

KIC 005525828

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})
005525828-01	OBS	No	260.348049	350.858867	760.9	20.863	9.8	7.9	0.86	5907	2.64	1.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005525828-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_ZUMA—LPP_DV—MOD_NONUNIQ_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.

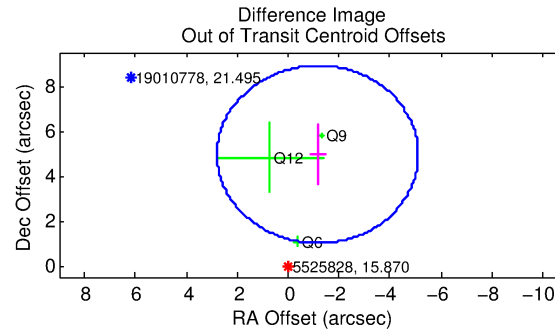
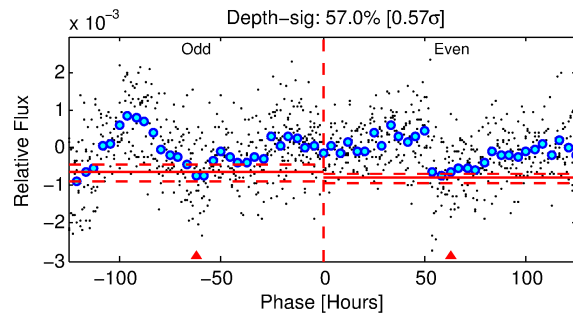
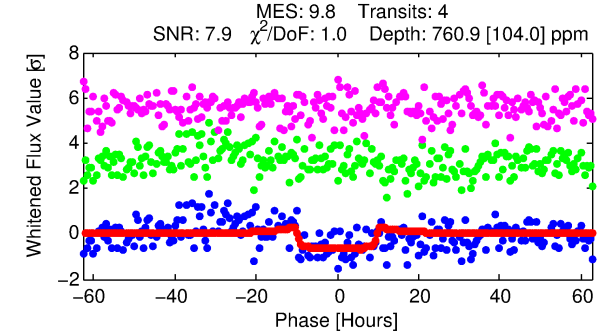
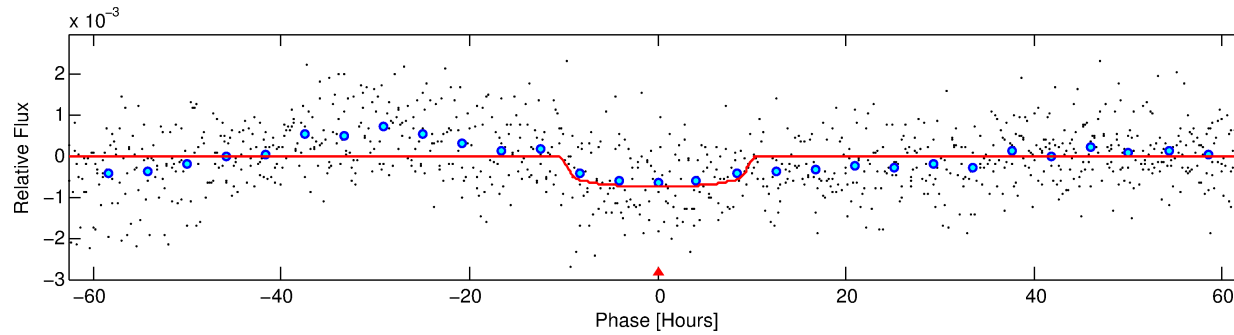
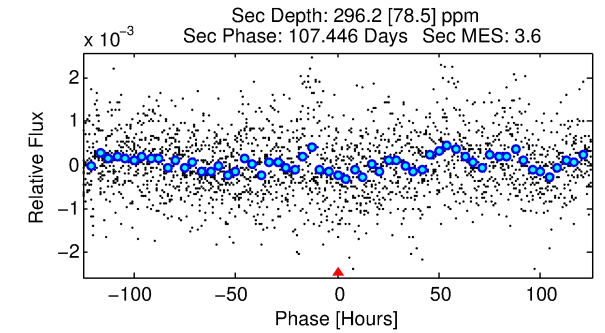
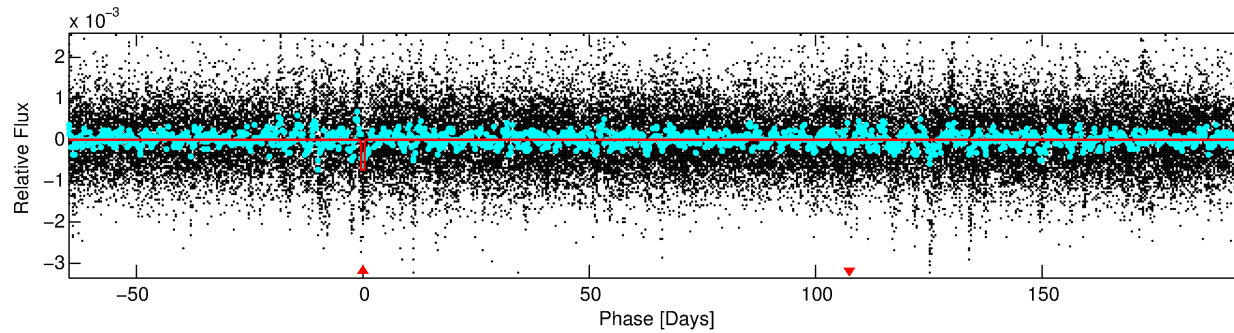
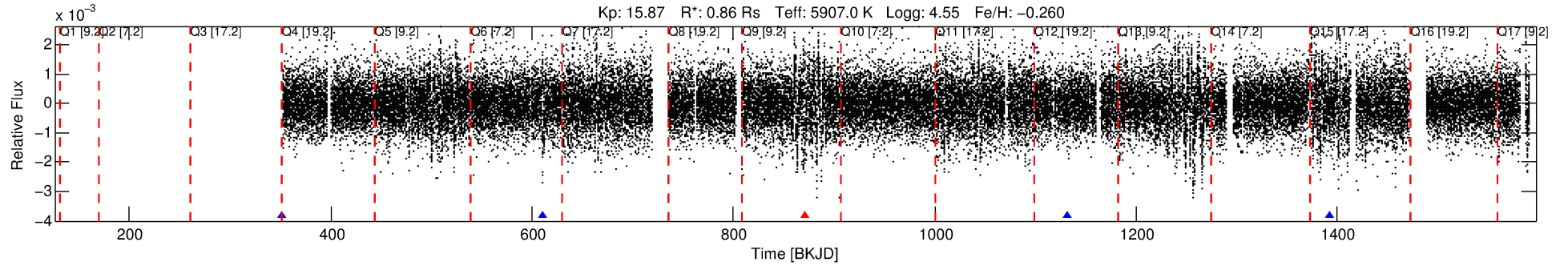
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005525828-01

No Significant Match Found

DV One-Page Summary

KIC: 5525828 Candidate: 1 of 1 Period: 260.348 d



DV Fit Results:

Period = 260.34805 [0.01619] d
Epoch = 350.8589 [0.0425] BKJD
Rp/R* = 0.0281 [0.0042]
a/R* = 60.40 [37.69]
b = 0.81 [0.27]
Seff = 1.31 [0.51]
Teq = 273 [27] K
Rp = 2.64 [0.89] Re
a = 0.7848 [0.1983] AU
Ag = 14406.40 [7838.09] [1.84σ]
Teffp = 4621 [492] K [8.83σ]

