

KIC 010525077

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})
010525077-01	OBS	5800.01	11.006776	135.996991	125.1	4.825	9.2	8.9	1.05	6091	1.32	138.48

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010525077-01	OBS	PC	0.99	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.

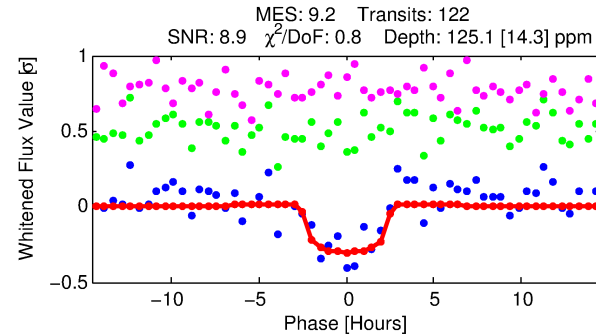
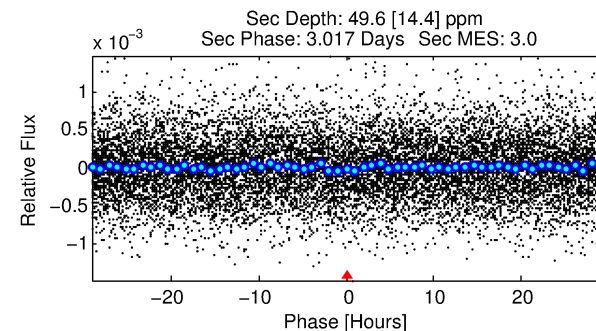
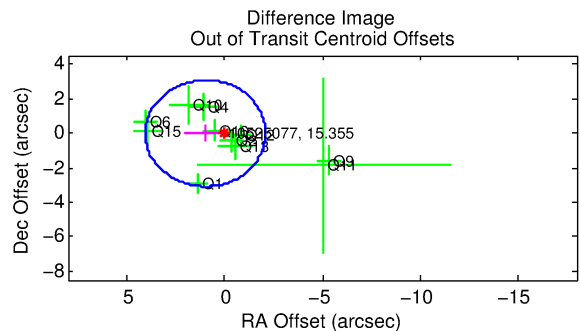
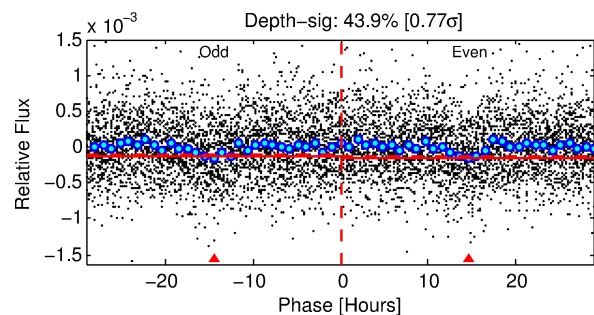
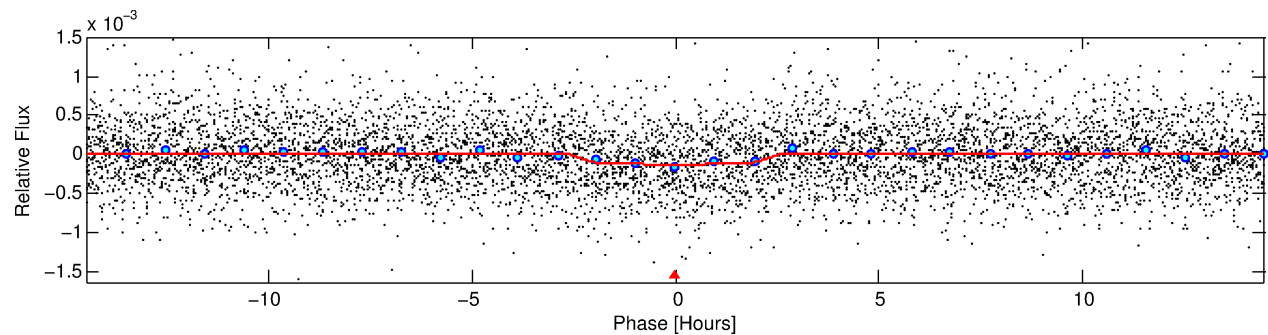
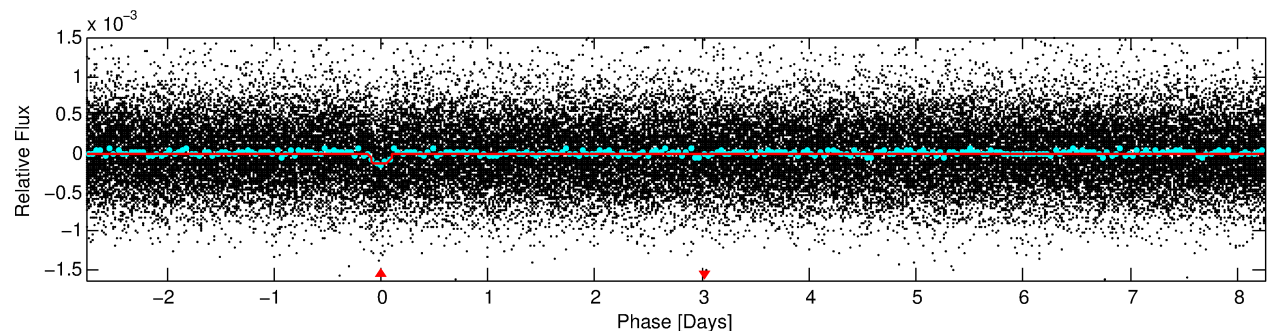
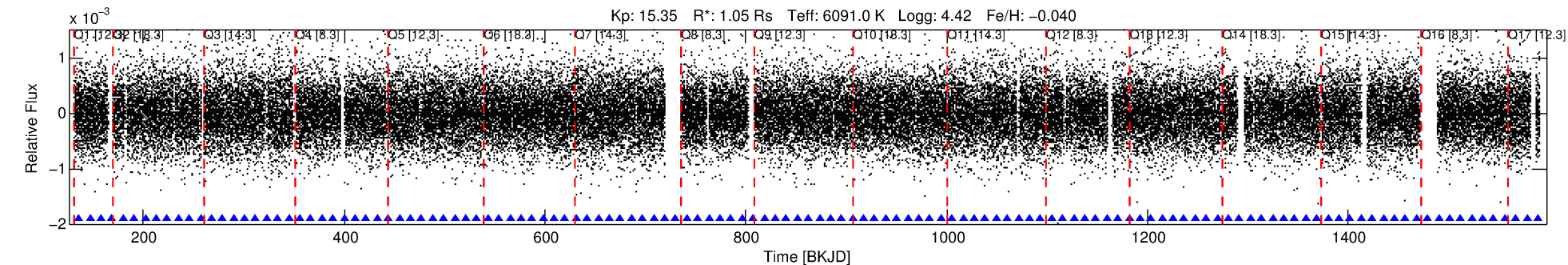
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010525077-01

No Significant Match Found

DV One-Page Summary

KIC: 10525077 Candidate: 1 of 1 Period: 11.007 d
KOI: K05800.01 Corr: 0.980



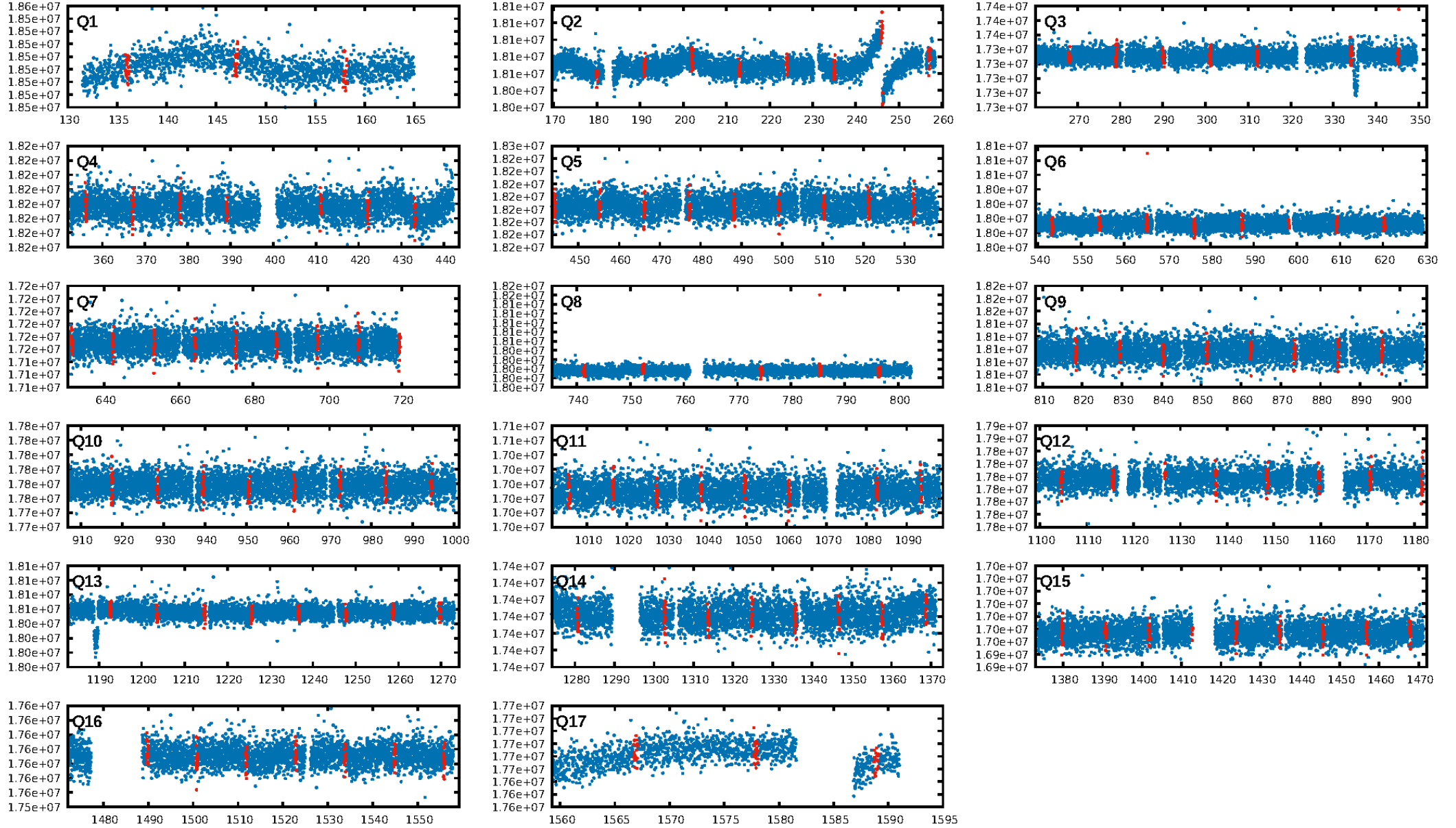
DV Fit Results:

