

KIC 005597361

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})
005597361-01	OBS	6601.01	17.992546	135.453924	205.6	2.847	8.1	9.1	1.09	5931	1.81	74.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005597361-01	OBS	PC	0.97	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.

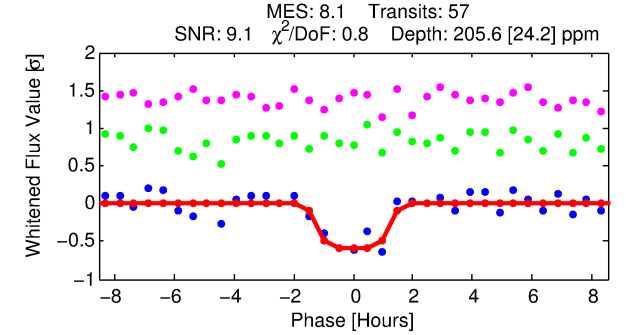
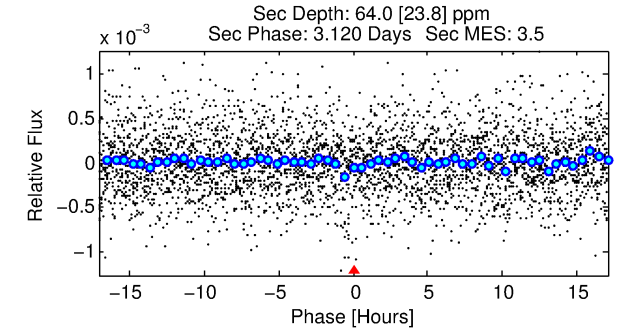
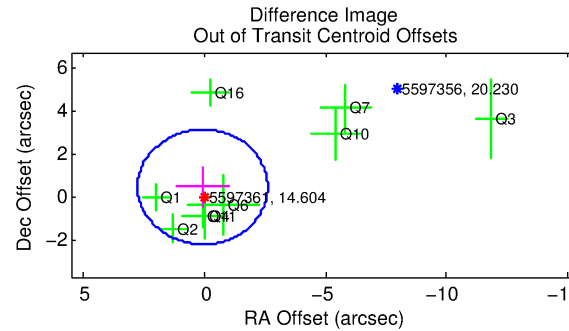
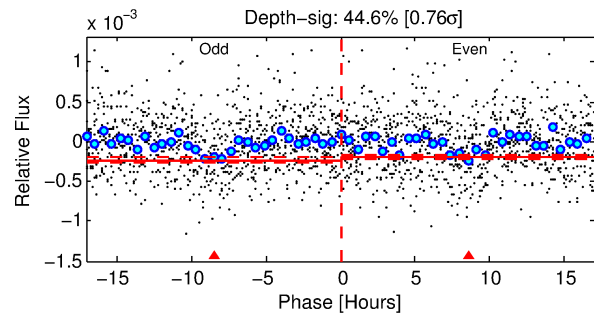
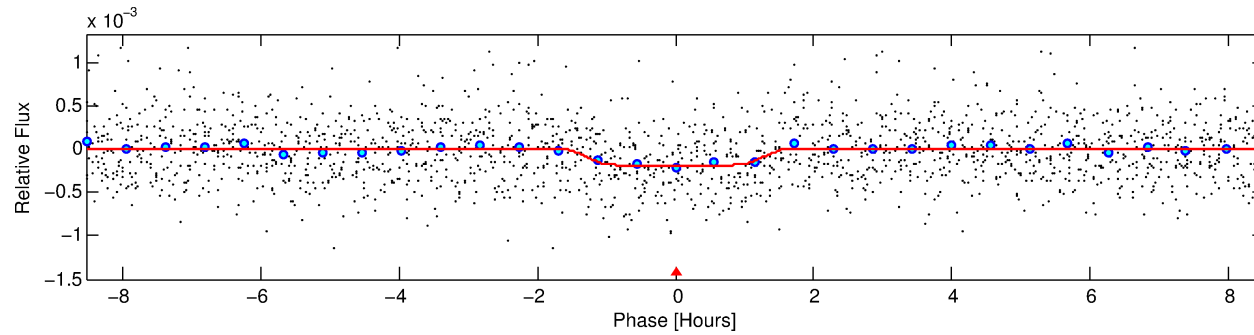
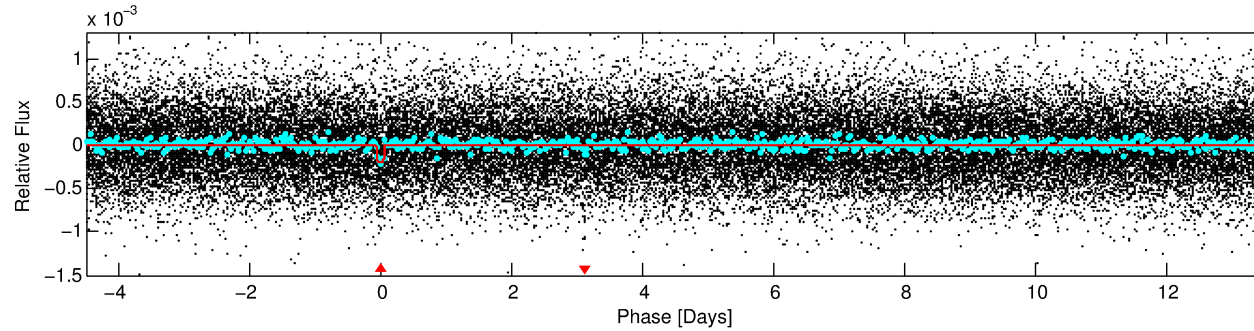
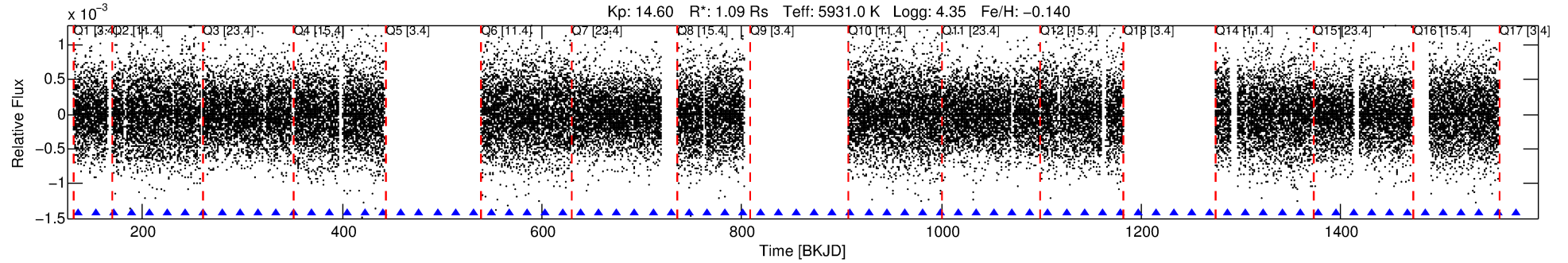
Ephemeris Match Information For 005597361-01

No Significant Match Found

DV One-Page Summary

KIC: 5597361 Candidate: 1 of 1 Period: 17.993 d

KOI: K06601.01 Corr: 0.973



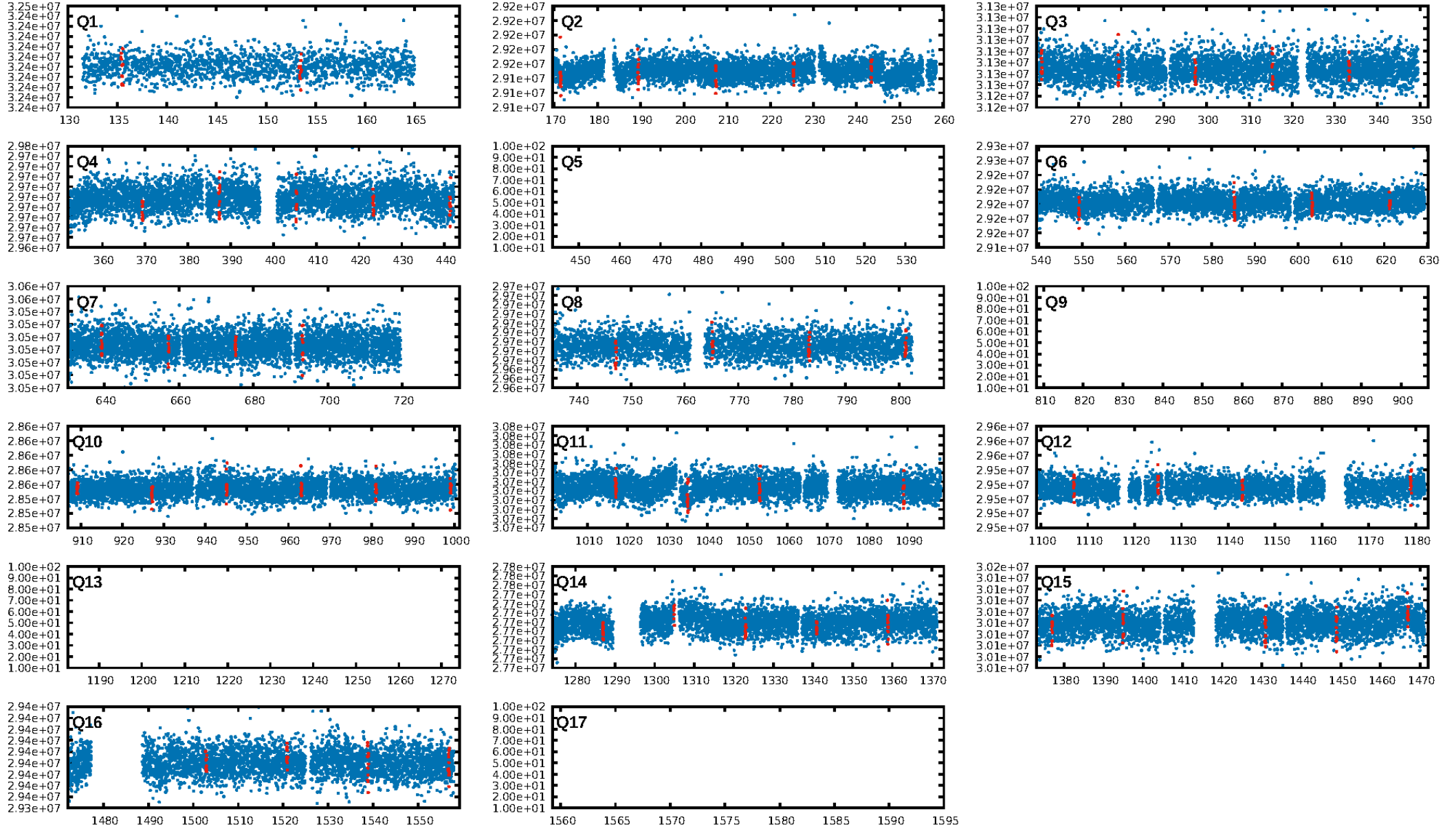
DV Fit Results:

