

KIC 004141562

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})
004141562-01	OBS	No	693.019400	186.073746	147.5	8.593	8.1	8.0	1.67	6191	2.24	1.50

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004141562-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—ALL_TRANS_CHASES—MOD_TER_DV—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.

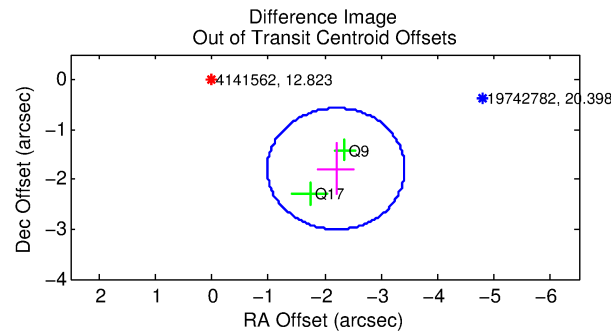
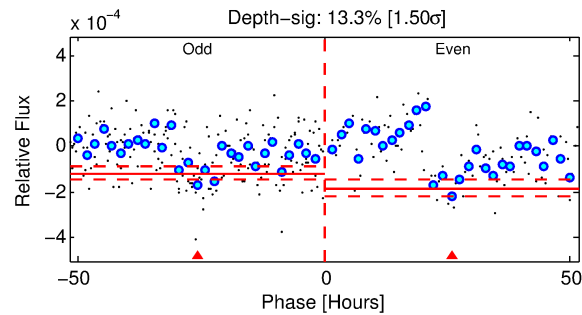
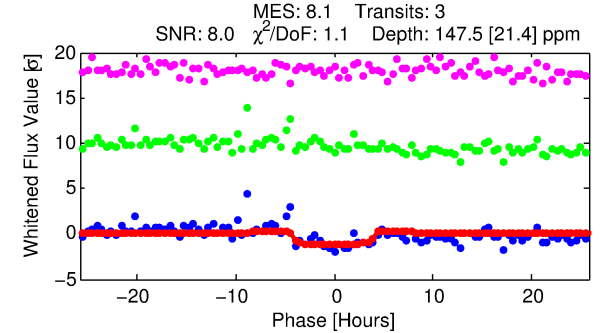
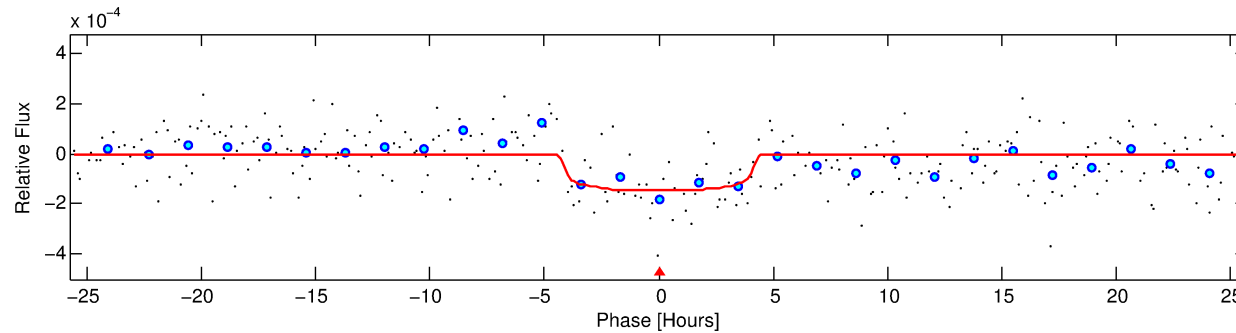
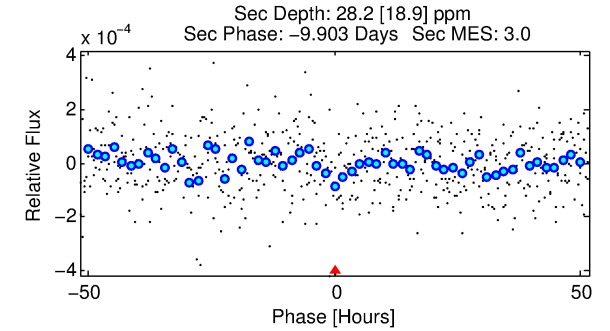
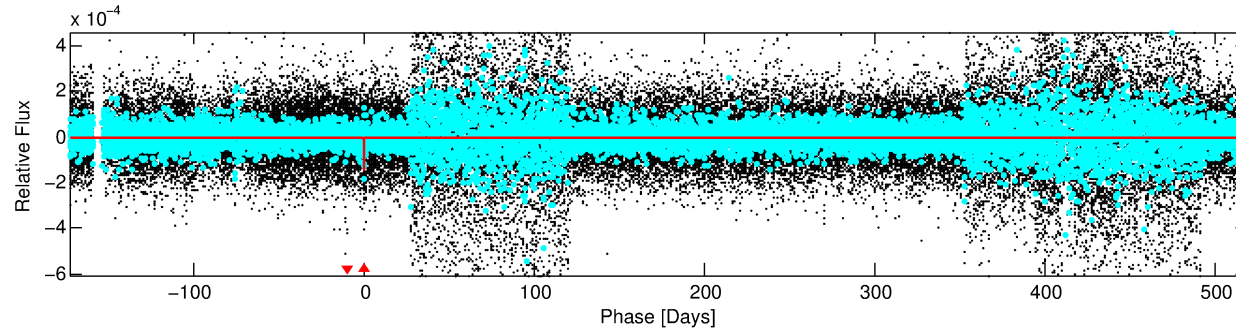
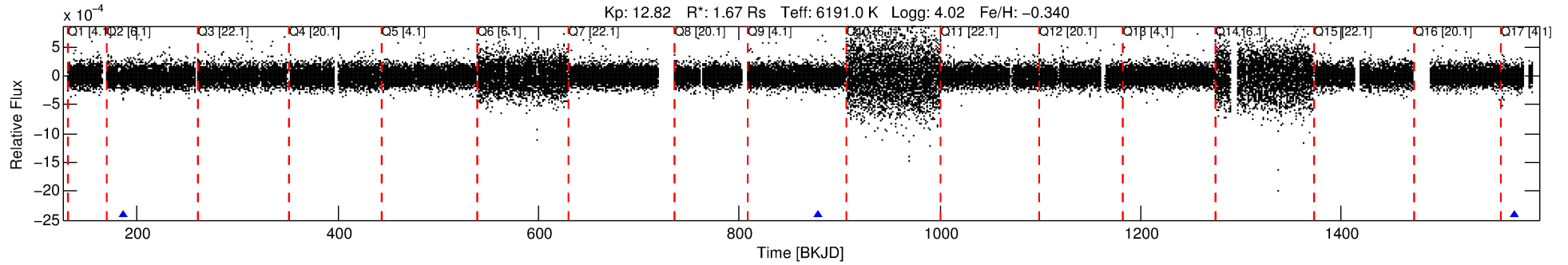
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004141562-01

No Significant Match Found

DV One-Page Summary

KIC: 4141562 Candidate: 1 of 1 Period: 693.019 d



DV Fit Results:

Period = 693.01940 [0.01234] d
Epoch = 186.0737 [0.0189] BKJD
Rp/R* = 0.0123 [0.0063]
a/R* = 378.16 [1036.79]
b = 0.81 [1.20]
Seff = 1.50 [0.70]
Teq = 282 [33] K
Rp = 2.24 [1.34] Re
a = 1.5588 [0.4471] AU
Ag = 7507.16 [9839.19] [0.76σ]
Teffp = 4062 [1253] K [3.02σ]

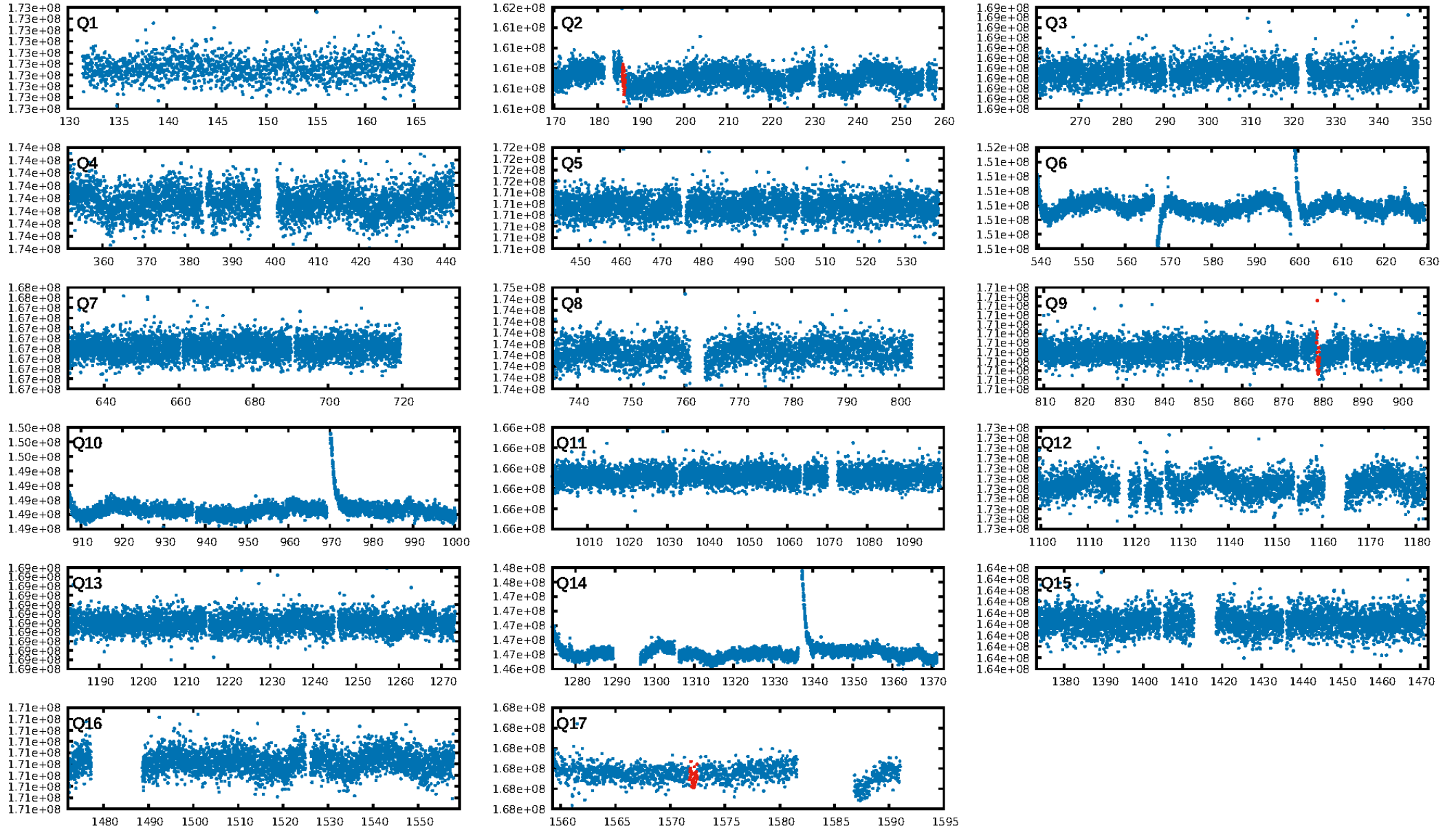
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 32.6%
ModelChiSquareGof-sig: 98.6%
Bootstrap-pfa: 1.12e-10
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 3.339
Centroid-sig: 0.0%
Centroid-so: 5.779 arcsec [2.91σ]
OotOffset-rm: 2.839 arcsec [7.01σ]
KicOffset-rm: 2.650 arcsec [6.89σ]
OotOffset-st: 0/0/0/2 [2]
KicOffset-st: 0/0/0/2 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

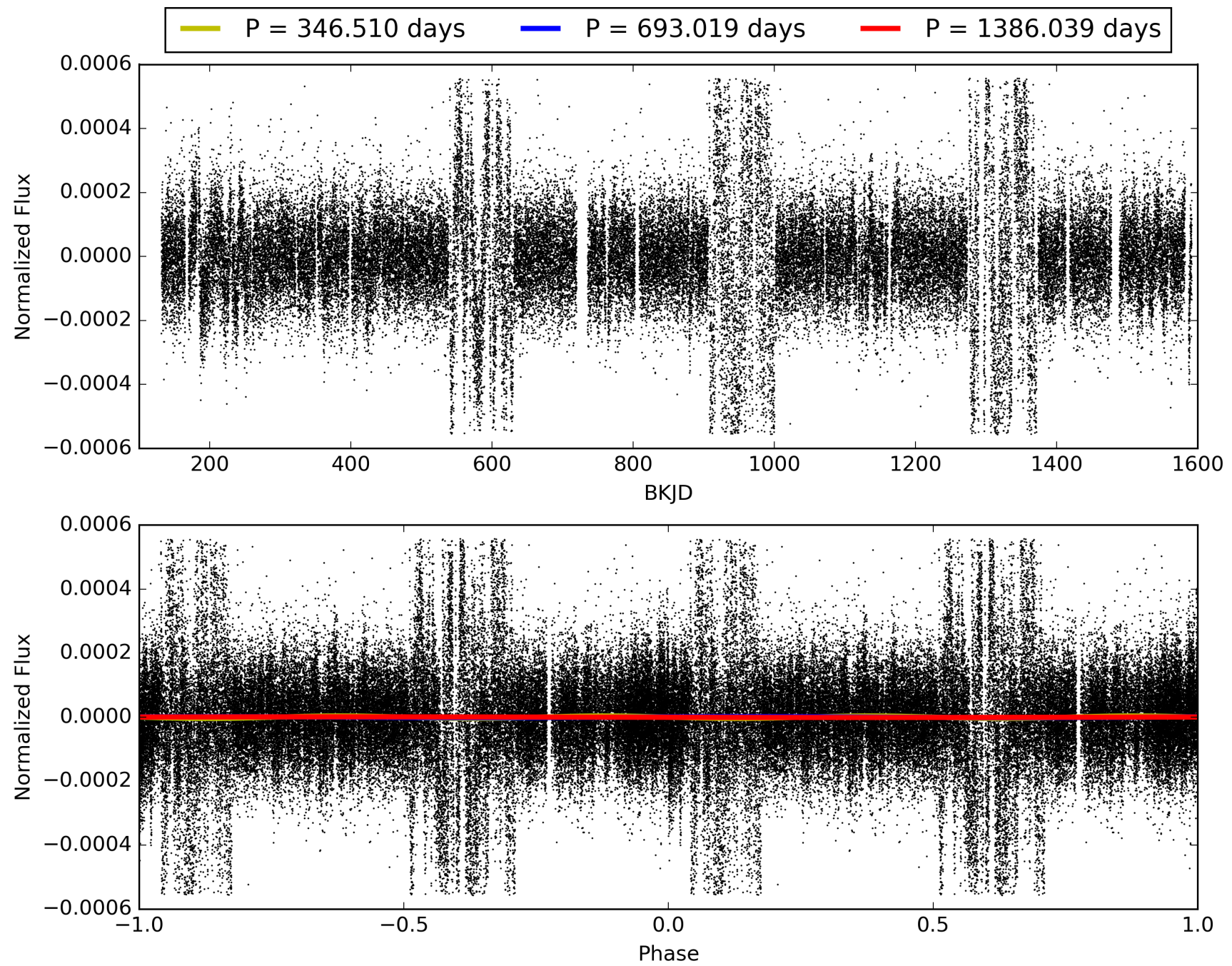
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:54:35 Z

