

KIC 007886102

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})
007886102-01	OBS	No	0.701607	131.609353	11.8	3.000	9.1	3.7	1.41	6821	0.57	14913.83

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007886102-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT

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

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

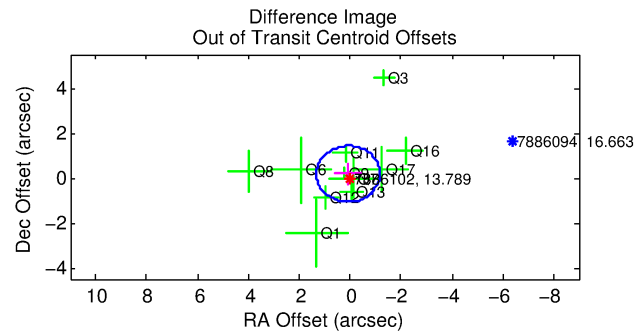
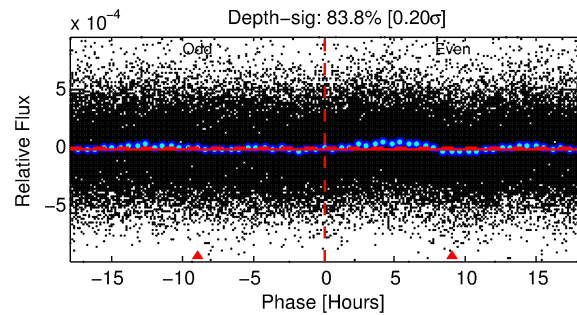
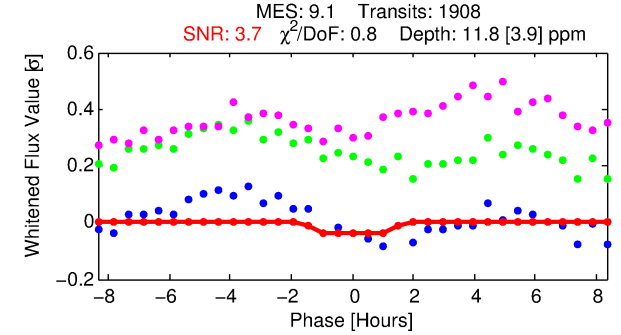
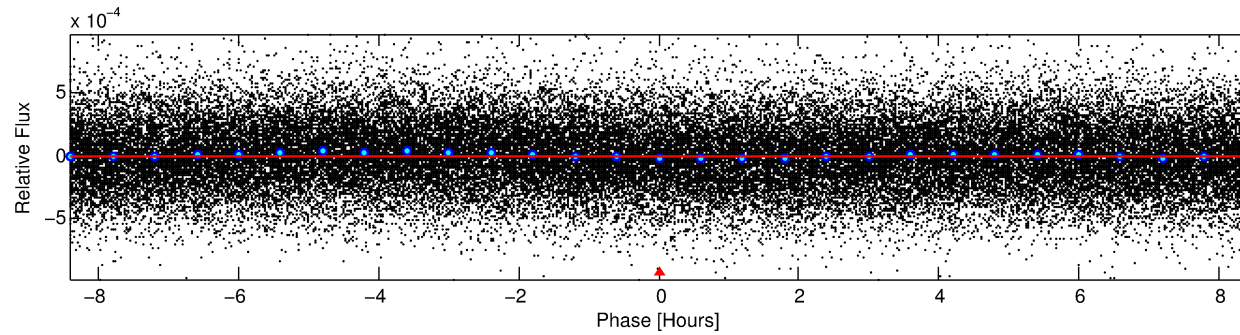
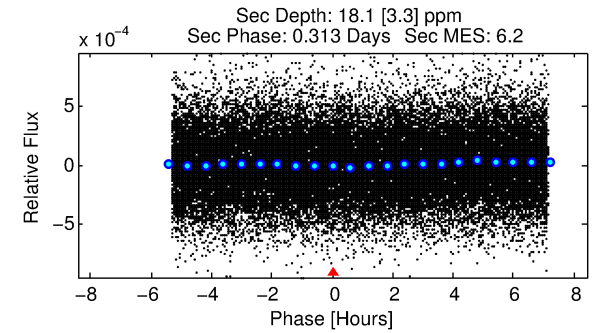
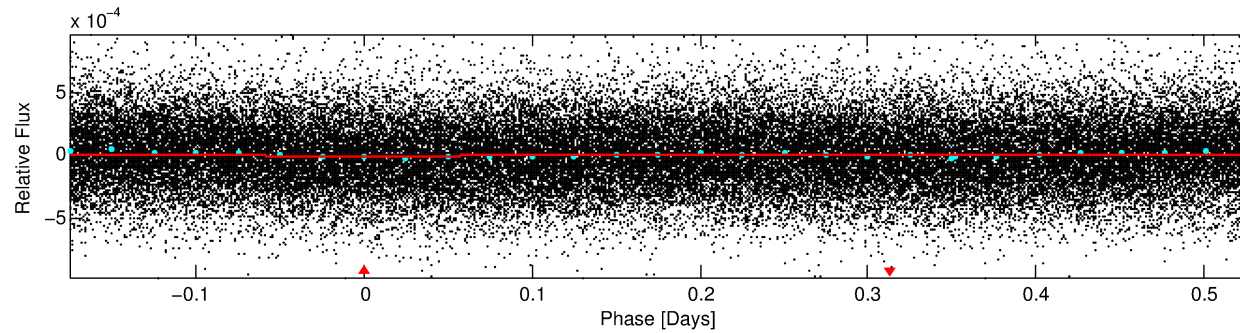
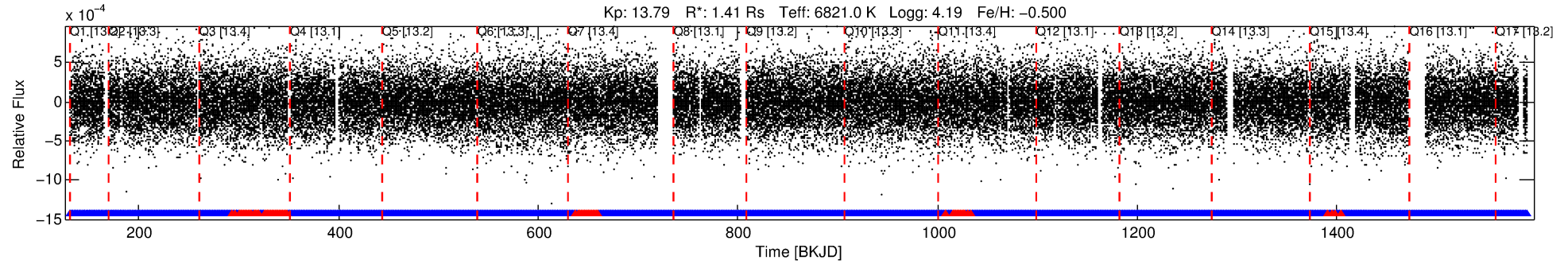
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007886102-01

No Significant Match Found

DV One-Page Summary

KIC: 7886102 Candidate: 1 of 1 Period: 0.702 d



DV Fit Results:

Period = 0.70161 [0.00003] d
Epoch = 131.6094 [0.0088] BKJD
Rp/R* = 0.0037 [0.0030]
a/R* = 1.21 [1.85]
b = 0.91 [0.92]
Seff = 14913.84 [5744.44]
Teq = 2818 [271] K
Rp = 0.57 [0.48] Re
a = 0.0161 [0.0038] AU
Ag = 7.91 [13.04] [0.53σ]
Teffp = 7307 [2960] K [1.51σ]

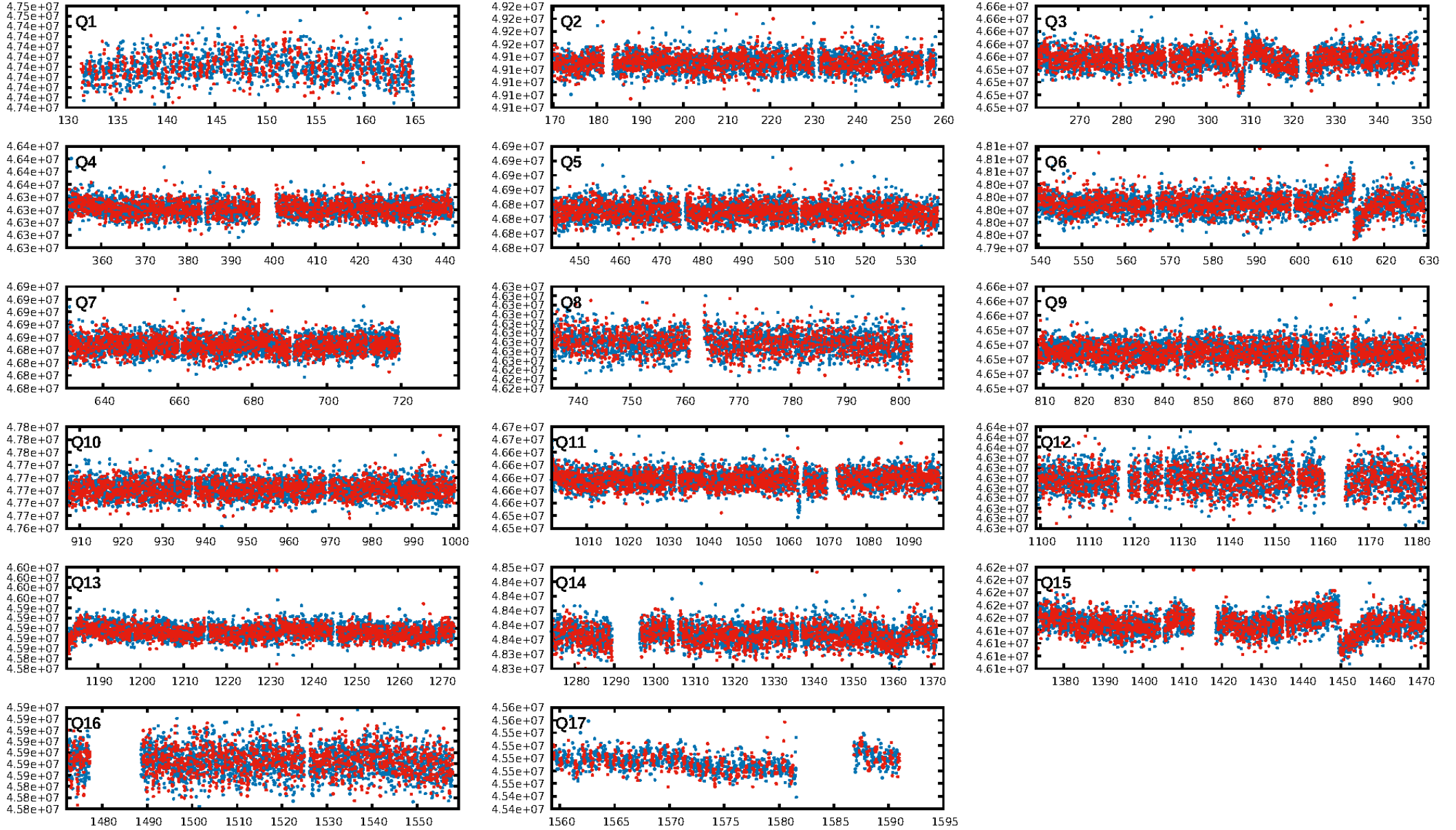
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.14e-14
RollingBand-fgt: 0.95 [1726/1822]
GhostDiagnostic-chr: 5.052
Centroid-sig: 0.1%
Centroid-so: 6.231 arcsec [2.23σ]
OotOffset-rm: 0.192 arcsec [0.46σ]
KicOffset-rm: 0.212 arcsec [0.51σ]
OotOffset-st: 1/3/3/4 [11]
KicOffset-st: 1/3/3/4 [11]
DiffImageQuality-fgm: 0.64 [7/11]
DiffImageOverlap-fno: 1.00 [17/17]

