

KIC 007461212

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})
007461212-01	OBS	No	496.228816	272.263395	632.7	4.290	12.8	7.7	0.86	5497	2.22	0.45

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007461212-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_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.

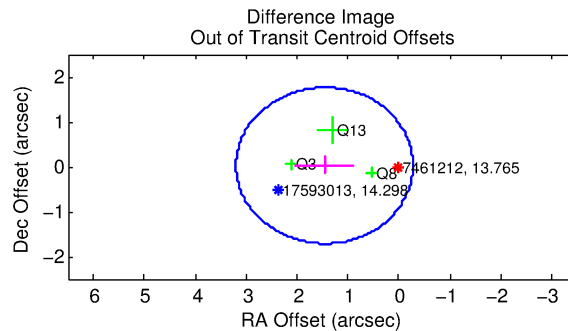
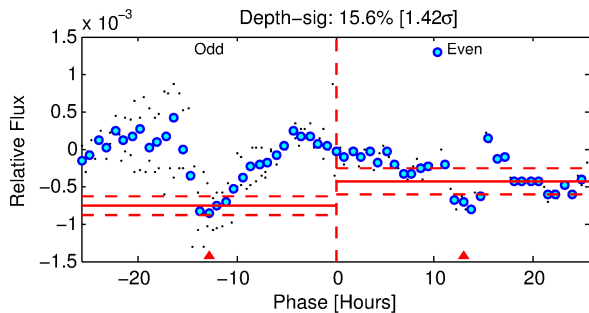
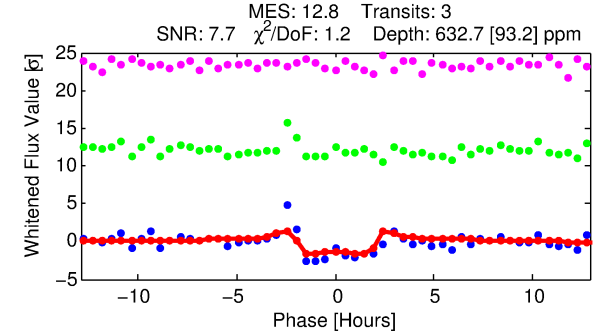
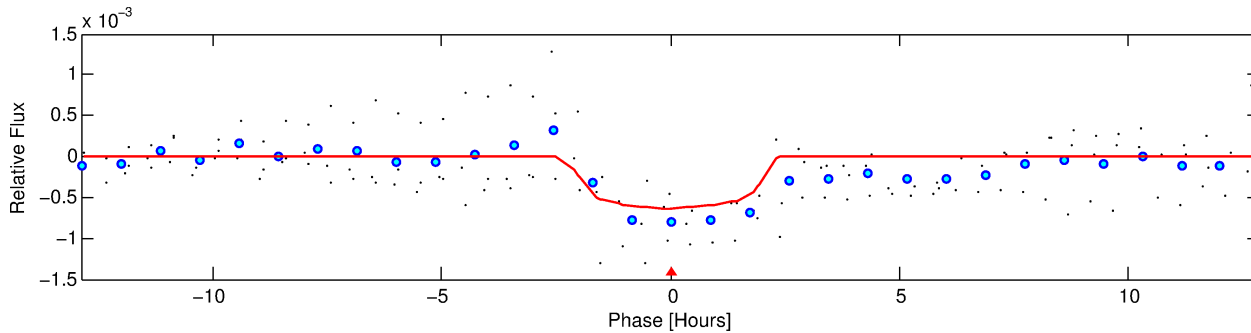
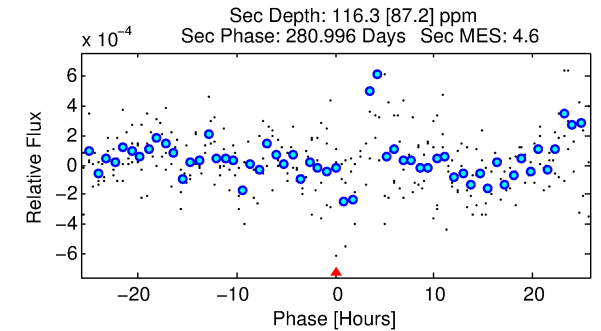
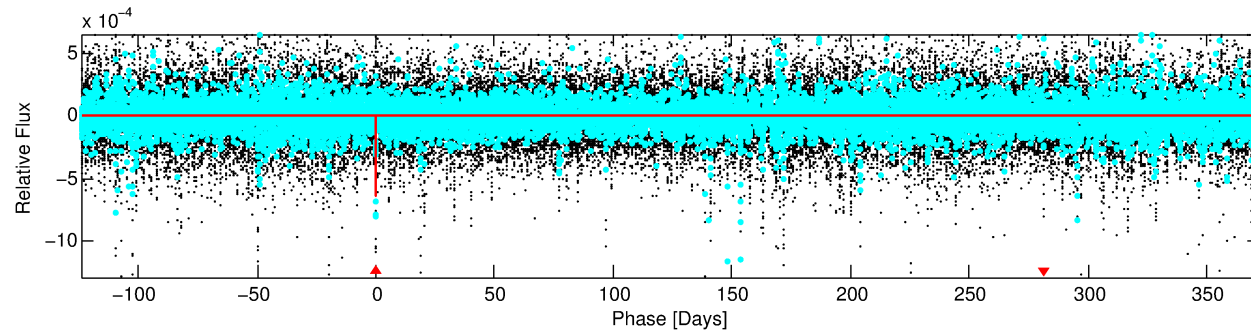
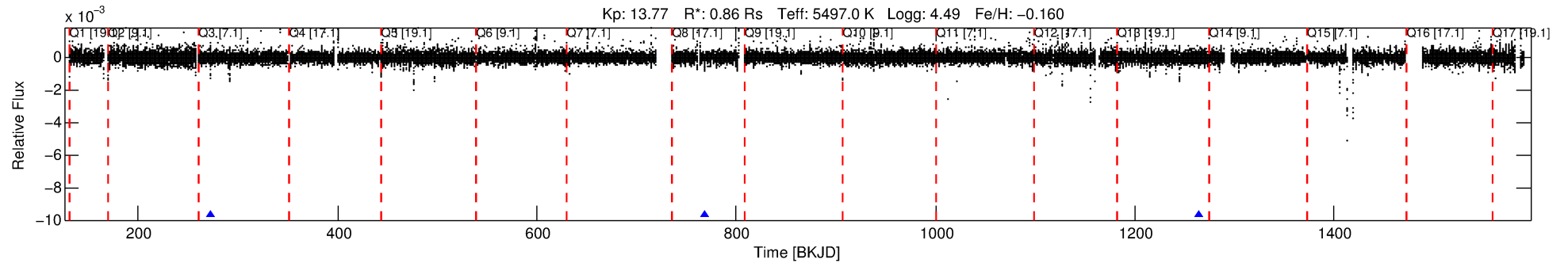
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007461212-01

No Significant Match Found

DV One-Page Summary

KIC: 7461212 Candidate: 1 of 1 Period: 496.229 d



DV Fit Results:

Period = 496.22882 [0.00460] d
Epoch = 272.2634 [0.0059] BKJD
Rp/R* = 0.0237 [0.0393]
a/R* = 764.92 [5157.84]
b = 0.55 [8.79]
Seff = 0.45 [0.13]
Teq = 209 [15] K
Rp = 2.22 [3.73] Re
a = 1.1574 [0.2089] AU
Ag = 17319.81 [59202.53] [0.29 σ]
Teffp = 3710 [3163] K [1.11 σ]

