

KIC 005992270

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})
005992270-01	OBS	1855.01	58.430141	168.300299	1875.8	7.015	39.0	41.4	0.61	4338	3.46	1.92

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005992270-01	OBS	PC	0.03	0	0	0	0	CENT_KIC_POS

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.

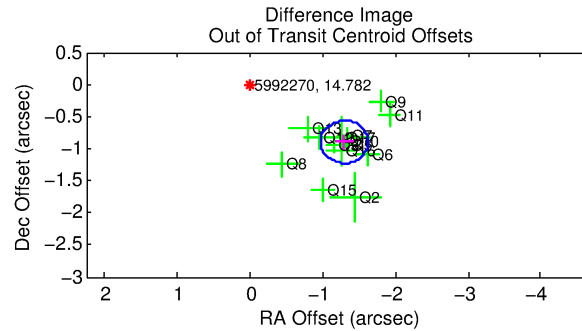
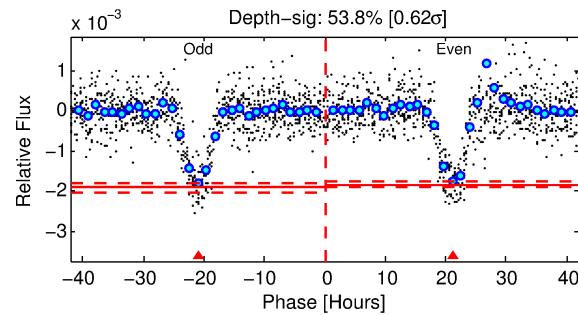
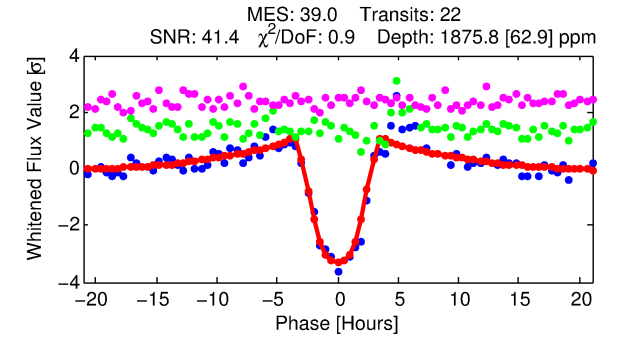
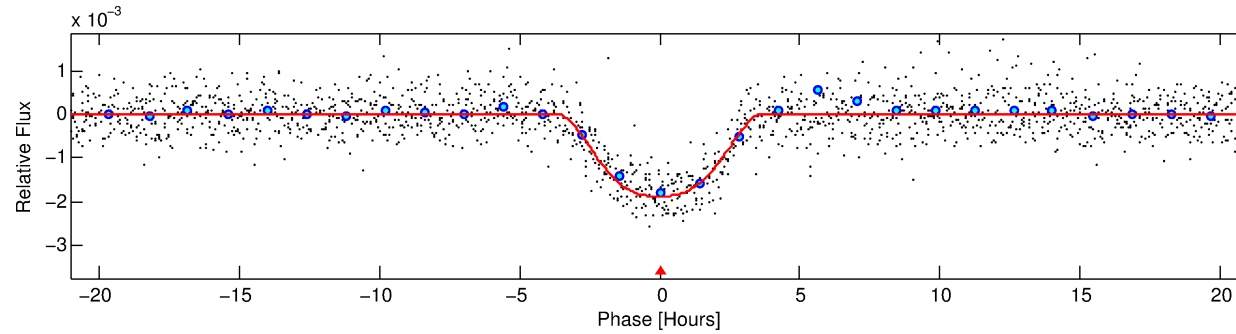
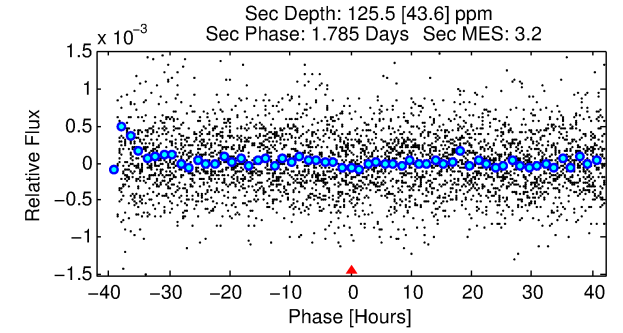
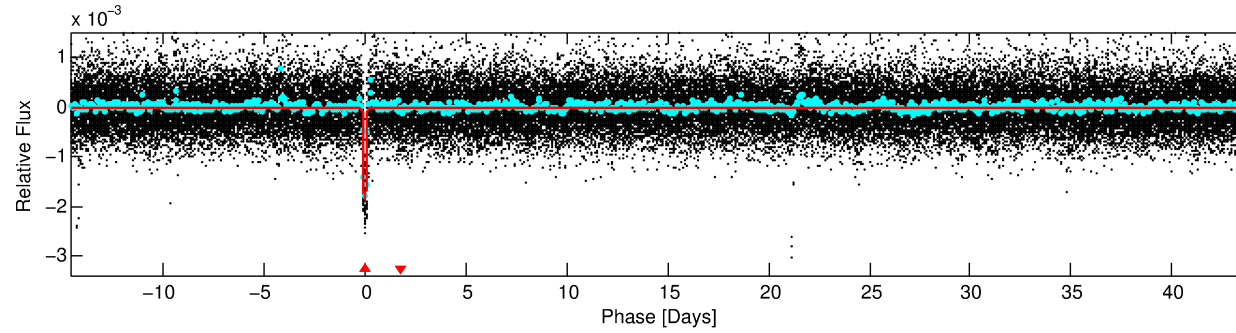
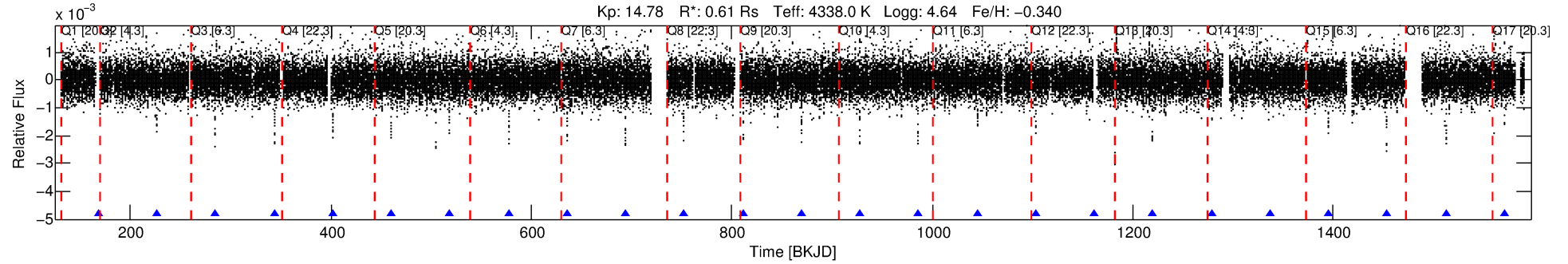
Ephemeris Match Information For 005992270-01

No Significant Match Found

DV One-Page Summary

KIC: 5992270 Candidate: 1 of 1 Period: 58.430 d

KOI: K01855.01 Corr: 0.992



DV Fit Results:

Period = 58.43014 [0.00024] d
Epoch = 168.3003 [0.0034] BKJD
Rp/R* = 0.0521 [0.0014]
a/R* = 29.49 [1.19]
b = 0.94 [0.01]
Seff = 1.92 [0.31]
Teq = 300 [12] K
Rp = 3.46 [0.36] Re
a = 0.2479 [0.0197] AU
Ag = 354.42 [130.48] [2.71σ]
Teff = 2012 [187] K [9.13σ]

