

KIC 007598693

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})
007598693-01	OBS	No	2.881028	132.035876	18.0	27.493	8.3	11.0	1.43	6428	0.61	1851.40

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007598693-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_FEW_MEAS

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

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

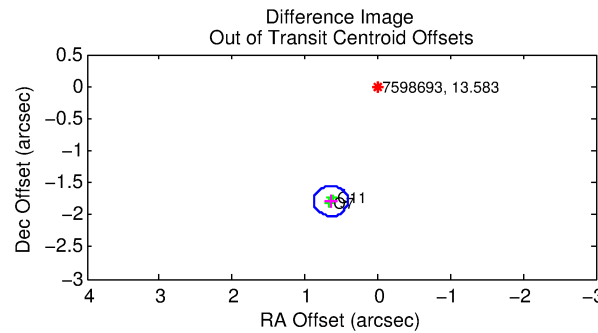
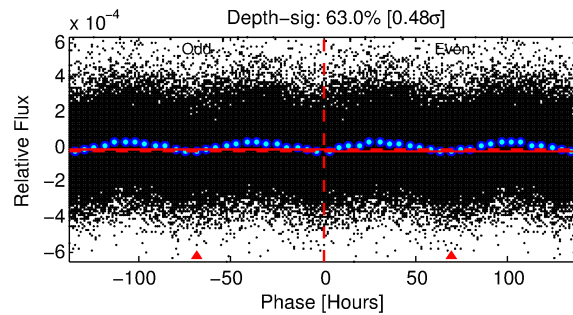
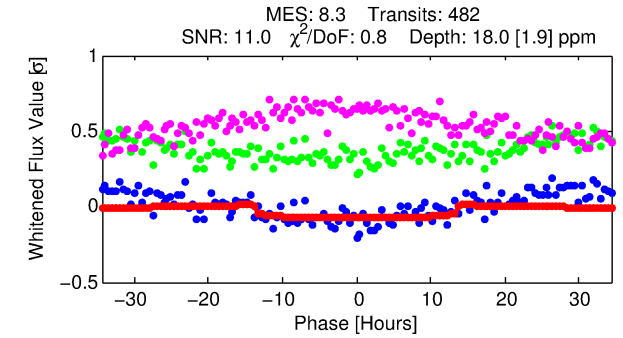
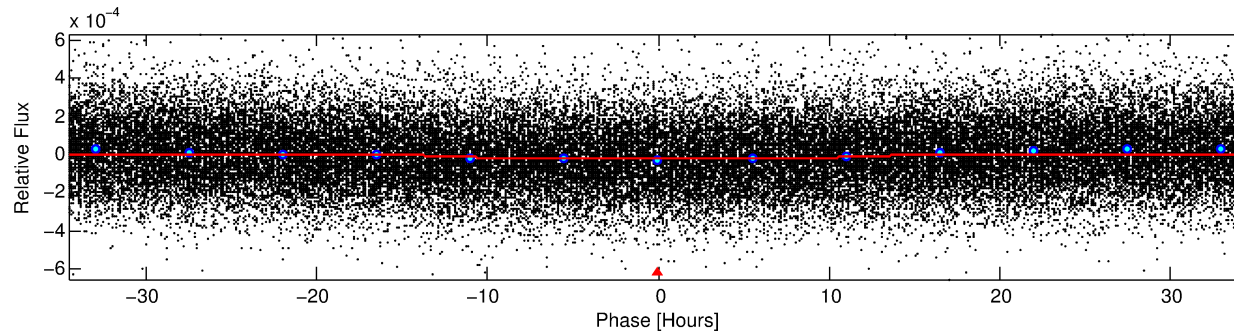
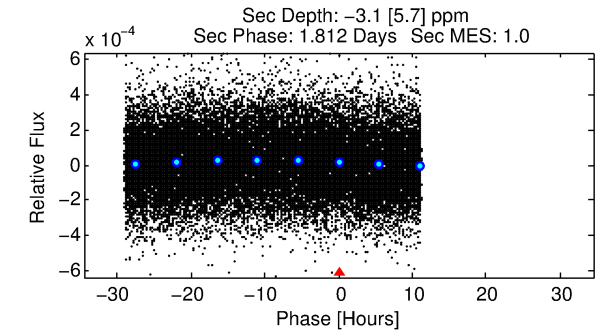
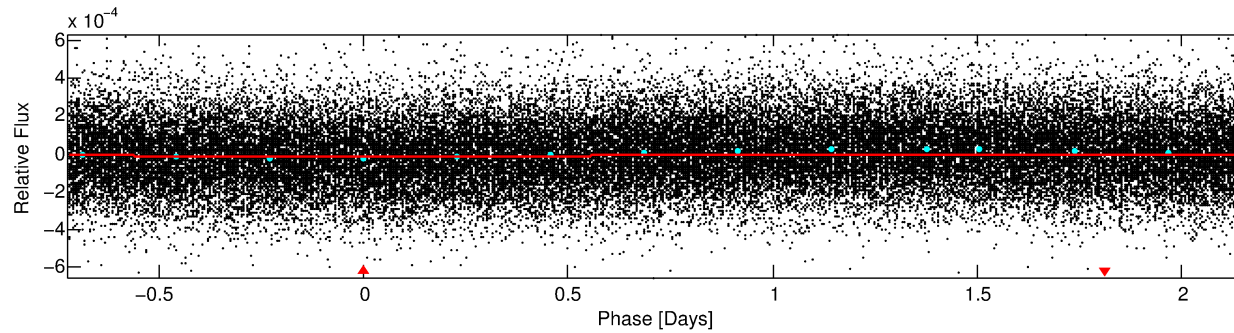
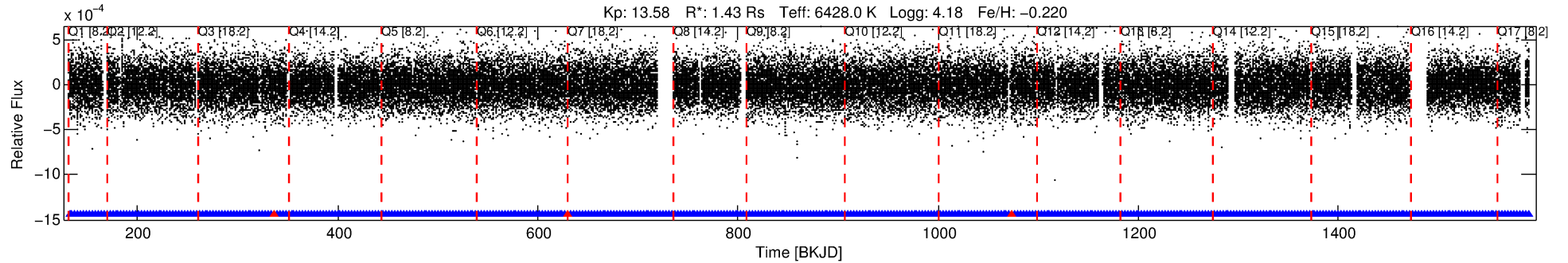
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007598693-01

No Significant Match Found

DV One-Page Summary

KIC: 7598693 Candidate: 1 of 1 Period: 2.881 d



DV Fit Results:

Period = 2.88103 [0.00007] d
Epoch = 132.0359 [0.0159] BKJD
Rp/R* = 0.0039 [0.0028]
a/R* = 1.06 [0.42]
b = 0.00 [991.99]
Seff = 1851.40 [679.16]
Teq = 1673 [153] K
Rp = 0.61 [0.46] Re
a = 0.0412 [0.0098] AU
Ag = N/A
Teffp = N/A

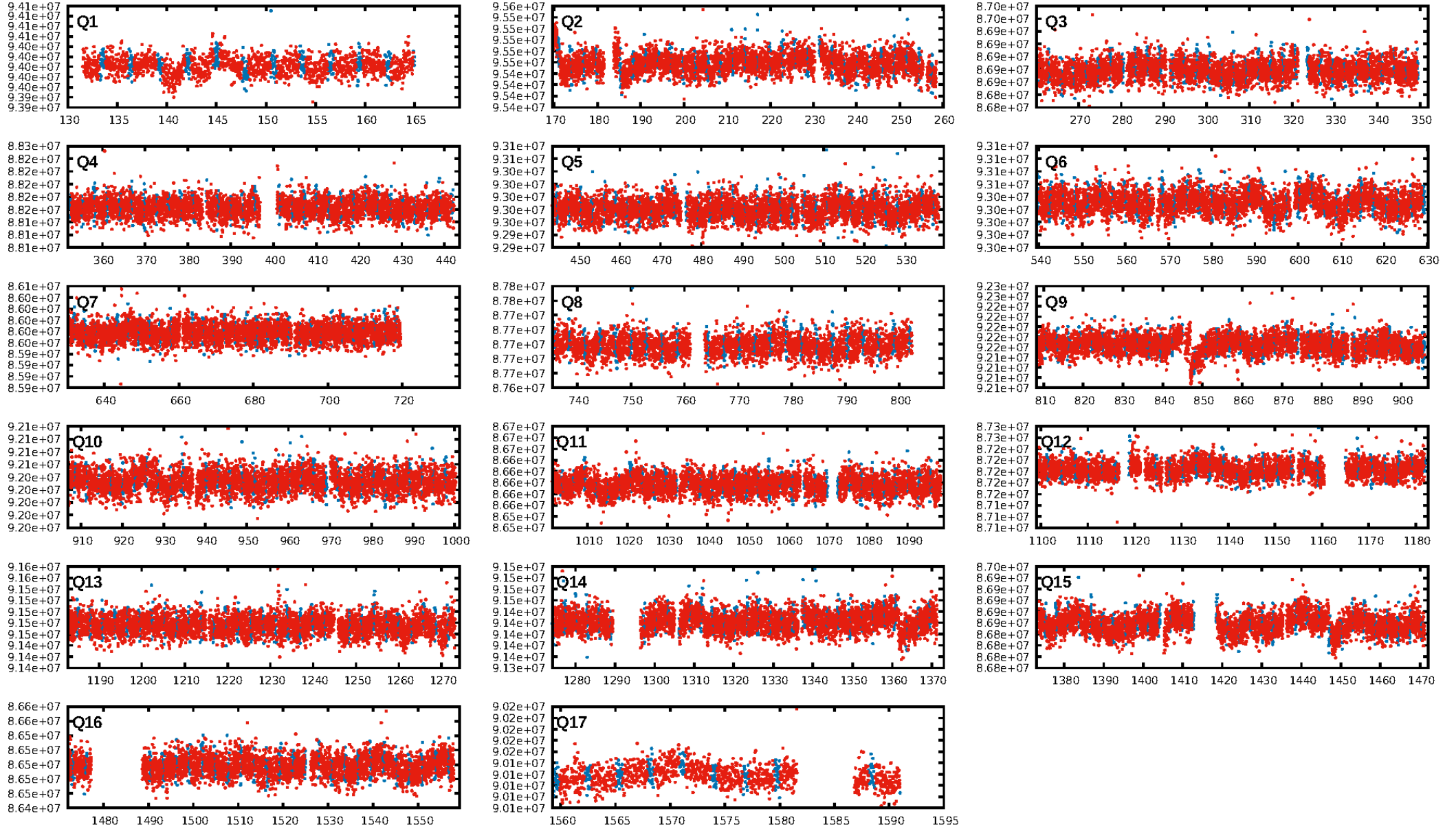
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.99 [457/460]
GhostDiagnostic-chr: 3.085
Centroid-sig: 0.0%
Centroid-so: 2.064 arcsec [2.49σ]
OotOffset-rm: 1.899 arcsec [24.28σ]
KicOffset-rm: 1.955 arcsec [25.24σ]
OotOffset-st: 0/2/0/0 [2]
KicOffset-st: 0/2/0/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [17/17]

