

KIC 005272878

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})
005272878-01	OBS	0826.01	6.365831	132.941748	785.7	3.241	58.2	67.4	0.85	5776	2.81	165.53

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005272878-01	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.

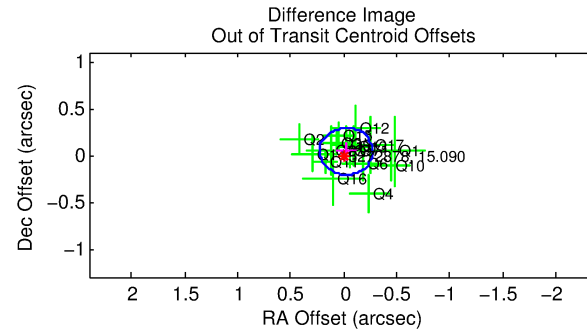
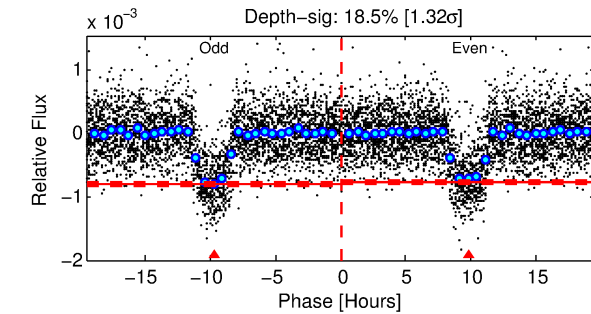
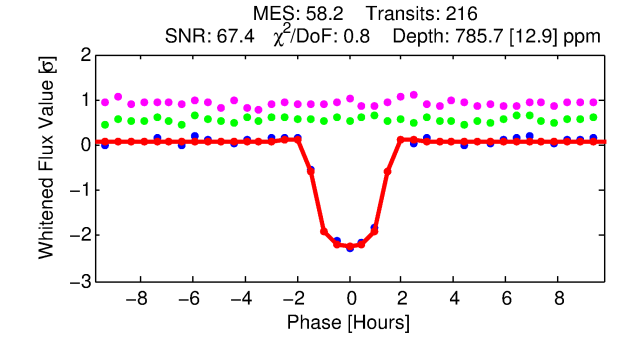
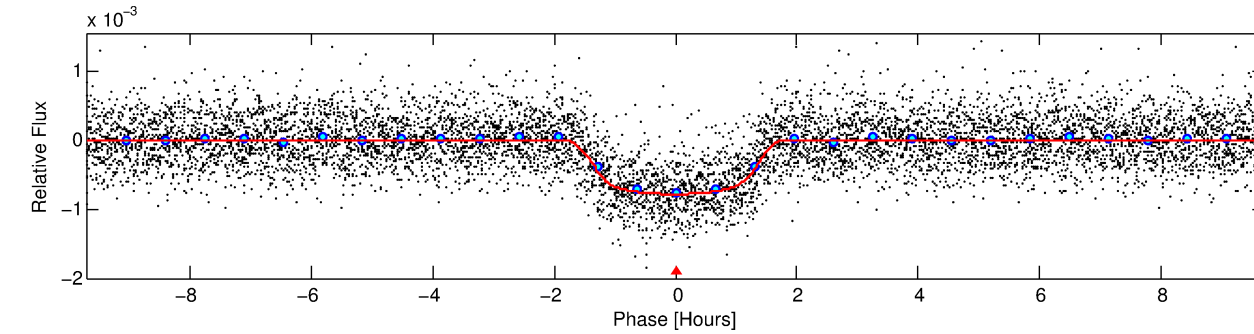
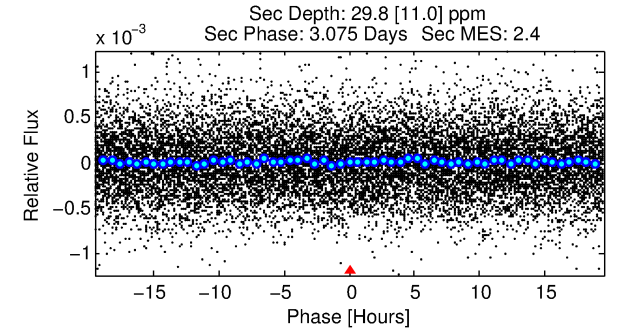
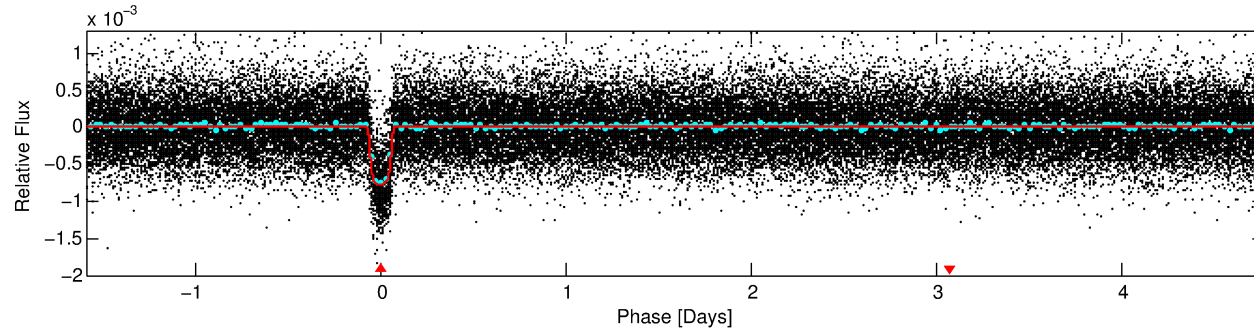
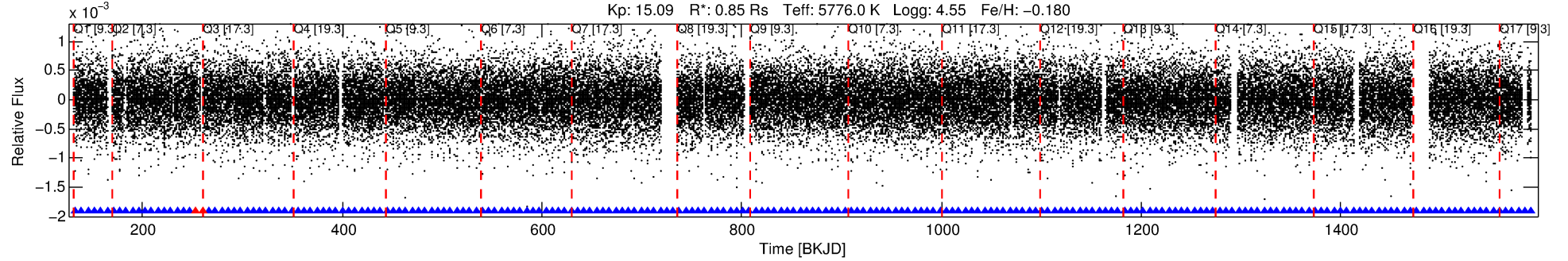
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005272878-01

No Significant Match Found

DV One-Page Summary

KIC: 5272878 Candidate: 1 of 1 Period: 6.366 d
KOI: K00826.01 Corr: 0.957



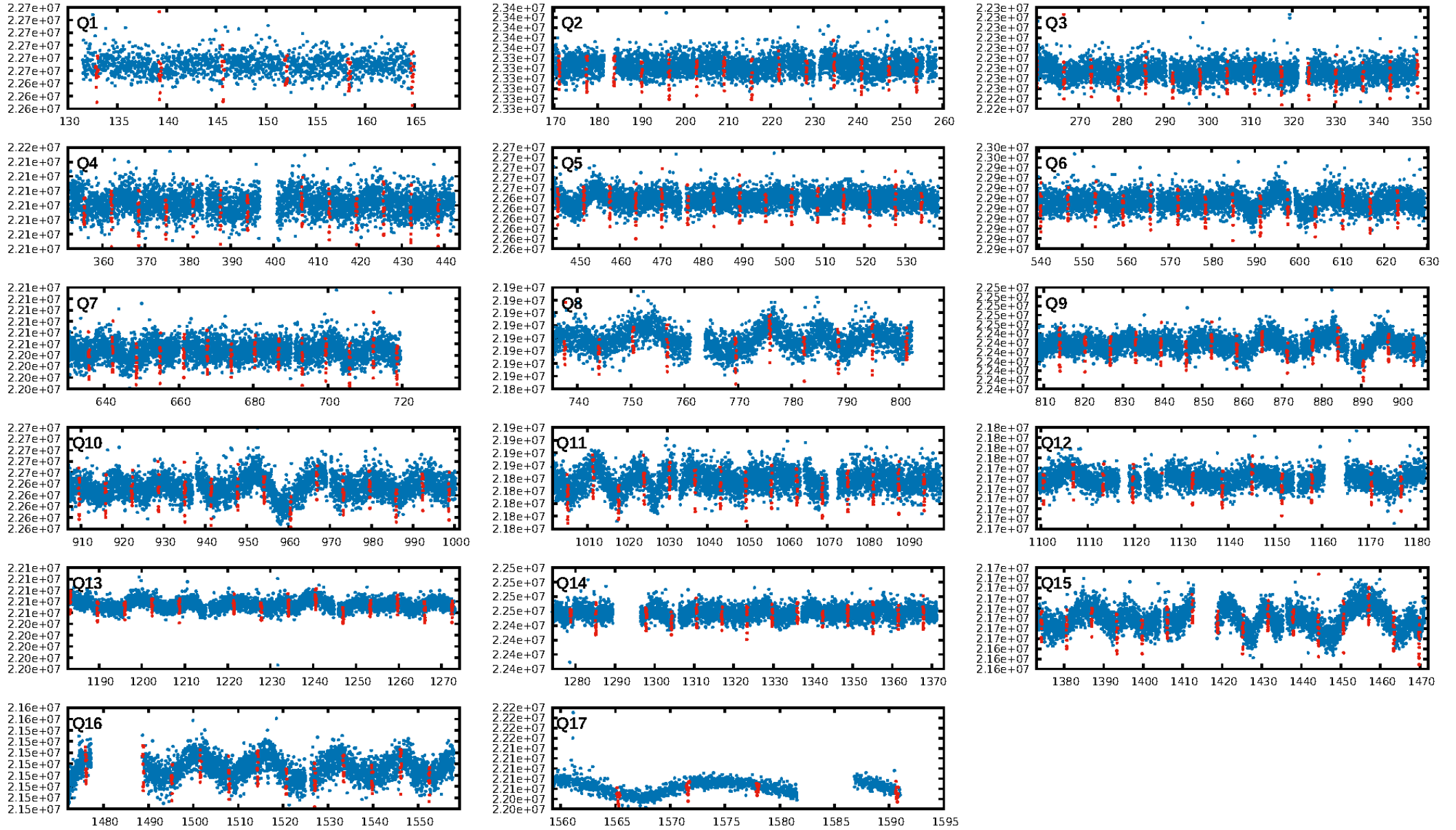
DV Fit Results:

Period = 6.36583 [0.00001] d
Epoch = 132.9417 [0.0010] BKJD
Rp/R* = 0.0304 [0.0011]
a/R* = 7.71 [1.28]
b = 0.90 [0.04]
Seff = 165.53 [53.83]
Teff = 915 [74] K
Rp = 2.81 [0.71] Re
a = 0.0659 [0.0139] AU
Ag = 9.00 [4.37] [1.83σ]
Teffp = 2449 [240] K [6.12σ]