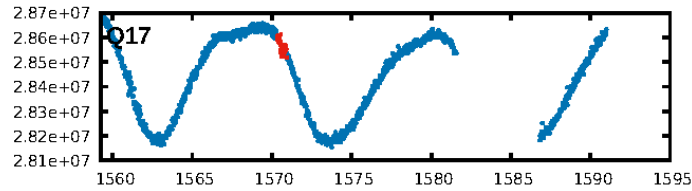
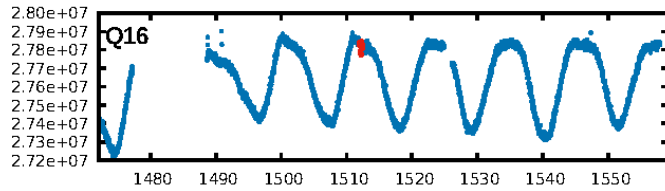
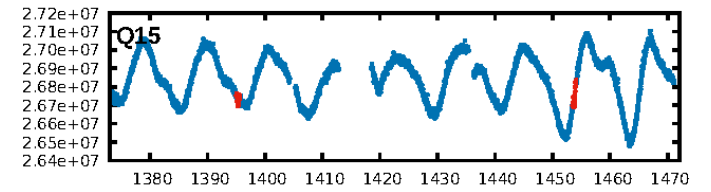
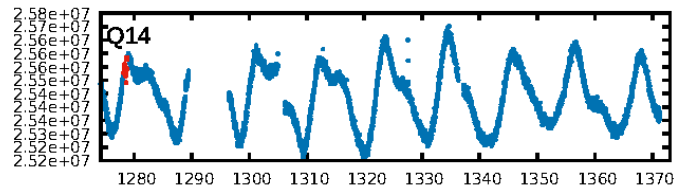
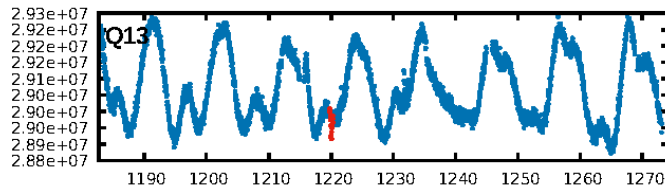
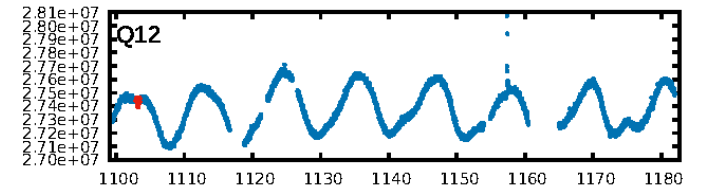
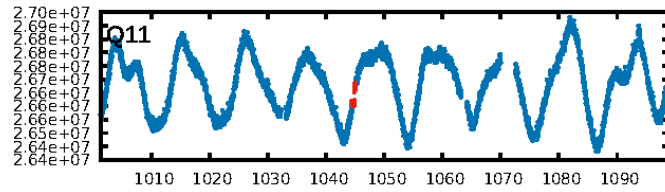
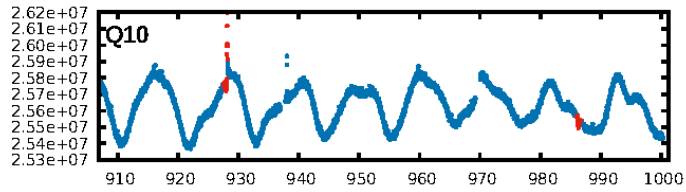
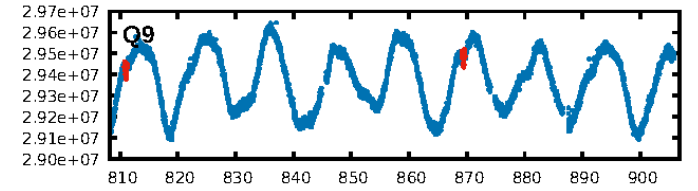
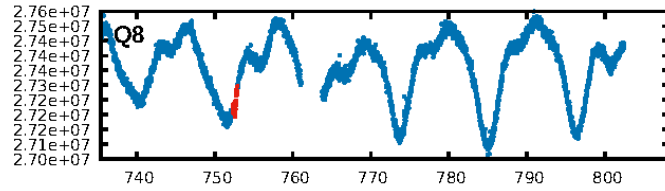
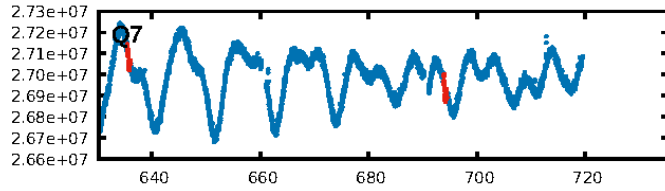
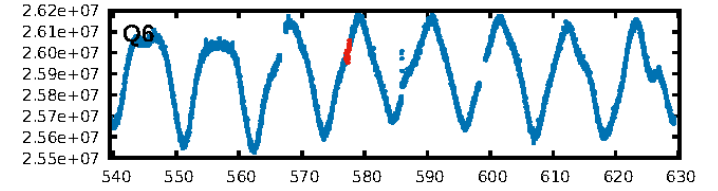
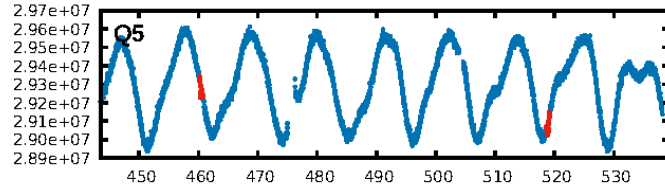
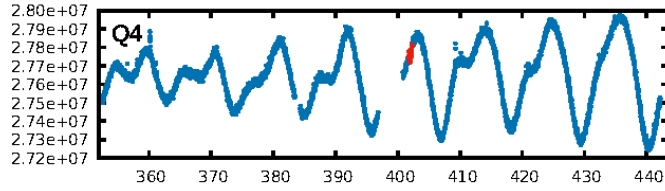
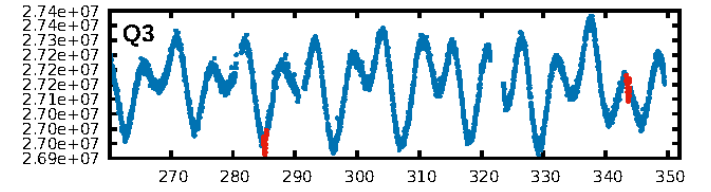
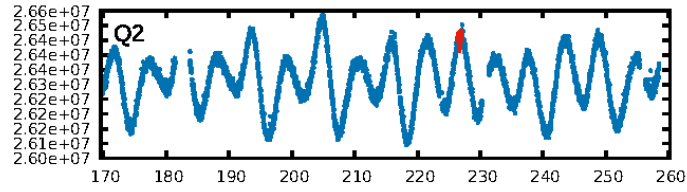
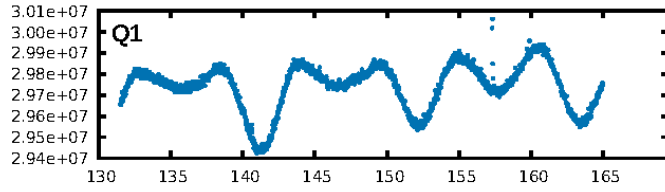
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 20.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.49e-281
RollingBand-fgt: 1.00 [21/21]
GhostDiagnostic-chr: 1.769
Centroid-sig: 0.0%
Centroid-so: 1.258 arcsec [4.73σ]
OotOffset-rm: 1.579 arcsec [14.36σ]
KicOffset-rm: 1.143 arcsec [9.93σ]
OotOffset-st: 3/4/3/4 [14]
KicOffset-st: 3/4/3/4 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

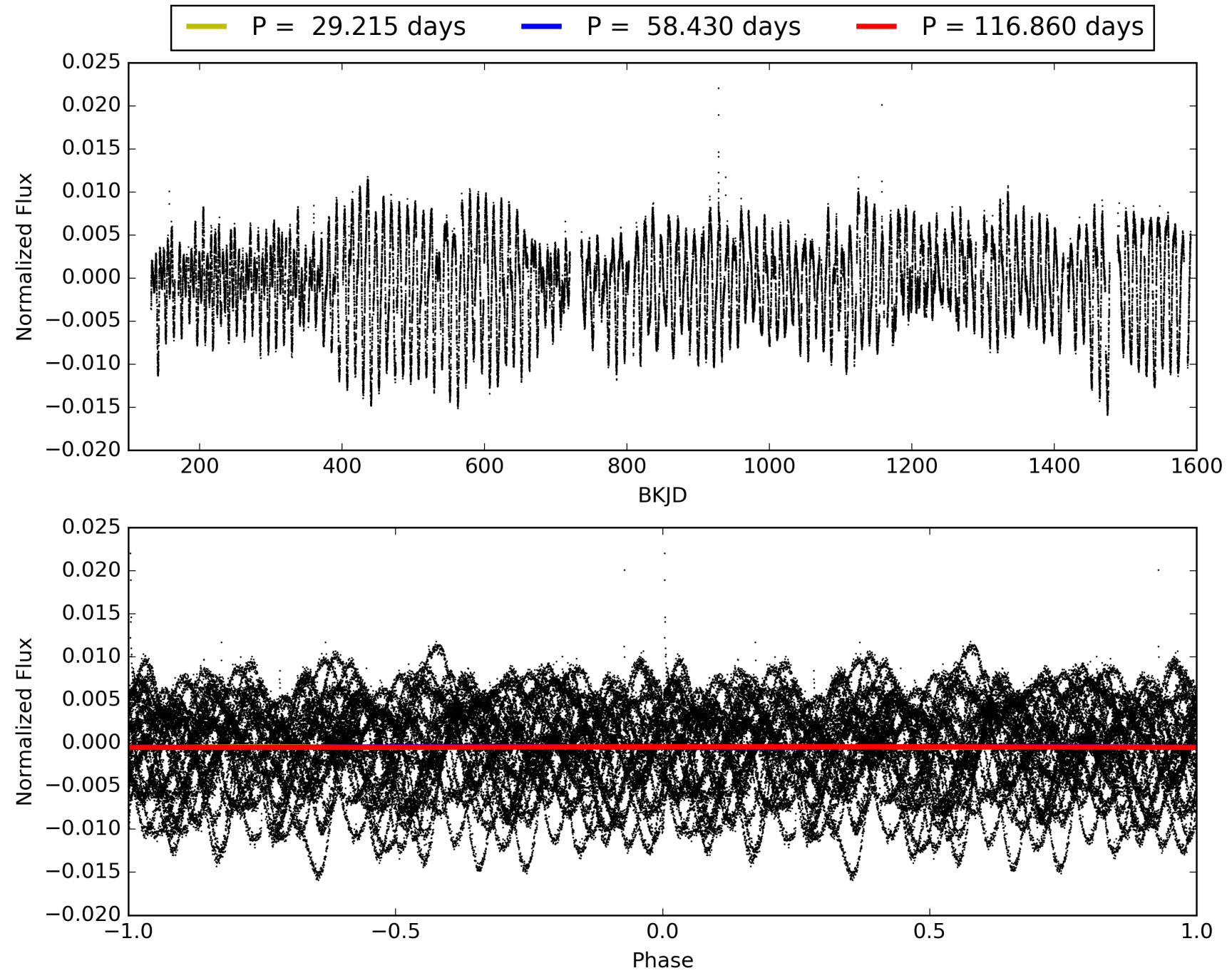
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 07:40:11 Z

