

KIC 011920541

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})
011920541-01	OBS	No	4.423418	134.564859	6.1	22.101	9.5	7.1	2.48	9482	0.73	8663.65

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011920541-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

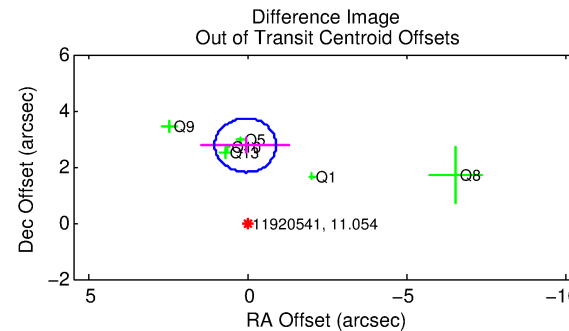
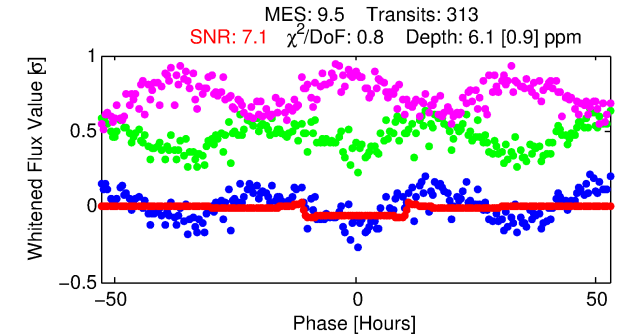
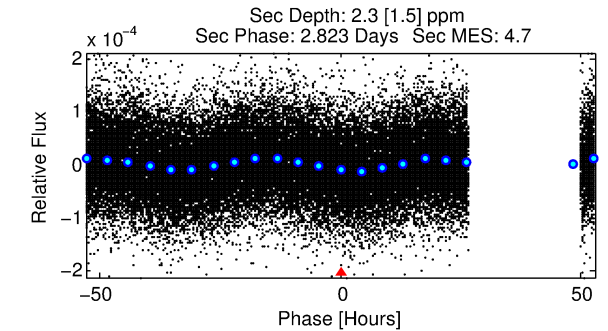
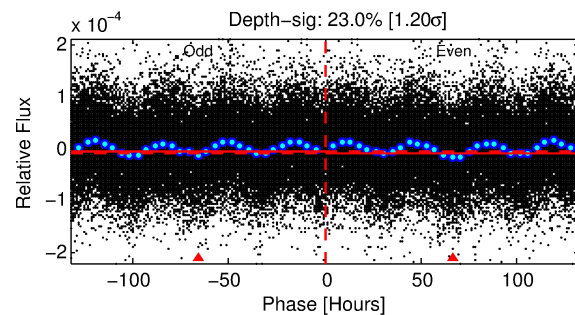
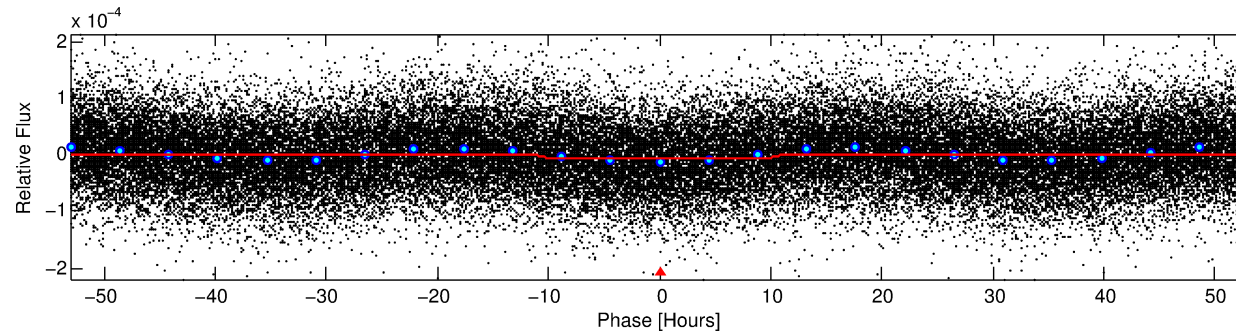
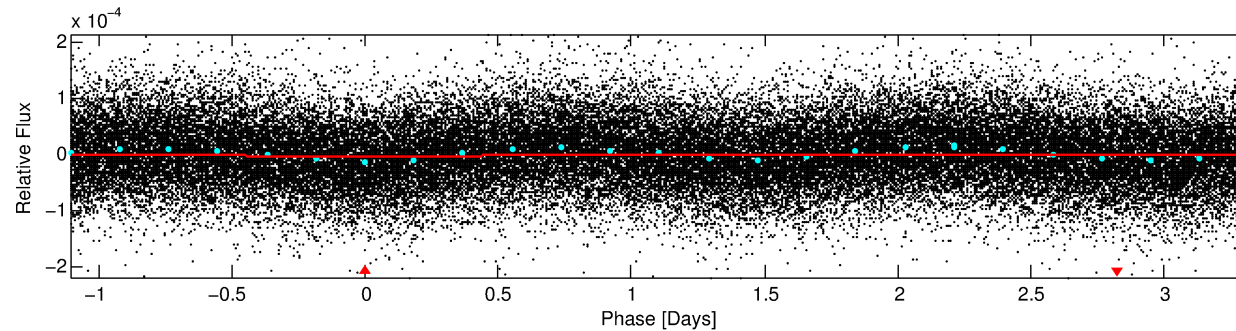
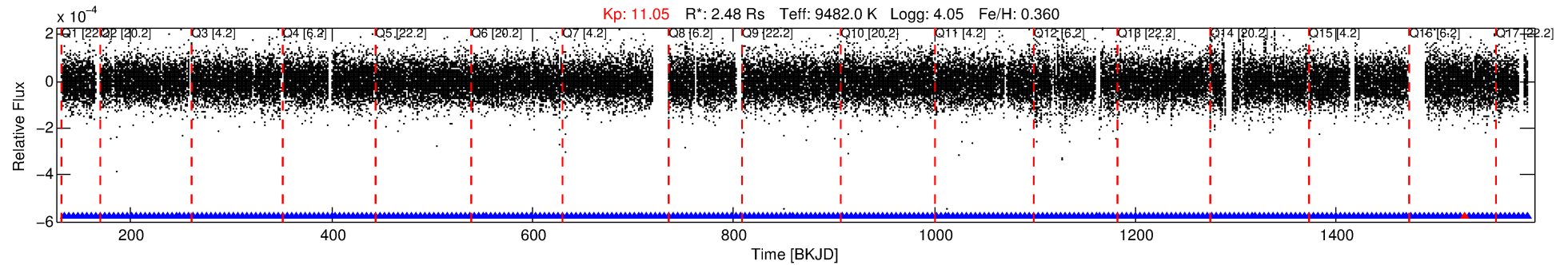
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011920541-01

No Significant Match Found

DV One-Page Summary

KIC: 11920541 Candidate: 1 of 1 Period: 4.423 d



DV Fit Results:

Period = 4.42342 [0.00011] d
Epoch = 134.5649 [0.0167] BKJD
Rp/R* = 0.0027 [0.0003]
a/R* = 1.11 [0.14]
b = 0.93 [0.09]
Seff = 8663.65 [4073.61]
Teq = 2460 [289] K
Rp = 0.73 [0.29] Re
a = 0.0718 [0.0226] AU
Ag = 12.45 [10.32] [1.11 σ]
Teffp = 7144 [1290] K [3.54 σ]

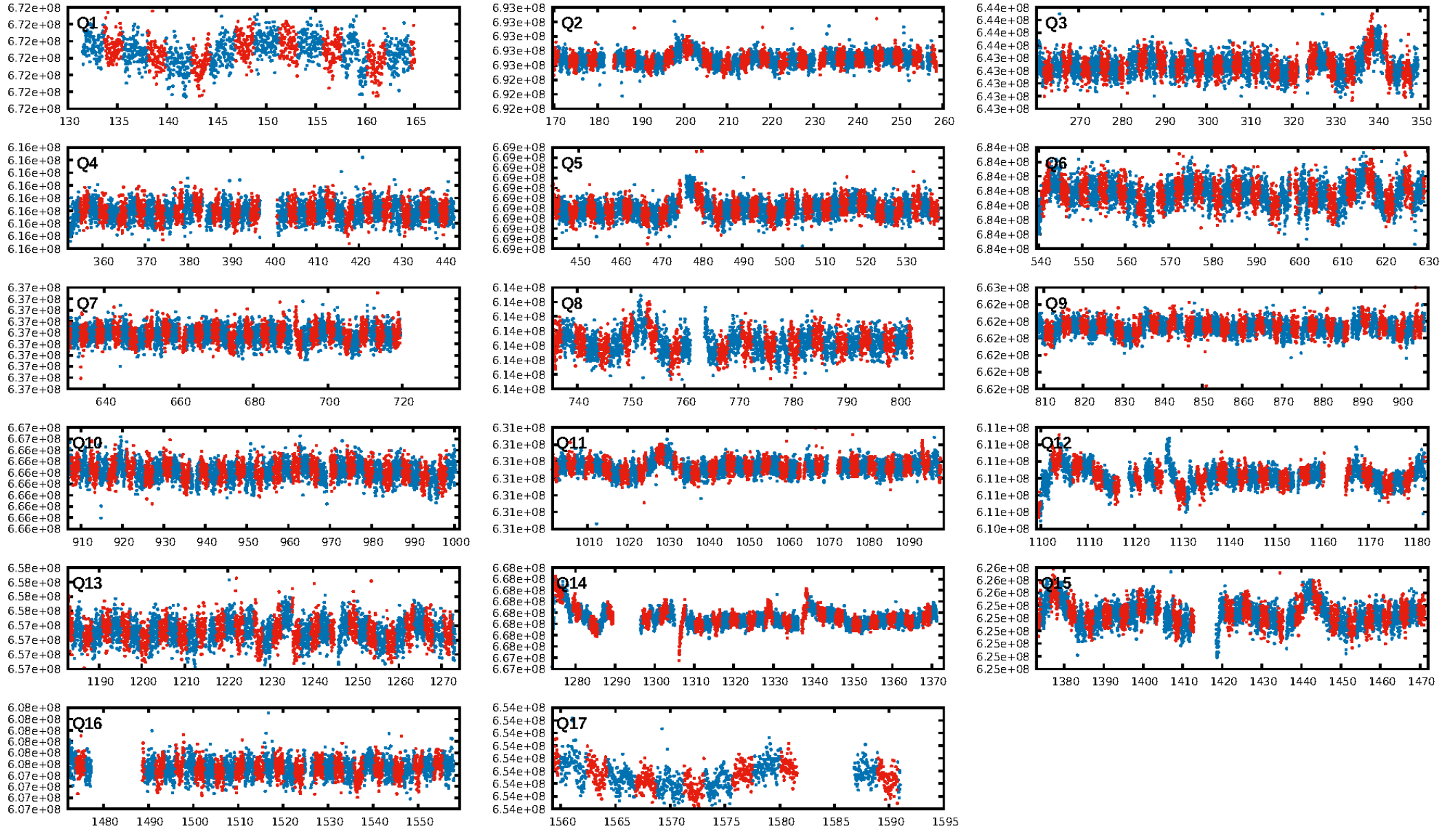
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.13e-18
RollingBand-fgt: 1.00 [298/299]
GhostDiagnostic-chr: 1.45
Centroid-sig: 19.3%
Centroid-so: 2.411 arcsec [1.15 σ]
OotOffset-rm: 2.762 arcsec [8.61 σ]
KicOffset-rm: 2.649 arcsec [9.94 σ]
OotOffset-st: 1/0/1/4 [6]
KicOffset-st: 1/0/1/4 [6]
DiffImageQuality-fgm: 0.33 [2/6]
DiffImageOverlap-fno: 1.00 [17/17]

