

KIC 010139126

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})
010139126-01	OBS	No	579.127765	173.494081	476.5	3.208	11.1	5.1	0.93	5706	2.14	0.43

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010139126-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_TRACKER—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—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.

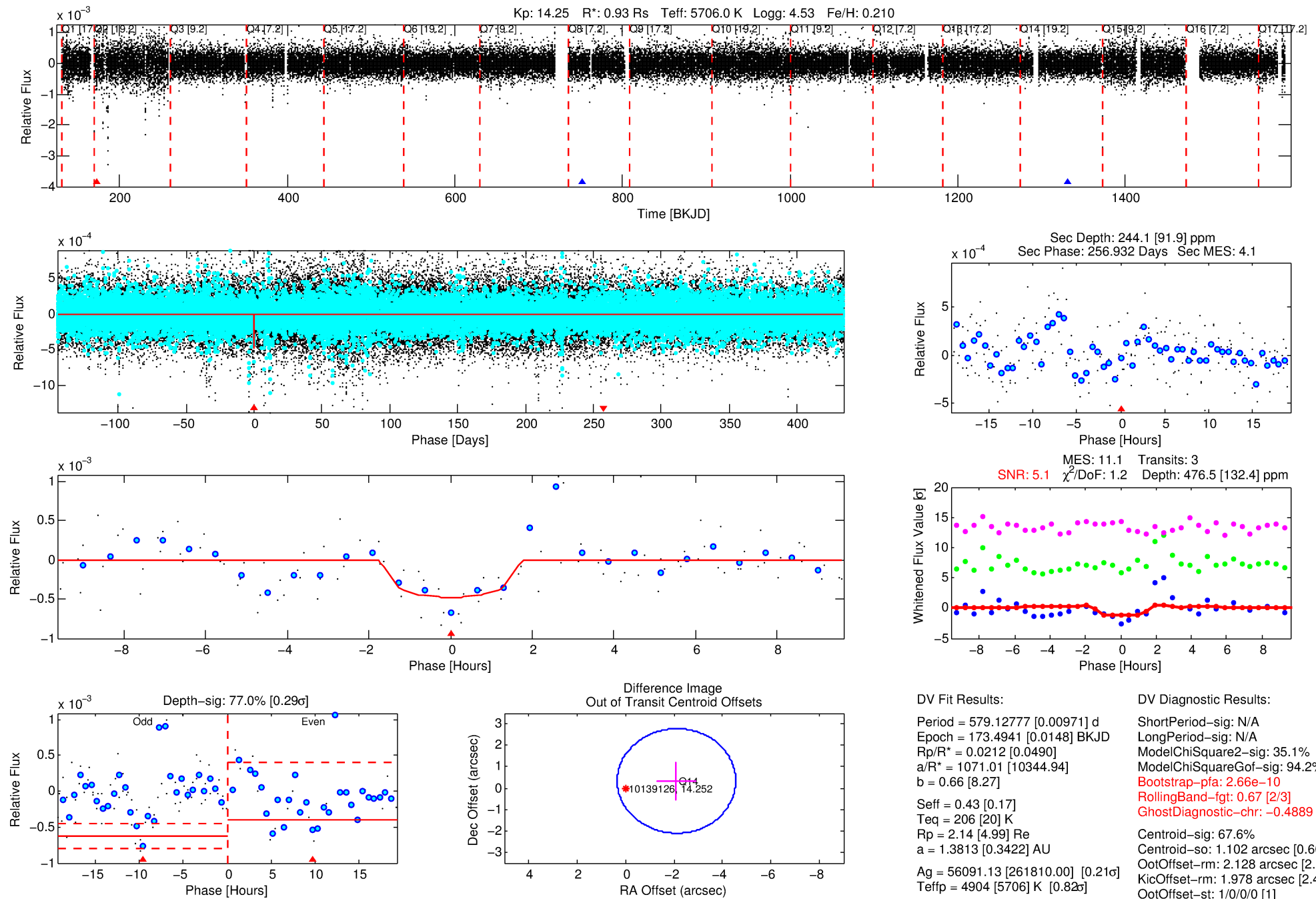
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010139126-01

No Significant Match Found

DV One-Page Summary

KIC: 10139126 Candidate: 1 of 1 Period: 579.128 d



DV Fit Results:

Period = 579.12777 [0.00971] d
Epoch = 173.4941 [0.0148] BKJD
Rp/R* = 0.0212 [0.0490]
a/R* = 1071.01 [10344.94]
b = 0.66 [8.27]
Seff = 0.43 [0.17]
Teff = 206 [20] K
Rp = 2.14 [4.99] Re
a = 1.3813 [0.3422] AU
Ag = 56091.13 [261810.00] [0.21 σ]
Teffp = 4904 [5706] K [0.82 σ]

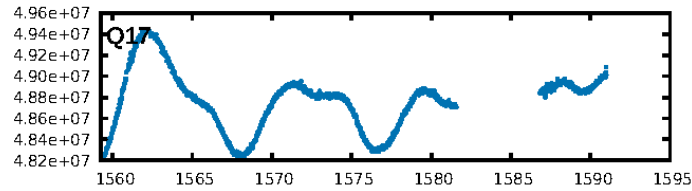
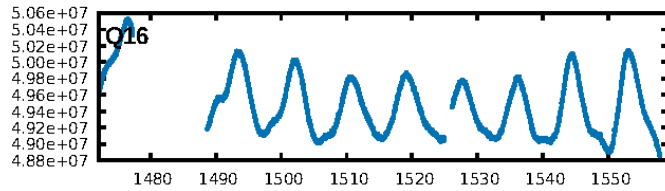
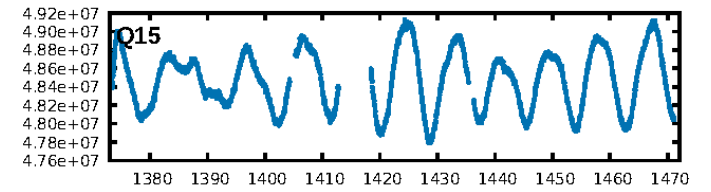
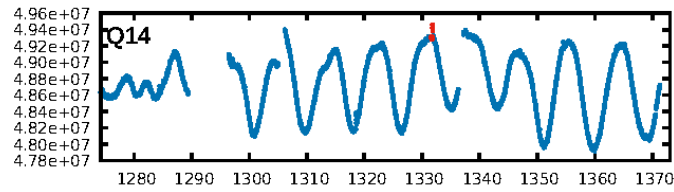
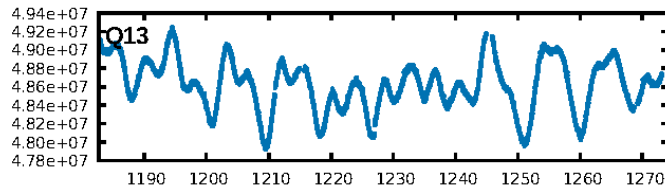
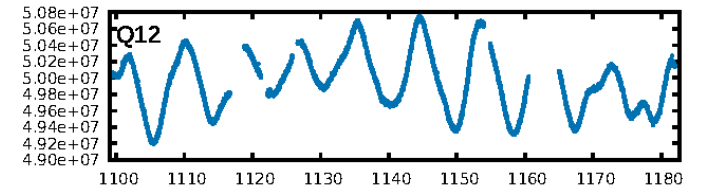
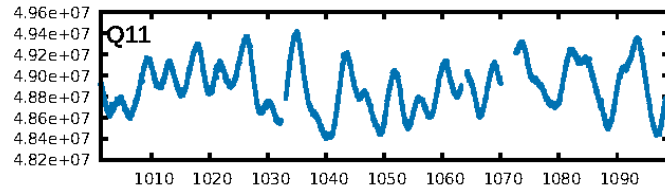
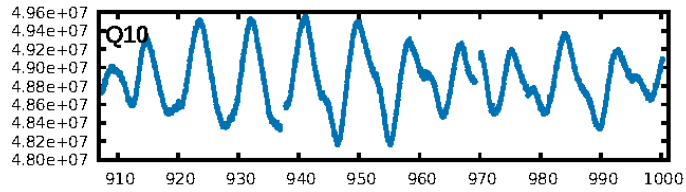
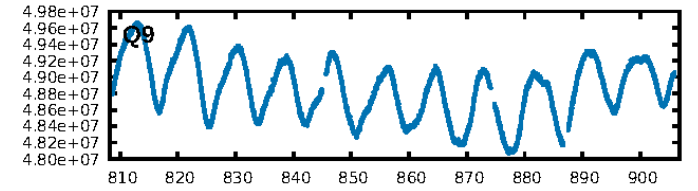
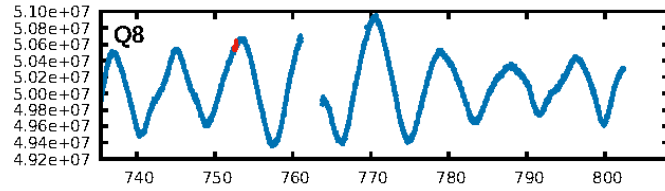
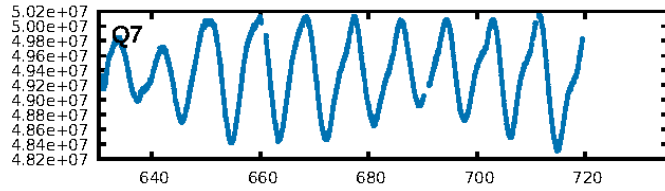
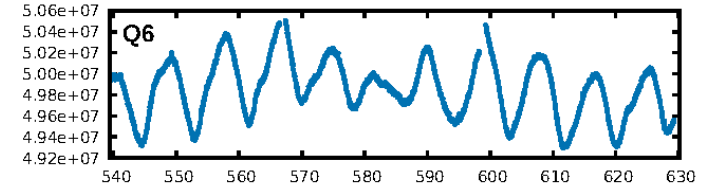
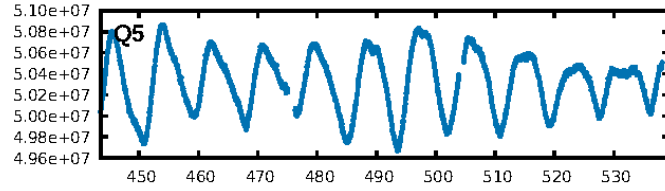
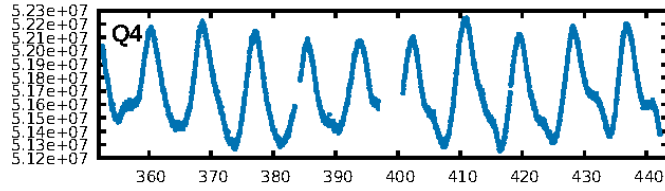
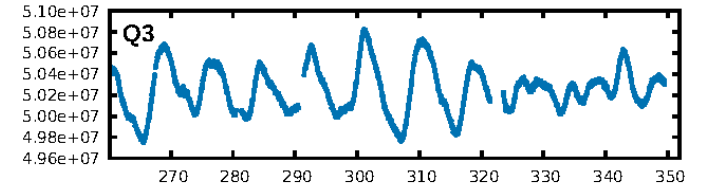
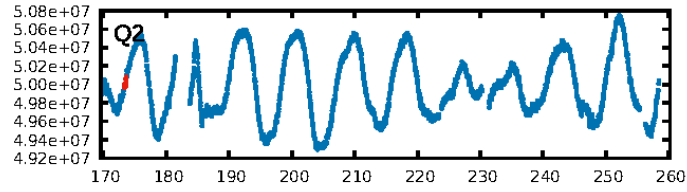
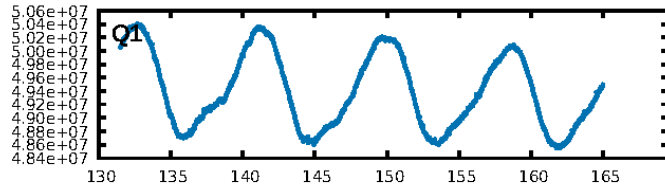
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 35.1%
ModelChiSquareGof-sig: 94.2%
Bootstrap-pfa: 2.66e-10
RollingBand-fgt: 0.67 [2/3]
GhostDiagnostic-chr: -0.4889
Centroid-sig: 67.6%
Centroid-so: 1.102 arcsec [0.60 σ]
OotOffset-rm: 2.128 arcsec [2.61 σ]
KicOffset-rm: 1.978 arcsec [2.42 σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [3/3]

