

KIC 006761777

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})
006761777-01	OBS	4571.01	47.312271	146.316779	198.5	11.373	11.6	12.4	1.88	5749	3.51	44.34

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006761777-01	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.

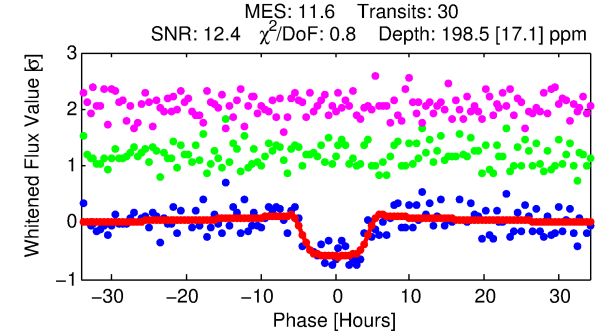
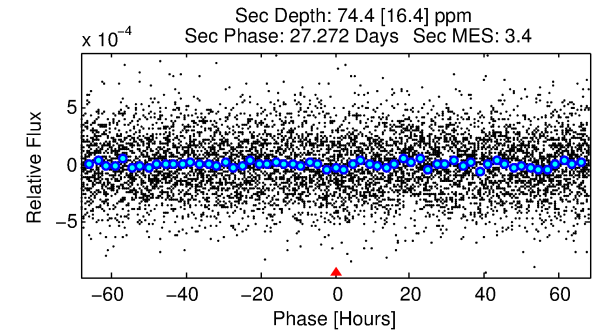
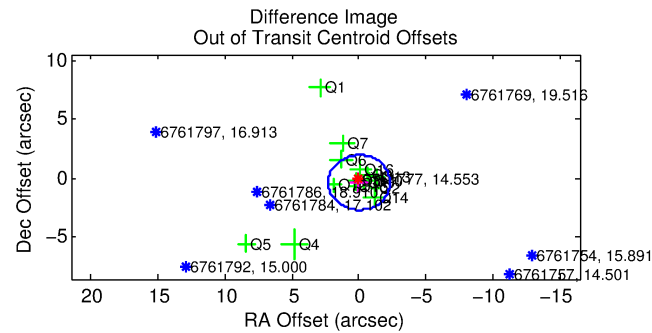
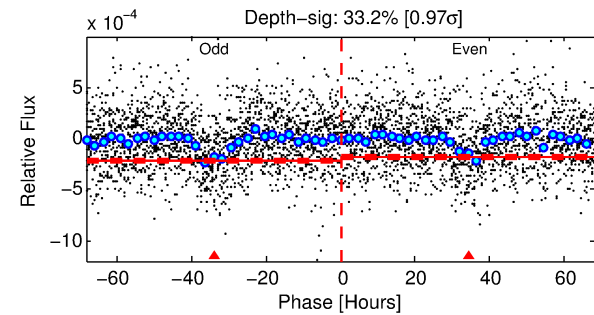
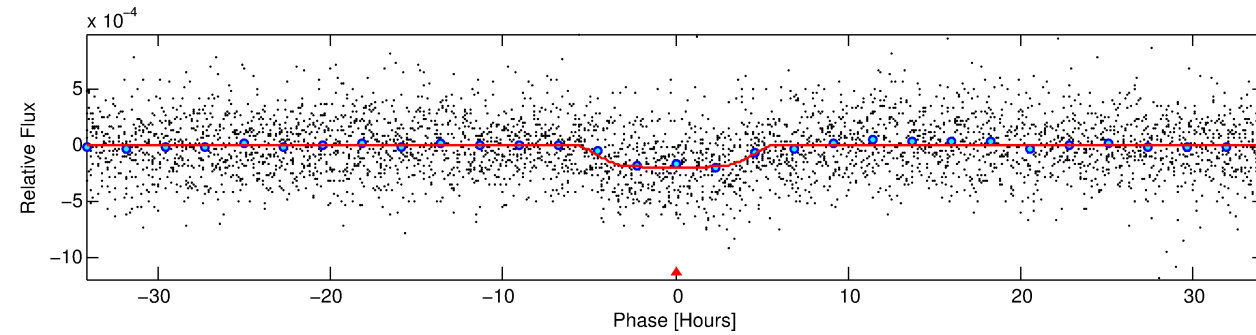
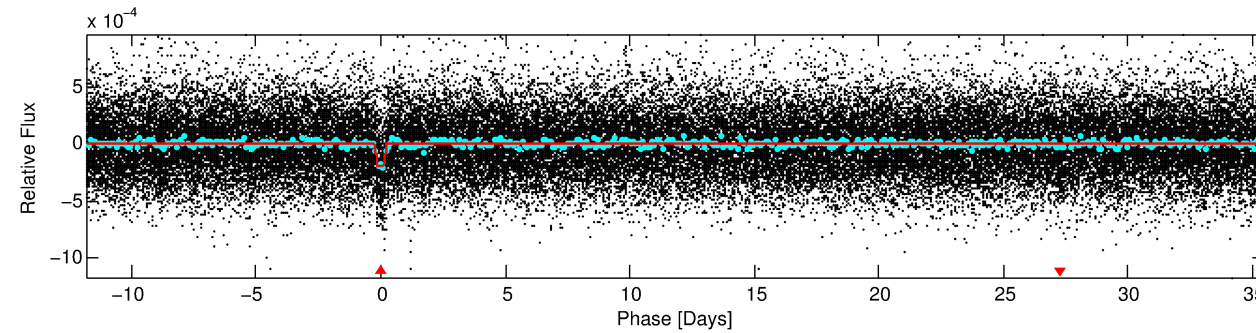
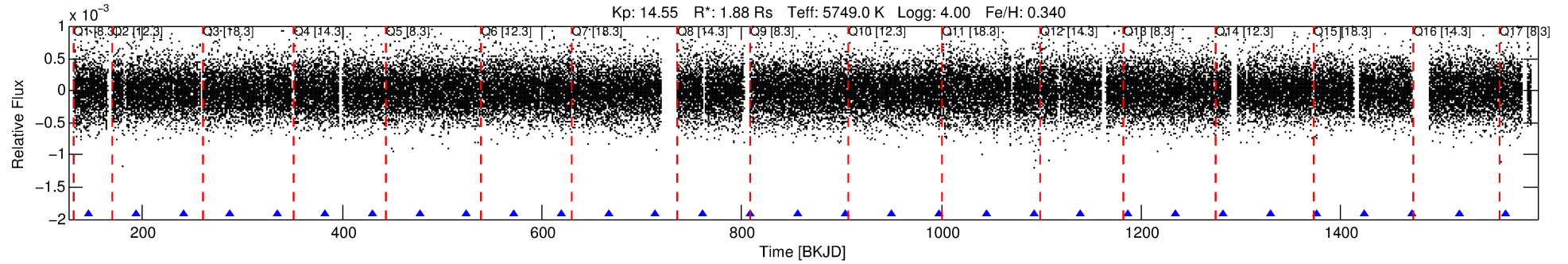
Ephemeris Match Information For 006761777-01

No Significant Match Found

DV One-Page Summary

KIC: 6761777 Candidate: 1 of 1 Period: 47.312 d

KOI: K04571.01 Corr: 0.966



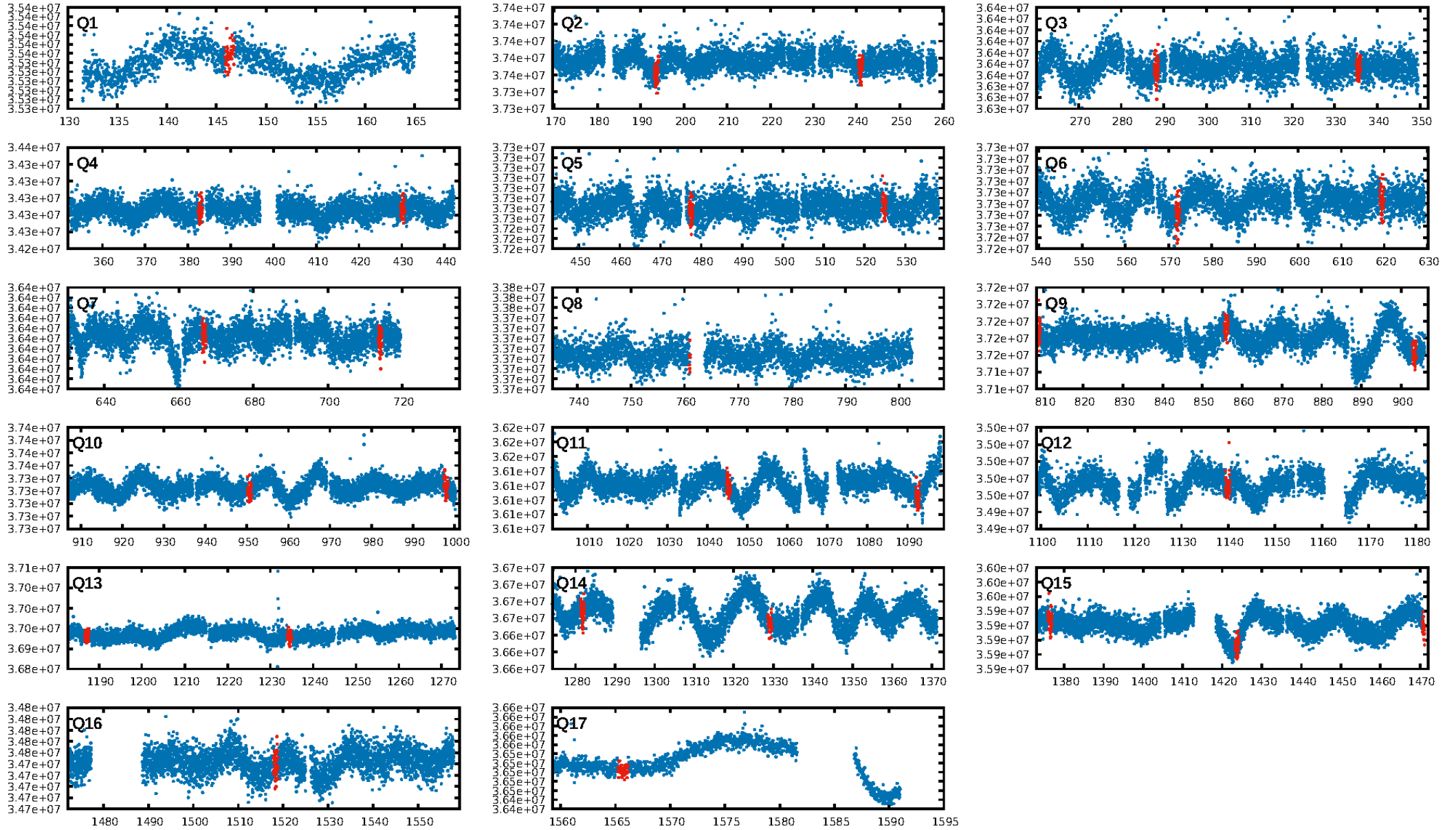
DV Fit Results:

