

KIC 006070312

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})
006070312-01	OBS	No	3.981958	132.308533	57.7	23.759	8.2	6.2	0.95	6075	0.78	447.41

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006070312-01	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.

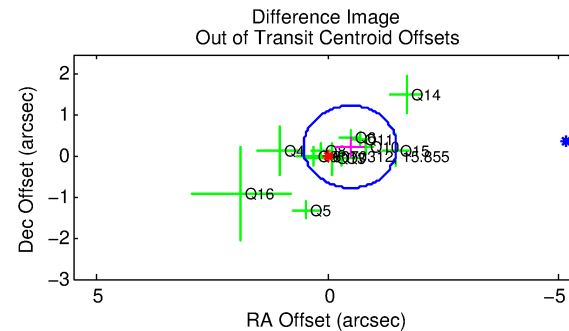
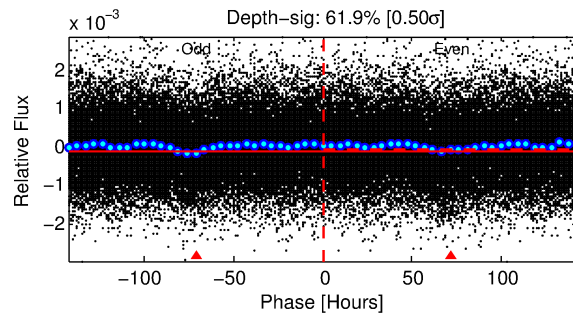
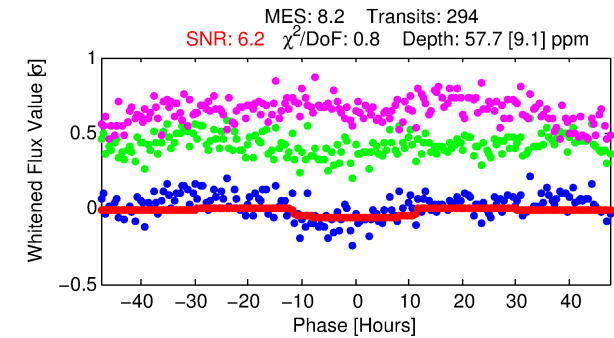
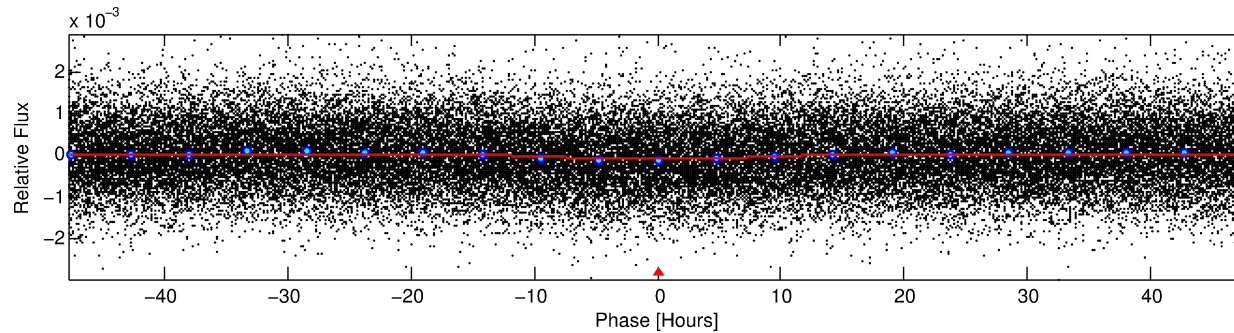
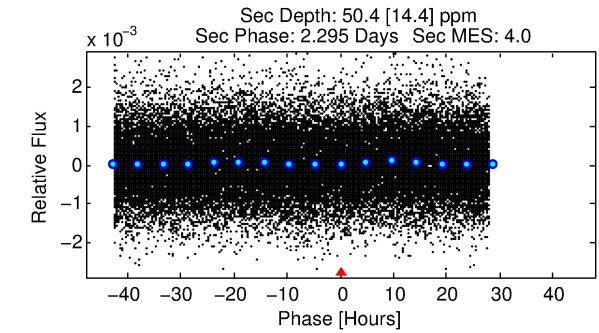
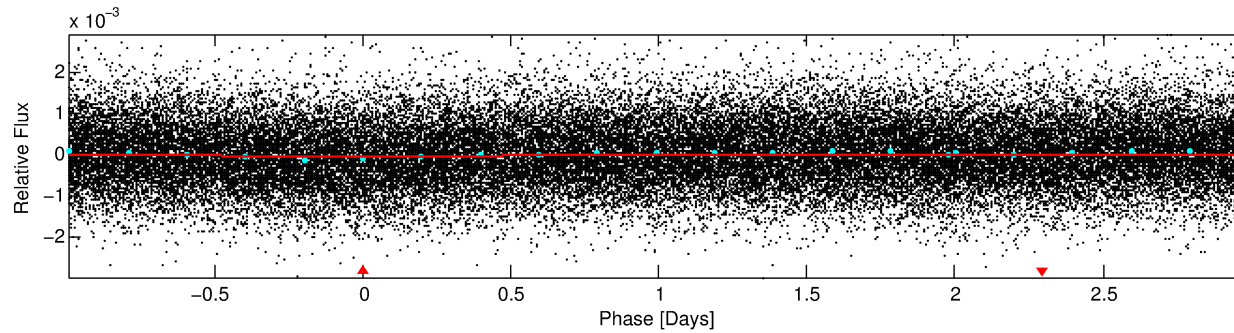
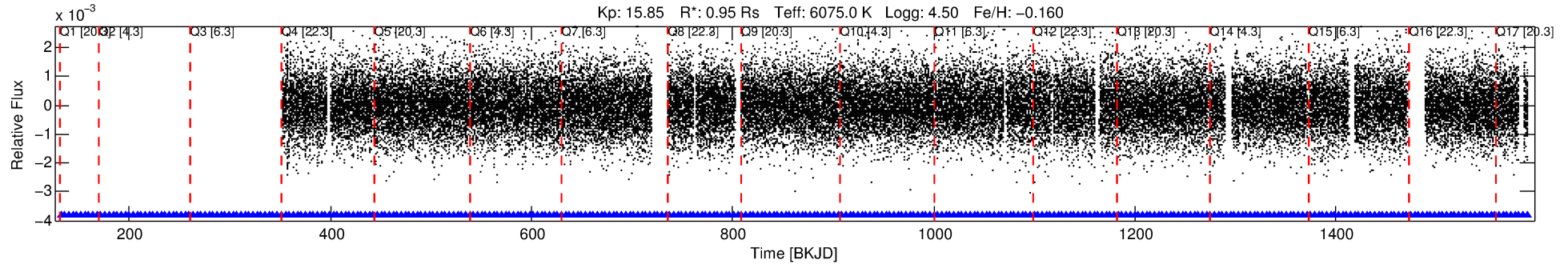
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006070312-01

No Significant Match Found

DV One-Page Summary

KIC: 6070312 Candidate: 1 of 1 Period: 3.982 d



DV Fit Results:

Period = 3.98196 [0.00018] d
Epoch = 132.3085 [0.0342] BKJD
Rp/R* = 0.0075 [0.0045]
a/R* = 1.22 [1.20]
b = 0.75 [1.81]
Seff = 447.41 [178.47]
Teq = 1173 [117] K
Rp = 0.78 [0.53] Re
a = 0.0497 [0.0127] AU
Ag = 111.44 [143.75] [0.77σ]
Teffp = 5891 [1835] K [2.57σ]

