

KIC 003245000

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})
003245000-01	OBS	6314.01	20.413851	148.512499	495.0	5.395	7.6	8.7	0.83	5514	2.61	27.89

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003245000-01	OBS	FP	0.00	0	0	1	0	CENT_RESOLVED_OFFSET—HALO_GHOST

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

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

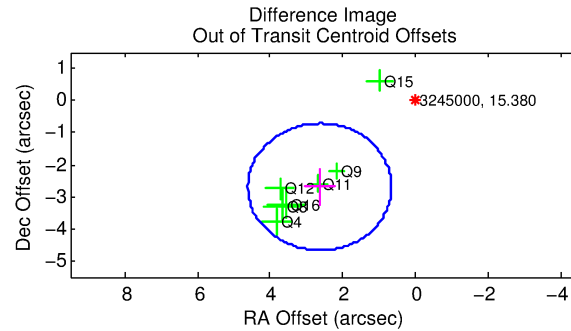
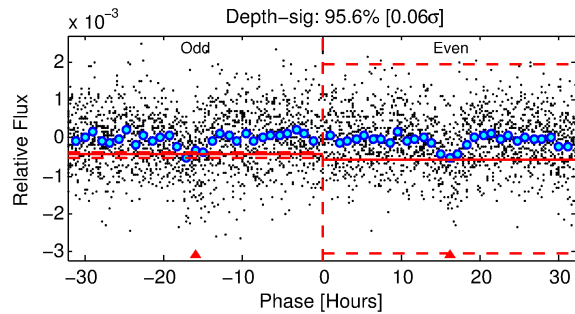
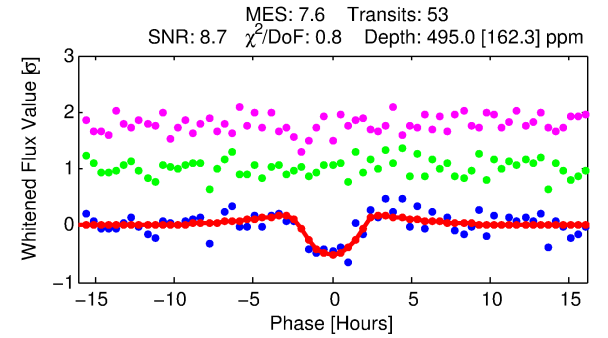
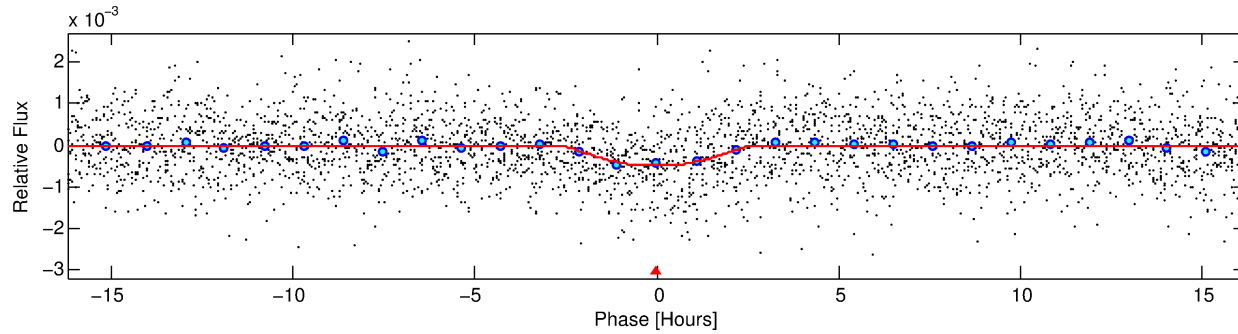
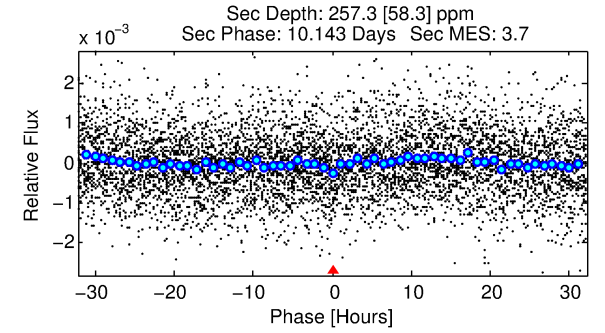
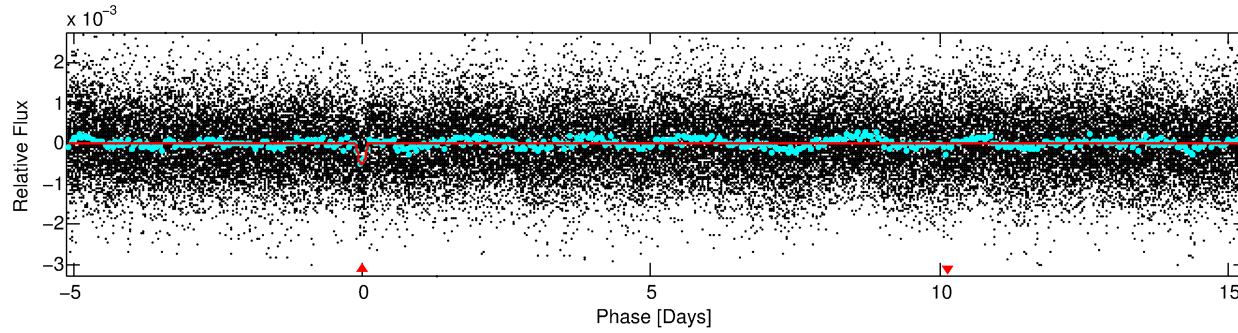
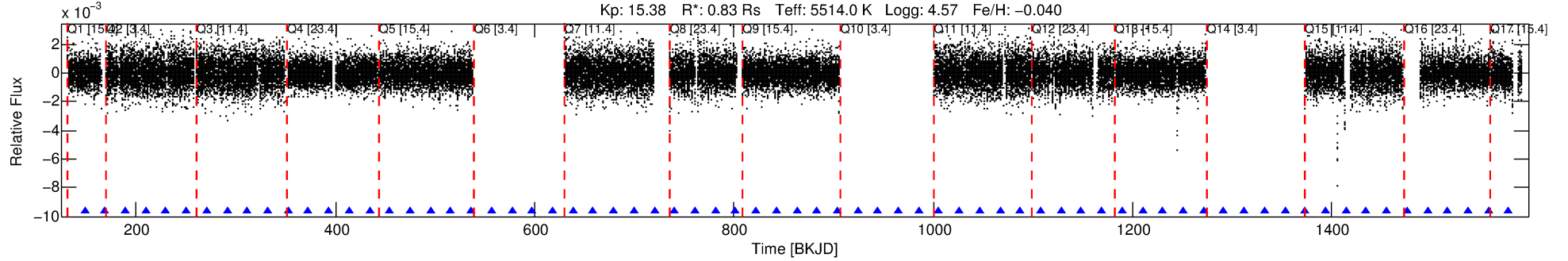
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003245000-01

No Significant Match Found

DV One-Page Summary

KIC: 3245000 Candidate: 1 of 1 Period: 20.414 d
KOI: K06314.01 Corr: 0.804



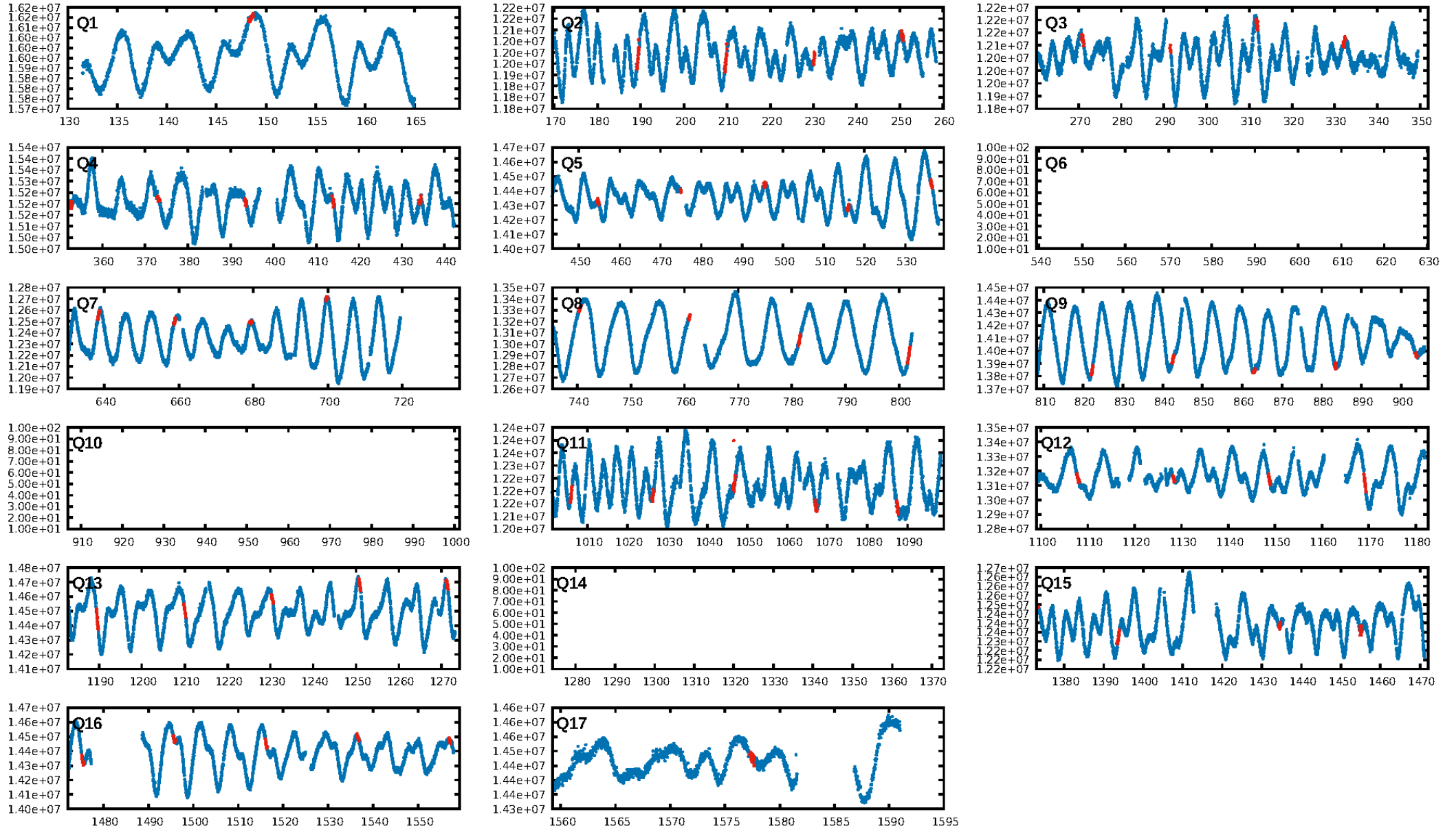
DV Fit Results:

