

KIC 008985070

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})
008985070-01	OBS	No	0.560765	131.954544	13.2	5.951	7.2	9.8	2.02	5250	0.80	15368.46

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008985070-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—CENT_RESOLVED_OFFSET

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

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

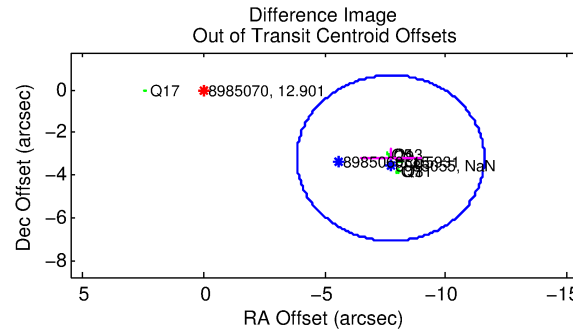
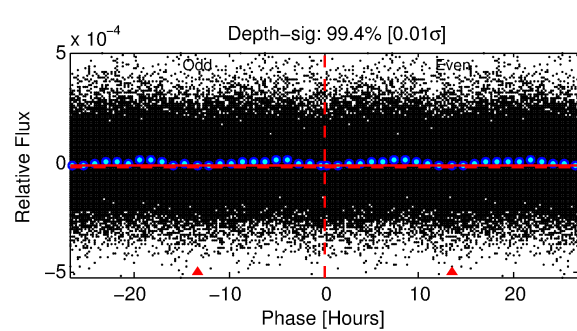
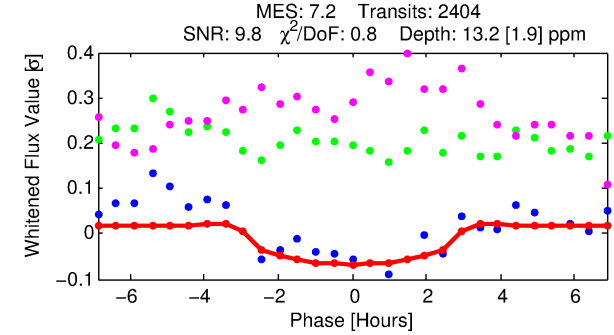
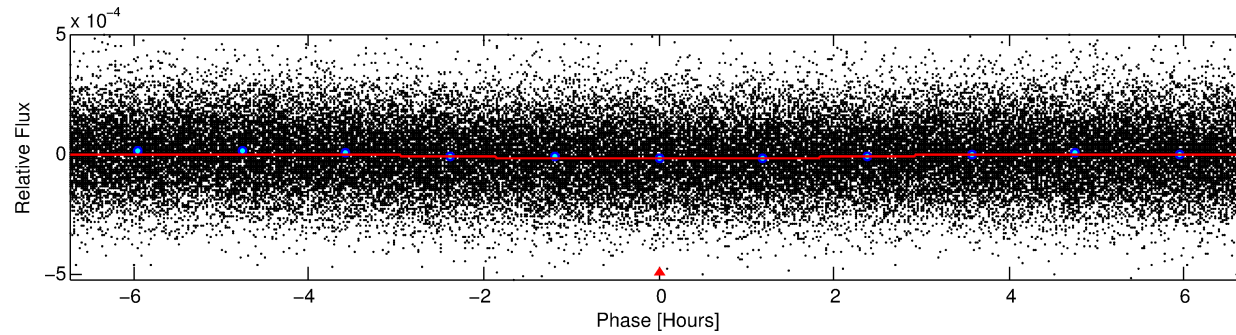
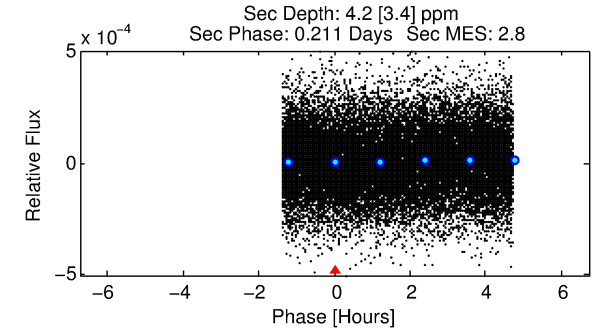
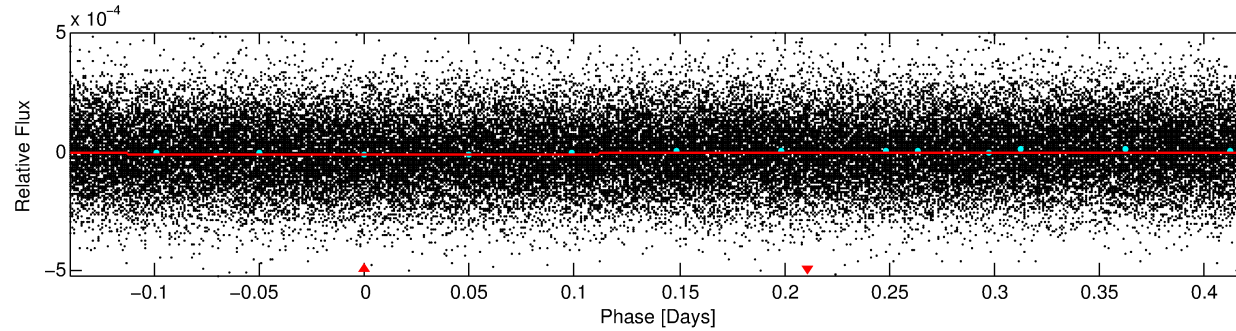
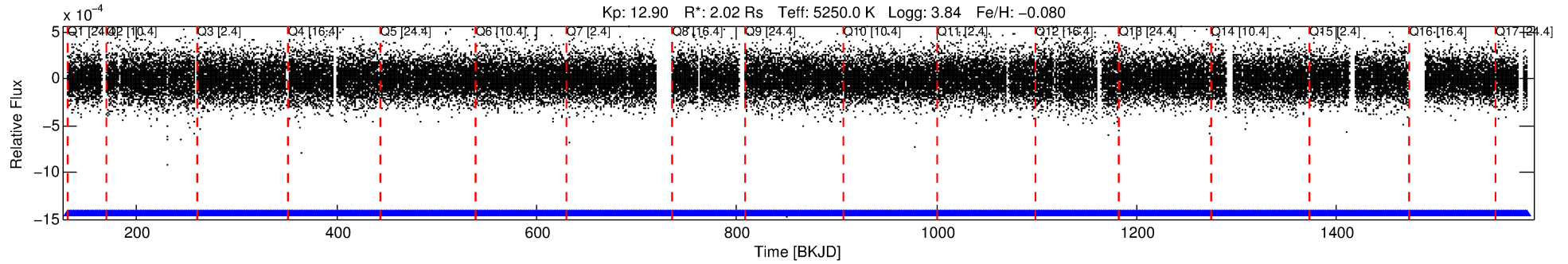
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008985070-01

No Significant Match Found

DV One-Page Summary

KIC: 8985070 Candidate: 1 of 1 Period: 0.561 d



DV Fit Results:

Period = 0.56077 [0.00001] d
Epoch = 131.9545 [0.0053] BKJD
Rp/R* = 0.0036 [0.0017]
a/R* = 1.01 [0.04]
b = 0.74 [1.15]
Seff = 15368.46 [17211.77]
Teq = 2839 [795] K
Rp = 0.80 [0.60] Re
a = 0.0135 [0.0087] AU
Ag = 0.66 [1.10] [-0.31σ]
Teffp = 3955 [1229] K [0.76σ]

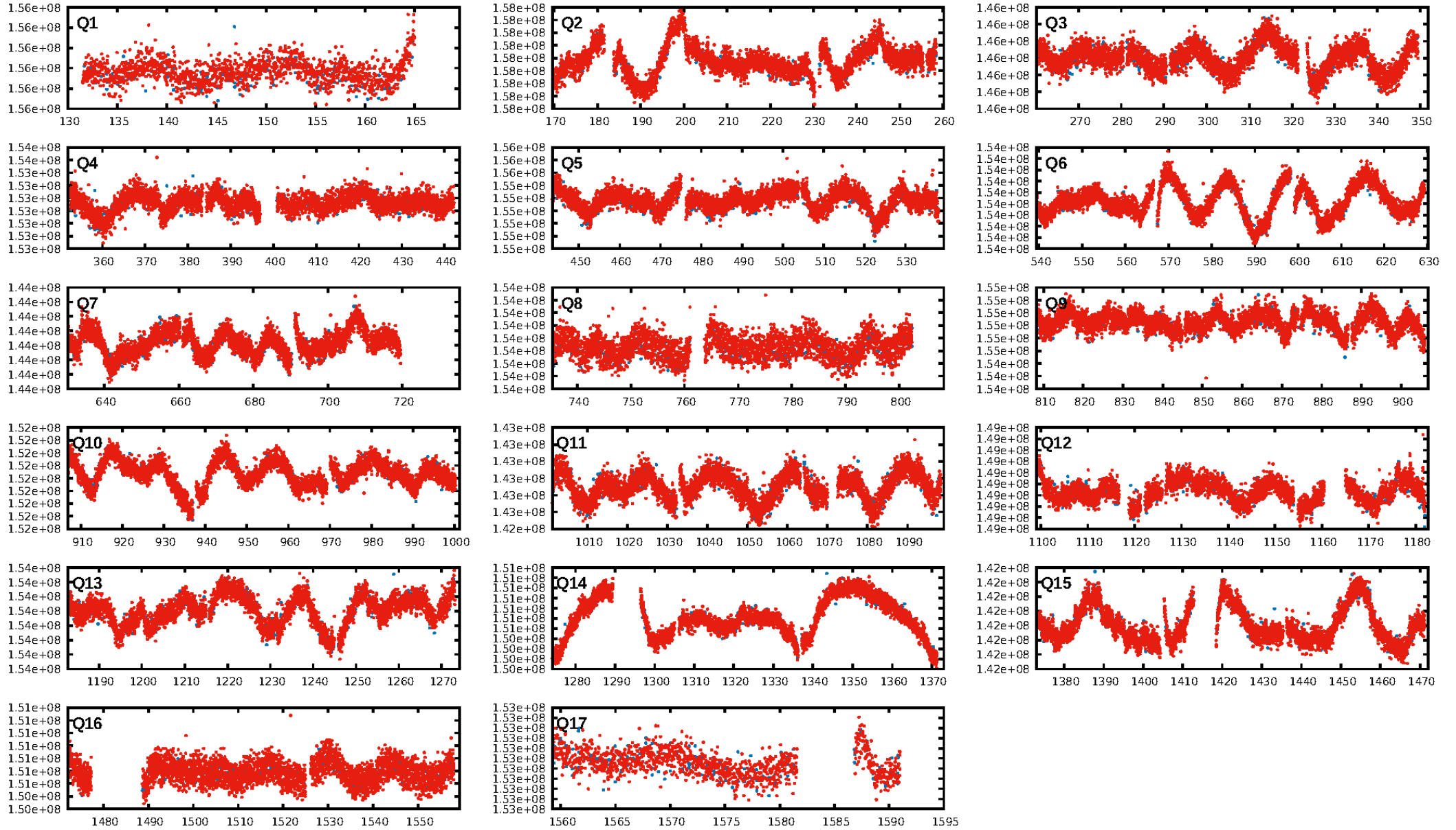
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2295/2295]
GhostDiagnostic-chr: -0.6982
Centroid-sig: 86.0%
Centroid-so: 1.310 arcsec [1.45σ]
OotOffset-rm: 8.355 arcsec [6.47σ]
KicOffset-rm: 8.493 arcsec [6.51σ]
OotOffset-st: 0/4/0/4 [8]
KicOffset-st: 0/4/0/4 [8]
DiffImageQuality-fgm: 0.38 [3/8]
DiffImageOverlap-fno: 1.00 [17/17]

