

KIC 012601939

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})
012601939-01	OBS	No	0.885396	131.640775	224.6	2.720	8.7	9.4	0.70	4403	1.19	610.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012601939-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

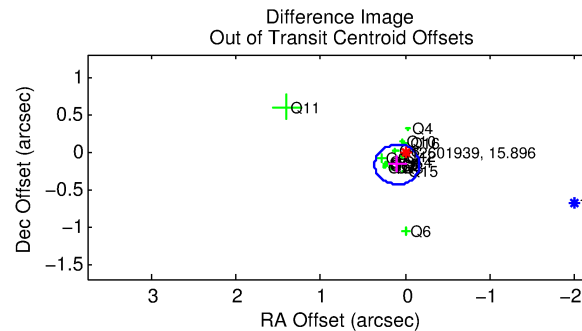
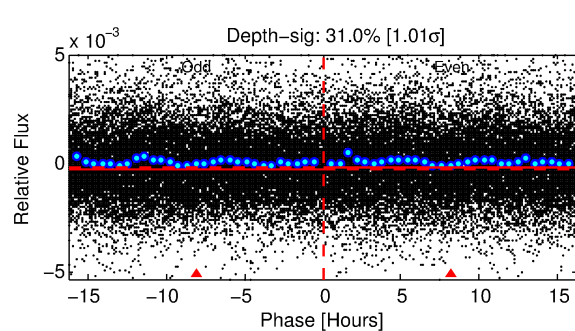
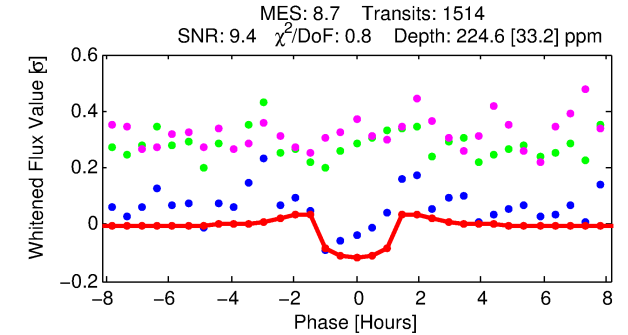
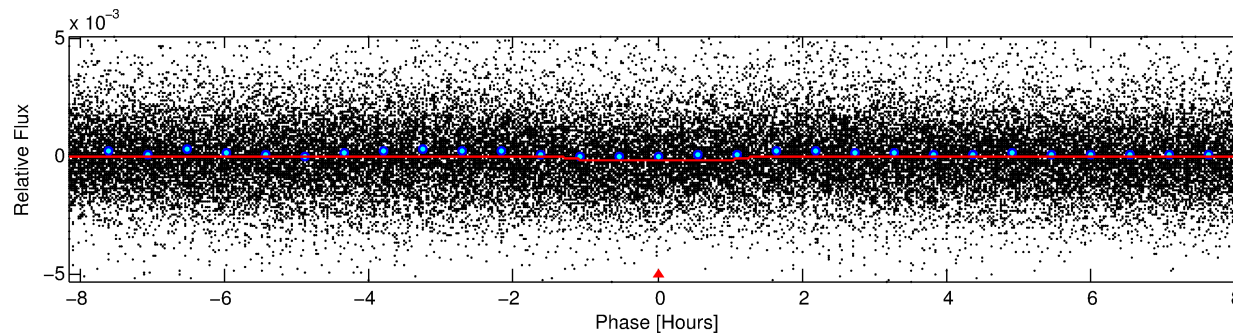
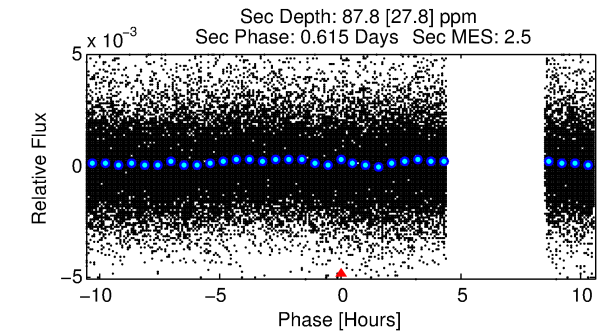
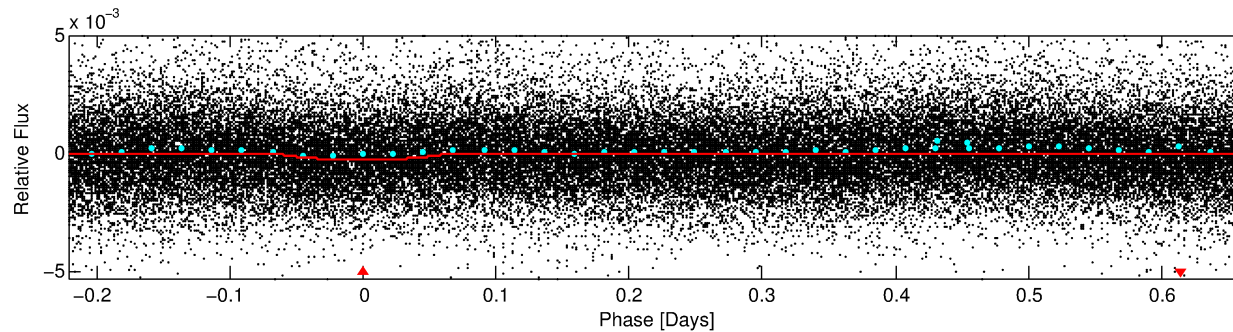
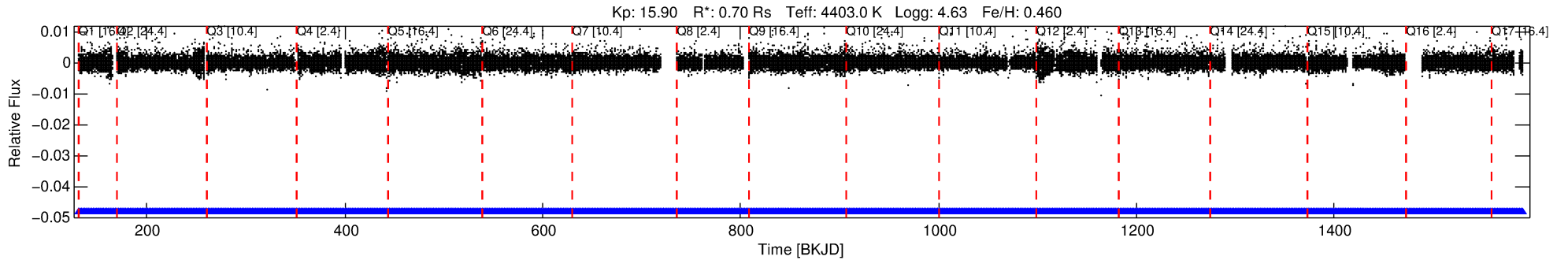
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012601939-01

No Significant Match Found

DV One-Page Summary

KIC: 12601939 Candidate: 1 of 1 Period: 0.885 d



DV Fit Results:

Period = 0.88540 [0.00001] d
Epoch = 131.6408 [0.0025] BKJD
Rp/R* = 0.0157 [0.0099]
a/R* = 1.76 [2.42]
b = 0.81 [0.89]
Seff = 610.04 [106.62]
Teq = 1267 [55] K
Rp = 1.19 [0.76] Re
a = 0.0164 [0.0009] AU
Ag = 9.13 [11.95] [0.68σ]
Teffp = 3406 [1121] K [1.91σ]

