

KIC 005963591

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})
005963591-01	OBS	5215.01	146.943061	190.455944	301.0	21.427	11.1	11.9	1.14	6237	3.88	5.79

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005963591-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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

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

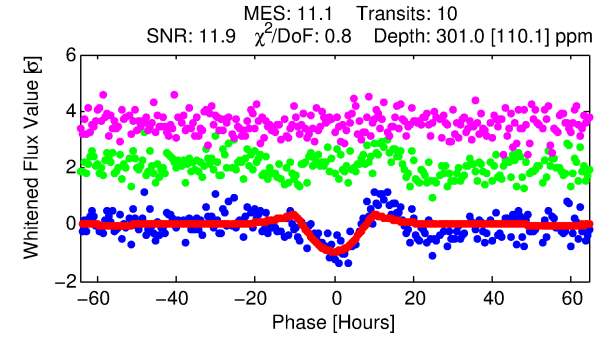
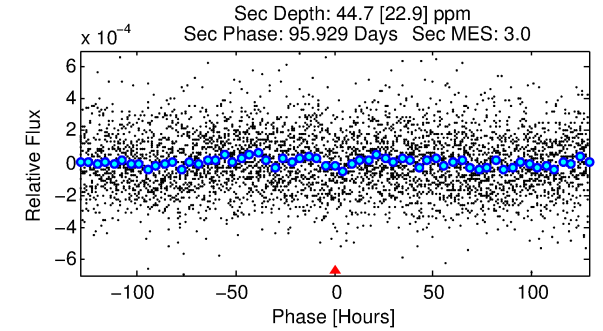
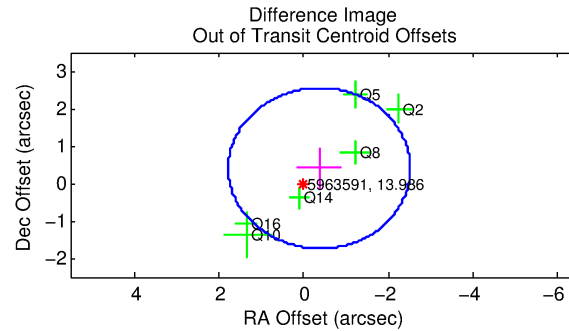
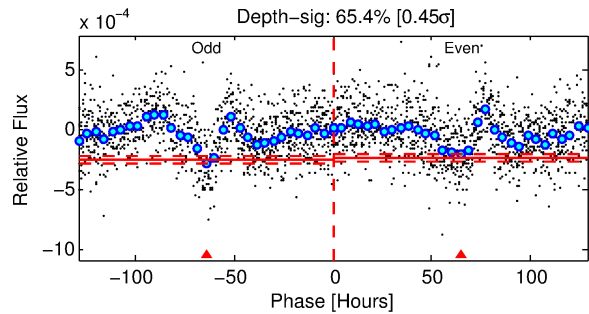
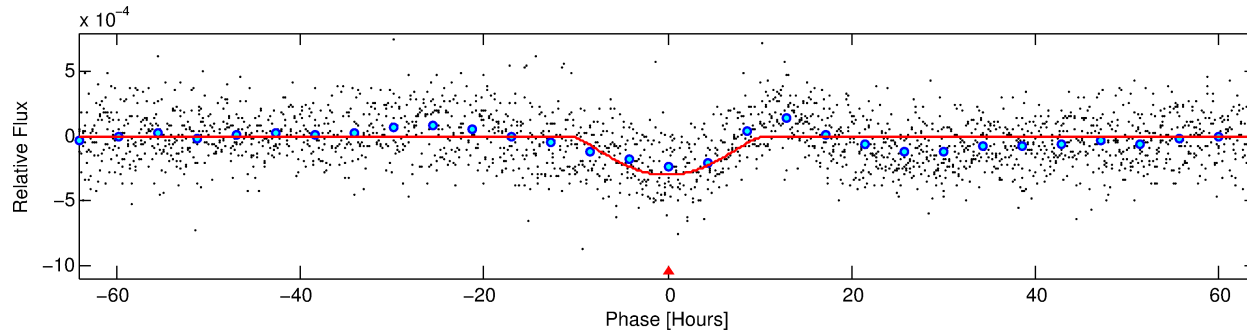
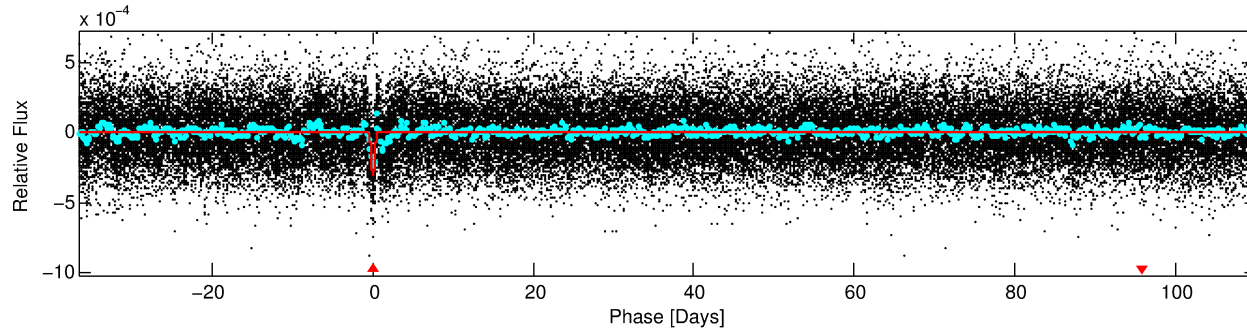
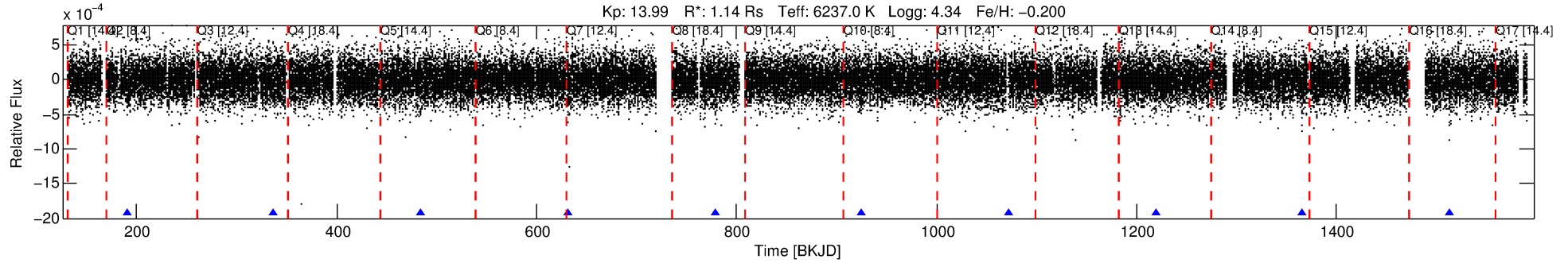
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005963591-01

No Significant Match Found

DV One-Page Summary

KIC: 5963591 Candidate: 1 of 1 Period: 146.943 d
KOI: K05215.01 Corr: 0.822



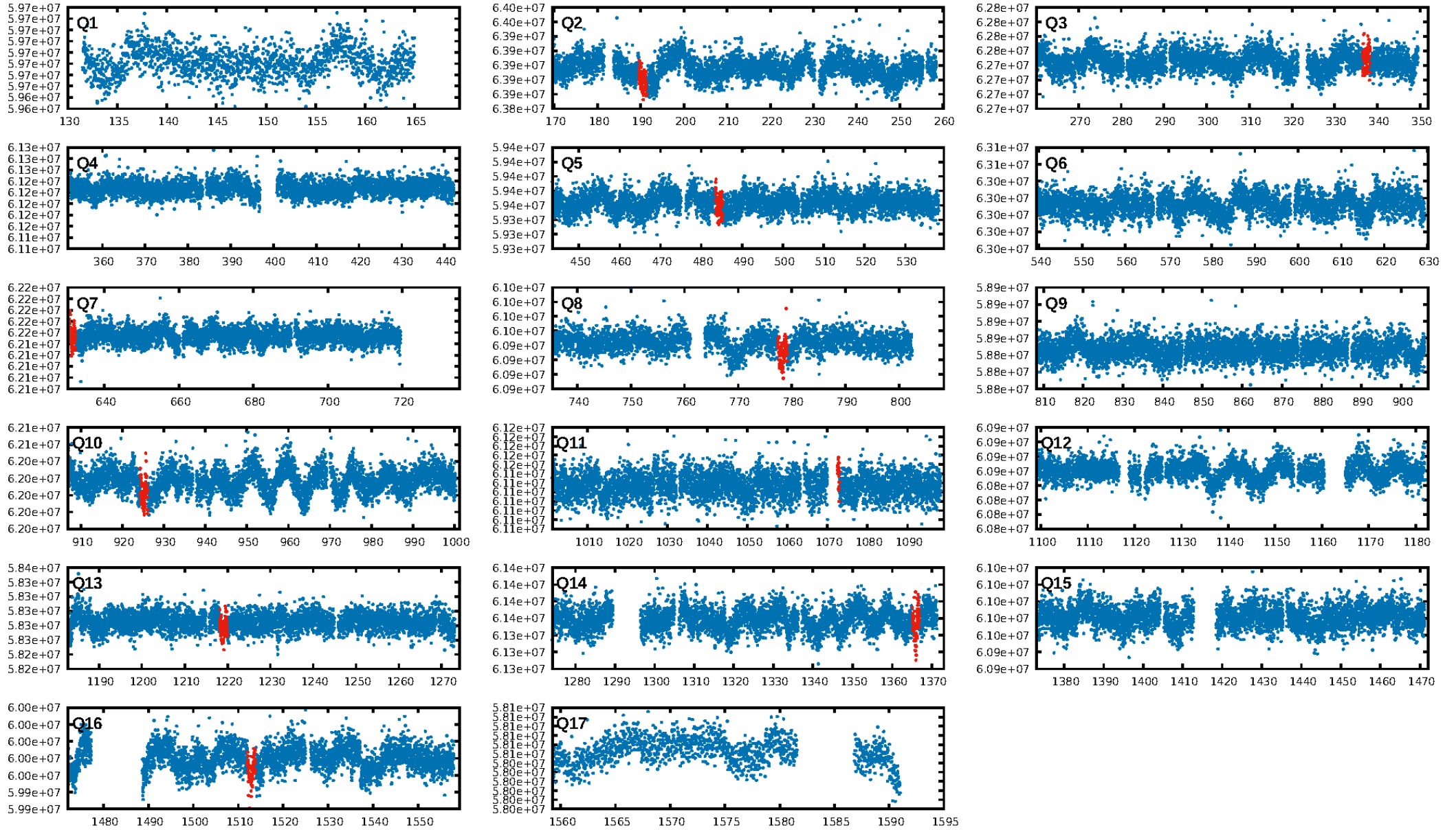
DV Fit Results:

