

# KIC 007605152

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007605152-01	OBS	No	0.849283	131.646064	3.8	7.465	9.9	4.4	3.47	7837	0.69	80982.99

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007605152-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_SATURATED

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

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

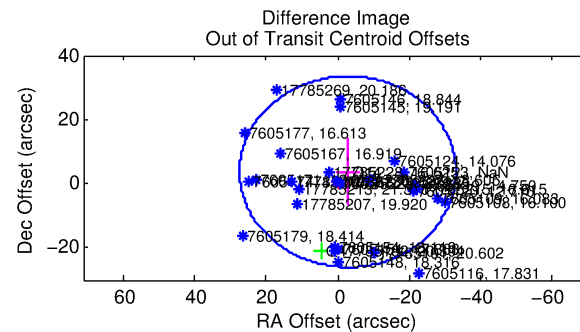
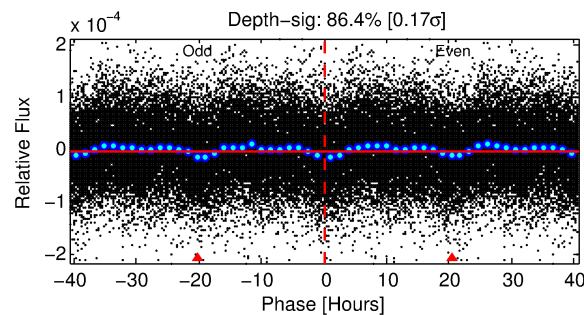
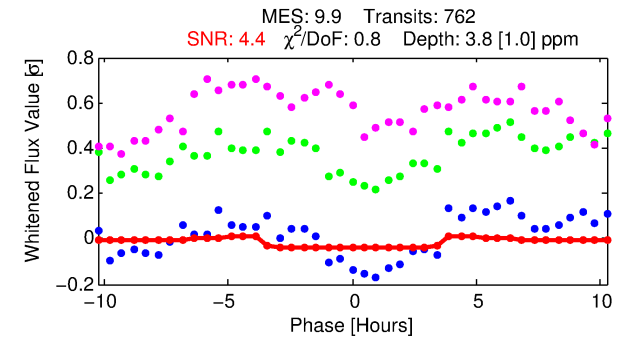
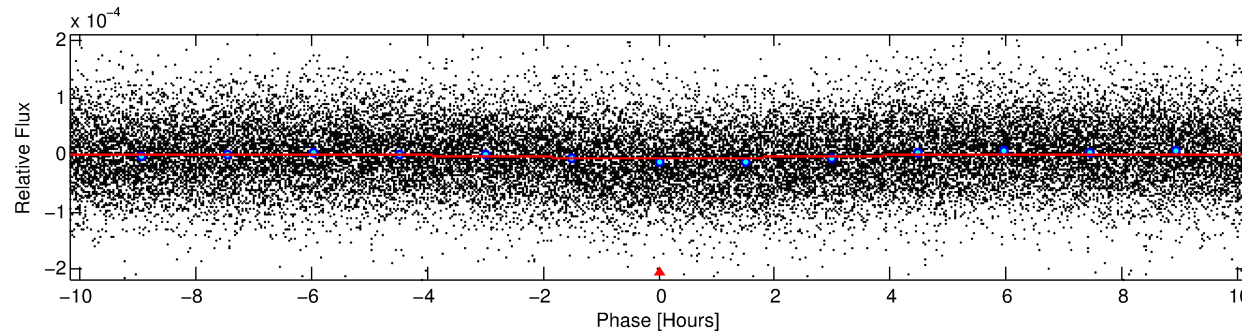
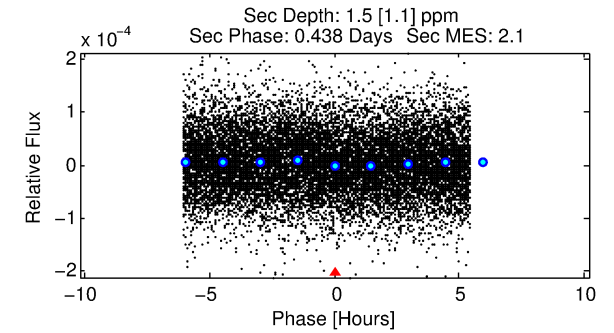
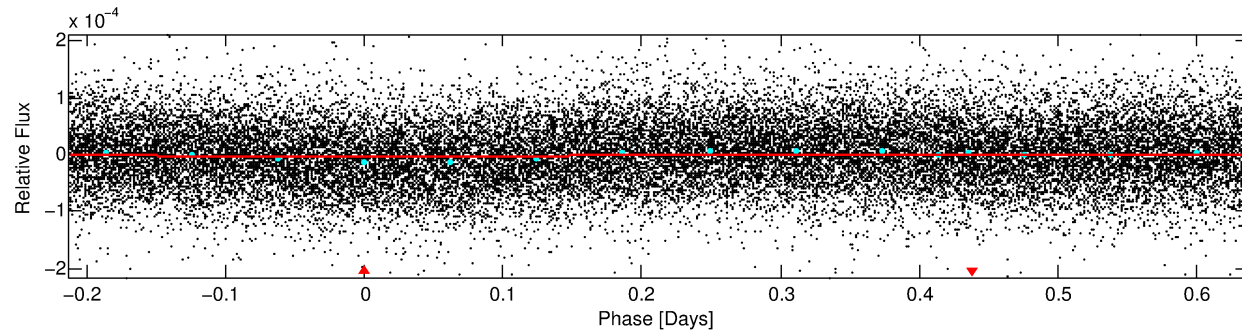
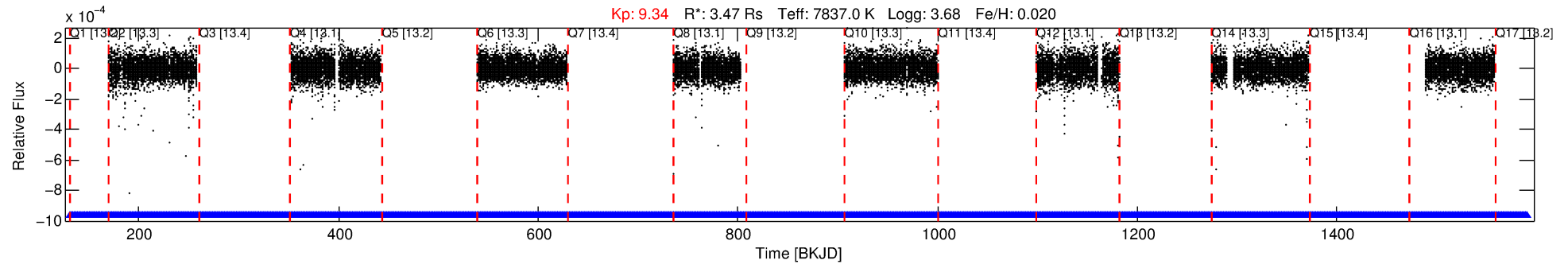
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 007605152-01

No Significant Match Found

# DV One-Page Summary

KIC: 7605152 Candidate: 1 of 1 Period: 0.849 d



## DV Fit Results:

Period = 0.84928 [0.00003] d  
Epoch = 131.6461 [0.0109] BKJD  
Rp/R\* = 0.0018 [0.0028]  
a/R\* = 1.10 [1.61]  
b = 0.10 [85.55]  
Seff = 80982.99 [60968.23]  
Teq = 4302 [810] K  
Rp = 0.68 [1.11] Re  
a = 0.0224 [0.0103] AU  
Ag = 0.91 [2.97] [-0.03σ]  
Teffp = 6498 [5159] K [0.42σ]

