

KIC 007106807

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})
007106807-01	OBS	No	339.810448	373.153228	207.3	10.330	8.7	7.7	0.48	3975	0.74	0.09

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007106807-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

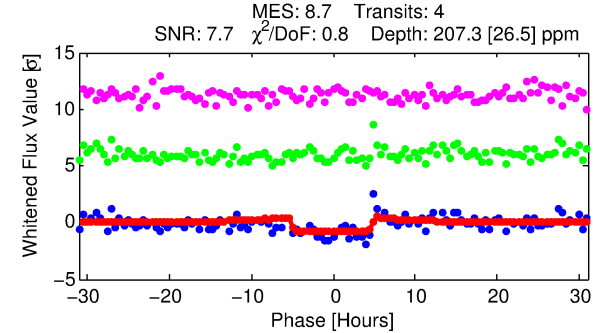
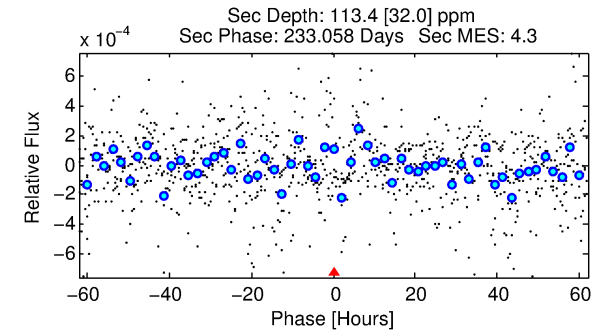
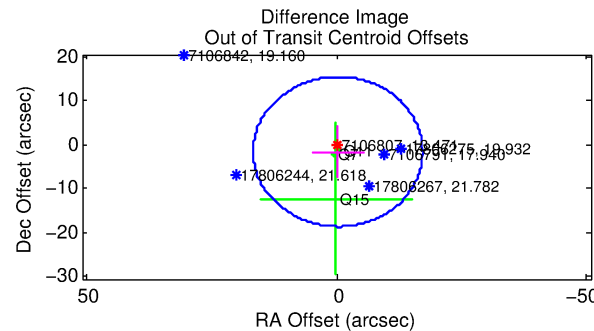
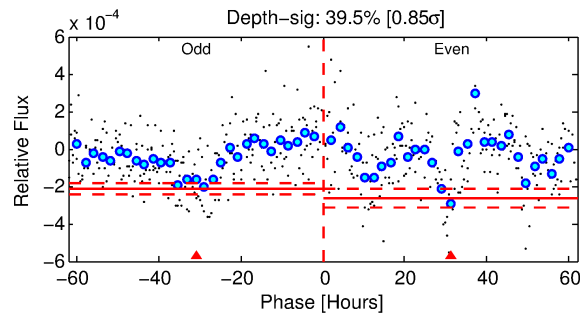
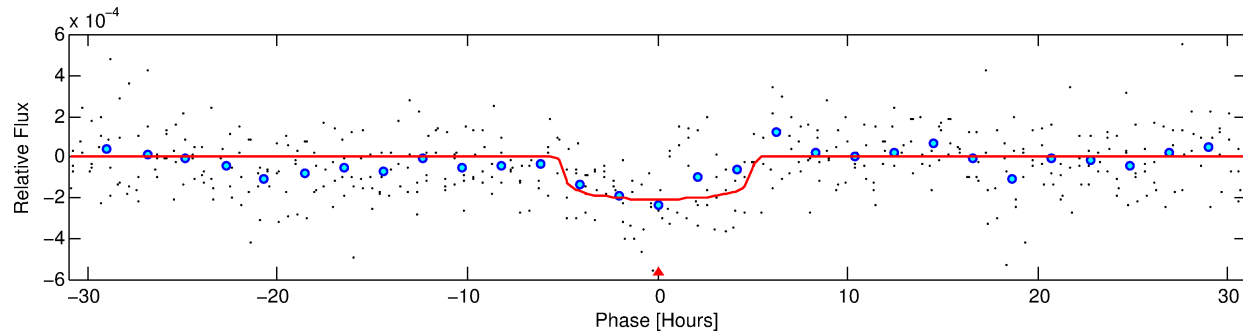
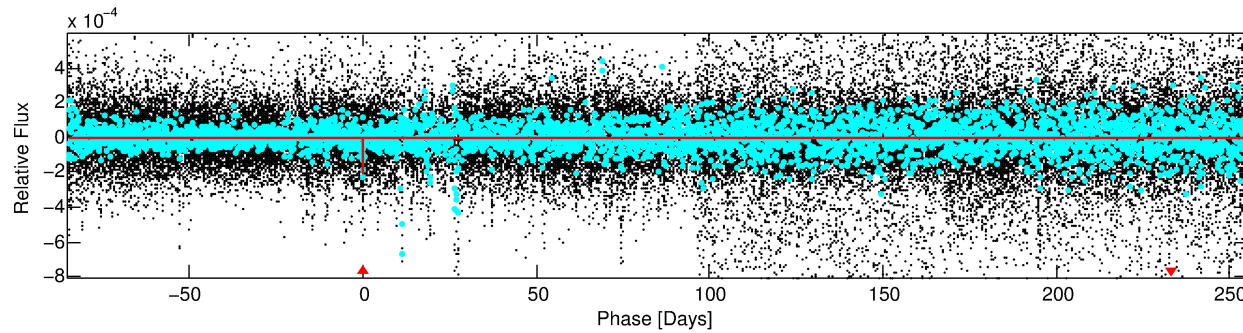
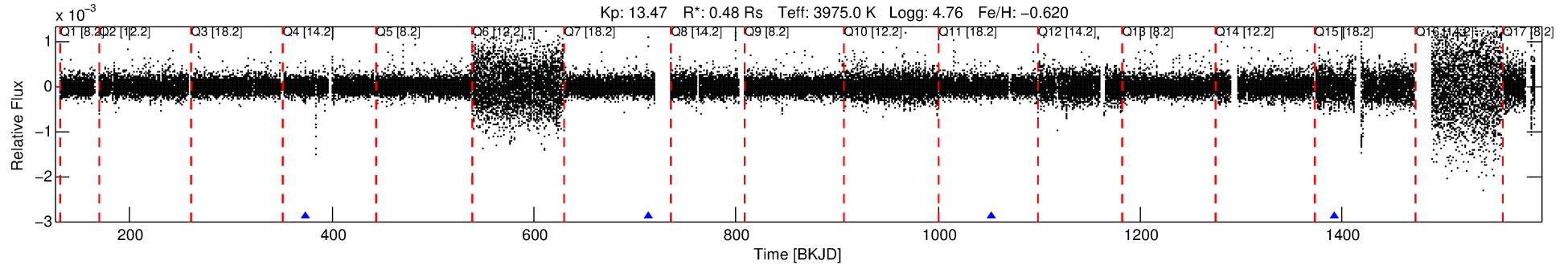
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007106807-01

No Significant Match Found

DV One-Page Summary

KIC: 7106807 Candidate: 1 of 1 Period: 339.810 d



DV Fit Results:

Period = 339.81045 [0.00687] d
Epoch = 373.1532 [0.0116] BKJD
Rp/R* = 0.0142 [0.0059]
a/R* = 178.66 [386.65]
b = 0.72 [1.43]
Seff = 0.09 [0.03]
Teq = 140 [10] K
Rp = 0.74 [0.34] Re
a = 0.7455 [0.1203] AU
Ag = 63346.56 [57770.79] [1.10 σ]
Teffp = 3444 [772] K [4.28 σ]