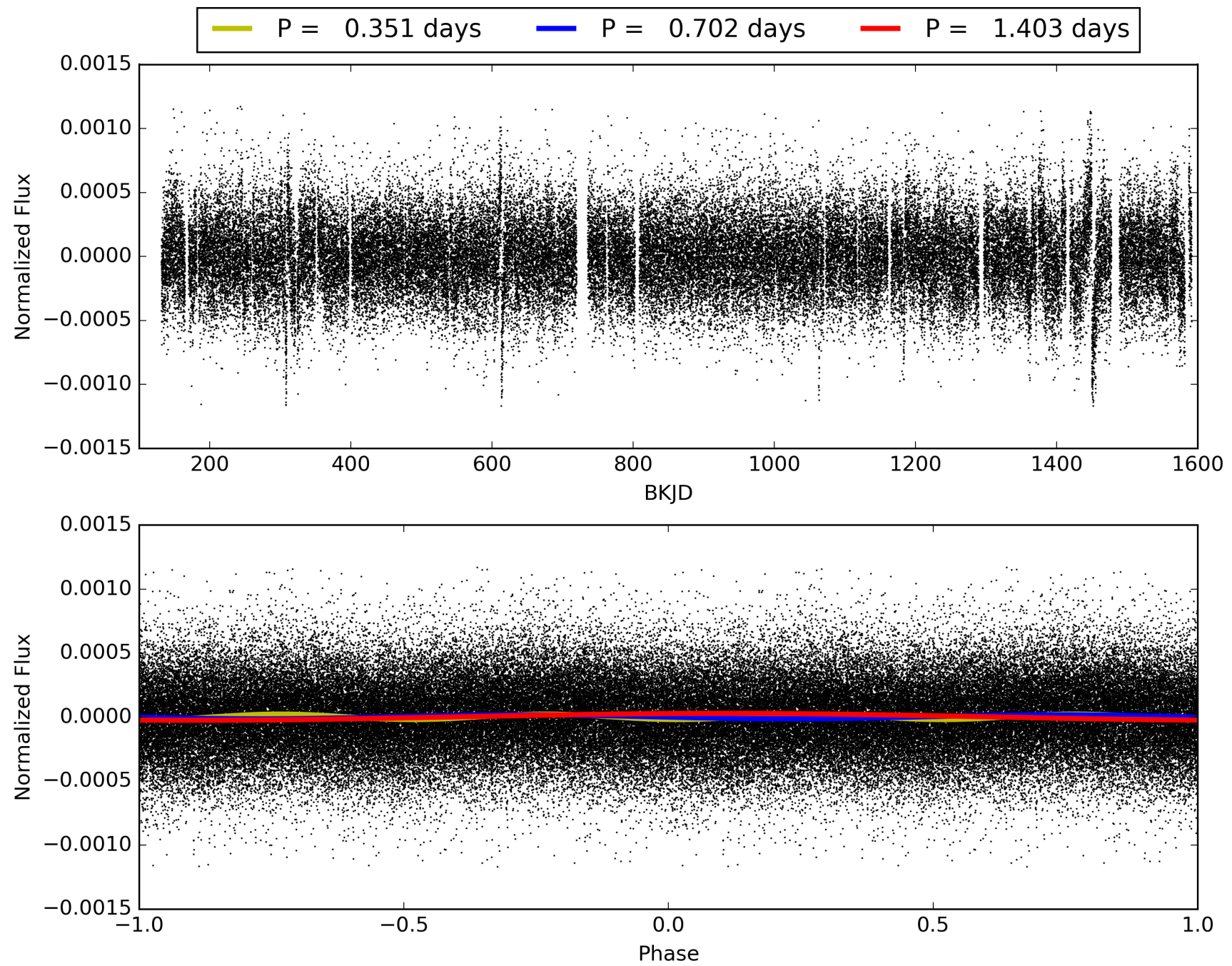
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 19:06:09 Z

