

KIC 005899971

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})
005899971-01	OBS	No	0.957326	132.303310	11.0	8.908	9.8	6.8	3.43	6628	1.28	40205.64

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005899971-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—CENT_SATURATED

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

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

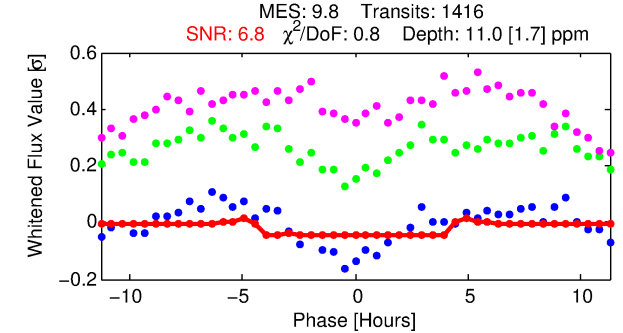
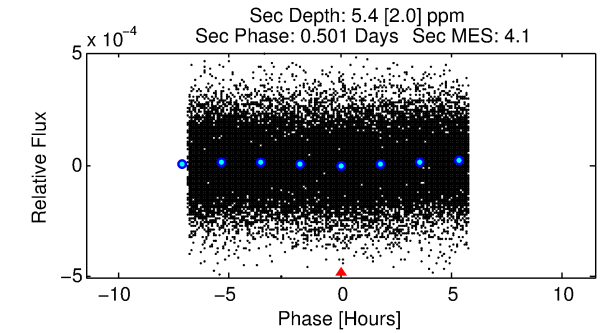
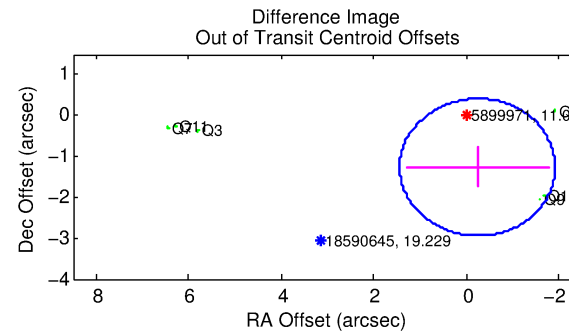
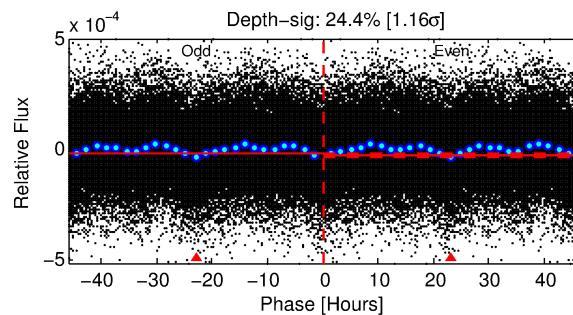
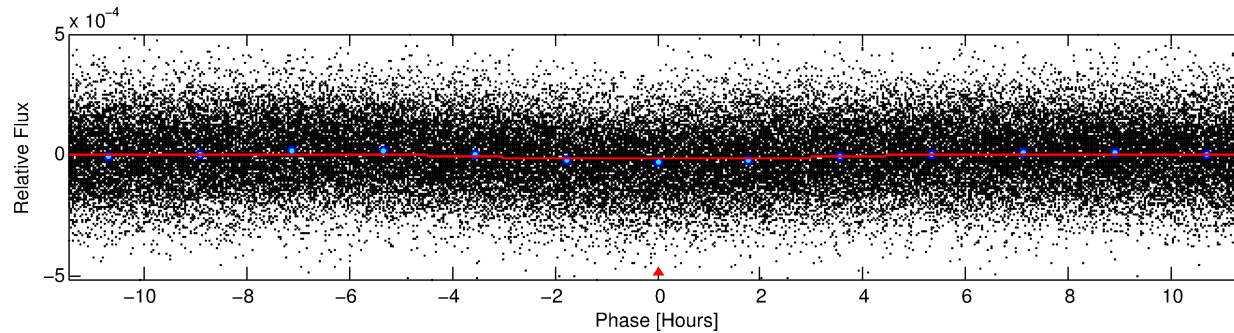
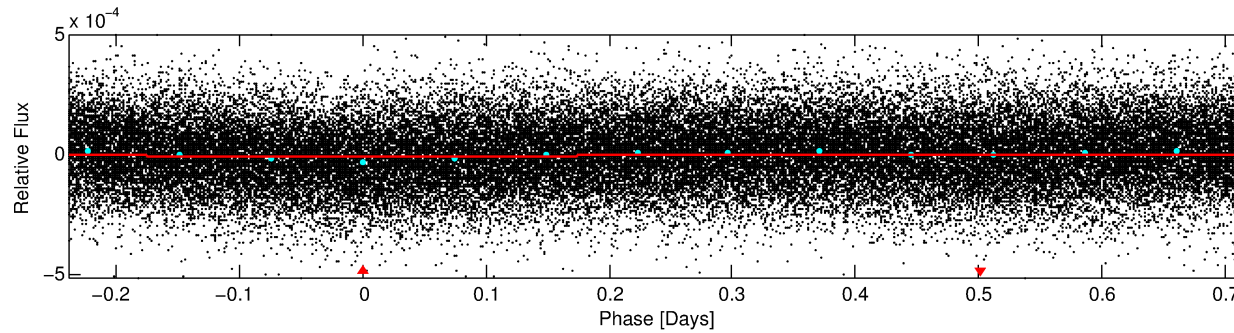
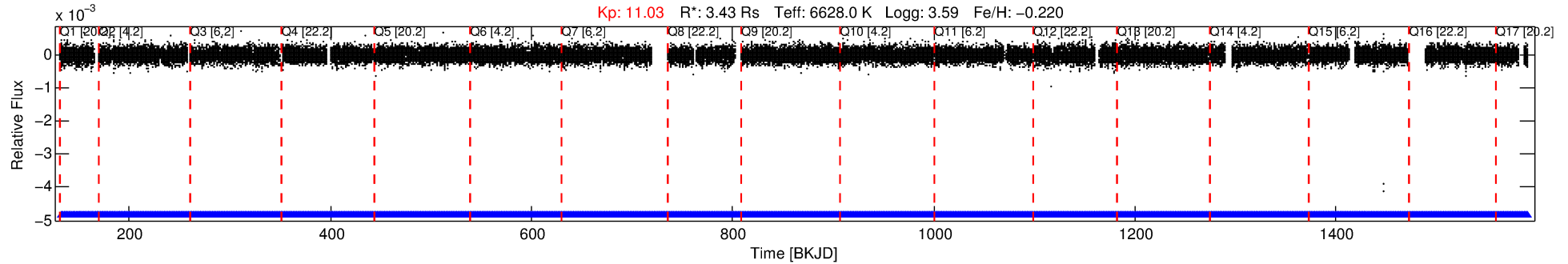
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005899971-01

No Significant Match Found

DV One-Page Summary

KIC: 5899971 Candidate: 1 of 1 Period: 0.957 d



DV Fit Results:

Period = 0.95733 [0.00002] d
Epoch = 132.3033 [0.0066] BKJD
Rp/R* = 0.0034 [0.0024]
a/R* = 1.02 [0.19]
b = 0.84 [1.47]
Seff = 40205.64 [22050.36]
Teq = 3611 [495] K
Rp = 1.28 [1.01] Re
a = 0.0225 [0.0077] AU
Ag = 0.91 [1.41] [-0.06 σ]
Teffp = 5456 [1982] K [0.90 σ]

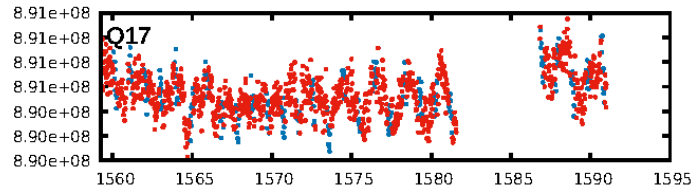
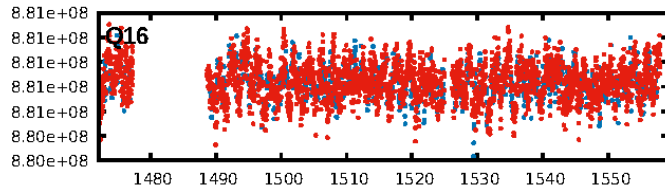
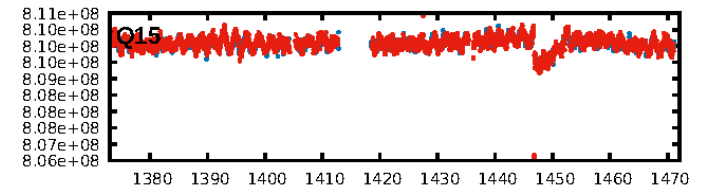
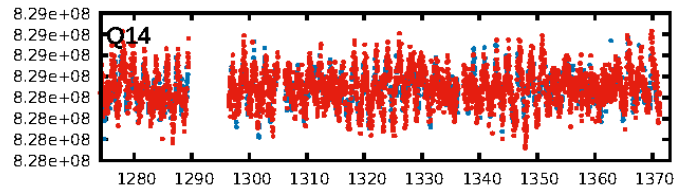
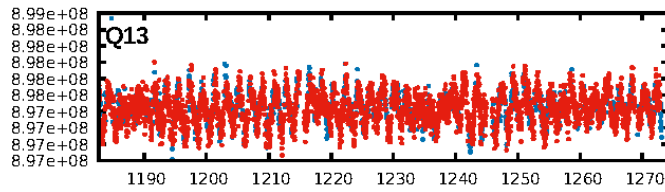
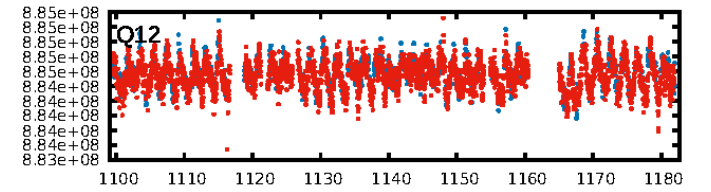
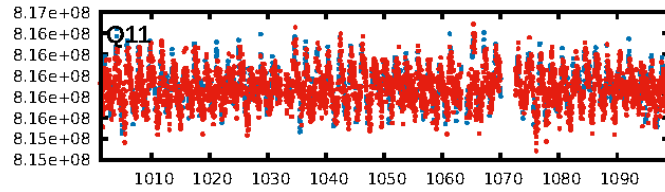
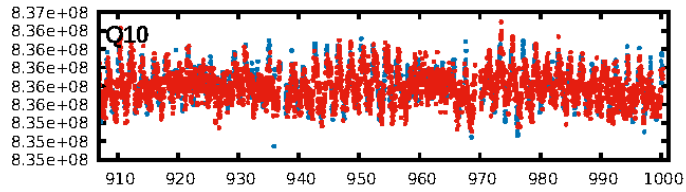
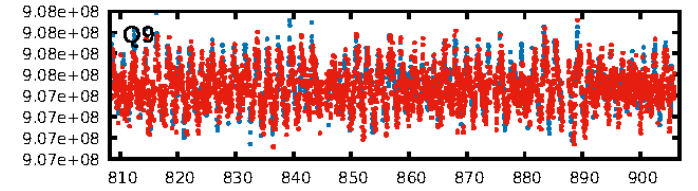
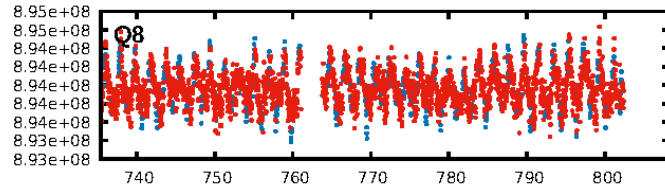
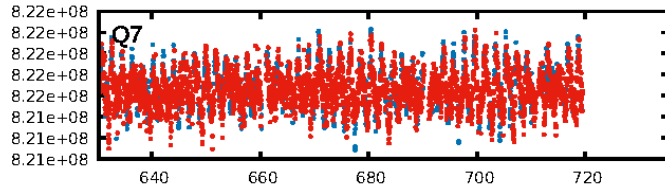
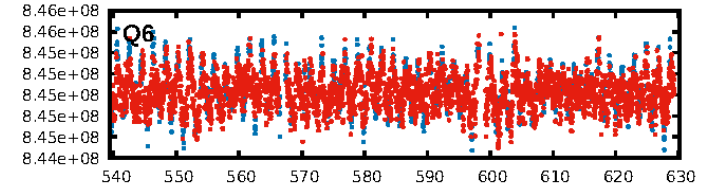
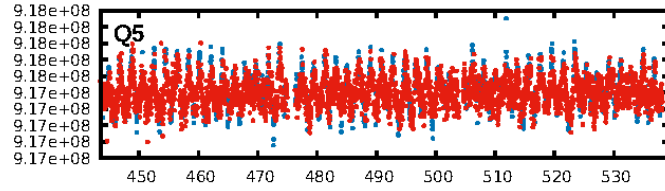
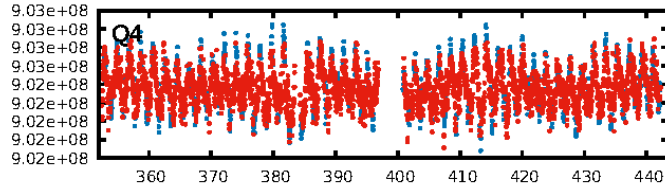
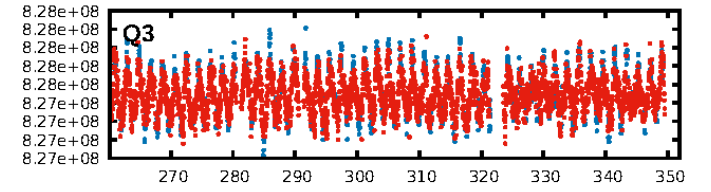
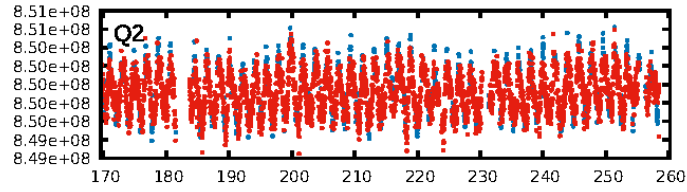
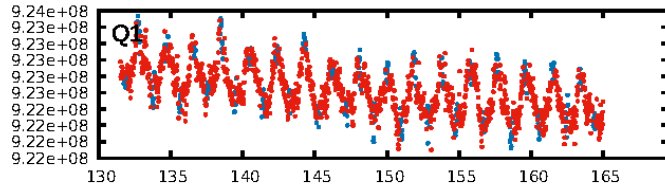
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1352/1352]
GhostDiagnostic-chr: 0.5026
Centroid-sig: 0.0%
Centroid-so: 5.993 arcsec [8.34 σ]
OotOffset-rm: 1.288 arcsec [2.30 σ]
KicOffset-rm: 1.224 arcsec [2.35 σ]
OotOffset-st: 0/3/0/3 [6]
KicOffset-st: 0/3/0/3 [6]
DiffImageQuality-fgm: 0.00 [0/6]
DiffImageOverlap-fno: 1.00 [17/17]

