

KIC 009963265

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})
009963265-01	OBS	2299.01	16.486895	139.202066	948.8	1.201	17.8	22.0	1.07	6090	3.96	79.14

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009963265-01	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.

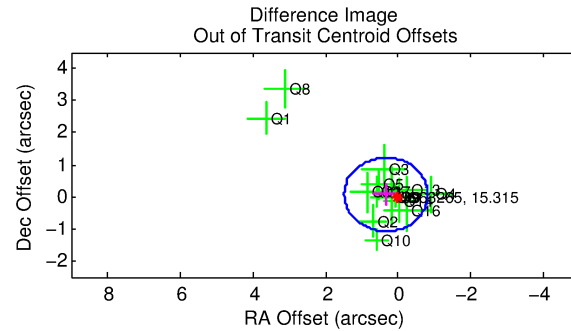
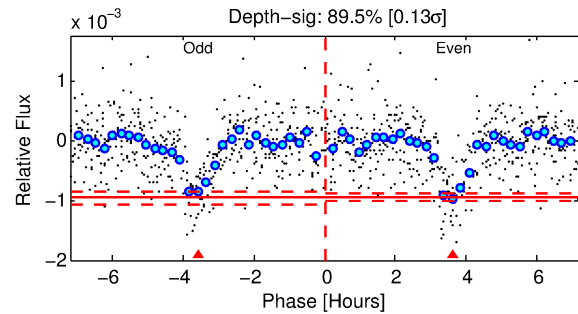
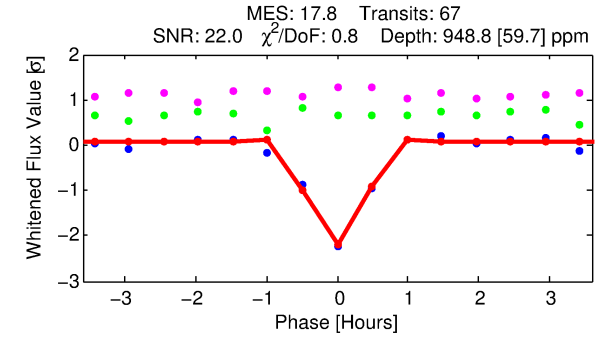
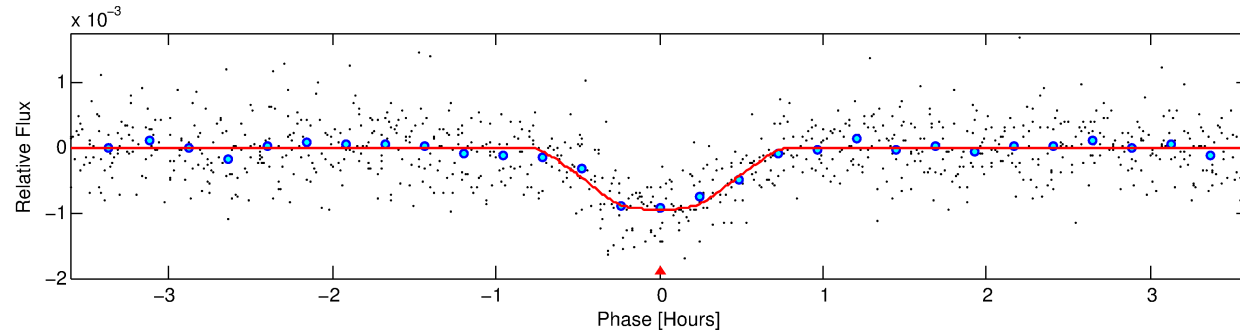
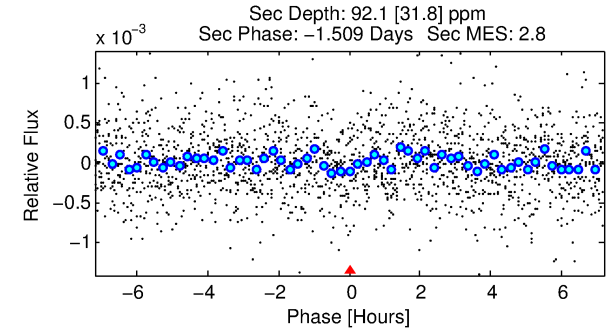
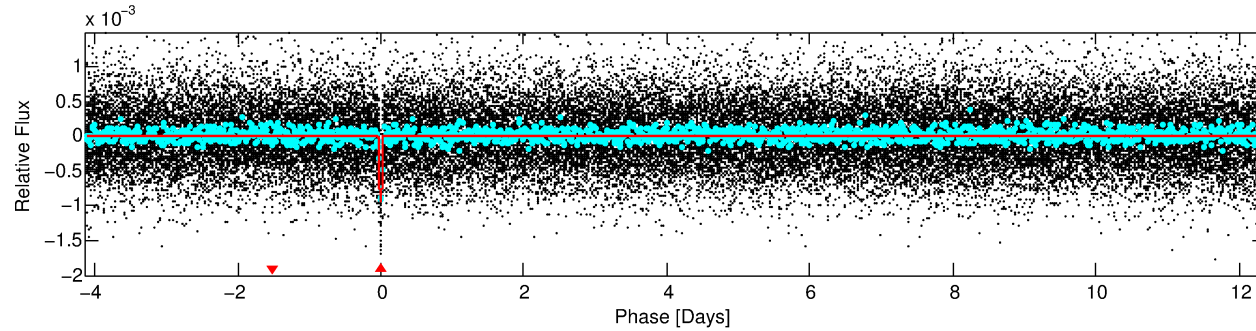
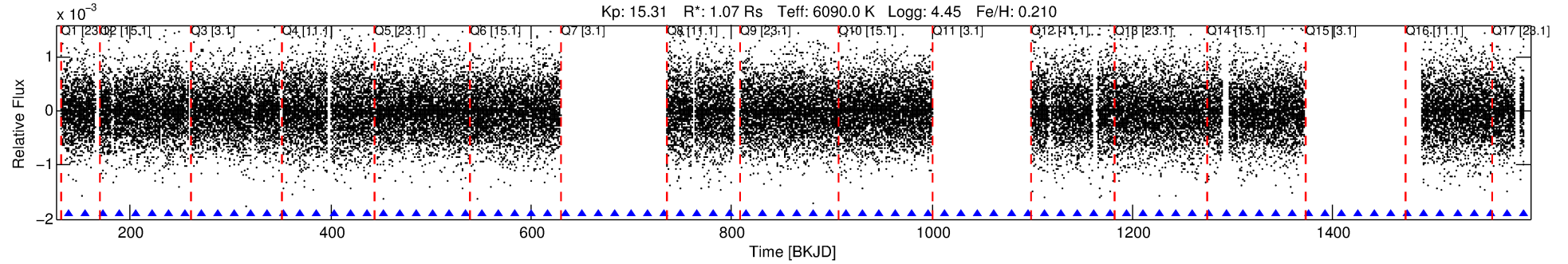
Ephemeris Match Information For 009963265-01

No Significant Match Found

DV One-Page Summary

KIC: 9963265 Candidate: 1 of 1 Period: 16.487 d

KOI: K02299.01 Corr: 0.882



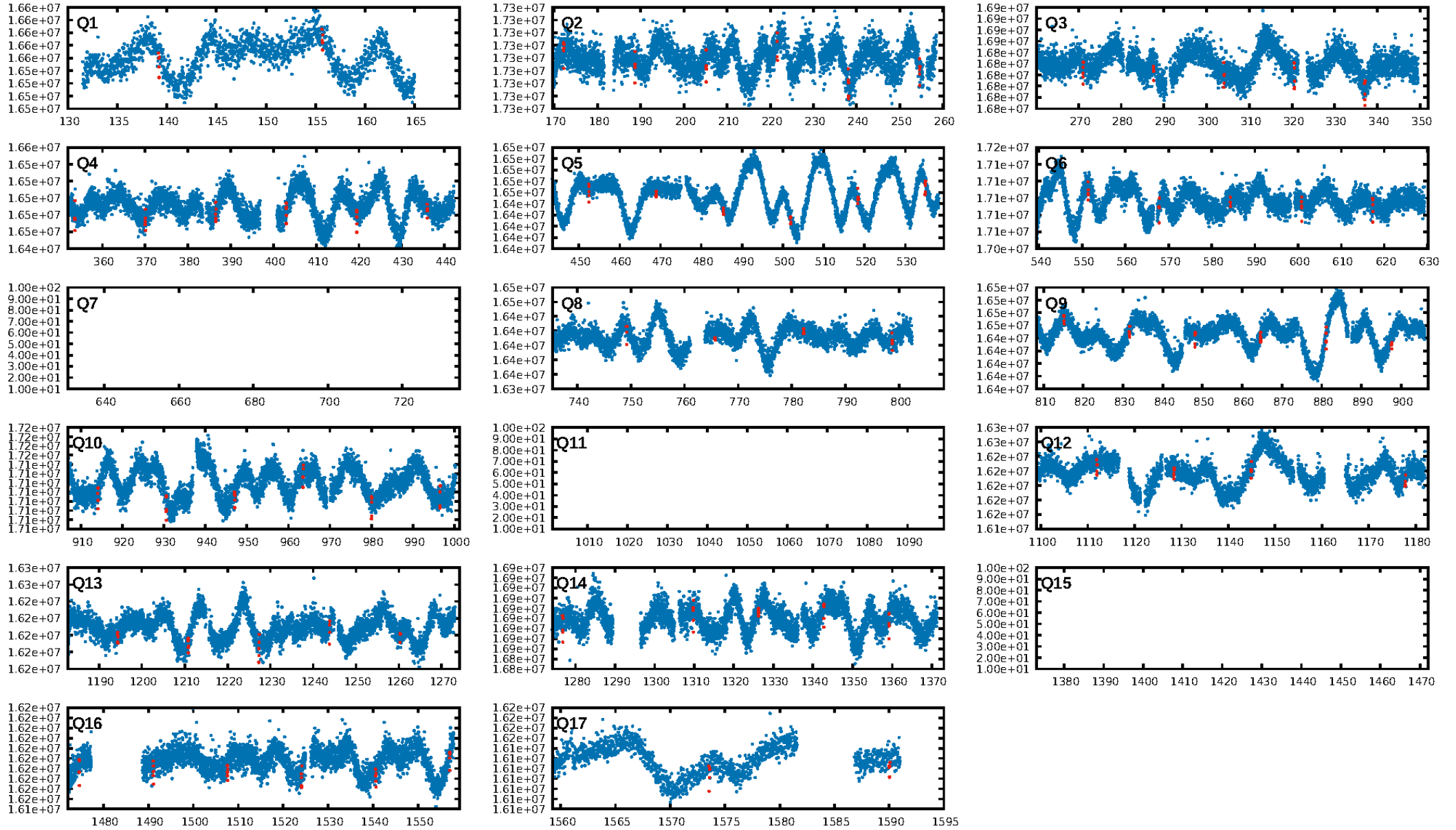
DV Fit Results:

Period = 16.48690 [0.00003] d
Epoch = 139.2021 [0.0013] BKJD
Rp/R* = 0.0339 [0.0065]
a/R* = 51.88 [44.80]
b = 0.91 [0.17]
Seff = 79.14 [29.94]
Teff = 761 [72] K
Rp = 3.96 [1.32] Re
a = 0.1337 [0.0313] AU
Ag = 57.57 [35.72] [1.58 σ]
Teffp = 3239 [435] K [5.62 σ]

