

KIC 005524881

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})
005524881-01	OBS	3030.01	7.195485	136.033397	209.9	4.109	13.2	14.6	1.09	6242	1.69	273.65

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005524881-01	OBS	FP	0.00	0	0	1	0	CENT_UNRESOLVED_OFFSET

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

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

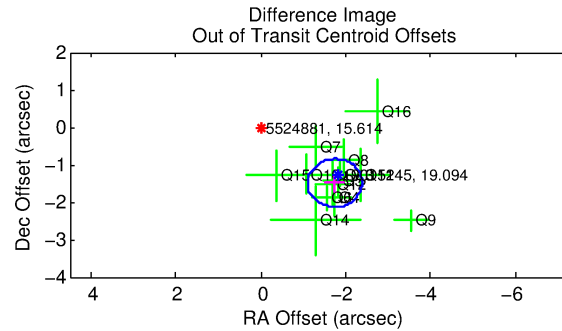
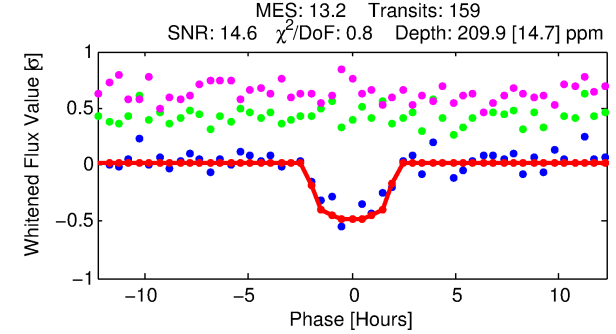
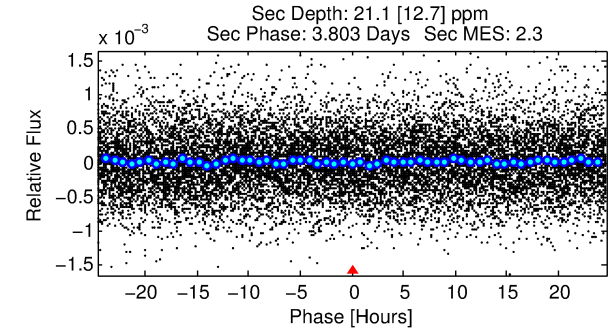
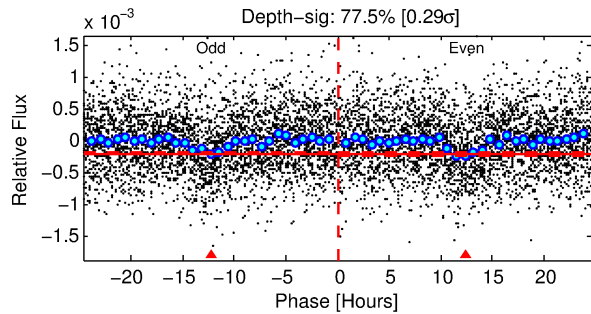
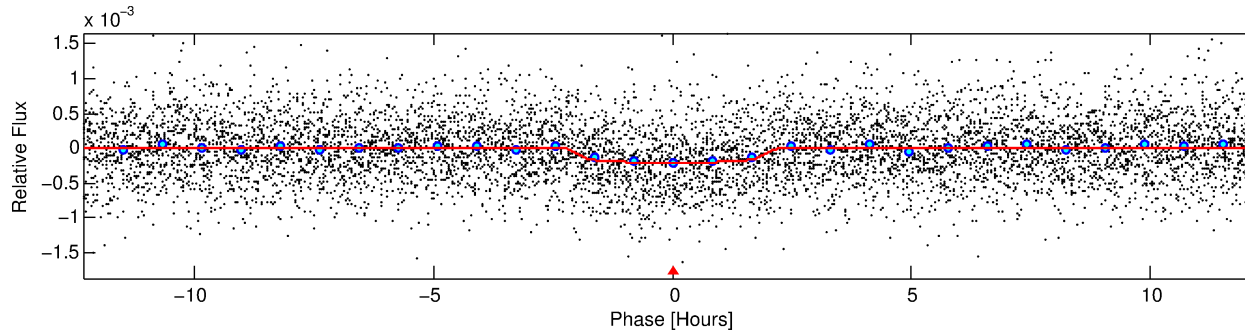
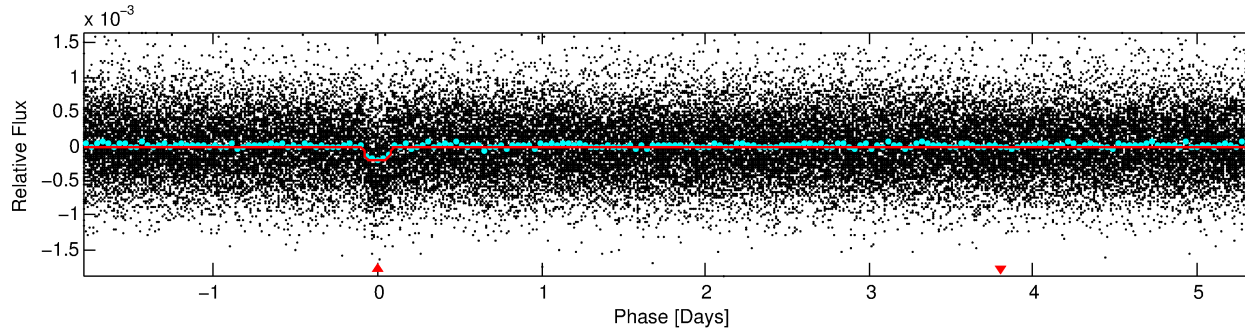
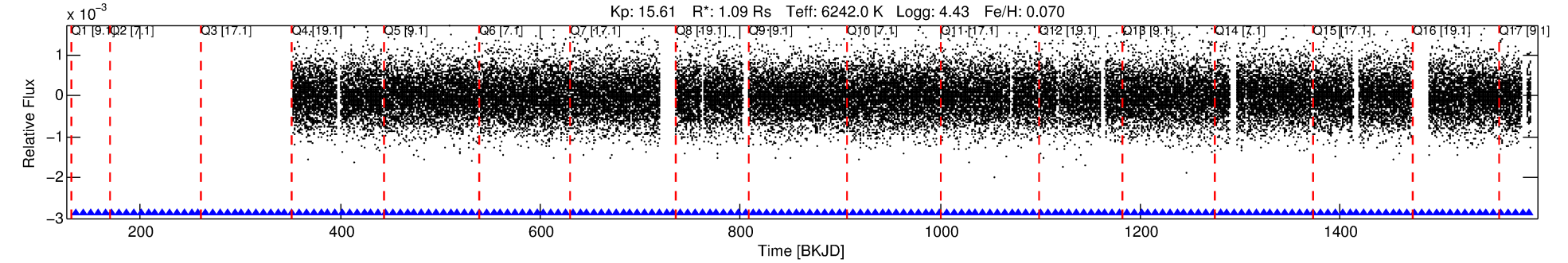
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005524881-01

No Significant Match Found

DV One-Page Summary

KIC: 5524881 Candidate: 1 of 1 Period: 7.195 d
KOI: K03030.01 Corr: 0.992



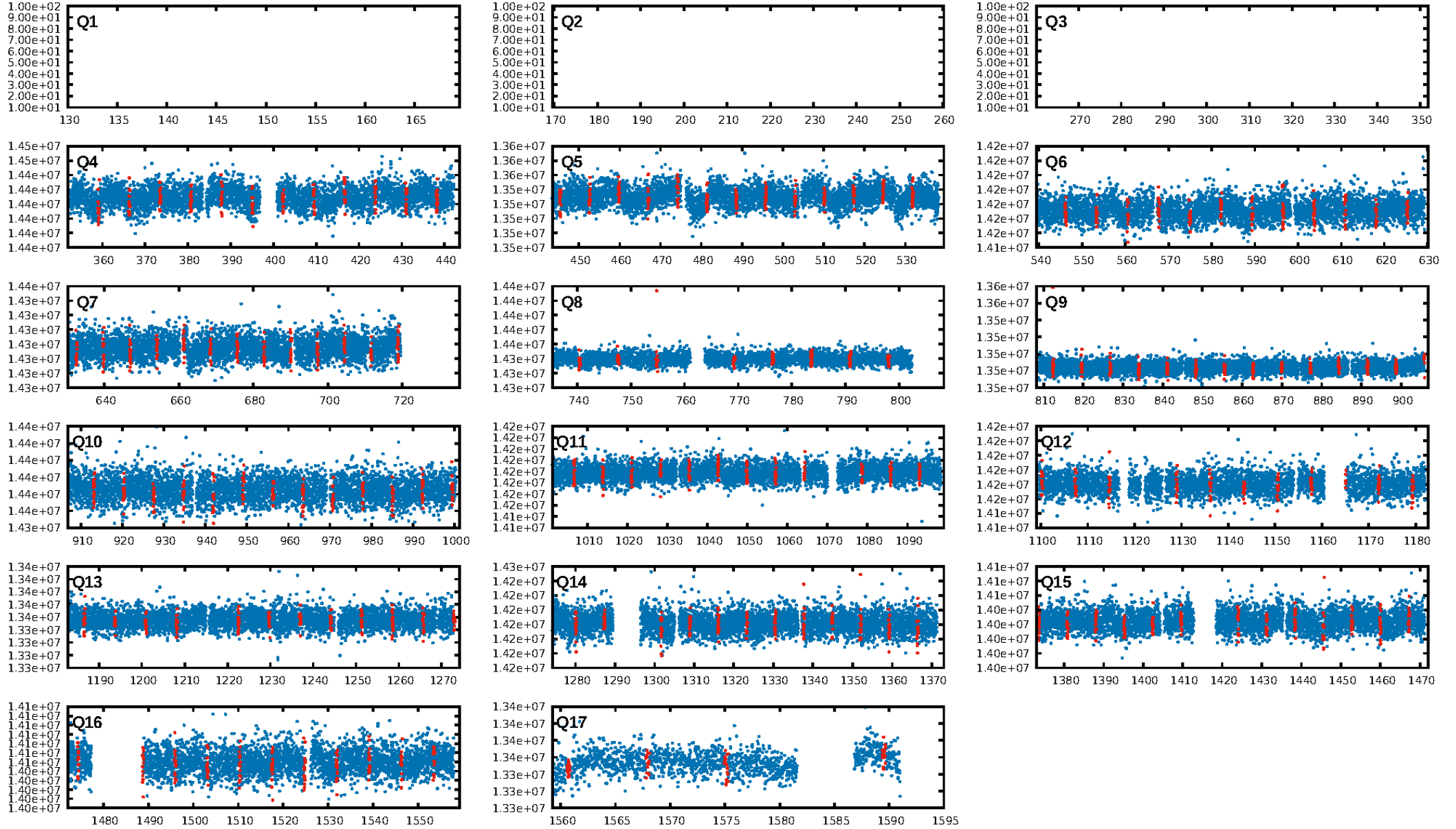
DV Fit Results:

Period = 7.19548 [0.00005] d
Epoch = 136.0334 [0.0060] BKJD
Rp/R* = 0.0142 [0.0100]
a/R* = 9.85 [34.51]
b = 0.70 [2.61]
Seff = 273.65 [123.64]
Teq = 1037 [117] K
Rp = 1.69 [1.32] Re
a = 0.0771 [0.0220] AU
Ag = 24.03 [38.29] [0.60 σ]
Teffp = 3550 [1372] K [1.82 σ]

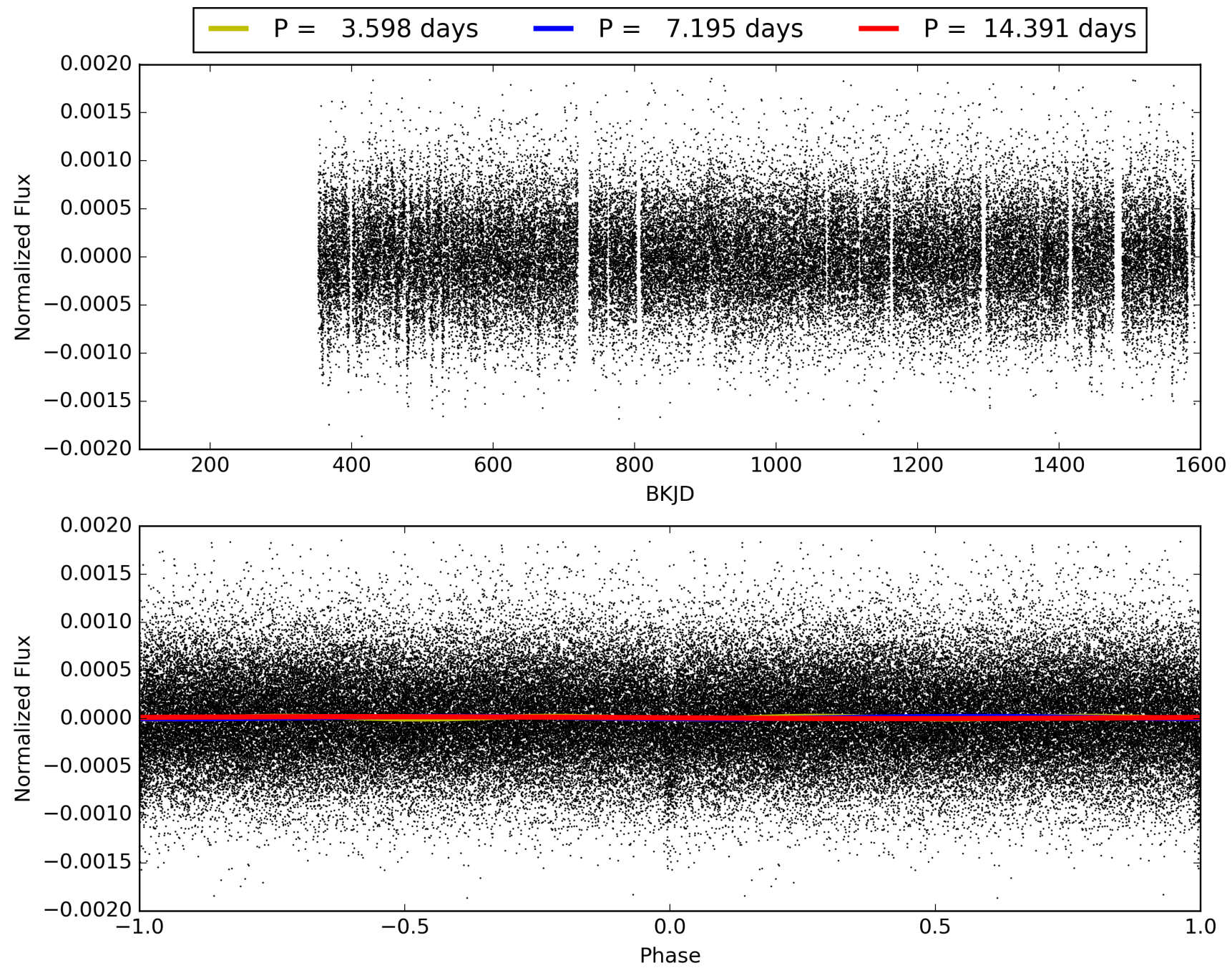
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 92.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.56e-39
RollingBand-fgt: 1.00 [155/155]
GhostDiagnostic-chr: 1.974
Centroid-sig: 0.0%
Centroid-so: 2.328 arcsec [2.46 σ]
OotOffset-rm: 2.298 arcsec [10.75 σ]
KicOffset-rm: 2.233 arcsec [10.45 σ]
OotOffset-st: 3/3/4/3 [13]
KicOffset-st: 3/3/4/3 [13]
DiffImageQuality-fgm: 0.85 [11/13]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 005524881-01, PDC Light Curves

