

KIC 002579590

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})
002579590-01	OBS	No	406.920340	318.597808	320.7	8.654	7.9	4.8	0.96	5614	1.84	0.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002579590-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—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.

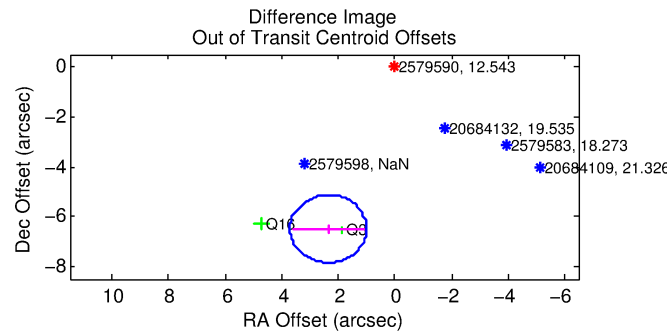
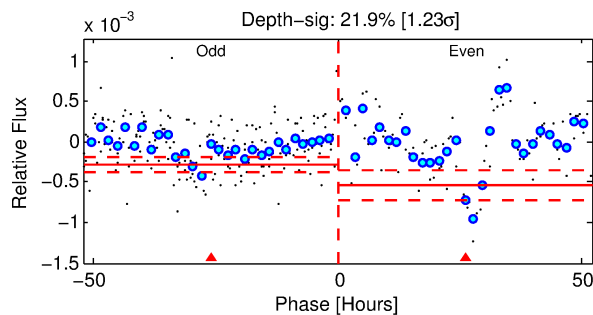
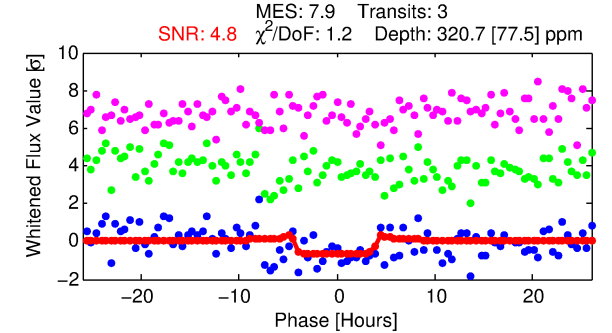
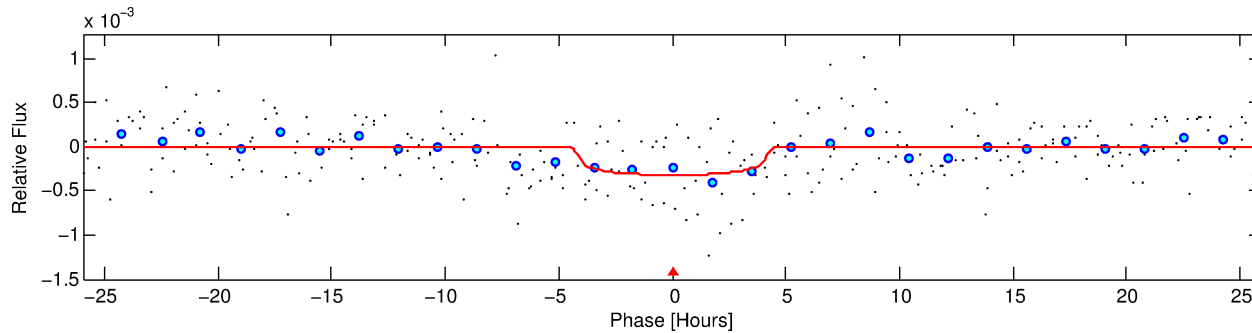
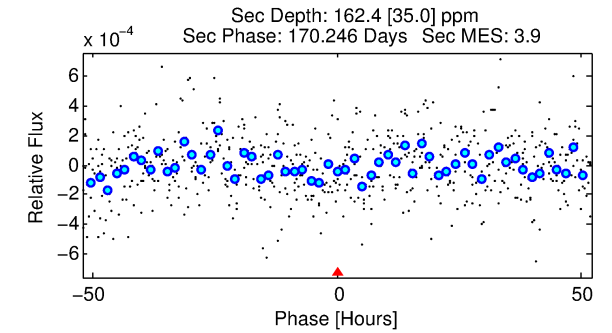
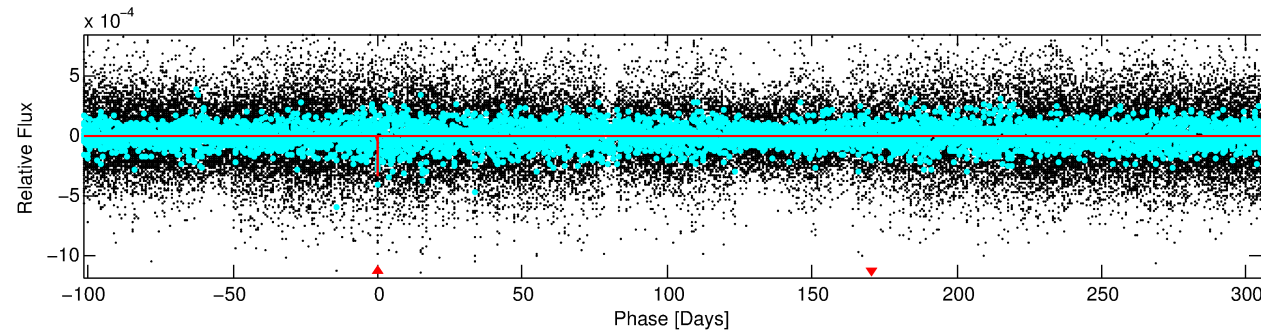
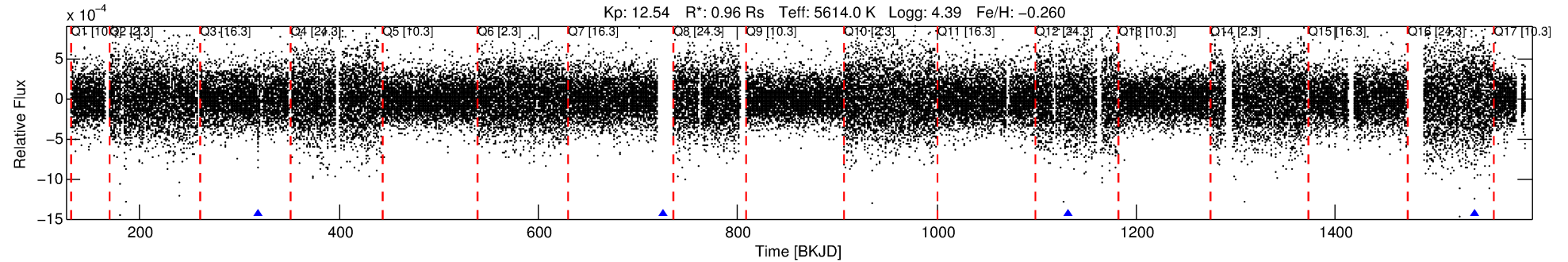
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002579590-01

No Significant Match Found

DV One-Page Summary

KIC: 2579590 Candidate: 1 of 1 Period: 406.920 d



DV Fit Results:

Period = 406.92034 [0.00995] d
Epoch = 318.5978 [0.0197] BKJD
Rp/R* = 0.0176 [0.0244]
a/R* = 261.34 [1587.75]
b = 0.71 [4.25]
Seff = 0.81 [0.31]
Teq = 242 [23] K
Rp = 1.84 [2.61] Re
a = 1.0051 [0.2418] AU
Ag = 26611.51 [74590.07] [0.36σ]
Teffp = 4780 [3327] K [1.36σ]

