

# KIC 01181260

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
01181260-01	OBS	4653.01	19.977731	135.169461	82.0	6.176	9.8	10.7	1.16	6392	1.23	84.50

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
01181260-01	OBS	PC	0.94	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.

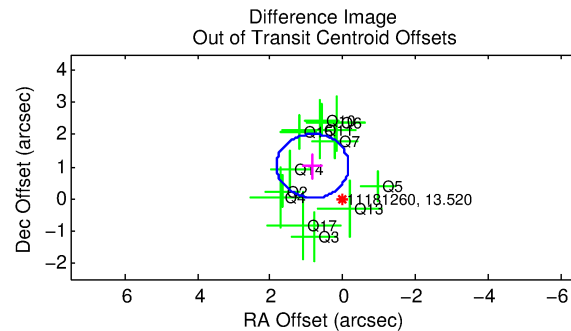
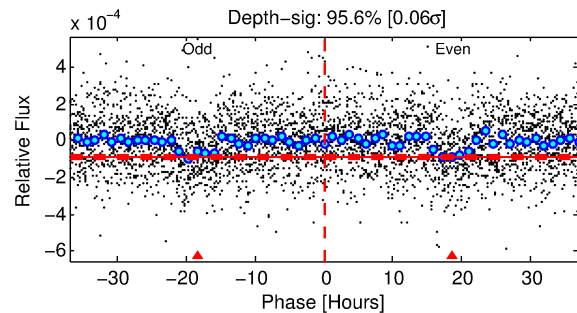
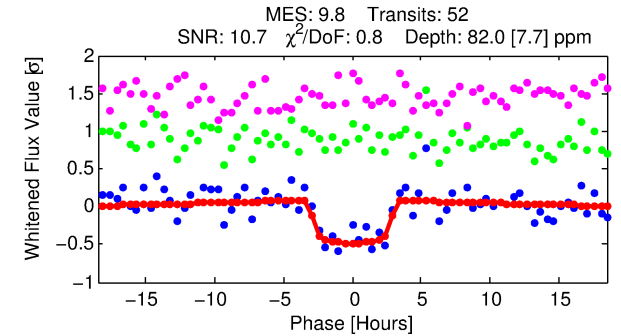
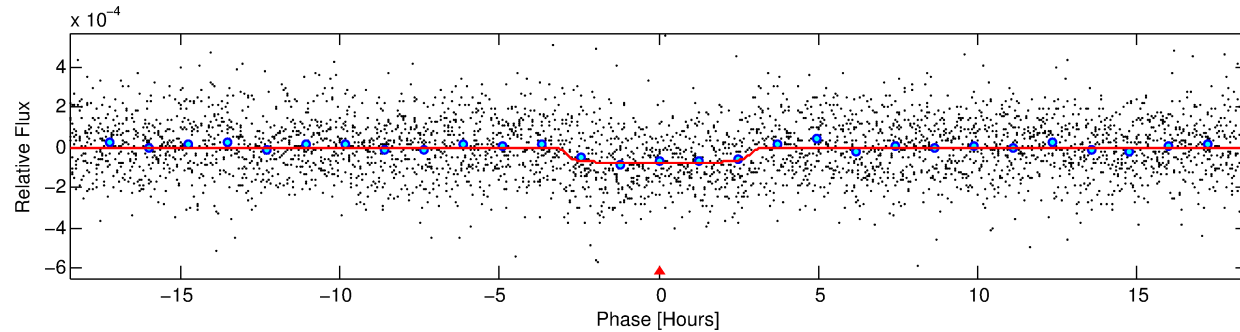
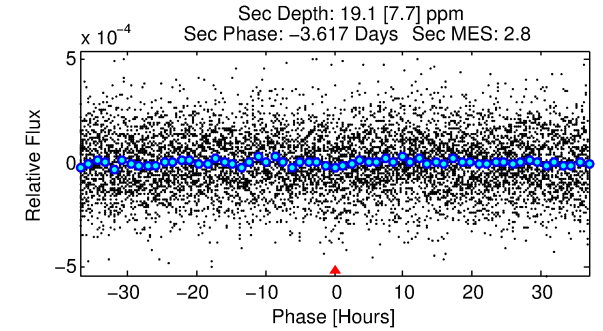
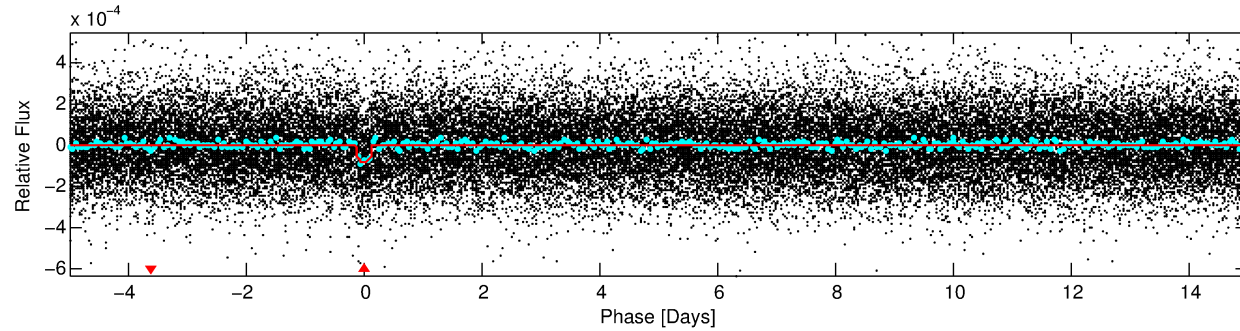
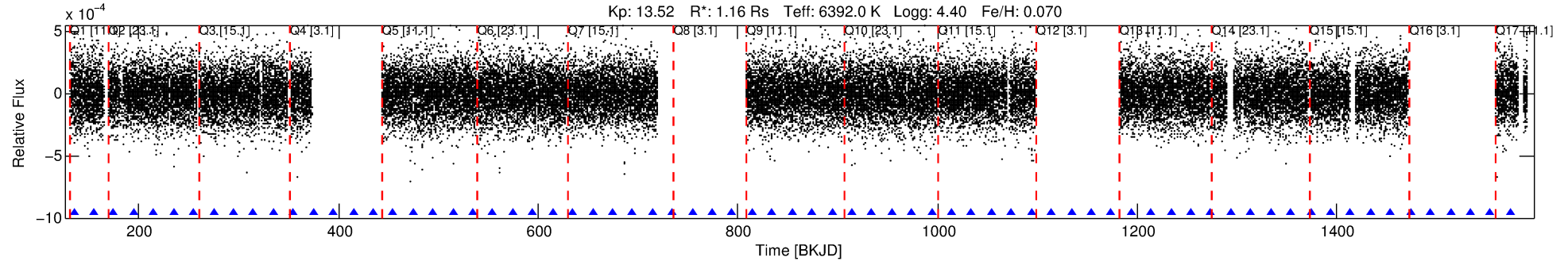
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 01181260-01

No Significant Match Found

# DV One-Page Summary

KIC: 11181260 Candidate: 1 of 1 Period: 19.978 d  
KOI: K04653.01 Corr: 0.988



## DV Fit Results:

Period = 19.97773 [0.00025] d  
Epoch = 135.1695 [0.0095] BKJD  
Rp/R\* = 0.0097 [0.0029]  
a/R\* = 11.35 [18.00]  
b = 0.90 [0.34]  
Seff = 84.50 [32.11]  
Teff = 773 [73] K  
Rp = 1.23 [0.52] Re  
a = 0.1546 [0.0387] AU  
Ag = 164.94 [131.58] [1.25σ]  
Teffp = 4284 [773] K [4.52σ]

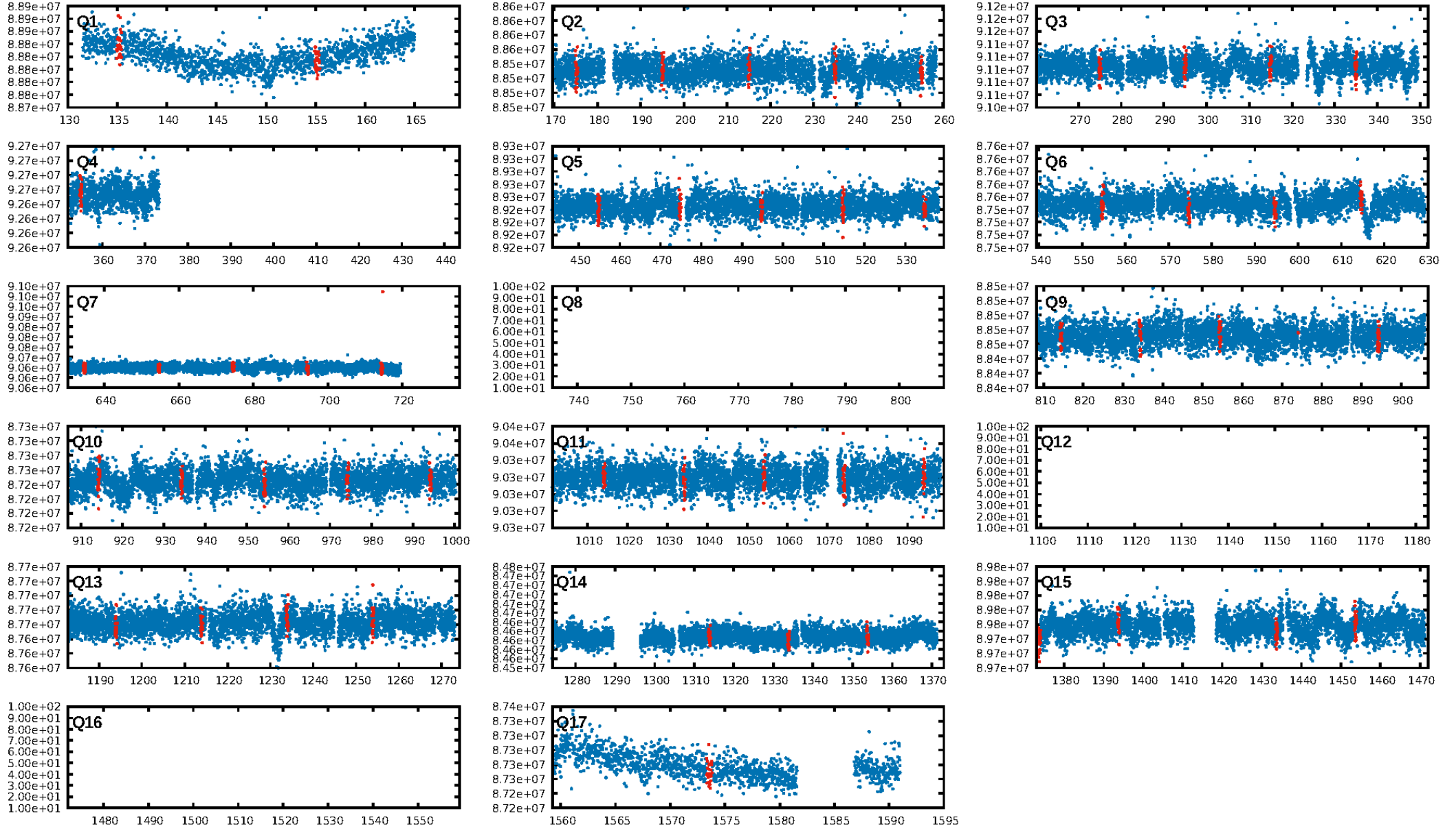
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 99.0%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: 3.76e-21  
RollingBand-fgt: 1.00 [48/48]  
GhostDiagnostic-chr: 3.249  
Centroid-sig: 54.1%  
Centroid-so: 0.775 arcsec [0.66σ]  
OotOffset-rm: 1.316 arcsec [3.97σ]  
KicOffset-rm: 1.118 arcsec [3.25σ]  
OotOffset-st: 4/4/1/3 [12]  
KicOffset-st: 4/4/1/3 [12]  
DiffImageQuality-fgm: 0.92 [11/12]  
DiffImageOverlap-fno: 1.00 [14/14]

