

# KIC 003120467

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
003120467-01	OBS	No	260.577986	169.481883	859.9	12.000	8.5	9.2	0.86	5645	3.30	1.09

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003120467-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—INCONSISTENT_TRANS—CENT_FEW_MEAS

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

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

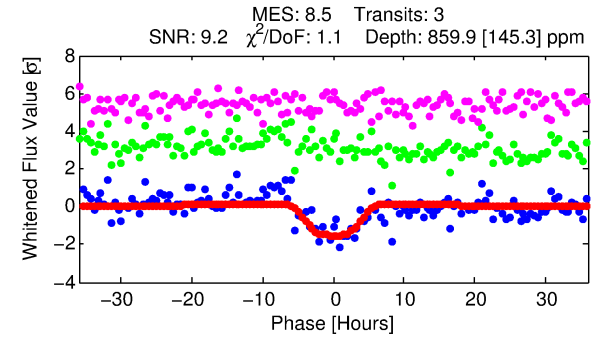
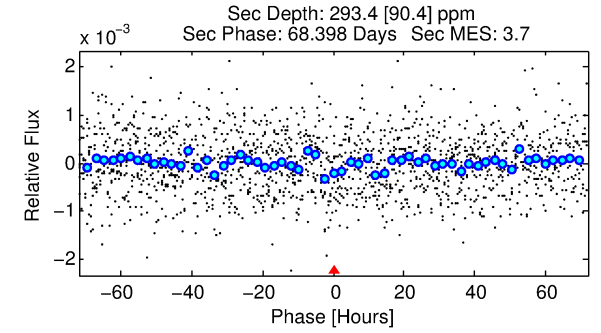
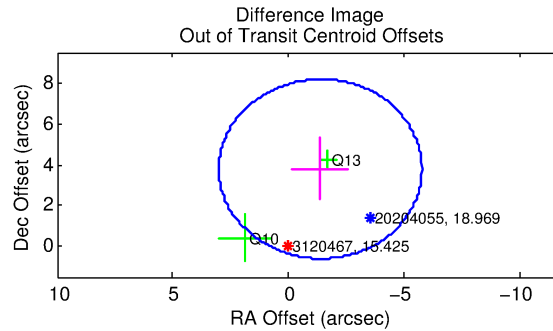
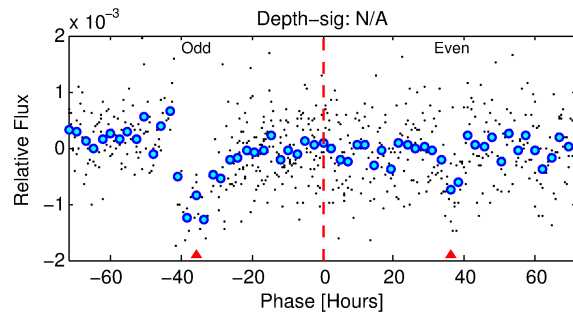
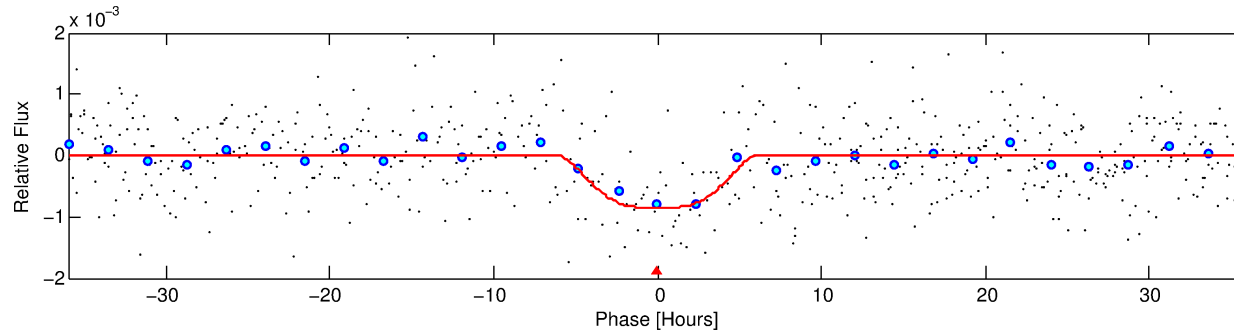
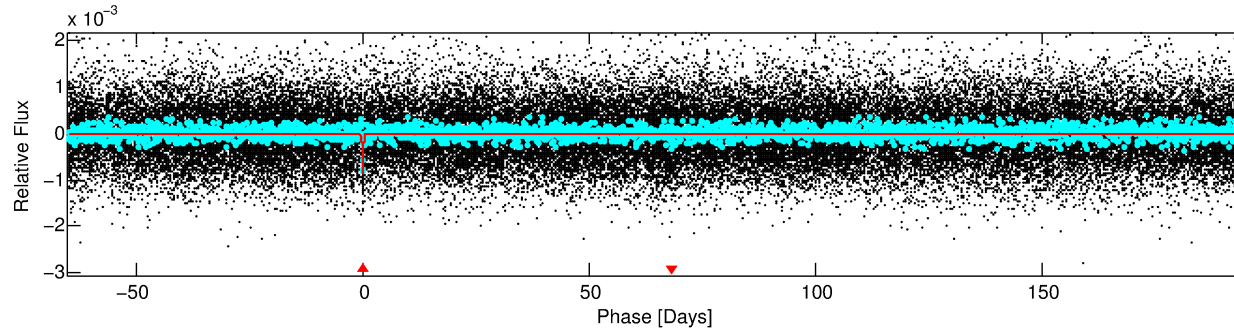
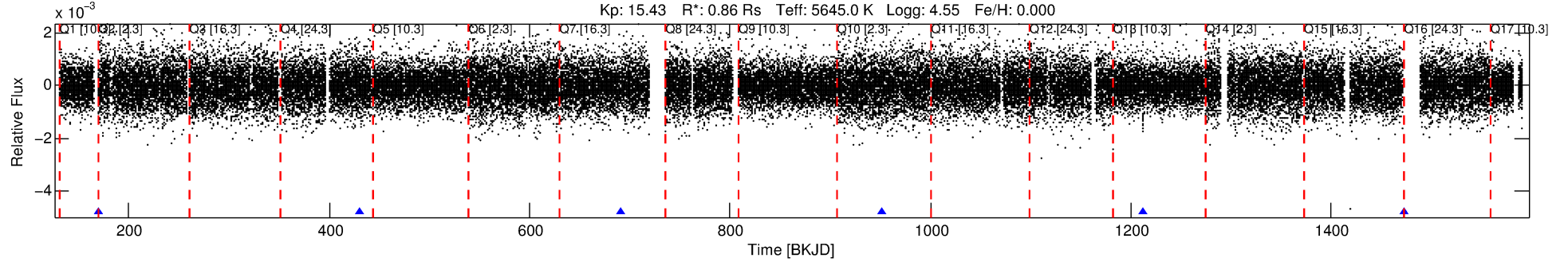
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 003120467-01

No Significant Match Found

# DV One-Page Summary

KIC: 3120467 Candidate: 1 of 1 Period: 260.578 d



## DV Fit Results:

Period = 260.57799 [0.01394] d  
Epoch = 169.4819 [0.0440] BKJD  
Rp/R\* = 0.0350 [0.0049]  
a/R\* = 65.37 [20.65]  
b = 0.96 [0.03]  
Seff = 1.09 [0.35]  
Teq = 261 [21] K  
Rp = 3.30 [0.92] Re  
a = 0.7895 [0.1589] AU  
Ag = 9224.32 [4710.54] [1.96σ]  
Teffp = 3950 [430] K [8.58σ]

