

KIC 010619109

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})
010619109-01	OBS	7351.01	2.045165	132.365847	260526.5	6.362	5851.4	3823.7	2.13	7128	185.97	8154.41

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010619109-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—MOD_SEC_DV—MOD_SEC_ALT—MOD_ODDEVEN_DV—DEEP_V_SHAPED

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 010619109-01

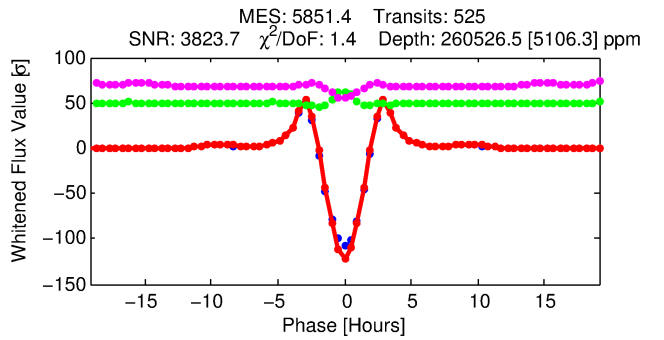
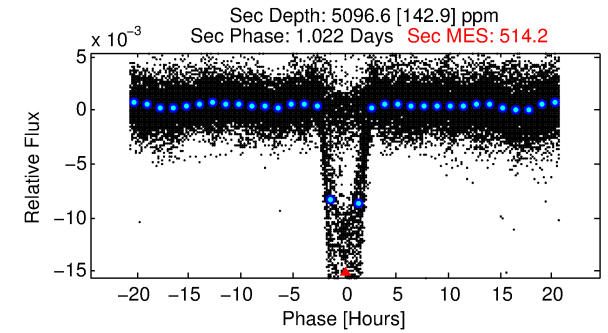
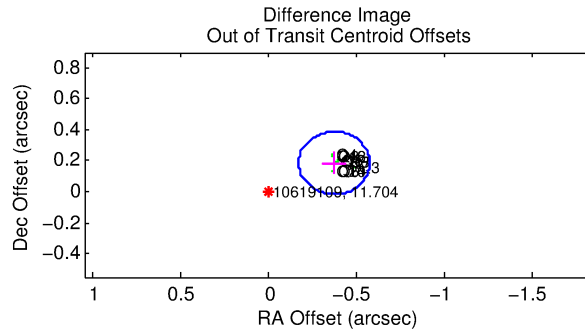
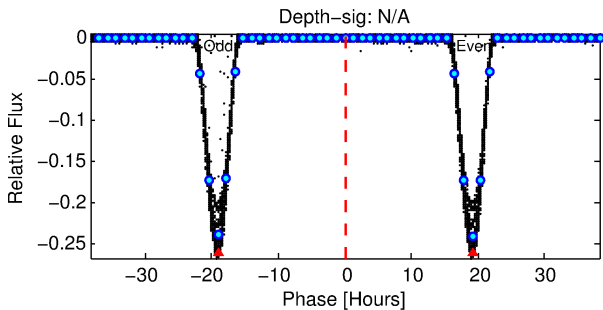
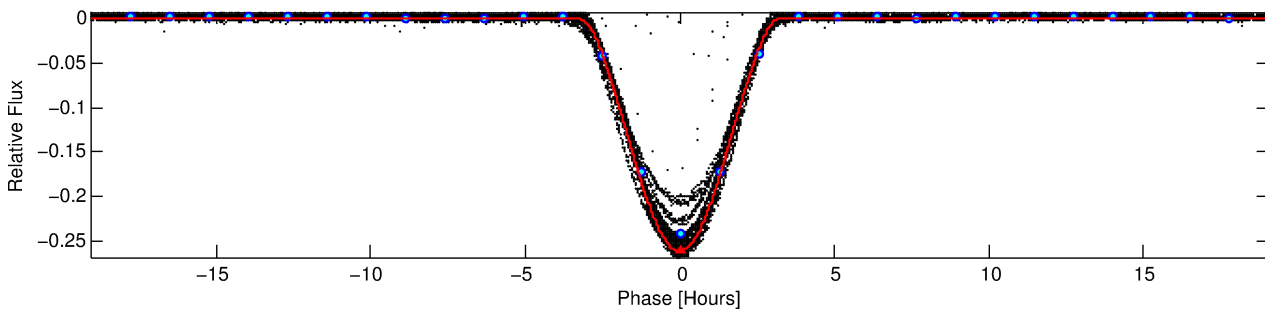
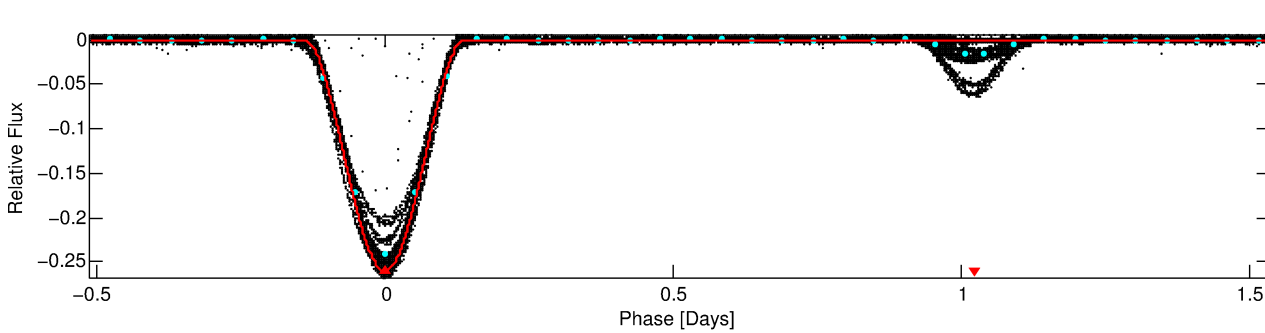
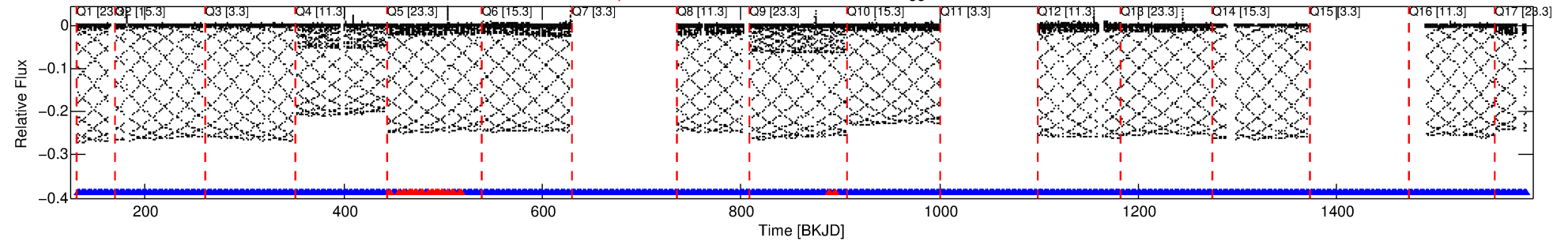
No Significant Match Found

DV One-Page Summary

KIC: 10619109 Candidate: 1 of 1 Period: 2.045 d

KOI: K07351.01 Corr: 0.964

Kp: 11.70 R*: 2.13 Rs Teff: 7128.0 K Logg: 3.95 Fe/H: -0.340



DV Fit Results:

Period = 2.04516 [0.00000] d
Epoch = 132.3658 [0.0000] BKJD
Rp/R* = 0.7982 [0.0026]
a/R* = 3.90 [0.00]
b = 1.00 [0.01]
Seff = 8154.41 [4767.73]
Teq = 2423 [354] K
Rp = 185.97 [68.73] Re
a = 0.0360 [0.0125] AU
Ag = 0.10 [0.06] [-15.44σ]
Teffp = 2132 [103] K [-0.79σ]