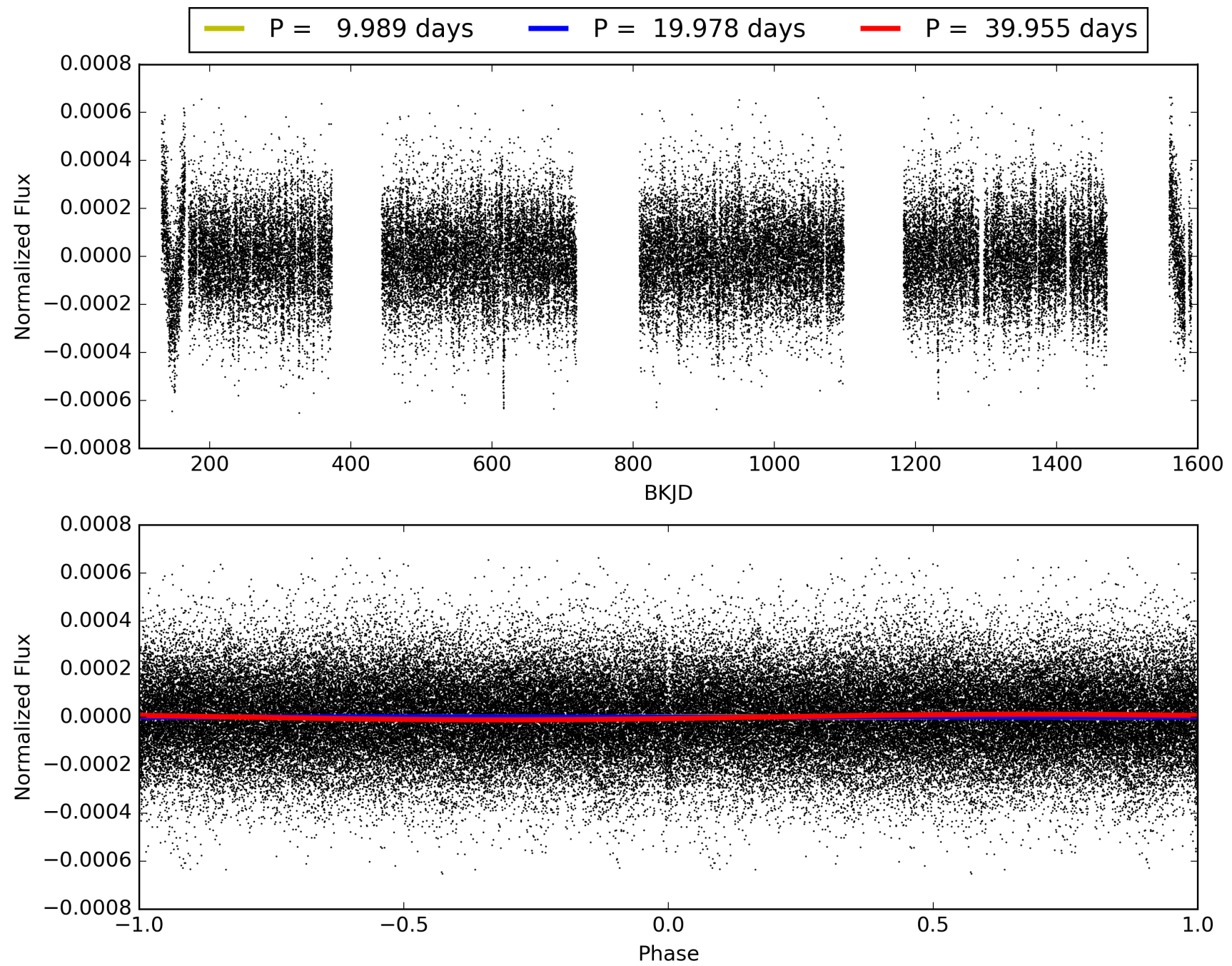
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 19:29:49 Z

