

KIC 005253740

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})
005253740-01	OBS	No	0.541076	131.581813	24.5	1.588	8.4	8.5	4.24	7221	2.49	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005253740-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

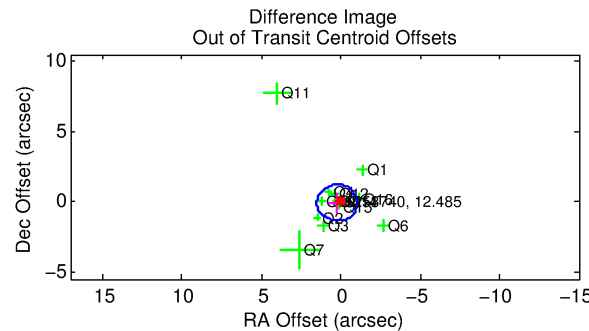
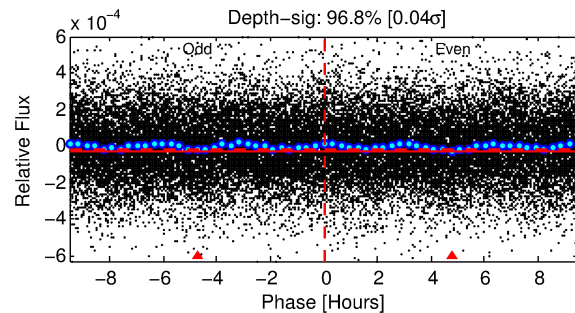
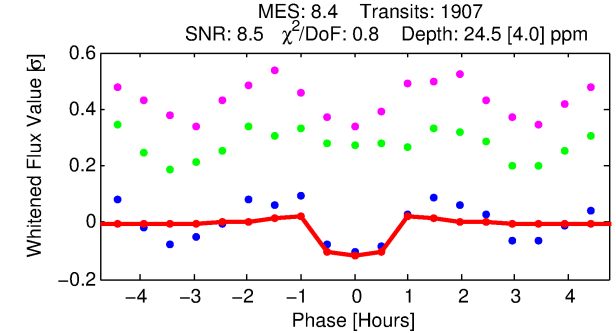
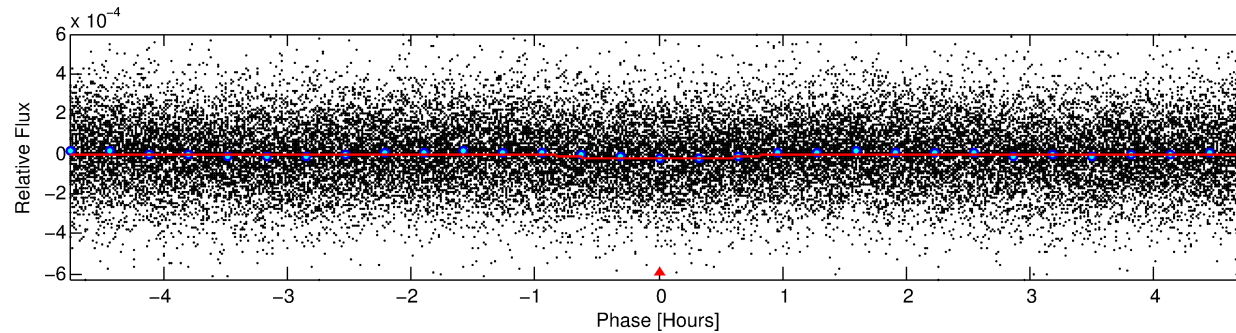
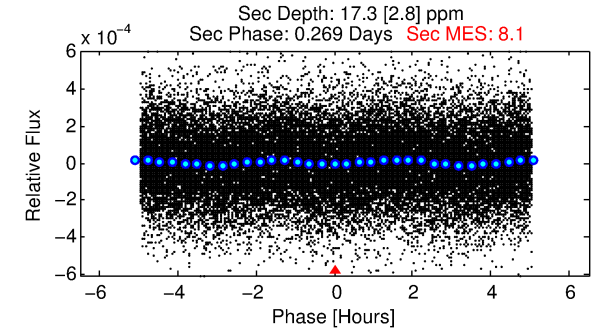
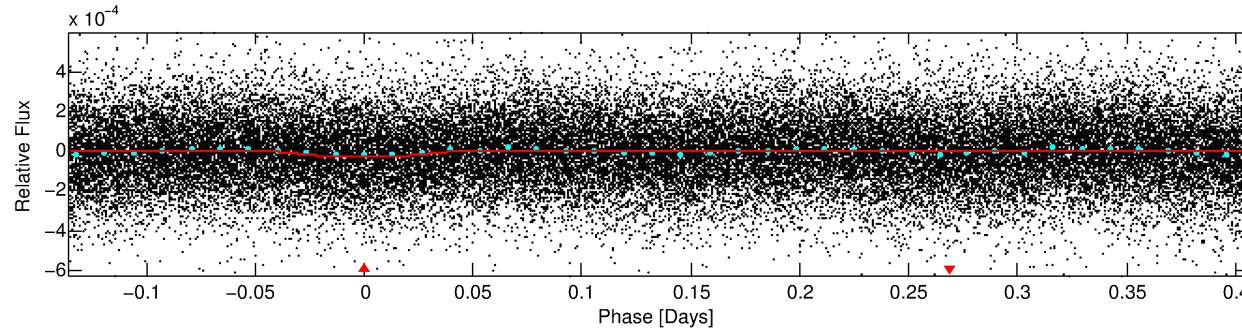
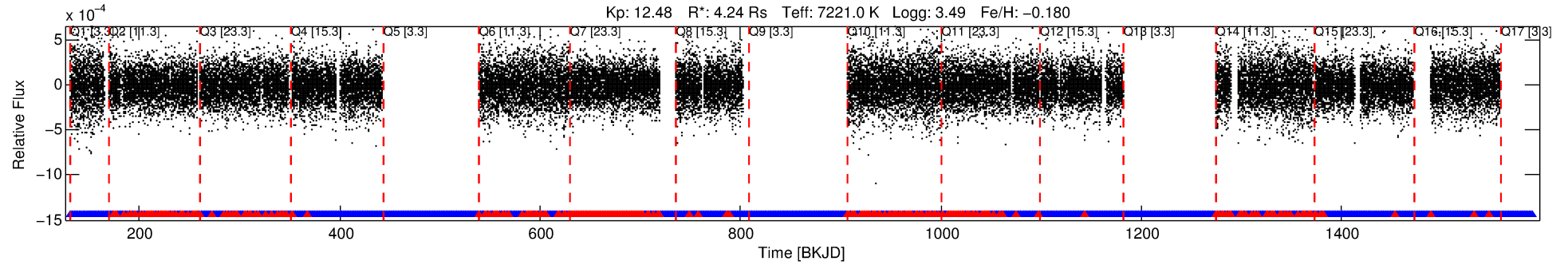
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005253740-01

No Significant Match Found

DV One-Page Summary

KIC: 5253740 Candidate: 1 of 1 Period: 0.541 d



DV Fit Results:

Period = 0.54108 [0.00001] d
Epoch = 131.5818 [0.0020] BKJD
Rp/R* = 0.0054 [0.0015]
a/R* = 1.47 [1.22]
b = 0.91 [0.31]
Seff = N/A
Teq = N/A
Rp = 2.49 [1.66] Re
a = N/A
Ag = N/A
Teffp = N/A