Period = 17.99255 [0.00016] d
Epoch = 135.4539 [0.0074] BKJD
Rp/R* = 0.0153 [0.0113]
a/R* = 24.30 [89.33]
b = 0.88 [0.94]
Seff = 74.15 [26.34]
Teff = 748 [66] K
Rp = 1.81 [1.44] Re
a = 0.1329 [0.0308] AU
Ag = 189.01 [295.43] [0.64 σ]
Teffp = 4290 [1642] K [2.15 σ]

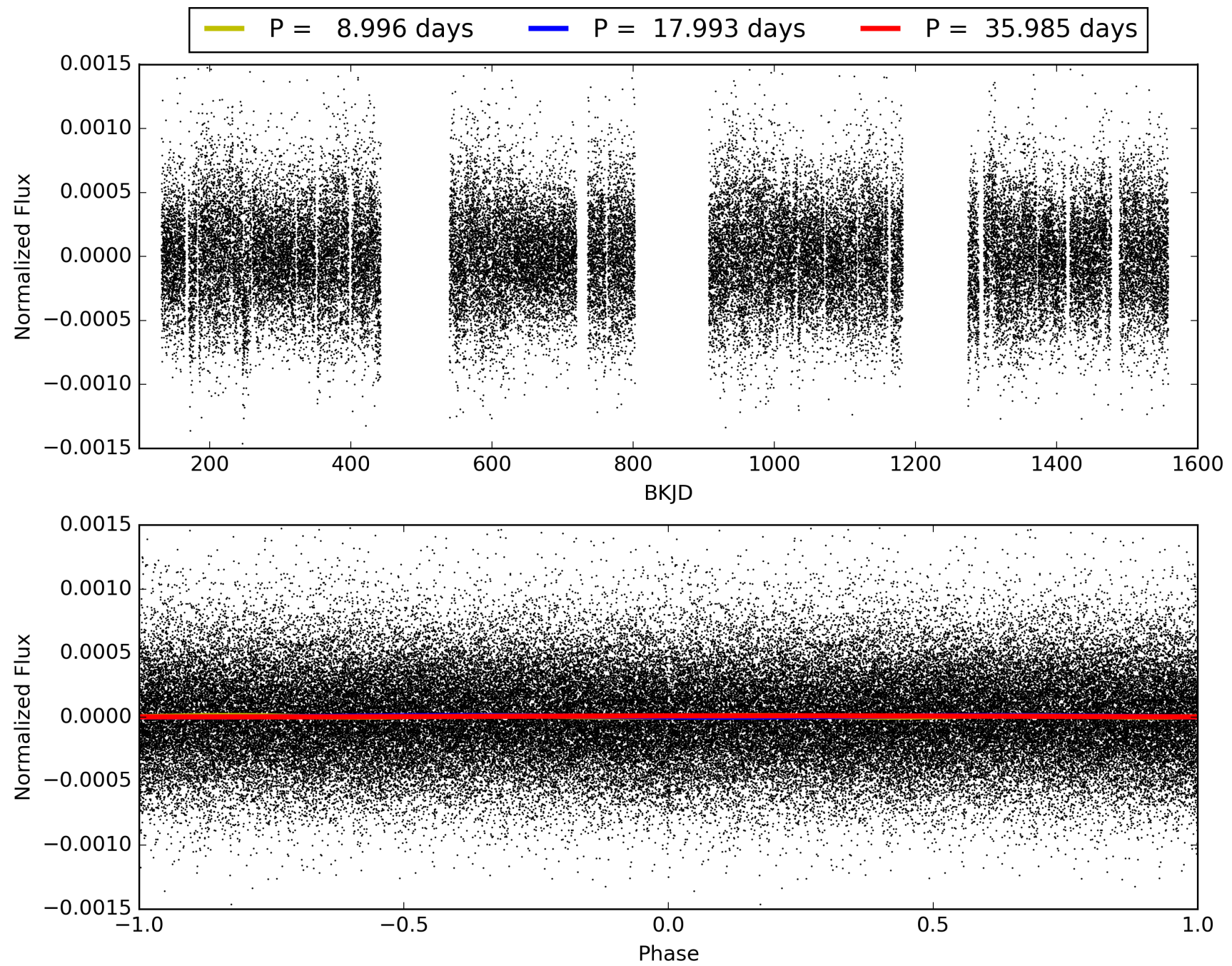
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 66.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.05e-16
RollingBand-fgt: 1.00 [55/55]
GhostDiagnostic-chr: 1.456
Centroid-sig: 12.7%
Centroid-so: 2.354 arcsec [1.25 σ]
OotOffset-rm: 0.458 arcsec [0.51 σ]
KicOffset-rm: 0.560 arcsec [0.62 σ]
OotOffset-st: 3/3/2/1 [9]
KicOffset-st: 3/3/2/1 [9]
DiffImageQuality-fgm: 0.33 [3/9]
DiffImageOverlap-fno: 1.00 [13/13]

