

KIC 002708499

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})
002708499-01	OBS	No	484.791816	215.663695	388.3	4.889	7.4	6.9	1.51	5495	3.31	1.40

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002708499-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—MOD_NONUNIQ_ALT—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.

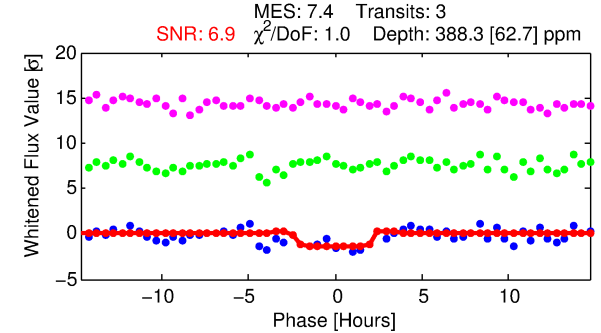
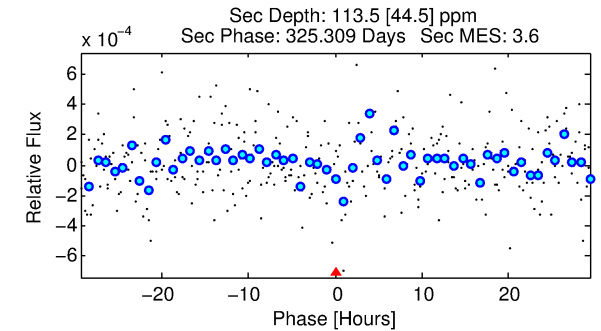
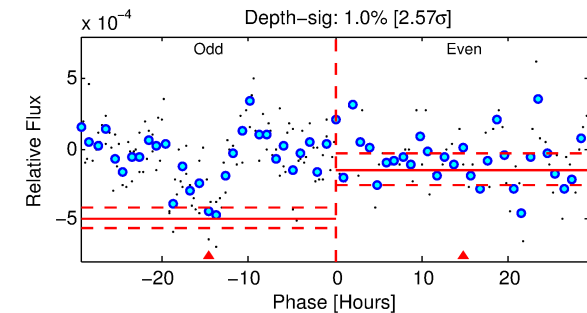
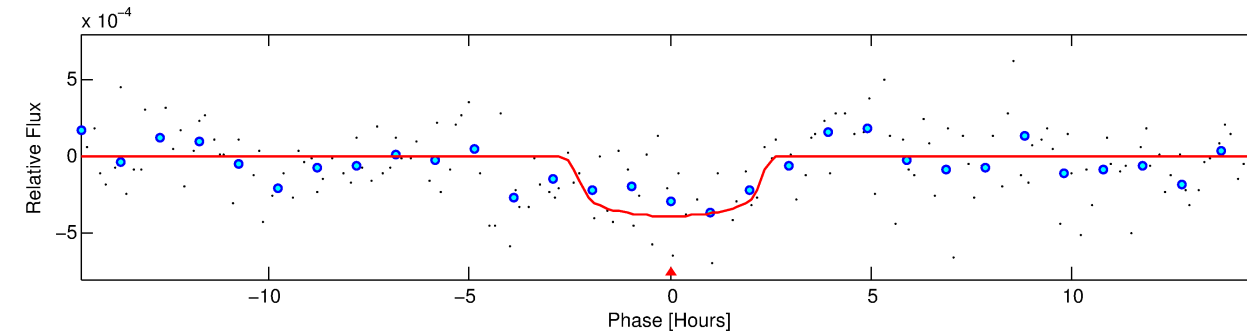
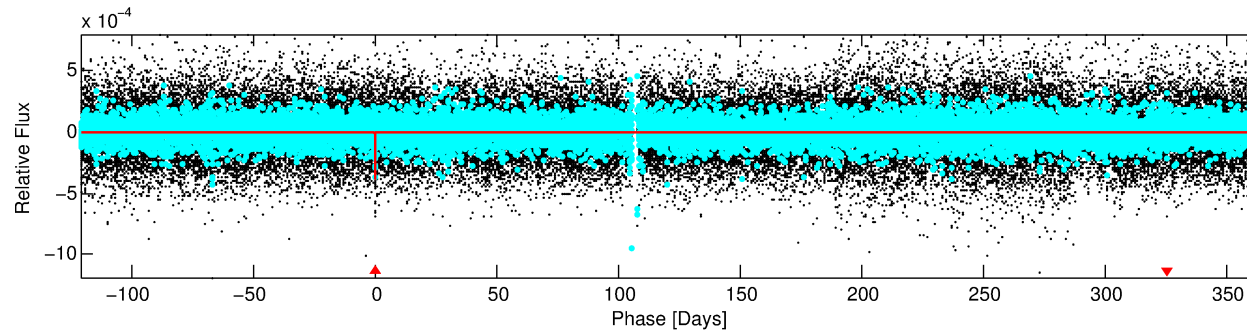
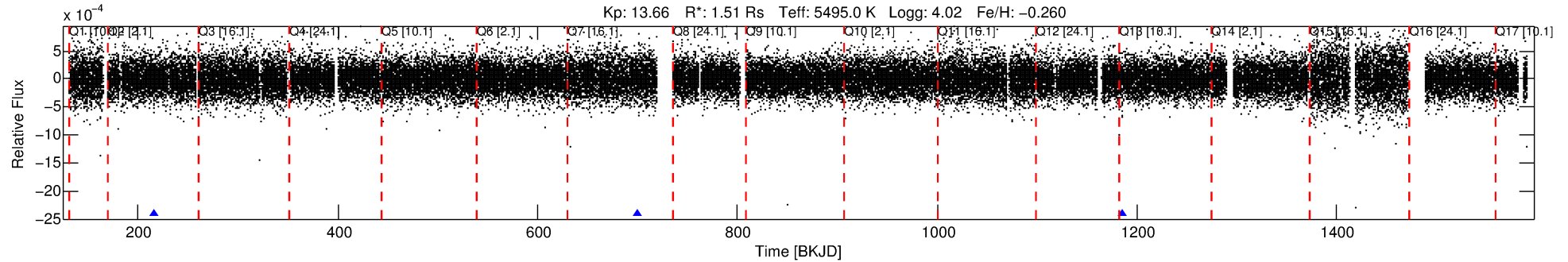
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002708499-01

No Significant Match Found

DV One-Page Summary

KIC: 2708499 Candidate: 1 of 1 Period: 484.792 d



DV Fit Results:

Period = 484.79182 [0.00761] d
Epoch = 215.6637 [0.0106] BKJD
Rp/R* = 0.0201 [0.0132]
a/R* = 475.39 [1329.73]
b = 0.80 [1.25]
Seff = 1.40 [1.21]
Teq = 277 [60] K
Rp = 3.31 [2.65] Re
a = 1.1503 [0.5766] AU
Ag = 7548.92 [12193.39] [0.62 σ]
Teffp = 3999 [1377] K [2.70 σ]