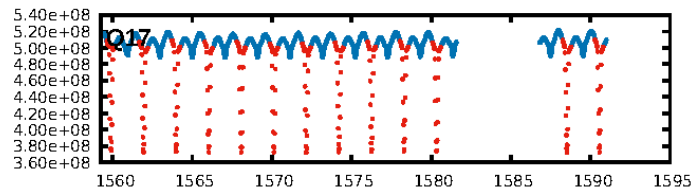
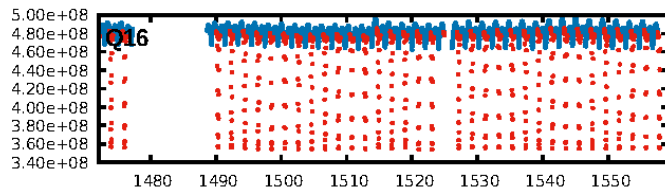
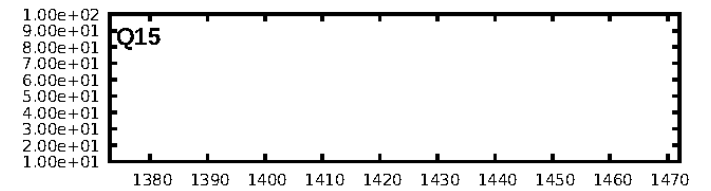
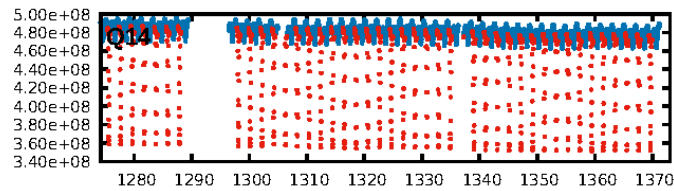
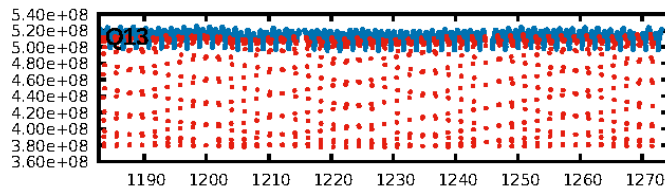
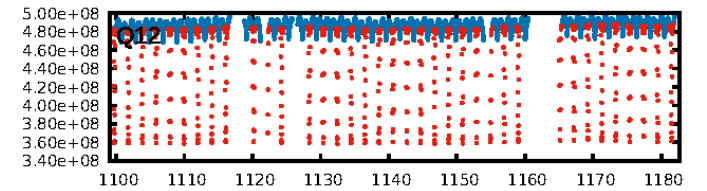
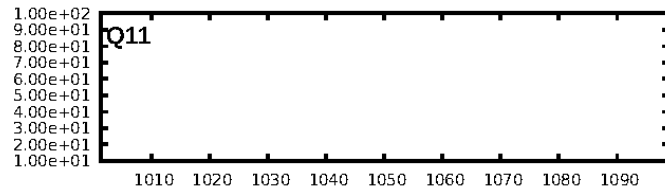
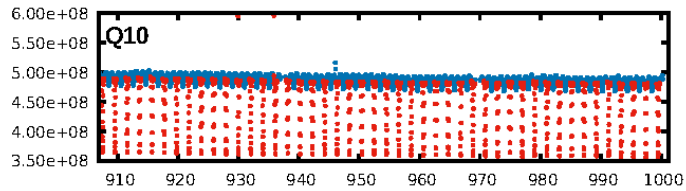
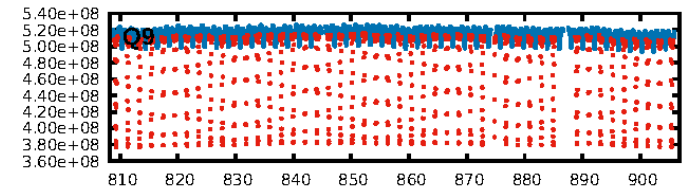
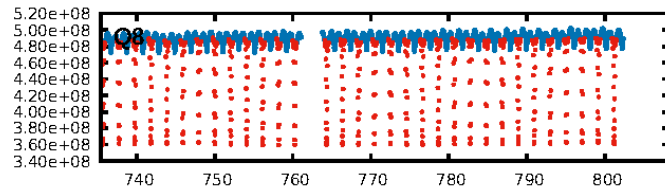
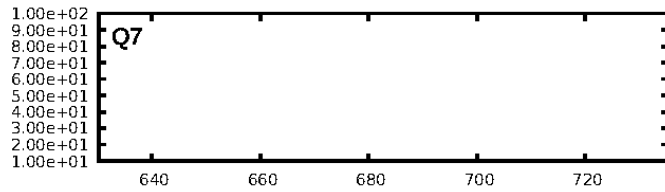
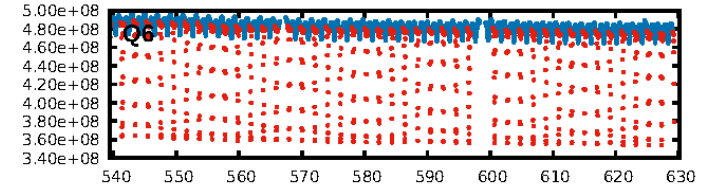
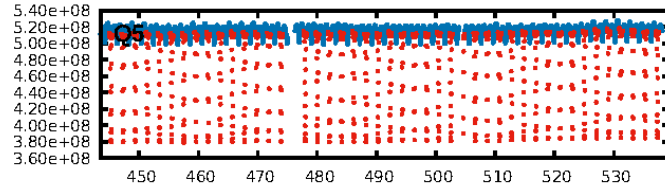
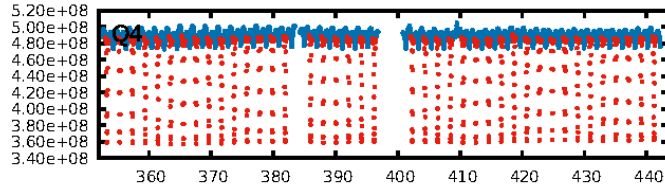
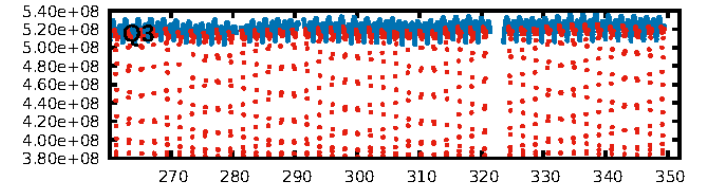
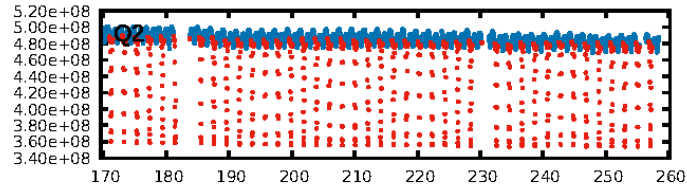
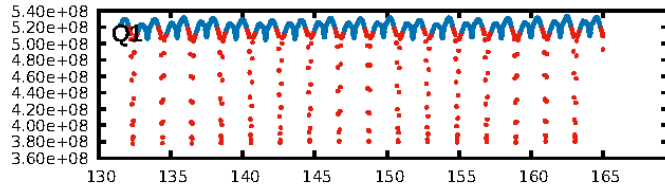
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.95 [469/495]
GhostDiagnostic-chr: 1.11
Centroid-sig: 0.0%
Centroid-so: 0.428 arcsec [1296.51σ]
OotOffset-rm: 0.417 arcsec [6.20σ]
KicOffset-rm: 0.278 arcsec [4.09σ]
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]

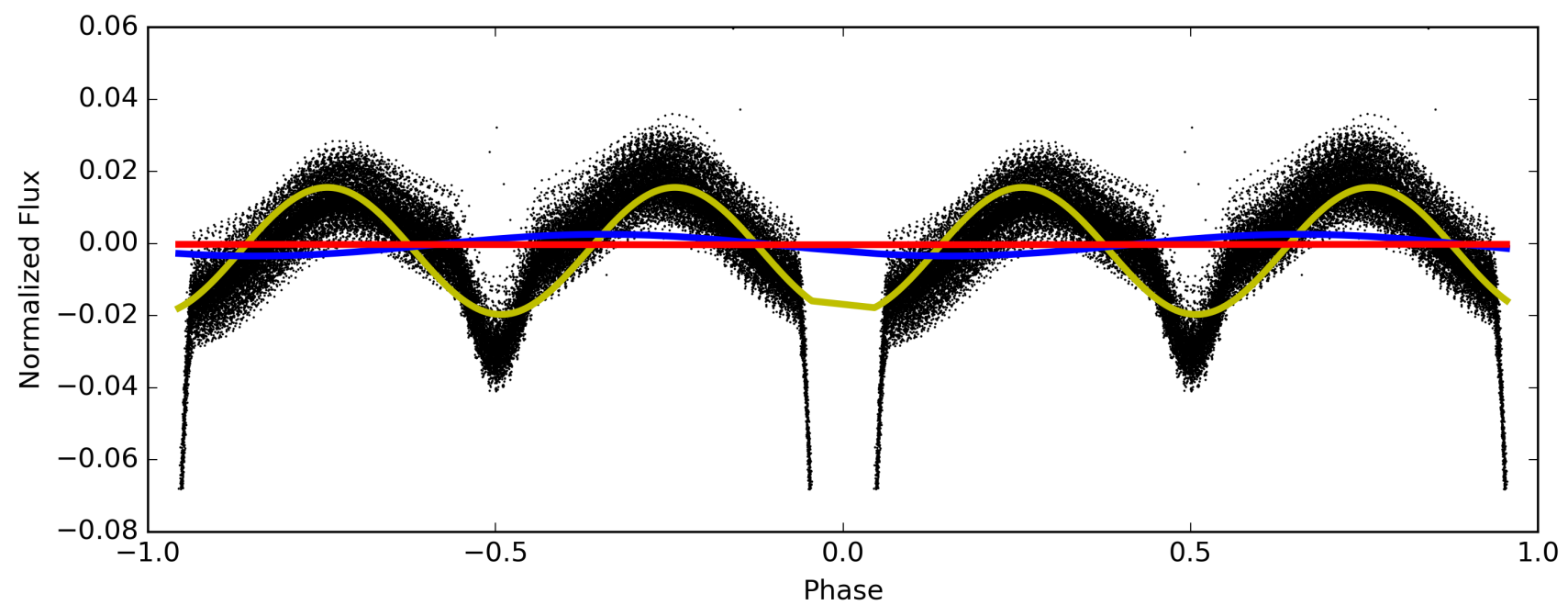
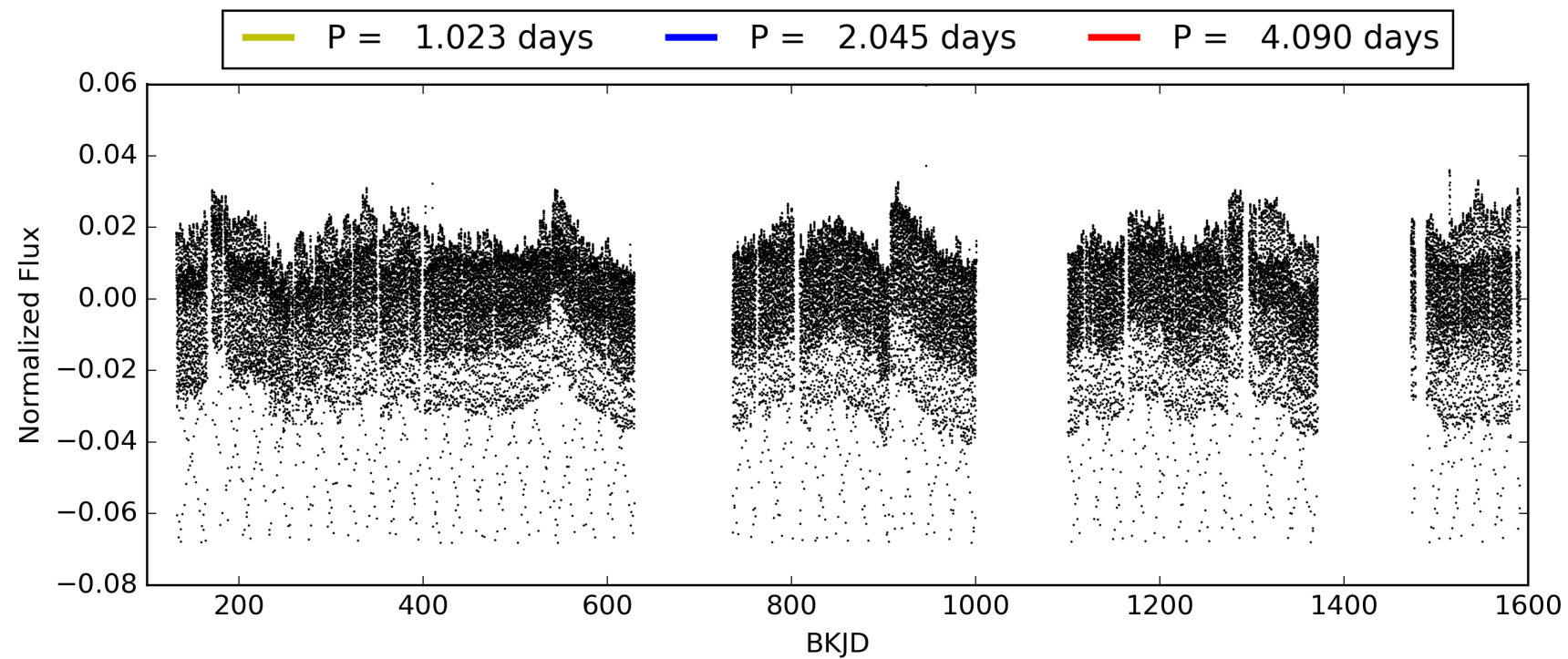
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 10:41:56 Z

