

KIC 010920086

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})
010920086-01	OBS	5841.01	3.213219	132.138111	193.4	0.531	22.6	37.1	1.51	6712	2.34	2024.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010920086-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL

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

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

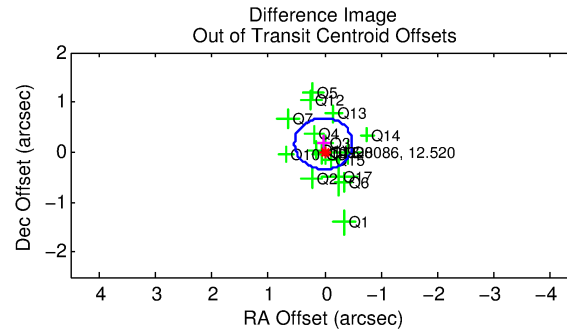
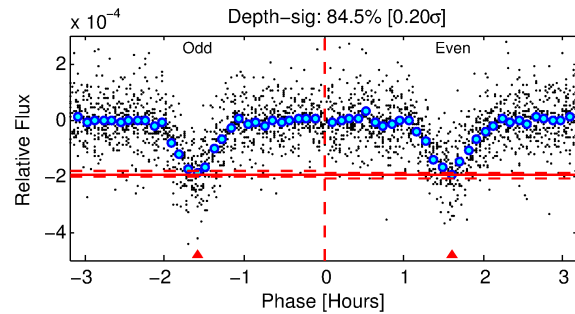
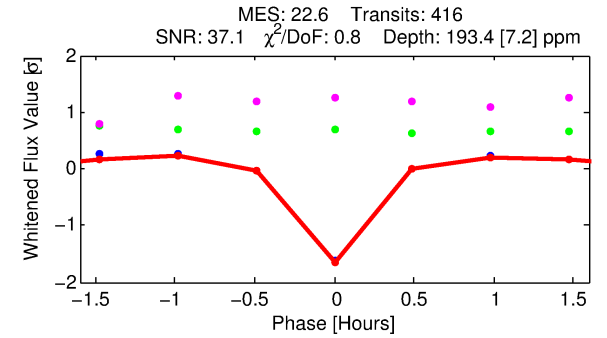
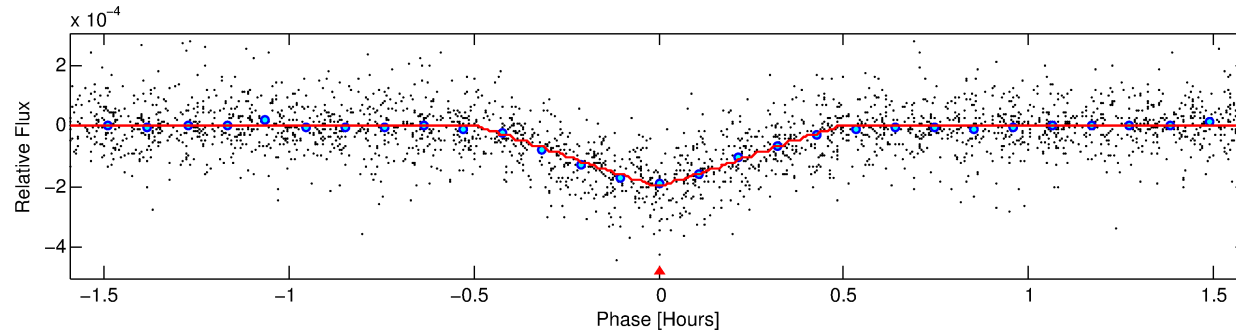
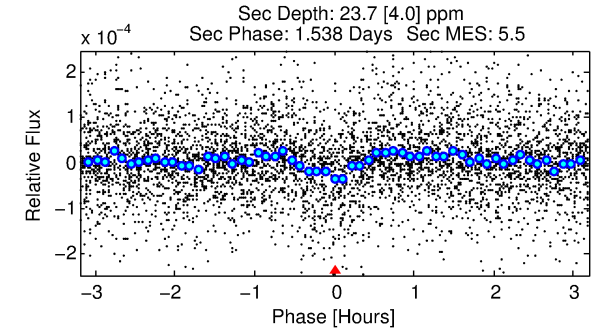
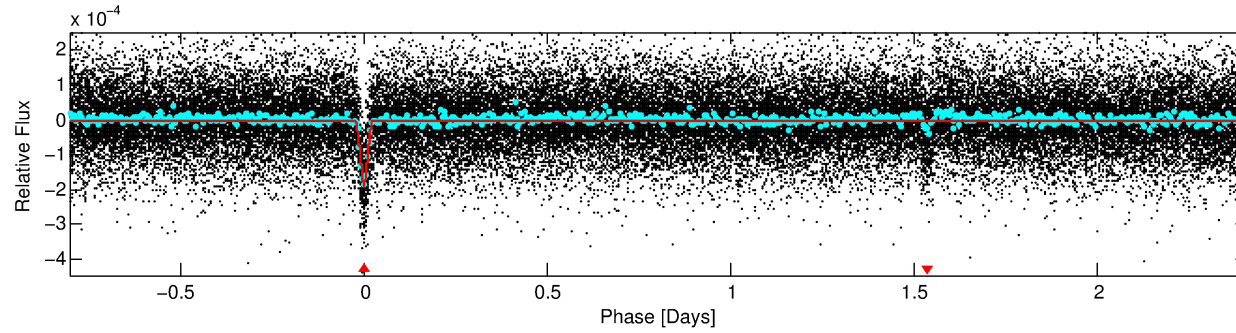
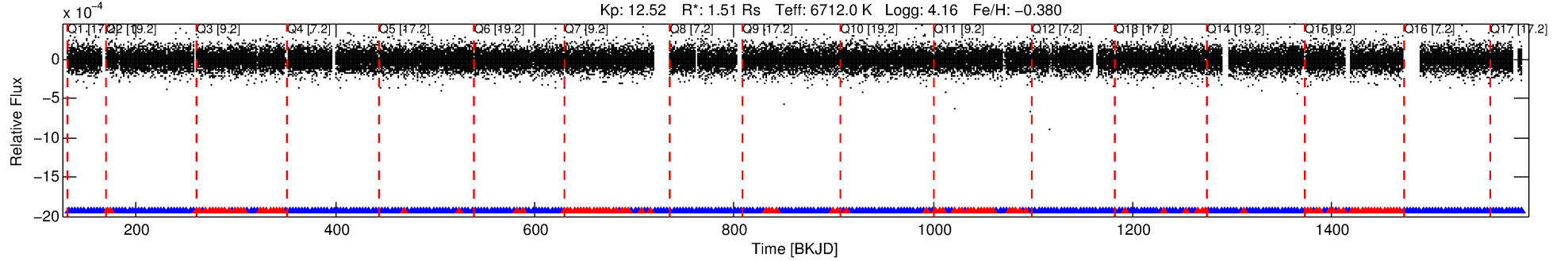
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010920086-01

No Significant Match Found

DV One-Page Summary

KIC: 10920086 Candidate: 1 of 1 Period: 3.213 d
KOI: K05841 Corr: No Ephemeris Match



DV Fit Results:

Period = 3.21322 [0.00000] d
Epoch = 132.1381 [0.0003] BKJD
Rp/R* = 0.0142 [0.0015]
a/R* = 33.91 [20.38]
b = 0.70 [0.44]
Seff = 2024.30 [682.04]
Teq = 1710 [144] K
Rp = 2.34 [0.55] Re
a = 0.0453 [0.0089] AU
Ag = 4.90 [2.02] [1.93σ]
Teffp = 3935 [297] K [6.73σ]

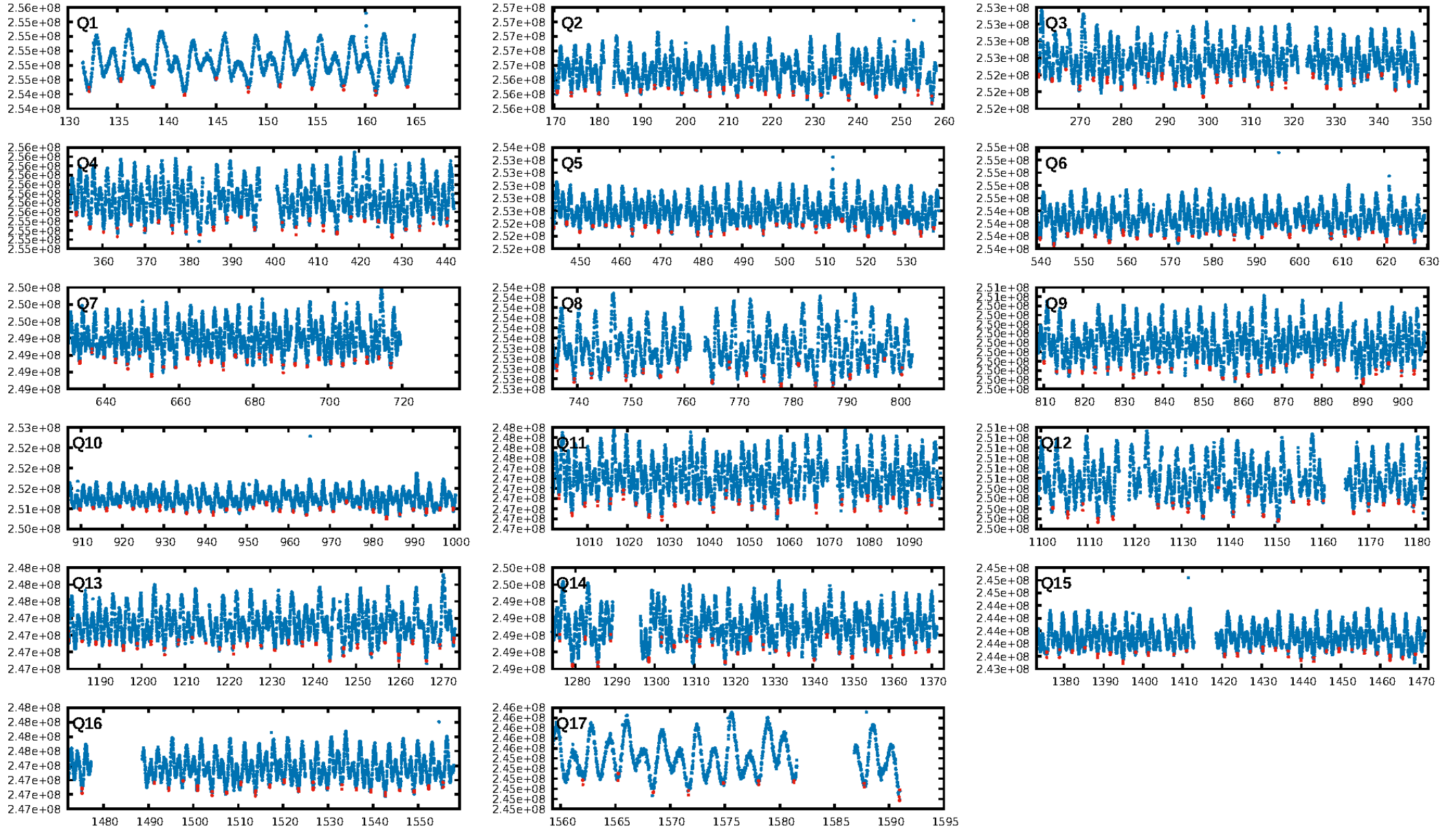
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.45e-108
RollingBand-fgt: 0.72 [287/396]
GhostDiagnostic-chr: 3.047
Centroid-sig: 0.2%
Centroid-so: 0.469 arcsec [2.29σ]
OotOffset-rm: 0.172 arcsec [1.01σ]
KicOffset-rm: 0.183 arcsec [1.15σ]
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]