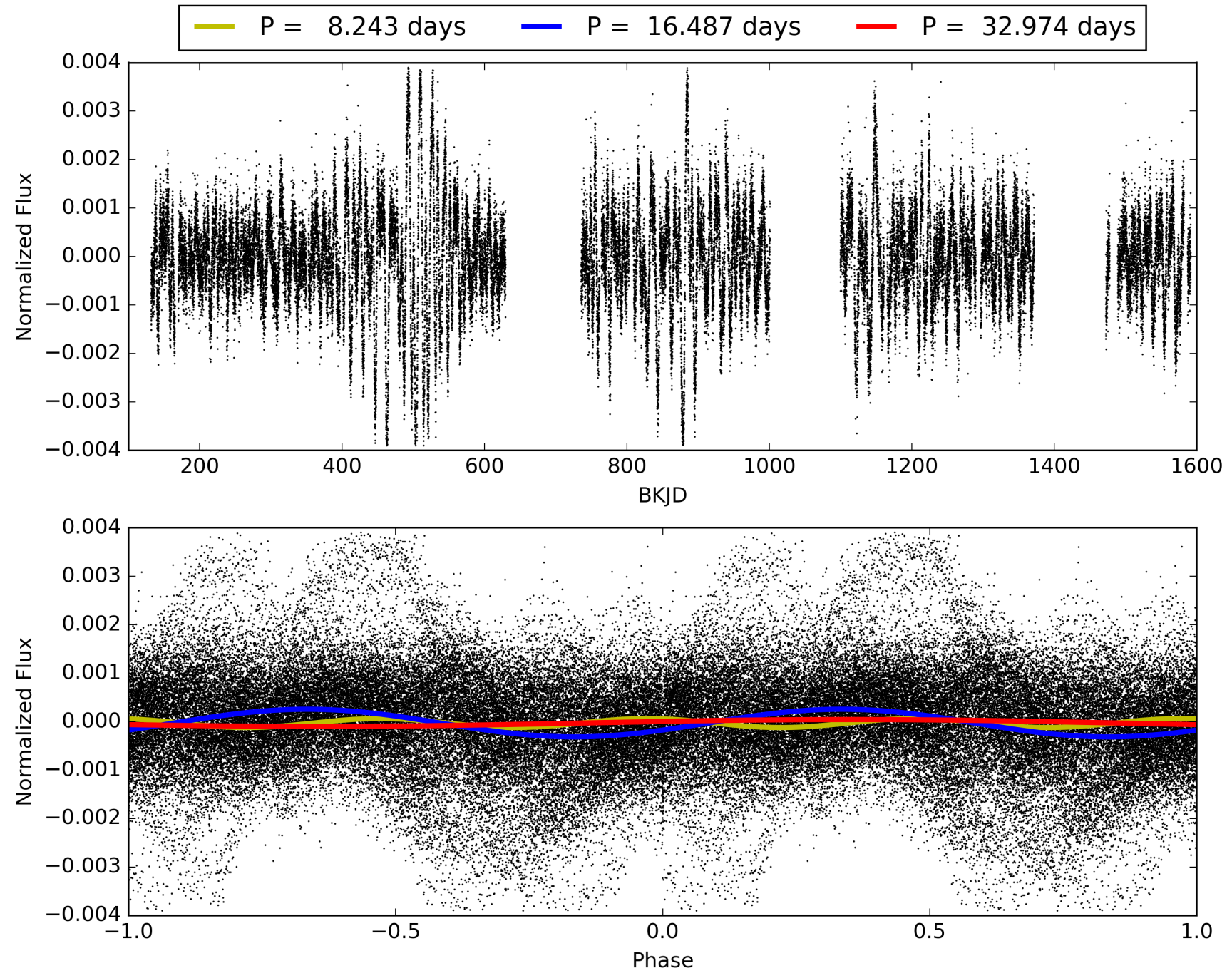
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.73e-69
RollingBand-fgt: 1.00 [63/63]
GhostDiagnostic-chr: -17.71
Centroid-sig: 0.0%
Centroid-so: 1.406 arcsec [1.96 σ]
OotOffset-rm: 0.347 arcsec [0.91 σ]
KicOffset-rm: 0.290 arcsec [0.71 σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 0.79 [11/14]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 009963265-01, PDC Light Curves

