

KIC 005904710

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})
005904710-01	OBS	No	0.531690	132.023222	22.9	2.008	7.5	8.0	3.13	6049	1.77	54422.77

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005904710-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_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.

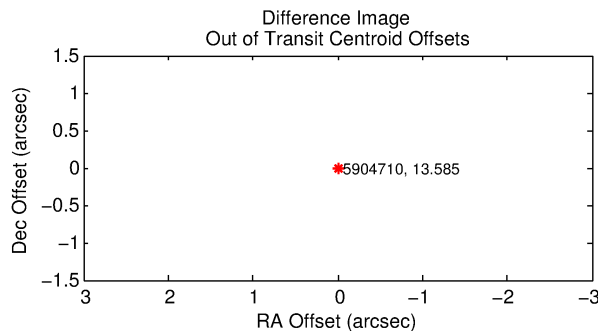
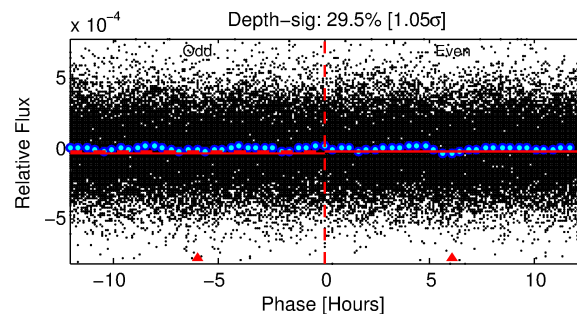
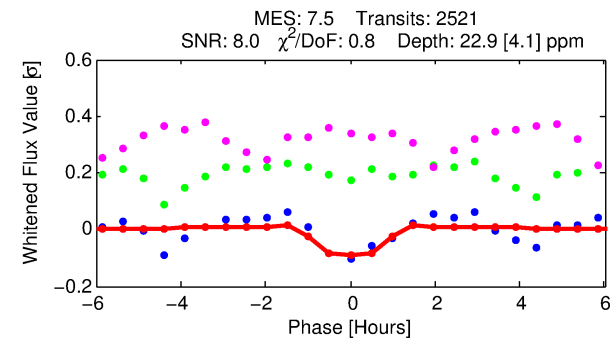
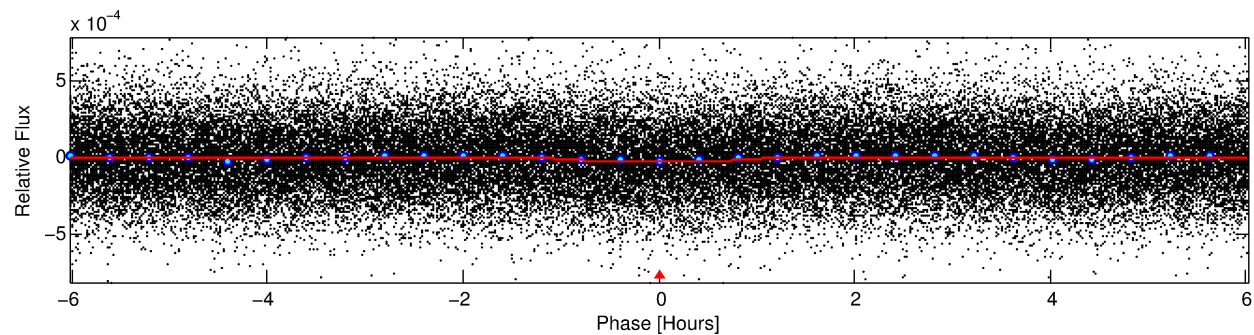
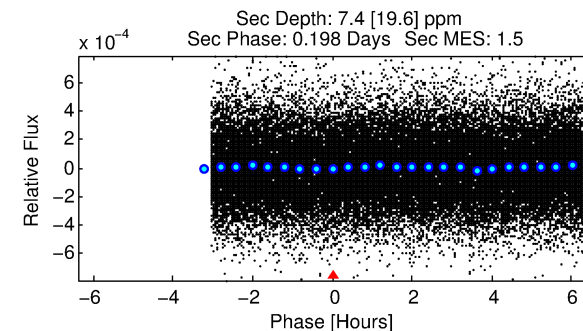
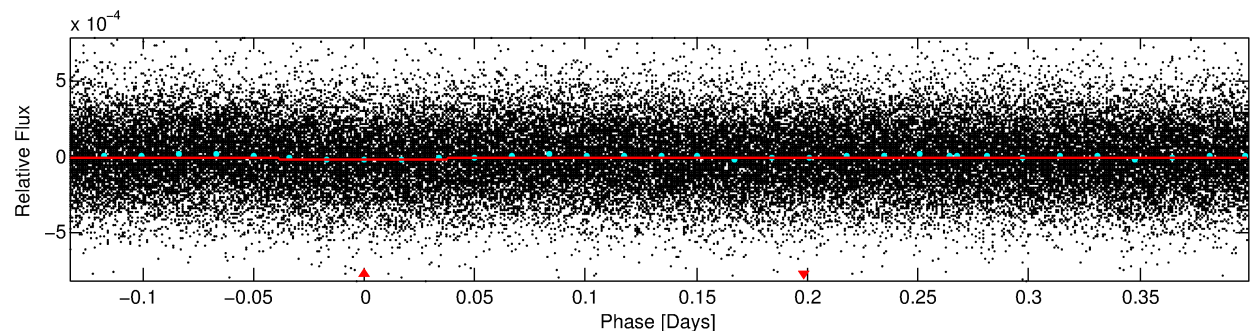
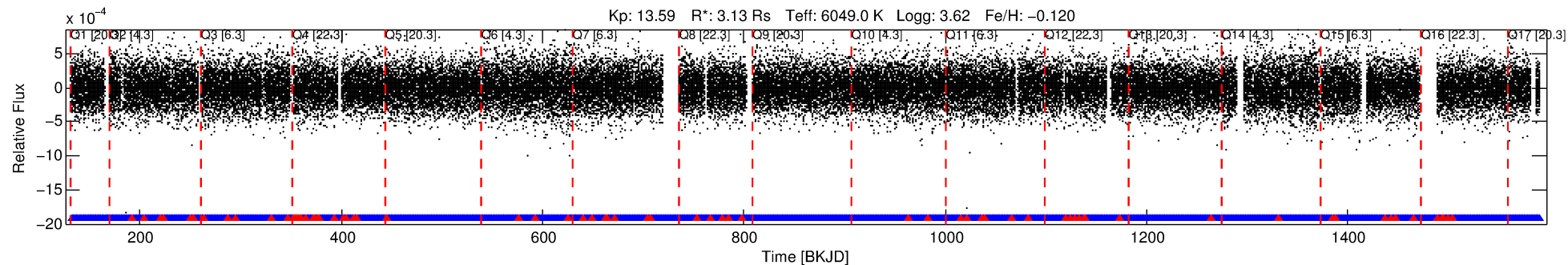
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005904710-01

No Significant Match Found

DV One-Page Summary

KIC: 5904710 Candidate: 1 of 1 Period: 0.532 d



DV Fit Results:

Period = 0.53169 [0.00001] d
Epoch = 132.0232 [0.0030] BKJD
Rp/R* = 0.0052 [0.0032]
a/R* = 1.29 [1.70]
b = 0.90 [0.67]
Seff = 54422.77 [57850.51]
Teff = 3895 [1035] K
Rp = 1.77 [1.53] Re
a = 0.0147 [0.0093] AU
Ag = 0.28 [0.87] [-0.82σ]
Teffp = 4387 [3192] K [0.15σ]

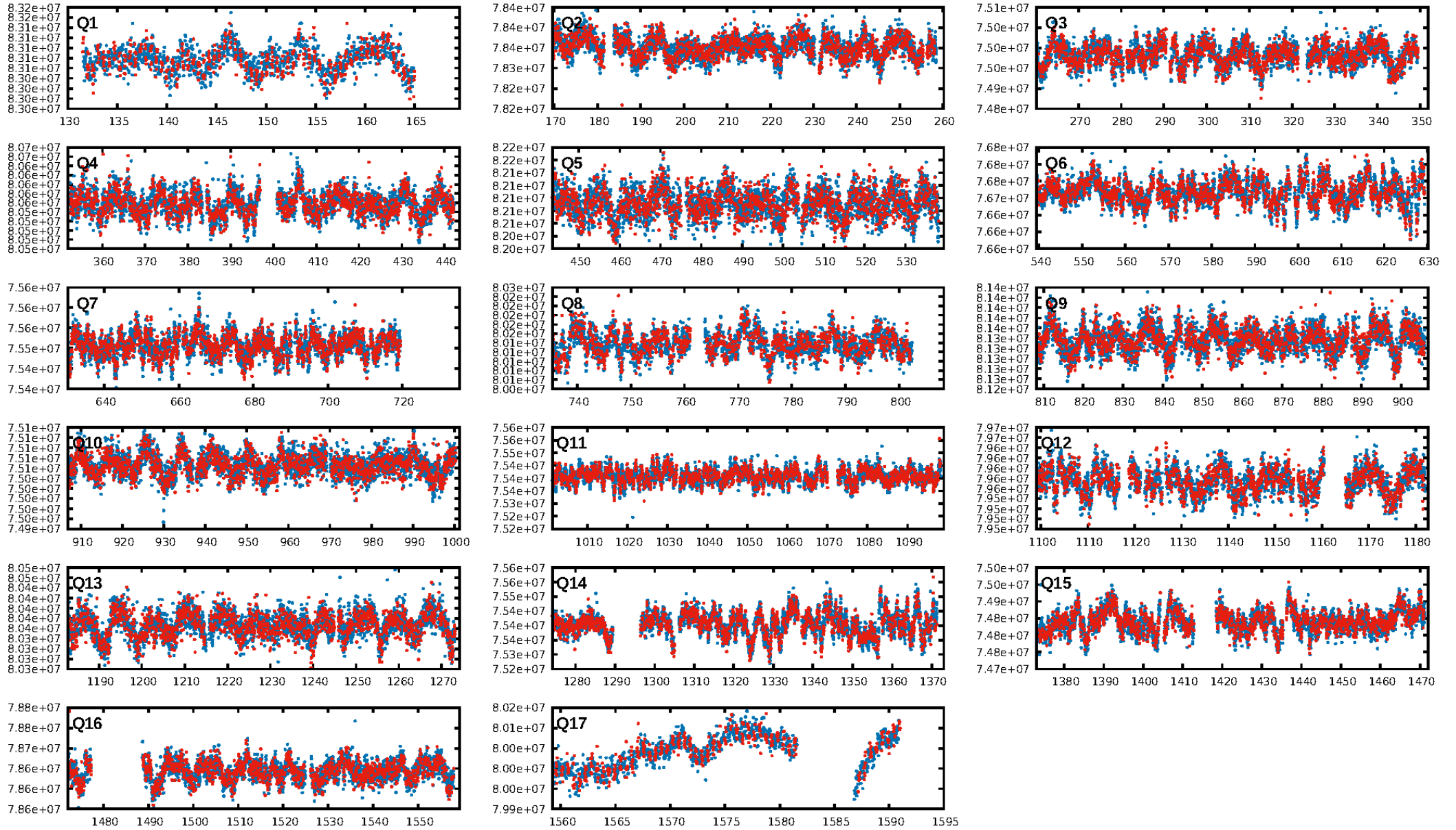
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: 5.39e-12
RollingBand-fgt: 0.97 [2327/2407]
GhostDiagnostic-chr: 0.2405
Centroid-sig: 16.4%
Centroid-so: 2.491 arcsec [2.15σ]
OotOffset-rm: N/A
KicOffset-rm: 6.799 arcsec [6.67σ]
OotOffset-st: 0/0/0 [0]
KicOffset-st: 3/0/0 [3]
DiffImageQuality-fgm: 0.00 [0/3]
DiffImageOverlap-fno: 1.00 [17/17]