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

# TCE 011181260-01, PDC Light Curves

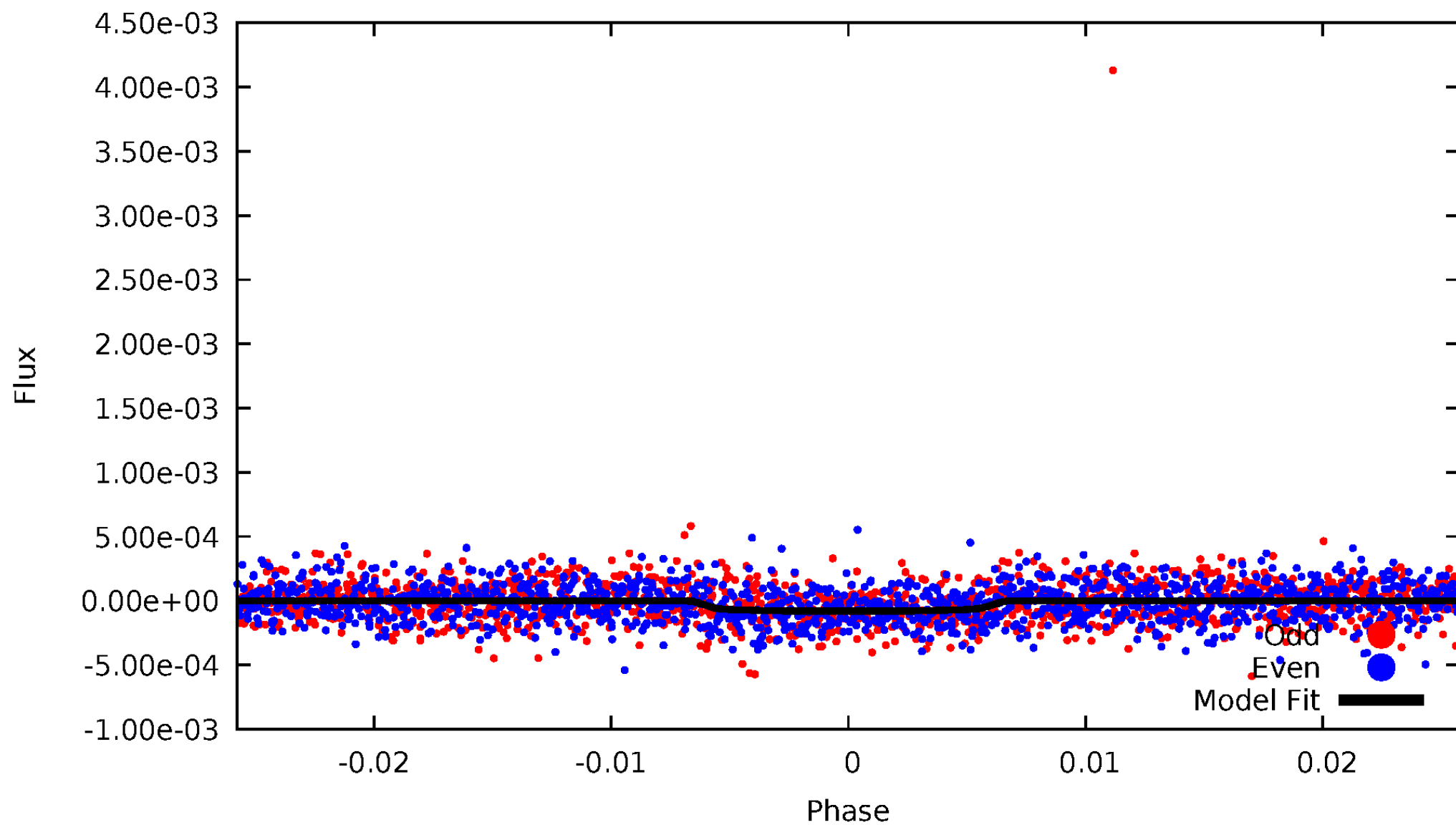


# TCE 01181260-01



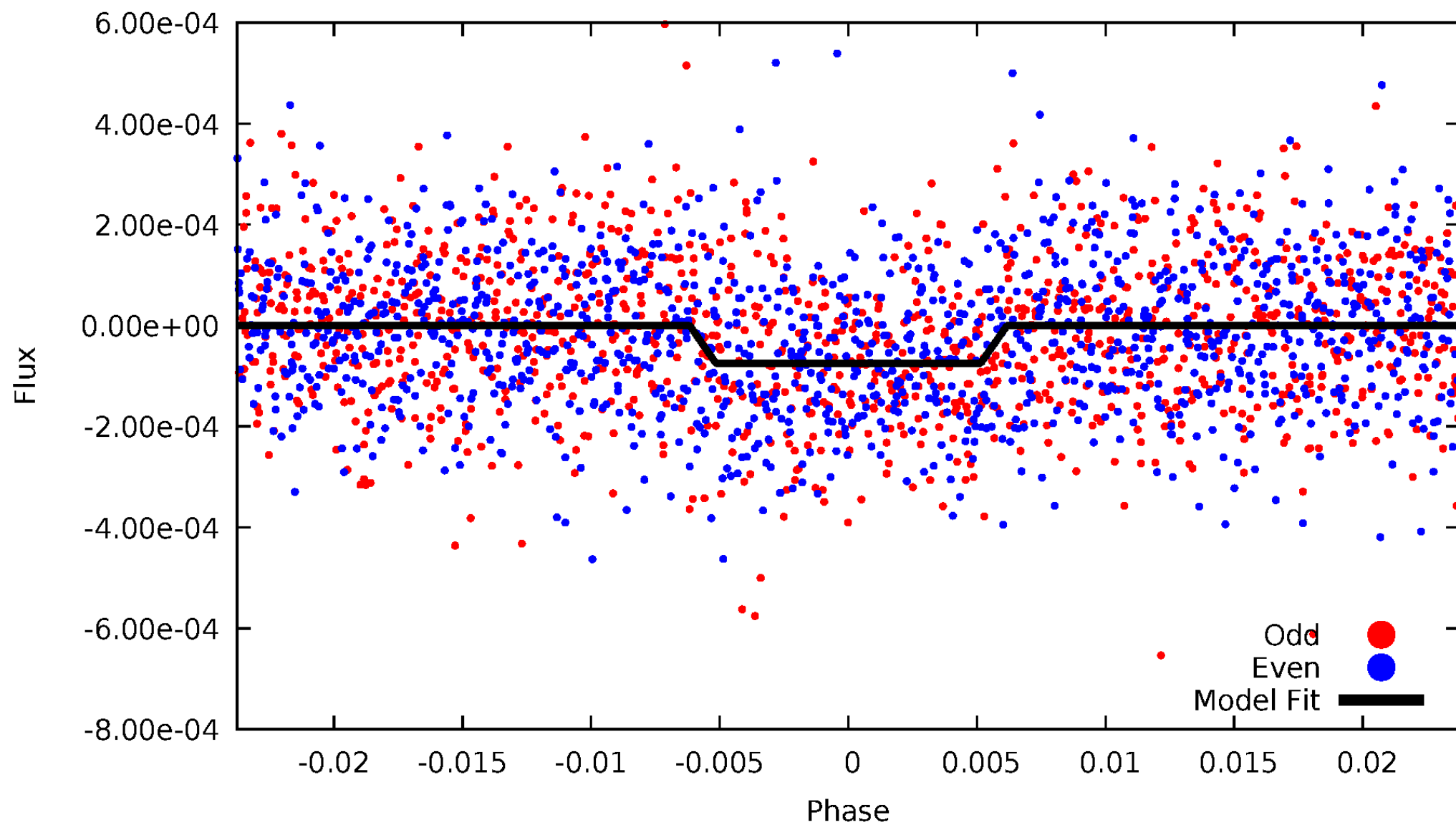
# DV Odd/Even

TCE 011181260-01



# ALT Odd/Even

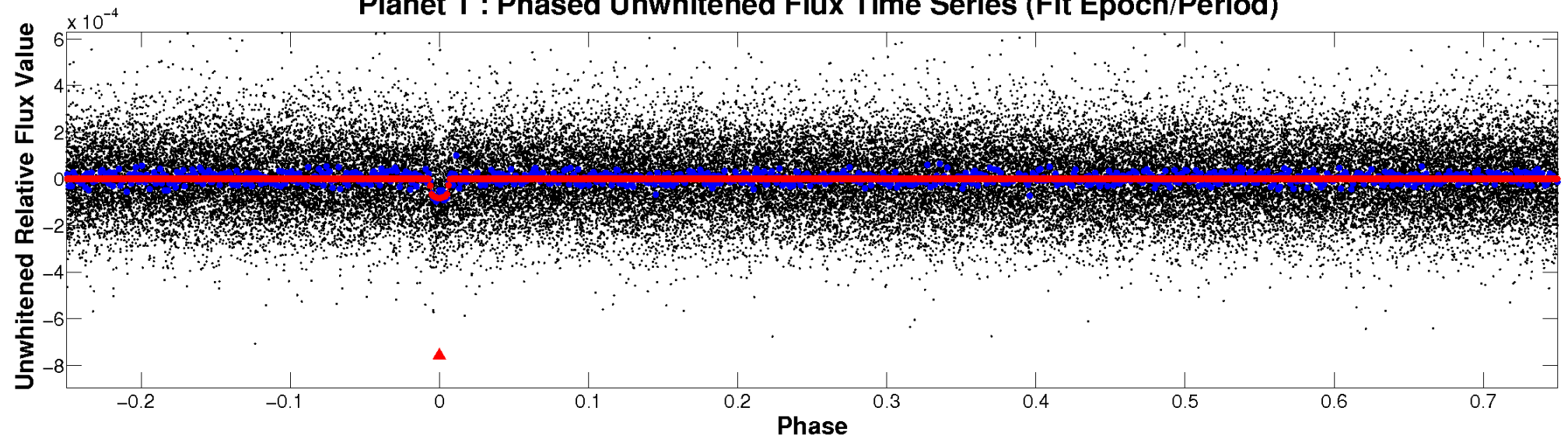
TCE 011181260-01



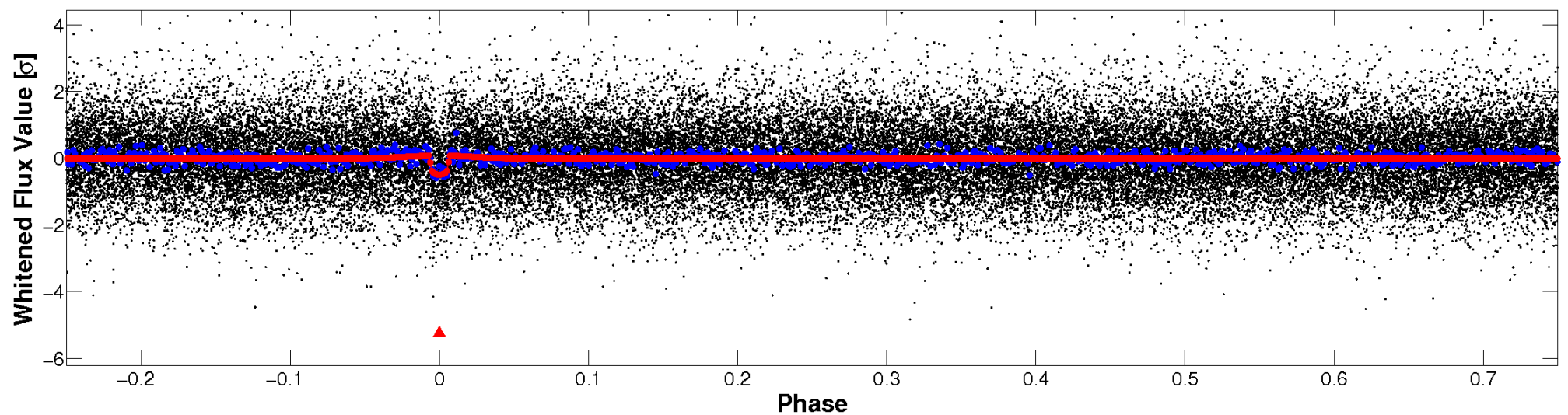


# Non-Whitened Vs. Whitened Light Curve

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