Period = 146.94306 [0.00540] d
Epoch = 190.4559 [0.0287] BKJD
Rp/R* = 0.0313 [0.0575]
a/R* = 13.26 [6.37]
b = 1.00 [0.08]
Seff = 5.79 [1.30]
Teff = 396 [22] K
Rp = 3.88 [7.16] Re
a = 0.5493 [0.0817] AU
Ag = 492.96 [1831.35] [0.27 σ]
Teffp = 2881 [2672] K [0.93 σ]

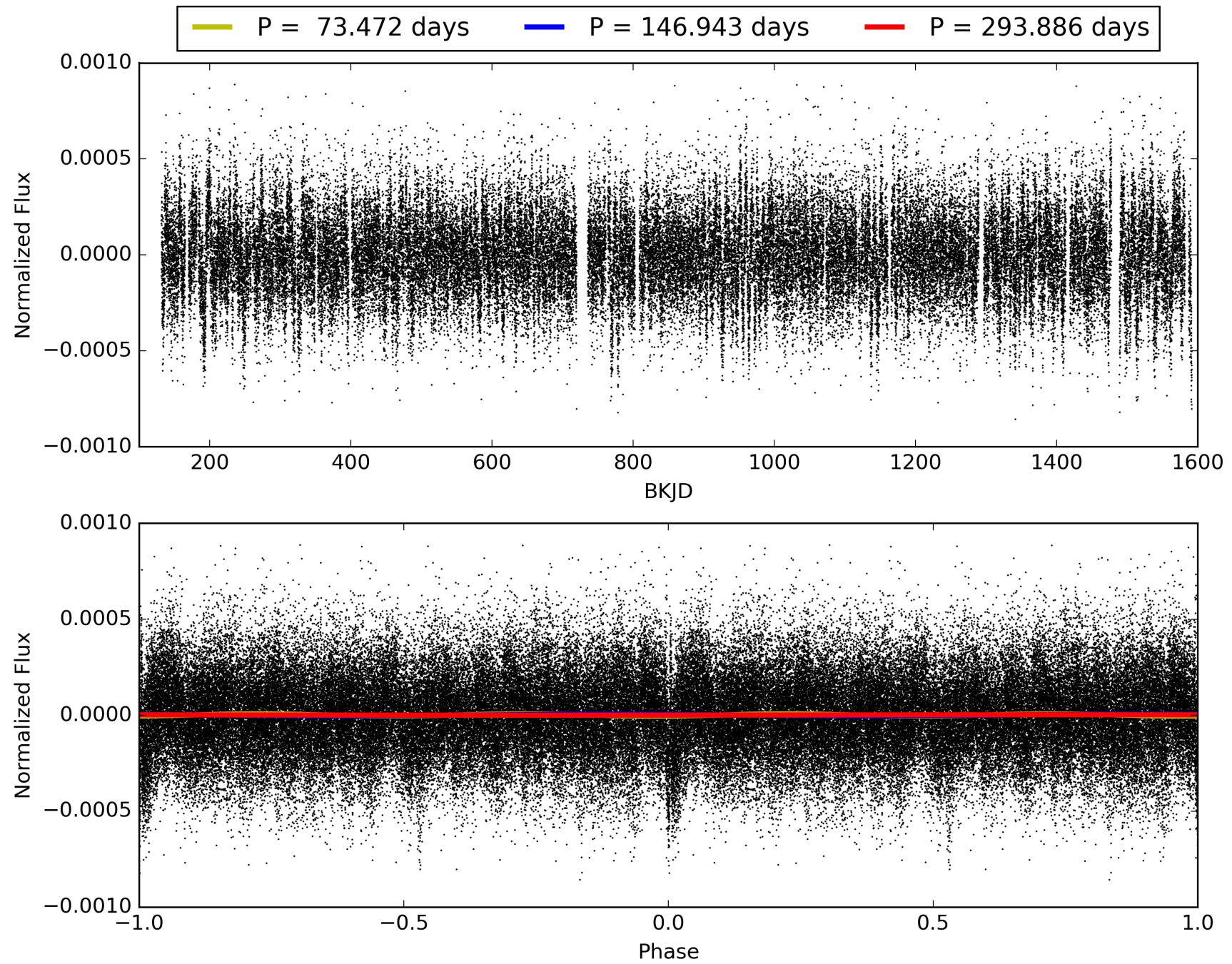
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 25.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.87e-24
RollingBand-fgt: 1.00 [10/10]
GhostDiagnostic-chr: 3.666
Centroid-sig: 2.0%
Centroid-so: 1.182 arcsec [1.76 σ]
OotOffset-rm: 0.551 arcsec [0.77 σ]
OotOffset-st: 3/0/2/1 [6]
KicOffset-rm: 0.569 arcsec [0.66 σ]
KicOffset-st: 3/0/2/1 [6]
DiffImageQuality-fgm: 0.83 [5/6]
DiffImageOverlap-fno: 1.00 [7/7]