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

TCE 005992270-01, PDC Light Curves

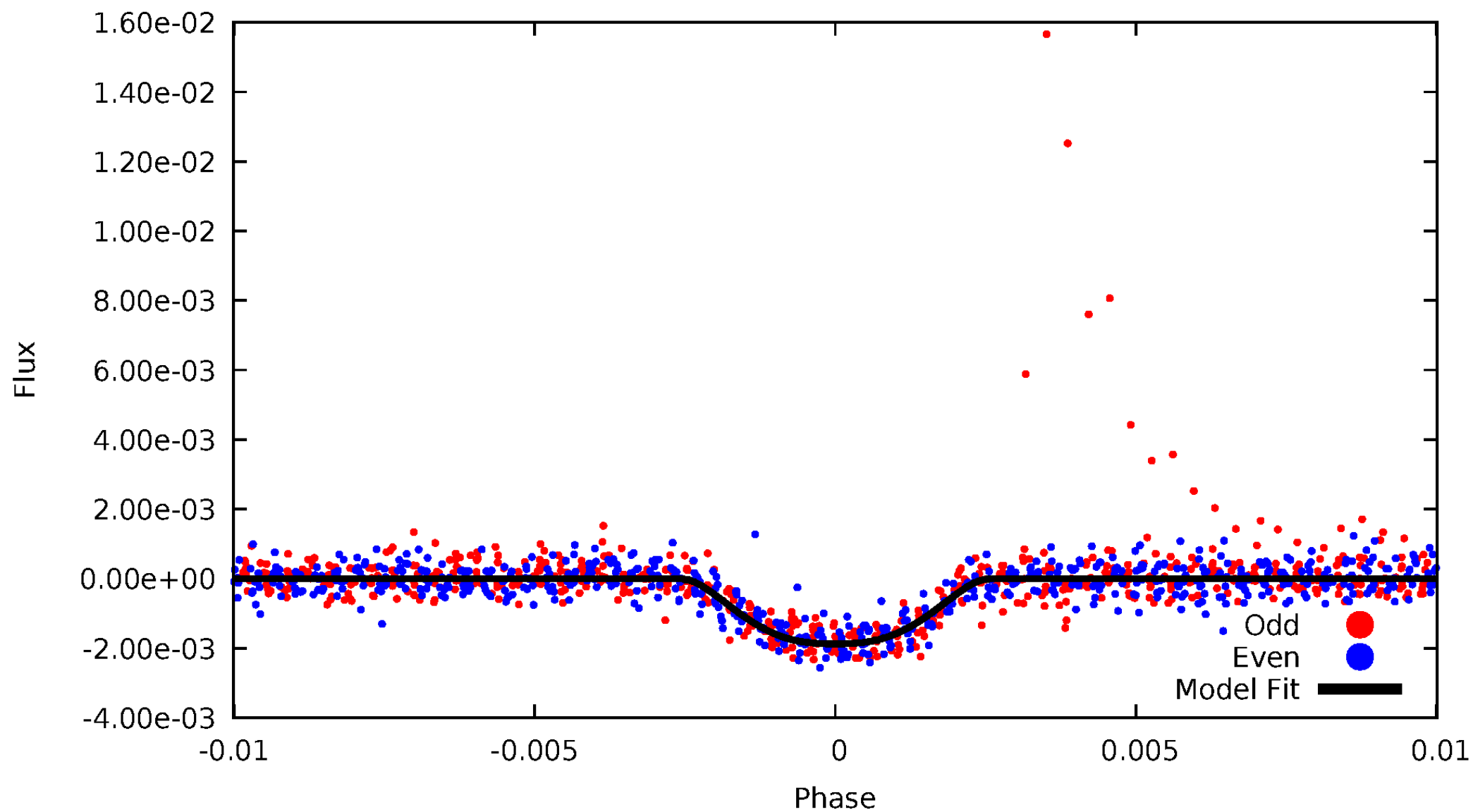


TCE 005992270-01



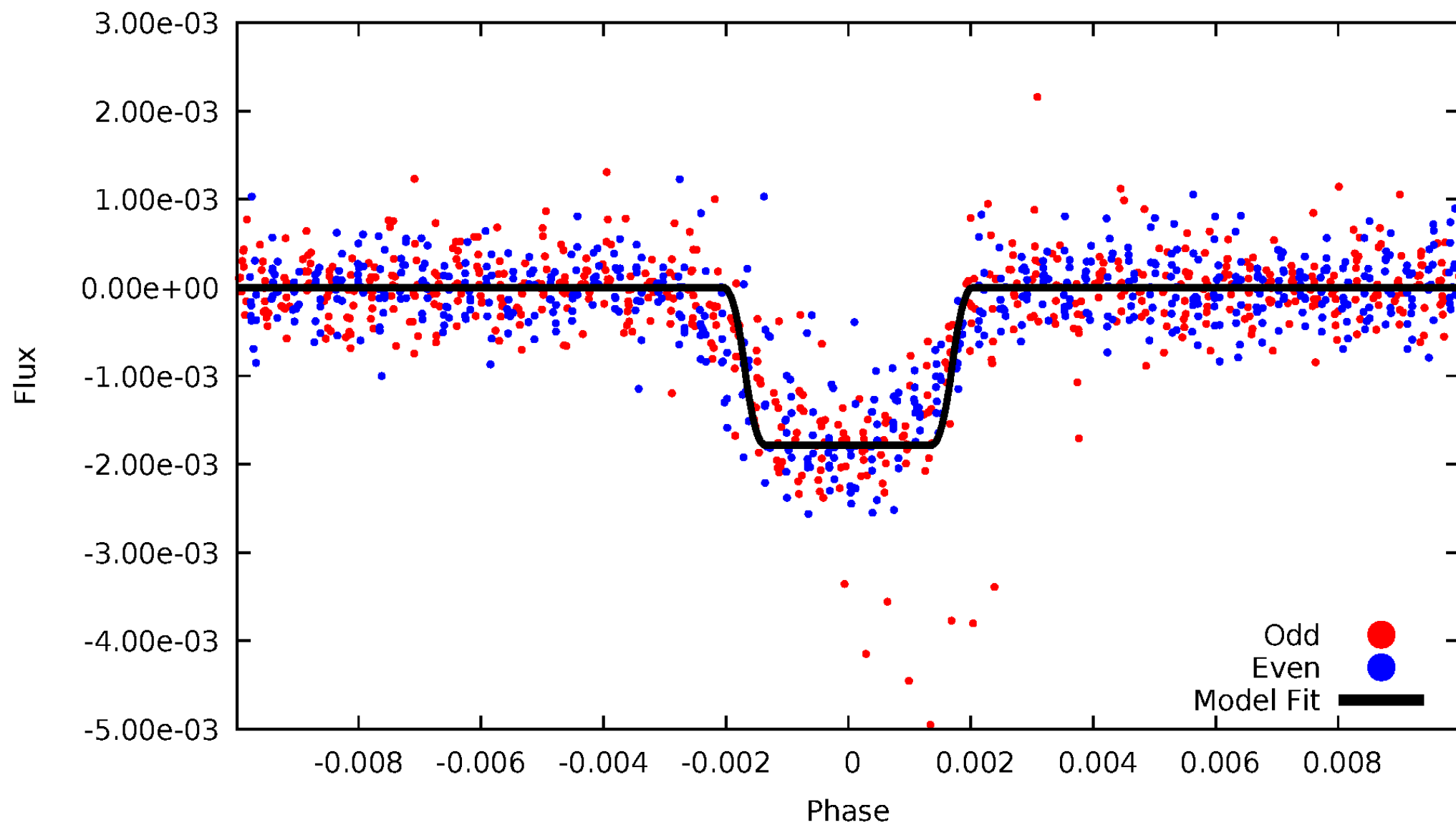
DV Odd/Even

TCE 005992270-01



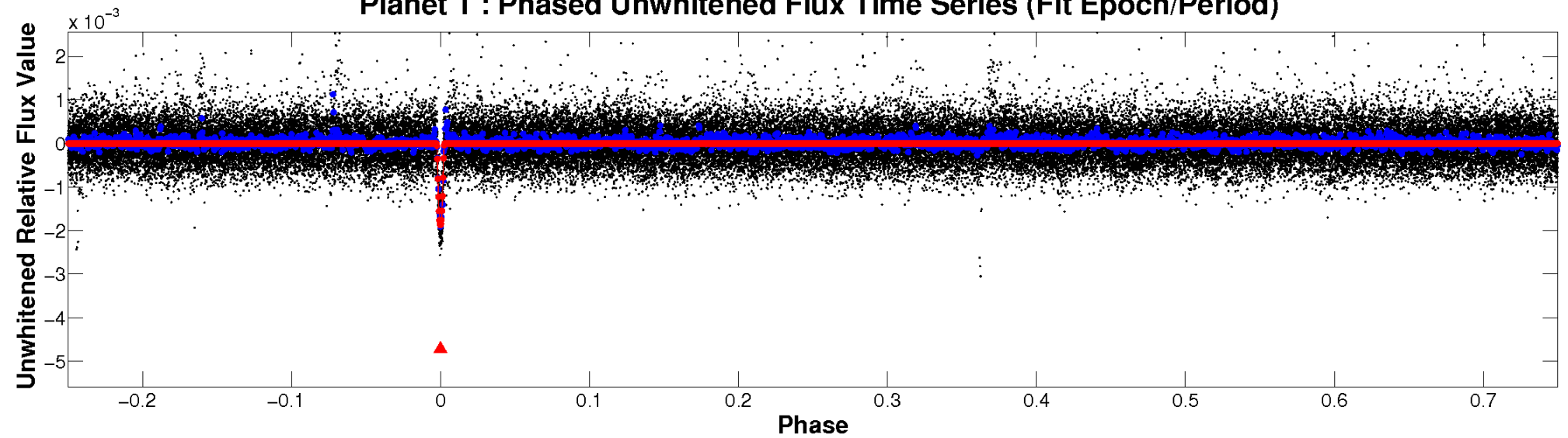
ALT Odd/Even

TCE 005992270-01

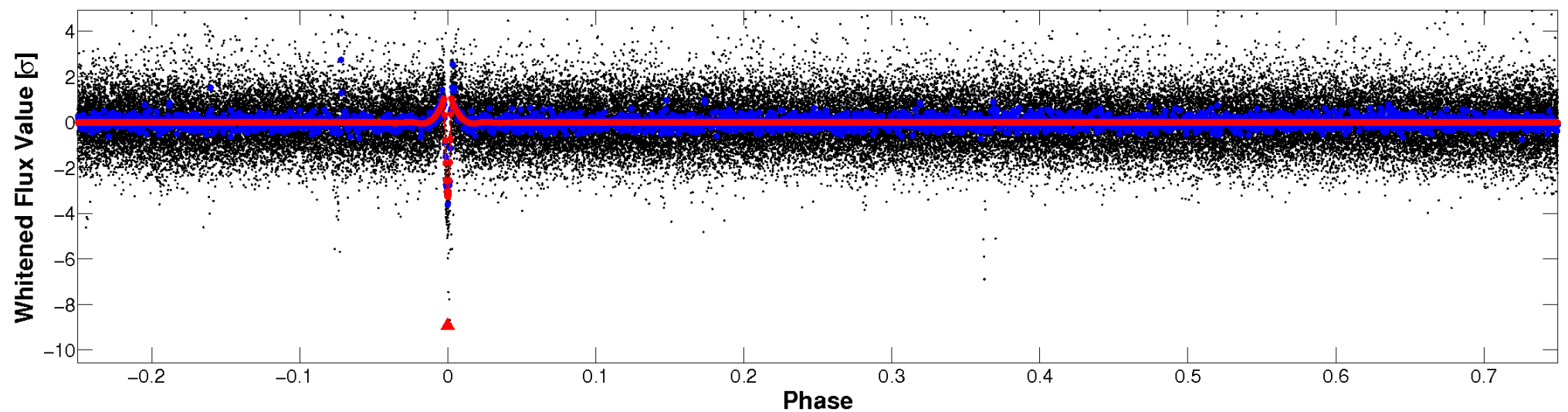