Period = 11.00678 [0.00014] d
Epoch = 135.9970 [0.0108] BKJD
Rp/R* = 0.0116 [0.0080]
a/R* = 9.77 [33.86]
b = 0.84 [1.21]
Seff = 138.48 [56.91]
Teff = 875 [90] K
Rp = 1.33 [1.01] Re
a = 0.0988 [0.0264] AU
Ag = 151.53 [221.84] [0.68 σ]
Teffp = 4745 [1683] K [2.30 σ]

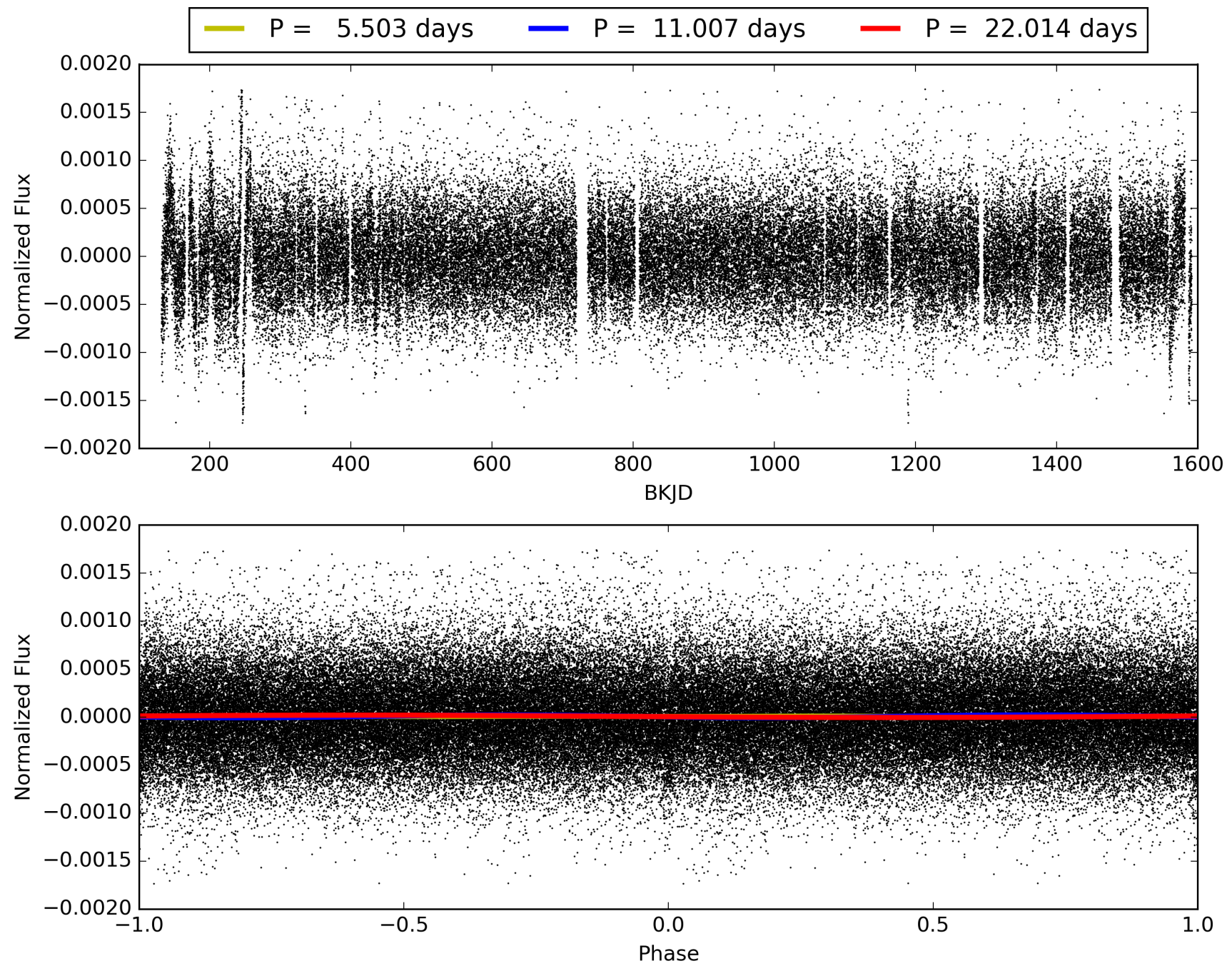
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.05e-20
RollingBand-fgt: 1.00 [116/116]
GhostDiagnostic-chr: 159.3
Centroid-sig: 30.7%
Centroid-so: 1.941 arcsec [1.16 σ]
OotOffset-rm: 0.984 arcsec [0.96 σ]
KicOffset-rm: 0.764 arcsec [0.83 σ]
OotOffset-st: 3/2/3/3 [11]
KicOffset-st: 3/2/3/3 [11]
DiffImageQuality-fgm: 0.55 [6/11]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 010525077-01, PDC Light Curves