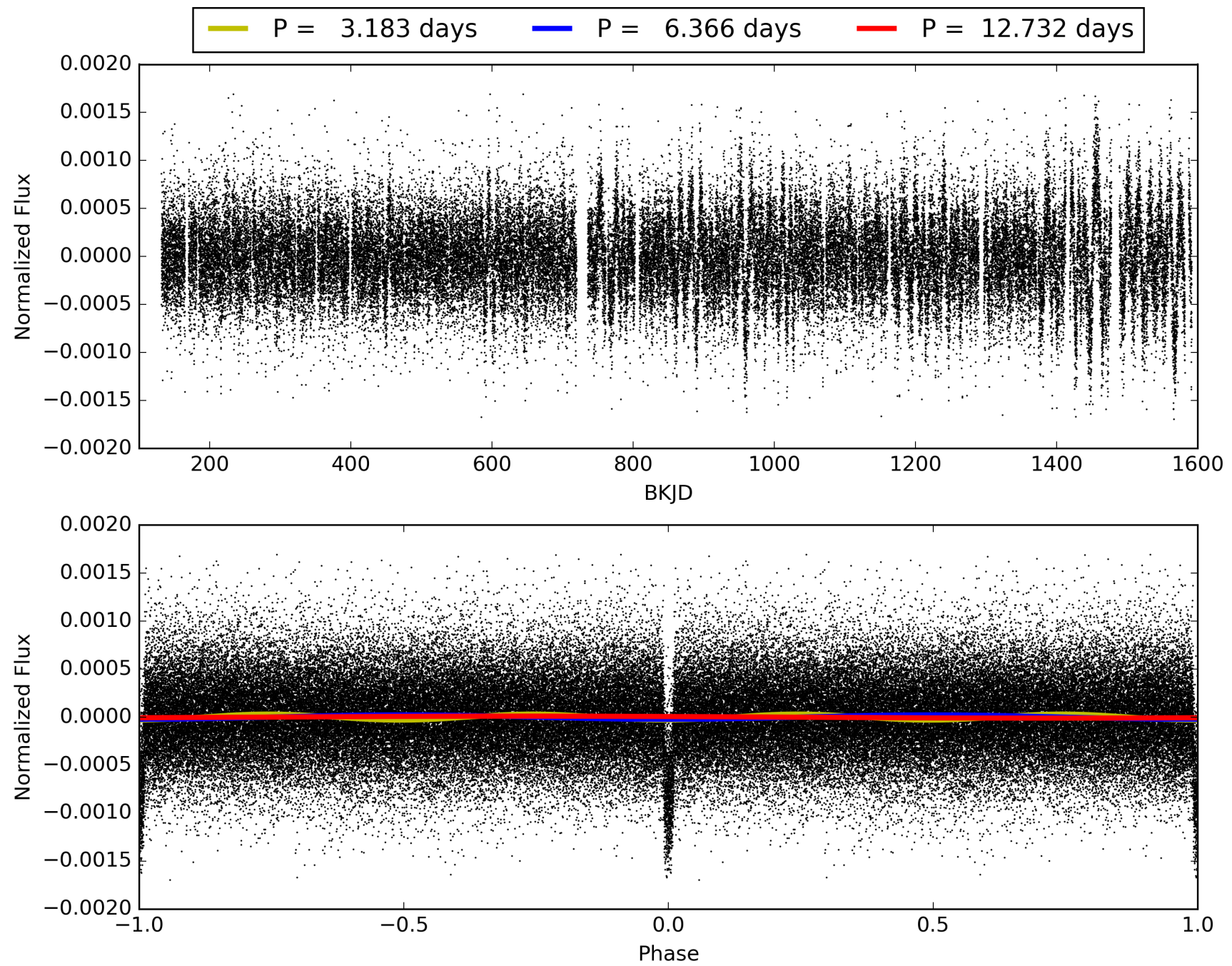
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.99 [204/206]
GhostDiagnostic-chr: 4.036
Centroid-sig: 87.1%
Centroid-so: 0.179 arcsec [0.84σ]
OotOffset-rm: 0.049 arcsec [0.59σ]
KicOffset-rm: 0.133 arcsec [1.58σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 005272878-01, PDC Light Curves

