

KIC 007987086

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})
007987086-01	OBS	3536.01	156.516538	278.137473	112777.4	12.234	2722.2	2409.4	1.08	6002	53.08	4.32

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007987086-01	OBS	FP	0.00	0	1	0	0	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.

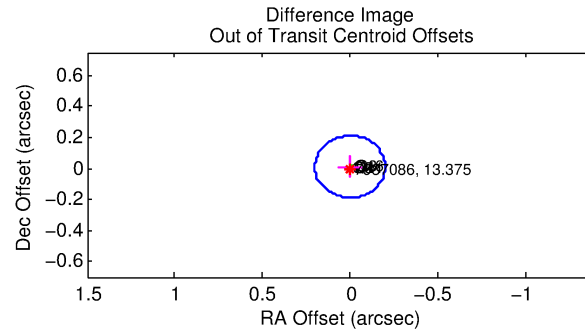
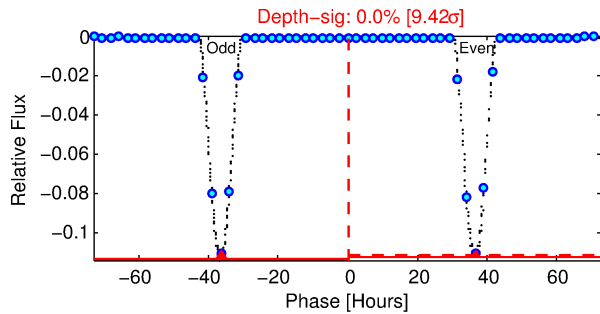
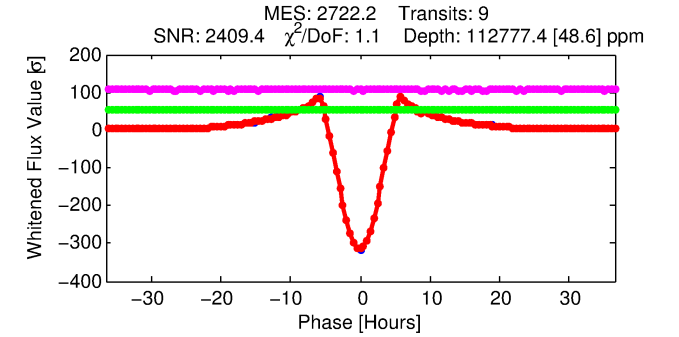
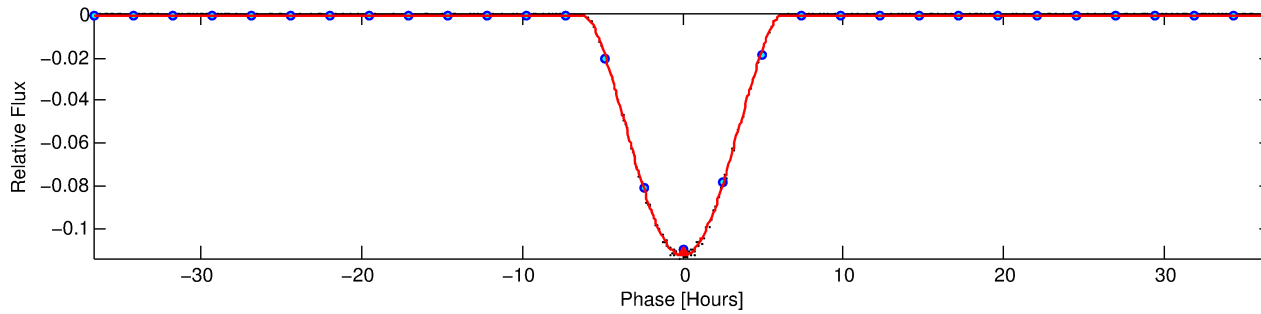
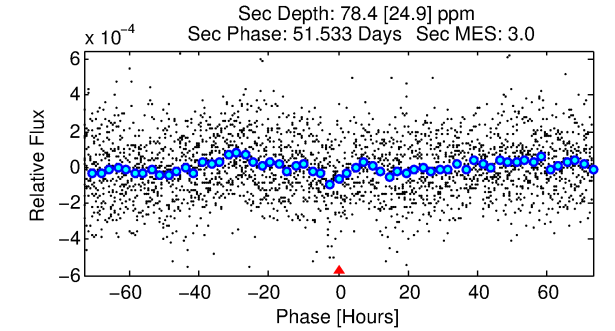
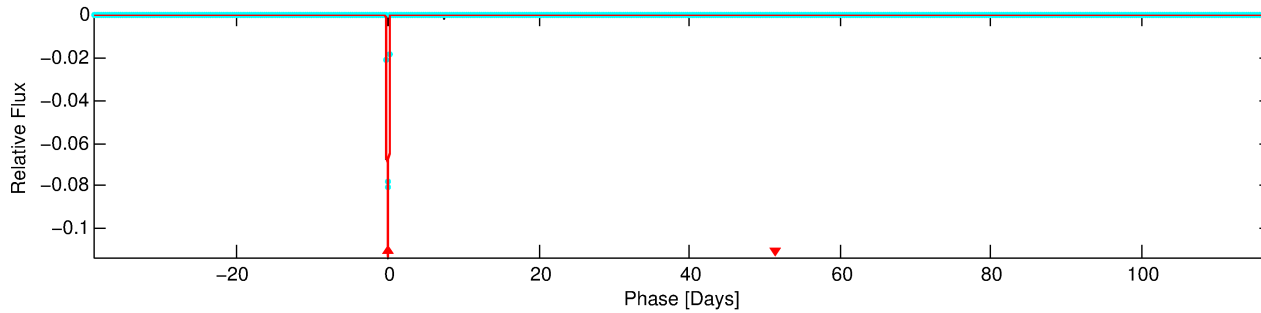
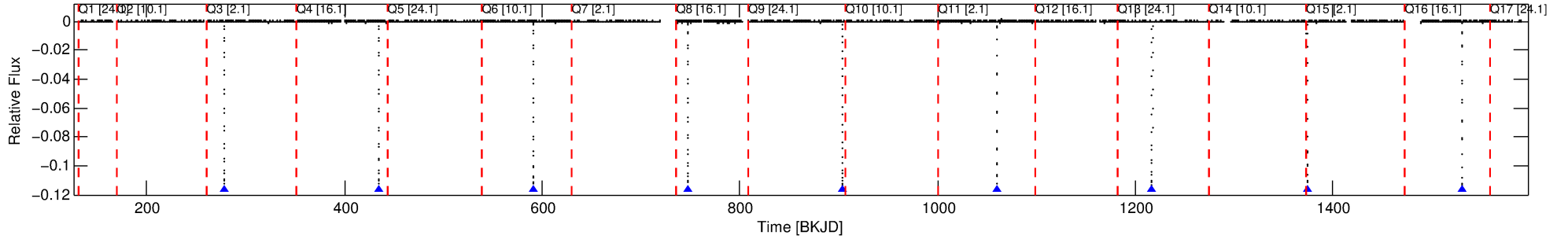
Ephemeris Match Information For 007987086-01

No Significant Match Found

DV One-Page Summary

KIC: 7987086 Candidate: 1 of 1 Period: 156.517 d
KOI: K03536.01 Corr: 1.000

Kp: 13.38 R*: 1.08 Rs Teff: 6002.0 K Logg: 4.35 Fe/H: -0.200



DV Fit Results:

Period = 156.51654 [0.00002] d
Epoch = 278.1375 [0.0001] BKJD
Rp/R* = 0.4487 [0.0142]
a/R* = 110.94 [0.15]
b = 0.90 [0.02]
Seff = 4.32 [1.66]
Teq = 368 [35] K
Rp = 53.08 [15.32] Re
a = 0.5625 [0.1374] AU
Ag = 4.84 [2.34] [1.64σ]
Teffp = 843 [74] K [5.77σ]

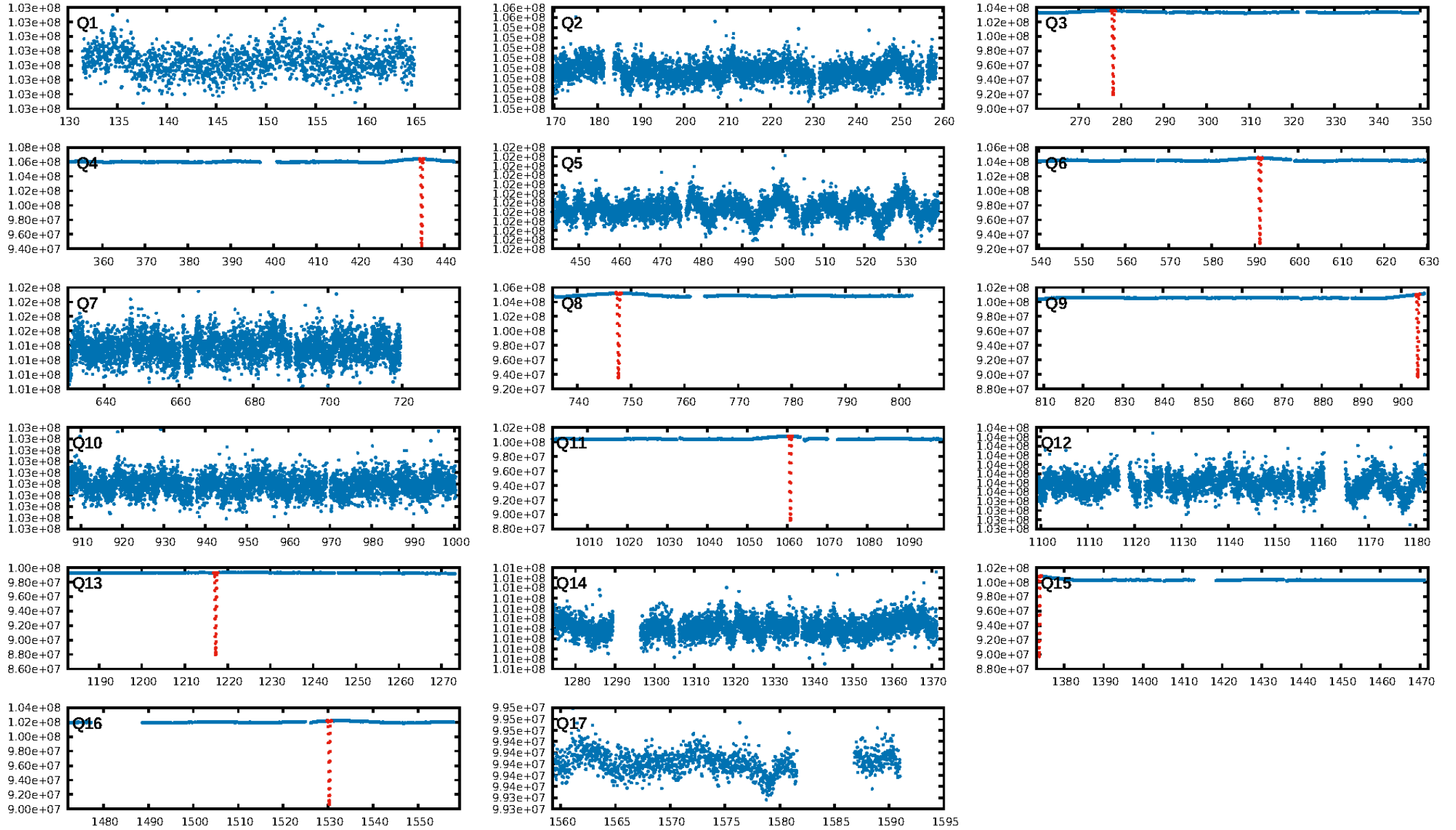
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [9/9]
GhostDiagnostic-chr: 5.114
Centroid-sig: 0.0%
Centroid-so: 0.091 arcsec [38.74σ]
OotOffset-rm: 0.012 arcsec [0.18σ]
KicOffset-rm: 0.081 arcsec [1.09σ]
OotOffset-st: 1/2/3/1 [7]
KicOffset-st: 1/2/3/1 [7]
DiffImageQuality-fgm: 1.00 [7/7]
DiffImageOverlap-fno: 1.00 [7/7]

