

KIC 007900284

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})
007900284-01	OBS	No	598.079569	374.619154	1095.9	12.151	8.6	8.3	0.86	5799	3.26	0.40

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007900284-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—ALL_TRANS_CHASES—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.

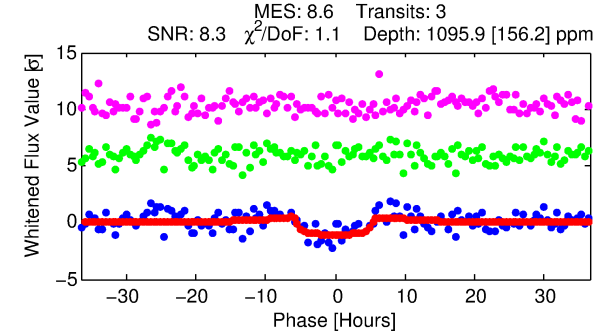
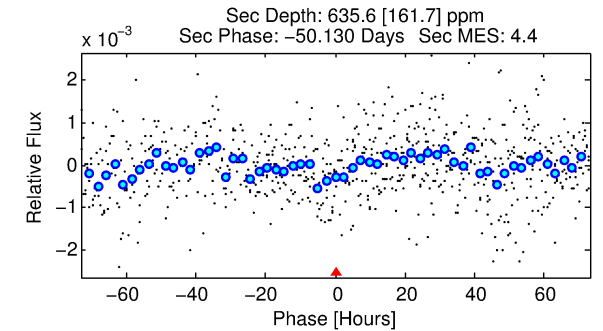
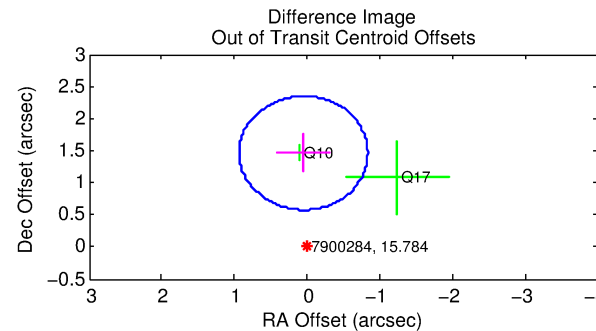
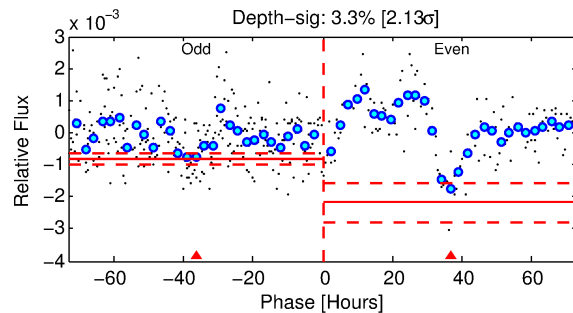
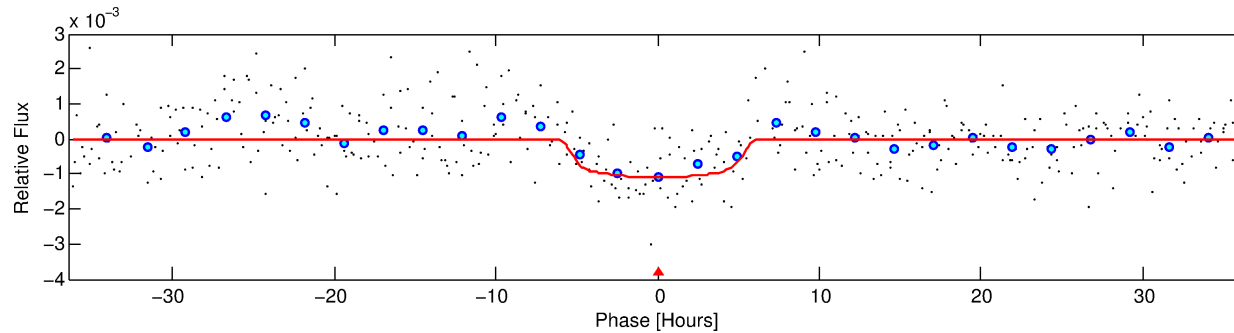
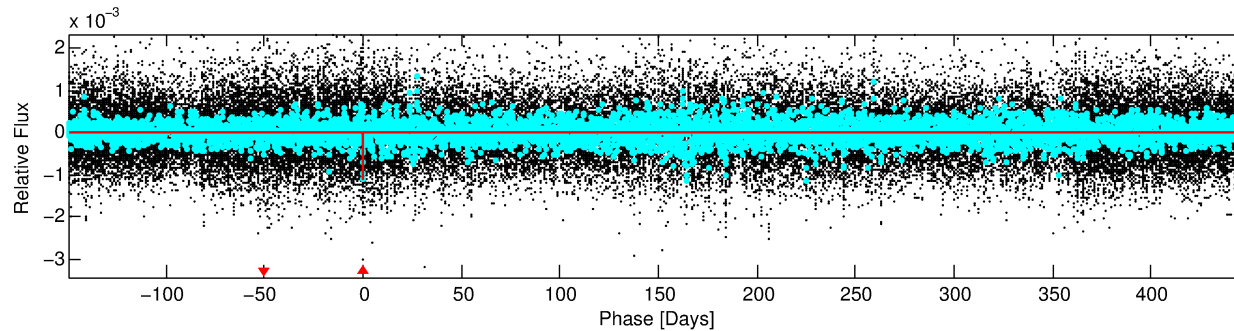
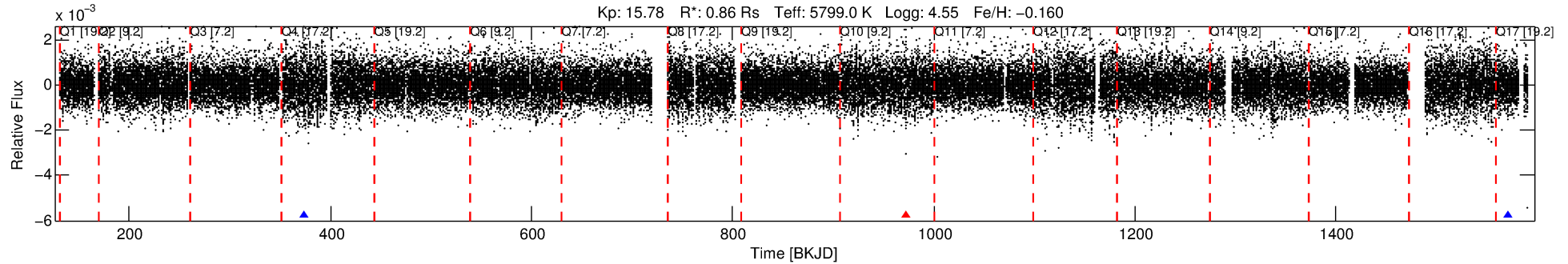
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007900284-01

No Significant Match Found

DV One-Page Summary

KIC: 7900284 Candidate: 1 of 1 Period: 598.080 d



DV Fit Results:

Period = 598.07957 [0.01720] d
Epoch = 374.6192 [0.0250] BKJD
Rp/R* = 0.0348 [0.0052]
a/R* = 218.03 [124.88]
b = 0.86 [0.18]
Seff = 0.40 [0.14]
Teq = 203 [17] K
Rp = 3.26 [0.96] Re
a = 1.3673 [0.2955] AU
Ag = 61434.69 [31211.67] [1.97 σ]
Teffp = 4939 [508] K [9.31 σ]