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

TCE 007886102-01, PDC Light Curves

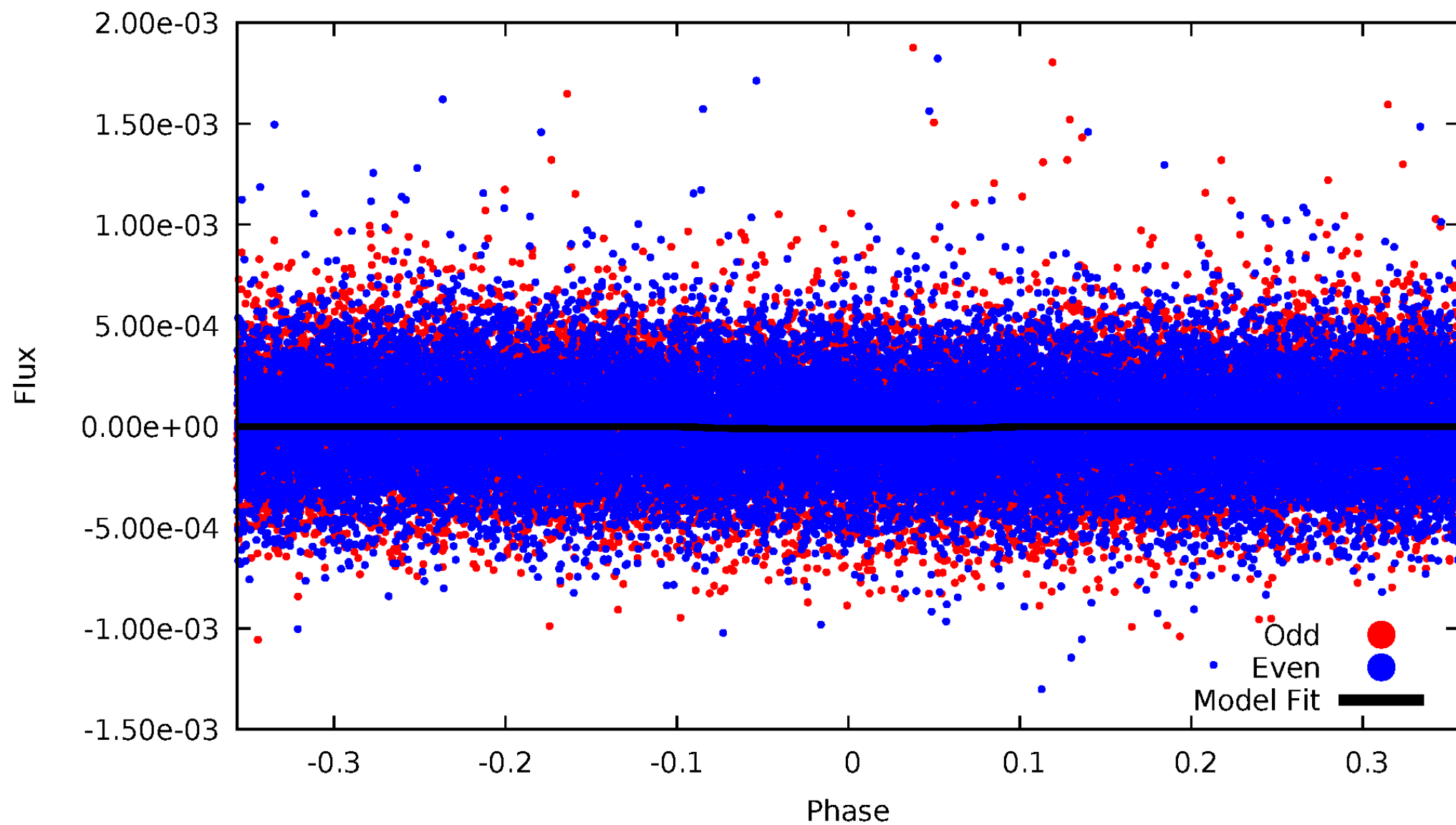


TCE 007886102-01



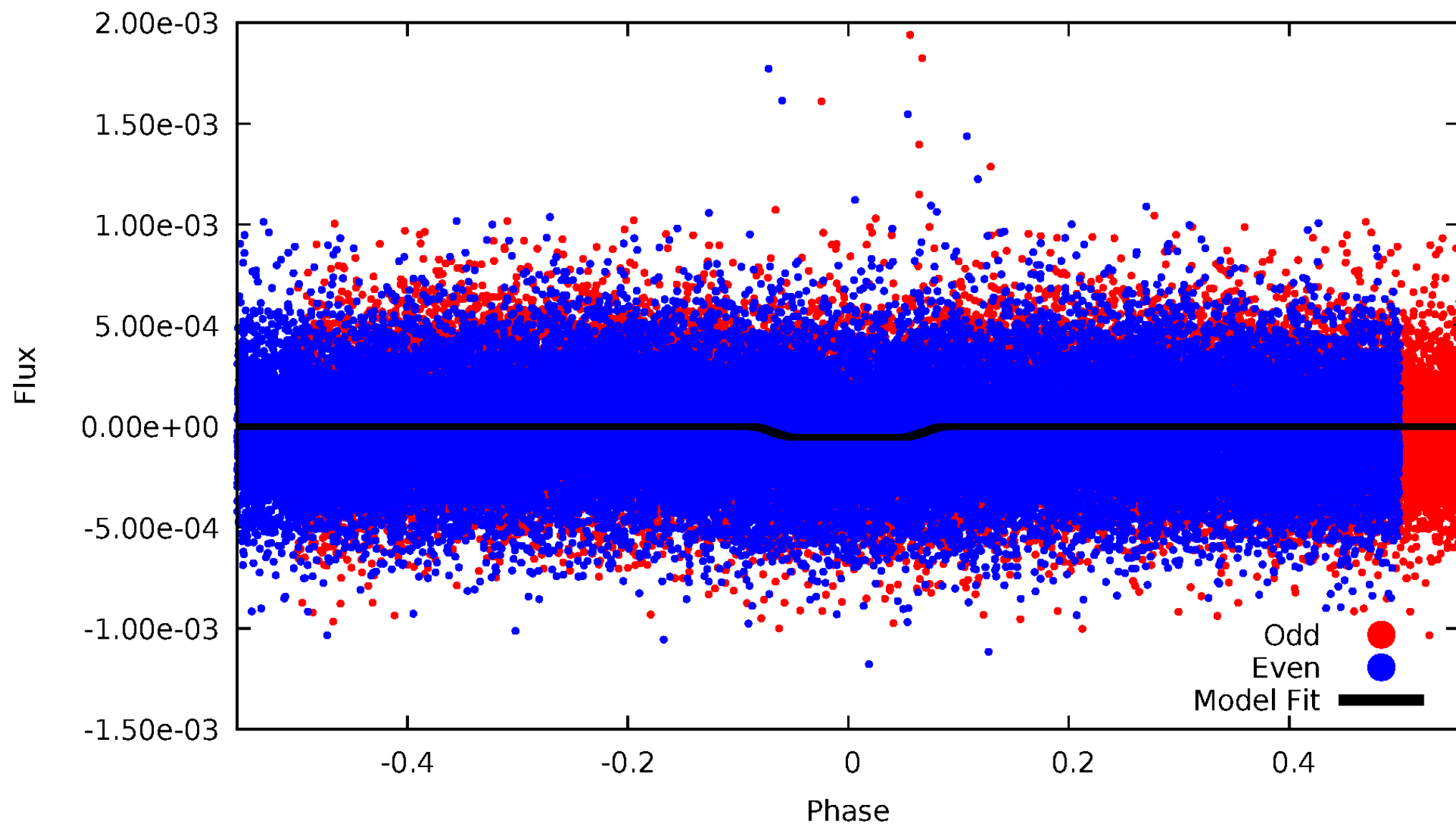
DV Odd/Even

TCE 007886102-01

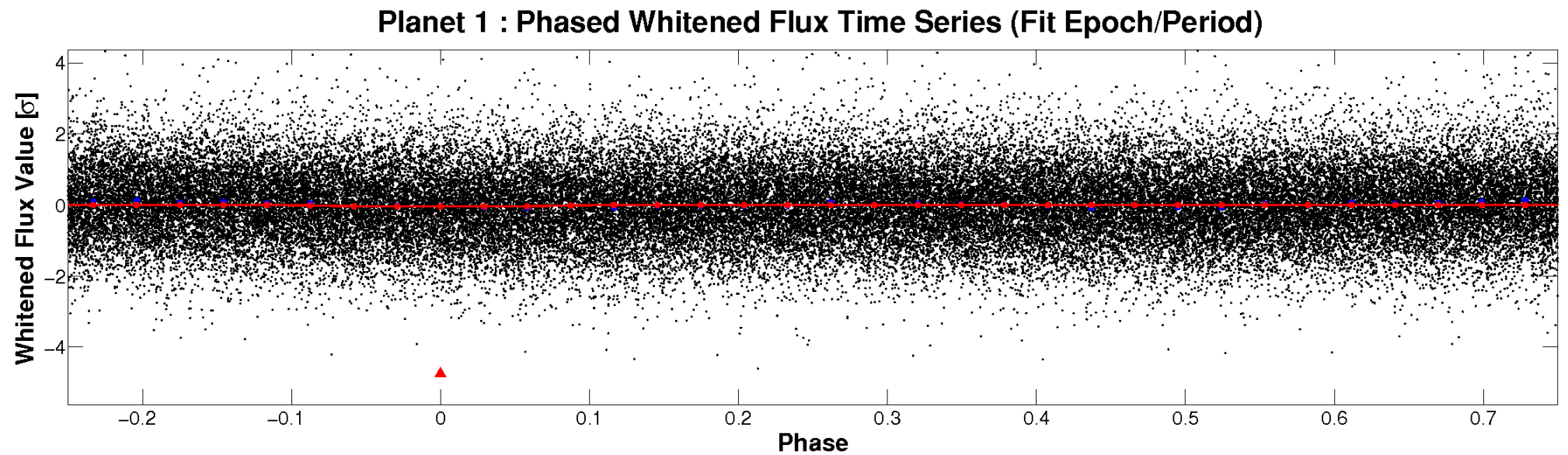
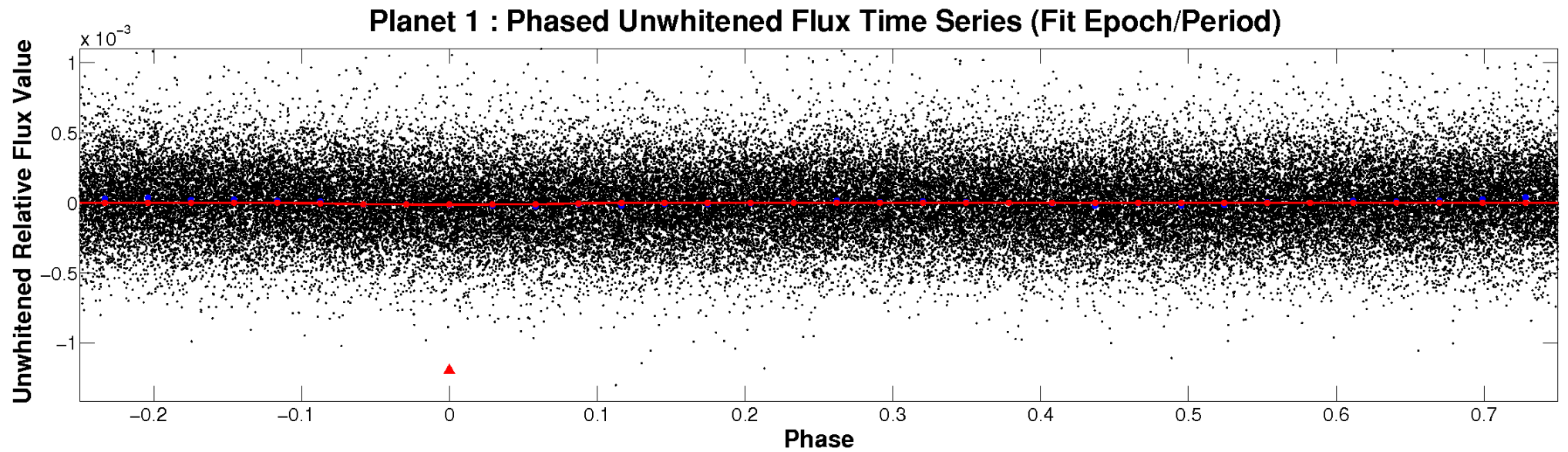


ALT Odd/Even

TCE 007886102-01

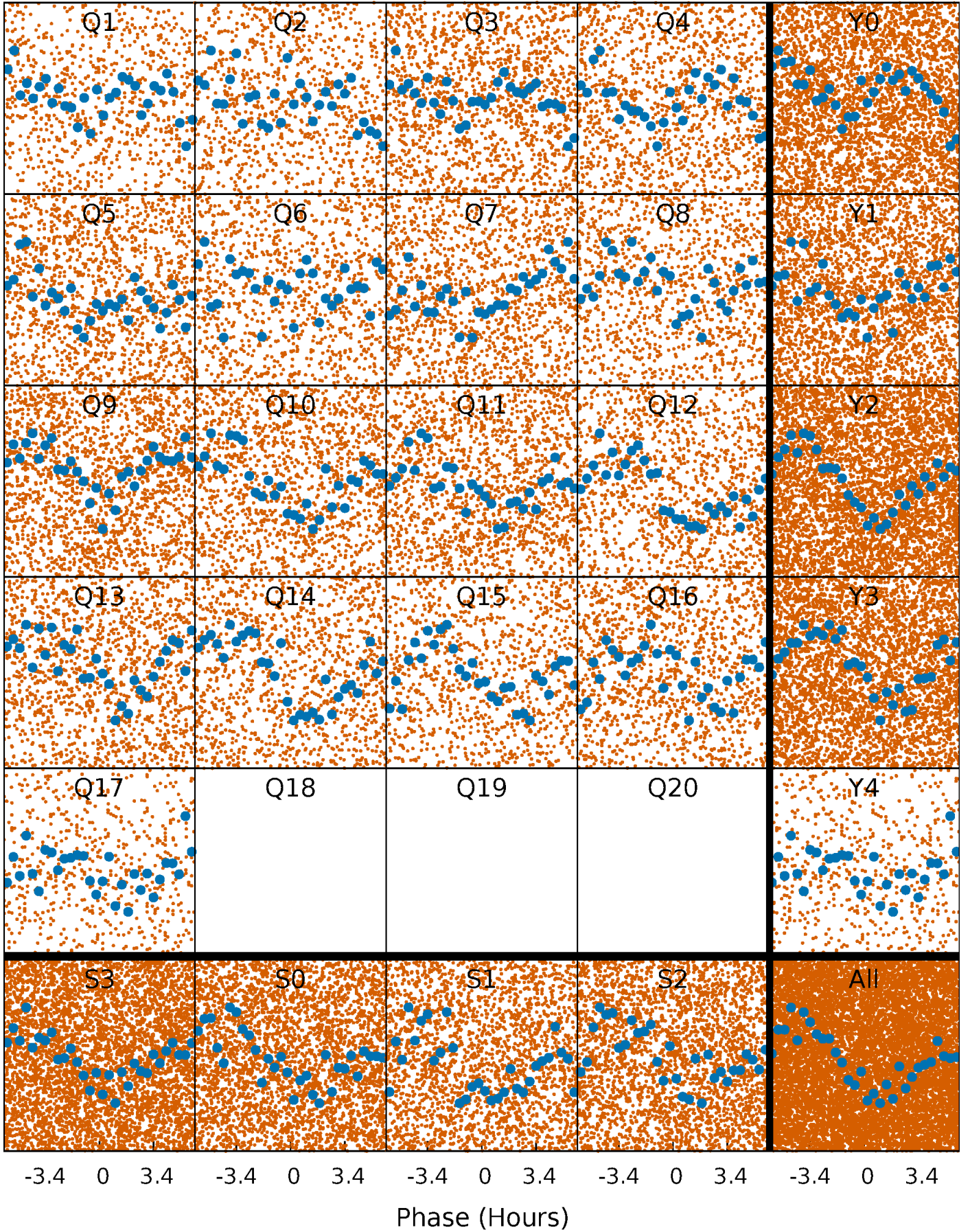


Non-Whitened Vs. Whitened Light Curve



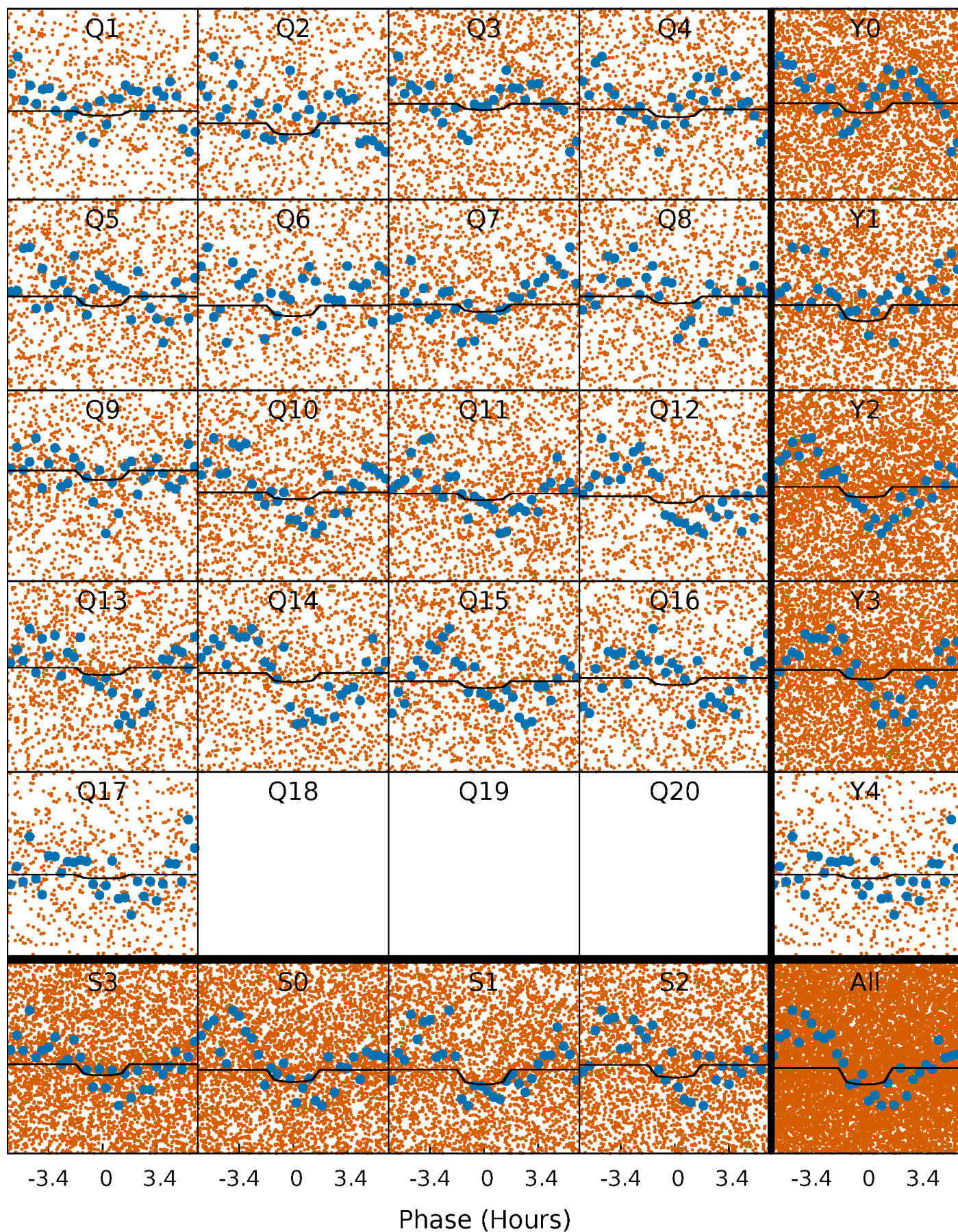
PDC Quarter-Phased Transit Curves

TCE 007886102-01 P= 0.701607 Days $T_0=131.609353$ (BKJD)