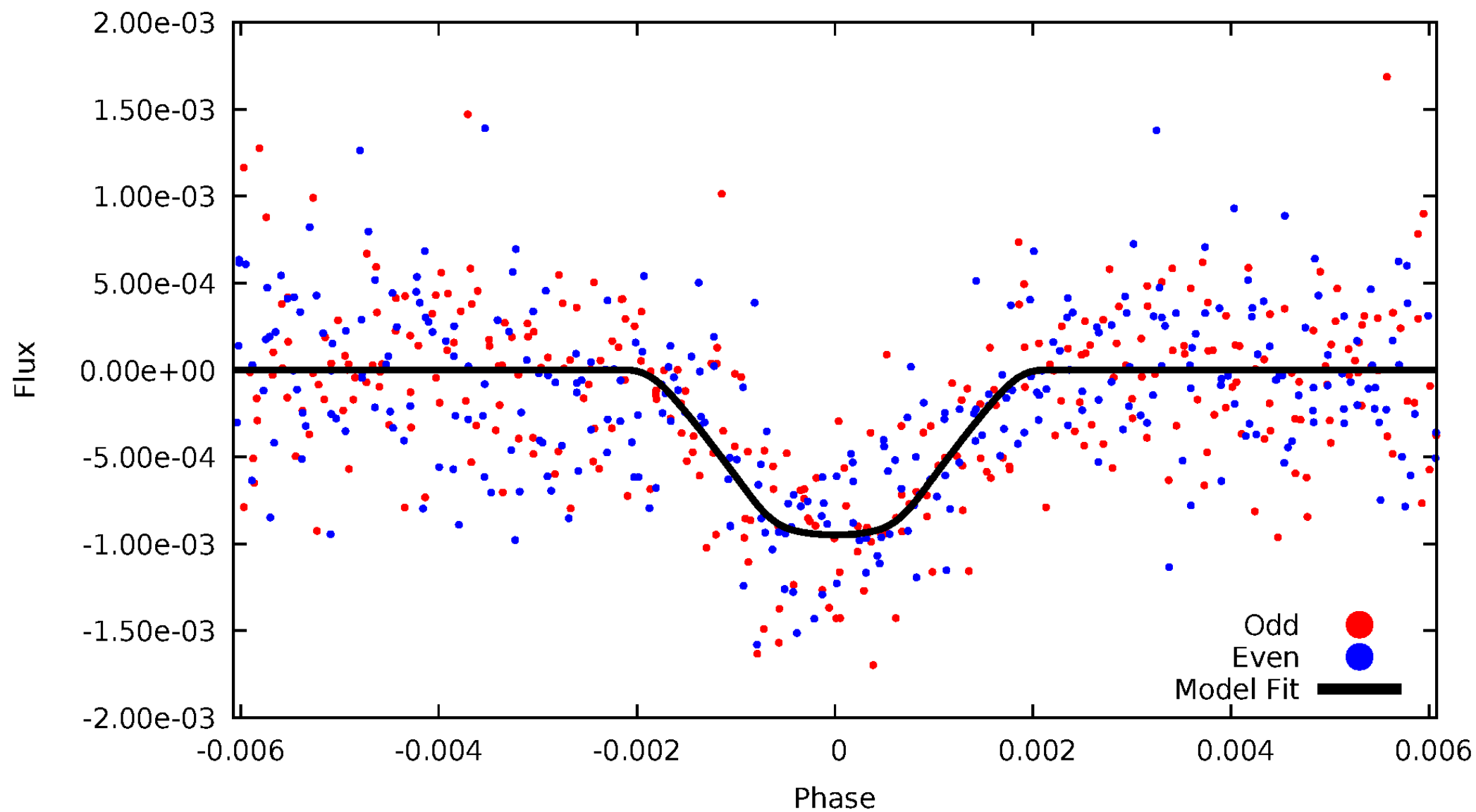


TCE 009963265-01



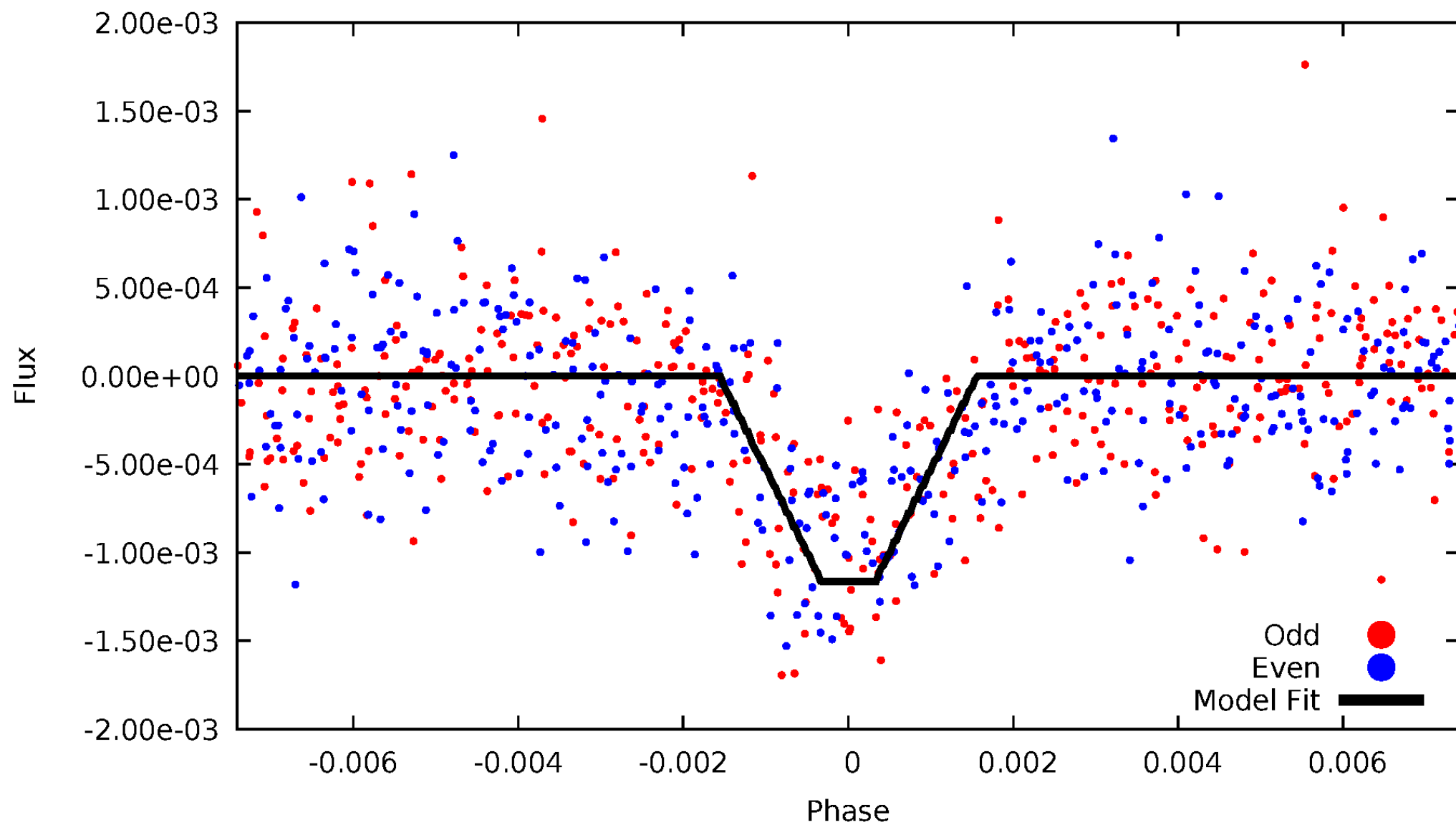
DV Odd/Even

TCE 009963265-01

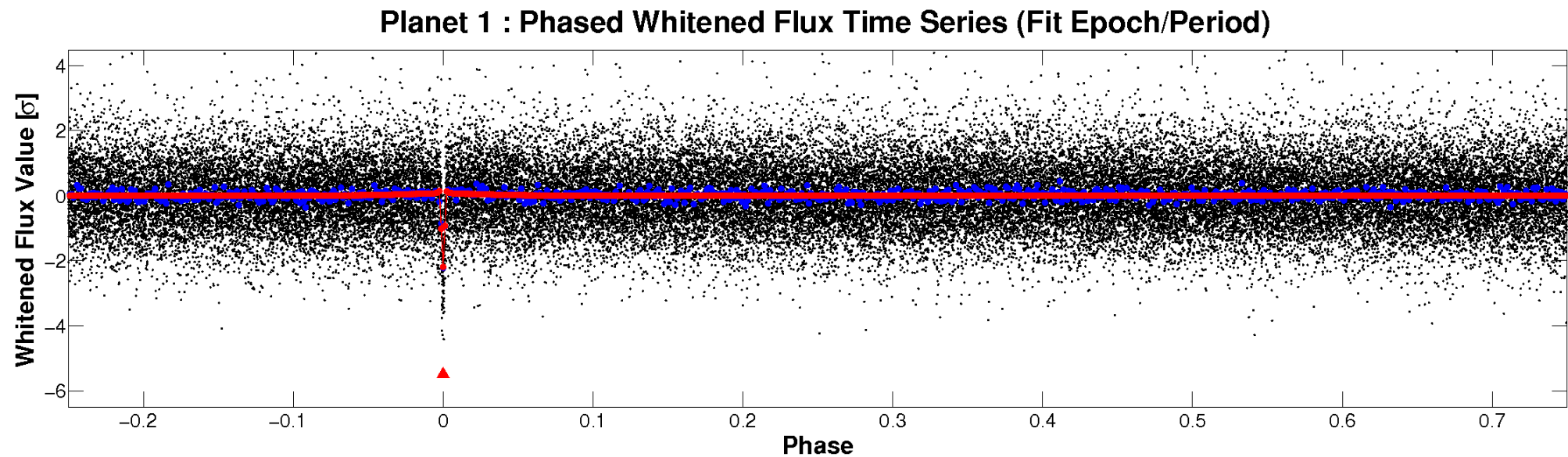
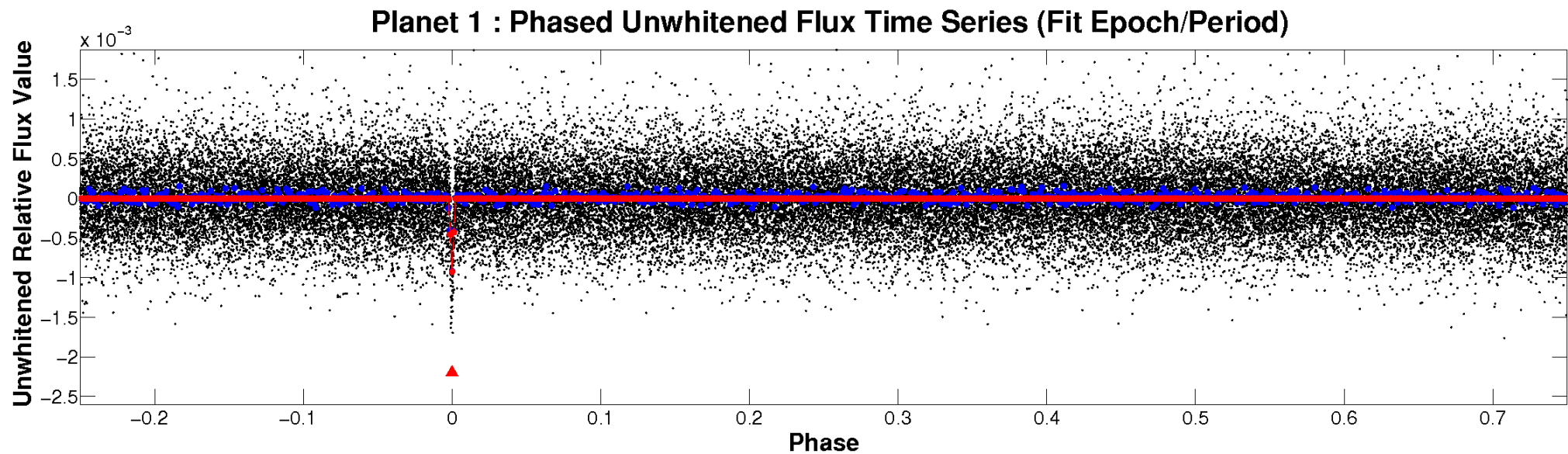


ALT Odd/Even

TCE 009963265-01

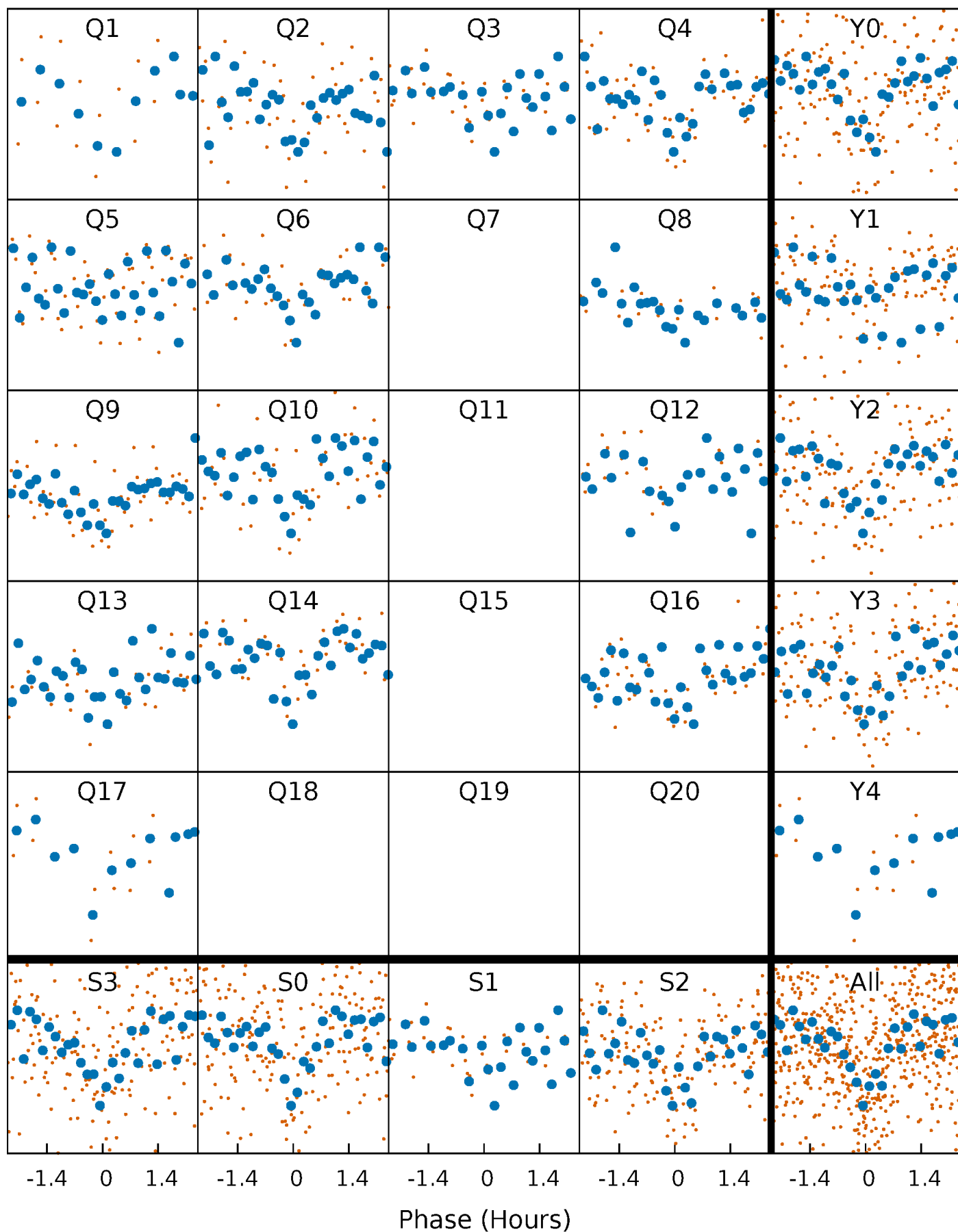


Non-Whitened Vs. Whitened Light Curve



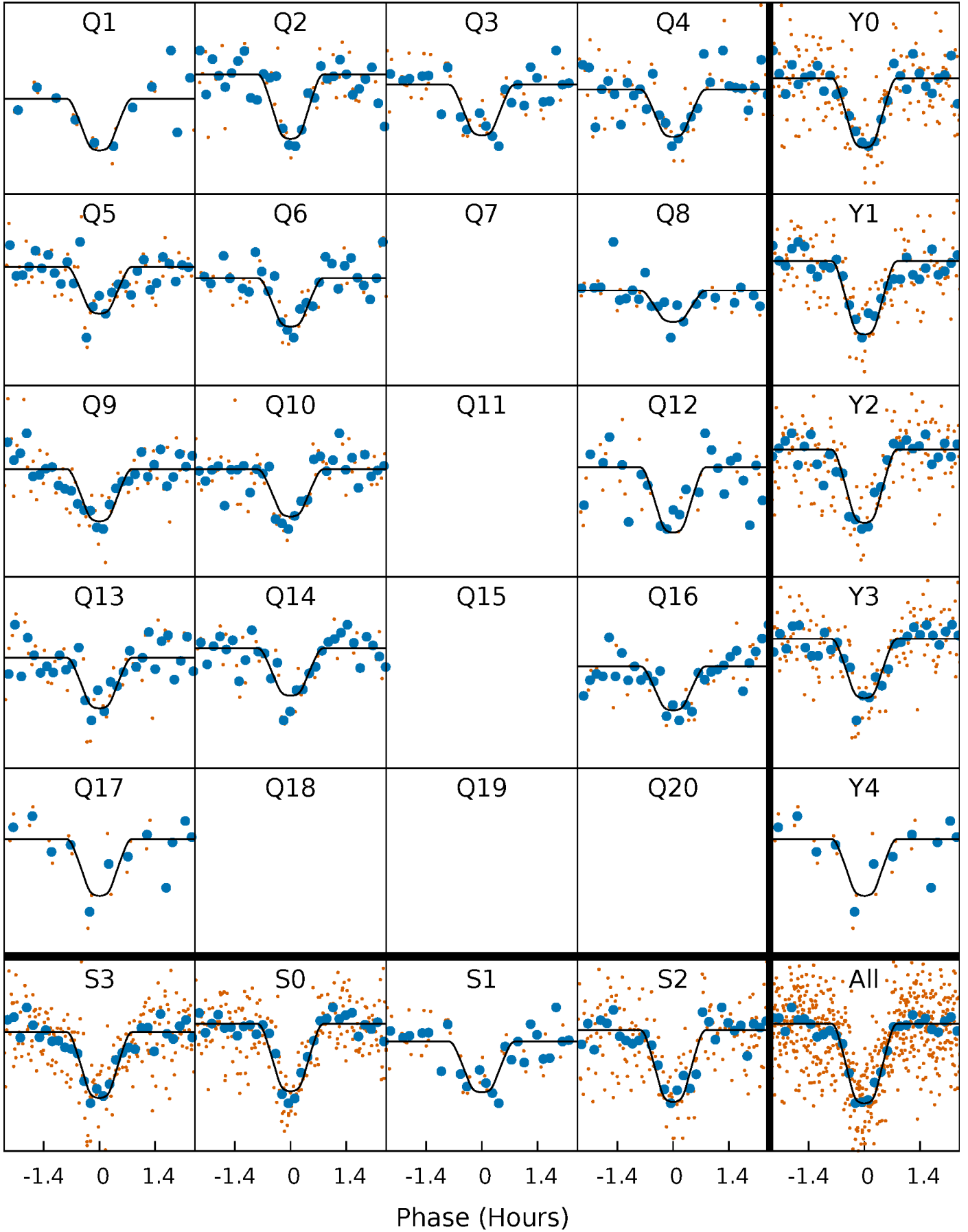
PDC Quarter-Phased Transit Curves

TCE 009963265-01 P= 16.486895 Days $T_0=139.202066$ (BKJD)