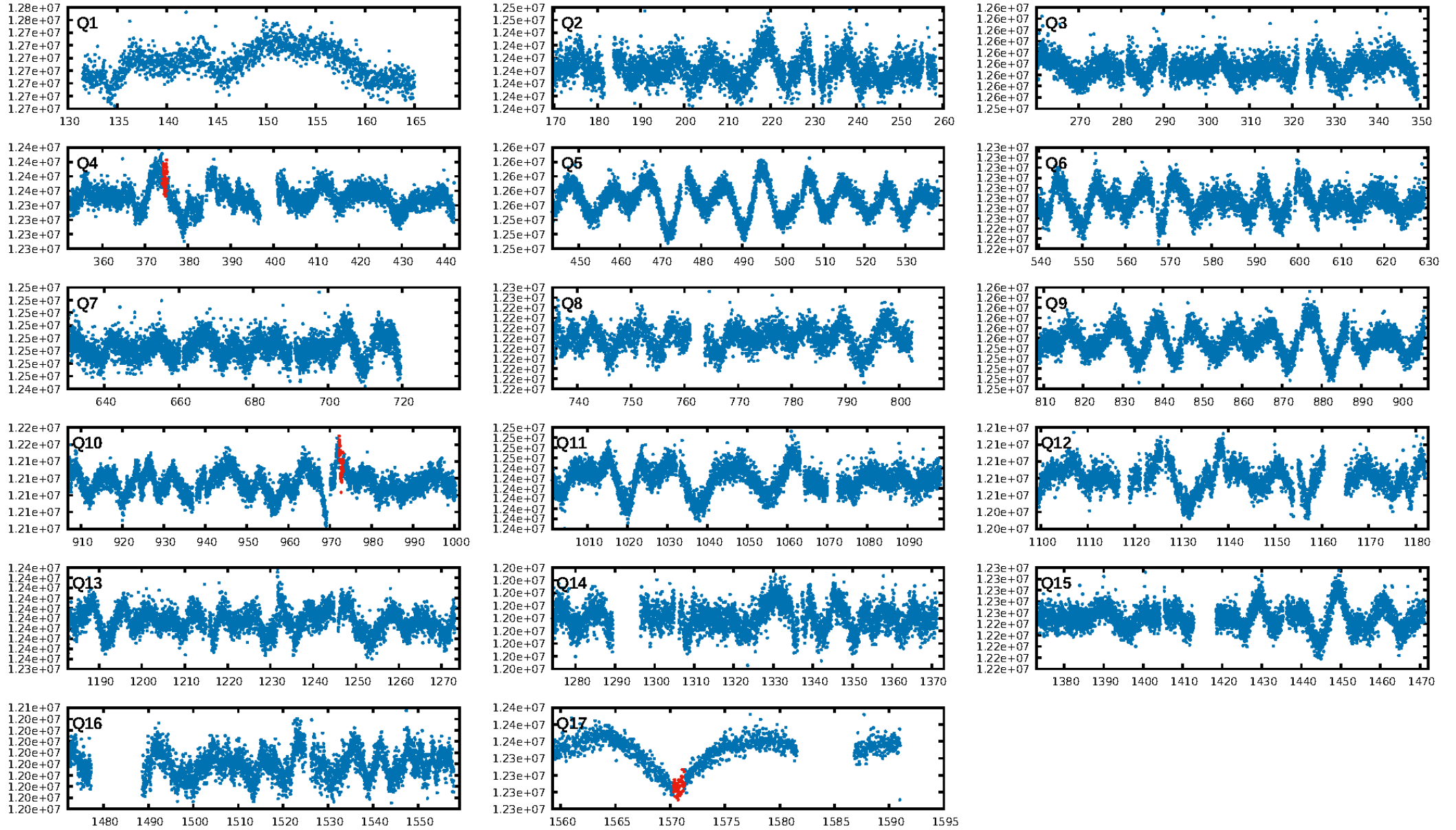
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 6.9%
ModelChiSquareGof-sig: 96.2%
Bootstrap-pfa: 1.23e-10
RollingBand-fgt: 0.50 [1/2]
GhostDiagnostic-chr: 2.39
Centroid-sig: 97.8%
Centroid-so: 0.360 arcsec [0.17 σ]
OotOffset-rm: 1.463 arcsec [4.95 σ]
KicOffset-rm: 1.521 arcsec [5.15 σ]
OotOffset-st: 1/0/0/1 [2]
KicOffset-st: 1/0/0/1 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [3/3]

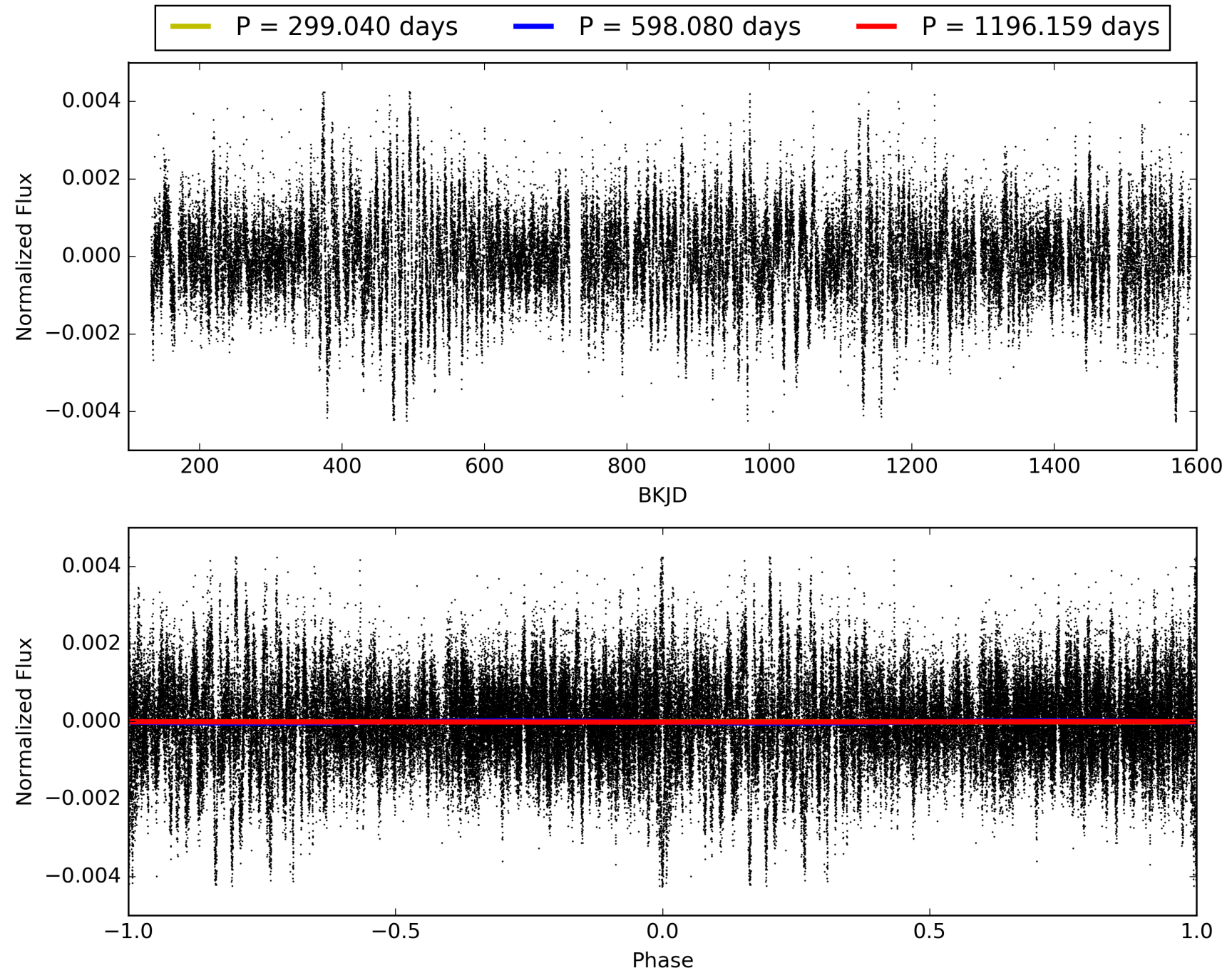
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:15:12 Z