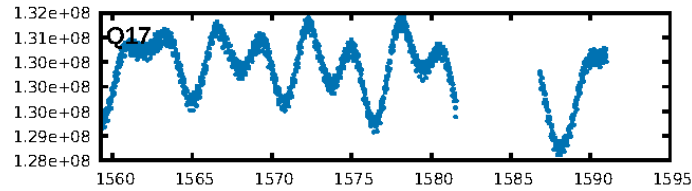
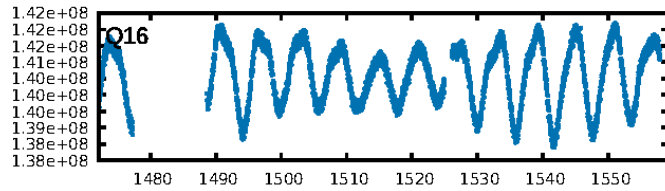
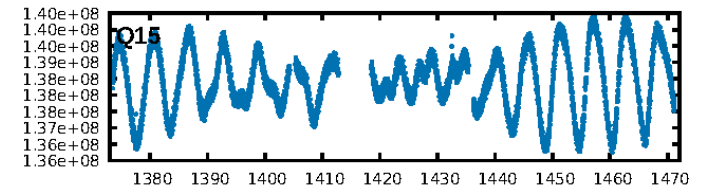
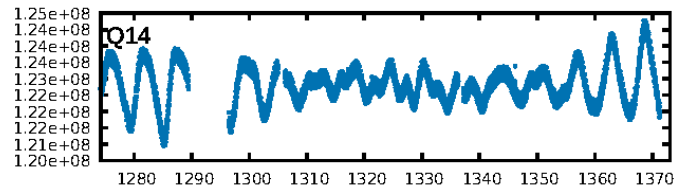
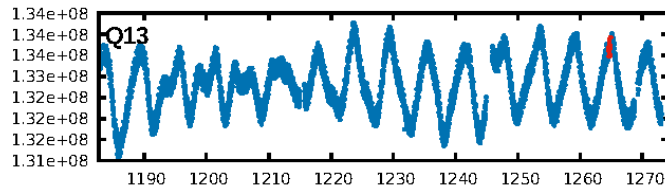
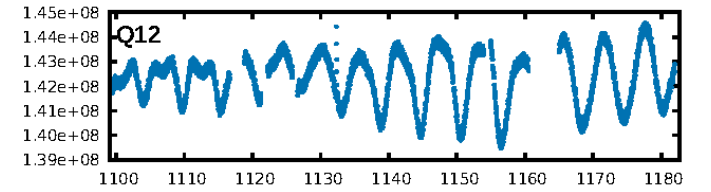
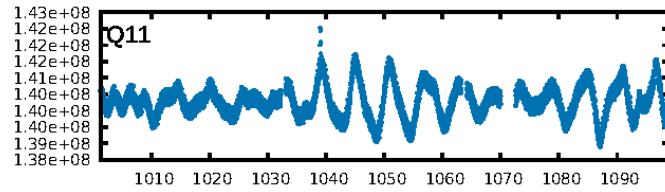
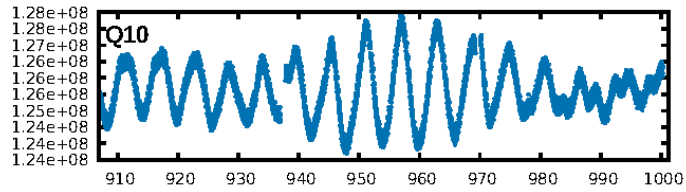
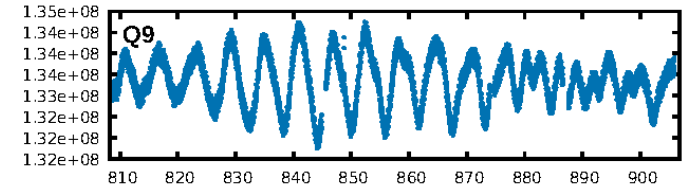
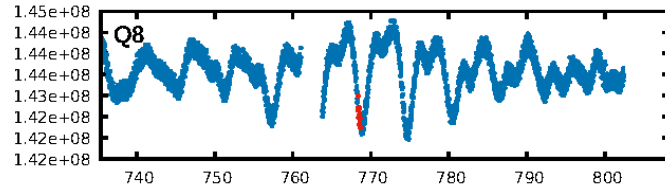
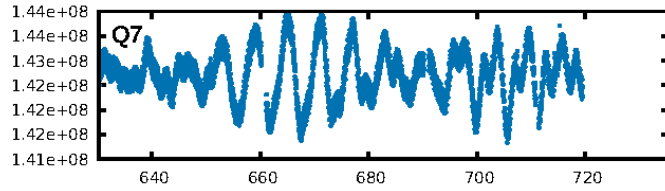
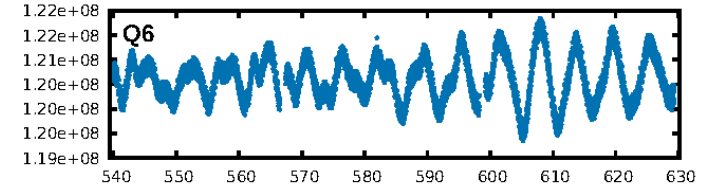
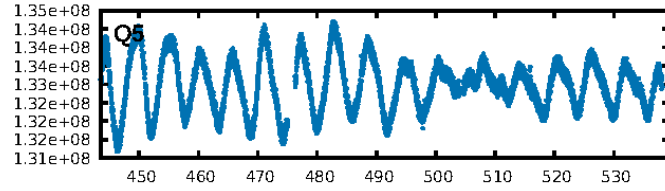
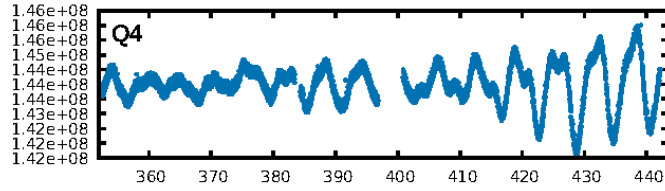
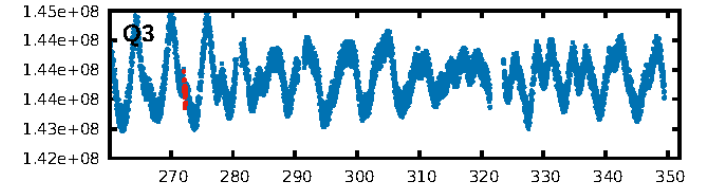
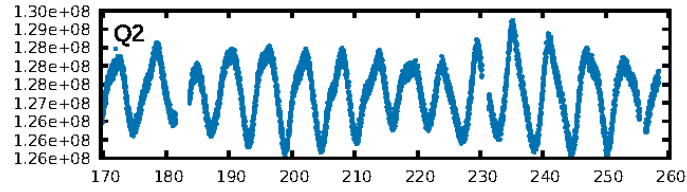
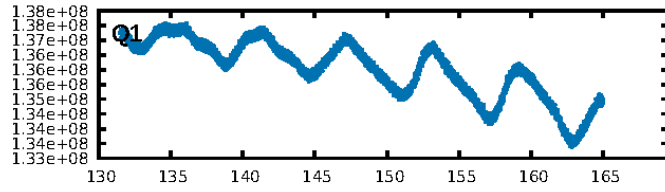
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 4.1%
ModelChiSquareGof-sig: 96.2%
Bootstrap-pfa: 3.41e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 5.219
Centroid-sig: 8.5%
Centroid-so: 1.261 arcsec [1.10 σ]
OotOffset-rm: 1.459 arcsec [2.52 σ]
OotOffset-st: 0/1/1/1 [3]
KicOffset-rm: 2.274 arcsec [3.40 σ]
OotOffset-st: 0/1/1/1 [3]
KicOffset-st: 0/1/1/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

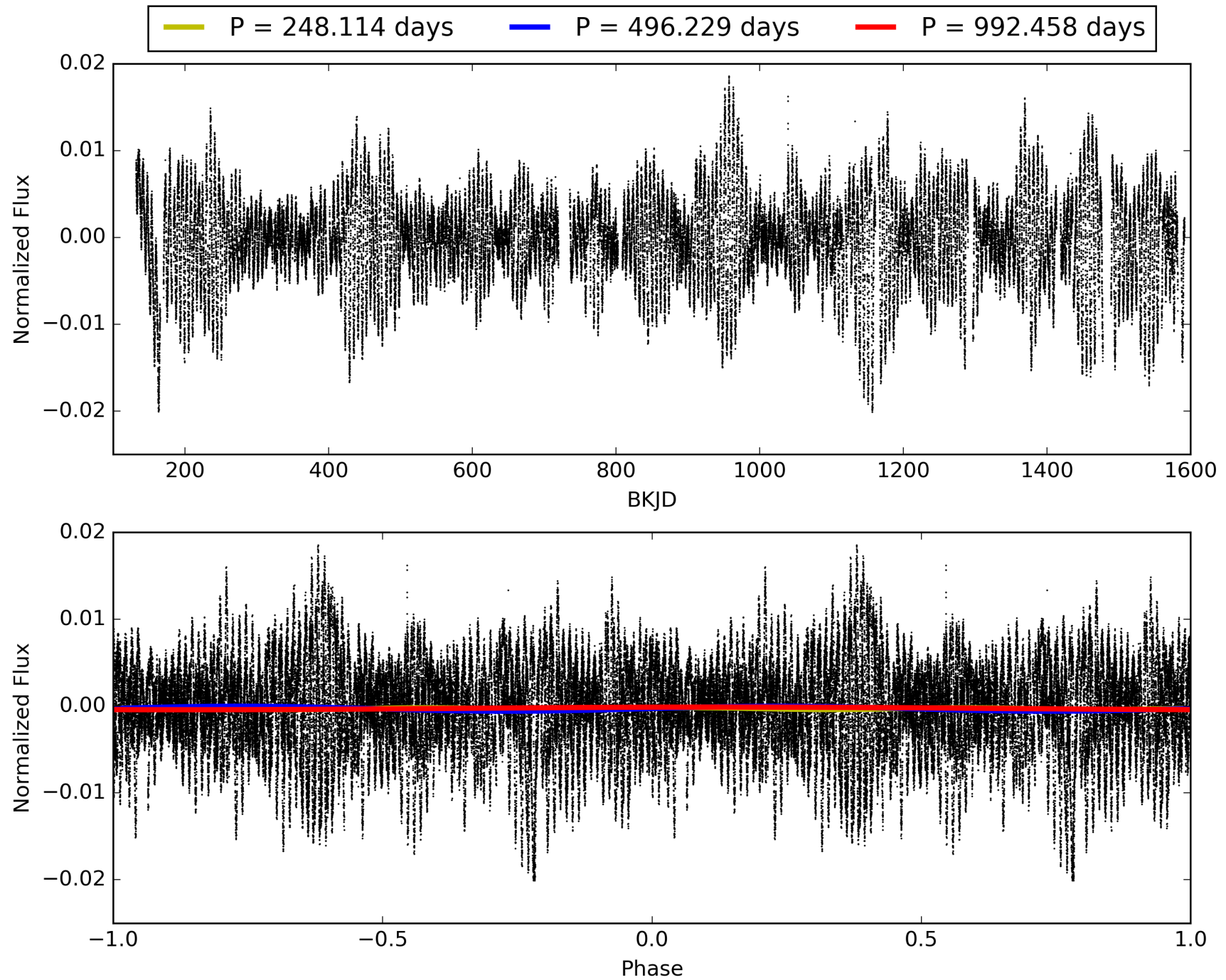
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 19:21:36 Z