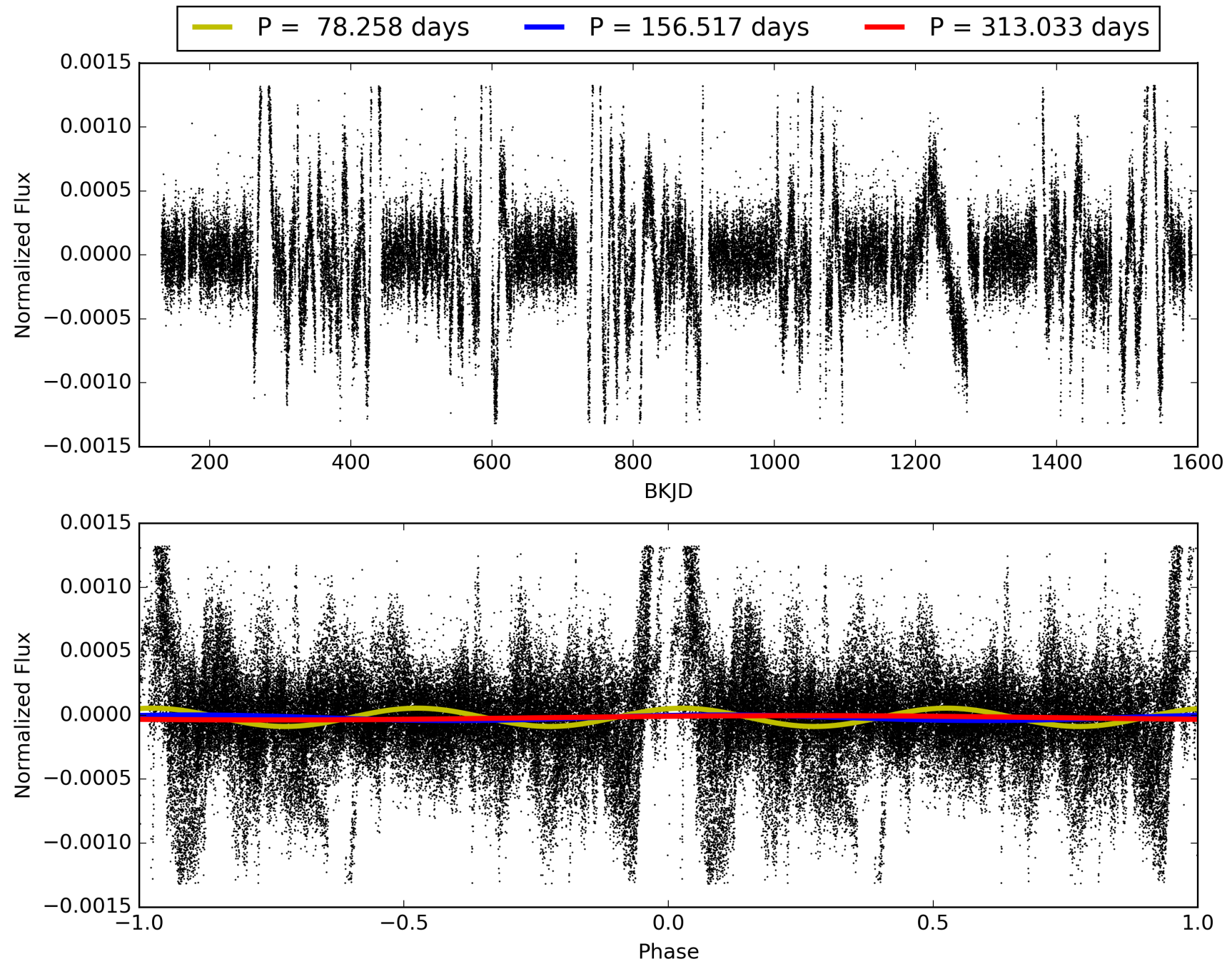
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:39:12 Z