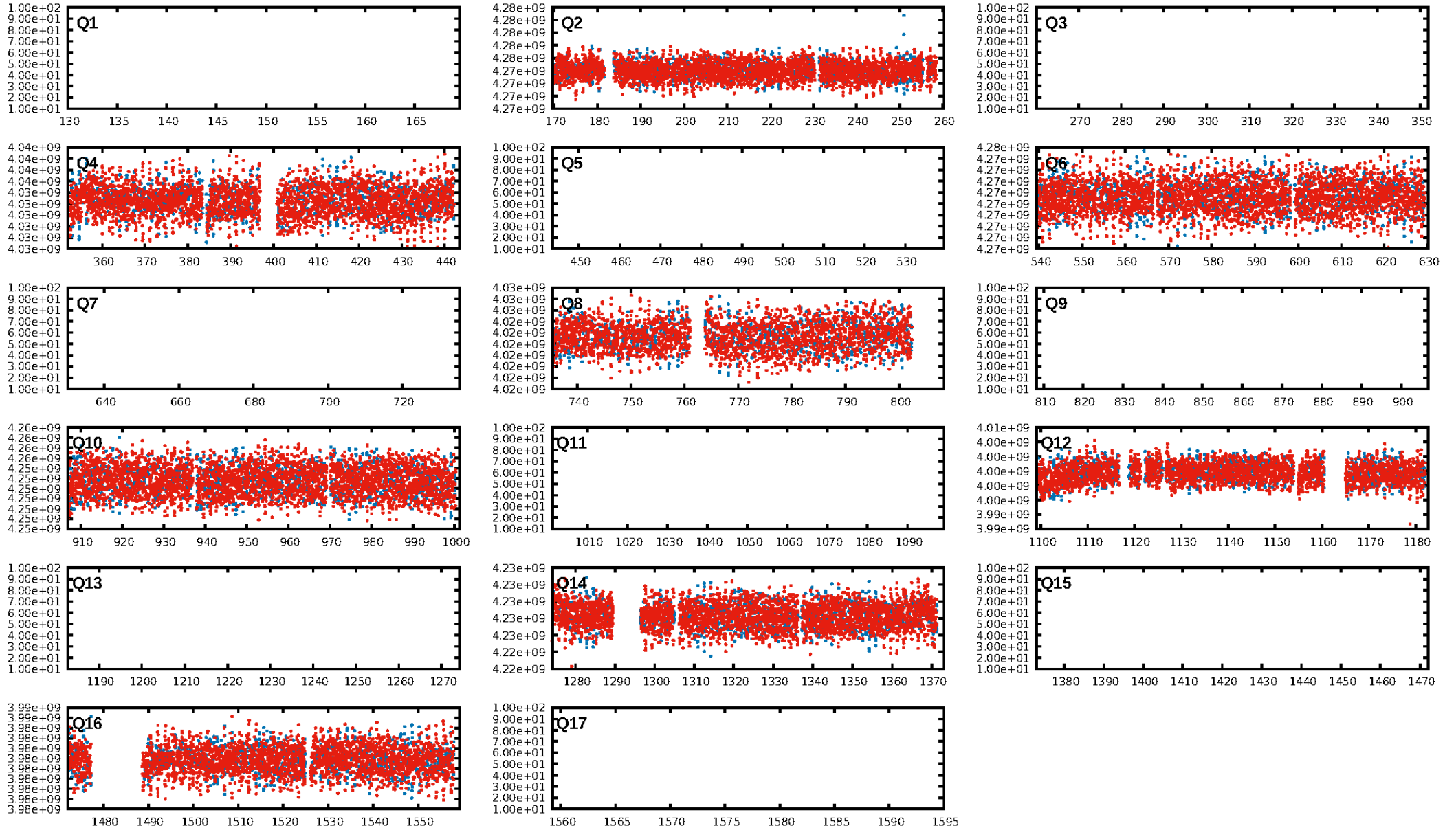
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [762/762]  
GhostDiagnostic-chr: N/A  
Centroid-sig: N/A  
Centroid-so: N/A  
OotOffset-rm: 4.667 arcsec [0.46σ]  
KicOffset-rm: 5.143 arcsec [0.49σ]  
OotOffset-st: 1/0/1/0 [2]  
KicOffset-st: 1/0/1/0 [2]  
DiffImageQuality-fgm: 0.00 [0/2]  
DiffImageOverlap-fno: 1.00 [8/8]

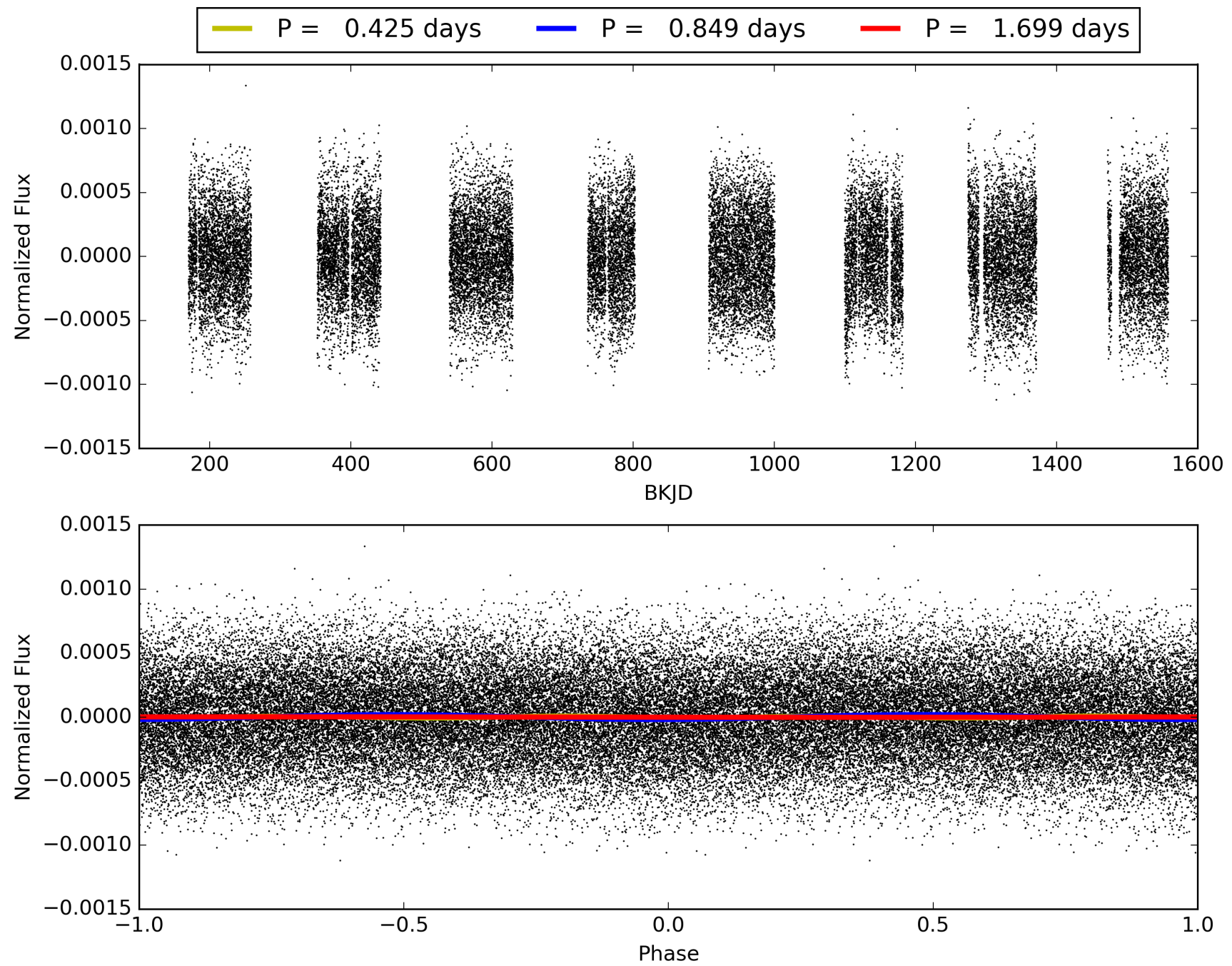
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:12:38 Z