Period = 47.31227 [0.00096] d
Epoch = 146.3168 [0.0167] BKJD
Rp/R* = 0.0172 [0.0011]
a/R* = 10.10 [2.11]
b = 0.97 [0.01]
Seff = 44.34 [14.96]
Teff = 658 [55] K
Rp = 3.51 [0.91] Re
a = 0.2787 [0.0614] AU
Ag = 257.98 [108.65] [2.37 σ]
Teffp = 4077 [268] K [12.48 σ]

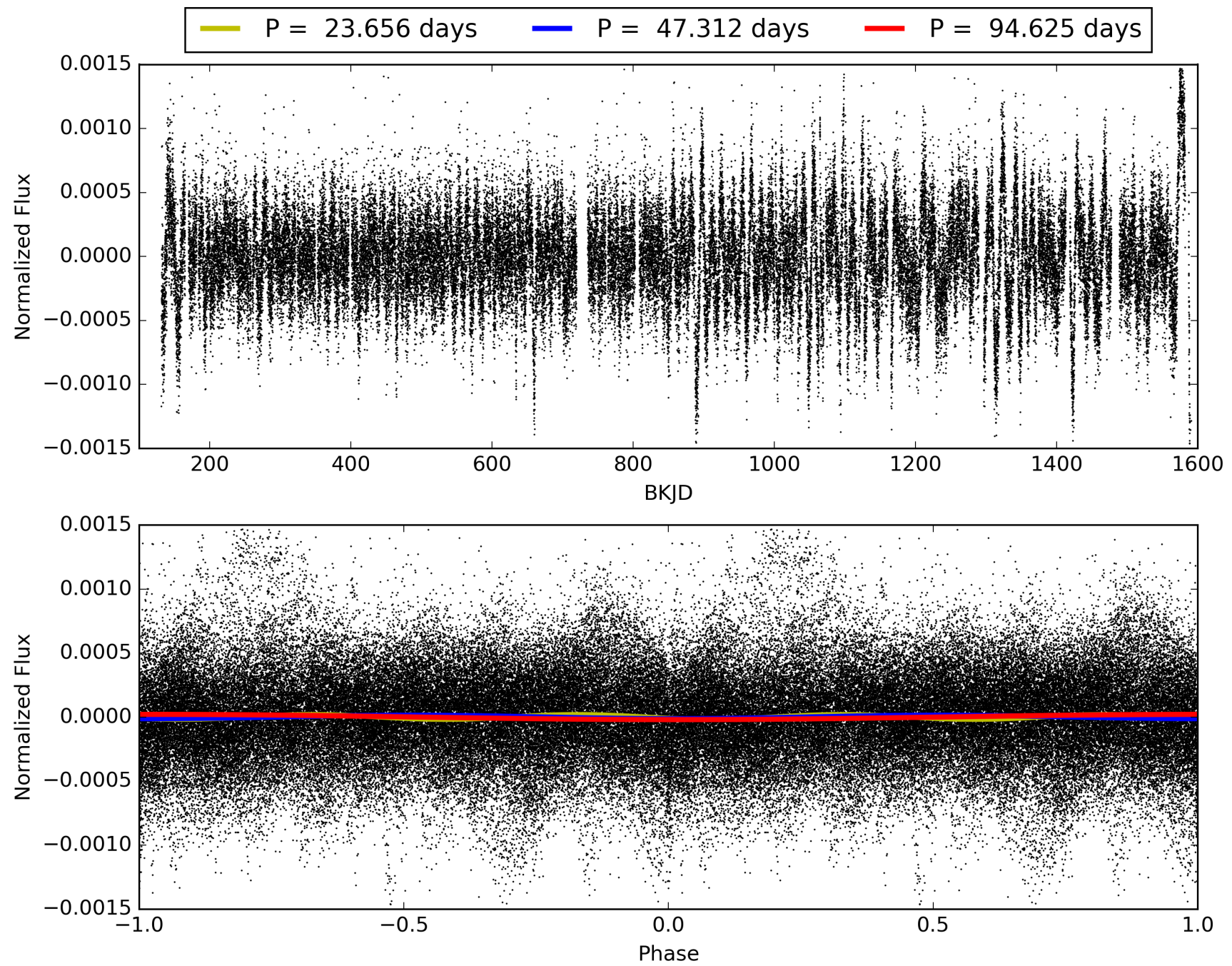
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 71.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 8.75e-30
RollingBand-fgt: 1.00 [28/28]
GhostDiagnostic-chr: -15.14
Centroid-sig: 13.6%
Centroid-so: 1.343 arcsec [1.44 σ]
OotOffset-rm: 0.341 arcsec [0.44 σ]
KicOffset-rm: 0.556 arcsec [0.68 σ]
OotOffset-st: 4/3/3/5 [15]
KicOffset-st: 4/3/3/5 [15]
DiffImageQuality-fgm: 0.67 [10/15]
DiffImageOverlap-fno: 1.00 [16/16]