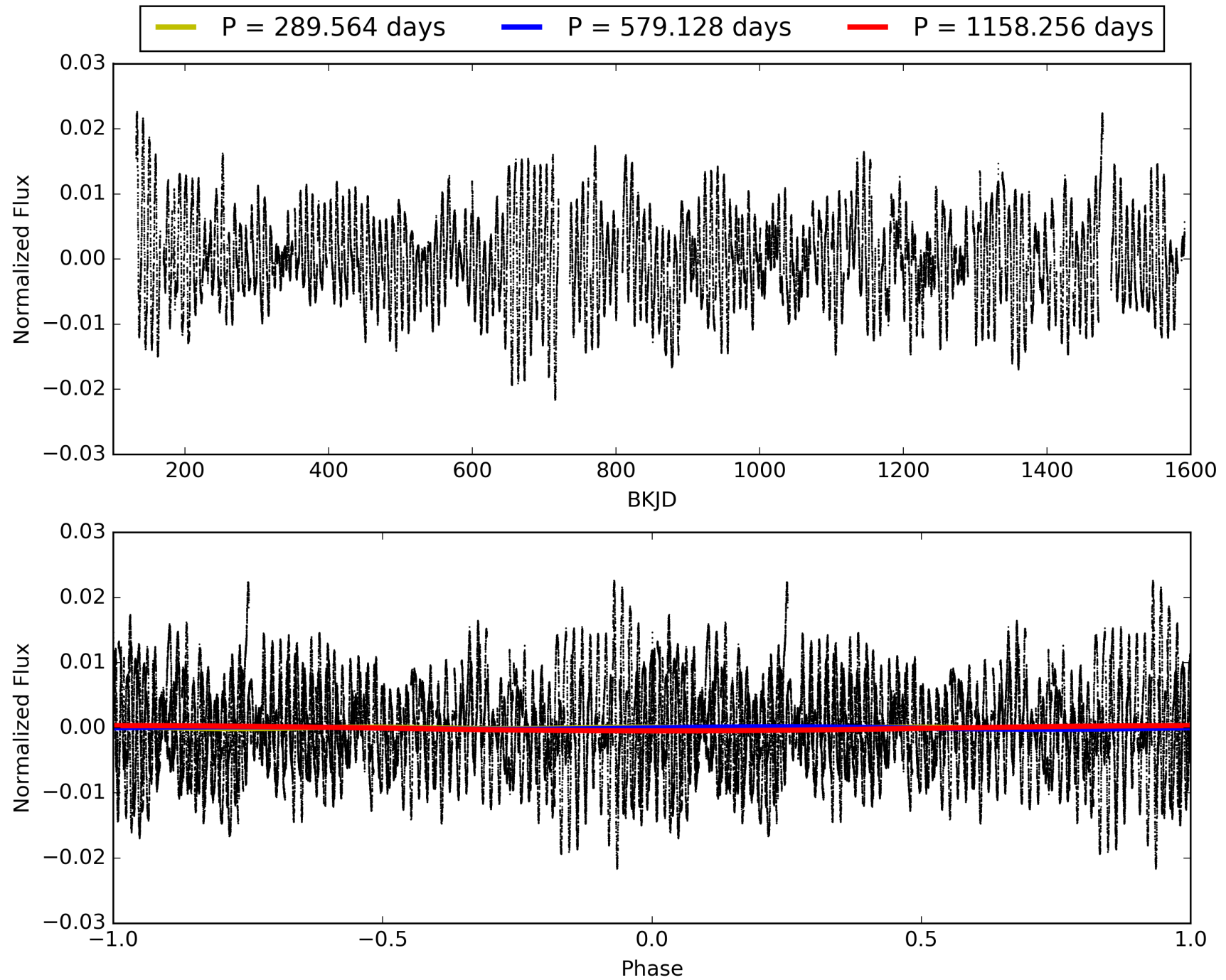
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:41:53 Z

