

KIC 005477286

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})
005477286-01	OBS	No	416.076378	318.528821	172.0	7.195	9.2	7.6	1.83	6006	2.70	3.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005477286-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_KIC_POS

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

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

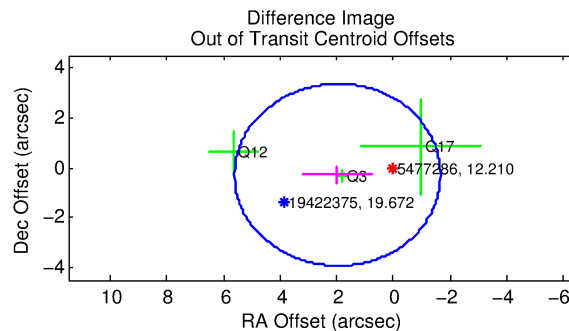
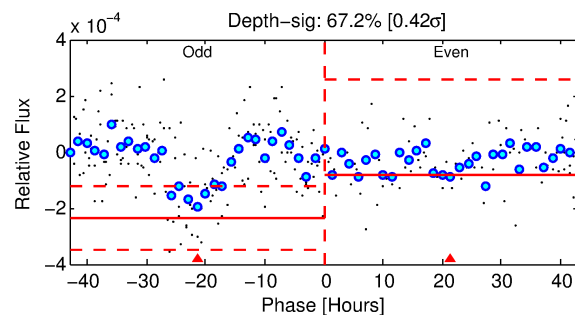
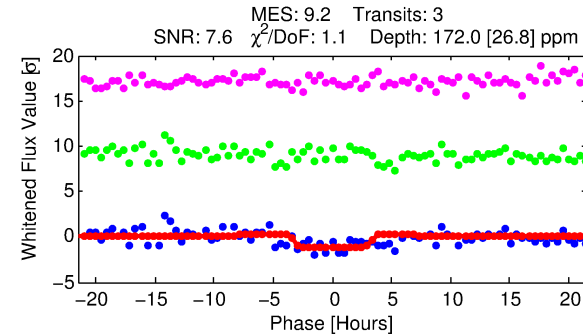
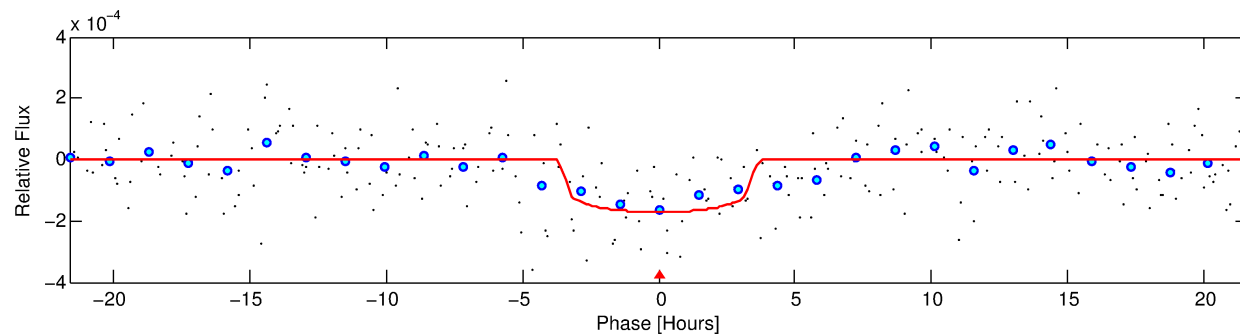
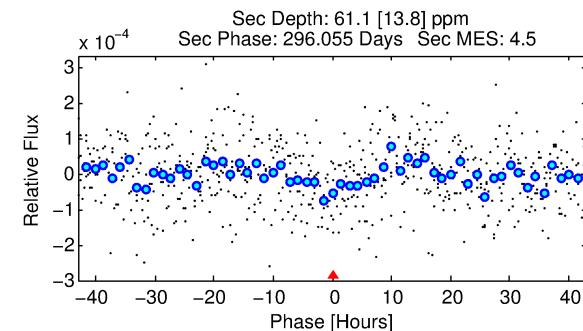
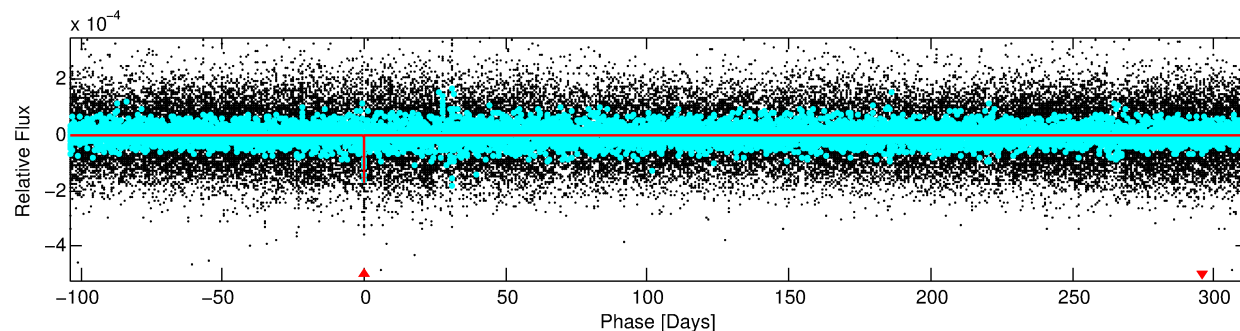
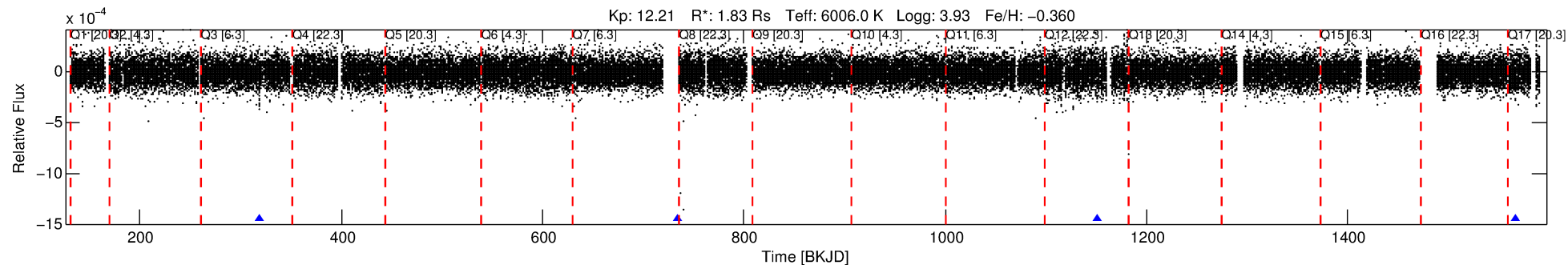
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005477286-01

No Significant Match Found

DV One-Page Summary

KIC: 5477286 Candidate: 1 of 1 Period: 416.076 d



DV Fit Results:

Period = 416.07638 [0.00748] d
Epoch = 318.5288 [0.0164] BKJD
Rp/R* = 0.0135 [0.0055]
a/R* = 252.28 [515.34]
b = 0.84 [0.73]
Seff = 3.19 [1.69]
Teq = 341 [45] K
Rp = 2.70 [1.39] Re
a = 1.1045 [0.3503] AU
Ag = 5631.58 [5560.52] [1.01σ]
Teffp = 4563 [969] K [4.35σ]