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

TCE 004141562-01, PDC Light Curves

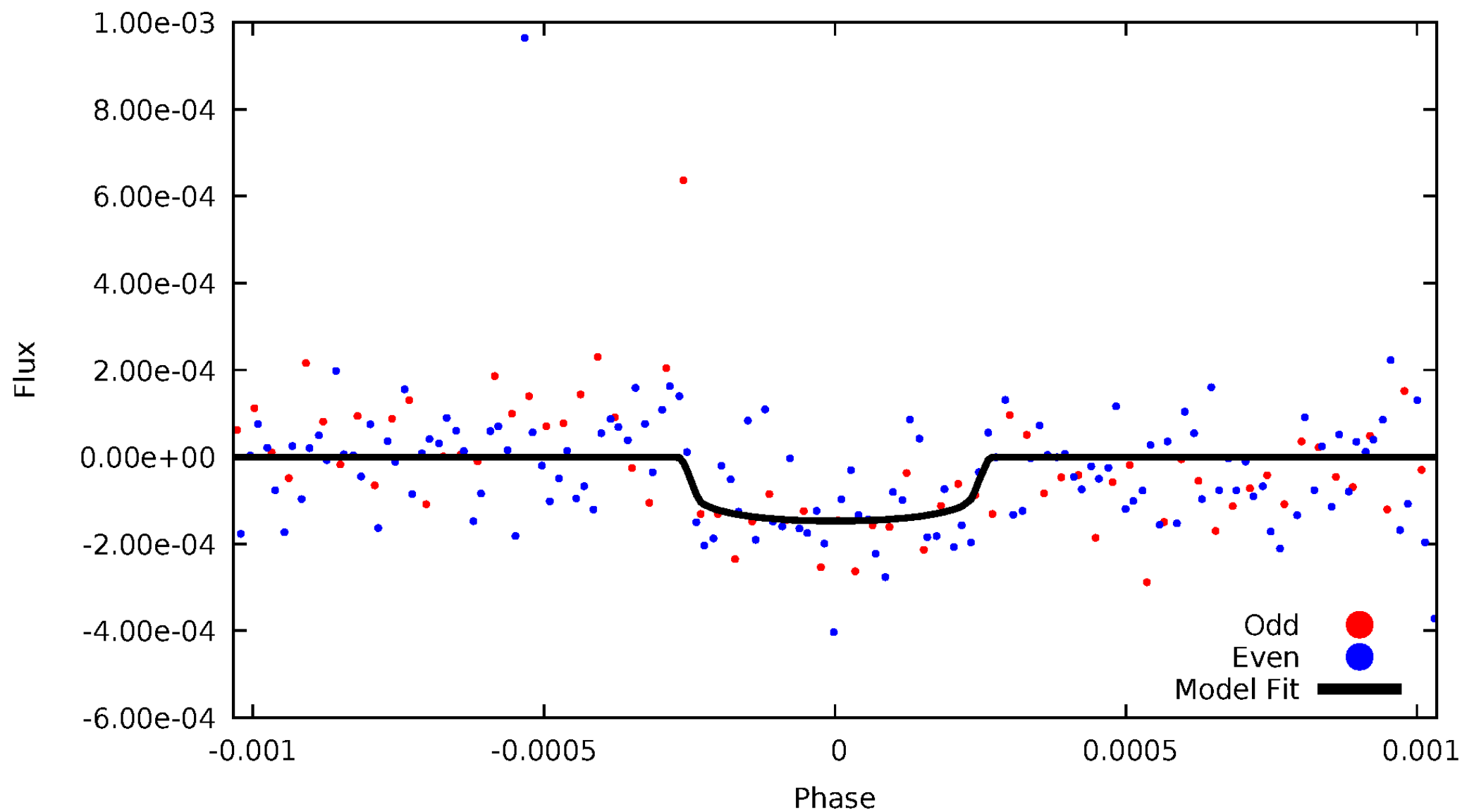


TCE 004141562-01