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

TCE 010139126-01, PDC Light Curves

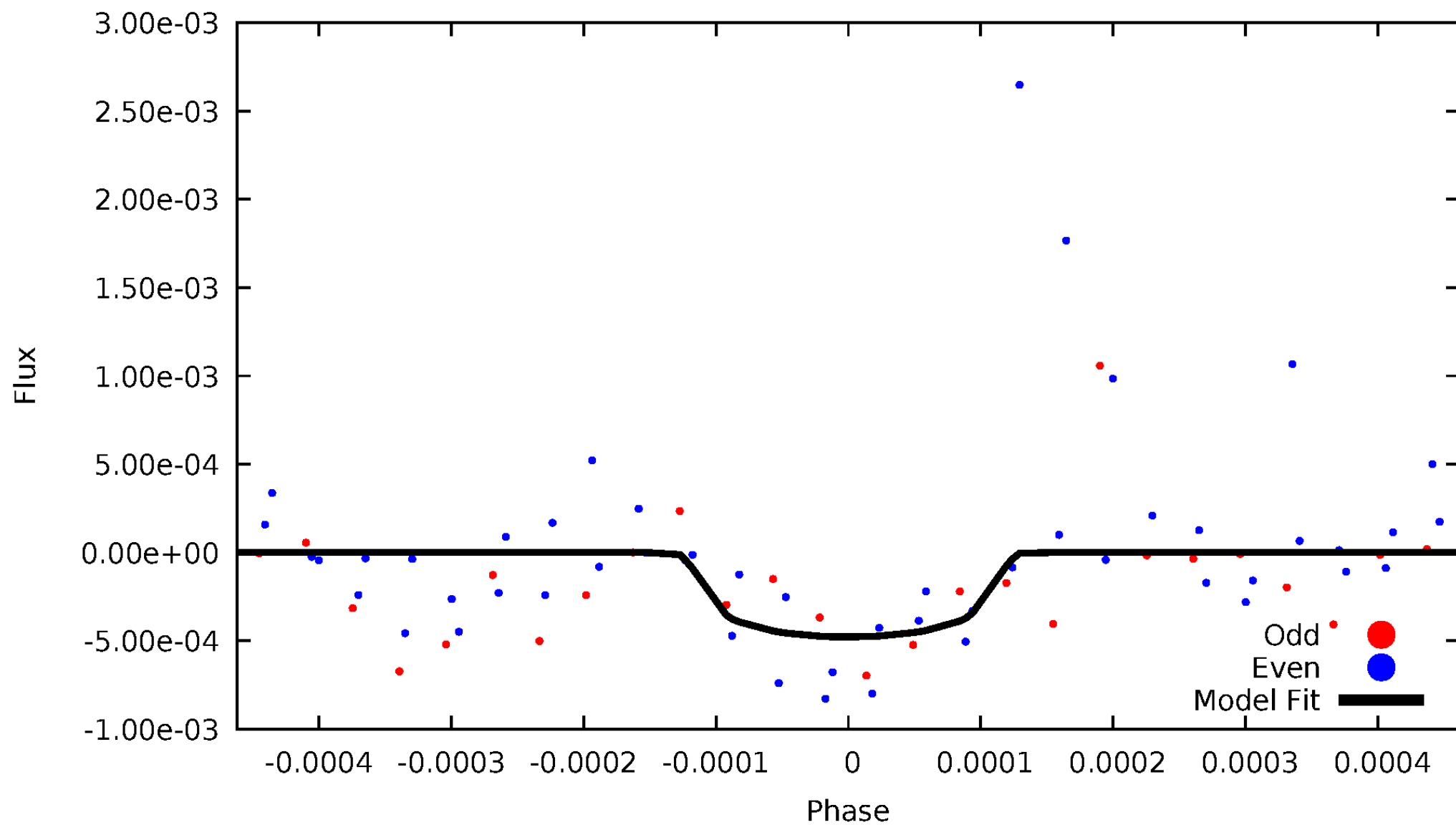


TCE 010139126-01



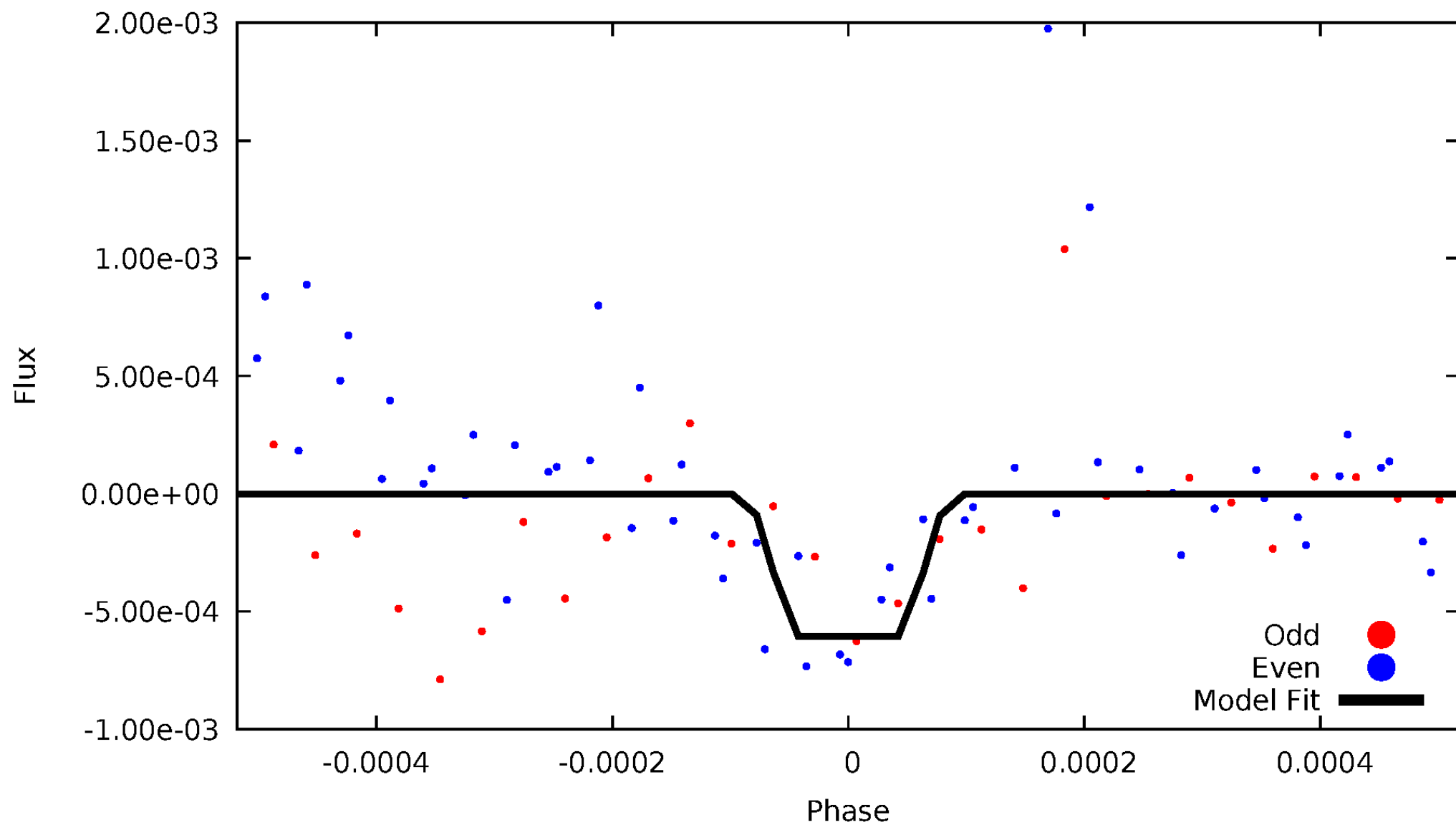
DV Odd/Even

TCE 010139126-01



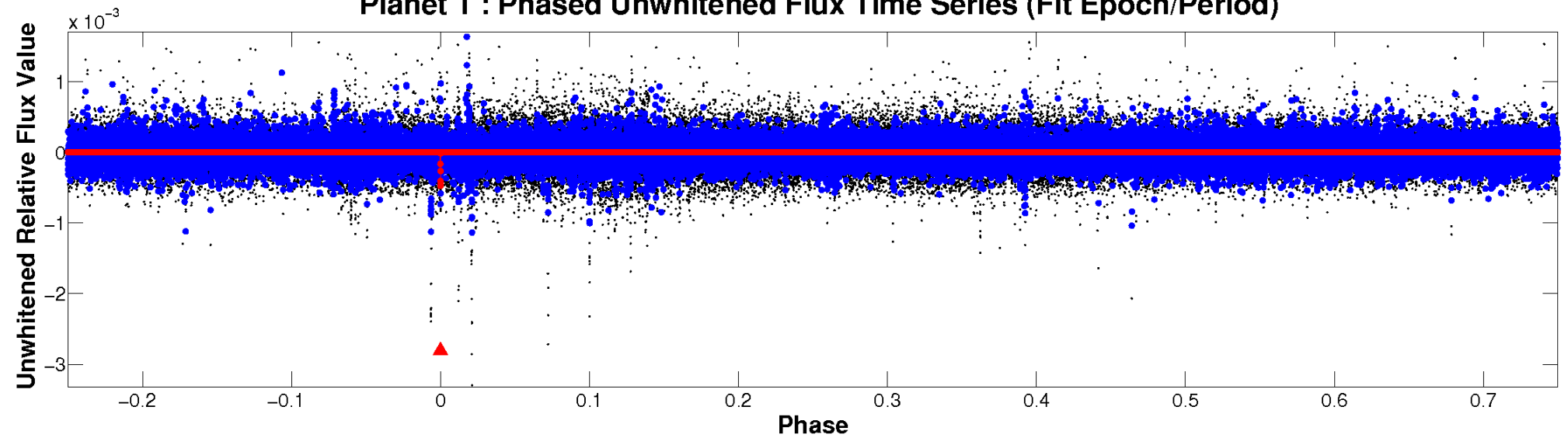
ALT Odd/Even

TCE 010139126-01

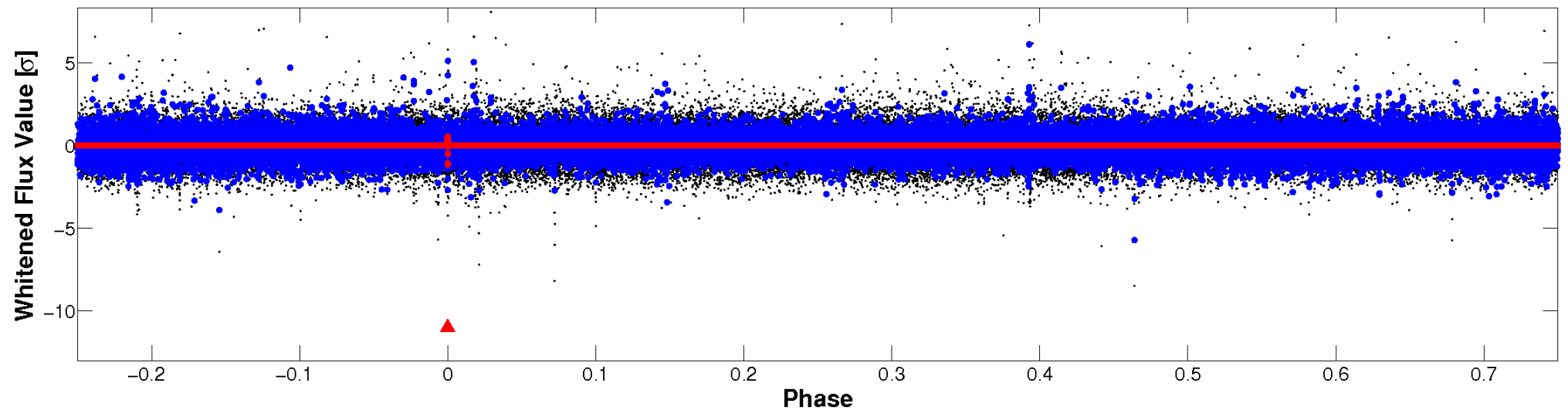


Non-Whitened Vs. Whitened Light Curve

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