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

TCE 007987086-01, PDC Light Curves

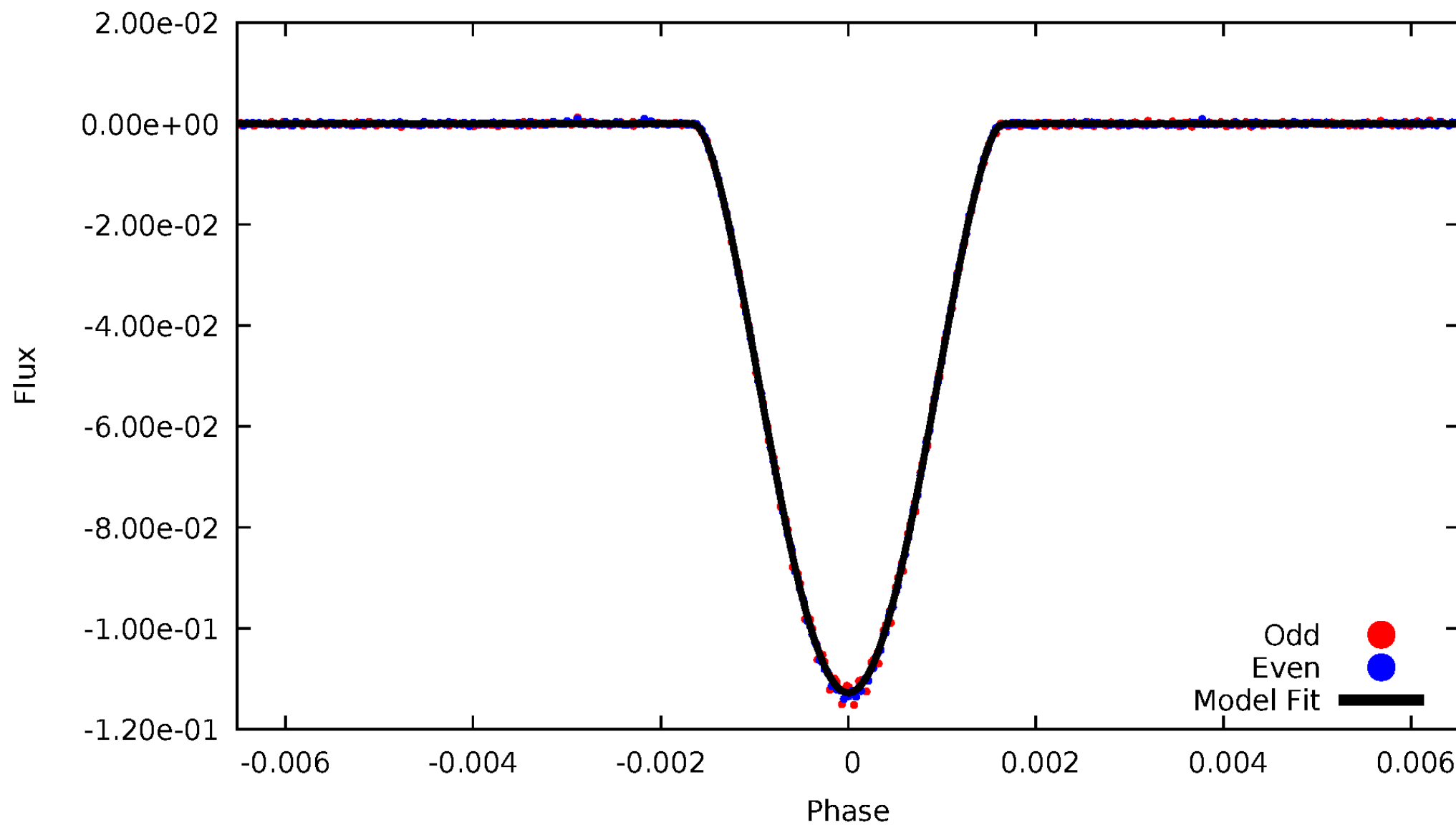


TCE 007987086-01



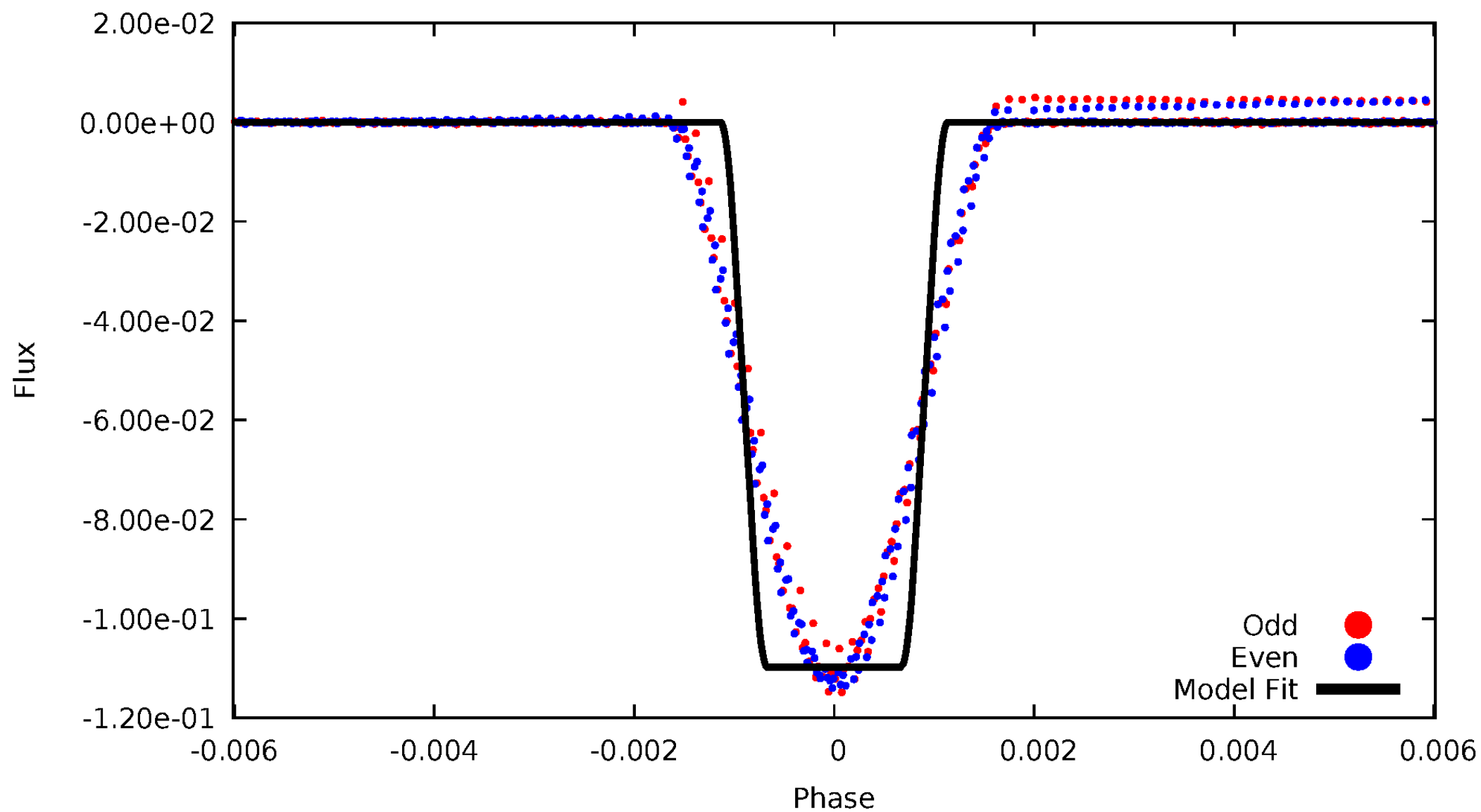
DV Odd/Even

TCE 007987086-01



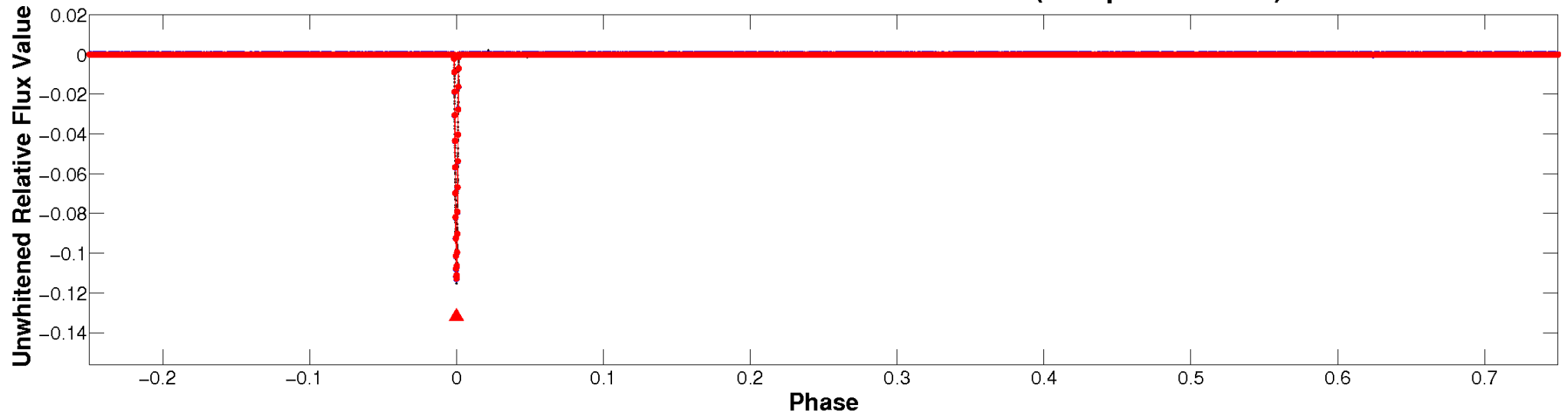
ALT Odd/Even

TCE 007987086-01

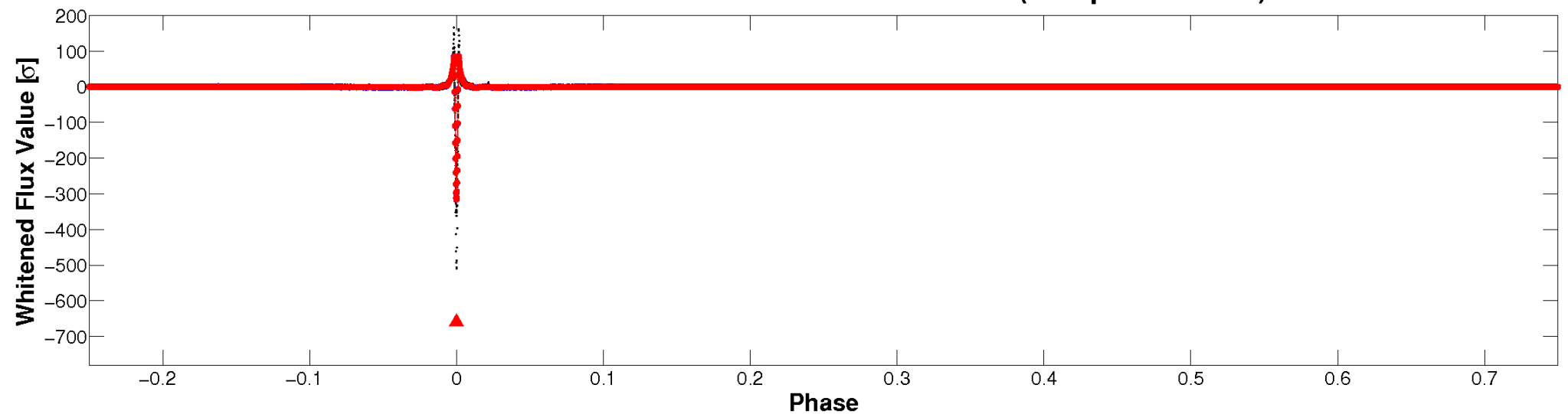


Non-Whitened Vs. Whitened Light Curve

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

