

KIC 006390013

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})
006390013-01	OBS	No	0.796723	132.238958	6.8	2.822	8.0	6.7	3.79	8729	1.15	139464.29

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006390013-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_UNRESOLVED_OFFSET

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

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

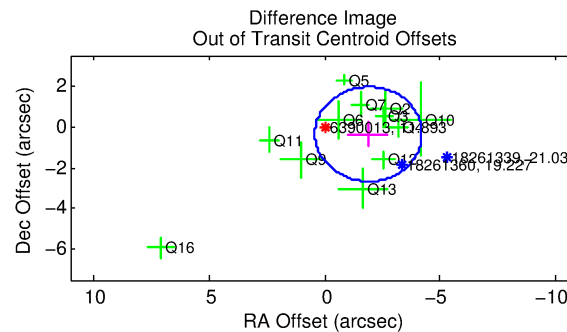
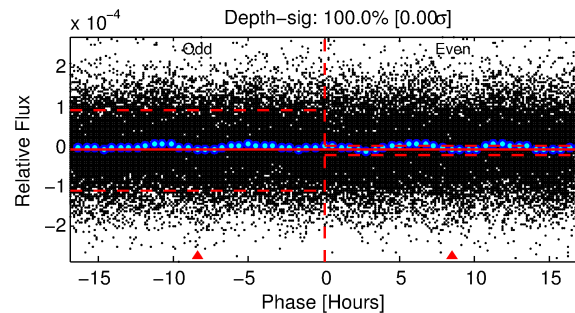
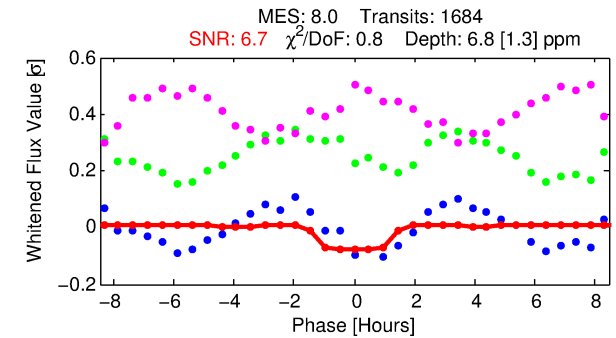
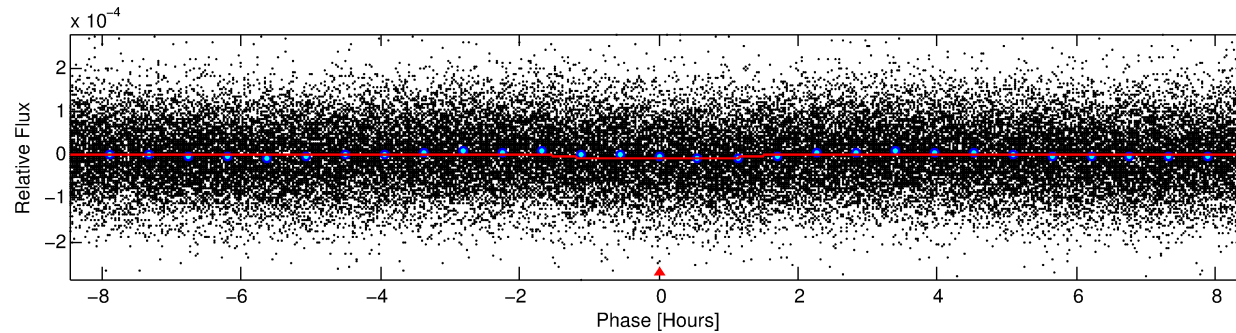
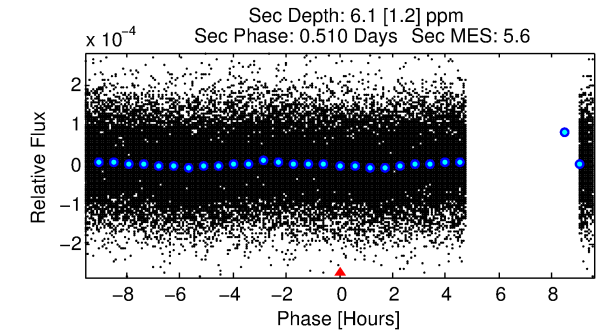
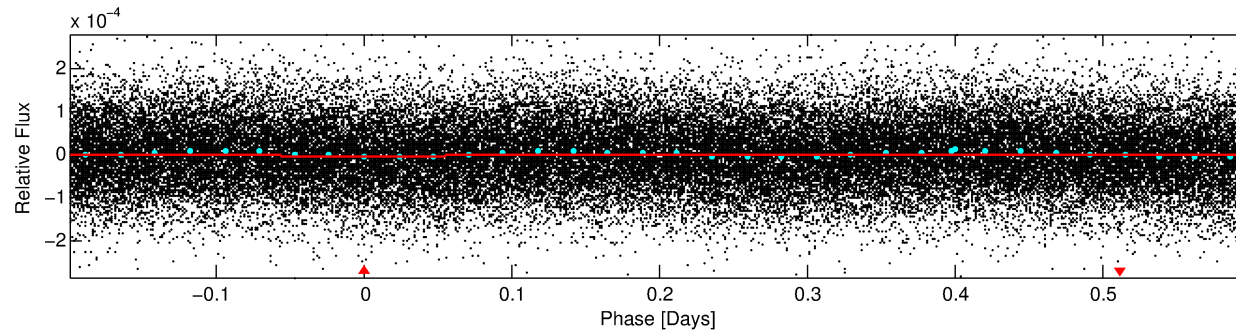
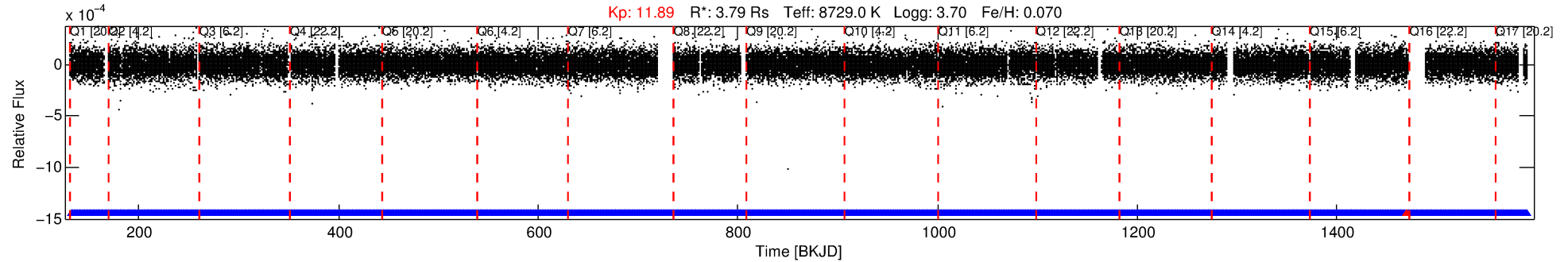
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006390013-01

No Significant Match Found

DV One-Page Summary

KIC: 6390013 Candidate: 1 of 1 Period: 0.797 d



DV Fit Results:

Period = 0.79672 [0.00002] d
Epoch = 132.2390 [0.0046] BKJD
Rp/R* = 0.0028 [0.0005]
a/R* = 1.34 [0.64]
b = 0.90 [0.23]
Seff = 139464.29 [115924.09]
Teq = 4928 [1024] K
Rp = 1.15 [0.61] Re
a = 0.0231 [0.0115] AU
Ag = 1.37 [1.25] [0.30 σ]
Teffp = 8243 [939] K [2.39 σ]