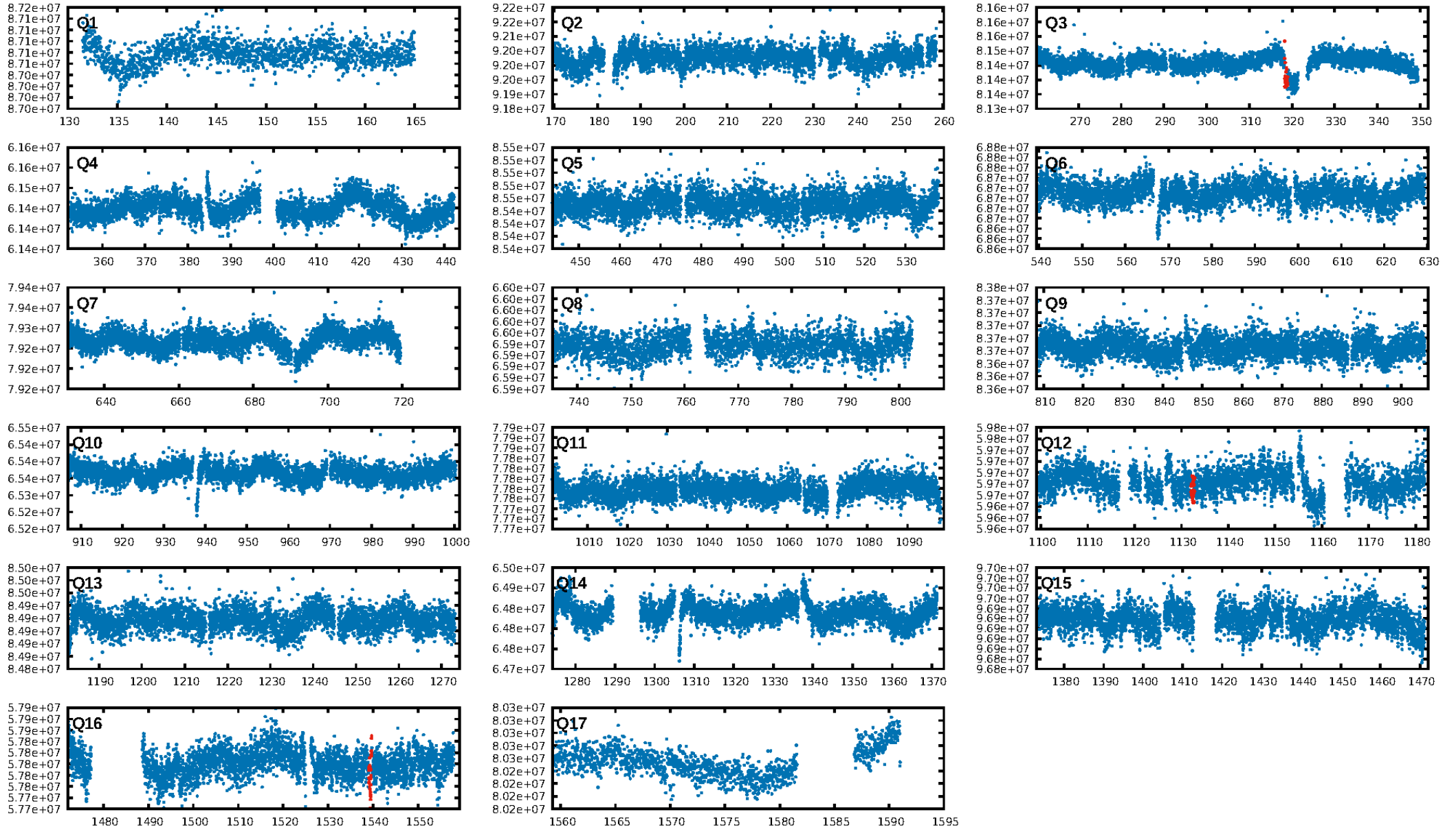
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 7.5%
ModelChiSquareGof-sig: 59.8%
Bootstrap-pfa: 1.33e-14
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.3535
Centroid-sig: 0.0%
Centroid-so: 6.364 arcsec [3.01σ]
OotOffset-rm: 6.904 arcsec [15.31σ]
KicOffset-rm: 5.011 arcsec [14.85σ]
OotOffset-st: 0/1/1/0 [2]
KicOffset-st: 0/1/1/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

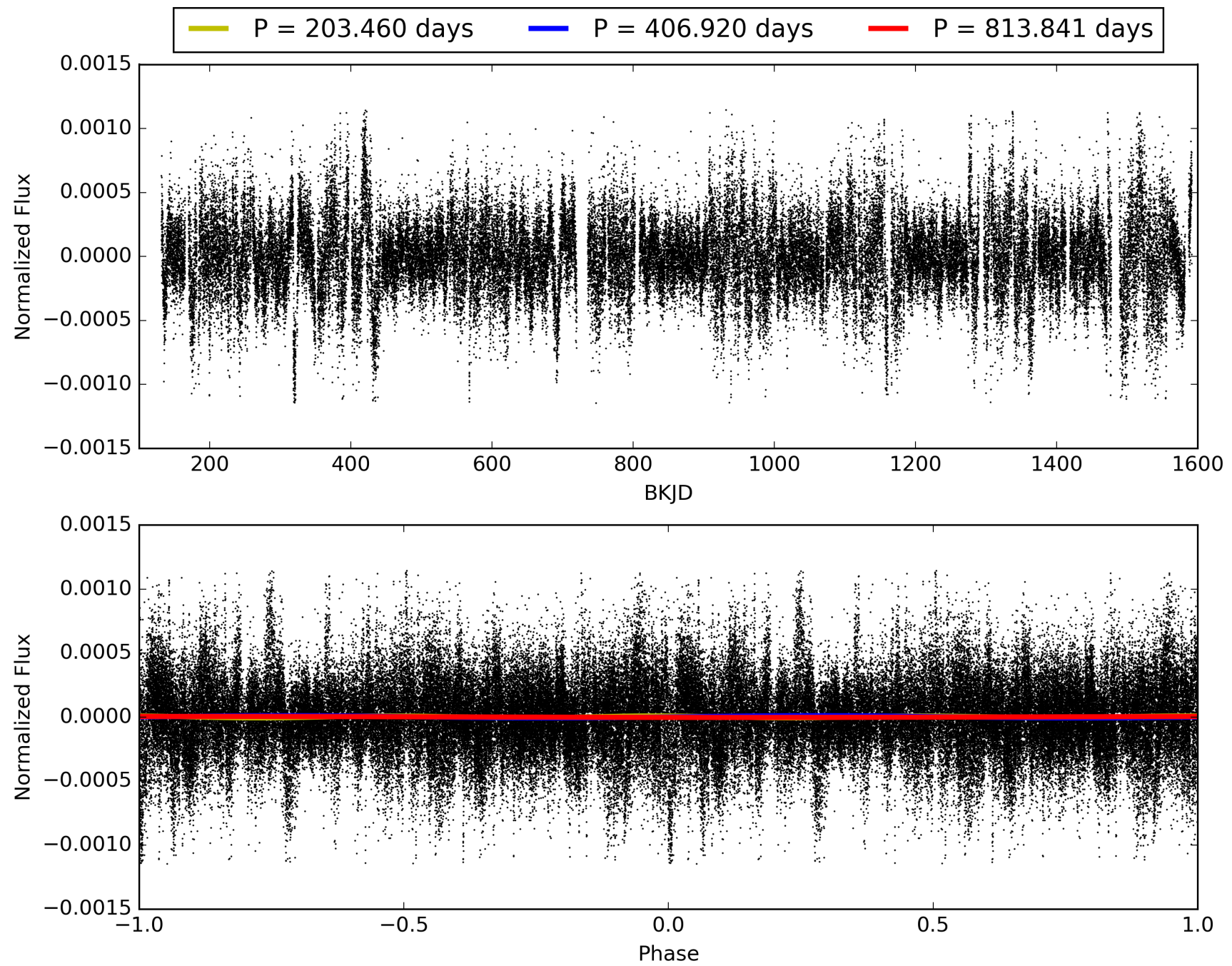
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 20:05:42 Z