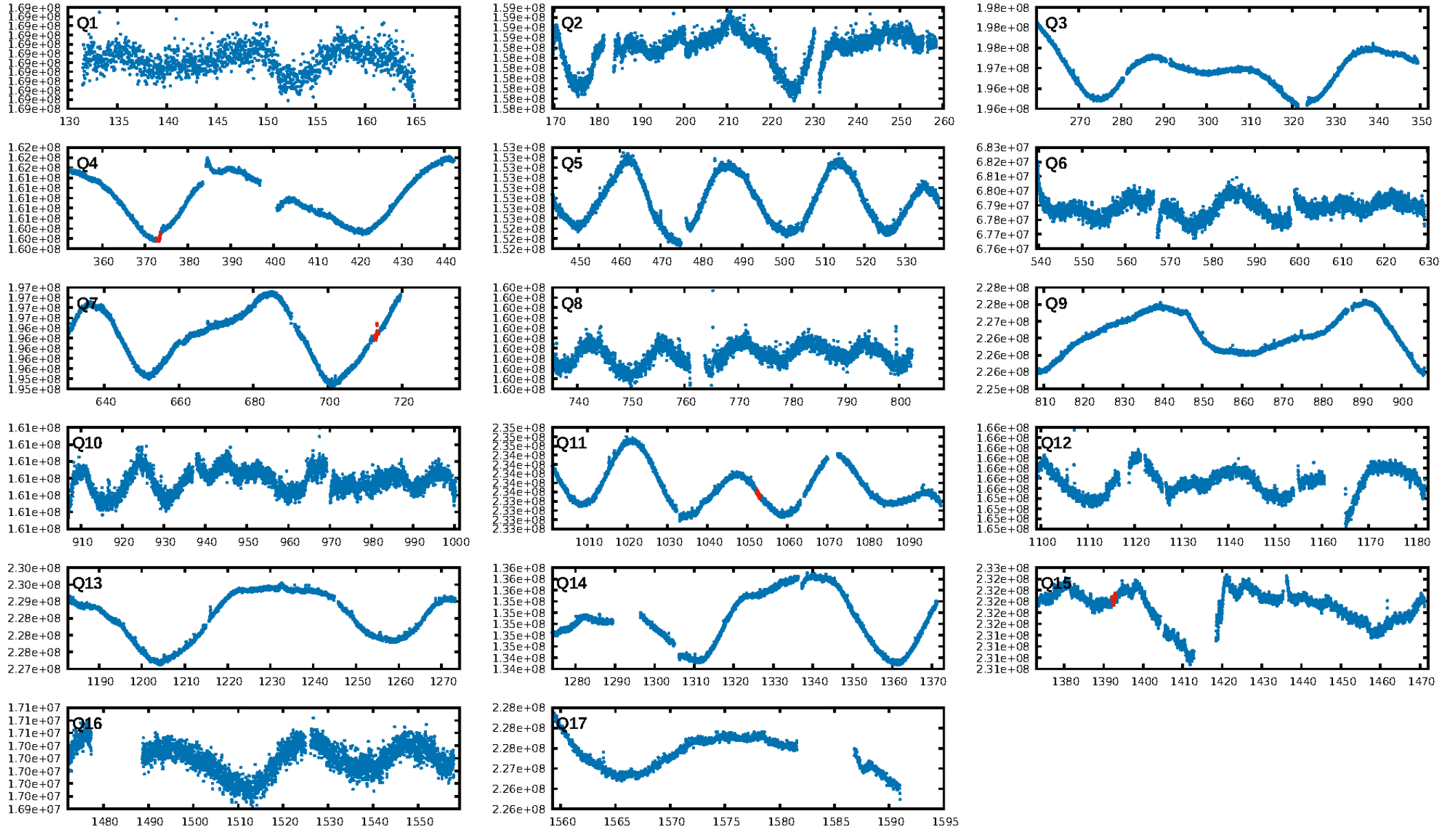
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 3.2%
ModelChiSquareGof-sig: 99.7%
Bootstrap-pfa: 8.75e-09
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 1.122
Centroid-sig: 5.1%
Centroid-so: 4.408 arcsec [4.45 σ]
OotOffset-rm: 1.632 arcsec [0.29 σ]
OotOffset-st: 0/3/0/0 [3]
KicOffset-rm: 4.705 arcsec [0.84 σ]
KicOffset-st: 0/3/0/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

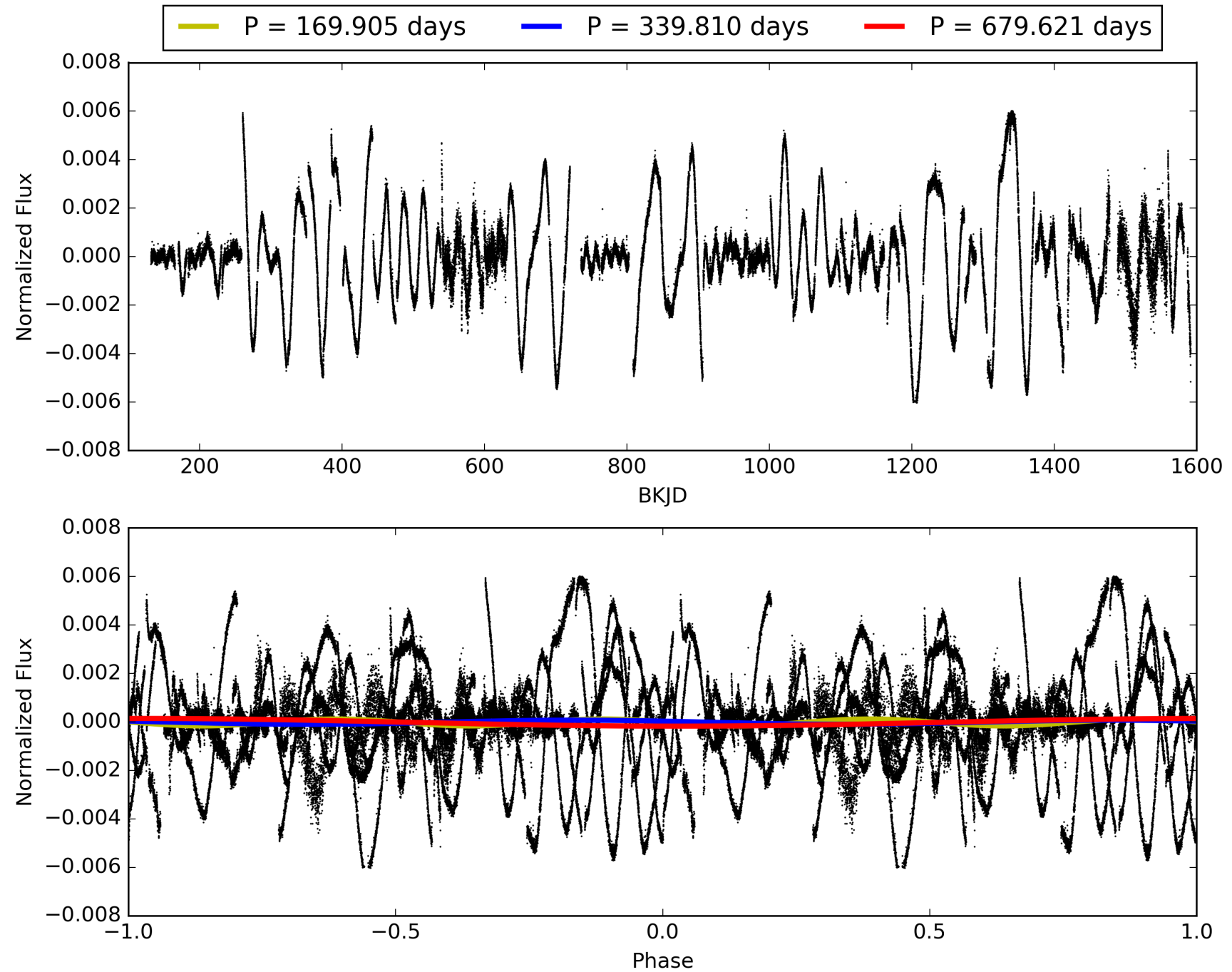
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:57:24 Z

