

KIC 004994506

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})
004994506-01	OBS	No	567.200859	329.574831	134.2	5.977	12.6	1.1	0.72	5651	0.94	0.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004994506-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST

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

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

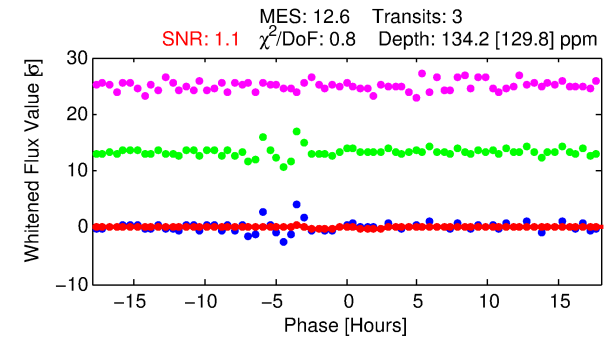
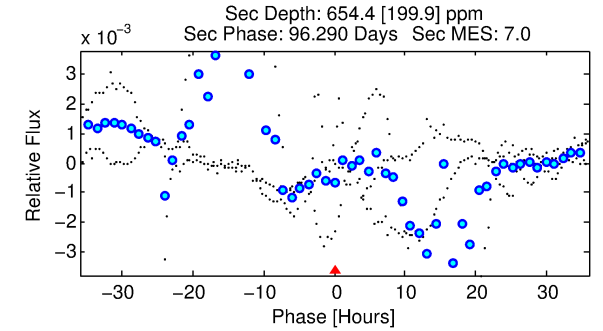
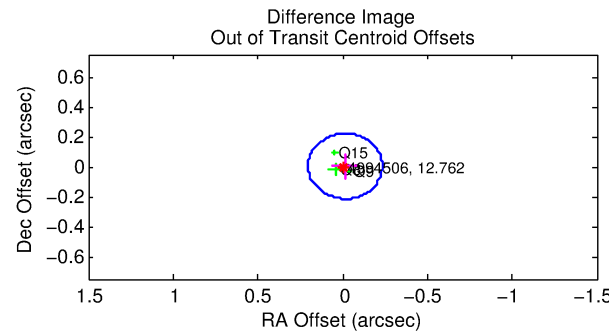
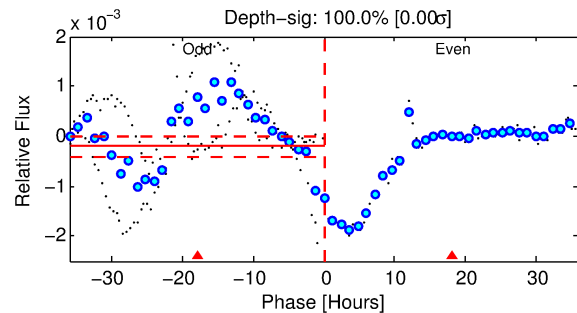
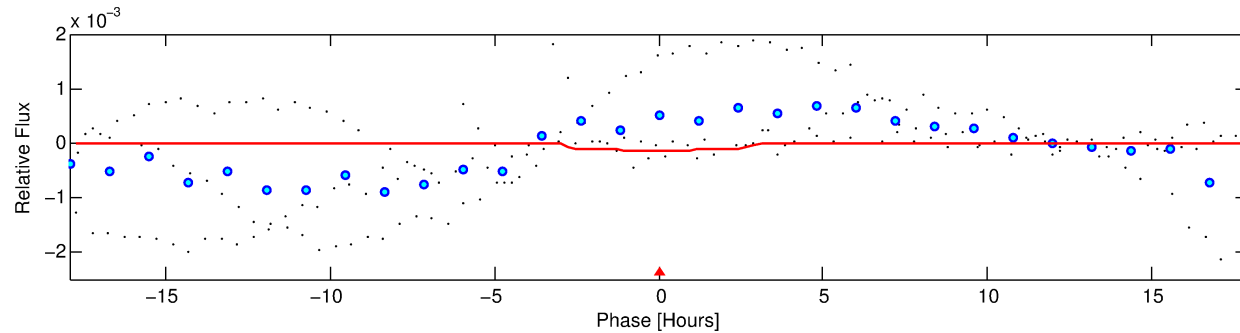
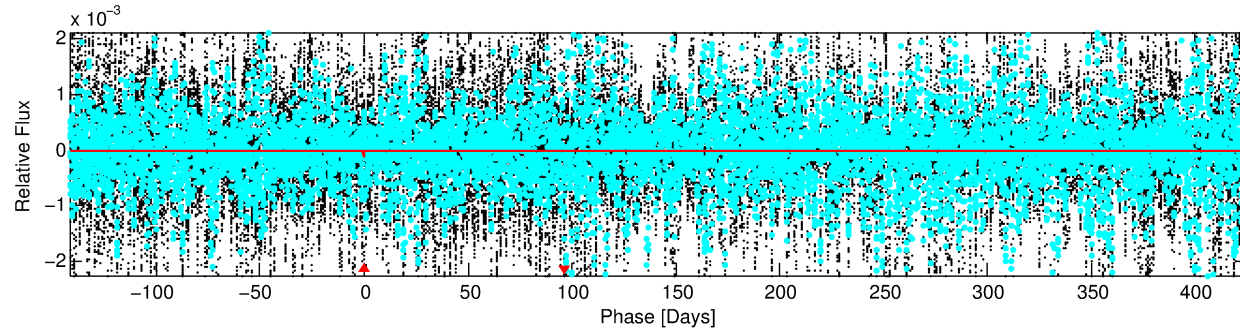
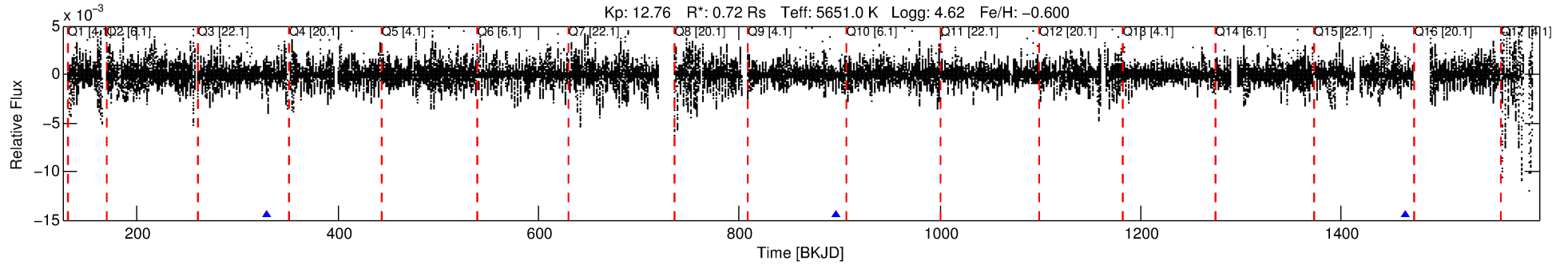
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004994506-01

No Significant Match Found

DV One-Page Summary

KIC: 4994506 Candidate: 1 of 1 Period: 567.201 d



DV Fit Results:

Period = 567.20086 [0.01874] d
Epoch = 329.5748 [0.0243] BKJD
Rp/R* = 0.0119 [0.0192]
a/R* = 427.61 [3063.96]
b = 0.82 [2.84]
Seff = 0.31 [0.08]
Teq = 190 [13] K
Rp = 0.94 [1.53] Re
a = 1.2426 [0.2078] AU
Ag = 630193.32 [2052473.47] [0.31σ]
Teffp = 8289 [6736] K [1.20σ]

