

# KIC 010200627

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
010200627-01	OBS	6217.01	7.701430	134.255298	151.3	11.193	11.9	13.4	3.61	5174	4.98	1660.67

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010200627-01	OBS	PC	0.96	0	0	0	0	NO_COMMENT

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

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

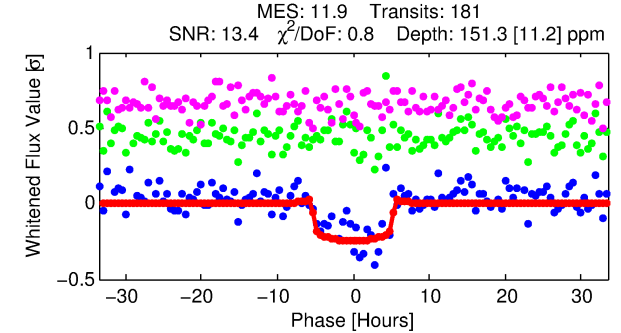
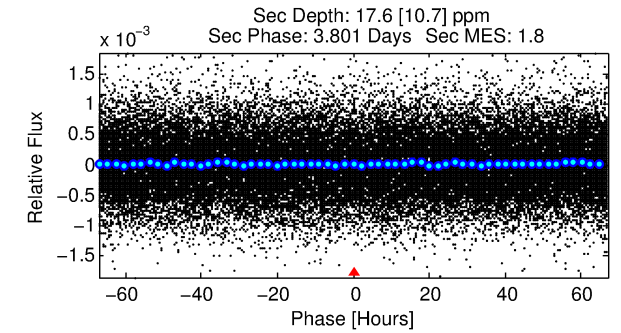
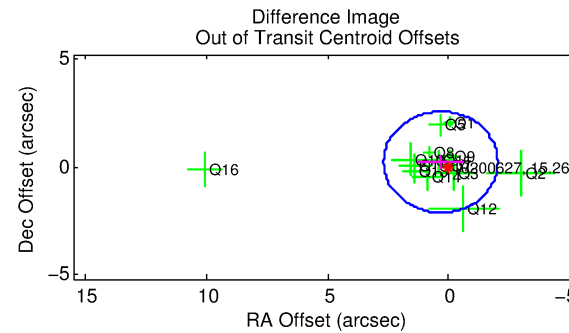
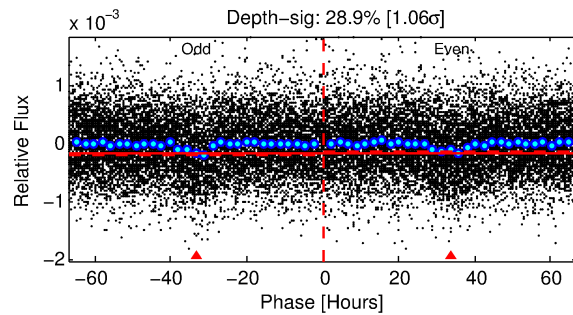
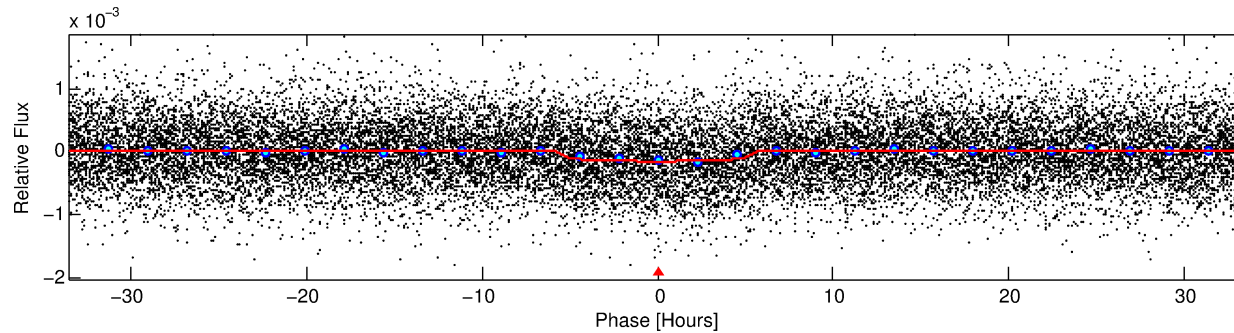
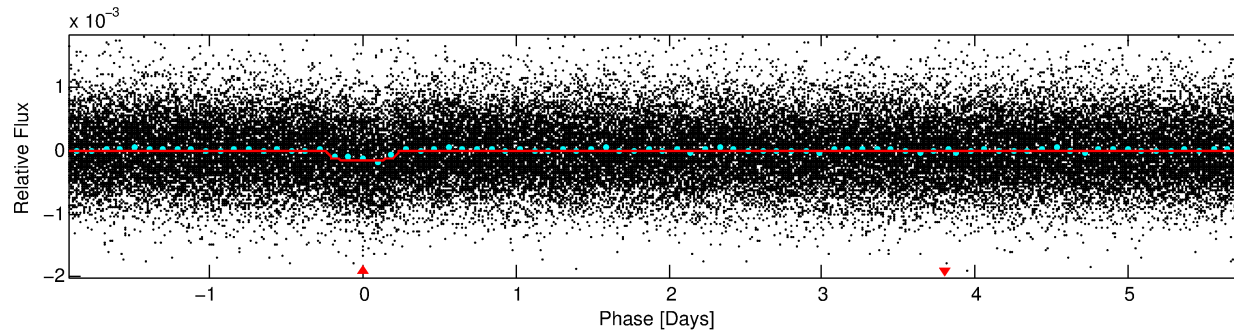
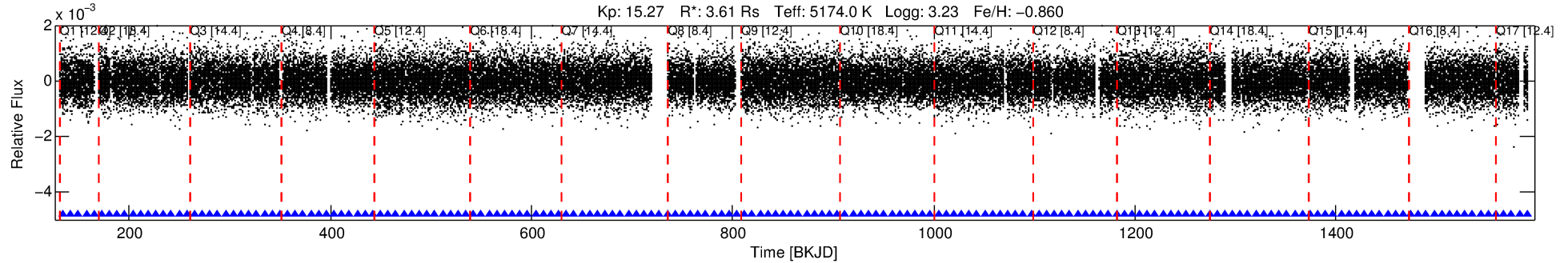
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 010200627-01

No Significant Match Found

# DV One-Page Summary

KIC: 10200627 Candidate: 1 of 1 Period: 7.701 d  
KOI: K06217.01 Corr: 0.963



## DV Fit Results:

Period = 7.70143 [0.00011] d  
Epoch = 134.2553 [0.0109] BKJD  
Rp/R\* = 0.0127 [0.0033]  
a/R\* = 3.24 [3.35]  
b = 0.82 [0.46]  
Seff = 1660.67 [227.35]  
Teq = 1628 [56] K  
Rp = 4.98 [1.39] Re  
a = 0.0709 [0.0054] AU  
Ag = 1.96 [1.57] [0.61 $\sigma$ ]  
Teffp = 2978 [599] K [2.25 $\sigma$ ]

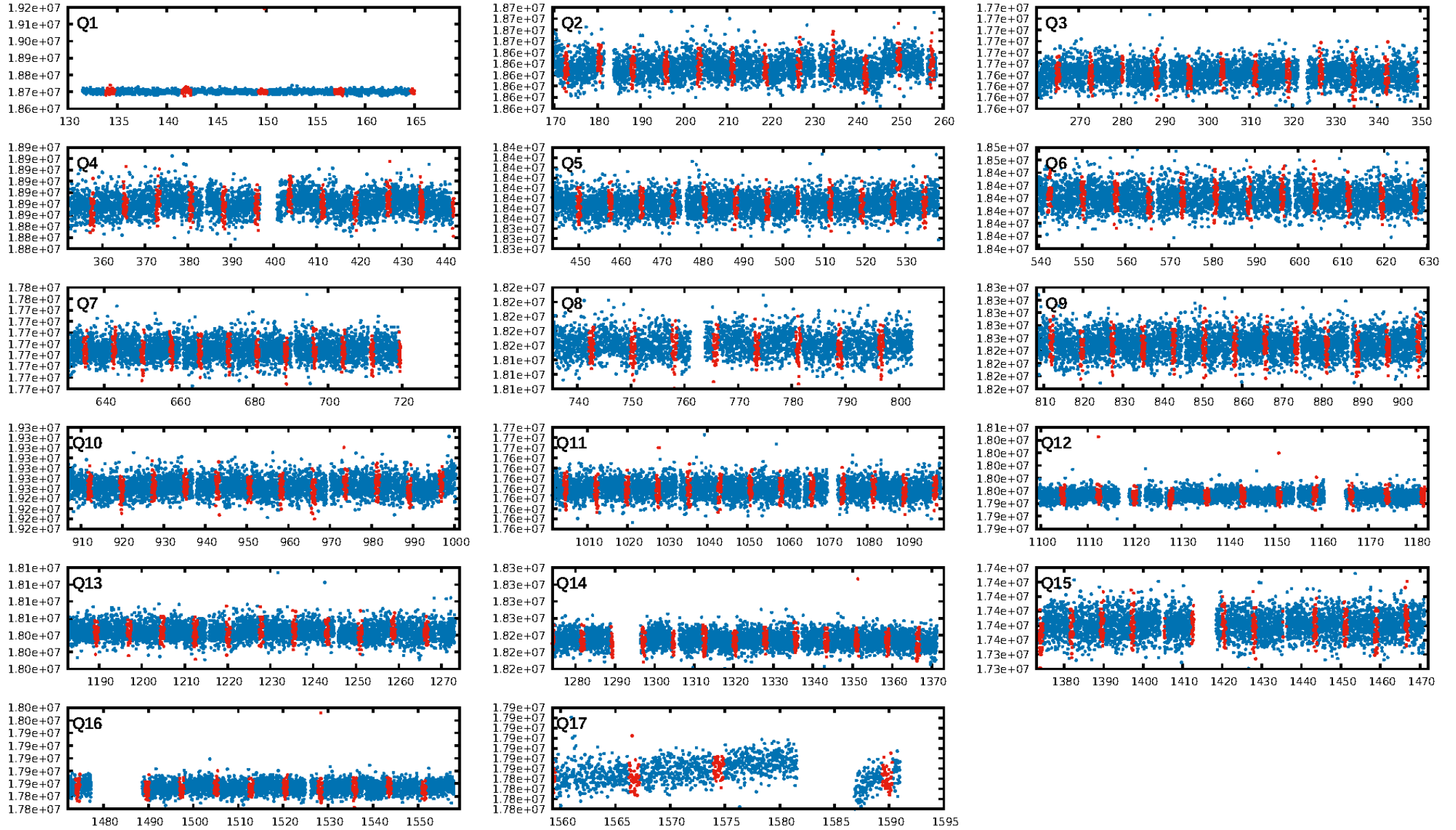
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 22.7%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: 3.81e-30  
RollingBand-fgt: 1.00 [172/172]  
GhostDiagnostic-chr: 60.71  
Centroid-sig: 51.4%  
Centroid-so: 0.824 arcsec [0.97 $\sigma$ ]  
OotOffset-rm: 0.389 arcsec [0.49 $\sigma$ ]  
KicOffset-rm: 0.509 arcsec [0.89 $\sigma$ ]  
OotOffset-st: 3/4/3/4 [14]  
KicOffset-st: 3/4/3/4 [14]  
DiffImageQuality-fgm: 0.64 [9/14]  
DiffImageOverlap-fno: 1.00 [17/17]