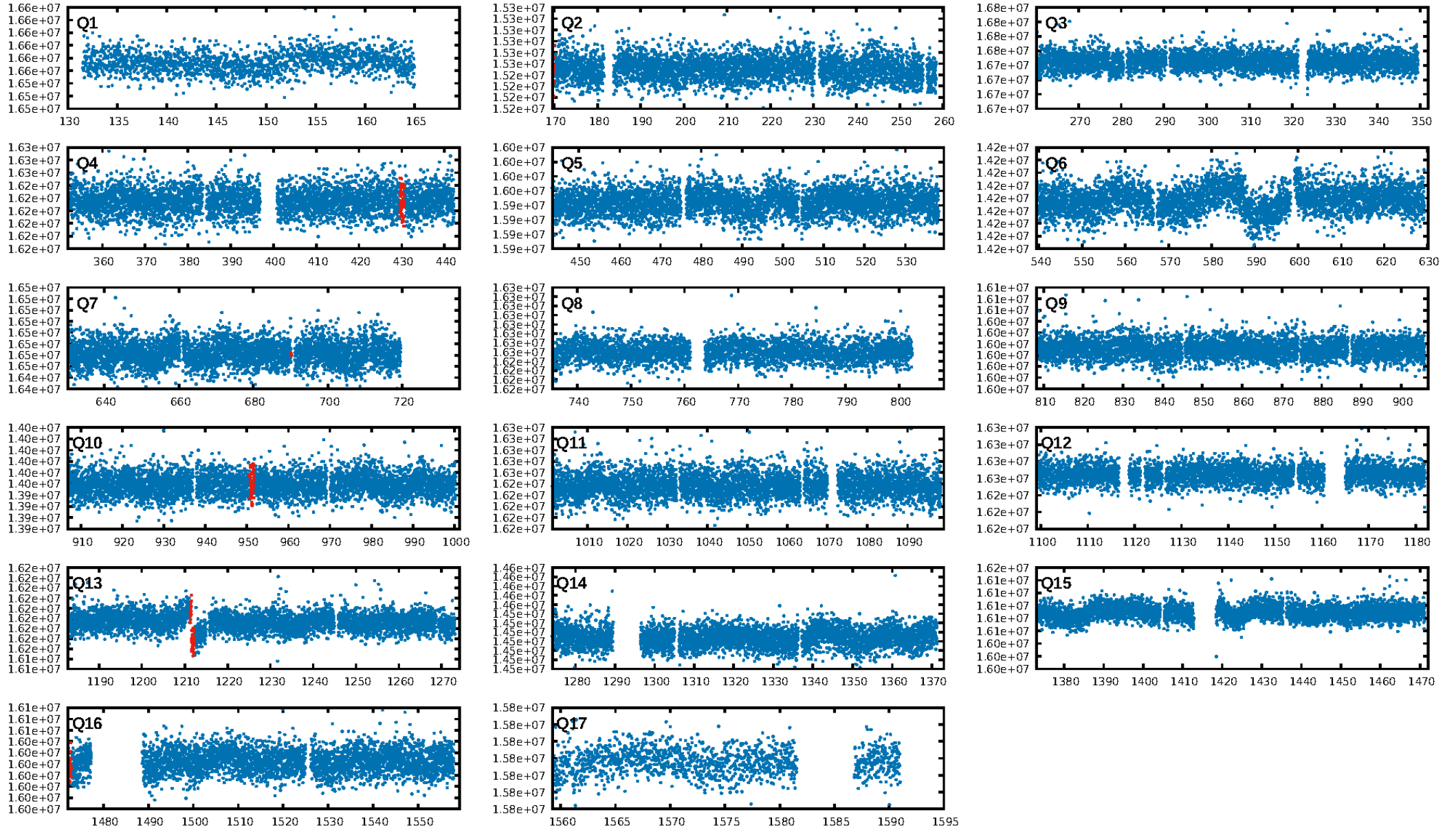
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 0.0%  
ModelChiSquareGof-sig: 93.6%  
Bootstrap-pfa: 9.32e-17  
RollingBand-fgt: 1.00 [3/3]  
GhostDiagnostic-chr: -5.969  
Centroid-sig: 0.1%  
Centroid-so: 3.693 arcsec [2.80σ]  
OotOffset-rm: 4.035 arcsec [2.76σ]  
KicOffset-rm: 1.850 arcsec [2.43σ]  
OotOffset-st: 1/0/0/1 [2]  
KicOffset-st: 1/0/0/1 [2]  
DiffImageQuality-fgm: 0.50 [1/2]  
DiffImageOverlap-fno: 1.00 [3/3]

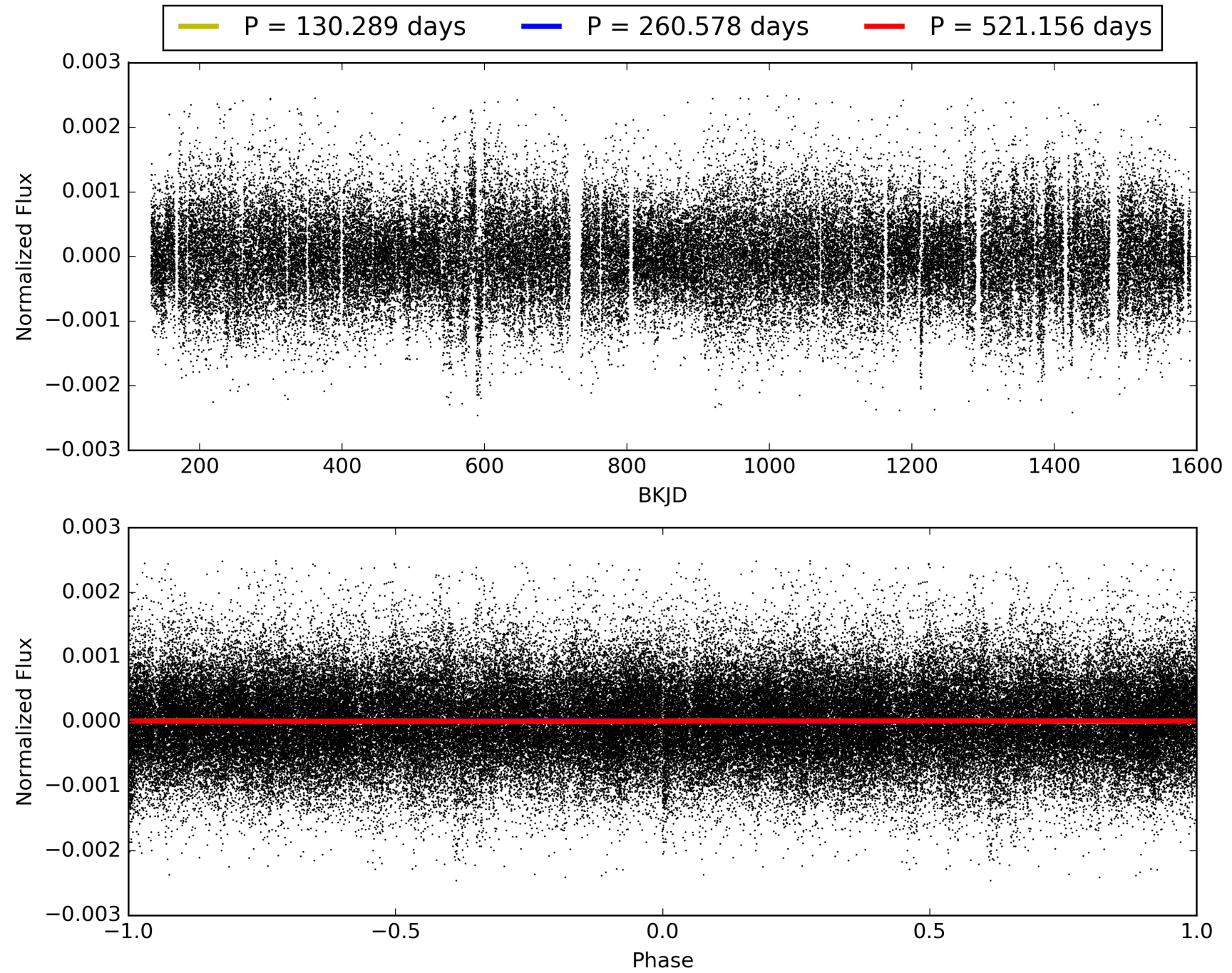
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 18:54:33 Z