Period = 20.41385 [0.00028] d
Epoch = 148.5125 [0.0111] BKJD
Rp/R* = 0.0289 [0.0121]
a/R* = 9.43 [2.81]
b = 0.98 [0.03]
Seff = 27.89 [8.90]
Teq = 586 [47] K
Rp = 2.61 [1.26] Re
a = 0.1423 [0.0290] AU
Ag = 422.32 [387.03] [1.09σ]
Teffp = 4107 [899] K [3.91σ]

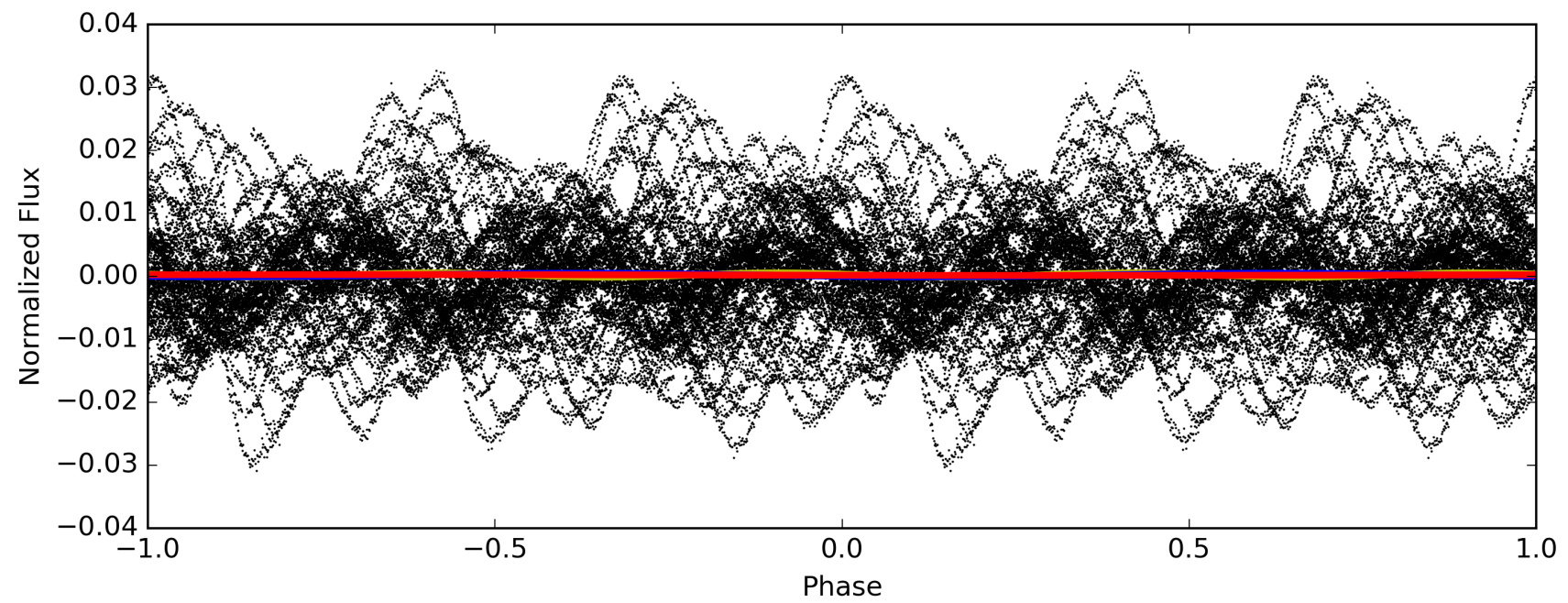
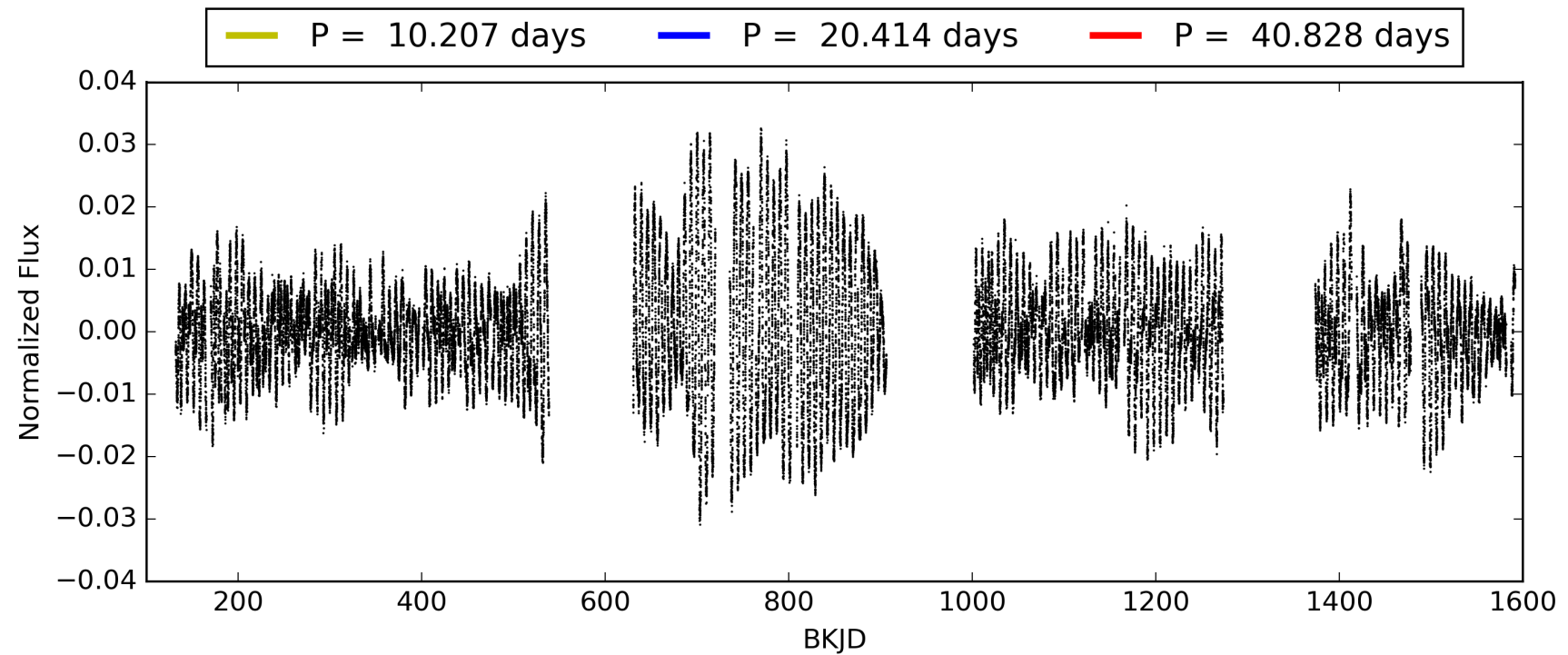
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 98.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.08e-14
RollingBand-fgt: 1.00 [51/51]
GhostDiagnostic-chr: 0.1813
Centroid-sig: 0.0%
Centroid-so: 5.566 arcsec [5.41σ]
OotOffset-rm: 3.768 arcsec [5.72σ]
KicOffset-rm: 3.448 arcsec [5.54σ]
OotOffset-st: 0/2/4/1 [7]
KicOffset-st: 0/2/4/1 [7]
DiffImageQuality-fgm: 0.71 [5/7]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 003245000-01, PDC Light Curves