TCE 006761777-01, PDC Light Curves

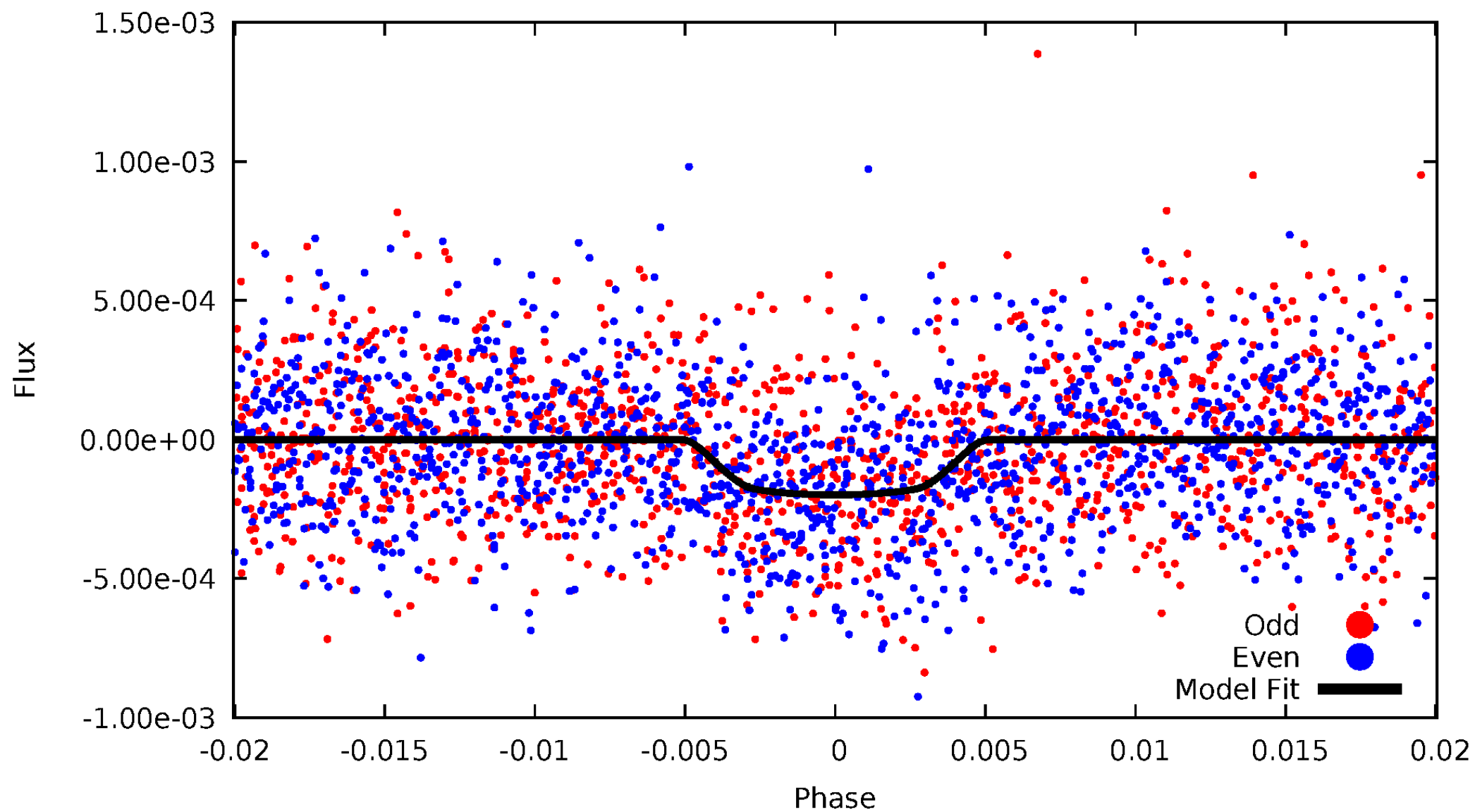


TCE 006761777-01



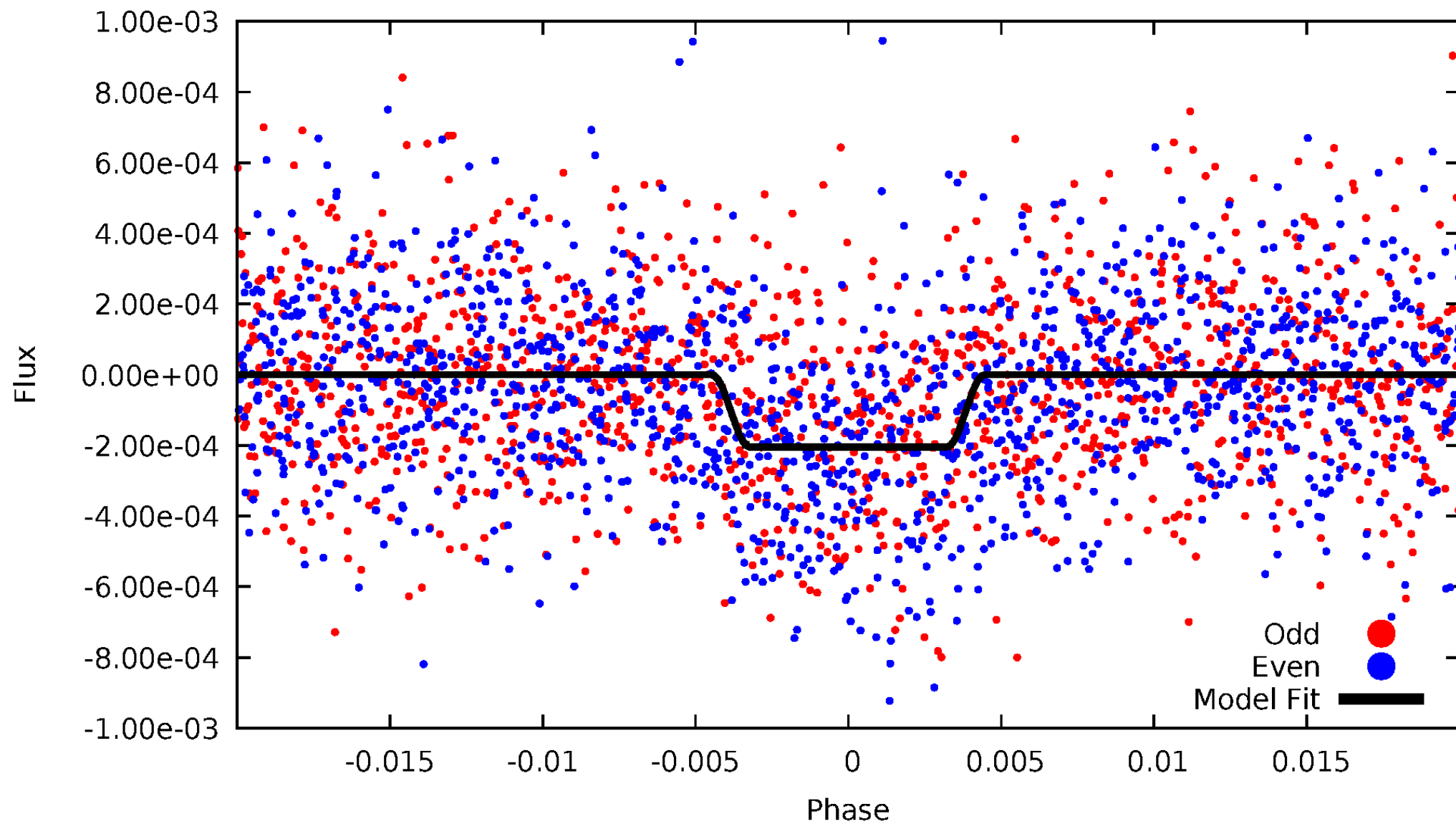
DV Odd/Even

TCE 006761777-01

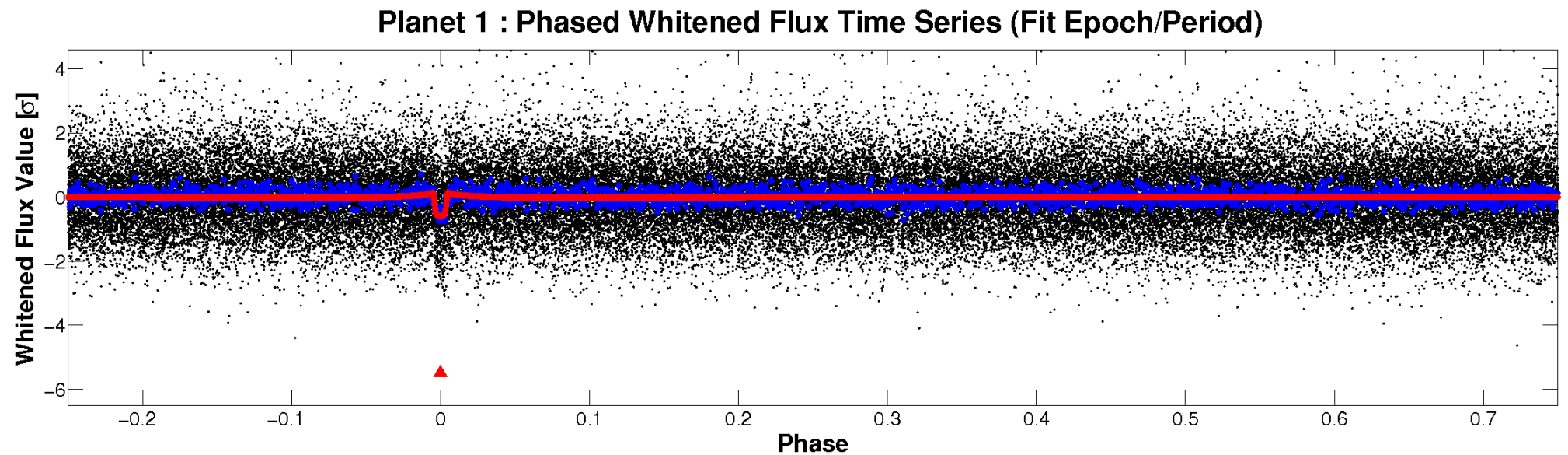
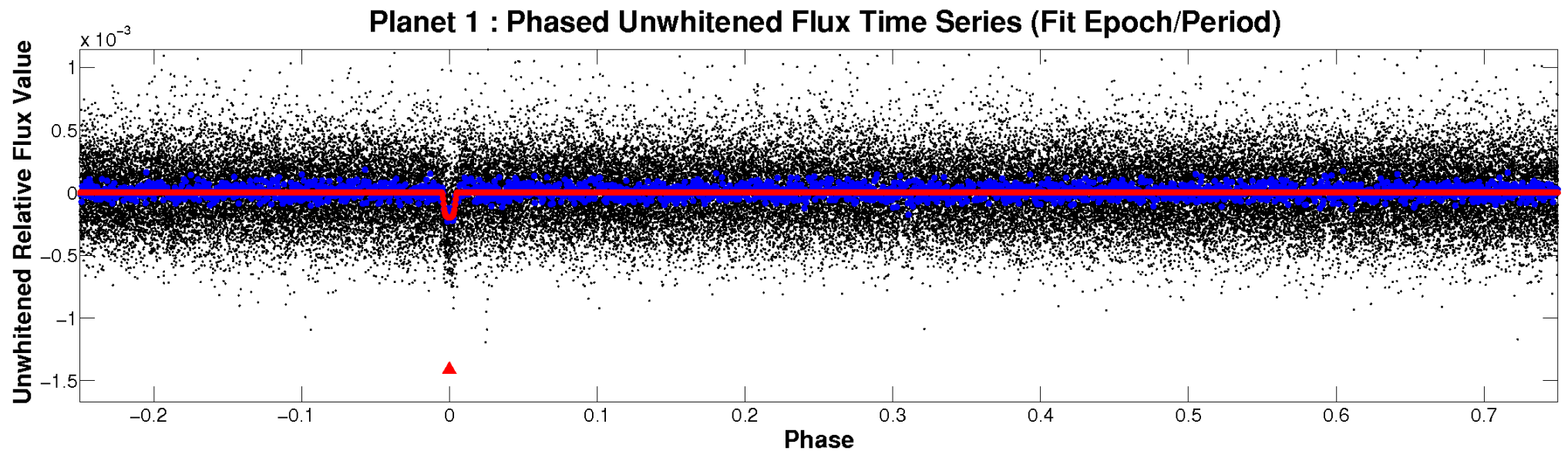


