

KIC 007688090

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})
007688090-01	OBS	No	459.822576	174.127415	1072.0	10.359	7.8	7.3	0.89	5883	3.03	0.64

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007688090-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—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.

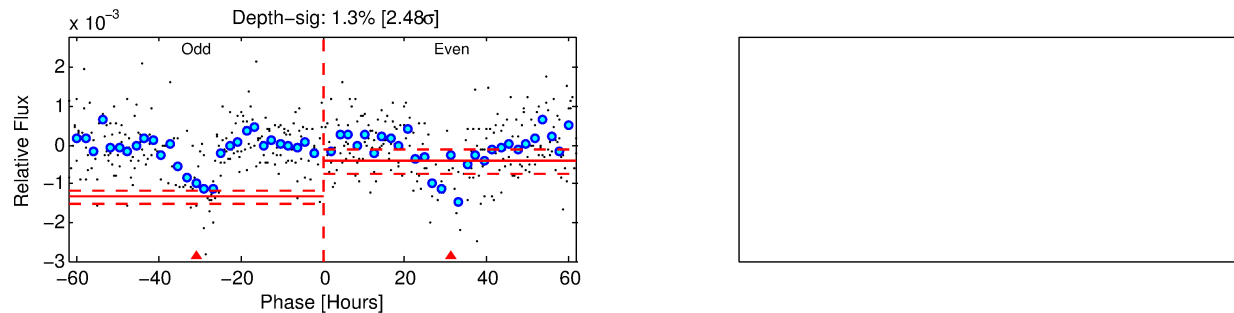
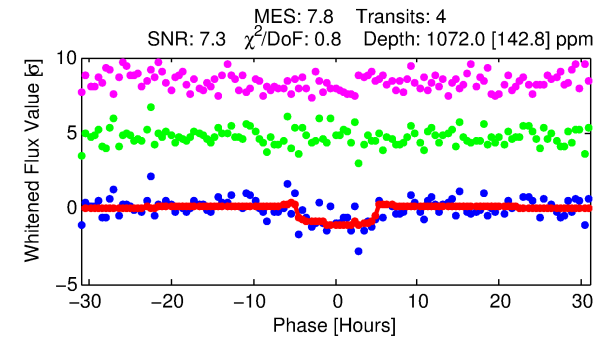
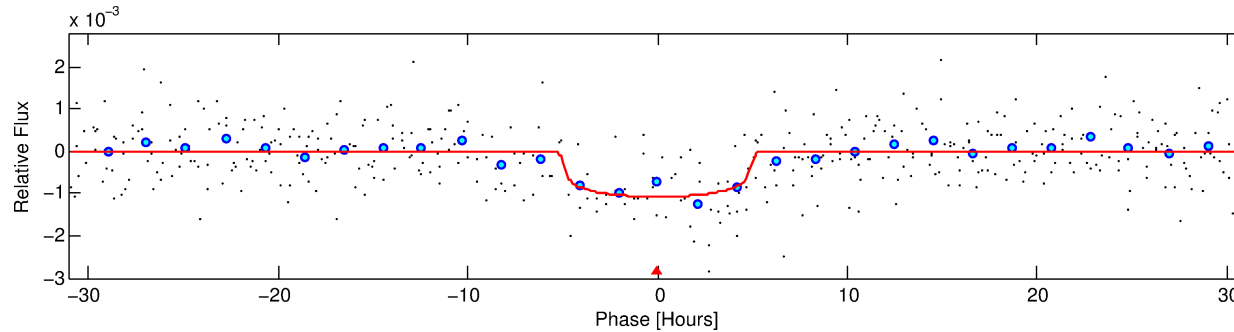
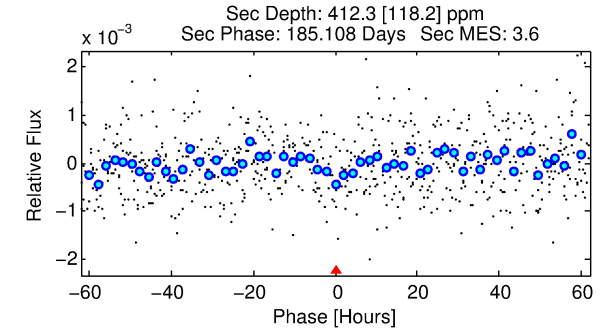
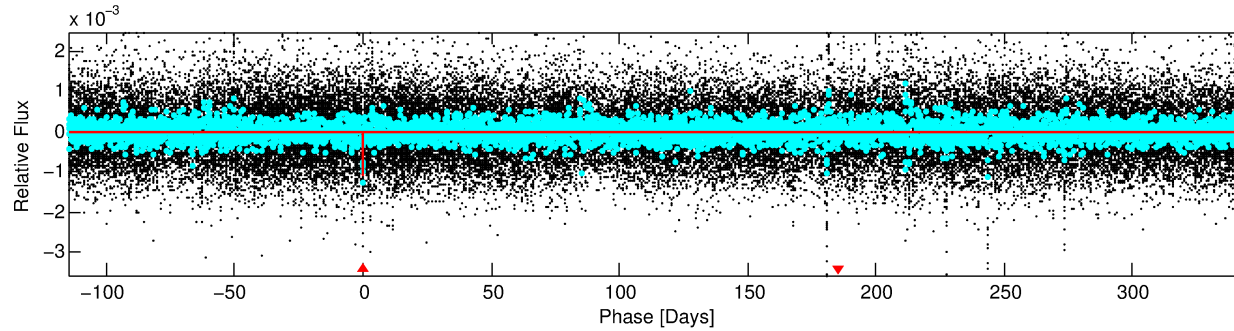
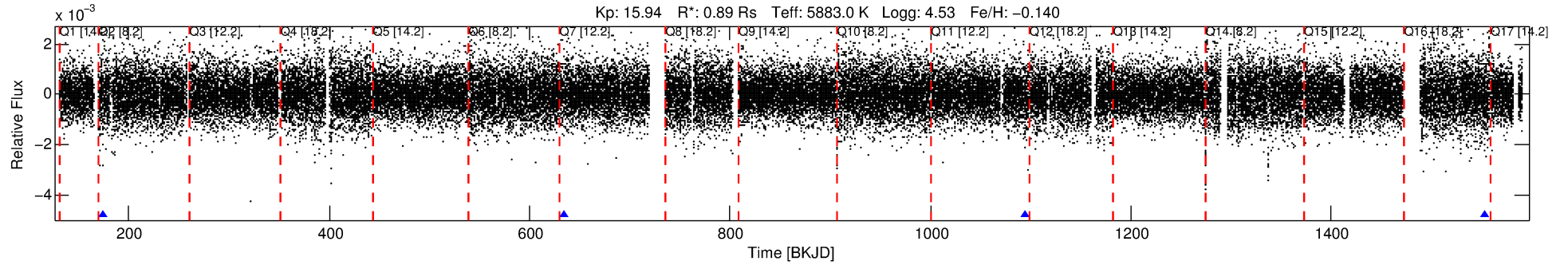
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007688090-01

No Significant Match Found

DV One-Page Summary

KIC: 7688090 Candidate: 1 of 1 Period: 459.823 d



DV Fit Results:

Period = 459.82258 [0.00829] d
Epoch = 174.1274 [0.0158] BKJD
Rp/R* = 0.0311 [0.0117]
a/R* = 290.65 [486.79]
b = 0.57 [1.98]
Seff = 0.63 [0.22]
Teq = 228 [20] K
Rp = 3.03 [1.39] Re
a = 1.1597 [0.2574] AU
Ag = 33263.77 [28946.46] [1.15σ]
Teffp = 4753 [972] K [4.65σ]