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

TCE 007106807-01, PDC Light Curves

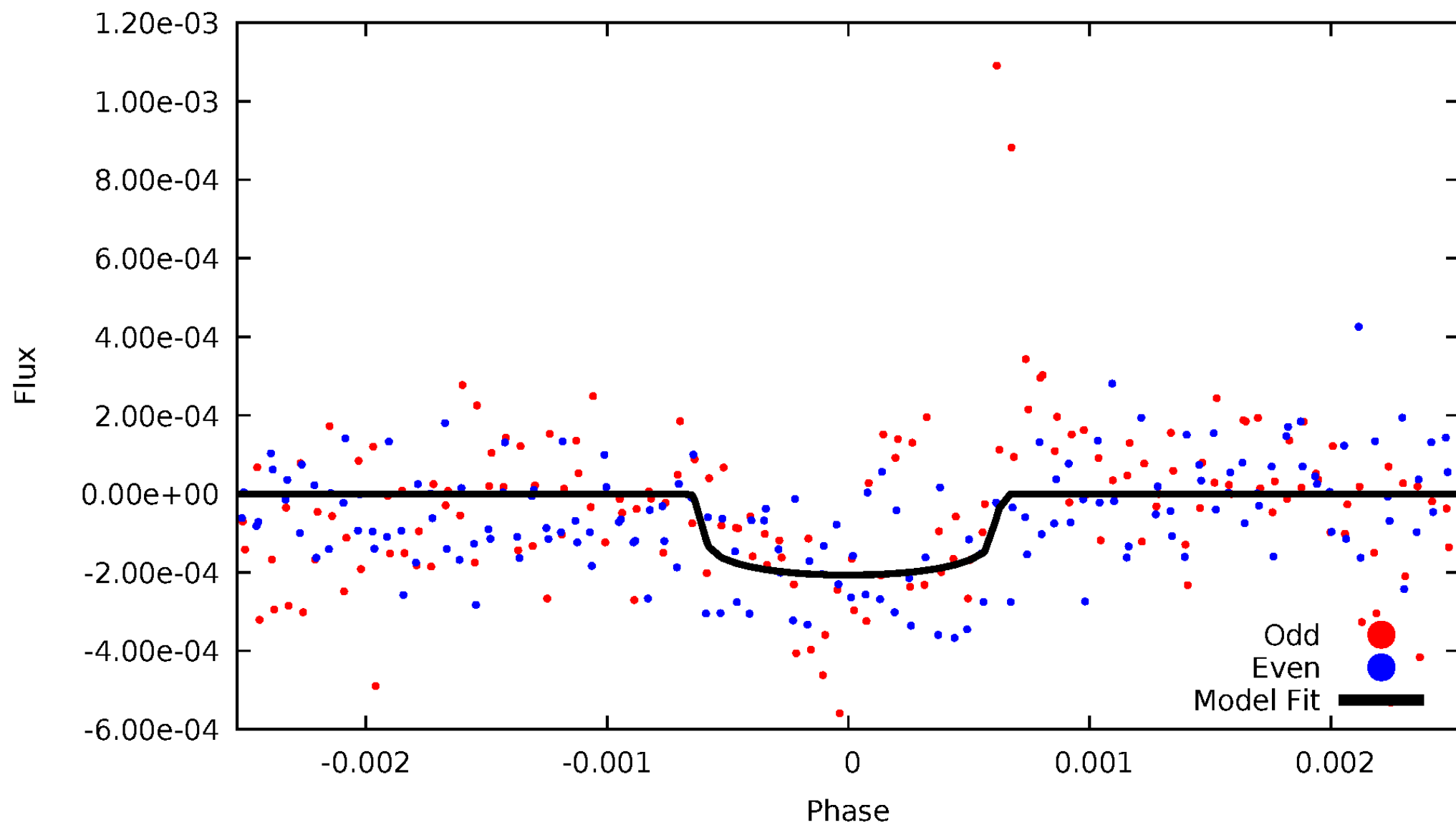


TCE 007106807-01



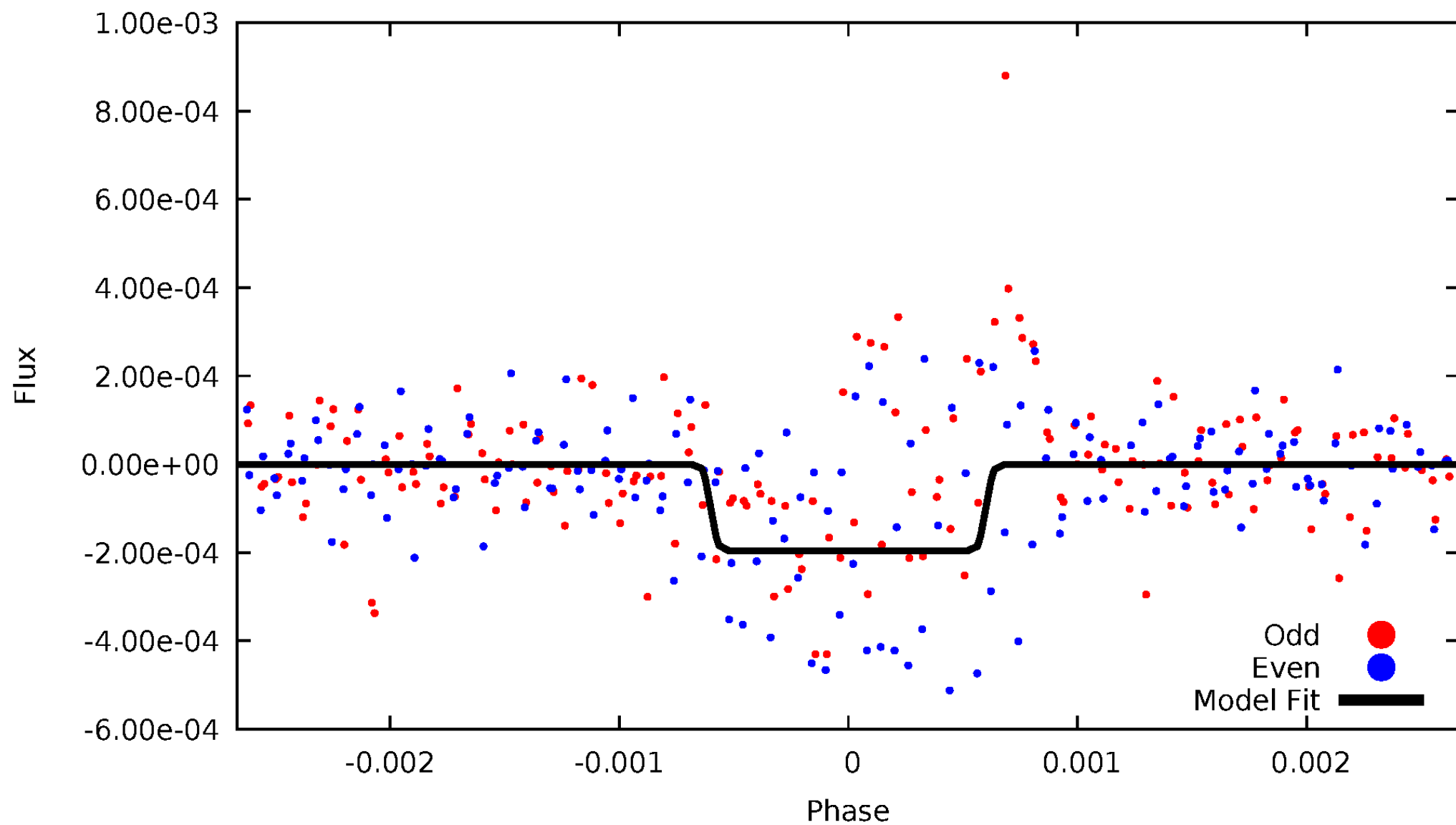
DV Odd/Even

TCE 007106807-01



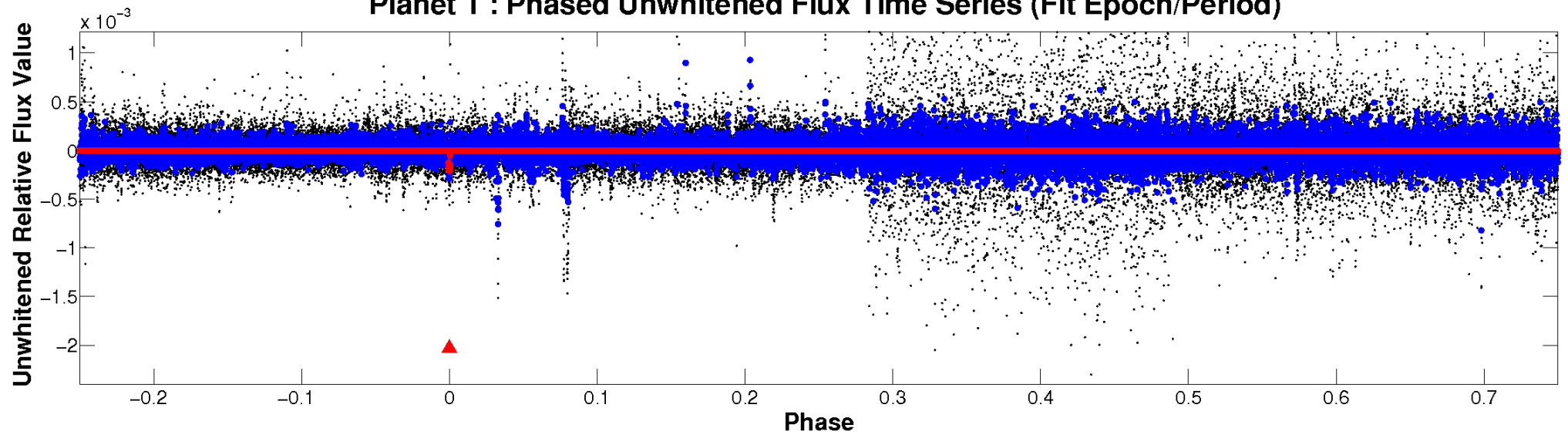
ALT Odd/Even

TCE 007106807-01

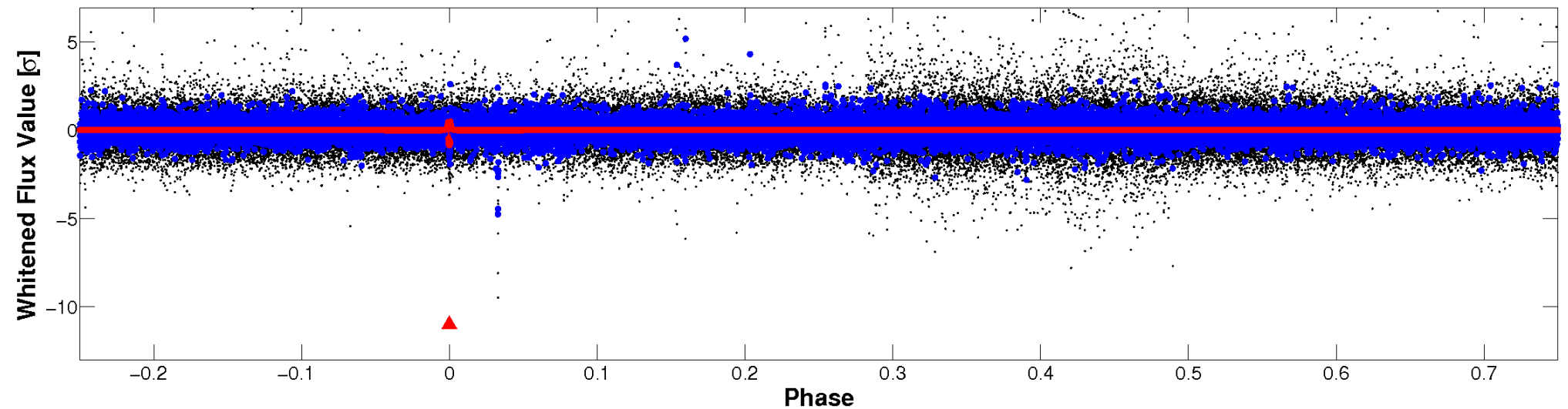