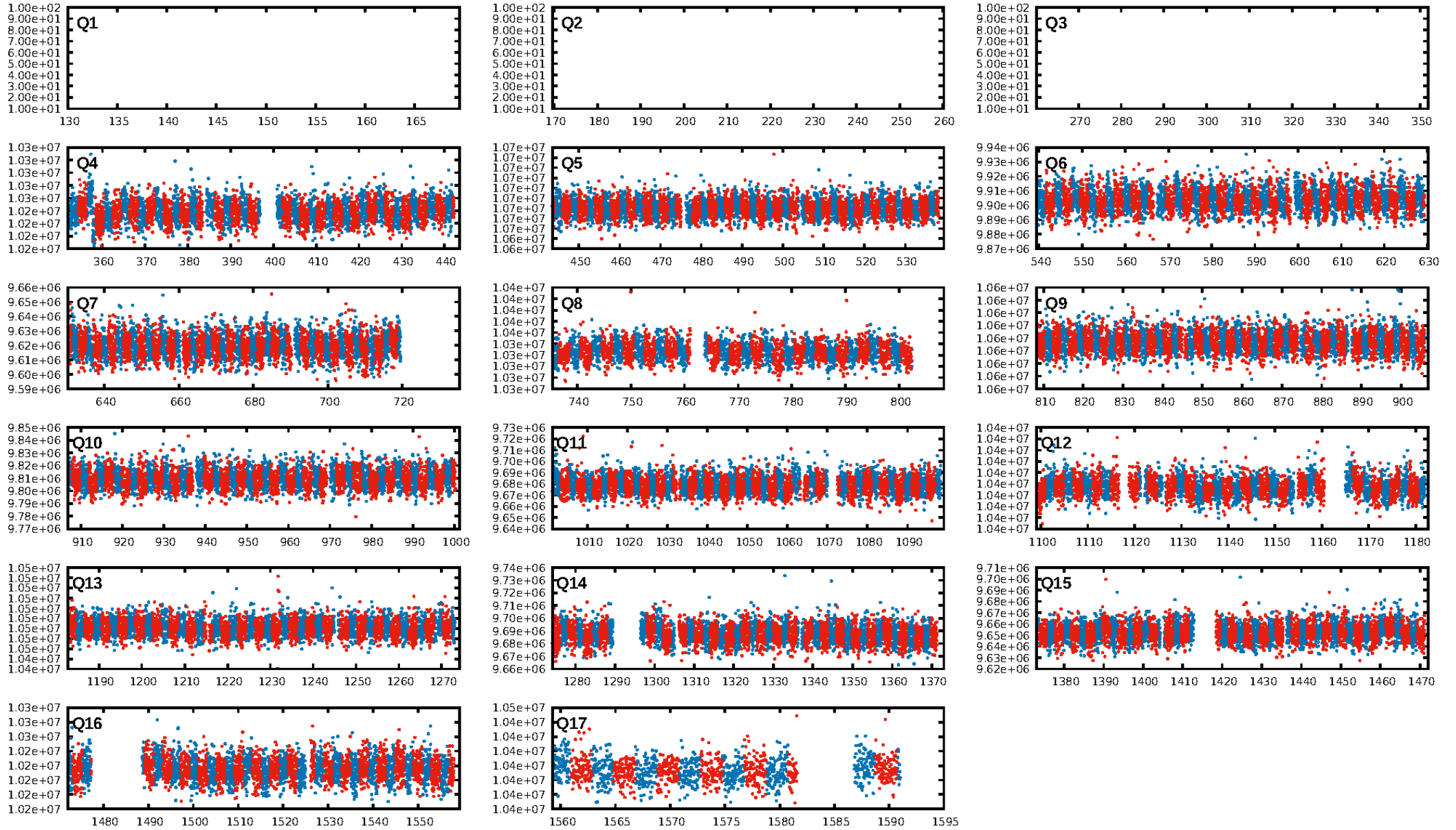
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.18e-17
RollingBand-fgt: 1.00 [287/287]
GhostDiagnostic-chr: 2.094
Centroid-sig: 1.6%
Centroid-so: 3.857 arcsec [2.33σ]
OotOffset-rm: 0.541 arcsec [1.61σ]
KicOffset-rm: 0.532 arcsec [1.75σ]
OotOffset-st: 3/3/3/3 [12]
KicOffset-st: 3/3/3/3 [12]
DiffImageQuality-fgm: 0.92 [11/12]
DiffImageOverlap-fno: 1.00 [14/14]

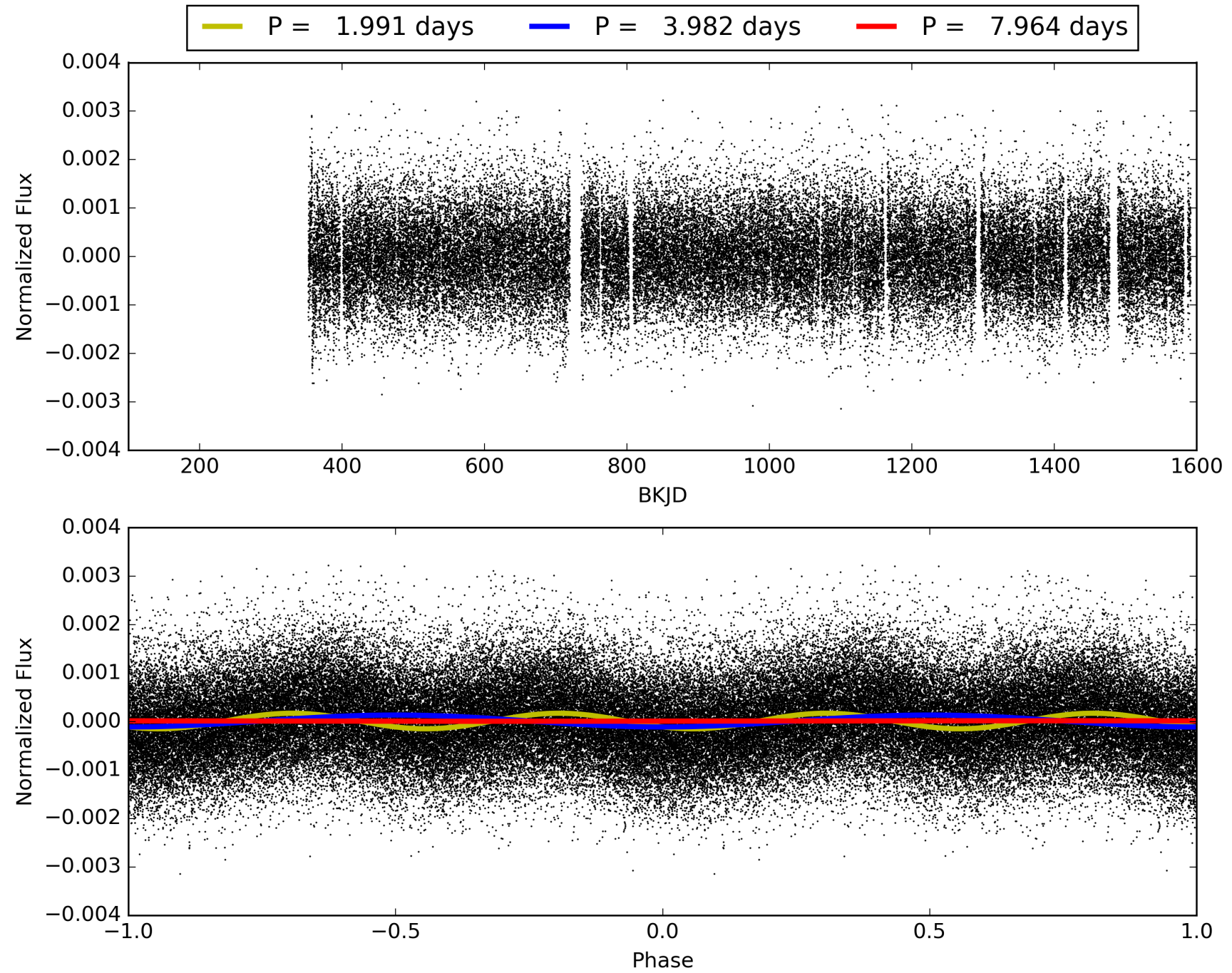
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 08:47:37 Z

