

KIC 005641605

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})
005641605-01	OBS	No	0.737500	131.659263	6.7	6.994	7.9	3.8	1.73	7058	0.47	20392.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005641605-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—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.

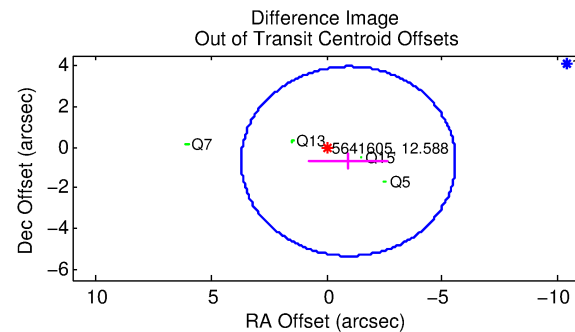
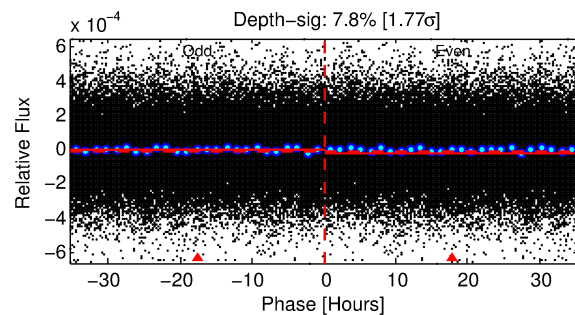
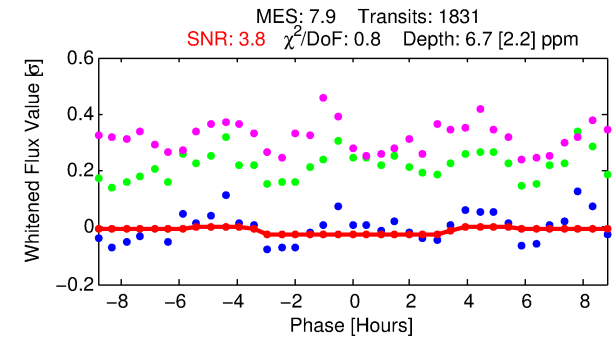
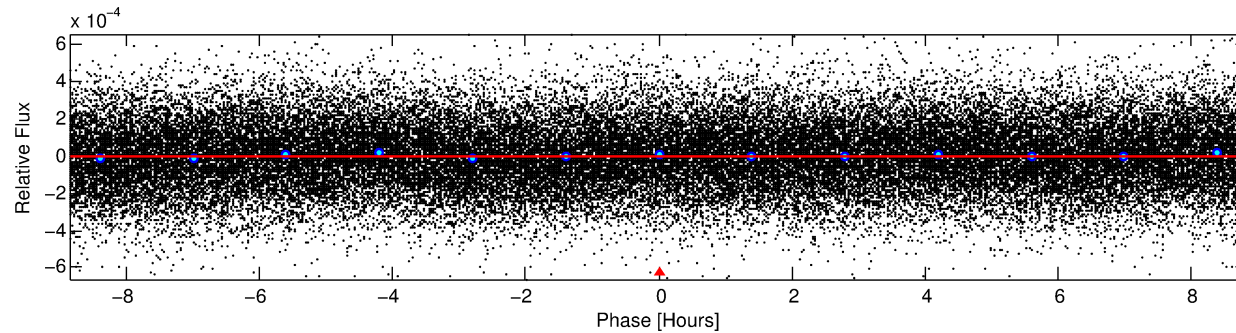
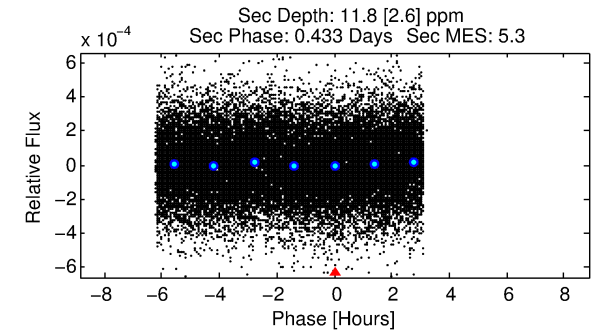
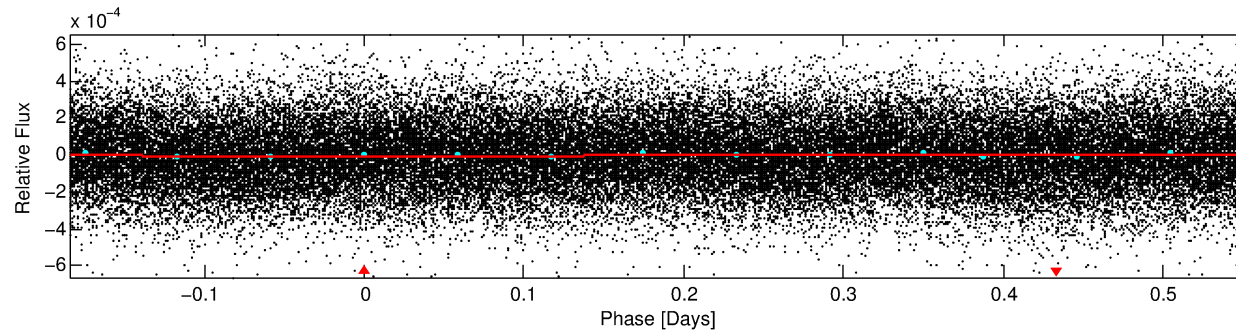
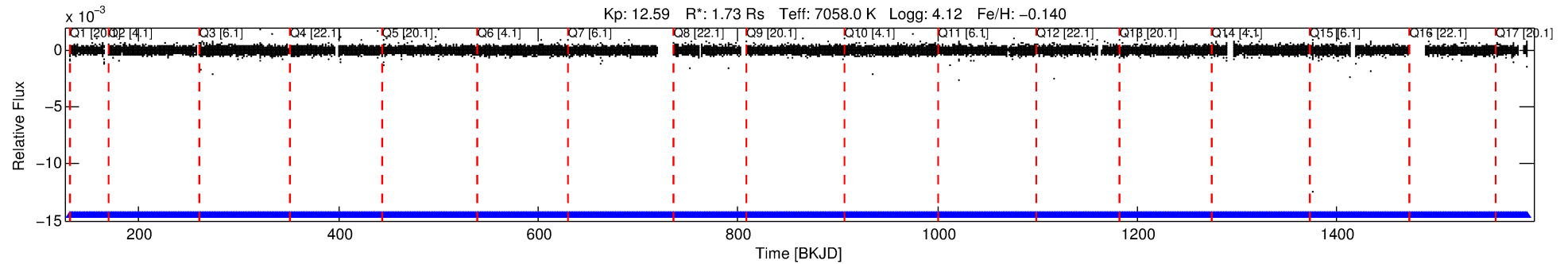
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005641605-01

No Significant Match Found

DV One-Page Summary

KIC: 5641605 Candidate: 1 of 1 Period: 0.738 d



DV Fit Results:

Period = 0.73750 [0.00004] d
Epoch = 131.6593 [0.0124] BKJD
Rp/R* = 0.0025 [0.0053]
a/R* = 1.04 [1.02]
b = 0.58 [14.90]
Seff = 20392.31 [7782.96]
Teq = 3047 [291] K
Rp = 0.47 [1.02] Re
a = 0.0180 [0.0044] AU
Ag = 9.59 [41.37] [0.21σ]
Teffp = 8291 [8916] K [0.59σ]

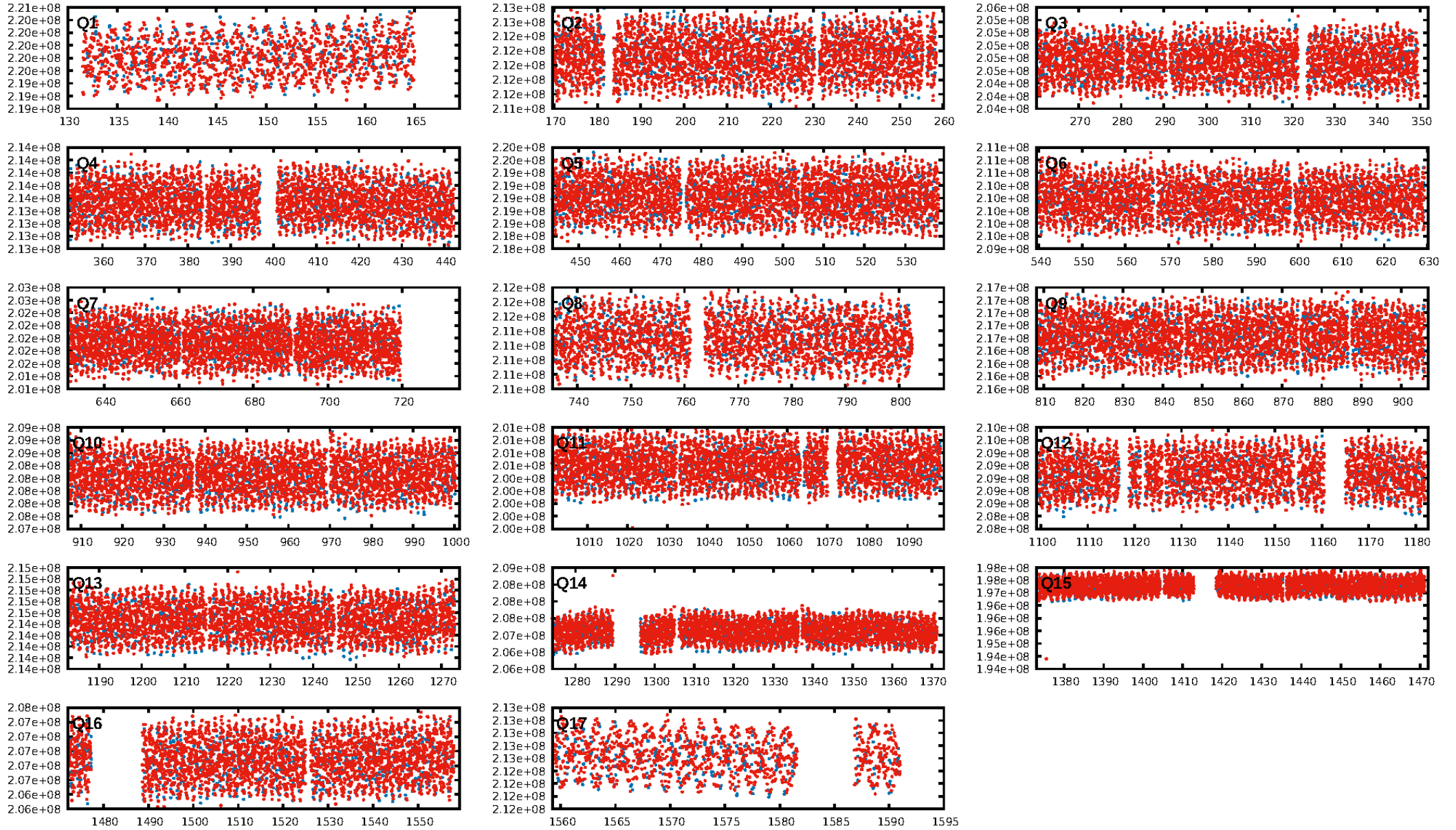
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1748/1748]
GhostDiagnostic-chr: -0.8254
Centroid-sig: 1.7%
Centroid-so: 2.050 arcsec [1.38σ]
OotOffset-rm: 1.165 arcsec [0.75σ]
KicOffset-rm: 1.117 arcsec [0.67σ]
OotOffset-st: 0/2/0/2 [4]
KicOffset-st: 0/2/0/2 [4]
DiffImageQuality-fgm: 0.25 [1/4]
DiffImageOverlap-fno: 1.00 [17/17]