TCE 005963591-01, PDC Light Curves

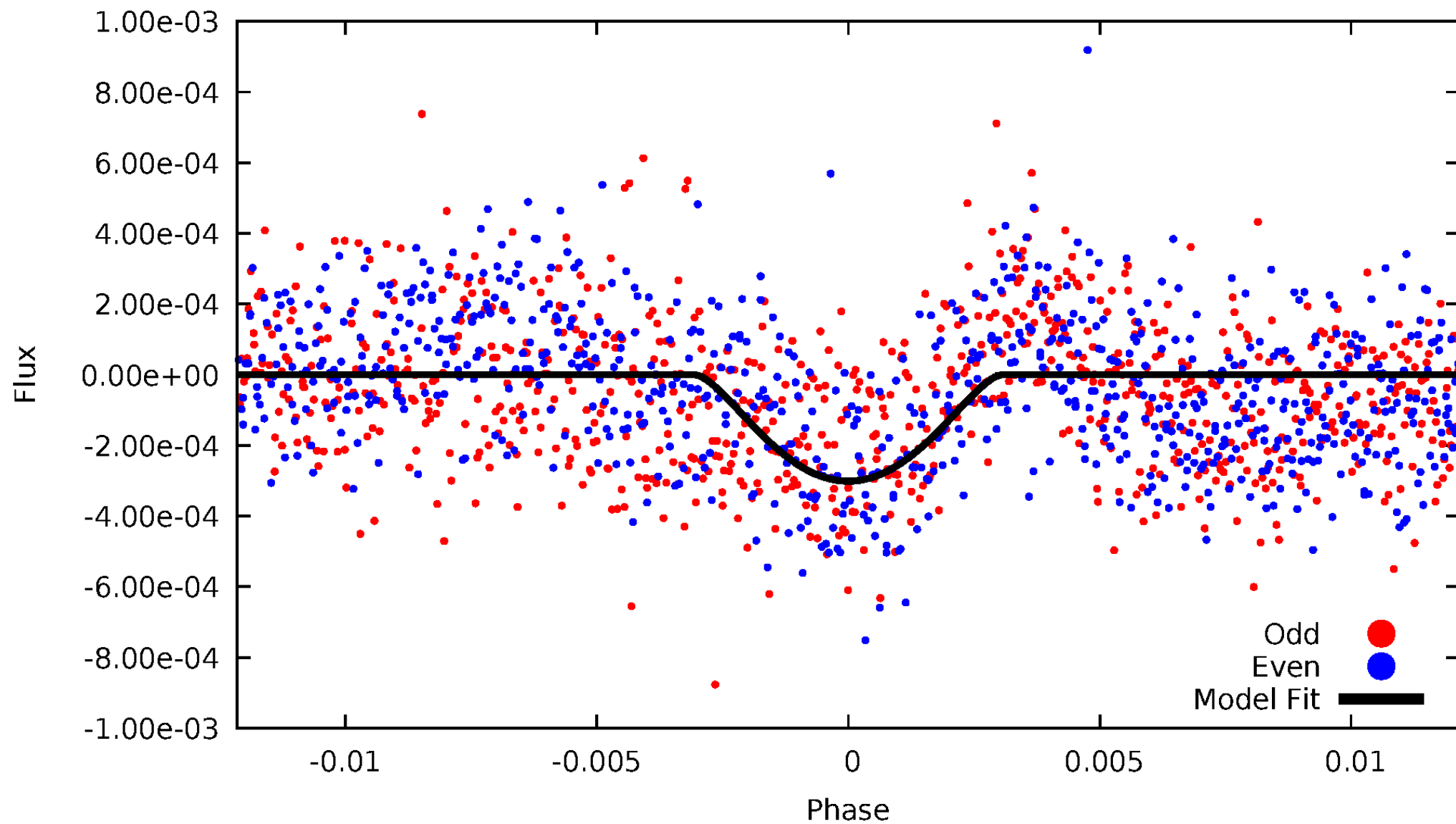


TCE 005963591-01



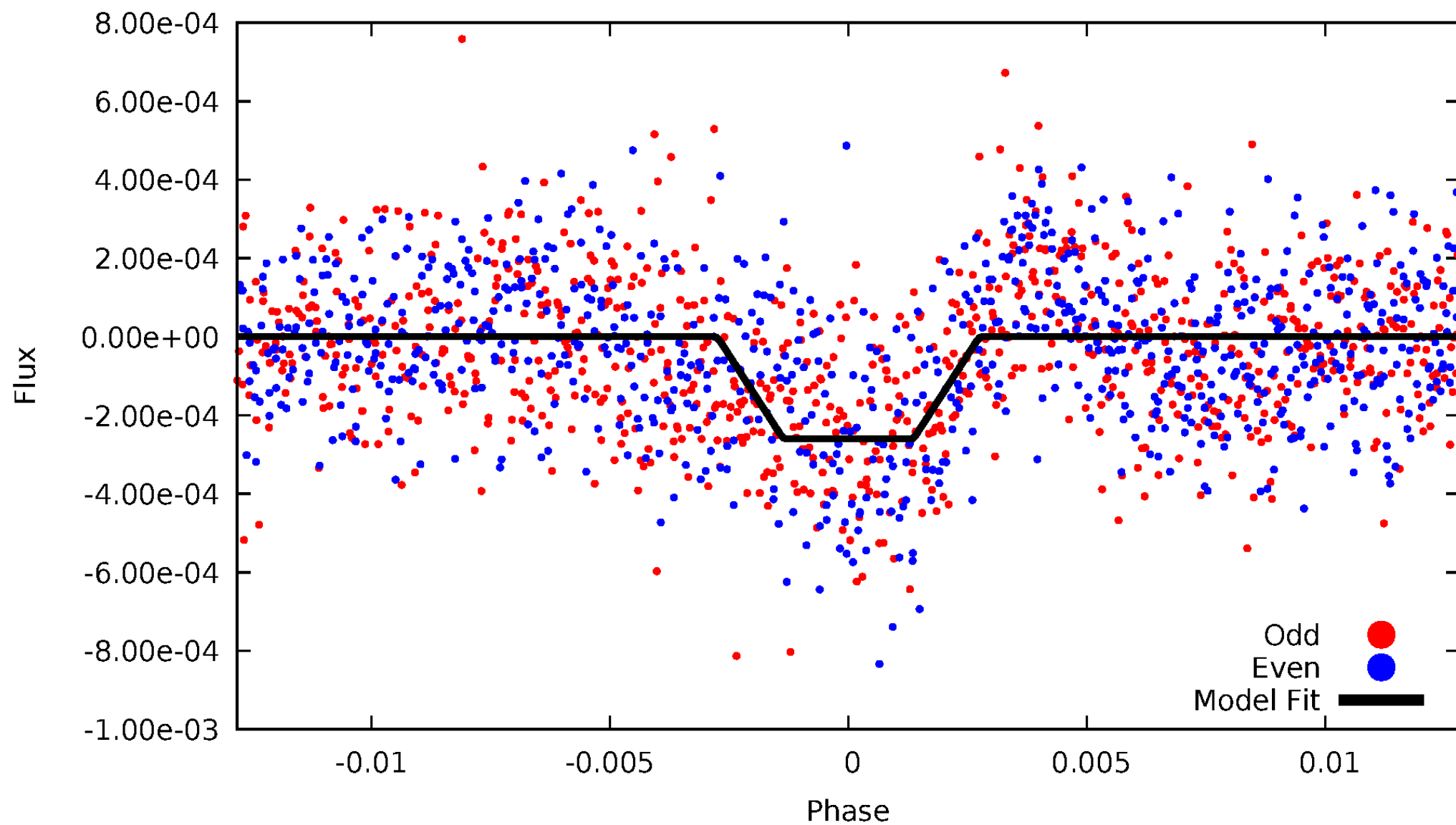
DV Odd/Even

TCE 005963591-01

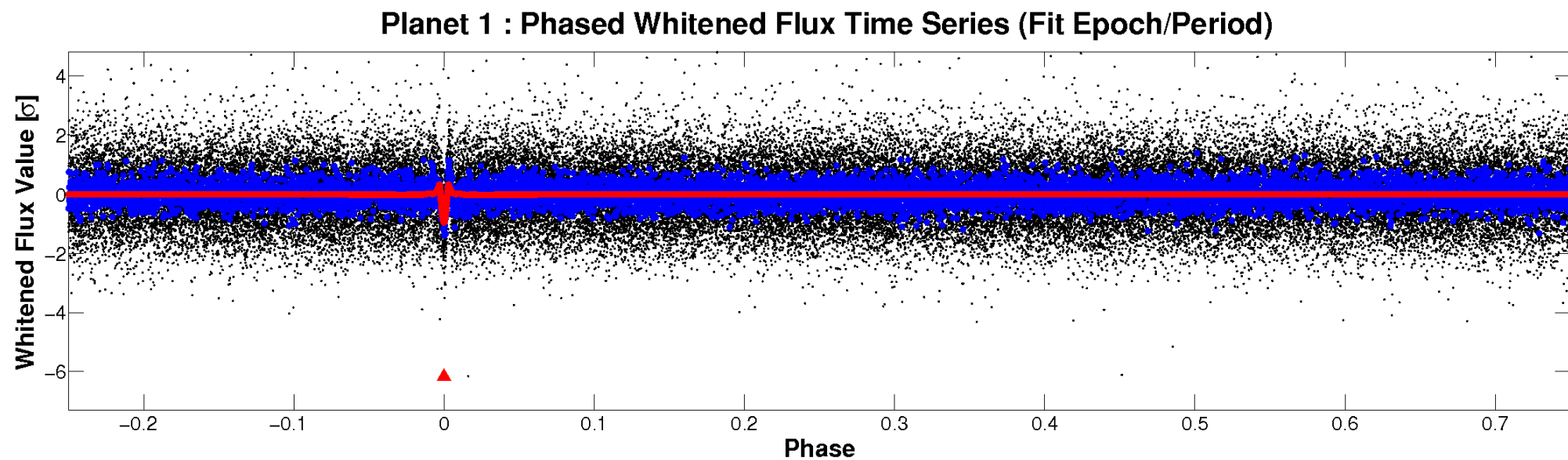
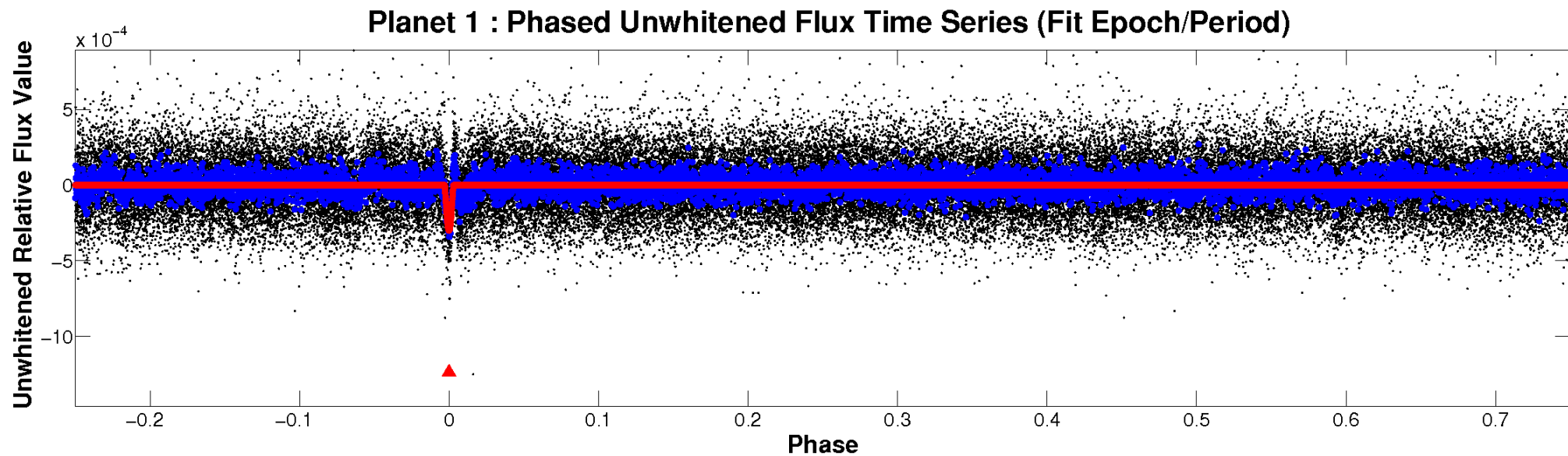


