

KIC 008937786

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})
008937786-01	OBS	No	370.123969	232.850522	518.9	10.242	8.4	8.2	1.04	6214	2.50	1.36

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008937786-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—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.

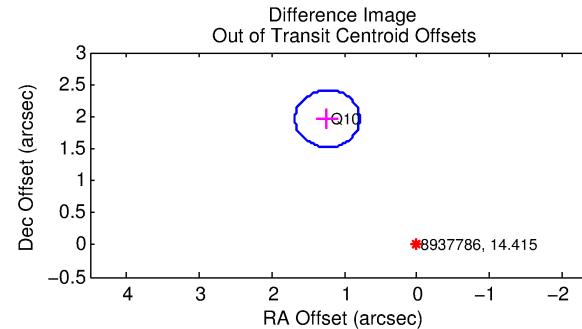
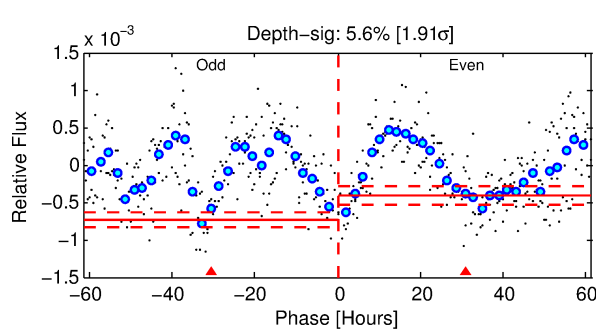
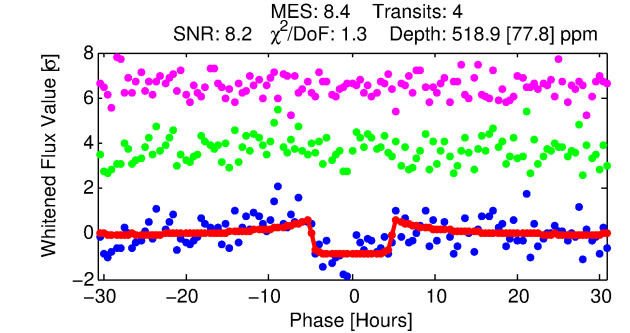
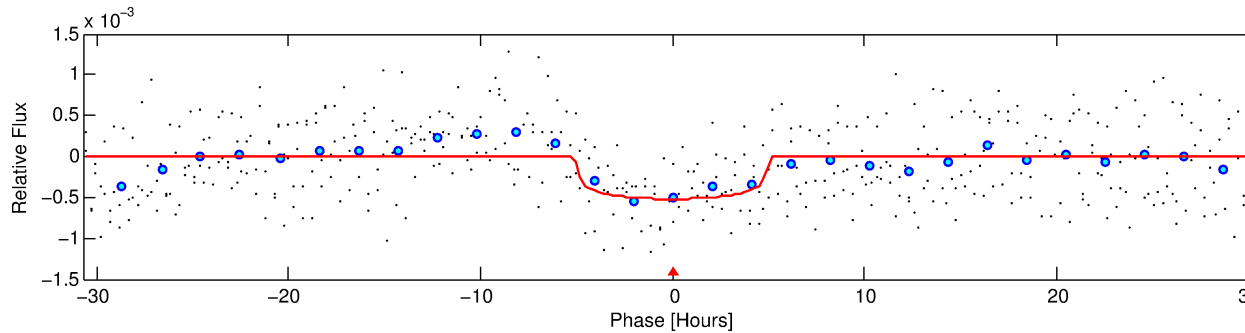
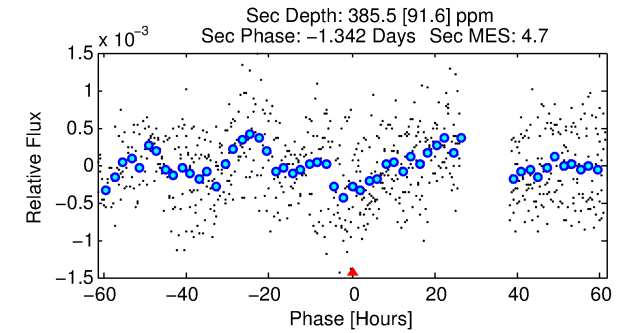
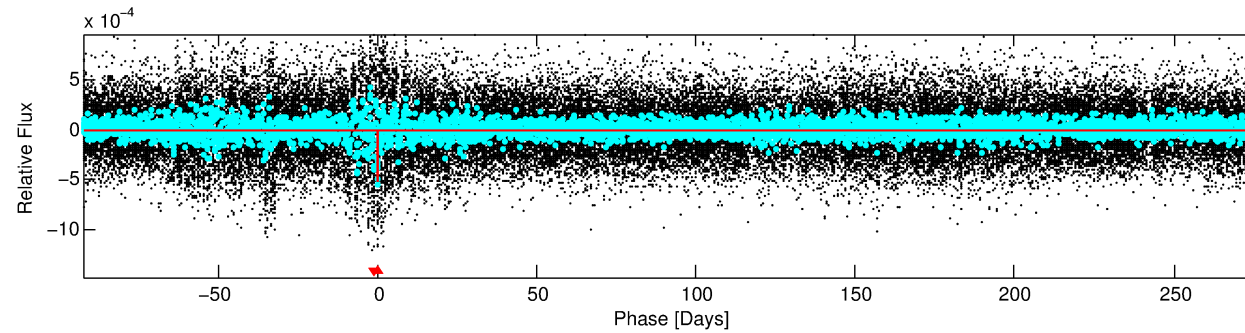
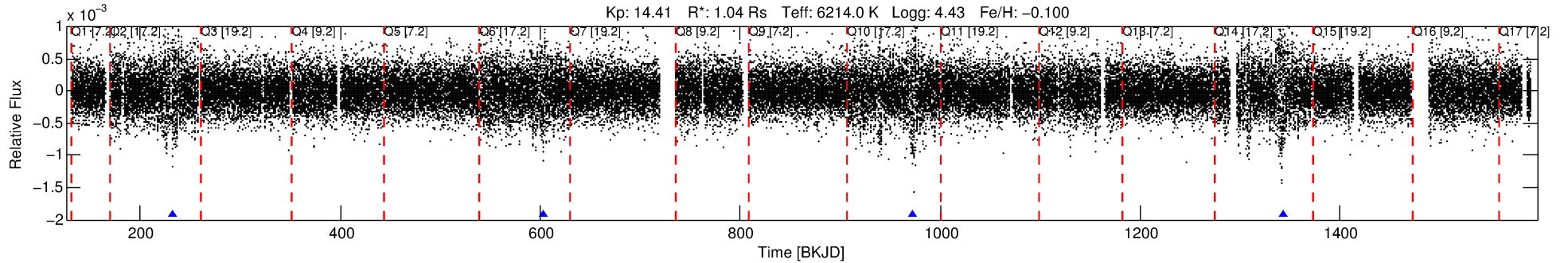
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008937786-01

No Significant Match Found

DV One-Page Summary

KIC: 8937786 Candidate: 1 of 1 Period: 370.124 d



DV Fit Results:

Period = 370.12397 [0.00697] d
Epoch = 232.8505 [0.0135] BKJD
Rp/R* = 0.0219 [0.0120]
a/R* = 223.34 [603.60]
b = 0.62 [2.65]
Seff = 1.36 [0.59]
Teq = 275 [30] K
Rp = 2.50 [1.60] Re
a = 1.0361 [0.2916] AU
Ag = 36481.17 [43386.28] [0.84σ]
Teffp = 5880 [1655] K [3.39σ]

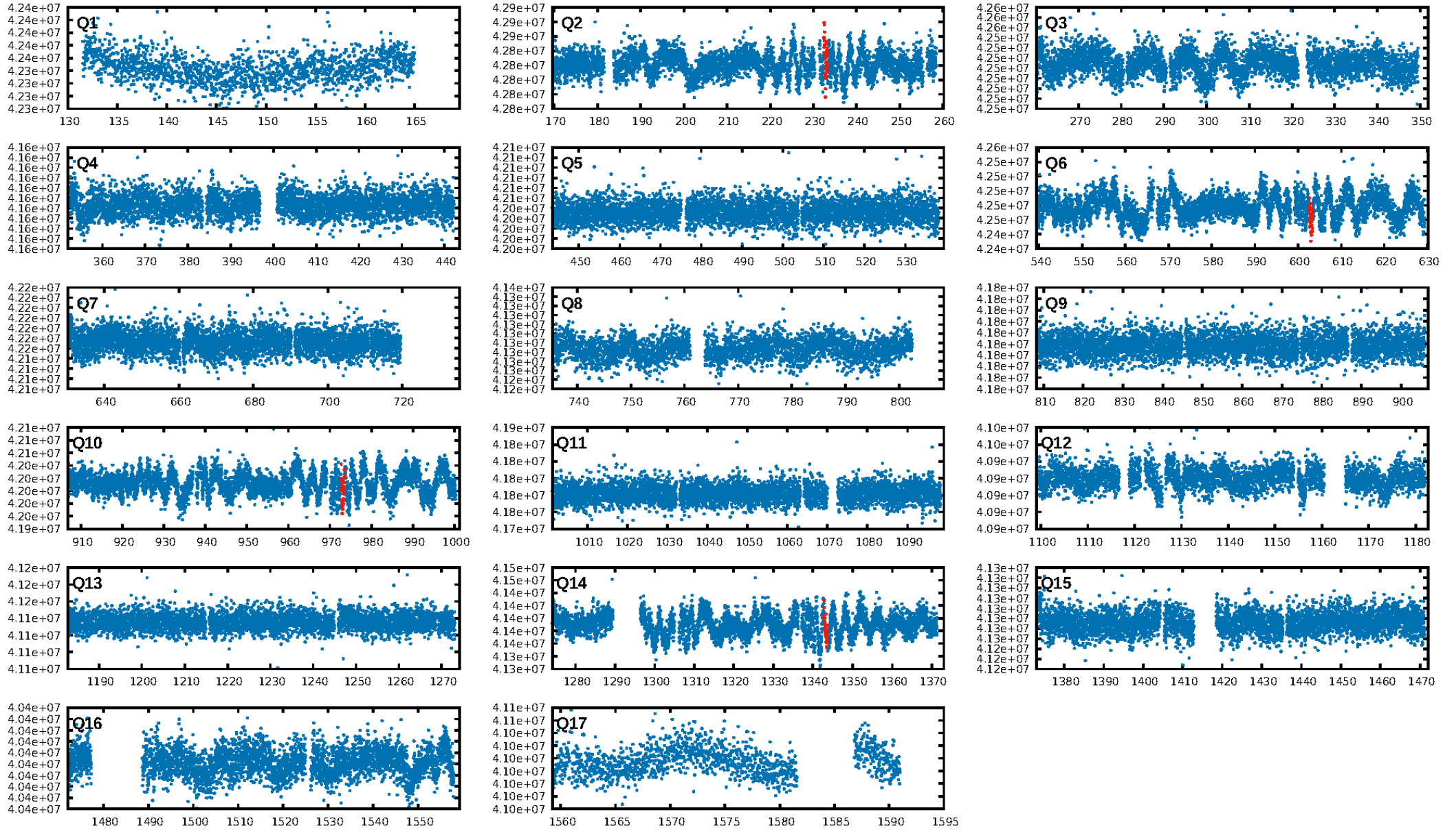
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 15.3%
ModelChiSquareGof-sig: 97.9%
Bootstrap-pfa: 6.19e-09
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 3.678
Centroid-sig: 1.1%
Centroid-so: 5.028 arcsec [1.89σ]
OotOffset-rm: 2.320 arcsec [15.69σ]
KicOffset-rm: 2.206 arcsec [14.82σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [3/3]