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

TCE 010619109-01, PDC Light Curves

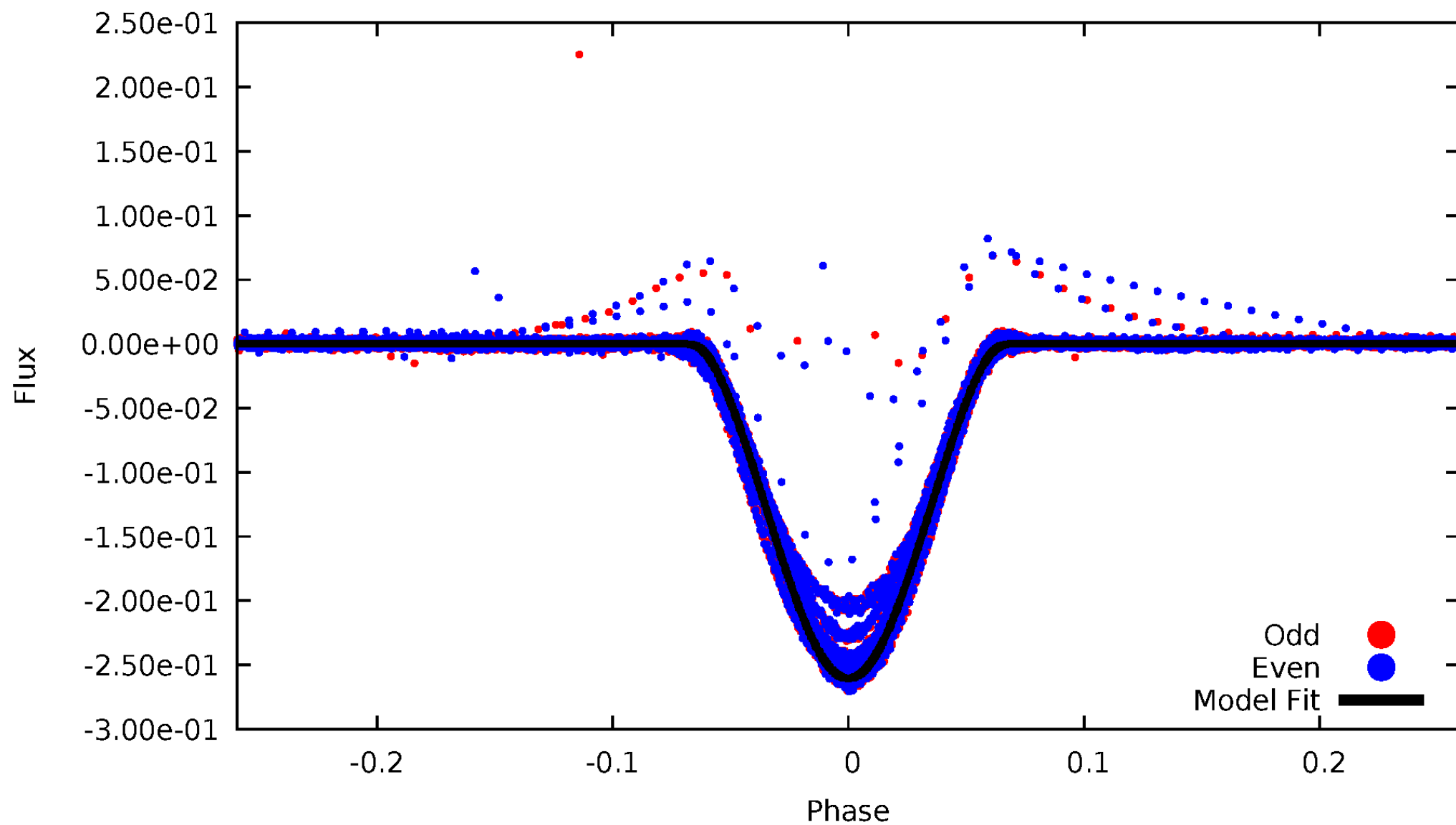


TCE 010619109-01



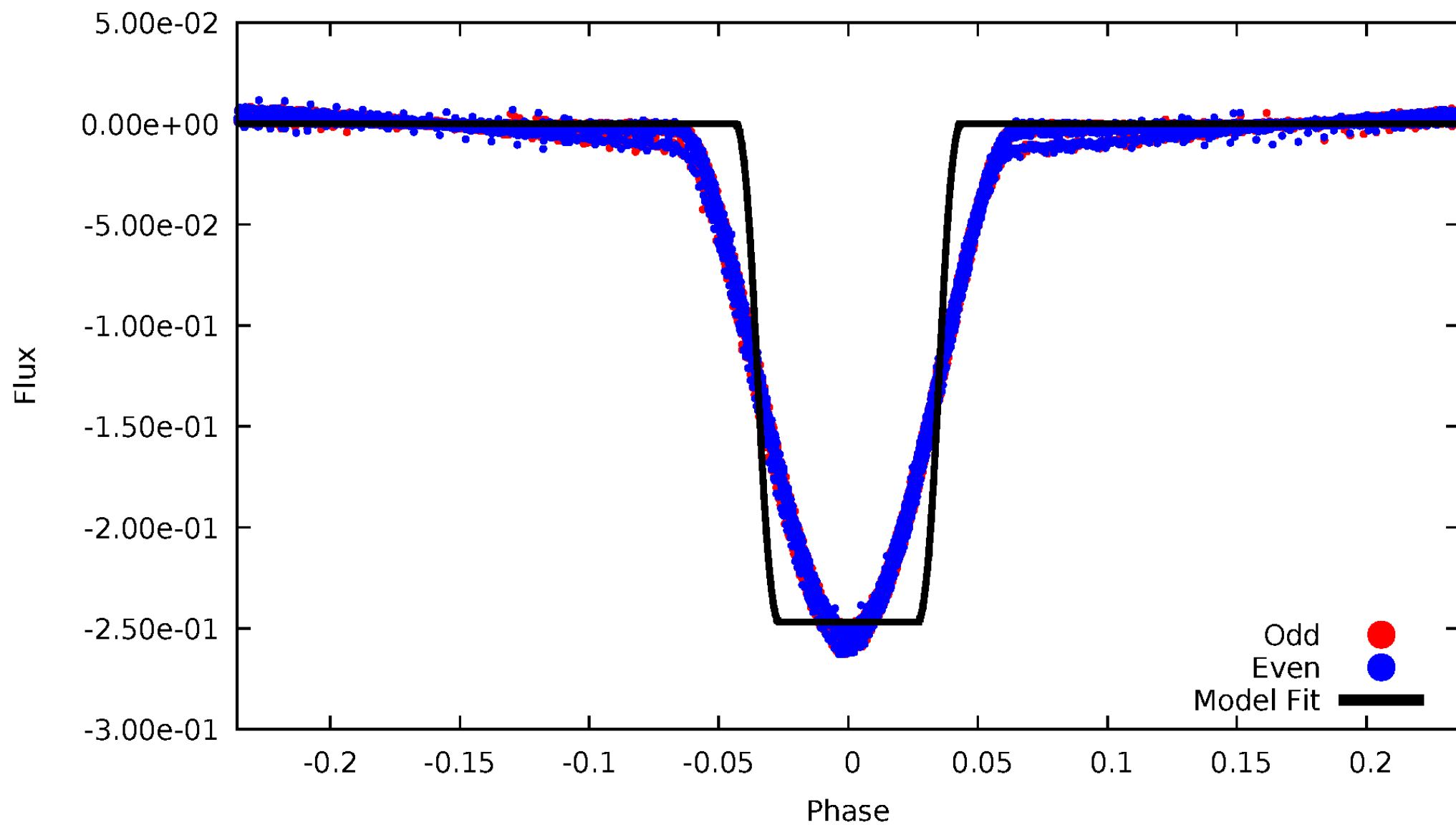
DV Odd/Even

TCE 010619109-01



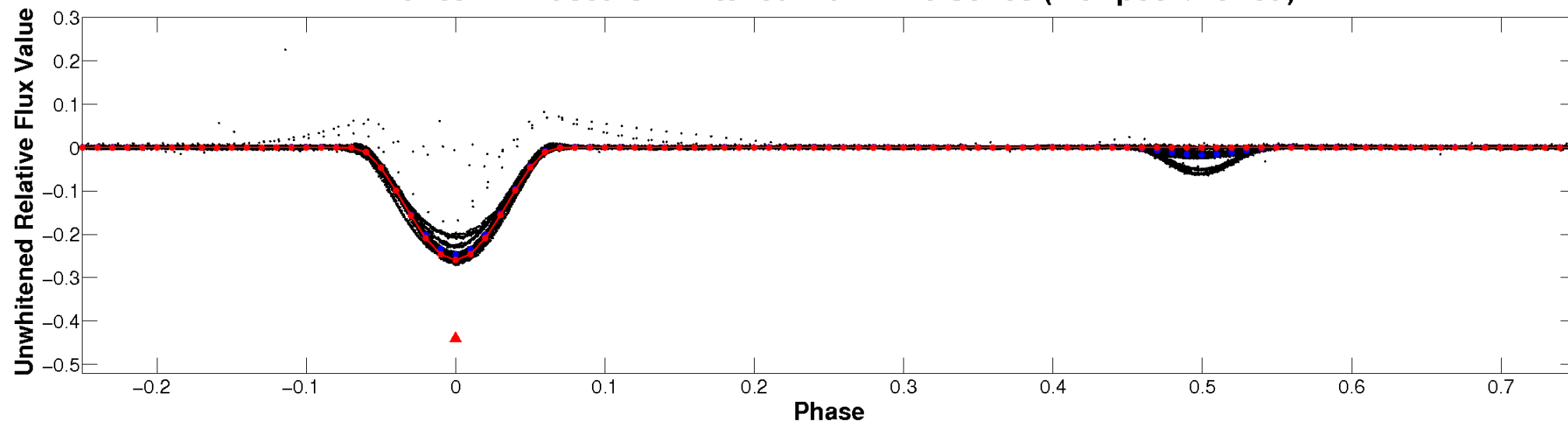
ALT Odd/Even

TCE 010619109-01

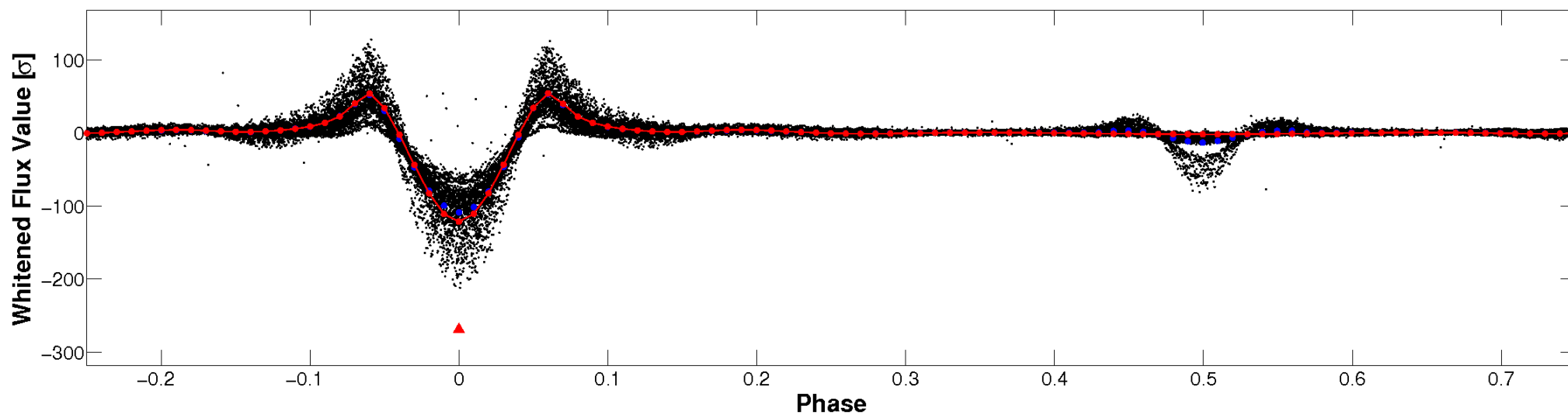


Non-Whitened Vs. Whitened Light Curve

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