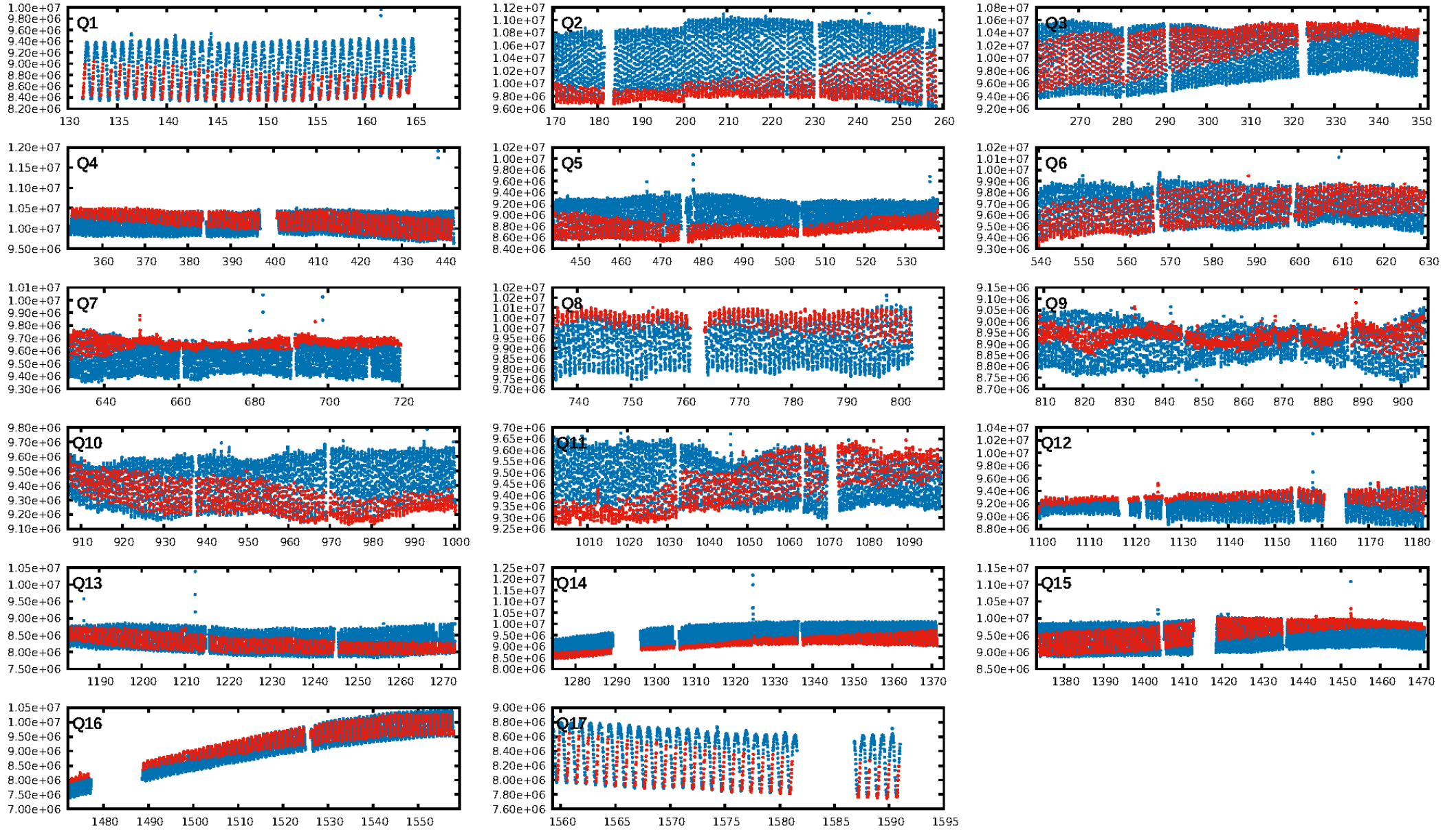
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.43e-15
RollingBand-fgt: 1.00 [1446/1446]
GhostDiagnostic-chr: 1.597
Centroid-sig: 32.4%
Centroid-so: 1.361 arcsec [2.05σ]
OotOffset-rm: 0.195 arcsec [2.19σ]
KicOffset-rm: 0.248 arcsec [2.46σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.53 [9/17]
DiffImageOverlap-fno: 1.00 [17/17]

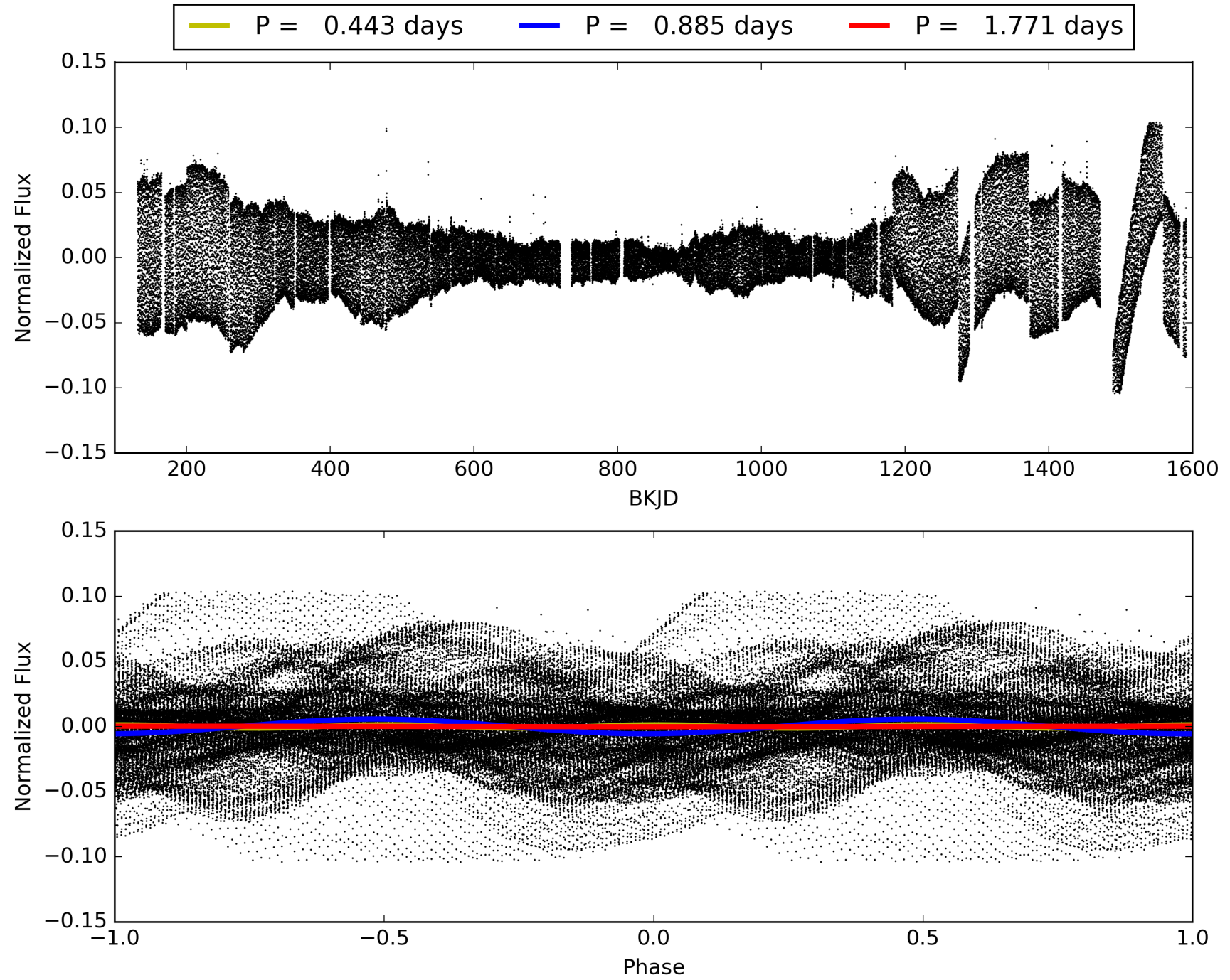
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 04:30:34 Z

