

KIC 006616270

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})
006616270-01	OBS	No	395.876619	382.291346	33.1	13.916	8.2	4.4	4.89	8313	3.17	48.43

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006616270-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_SATURATED

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

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

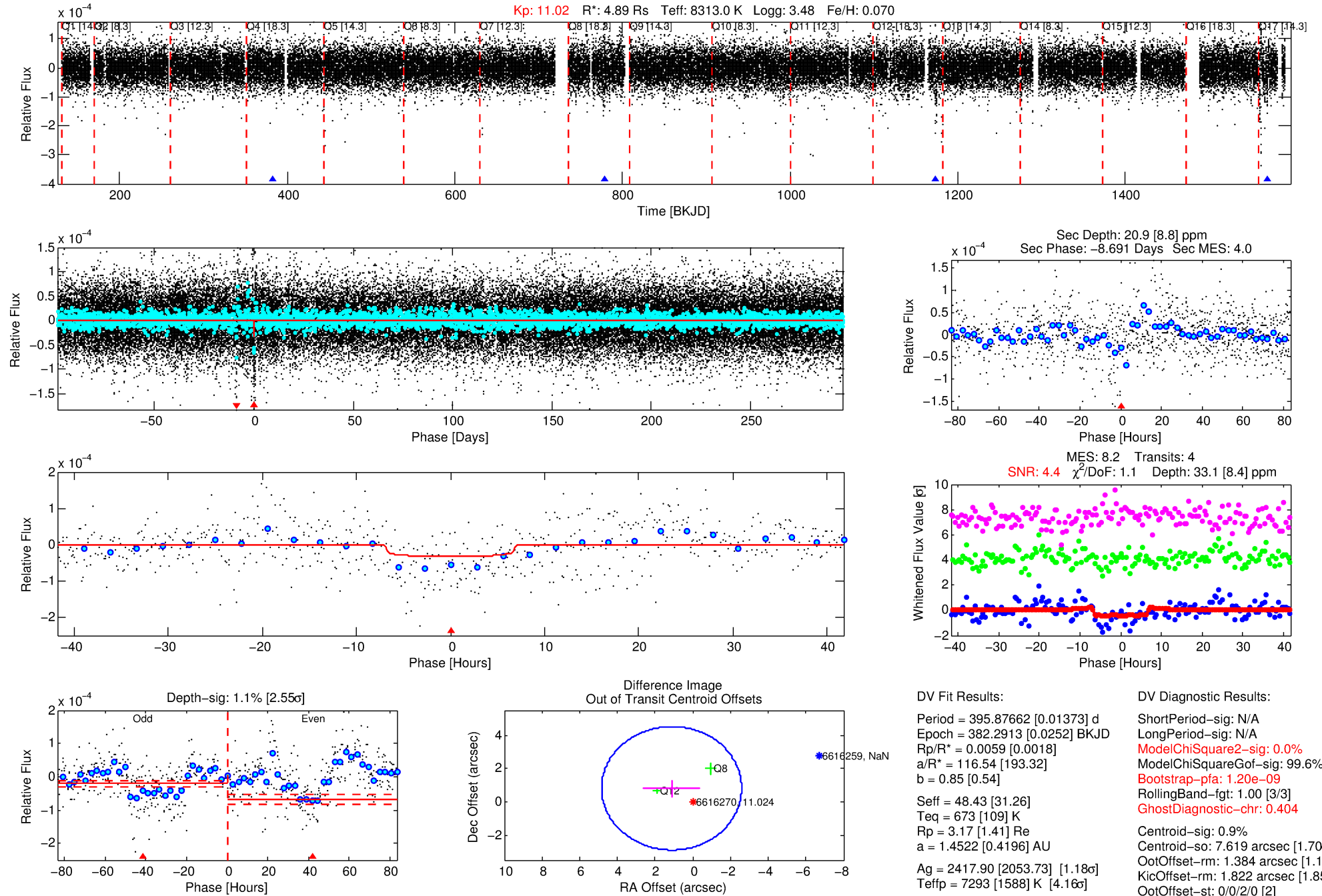
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006616270-01

No Significant Match Found

DV One-Page Summary

KIC: 6616270 Candidate: 1 of 1 Period: 395.877 d



DV Fit Results:

Period = 395.87662 [0.01373] d
Epoch = 382.2913 [0.0252] BKJD
Rp/R* = 0.0059 [0.0018]
a/R* = 116.54 [193.32]
b = 0.85 [0.54]
Seff = 48.43 [31.26]
Teff = 673 [109] K
Rp = 3.17 [1.41] Re
a = 1.4522 [0.4196] AU
Ag = 2417.90 [2053.73] [1.18] σ
Teffp = 7293 [1588] K [4.16] σ

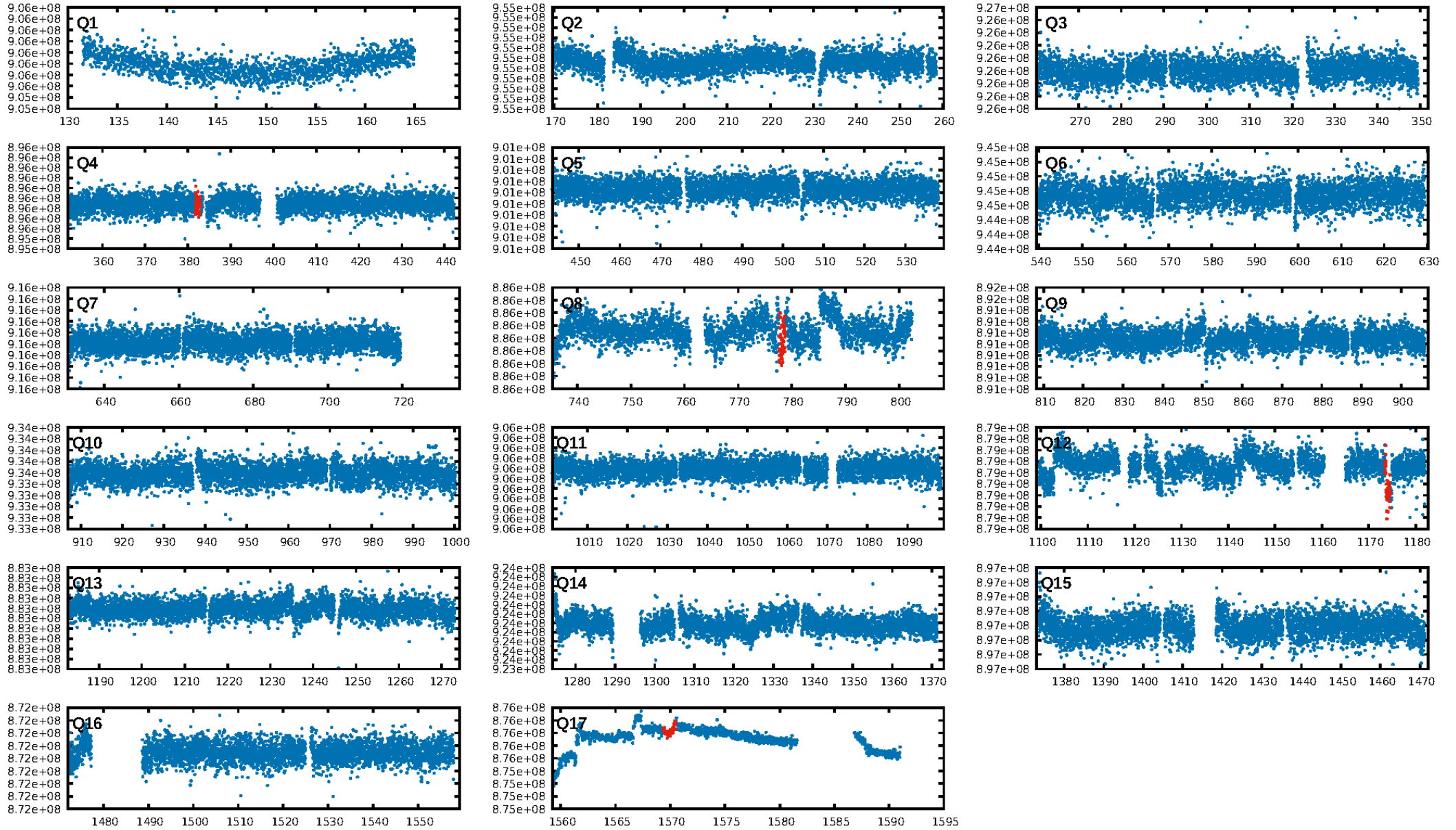
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 99.6%
Bootstrap-pfa: 1.20e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.404
Centroid-sig: 0.9%
Centroid-so: 7.619 arcsec [1.70] σ
OotOffset-rm: 1.384 arcsec [1.12] σ
KicOffset-rm: 1.822 arcsec [1.85] σ
OotOffset-st: 0/0/2/0 [2]
KicOffset-st: 0/0/2/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [4/4]