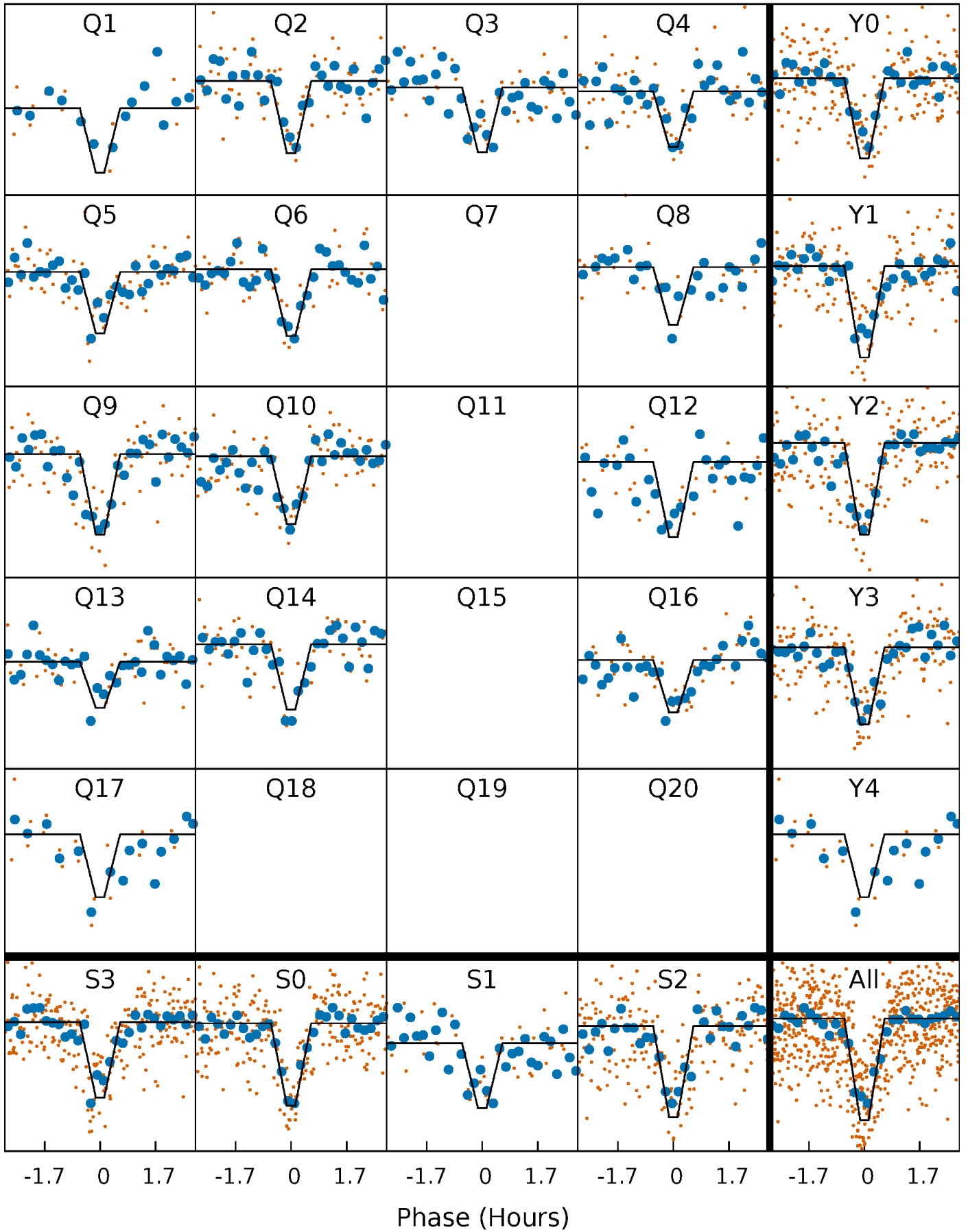
DV Quarter-Phased Transit Curves

TCE 009963265-01 P= 16.486895 Days $T_0=139.202066$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

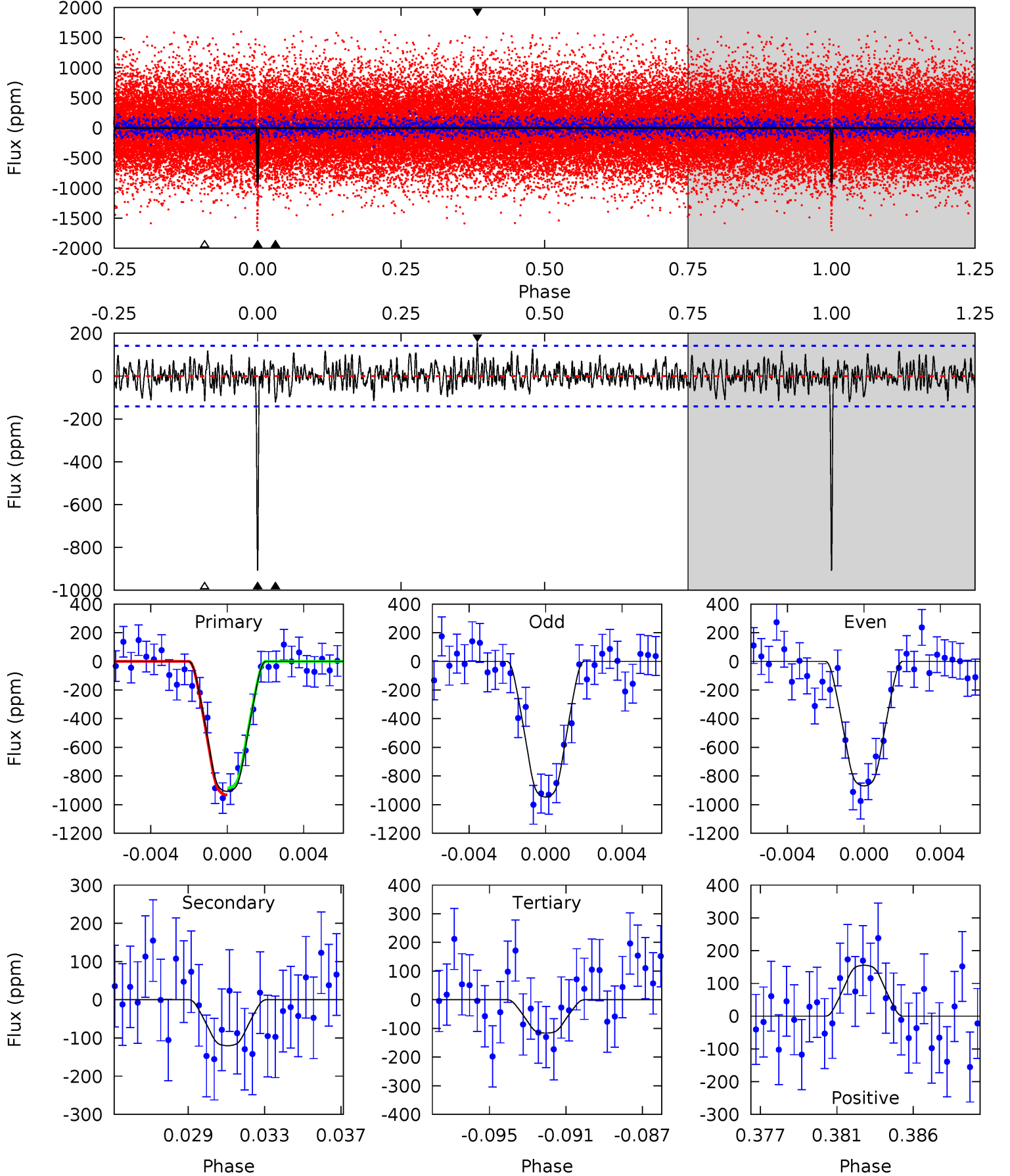
TCE 009963265-01 P= 16.486873 Days $T_0=139.202922$ (BKJD)



DV Model-Shift Uniqueness Test

009963265-01, $P = 16.486895$ Days, $E = 122.715171$ Days

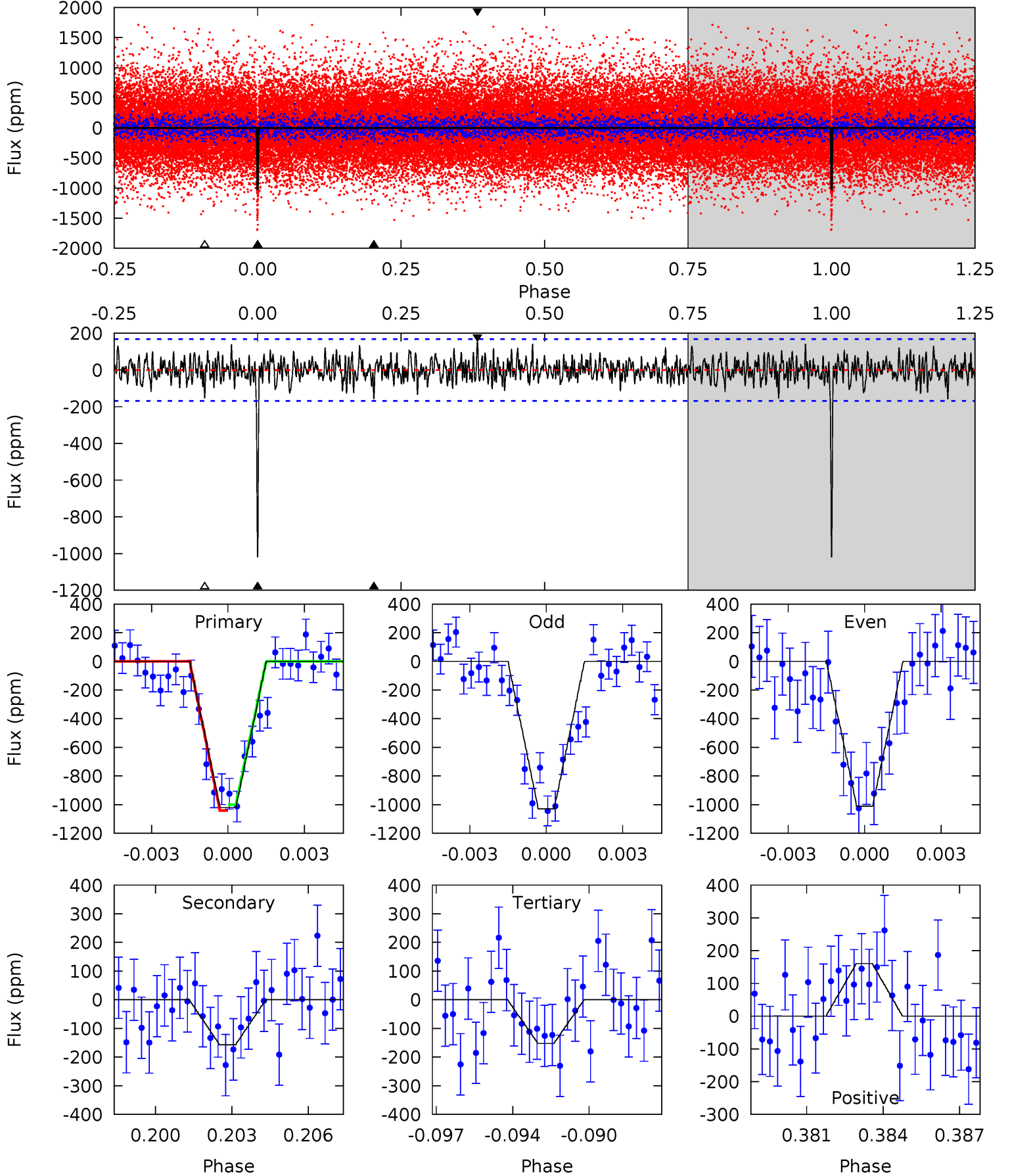
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.2	4.40	4.26	5.68	5.19	2.87	1.47	29.0	27.5	0.14	-1.28	1.42	0.99	0.15	0.88