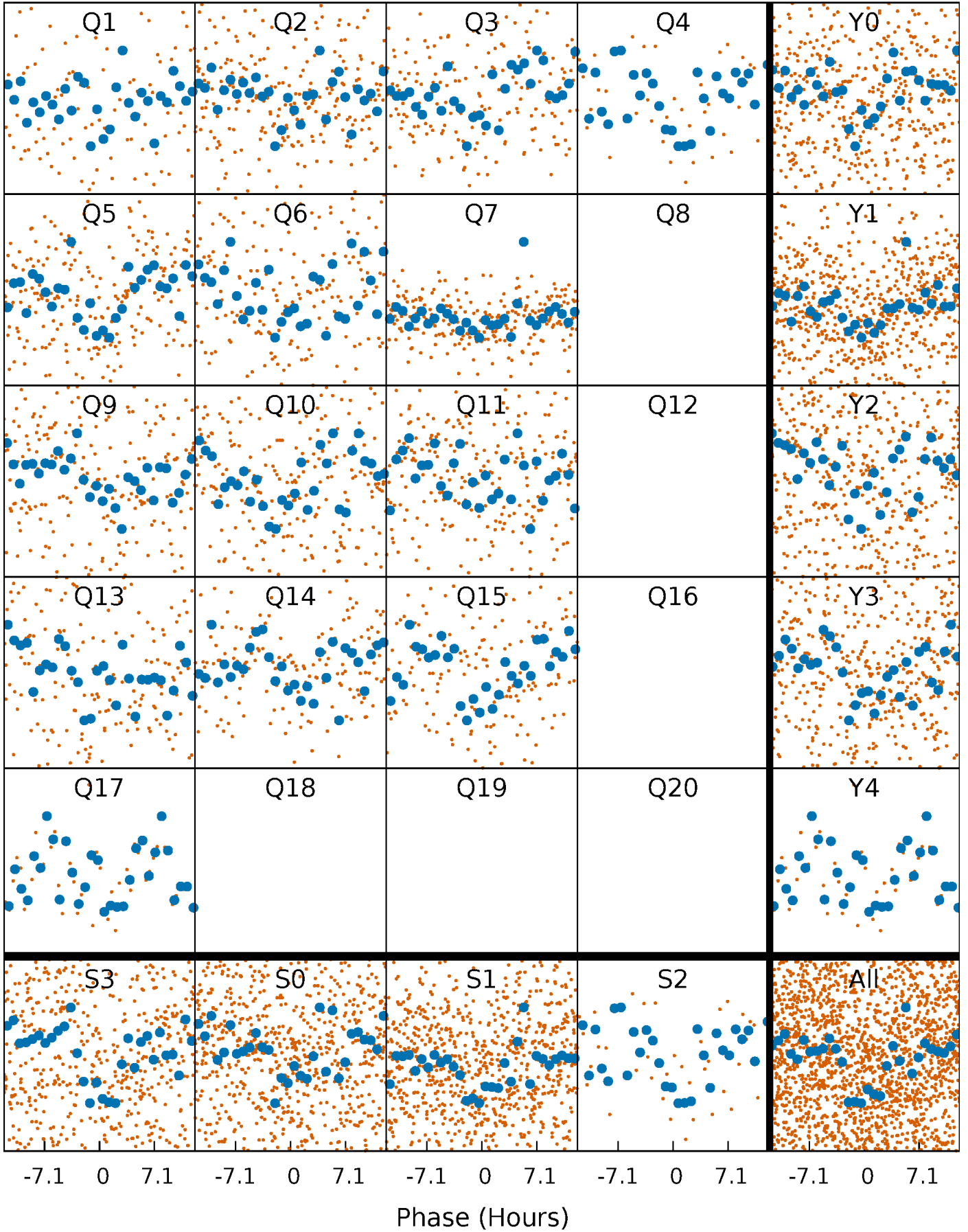


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

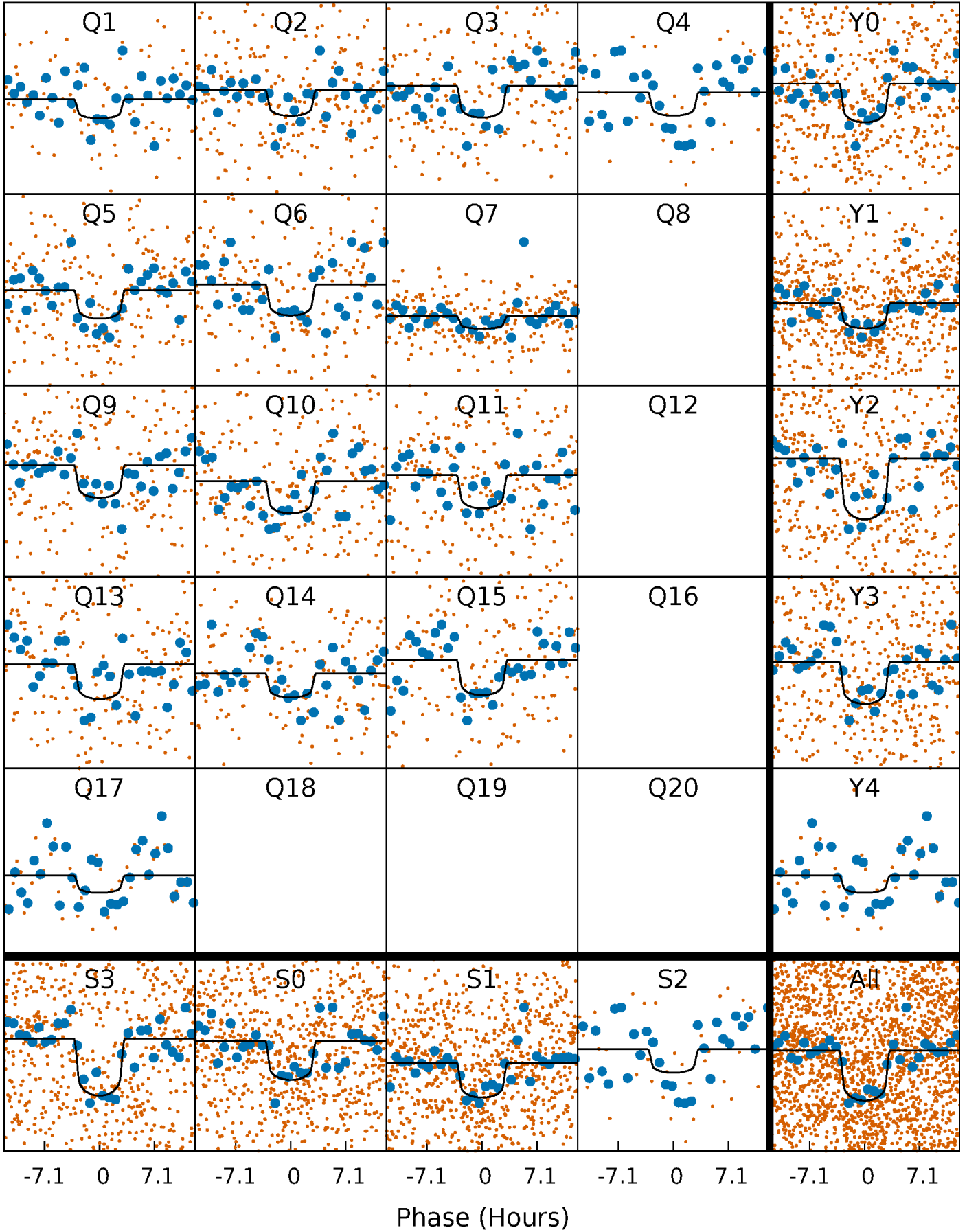
TCE 011181260-01 P= 19.977731 Days  $T_0=135.169461$  (BKJD)





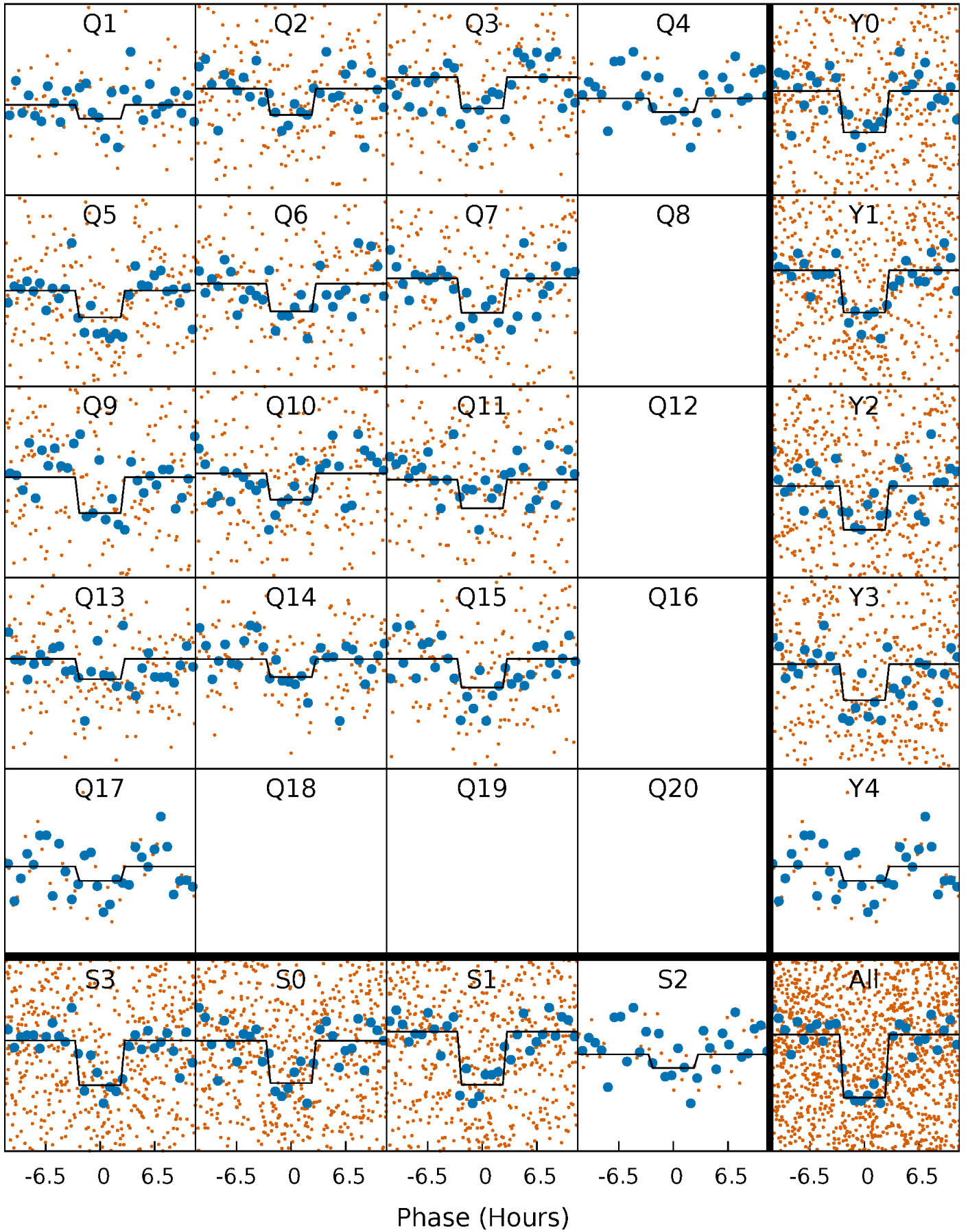
# DV Quarter-Phased Transit Curves

TCE 011181260-01 P= 19.977731 Days  $T_0=135.169461$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