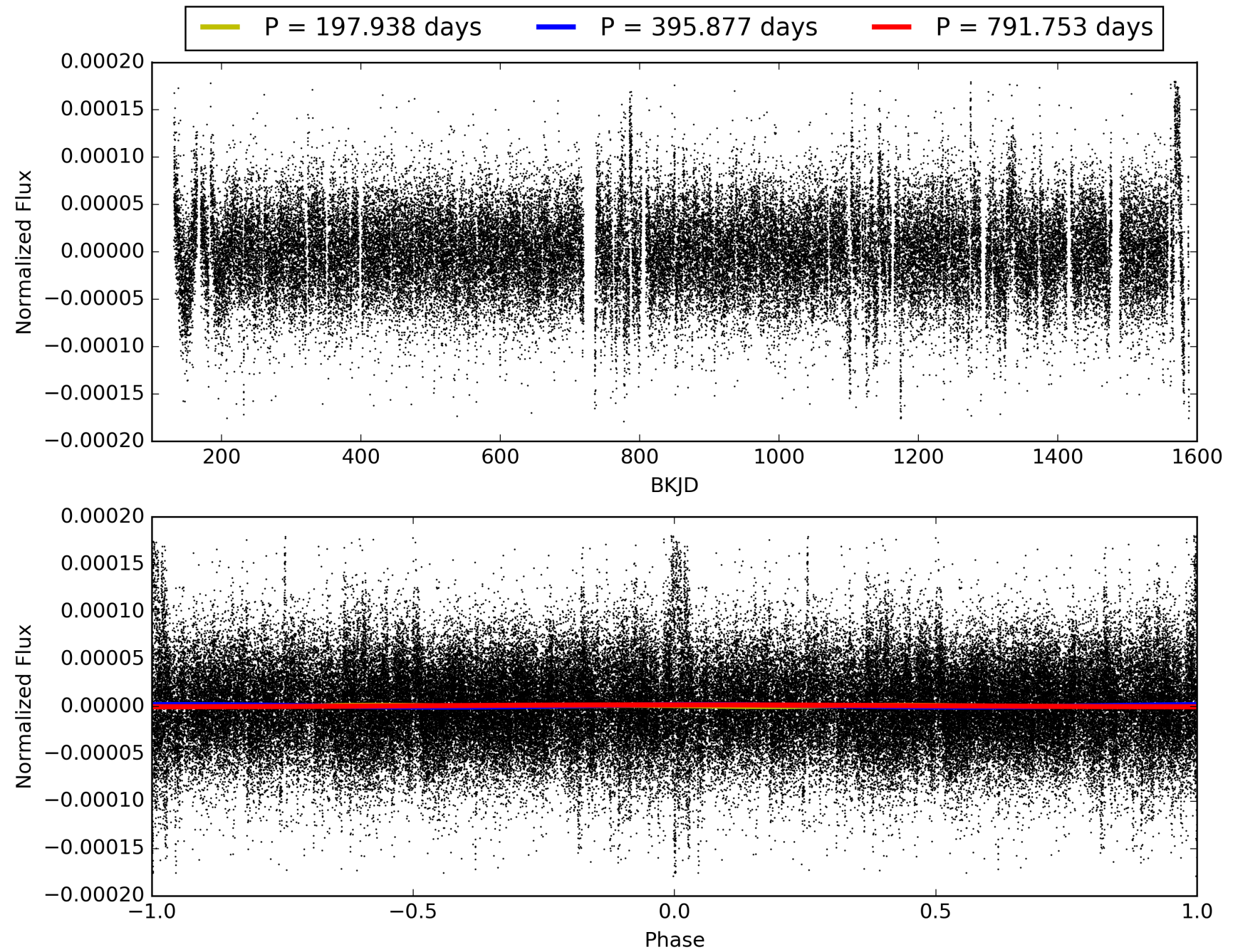
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:32:46 Z