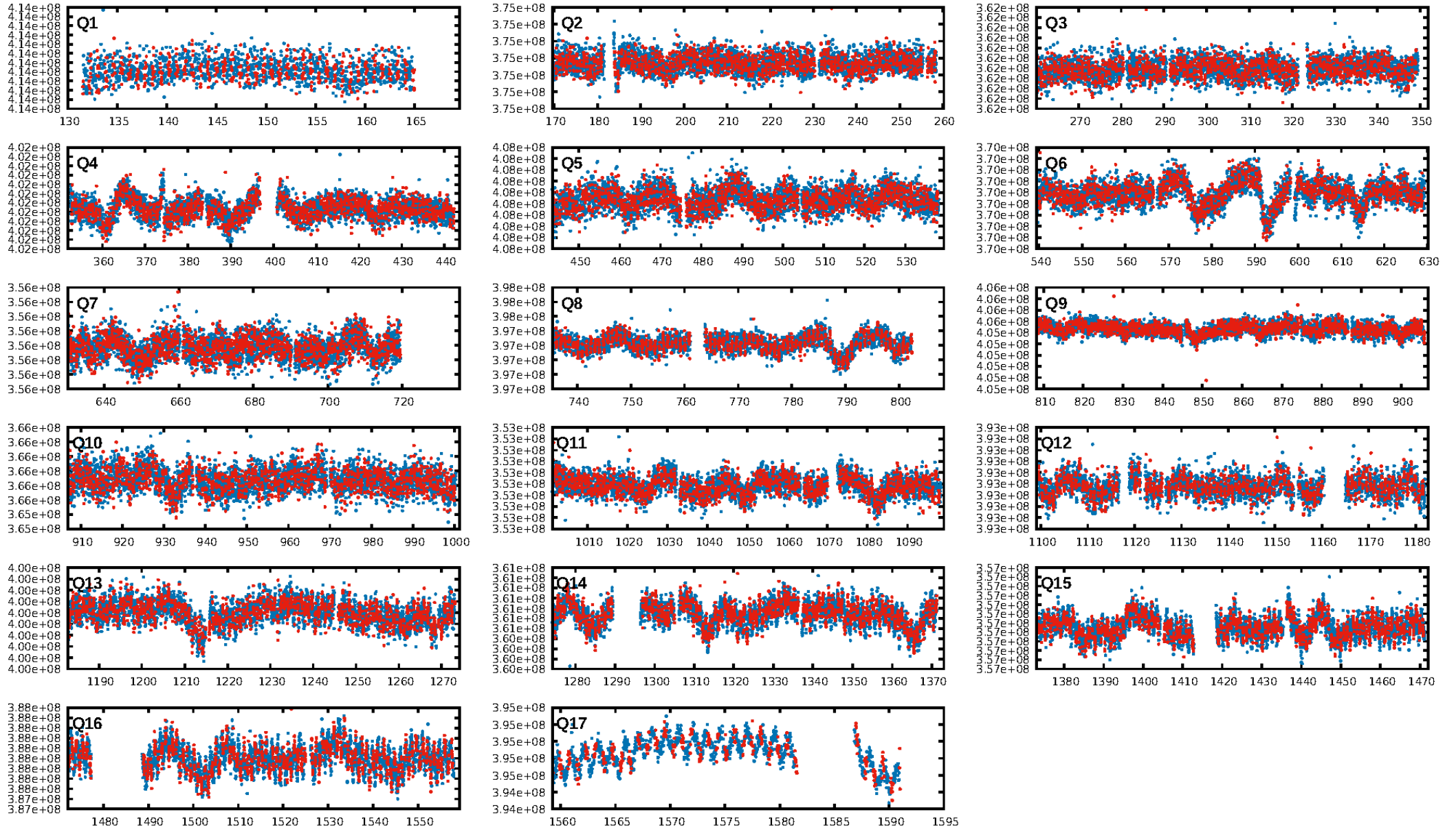
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.47e-13
RollingBand-fgt: 1.00 [1607/1608]
GhostDiagnostic-chr: 0.4445
Centroid-sig: 4.4%
Centroid-so: 3.240 arcsec [1.70 σ]
OotOffset-rm: 1.924 arcsec [2.49 σ]
KicOffset-rm: 2.086 arcsec [2.63 σ]
OotOffset-st: 3/3/3/3 [12]
KicOffset-st: 3/3/3/3 [12]
DiffImageQuality-fgm: 0.58 [7/12]
DiffImageOverlap-fno: 1.00 [17/17]

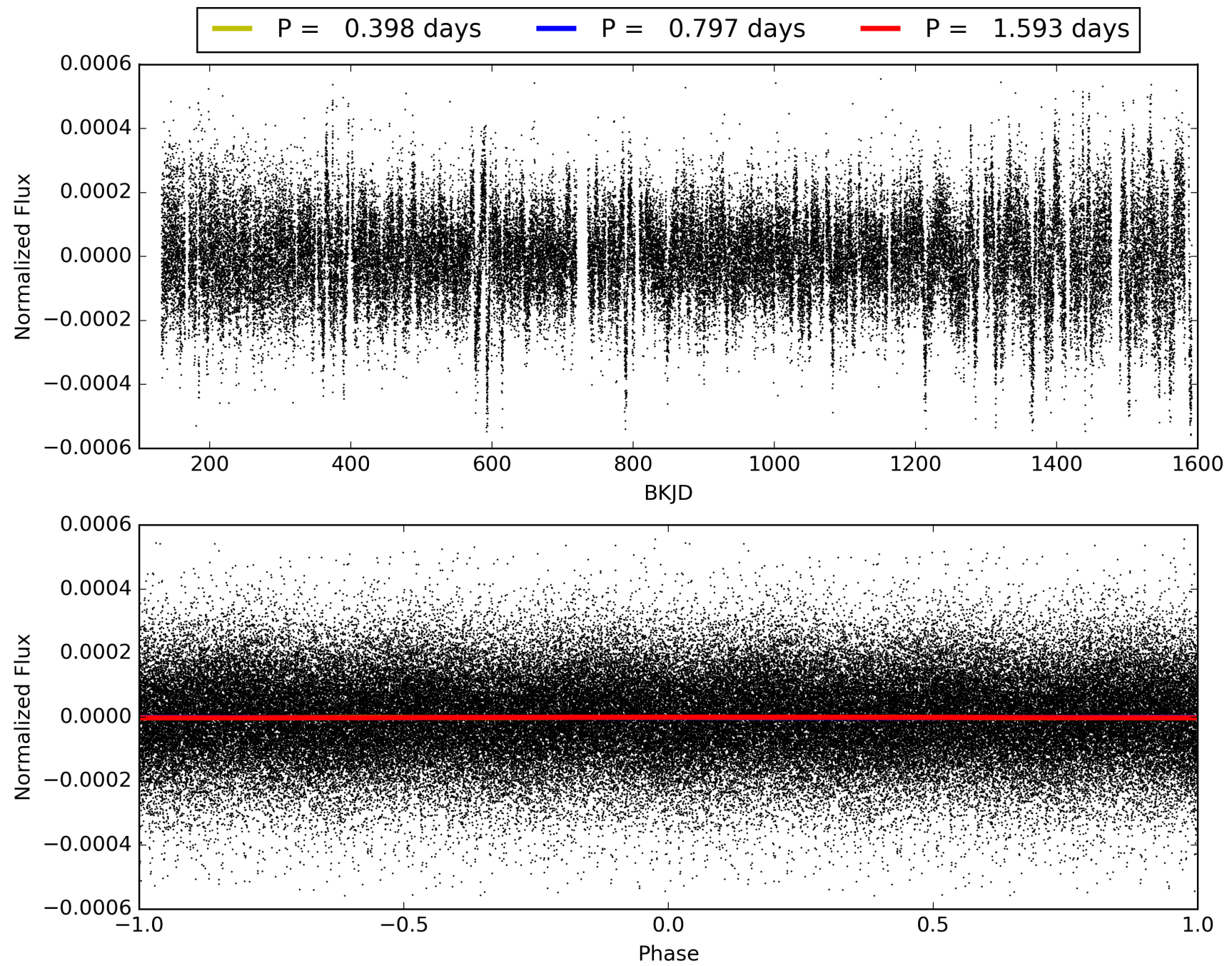
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 00:05:17 Z