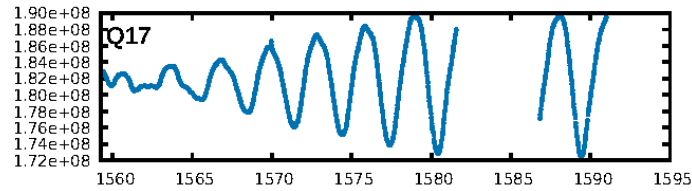
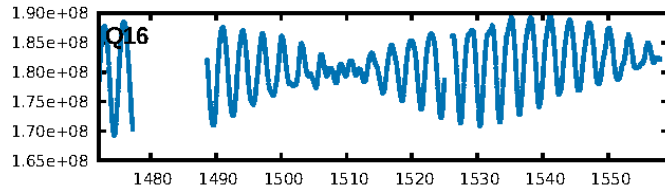
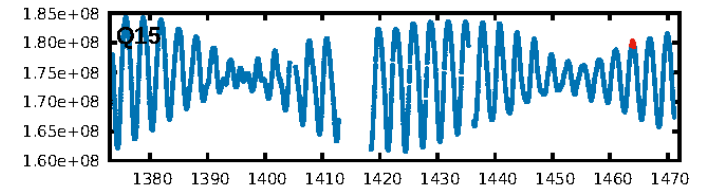
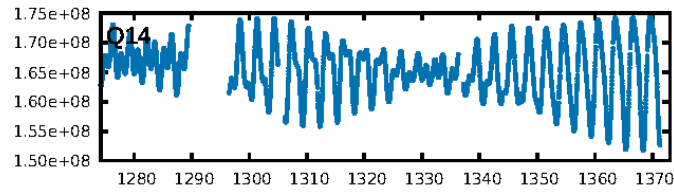
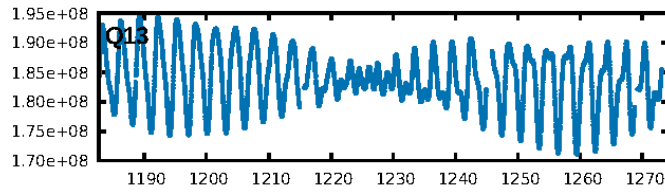
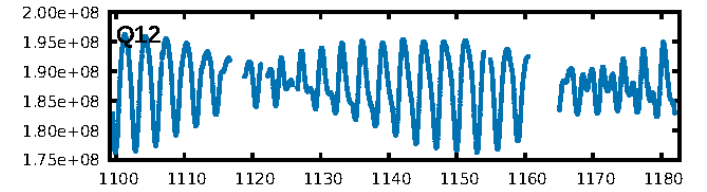
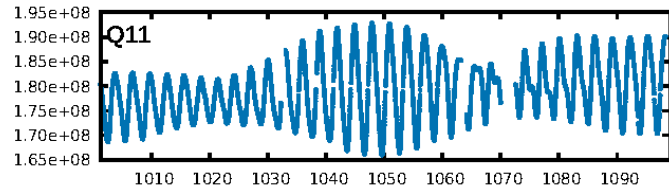
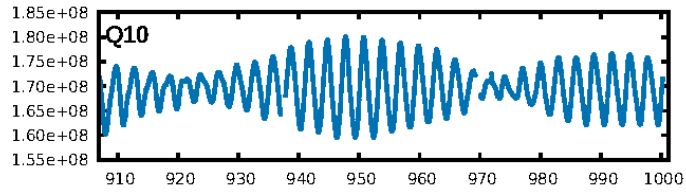
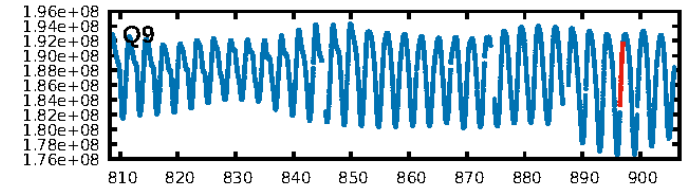
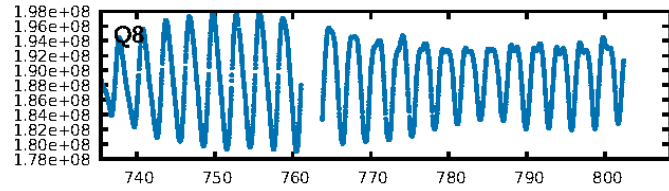
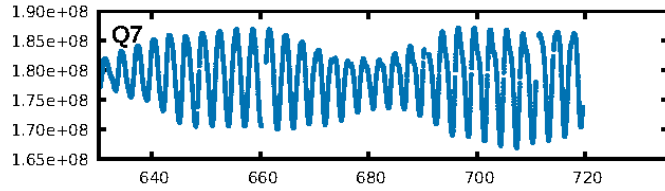
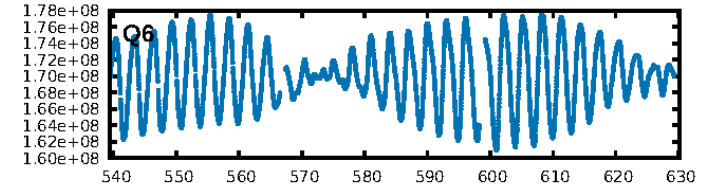
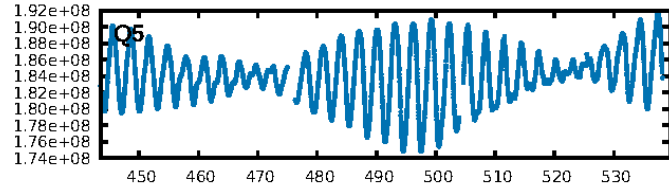
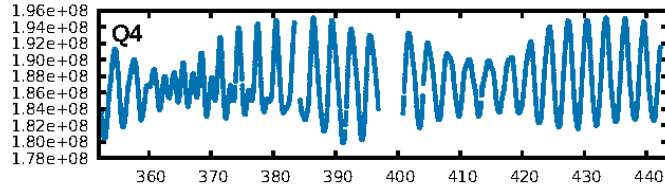
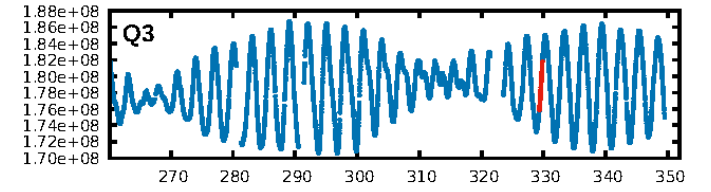
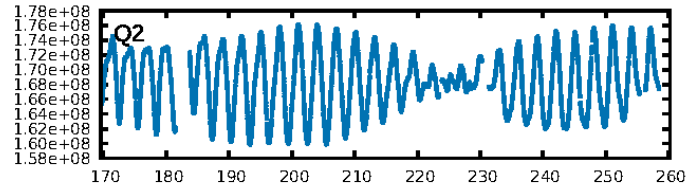
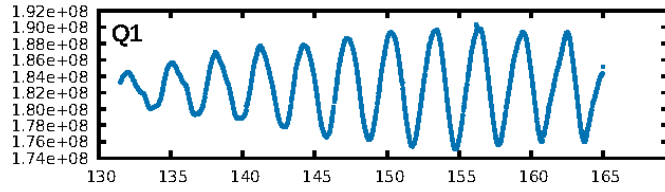
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 26.3%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 1.02e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.2143
Centroid-sig: 23.3%
Centroid-so: 2.414 arcsec [1.01σ]
OotOffset-rm: 0.015 arcsec [0.21σ]
OotOffset-st: 0/2/0/1 [3]
KicOffset-rm: 0.216 arcsec [1.85σ]
KicOffset-st: 0/2/0/1 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

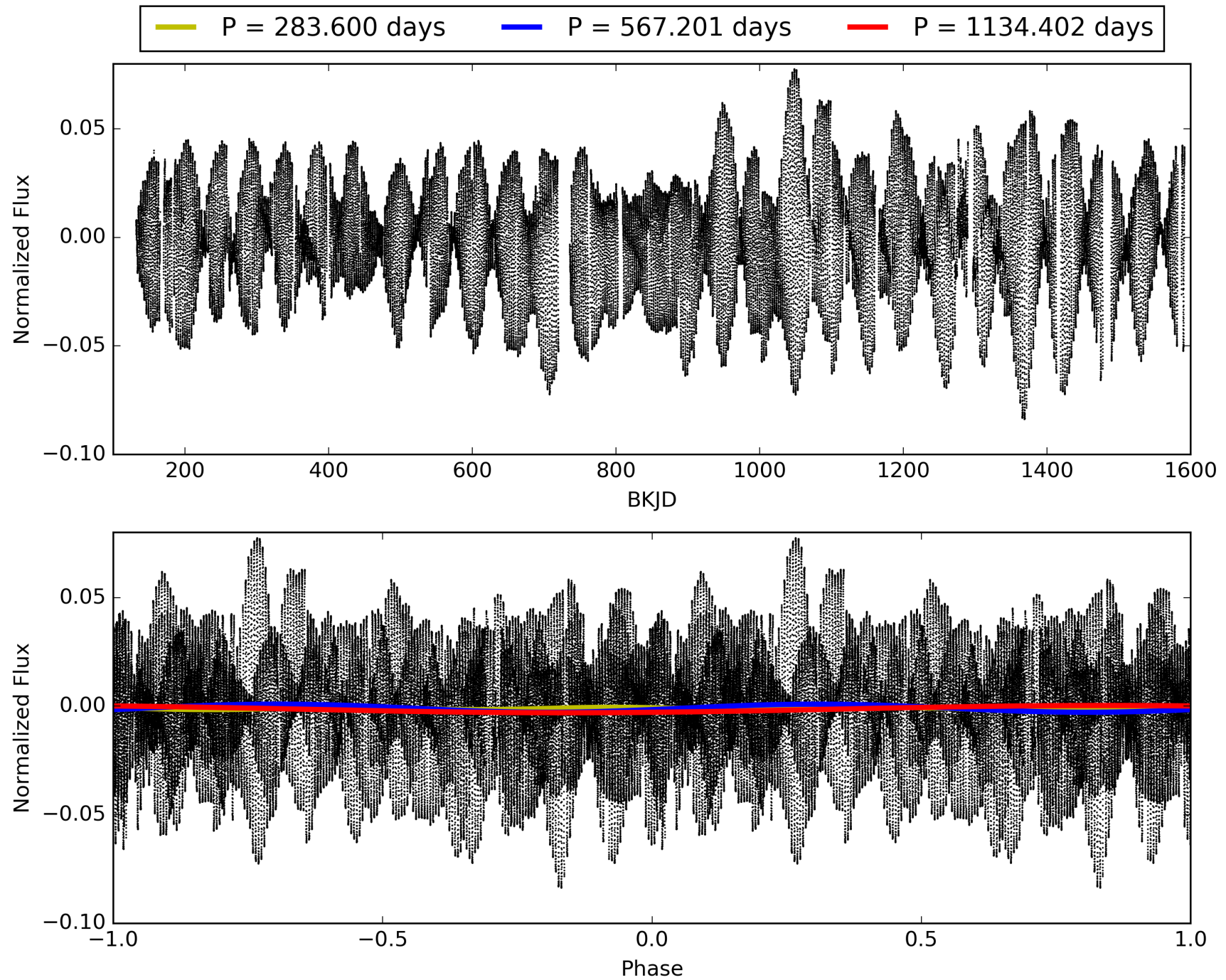
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 10:24:20 Z