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

TCE 002579590-01, PDC Light Curves

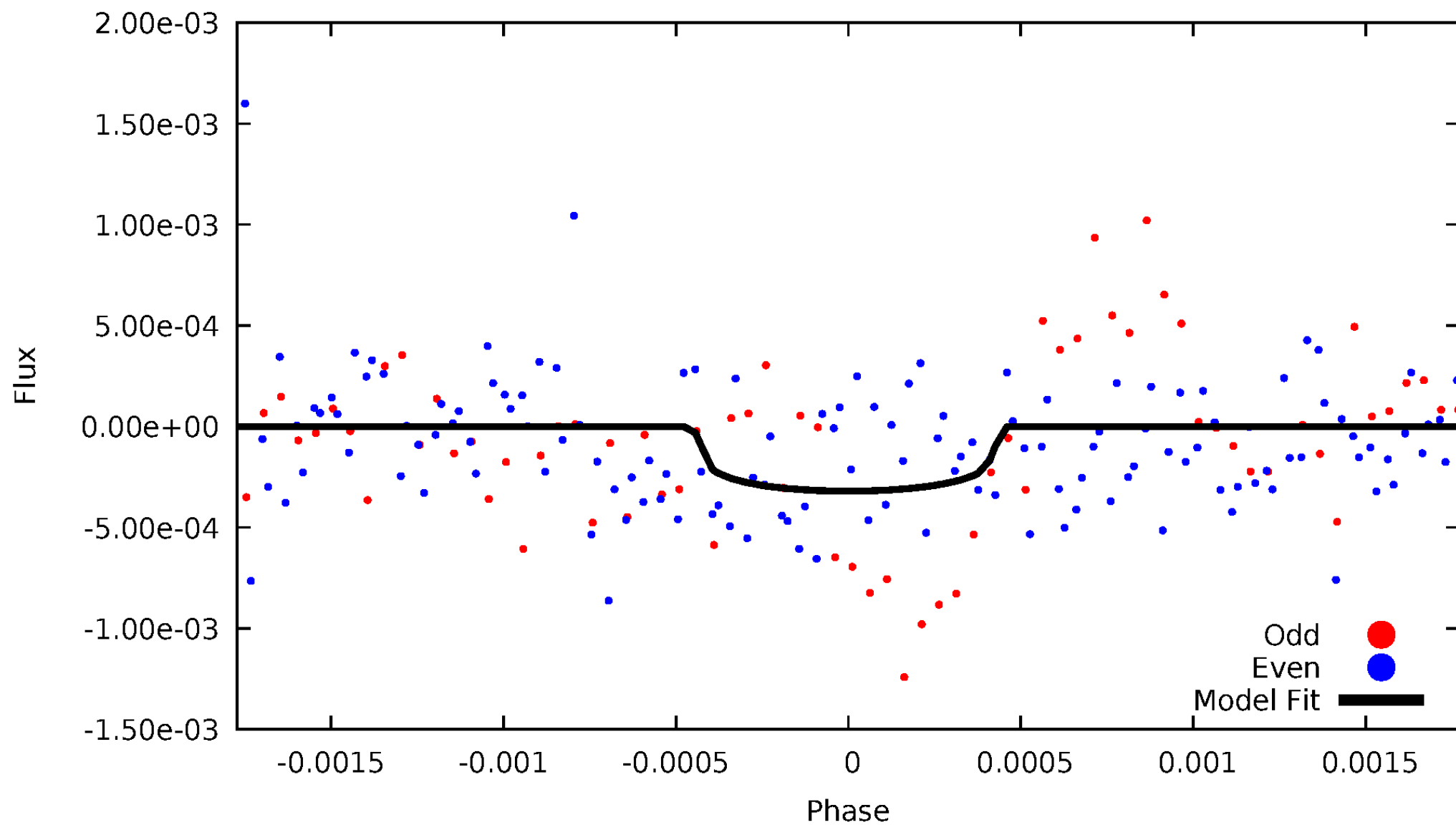


TCE 002579590-01