TCE 005597361-01, PDC Light Curves

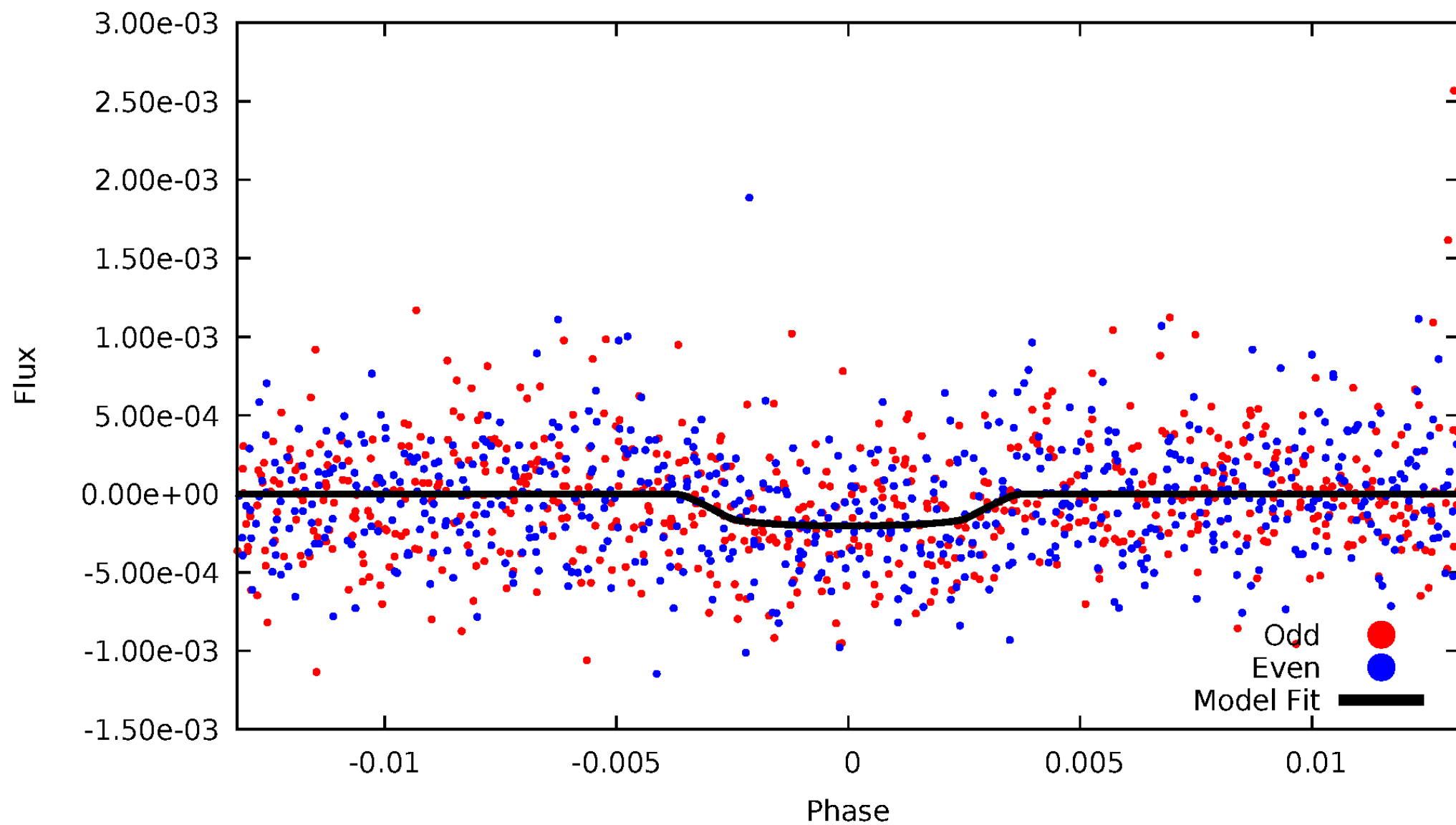


TCE 005597361-01



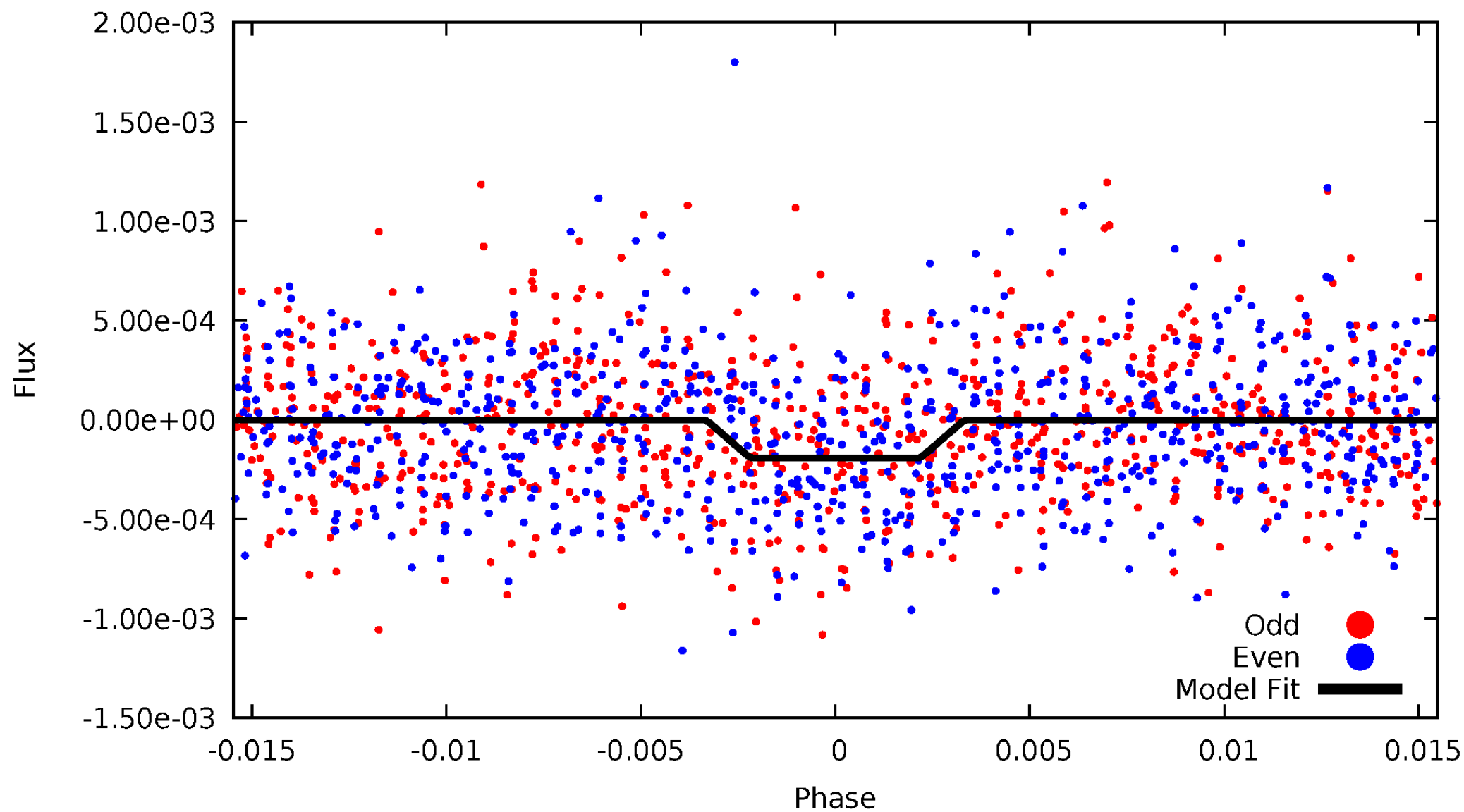
DV Odd/Even

TCE 005597361-01



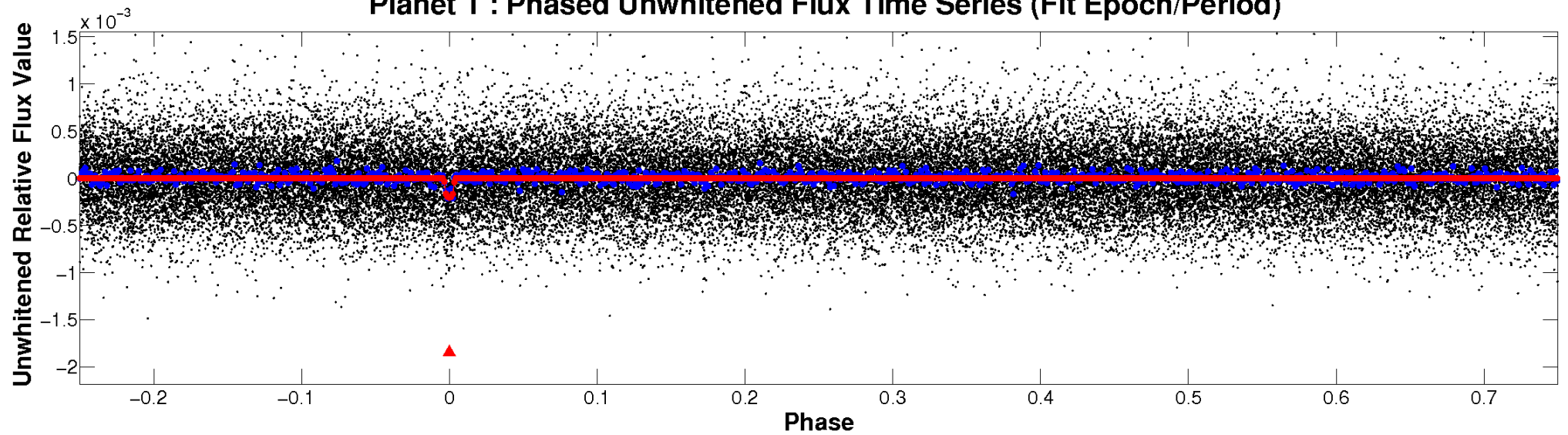
ALT Odd/Even

TCE 005597361-01

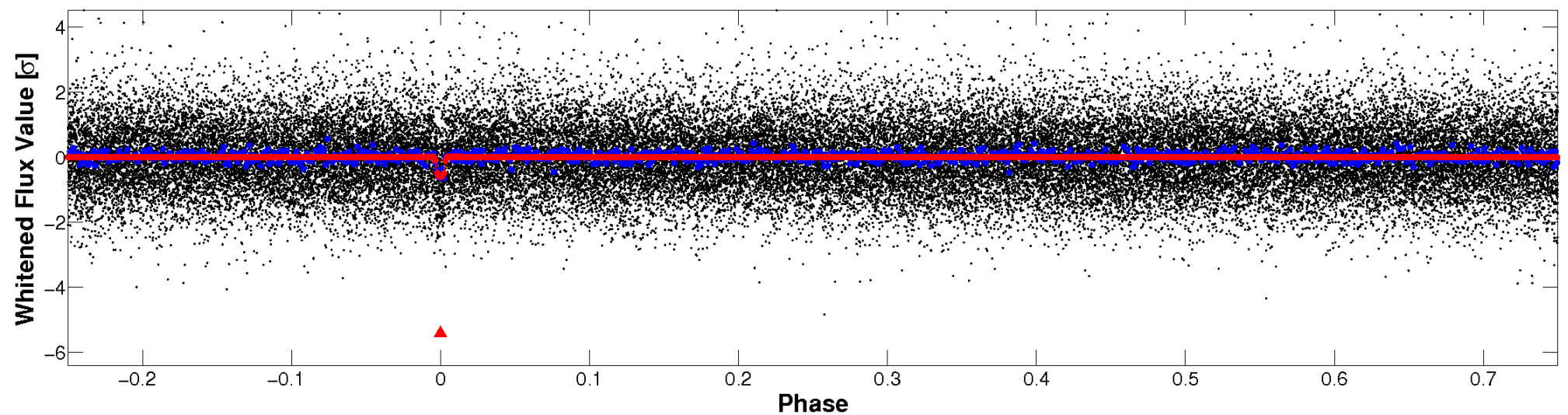