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

TCE 006070312-01, PDC Light Curves

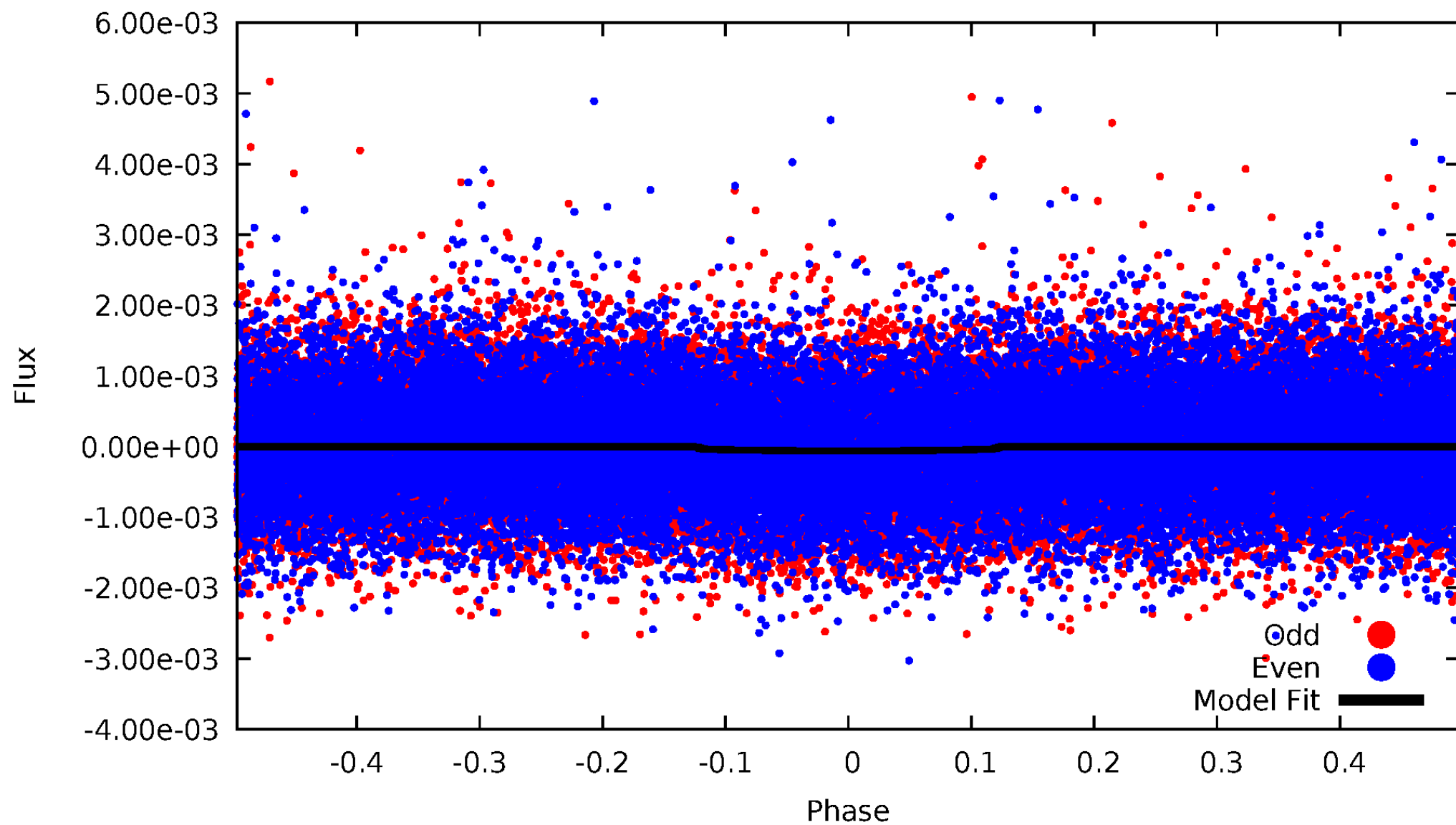


TCE 006070312-01



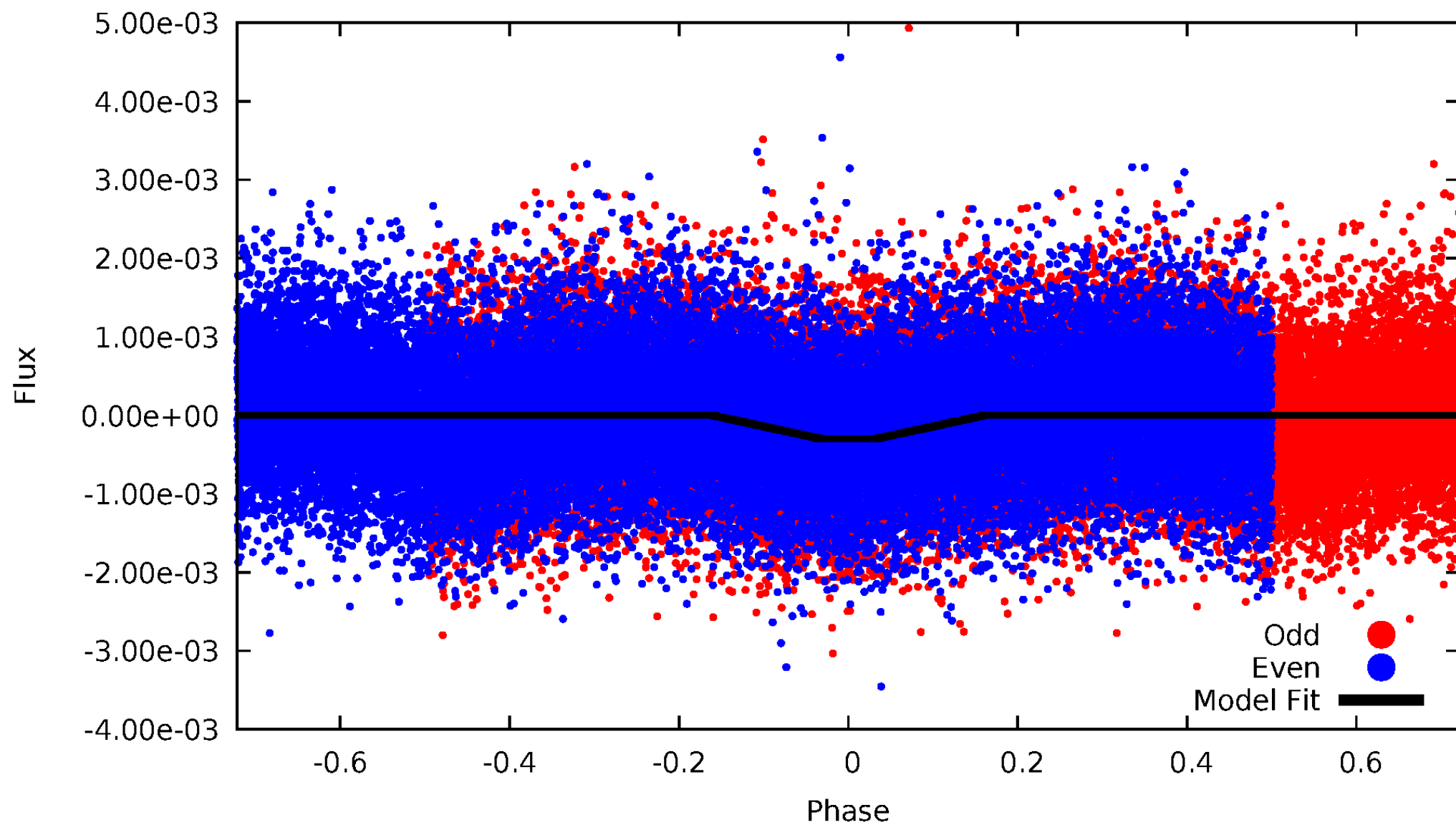
DV Odd/Even

TCE 006070312-01

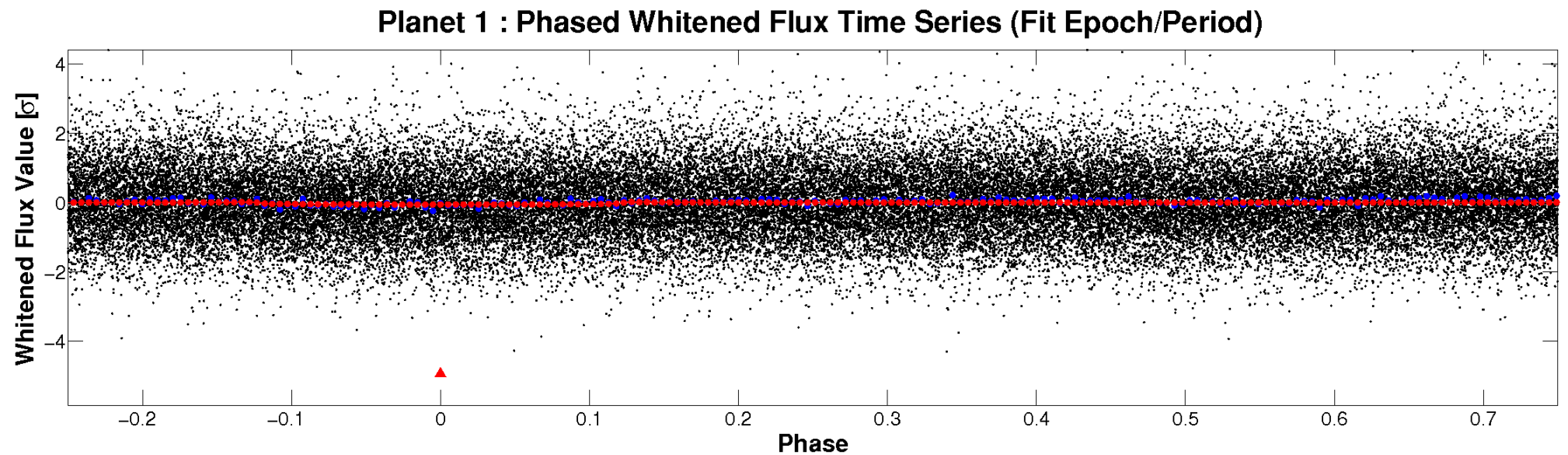
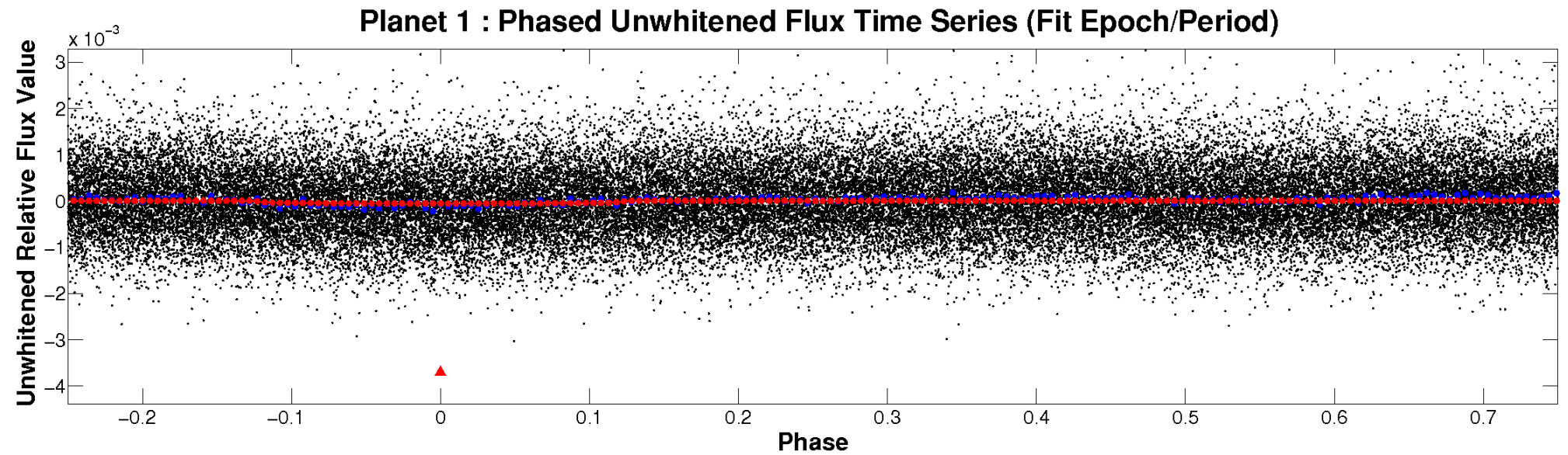