ALT Odd/Even

TCE 005963591-01

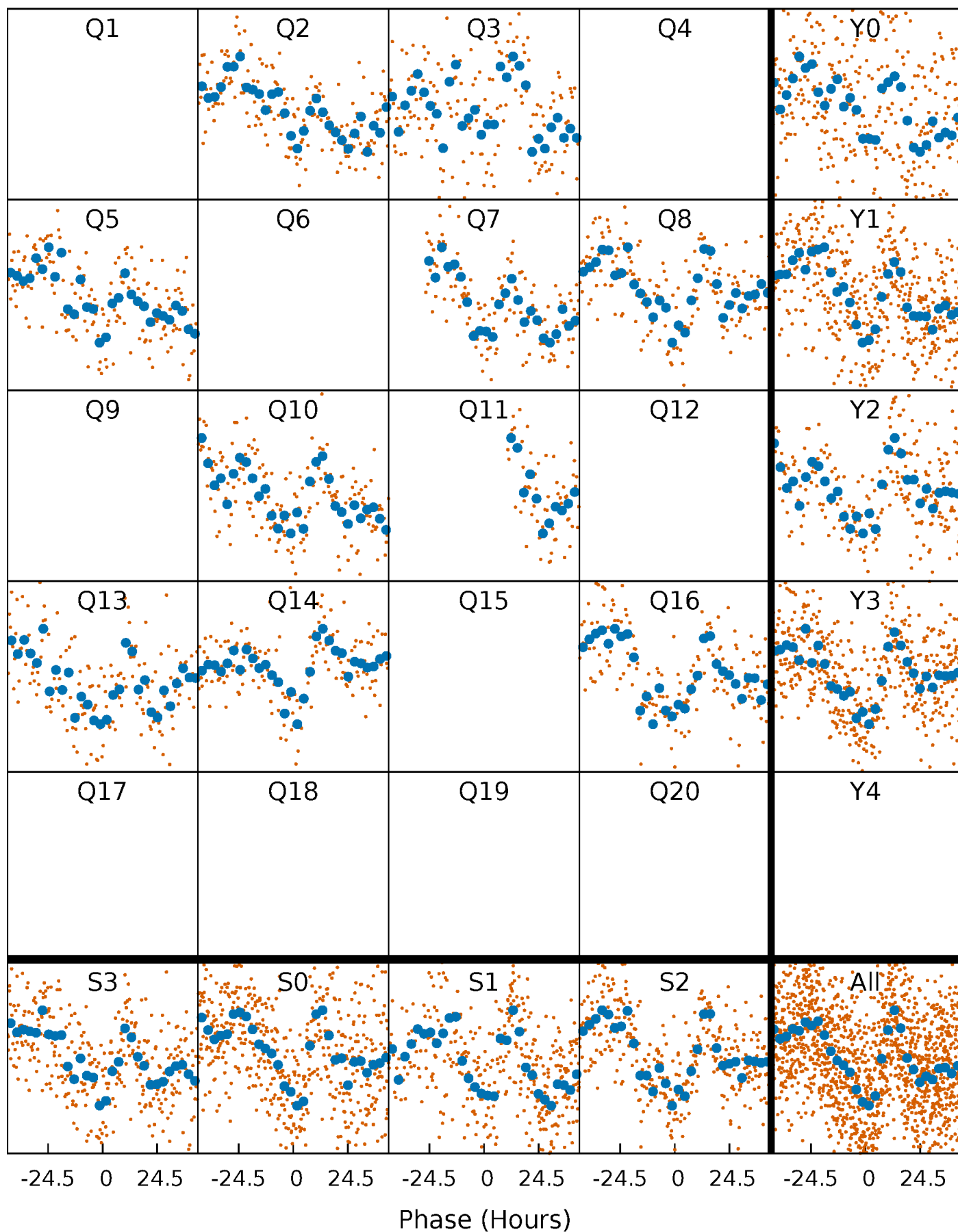


Non-Whitened Vs. Whitened Light Curve



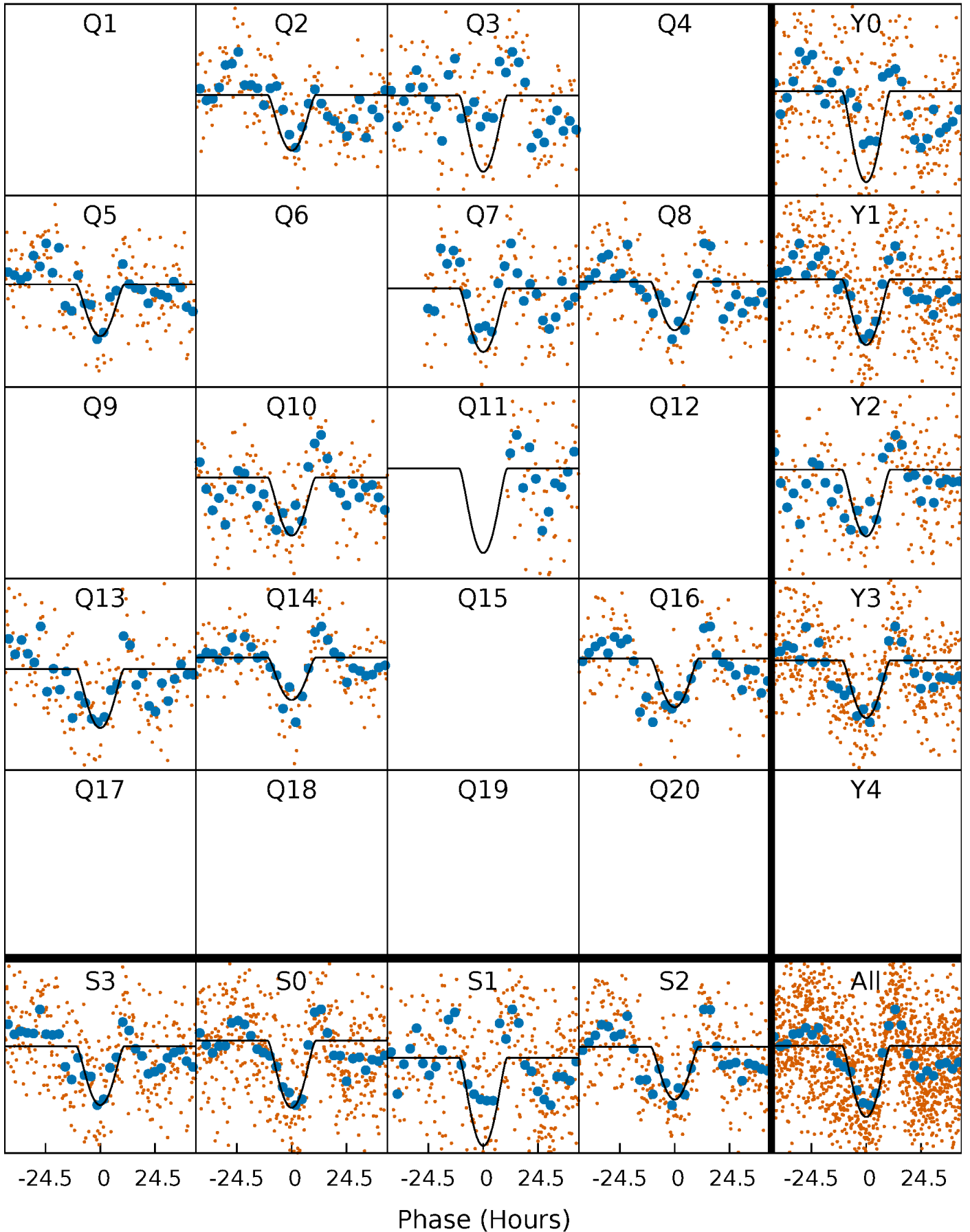
PDC Quarter-Phased Transit Curves

TCE 005963591-01 P=146.943061 Days $T_0=190.455944$ (BKJD)



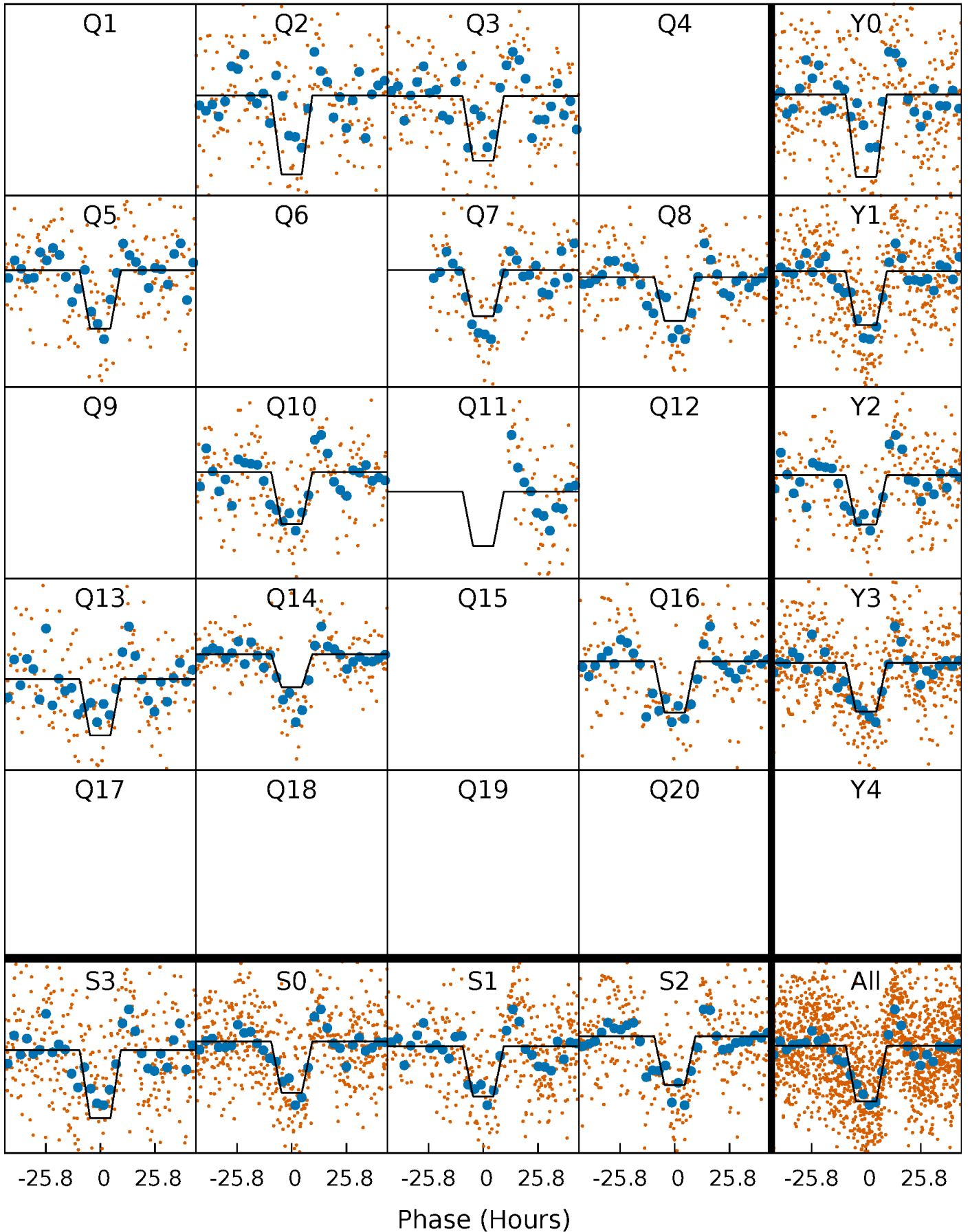
DV Quarter-Phased Transit Curves

TCE 005963591-01 P=146.943061 Days $T_0=190.455944$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