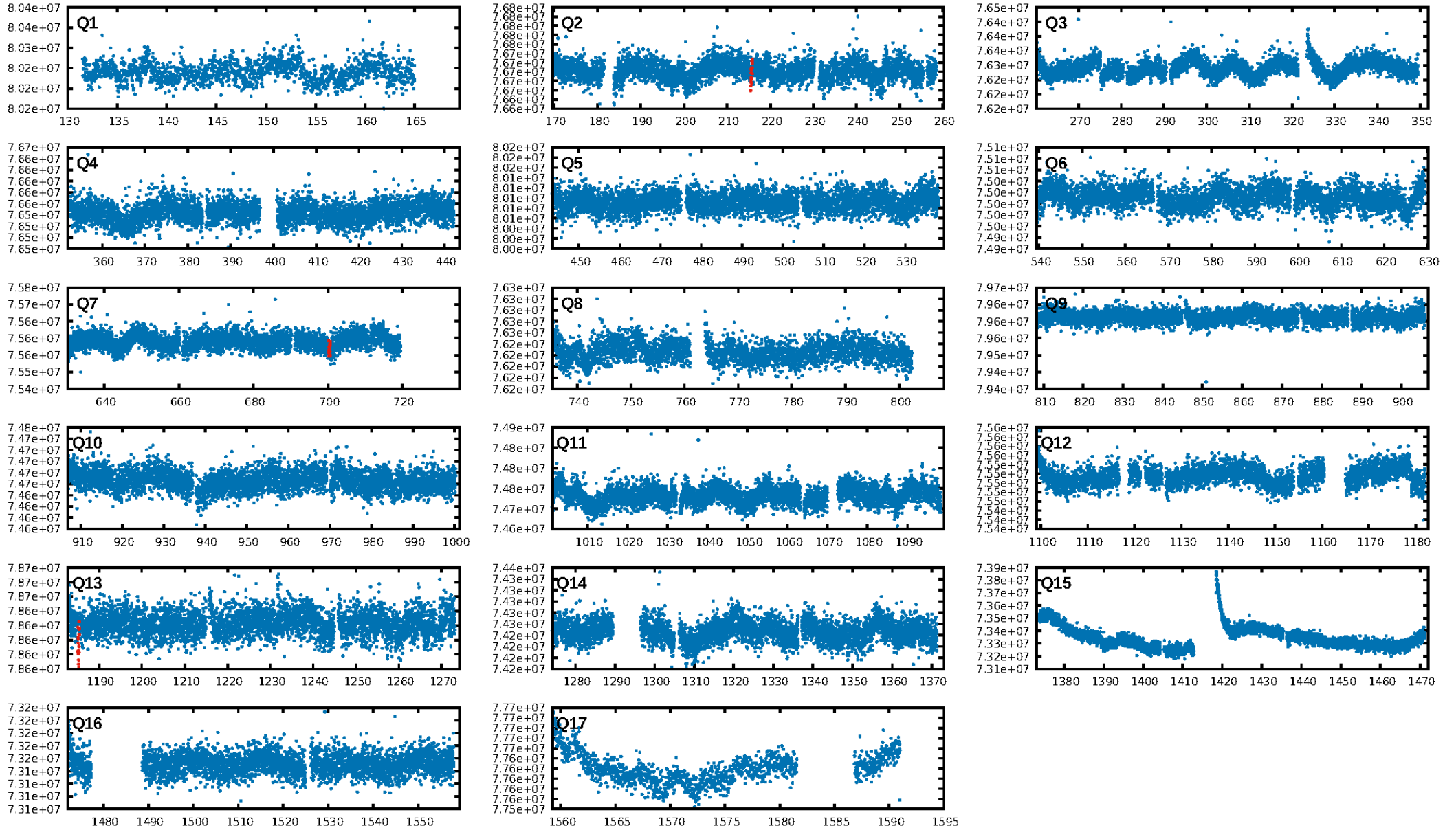
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 1.0%
ModelChiSquareGof-sig: 98.1%
Bootstrap-pfa: 1.47e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -1.432
Centroid-sig: 3.3%
Centroid-so: 1.420 arcsec [0.89 σ]
OotOffset-rm: N/A
OotOffset-st: 0/0/0 [0]
KicOffset-rm: N/A
KicOffset-st: 0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [2/2]

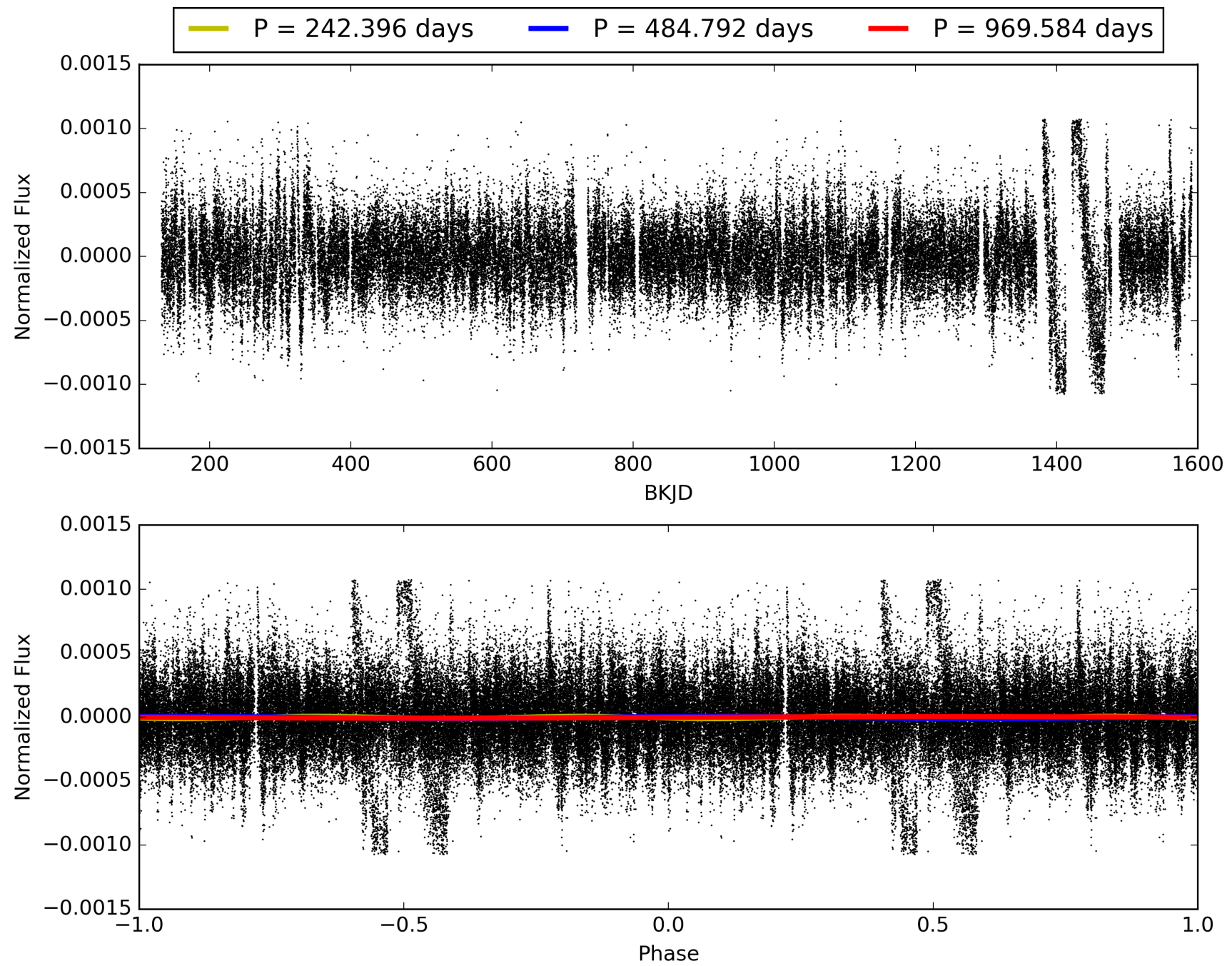
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 12:19:32 Z