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

TCE 006390013-01, PDC Light Curves

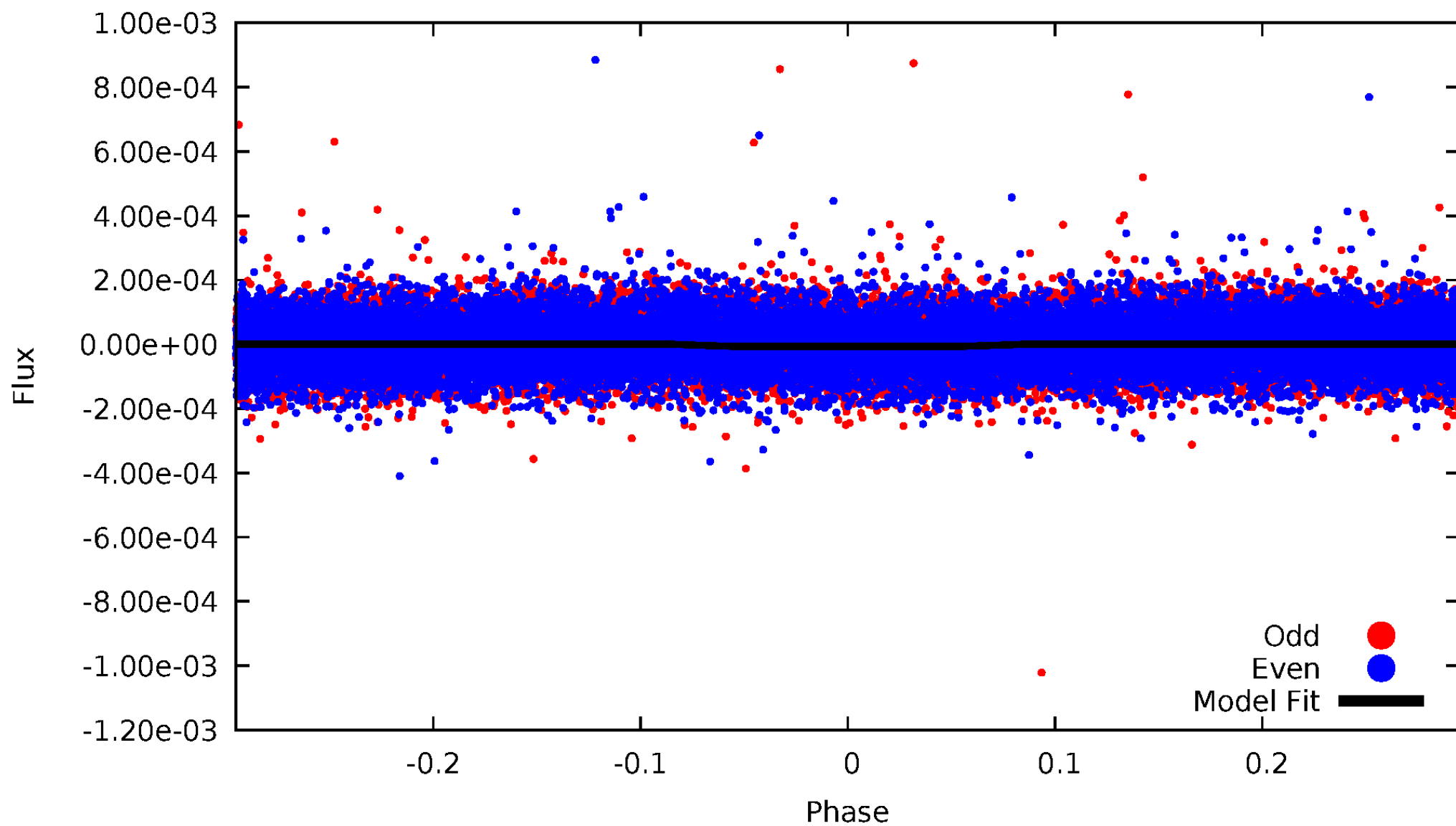


TCE 006390013-01



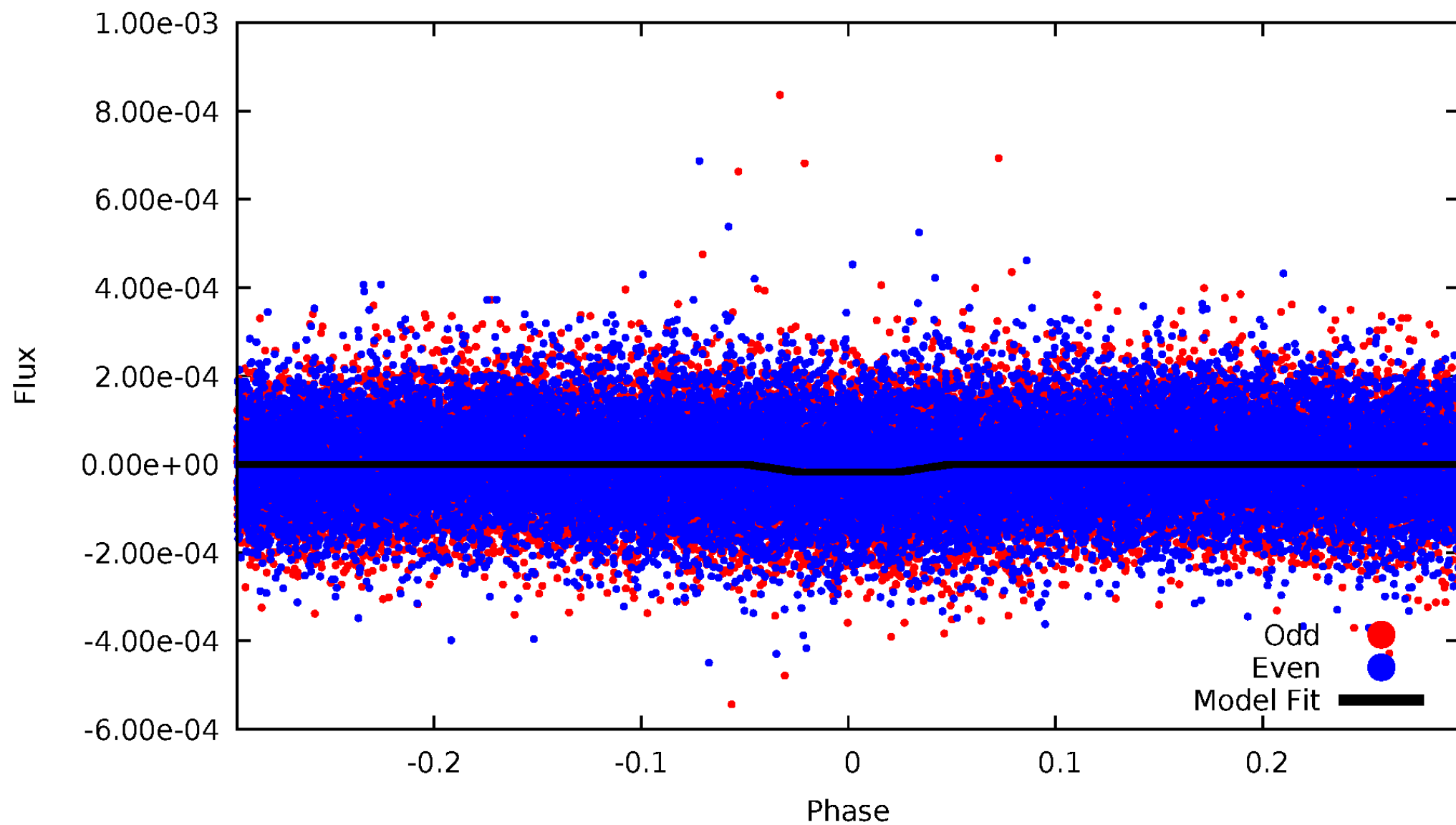
DV Odd/Even

TCE 006390013-01



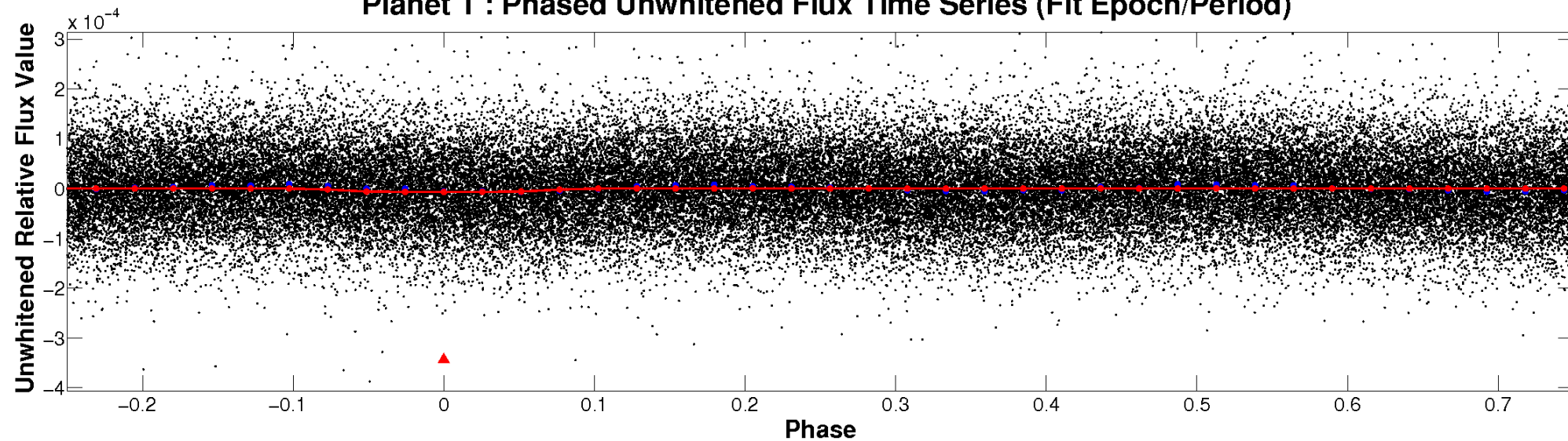
ALT Odd/Even

TCE 006390013-01

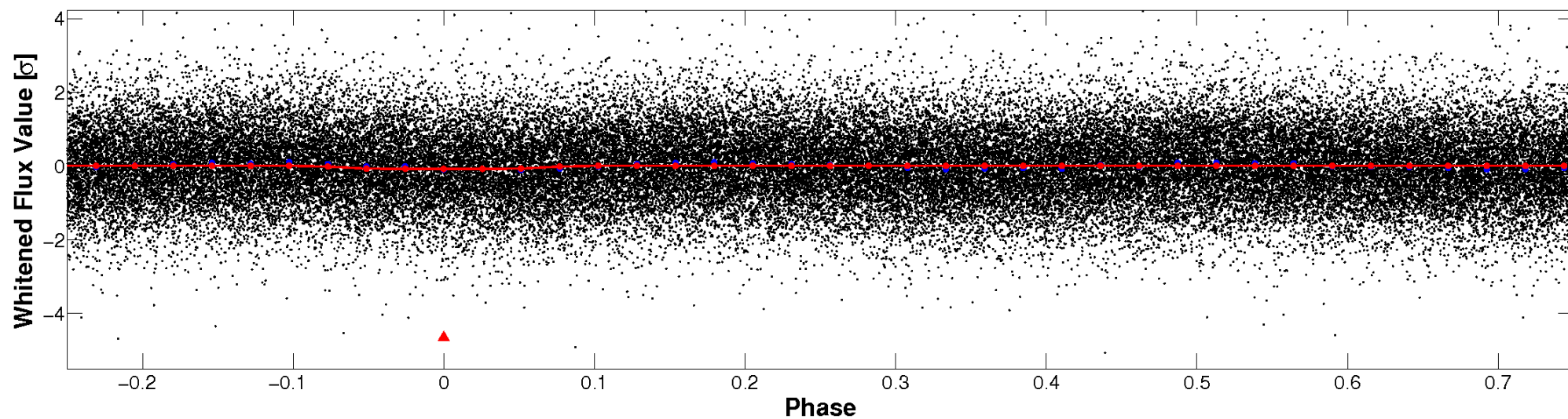