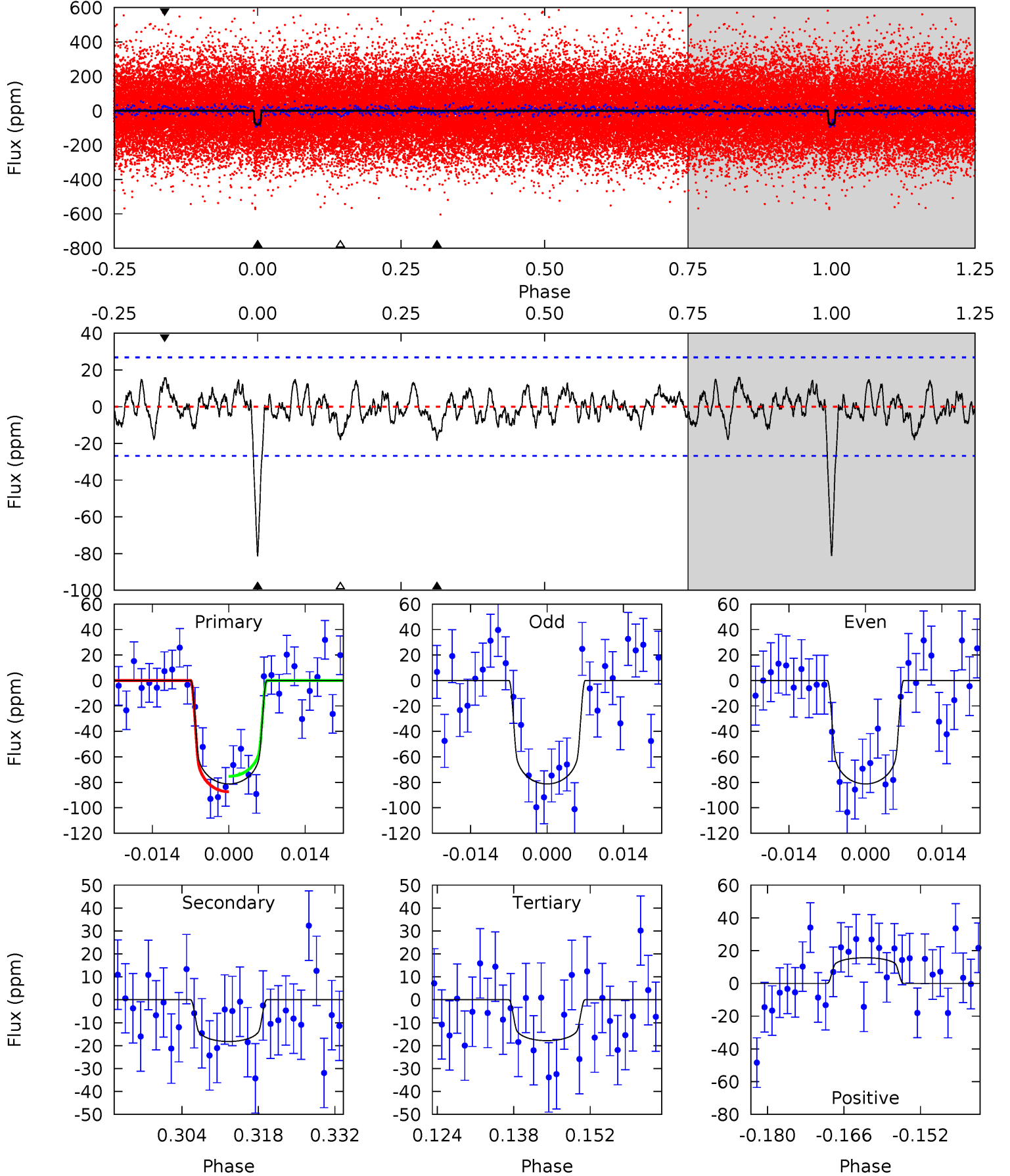
TCE 011181260-01 P= 19.978465 Days  $T_0=135.144711$  (BKJD)



# DV Model-Shift Uniqueness Test

011181260-01,  $P = 19.977731$  Days,  $E = 115.191730$  Days

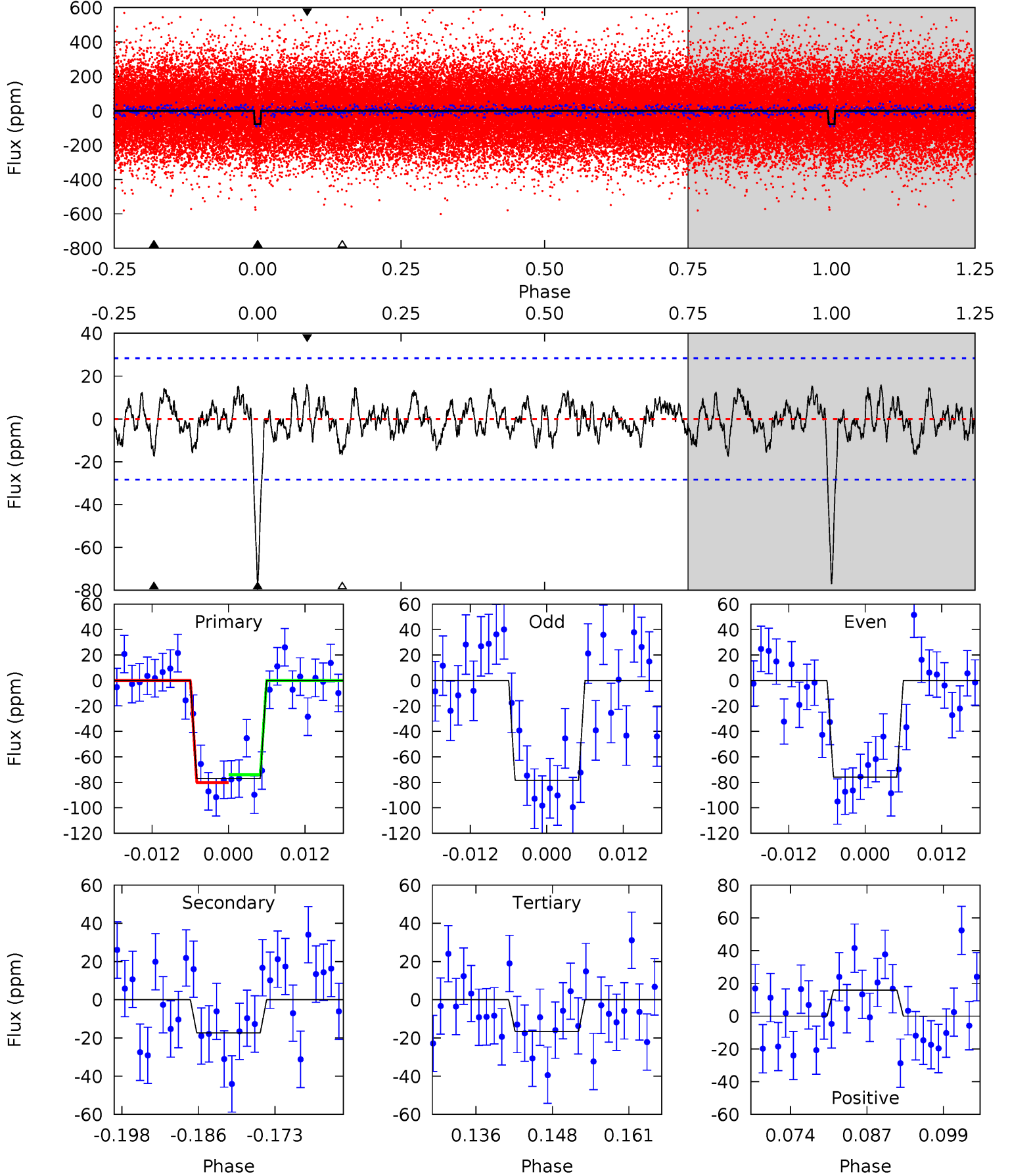
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.0	3.37	3.30	2.90	4.96	2.46	1.16	11.7	12.1	0.07	0.47	0.00	0.99	0.16	1.12



# Alt Model-Shift Uniqueness Test

011181260-01, P = 19.978465 Days, E = 115.166246 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
13.5	3.05	2.91	2.79	4.99	2.50	1.10	10.6	10.8	0.14	0.26	0.22	1.03	0.17	0.54



### Stellar Parameters For KIC 011181260

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6392^{+153}_{-192}$	$4.399^{+0.065}_{-0.195}$	$0.070^{+0.250}_{-0.350}$	$1.162^{+0.350}_{-0.140}$	$1.232^{+0.141}_{-0.188}$	$1.107^{+0.304}_{-0.573}$
	+2%/-3%	+1%/-4%	+357%/-500%	+30%/-12%	+11%/-15%	+27%/-52%
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 011181260-01 / KOI 4653.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-18 \pm 5$	$1.29^{+0.44}_{-0.41}$	$1102^{+79}_{-59}$	$4386^{+698}_{-462}$	$137^{+160}_{-69}$
Alt.	$-17 \pm 6$	$1.13^{+0.40}_{-0.38}$	$1097^{+70}_{-52}$	$4515^{+986}_{-530}$	$165^{+239}_{-85}$

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



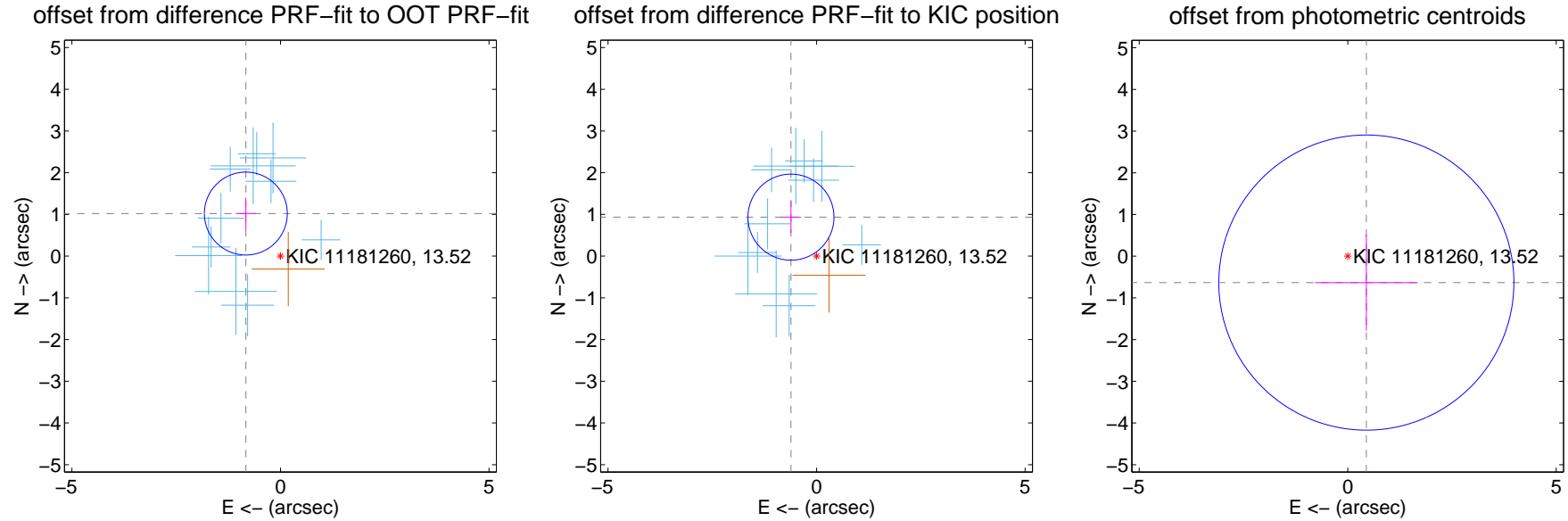
## DV Centroid Data

Supplemental centroid analysis for 011181260-01. Kepler magnitude: 13.52. Transit SNR 10.71

