

KIC 009786017

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})
009786017-01	OBS	5714.01	2.248995	132.653560	55149.3	8.994	2973.0	2278.2	2.29	6025	58.09	4841.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009786017-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT

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 009786017-01

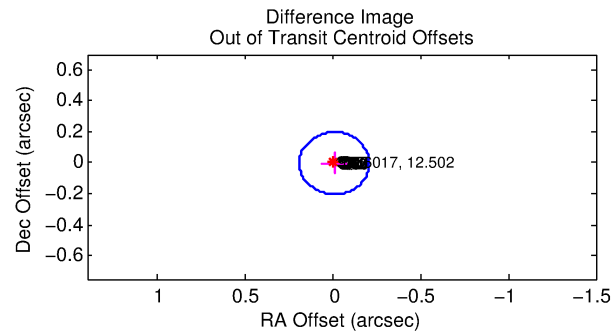
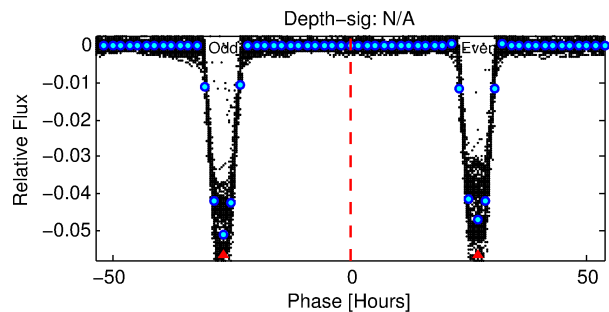
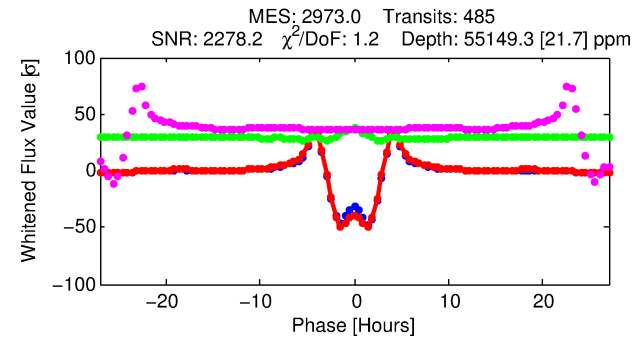
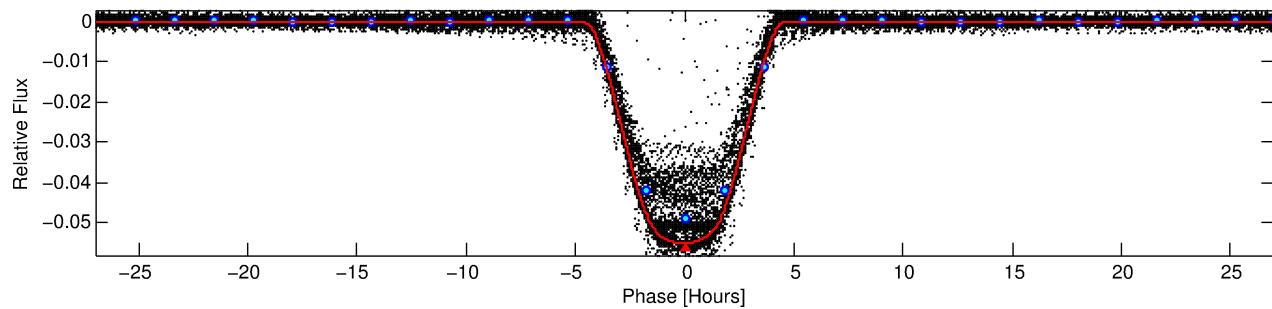
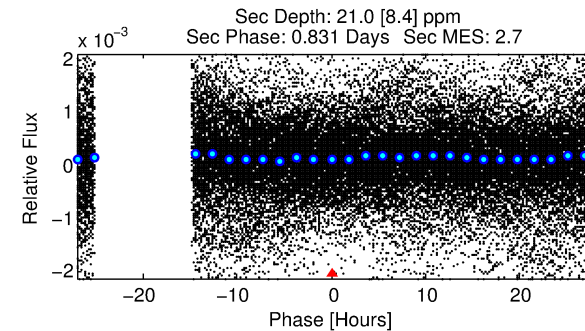
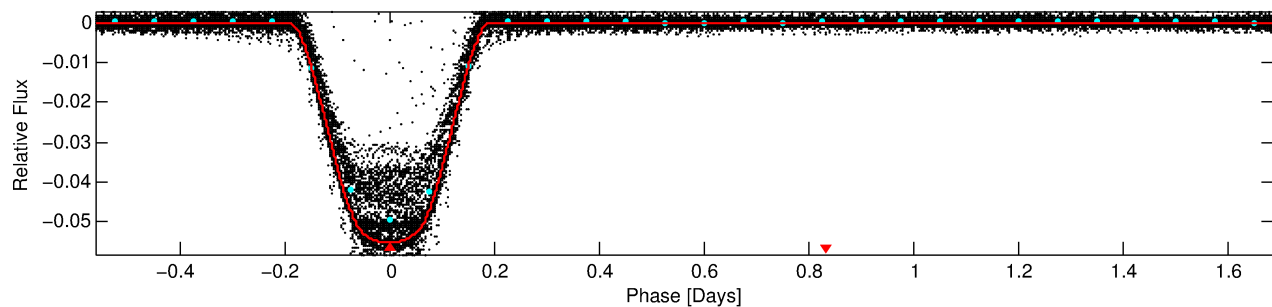
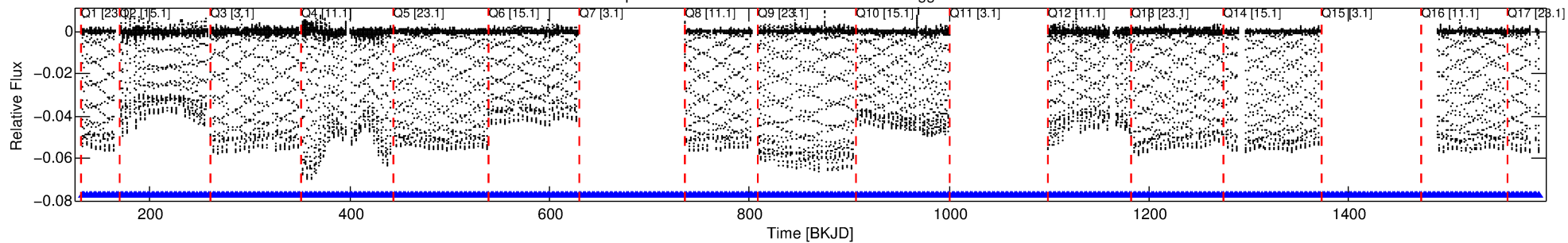
No Significant Match Found

DV One-Page Summary

KIC: 9786017 Candidate: 1 of 1 Period: 2.249 d

KOI: K05714.01 Corr: 0.993

Kp: 12.50 R*: 2.29 Rs Teff: 6025.0 K Logg: 3.80 Fe/H: -0.280



DV Fit Results:

Period = 2.24899 [0.00000] d
Epoch = 132.6536 [0.0000] BKJD
Rp/R* = 0.2321 [0.0000]
a/R* = 2.15 [0.00]
b = 0.70 [0.00]
Seff = 4841.81 [4482.99]
Teq = 2127 [492] K
Rp = 58.09 [30.80] Re
a = 0.0358 [0.0198] AU
Ag = 0.00 [0.00] [-225.84σ]
Teffp = 847 [89] K [-2.56σ]