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

# TCE 003120467-01, PDC Light Curves

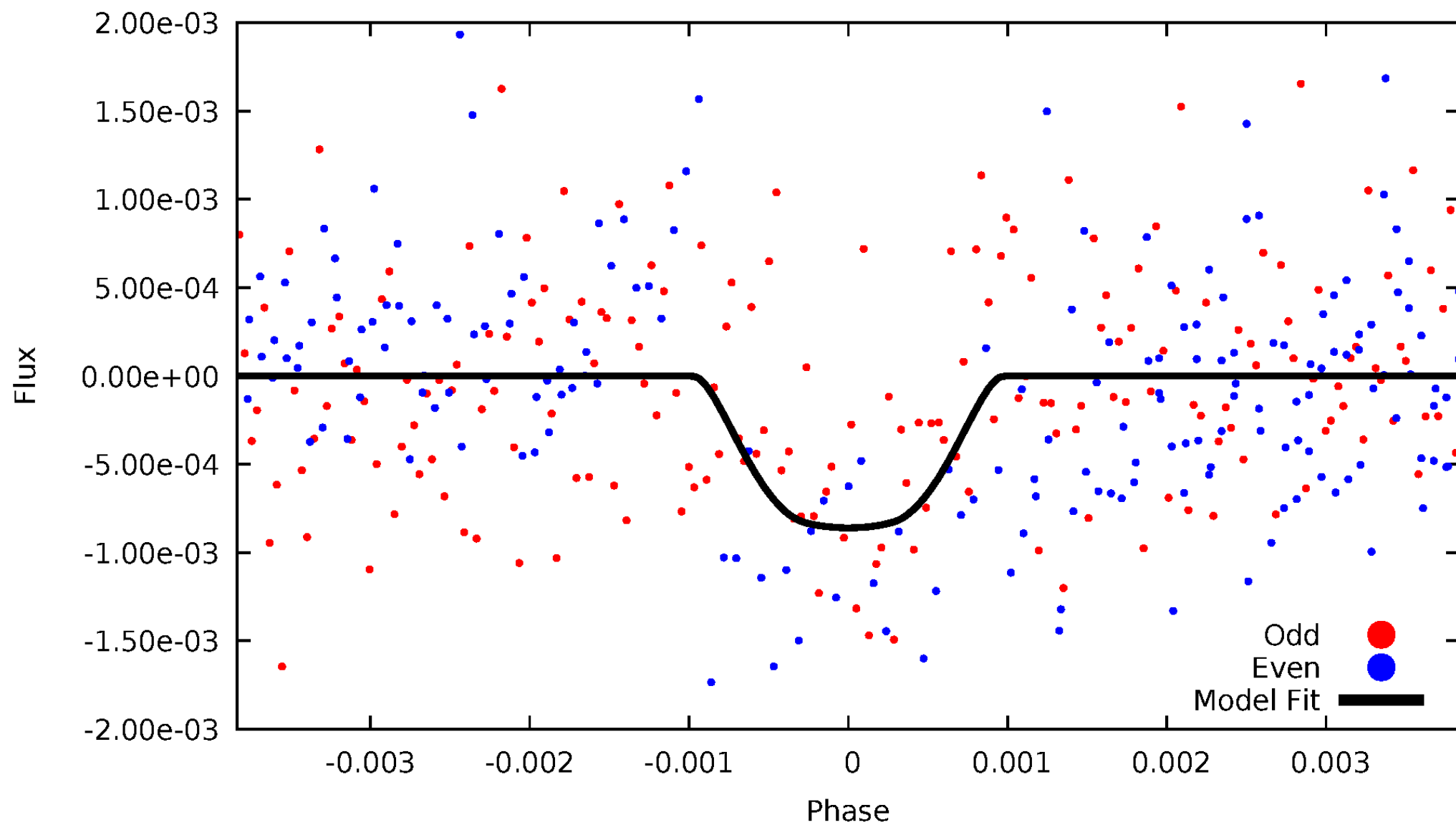


TCE 003120467-01



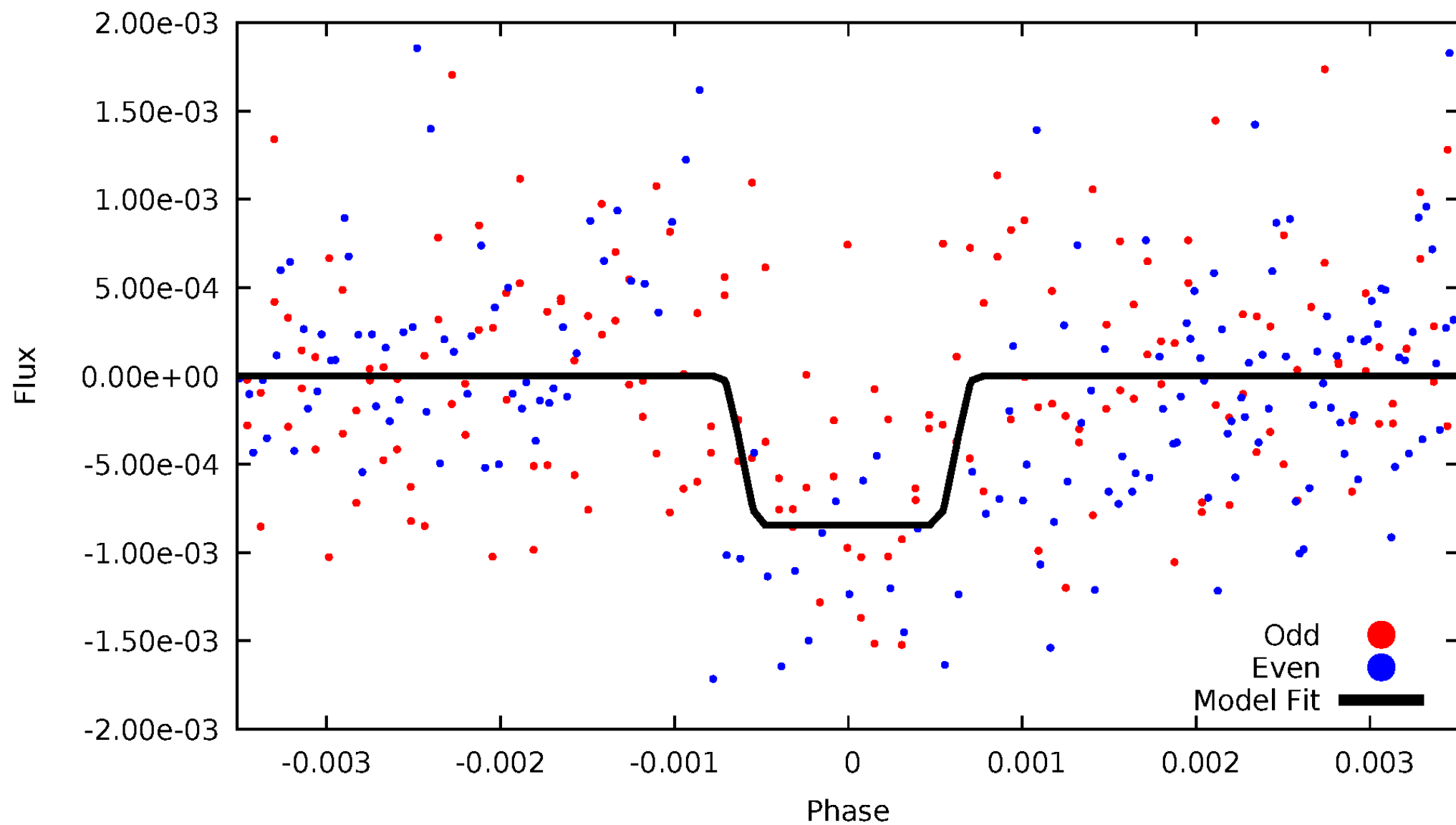
# DV Odd/Even

TCE 003120467-01



# ALT Odd/Even

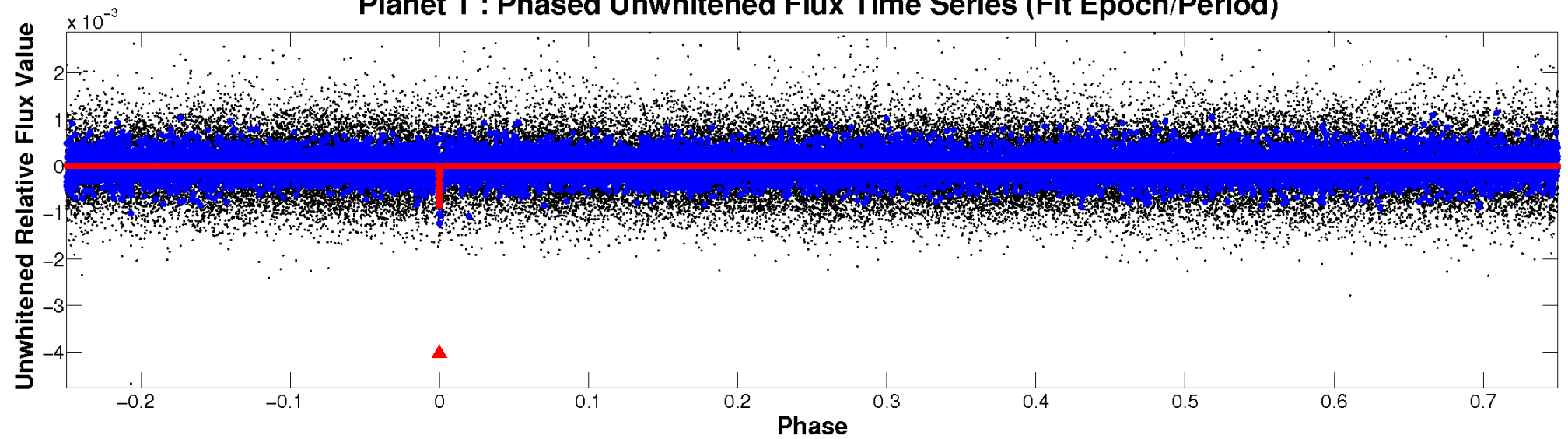
TCE 003120467-01



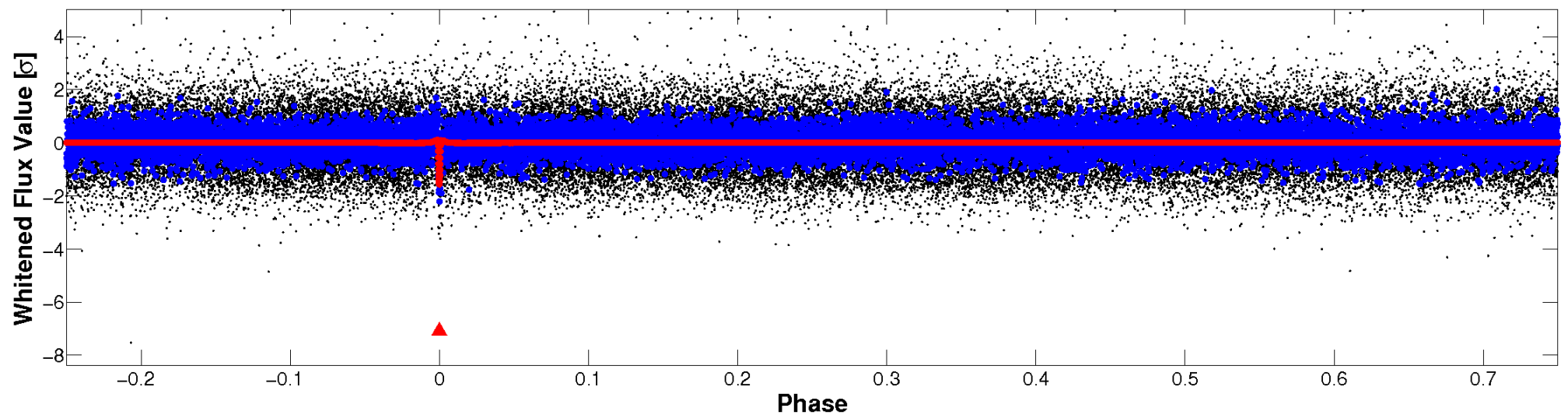


# Non-Whitened Vs. Whitened Light Curve

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