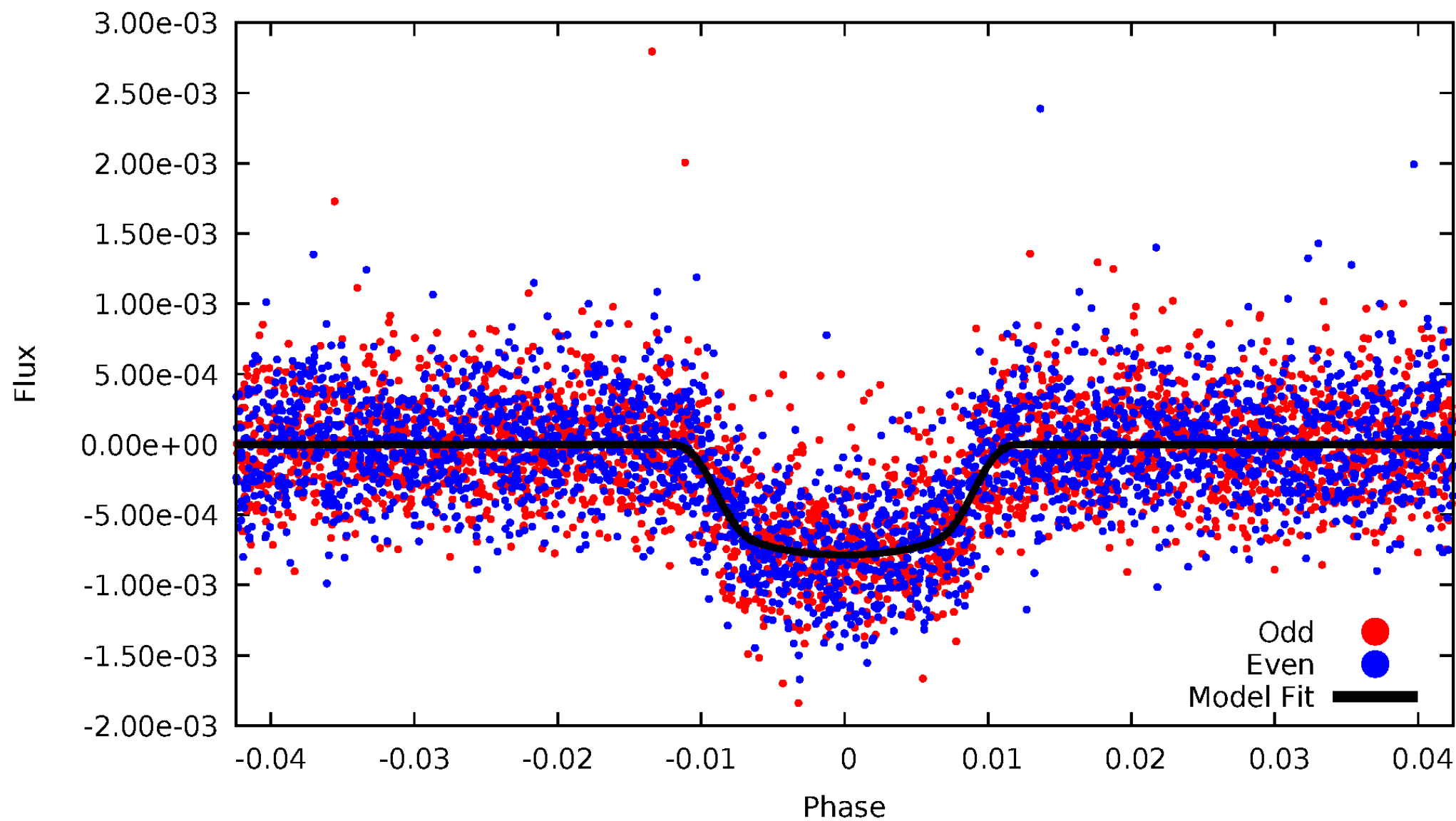


TCE 005272878-01



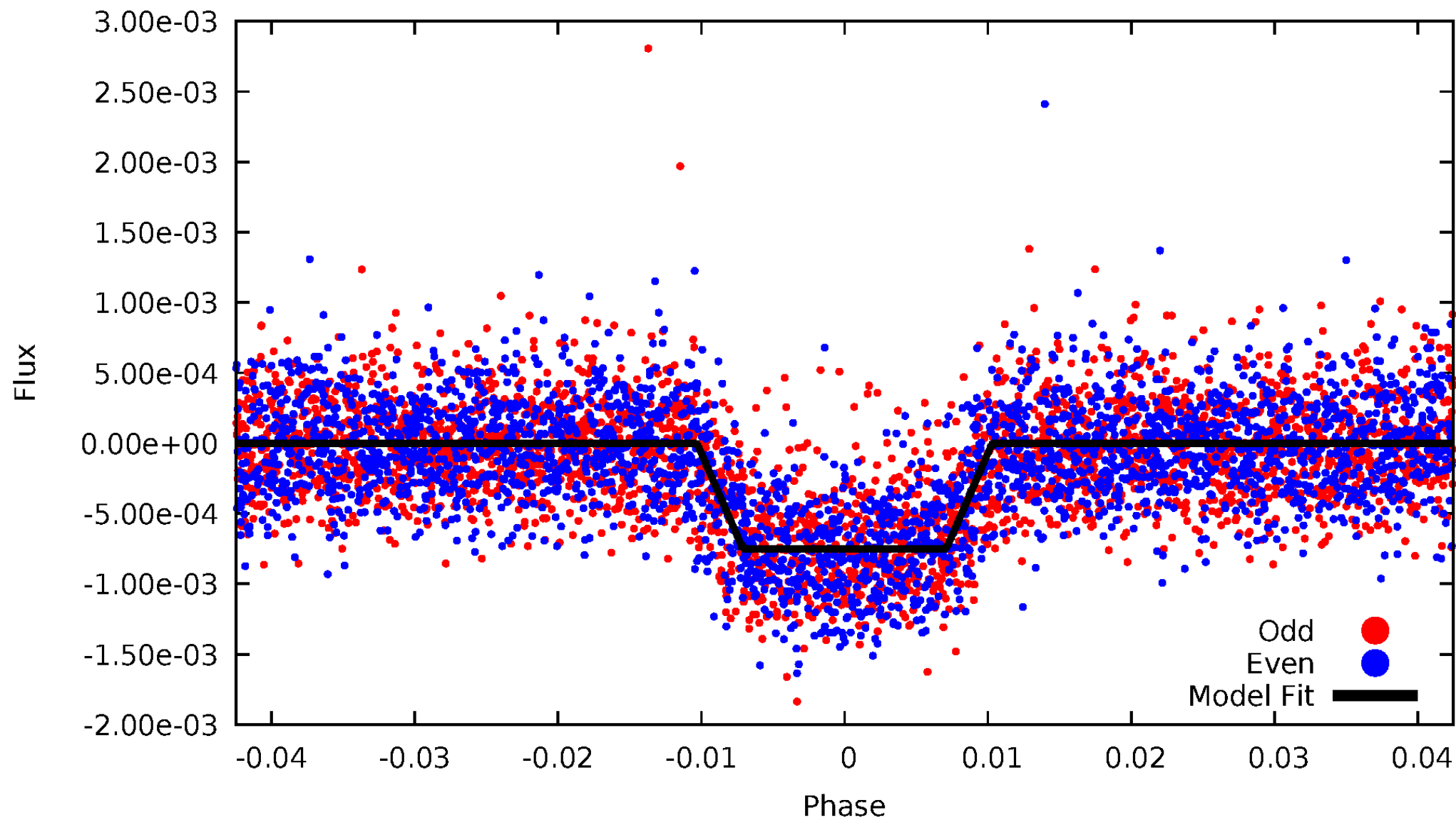
DV Odd/Even

TCE 005272878-01



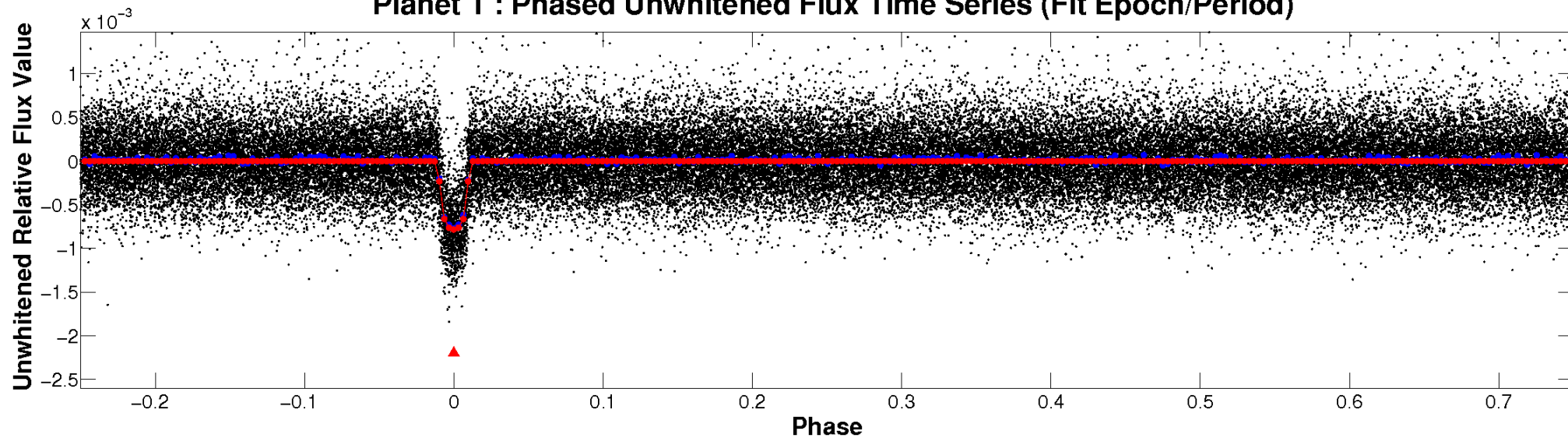
ALT Odd/Even

TCE 005272878-01

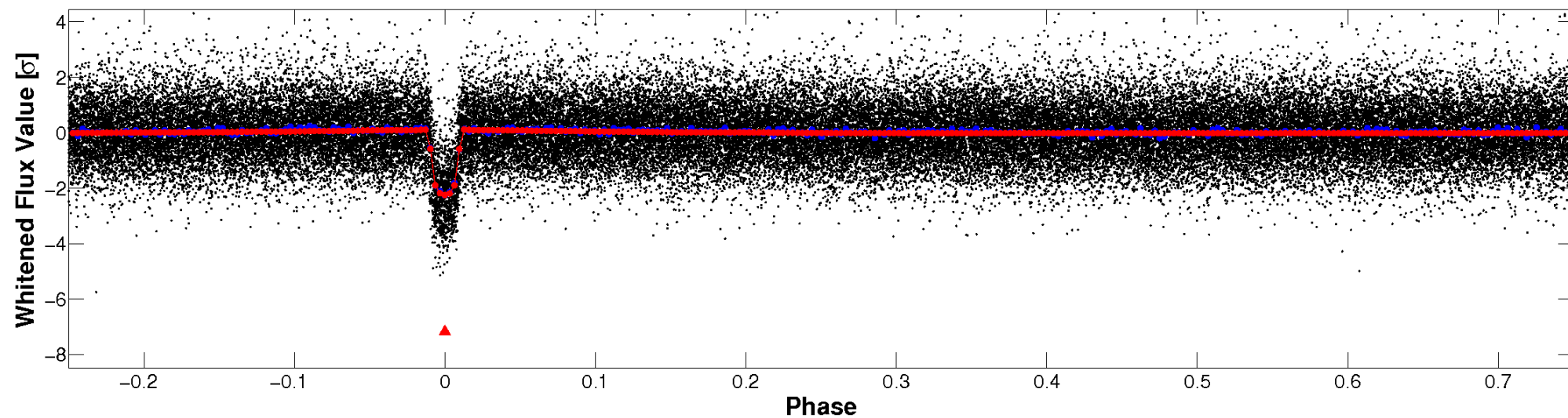


Non-Whitened Vs. Whitened Light Curve

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

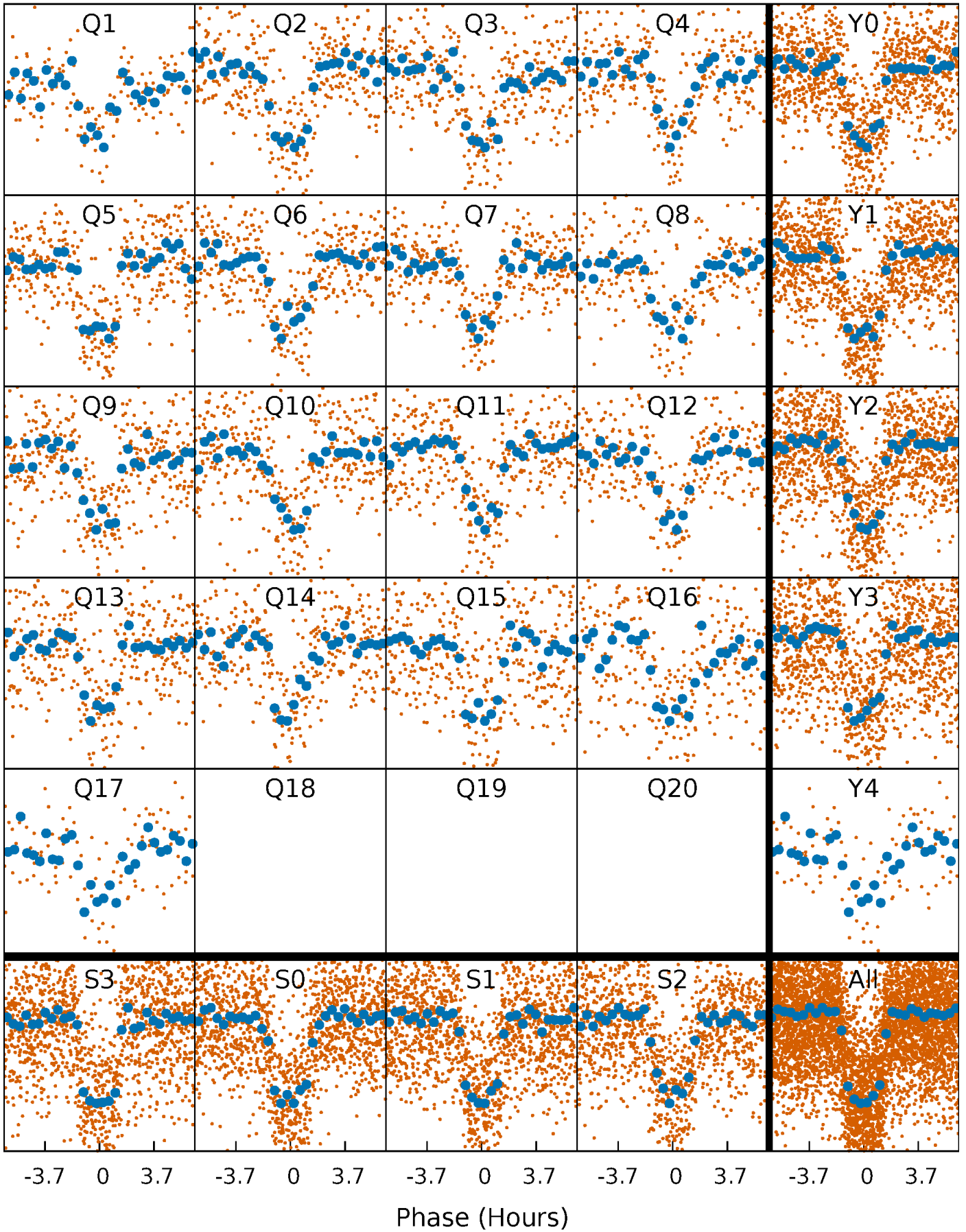


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



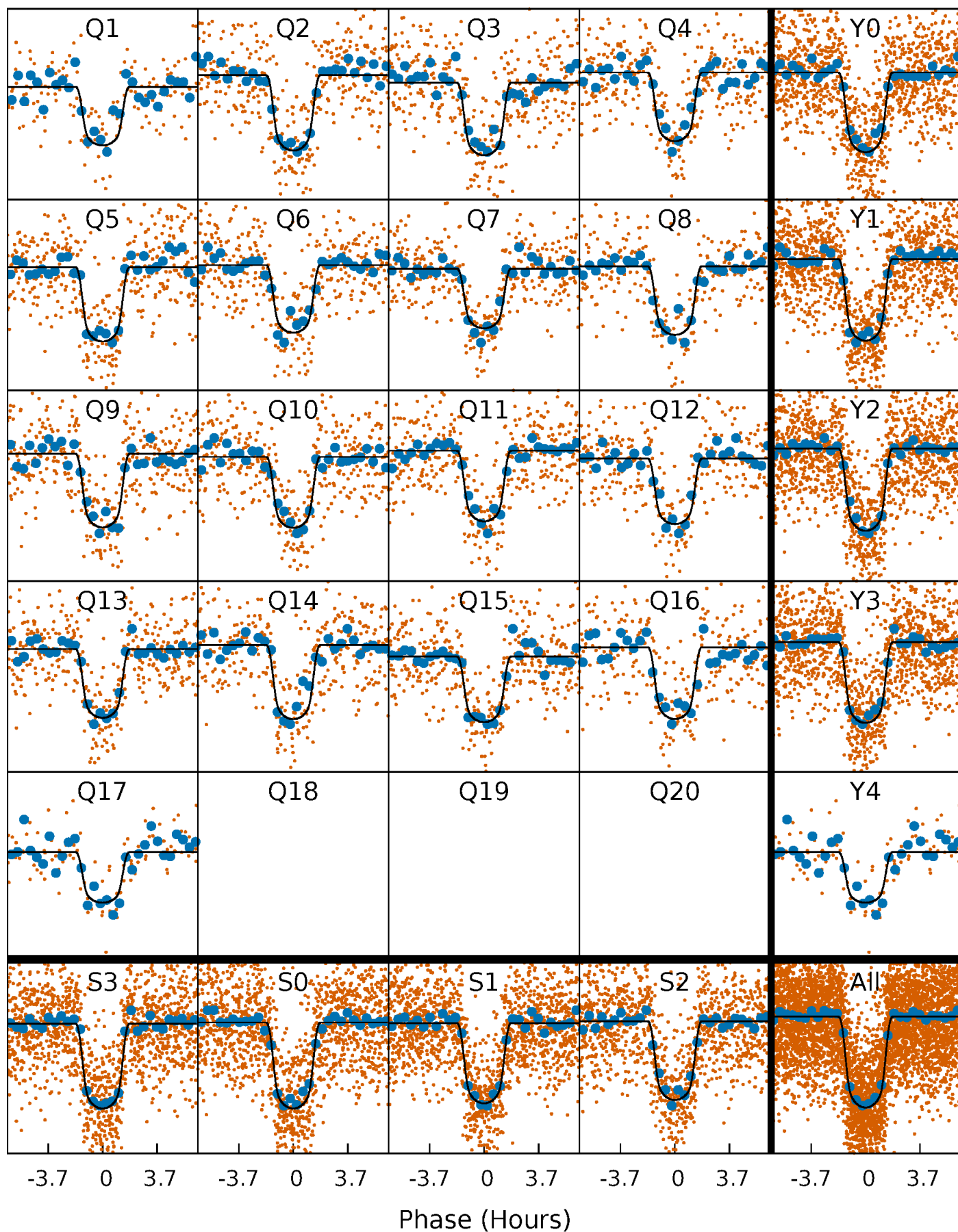
PDC Quarter-Phased Transit Curves

TCE 005272878-01 P= 6.365831 Days $T_0=132.941748$ (BKJD)