Non-Whitened Vs. Whitened Light Curve

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

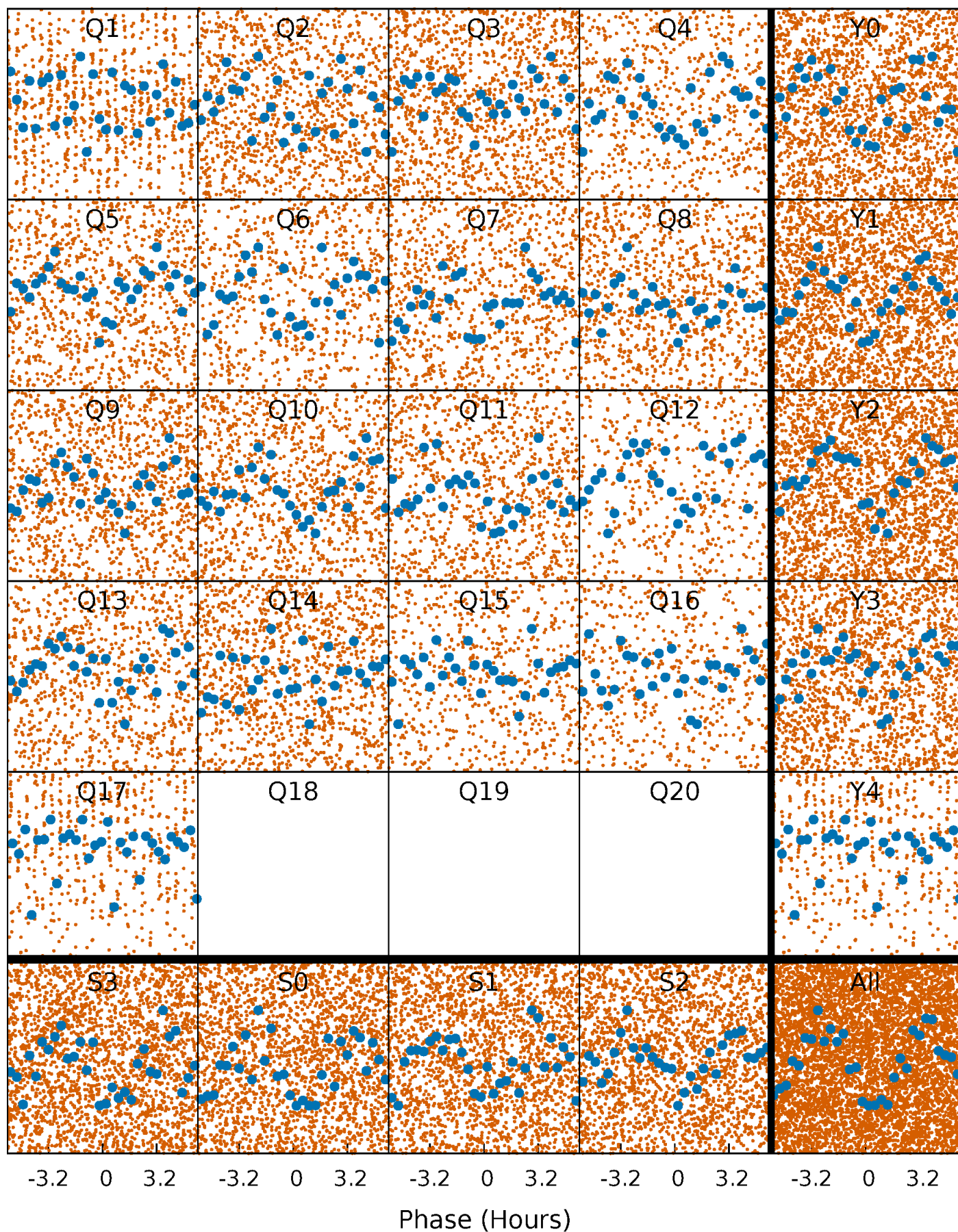


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



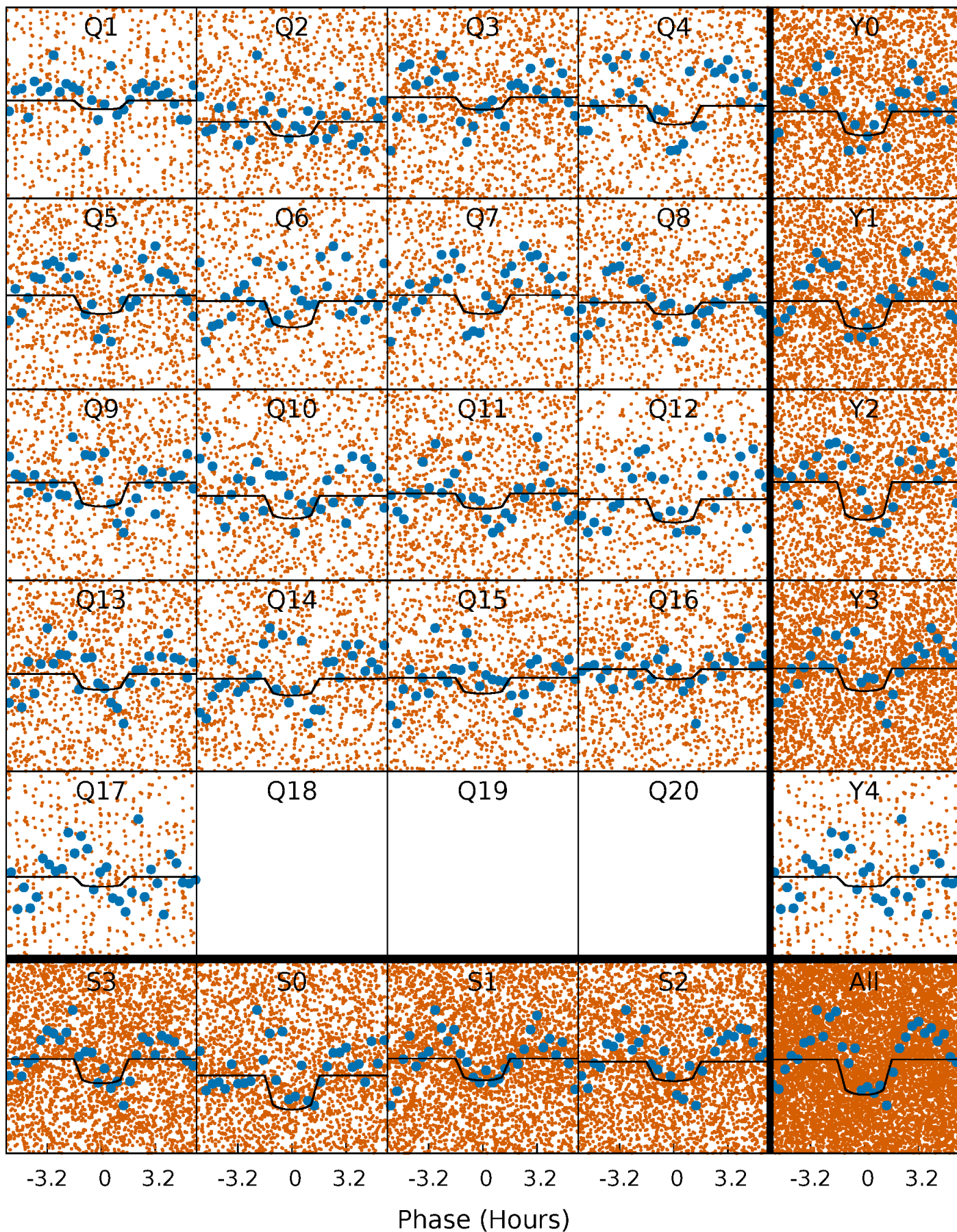
PDC Quarter-Phased Transit Curves

TCE 006390013-01 P= 0.796723 Days $T_0=132.238958$ (BKJD)