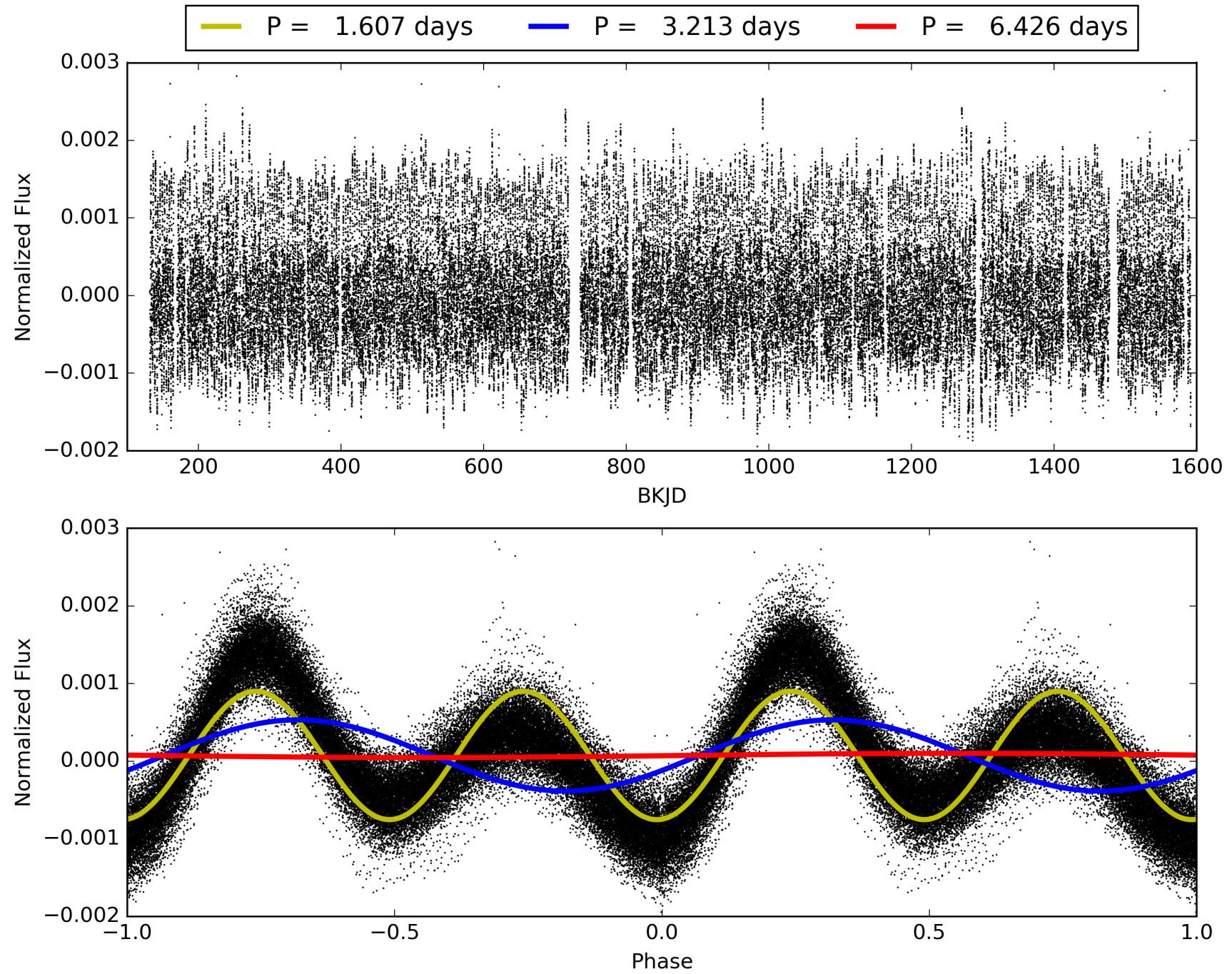
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:13:51 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 010920086-01, PDC Light Curves