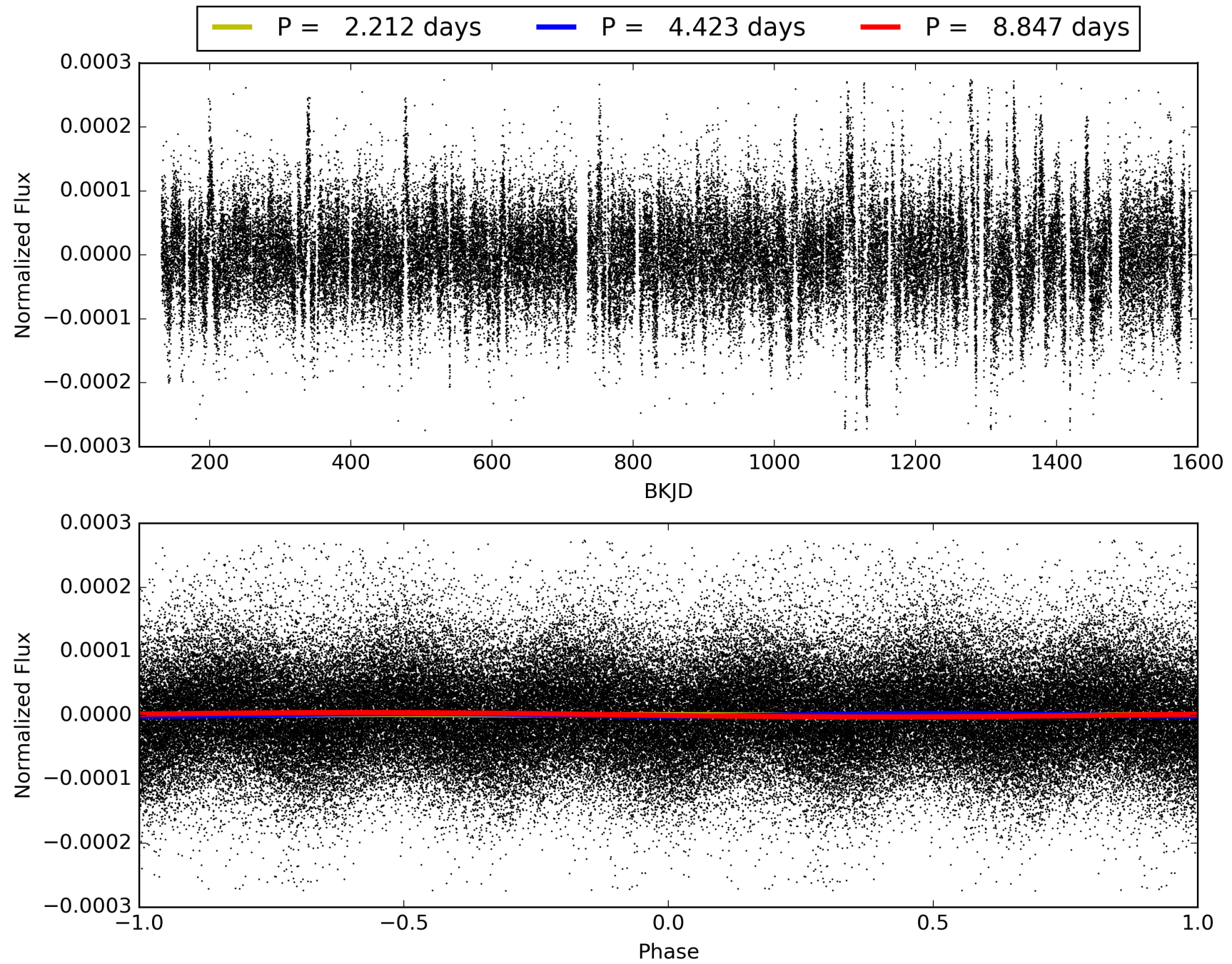
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:57:11 Z