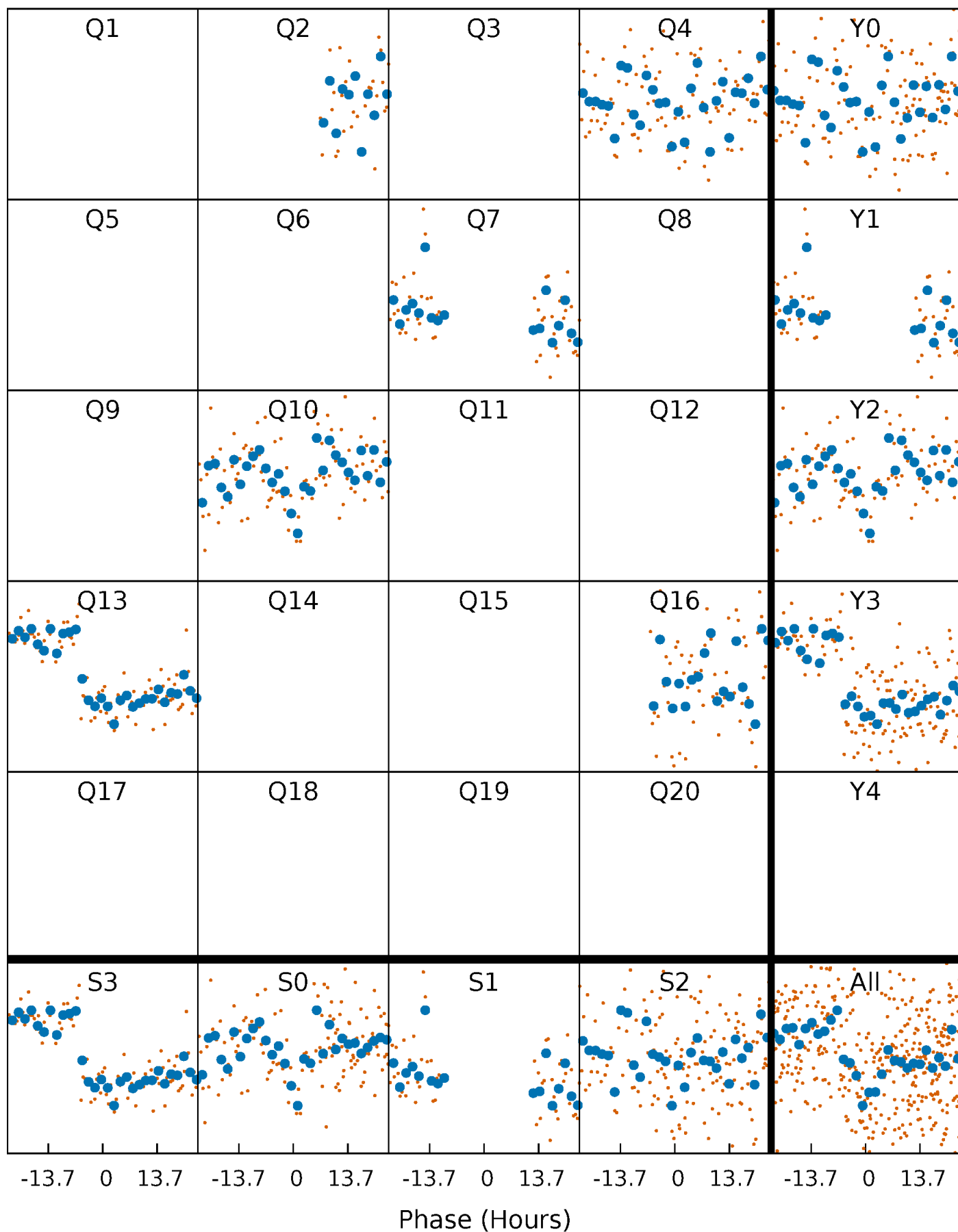


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

TCE 003120467-01 P=260.577986 Days  $T_0=169.481883$  (BKJD)





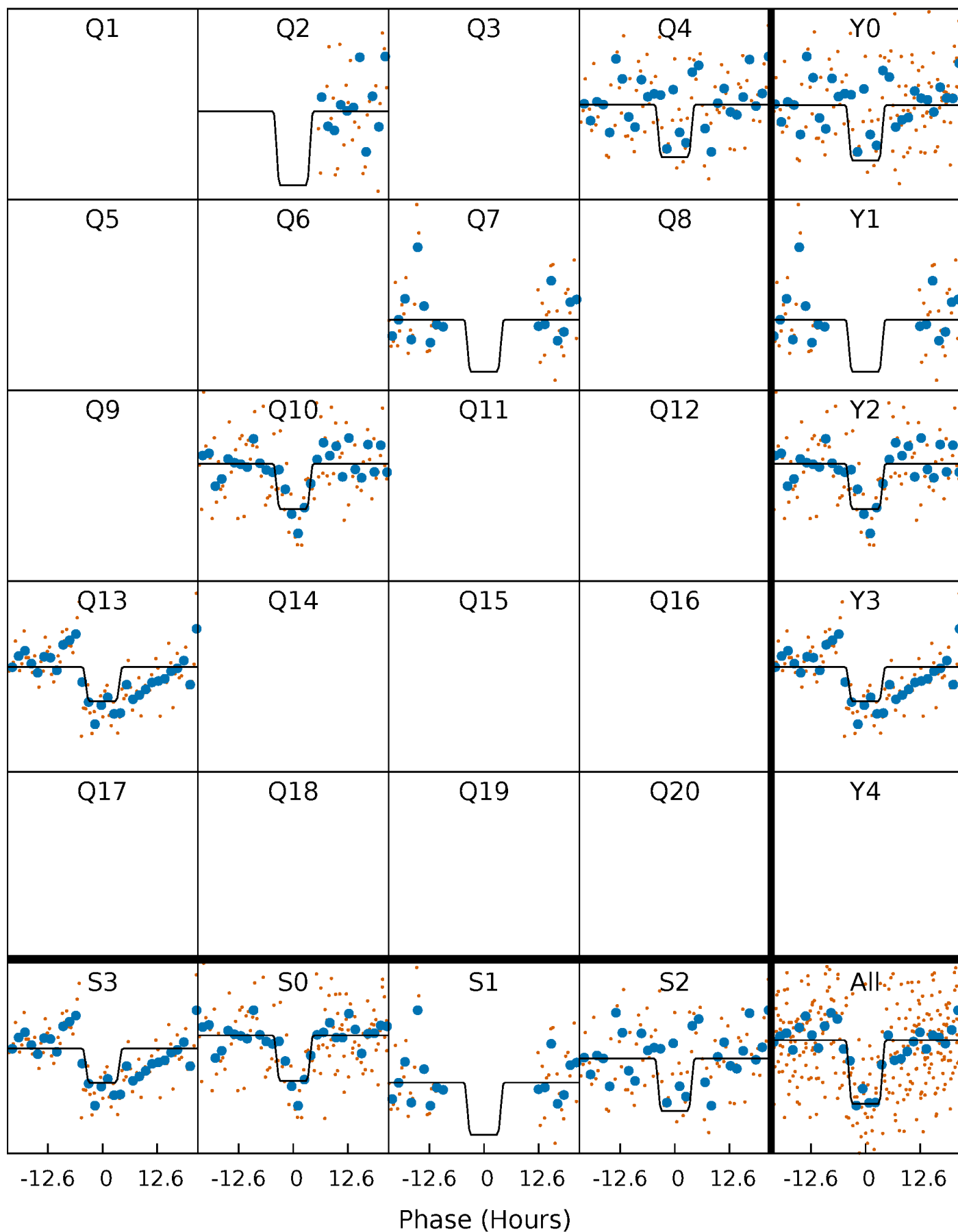
# DV Quarter-Phased Transit Curves

TCE 003120467-01 P=260.577986 Days  $T_0=169.481883$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

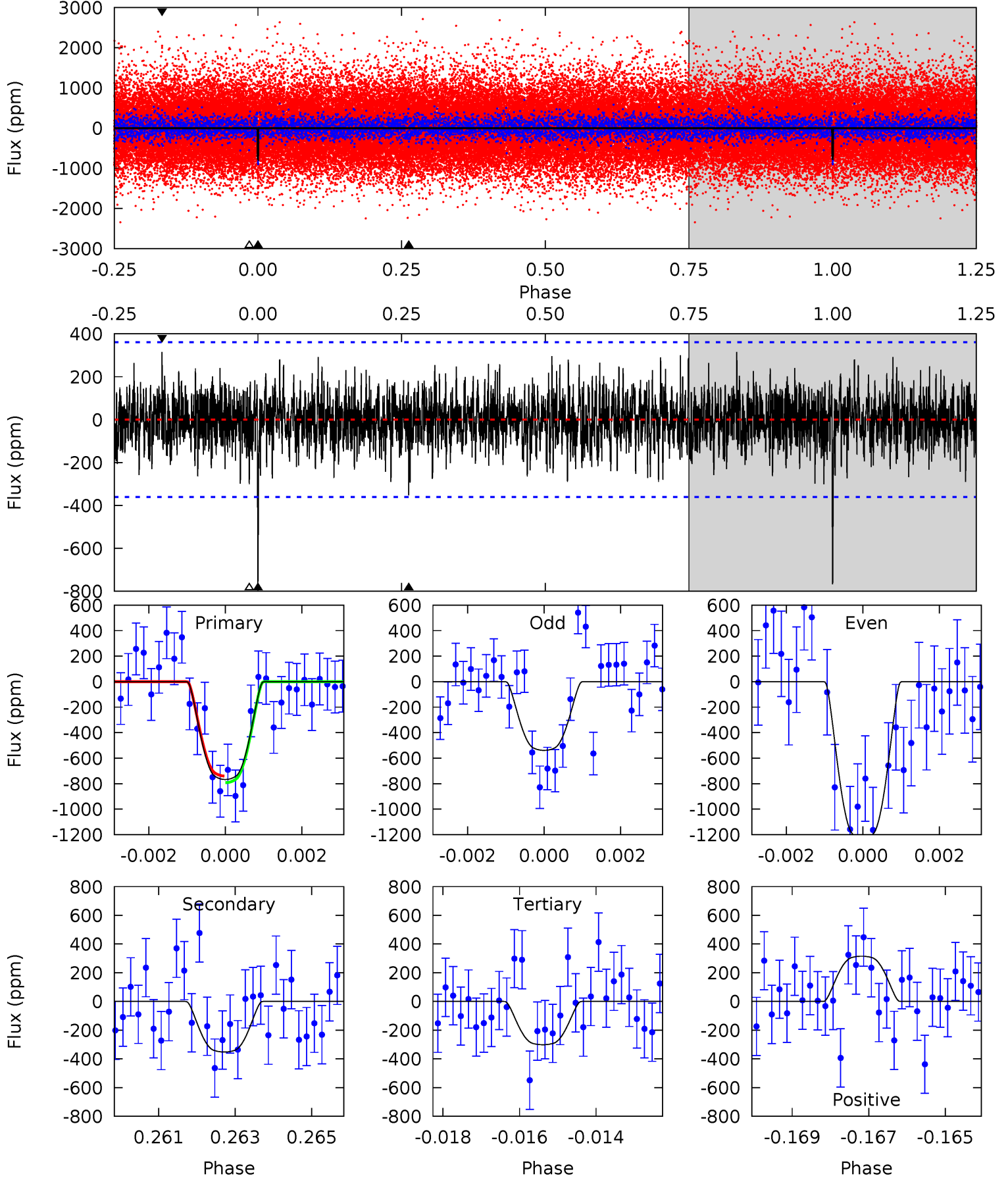
TCE 003120467-01 P=260.561946 Days  $T_0=169.524486$  (BKJD)



