

KIC 006521110

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})
006521110-01	OBS	No	0.732784	131.993657	16.8	1.854	8.0	8.4	0.86	5804	0.41	3051.34

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006521110-01	OBS	FP	0.00	1	0	1	0	LPP_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET—HALO_GHOST

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

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

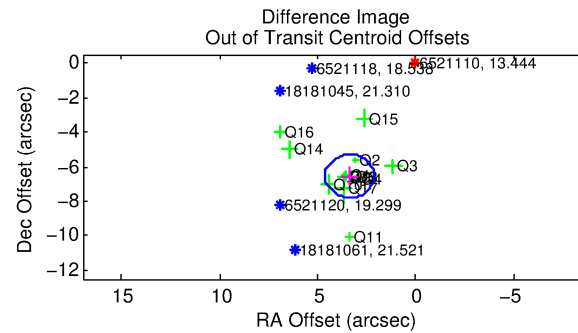
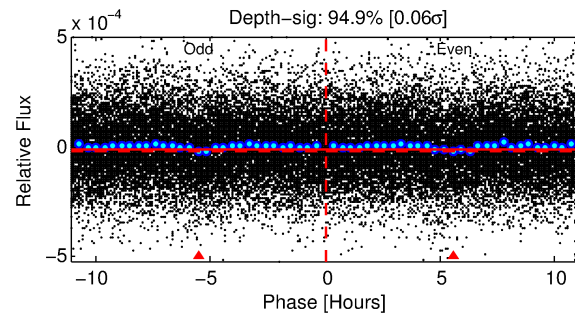
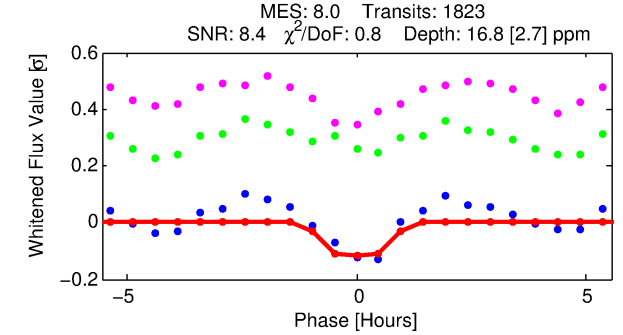
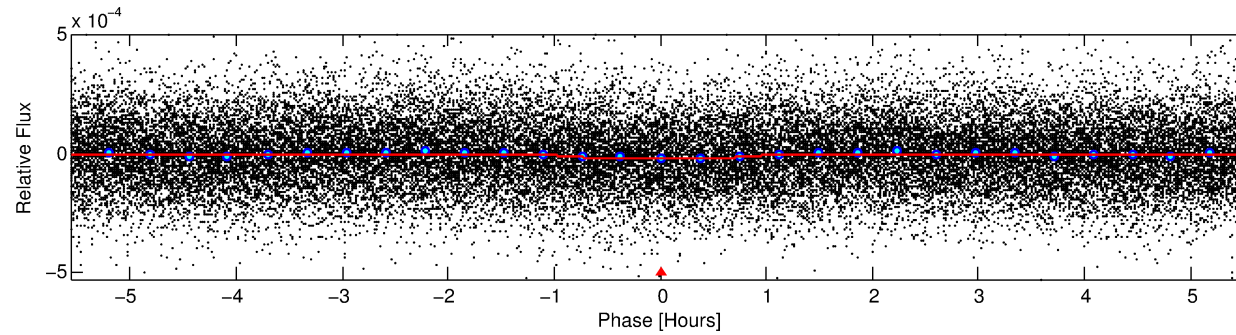
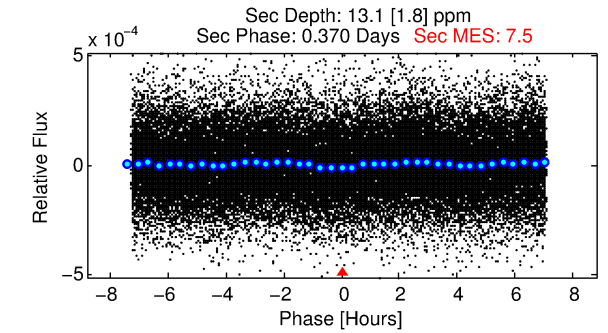
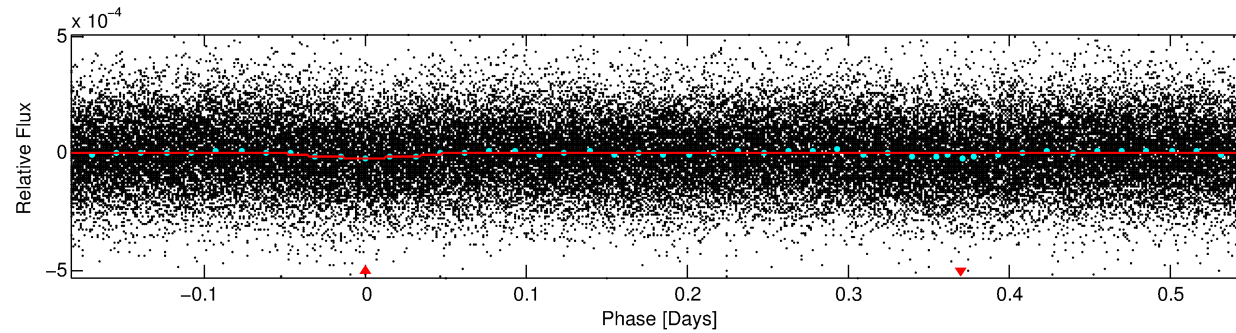
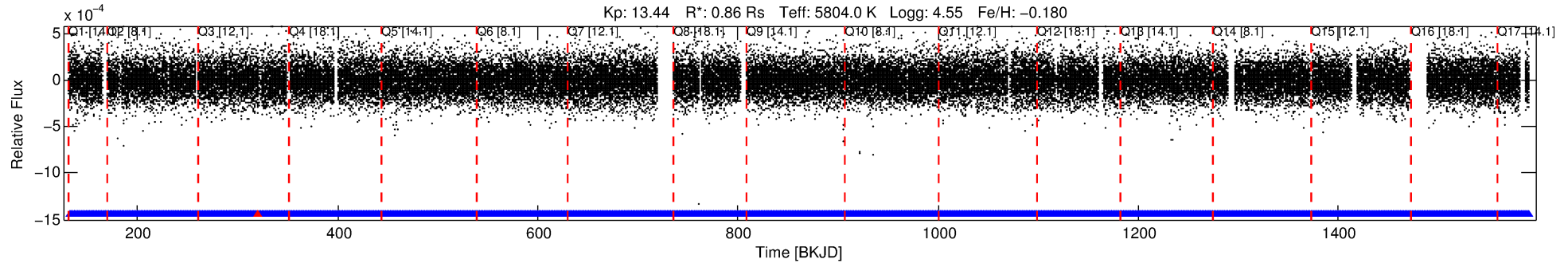
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006521110-01

No Significant Match Found

DV One-Page Summary

KIC: 6521110 Candidate: 1 of 1 Period: 0.733 d



DV Fit Results:

Period = 0.73278 [0.00001] d
Epoch = 131.9937 [0.0032] BKJD
 R_p/R^* = 0.0044 [0.0013]
 a/R^* = 1.70 [1.57]
 b = 0.89 [0.35]
 S_{eff} = 3051.34 [1115.78]
 T_{eq} = 1895 [173] K
 R_p = 0.41 [0.16] R_e
 a = 0.0156 [0.0036] AU
 A_g = 10.39 [7.27] [1.29σ]
Teff = 5260 [811] K [4.06σ]

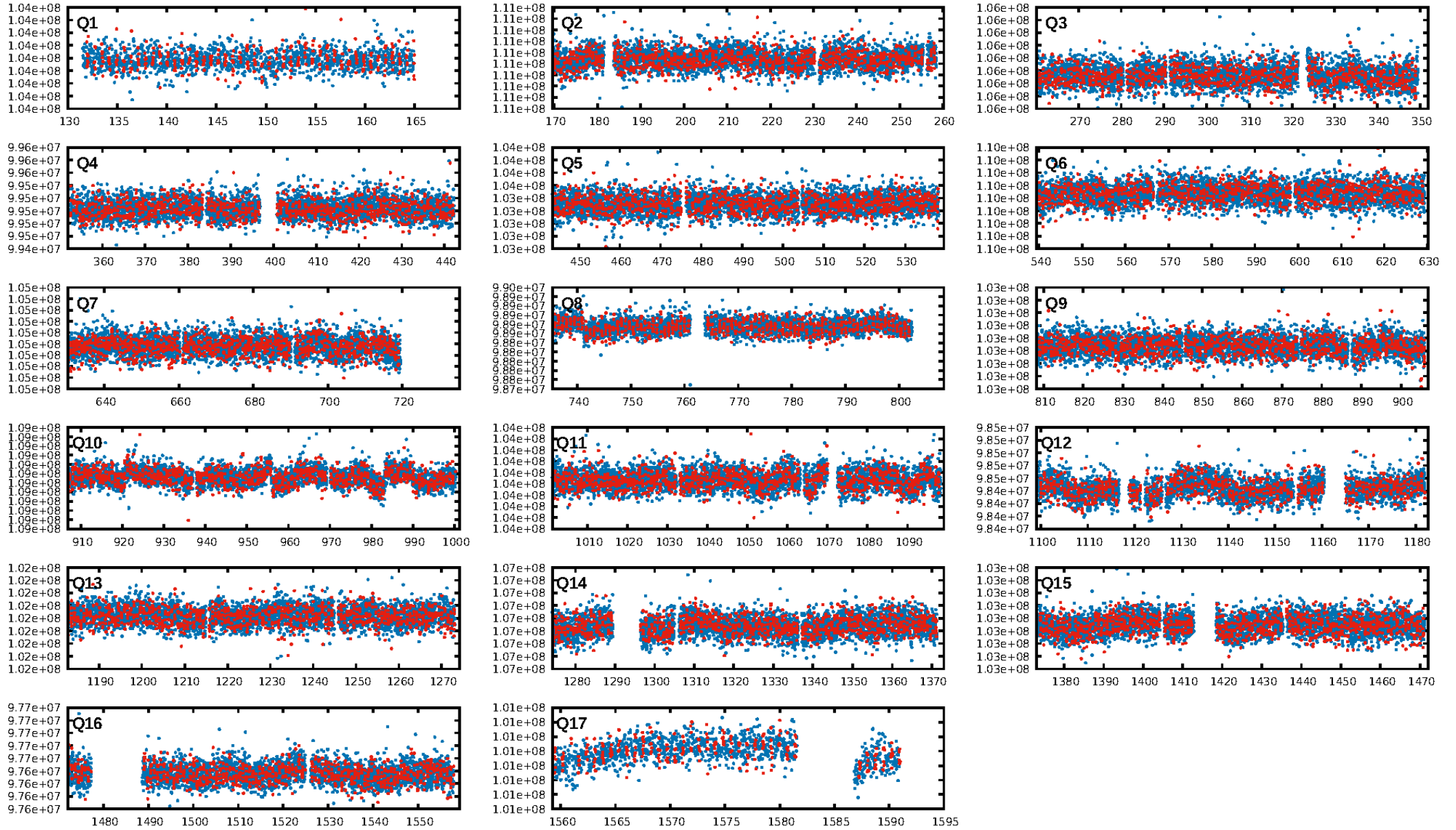
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.38e-16
RollingBand-fgt: 1.00 [1739/1740]
GhostDiagnostic-chr: -0.205
Centroid-sig: 0.0%
Centroid-so: 5.191 arcsec [3.80σ]
OotOffset-rm: 7.367 arcsec [17.70σ]
KicOffset-rm: 7.323 arcsec [18.98σ]
OotOffset-st: 4/3/2/4 [13]
KicOffset-st: 4/3/2/4 [13]
DiffImageQuality-fgm: 0.15 [2/13]
DiffImageOverlap-fno: 1.00 [17/17]