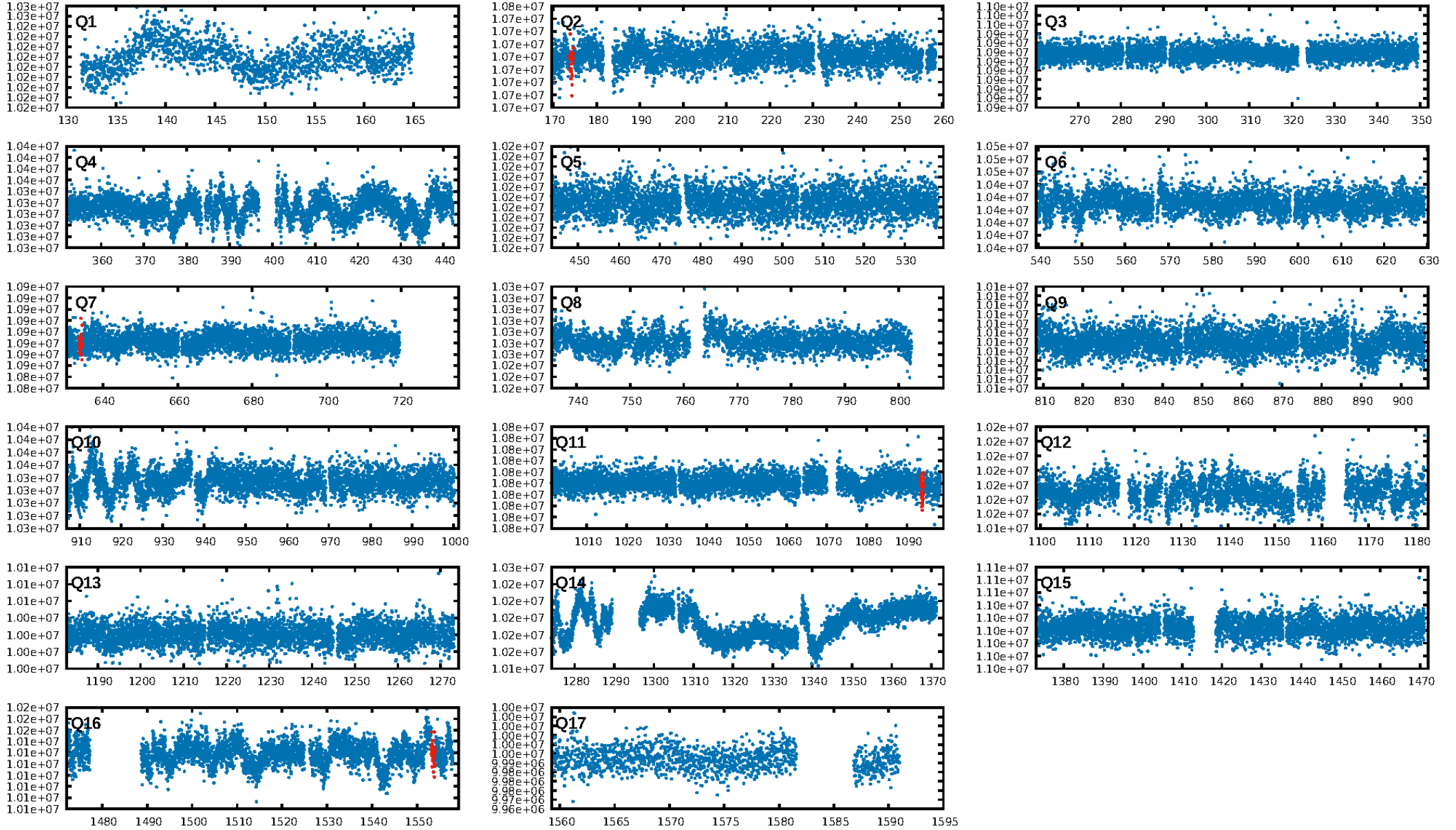
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 11.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.85e-10
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 2.293
Centroid-sig: 6.5%
Centroid-so: 3.536 arcsec [1.75σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [2/2]

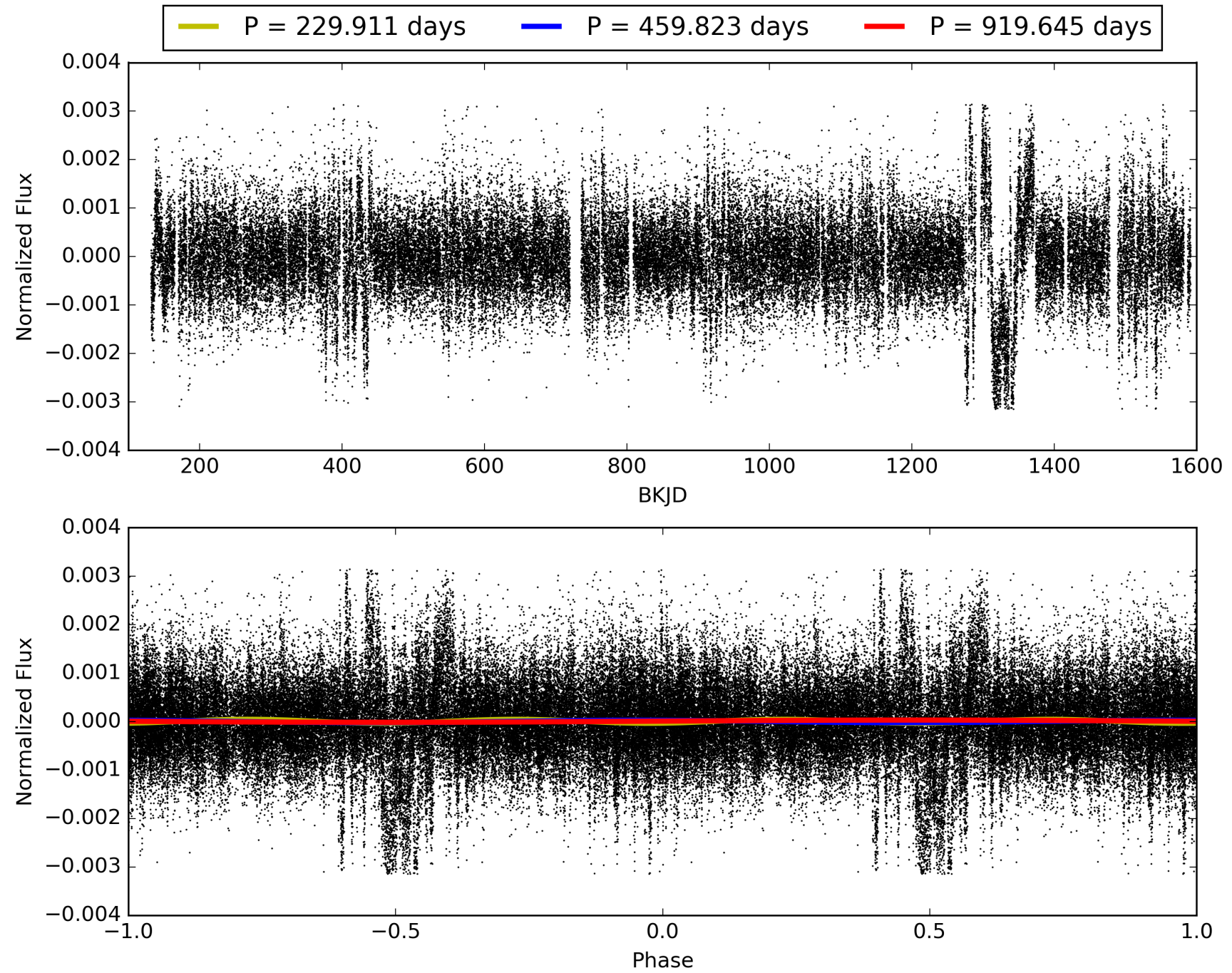
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:45:52 Z