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

TCE 012601939-01, PDC Light Curves

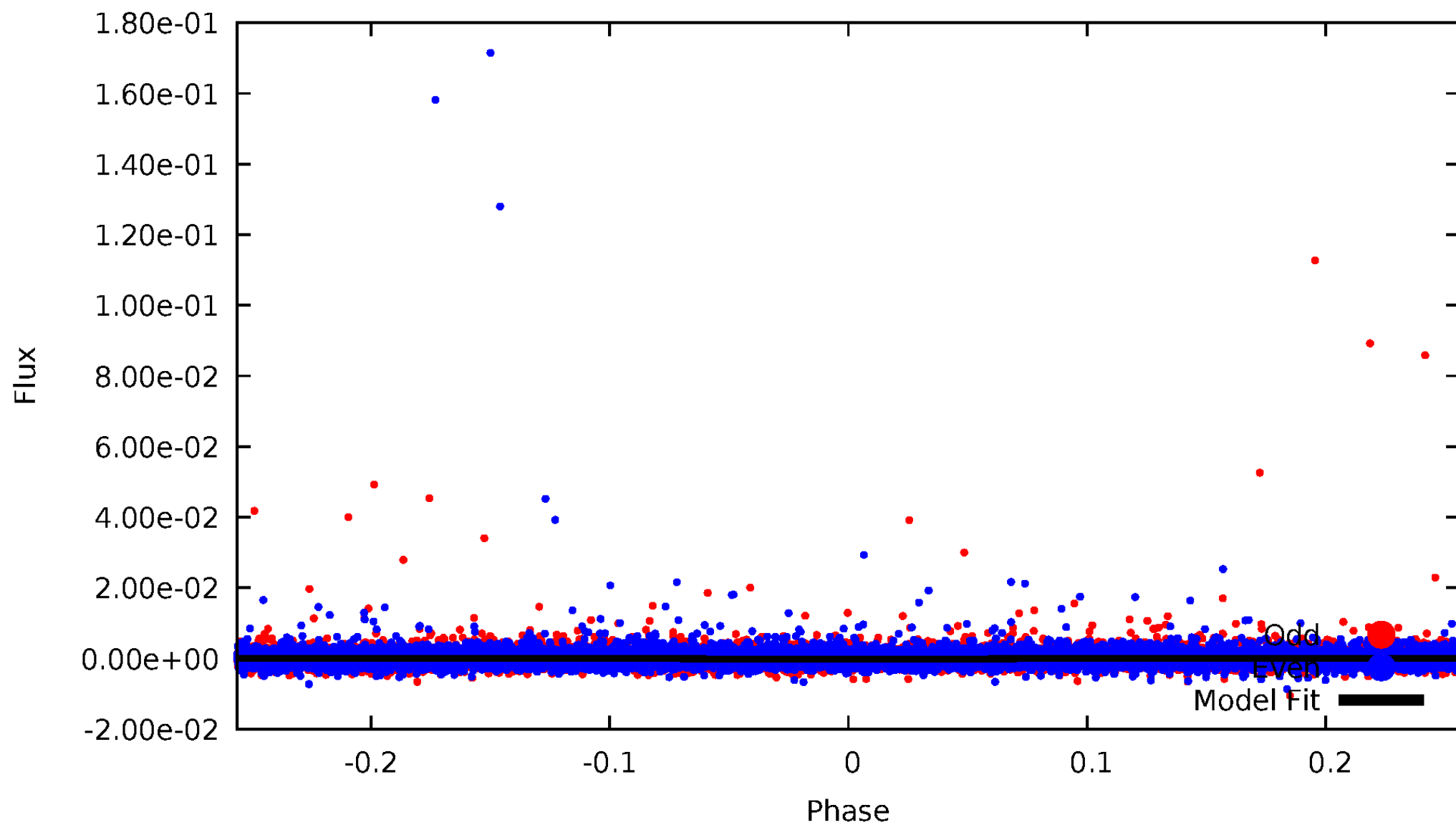


TCE 012601939-01



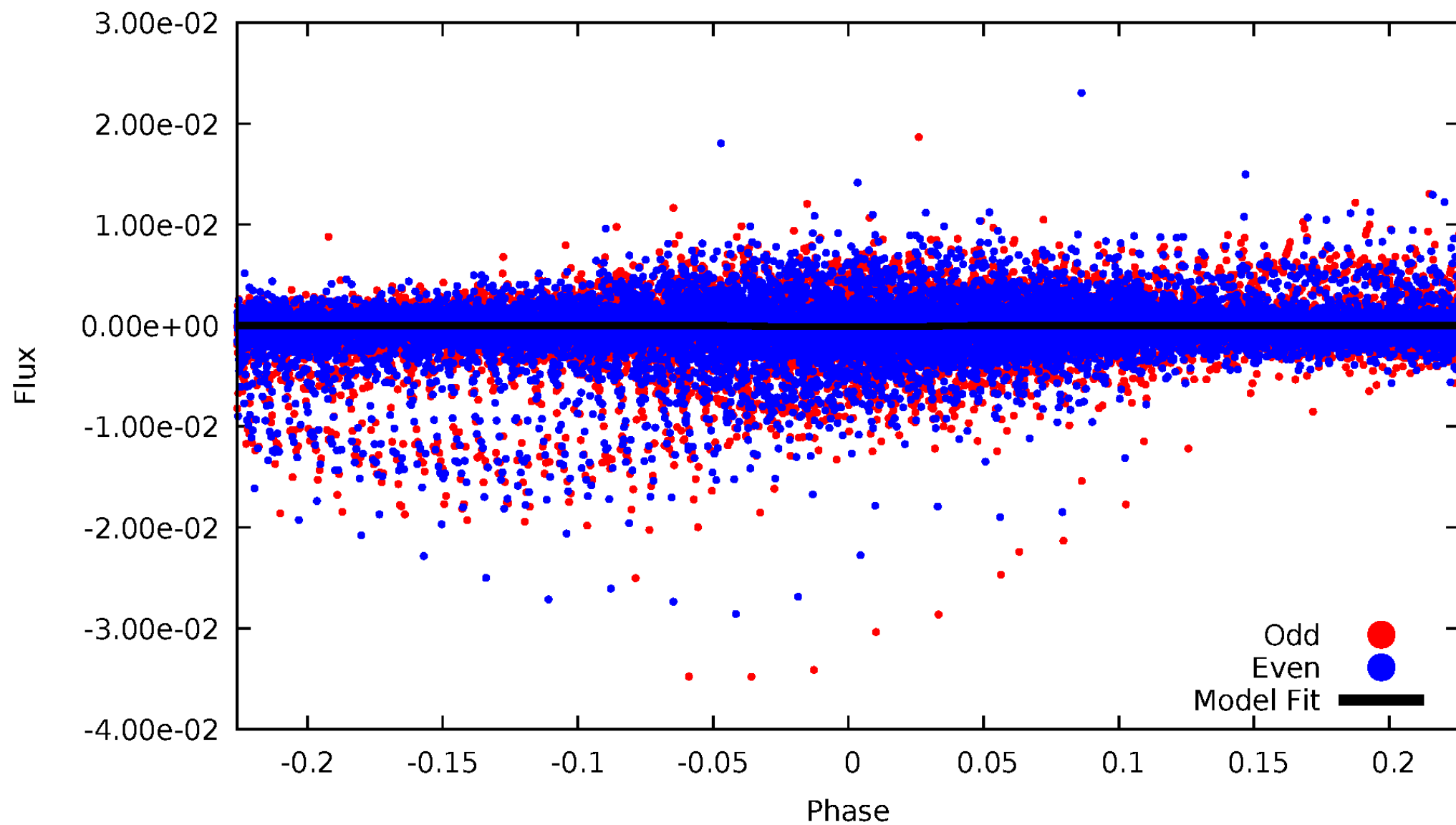
DV Odd/Even

TCE 012601939-01



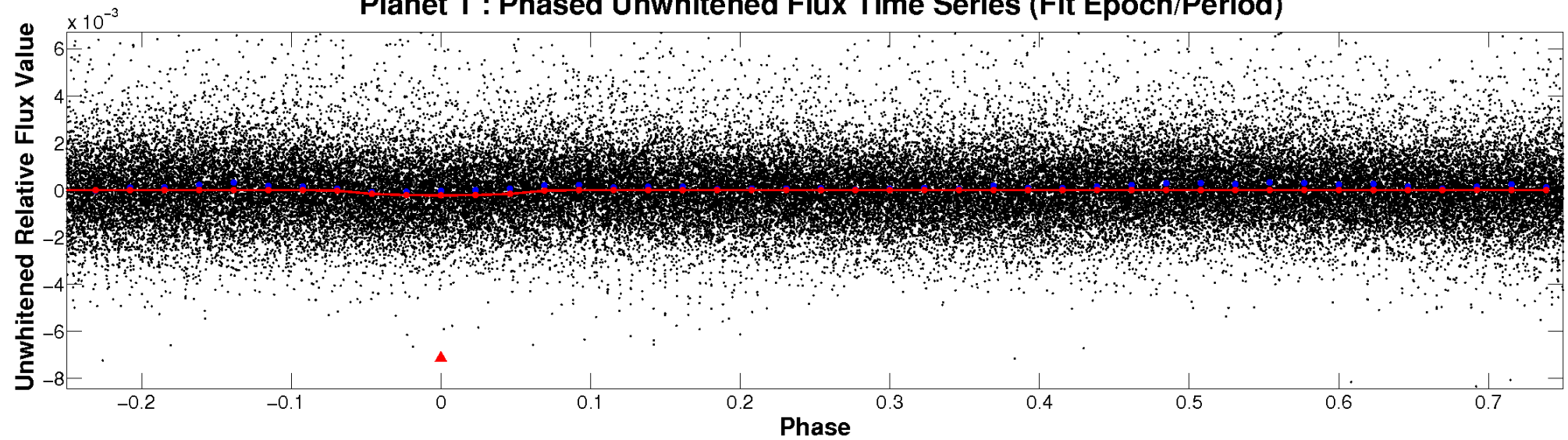
ALT Odd/Even

TCE 012601939-01

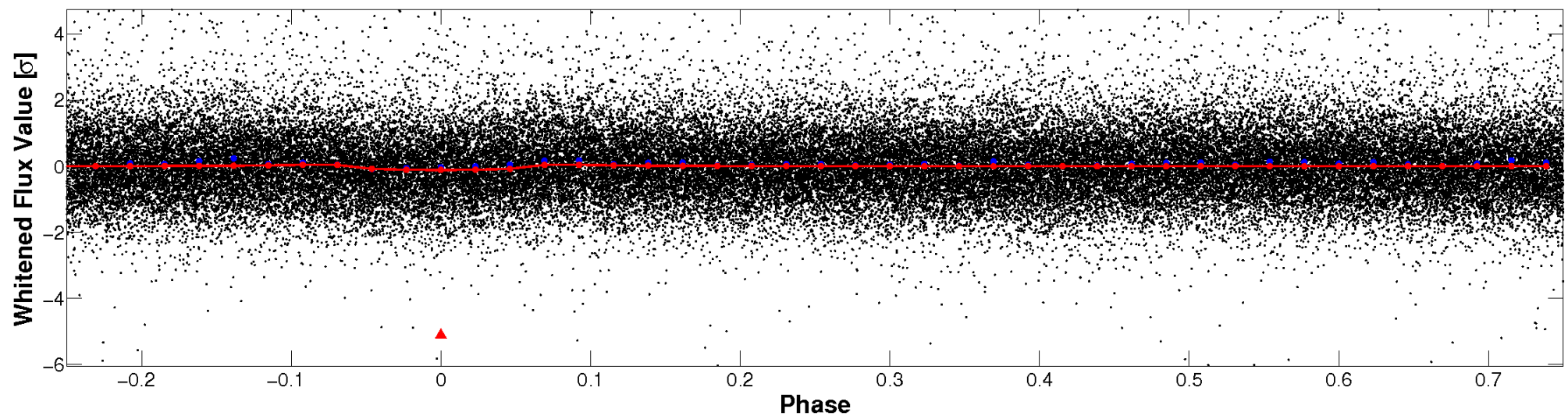