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

TCE 007900284-01, PDC Light Curves

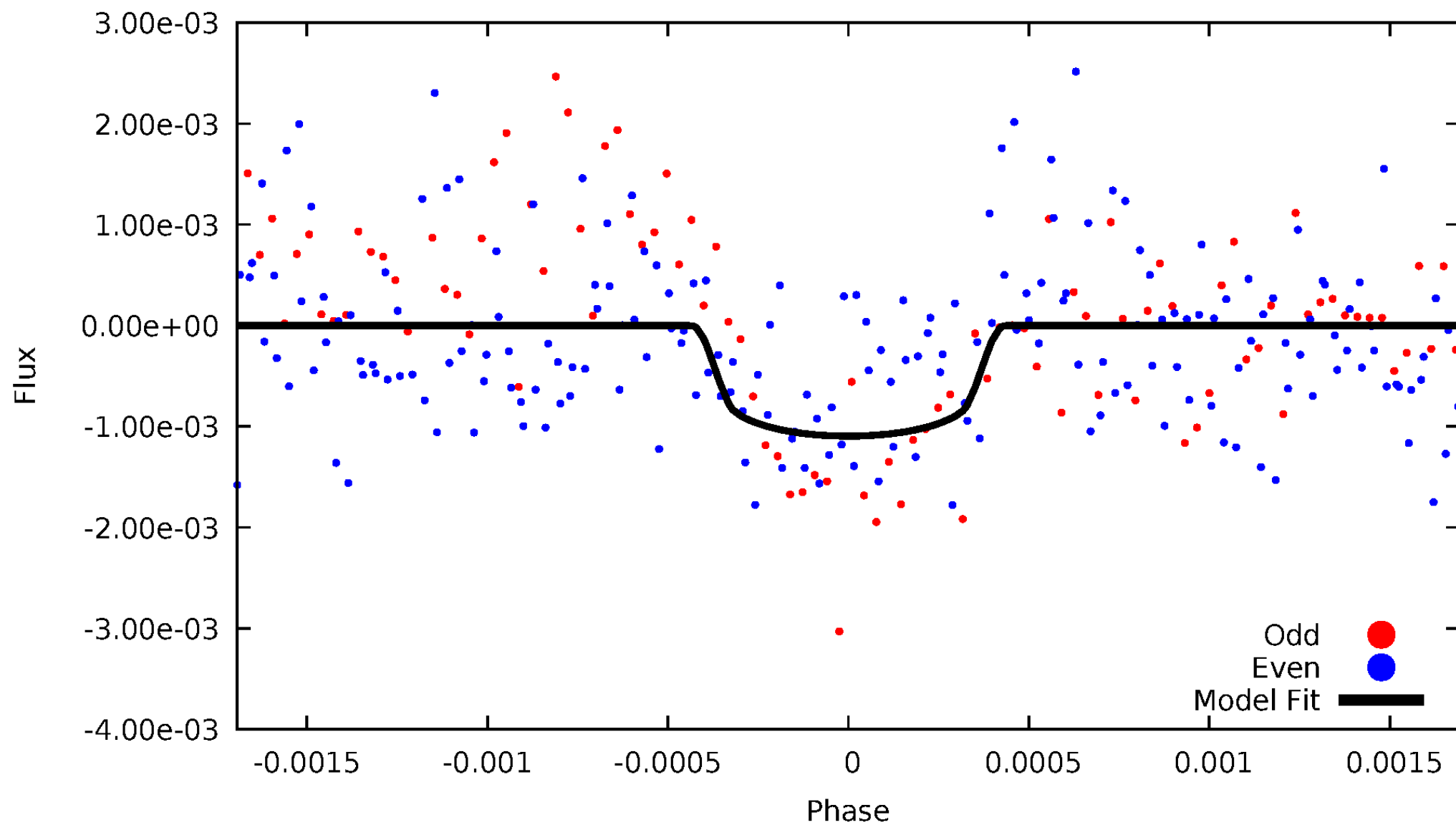


TCE 007900284-01



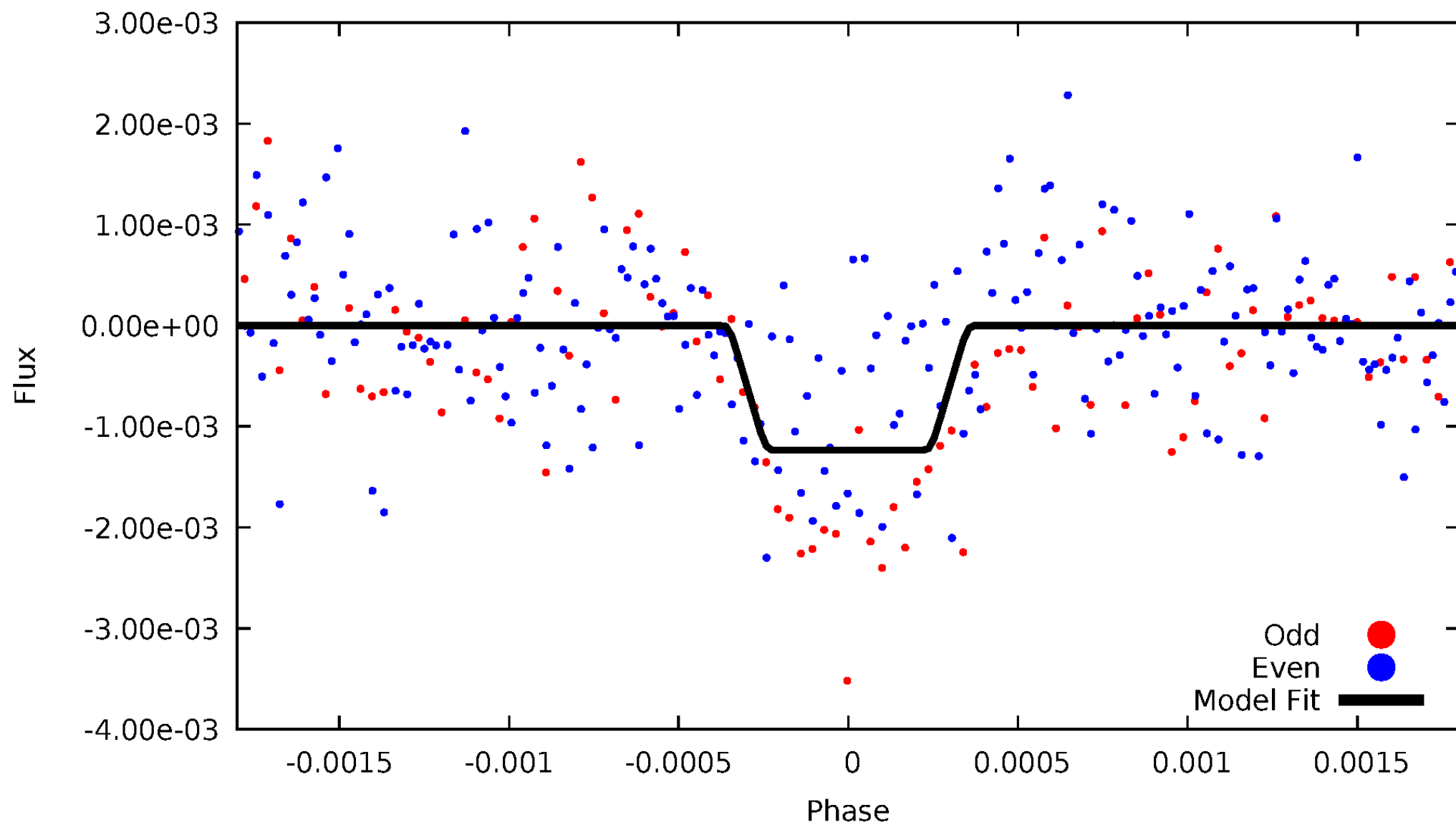
DV Odd/Even

TCE 007900284-01



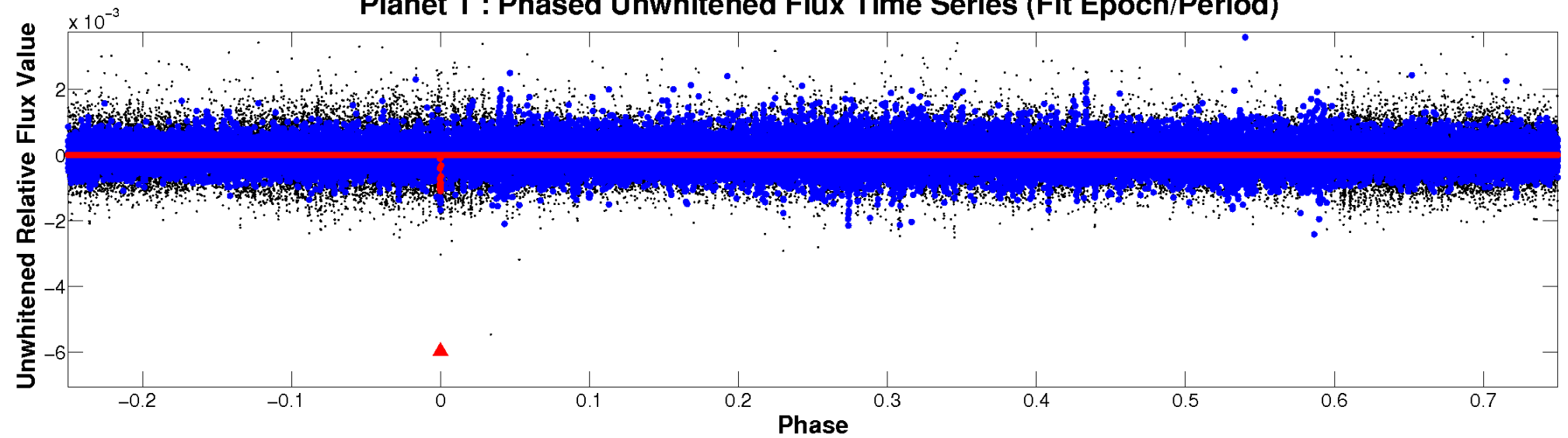
ALT Odd/Even

TCE 007900284-01