Non-Whitened Vs. Whitened Light Curve

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

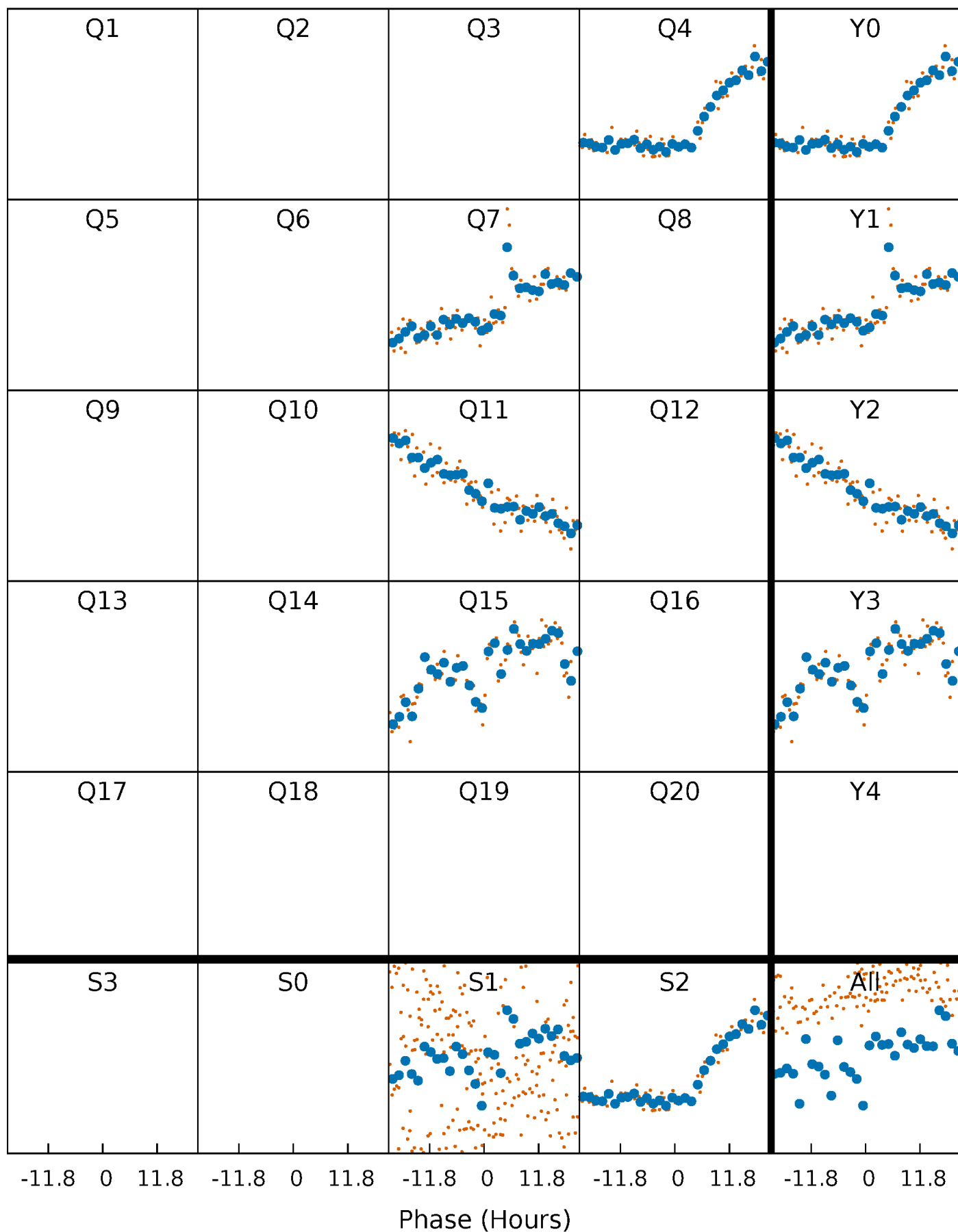


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



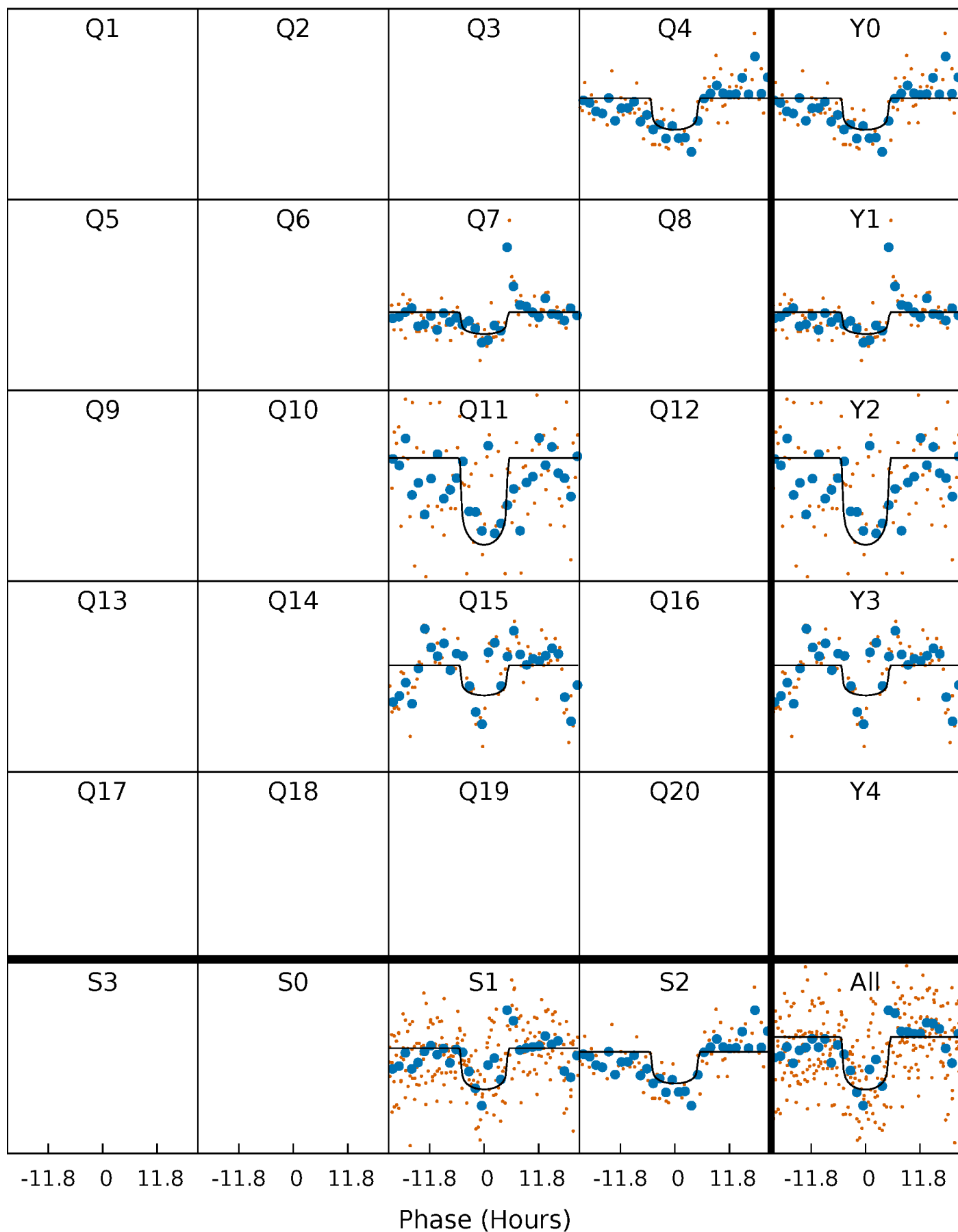
PDC Quarter-Phased Transit Curves

TCE 007106807-01 P=339.810448 Days $T_0=373.153228$ (BKJD)