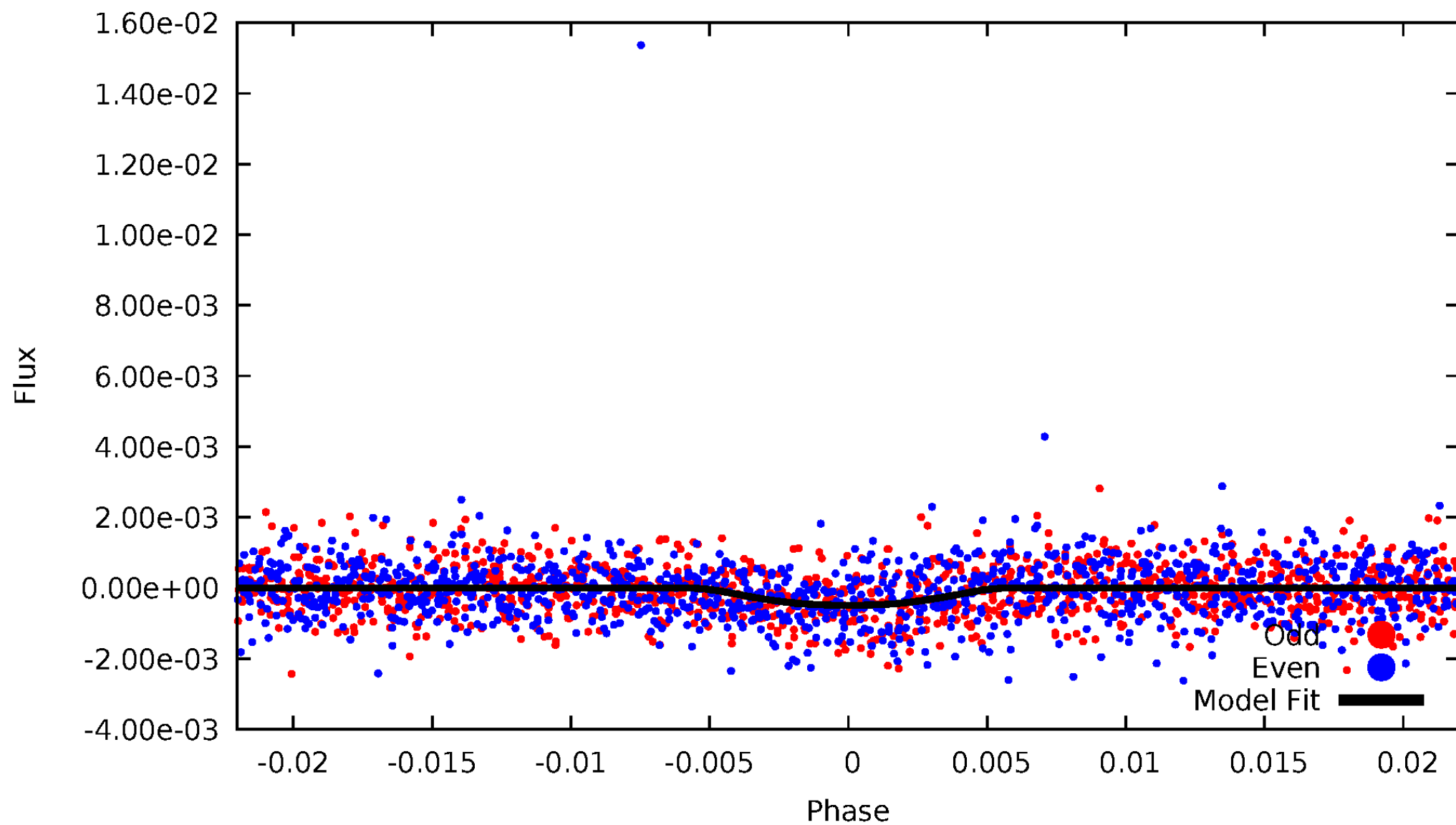


TCE 003245000-01



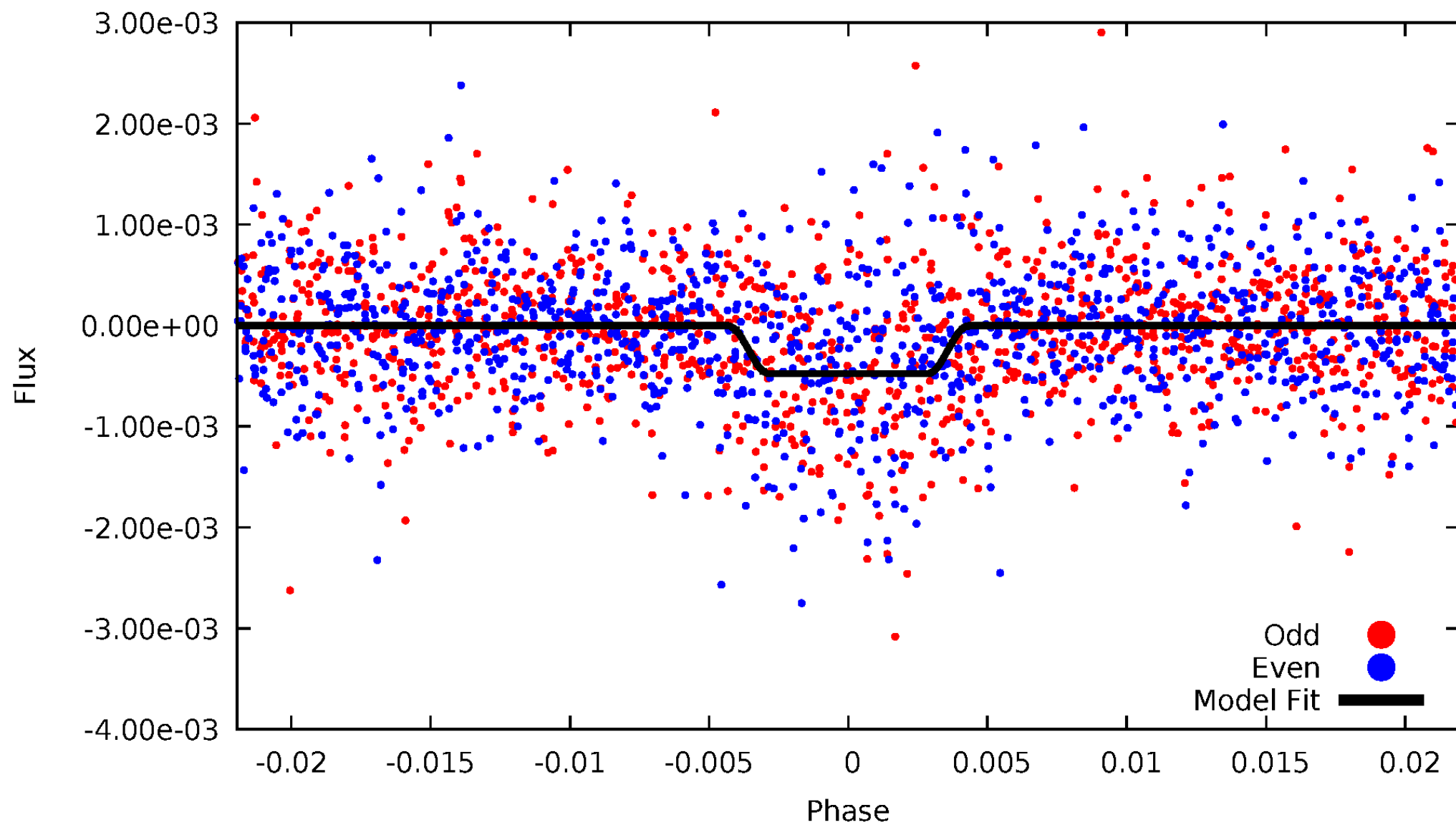
DV Odd/Even

TCE 003245000-01

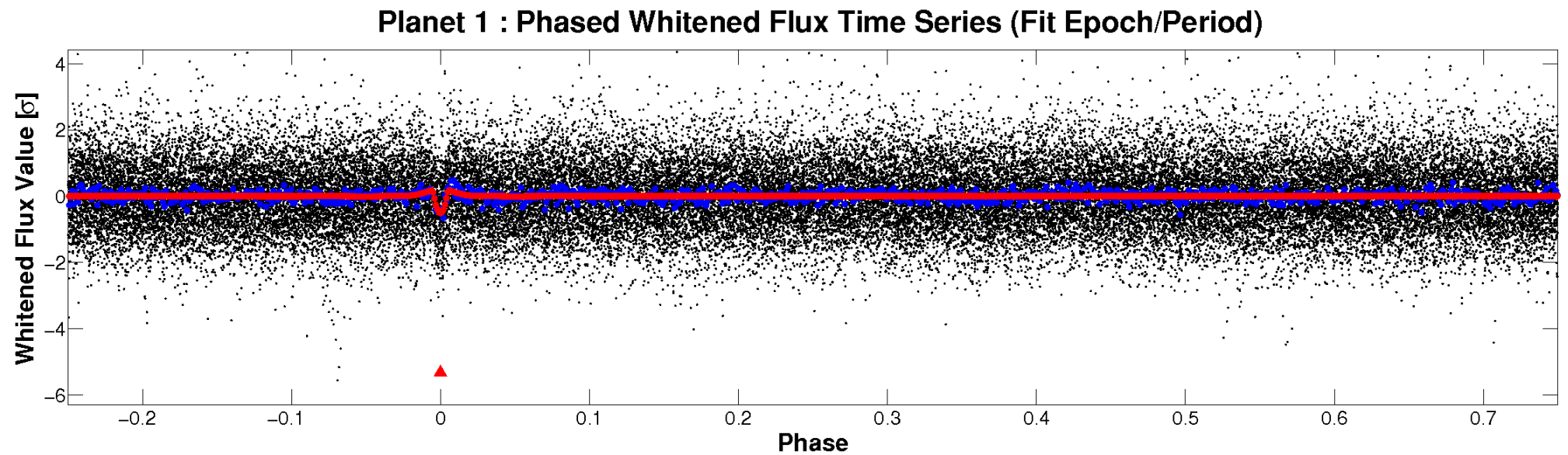
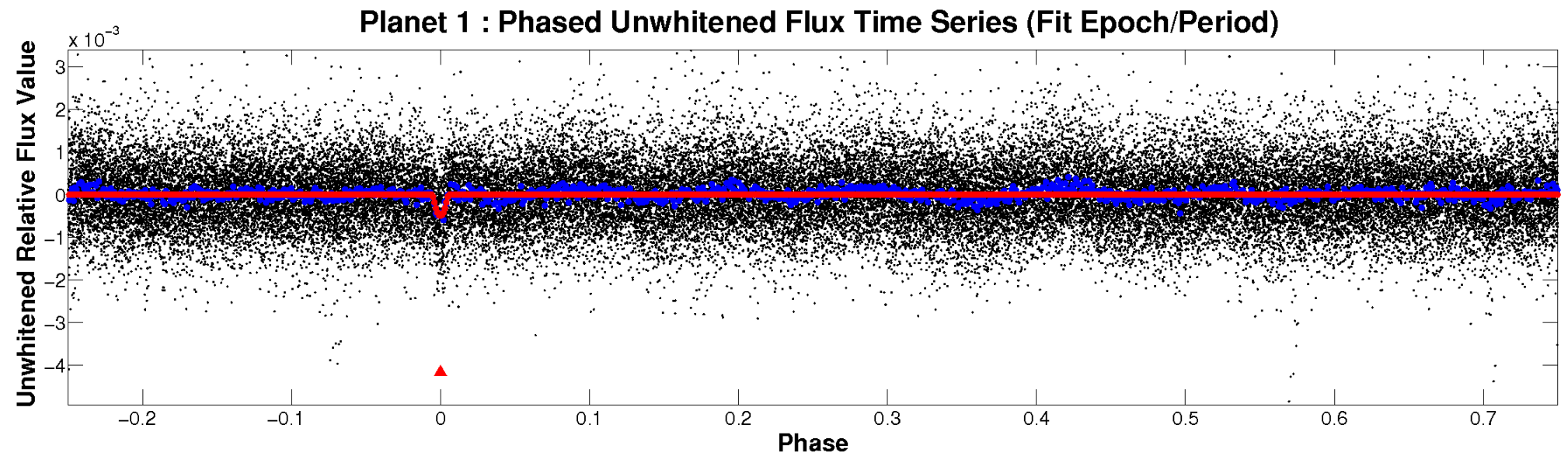