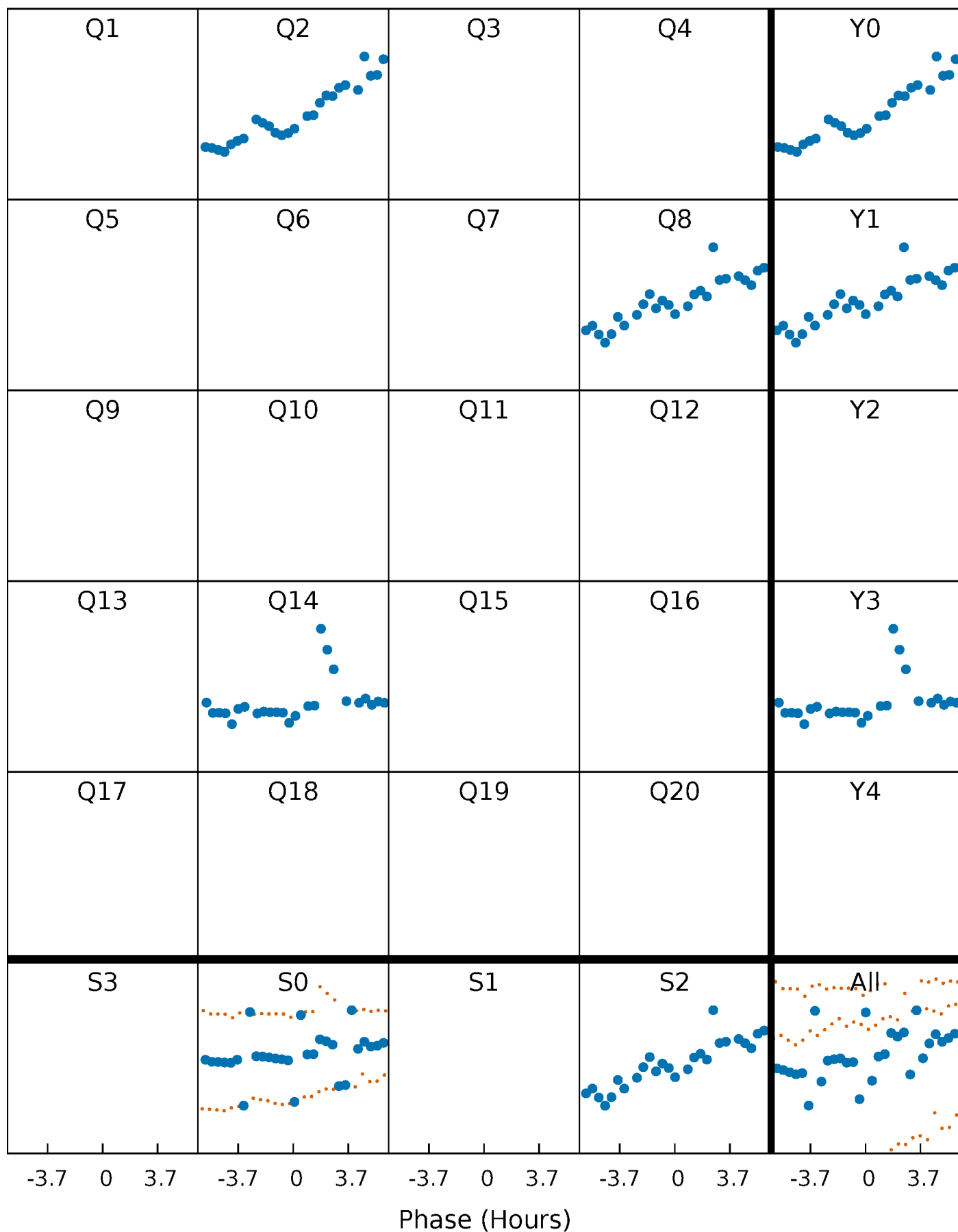


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



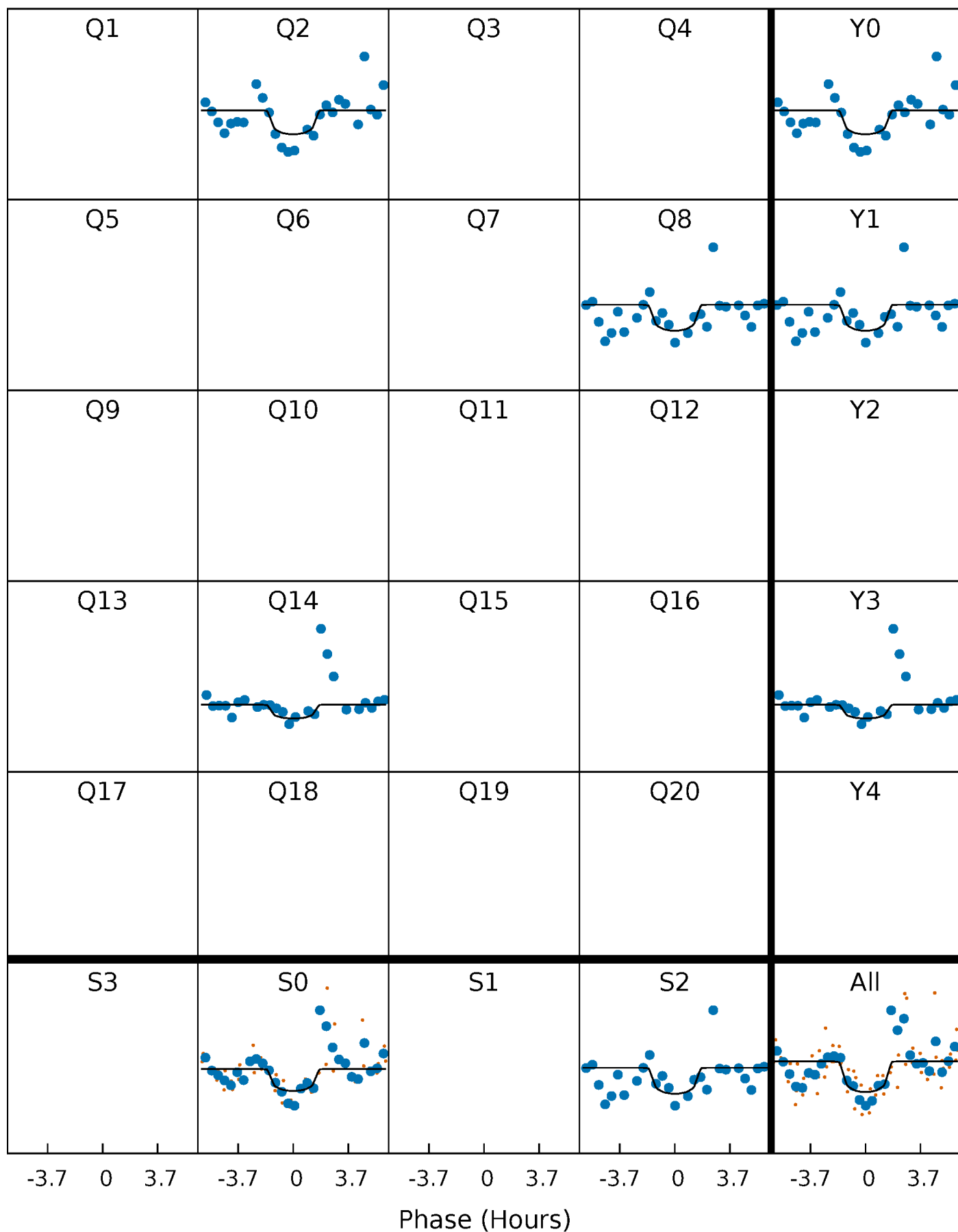
PDC Quarter-Phased Transit Curves

TCE 010139126-01 P=579.127765 Days $T_0=173.494081$ (BKJD)



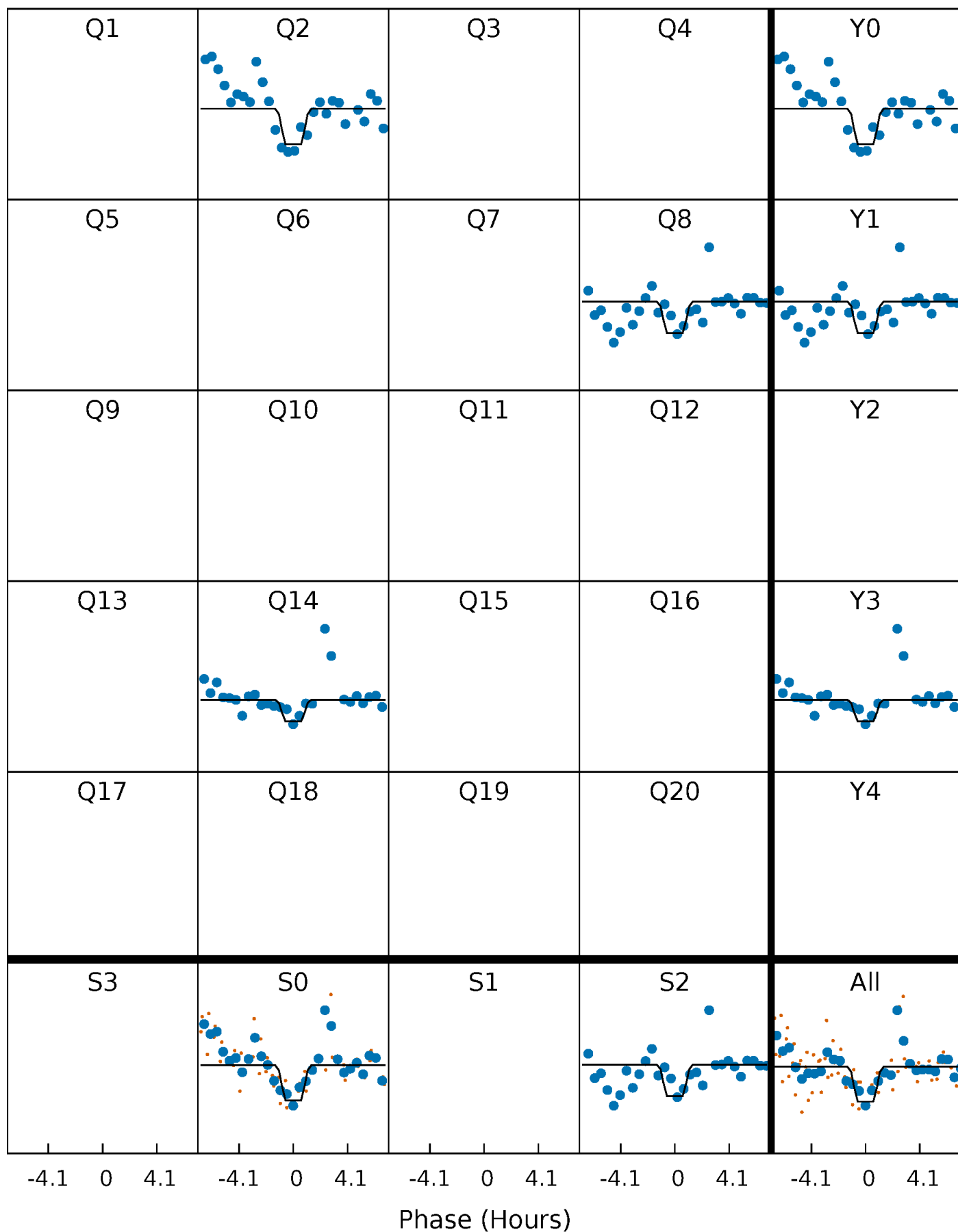
DV Quarter-Phased Transit Curves

TCE 010139126-01 P=579.127765 Days $T_0=173.494081$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

