

KIC 008016298

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})
008016298-01	OBS	No	388.690349	219.352088	260.4	4.392	10.2	7.0	1.01	6088	1.81	1.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008016298-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS

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

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

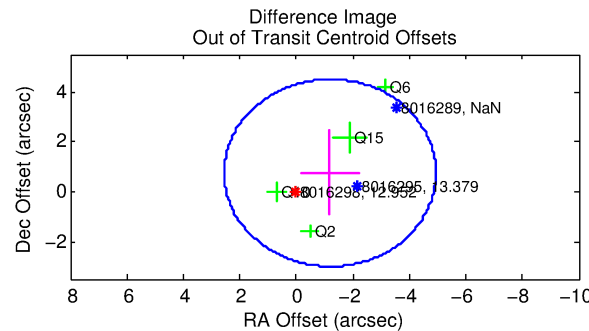
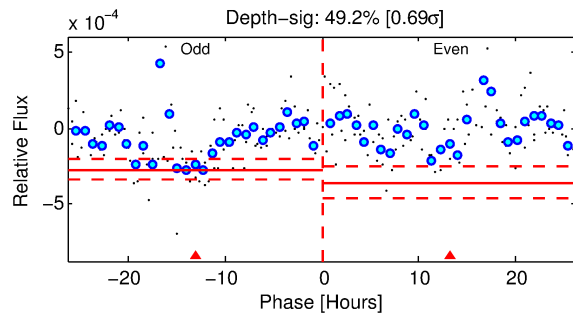
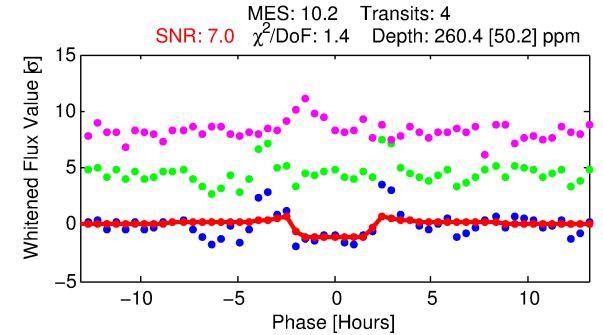
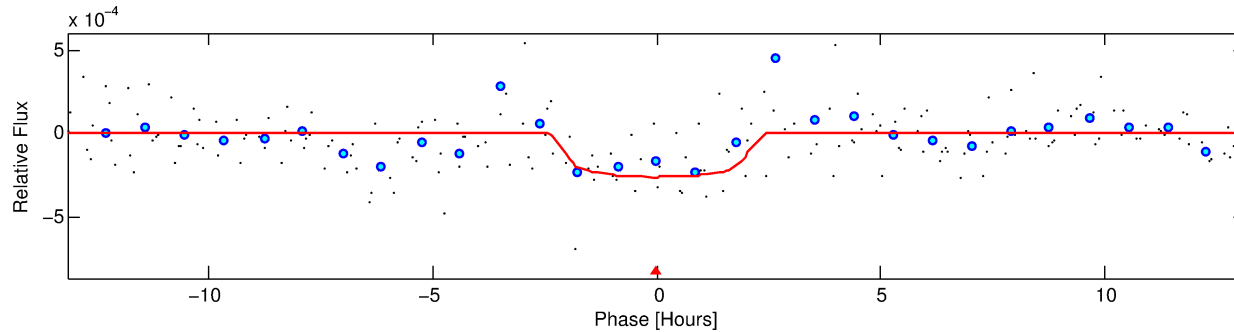
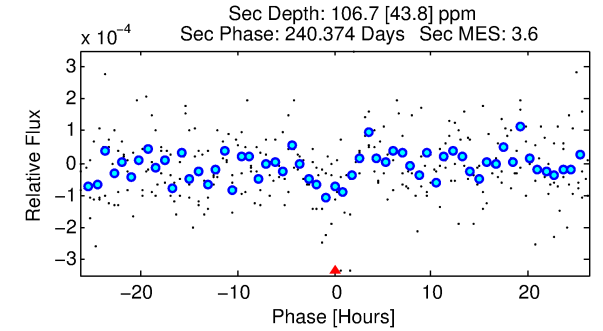
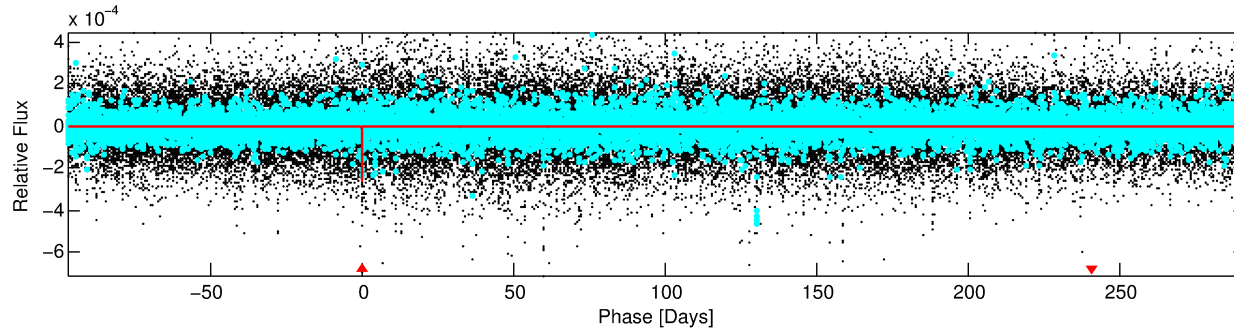
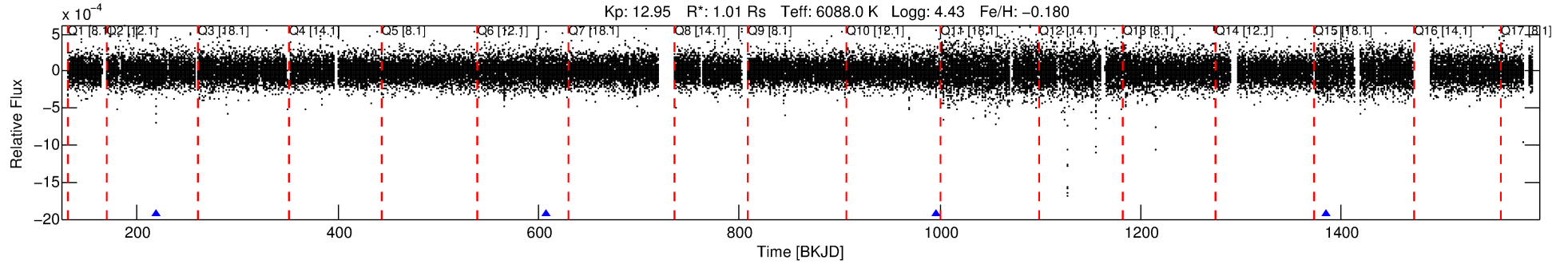
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008016298-01

No Significant Match Found

DV One-Page Summary

KIC: 8016298 Candidate: 1 of 1 Period: 388.690 d



DV Fit Results:

Period = 388.69035 [0.00567] d
Epoch = 219.3521 [0.0110] BKJD
Rp/R* = 0.0165 [0.0112]
a/R* = 413.58 [1413.34]
b = 0.81 [1.44]
Seff = 1.14 [0.46]
Teq = 264 [27] K
Rp = 1.81 [1.35] Re
a = 1.0442 [0.2691] AU
Ag = 19576.19 [28759.09] [0.68σ]
Teffp = 4824 [1723] K [2.65σ]