ALT Odd/Even

TCE 006070312-01

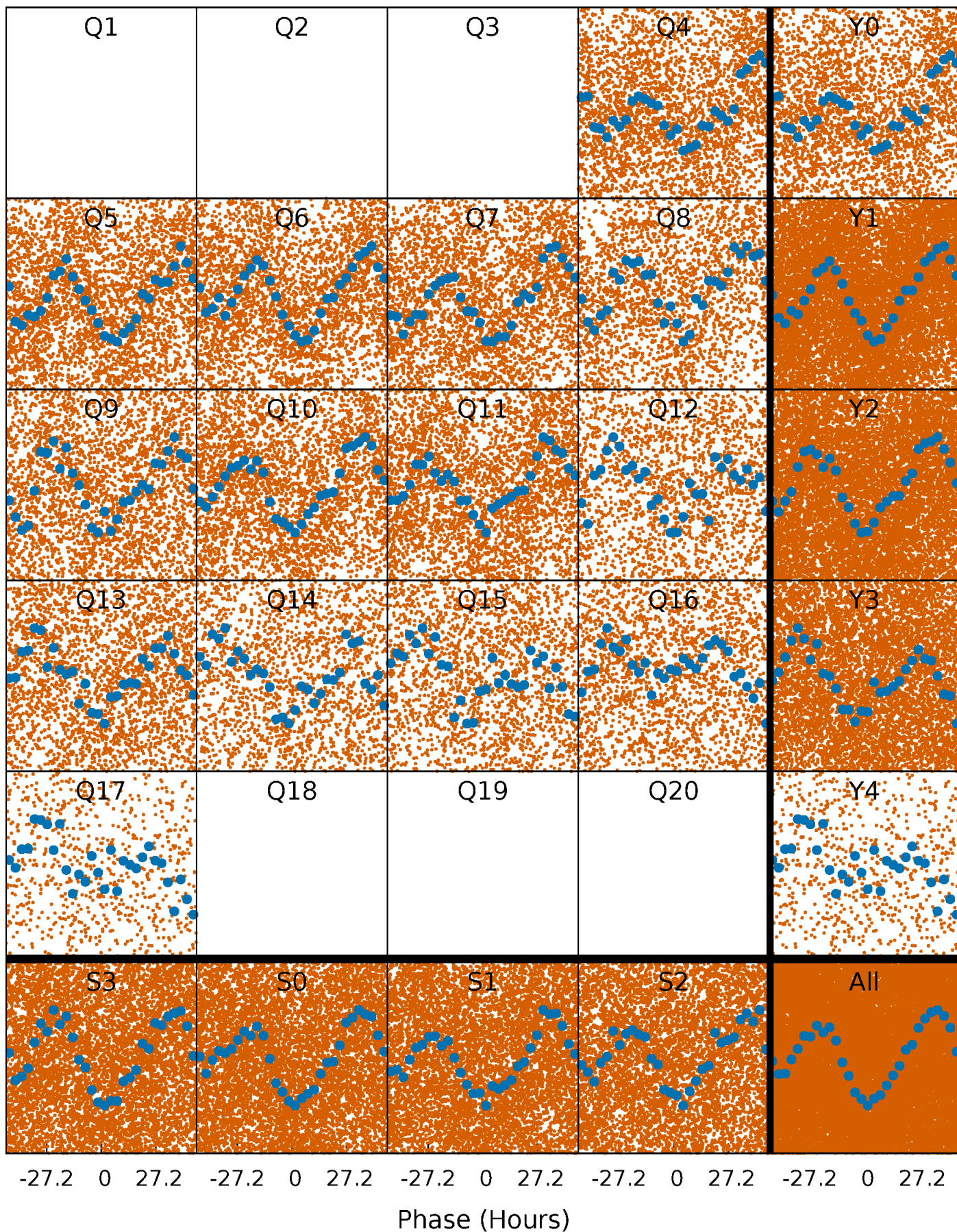


Non-Whitened Vs. Whitened Light Curve



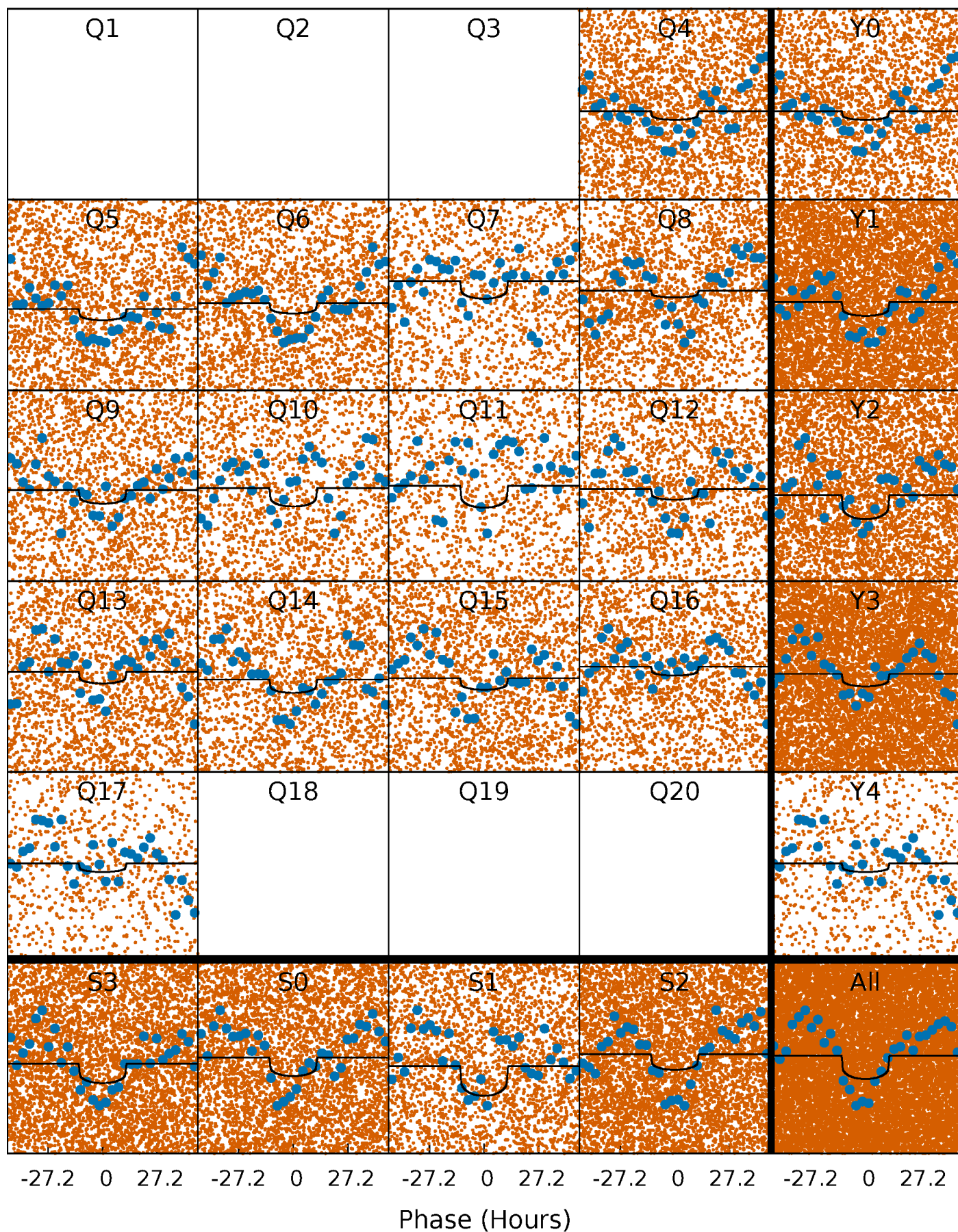
PDC Quarter-Phased Transit Curves

TCE 006070312-01 P= 3.981958 Days $T_0=132.308533$ (BKJD)