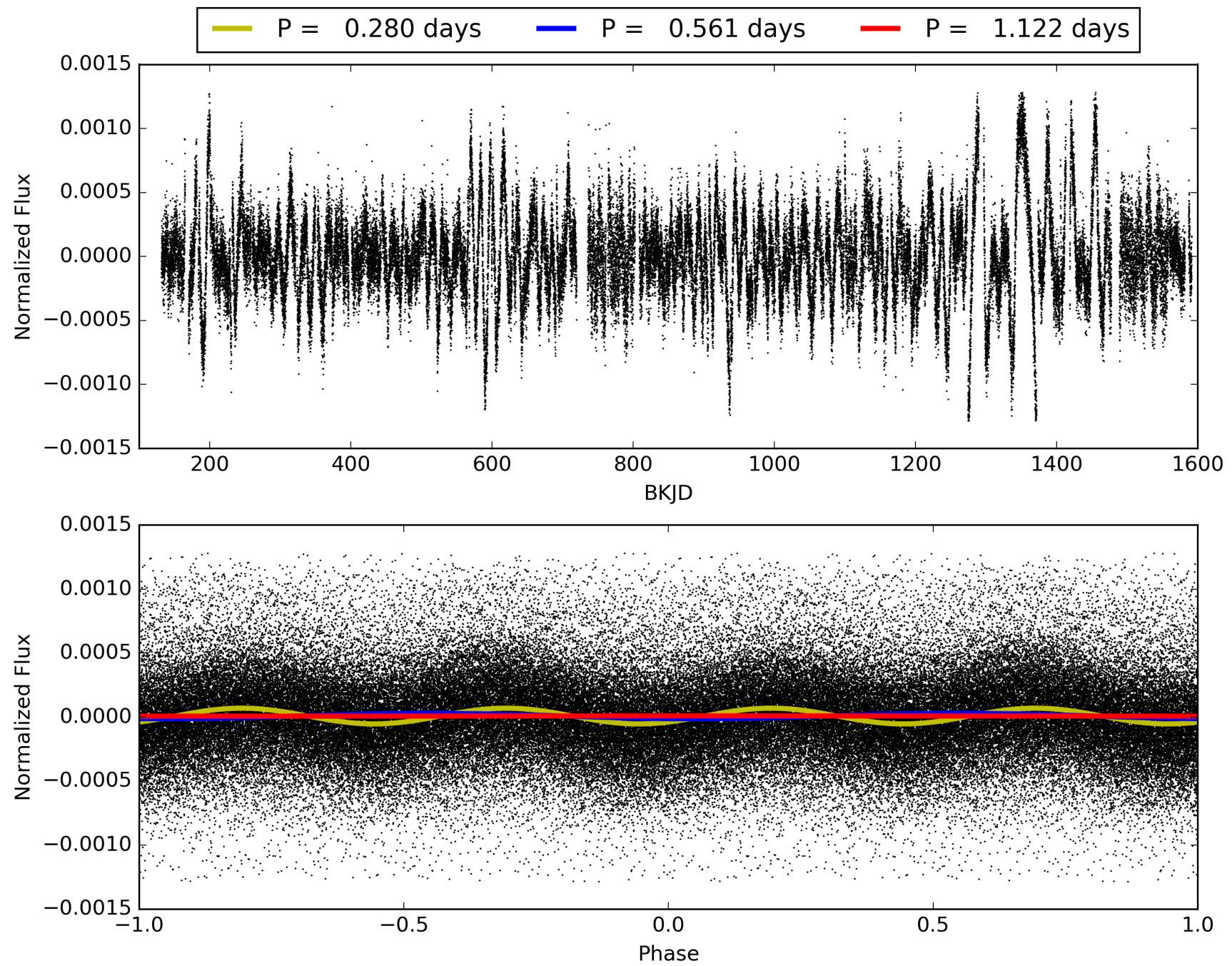
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 00:38:50 Z