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

TCE 007688090-01, PDC Light Curves

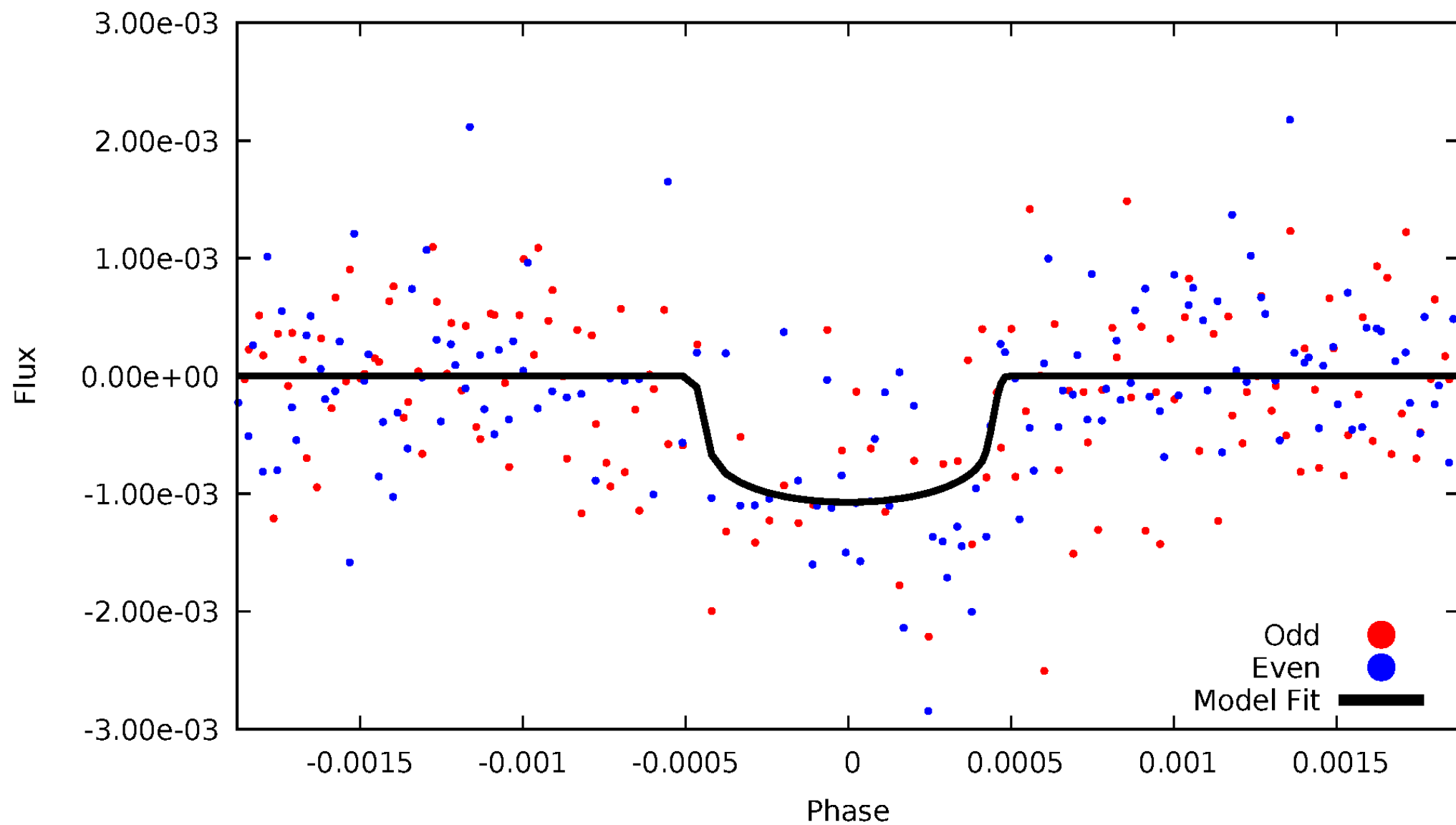


TCE 007688090-01



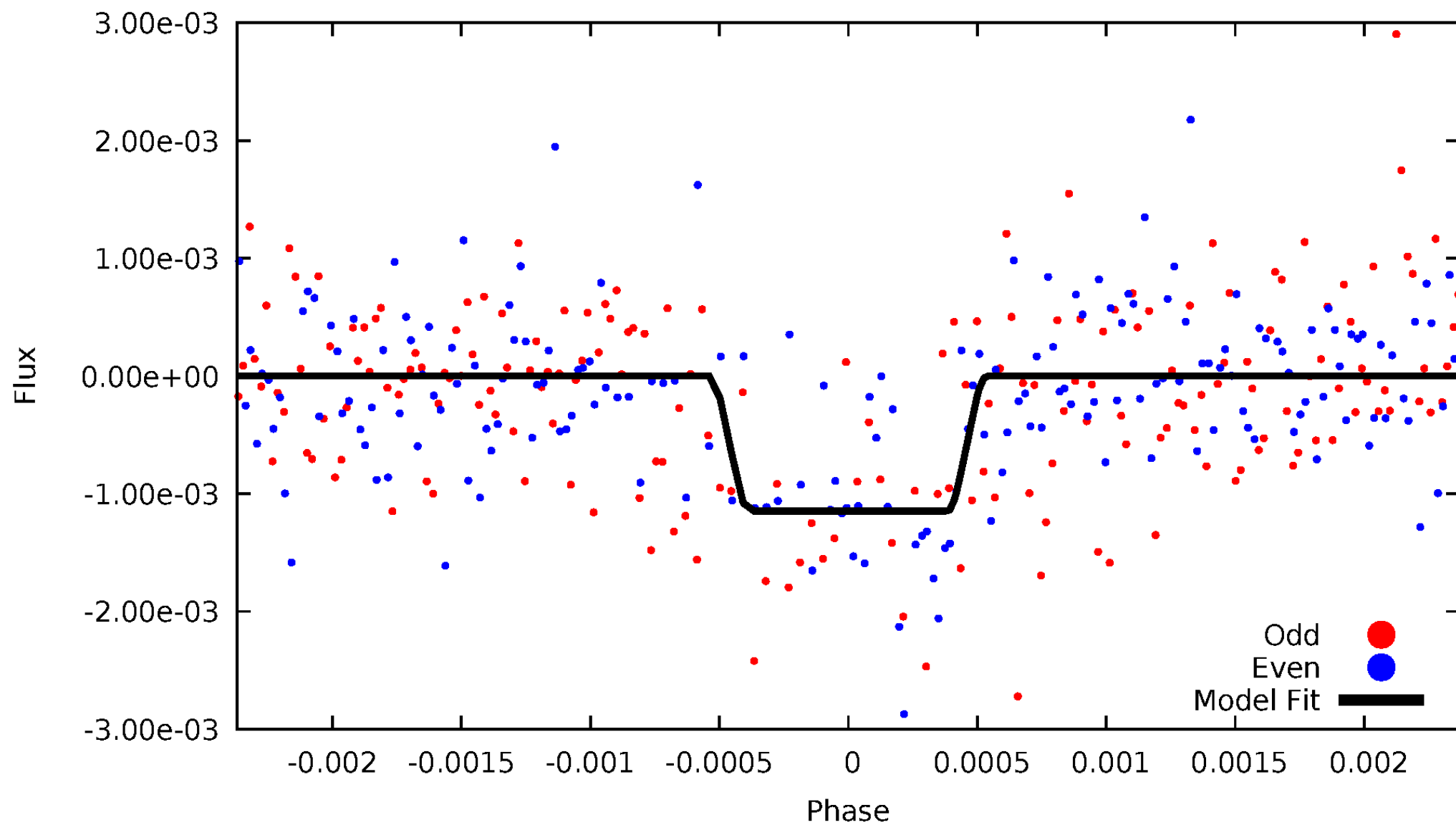
DV Odd/Even

TCE 007688090-01



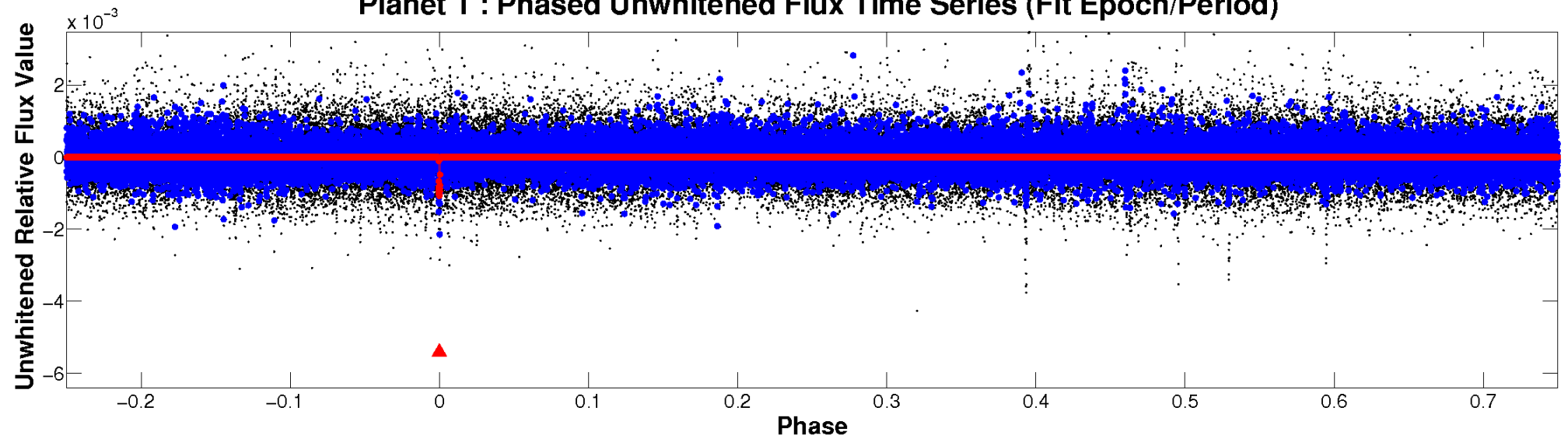
ALT Odd/Even

TCE 007688090-01

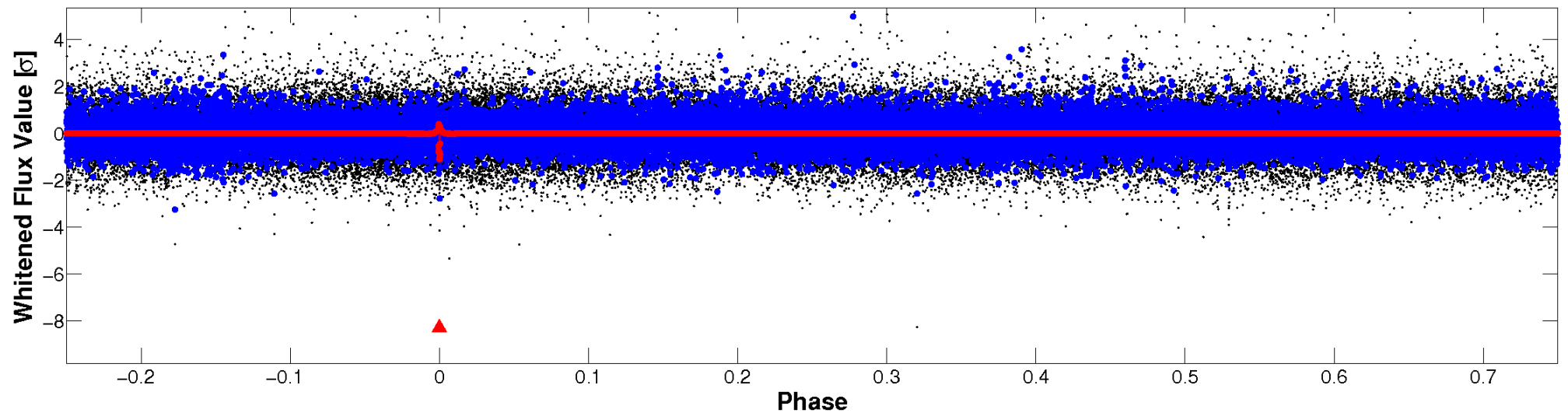


Non-Whitened Vs. Whitened Light Curve