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

TCE 004994506-01, PDC Light Curves

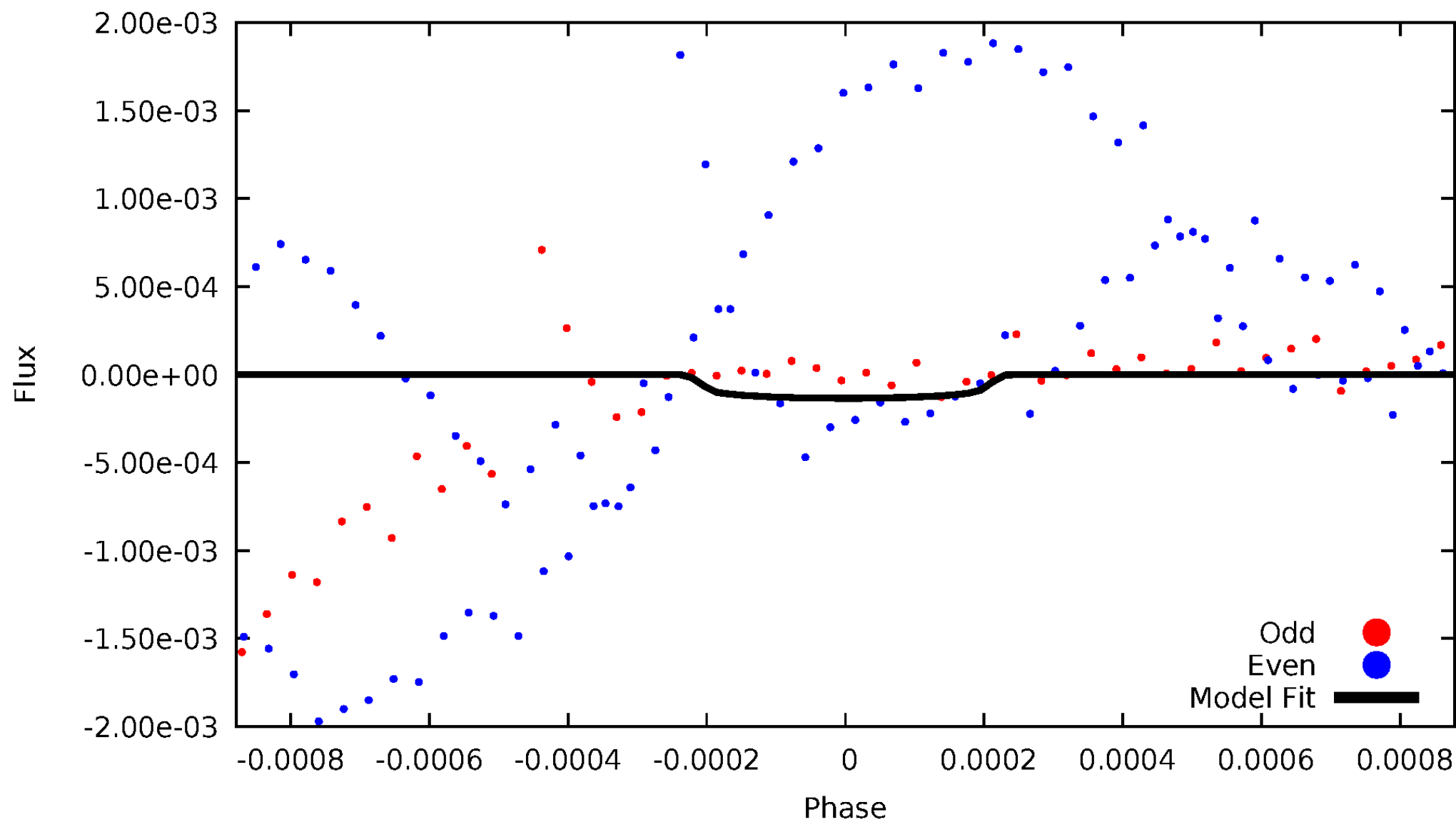


TCE 004994506-01



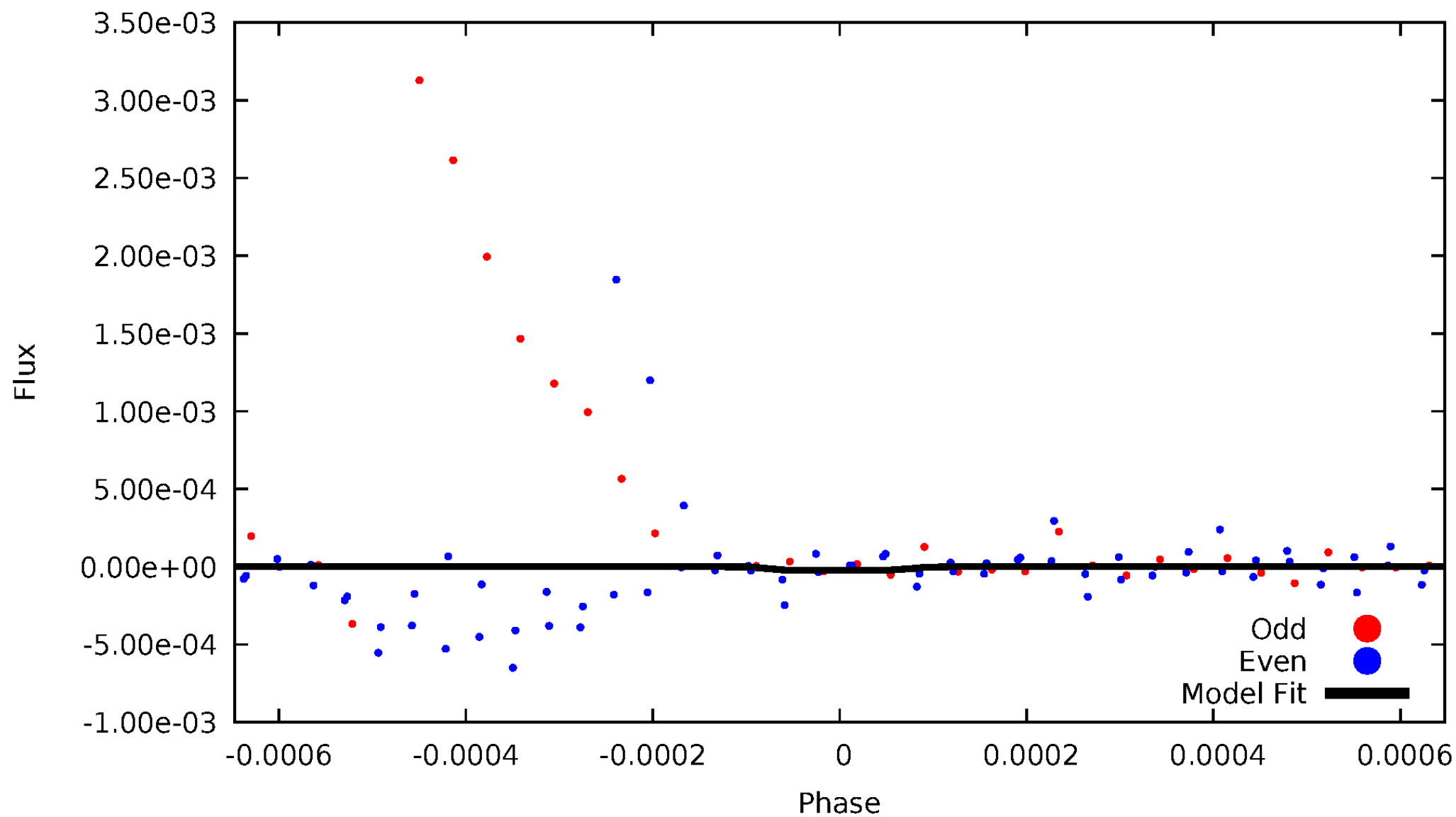
DV Odd/Even

TCE 004994506-01



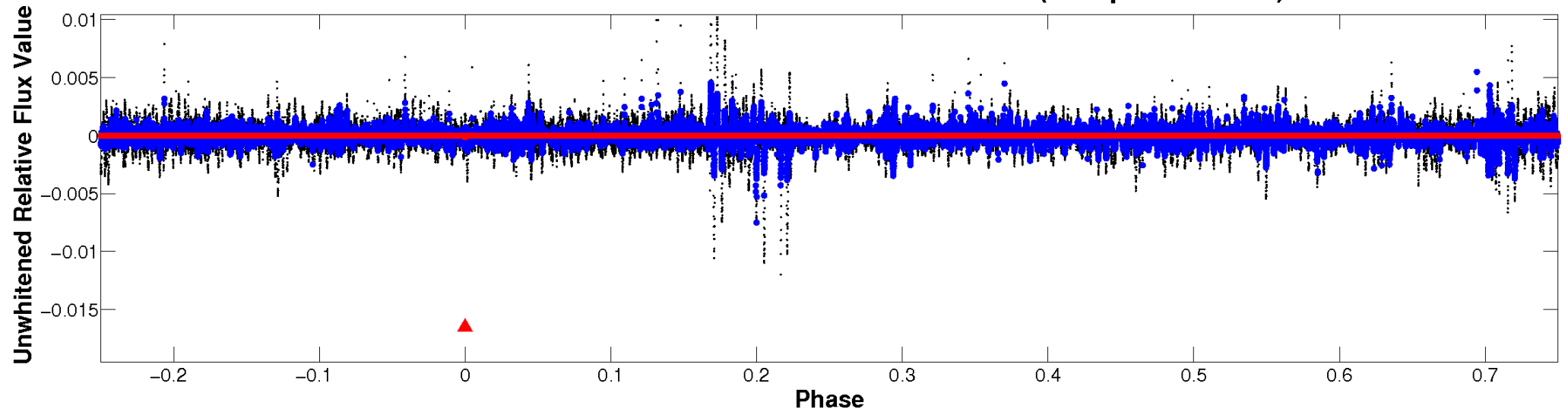
ALT Odd/Even

TCE 004994506-01