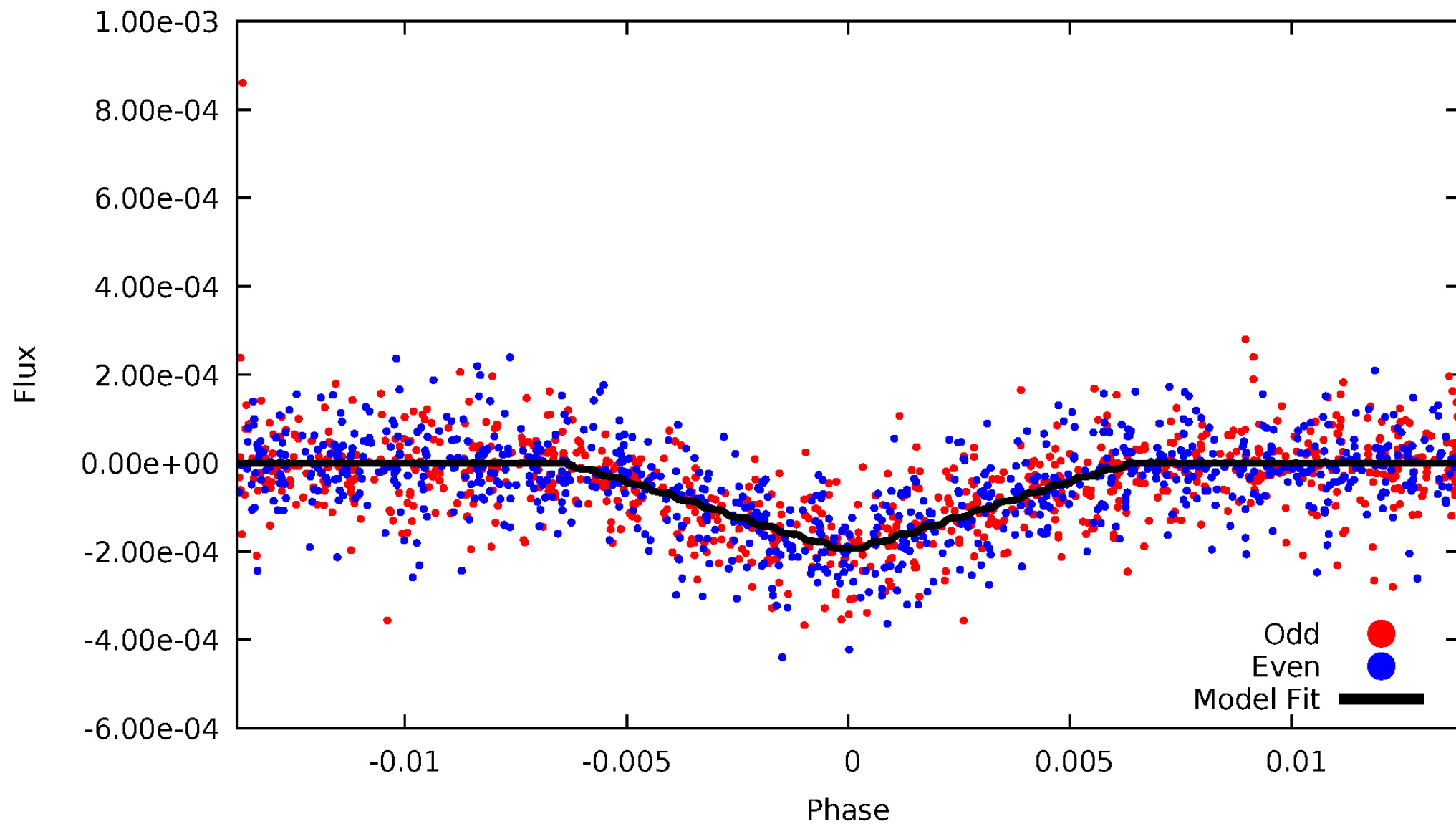


TCE 010920086-01



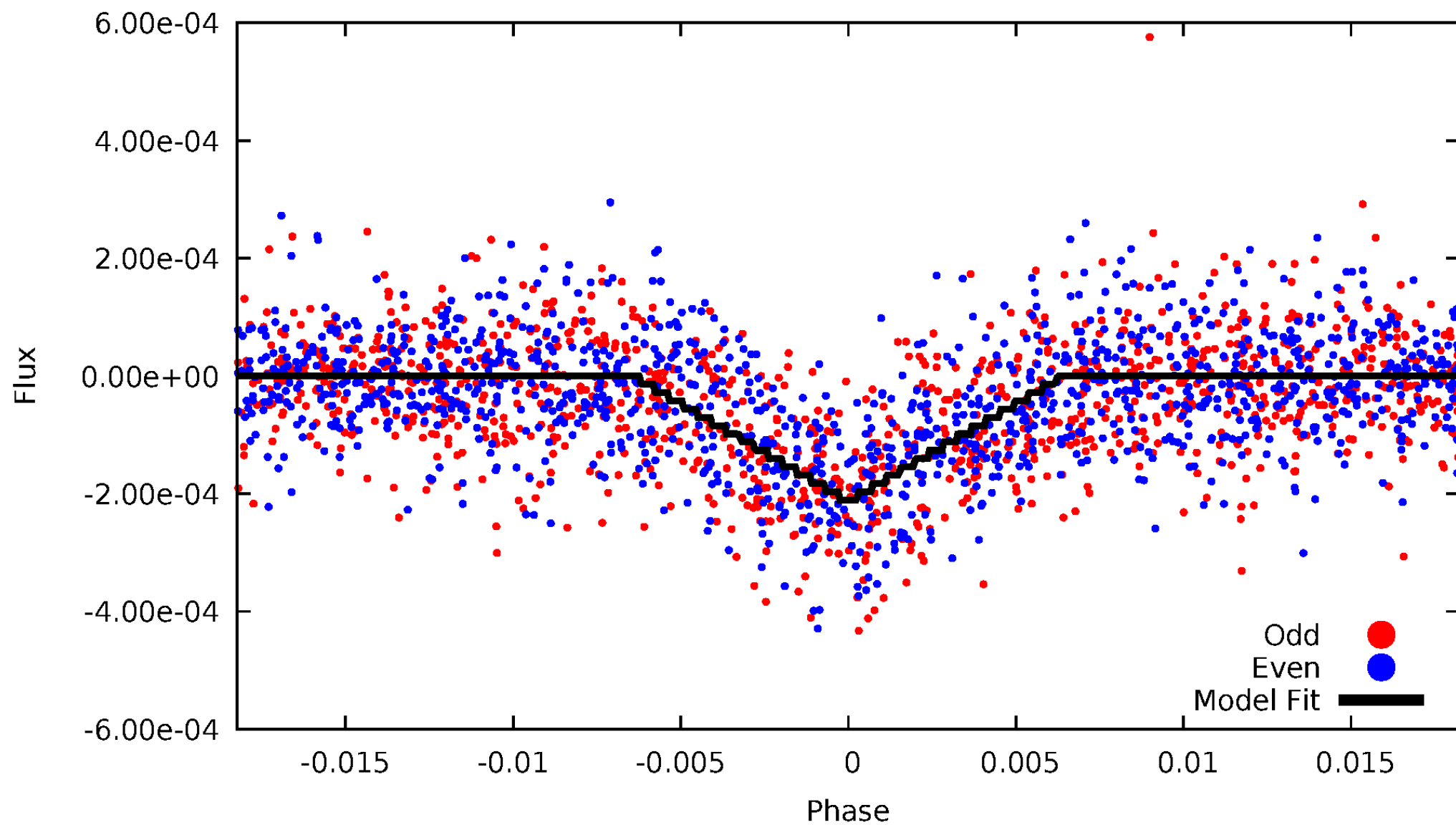
DV Odd/Even

TCE 010920086-01



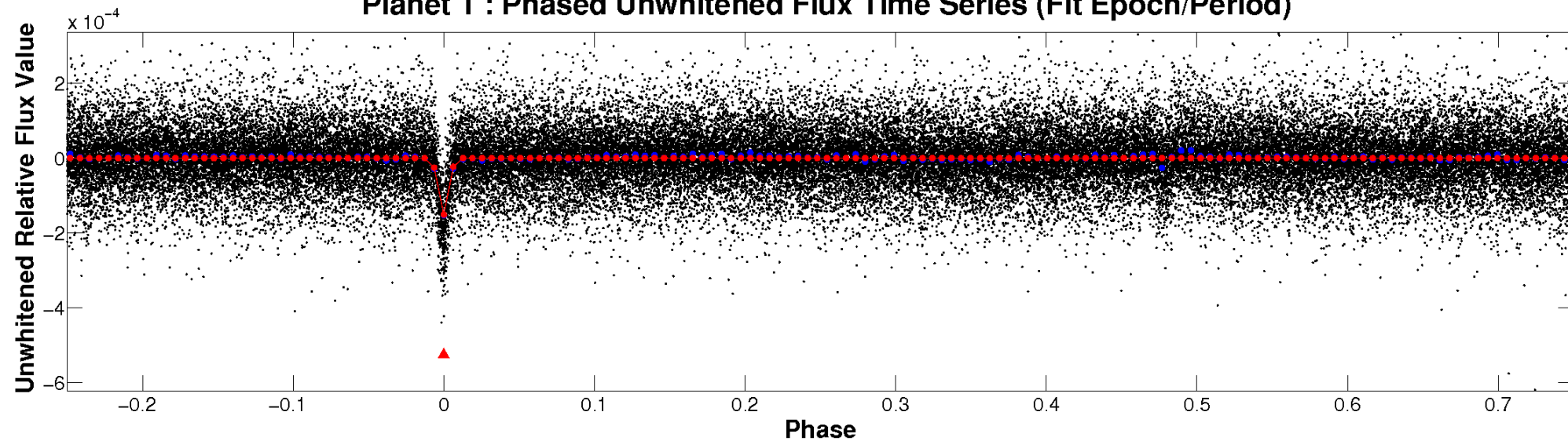
ALT Odd/Even

TCE 010920086-01

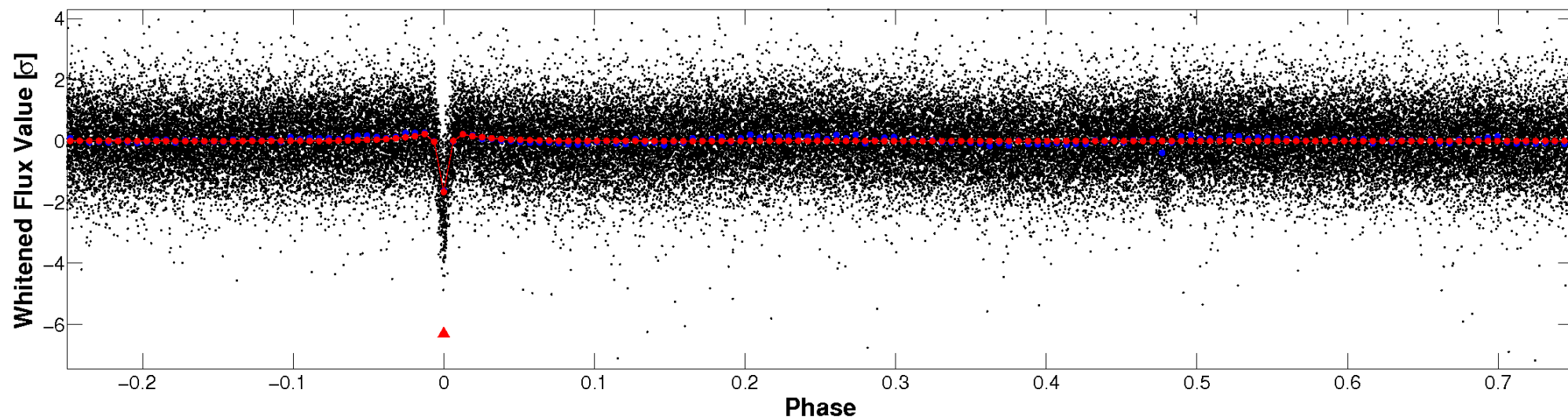


Non-Whitened Vs. Whitened Light Curve

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

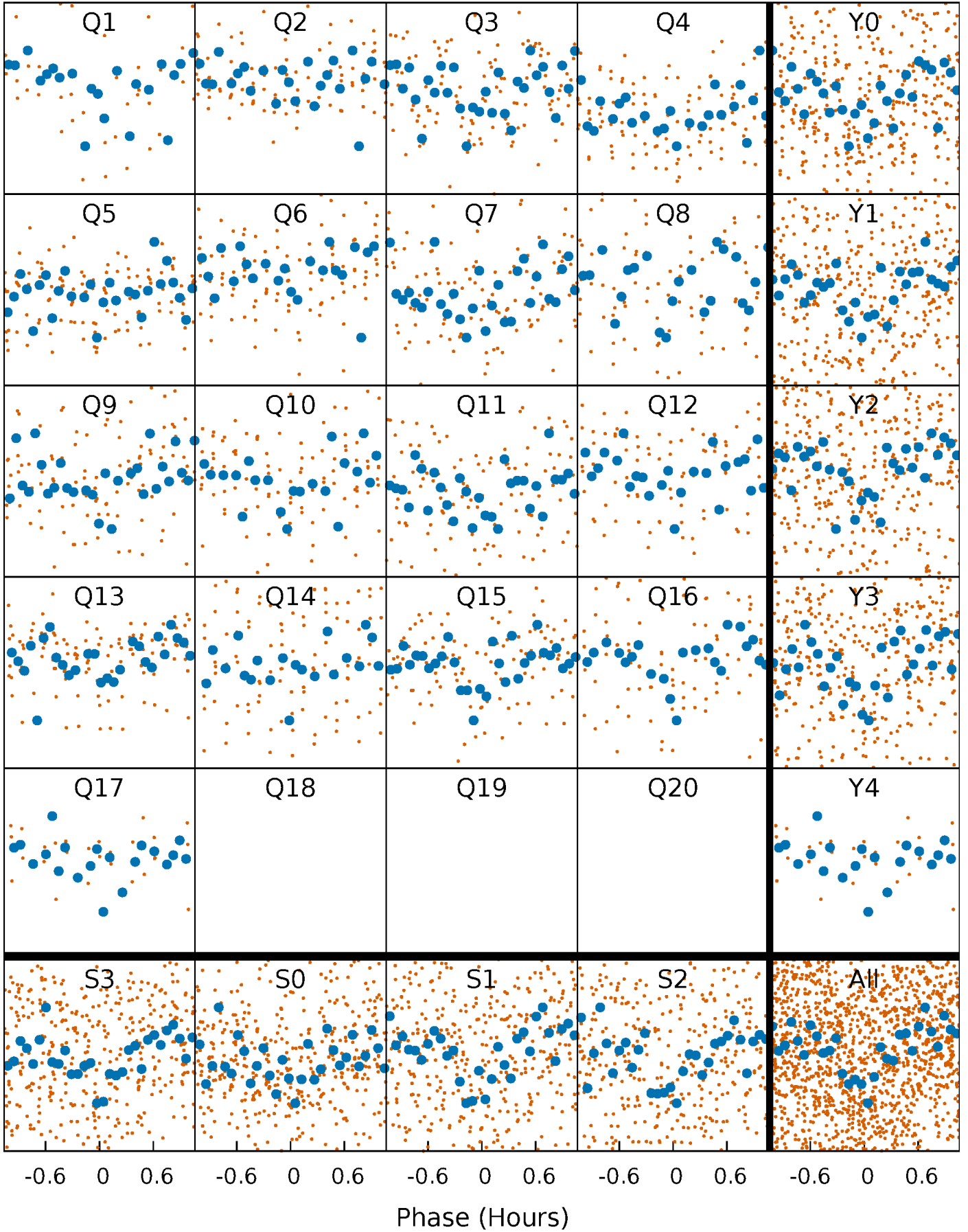