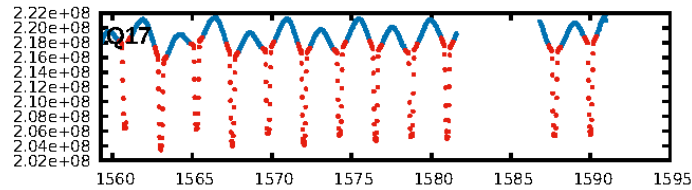
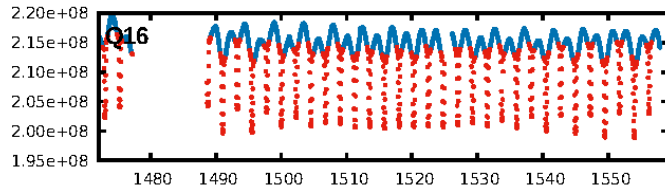
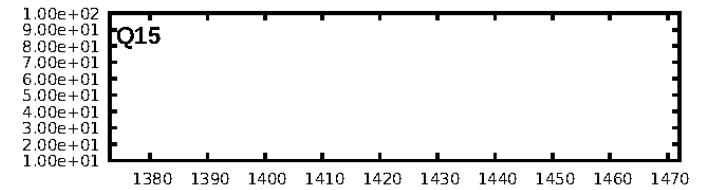
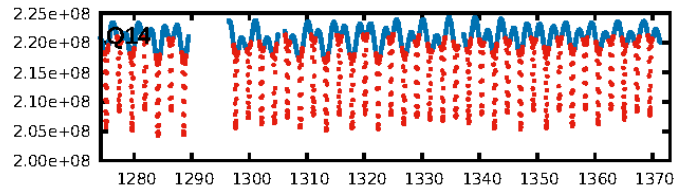
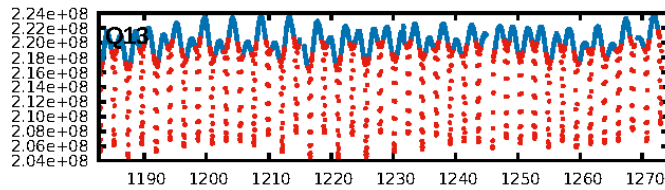
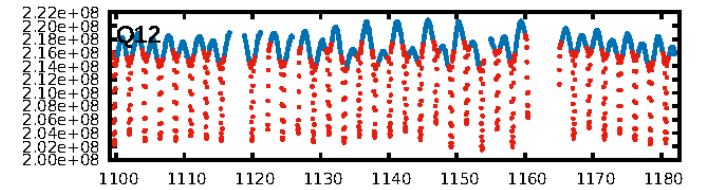
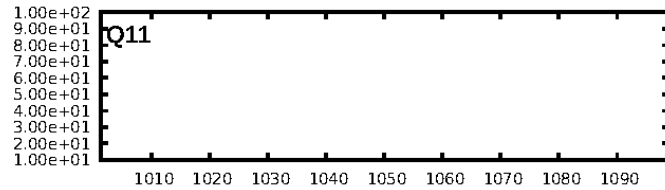
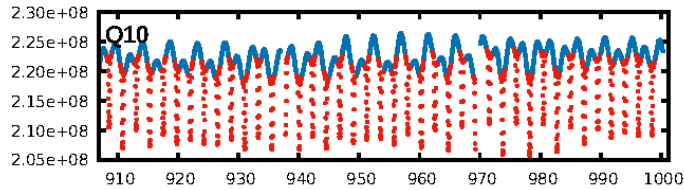
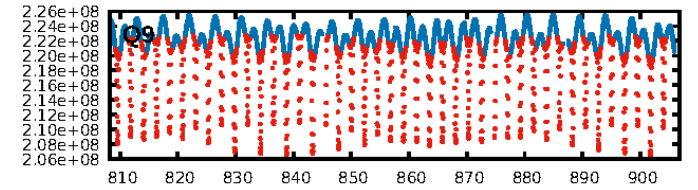
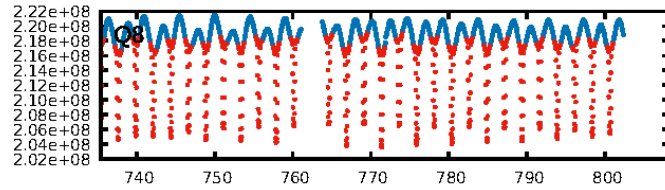
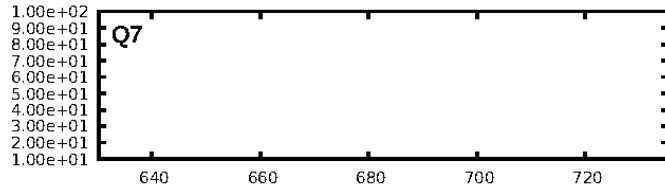
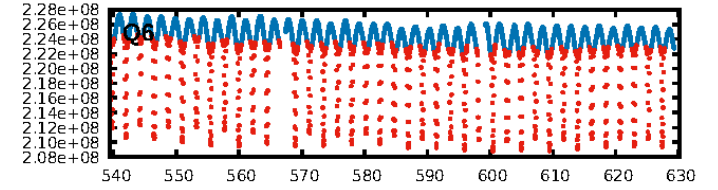
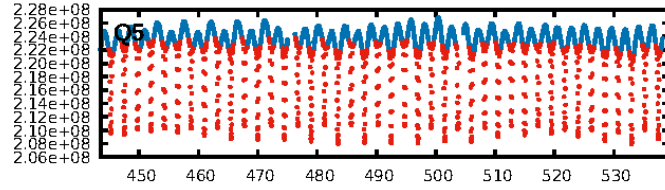
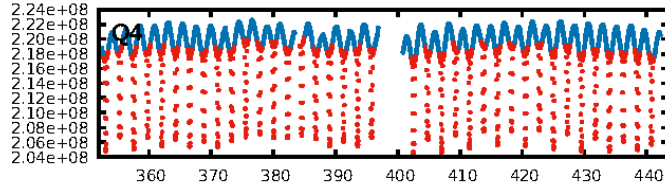
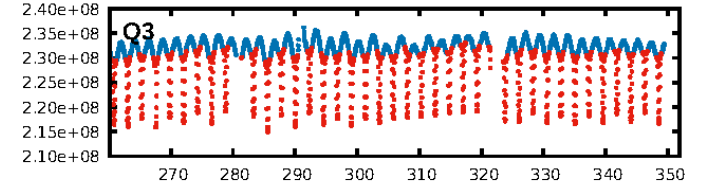
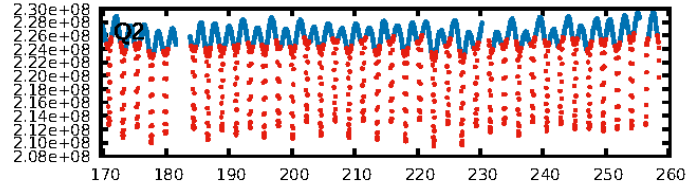
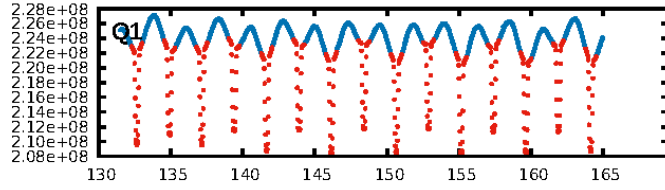
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [458/458]
GhostDiagnostic-chr: 1.412
Centroid-sig: 0.0%
Centroid-so: 0.030 arcsec [61.35σ]
OotOffset-rm: 0.008 arcsec [0.12σ]
KicOffset-rm: 0.019 arcsec [0.29σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

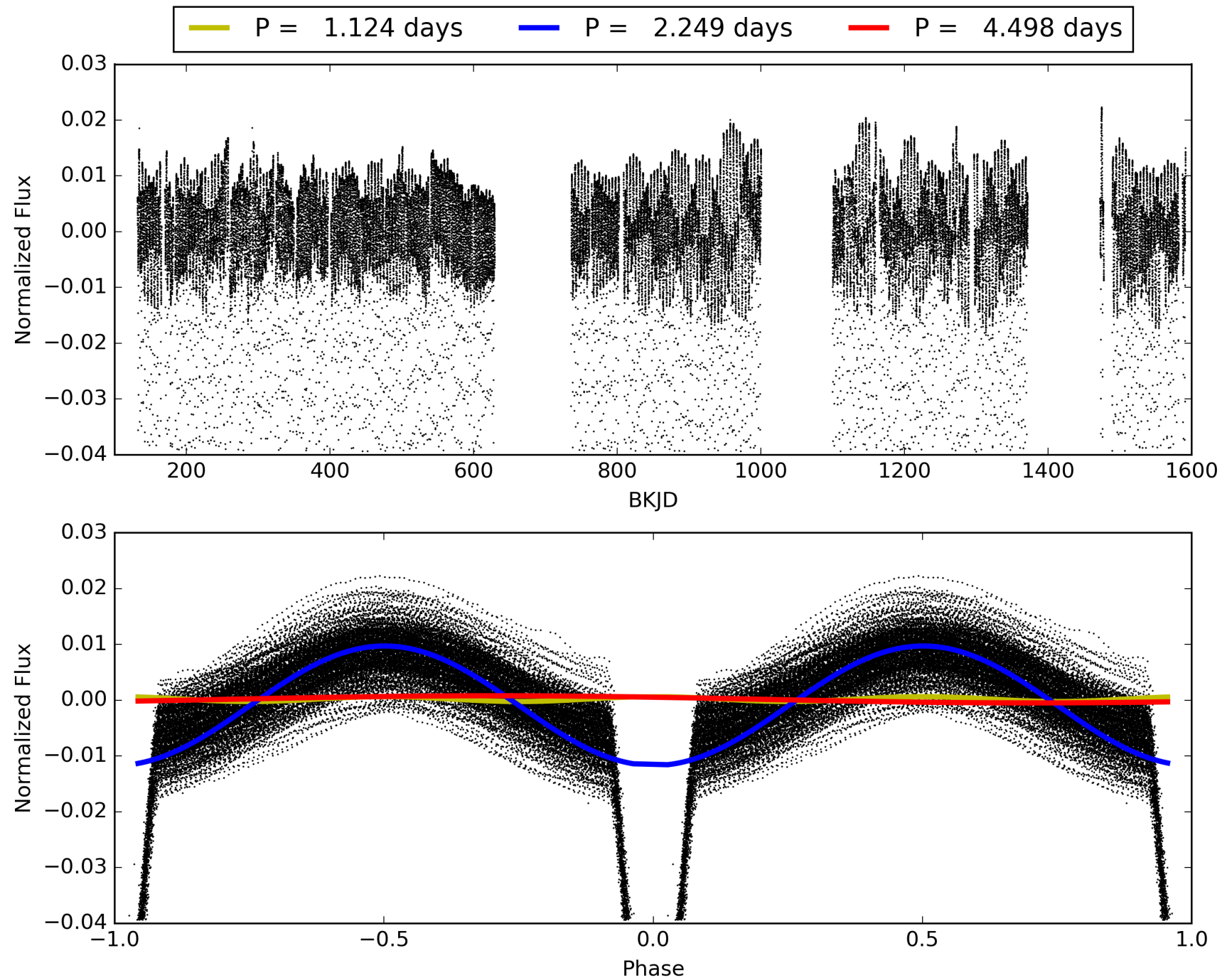
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 18:44:50 Z