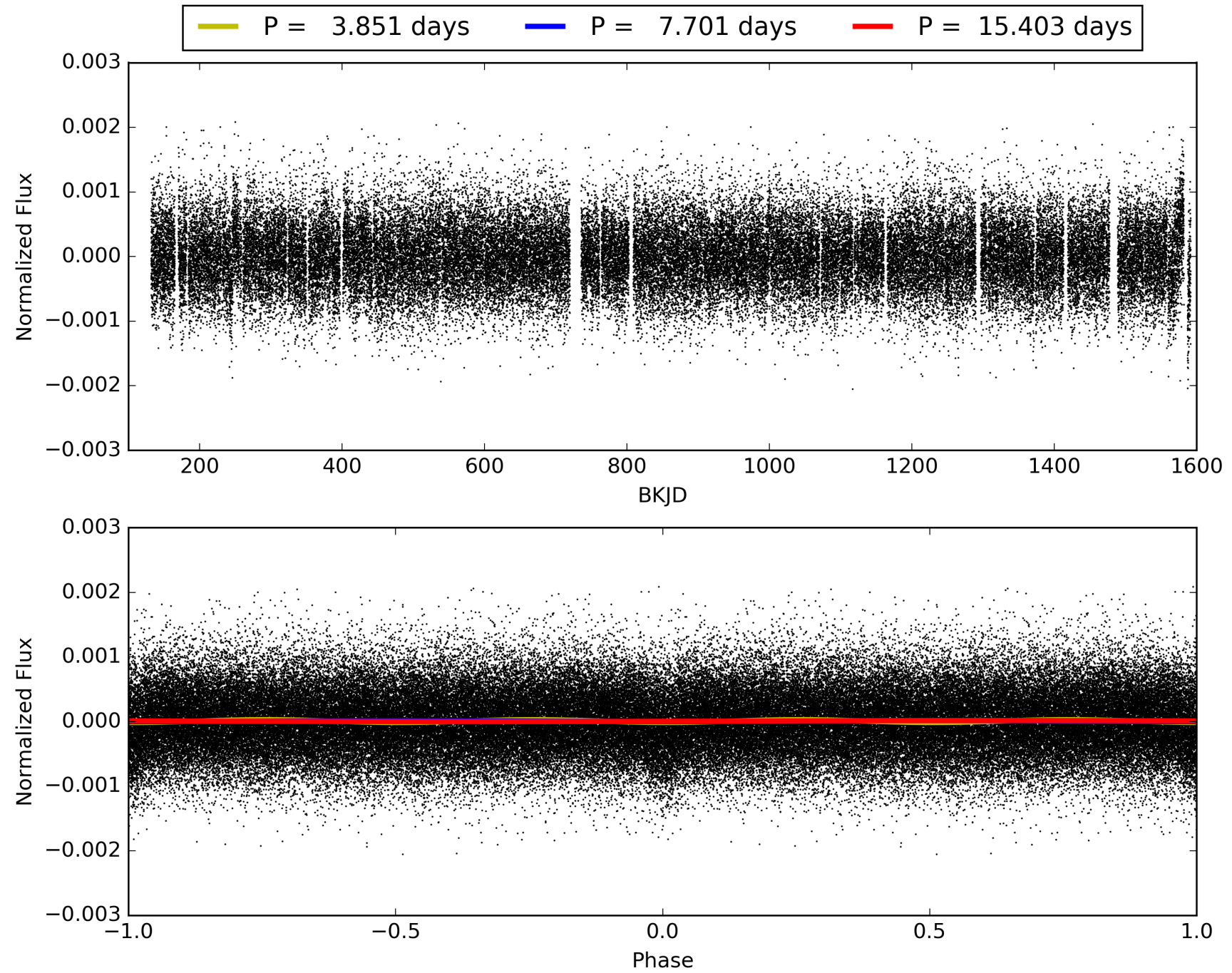
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 23:15:04 Z