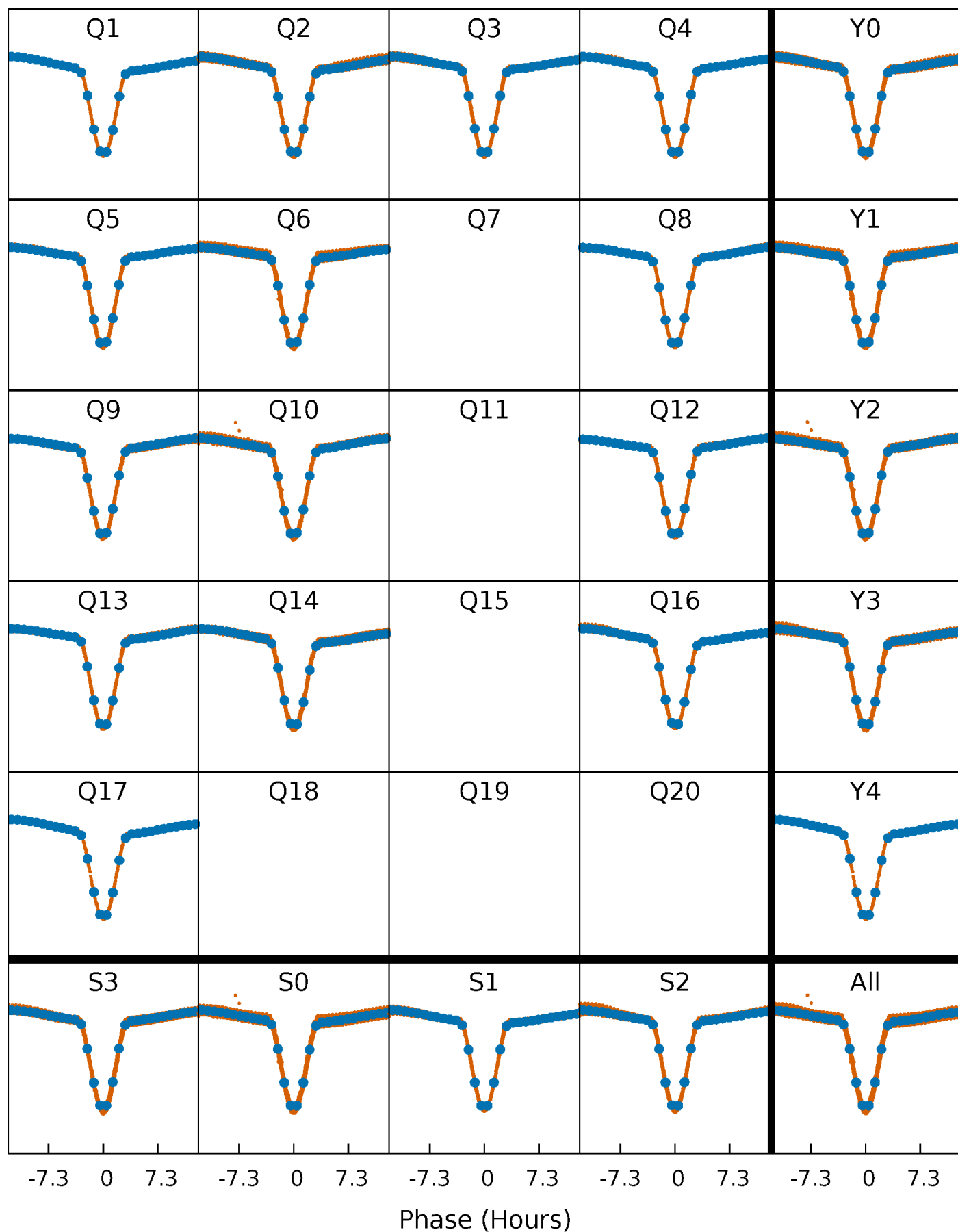


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



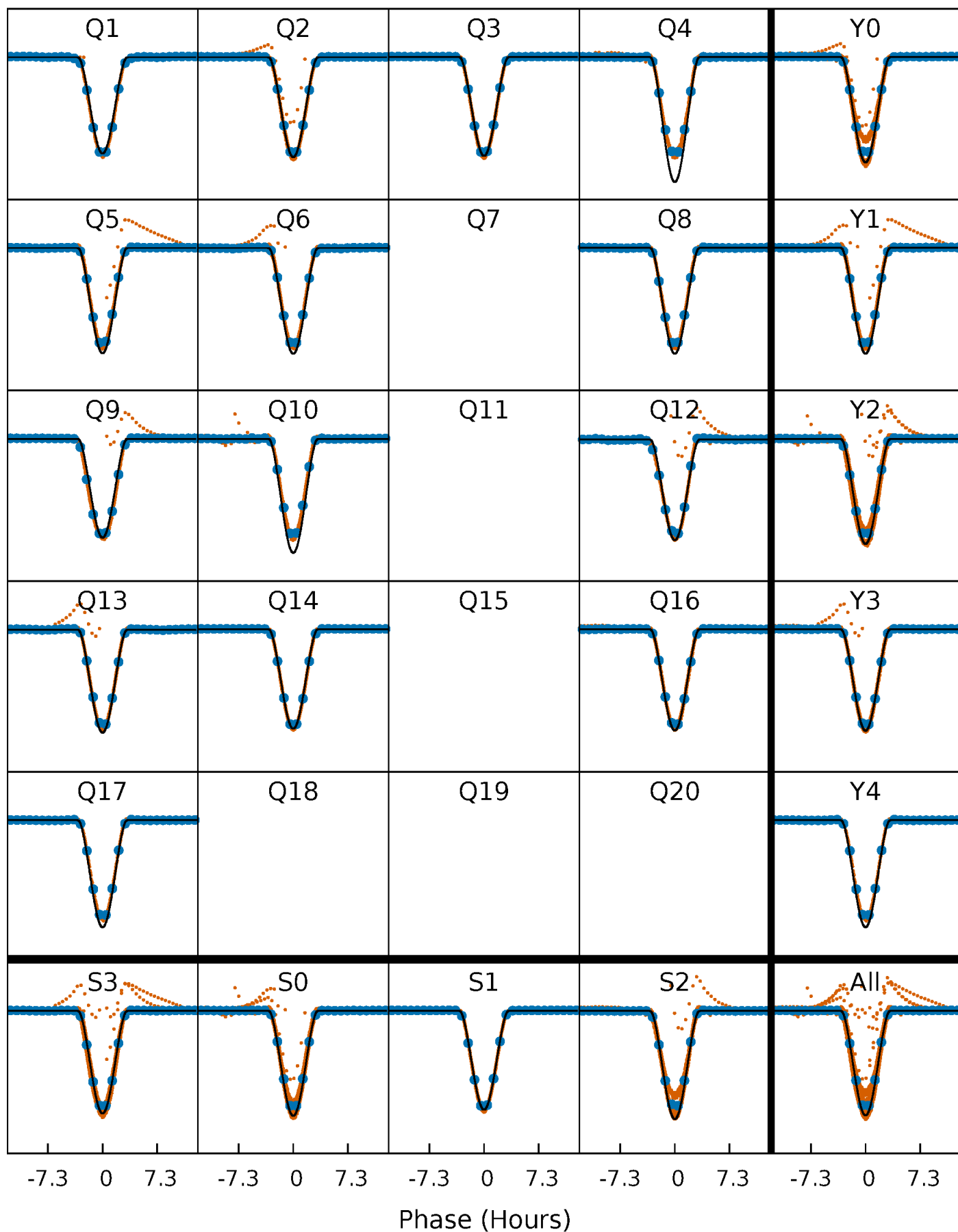
PDC Quarter-Phased Transit Curves

TCE 010619109-01 P= 2.045165 Days $T_0=132.365847$ (BKJD)



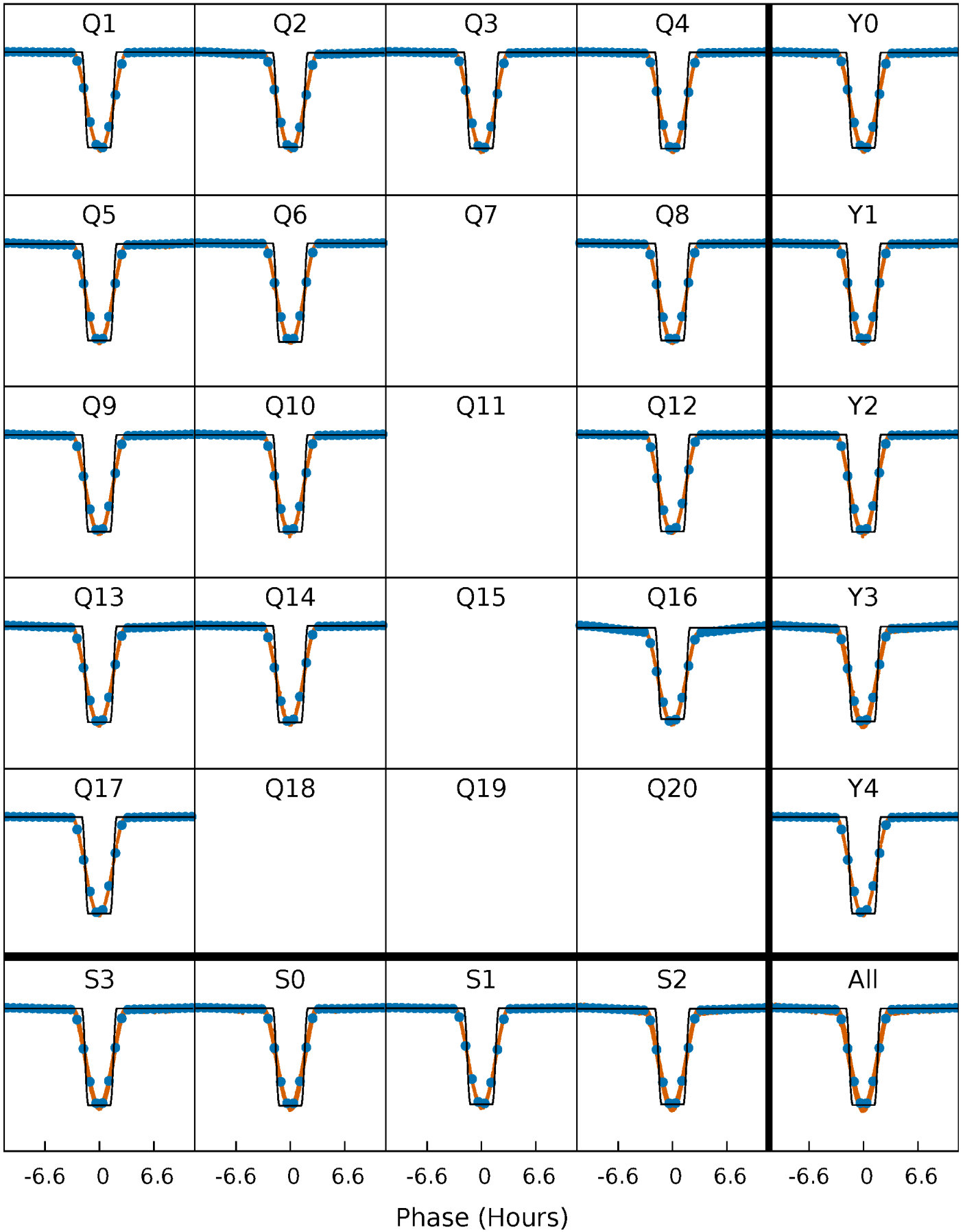
DV Quarter-Phased Transit Curves

TCE 010619109-01 P= 2.045165 Days $T_0=132.365847$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