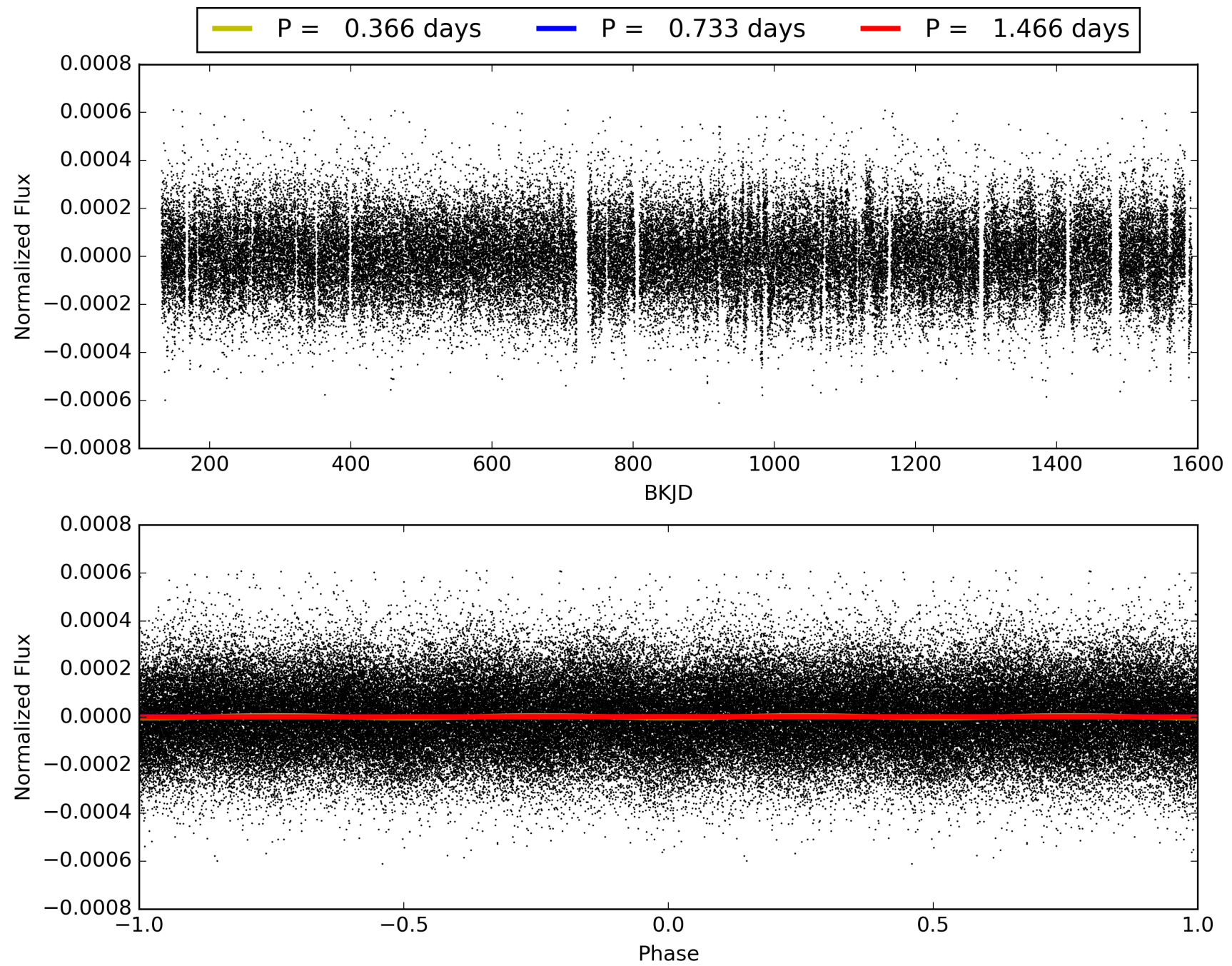
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 09:31:27 Z