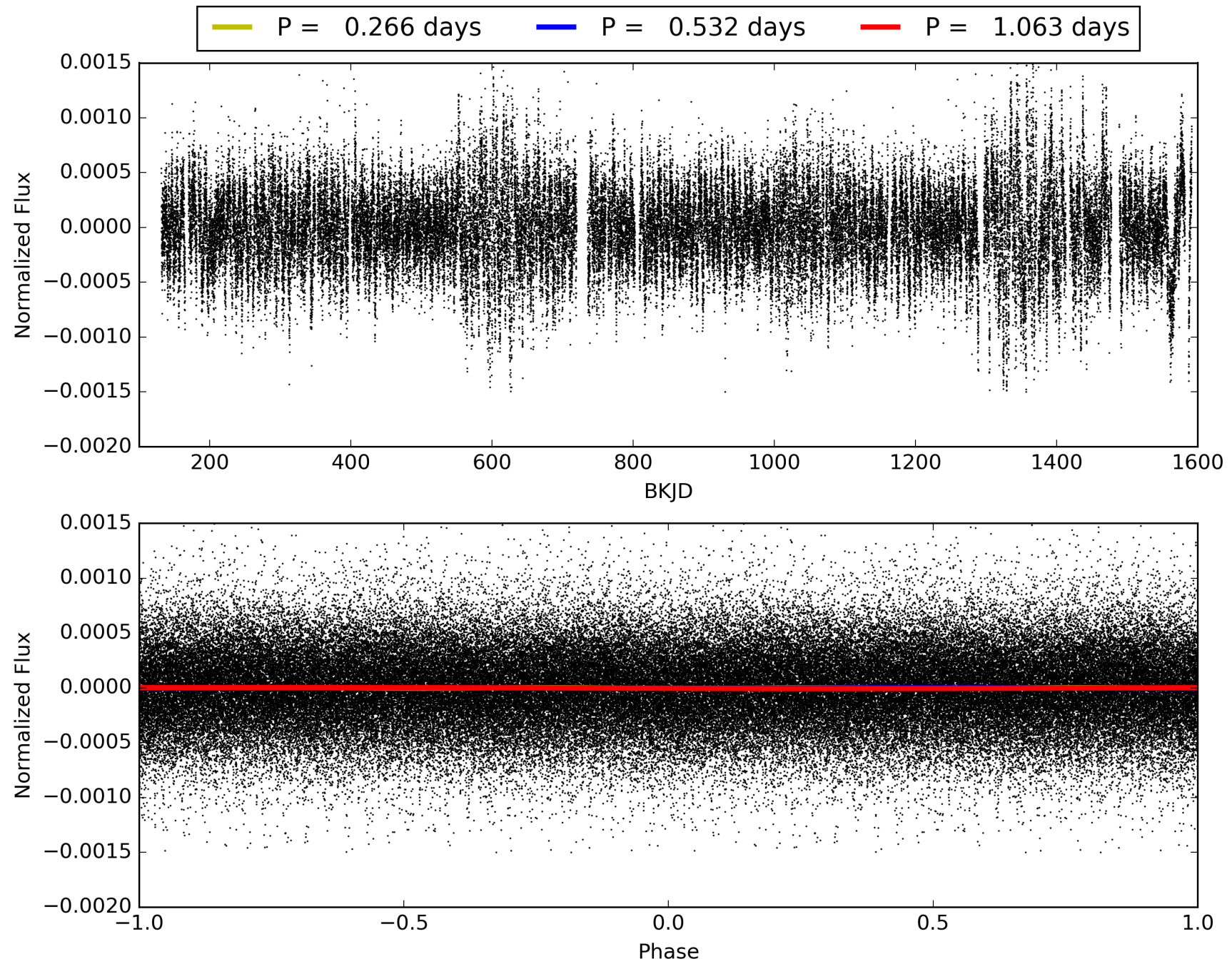
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 13:06:13 Z