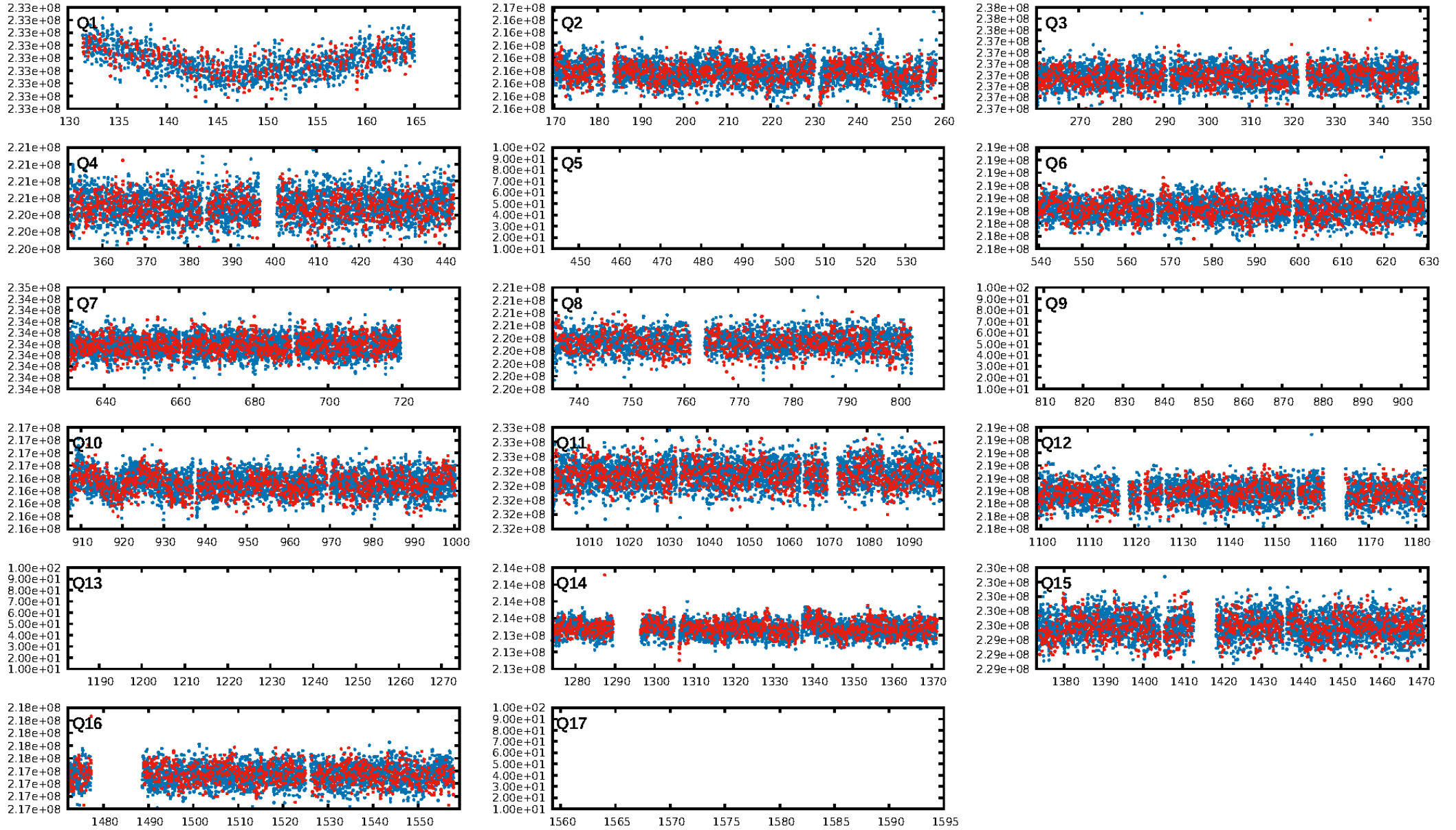
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.80e-14
RollingBand-fgt: 0.81 [1491/1845]
GhostDiagnostic-chr: 0.9552
Centroid-sig: 5.8%
Centroid-so: 1.363 arcsec [1.64σ]
OotOffset-rm: 0.236 arcsec [0.55σ]
KicOffset-rm: 0.181 arcsec [0.44σ]
OotOffset-st: 4/4/4/1 [13]
KicOffset-st: 4/4/4/1 [13]
DiffImageQuality-fgm: 0.38 [5/13]
DiffImageOverlap-fno: 1.00 [13/13]

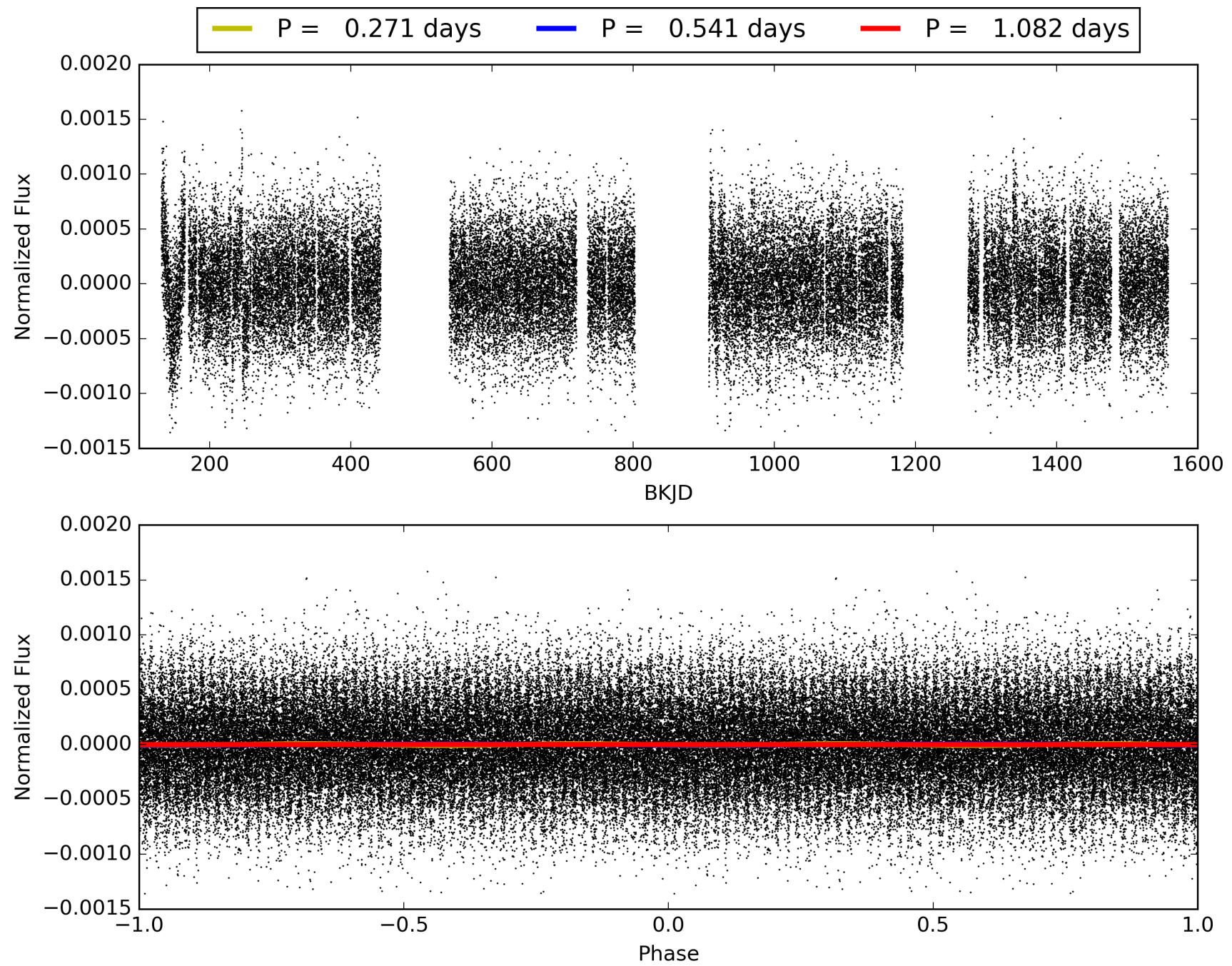
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 05:46:29 Z