Non-Whitened Vs. Whitened Light Curve

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

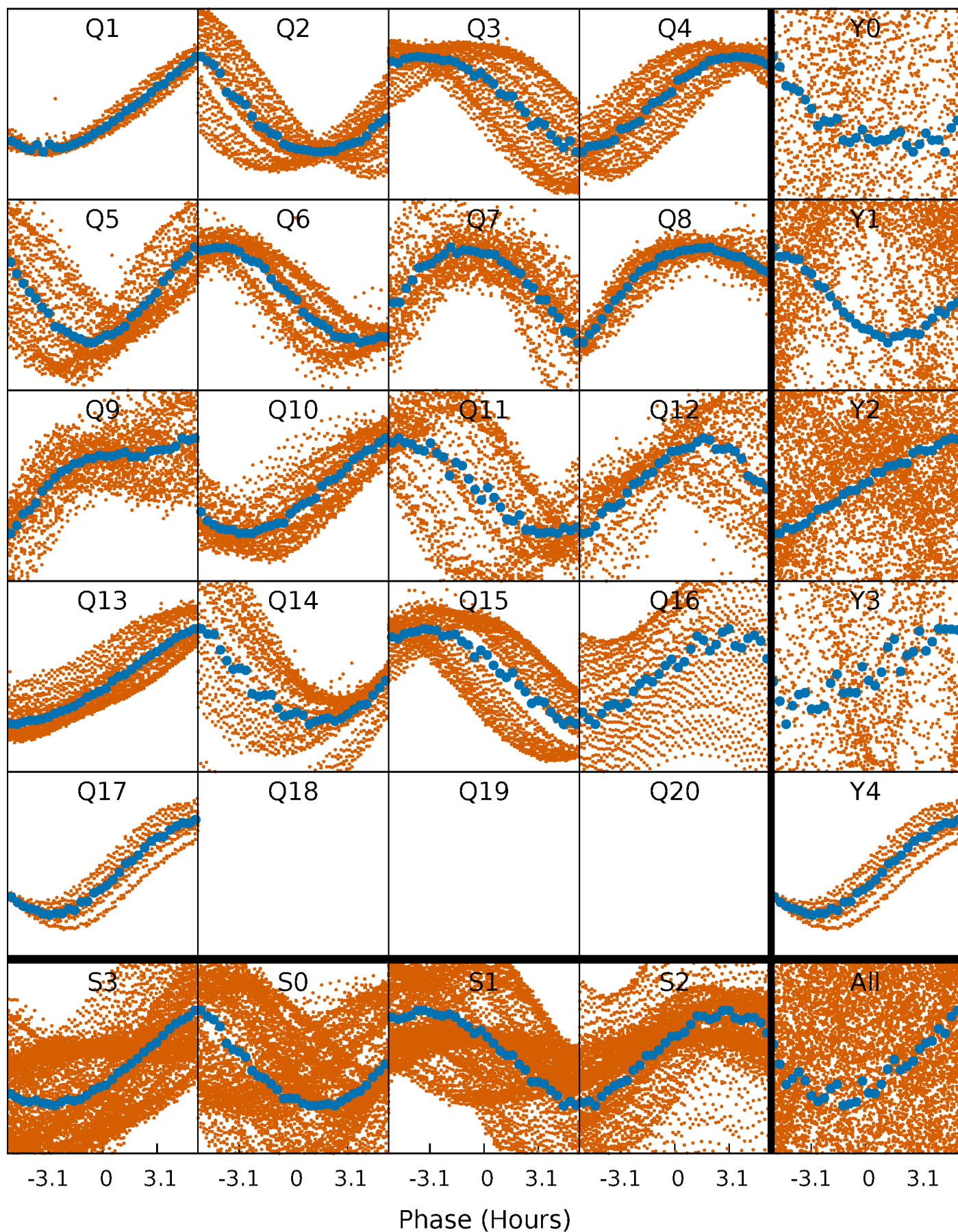


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



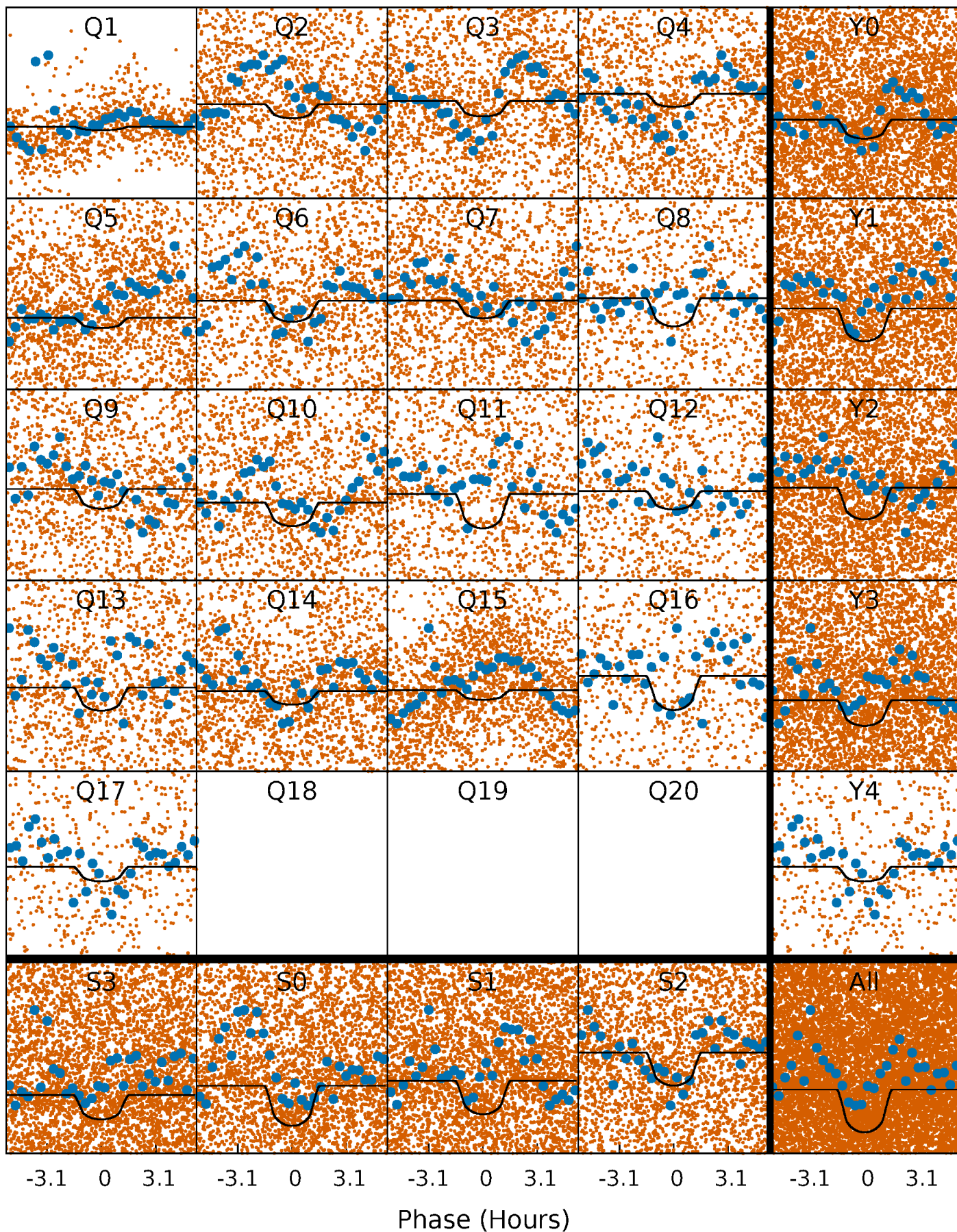
PDC Quarter-Phased Transit Curves

TCE 012601939-01 P= 0.885396 Days $T_0=131.640775$ (BKJD)