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



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



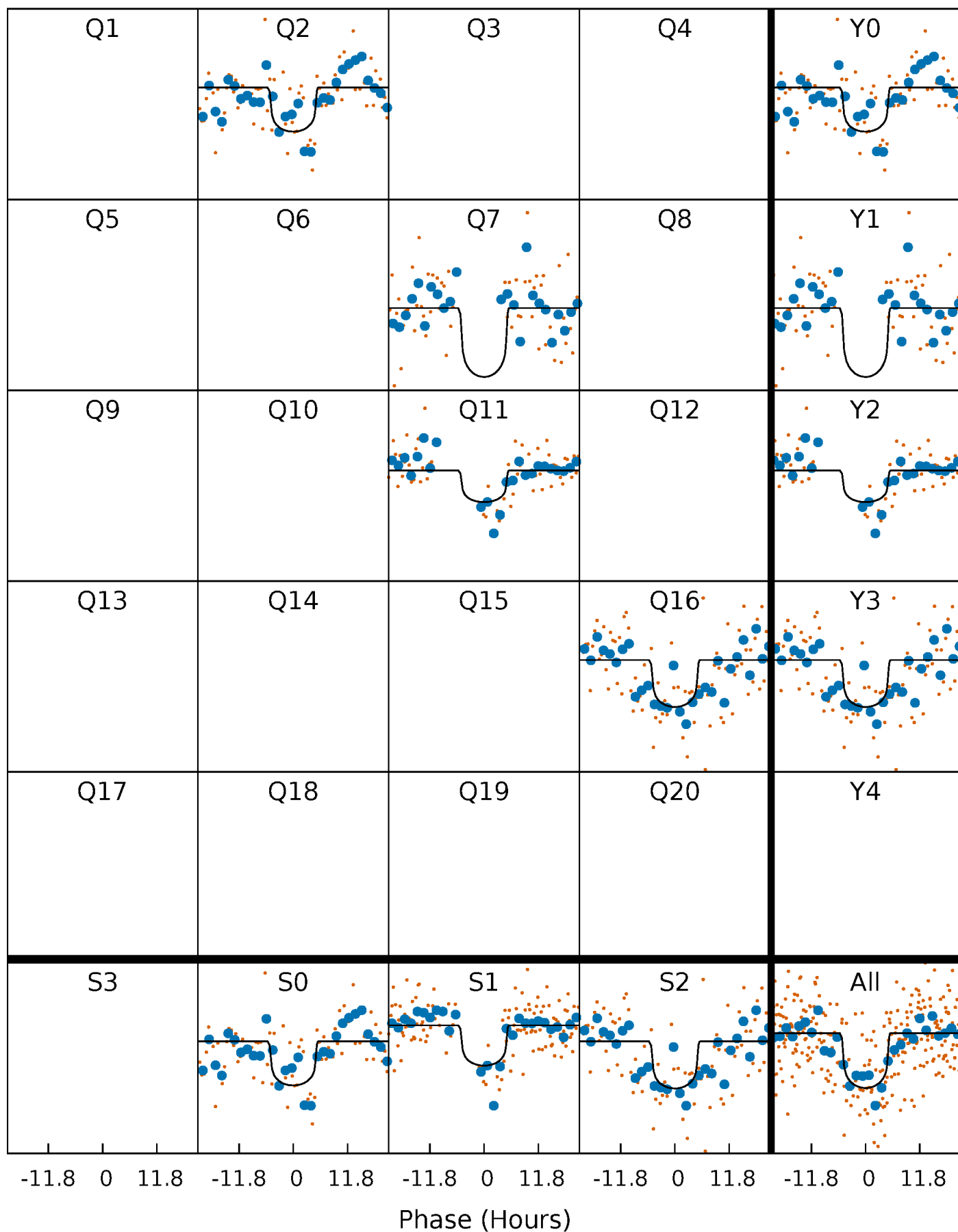
PDC Quarter-Phased Transit Curves

TCE 007688090-01 P=459.822576 Days $T_0=174.127415$ (BKJD)



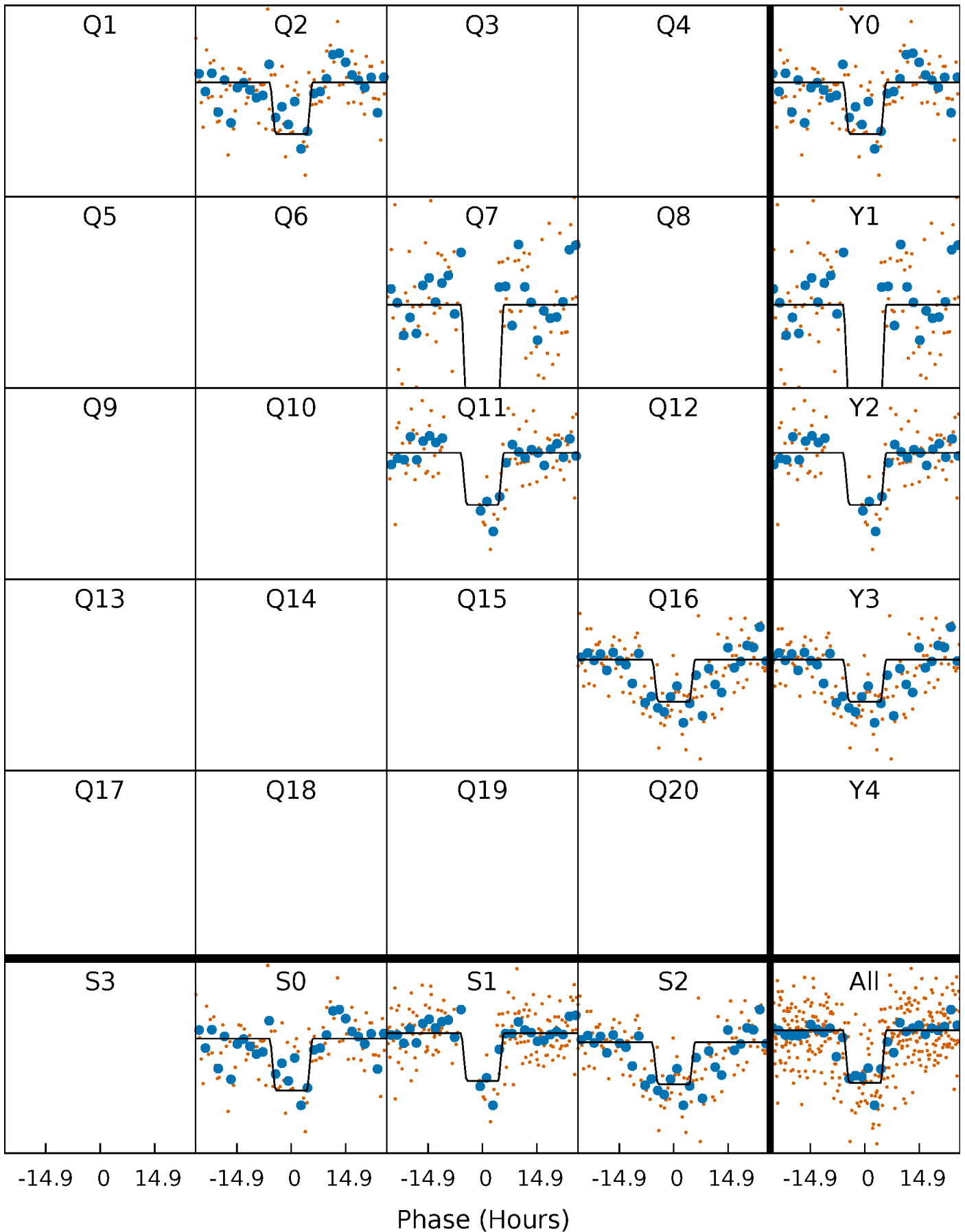
DV Quarter-Phased Transit Curves

TCE 007688090-01 P=459.822576 Days $T_0=174.127415$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