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

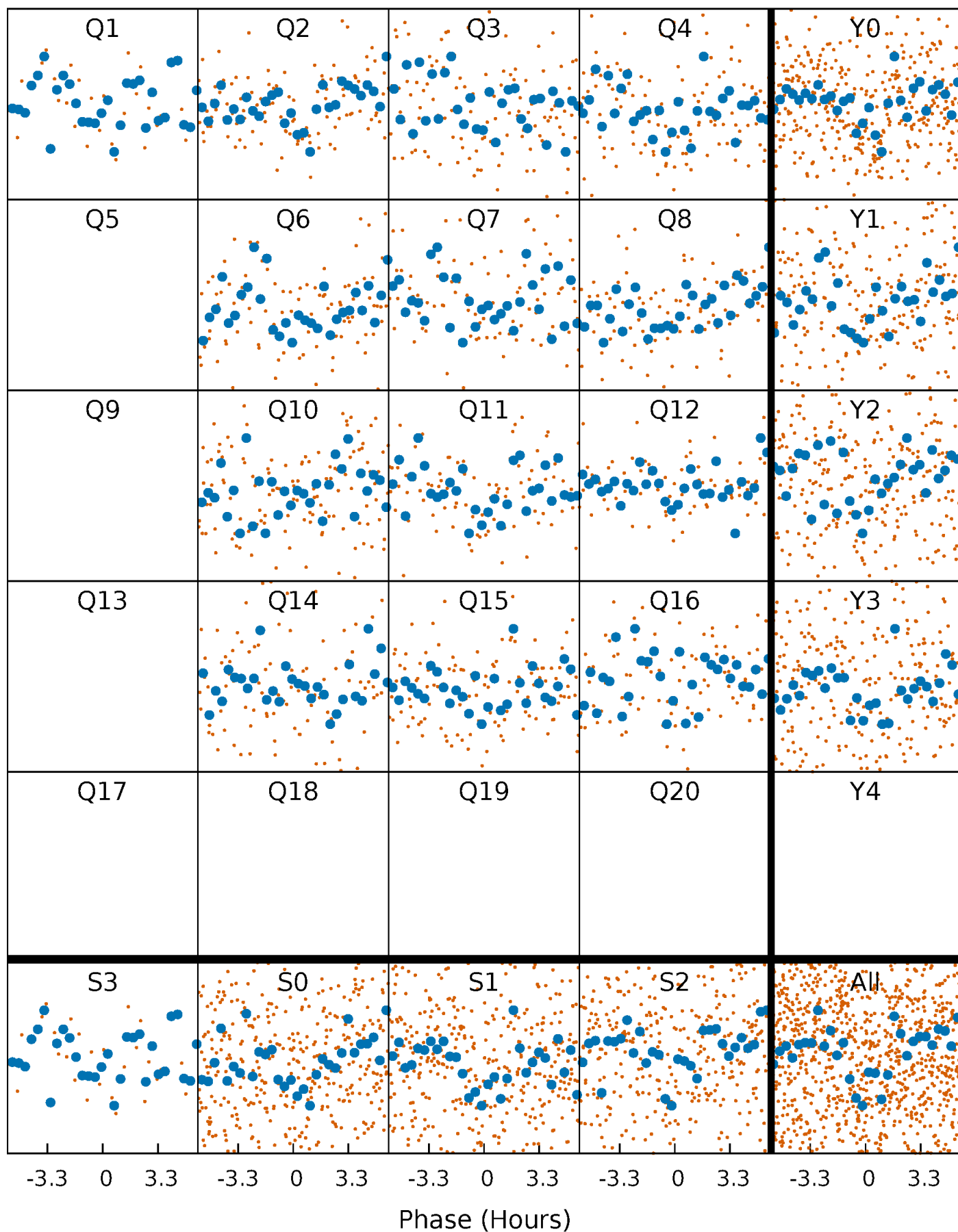


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



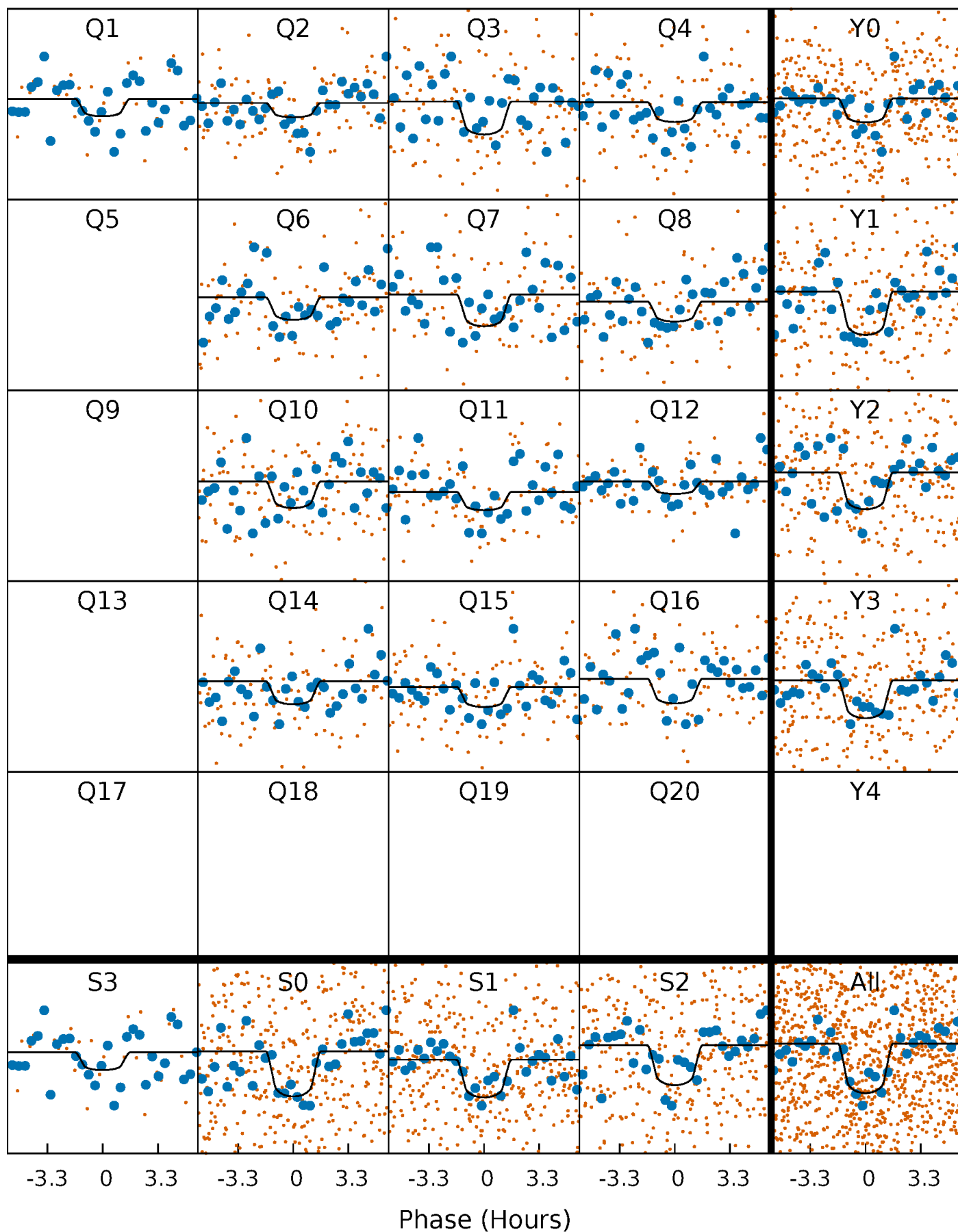
PDC Quarter-Phased Transit Curves

TCE 005597361-01 P= 17.992546 Days $T_0=135.453924$ (BKJD)