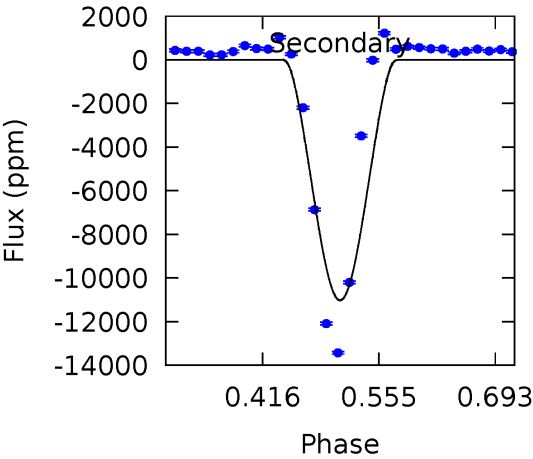
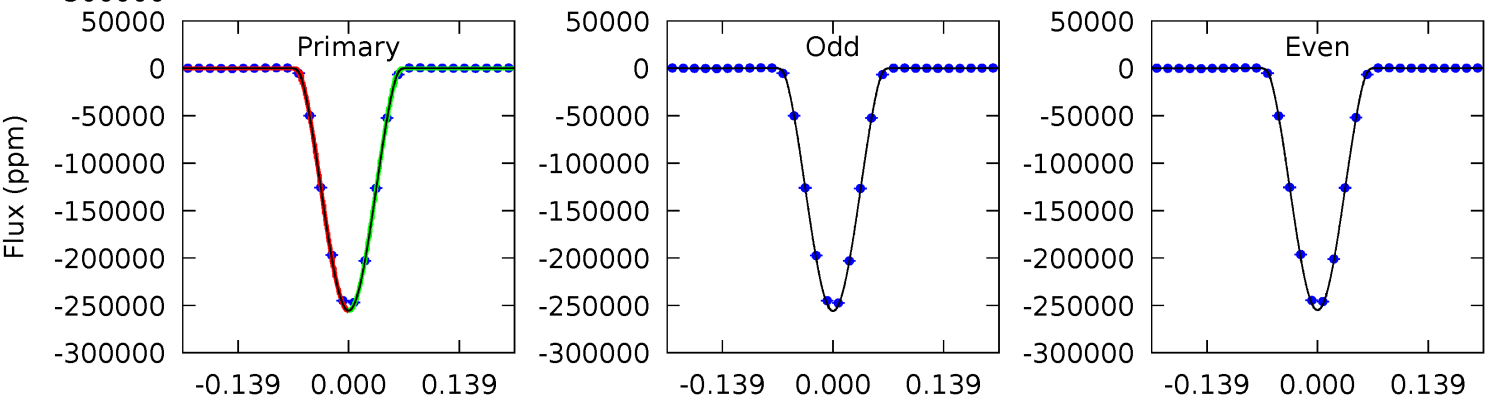
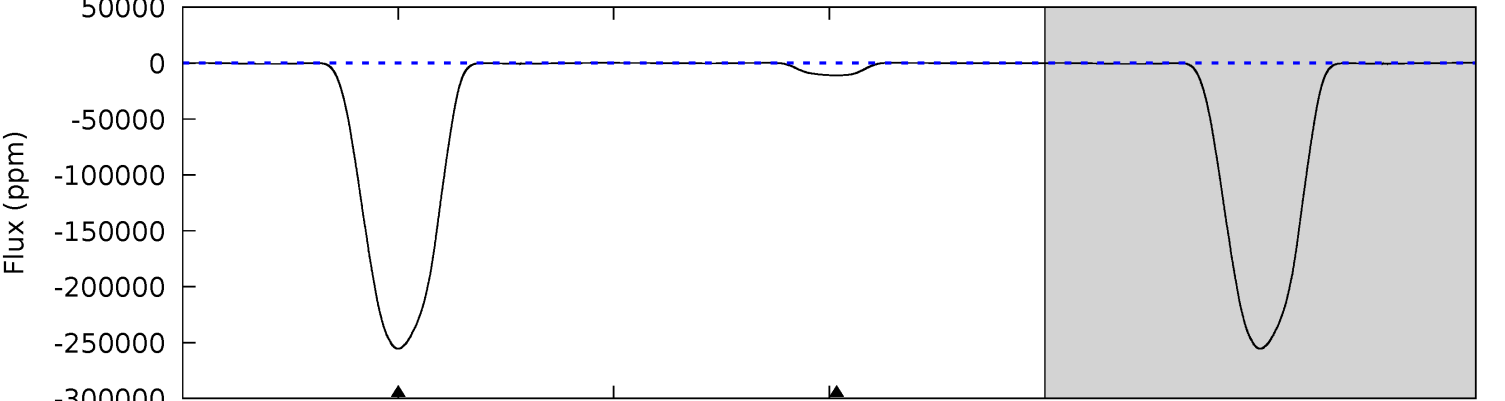
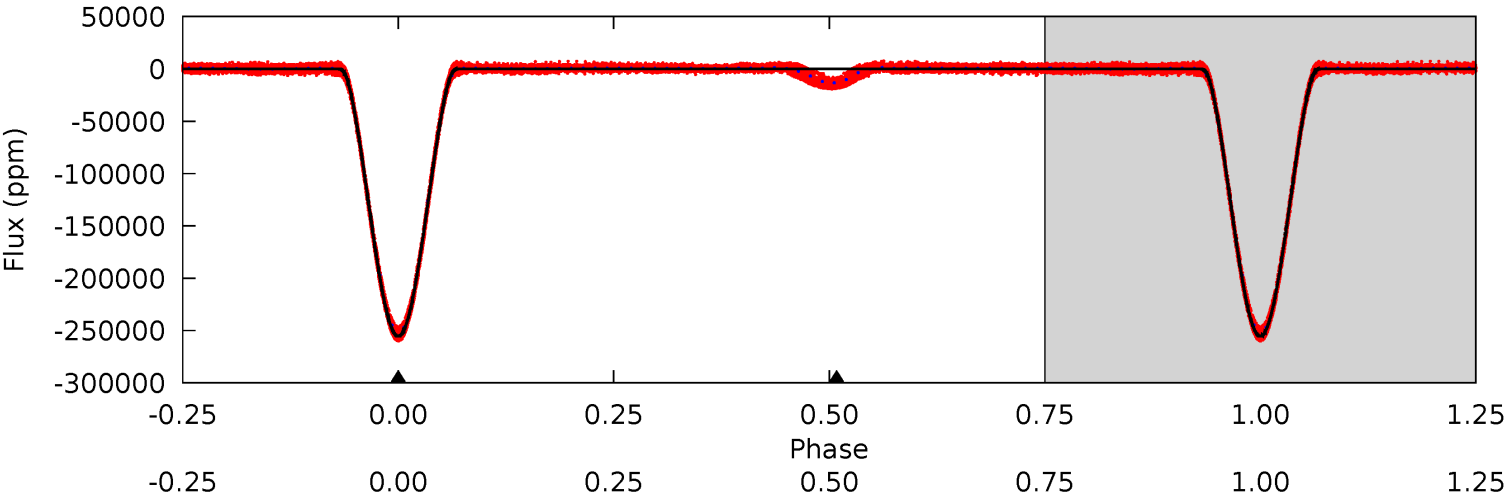
TCE 010619109-01 P= 2.045174 Days $T_0=132.362630$ (BKJD)



DV Model-Shift Uniqueness Test

010619109-01, P = 2.045165 Days, E = 130.320682 Days

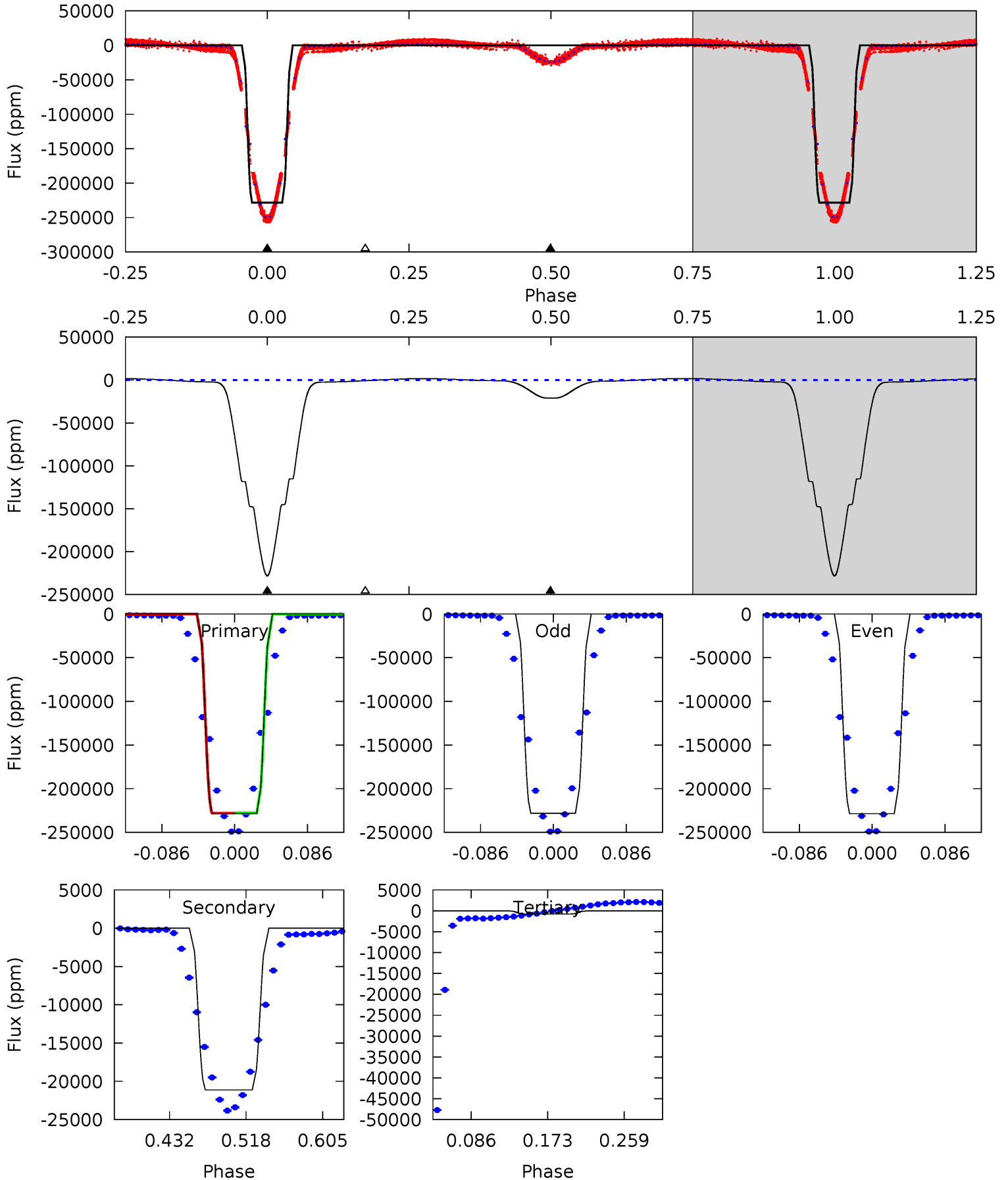
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11119	479.7	0	0	4.50	1.48	11.5	11119	11119	479.7	479.7	19.2	0.97	0.00	0



Alt Model-Shift Uniqueness Test

010619109-01, P = 2.045174 Days, E = 130.317456 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6516	603.0	21.9	0	4.60	1.71	37.3	6494	6516	581.2	603.0	4.67	1.00	0.01	0.78