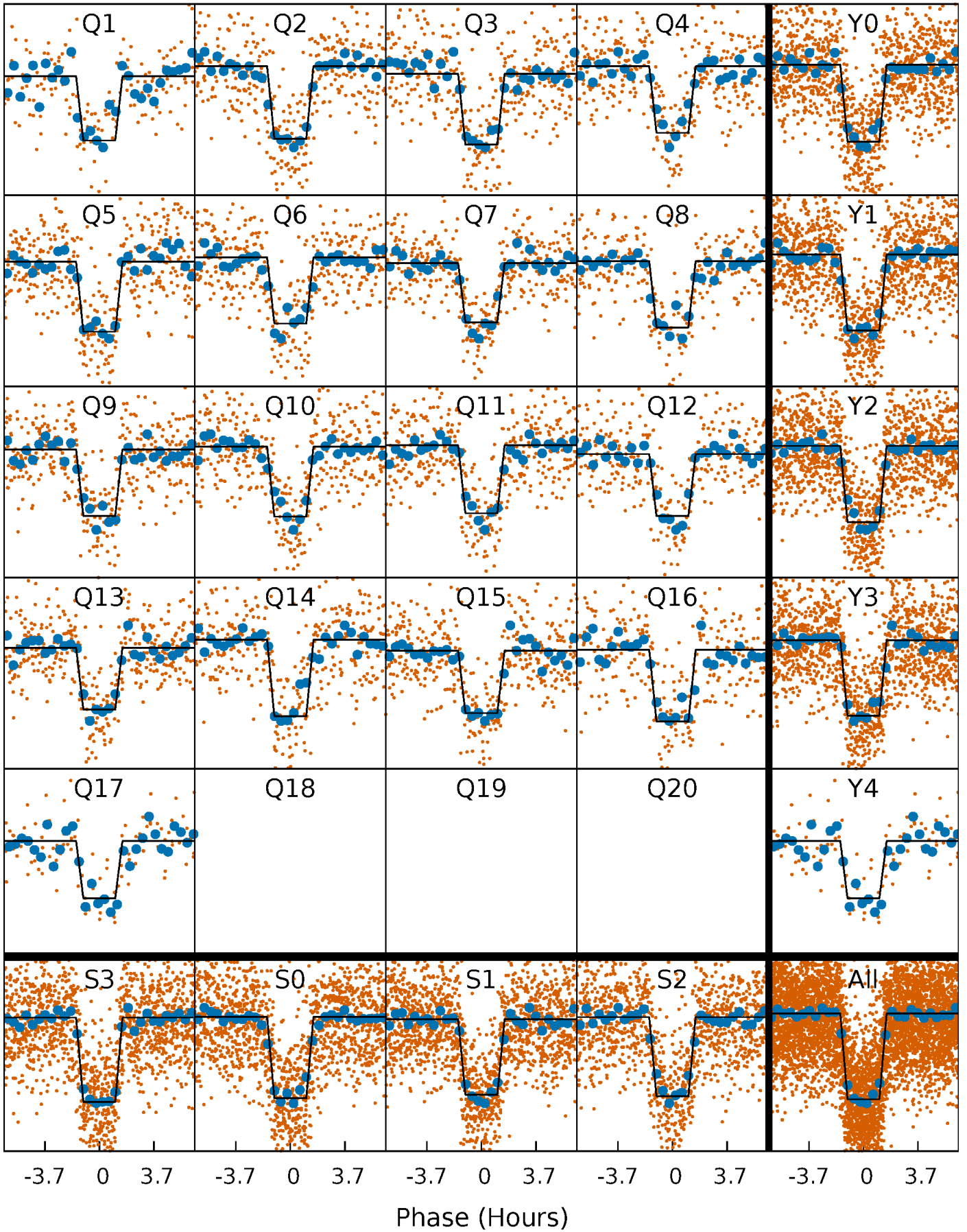
DV Quarter-Phased Transit Curves

TCE 005272878-01 P= 6.365831 Days $T_0=132.941748$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

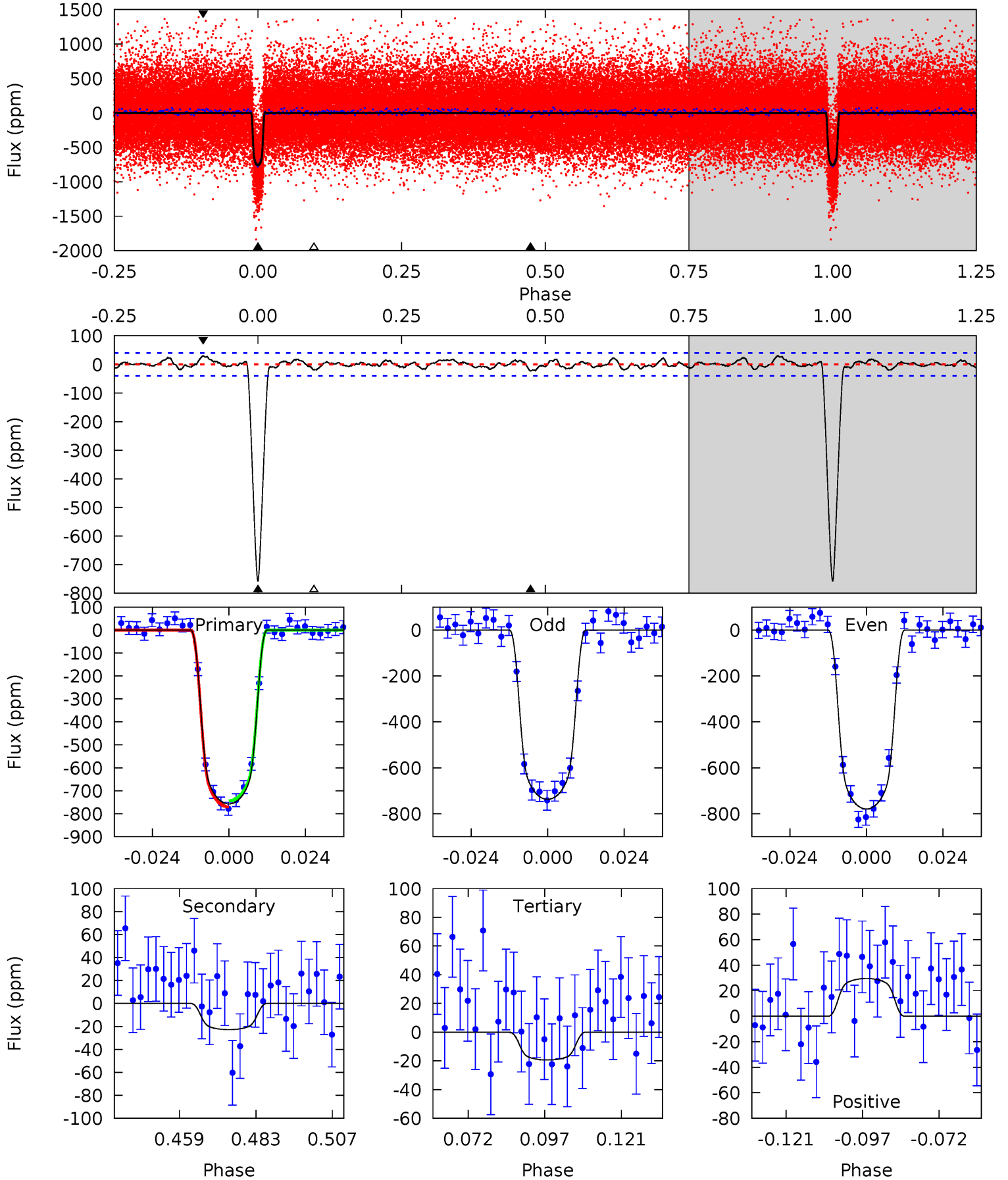
TCE 005272878-01 P= 6.365810 Days $T_0=132.943971$ (BKJD)



DV Model-Shift Uniqueness Test

005272878-01, P = 6.365831 Days, E = 126.575917 Days

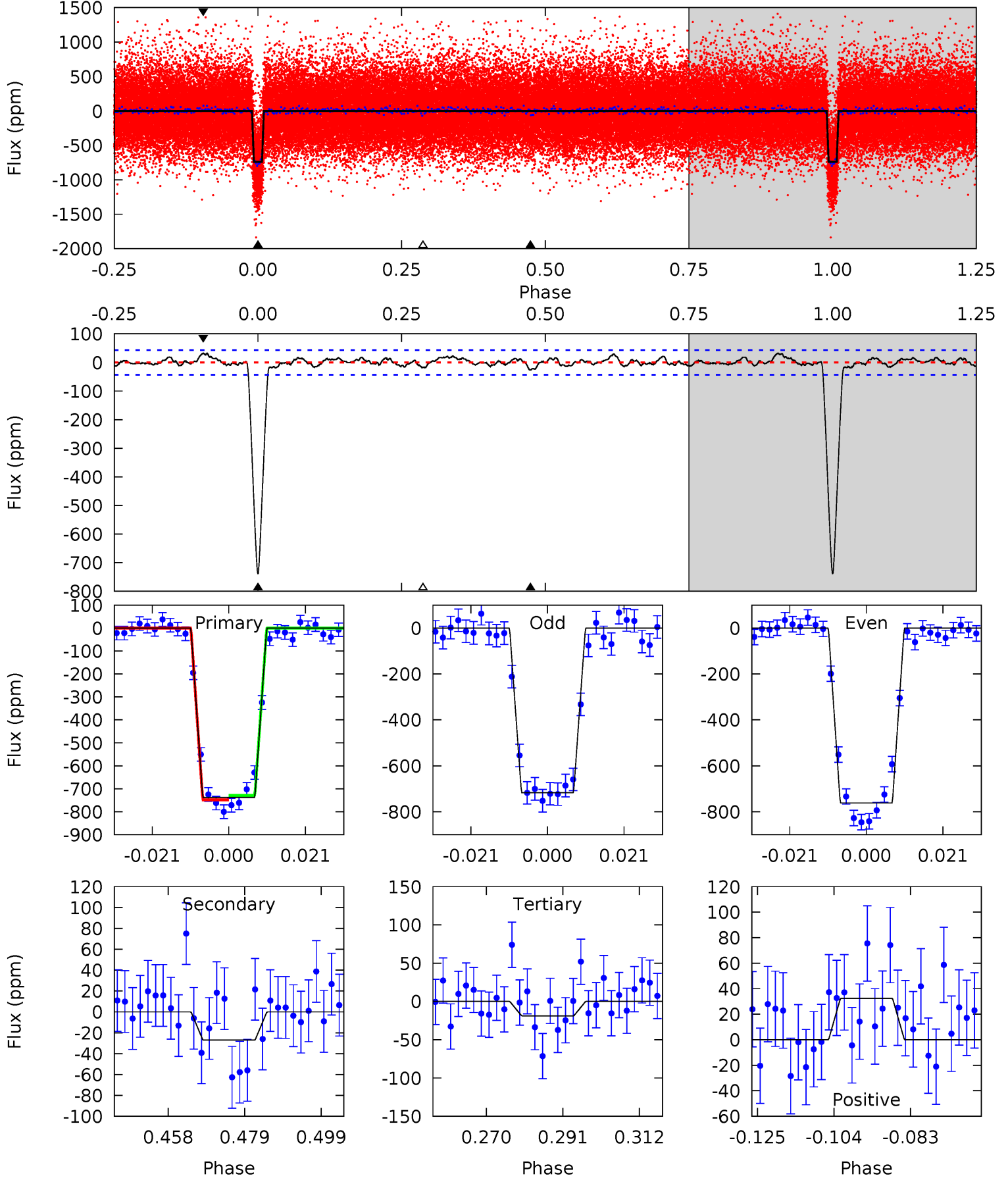
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
91.4	2.75	2.34	3.57	4.85	2.25	1.16	89.0	87.8	0.41	-0.81	2.55	0.98	0.04	1.59