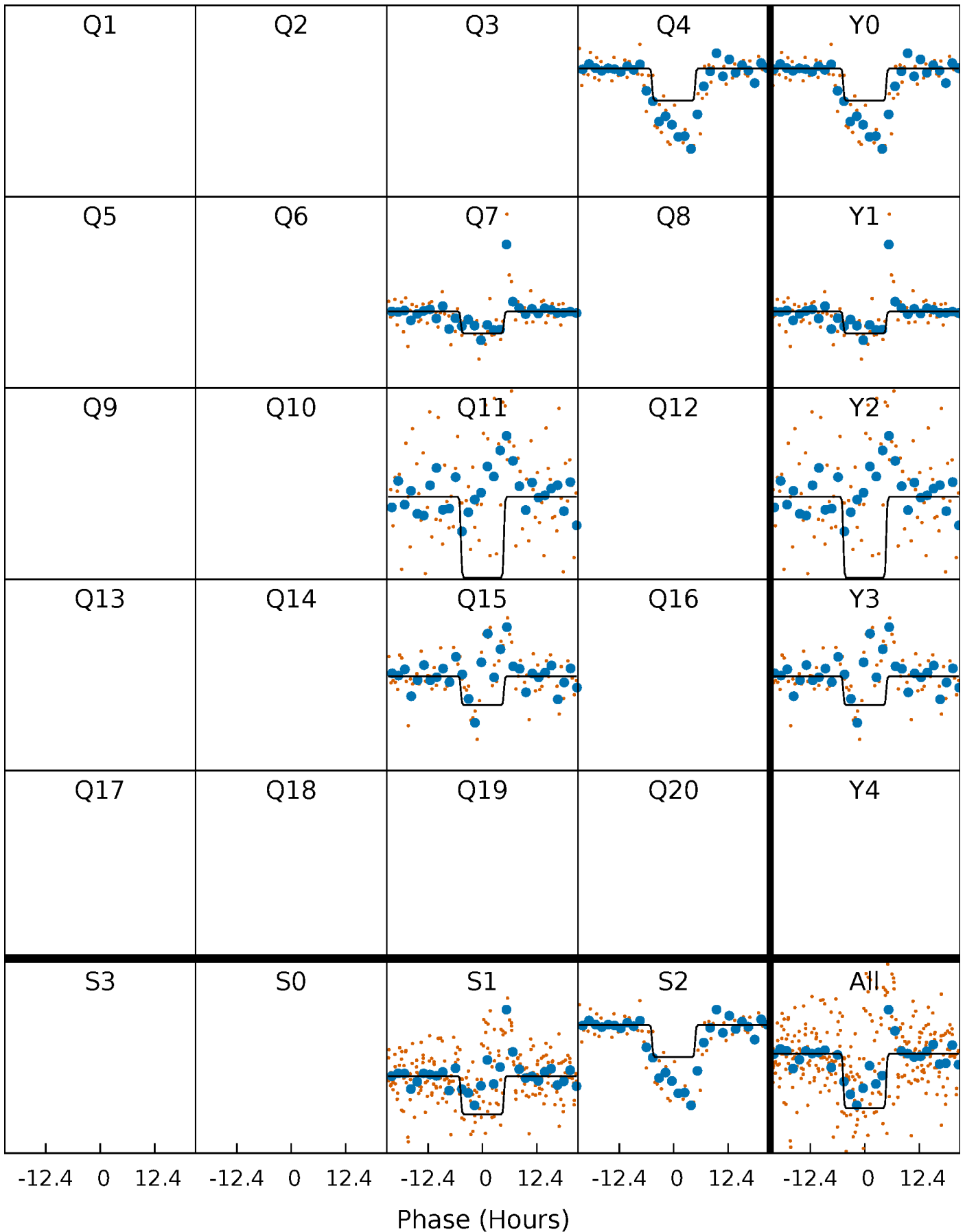
DV Quarter-Phased Transit Curves

TCE 007106807-01 P=339.810448 Days $T_0=373.153228$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

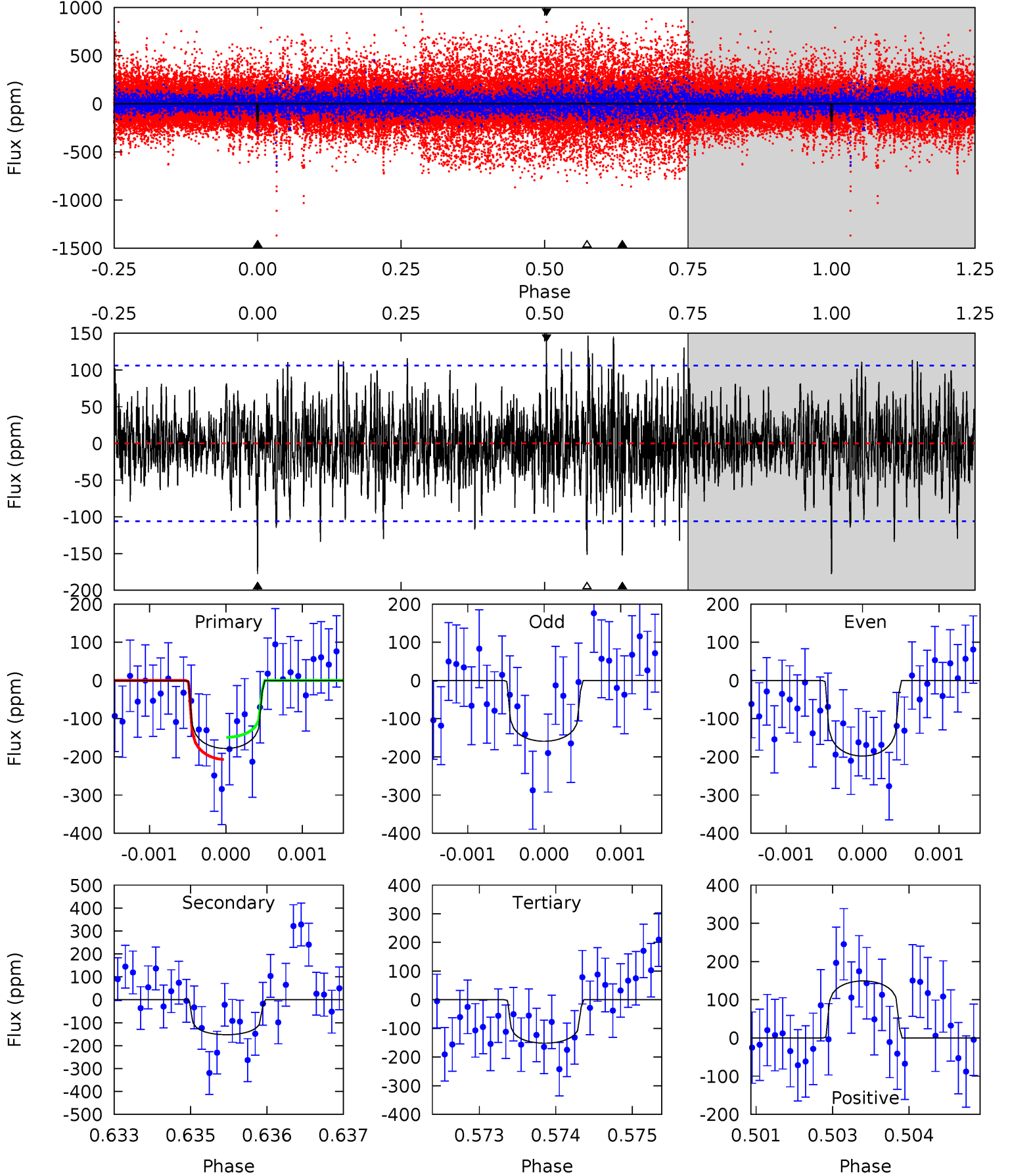
TCE 007106807-01 P=339.830536 Days $T_0=373.129470$ (BKJD)