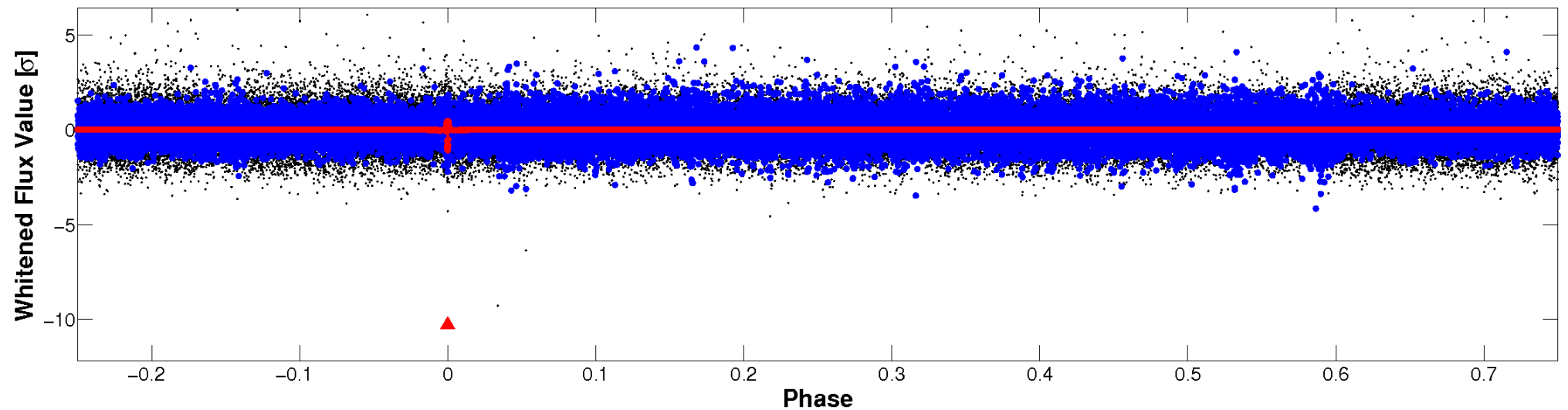


Non-Whitened Vs. Whitened Light Curve

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

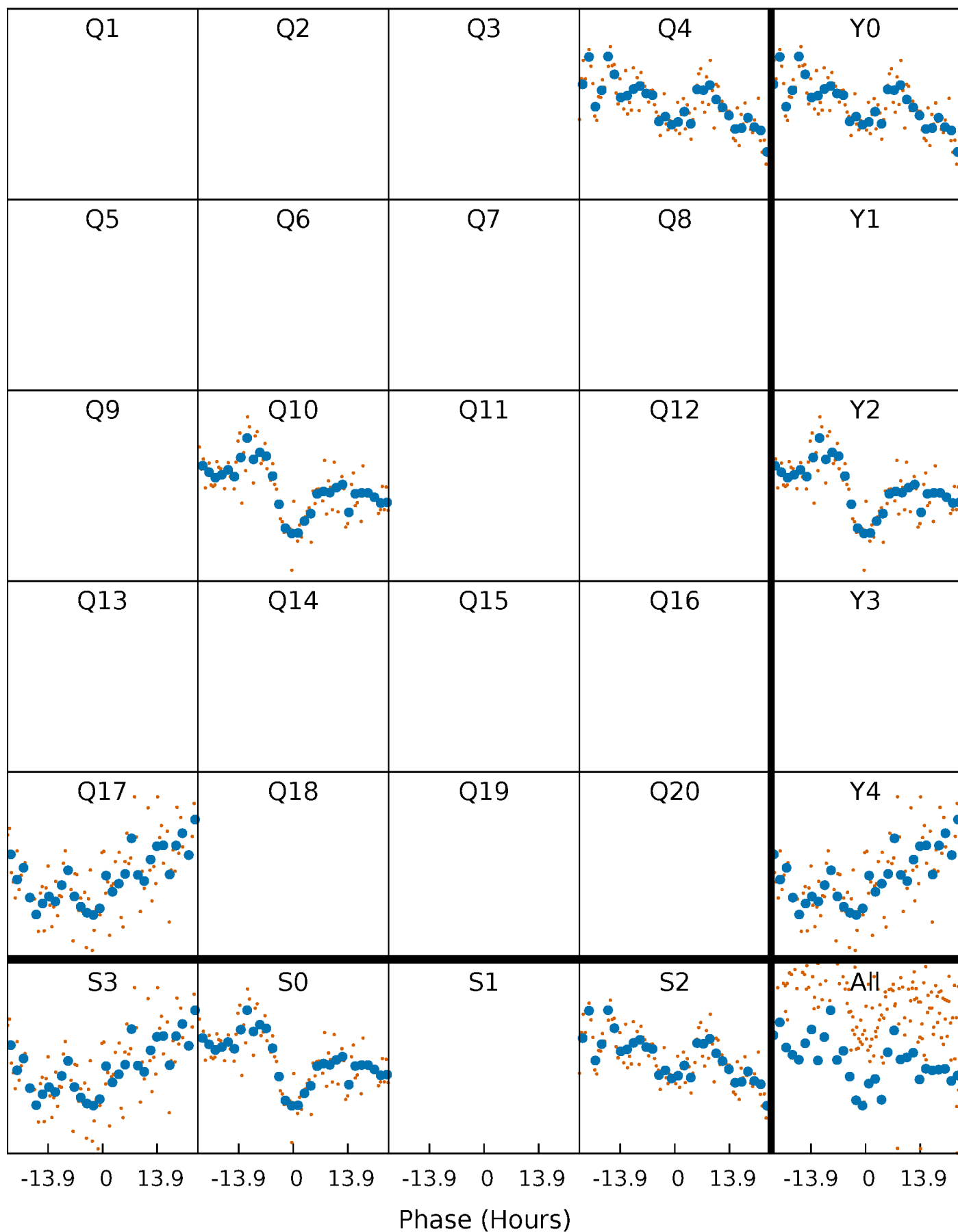


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



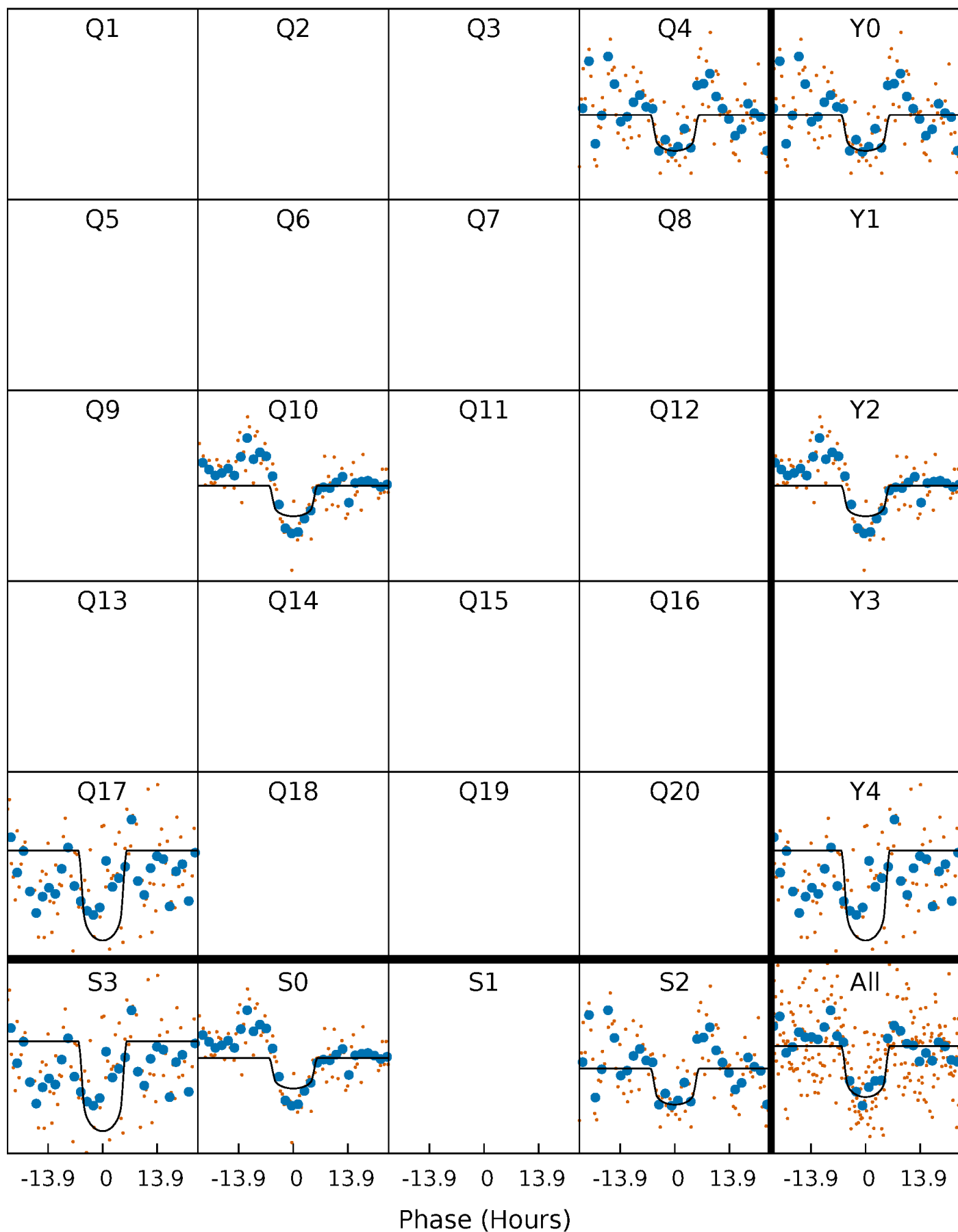
PDC Quarter-Phased Transit Curves