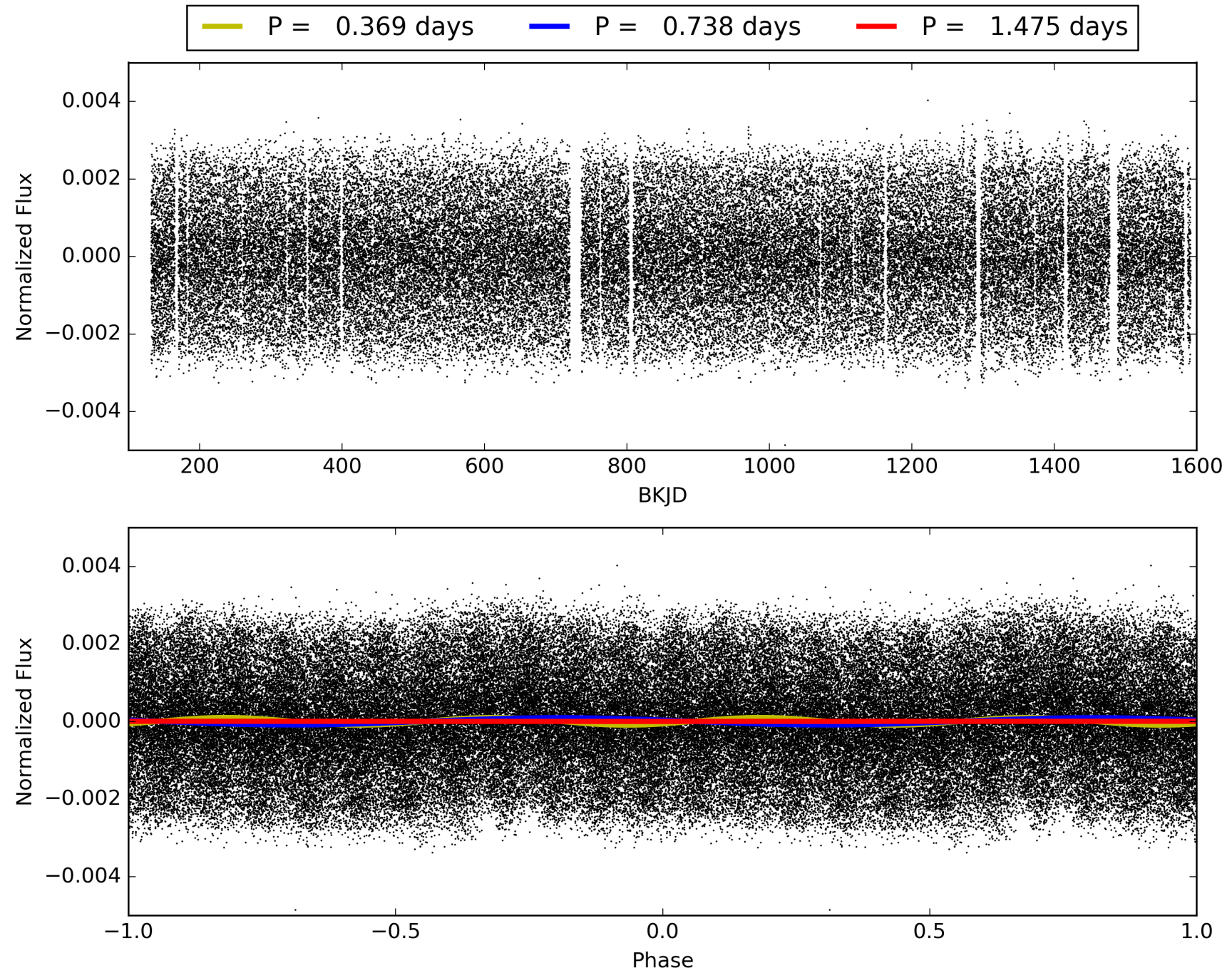
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 17:30:51 Z