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

TCE 011920541-01, PDC Light Curves

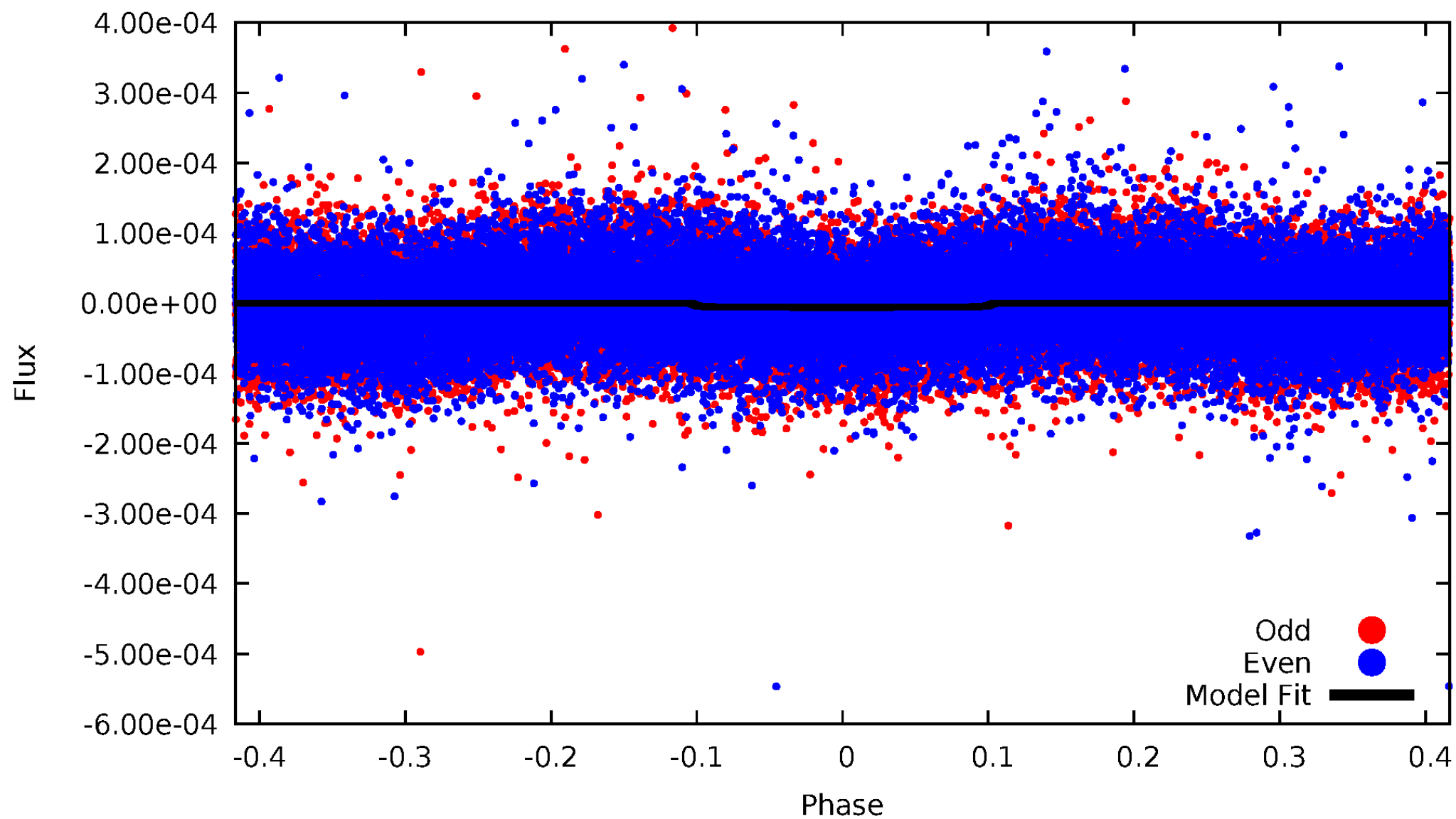


TCE 011920541-01



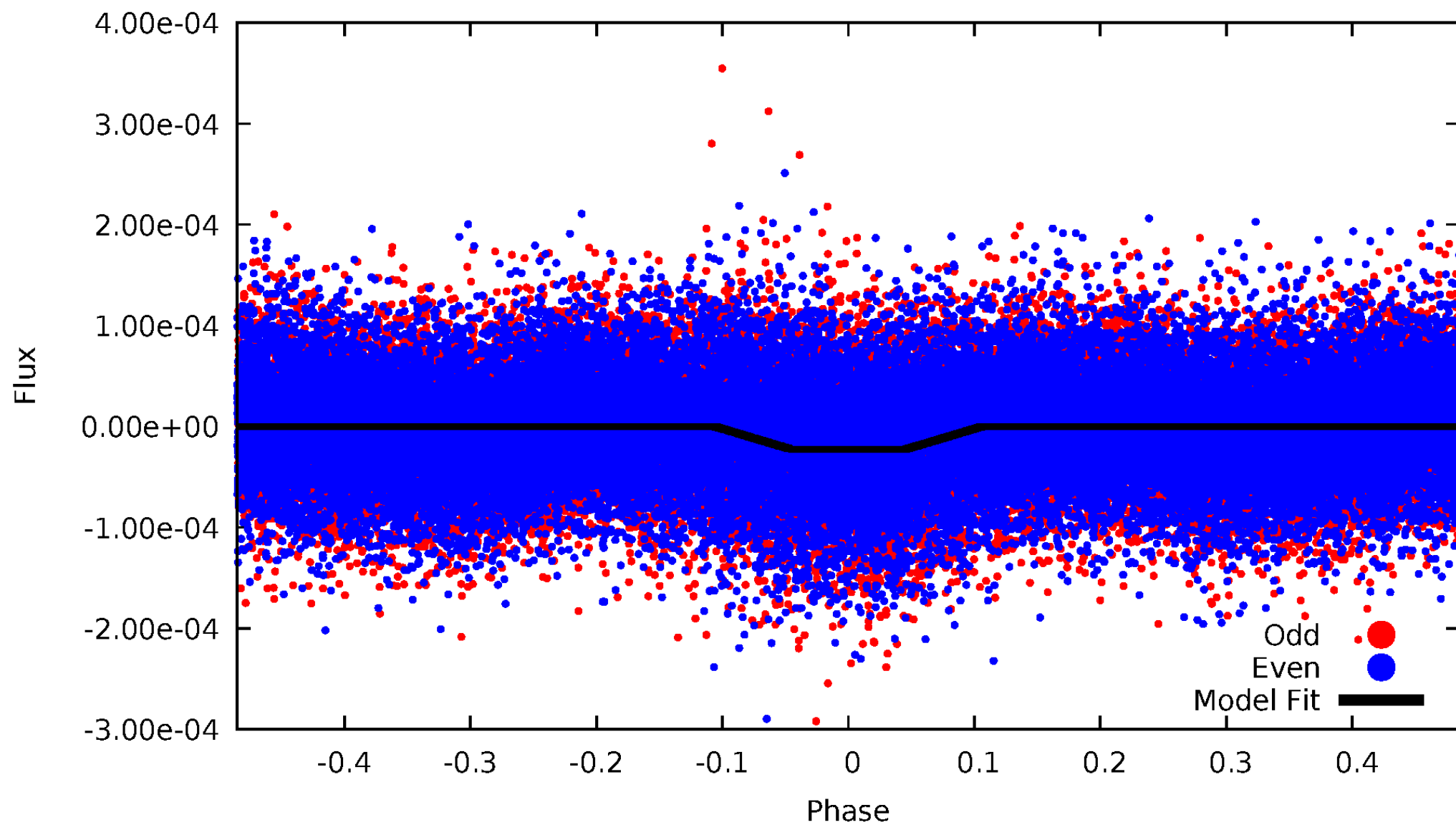
DV Odd/Even

TCE 011920541-01



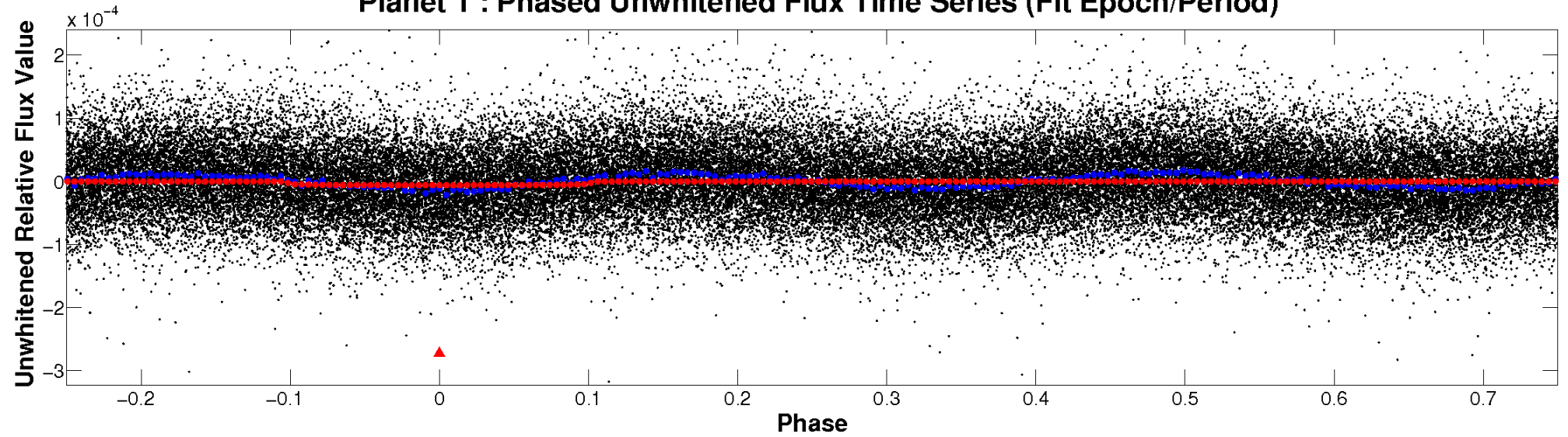
ALT Odd/Even

TCE 011920541-01

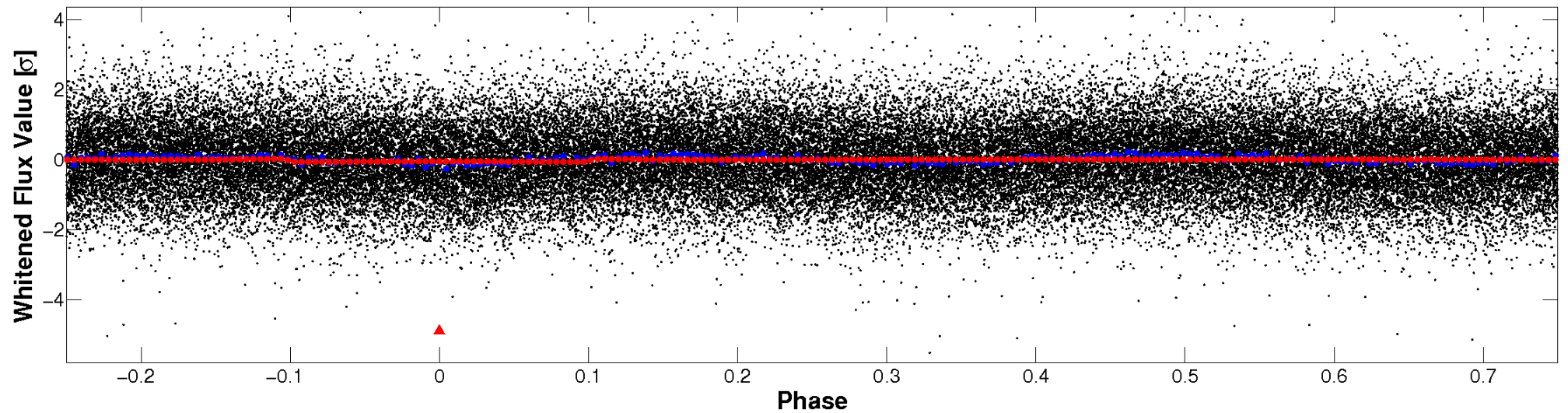


Non-Whitened Vs. Whitened Light Curve

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

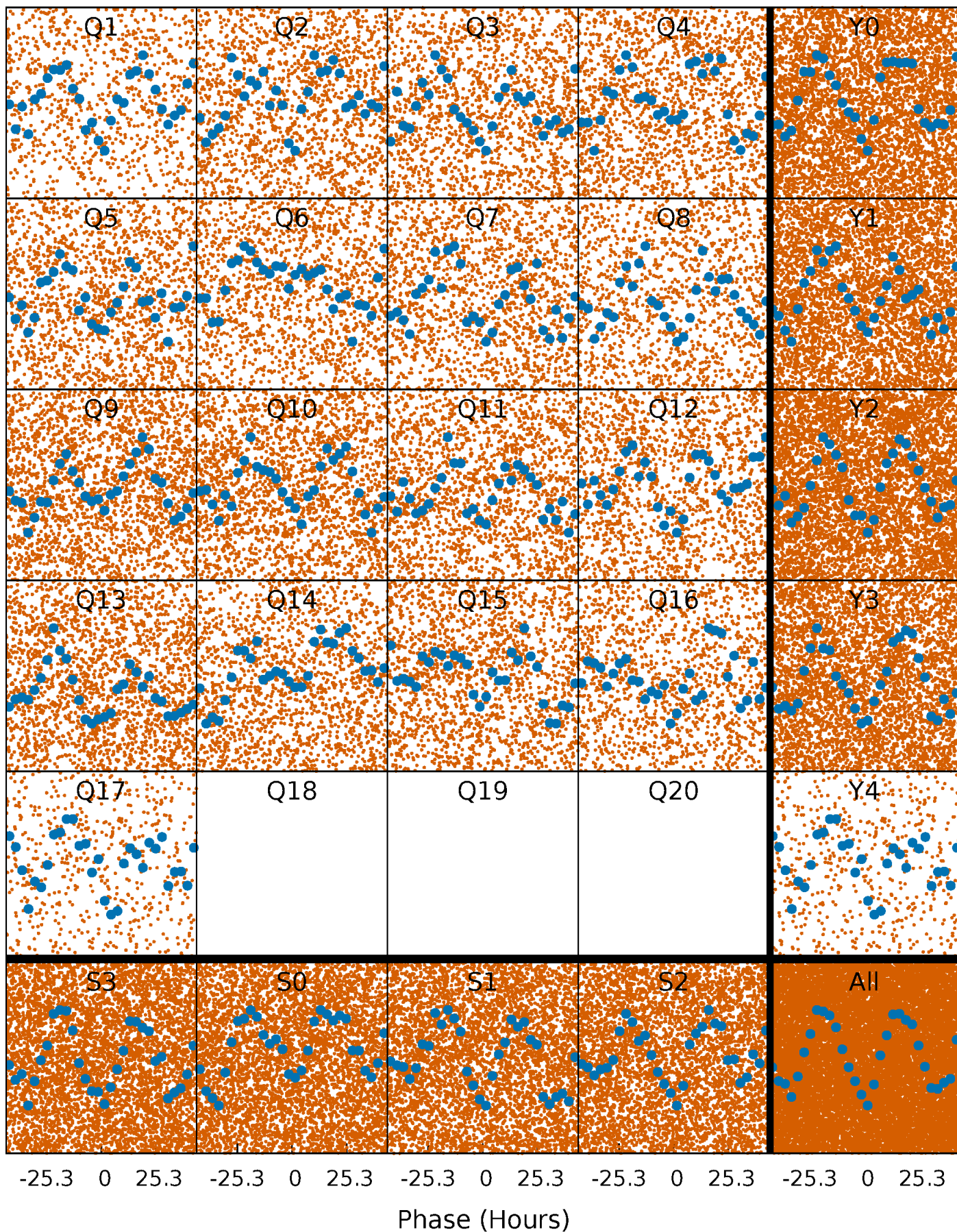


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



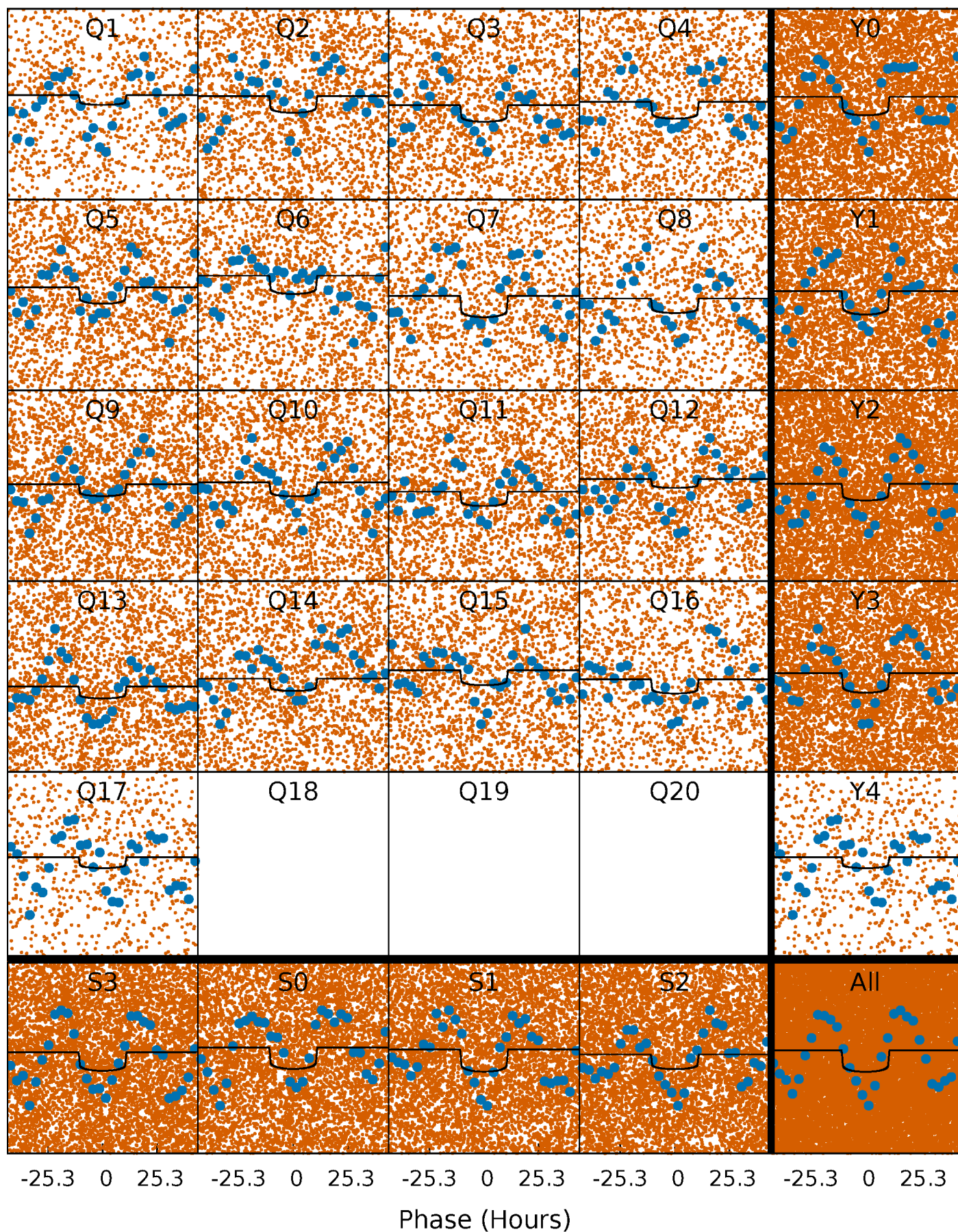
PDC Quarter-Phased Transit Curves

TCE 011920541-01 P= 4.423418 Days $T_0=134.564859$ (BKJD)