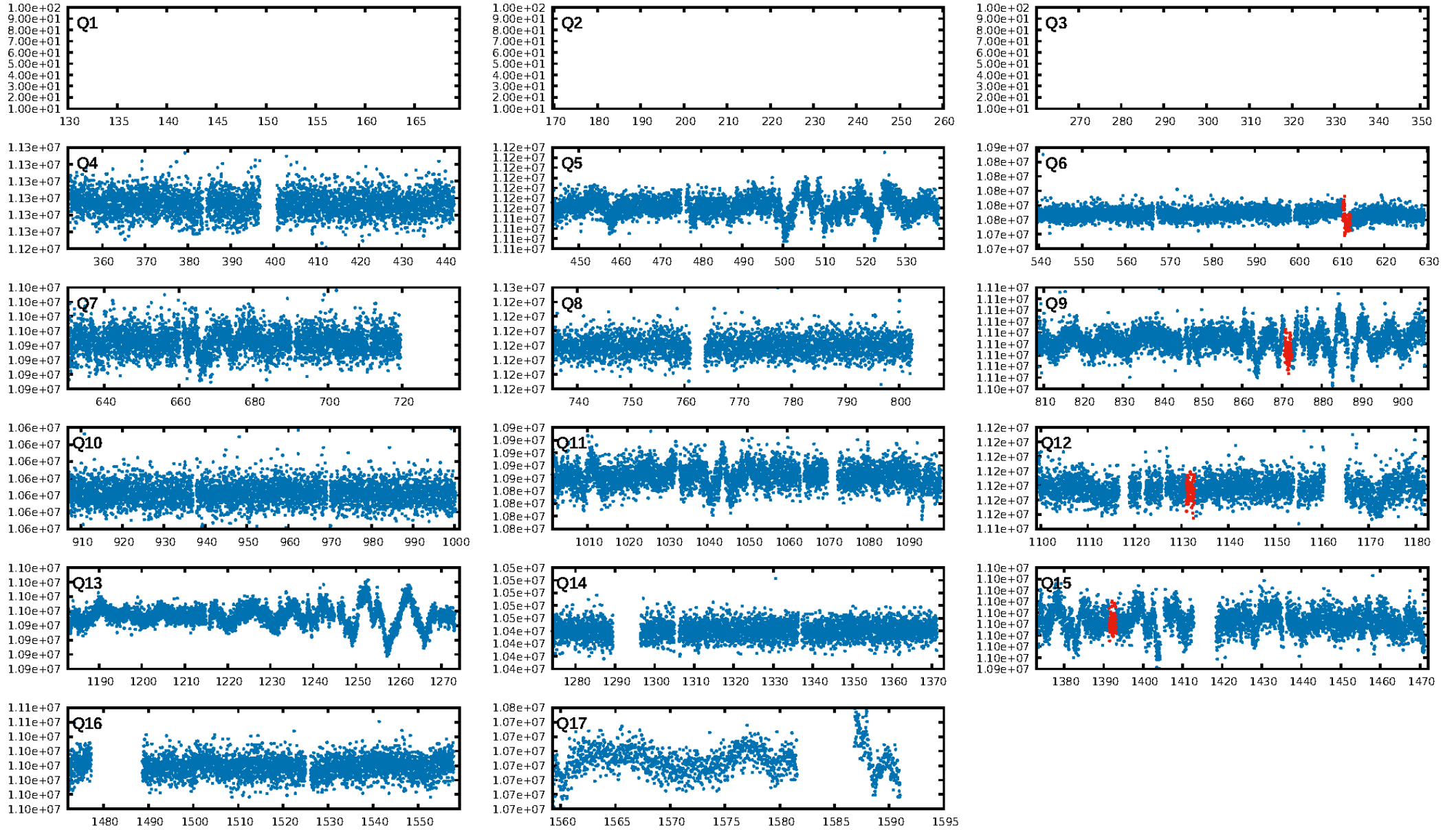
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 99.8%
Bootstrap-pfa: 5.73e-13
RollingBand-fgt: 0.75 [3/4]
GhostDiagnostic-chr: 1.497
Centroid-sig: 58.5%
Centroid-so: 2.199 arcsec [1.59σ]
OotOffset-rm: 5.088 arcsec [3.86σ]
KicOffset-rm: 4.824 arcsec [3.12σ]
OotOffset-st: 1/0/1/1 [3]
KicOffset-st: 1/0/1/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

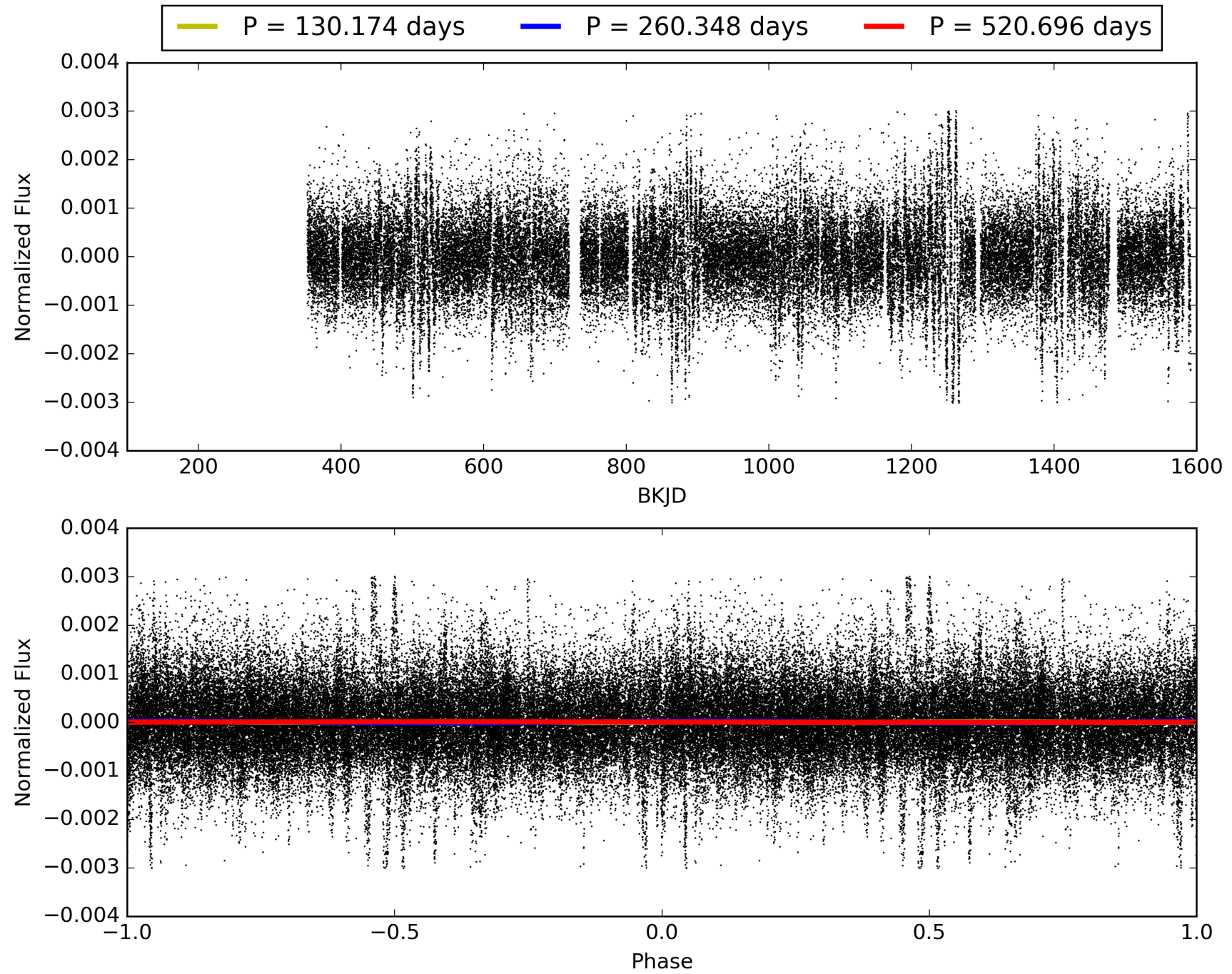
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 15:00:49 Z