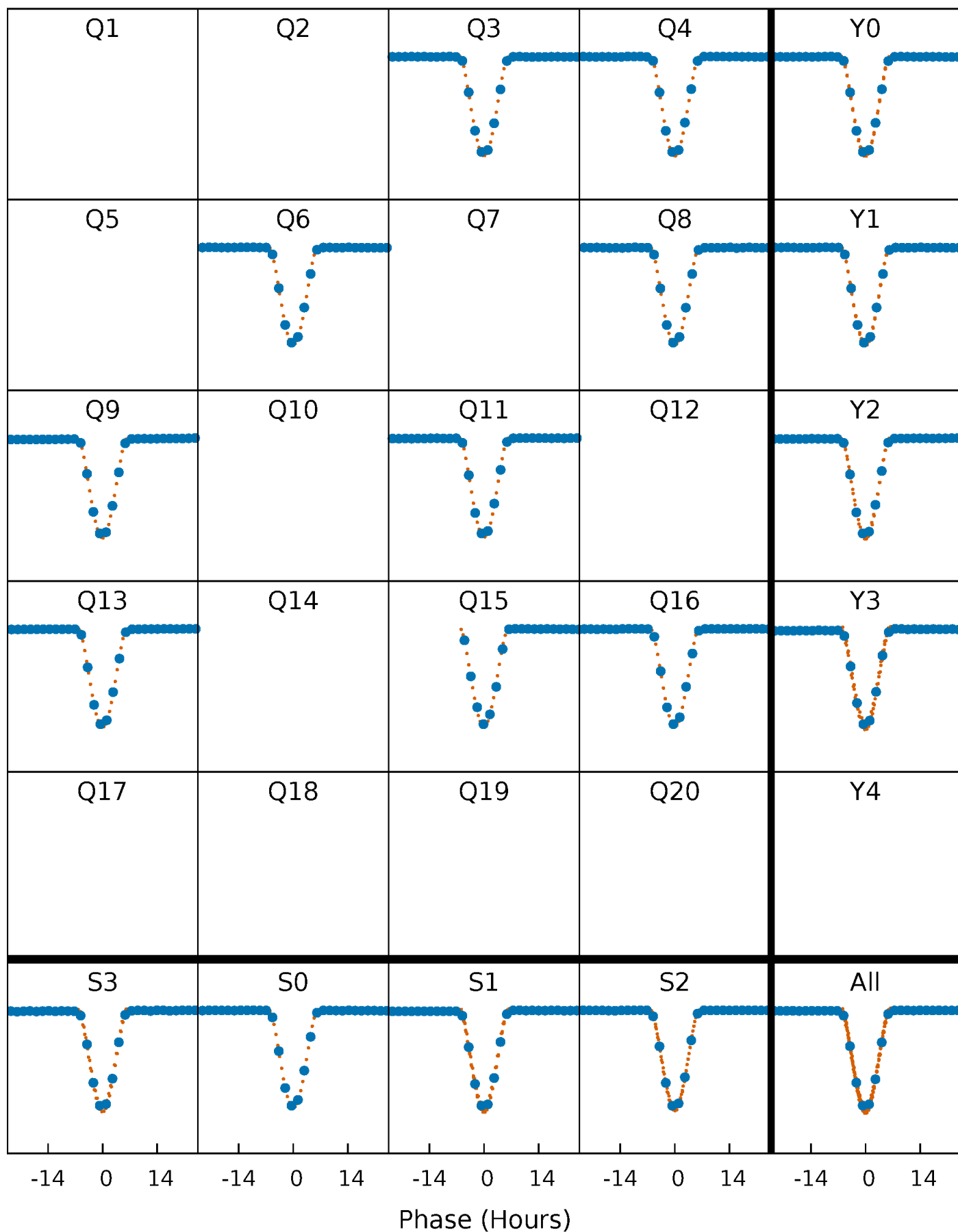


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



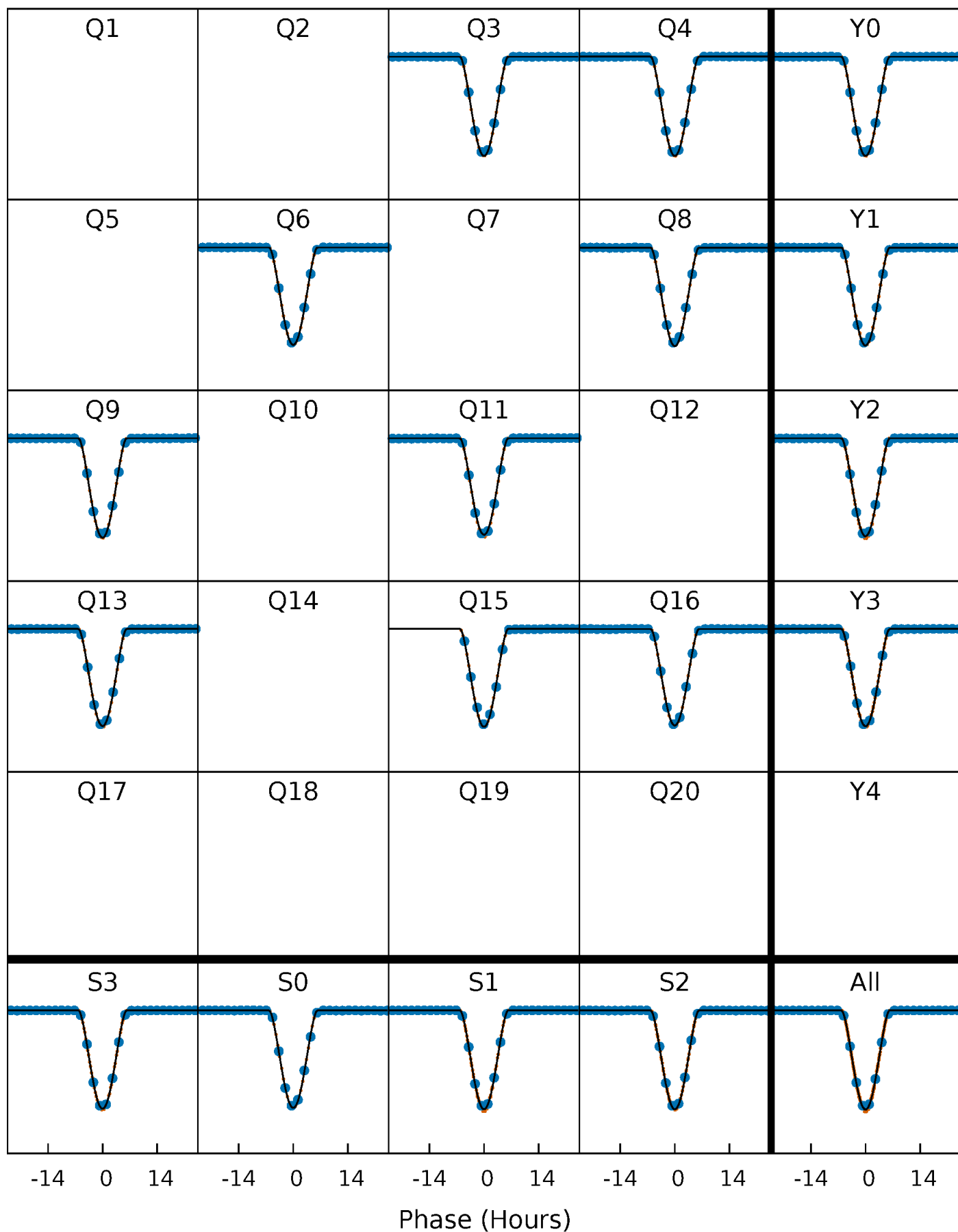
PDC Quarter-Phased Transit Curves

TCE 007987086-01 P=156.516538 Days $T_0=278.137473$ (BKJD)



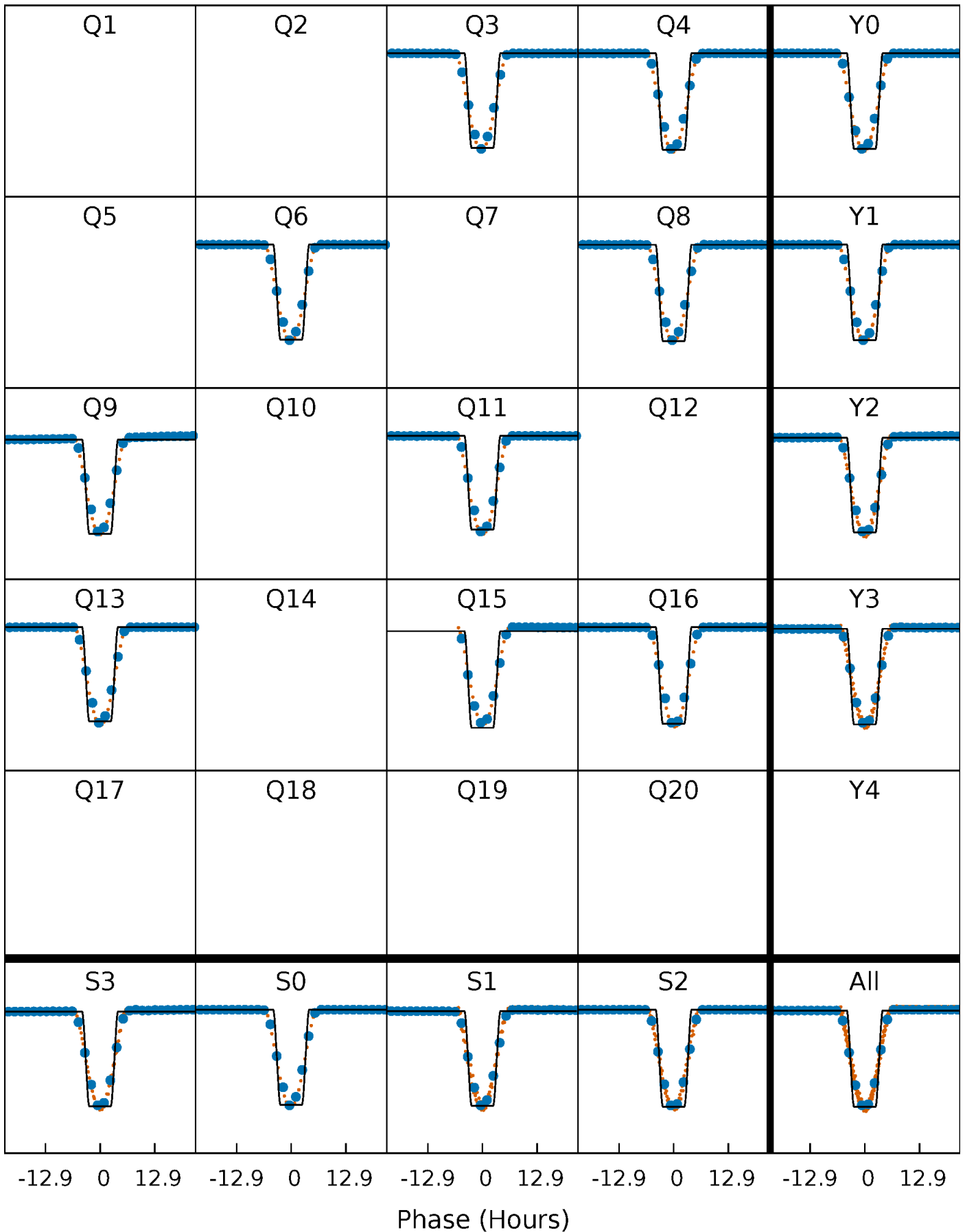
DV Quarter-Phased Transit Curves

TCE 007987086-01 P=156.516538 Days $T_0=278.137473$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