ALT Odd/Even

TCE 003245000-01

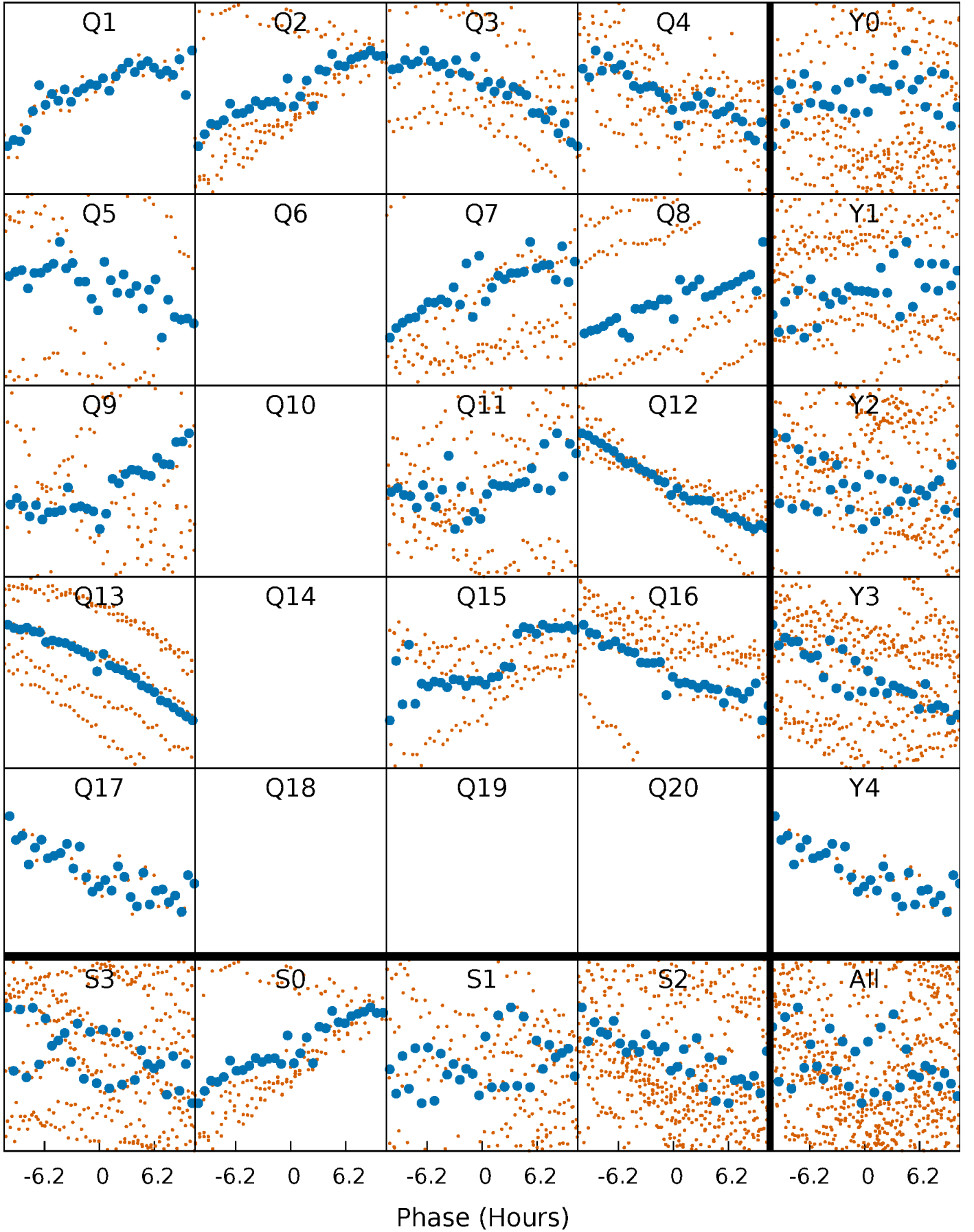


Non-Whitened Vs. Whitened Light Curve



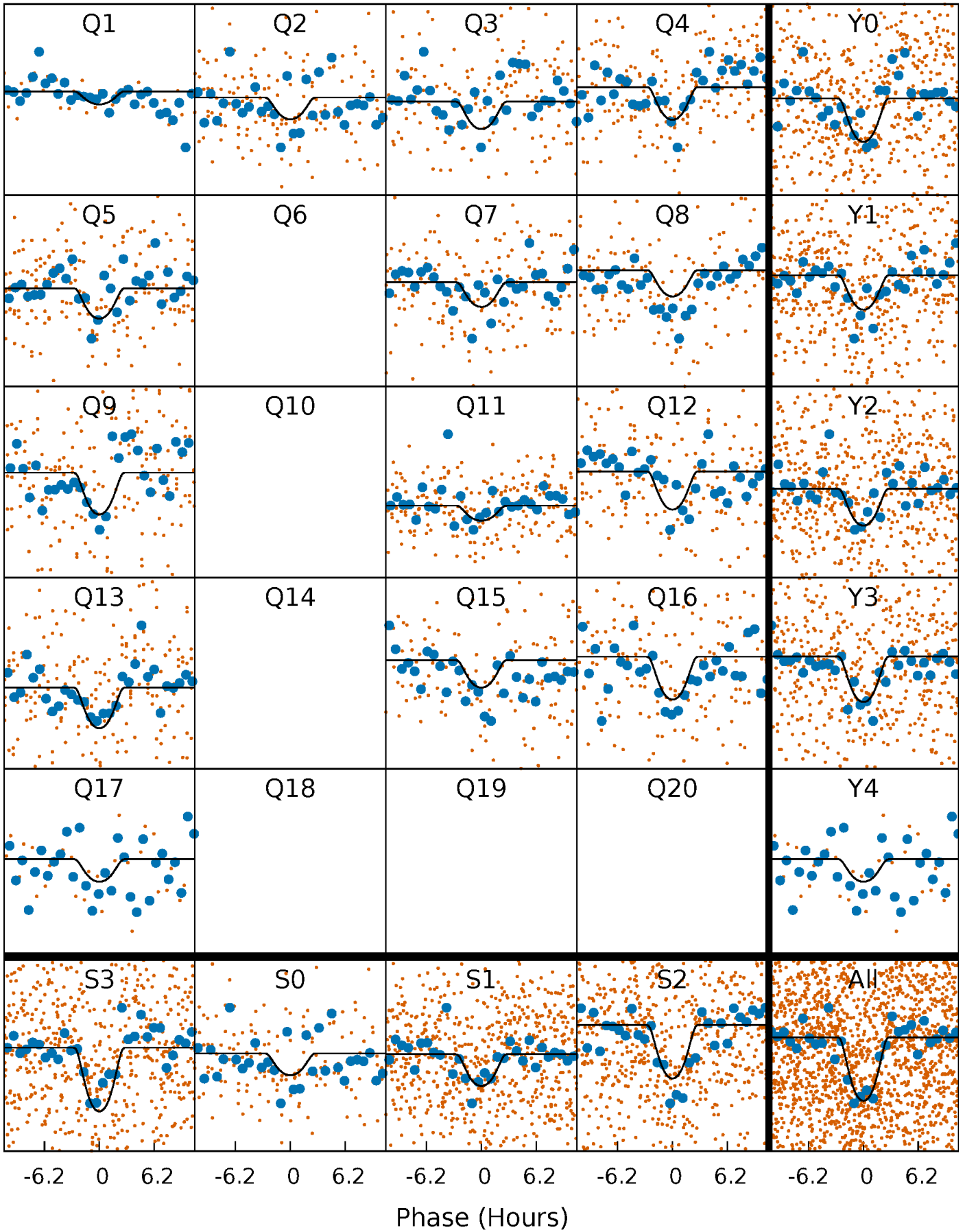
PDC Quarter-Phased Transit Curves

TCE 003245000-01 P= 20.413851 Days $T_0=148.512499$ (BKJD)



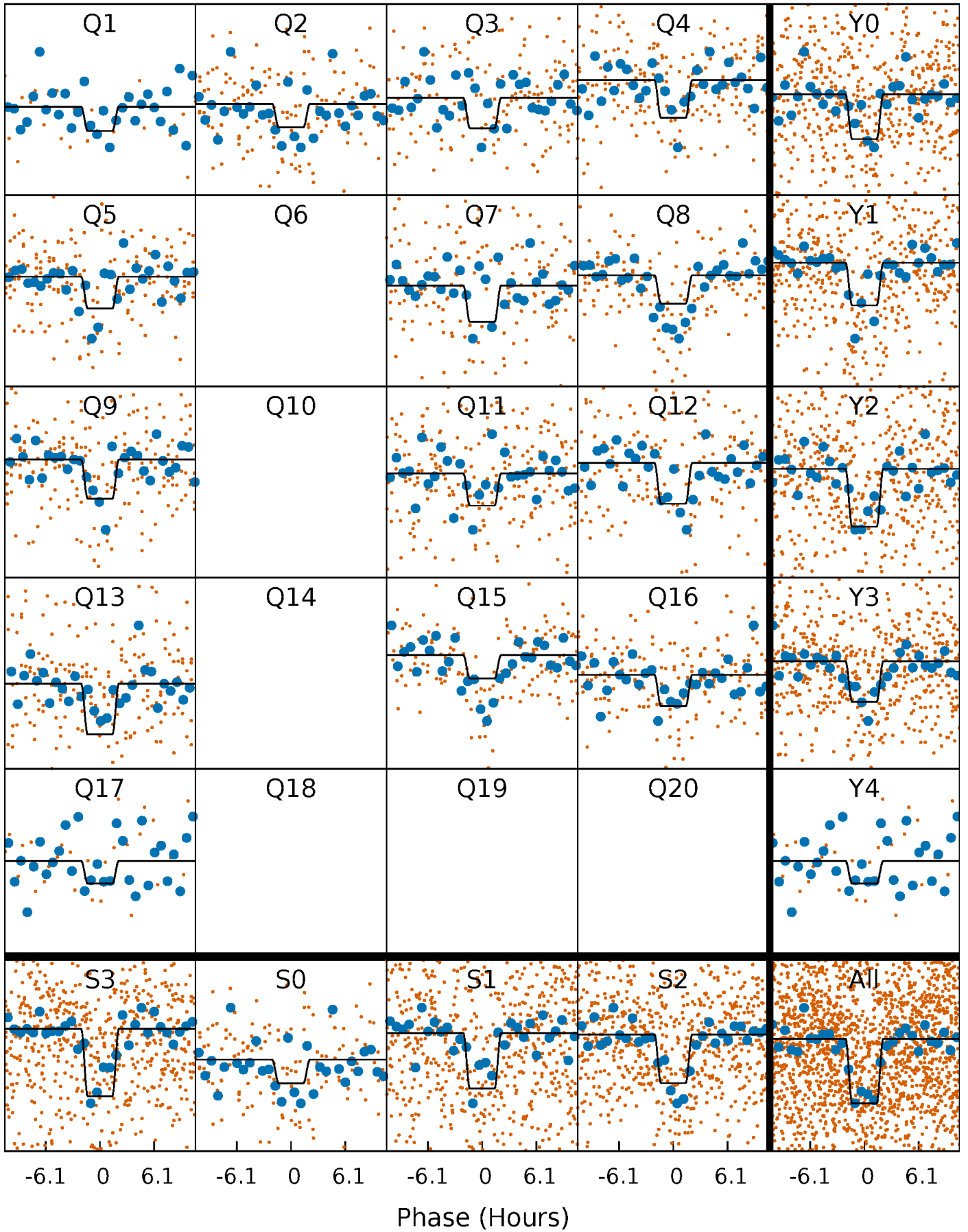
DV Quarter-Phased Transit Curves

TCE 003245000-01 P= 20.413851 Days $T_0=148.512499$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

