

# KIC 011572363

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011572363-01	OBS	No	19.029449	146.004513	716.1	22.276	24.5	31.0	2.17	6300	11.09	298.40

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011572363-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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

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

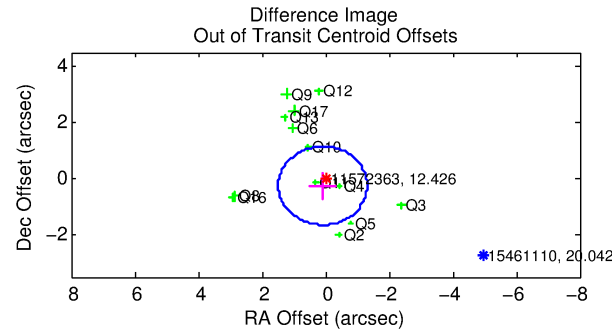
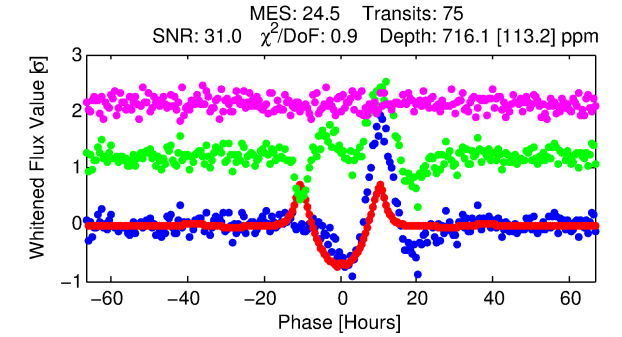
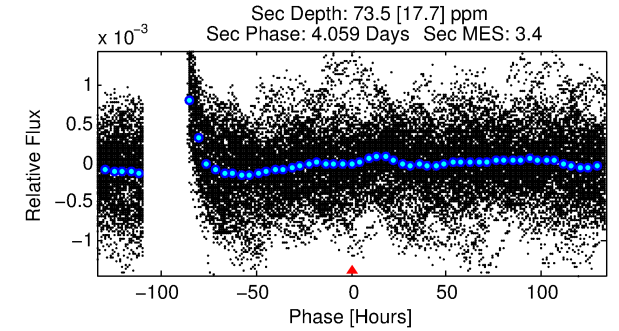
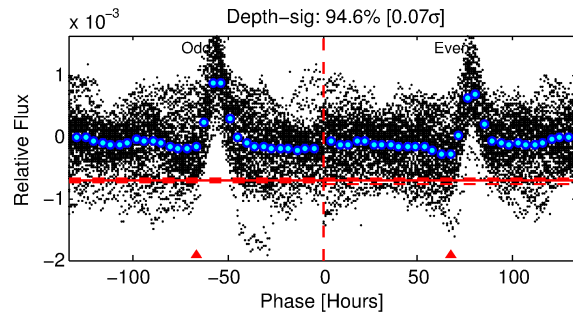
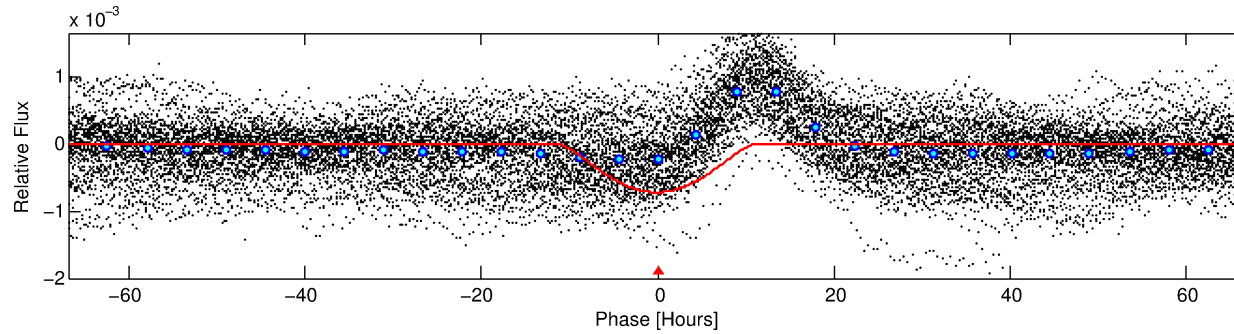
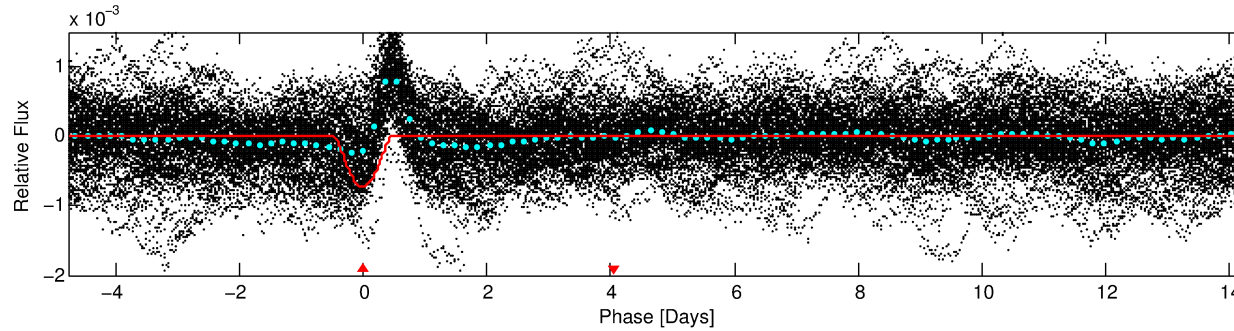
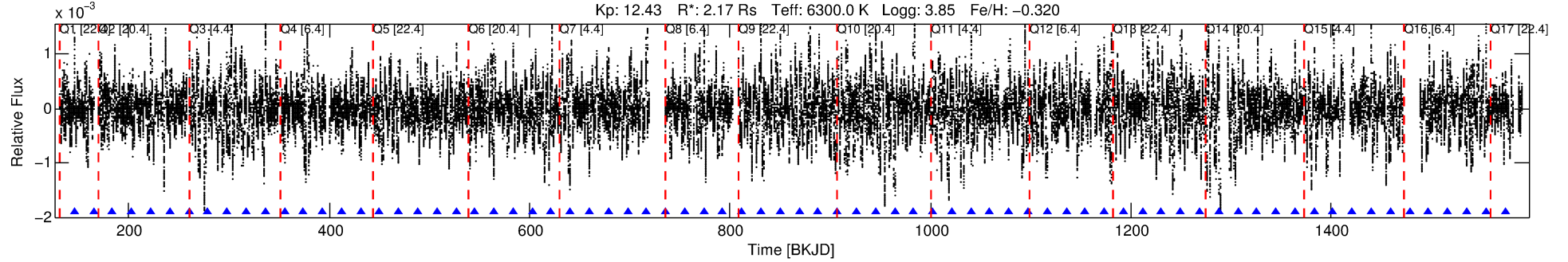
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 011572363-01