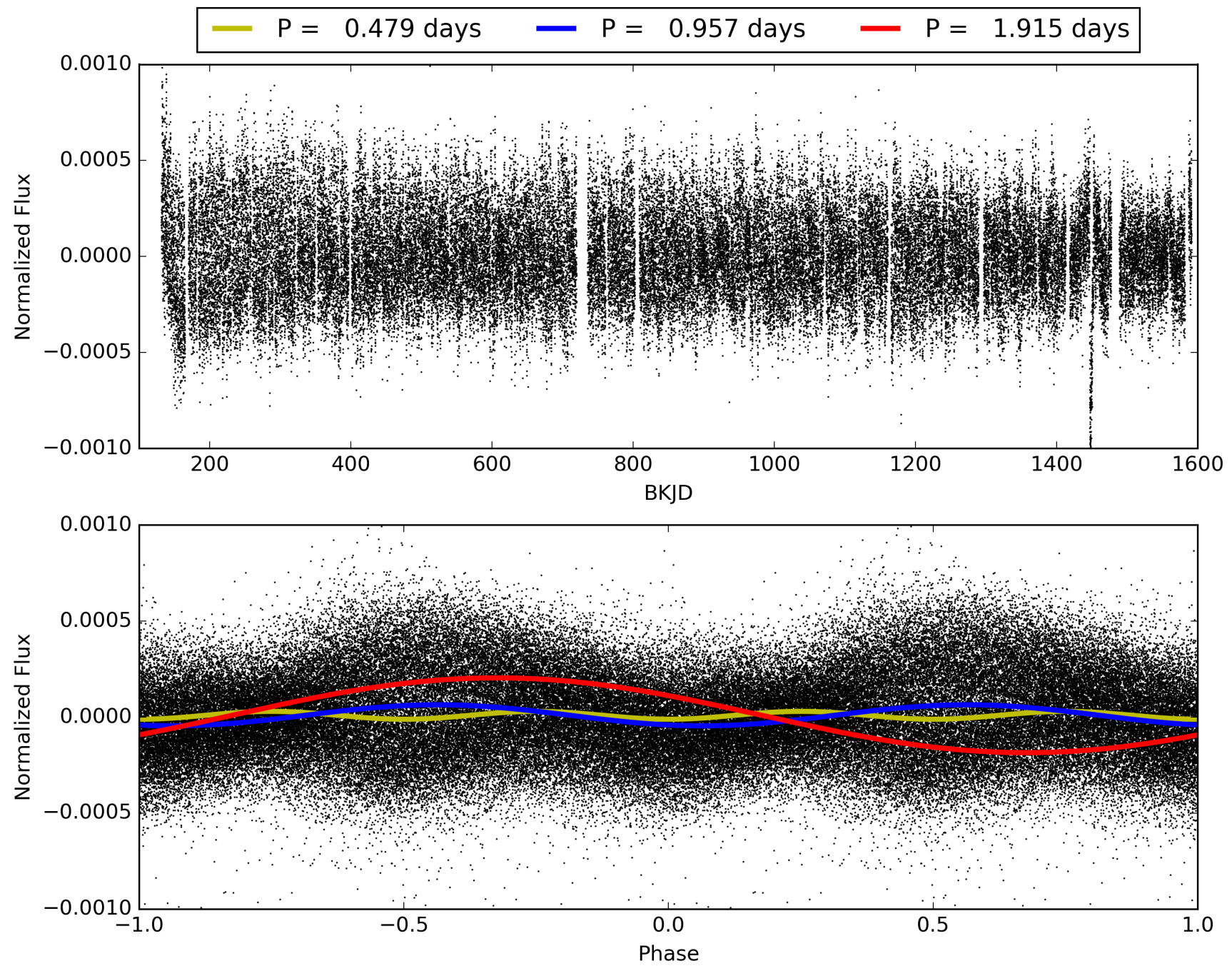
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 01:56:10 Z