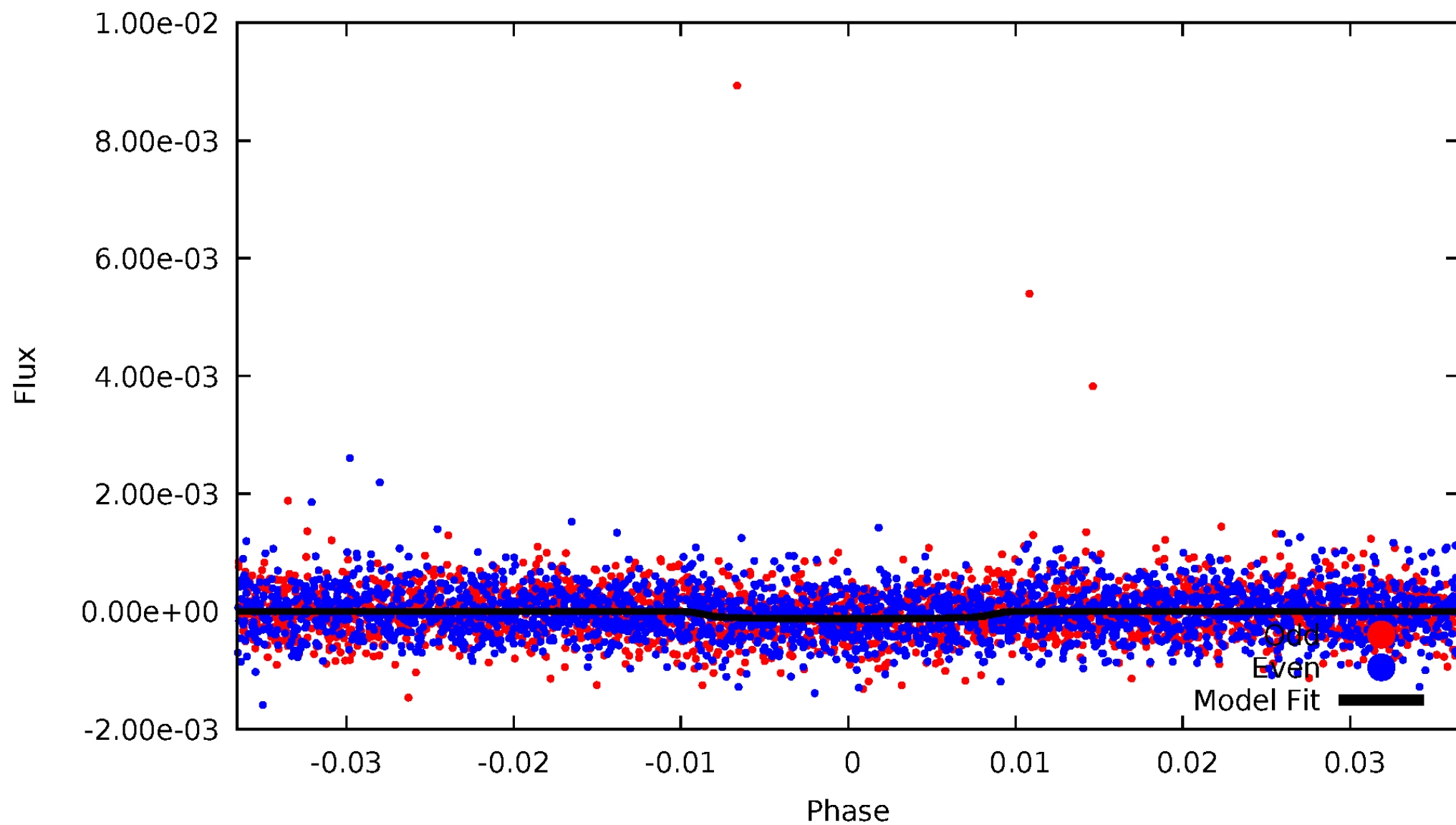


TCE 010525077-01



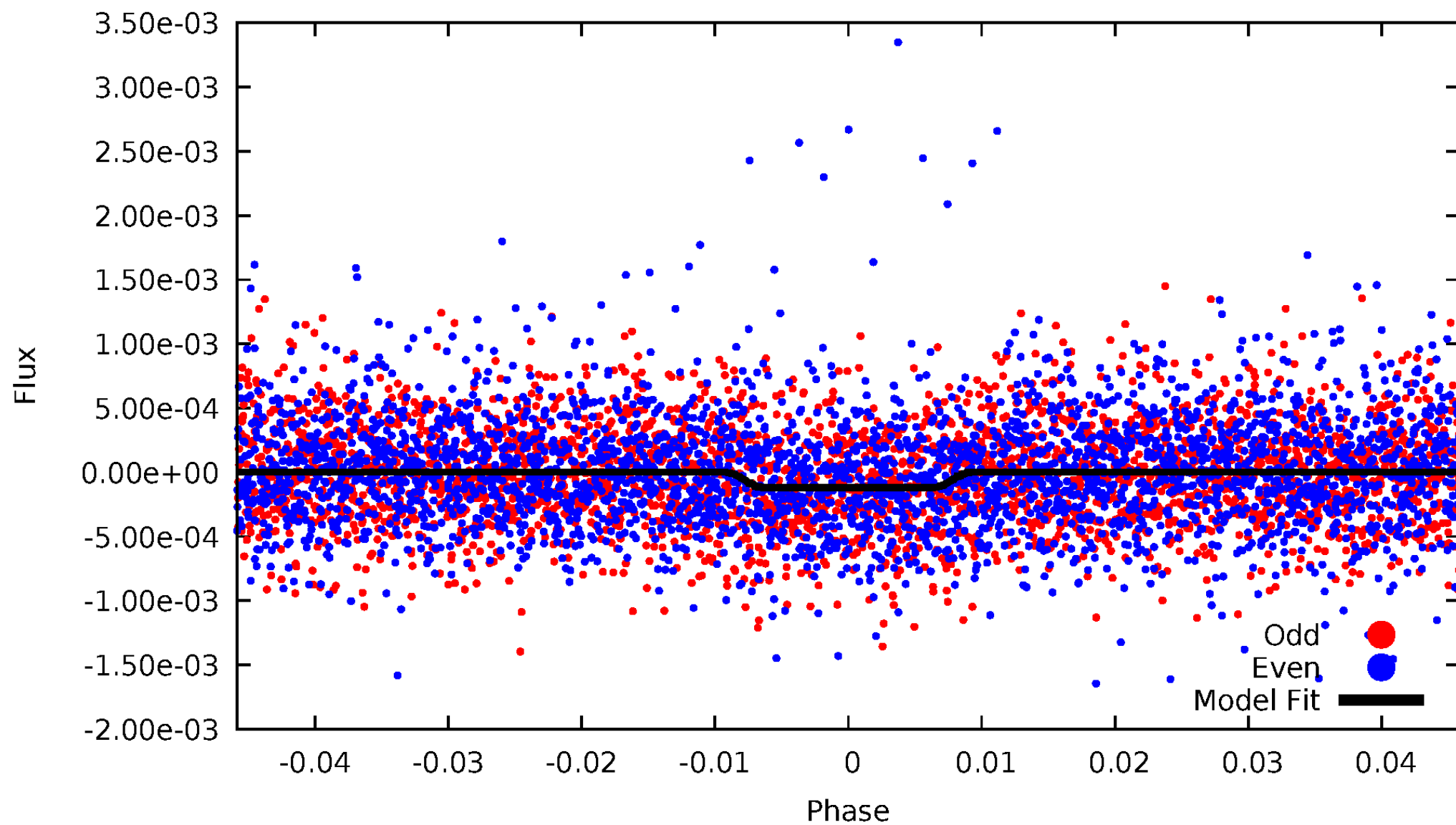
DV Odd/Even

TCE 010525077-01

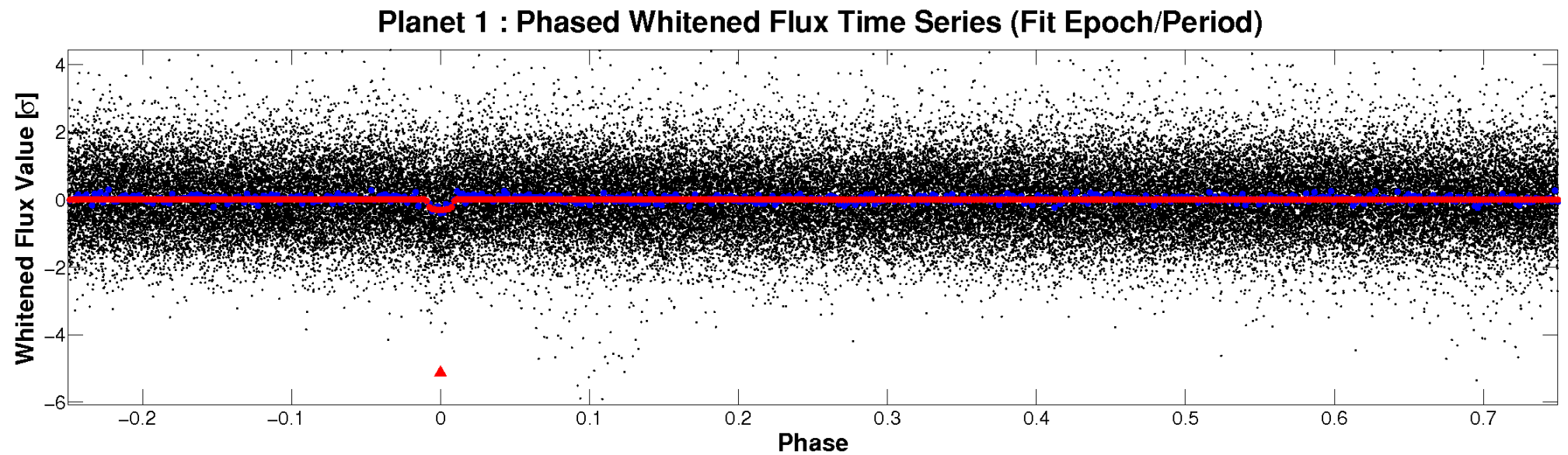
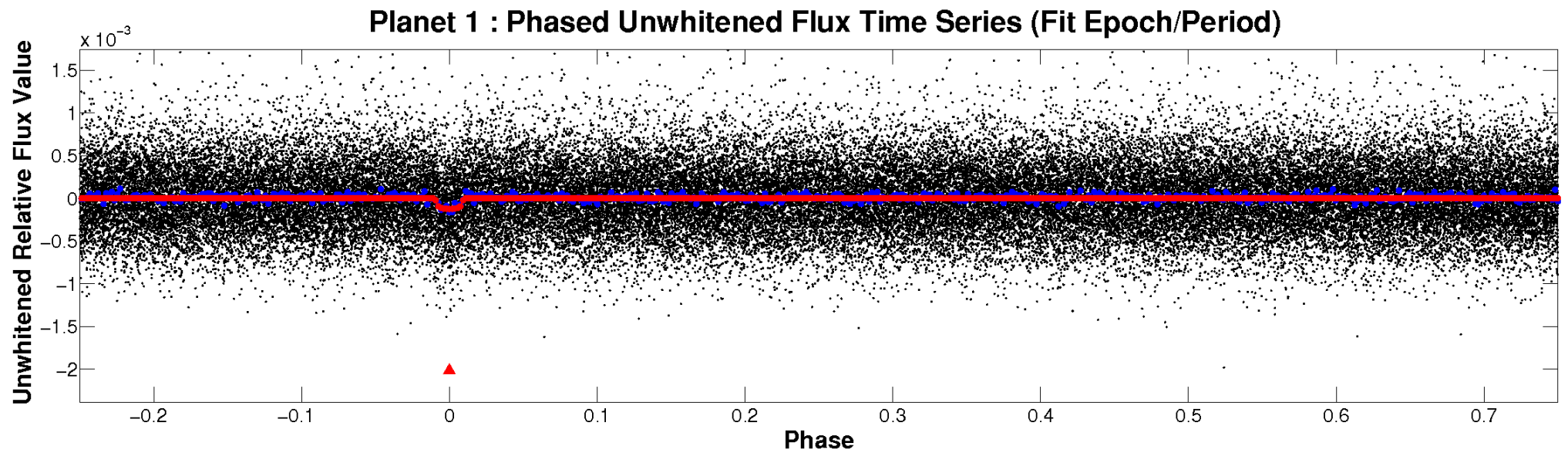