Stellar Parameters For KIC 010619109

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7128^{+256}_{-342}	$3.950^{+0.322}_{-0.138}$	$-0.340^{+0.300}_{-0.300}$	$2.135^{+0.526}_{-0.789}$	$1.479^{+0.217}_{-0.325}$	$0.214^{+0.488}_{-0.084}$
	+4%/-5%	+8%/-3%	+88%/-88%	+25%/-37%	+15%/-22%	+228%/-39%
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 010619109-01 / KOI 7351.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-11023 ± 23	$184.17^{+25.45}_{-35.22}$	3346^{+249}_{-322}	-2664^{+5064}_{-301}	$0.234^{+0.109}_{-0.048}$
Alt.	-21128 ± 35	$113.60^{+16.80}_{-23.54}$	3319^{+268}_{-362}	3916^{+115}_{-138}	$1.199^{+0.624}_{-0.277}$

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 $A_{obs} \gg 1.0$

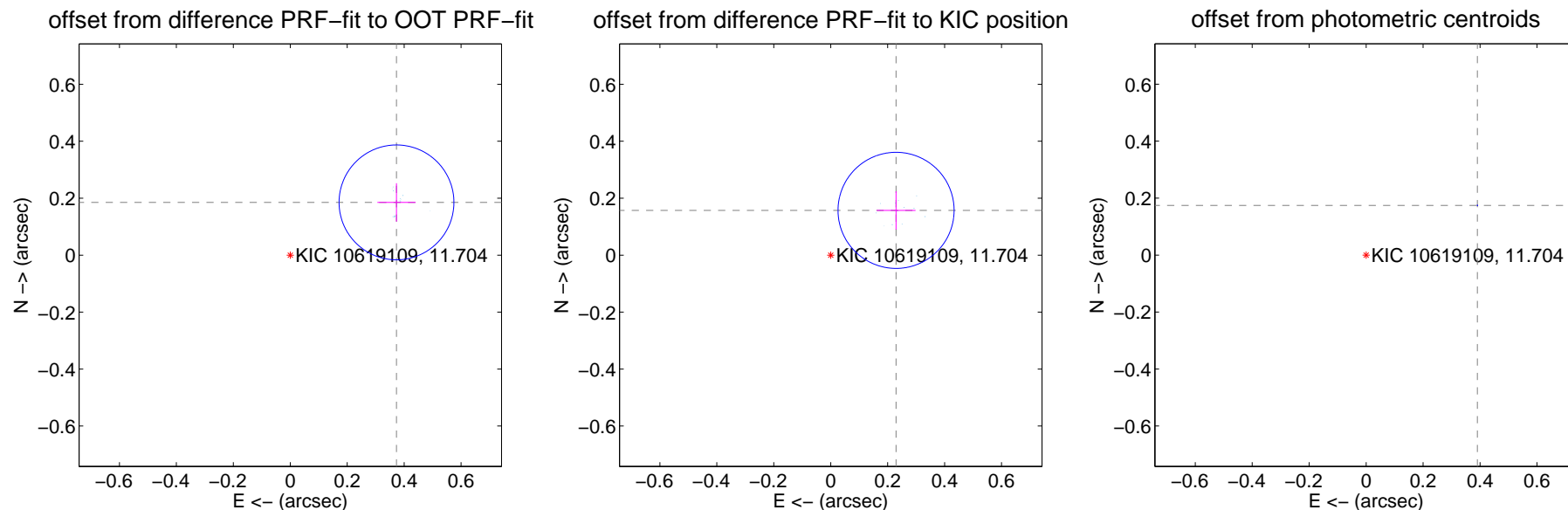
DV Centroid Data

Supplemental centroid analysis for 010619109-01. **Kepler magnitude: 11.70.** Transit SNR 3823.73

There are 14 quarters with good PRF difference image offsets

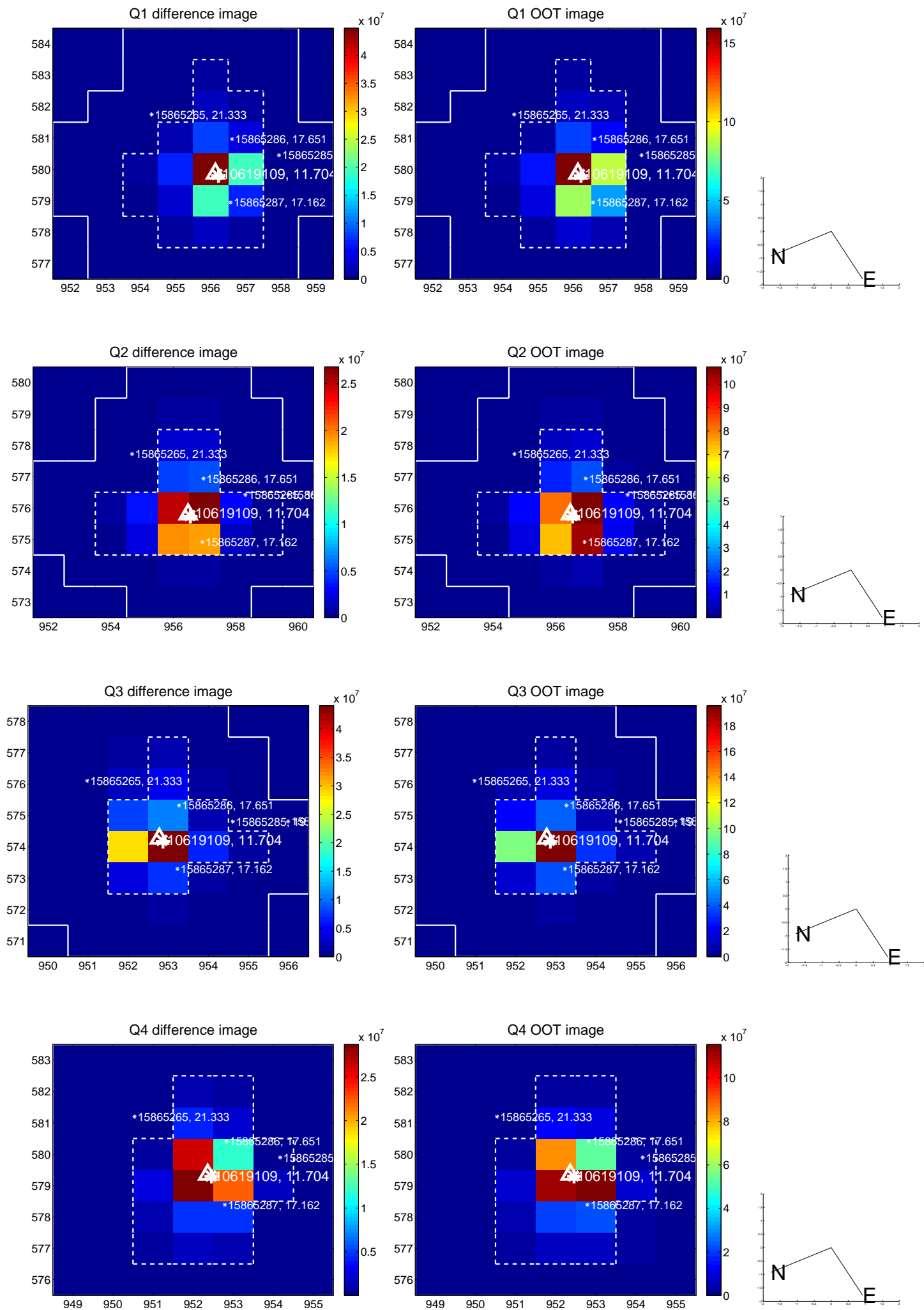
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.417 \pm 0.067	6.20	-0.373 \pm 0.067	0.185 \pm 0.067
PRF-fit source offset from KIC position	0.278 \pm 0.068	4.09	-0.230 \pm 0.068	0.157 \pm 0.067
photometric centroid source offset	0.43 \pm 0.00	1296.51	-0.39 \pm 0.00	0.17 \pm 0.00