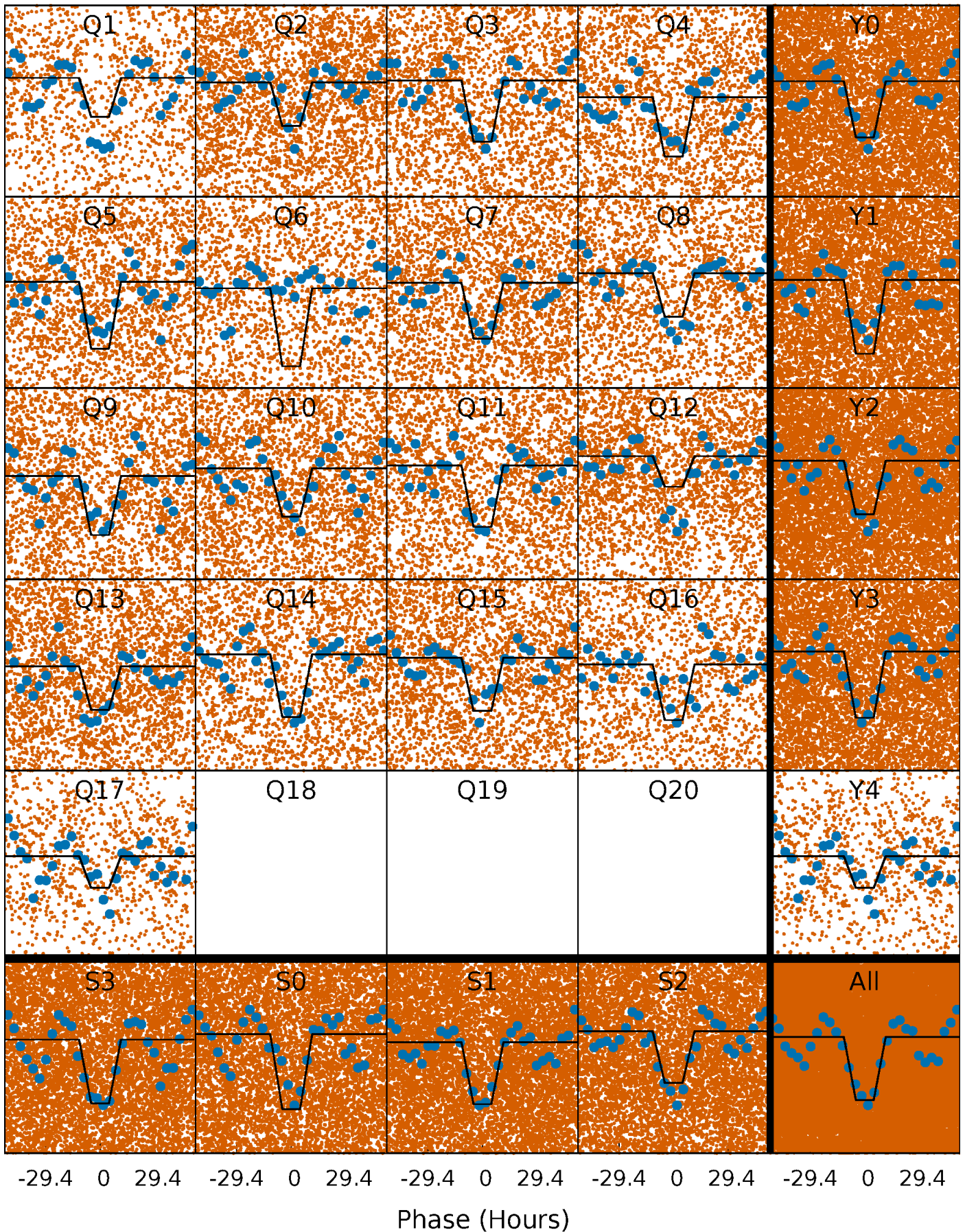
DV Quarter-Phased Transit Curves

TCE 011920541-01 P= 4.423418 Days $T_0=134.564859$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

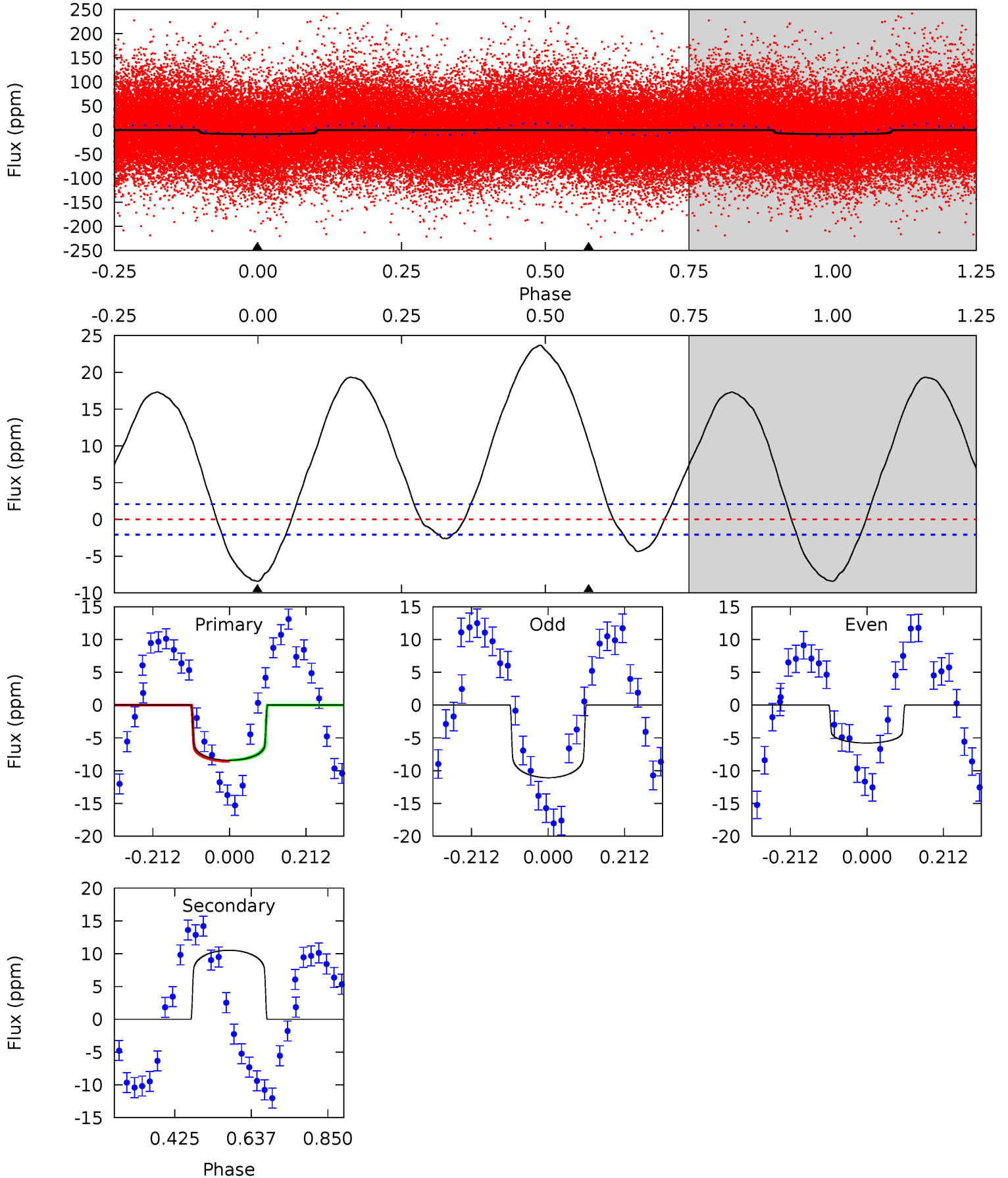
TCE 011920541-01 P= 4.423838 Days $T_0=134.481329$ (BKJD)



DV Model-Shift Uniqueness Test

011920541-01, P = 4.423418 Days, E = 130.141441 Days

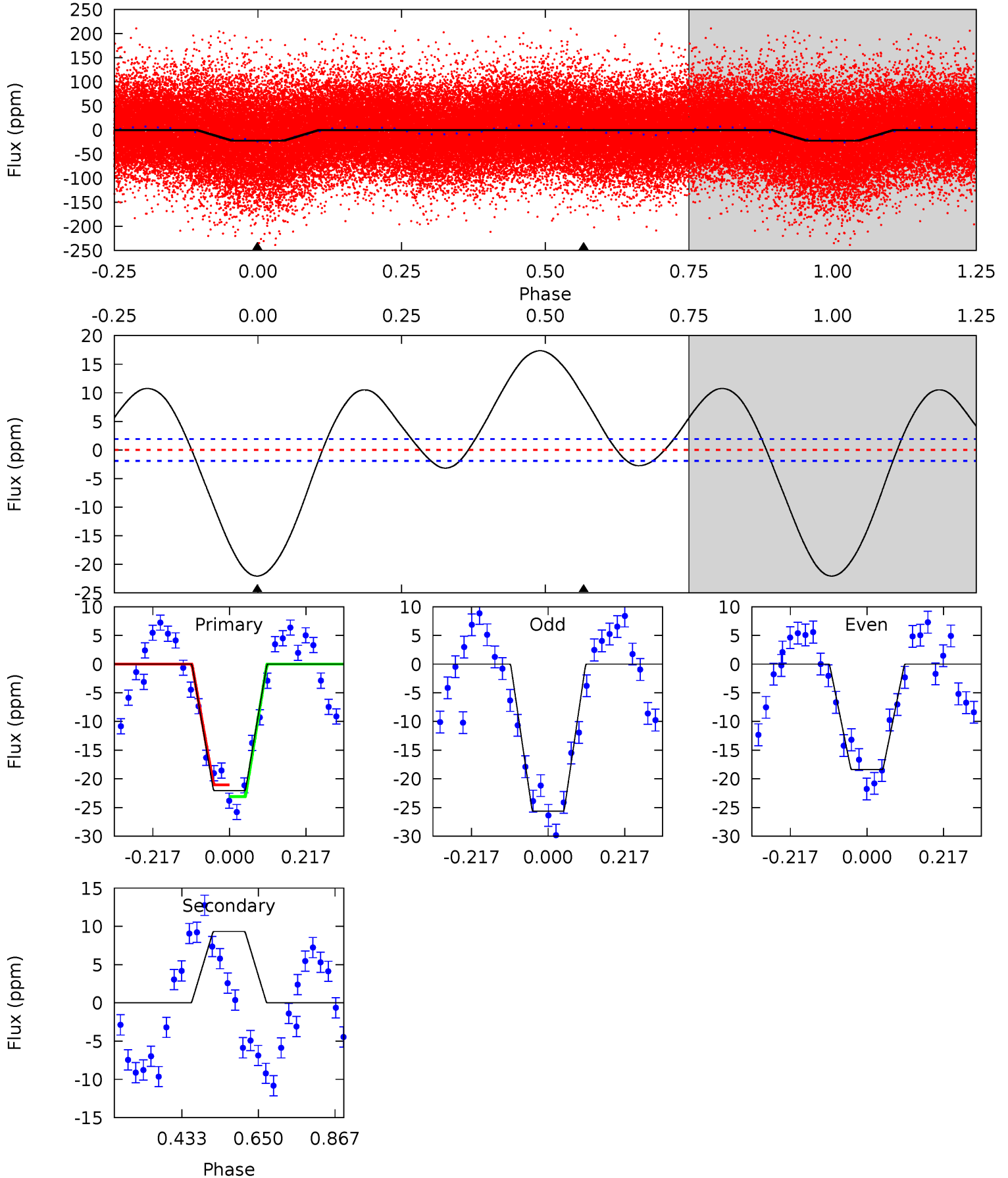
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.9	-22.4	0	0	4.40	1.25	11.5	17.9	17.9	-22.4	-22.4	5.64	1.11	0.74	0.19