# DV Model-Shift Uniqueness Test

003120467-01, P = 260.577986 Days, E = 169.481883 Days

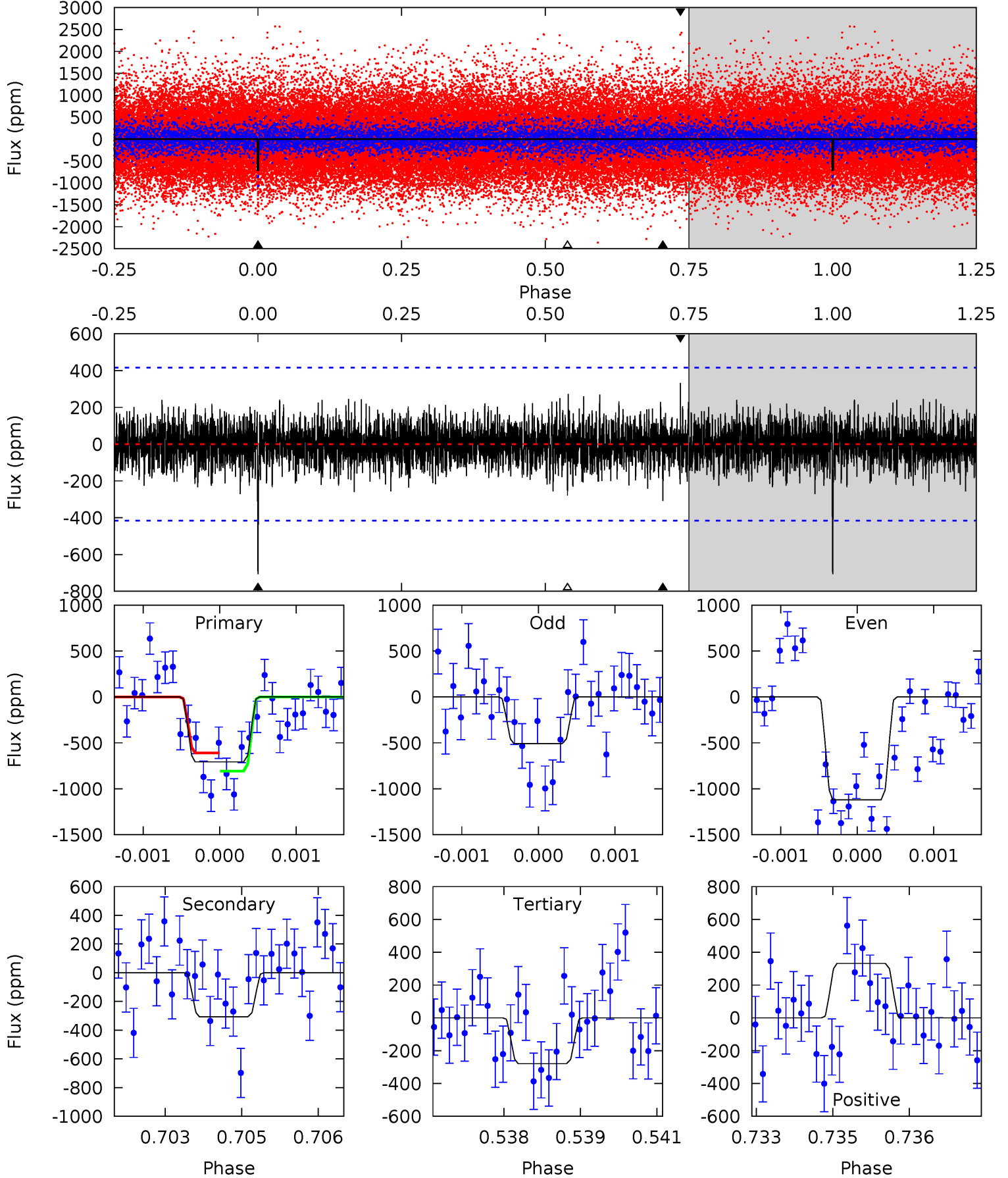
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.3	5.20	4.45	4.66	5.33	3.10	1.37	6.88	6.68	0.75	0.54	4.85	1.01	0.29	0.38



# Alt Model-Shift Uniqueness Test

003120467-01, P = 260.561946 Days, E = 169.524486 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
9.15	3.99	3.62	4.30	5.38	3.18	1.04	5.53	4.85	0.37	-0.31	3.75	0.96	0.32	1.29



### Stellar Parameters For KIC 003120467

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5645^{+169}_{-169}$	$4.549^{+0.040}_{-0.160}$	$0.000^{+0.250}_{-0.300}$	$0.865^{+0.207}_{-0.069}$	$0.965^{+0.083}_{-0.115}$	$2.102^{+0.350}_{-0.926}$
	+3%/-3%	+1%/-4%	+inf%/-inf%	+24%/-8%	+9%/-12%	+17%/-44%
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 003120467-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-352 \pm 68$	$3.40^{+0.56}_{-0.55}$	$370^{+23}_{-16}$	$4352^{+311}_{-291}$	$10073^{+4494}_{-3188}$
Alt.	$-308 \pm 77$	$2.86^{+0.55}_{-0.54}$	$372^{+22}_{-15}$	$4542^{+449}_{-364}$	$12758^{+6995}_{-4758}$

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

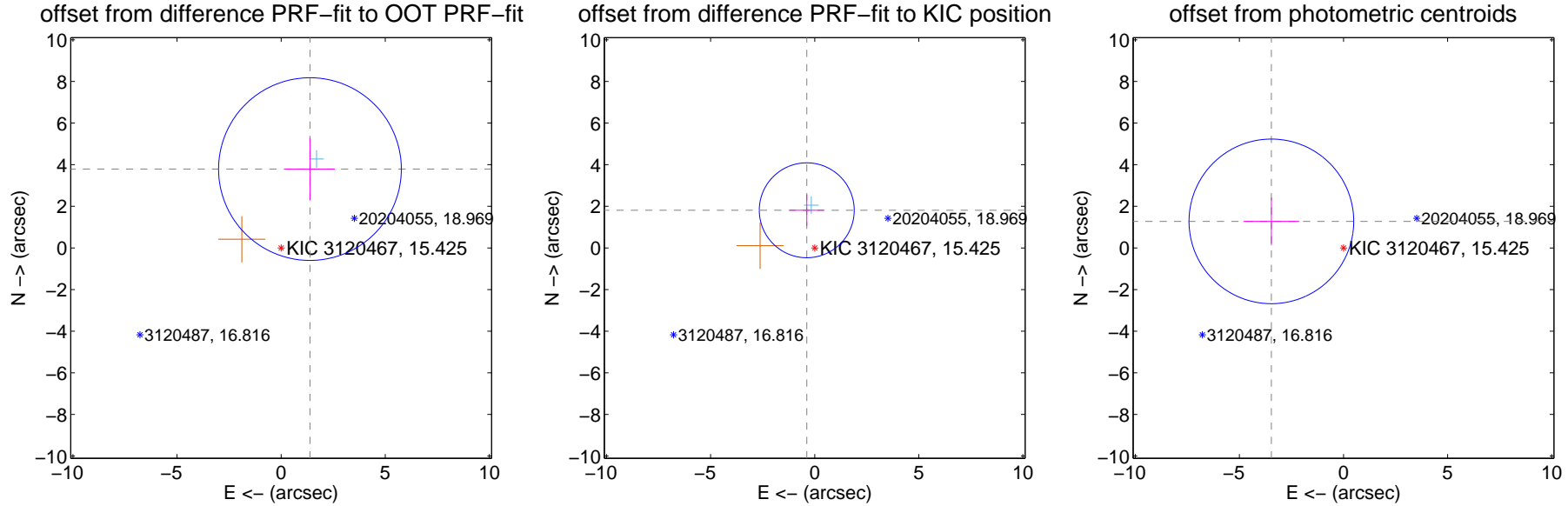
## DV Centroid Data

Supplemental centroid analysis for 003120467-01. Kepler magnitude: 15.43. Transit SNR 9.21