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

# TCE 010200627-01, PDC Light Curves

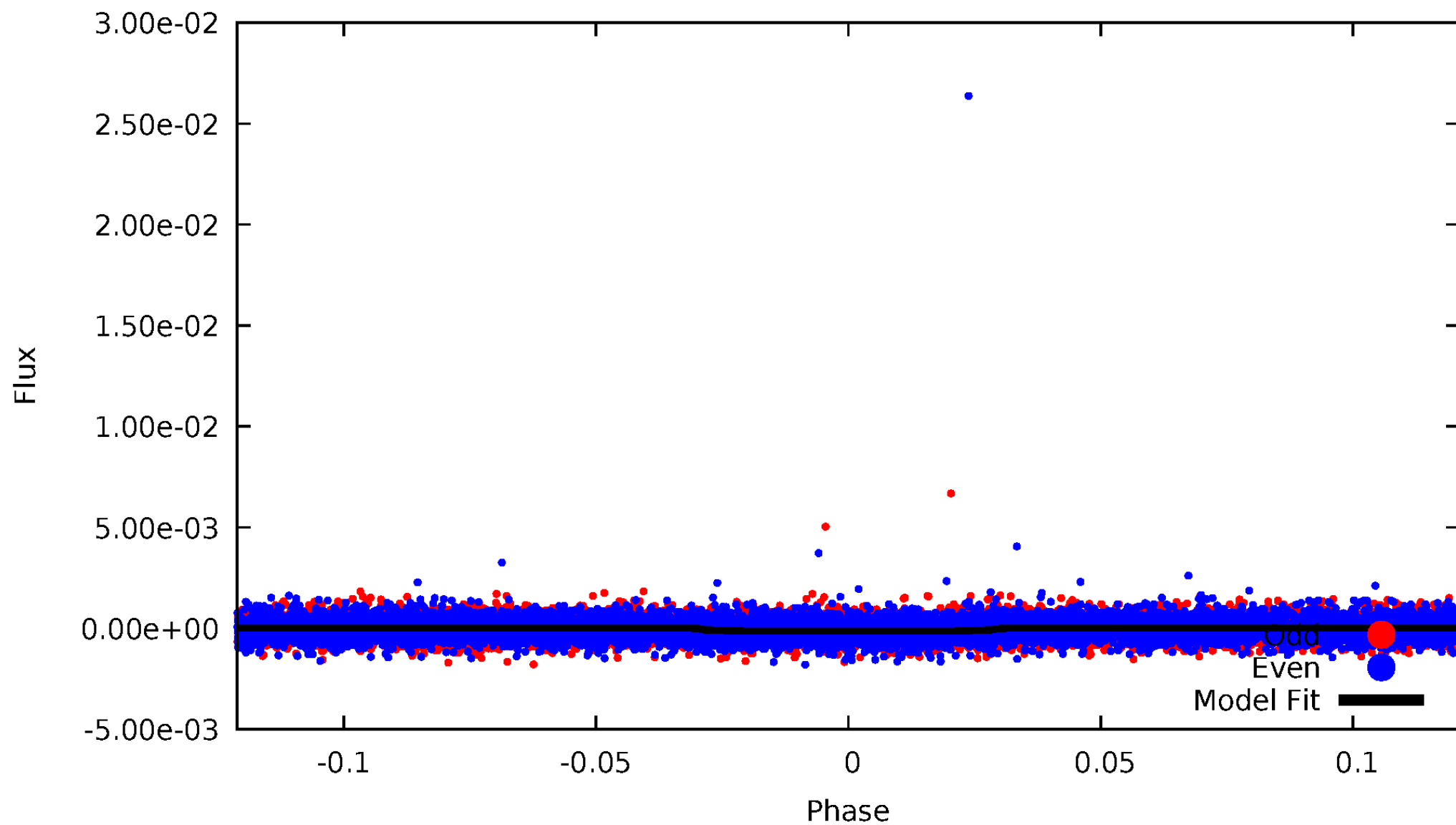


TCE 010200627-01



# DV Odd/Even

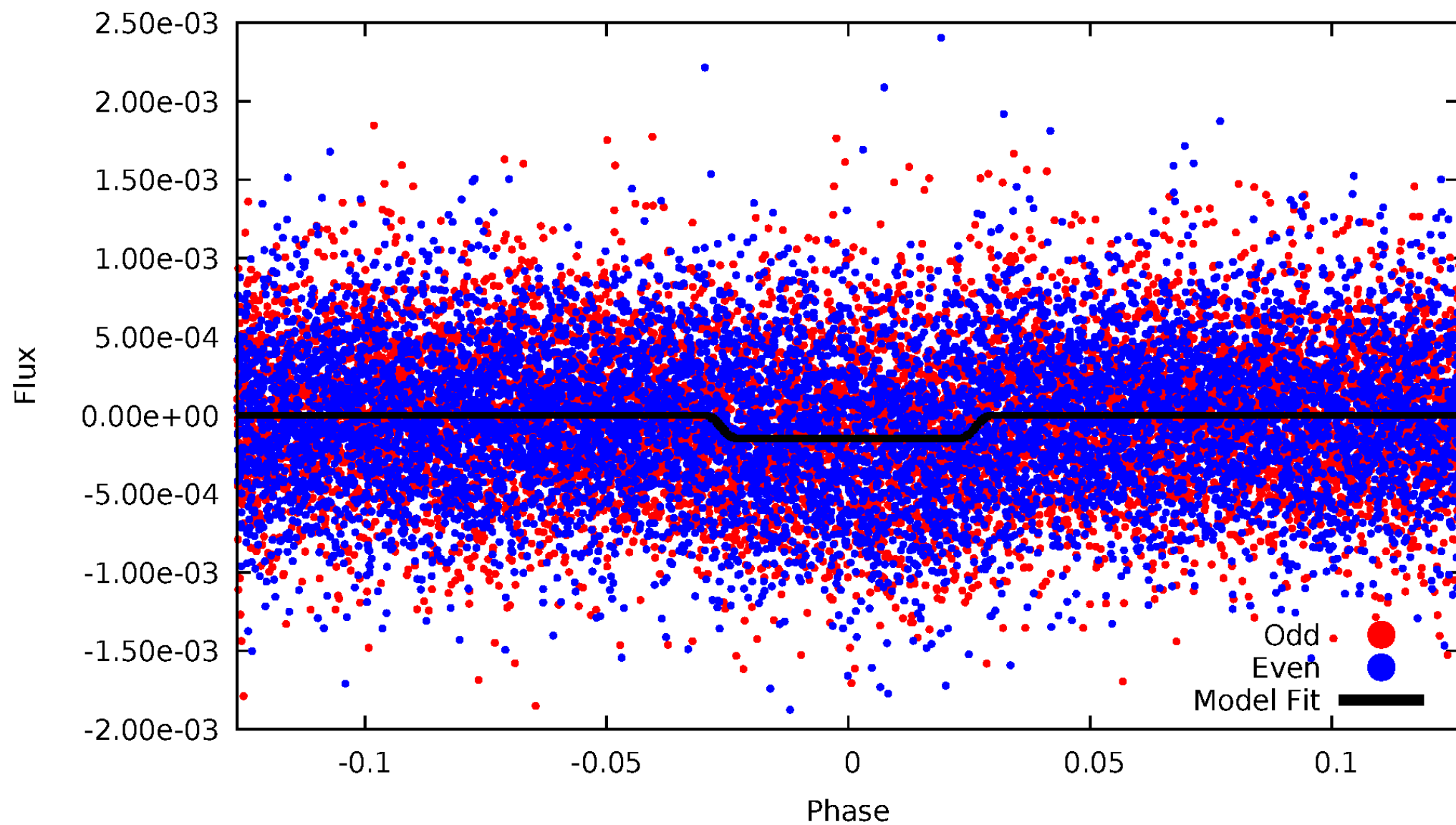
TCE 010200627-01





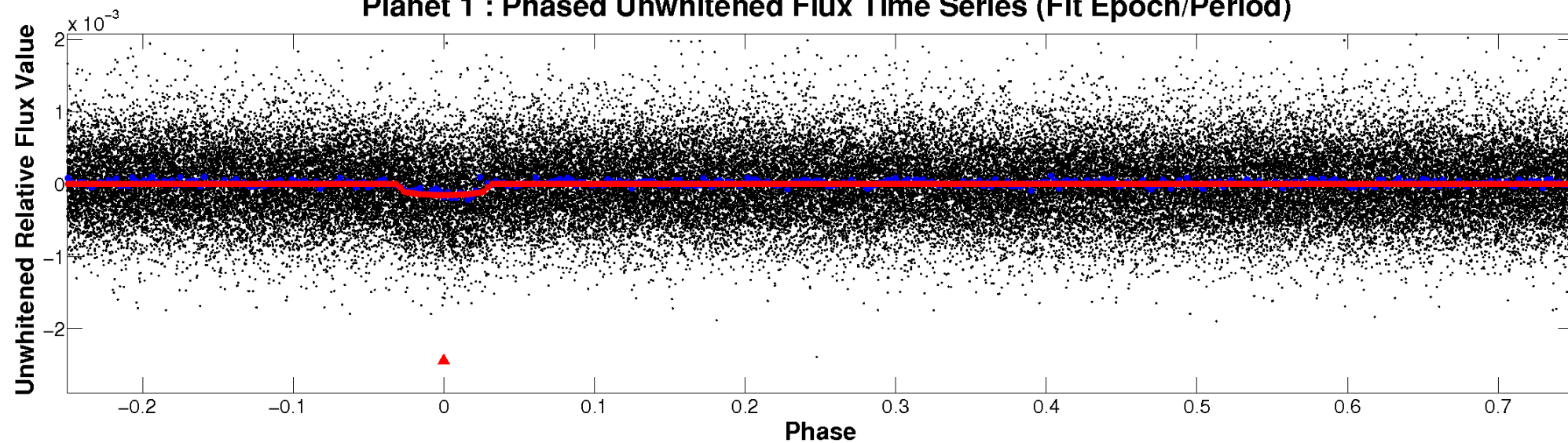
# ALT Odd/Even

TCE 010200627-01

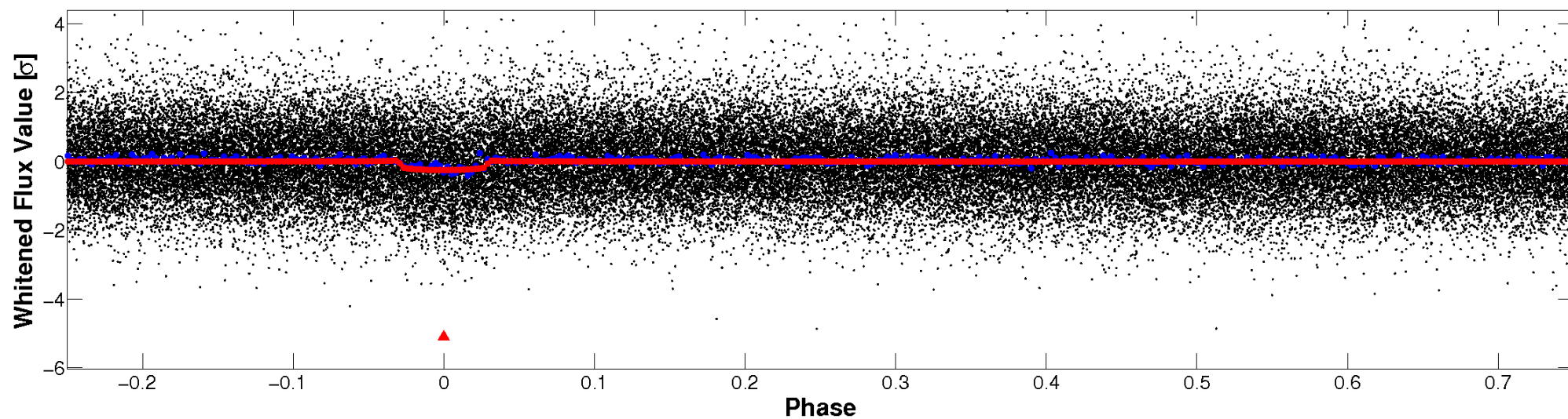


# Non-Whitened Vs. Whitened Light Curve

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

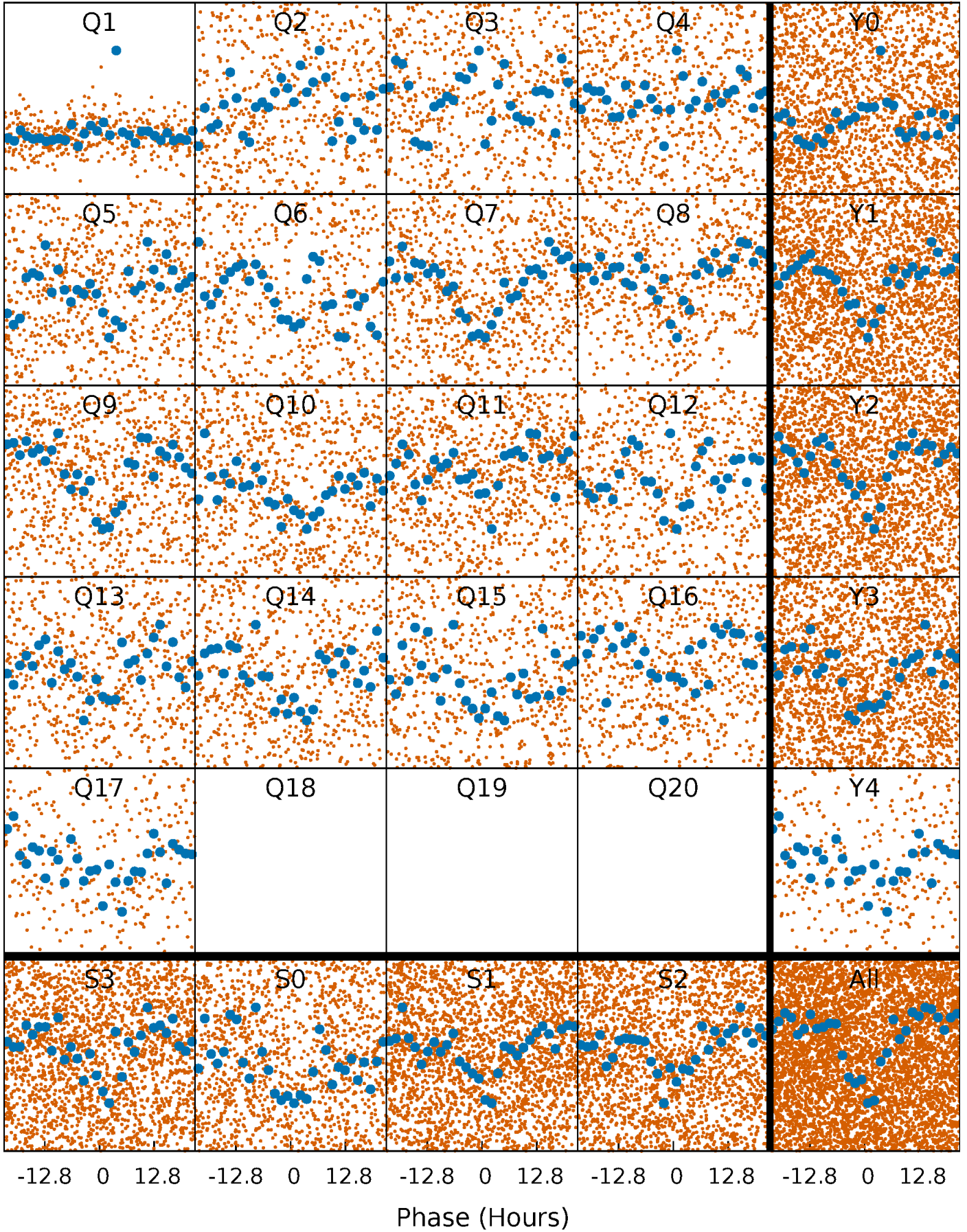


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

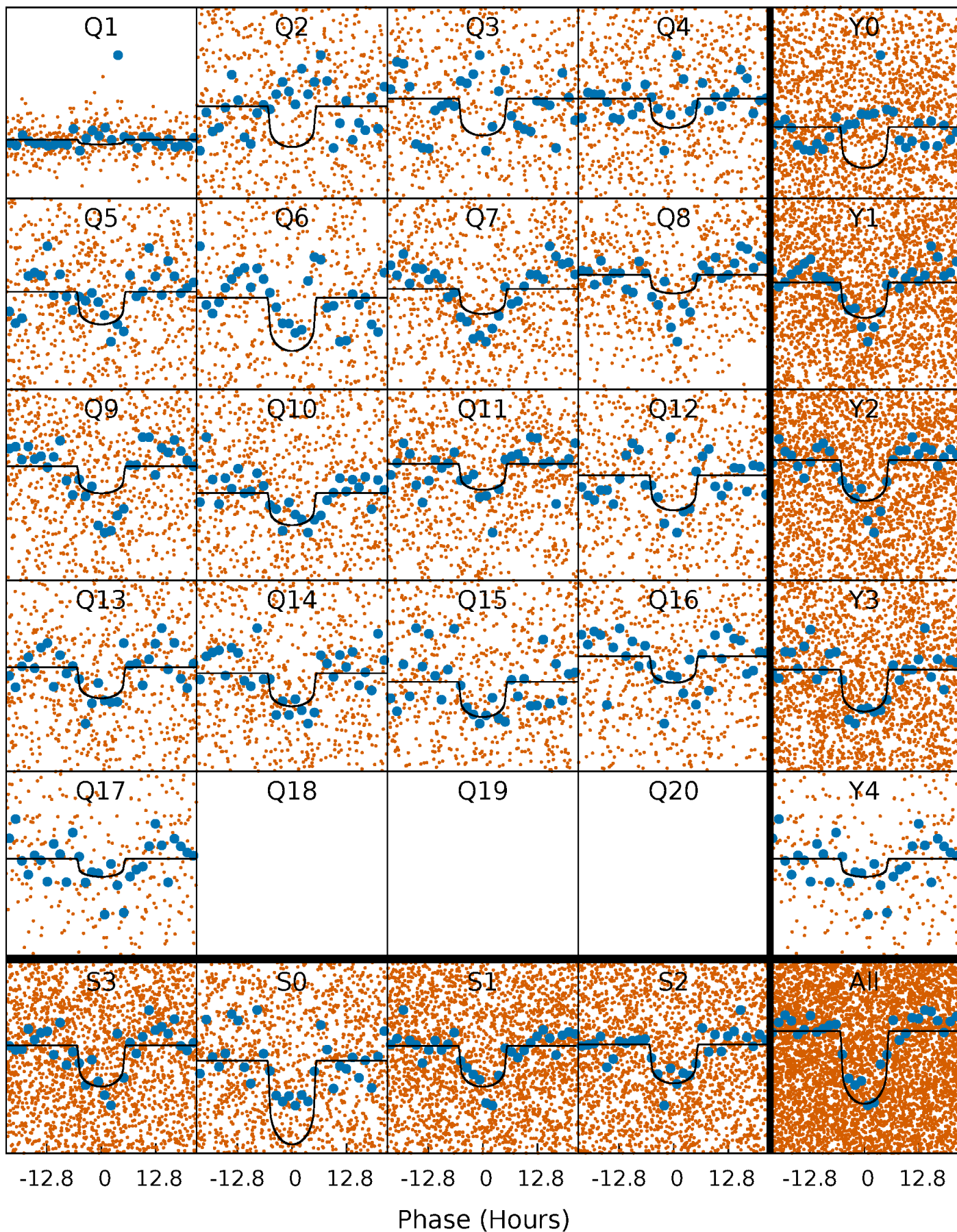
TCE 010200627-01 P= 7.701430 Days  $T_0=134.255298$  (BKJD)