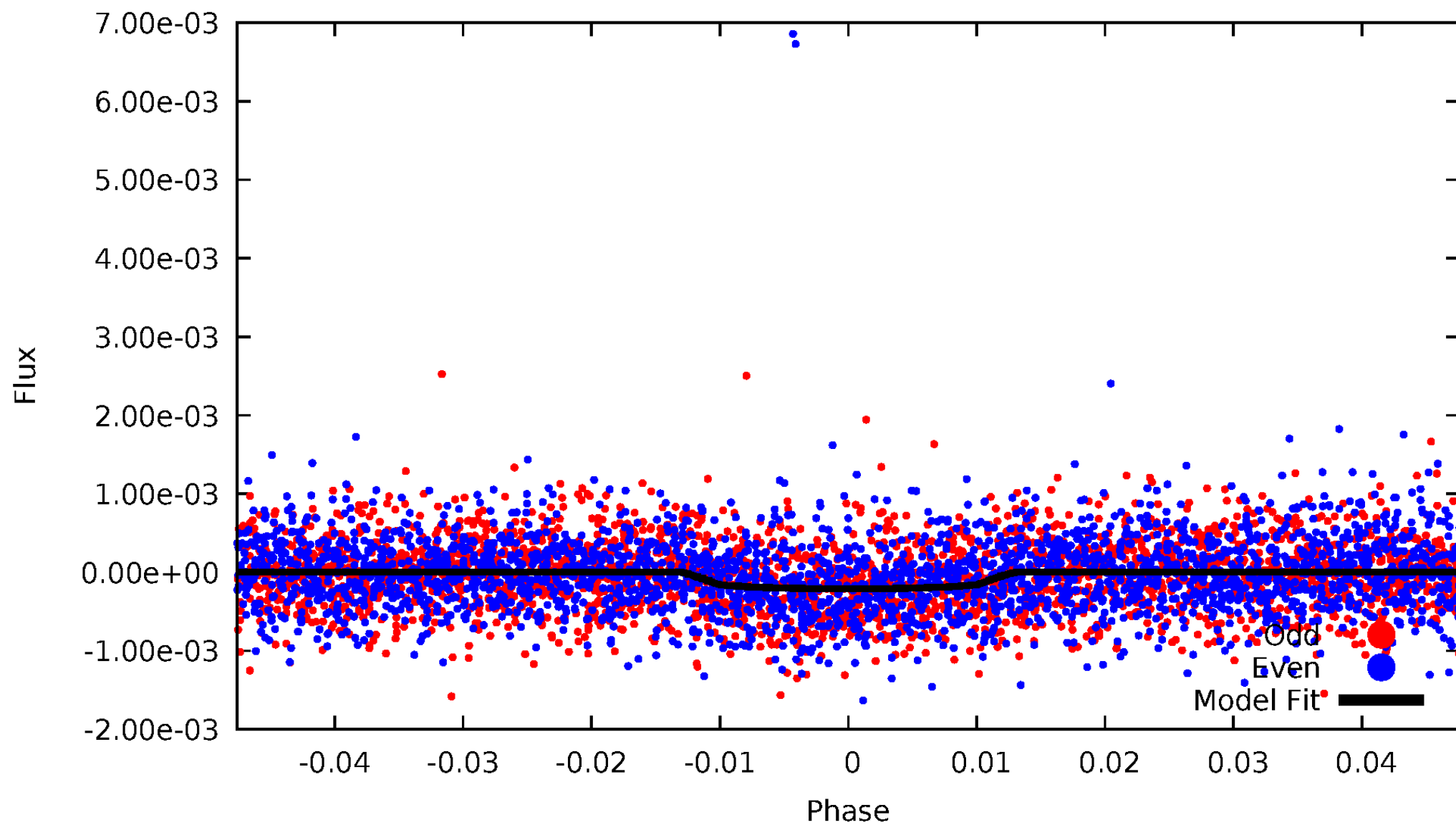


TCE 005524881-01



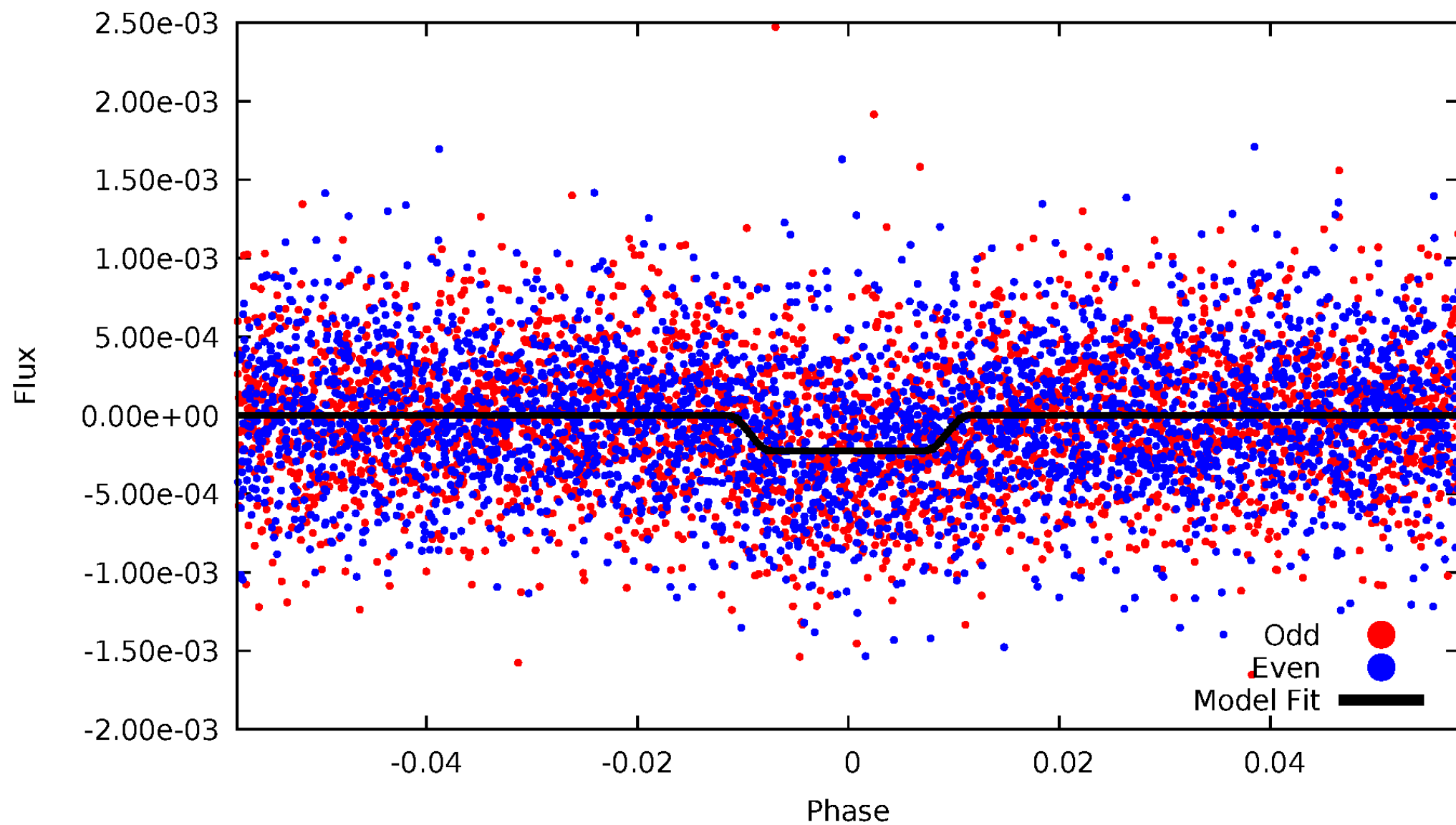
DV Odd/Even

TCE 005524881-01

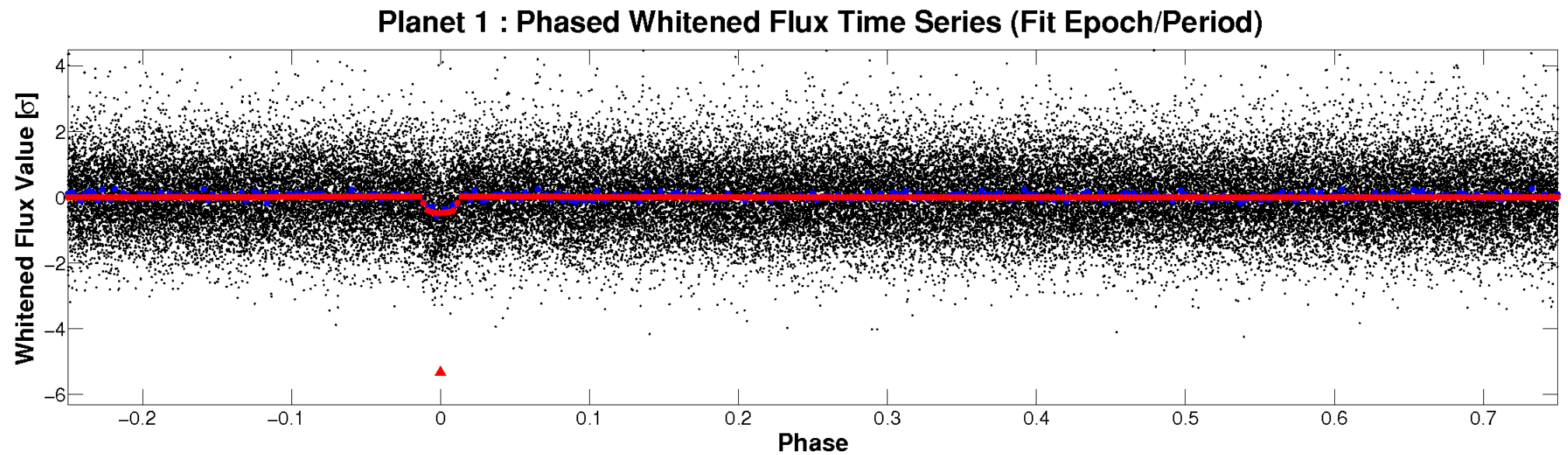
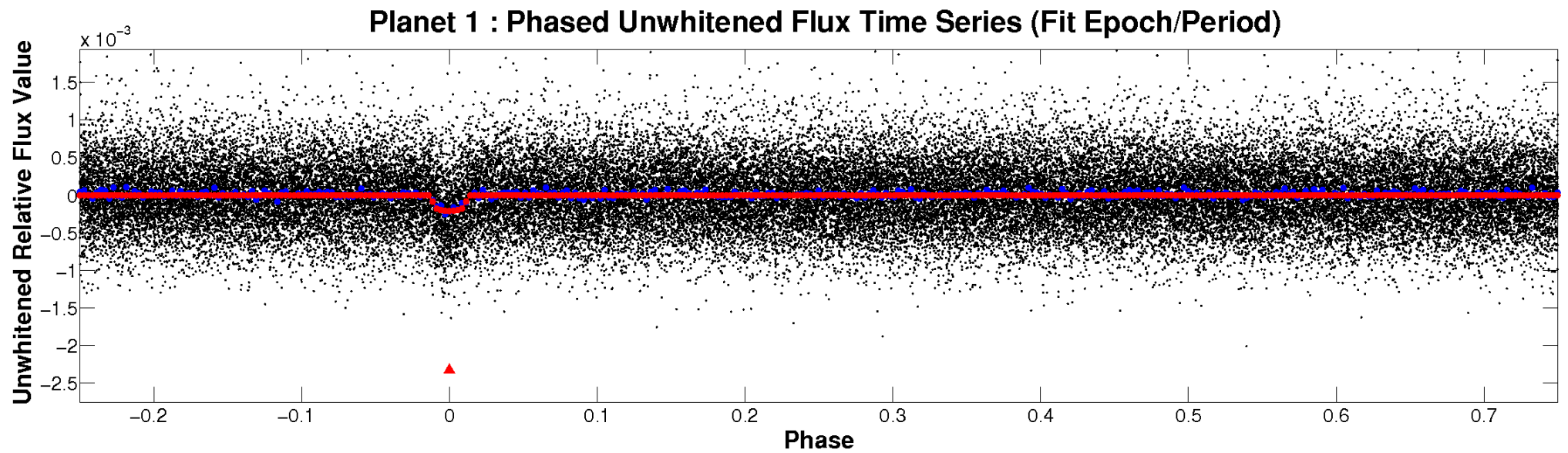