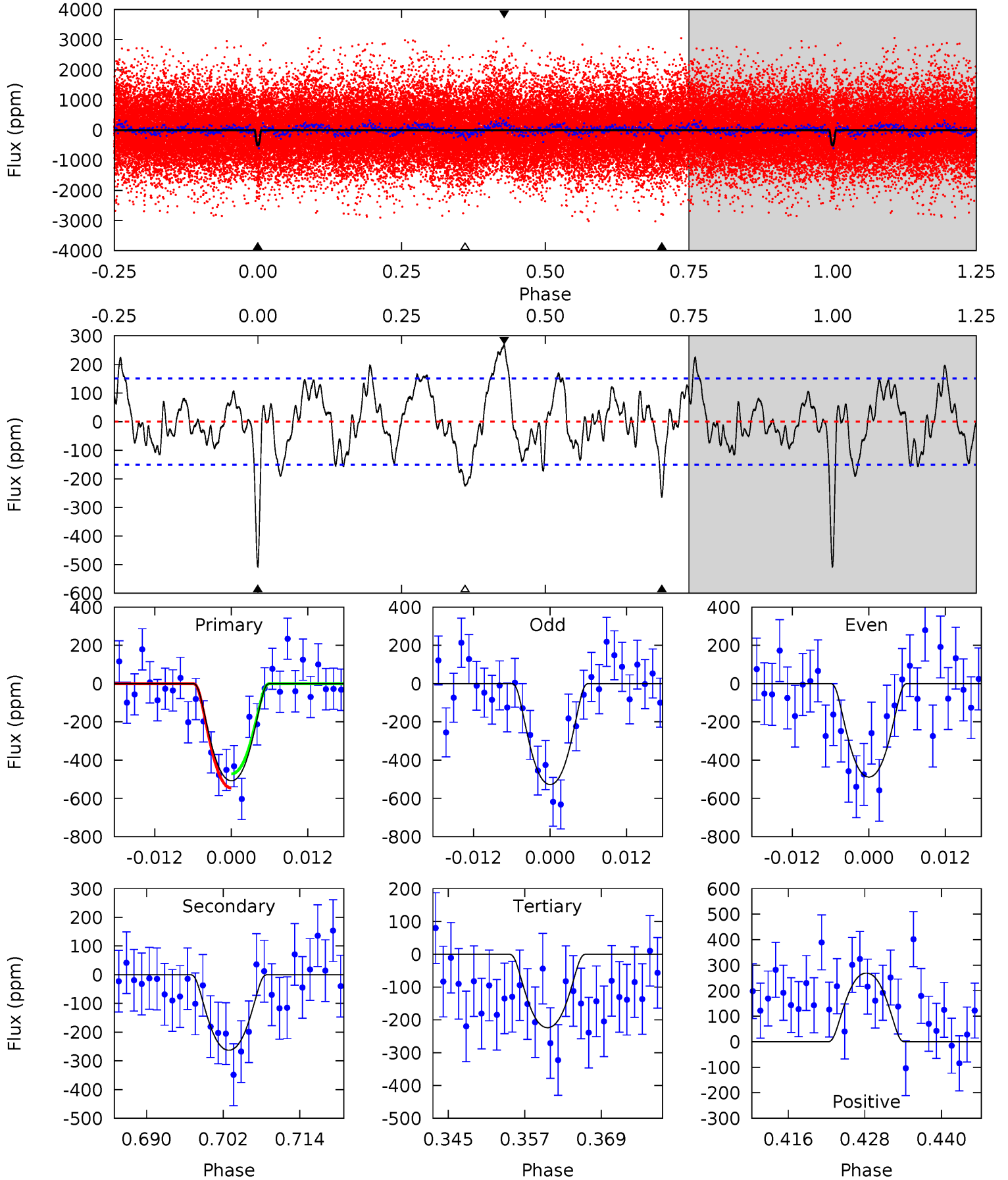
TCE 003245000-01 P= 20.413970 Days $T_0=148.511593$ (BKJD)



DV Model-Shift Uniqueness Test

003245000-01, P = 20.413851 Days, E = 128.098648 Days

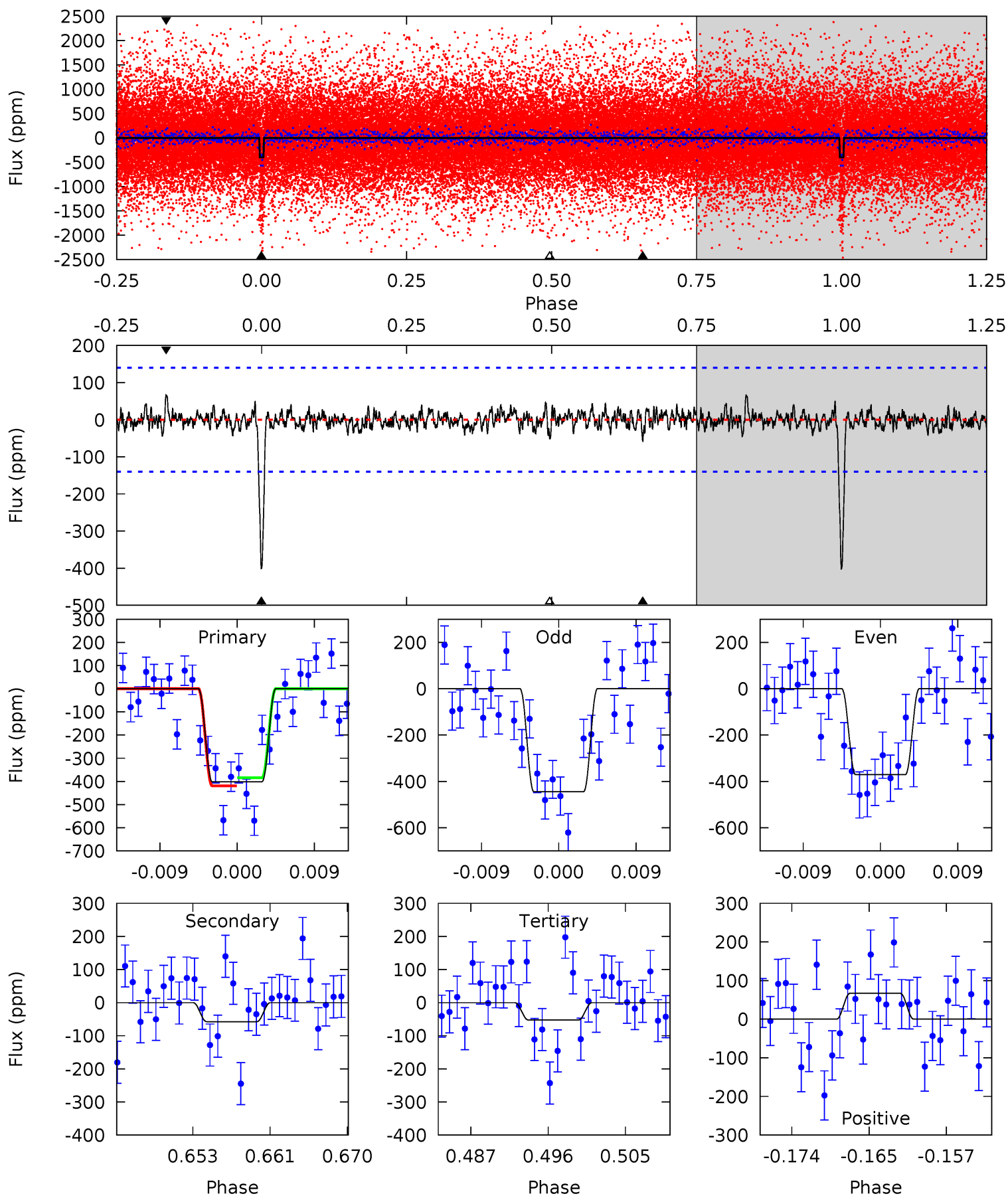
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.8	8.70	7.41	8.90	4.99	2.52	3.08	9.41	7.91	1.29	-0.20	0.65	1.19	0.35	1.23



Alt Model-Shift Uniqueness Test

003245000-01, P = 20.413970 Days, E = 128.097623 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.5	2.08	1.90	2.43	5.05	2.62	0.61	12.6	12.1	0.18	-0.35	1.33	1.08	0.14	0.62



Stellar Parameters For KIC 003245000

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5514^{+166}_{-166}	$4.569^{+0.038}_{-0.161}$	$-0.040^{+0.300}_{-0.300}$	$0.826^{+0.201}_{-0.067}$	$0.926^{+0.083}_{-0.102}$	$2.312^{+0.461}_{-1.015}$
	+3%/-3%	+1%/-4%	+750%/-750%	+24%/-8%	+9%/-11%	+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 003245000-01 / KOI 6314.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-263 ± 30	$2.73^{+1.18}_{-1.02}$	832^{+47}_{-35}	4283^{+985}_{-483}	383^{+620}_{-192}
Alt.	-58 ± 28	$2.09^{+1.25}_{-1.00}$	835^{+50}_{-36}	3596^{+1013}_{-557}	133^{+385}_{-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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

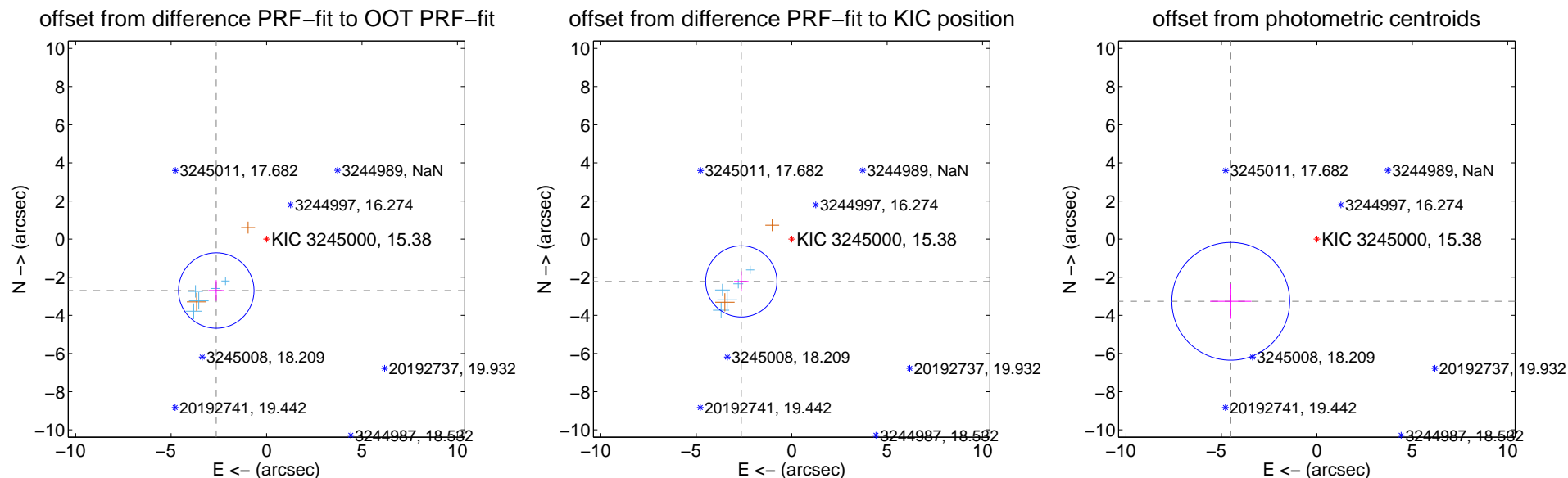
DV Centroid Data

Supplemental centroid analysis for 003245000-01. Kepler magnitude: 15.38. Transit SNR 8.67