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

TCE 009786017-01, PDC Light Curves

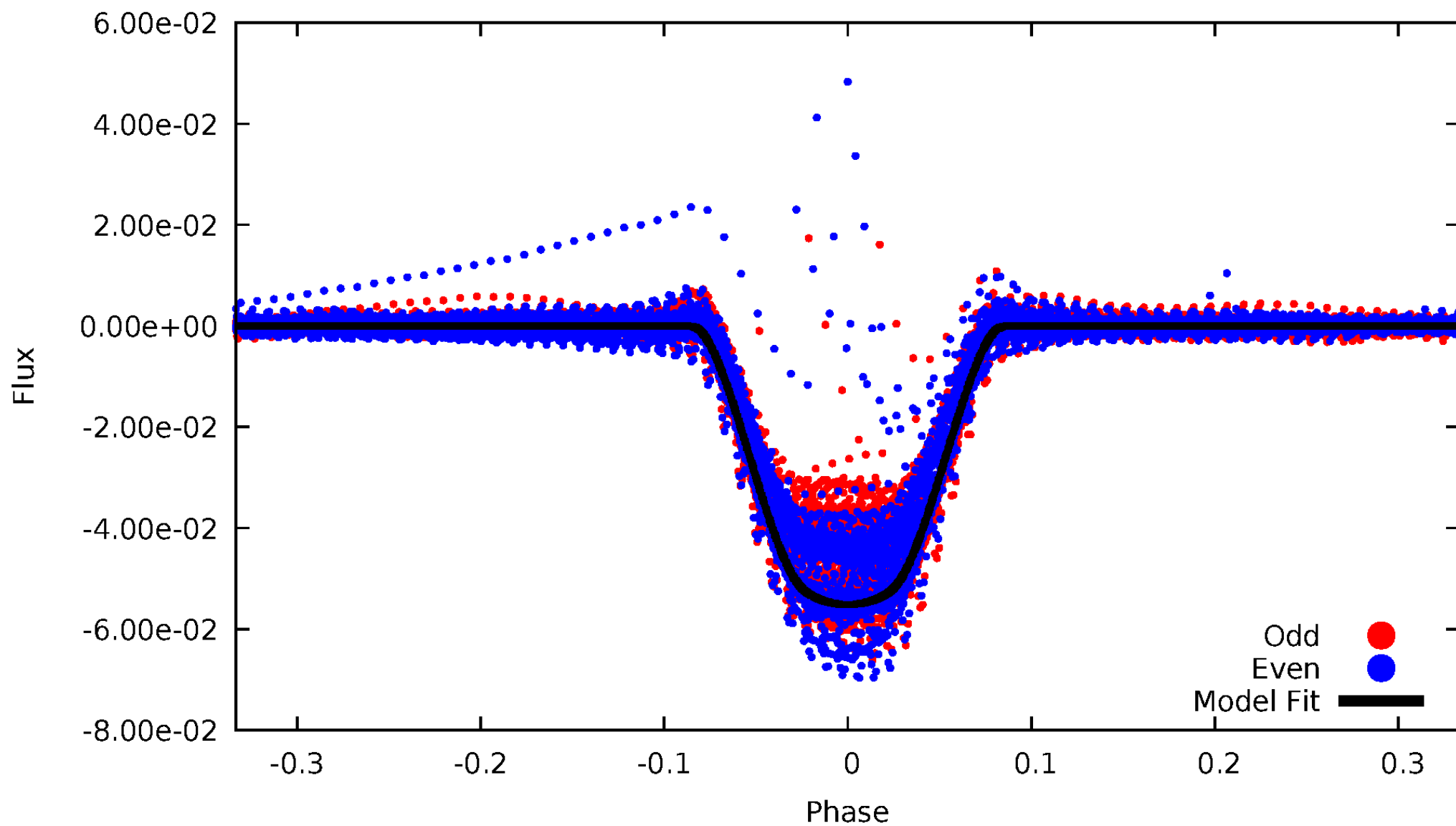


TCE 009786017-01



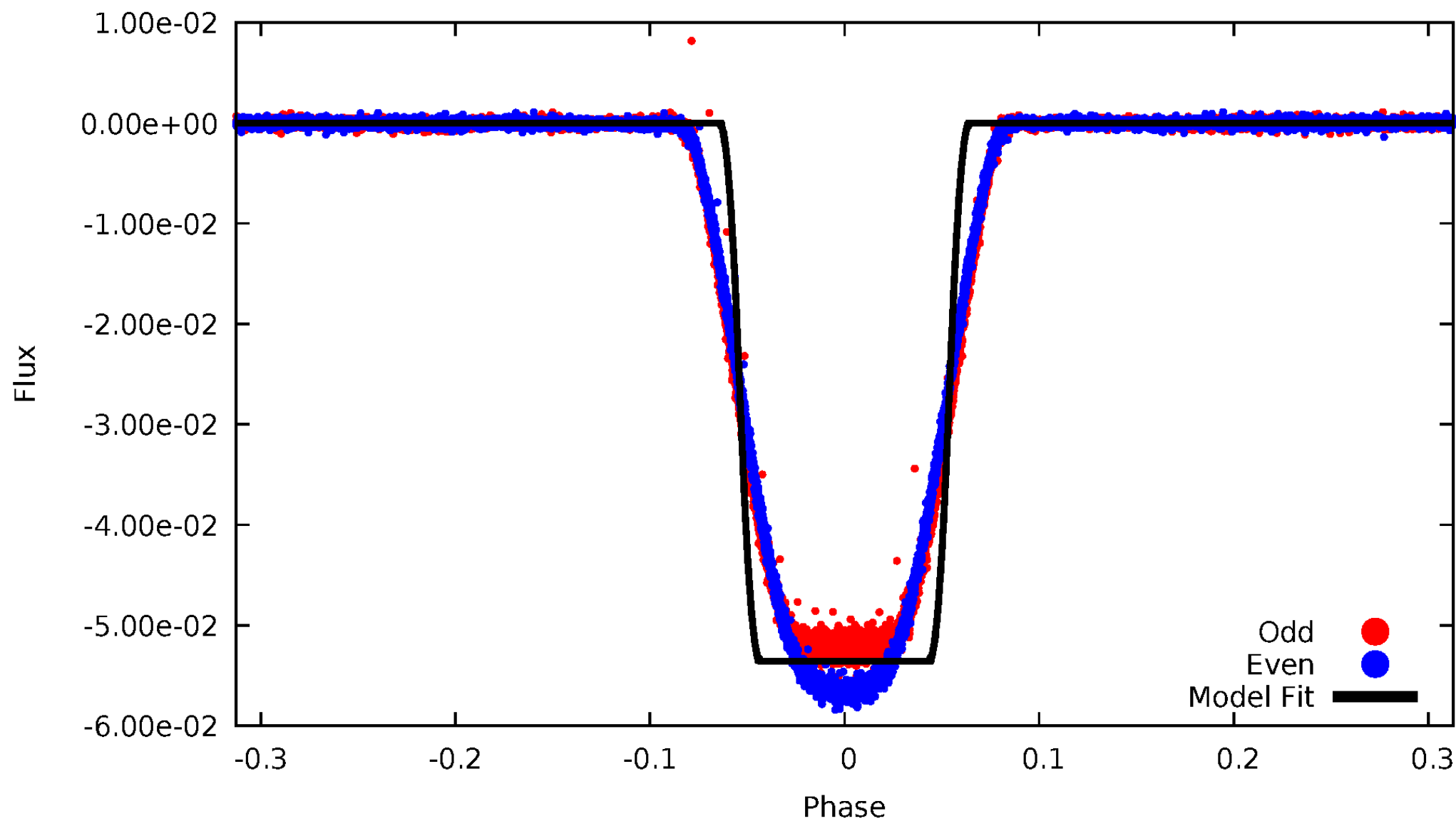
DV Odd/Even

TCE 009786017-01



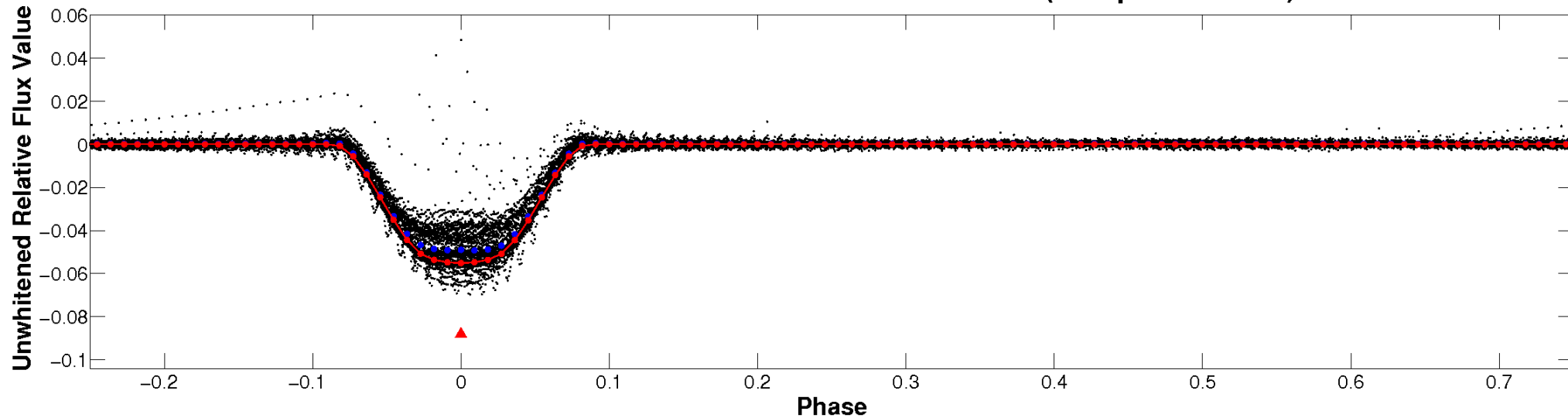
ALT Odd/Even

TCE 009786017-01

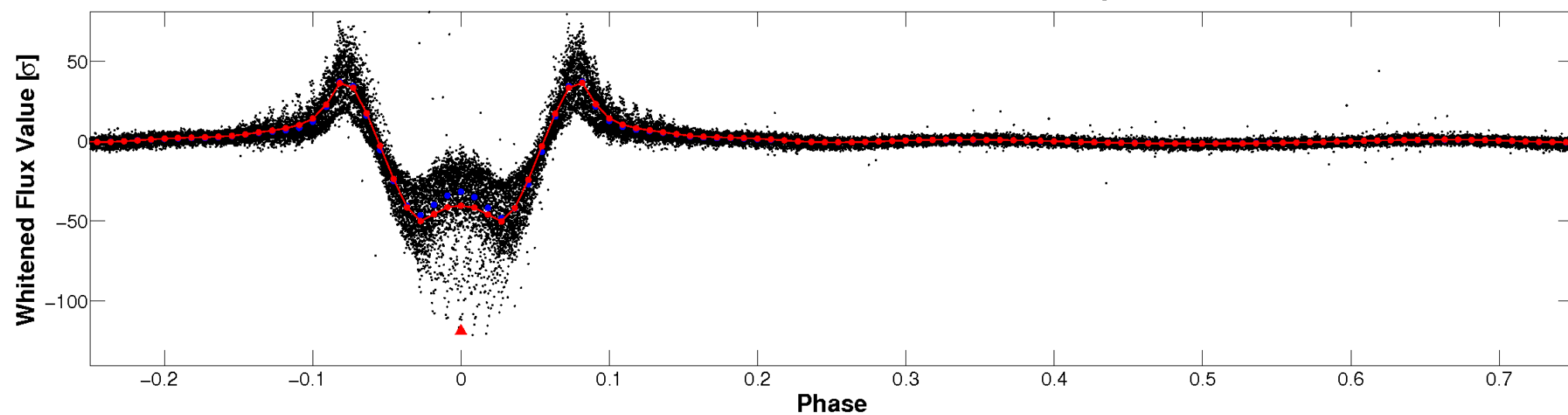


Non-Whitened Vs. Whitened Light Curve

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