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

TCE 005253740-01, PDC Light Curves

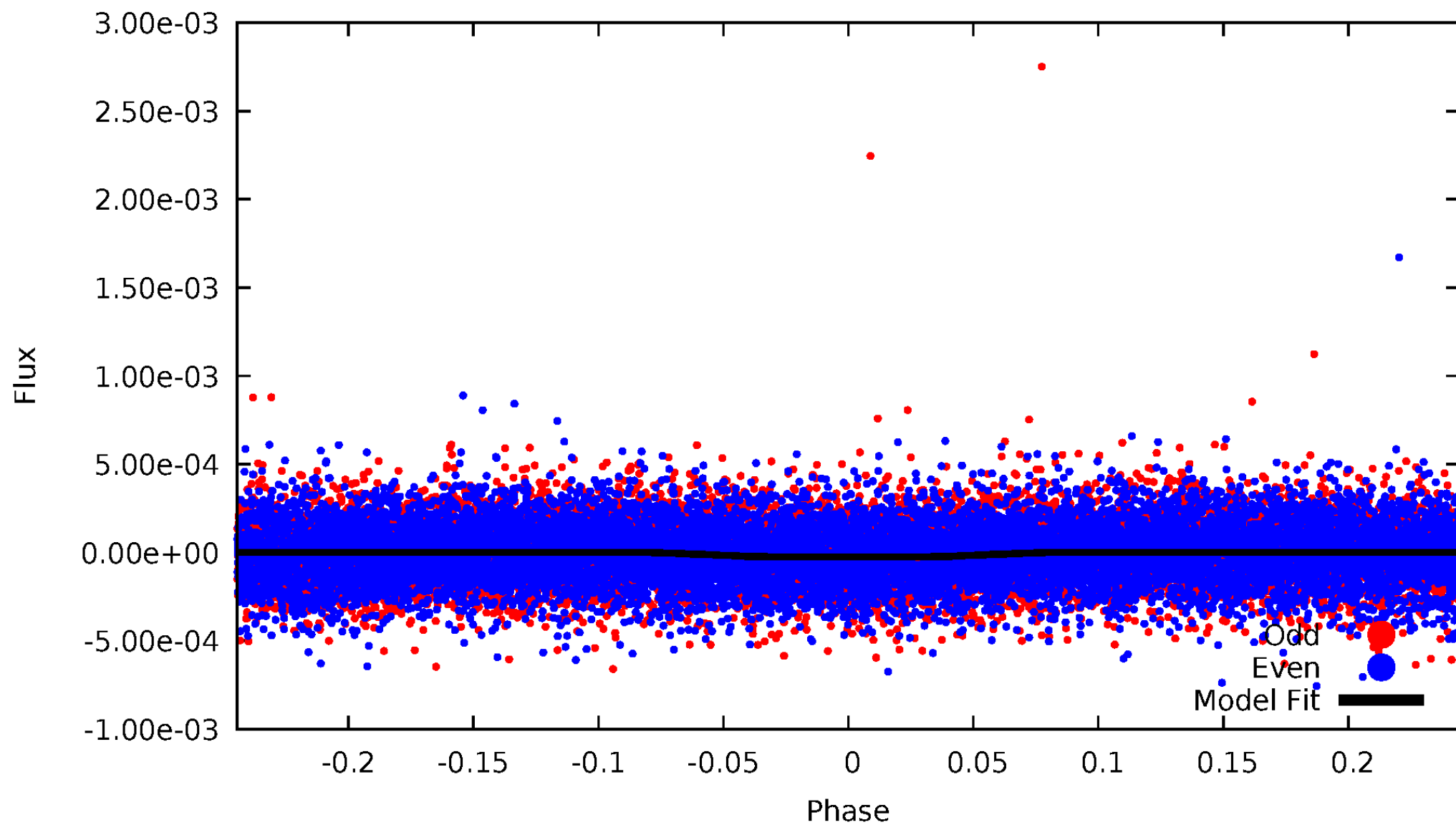


TCE 005253740-01



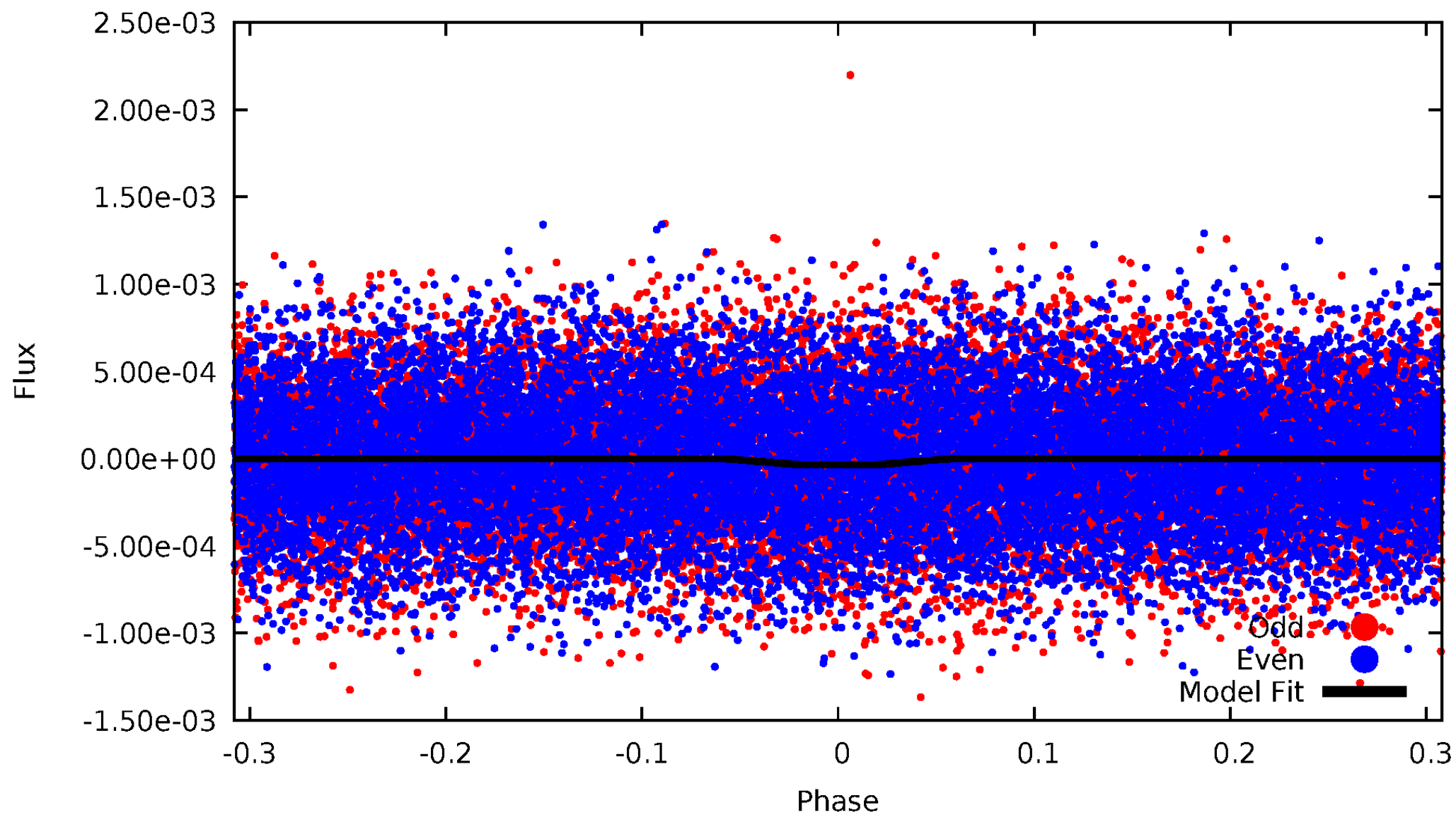
DV Odd/Even

TCE 005253740-01



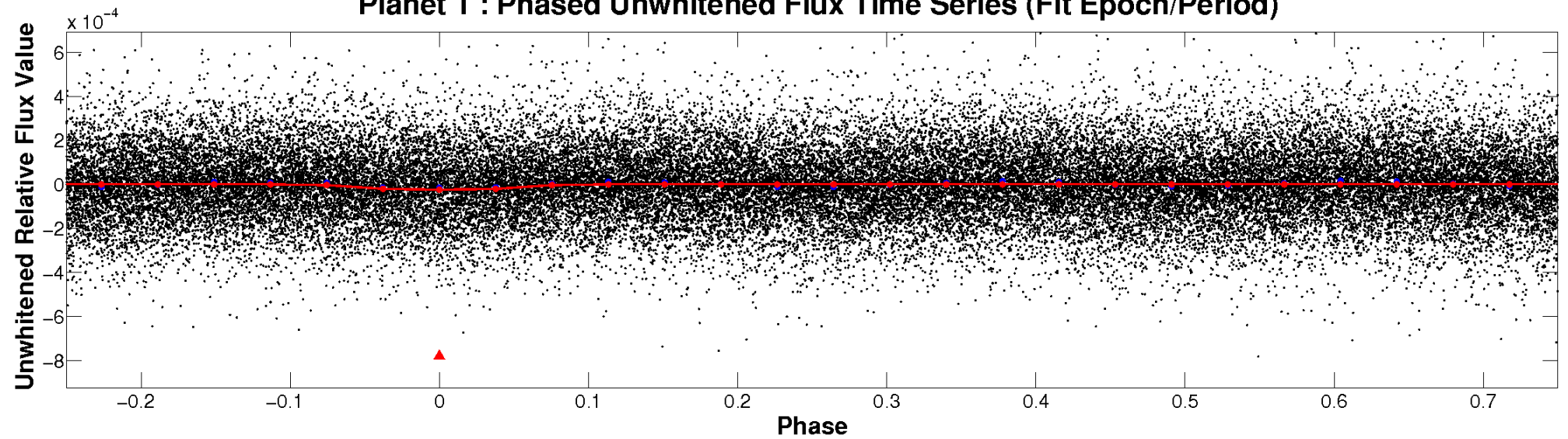
ALT Odd/Even

TCE 005253740-01

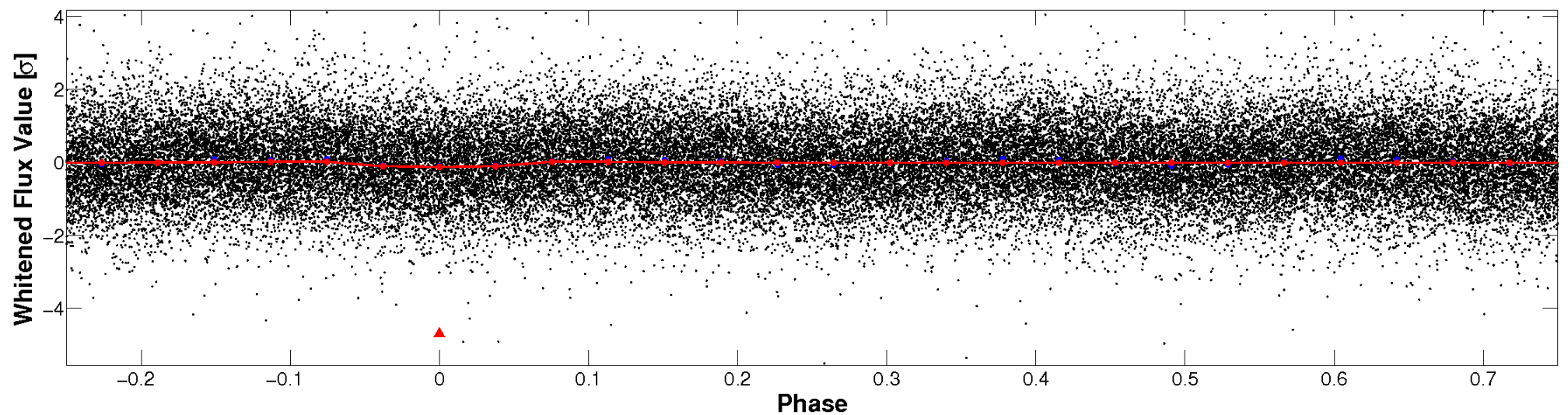