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

TCE 002708499-01, PDC Light Curves

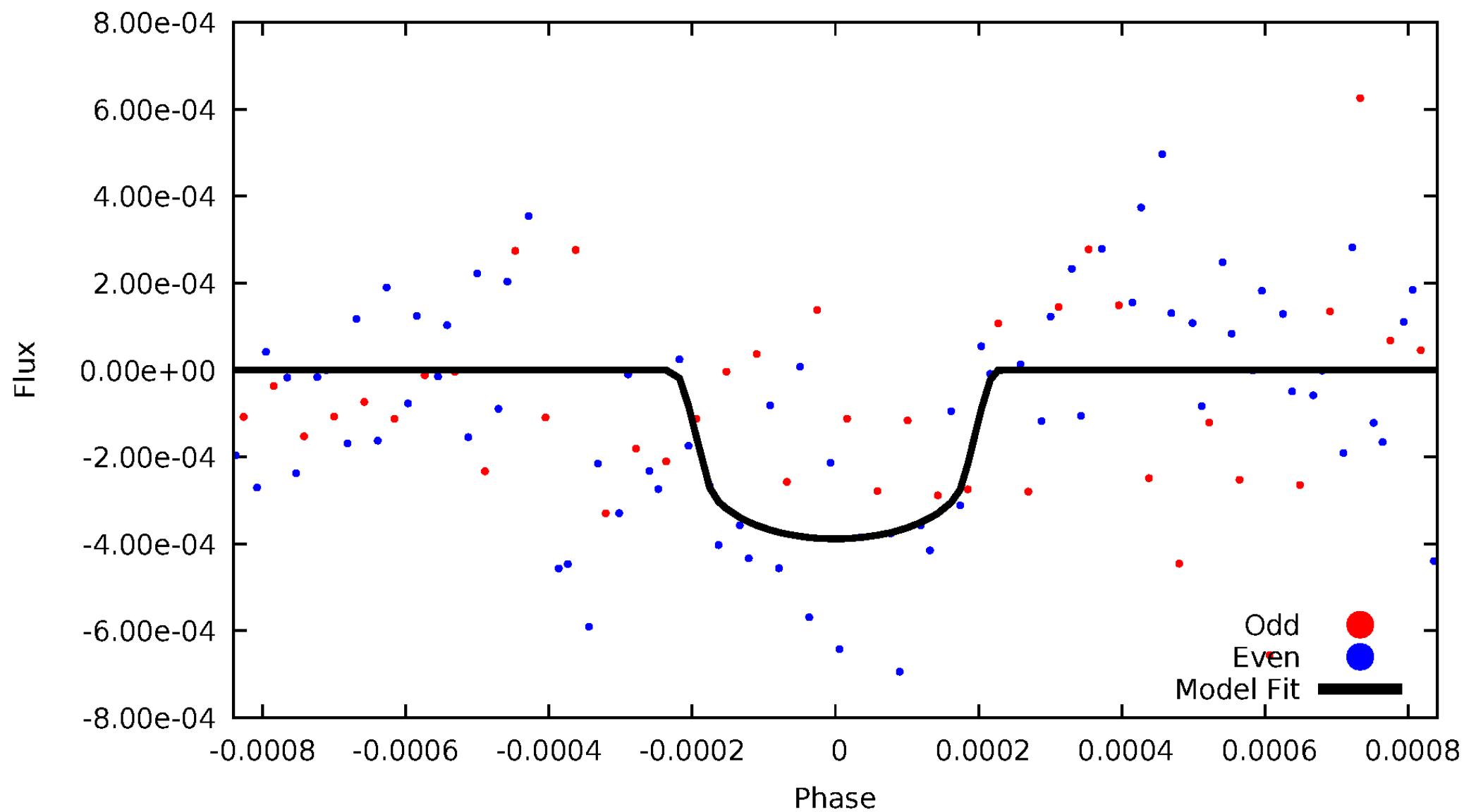


TCE 002708499-01



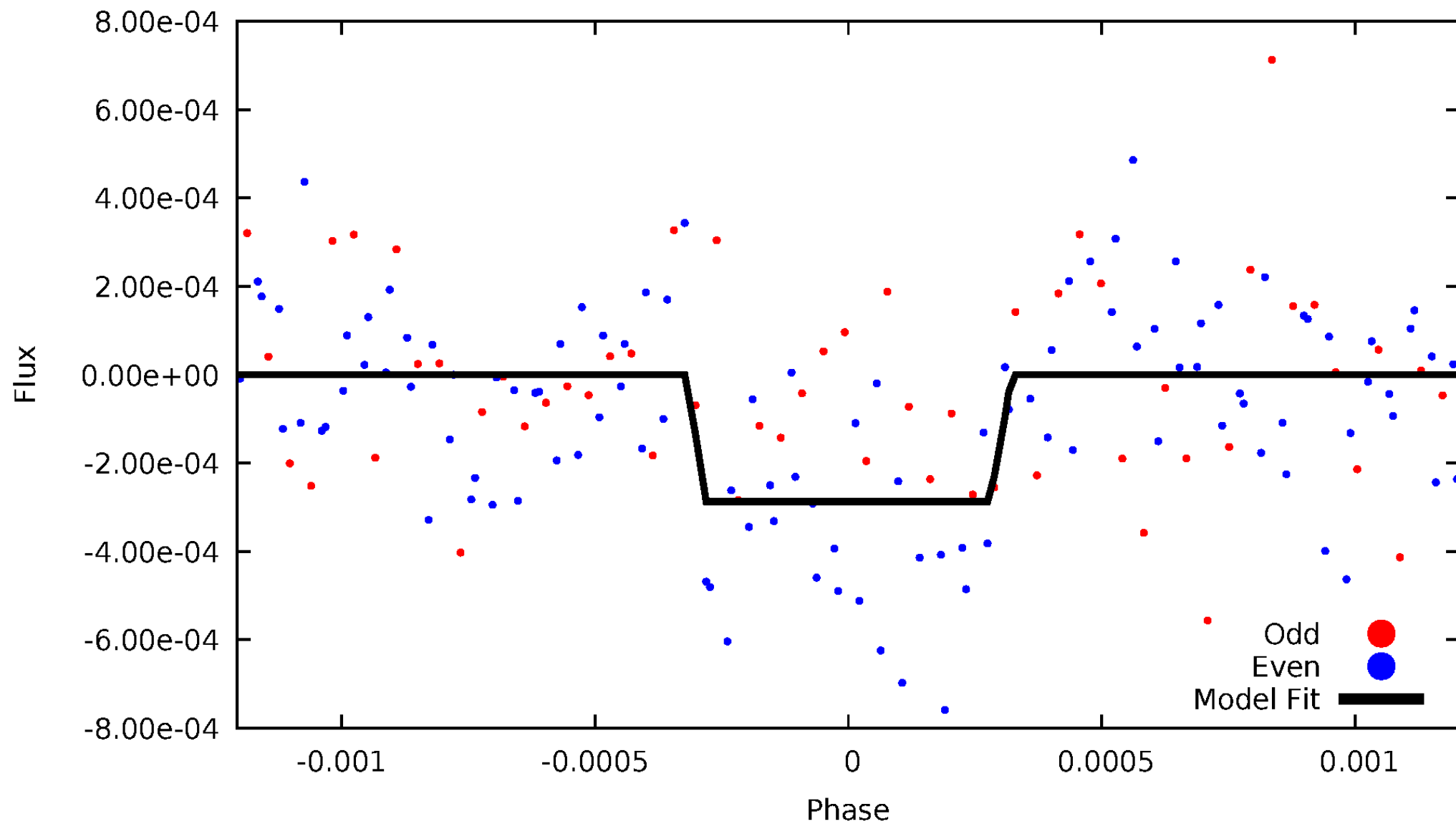
DV Odd/Even

TCE 002708499-01



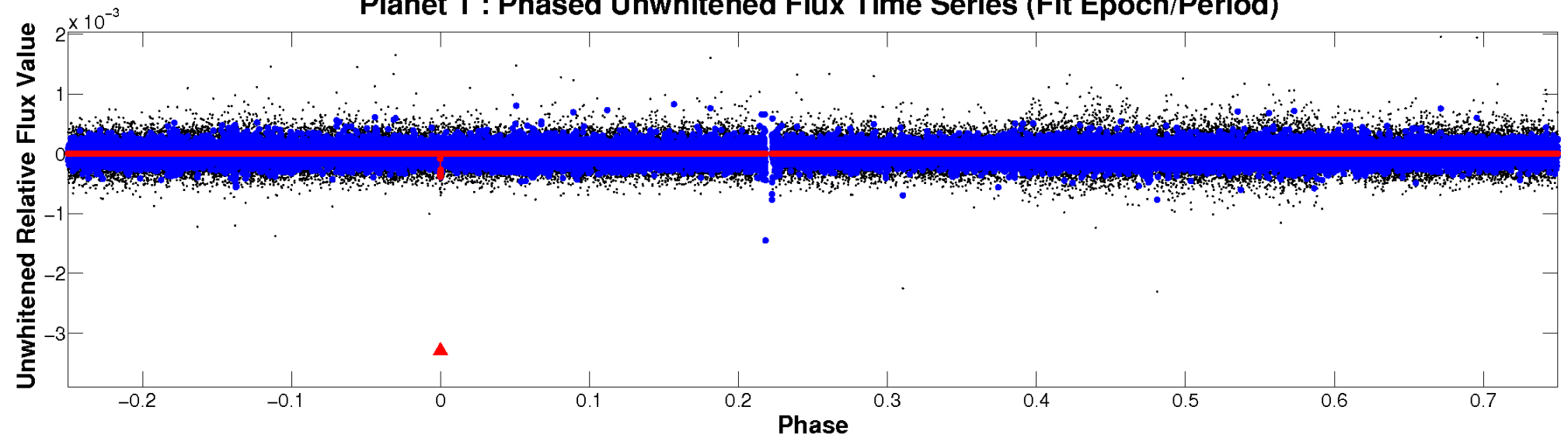
ALT Odd/Even