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

TCE 008985070-01, PDC Light Curves

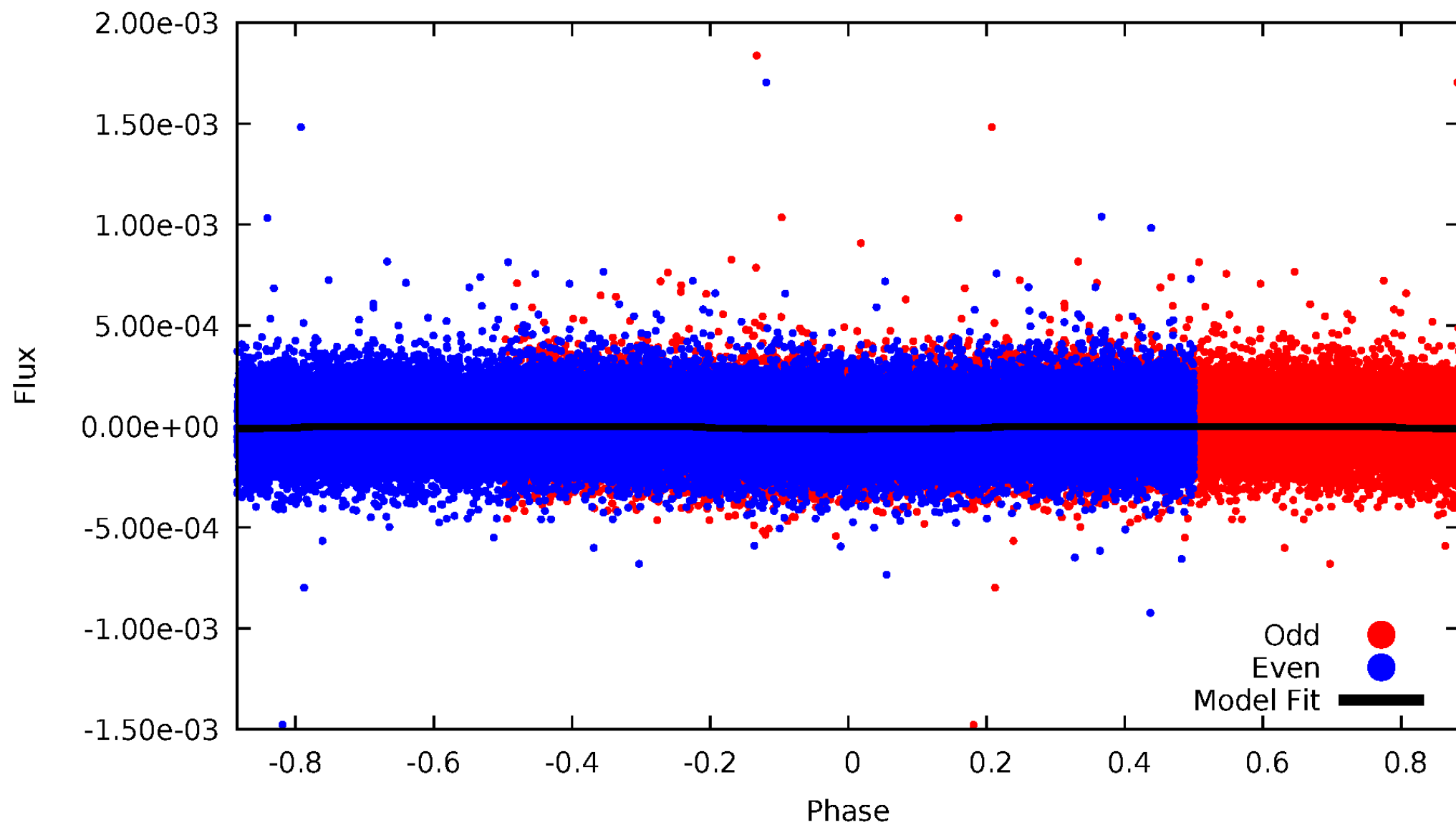


TCE 008985070-01



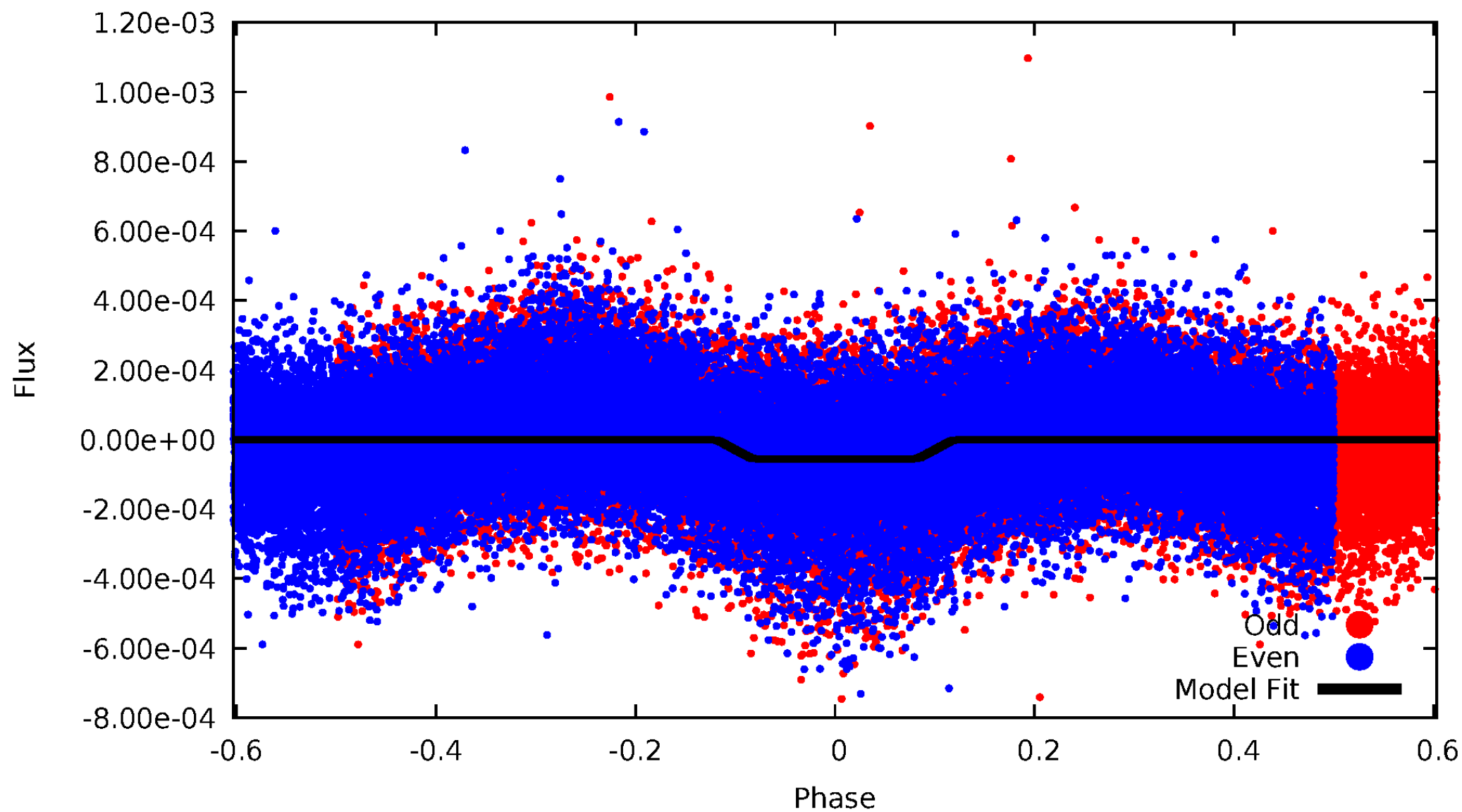
DV Odd/Even

TCE 008985070-01



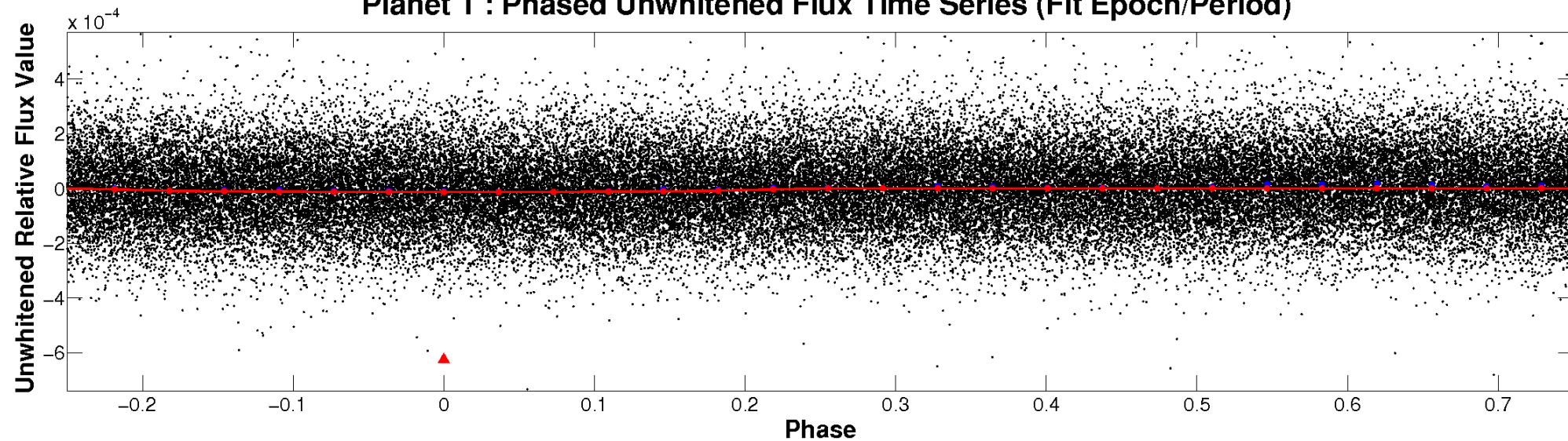
ALT Odd/Even

TCE 008985070-01

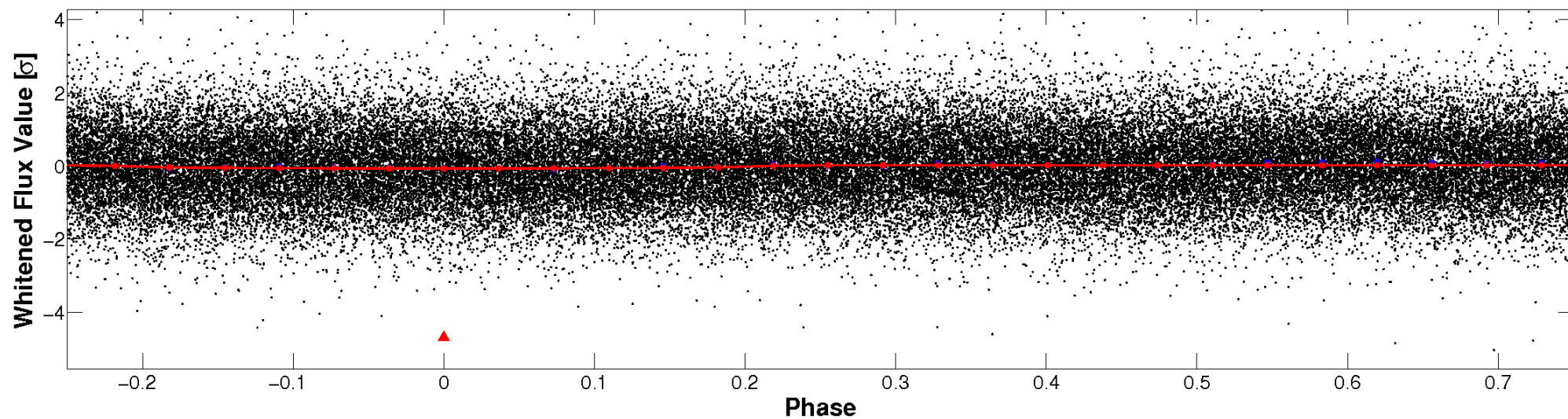


Non-Whitened Vs. Whitened Light Curve

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

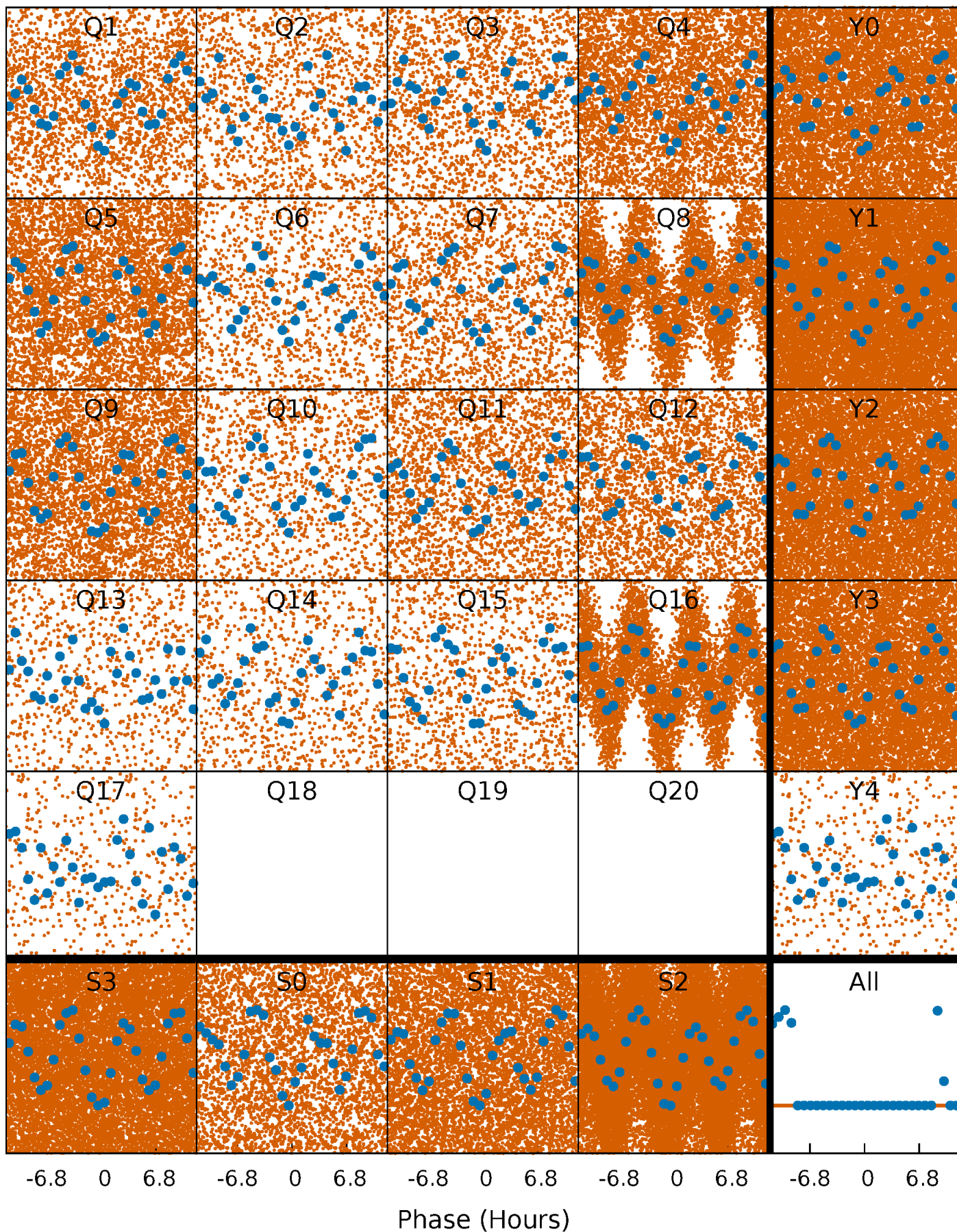