Alt Model-Shift Uniqueness Test

005272878-01, P = 6.365810 Days, E = 126.578161 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
83.2	3.04	2.12	3.64	4.88	2.31	1.13	81.1	79.6	0.93	-0.60	2.52	0.99	0.04	1.08



Stellar Parameters For KIC 005272878

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5776^{+155}_{-155}	$4.554^{+0.042}_{-0.168}$	$-0.180^{+0.300}_{-0.300}$	$0.849^{+0.212}_{-0.071}$	$0.939^{+0.098}_{-0.109}$	$2.161^{+0.466}_{-1.004}$
	+3%/-3%	+1%/-4%	+167%/-167%	+25%/-8%	+10%/-12%	+22%/-46%
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 005272878-01 / KOI 0826.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-23 ± 8	$2.90^{+0.37}_{-0.24}$	1298^{+78}_{-53}	2957^{+147}_{-183}	$6.339^{+2.737}_{-2.409}$
Alt.	-27 ± 9	$2.62^{+0.33}_{-0.23}$	1300^{+78}_{-51}	3114^{+159}_{-178}	$8.912^{+3.820}_{-3.069}$

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

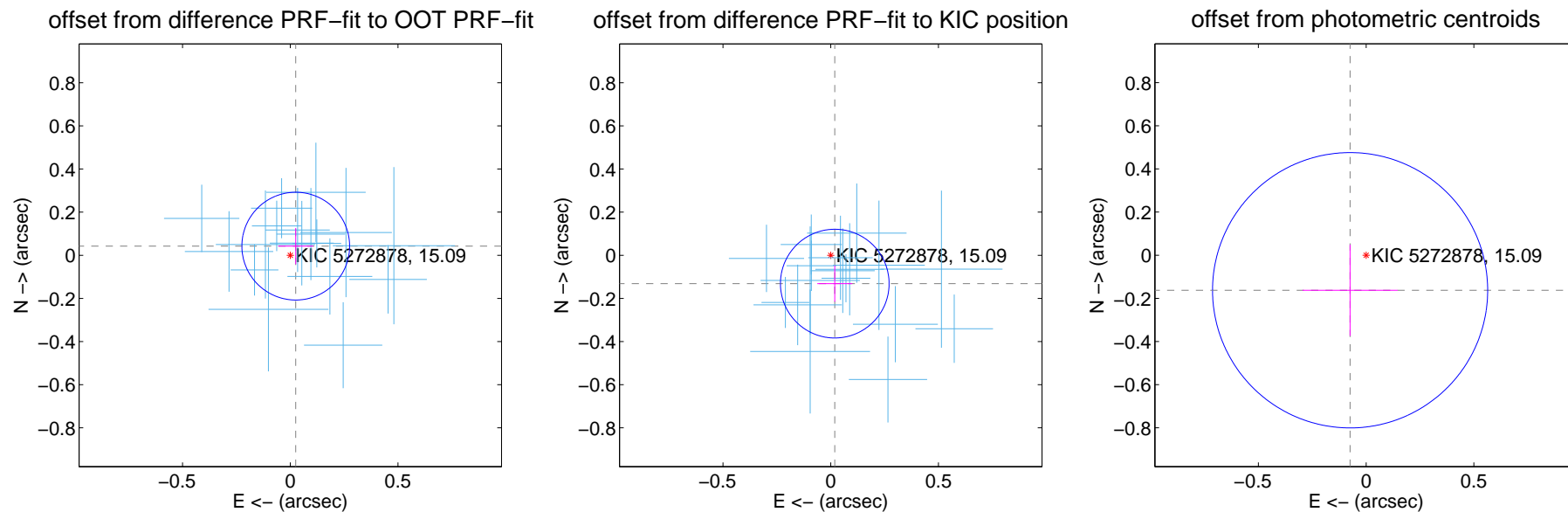
DV Centroid Data

Supplemental centroid analysis for 005272878-01. Kepler magnitude: 15.09. Transit SNR 67.39

There are 17 quarters with good PRF difference image offsets

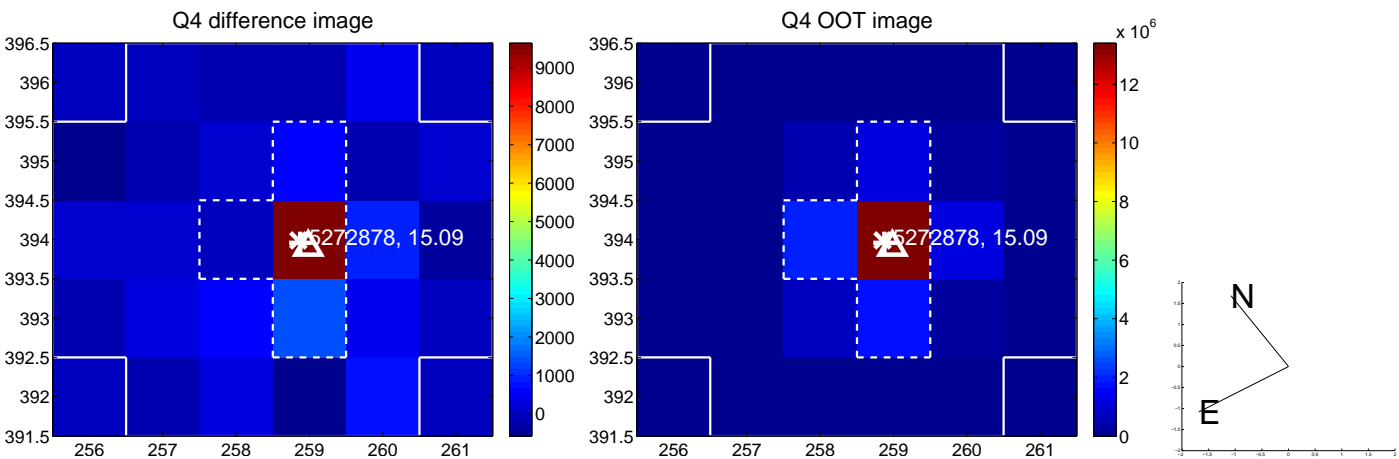
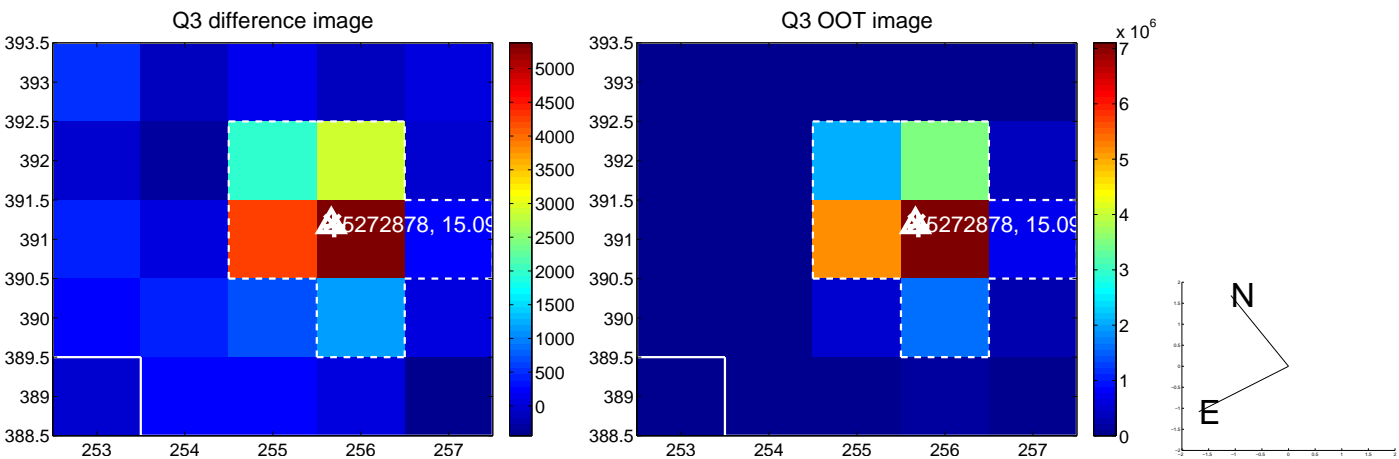
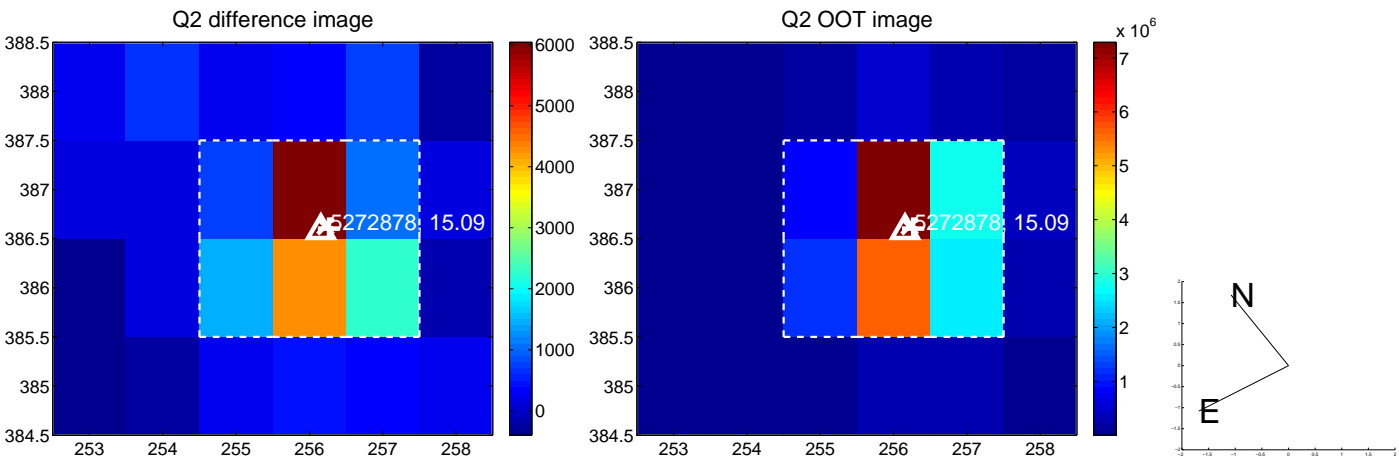
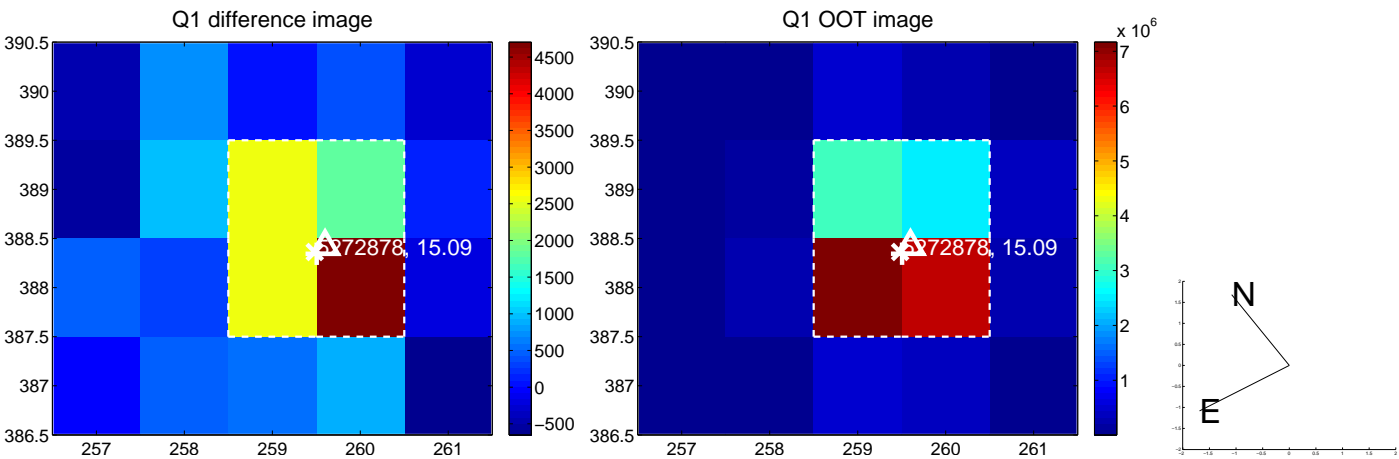
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.049 ± 0.083	0.59	-0.025 ± 0.081	0.042 ± 0.084
PRF-fit source offset from KIC position	0.133 ± 0.084	1.58	-0.019 ± 0.081	-0.131 ± 0.084
photometric centroid source offset	0.18 ± 0.21	0.84	0.07 ± 0.22	-0.16 ± 0.21