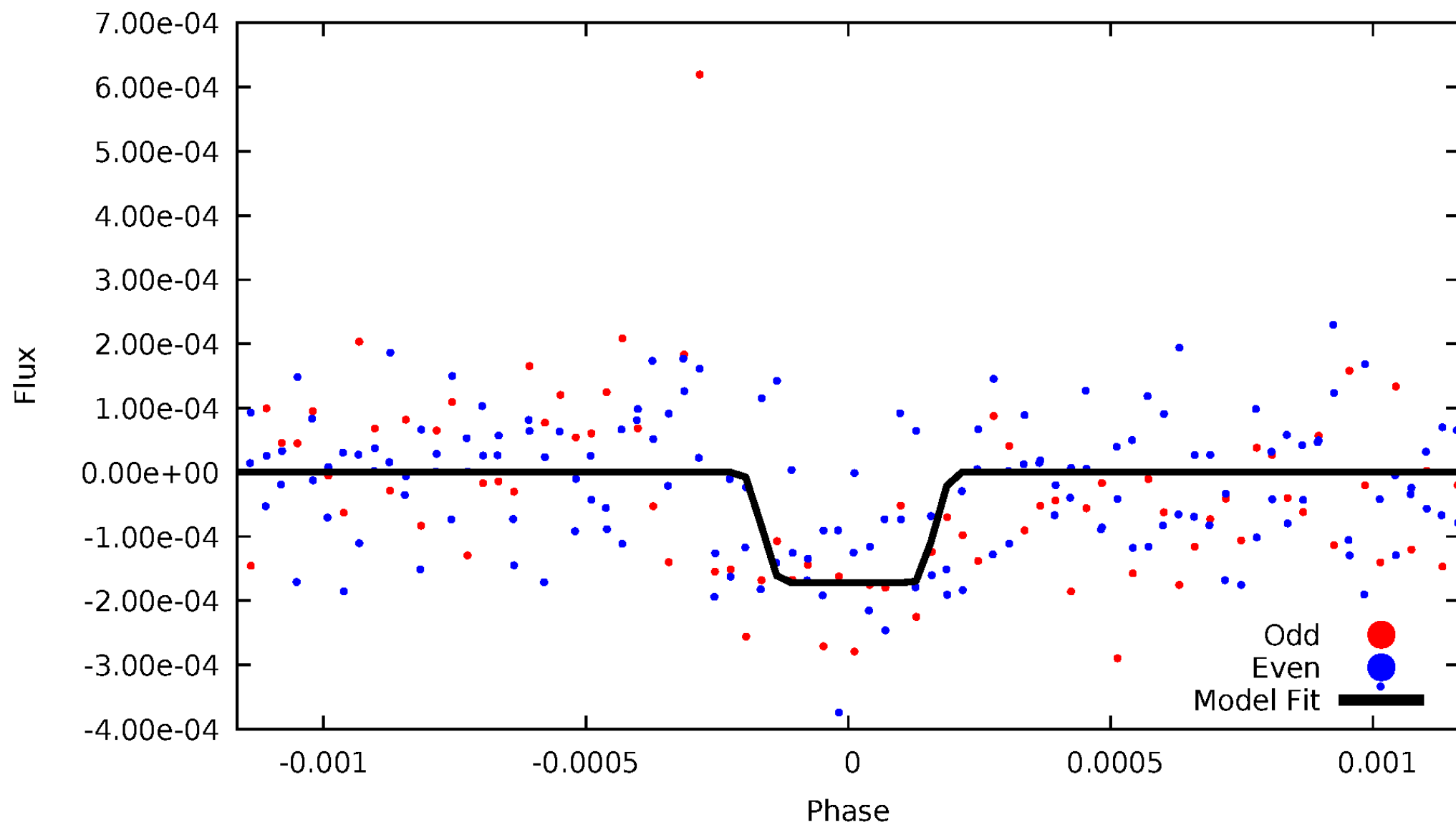
DV Odd/Even

TCE 004141562-01

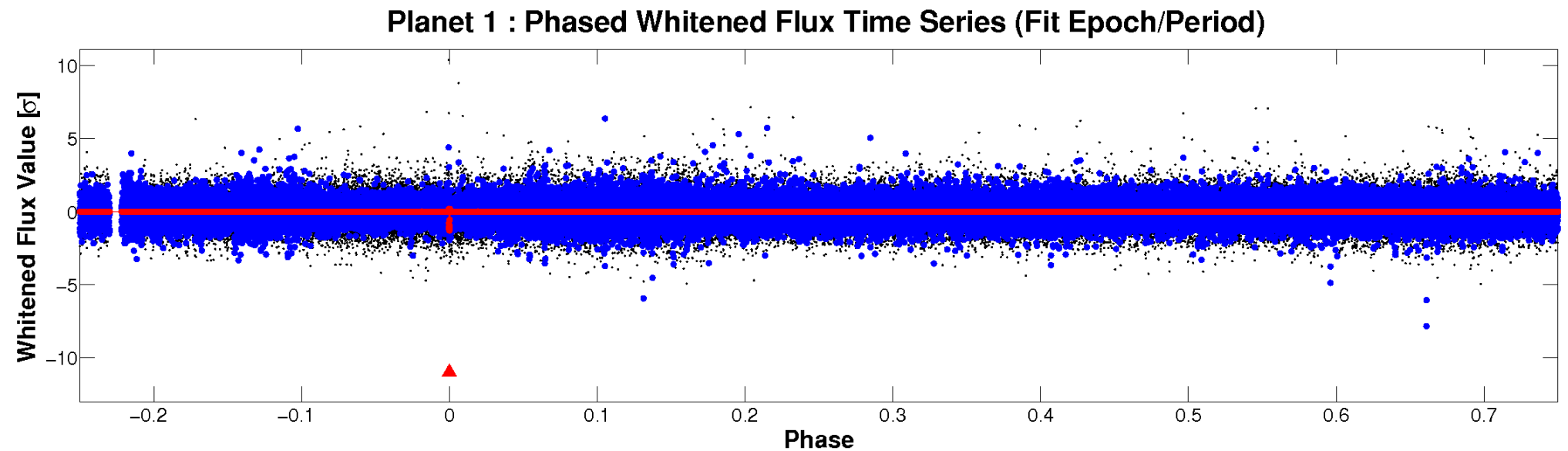
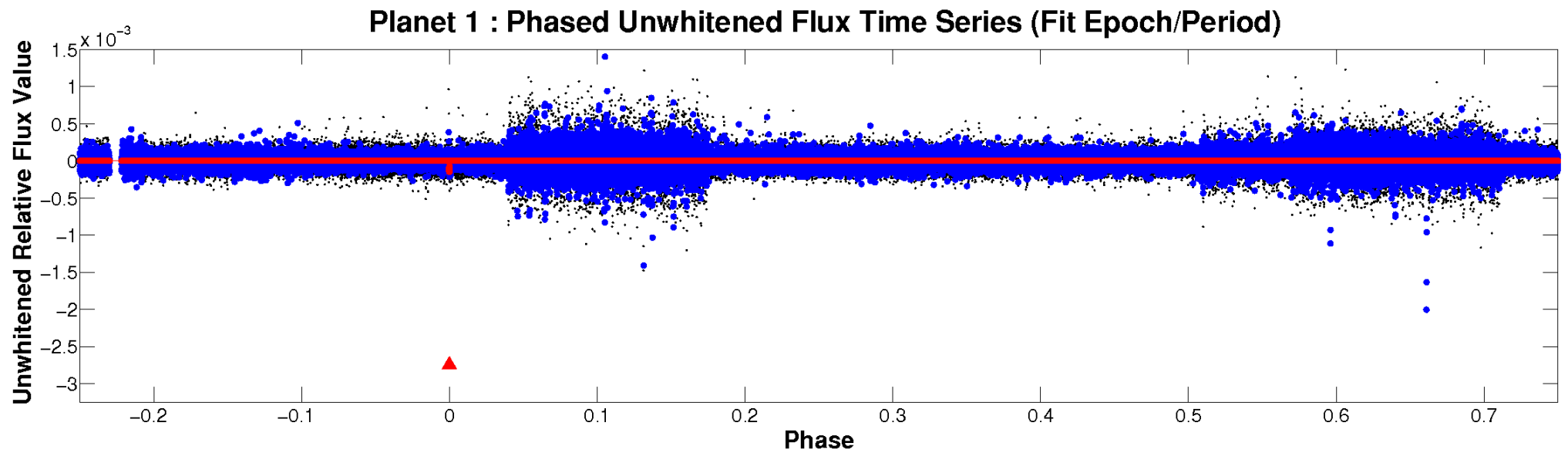