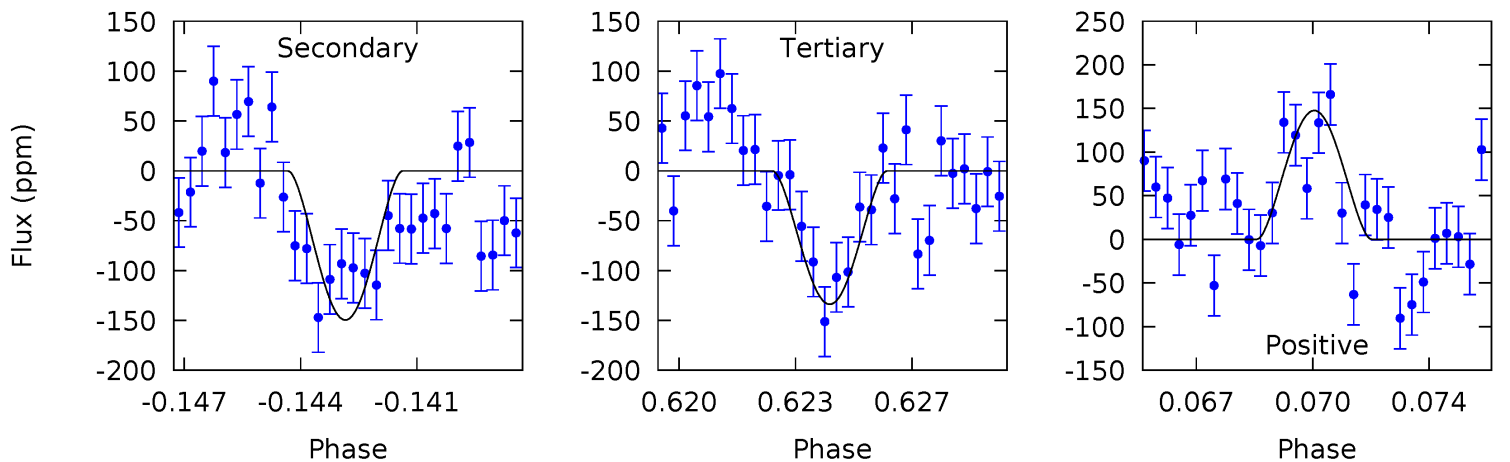
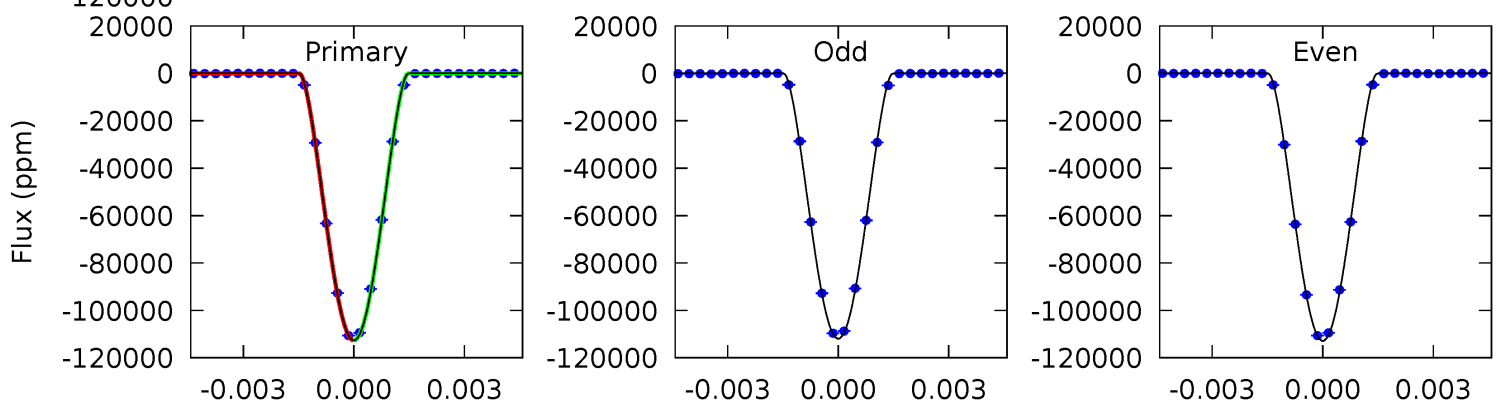
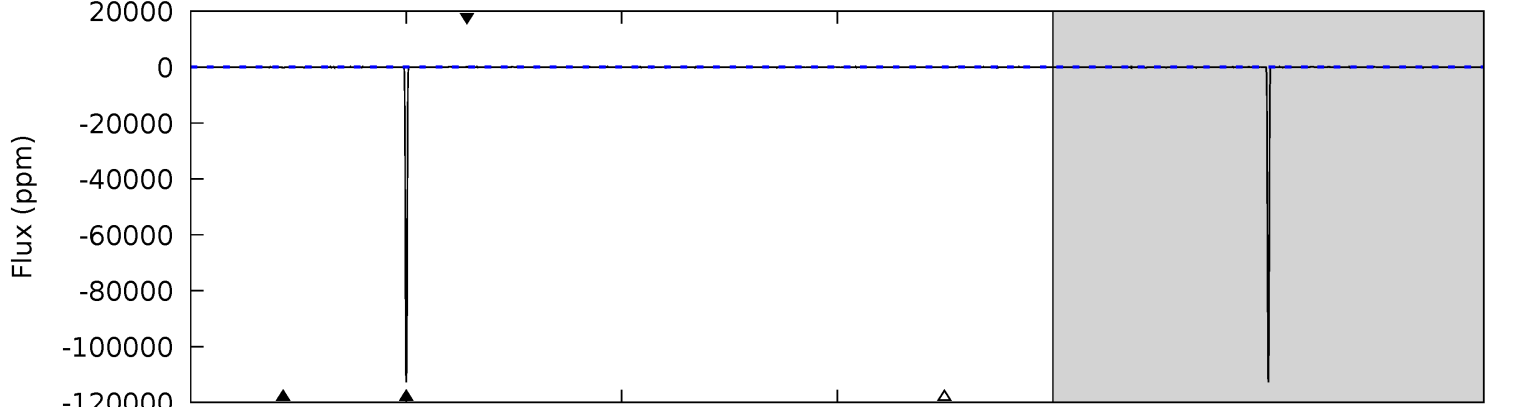
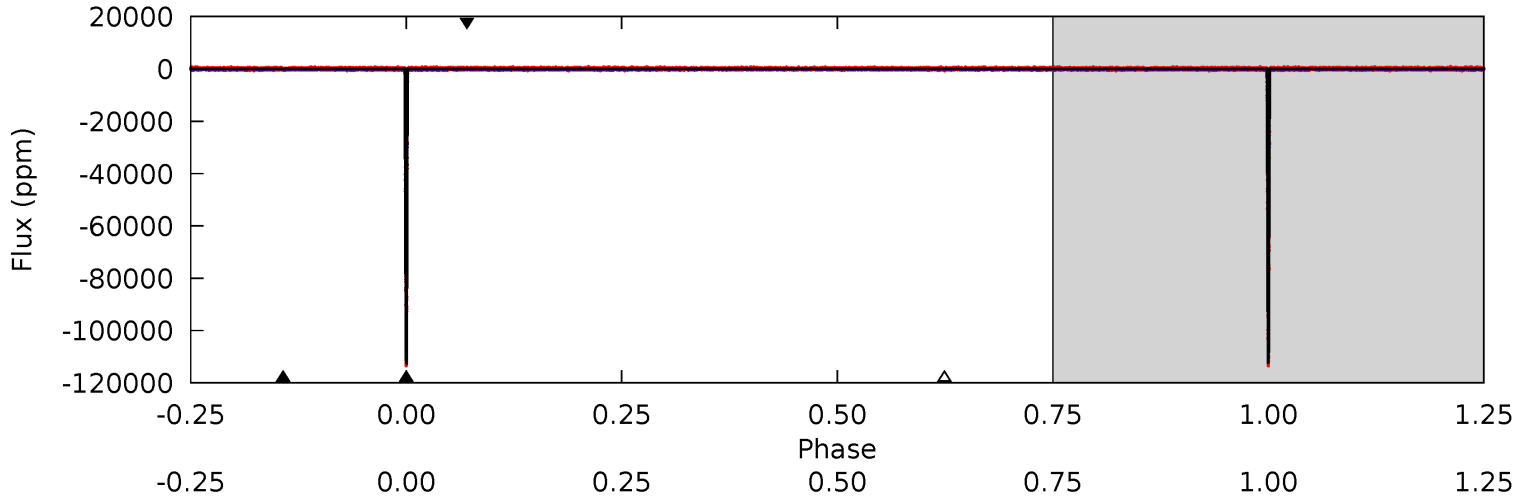
TCE 007987086-01 P=156.514258 Days $T_0=278.146388$ (BKJD)



DV Model-Shift Uniqueness Test

007987086-01, P = 156.516538 Days, E = 121.620935 Days

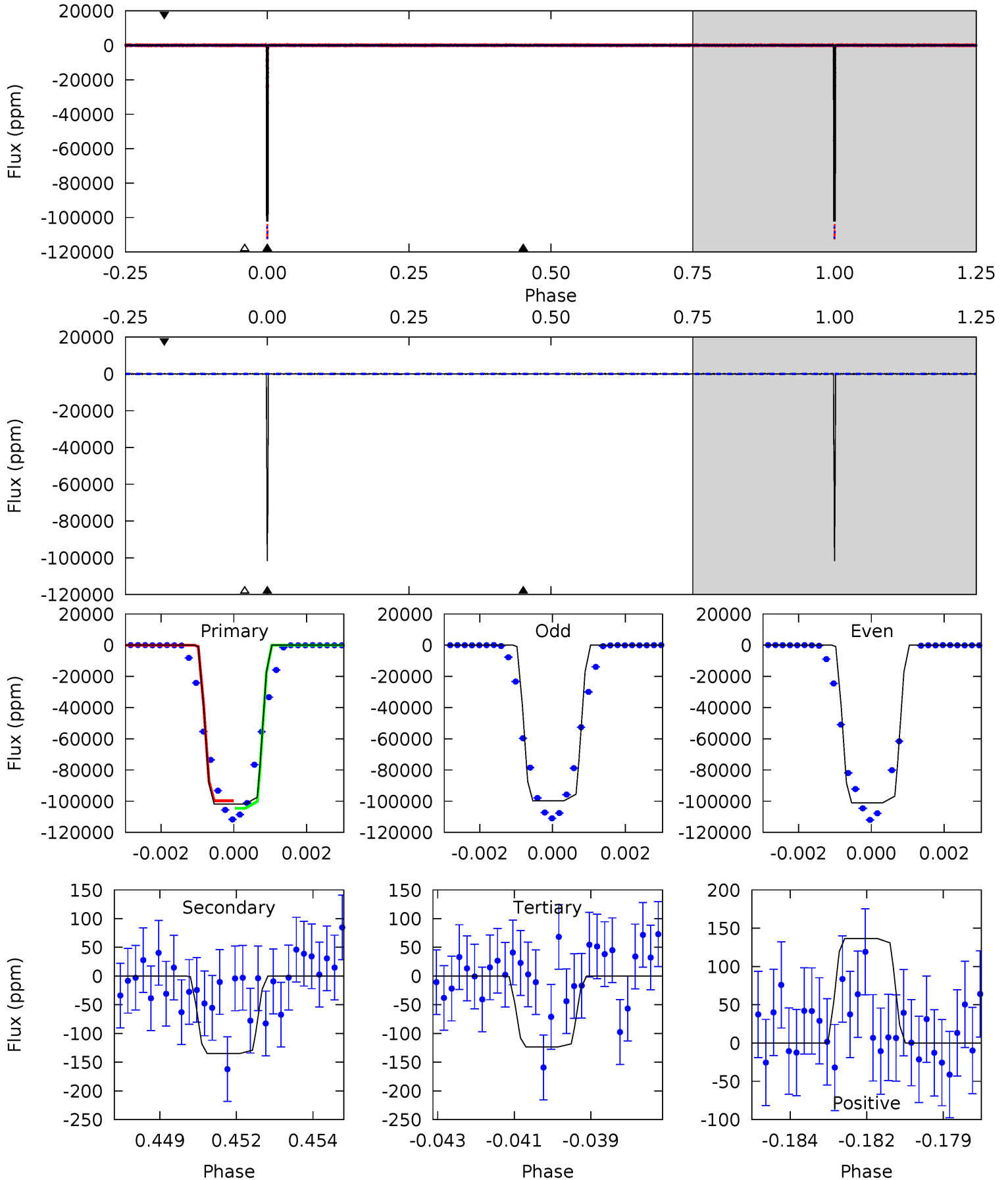
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8495	11.3	10.1	11.1	5.23	2.93	3.23	8485	8484	1.19	0.15	35.2	1.00	0.00	2.89