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

TCE 007461212-01, PDC Light Curves

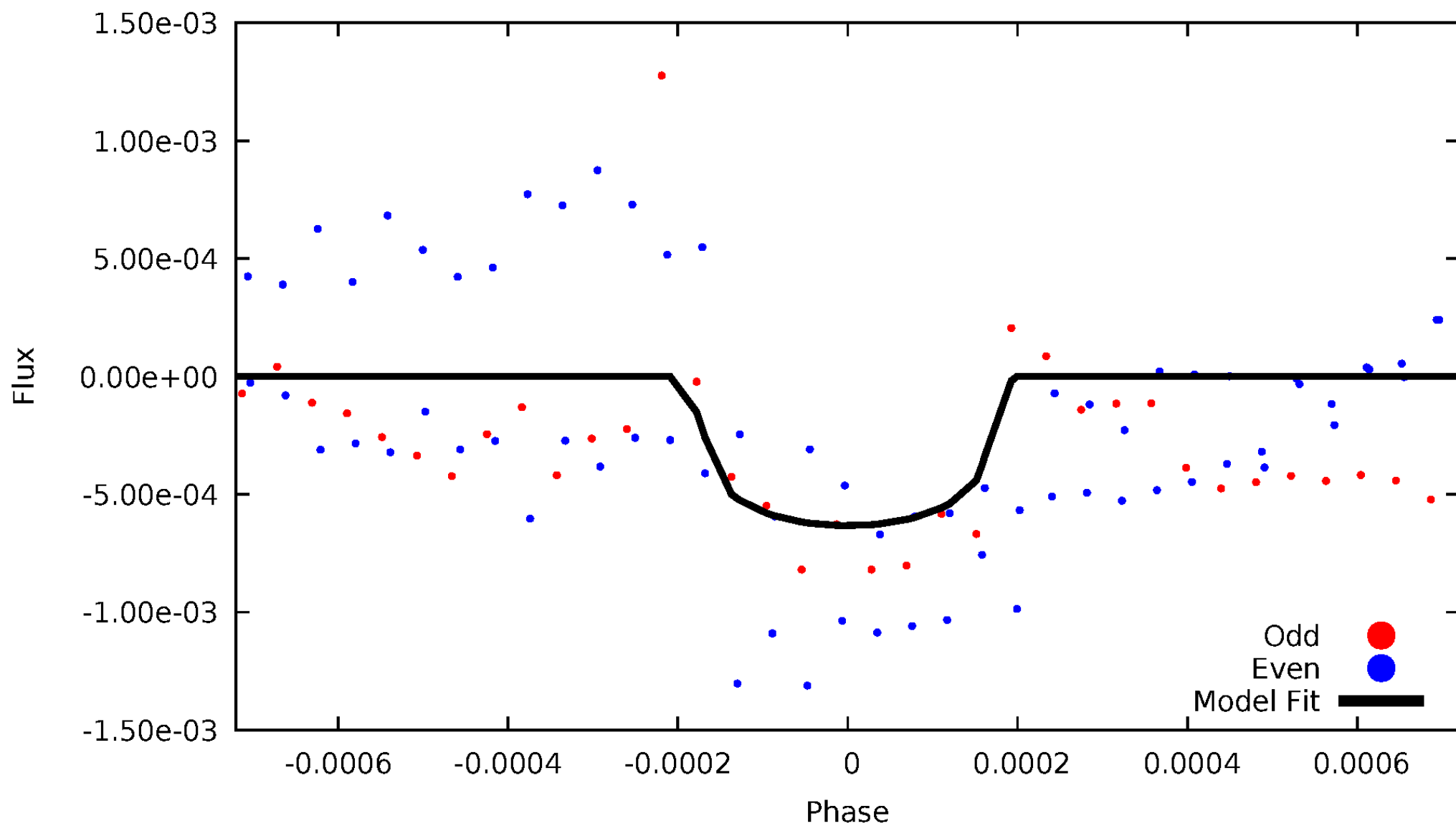


TCE 007461212-01



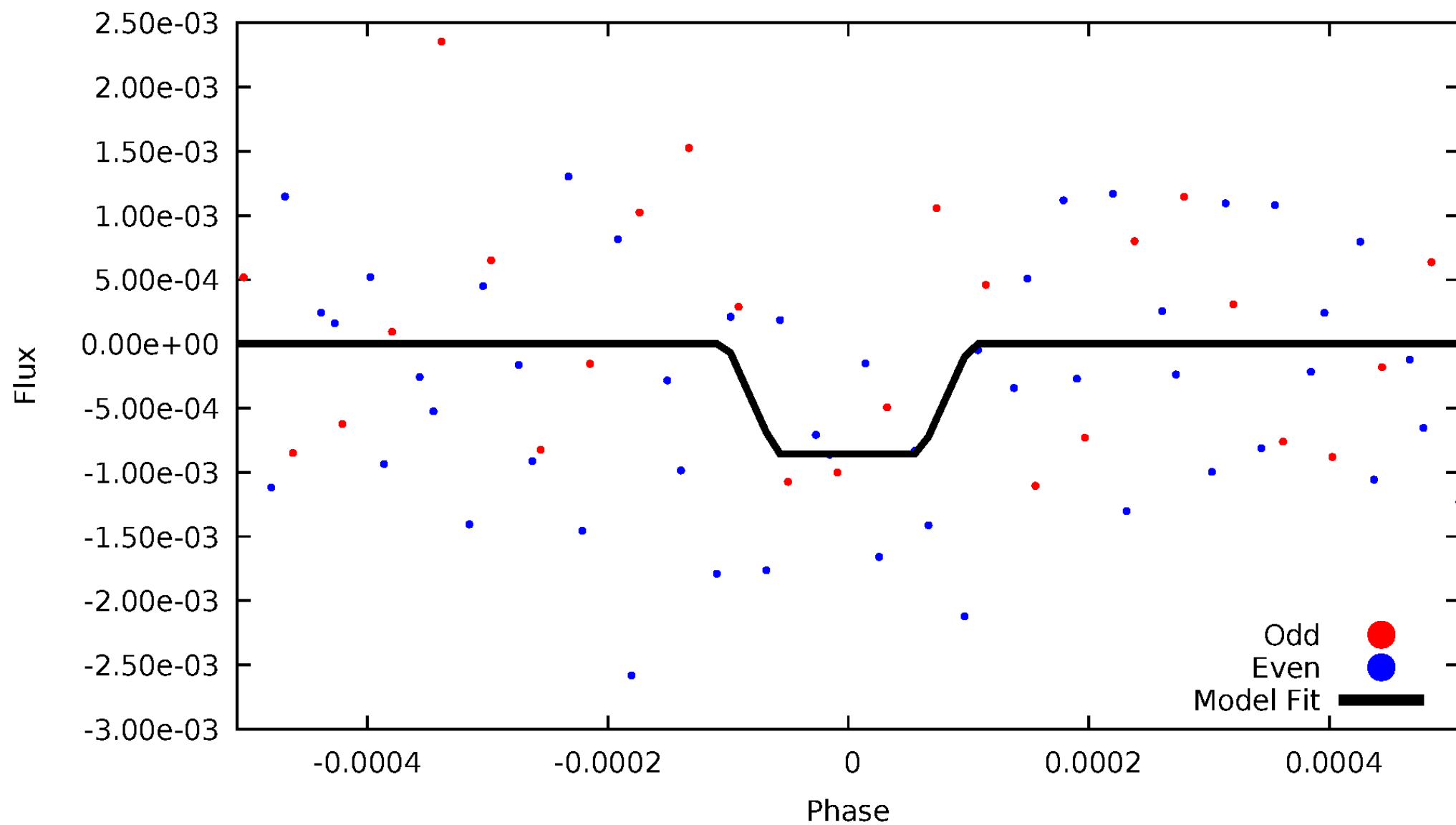
DV Odd/Even

TCE 007461212-01



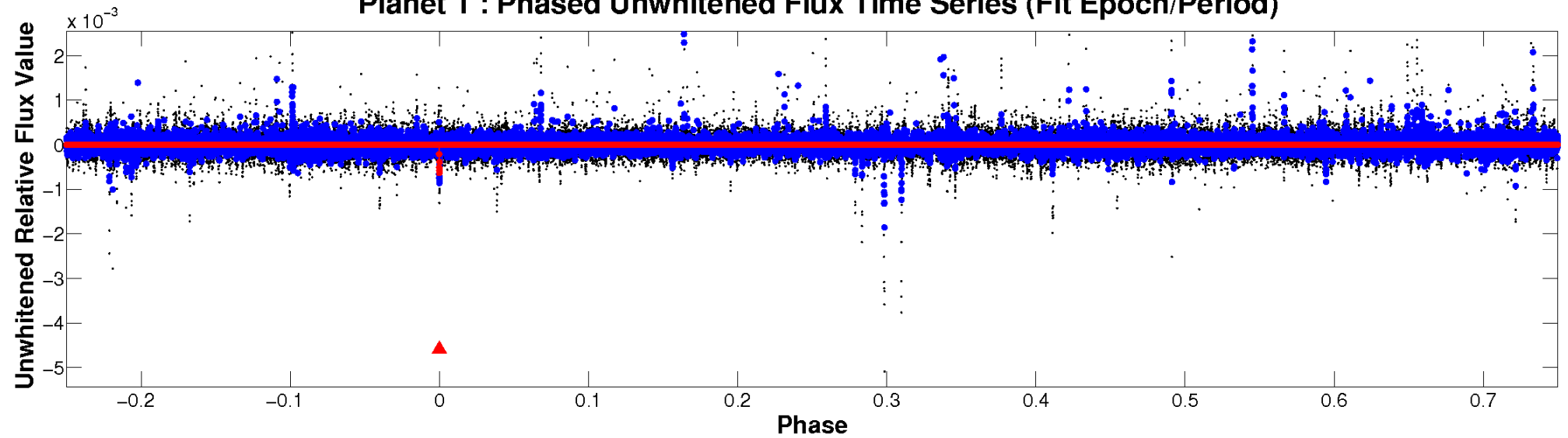
ALT Odd/Even

TCE 007461212-01