ALT Odd/Even

TCE 005524881-01

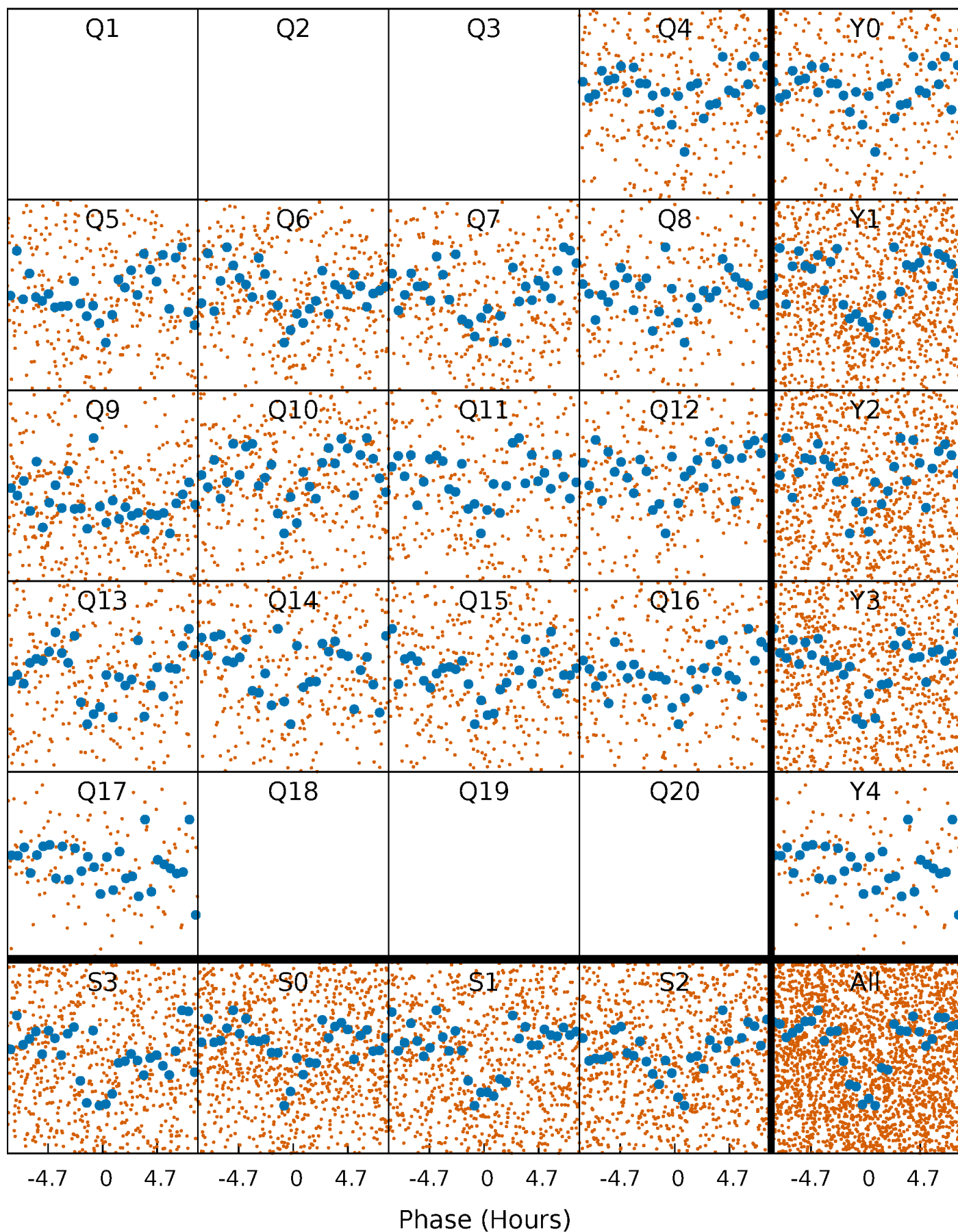


Non-Whitened Vs. Whitened Light Curve



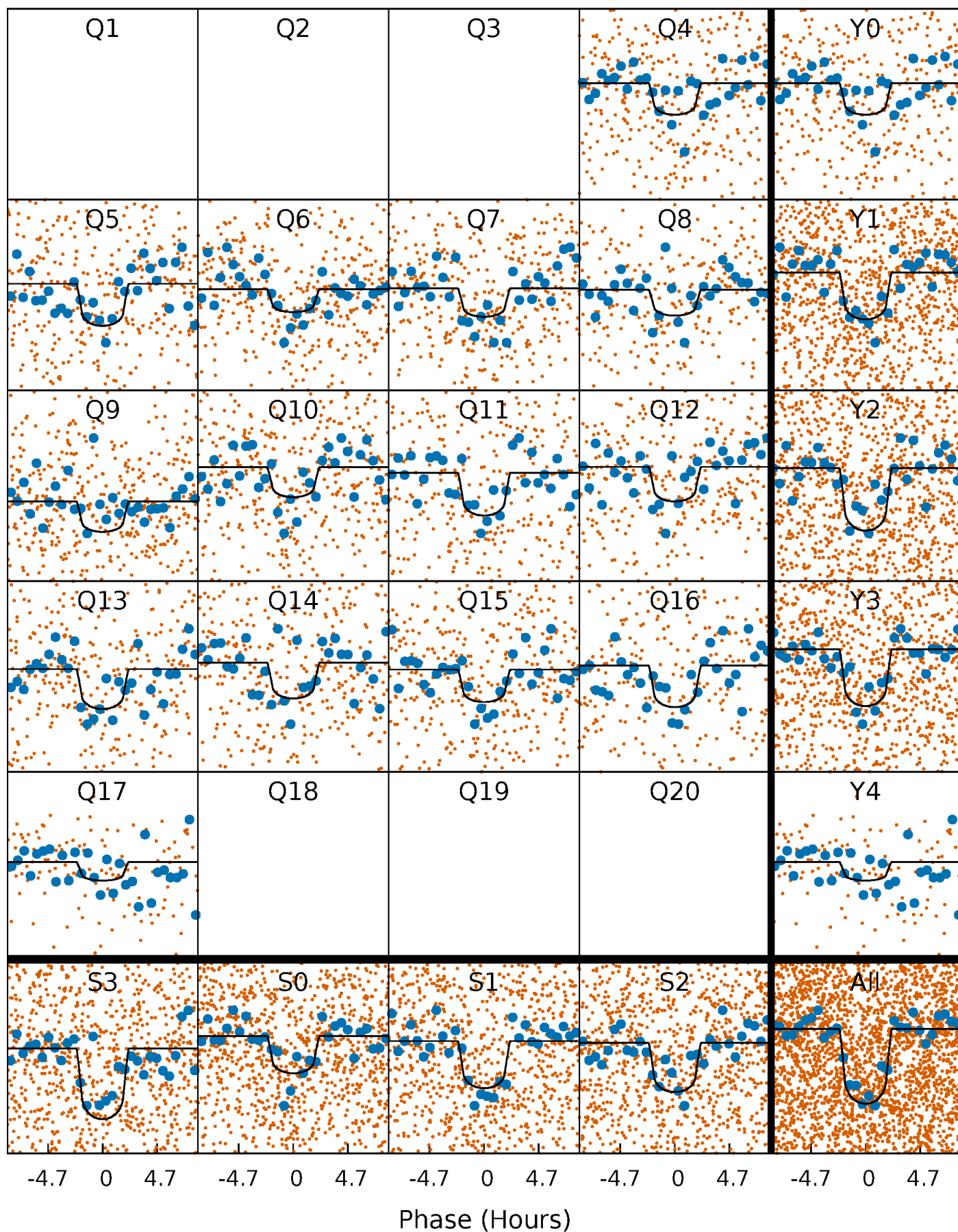
PDC Quarter-Phased Transit Curves

TCE 005524881-01 P= 7.195485 Days $T_0=136.033397$ (BKJD)



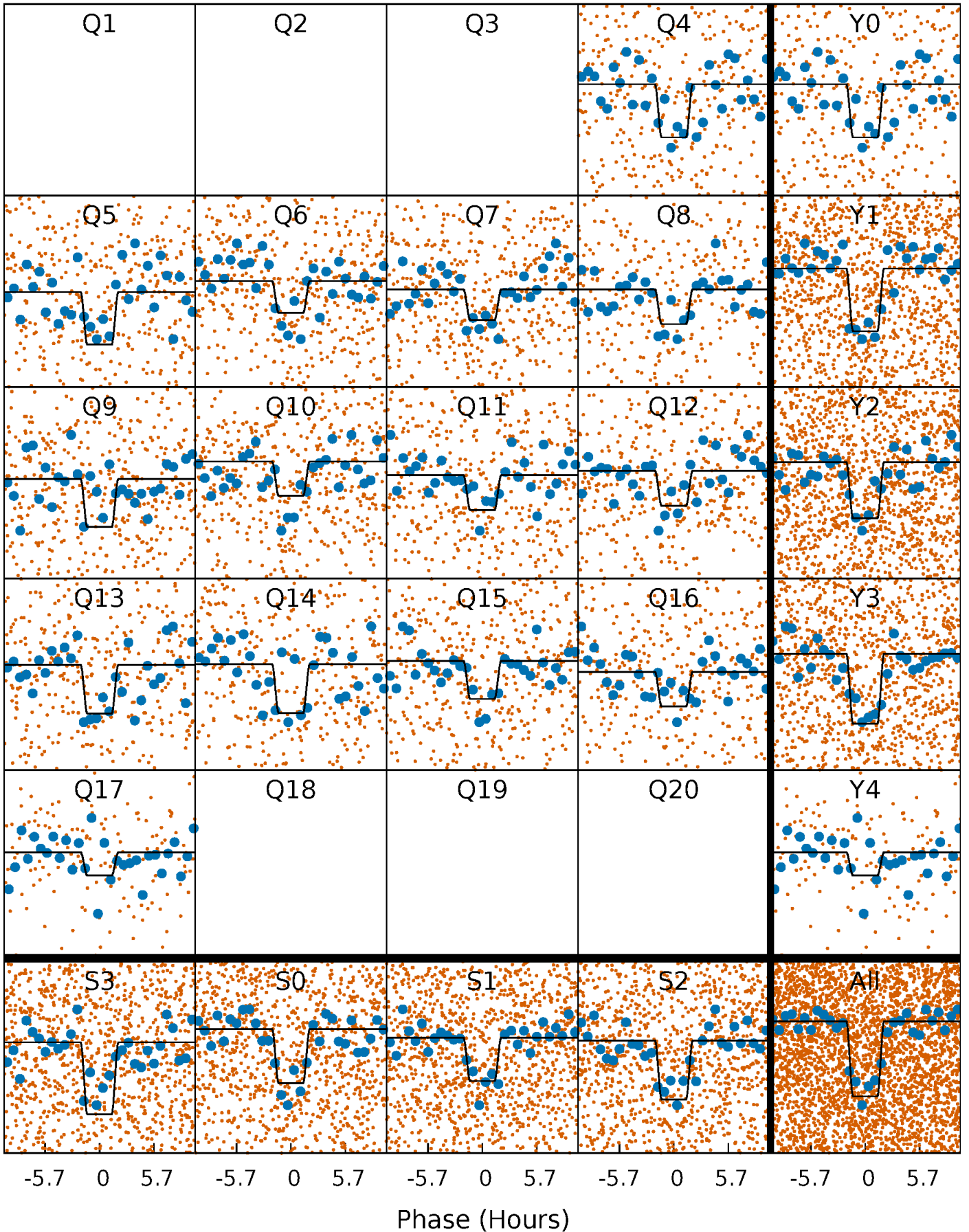
DV Quarter-Phased Transit Curves

TCE 005524881-01 P= 7.195485 Days $T_0=136.033397$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