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

TCE 005904710-01, PDC Light Curves

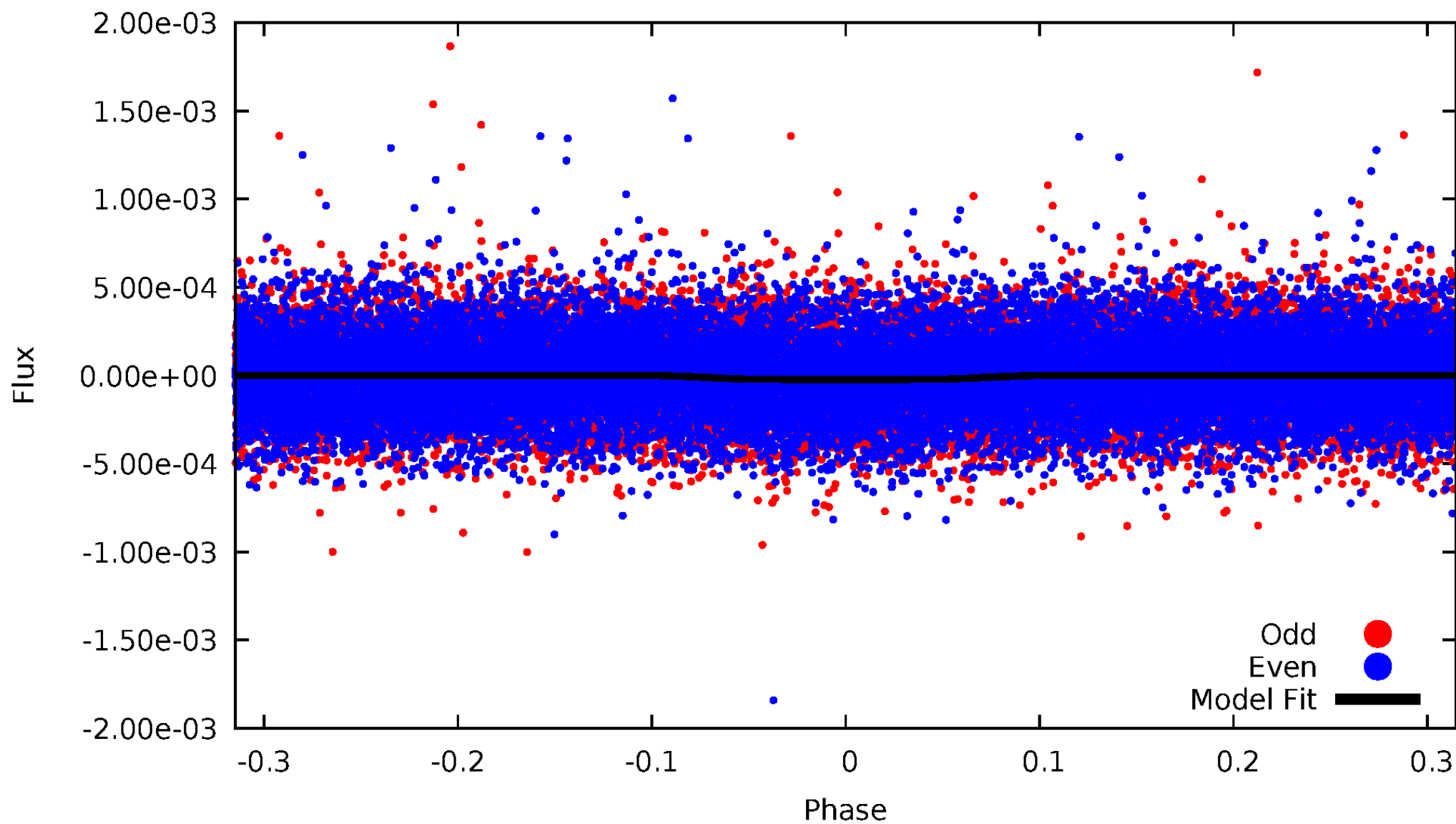


TCE 005904710-01



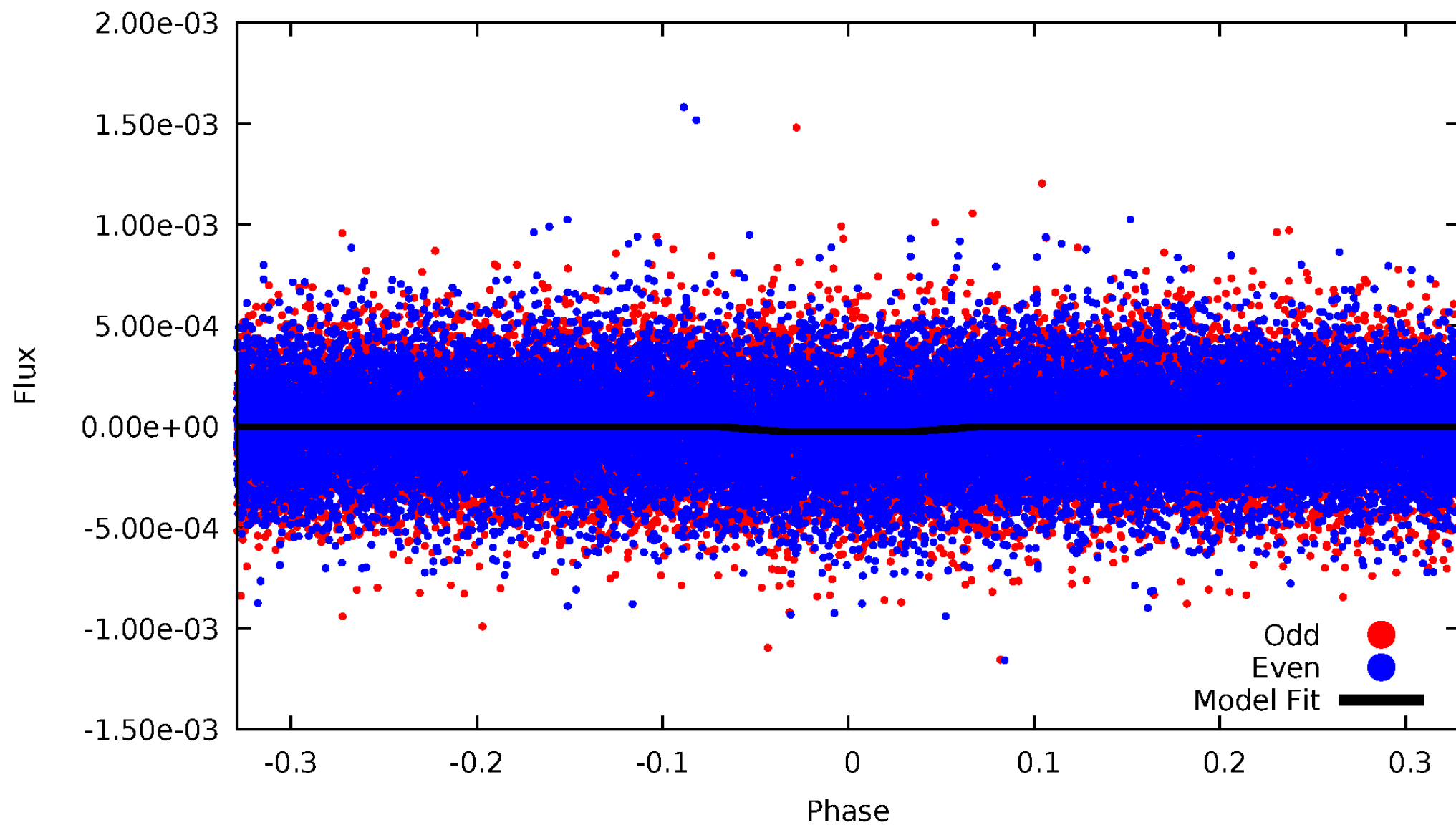
DV Odd/Even

TCE 005904710-01

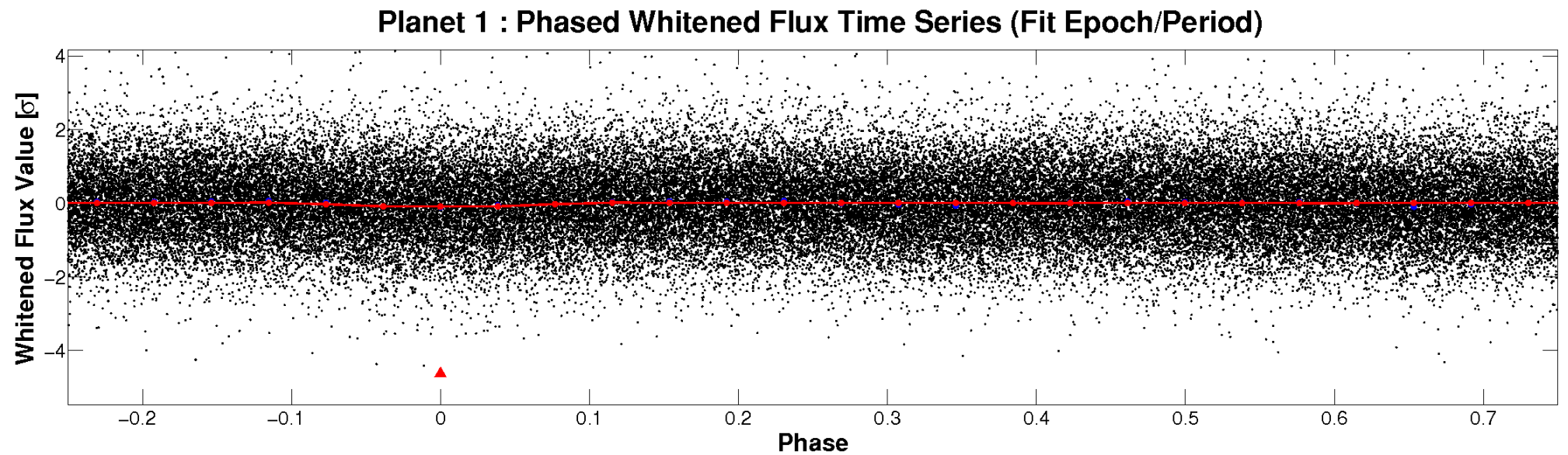
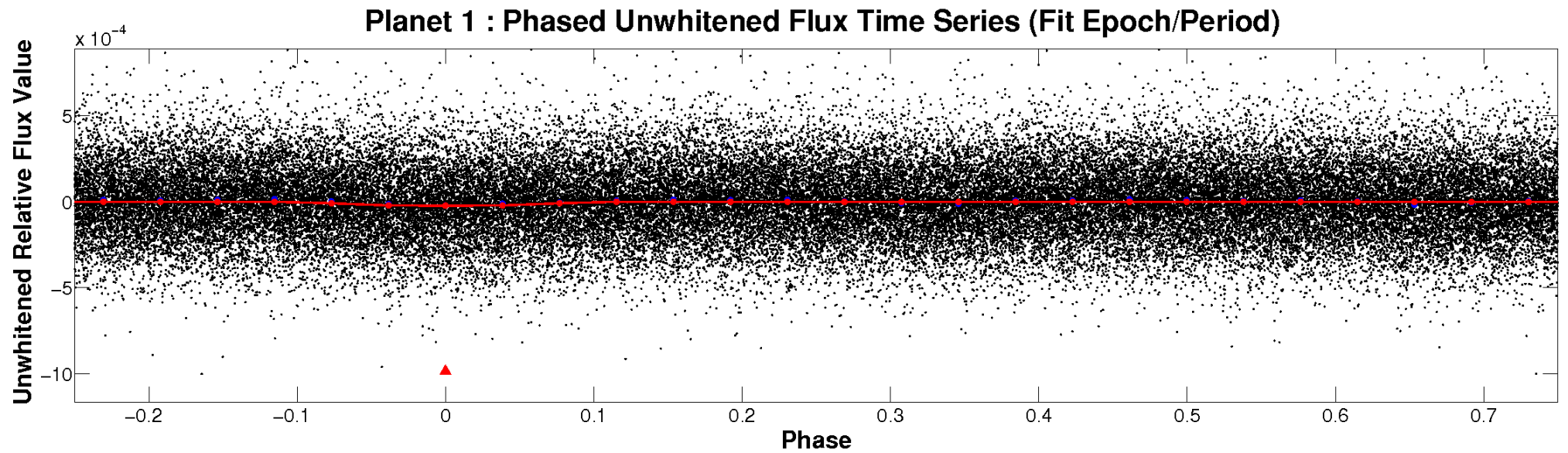


ALT Odd/Even

TCE 005904710-01

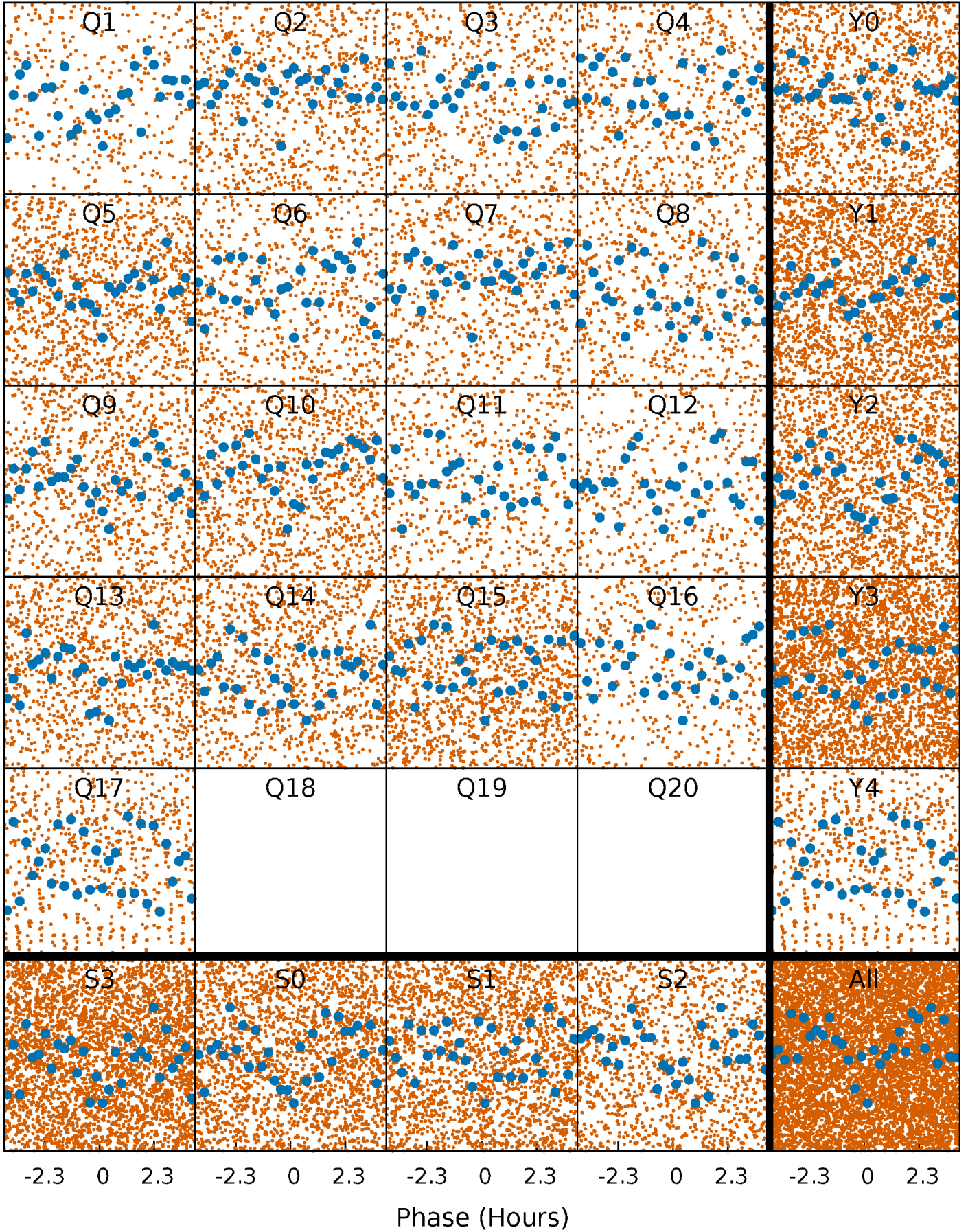


Non-Whitened Vs. Whitened Light Curve



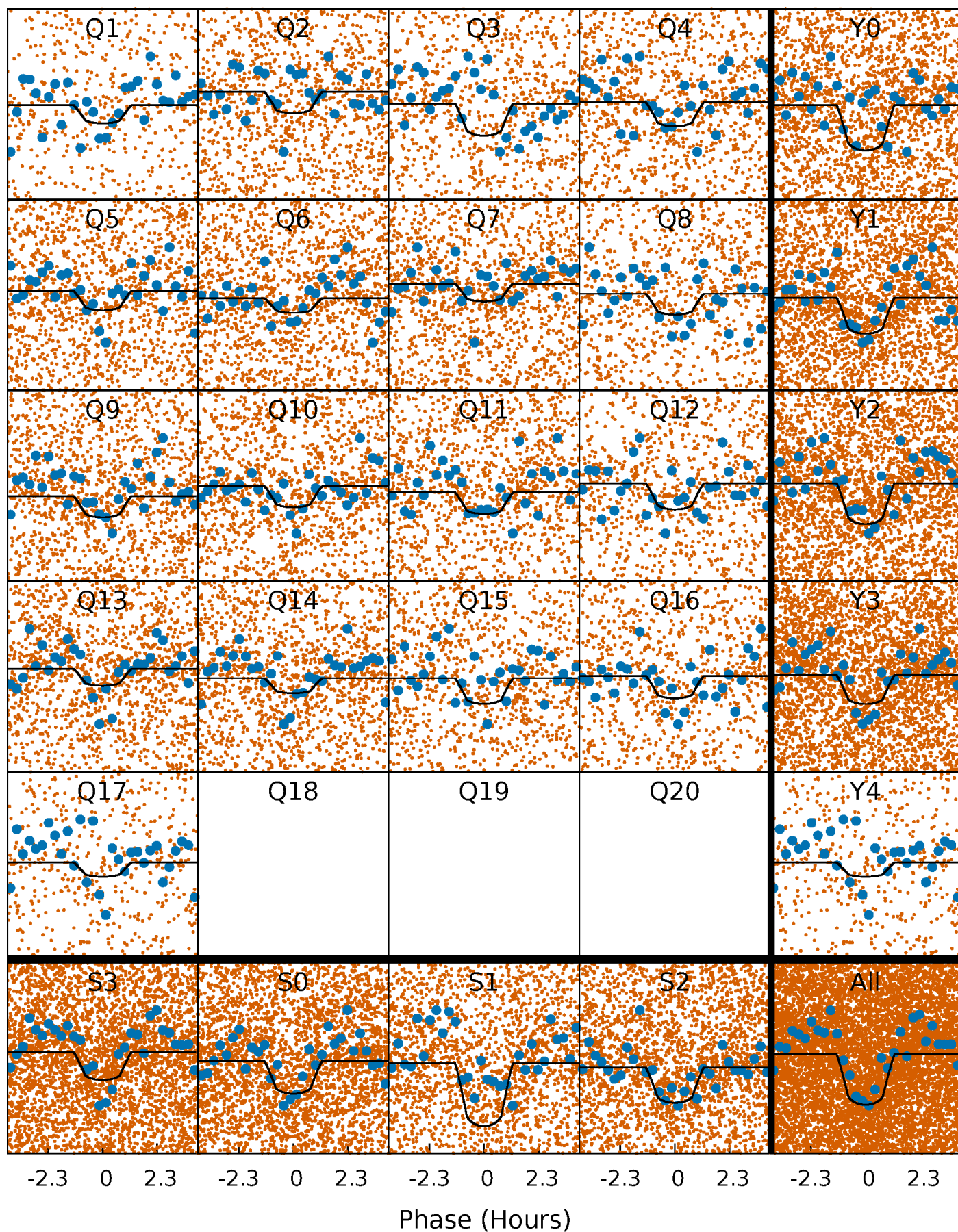
PDC Quarter-Phased Transit Curves

TCE 005904710-01 P= 0.531690 Days $T_0=132.023222$ (BKJD)



