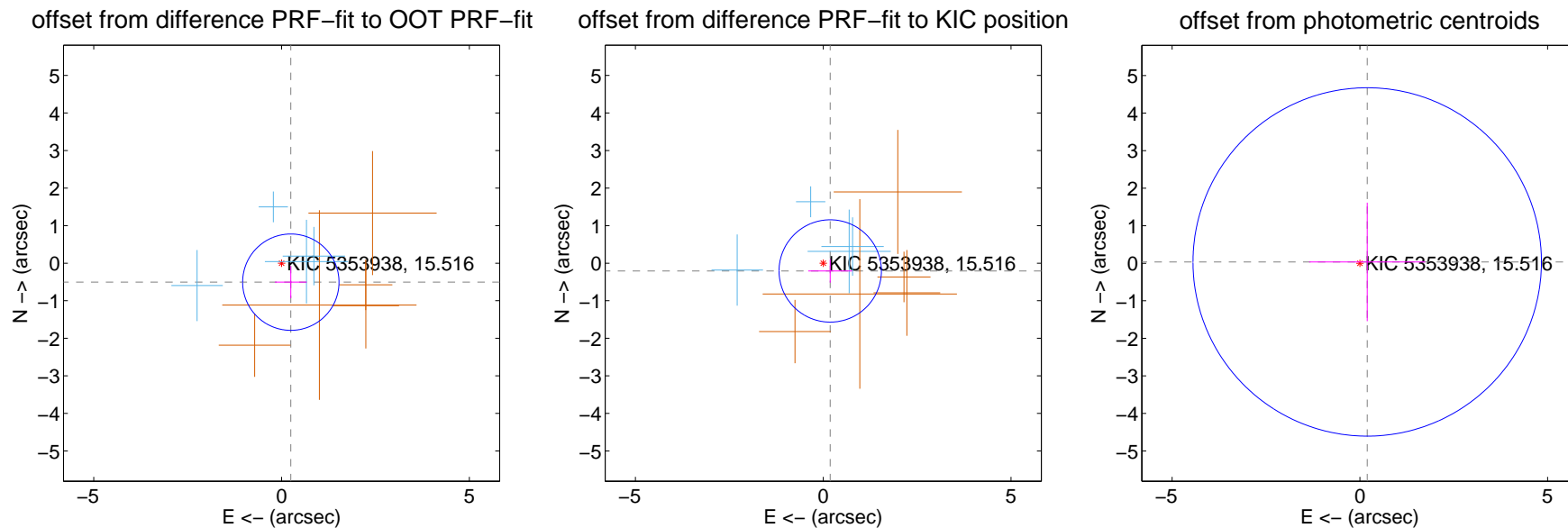
DV Centroid Data

Supplemental centroid analysis for 005353938-01. Kepler magnitude: 15.52. Transit SNR 8.47

There are 4 quarters with good PRF difference image offsets