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

TCE 005641605-01, PDC Light Curves

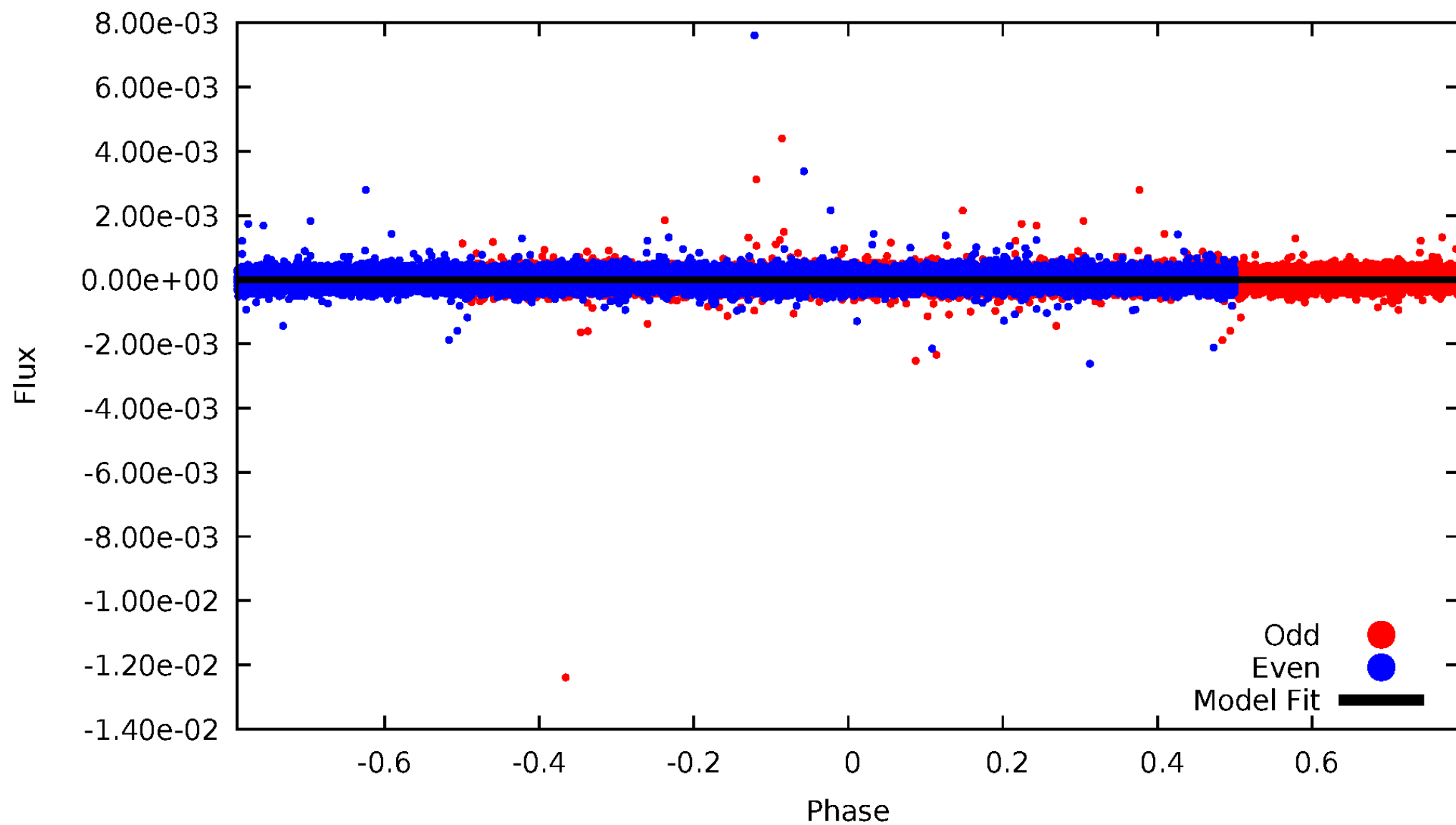


TCE 005641605-01



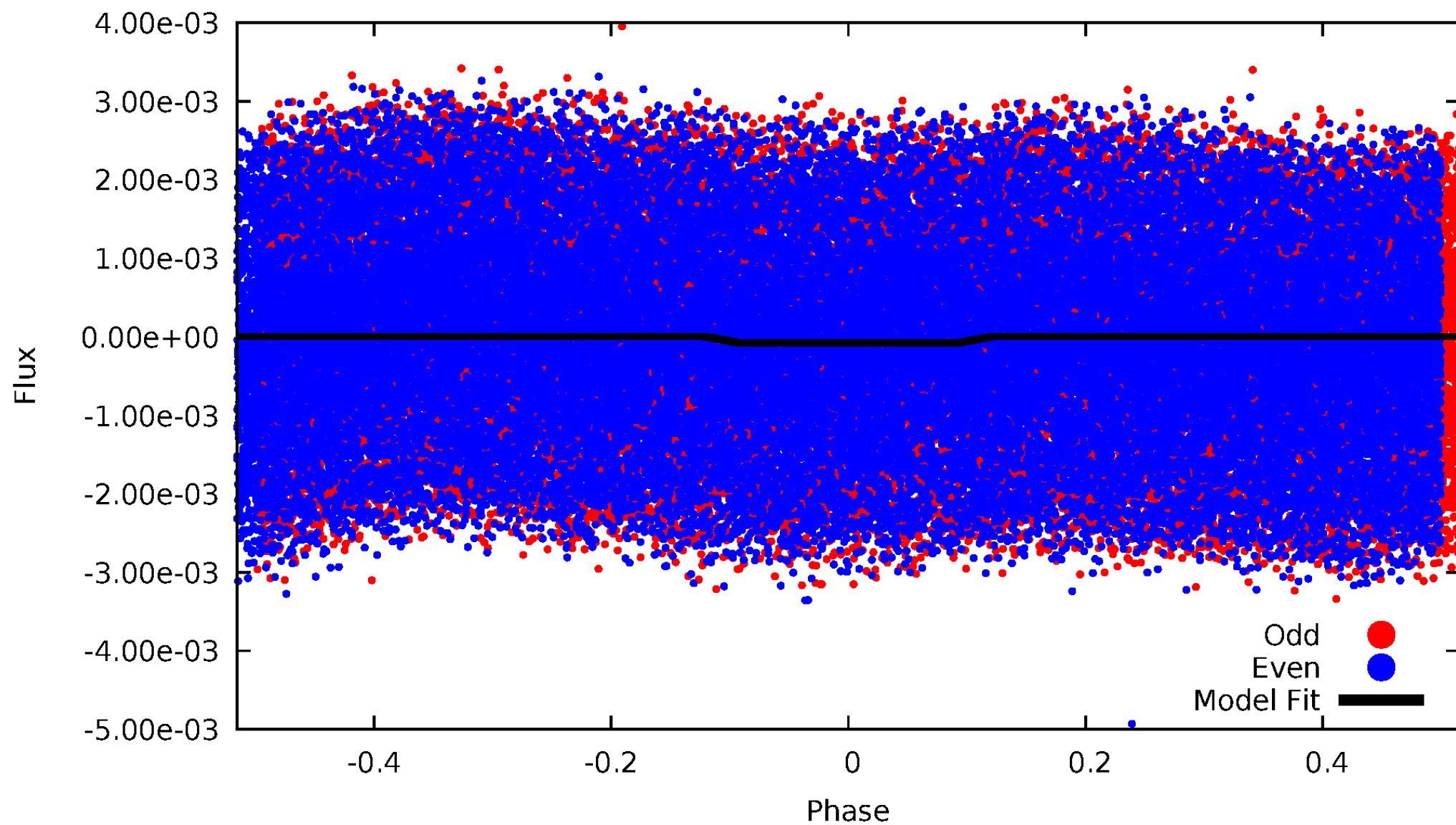
DV Odd/Even

TCE 005641605-01



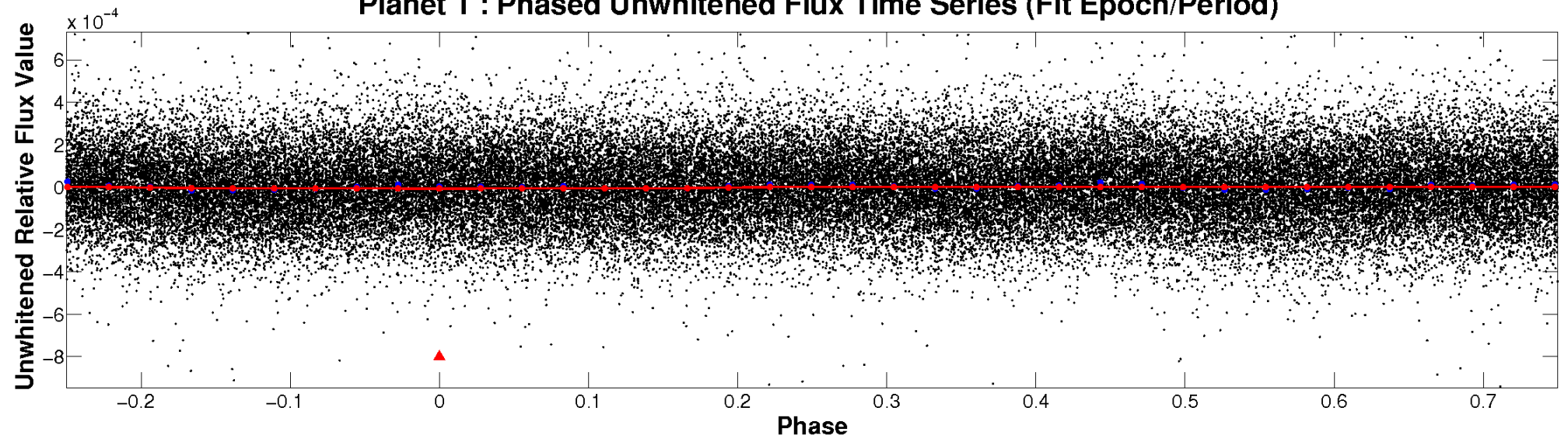
ALT Odd/Even

TCE 005641605-01

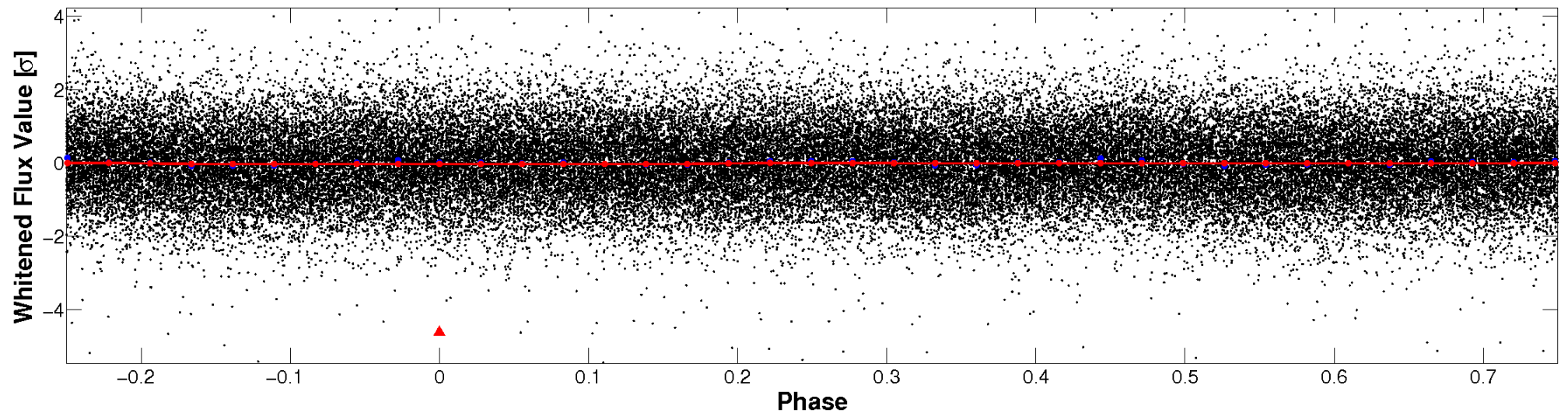


Non-Whitened Vs. Whitened Light Curve

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

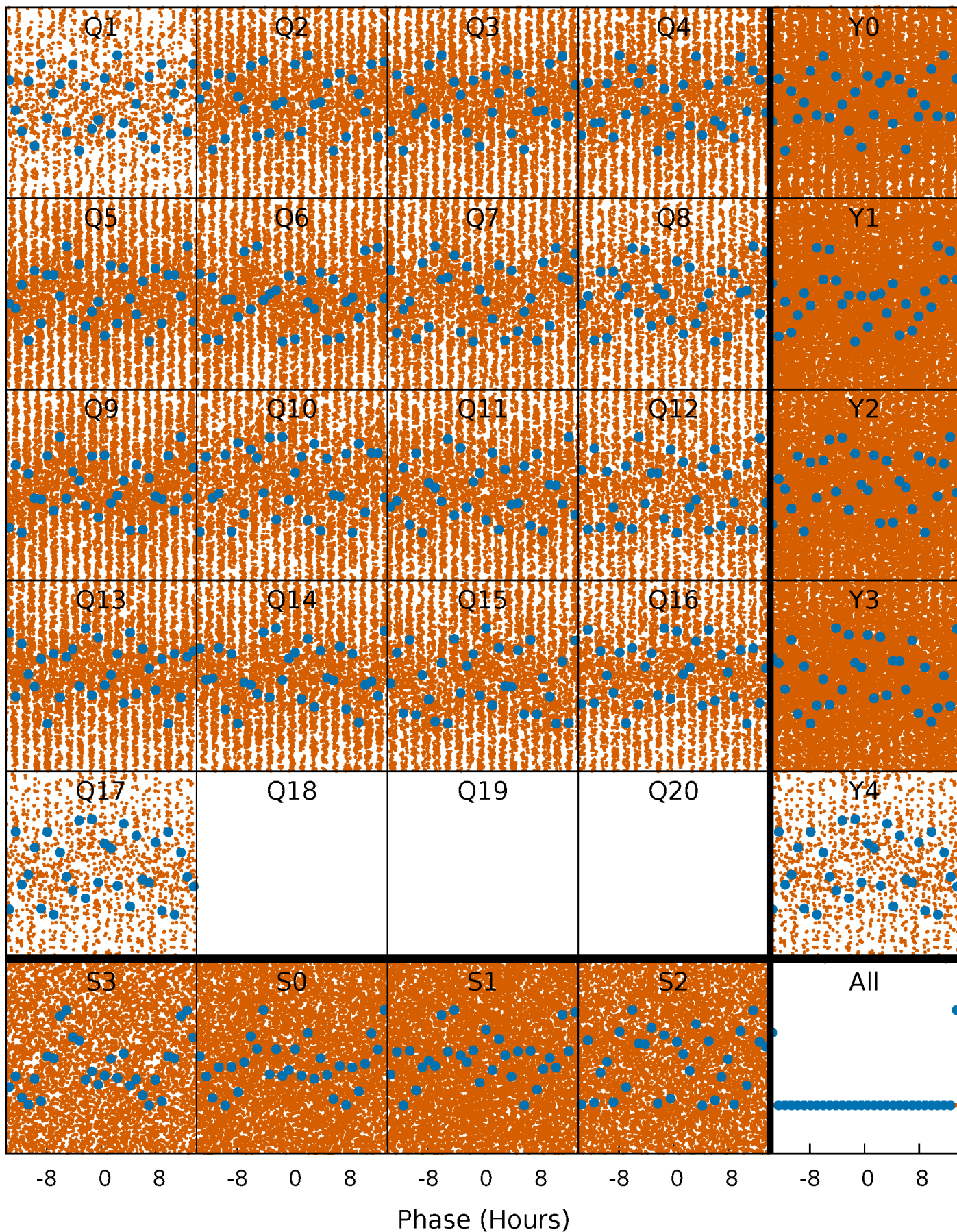