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

TCE 005525828-01, PDC Light Curves

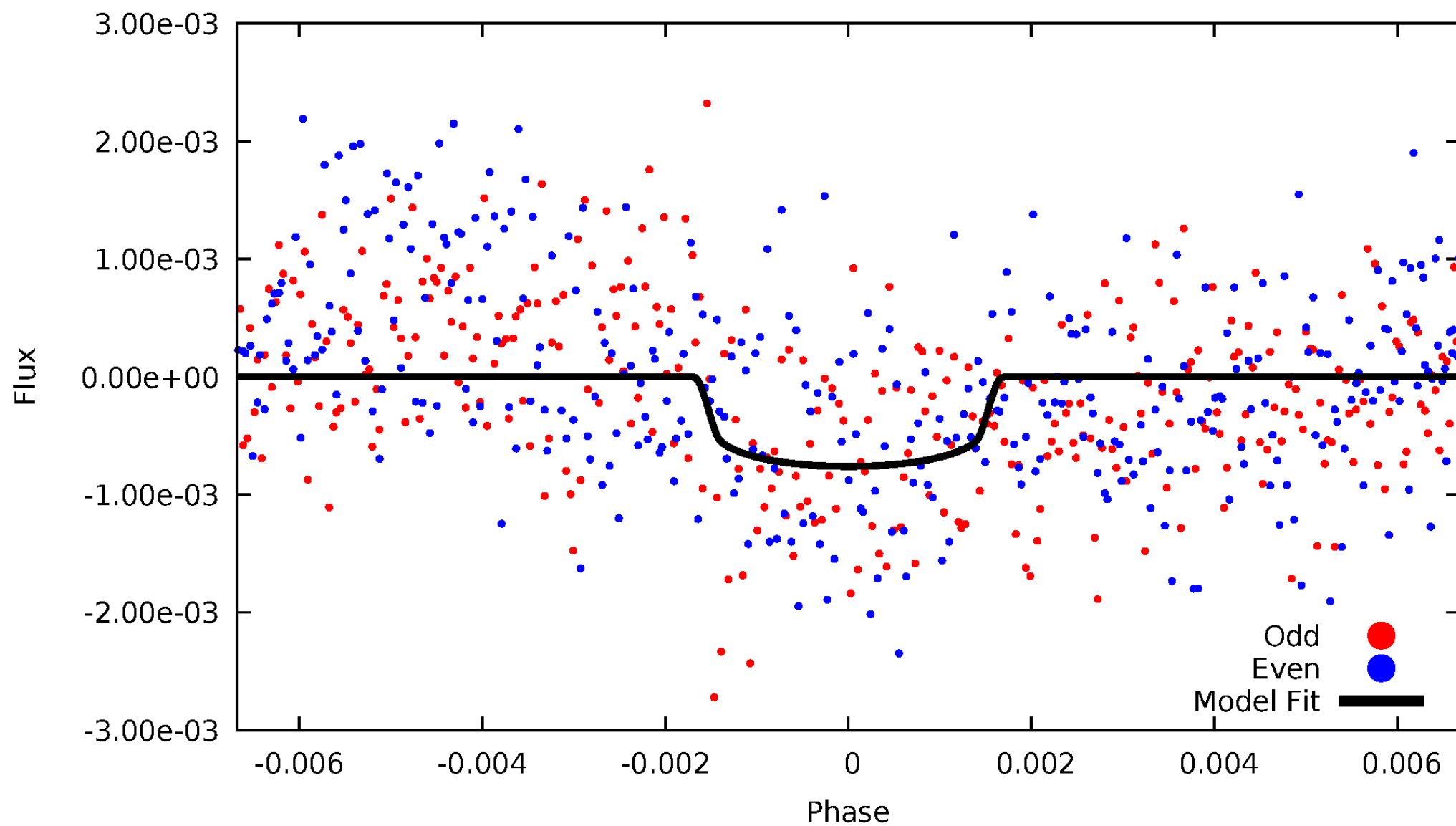


TCE 005525828-01



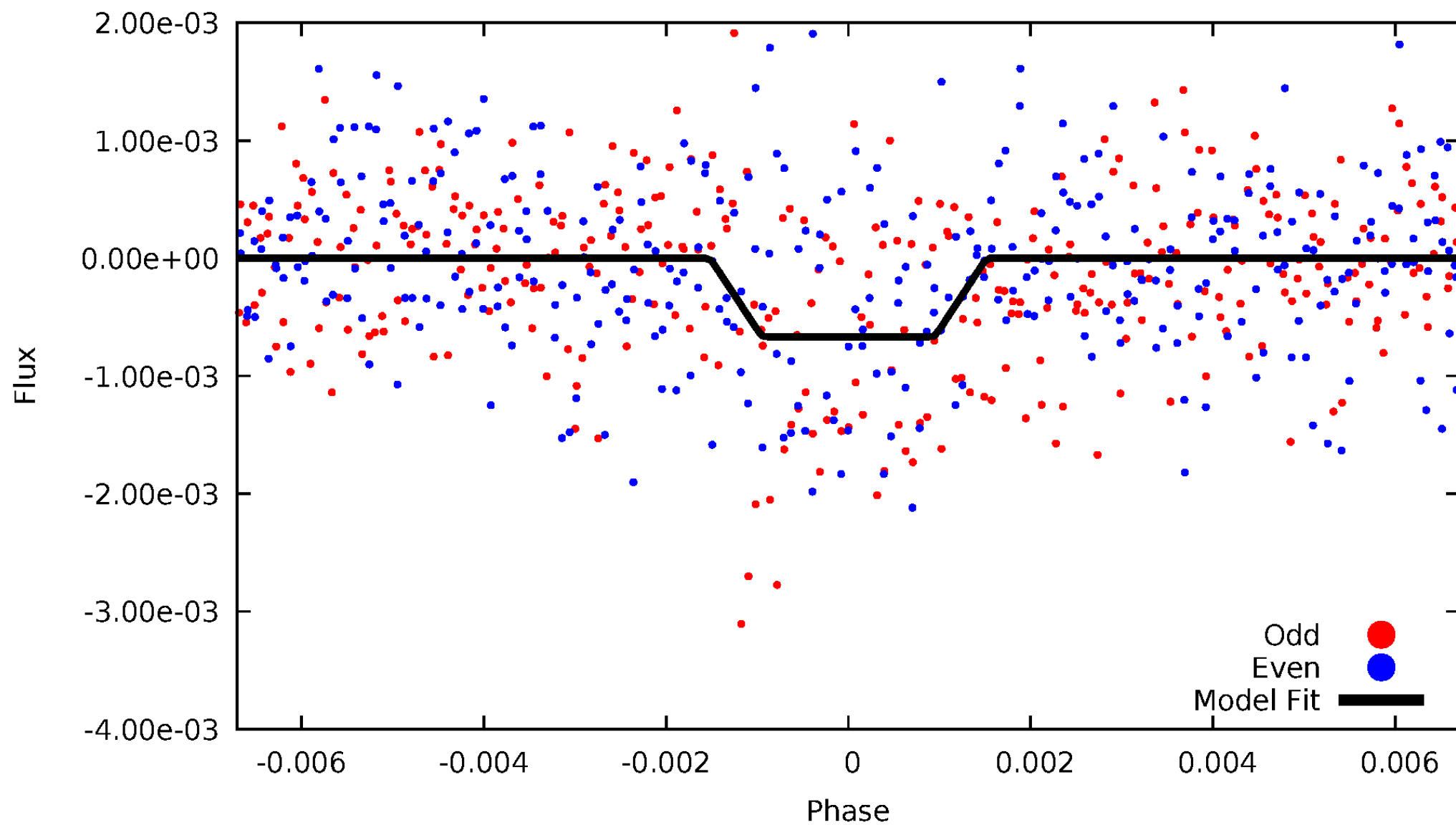
DV Odd/Even

TCE 005525828-01



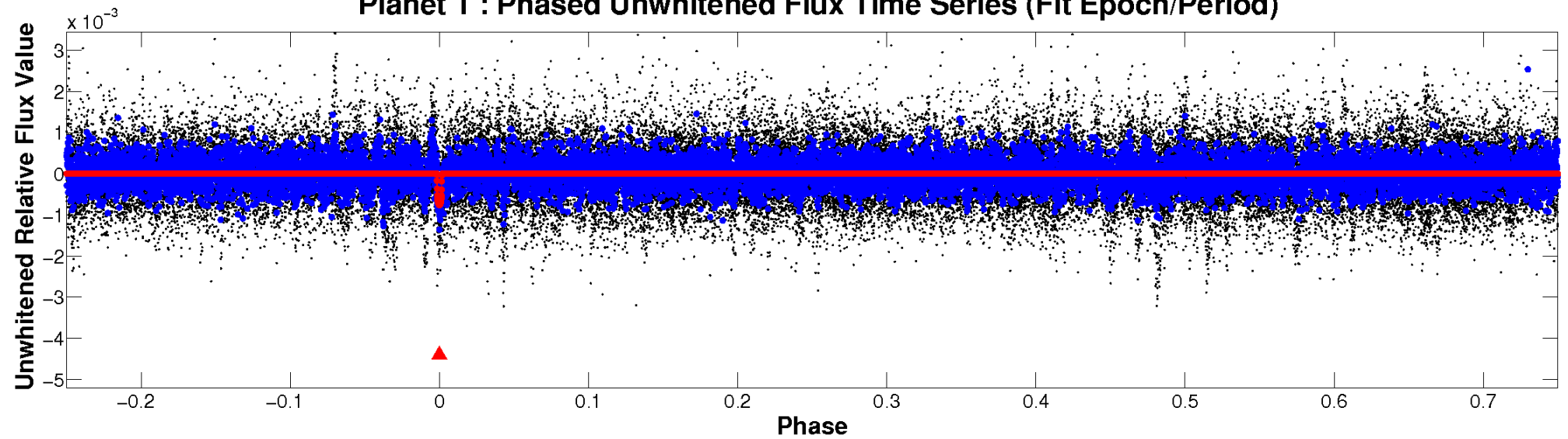