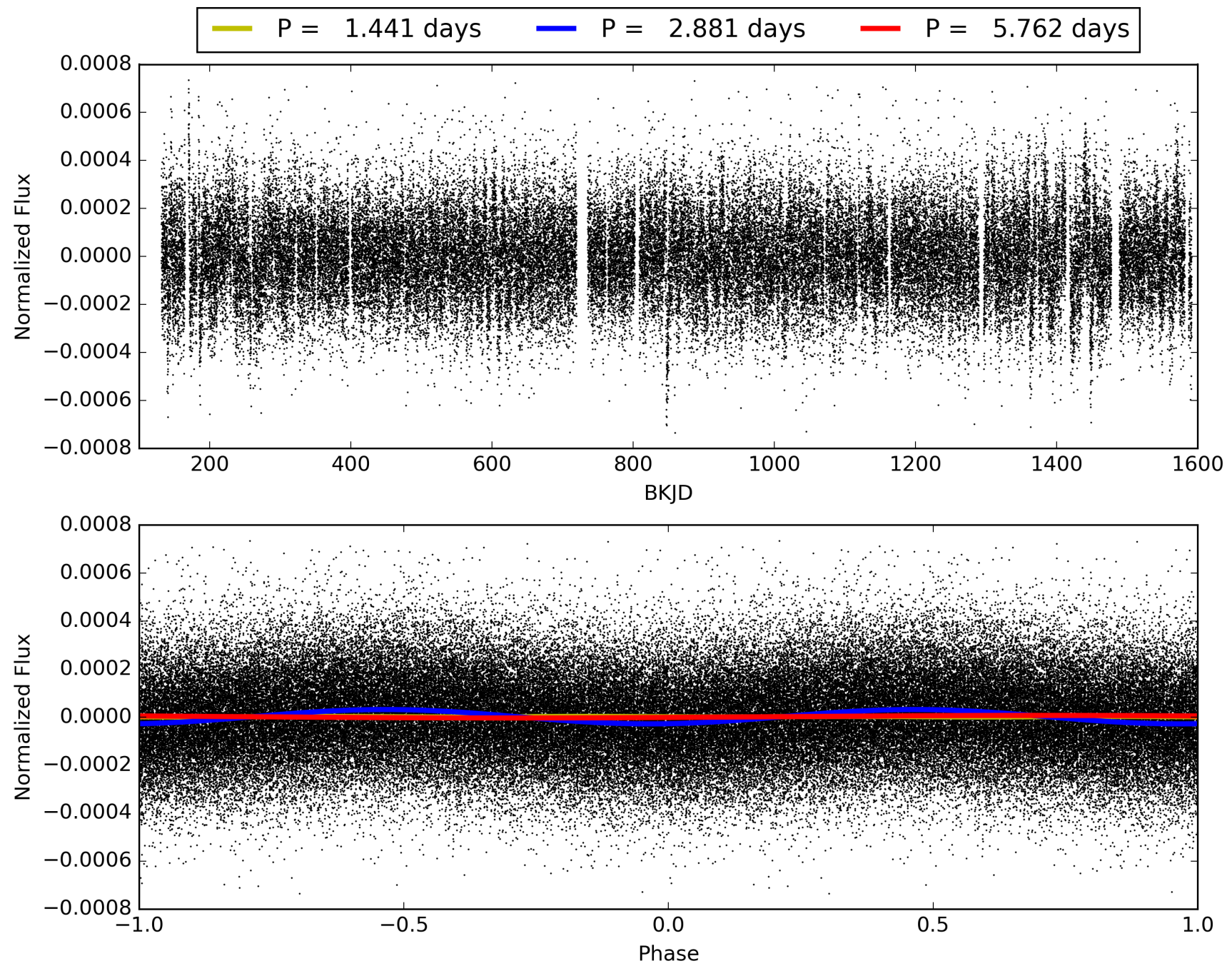
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:27:44 Z