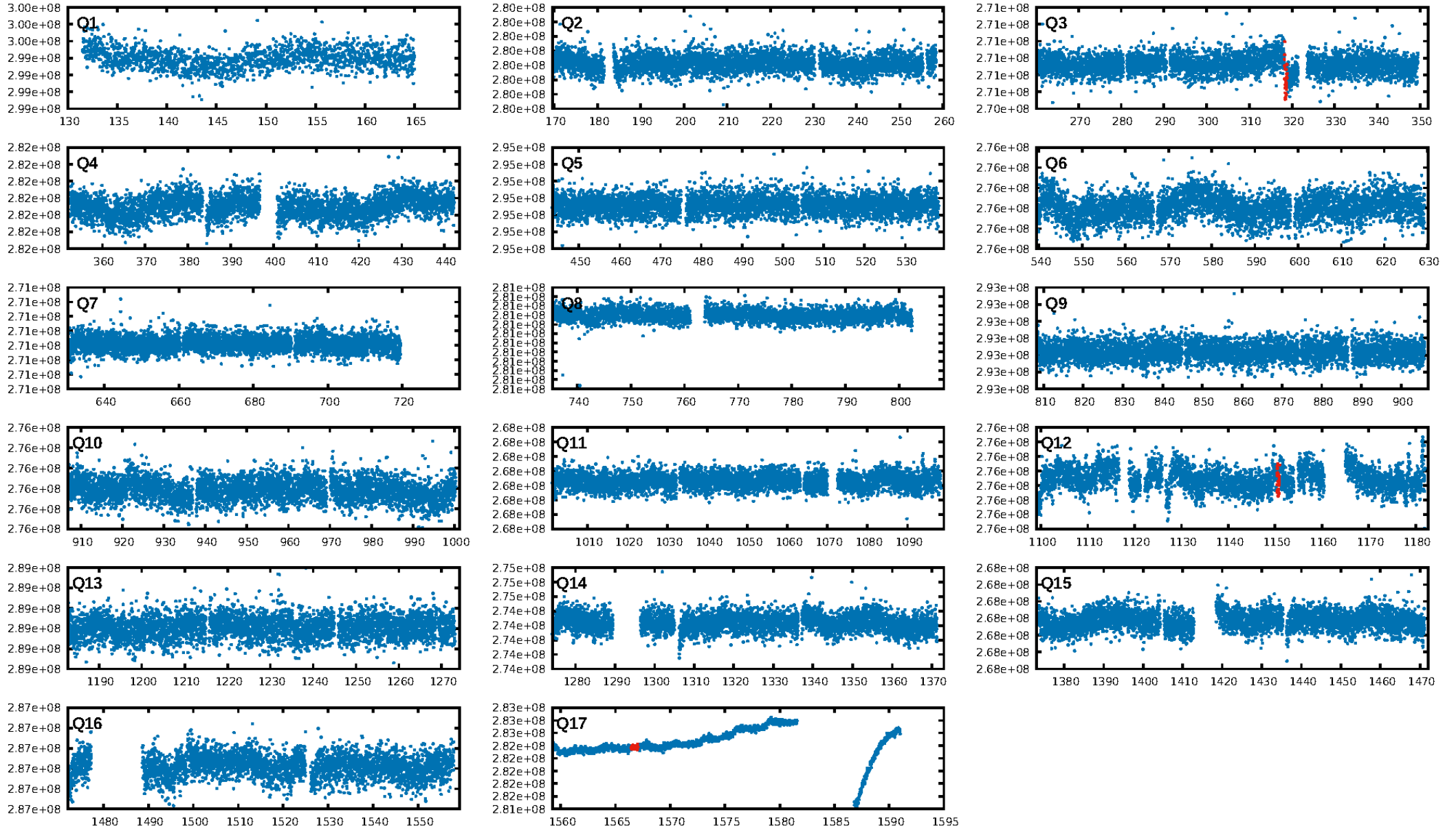
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.3%
ModelChiSquareGof-sig: 88.0%
Bootstrap-pfa: 1.20e-18
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 1.52
Centroid-sig: 26.1%
Centroid-so: 1.851 arcsec [1.25σ]
OotOffset-rm: 1.994 arcsec [1.64σ]
KicOffset-rm: 1.638 arcsec [1.11σ]
OotOffset-st: 0/1/1/1 [3]
KicOffset-st: 0/1/1/1 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

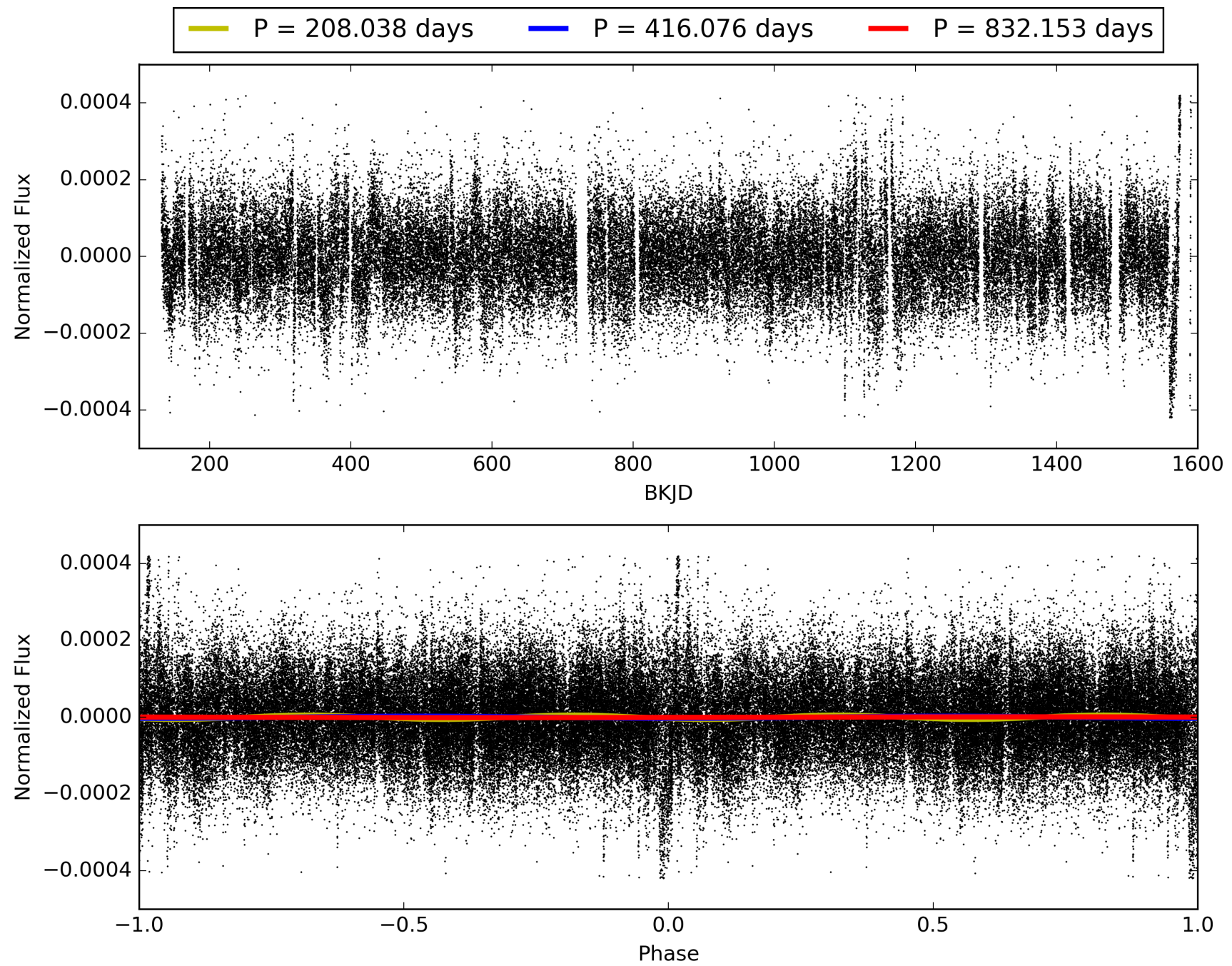
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 06:27:04 Z