ALT Odd/Even

TCE 005525828-01

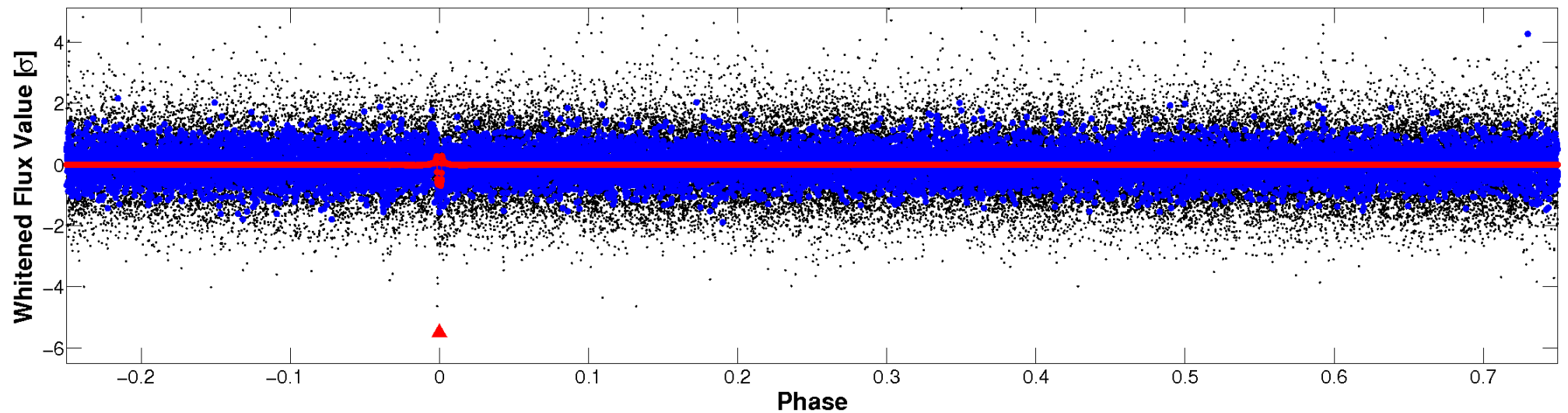


Non-Whitened Vs. Whitened Light Curve

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



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



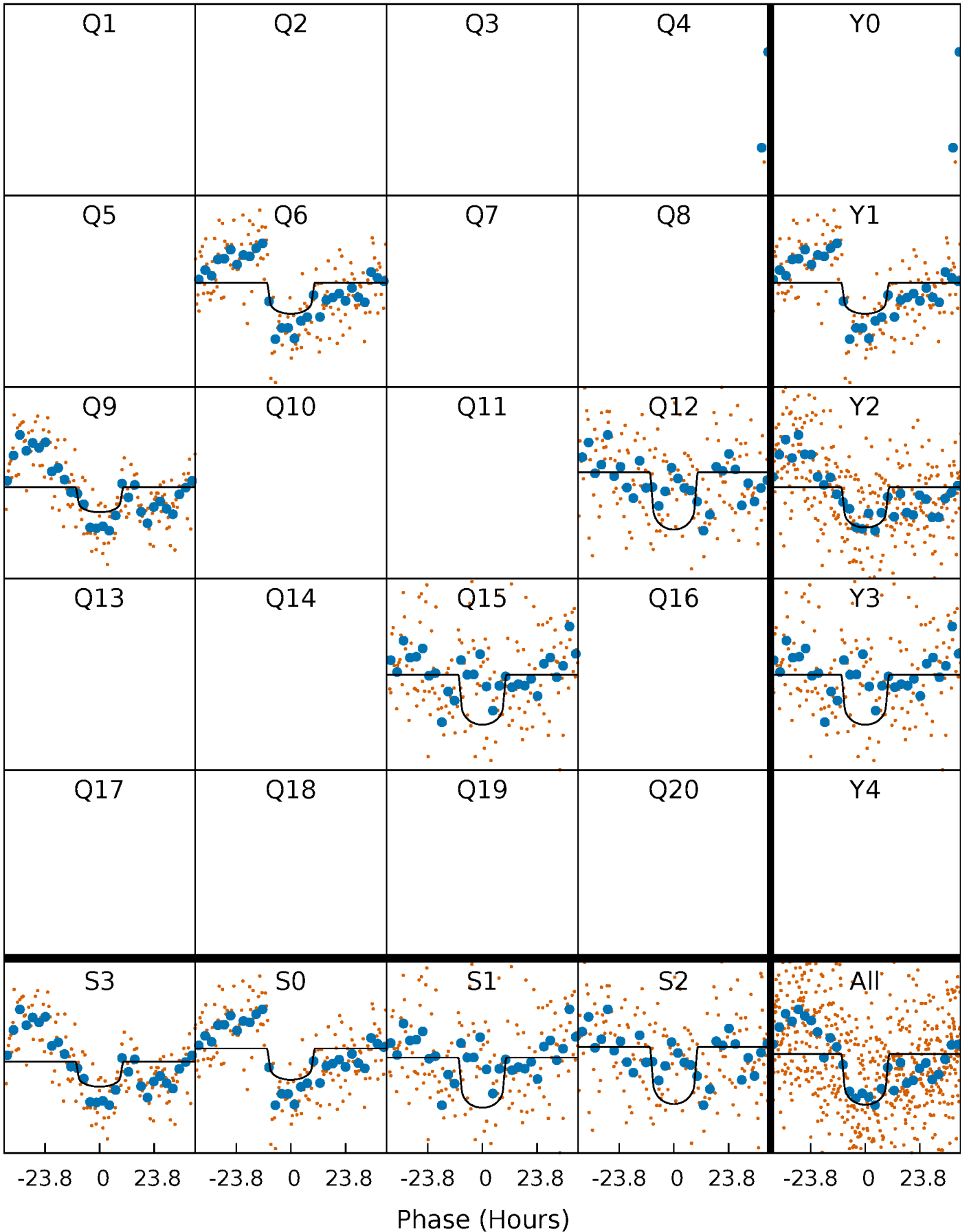