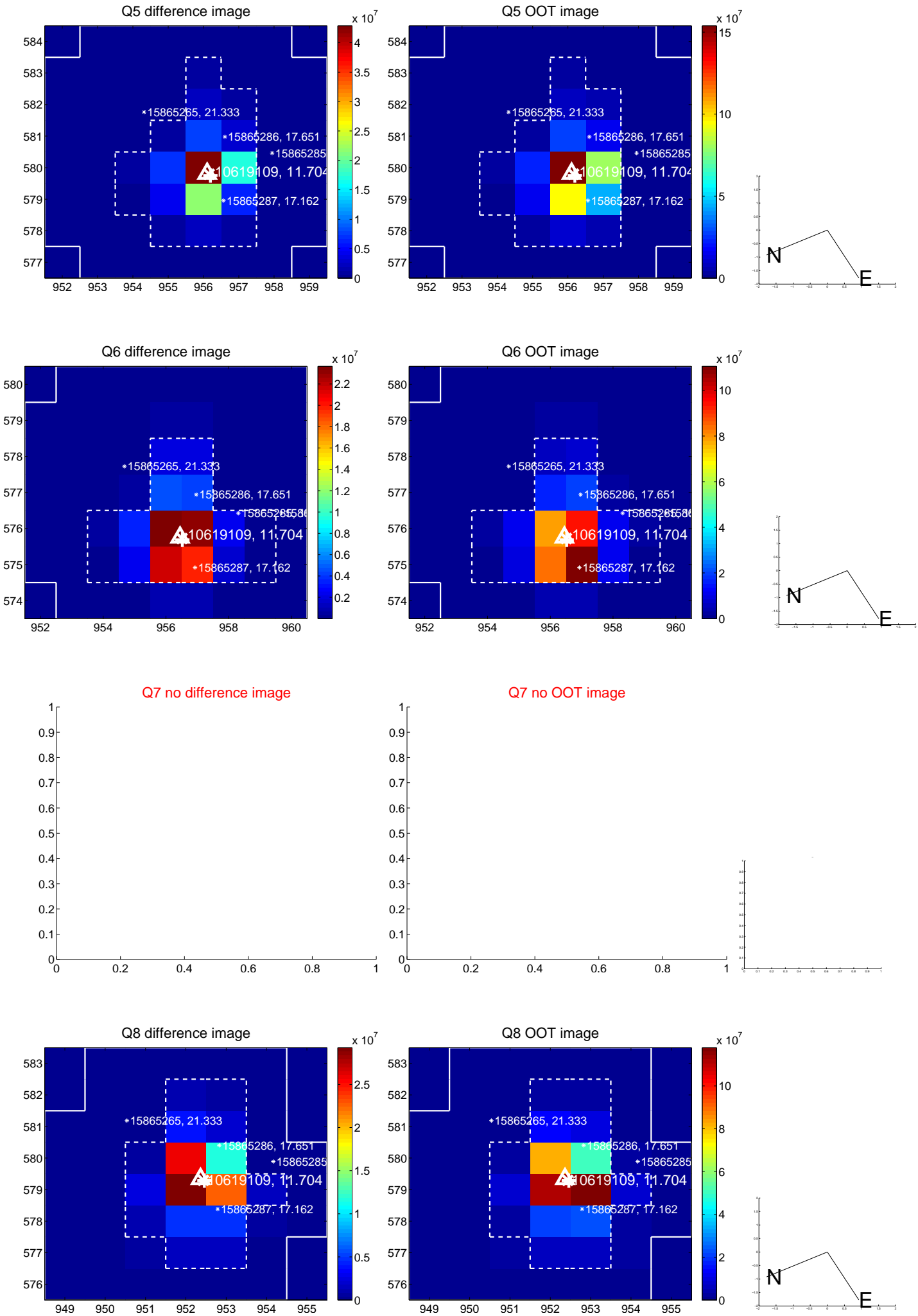


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

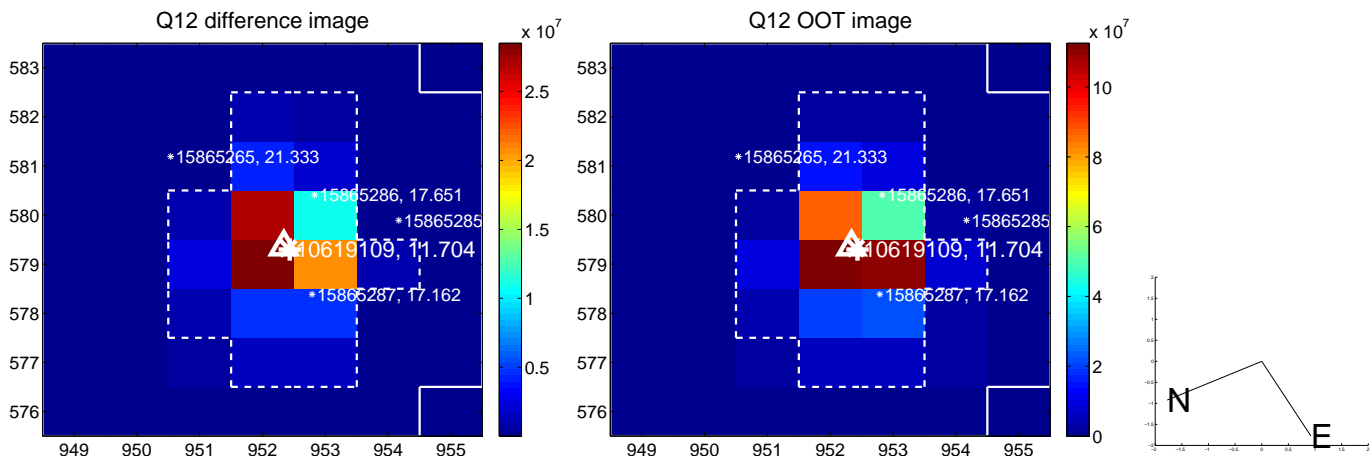
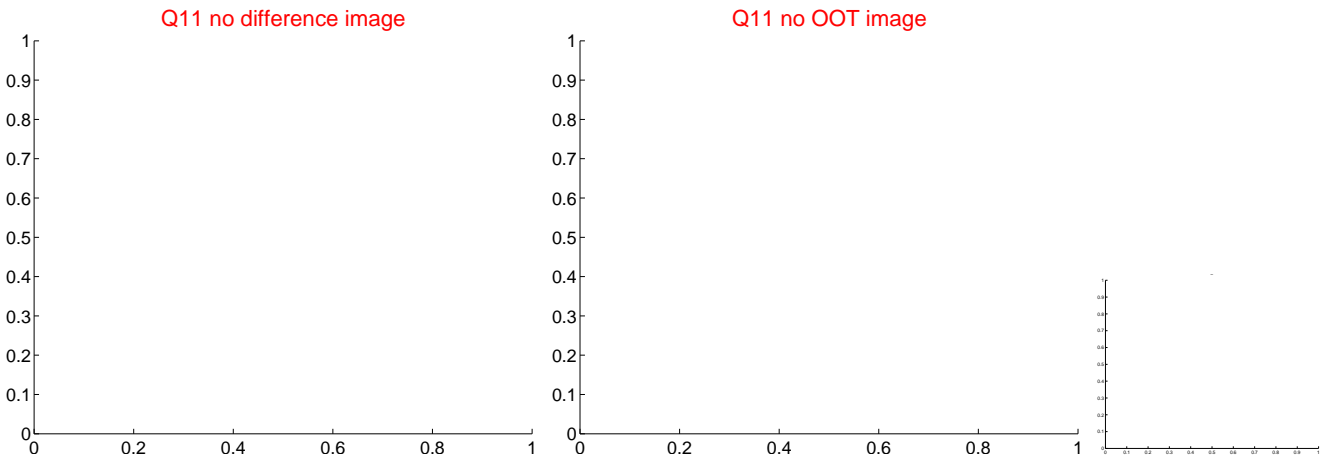
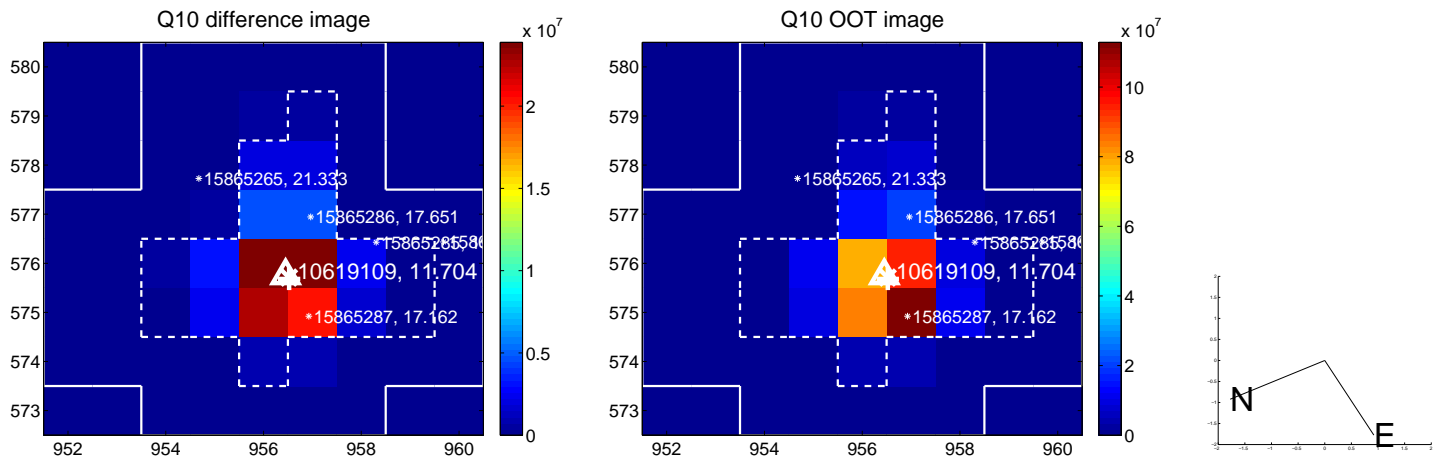
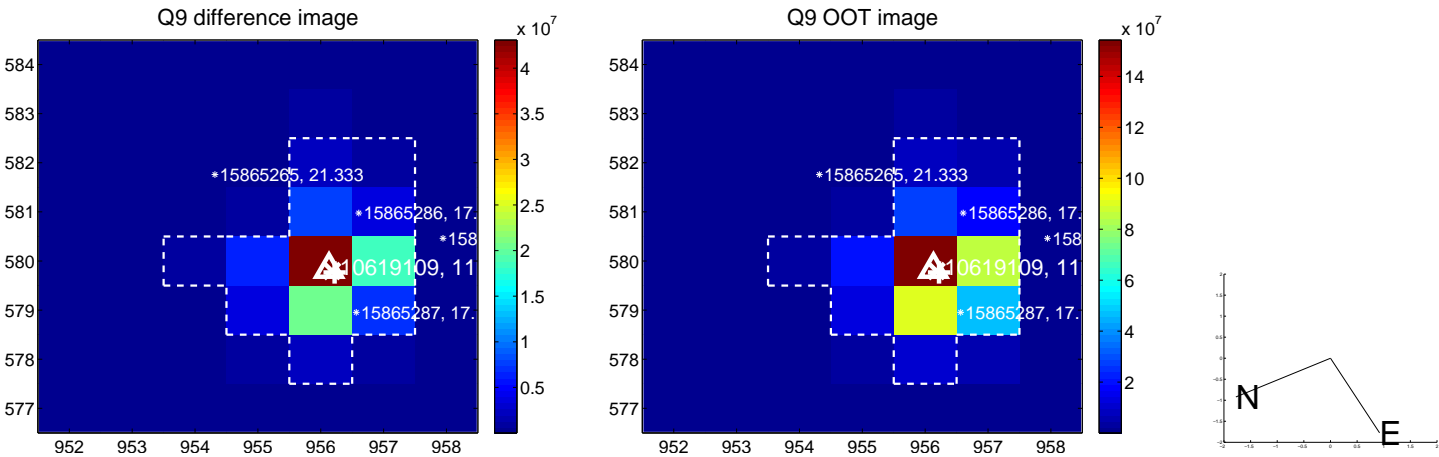
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