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



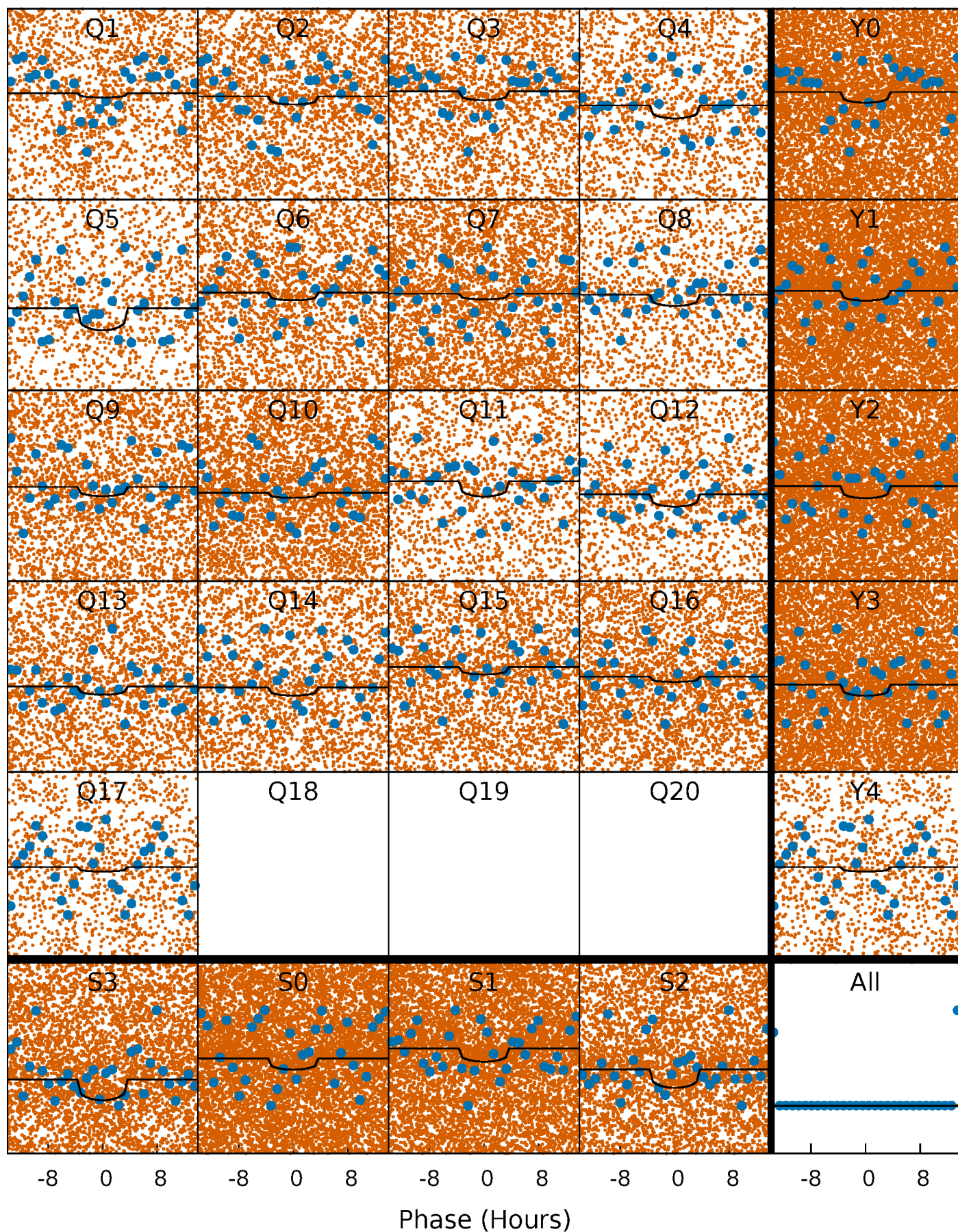
PDC Quarter-Phased Transit Curves

TCE 005641605-01 P= 0.737500 Days $T_0=131.659263$ (BKJD)



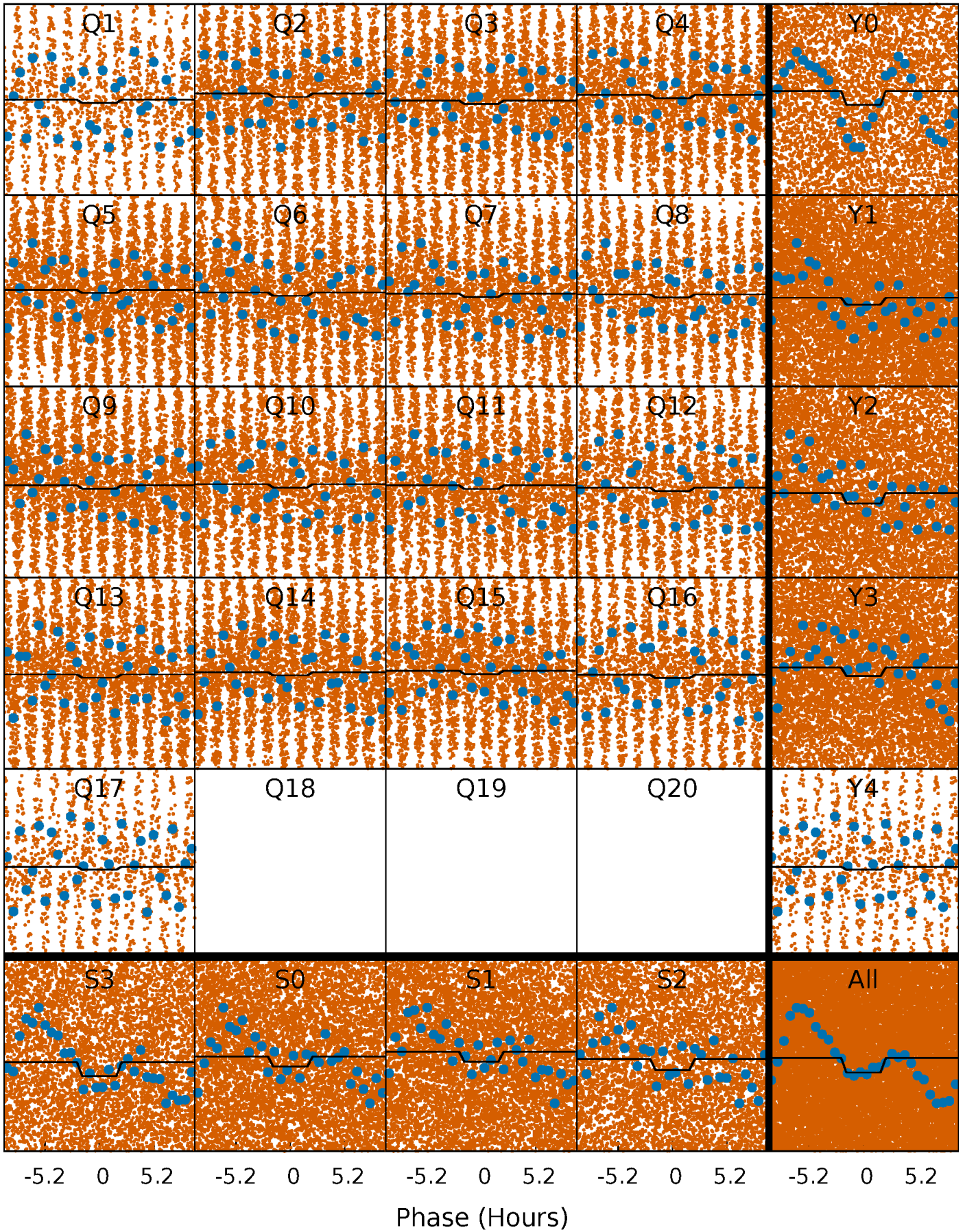
DV Quarter-Phased Transit Curves

TCE 005641605-01 P= 0.737500 Days $T_0=131.659263$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

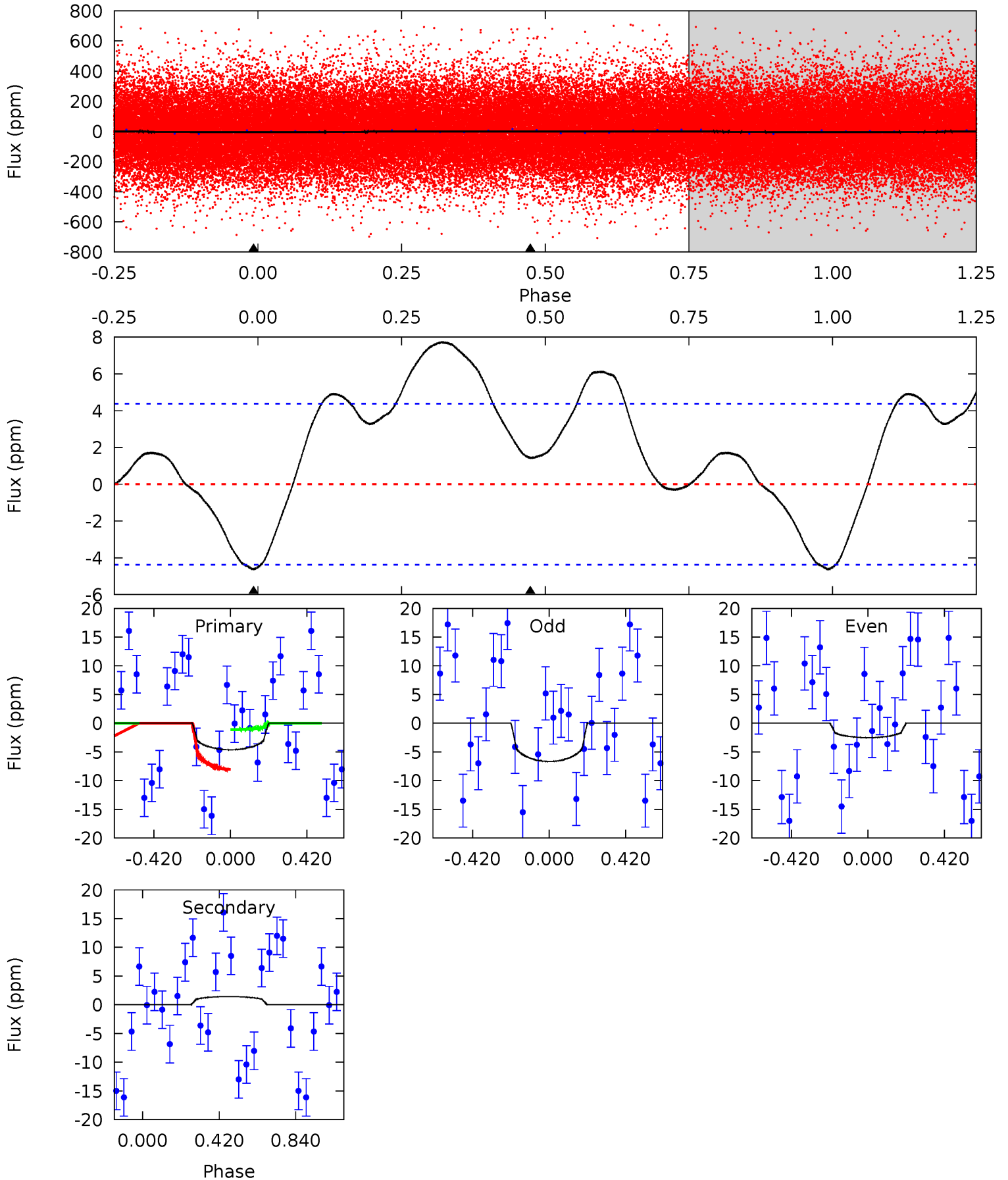
TCE 005641605-01 P= 0.737586 Days $T_0=131.610200$ (BKJD)