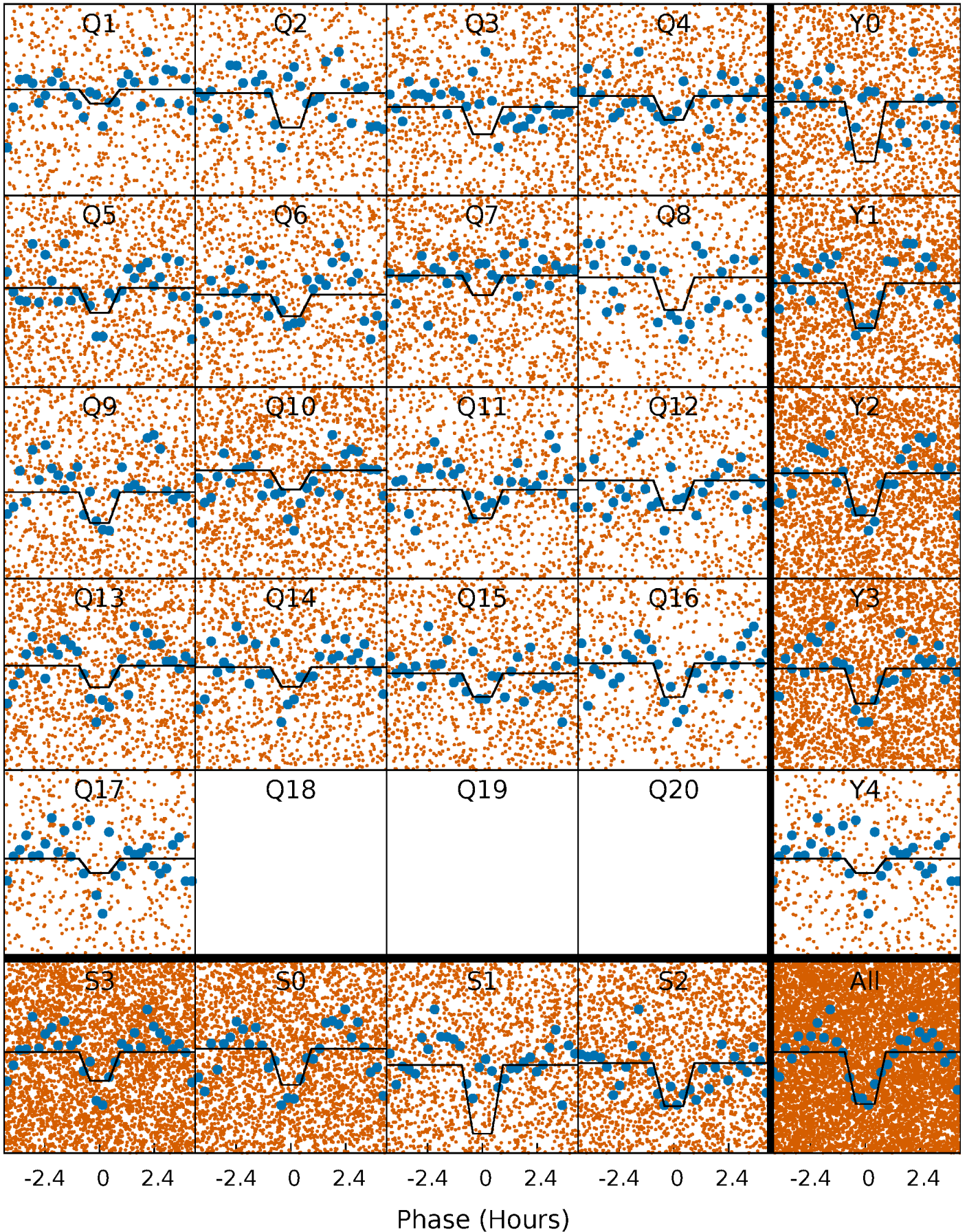
DV Quarter-Phased Transit Curves

TCE 005904710-01 P= 0.531690 Days $T_0=132.023222$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

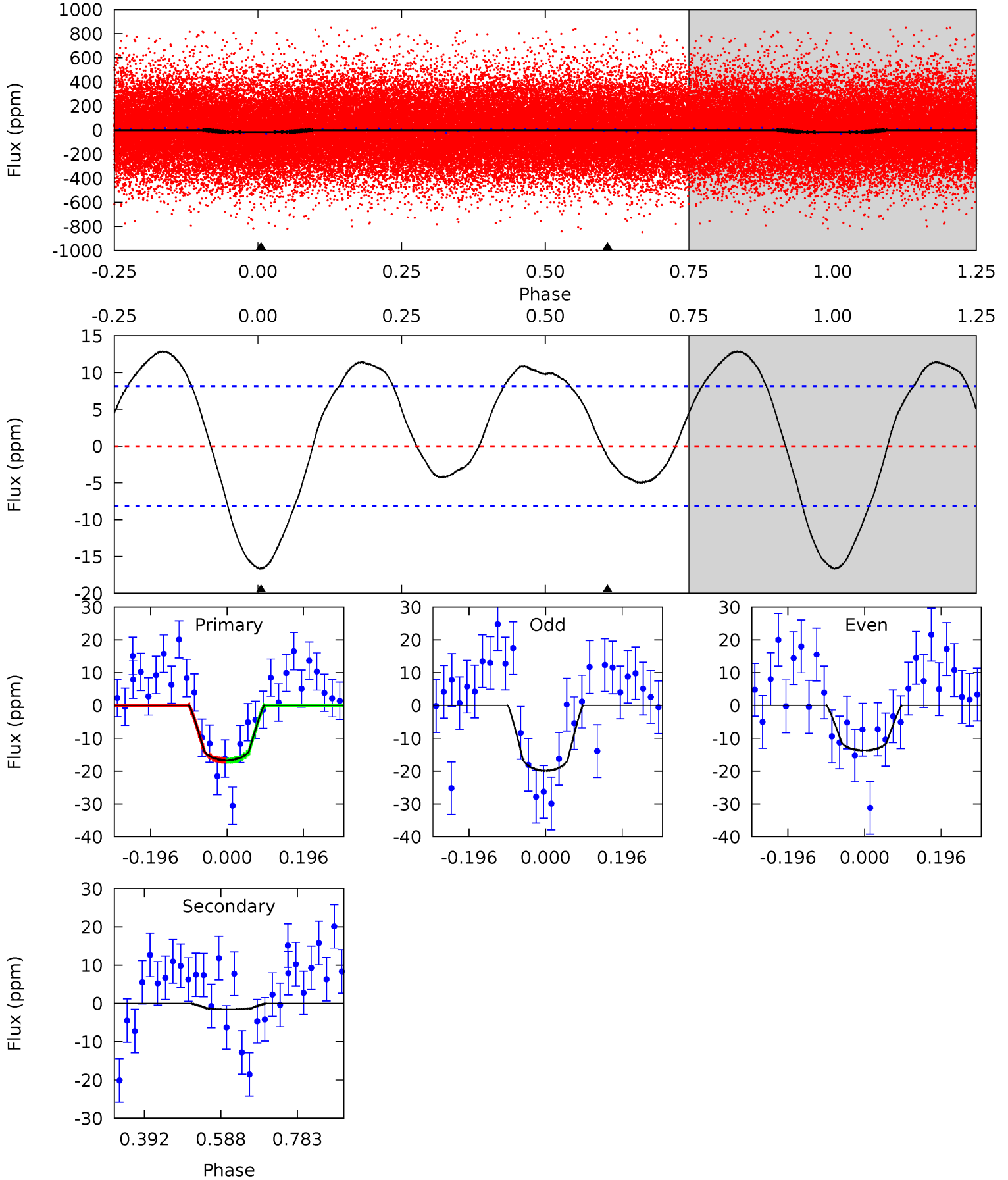
TCE 005904710-01 P= 0.531690 Days $T_0=132.022360$ (BKJD)



DV Model-Shift Uniqueness Test

005904710-01, P = 0.531690 Days, E = 131.491532 Days

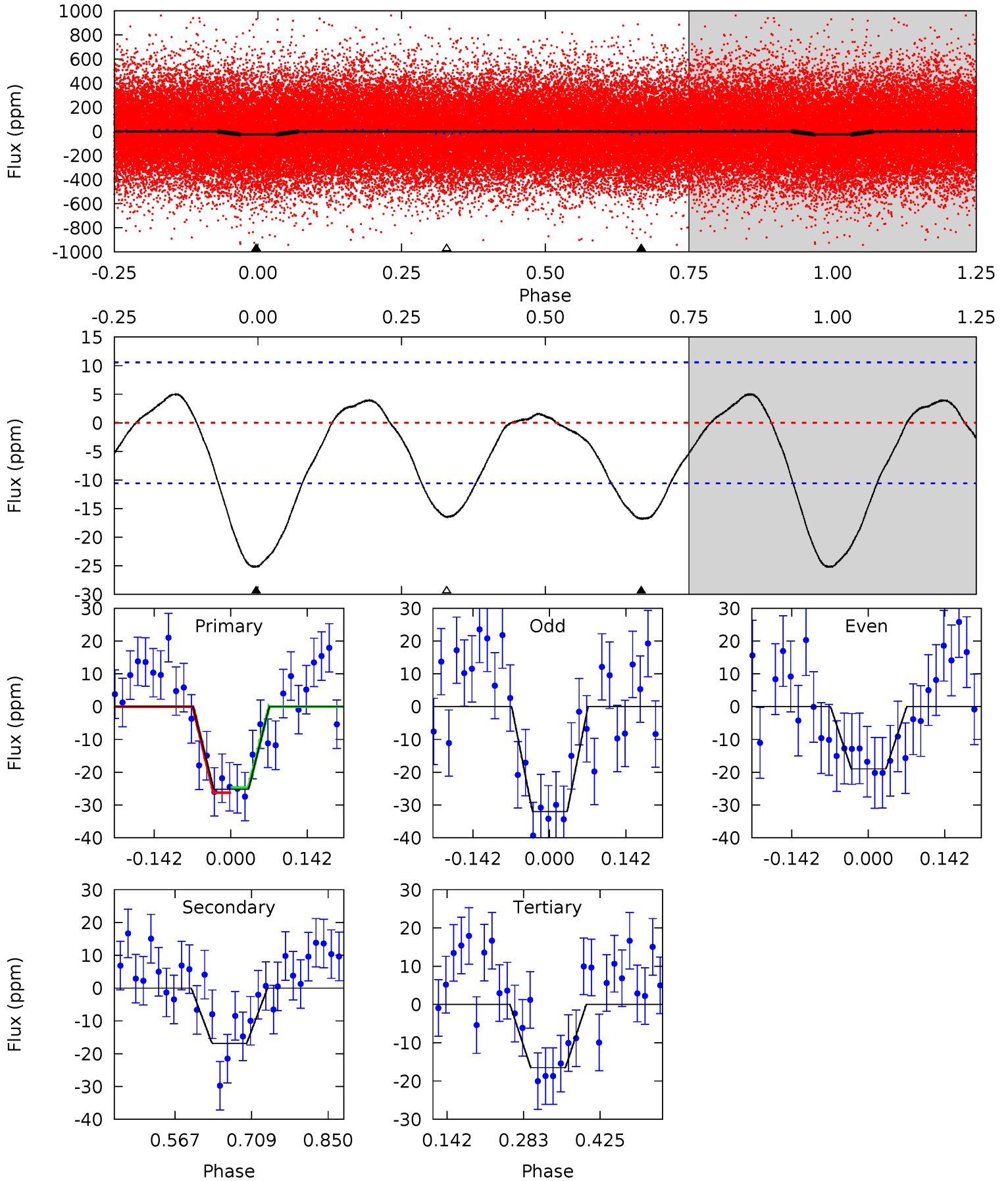
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.05	0.81	0	0	4.42	1.29	2.79	9.05	9.05	0.81	0.81	1.66	1.22	0.44	0.01