DV Model-Shift Uniqueness Test

007106807-01, P = 339.810448 Days, E = 33.342780 Days

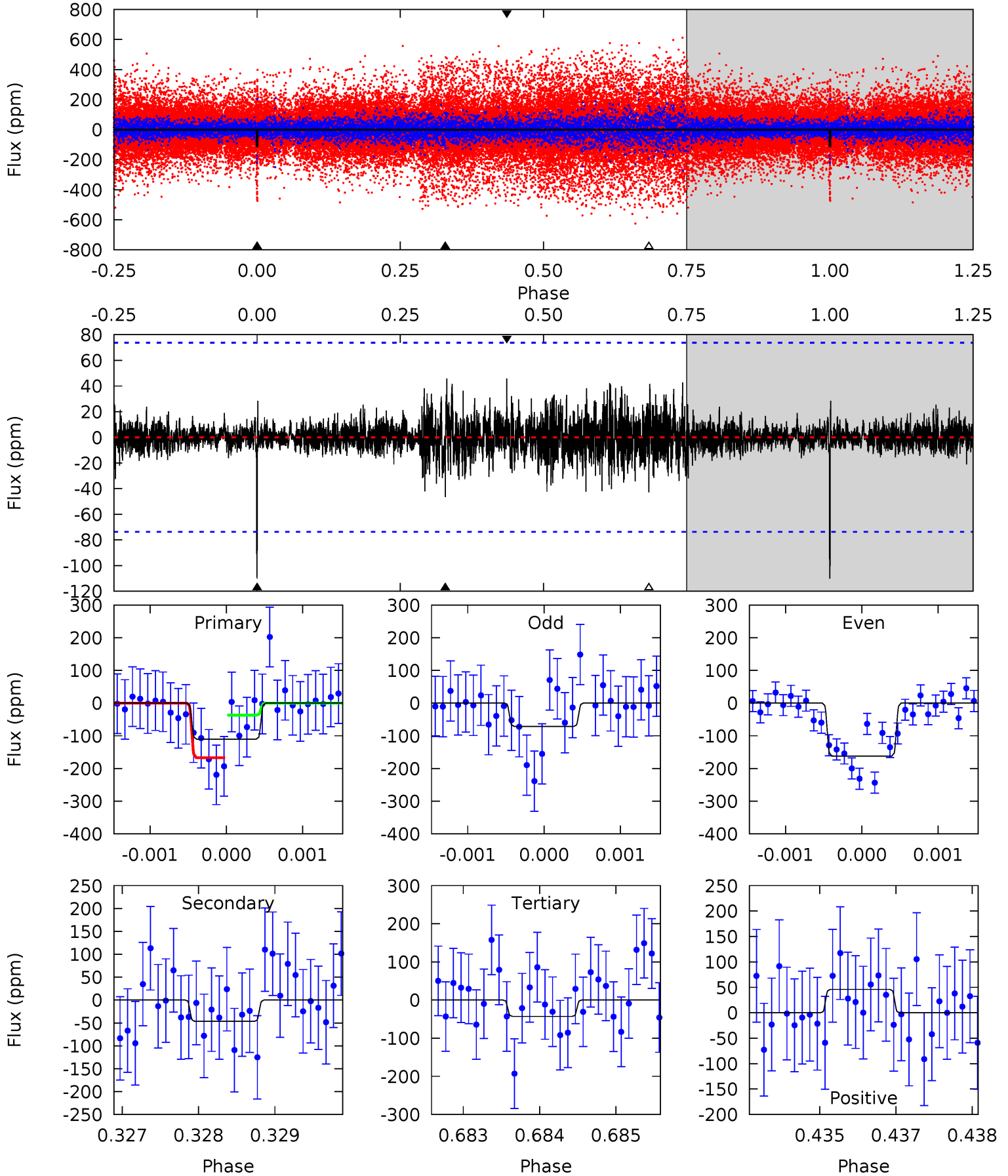
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.07	7.76	7.72	7.60	5.40	3.21	1.90	1.35	1.47	0.05	0.16	0.92	1.13	0.46	1.50



Alt Model-Shift Uniqueness Test

007106807-01, P = 339.830536 Days, E = 33.298934 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.07	3.40	3.14	3.36	5.40	3.21	0.74	4.94	4.71	0.26	0.04	3.07	1.71	0.29	4.82



Stellar Parameters For KIC 007106807

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3975^{+123}_{-151}	$4.759^{+0.120}_{-0.048}$	$-0.620^{+0.300}_{-0.350}$	$0.478^{+0.058}_{-0.095}$	$0.478^{+0.060}_{-0.080}$	$6.163^{+3.925}_{-1.167}$
	+3%/-4%	+3%/-1%	+48%/-56%	+12%/-20%	+13%/-17%	+64%/-19%
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 007106807-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-152 ± 20	$0.70^{+0.35}_{-0.30}$	194^{+8}_{-10}	3820^{+915}_{-471}	$96387^{+188514}_{-54083}$
Alt.	-46 ± 14	$0.71^{+0.32}_{-0.28}$	193^{+9}_{-10}	3154^{+543}_{-349}	29233^{+49280}_{-16920}

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

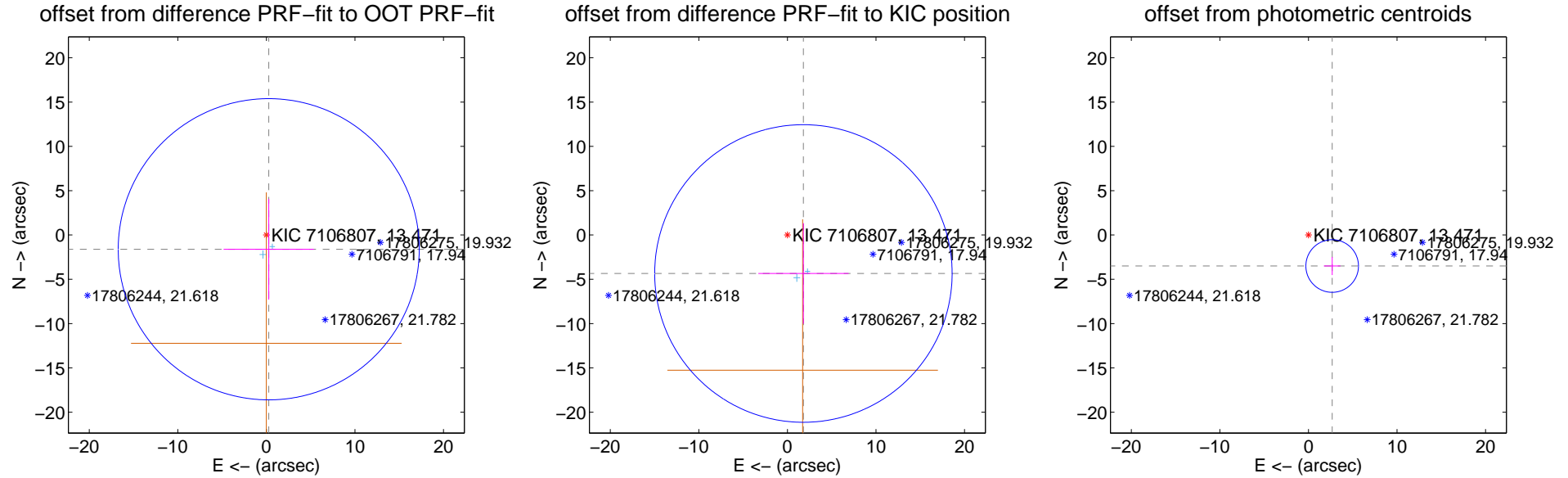
DV Centroid Data

Supplemental centroid analysis for 007106807-01. Kepler magnitude: 13.47. Transit SNR 7.68

There are 2 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 3.48 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.632 ± 5.666	0.29	-0.266 ± 5.096	-1.610 ± 5.681
PRF-fit source offset from KIC position	4.705 ± 5.599	0.84	-1.806 ± 5.096	-4.345 ± 5.681
photometric centroid source offset	4.41 ± 0.99	4.45	-2.68 ± 0.93	-3.50 ± 1.02