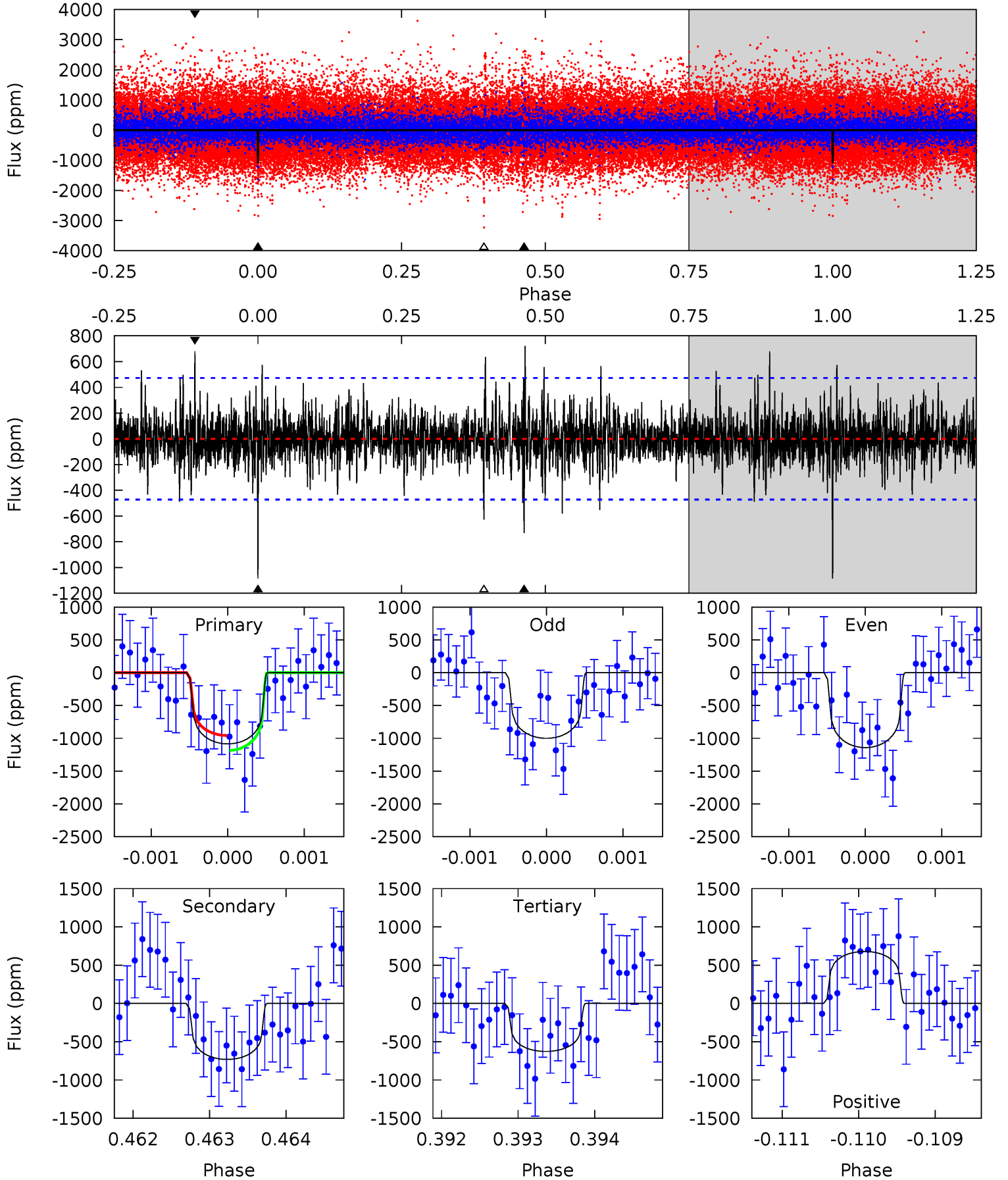
TCE 007688090-01 P=459.809590 Days $T_0=174.141082$ (BKJD)



DV Model-Shift Uniqueness Test

007688090-01, P = 459.822576 Days, E = 174.127415 Days

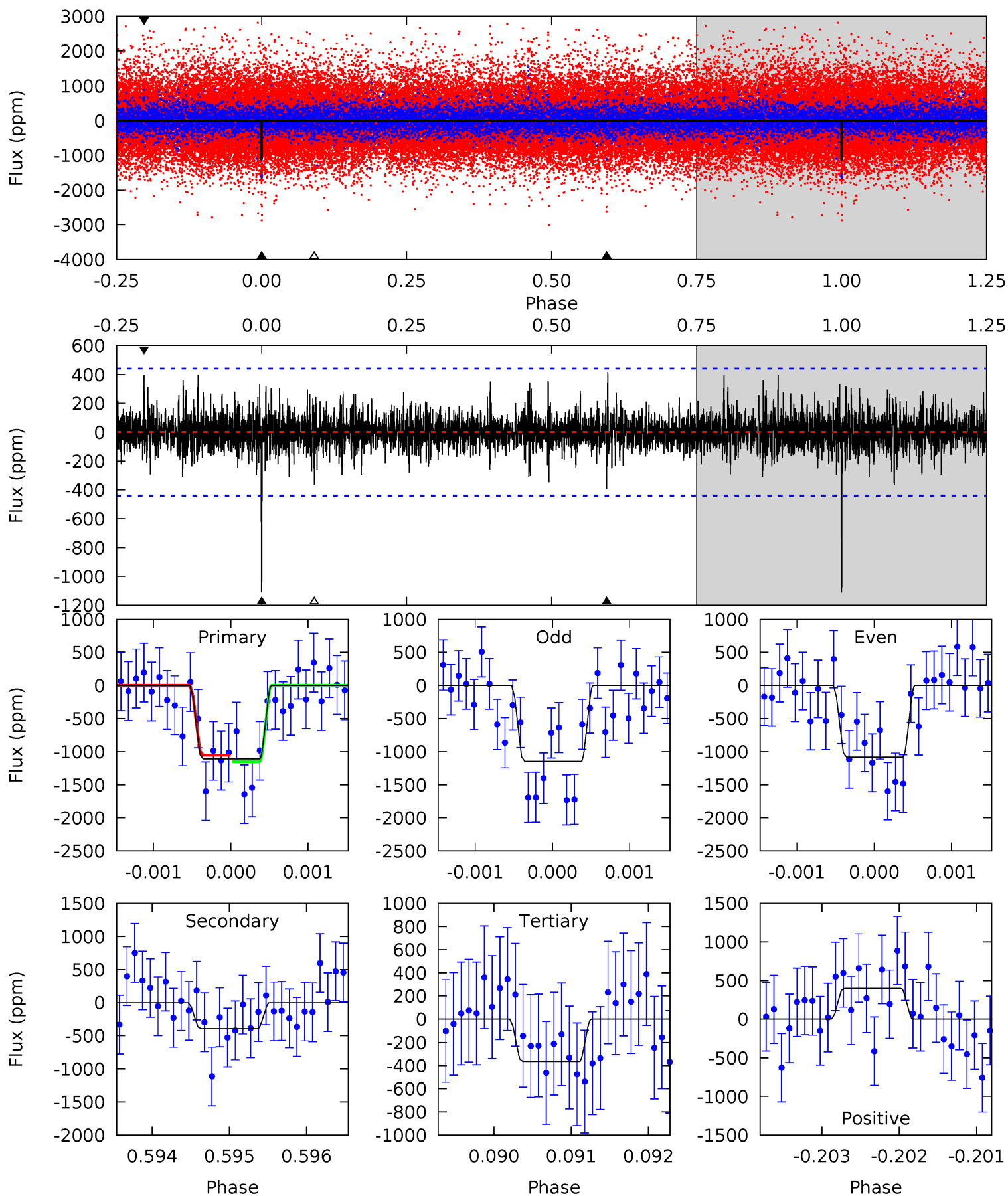
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.5	8.45	7.25	7.85	5.46	3.31	1.58	5.30	4.70	1.20	0.60	0.81	0.76	0.40	1.30



Alt Model-Shift Uniqueness Test

007688090-01, $P = 459.809590$ Days, $E = 174.141082$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.7	4.86	4.52	4.91	5.45	3.28	1.10	9.22	8.82	0.34	-0.05	0.41	0.73	0.27	0.59



Stellar Parameters For KIC 007688090

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5883^{+158}_{-194}	$4.530^{+0.042}_{-0.178}$	$-0.140^{+0.300}_{-0.300}$	$0.892^{+0.234}_{-0.073}$	$0.985^{+0.108}_{-0.120}$	$1.952^{+0.442}_{-0.941}$
	+3%/-3%	+1%/-4%	+214%/-214%	+26%/-8%	+11%/-12%	+23%/-48%
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 007688090-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-731 ± 87	$3.24^{+1.19}_{-1.11}$	324^{+19}_{-14}	5440^{+1330}_{-683}	51741^{+68037}_{-25590}
Alt.	-393 ± 81	$3.48^{+1.20}_{-1.20}$	324^{+18}_{-15}	4639^{+839}_{-538}	24015^{+30415}_{-11699}

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

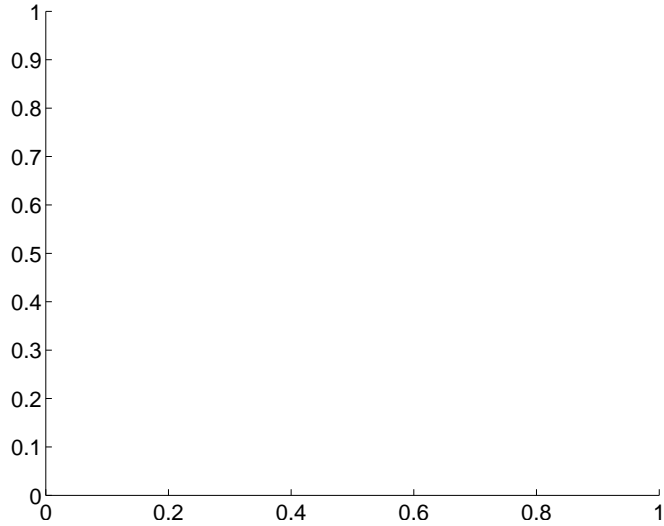
Supplemental centroid analysis for 007688090-01. Kepler magnitude: 15.94. Transit SNR 7.25