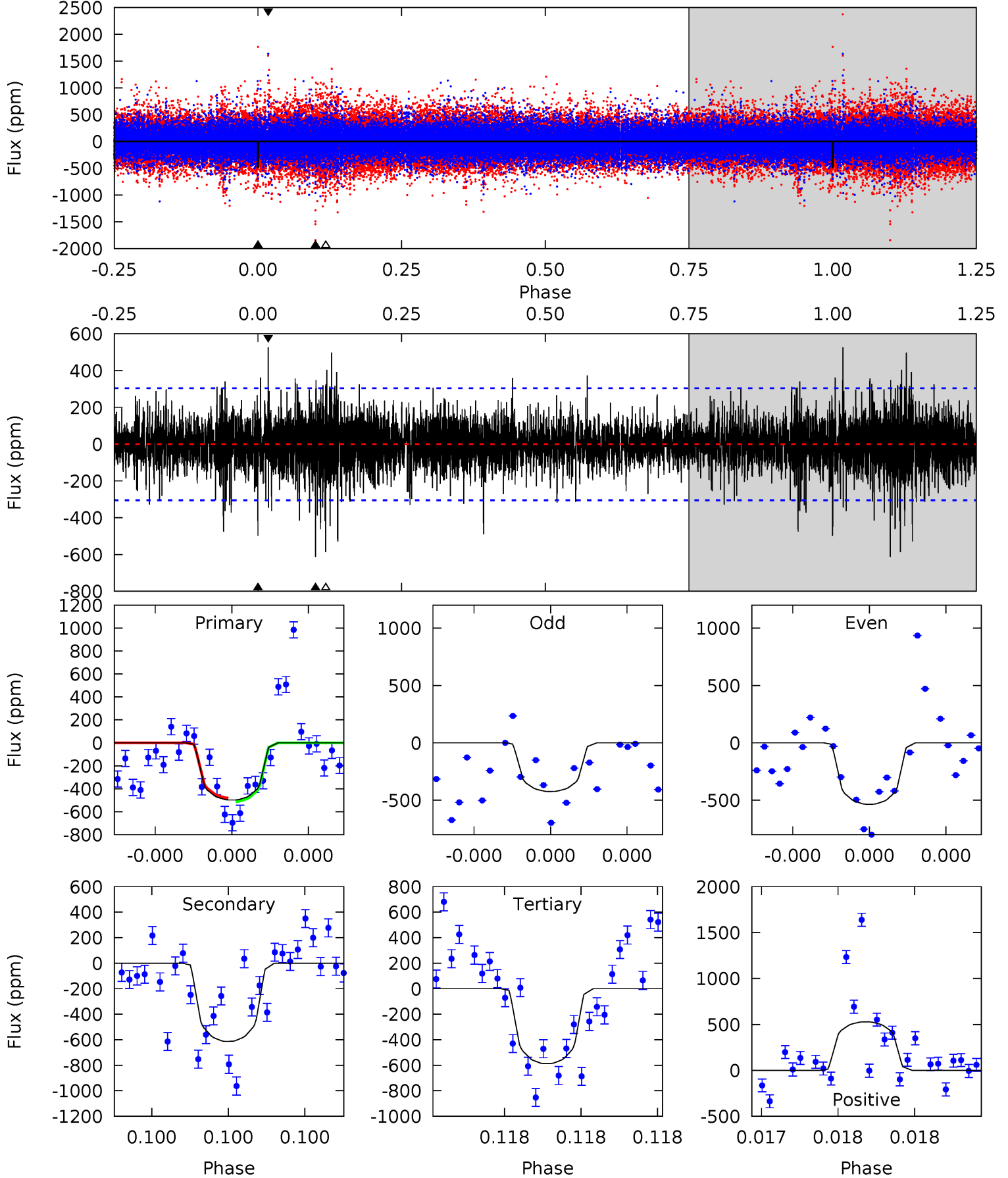
TCE 010139126-01 P=579.121146 Days $T_0=173.504583$ (BKJD)



DV Model-Shift Uniqueness Test

010139126-01, P = 579.127765 Days, E = 173.494081 Days

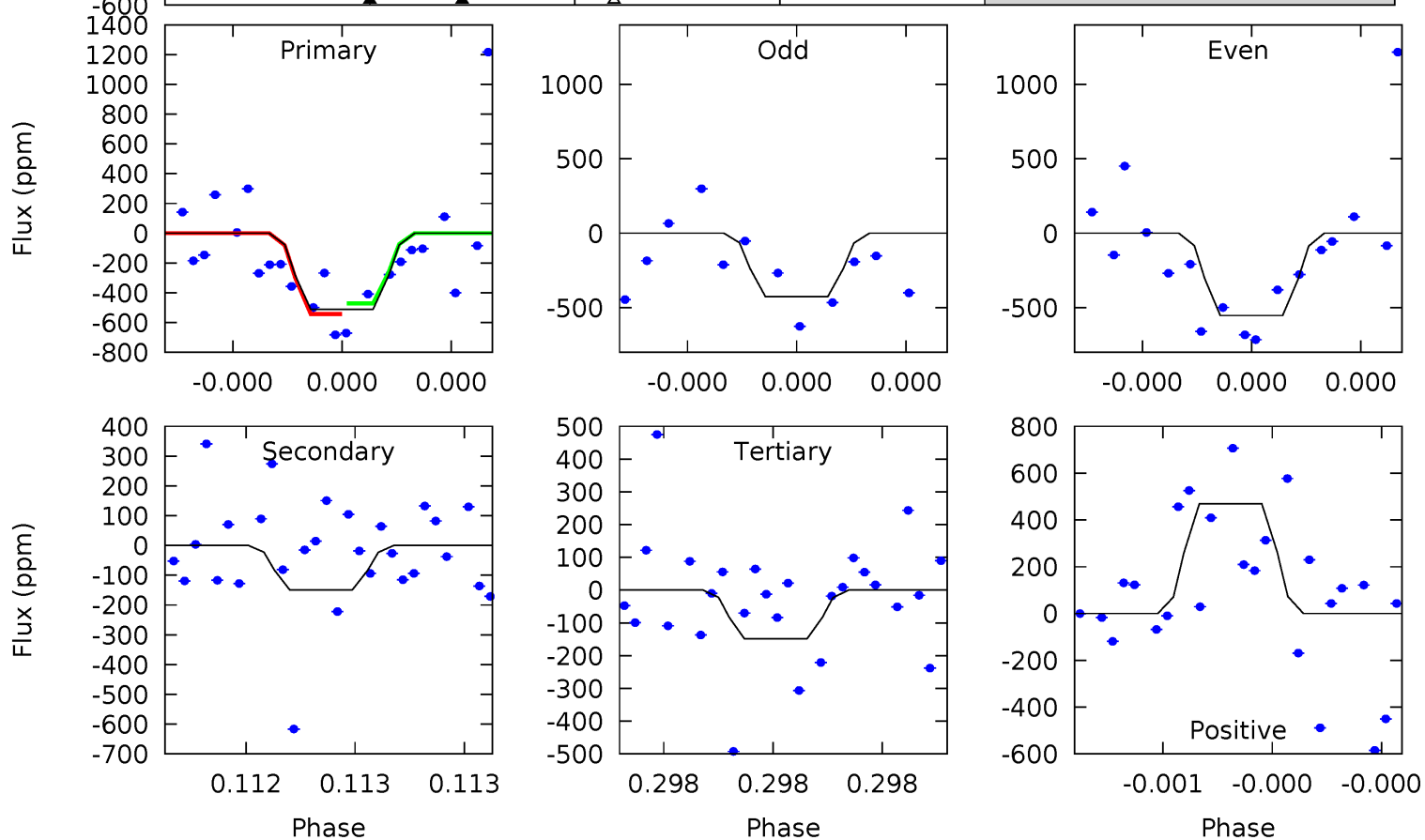
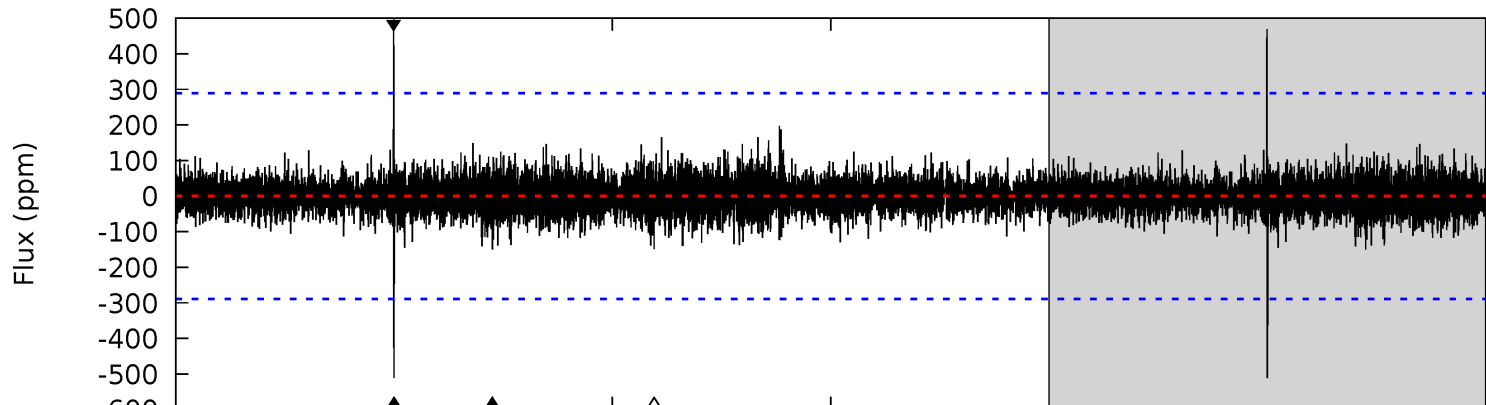
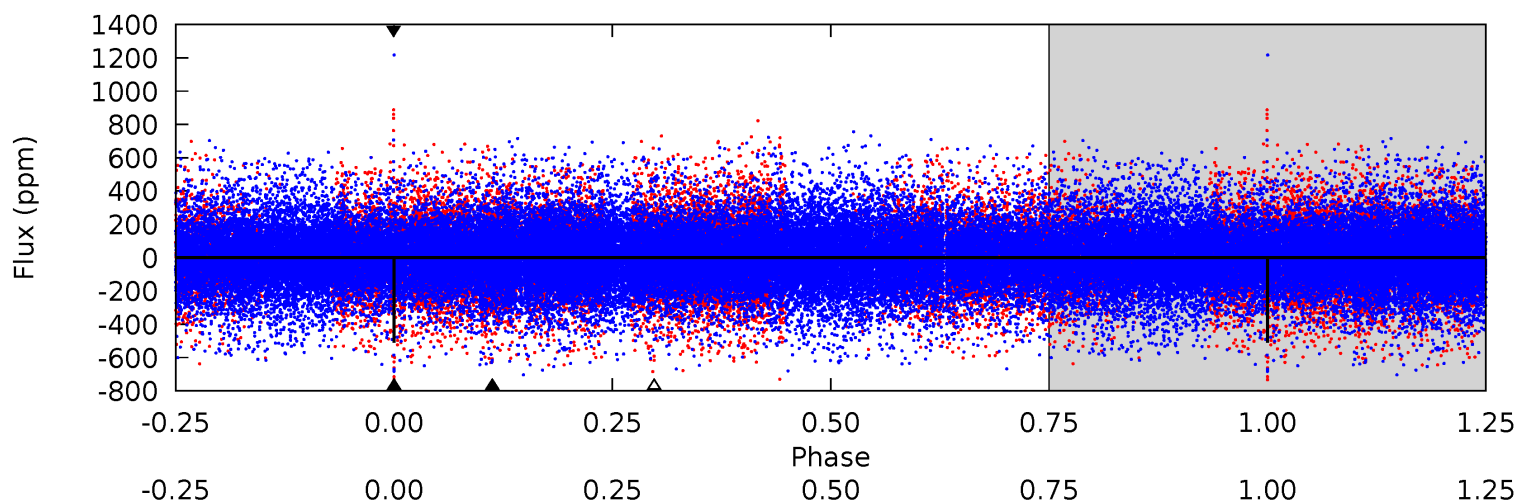
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.30	11.4	11.0	9.85	5.69	3.66	1.68	-1.67	-0.56	0.48	1.59	0.97	1.17	0.46	0.29