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

TCE 007598693-01, PDC Light Curves

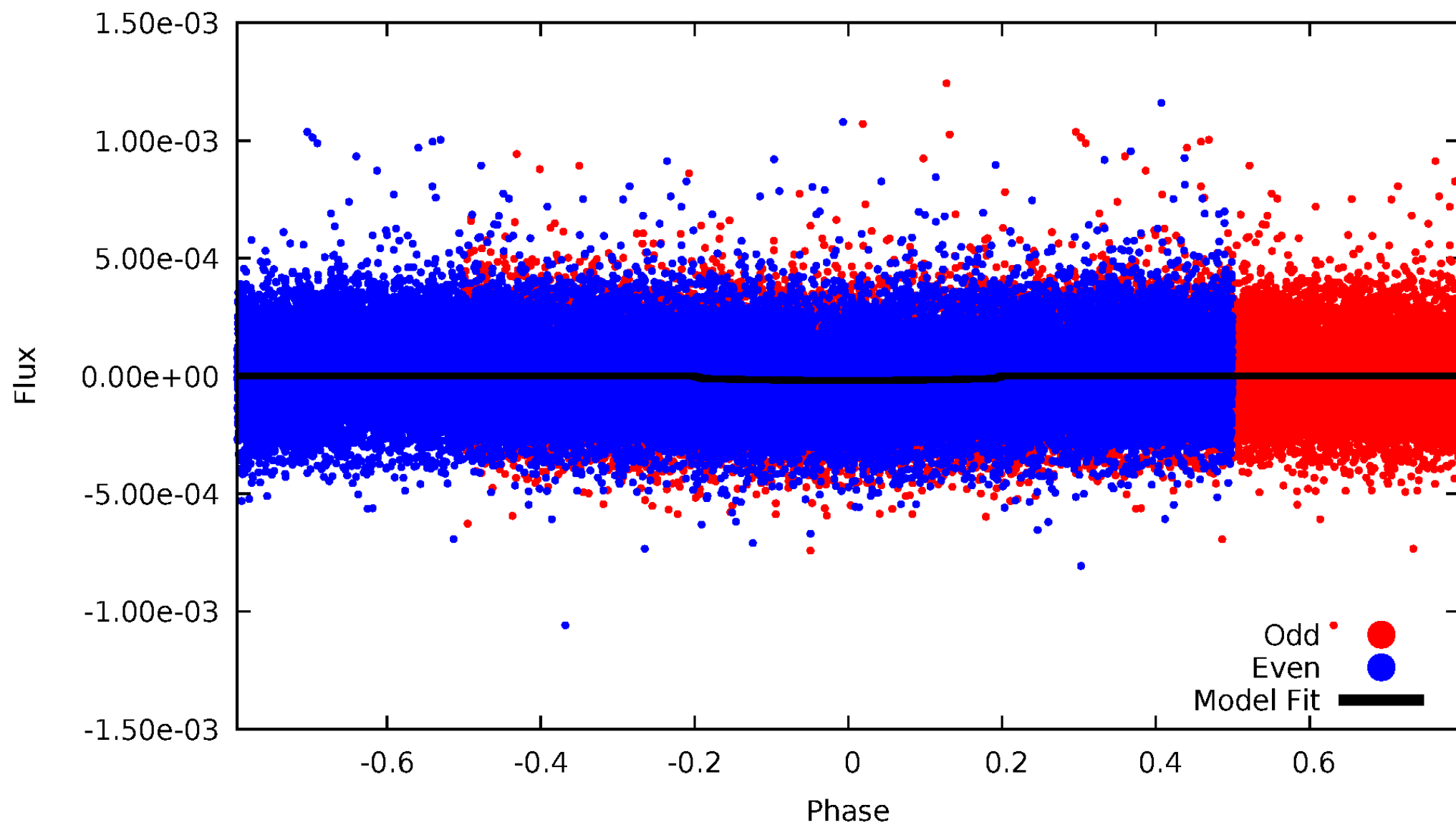


TCE 007598693-01



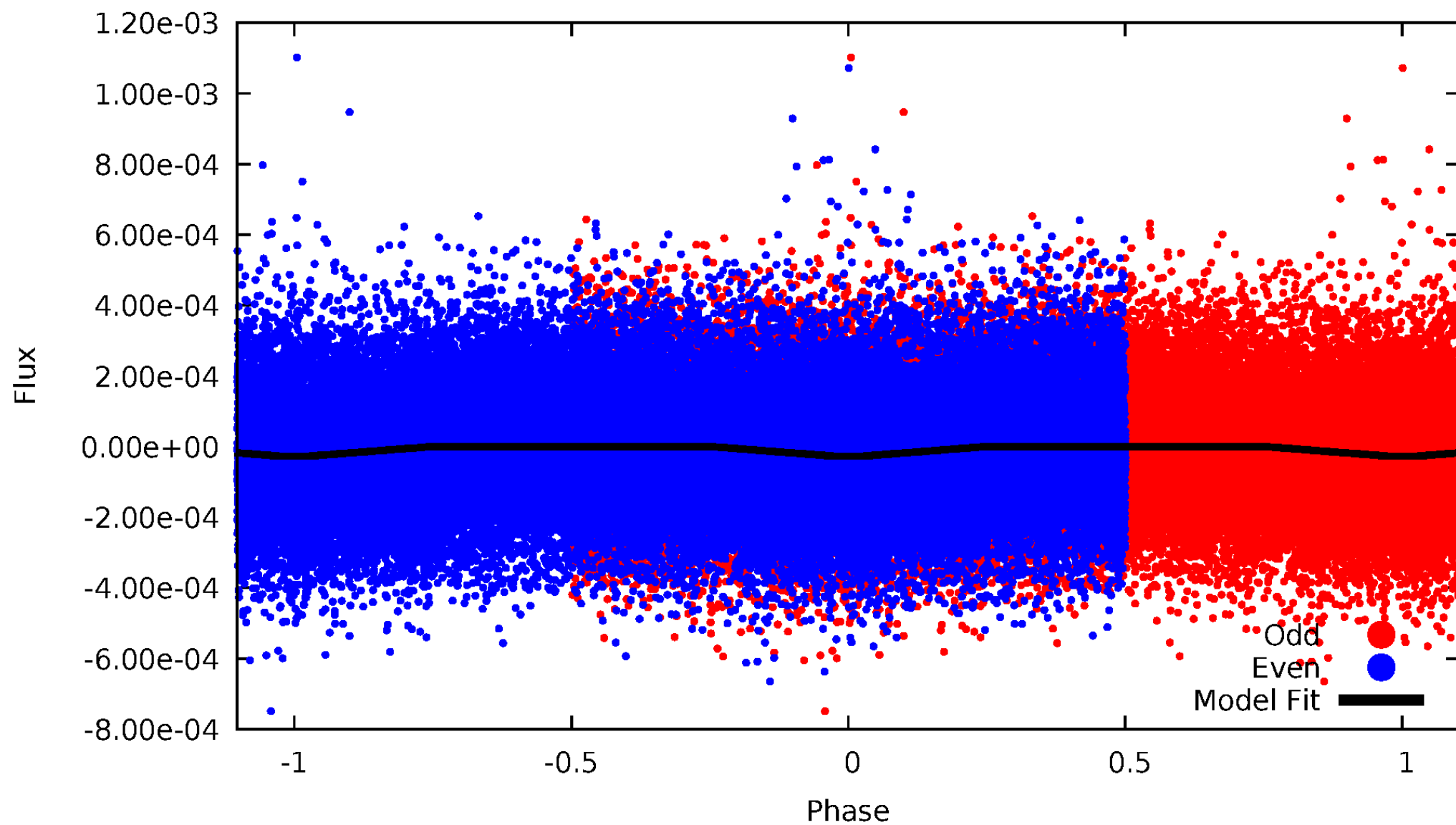
DV Odd/Even

TCE 007598693-01



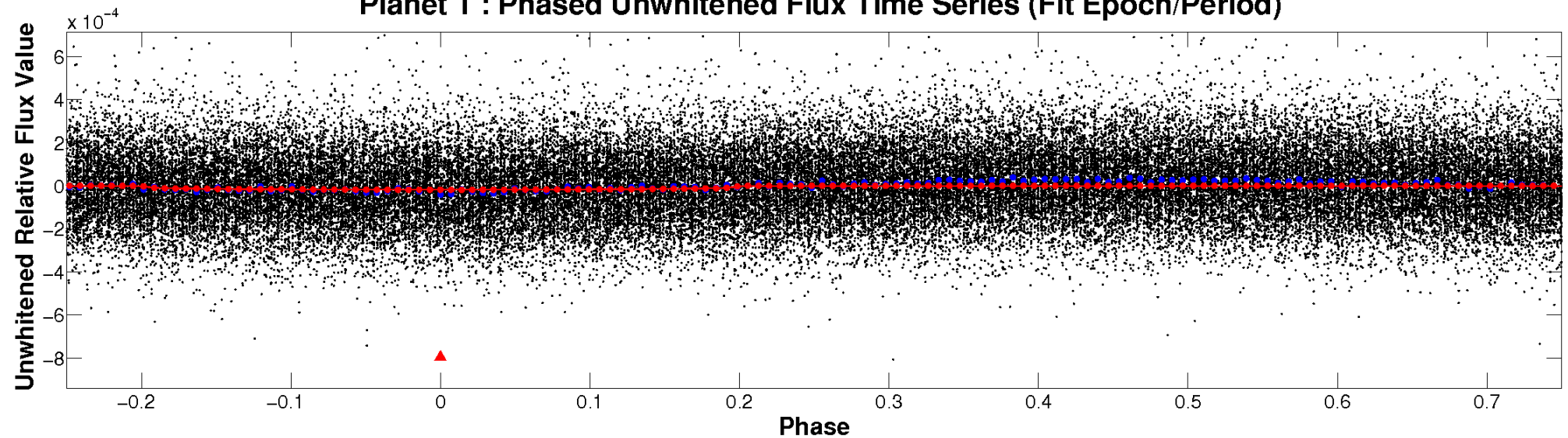
ALT Odd/Even

TCE 007598693-01

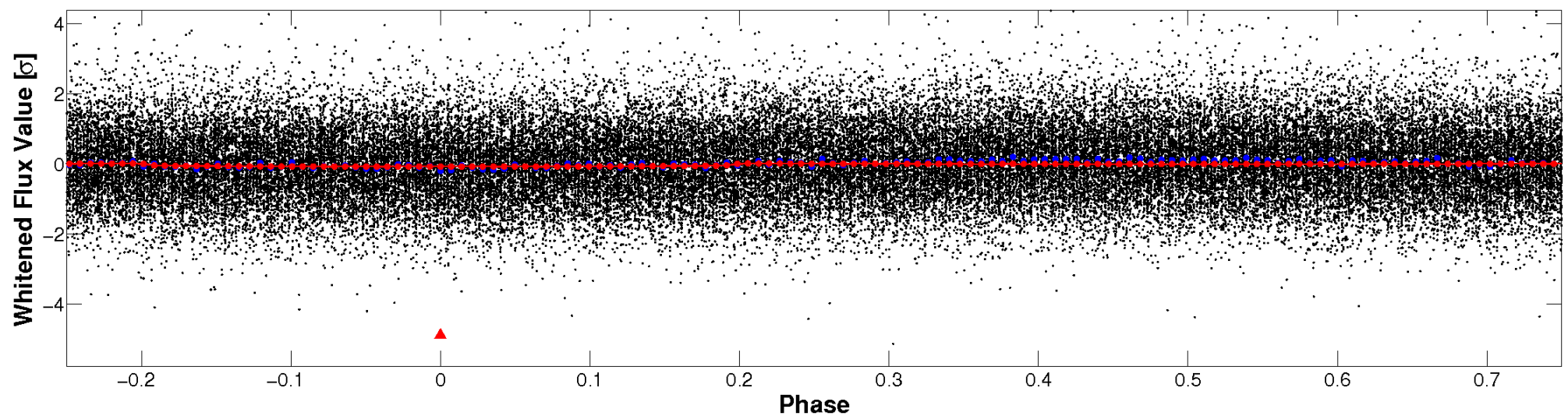


Non-Whitened Vs. Whitened Light Curve

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

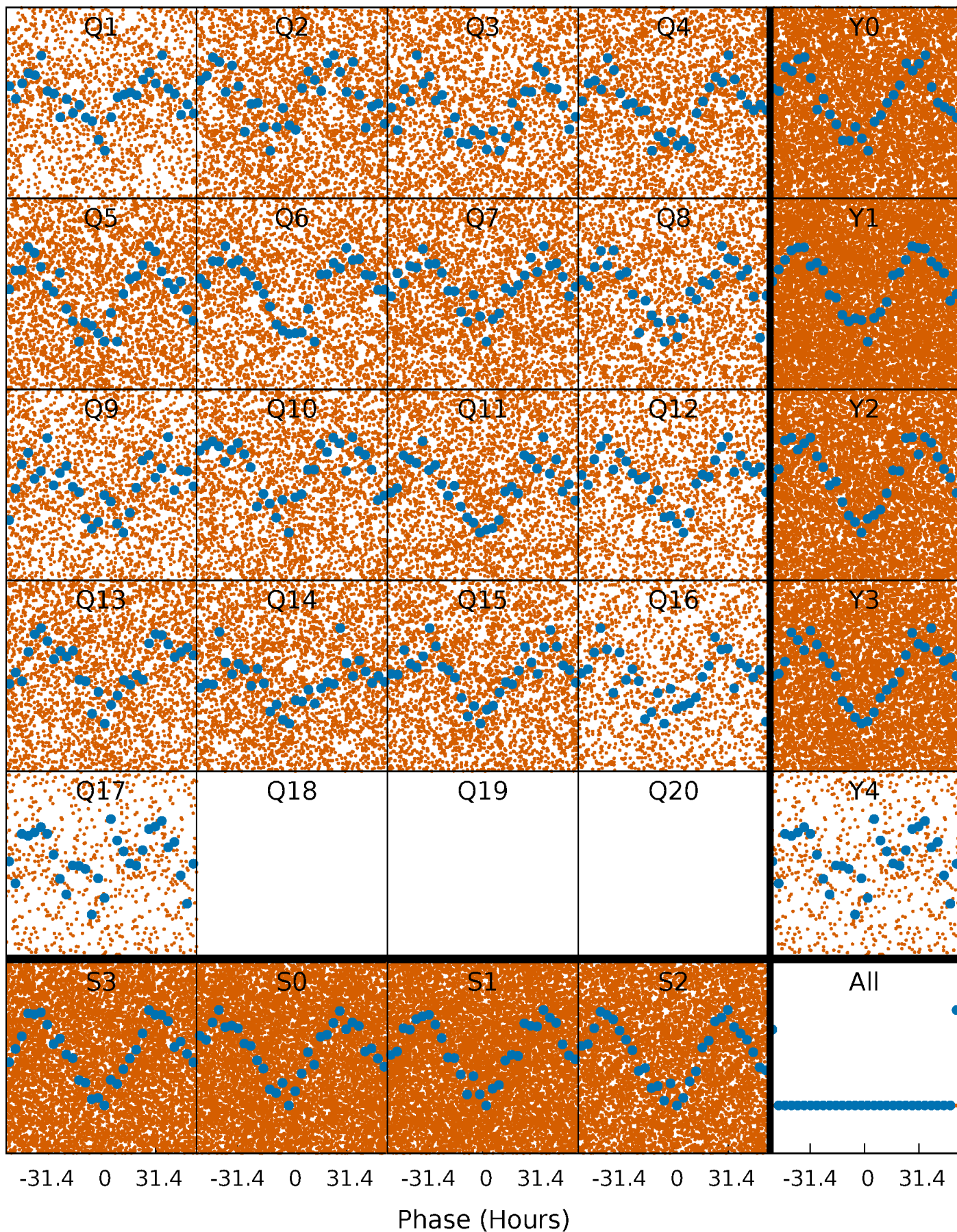


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



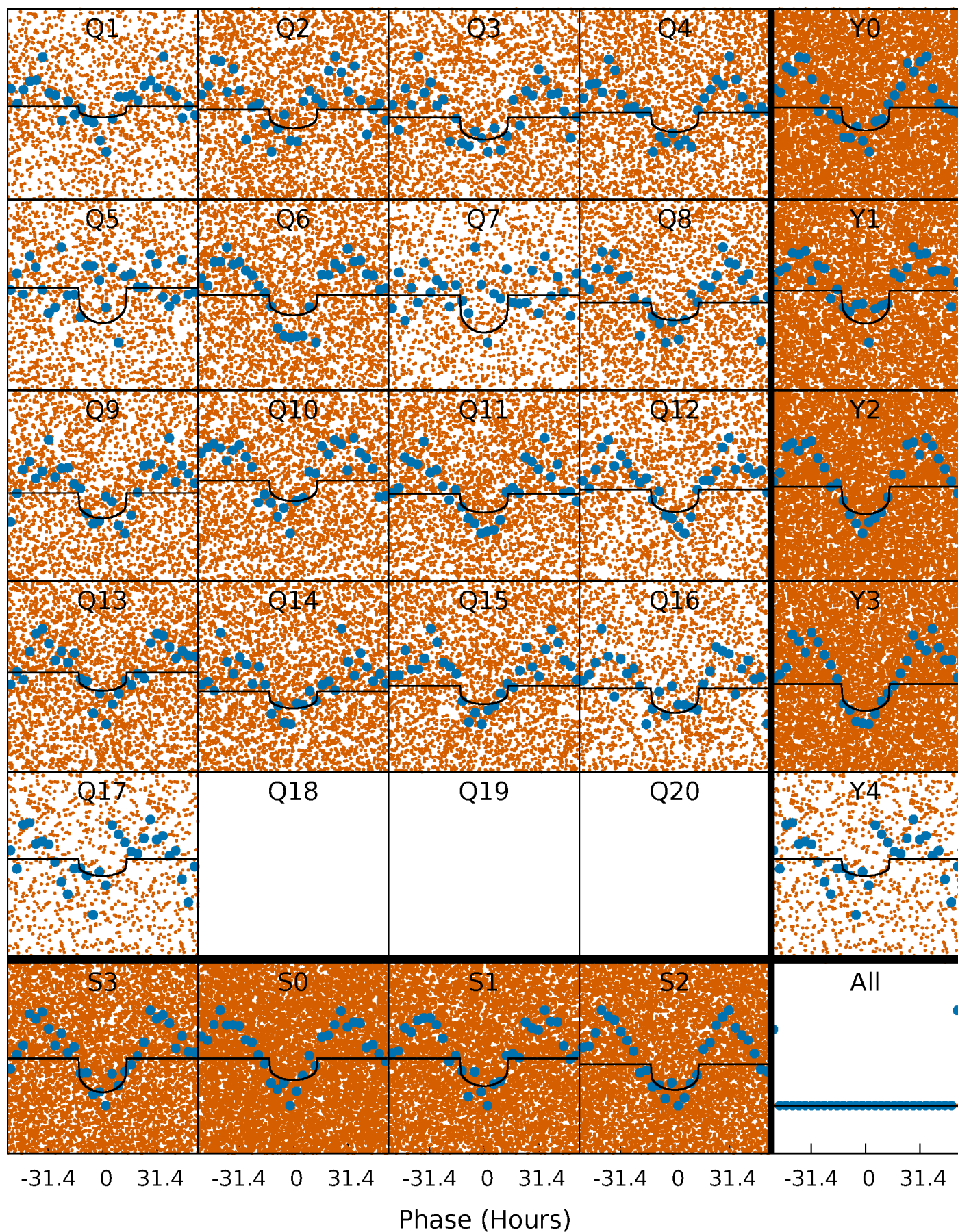
PDC Quarter-Phased Transit Curves

TCE 007598693-01 P= 2.881028 Days $T_0=132.035876$ (BKJD)