ALT Odd/Even

TCE 006761777-01

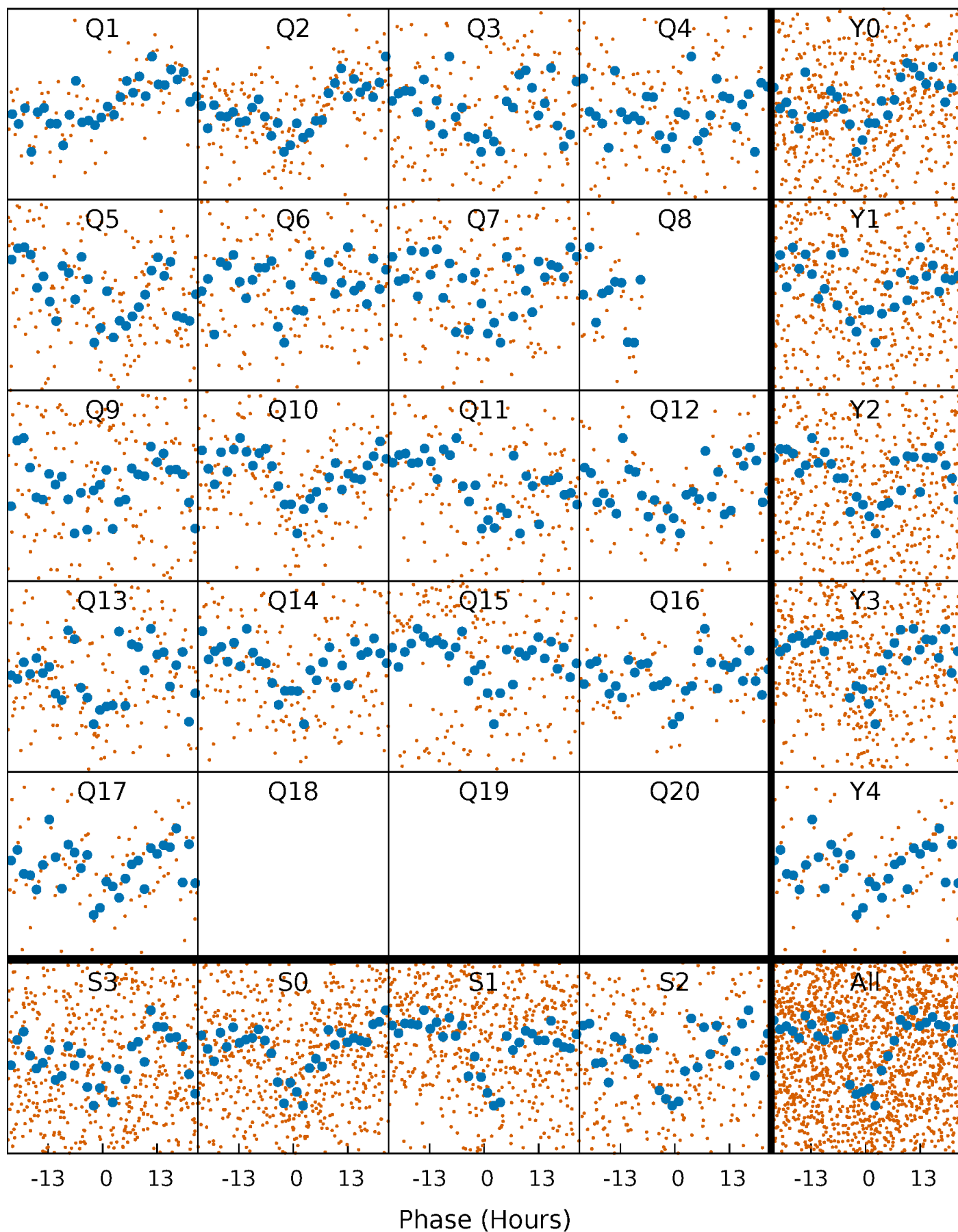


Non-Whitened Vs. Whitened Light Curve



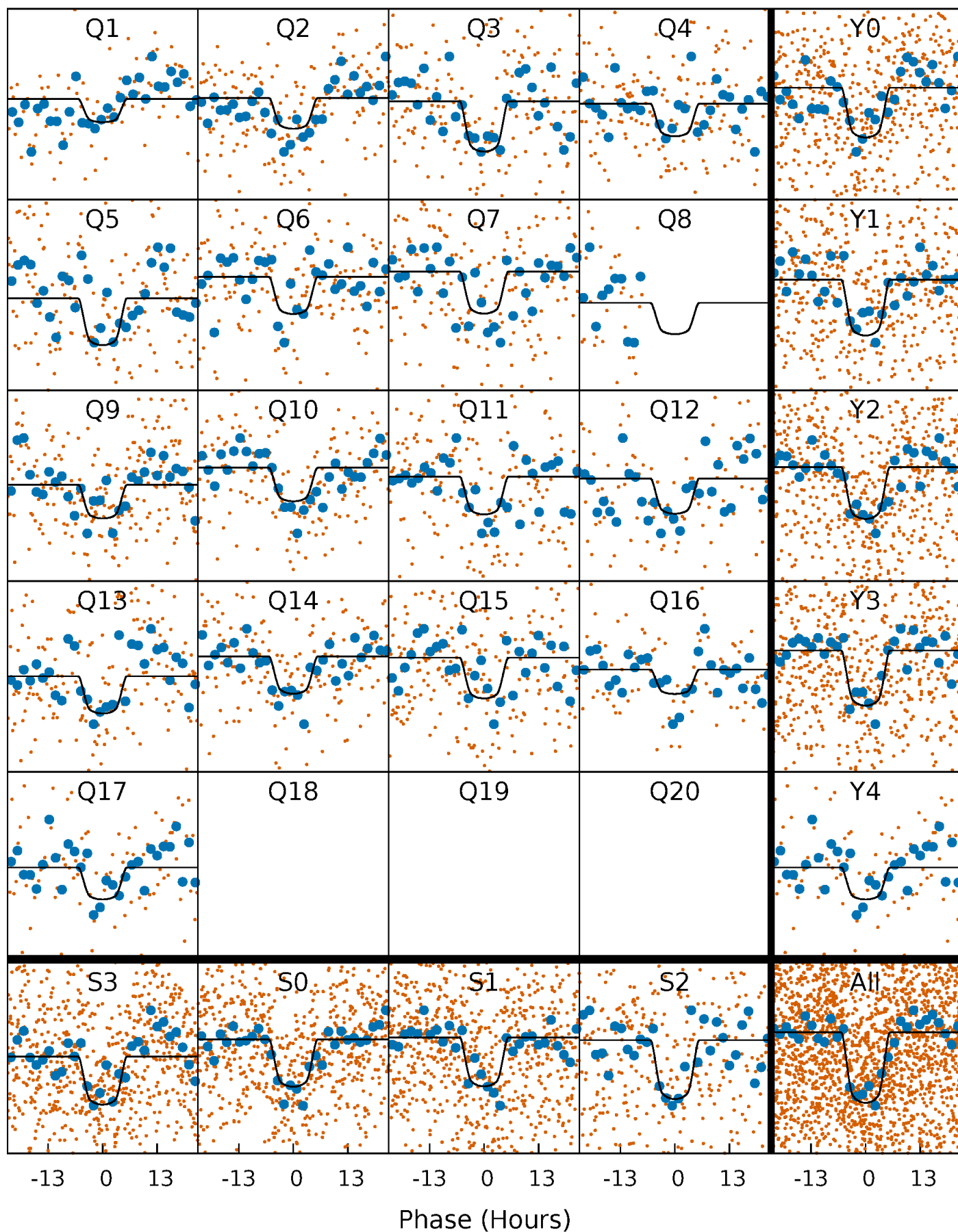
PDC Quarter-Phased Transit Curves

TCE 006761777-01 P= 47.312271 Days $T_0=146.316779$ (BKJD)



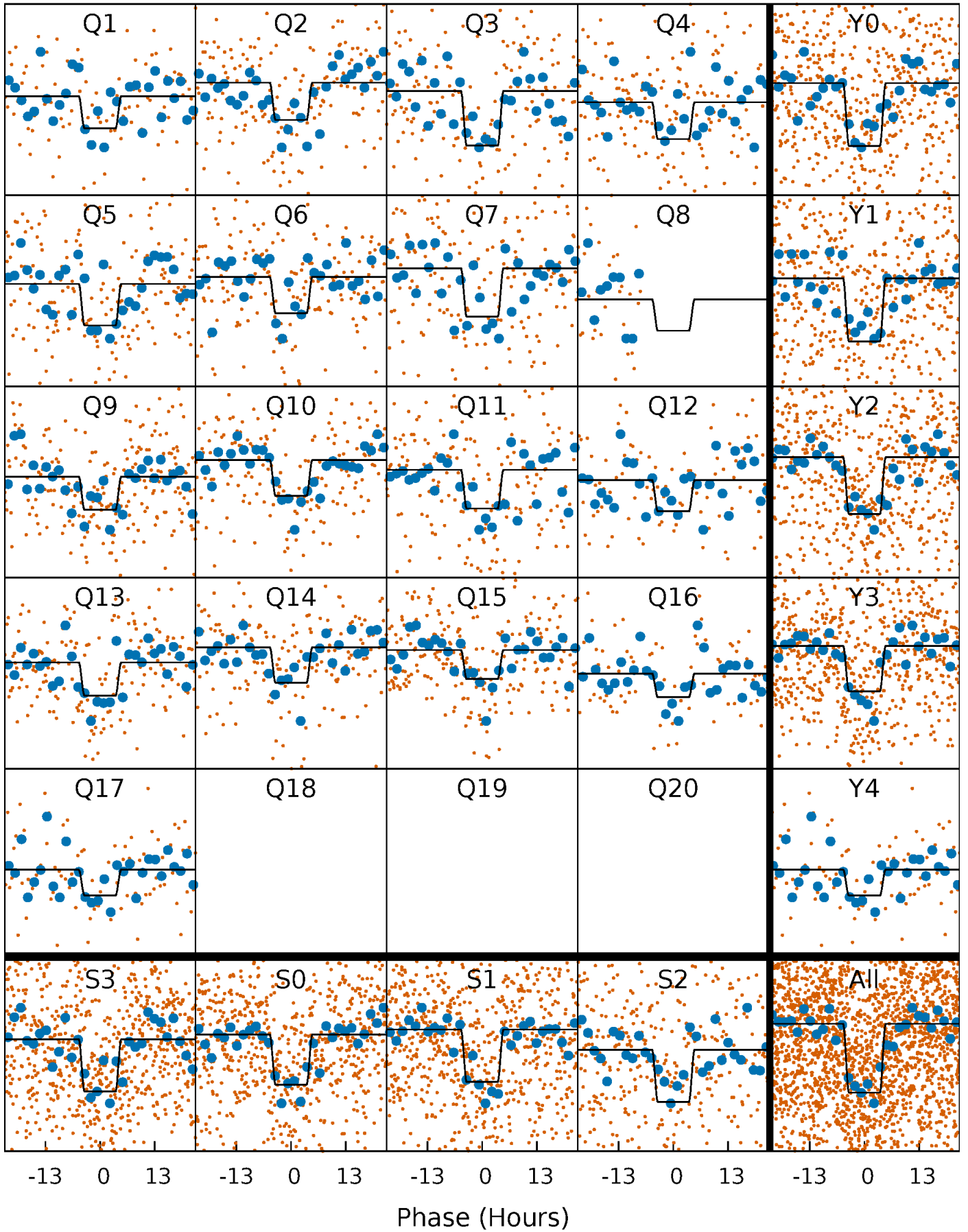
DV Quarter-Phased Transit Curves

TCE 006761777-01 P= 47.312271 Days $T_0=146.316779$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

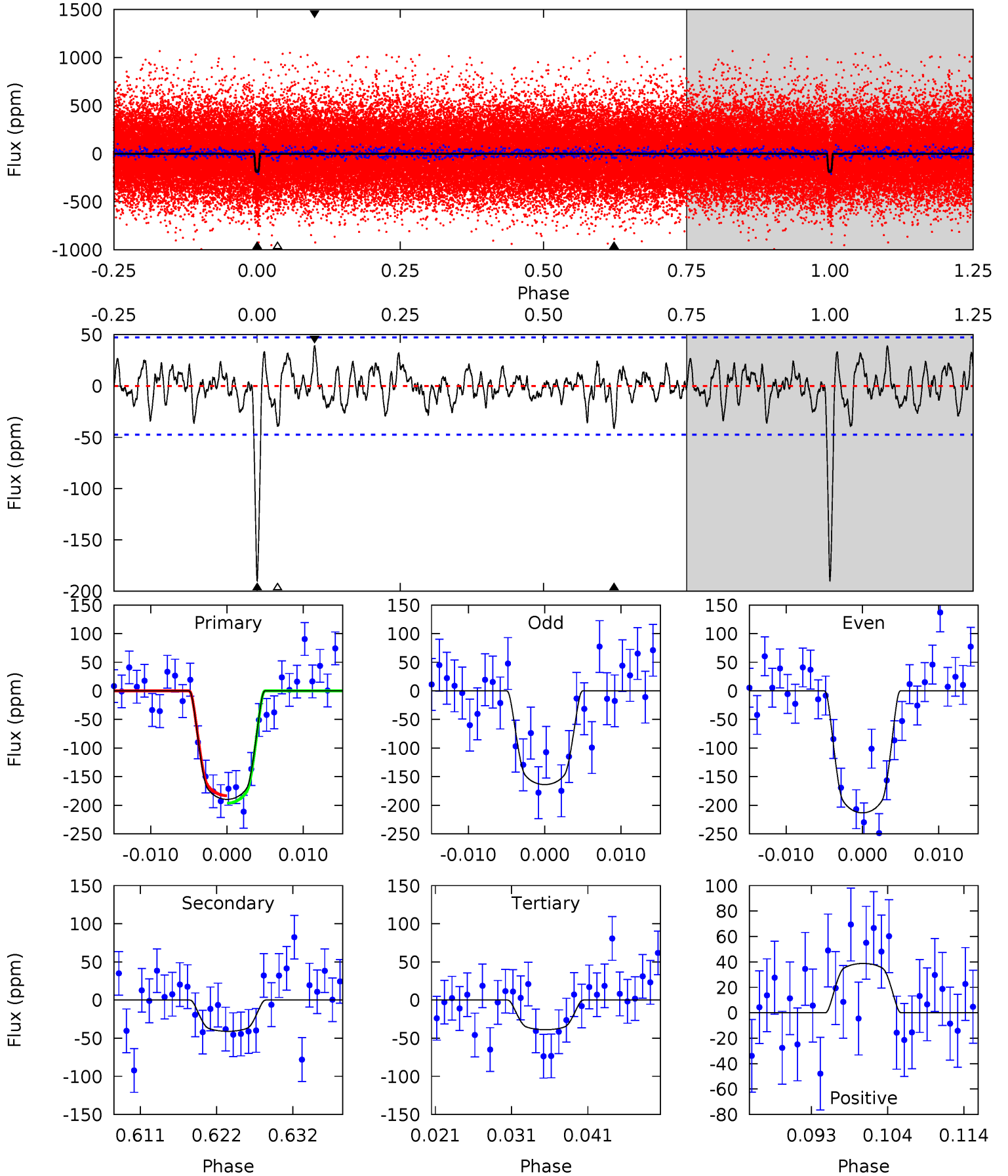
TCE 006761777-01 P= 47.313198 Days $T_0=146.303073$ (BKJD)