Non-Whitened Vs. Whitened Light Curve

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

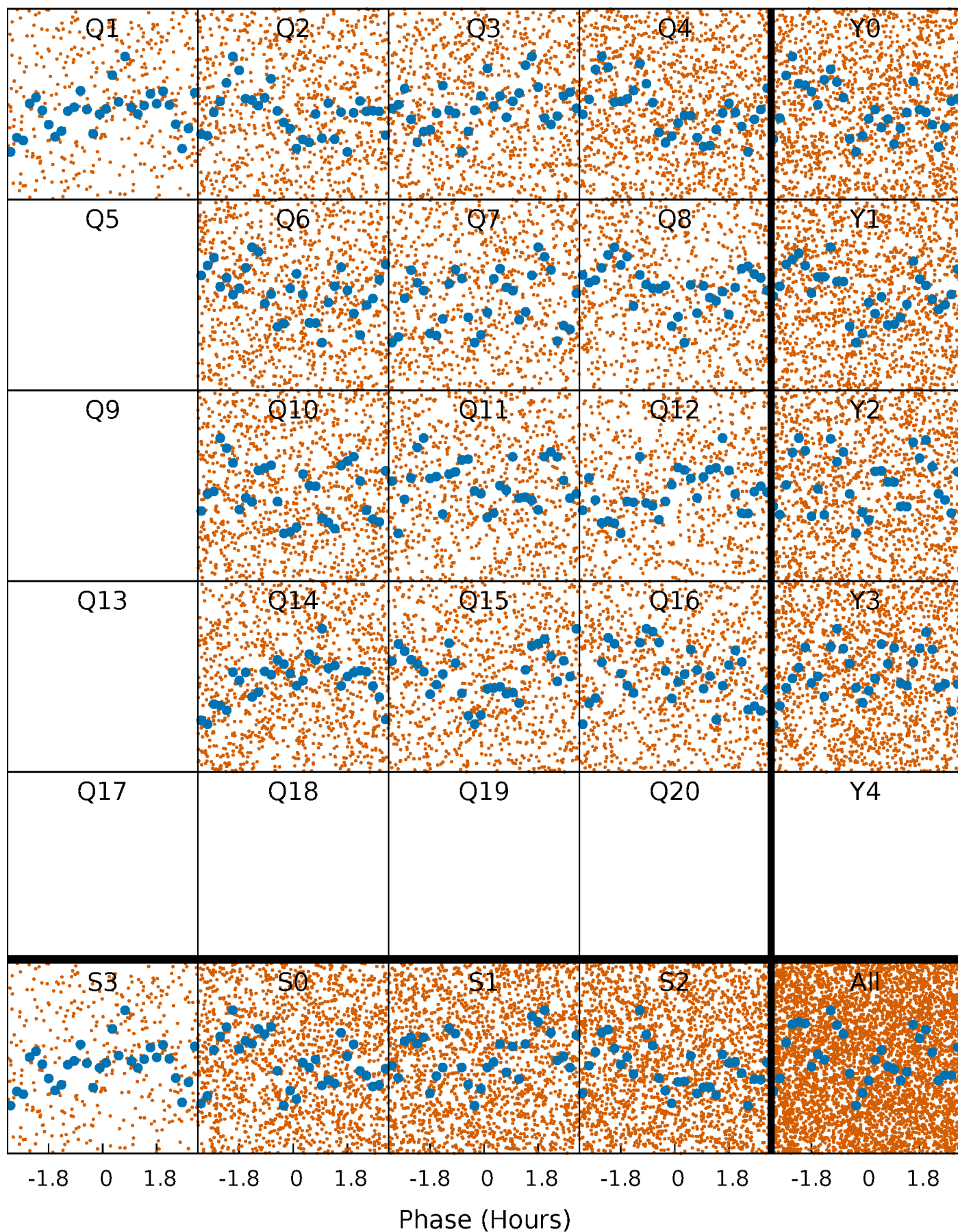


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



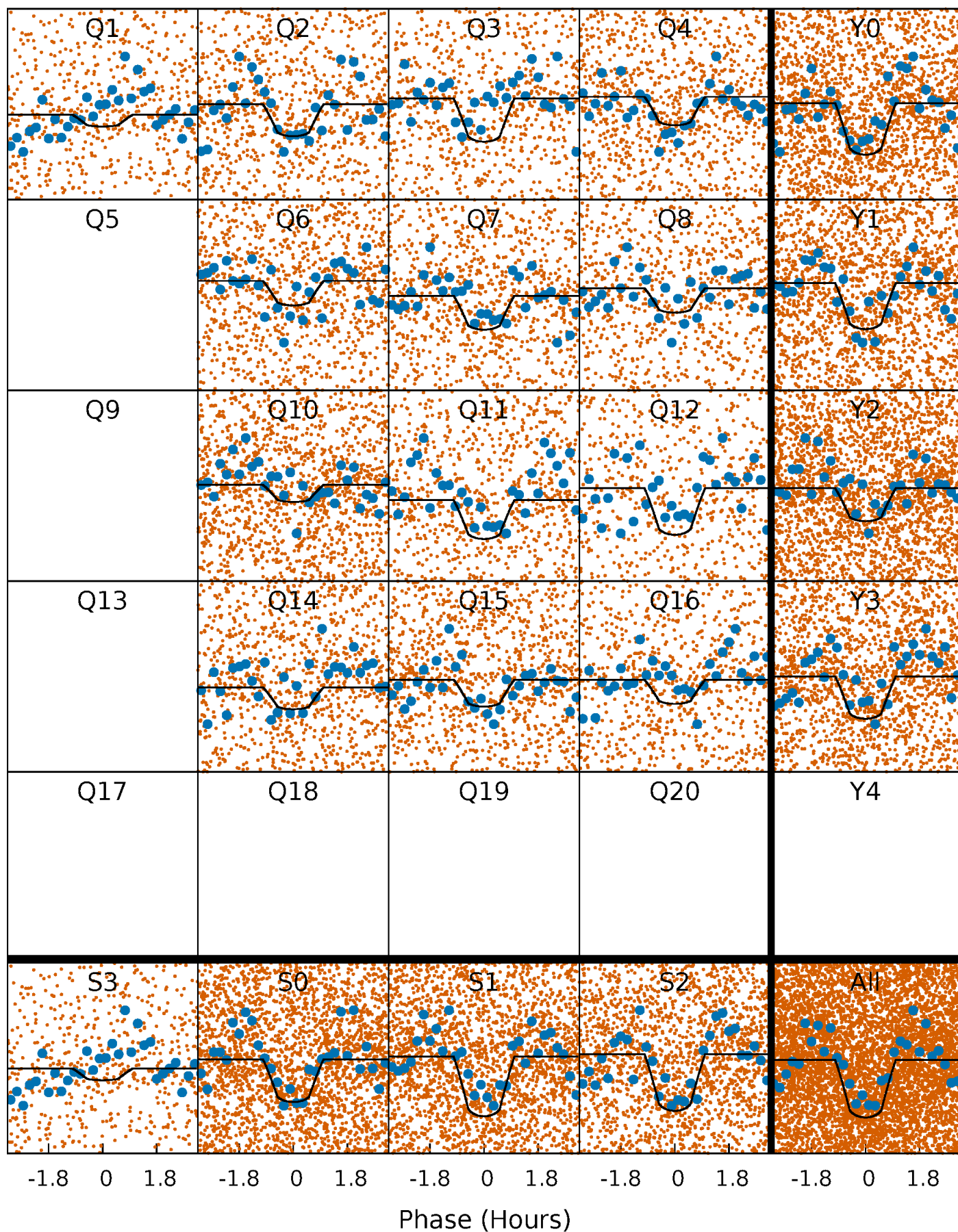
PDC Quarter-Phased Transit Curves

TCE 005253740-01 P= 0.541076 Days $T_0=131.581813$ (BKJD)