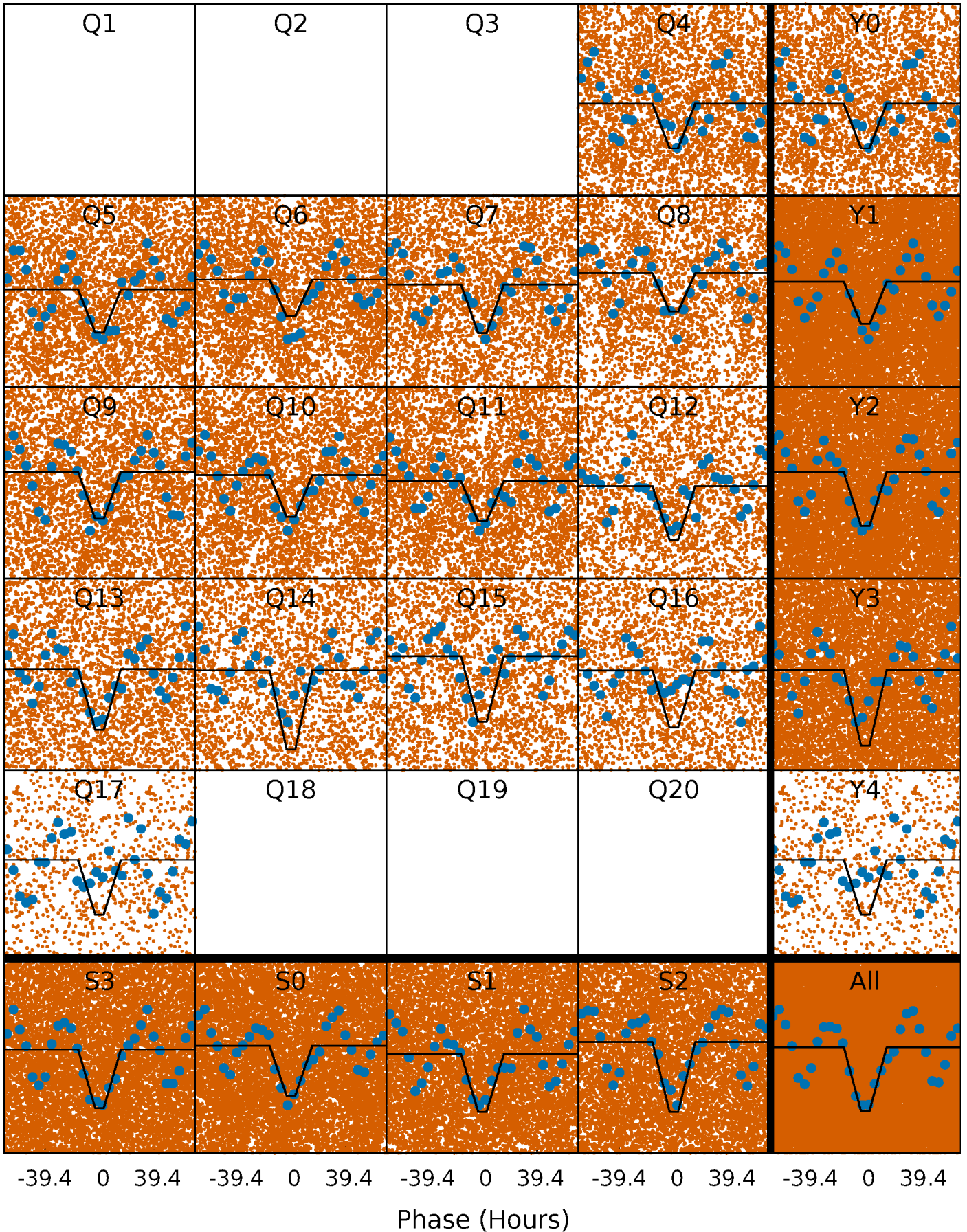
DV Quarter-Phased Transit Curves

TCE 006070312-01 P= 3.981958 Days $T_0=132.308533$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

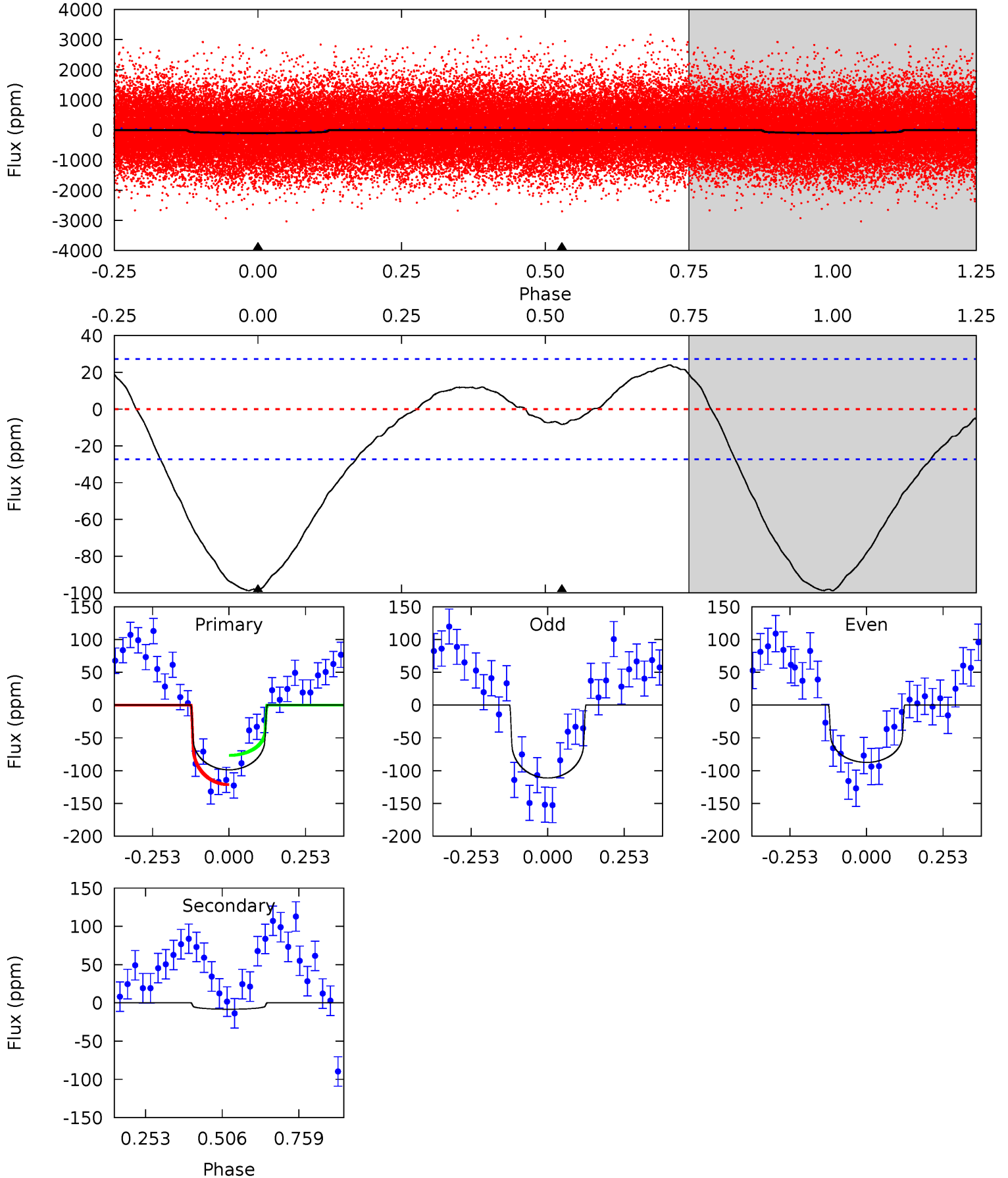
TCE 006070312-01 P= 3.981127 Days $T_0=132.552521$ (BKJD)



DV Model-Shift Uniqueness Test

006070312-01, P = 3.981958 Days, E = 132.308533 Days

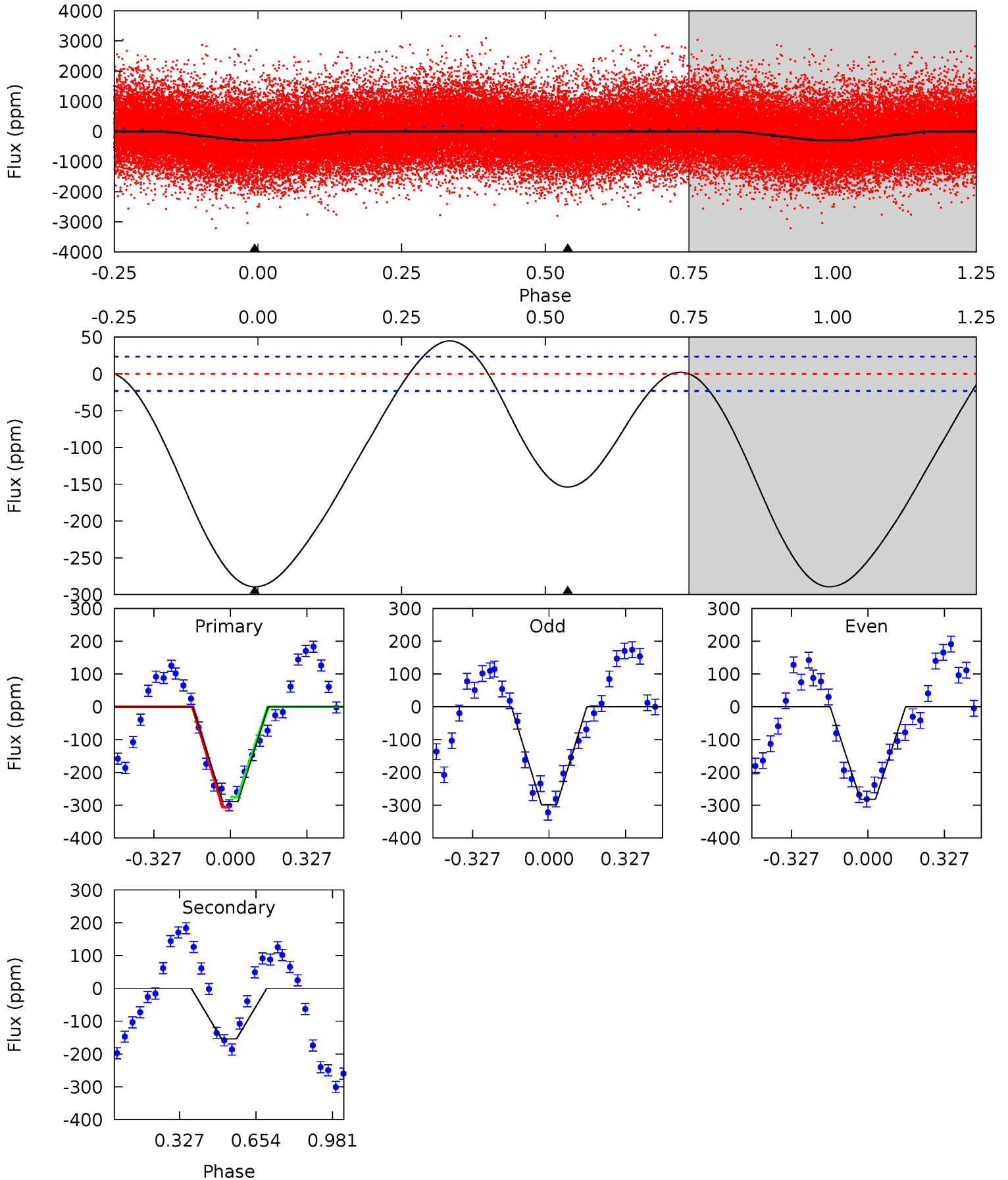
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.8	1.33	0	0	4.37	1.14	1.30	15.8	15.8	1.33	1.33	1.90	0.99	0.20	3.55