There are 5 quarters with good PRF difference image offsets

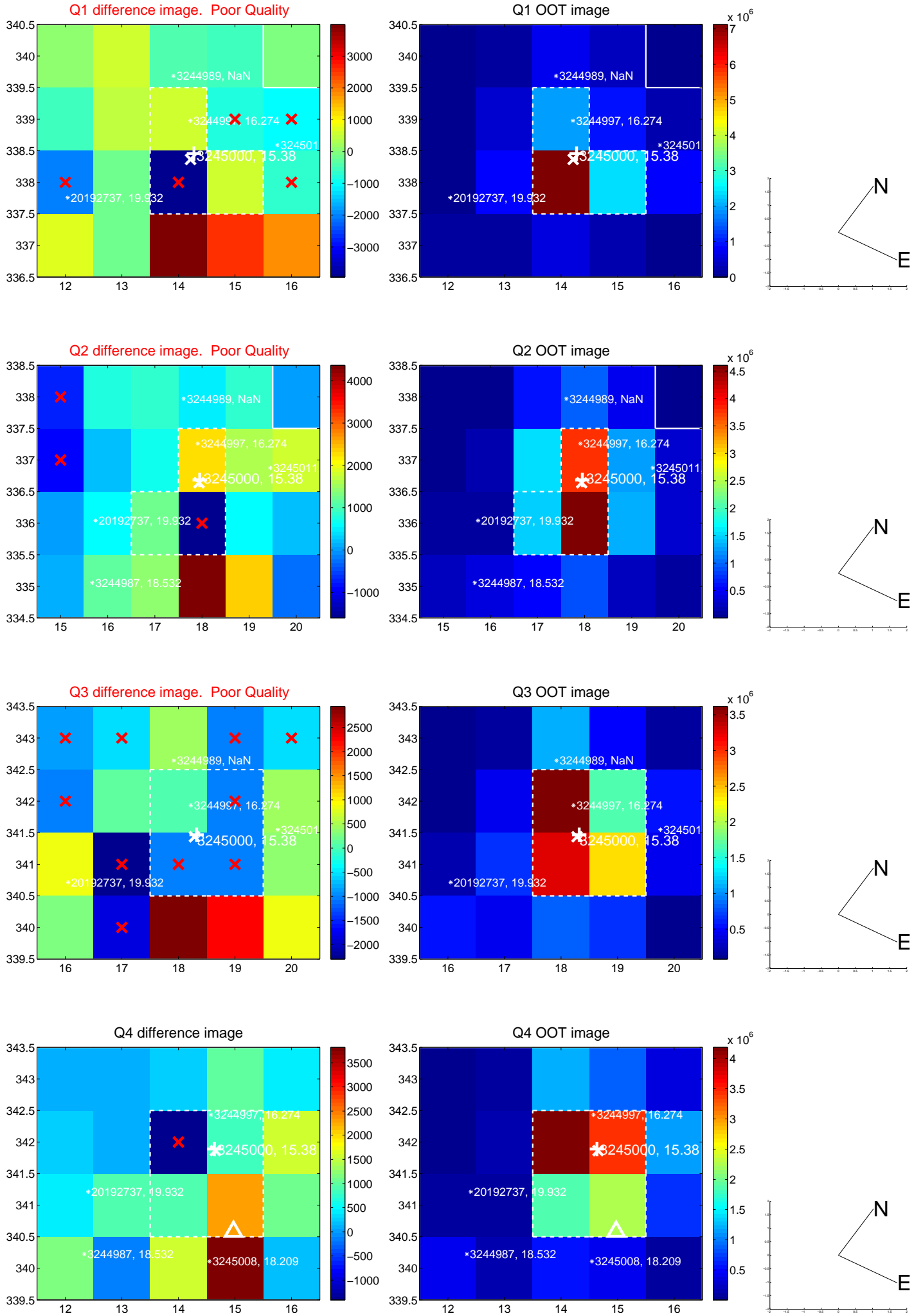
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.768 ± 0.659	5.72	2.635 ± 0.406	-2.694 ± 0.544
PRF-fit source offset from KIC position	3.448 ± 0.622	5.54	2.641 ± 0.378	-2.217 ± 0.530
photometric centroid source offset	5.57 ± 1.03	5.41	4.51 ± 1.08	-3.26 ± 0.91

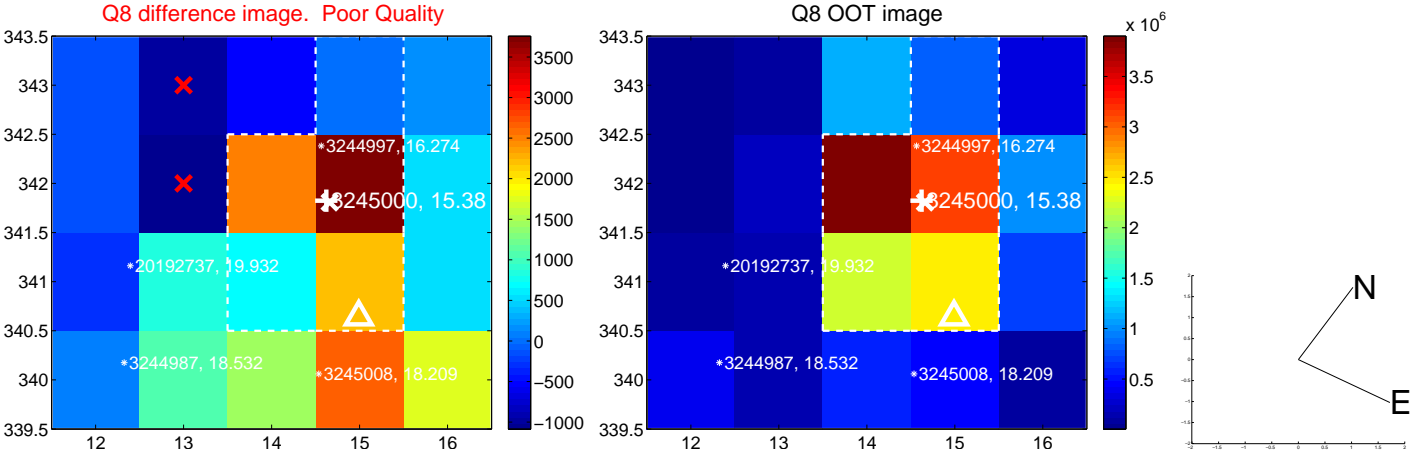
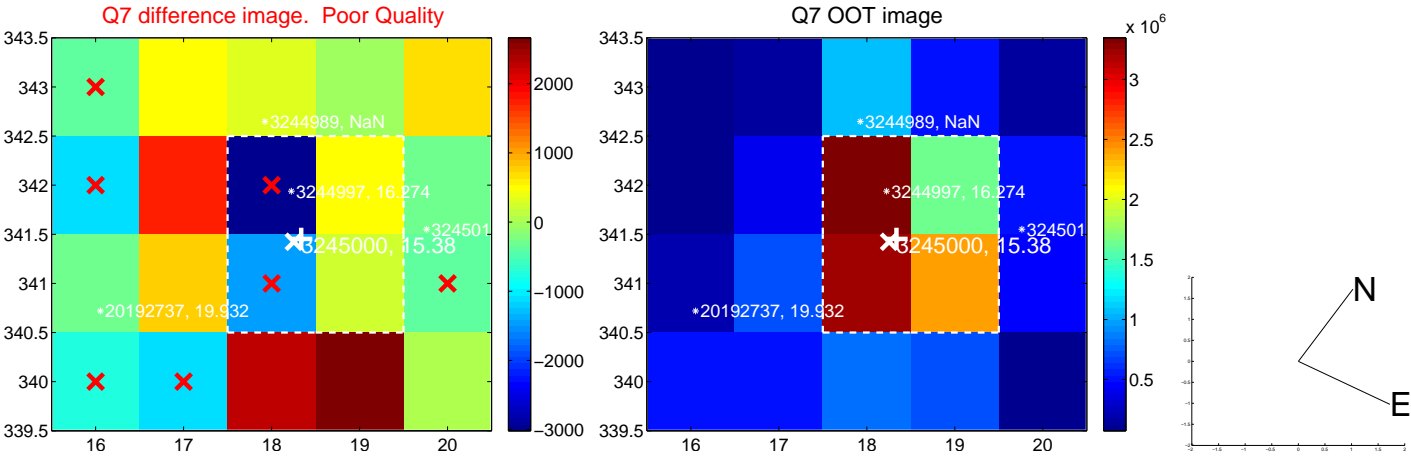
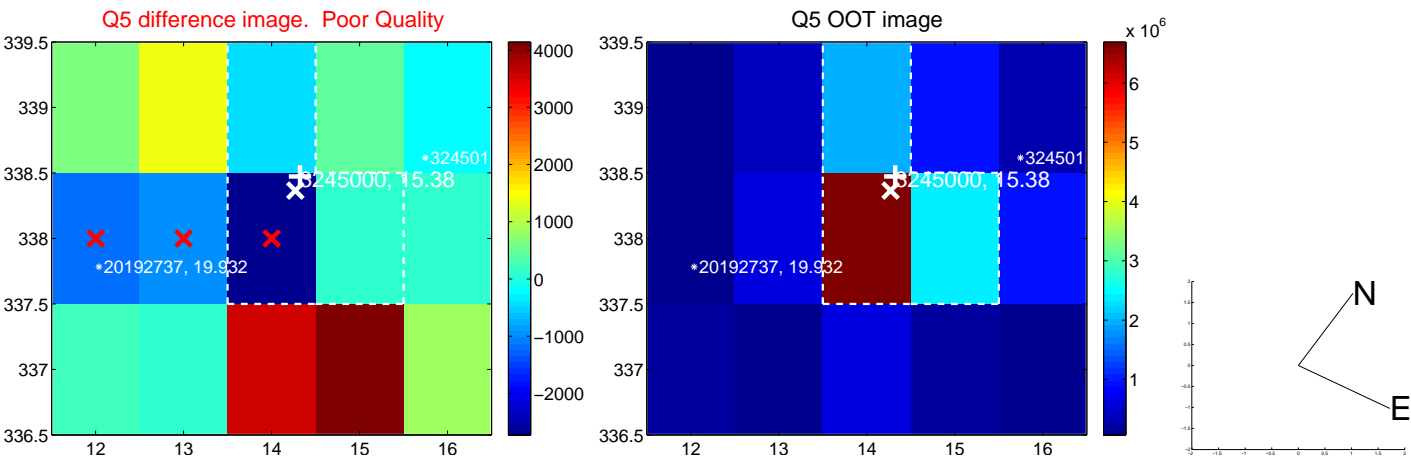