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

TCE 005477286-01, PDC Light Curves

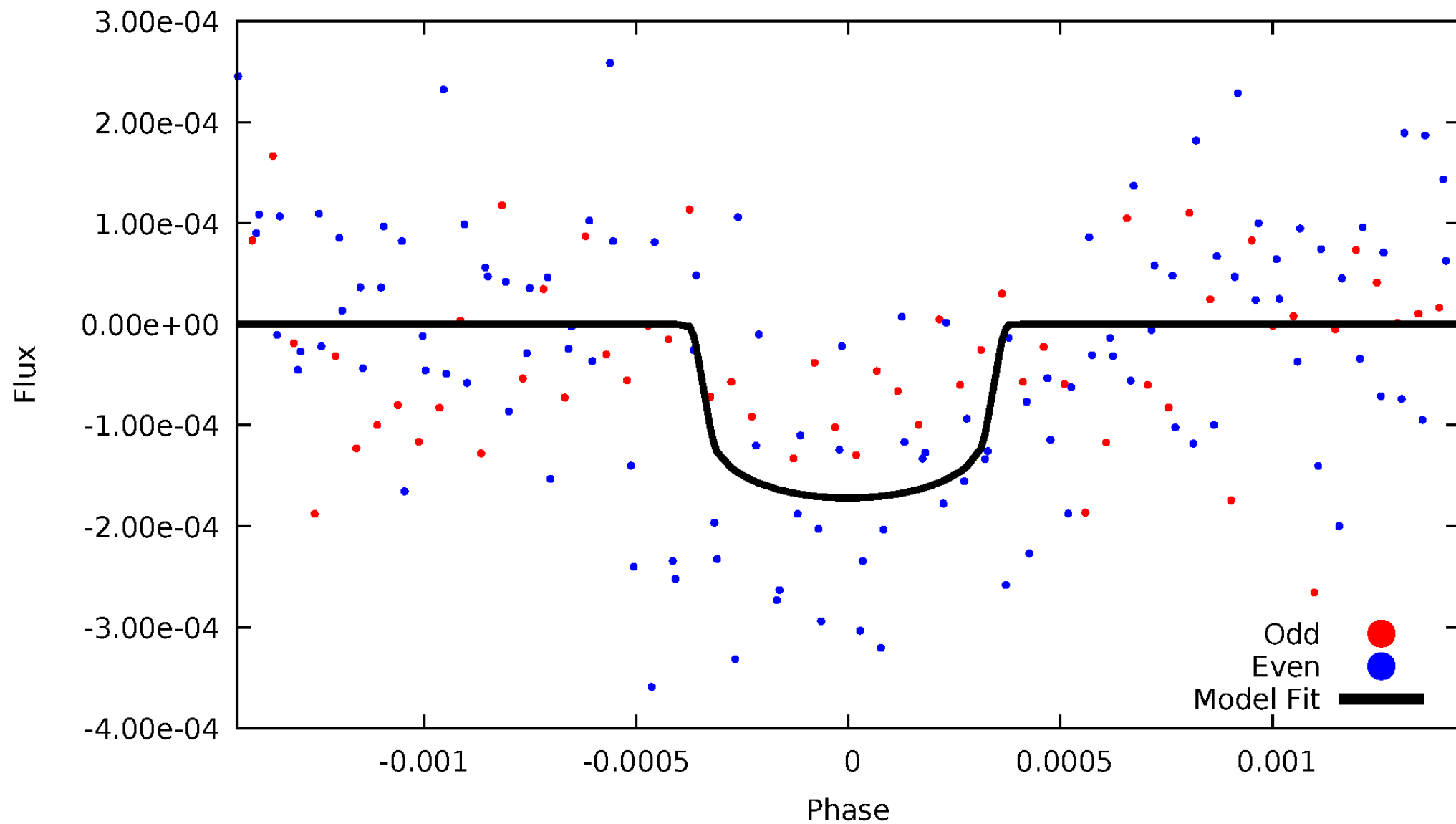


TCE 005477286-01



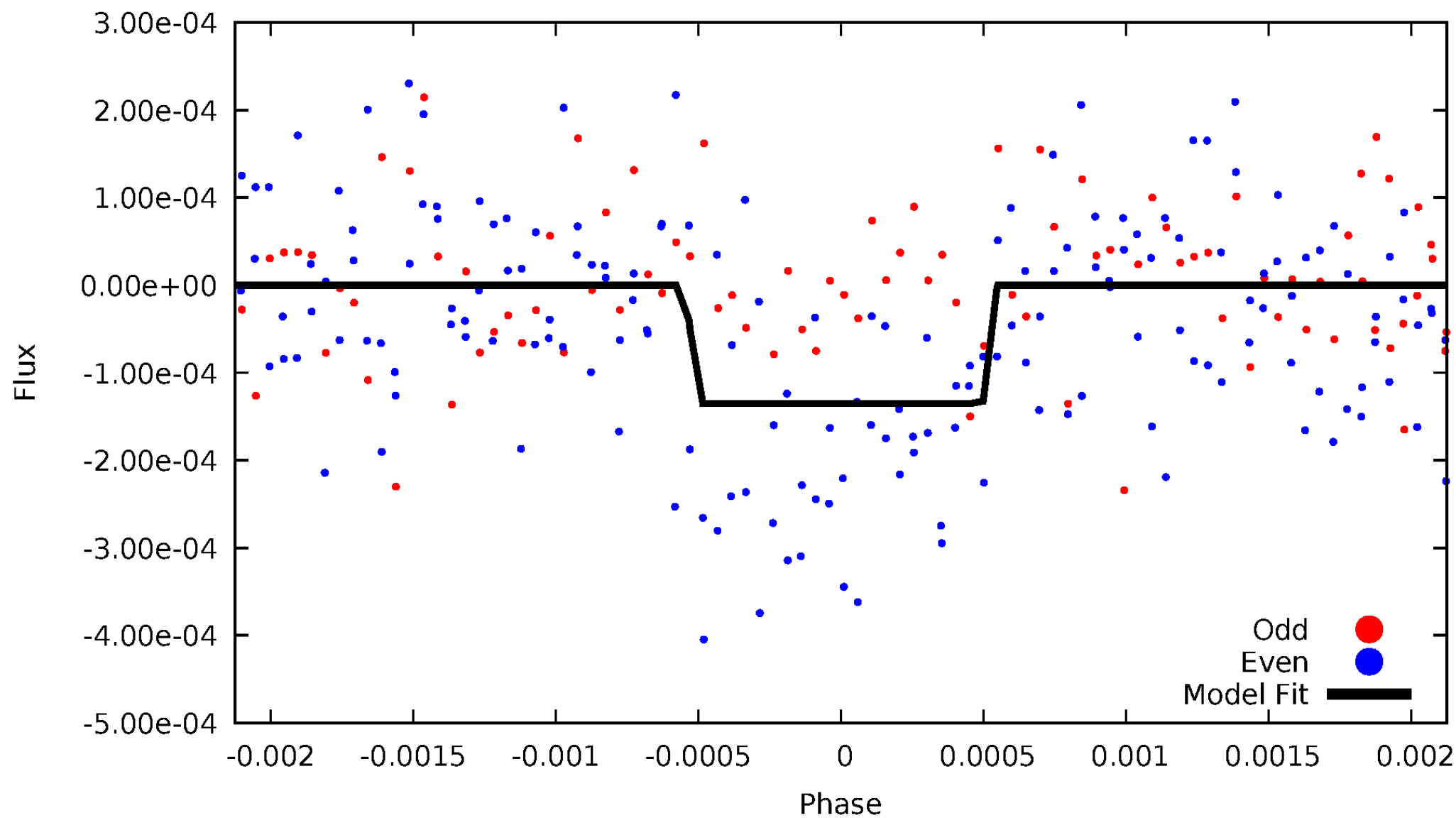
DV Odd/Even

TCE 005477286-01



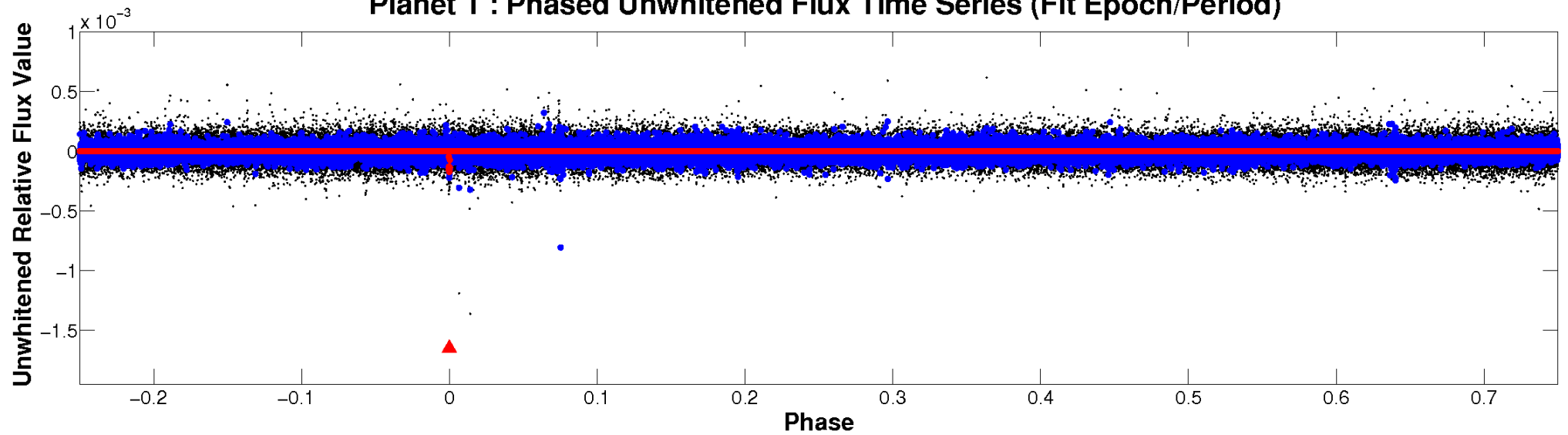
ALT Odd/Even

TCE 005477286-01