TCE 007900284-01 P=598.079569 Days $T_0=374.619154$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 007900284-01 $P=598.079569$ Days $T_0=374.619154$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

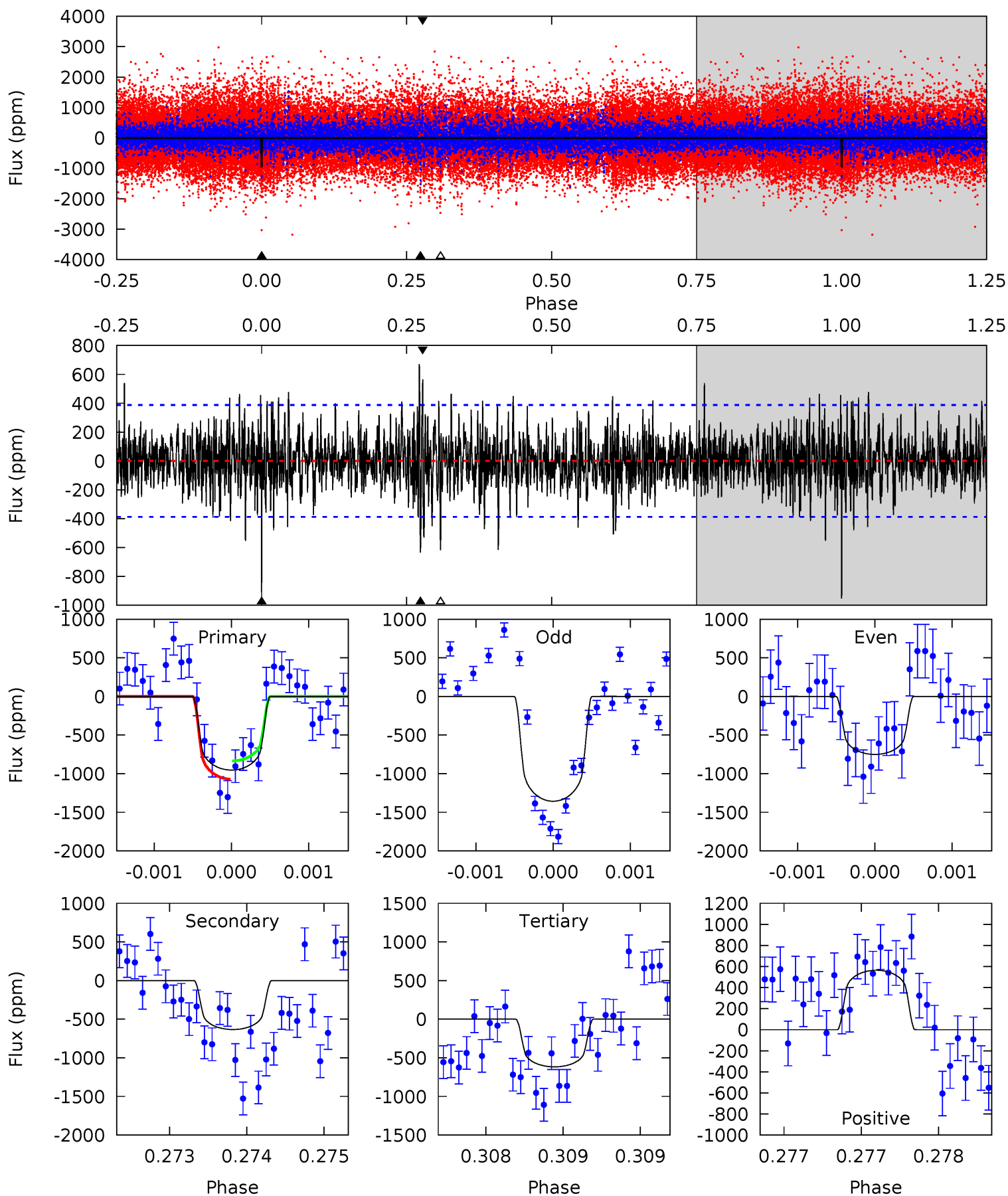
TCE 007900284-01 P=598.076679 Days $T_0=374.609170$ (BKJD)