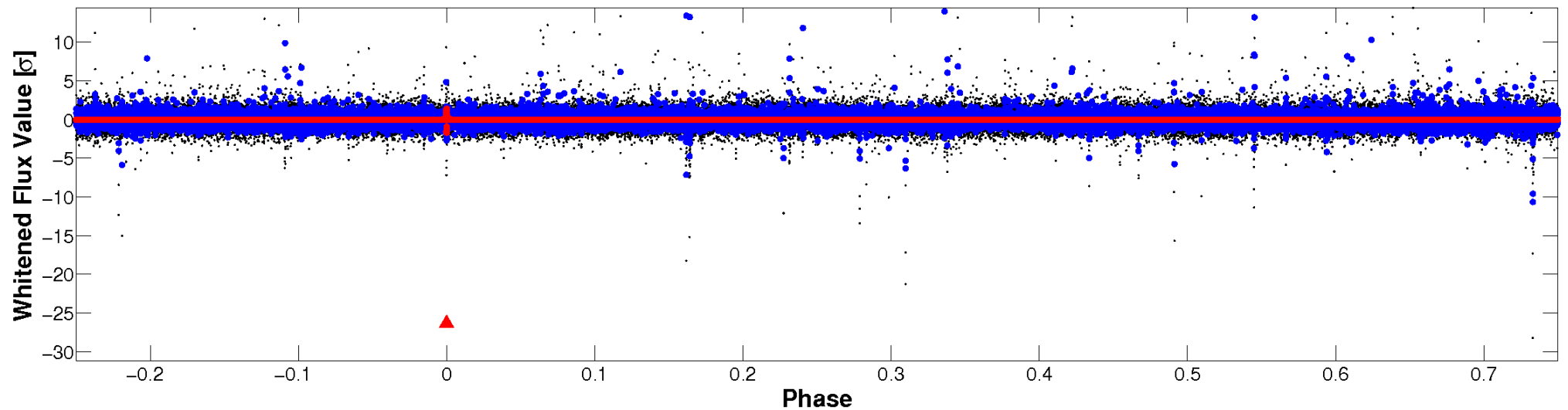


Non-Whitened Vs. Whitened Light Curve

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

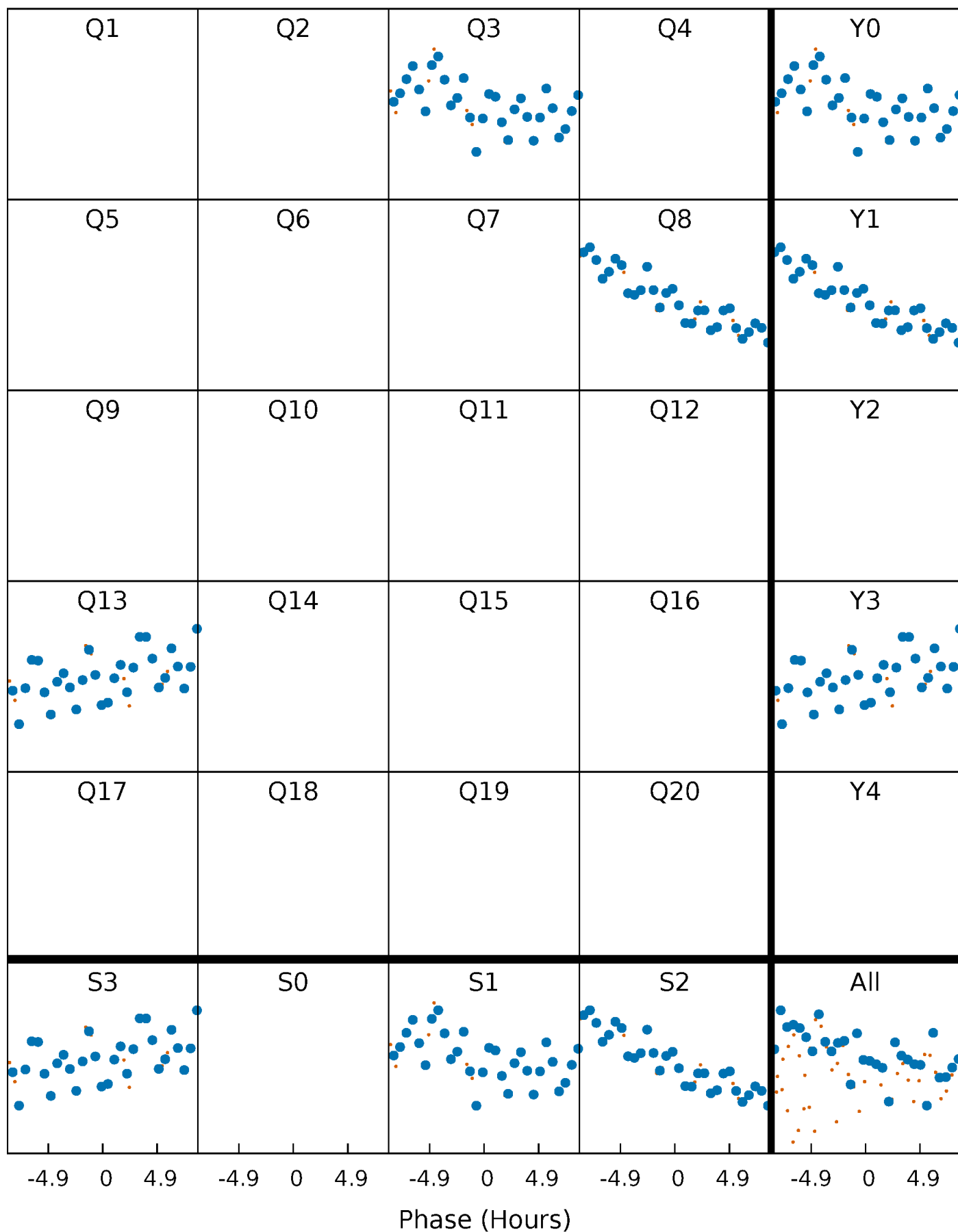


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



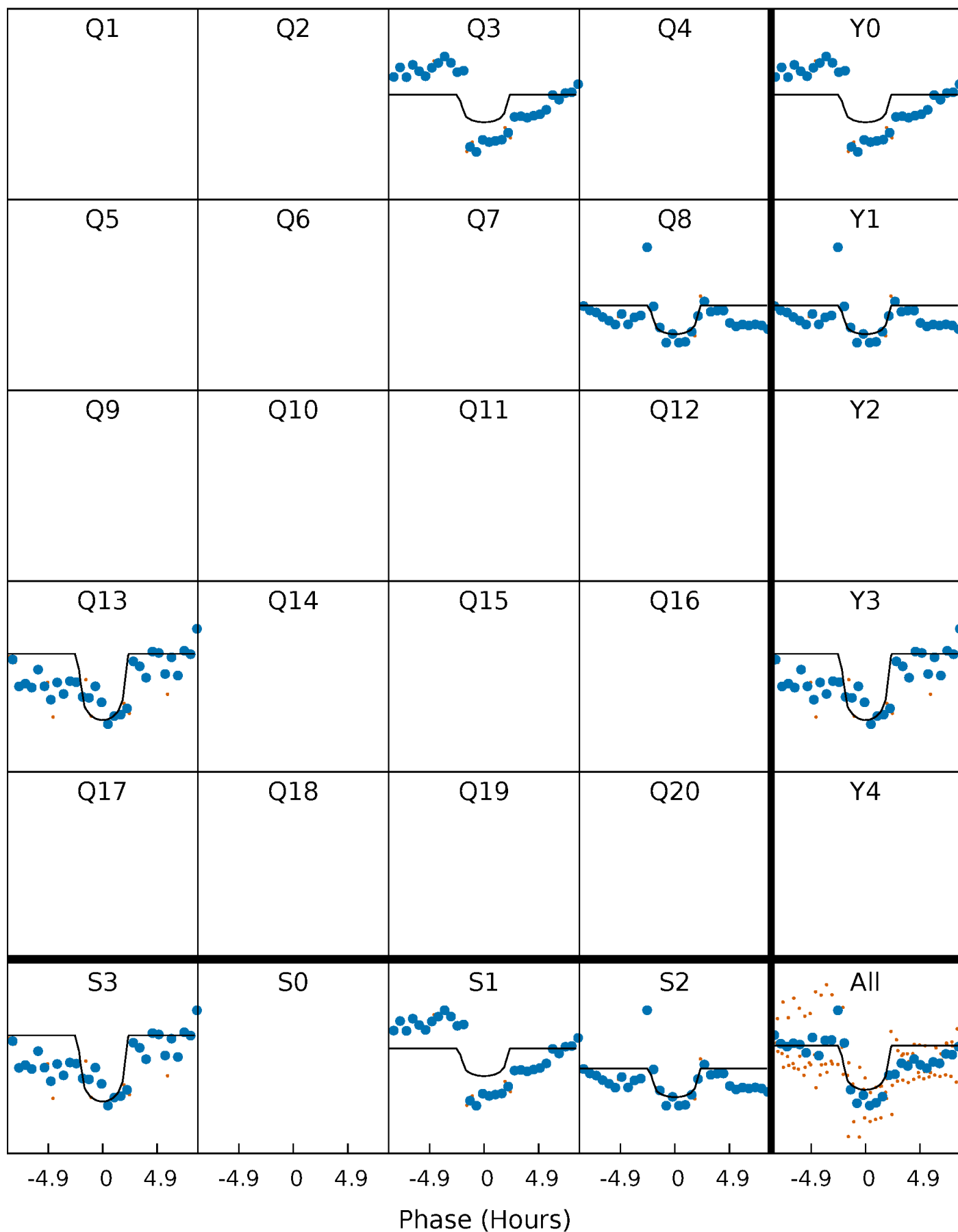
PDC Quarter-Phased Transit Curves