There are 1 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 2.90 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

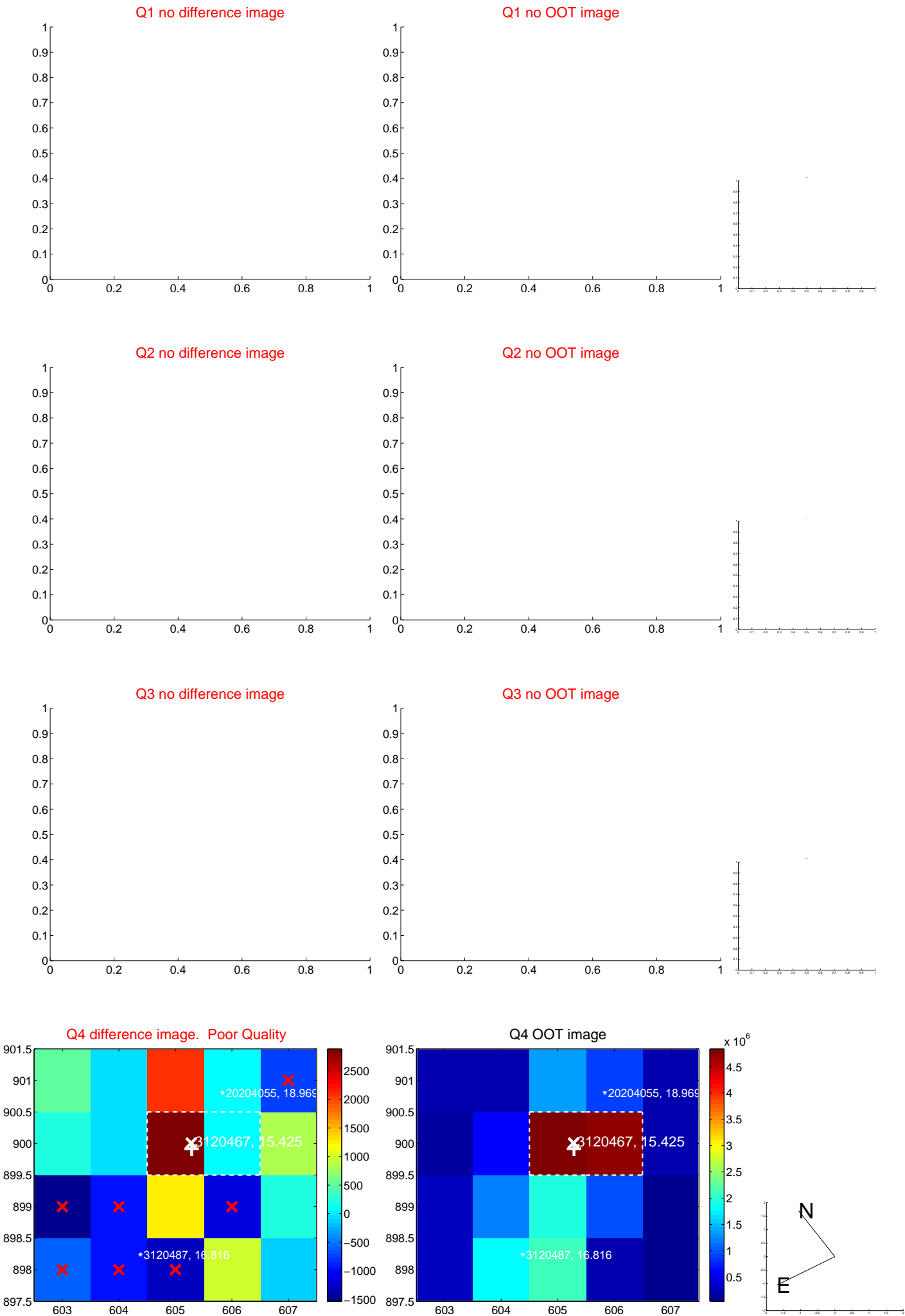
	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$4.035 \pm 1.463$	2.76	$-1.385 \pm 1.194$	$3.790 \pm 1.496$
PRF-fit source offset from KIC position	$1.850 \pm 0.760$	2.43	$0.383 \pm 0.820$	$1.810 \pm 0.757$
photometric centroid source offset	$3.69 \pm 1.32$	2.80	$3.47 \pm 1.34$	$1.28 \pm 1.14$



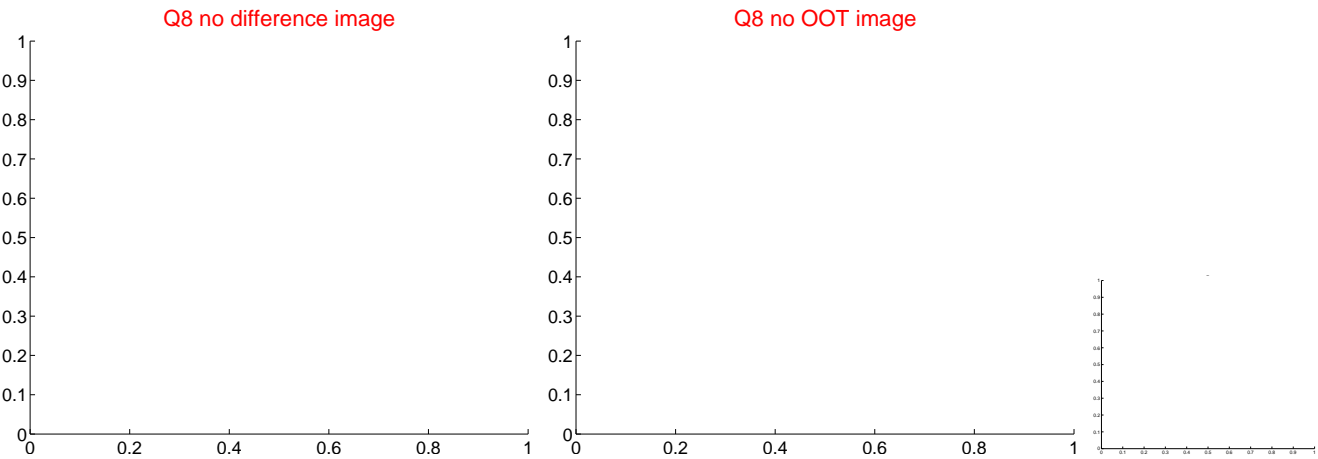
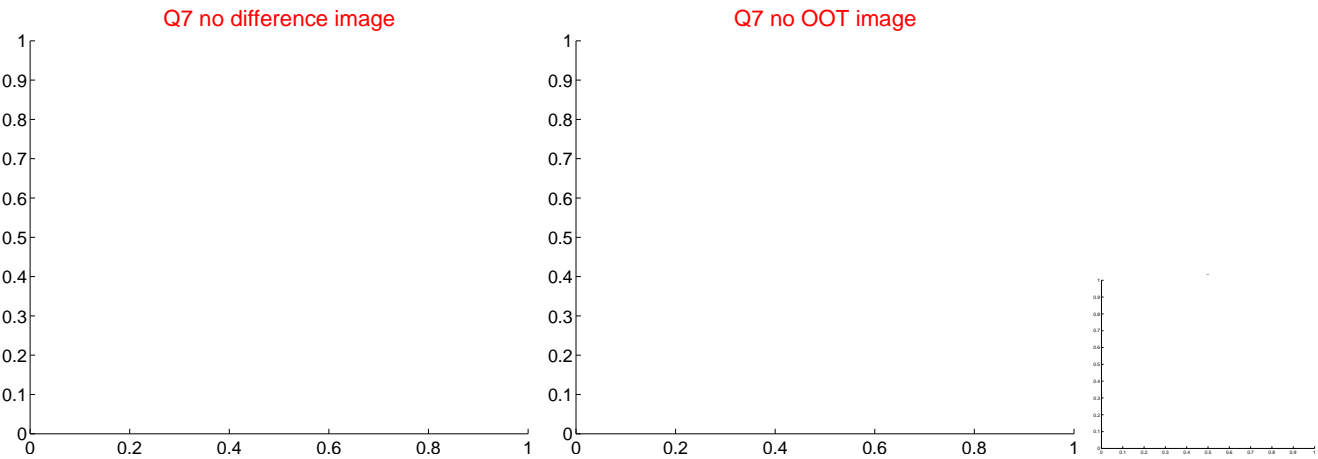
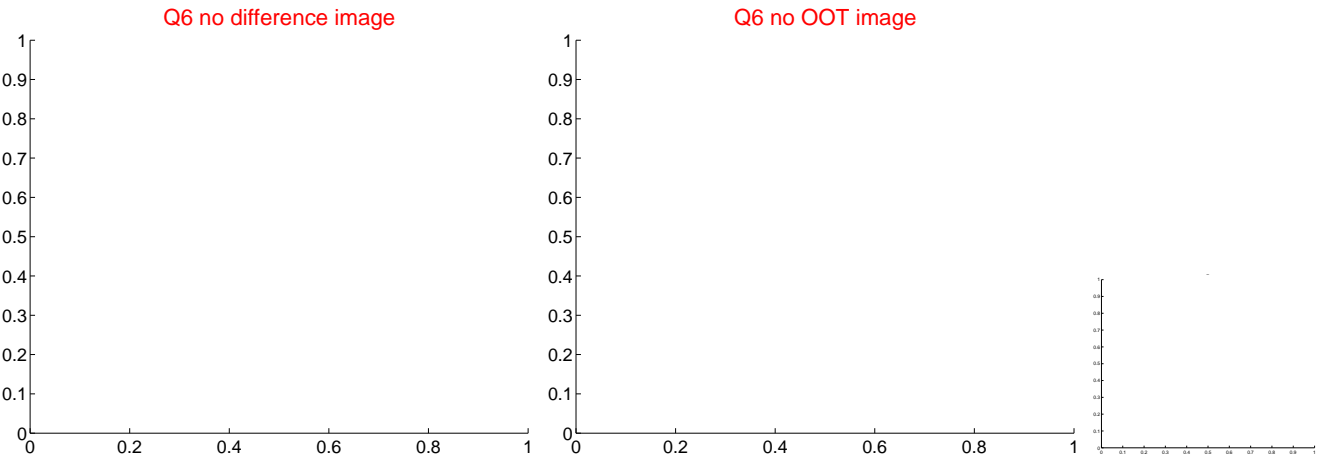
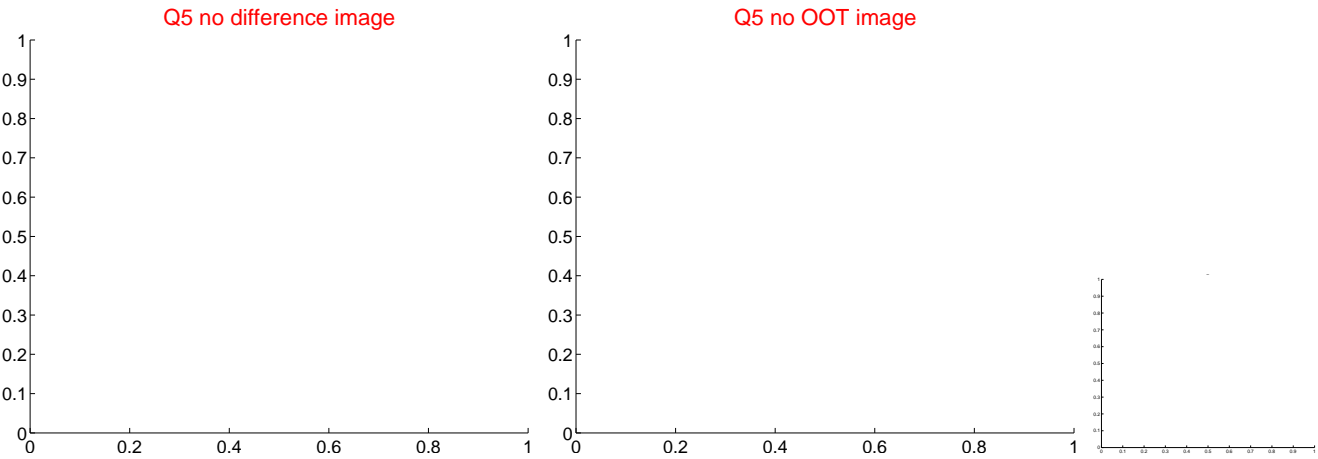
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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