DV Model-Shift Uniqueness Test

005641605-01, P = 0.737500 Days, E = 130.921763 Days

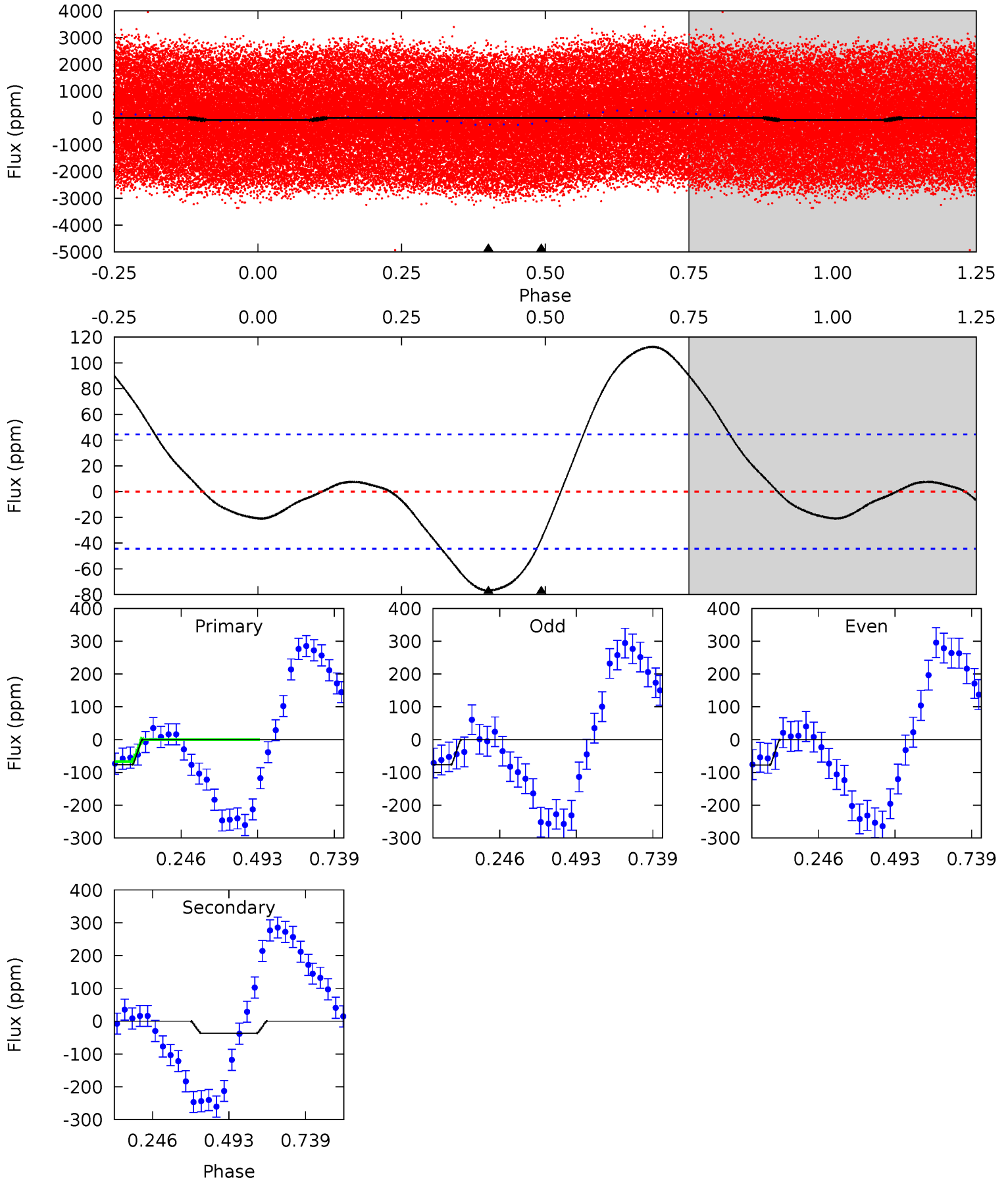
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.50	-1.39	0	0	4.25	0.81	1.94	4.50	4.50	-1.39	-1.39	2.01	0.48	0.63	3.39



Alt Model-Shift Uniqueness Test

005641605-01, P = 0.737586 Days, E = 130.872614 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.57	3.62	0	0	4.37	1.16	3.28	7.57	7.57	3.62	3.62	0.04	1.04	0.59	0.99



Stellar Parameters For KIC 005641605

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7058^{+197}_{-271}	$4.121^{+0.170}_{-0.187}$	$-0.140^{+0.250}_{-0.350}$	$1.727^{+0.516}_{-0.422}$	$1.438^{+0.208}_{-0.255}$	$0.394^{+0.334}_{-0.197}$
	+3%/-4%	+4%/-5%	+179%/-250%	+30%/-24%	+14%/-18%	+85%/-50%
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 005641605-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	1 ± 1	$0.92^{+0.80}_{-0.60}$	4246^{+328}_{-298}	-4293^{+451}_{-1441}	$-0.246^{+0.216}_{-1.598}$
Alt.	-37 ± 10	$1.75^{+1.04}_{-0.98}$	4274^{+342}_{-307}	5504^{+3194}_{-1266}	$2.152^{+8.218}_{-1.370}$

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 $A_{obs} \gg 1.0$

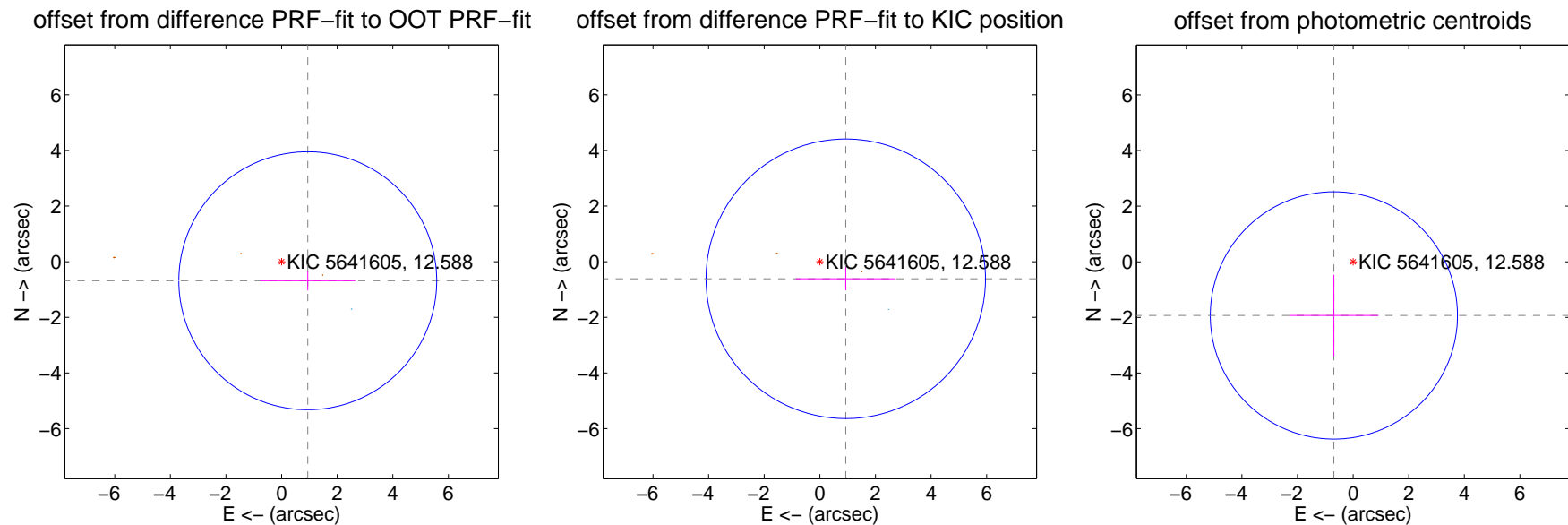
DV Centroid Data

Supplemental centroid analysis for 005641605-01. Kepler magnitude: 12.59. Transit SNR 3.78