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

TCE 006521110-01, PDC Light Curves

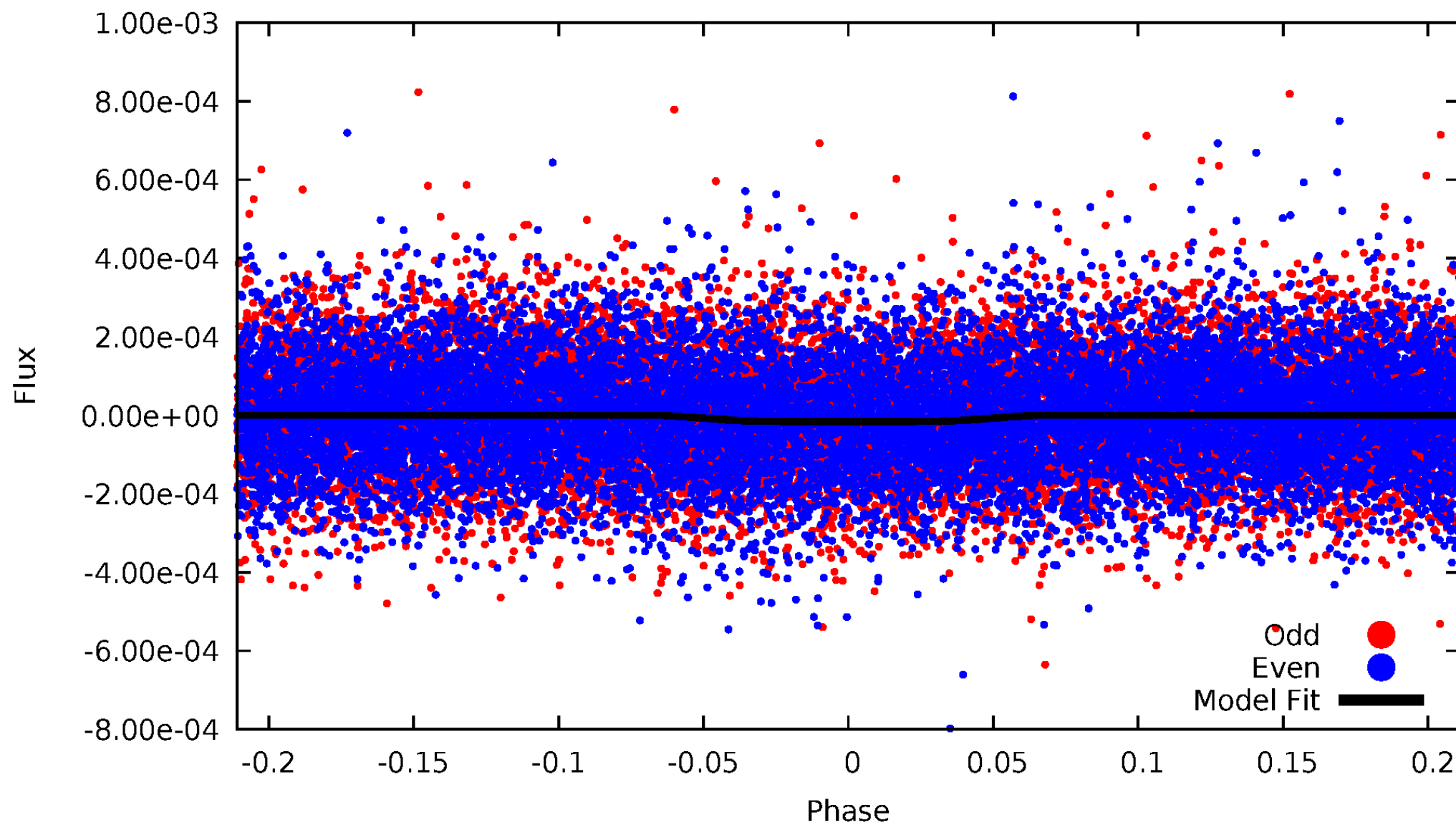


TCE 006521110-01



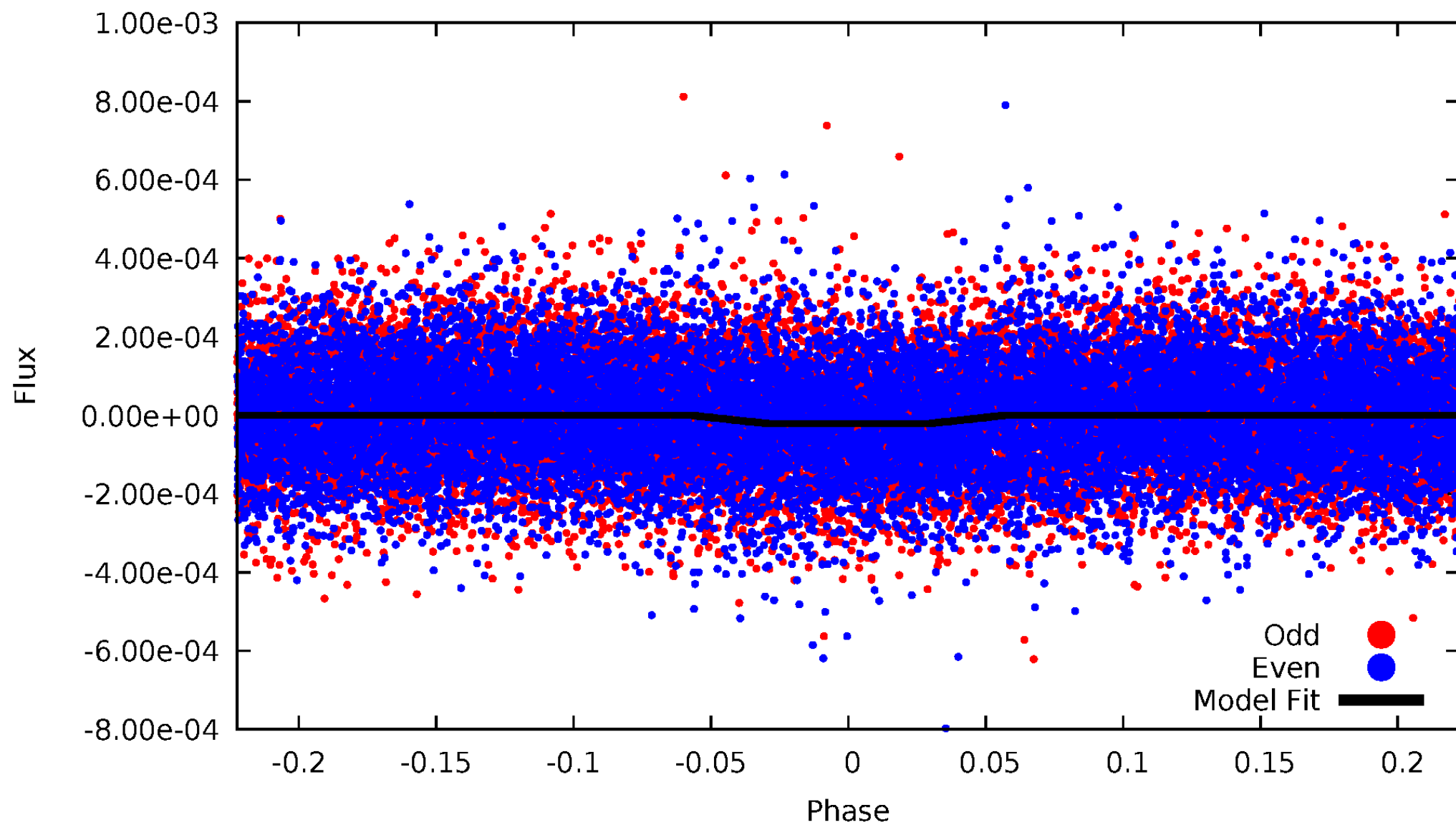
DV Odd/Even

TCE 006521110-01

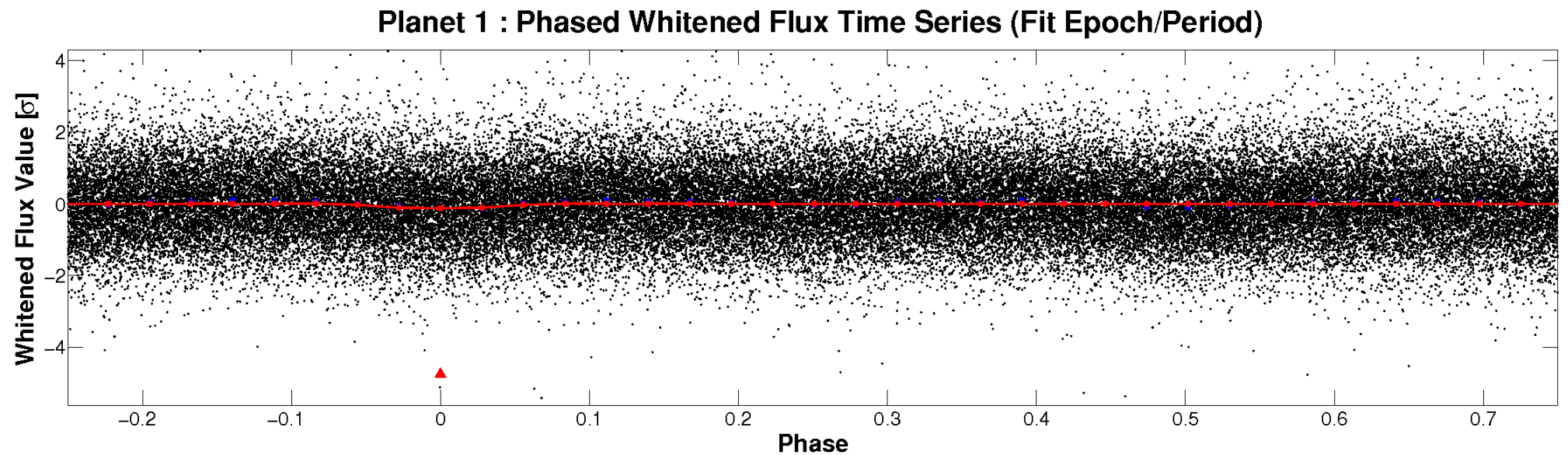
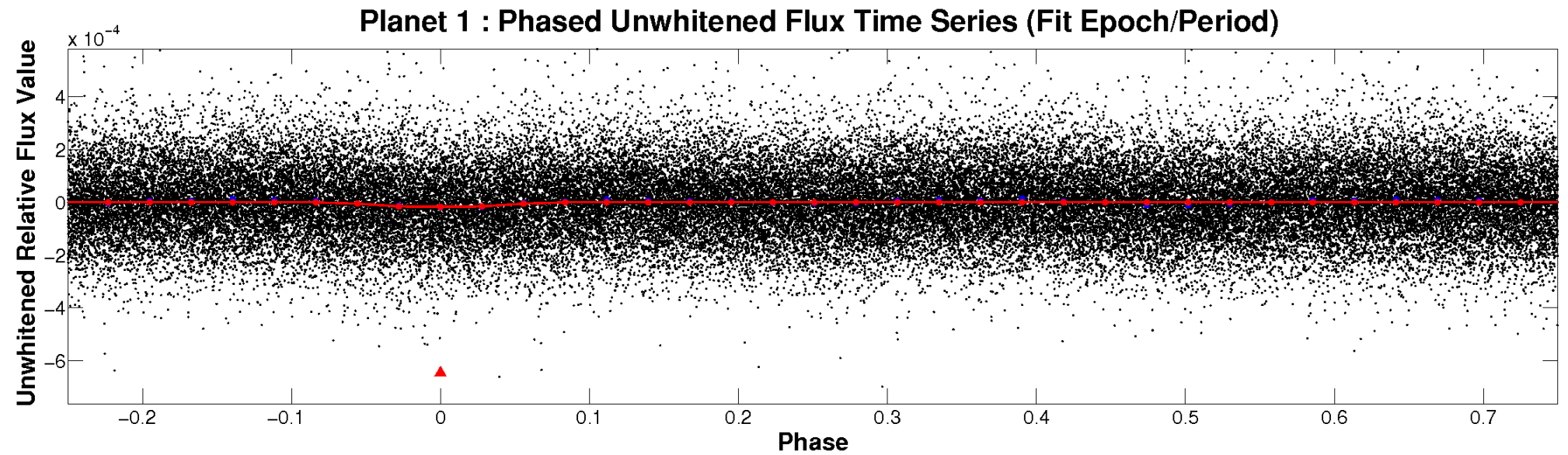