ALT Odd/Even

TCE 010525077-01

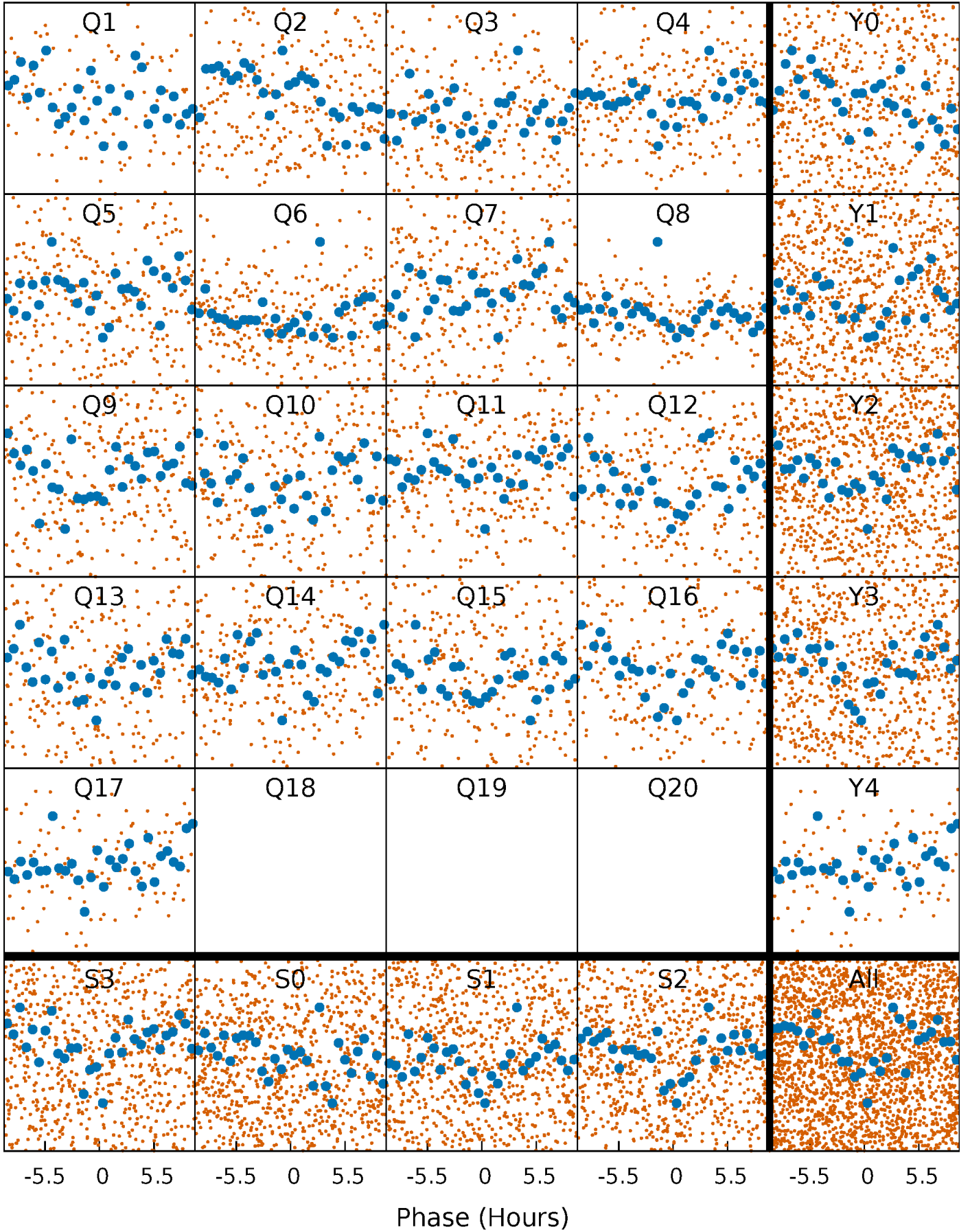


Non-Whitened Vs. Whitened Light Curve



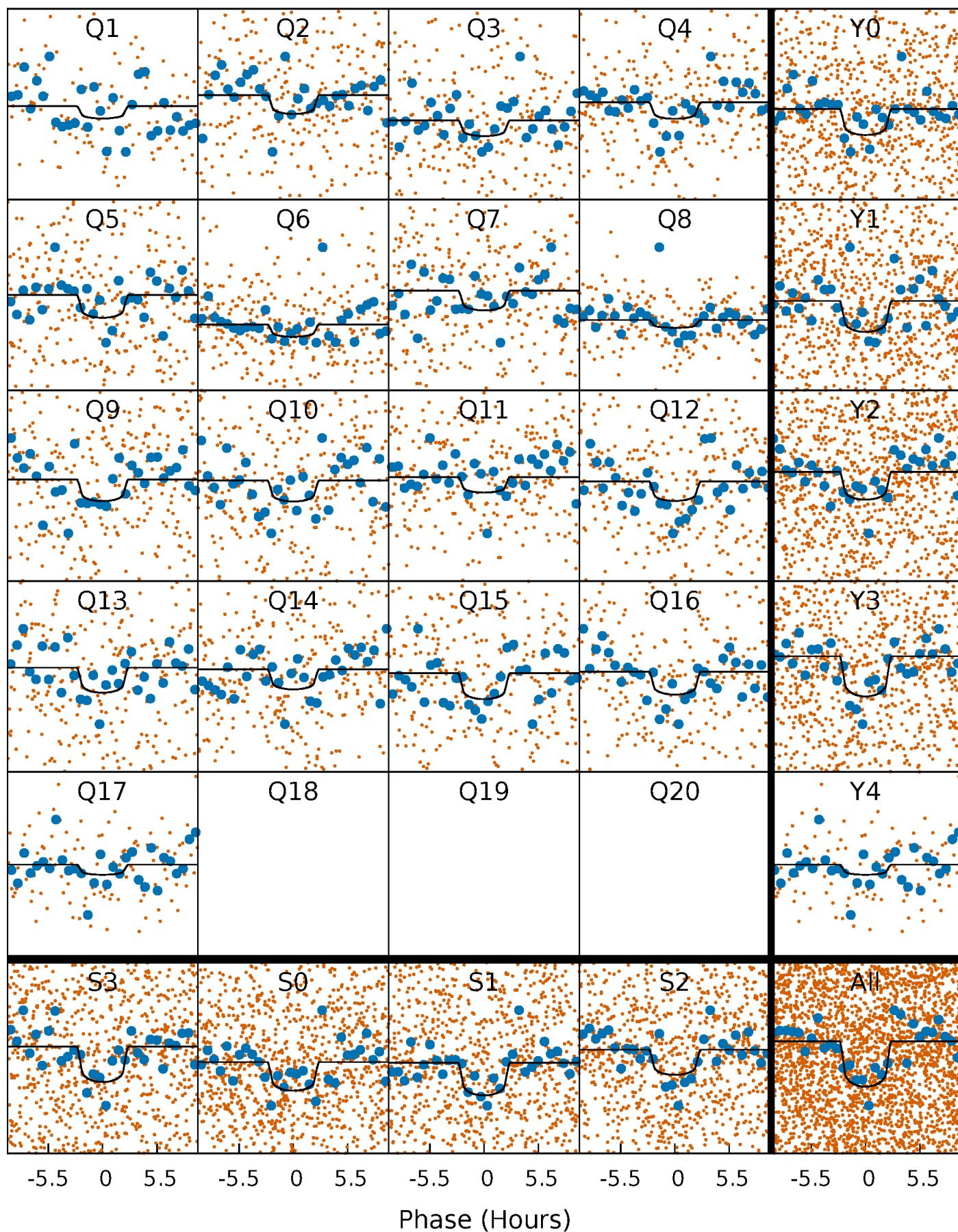
PDC Quarter-Phased Transit Curves

TCE 010525077-01 P= 11.006776 Days $T_0=135.996991$ (BKJD)



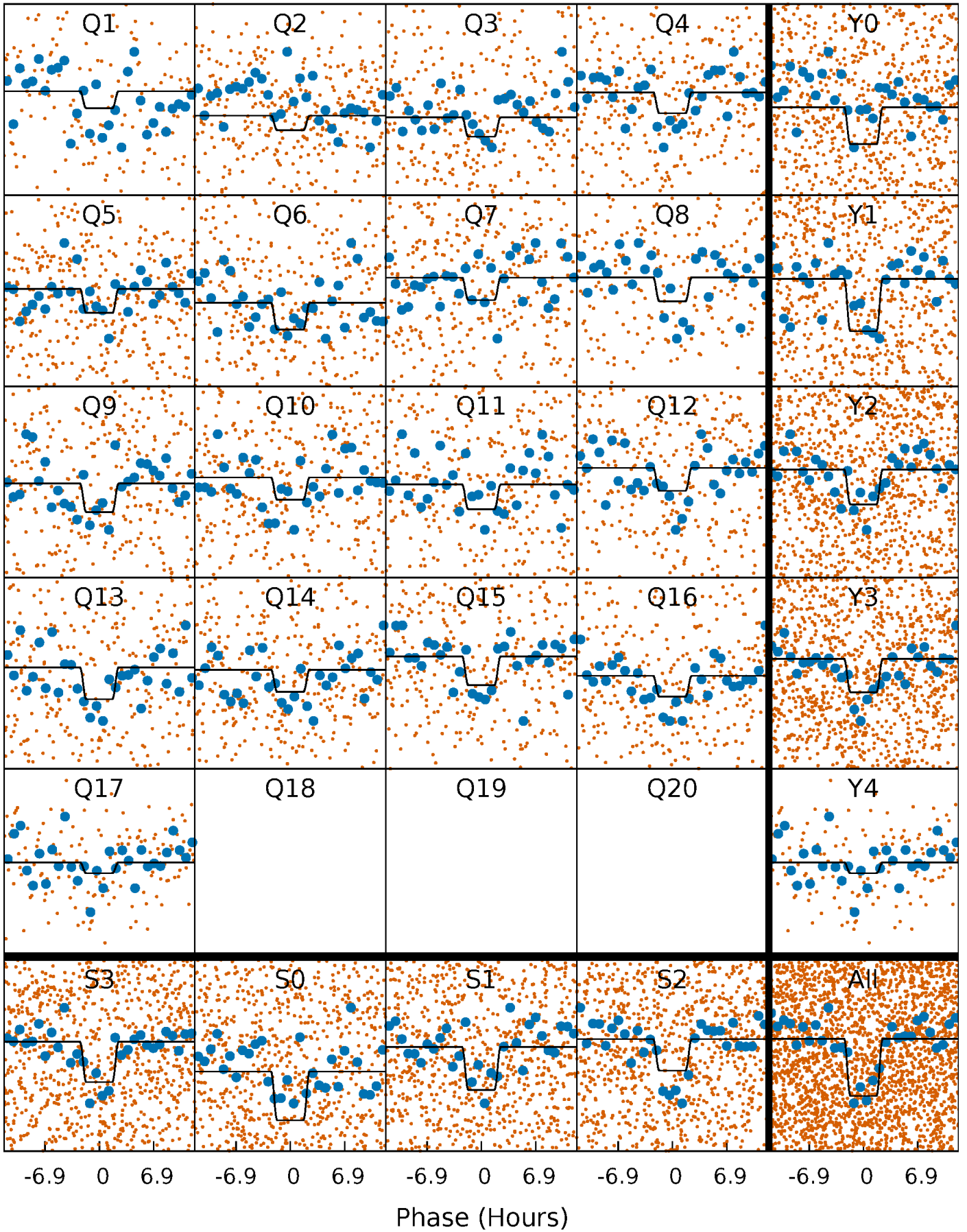
DV Quarter-Phased Transit Curves

TCE 010525077-01 P= 11.006776 Days $T_0=135.996991$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