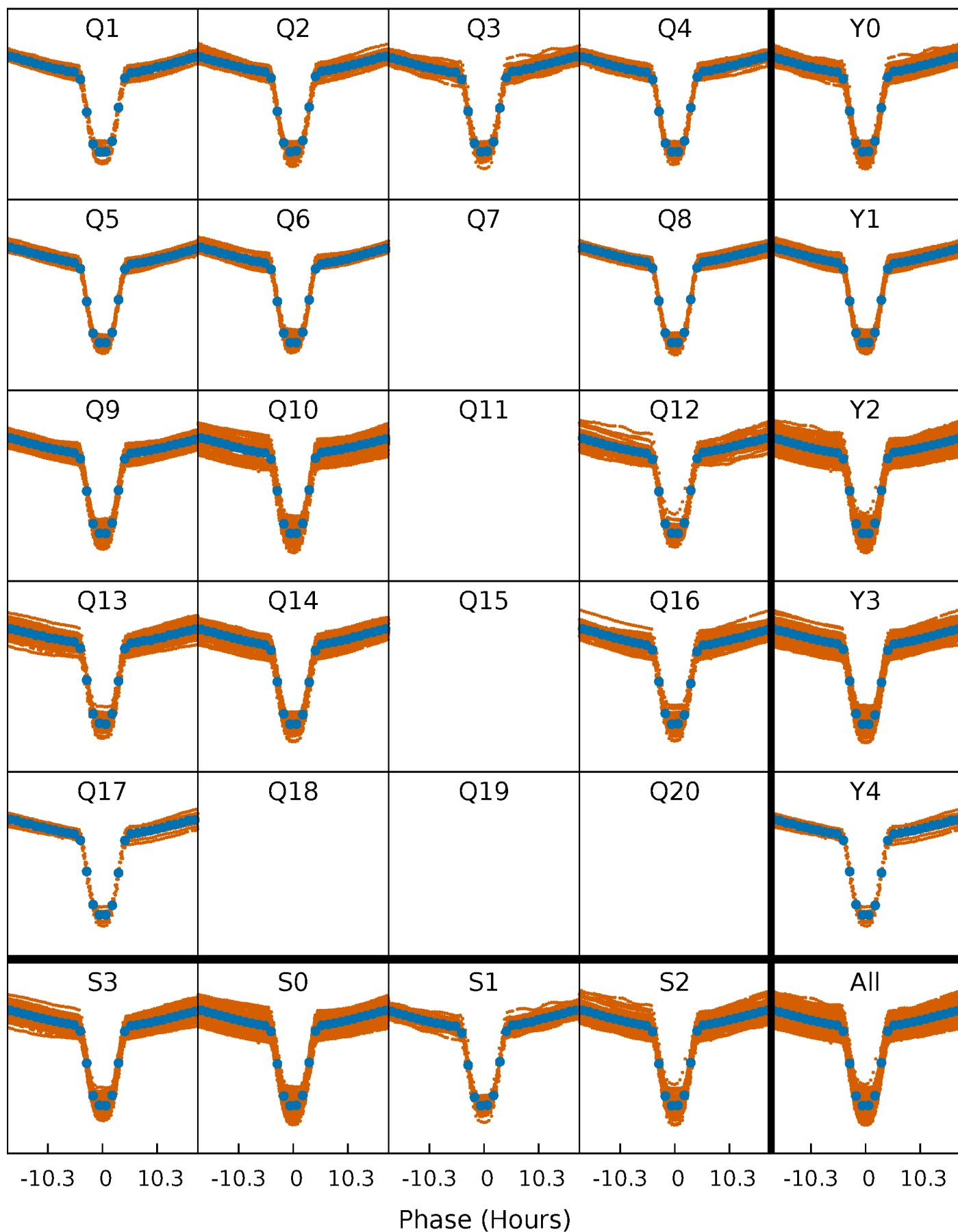


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



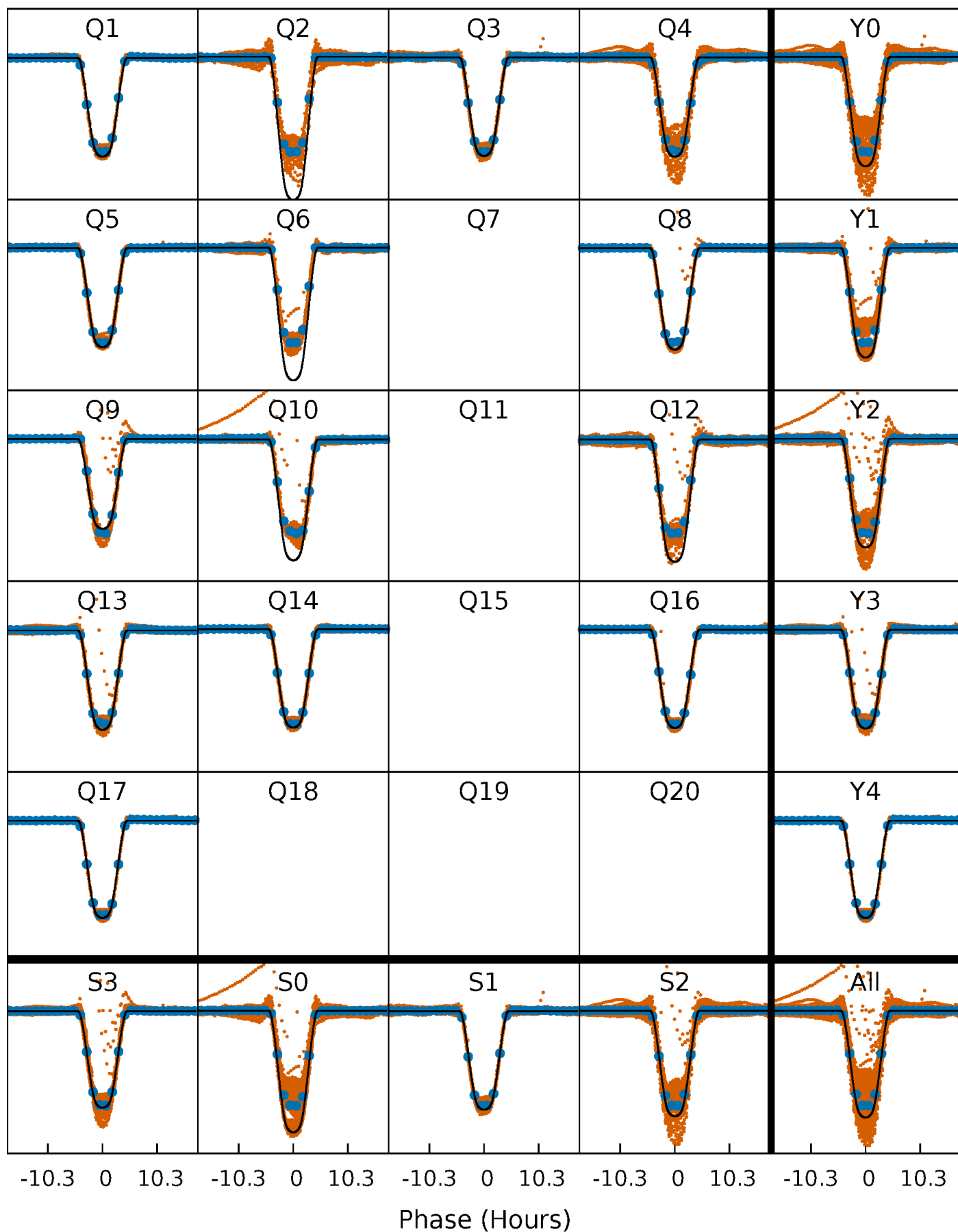
PDC Quarter-Phased Transit Curves

TCE 009786017-01 P= 2.248995 Days $T_0=132.653560$ (BKJD)



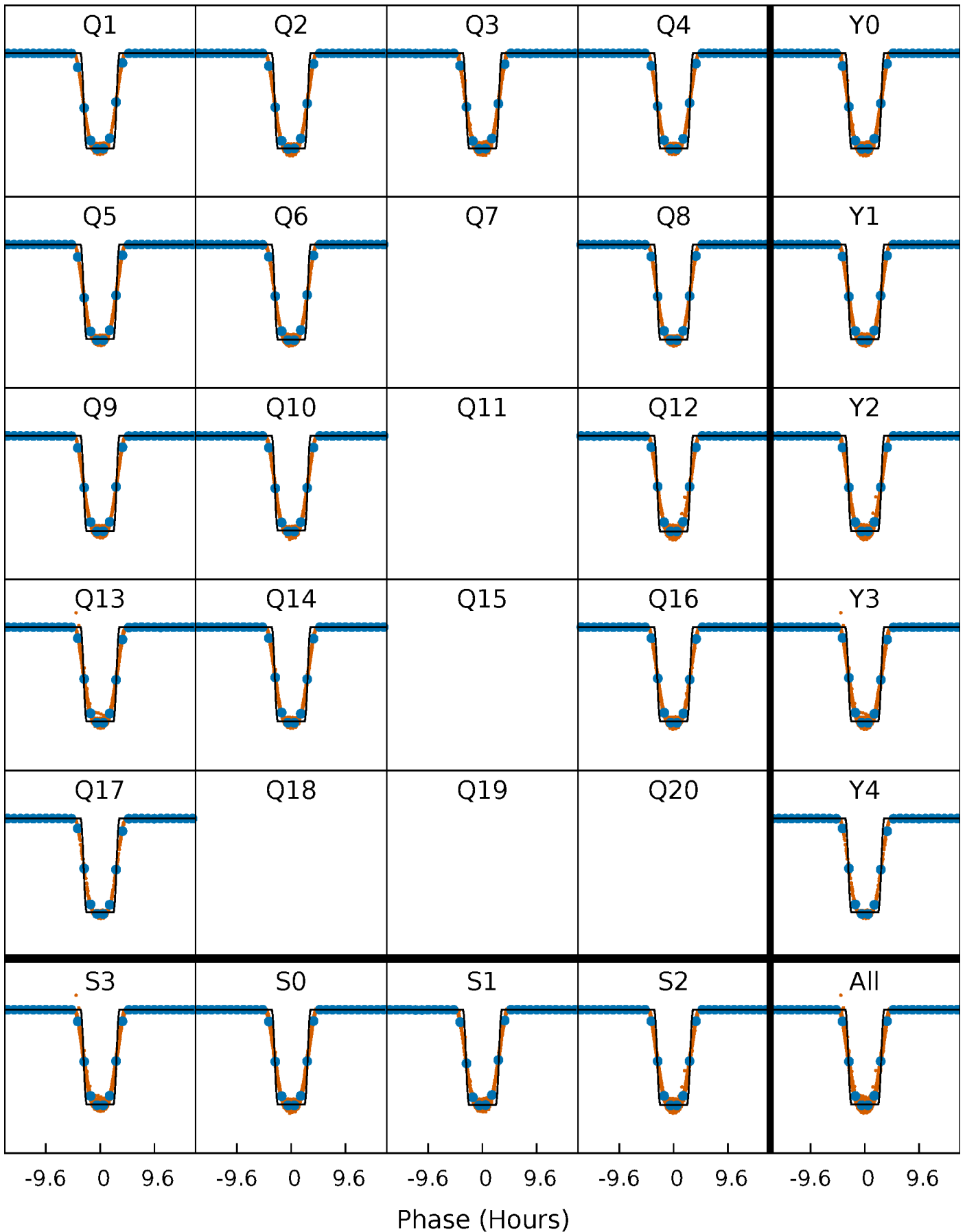
DV Quarter-Phased Transit Curves

TCE 009786017-01 P= 2.248995 Days $T_0=132.653560$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