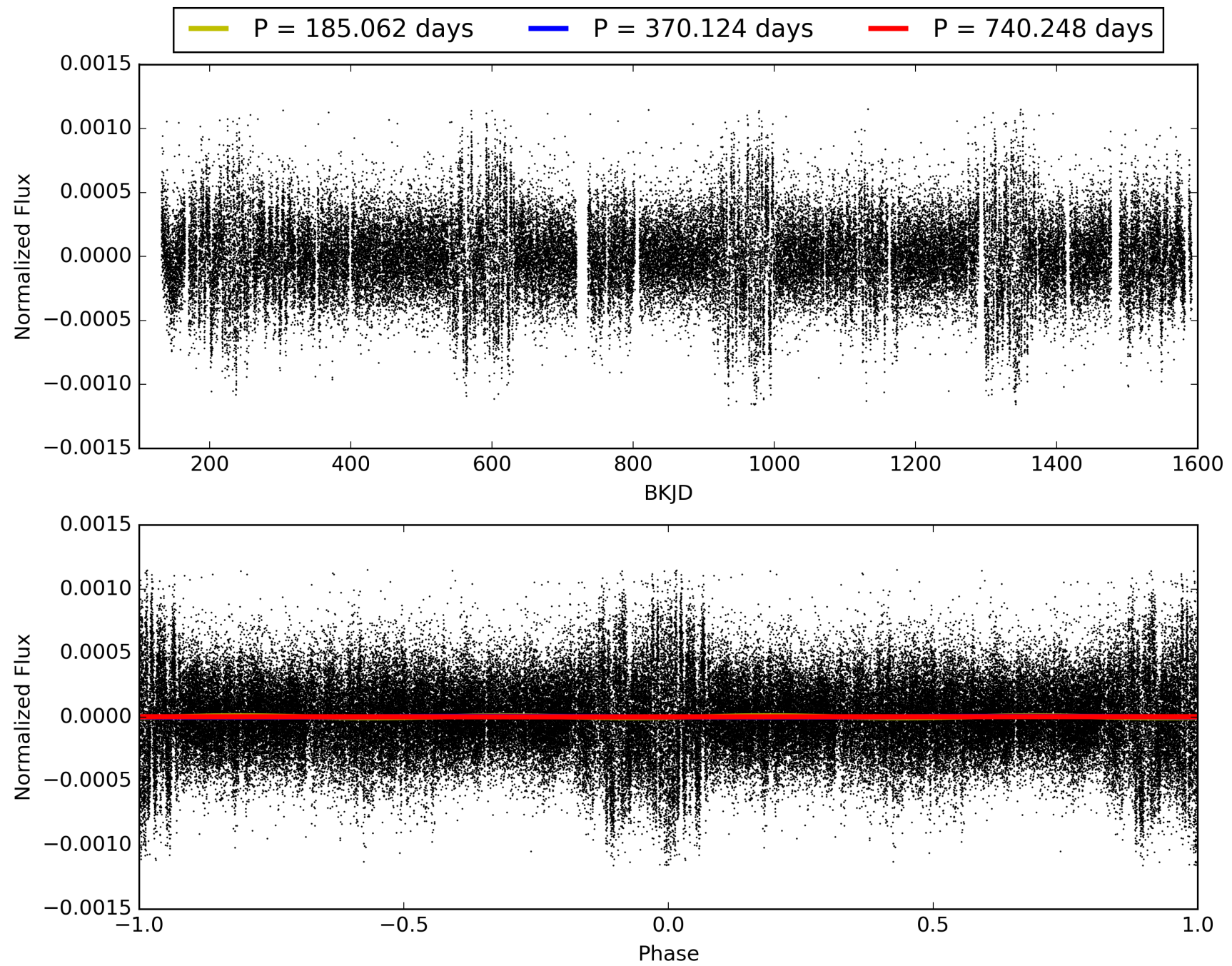
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:23:35 Z