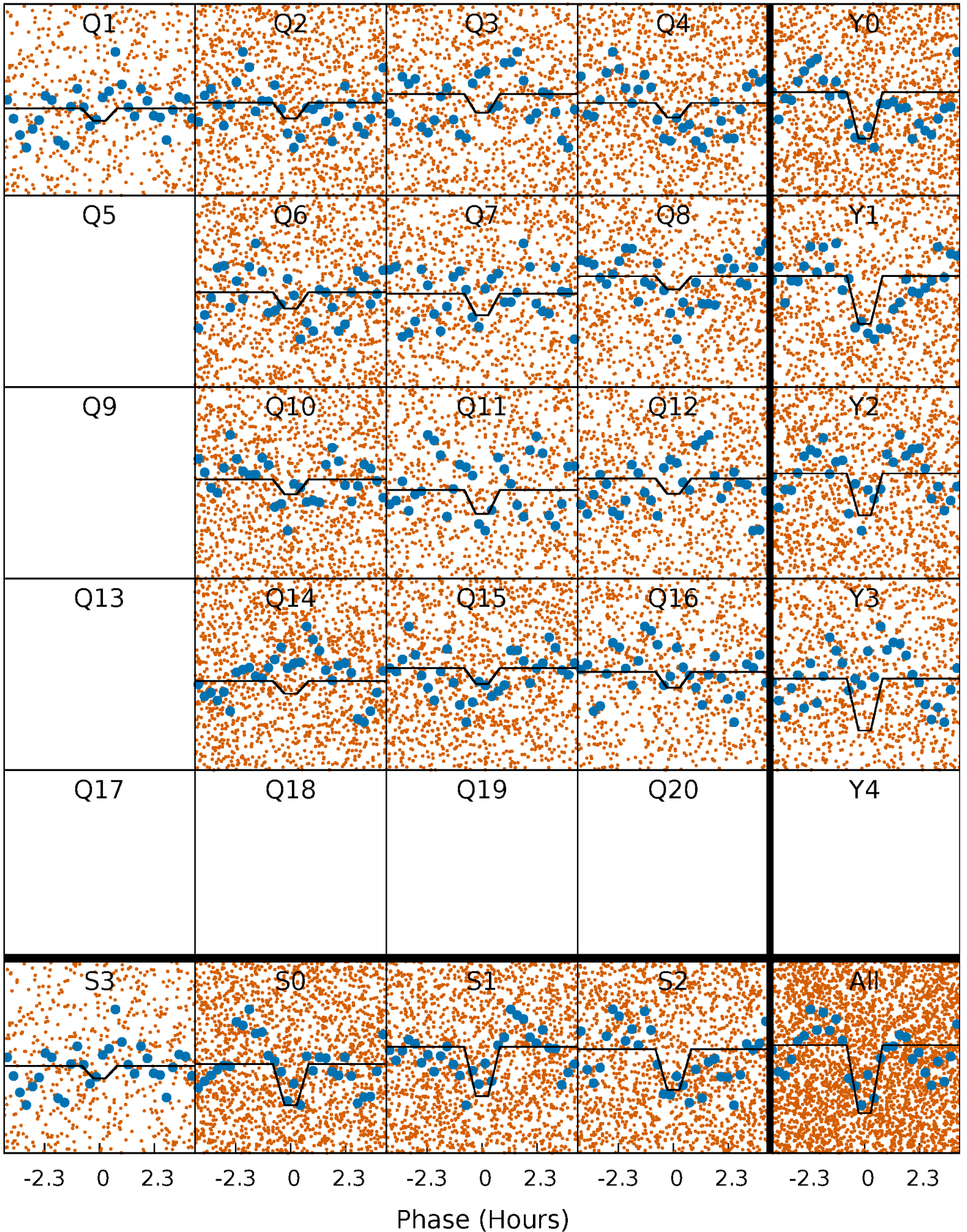
DV Quarter-Phased Transit Curves

TCE 005253740-01 P= 0.541076 Days $T_0=131.581813$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

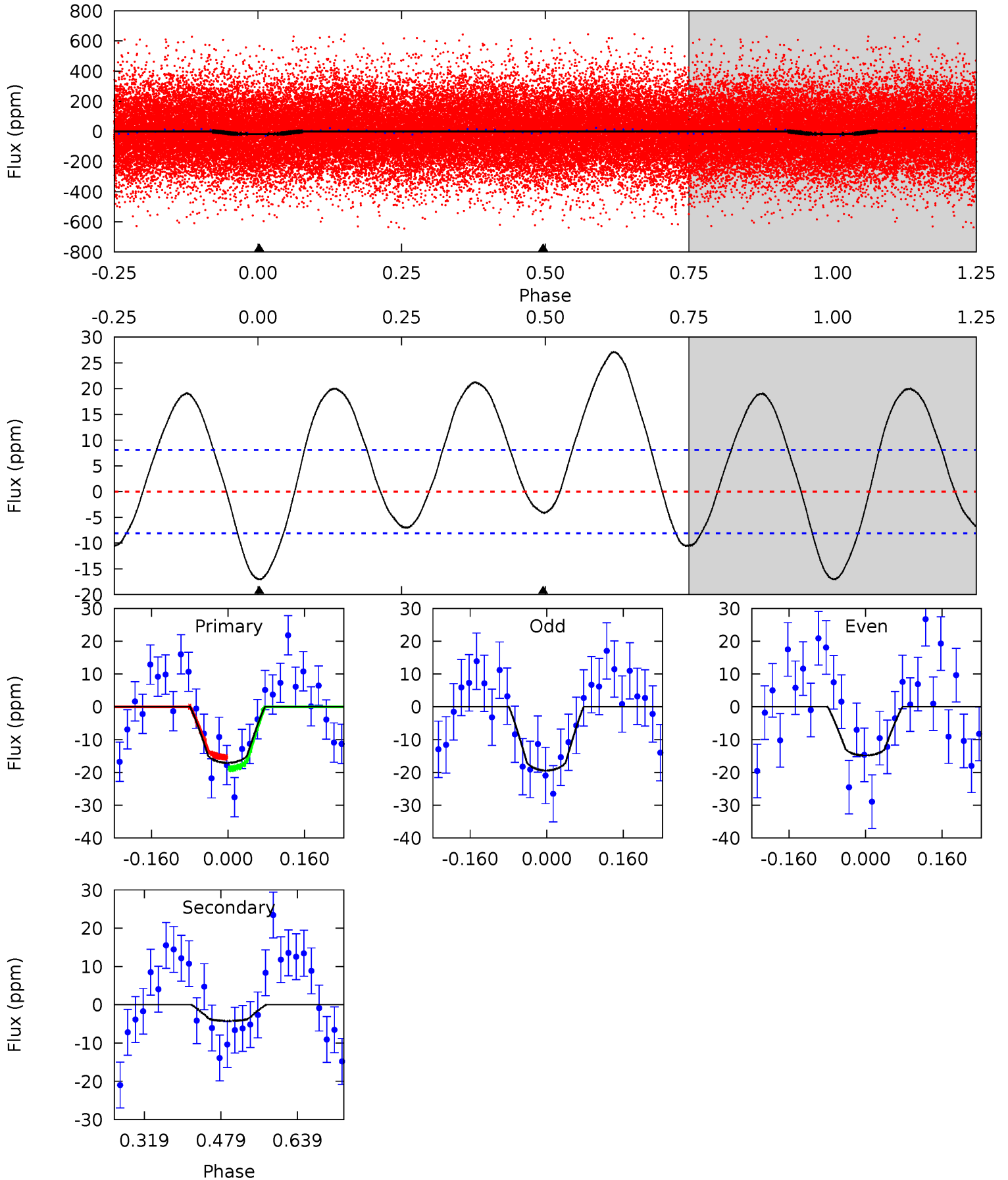
TCE 005253740-01 P= 0.541080 Days $T_0=131.581484$ (BKJD)



DV Model-Shift Uniqueness Test

005253740-01, P = 0.541076 Days, E = 131.040737 Days

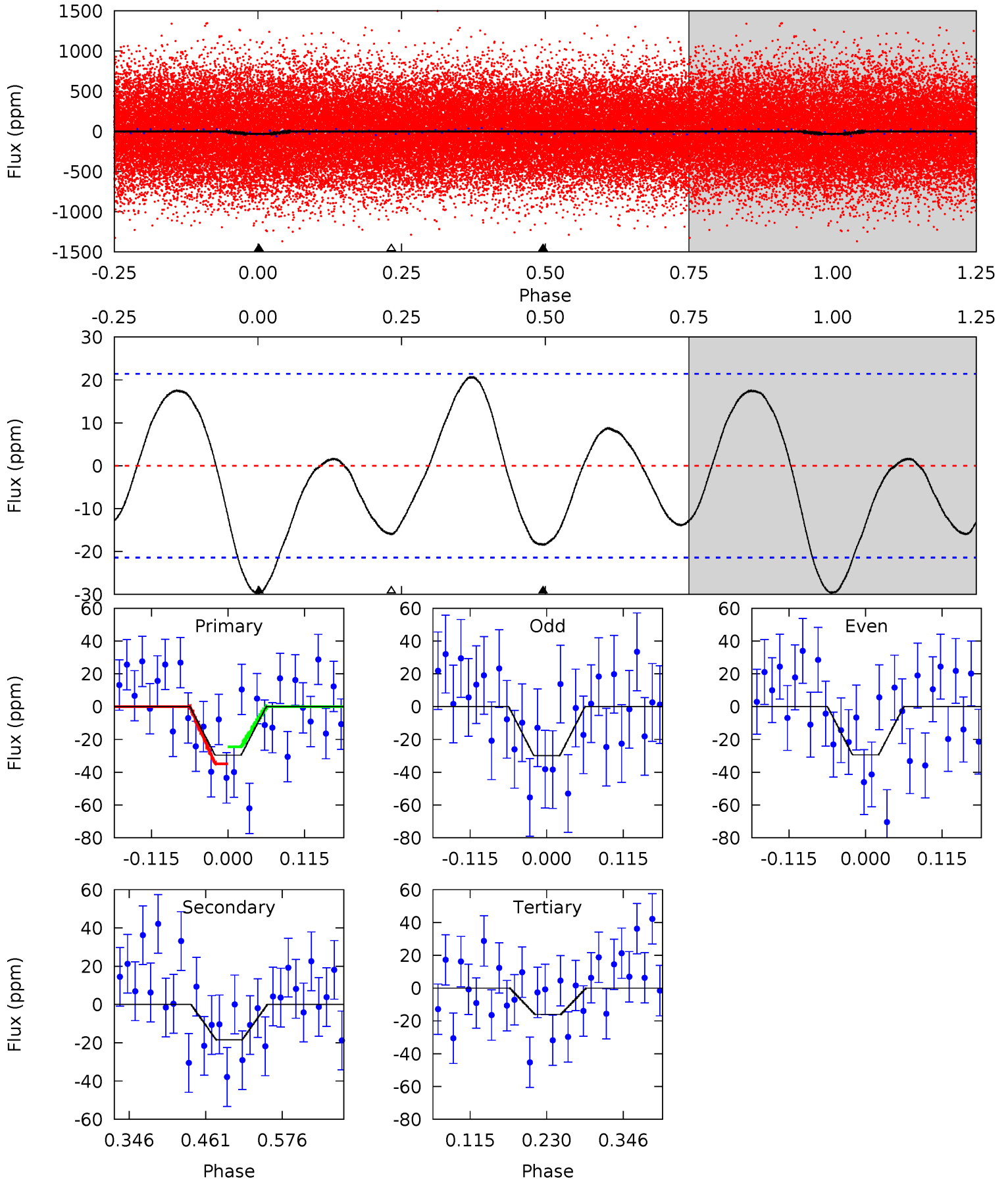
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.40	2.32	0	0	4.47	1.41	4.41	9.40	9.40	2.32	2.32	1.26	1.05	0.61	0.98