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

# TCE 007605152-01, PDC Light Curves

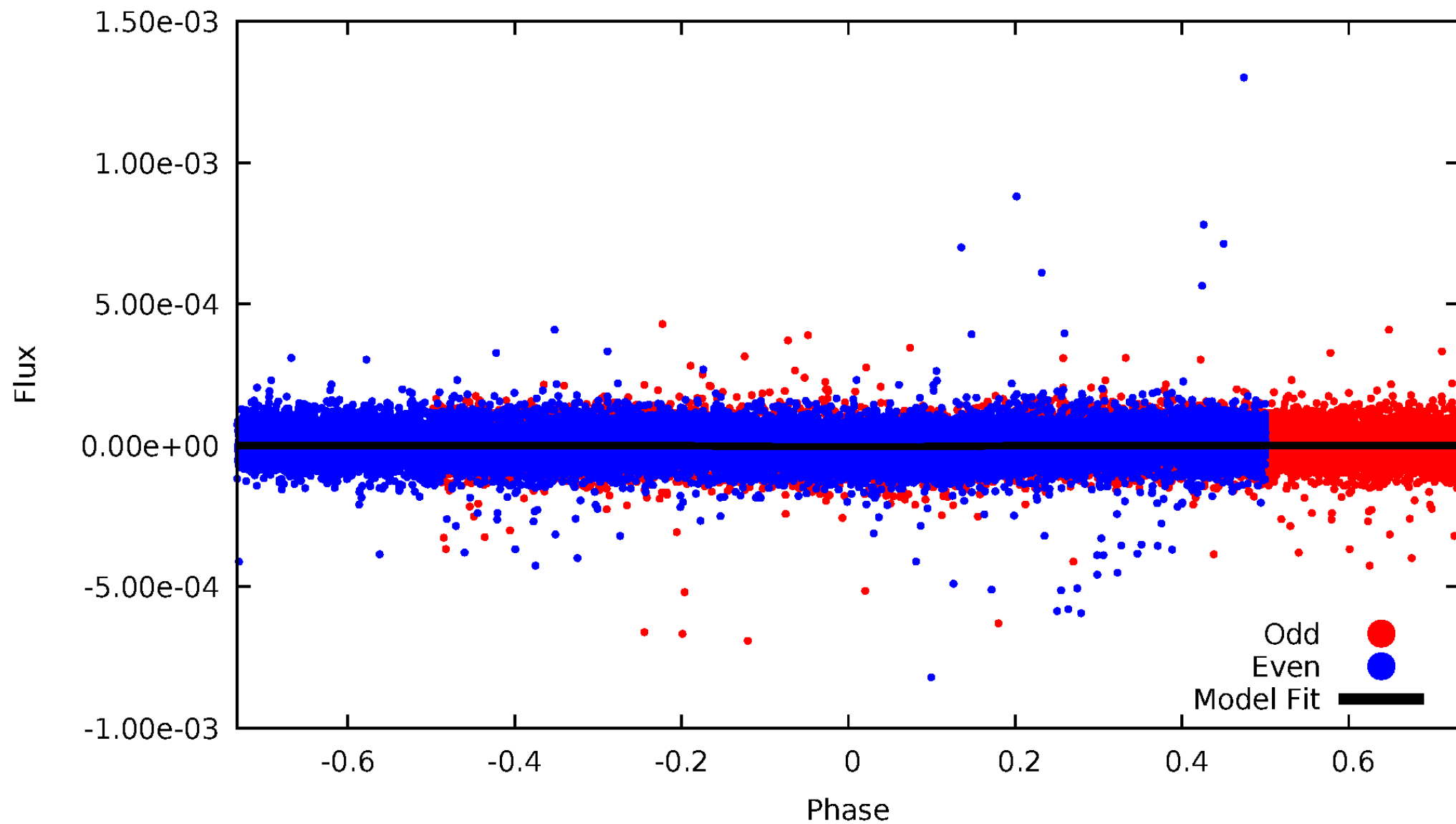


TCE 007605152-01



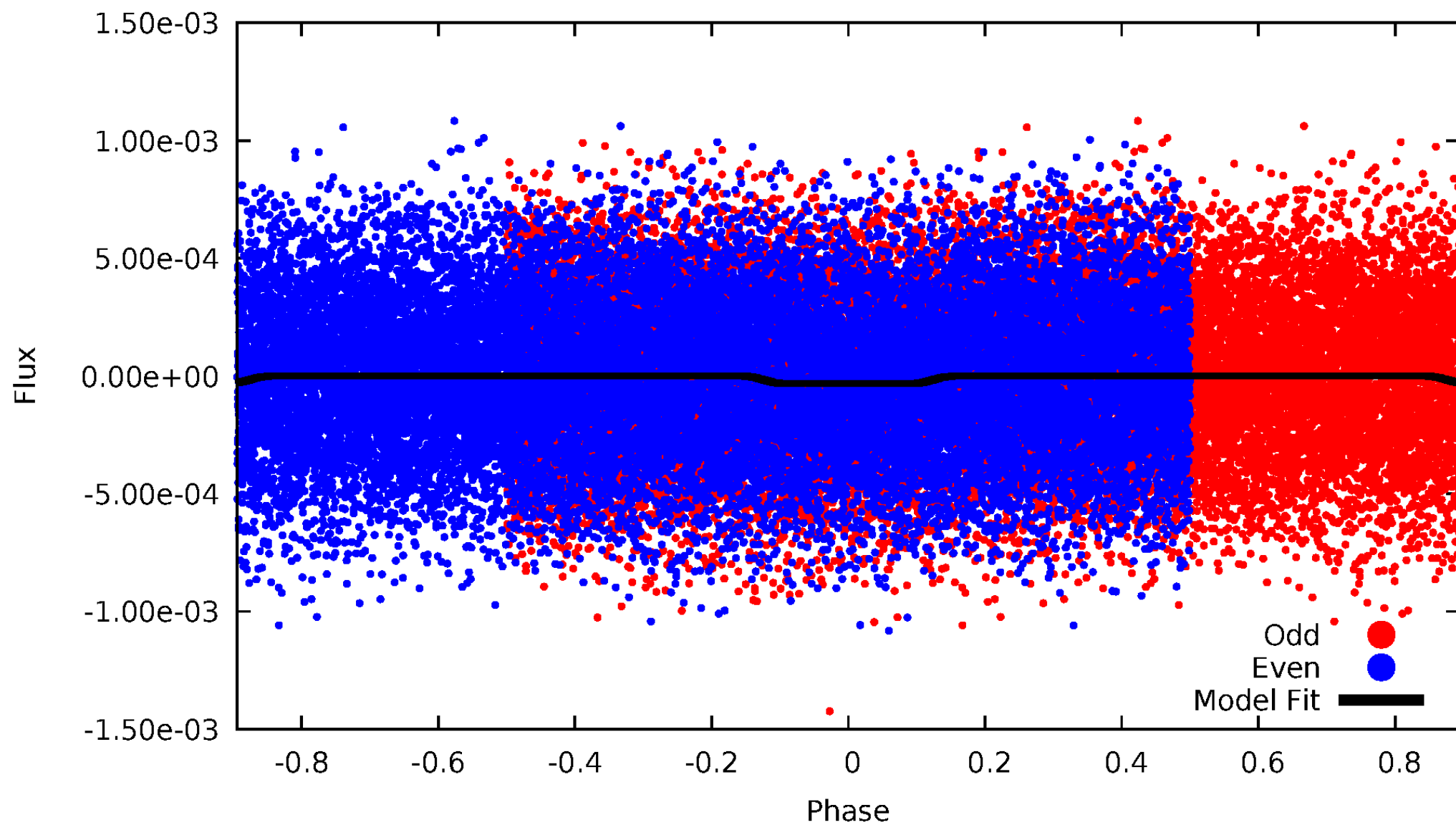
# DV Odd/Even

TCE 007605152-01



# ALT Odd/Even

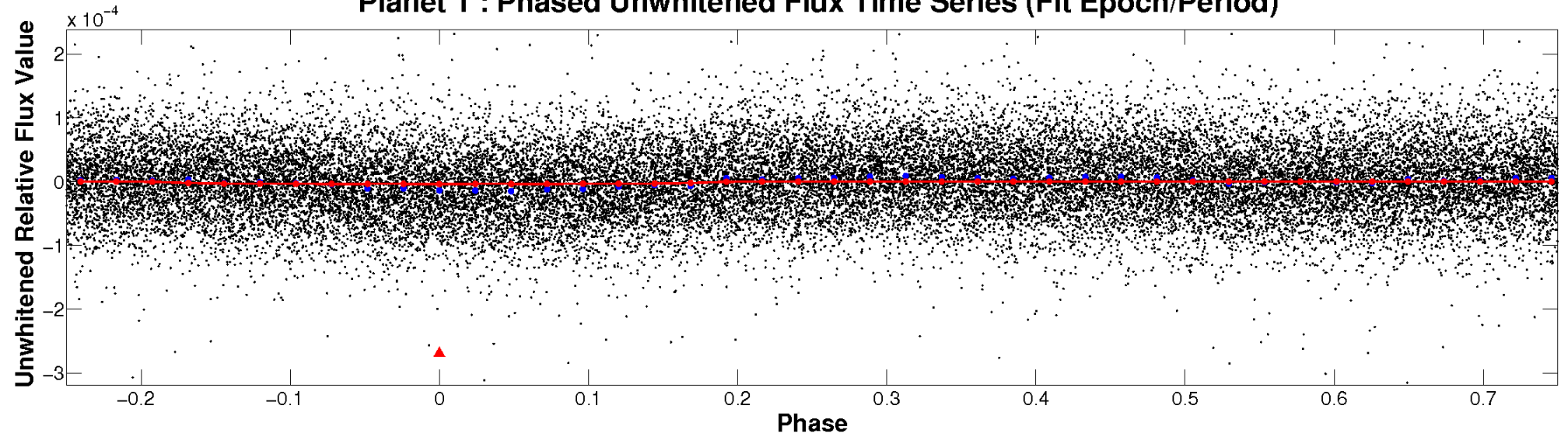
TCE 007605152-01