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

TCE 008937786-01, PDC Light Curves

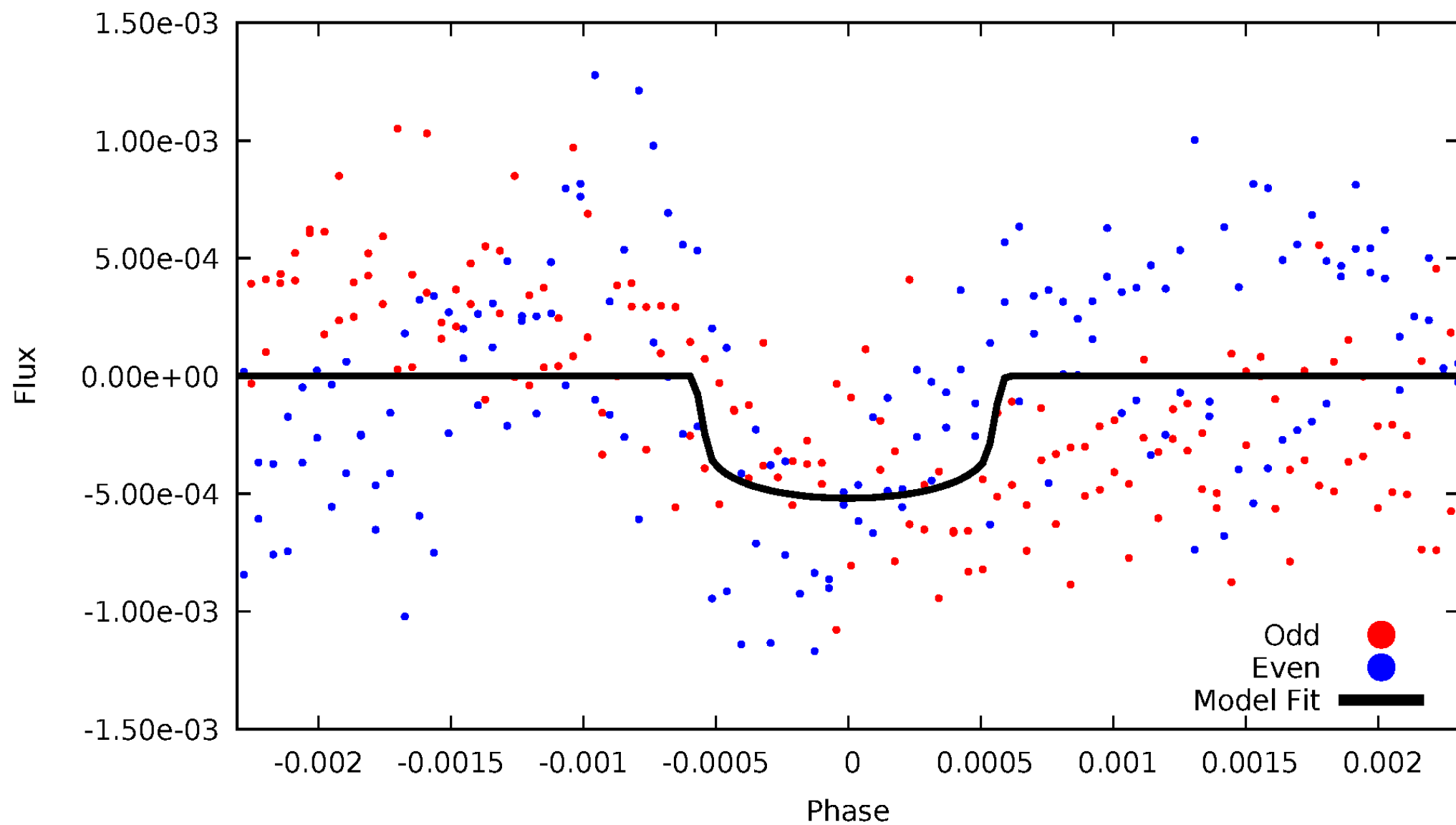


TCE 008937786-01



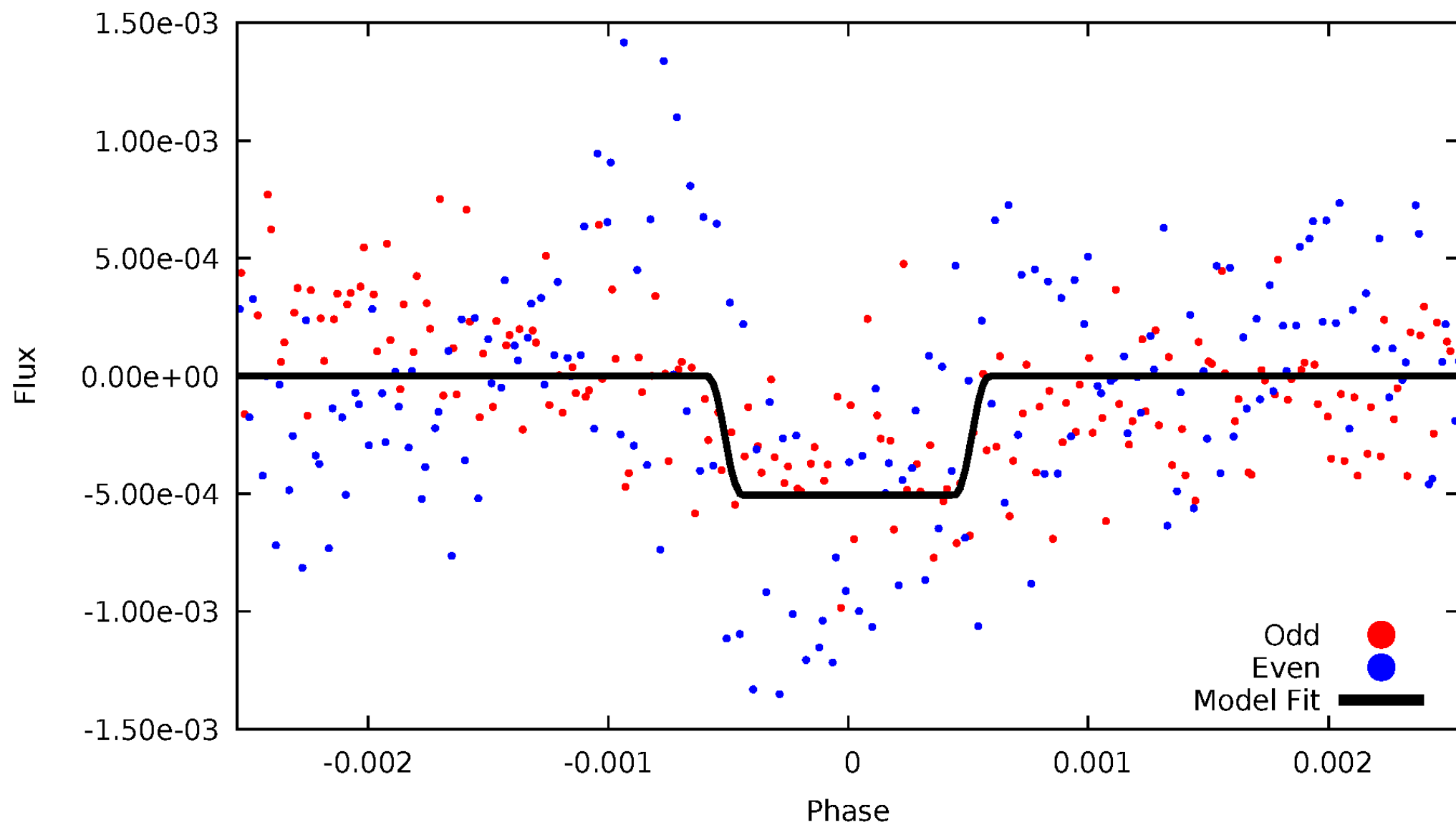
DV Odd/Even

TCE 008937786-01



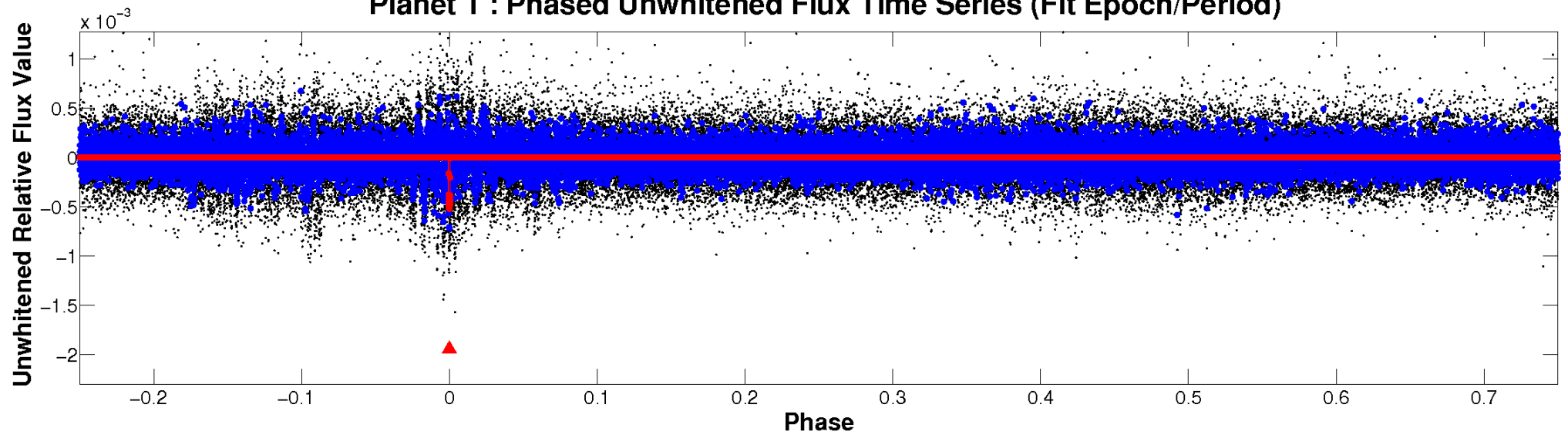
ALT Odd/Even

TCE 008937786-01

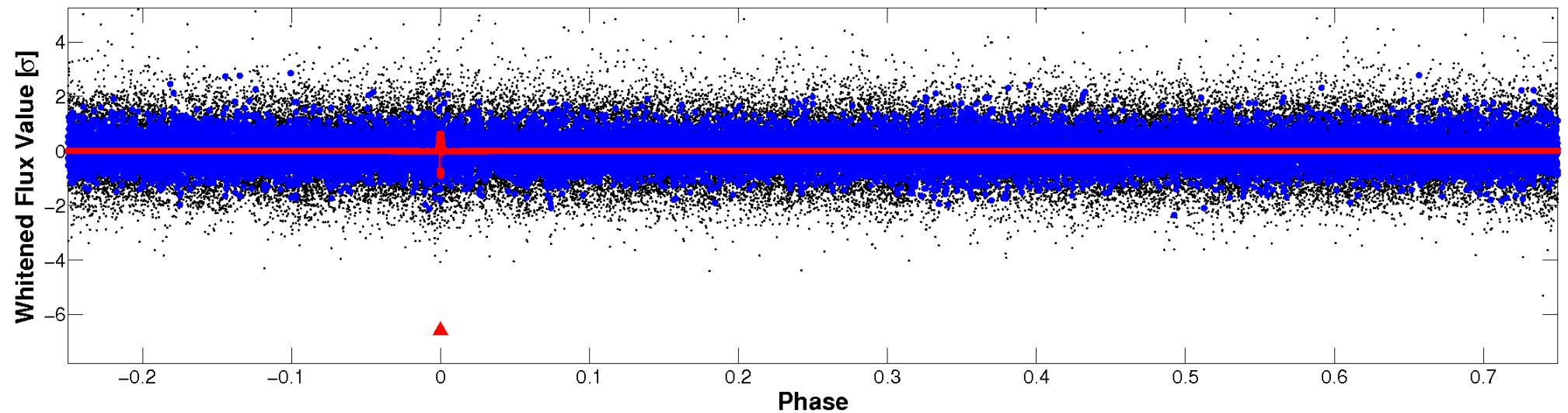


Non-Whitened Vs. Whitened Light Curve

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