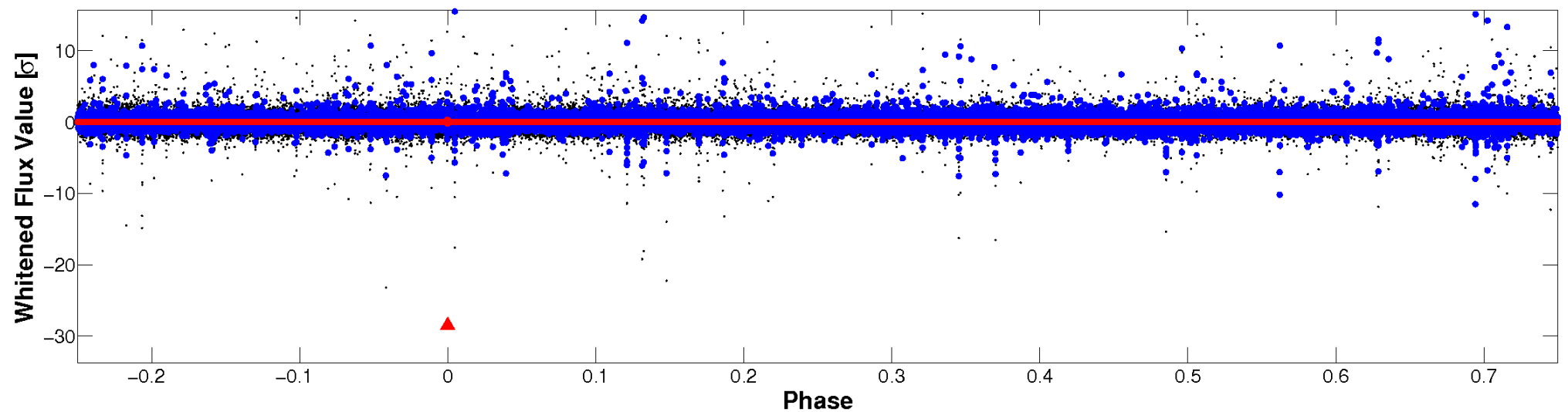


Non-Whitened Vs. Whitened Light Curve

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

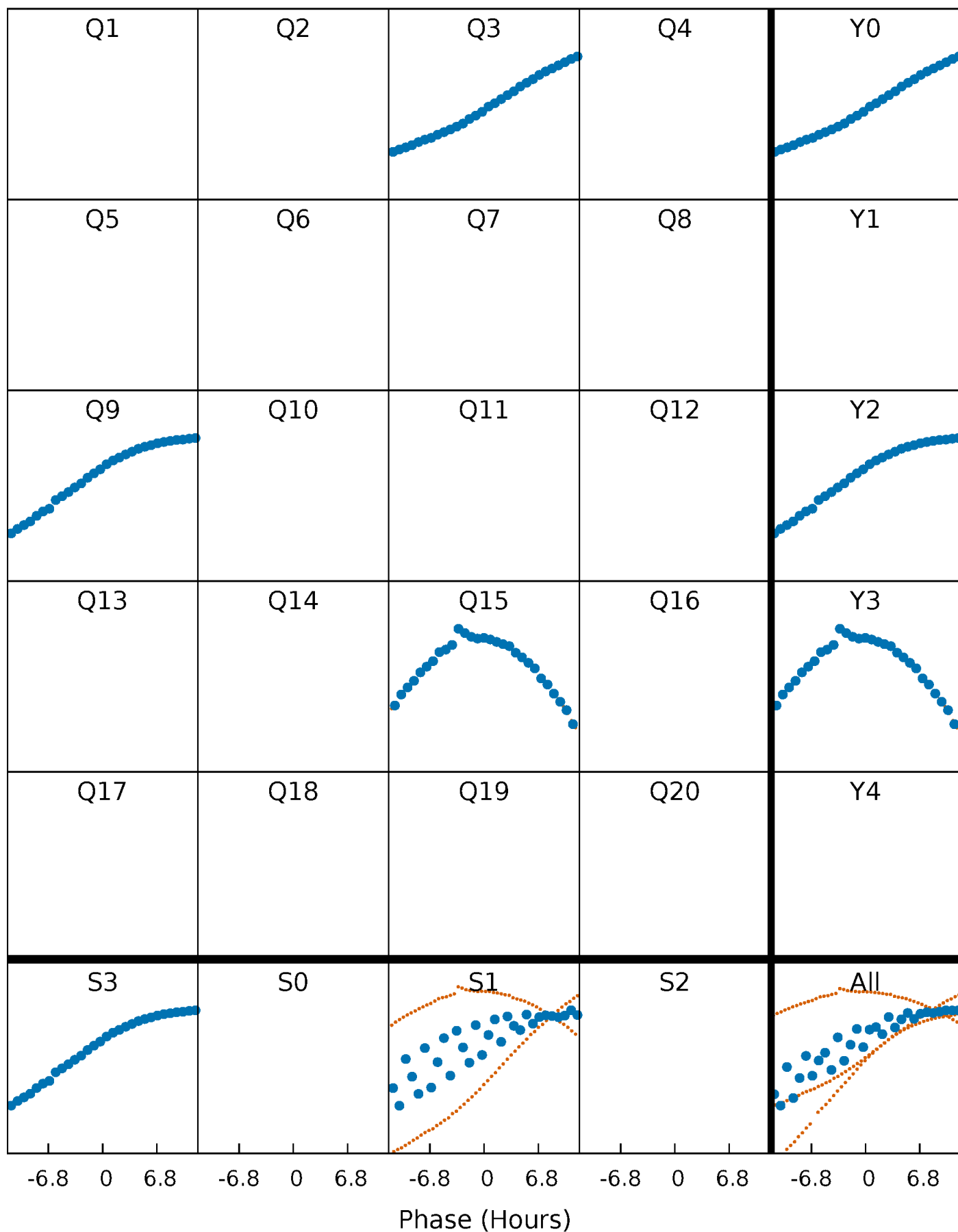


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



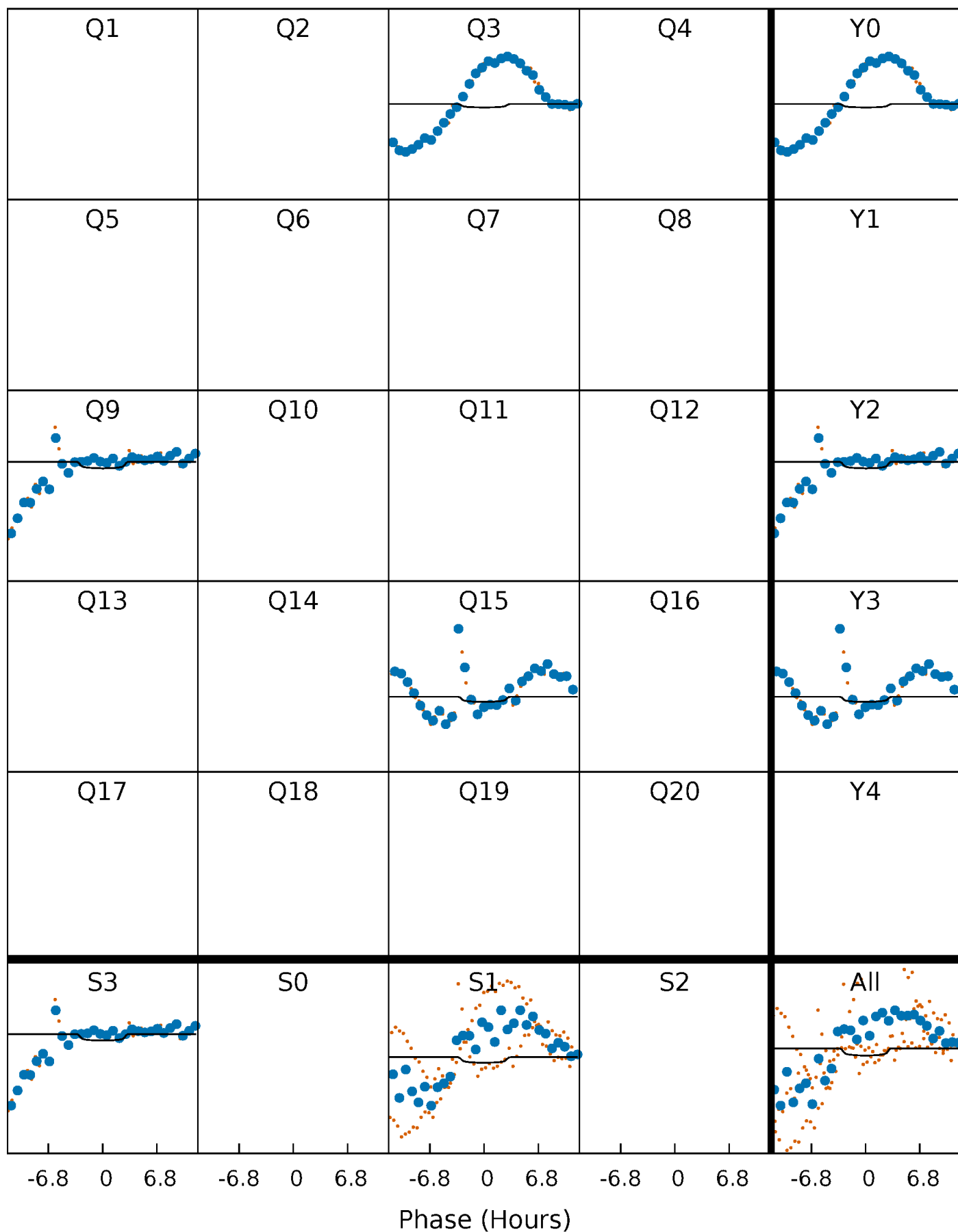
PDC Quarter-Phased Transit Curves