There are 1 quarters with good PRF difference image offsets

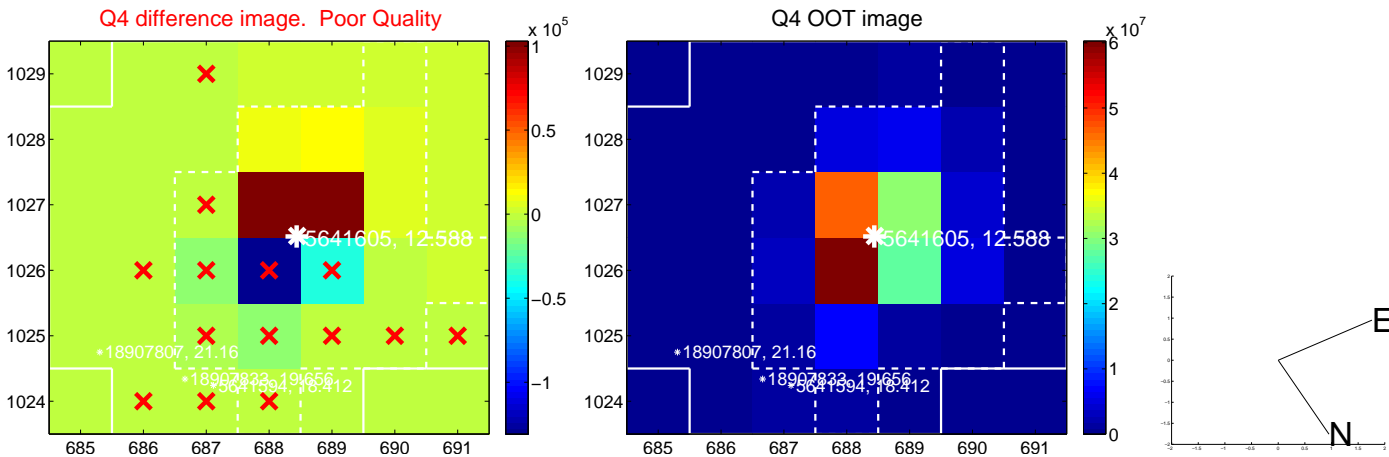
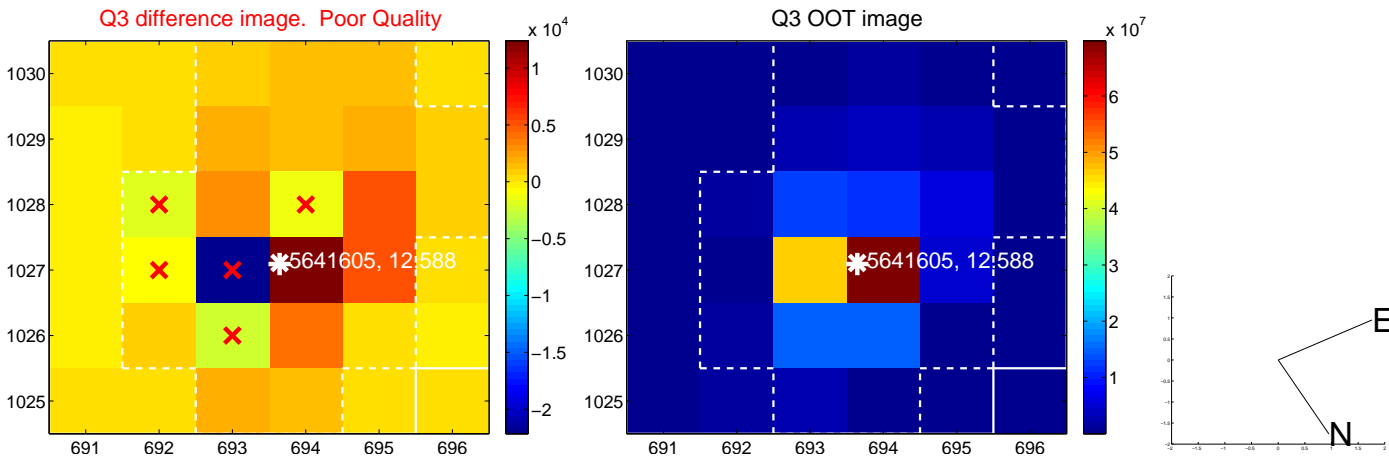
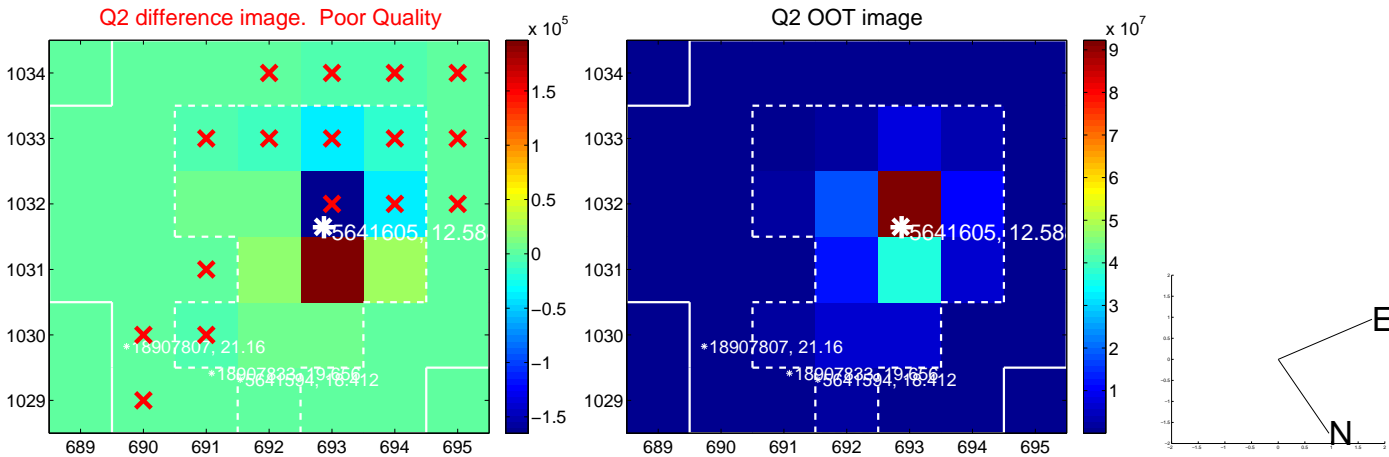
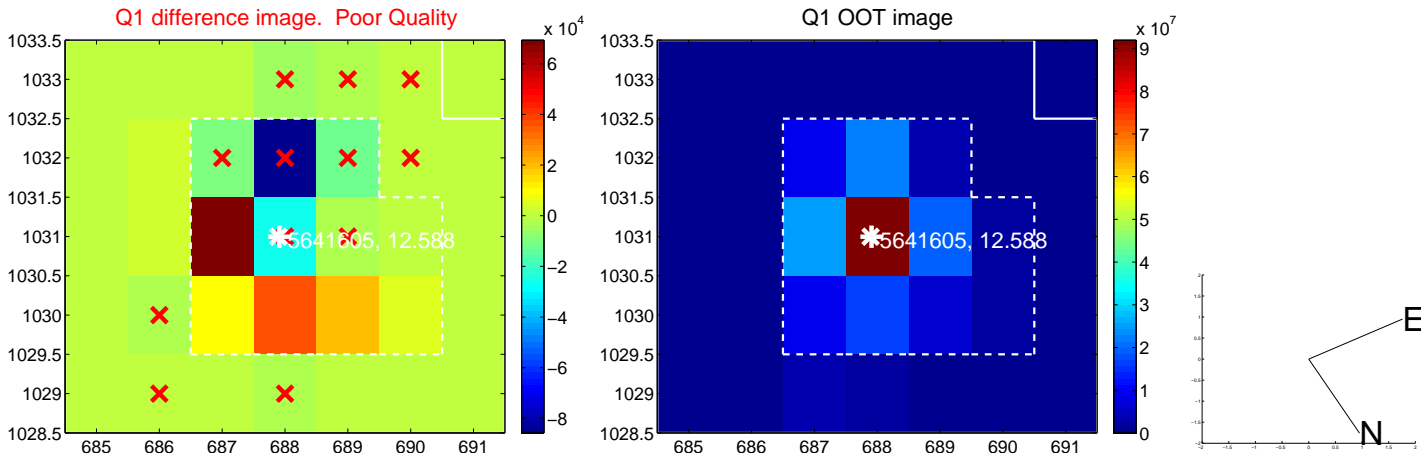
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.165 ± 1.546	0.75	-0.942 ± 1.713	-0.686 ± 0.349
PRF-fit source offset from KIC position	1.117 ± 1.675	0.67	-0.932 ± 1.796	-0.615 ± 0.412
photometric centroid source offset	2.05 ± 1.48	1.38	0.69 ± 1.61	-1.93 ± 1.47