ALT Odd/Even

TCE 004141562-01

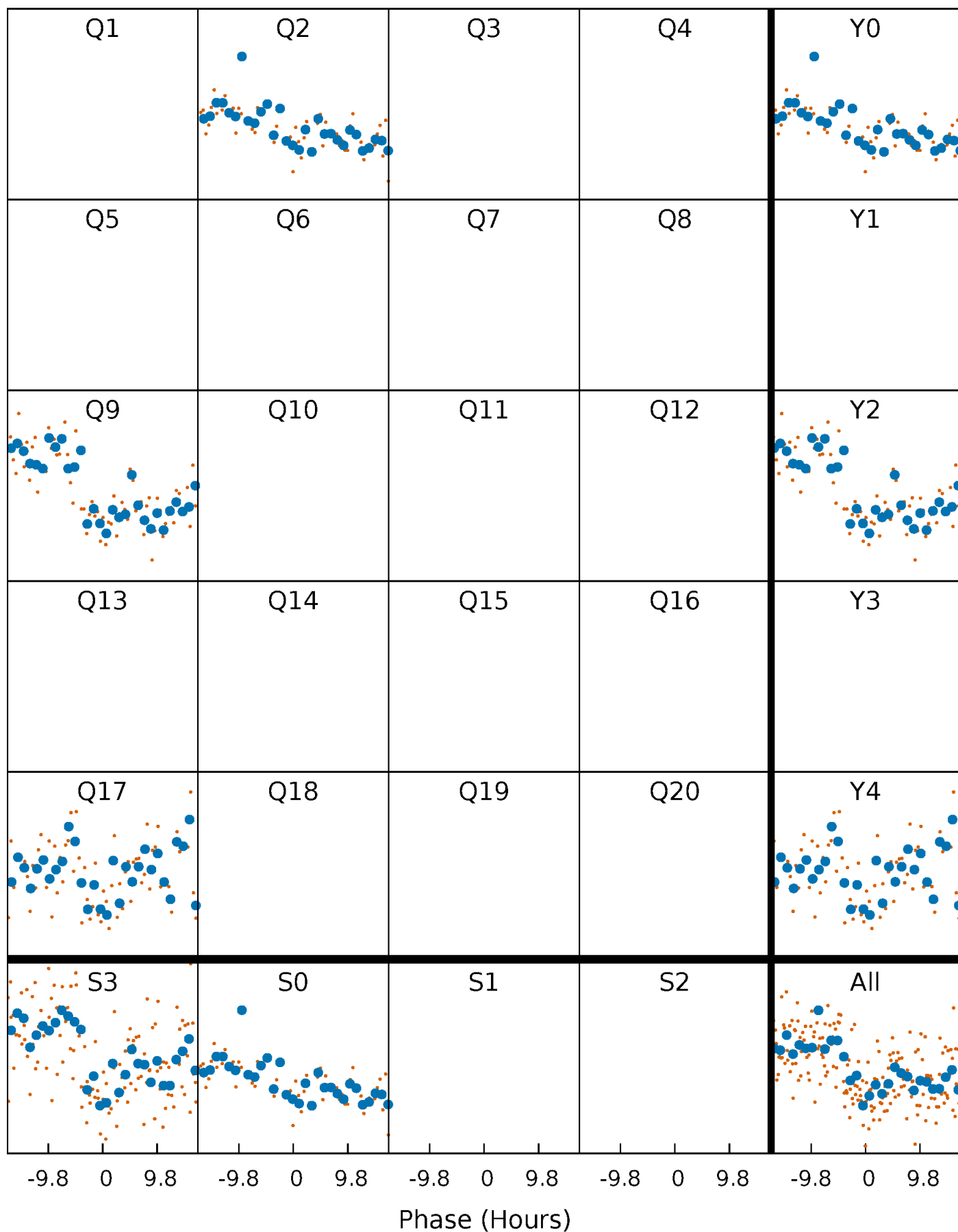


Non-Whitened Vs. Whitened Light Curve



PDC Quarter-Phased Transit Curves

TCE 004141562-01 P=693.019400 Days $T_0=186.073746$ (BKJD)



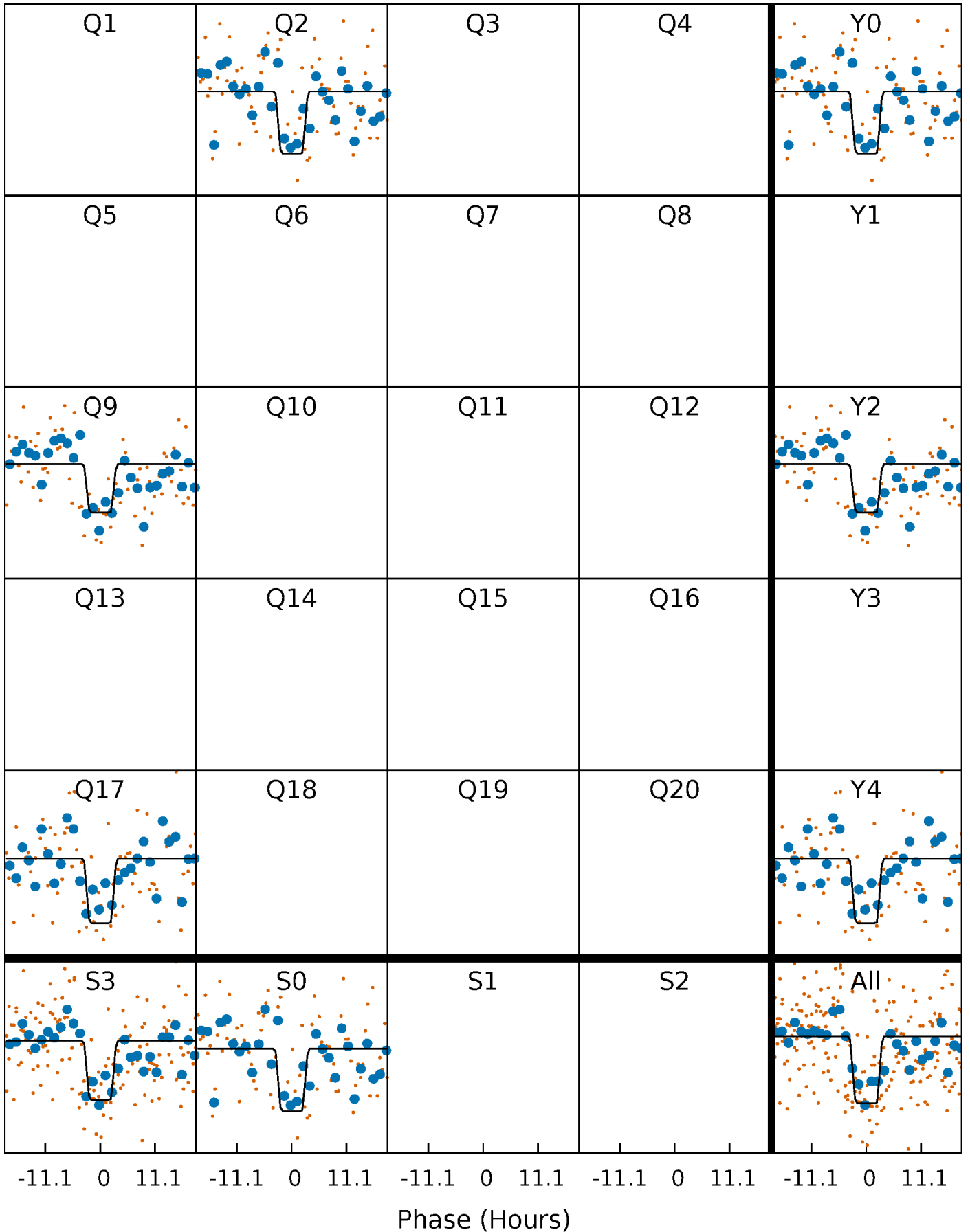
DV Quarter-Phased Transit Curves

TCE 004141562-01 P=693.019400 Days $T_0=186.073746$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