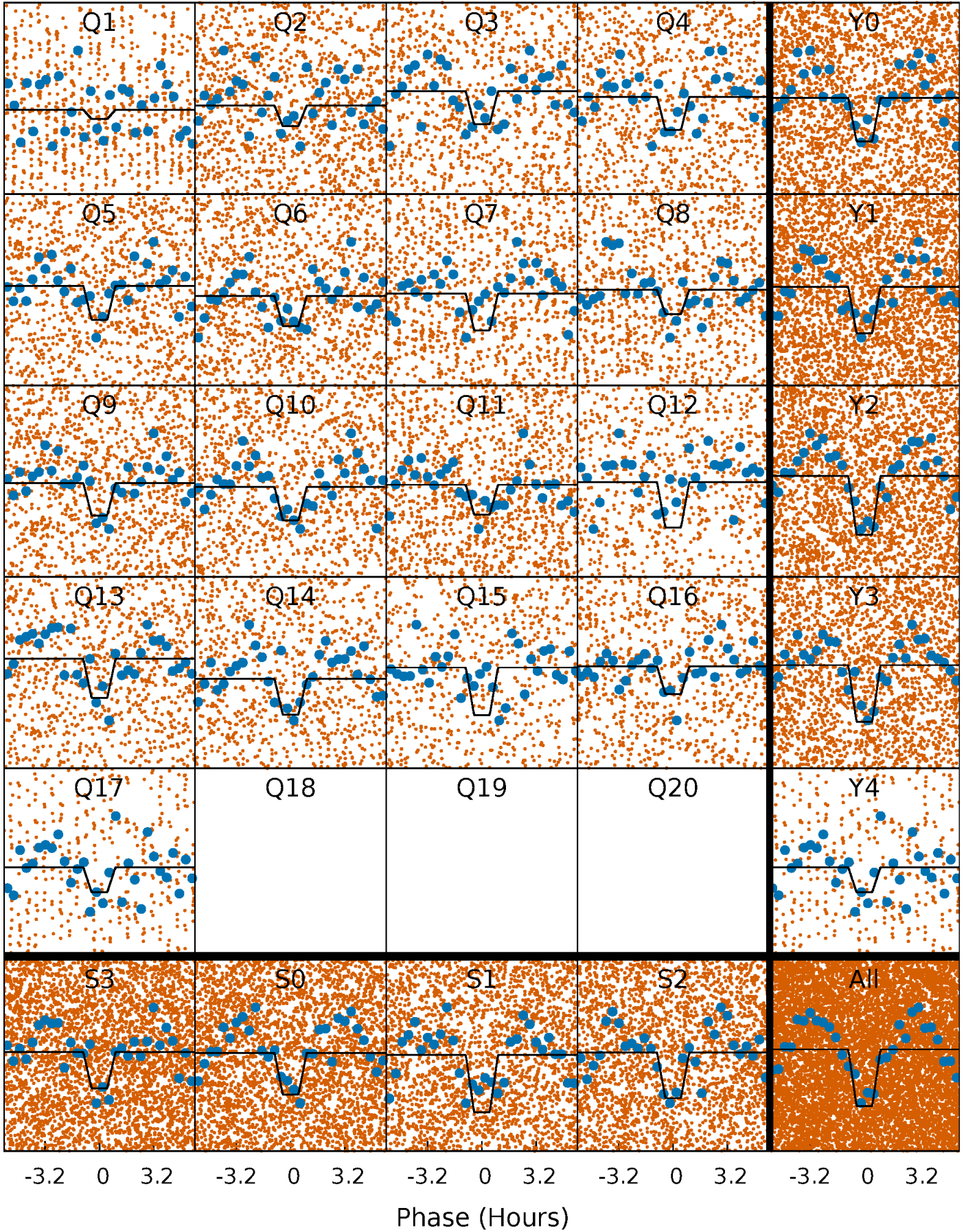
DV Quarter-Phased Transit Curves

TCE 006390013-01 P= 0.796723 Days $T_0=132.238958$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

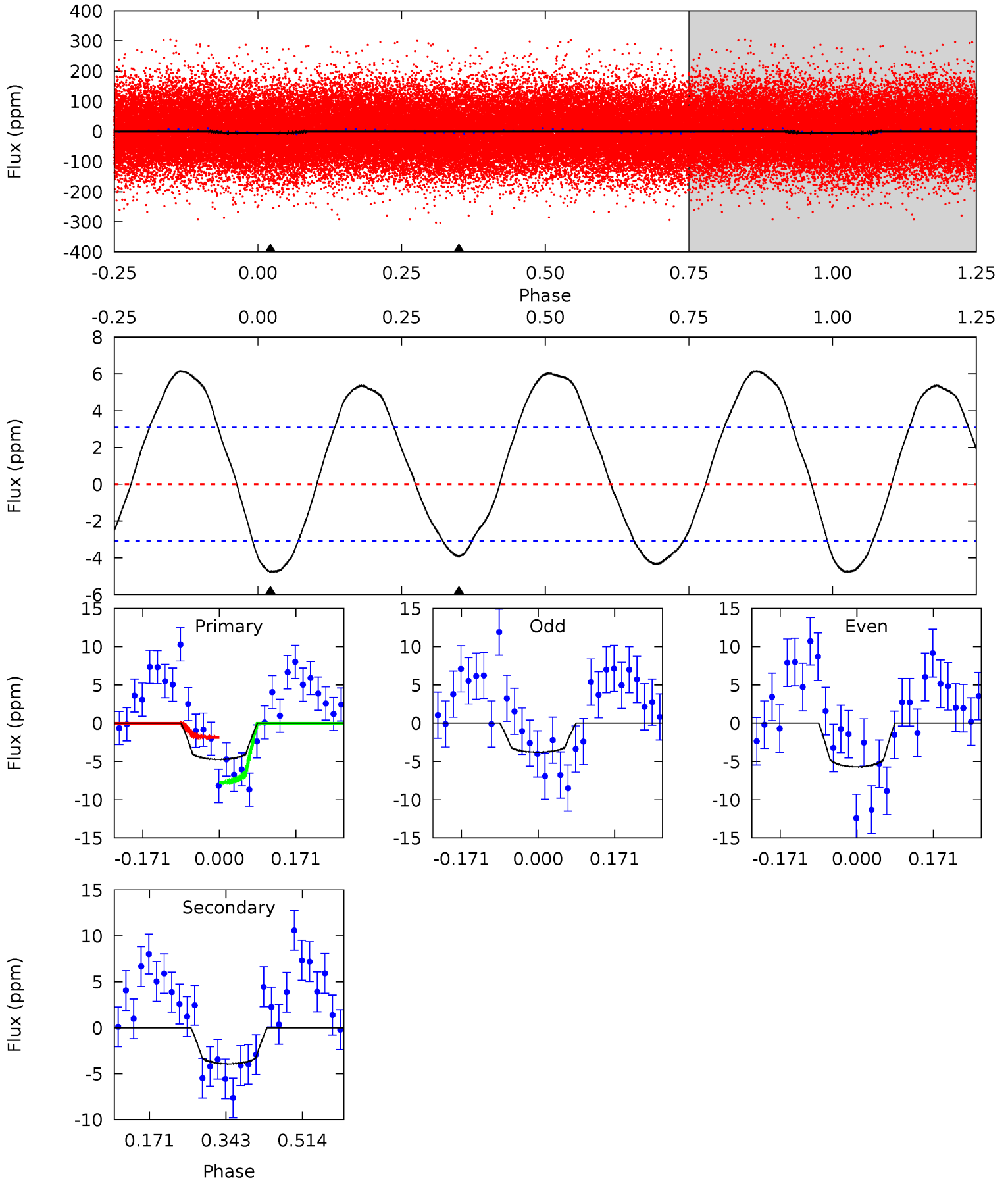
TCE 006390013-01 P= 0.796754 Days $T_0=132.235265$ (BKJD)



DV Model-Shift Uniqueness Test

006390013-01, P = 0.796723 Days, E = 131.442235 Days

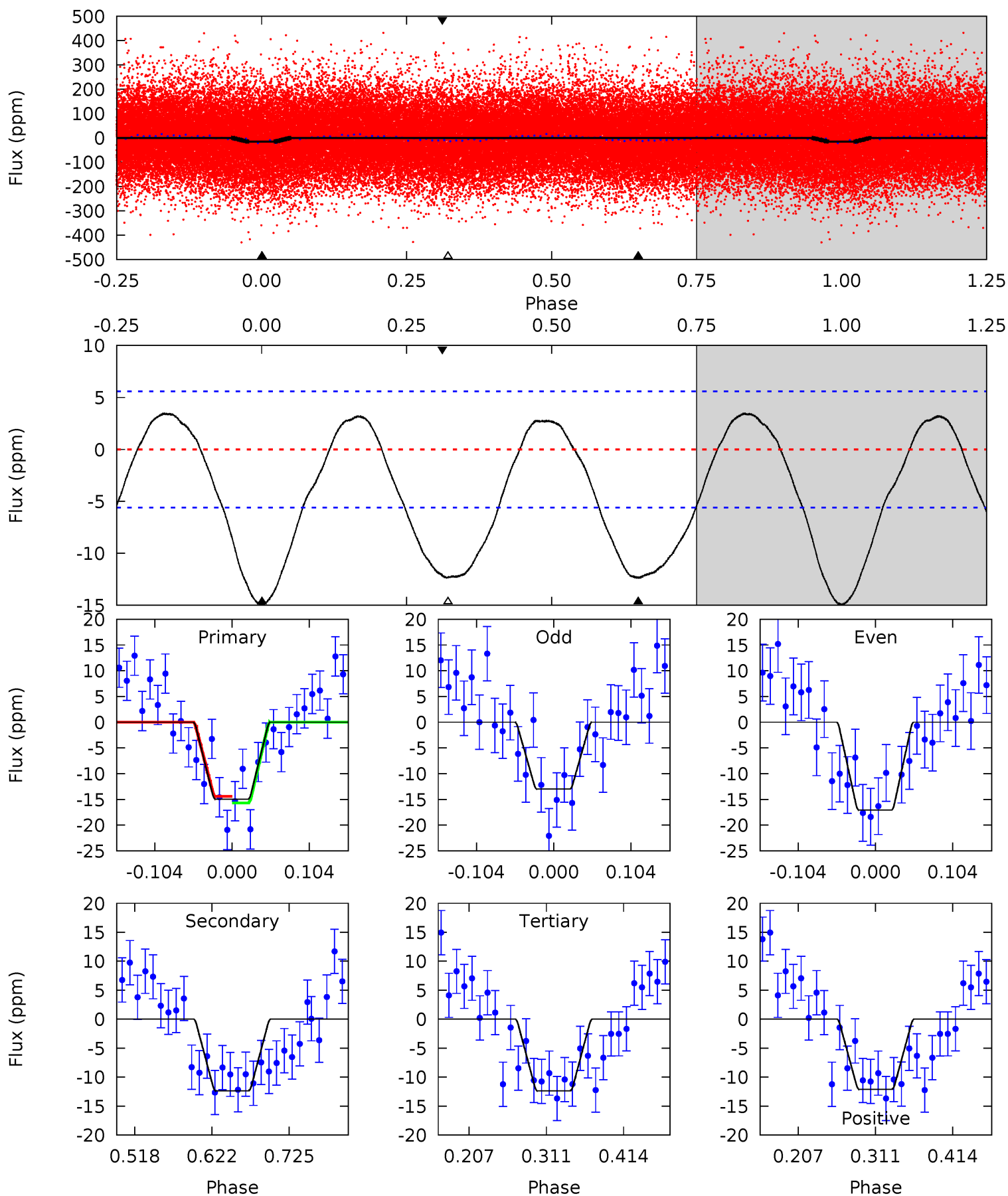
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.86	5.66	0	0	4.45	1.37	5.07	6.86	6.86	5.66	5.66	1.38	0.87	0.56	4.25