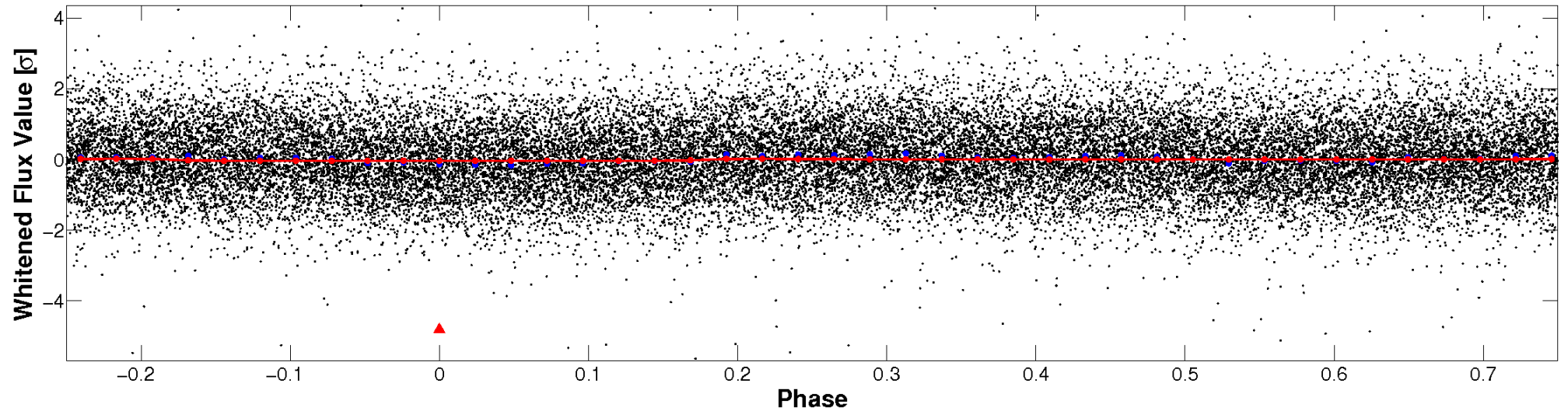


# Non-Whitened Vs. Whitened Light Curve

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

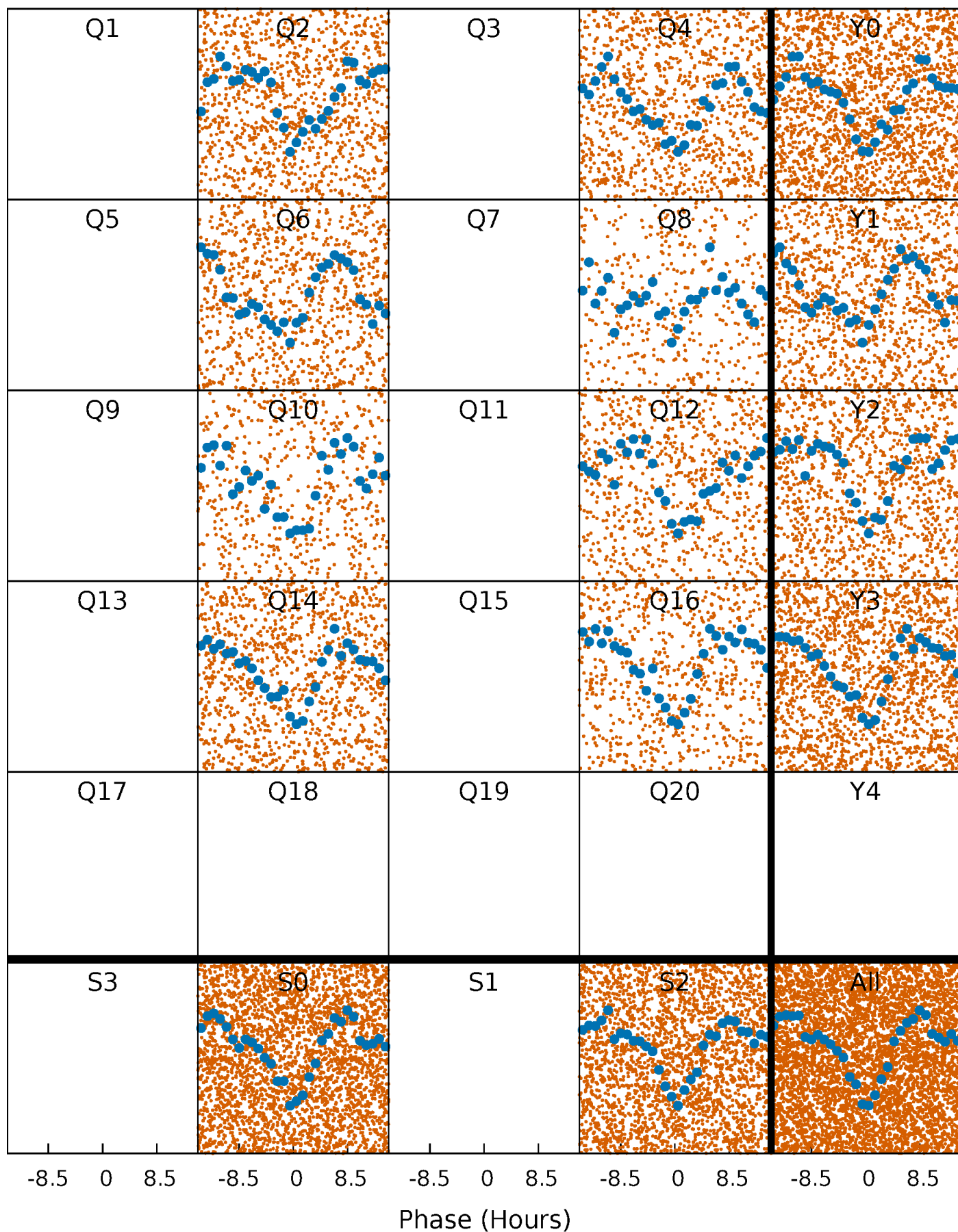


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

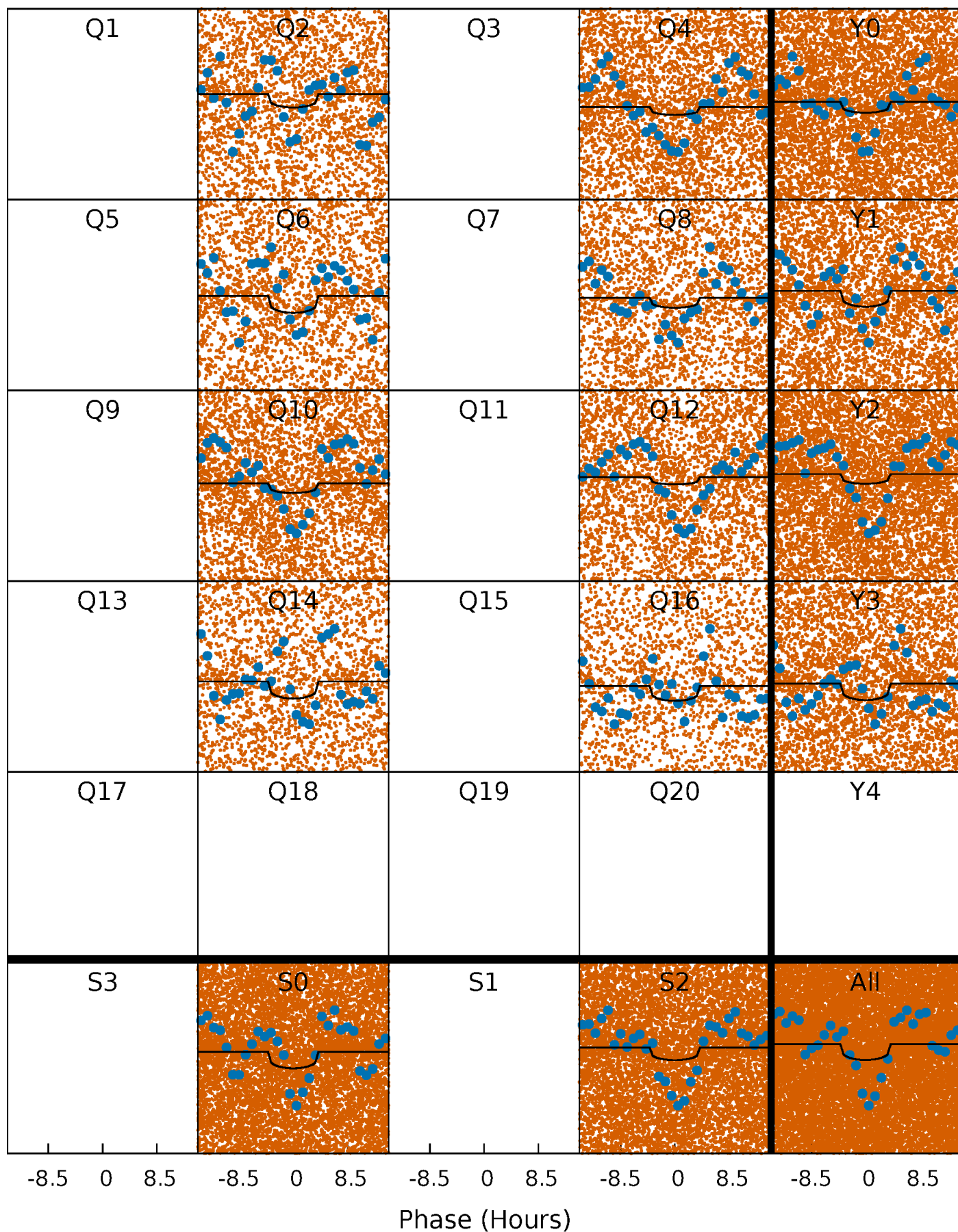
TCE 007605152-01 P= 0.849283 Days  $T_0=131.646064$  (BKJD)