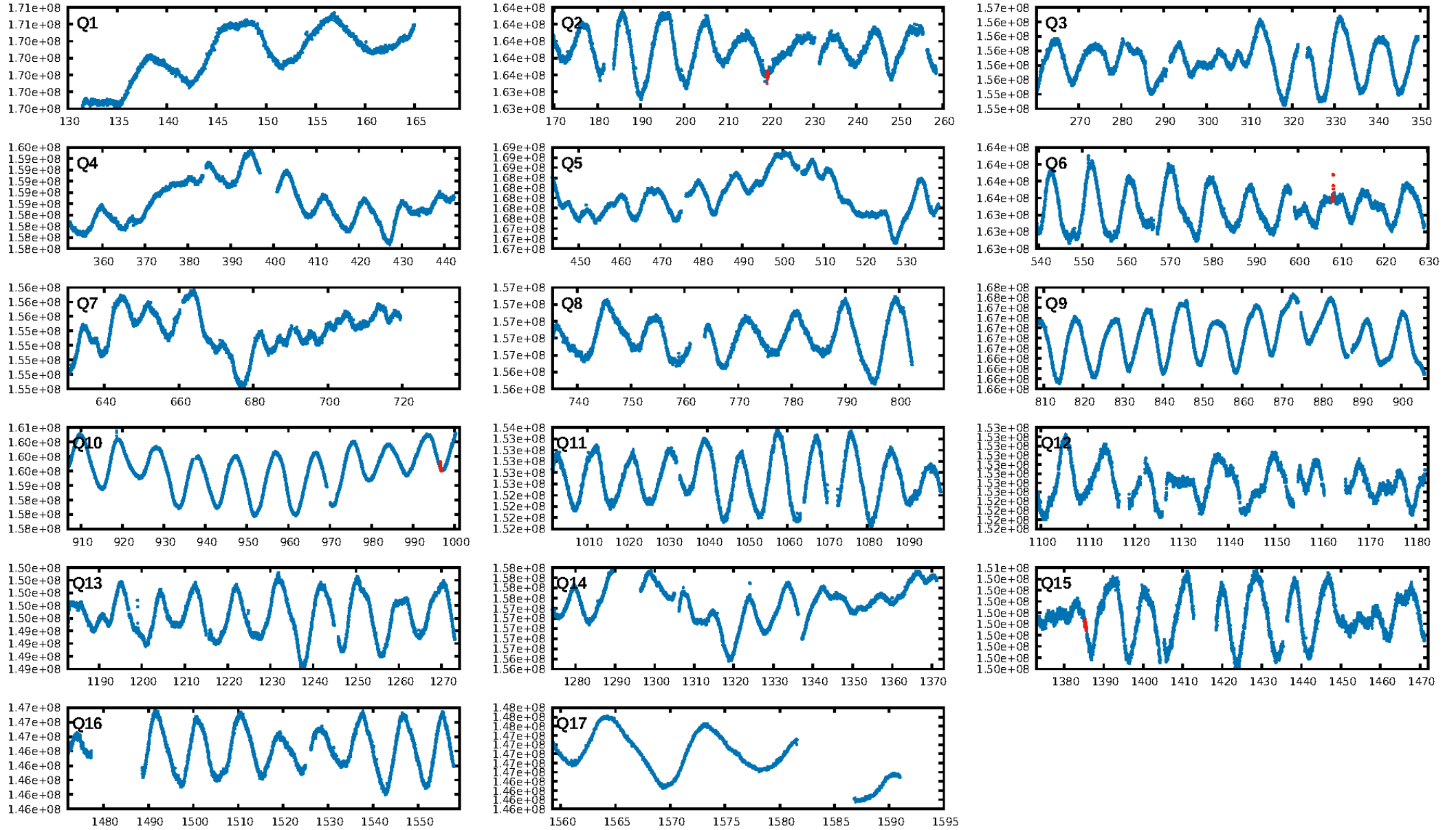
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.5%
ModelChiSquareGof-sig: 63.4%
Bootstrap-pfa: 1.88e-14
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -2.294
Centroid-sig: 0.0%
Centroid-so: 2.512 arcsec [1.86σ]
OotOffset-rm: 1.408 arcsec [1.13σ]
KicOffset-rm: 1.167 arcsec [0.98σ]
OotOffset-st: 3/1/0/0 [4]
KicOffset-st: 3/1/0/0 [4]
DiffImageQuality-fgm: 0.75 [3/4]
DiffImageOverlap-fno: 1.00 [4/4]

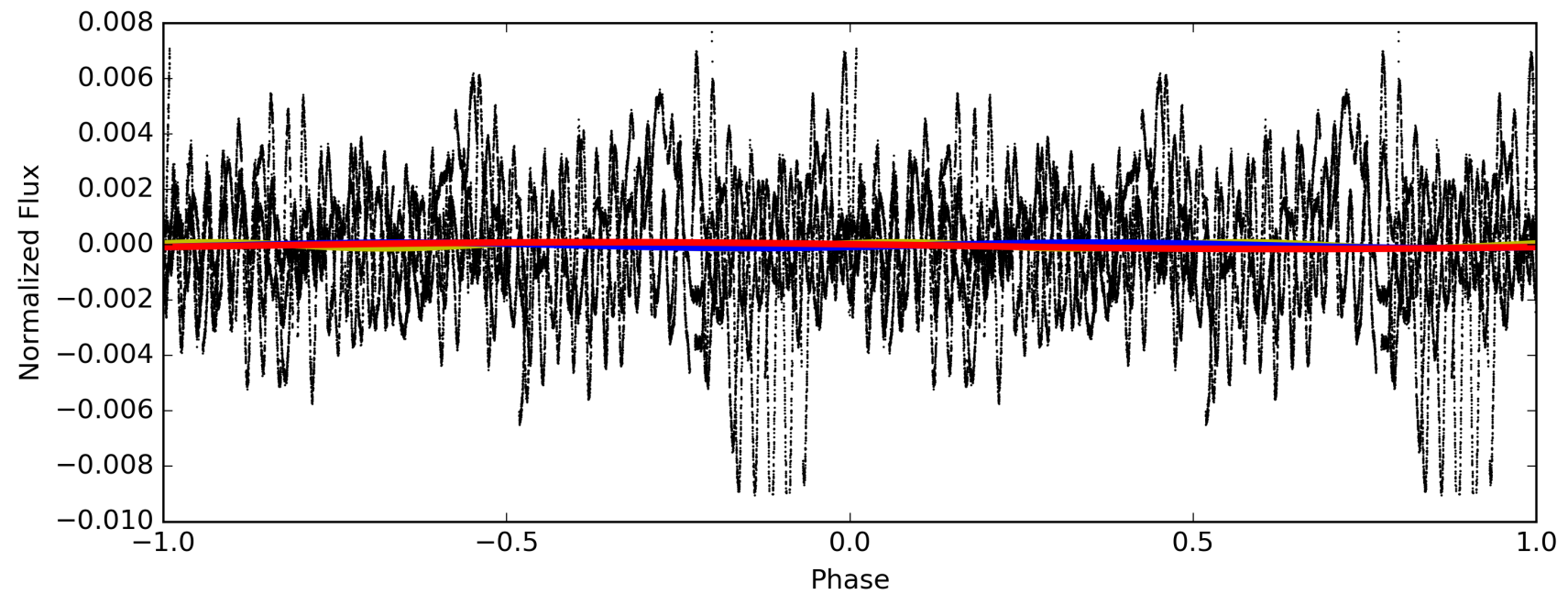
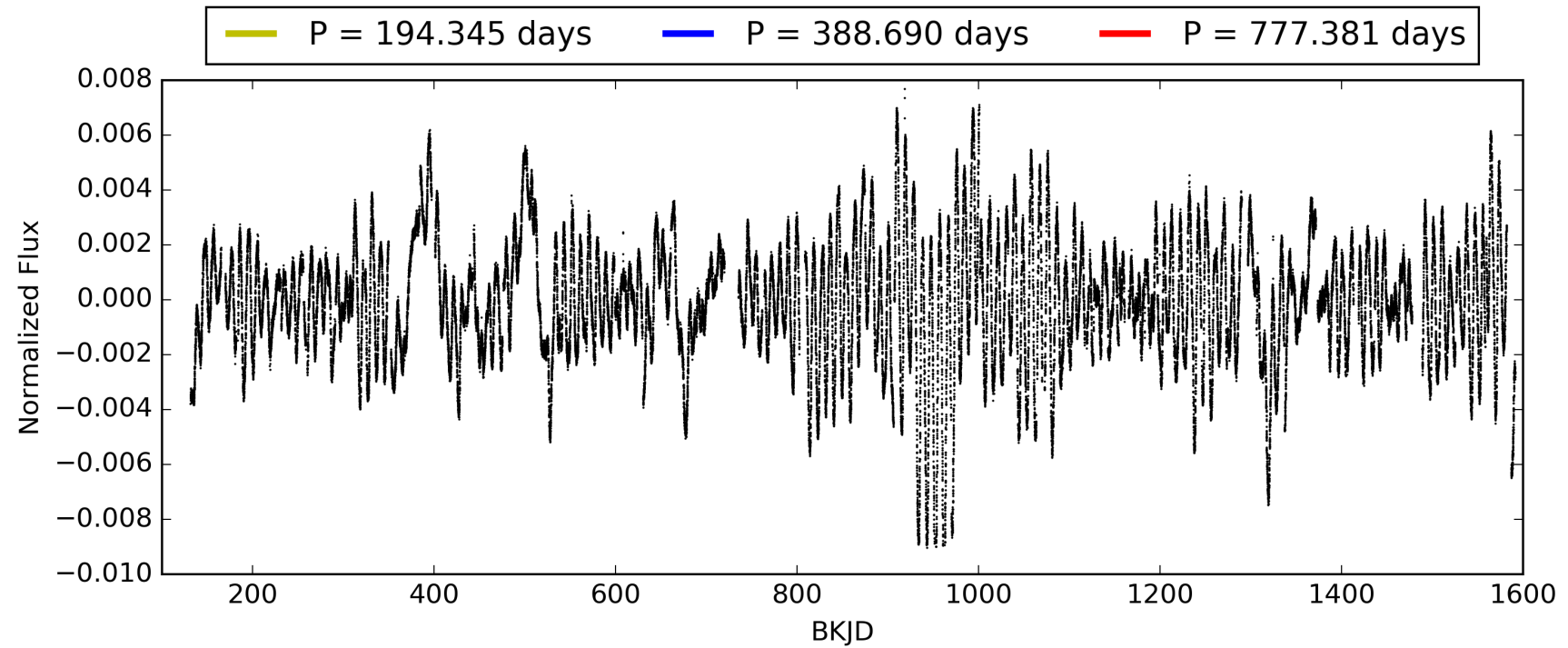
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:21:25 Z