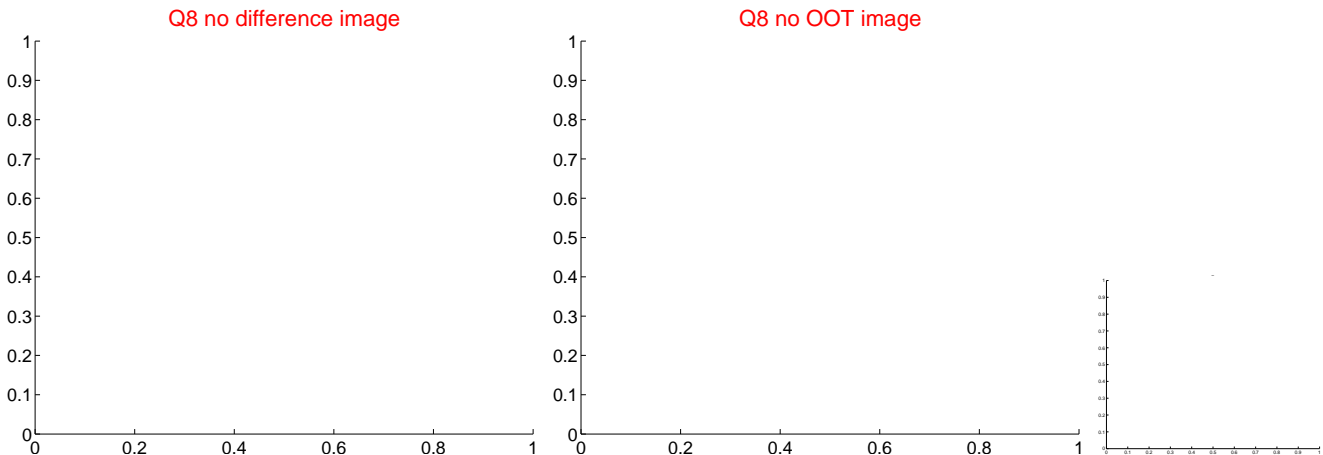
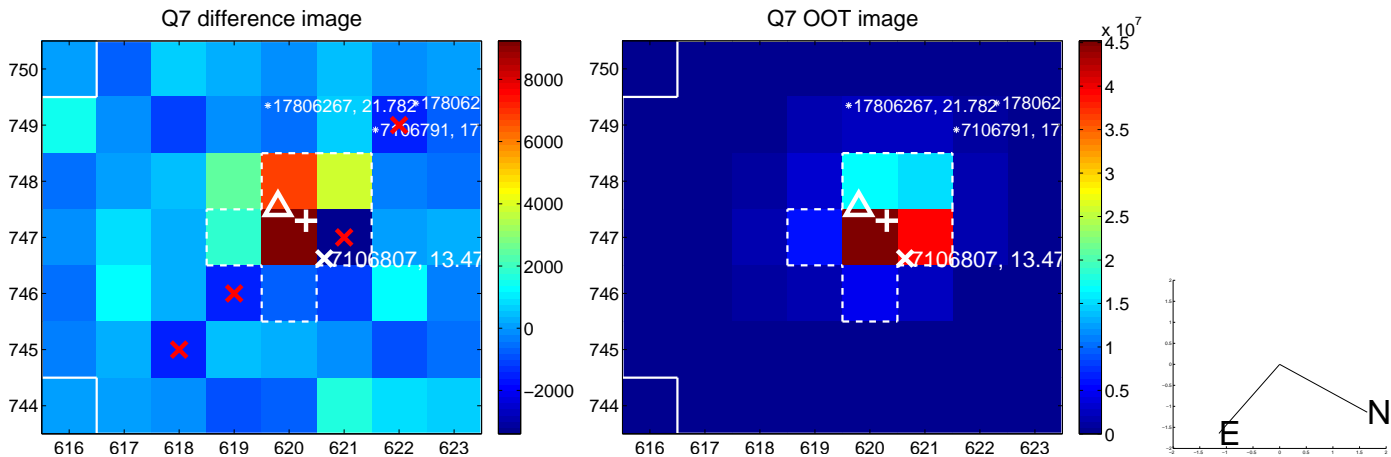


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



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Q9 no difference image



Q9 no OOT image



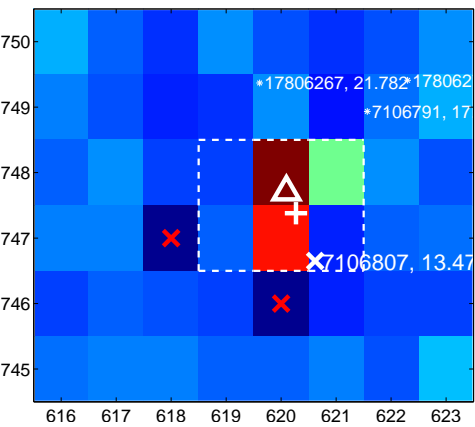
Q10 no difference image



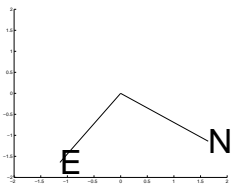
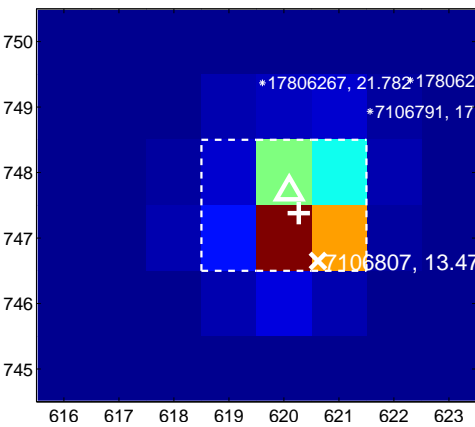
Q10 no OOT image