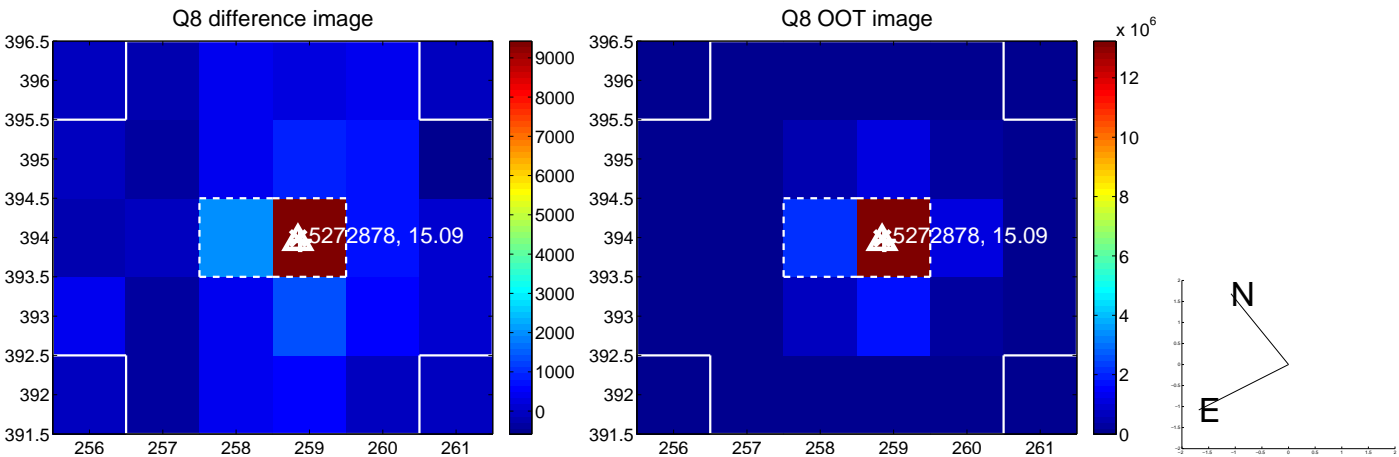
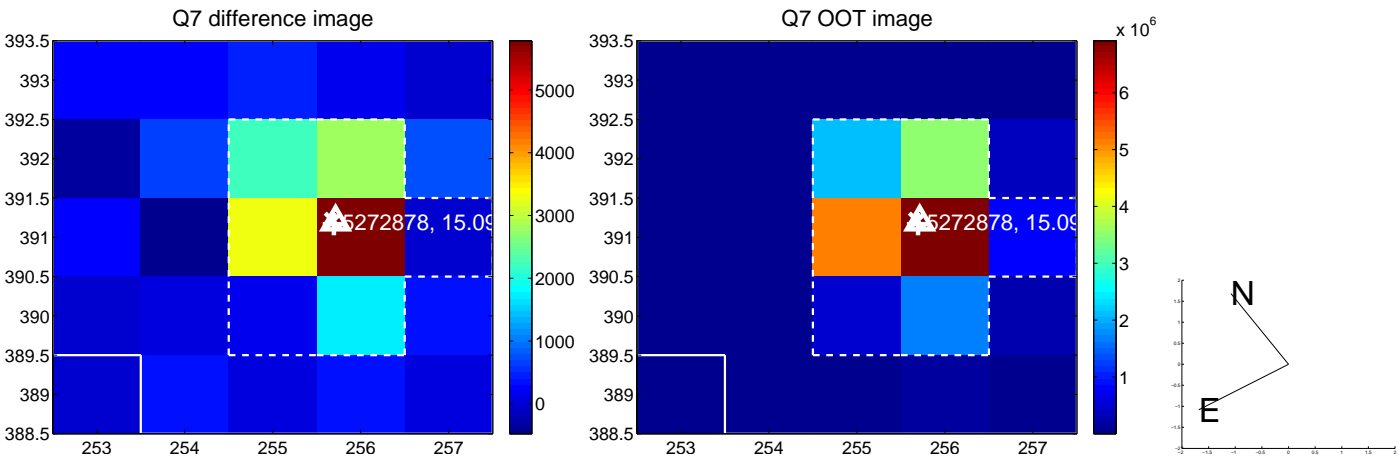
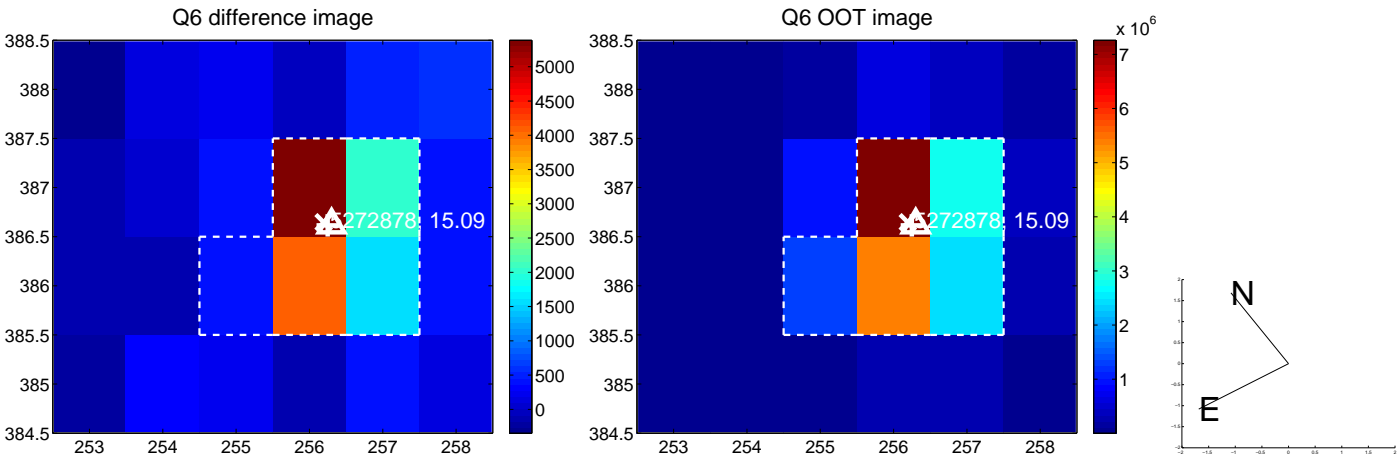
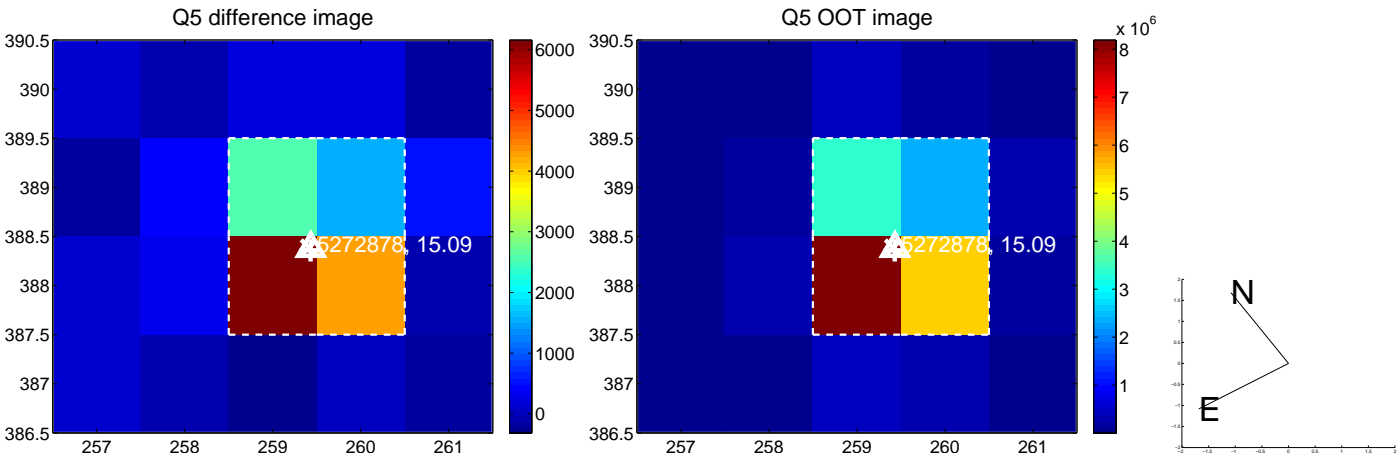