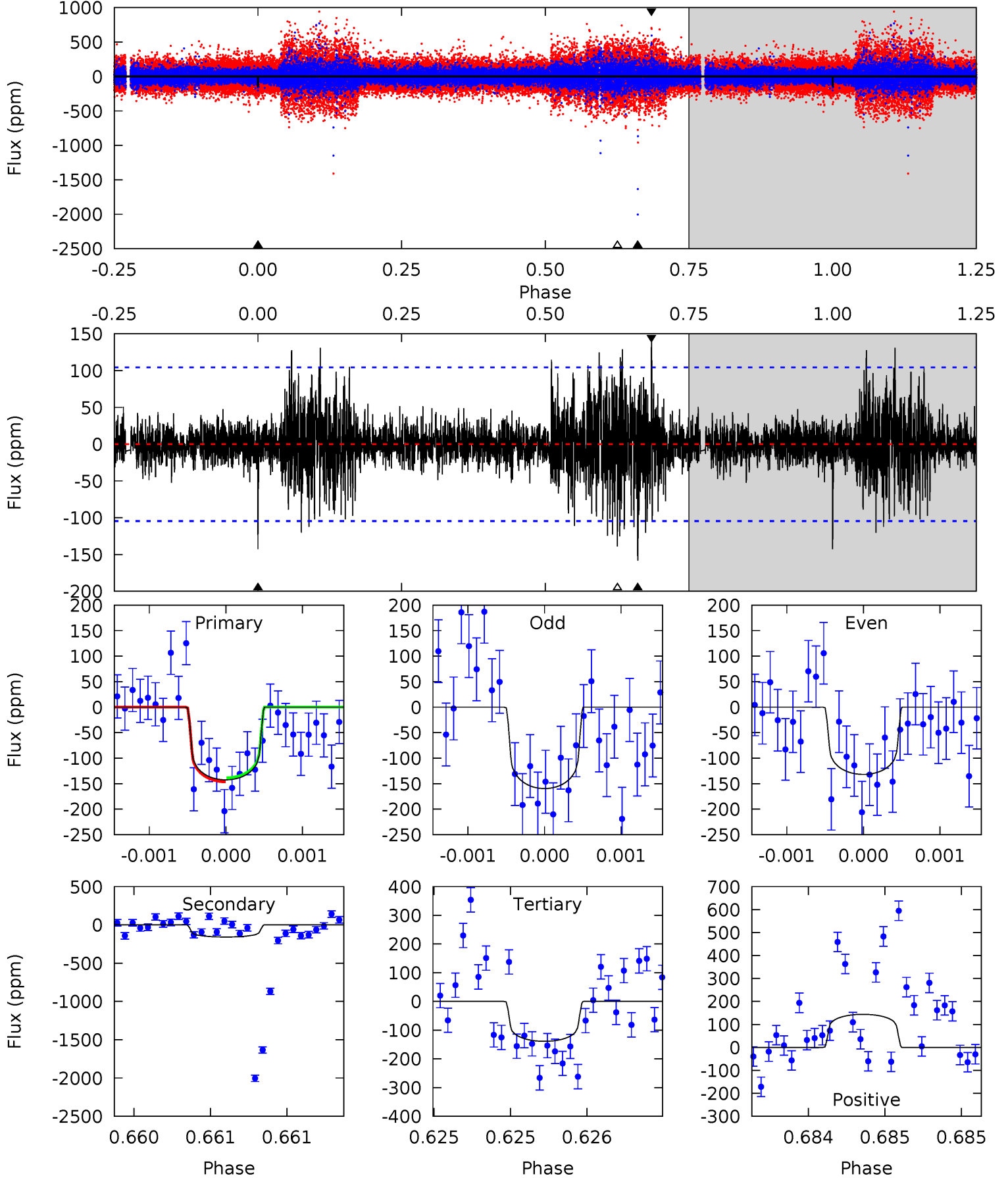
TCE 004141562-01 P=693.024621 Days $T_0=186.084618$ (BKJD)



DV Model-Shift Uniqueness Test

004141562-01, P = 693.019400 Days, E = 186.073746 Days

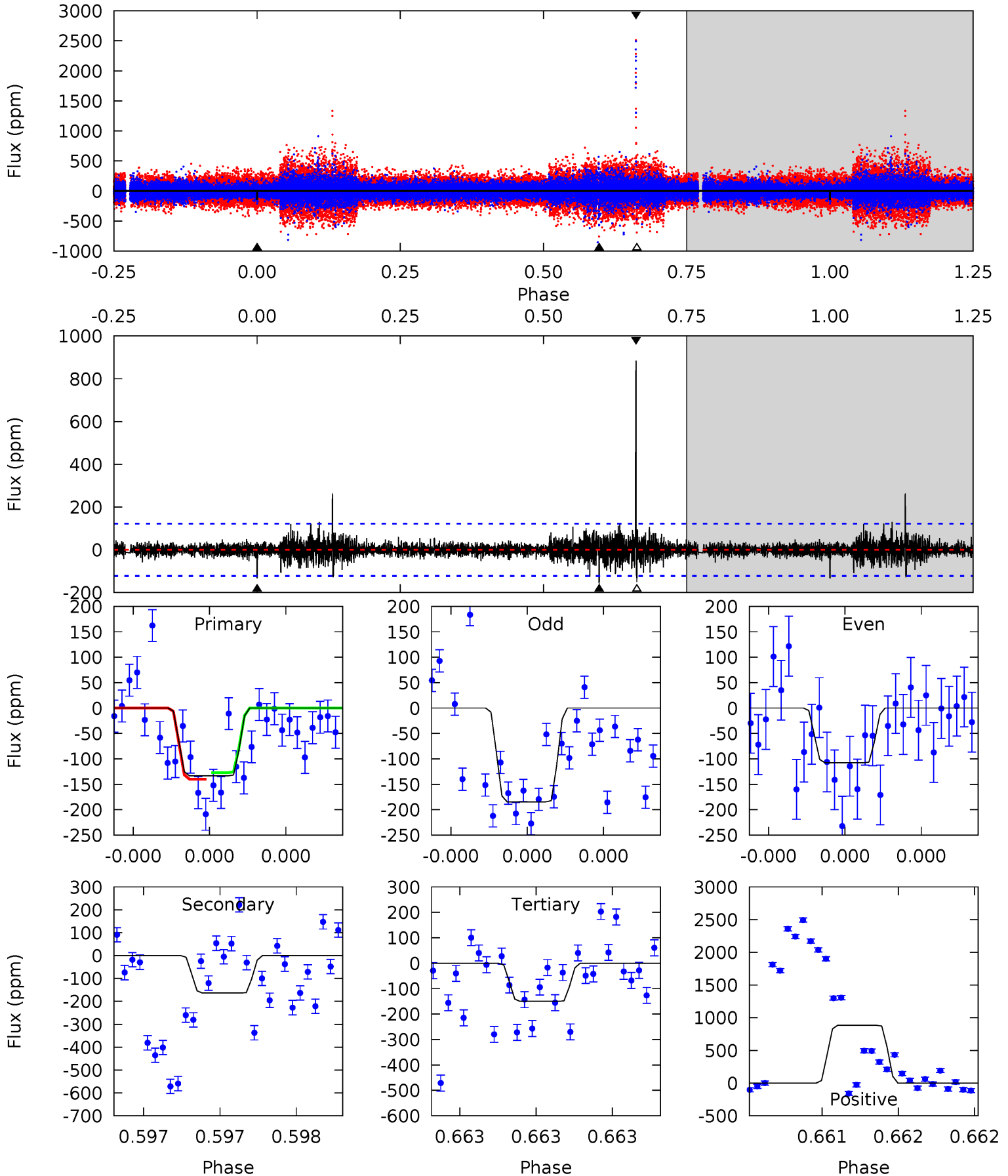
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.58	8.41	7.39	7.66	5.56	3.46	1.43	0.19	-0.08	1.03	0.75	0.65	1.04	0.48	0.21