DV Model-Shift Uniqueness Test

006761777-01, P = 47.312271 Days, E = 99.004508 Days

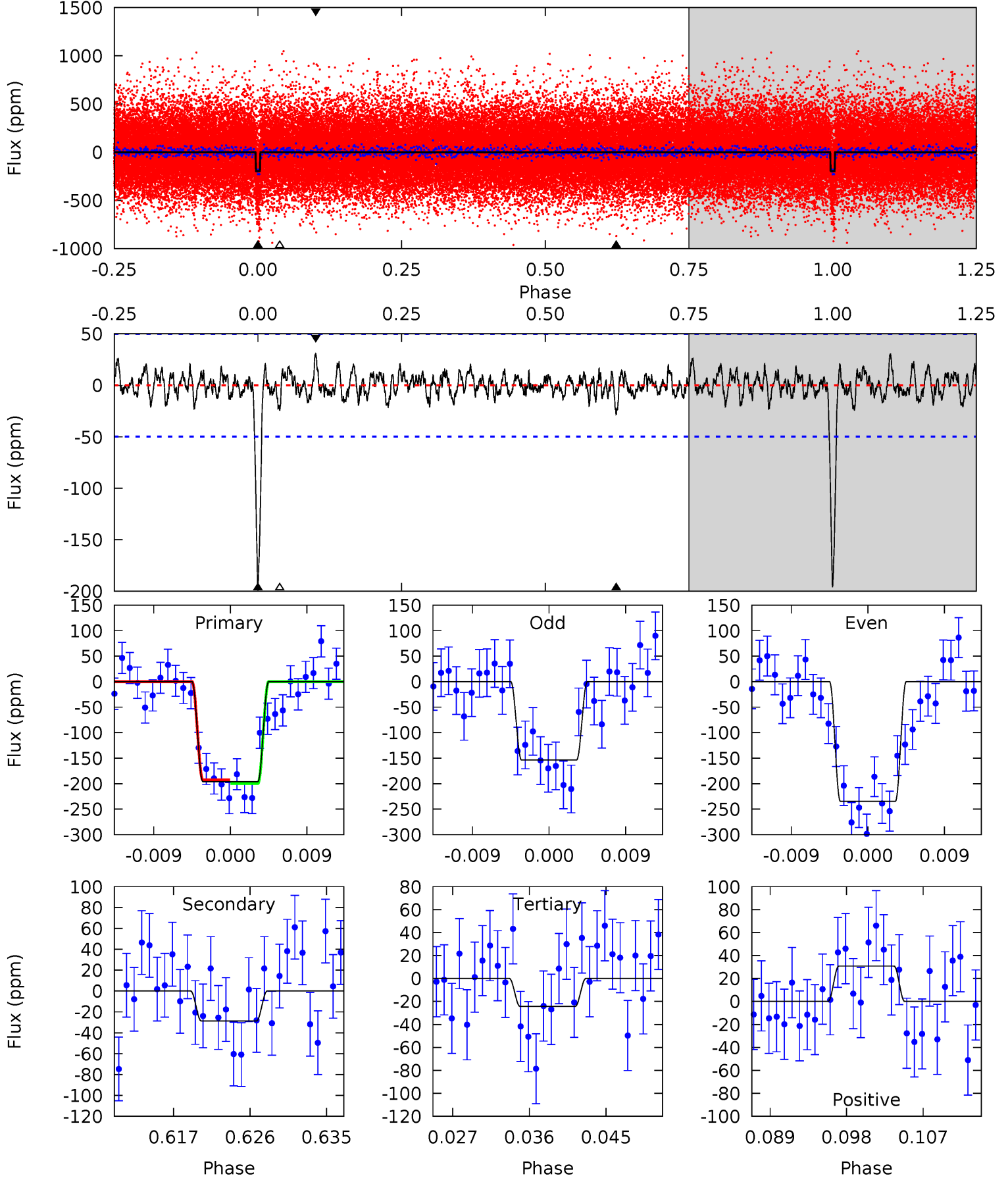
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.1	4.34	4.11	4.11	5.02	2.56	1.35	16.0	16.0	0.22	0.23	2.61	1.09	0.17	0.70



Alt Model-Shift Uniqueness Test

006761777-01, P = 47.313198 Days, E = 98.989875 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.9	2.91	2.47	3.12	5.05	2.61	0.89	17.4	16.7	0.45	-0.21	4.10	1.07	0.14	0.36



Stellar Parameters For KIC 006761777

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5749^{+77}_{-77}	$4.002^{+0.188}_{-0.062}$	$0.340^{+0.100}_{-0.100}$	$1.876^{+0.201}_{-0.468}$	$1.288^{+0.084}_{-0.196}$	$0.275^{+0.293}_{-0.059}$
	+1%/-1%	+5%/-2%	+29%/-29%	+11%/-25%	+7%/-15%	+107%/-21%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 006761777-01 / KOI 4571.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-41 ± 9	$3.42^{+0.37}_{-0.45}$	912^{+31}_{-49}	3858^{+173}_{-192}	148^{+58}_{-40}
Alt.	-29 ± 10	$2.83^{+0.36}_{-0.40}$	908^{+33}_{-53}	3888^{+245}_{-301}	156^{+74}_{-59}

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 $A_{\text{obs}} \gg 1.0$

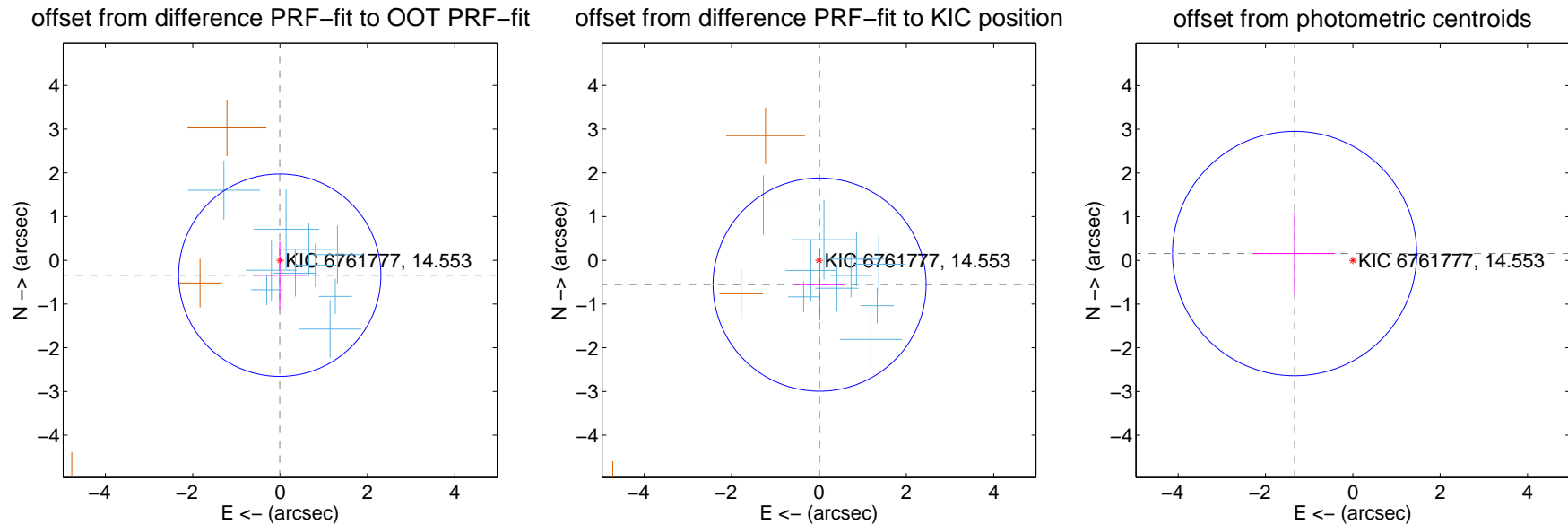
DV Centroid Data

Supplemental centroid analysis for 006761777-01. Kepler magnitude: 14.55. Transit SNR 12.39

There are 10 quarters with good PRF difference image offsets

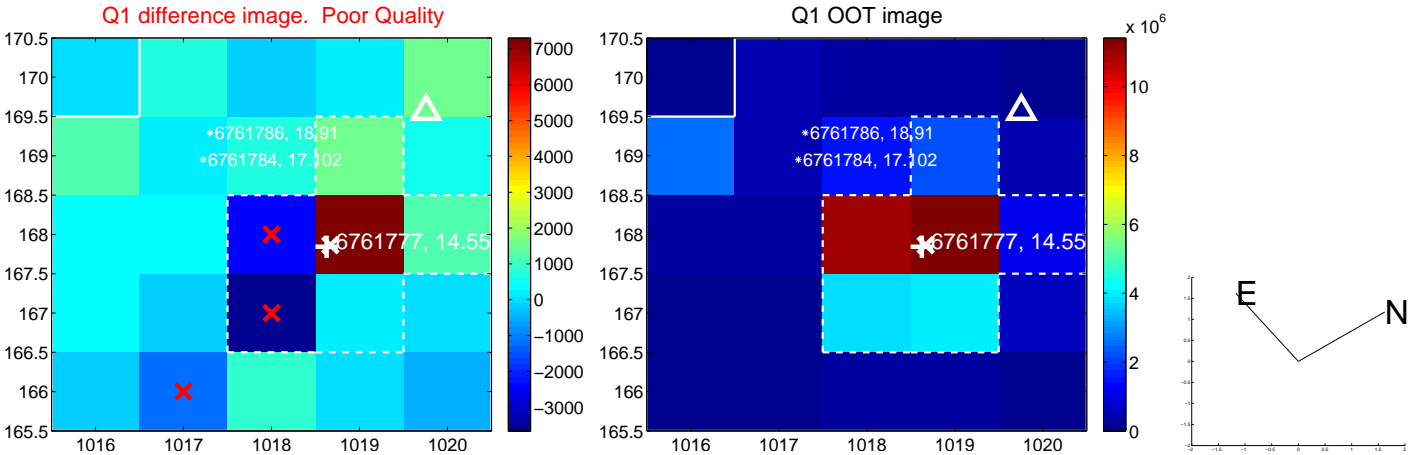
The direct PRF centroid is offset from the target star catalog position by about 0.35 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.341 ± 0.772	0.44	0.008 ± 0.631	-0.341 ± 0.767
PRF-fit source offset from KIC position	0.556 ± 0.813	0.68	-0.014 ± 0.586	-0.556 ± 0.817
photometric centroid source offset	1.34 ± 0.93	1.44	1.33 ± 0.93	0.16 ± 0.94