Alt Model-Shift Uniqueness Test

010139126-01, P = 579.121146 Days, E = 173.504583 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.2	2.99	2.97	9.37	5.78	3.79	0.65	7.22	0.82	0.01	-6.38	1.21	1.15	0.48	0.71



Stellar Parameters For KIC 010139126

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5706^{+154}_{-171}	$4.525^{+0.035}_{-0.207}$	$0.210^{+0.200}_{-0.250}$	$0.926^{+0.264}_{-0.070}$	$1.048^{+0.090}_{-0.120}$	$1.856^{+0.349}_{-0.919}$
	+3%/-3%	+1%/-5%	+95%/-119%	+29%/-8%	+9%/-11%	+19%/-49%
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 010139126-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-613 ± 54	$4.52^{+4.50}_{-3.14}$	295^{+20}_{-13}	4510^{+3477}_{-979}	$30352^{+301340}_{-22678}$
Alt.	-150 ± 50	$4.54^{+4.77}_{-2.96}$	295^{+20}_{-13}	3490^{+1708}_{-668}	6906^{+58047}_{-5314}

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 $A_{obs} \gg 1.0$

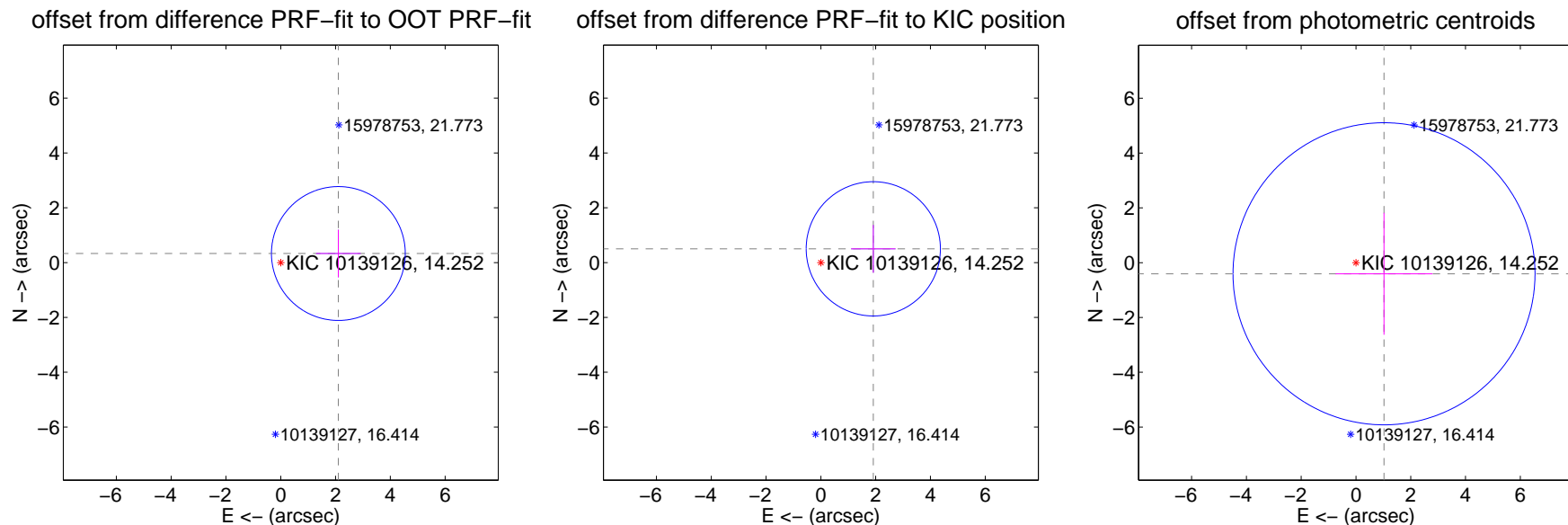
DV Centroid Data

Supplemental centroid analysis for 010139126-01. Kepler magnitude: 14.25. Transit SNR 5.06