TCE 002708499-01

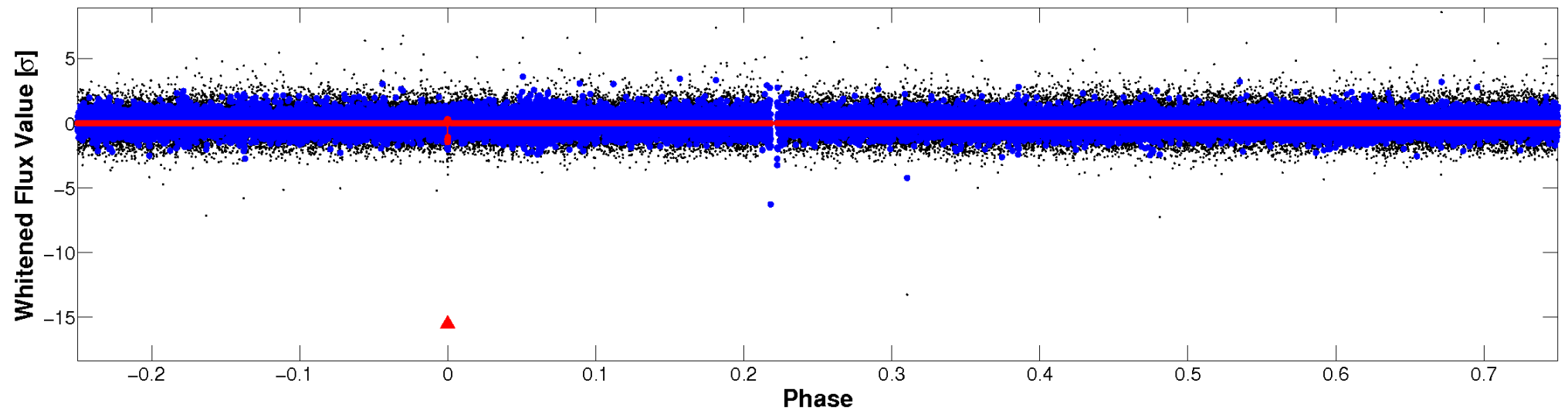


Non-Whitened Vs. Whitened Light Curve

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

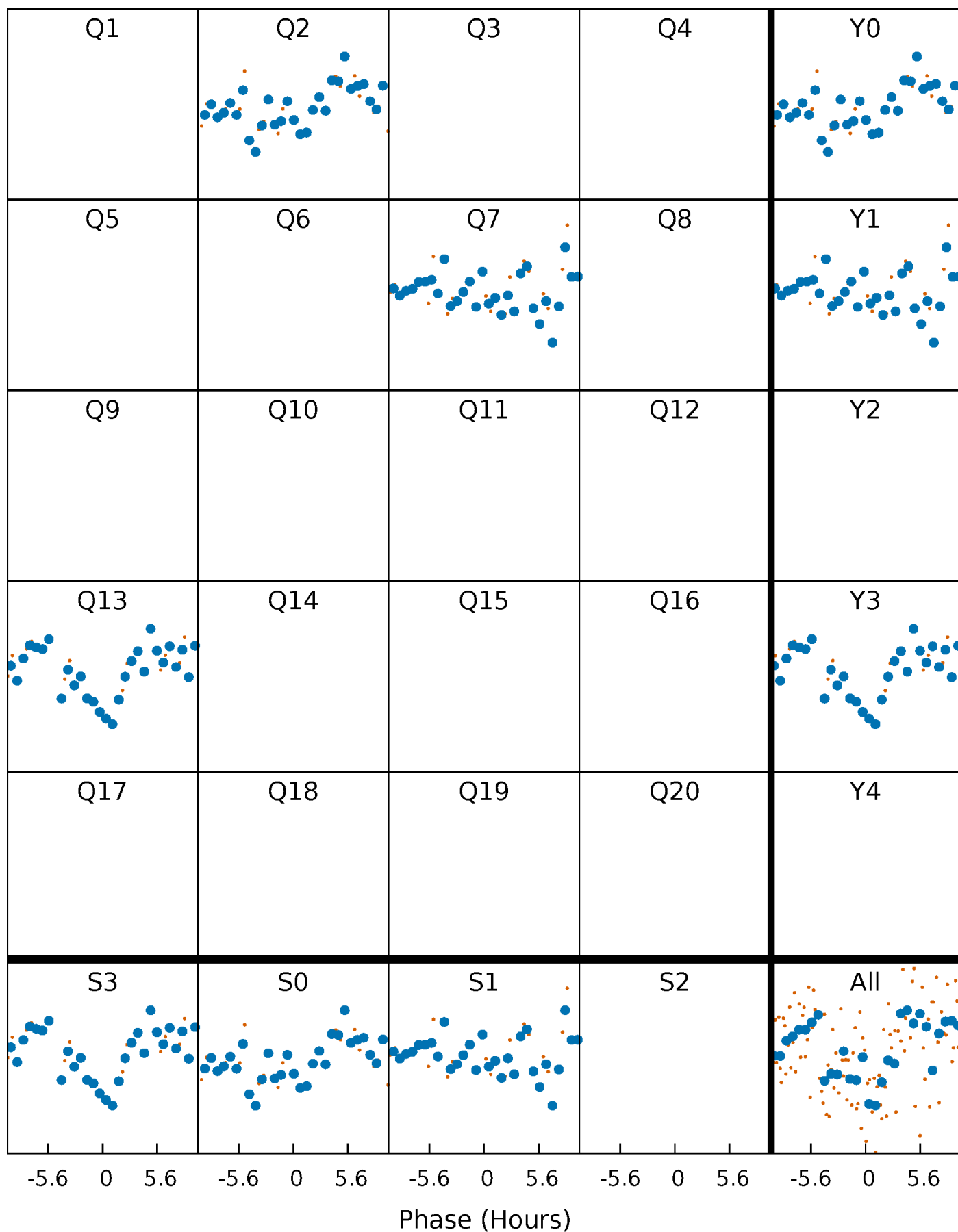


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 002708499-01 P=484.791816 