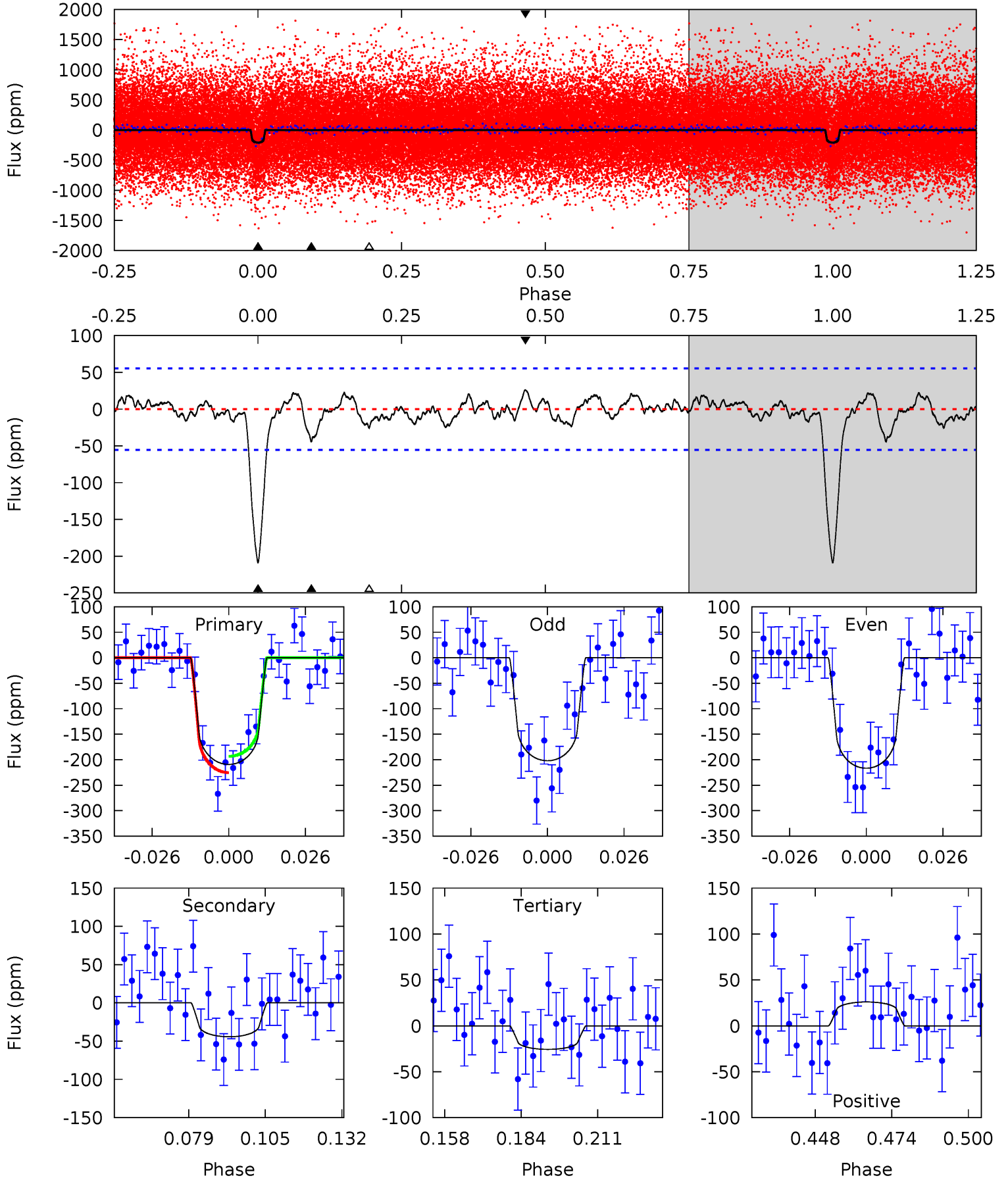
TCE 005524881-01 P= 7.195393 Days $T_0=136.041399$ (BKJD)



DV Model-Shift Uniqueness Test

005524881-01, P = 7.195485 Days, E = 136.033397 Days

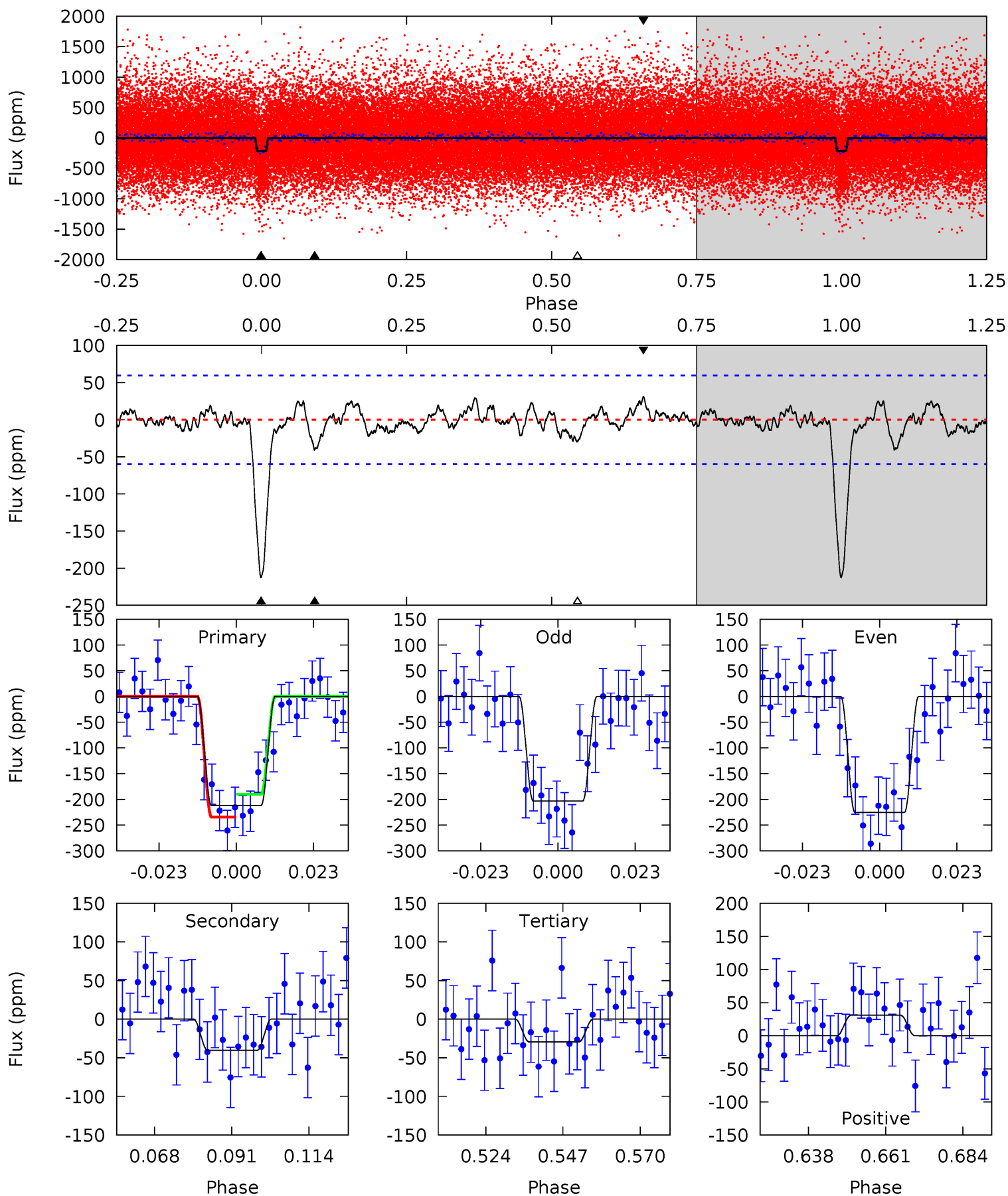
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.3	3.87	2.24	2.26	4.84	2.22	0.95	16.0	16.0	1.63	1.60	0.64	1.02	0.11	1.39



Alt Model-Shift Uniqueness Test

005524881-01, P = 7.195393 Days, E = 136.041399 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.3	3.28	2.40	2.52	4.87	2.28	0.92	14.9	14.7	0.88	0.76	0.91	0.96	0.13	1.82



Stellar Parameters For KIC 005524881

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6242^{+195}_{-260}	$4.432^{+0.058}_{-0.232}$	$0.070^{+0.250}_{-0.300}$	$1.093^{+0.365}_{-0.122}$	$1.178^{+0.153}_{-0.170}$	$1.272^{+0.383}_{-0.693}$
	+3%/-4%	+1%/-5%	+357%/-429%	+33%/-11%	+13%/-14%	+30%/-54%
Source	KIC0	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 005524881-01 / KOI 3030.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-44 ± 11	$1.90^{+1.27}_{-1.02}$	1486^{+113}_{-82}	4366^{+1765}_{-753}	38^{+151}_{-25}
Alt.	-40 ± 12	$2.01^{+1.25}_{-1.07}$	1476^{+110}_{-79}	4148^{+1546}_{-688}	31^{+112}_{-20}