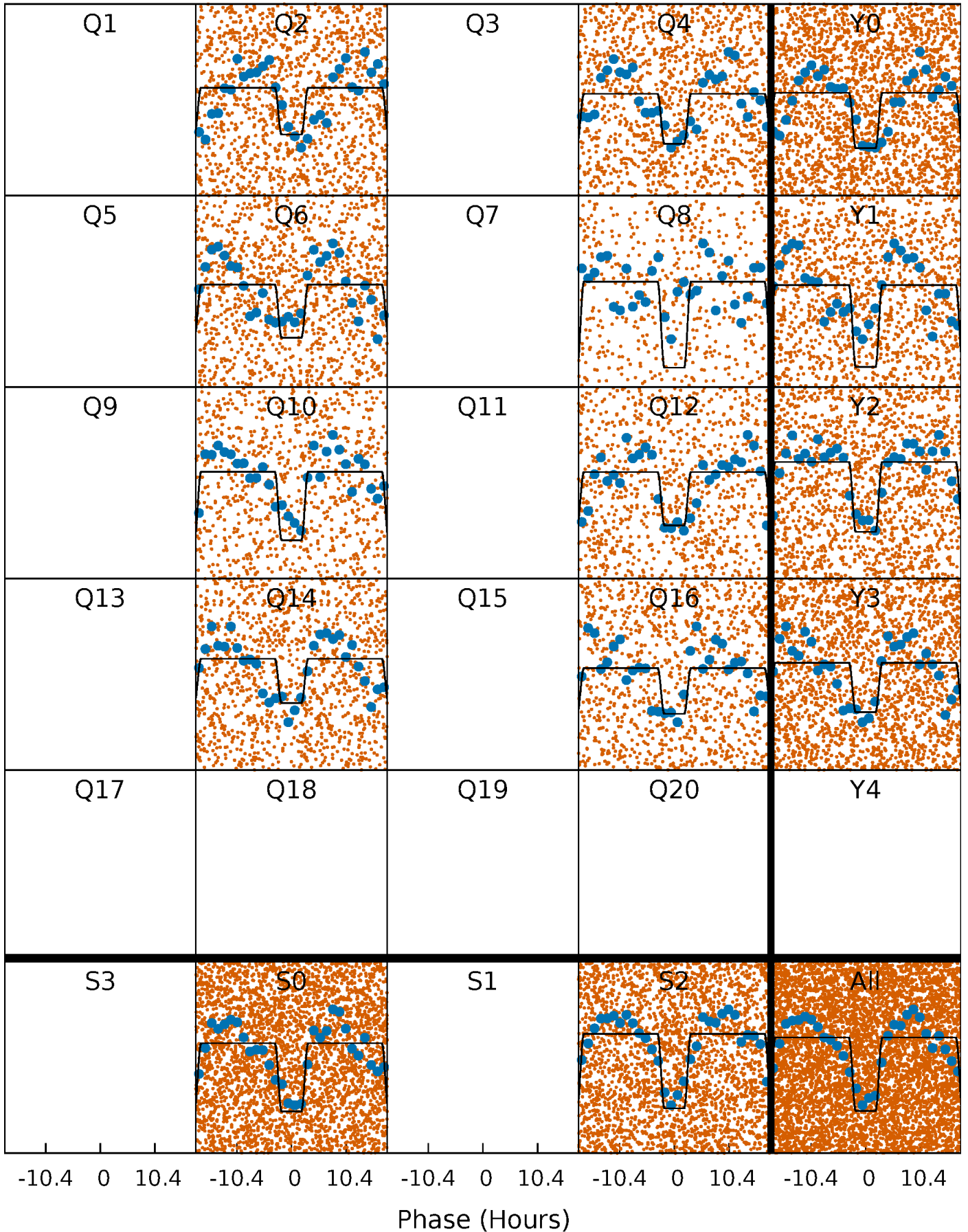
# DV Quarter-Phased Transit Curves

TCE 007605152-01 P= 0.849283 Days  $T_0=131.646064$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

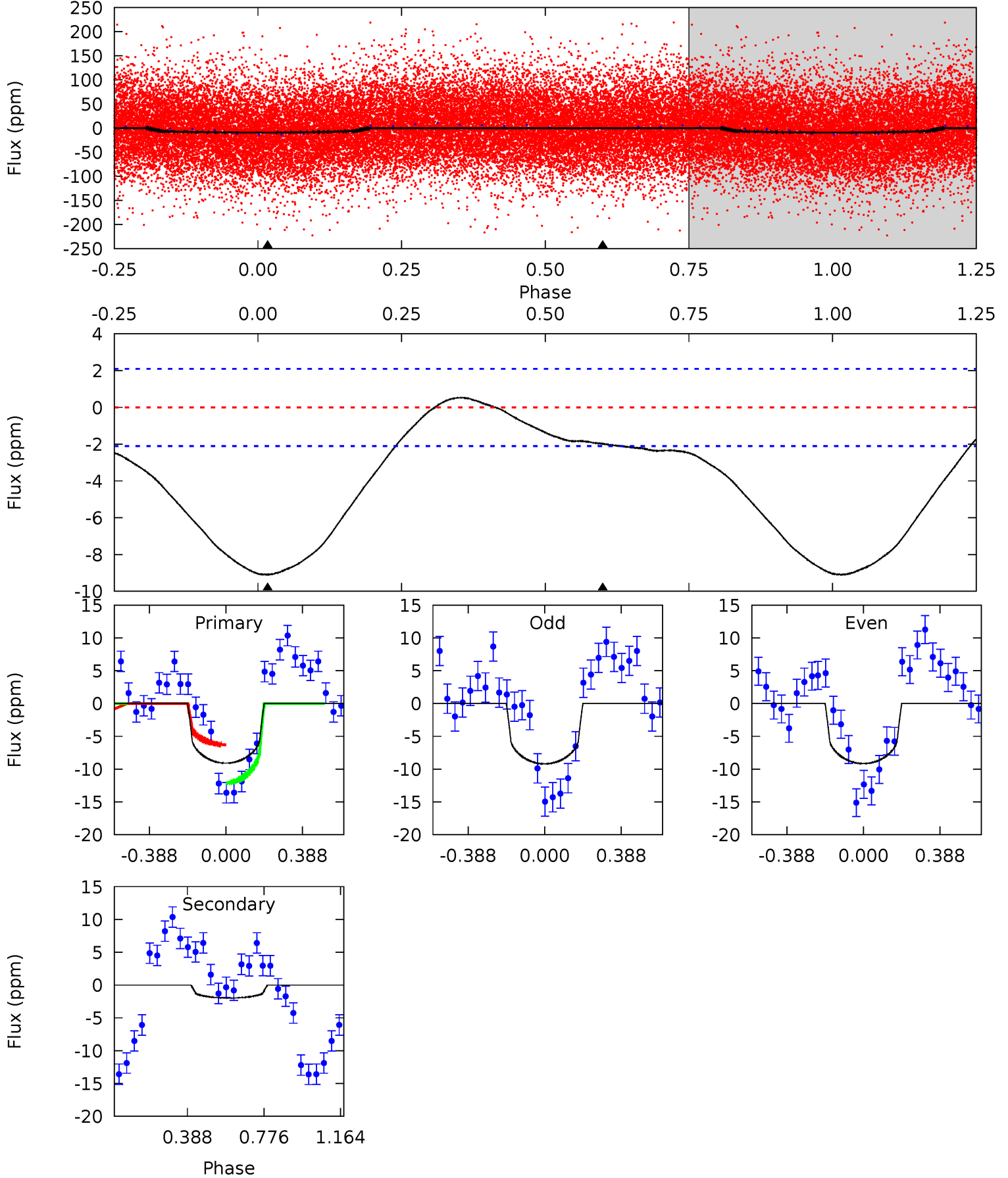
TCE 007605152-01 P= 0.849341 Days  $T_0=131.607237$  (BKJD)



# DV Model-Shift Uniqueness Test

007605152-01, P = 0.849283 Days, E = 131.646064 Days

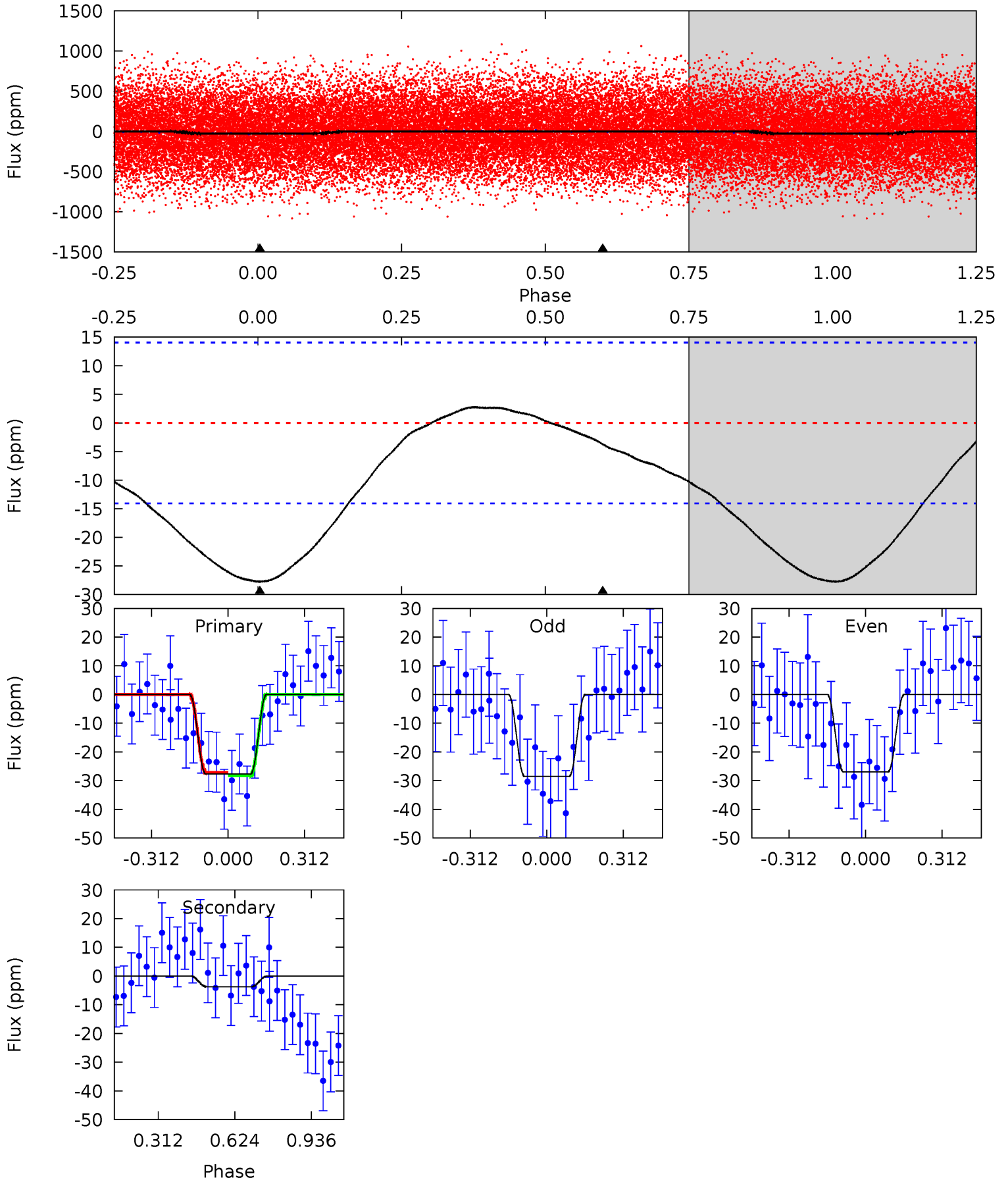
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.5	4.03	0	0	4.27	0.86	1.26	18.5	18.5	4.03	4.03	0.04	1.09	0.06	5.70