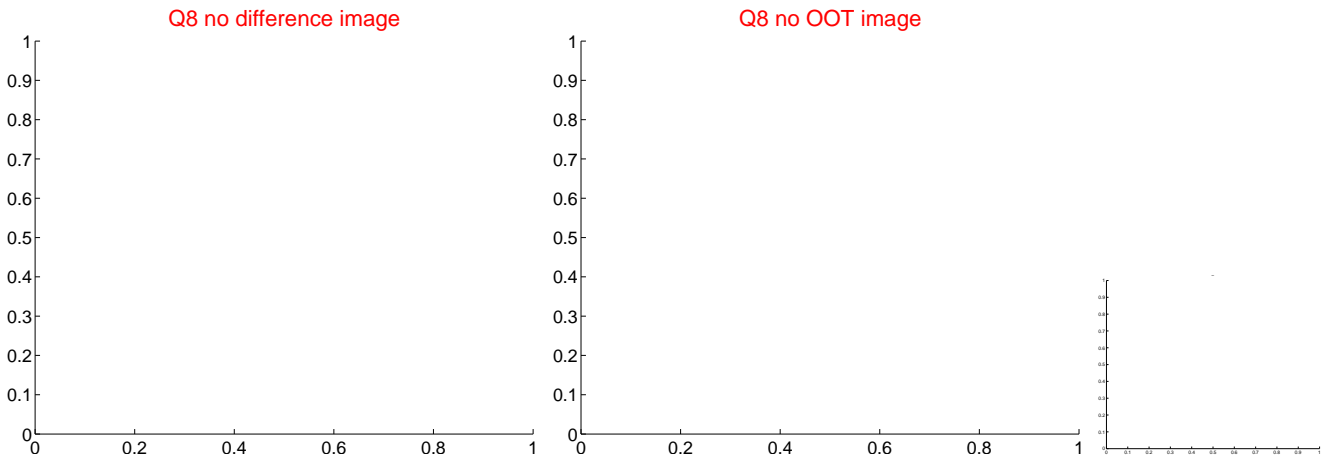
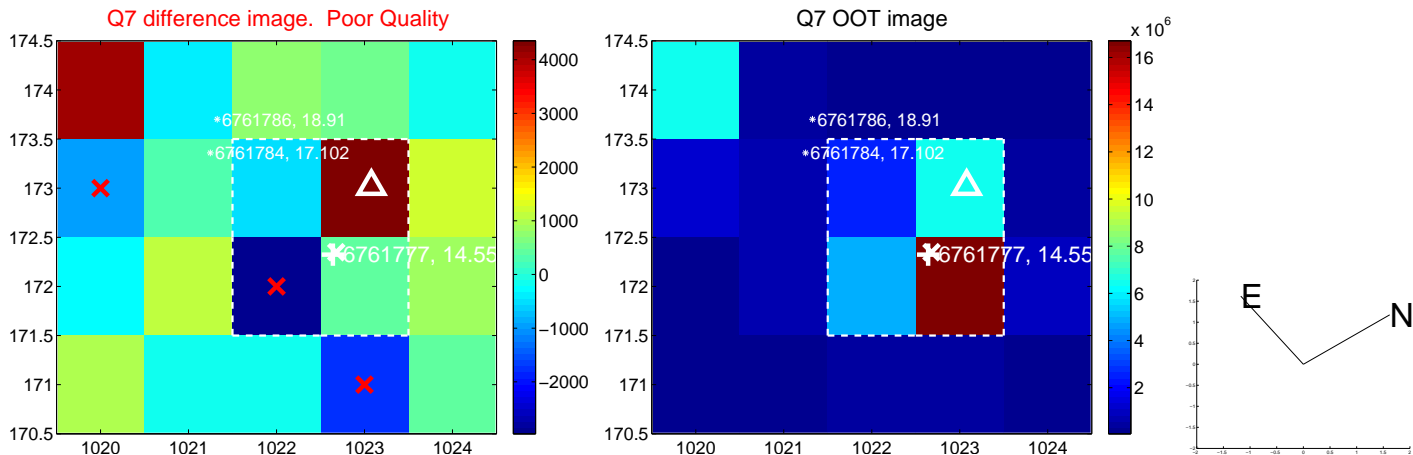
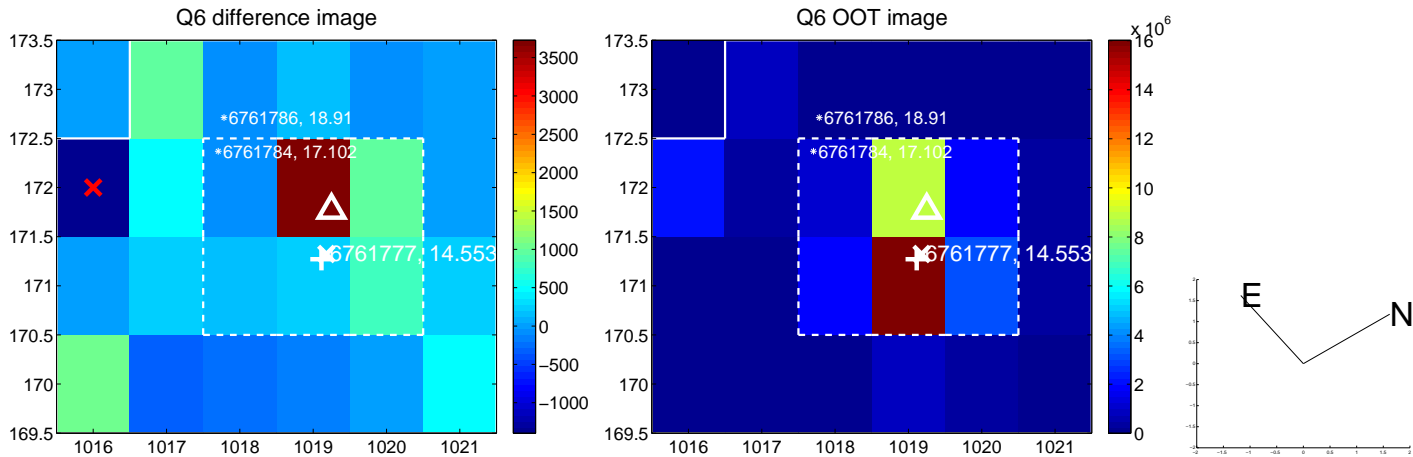
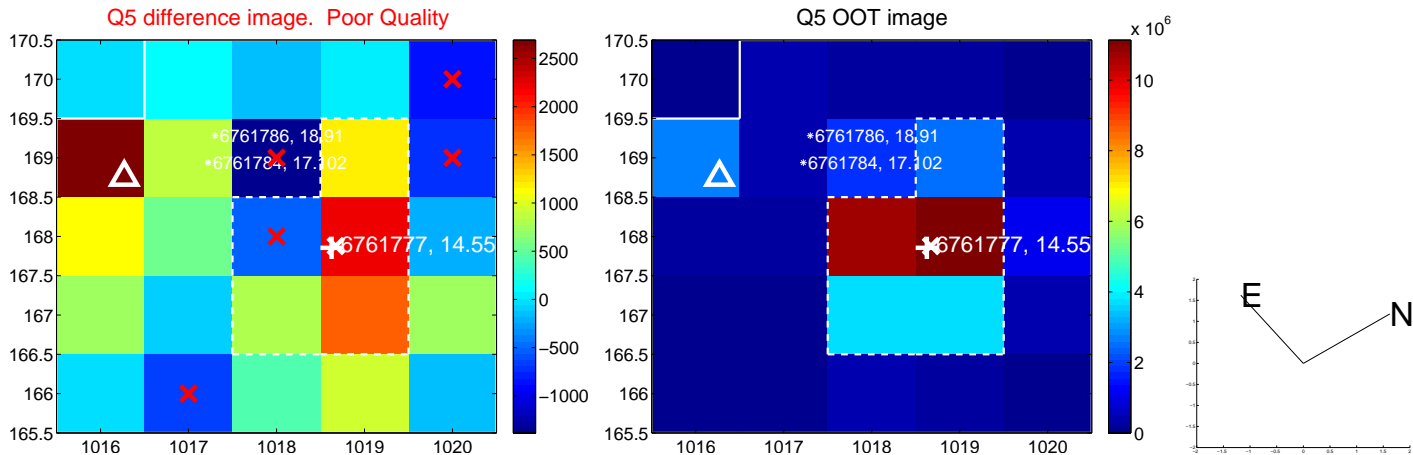