PDC Quarter-Phased Transit Curves

TCE 005525828-01 P=260.348049 Days $T_0=350.858867$ (BKJD)



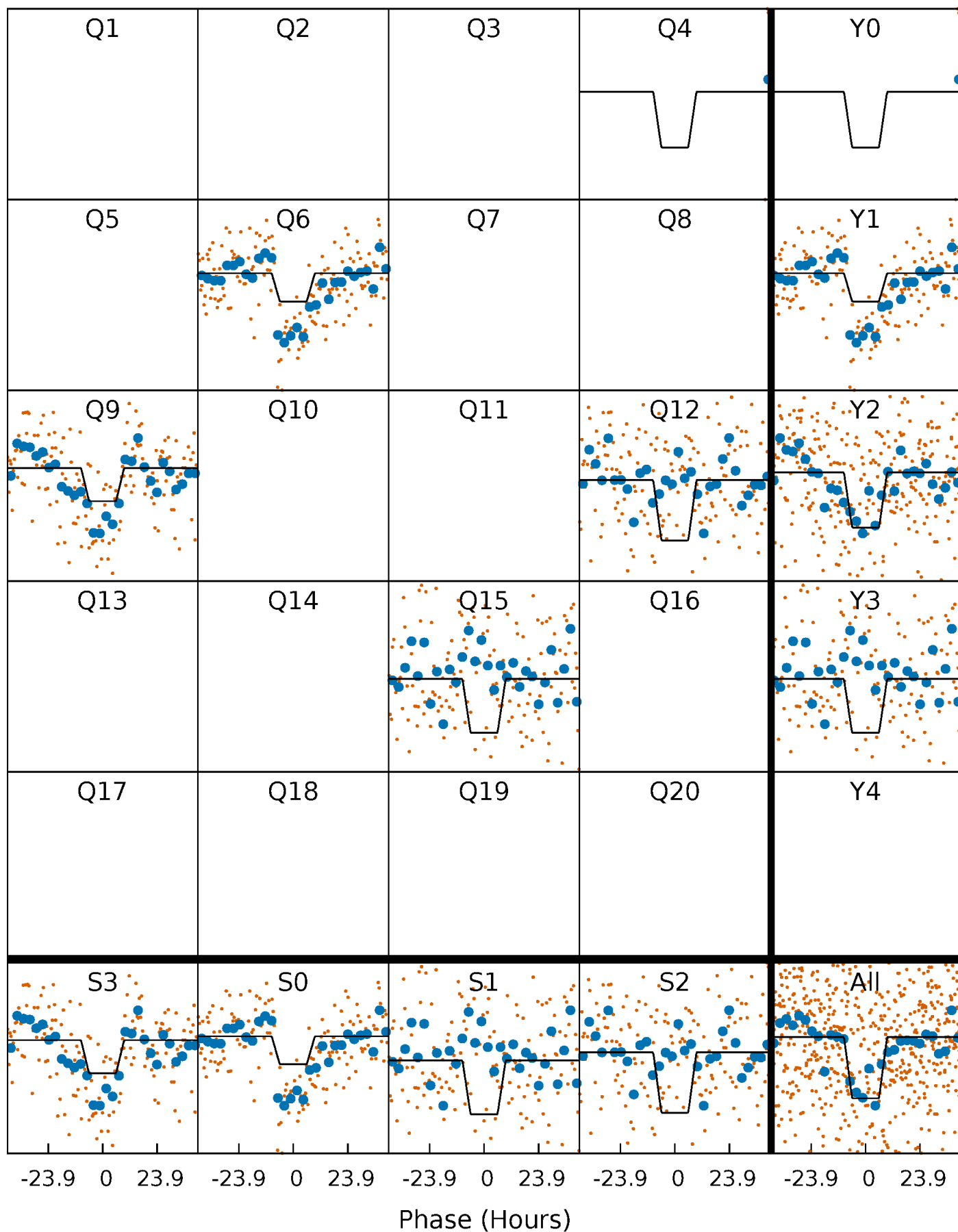
DV Quarter-Phased Transit Curves

TCE 005525828-01 P=260.348049 Days $T_0=350.858867$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