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

TCE 006616270-01, PDC Light Curves

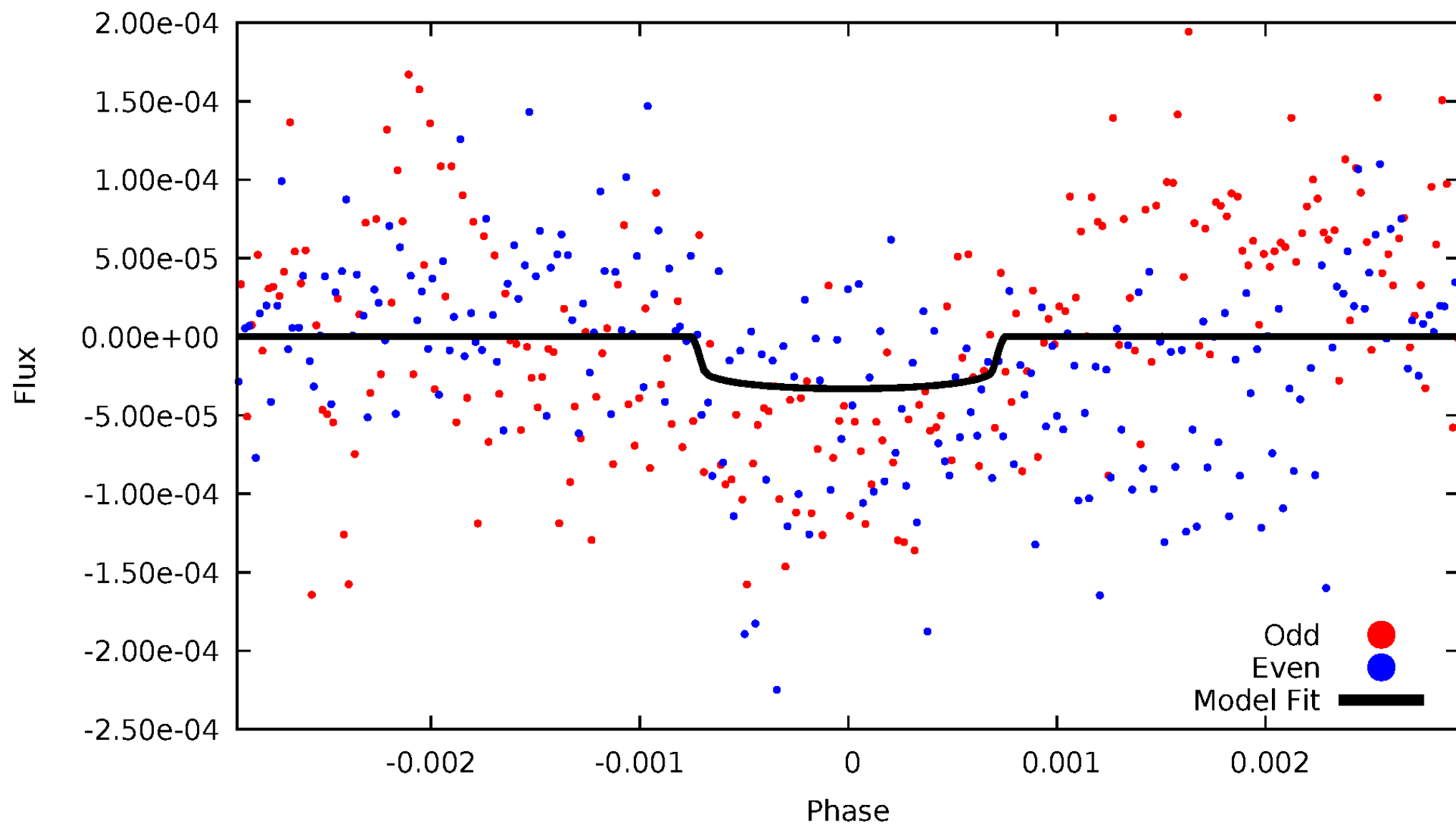


TCE 006616270-01



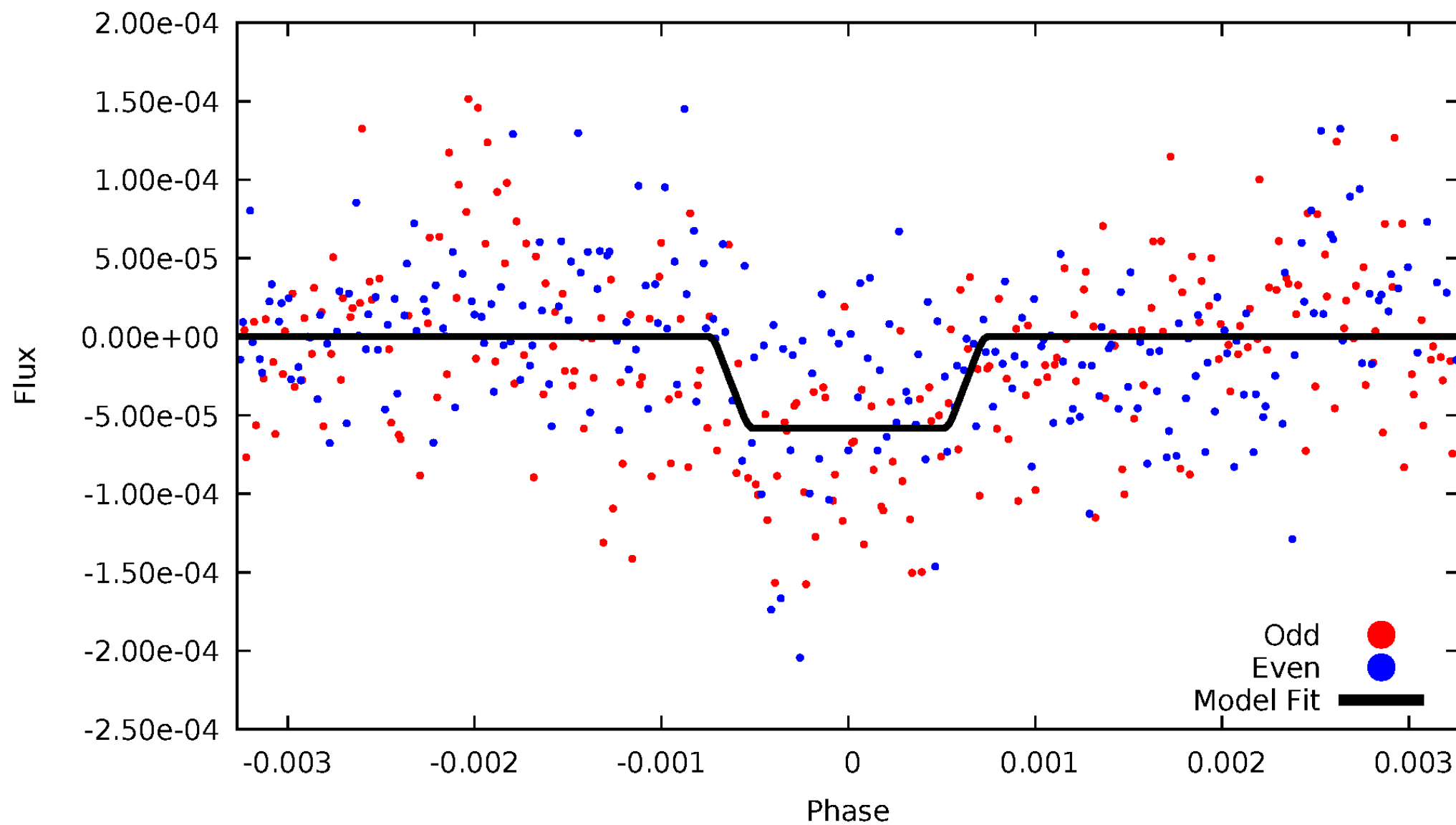
DV Odd/Even

TCE 006616270-01

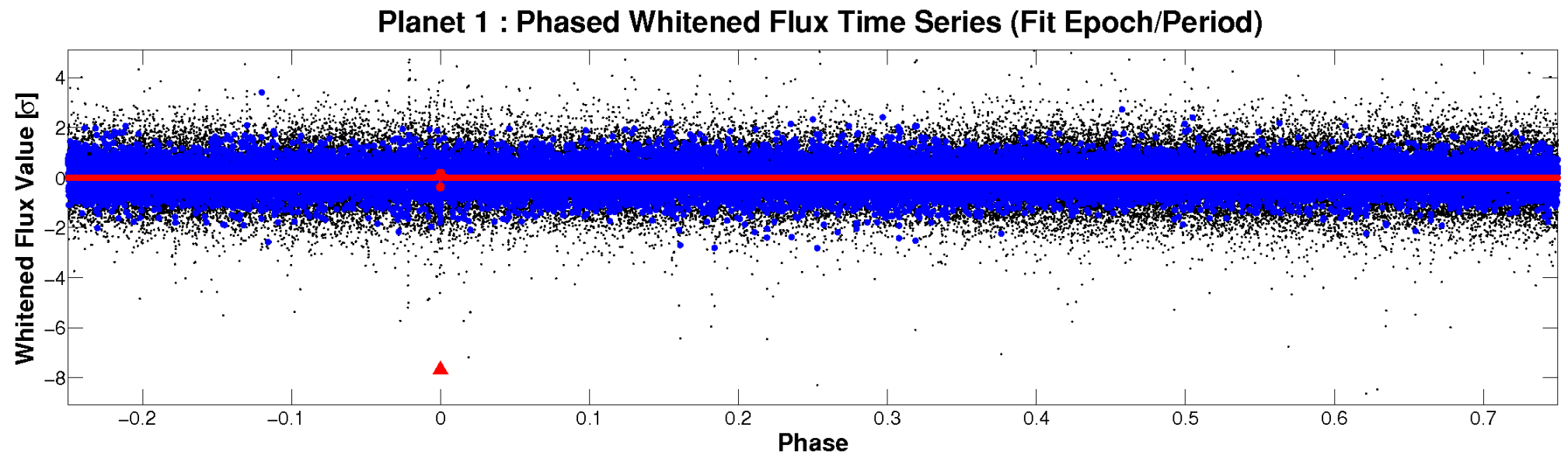
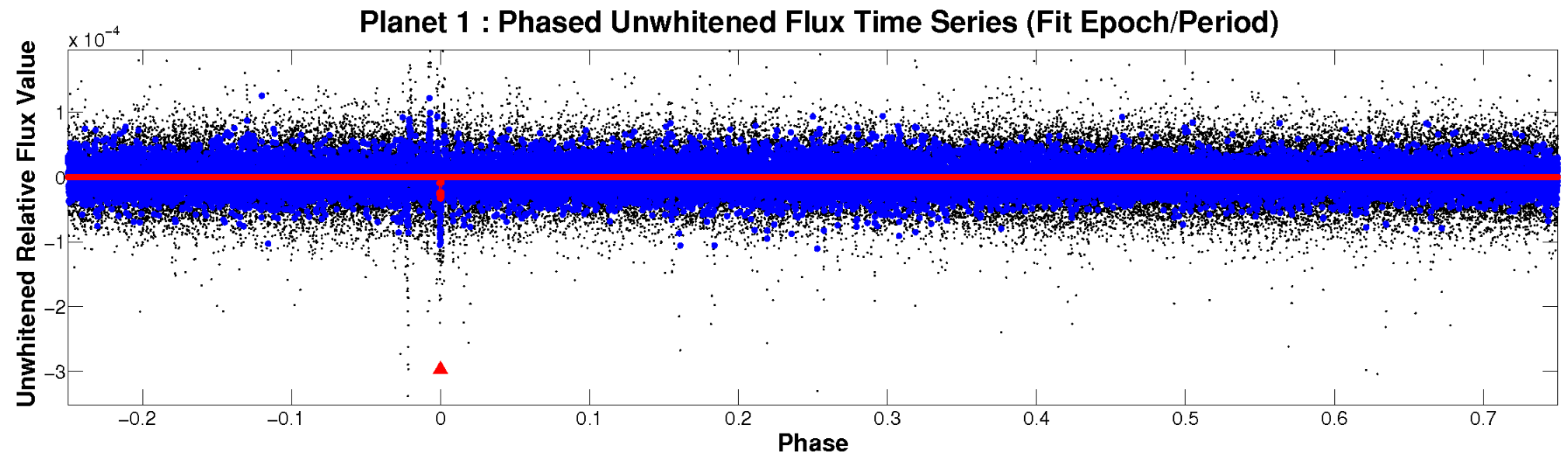


ALT Odd/Even