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

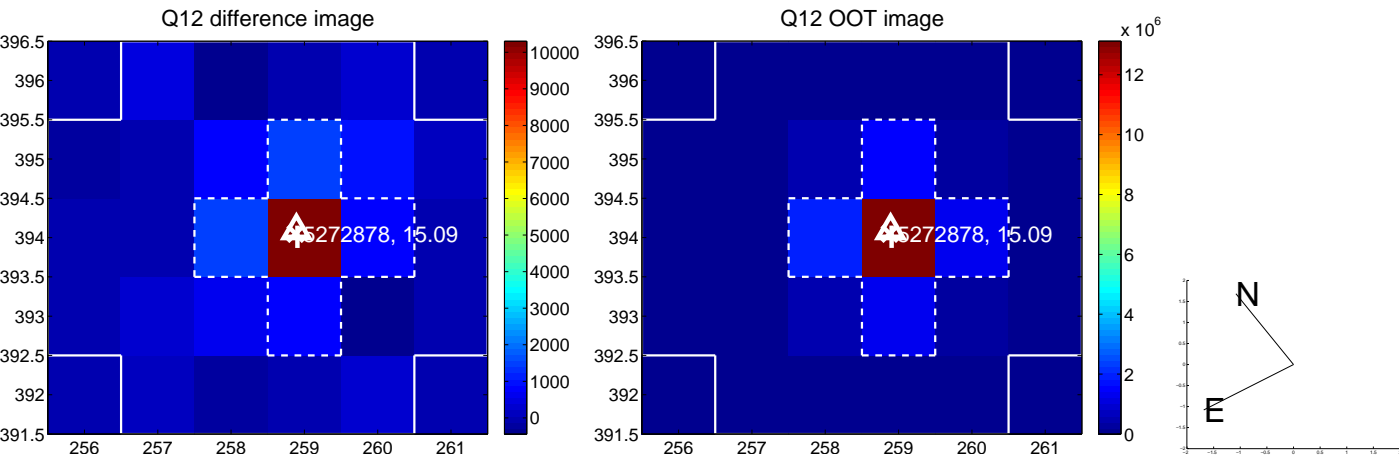
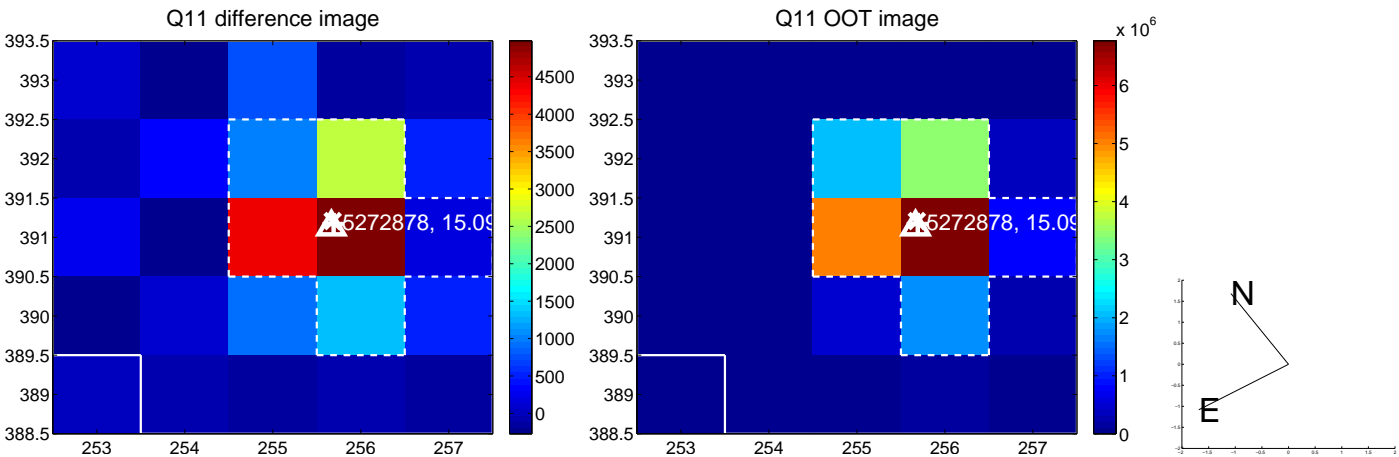
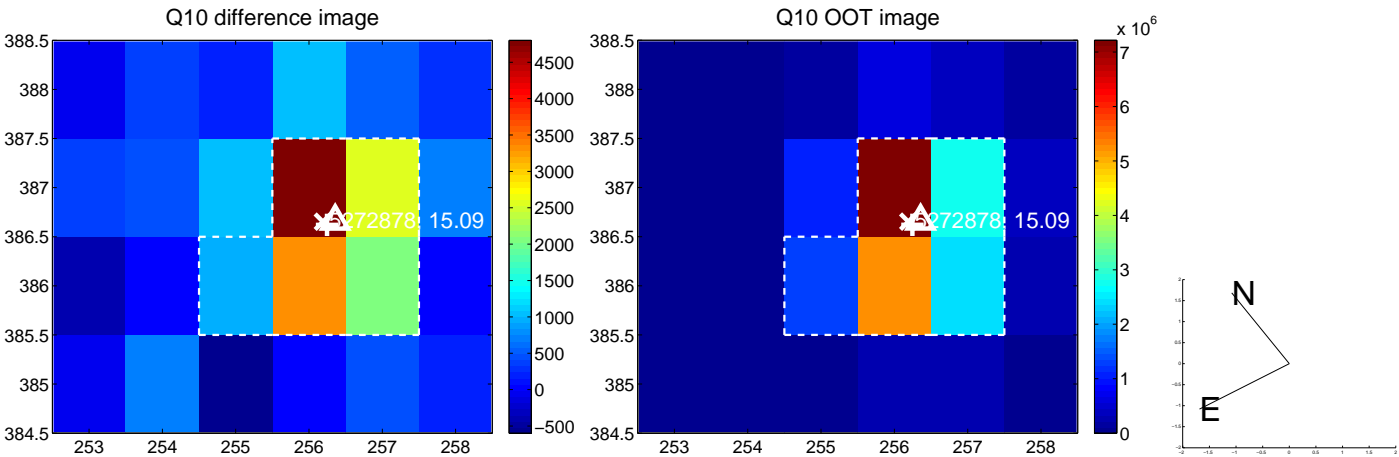
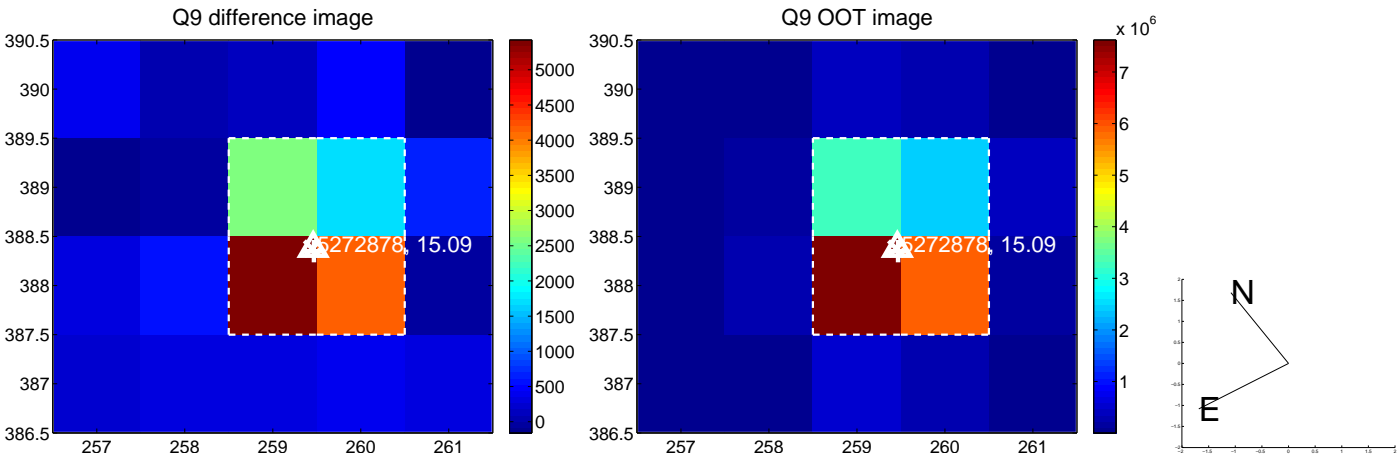
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