Days $T_0=215.663695$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 002708499-01 P=484.791816 Days $T_0=215.663695$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

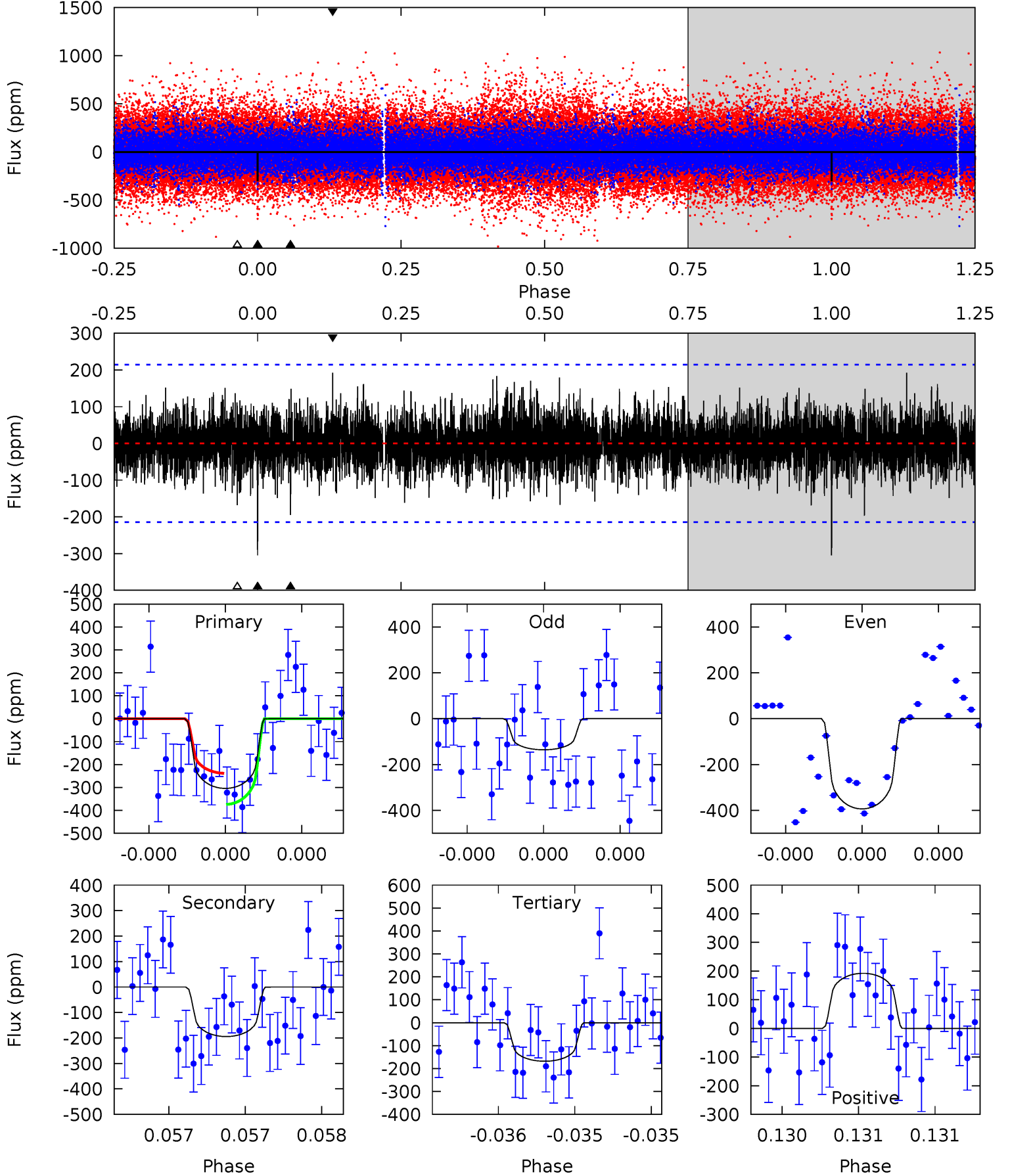
TCE 002708499-01 P=484.793022 Days $T_0=215.612587$ (BKJD)