ALT Odd/Even

TCE 006521110-01

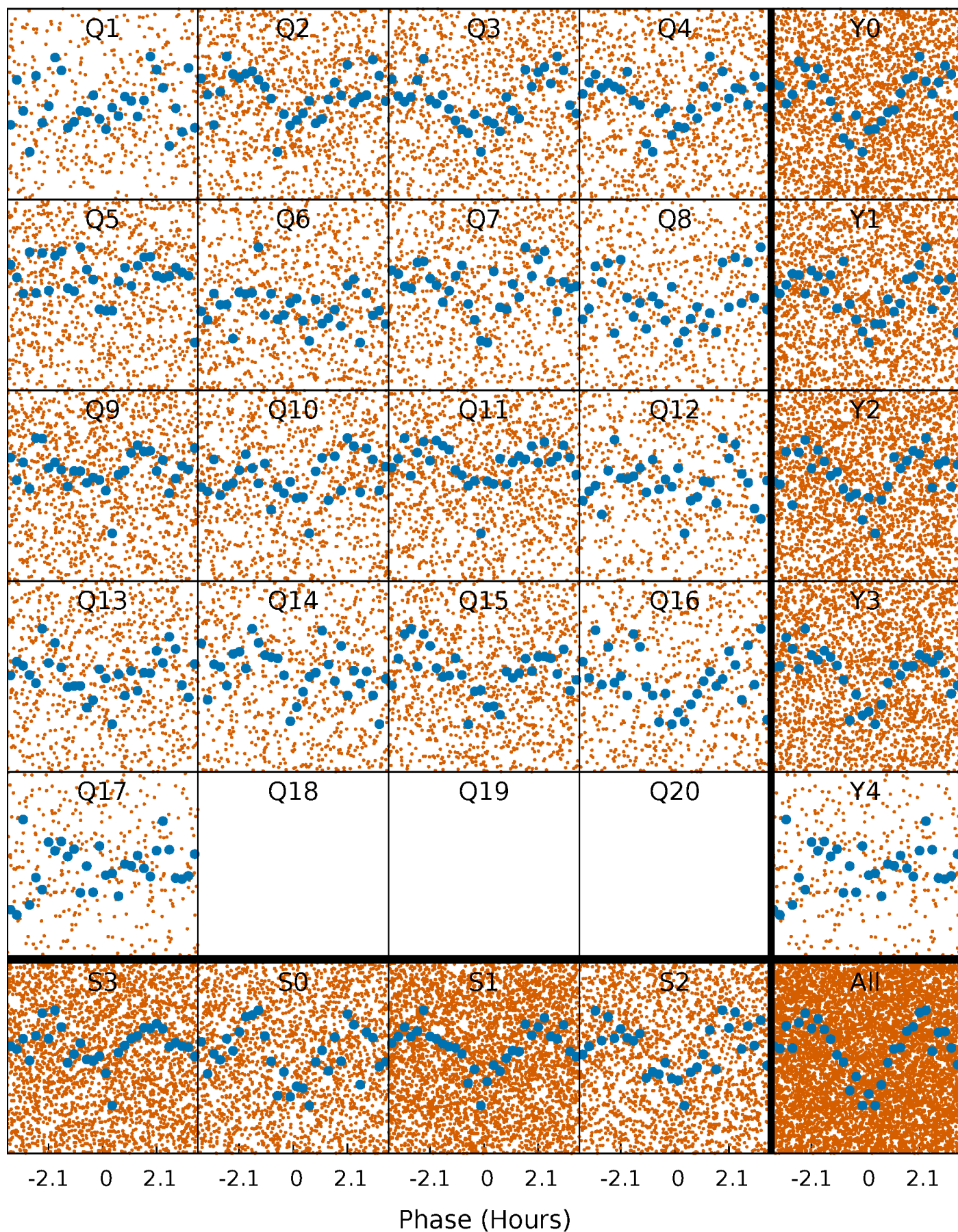


Non-Whitened Vs. Whitened Light Curve



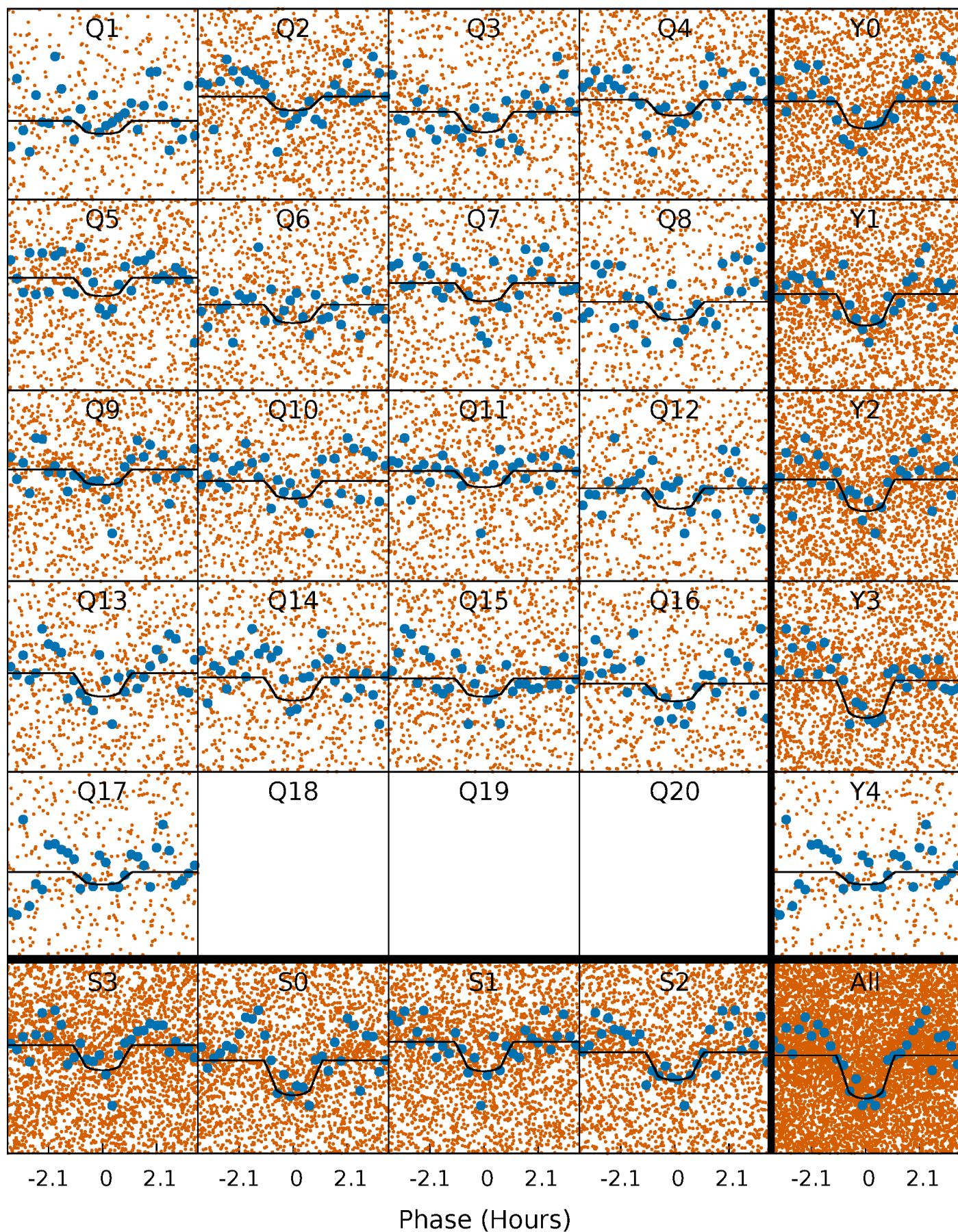
PDC Quarter-Phased Transit Curves

TCE 006521110-01 P= 0.732783 Days $T_0=131.993657$ (BKJD)



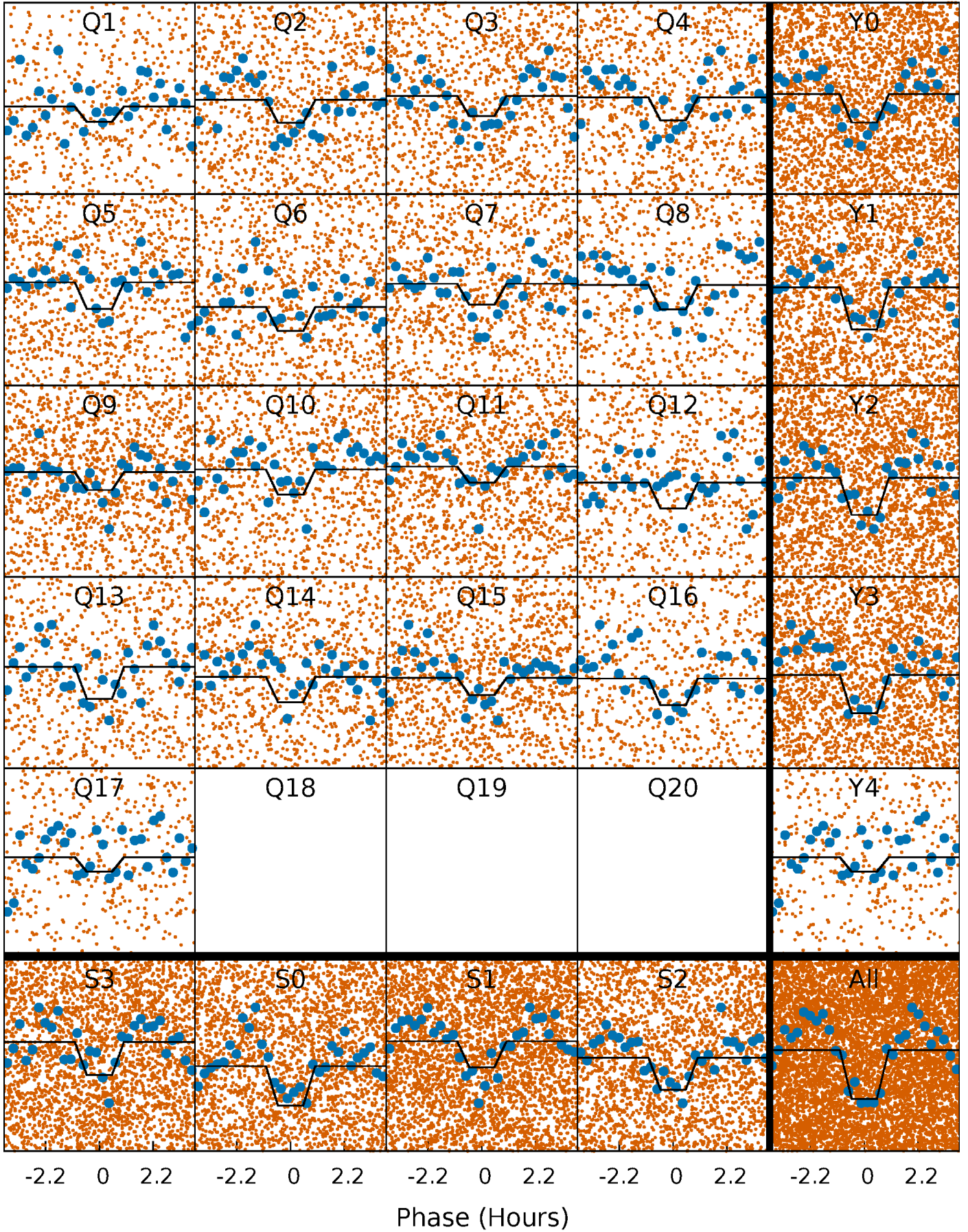
DV Quarter-Phased Transit Curves

TCE 006521110-01 P= 0.732783 Days $T_0=131.993657$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

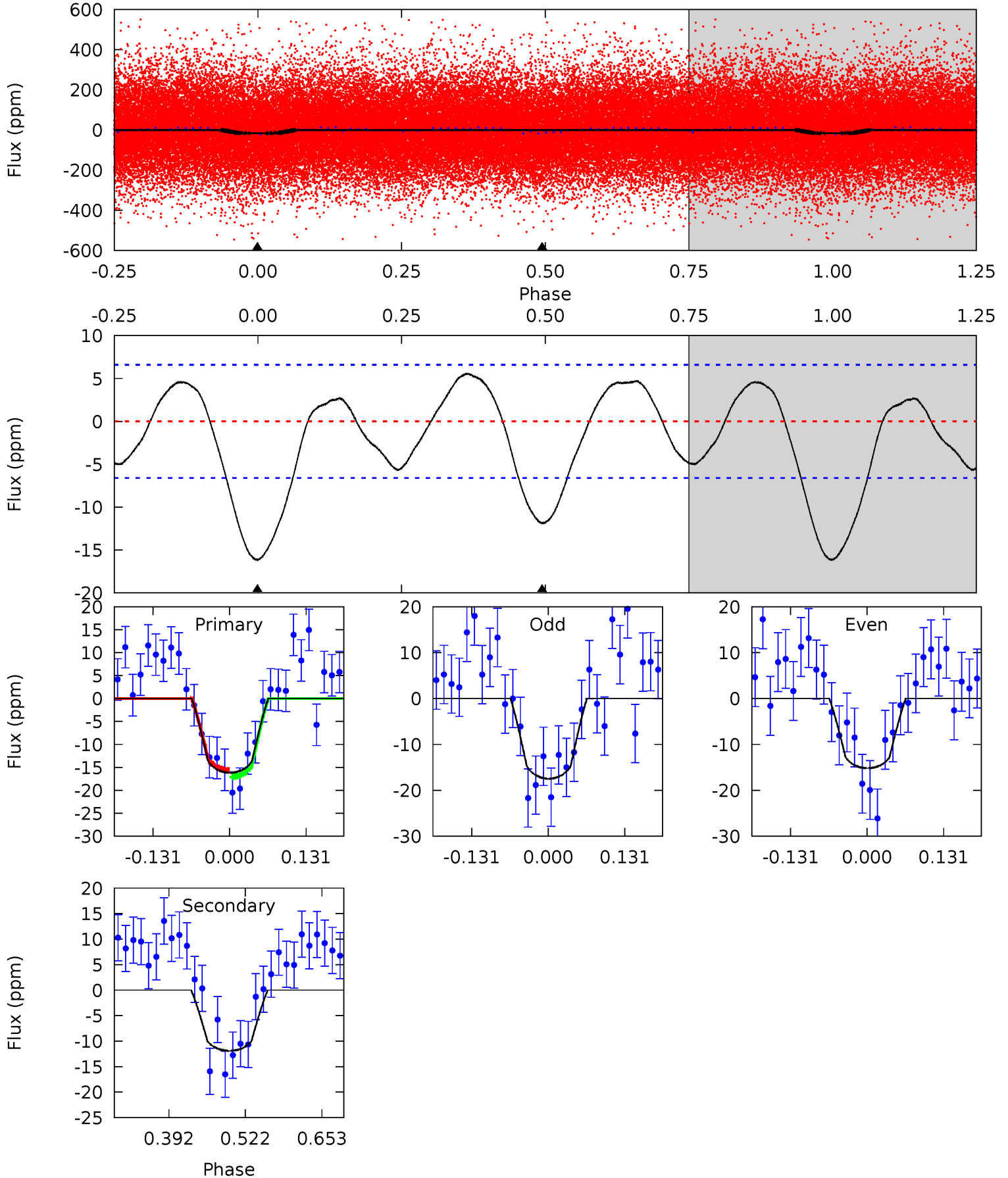
TCE 006521110-01 P= 0.732785 Days $T_0=131.992031$ (BKJD)