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

TCE 008016298-01, PDC Light Curves

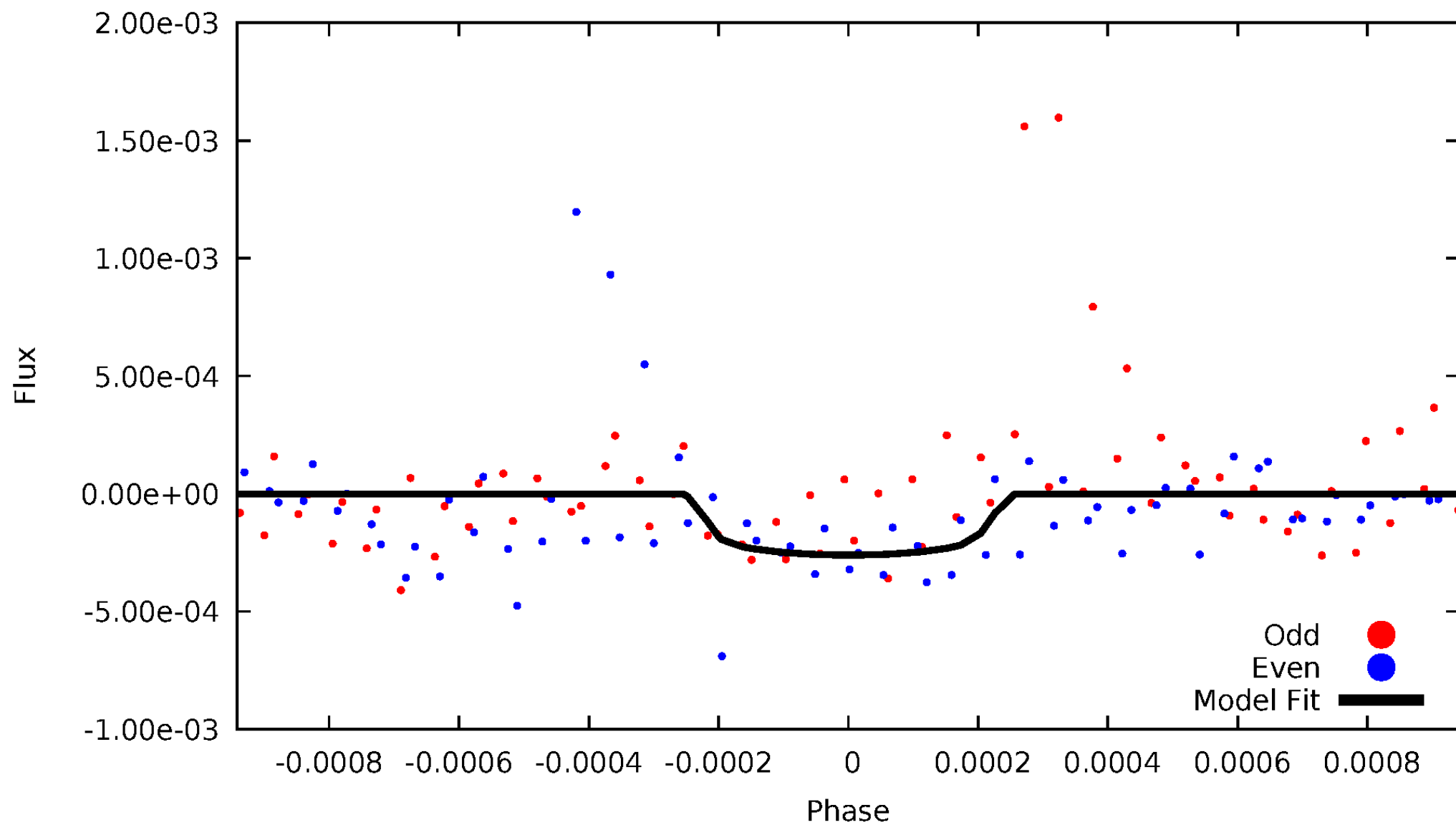


TCE 008016298-01



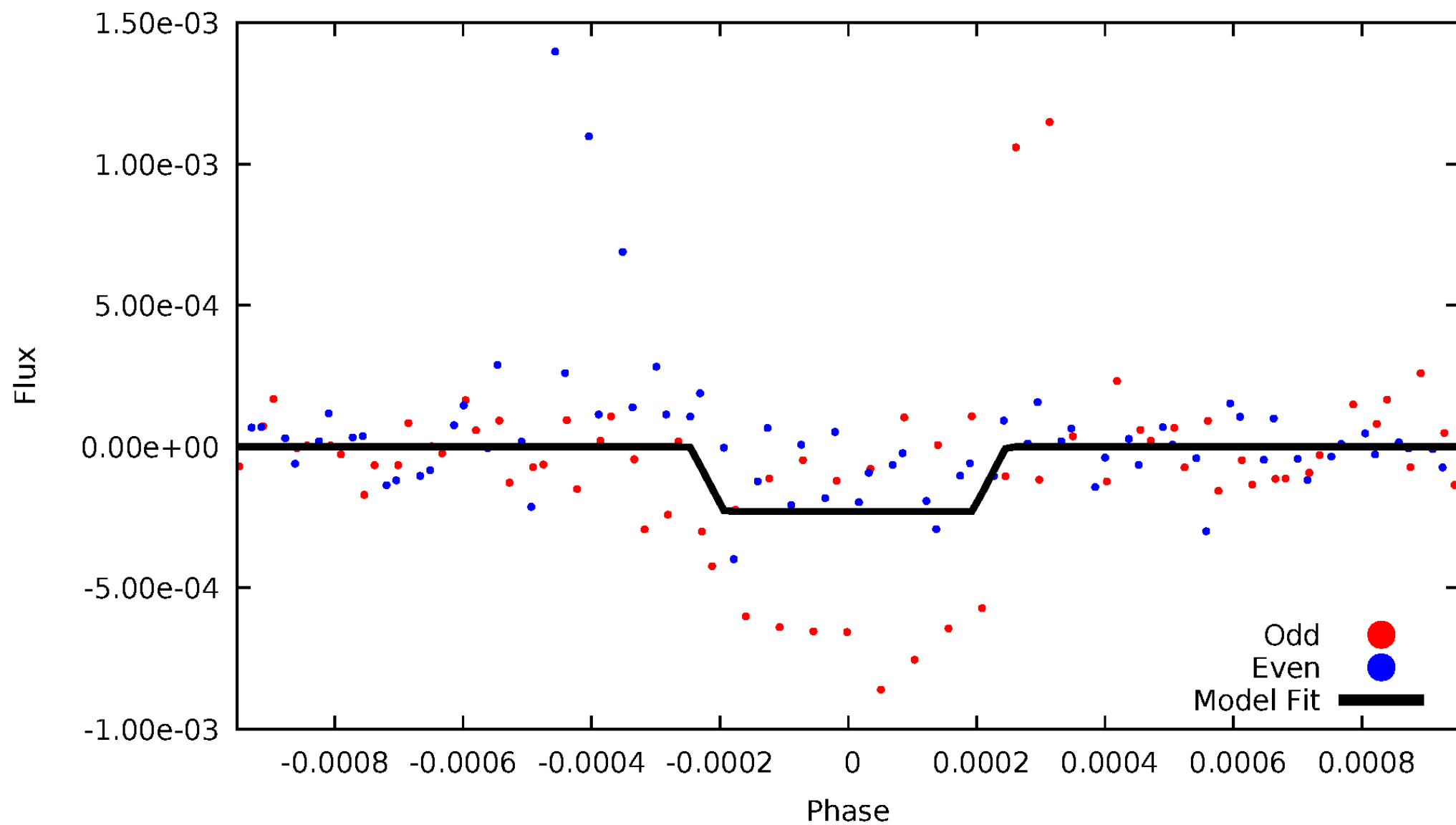
DV Odd/Even

TCE 008016298-01

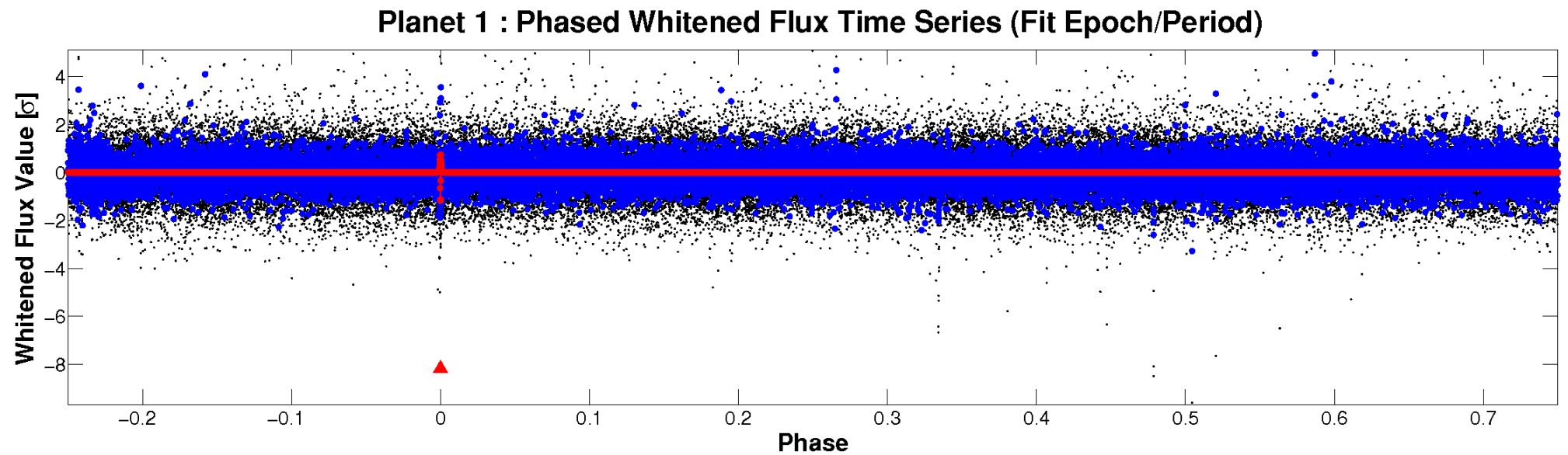
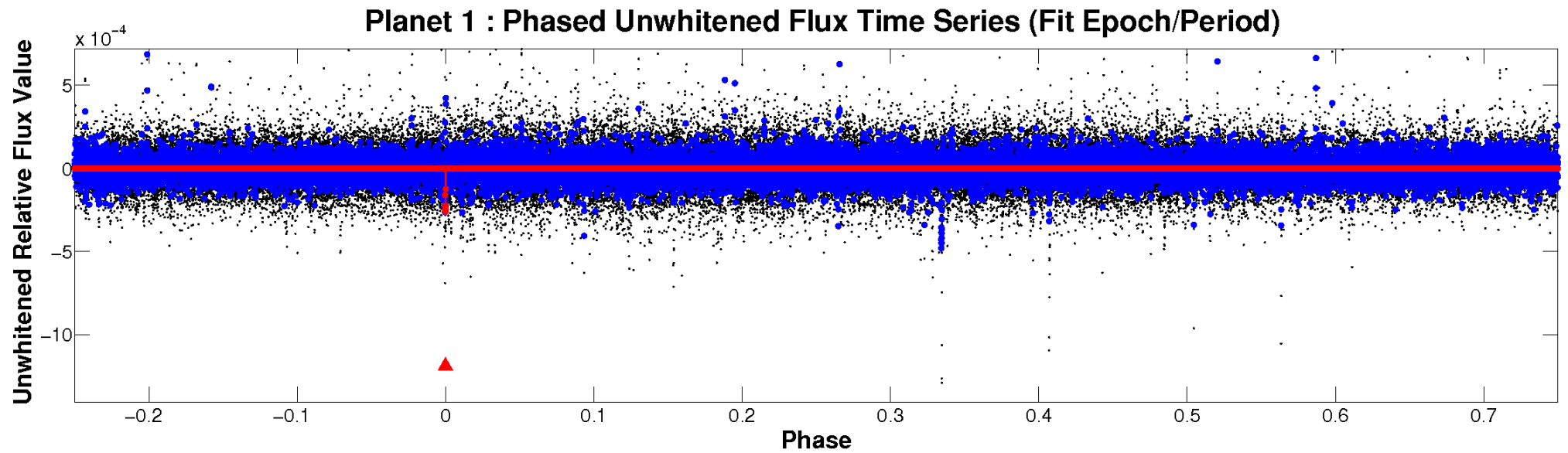