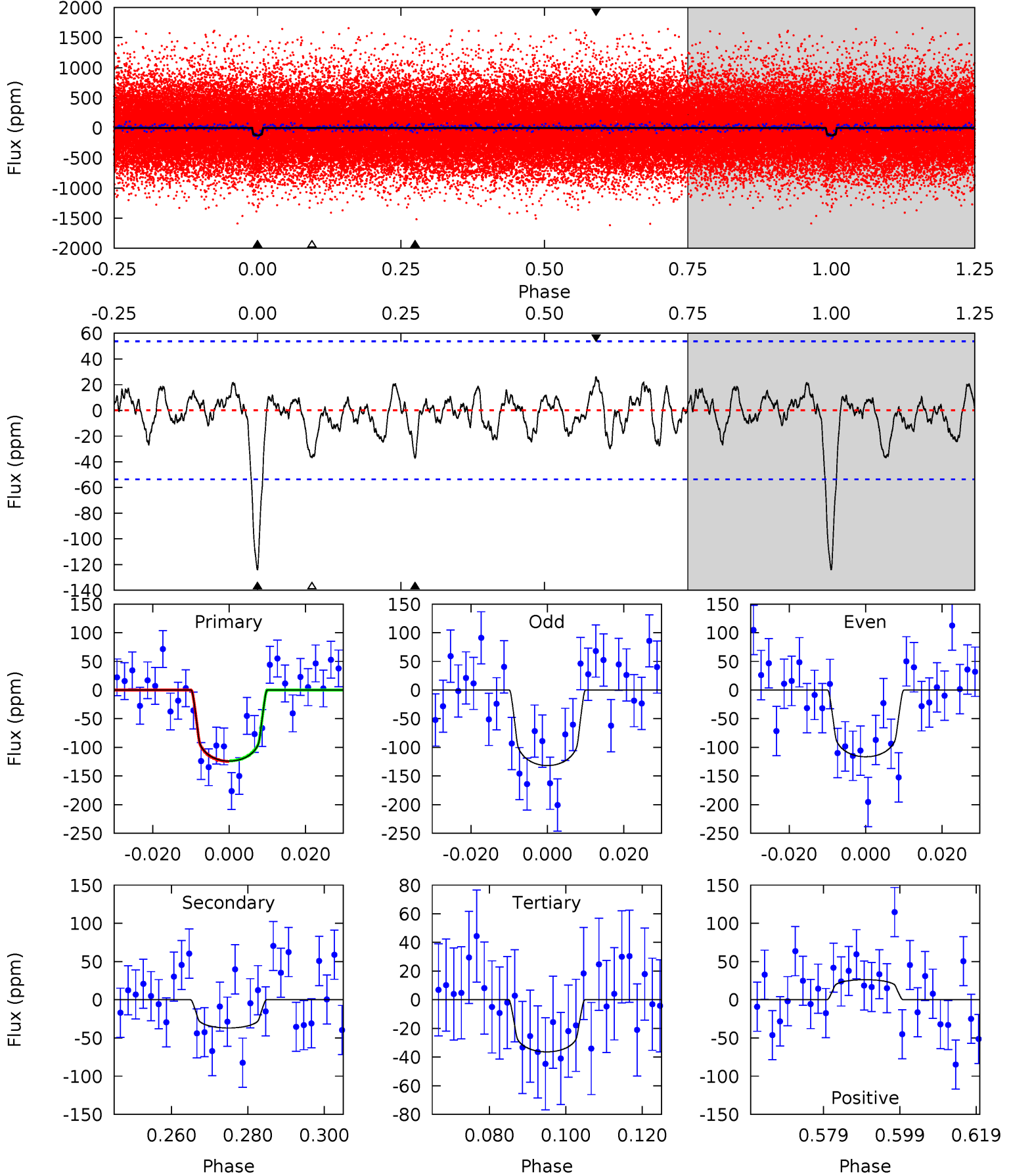
TCE 010525077-01 P= 11.006851 Days $T_0=135.975071$ (BKJD)



DV Model-Shift Uniqueness Test

010525077-01, P = 11.006776 Days, E = 124.990215 Days

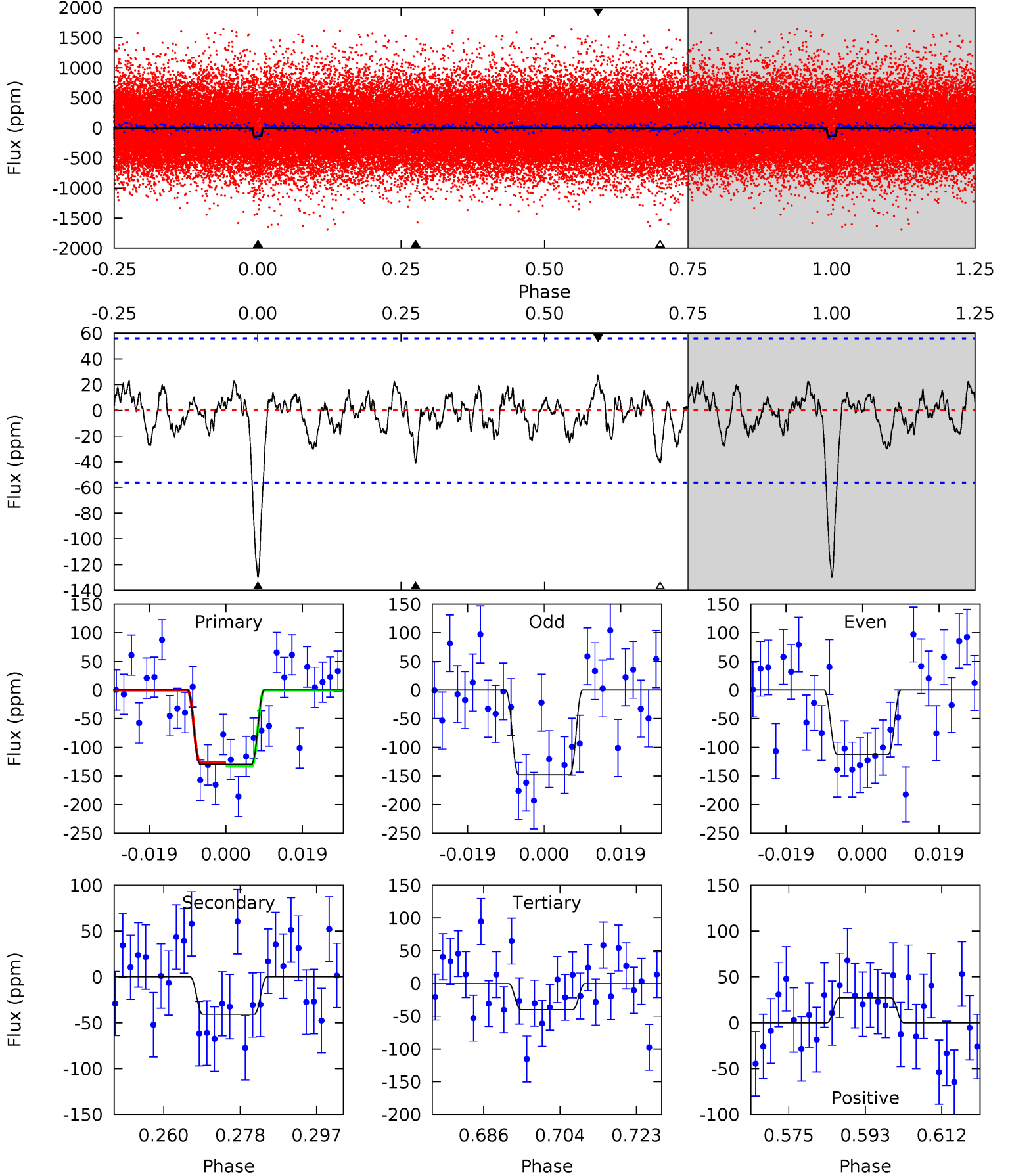
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.3	3.37	3.31	2.39	4.89	2.33	1.07	7.98	8.90	0.05	0.97	0.70	0.96	0.17	0.05



Alt Model-Shift Uniqueness Test

010525077-01, $P = 11.006851$ Days, $E = 124.968220$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.3	3.58	3.52	2.36	4.91	2.35	1.03	7.82	8.99	0.06	1.22	1.57	0.82	0.17	0.29



Stellar Parameters For KIC 010525077

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6091^{+193}_{-214}	$4.424^{+0.070}_{-0.210}$	$-0.040^{+0.250}_{-0.300}$	$1.047^{+0.334}_{-0.143}$	$1.058^{+0.151}_{-0.135}$	$1.299^{+0.496}_{-0.726}$
	+3%/-4%	+2%/-5%	+625%/-750%	+32%/-14%	+14%/-13%	+38%/-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 010525077-01 / KOI 5800.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-37 ± 11	$1.58^{+0.92}_{-0.86}$	1250^{+108}_{-65}	4406^{+1688}_{-757}	80^{+282}_{-52}
Alt.	-41 ± 11	$1.45^{+0.96}_{-0.84}$	1249^{+95}_{-75}	4548^{+2119}_{-802}	105^{+445}_{-71}

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 $A_{obs} \gg 1.0$

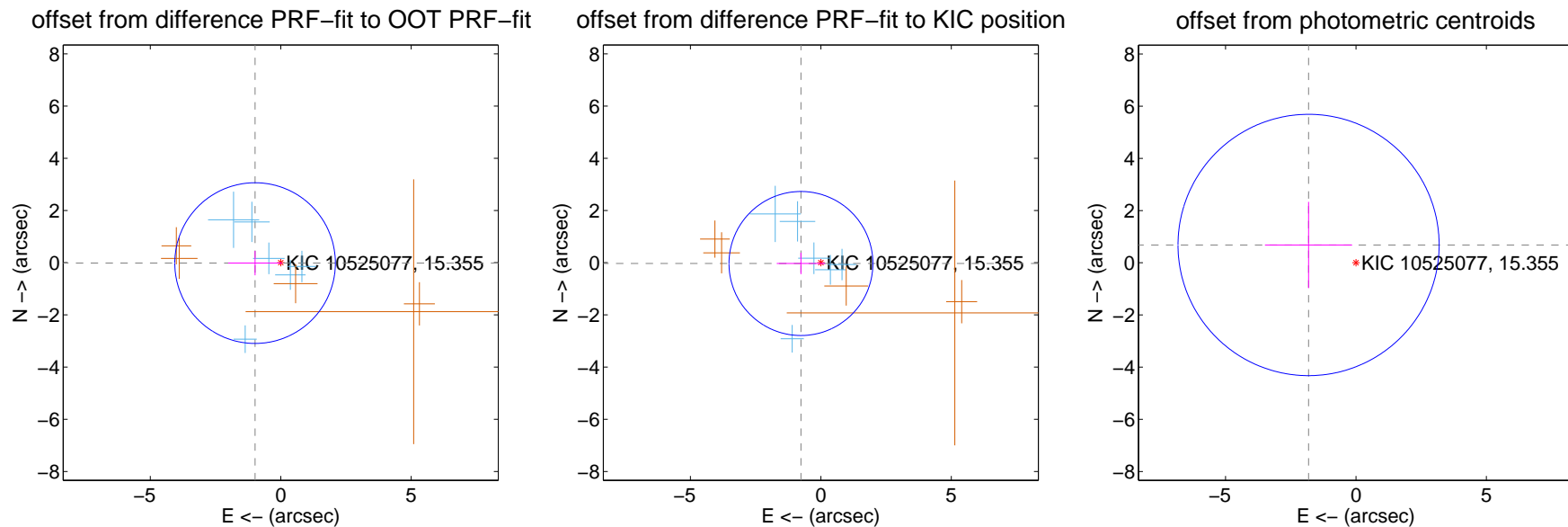
DV Centroid Data

Supplemental centroid analysis for 010525077-01. Kepler magnitude: 15.36. Transit SNR 8.87