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

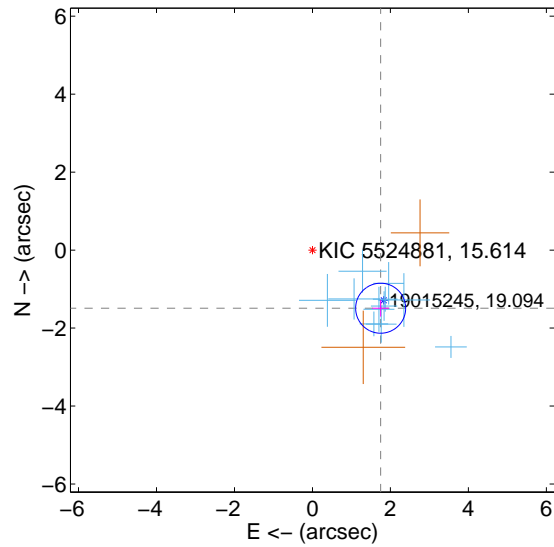
Supplemental centroid analysis for 005524881-01. Kepler magnitude: 15.61. Transit SNR 14.56

There are 11 quarters with good PRF difference image offsets

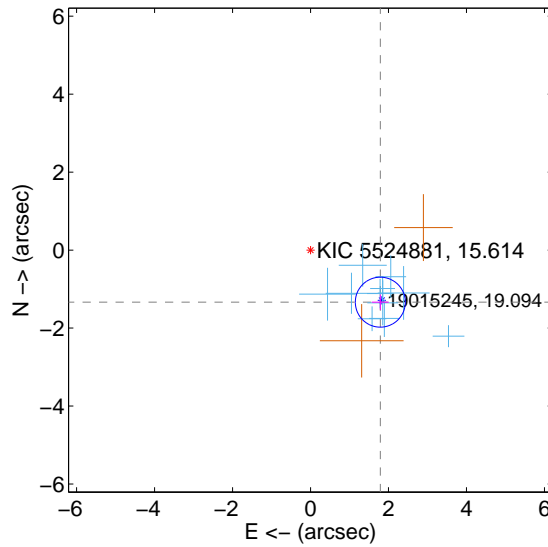
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.298 ± 0.214	10.75	-1.749 ± 0.214	-1.490 ± 0.215
PRF-fit source offset from KIC position	2.233 ± 0.214	10.45	-1.790 ± 0.218	-1.335 ± 0.198
photometric centroid source offset	2.33 ± 0.95	2.46	-0.69 ± 0.99	-2.22 ± 0.94

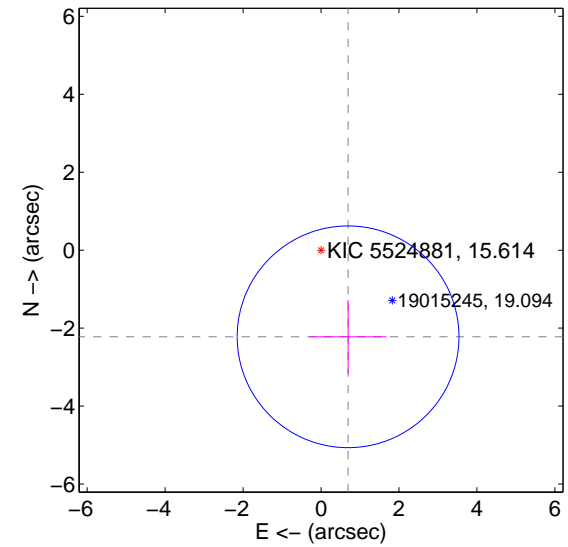
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