DV Model-Shift Uniqueness Test

002708499-01, P = 484.791816 Days, E = 215.663695 Days

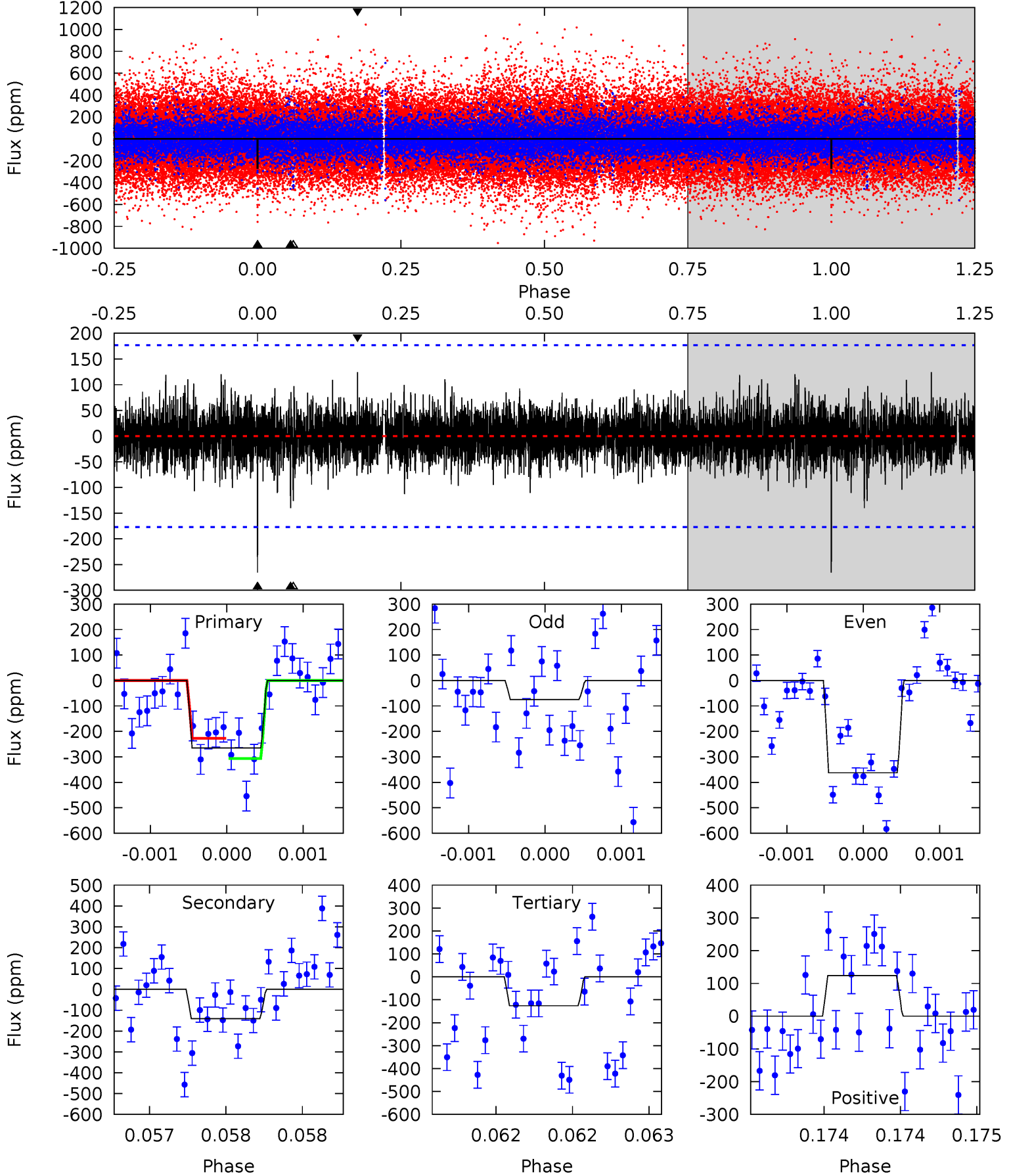
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.94	5.07	4.39	5.02	5.59	3.51	1.24	3.55	2.92	0.69	0.06	3.21	1.24	0.39	1.77



Alt Model-Shift Uniqueness Test

002708499-01, P = 484.793022 Days, E = 215.612587 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.31	4.39	3.95	3.89	5.54	3.42	0.95	4.36	4.42	0.45	0.51	4.30	0.94	0.32	1.24



Stellar Parameters For KIC 002708499

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5495^{+166}_{-149}	$4.018^{+0.518}_{-0.222}$	$-0.260^{+0.350}_{-0.250}$	$1.507^{+0.565}_{-0.690}$	$0.863^{+0.102}_{-0.091}$	$0.355^{+1.791}_{-0.182}$
	+3%/-3%	+13%/-6%	+135%/-96%	+37%/-46%	+12%/-11%	+504%/-51%
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 002708499-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-194 ± 38	$3.13^{+2.38}_{-1.78}$	381^{+42}_{-53}	4657^{+1794}_{-793}	14160^{+63613}_{-9635}
Alt.	-140 ± 32	$2.84^{+2.38}_{-1.67}$	384^{+40}_{-51}	4537^{+1792}_{-792}	12471^{+64476}_{-8878}

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

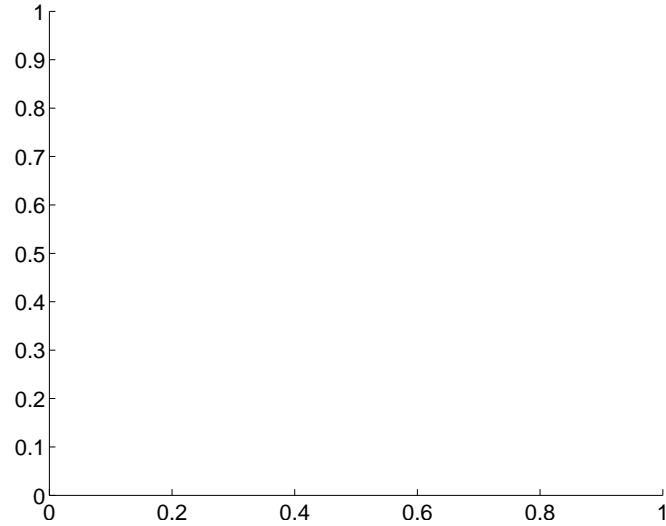
Supplemental centroid analysis for 002708499-01. Kepler magnitude: 13.66. Transit SNR 6.91

There are 0 quarters with good PRF difference image offsets

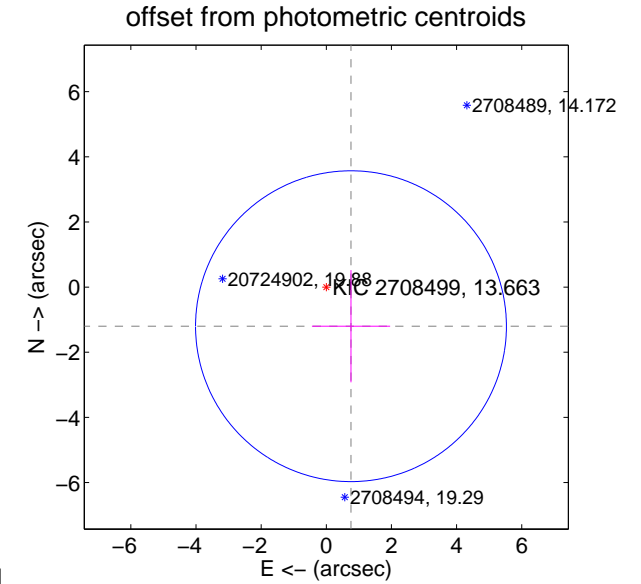
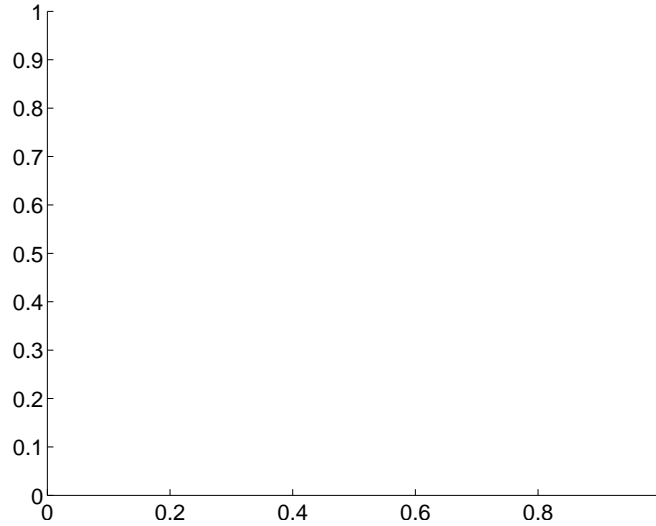
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	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	1.42 ± 1.59	0.89	-0.76 ± 1.20	-1.20 ± 1.72