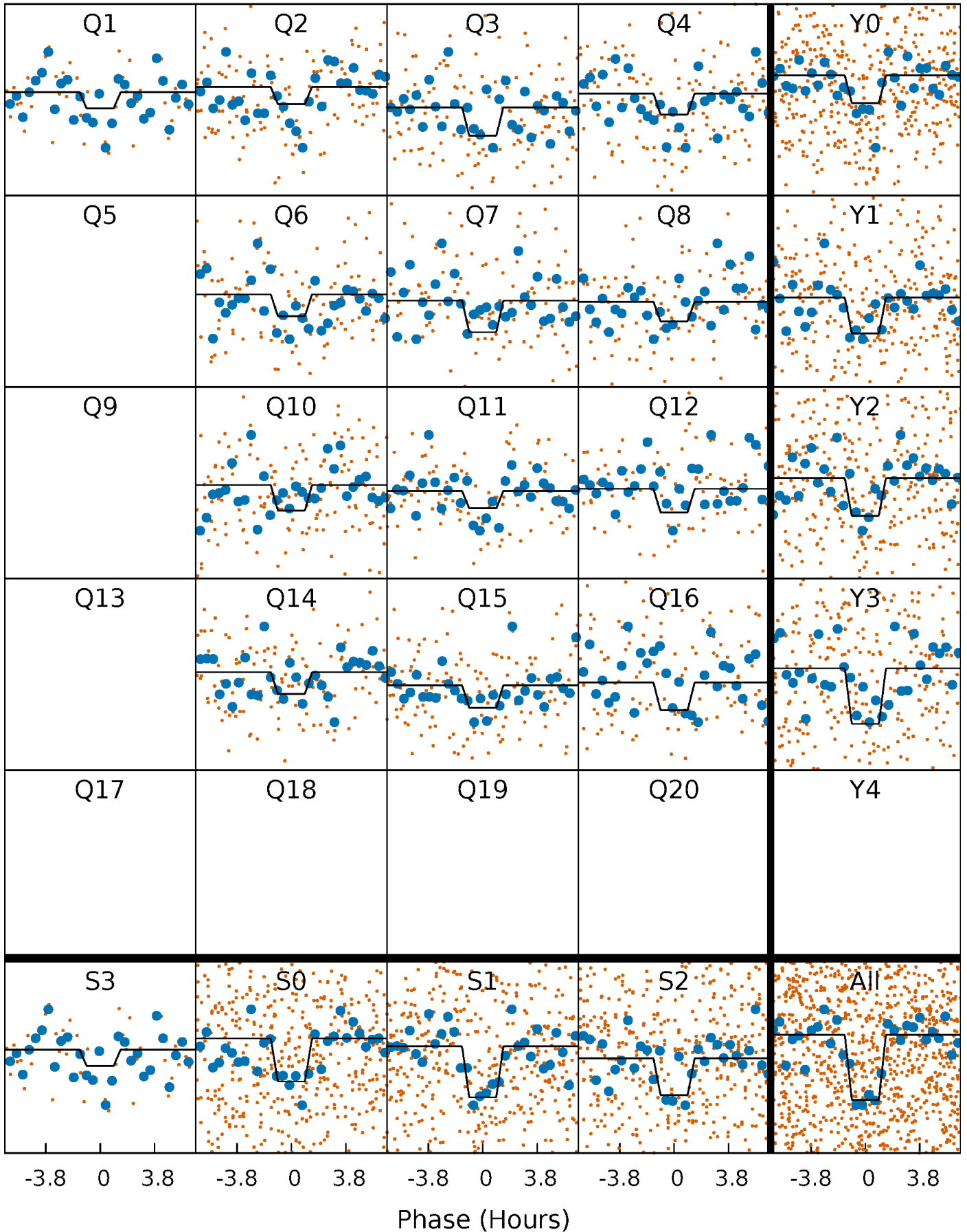
DV Quarter-Phased Transit Curves

TCE 005597361-01 P= 17.992546 Days $T_0=135.453924$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

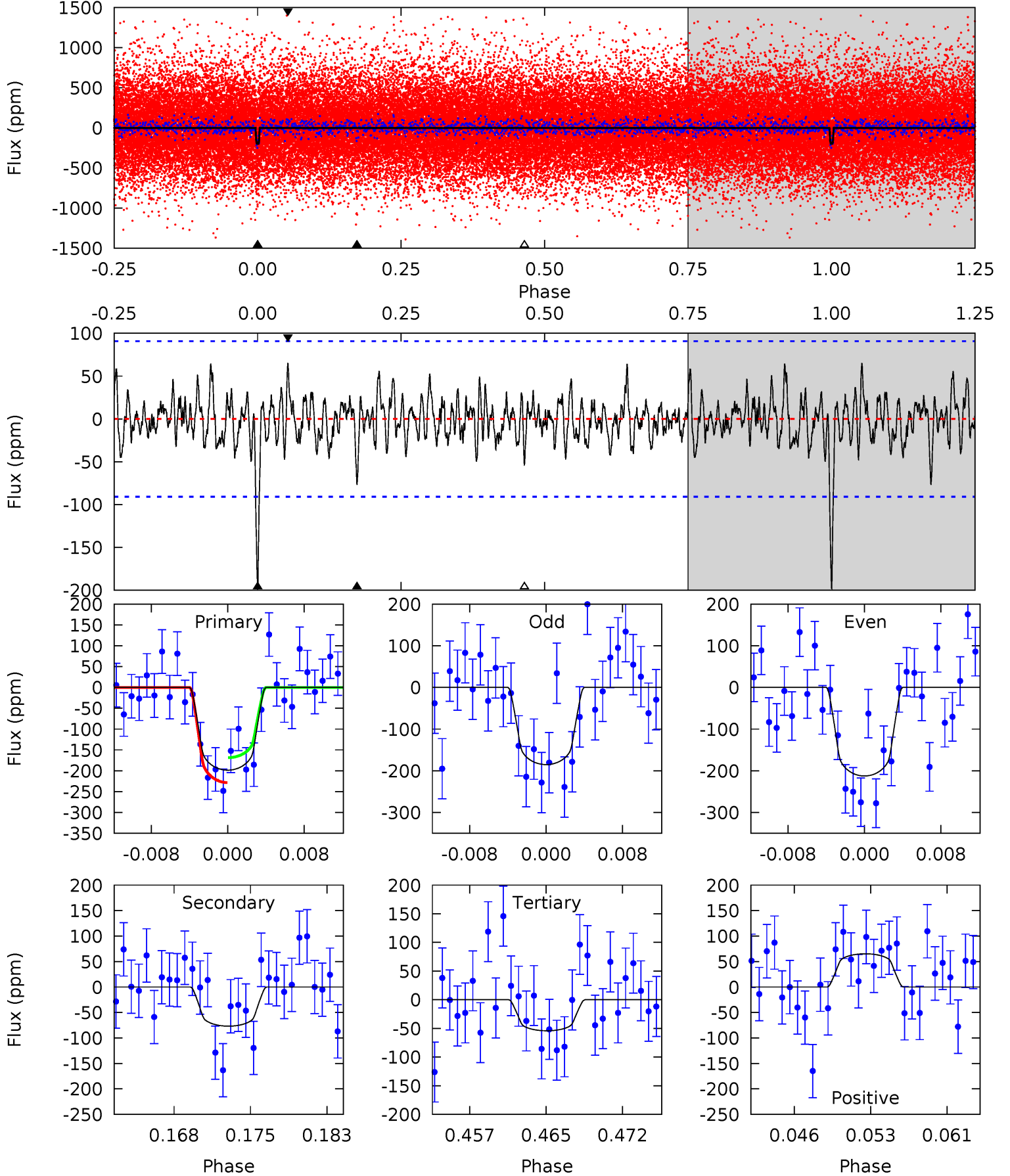
TCE 005597361-01 P= 17.992288 Days $T_0=135.462595$ (BKJD)



DV Model-Shift Uniqueness Test

005597361-01, P = 17.992546 Days, E = 117.461378 Days

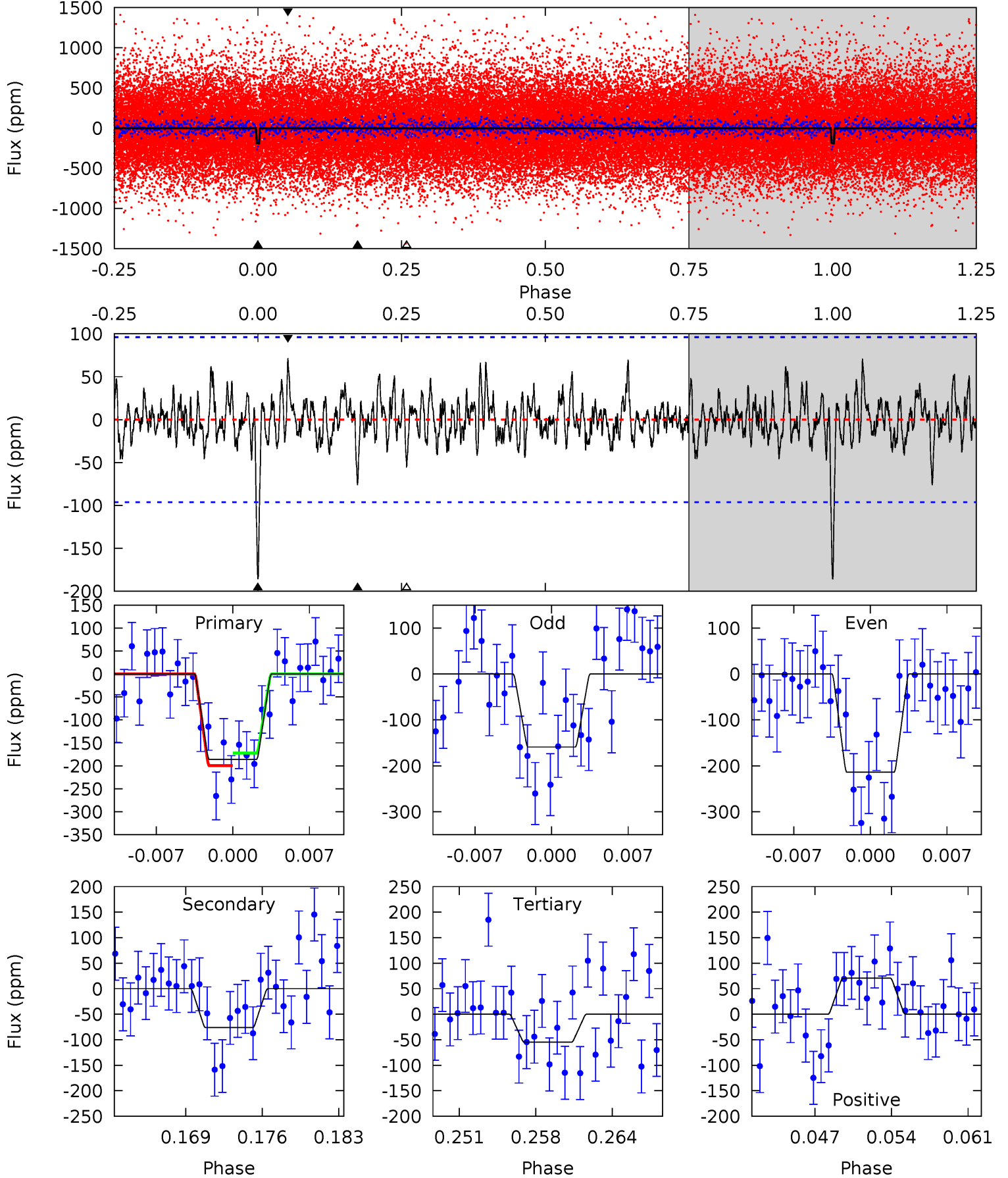
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.1	4.30	3.03	3.65	5.08	2.67	1.14	8.07	7.45	1.27	0.65	0.77	1.03	0.25	1.68