TCE 006616270-01



Non-Whitened Vs. Whitened Light Curve



PDC Quarter-Phased Transit Curves

TCE 006616270-01 P=395.876619 Days $T_0=382.291346$ (BKJD)



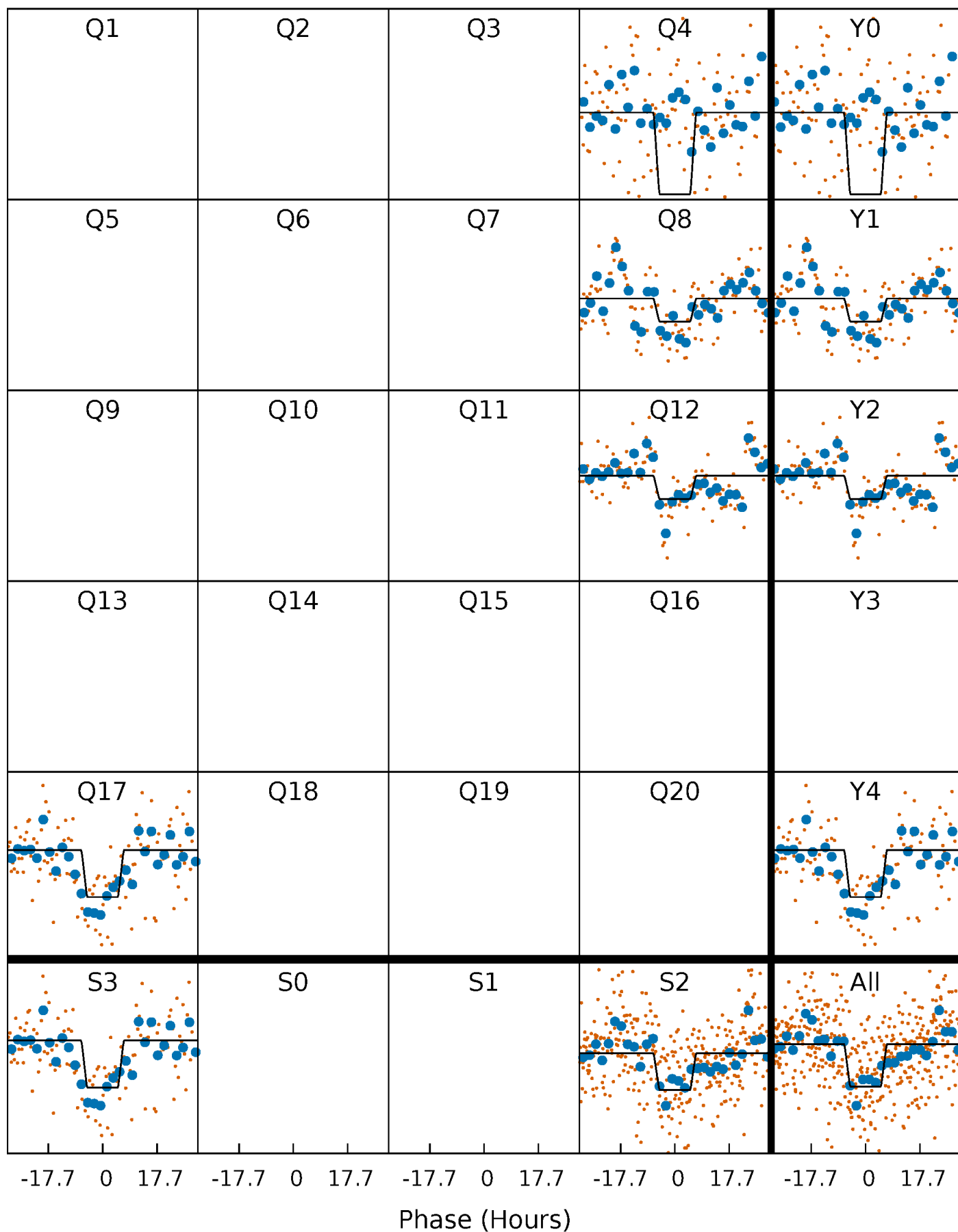
DV Quarter-Phased Transit Curves

TCE 006616270-01 P=395.876619 Days $T_0=382.291346$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