TCE 007461212-01 P=496.228815 Days $T_0=272.263395$ (BKJD)



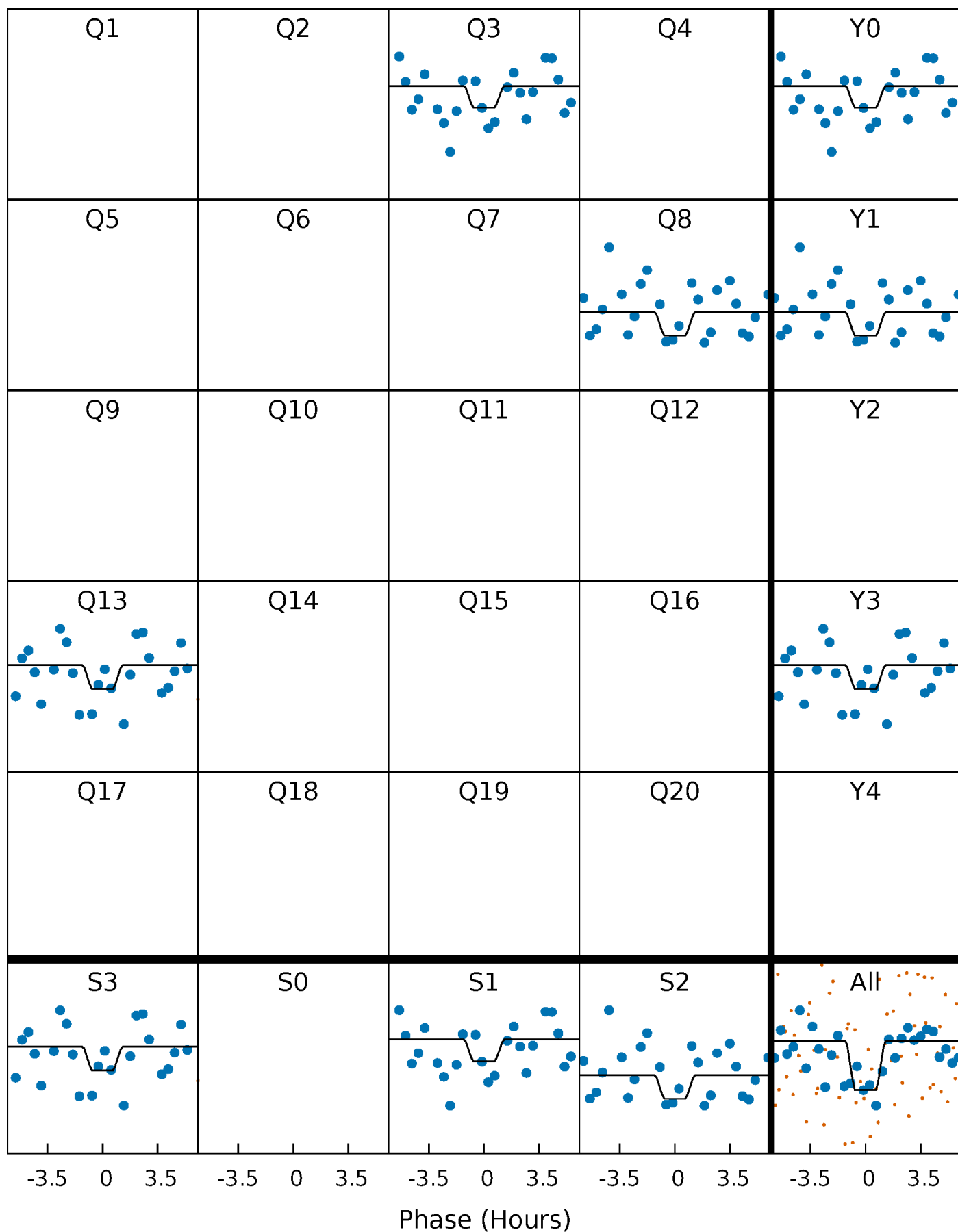
DV Quarter-Phased Transit Curves

TCE 007461212-01 P=496.228815 Days $T_0=272.263395$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

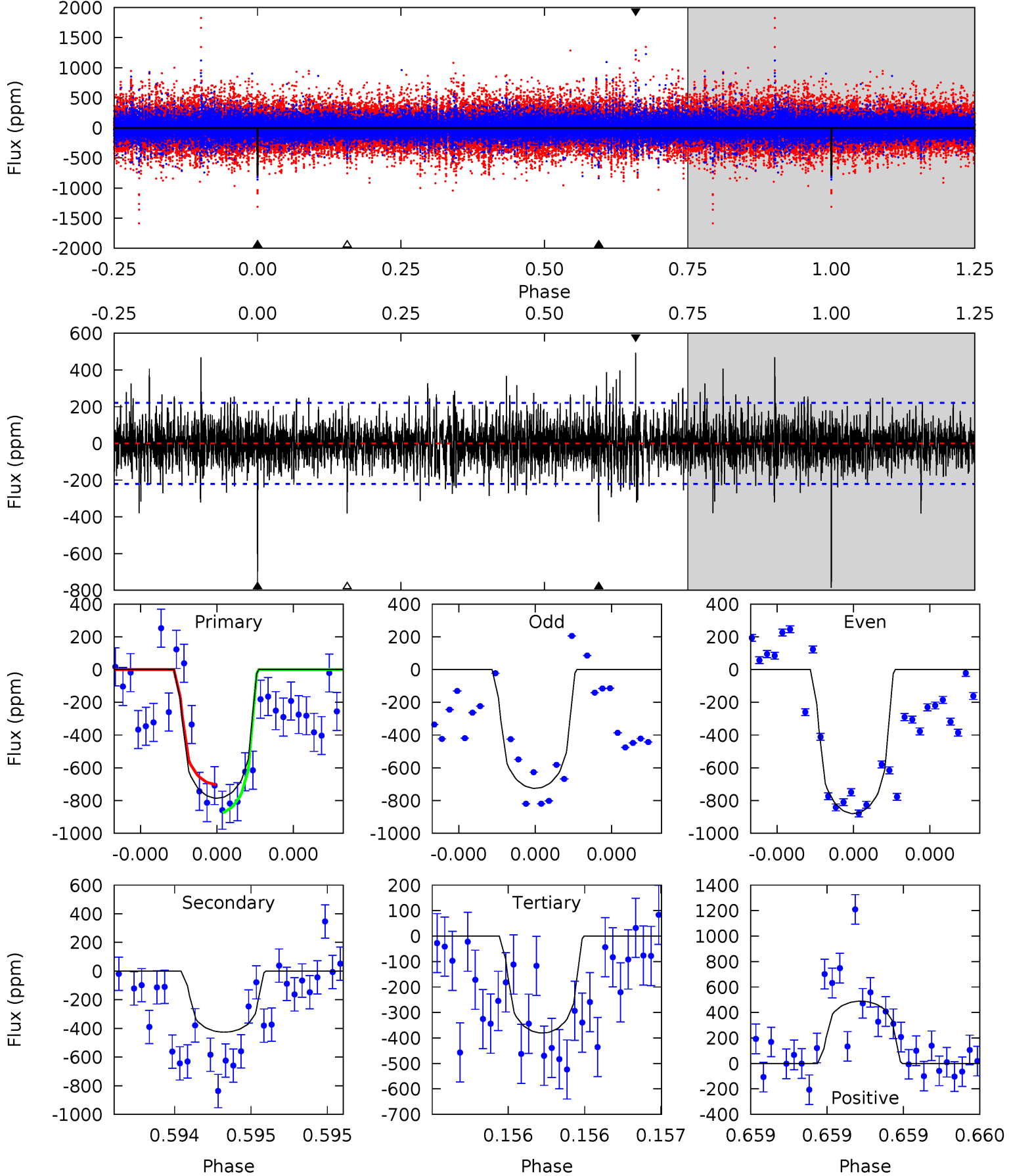
TCE 007461212-01 P=496.222193 Days $T_0=272.329244$ (BKJD)