There are 1 quarters with good PRF difference image offsets

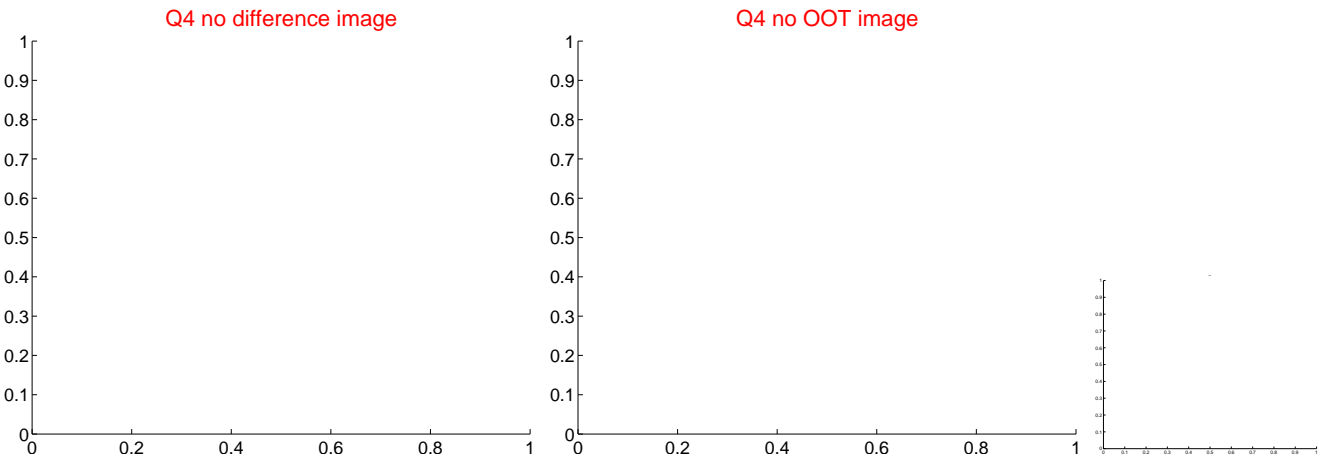
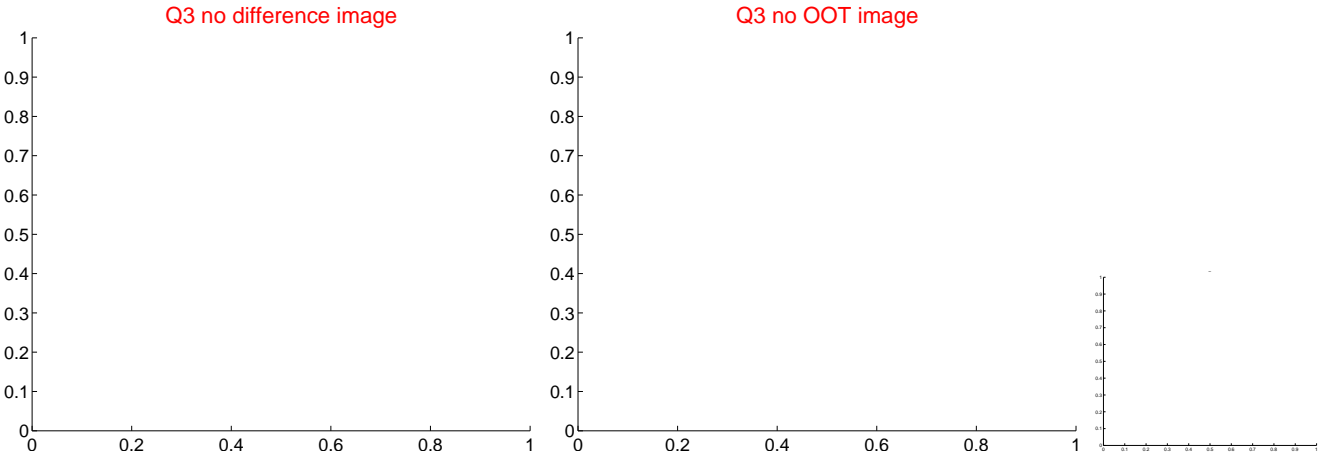
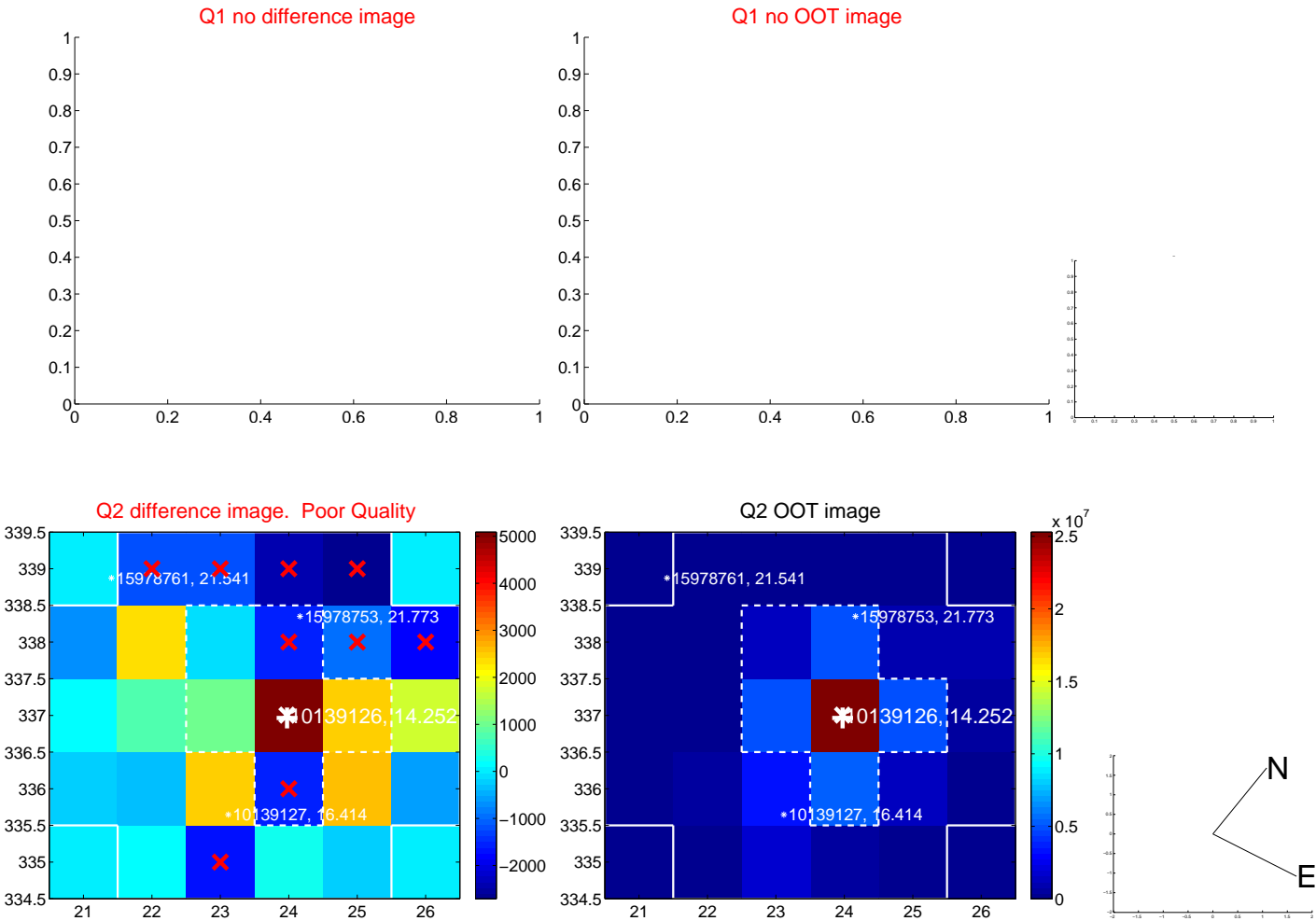
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.128 ± 0.814	2.61	-2.102 ± 0.813	0.331 ± 0.870
PRF-fit source offset from KIC position	1.978 ± 0.816	2.42	-1.914 ± 0.813	0.502 ± 0.870
photometric centroid source offset	1.10 ± 1.84	0.60	-1.02 ± 1.77	-0.41 ± 2.22