DV Model-Shift Uniqueness Test

006521110-01, P = 0.732783 Days, E = 131.260874 Days

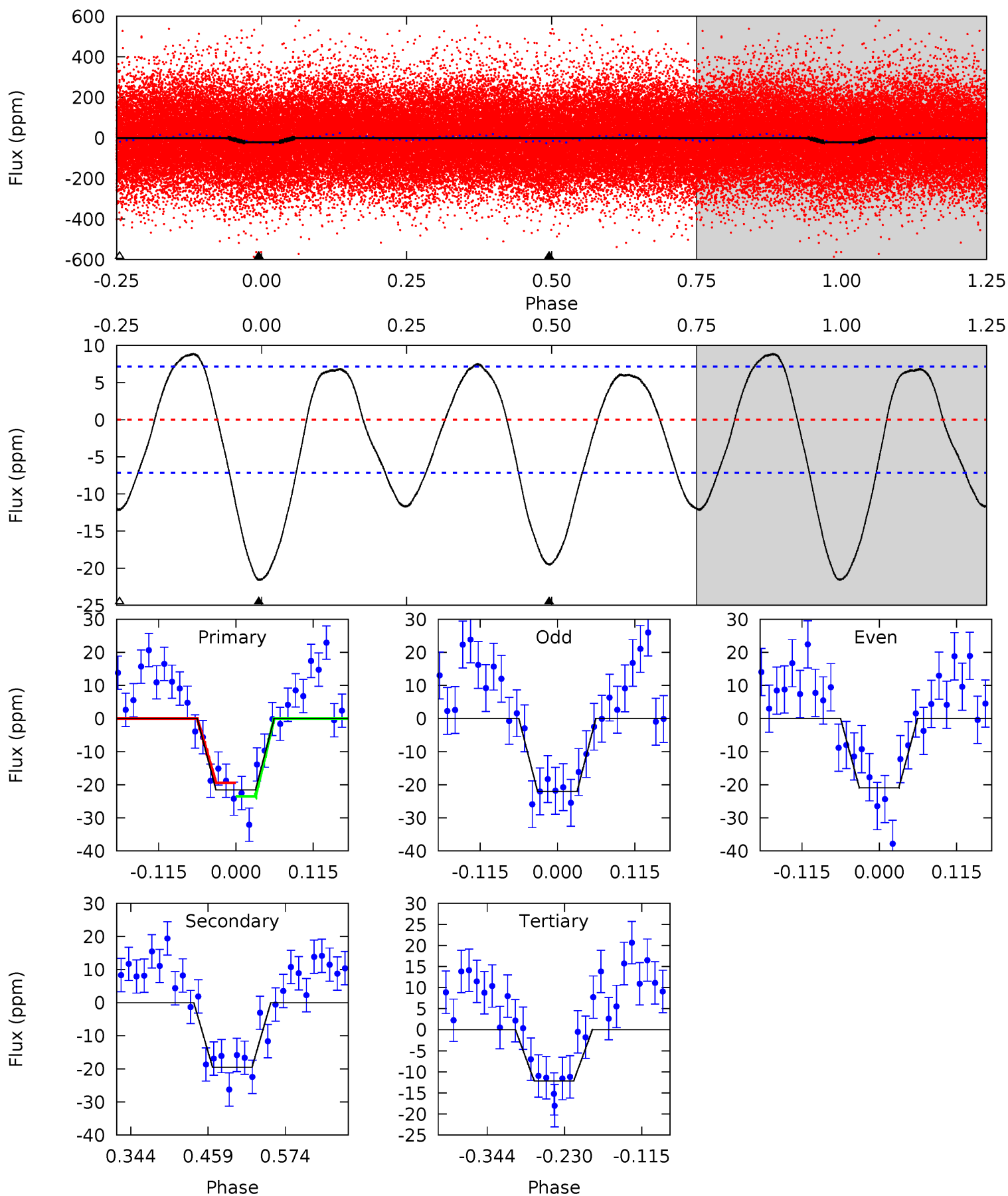
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.0	8.13	0	0	4.51	1.51	2.38	11.0	11.0	8.13	8.13	0.78	1.01	0.26	0.50



Alt Model-Shift Uniqueness Test

006521110-01, P = 0.732785 Days, E = 131.259246 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.7	12.4	7.68	0	4.54	1.58	4.35	5.98	13.7	4.67	12.4	0.35	0.94	0.29	1.30



Stellar Parameters For KIC 006521110

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5804^{+145}_{-159}	$4.550^{+0.035}_{-0.196}$	$-0.180^{+0.300}_{-0.300}$	$0.857^{+0.227}_{-0.076}$	$0.951^{+0.110}_{-0.110}$	$2.130^{+0.387}_{-1.041}$
	+2%/-3%	+1%/-4%	+167%/-167%	+26%/-9%	+12%/-12%	+18%/-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 006521110-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-12 ± 1	$0.44^{+0.13}_{-0.13}$	2711^{+156}_{-108}	5153^{+886}_{-570}	$8.372^{+8.625}_{-3.585}$
Alt.	-20 ± 2	$0.46^{+0.14}_{-0.14}$	2717^{+173}_{-109}	5641^{+1056}_{-647}	12^{+12}_{-5}

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

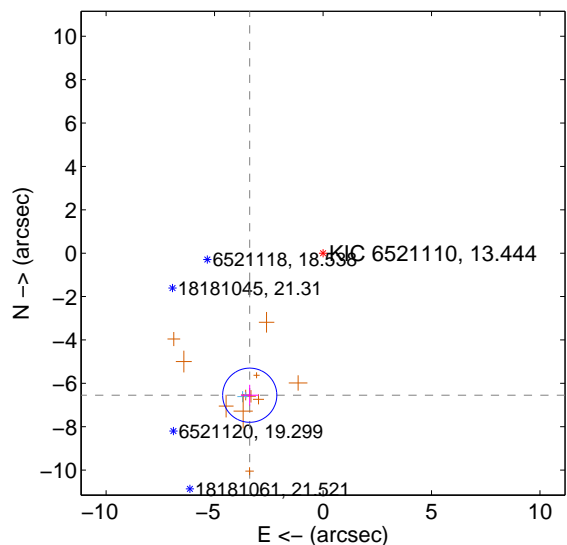
Supplemental centroid analysis for 006521110-01. Kepler magnitude: 13.44. Transit SNR 8.44

There are 2 quarters with good PRF difference image offsets

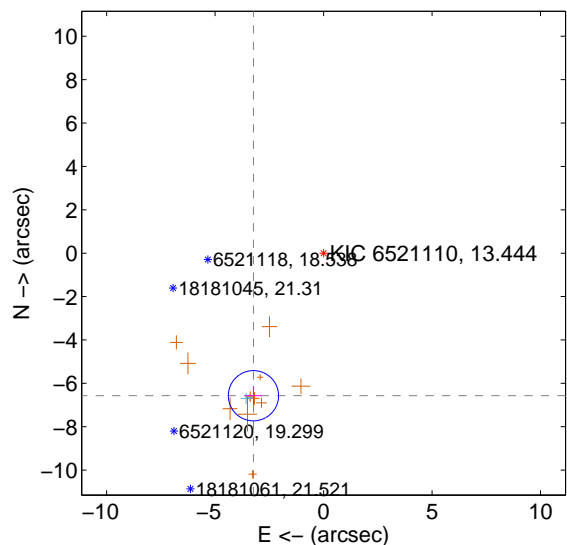
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.367 ± 0.416	17.70	3.379 ± 0.409	-6.546 ± 0.477
PRF-fit source offset from KIC position	7.323 ± 0.386	18.98	3.233 ± 0.398	-6.570 ± 0.455
photometric centroid source offset	5.19 ± 1.37	3.80	4.11 ± 1.38	-3.17 ± 1.34

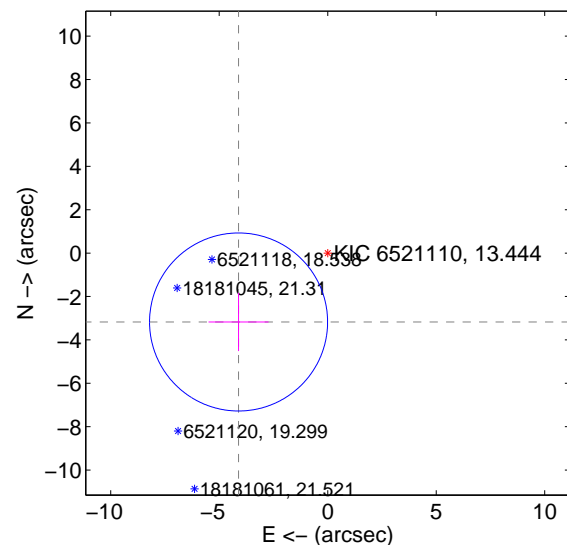
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