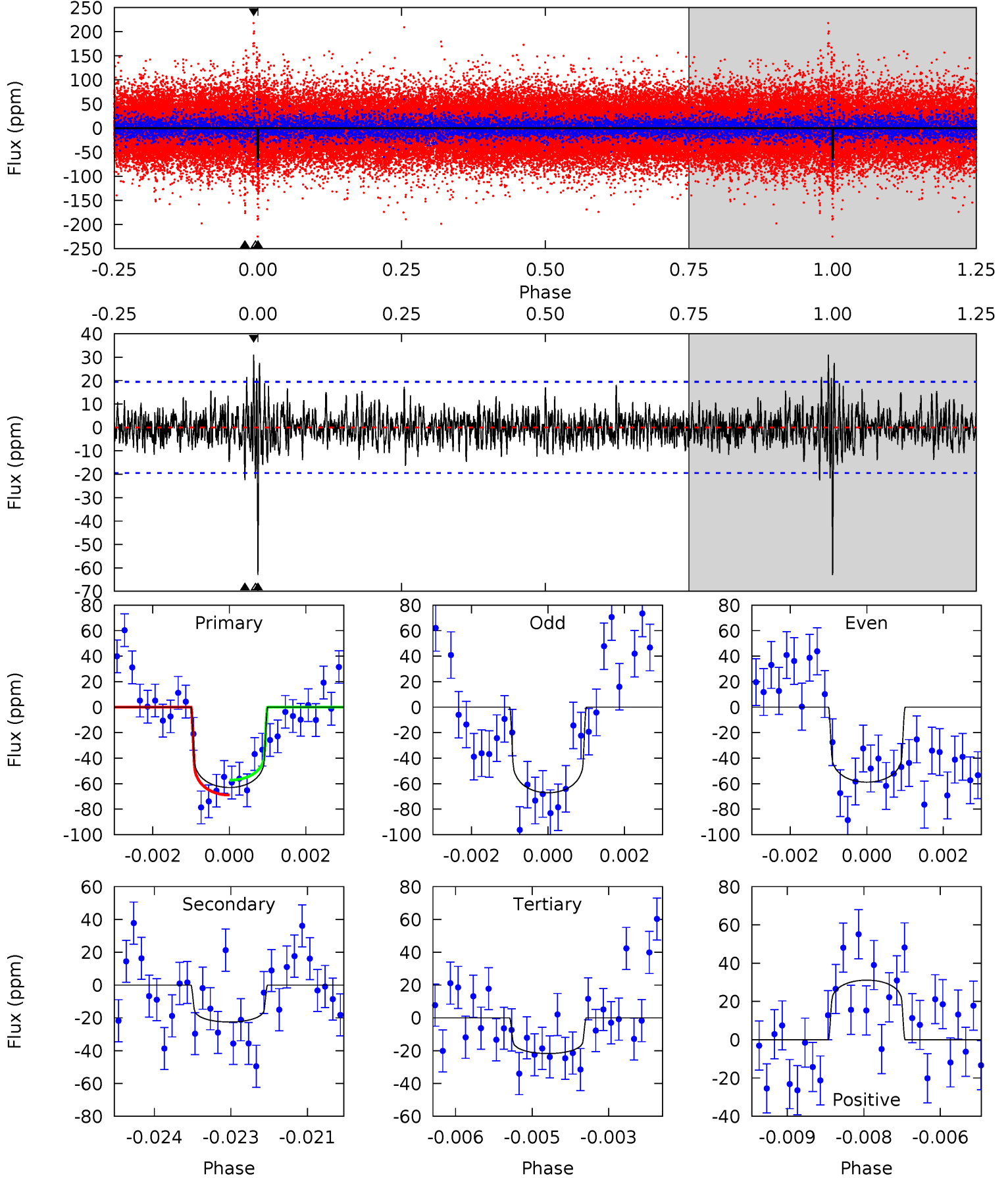
TCE 006616270-01 P=395.872980 Days $T_0=382.265275$ (BKJD)



DV Model-Shift Uniqueness Test

006616270-01, P = 395.876619 Days, E = 382.291346 Days

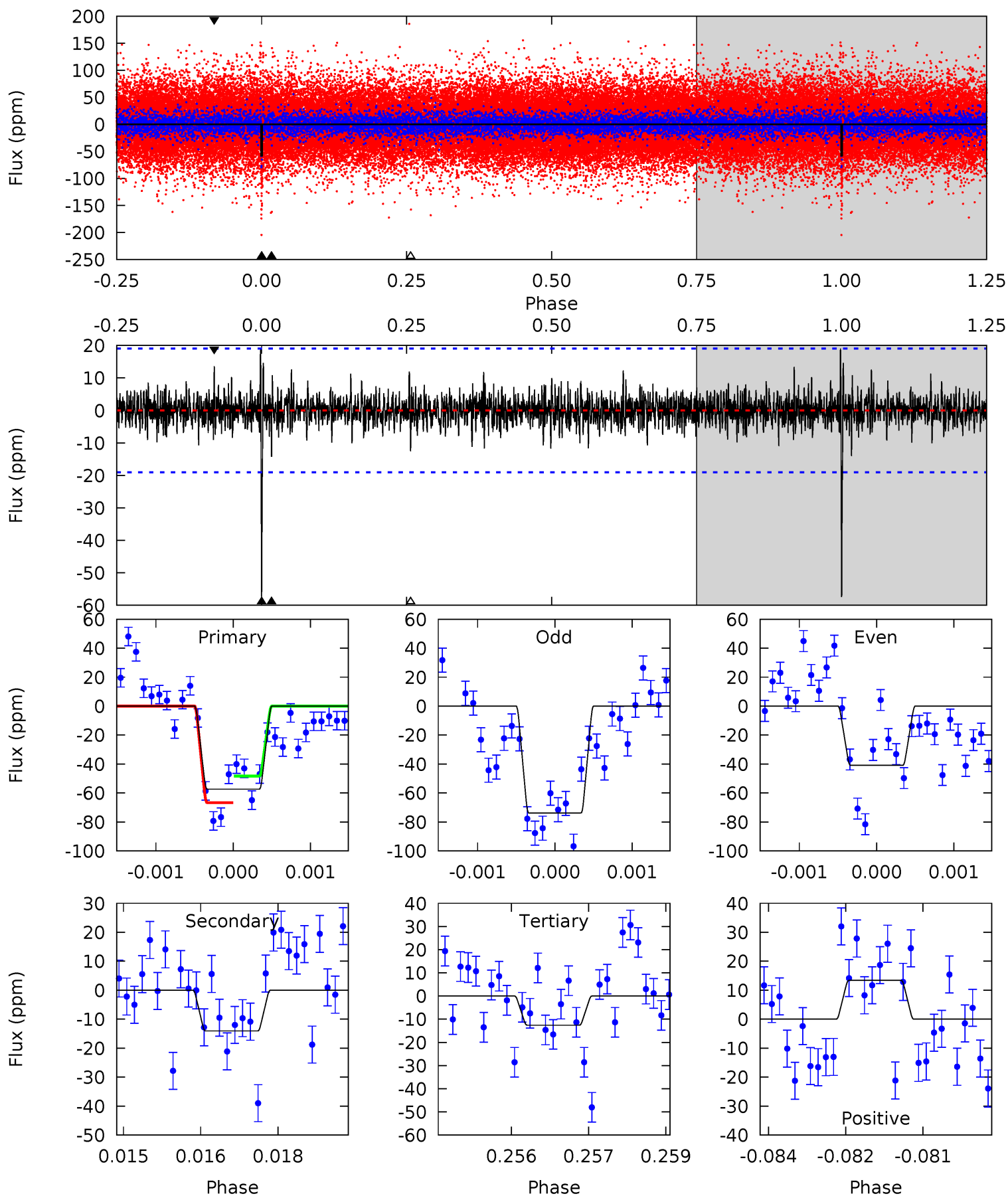
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.4	6.22	6.01	8.60	5.38	3.17	1.46	11.4	8.80	0.21	-2.38	1.14	0.93	0.33	1.61