There are 11 quarters with good PRF difference image offsets

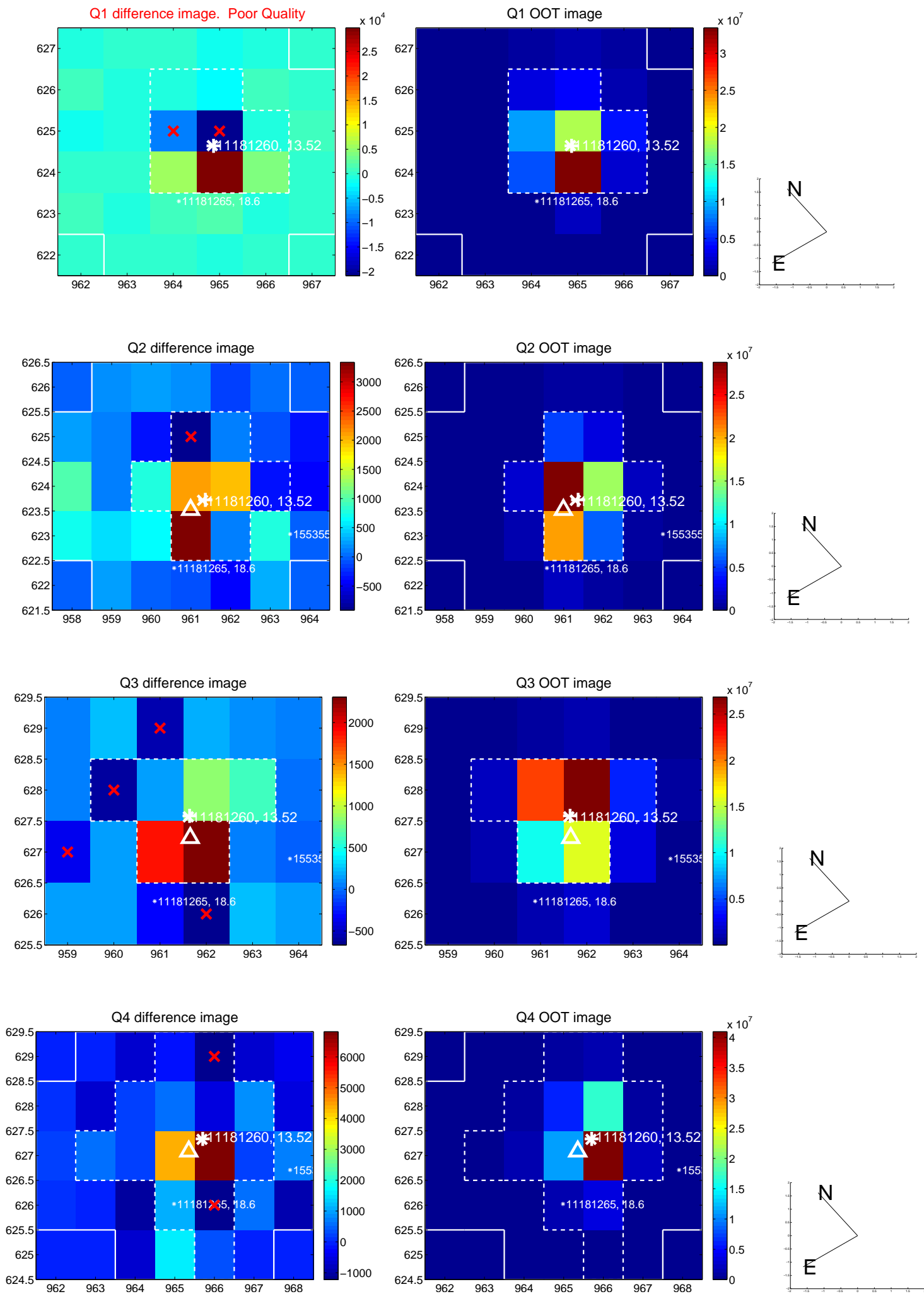
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.316 \pm 0.331$	$3.97$	$0.830 \pm 0.238$	$1.021 \pm 0.381$
PRF-fit source offset from KIC position	$1.118 \pm 0.344$	$3.25$	$0.615 \pm 0.244$	$0.934 \pm 0.379$
photometric centroid source offset	$0.77 \pm 1.18$	$0.66$	$-0.45 \pm 1.23$	$-0.63 \pm 1.15$