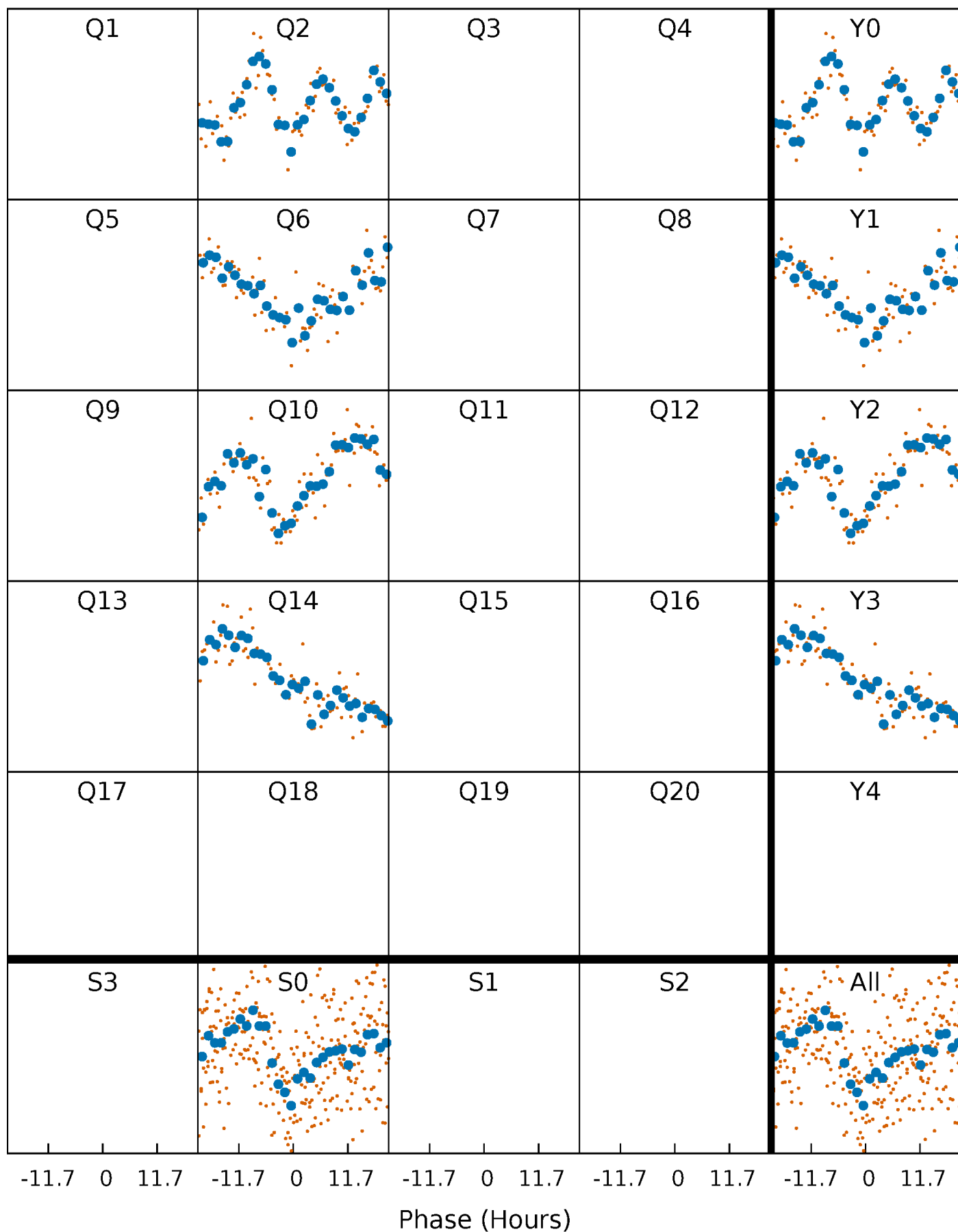


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



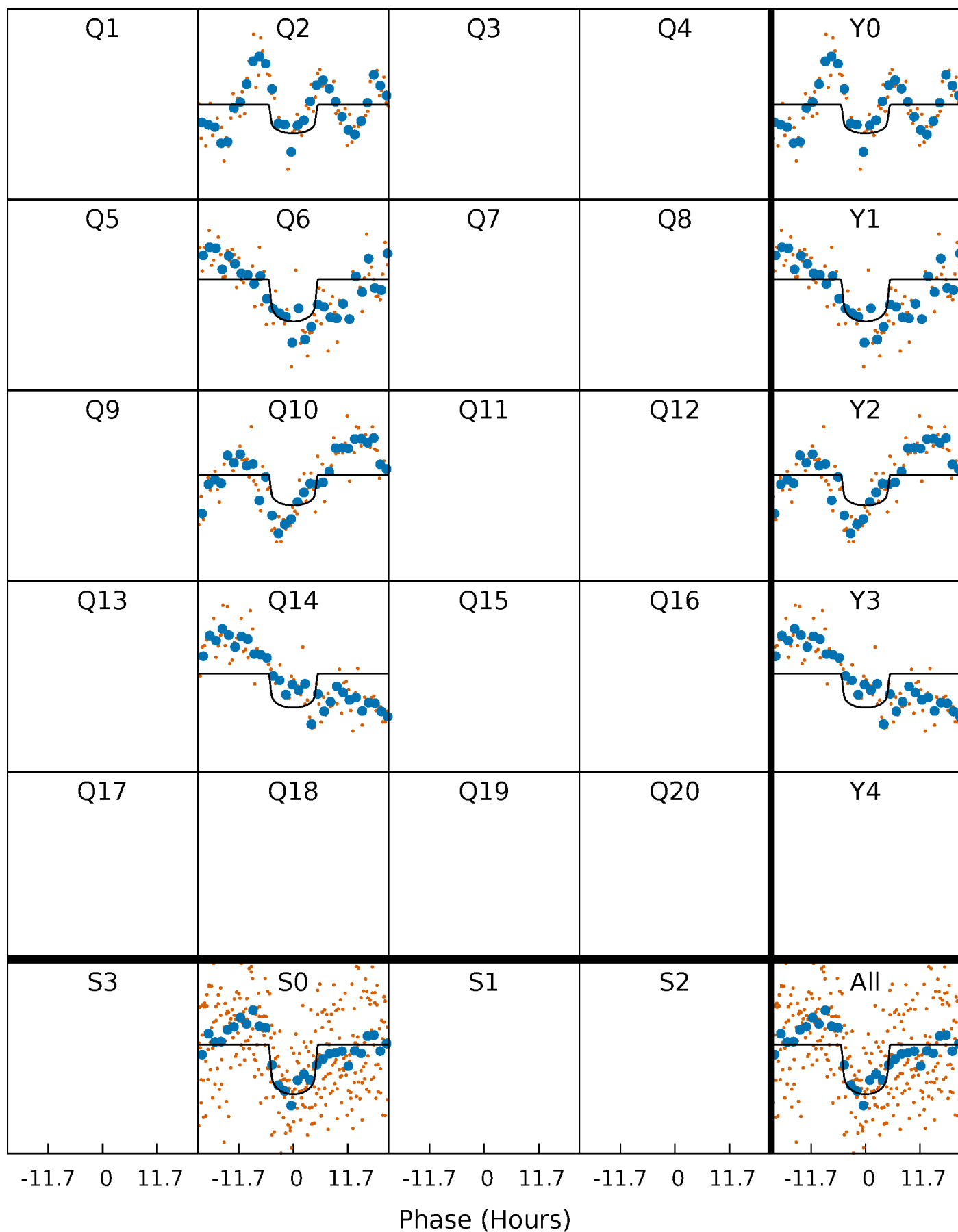
PDC Quarter-Phased Transit Curves

TCE 008937786-01 P=370.123969 Days $T_0=232.850522$ (BKJD)



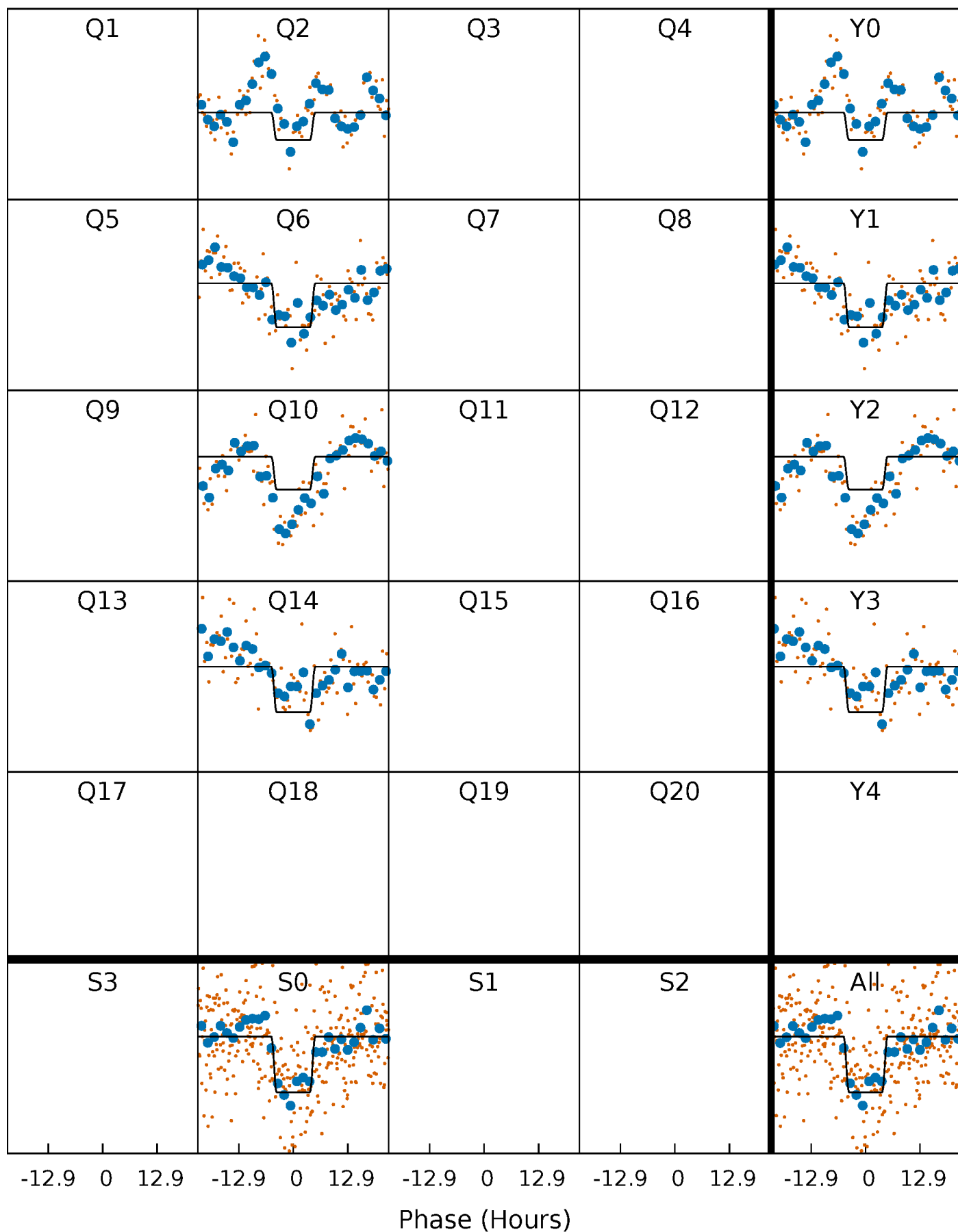
DV Quarter-Phased Transit Curves

TCE 008937786-01 P=370.123969 Days $T_0=232.850522$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