Alt Model-Shift Uniqueness Test

004141562-01, P = 693.024621 Days, E = 186.084618 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.12	7.51	6.88	40.6	5.61	3.53	1.39	-0.76	-34.4	0.63	-33.1	1.56	1.14	0.84	0.29



Stellar Parameters For KIC 004141562

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6191^{+170}_{-170}	$4.017^{+0.266}_{-0.114}$	$-0.340^{+0.350}_{-0.250}$	$1.665^{+0.335}_{-0.503}$	$1.051^{+0.192}_{-0.140}$	$0.321^{+0.475}_{-0.110}$
	+3%/-3%	+7%/-3%	+103%/-74%	+20%/-30%	+18%/-13%	+148%/-34%
Source	PHO1	FLK73	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 004141562-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-158 ± 19	$2.11^{+1.21}_{-0.99}$	390^{+24}_{-33}	6260^{+3031}_{-1129}	$47195^{+123632}_{-27824}$
Alt.	-164 ± 22	$2.39^{+1.17}_{-1.11}$	390^{+24}_{-32}	6022^{+2424}_{-1007}	39863^{+91366}_{-21917}

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 $A_{obs} \gg 1.0$

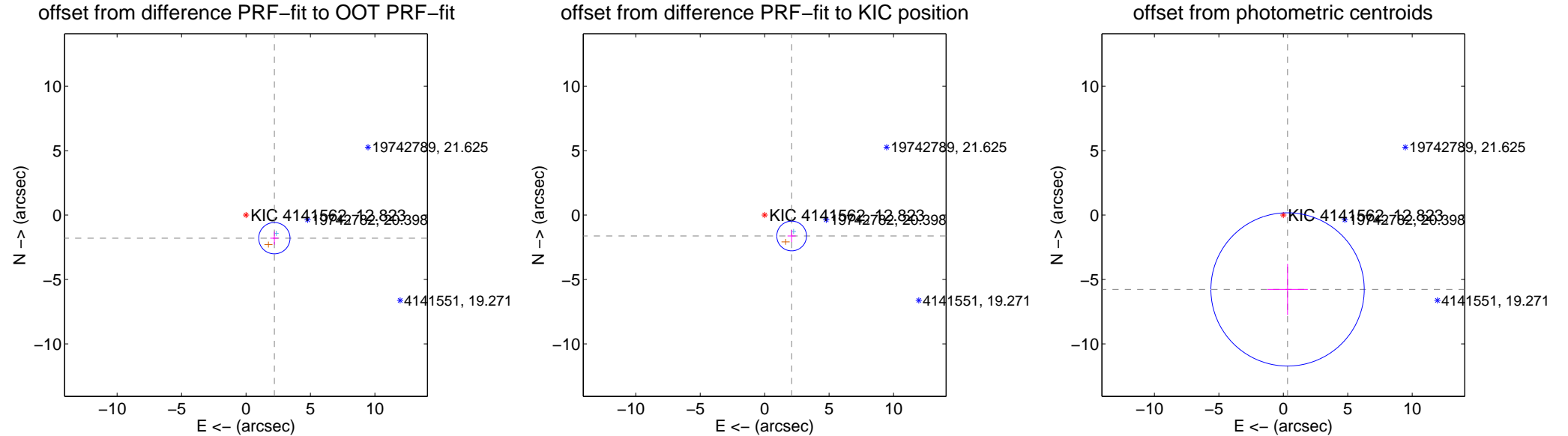
DV Centroid Data

Supplemental centroid analysis for 004141562-01. Kepler magnitude: 12.82. Transit SNR 7.98

There are 1 quarters with good PRF difference image offsets

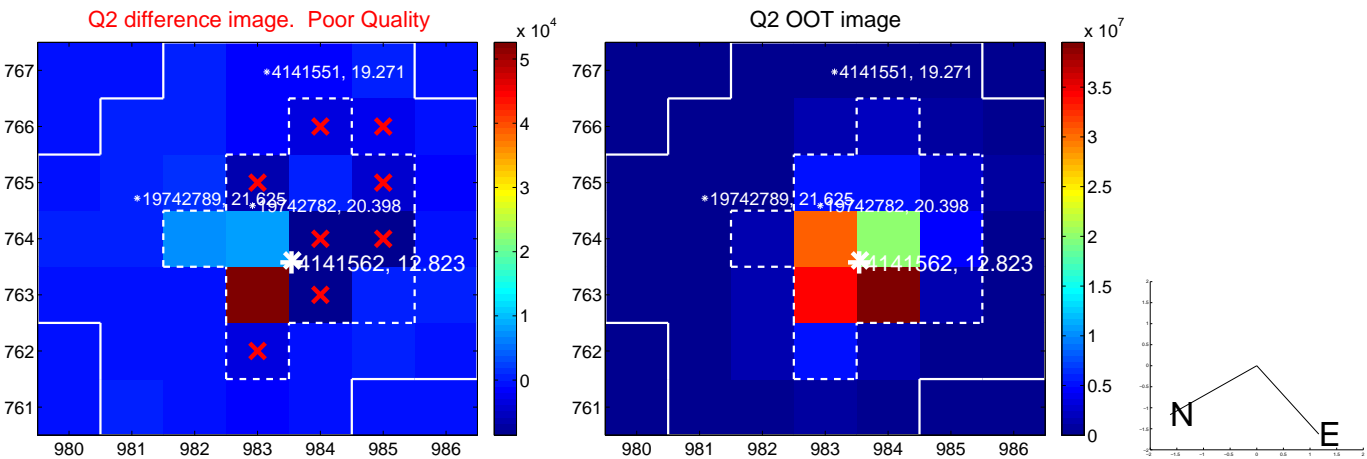
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.839 ± 0.405	7.01	-2.201 ± 0.317	-1.794 ± 0.510
PRF-fit source offset from KIC position	2.650 ± 0.385	6.89	-2.094 ± 0.322	-1.624 ± 0.471
photometric centroid source offset	5.78 ± 1.98	2.91	-0.33 ± 1.57	-5.77 ± 1.98



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.