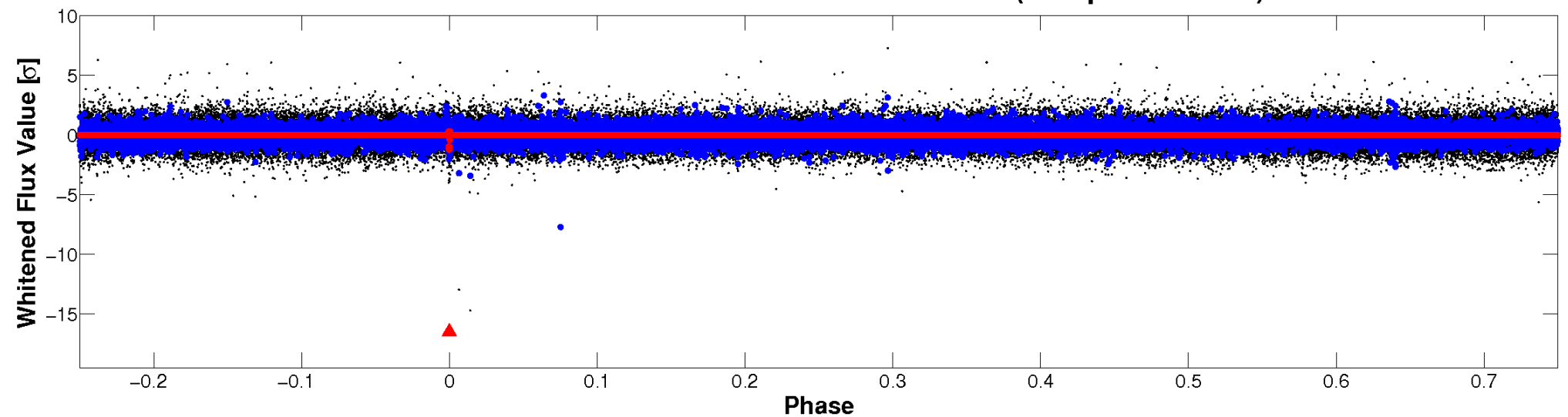


Non-Whitened Vs. Whitened Light Curve

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

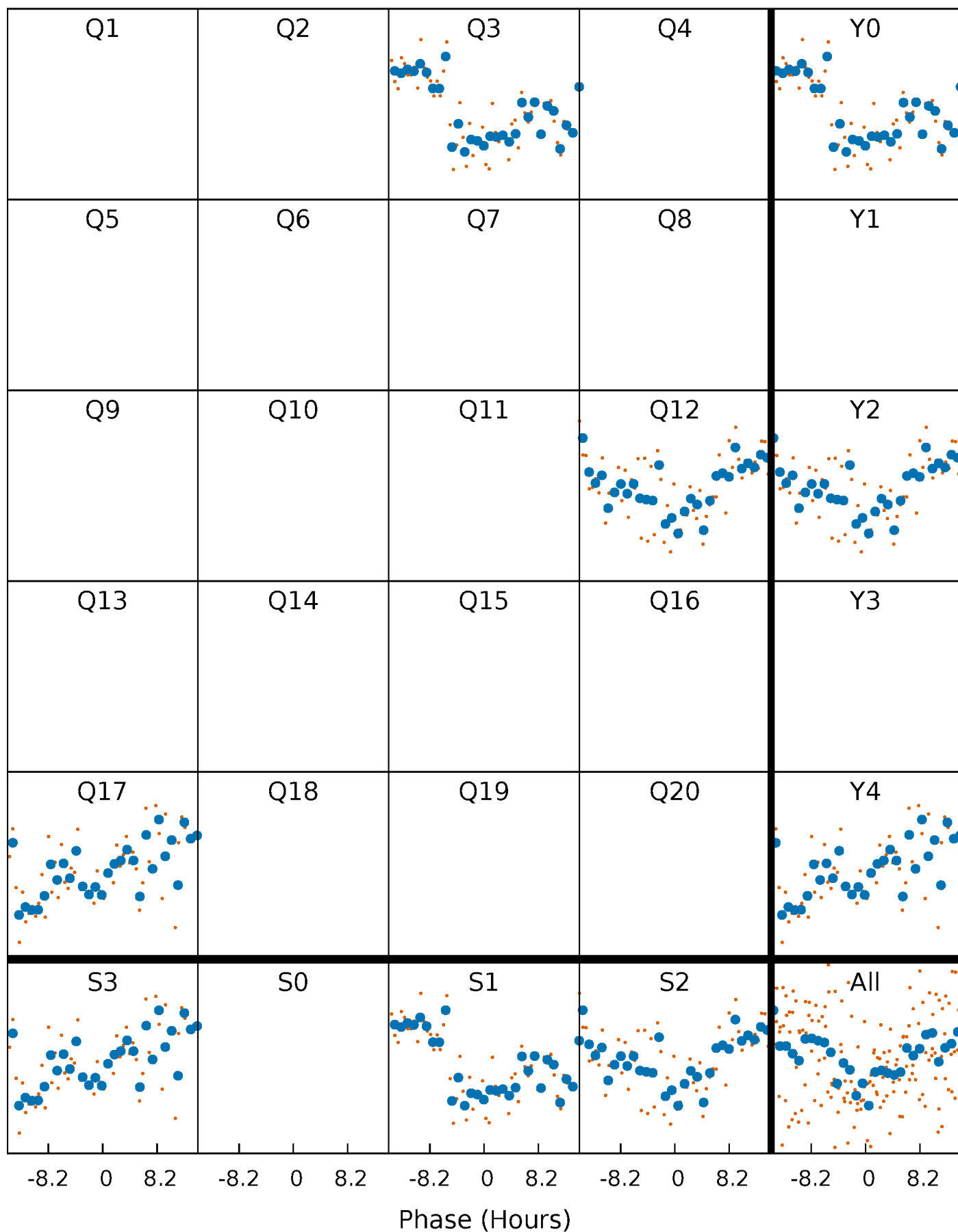


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



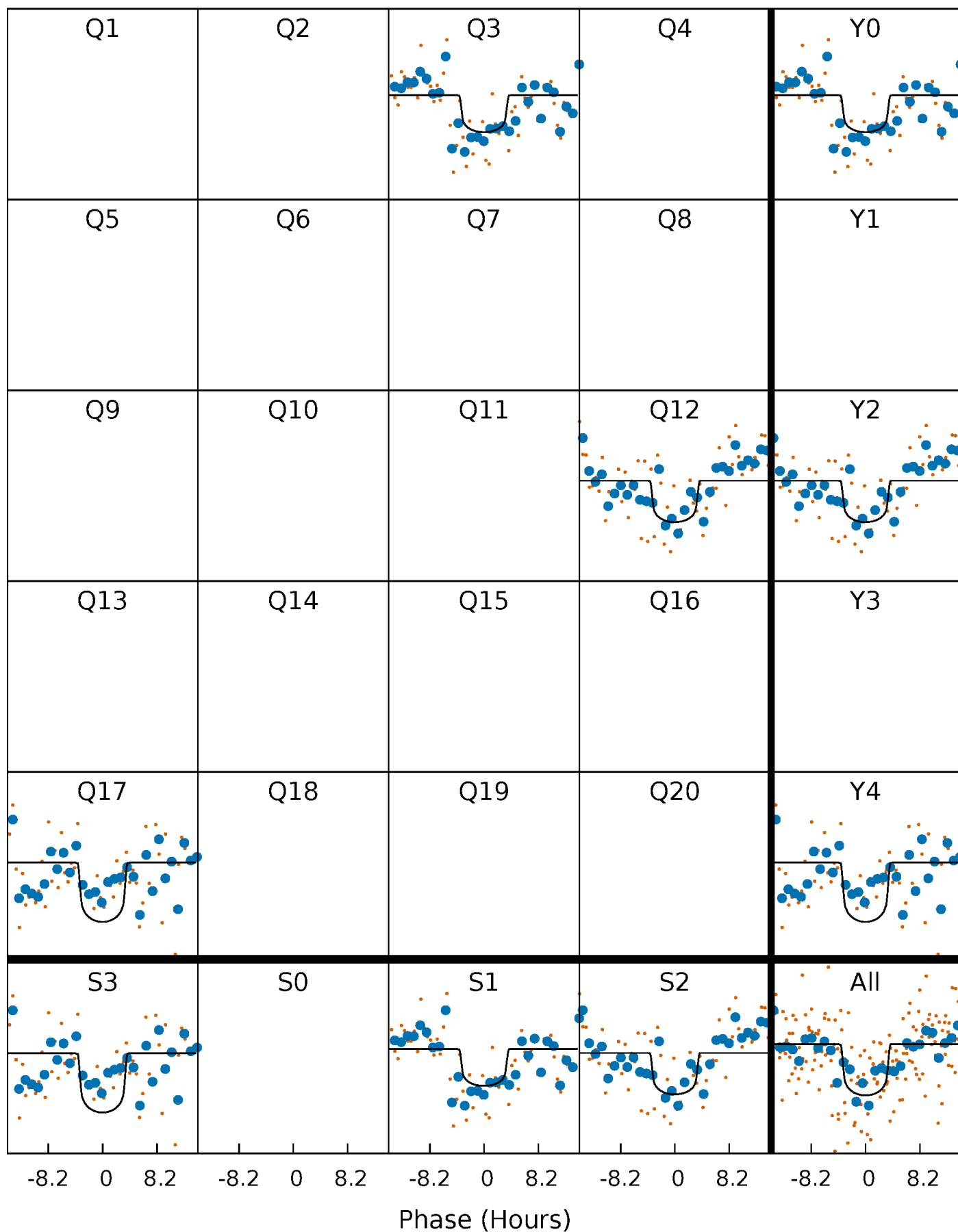
PDC Quarter-Phased Transit Curves