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

TCE 005899971-01, PDC Light Curves

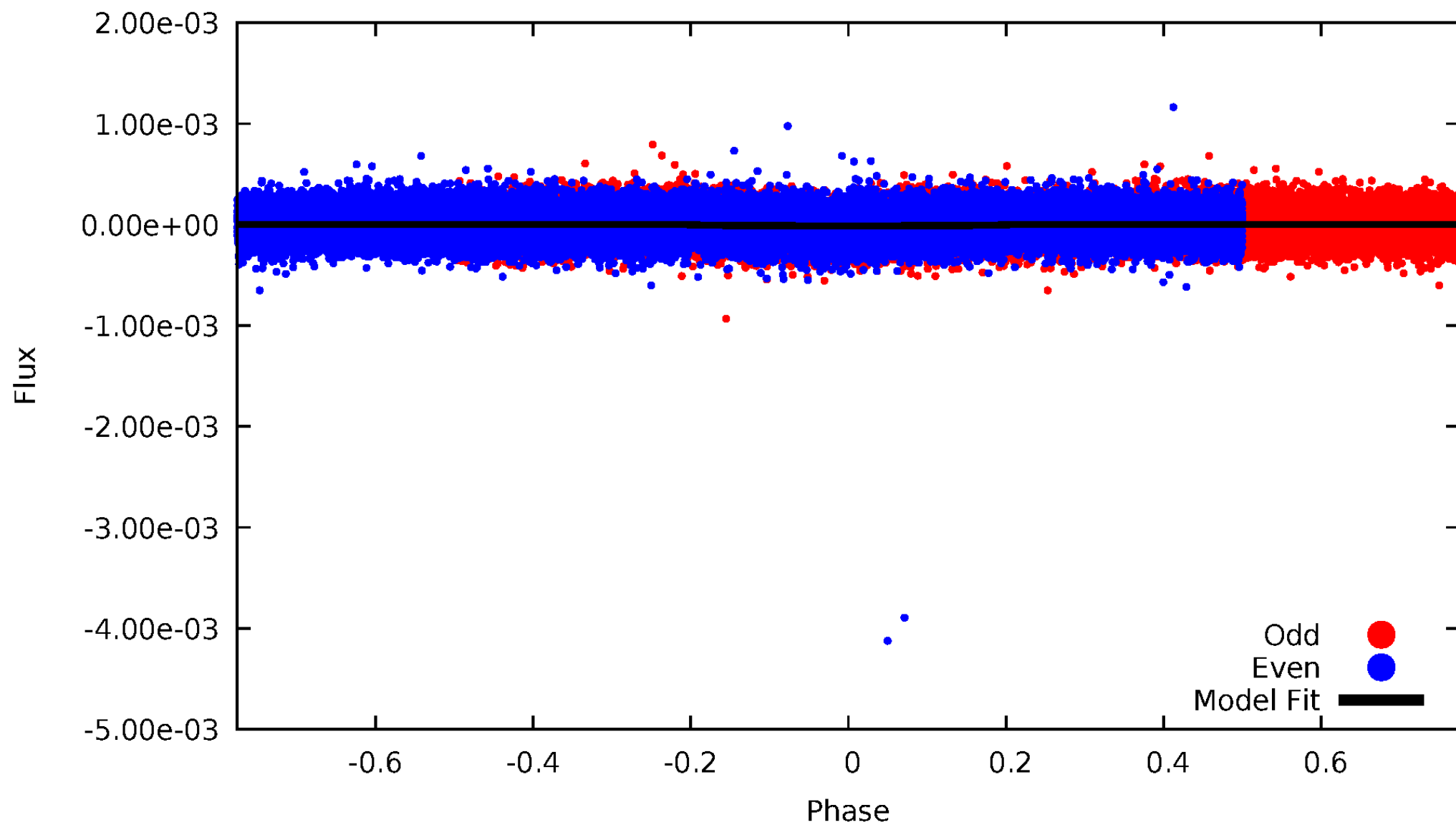


TCE 005899971-01



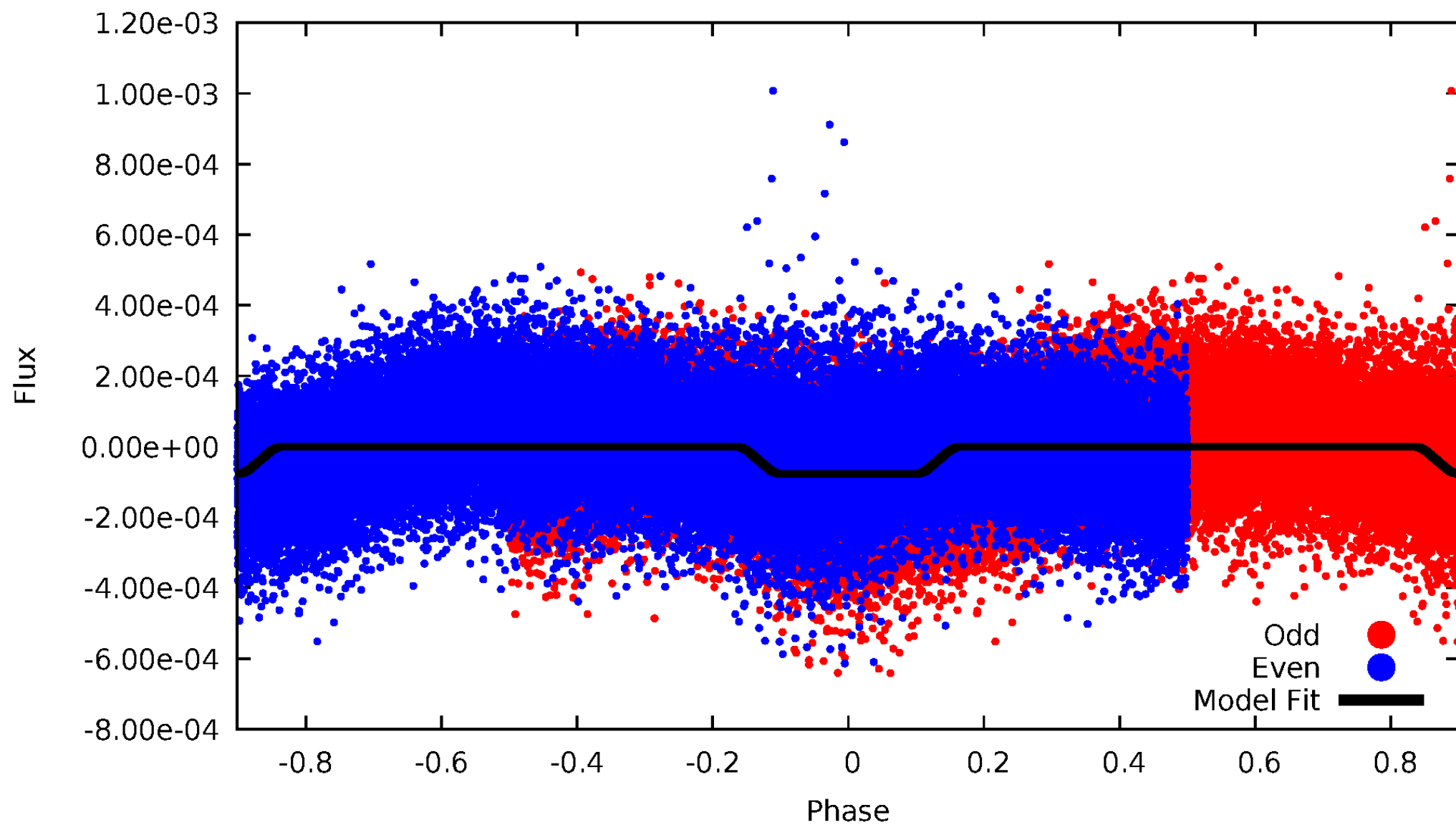
DV Odd/Even

TCE 005899971-01



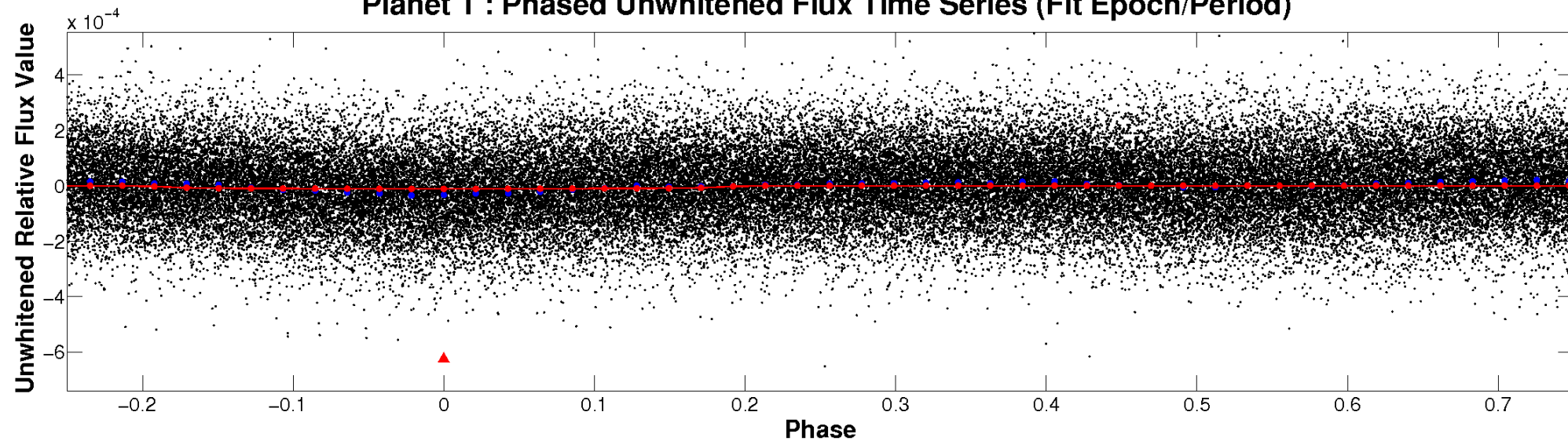
ALT Odd/Even

TCE 005899971-01

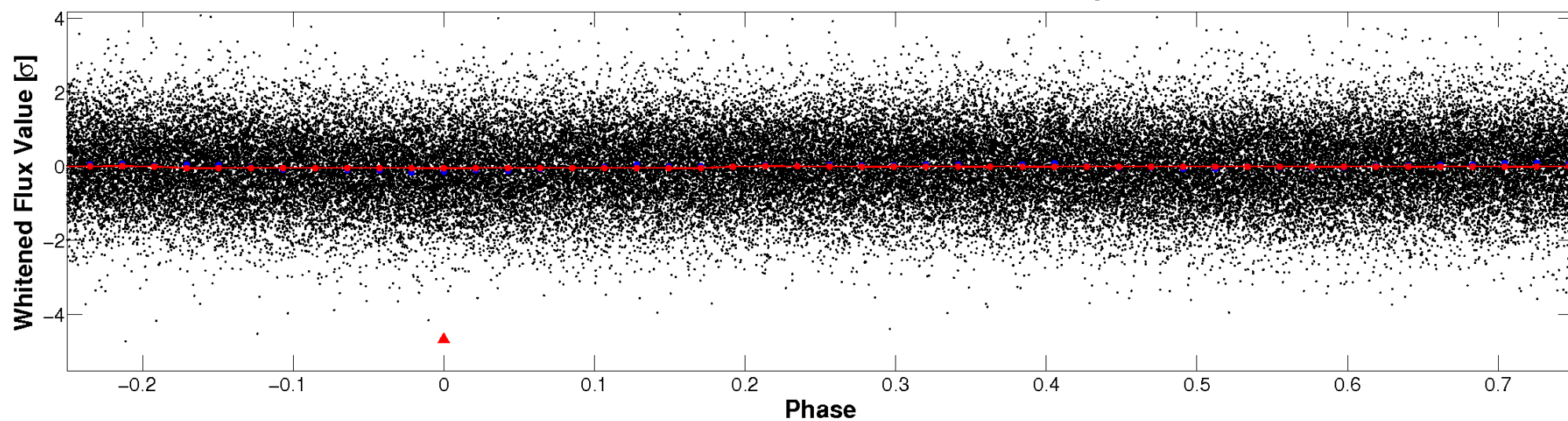


Non-Whitened Vs. Whitened Light Curve

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

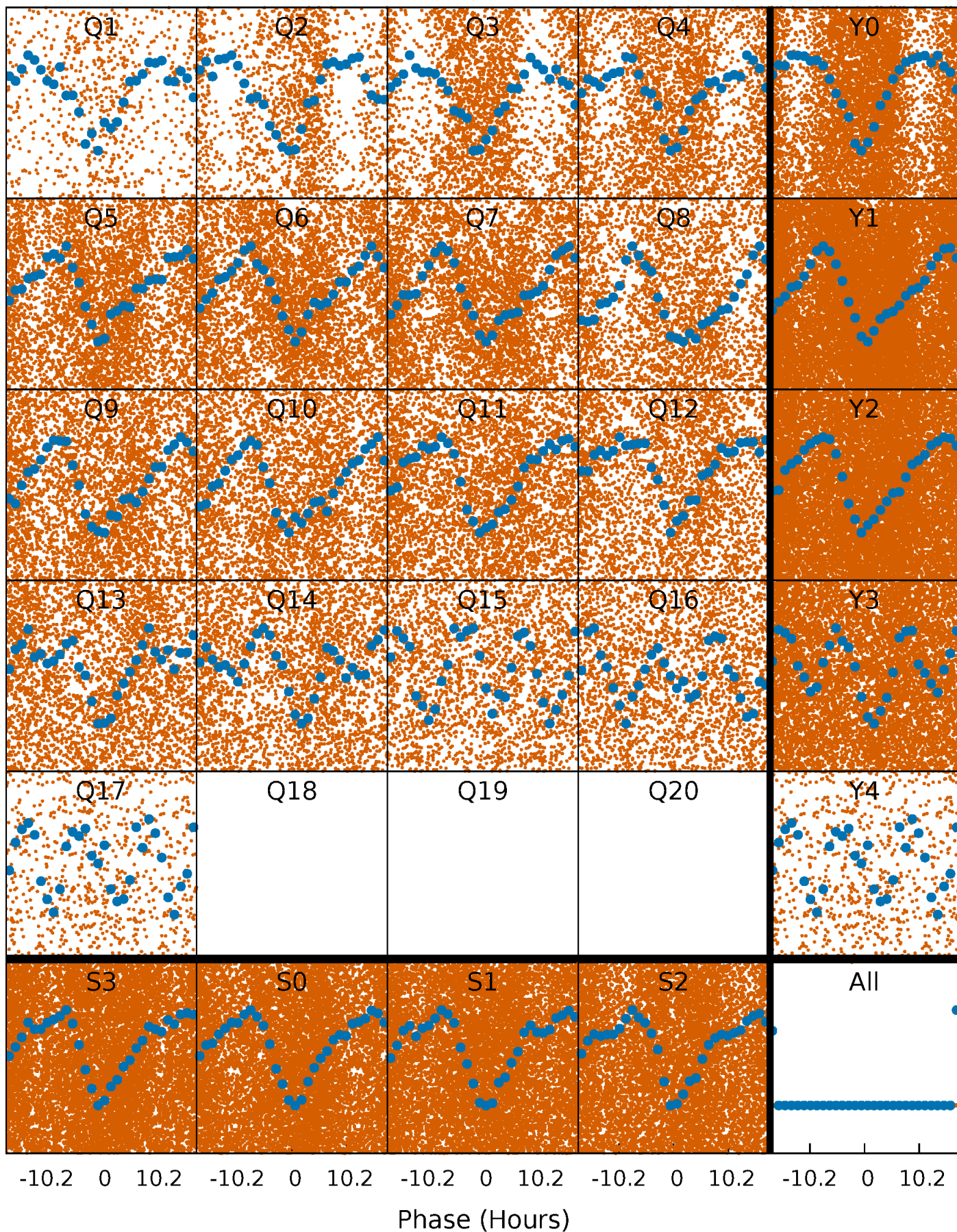