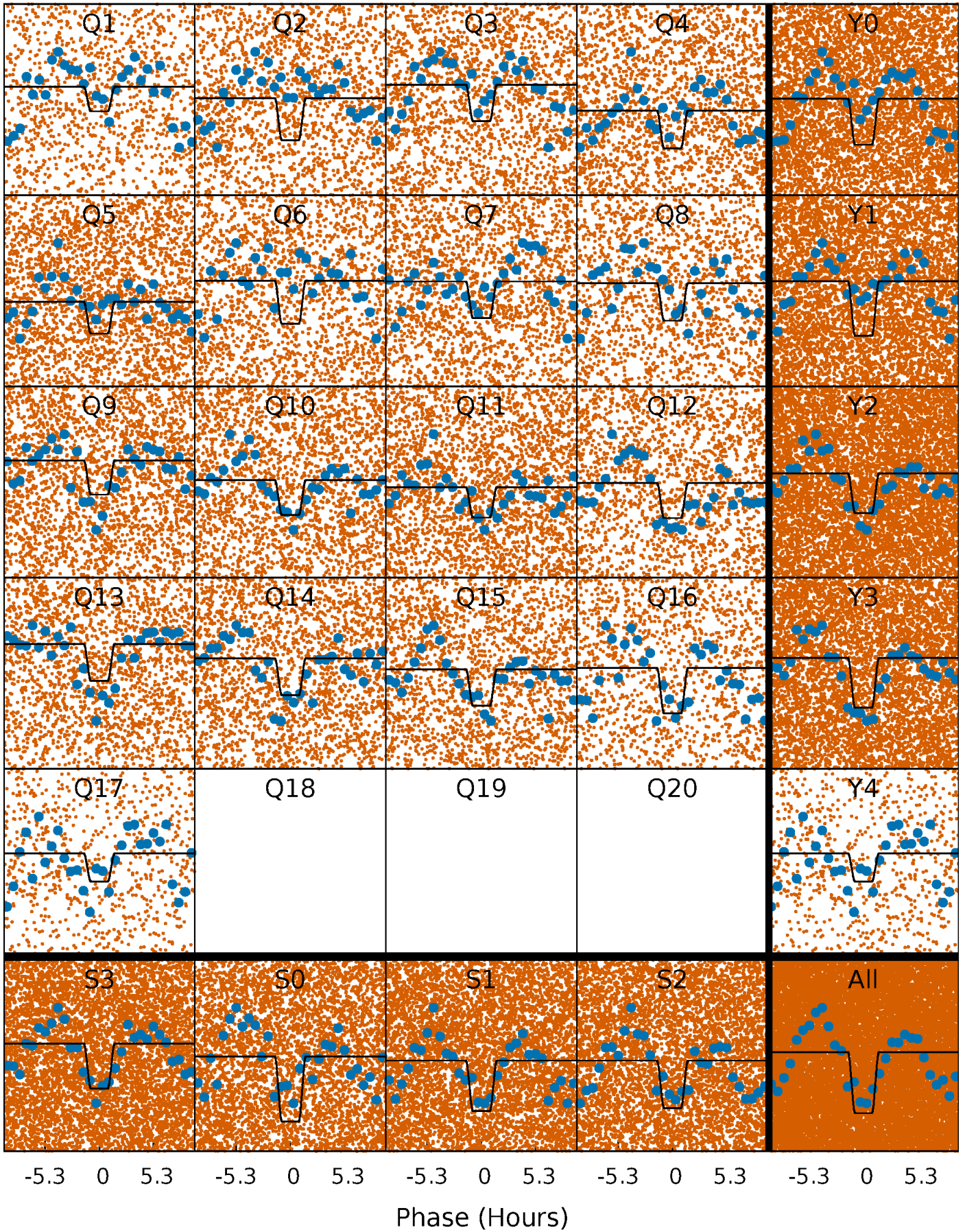
DV Quarter-Phased Transit Curves

TCE 007886102-01 P= 0.701607 Days $T_0=131.609353$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

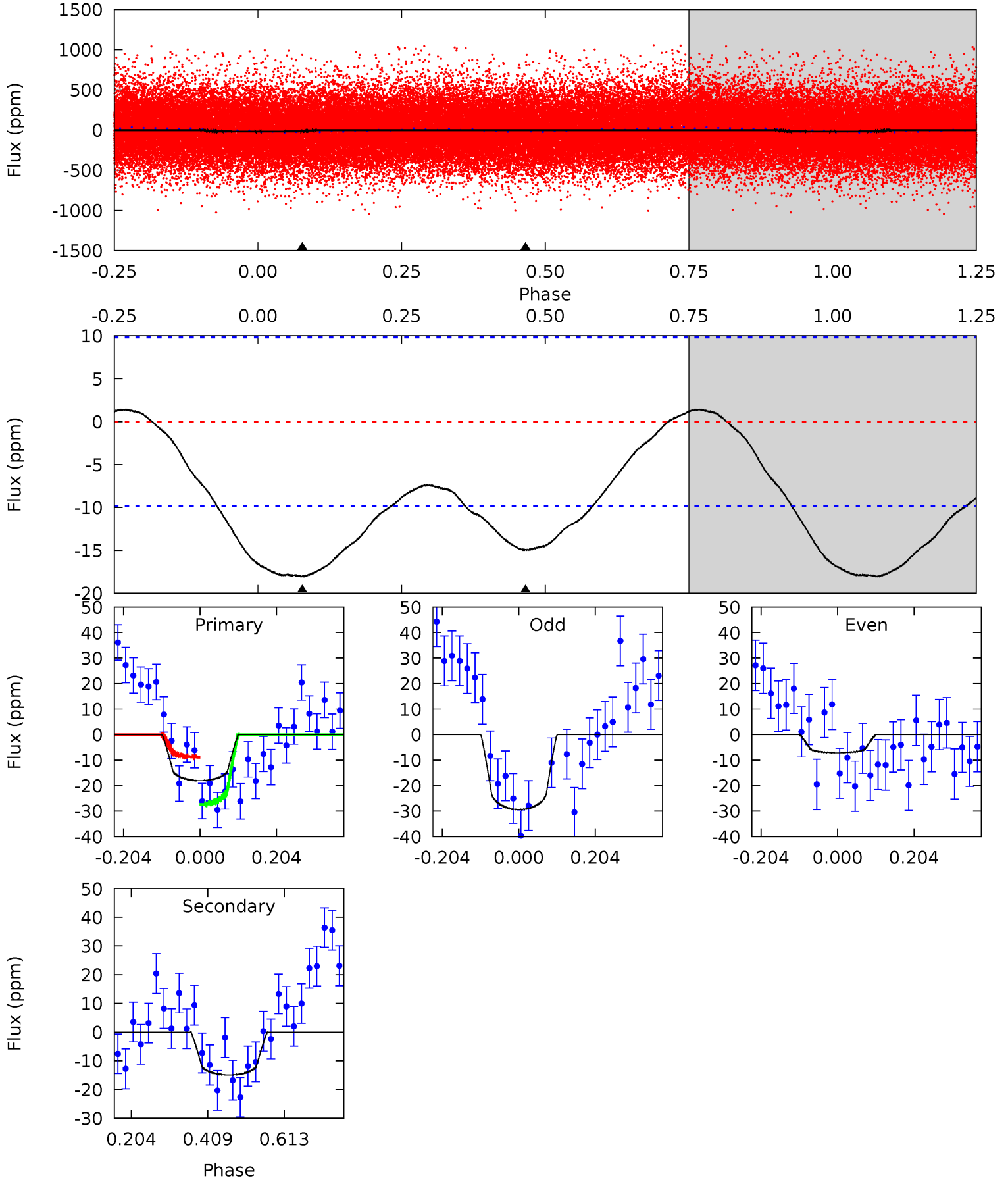
TCE 007886102-01 P= 0.701693 Days $T_0=131.540454$ (BKJD)