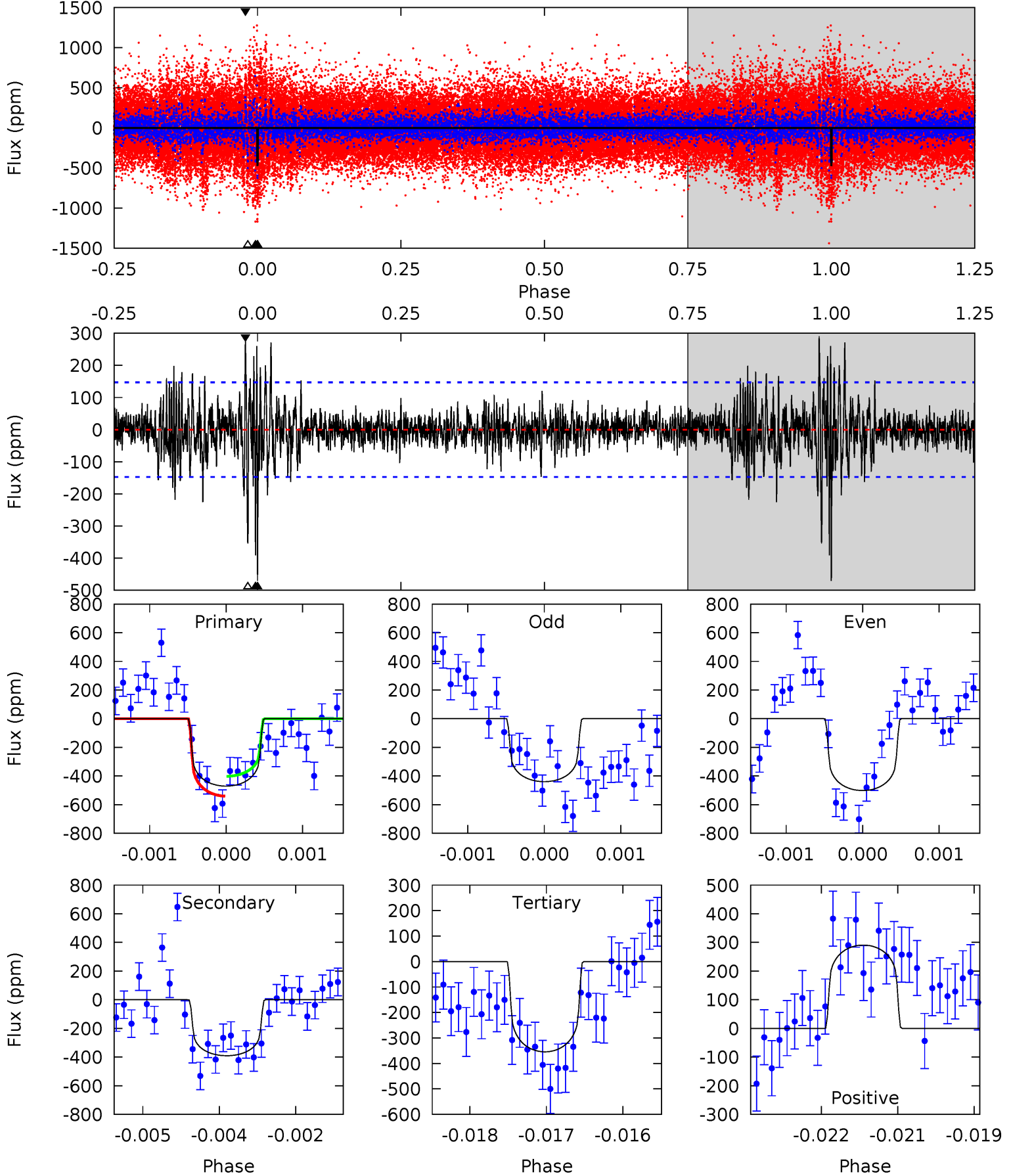
TCE 008937786-01 P=370.126695 Days $T_0=232.842577$ (BKJD)



DV Model-Shift Uniqueness Test

008937786-01, P = 370.123969 Days, E = 232.850522 Days

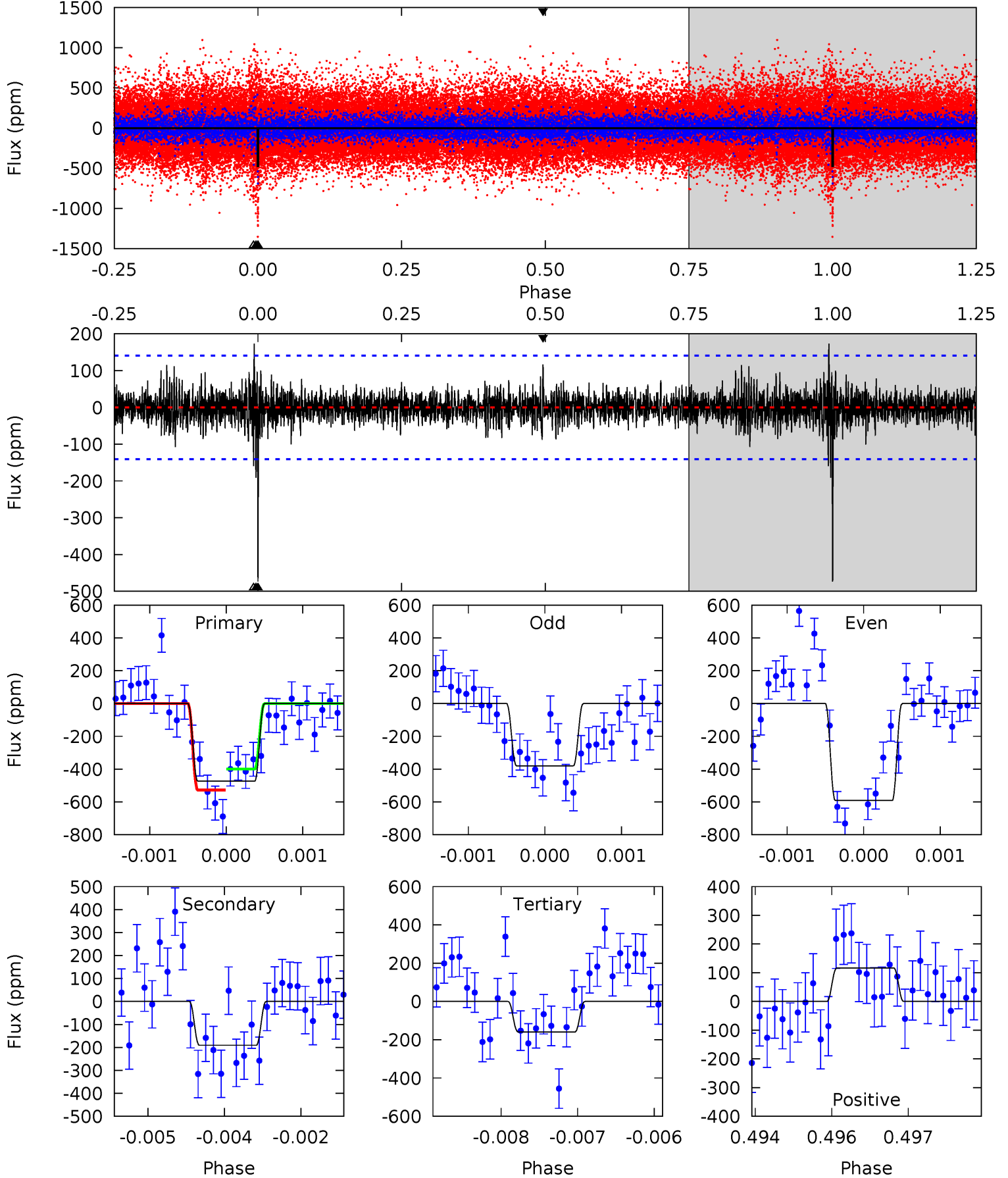
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.3	14.4	13.0	10.7	5.42	3.24	1.85	4.28	6.63	1.34	3.68	1.14	1.01	0.38	2.54



Alt Model-Shift Uniqueness Test

008937786-01, P = 370.126695 Days, E = 232.842577 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.2	7.36	6.14	4.49	5.42	3.24	1.06	12.1	13.8	1.22	2.87	4.11	1.27	0.27	2.45



Stellar Parameters For KIC 008937786

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6214^{+166}_{-222}	$4.435^{+0.070}_{-0.224}$	$-0.100^{+0.250}_{-0.300}$	$1.044^{+0.349}_{-0.116}$	$1.078^{+0.168}_{-0.137}$	$1.333^{+0.407}_{-0.728}$
	+3%/-4%	+2%/-5%	+250%/-300%	+33%/-11%	+16%/-13%	+31%/-55%
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 008937786-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-391 ± 27	$2.71^{+1.51}_{-1.41}$	391^{+31}_{-20}	5868^{+2966}_{-1106}	31297^{+97077}_{-18730}
Alt.	-191 ± 26	$2.83^{+1.43}_{-1.38}$	391^{+32}_{-22}	4861^{+1718}_{-714}	14236^{+37566}_{-8063}

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 $A_{obs} \gg 1.0$

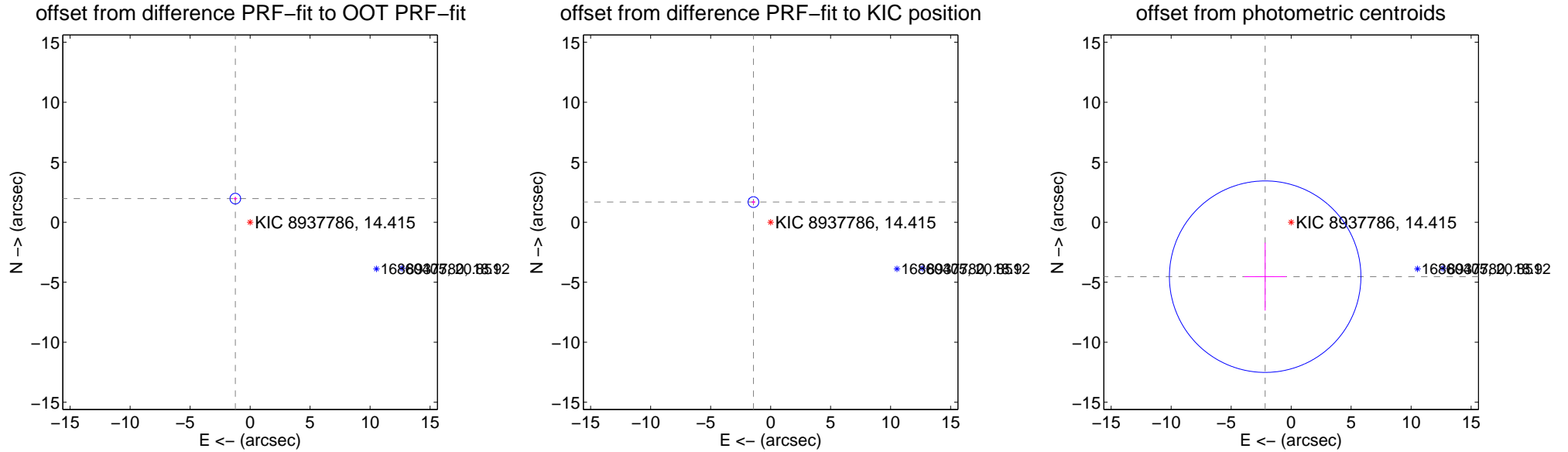
DV Centroid Data

Supplemental centroid analysis for 008937786-01. Kepler magnitude: 14.41. Transit SNR 8.20