Non-Whitened Vs. Whitened Light Curve

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

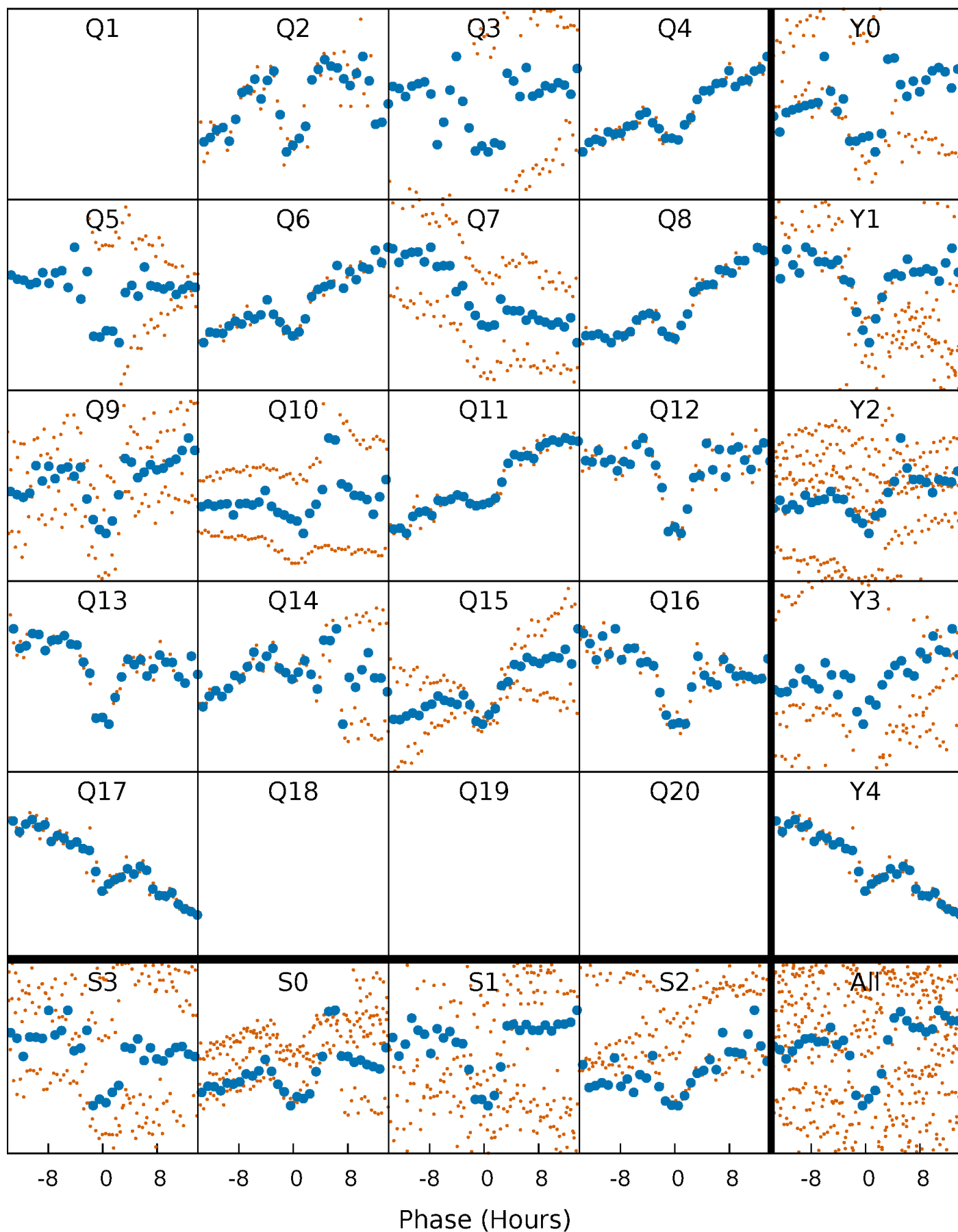


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



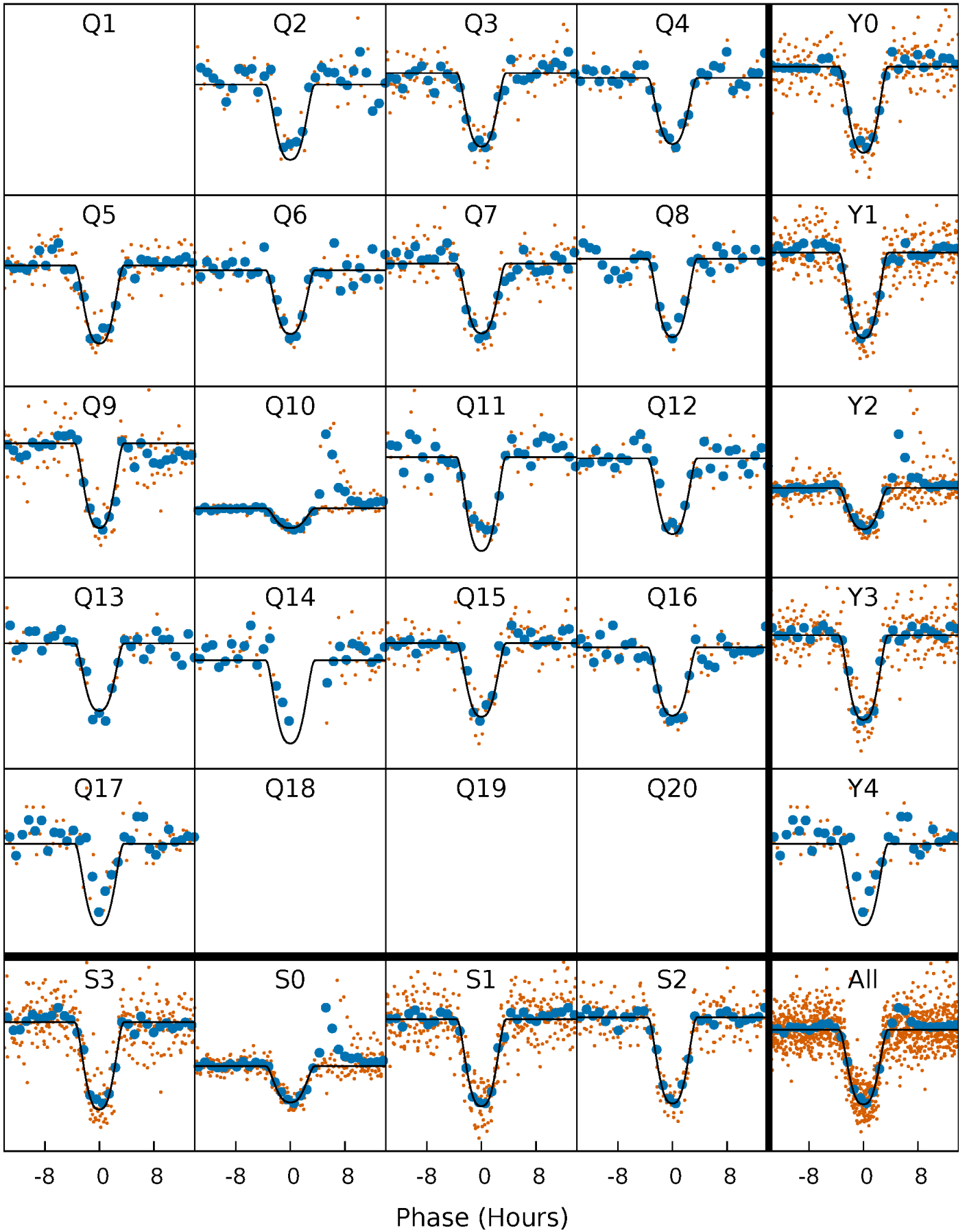
PDC Quarter-Phased Transit Curves

TCE 005992270-01 P= 58.430141 Days $T_0=168.300299$ (BKJD)