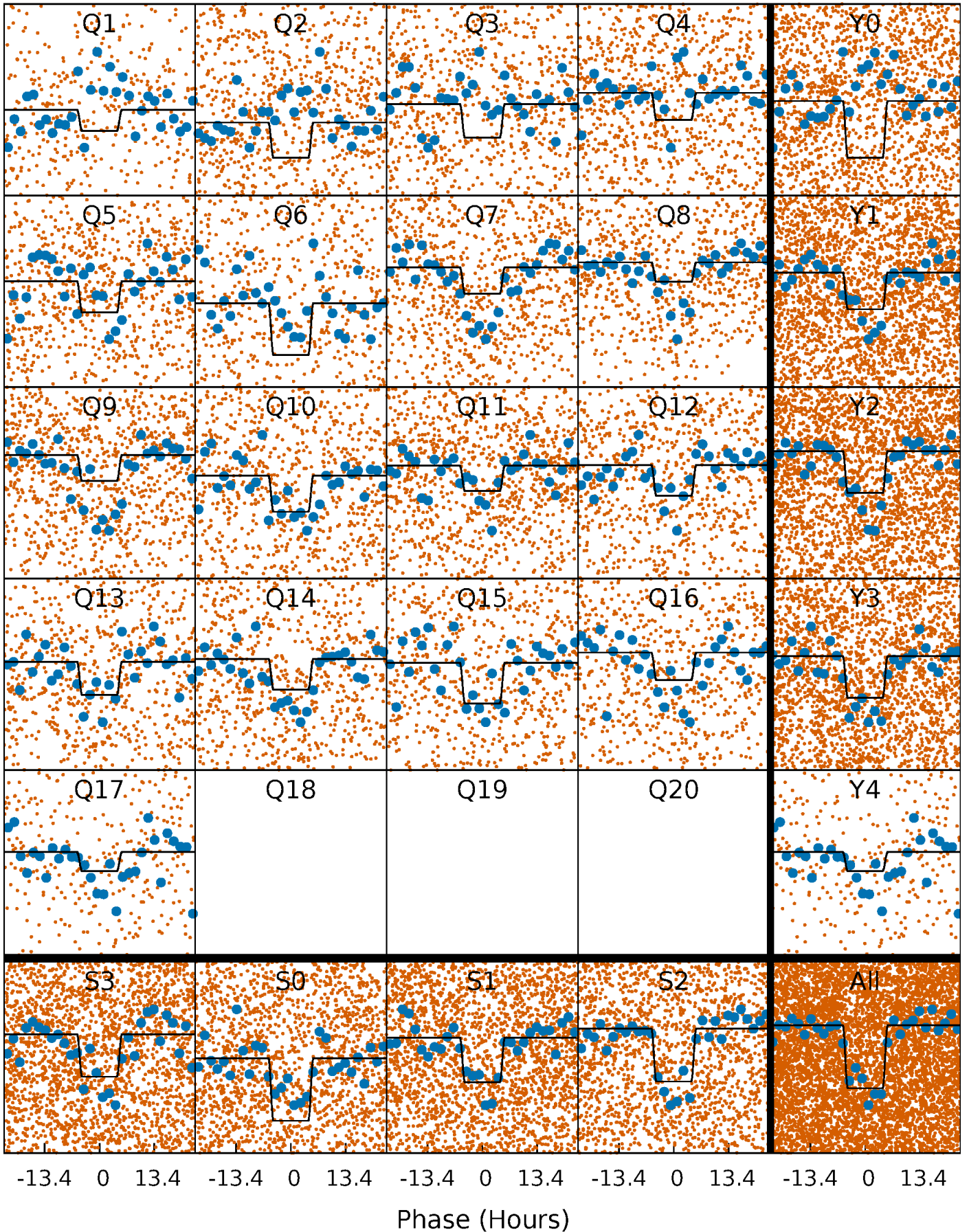
# DV Quarter-Phased Transit Curves

TCE 010200627-01 P= 7.701430 Days  $T_0=134.255298$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

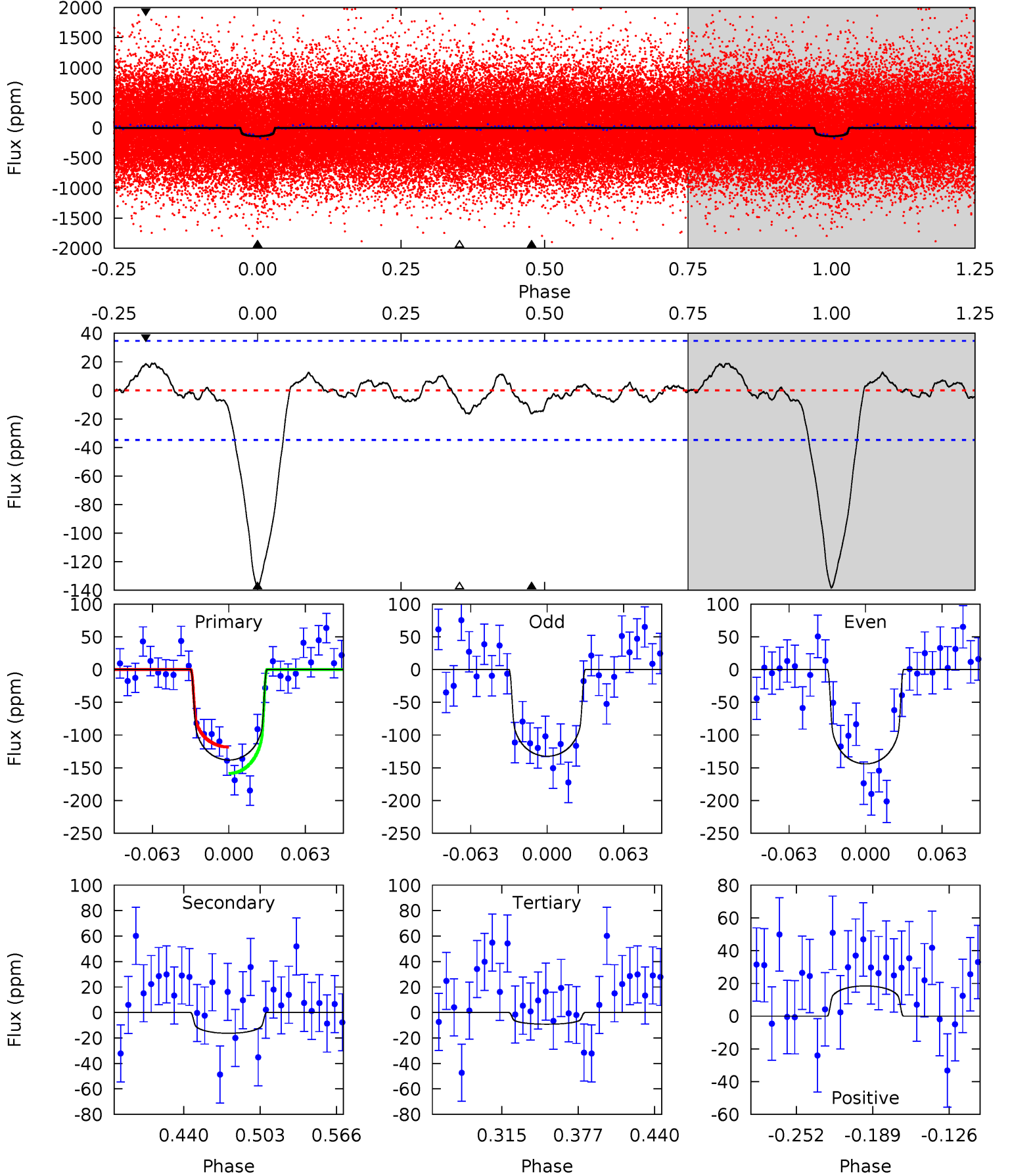
TCE 010200627-01   P= 7.701807 Days    $T_0=134.213751$  (BKJD)



# DV Model-Shift Uniqueness Test

010200627-01, P = 7.701430 Days, E = 126.553868 Days

Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.6	2.19	1.24	2.48	4.66	1.86	0.91	17.3	16.1	0.96	-0.28	0.78	1.00	0.12	2.71