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.35 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.320 ± 0.148	15.69	1.232 ± 0.153	1.966 ± 0.146
PRF-fit source offset from KIC position	2.206 ± 0.149	14.82	1.432 ± 0.153	1.678 ± 0.146
photometric centroid source offset	5.03 ± 2.66	1.89	2.16 ± 1.74	-4.54 ± 2.83

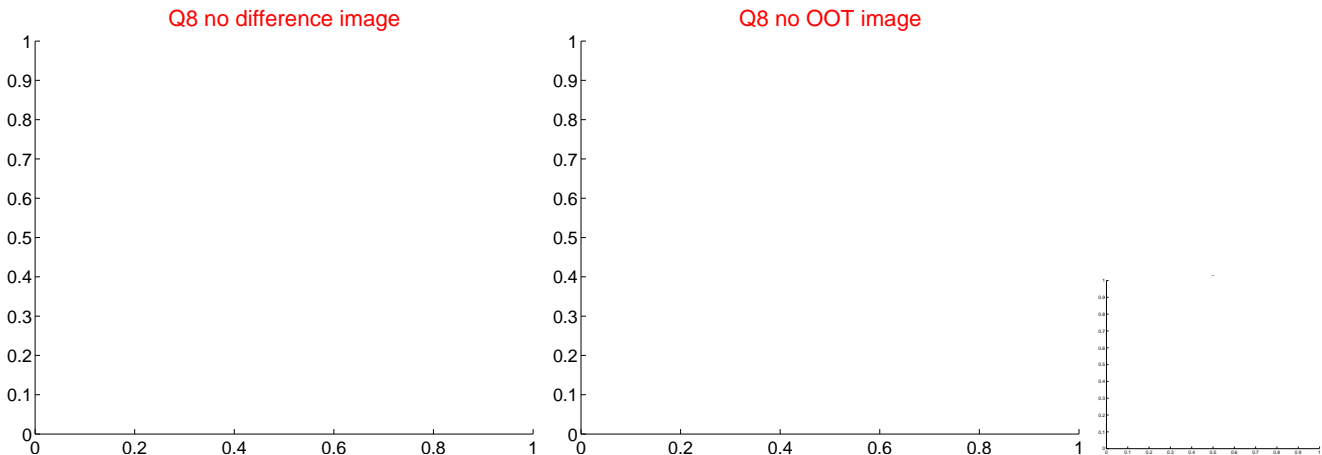
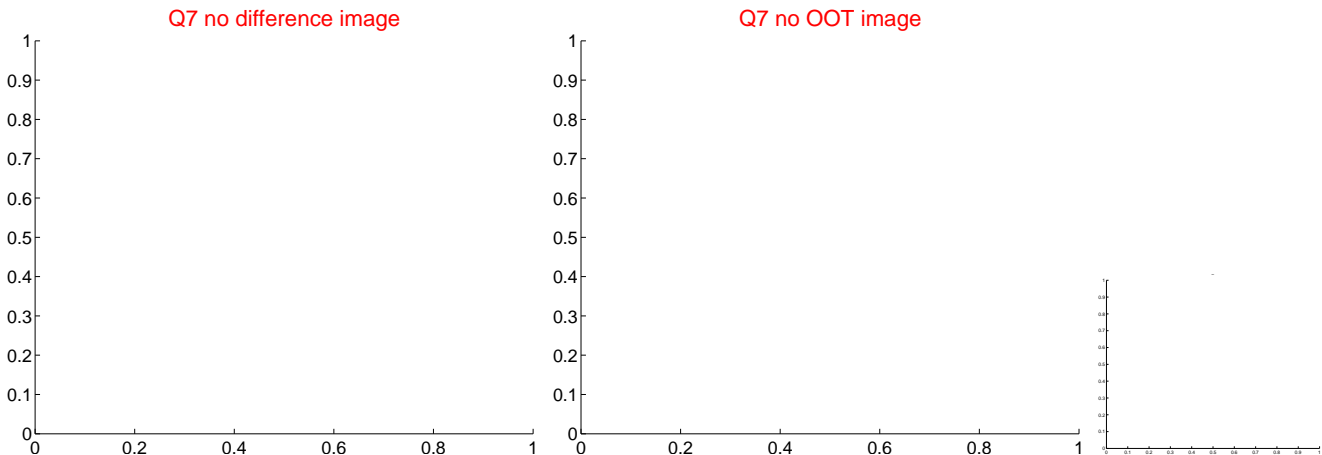
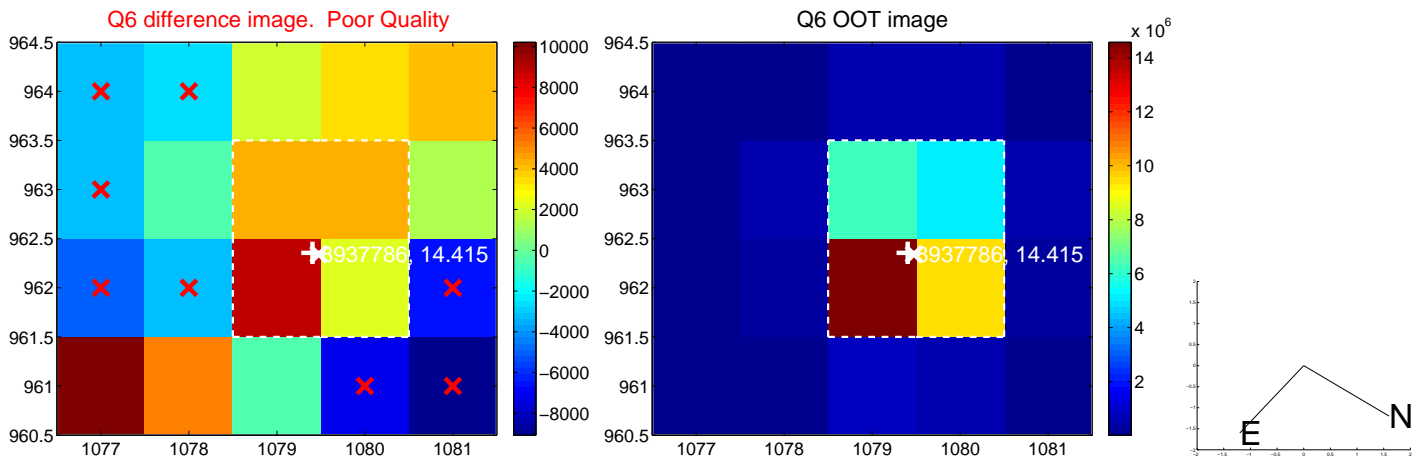
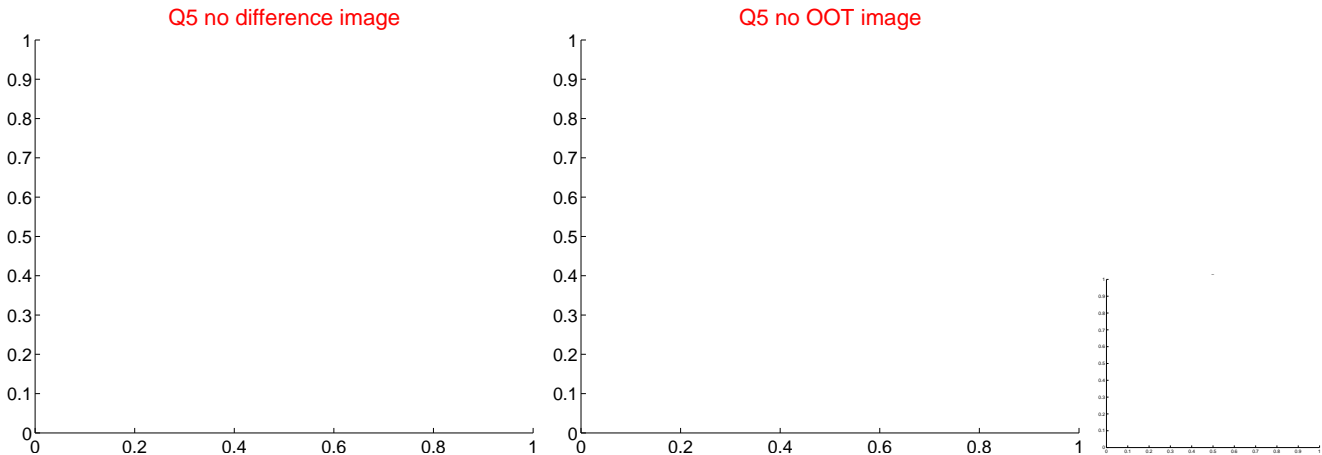