Alt Model-Shift Uniqueness Test

005253740-01, P = 0.541080 Days, E = 131.040404 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.28	3.91	3.38	0	4.54	1.58	2.35	2.89	6.28	0.53	3.91	0.04	0.94	0.41	1.09



Stellar Parameters For KIC 005253740

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7221^{+226}_{-302}	$3.488^{+0.630}_{-0.070}$	$-0.180^{+0.250}_{-0.300}$	$4.240^{+0.284}_{-2.557}$	$2.018^{+0.069}_{-0.651}$	$0.037^{+0.339}_{-0.008}$
	+3%/-4%	+18%/-2%	+139%/-167%	+7%/-60%	+3%/-32%	+909%/-22%
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 005253740-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-4 ± 2	$2.12^{+0.85}_{-0.75}$	6932^{+470}_{-1079}	-4884^{+8108}_{-663}	$0.125^{+0.199}_{-0.071}$
Alt.	-18 ± 5	$2.35^{+0.85}_{-0.88}$	6847^{+548}_{-1032}	4858^{+1540}_{-8773}	$0.475^{+0.660}_{-0.221}$

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 $A_{obs} \gg 1.0$

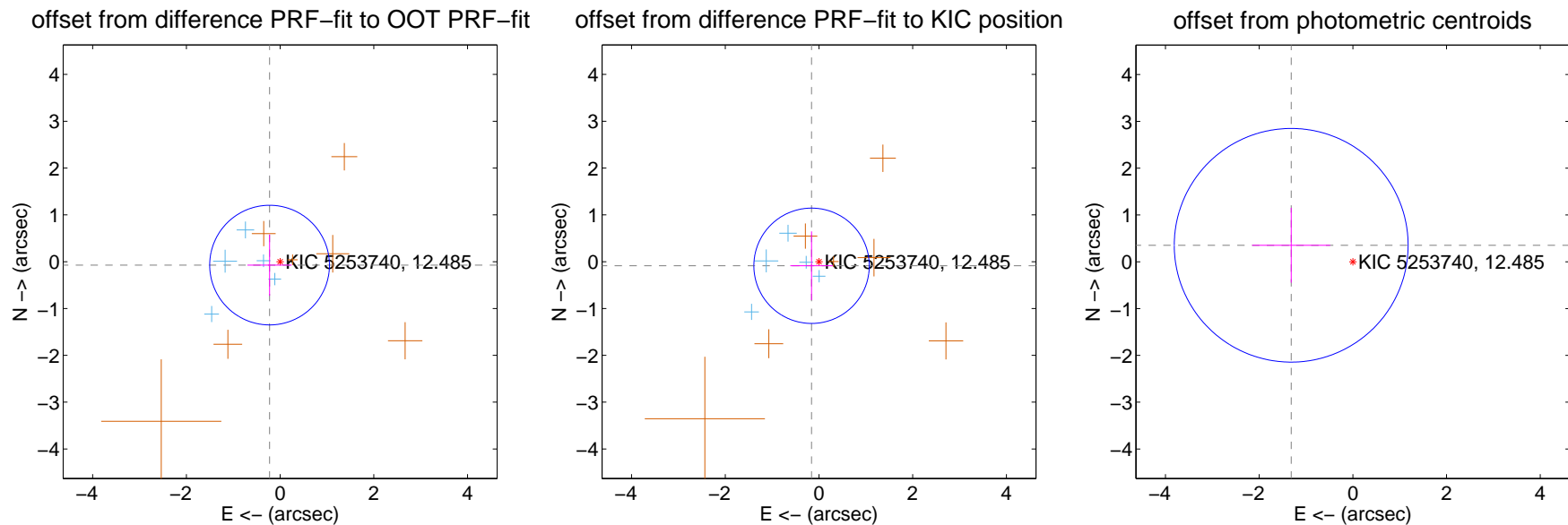
DV Centroid Data

Supplemental centroid analysis for 005253740-01. Kepler magnitude: 12.48. Transit SNR 8.52

There are 5 quarters with good PRF difference image offsets

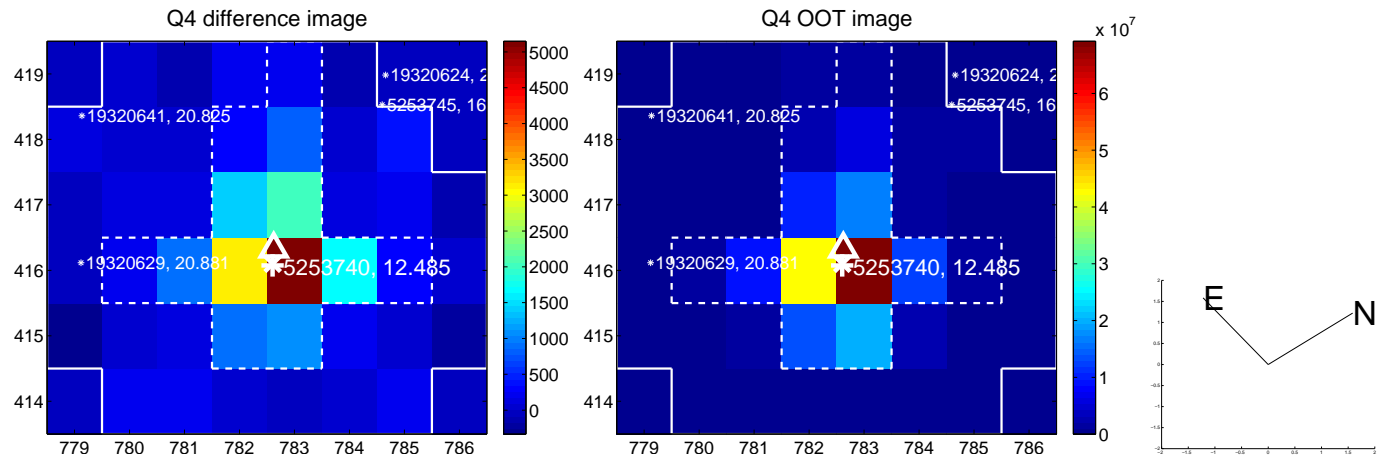
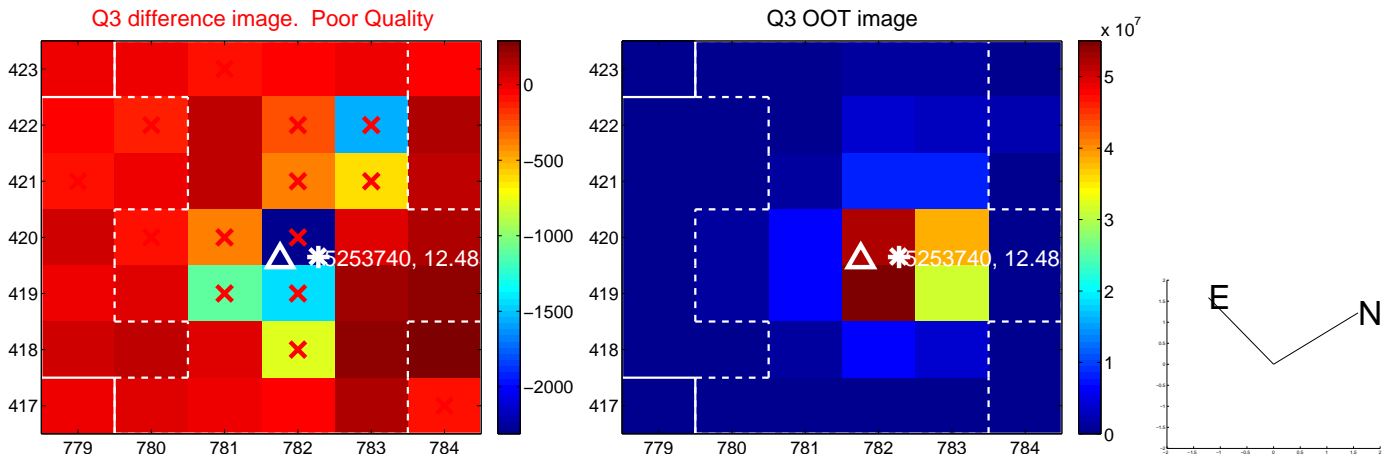
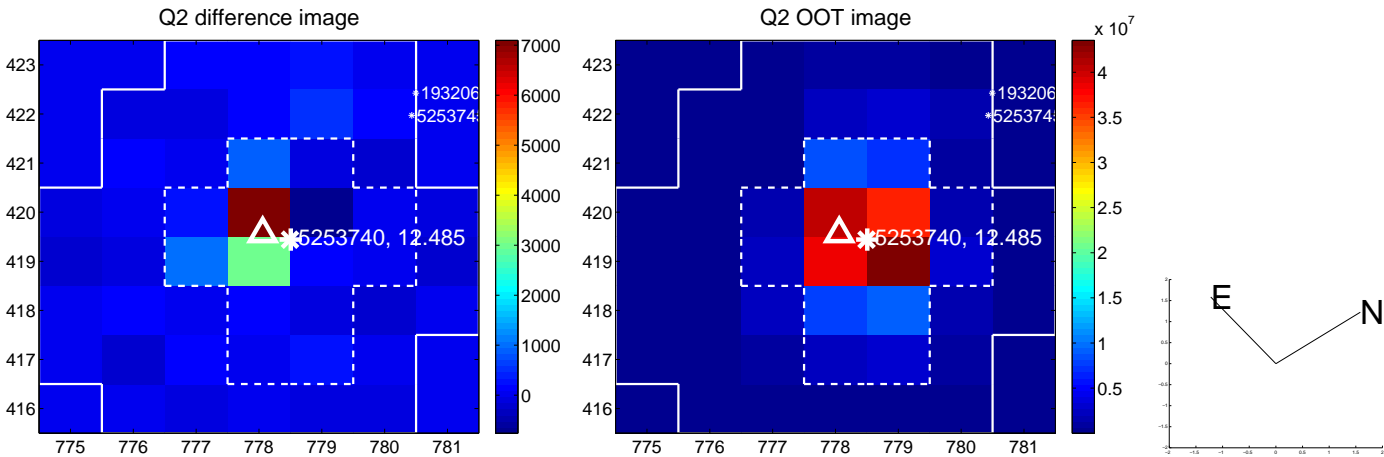
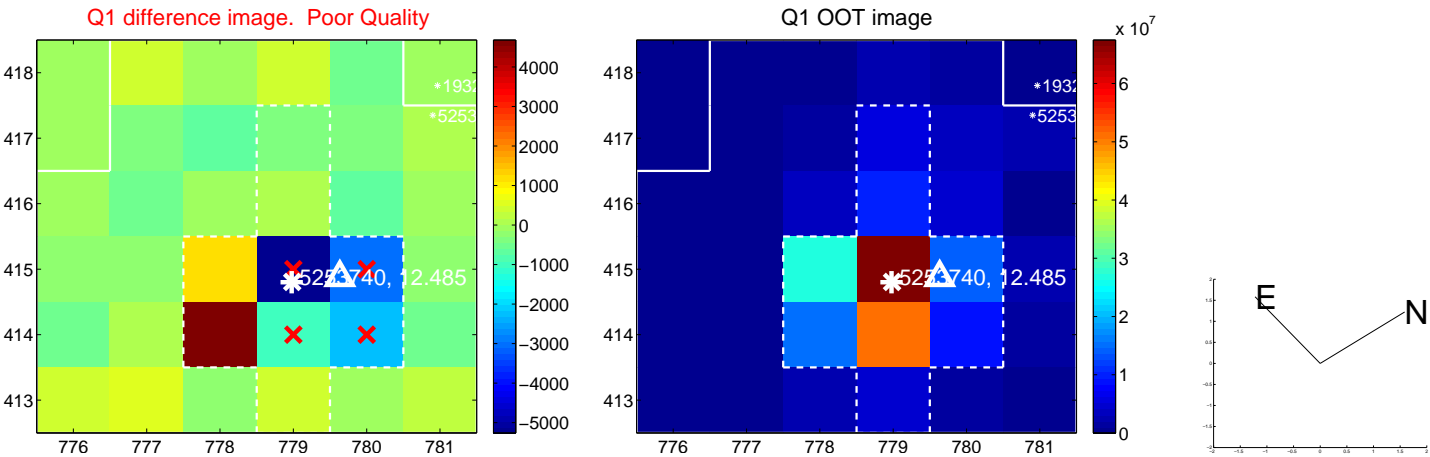
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.236 ± 0.426	0.55	0.225 ± 0.472	-0.073 ± 0.653
PRF-fit source offset from KIC position	0.181 ± 0.411	0.44	0.158 ± 0.455	-0.087 ± 0.734
photometric centroid source offset	1.36 ± 0.83	1.64	1.32 ± 0.83	0.35 ± 0.80