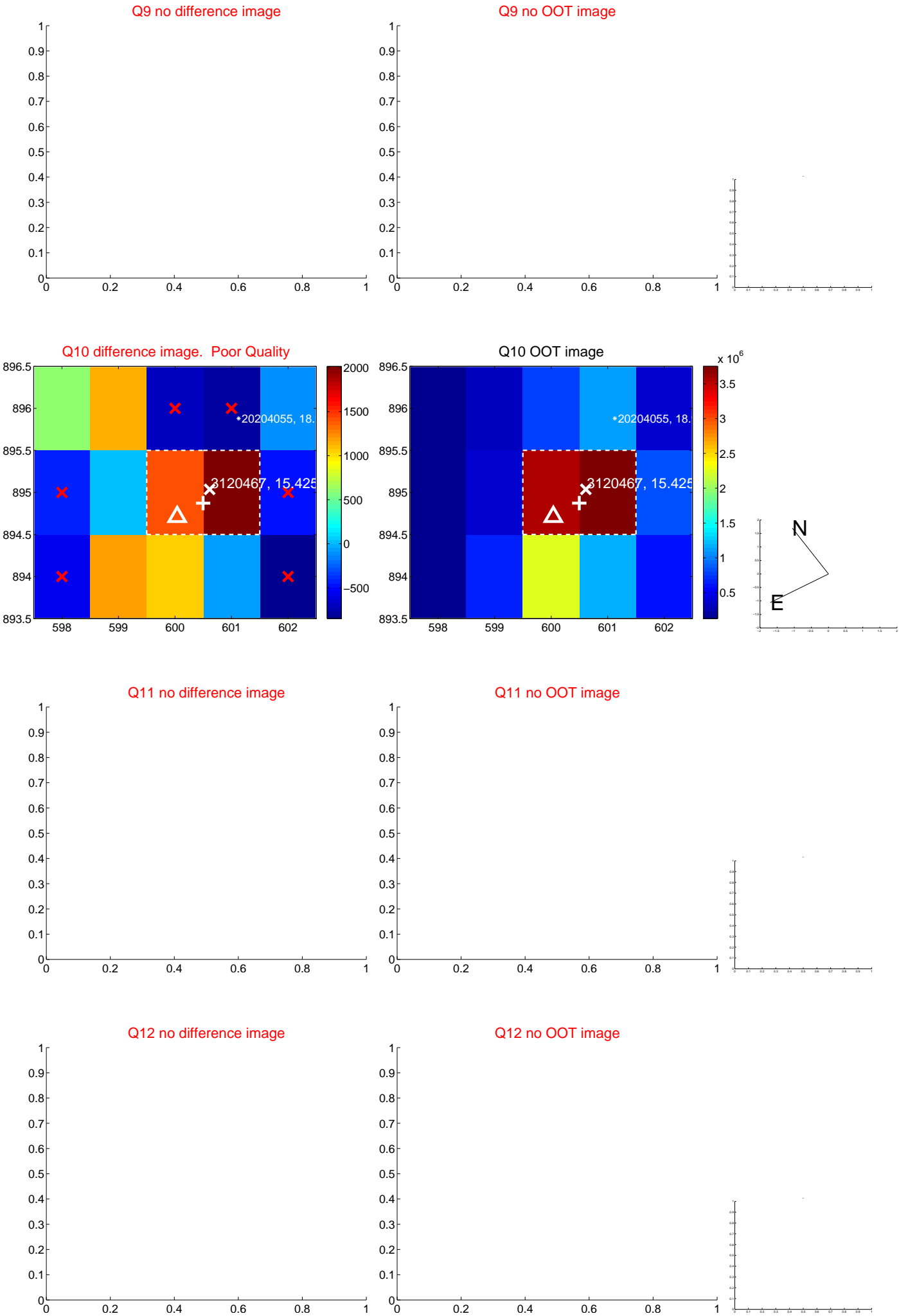
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