Alt Model-Shift Uniqueness Test

011920541-01, P = 4.423838 Days, E = 130.057491 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
50.6	-21.4	0	0	4.40	1.24	8.71	50.6	50.6	-21.4	-21.4	8.31	1.20	0.44	2.40



Stellar Parameters For KIC 011920541

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	9482^{+295}_{-394}	$4.050^{+0.099}_{-0.231}$	$0.360^{+0.050}_{-0.300}$	$2.485^{+0.970}_{-0.388}$	$2.530^{+0.363}_{-0.242}$	$0.232^{+0.105}_{-0.135}$
	+3%/-4%	+2%/-6%	+14%/-83%	+39%/-16%	+14%/-10%	+45%/-58%
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 011920541-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	11 ± 0	$0.74^{+0.16}_{-0.11}$	3477^{+303}_{-205}	-10900^{+881}_{-1140}	$-53.252^{+17.425}_{-19.607}$
Alt.	9 ± 0	$1.33^{+0.24}_{-0.15}$	3477^{+302}_{-224}	-7170^{+323}_{-369}	$-14.853^{+3.973}_{-3.888}$

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

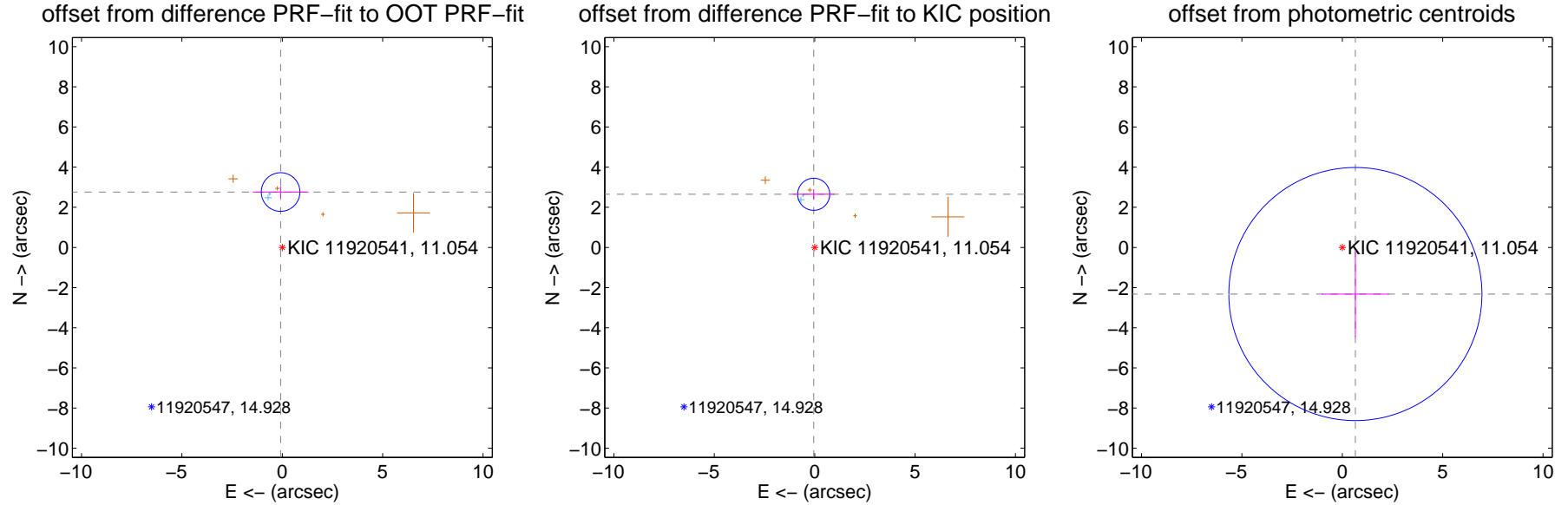
DV Centroid Data

Supplemental centroid analysis for 011920541-01. **Kepler magnitude: 11.05.** Transit SNR 7.05

There are 2 quarters with good PRF difference image offsets

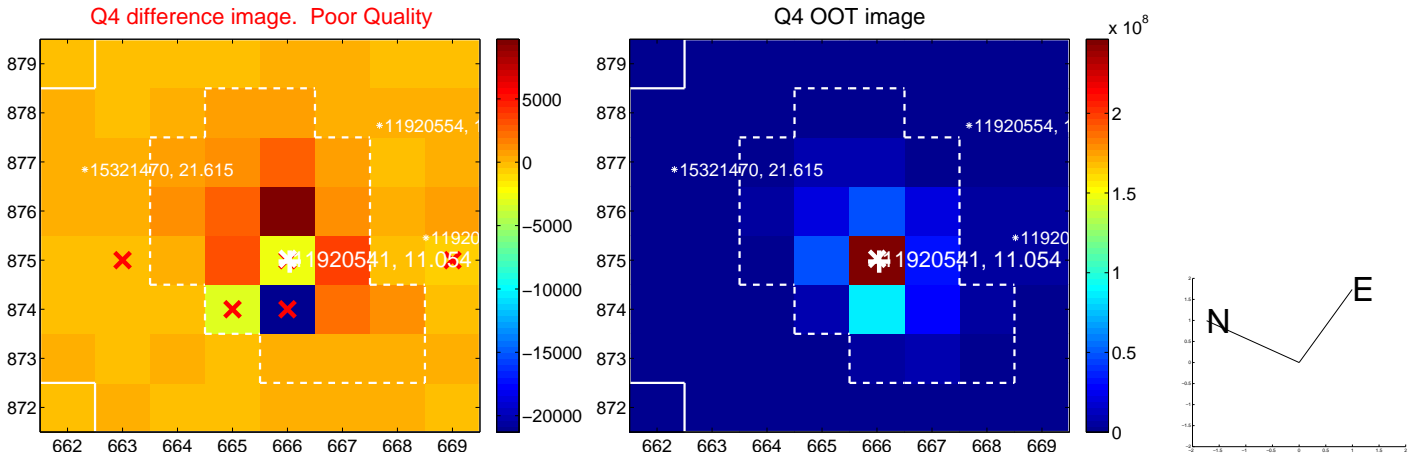
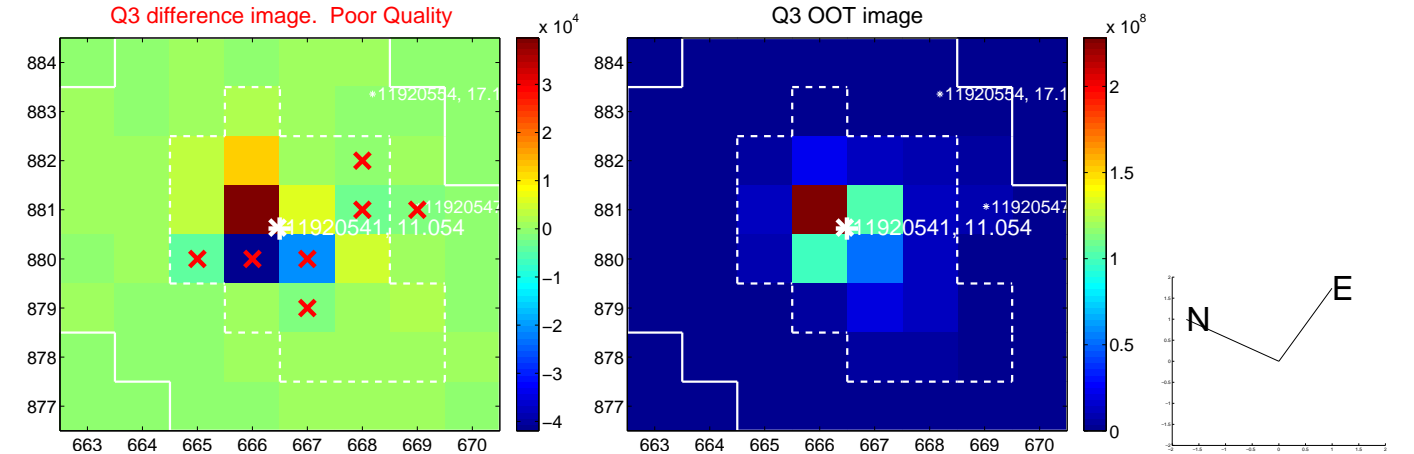
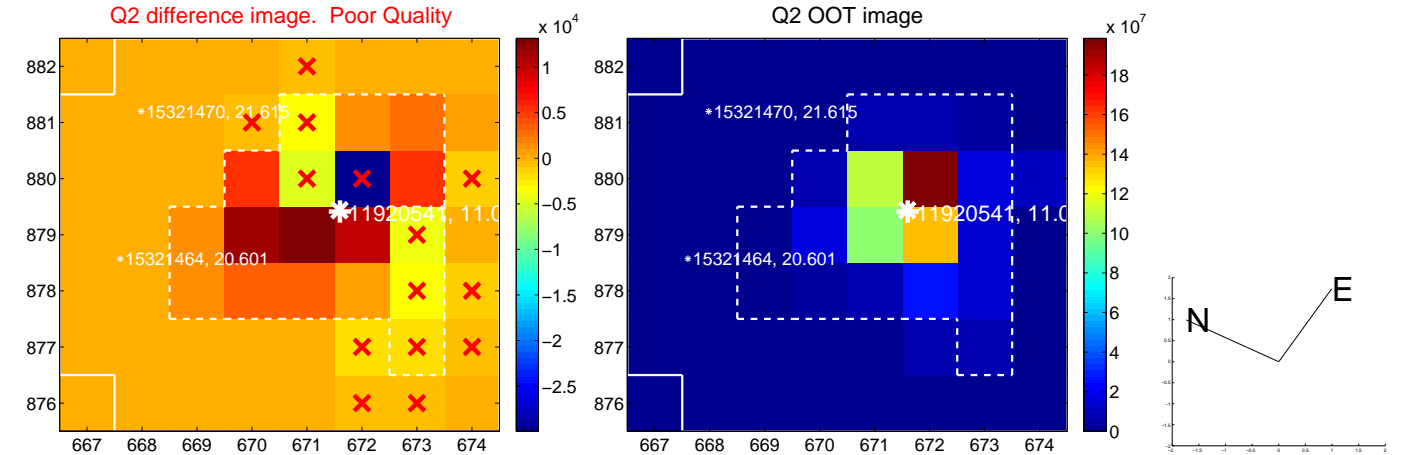
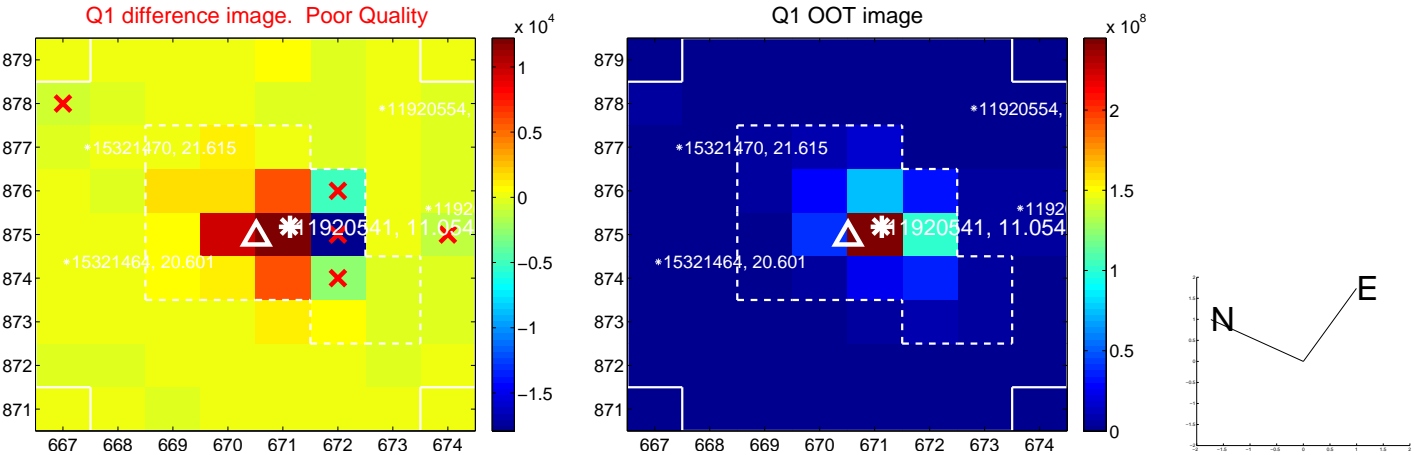
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.762 ± 0.321	8.61	0.084 ± 1.388	2.761 ± 0.284
PRF-fit source offset from KIC position	2.649 ± 0.266	9.94	0.049 ± 1.047	2.648 ± 0.251
photometric centroid source offset	2.41 ± 2.10	1.15	-0.65 ± 1.68	-2.32 ± 2.13