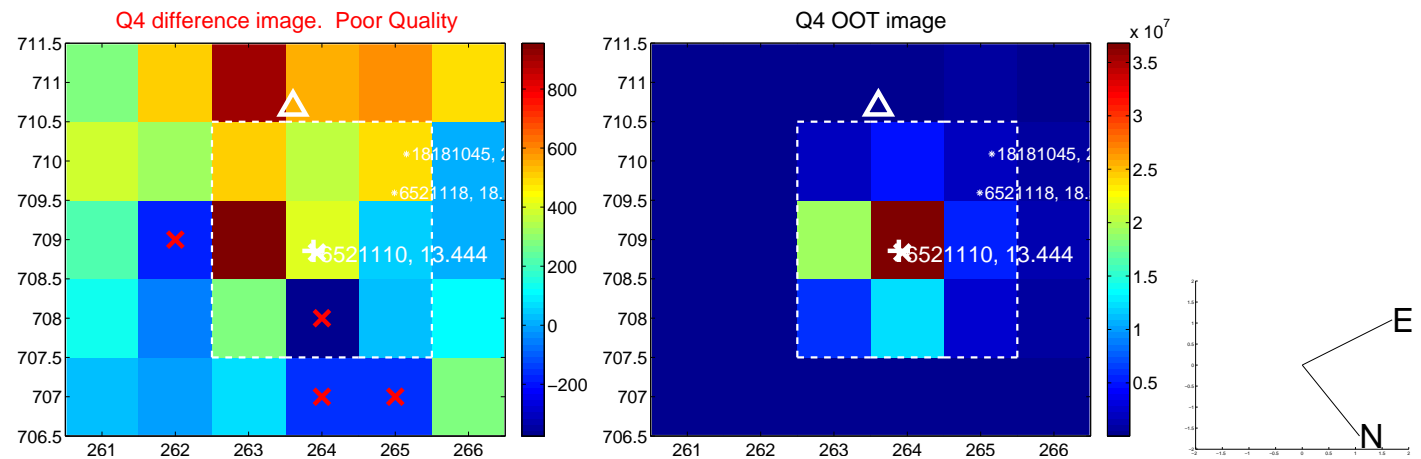
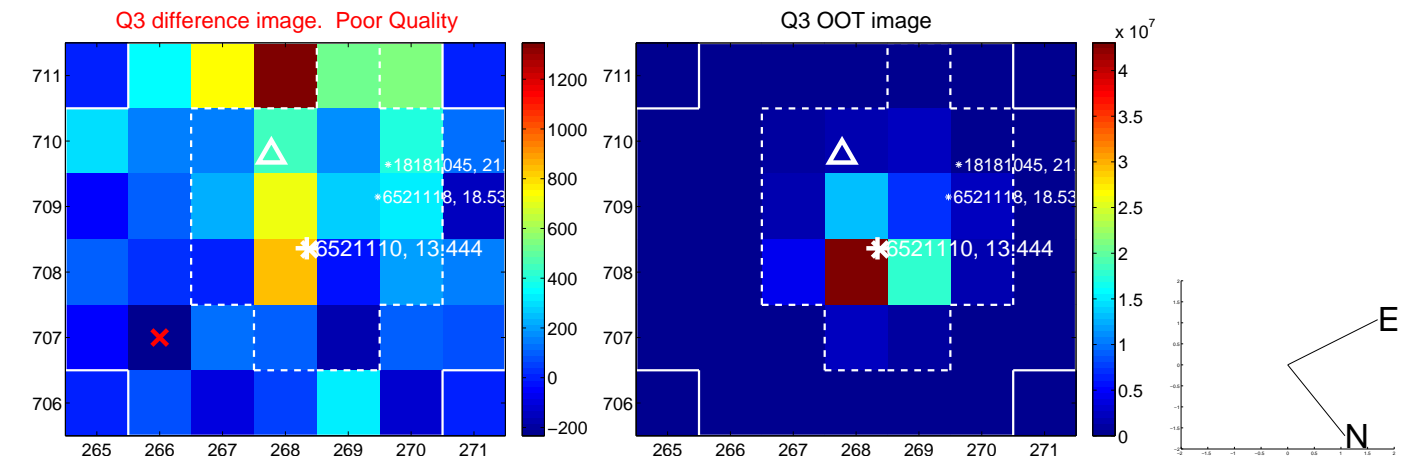
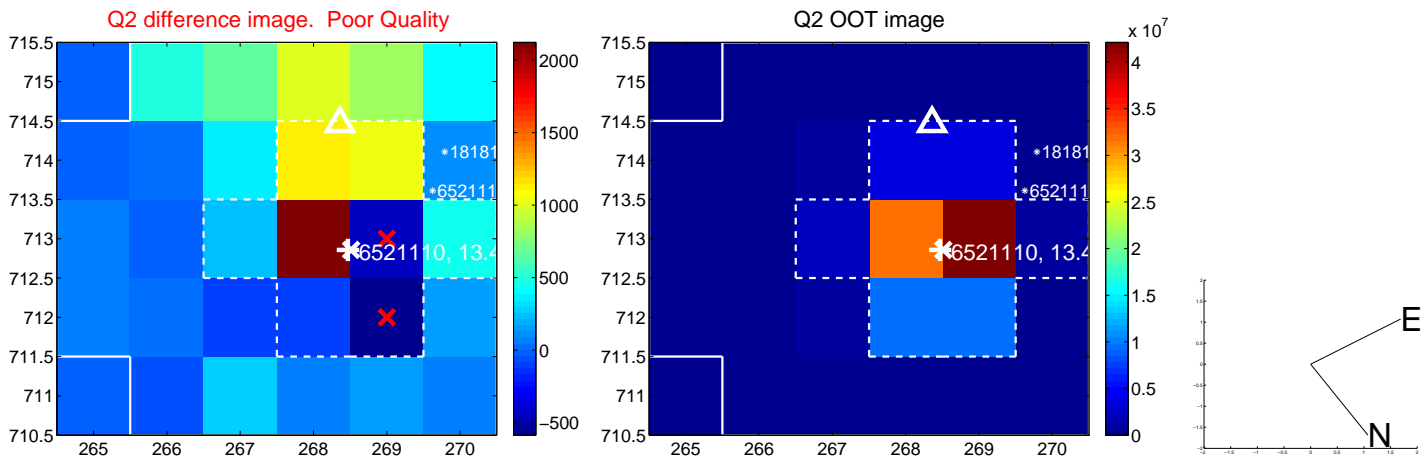
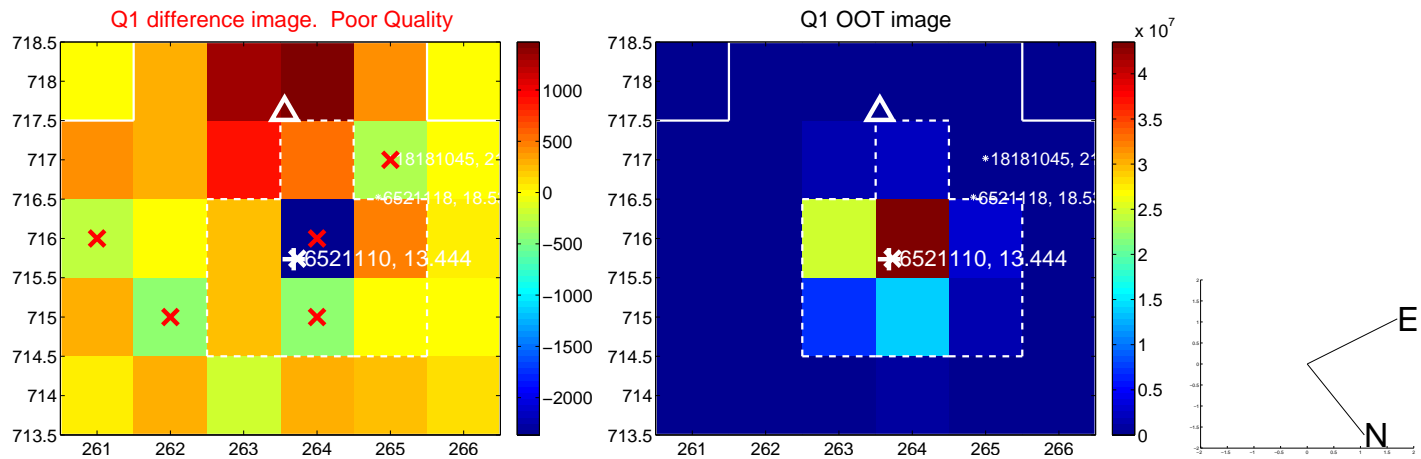


offset from photometric centroids

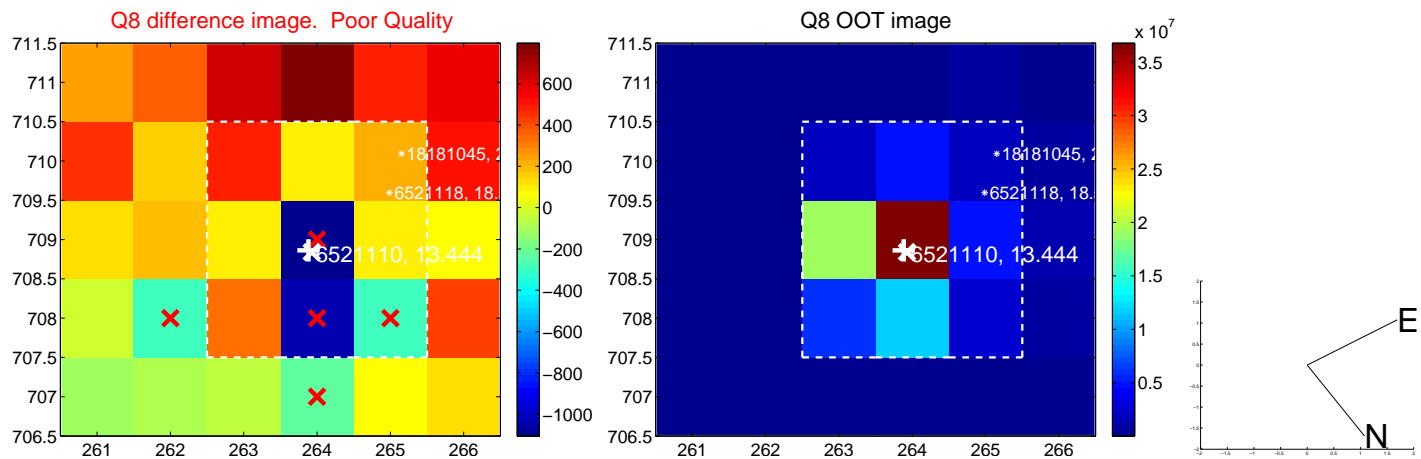
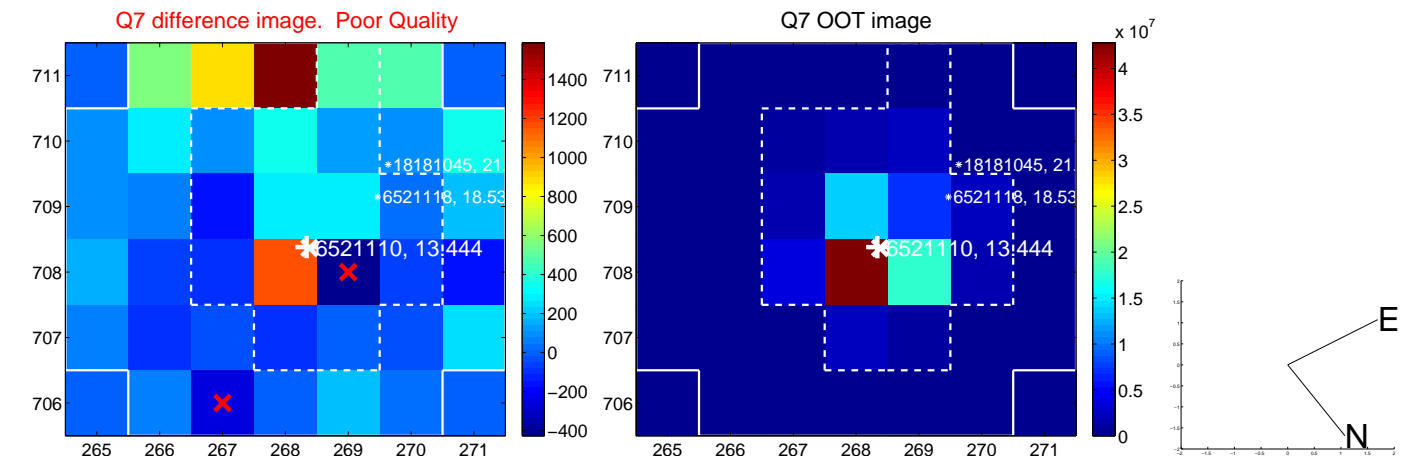
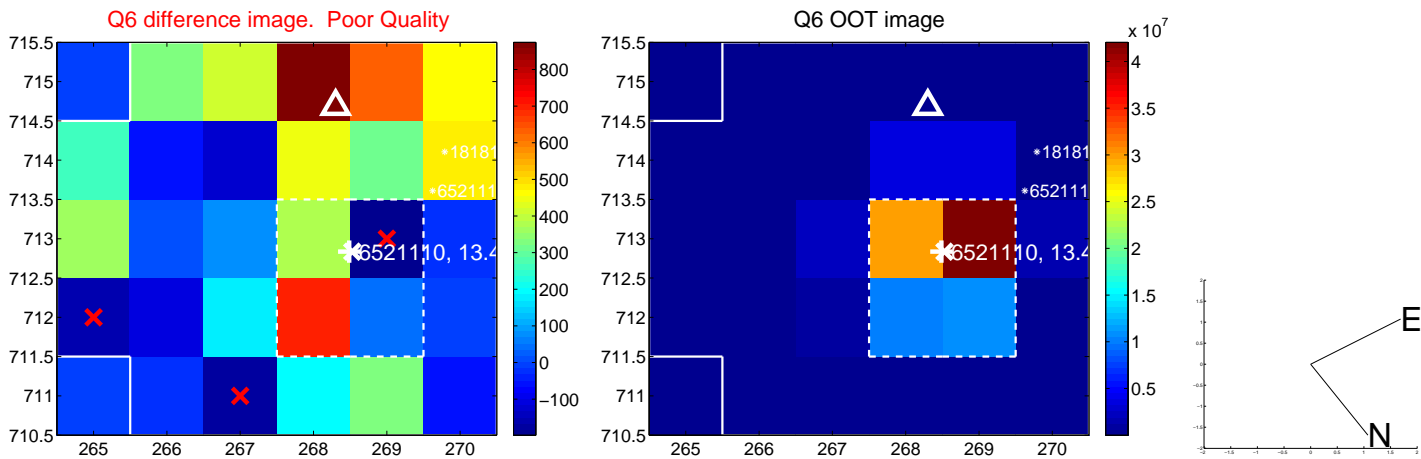
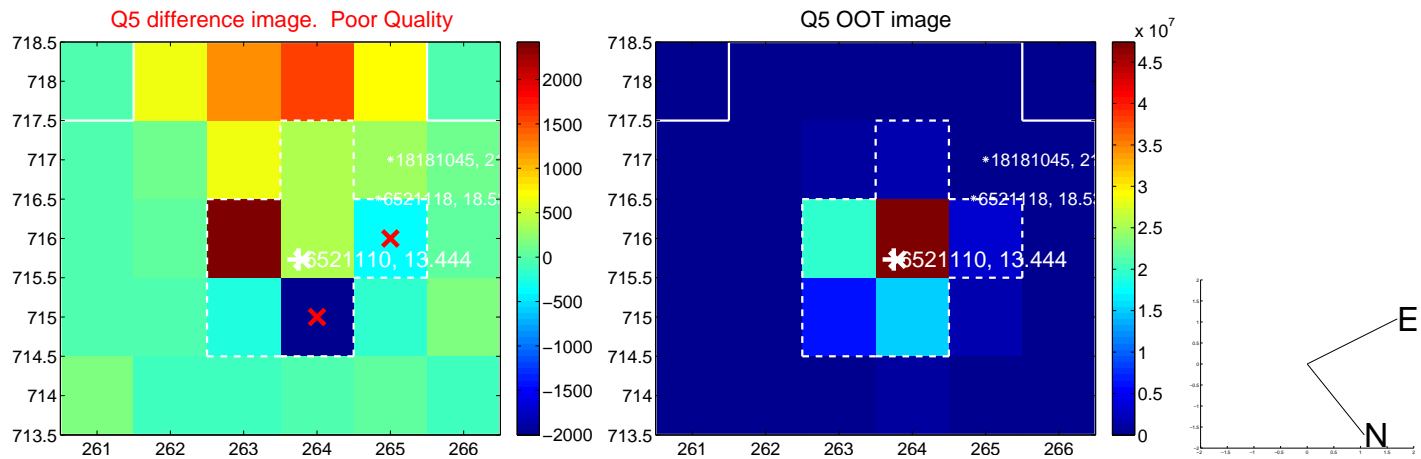