There are 0 quarters with good PRF difference image offsets

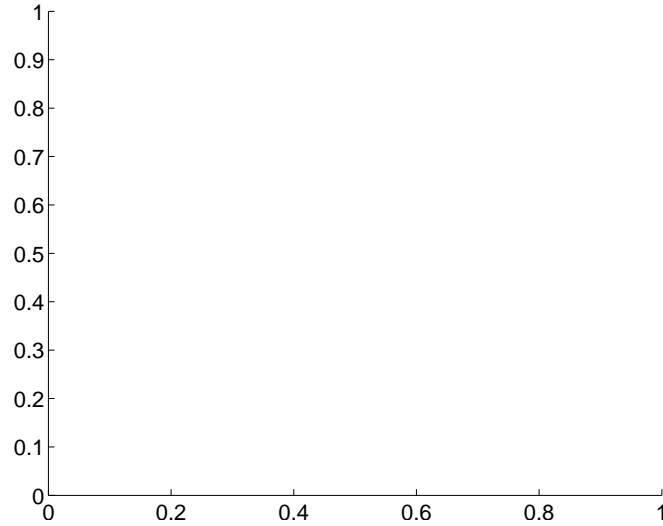
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	3.54 ± 2.02	1.75	-3.41 ± 2.04	-0.92 ± 1.68

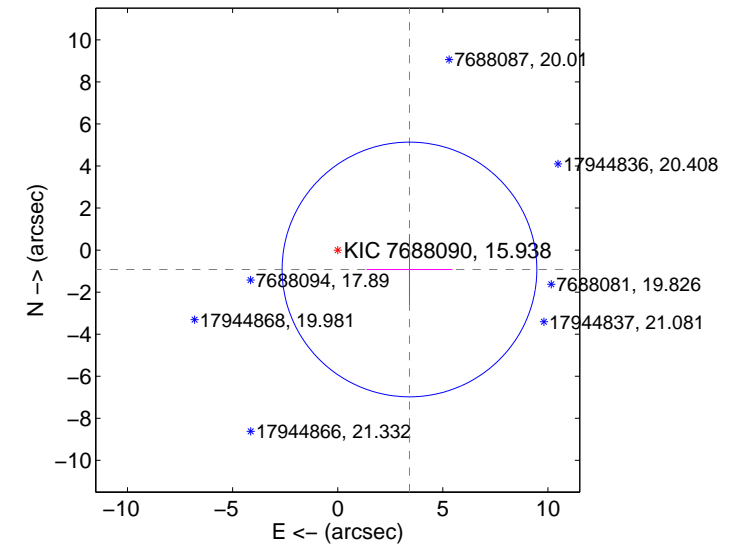
There is no PRF-fit offset from OOT-fit



There is no PRF-fit offset from KIC

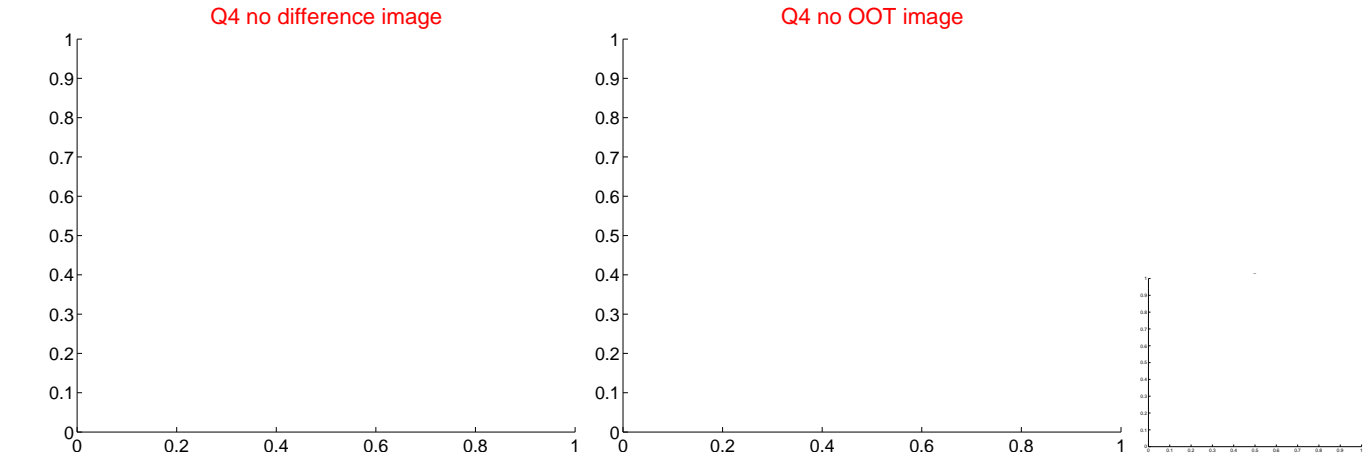
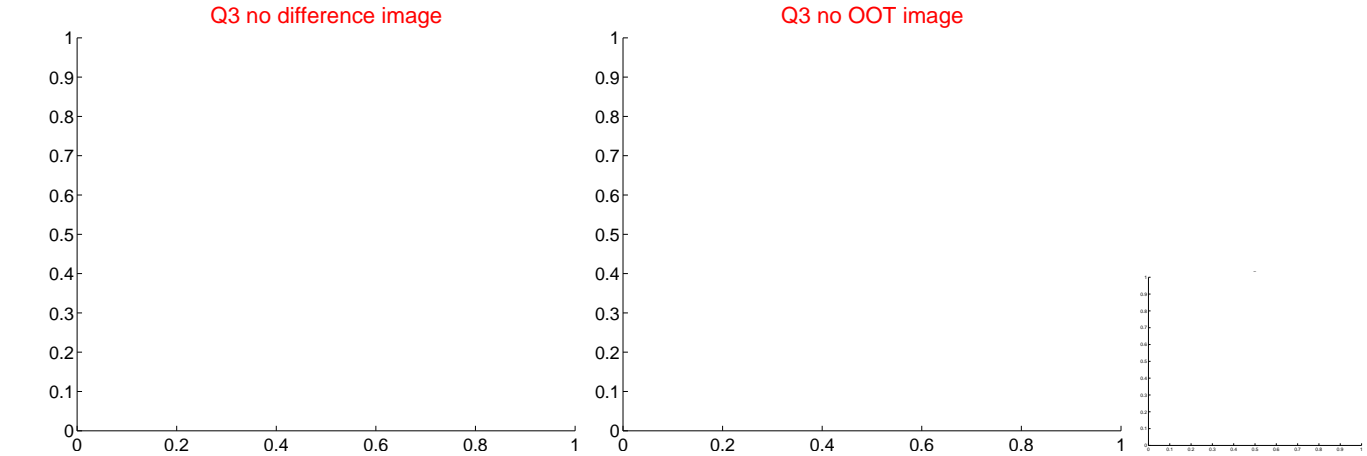
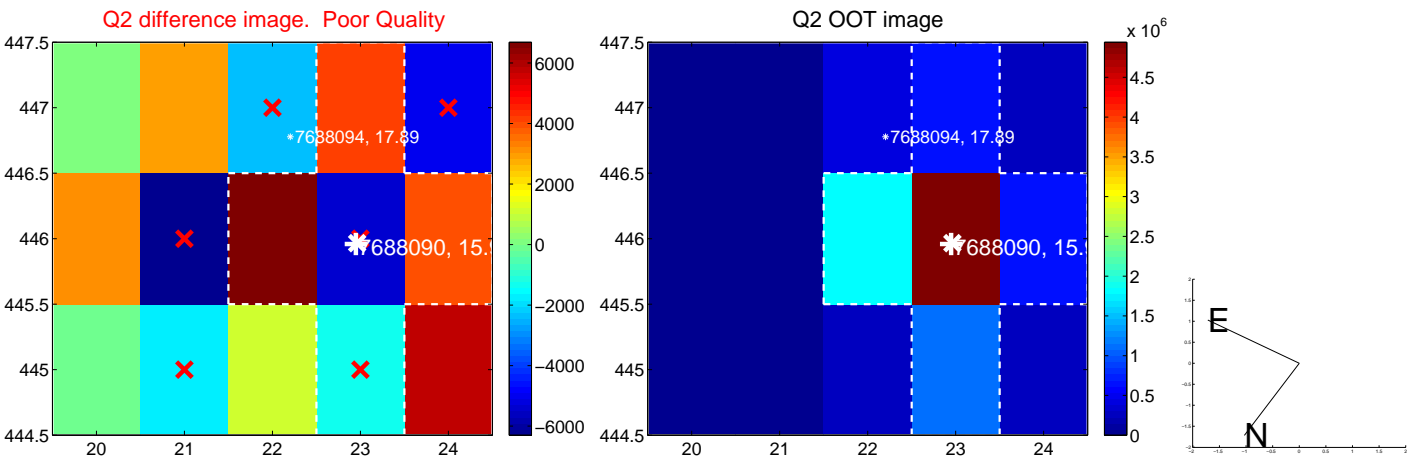
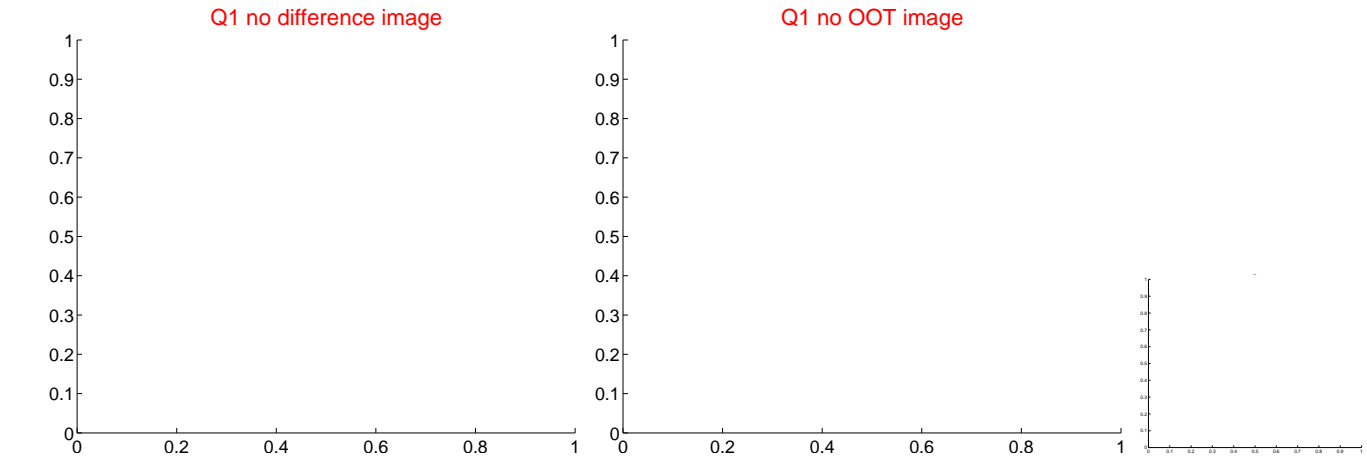