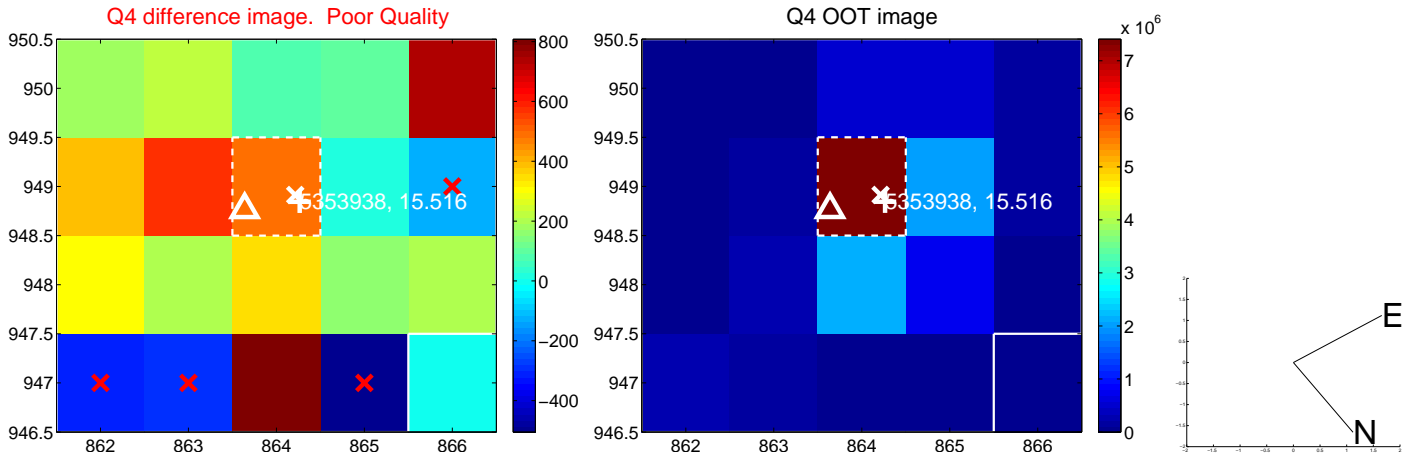
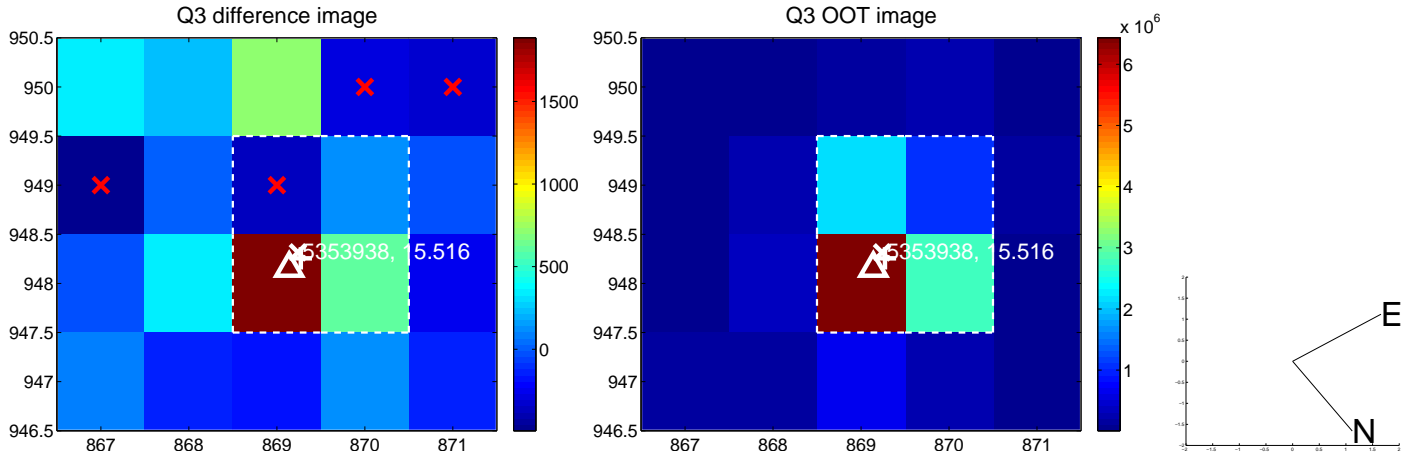
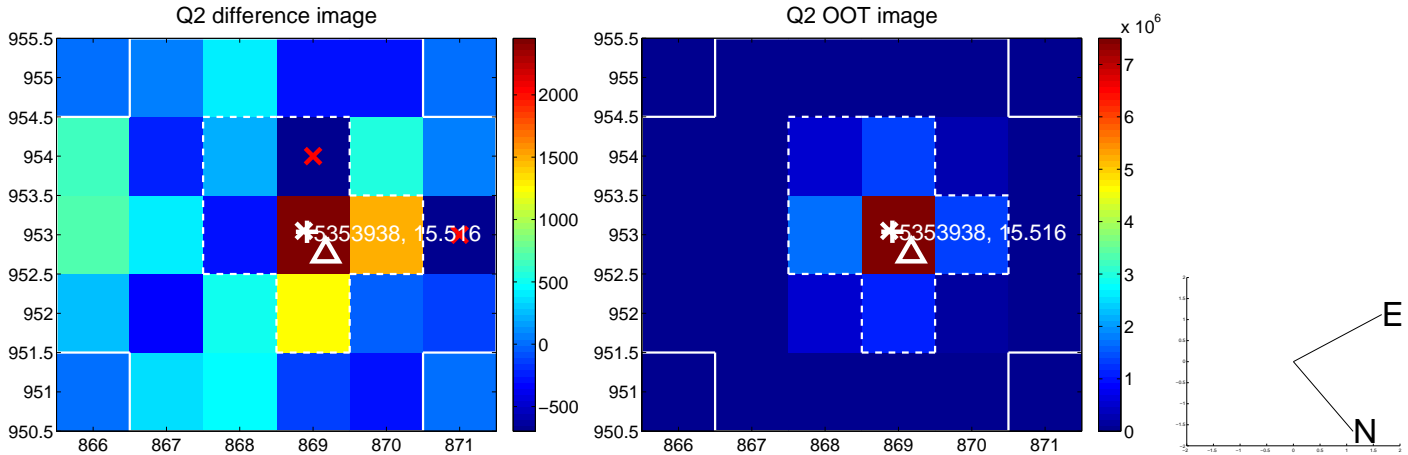
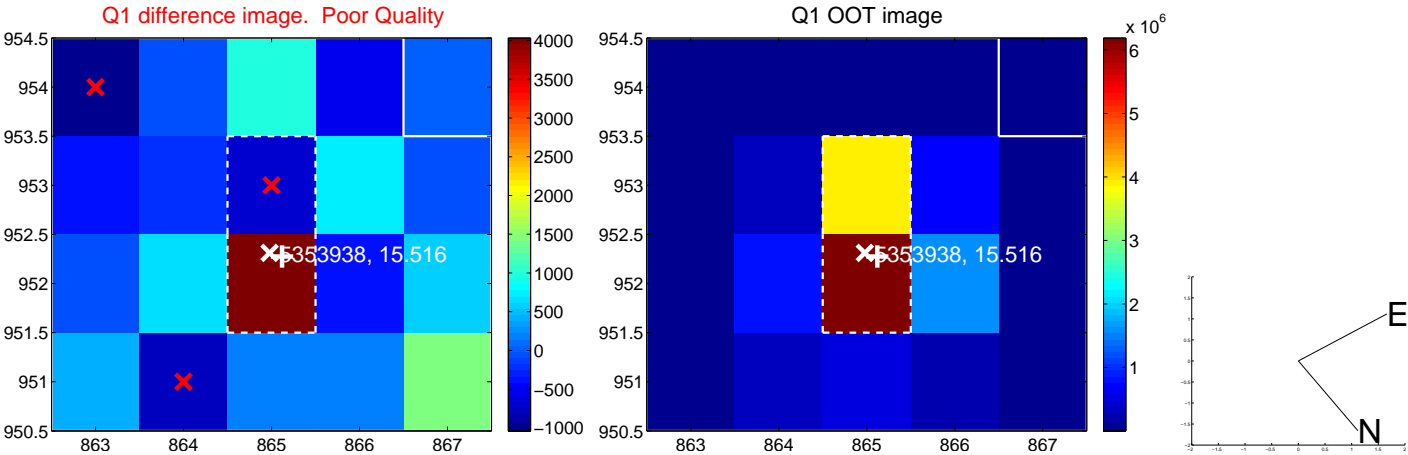