TCE 004994506-01 P=567.200859 Days $T_0=329.574831$ (BKJD)



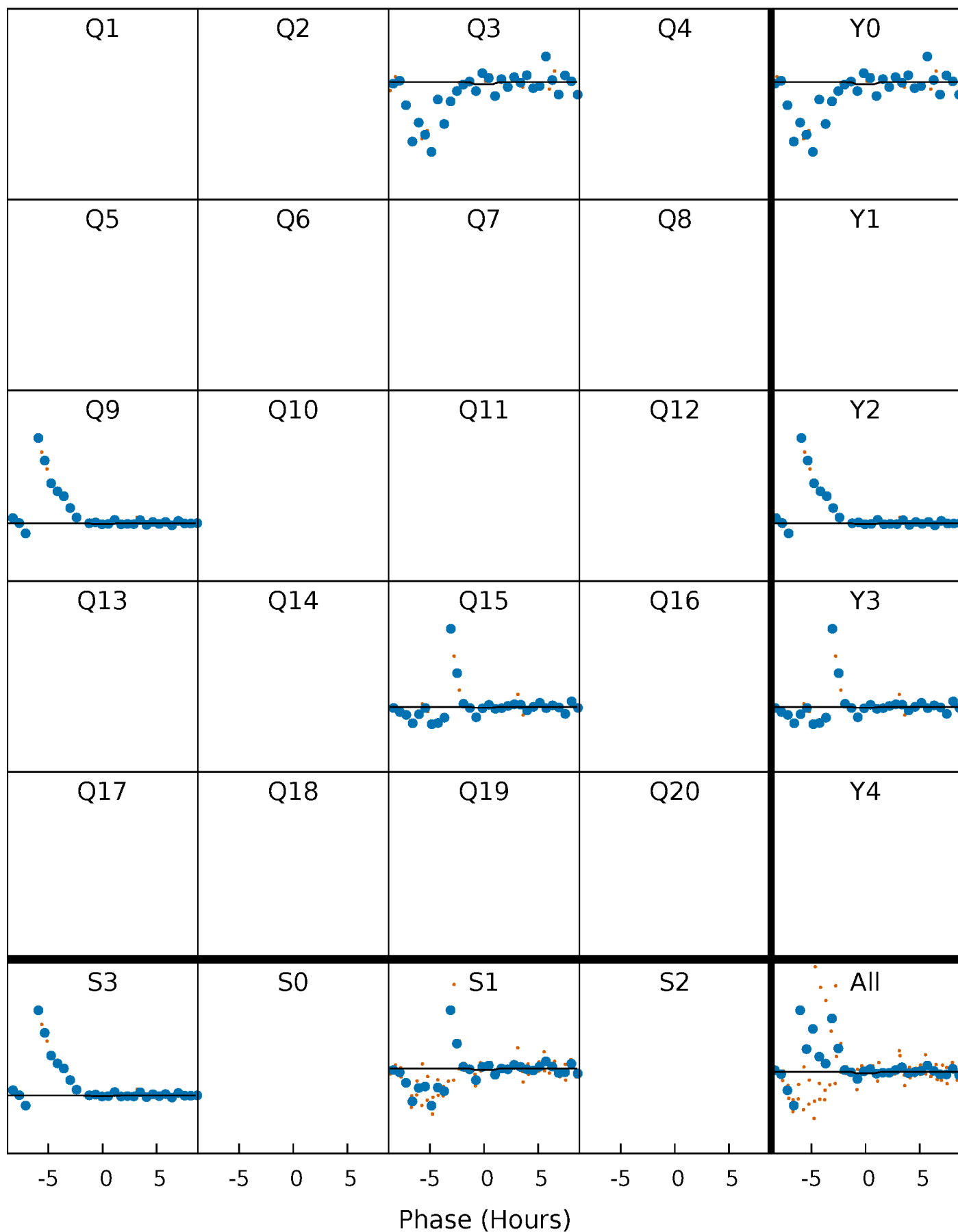
DV Quarter-Phased Transit Curves

TCE 004994506-01 P=567.200859 Days $T_0=329.574831$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

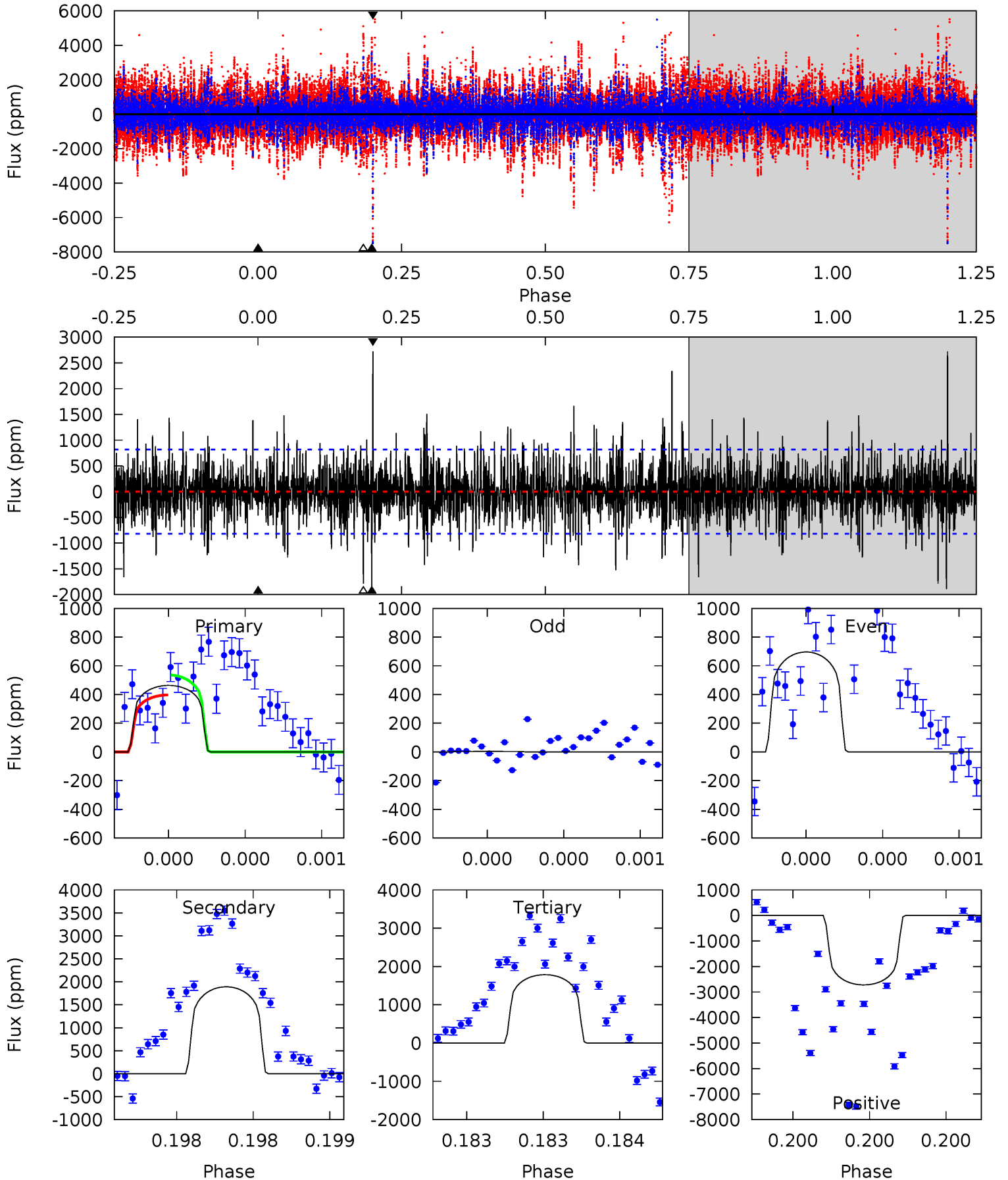
TCE 004994506-01 P=567.194759 Days $T_0=329.587565$ (BKJD)