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

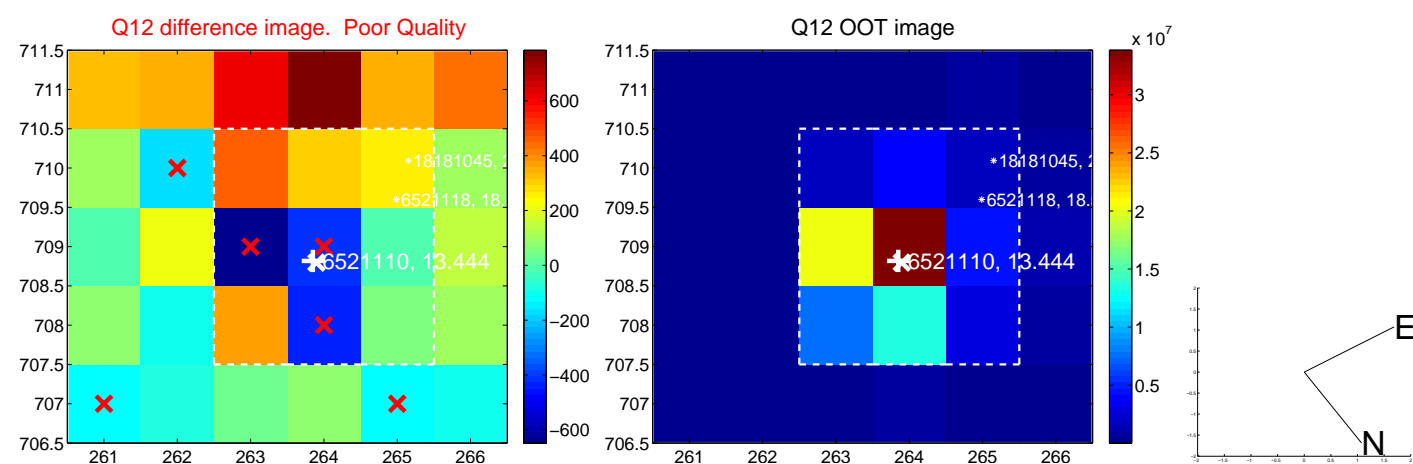
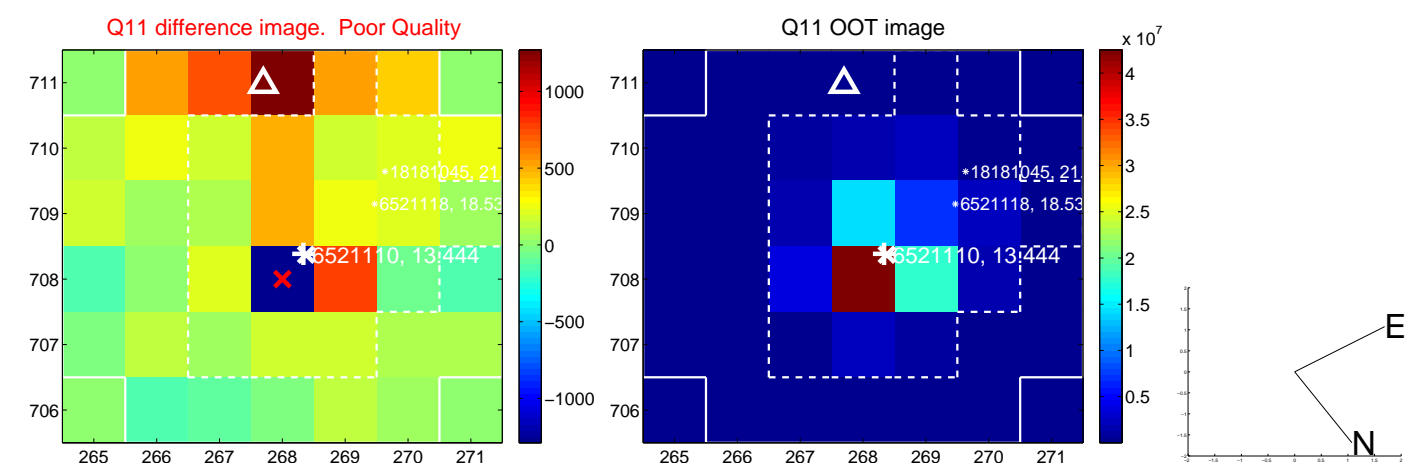
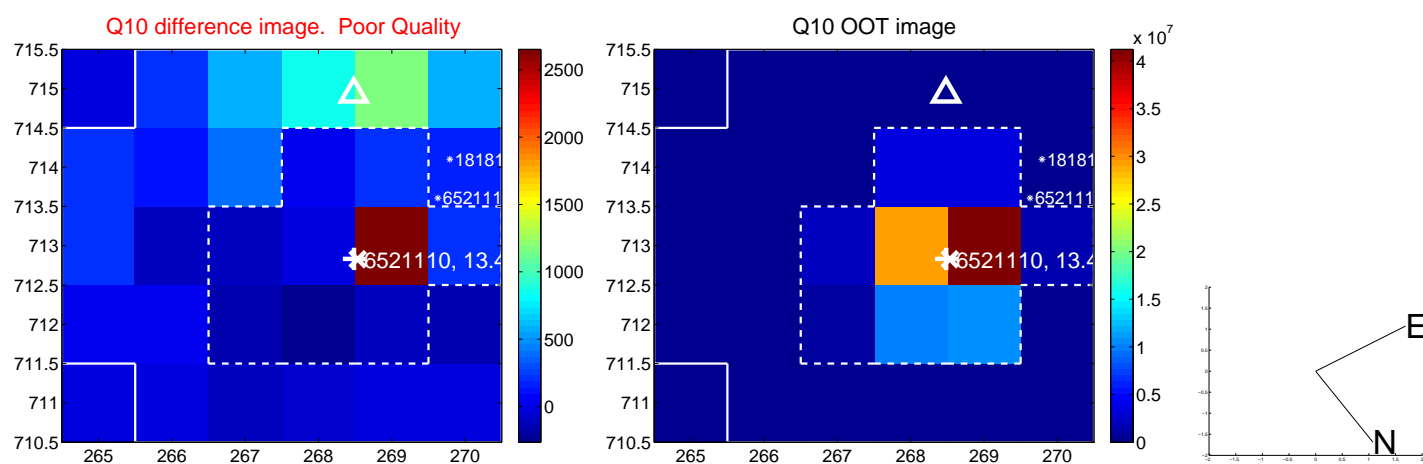
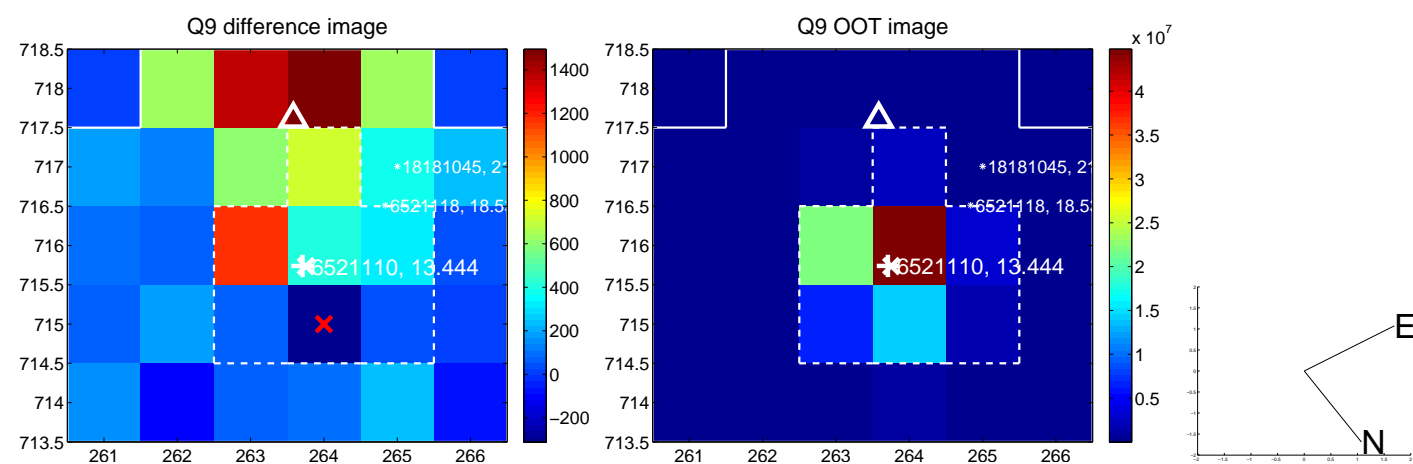
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