Alt Model-Shift Uniqueness Test

006390013-01, P = 0.796754 Days, E = 131.438511 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.2	10.1	10.1	-9.86	4.56	1.63	4.37	2.10	22.0	0.01	19.9	1.65	0.88	0.19	0.54



Stellar Parameters For KIC 006390013

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8729^{+240}_{-411}	$3.696^{+0.480}_{-0.150}$	$0.070^{+0.250}_{-0.600}$	$3.786^{+0.879}_{-1.905}$	$2.593^{+0.312}_{-0.935}$	$0.067^{+0.362}_{-0.024}$
	+3%/-5%	+13%/-4%	+357%/-857%	+23%/-50%	+12%/-36%	+538%/-36%
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 006390013-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-4 ± 1	$1.07^{+0.32}_{-0.33}$	6680^{+596}_{-889}	6328^{+1211}_{-961}	$0.982^{+1.071}_{-0.406}$
Alt.	-12 ± 1	$1.61^{+0.40}_{-0.46}$	6683^{+553}_{-908}	7179^{+867}_{-661}	$1.380^{+1.091}_{-0.475}$

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 $A_{obs} \gg 1.0$

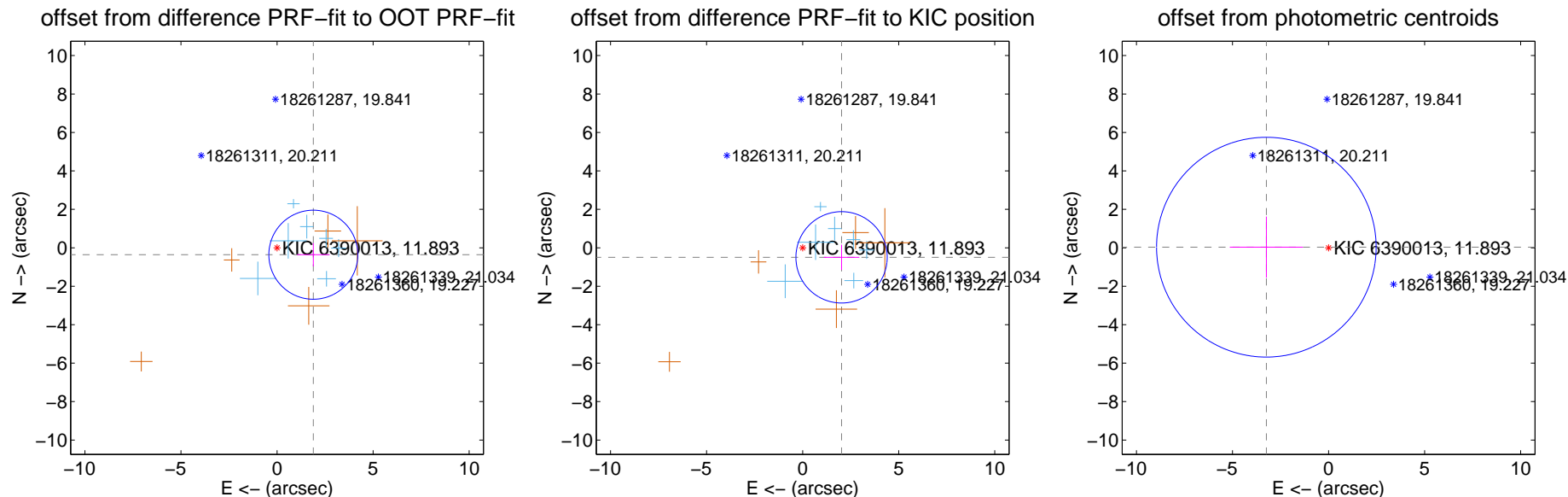
DV Centroid Data

Supplemental centroid analysis for 006390013-01. **Kepler magnitude: 11.89.** Transit SNR 6.72

There are 7 quarters with good PRF difference image offsets

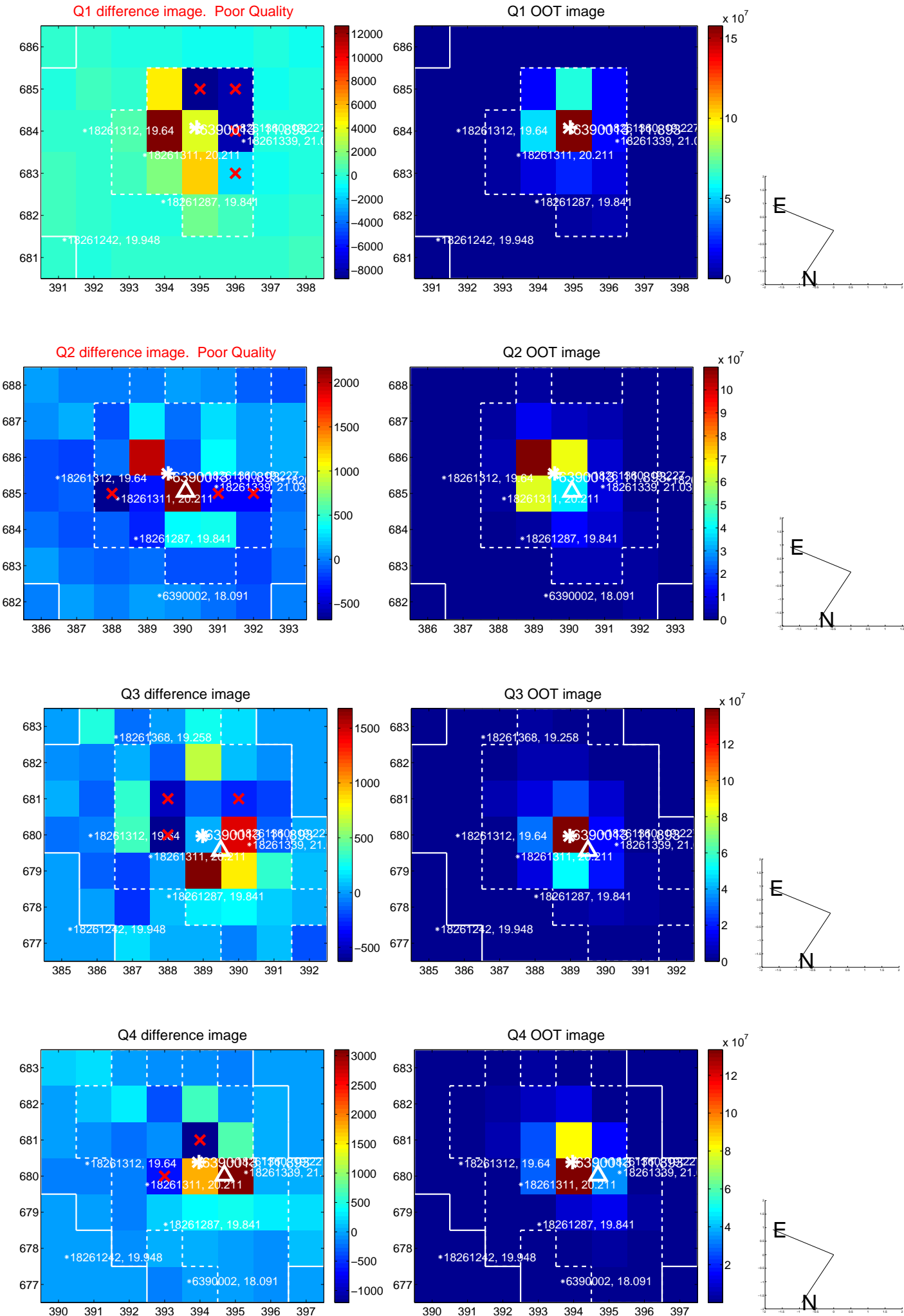
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.924 ± 0.772	2.49	-1.890 ± 0.852	-0.360 ± 0.604
PRF-fit source offset from KIC position	2.086 ± 0.792	2.63	-2.026 ± 0.925	-0.496 ± 0.655
photometric centroid source offset	3.24 ± 1.91	1.70	3.24 ± 1.91	0.03 ± 1.59