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



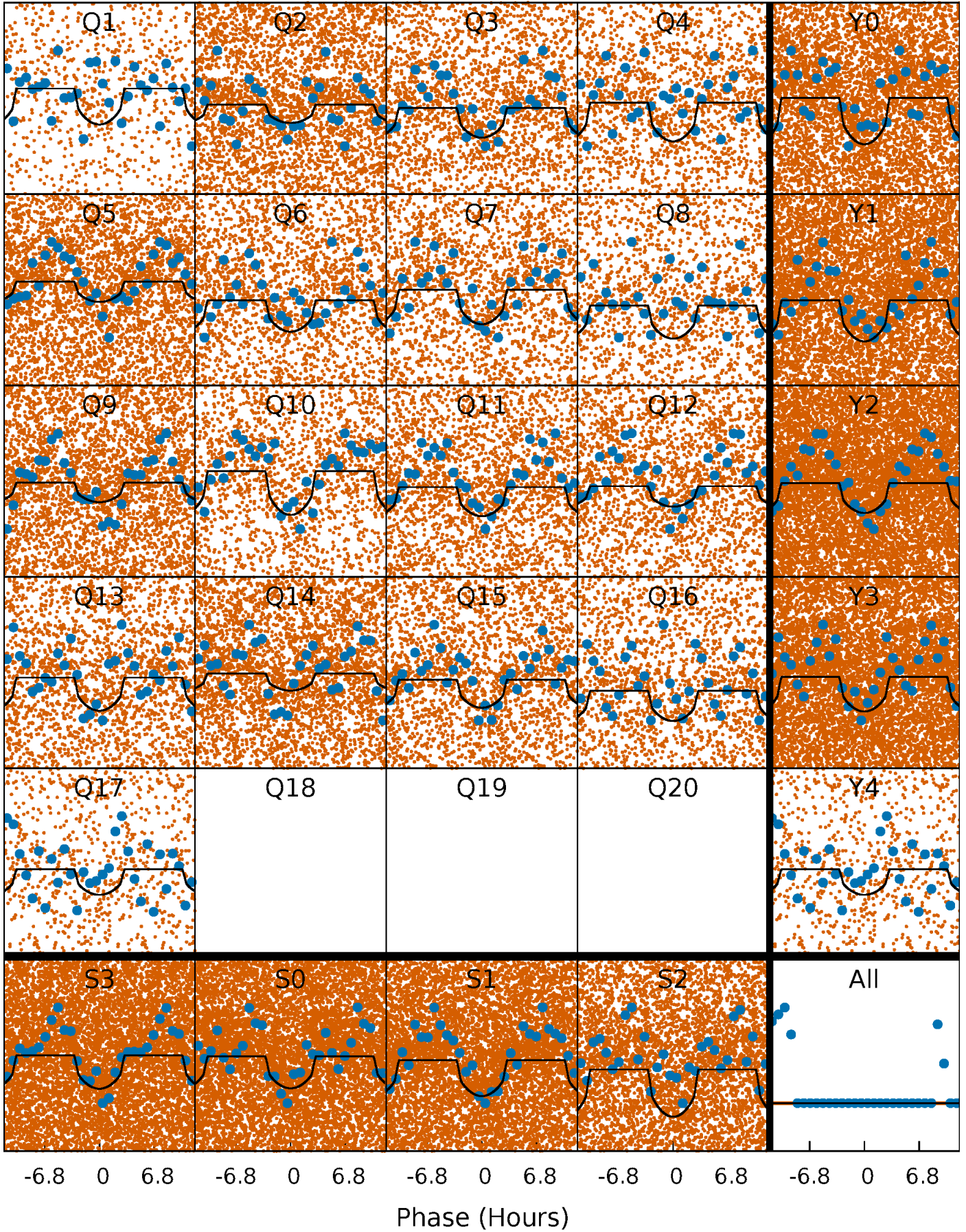
PDC Quarter-Phased Transit Curves

TCE 008985070-01 P= 0.560765 Days $T_0=131.954544$ (BKJD)



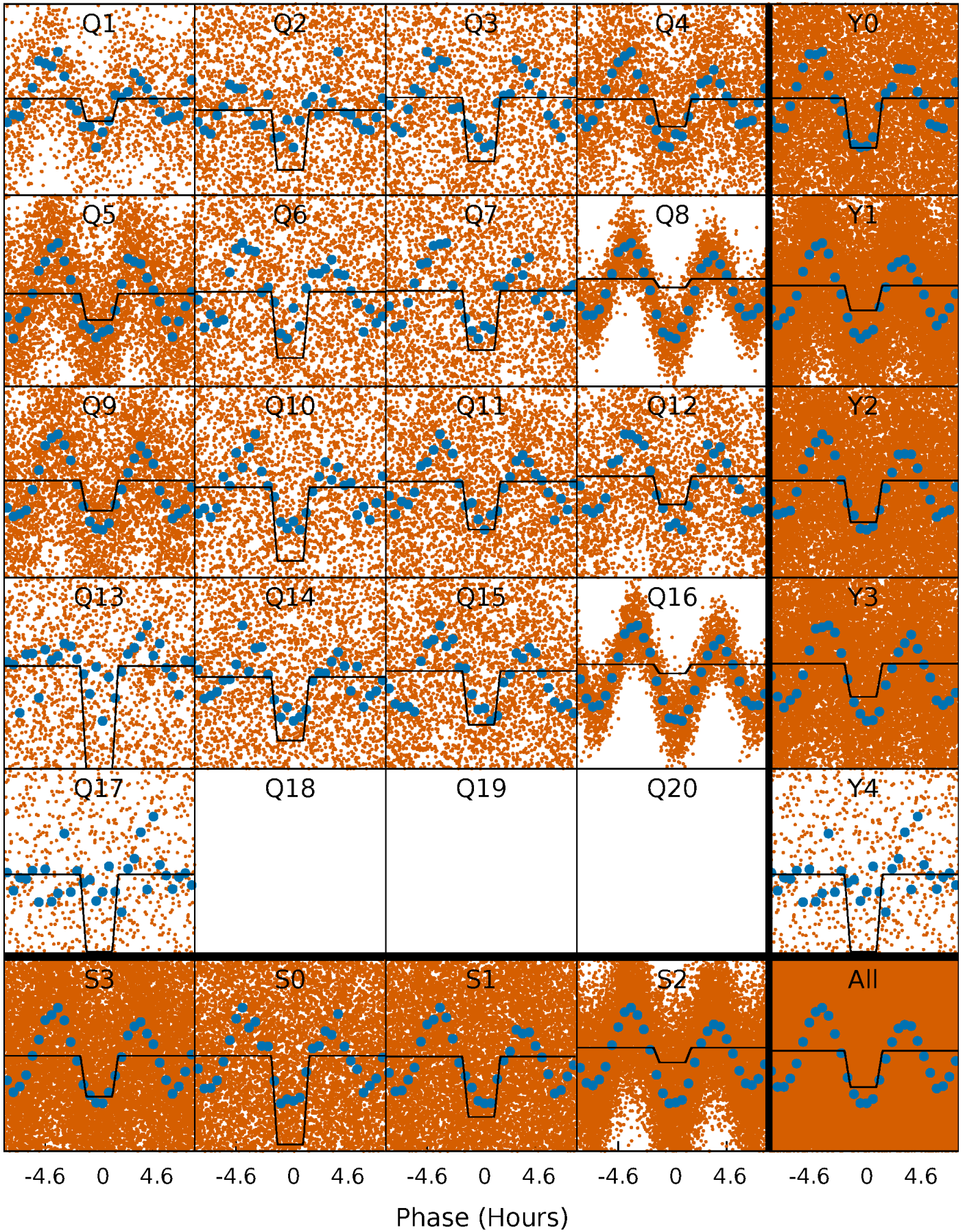
DV Quarter-Phased Transit Curves

TCE 008985070-01 P= 0.560765 Days $T_0=131.954544$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

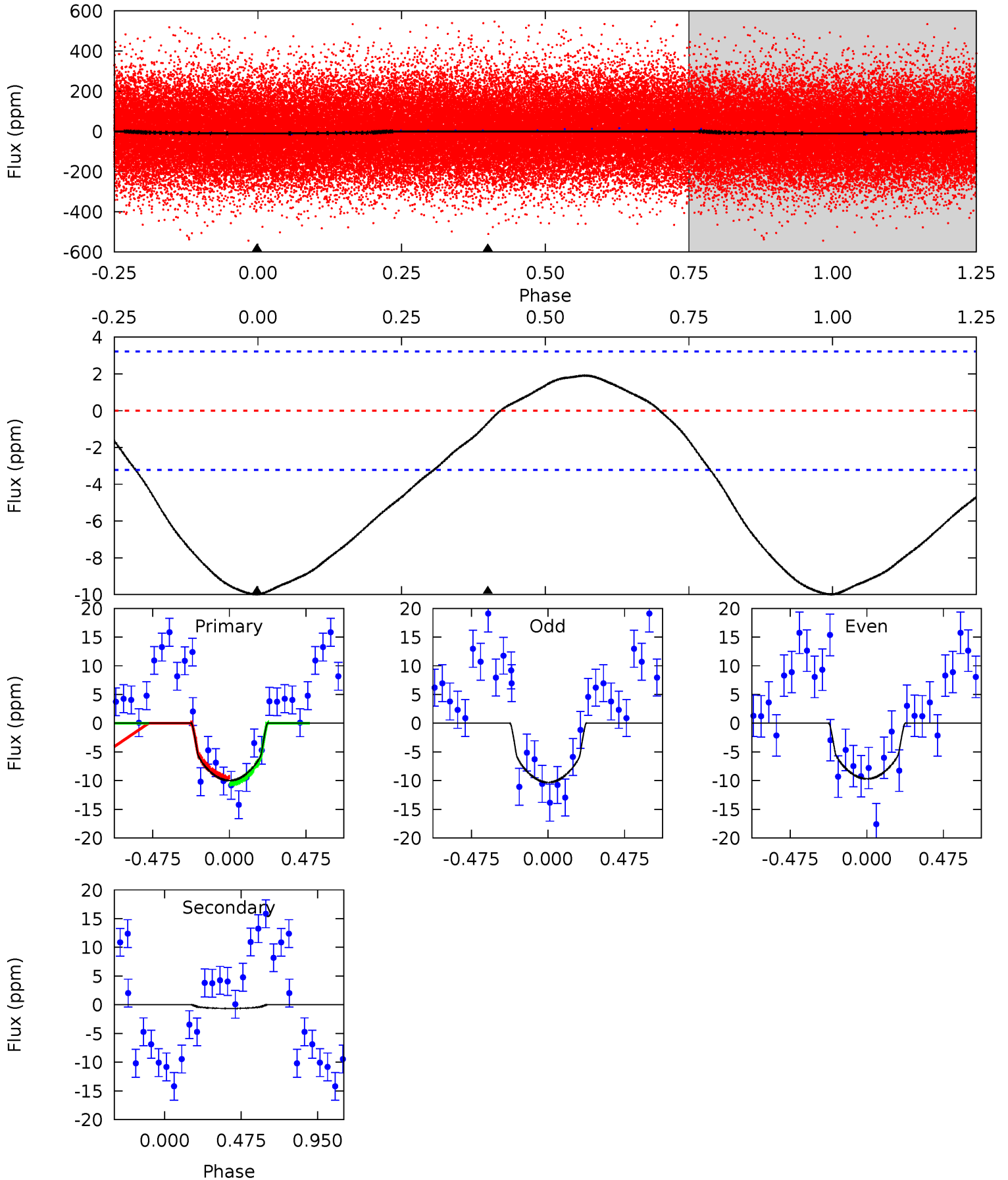
TCE 008985070-01 P= 0.560732 Days $T_0=131.972534$ (BKJD)