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

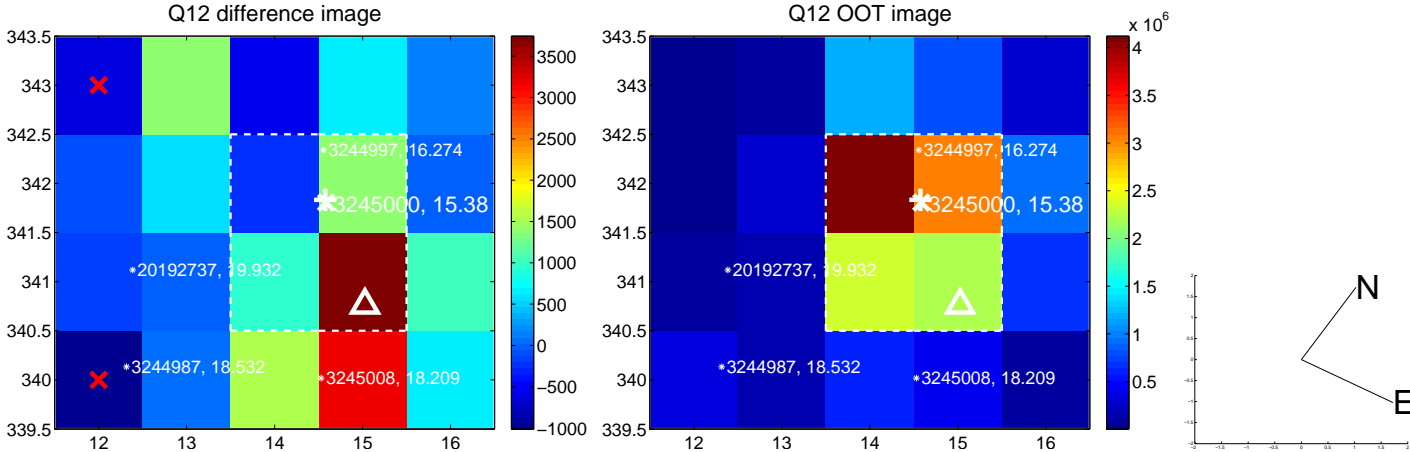
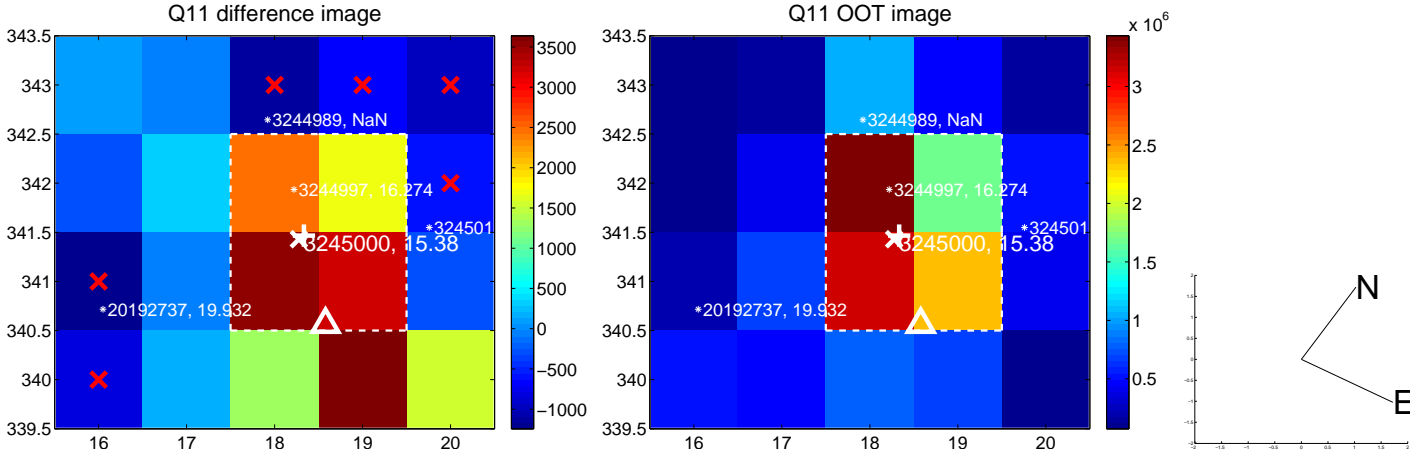
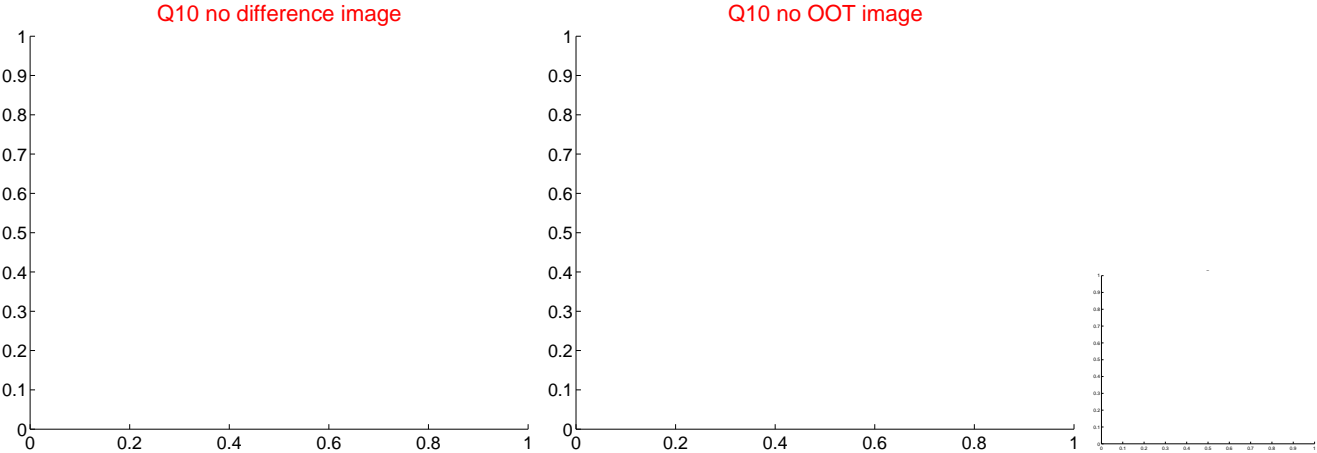
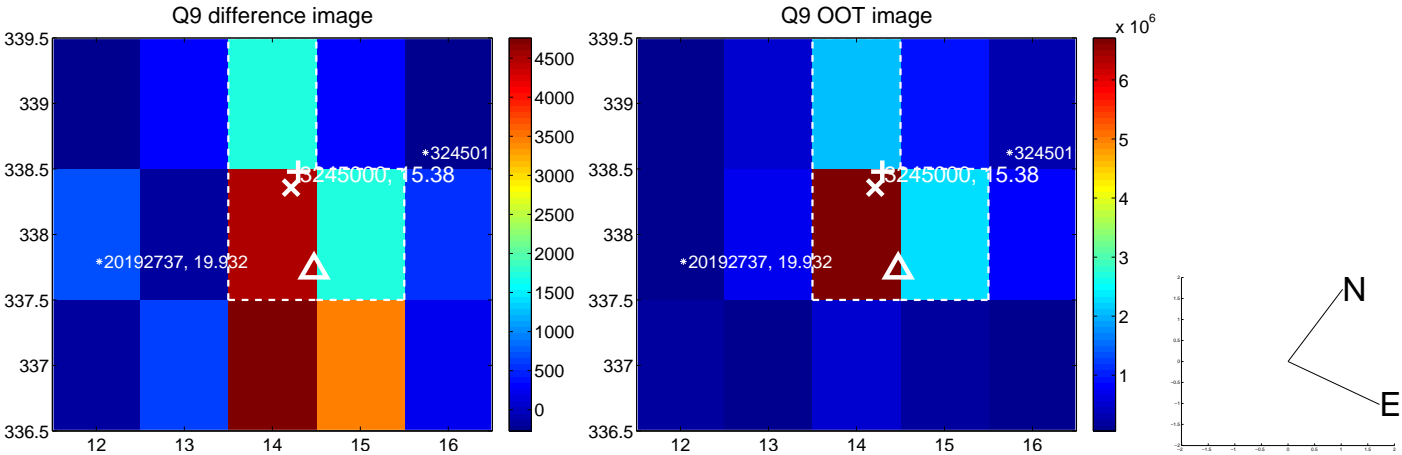
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