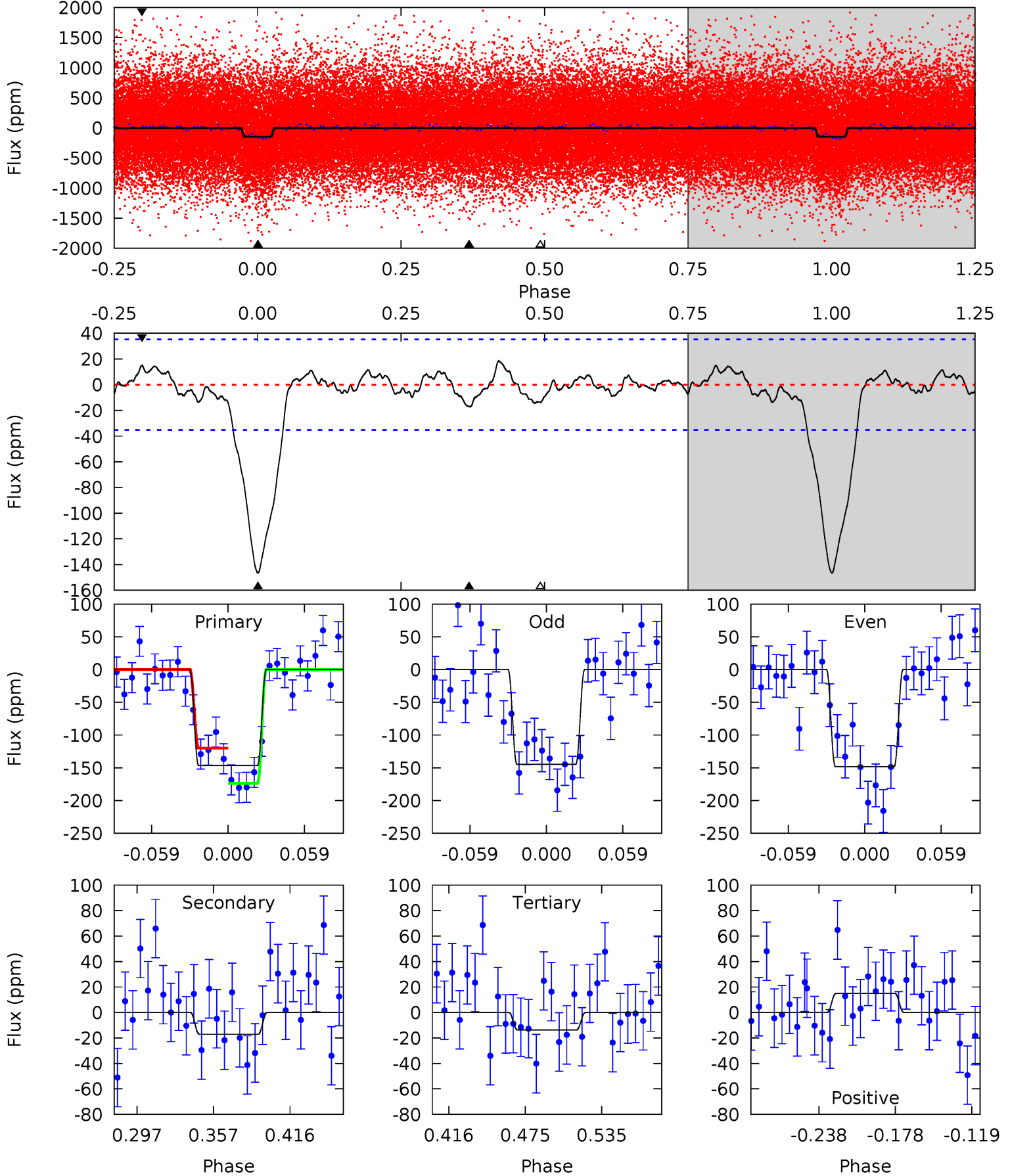




# Alt Model-Shift Uniqueness Test

010200627-01, P = 7.701807 Days, E = 126.511944 Days

Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.4	2.26	1.83	1.99	4.67	1.89	0.86	17.6	17.4	0.43	0.28	0.24	0.99	0.11	3.56





### Stellar Parameters For KIC 010200627

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M$ ( $M_{\odot}$ )	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$5174^{+134}_{-93}$	$3.228^{+0.036}_{-0.024}$	$-0.860^{+0.300}_{-0.300}$	$3.608^{+0.381}_{-0.127}$	$0.802^{+0.154}_{-0.016}$	$0.024^{+0.003}_{-0.003}$
	+3%/-2%	+1%/-1%	+35%/-35%	+11%/-4%	+19%/-2%	+11%/-13%
Source	PHO1	AST71	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 010200627-01 / KOI 6217.01

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$-16 \pm 7$	$5.02^{+1.39}_{-1.34}$	$2276^{+62}_{-53}$	$3285^{+502}_{-462}$	$1.736^{+1.983}_{-0.951}$
Alt.	$-17 \pm 8$	$4.81^{+1.32}_{-1.32}$	$2269^{+66}_{-47}$	$3399^{+514}_{-463}$	$2.067^{+2.446}_{-1.086}$

$T_{\text{max}}$  = Theoretical Maximum Planetary Temperature

$T_{\text{obs}}$  = Observed Planetary Temperature (Assuming  $A=0.3$ )

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

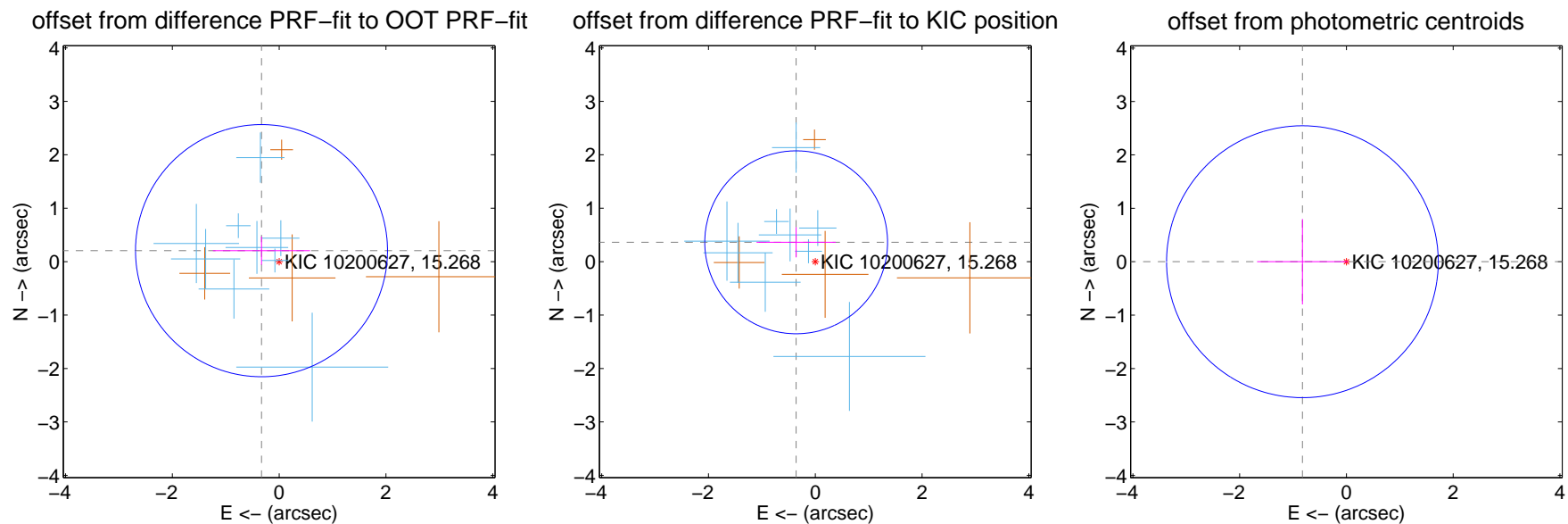
## DV Centroid Data

Supplemental centroid analysis for 010200627-01. Kepler magnitude: 15.27. Transit SNR 13.37

There are 9 quarters with good PRF difference image offsets

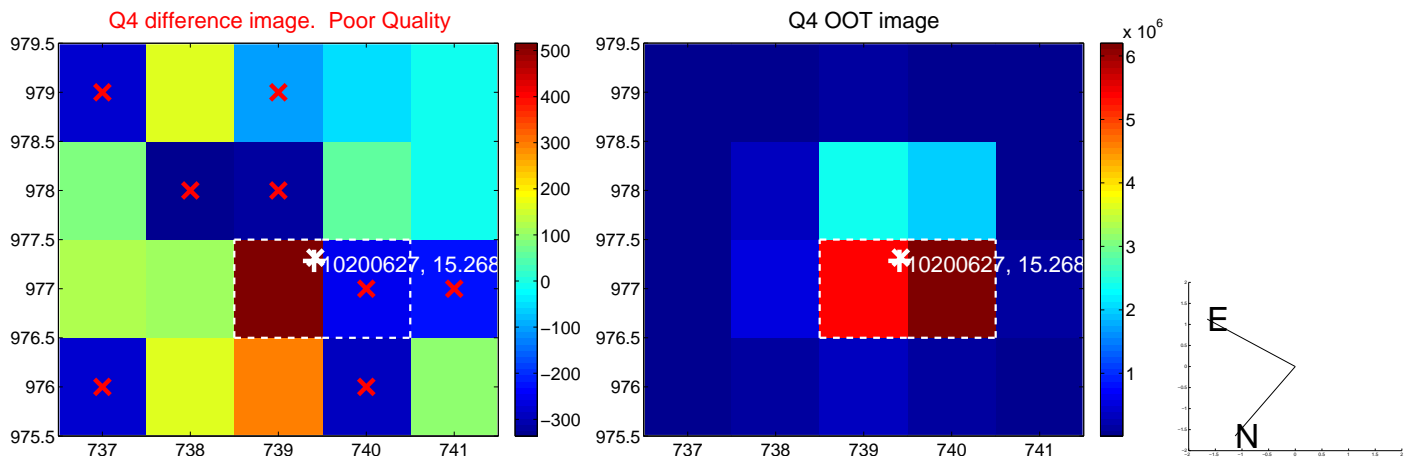
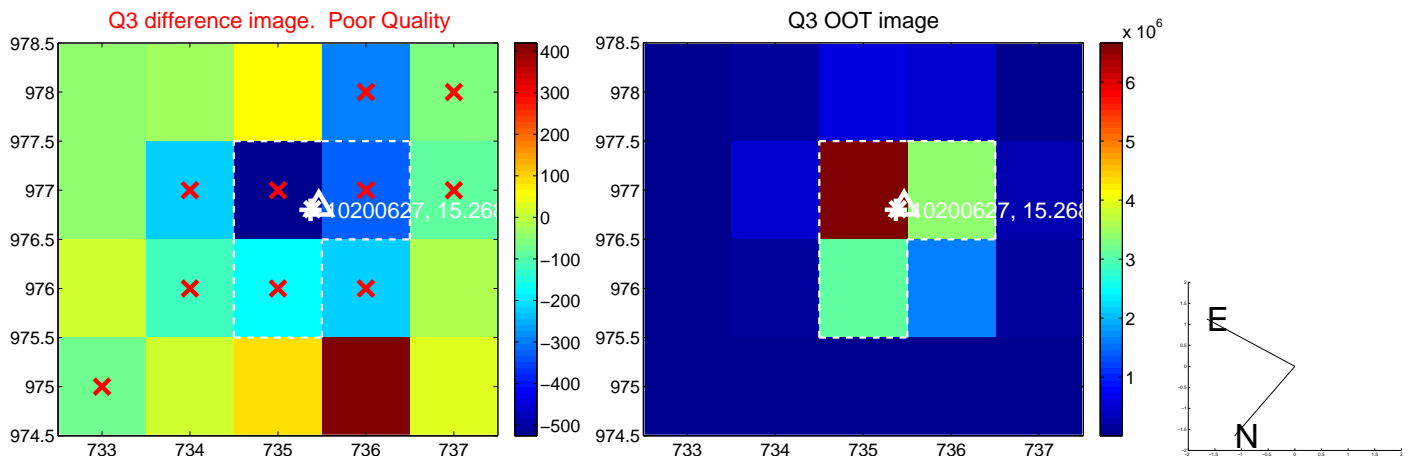
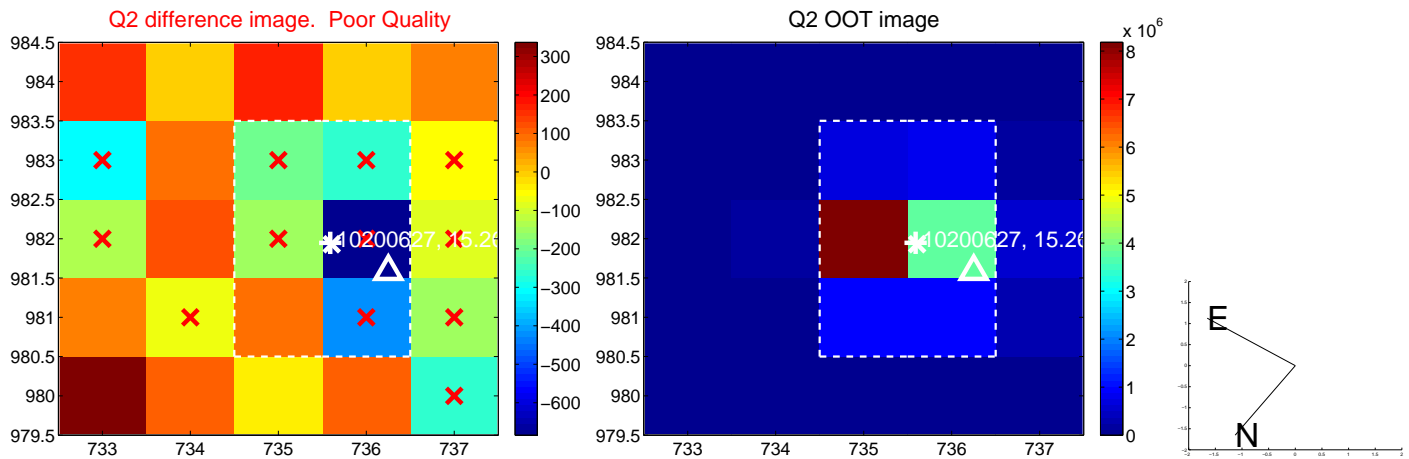
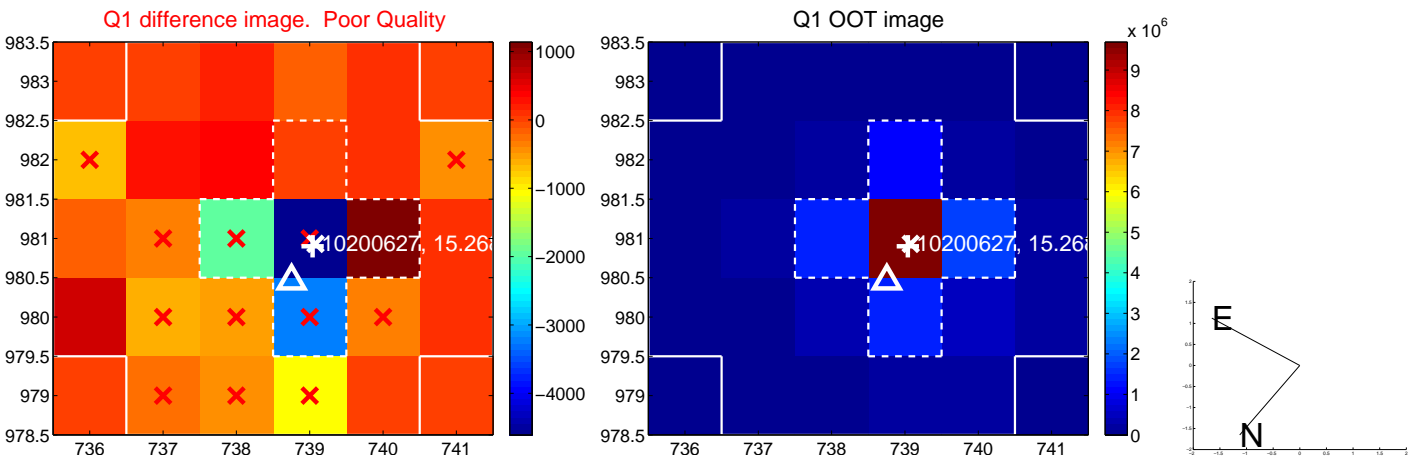
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.389 \pm 0.787$	0.49	$0.331 \pm 0.910$	$0.206 \pm 0.265$
PRF-fit source offset from KIC position	$0.509 \pm 0.571$	0.89	$0.358 \pm 0.741$	$0.362 \pm 0.283$
photometric centroid source offset	$0.82 \pm 0.85$	0.97	$0.82 \pm 0.85$	$0.00 \pm 0.80$