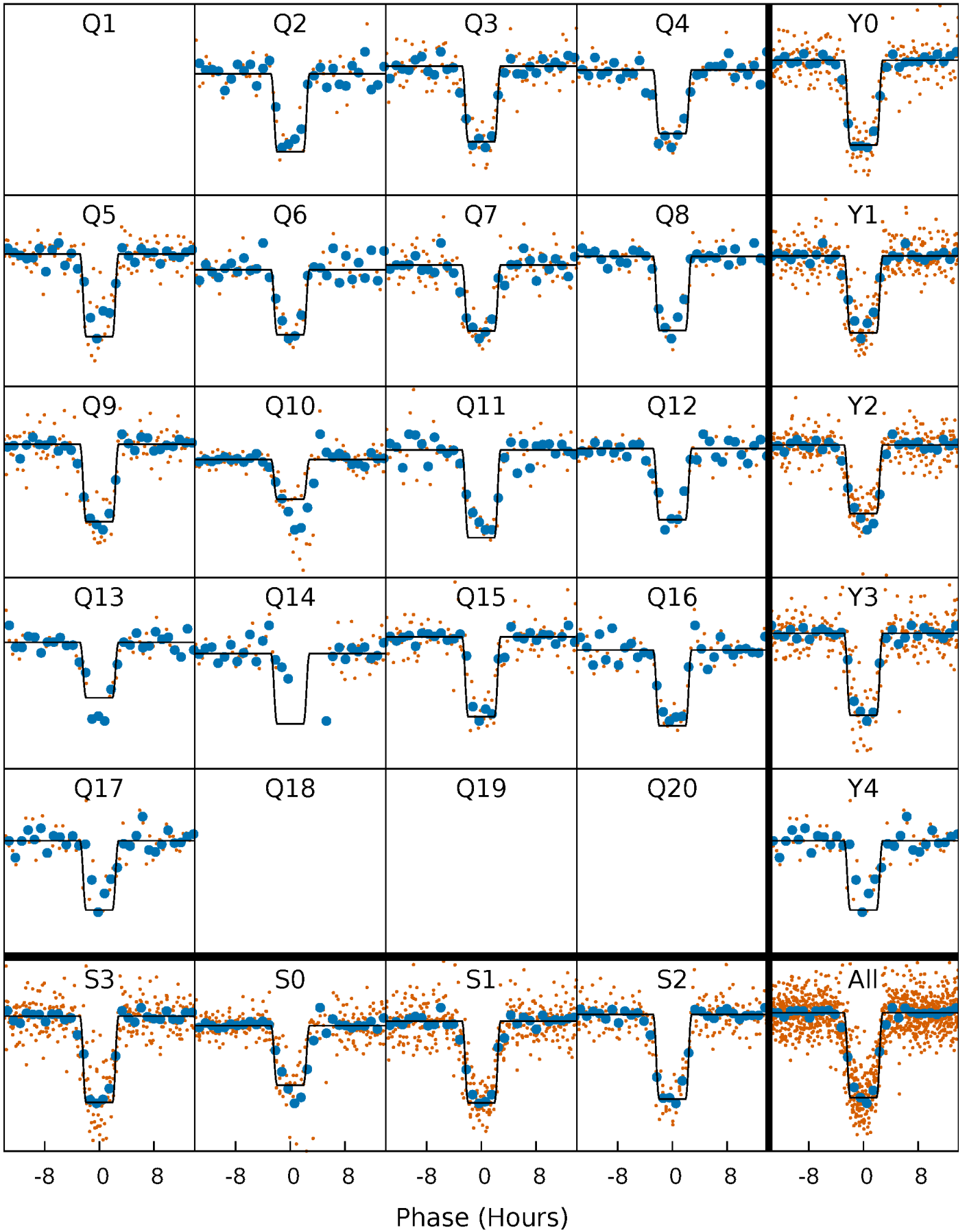
DV Quarter-Phased Transit Curves

TCE 005992270-01 P= 58.430141 Days $T_0=168.300299$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

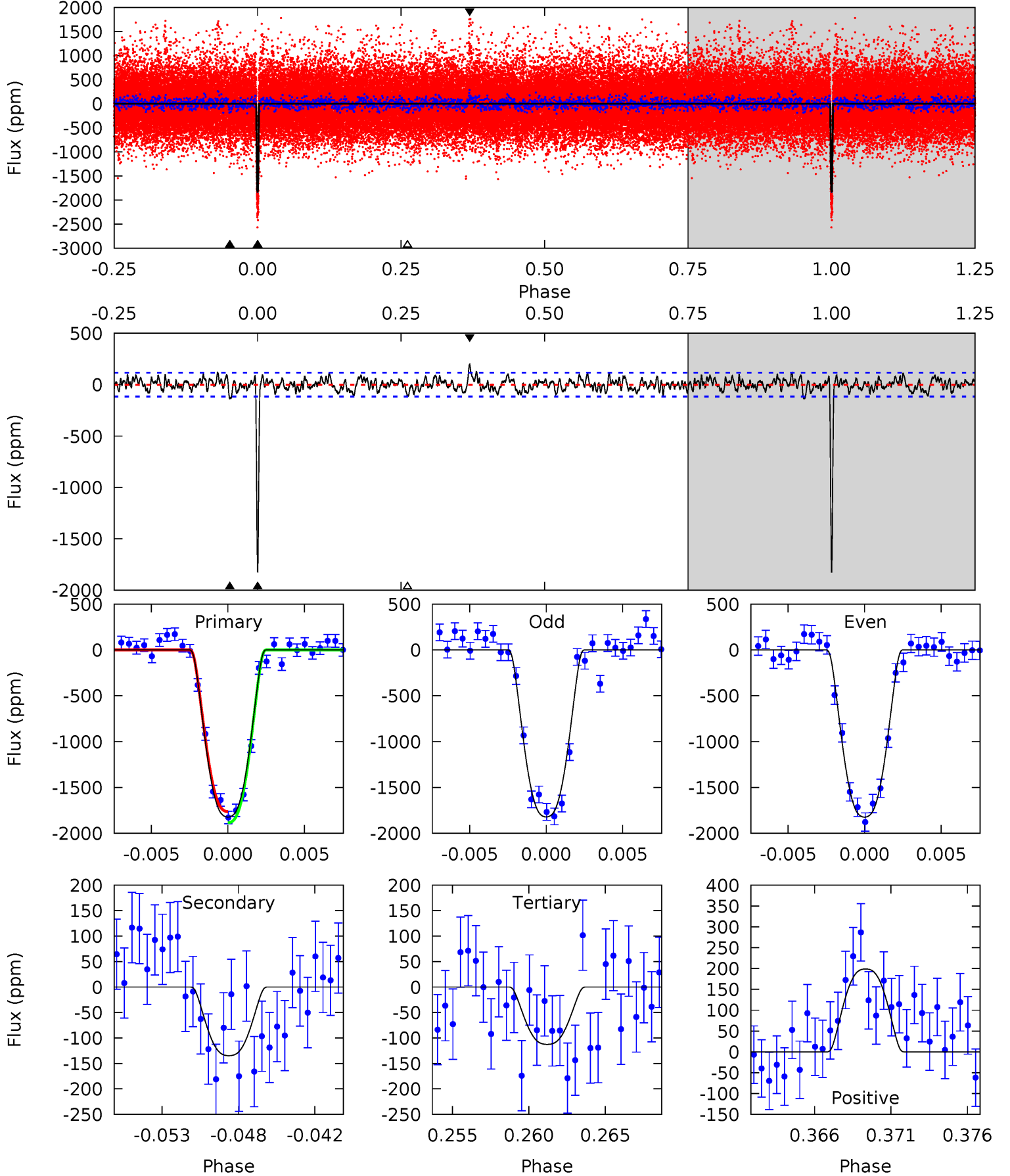
TCE 005992270-01 P= 58.429968 Days $T_0=168.307171$ (BKJD)