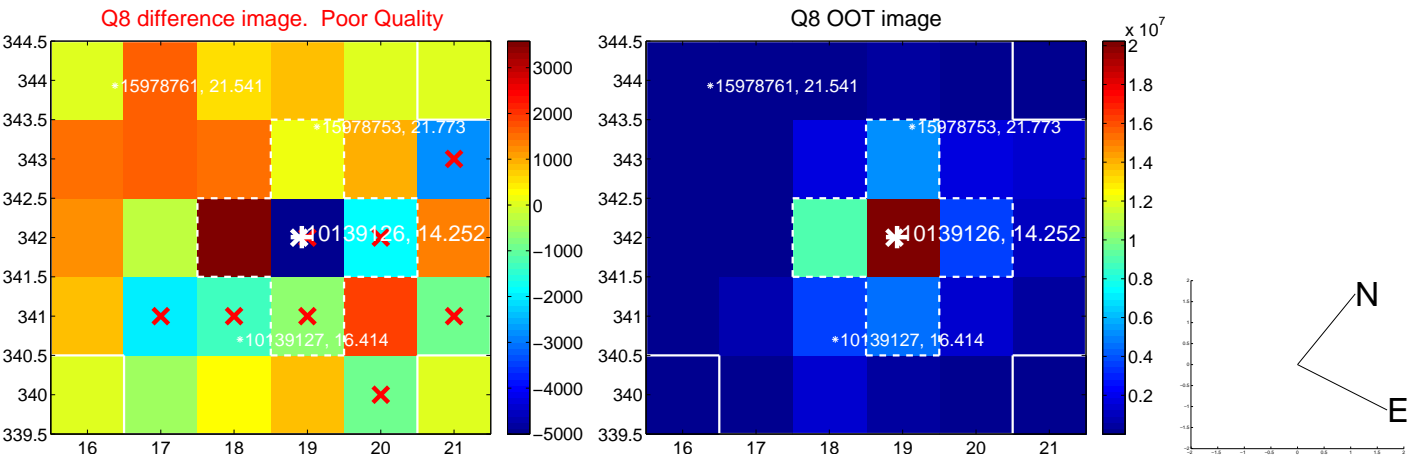


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



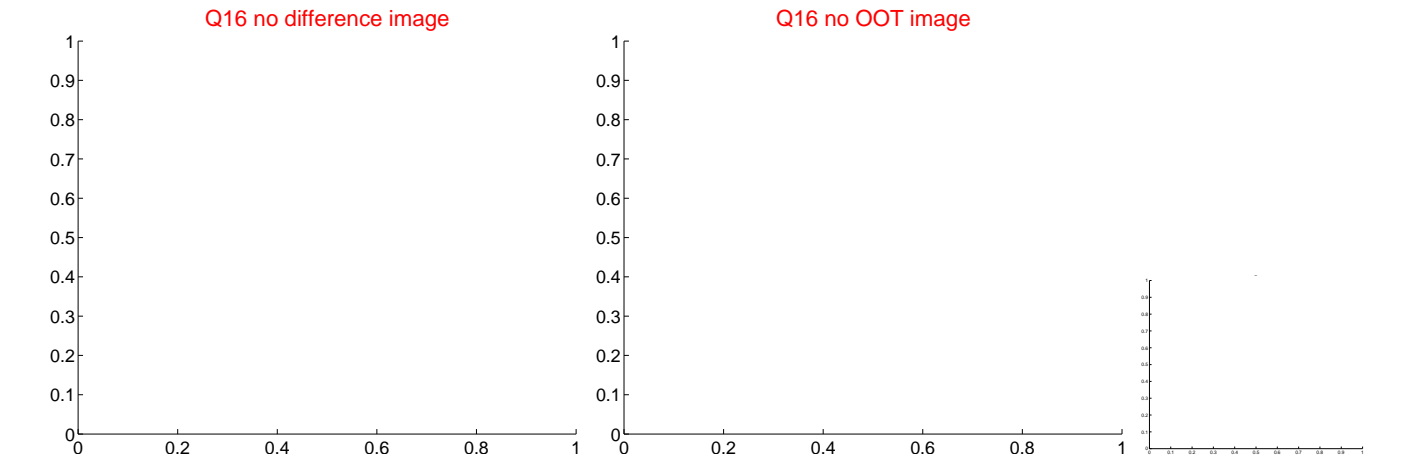
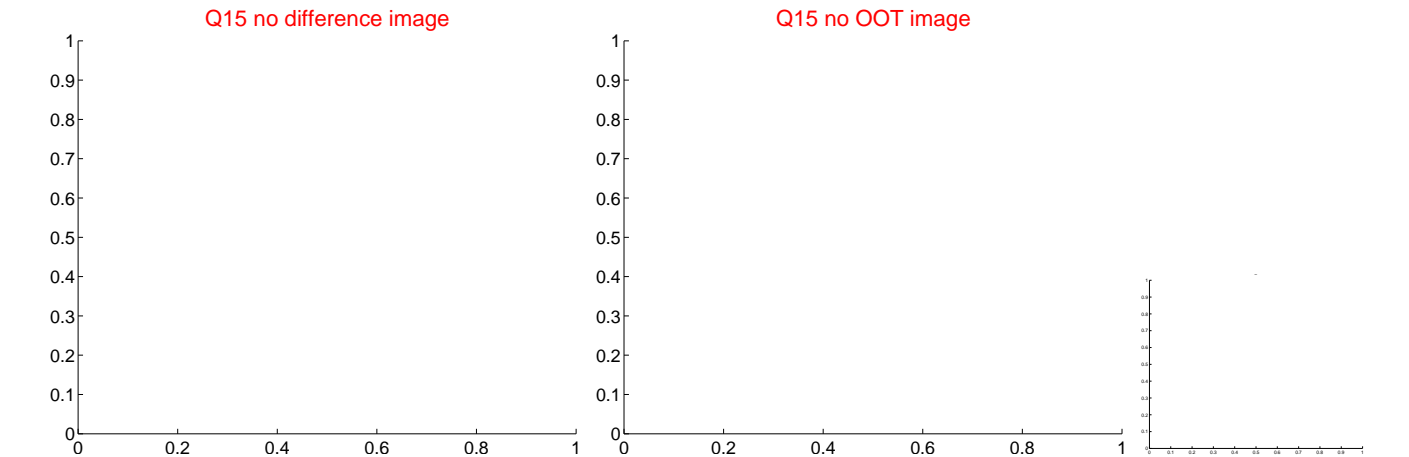
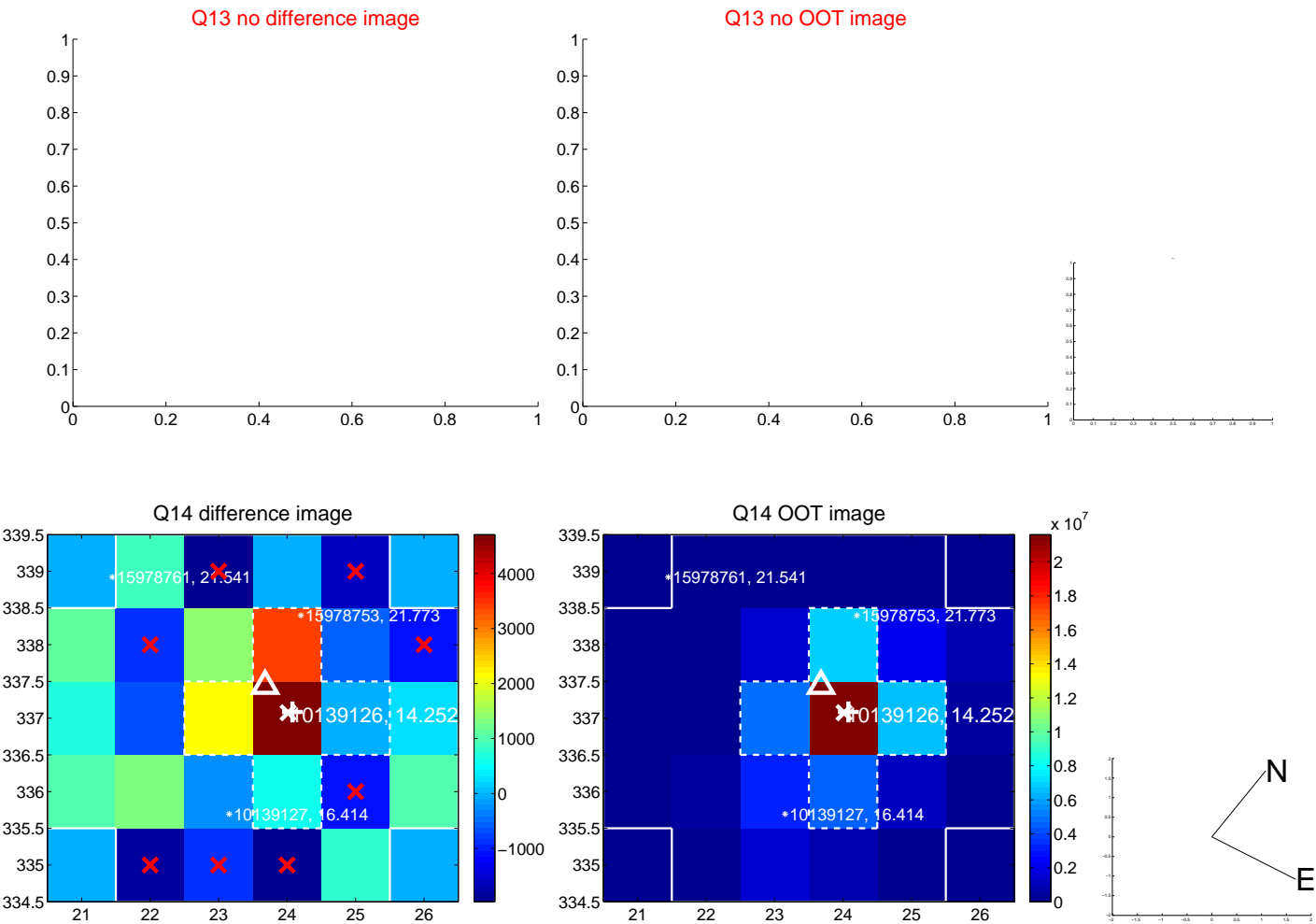
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



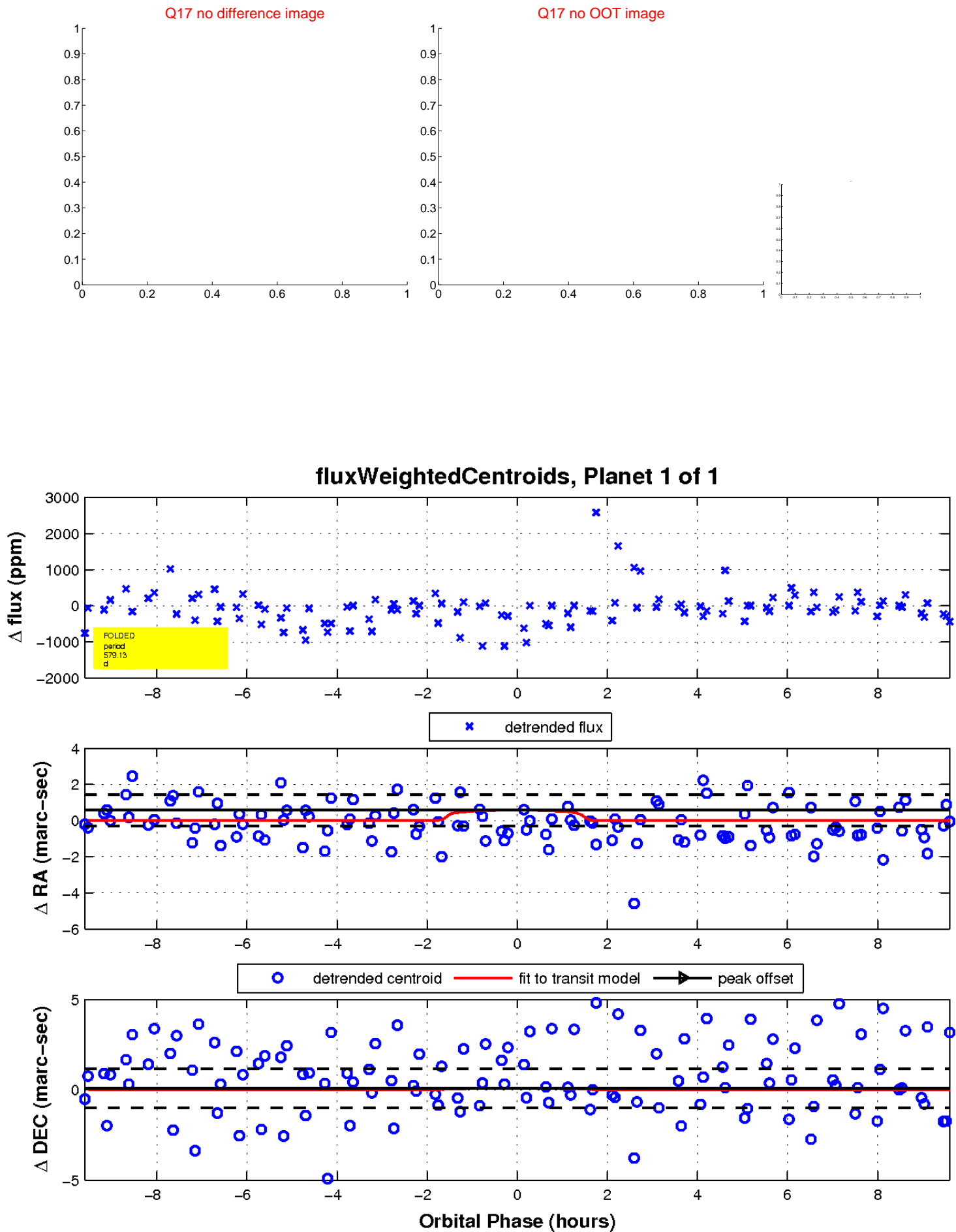
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UKIRT Image

Declination