The direct PRF centroid is offset from the target star catalog position by about 0.41 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.563 ± 0.428	1.32	-0.247 ± 0.426	-0.506 ± 0.428
PRF-fit source offset from KIC position	0.278 ± 0.454	0.61	-0.186 ± 0.585	-0.207 ± 0.310
photometric centroid source offset	0.20 ± 1.55	0.13	-0.20 ± 1.55	0.04 ± 1.58

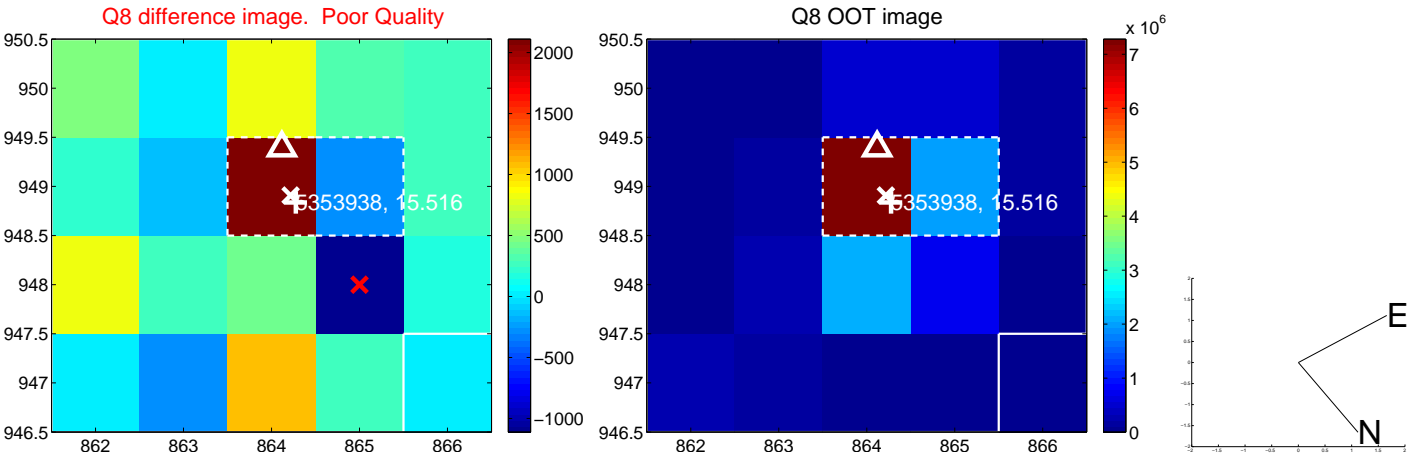