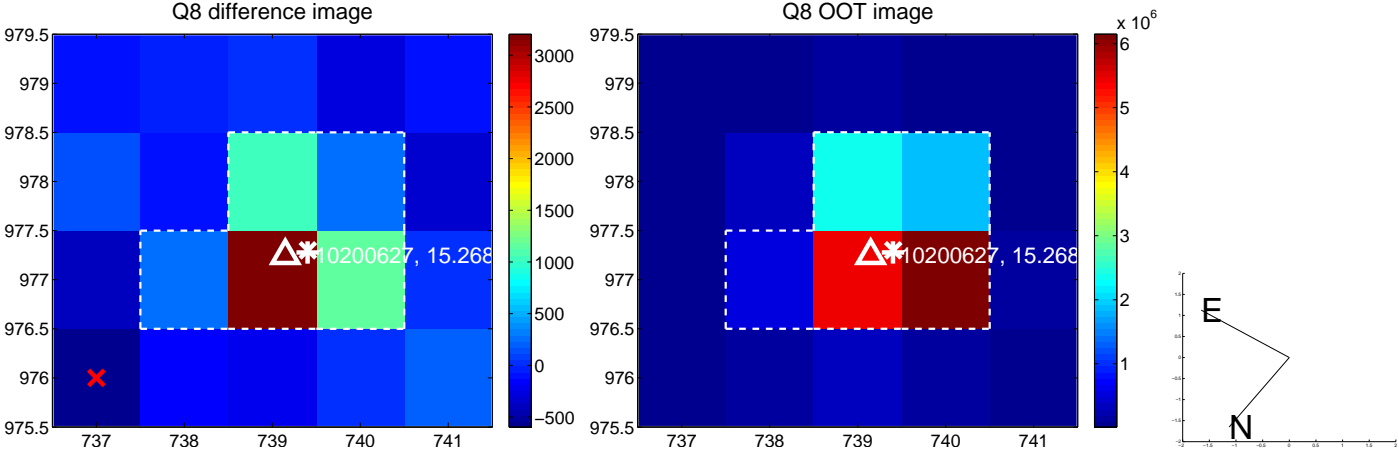
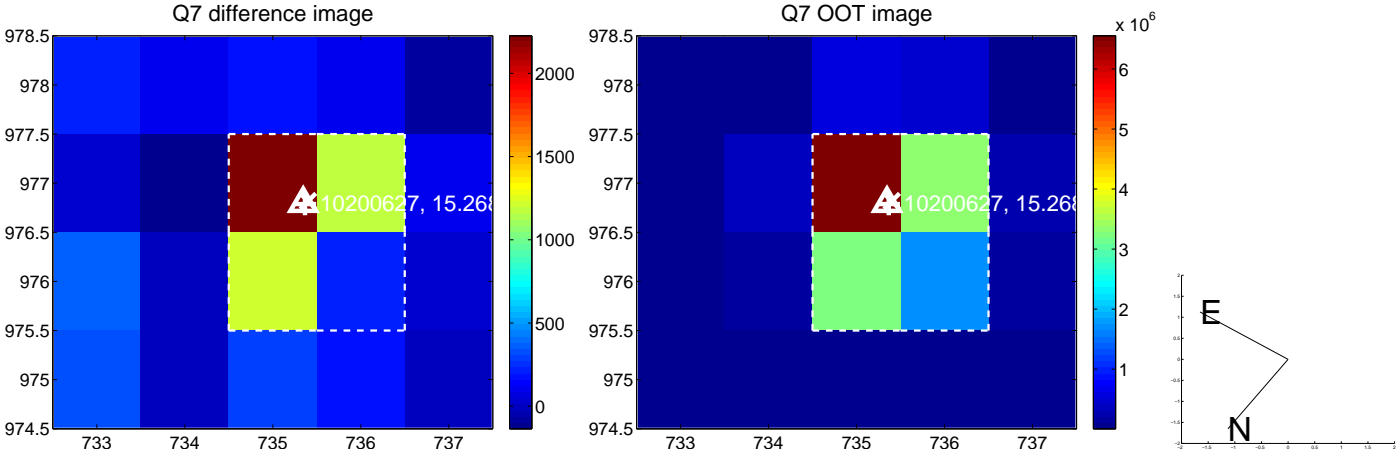
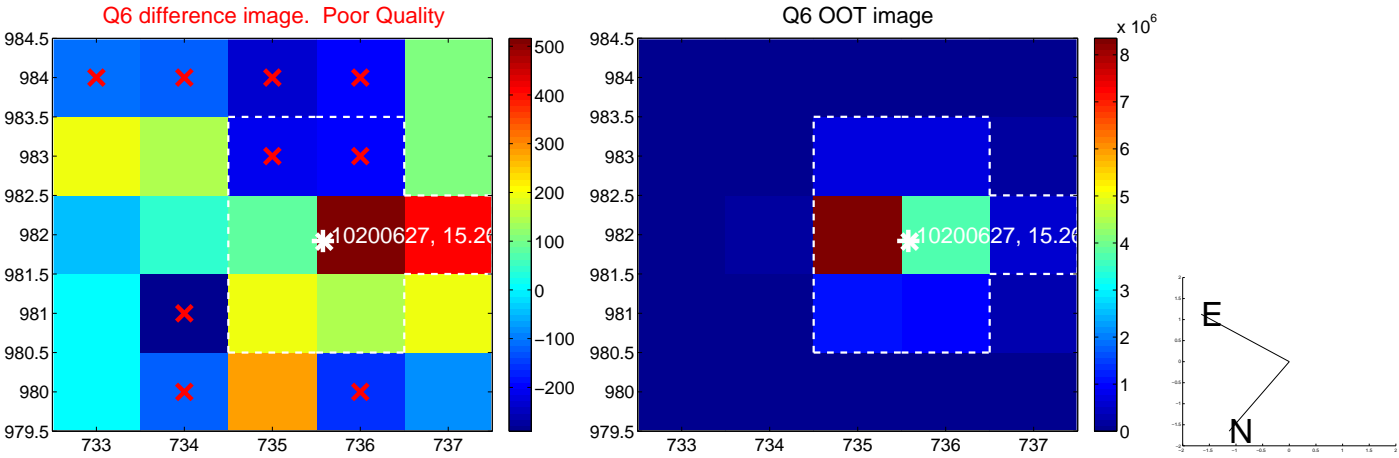
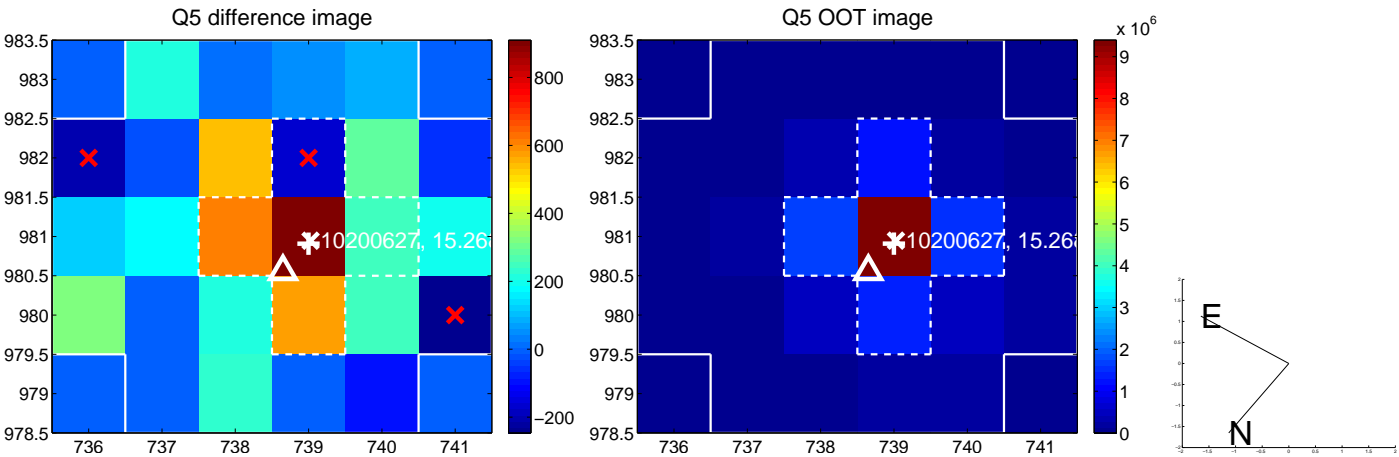