Alt Model-Shift Uniqueness Test

006616270-01, $P = 395.872980$ Days, $E = 382.265275$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.2	3.97	3.56	3.79	5.38	3.18	0.96	12.7	12.4	0.42	0.19	4.65	0.77	0.25	2.59



Stellar Parameters For KIC 006616270

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8313^{+424}_{-990}	$3.476^{+0.245}_{-0.140}$	$0.070^{+0.150}_{-0.100}$	$4.886^{+0.284}_{-1.608}$	$2.607^{+0.213}_{-0.598}$	$0.031^{+0.050}_{-0.005}$
	+5%/-12%	+7%/-4%	+214%/-143%	+6%/-33%	+8%/-23%	+159%/-15%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 006616270-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-23 ± 4	$3.00^{+1.06}_{-1.02}$	915^{+82}_{-107}	7142^{+1895}_{-1064}	2808^{+3418}_{-1258}
Alt.	-14 ± 4	$3.97^{+1.06}_{-1.06}$	916^{+76}_{-117}	5495^{+854}_{-653}	1037^{+814}_{-442}

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 $A_{obs} \gg 1.0$

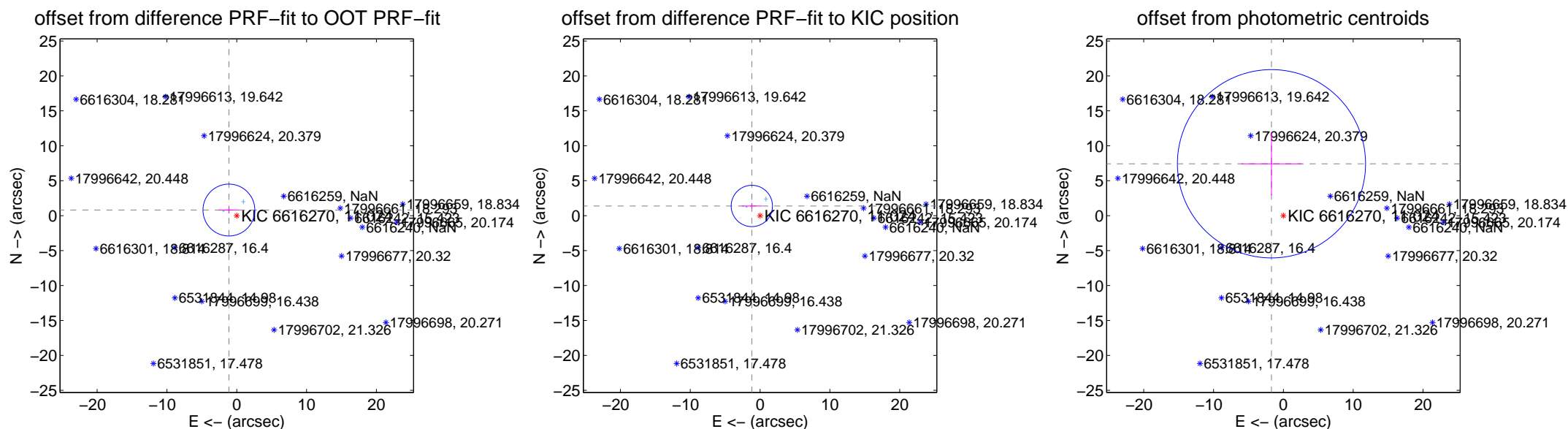
DV Centroid Data

Supplemental centroid analysis for 006616270-01. **Kepler magnitude: 11.02.** Transit SNR 4.42

There are 2 quarters with good PRF difference image offsets

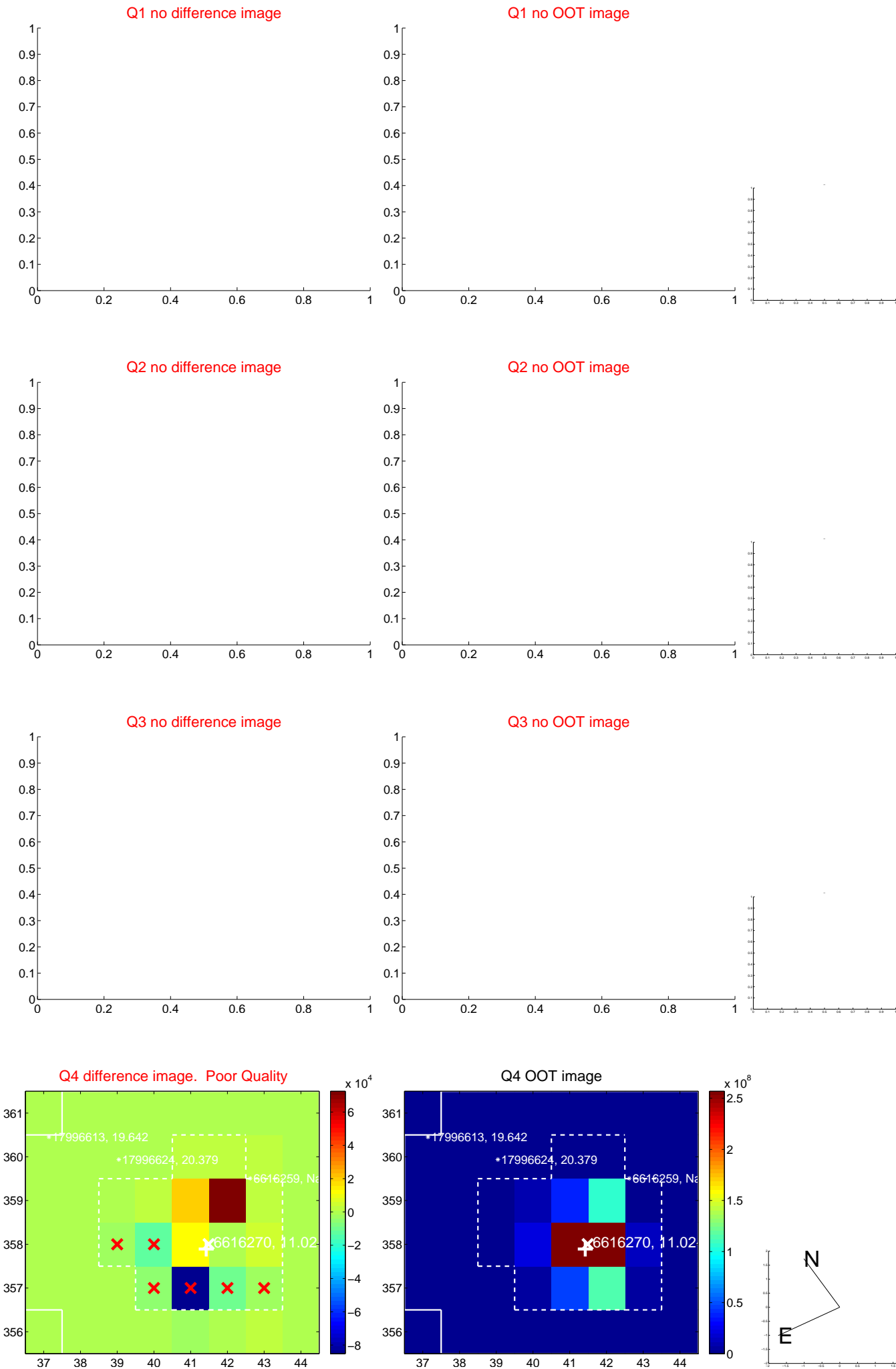
The direct PRF centroid is offset from the target star catalog position by about 0.61 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.384 ± 1.237	1.12	1.126 ± 1.481	0.806 ± 0.487
PRF-fit source offset from KIC position	1.822 ± 0.986	1.85	1.179 ± 1.445	1.389 ± 0.409
photometric centroid source offset	7.62 ± 4.49	1.70	1.70 ± 4.34	7.43 ± 4.50