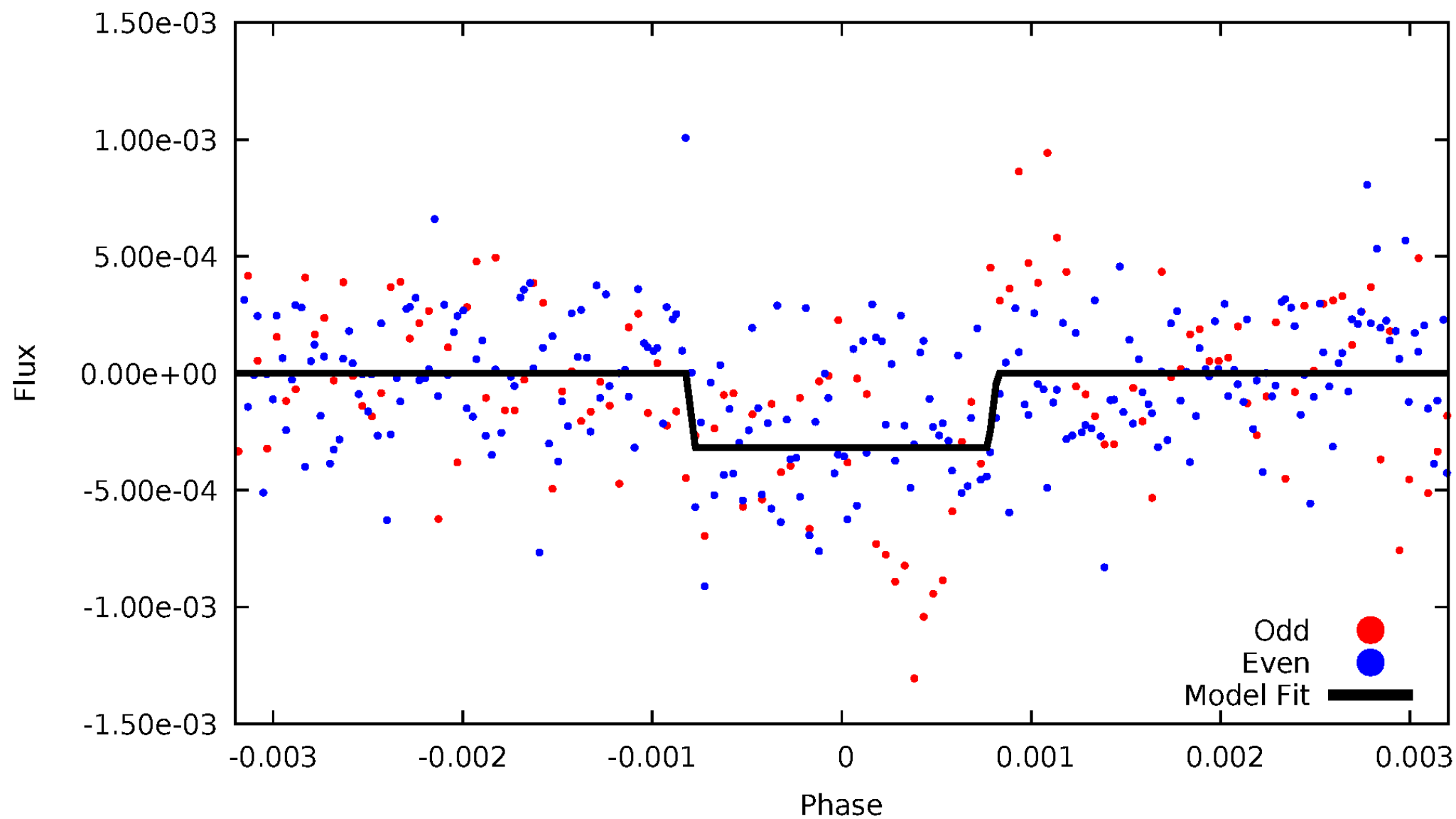
DV Odd/Even

TCE 002579590-01

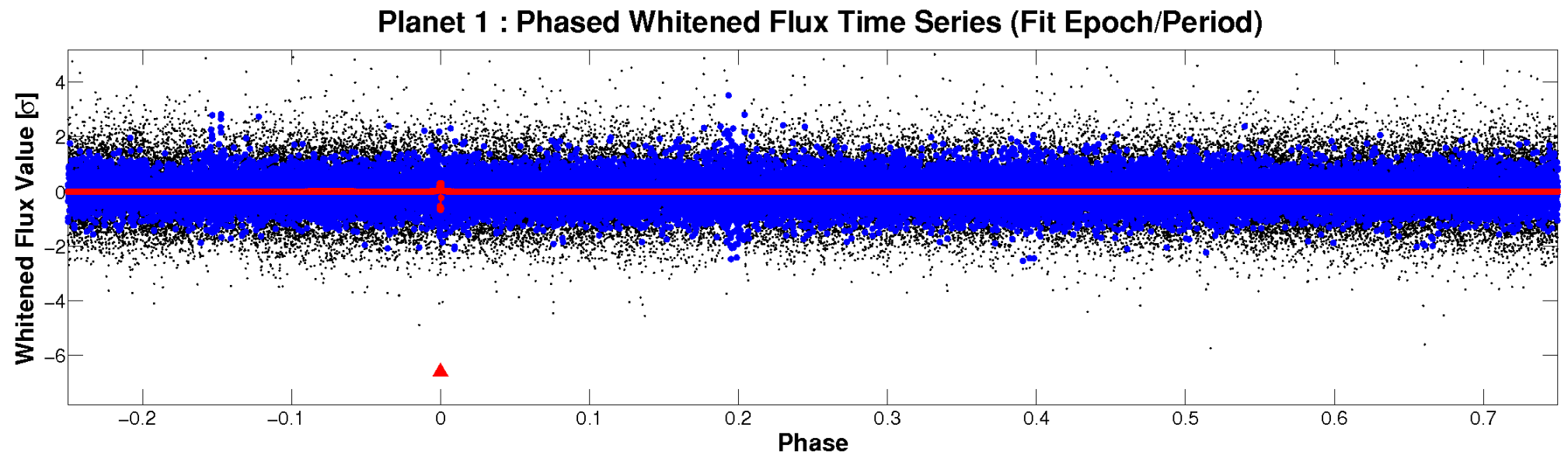
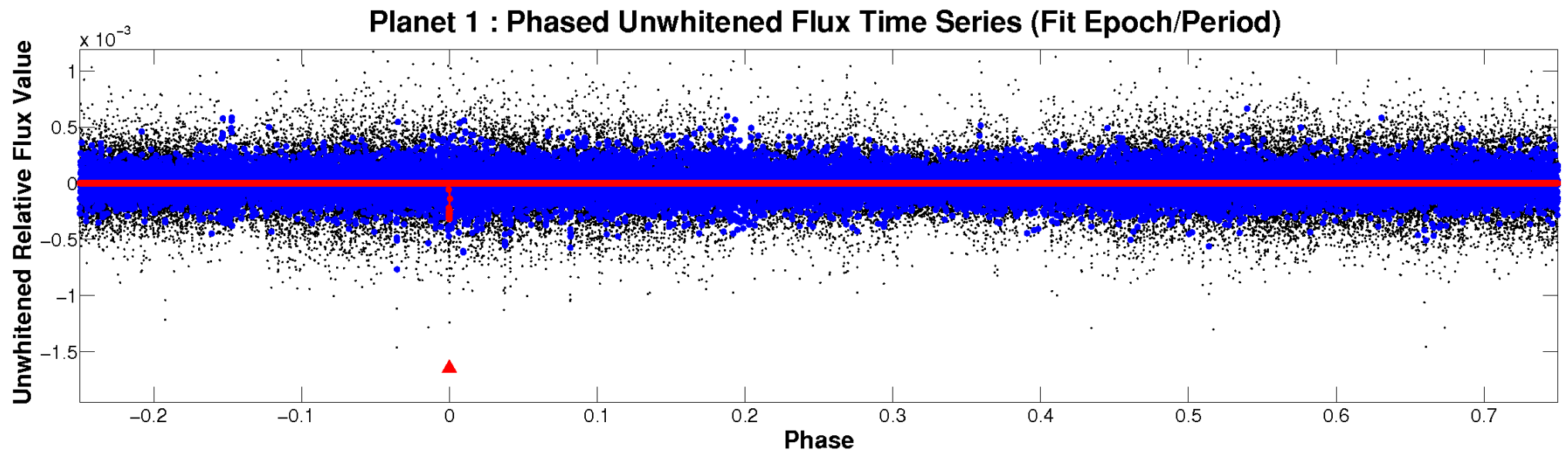