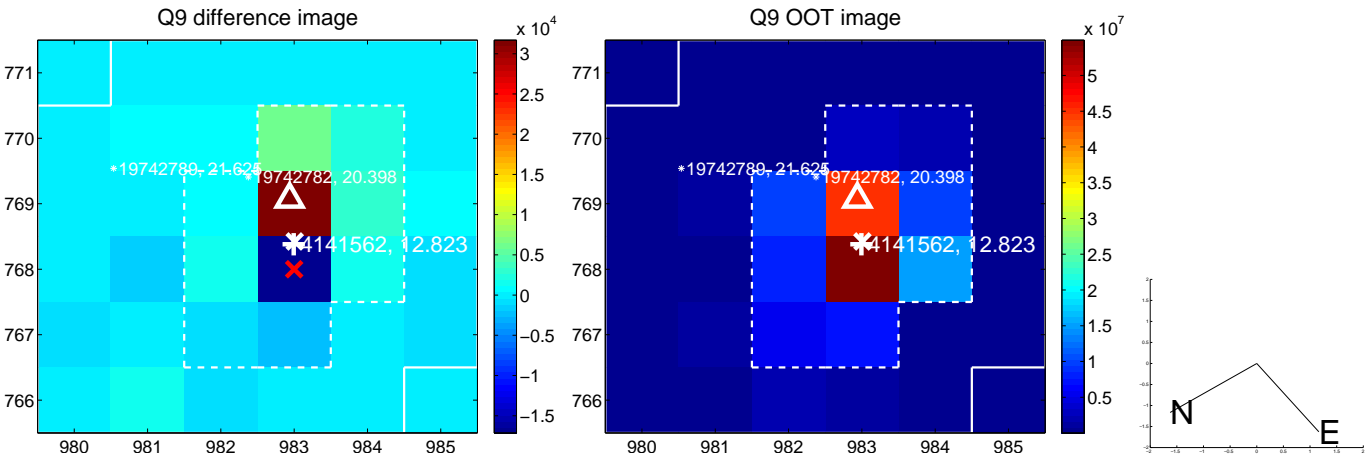
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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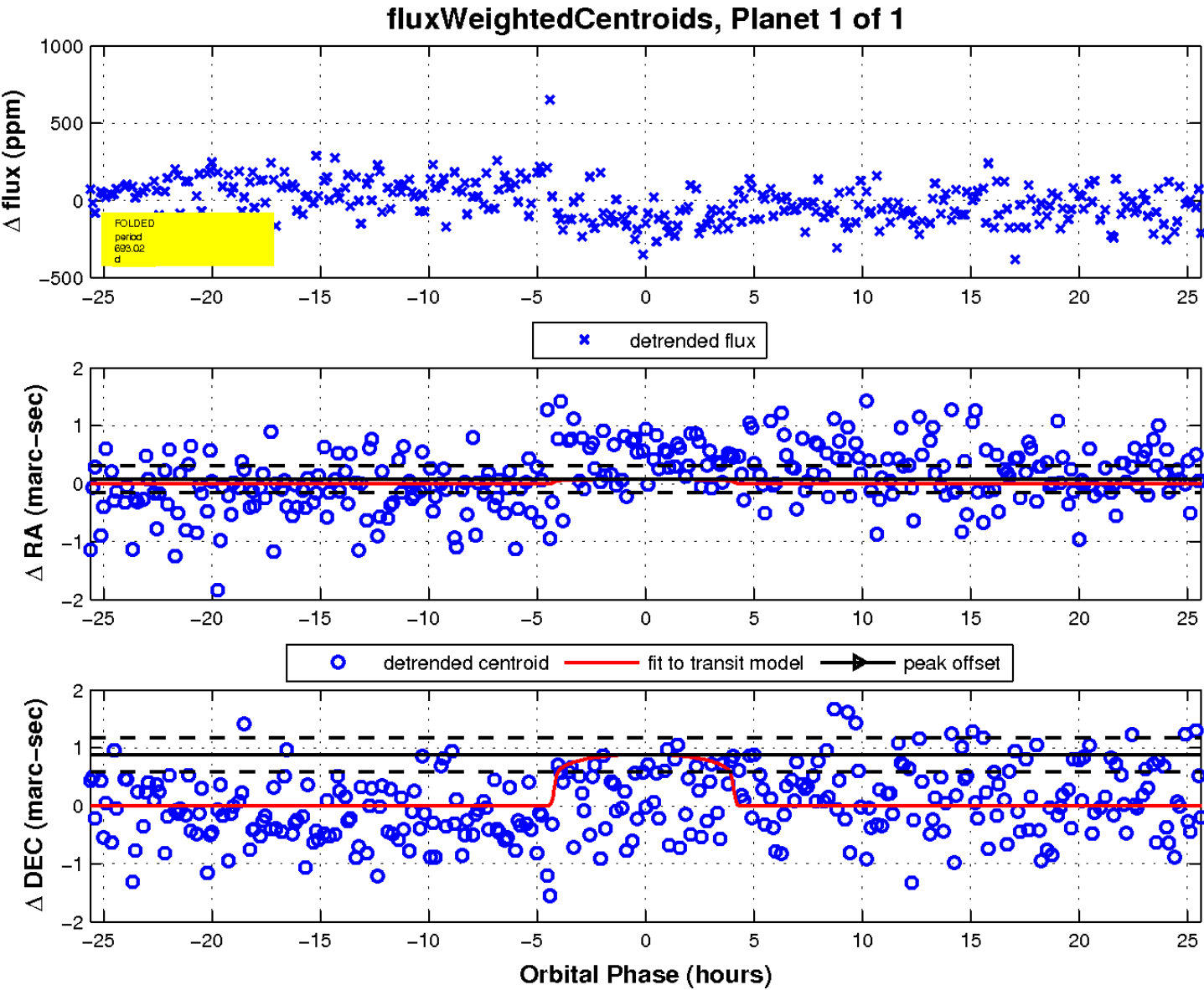
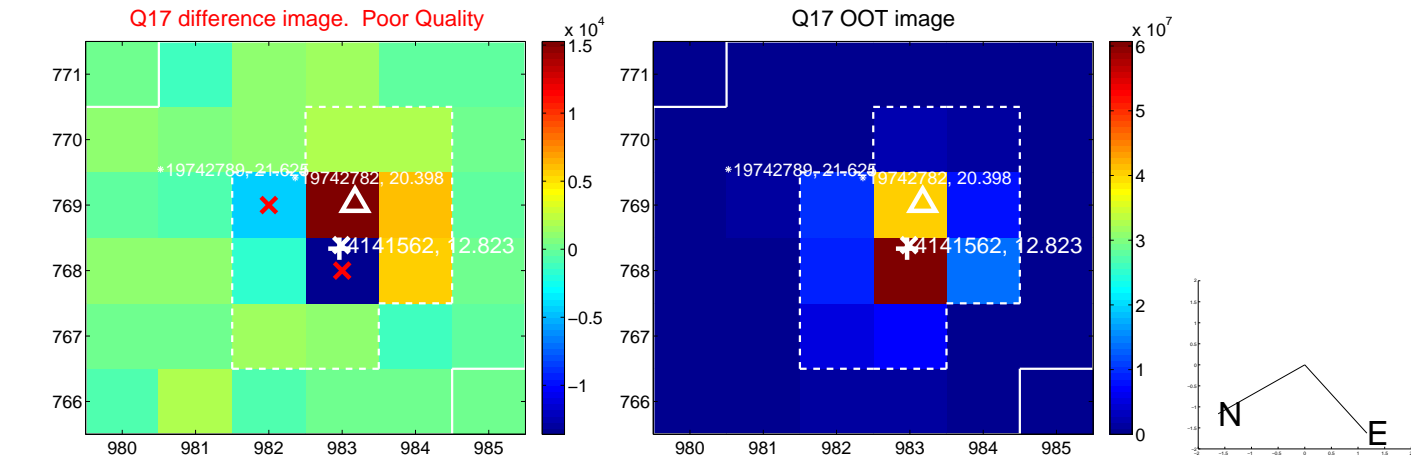
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