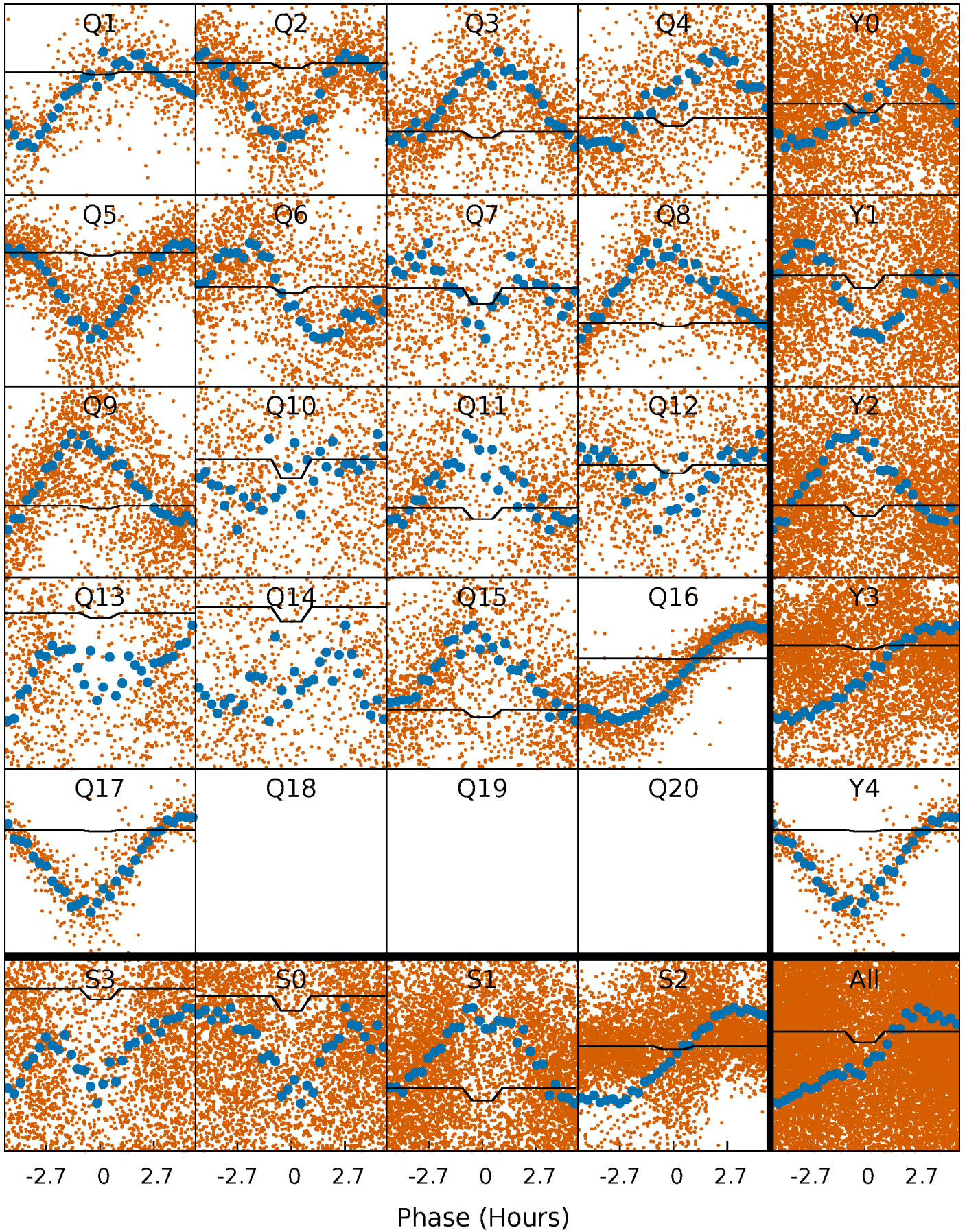
DV Quarter-Phased Transit Curves

TCE 012601939-01 P= 0.885396 Days $T_0=131.640775$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

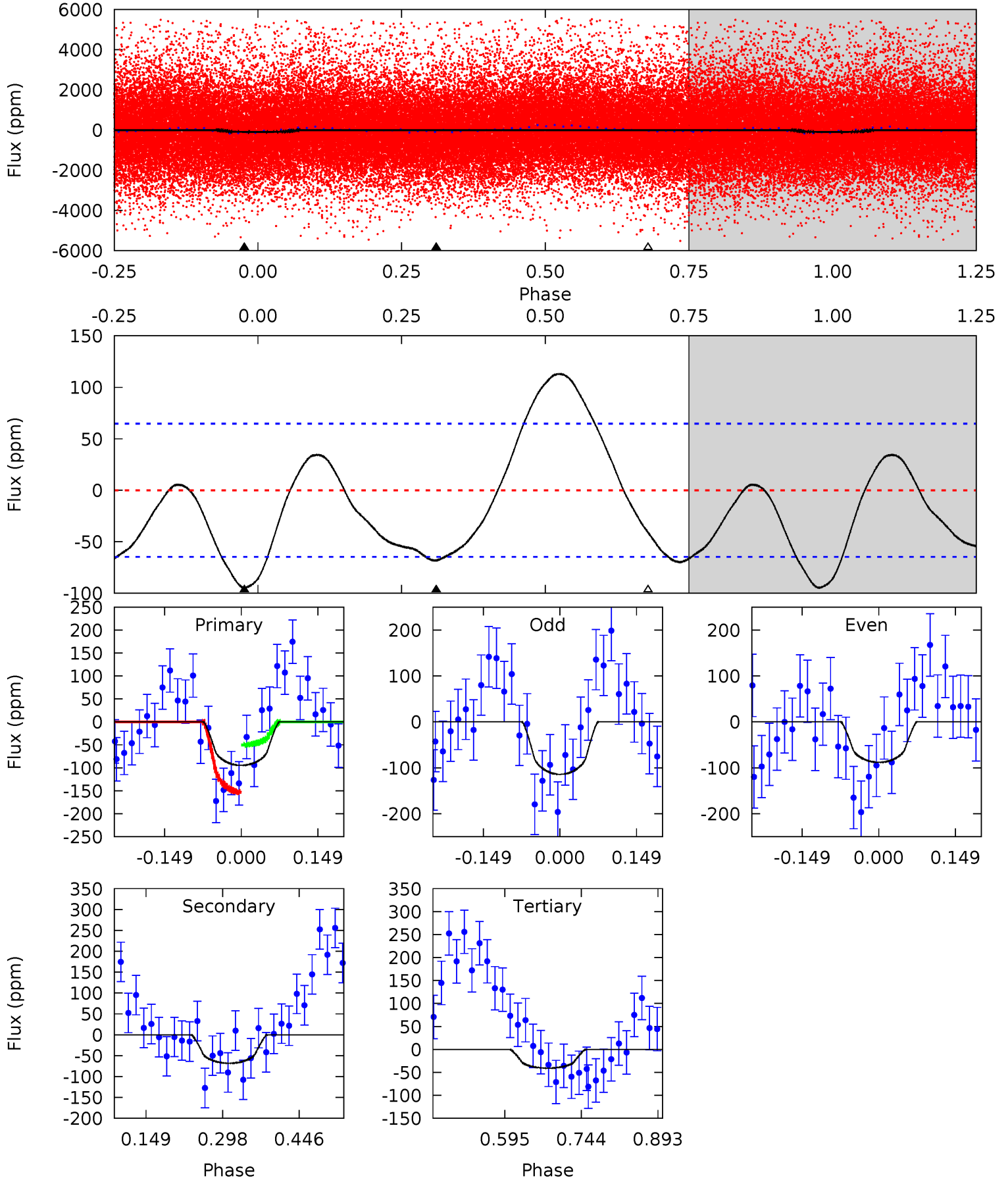
TCE 012601939-01 P= 0.885378 Days $T_0=131.616995$ (BKJD)



DV Model-Shift Uniqueness Test

012601939-01, P = 0.885396 Days, E = 130.755379 Days

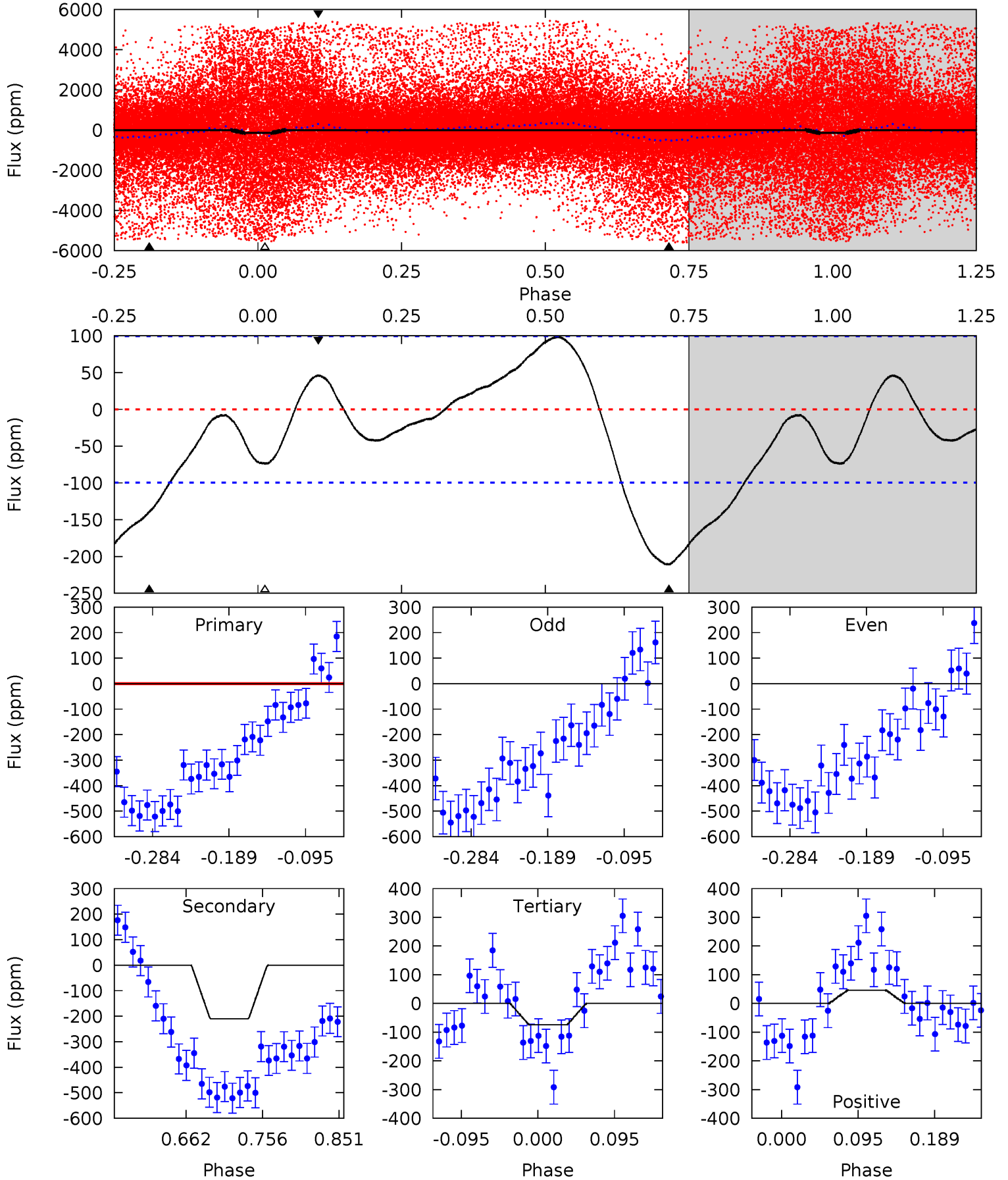
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.56	4.73	2.83	0	4.48	1.44	4.42	3.72	6.56	1.89	4.73	0.90	0.19	0.54	3.56