ALT Odd/Even

TCE 002579590-01

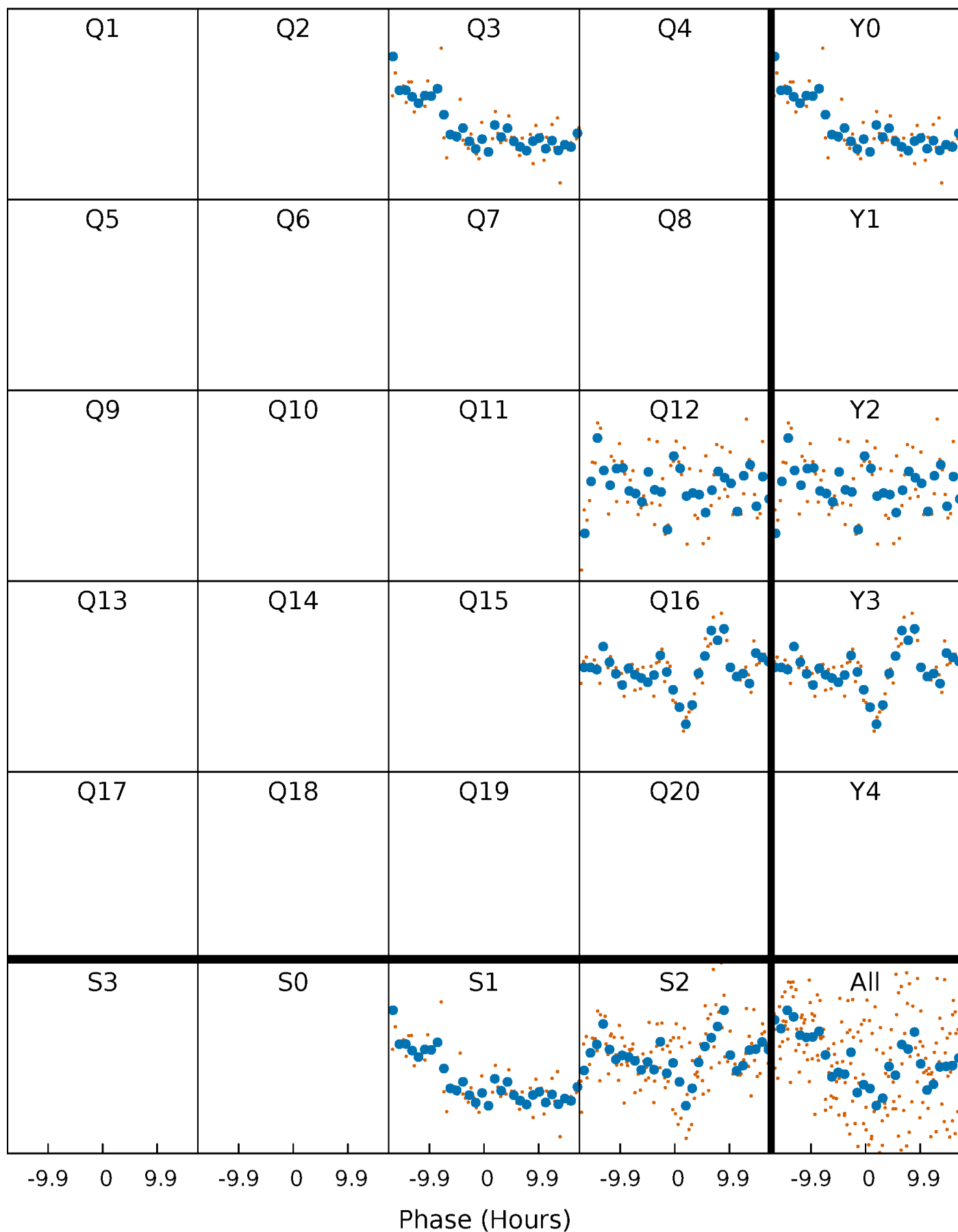


Non-Whitened Vs. Whitened Light Curve



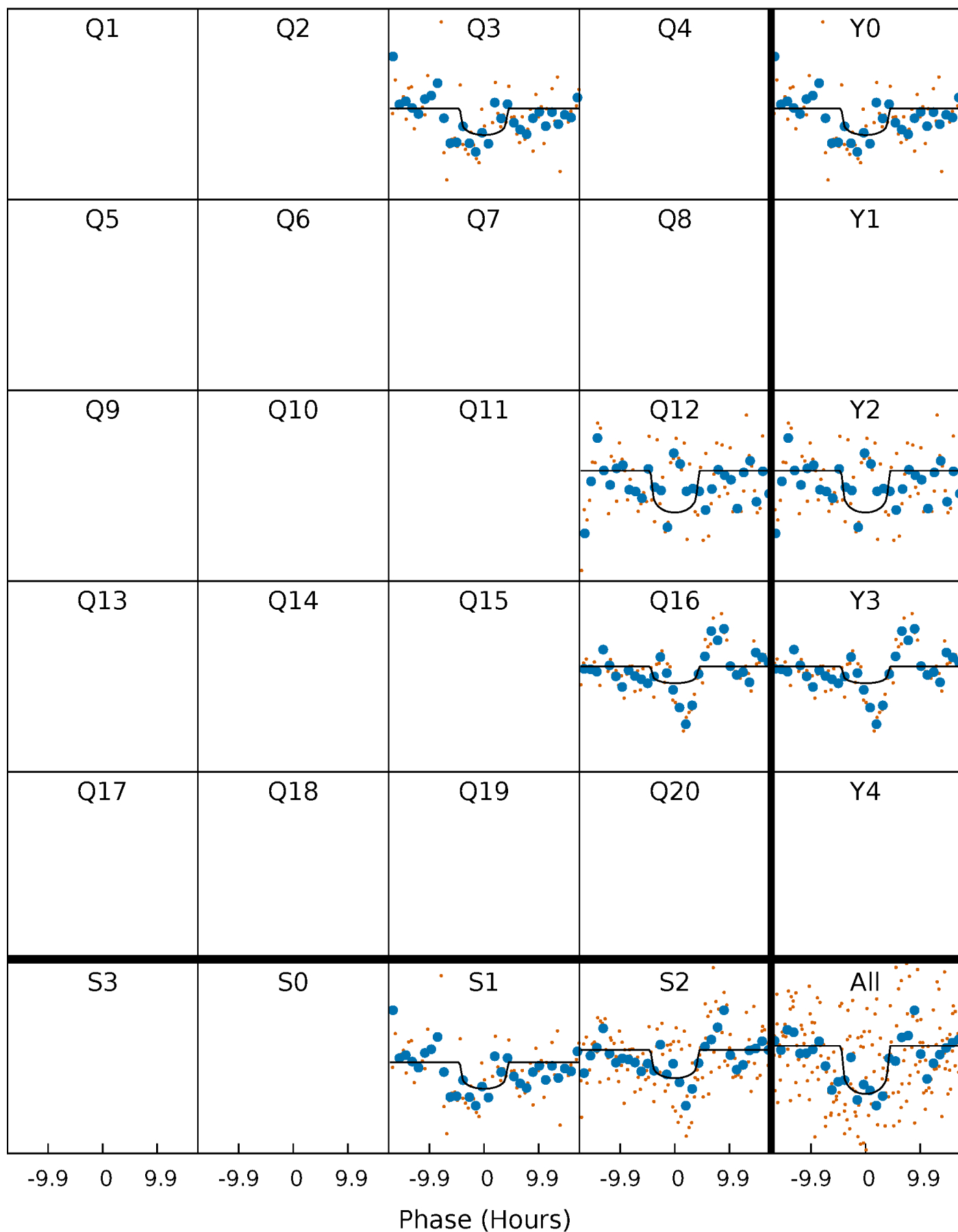
PDC Quarter-Phased Transit Curves

TCE 002579590-01 P=406.920340 Days $T_0=318.597808$ (BKJD)



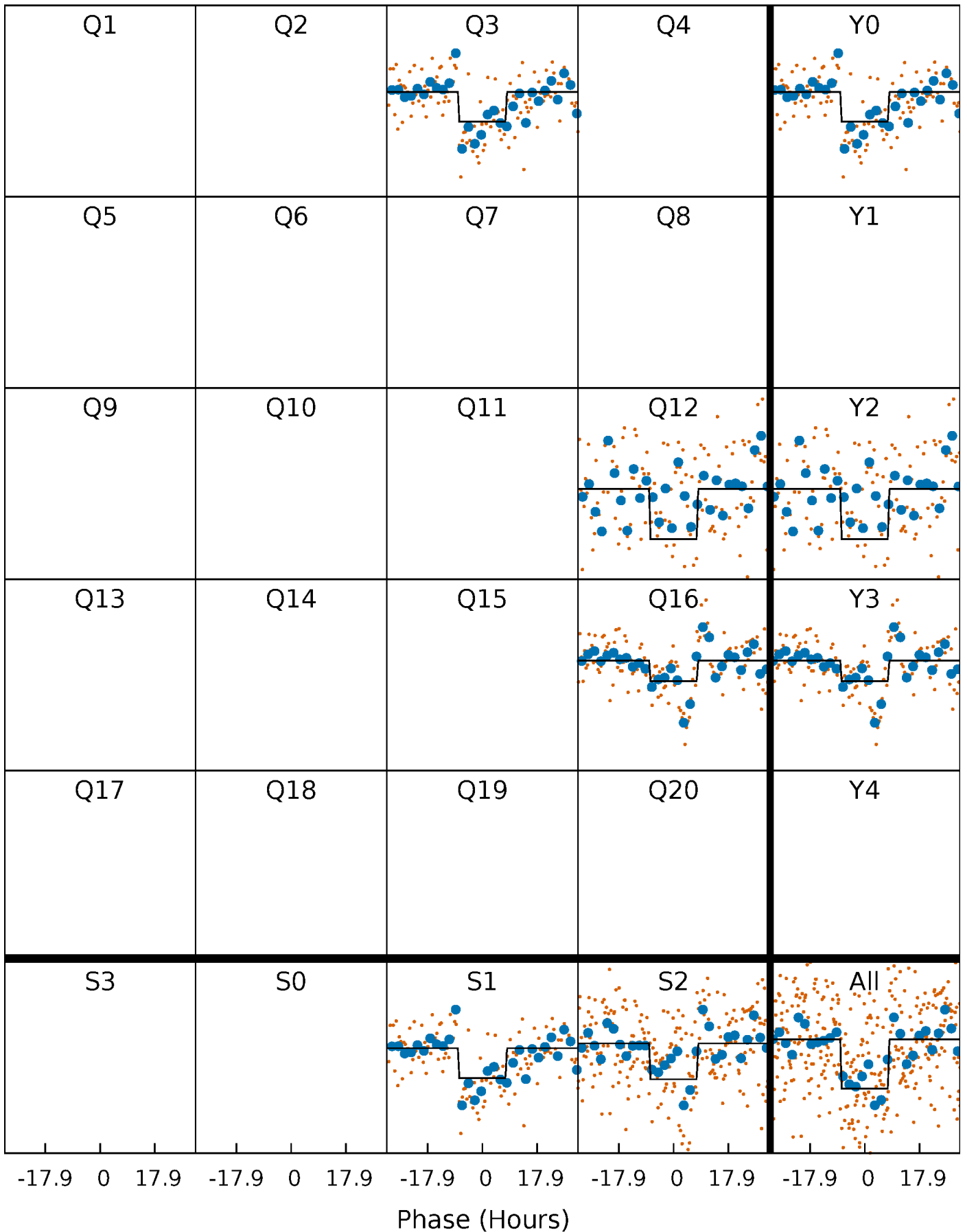
DV Quarter-Phased Transit Curves

TCE 002579590-01 P=406.920340 Days $T_0=318.597808$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