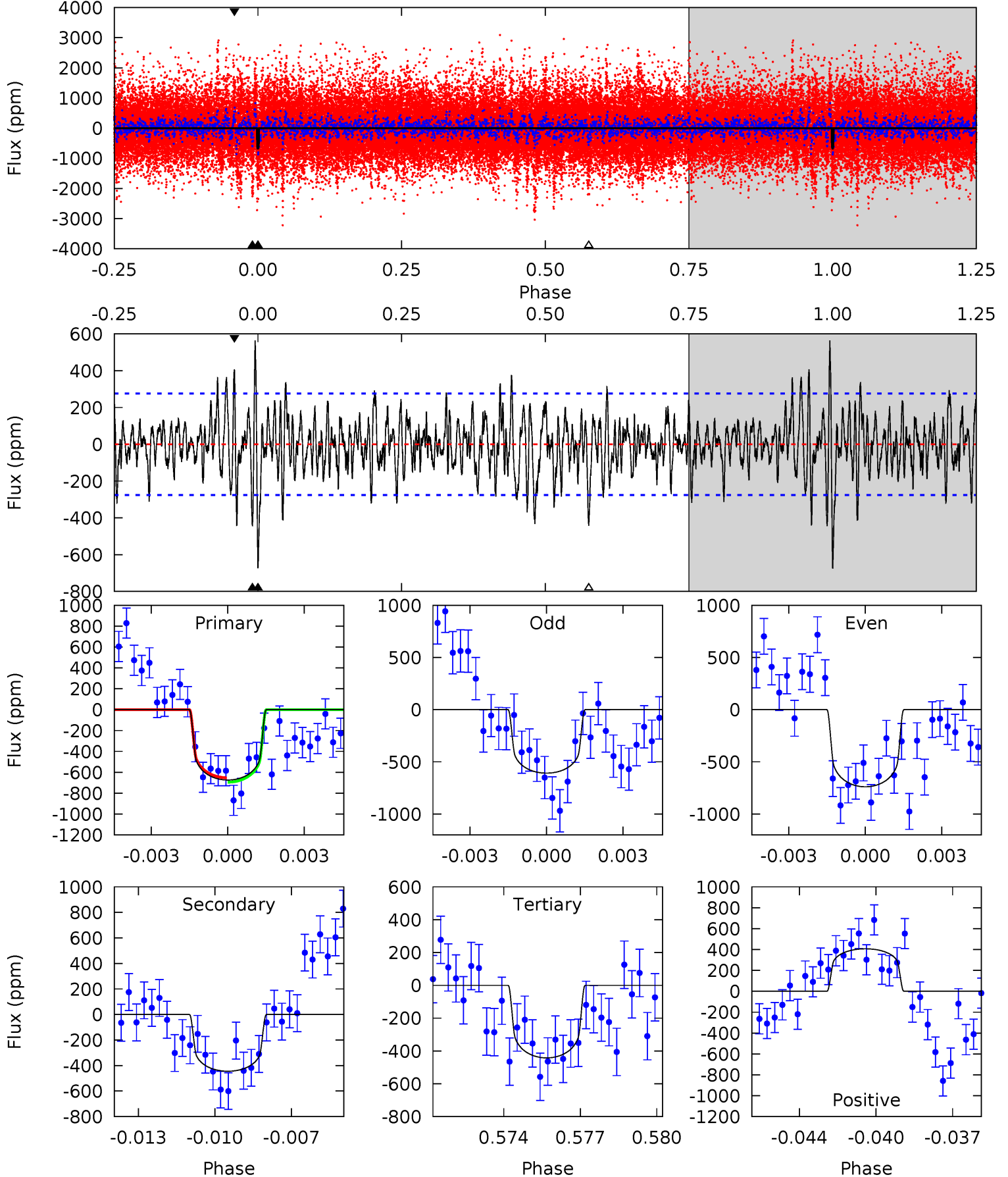
TCE 005525828-01 P=260.384855 Days $T_0=350.746239$ (BKJD)



DV Model-Shift Uniqueness Test

005525828-01, P = 260.348049 Days, E = 350.858867 Days

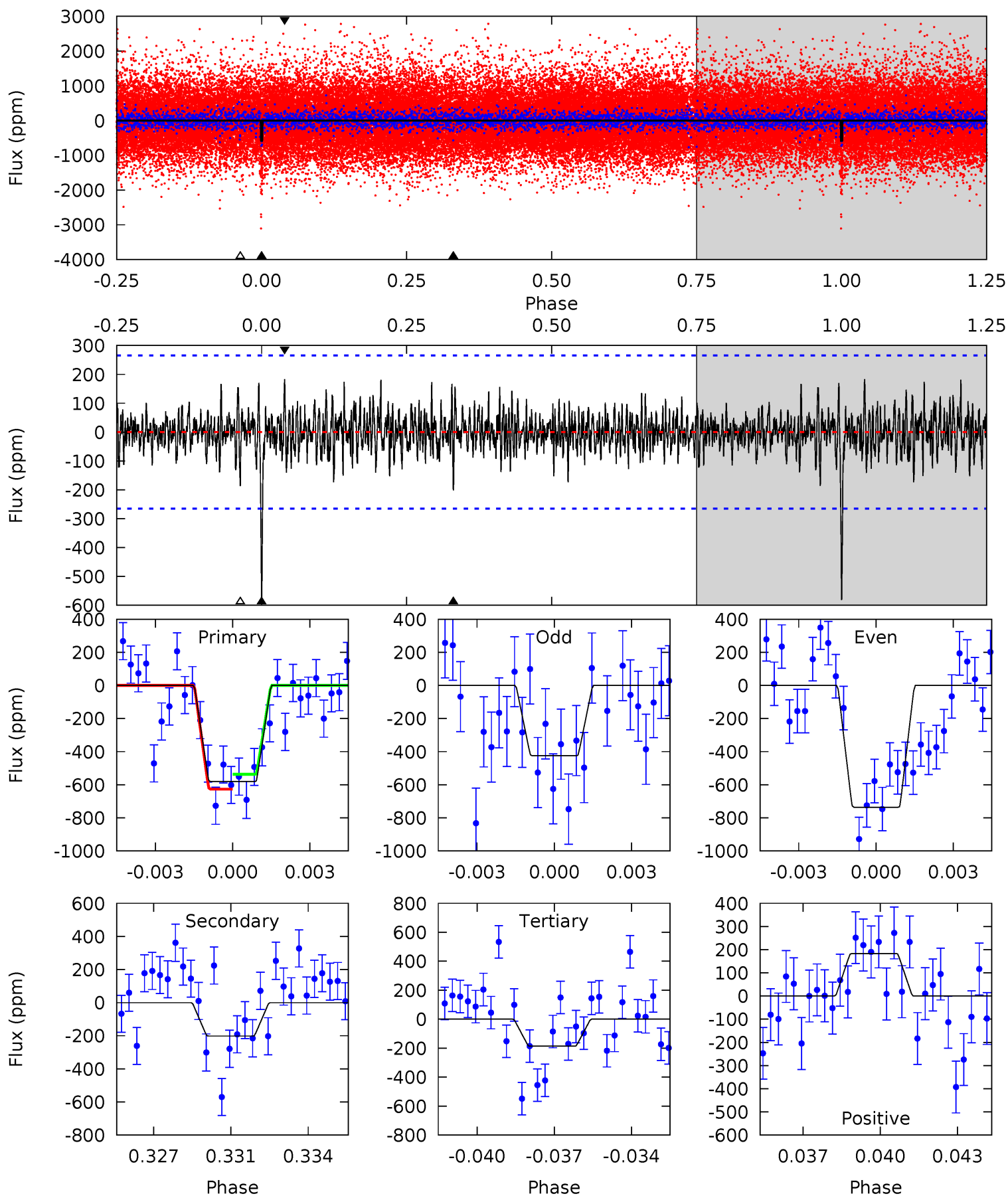
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.8	8.43	8.38	7.71	5.23	2.93	2.42	4.39	5.07	0.05	0.72	1.25	1.01	0.46	0.40



Alt Model-Shift Uniqueness Test

005525828-01, P = 260.384855 Days, E = 350.746239 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.5	3.99	3.69	3.62	5.25	2.96	1.04	7.81	7.88	0.30	0.37	3.09	1.06	0.24	0.88