ALT Odd/Even

TCE 008016298-01

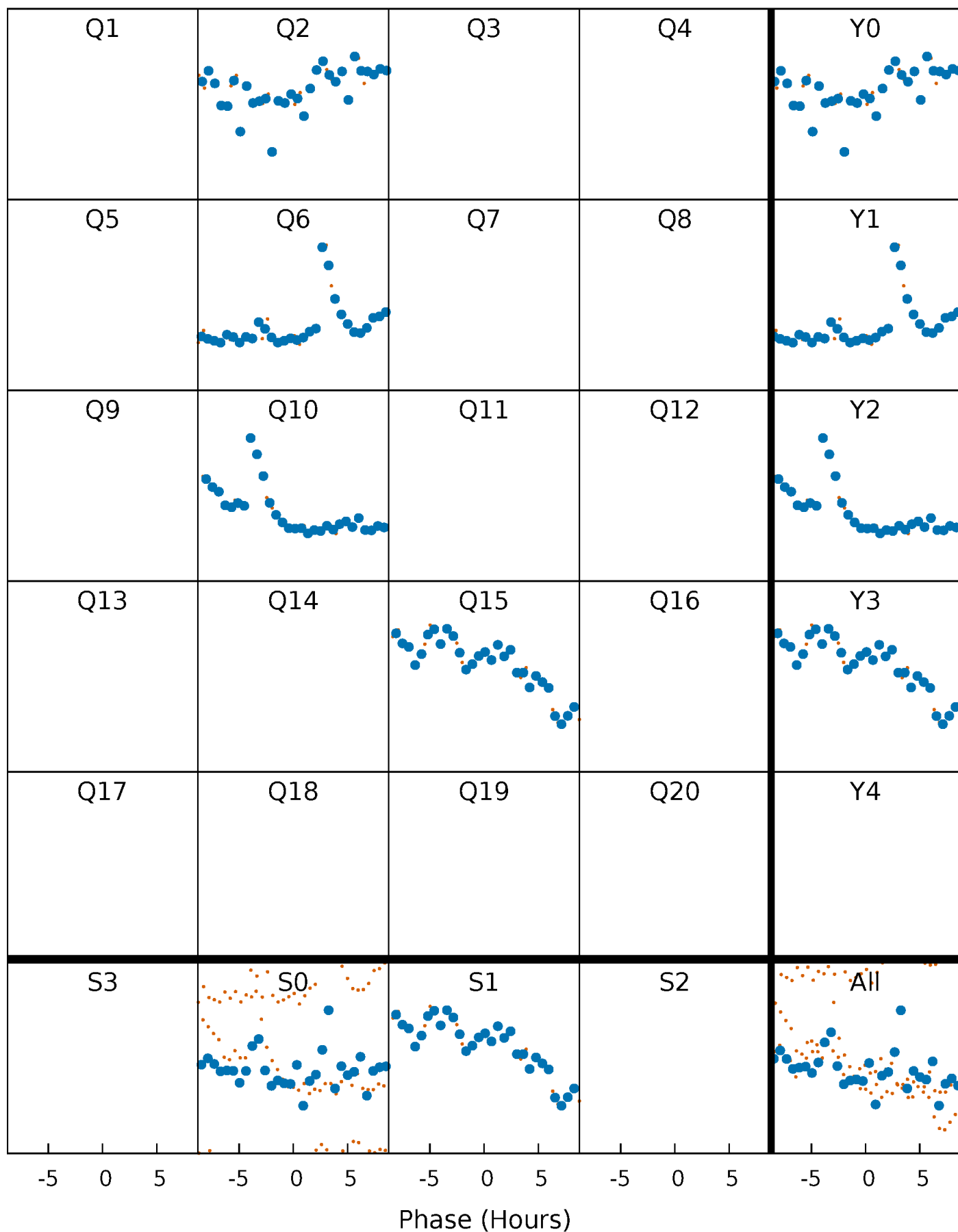


Non-Whitened Vs. Whitened Light Curve



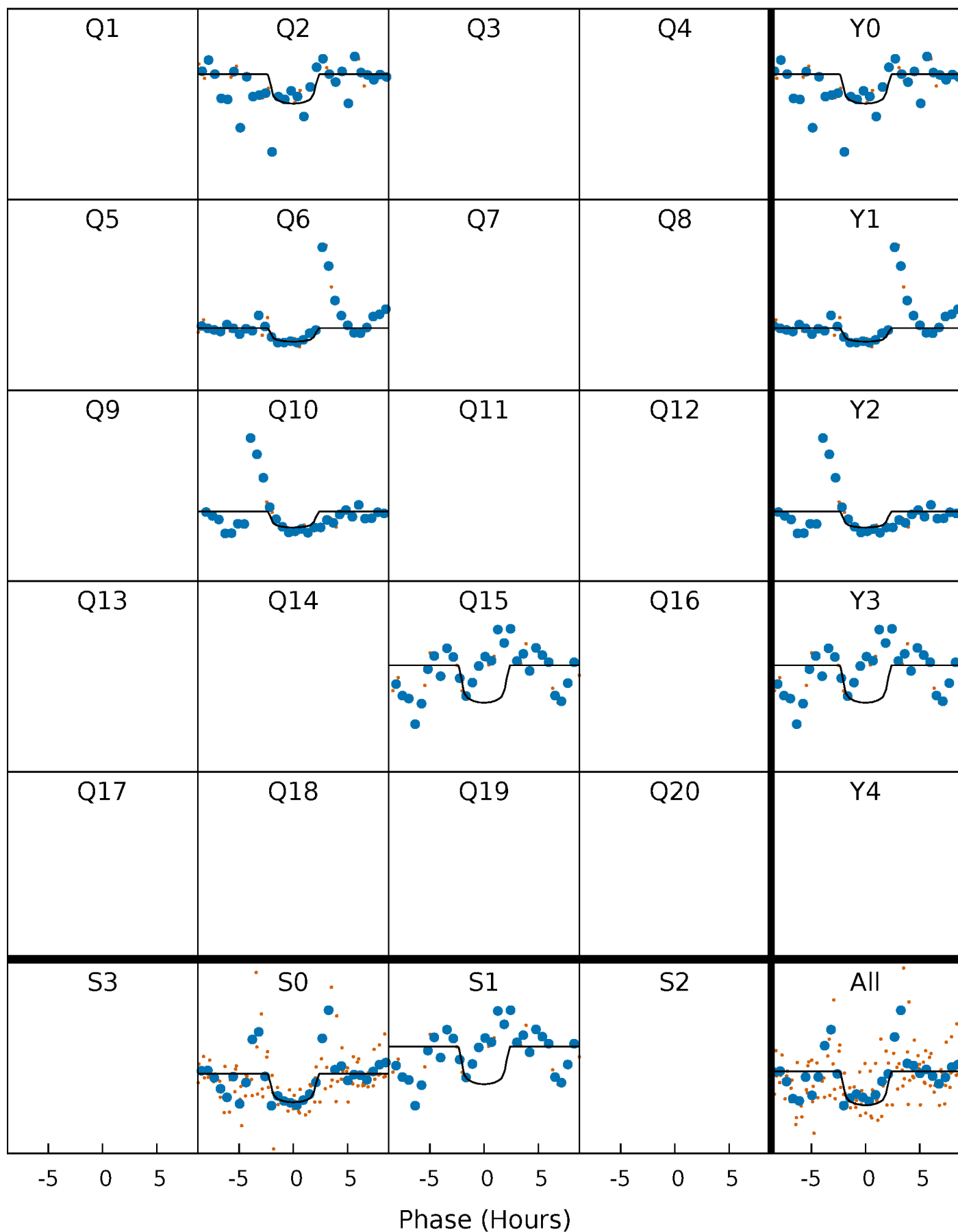
PDC Quarter-Phased Transit Curves

TCE 008016298-01 P=388.690349 Days $T_0=219.352088$ (BKJD)