There is no PRF-fit offset from OOT-fit

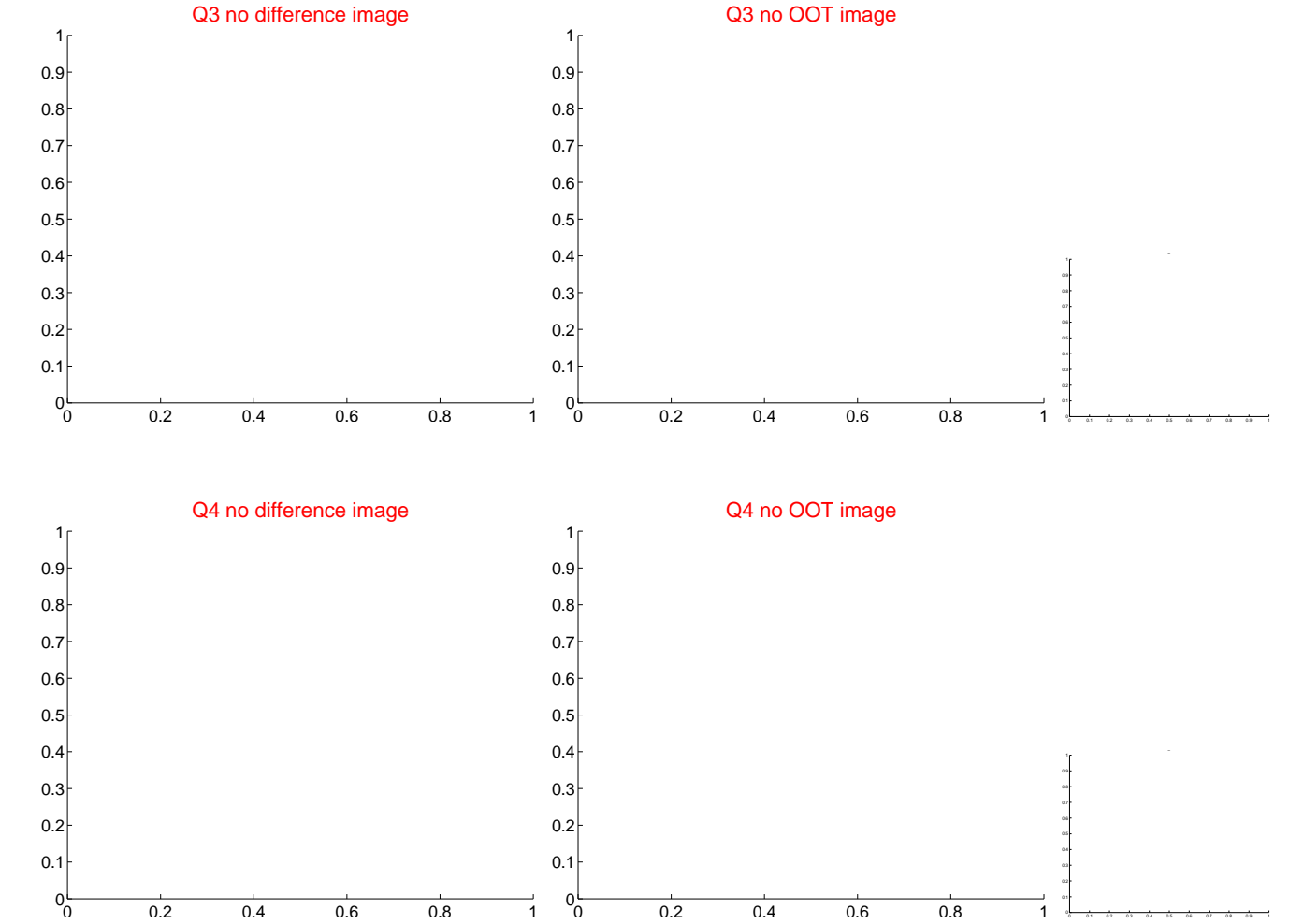
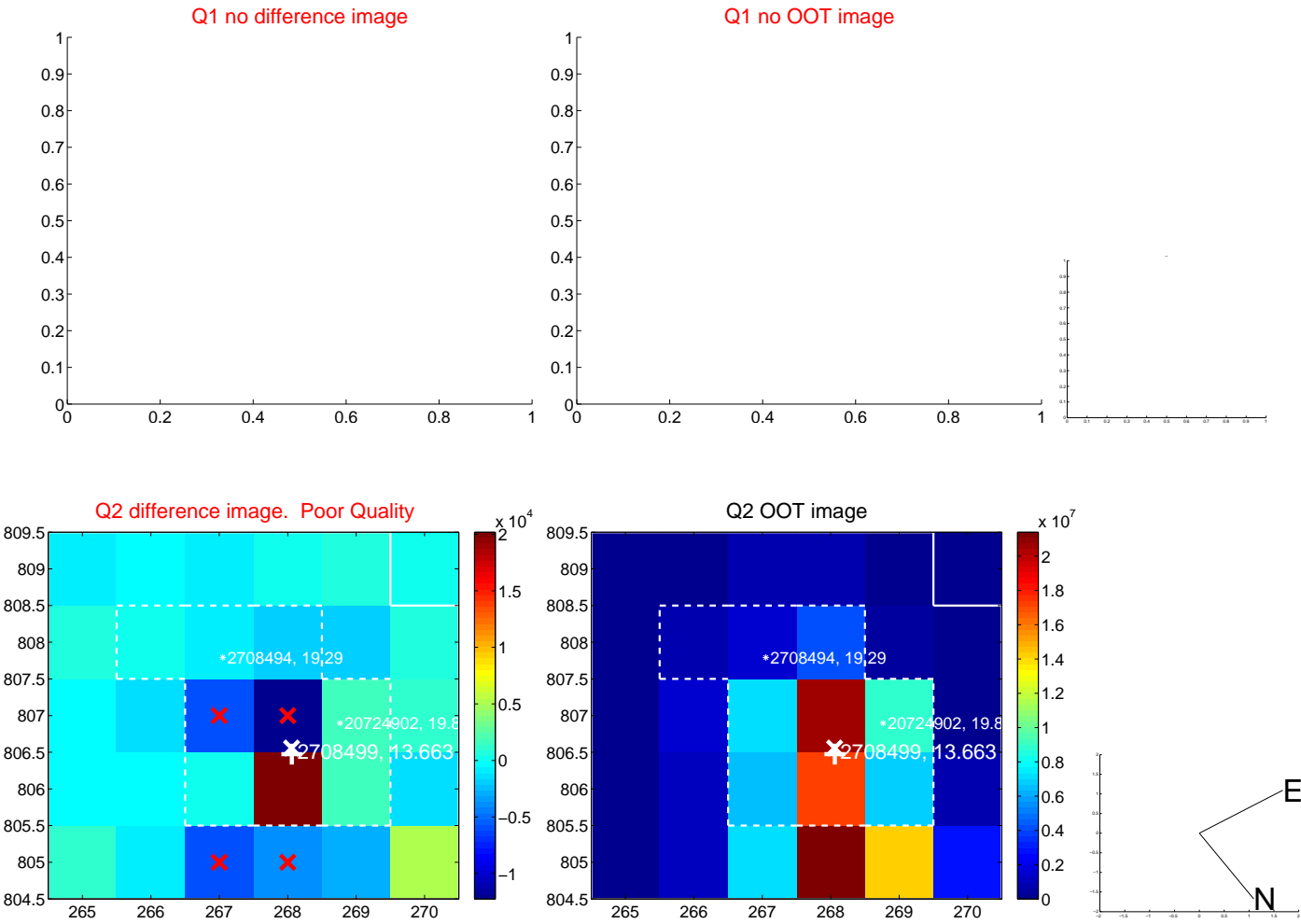