TCE 005477286-01 P=416.076378 Days $T_0=318.528821$ (BKJD)



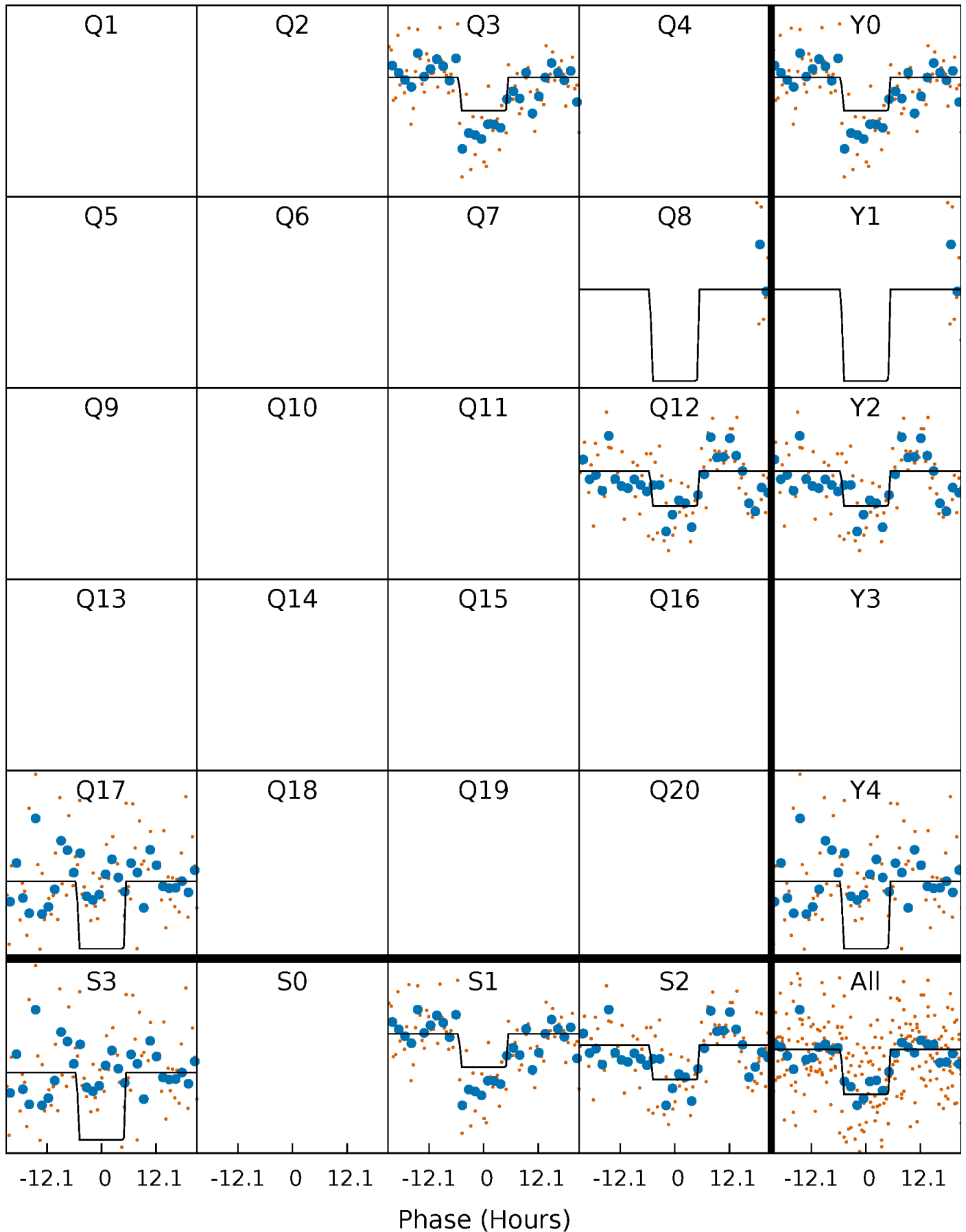
DV Quarter-Phased Transit Curves

TCE 005477286-01 P=416.076378 Days $T_0=318.528821$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

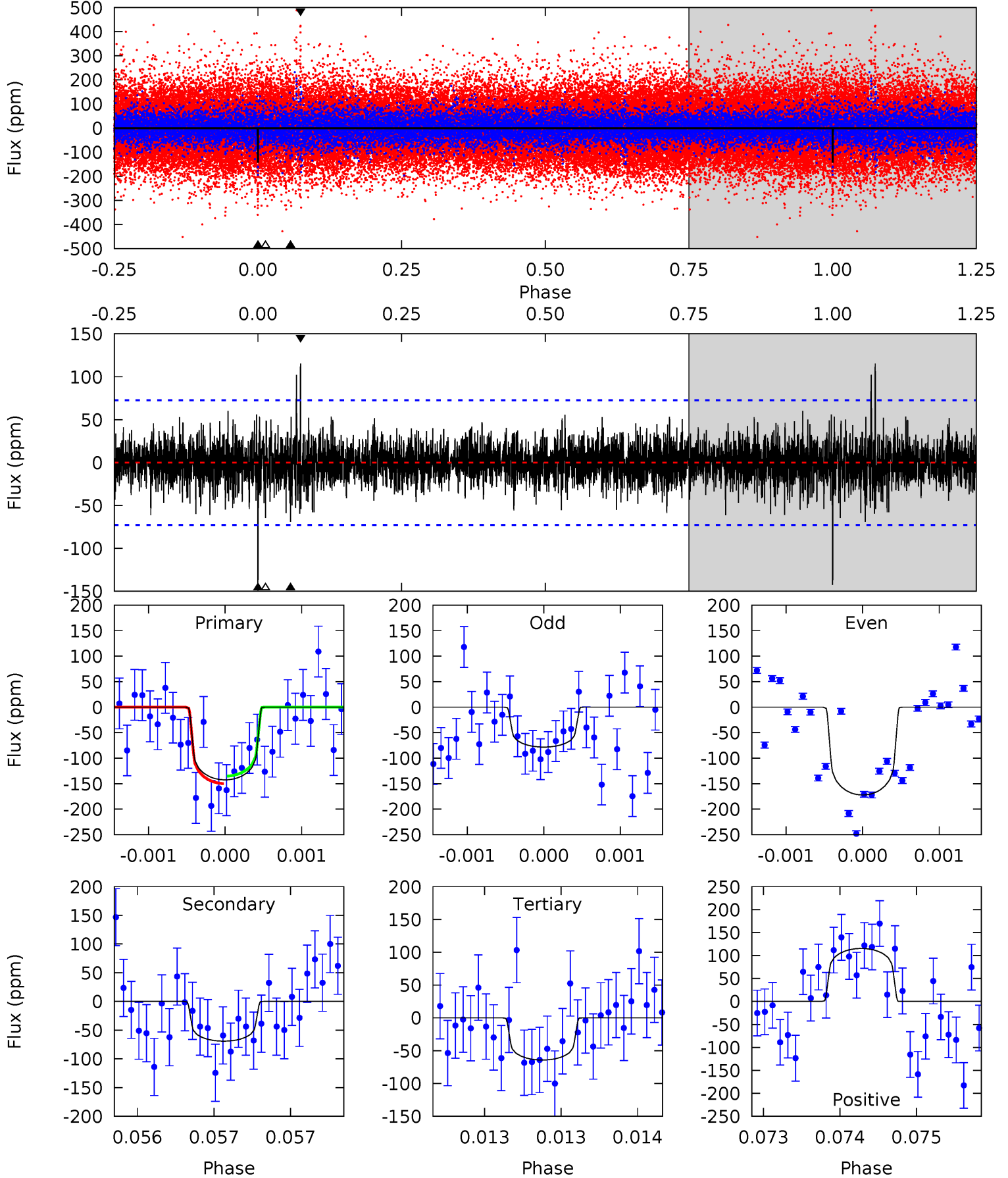
TCE 005477286-01 P=416.088582 Days $T_0=318.536058$ (BKJD)