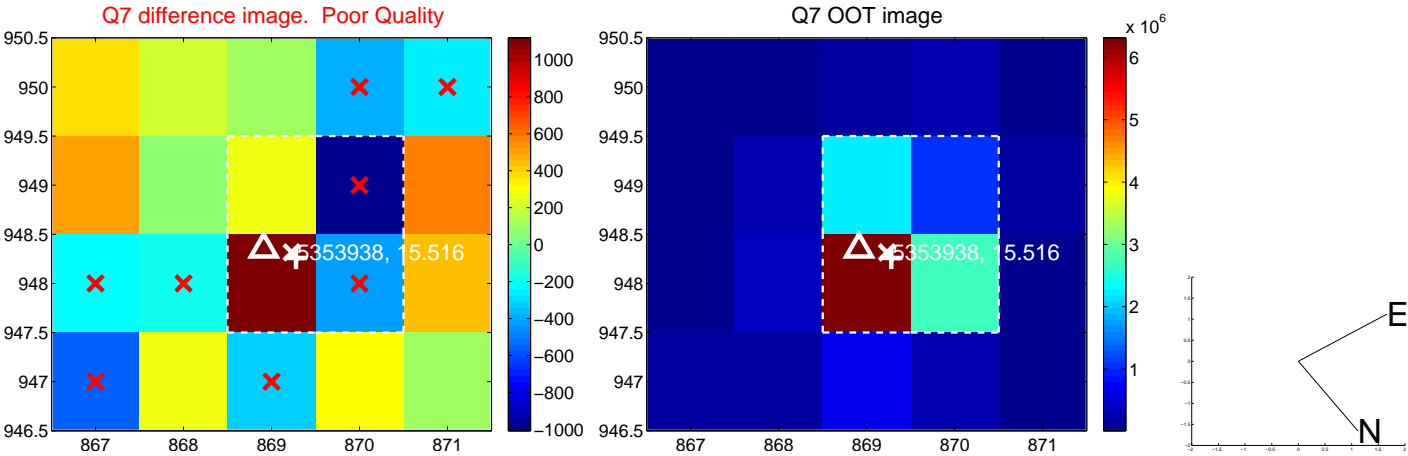
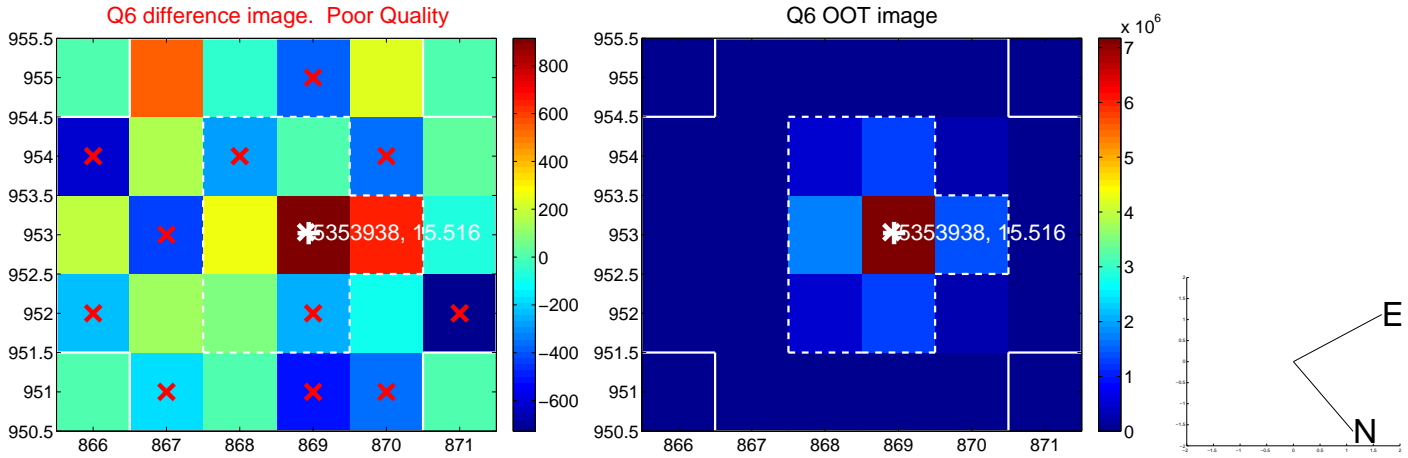
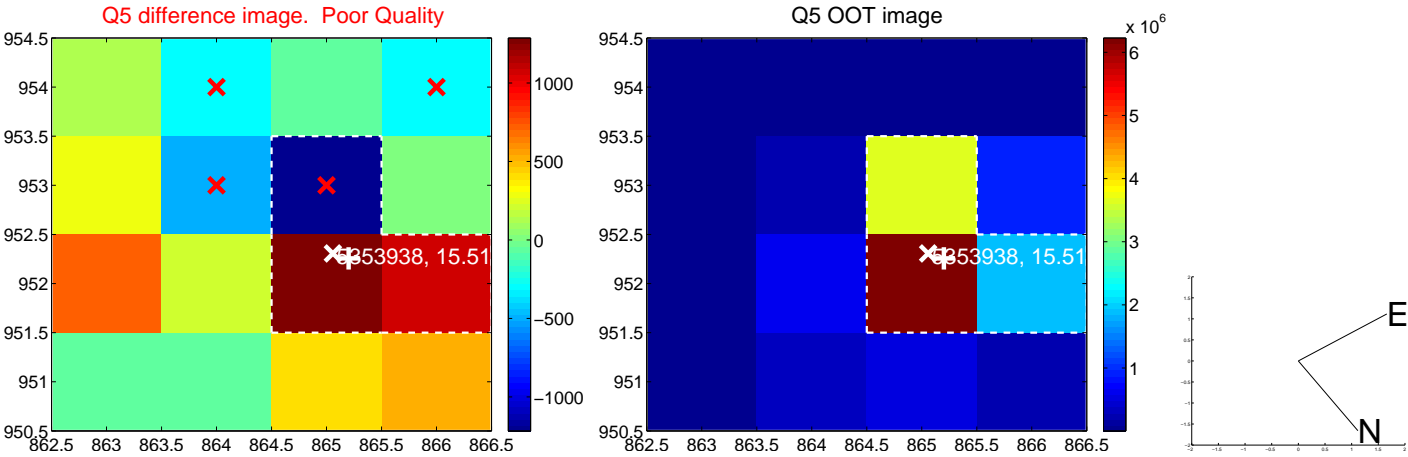


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