Alt Model-Shift Uniqueness Test

005597361-01, P = 17.992288 Days, E = 117.470307 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.85	4.04	2.91	3.75	5.10	2.71	1.07	6.95	6.10	1.13	0.29	1.46	1.12	0.28	0.72



Stellar Parameters For KIC 005597361

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5931^{+160}_{-178}	$4.351^{+0.148}_{-0.181}$	$-0.140^{+0.300}_{-0.300}$	$1.087^{+0.303}_{-0.202}$	$0.967^{+0.134}_{-0.110}$	$1.062^{+0.739}_{-0.537}$
	+3%/-3%	+3%/-4%	+214%/-214%	+28%/-19%	+14%/-11%	+70%/-51%
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 005597361-01 / KOI 6601.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-77 ± 18	$1.93^{+1.39}_{-1.08}$	1050^{+73}_{-63}	4514^{+2175}_{-795}	195^{+814}_{-131}
Alt.	-76 ± 19	$1.79^{+1.38}_{-1.04}$	1045^{+77}_{-65}	4663^{+2358}_{-914}	229^{+1053}_{-160}

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 $A_{obs} \gg 1.0$

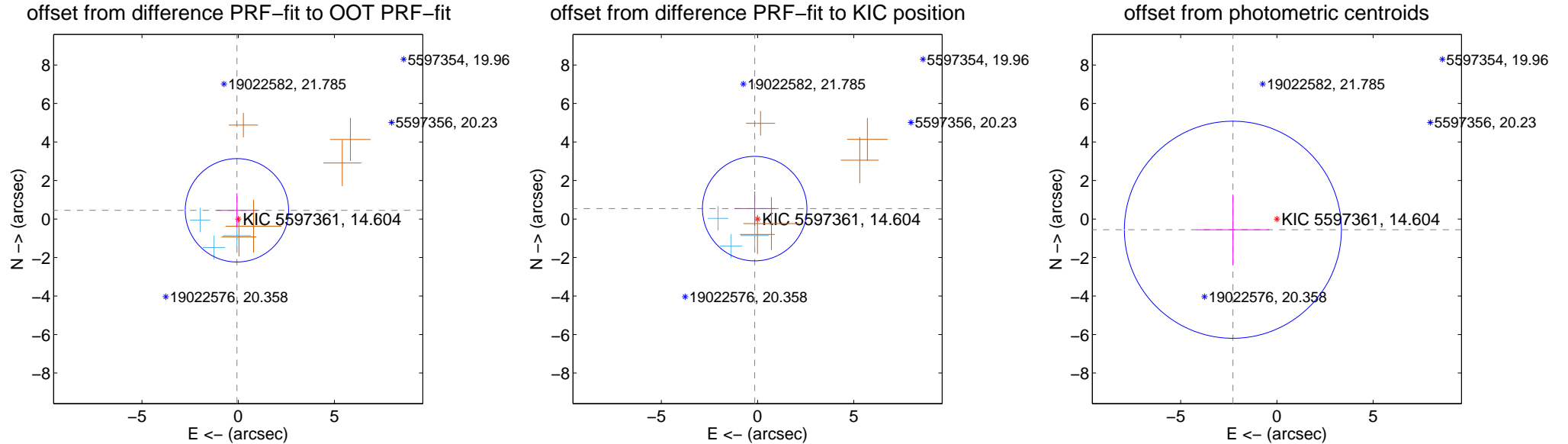
DV Centroid Data

Supplemental centroid analysis for 005597361-01. Kepler magnitude: 14.60. Transit SNR 9.11

There are 3 quarters with good PRF difference image offsets

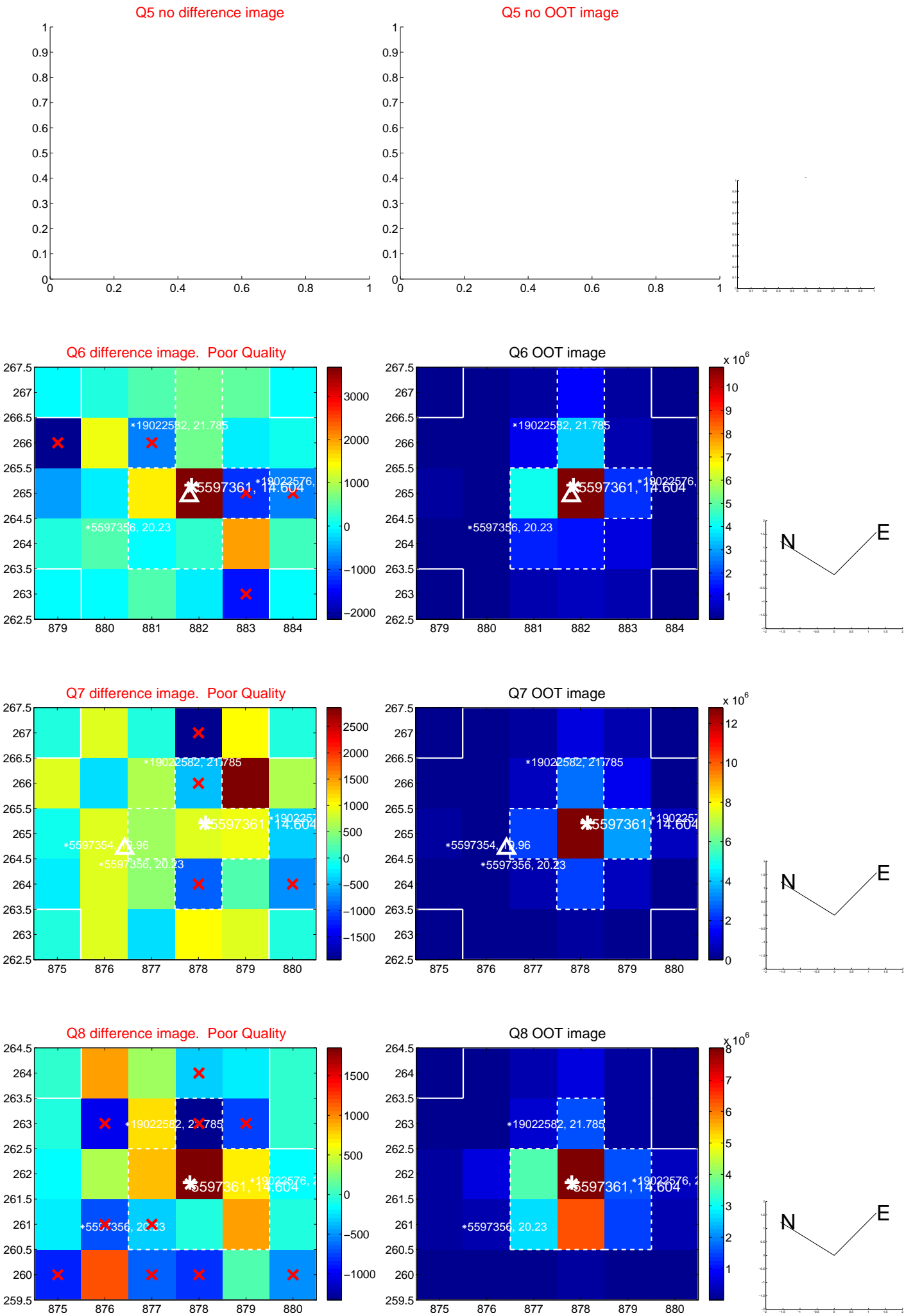
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.458 ± 0.895	0.51	0.066 ± 1.062	0.453 ± 0.891
PRF-fit source offset from KIC position	0.560 ± 0.905	0.62	0.149 ± 1.057	0.540 ± 0.892
photometric centroid source offset	2.35 ± 1.88	1.25	2.29 ± 1.88	-0.56 ± 1.83