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

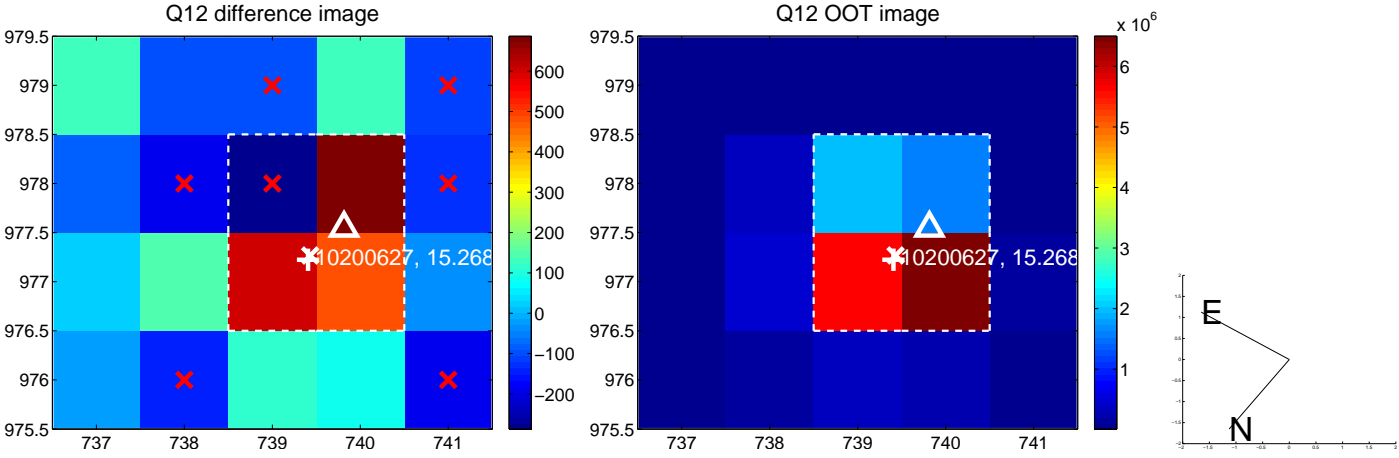
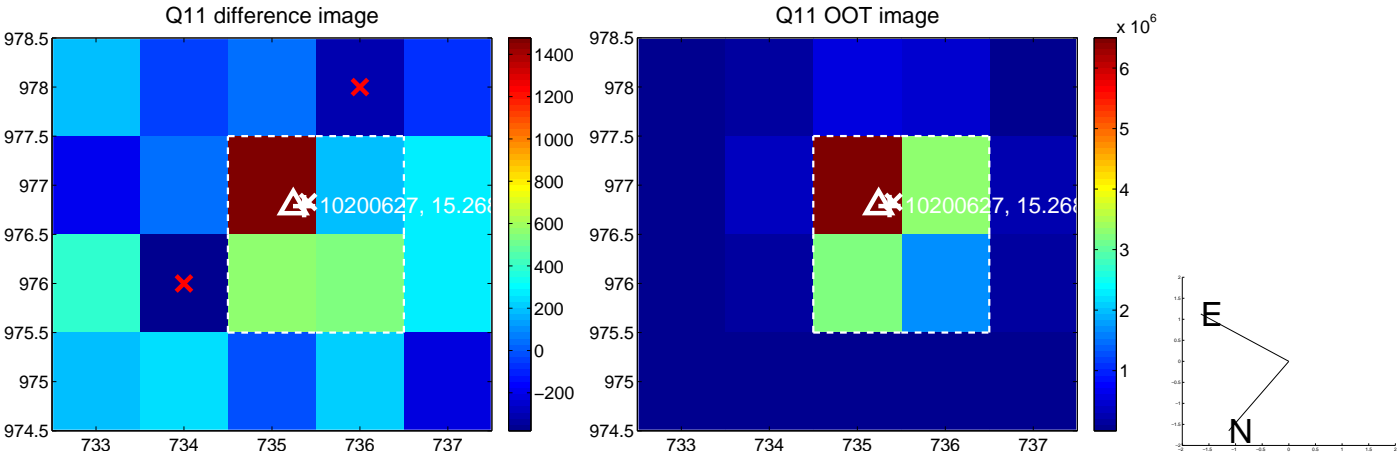
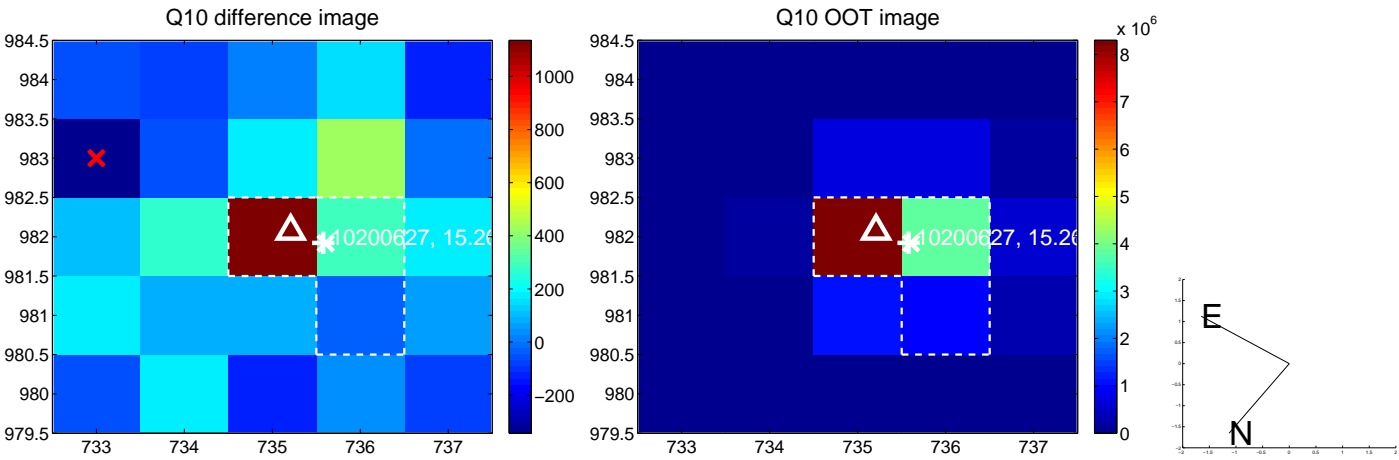
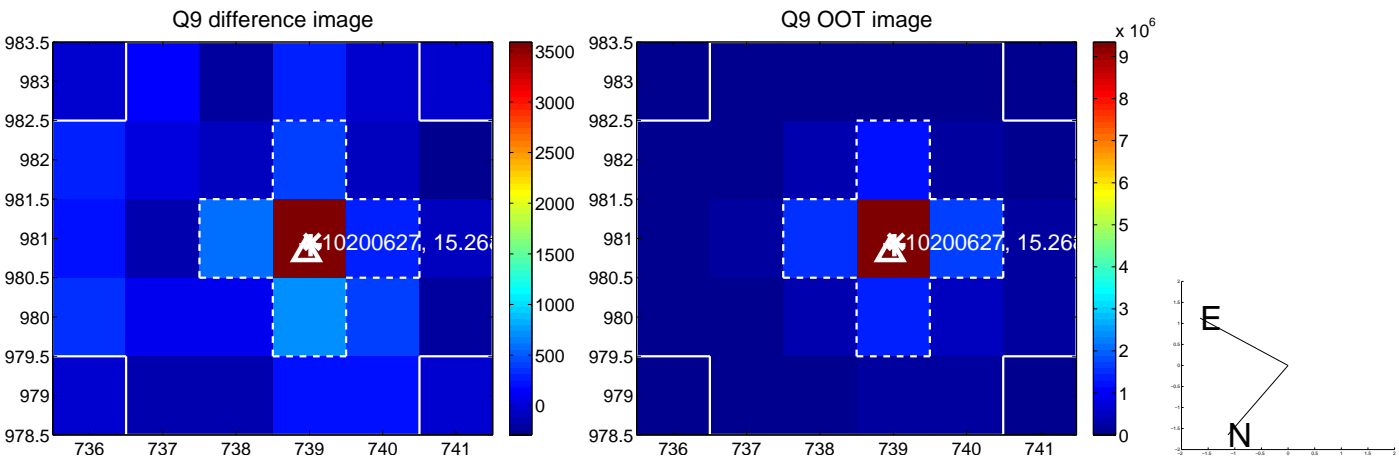