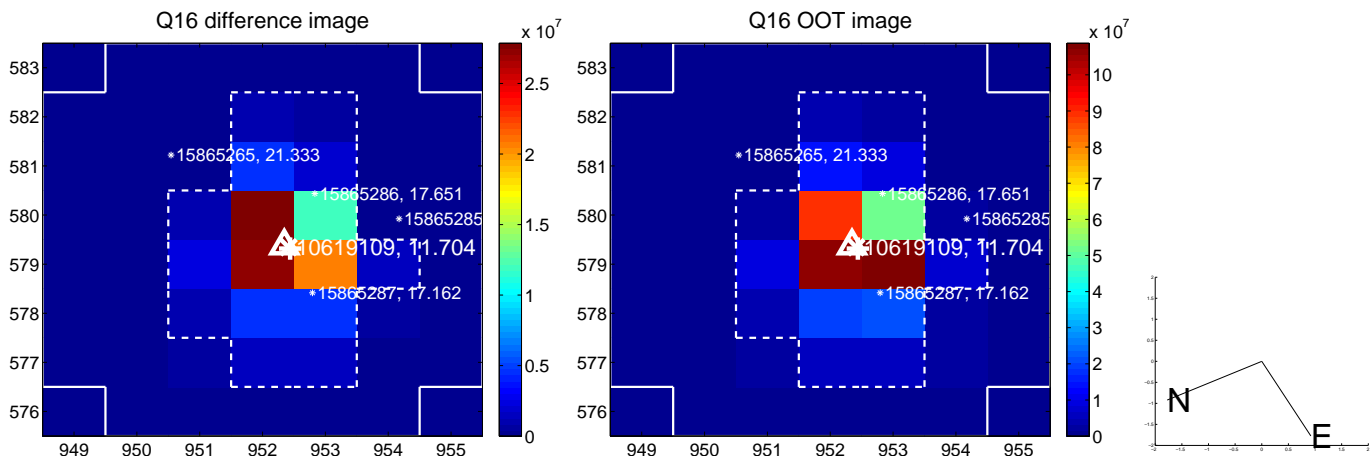
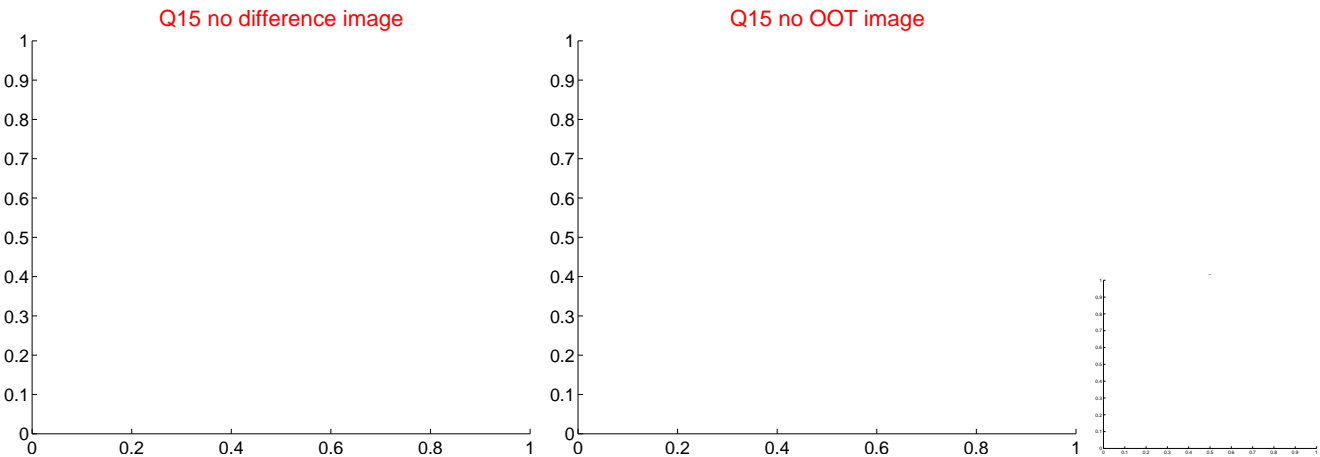
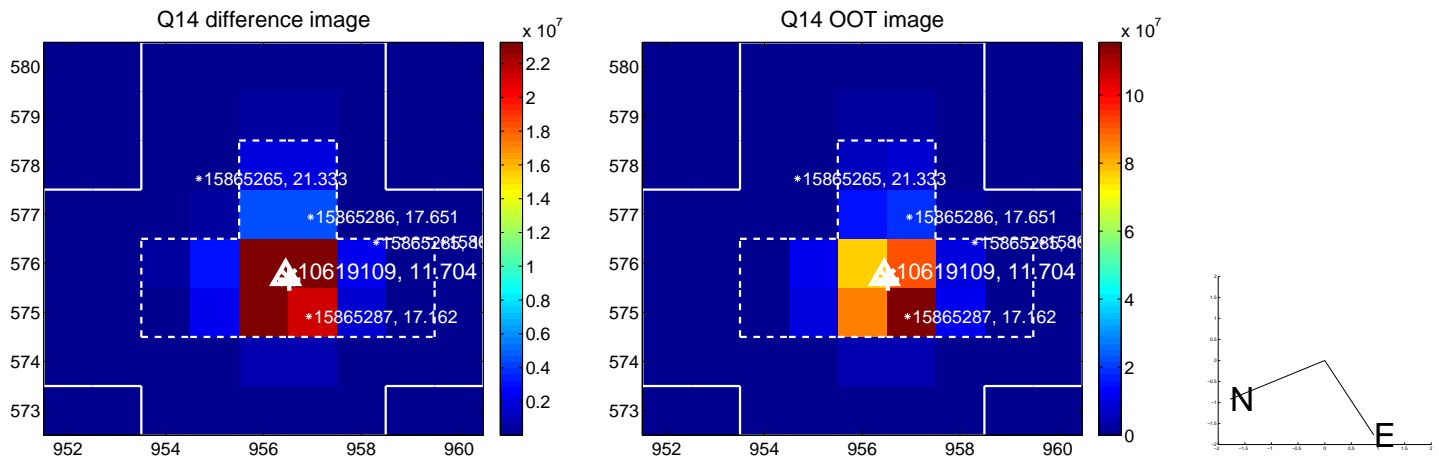
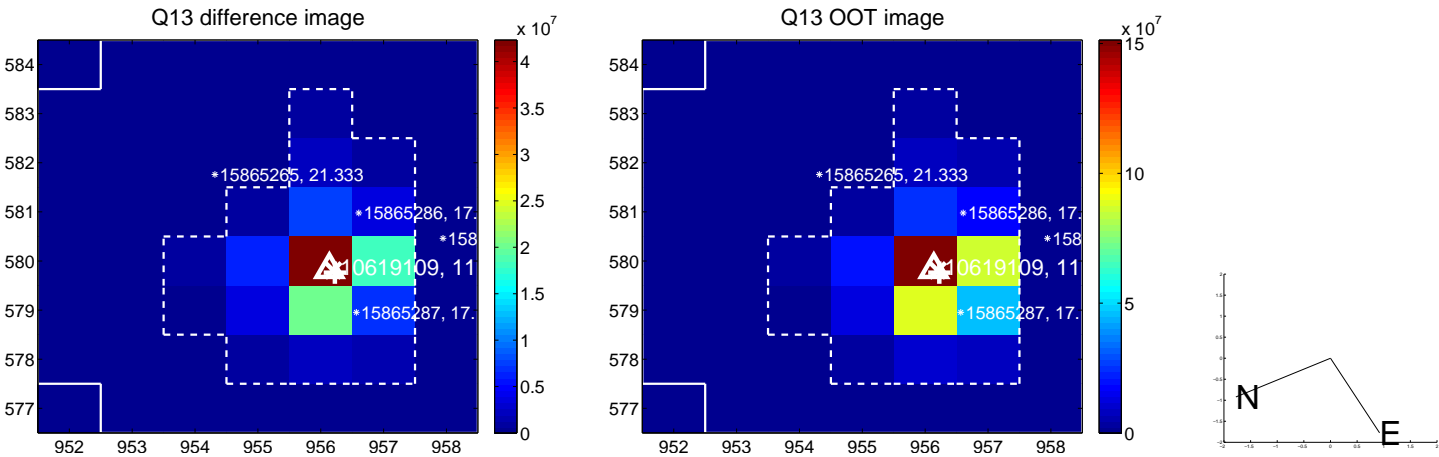
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



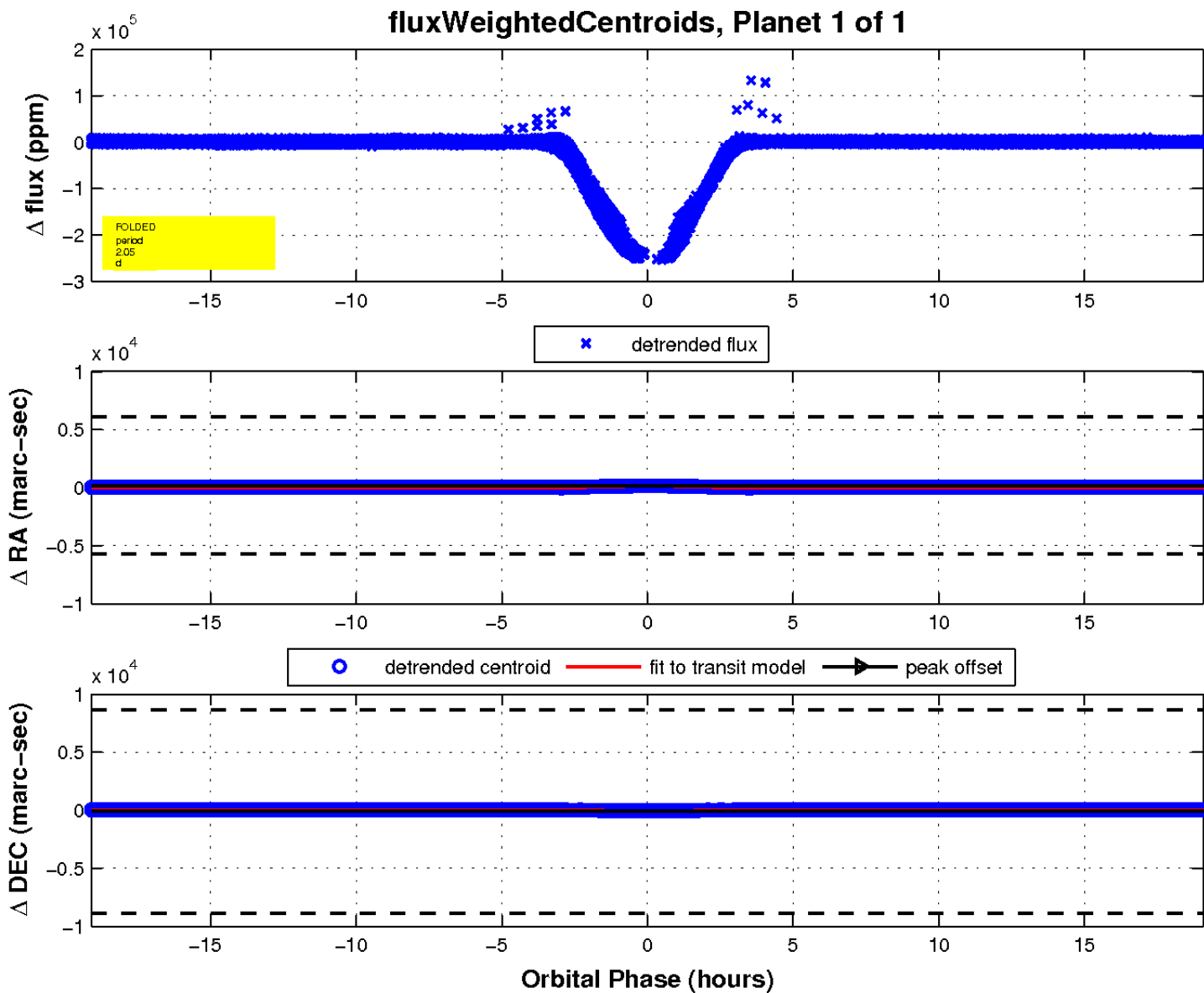
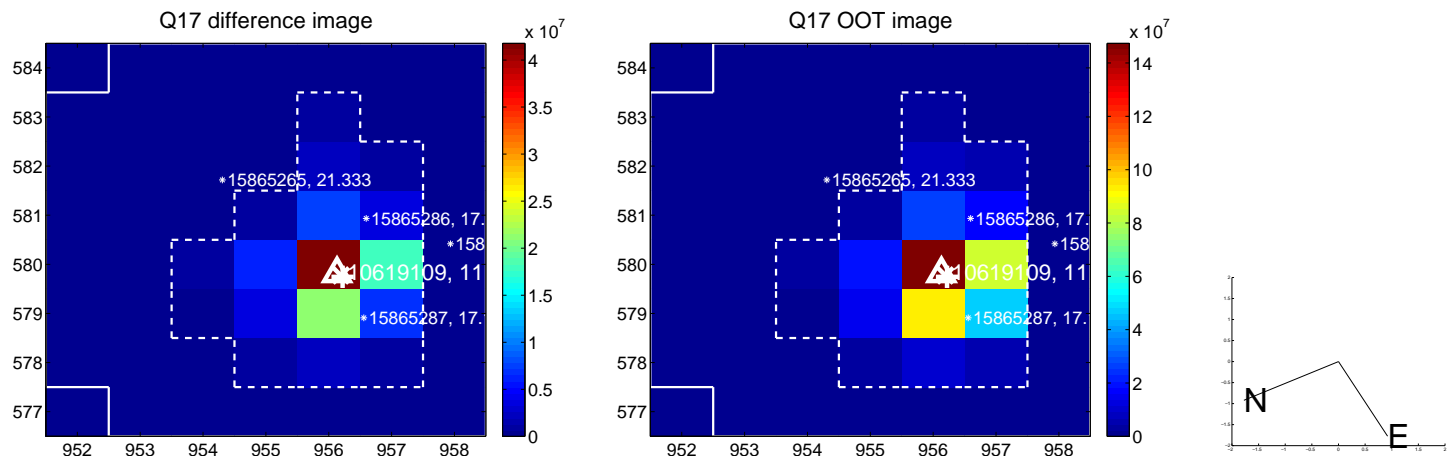
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