Stellar Parameters For KIC 005525828

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5907^{+166}_{-207}	$4.547^{+0.037}_{-0.200}$	$-0.260^{+0.300}_{-0.300}$	$0.860^{+0.259}_{-0.069}$	$0.951^{+0.107}_{-0.119}$	$2.103^{+0.435}_{-1.121}$
	+3%/-4%	+1%/-4%	+115%/-115%	+30%/-8%	+11%/-13%	+21%/-53%
Source	KIC0	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 005525828-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-445 ± 53	$2.77^{+0.53}_{-0.42}$	389^{+28}_{-18}	5135^{+431}_{-339}	18809^{+8030}_{-5552}
Alt.	-202 ± 51	$2.53^{+0.54}_{-0.47}$	390^{+25}_{-18}	4544^{+399}_{-356}	10401^{+5596}_{-3894}

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

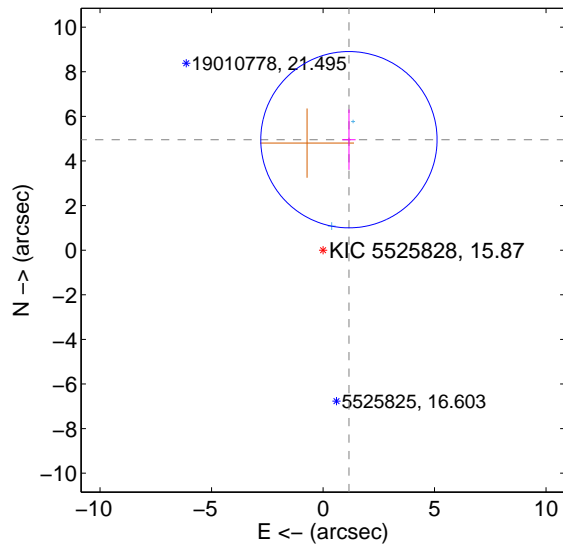
Supplemental centroid analysis for 005525828-01. Kepler magnitude: 15.87. Transit SNR 7.87

There are 2 quarters with good PRF difference image offsets

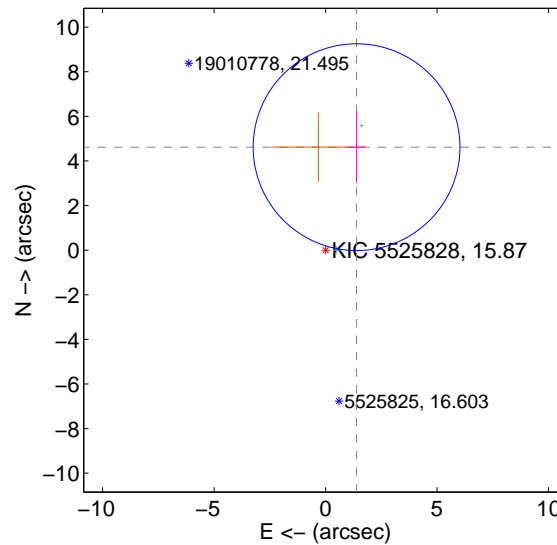
The direct PRF centroid is offset from the target star catalog position by about 0.43 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.088 ± 1.318	3.86	-1.161 ± 0.300	4.954 ± 1.352
PRF-fit source offset from KIC position	4.824 ± 1.545	3.12	-1.390 ± 0.349	4.619 ± 1.610
photometric centroid source offset	2.20 ± 1.38	1.59	0.05 ± 1.30	-2.20 ± 1.38

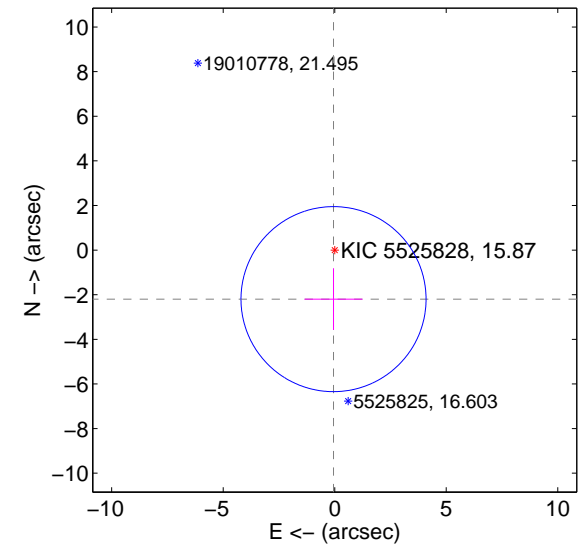
offset from difference PRF-fit to OOT PRF-fit



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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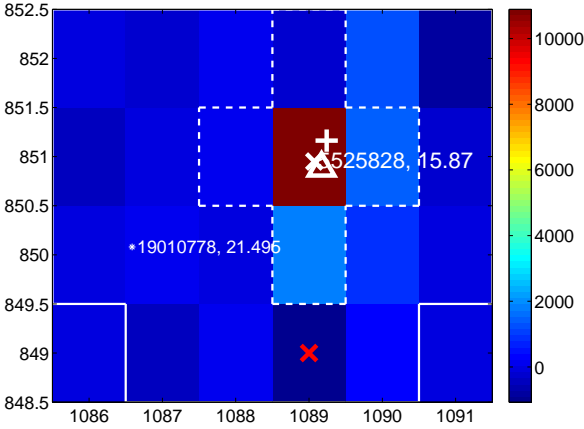
Q5 no difference image