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



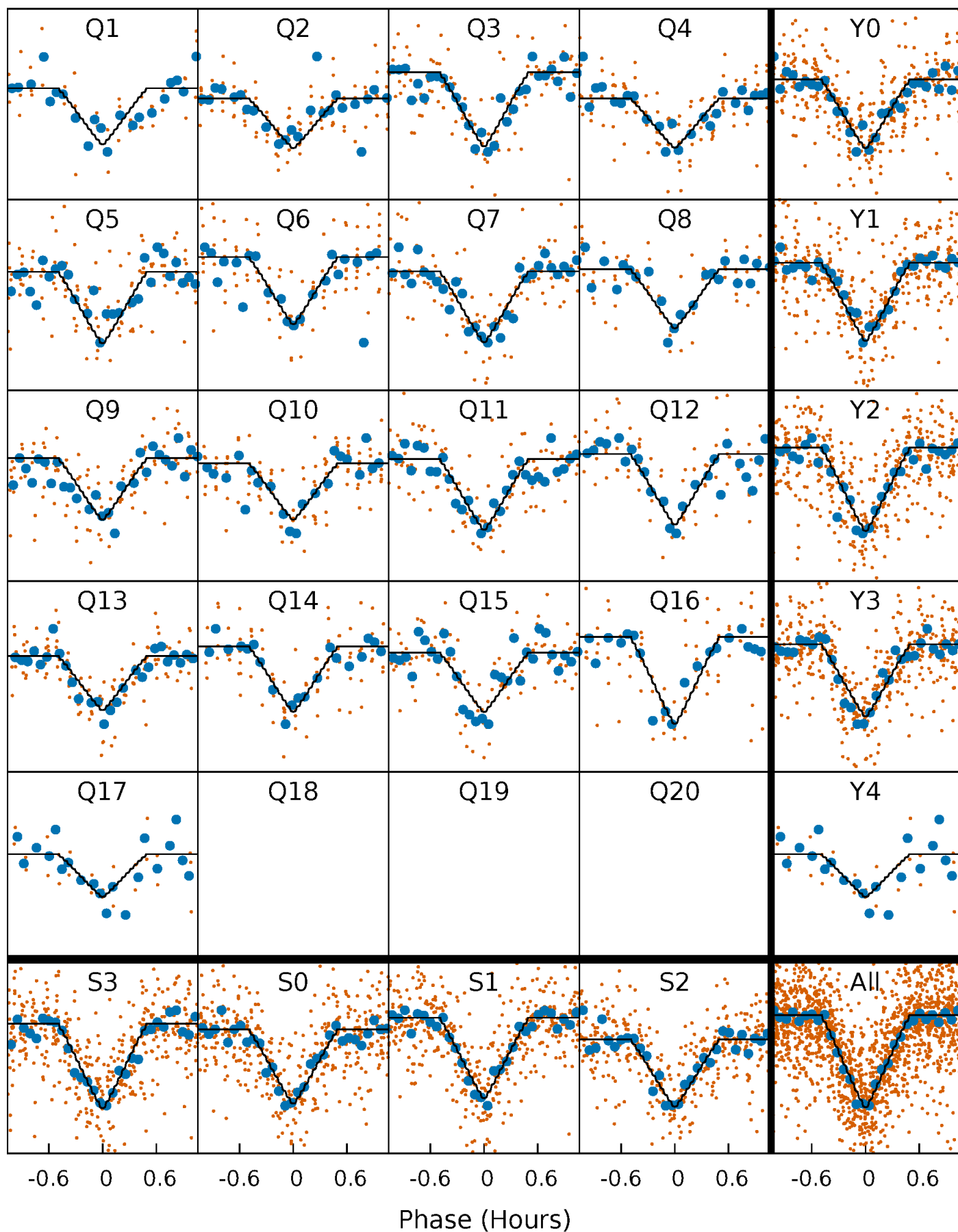
PDC Quarter-Phased Transit Curves

TCE 010920086-01 P= 3.213219 Days $T_0=132.138111$ (BKJD)



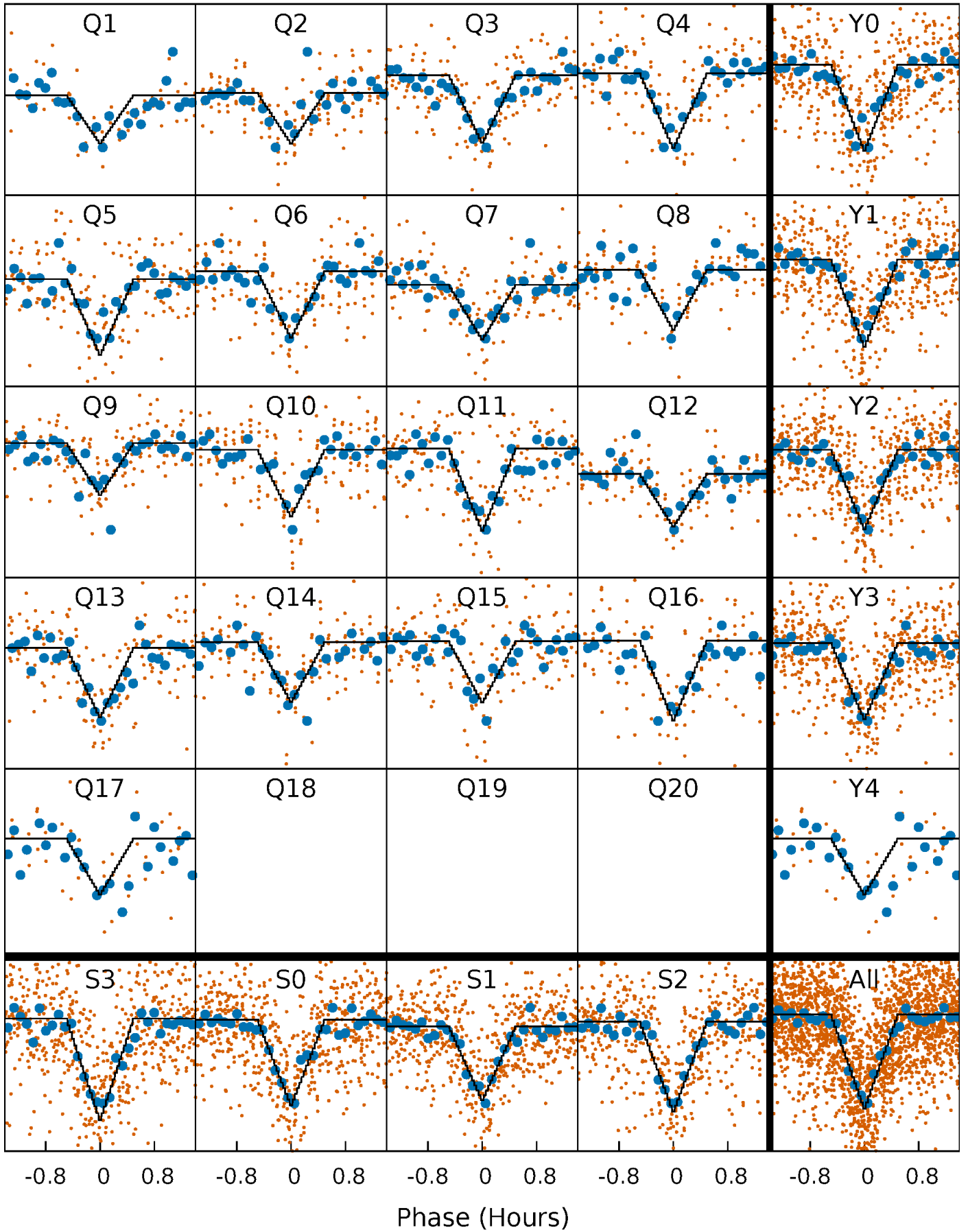
DV Quarter-Phased Transit Curves

TCE 010920086-01 P= 3.213219 Days $T_0=132.138111$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