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



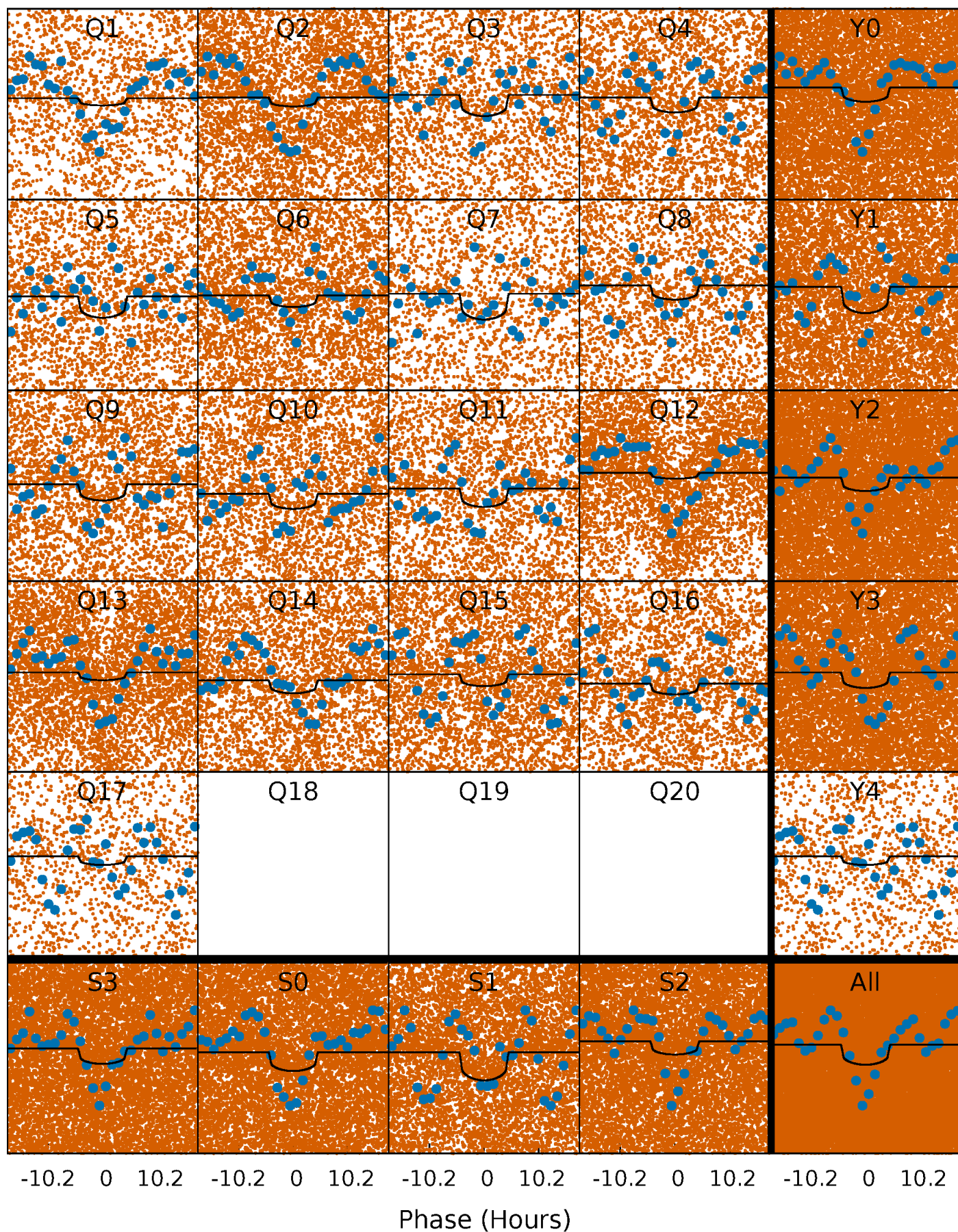
PDC Quarter-Phased Transit Curves

TCE 005899971-01 P= 0.957327 Days $T_0=132.303311$ (BKJD)



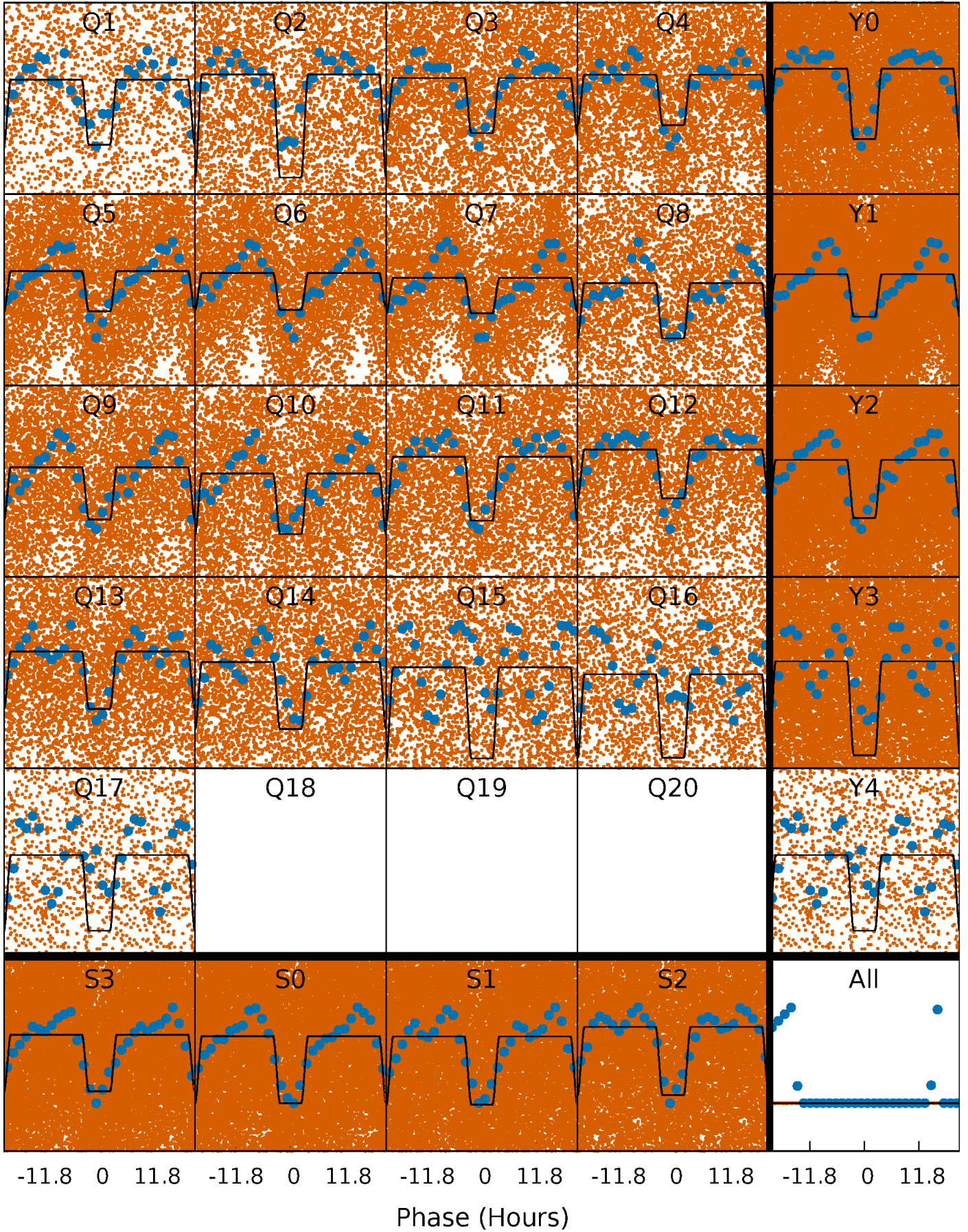
DV Quarter-Phased Transit Curves

TCE 005899971-01 P= 0.957327 Days $T_0=132.303311$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

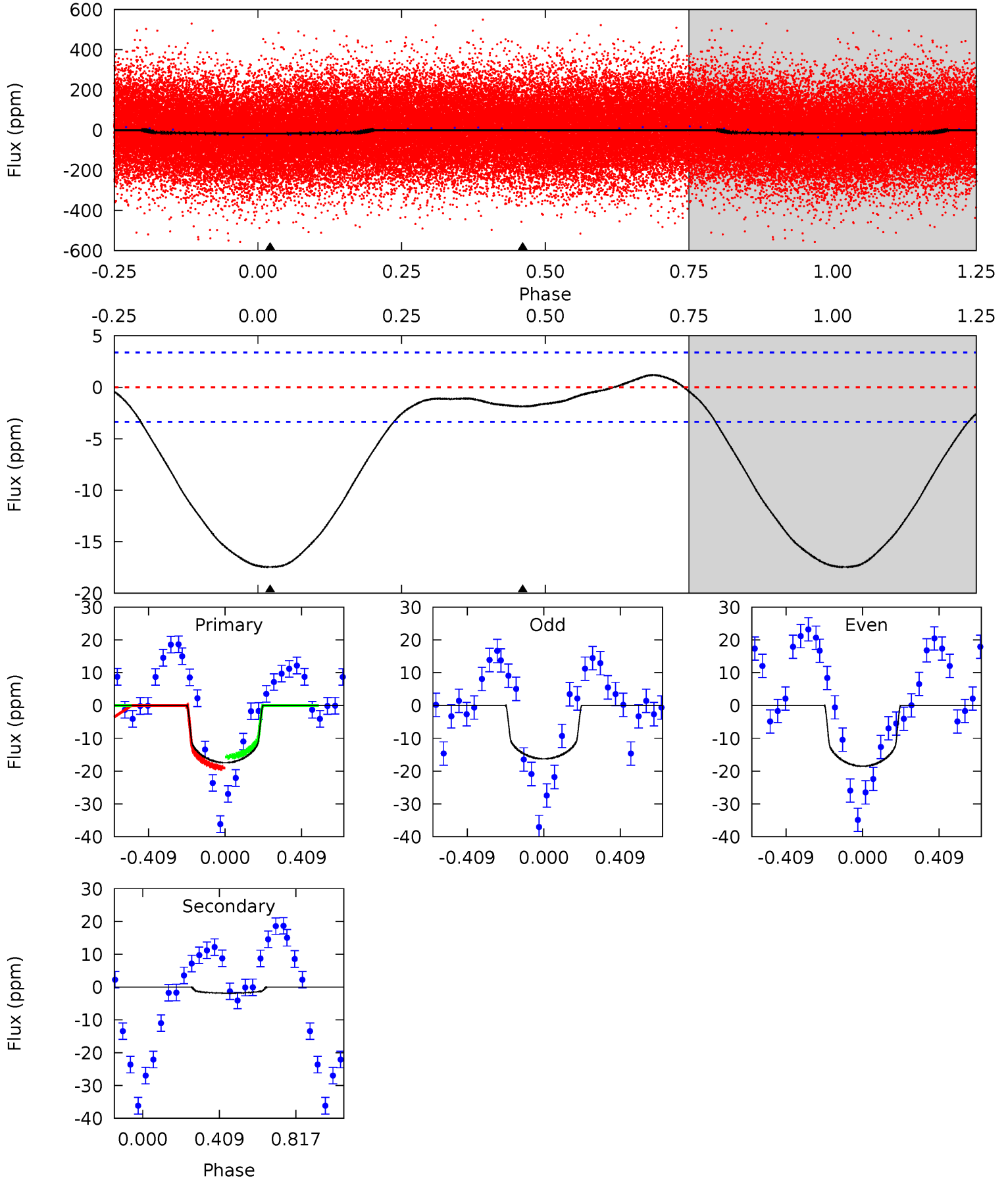
TCE 005899971-01 P= 0.957351 Days $T_0=132.302871$ (BKJD)