offset from photometric centroids

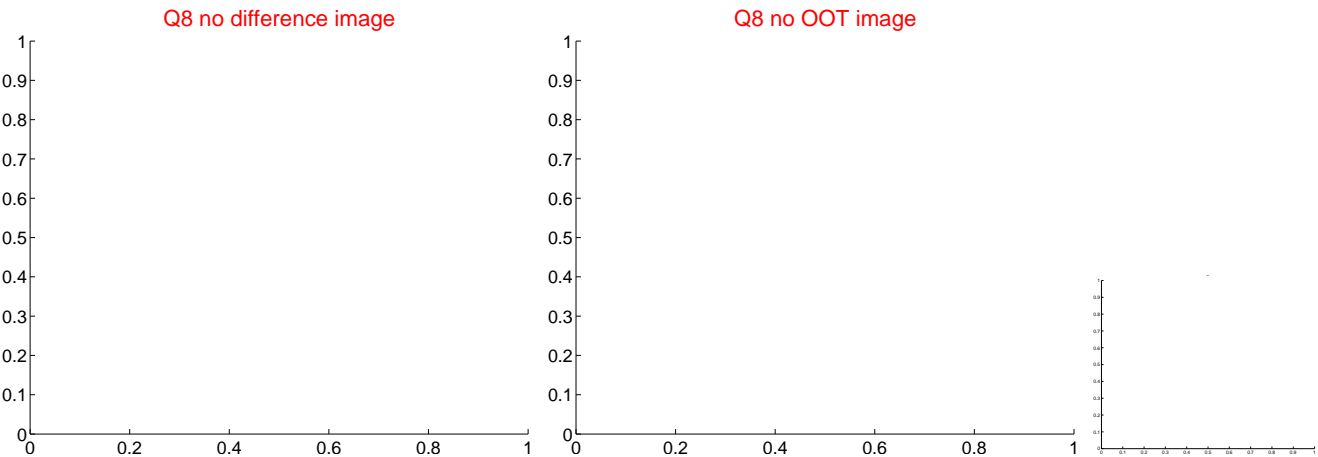
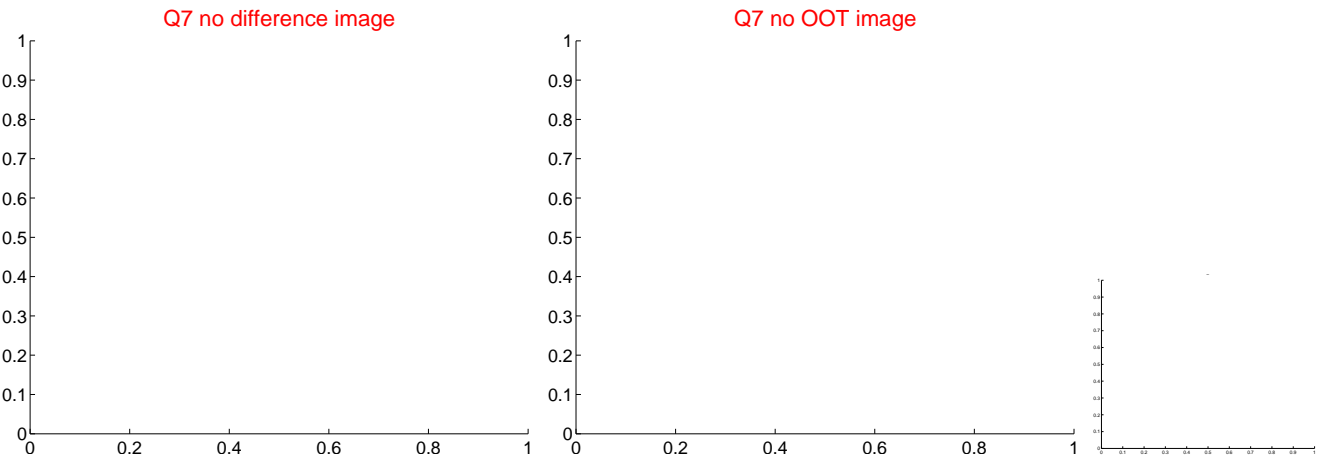
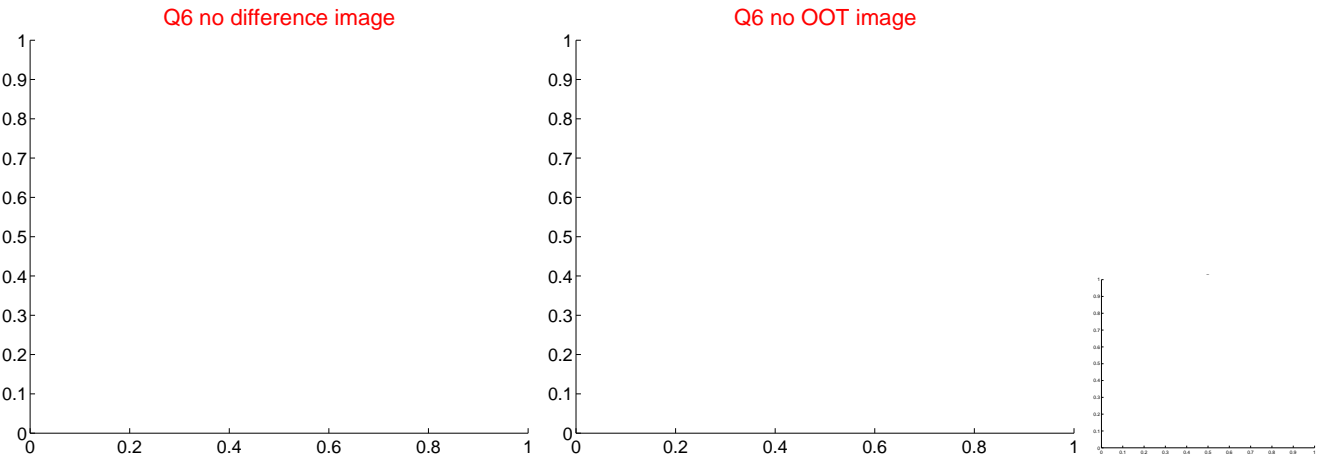
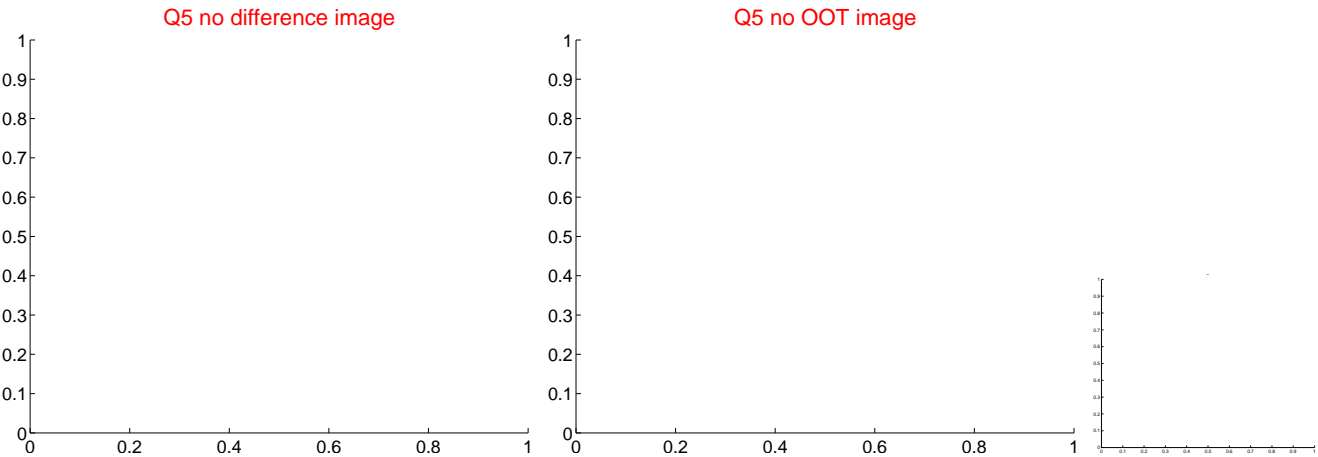