# Alt Model-Shift Uniqueness Test

007605152-01, P = 0.849341 Days, E = 131.607237 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
8.52	1.14	0	0	4.32	1.01	0.44	8.52	8.52	1.14	1.14	0.24	1.19	0.09	0.19



### Stellar Parameters For KIC 007605152

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$7837^{+217}_{-326}$	$3.676^{+0.432}_{-0.108}$	$0.020^{+0.200}_{-0.350}$	$3.471^{+0.821}_{-1.641}$	$2.085^{+0.343}_{-0.514}$	$0.070^{+0.297}_{-0.024}$
	+3%/-4%	+12%/-3%	+1000%/-1750%	+24%/-47%	+16%/-25%	+422%/-34%
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 007605152-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-2 \pm 0$	$0.91^{+0.93}_{-0.62}$	$5768^{+499}_{-721}$	$4650^{+5180}_{-8798}$	$0.622^{+5.631}_{-0.461}$
Alt.	$-4 \pm 3$	$1.86^{+1.22}_{-0.87}$	$5759^{+500}_{-681}$	$-3349^{+9080}_{-1409}$	$0.251^{+0.816}_{-0.227}$

$T_{max}$  = 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

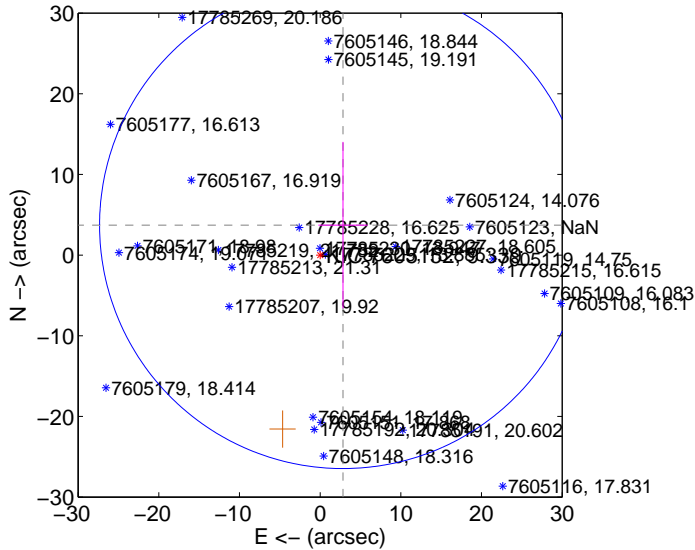
Supplemental centroid analysis for 007605152-01. **Kepler magnitude: 9.34.** Transit SNR 4.36

**There are 0 quarters with good PRF difference image offsets**

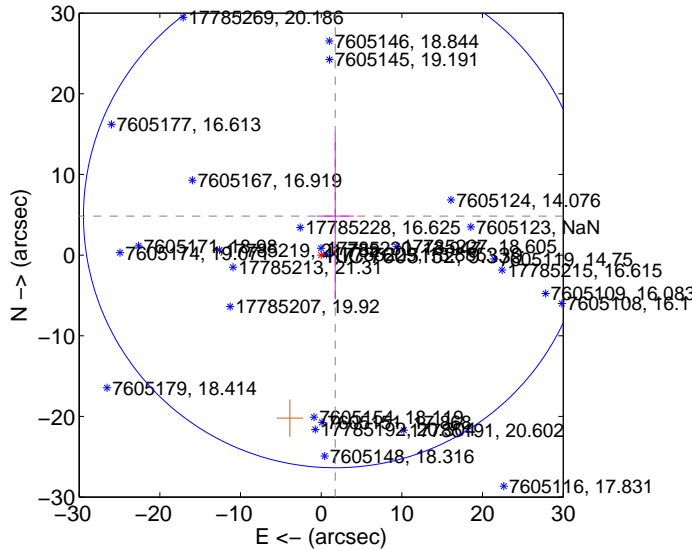
The direct PRF centroid is offset from the target star catalog position by about 1.57 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$4.667 \pm 10.058$	0.46	$-2.832 \pm 3.057$	$3.710 \pm 10.320$
PRF-fit source offset from KIC position	$5.143 \pm 10.401$	0.49	$-1.737 \pm 2.294$	$4.841 \pm 10.227$
photometric centroid source offset	—	—	—	—

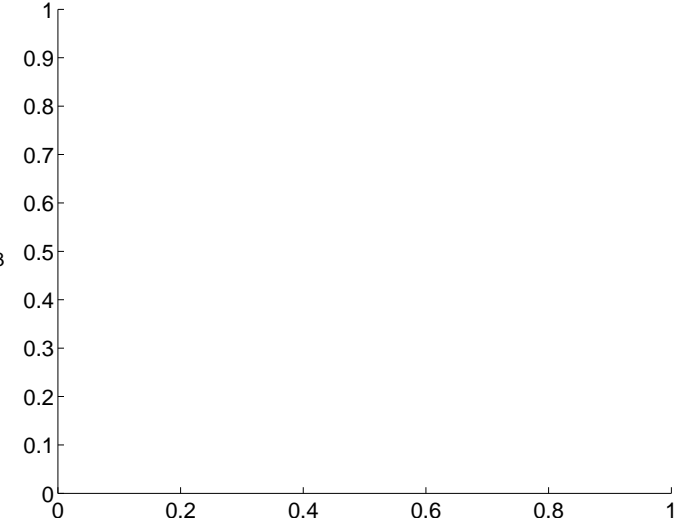
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



**There are no 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- $\sigma$  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.

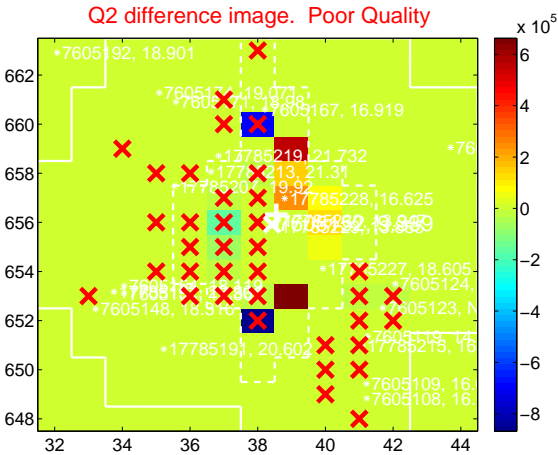
Q1 no difference image



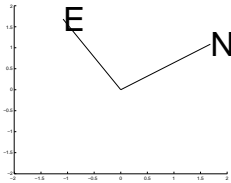
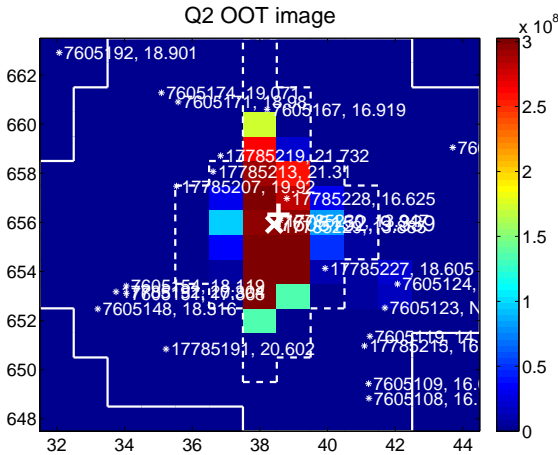
Q1 no OOT image