Q11 difference image



Q11 OOT image



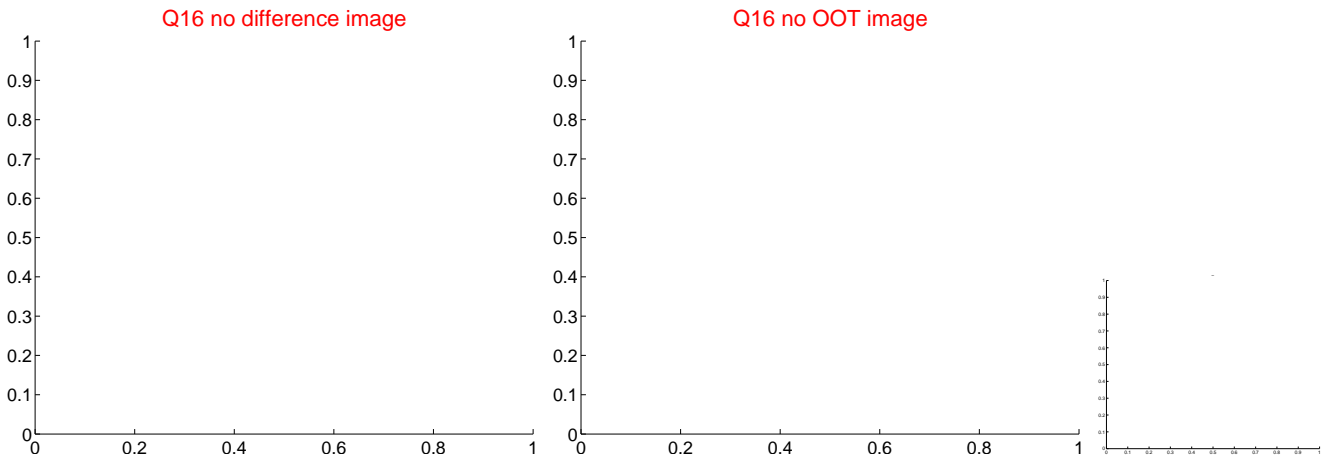
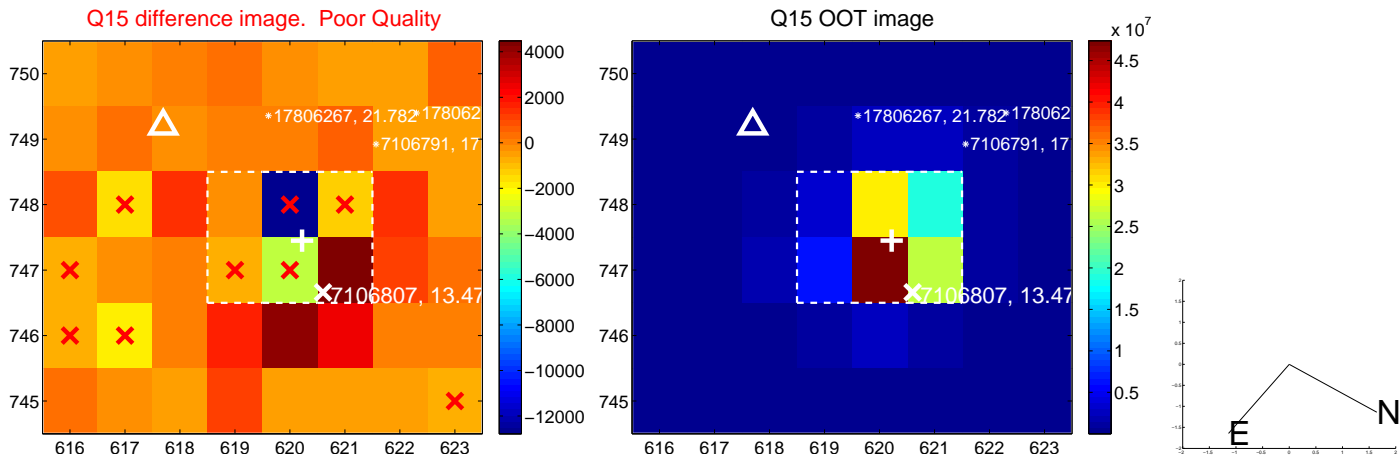
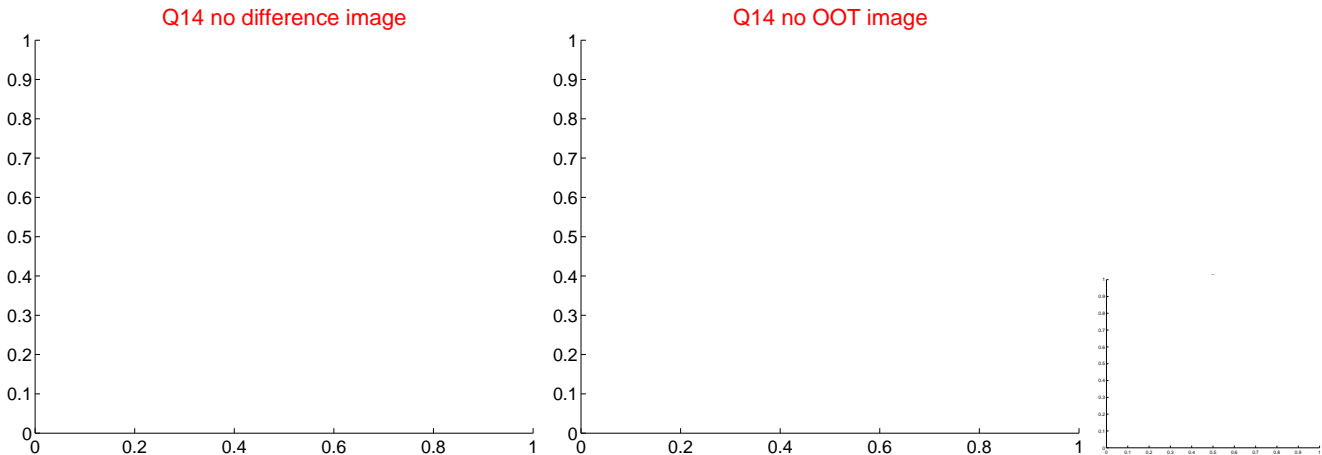
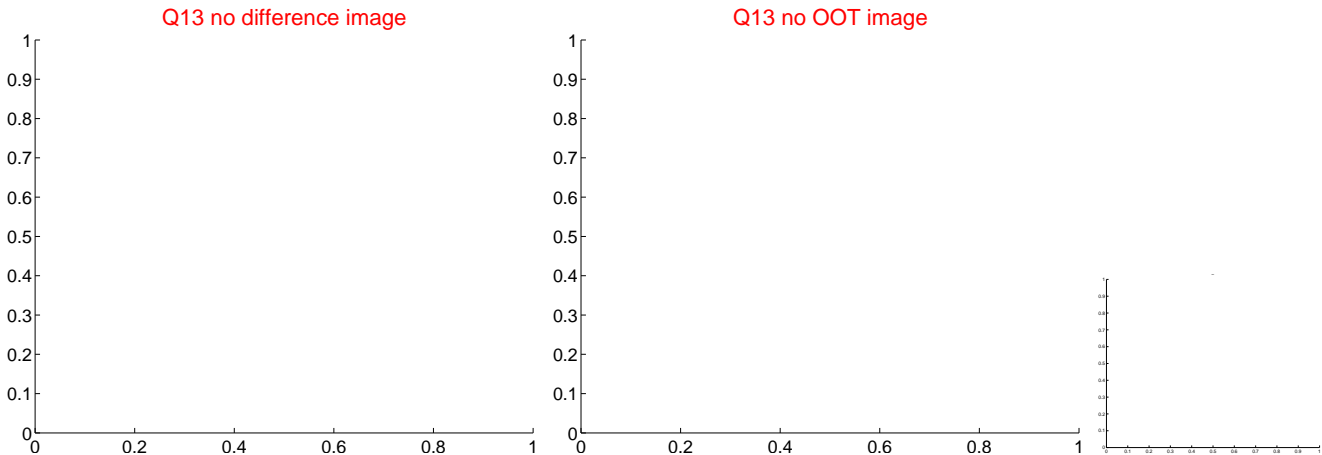
Q12 no difference image



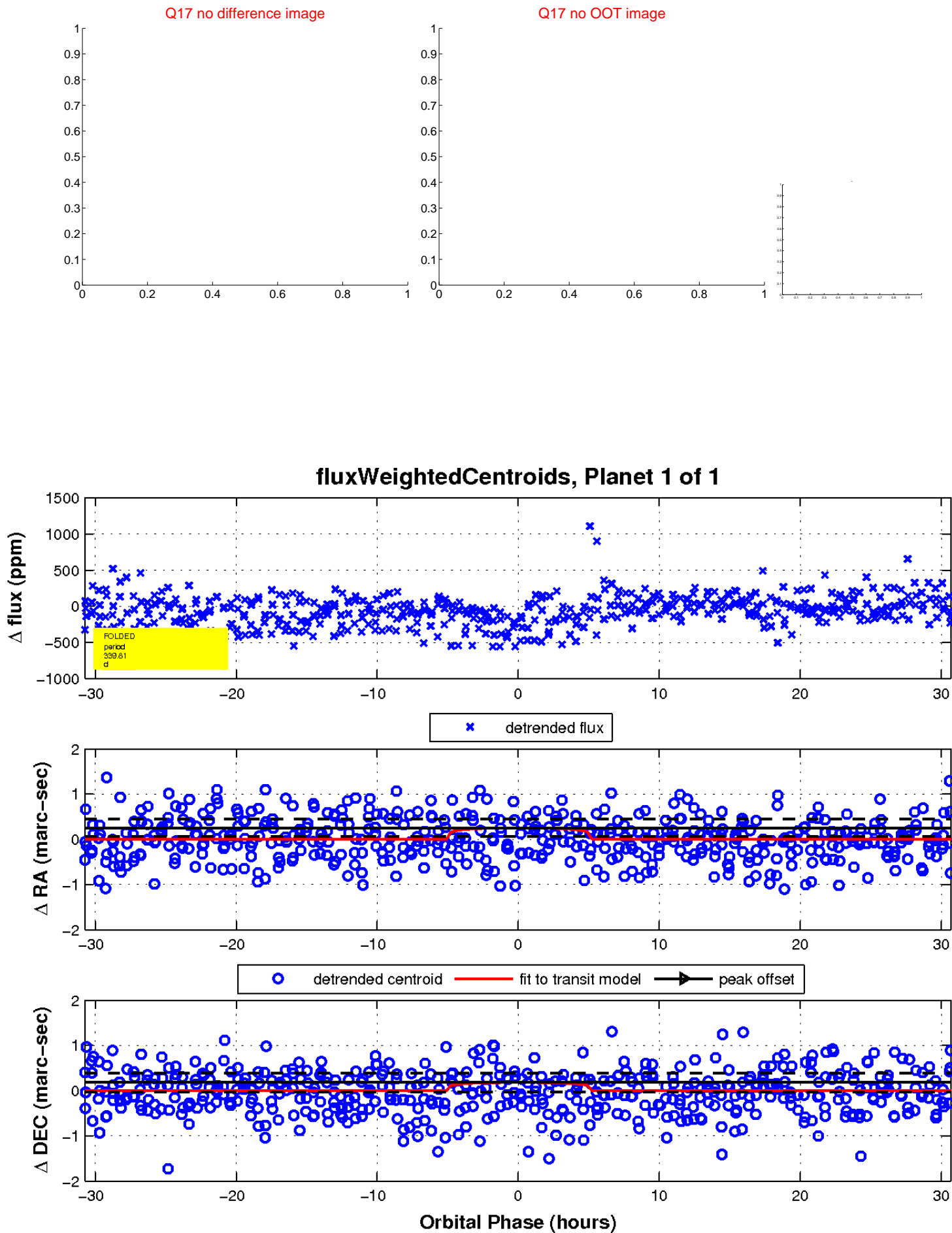
Q12 no OOT image



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



UKIRT Image

Declination