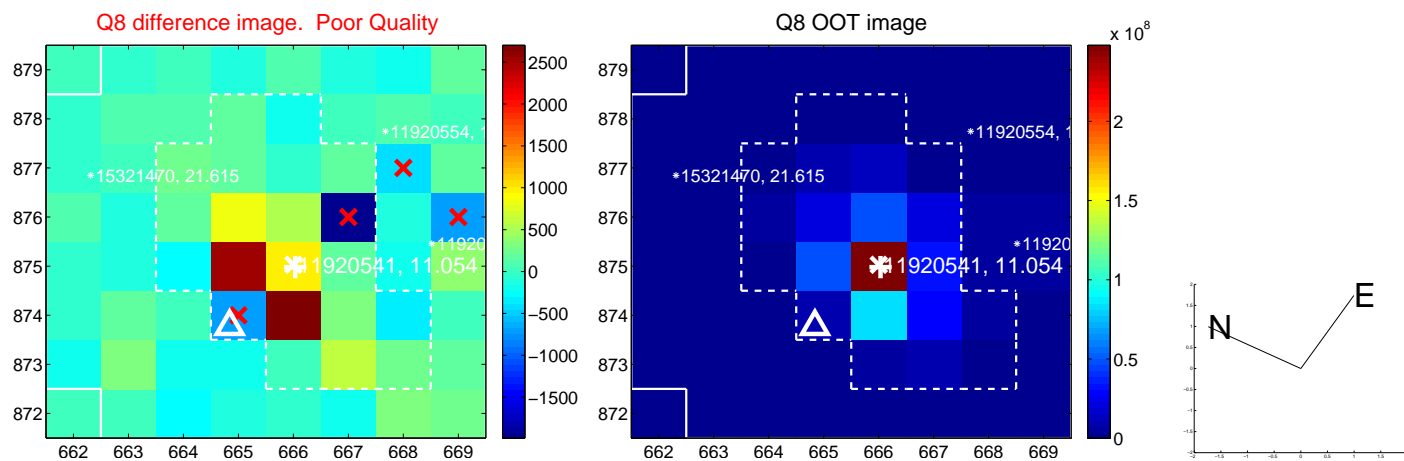
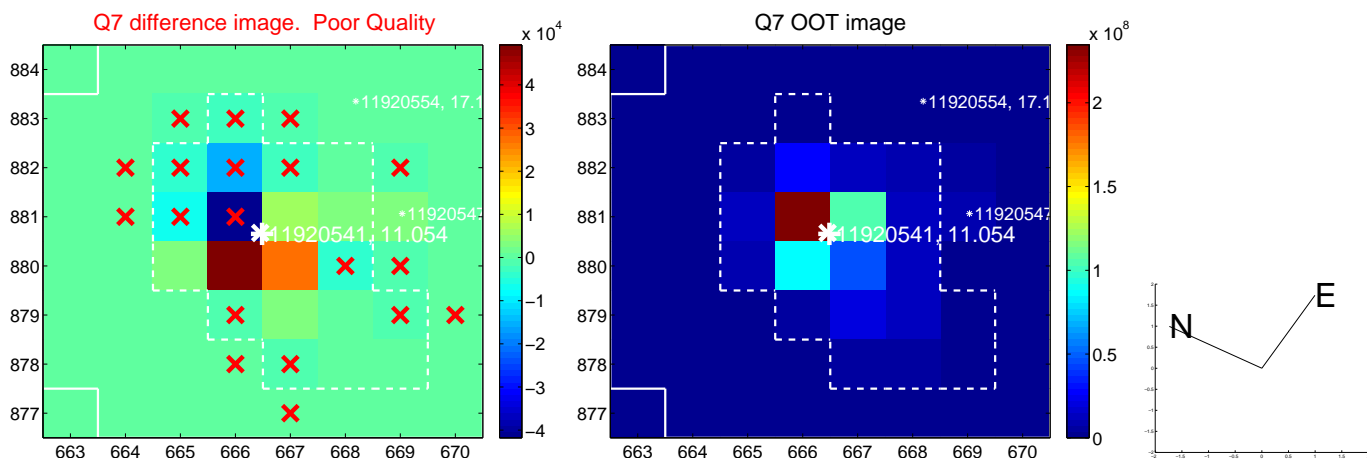
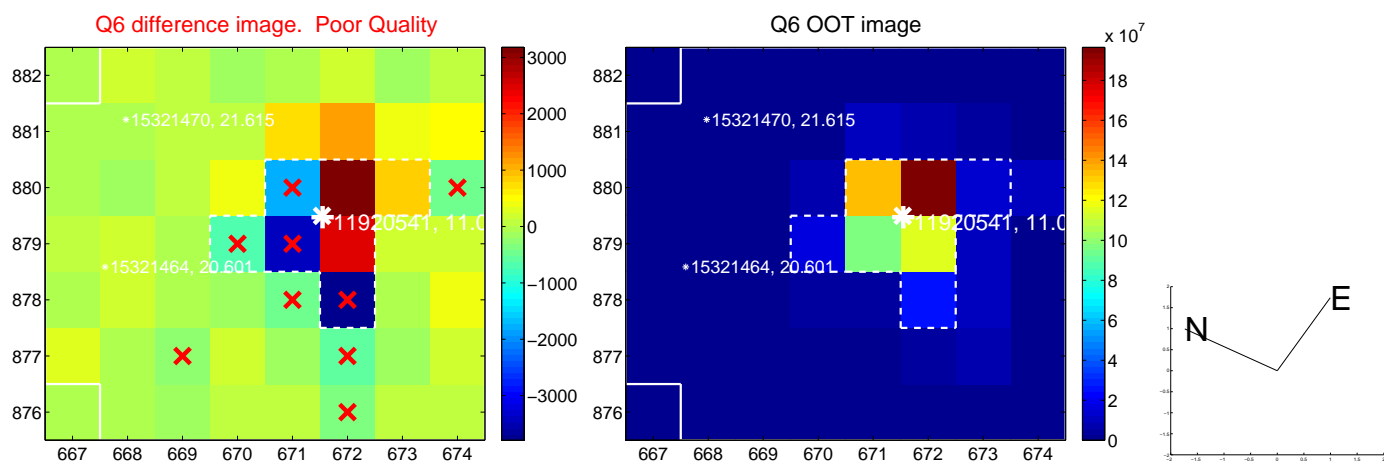
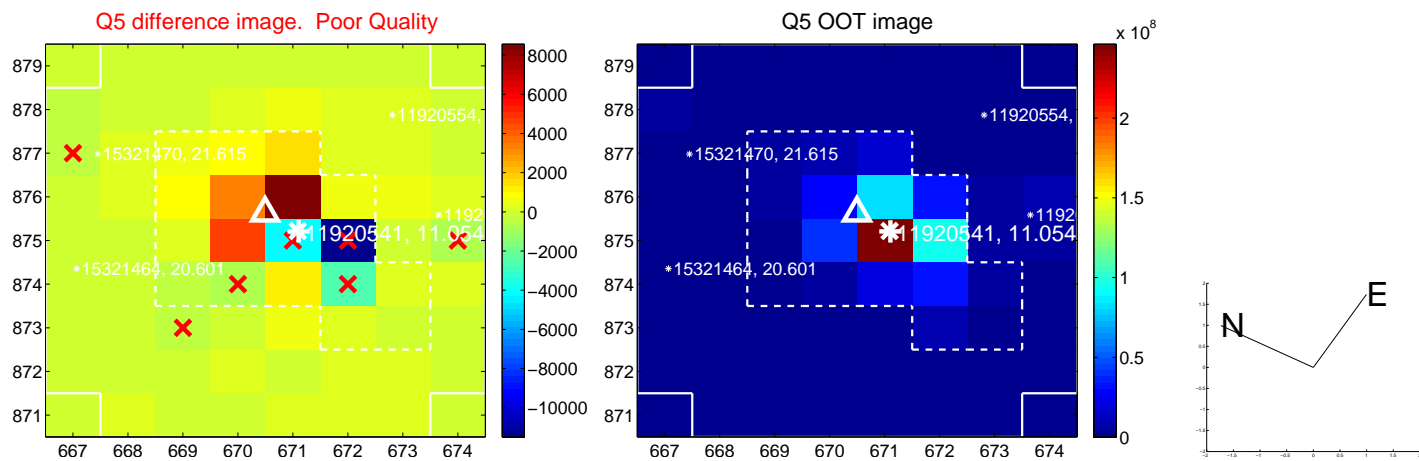