DV Model-Shift Uniqueness Test

007461212-01, P = 496.228815 Days, E = 272.263395 Days

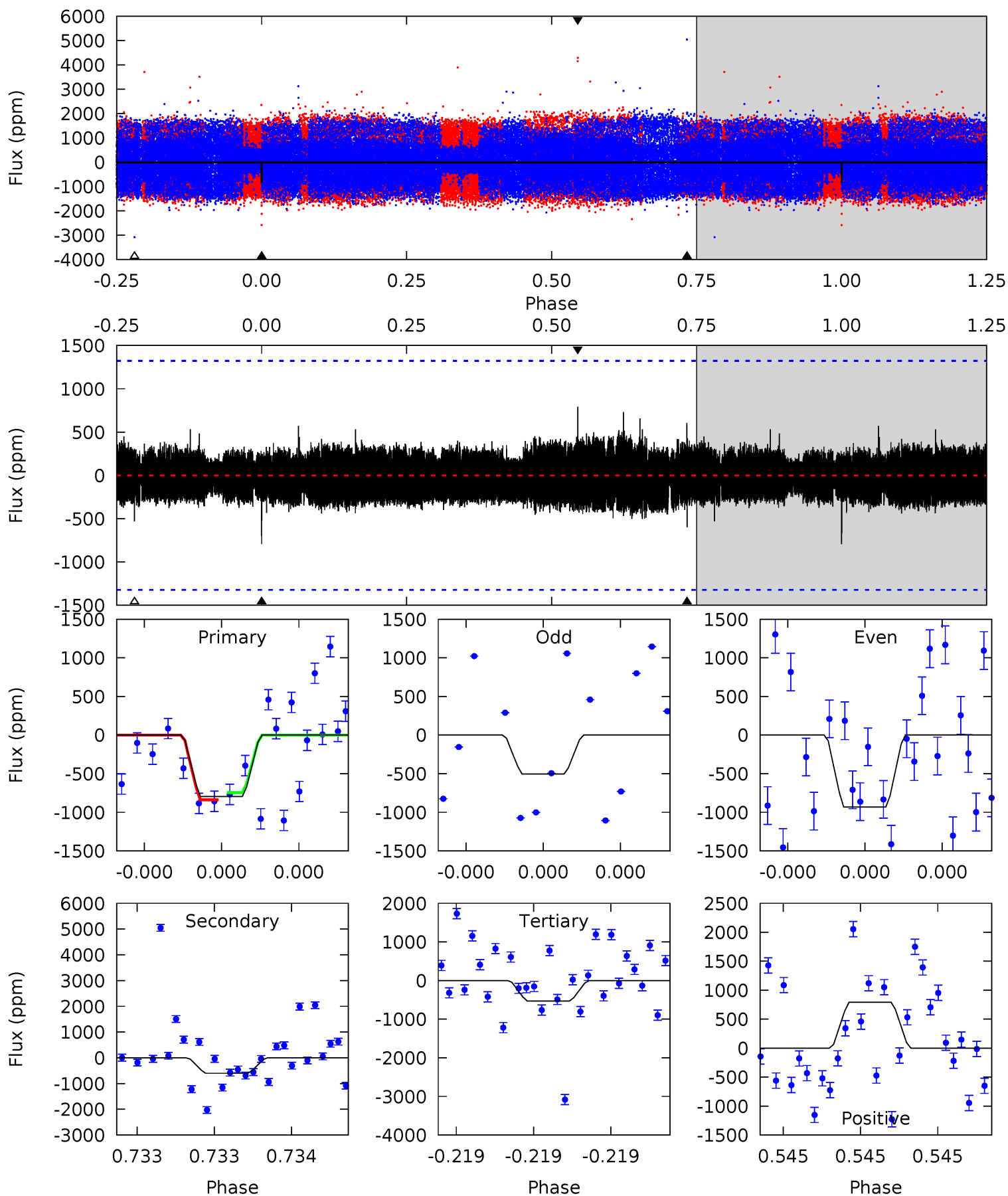
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.0	10.9	9.70	12.5	5.63	3.56	2.12	10.3	7.57	1.16	-1.60	1.68	1.12	0.38	2.21



Alt Model-Shift Uniqueness Test

007461212-01, P = 496.222193 Days, E = 272.329244 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.44	2.59	2.29	3.43	5.73	3.71	0.83	1.15	0.01	0.30	-0.84	0.91	0.86	0.50	0.20



Stellar Parameters For KIC 007461212

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5497^{+149}_{-149}	$4.492^{+0.077}_{-0.143}$	$-0.160^{+0.300}_{-0.300}$	$0.861^{+0.185}_{-0.100}$	$0.840^{+0.111}_{-0.074}$	$1.855^{+0.625}_{-0.773}$
	+3%/-3%	+2%/-3%	+188%/-188%	+21%/-12%	+13%/-9%	+34%/-42%
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 007461212-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-426 ± 39	$3.48^{+3.30}_{-2.20}$	295^{+15}_{-12}	4353^{+2442}_{-907}	$25467^{+171694}_{-18666}$
Alt.	-598 ± 231	$3.88^{+3.34}_{-2.59}$	295^{+17}_{-13}	4472^{+2703}_{-940}	$29462^{+228153}_{-21885}$

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 $A_{obs} \gg 1.0$

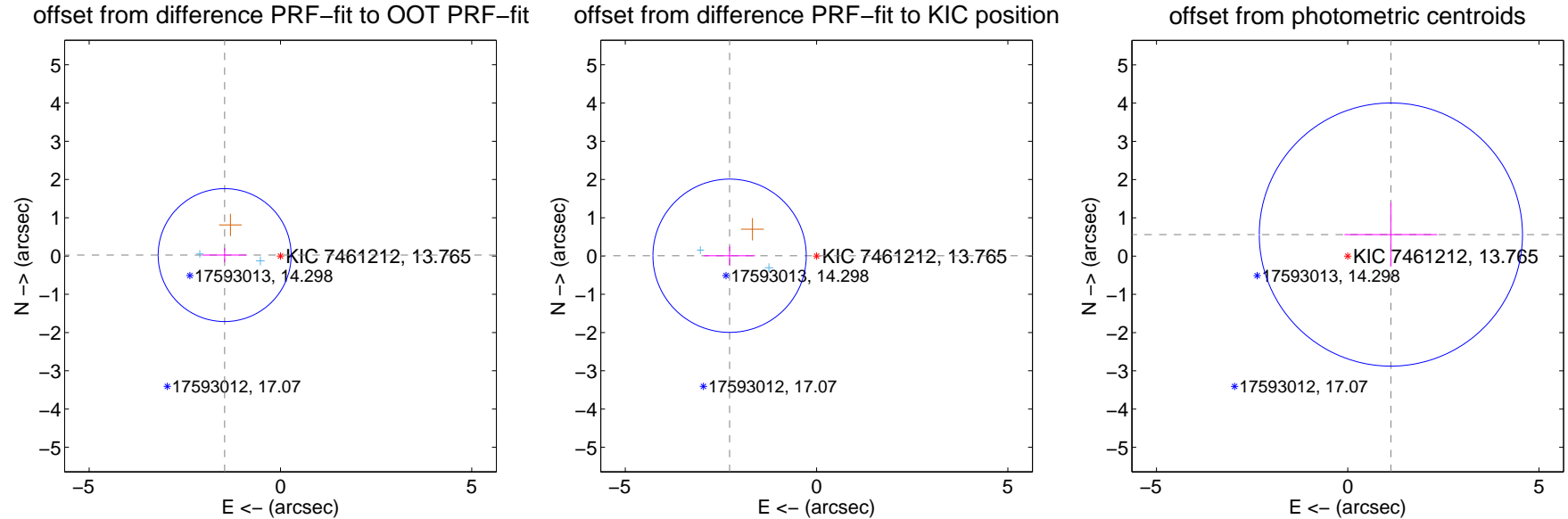
DV Centroid Data

Supplemental centroid analysis for 007461212-01. Kepler magnitude: 13.77. Transit SNR 7.72