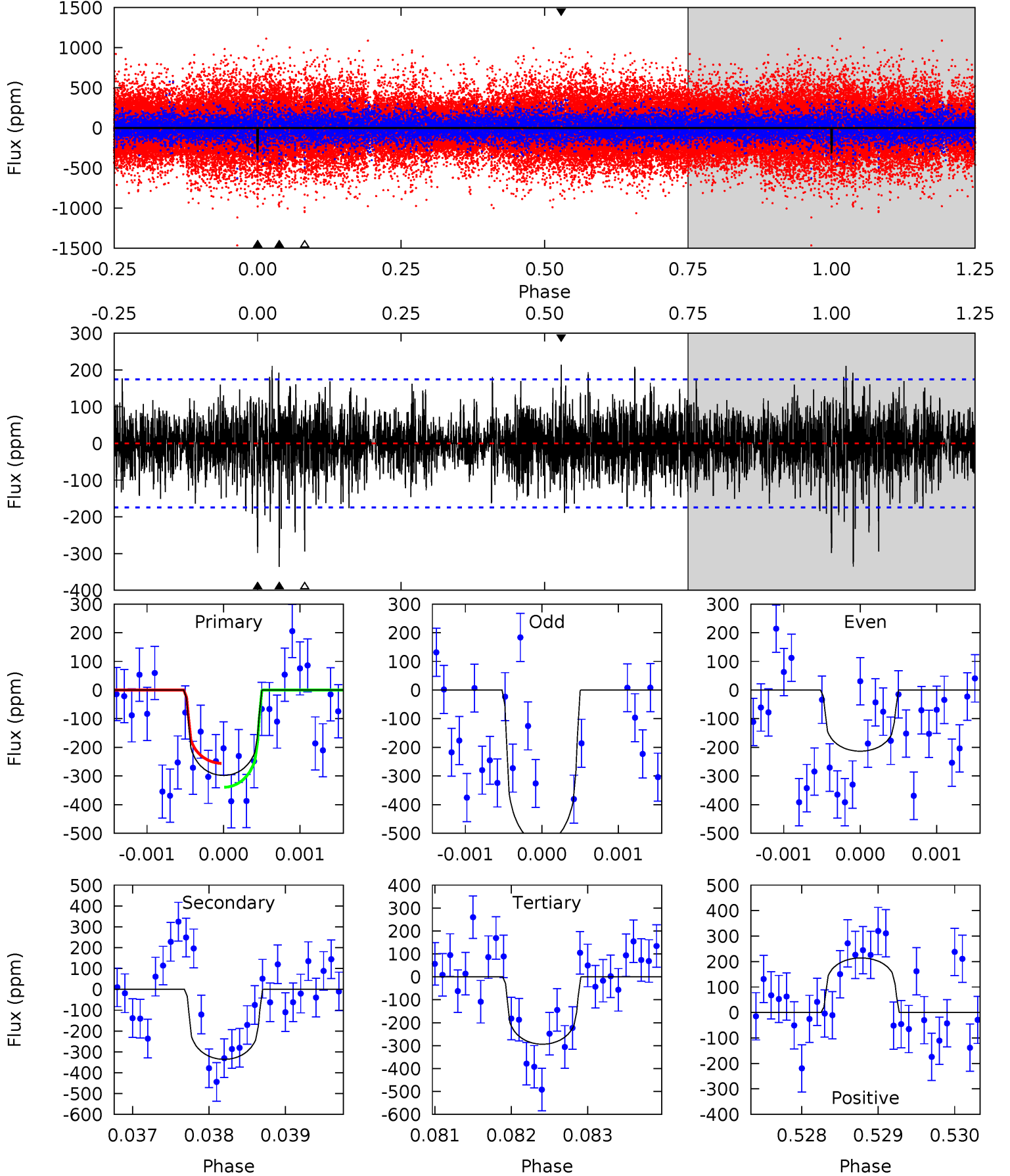
TCE 002579590-01 P=406.886669 Days $T_0=318.609164$ (BKJD)



DV Model-Shift Uniqueness Test

002579590-01, P = 406.920340 Days, E = 318.597808 Days

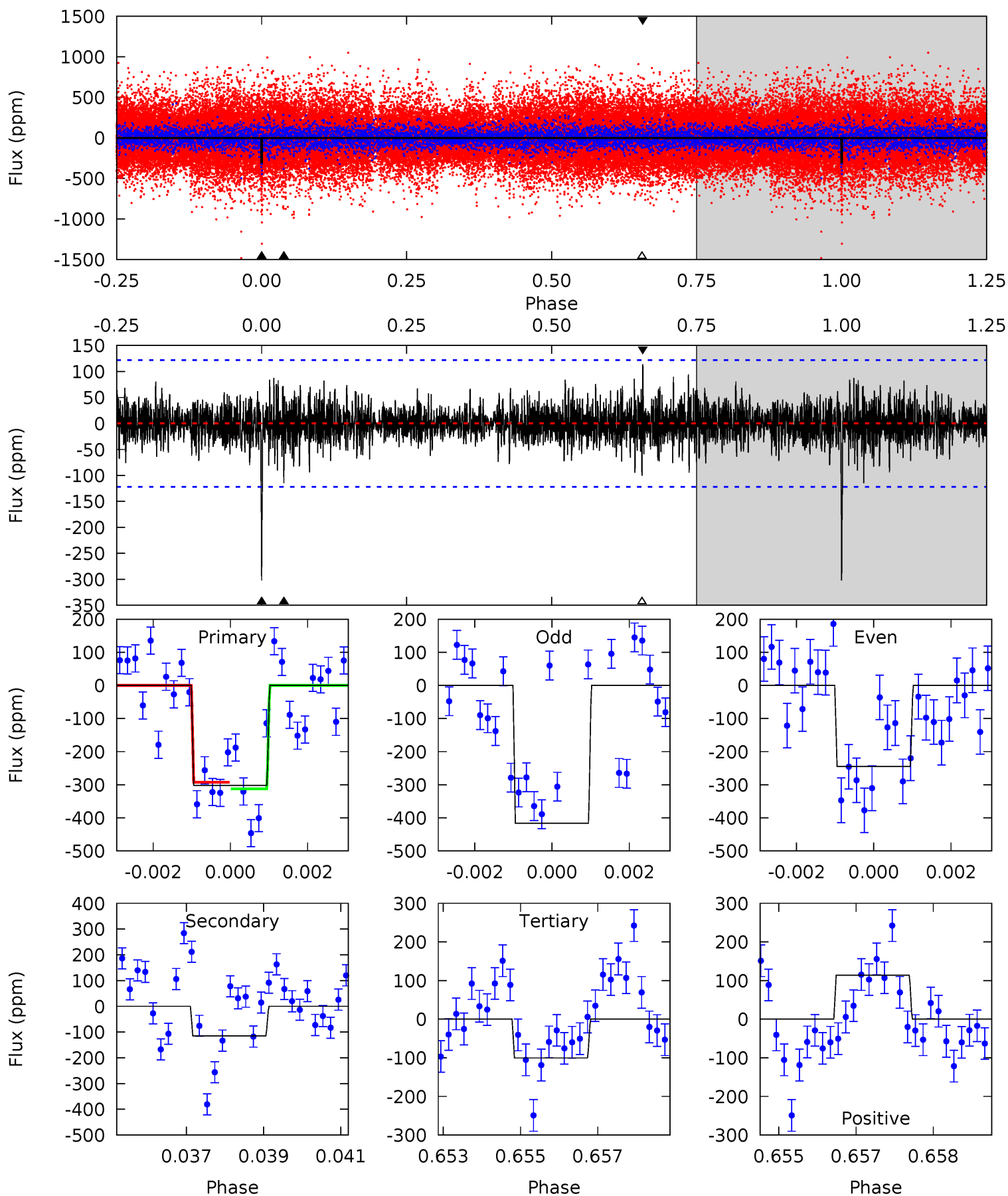
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.35	10.5	9.22	6.71	5.47	3.31	1.80	0.14	2.64	1.32	3.82	4.84	1.00	0.39	1.31



Alt Model-Shift Uniqueness Test

002579590-01, P = 406.886669 Days, E = 318.609164 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.3	5.07	4.42	5.00	5.36	3.15	1.12	8.88	8.30	0.65	0.06	3.56	0.77	0.27	0.43



Stellar Parameters For KIC 002579590

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5614^{+186}_{-186}	$4.386^{+0.175}_{-0.193}$	$-0.260^{+0.300}_{-0.300}$	$0.960^{+0.273}_{-0.168}$	$0.818^{+0.127}_{-0.068}$	$1.303^{+1.004}_{-0.663}$
	+3%/-3%	+4%/-4%	+115%/-115%	+28%/-18%	+16%/-8%	+77%/-51%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 002579590-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-336 ± 32	$2.54^{+2.36}_{-1.59}$	338^{+26}_{-22}	4988^{+3211}_{-1115}	$28660^{+179176}_{-20711}$
Alt.	-115 ± 23	$2.59^{+2.24}_{-1.68}$	338^{+28}_{-23}	3995^{+2282}_{-733}	9646^{+74306}_{-6923}