There are 6 quarters with good PRF difference image offsets

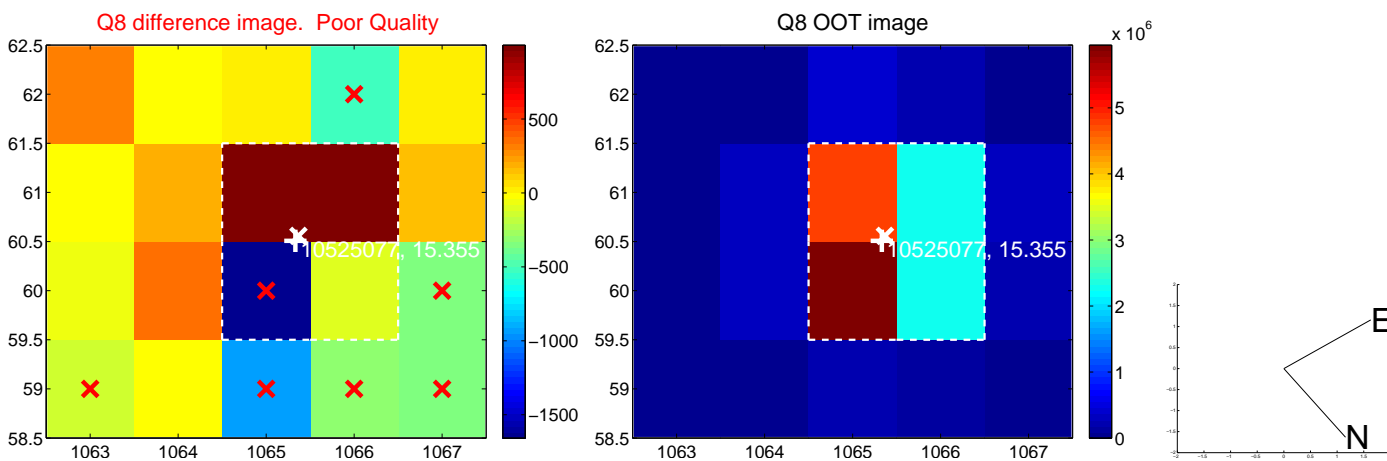
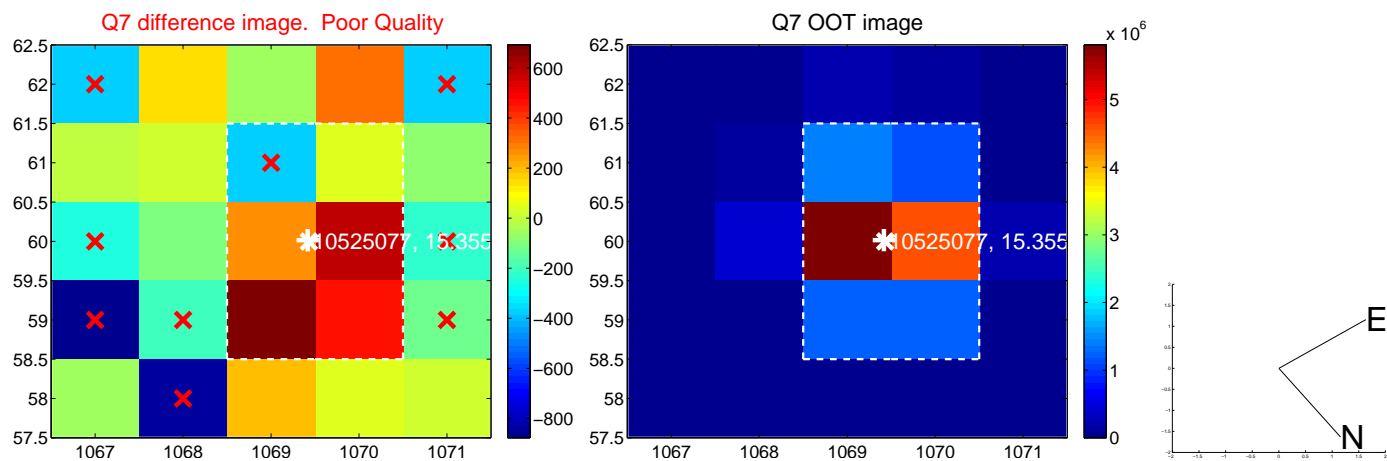
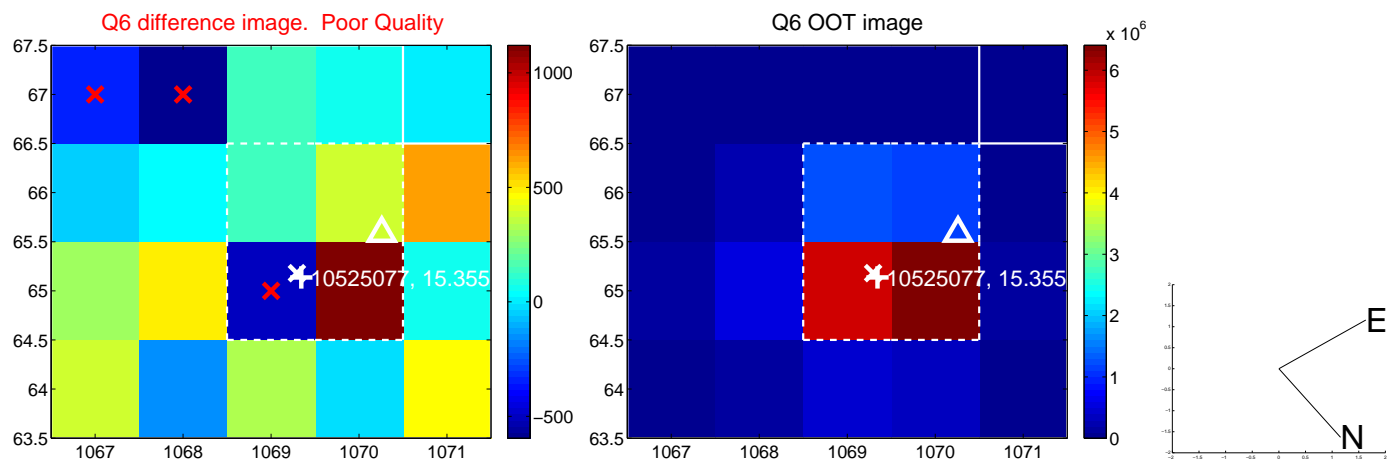
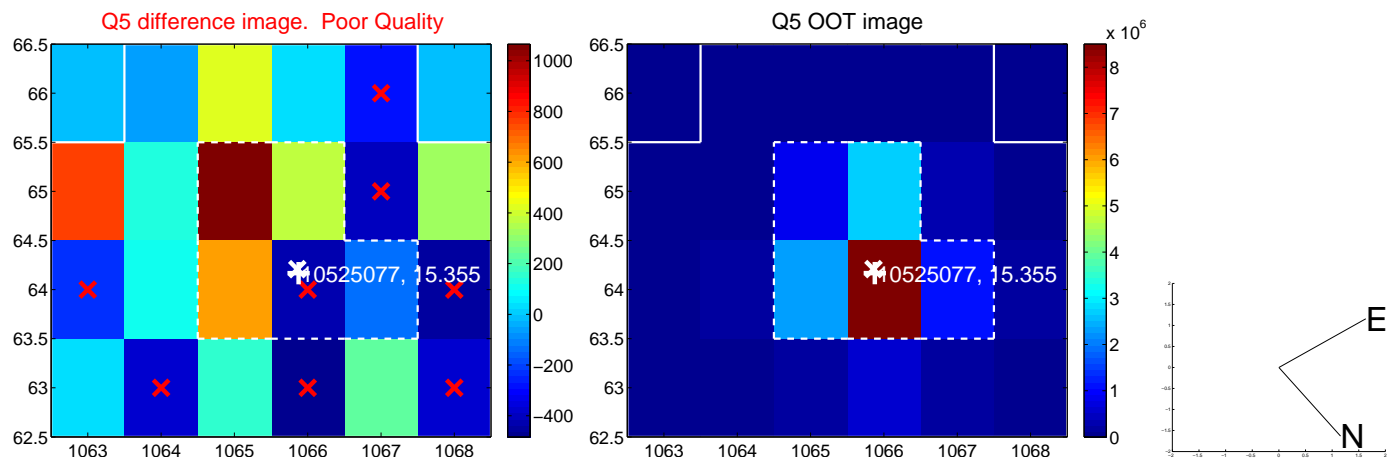
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.984 ± 1.026	0.96	0.984 ± 1.031	-0.016 ± 0.467
PRF-fit source offset from KIC position	0.764 ± 0.919	0.83	0.763 ± 0.929	-0.031 ± 0.410
photometric centroid source offset	1.94 ± 1.67	1.16	1.82 ± 1.67	0.68 ± 1.65