Alt Model-Shift Uniqueness Test

009963265-01, $P = 16.486873$ Days, $E = 122.716049$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.8	4.91	4.76	5.01	5.25	2.96	1.45	27.1	26.8	0.15	-0.10	0.31	0.99	0.14	0.65



Stellar Parameters For KIC 009963265

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6090^{+169}_{-232}	$4.447^{+0.060}_{-0.192}$	$0.210^{+0.200}_{-0.350}$	$1.071^{+0.292}_{-0.125}$	$1.173^{+0.121}_{-0.181}$	$1.345^{+0.334}_{-0.649}$
	+3%/-4%	+1%/-4%	+95%/-167%	+27%/-12%	+10%/-15%	+25%/-48%
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 009963265-01 / KOI 2299.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-120 ± 27	$4.06^{+0.96}_{-0.83}$	1079^{+72}_{-52}	3818^{+364}_{-262}	69^{+44}_{-27}
Alt.	-157 ± 32	$4.11^{+1.05}_{-0.88}$	1081^{+74}_{-51}	4006^{+385}_{-309}	89^{+56}_{-35}

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 $A_{obs} \gg 1.0$

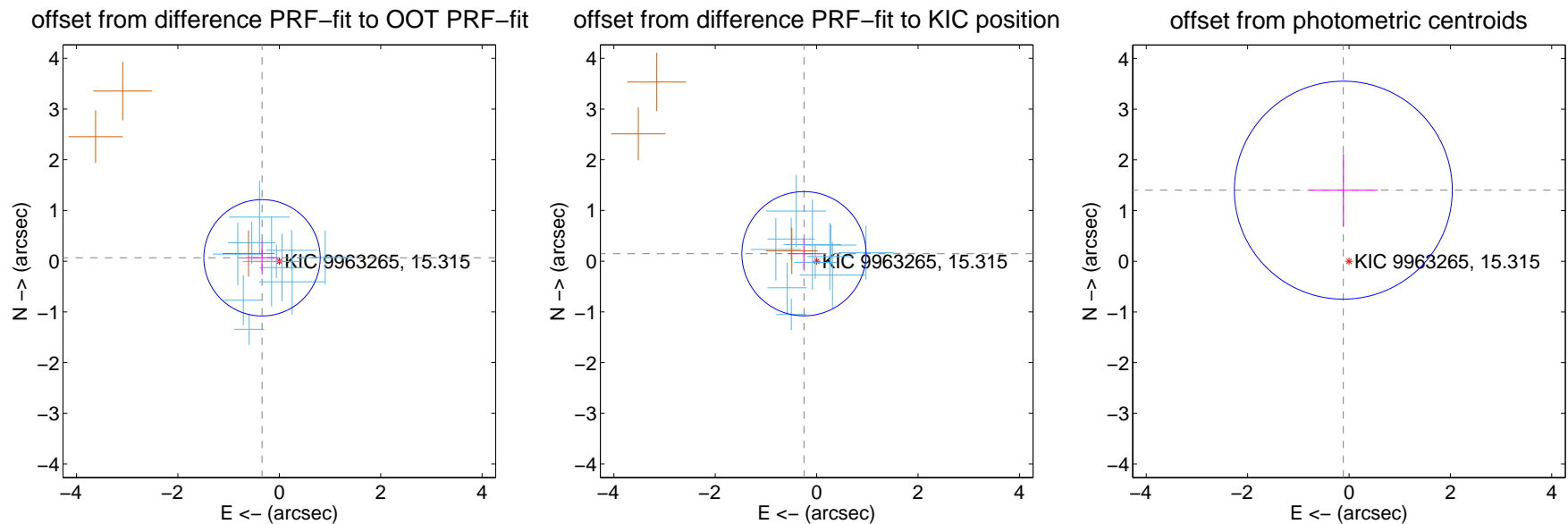
DV Centroid Data

Supplemental centroid analysis for 009963265-01. Kepler magnitude: 15.31. Transit SNR 22.00

There are 11 quarters with good PRF difference image offsets

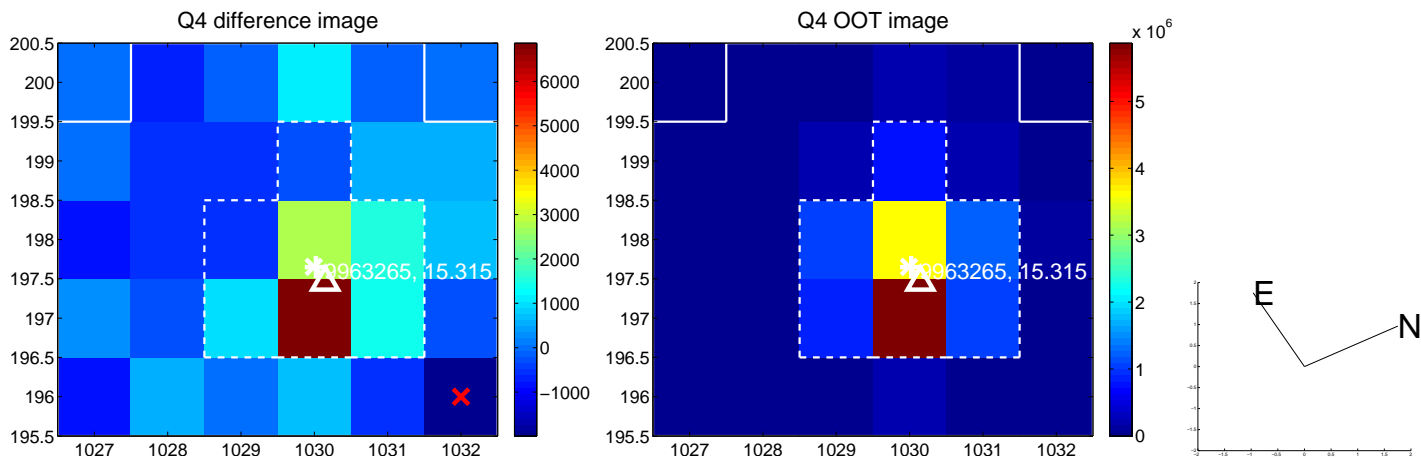
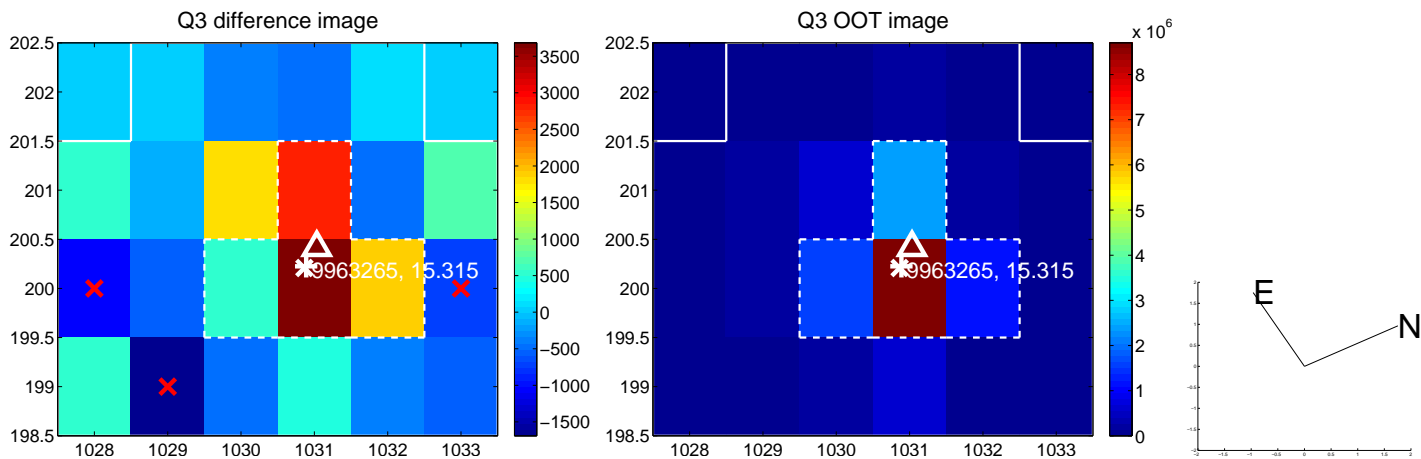
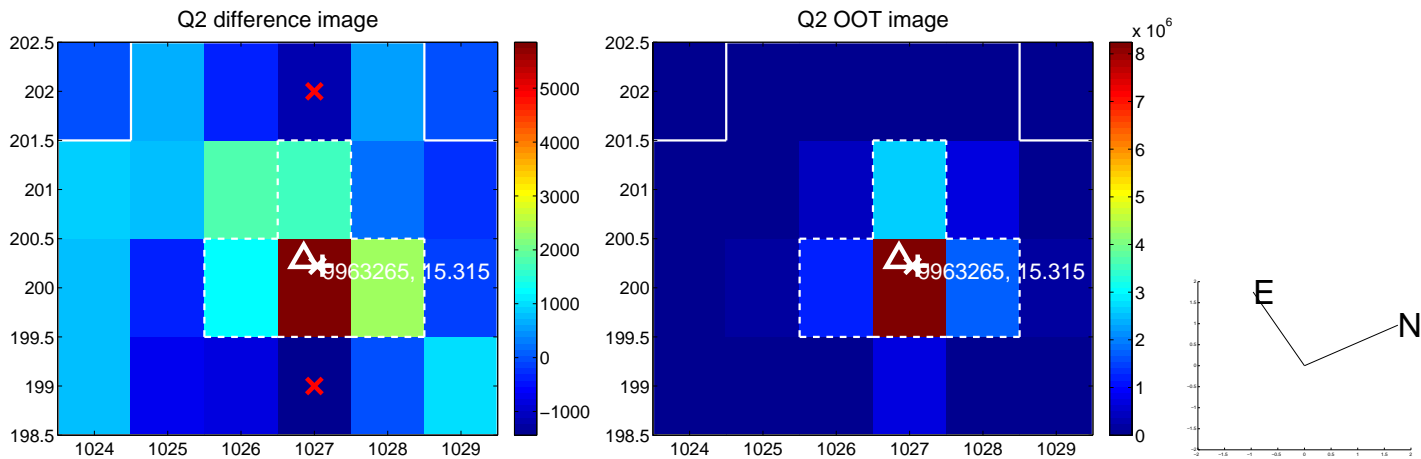
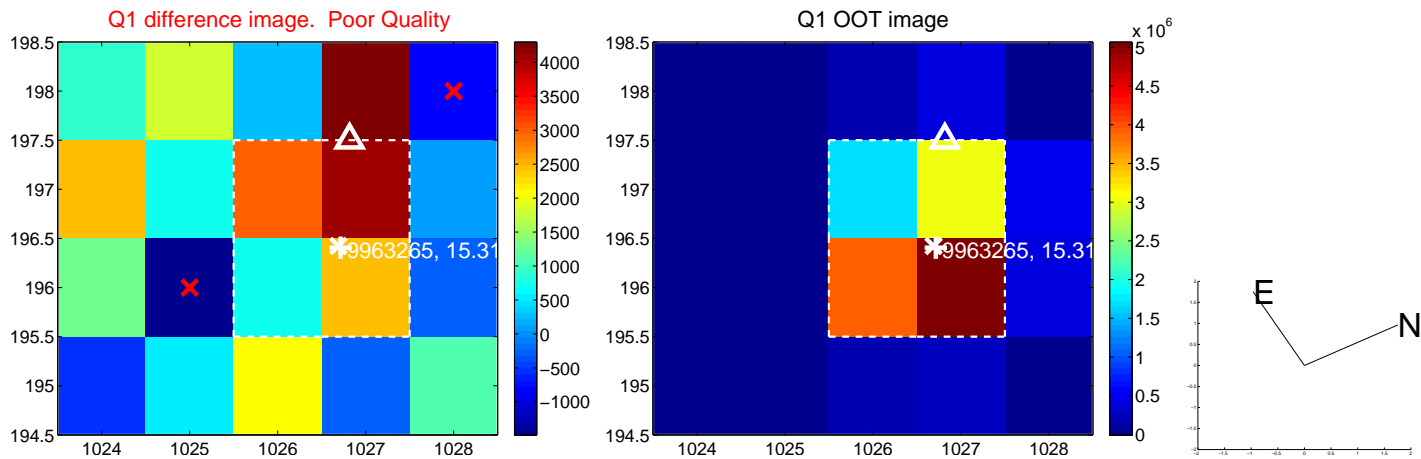
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.347 ± 0.382	0.91	0.341 ± 0.338	0.067 ± 0.331
PRF-fit source offset from KIC position	0.290 ± 0.408	0.71	0.250 ± 0.322	0.148 ± 0.310
photometric centroid source offset	1.41 ± 0.72	1.96	0.11 ± 0.68	1.40 ± 0.72