Alt Model-Shift Uniqueness Test

006070312-01, P = 3.981127 Days, E = 132.552521 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
53.4	28.4	0	0	4.31	0.98	5.13	53.4	53.4	28.4	28.4	1.59	0.94	0.13	2.76



Stellar Parameters For KIC 006070312

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6075^{+211}_{-232}	$4.495^{+0.050}_{-0.200}$	$-0.160^{+0.250}_{-0.300}$	$0.952^{+0.291}_{-0.097}$	$1.033^{+0.140}_{-0.140}$	$1.689^{+0.444}_{-0.845}$
	+3%/-4%	+1%/-4%	+156%/-188%	+31%/-10%	+14%/-14%	+26%/-50%
Source	KIC0	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 006070312-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-8 ± 6	$0.84^{+0.53}_{-0.47}$	1675^{+121}_{-91}	3940^{+1638}_{-917}	14^{+66}_{-11}
Alt.	-154 ± 5	$1.89^{+0.54}_{-0.51}$	1681^{+117}_{-92}	5170^{+795}_{-484}	57^{+50}_{-22}

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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

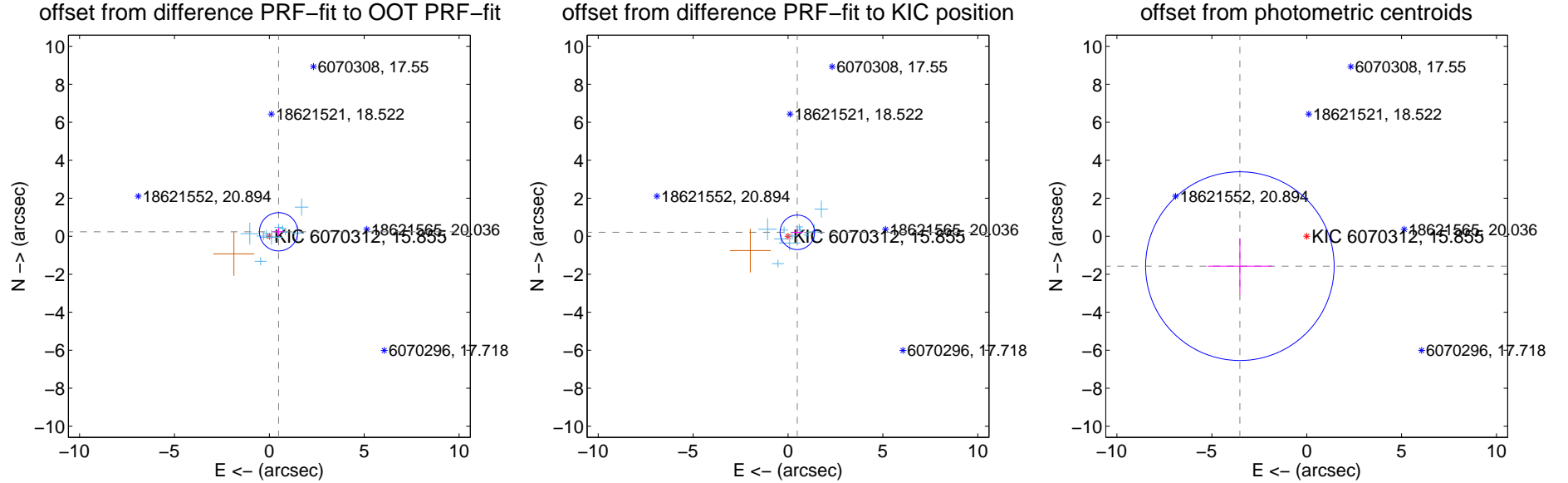
DV Centroid Data

Supplemental centroid analysis for 006070312-01. Kepler magnitude: 15.86. Transit SNR 6.24

There are 11 quarters with good PRF difference image offsets

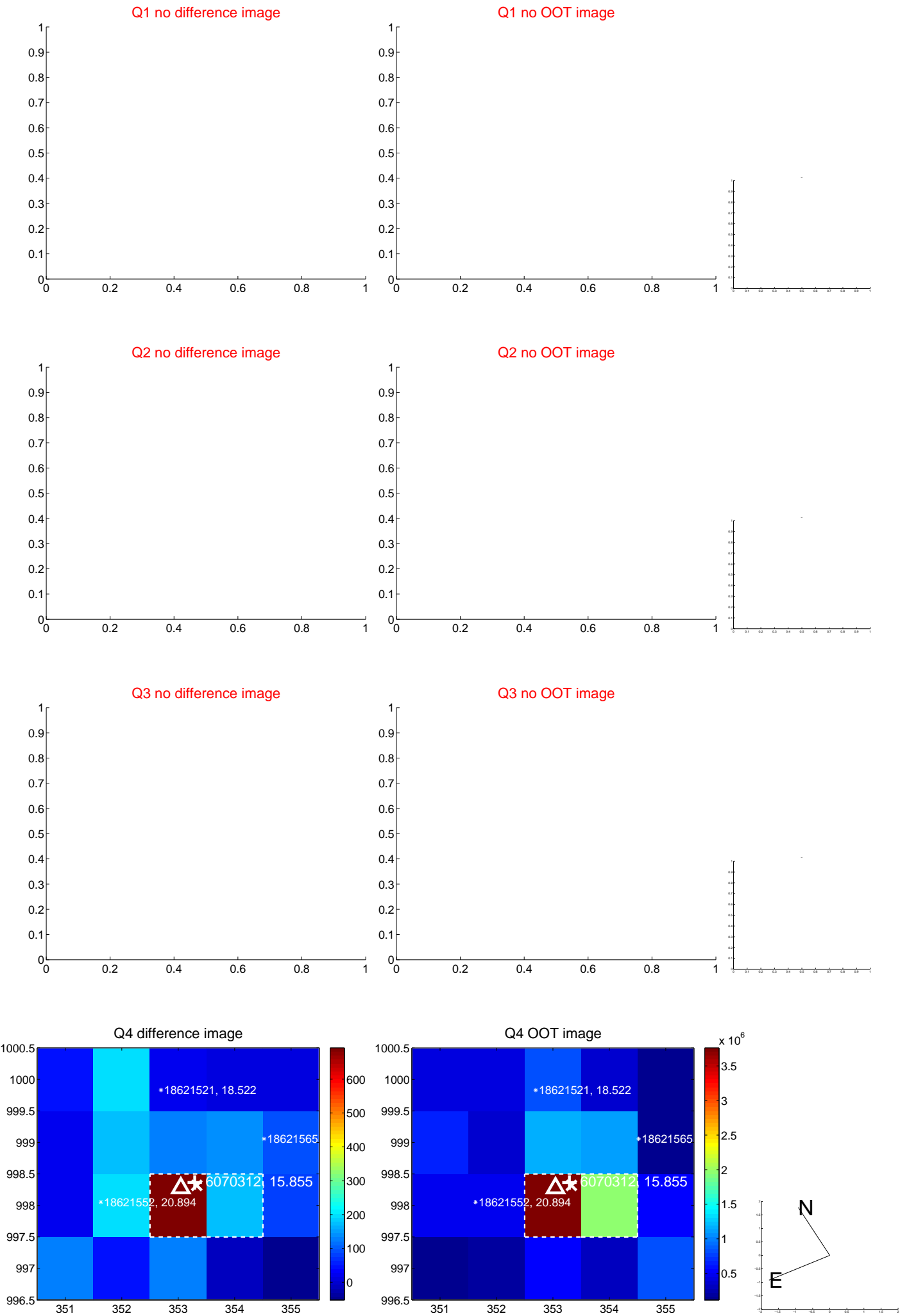
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.541 ± 0.336	1.61	-0.488 ± 0.296	0.234 ± 0.210
PRF-fit source offset from KIC position	0.532 ± 0.303	1.75	-0.490 ± 0.283	0.206 ± 0.194
photometric centroid source offset	3.86 ± 1.66	2.33	3.52 ± 1.69	-1.57 ± 1.47