There are 2 quarters with good PRF difference image offsets

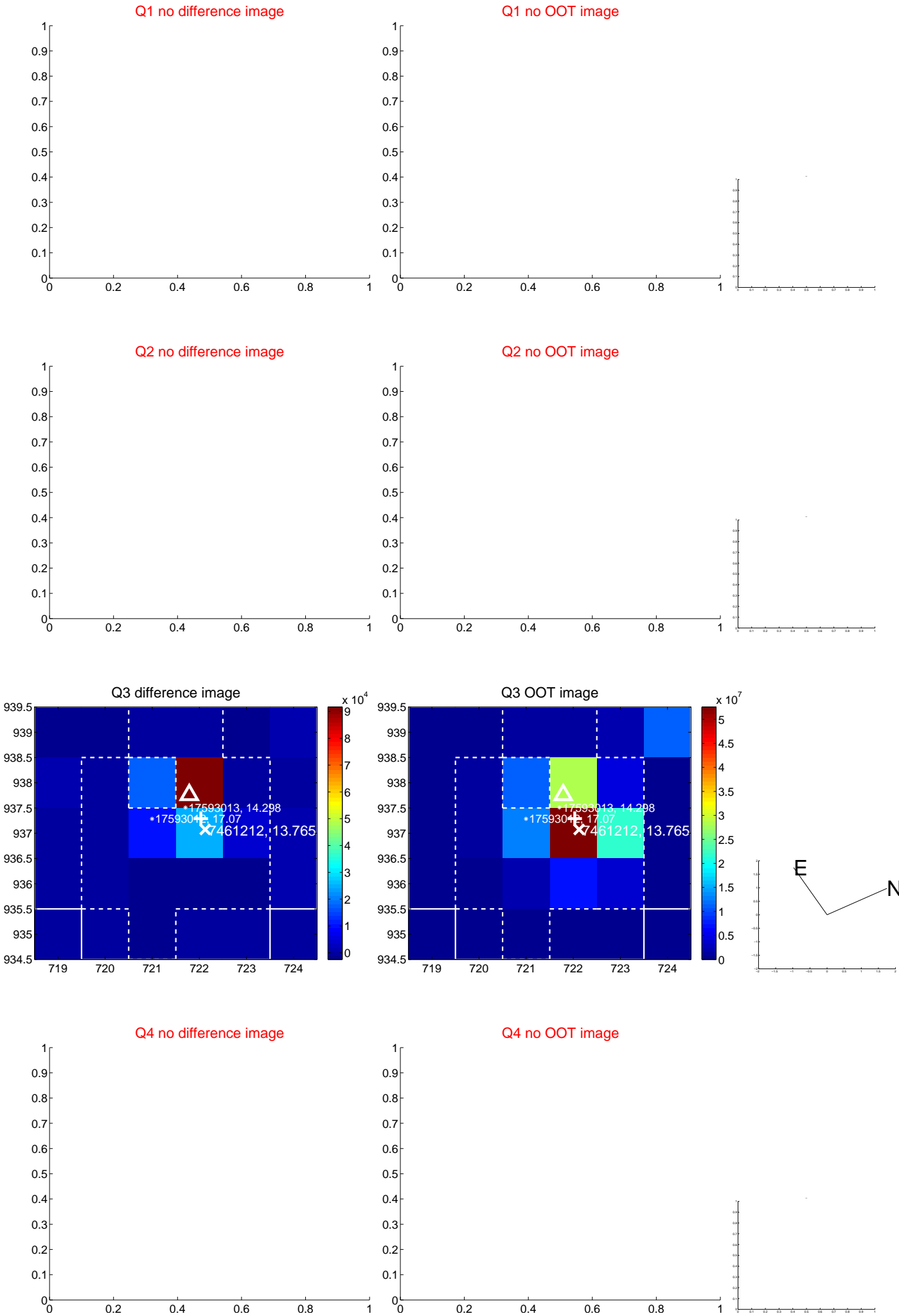
The direct PRF centroid is offset from the target star catalog position by about 0.38 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.459 ± 0.579	2.52	1.458 ± 0.579	0.024 ± 0.186
PRF-fit source offset from KIC position	2.274 ± 0.668	3.40	2.274 ± 0.668	0.007 ± 0.246
photometric centroid source offset	1.26 ± 1.15	1.10	-1.13 ± 1.21	0.56 ± 0.84