DV Model-Shift Uniqueness Test

005477286-01, P = 416.076378 Days, E = 318.528821 Days

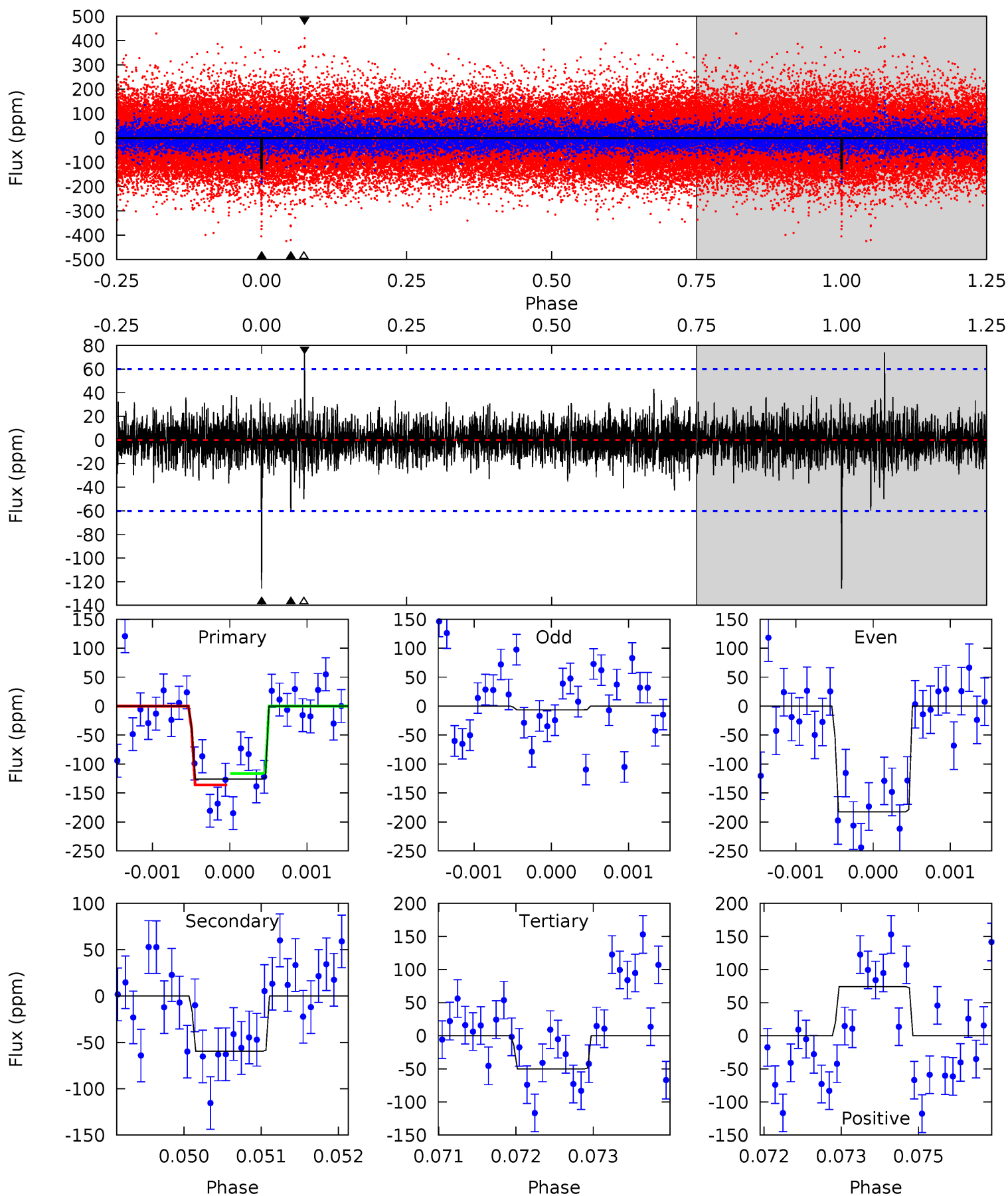
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.8	5.22	4.85	8.72	5.49	3.36	1.29	5.91	2.05	0.37	-3.49	3.29	1.04	0.45	0.55



Alt Model-Shift Uniqueness Test

005477286-01, P = 416.088582 Days, E = 318.536058 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.4	5.39	4.52	6.68	5.44	3.27	0.97	6.85	4.69	0.87	-1.29	7.46	0.89	0.37	0.89



Stellar Parameters For KIC 005477286

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6006^{+180}_{-162}	$3.931^{+0.308}_{-0.103}$	$-0.360^{+0.350}_{-0.250}$	$1.826^{+0.386}_{-0.579}$	$1.038^{+0.183}_{-0.149}$	$0.240^{+0.440}_{-0.086}$
	+3%/-3%	+8%/-3%	+97%/-69%	+21%/-32%	+18%/-14%	+183%/-36%
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 005477286-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-69 ± 13	$2.51^{+1.18}_{-1.07}$	467^{+30}_{-43}	4834^{+1350}_{-651}	7274^{+15726}_{-3918}
Alt.	-60 ± 11	$2.13^{+1.19}_{-0.95}$	467^{+32}_{-41}	4992^{+1502}_{-716}	9018^{+18522}_{-5475}

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

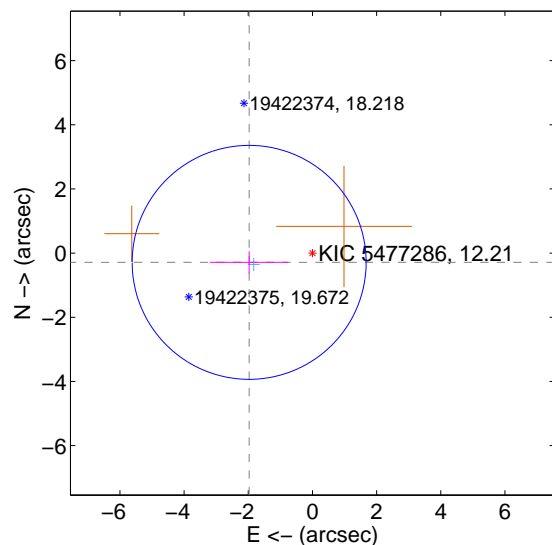
Supplemental centroid analysis for 005477286-01. Kepler magnitude: 12.21. Transit SNR 7.58

There are 1 quarters with good PRF difference image offsets

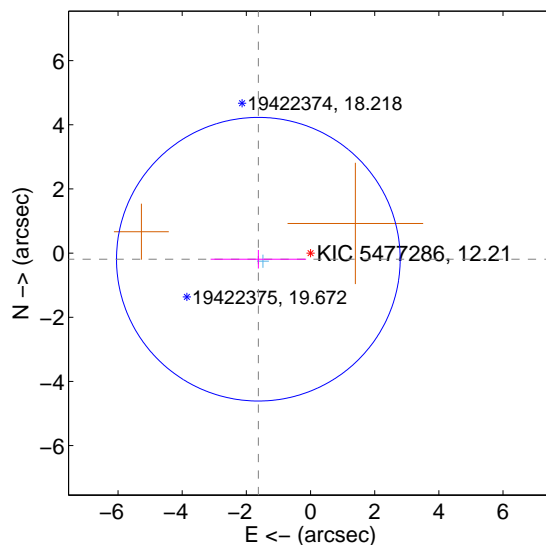
The direct PRF centroid is offset from the target star catalog position by about 0.42 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.994 ± 1.215	1.64	1.973 ± 1.219	-0.289 ± 0.347
PRF-fit source offset from KIC position	1.638 ± 1.474	1.11	1.627 ± 1.489	-0.190 ± 0.289
photometric centroid source offset	1.85 ± 1.48	1.25	1.80 ± 1.50	-0.43 ± 1.14