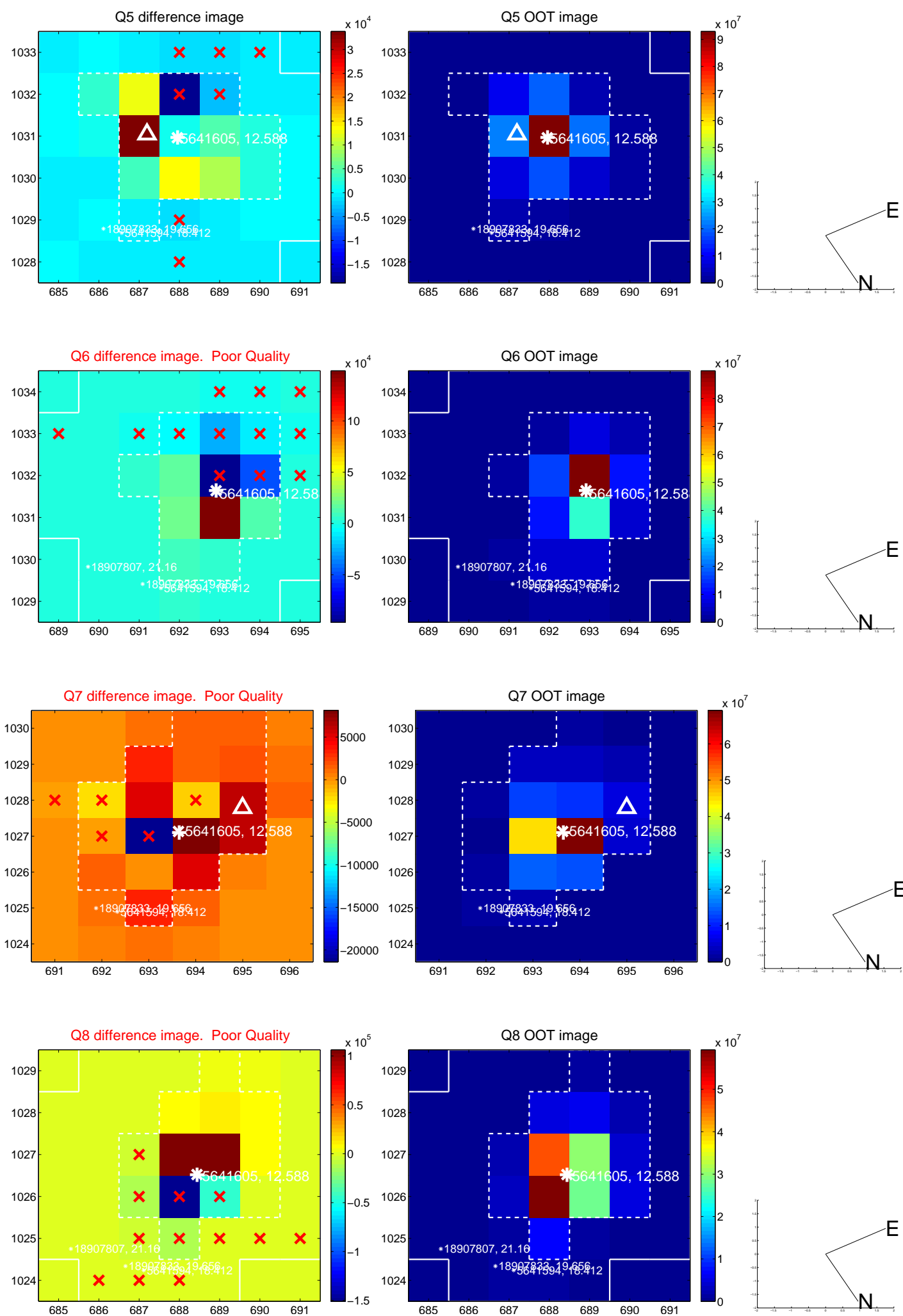


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

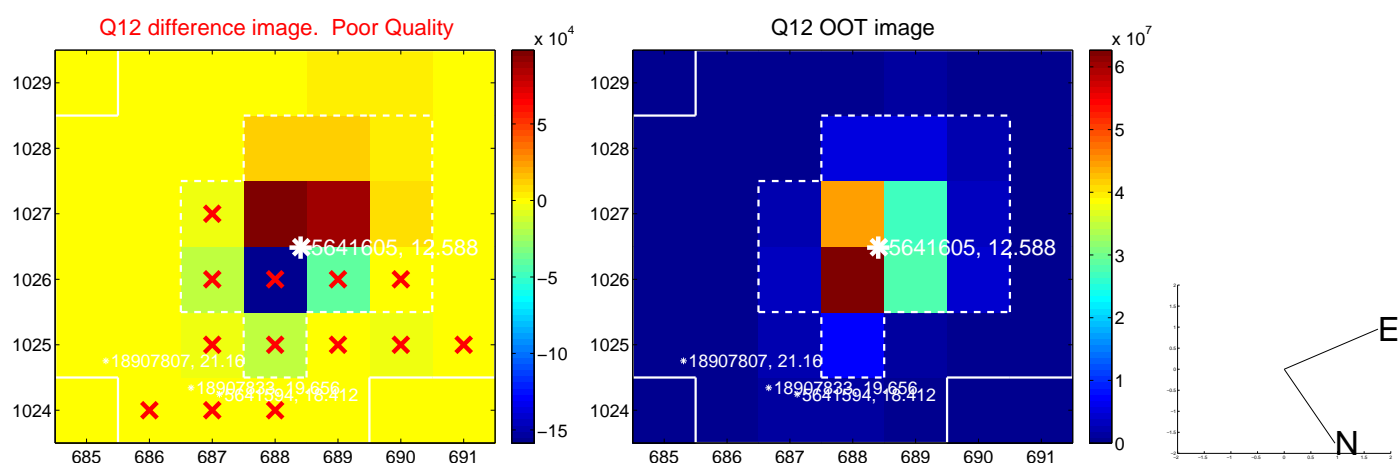
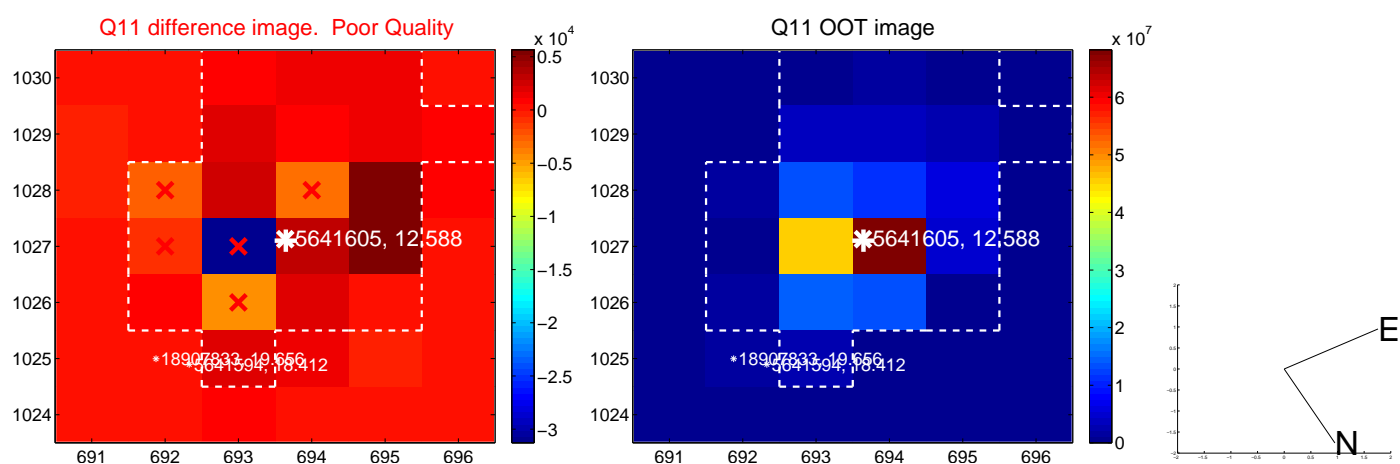
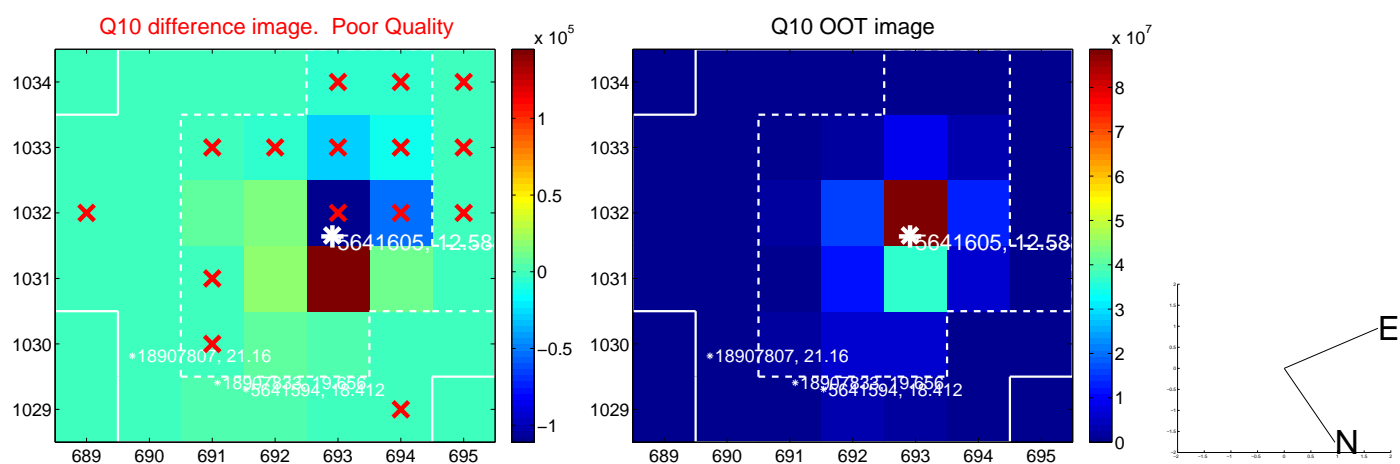
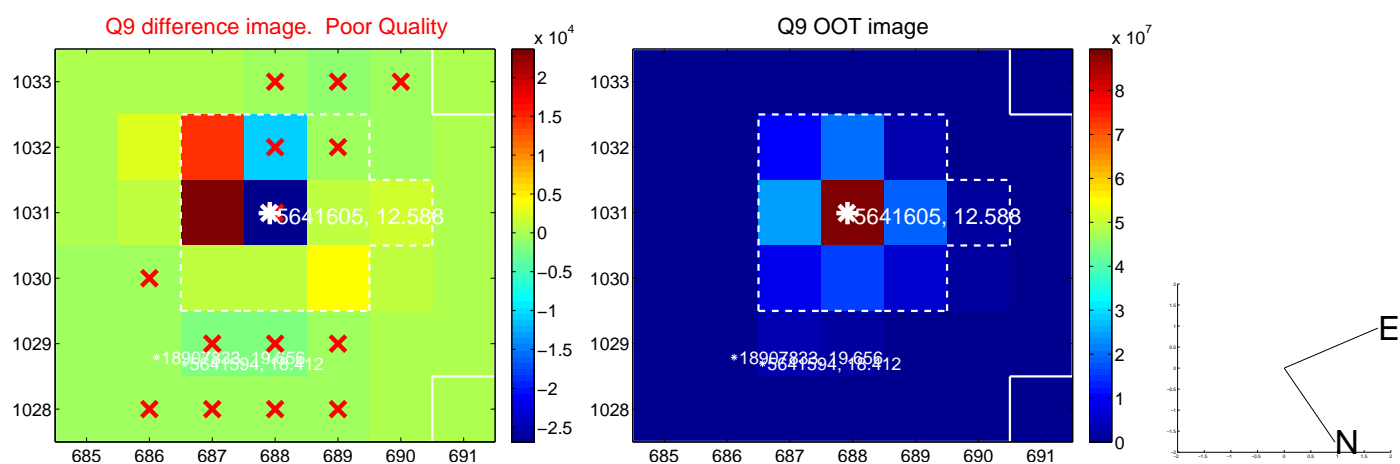
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