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

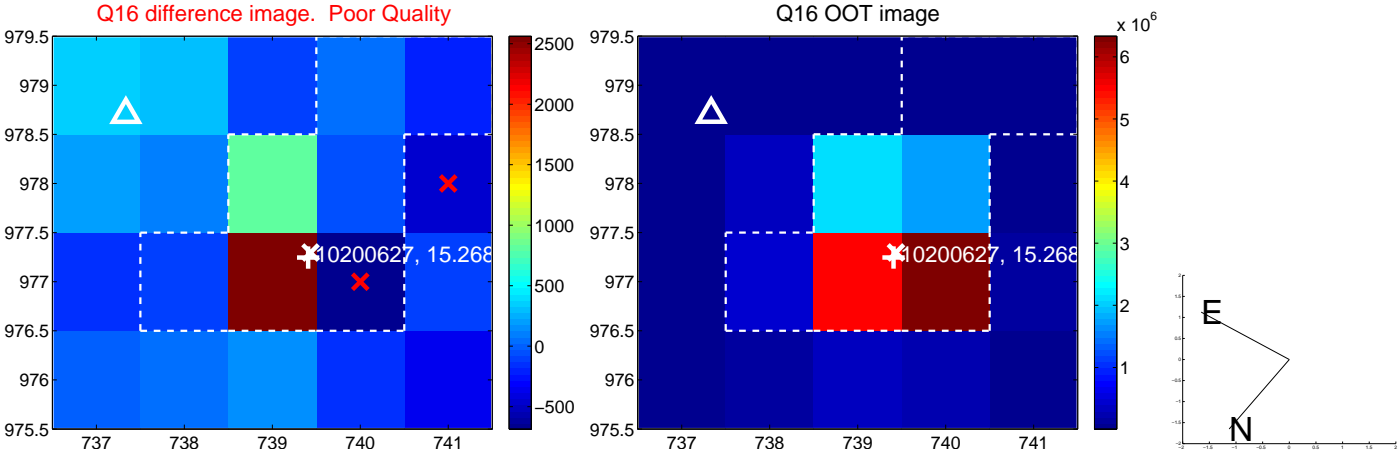
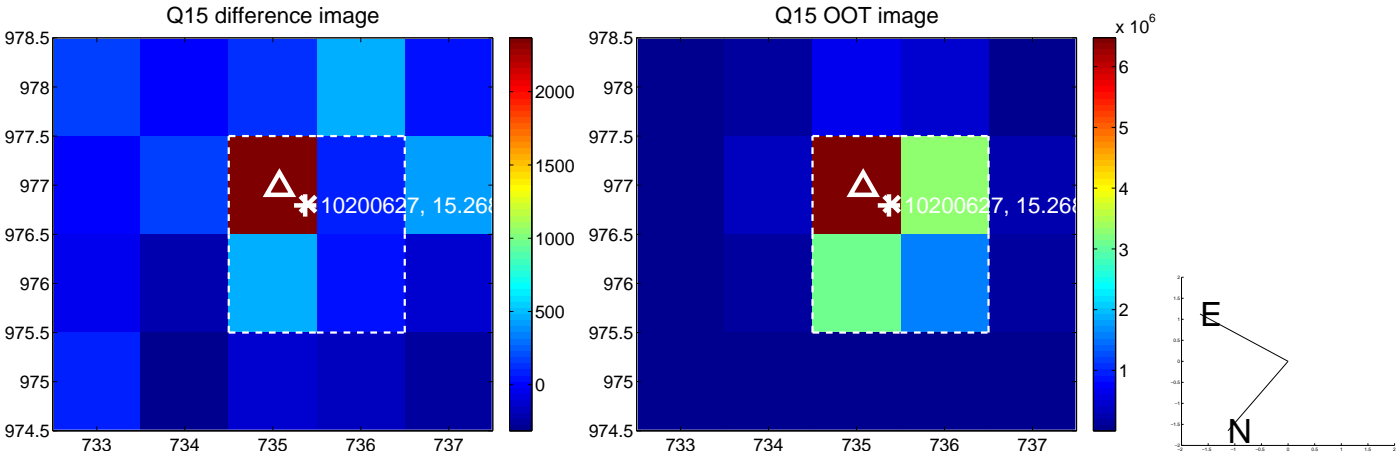
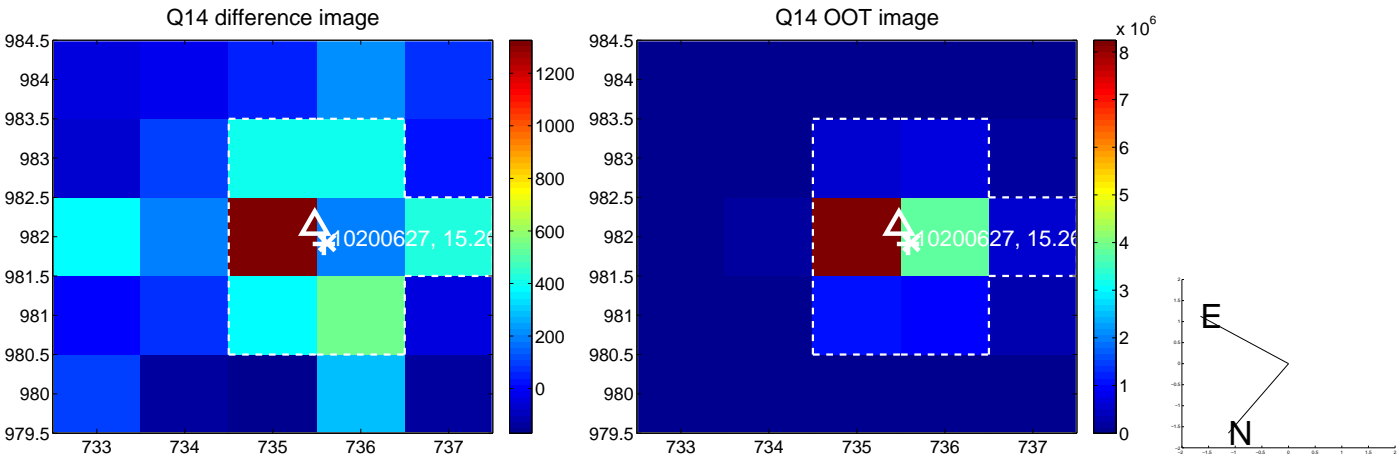
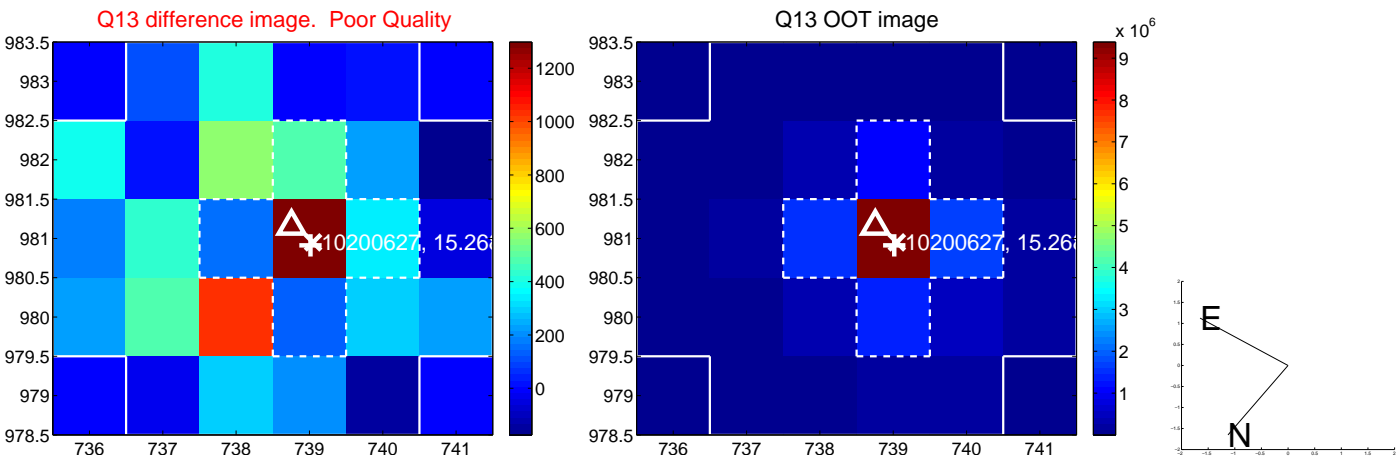




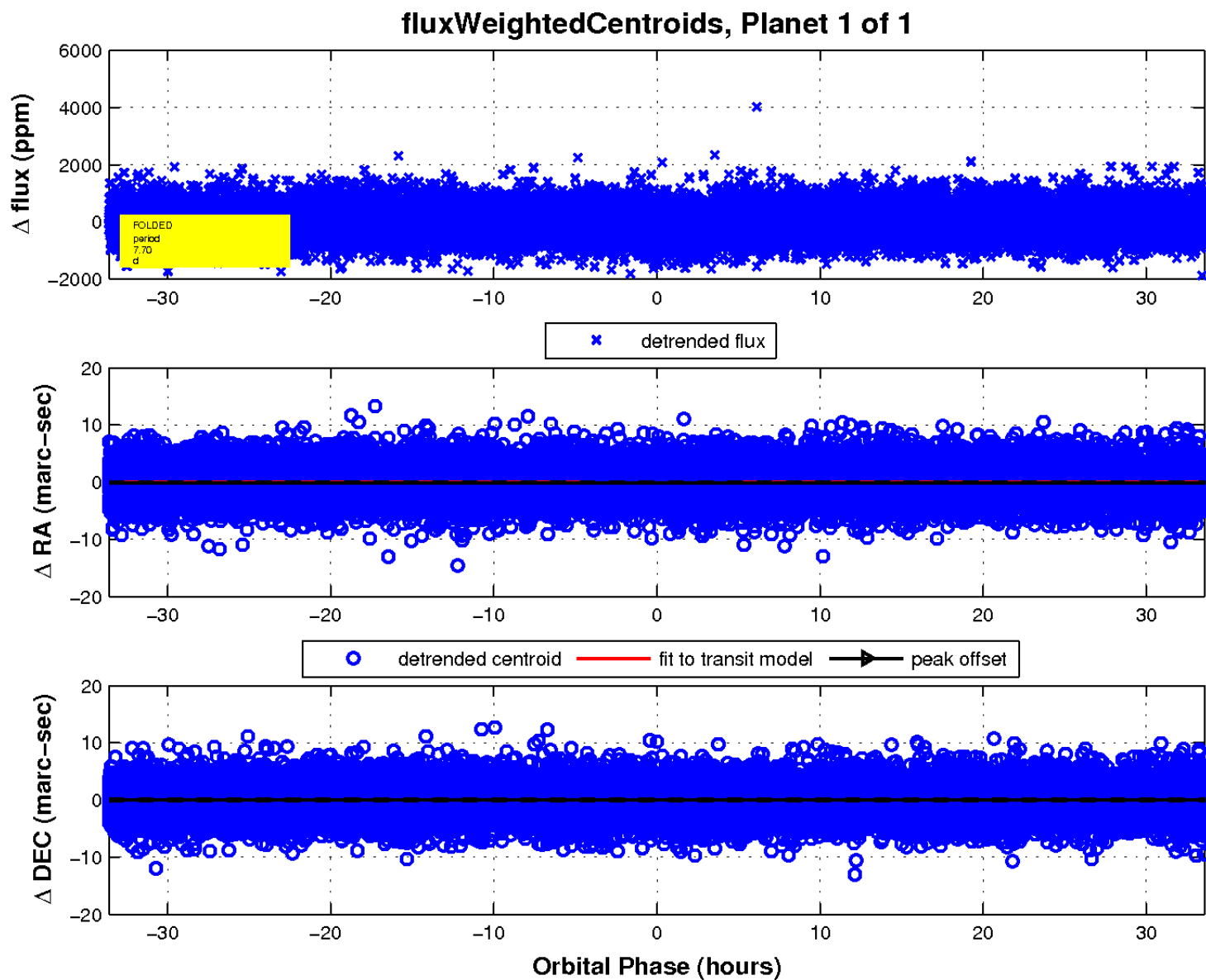
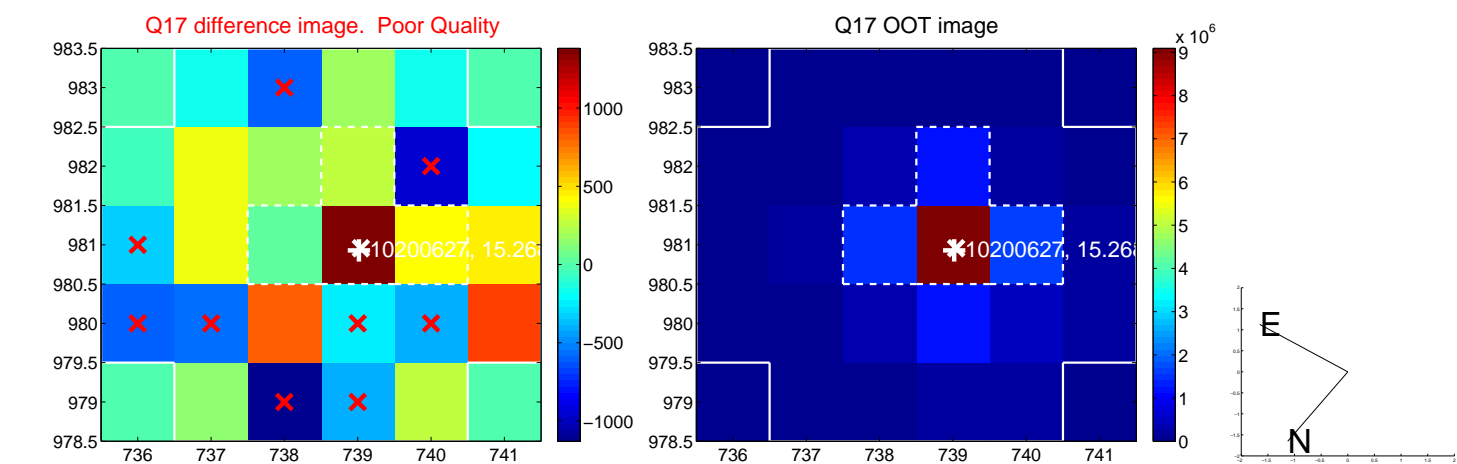
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



UKIRT Image

Declination