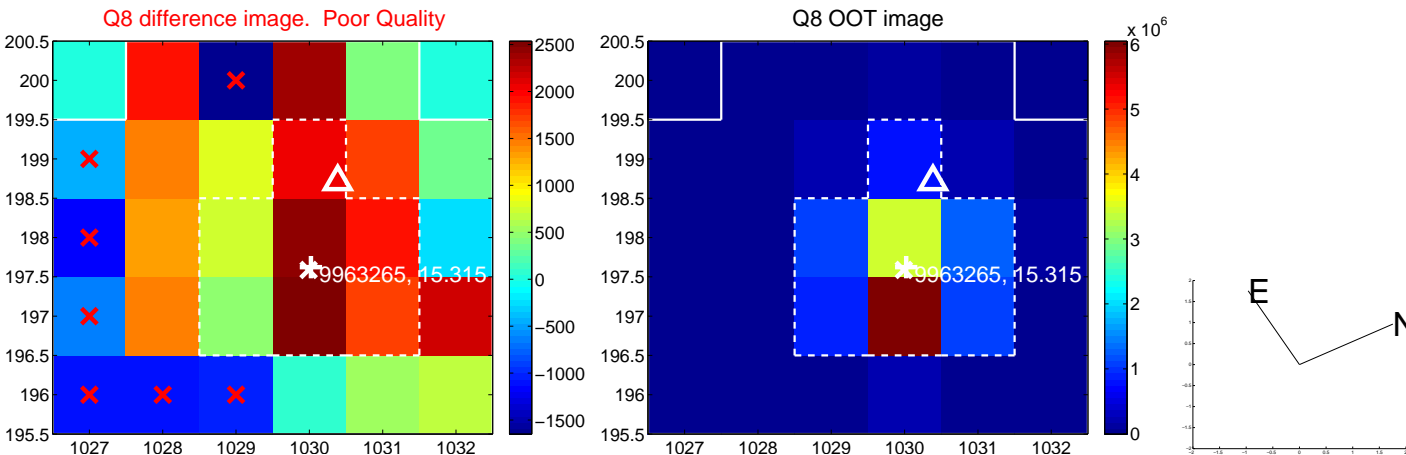
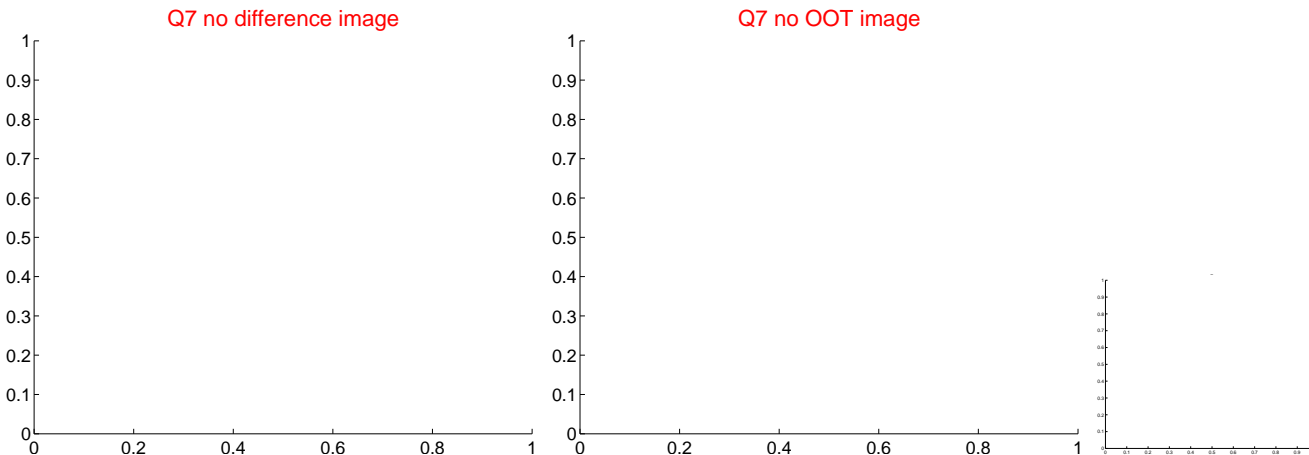
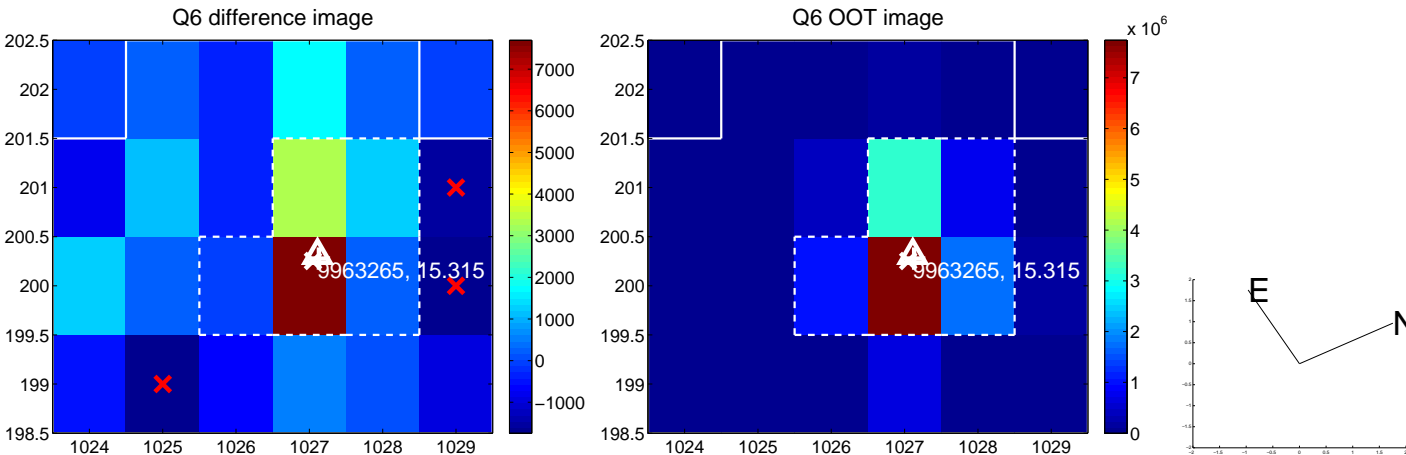
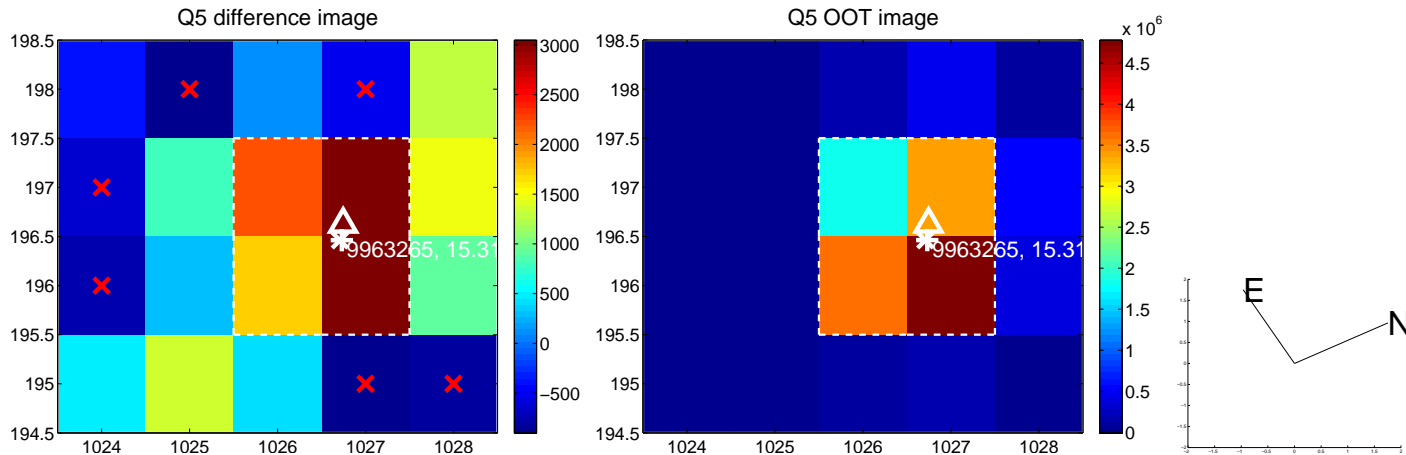