DV Model-Shift Uniqueness Test

005992270-01, P = 58.430141 Days, E = 109.870158 Days

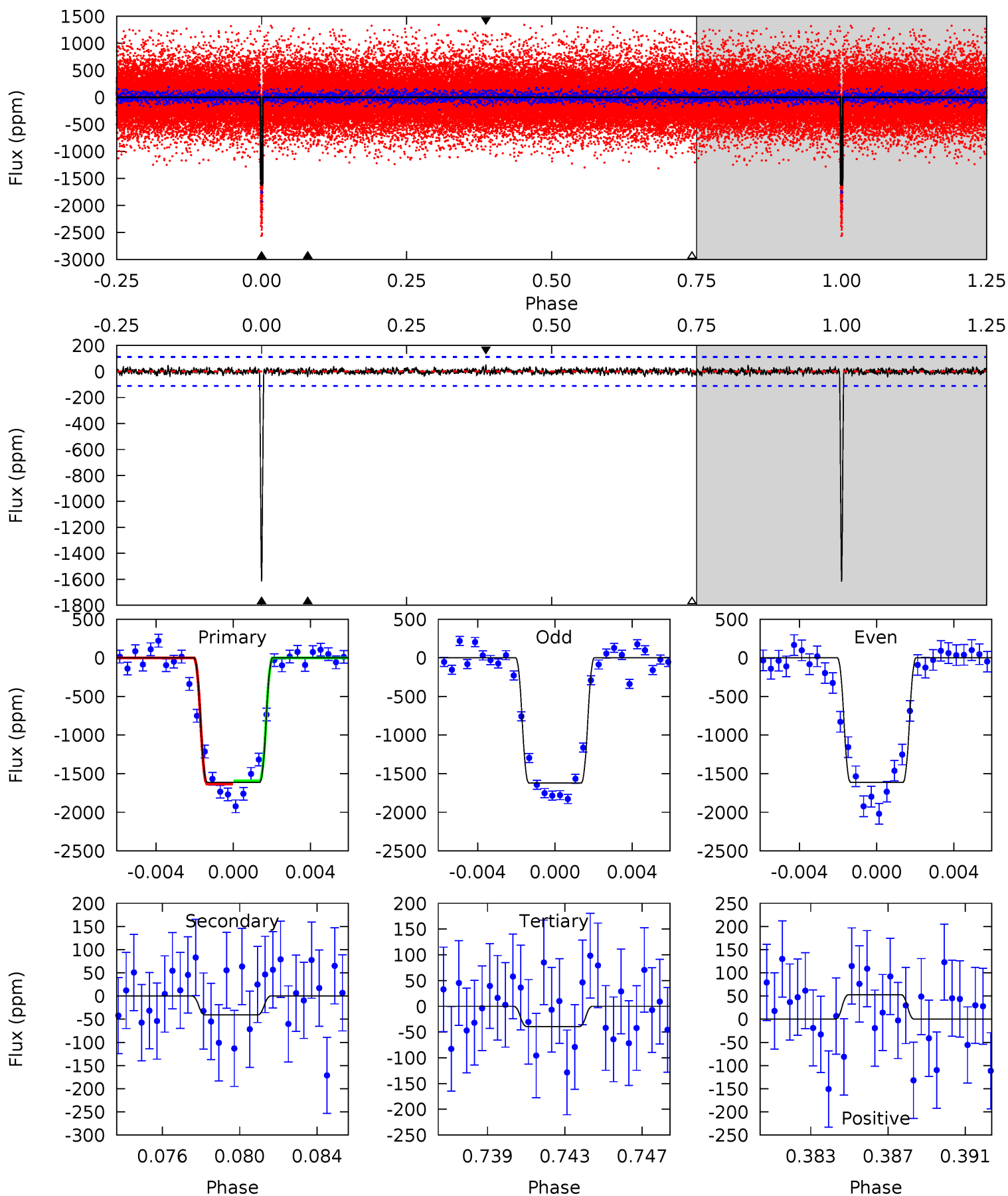
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
81.0	5.99	5.00	8.84	5.15	2.79	2.03	76.0	72.2	0.99	-2.85	0.04	0.96	0.10	2.72



Alt Model-Shift Uniqueness Test

005992270-01, P = 58.429968 Days, E = 109.877203 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
75.1	1.90	1.84	2.46	5.20	2.88	0.56	73.3	72.7	0.07	-0.56	0.19	1.01	0.03	0.95



Stellar Parameters For KIC 005992270

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4338^{+118}_{-131}	$4.643^{+0.056}_{-0.024}$	$-0.340^{+0.300}_{-0.300}$	$0.609^{+0.045}_{-0.061}$	$0.594^{+0.065}_{-0.047}$	$3.705^{+0.937}_{-0.448}$
	+3%/-3%	+1%/-1%	+88%/-88%	+7%/-10%	+11%/-8%	+25%/-12%
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 005992270-01 / KOI 1855.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-135 ± 23	$3.45^{+0.19}_{-0.21}$	416^{+14}_{-15}	2719^{+76}_{-83}	395^{+75}_{-72}
Alt.	-41 ± 21	$2.78^{+0.18}_{-0.16}$	416^{+15}_{-15}	2467^{+142}_{-218}	181^{+95}_{-99}

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

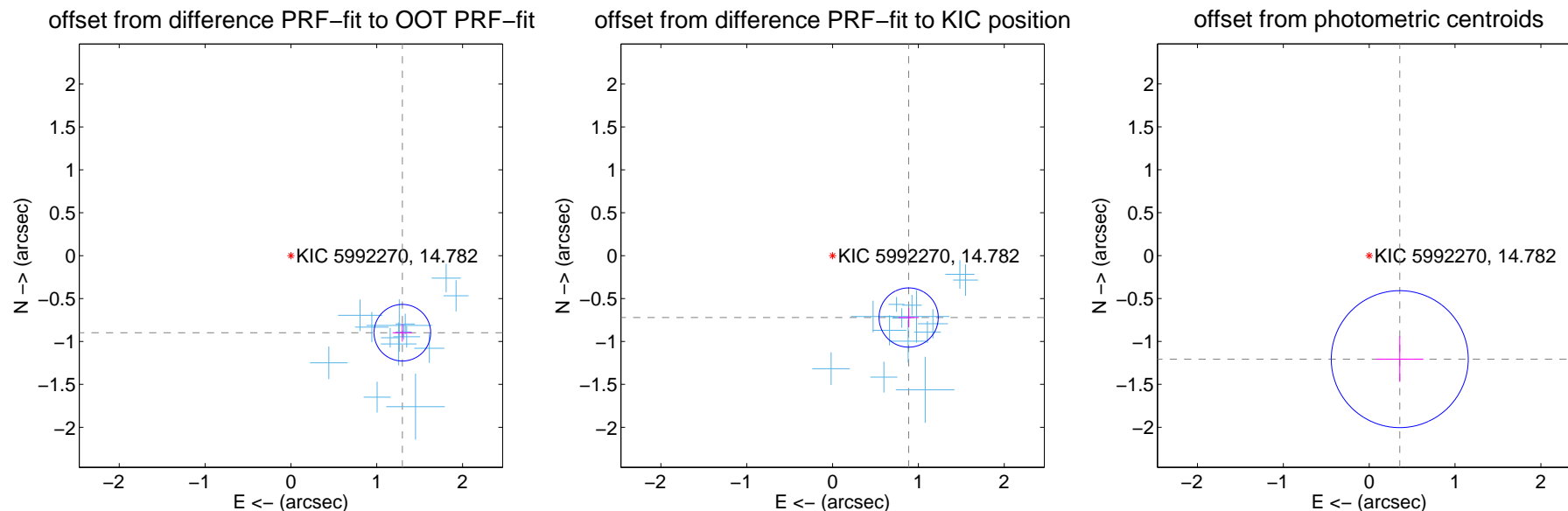
DV Centroid Data

Supplemental centroid analysis for 005992270-01. Kepler magnitude: 14.78. Transit SNR 41.36

There are 14 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.30 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.579 ± 0.110	14.36	-1.299 ± 0.113	-0.898 ± 0.104
PRF-fit source offset from KIC position	1.143 ± 0.115	9.93	-0.887 ± 0.117	-0.721 ± 0.113
photometric centroid source offset	1.26 ± 0.27	4.73	-0.36 ± 0.27	-1.21 ± 0.27



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.