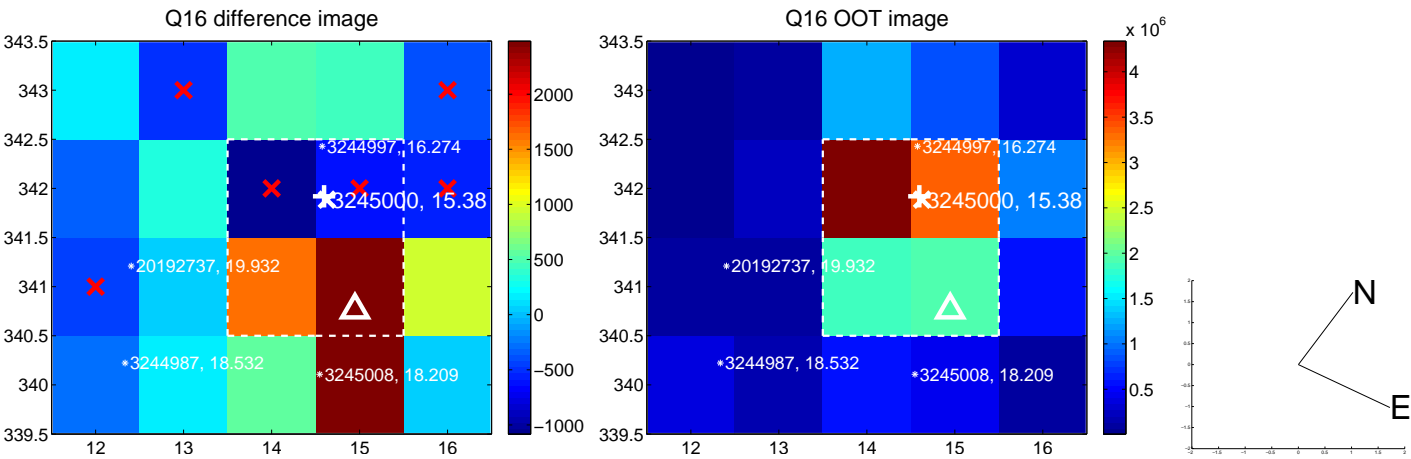
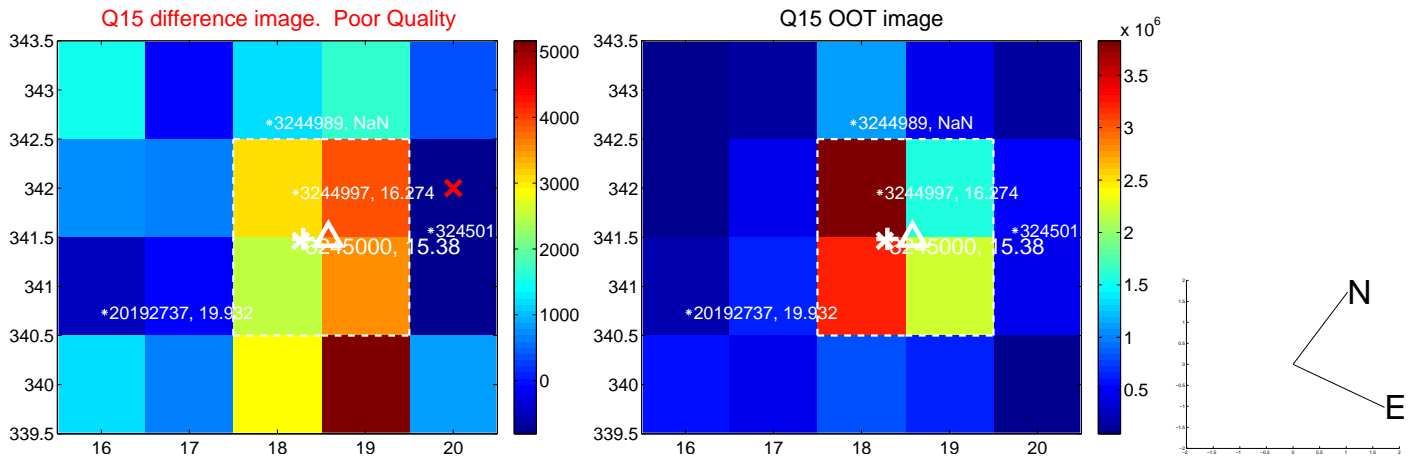
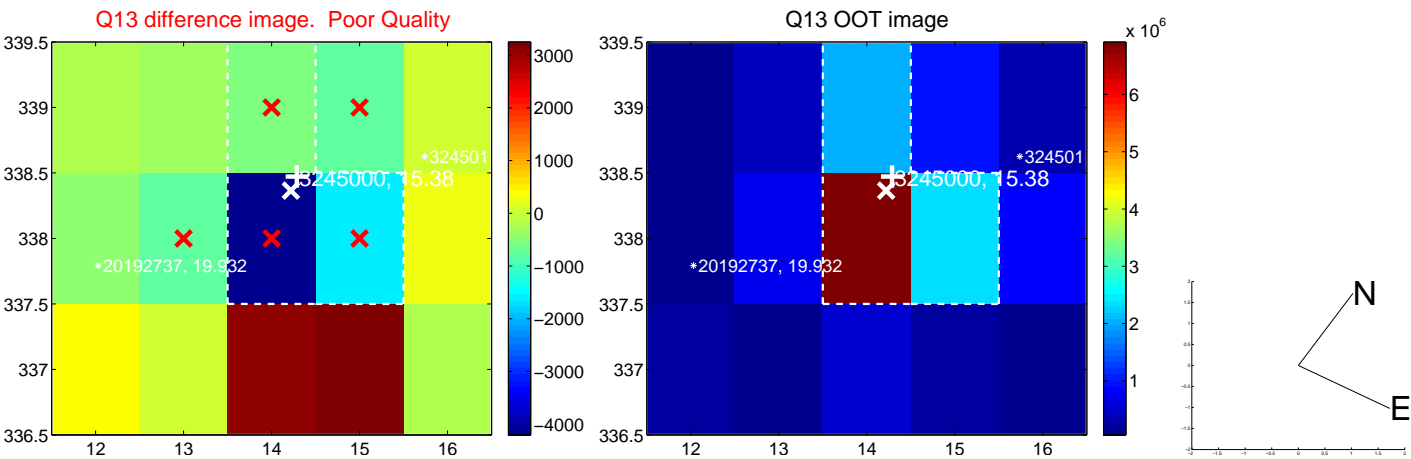
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



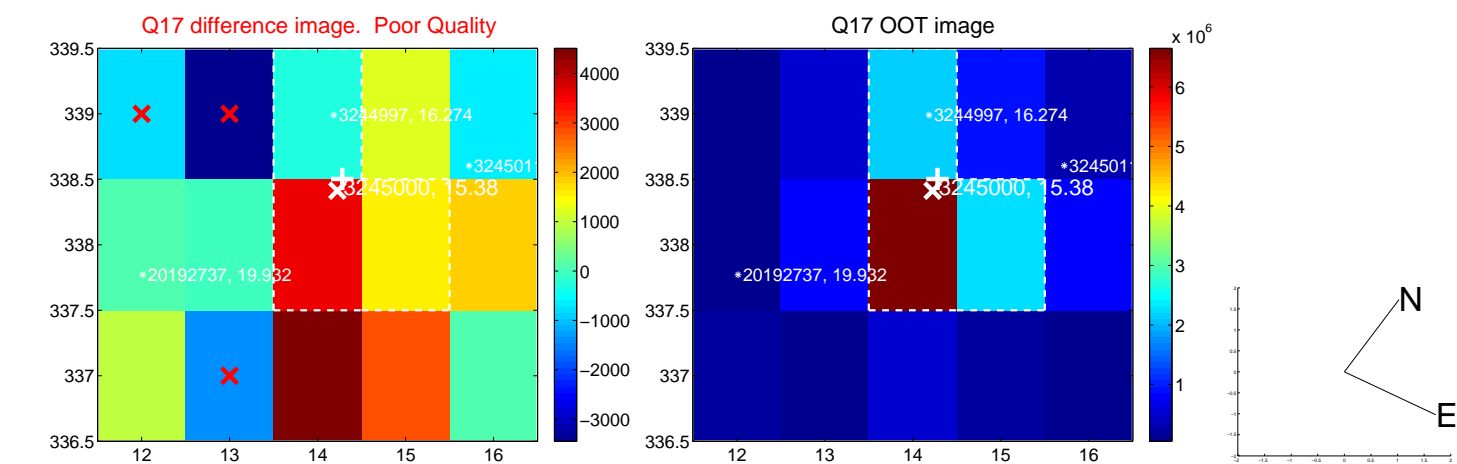
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



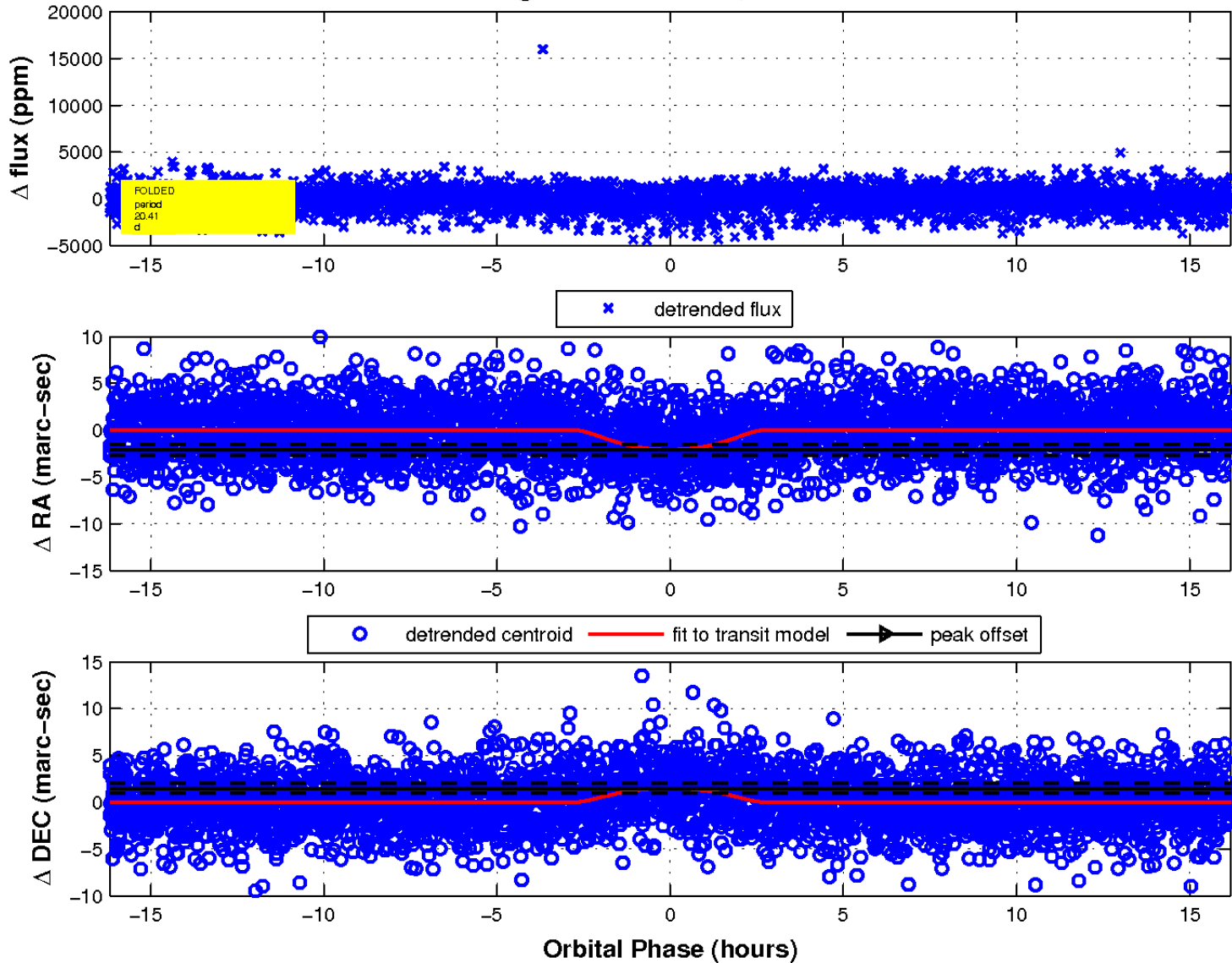
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