DV Model-Shift Uniqueness Test

005899971-01, P = 0.957327 Days, E = 131.345984 Days

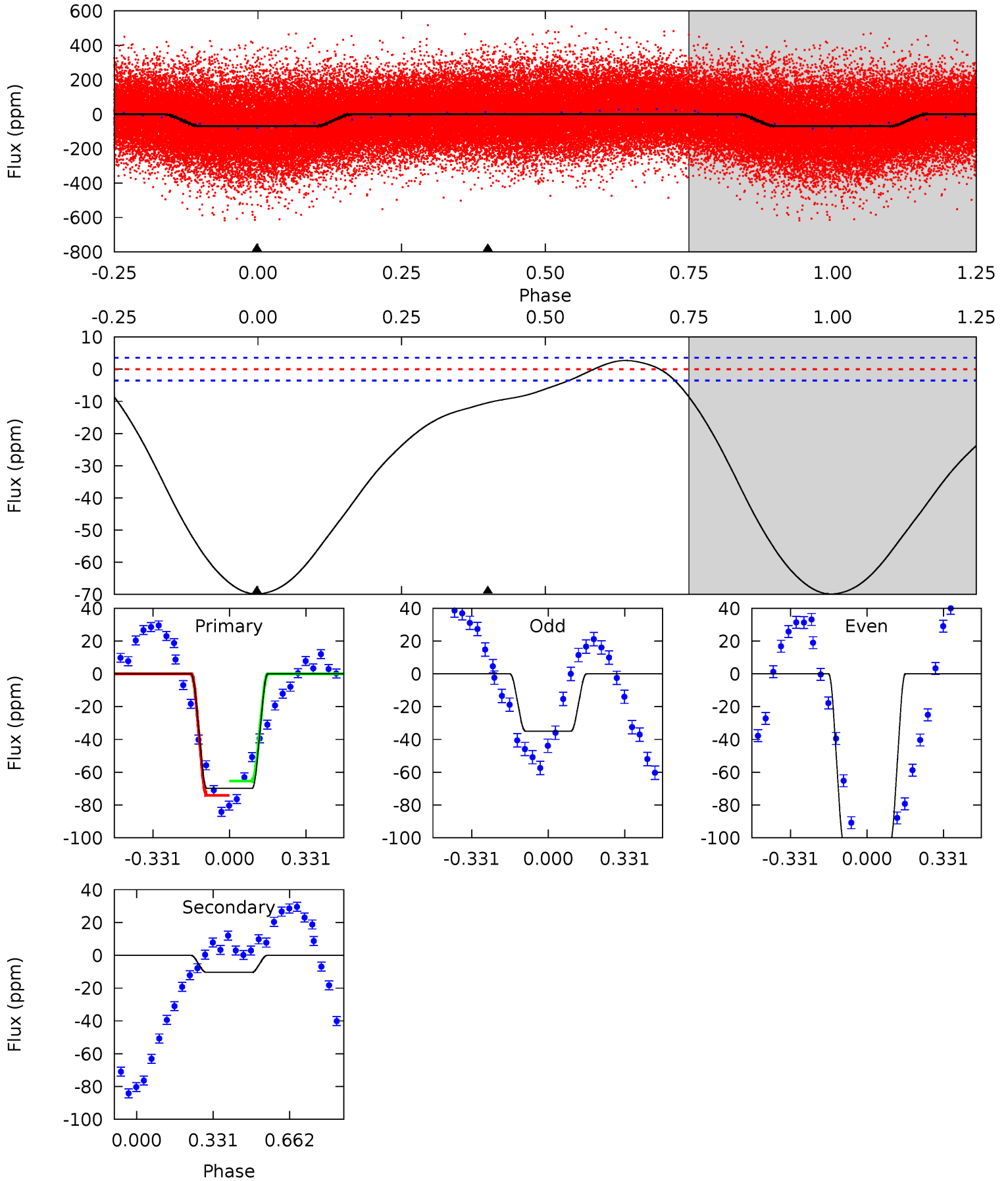
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.1	2.35	0	0	4.26	0.83	1.55	22.1	22.1	2.35	2.35	1.42	1.11	0.06	2.08



Alt Model-Shift Uniqueness Test

005899971-01, P = 0.957351 Days, E = 131.345520 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
84.9	12.7	0	0	4.31	0.97	3.93	84.9	84.9	12.7	12.7	42.0	1.02	0.04	4.58



Stellar Parameters For KIC 005899971

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6628^{+160}_{-180}	$3.586^{+0.312}_{-0.078}$	$-0.220^{+0.350}_{-0.250}$	$3.427^{+0.418}_{-1.255}$	$1.652^{+0.240}_{-0.320}$	$0.058^{+0.132}_{-0.011}$
	+2%/-3%	+9%/-2%	+159%/-114%	+12%/-37%	+15%/-19%	+229%/-19%
Source	PHO1	FLK73	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 005899971-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-2 ± 1	$1.24^{+0.90}_{-0.74}$	4931^{+282}_{-439}	2923^{+3267}_{-6949}	$0.330^{+1.802}_{-0.235}$
Alt.	-10 ± 1	$3.12^{+1.05}_{-1.00}$	4950^{+237}_{-418}	1901^{+2352}_{-5645}	$0.301^{+0.350}_{-0.130}$

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

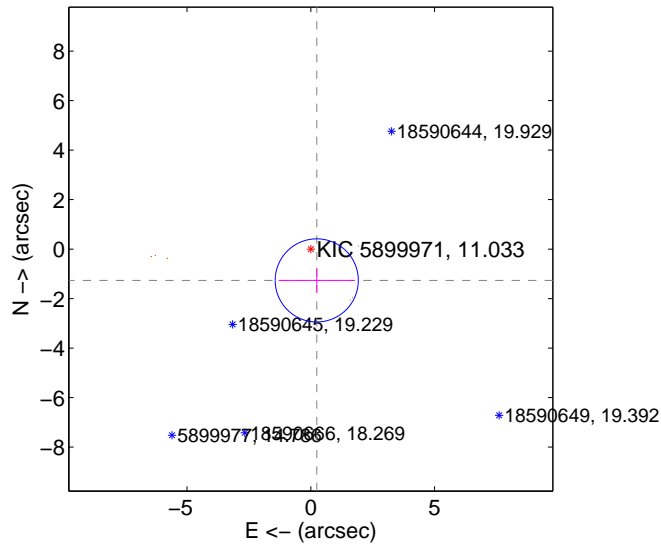
Supplemental centroid analysis for 005899971-01. **Kepler magnitude: 11.03.** Transit SNR 6.79

There are 0 quarters with good PRF difference image offsets

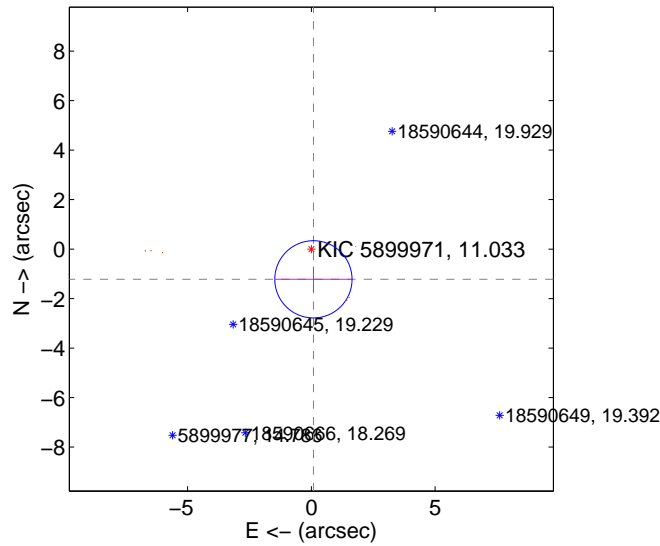
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.288 ± 0.560	2.30	-0.241 ± 1.539	-1.265 ± 0.489
PRF-fit source offset from KIC position	1.224 ± 0.520	2.35	-0.083 ± 1.555	-1.221 ± 0.511
photometric centroid source offset	5.99 ± 0.72	8.34	-3.88 ± 0.70	4.57 ± 0.73

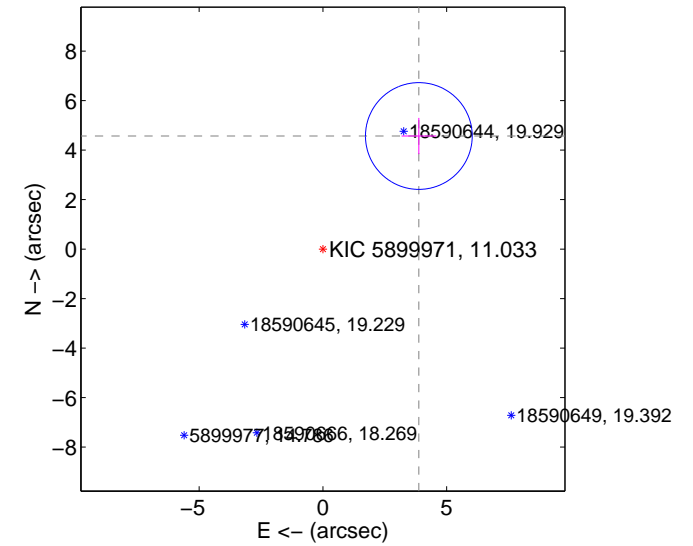
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