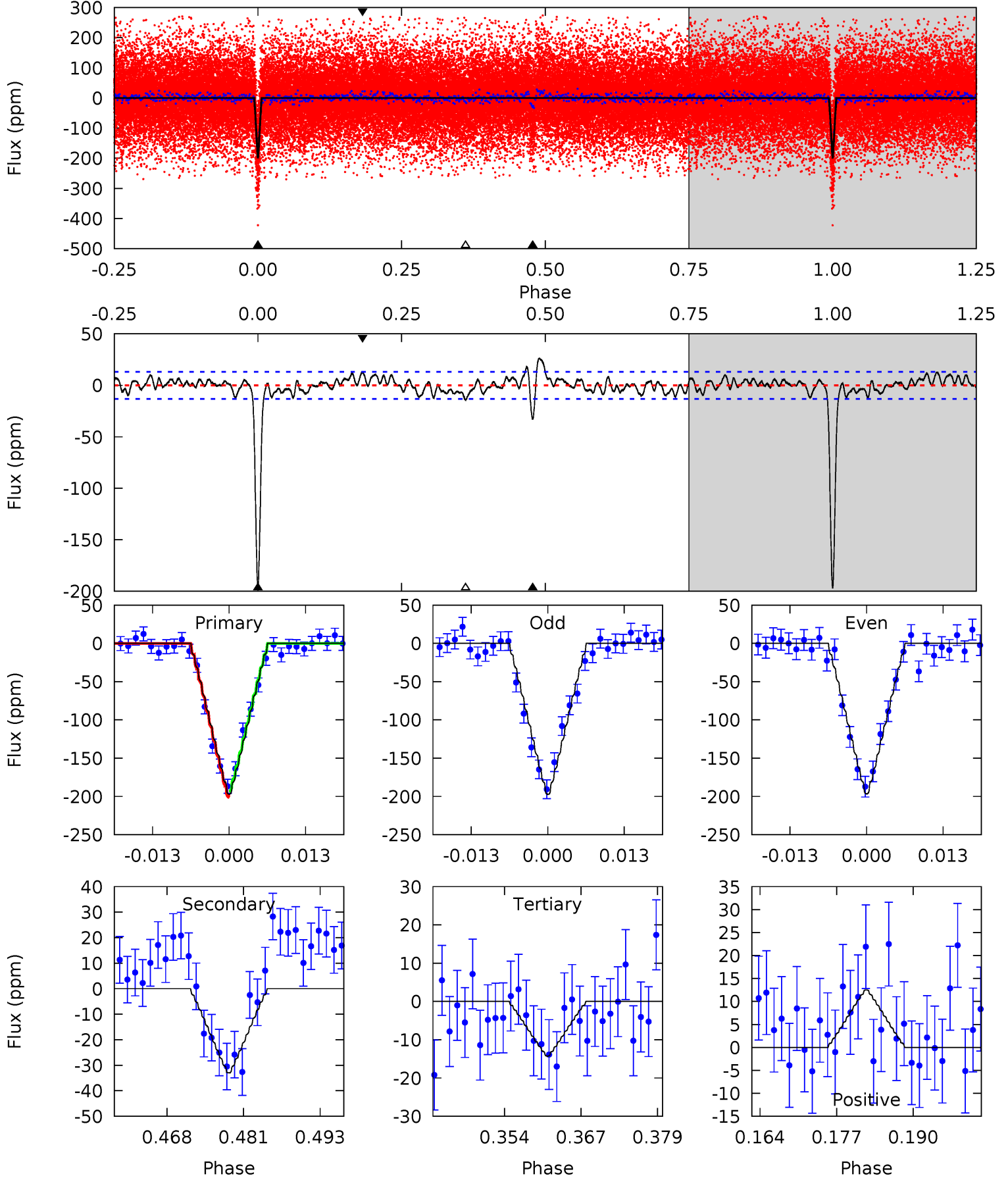
TCE 010920086-01 P= 3.213212 Days $T_0=132.139186$ (BKJD)



DV Model-Shift Uniqueness Test

010920086-01, P = 3.213219 Days, E = 128.924892 Days

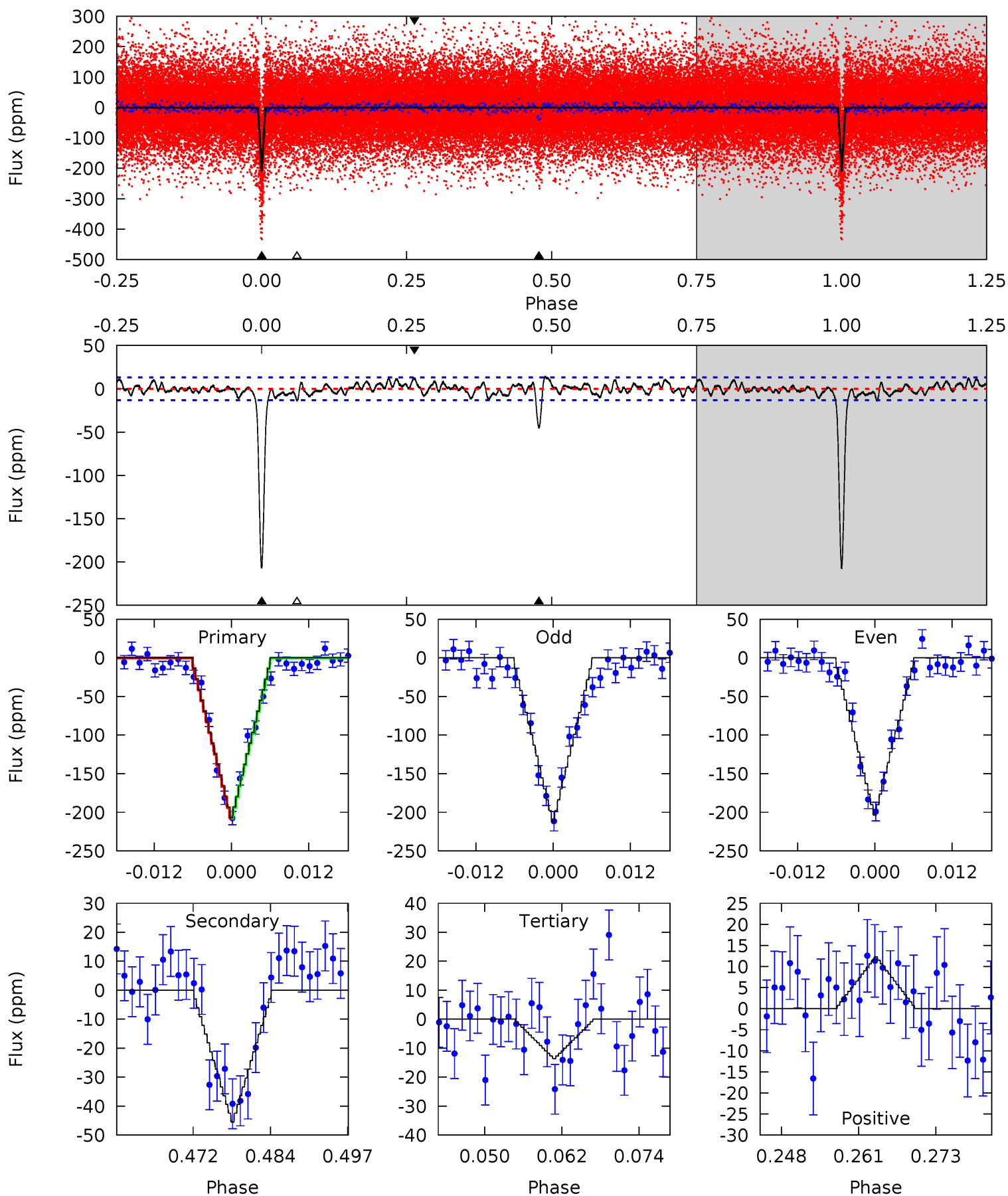
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
74.6	12.5	5.41	4.75	4.98	2.49	2.15	69.2	69.9	7.09	7.75	0.16	1.01	0.12	1.48



Alt Model-Shift Uniqueness Test

010920086-01, P = 3.213212 Days, E = 128.925974 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
78.5	17.2	5.17	4.66	4.98	2.50	1.85	73.3	73.8	12.1	12.6	1.61	1.04	0.06	0.04



Stellar Parameters For KIC 010920086

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6712^{+162}_{-223}	$4.159^{+0.180}_{-0.135}$	$-0.380^{+0.250}_{-0.300}$	$1.513^{+0.317}_{-0.317}$	$1.206^{+0.158}_{-0.175}$	$0.491^{+0.415}_{-0.192}$
	+2%/-3%	+4%/-3%	+66%/-79%	+21%/-21%	+13%/-15%	+85%/-39%
Source	PHO1	FLK73	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 010920086-01 / KOI 5841.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-33 ± 3	$2.31^{+0.37}_{-0.36}$	2365^{+149}_{-143}	4419^{+224}_{-218}	$7.021^{+2.786}_{-1.806}$
Alt.	-45 ± 3	$2.35^{+0.42}_{-0.37}$	2376^{+137}_{-167}	4670^{+244}_{-228}	$9.139^{+3.975}_{-2.349}$