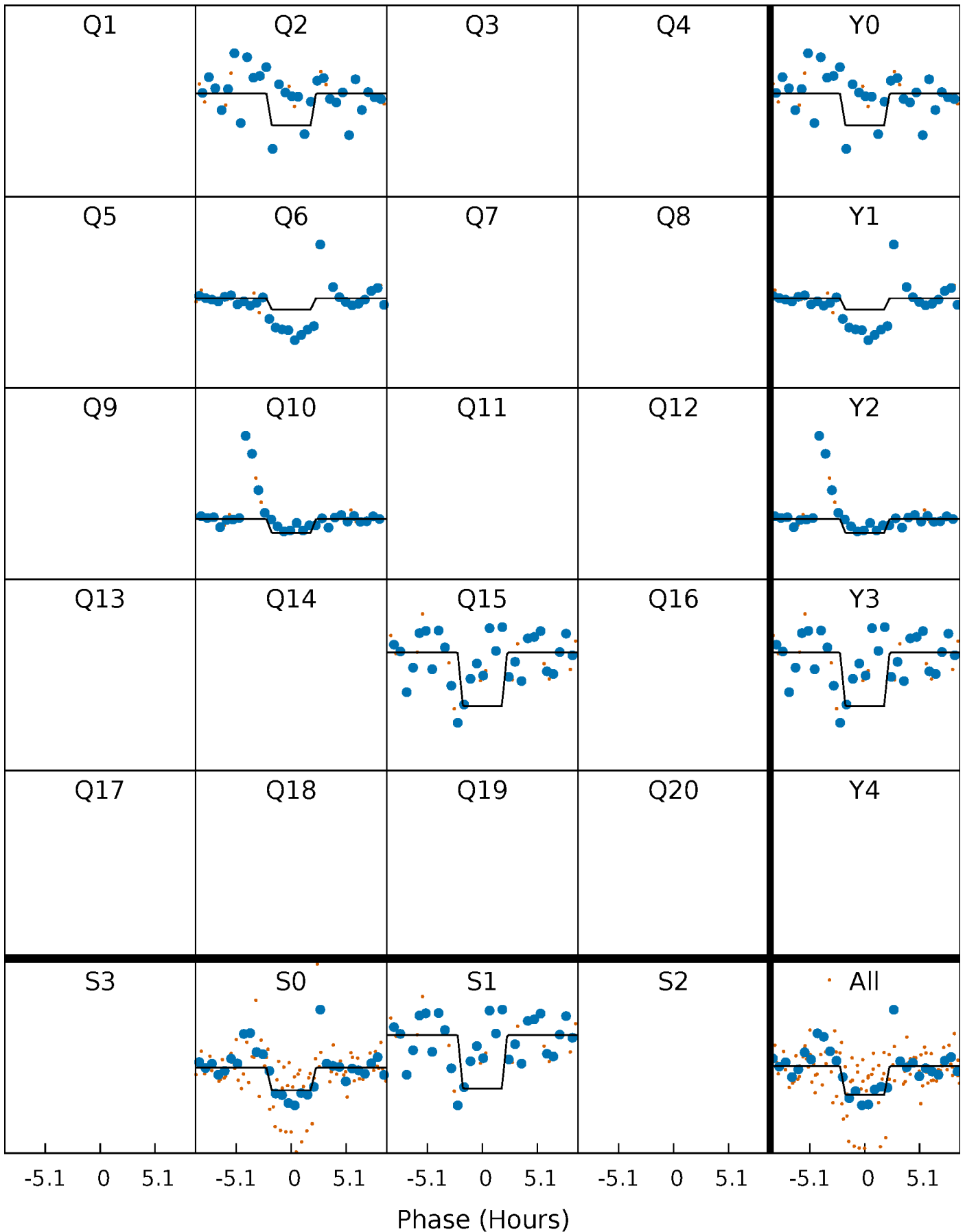
DV Quarter-Phased Transit Curves

TCE 008016298-01 P=388.690349 Days $T_0=219.352088$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

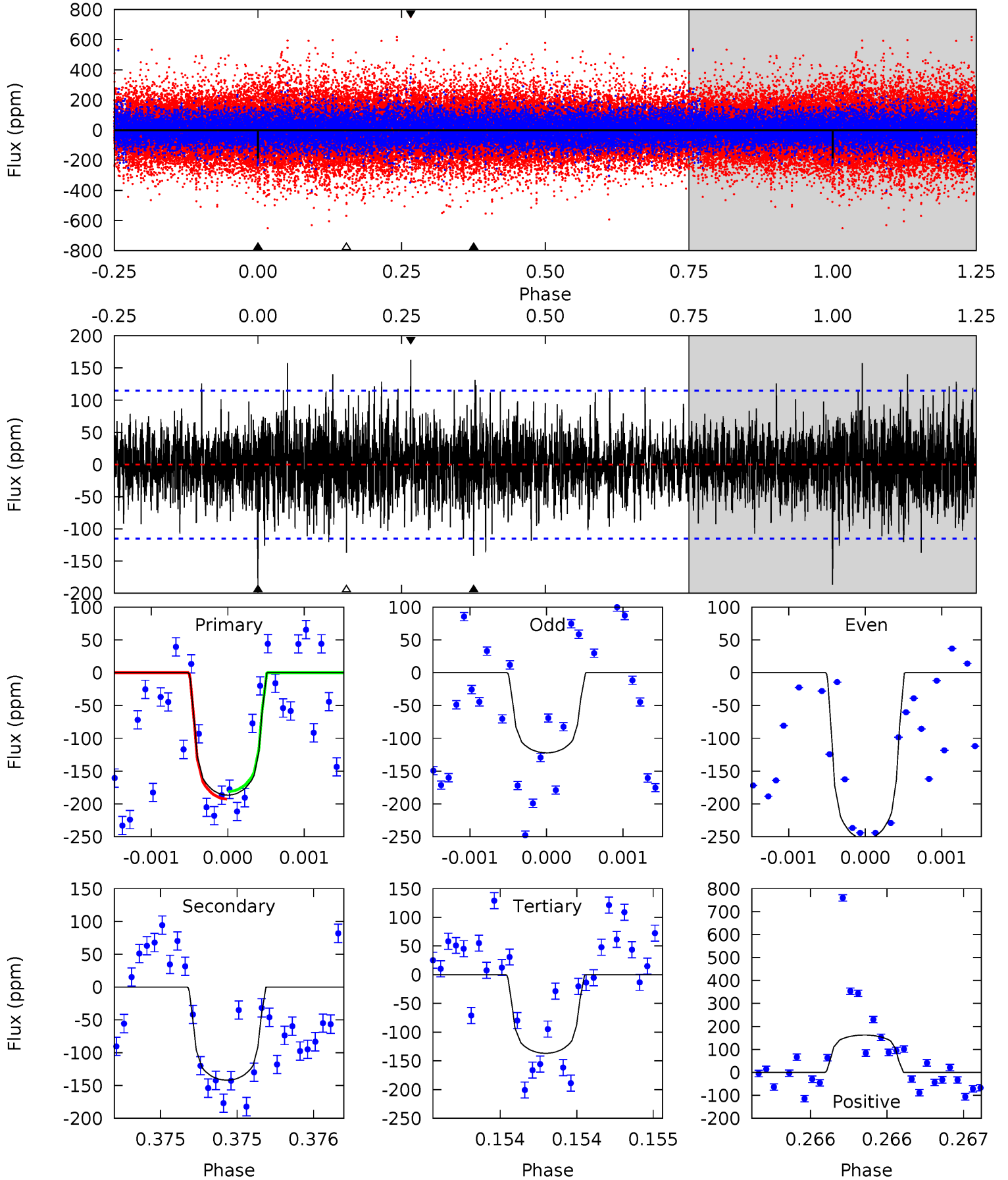
TCE 008016298-01 P=388.700801 Days $T_0=219.345791$ (BKJD)