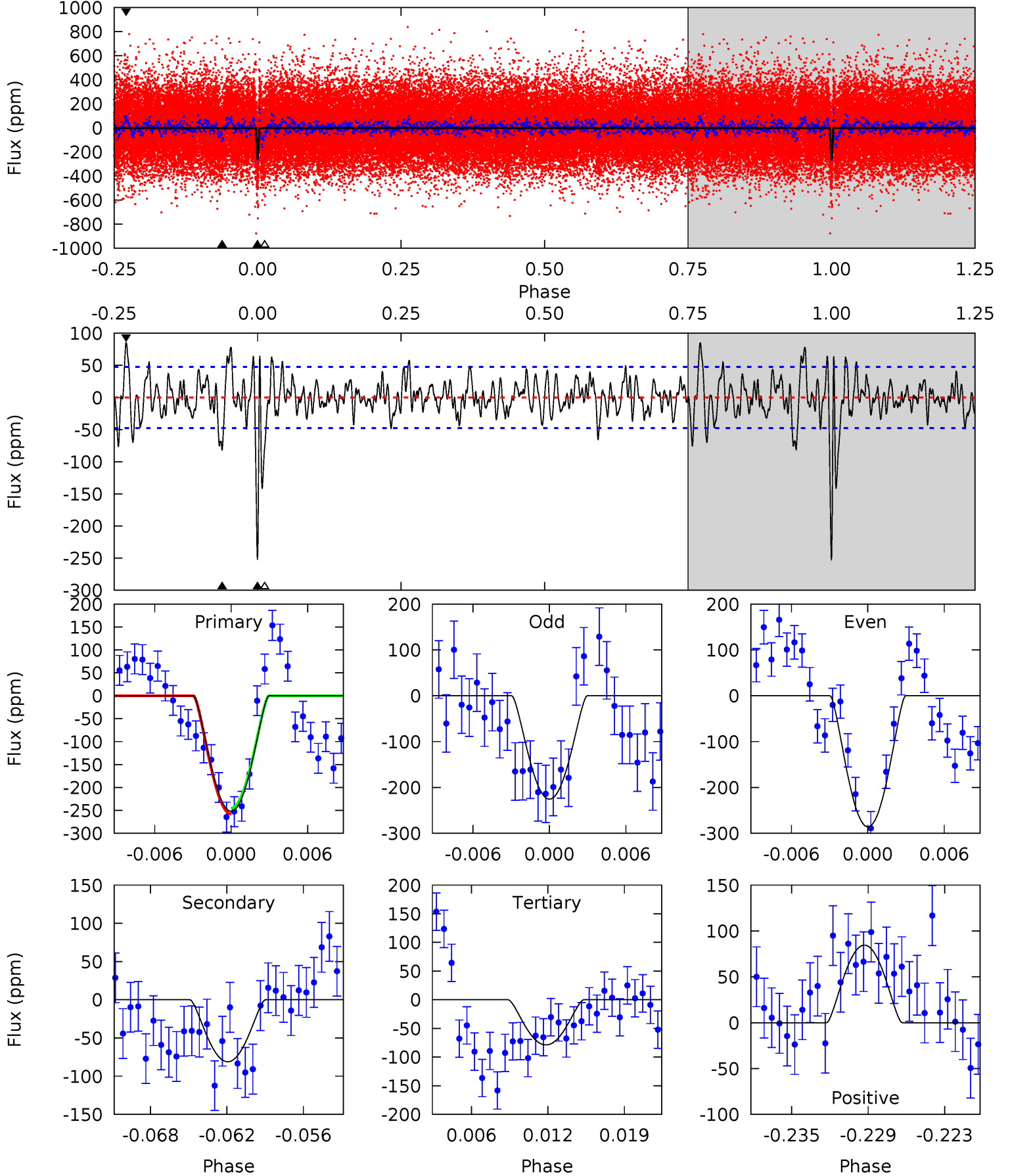
TCE 005963591-01 P=146.944541 Days $T_0=190.398451$ (BKJD)



DV Model-Shift Uniqueness Test

005963591-01, P = 146.943061 Days, E = 43.512883 Days

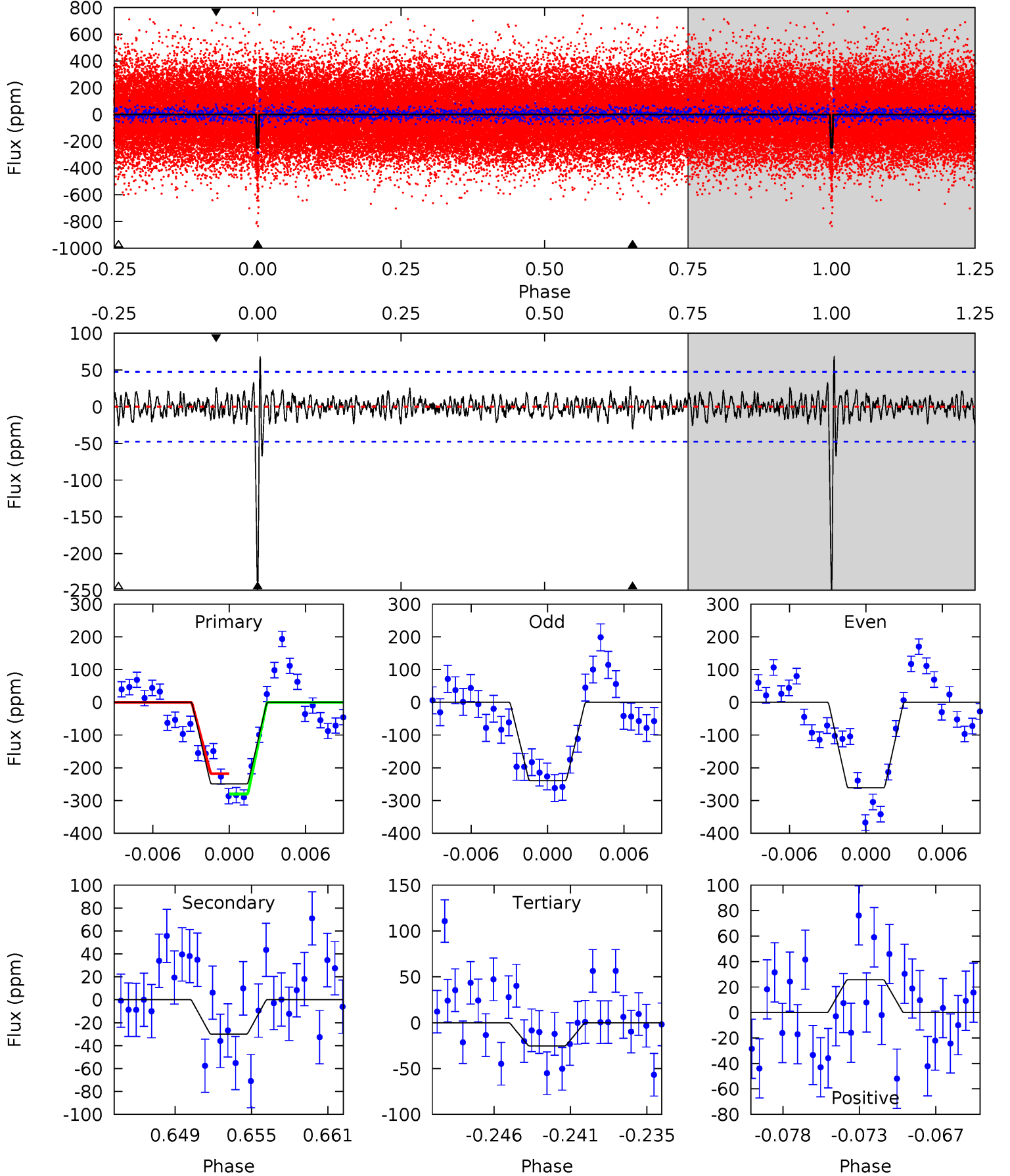
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.1	8.72	8.47	9.09	5.12	2.74	2.70	18.6	18.0	0.25	-0.38	3.23	1.00	0.25	0.69



Alt Model-Shift Uniqueness Test

005963591-01, $P = 146.944541$ Days, $E = 43.453910$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.0	3.24	2.74	2.78	5.14	2.77	1.07	24.2	24.2	0.50	0.46	1.17	0.97	0.21	3.37



Stellar Parameters For KIC 005963591

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6237^{+81}_{-81}	$4.338^{+0.099}_{-0.121}$	$-0.200^{+0.150}_{-0.150}$	$1.135^{+0.198}_{-0.116}$	$1.020^{+0.089}_{-0.051}$	$0.983^{+0.352}_{-0.363}$
	+1%/-1%	+2%/-3%	+75%/-75%	+17%/-10%	+9%/-5%	+36%/-37%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 005963591-01 / KOI 5215.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-81 ± 9	$6.60^{+5.80}_{-4.43}$	553^{+24}_{-19}	3172^{+1491}_{-492}	323^{+2601}_{-235}
Alt.	-30 ± 9	$5.73^{+5.75}_{-3.92}$	553^{+22}_{-19}	2846^{+1235}_{-465}	149^{+1291}_{-115}