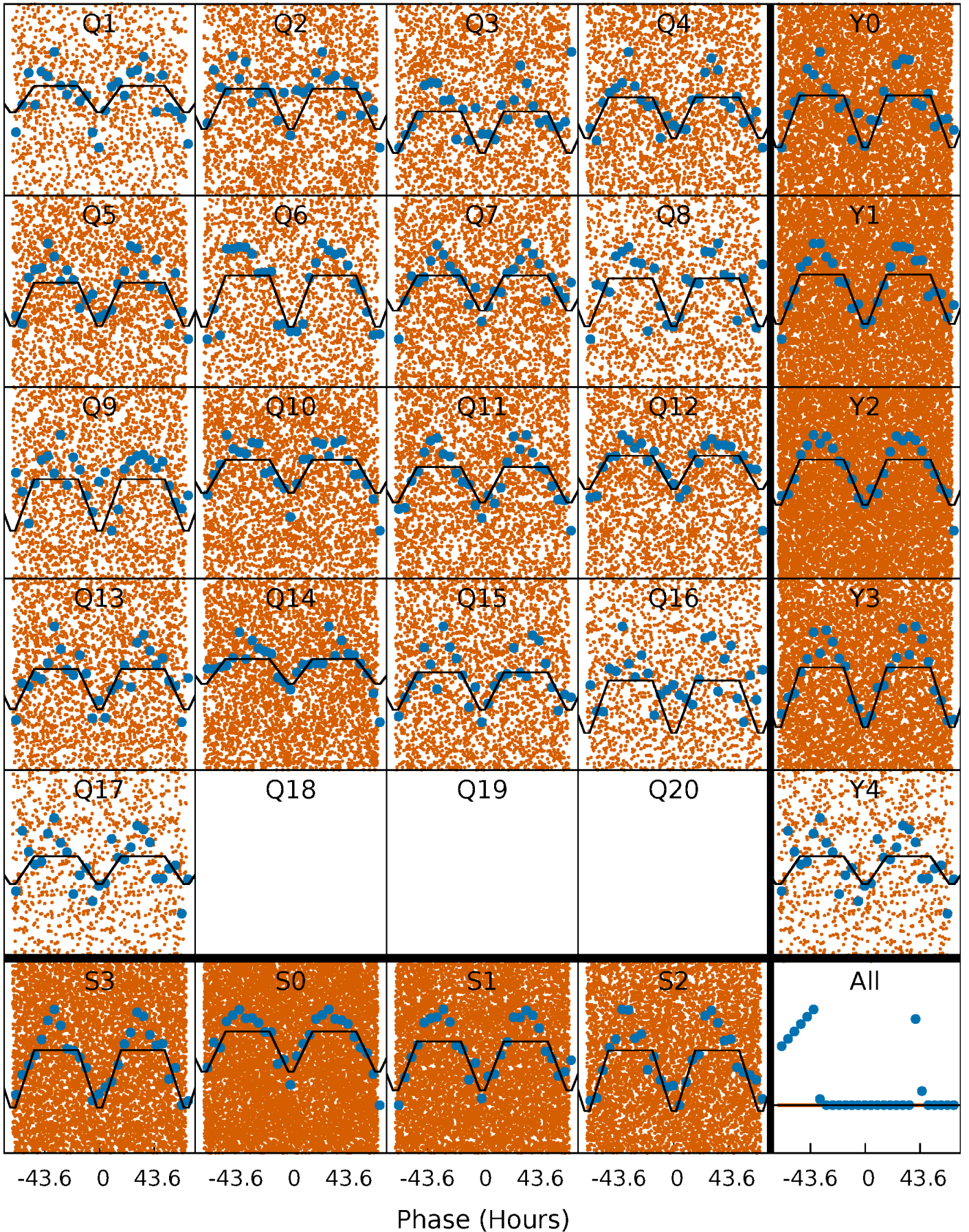
DV Quarter-Phased Transit Curves

TCE 007598693-01 P= 2.881028 Days $T_0=132.035876$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

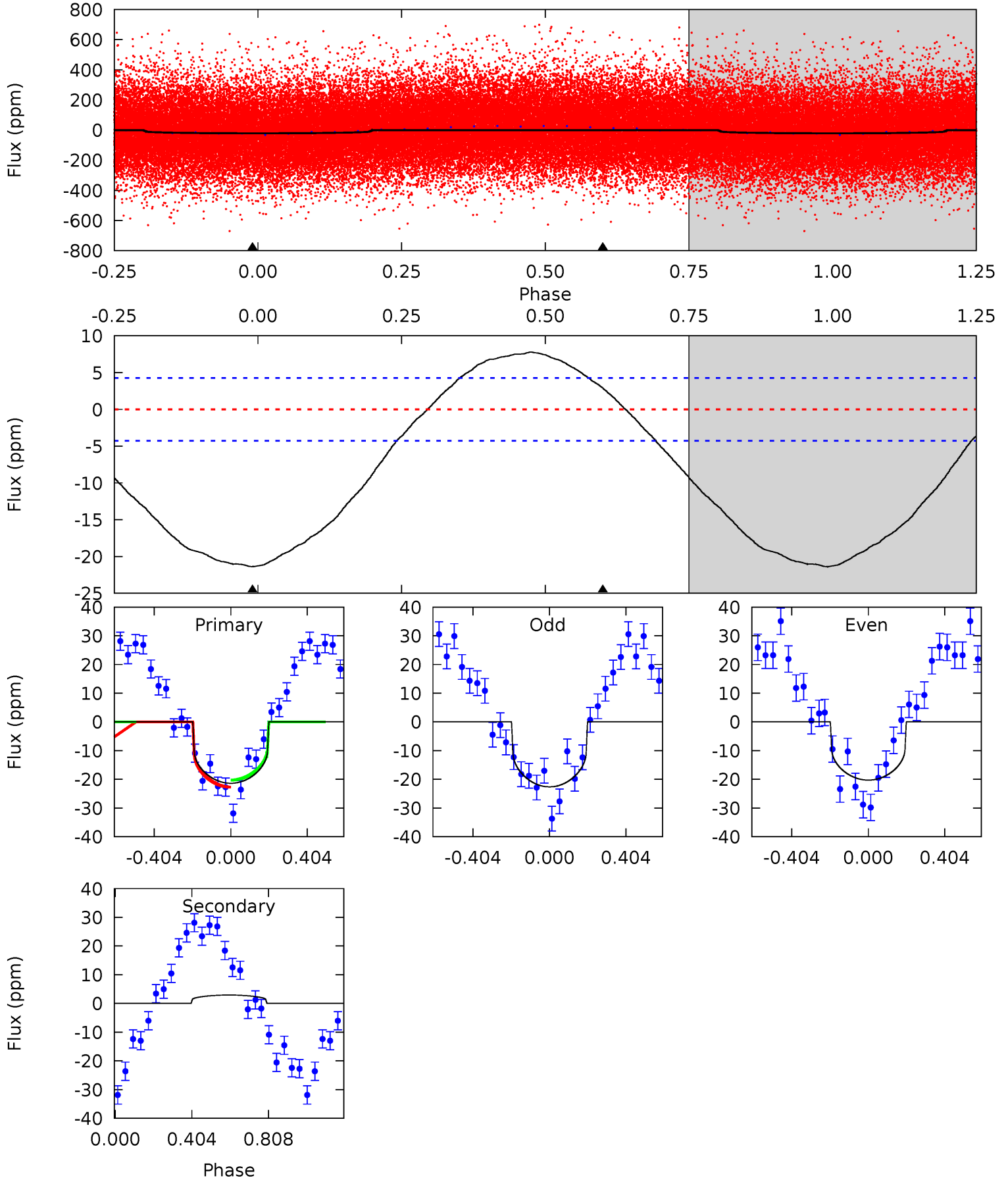
TCE 007598693-01 P= 2.880803 Days $T_0=132.086983$ (BKJD)



DV Model-Shift Uniqueness Test

007598693-01, P = 2.881028 Days, E = 129.154848 Days

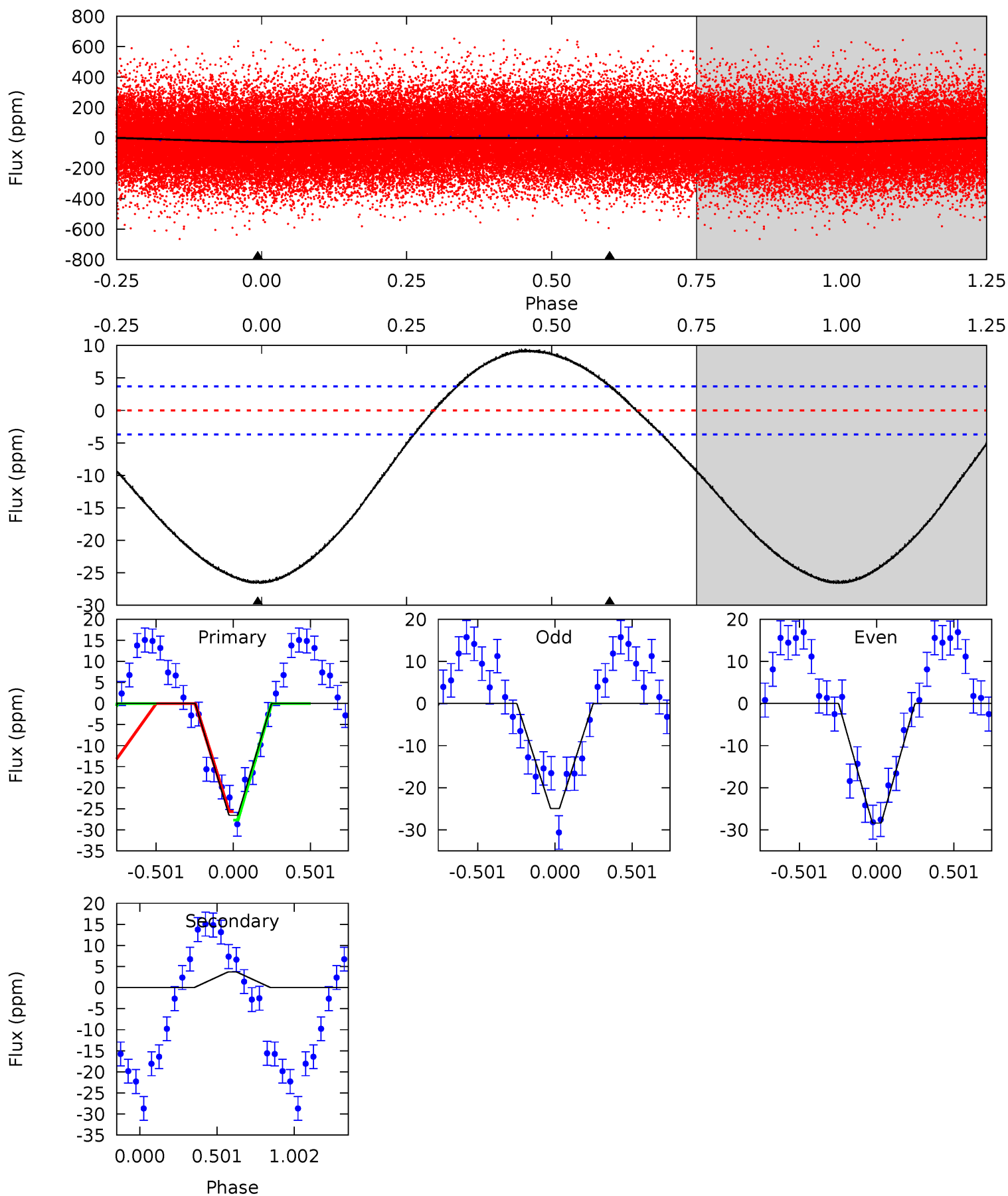
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.4	-2.92	0	0	4.26	0.83	2.27	21.4	21.4	-2.92	-2.92	1.17	0.96	0.27	1.23