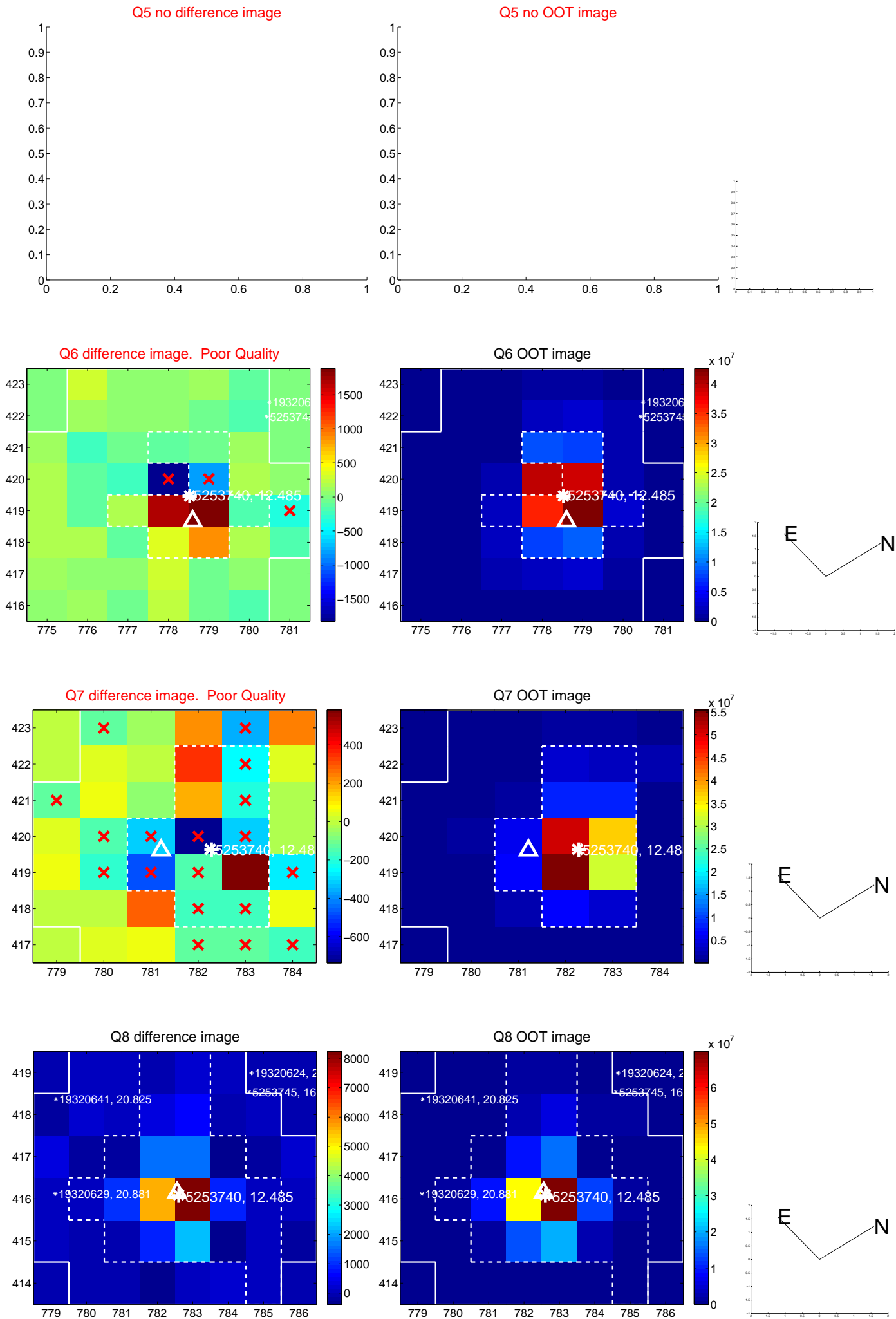


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

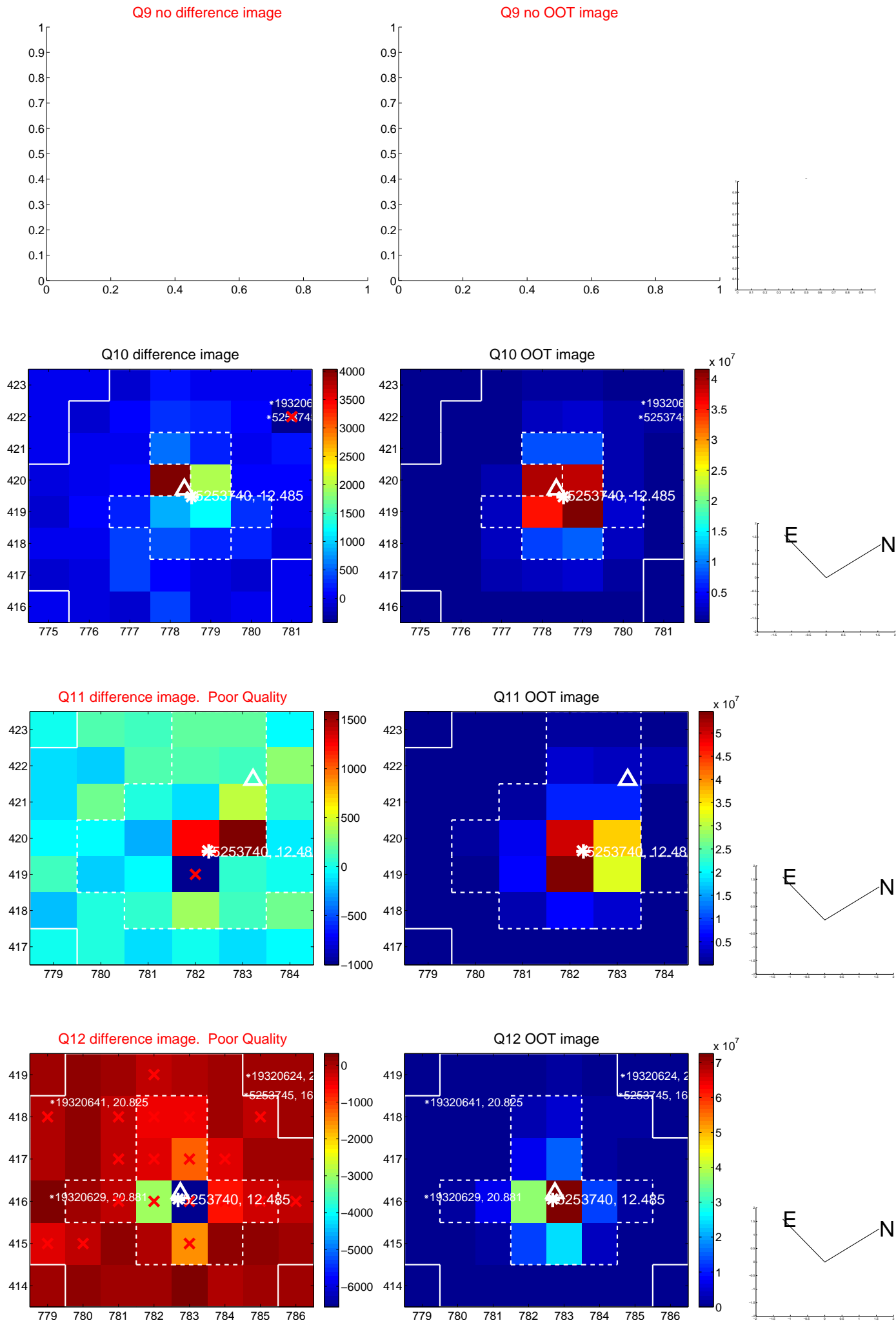
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