Alt Model-Shift Uniqueness Test

012601939-01, P = 0.885378 Days, E = 130.731617 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.41	9.69	3.40	2.12	4.58	1.67	2.11	3.01	4.29	6.29	7.57	1.37	3.26	0.32	2.03



Stellar Parameters For KIC 012601939

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4403^{+176}_{-176}	$4.626^{+0.024}_{-0.036}$	$0.460^{+0.050}_{-0.300}$	$0.699^{+0.038}_{-0.046}$	$0.758^{+0.032}_{-0.070}$	$3.121^{+0.419}_{-0.403}$
	+4%/-4%	+1%/-1%	+11%/-65%	+5%/-7%	+4%/-9%	+13%/-13%
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 012601939-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-68 ± 14	$1.18^{+0.80}_{-0.63}$	1774^{+70}_{-74}	3510^{+1216}_{-534}	$7.266^{+28.472}_{-4.732}$
Alt.	-211 ± 22	$0.97^{+0.75}_{-0.60}$	1773^{+84}_{-73}	4659^{+2686}_{-932}	33^{+203}_{-23}

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

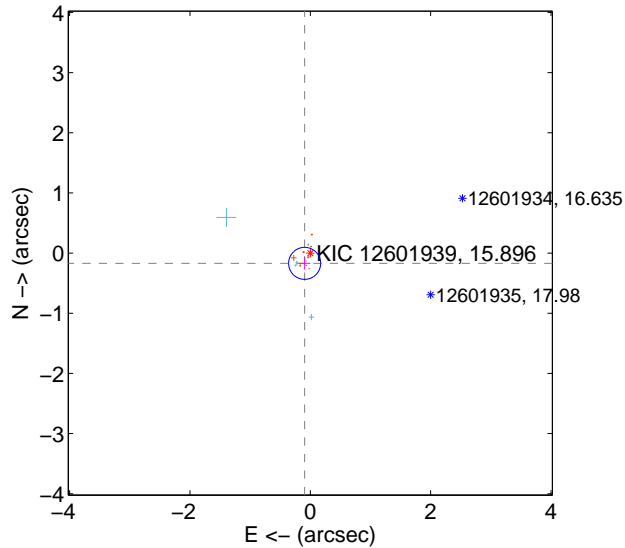
Supplemental centroid analysis for 012601939-01. Kepler magnitude: 15.90. Transit SNR 9.38

There are 9 quarters with good PRF difference image offsets

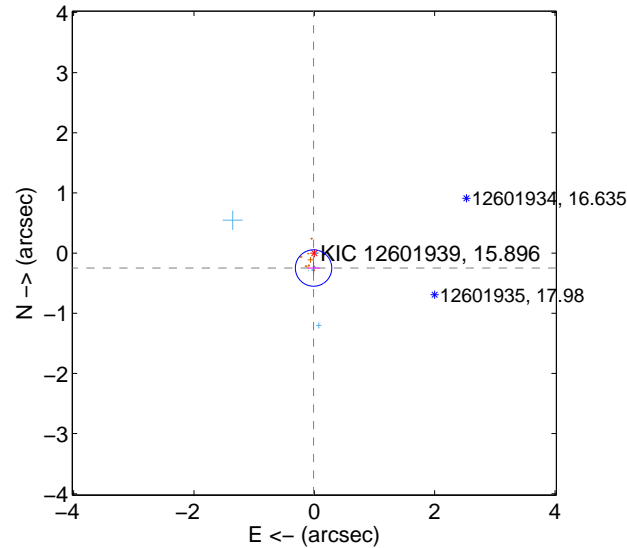
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.195 ± 0.089	2.19	0.094 ± 0.098	-0.170 ± 0.102
PRF-fit source offset from KIC position	0.248 ± 0.101	2.46	0.012 ± 0.100	-0.248 ± 0.103
photometric centroid source offset	1.36 ± 0.66	2.05	-0.02 ± 0.82	1.36 ± 0.66

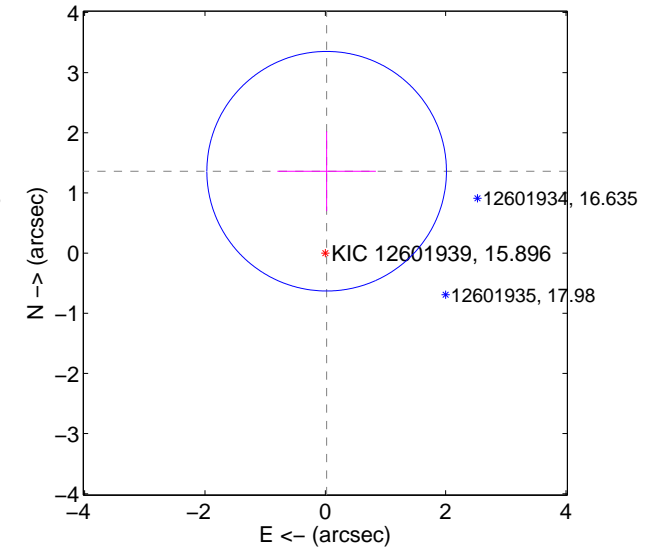
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