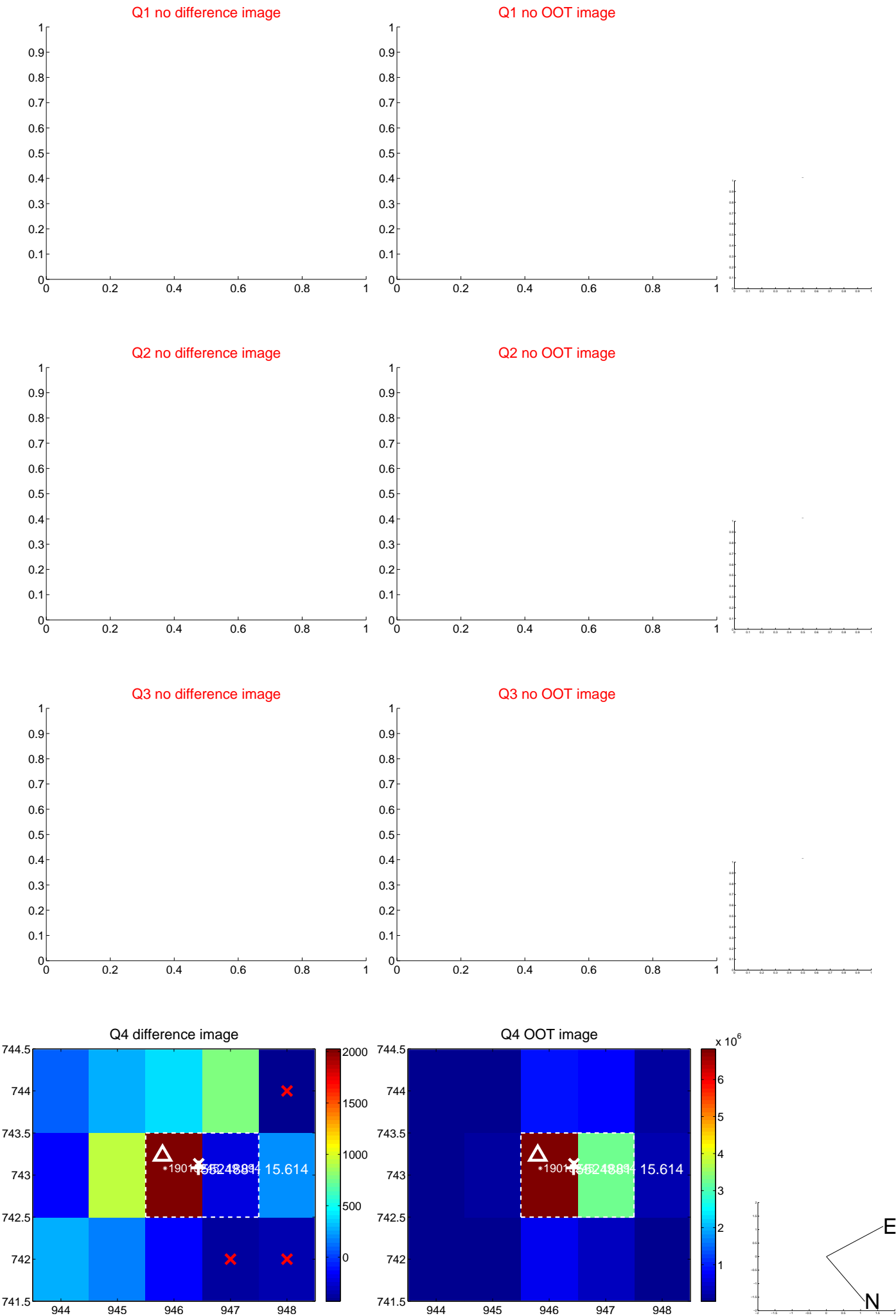


offset from photometric centroids

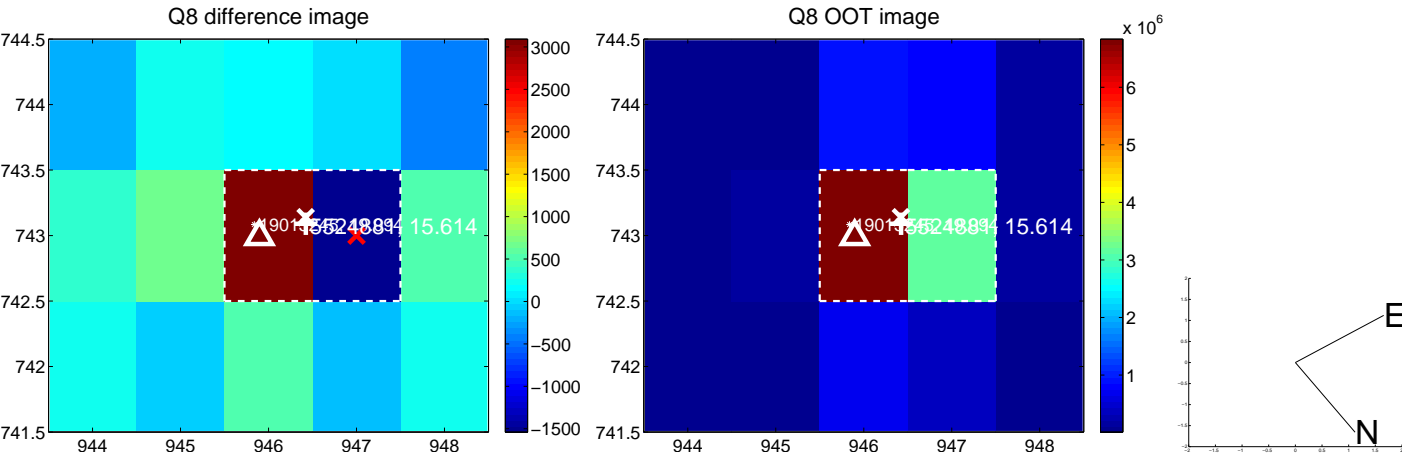
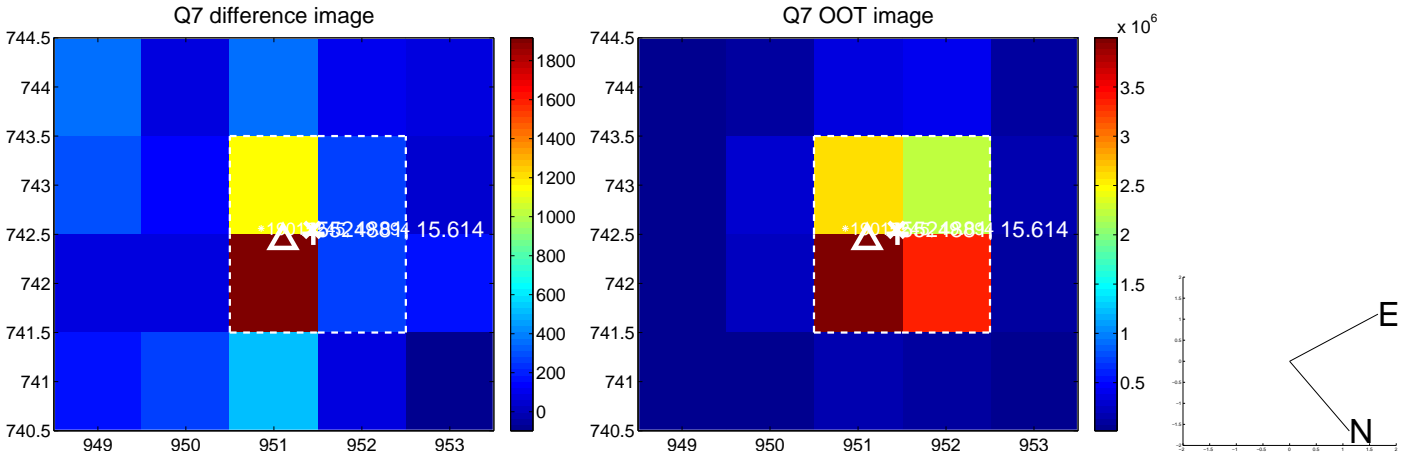
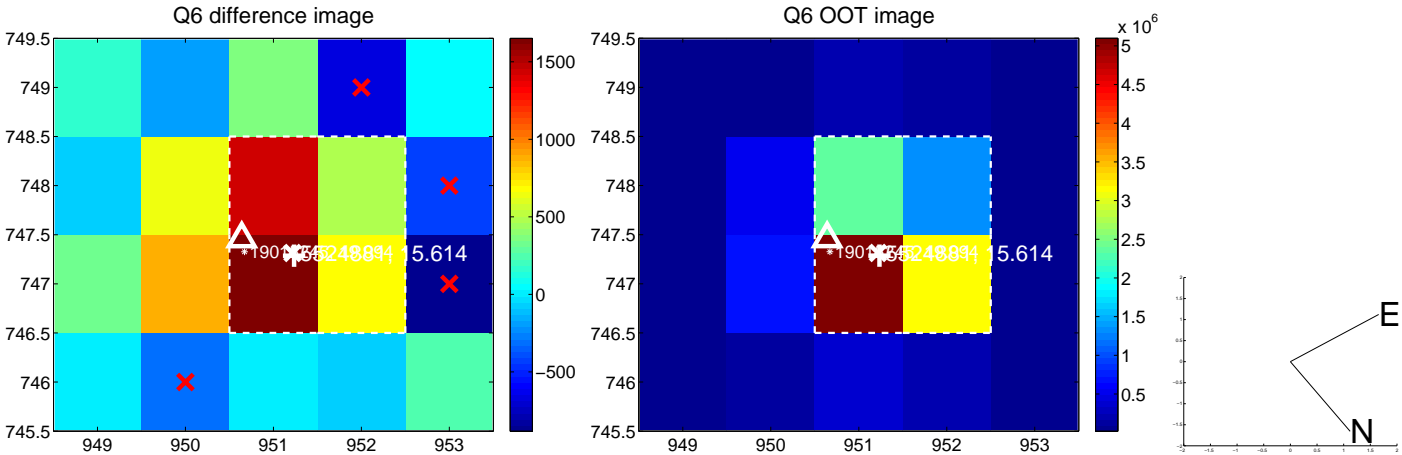
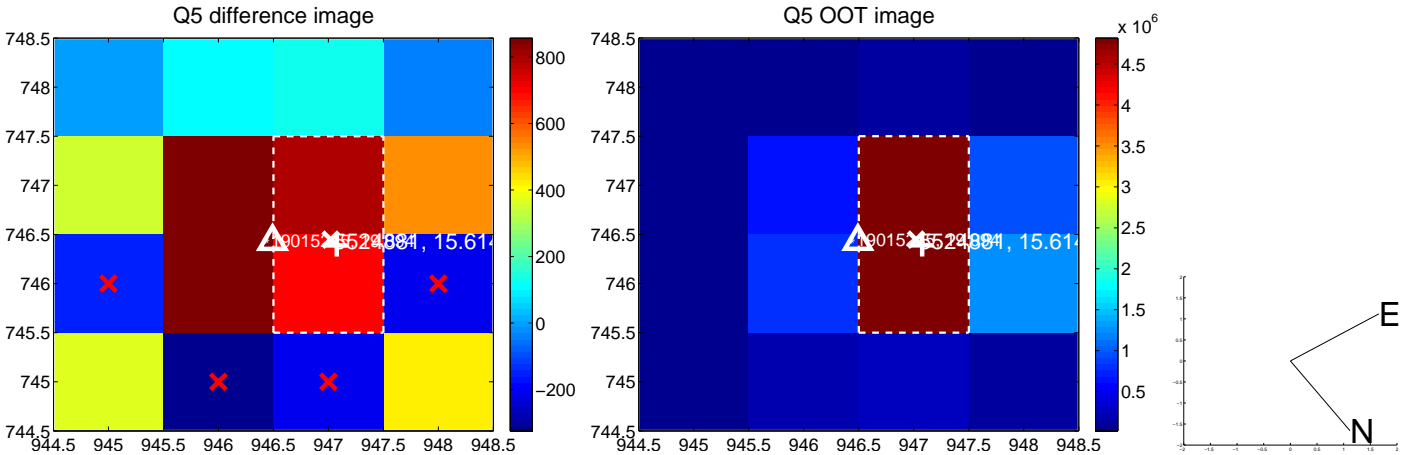


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

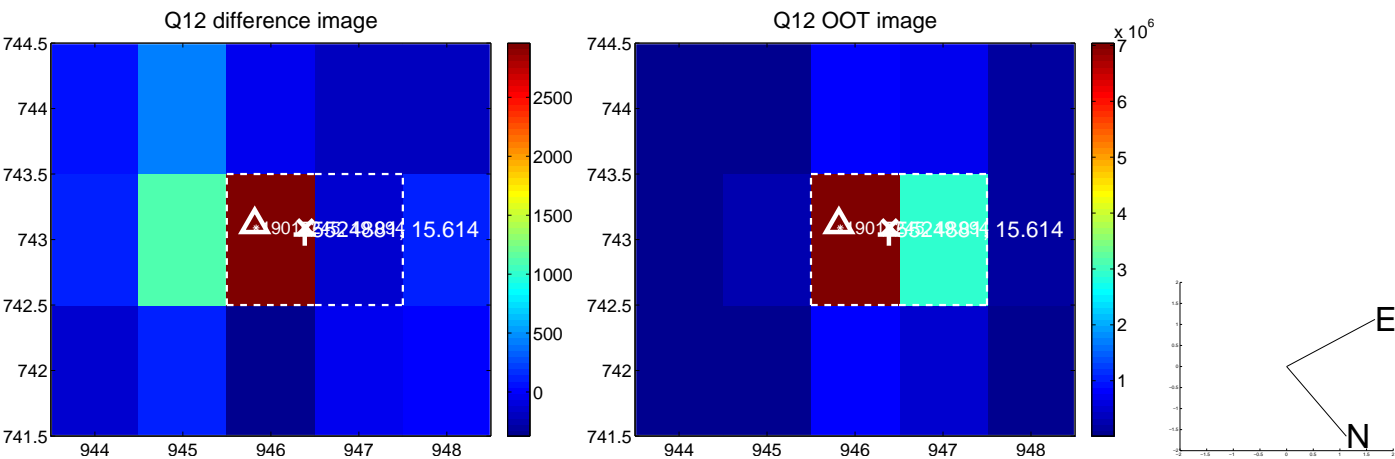
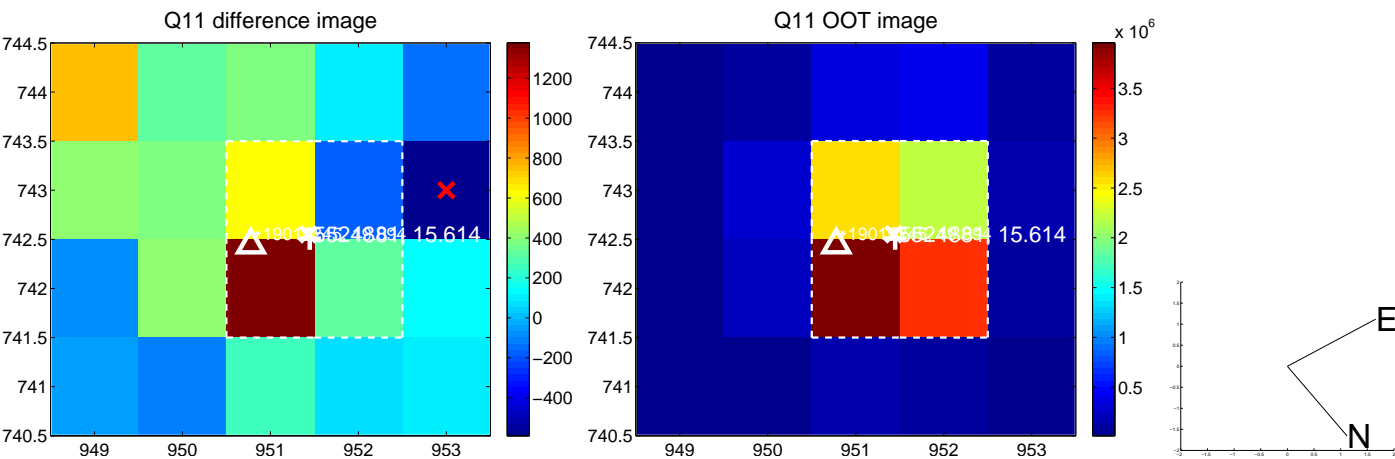
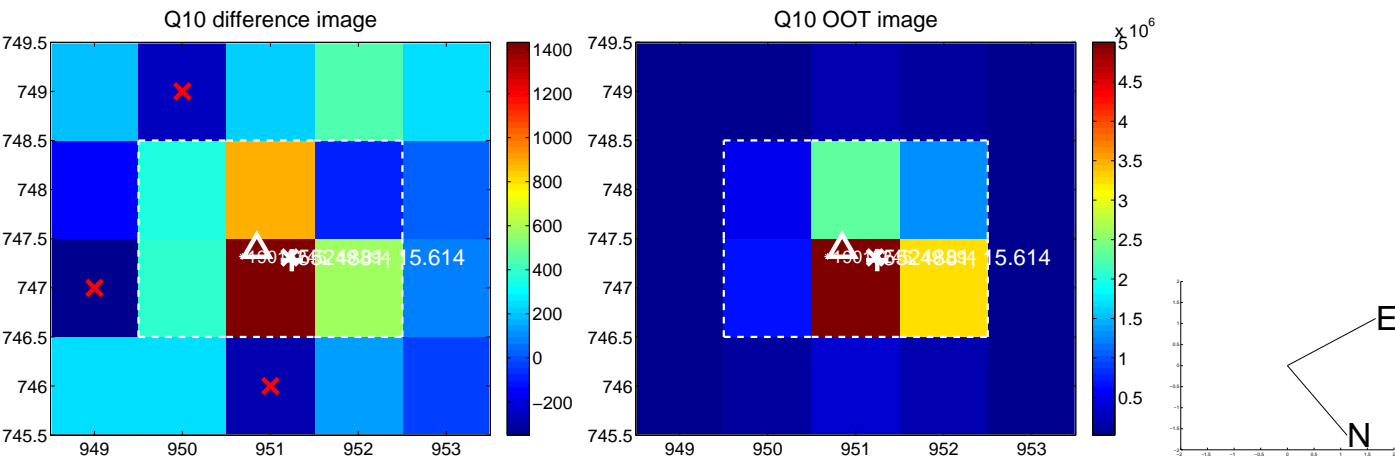
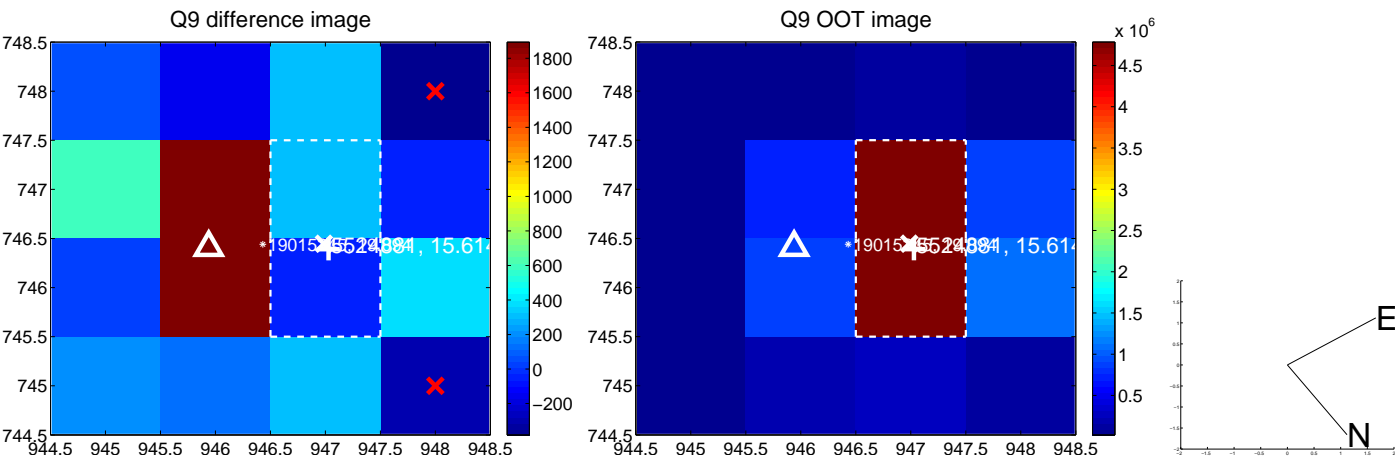
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