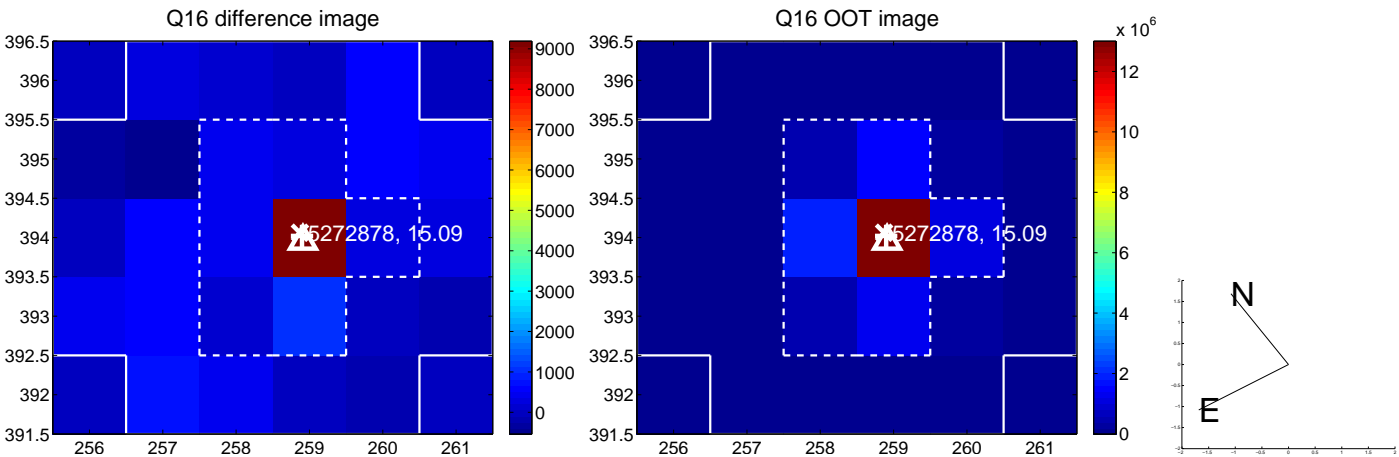
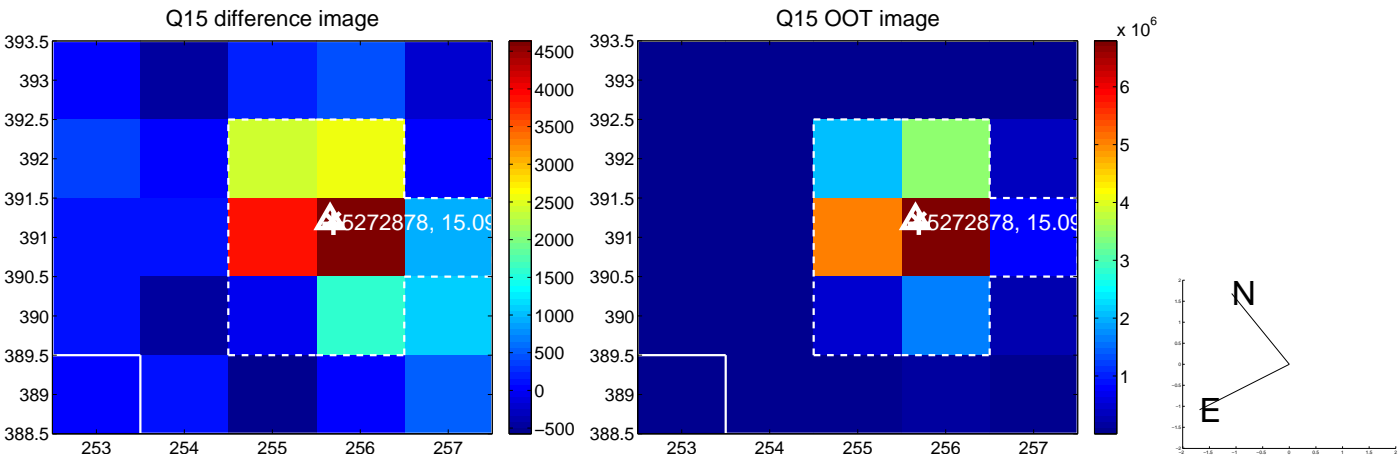
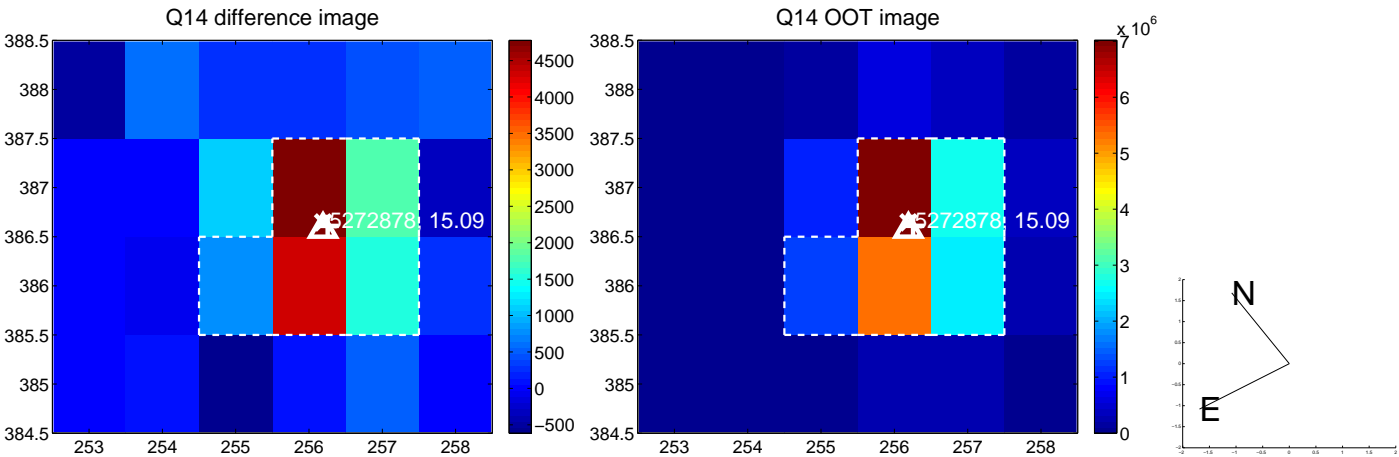
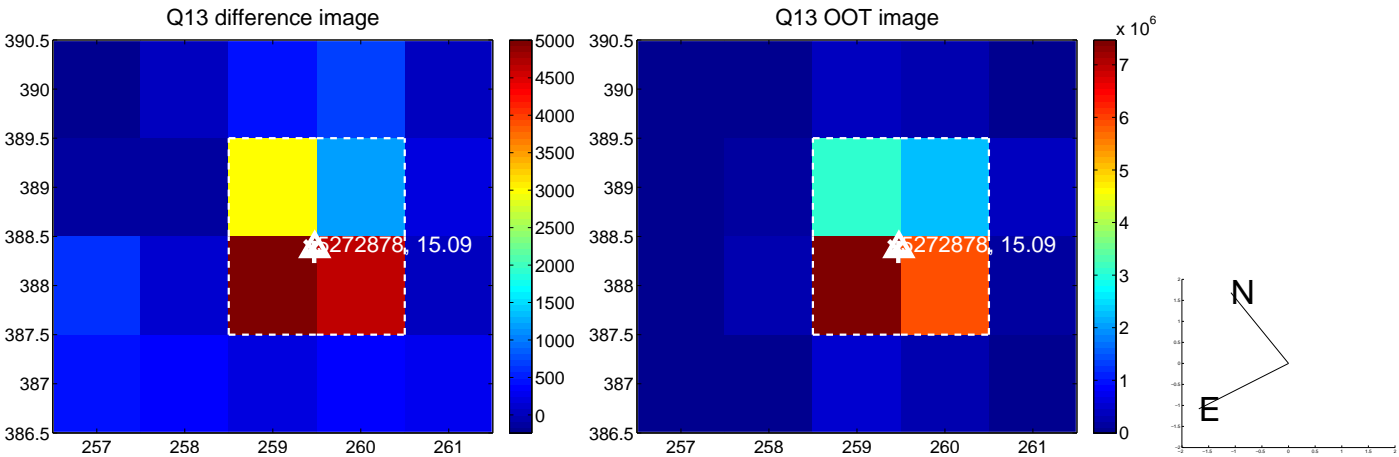
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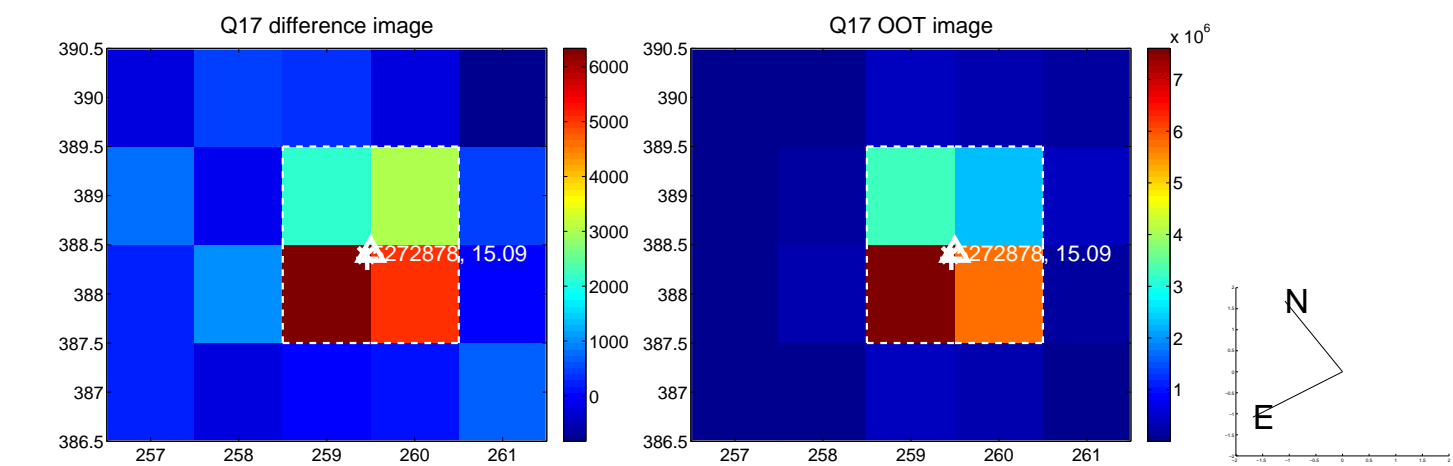
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



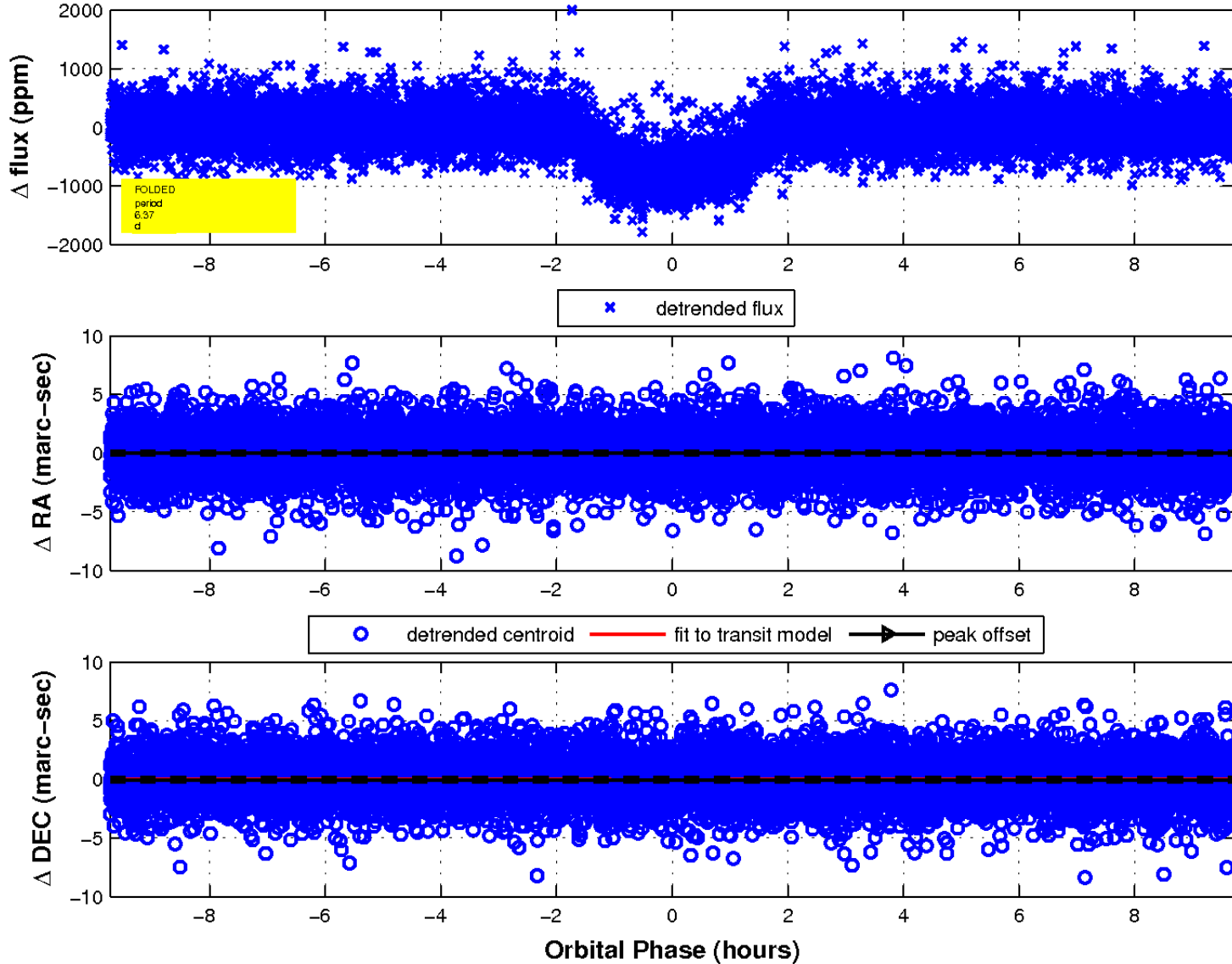
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