DV Model-Shift Uniqueness Test

008016298-01, P = 388.690349 Days, E = 219.352088 Days

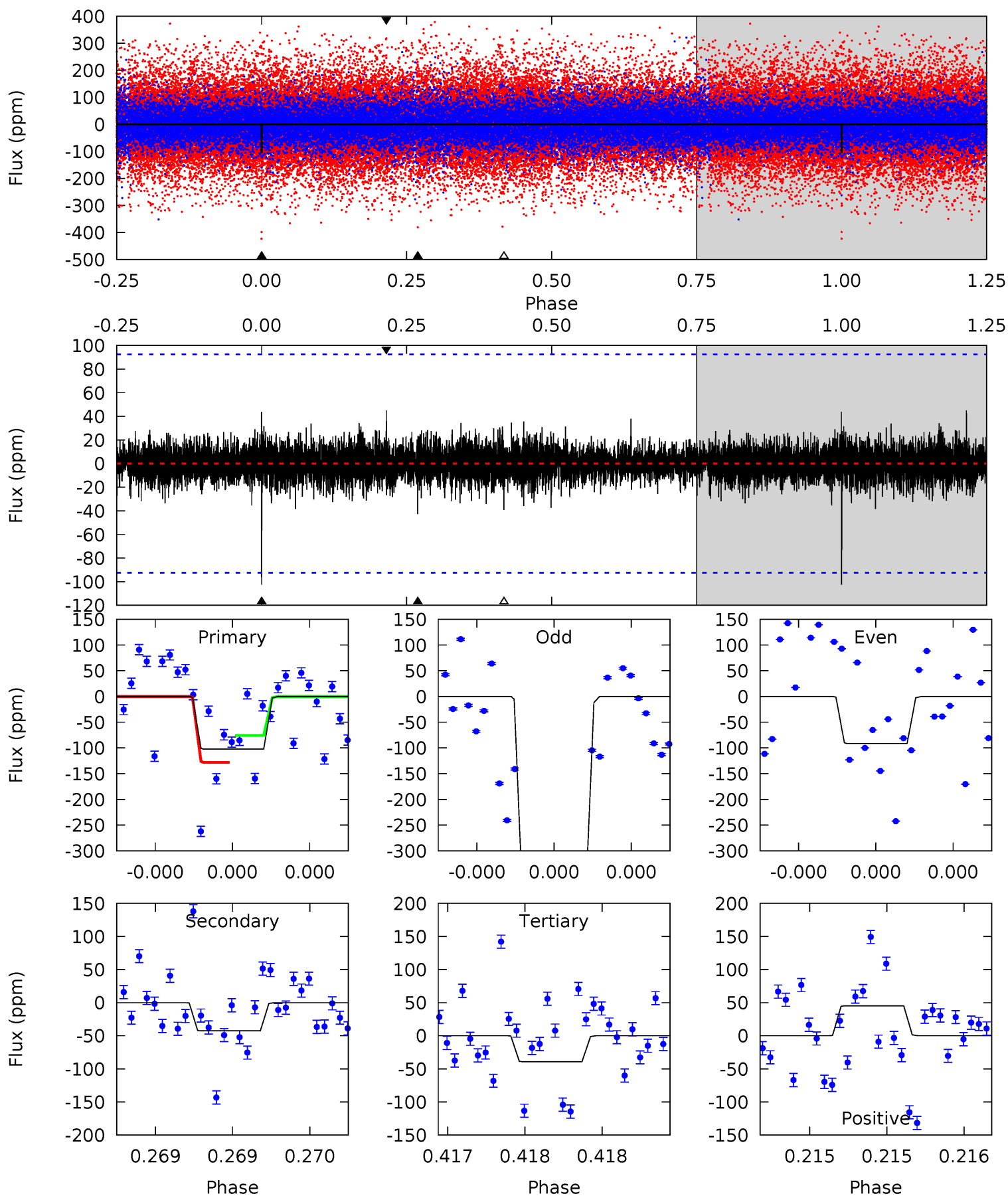
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.04	6.87	6.63	7.87	5.57	3.48	1.70	2.41	1.17	0.24	-1.00	3.19	0.77	0.47	0.28



Alt Model-Shift Uniqueness Test

008016298-01, P = 388.700801 Days, E = 219.345791 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.18	2.58	2.37	2.72	5.58	3.49	0.53	3.82	3.46	0.21	-0.14	10.4	2.20	0.31	0



Stellar Parameters For KIC 008016298

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6088^{+211}_{-232}	$4.434^{+0.087}_{-0.203}$	$-0.180^{+0.300}_{-0.300}$	$1.007^{+0.310}_{-0.133}$	$1.004^{+0.154}_{-0.126}$	$1.384^{+0.530}_{-0.735}$
	+3%/-4%	+2%/-5%	+167%/-167%	+31%/-13%	+15%/-13%	+38%/-53%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 008016298-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-142 ± 21	$2.02^{+1.21}_{-1.14}$	373^{+29}_{-21}	5045^{+2573}_{-853}	20191^{+82249}_{-12404}
Alt.	-43 ± 17	$1.87^{+1.38}_{-1.01}$	374^{+28}_{-22}	4103^{+1662}_{-722}	7365^{+29940}_{-5267}

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

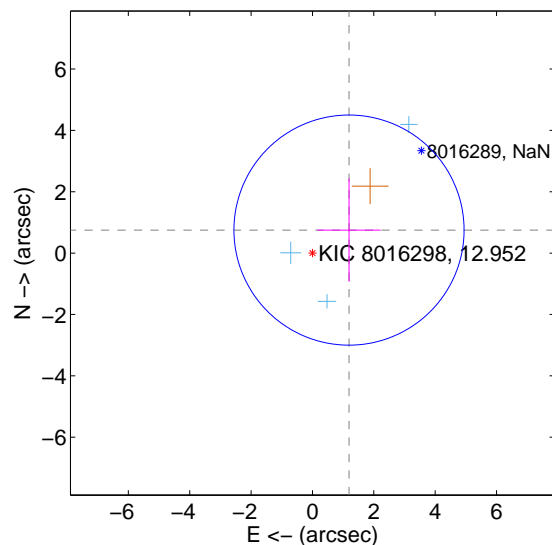
Supplemental centroid analysis for 008016298-01. Kepler magnitude: 12.95. Transit SNR 6.96

There are 3 quarters with good PRF difference image offsets

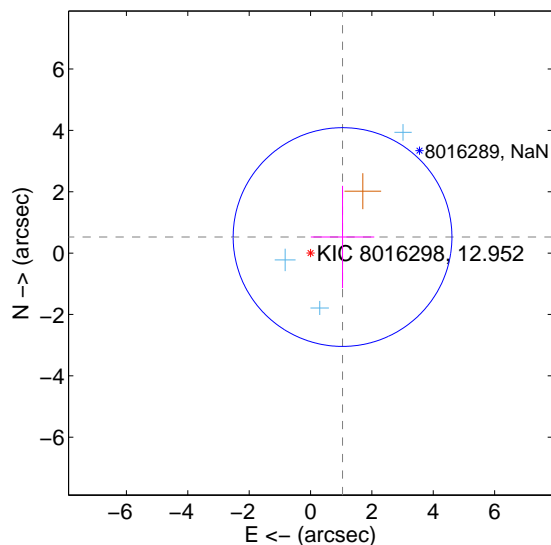
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.408 ± 1.250	1.13	-1.191 ± 1.030	0.750 ± 1.682
PRF-fit source offset from KIC position	1.167 ± 1.188	0.98	-1.043 ± 1.033	0.523 ± 1.668
photometric centroid source offset	2.51 ± 1.35	1.86	-0.02 ± 1.13	2.51 ± 1.35

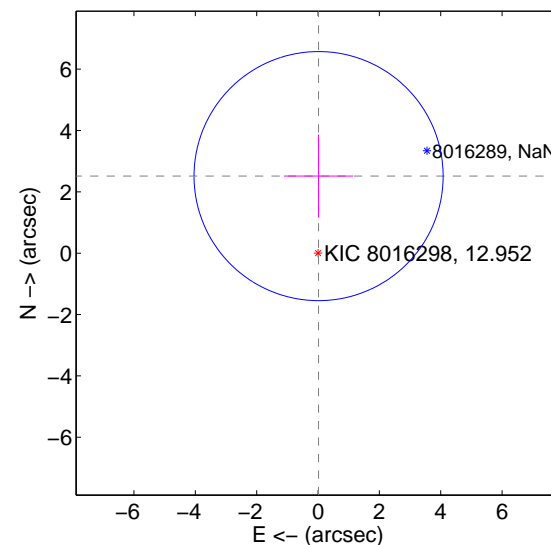
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