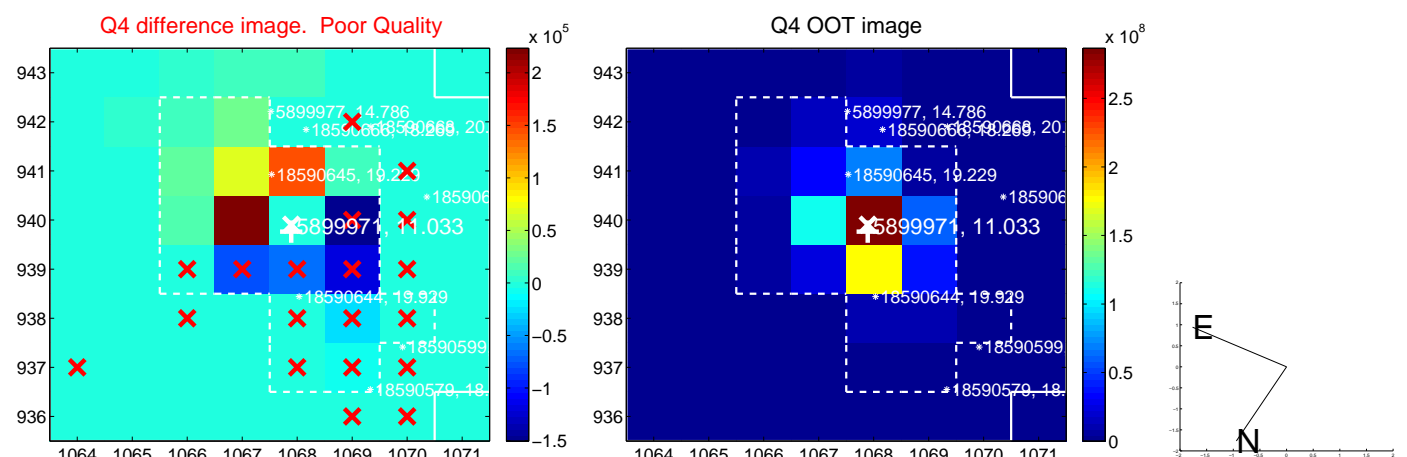
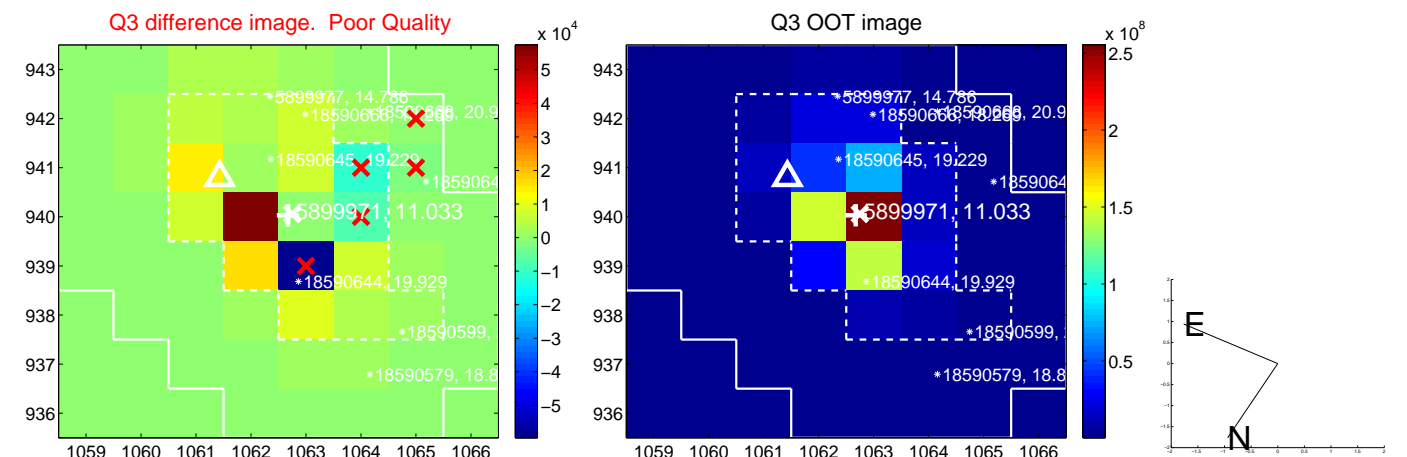
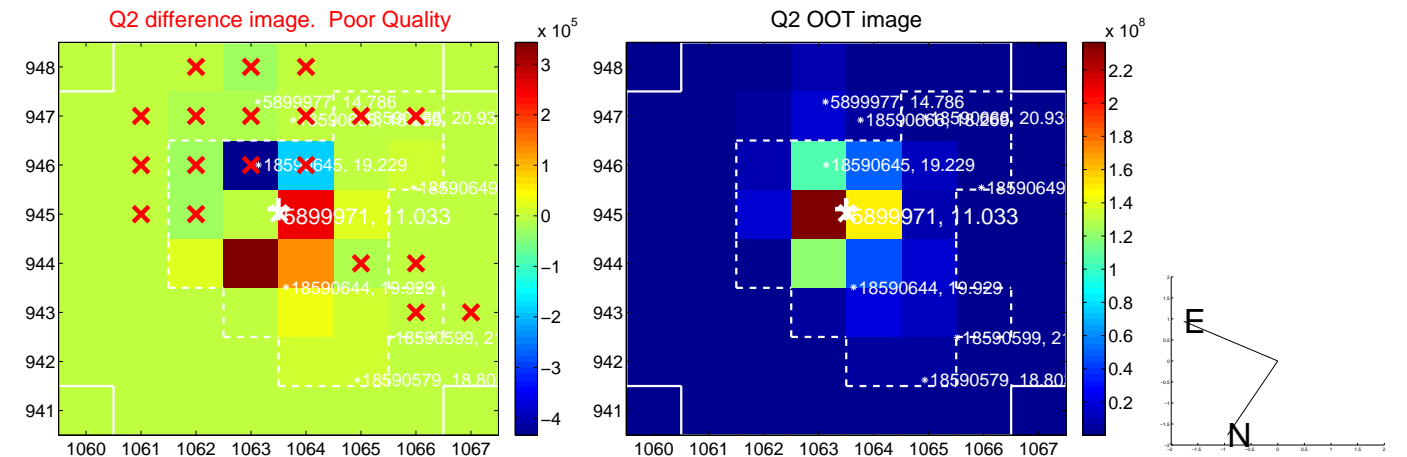
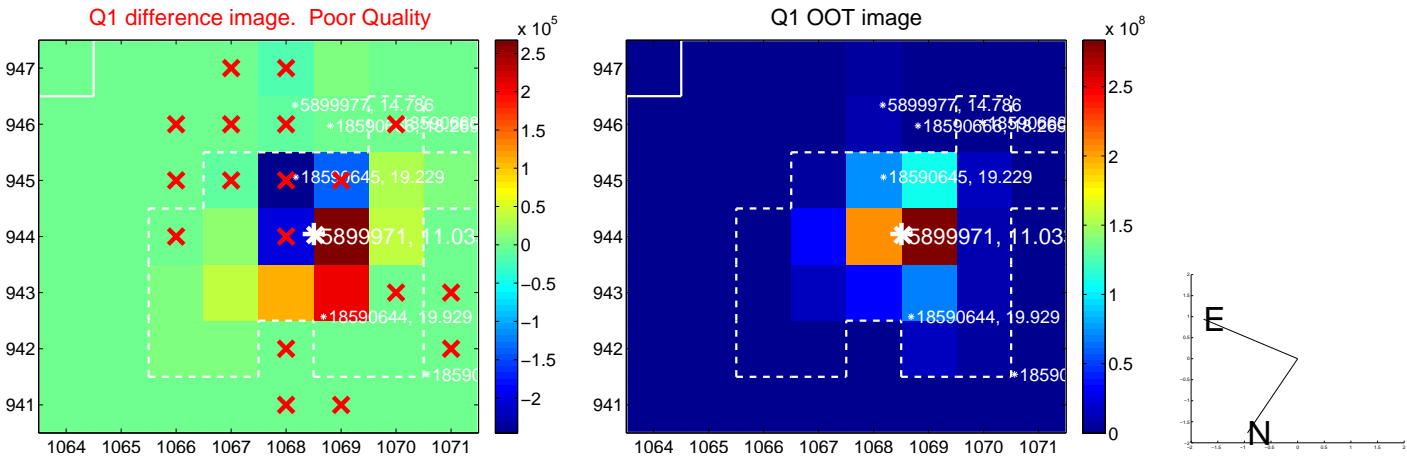


offset from photometric centroids

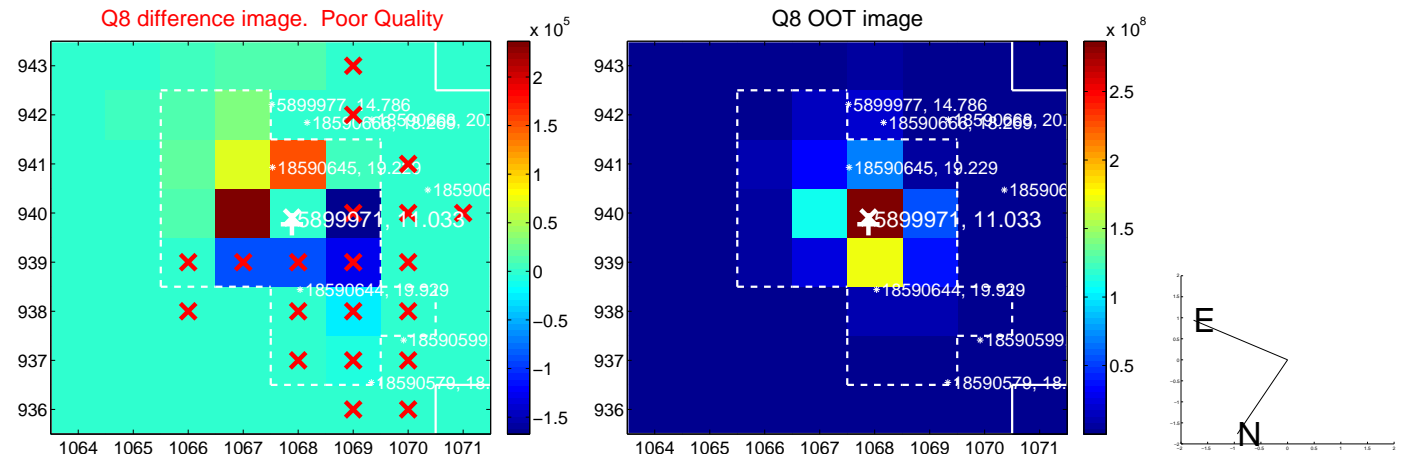
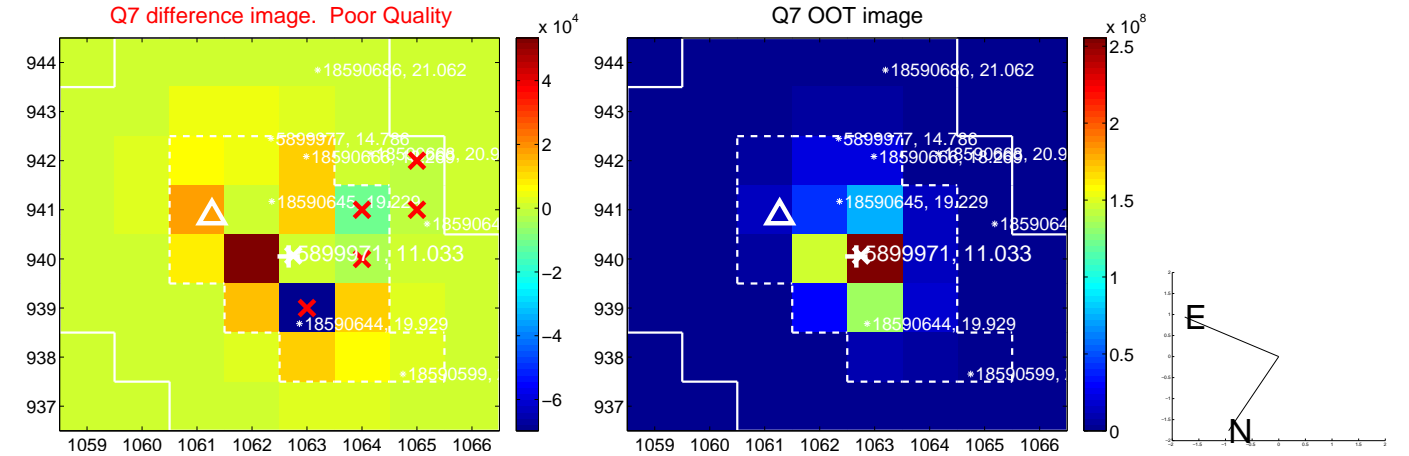
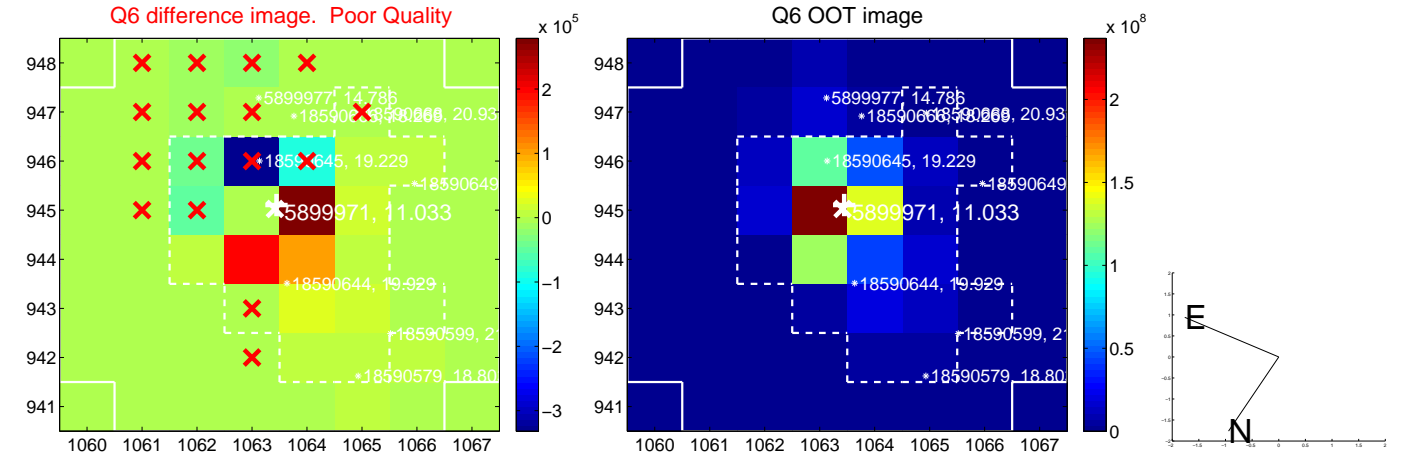
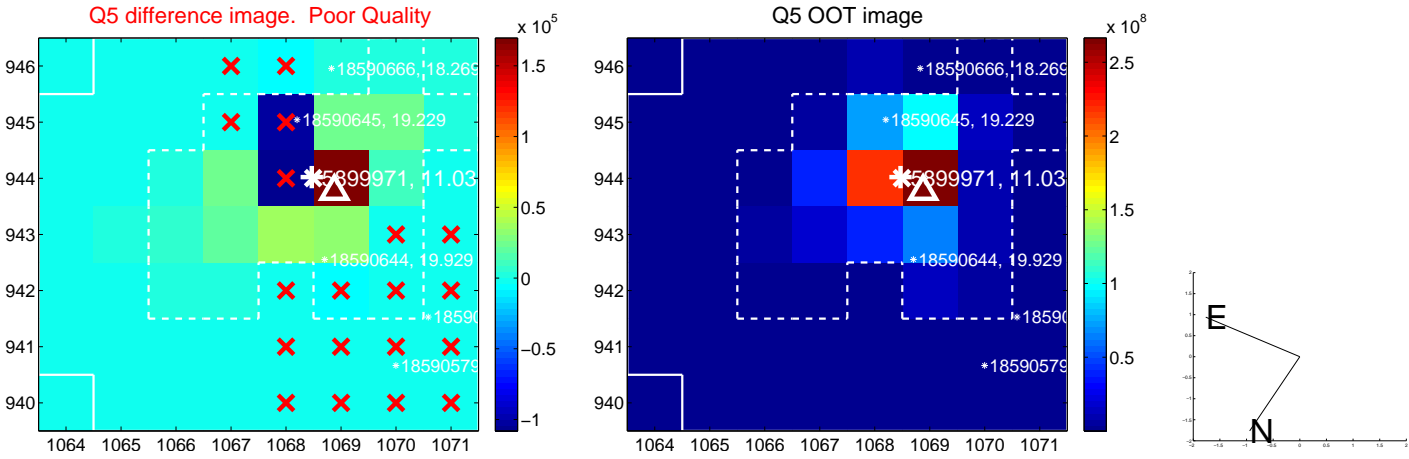