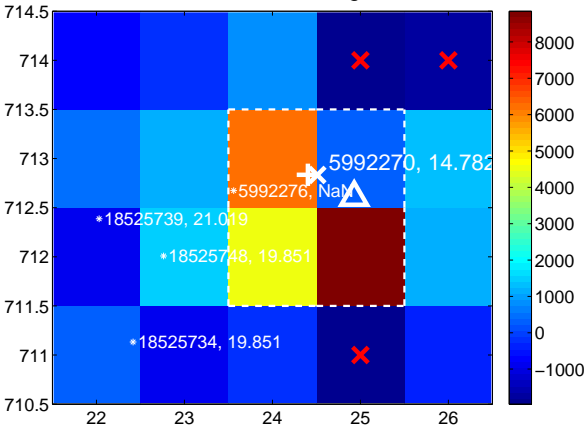
Q1 no difference image



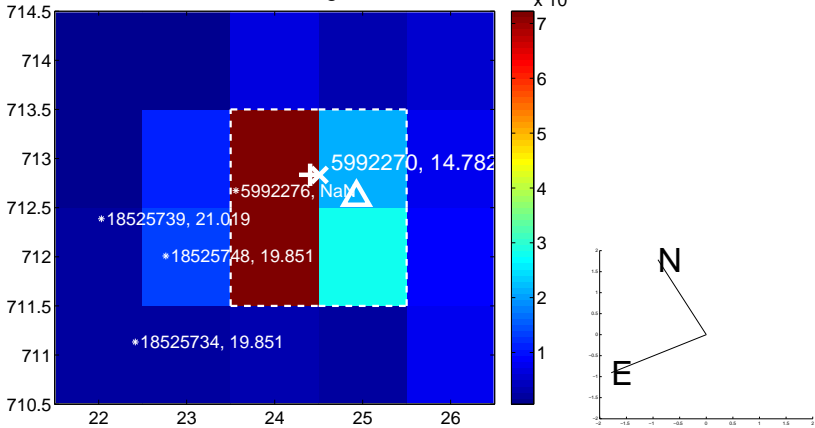
Q1 no OOT image



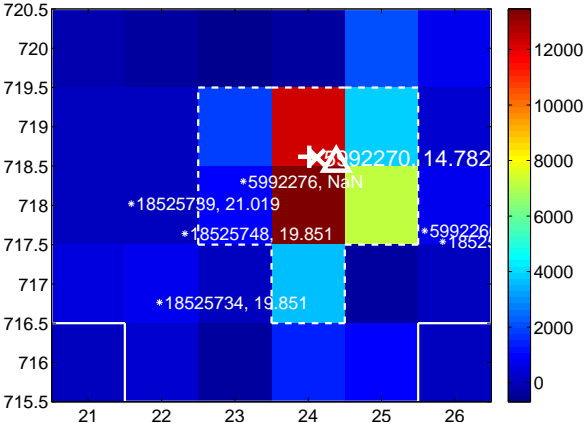
Q2 difference image



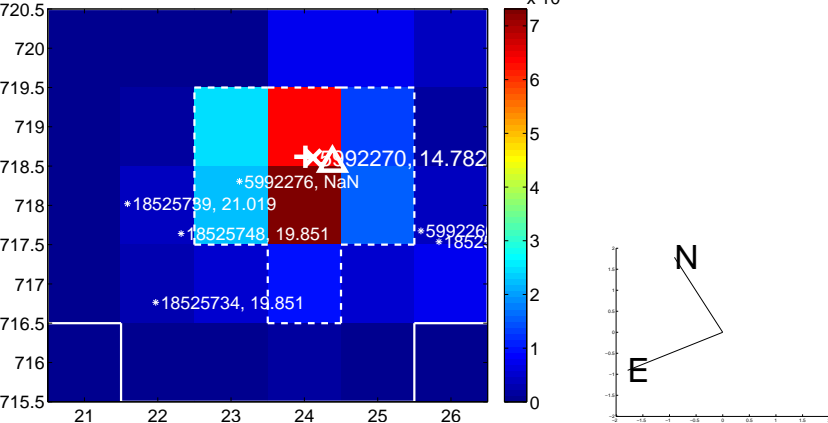
Q2 OOT image



Q3 difference image



Q3 OOT image



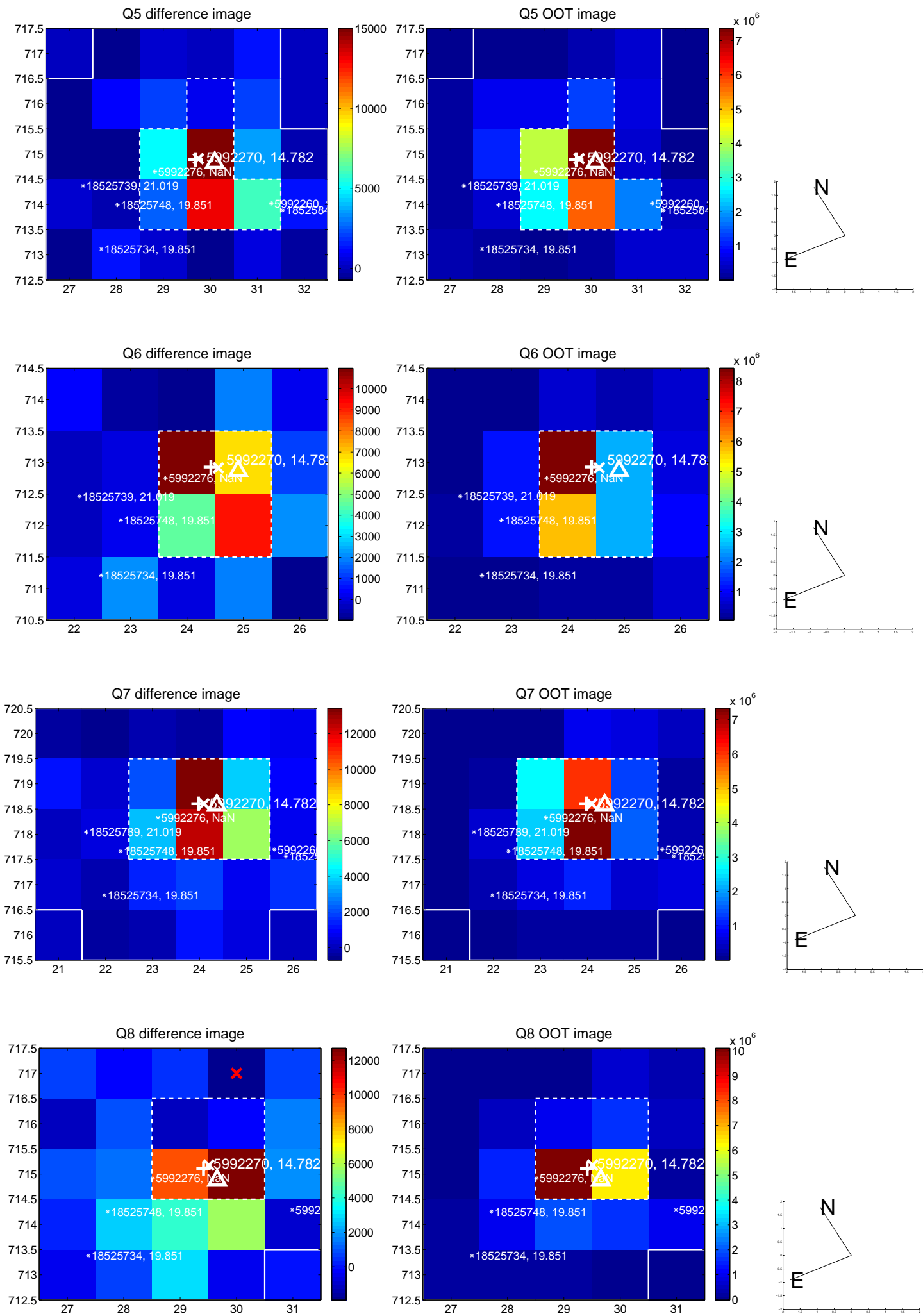