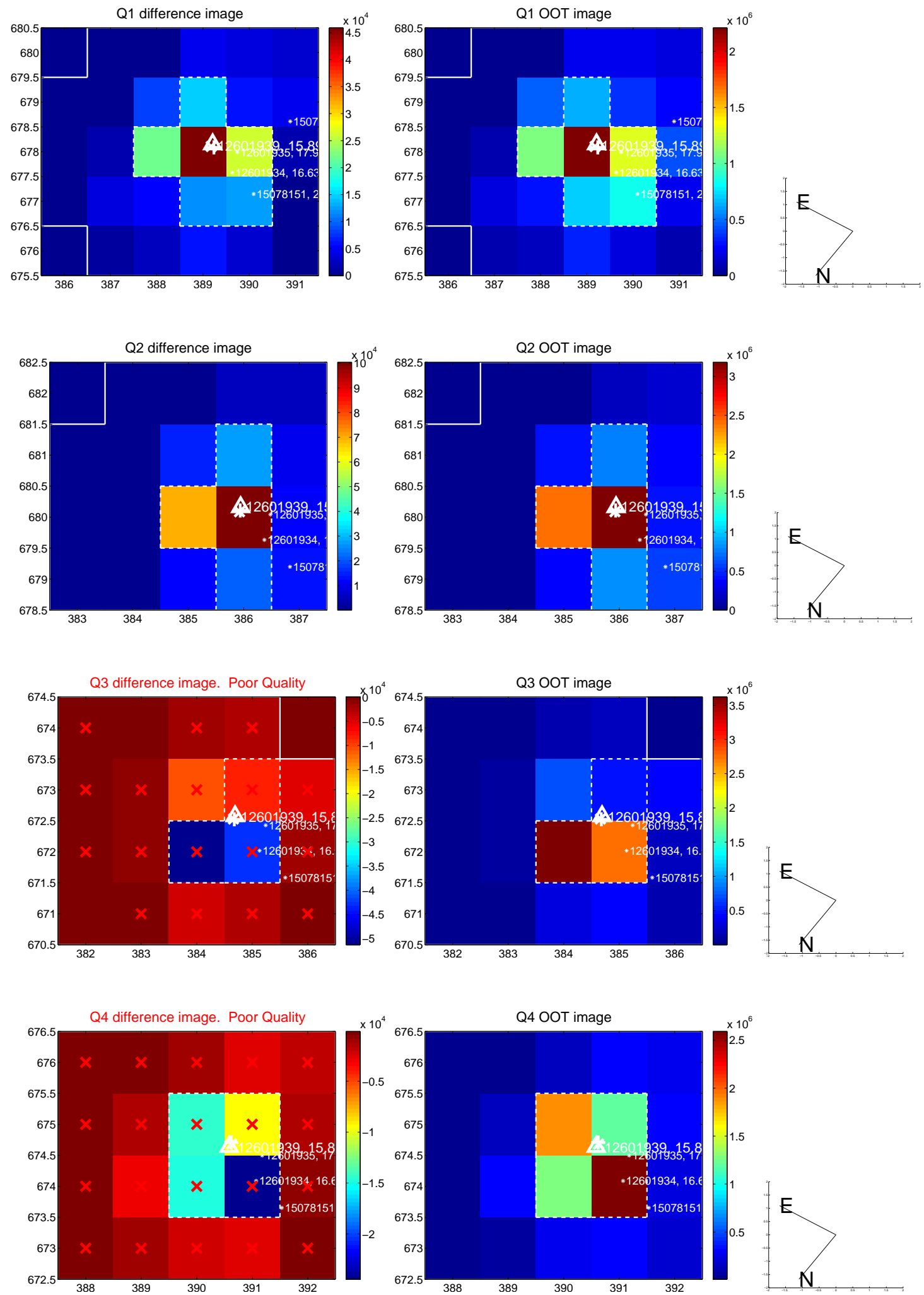


offset from photometric centroids

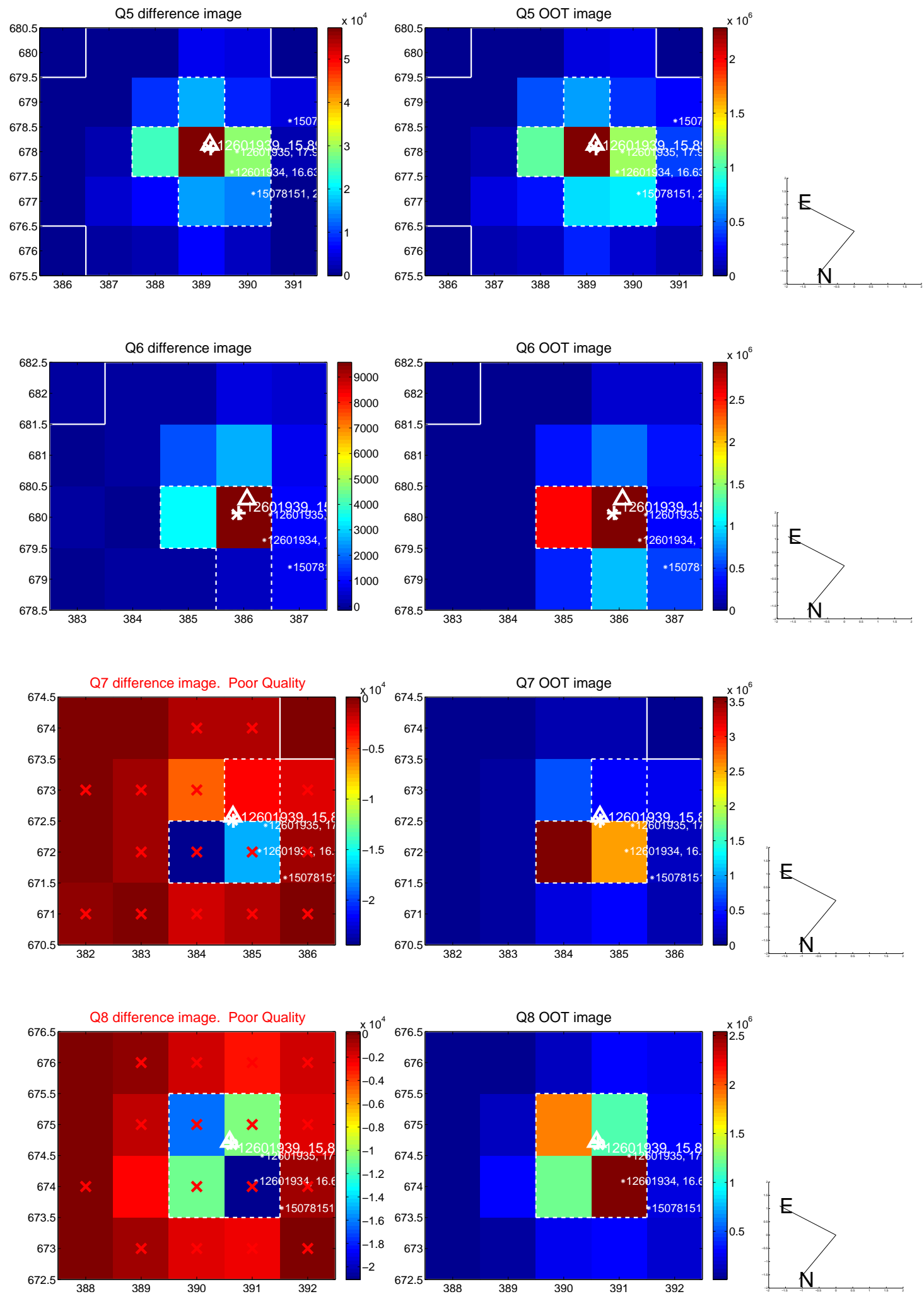


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

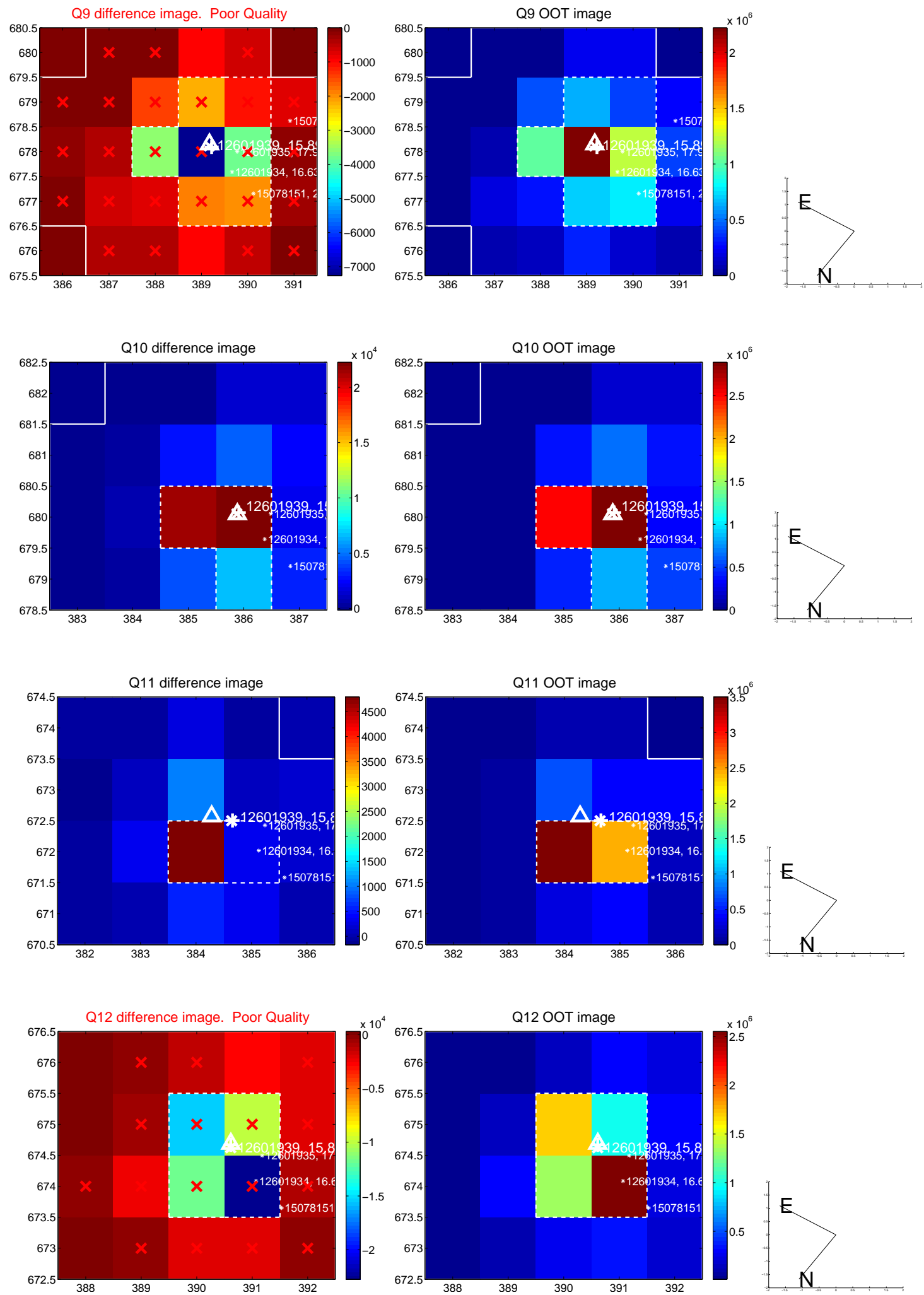
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