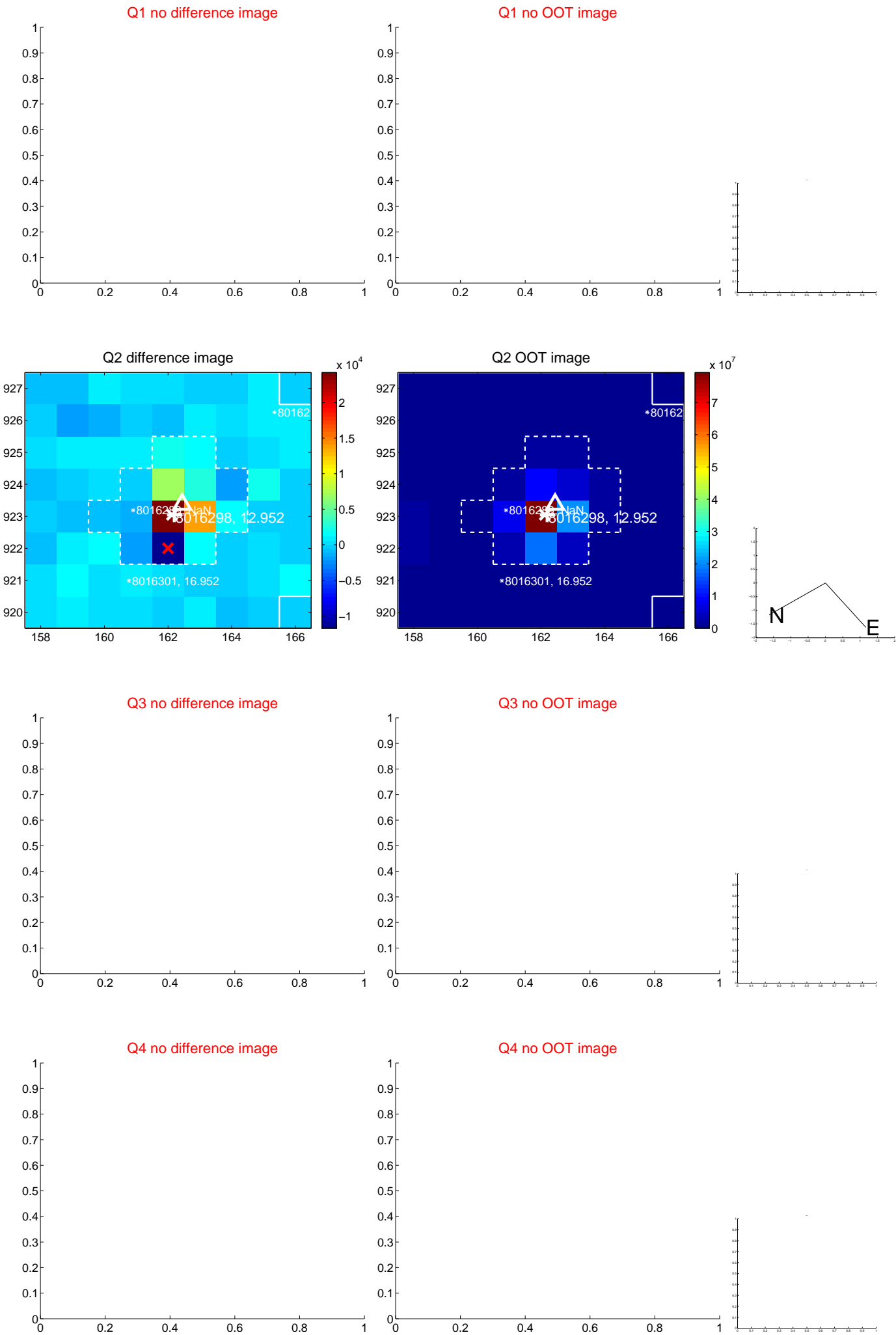


offset from photometric centroids



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.

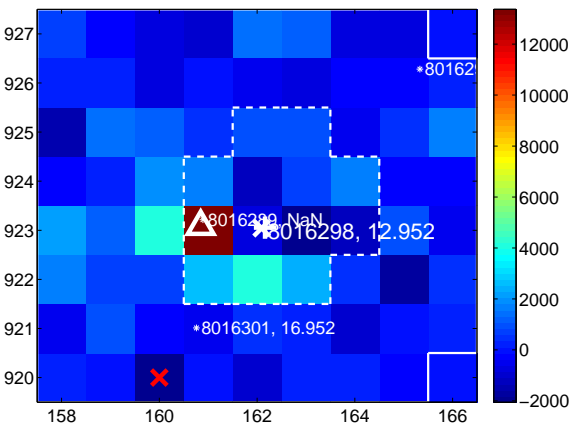
Q5 no difference image



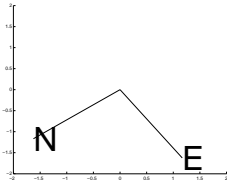
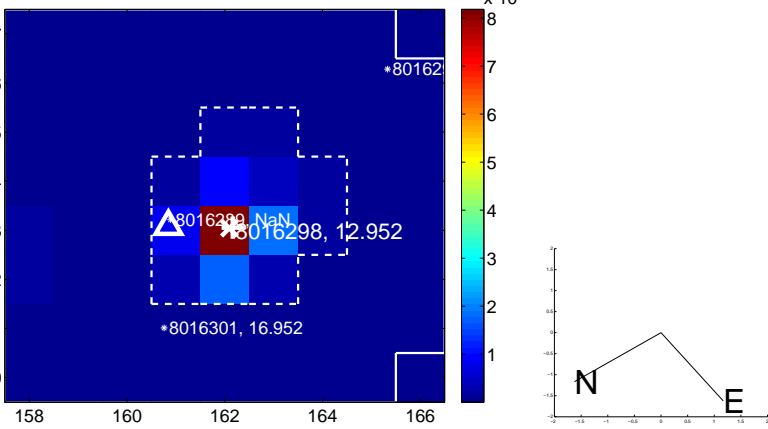
Q5 no OOT image