DV Model-Shift Uniqueness Test

008985070-01, P = 0.560765 Days, E = 131.393779 Days

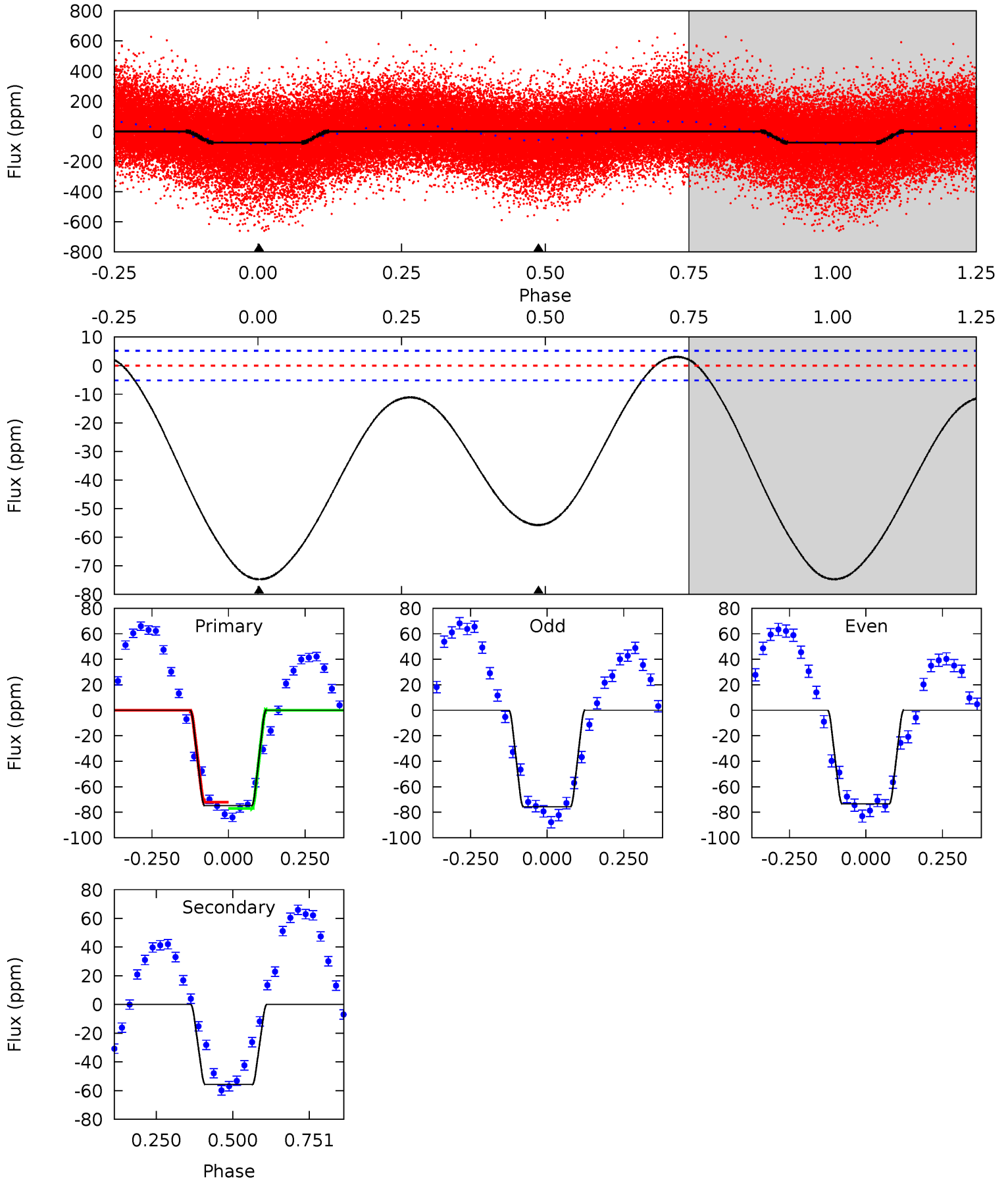
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.1	0.87	0	0	4.23	0.71	1.02	13.1	13.1	0.87	0.87	0.41	1.01	0.16	0.63



Alt Model-Shift Uniqueness Test

008985070-01, P = 0.560732 Days, E = 131.411802 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
63.0	47.0	0	0	4.37	1.15	5.67	63.0	63.0	47.0	47.0	0.95	1.36	0.04	2.11



Stellar Parameters For KIC 008985070

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5250^{+174}_{-158}	$3.841^{+0.679}_{-0.291}$	$-0.080^{+0.350}_{-0.250}$	$2.024^{+0.963}_{-1.177}$	$1.036^{+0.216}_{-0.216}$	$0.176^{+2.104}_{-0.094}$
	+3%/-3%	+18%/-8%	+438%/-312%	+48%/-58%	+21%/-21%	+1195%/-54%
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 008985070-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1 ± 1	$0.75^{+0.46}_{-0.38}$	3941^{+520}_{-633}	-3332^{+6587}_{-524}	$0.100^{+0.469}_{-0.122}$
Alt.	-56 ± 1	$1.53^{+0.70}_{-0.56}$	3914^{+491}_{-739}	5096^{+710}_{-580}	$2.431^{+3.423}_{-1.299}$

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

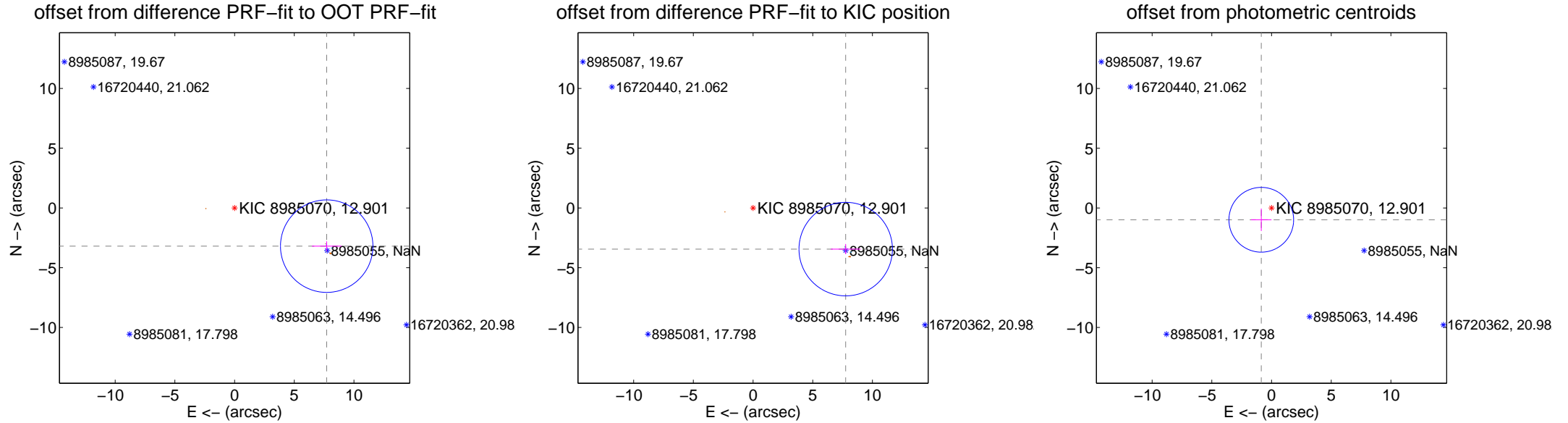
DV Centroid Data

Supplemental centroid analysis for 008985070-01. Kepler magnitude: 12.90. Transit SNR 9.78