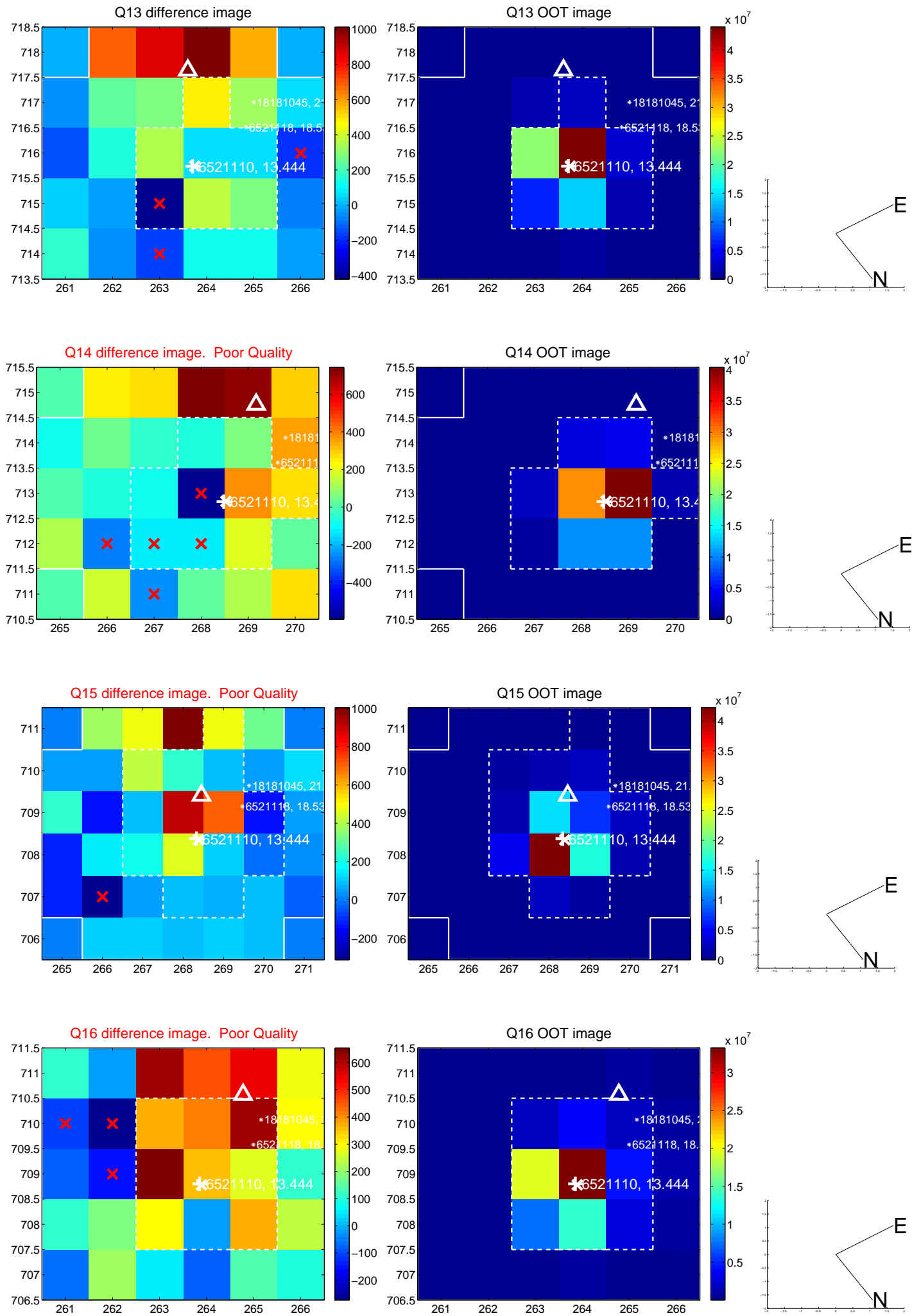
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



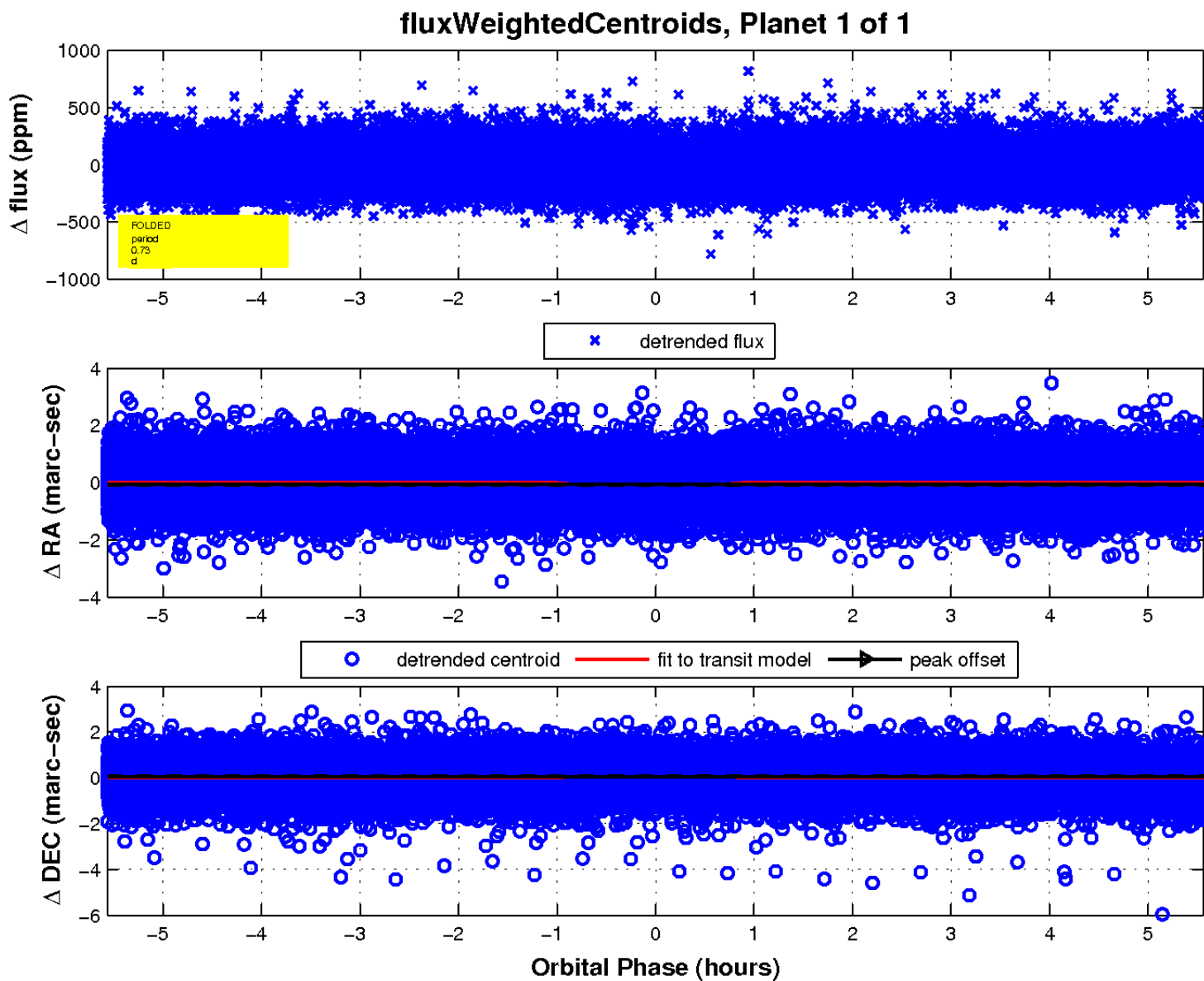
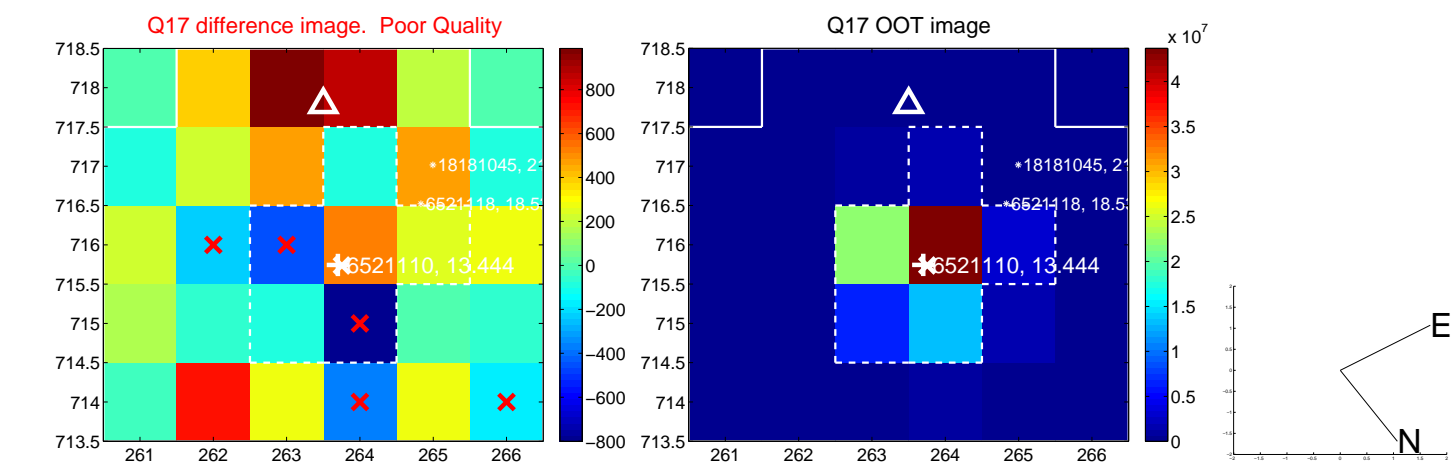
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