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

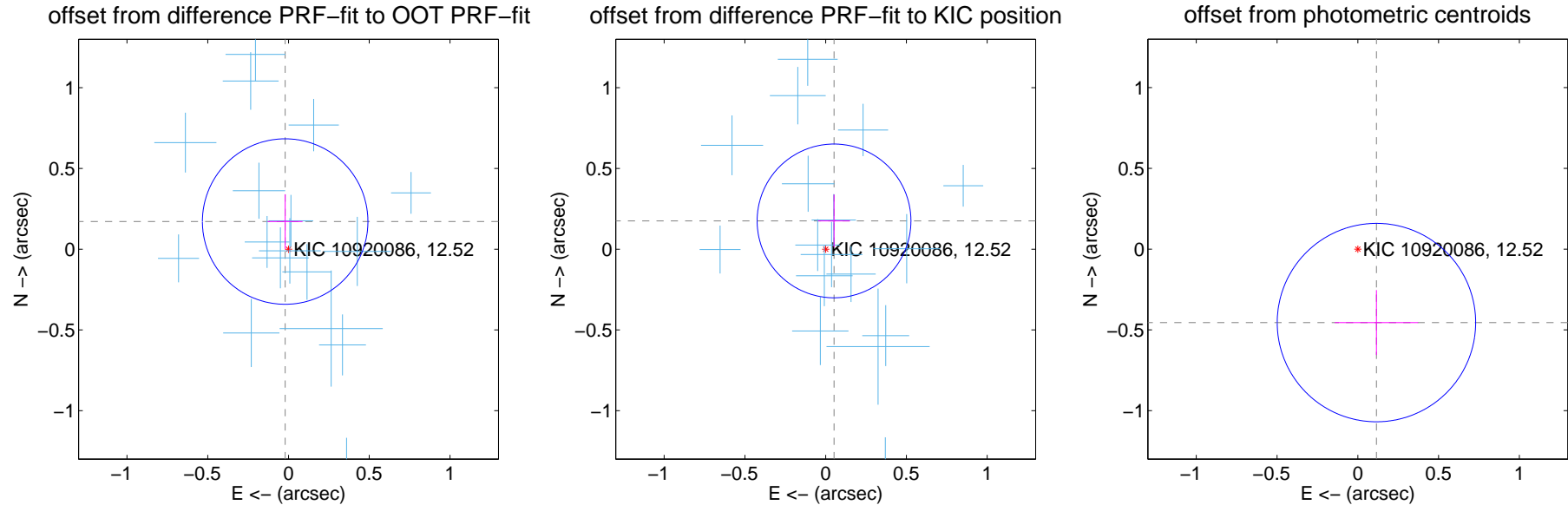
DV Centroid Data

Supplemental centroid analysis for 010920086-01. Kepler magnitude: 12.52. Transit SNR 37.14

There are 17 quarters with good PRF difference image offsets

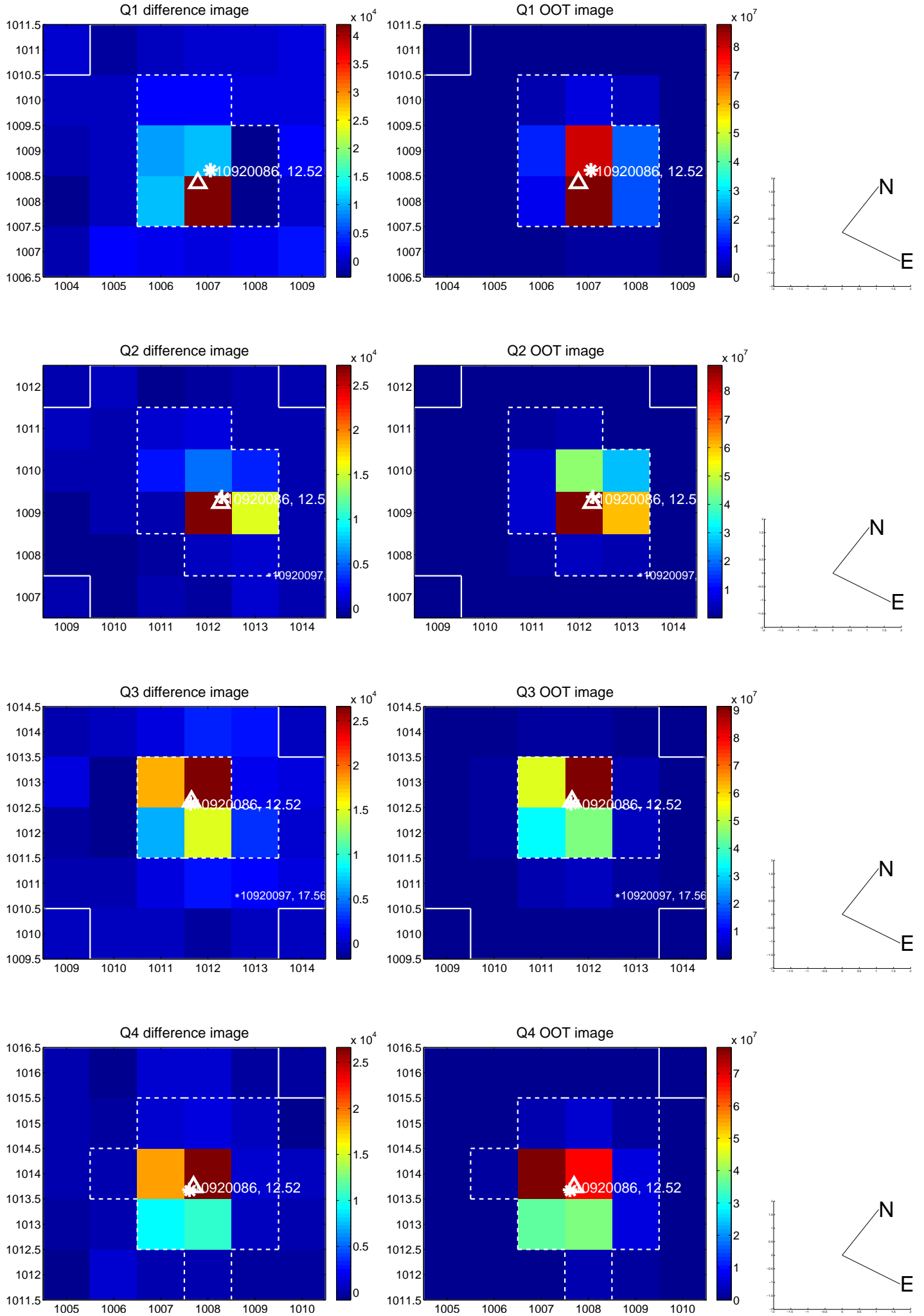
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.172 ± 0.171	1.01	0.021 ± 0.108	0.171 ± 0.169
PRF-fit source offset from KIC position	0.183 ± 0.159	1.15	-0.052 ± 0.099	0.175 ± 0.163
photometric centroid source offset	0.47 ± 0.20	2.29	-0.12 ± 0.26	-0.45 ± 0.20