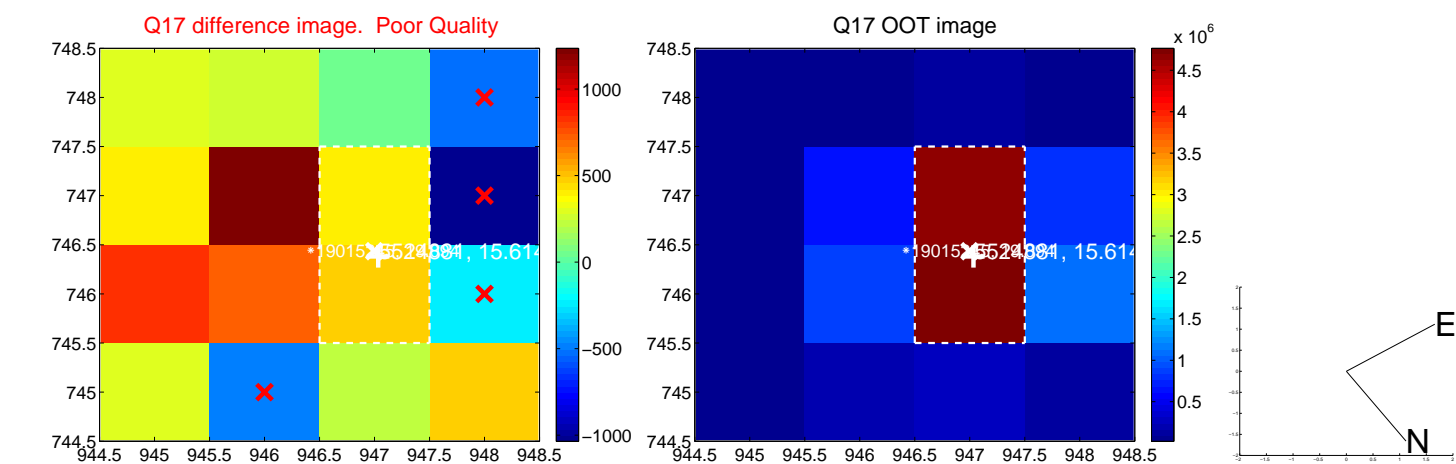
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



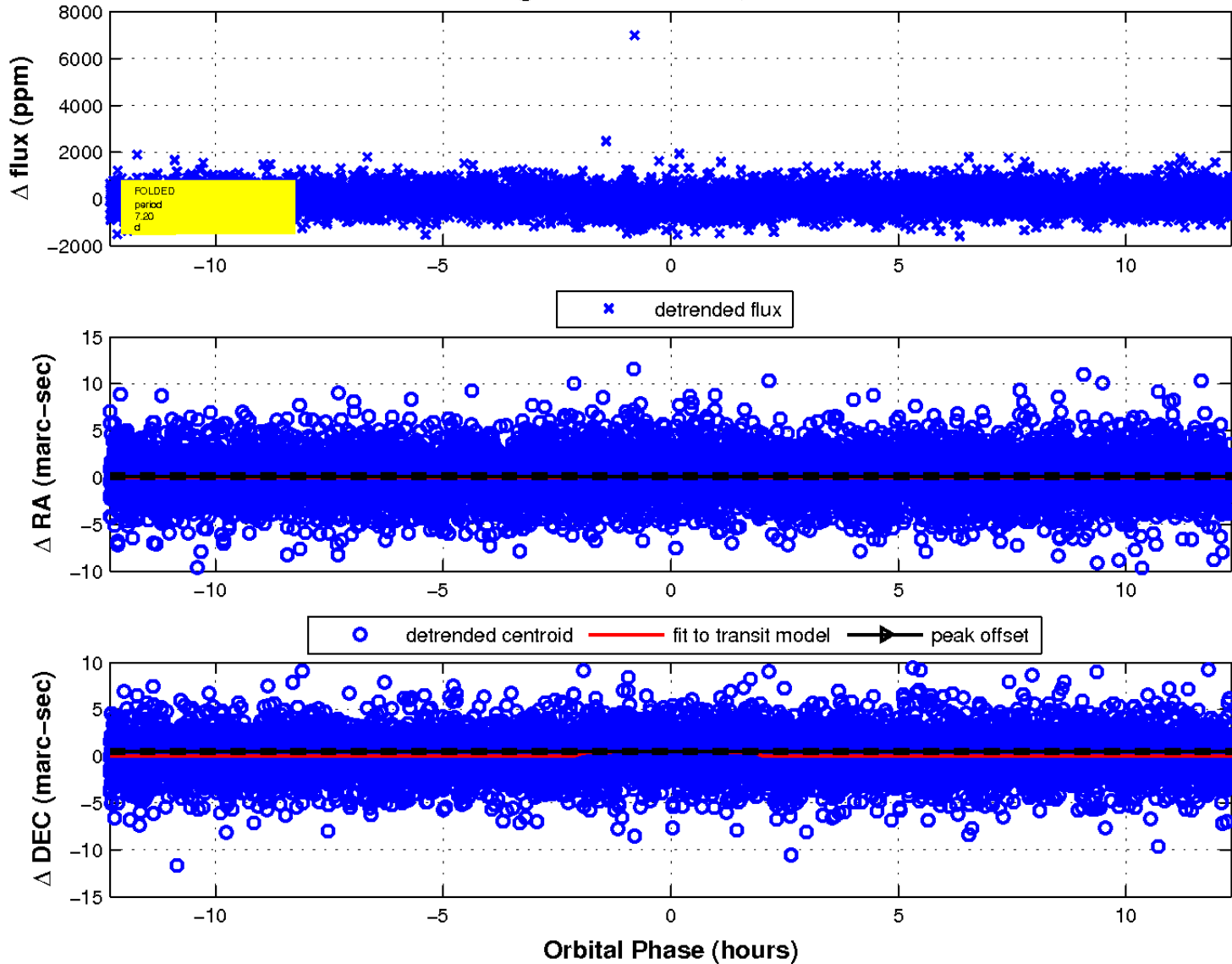
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