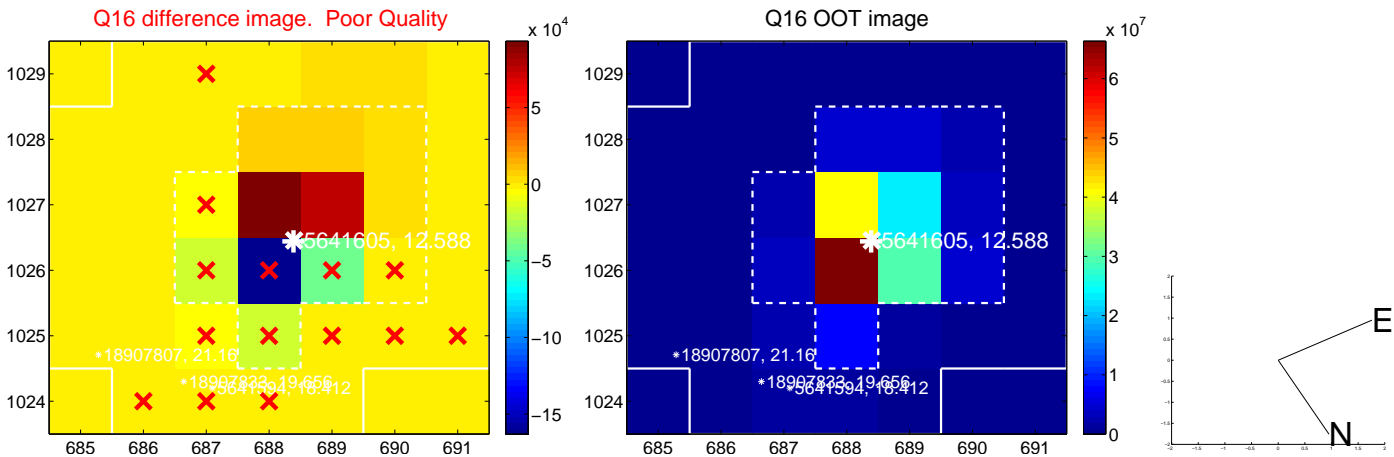
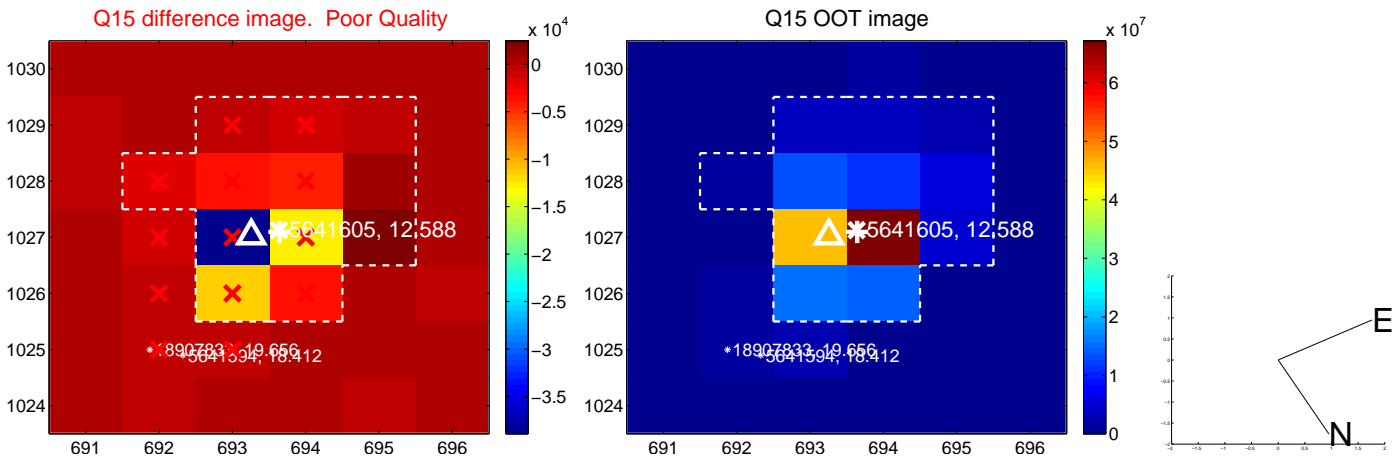
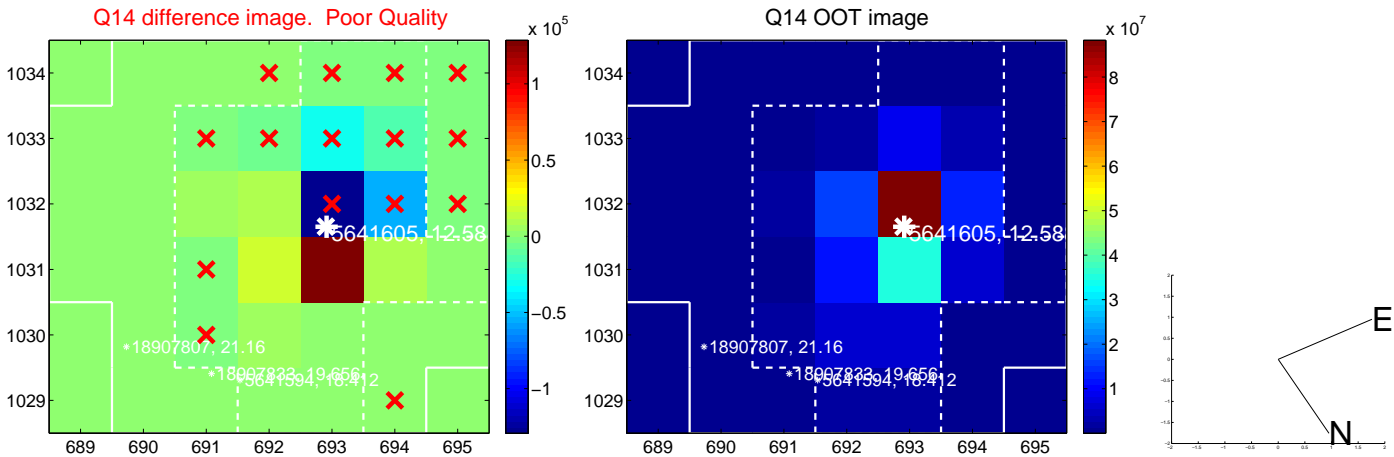
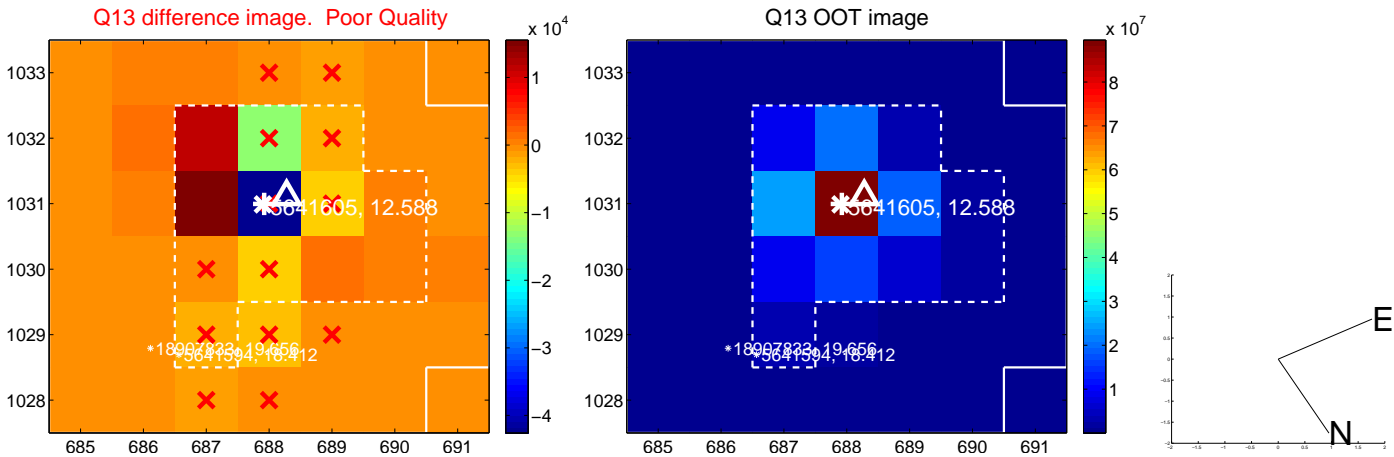
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



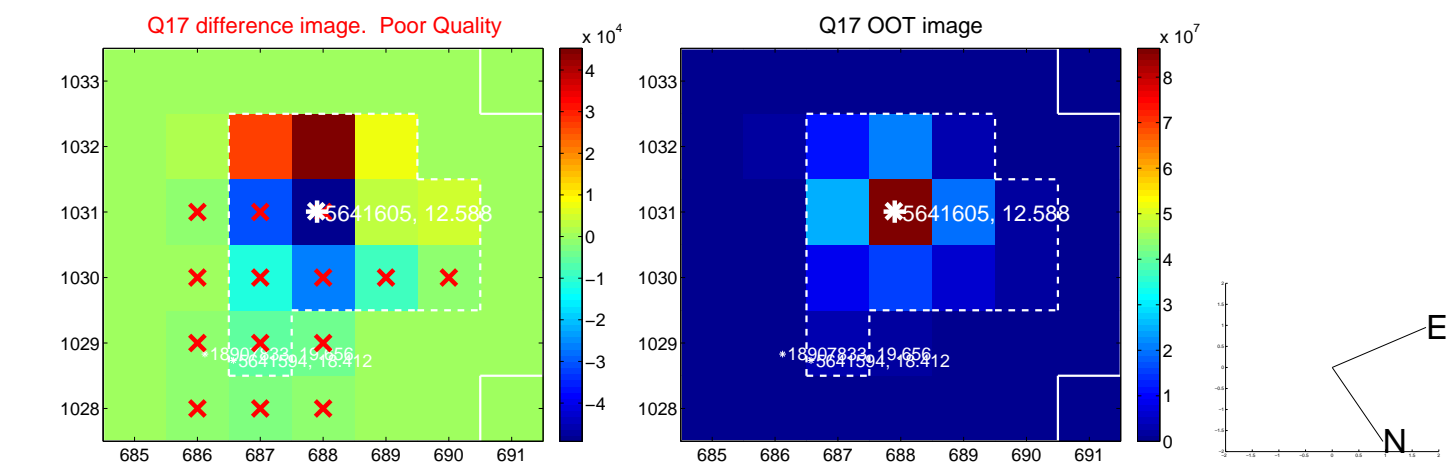
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



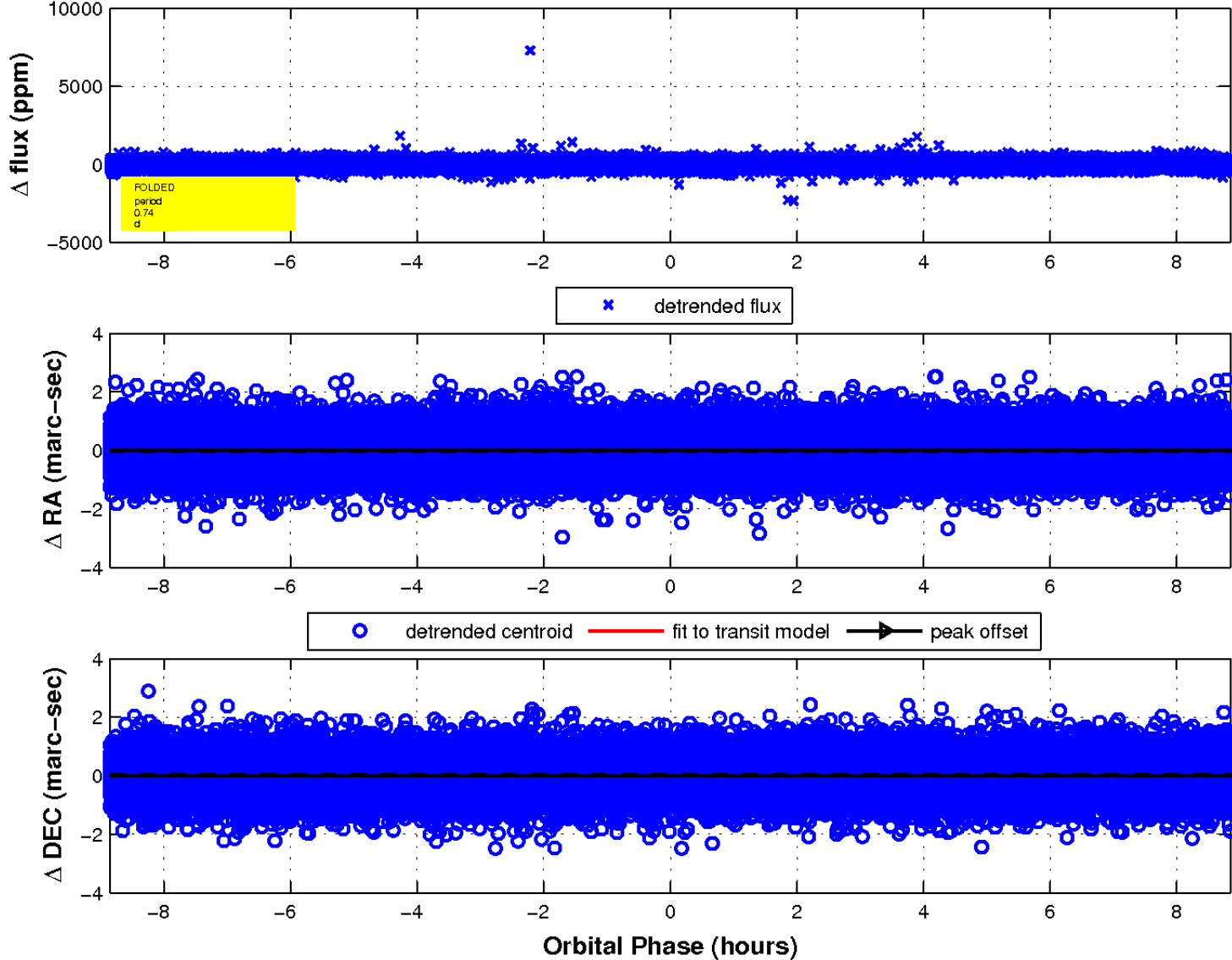
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