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

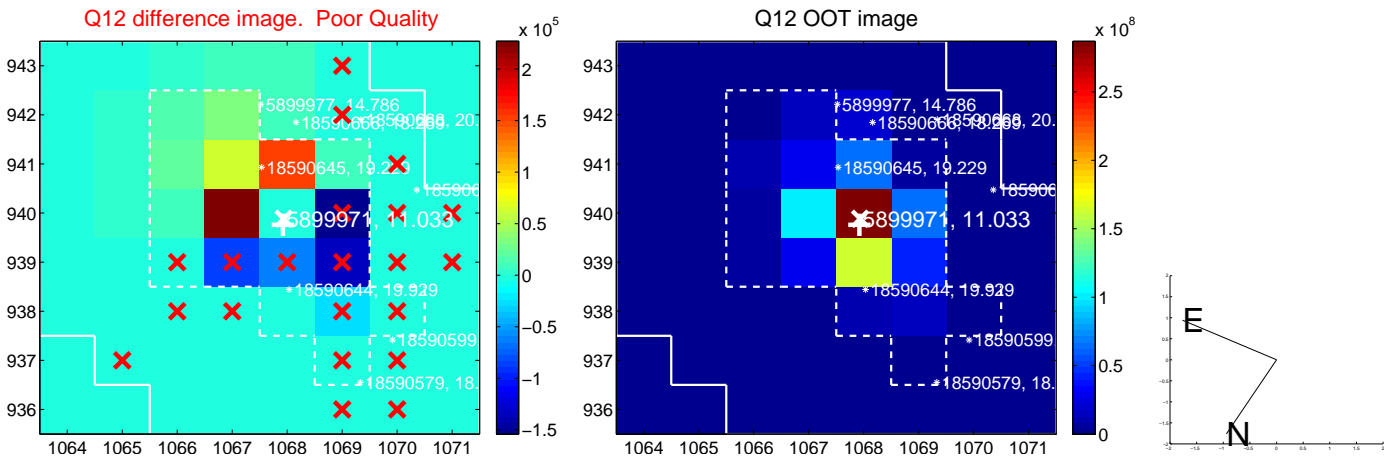
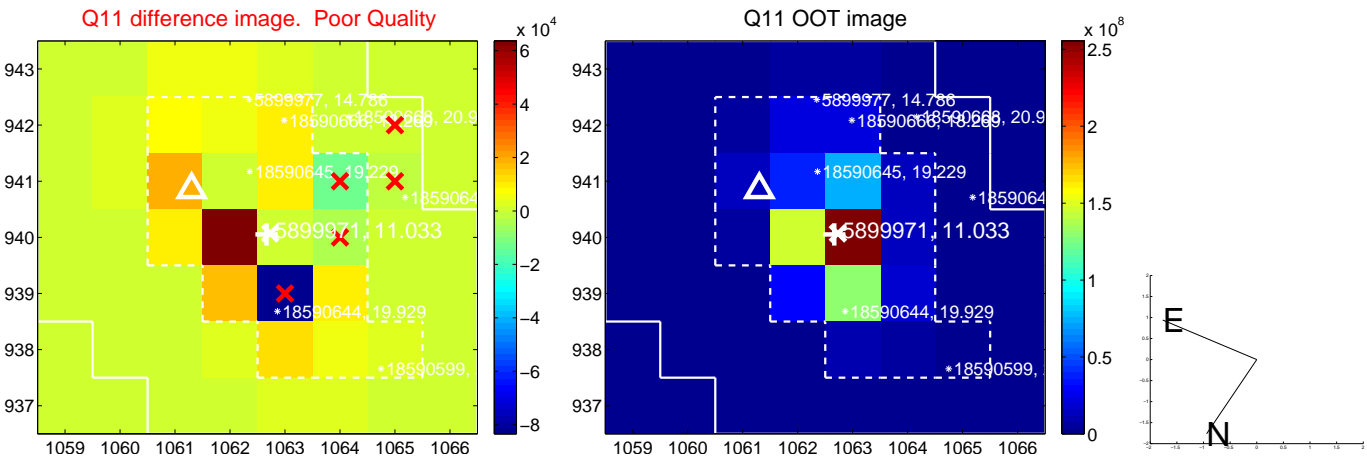
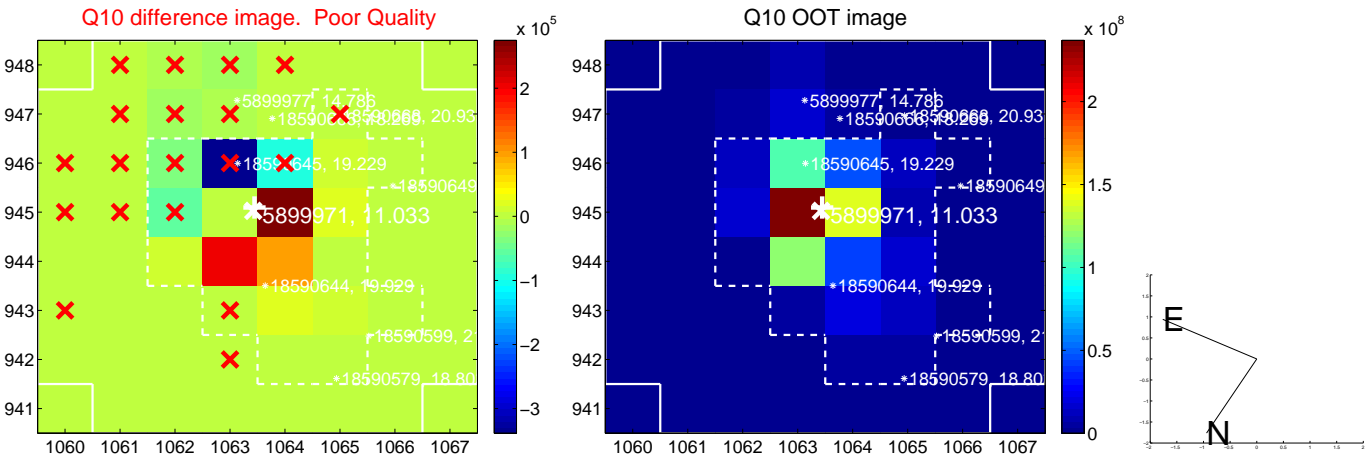
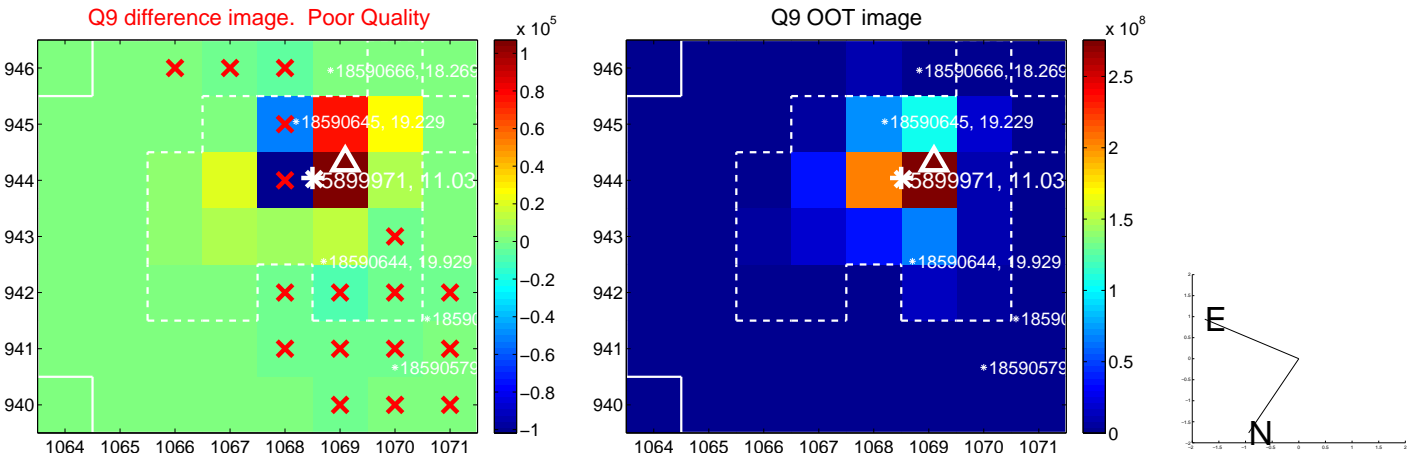
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