There are 3 quarters with good PRF difference image offsets

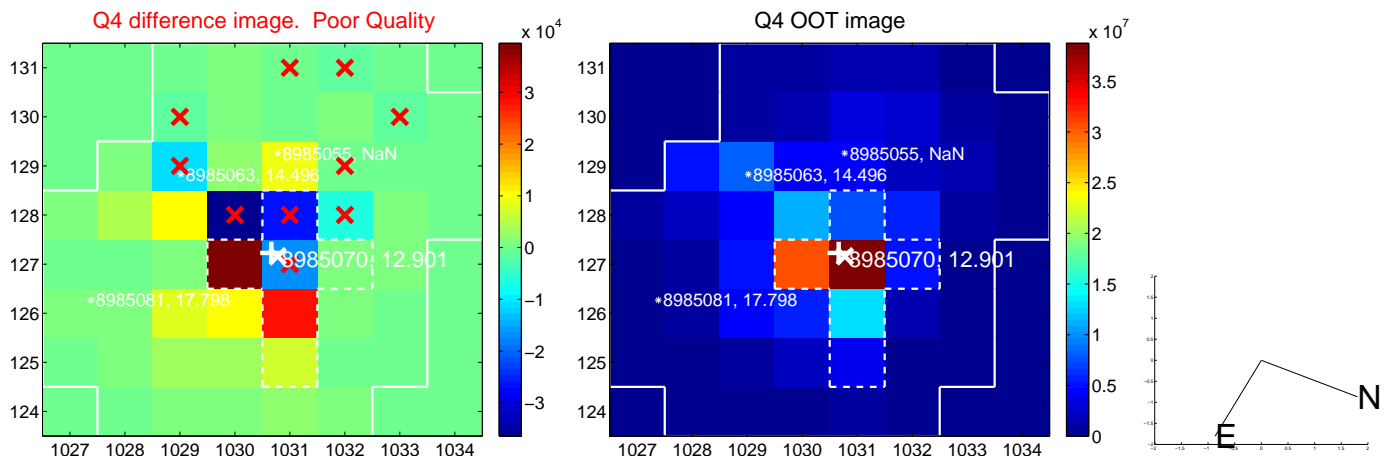
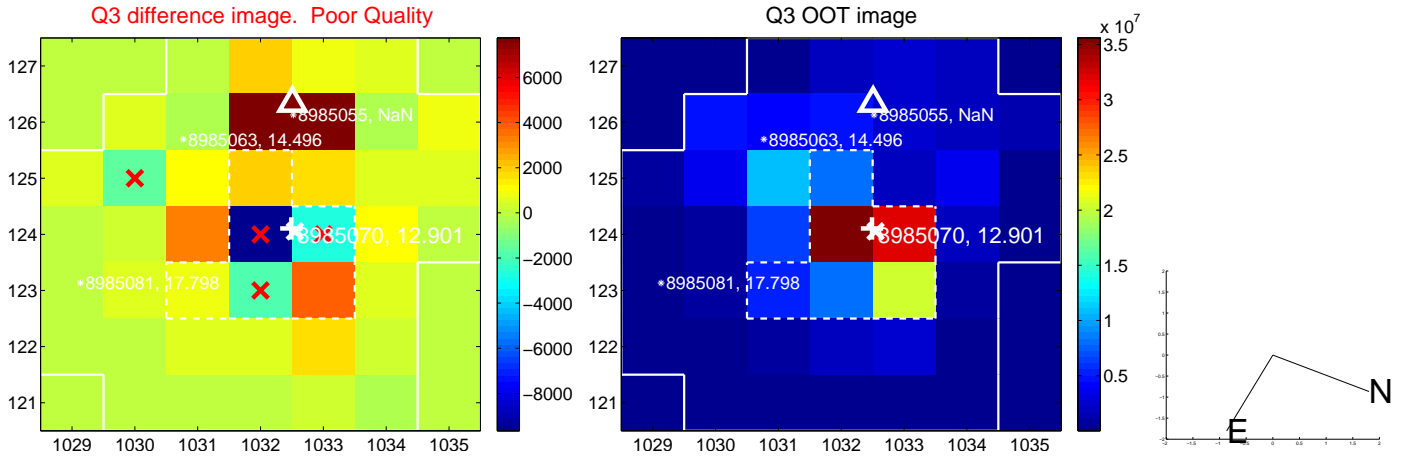
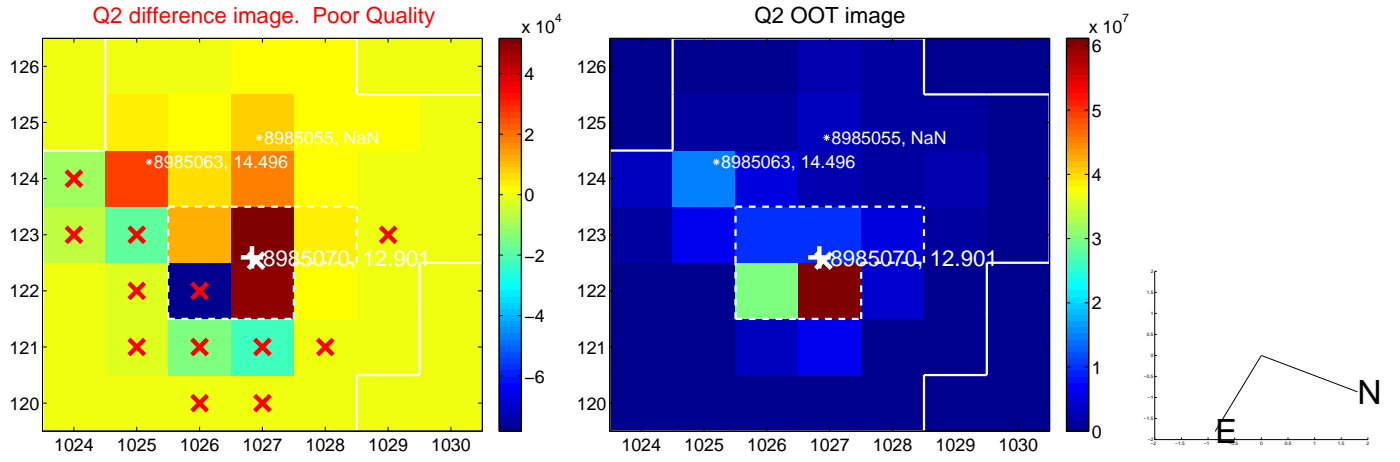
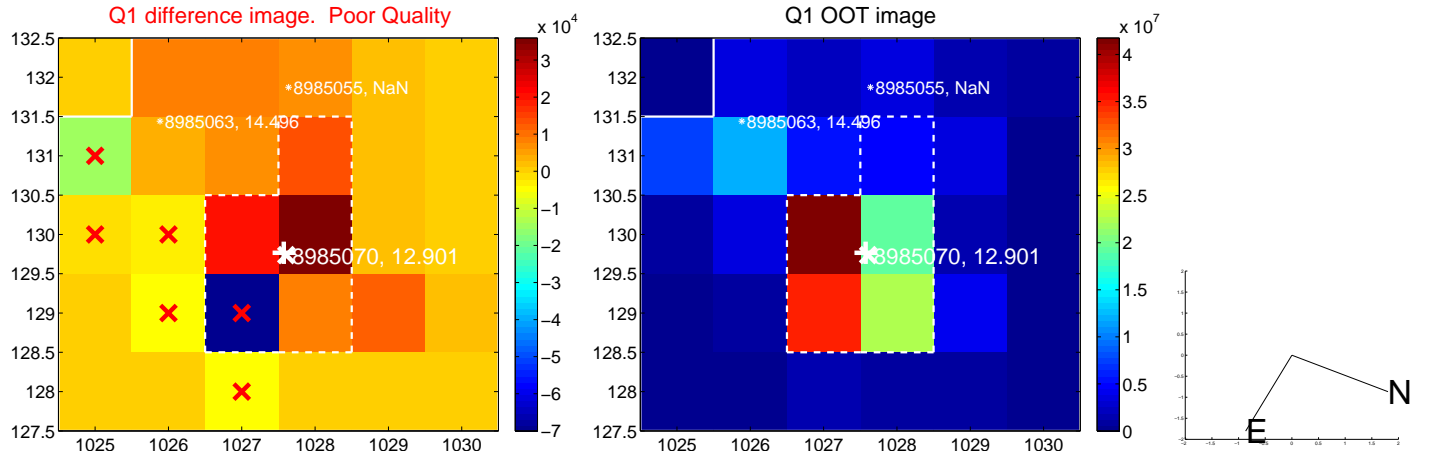
The direct PRF centroid is offset from the target star catalog position by about 0.28 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	8.355 ± 1.291	6.47	-7.719 ± 1.239	-3.198 ± 0.401
PRF-fit source offset from KIC position	8.493 ± 1.305	6.51	-7.763 ± 1.245	-3.444 ± 0.426
photometric centroid source offset	1.31 ± 0.90	1.45	0.86 ± 0.85	-0.99 ± 0.94