There is no PRF-fit offset from KIC

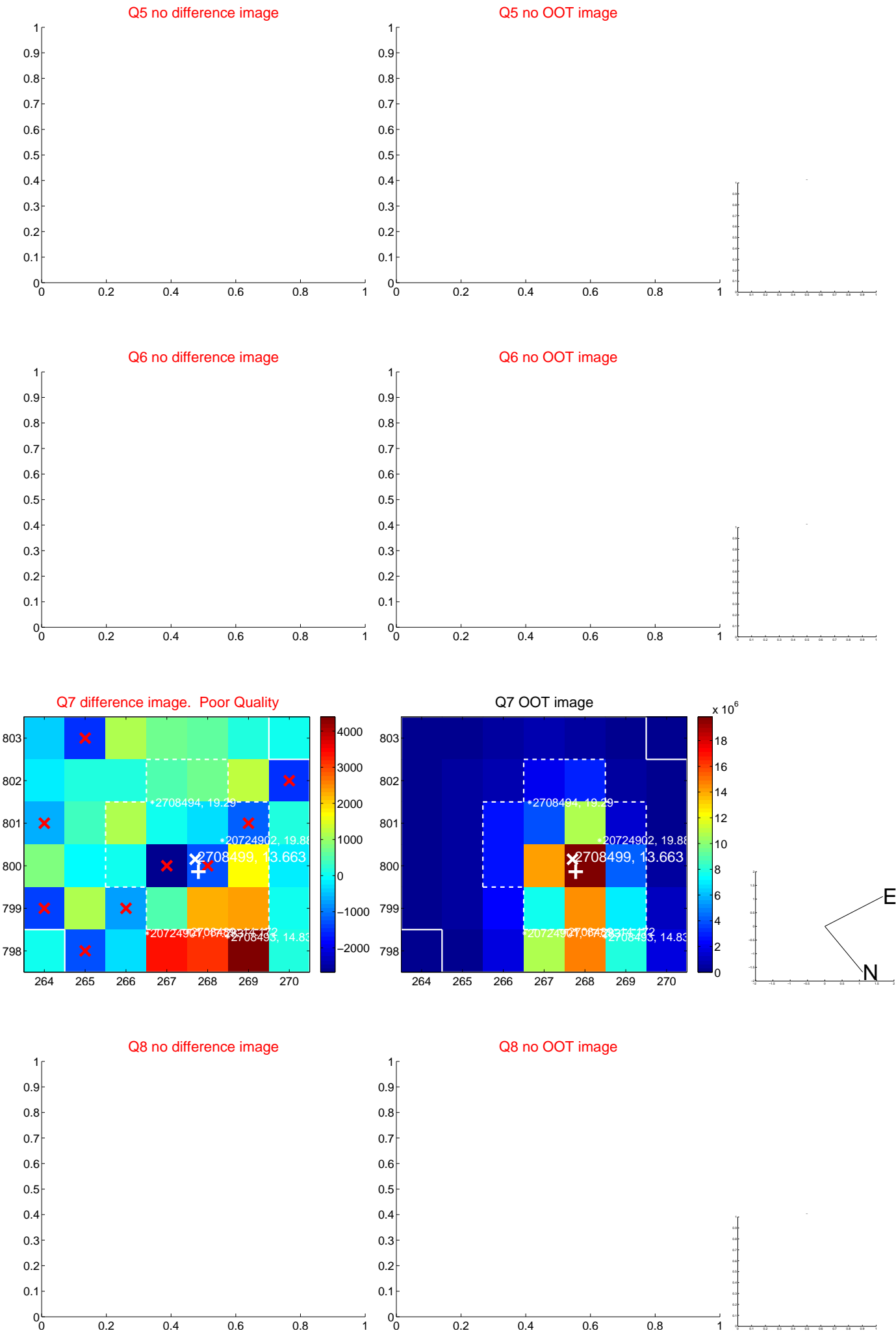


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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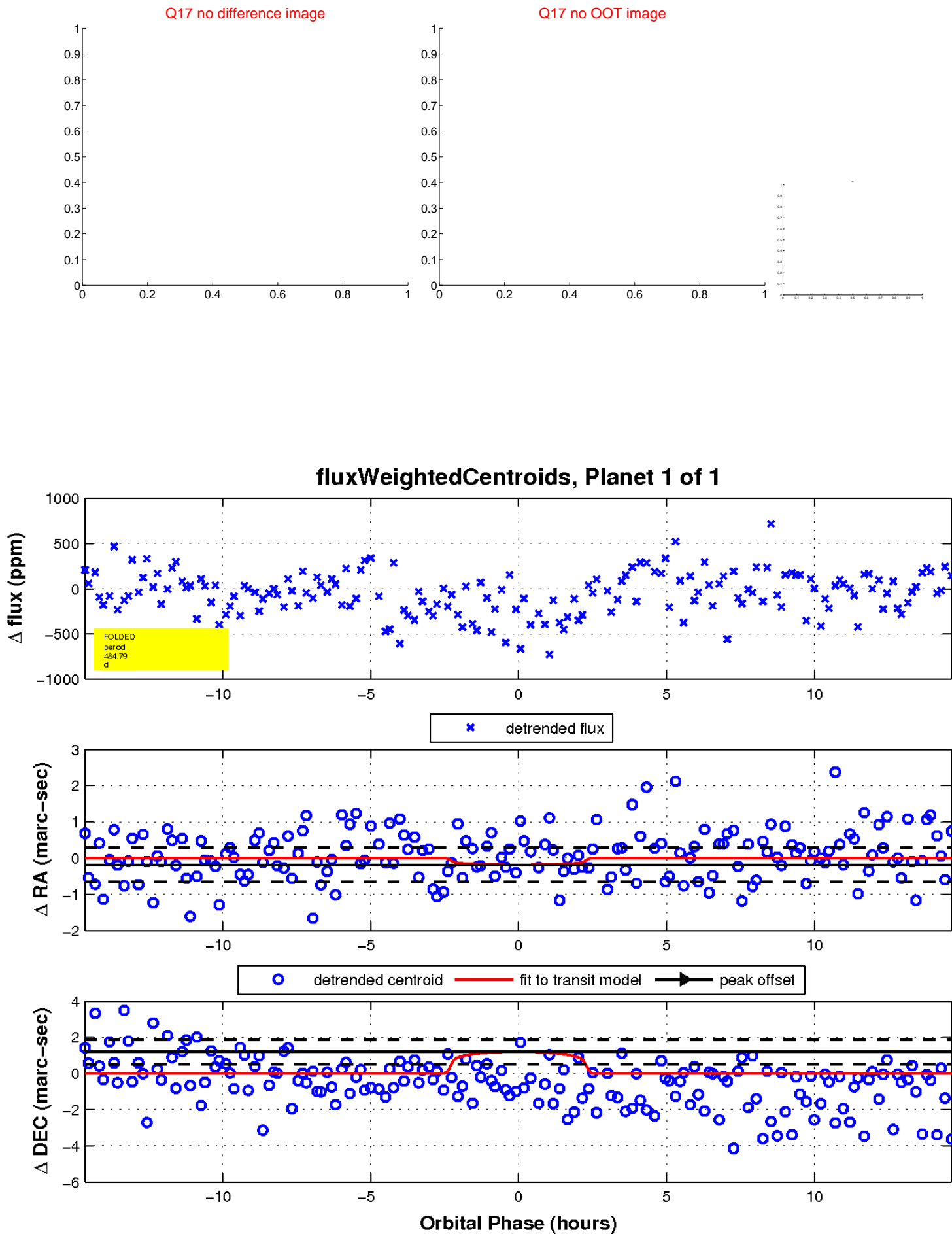
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