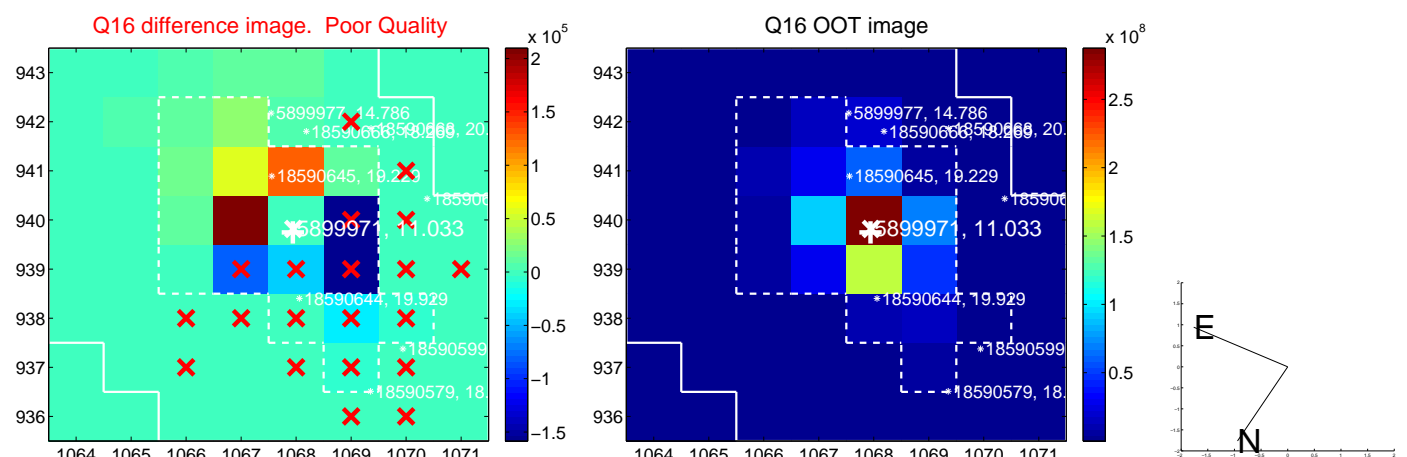
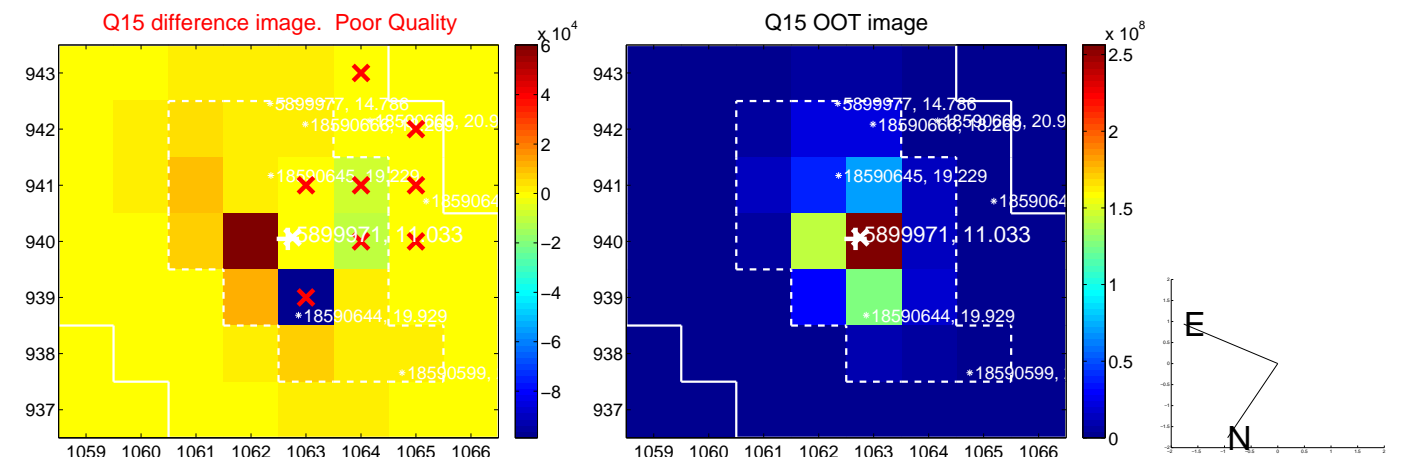
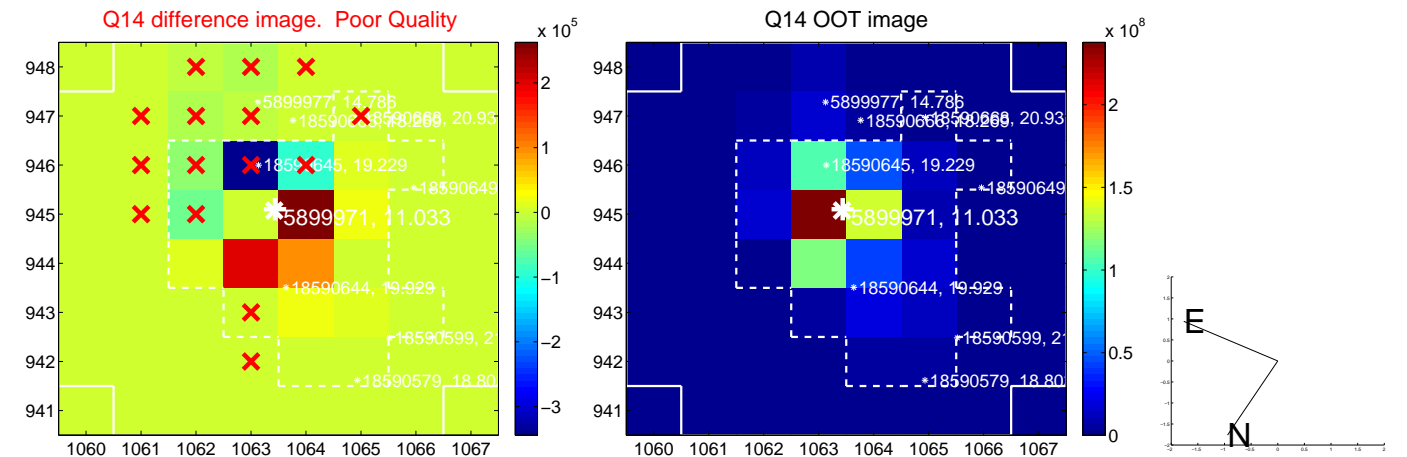
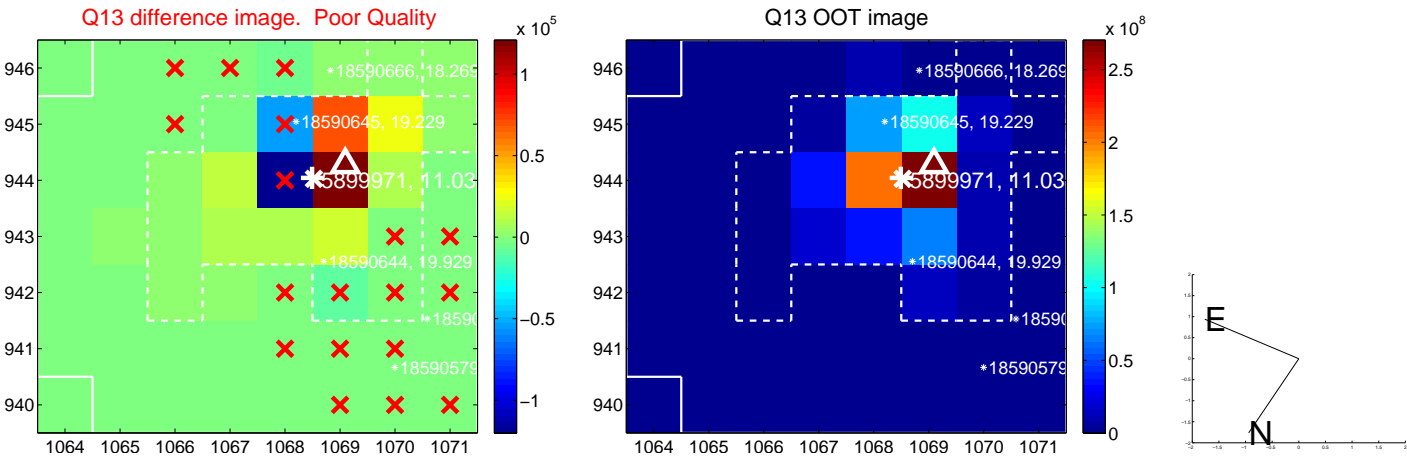
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



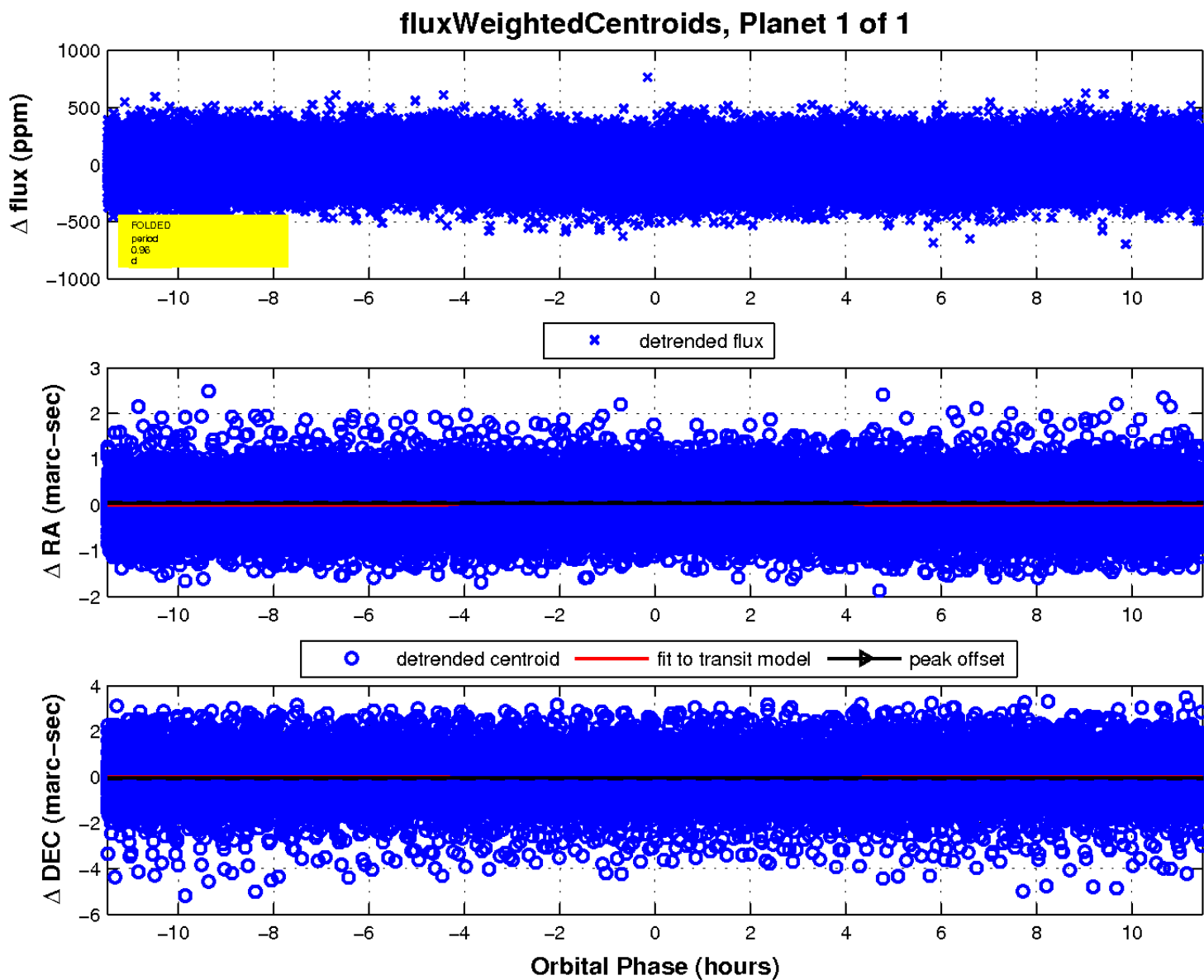
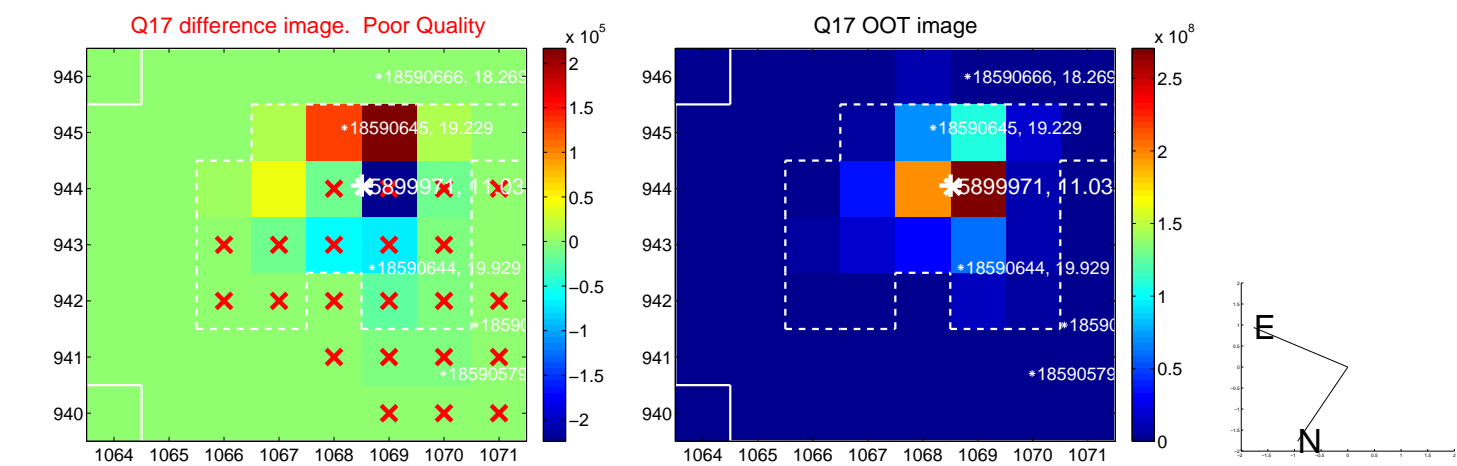
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