Alt Model-Shift Uniqueness Test

007598693-01, P = 2.880803 Days, E = 129.206180 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.3	-4.23	0	0	4.21	0.67	3.36	30.3	30.3	-4.23	-4.23	1.97	0.98	0.26	1.15



Stellar Parameters For KIC 007598693

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6428^{+162}_{-194}	$4.176^{+0.190}_{-0.171}$	$-0.220^{+0.250}_{-0.300}$	$1.434^{+0.402}_{-0.329}$	$1.124^{+0.192}_{-0.139}$	$0.537^{+0.548}_{-0.252}$
	+3%/-3%	+5%/-4%	+114%/-136%	+28%/-23%	+17%/-12%	+102%/-47%
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 007598693-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	3 ± 1	$0.65^{+0.42}_{-0.35}$	2329^{+174}_{-151}	-4378^{+724}_{-1692}	$-6.647^{+4.500}_{-25.296}$
Alt.	4 ± 1	$0.83^{+0.46}_{-0.42}$	2338^{+150}_{-170}	-4131^{+493}_{-1315}	$-4.843^{+2.873}_{-15.103}$

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

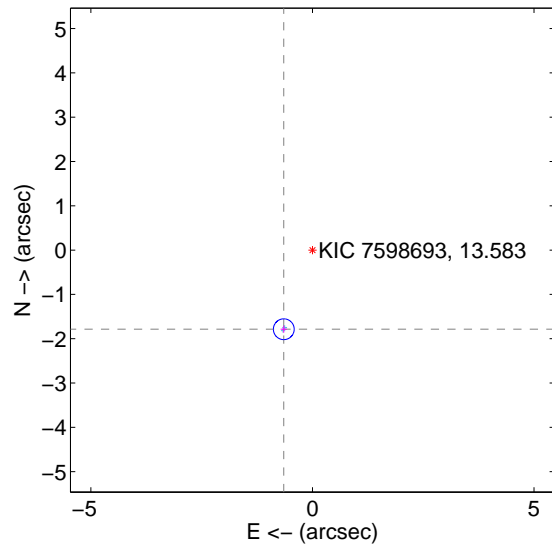
Supplemental centroid analysis for 007598693-01. Kepler magnitude: 13.58. Transit SNR 11.04

There are 2 quarters with good PRF difference image offsets

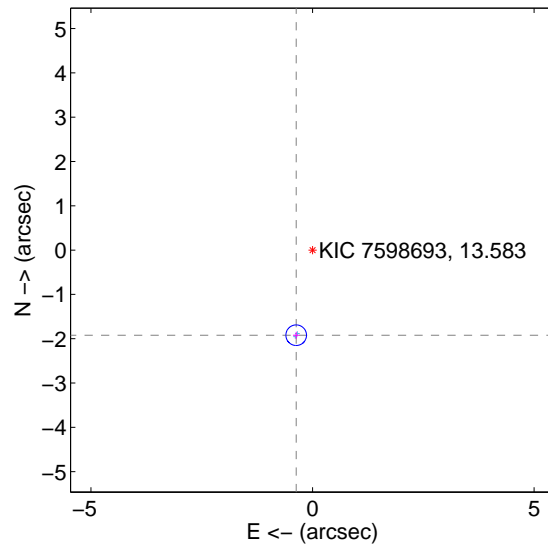
The direct PRF centroid is offset from the target star catalog position by about 0.31 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.899 ± 0.078	24.28	0.646 ± 0.070	-1.786 ± 0.079
PRF-fit source offset from KIC position	1.955 ± 0.077	25.24	0.368 ± 0.072	-1.920 ± 0.078
photometric centroid source offset	2.06 ± 0.83	2.49	2.02 ± 0.83	-0.44 ± 0.87

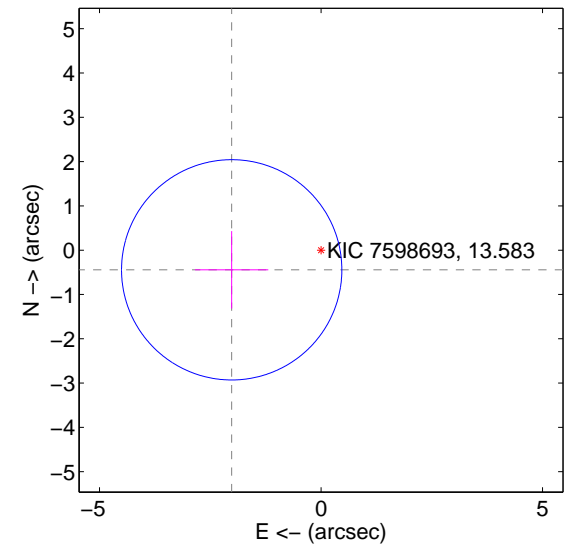
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

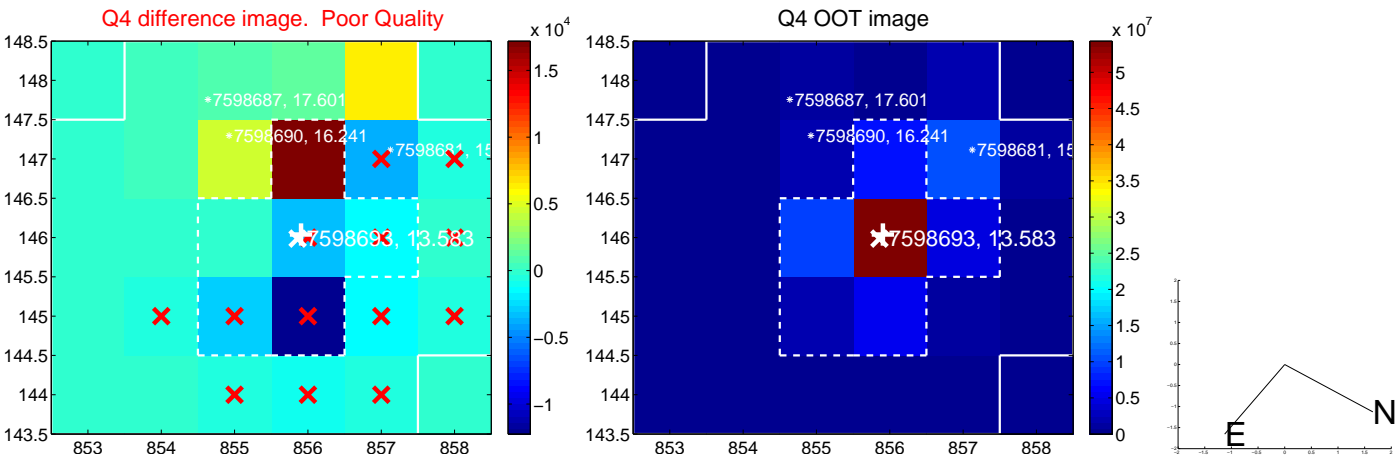
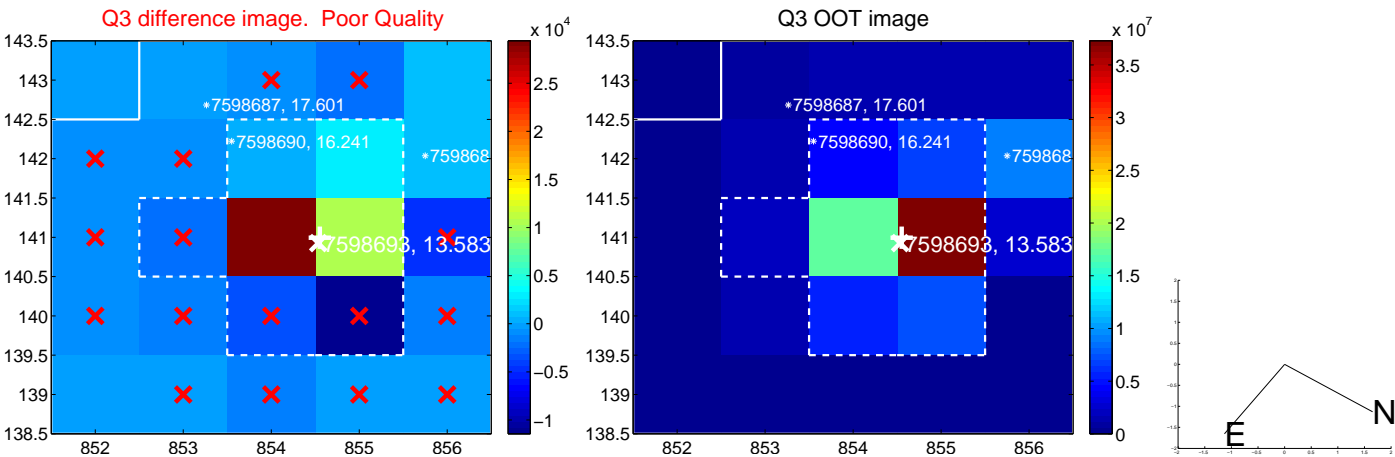
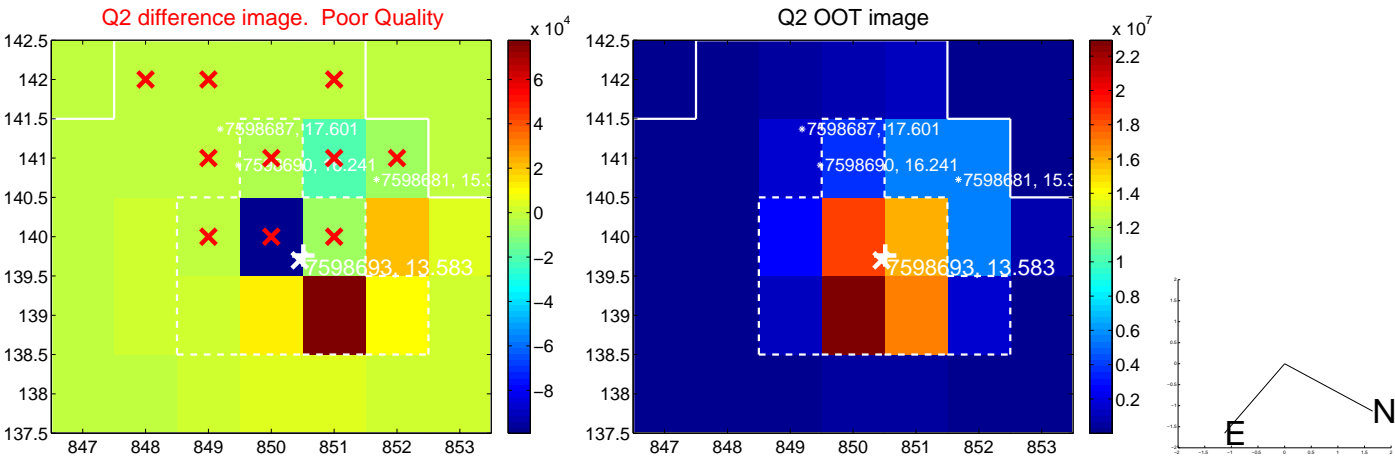
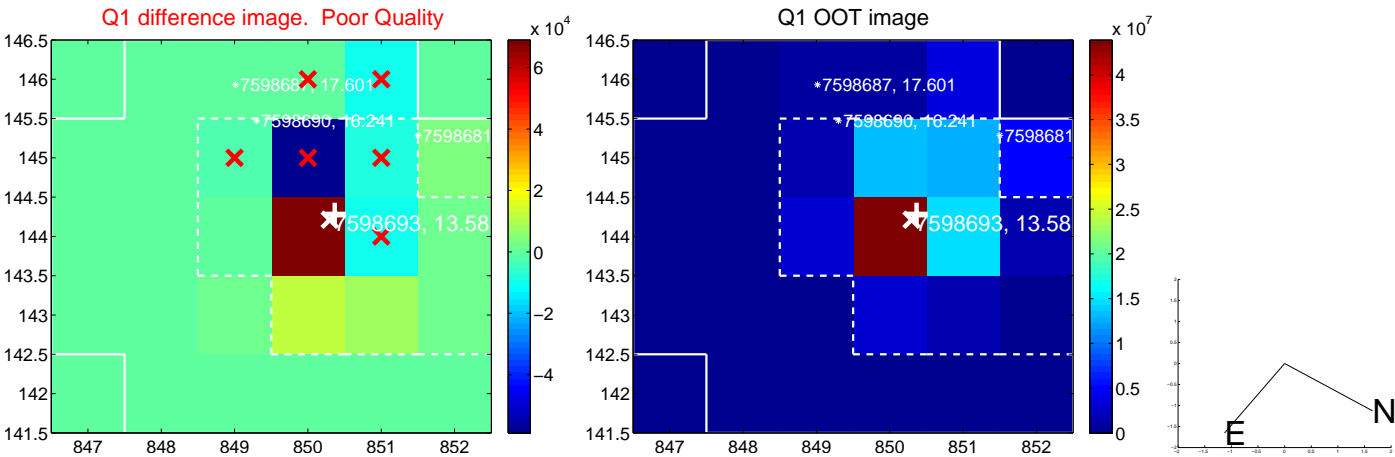