DV Model-Shift Uniqueness Test

007900284-01, P = 598.079569 Days, E = 374.619154 Days

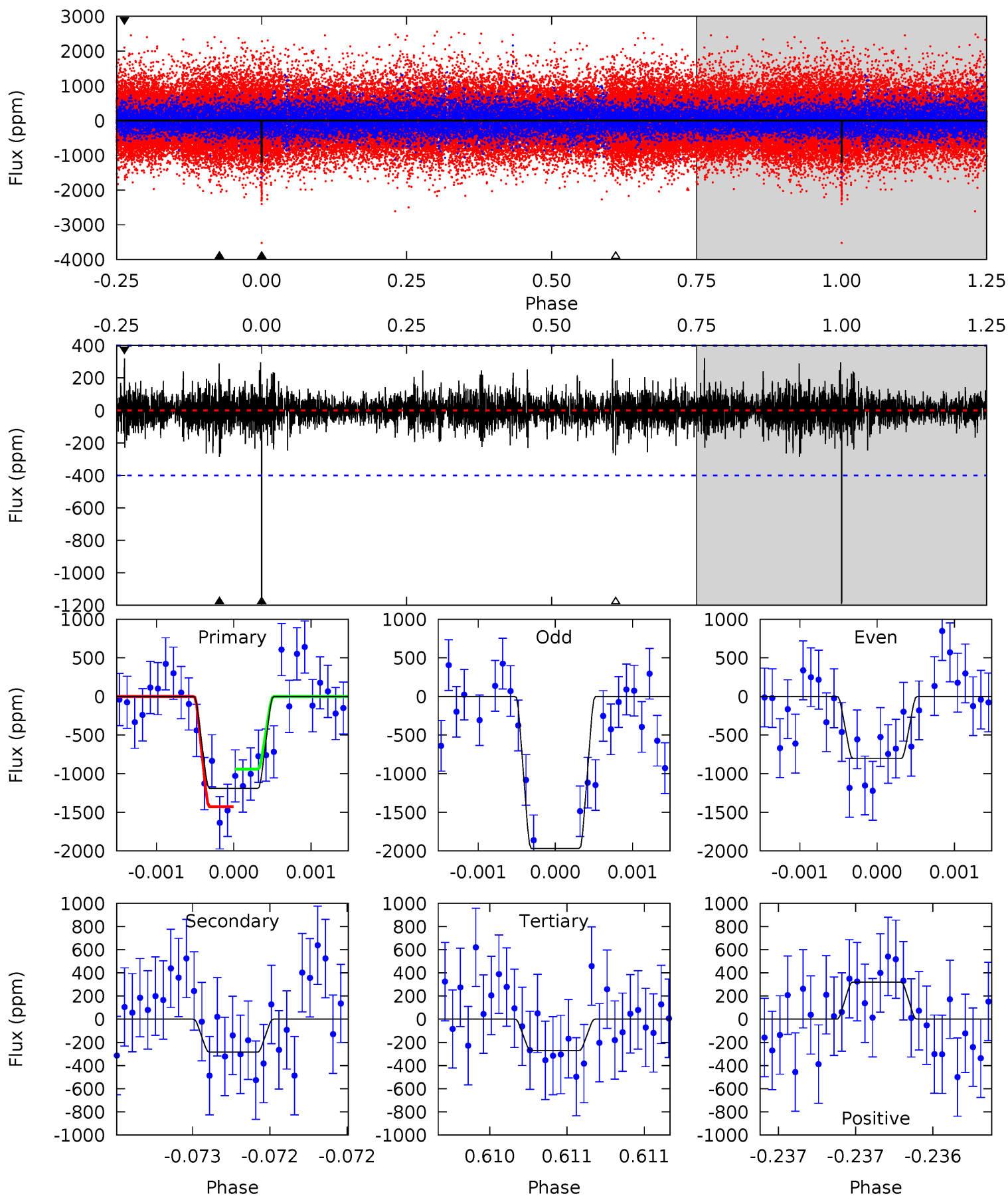
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.5	8.96	8.72	7.98	5.48	3.33	2.08	4.75	5.49	0.24	0.98	4.02	1.06	0.41	1.67



Alt Model-Shift Uniqueness Test

007900284-01, P = 598.076679 Days, E = 374.609170 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.4	3.92	3.73	4.42	5.51	3.38	0.92	12.7	12.0	0.19	-0.50	7.59	0.85	0.21	3.35



Stellar Parameters For KIC 007900284

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5799^{+155}_{-172}	$4.548^{+0.031}_{-0.178}$	$-0.160^{+0.300}_{-0.300}$	$0.860^{+0.216}_{-0.072}$	$0.955^{+0.102}_{-0.112}$	$2.112^{+0.367}_{-0.953}$
	+3%/-3%	+1%/-4%	+188%/-188%	+25%/-8%	+11%/-12%	+17%/-45%
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 007900284-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-634 ± 71	$3.41^{+0.68}_{-0.54}$	290^{+18}_{-12}	4988^{+390}_{-311}	53543^{+24936}_{-15953}
Alt.	-284 ± 73	$3.50^{+0.64}_{-0.60}$	291^{+18}_{-13}	4258^{+326}_{-321}	23391^{+11900}_{-7980}

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

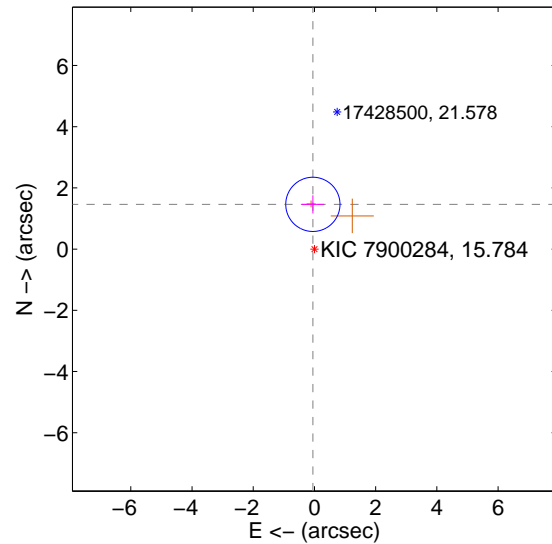
Supplemental centroid analysis for 007900284-01. Kepler magnitude: 15.78. Transit SNR 8.26

There are 0 quarters with good PRF difference image offsets

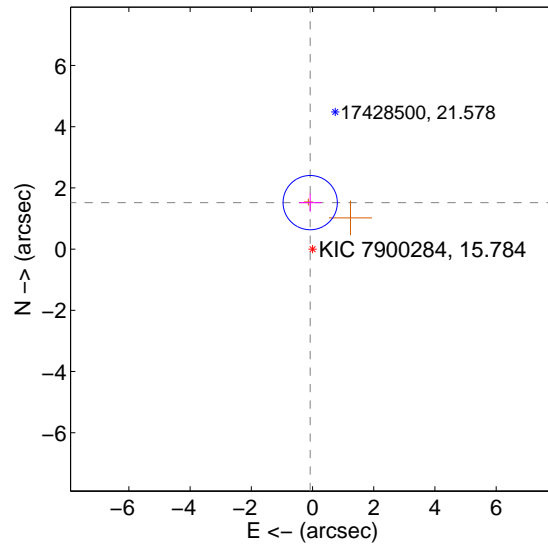
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.463 ± 0.295	4.95	0.051 ± 0.366	1.462 ± 0.295
PRF-fit source offset from KIC position	1.521 ± 0.296	5.15	0.076 ± 0.366	1.519 ± 0.295
photometric centroid source offset	0.36 ± 2.08	0.17	0.02 ± 1.83	-0.36 ± 2.08

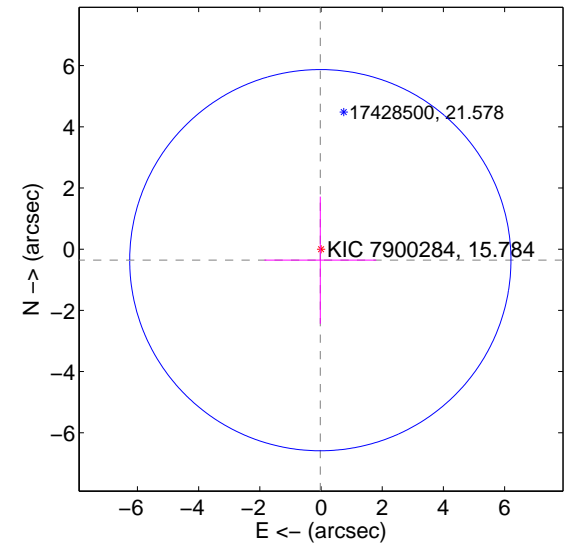
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