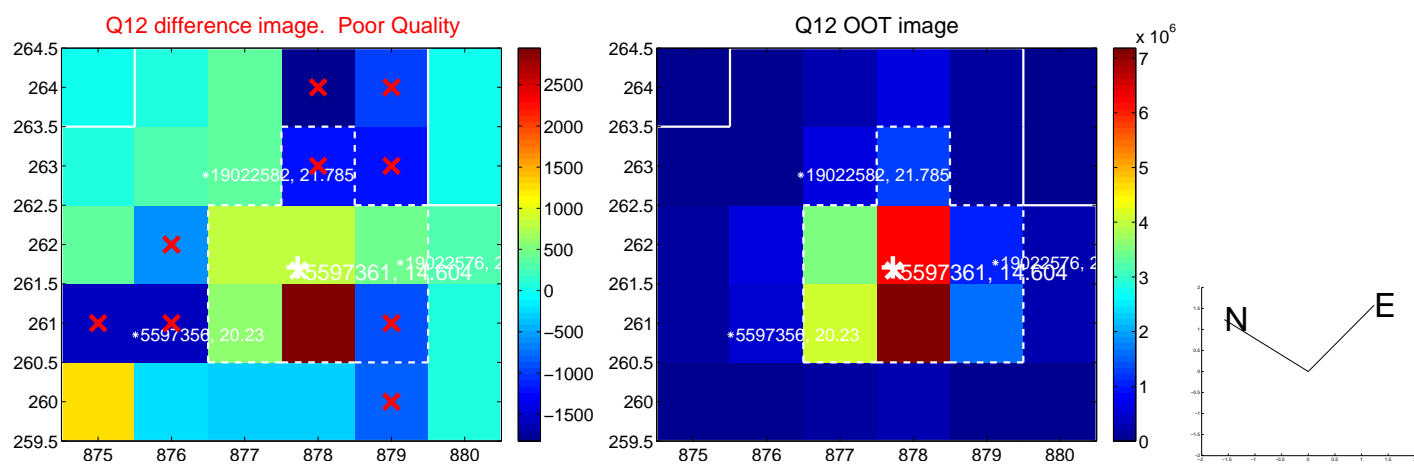
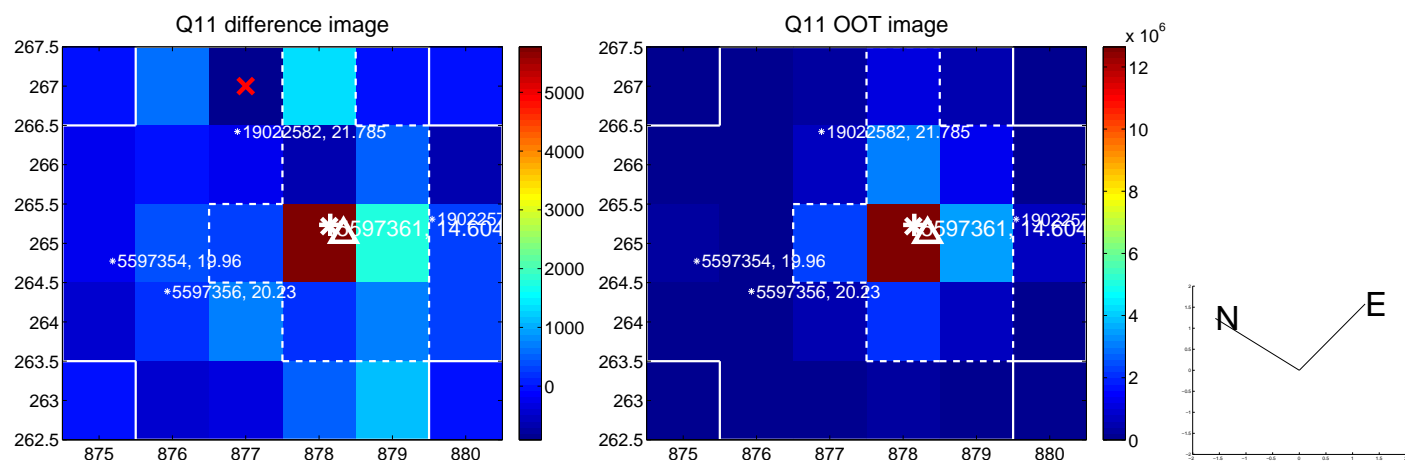
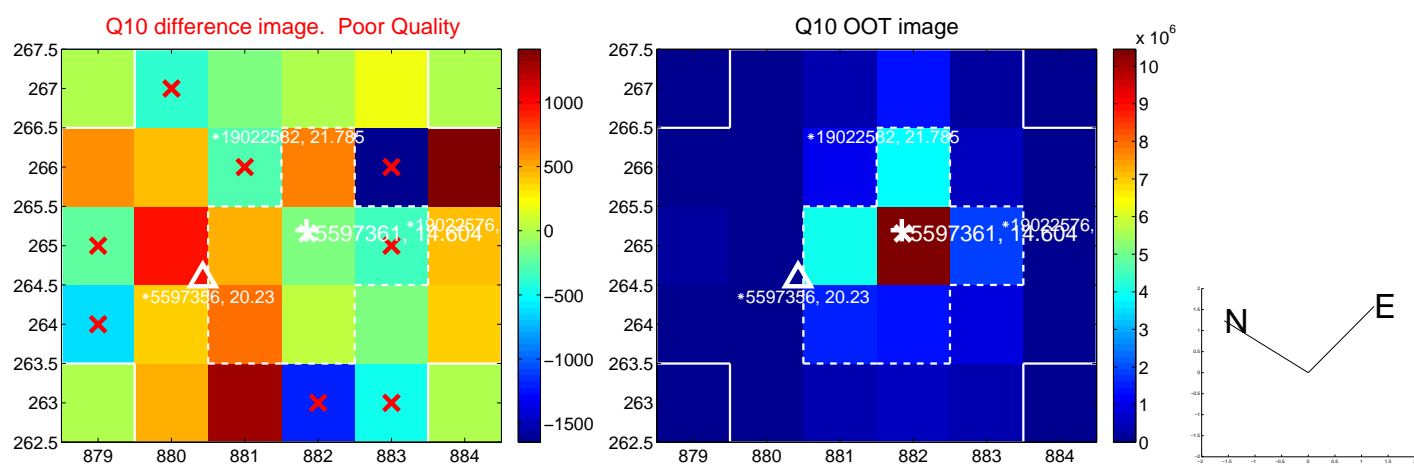
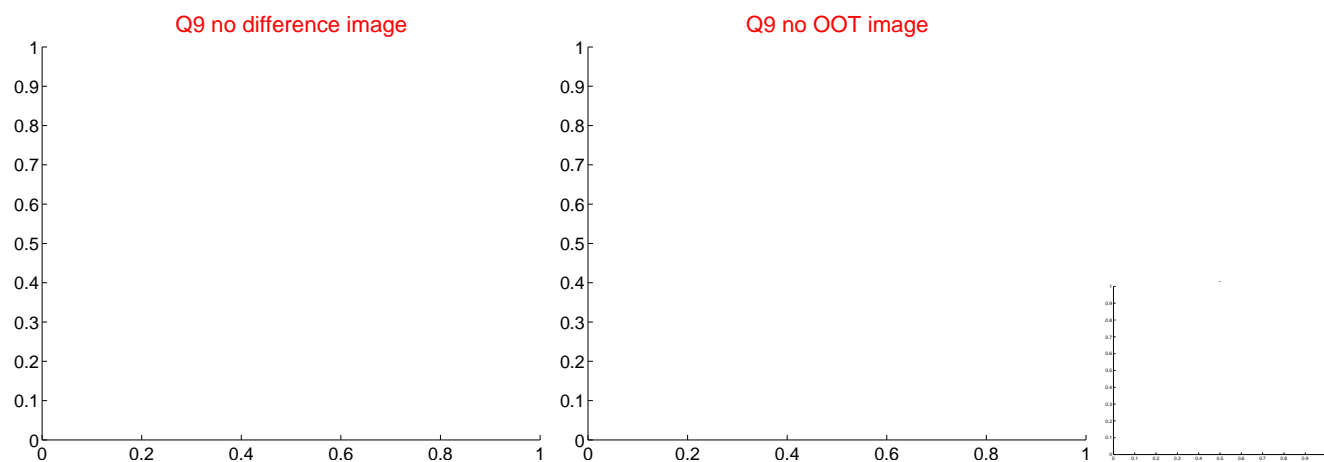