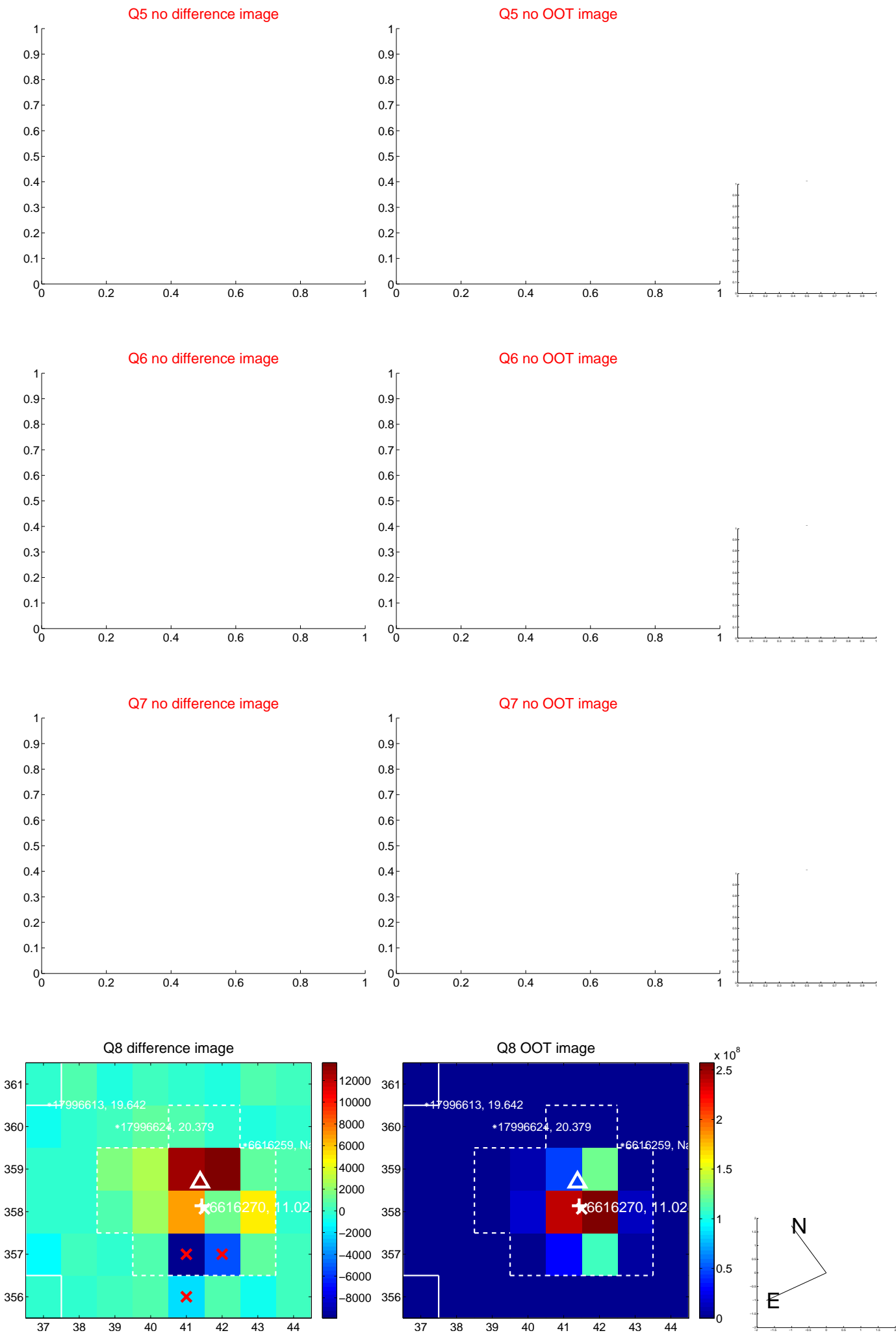


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

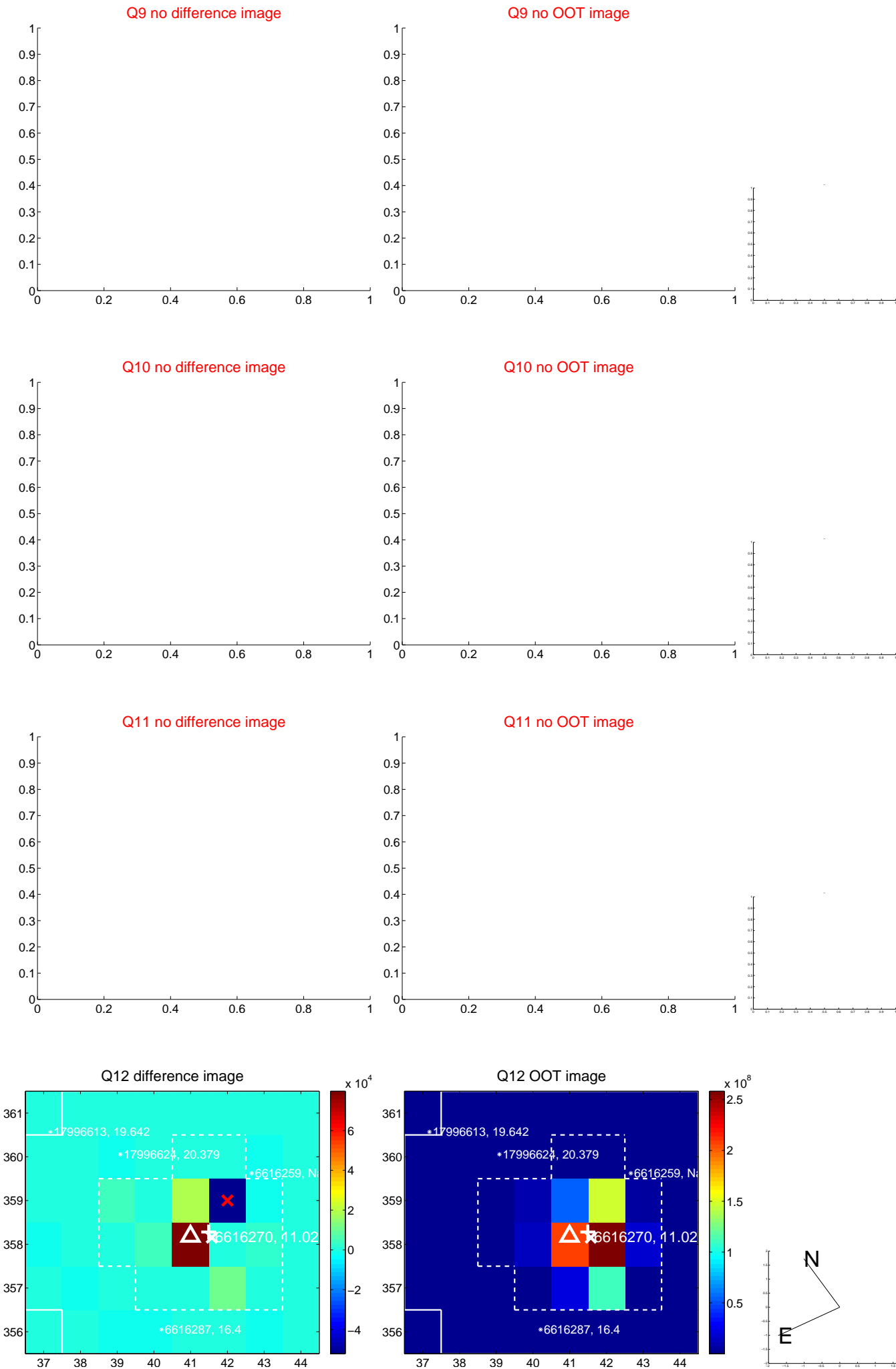
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