DV Model-Shift Uniqueness Test

007886102-01, P = 0.701607 Days, E = 130.907746 Days

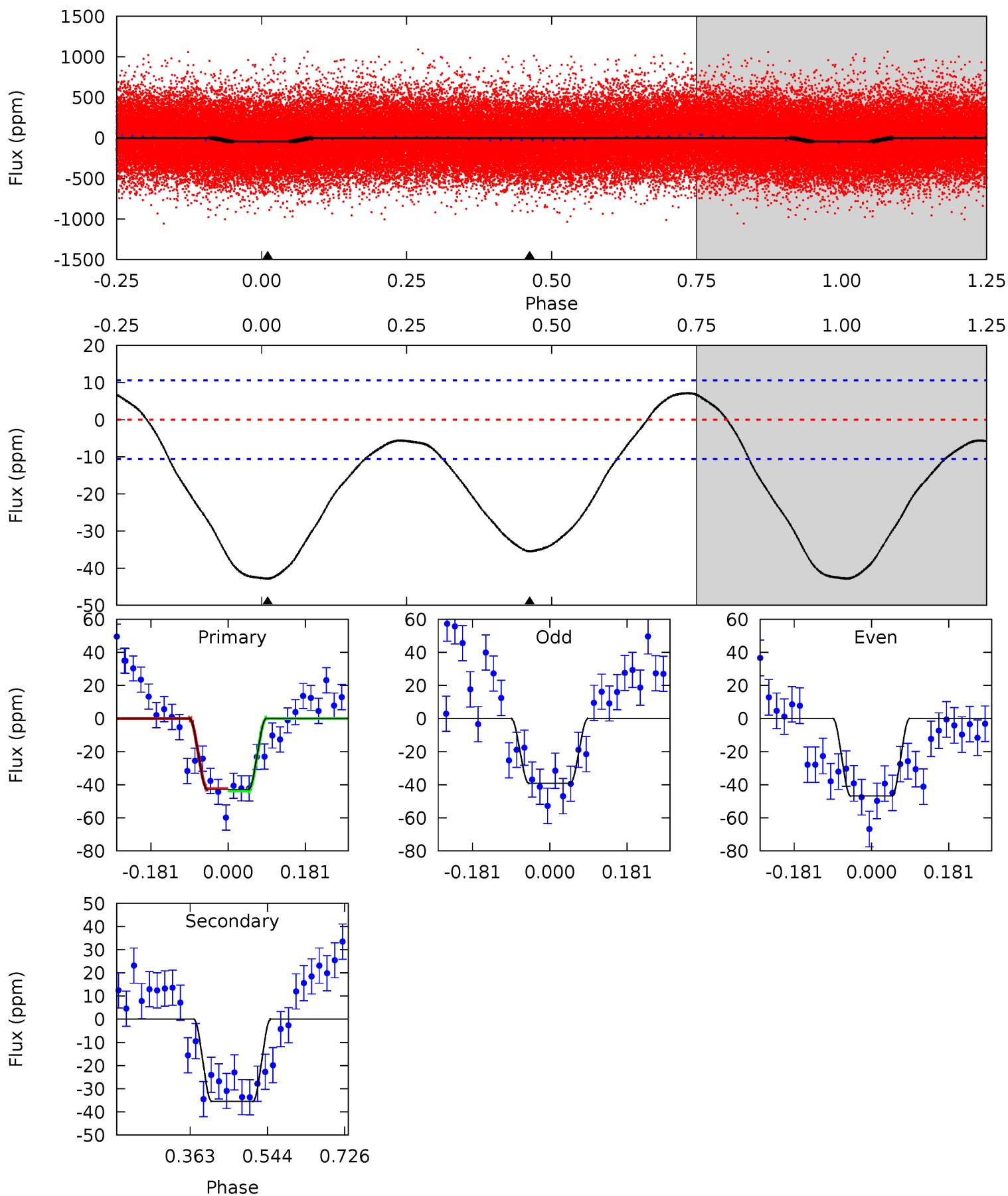
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.09	6.71	0	0	4.41	1.27	0.70	8.09	8.09	6.71	6.71	5.02	0.92	0.07	4.20



Alt Model-Shift Uniqueness Test

007886102-01, P = 0.701693 Days, E = 130.838761 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	14.9	0	0	4.44	1.34	2.27	17.9	17.9	14.9	14.9	1.59	1.00	0.14	0.28



Stellar Parameters For KIC 007886102

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6821^{+214}_{-285}	$4.192^{+0.193}_{-0.175}$	$-0.500^{+0.250}_{-0.300}$	$1.413^{+0.383}_{-0.313}$	$1.133^{+0.178}_{-0.146}$	$0.565^{+0.532}_{-0.273}$
	+3%/-4%	+5%/-4%	+50%/-60%	+27%/-22%	+16%/-13%	+94%/-48%
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 007886102-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-15 ± 2	$0.64^{+0.46}_{-0.40}$	3932^{+309}_{-274}	6395^{+5721}_{-1496}	$5.241^{+28.849}_{-3.533}$
Alt.	-35 ± 2	$1.11^{+0.50}_{-0.44}$	3892^{+308}_{-264}	5991^{+1998}_{-981}	$4.088^{+7.464}_{-2.146}$

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

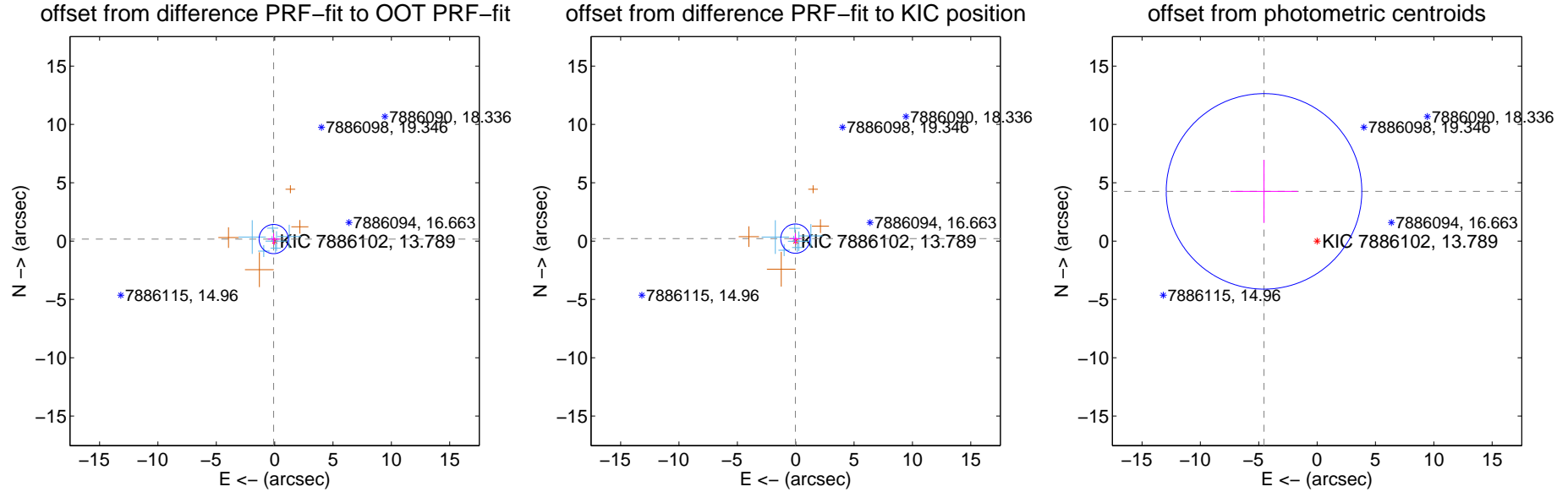
DV Centroid Data

Supplemental centroid analysis for 007886102-01. Kepler magnitude: 13.79. Transit SNR 3.75

There are 7 quarters with good PRF difference image offsets

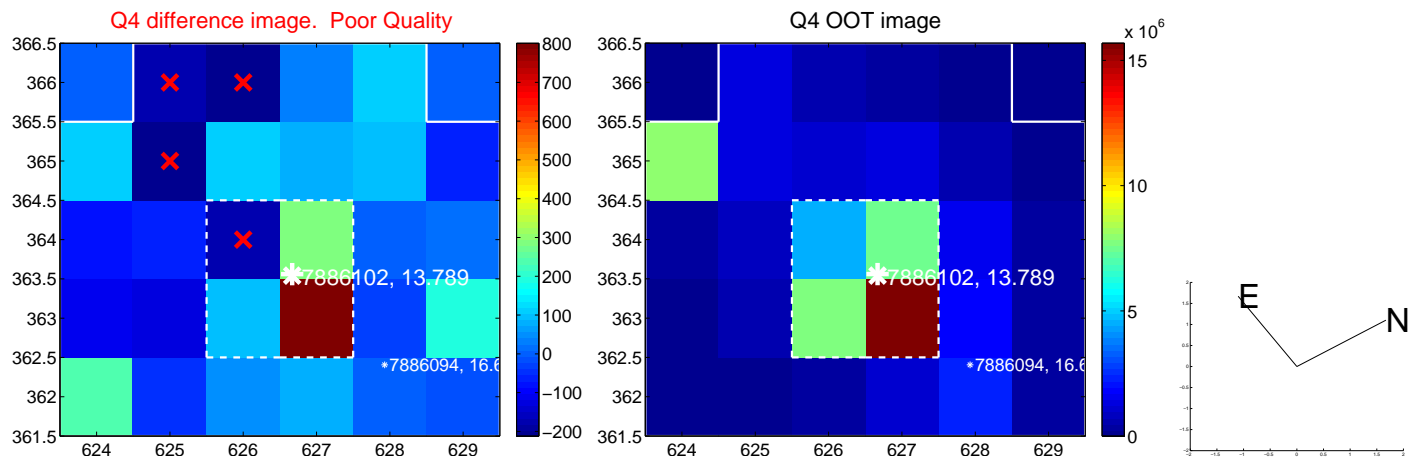
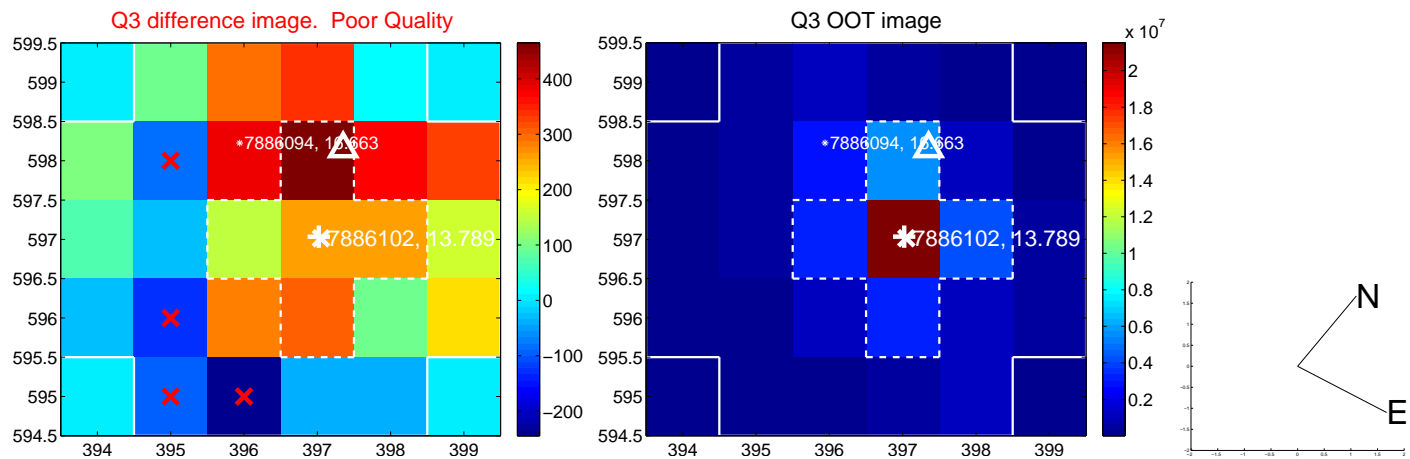
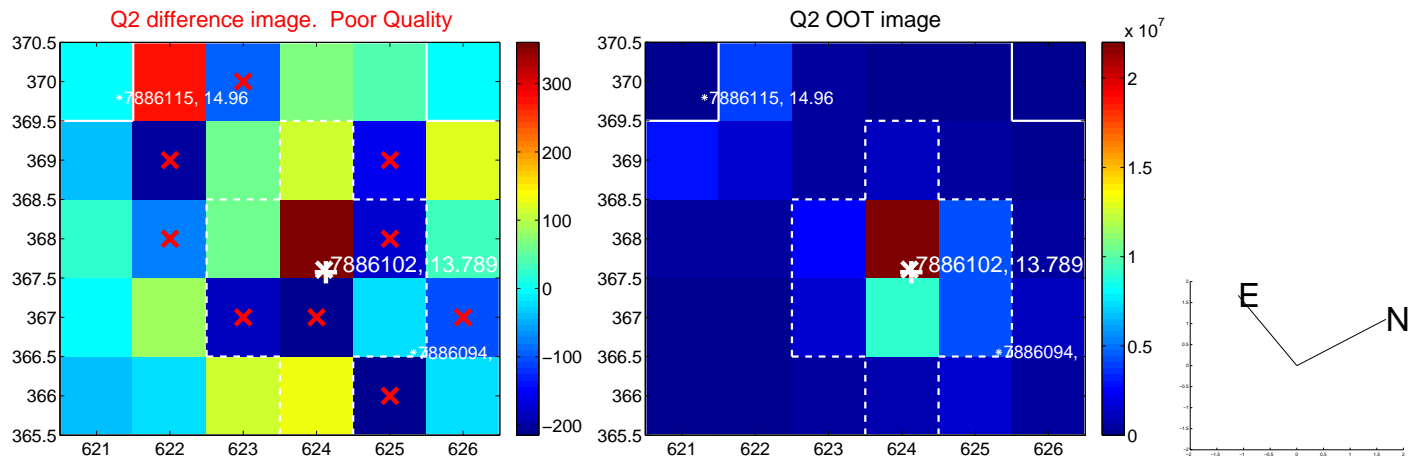
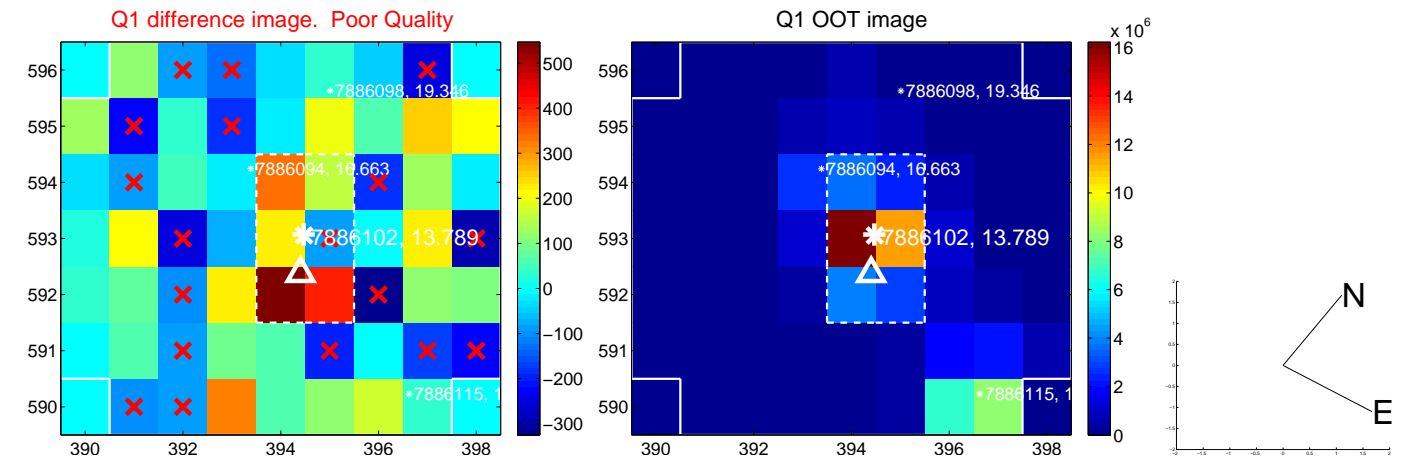
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.192 ± 0.417	0.46	0.084 ± 0.501	0.173 ± 0.467
PRF-fit source offset from KIC position	0.212 ± 0.418	0.51	0.027 ± 0.487	0.211 ± 0.445
photometric centroid source offset	6.23 ± 2.79	2.23	4.55 ± 2.88	4.26 ± 2.70