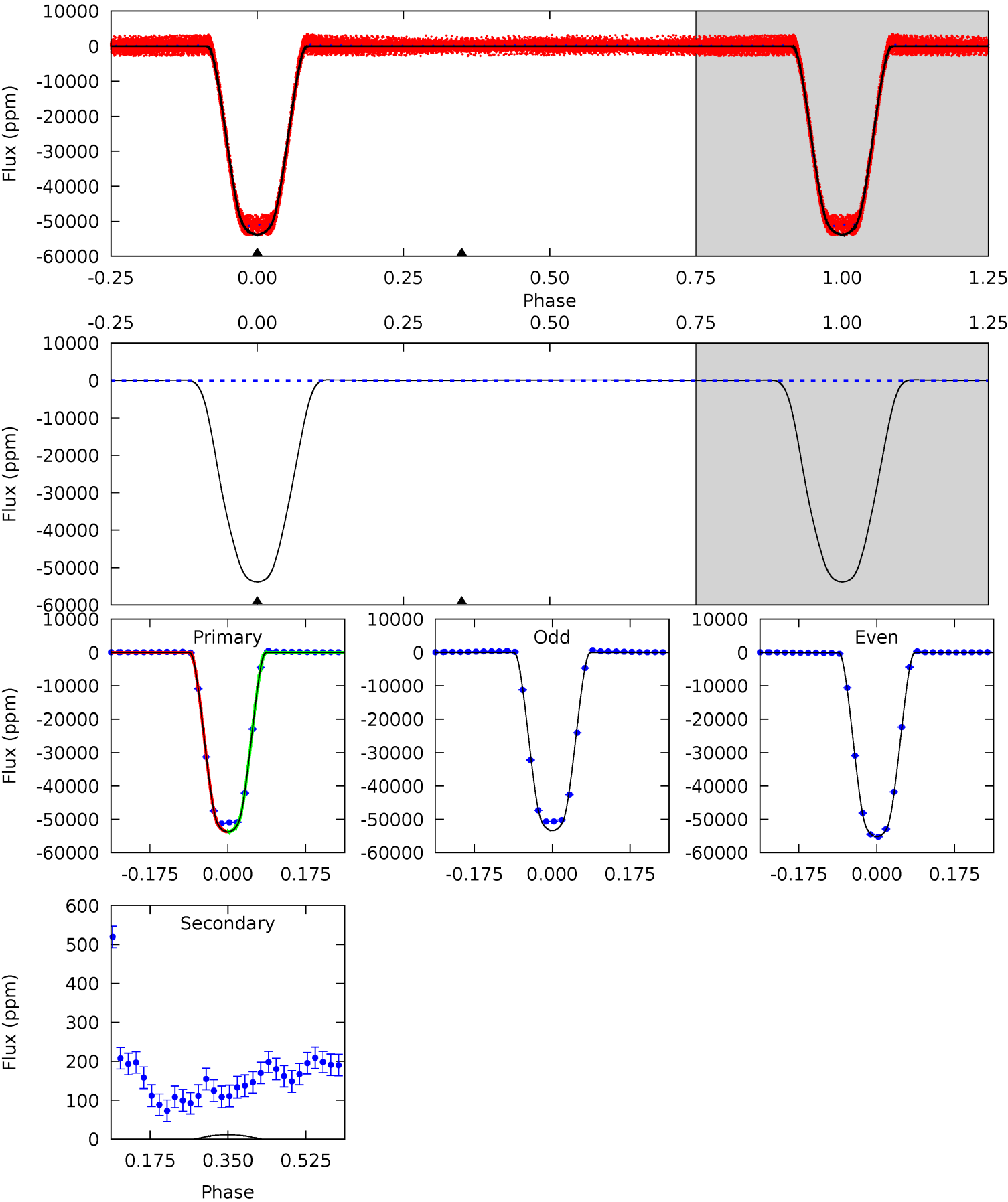
TCE 009786017-01 P= 2.248995 Days $T_0=132.653142$ (BKJD)



DV Model-Shift Uniqueness Test

009786017-01, P = 2.248995 Days, E = 130.404565 Days

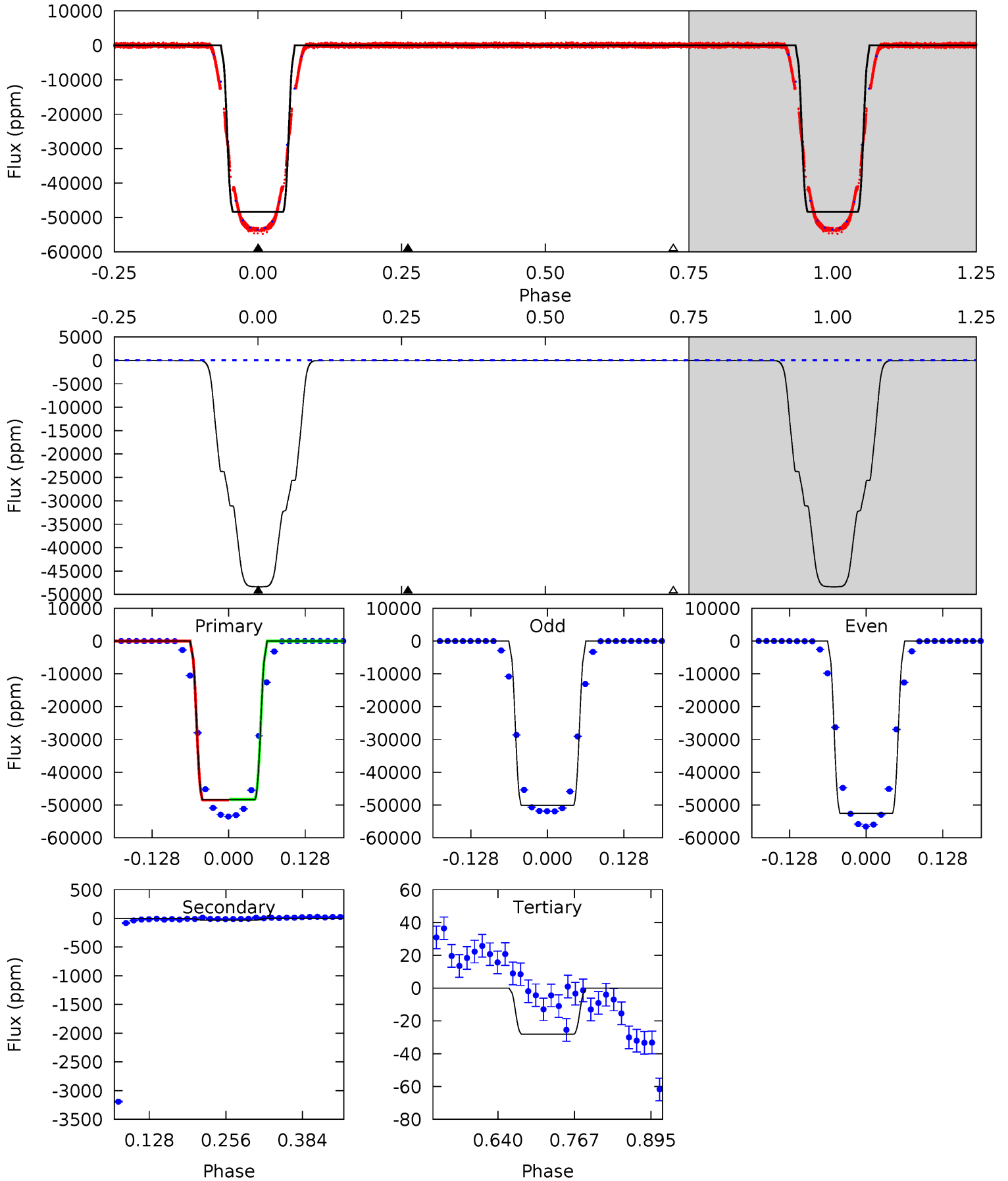
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5571	-1.13	0	0	4.45	1.36	5.81	5571	5571	-1.13	-1.13	96.2	0.94	0.00	0



Alt Model-Shift Uniqueness Test

009786017-01, P = 2.248995 Days, E = 130.404147 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11534	7.62	6.70	0	4.51	1.52	4.25	11528	11534	0.91	7.62	421.1	1.00	0.00	0



Stellar Parameters For KIC 009786017

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6025^{+180}_{-180}	$3.800^{+0.552}_{-0.138}$	$-0.280^{+0.300}_{-0.300}$	$2.293^{+0.521}_{-1.216}$	$1.209^{+0.163}_{-0.302}$	$0.141^{+0.948}_{-0.057}$
	+3%/-3%	+15%/-4%	+107%/-107%	+23%/-53%	+13%/-25%	+671%/-40%
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 009786017-01 / KOI 5714.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	11 ± 10	$57.10^{+8.18}_{-16.89}$	2921^{+245}_{-388}	-3050^{+235}_{-146}	$-0.002^{+0.002}_{-0.003}$
Alt.	-32 ± 4	$55.49^{+8.96}_{-16.08}$	2899^{+244}_{-414}	-3022^{+251}_{-150}	$0.007^{+0.006}_{-0.002}$

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

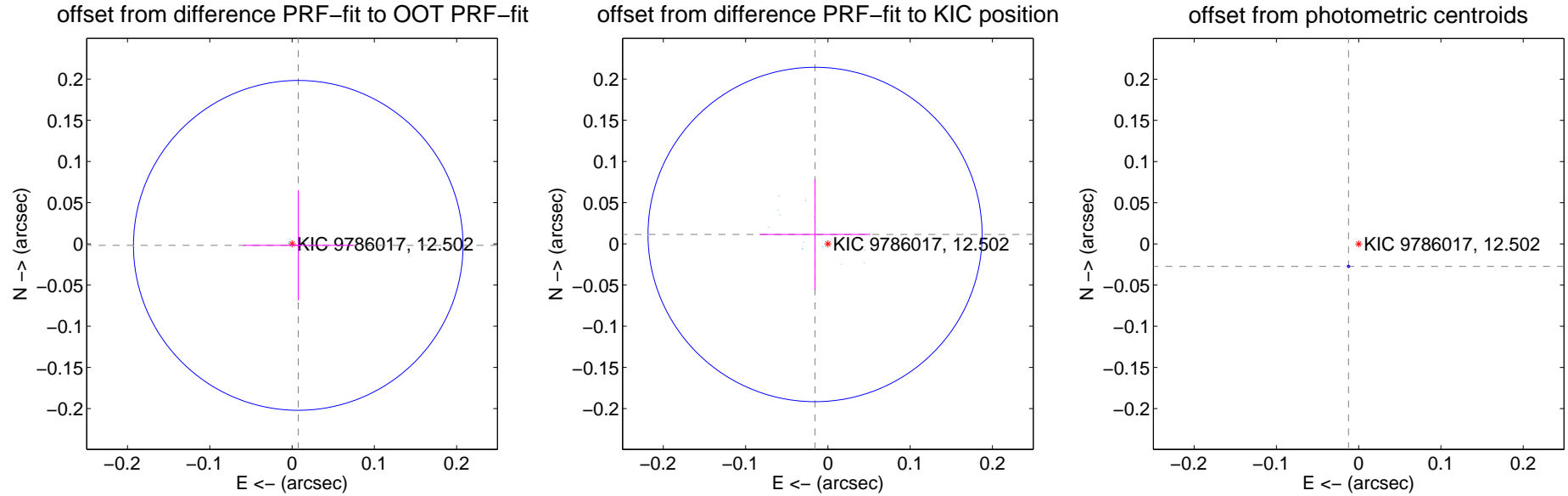
DV Centroid Data

Supplemental centroid analysis for 009786017-01. Kepler magnitude: 12.50. Transit SNR 2278.23