Alt Model-Shift Uniqueness Test

007987086-01, P = 156.514258 Days, E = 121.632130 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3695	4.90	4.48	4.96	5.30	3.05	1.25	3691	3690	0.42	-0.06	25.0	0.99	0.00	88.2



Stellar Parameters For KIC 007987086

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6002^{+189}_{-210}	$4.354^{+0.132}_{-0.198}$	$-0.200^{+0.300}_{-0.300}$	$1.084^{+0.311}_{-0.182}$	$0.969^{+0.144}_{-0.118}$	$1.072^{+0.758}_{-0.544}$
	+3%/-3%	+3%/-5%	+150%/-150%	+29%/-17%	+15%/-12%	+71%/-51%
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 007987086-01 / KOI 3536.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-150 ± 13	$53.70^{+9.02}_{-5.91}$	515^{+42}_{-33}	1987^{+36}_{-37}	$8.997^{+2.512}_{-2.324}$
Alt.	-135 ± 28	$39.66^{+6.53}_{-4.44}$	516^{+40}_{-30}	2094^{+57}_{-56}	15^{+5}_{-4}

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

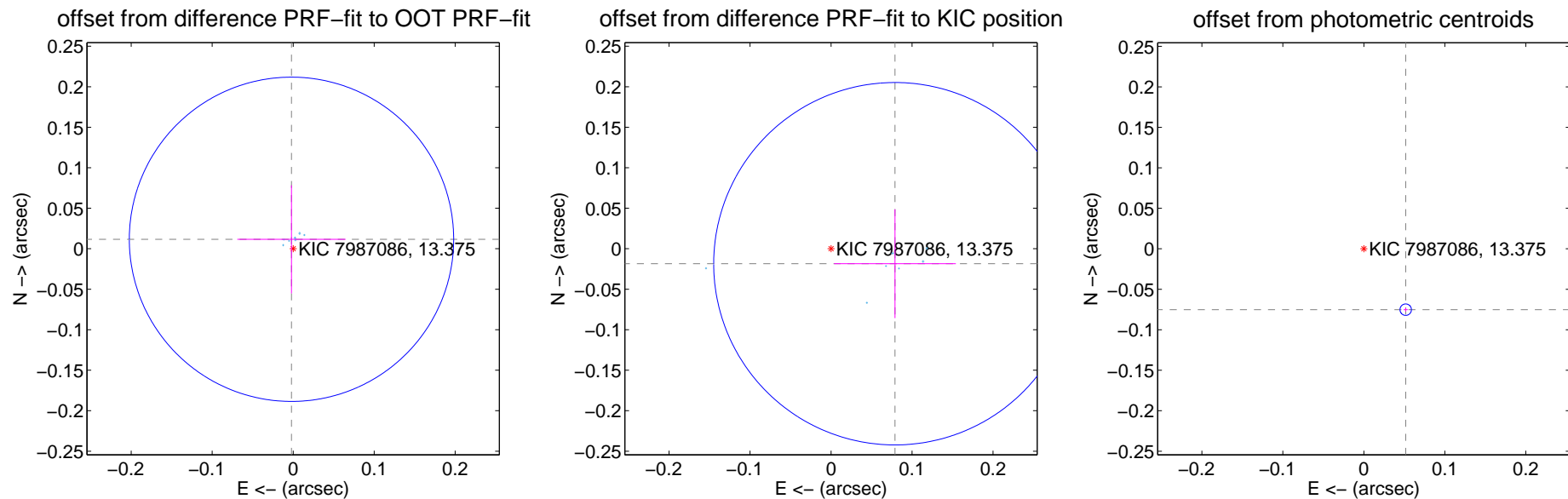
DV Centroid Data

Supplemental centroid analysis for 007987086-01. Kepler magnitude: 13.38. Transit SNR 2409.42

There are 7 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.012 ± 0.067	0.18	0.002 ± 0.067	0.012 ± 0.067
PRF-fit source offset from KIC position	0.081 ± 0.075	1.09	-0.079 ± 0.075	-0.019 ± 0.067
photometric centroid source offset	0.09 ± 0.00	38.74	-0.05 ± 0.00	-0.08 ± 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.

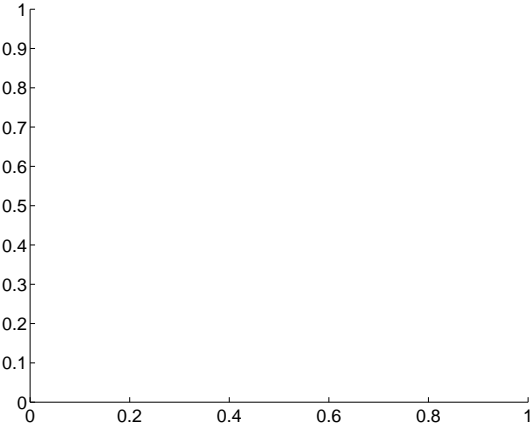
Q1 no difference image



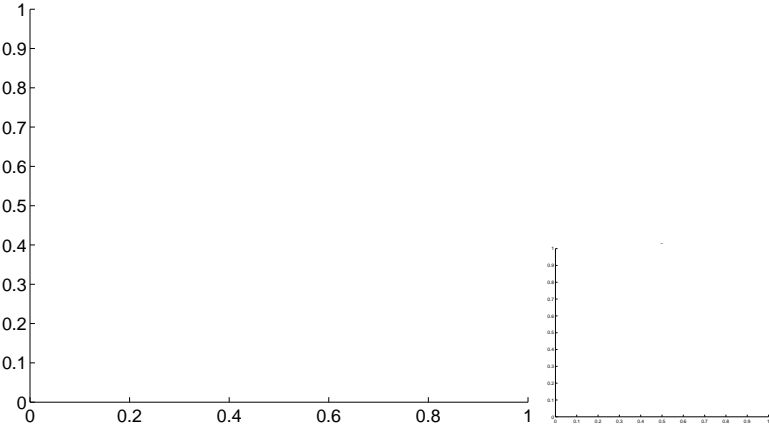
Q1 no OOT image



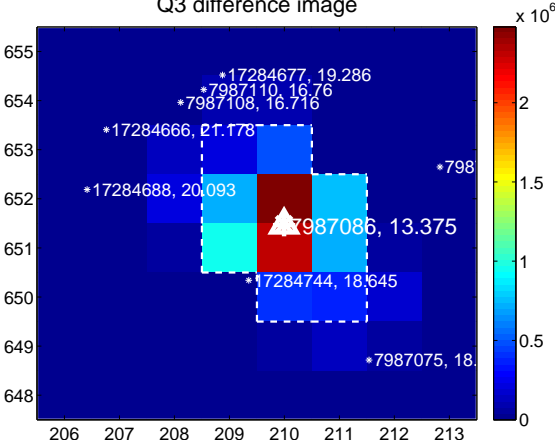
Q2 no difference image



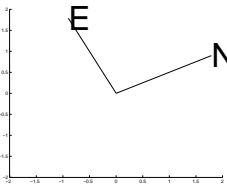
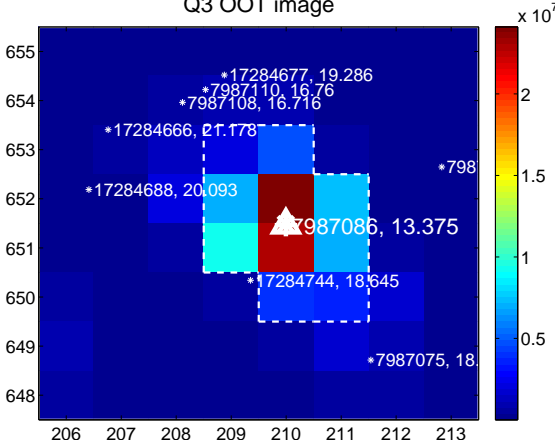
Q2 no OOT image



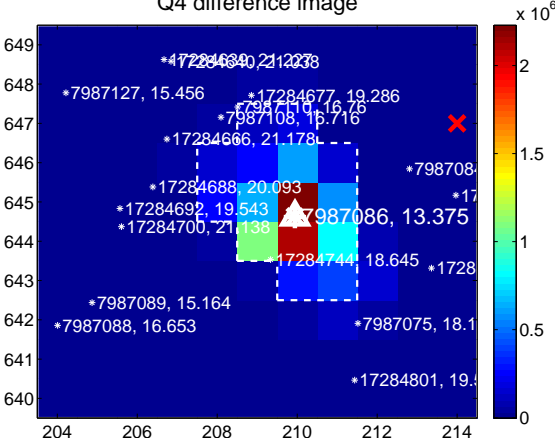
Q3 difference image



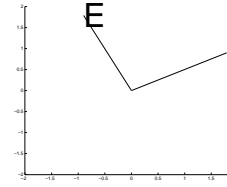
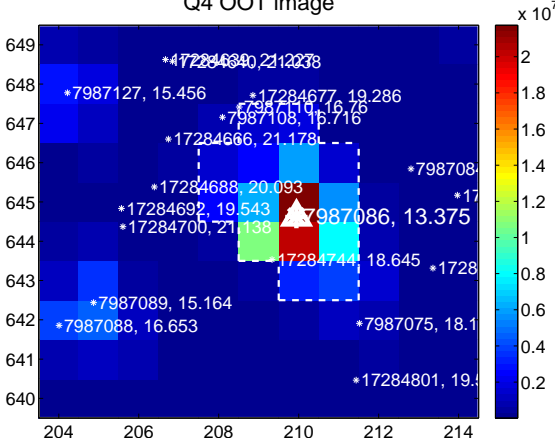
Q3 OOT image