DV Model-Shift Uniqueness Test

004994506-01, P = 567.200859 Days, E = 329.574831 Days

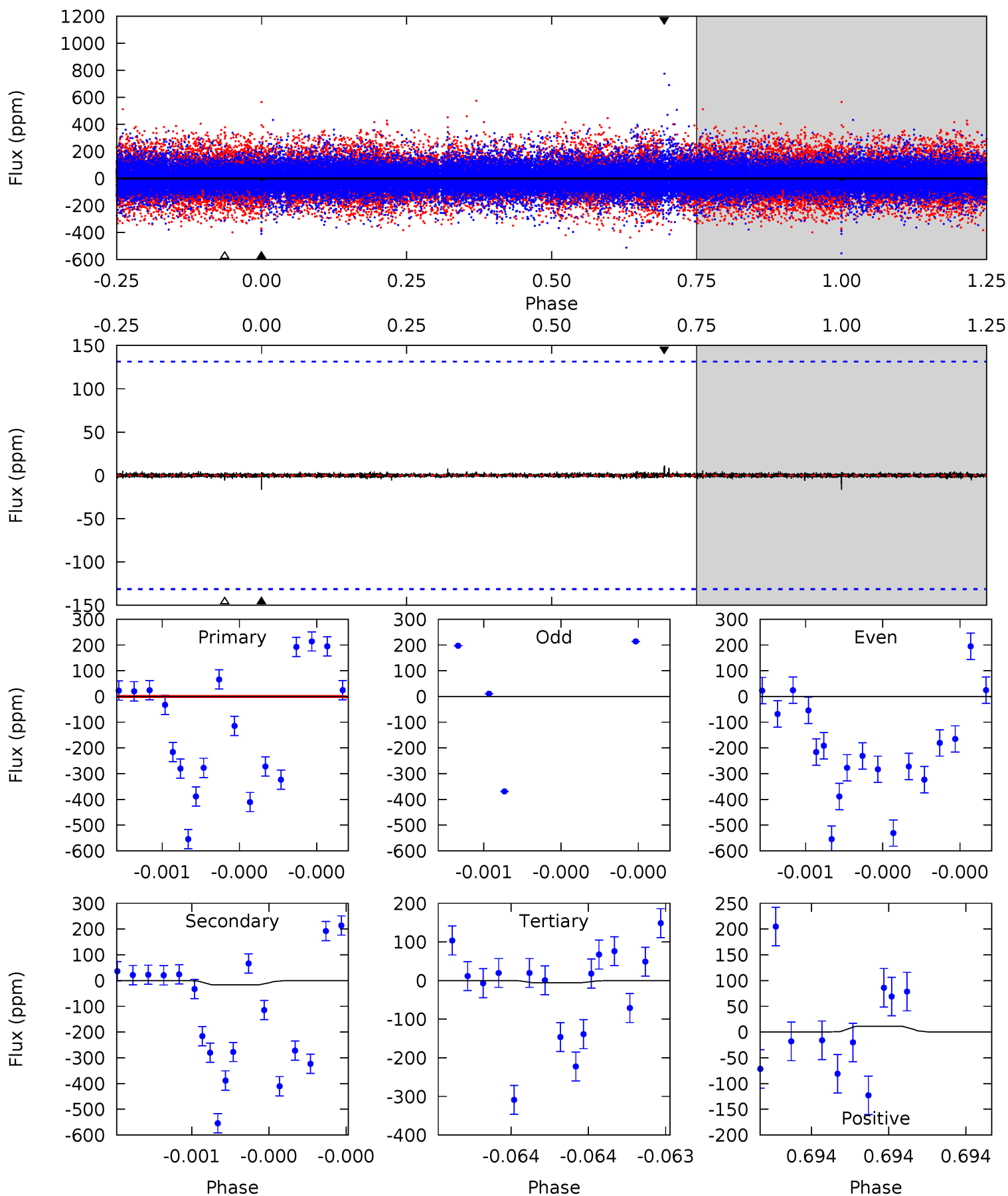
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.17	12.9	12.2	18.6	5.59	3.51	2.61	-9.03	-15.4	0.72	-5.69	2.05	-150.6	0.59	0.47



Alt Model-Shift Uniqueness Test

004994506-01, P = 567.194759 Days, E = 329.587565 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.68	0.72	0.26	0.49	5.74	3.73	0.04	0.42	0.20	0.47	0.24	0.43	27.7	0.40	0.73



Stellar Parameters For KIC 004994506

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5651^{+169}_{-152}	$4.619^{+0.032}_{-0.128}$	$-0.600^{+0.300}_{-0.300}$	$0.724^{+0.147}_{-0.049}$	$0.799^{+0.078}_{-0.078}$	$2.965^{+0.503}_{-1.115}$
	+3%/-3%	+1%/-3%	+50%/-50%	+20%/-7%	+10%/-10%	+17%/-38%
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 004994506-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1891 ± 146	$1.52^{+1.33}_{-1.03}$	270^{+14}_{-10}	9105^{+18205}_{-2854}	$675446^{+6018499}_{-483892}$
Alt.	-17 ± 23	$1.18^{+1.34}_{-0.84}$	271^{+13}_{-11}	3281^{+1924}_{-6125}	6742^{+83753}_{-9159}

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

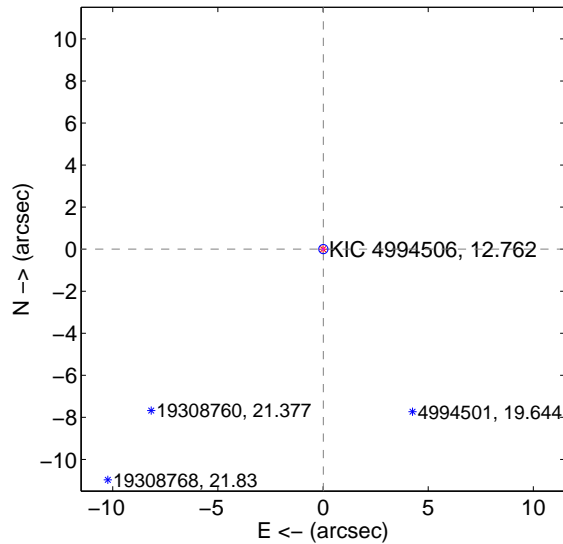
Supplemental centroid analysis for 004994506-01. Kepler magnitude: 12.76. Transit SNR 1.08

There are 1 quarters with good PRF difference image offsets

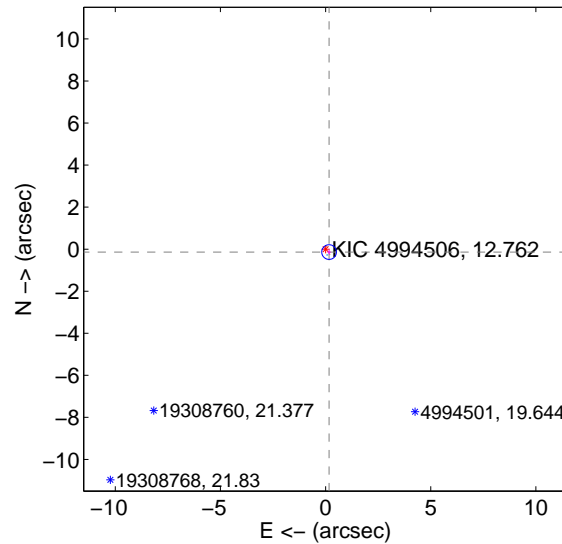
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.015 ± 0.073	0.21	-0.015 ± 0.072	0.003 ± 0.081
PRF-fit source offset from KIC position	0.216 ± 0.116	1.85	-0.166 ± 0.082	-0.138 ± 0.121
photometric centroid source offset	2.41 ± 2.39	1.01	1.93 ± 2.24	1.46 ± 2.63

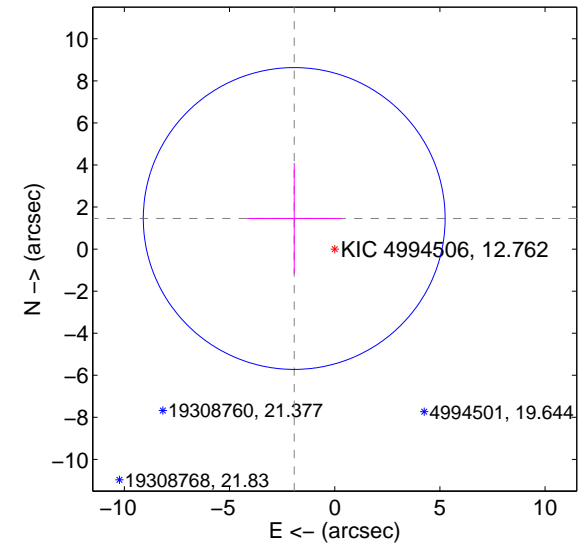
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