offset from photometric centroids

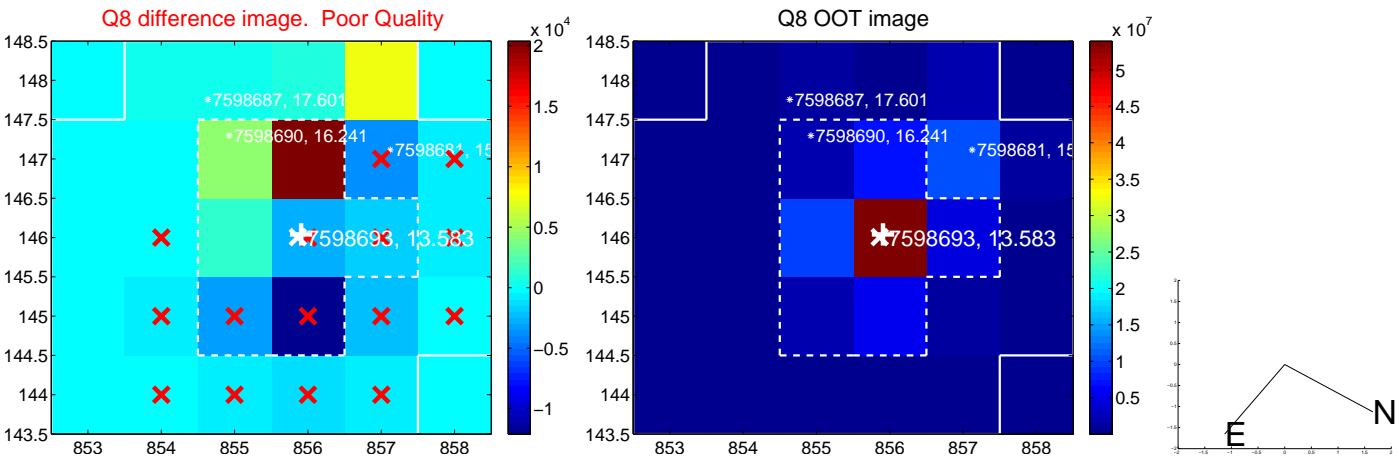
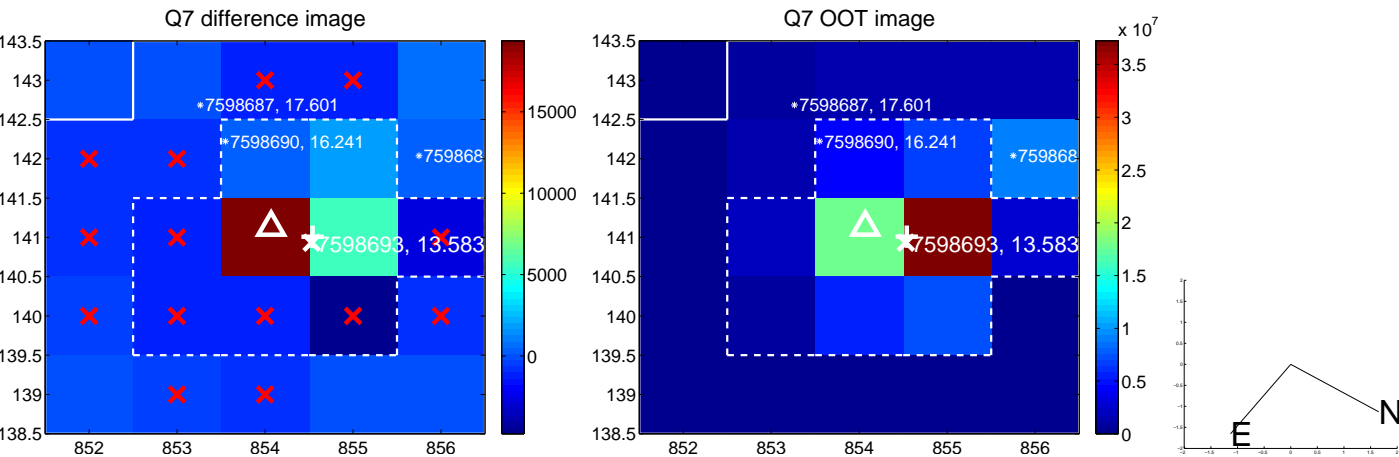
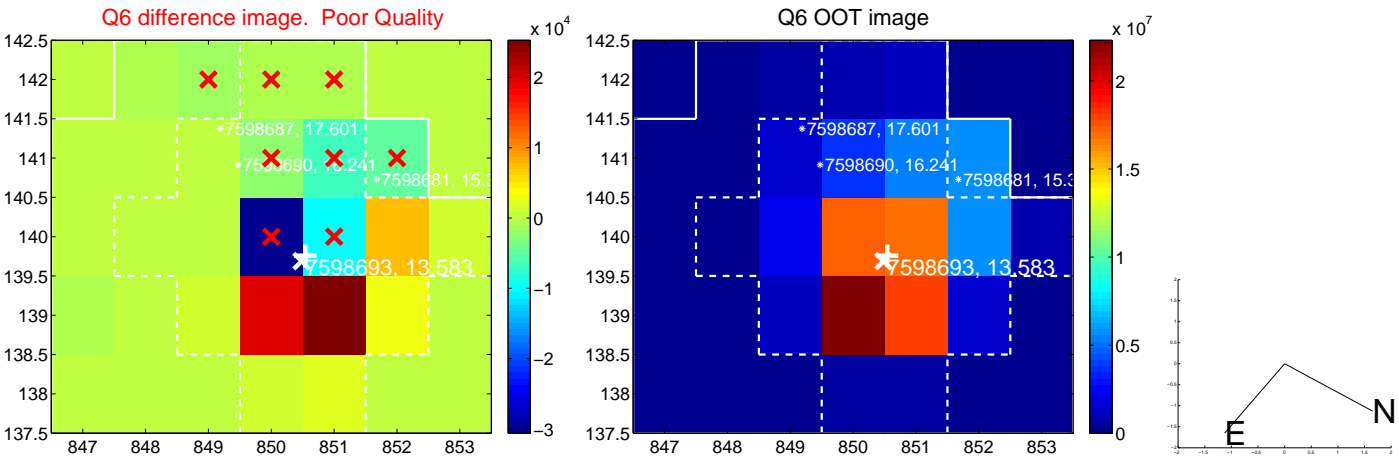
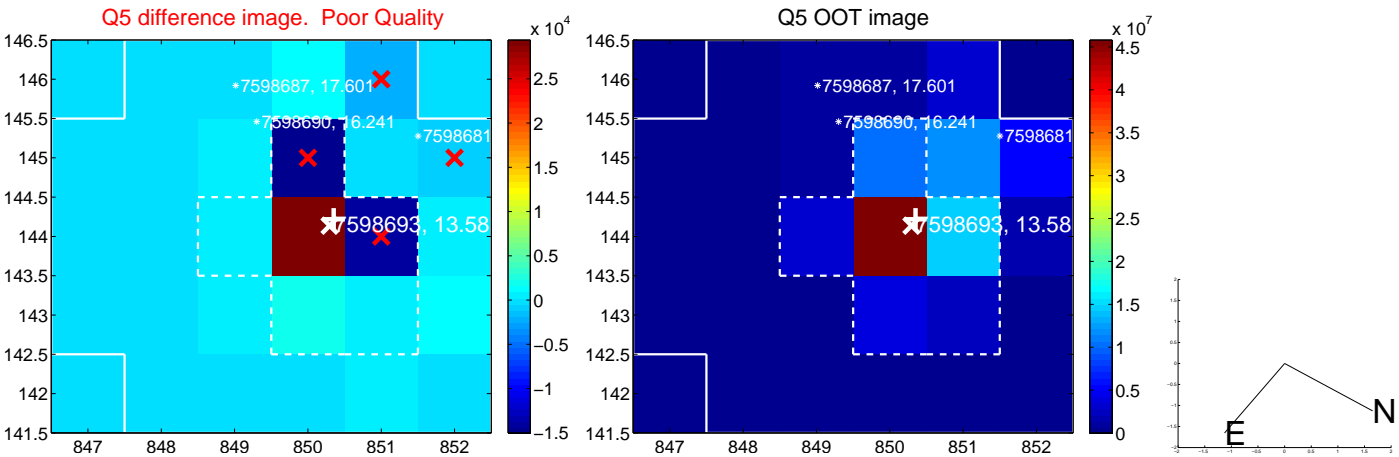