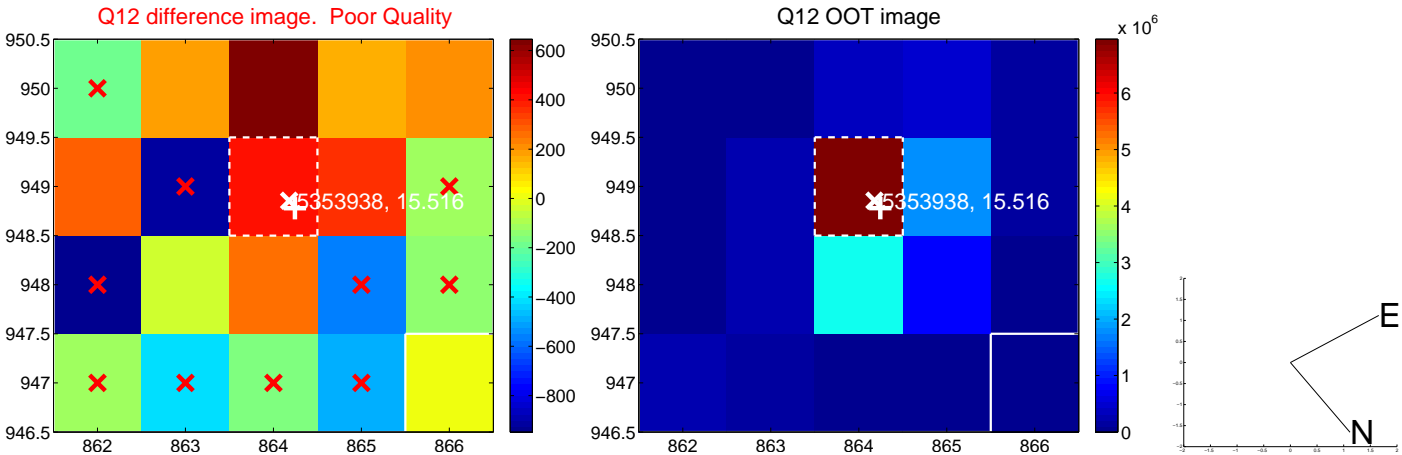
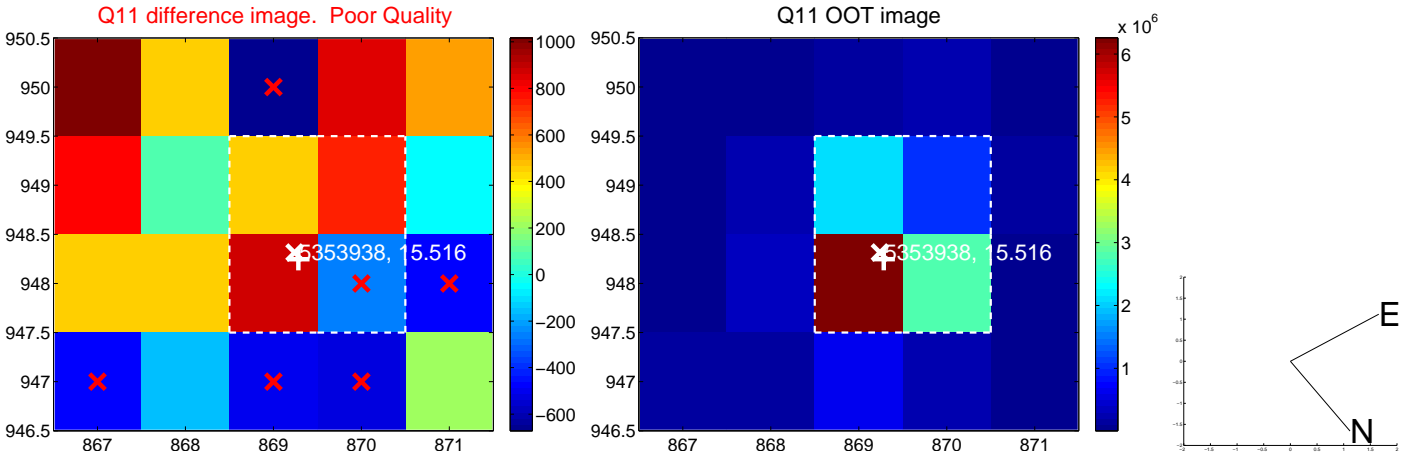
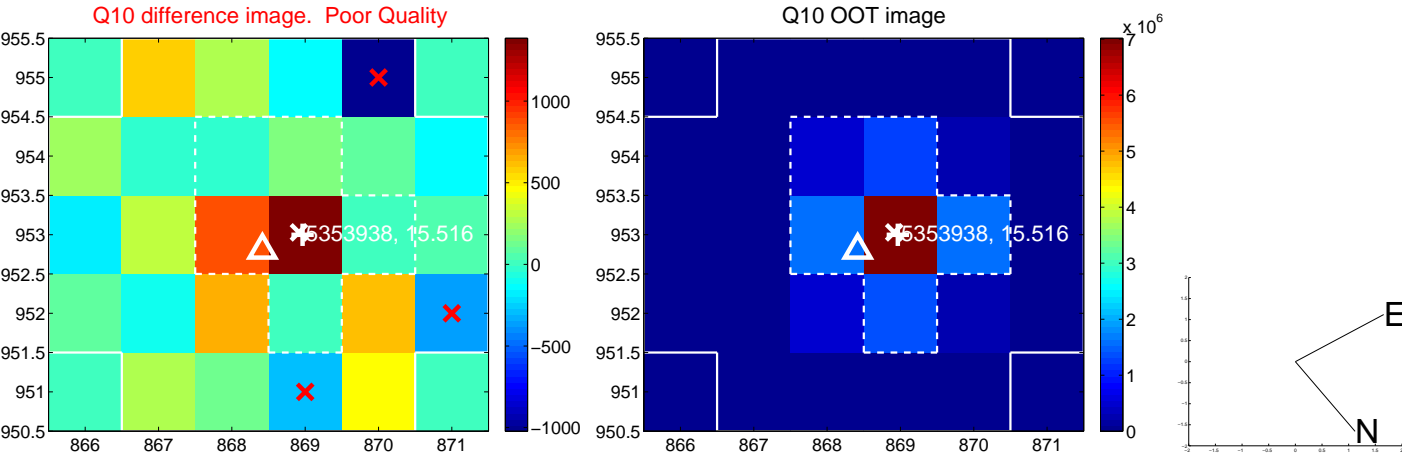
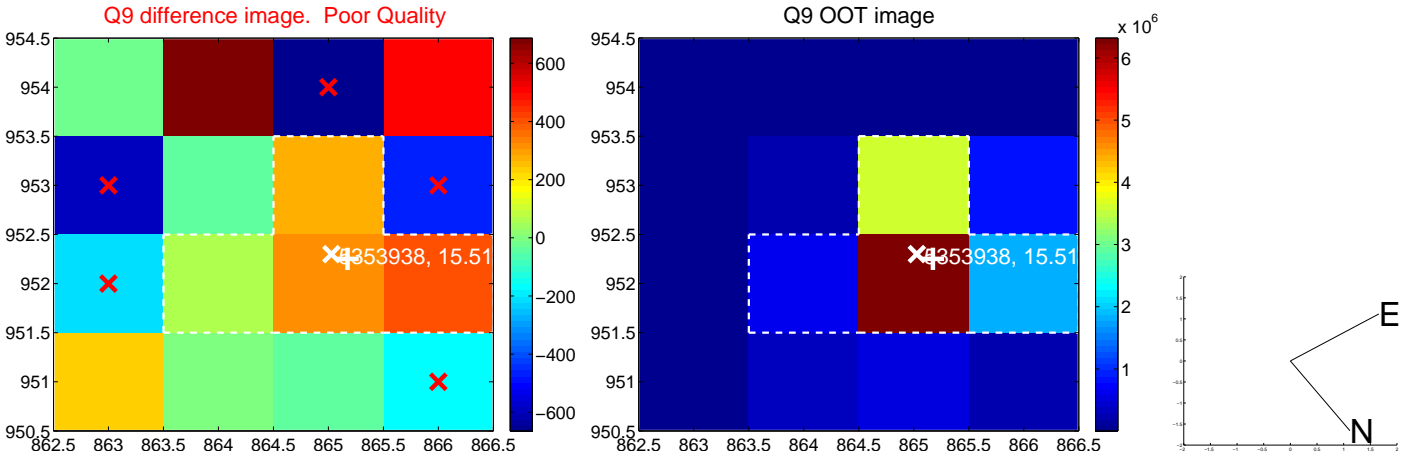
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