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

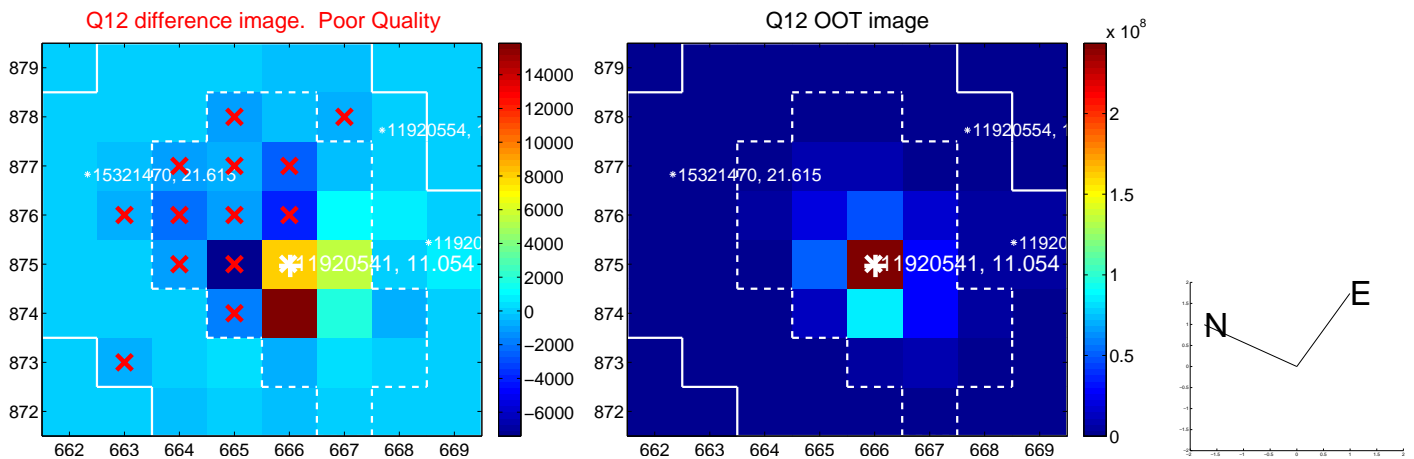
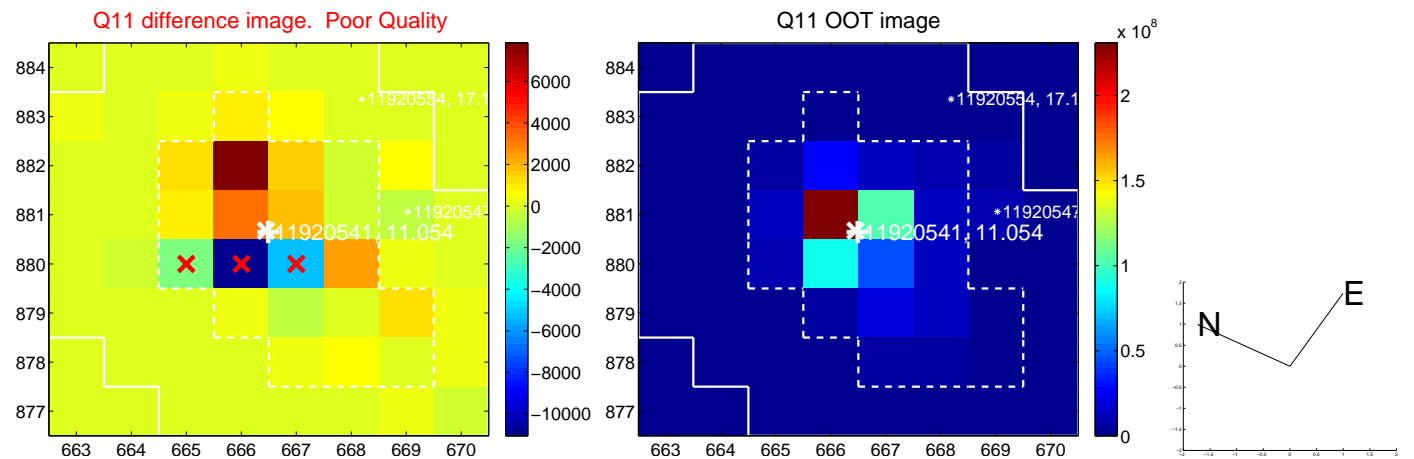
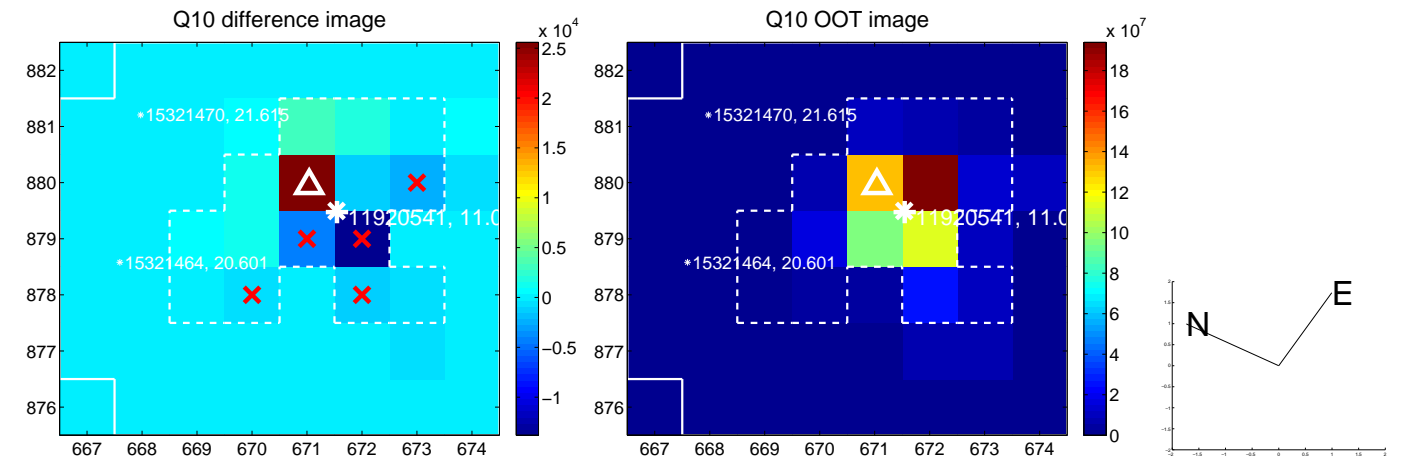
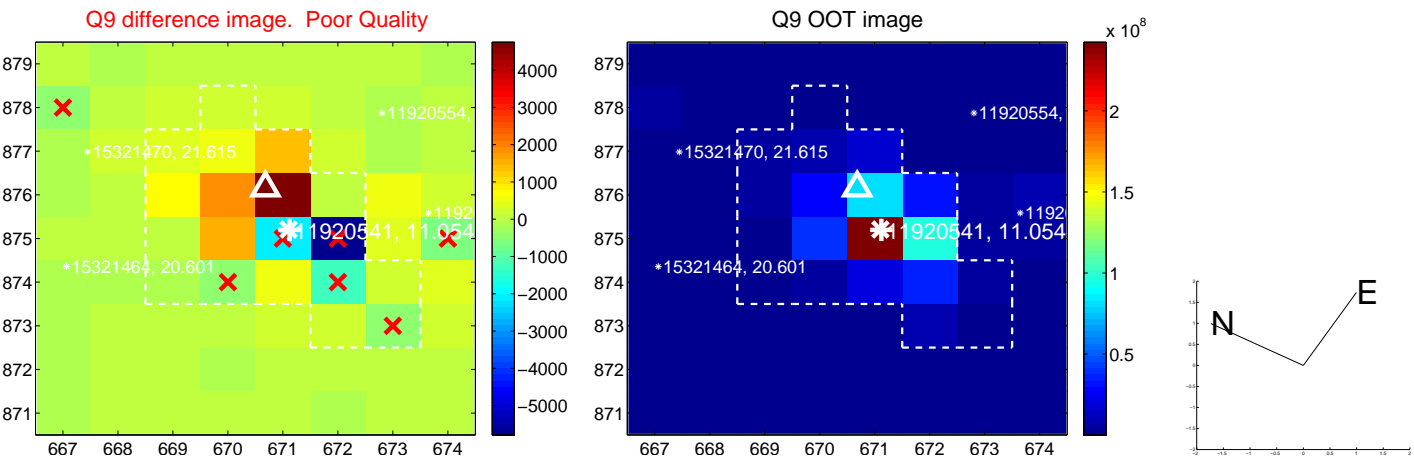
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