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 $A_{obs} \gg 1.0$

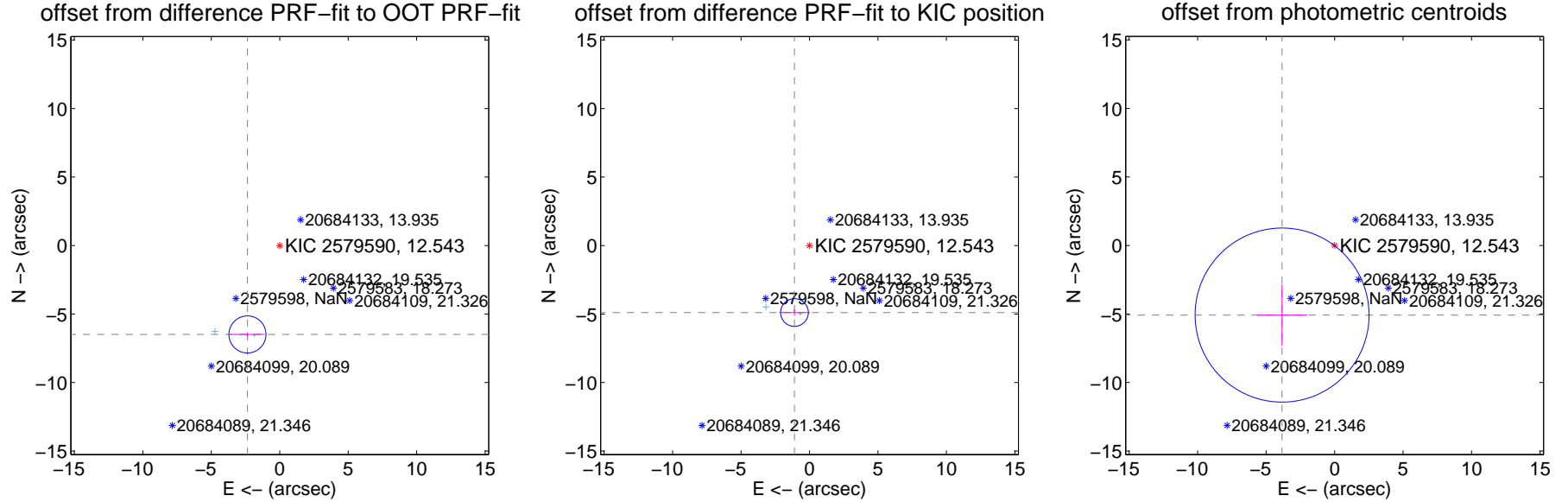
DV Centroid Data

Supplemental centroid analysis for 002579590-01. Kepler magnitude: 12.54. Transit SNR 4.77

There are 2 quarters with good PRF difference image offsets

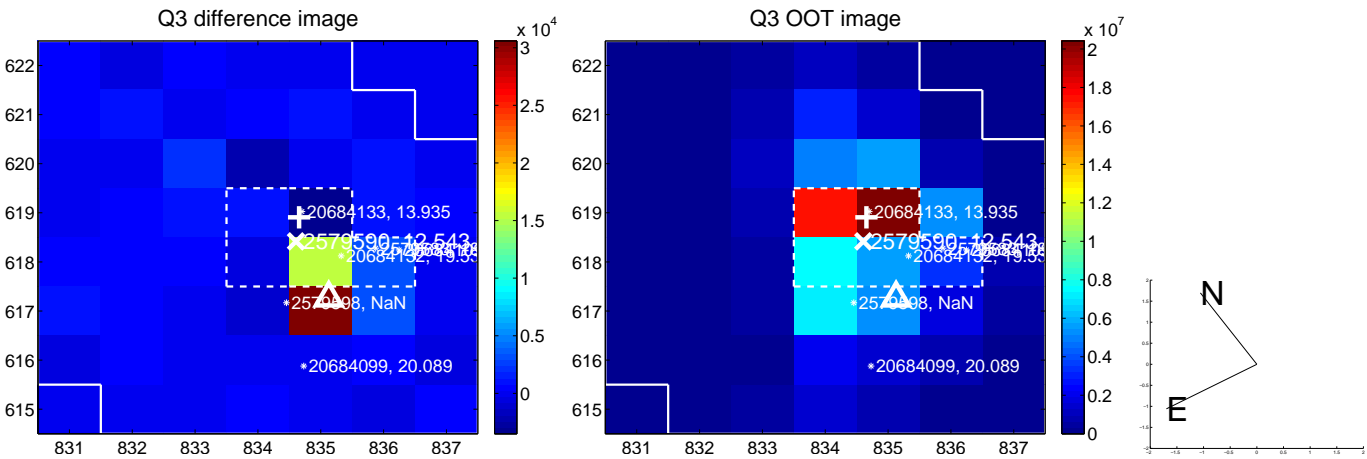
The OOT PRF centroid is offset from the target star catalog position by about 2.37 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.904 ± 0.451	15.31	2.360 ± 1.262	-6.488 ± 0.140
PRF-fit source offset from KIC position	5.011 ± 0.337	14.85	1.098 ± 1.110	-4.889 ± 0.240
photometric centroid source offset	6.36 ± 2.12	3.01	3.83 ± 1.85	-5.08 ± 2.25



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.

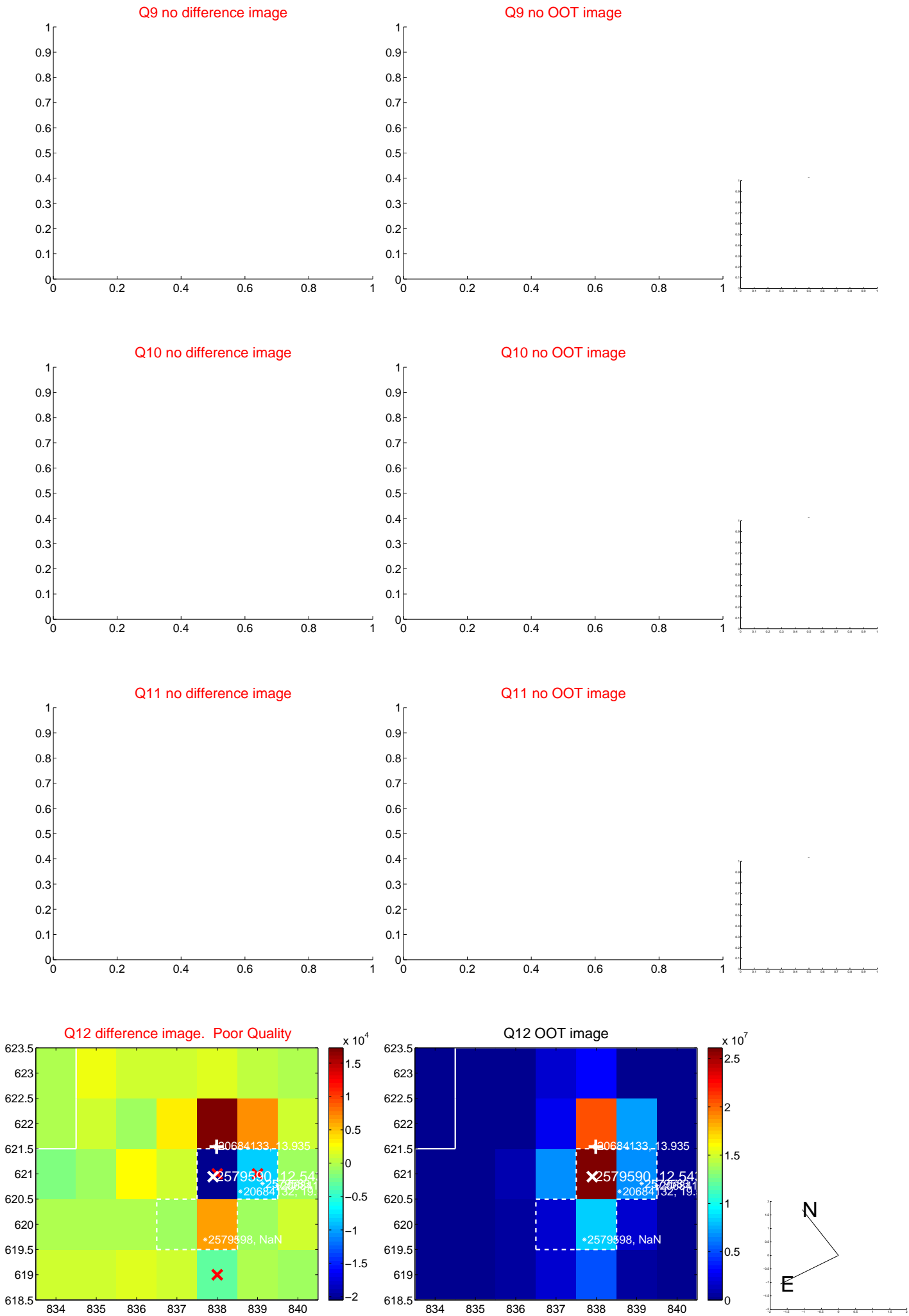
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