There are 14 quarters with good PRF difference image offsets

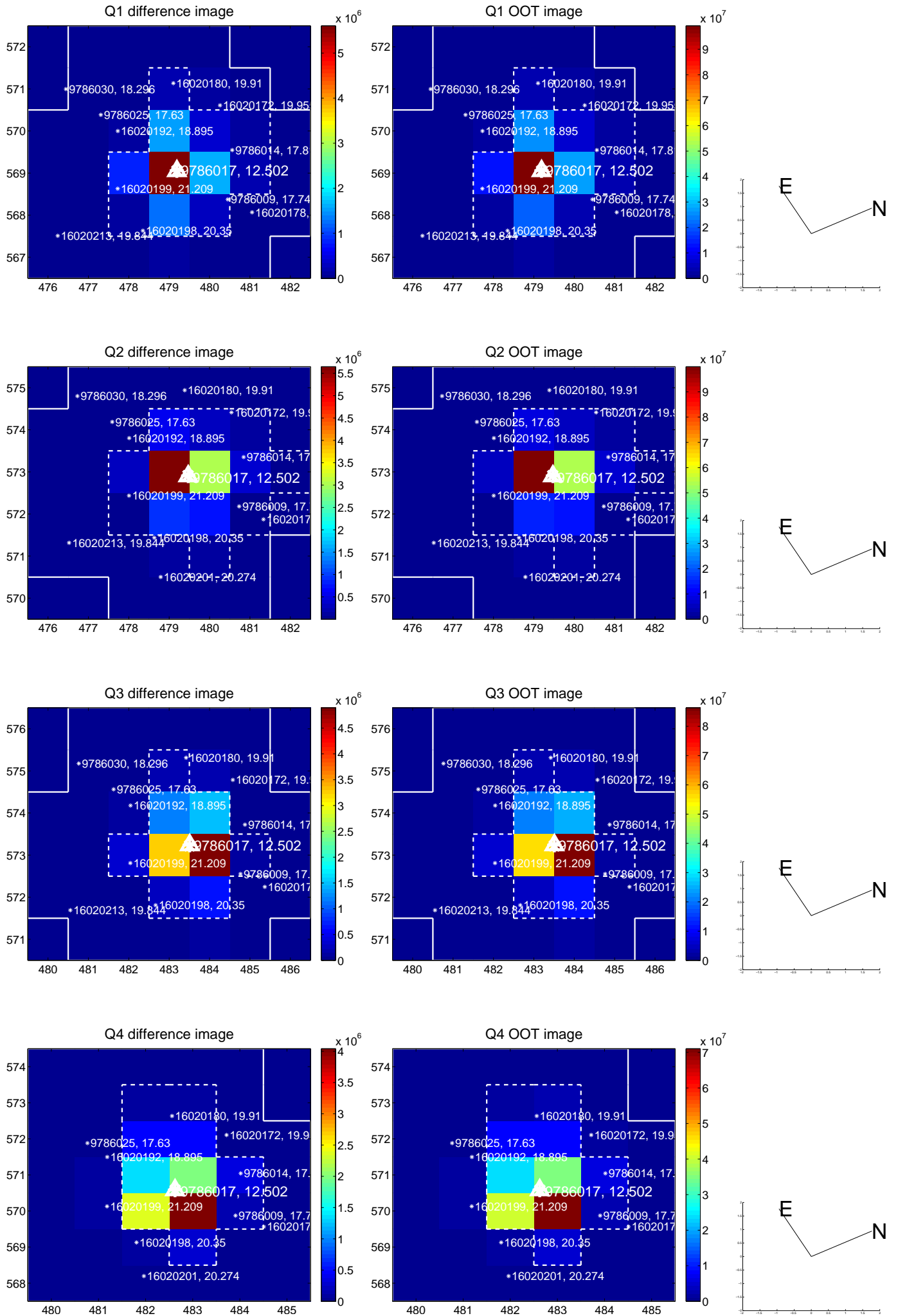
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.008 ± 0.067	0.12	-0.007 ± 0.067	-0.002 ± 0.067
PRF-fit source offset from KIC position	0.019 ± 0.068	0.29	0.016 ± 0.067	0.011 ± 0.067
photometric centroid source offset	0.03 ± 0.00	61.35	0.01 ± 0.00	-0.03 ± 0.00

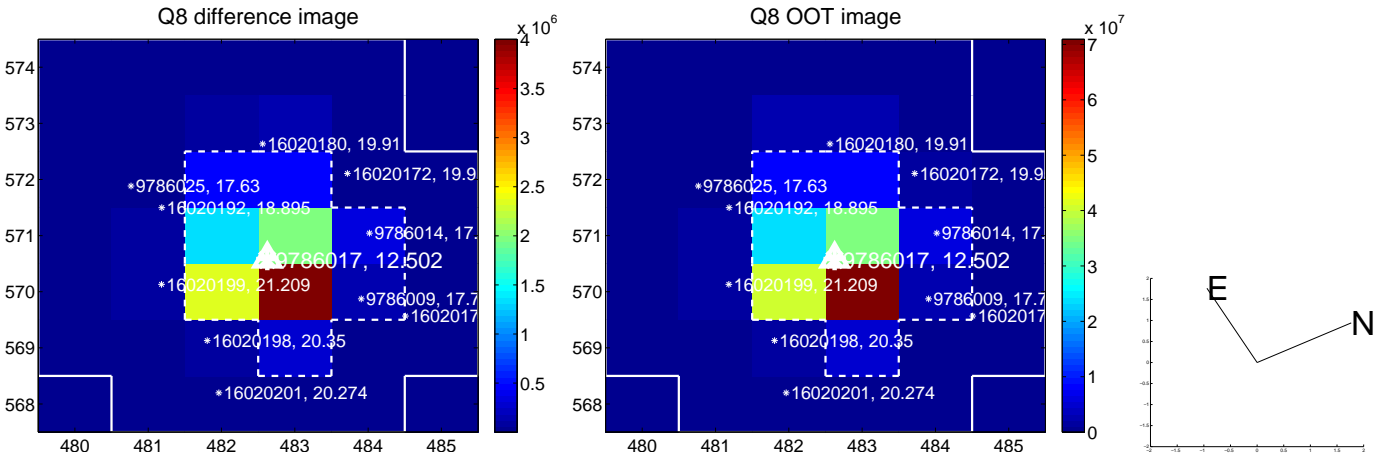
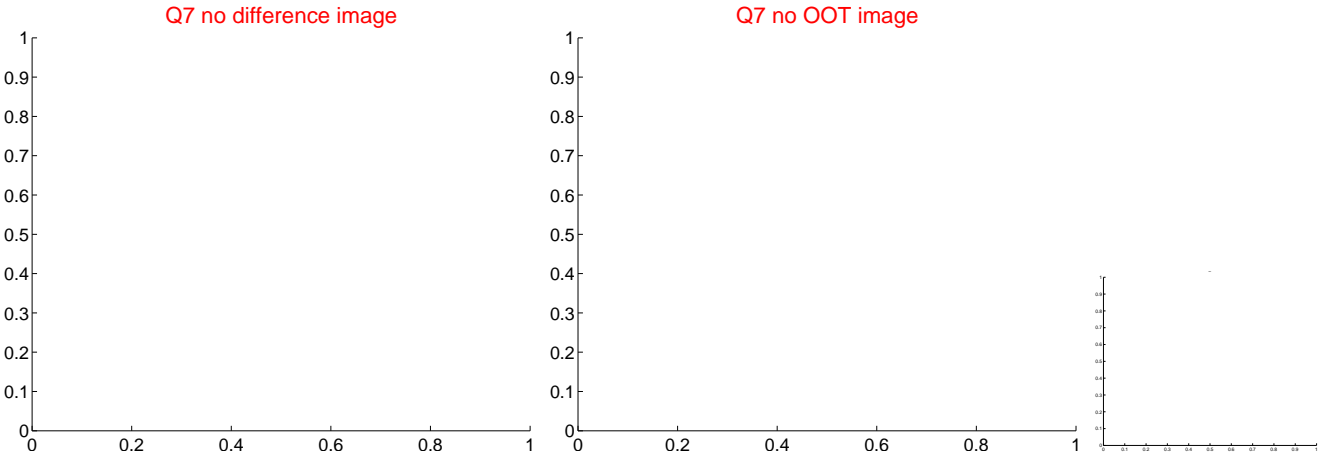
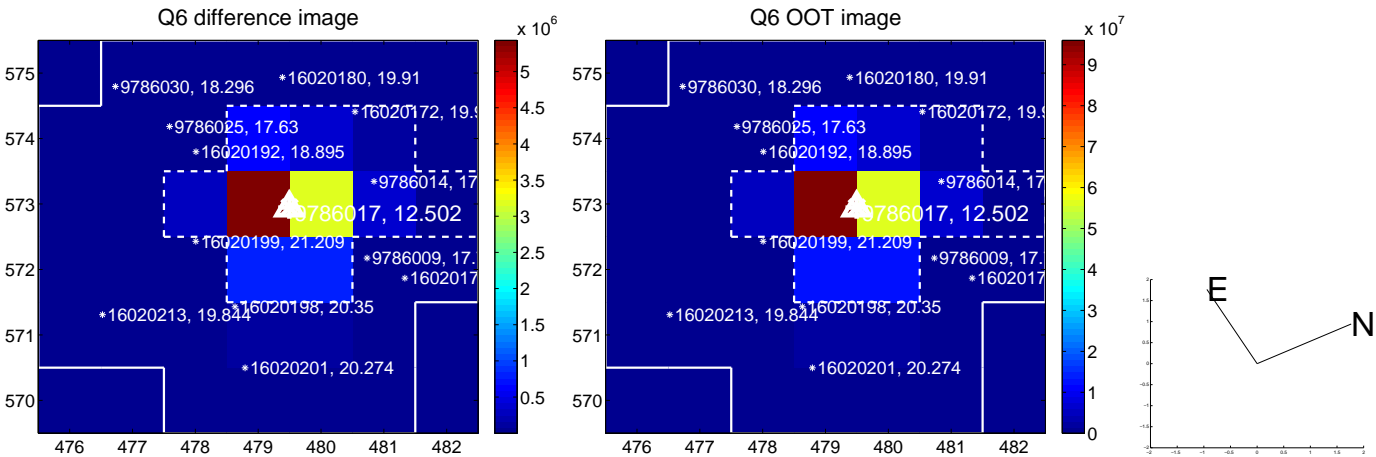
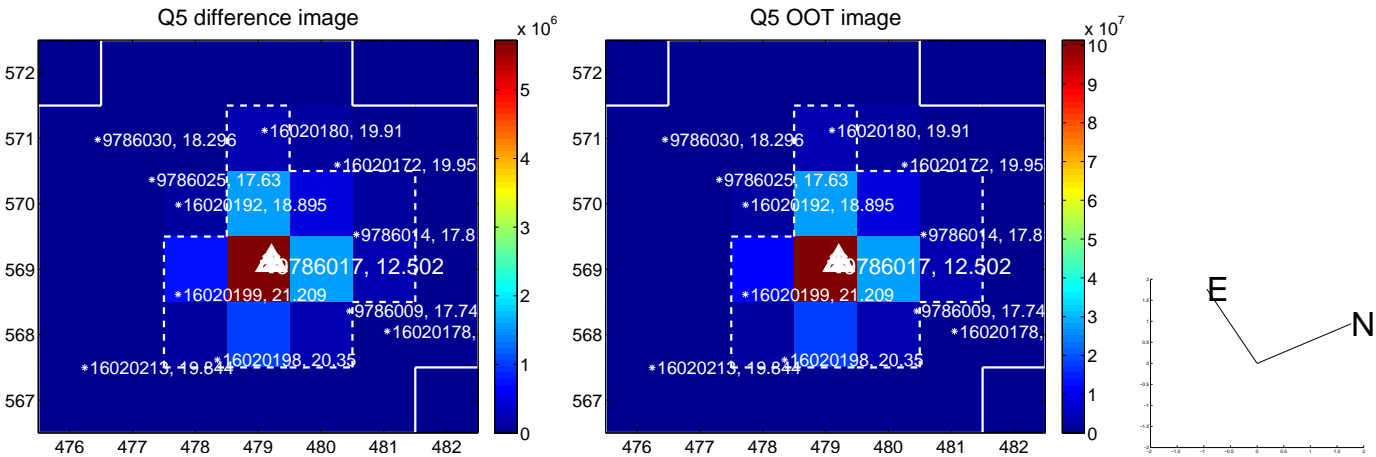