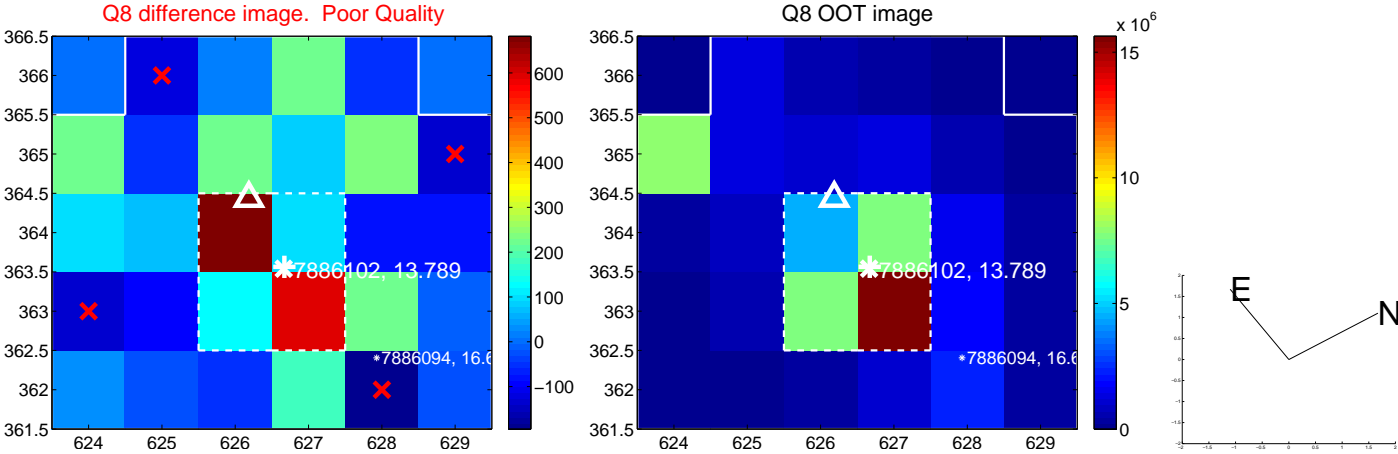
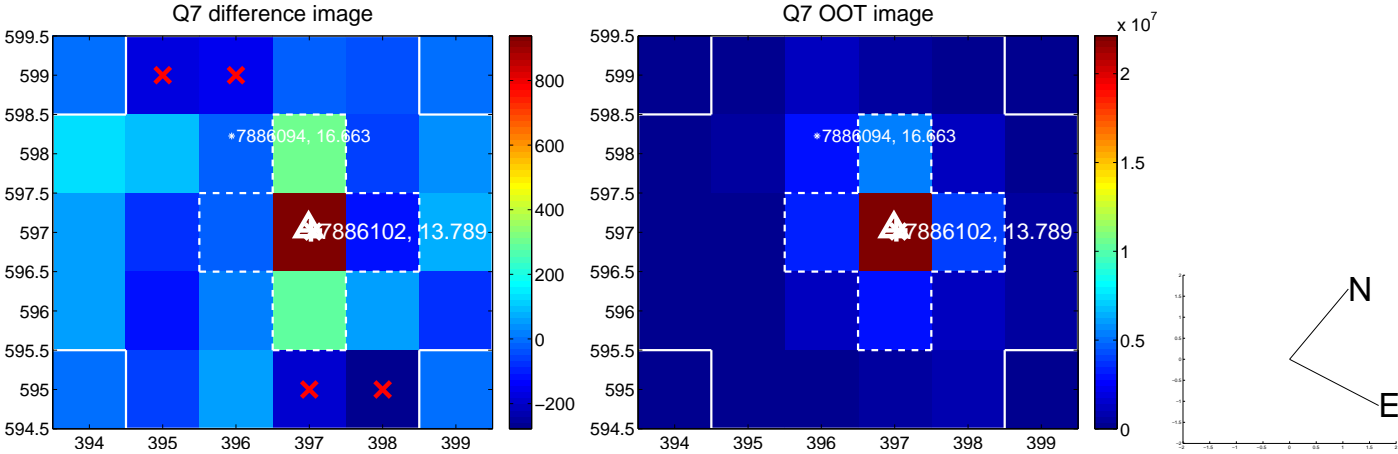
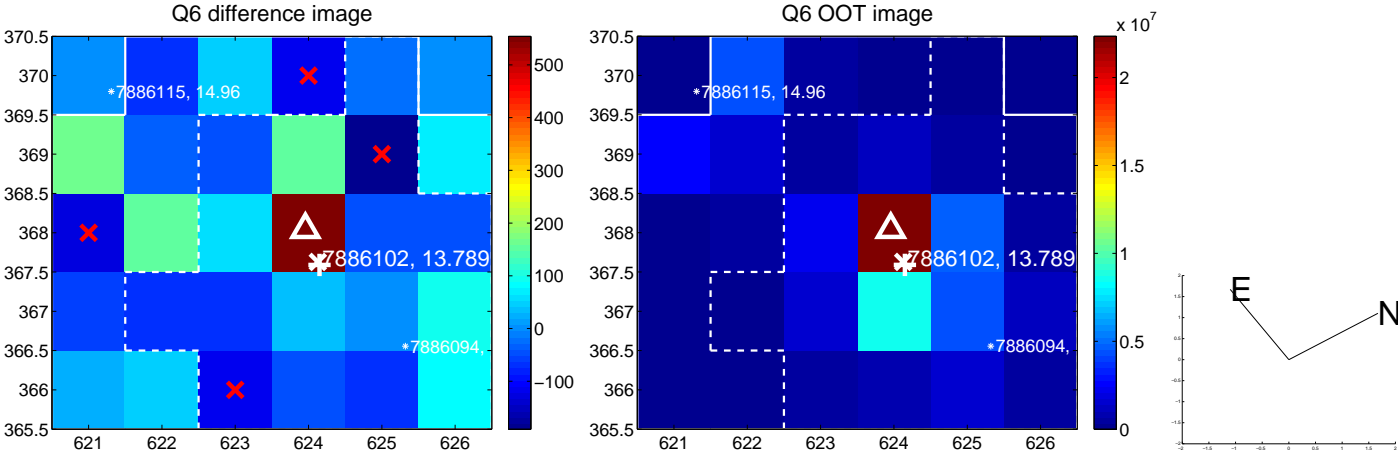
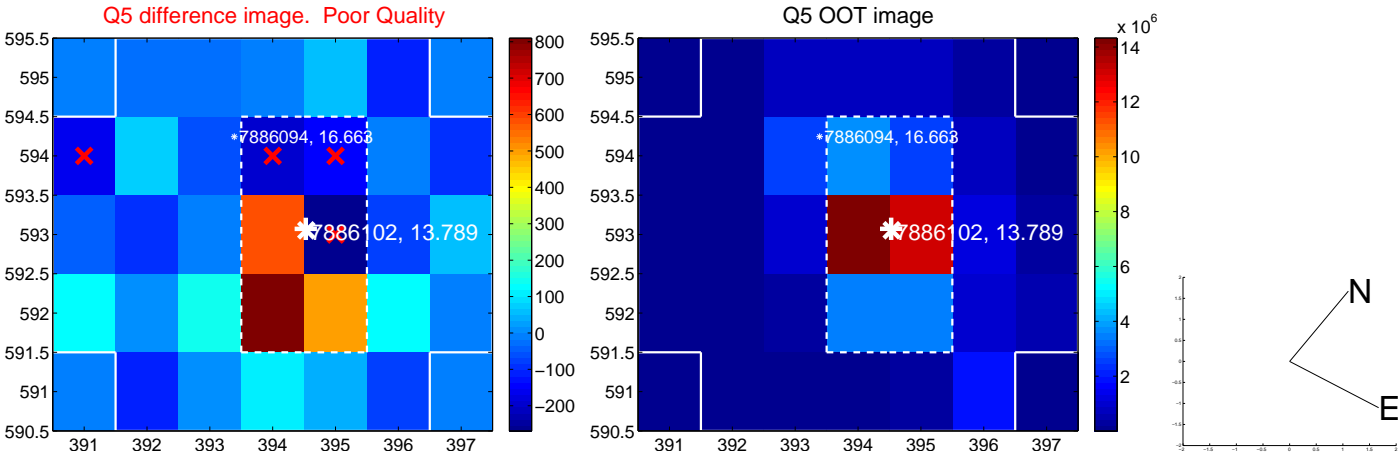