Alt Model-Shift Uniqueness Test

005904710-01, P = 0.531690 Days, E = 131.490670 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.7	7.13	7.01	0	4.49	1.47	2.90	3.69	10.7	0.13	7.13	2.75	1.31	0.17	0.32



Stellar Parameters For KIC 005904710

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6049^{+219}_{-219}	$3.622^{+0.632}_{-0.119}$	$-0.120^{+0.300}_{-0.300}$	$3.130^{+0.641}_{-1.923}$	$1.496^{+0.172}_{-0.481}$	$0.069^{+0.789}_{-0.025}$
	+4%/-4%	+17%/-3%	+250%/-250%	+20%/-61%	+11%/-32%	+1149%/-36%
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 005904710-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-2 ± 2	$1.56^{+1.08}_{-0.87}$	5257^{+475}_{-800}	-4232^{+7289}_{-525}	$0.061^{+0.288}_{-0.068}$
Alt.	-17 ± 2	$1.56^{+1.16}_{-0.89}$	5314^{+417}_{-811}	4805^{+3119}_{-7885}	$0.818^{+3.353}_{-0.553}$

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 $A_{\text{obs}} \gg 1.0$

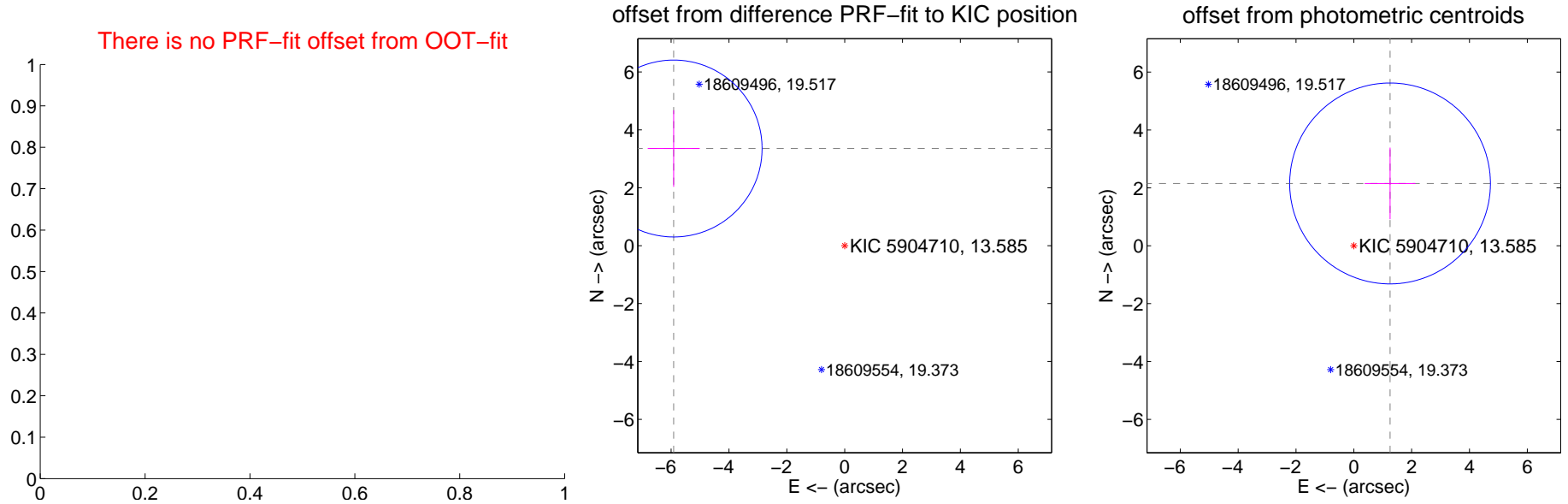
DV Centroid Data

Supplemental centroid analysis for 005904710-01. Kepler magnitude: 13.59. Transit SNR 7.95

There are 0 quarters with good PRF difference image offsets

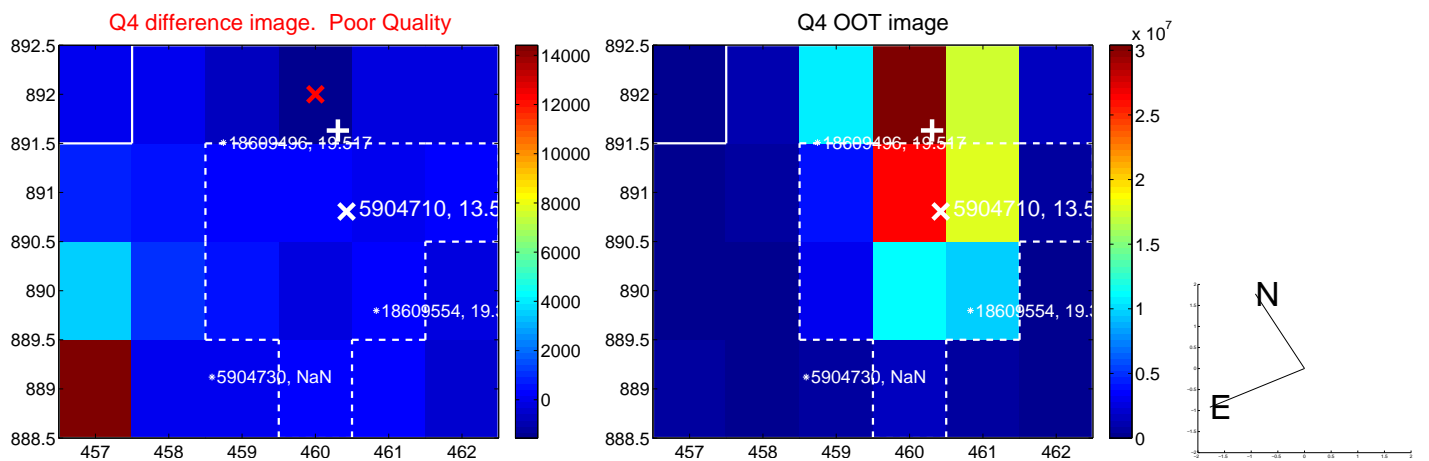
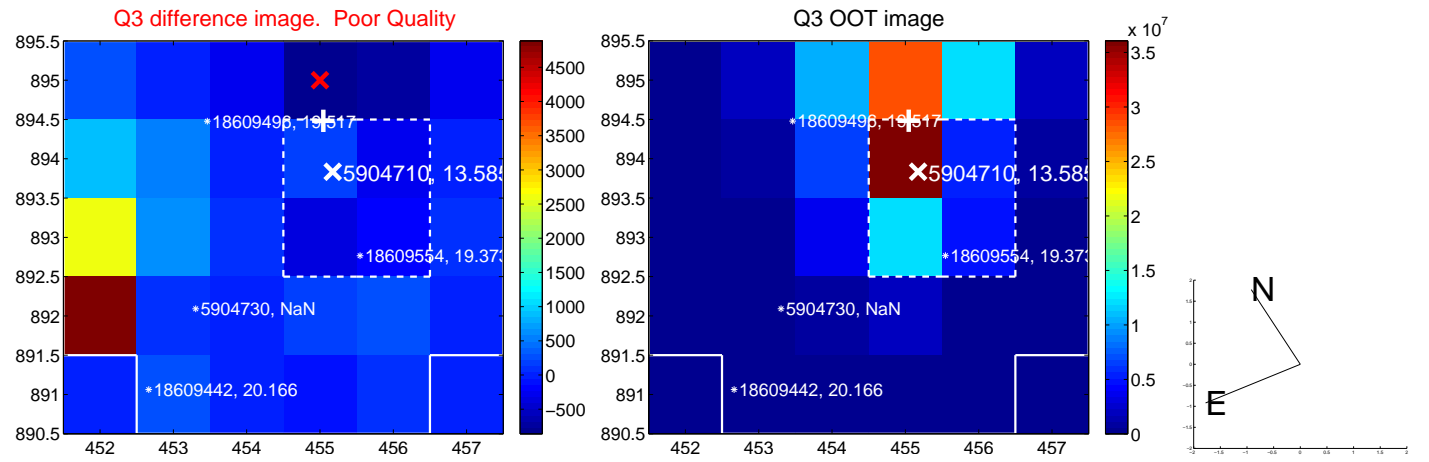
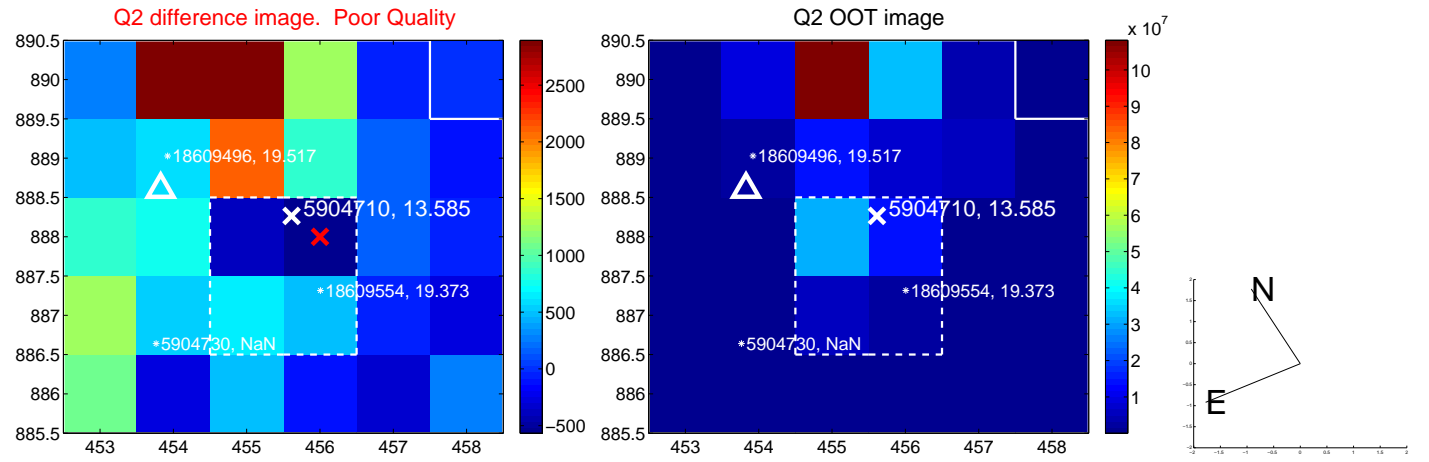
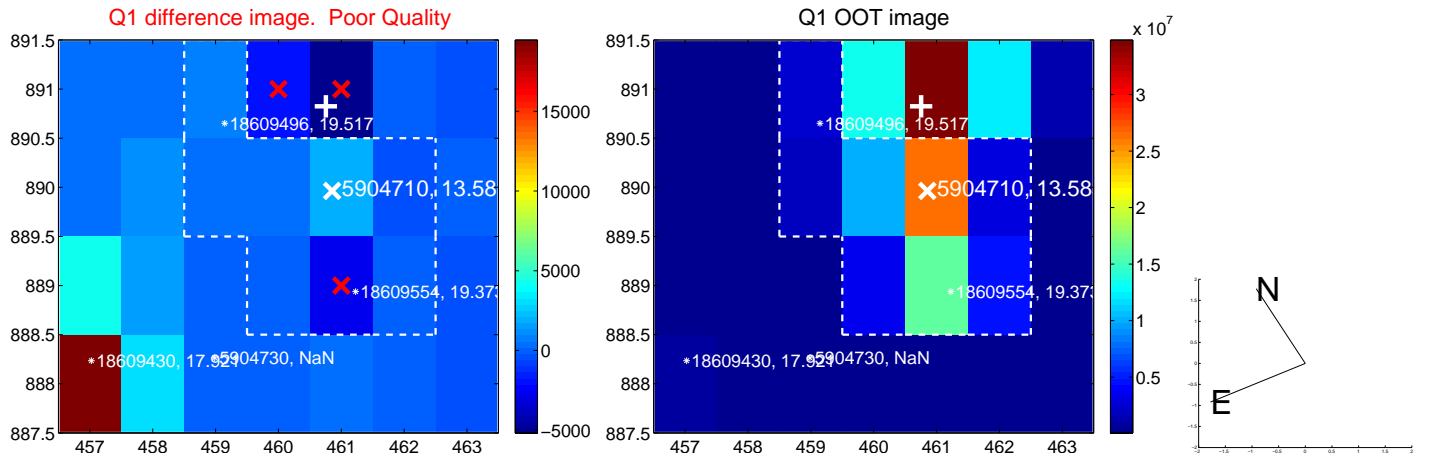
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	6.799 ± 1.019	6.67	5.912 ± 0.899	3.357 ± 1.322
photometric centroid source offset	2.49 ± 1.16	2.15	-1.25 ± 0.88	2.15 ± 1.24