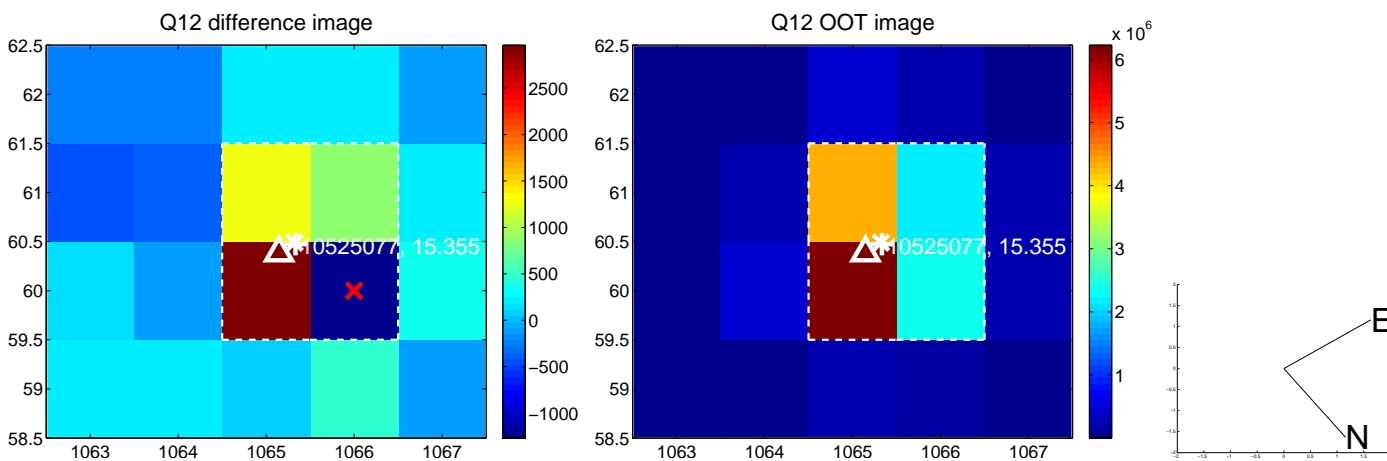
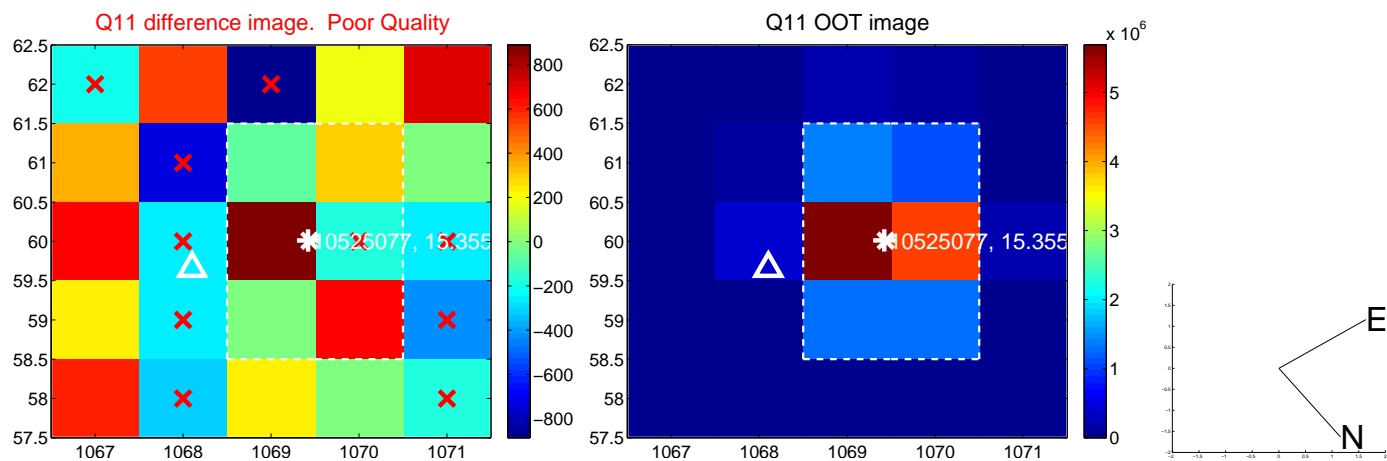
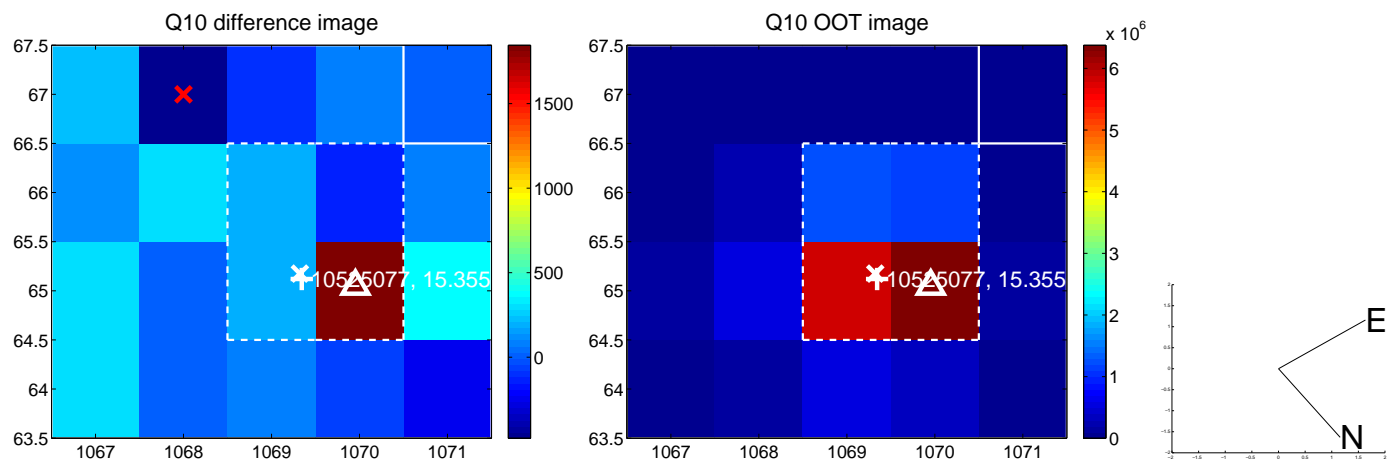
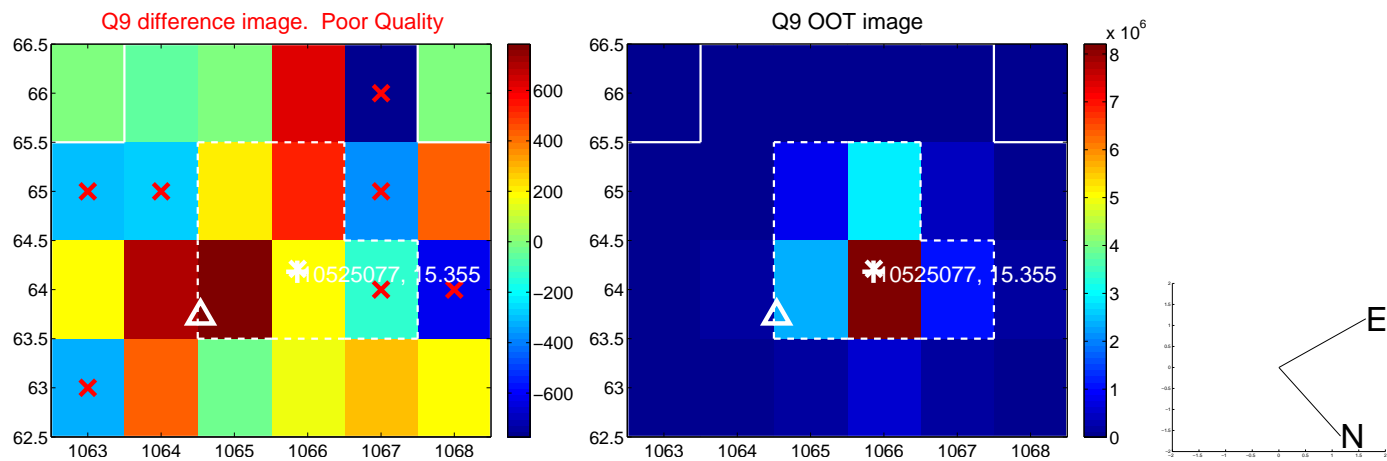