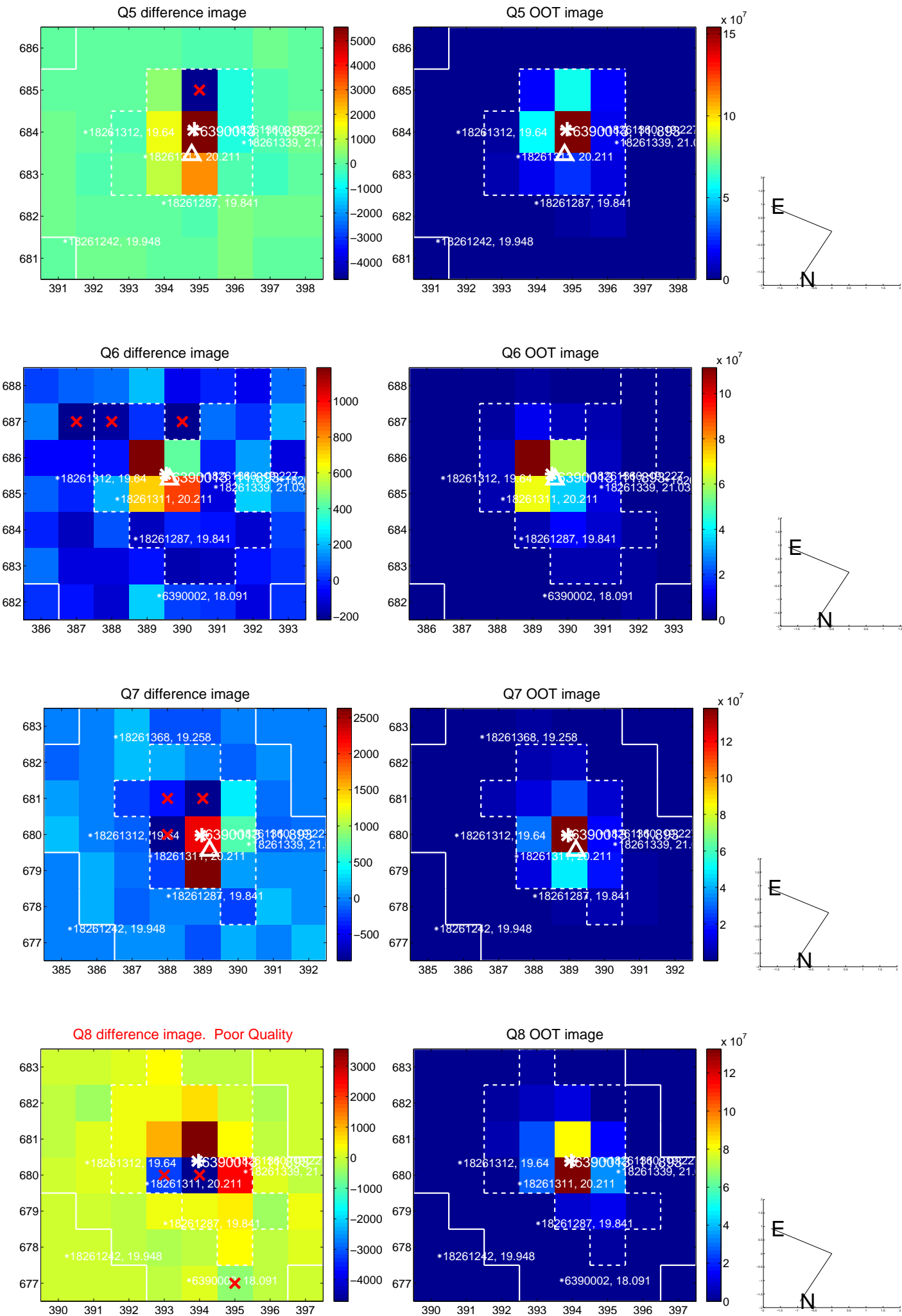


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

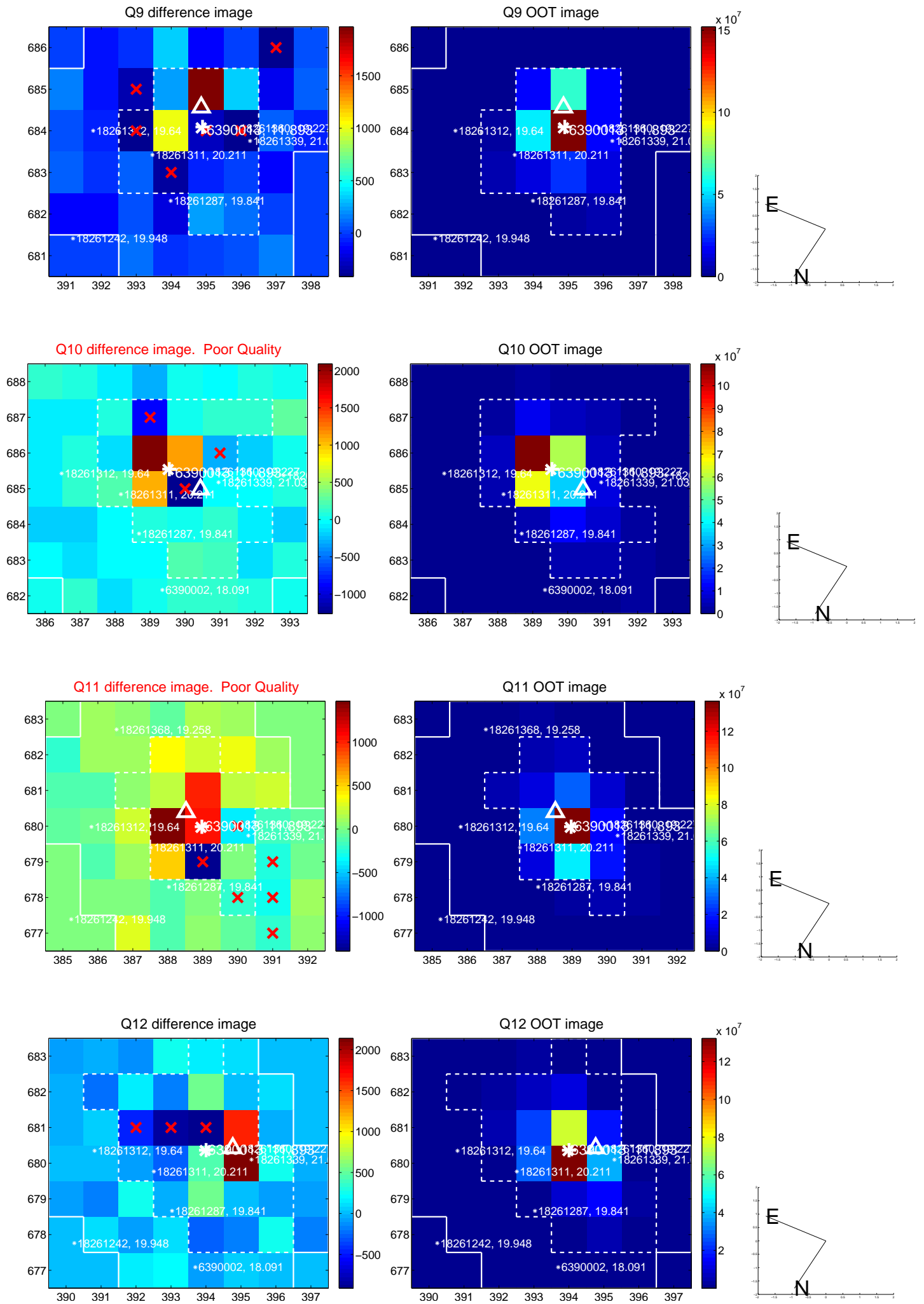
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