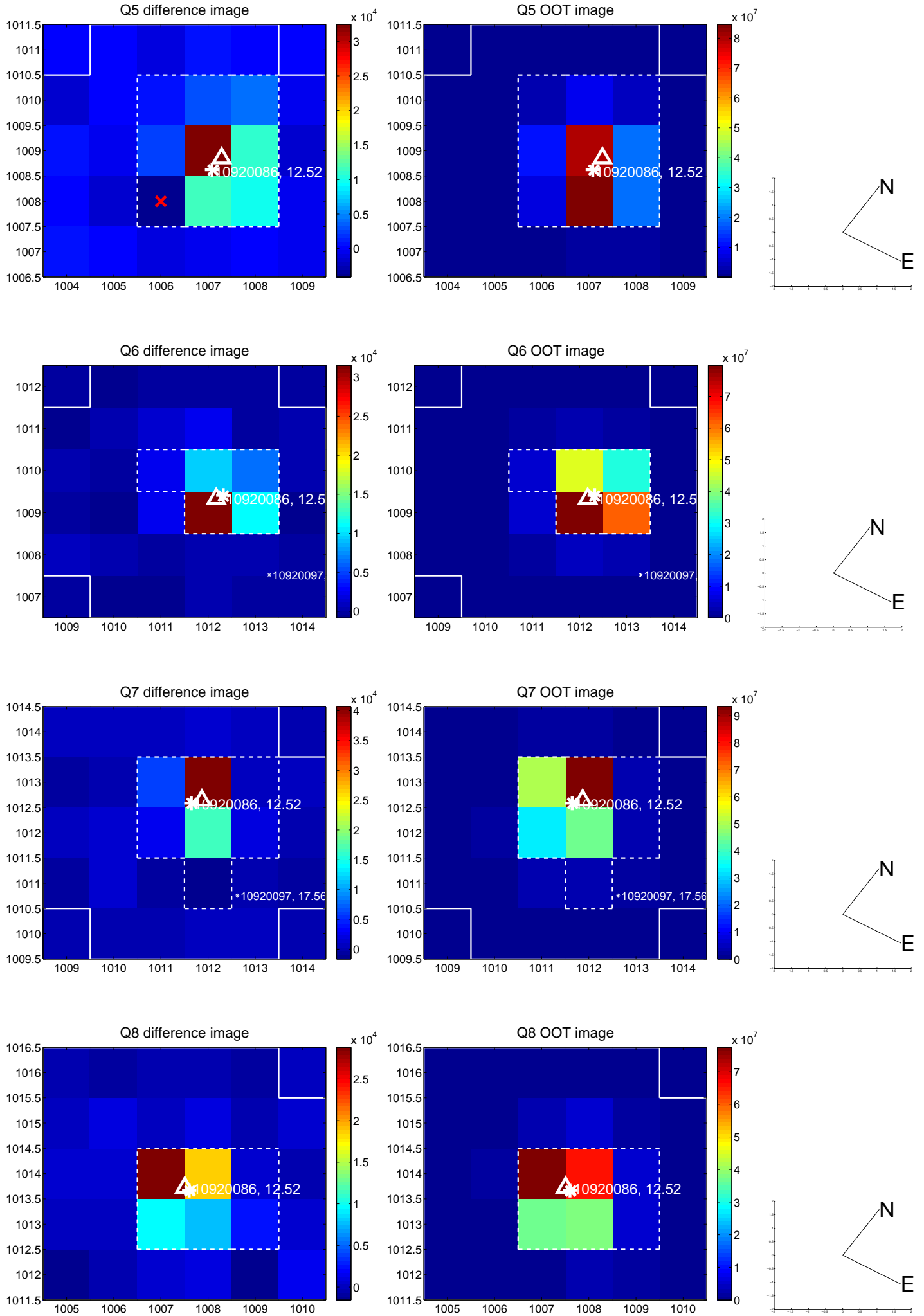


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

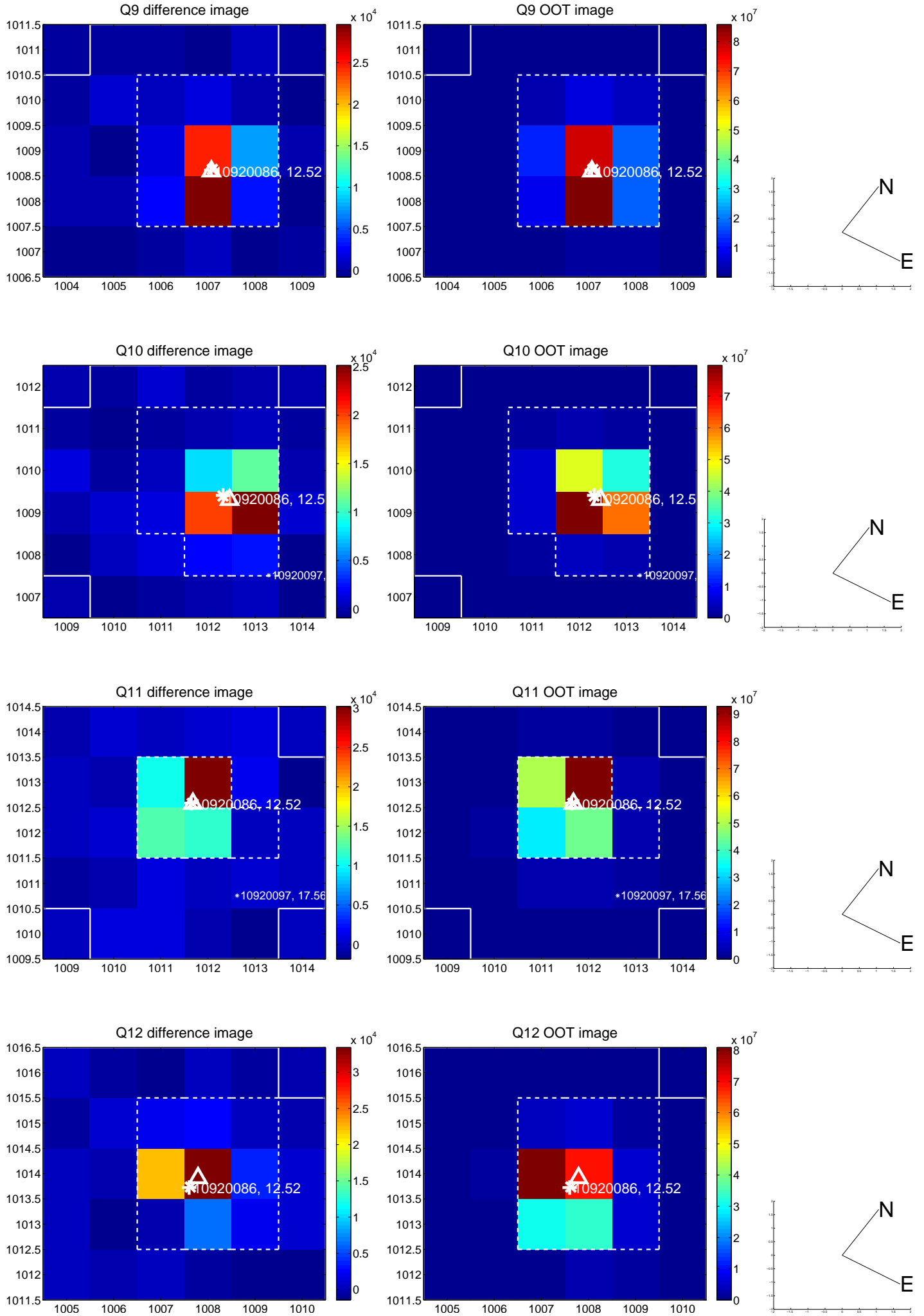
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