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

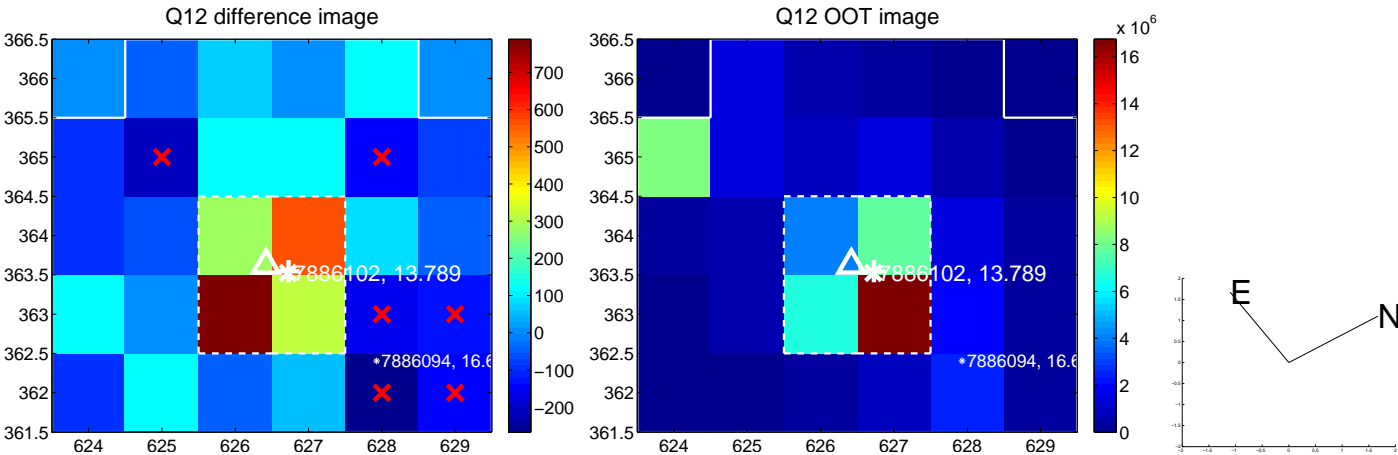
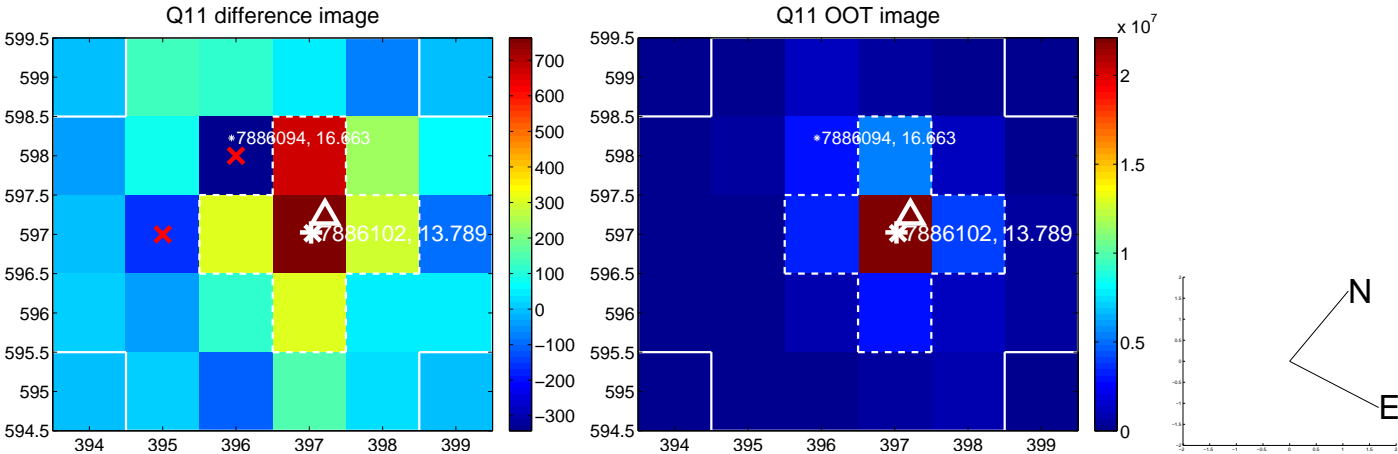
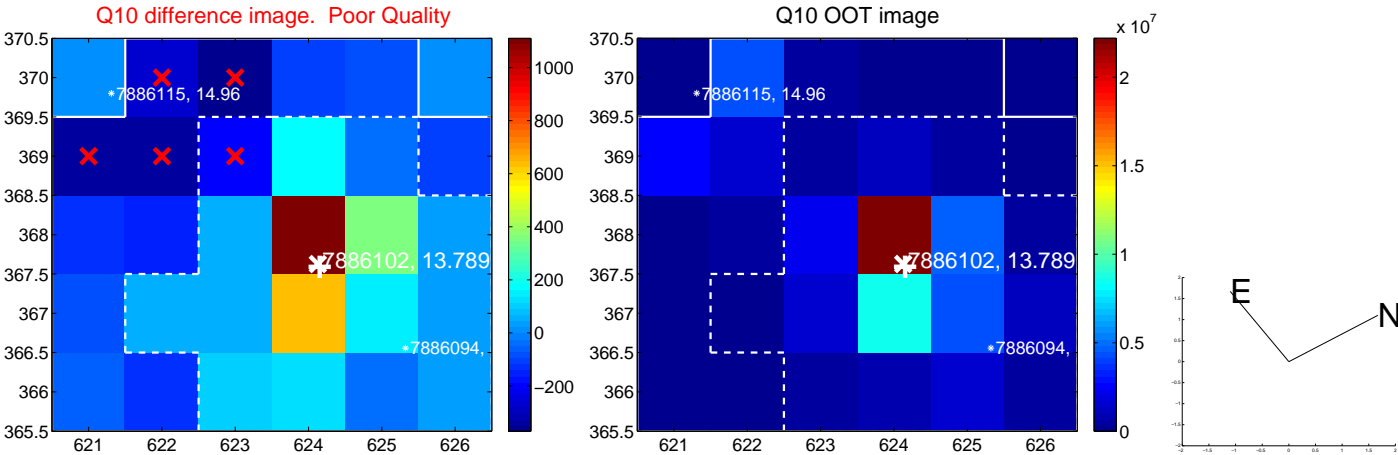
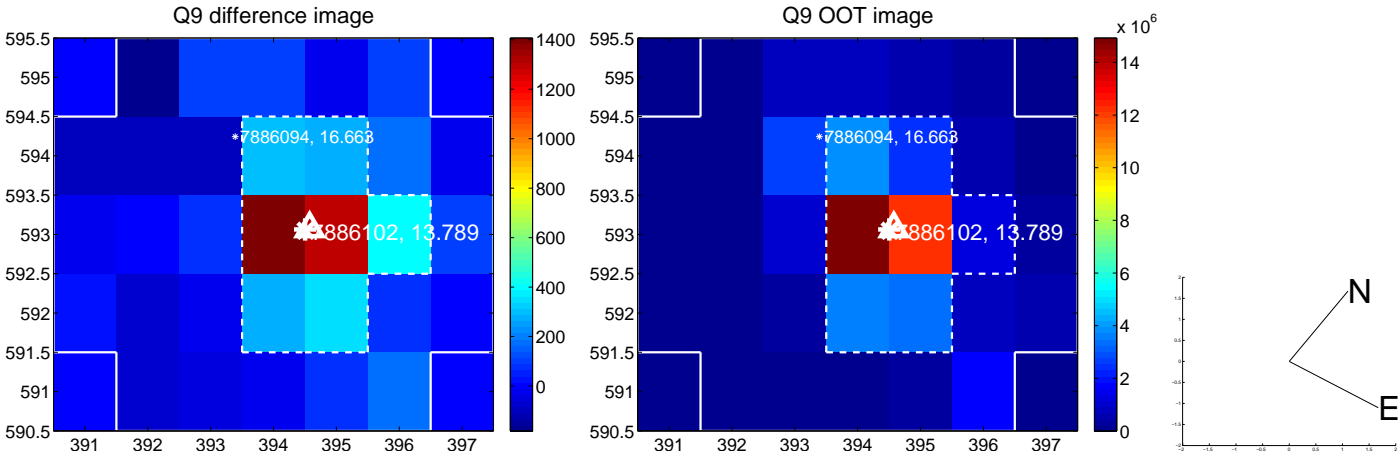
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