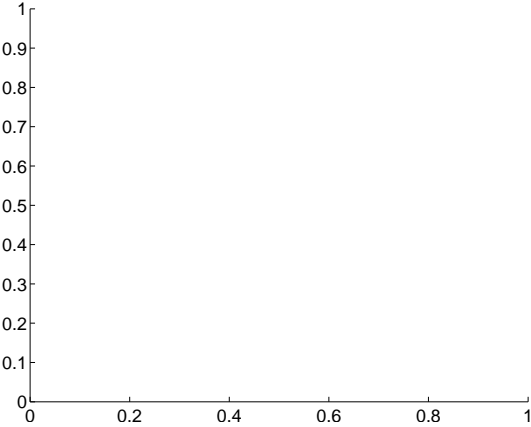
Q6 difference image



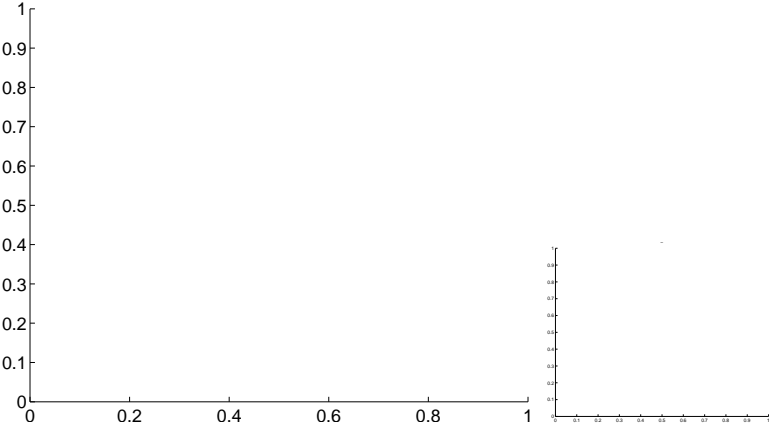
Q6 OOT image



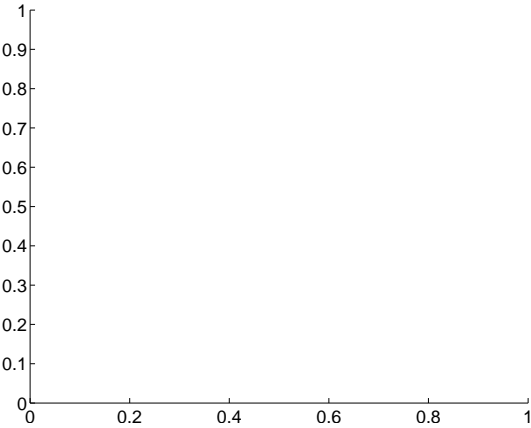
Q7 no difference image



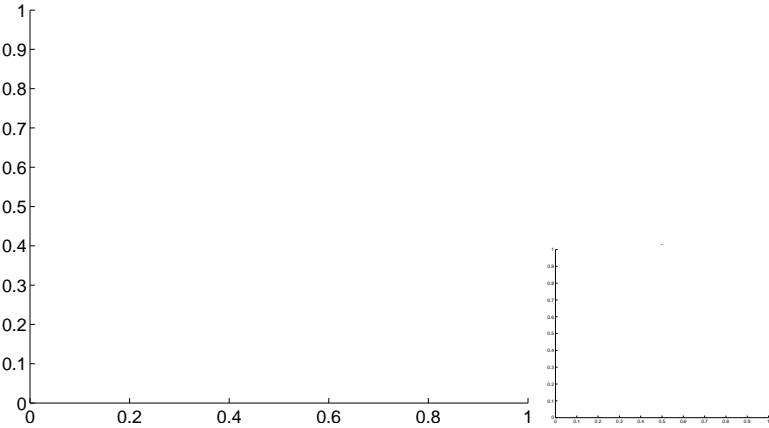
Q7 no OOT image



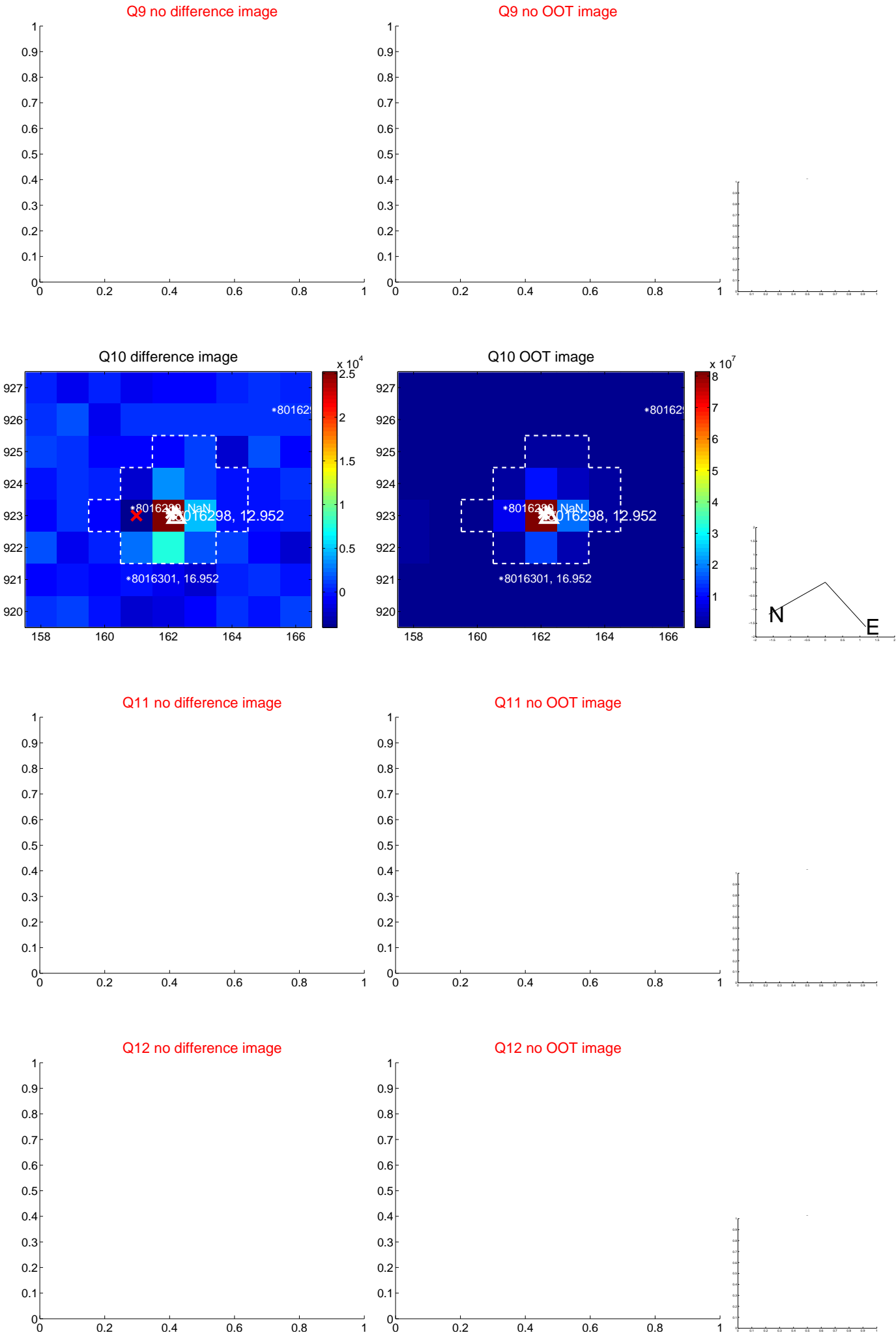
Q8 no difference image



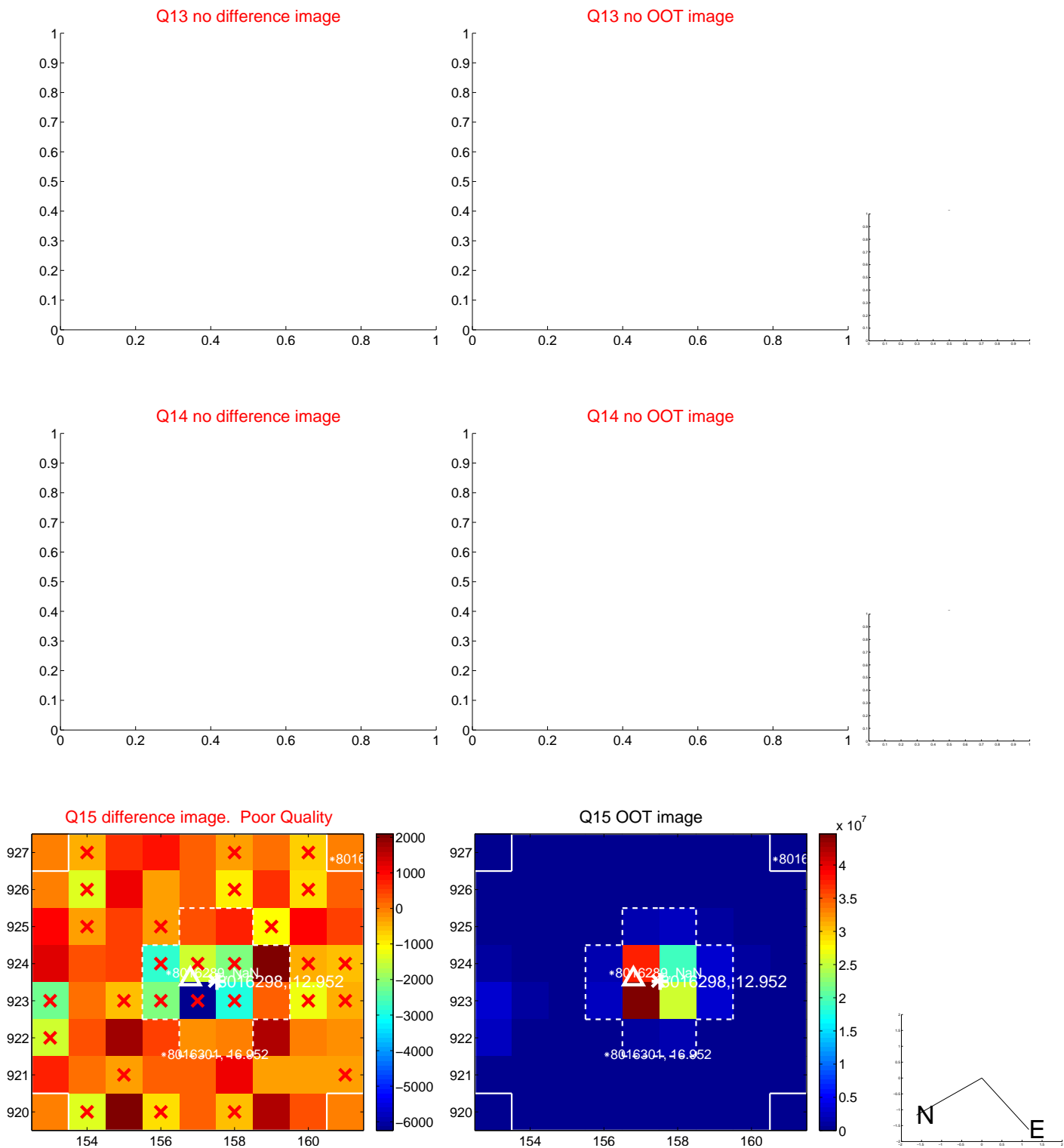
Q8 no OOT image



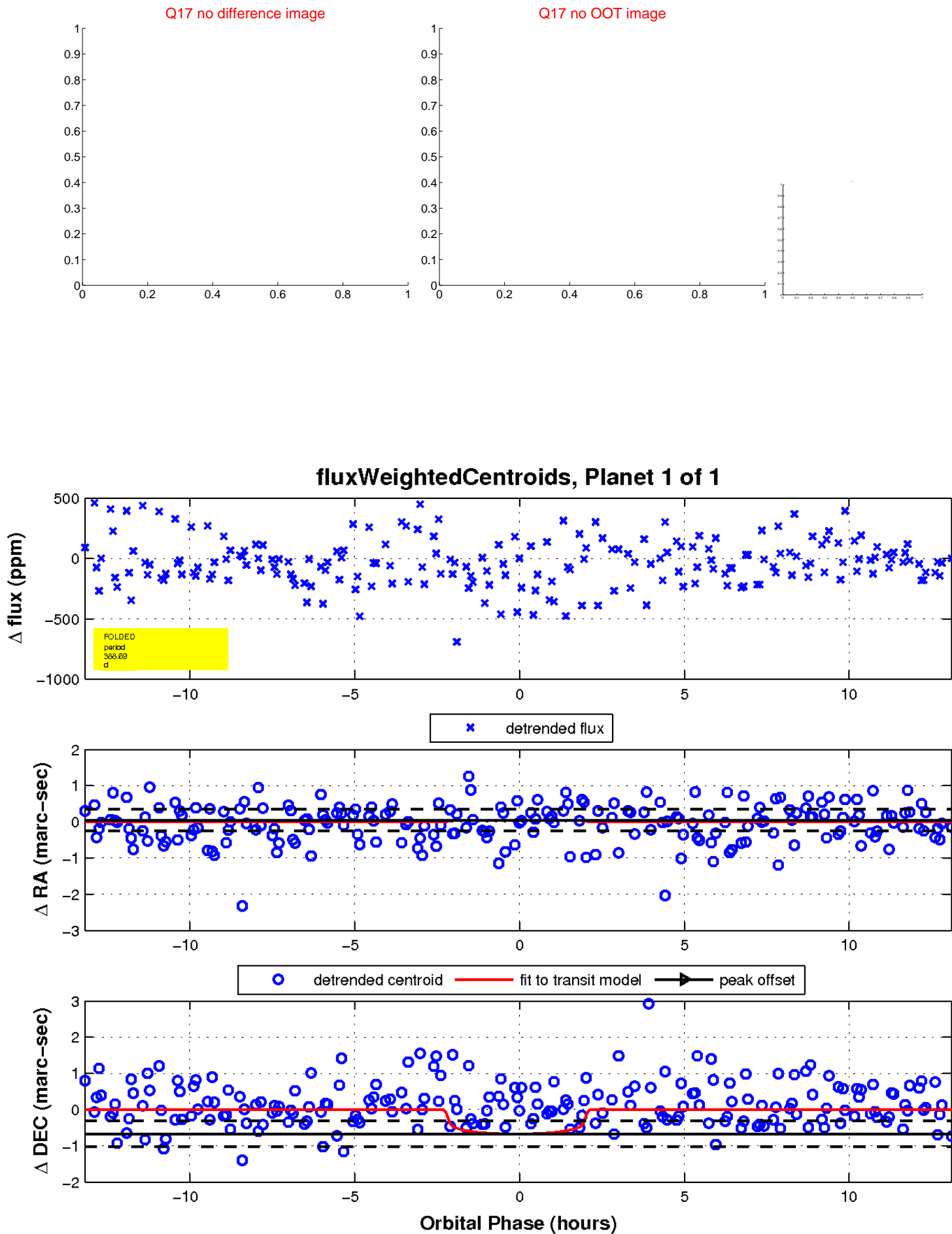
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