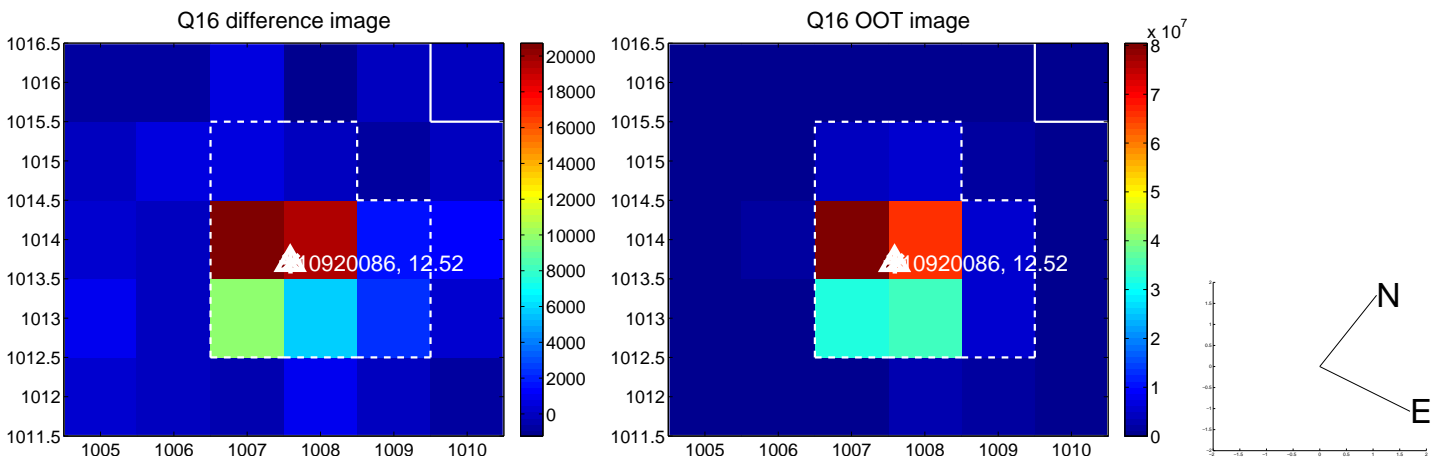
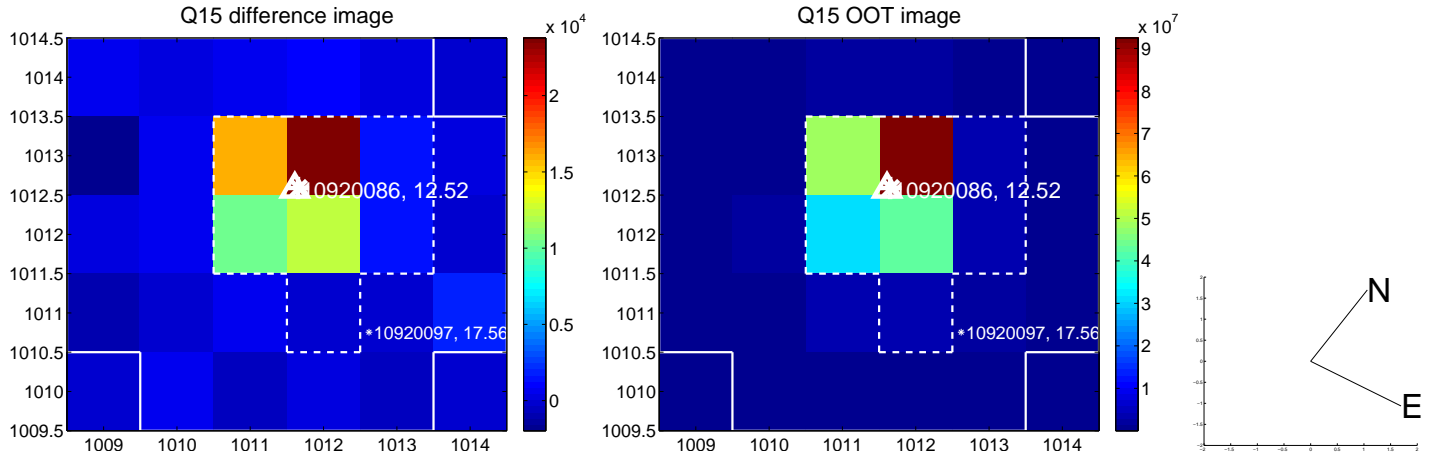
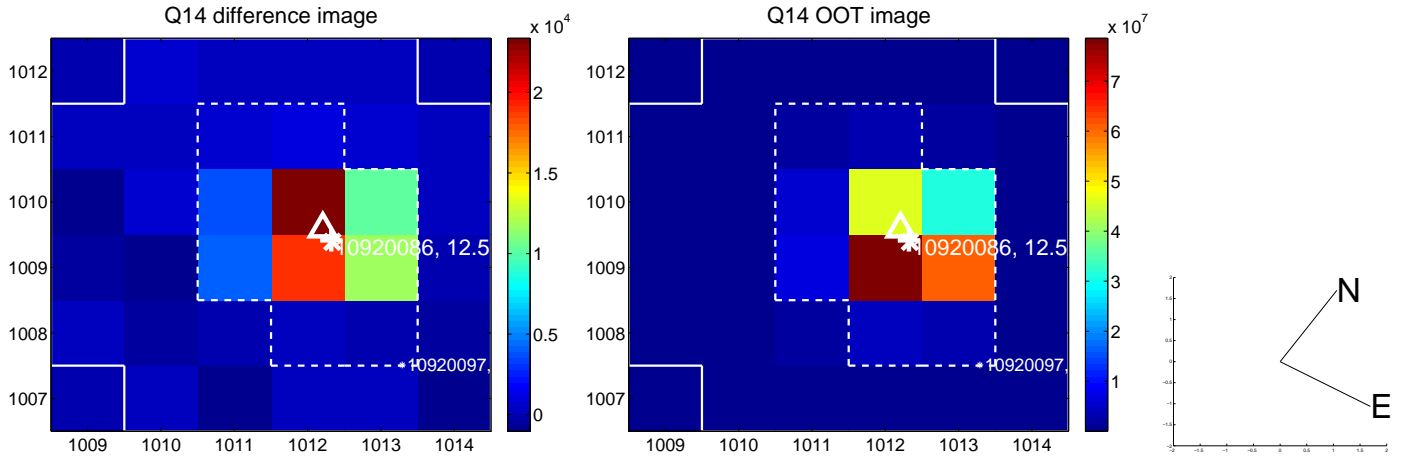
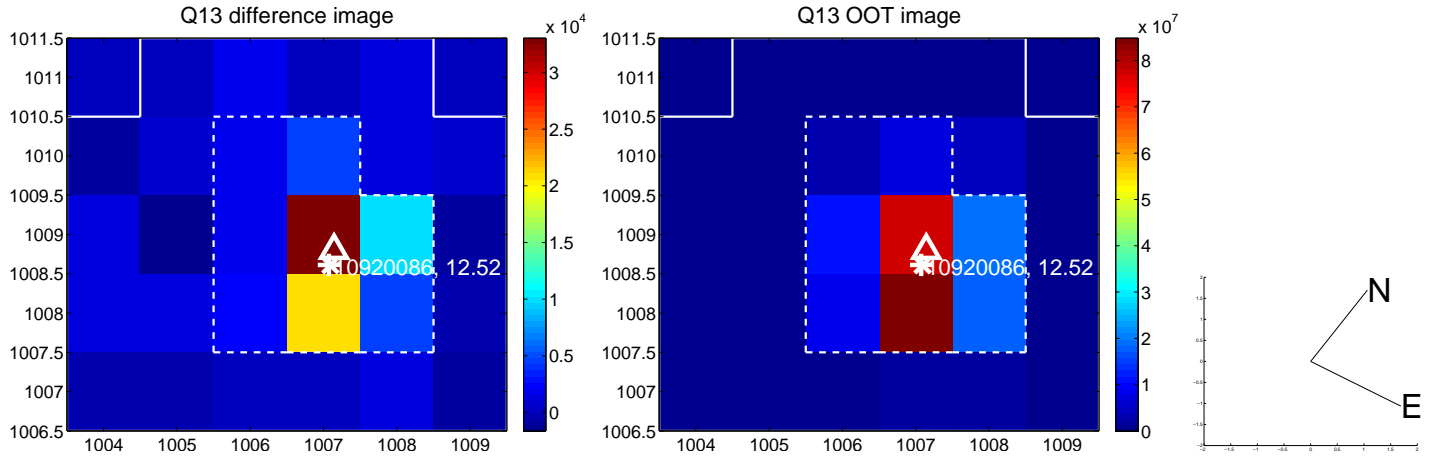
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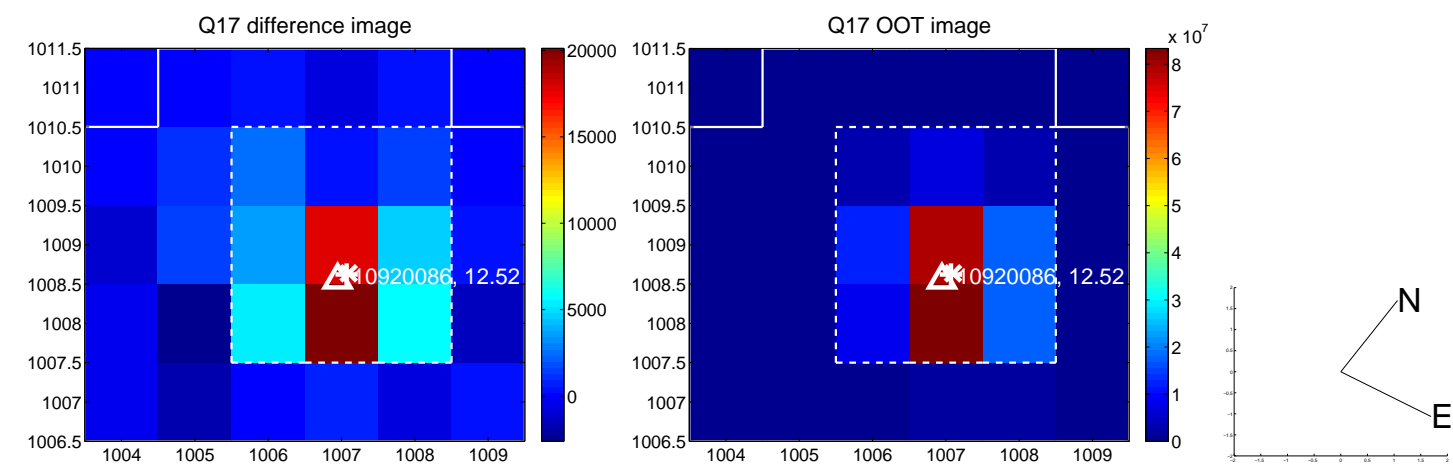
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



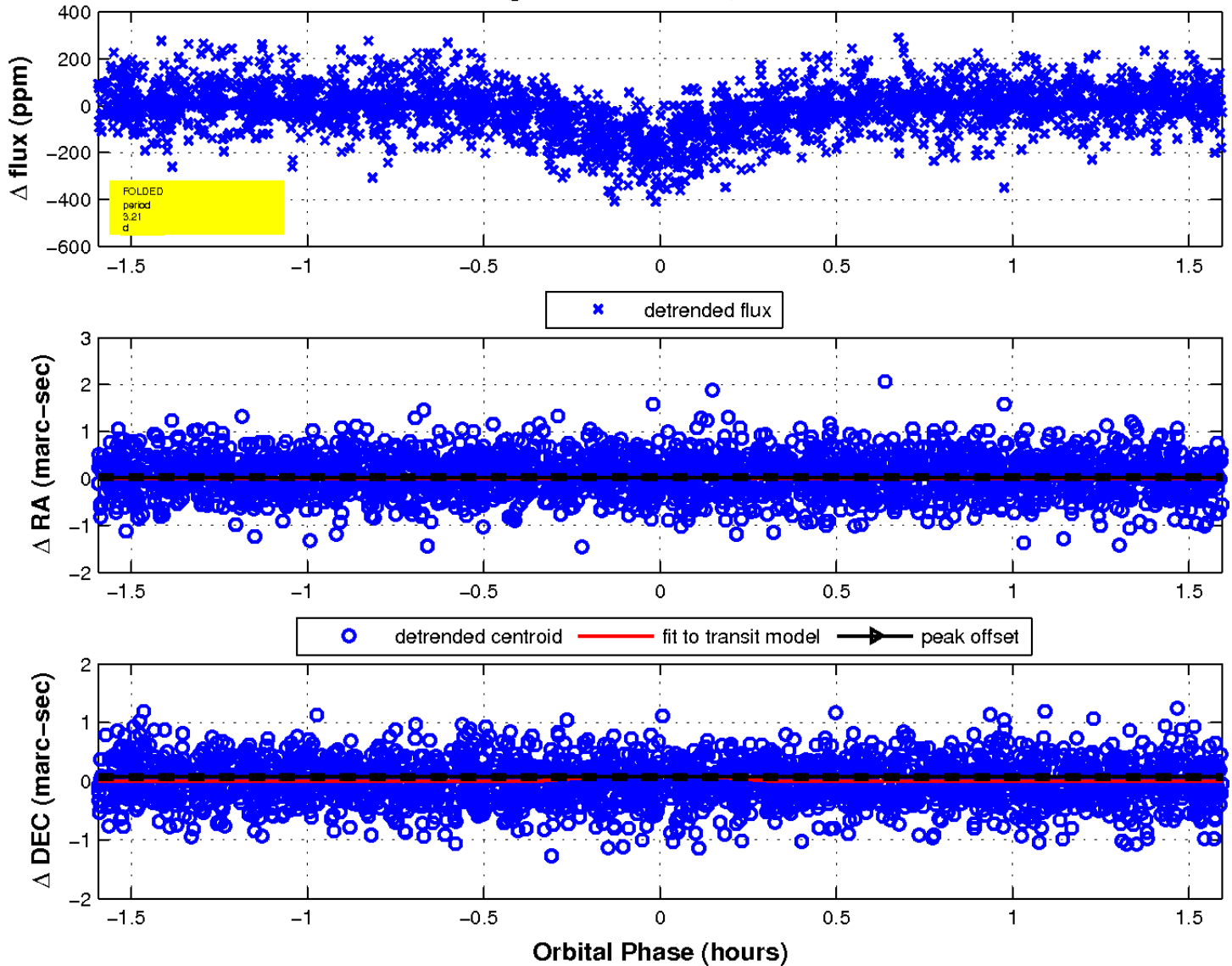
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