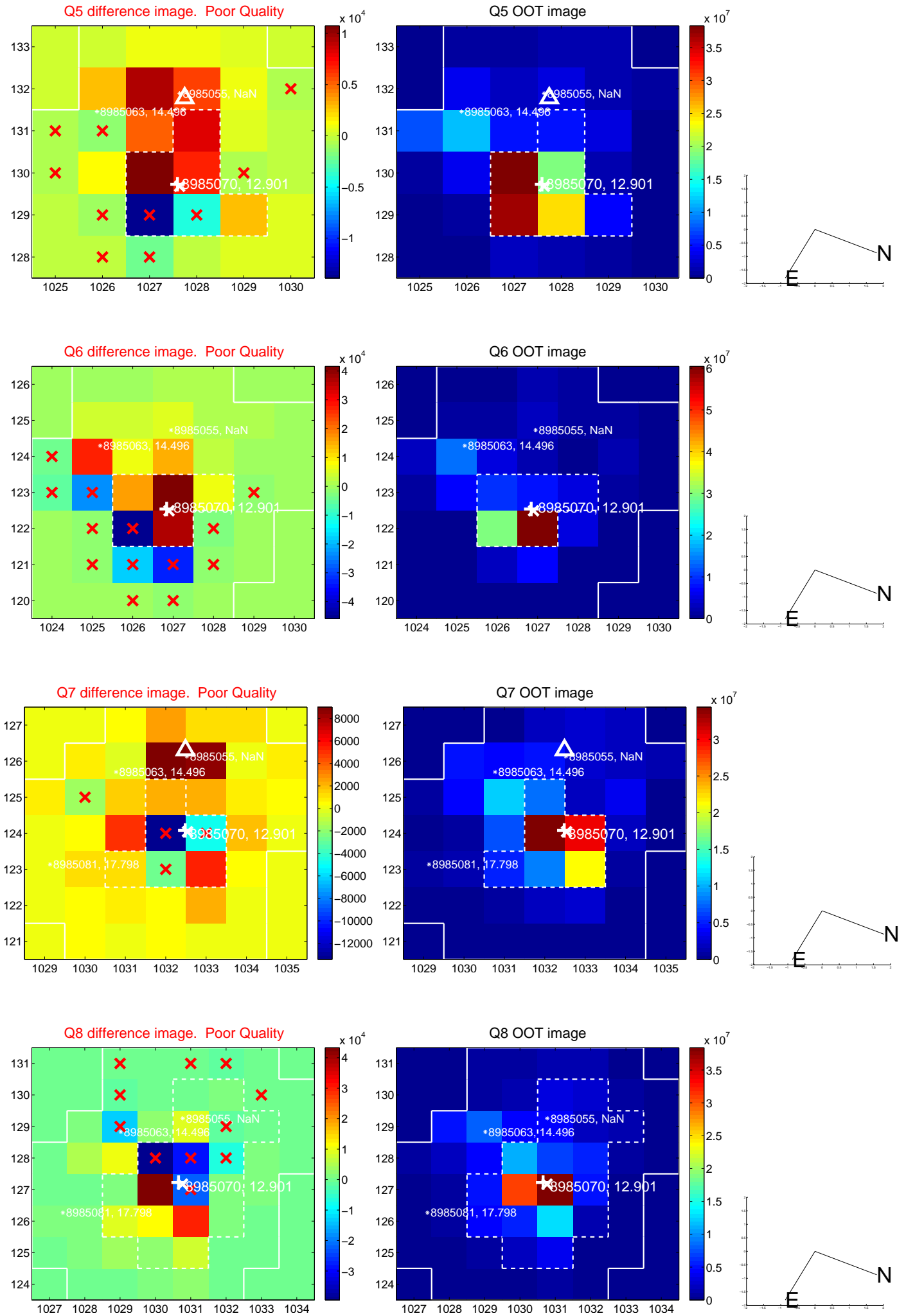


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

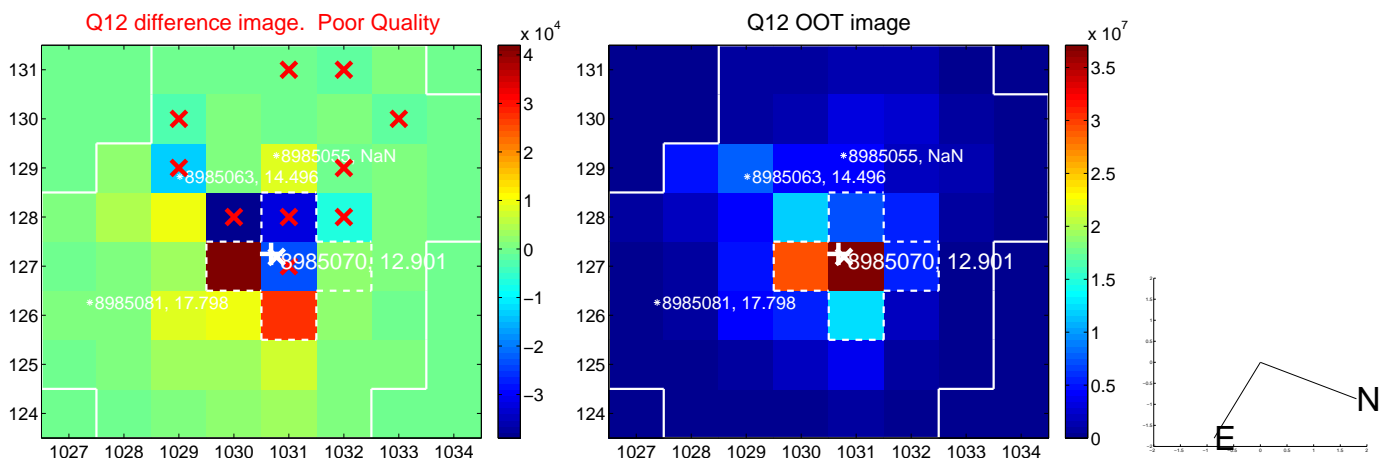
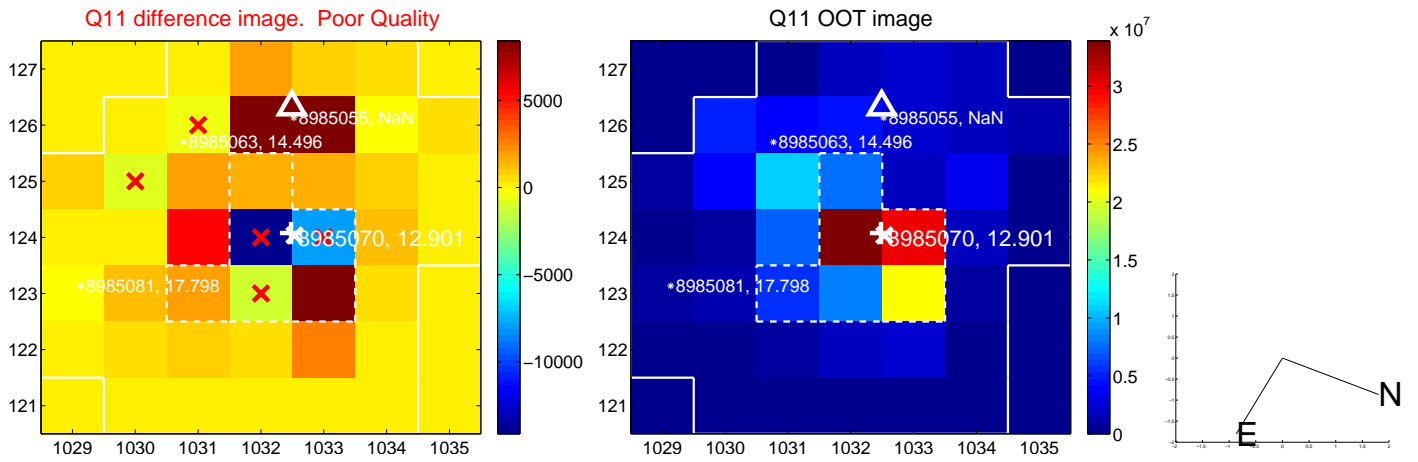
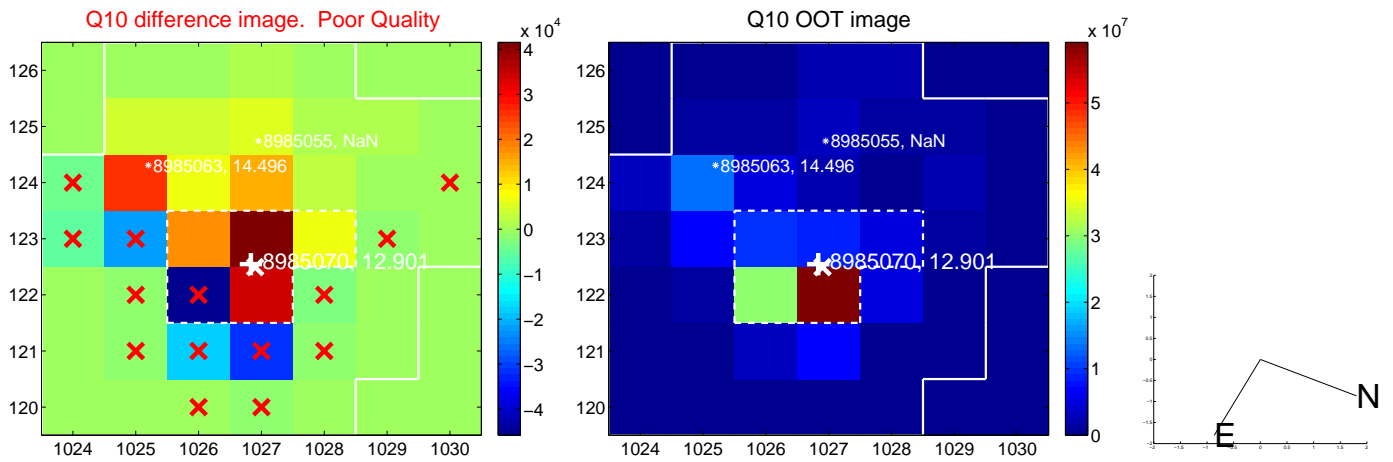
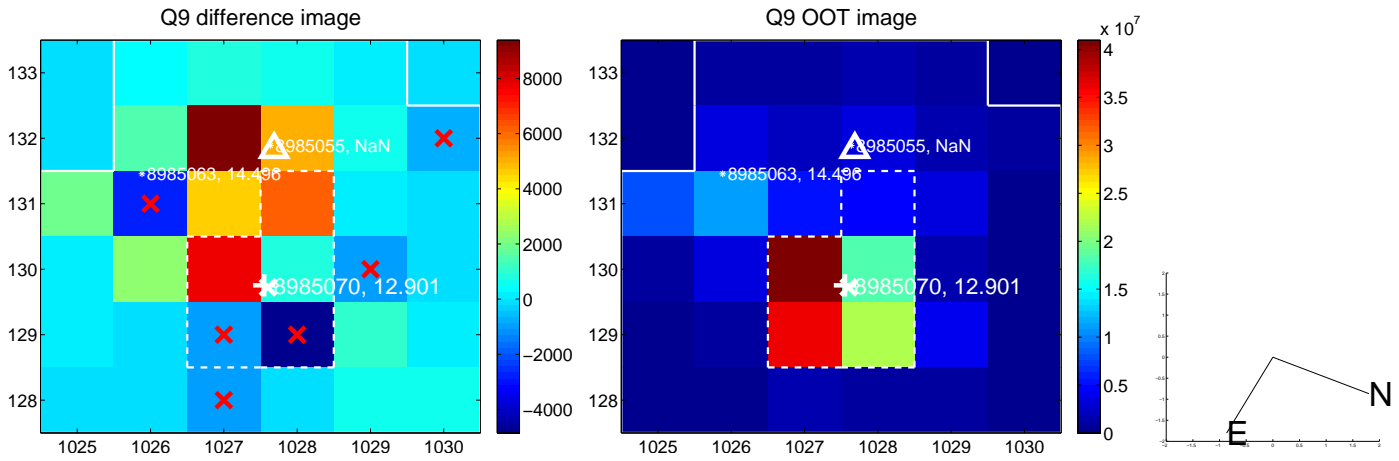
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