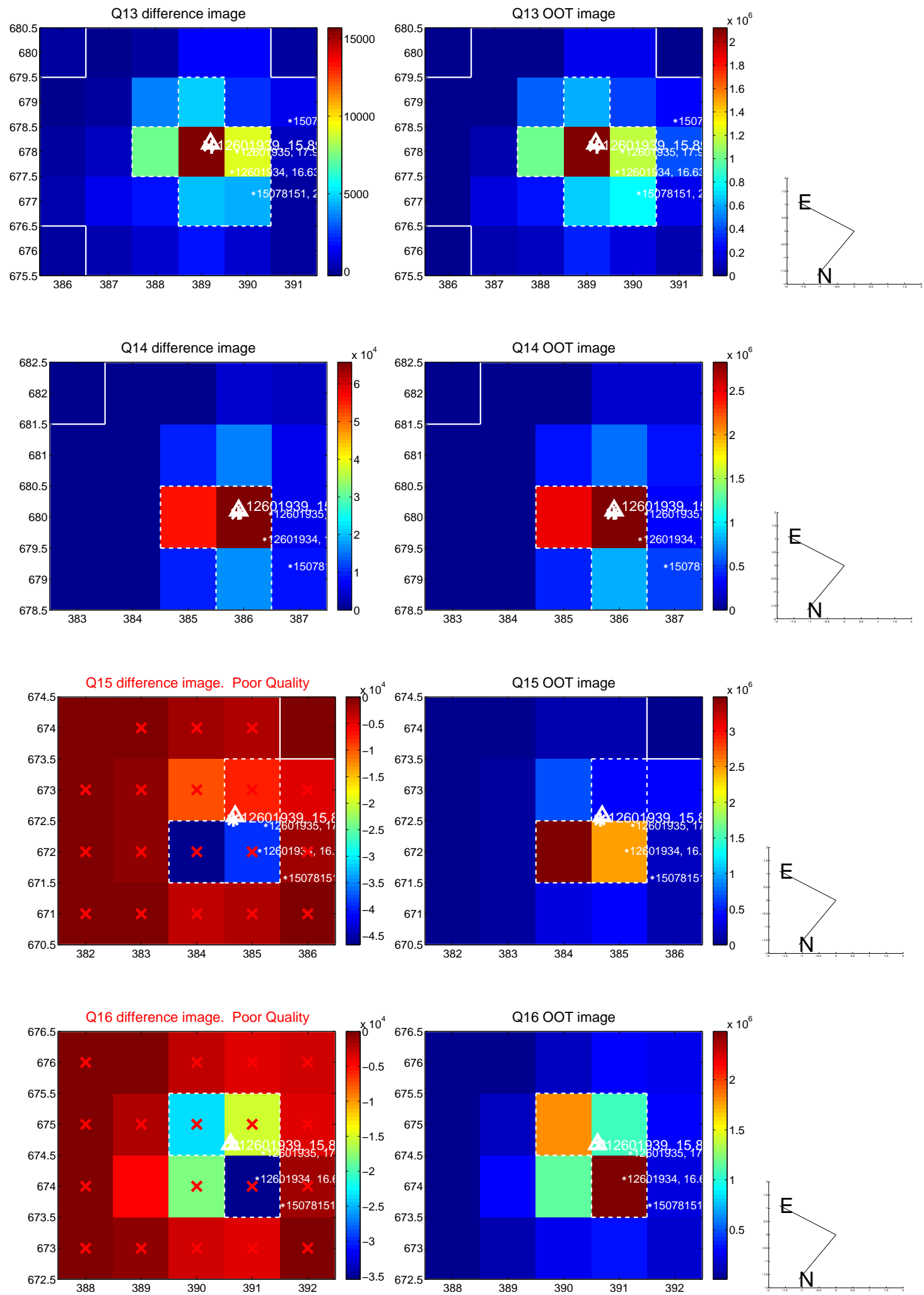
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



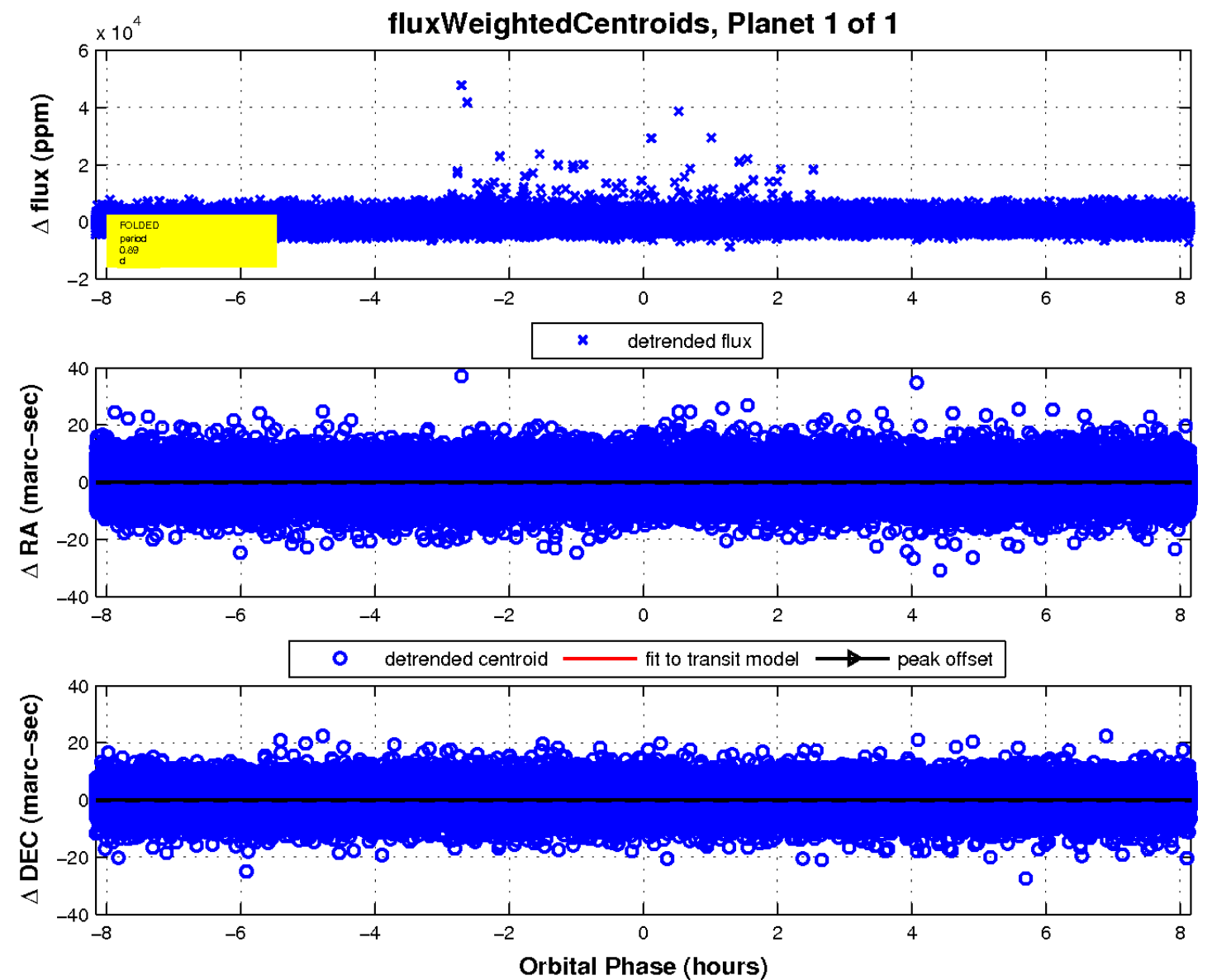
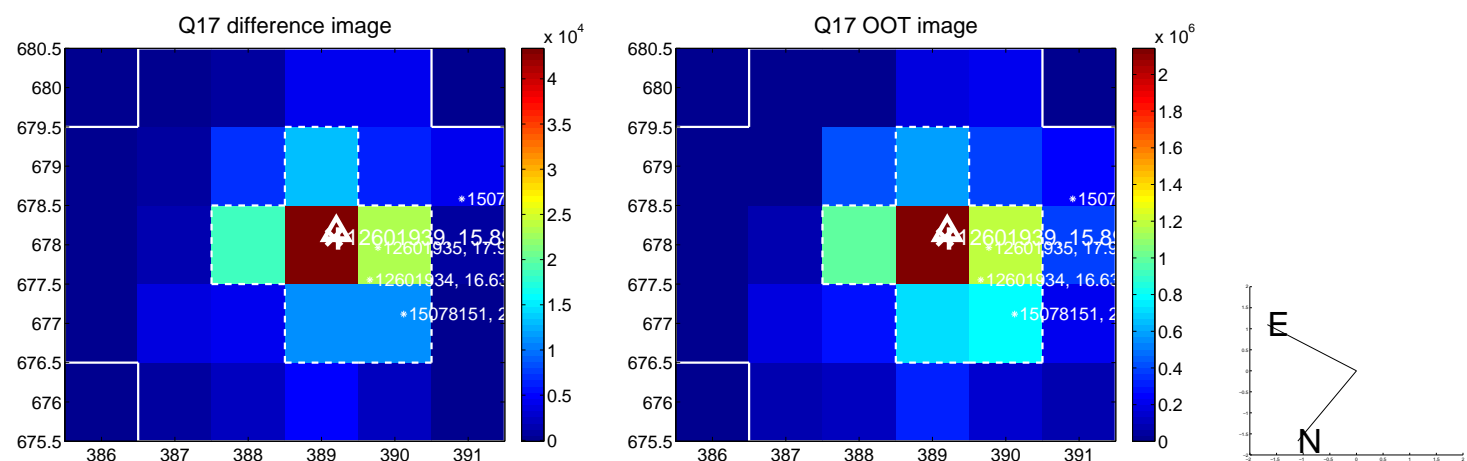
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