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

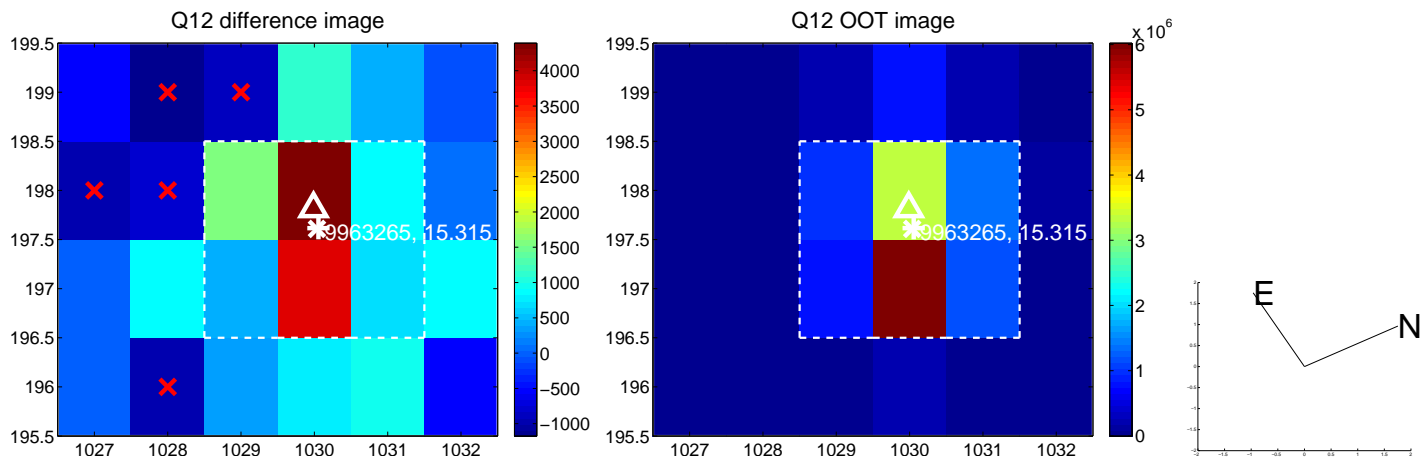
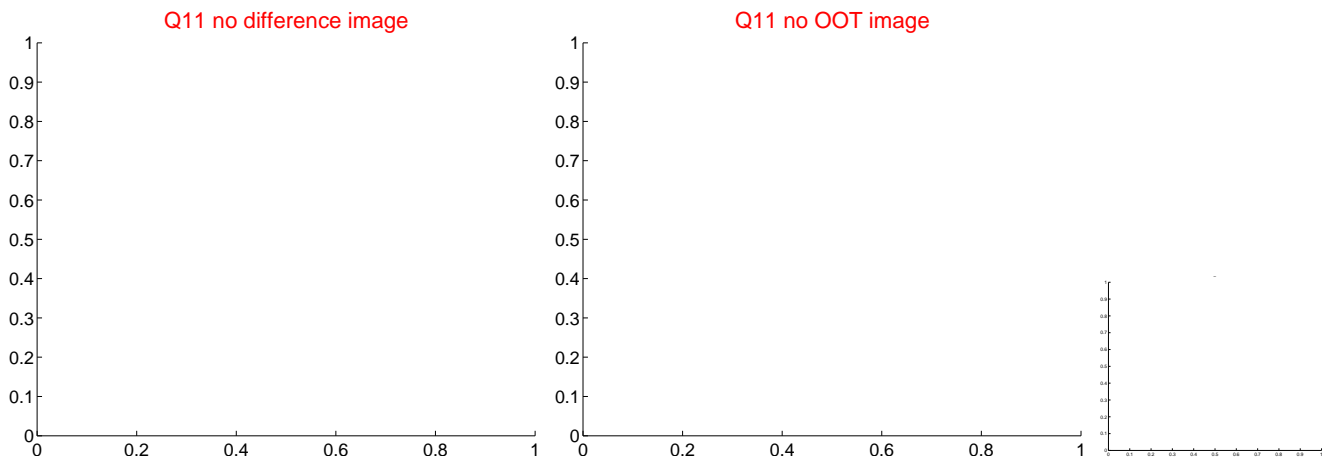
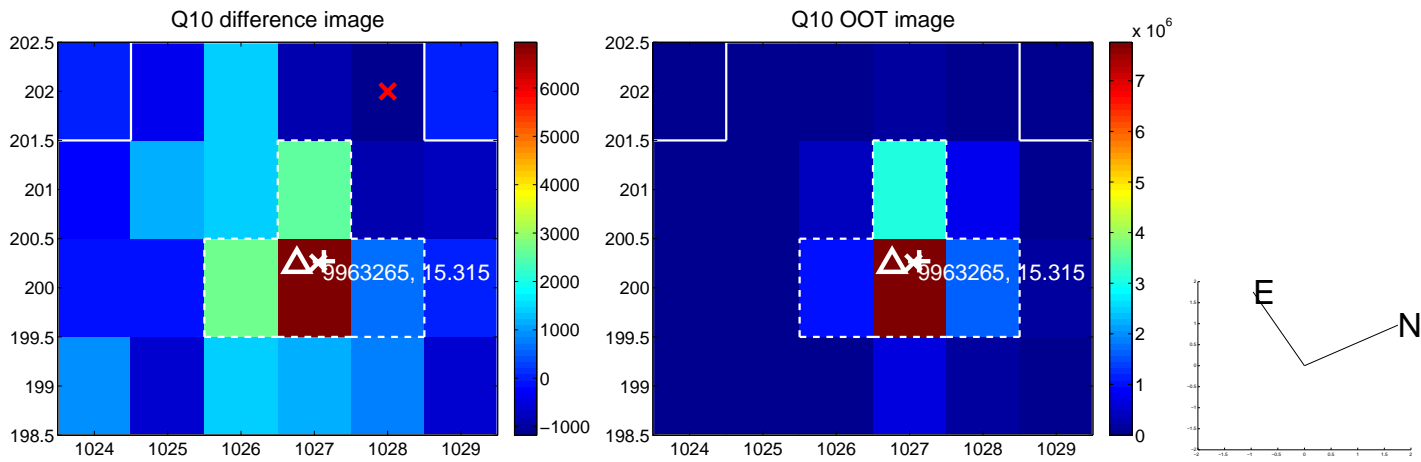
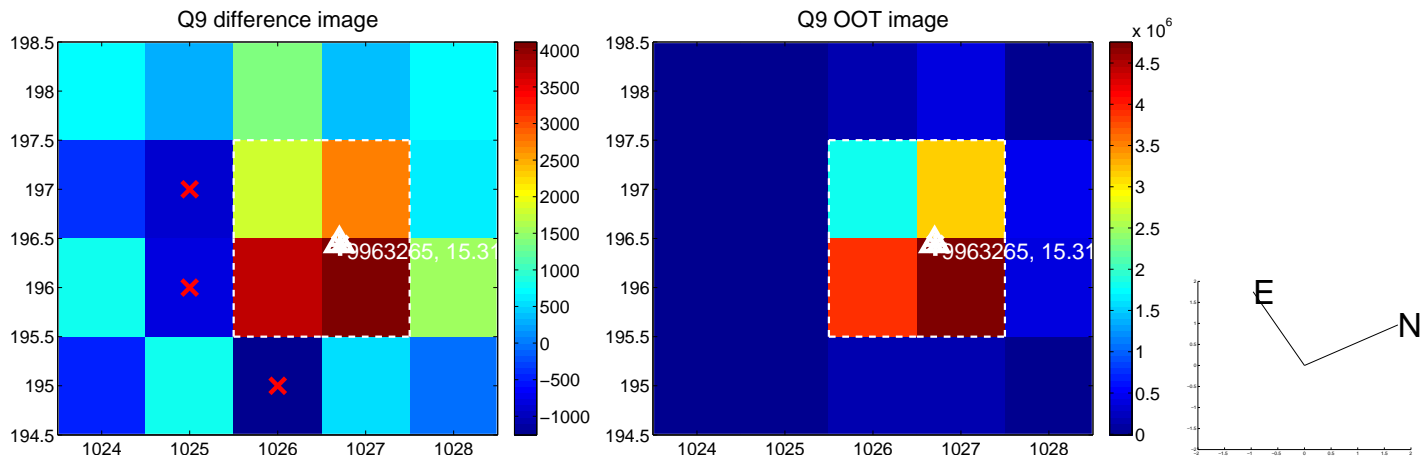
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