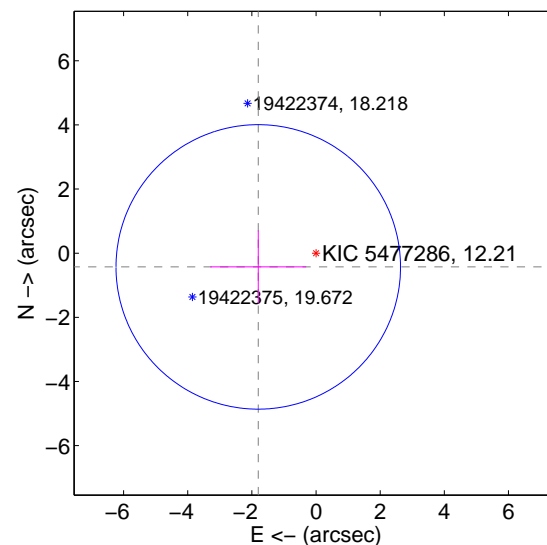
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

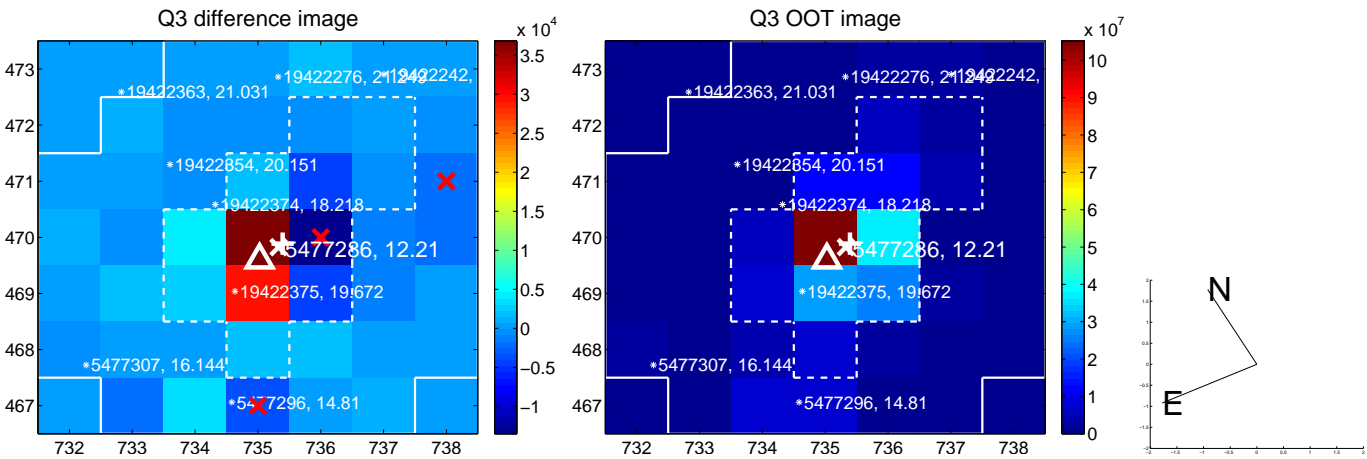


offset from photometric centroids



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.

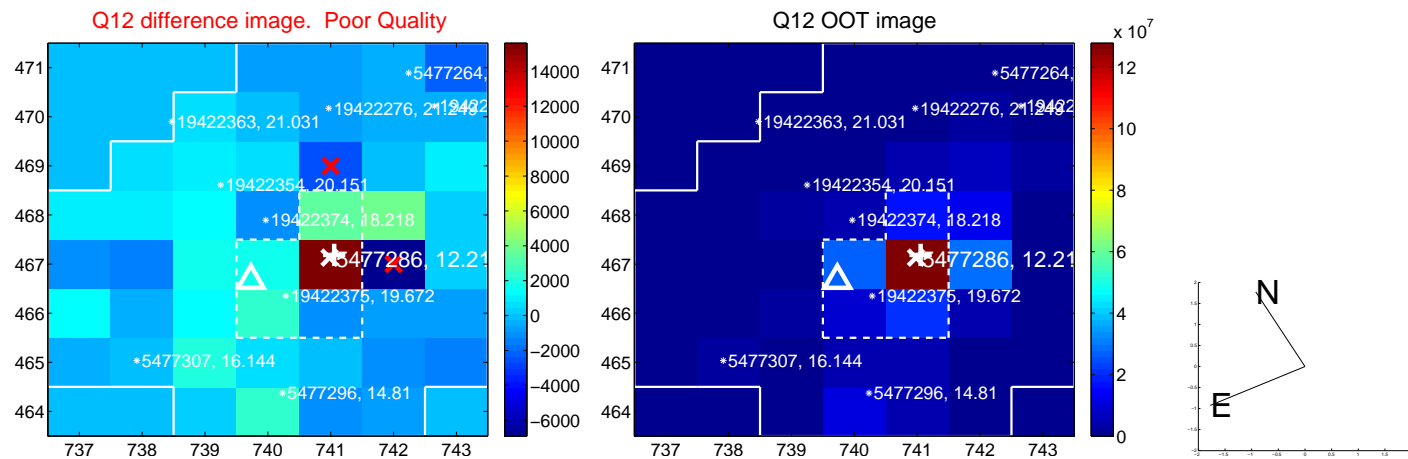
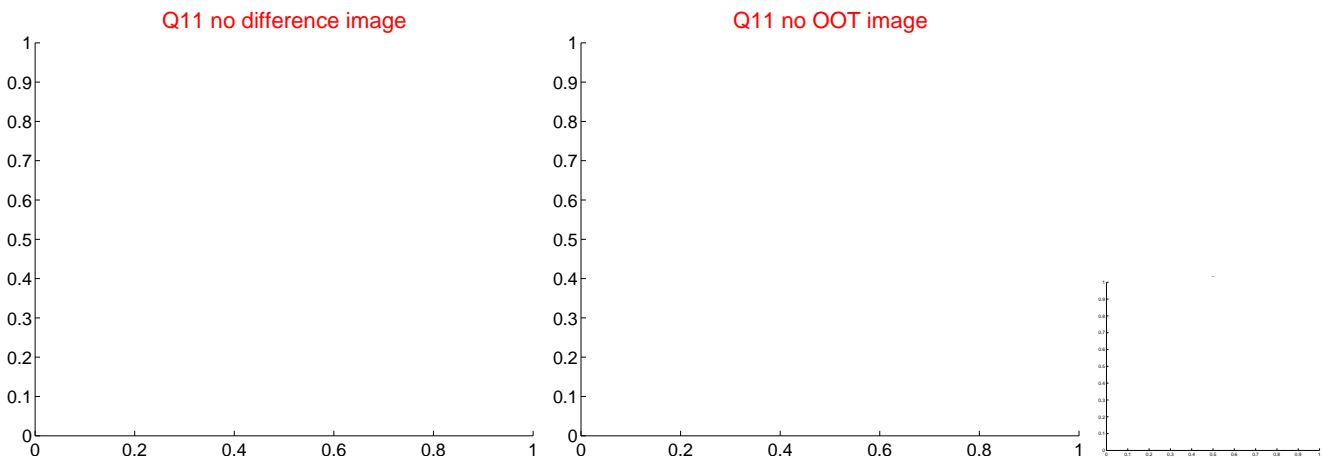
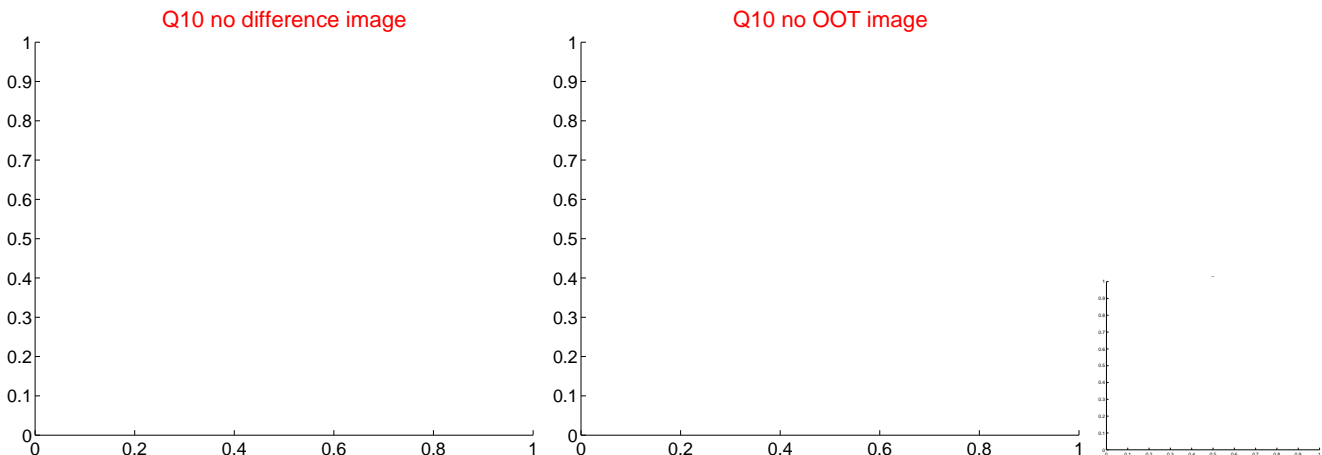
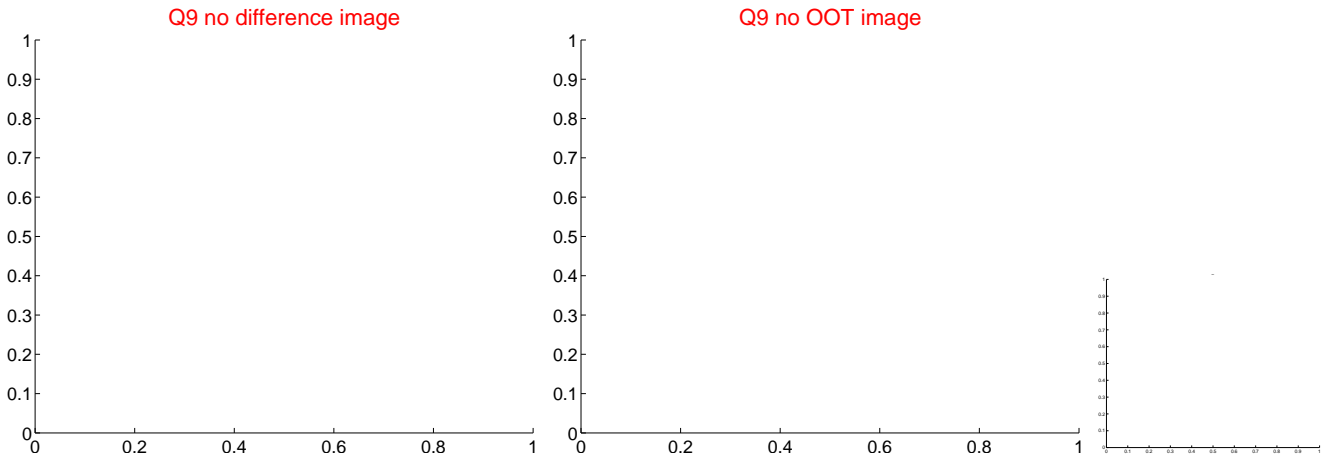
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