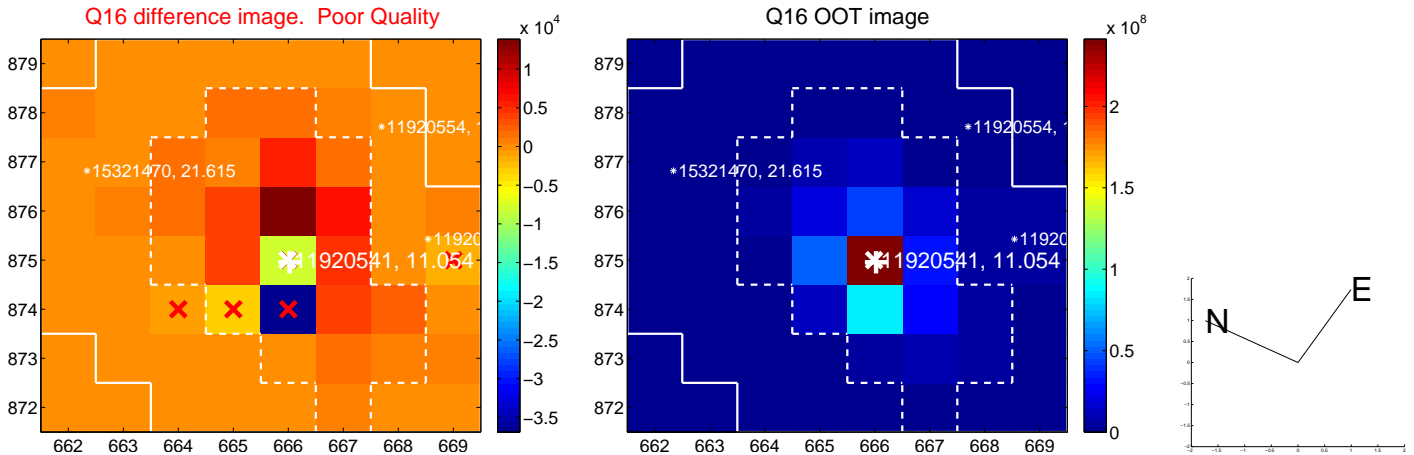
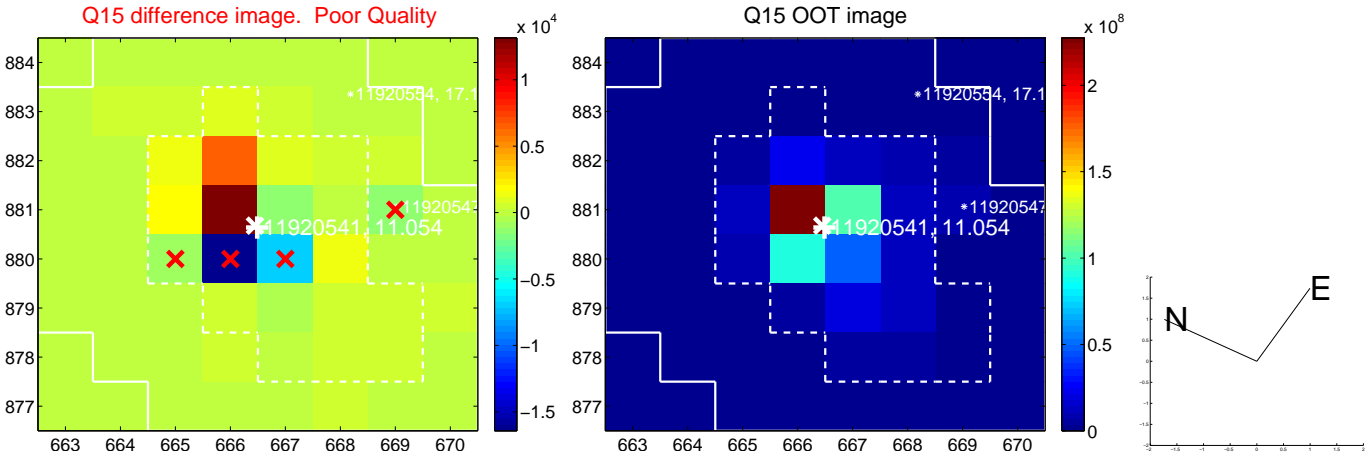
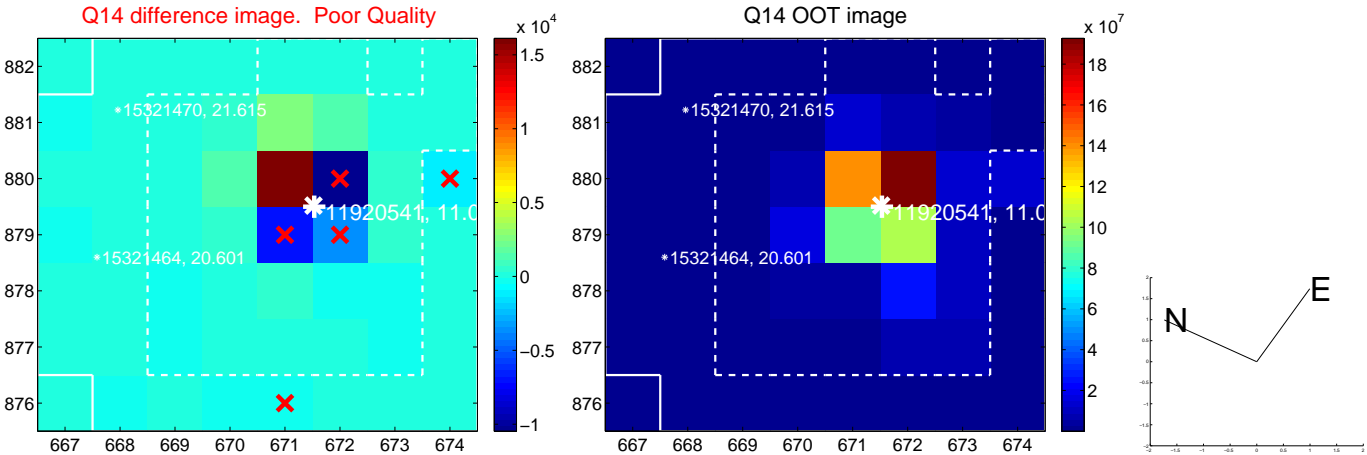
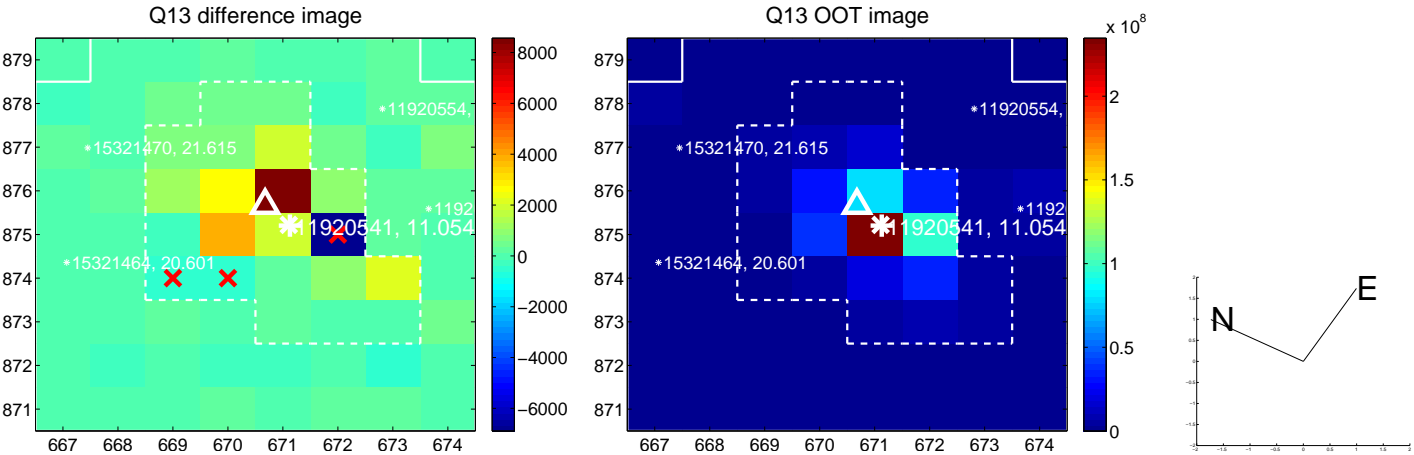
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



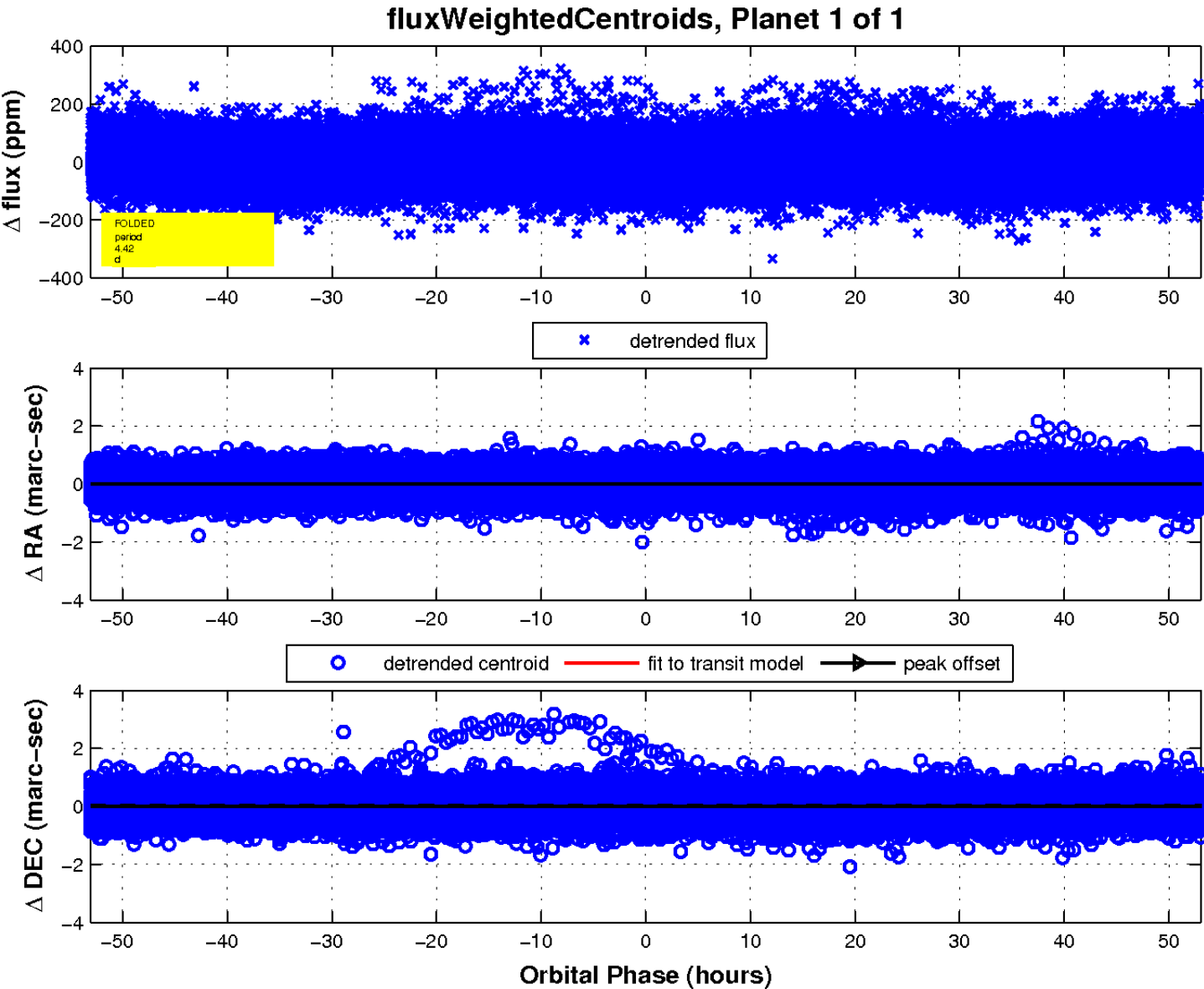
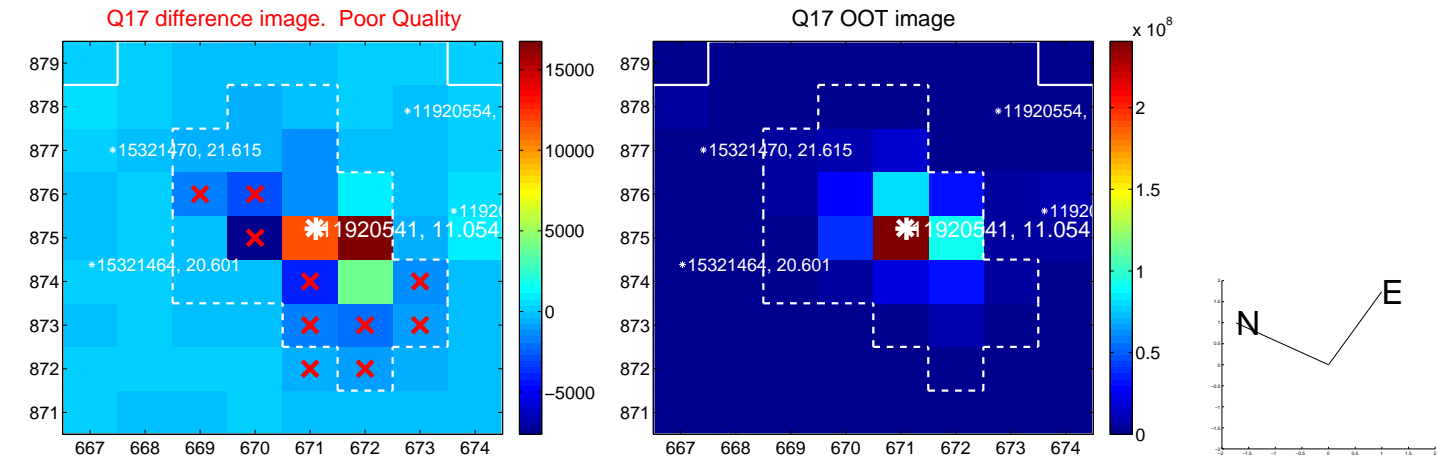
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Declination