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 $A_{obs} \gg 1.0$

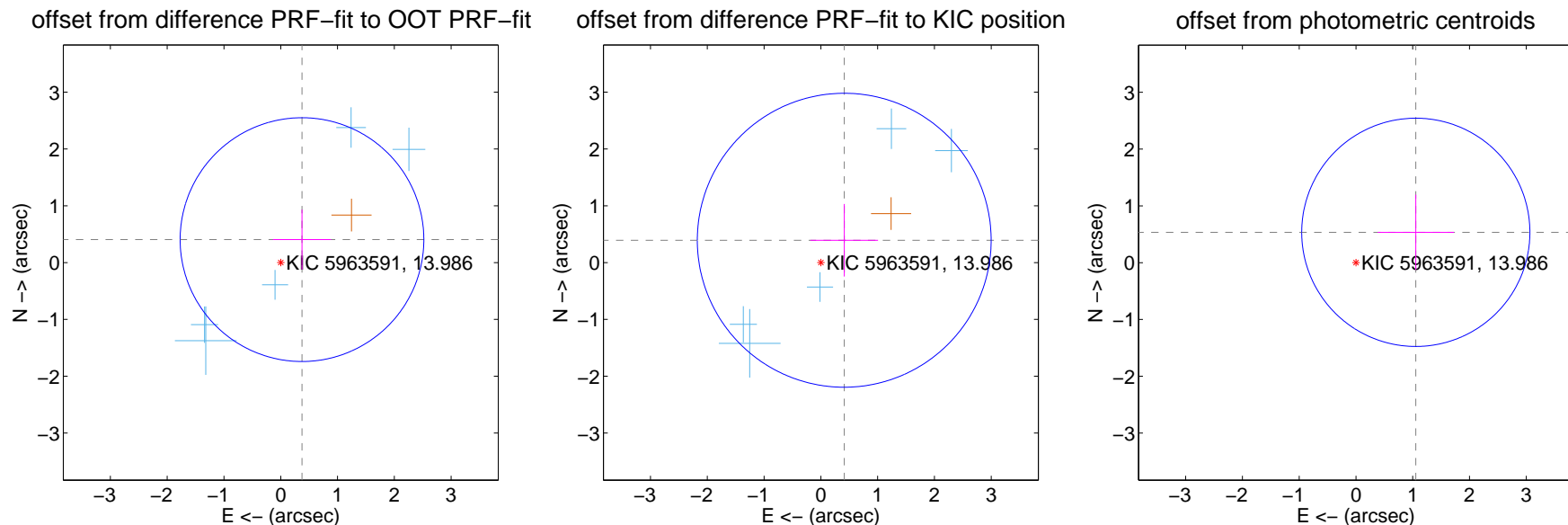
DV Centroid Data

Supplemental centroid analysis for 005963591-01. Kepler magnitude: 13.99. Transit SNR 11.91

There are 5 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.551 ± 0.715	0.77	-0.374 ± 0.511	0.404 ± 0.527
PRF-fit source offset from KIC position	0.569 ± 0.862	0.66	-0.411 ± 0.596	0.393 ± 0.638
photometric centroid source offset	1.18 ± 0.67	1.76	-1.05 ± 0.67	0.53 ± 0.66



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.

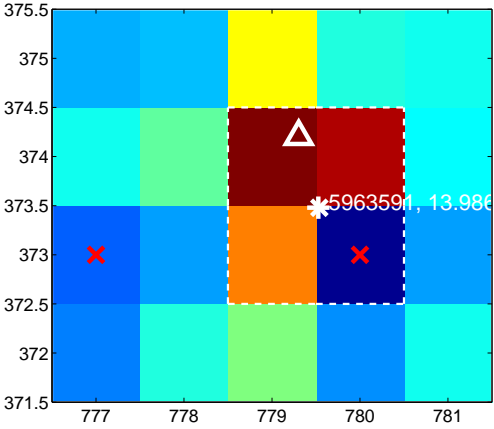
Q1 no difference image



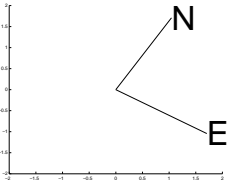
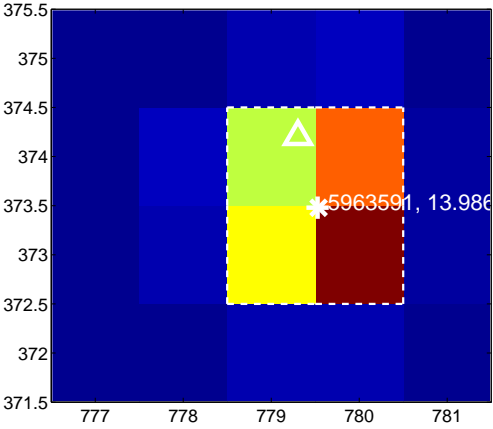
Q1 no OOT image



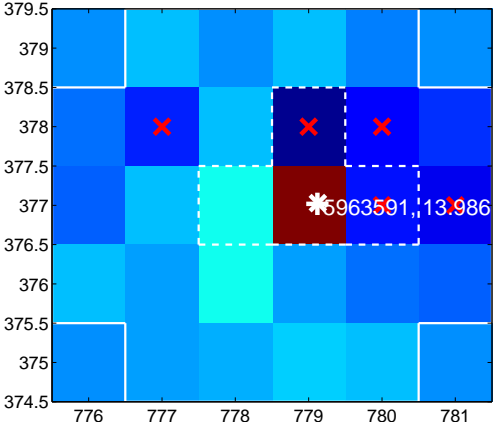
Q2 difference image



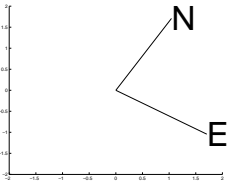
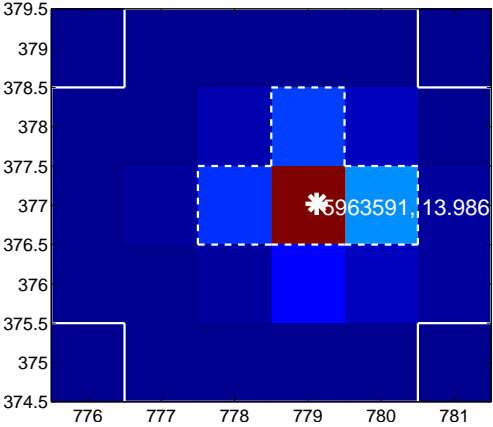
Q2 OOT image