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

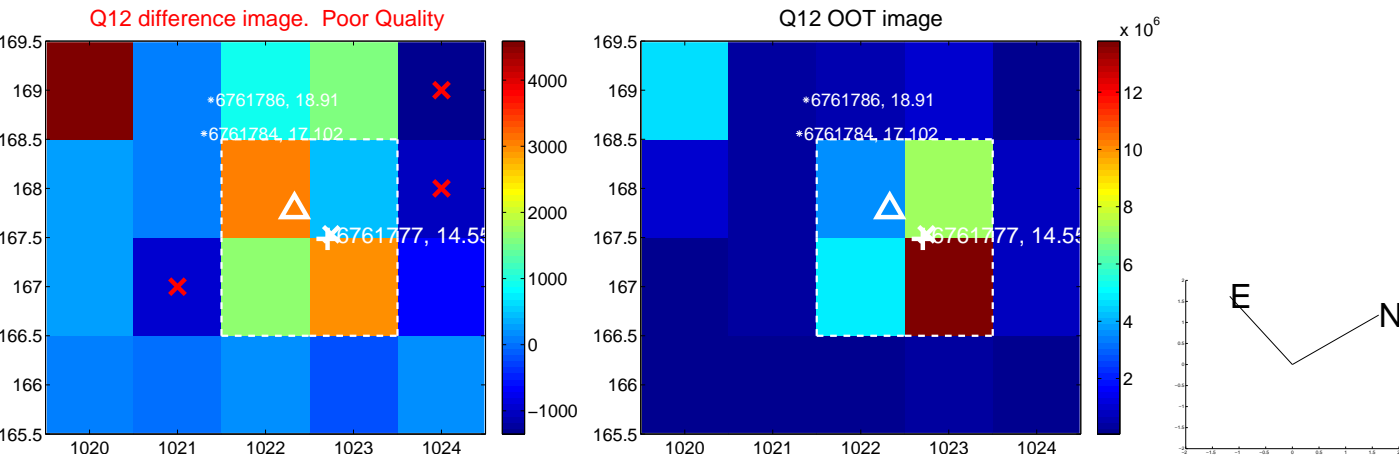
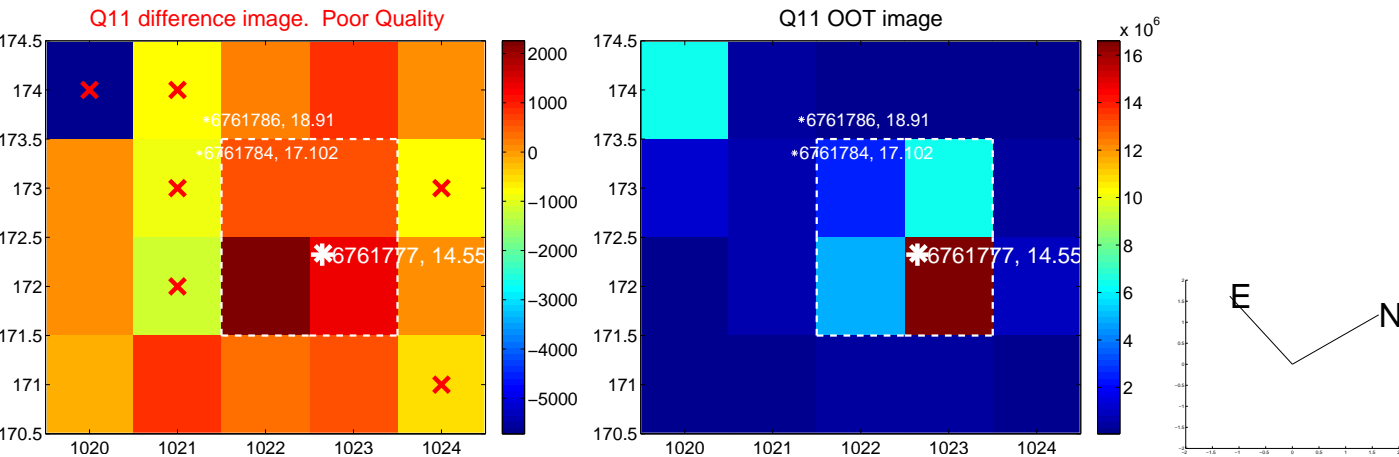
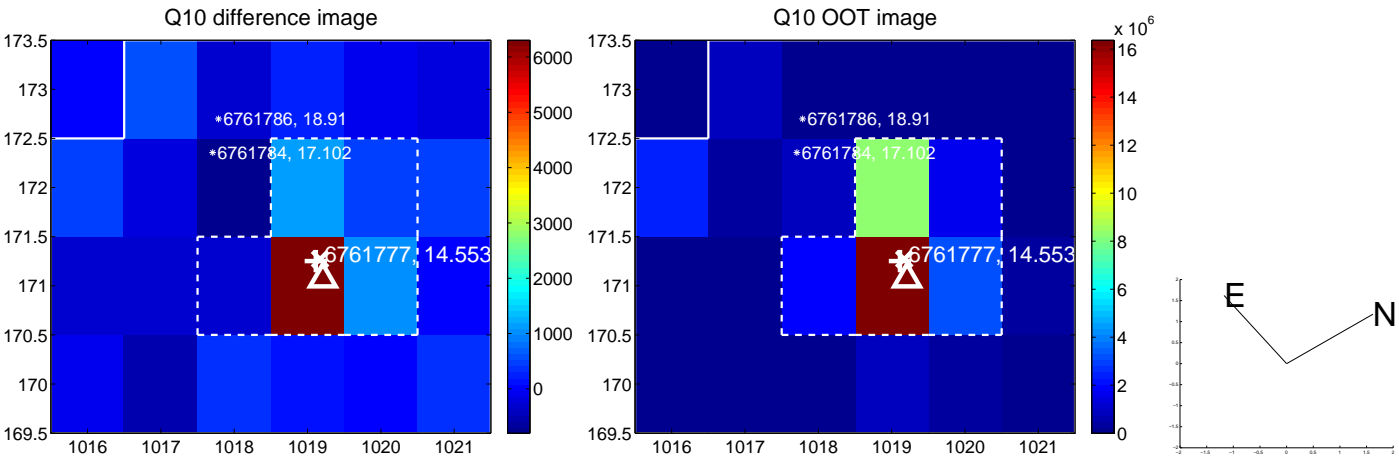
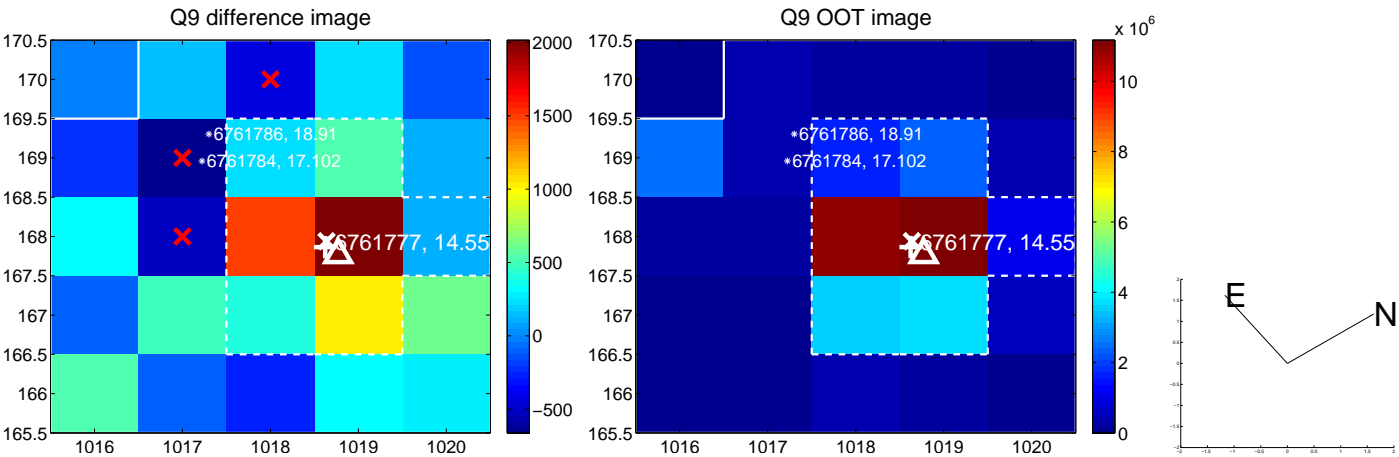
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