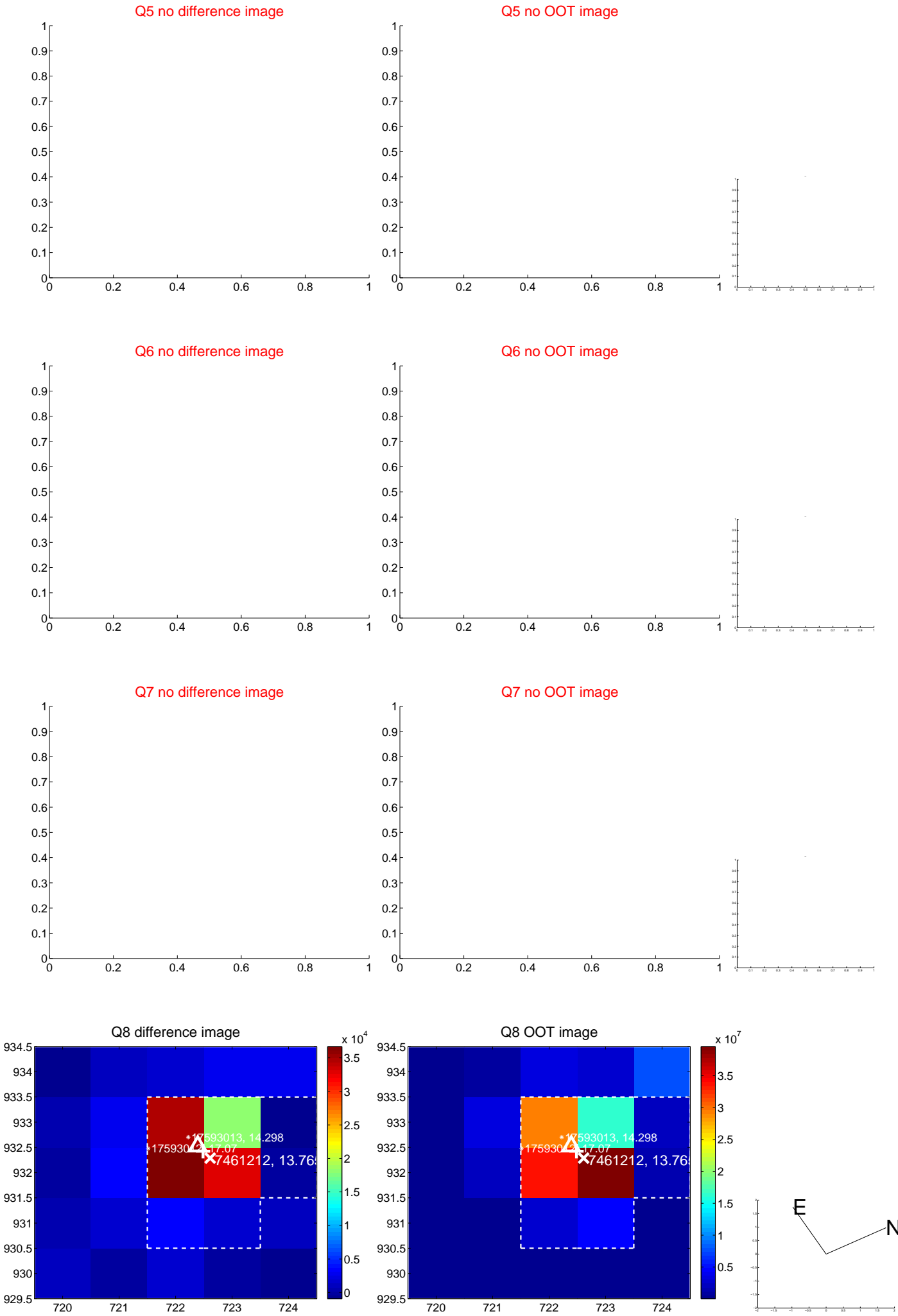


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



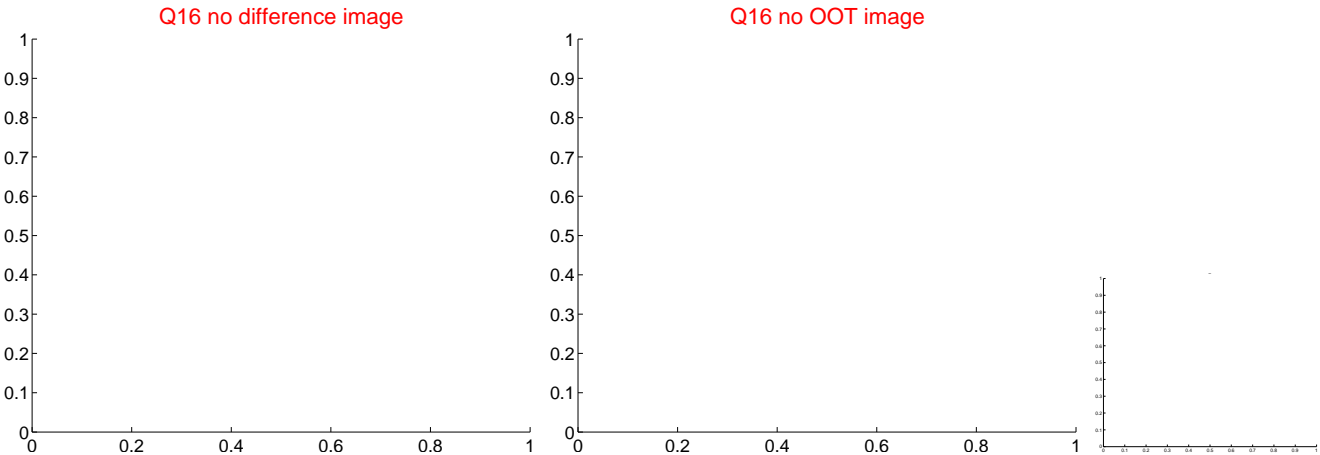
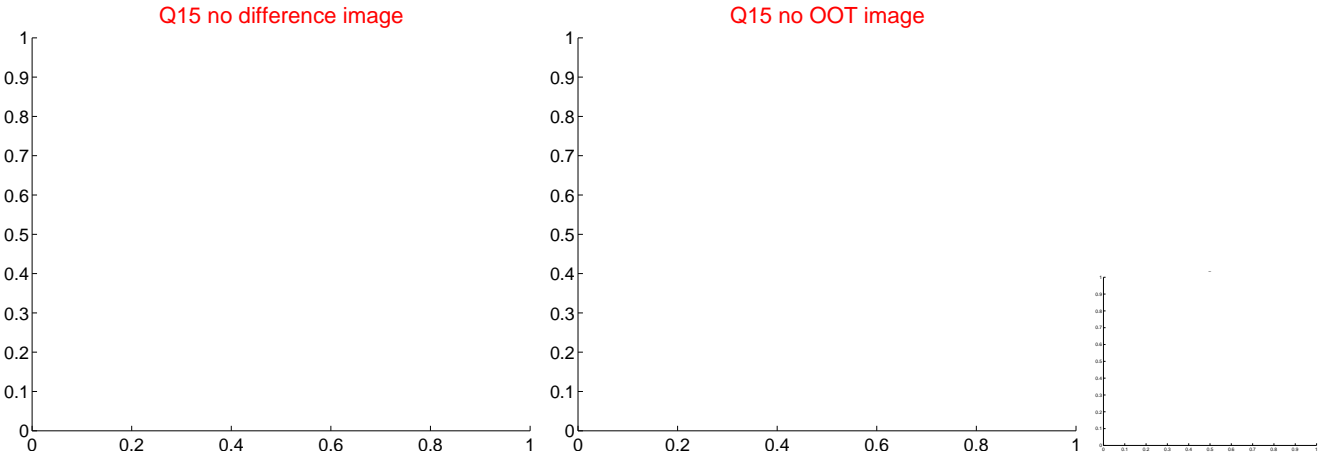
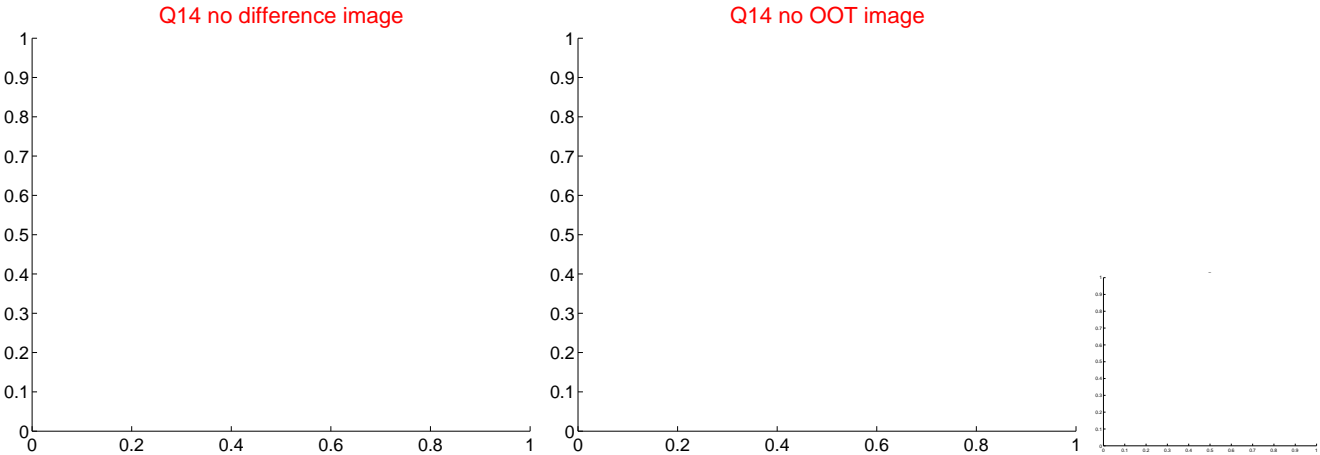
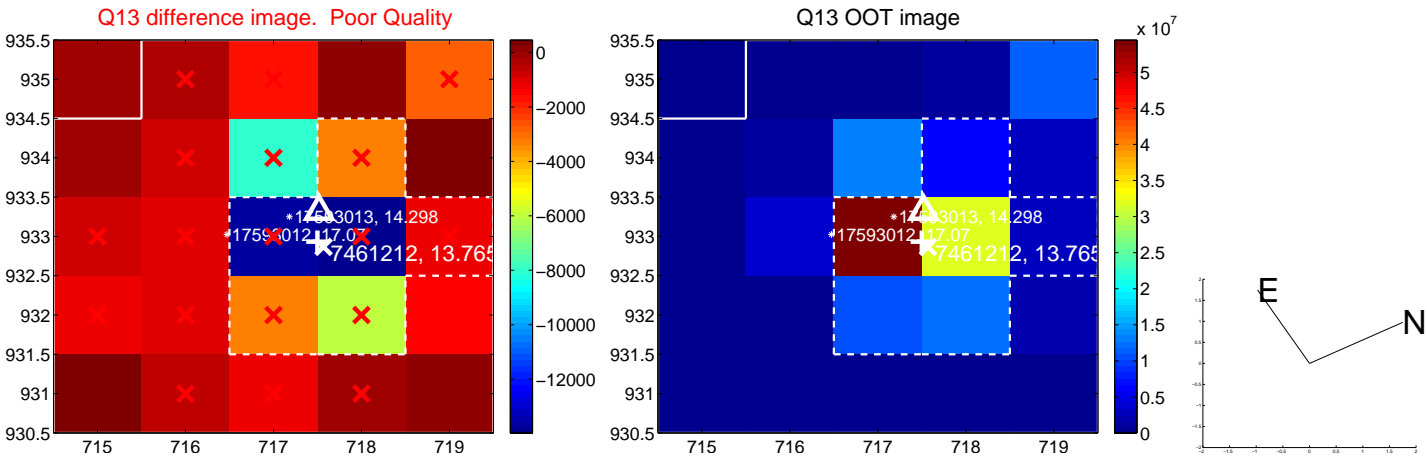
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



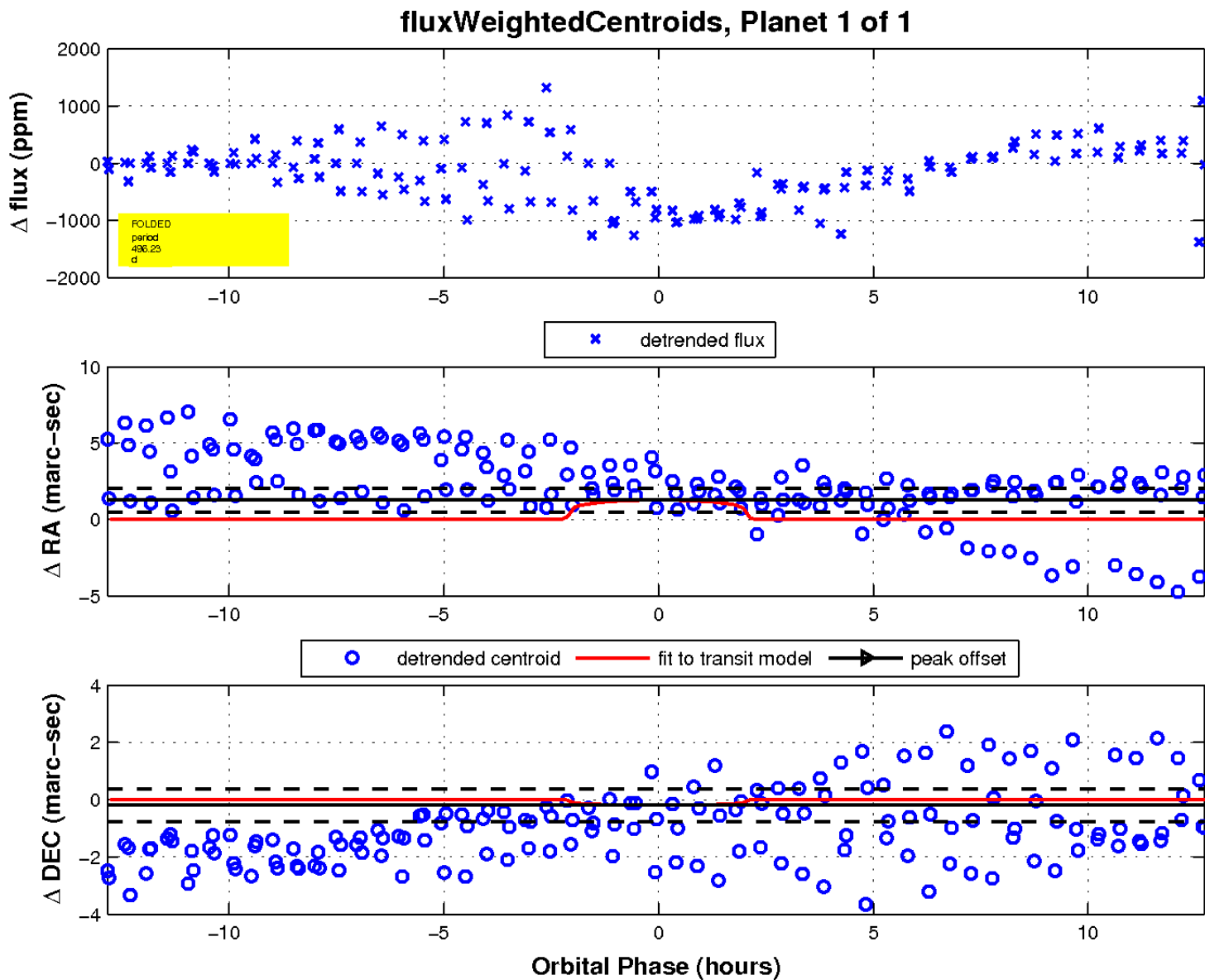
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