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

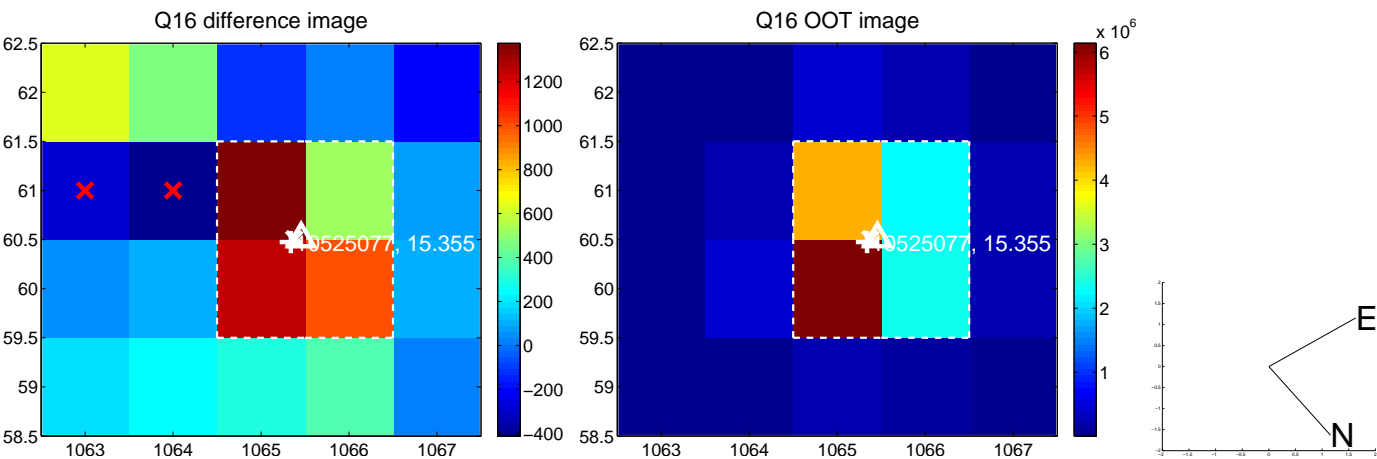
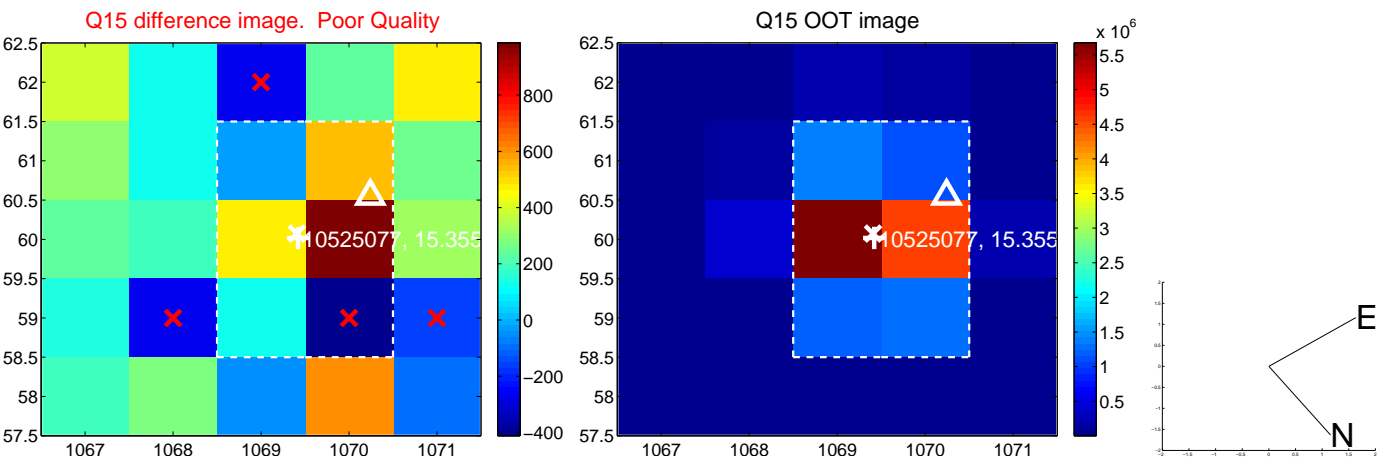
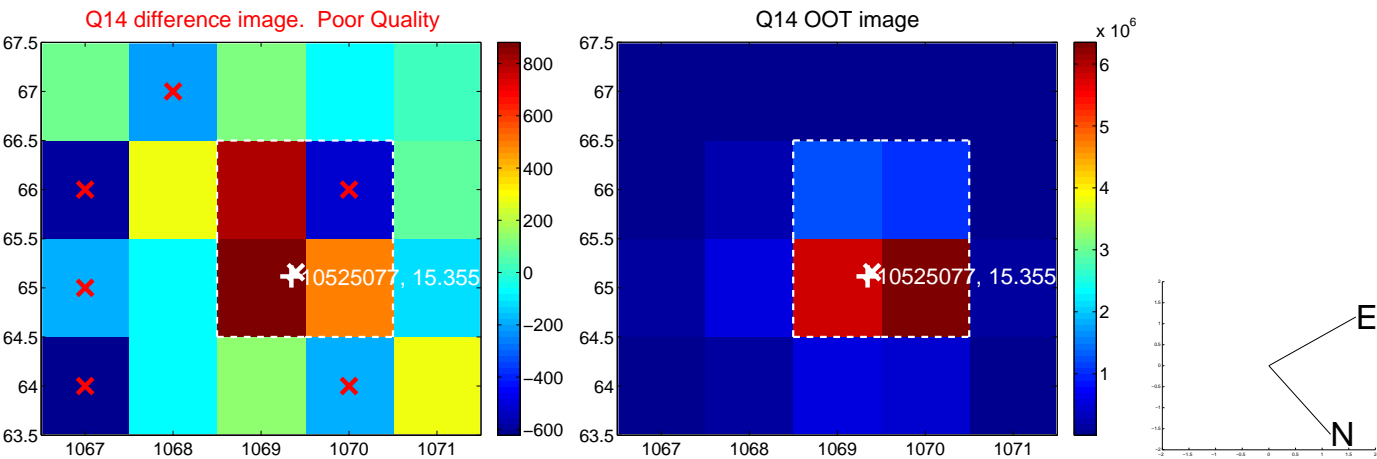
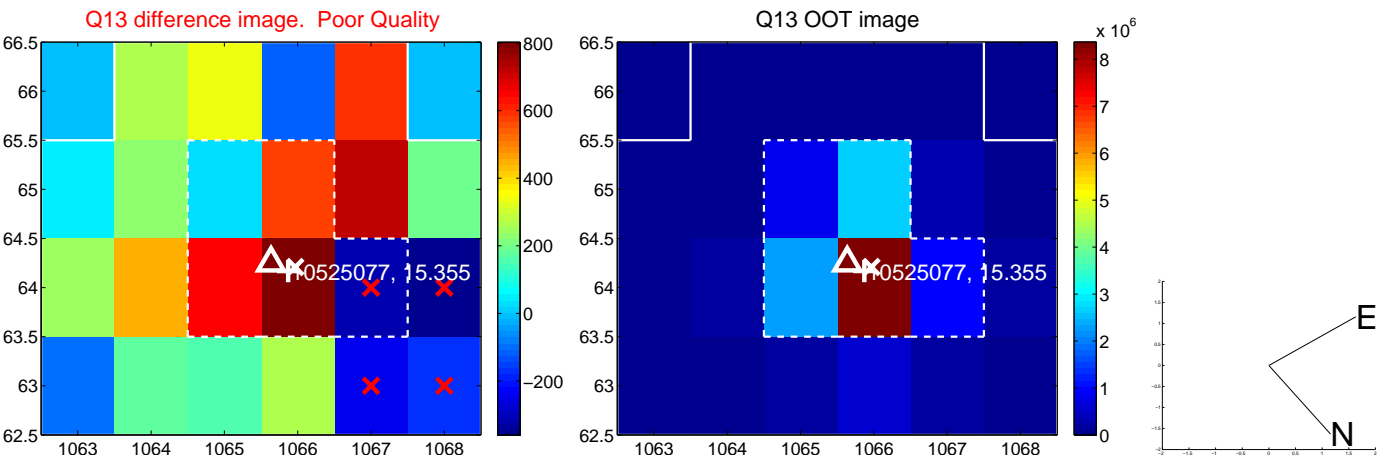
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



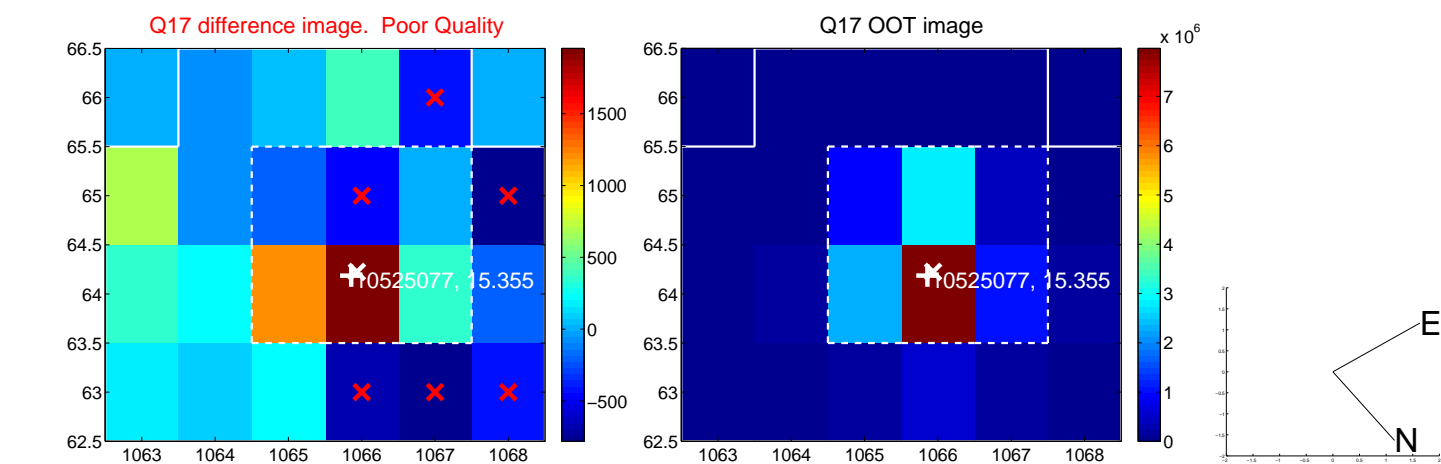
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



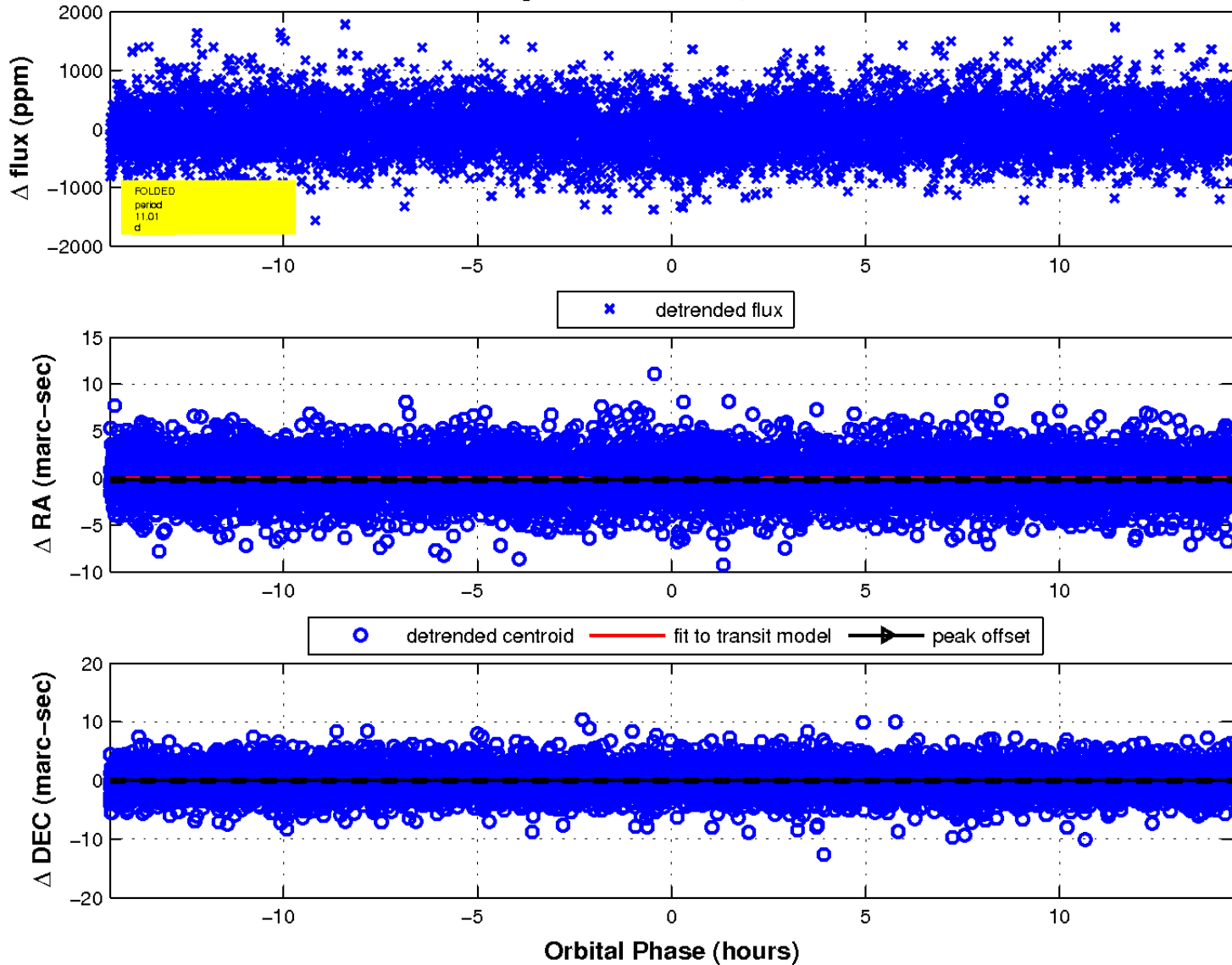
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