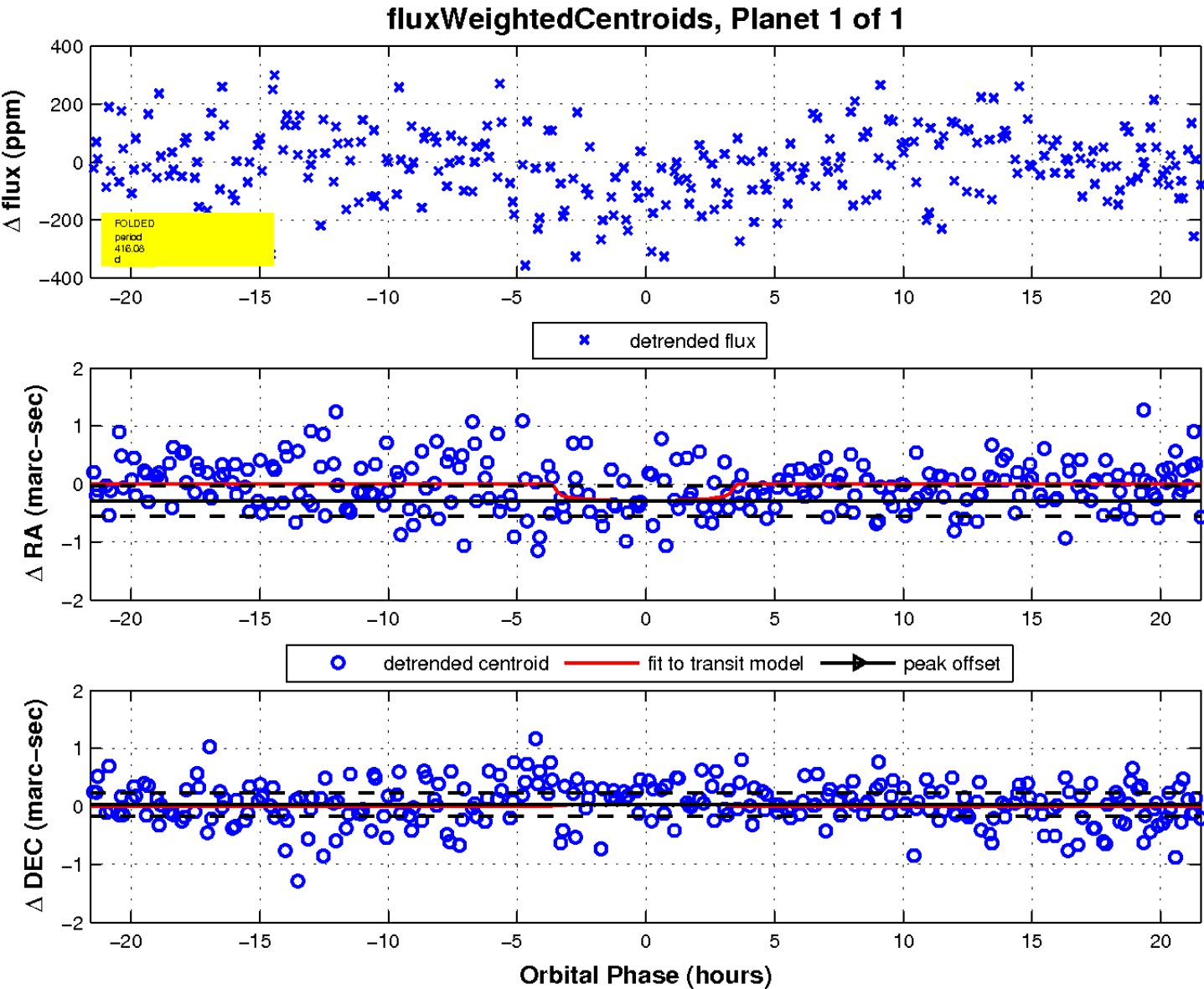
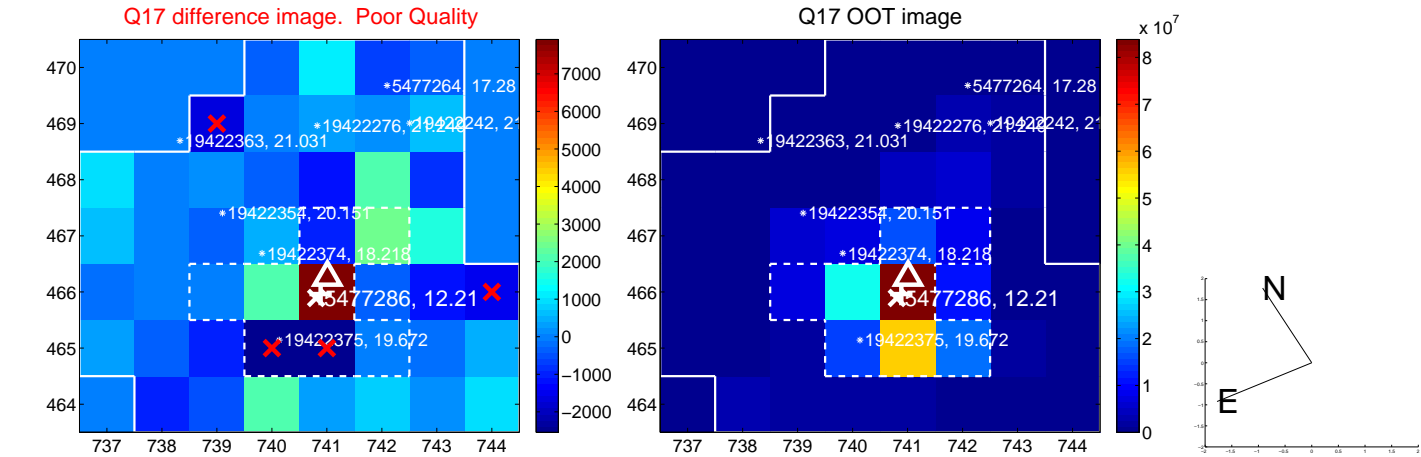
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



UKIRT Image

Declination