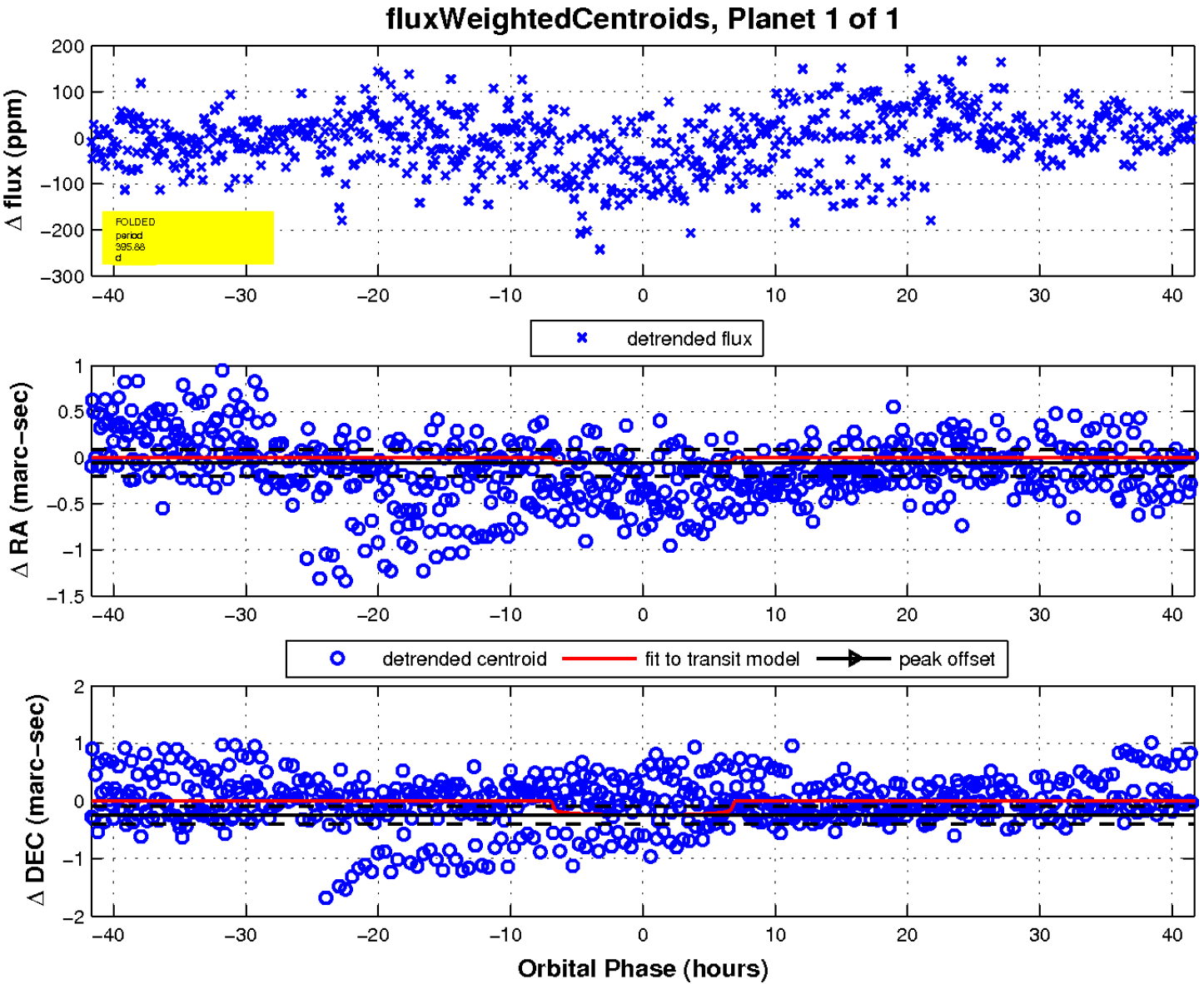
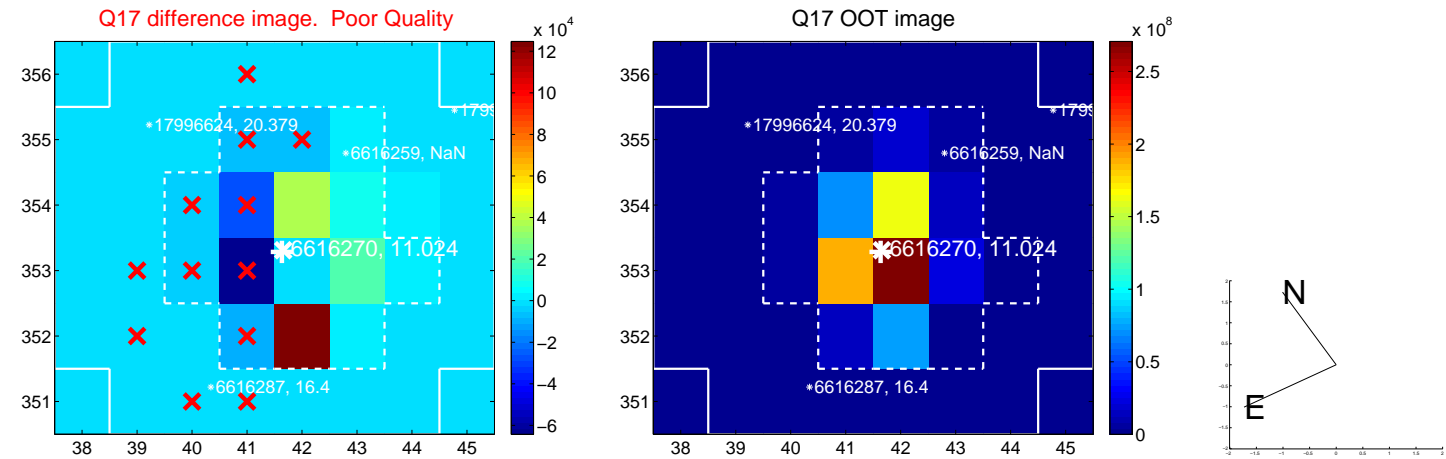
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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.



UKIRT Image

Declination