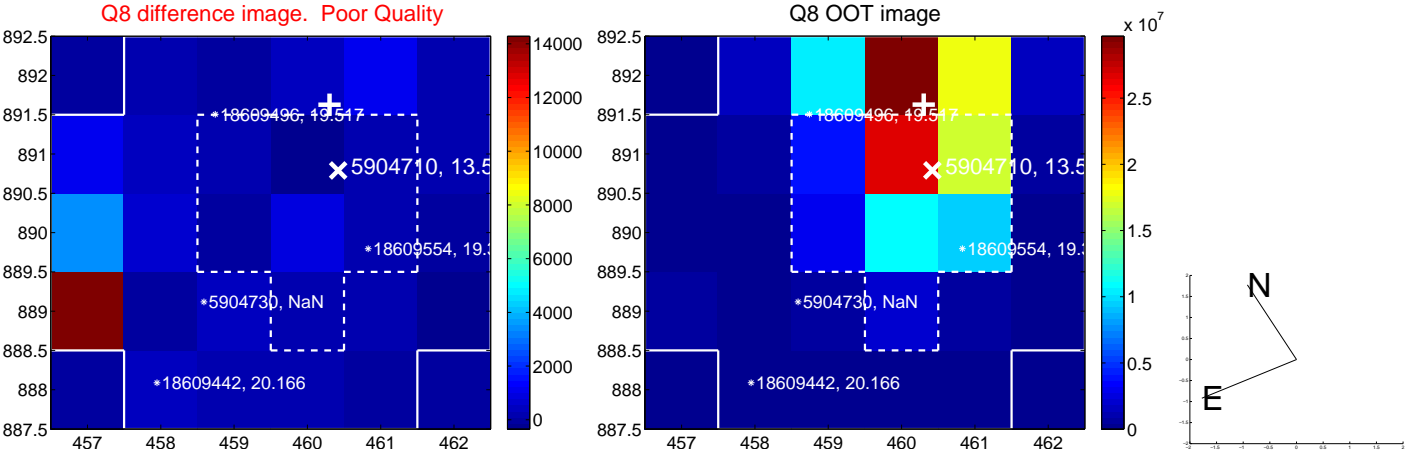
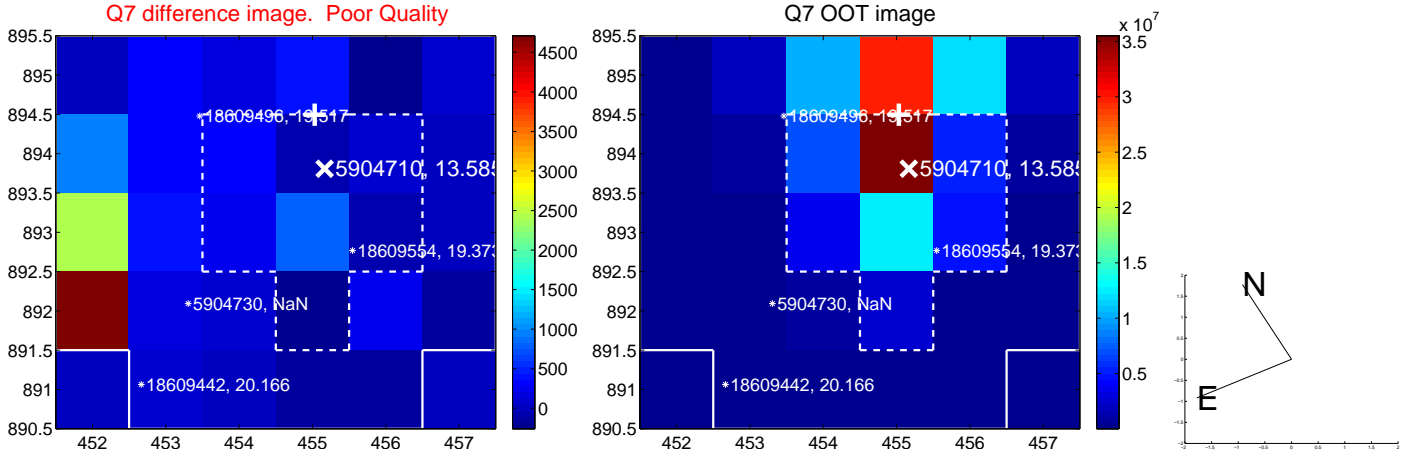
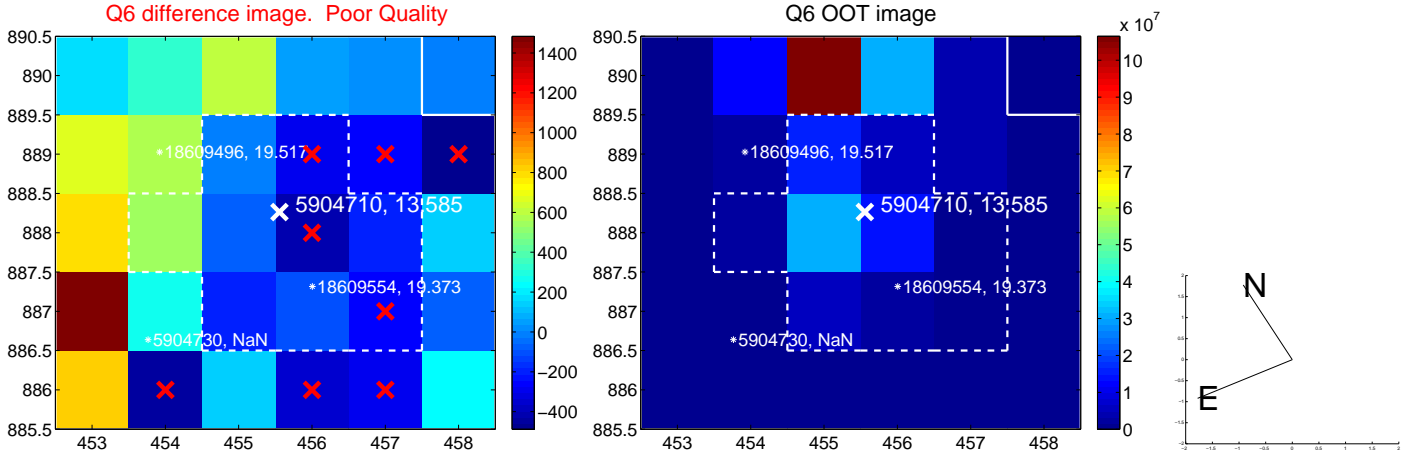
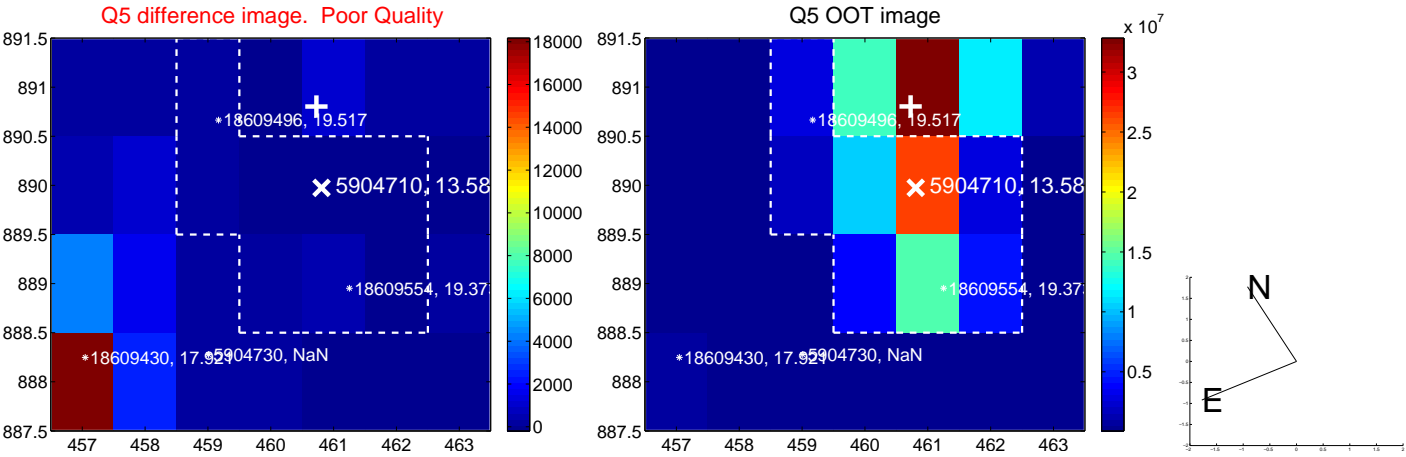