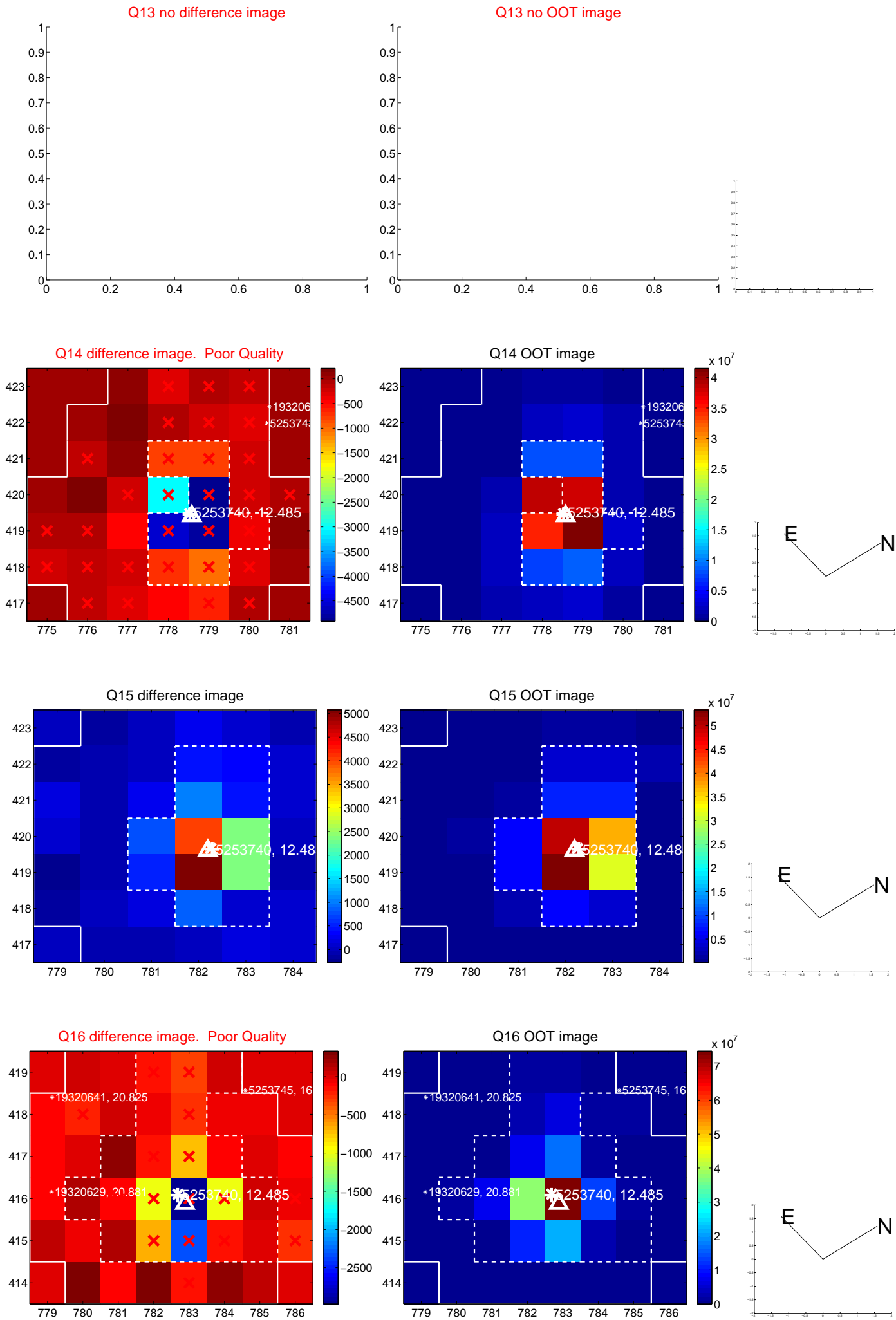
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



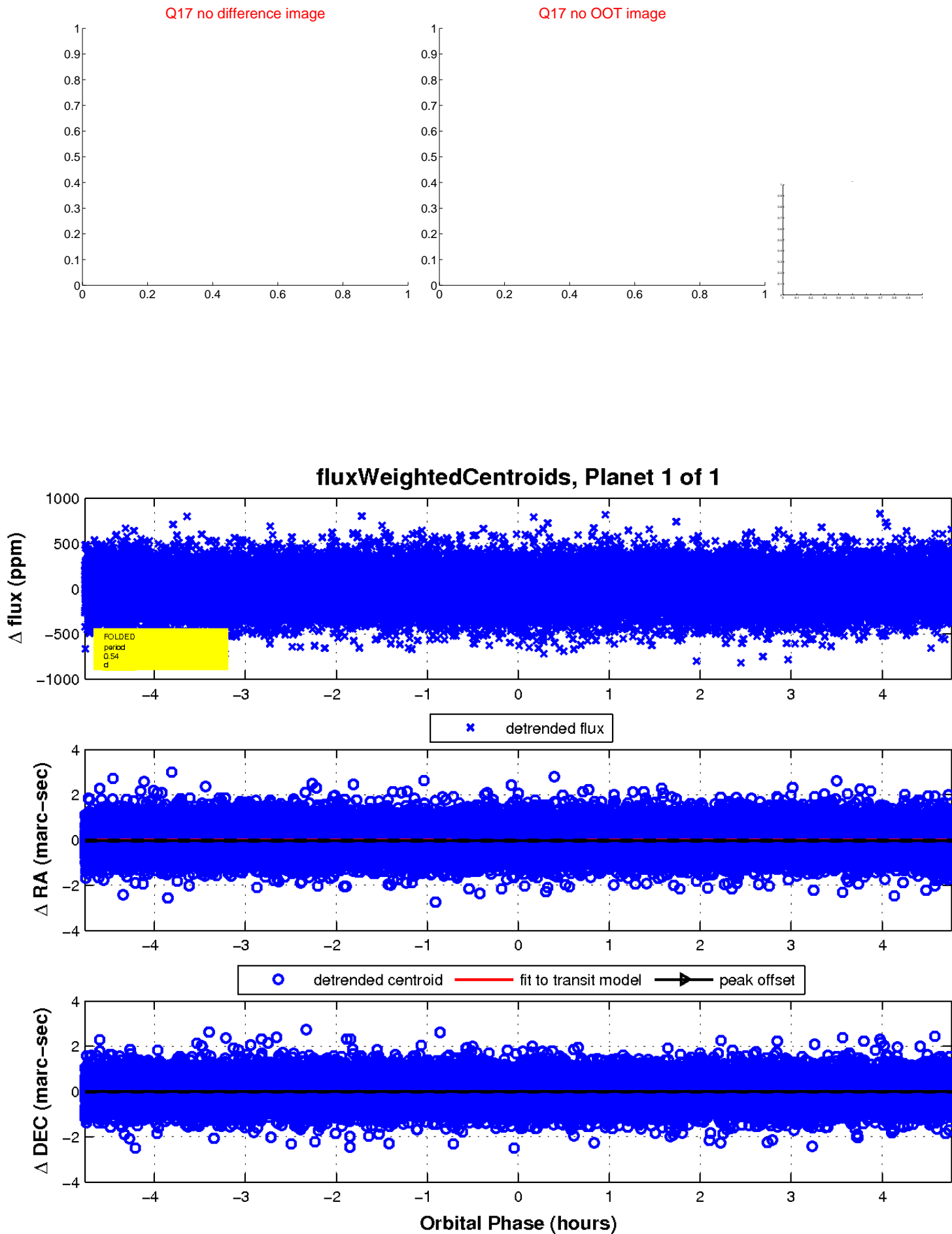
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