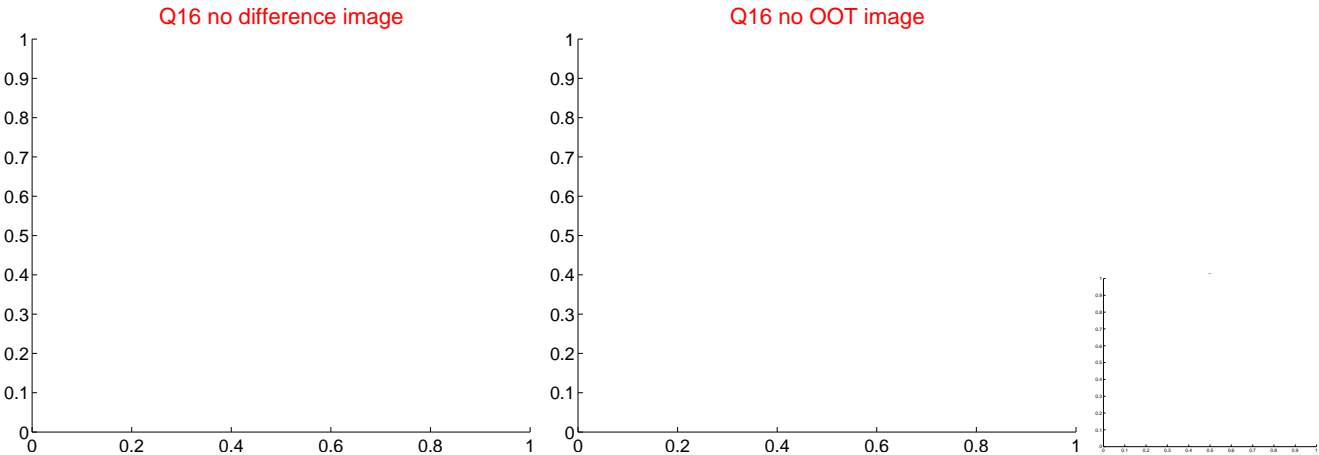
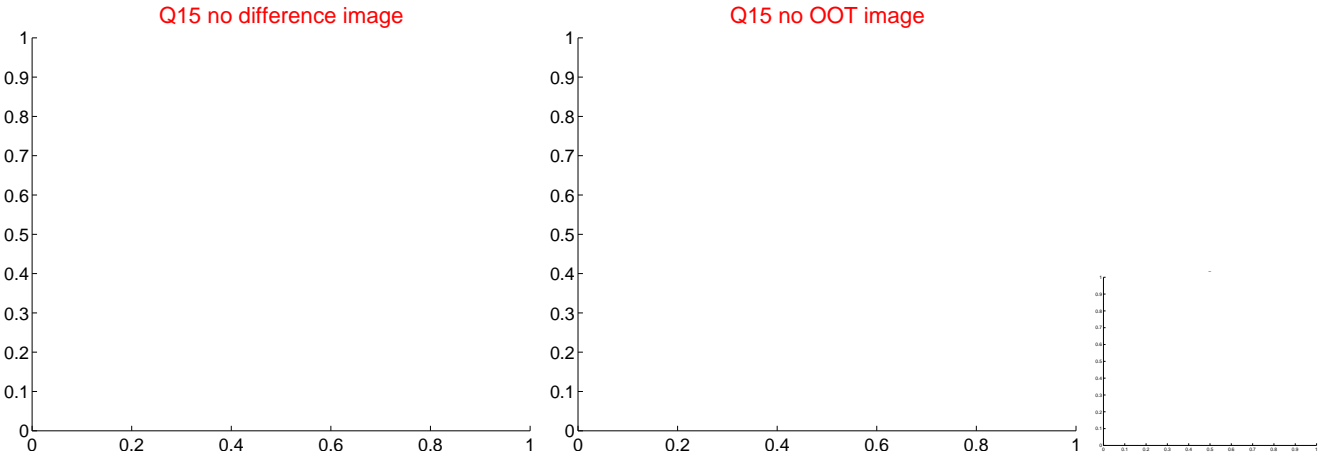
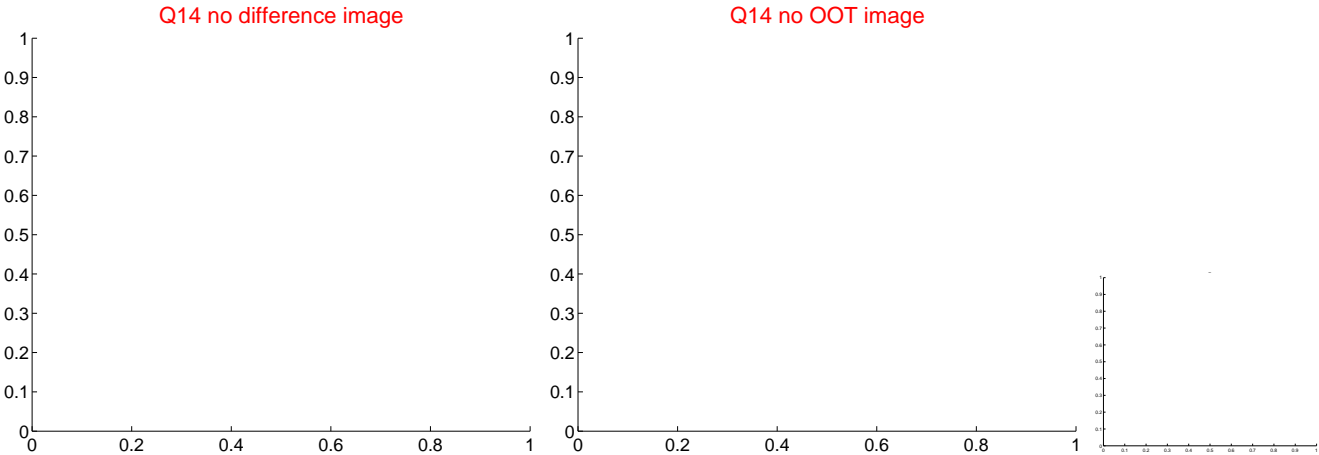
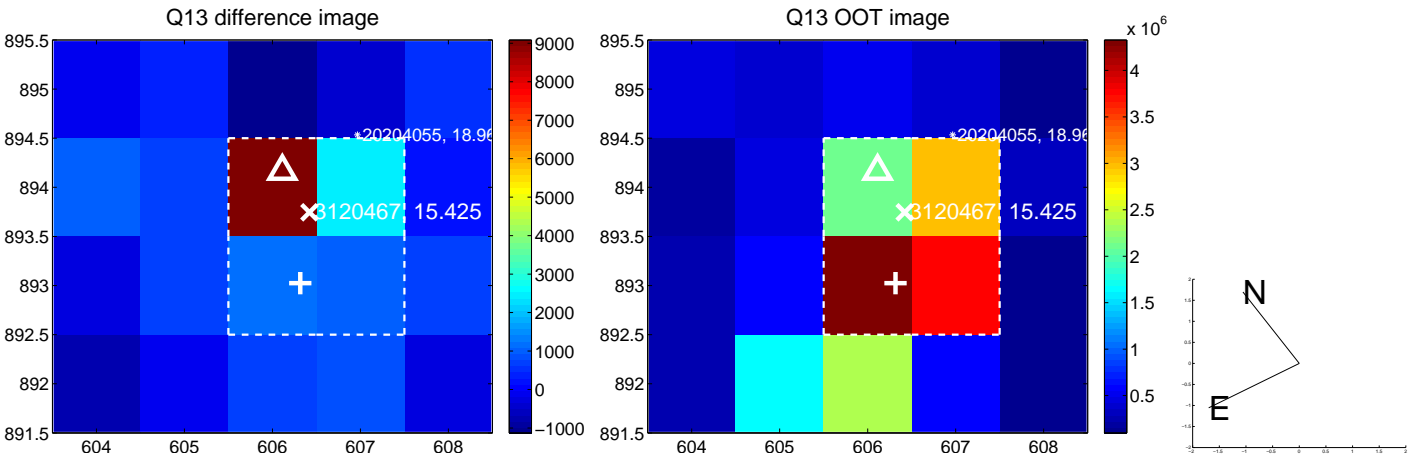
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



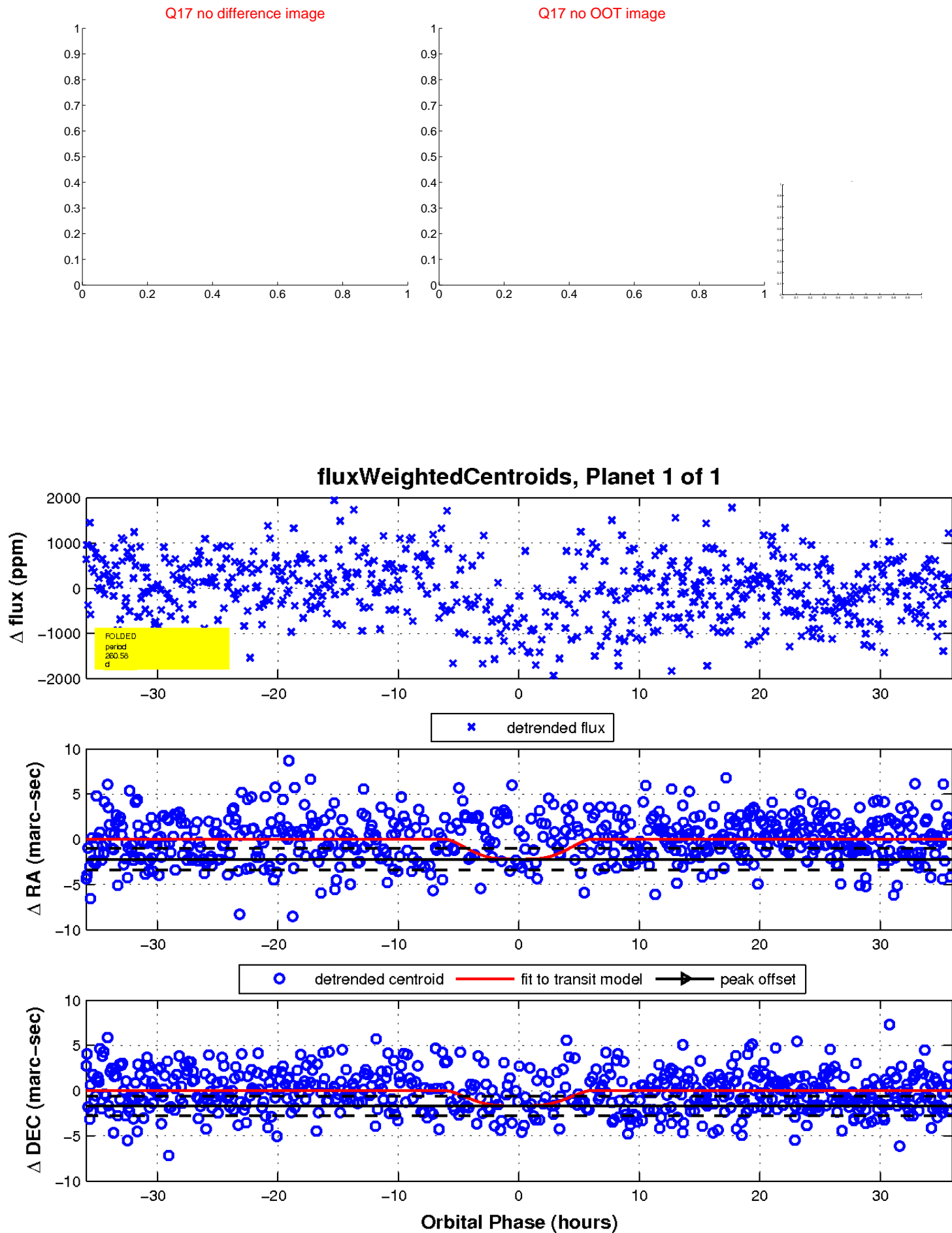
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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UKIRT Image

Declination