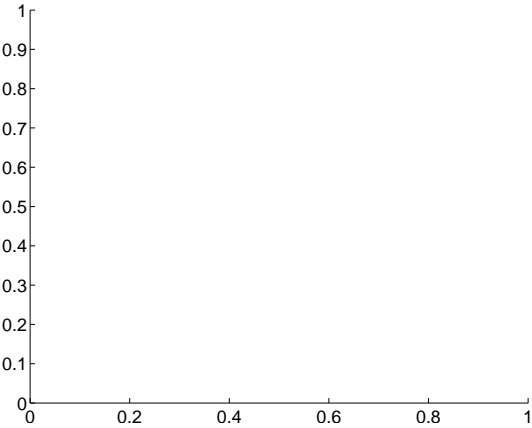
Q3 difference image. Poor Quality



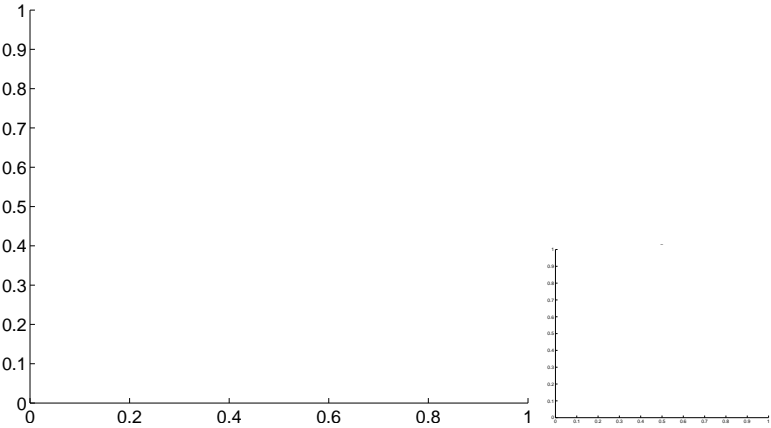
Q3 OOT image



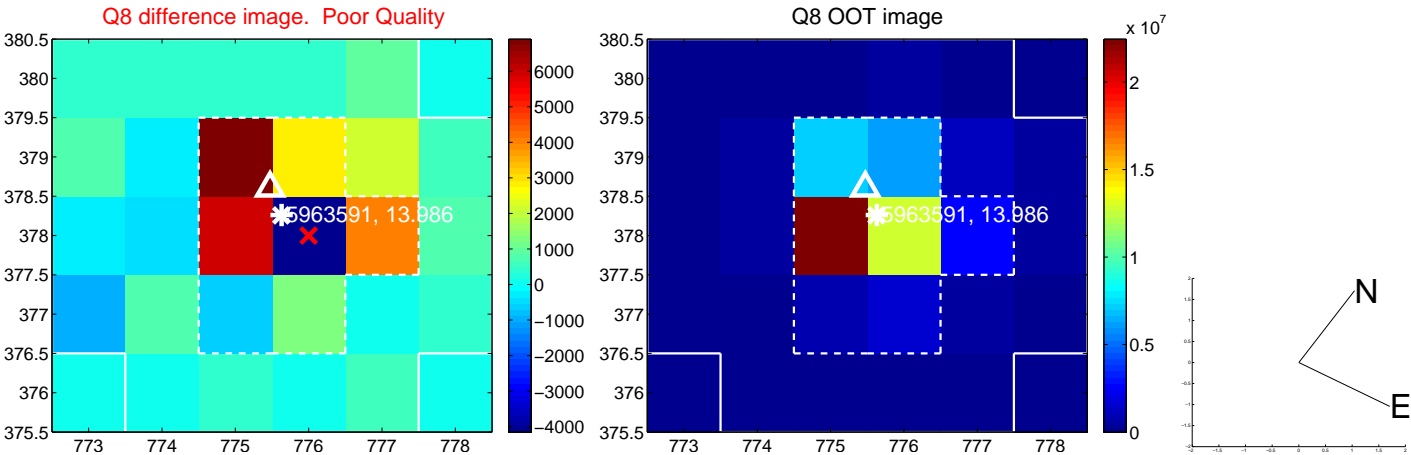
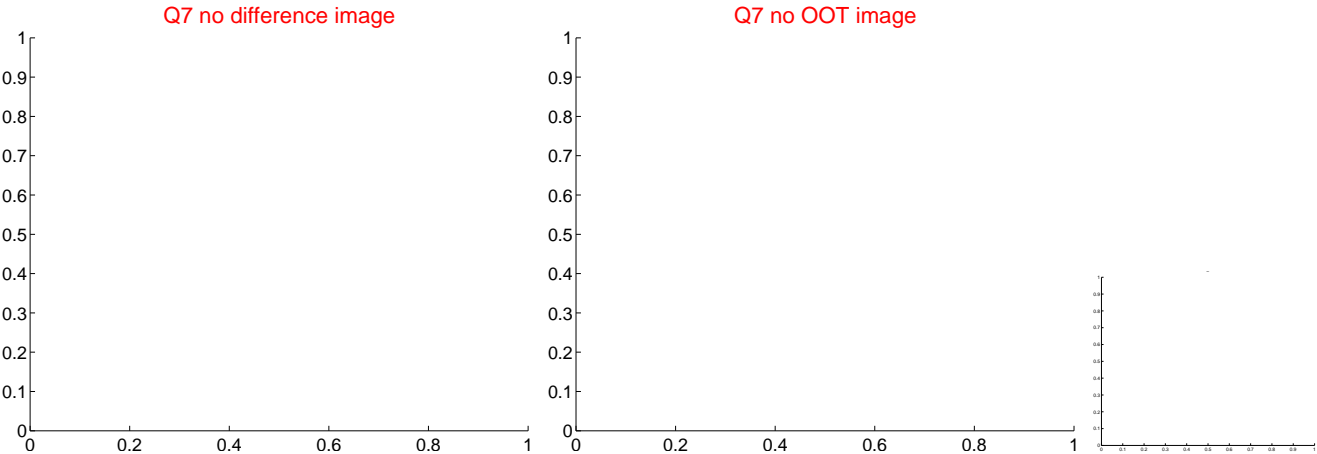
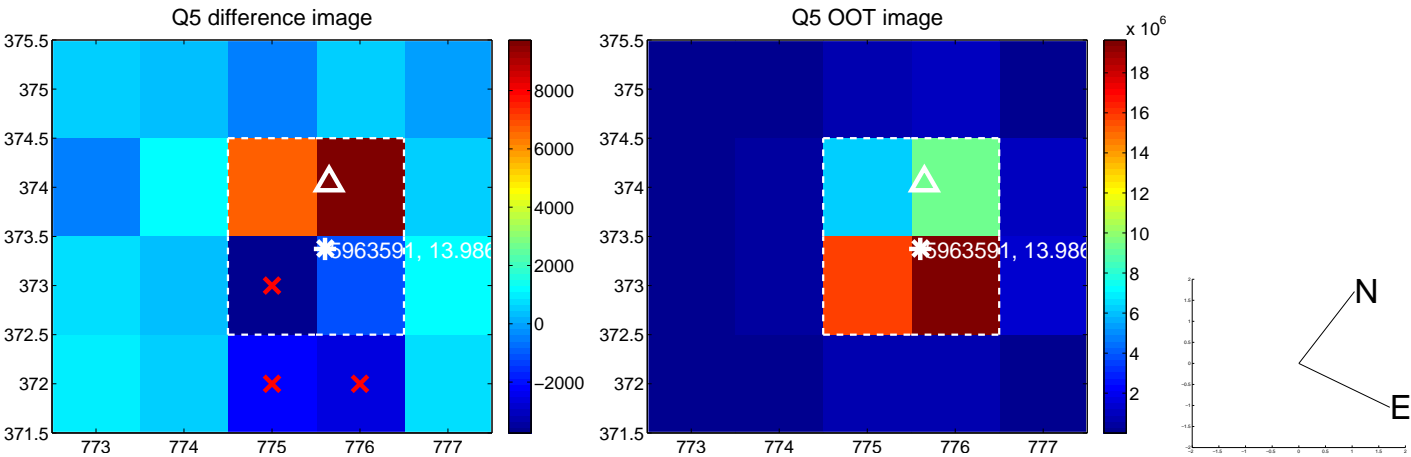
Q4 no difference image



Q4 no OOT image



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

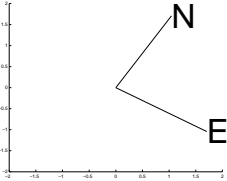
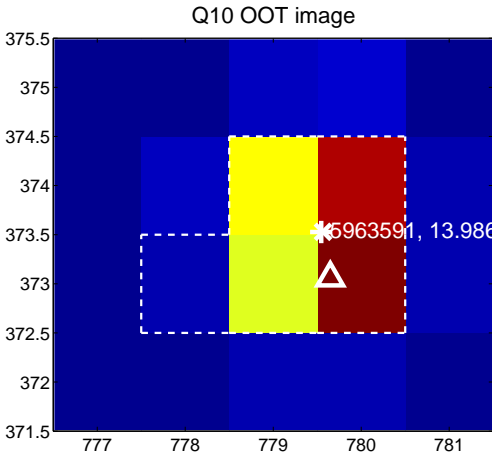
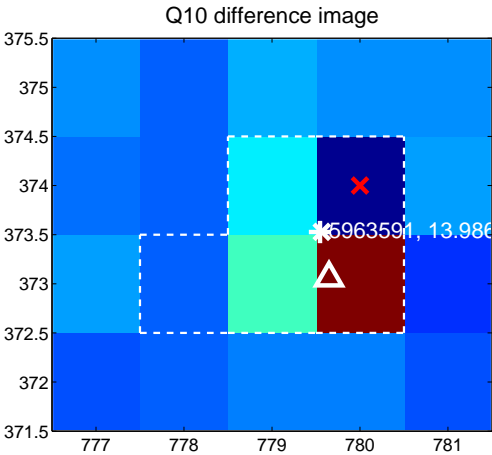
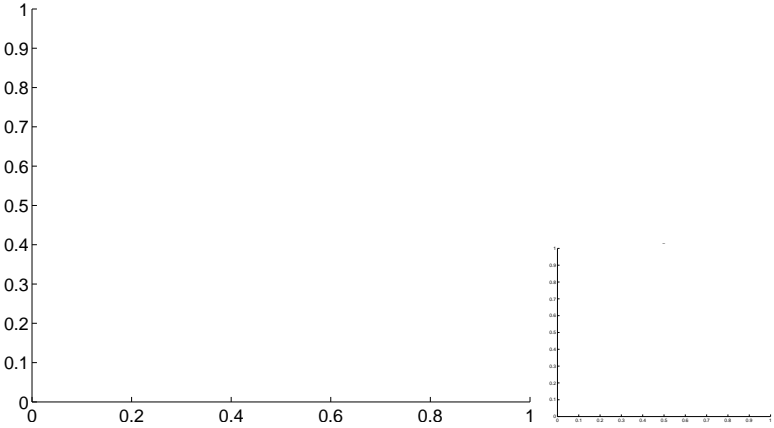