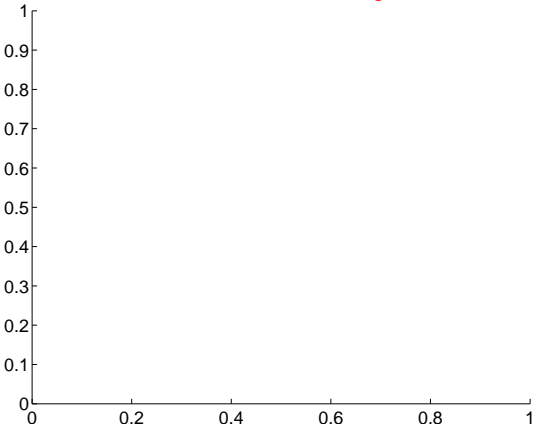
Q2 difference image. Poor Quality



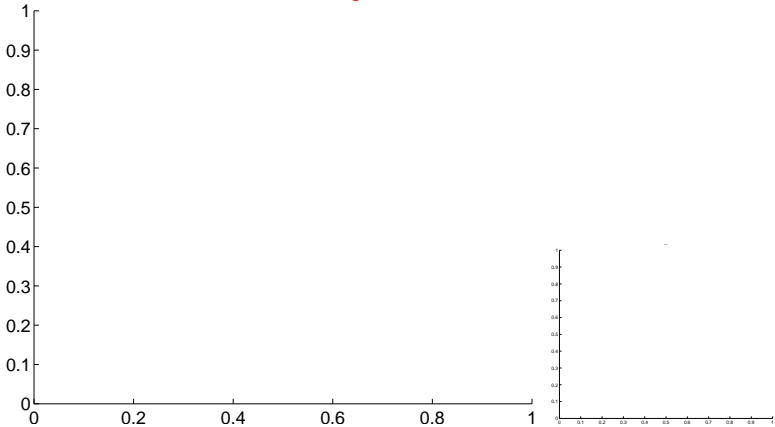
Q2 OOT image



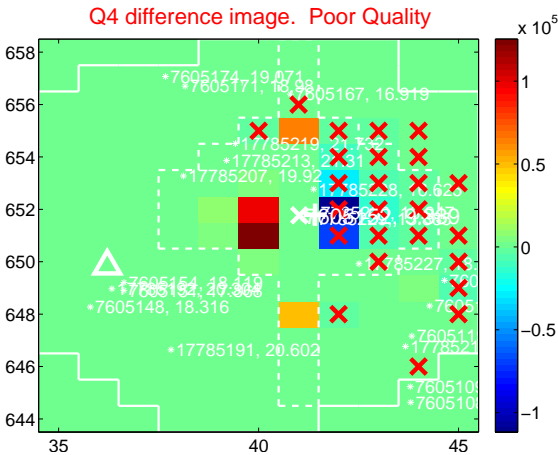
Q3 no difference image



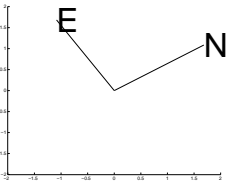
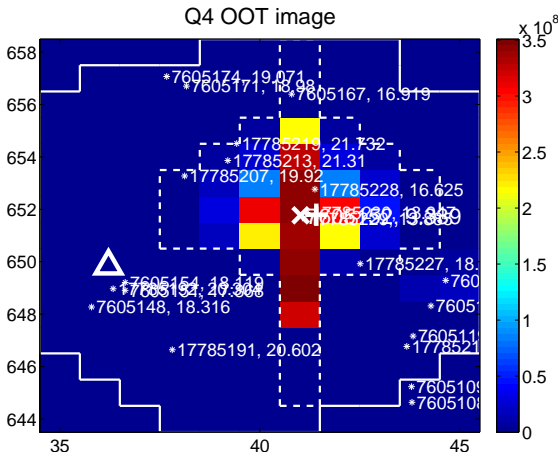
Q3 no OOT image