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

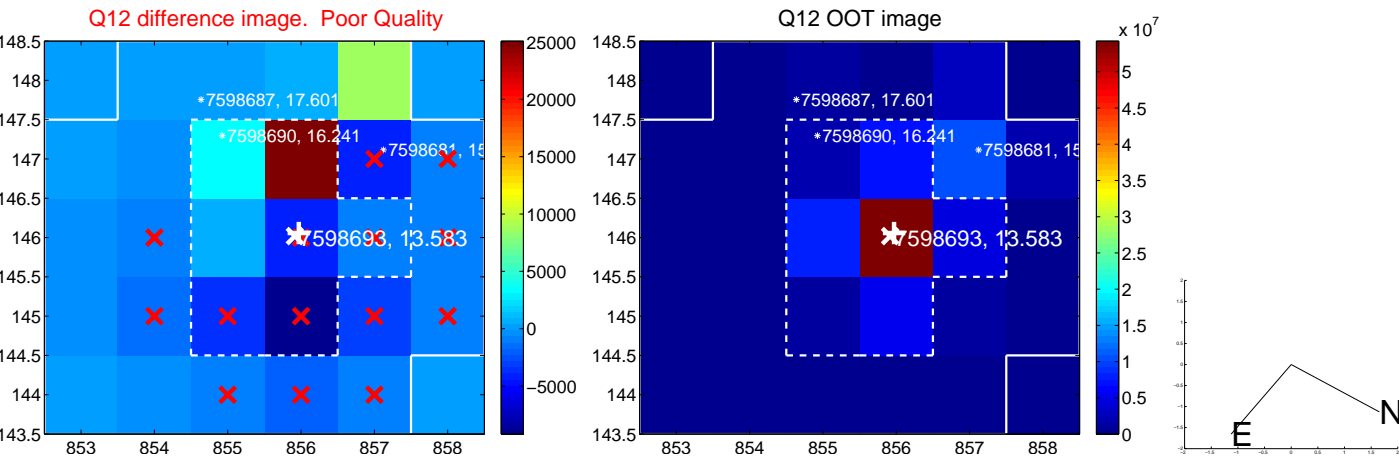
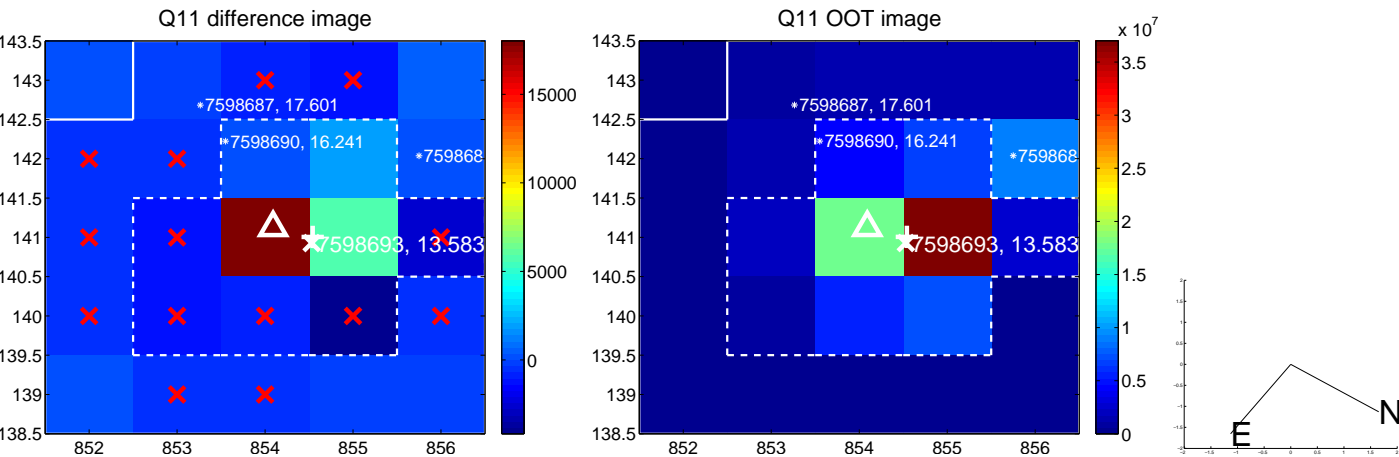
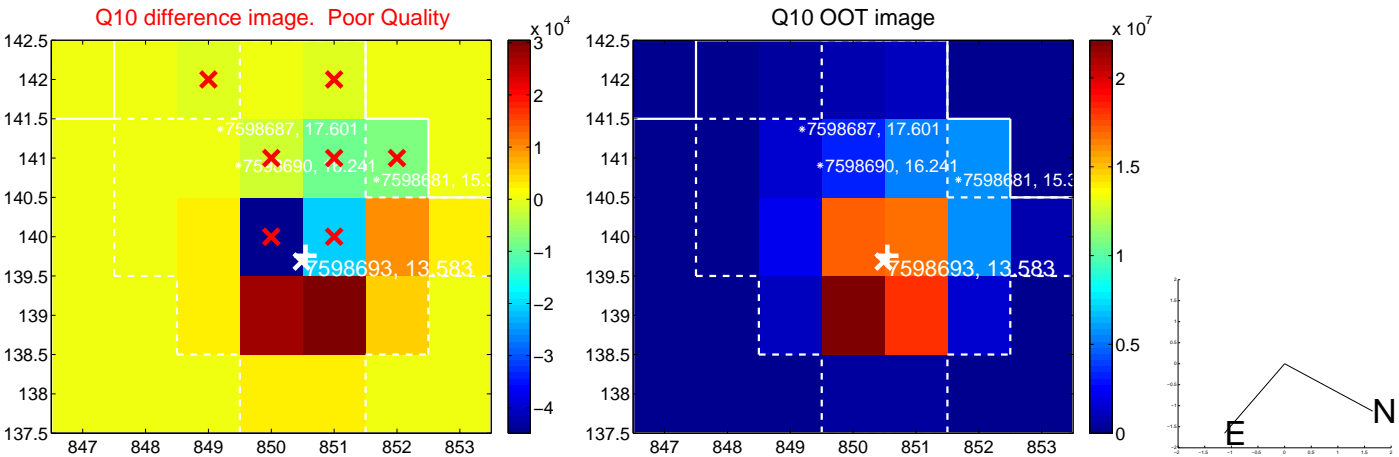
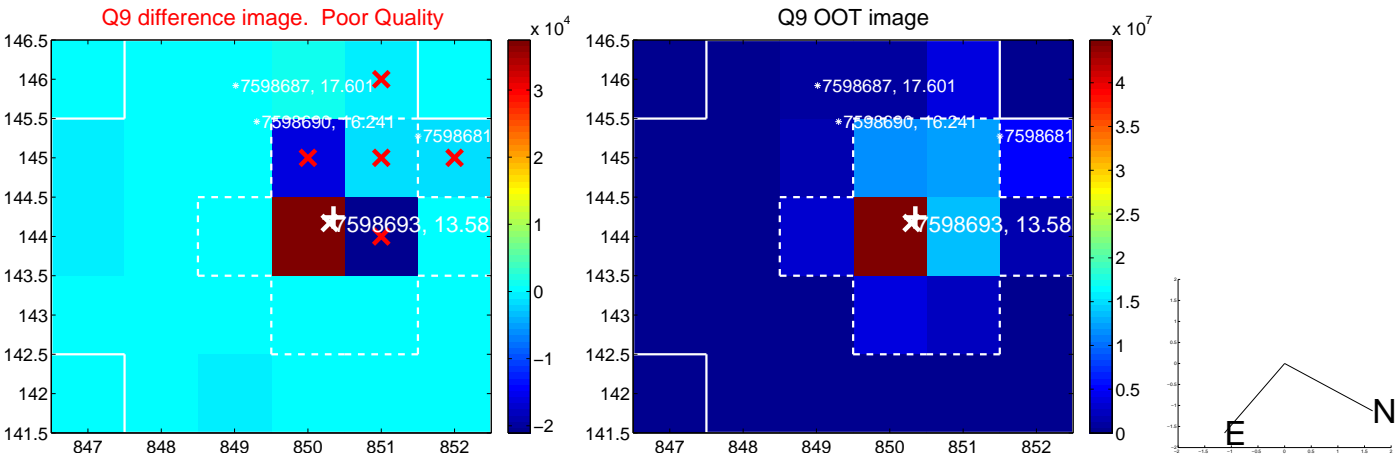
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