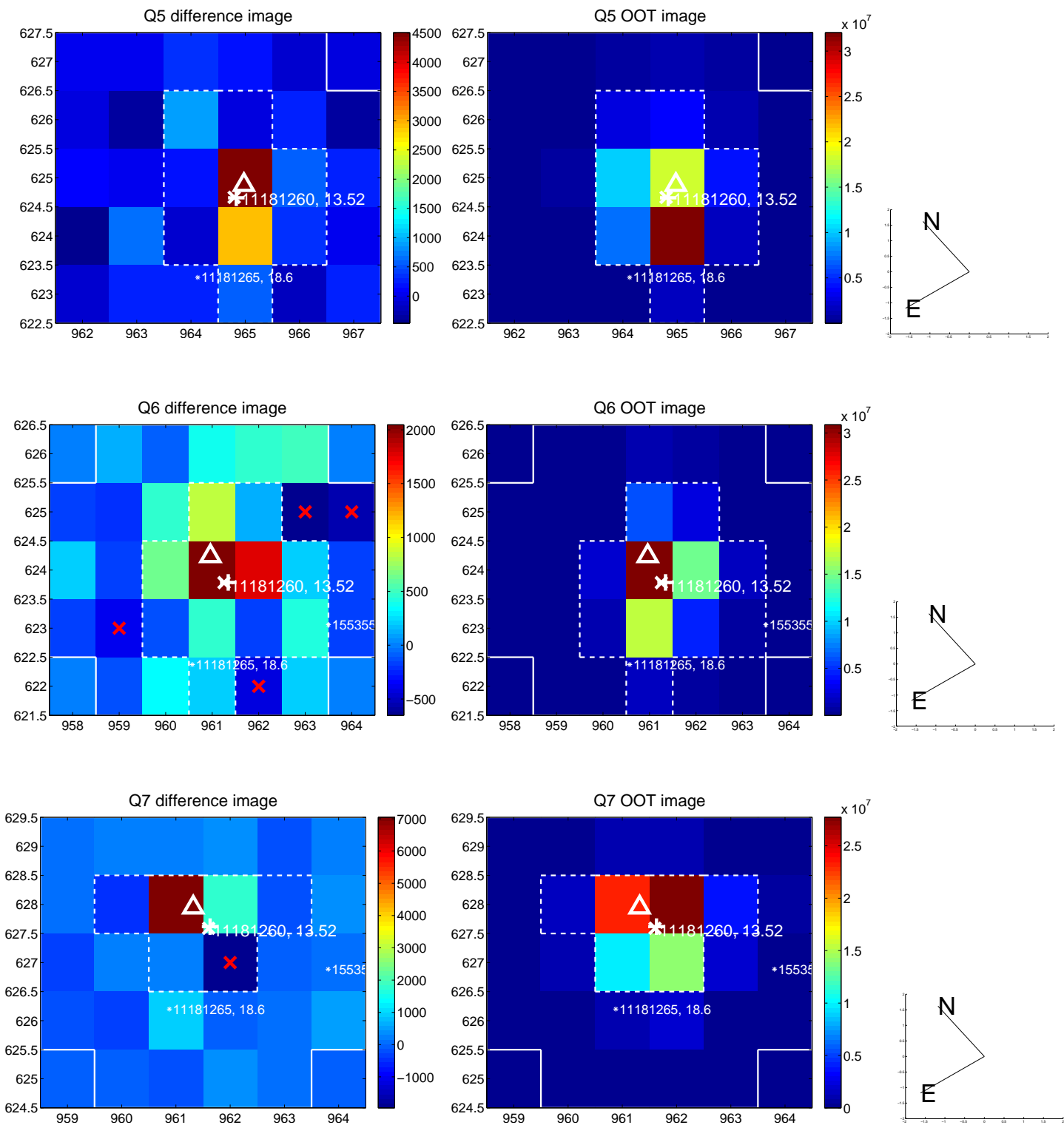


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

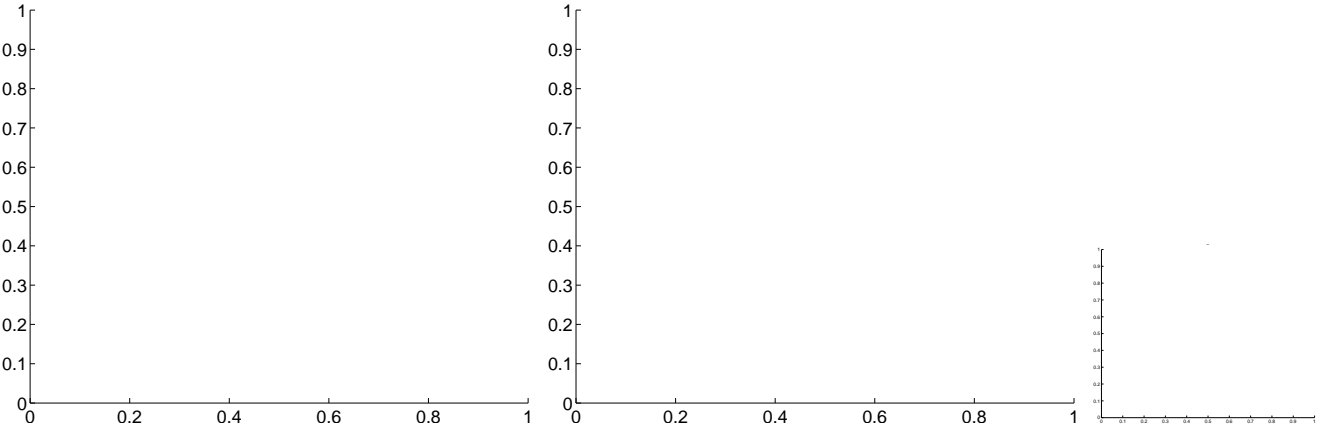


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

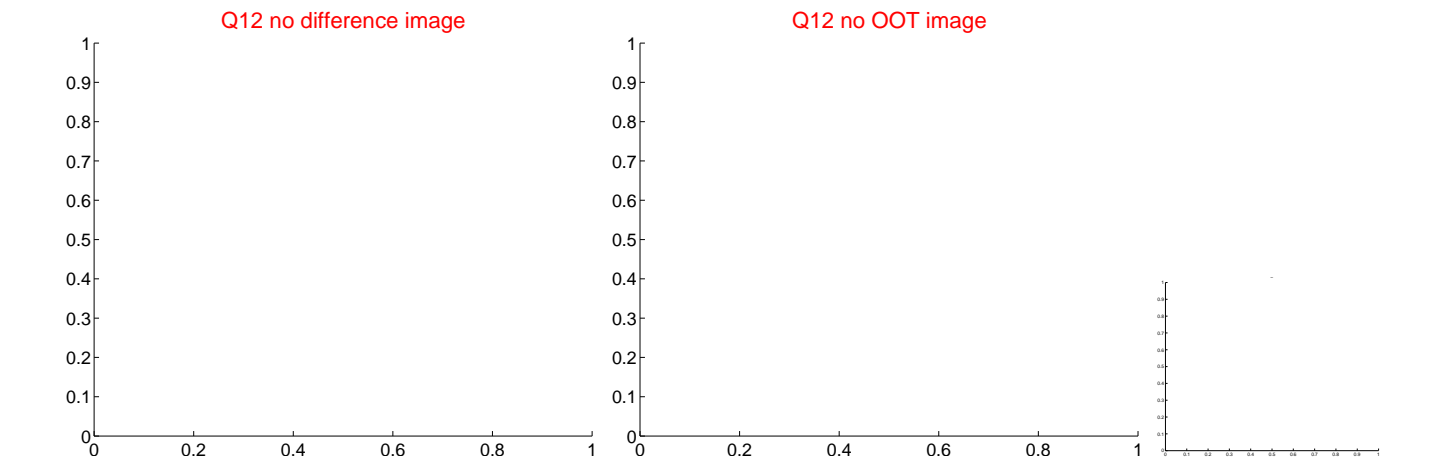
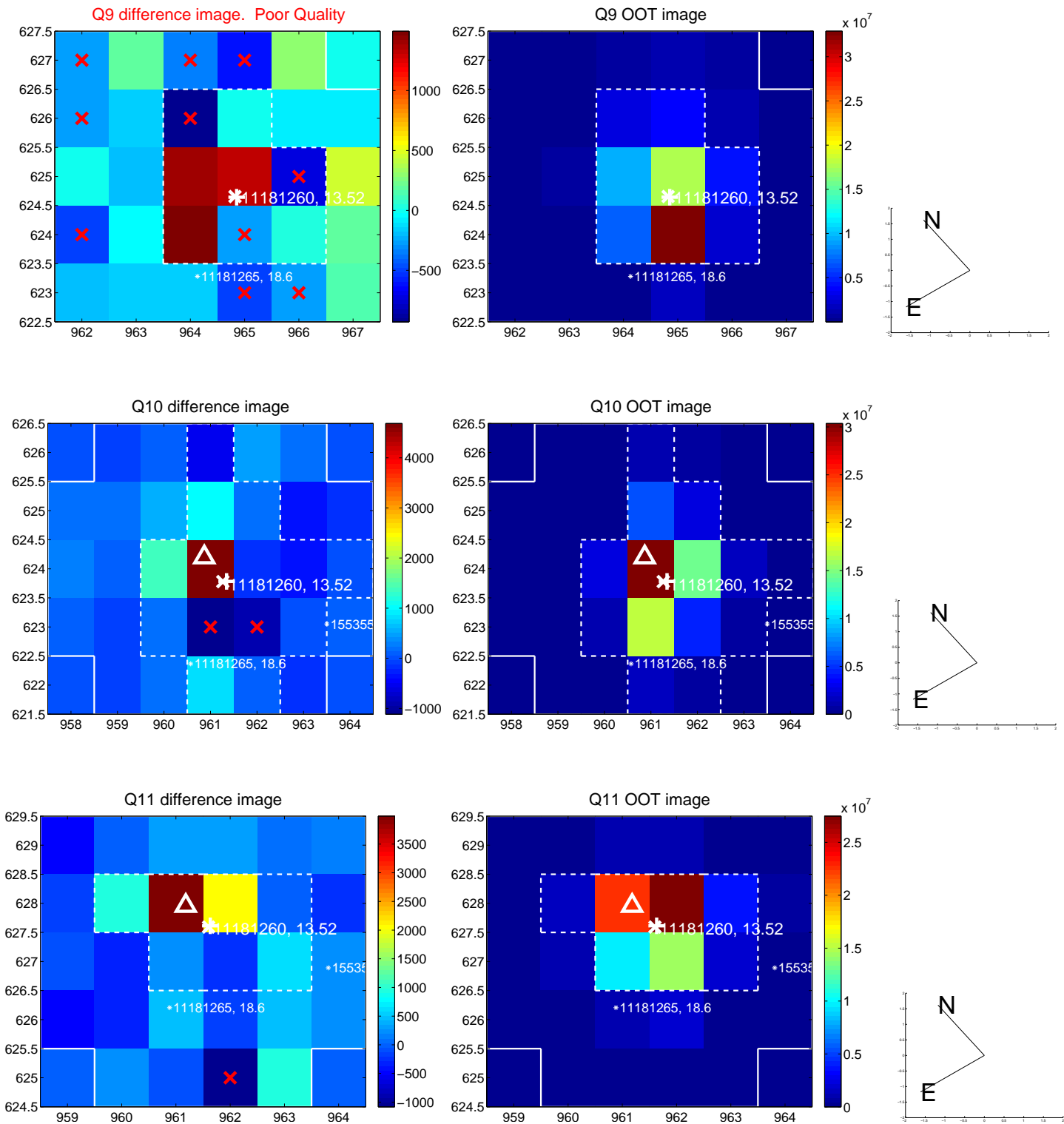


Q8 no difference image

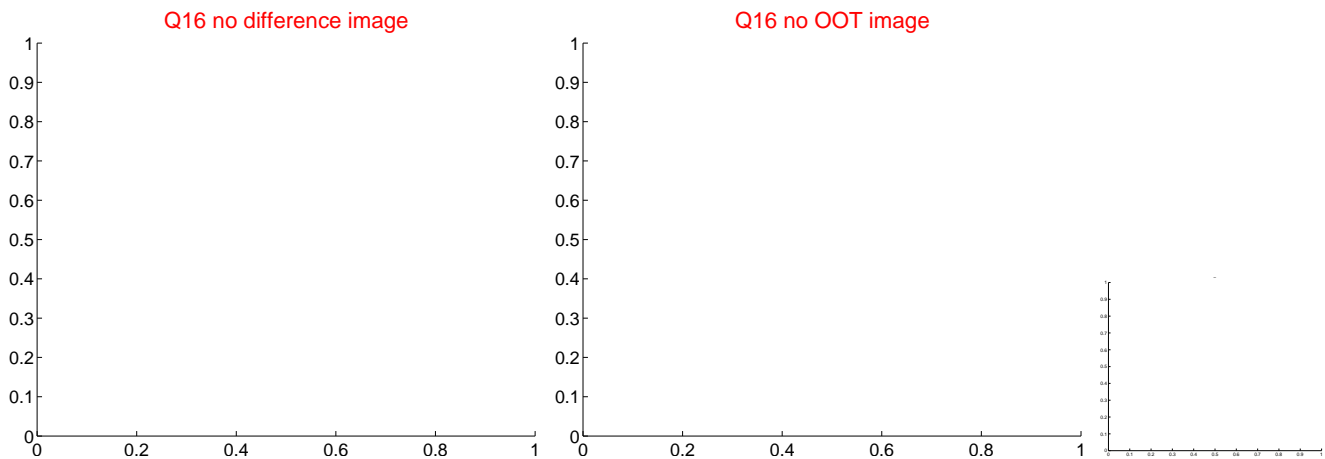
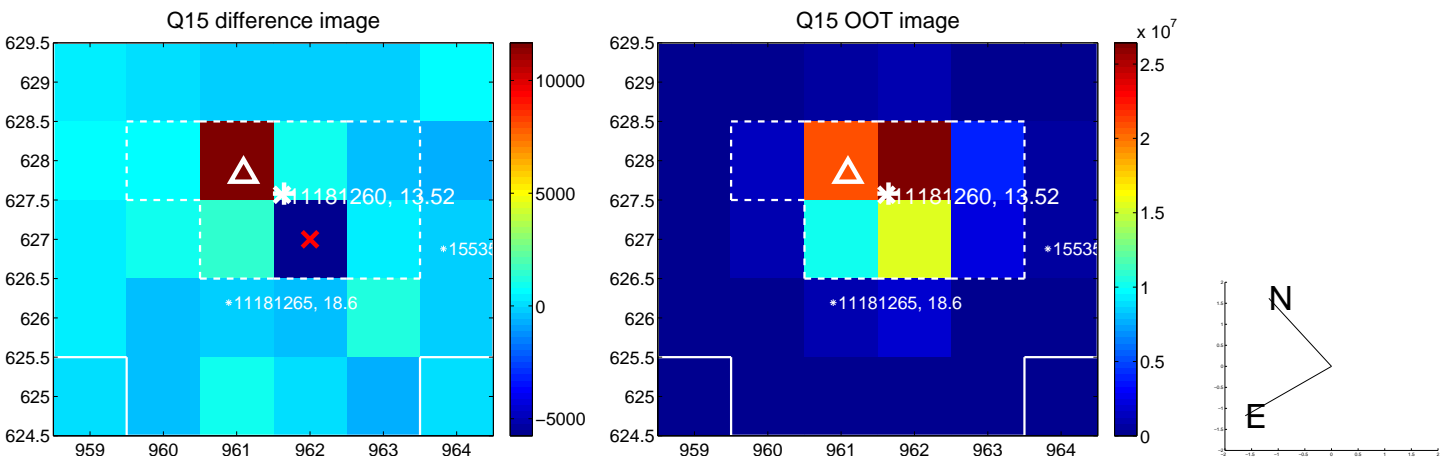
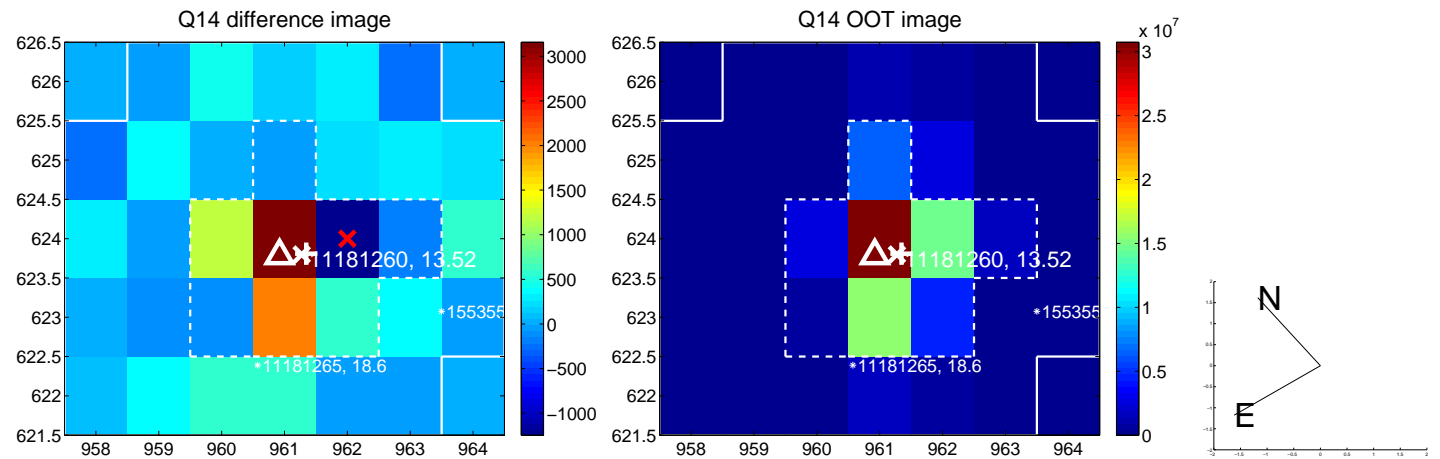
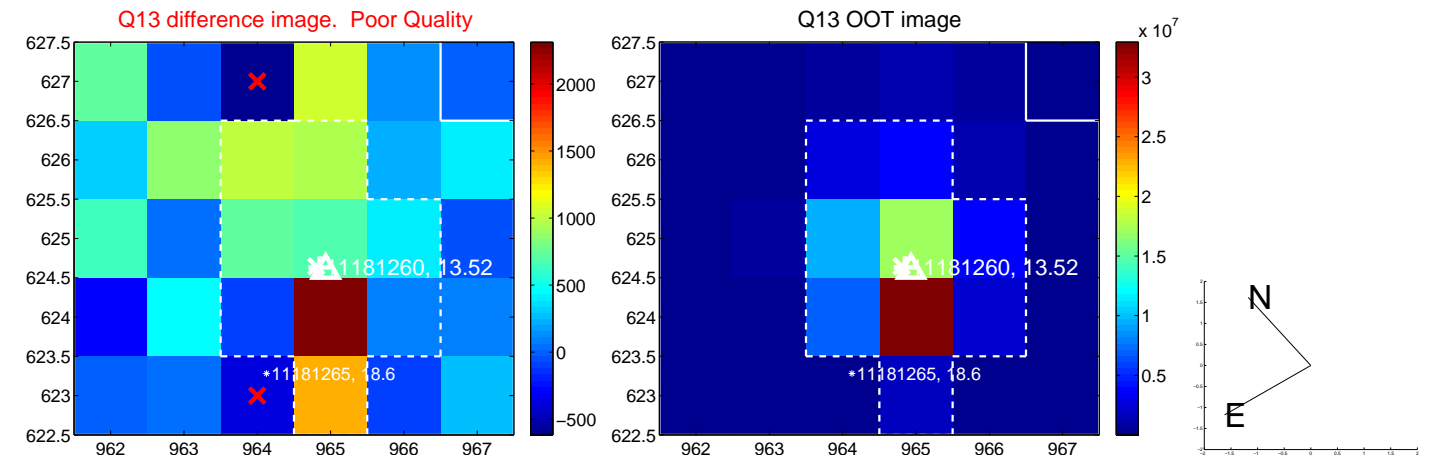
Q8 no OOT image