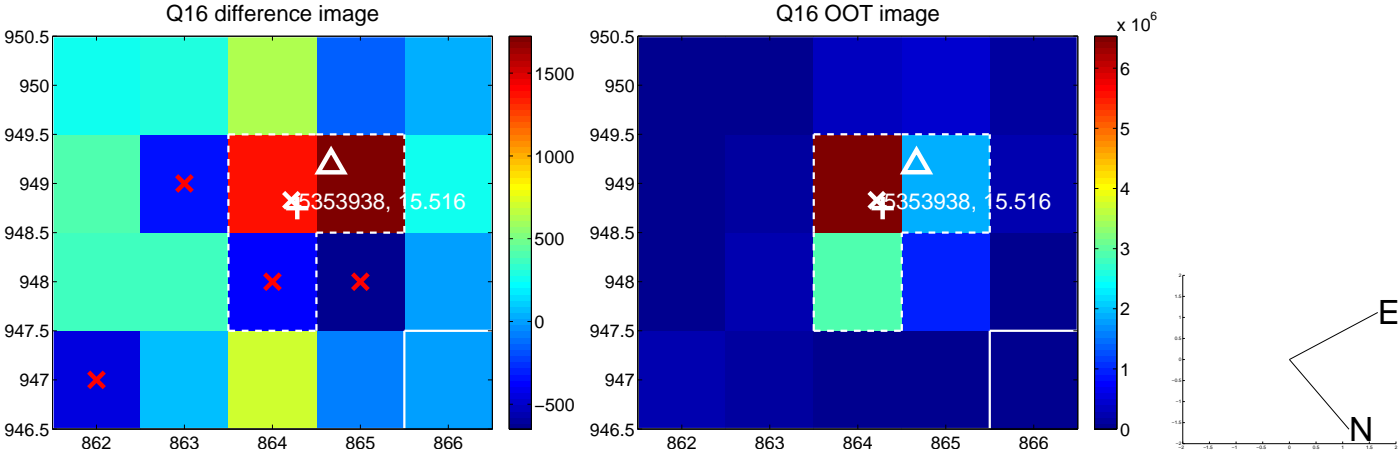
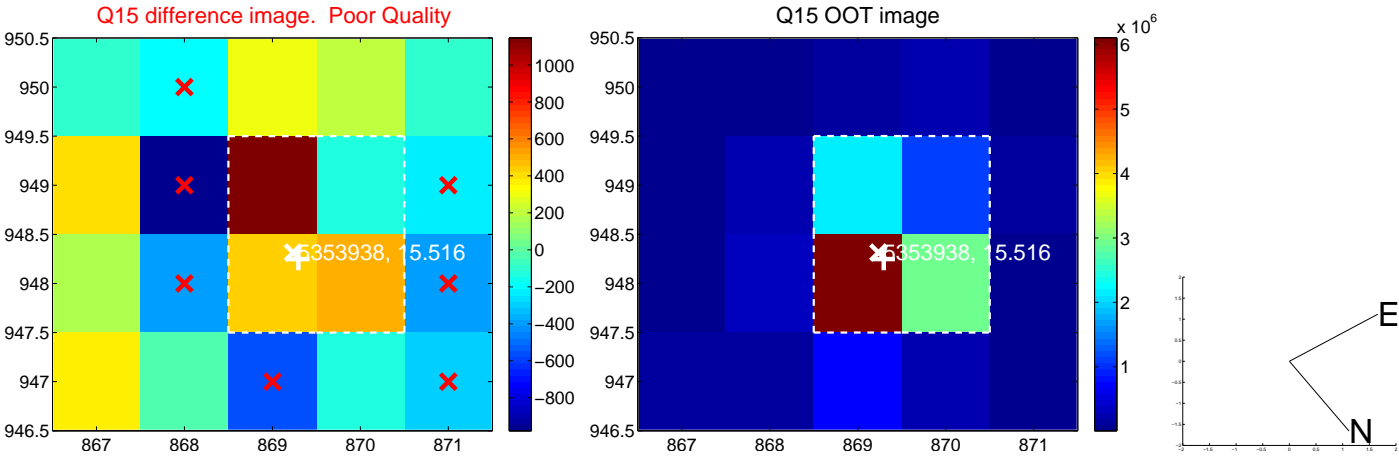
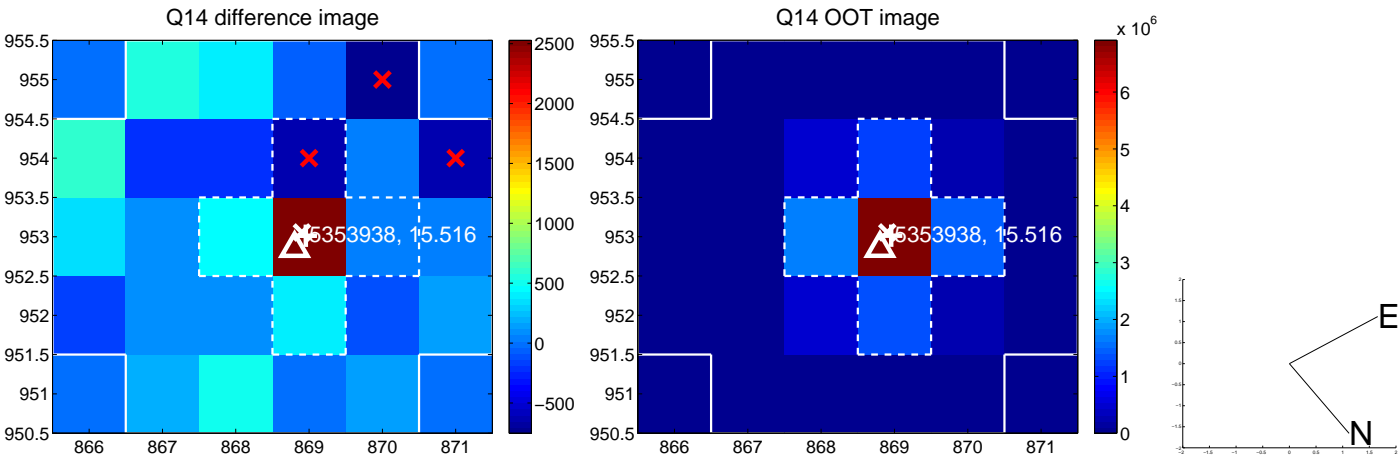
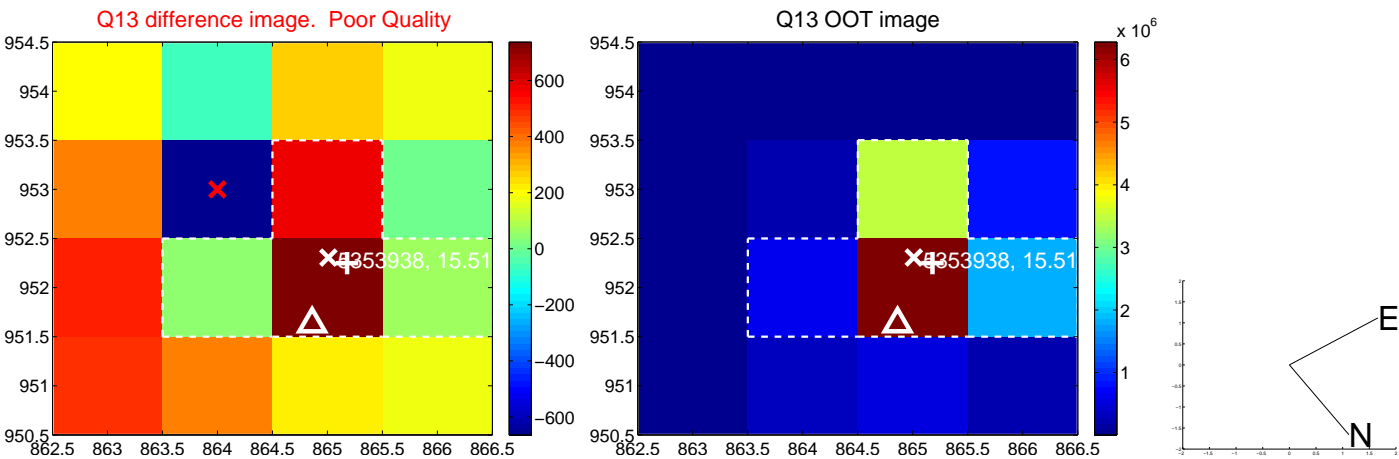