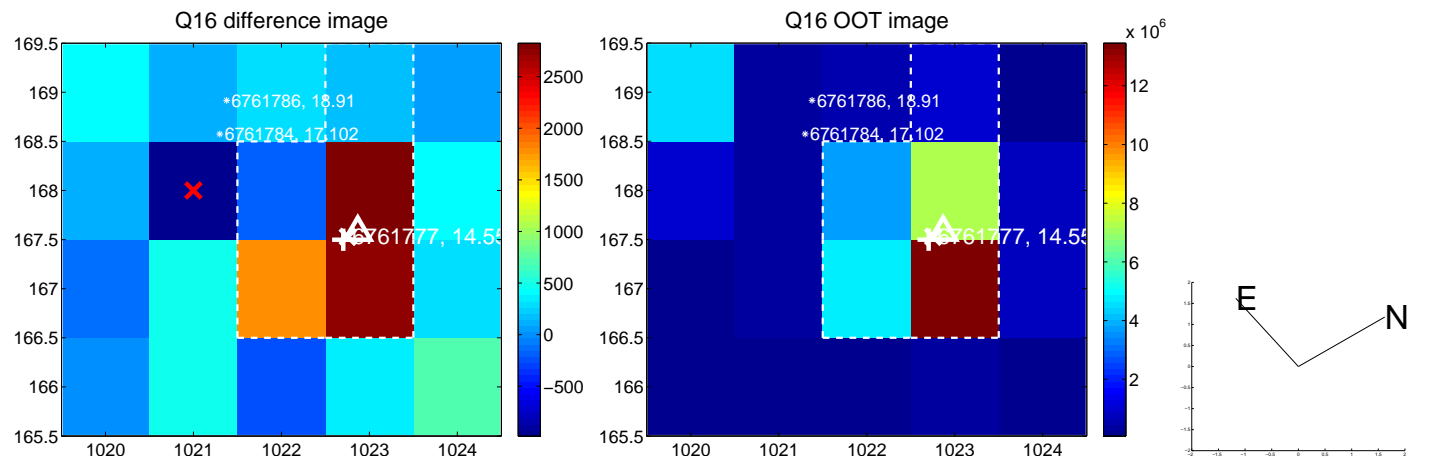
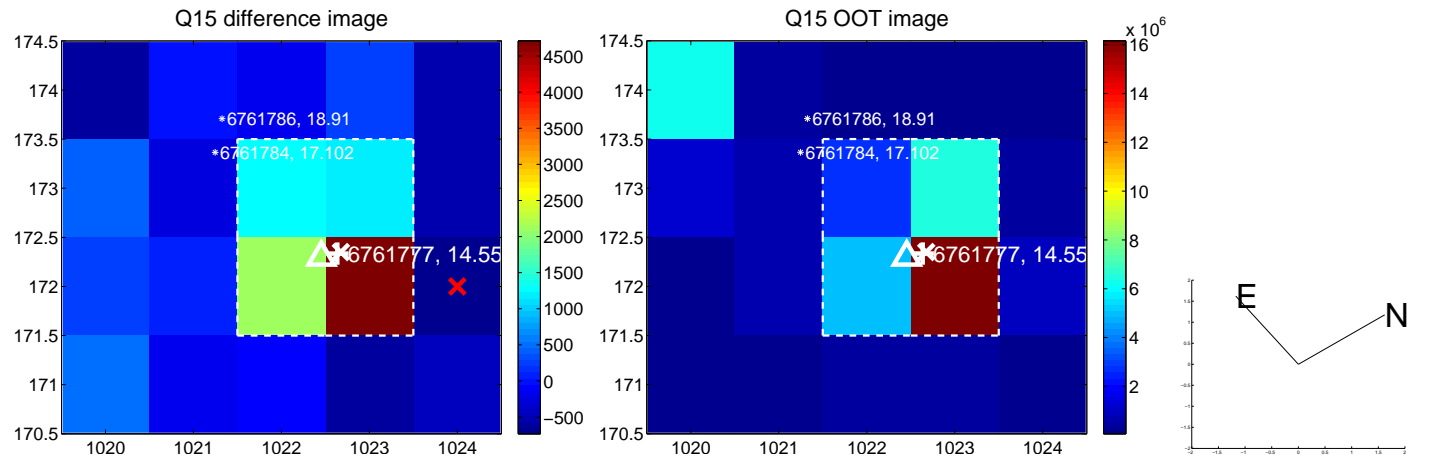
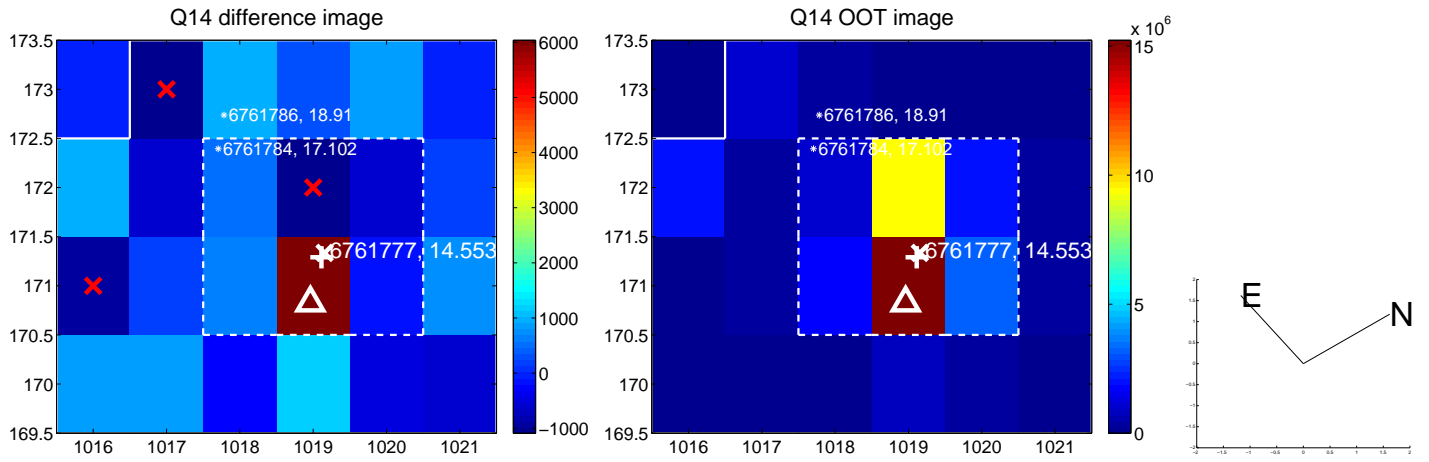
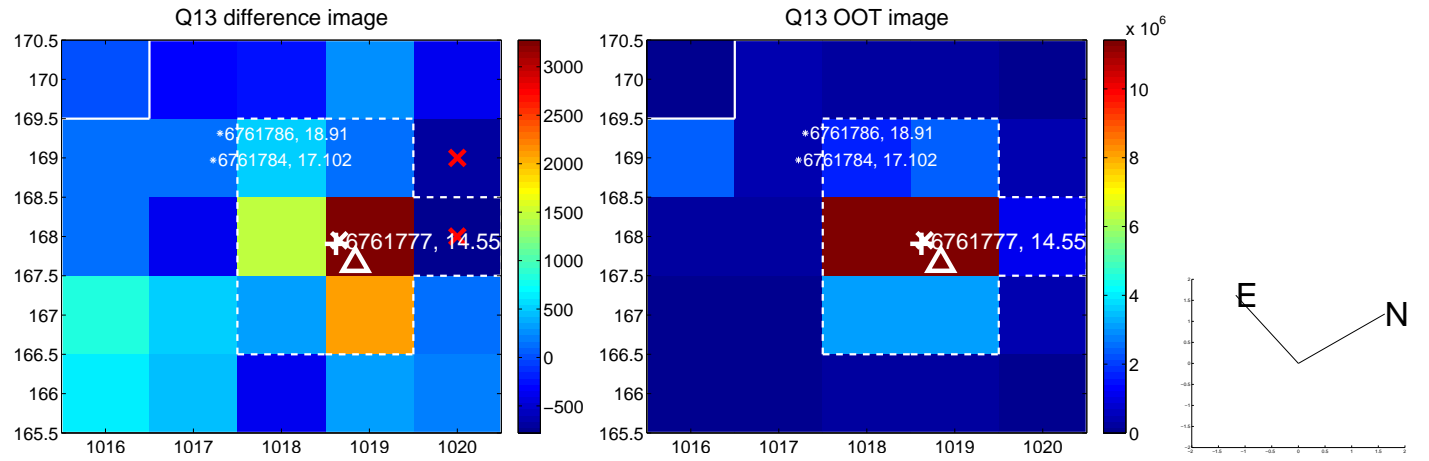
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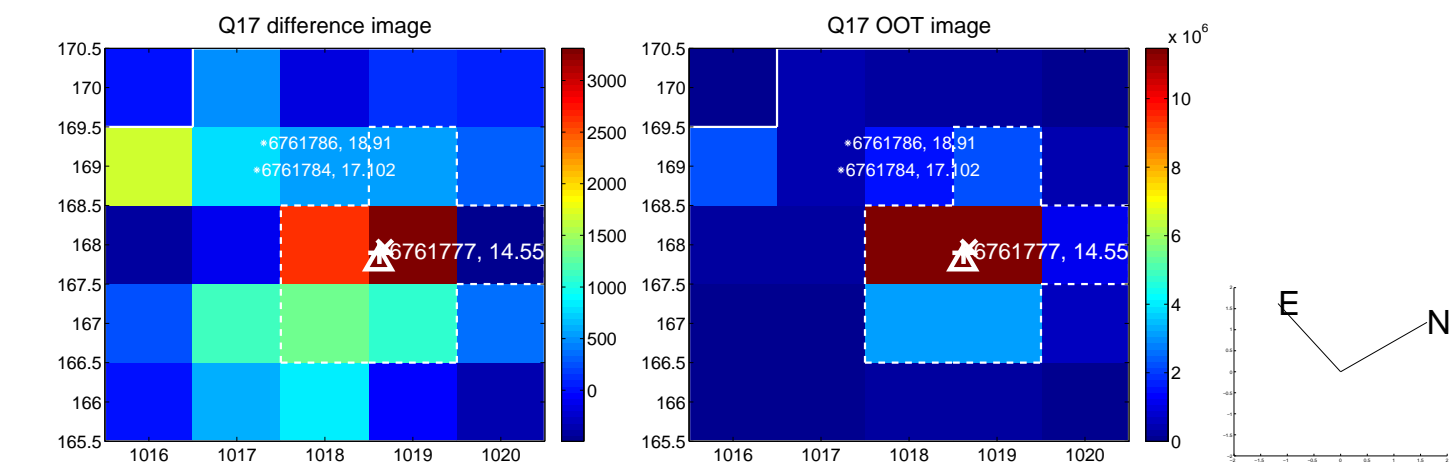
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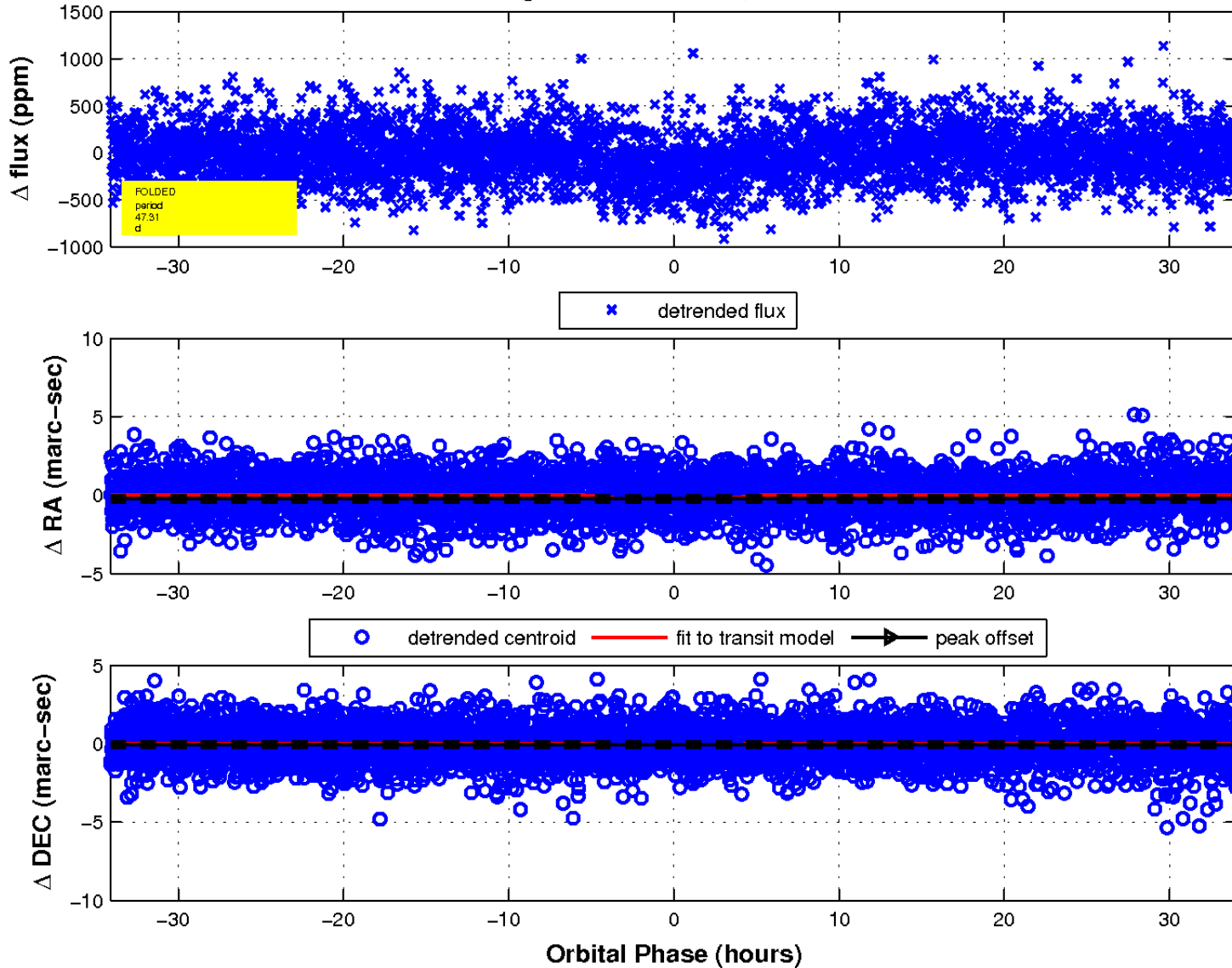
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