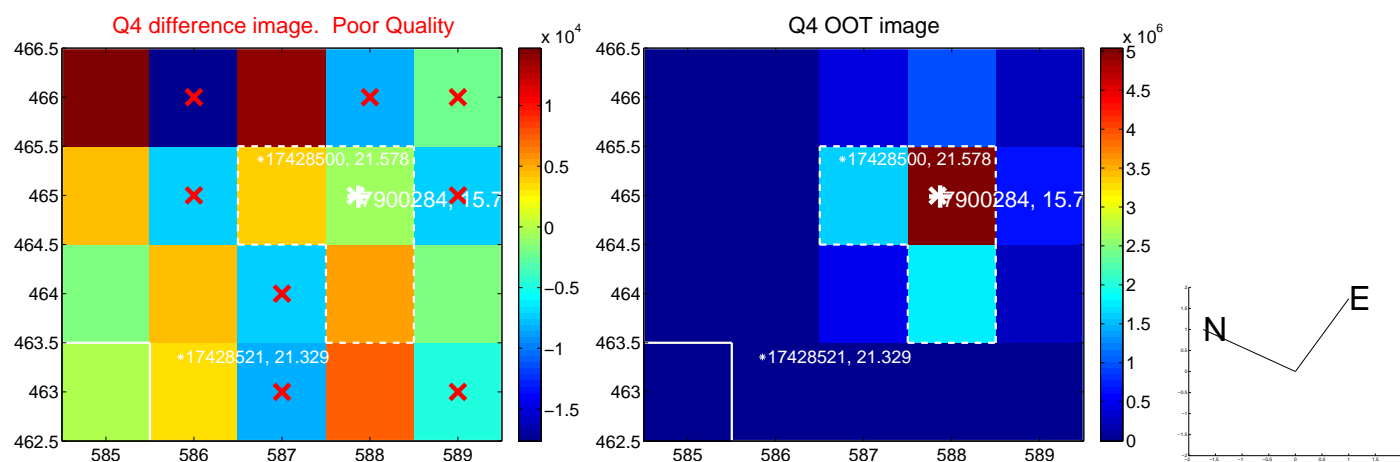


offset from photometric centroids



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.