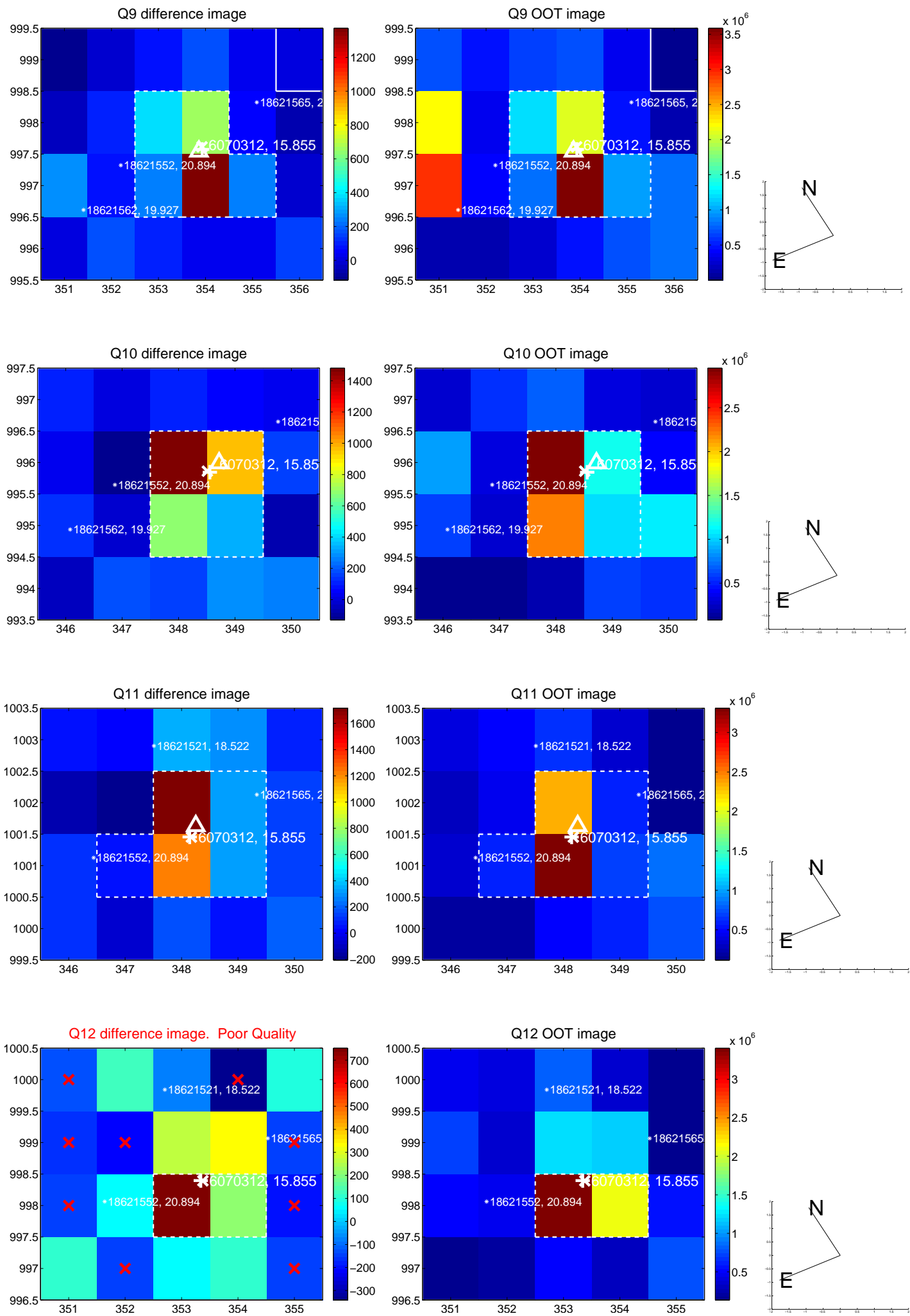


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

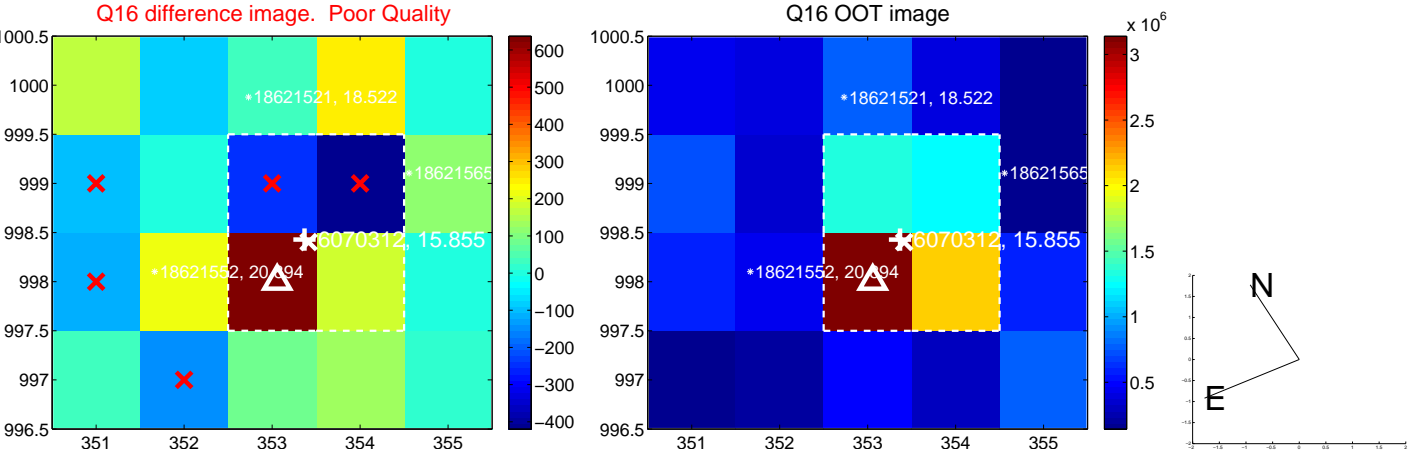
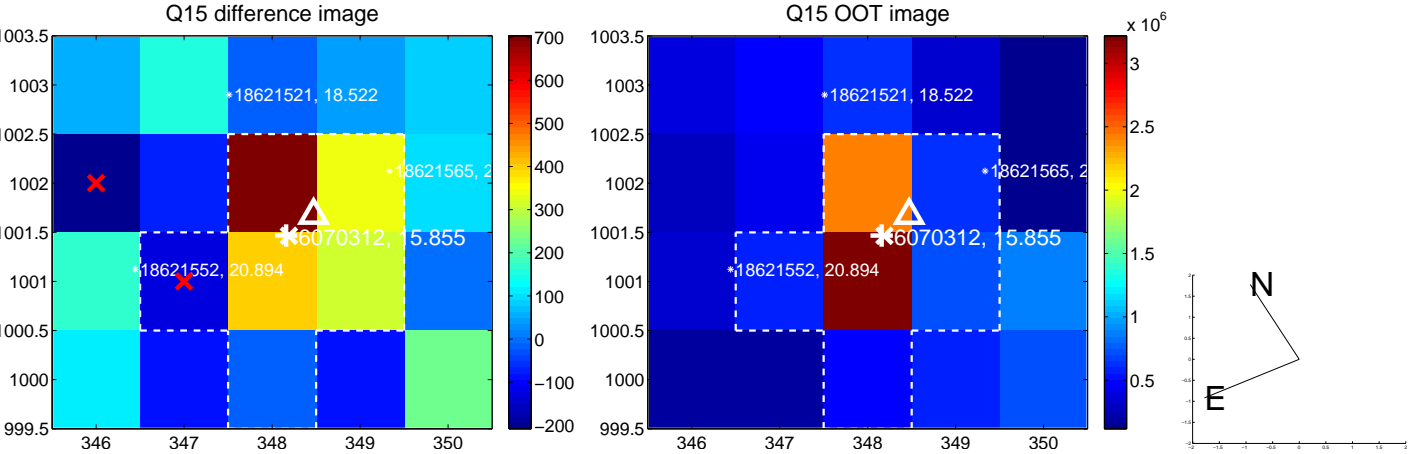
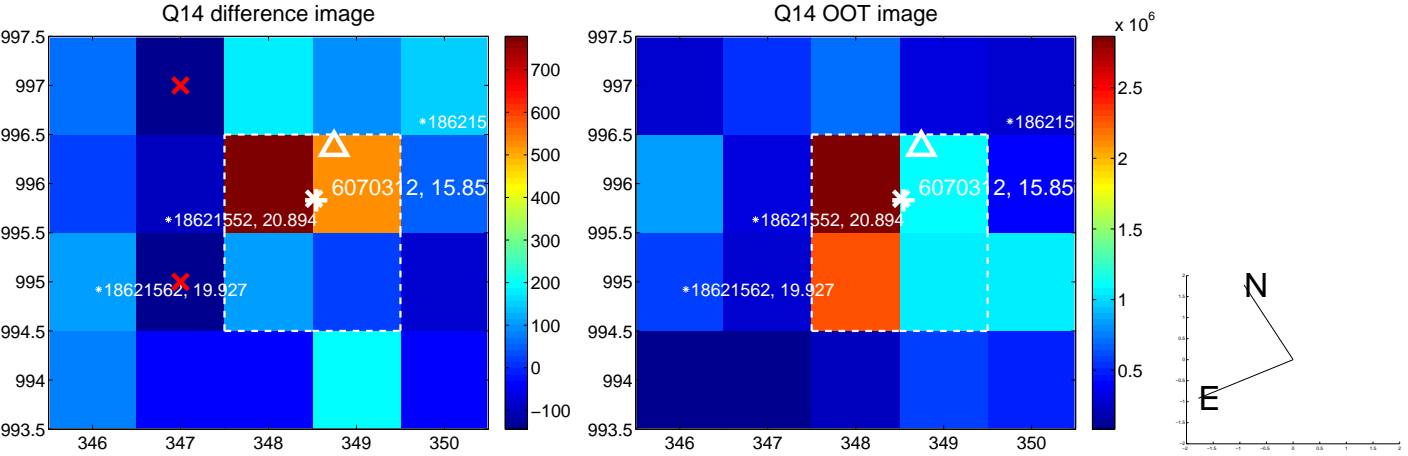
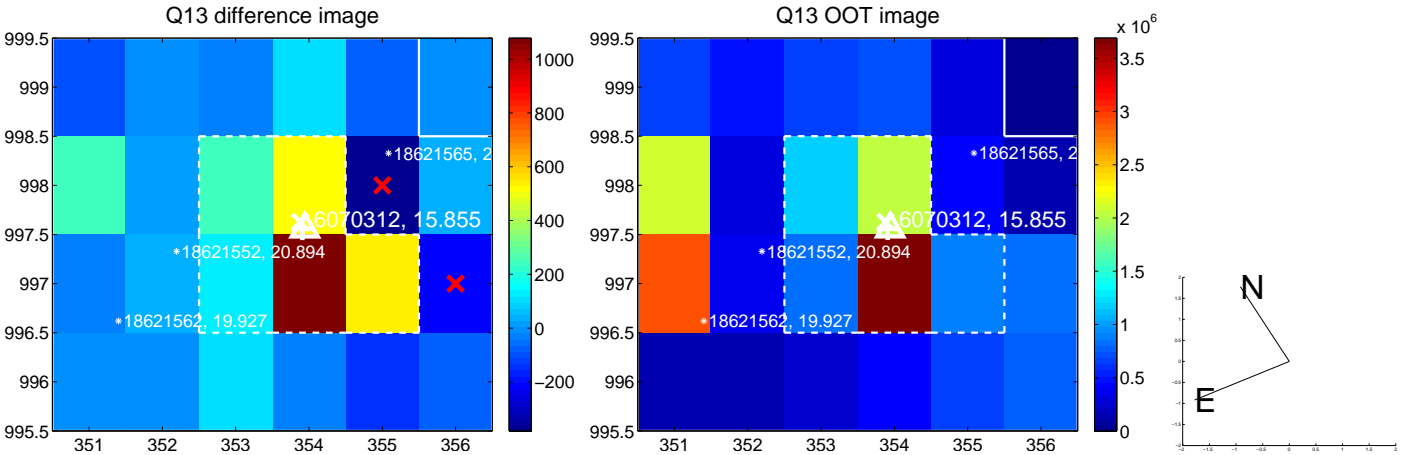
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