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

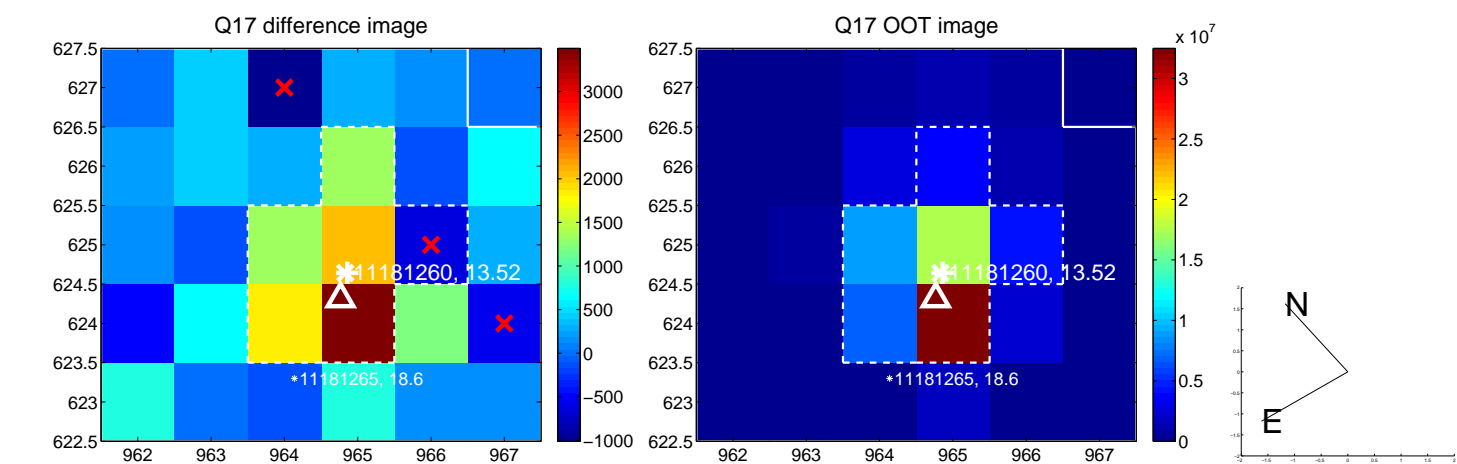


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

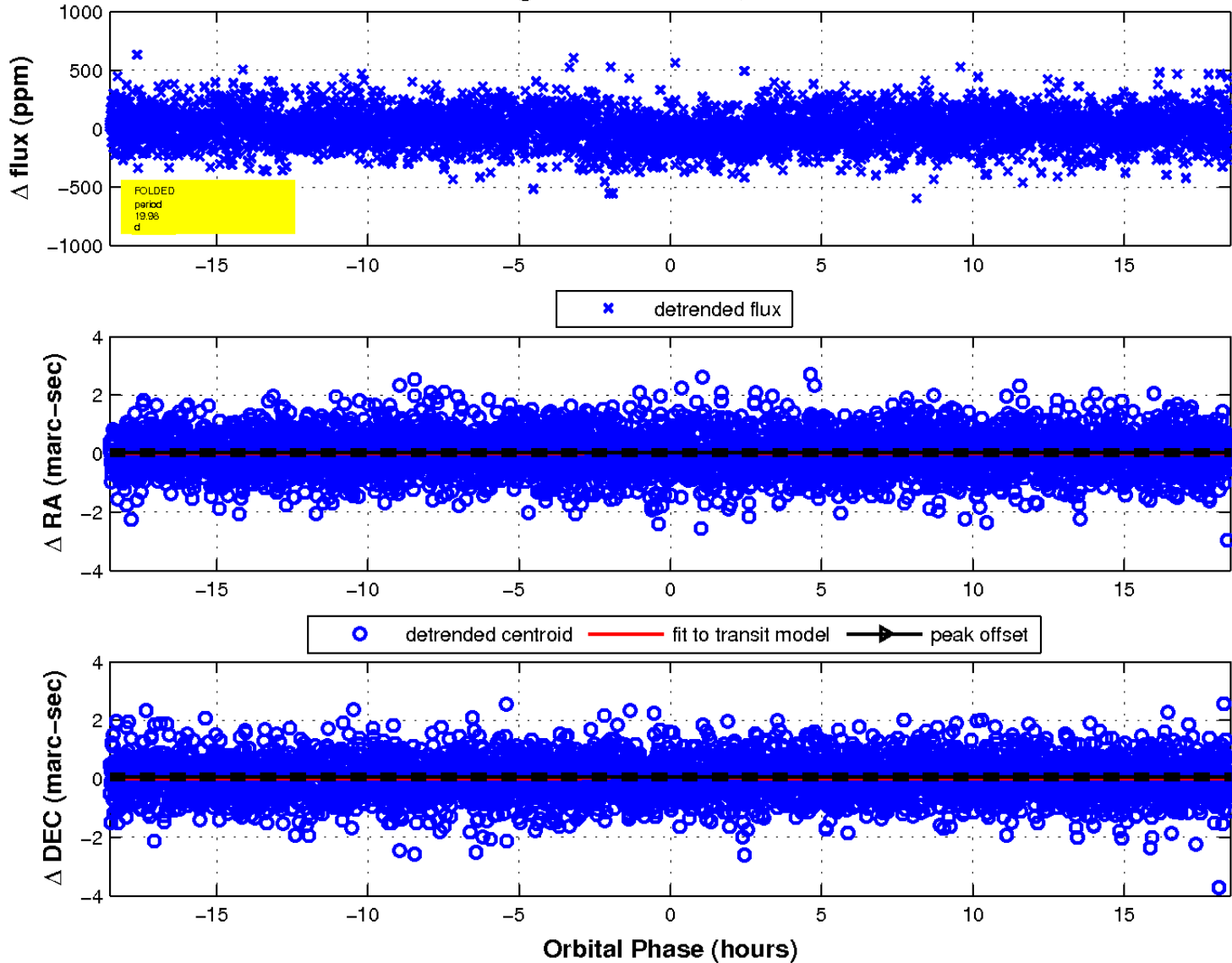




white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



### fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