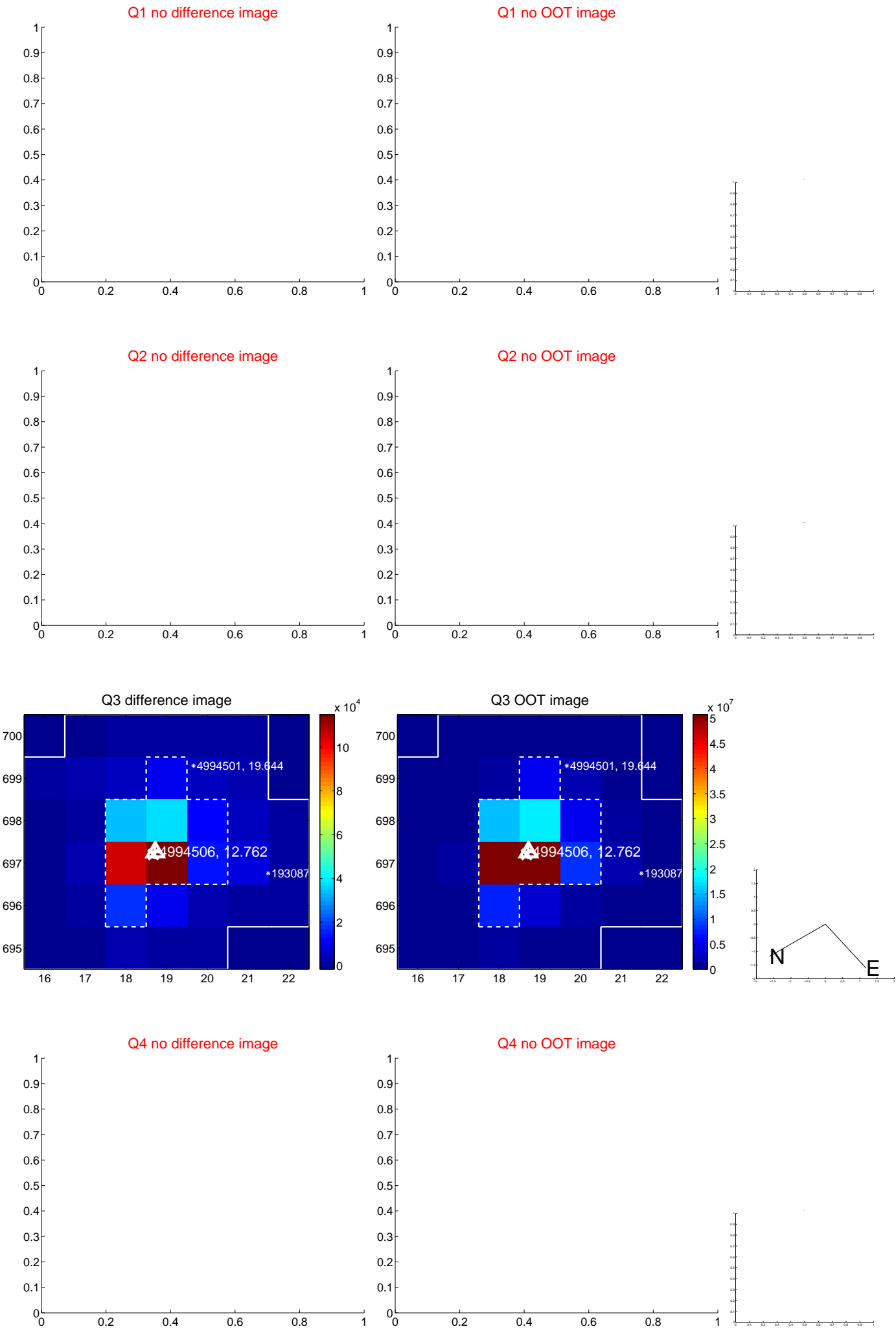


offset from photometric centroids



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.

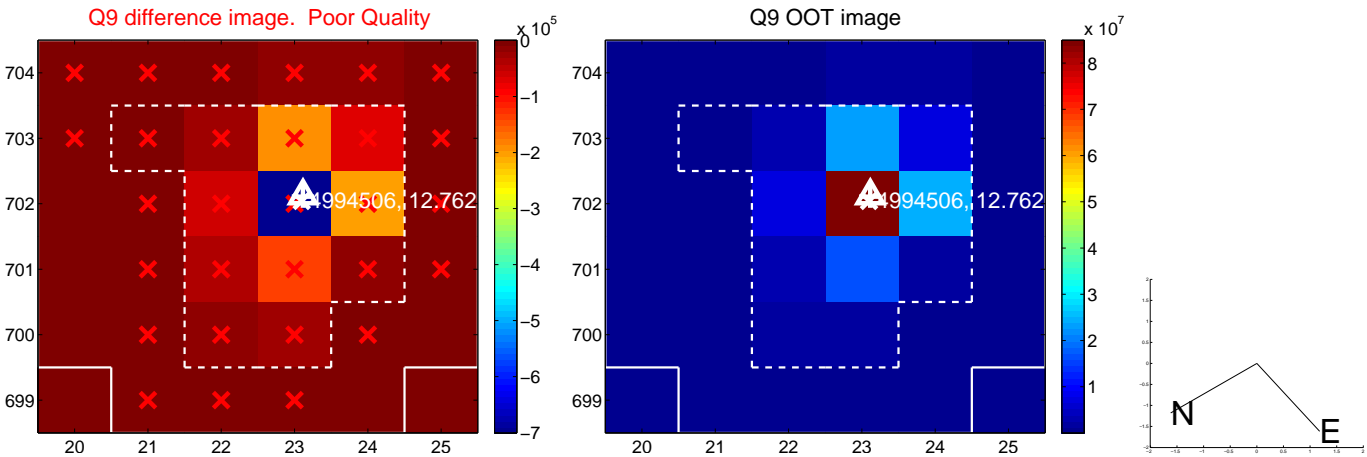
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