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

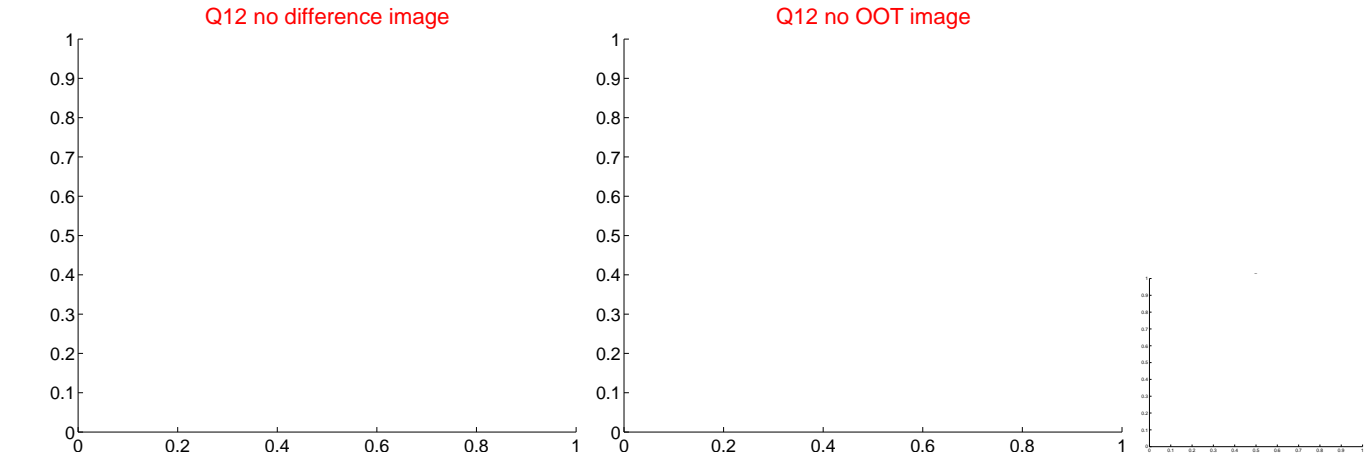
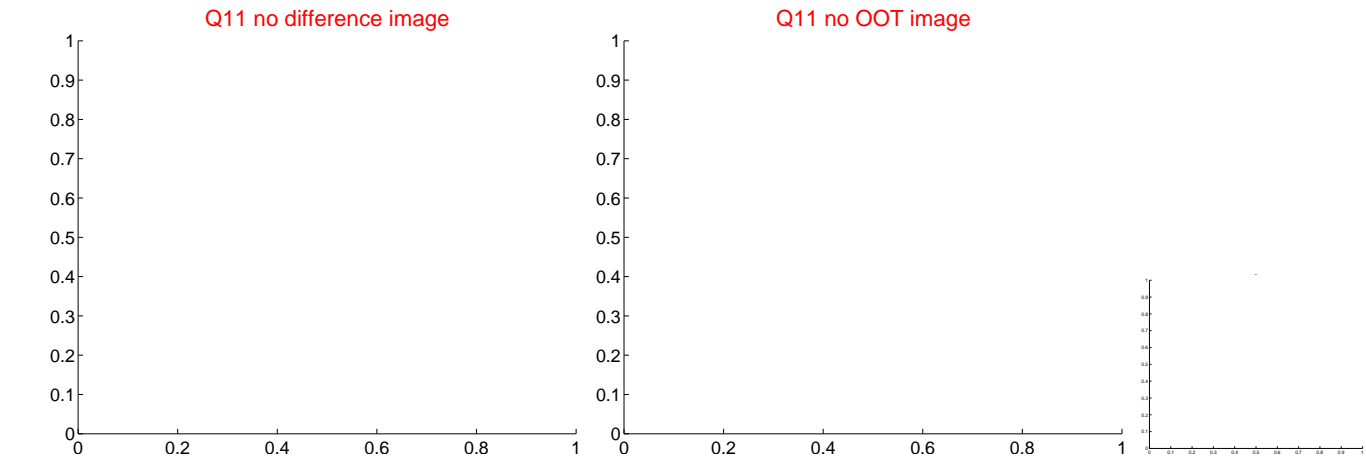
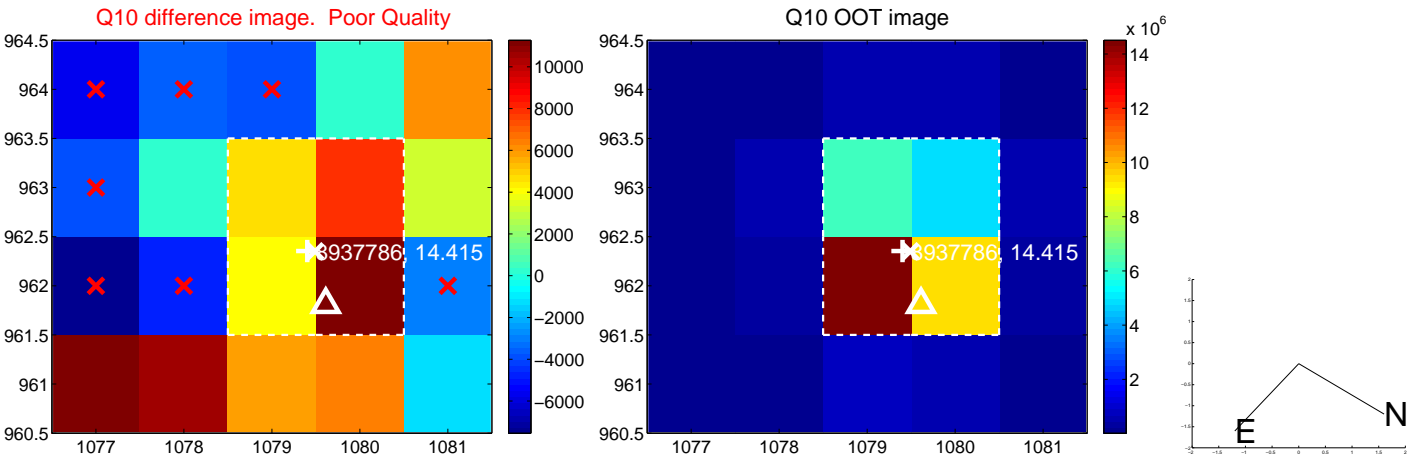
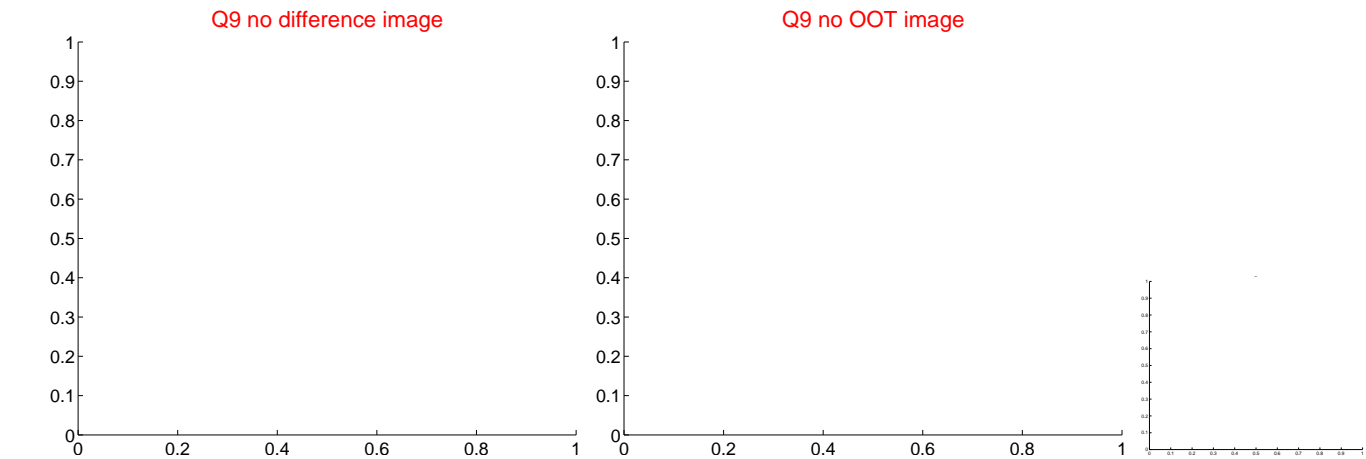
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