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



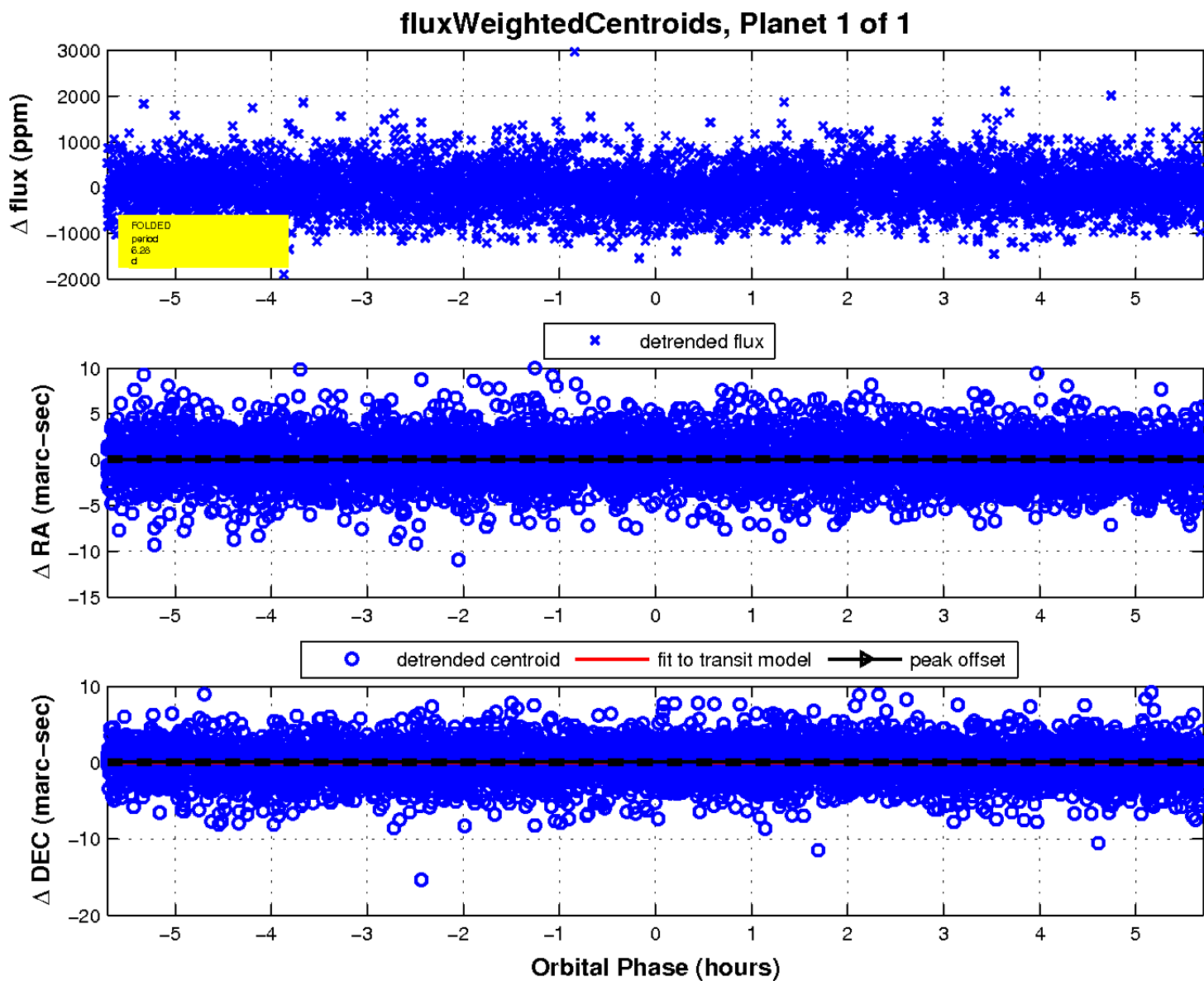
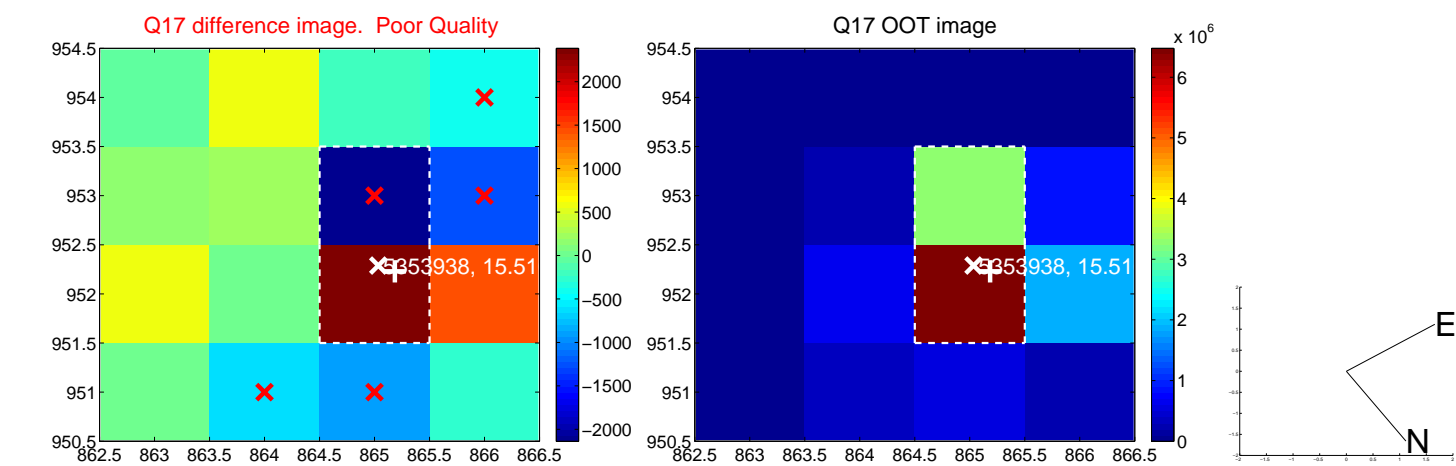
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UKIRT Image

Declination