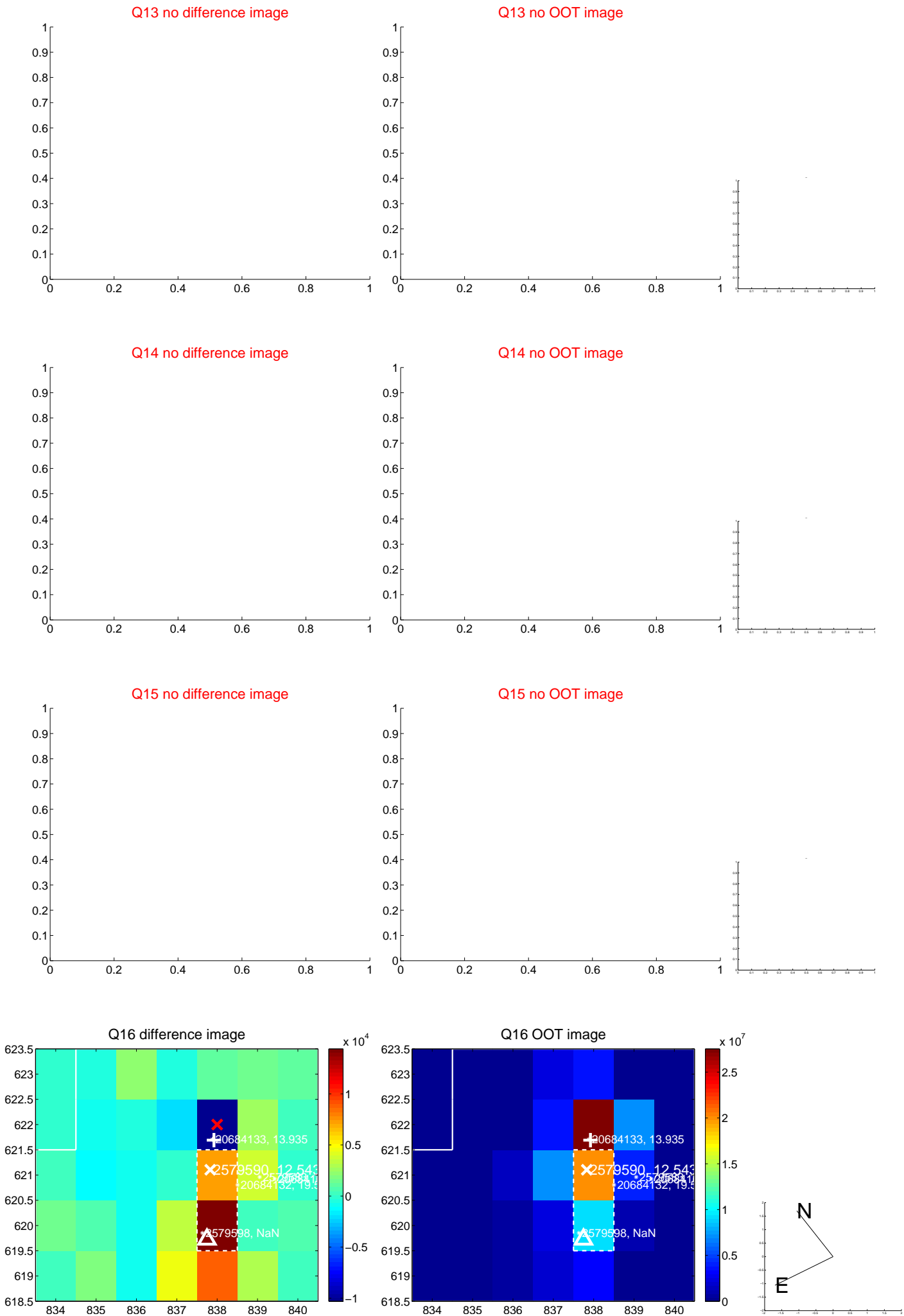
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



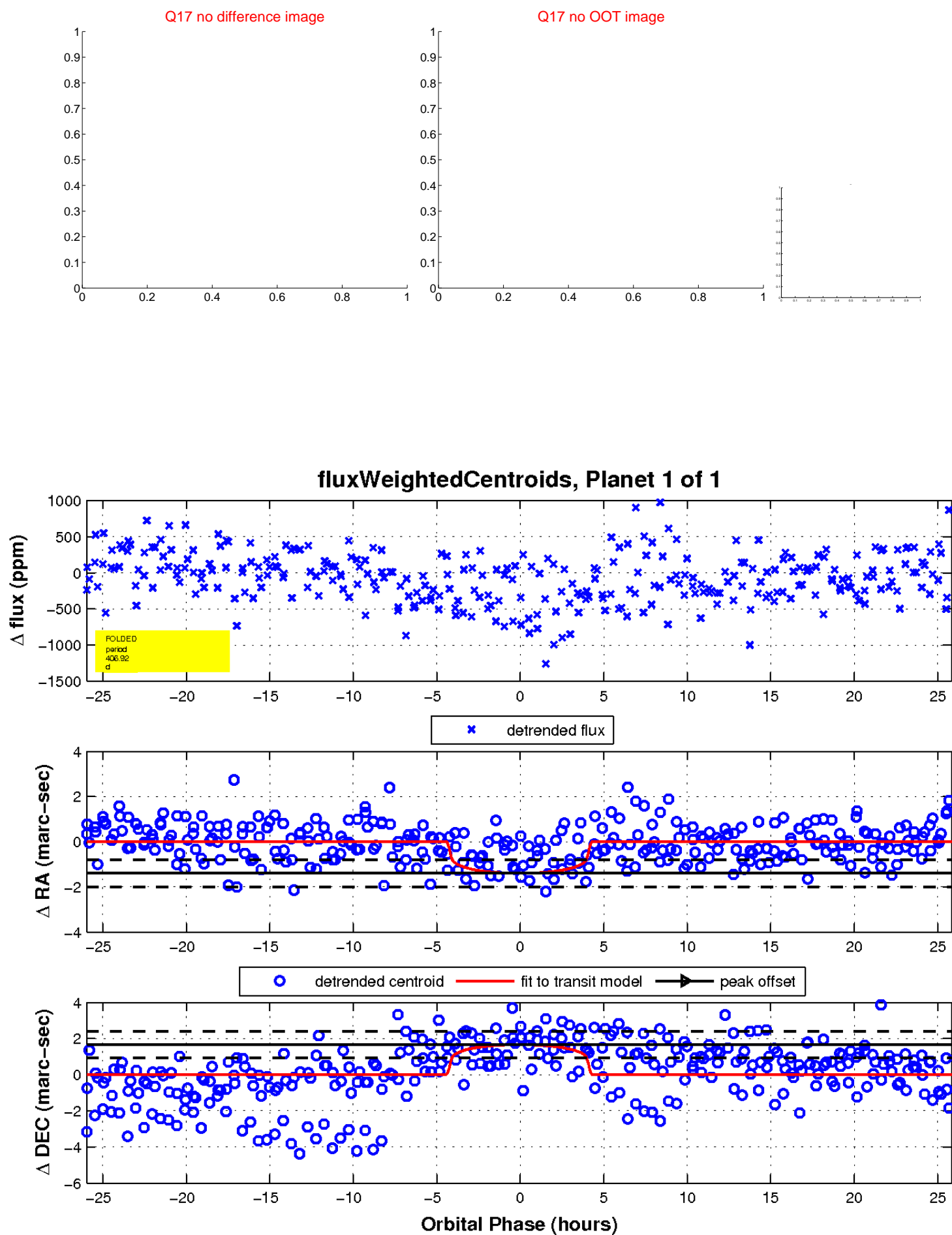
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