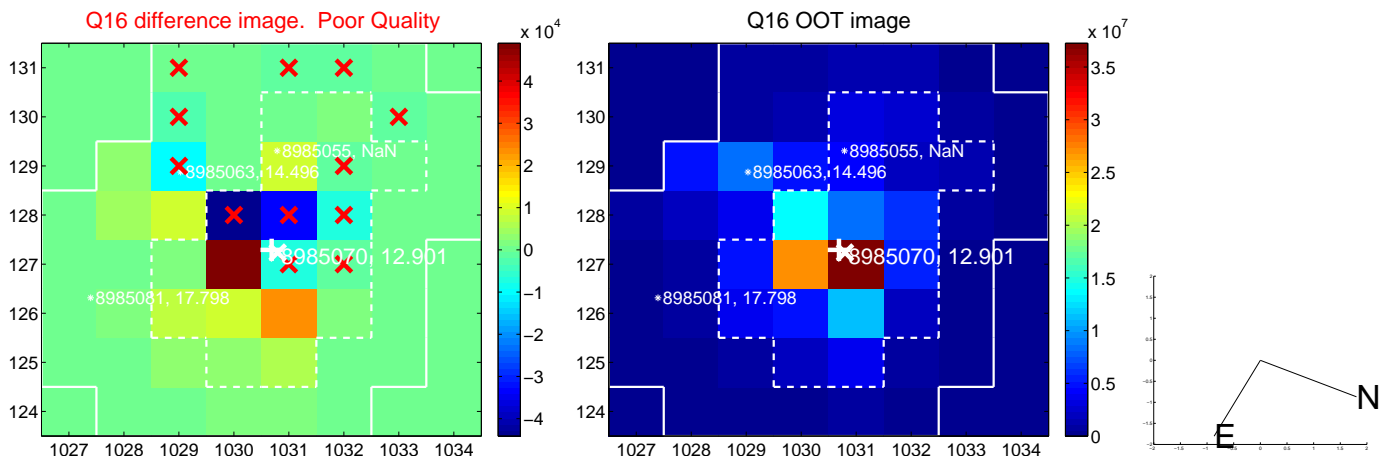
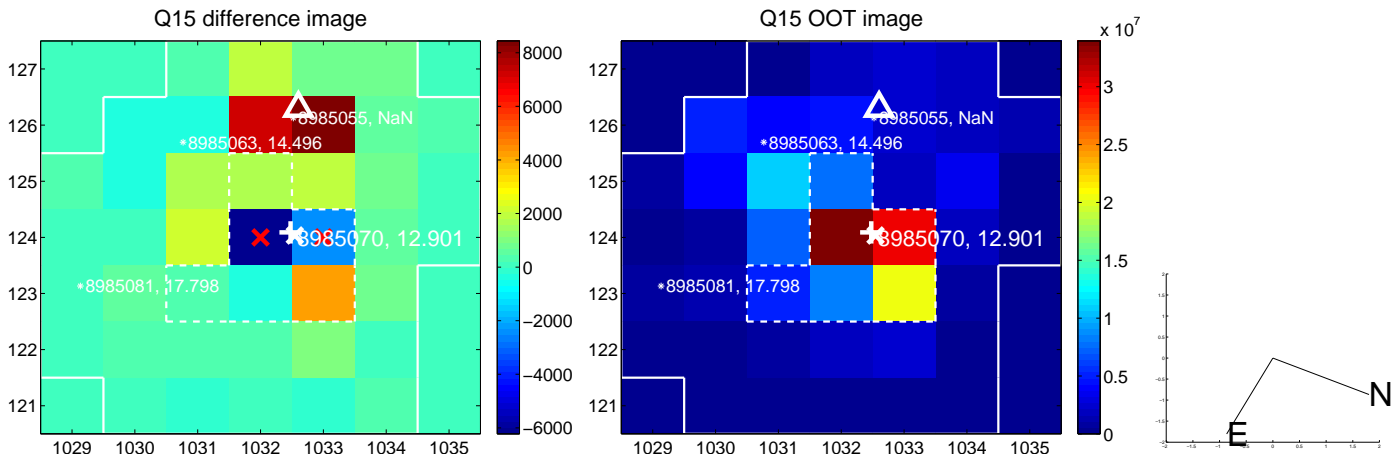
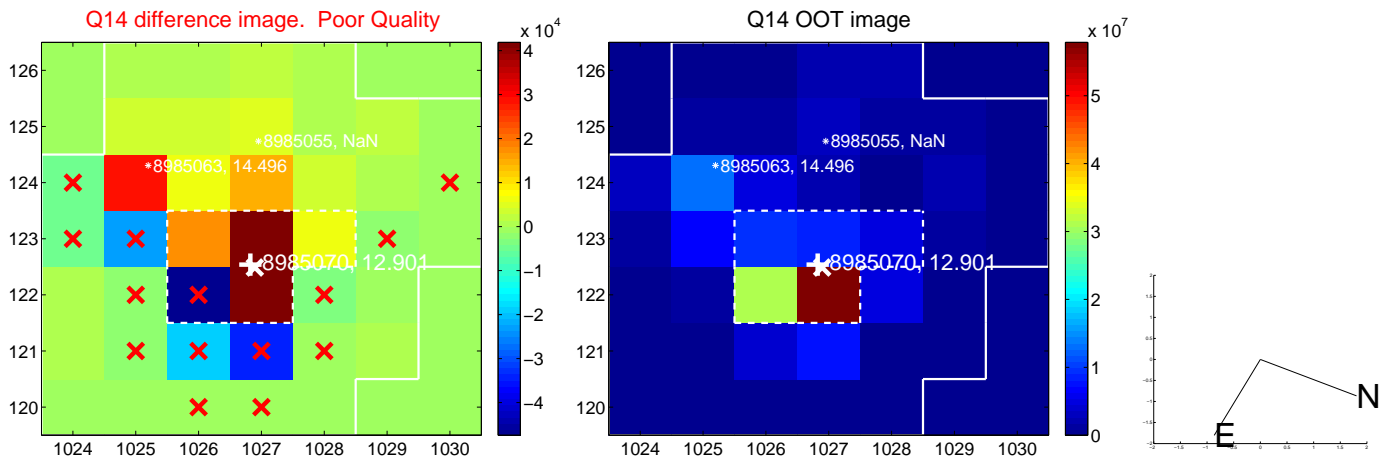
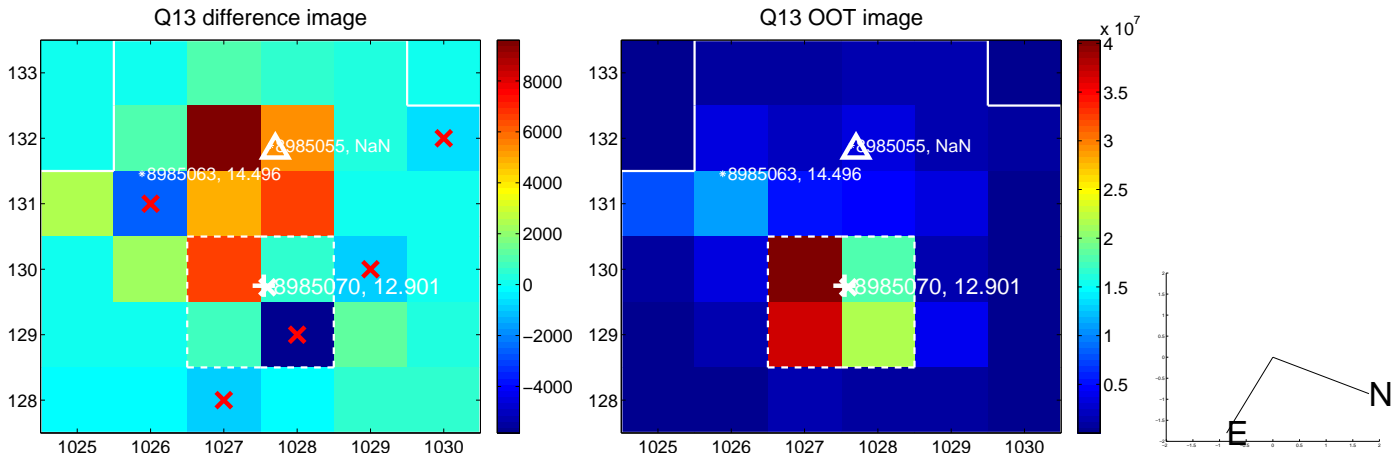
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



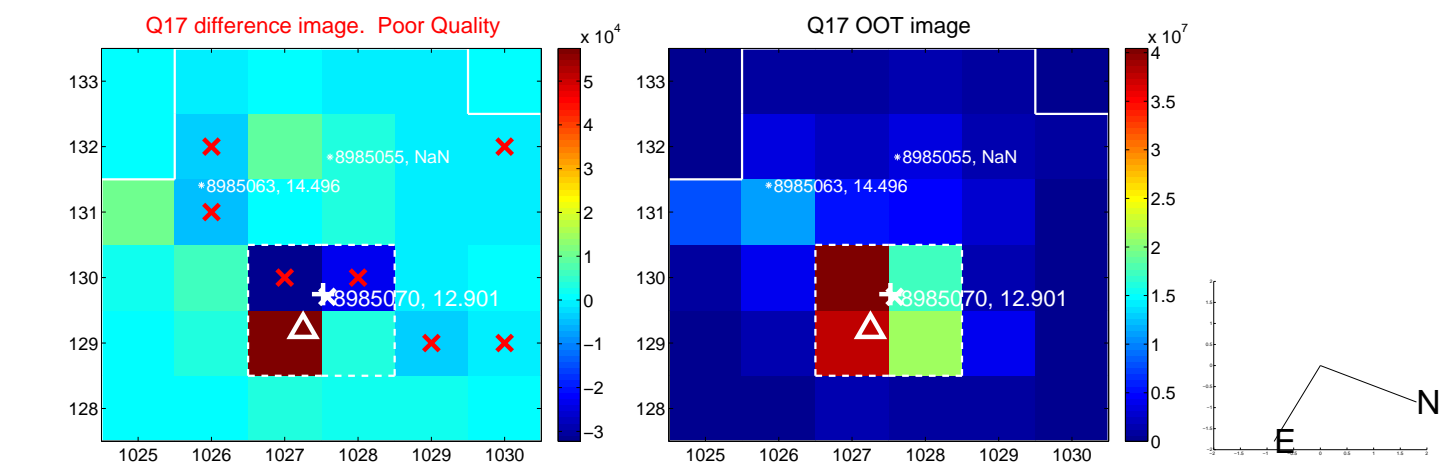
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



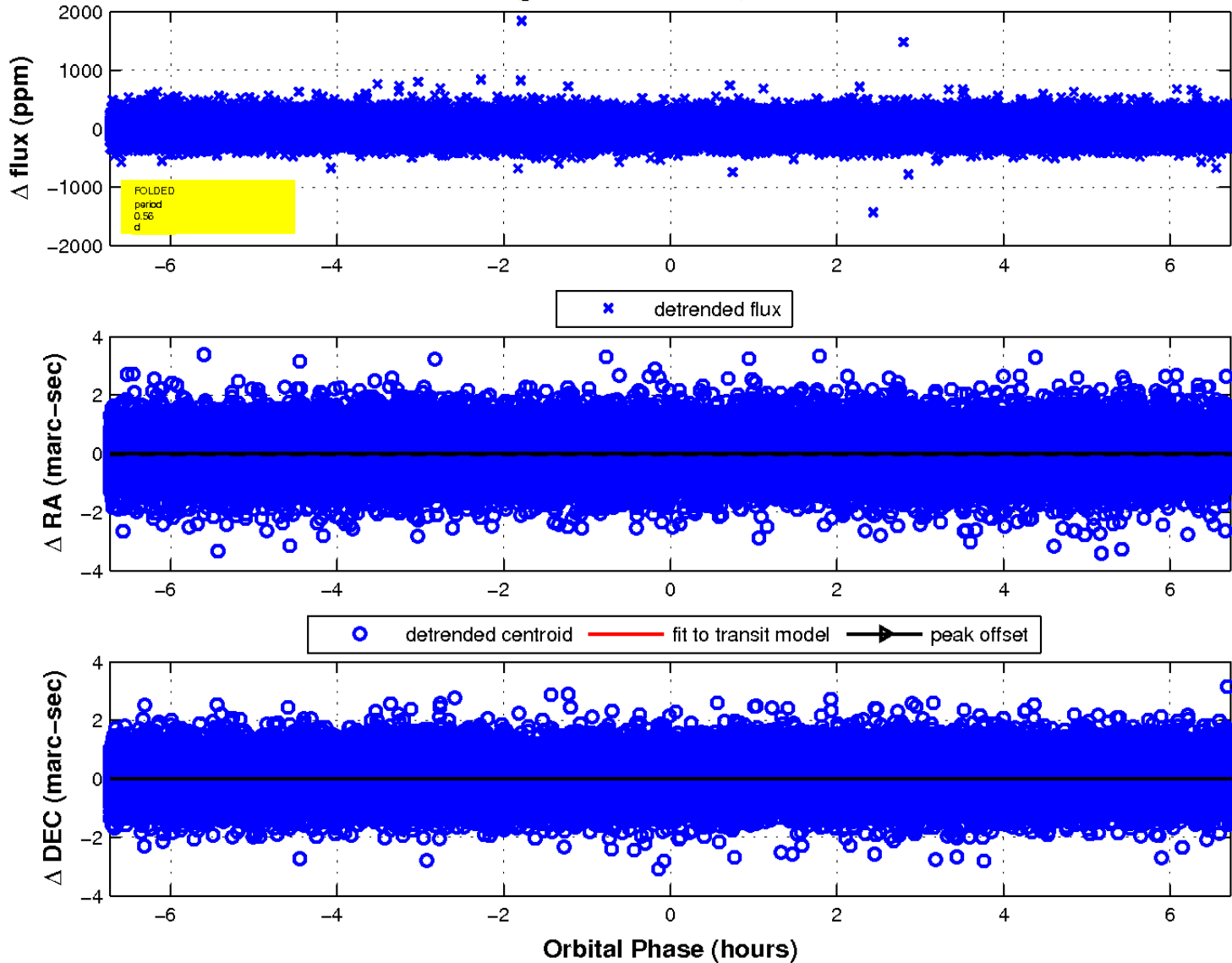
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