Q4 no difference image



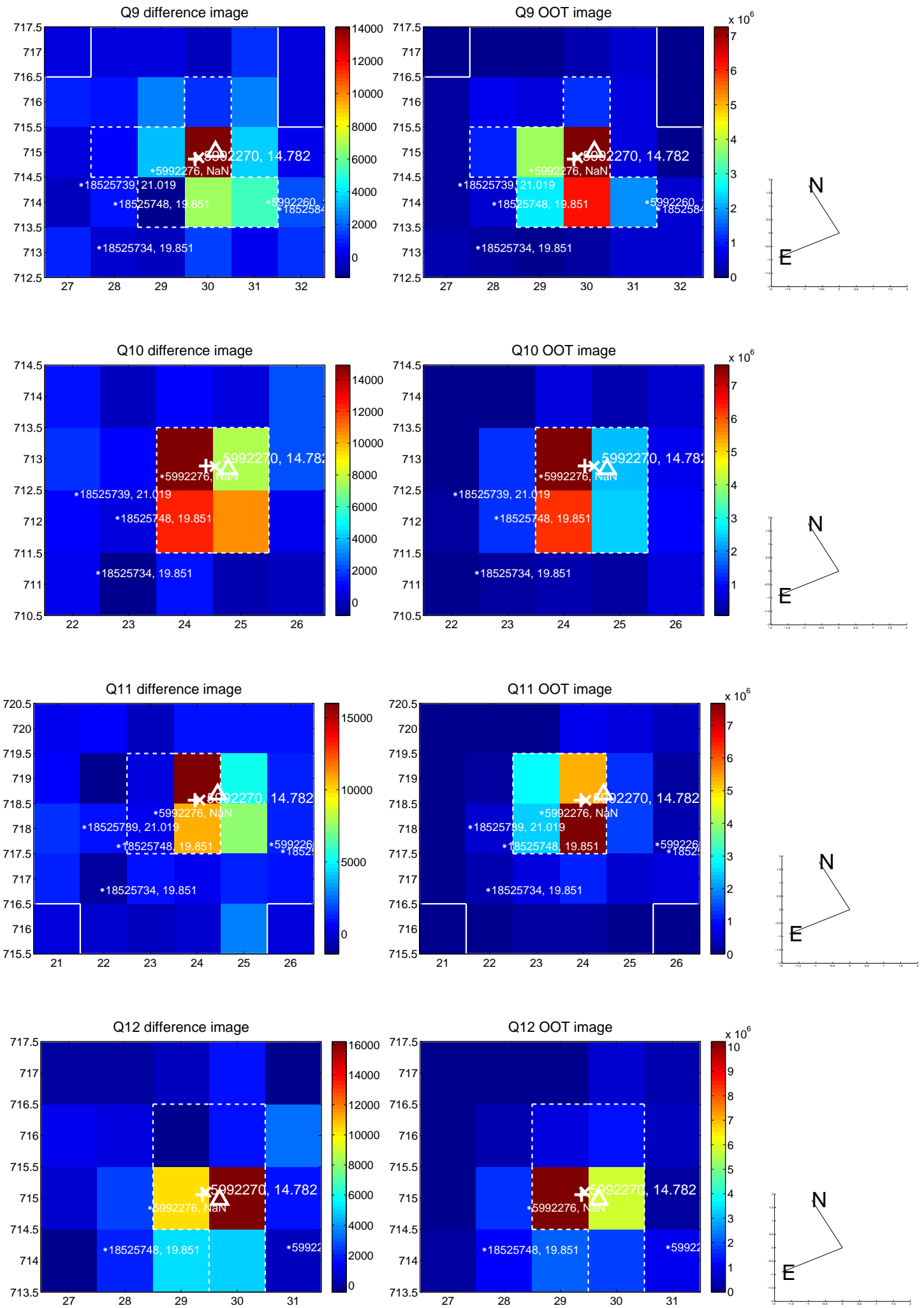
Q4 no OOT image



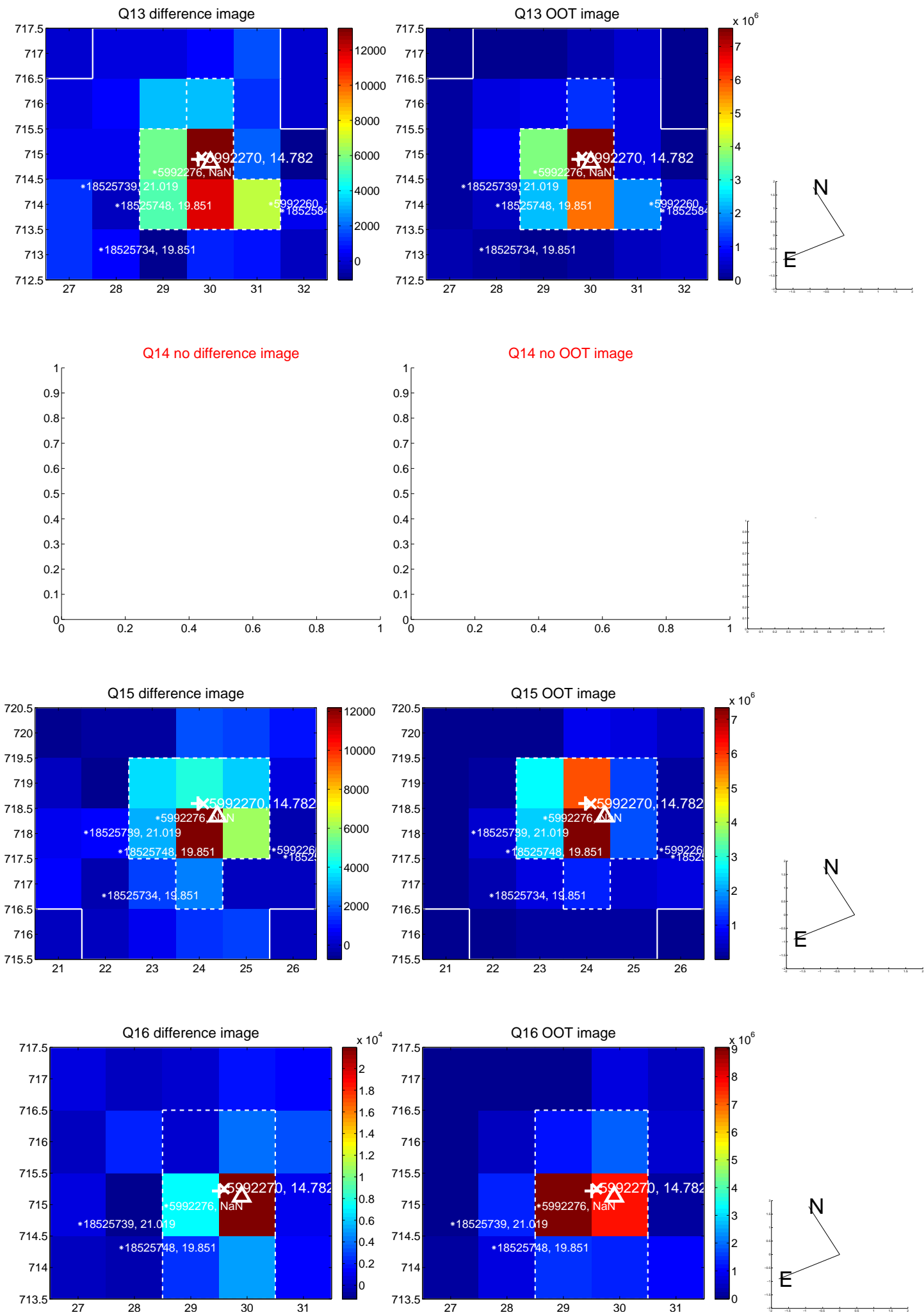
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



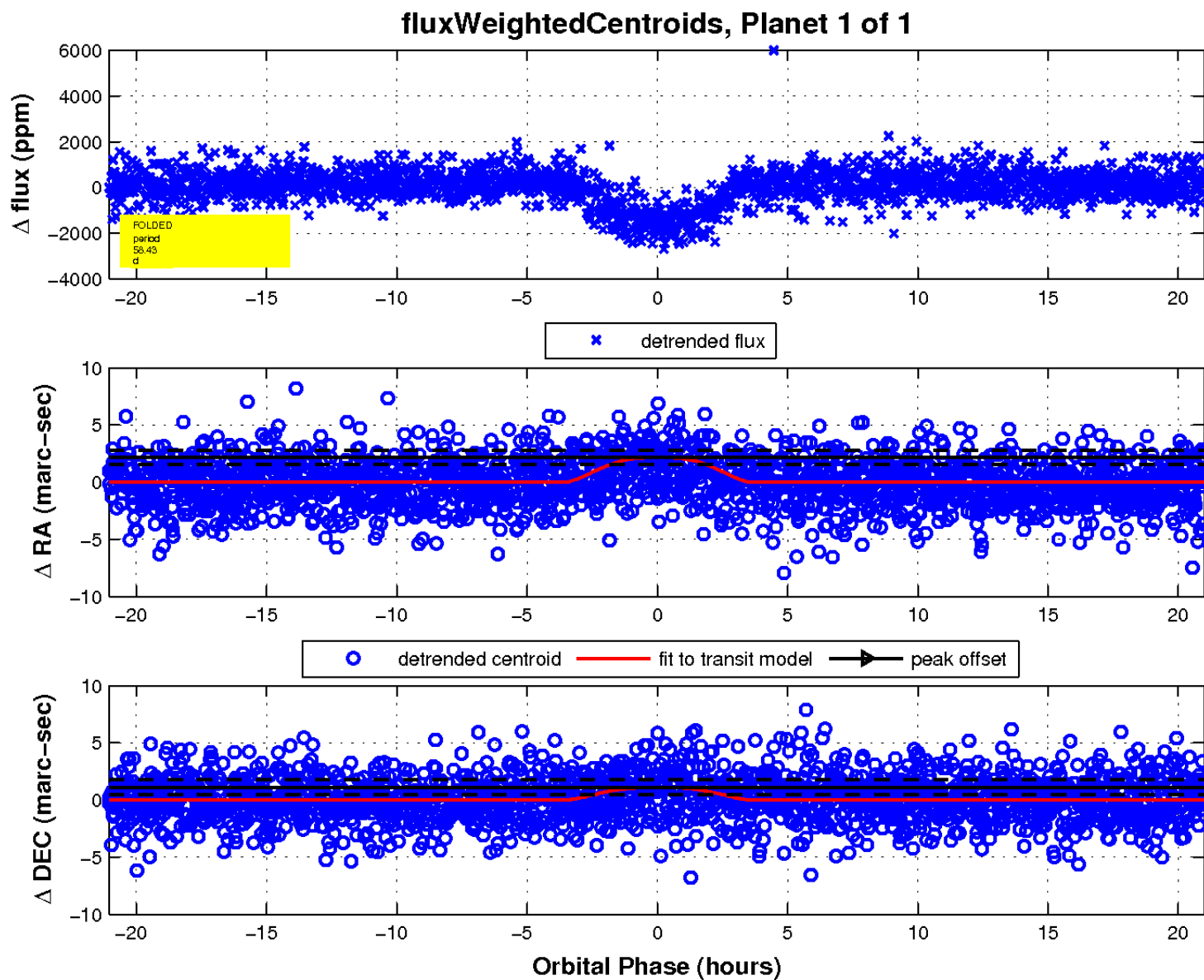
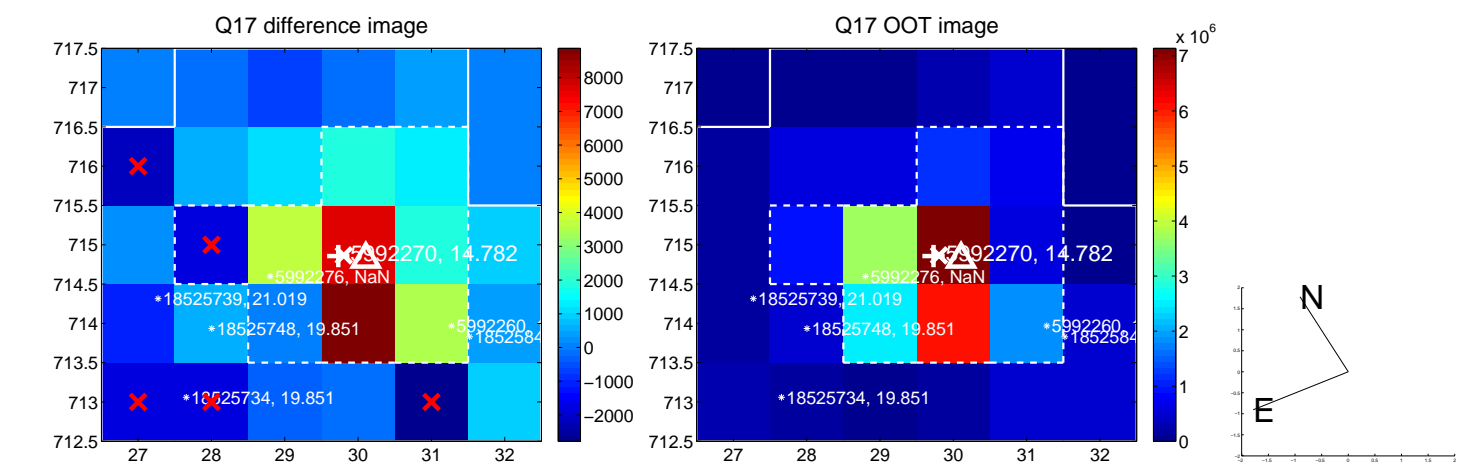
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