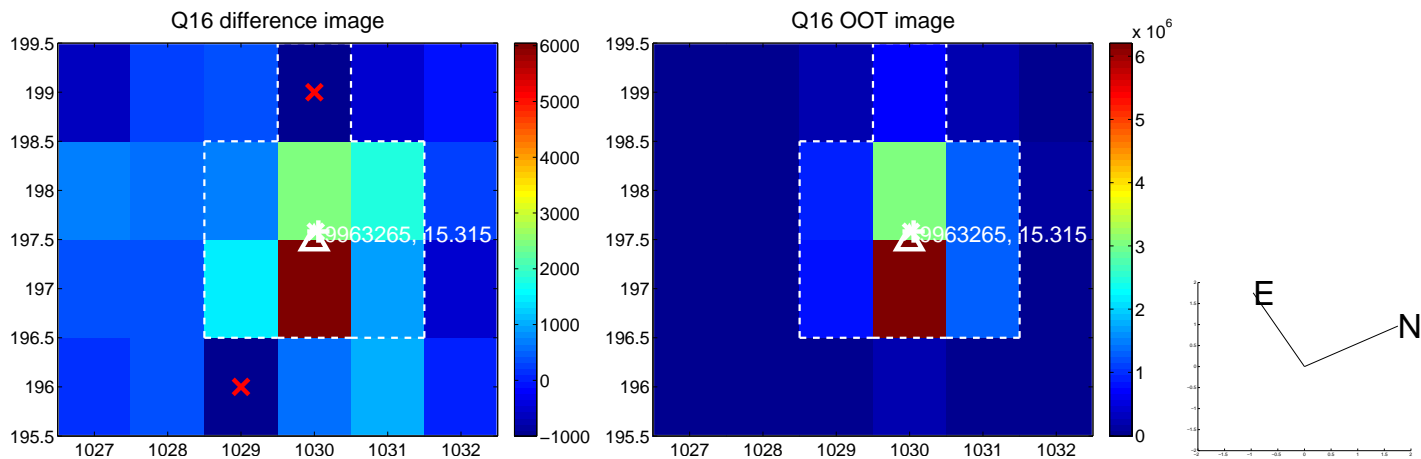
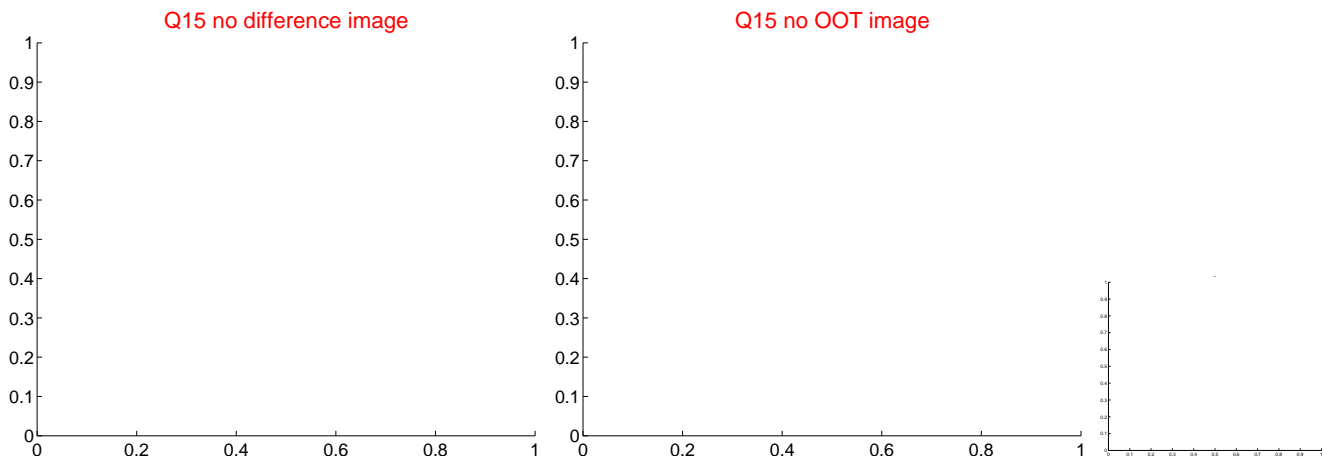
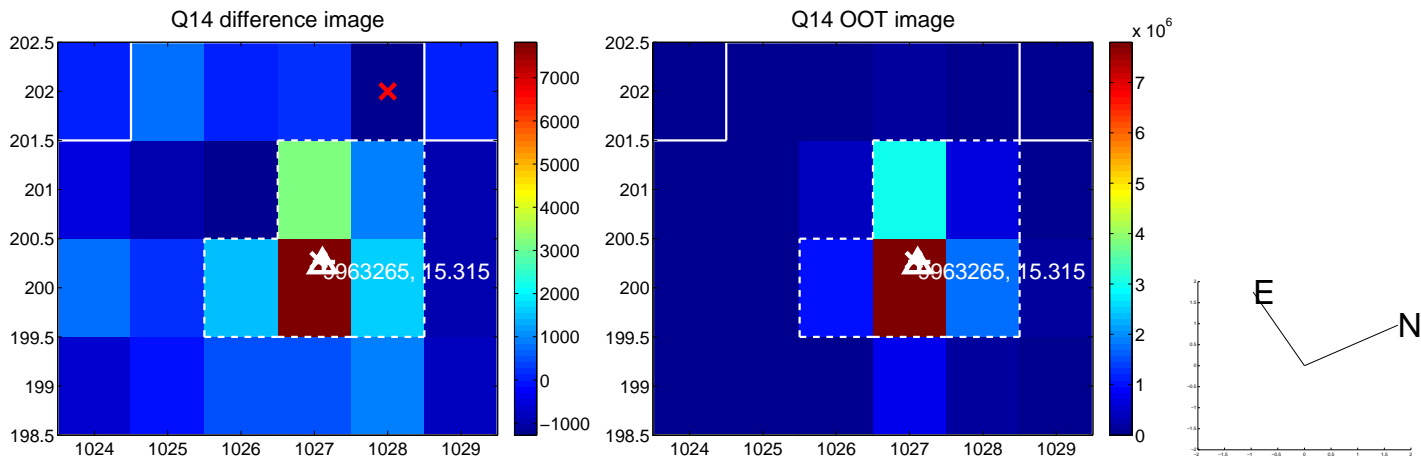
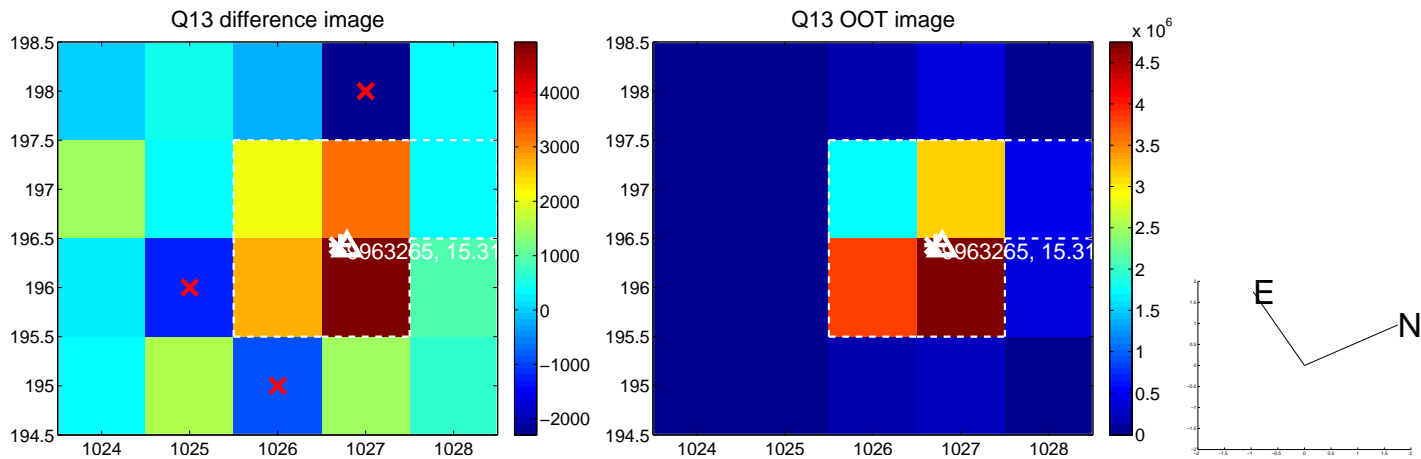
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



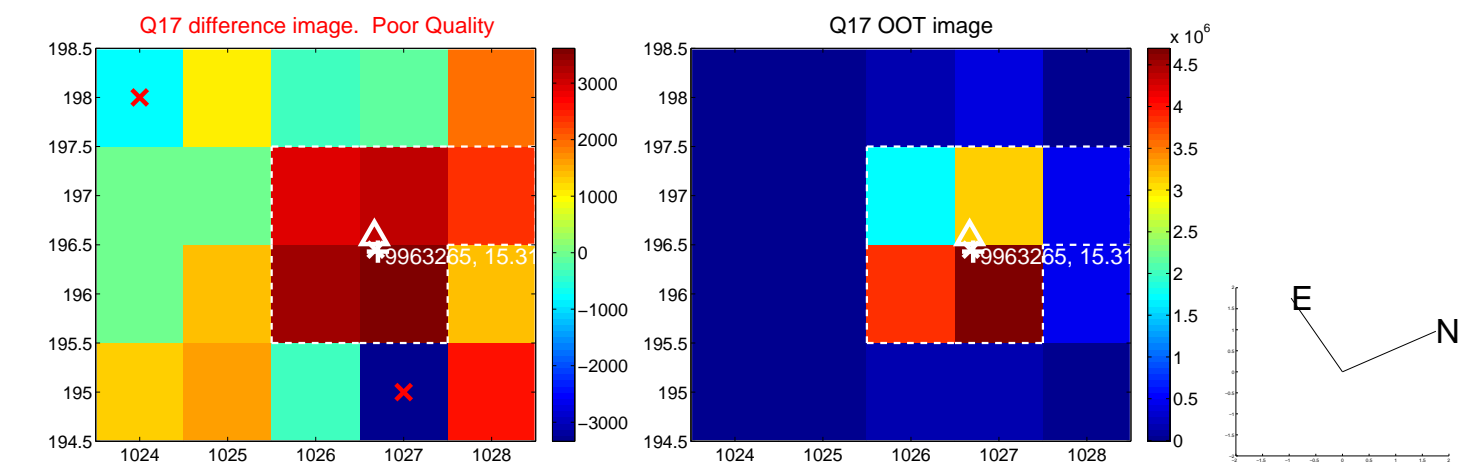
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



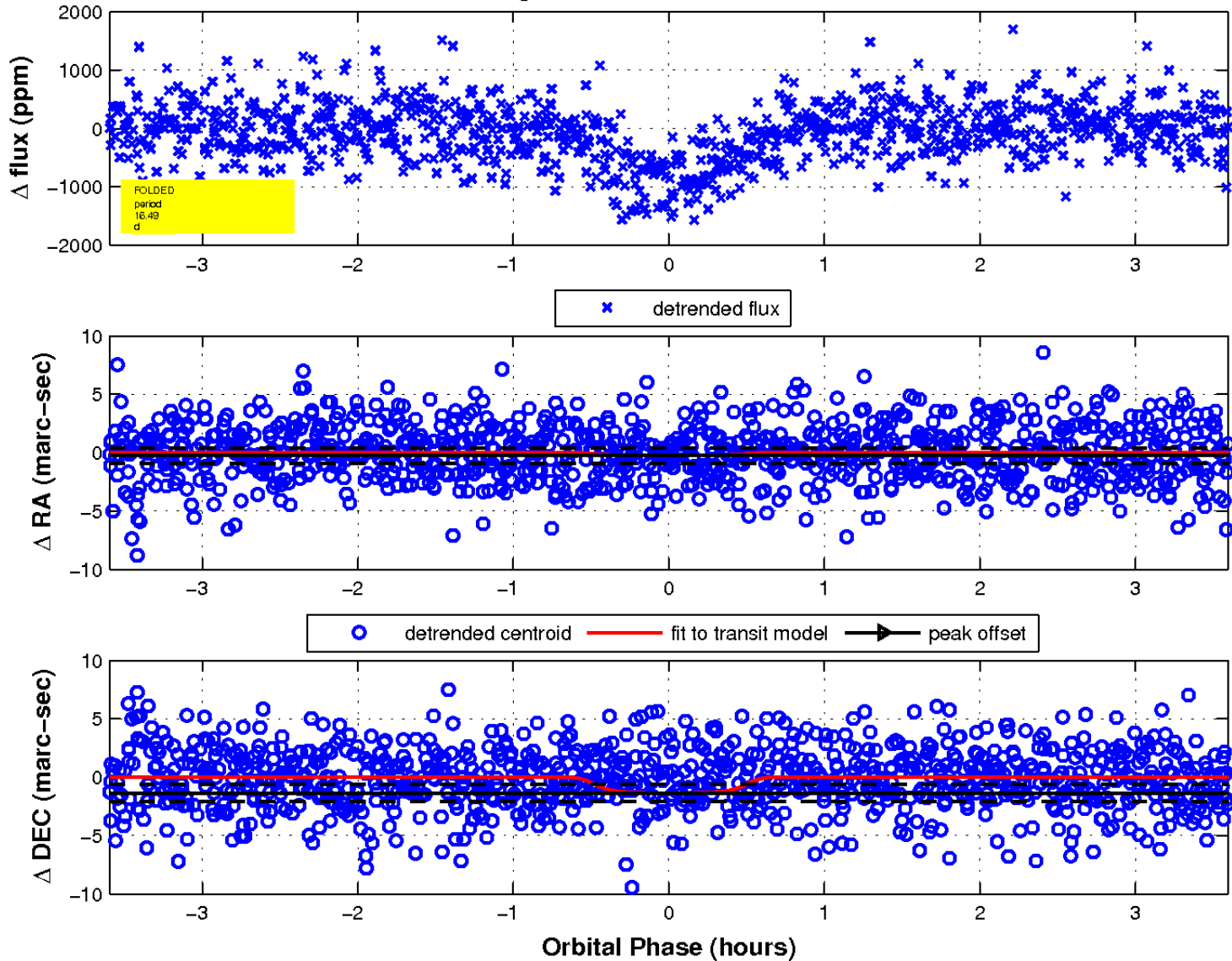
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