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . 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 ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



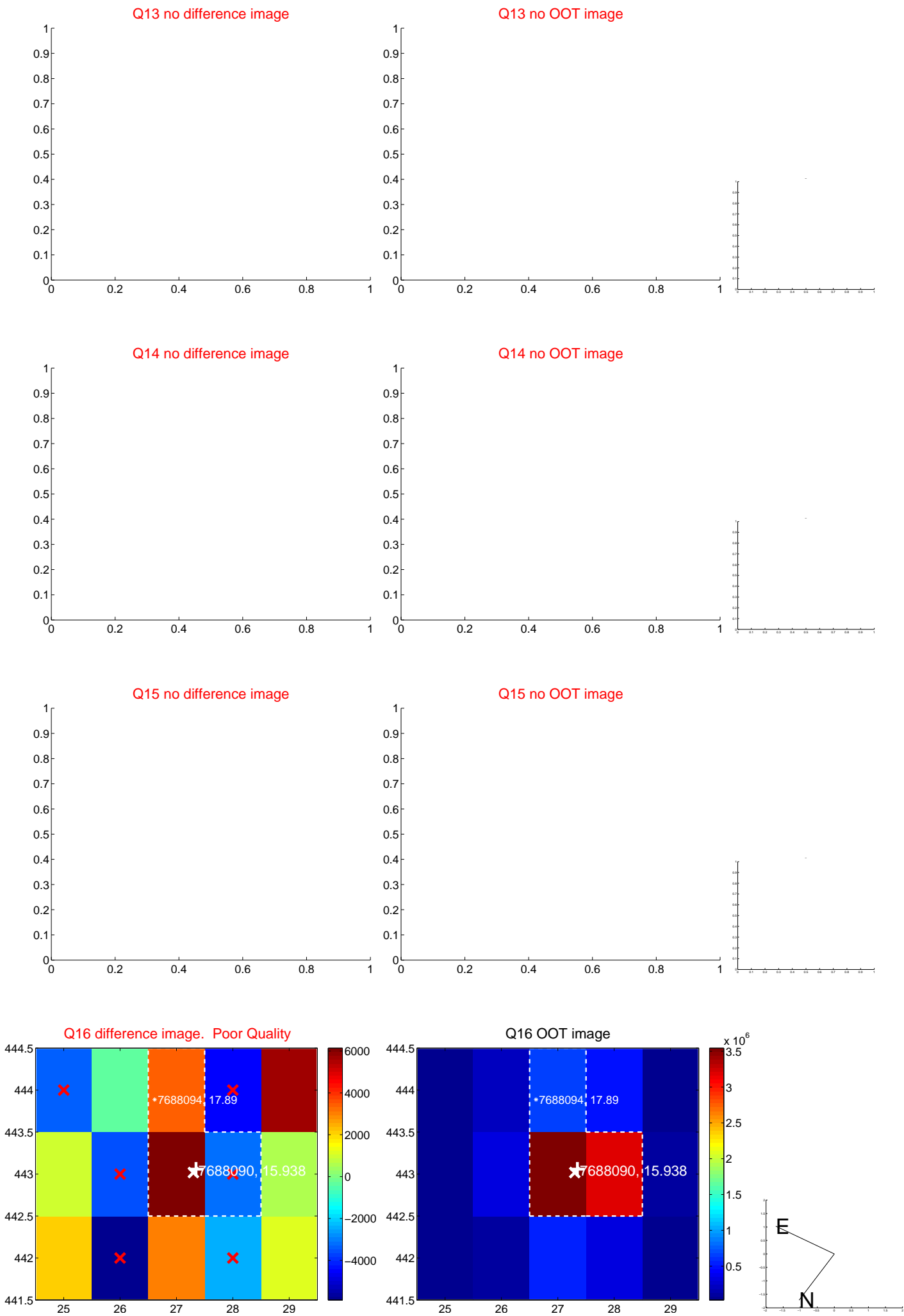
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



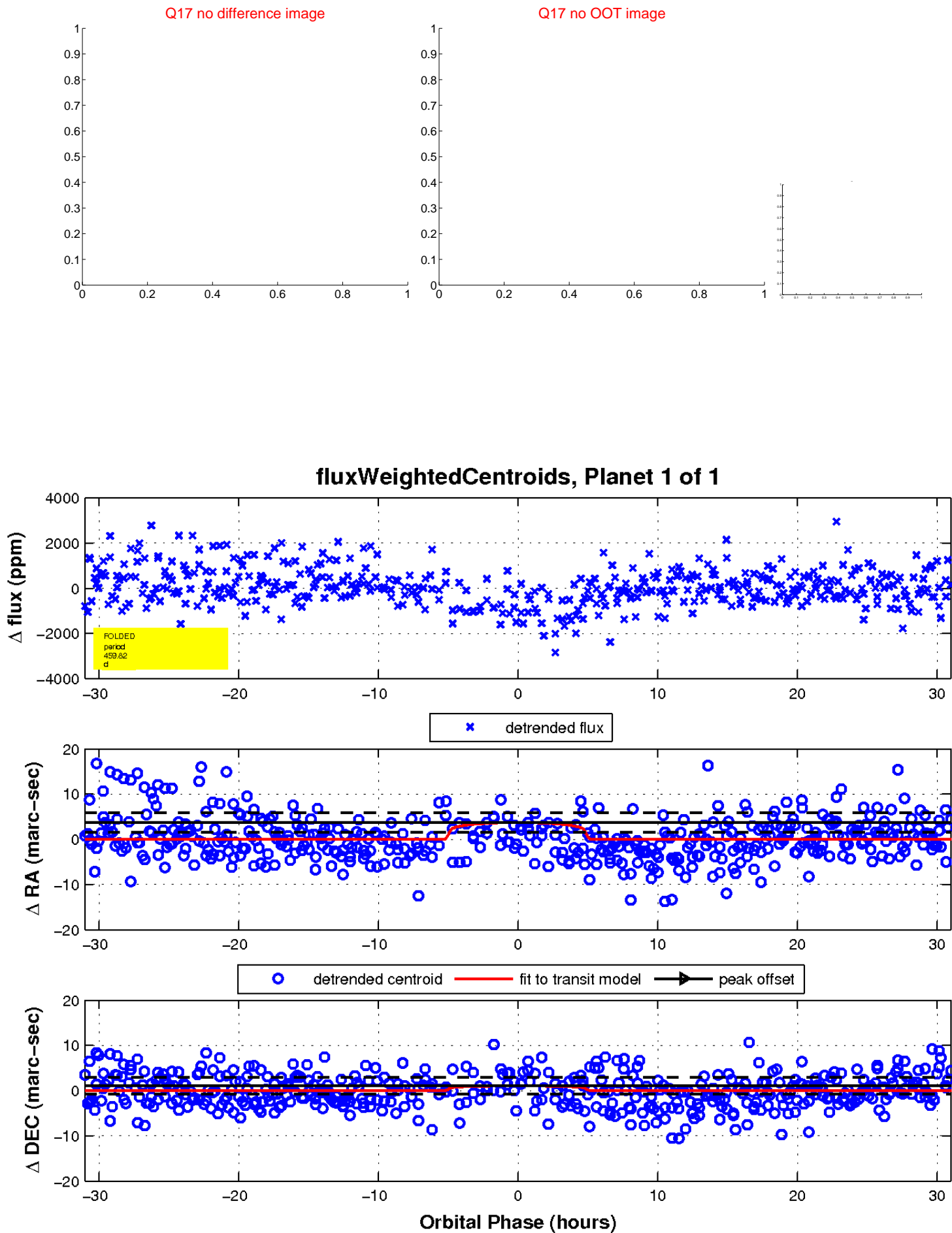
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



UKIRT Image

Declination