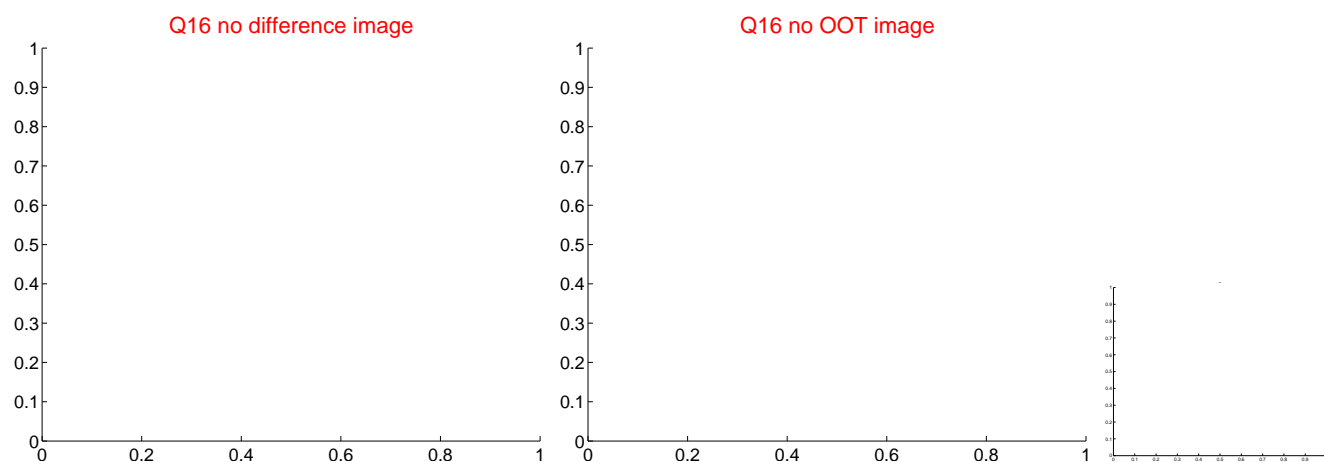
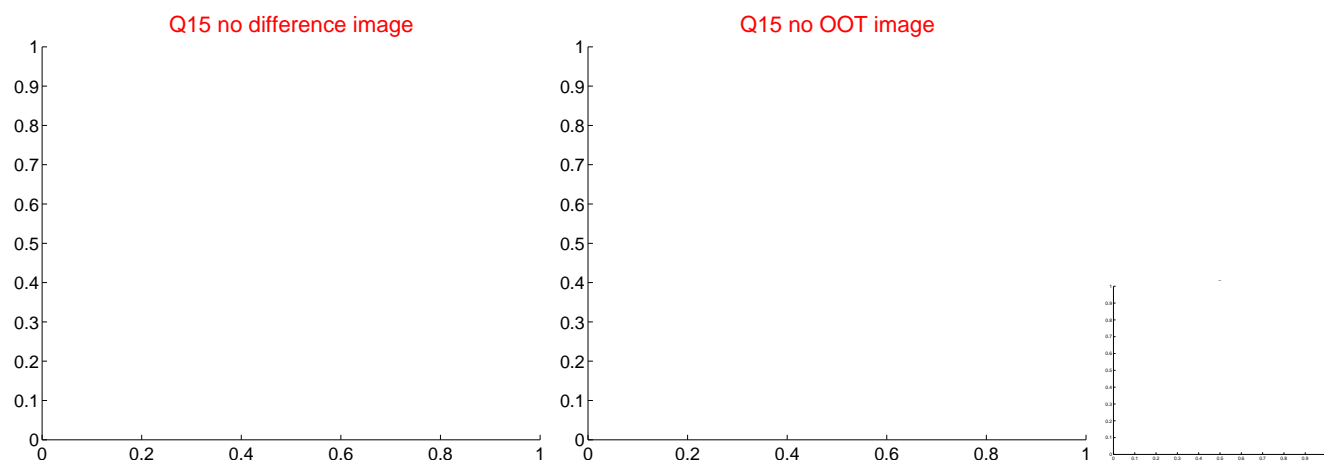
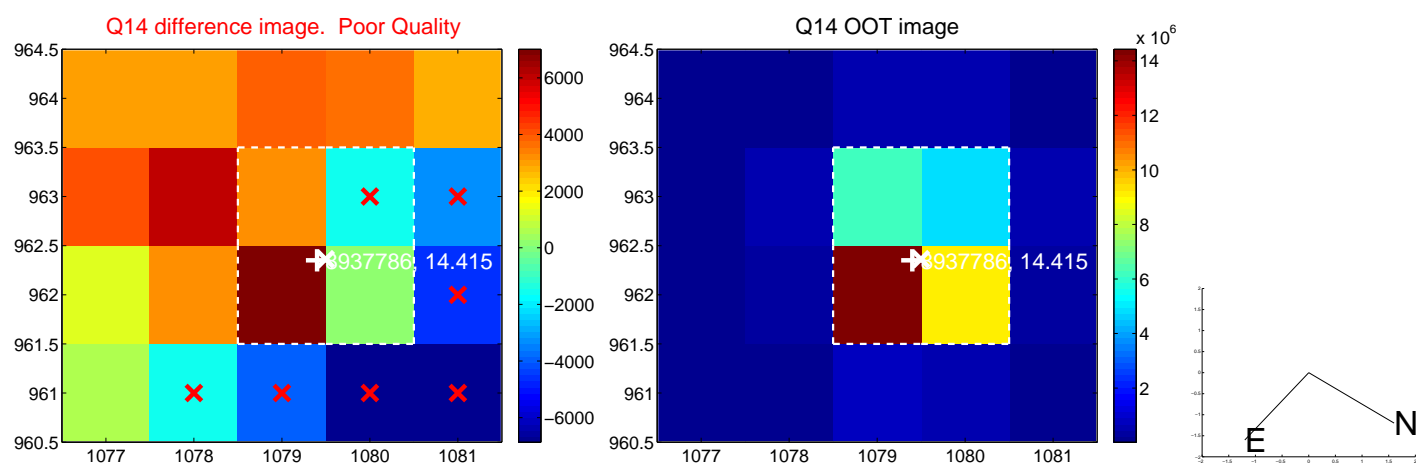
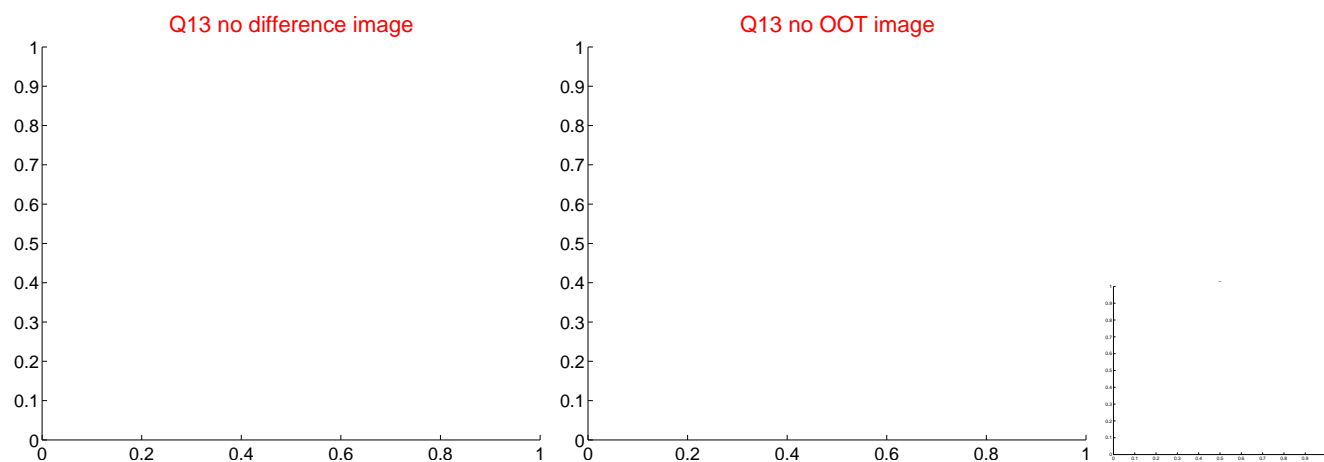
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



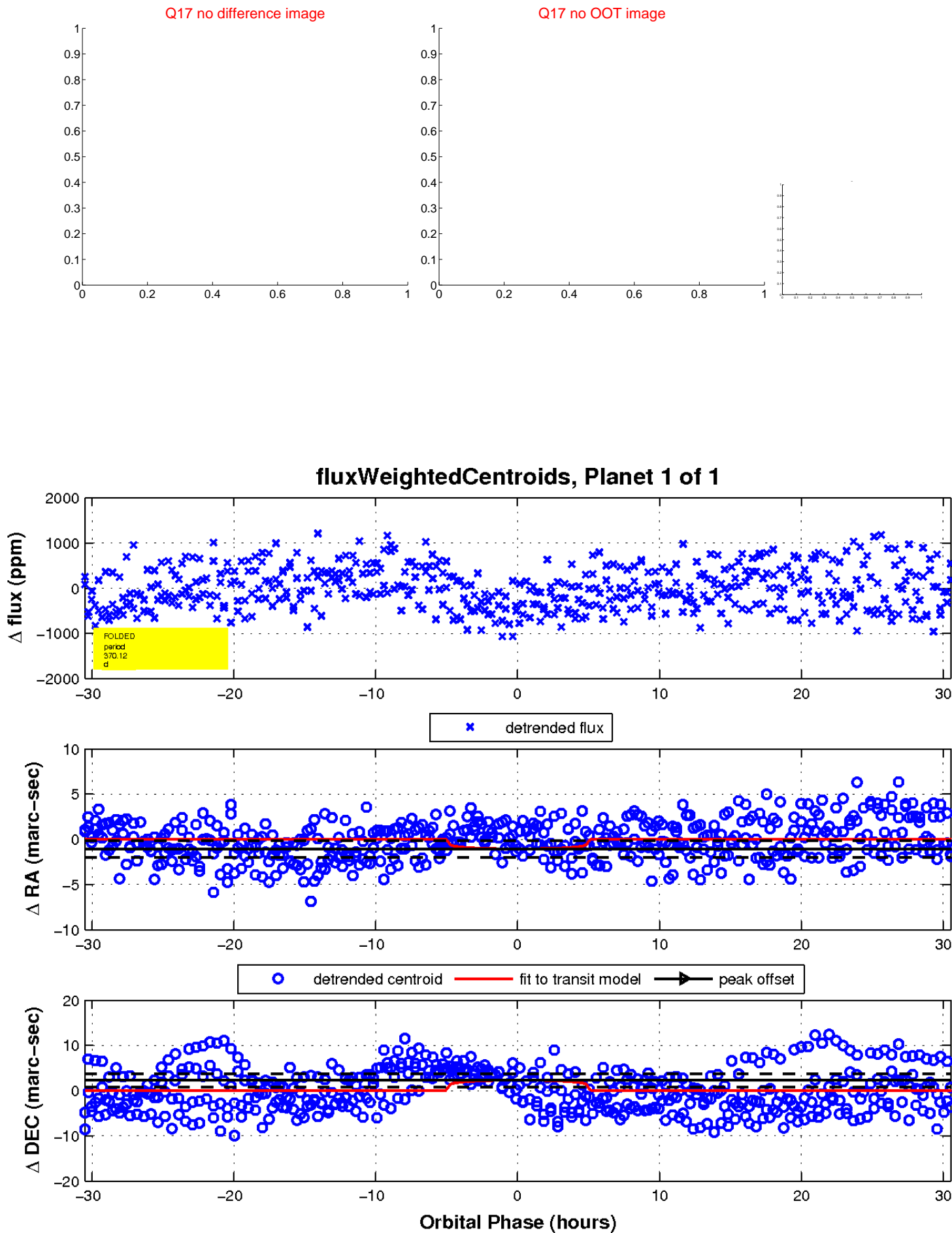
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UKIRT Image

Declination