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

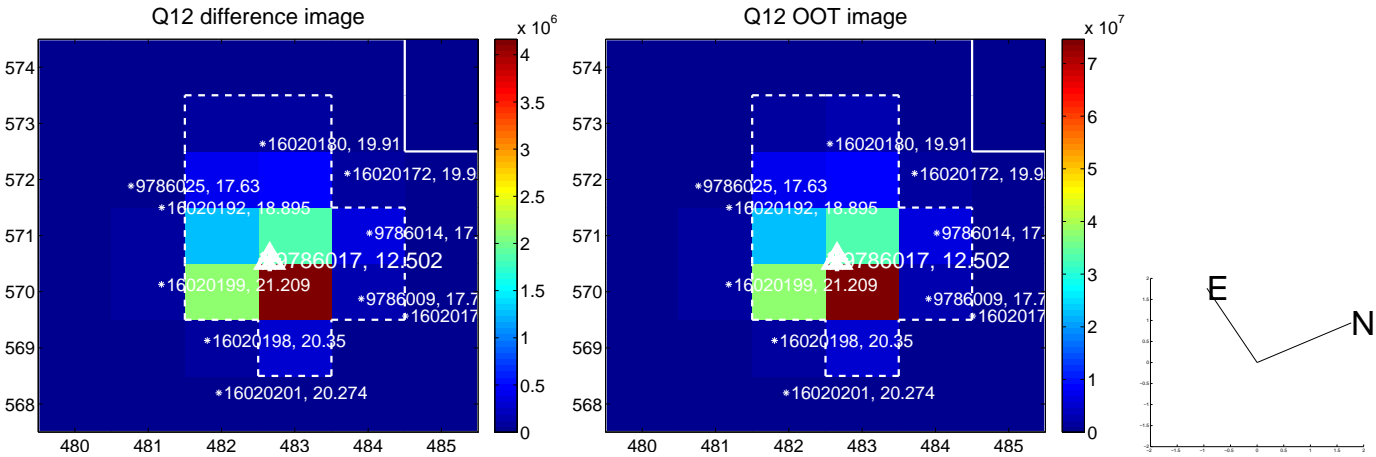
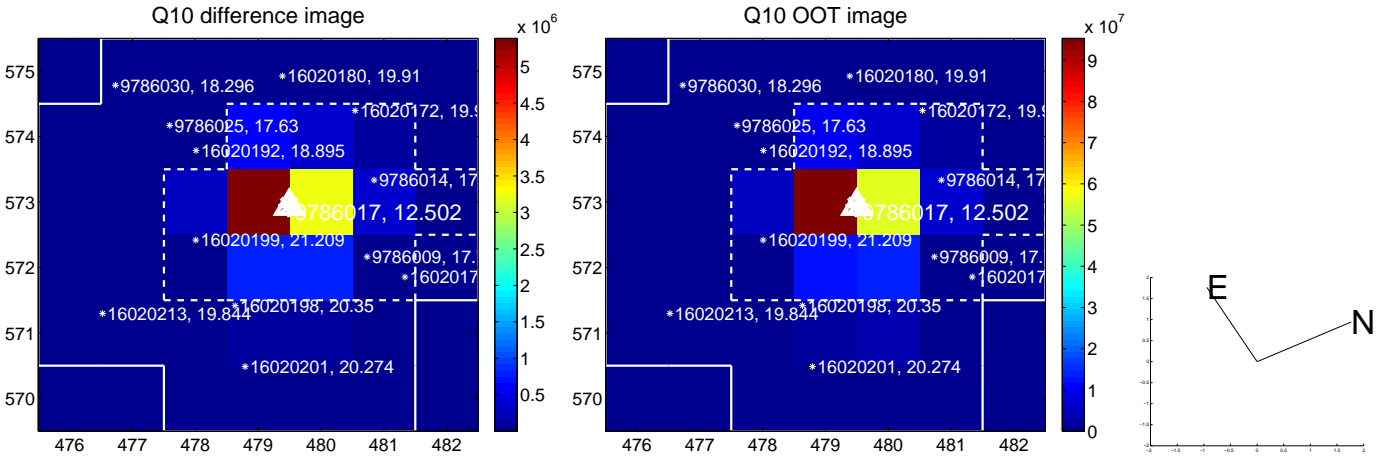
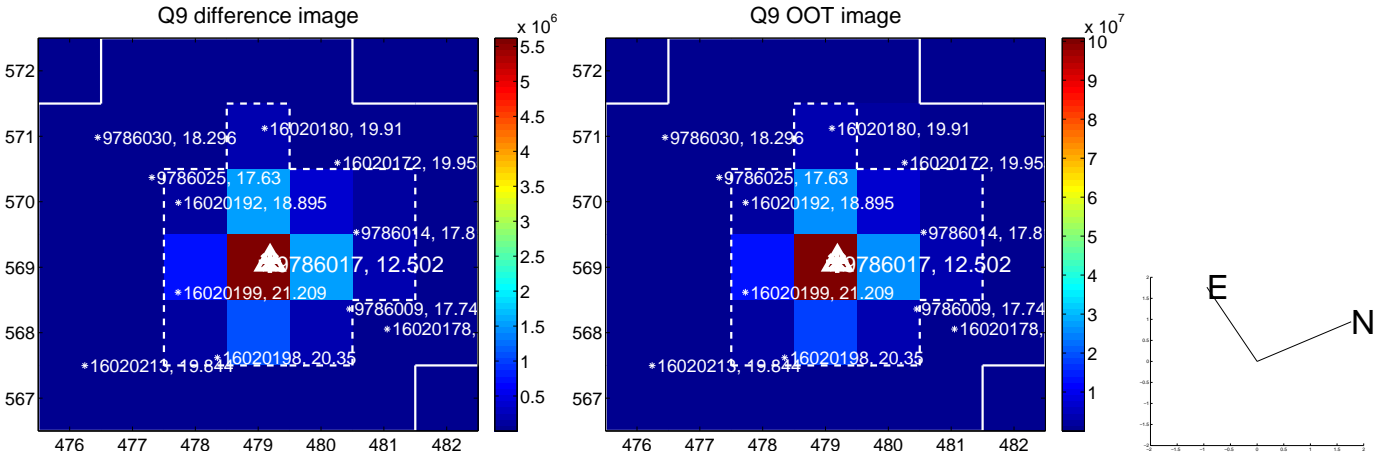
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