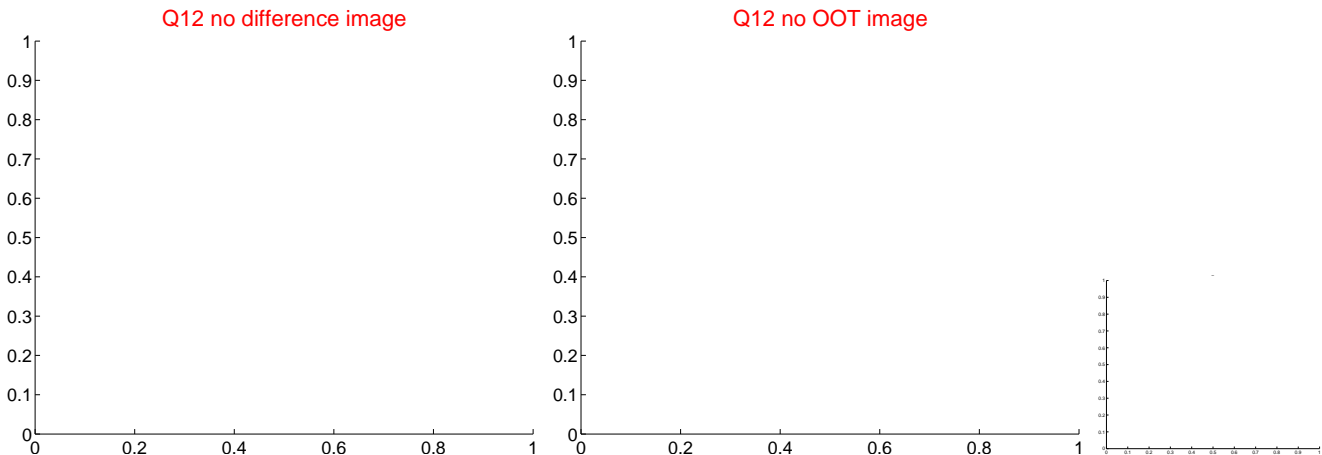
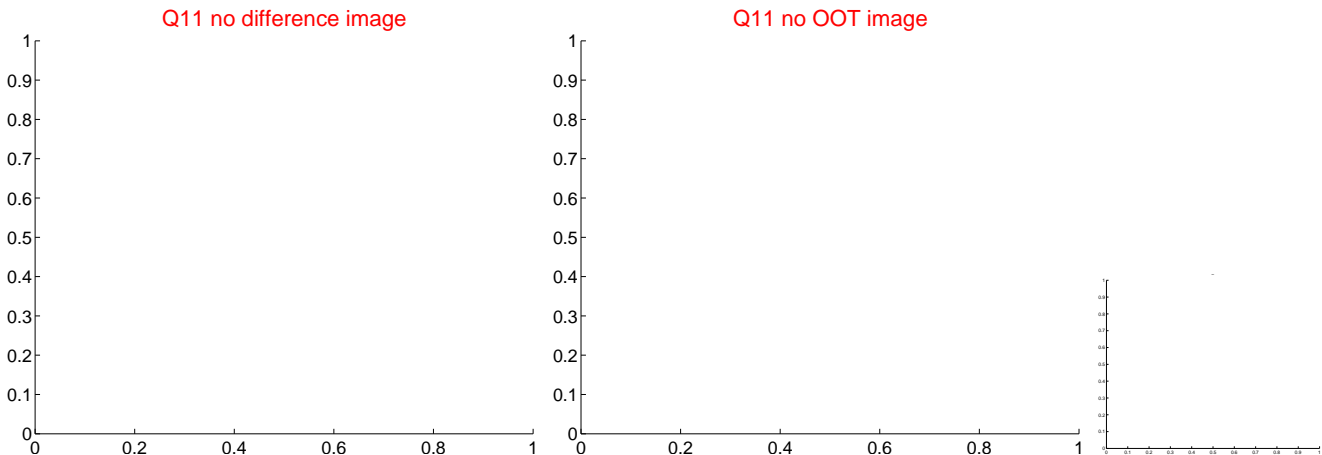
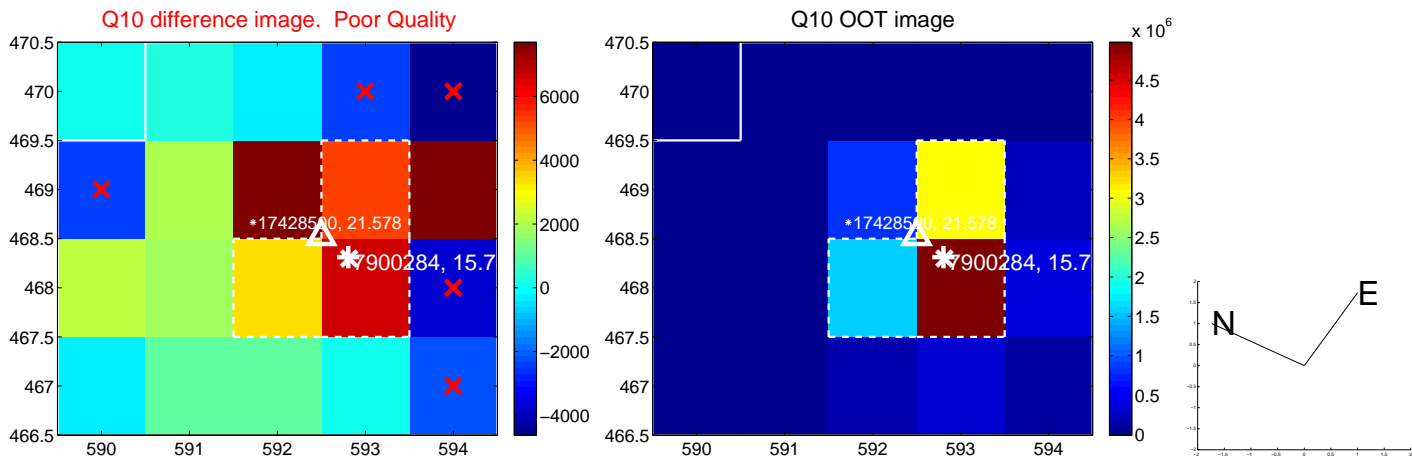
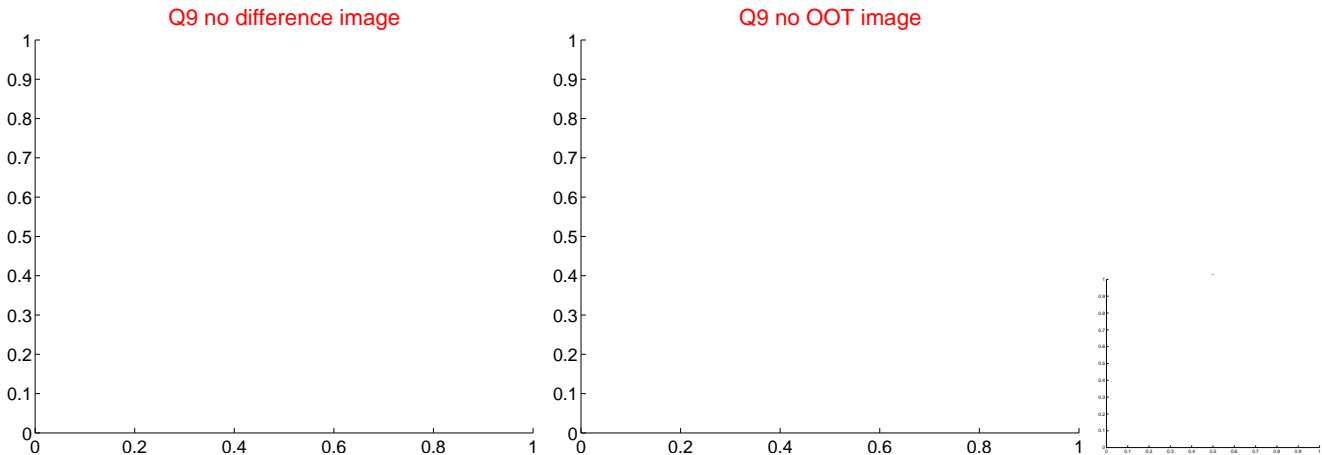
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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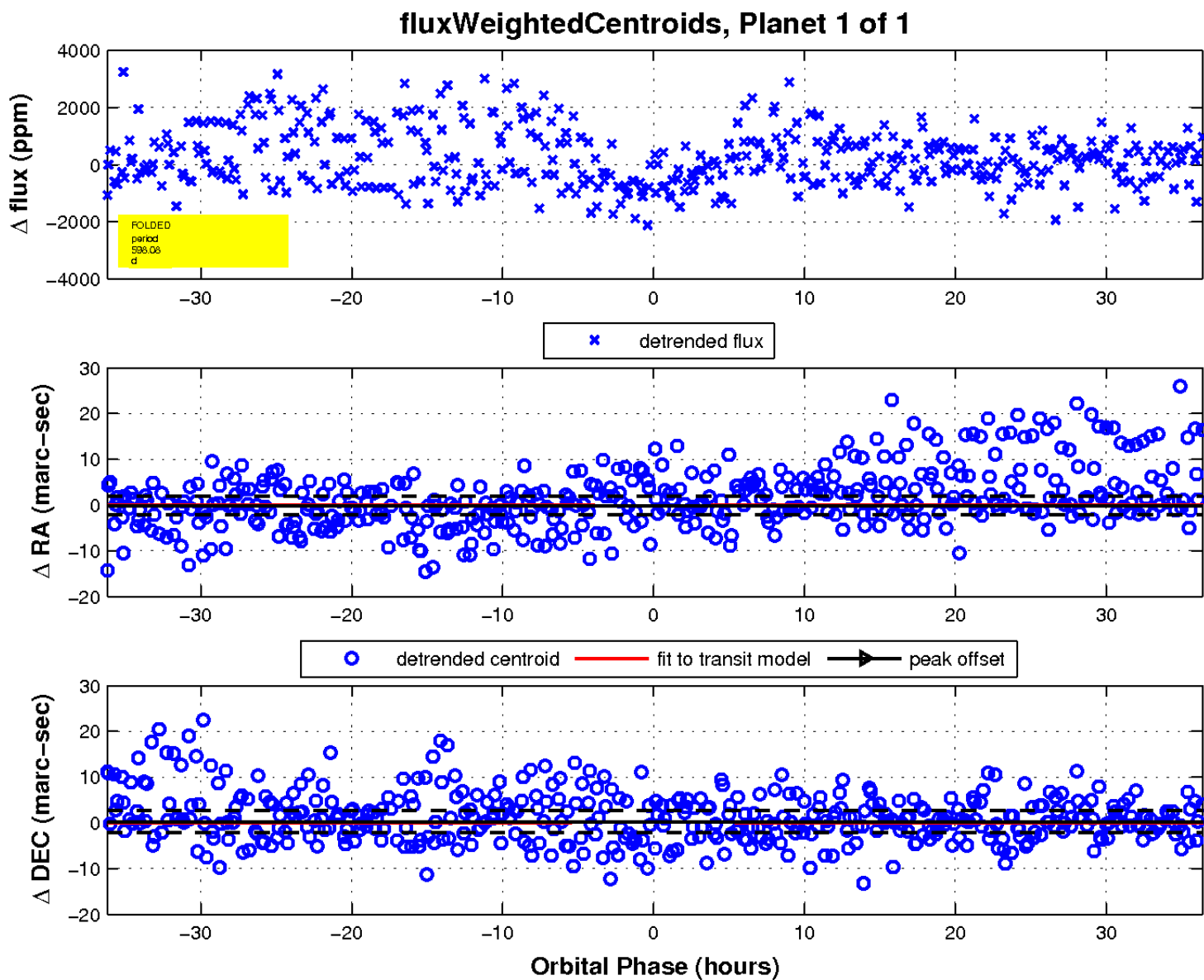
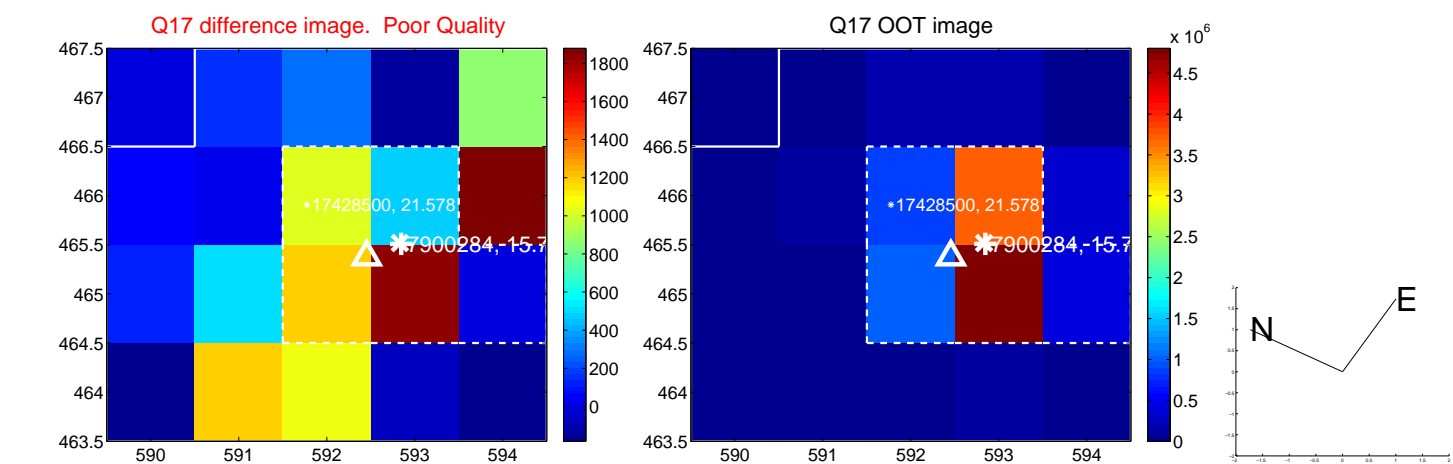
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



UKIRT Image

Declination