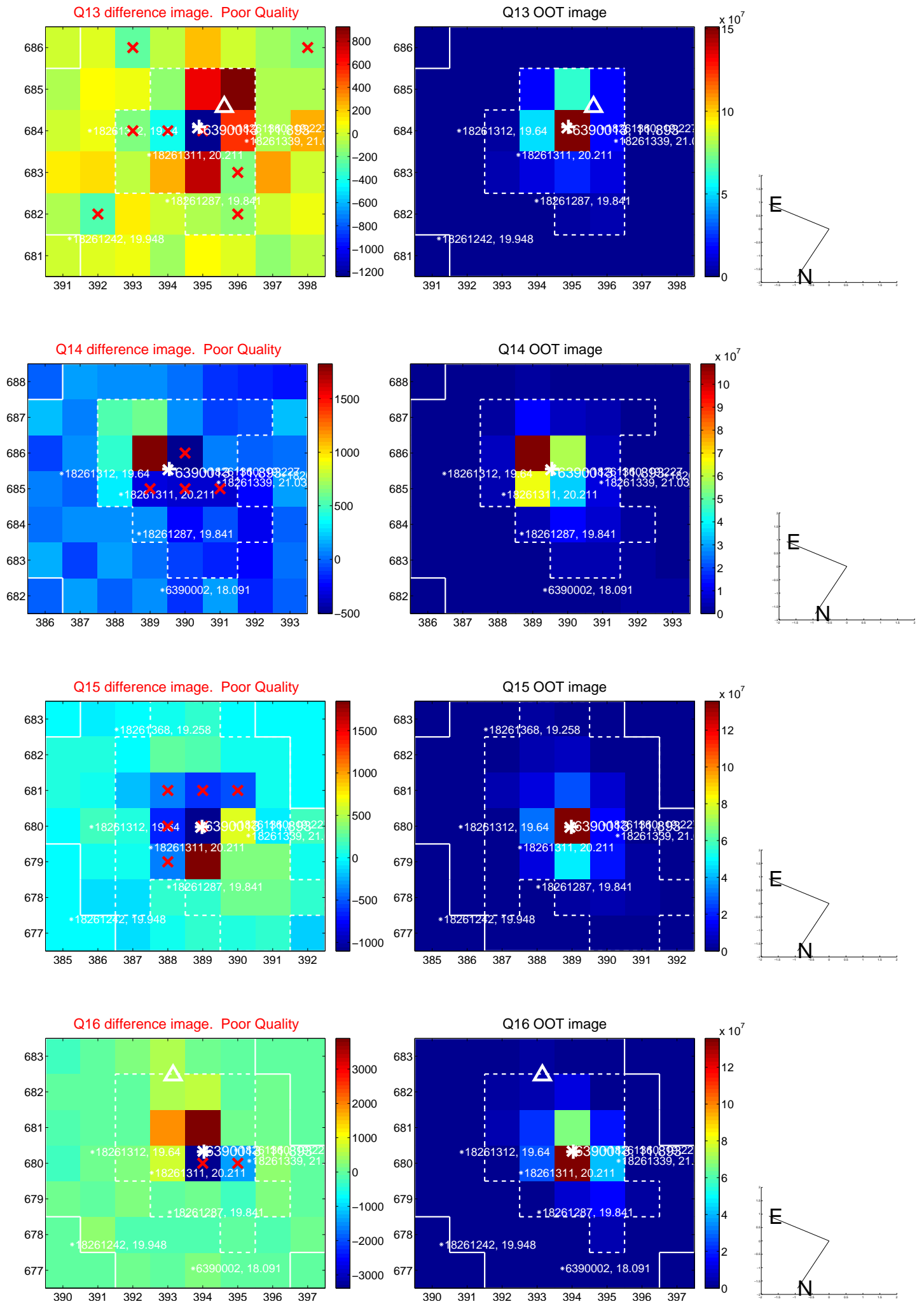
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



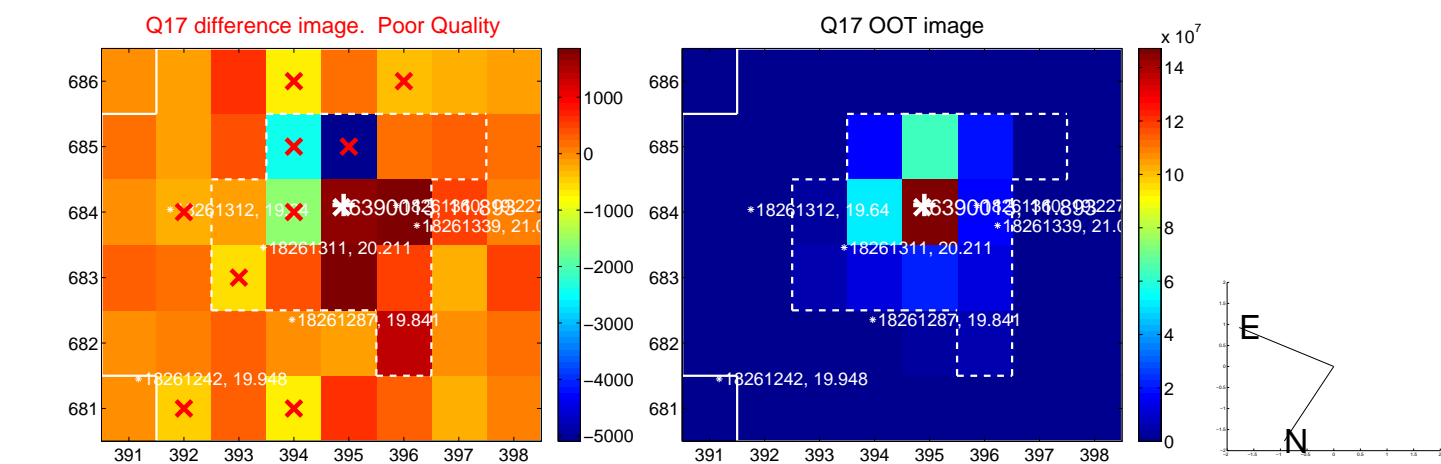
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



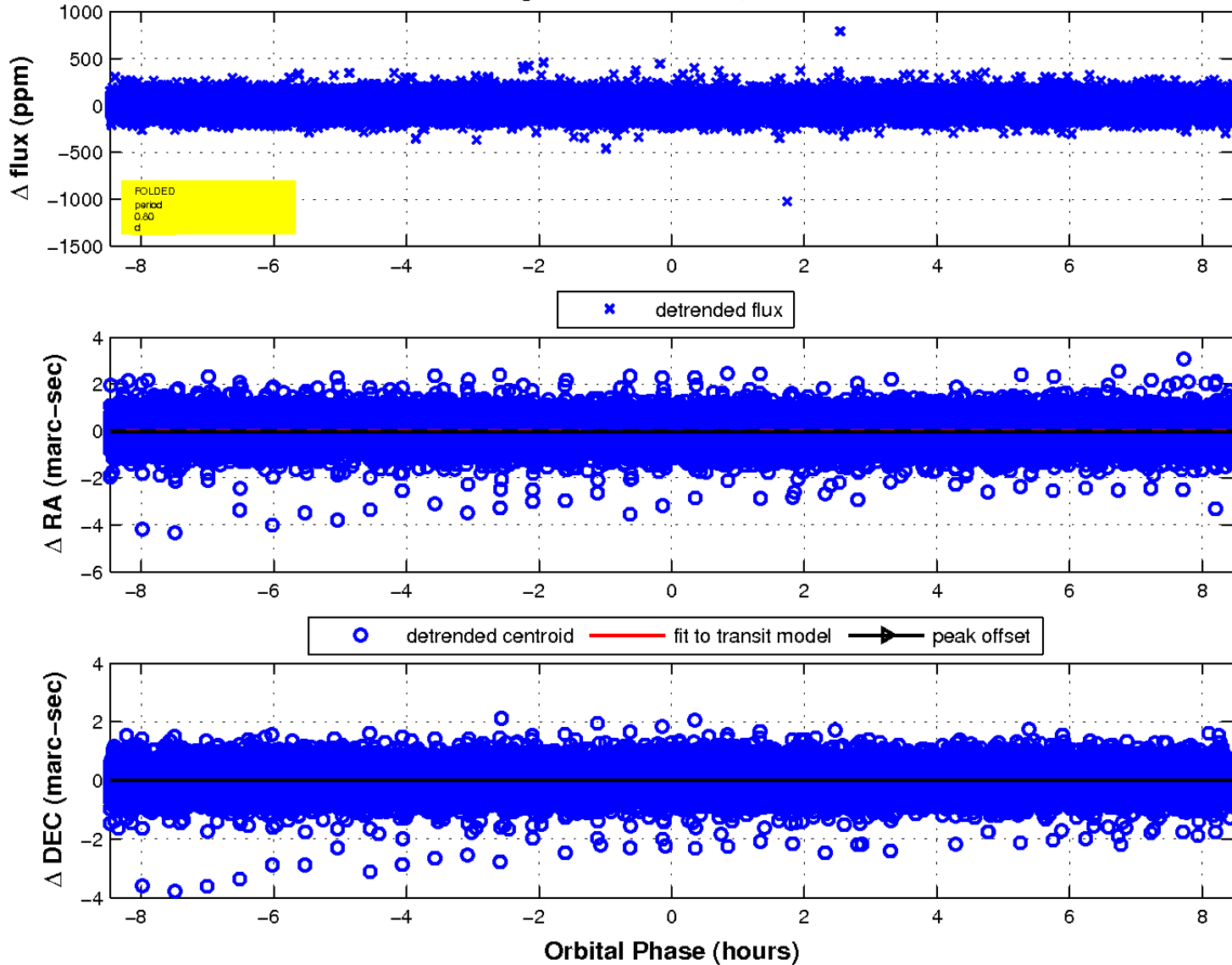
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