Q4 difference image



Q4 OOT image



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

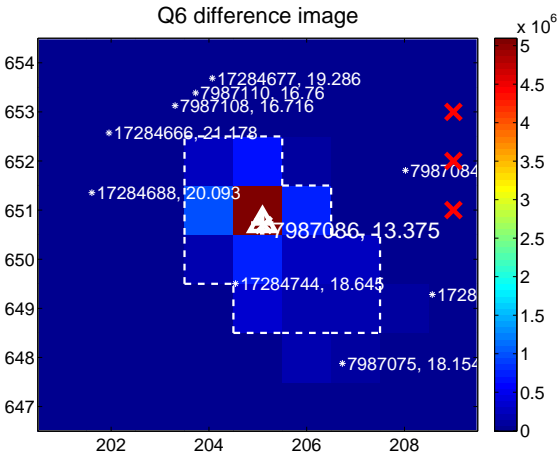
Q5 no difference image



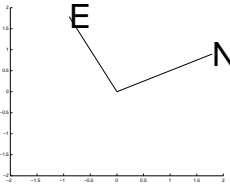
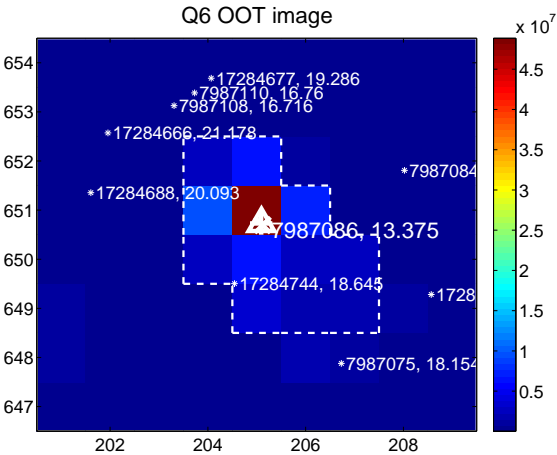
Q5 no OOT image



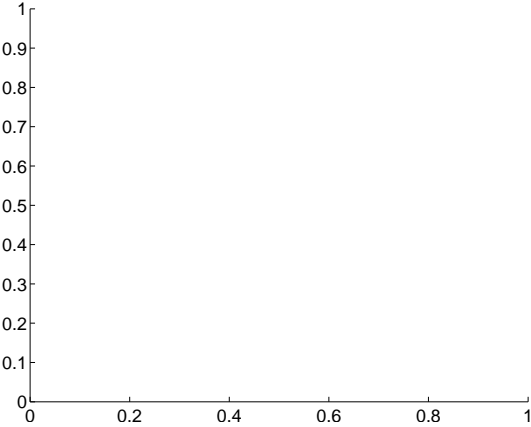
Q6 difference image



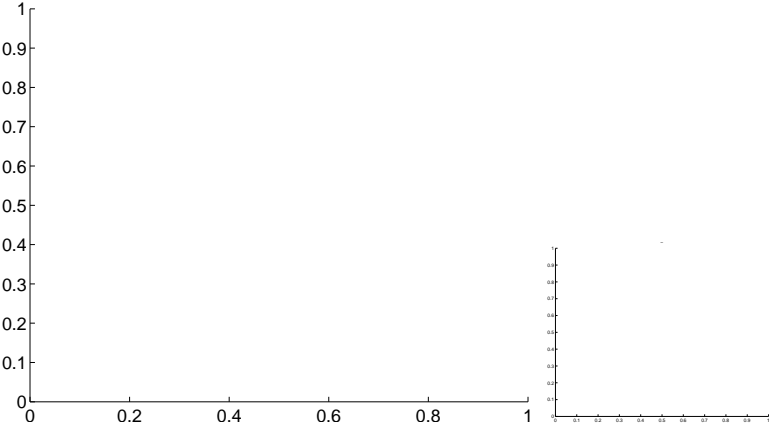
Q6 OOT image



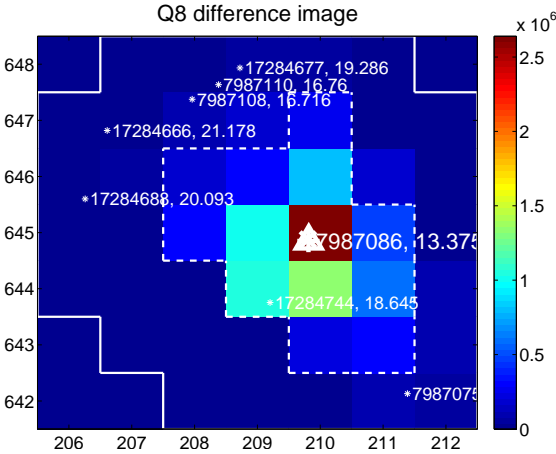
Q7 no difference image



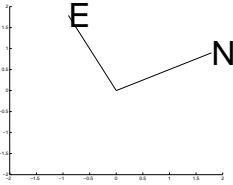
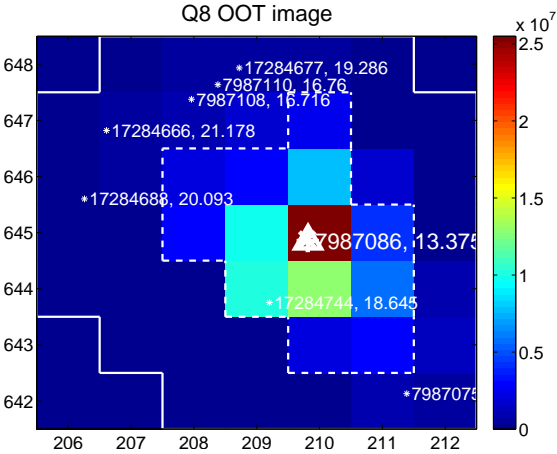
Q7 no OOT image



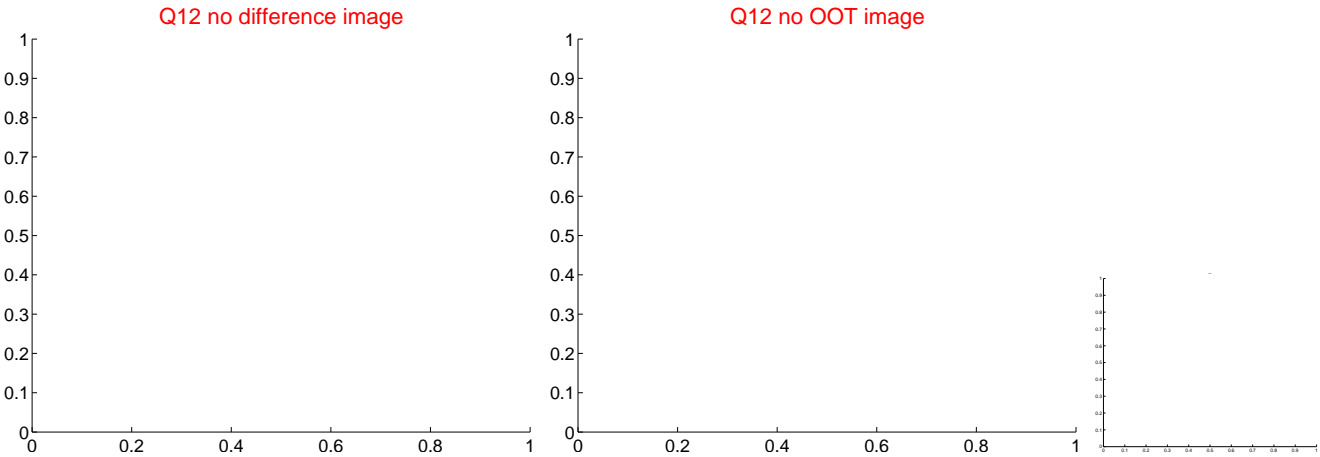
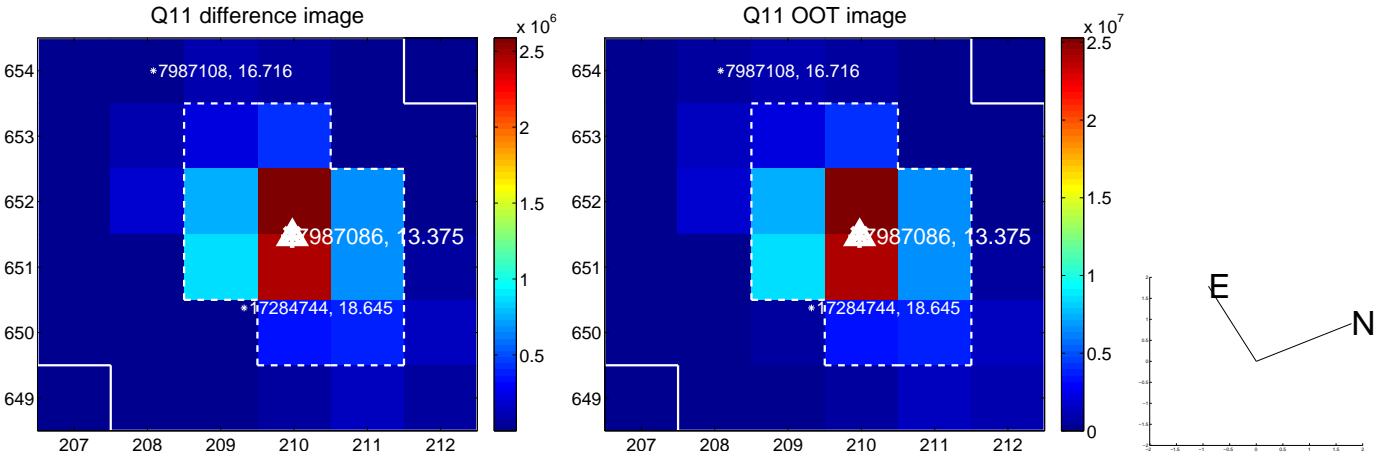
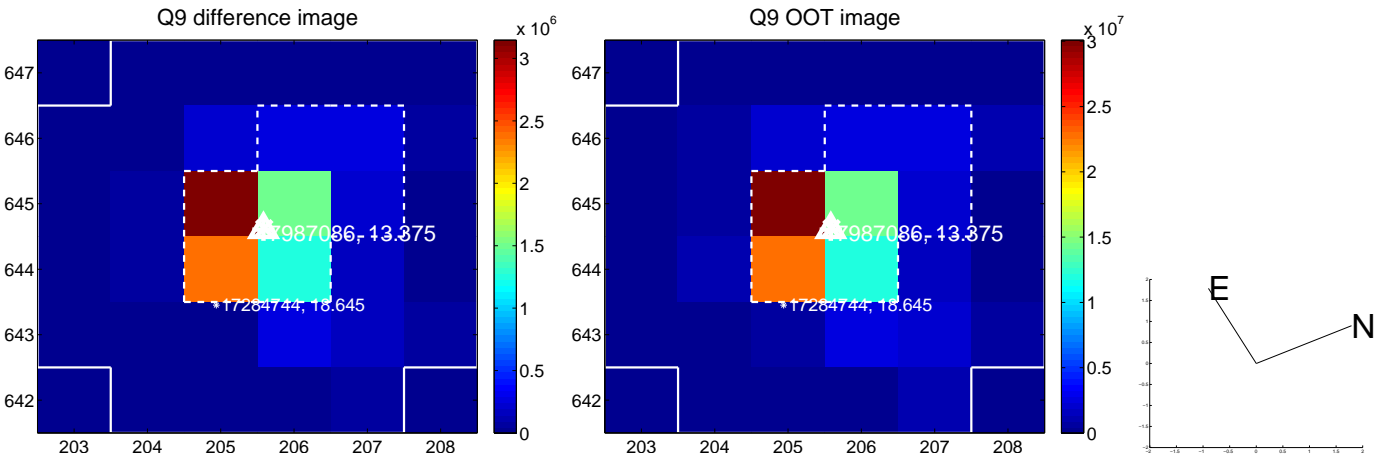
Q8 difference image