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

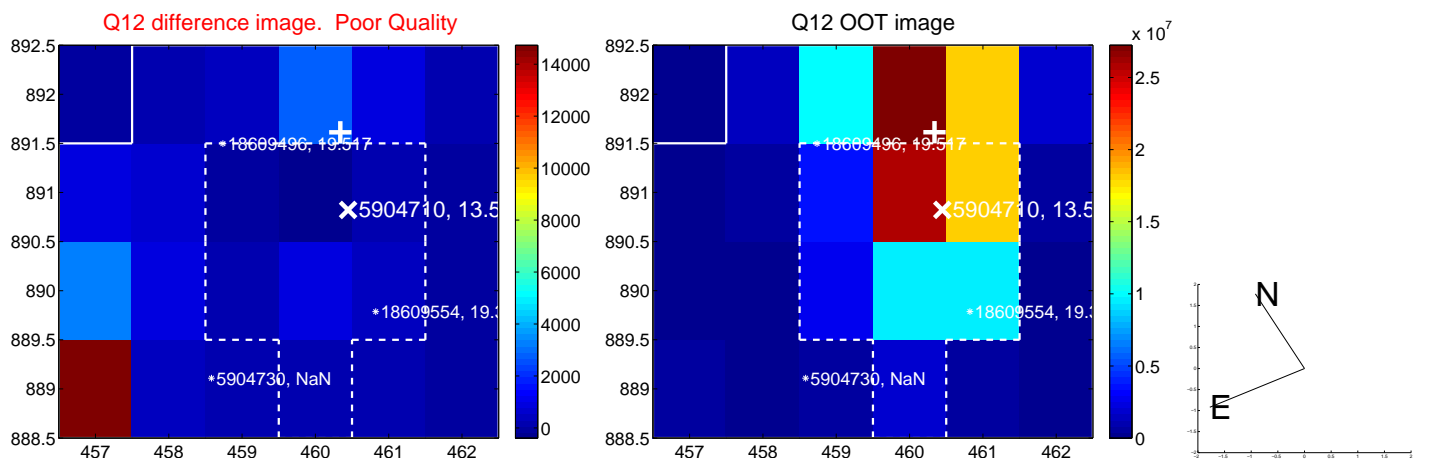
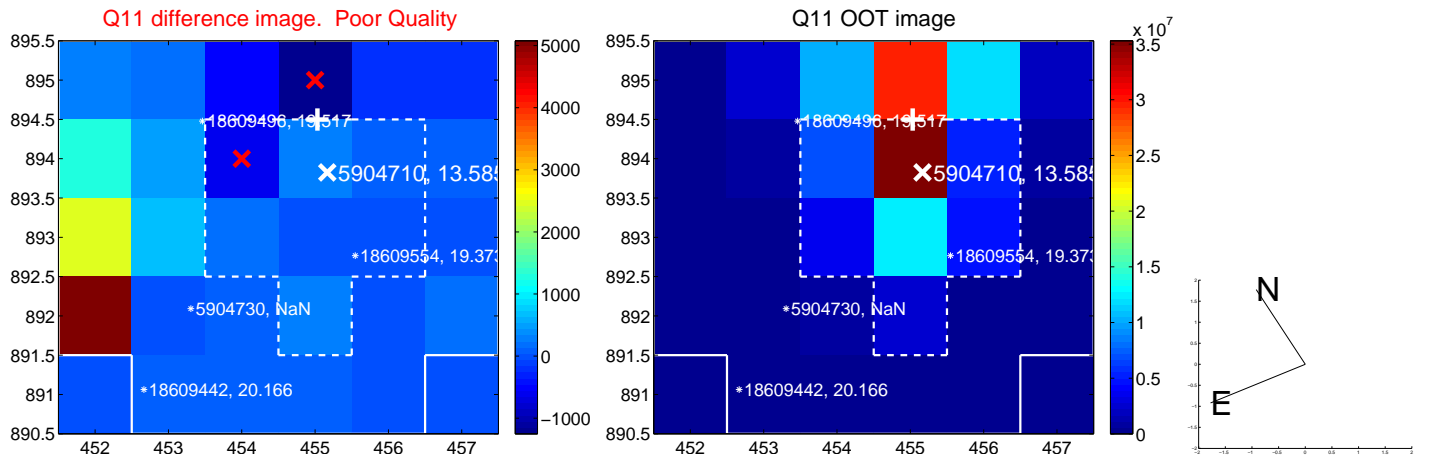
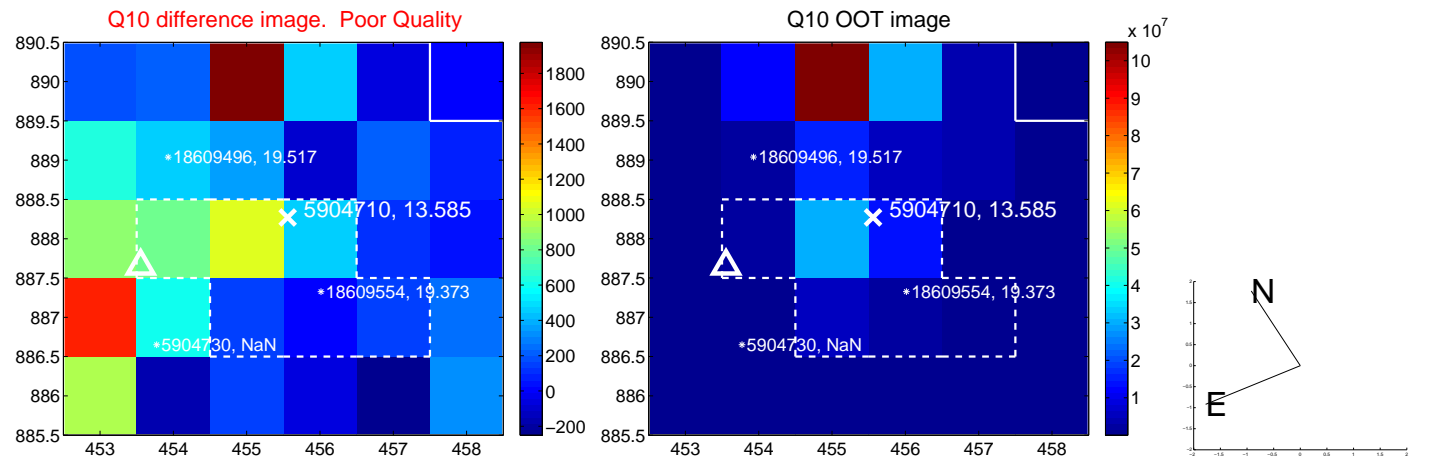
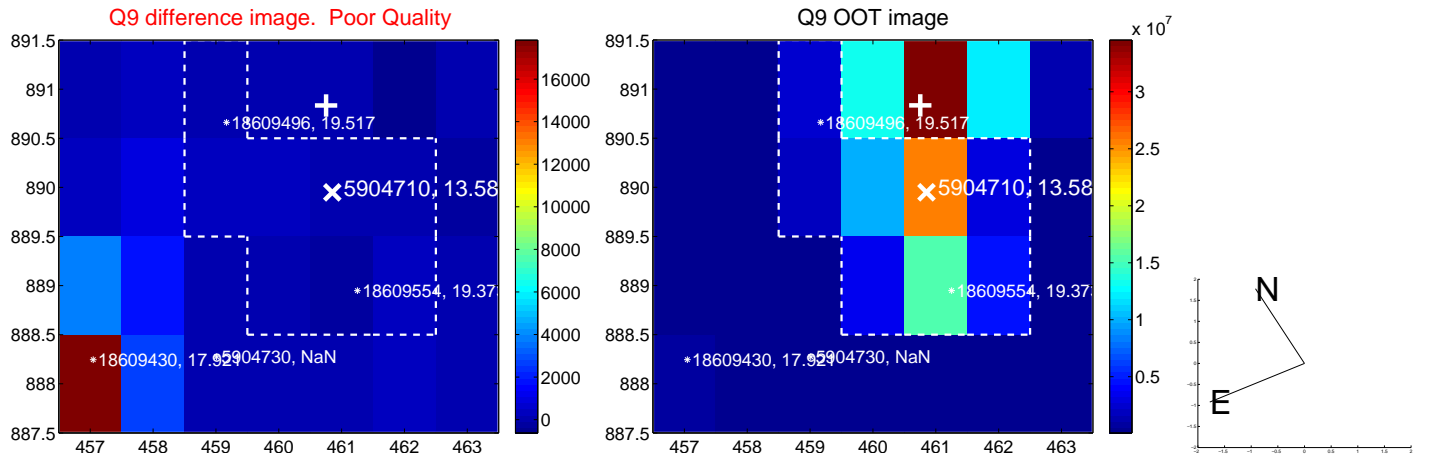
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