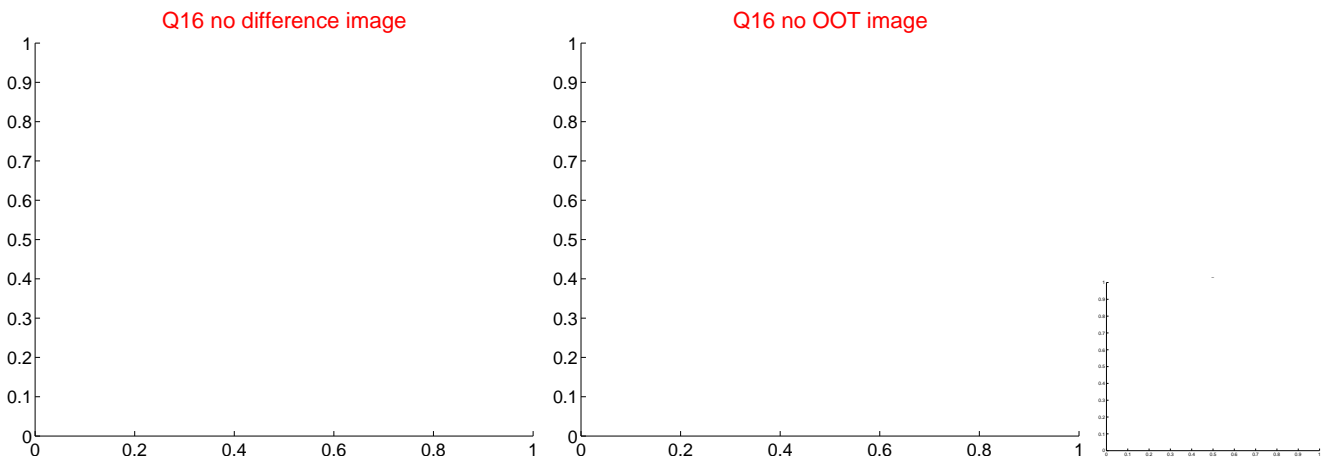
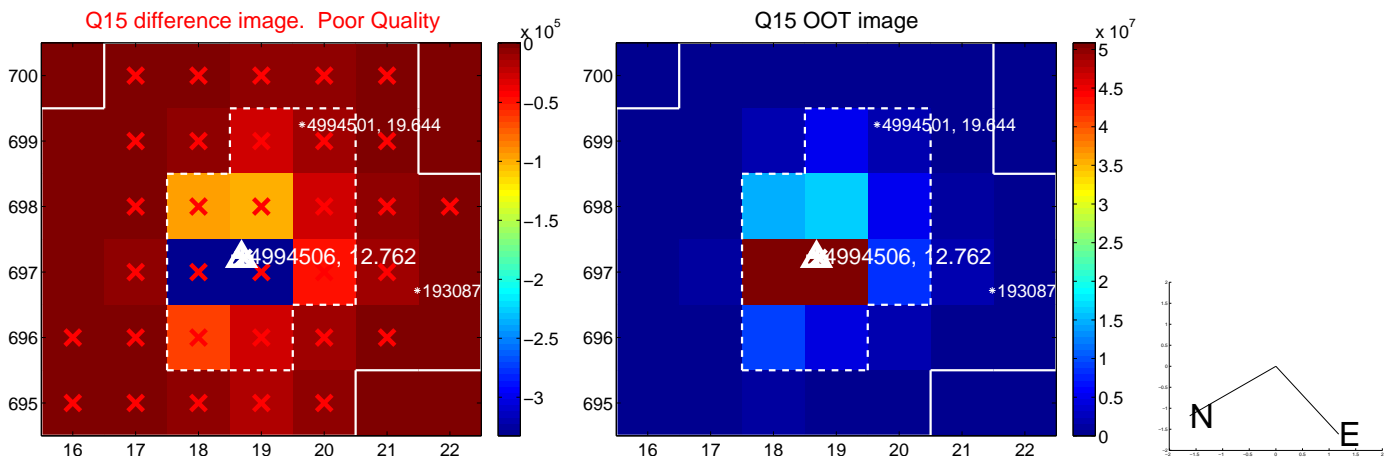
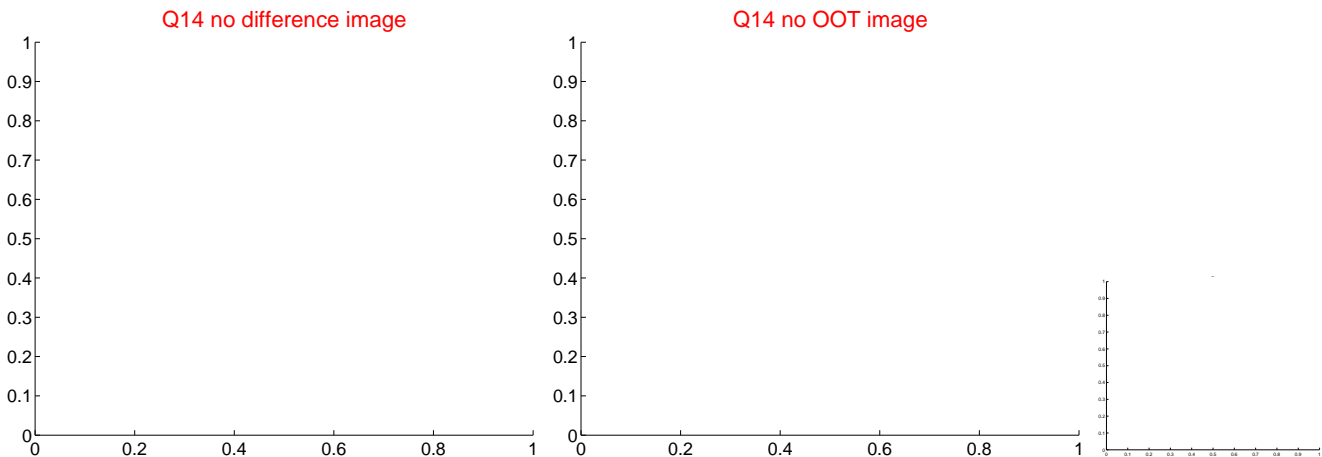
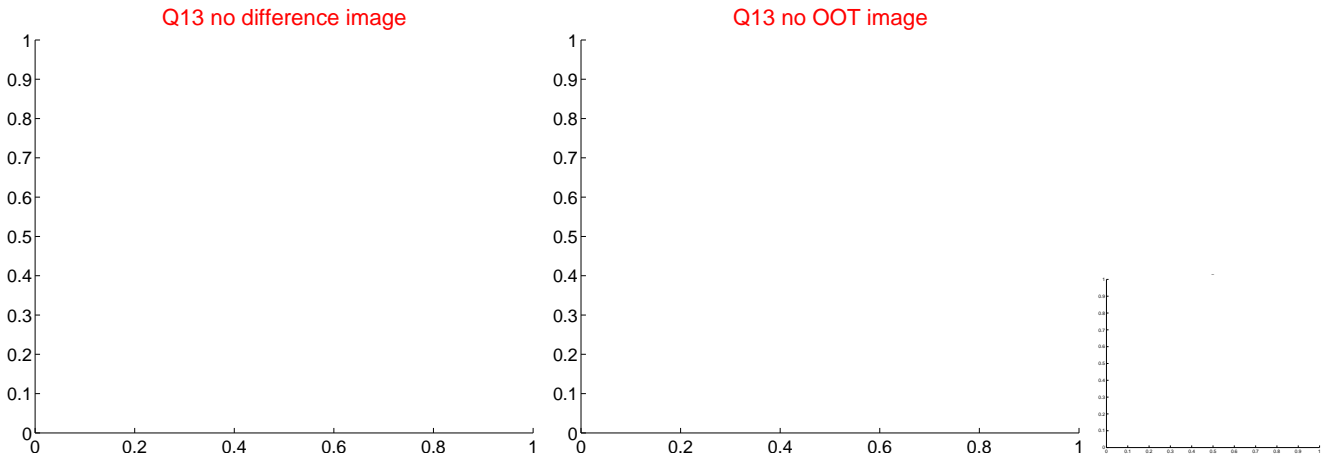
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



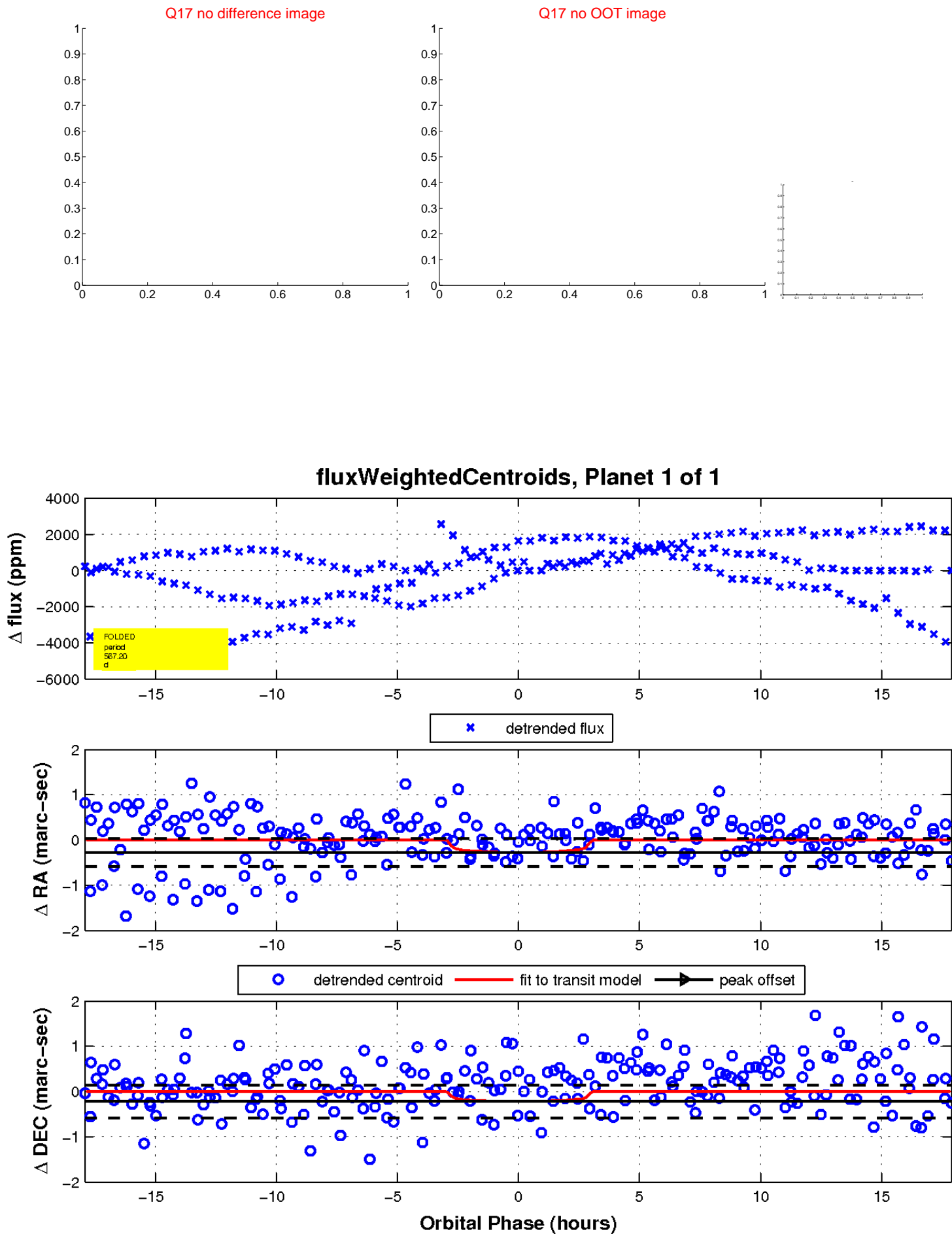
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