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

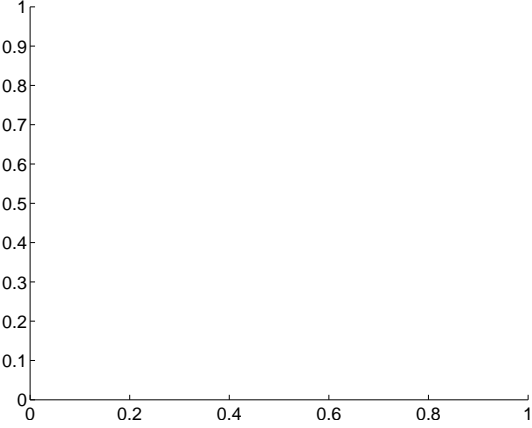
Q9 no difference image



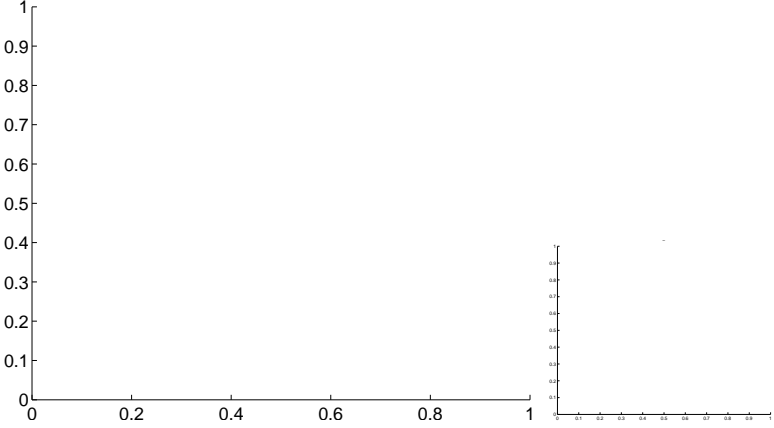
Q9 no OOT image



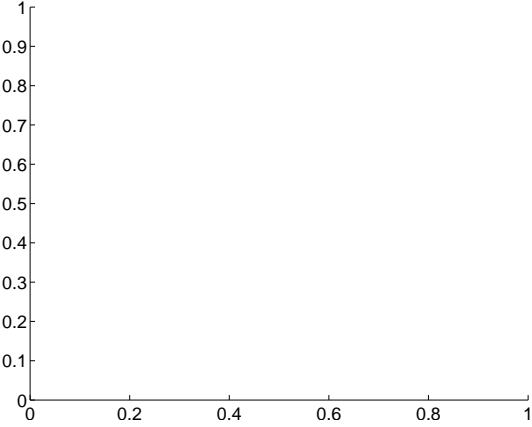
Q11 no difference image



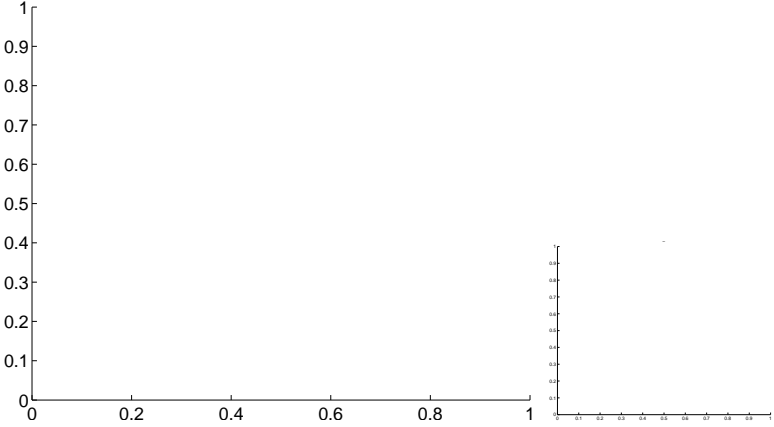
Q11 no OOT image



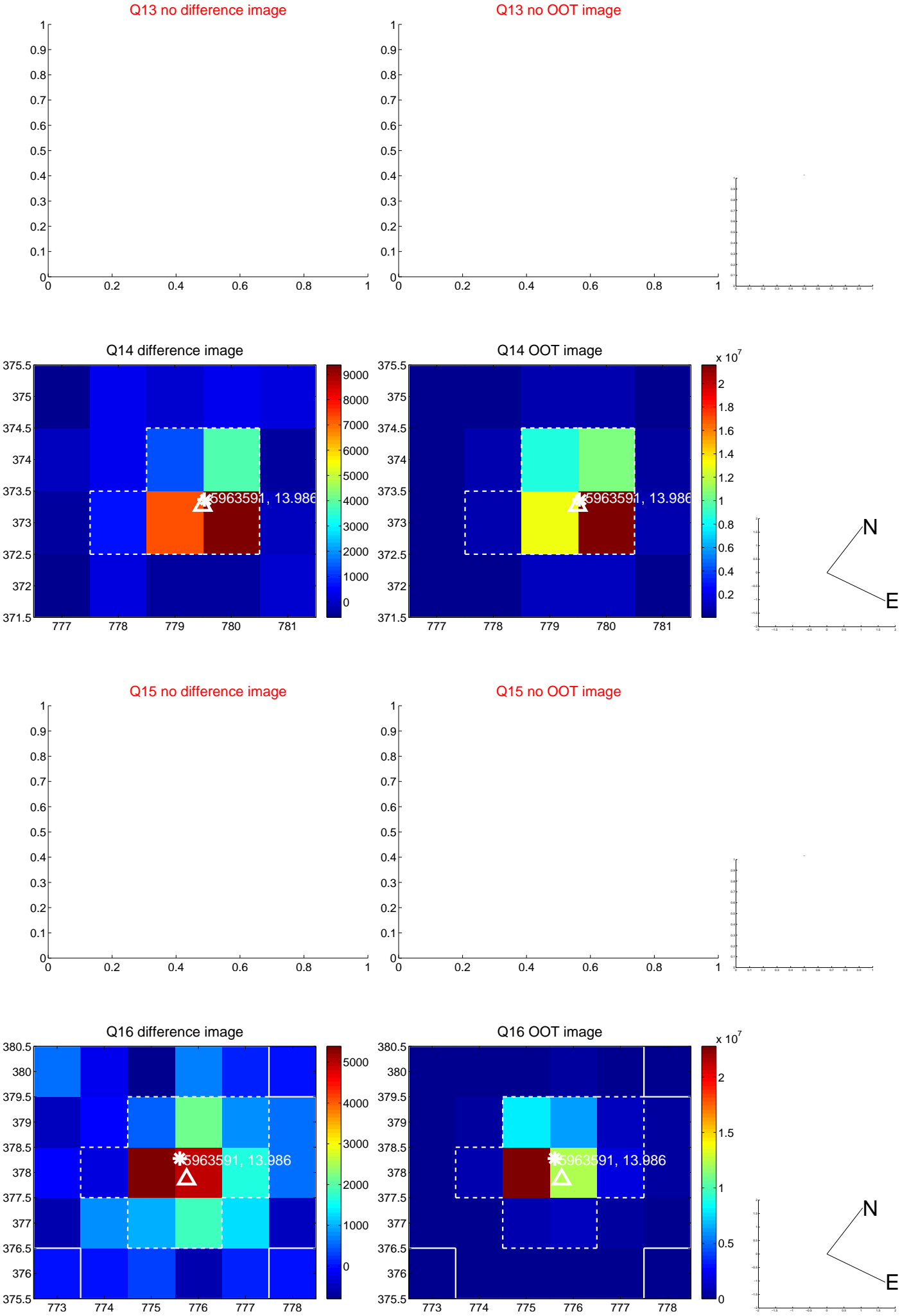
Q12 no difference image



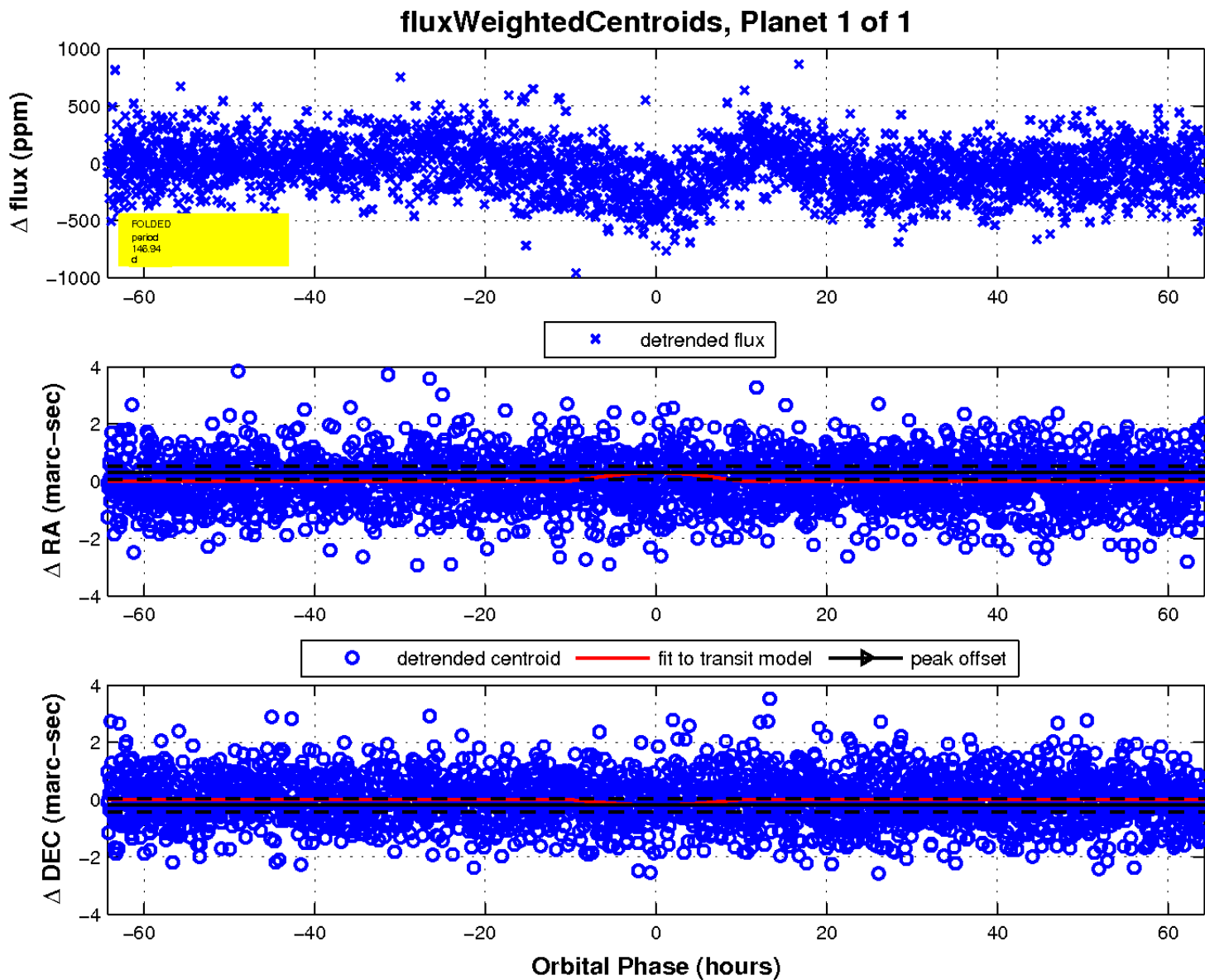
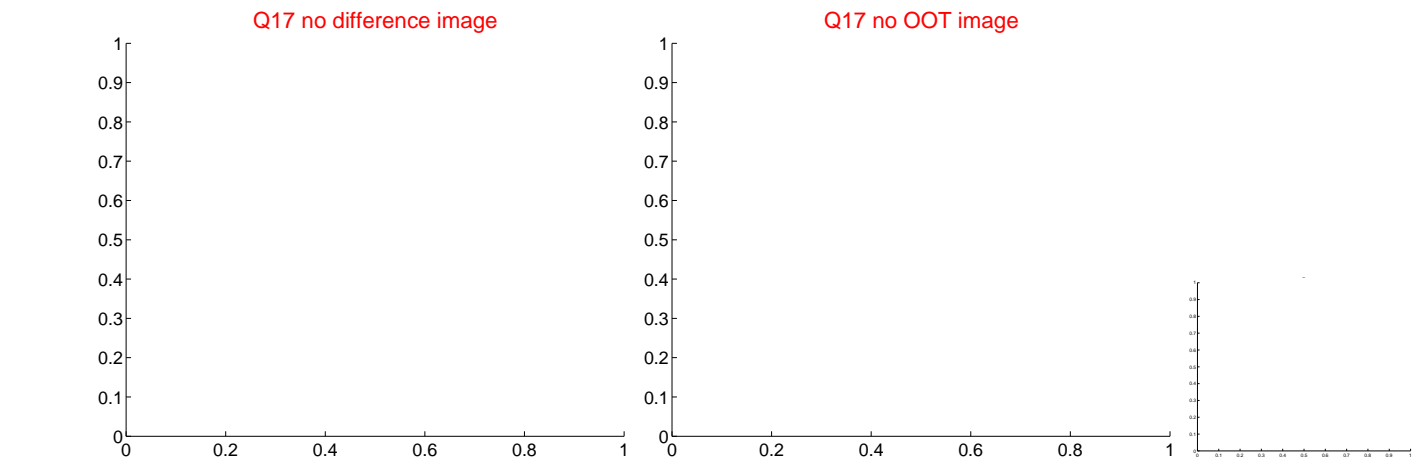
Q12 no OOT image



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UKIRT Image

Declination