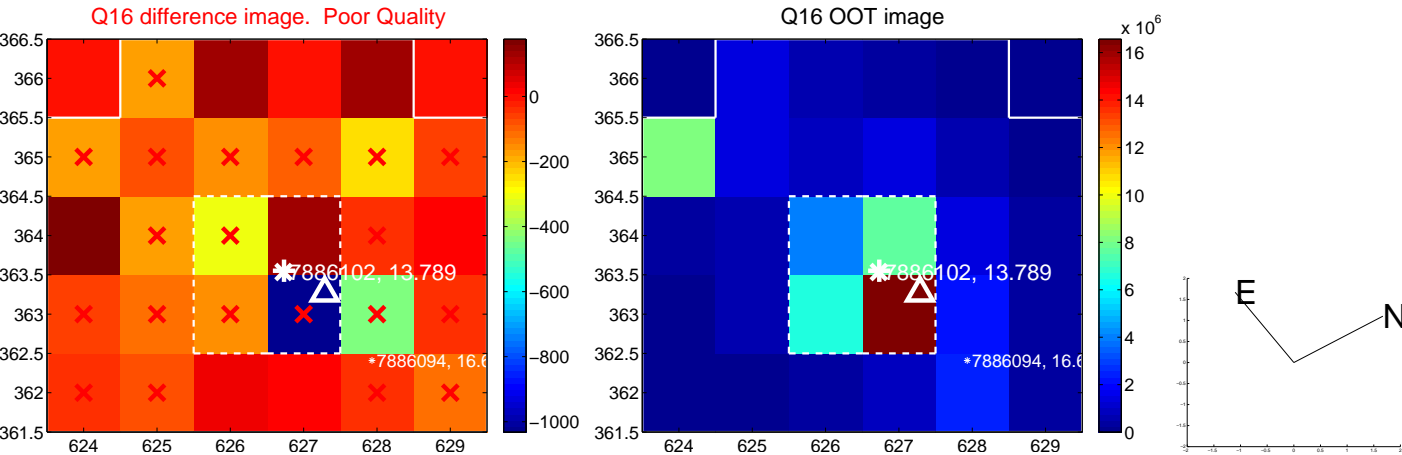
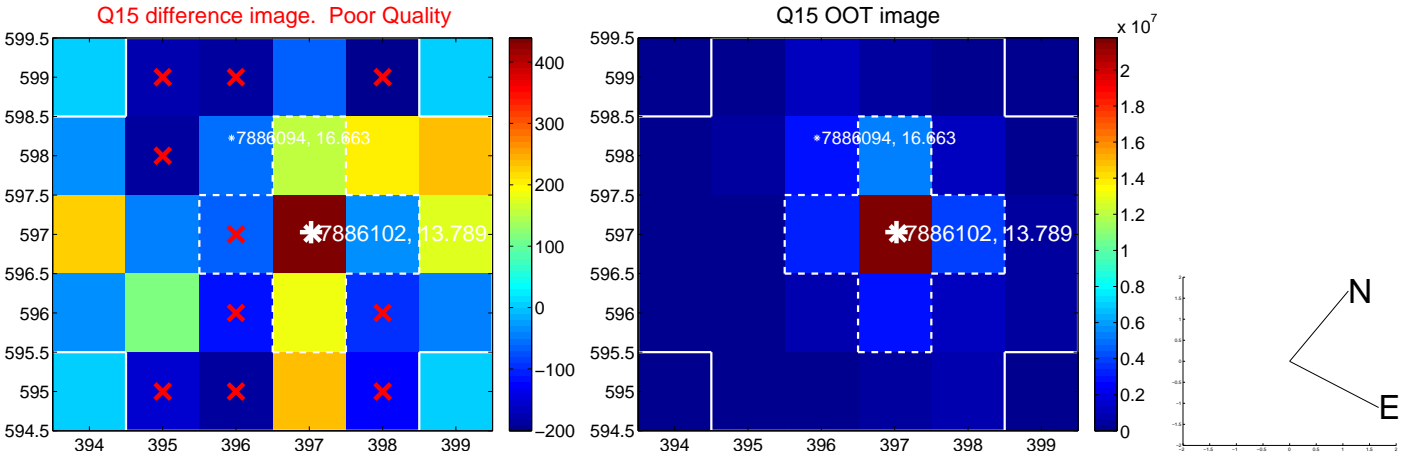
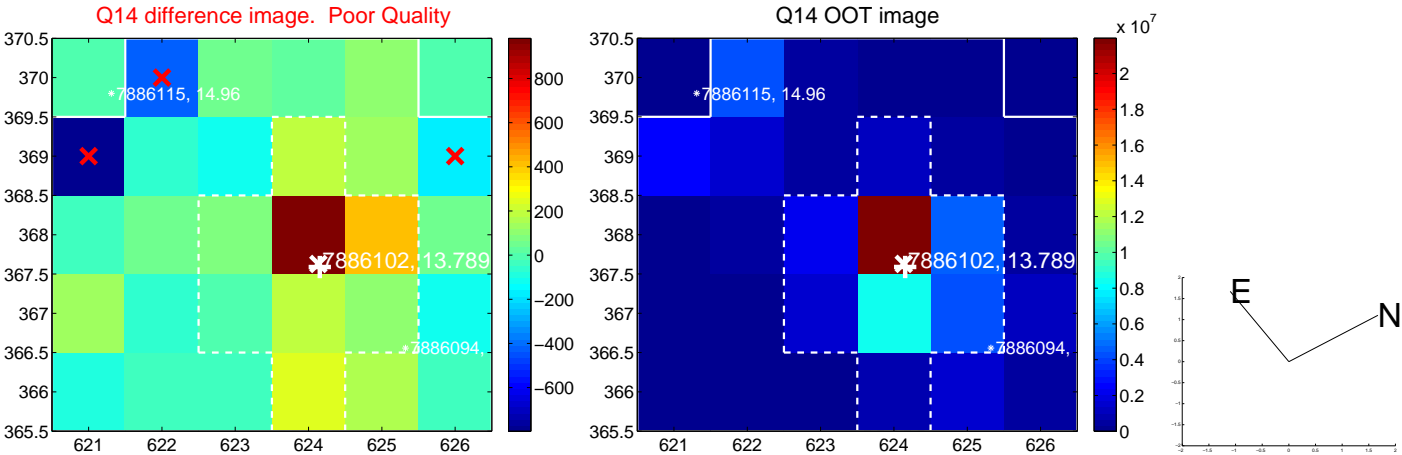
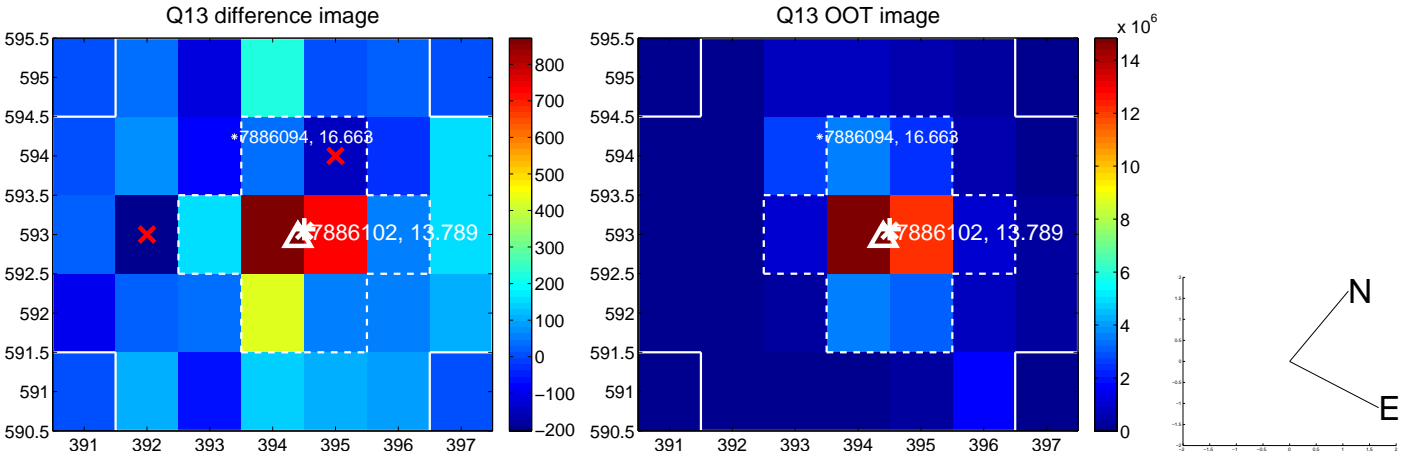
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



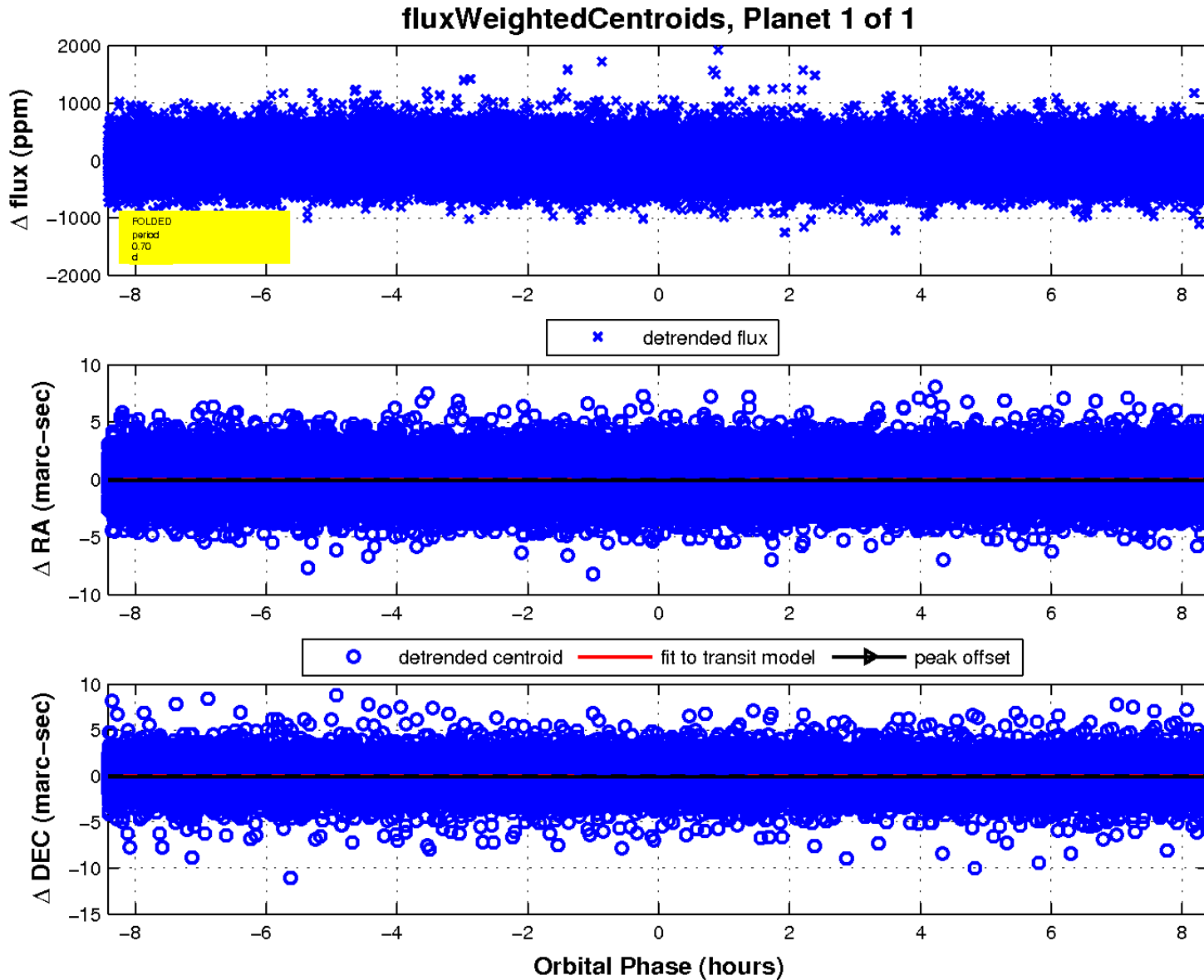
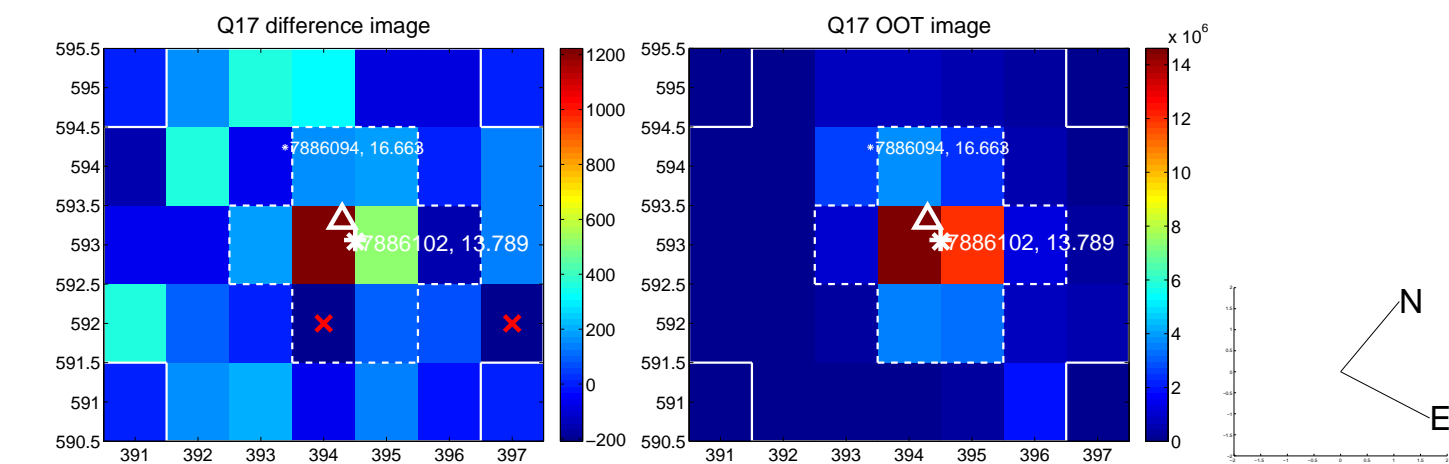
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