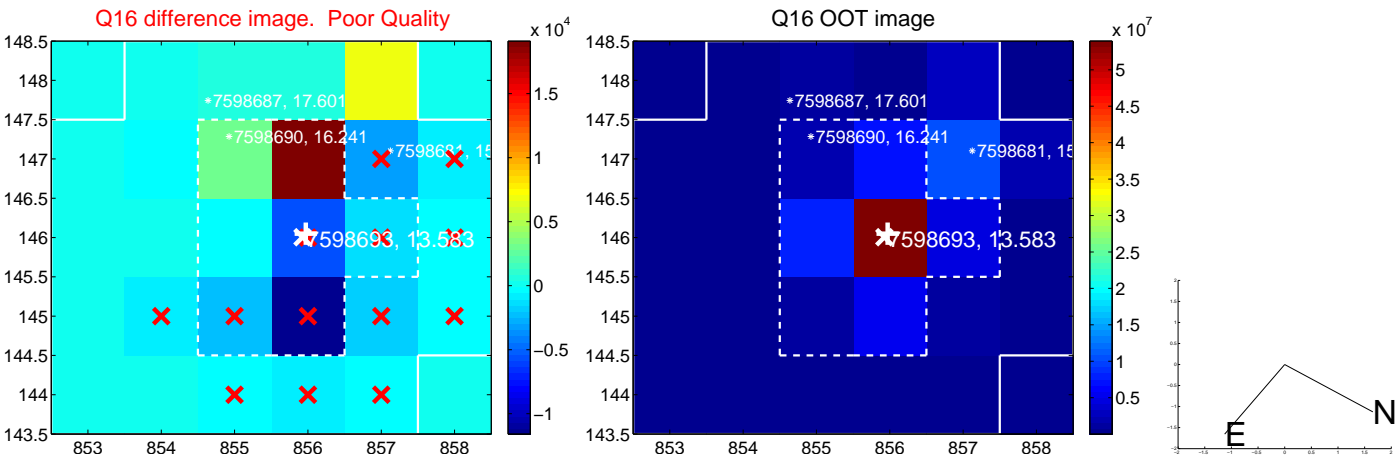
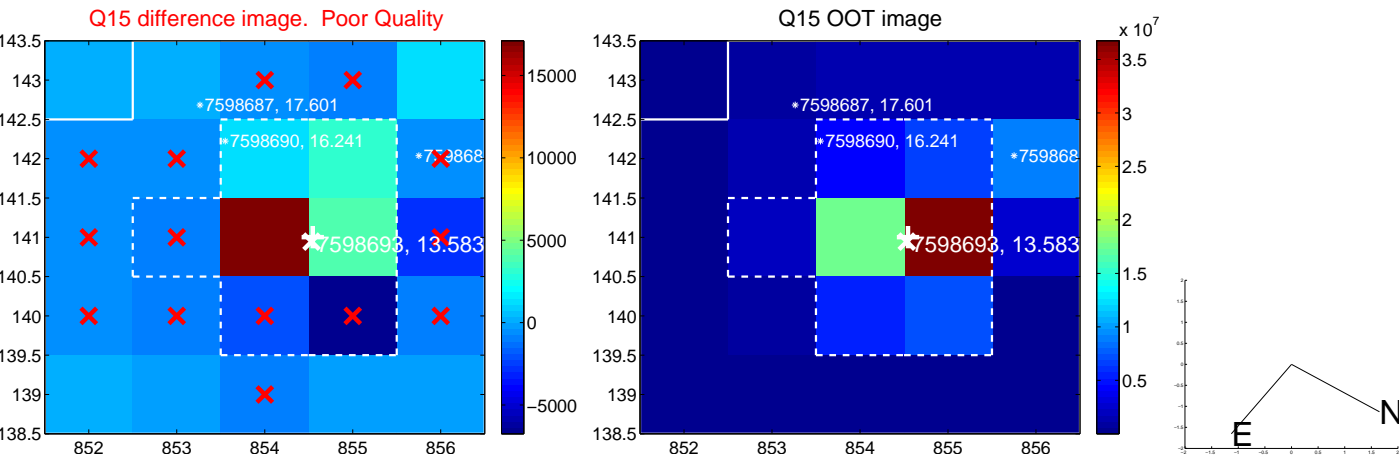
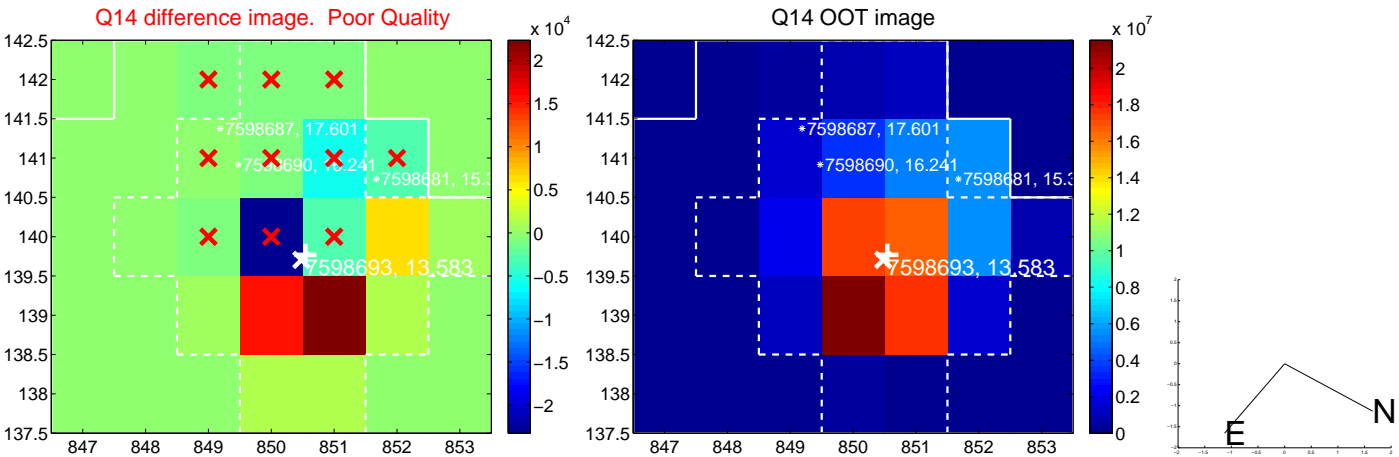
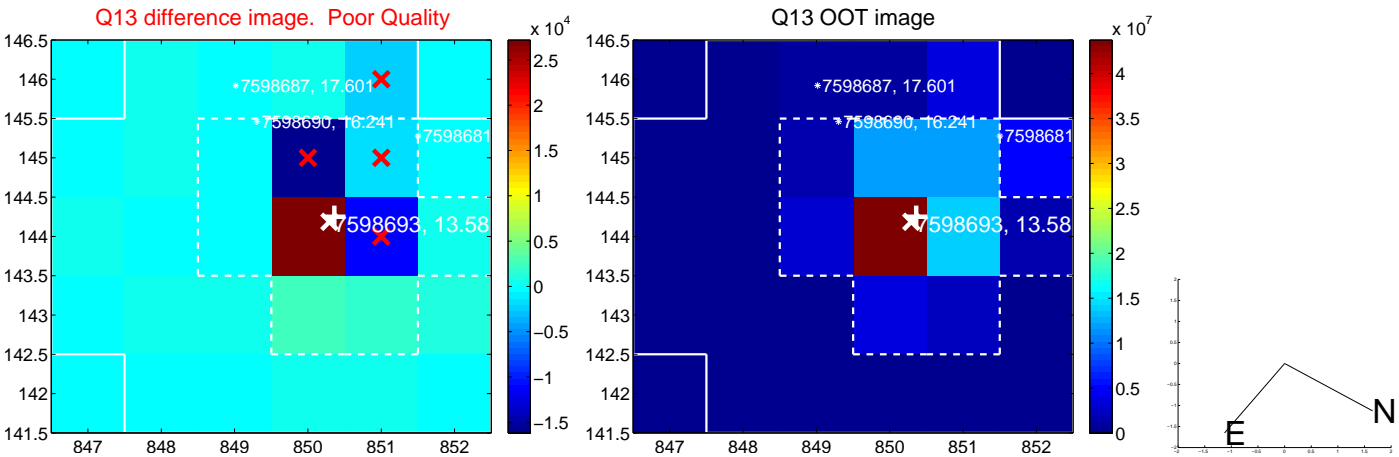
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



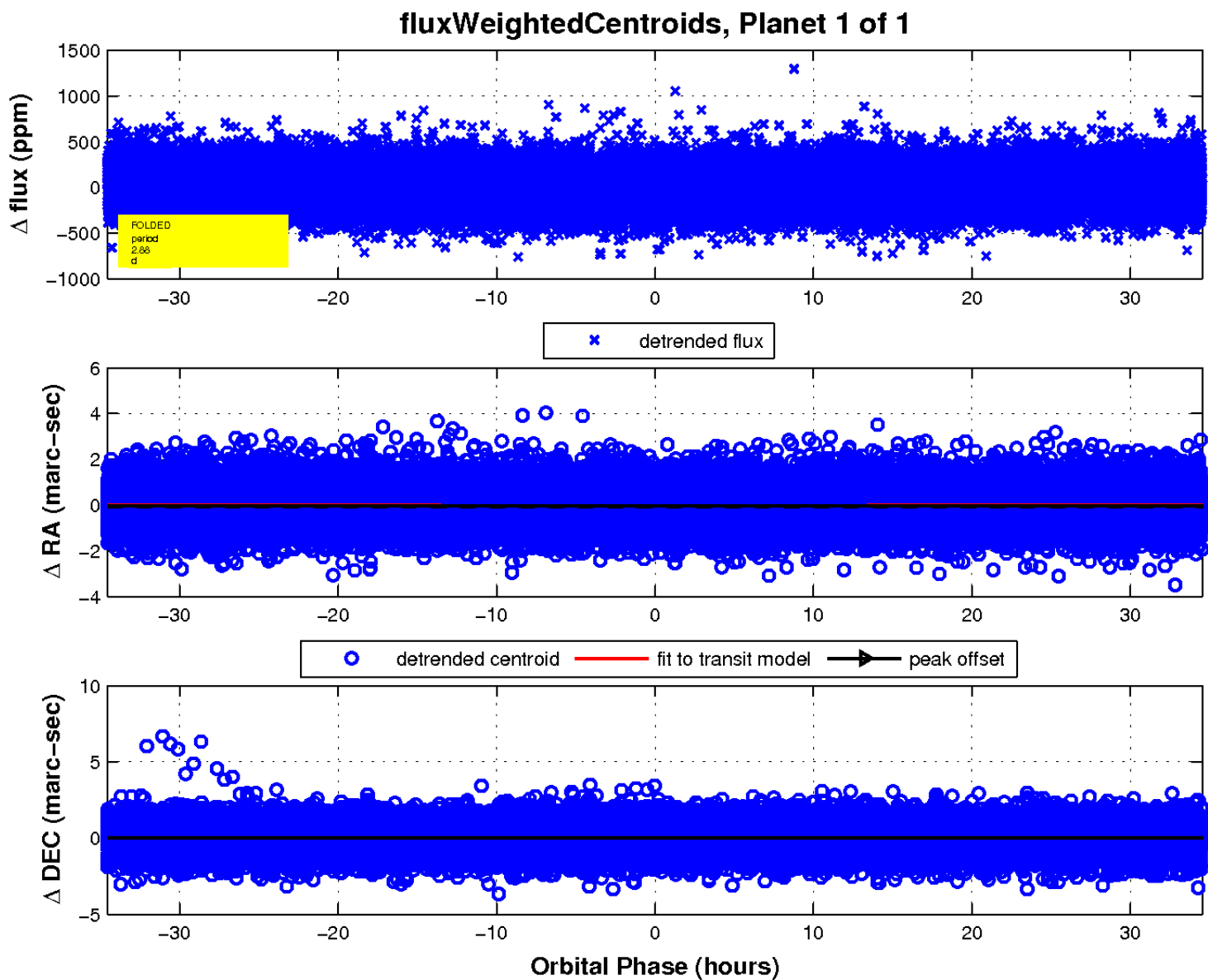
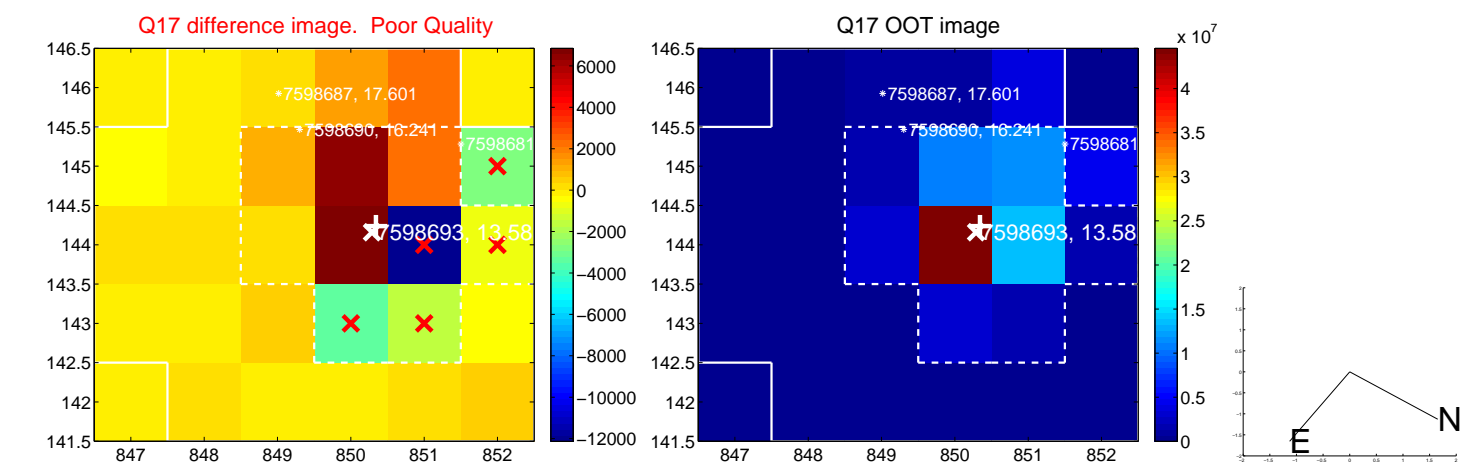
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



UKIRT Image

Declination