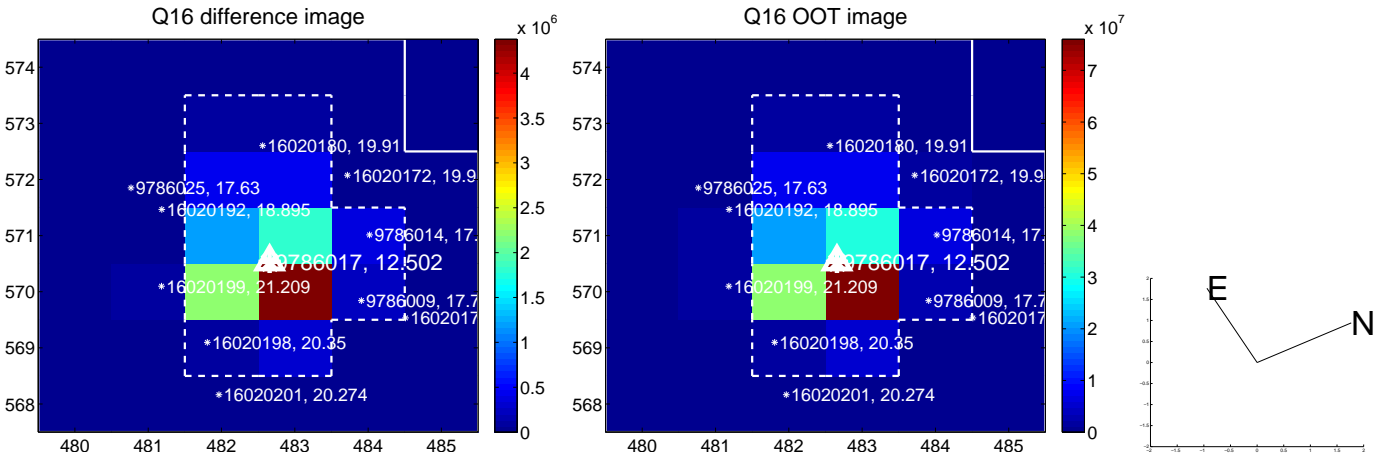
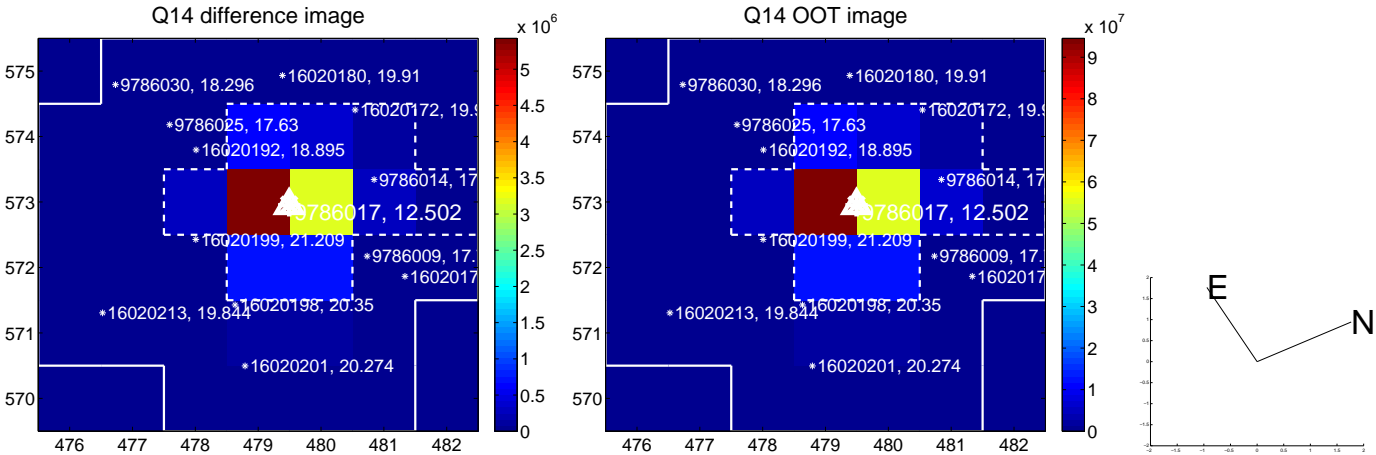
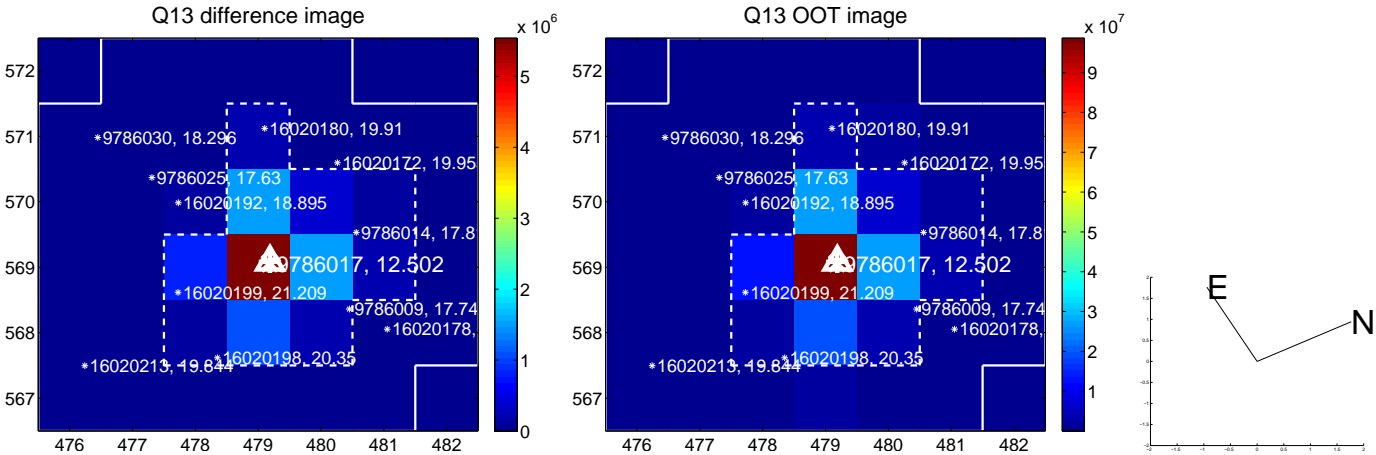
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



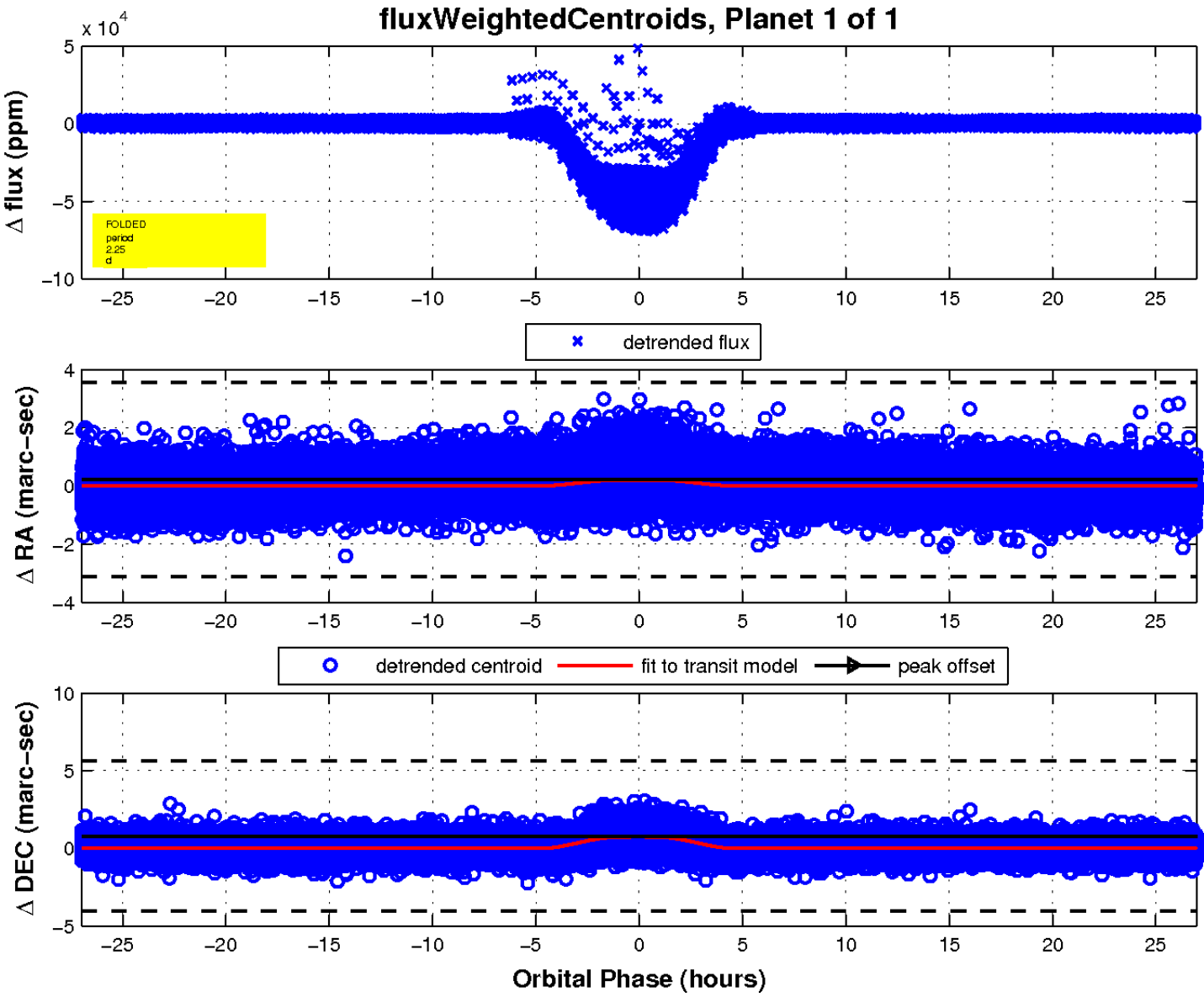
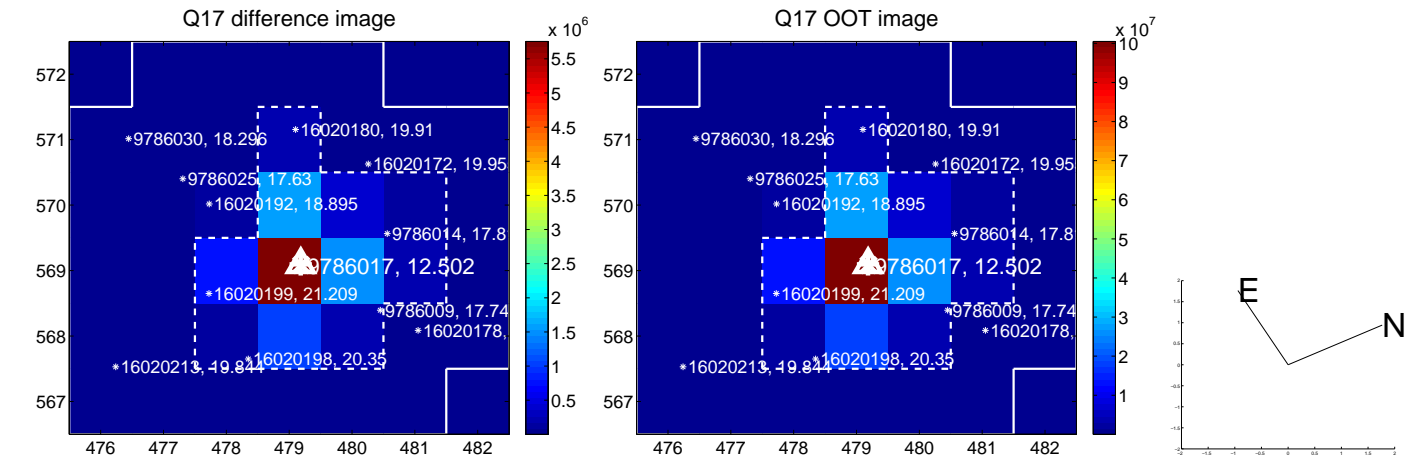
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