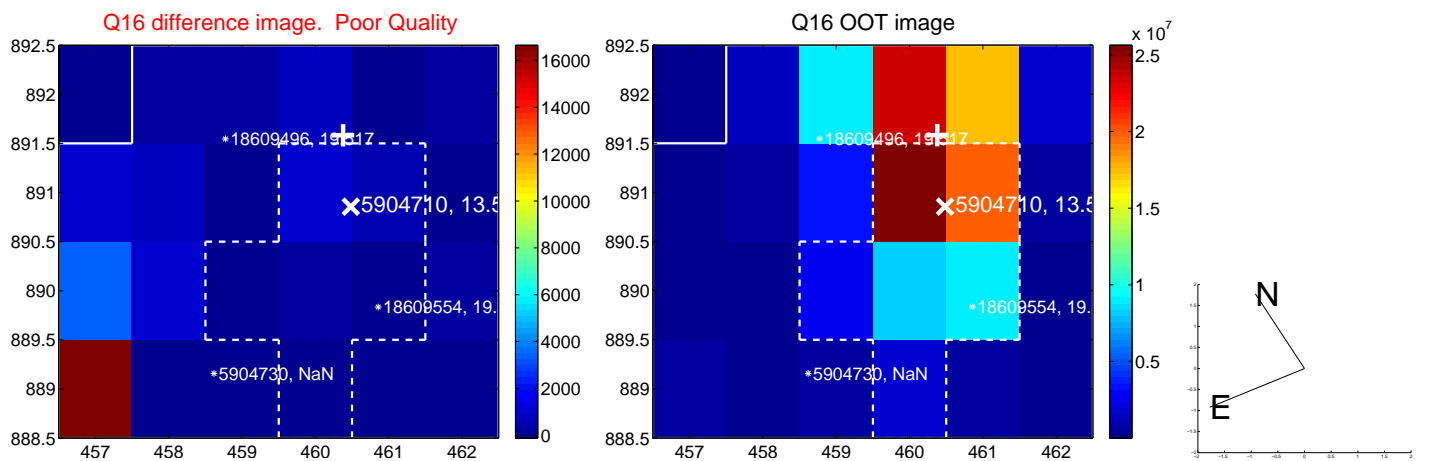
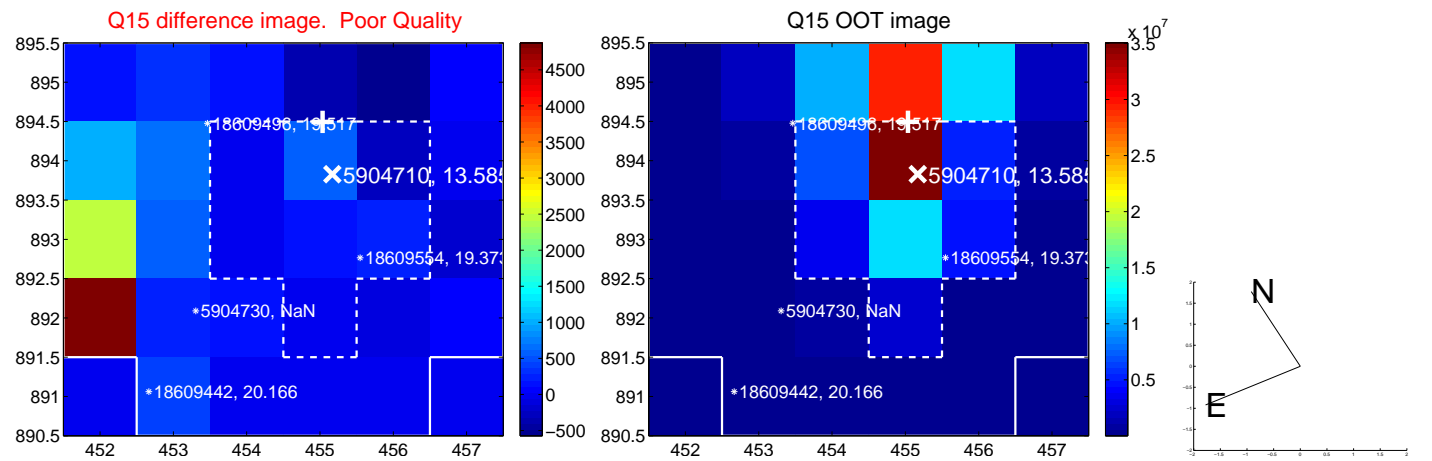
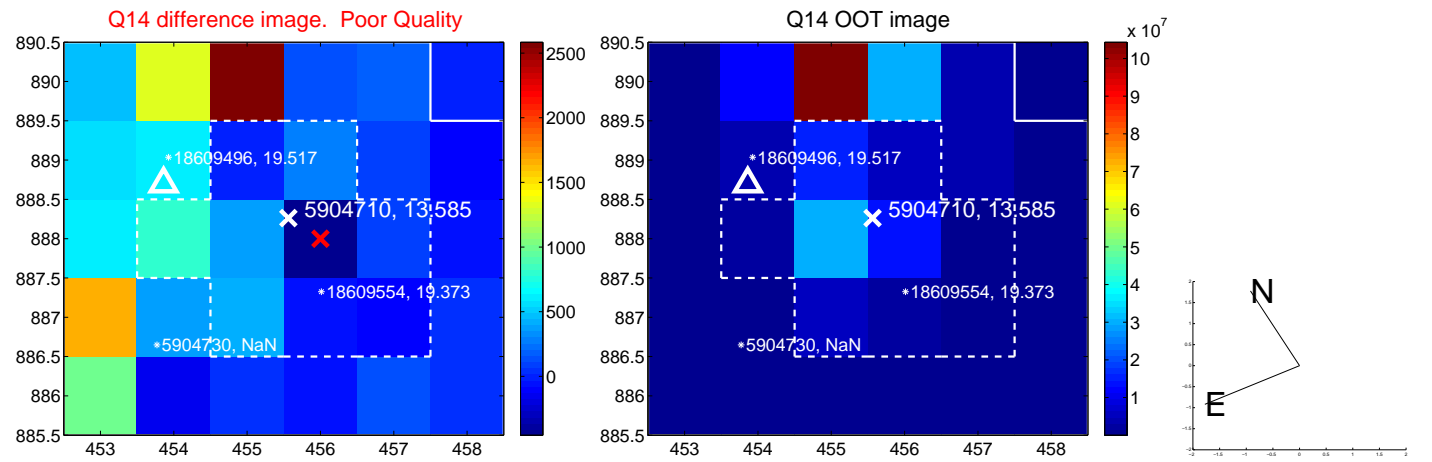
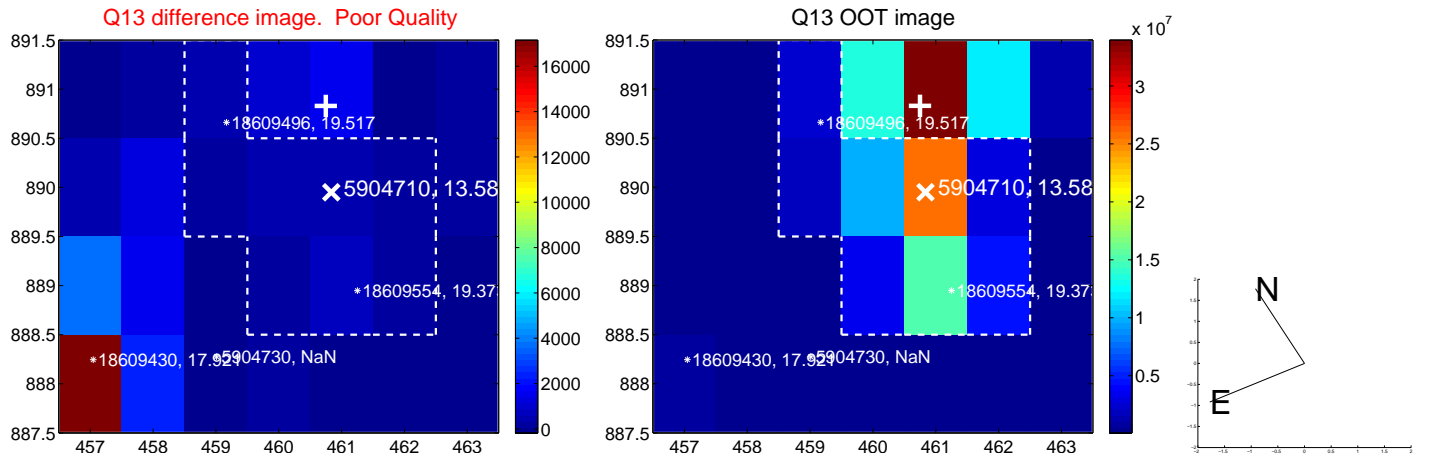
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



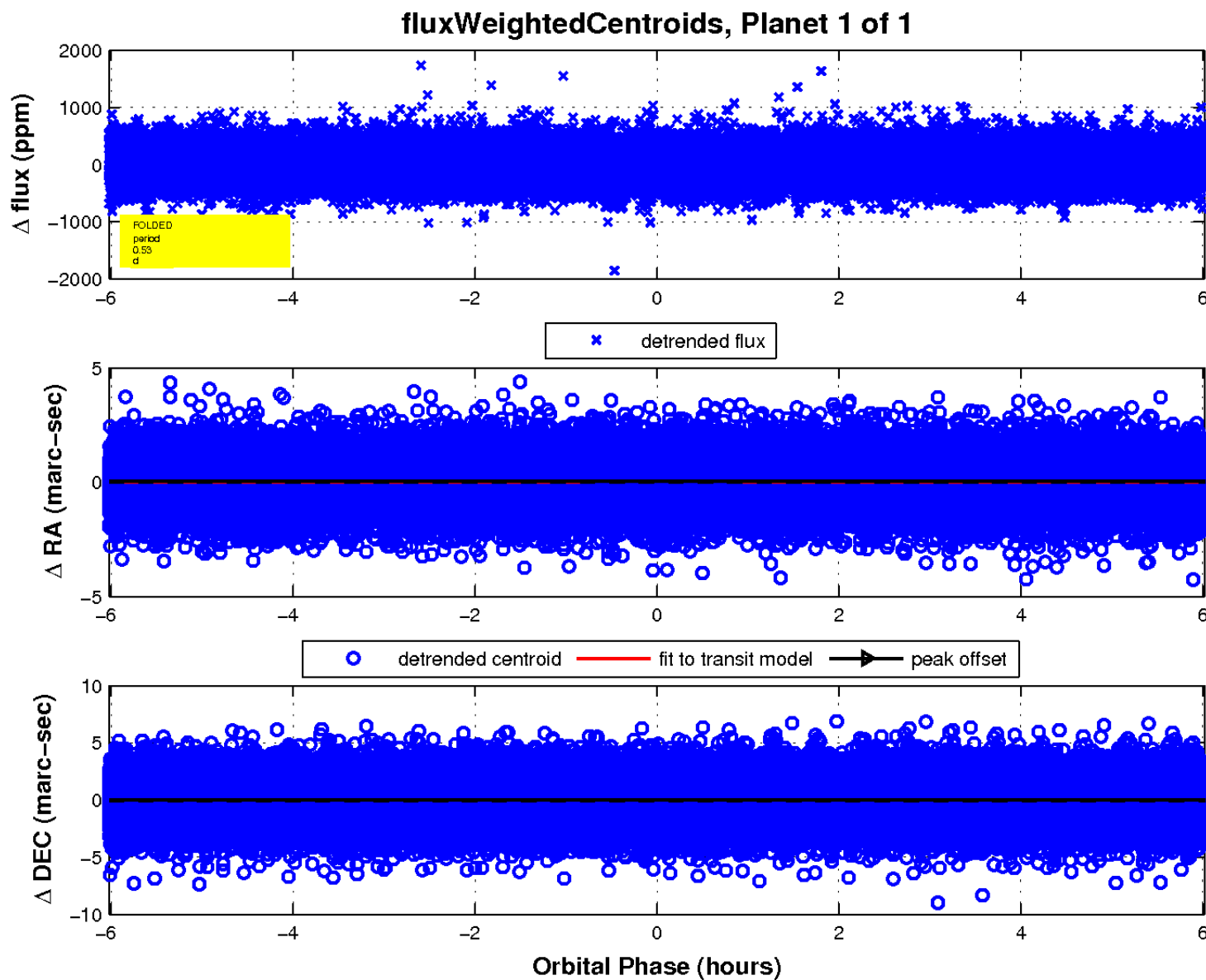
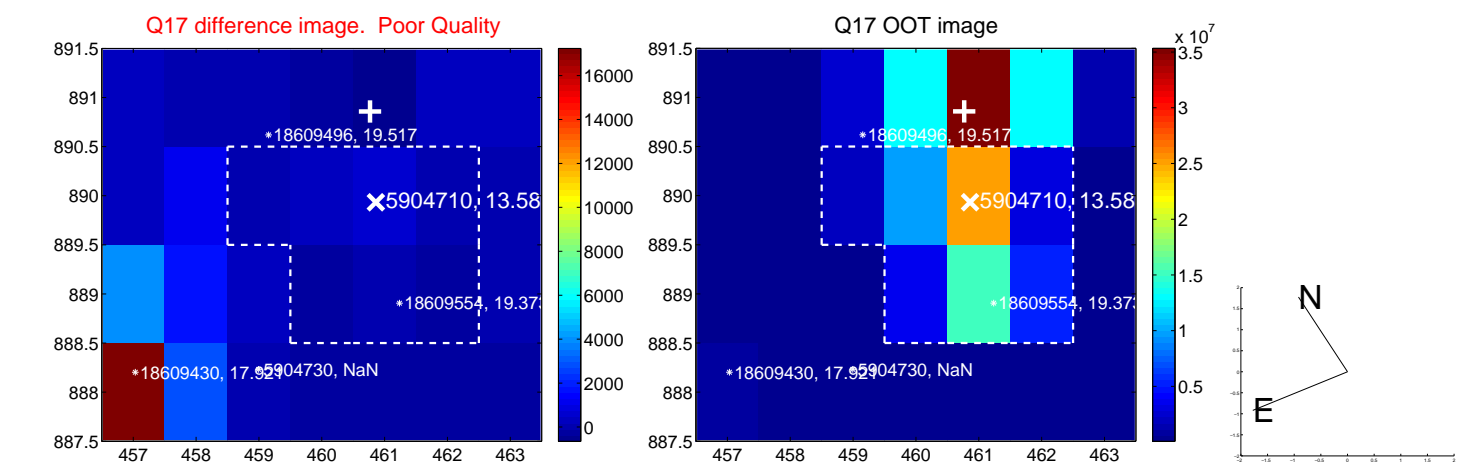
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