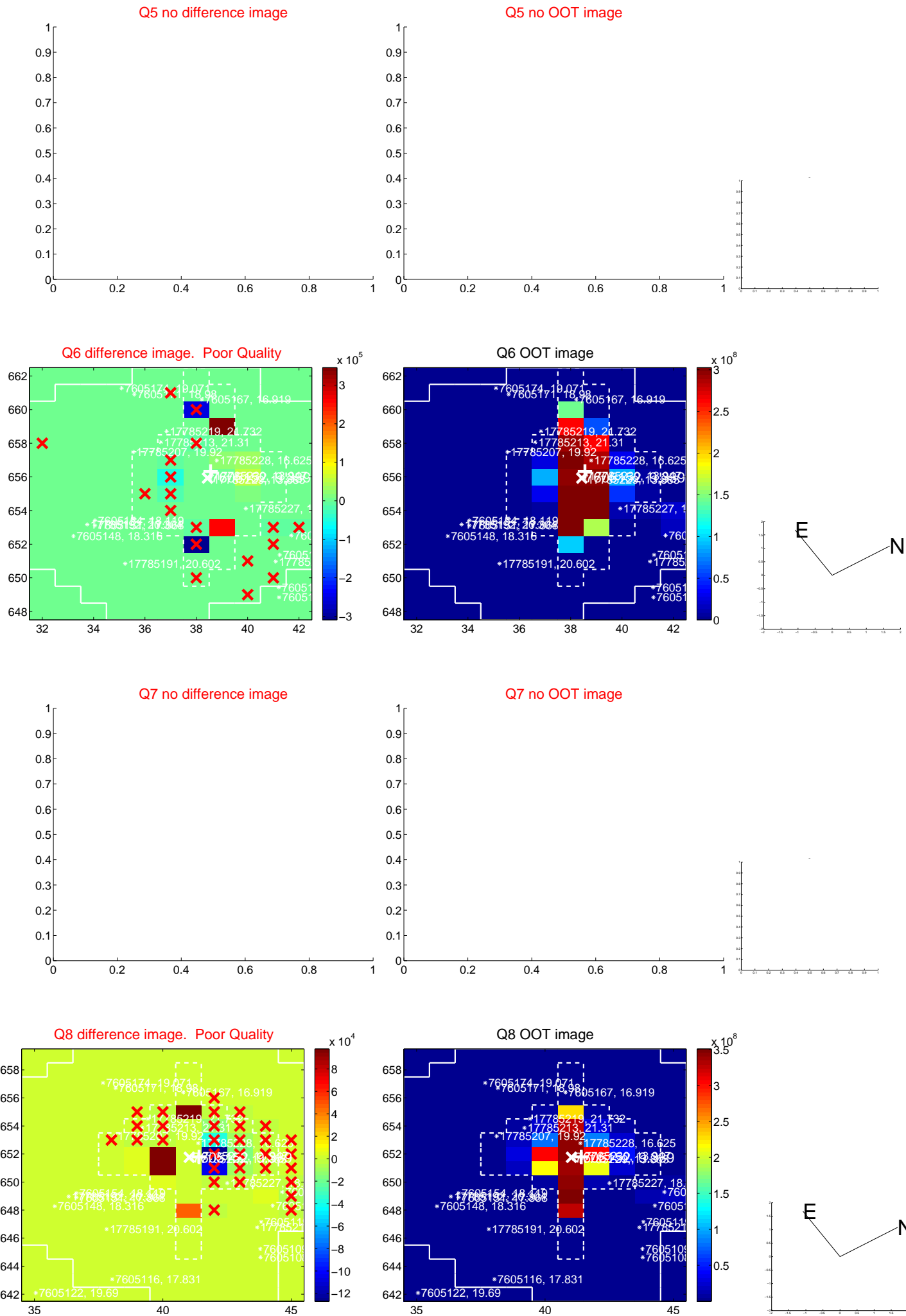
Q4 difference image. Poor Quality



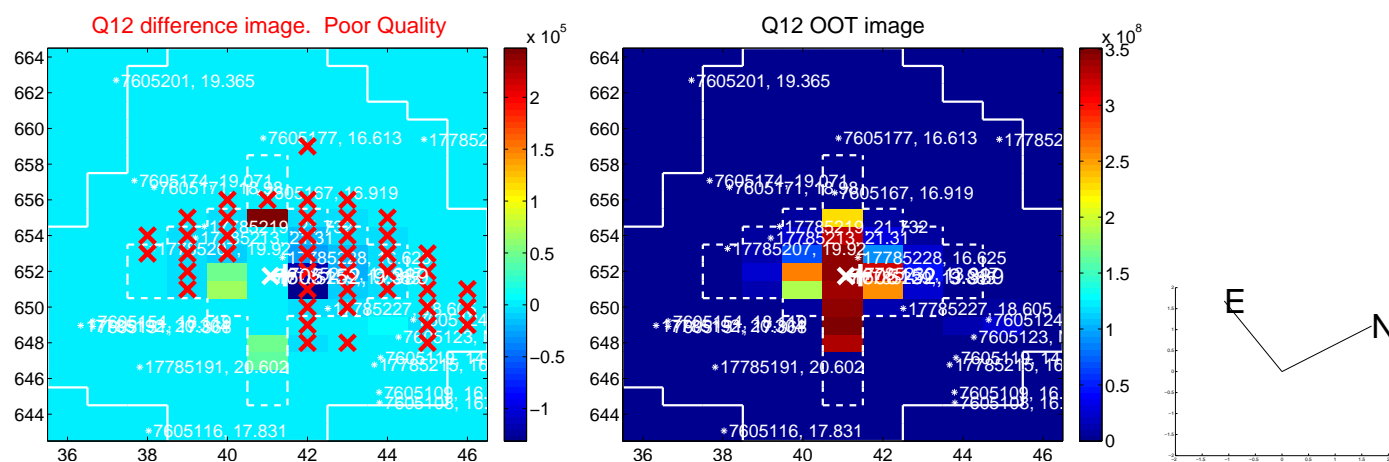
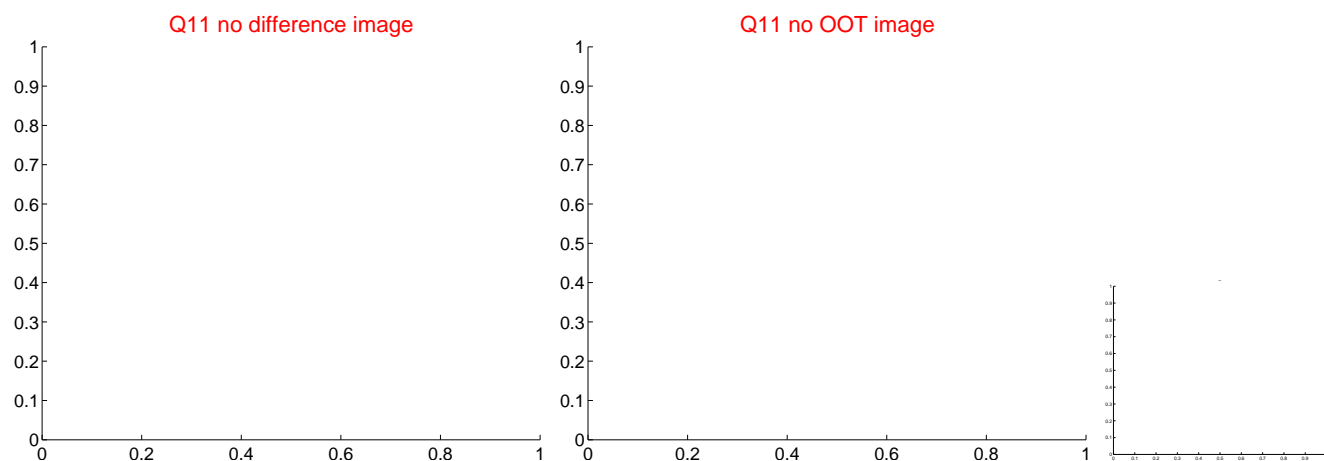
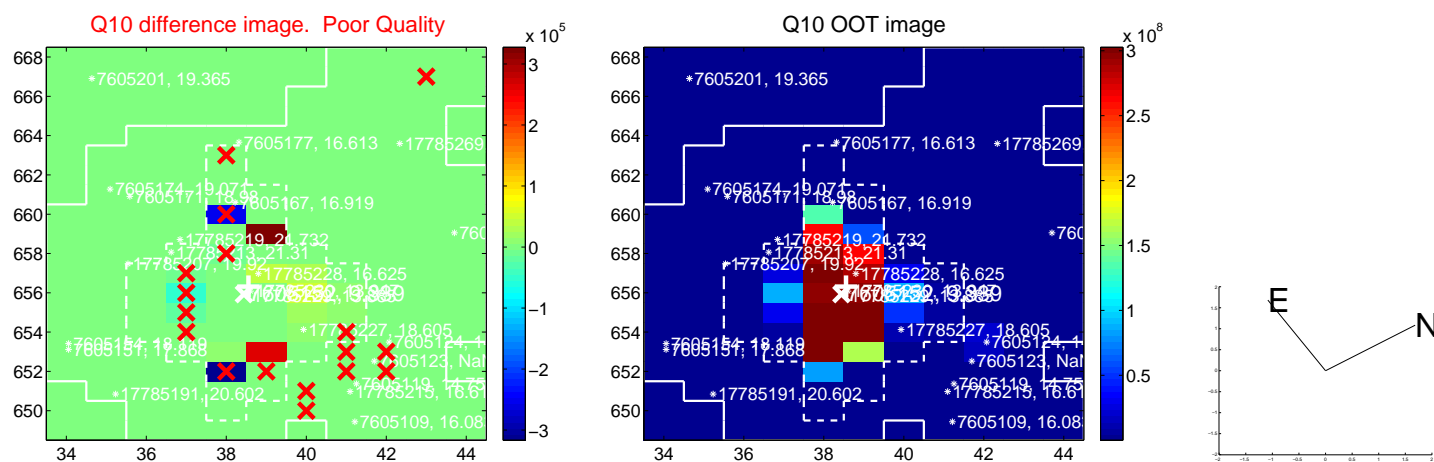
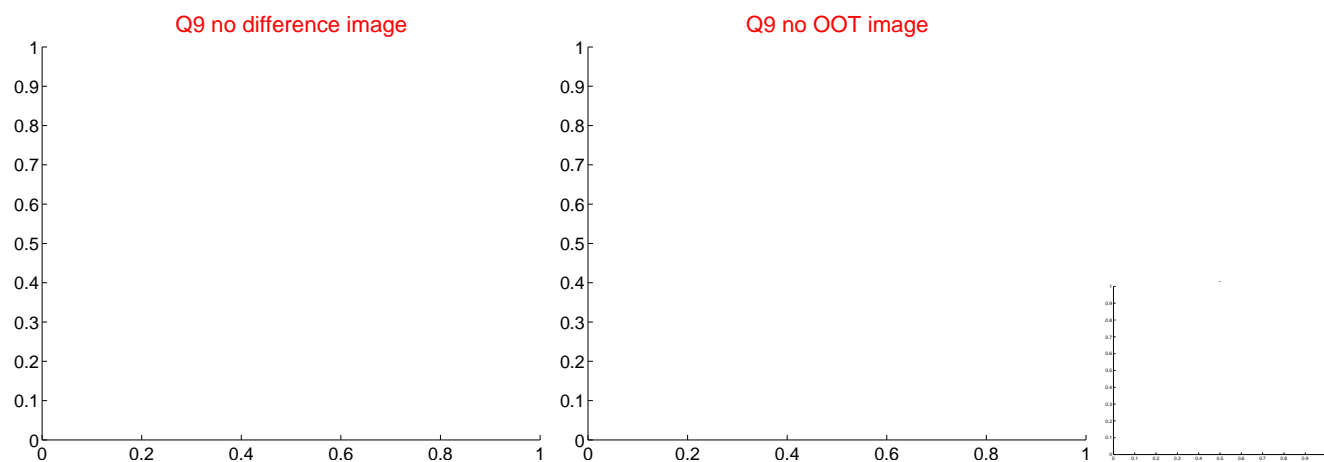
Q4 OOT image



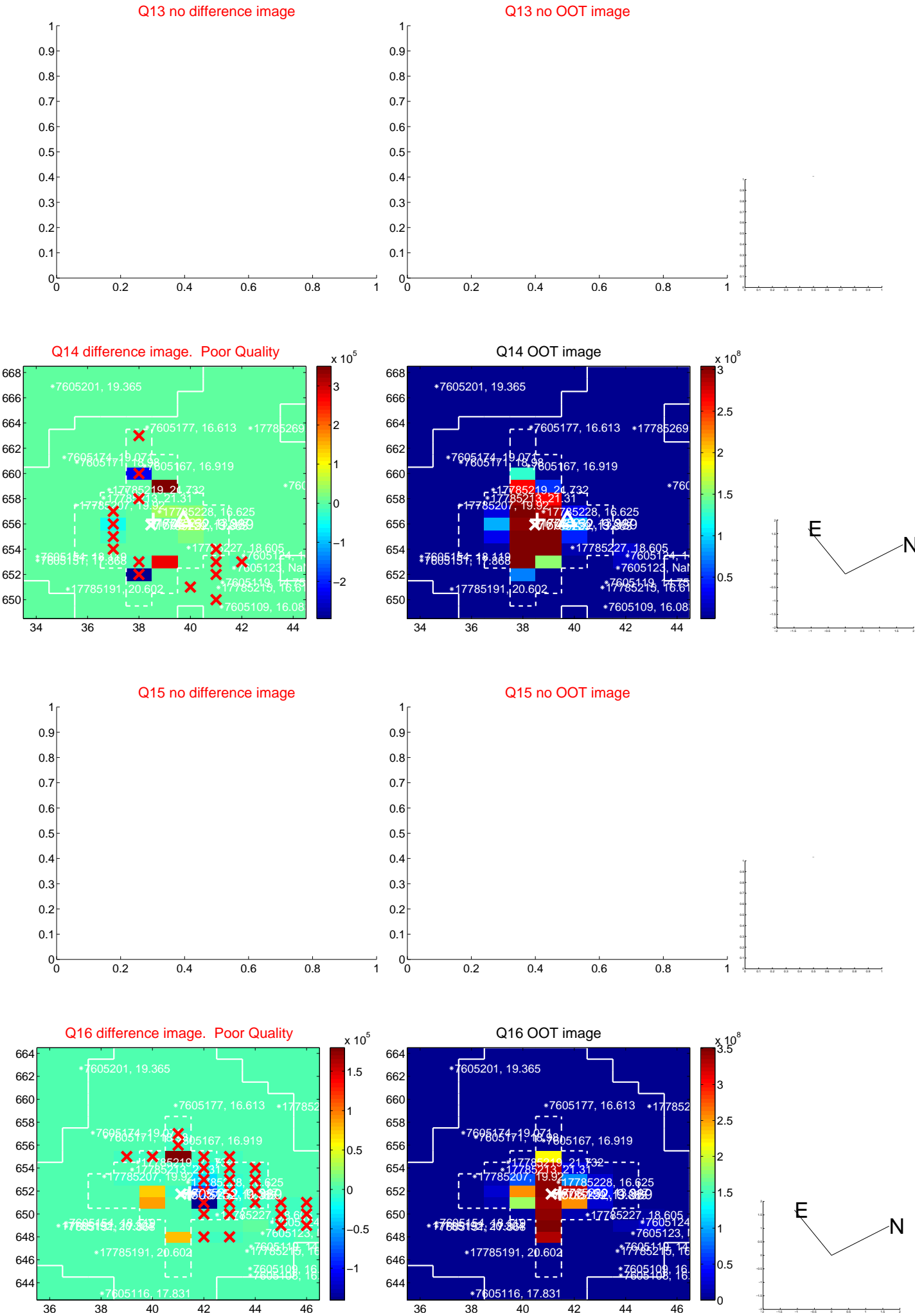
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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.



folded centroid time series figure for this object.

UKIRT Image