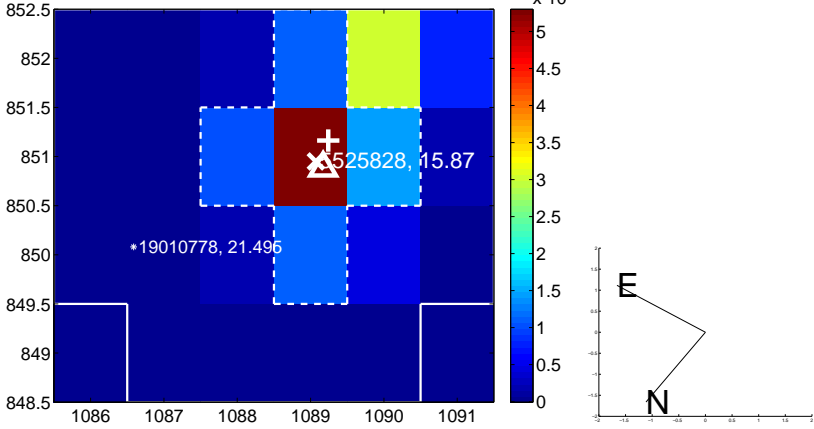
Q5 no OOT image



Q6 difference image



Q6 OOT image



Q7 no difference image



Q7 no OOT image



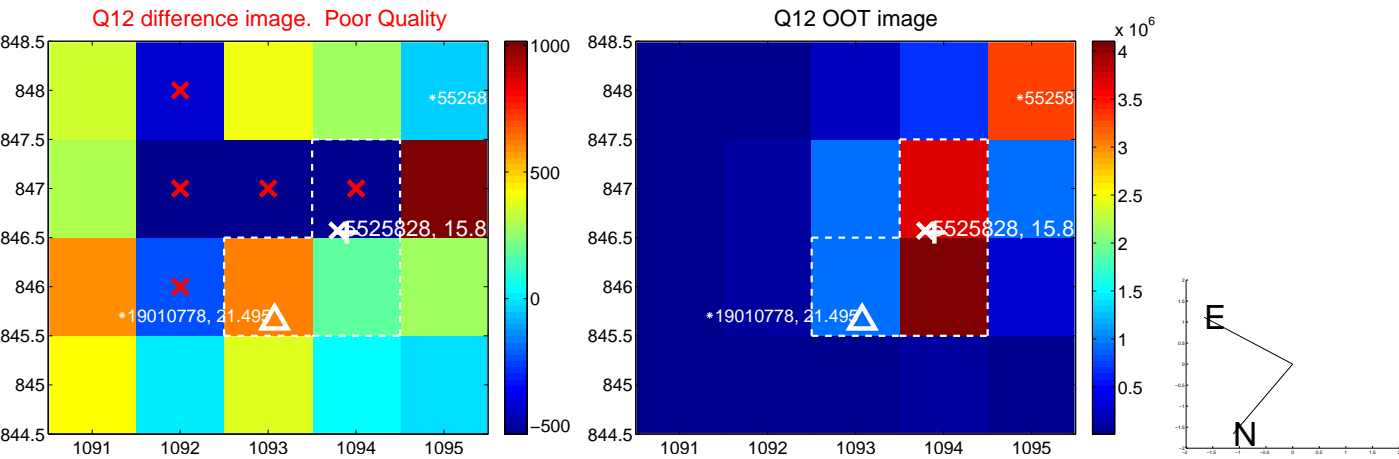
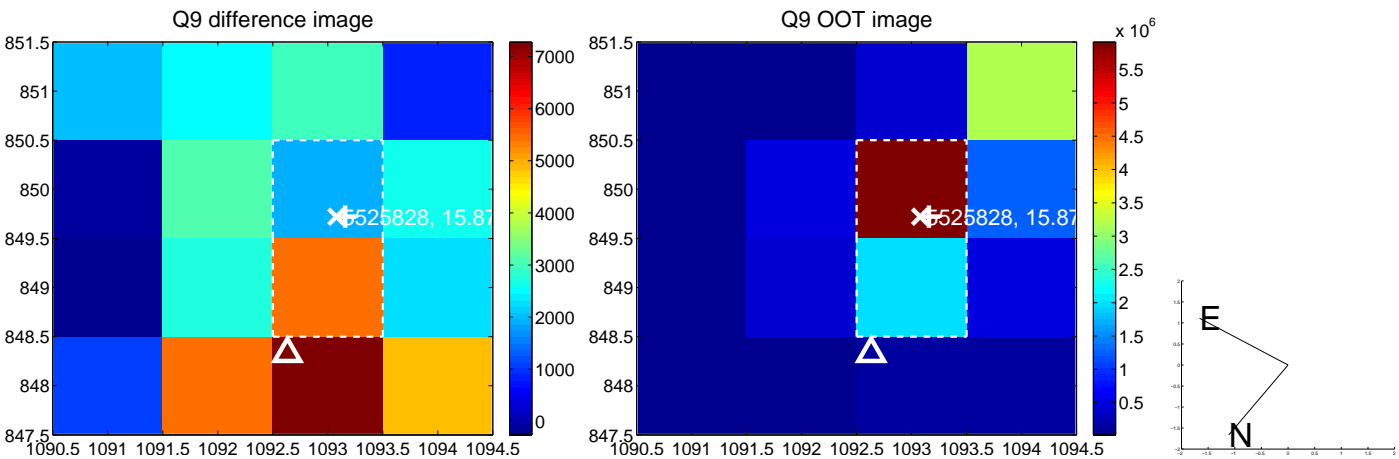
Q8 no difference image



Q8 no OOT image



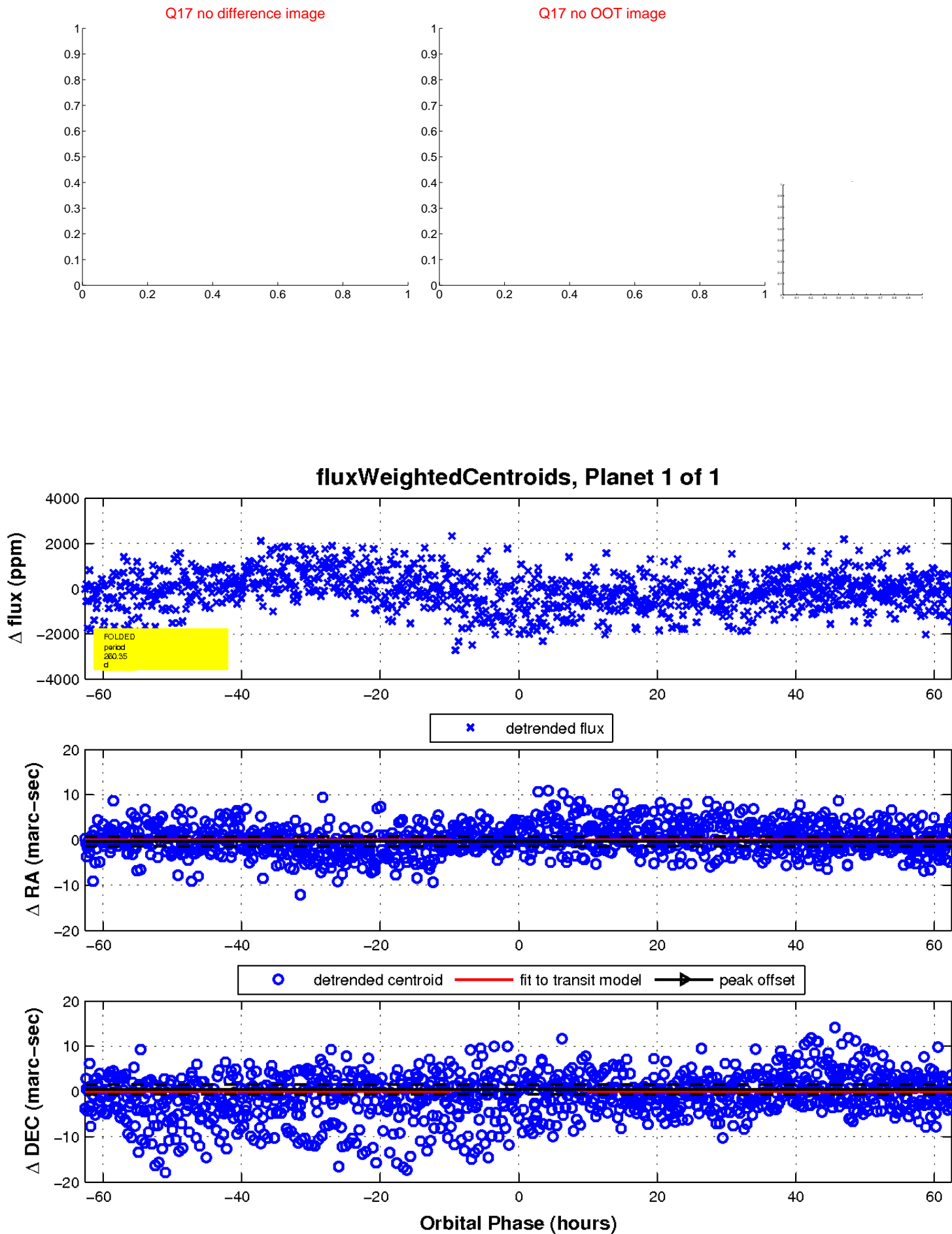
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