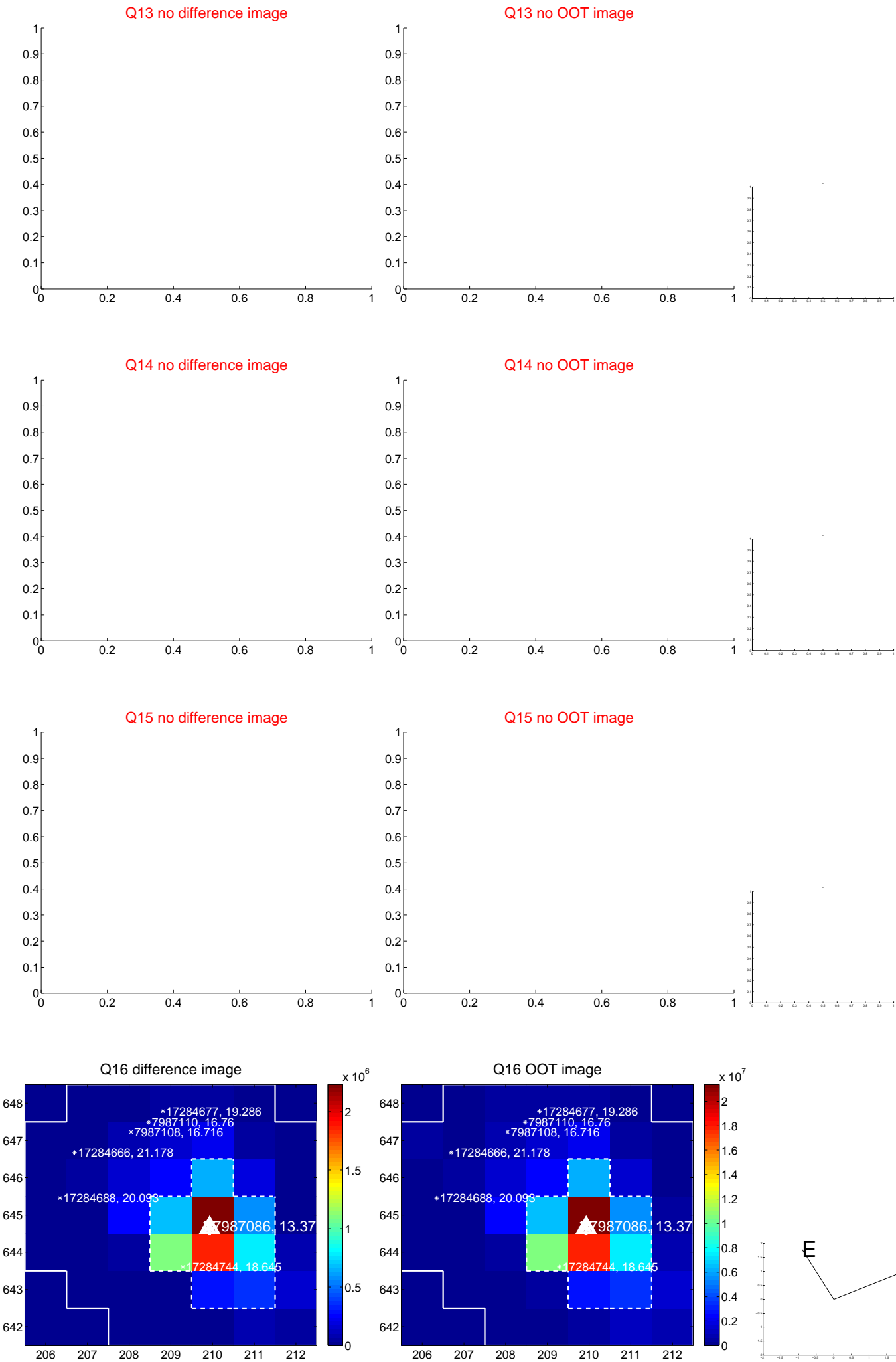
Q8 OOT image



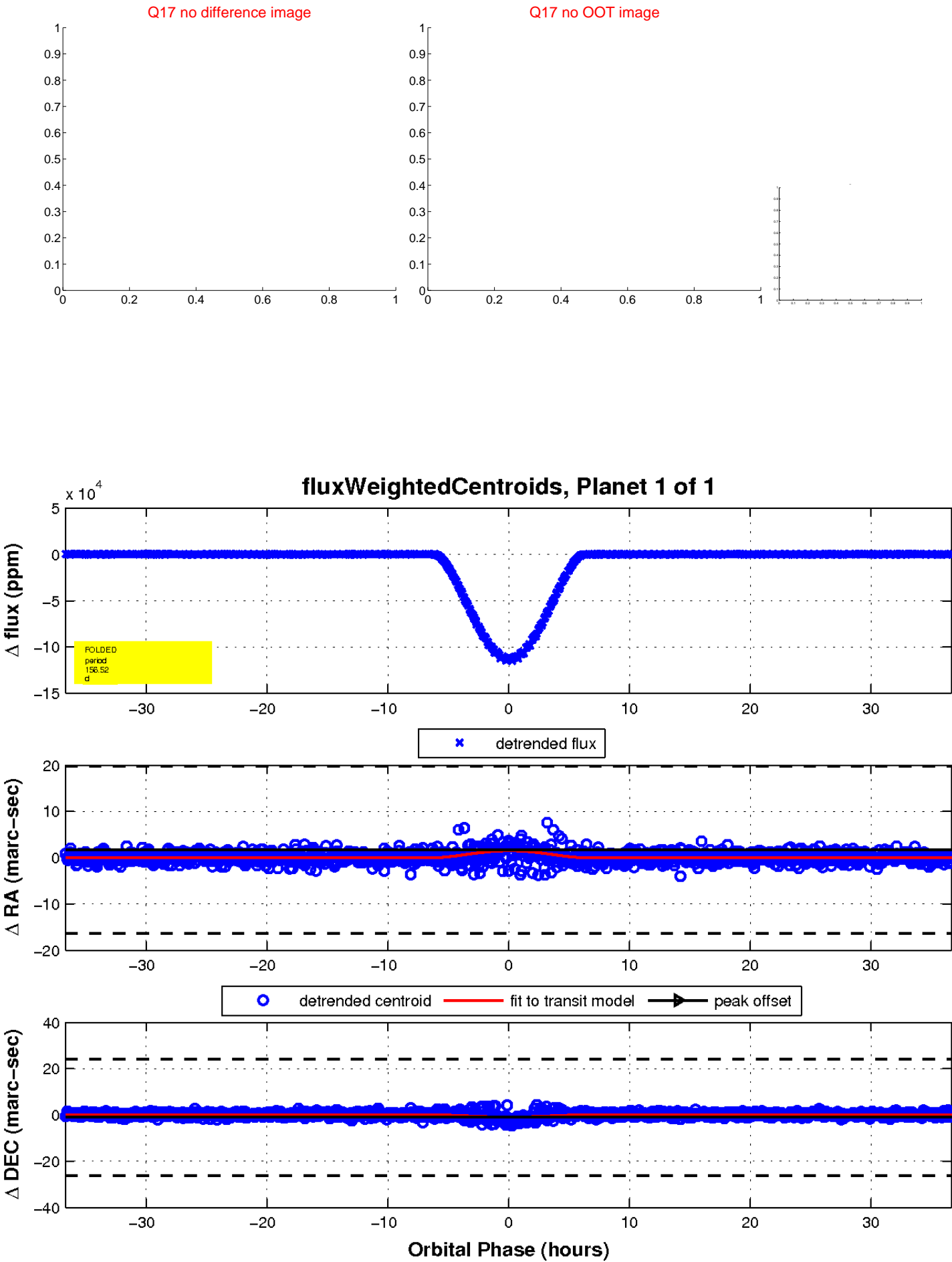
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