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

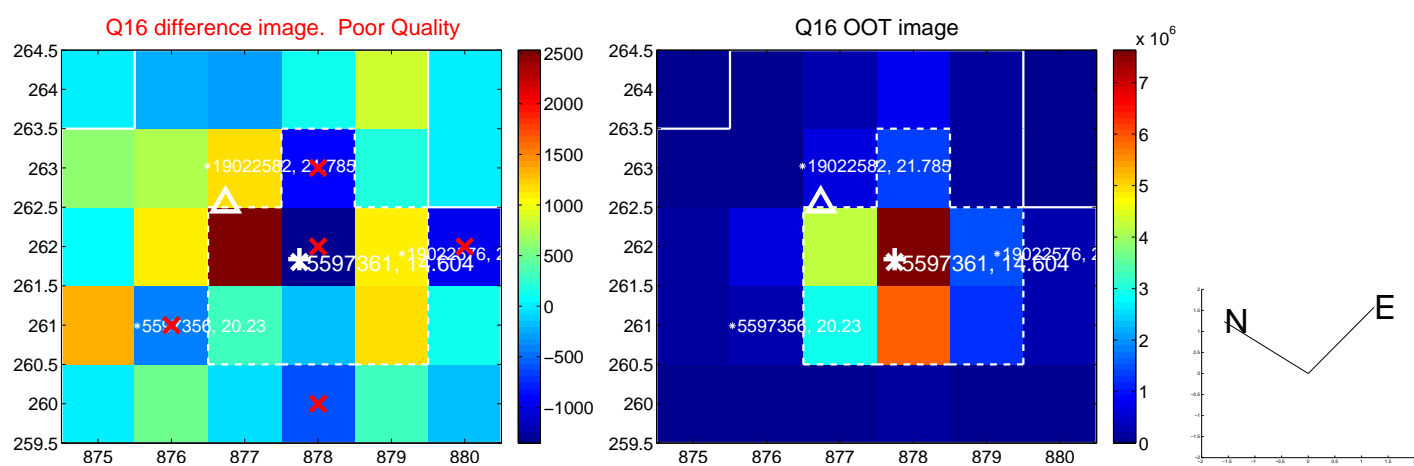
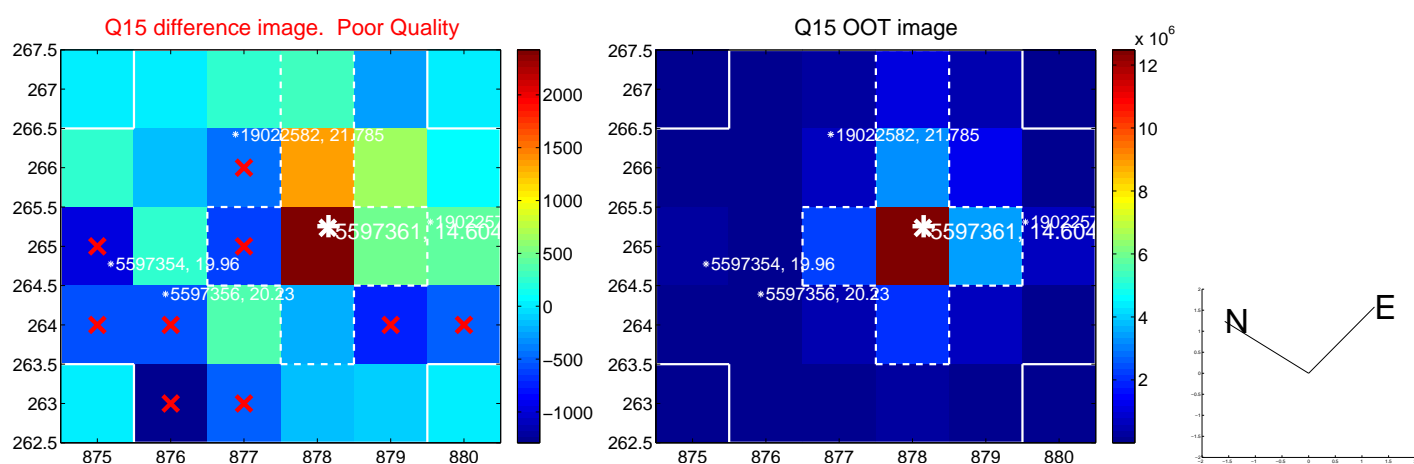
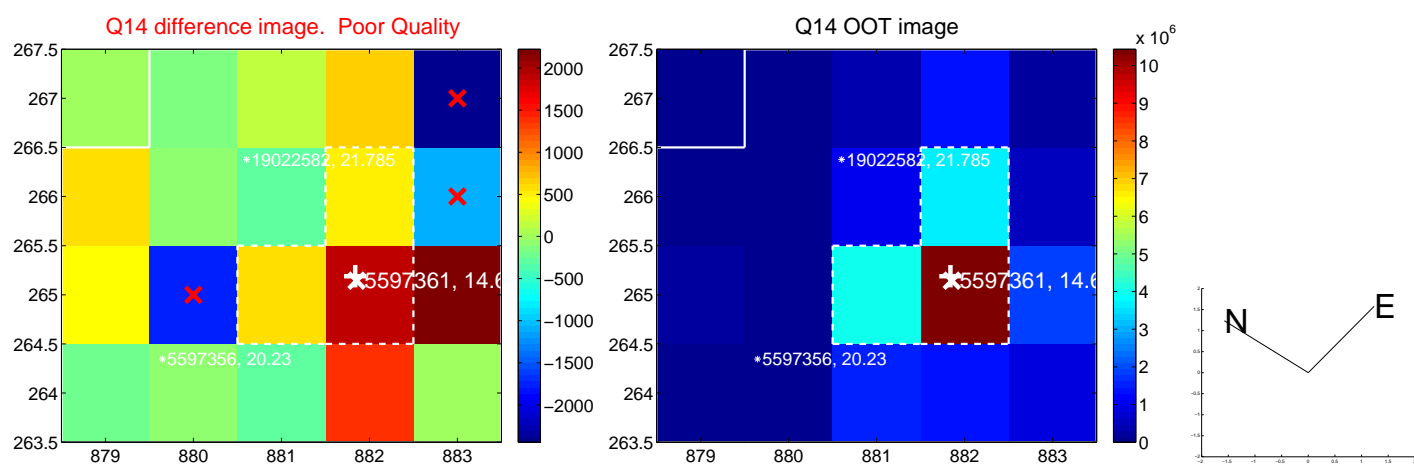
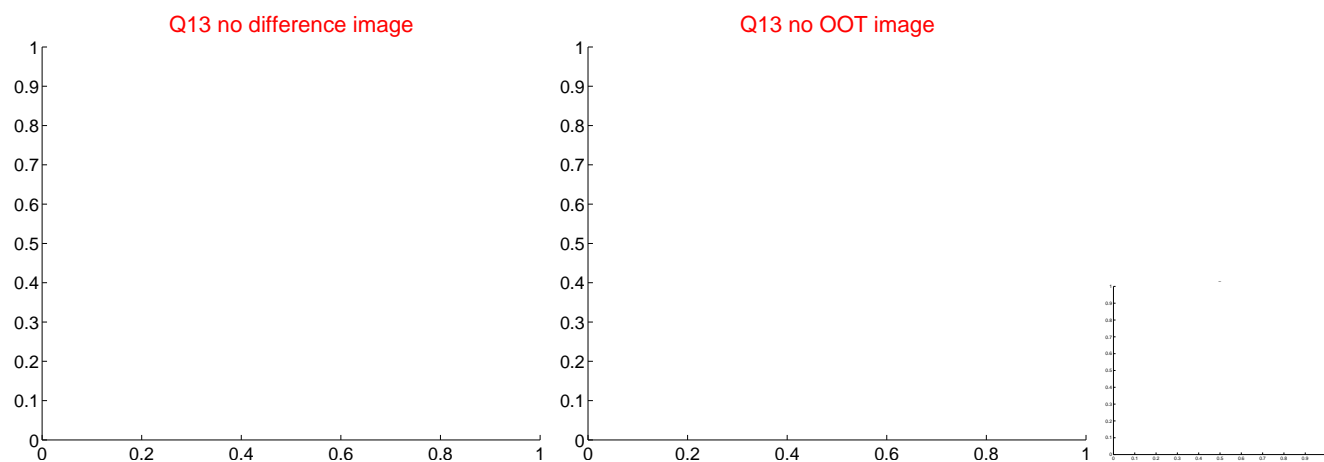
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



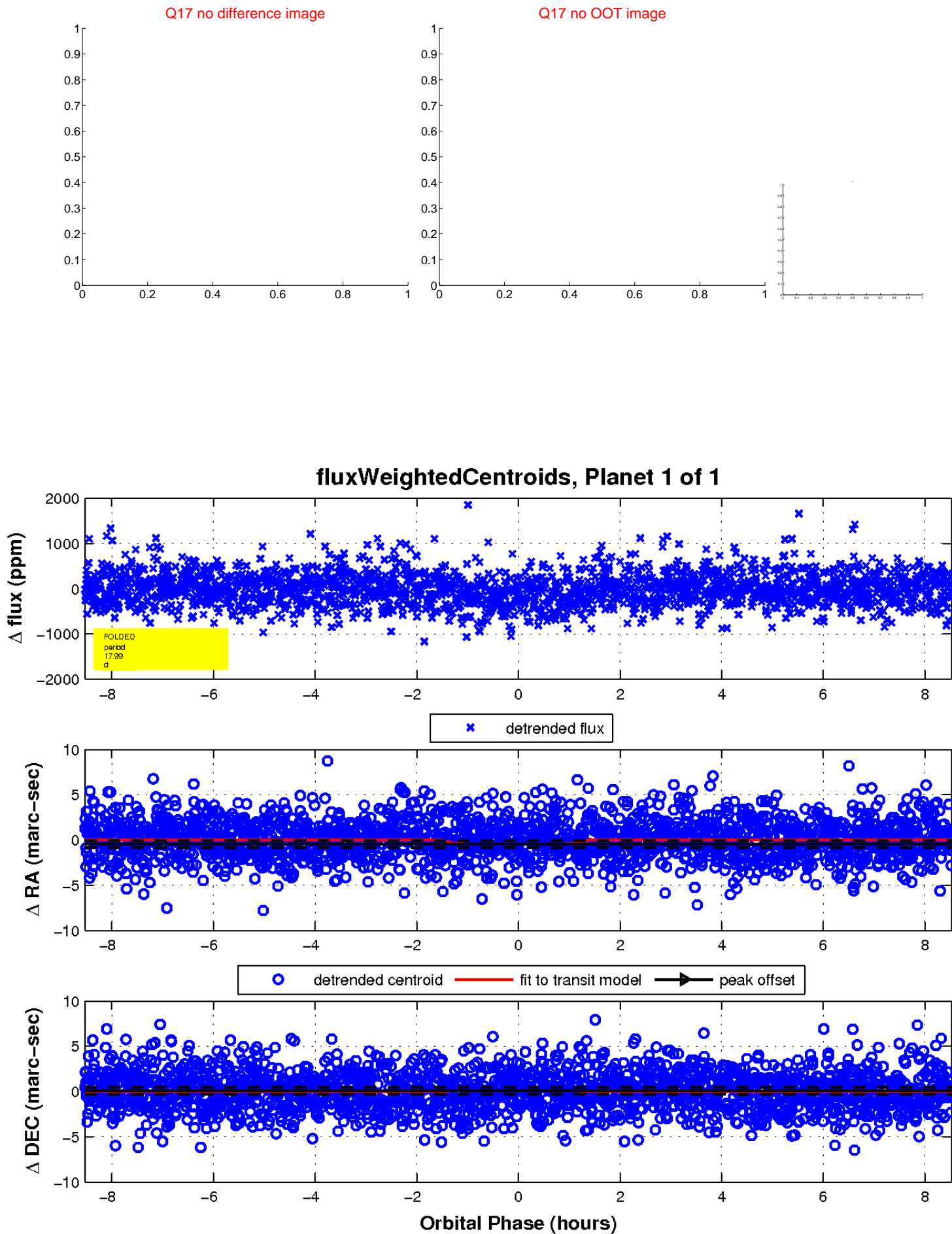
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