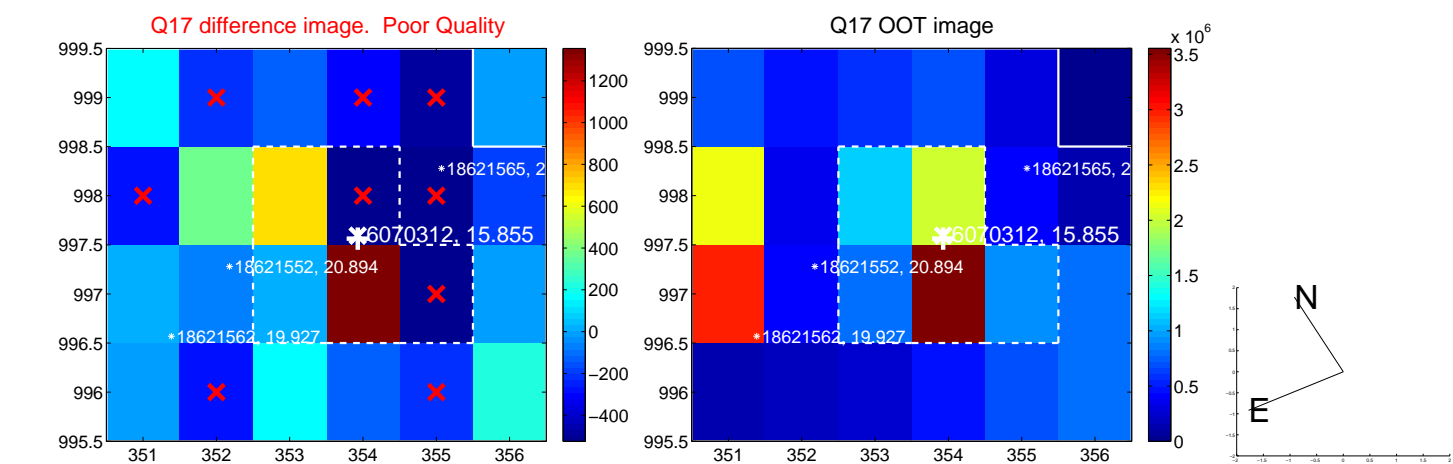
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



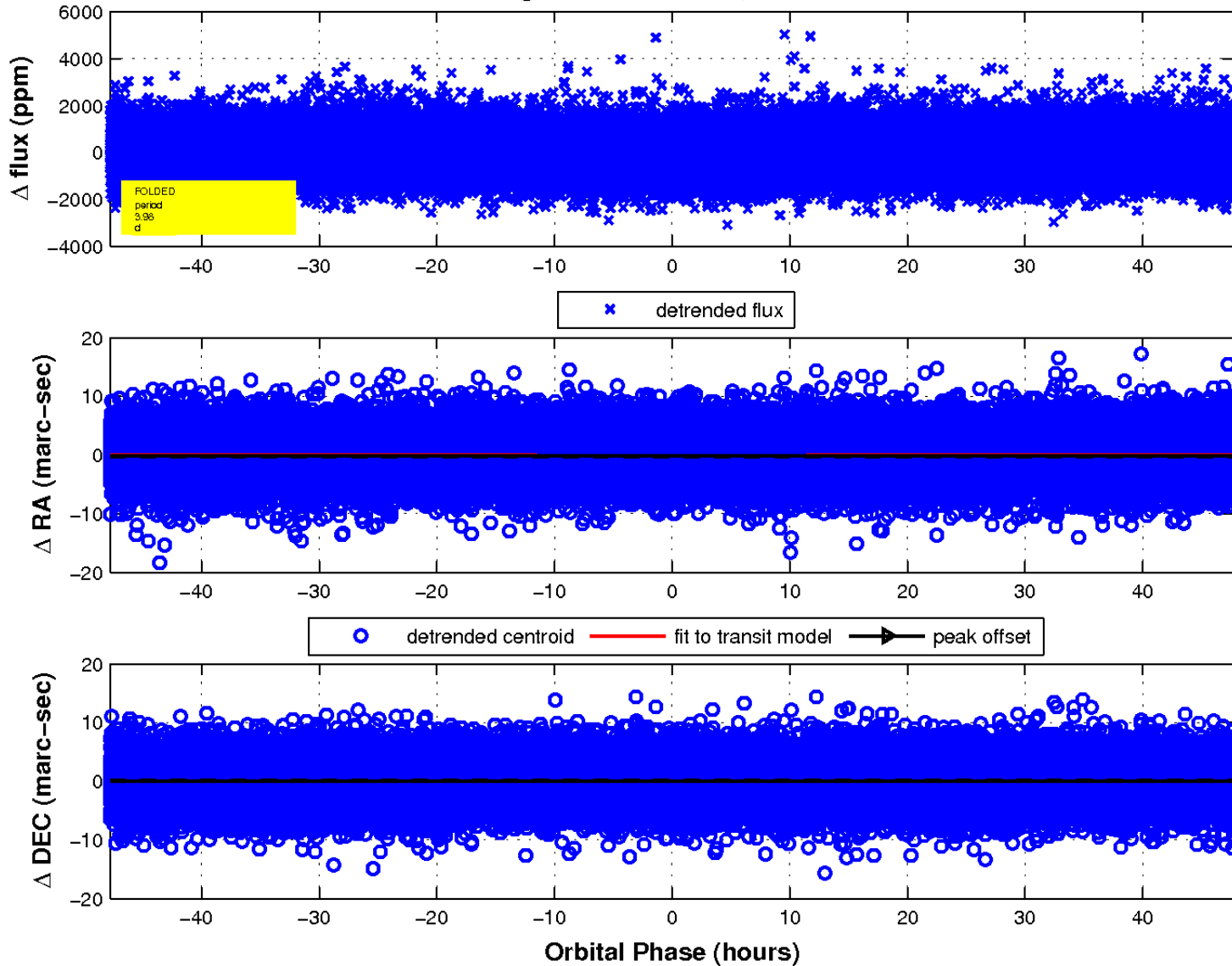
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