No Significant Match Found

# DV One-Page Summary

KIC: 11572363 Candidate: 1 of 1 Period: 19.029 d



## DV Fit Results:

Period = 19.02945 [0.00019] d  
Epoch = 146.0045 [0.0081] BKJD  
Rp/R\* = 0.0469 [0.0116]  
a/R\* = 2.26 [0.10]  
b = 1.00 [0.01]  
Seff = 298.40 [152.65]  
Teq = 1060 [136] K  
Rp = 11.09 [4.54] Re  
a = 0.1490 [0.0466] AU  
Ag = 7.29 [5.42] [1.16 $\sigma$ ]  
Teffp = 2693 [377] K [4.07 $\sigma$ ]

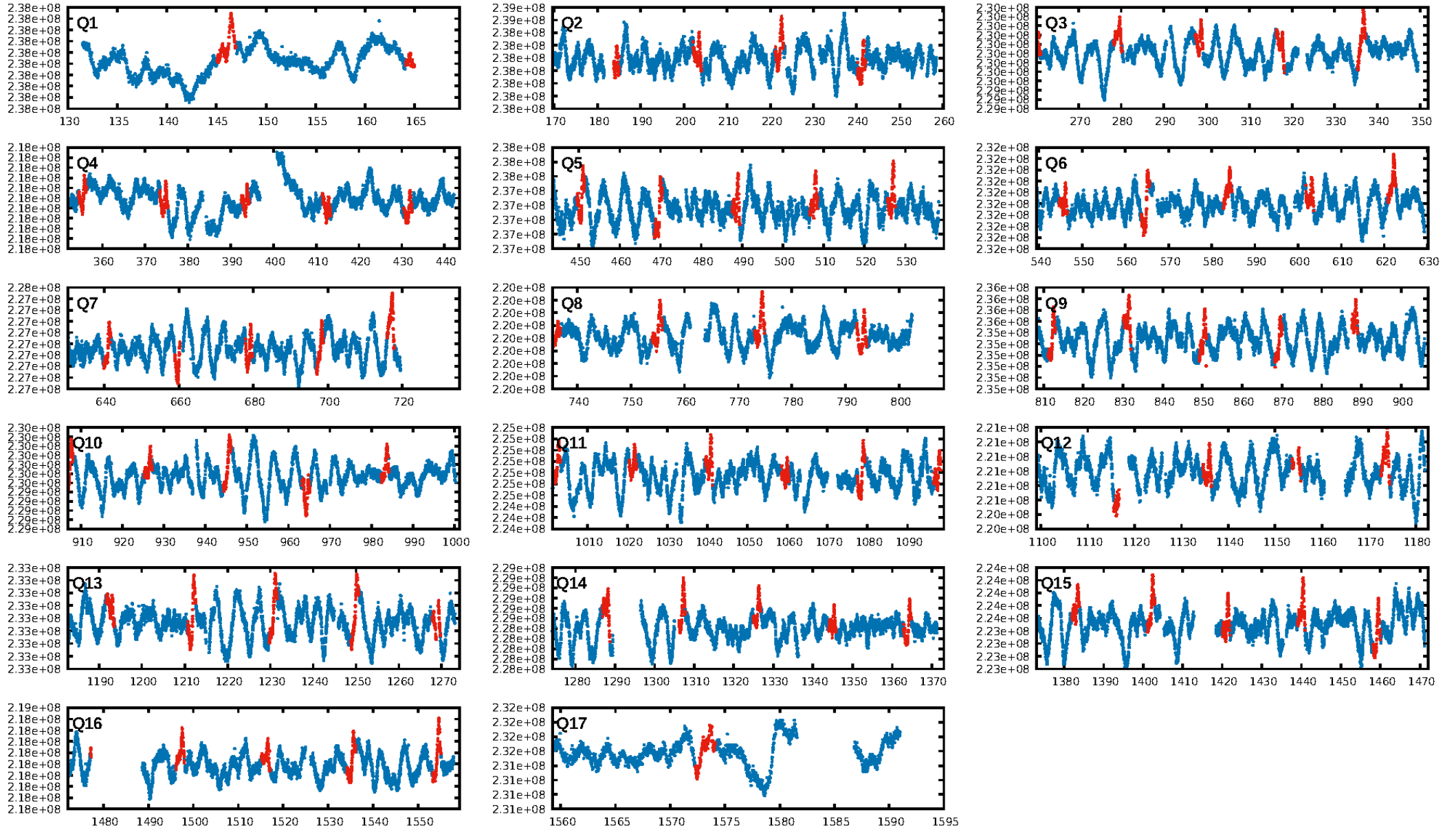
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 24.0%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: 1.92e-123  
RollingBand-fgt: 1.00 [72/72]  
GhostDiagnostic-chr: 2.032  
Centroid-sig: 0.0%  
Centroid-so: 0.118 arcsec [1.83 $\sigma$ ]  
OotOffset-rm: 0.263 arcsec [0.56 $\sigma$ ]  
KicOffset-rm: 0.269 arcsec [0.58 $\sigma$ ]  
OotOffset-st: 3/2/4/4 [13]  
KicOffset-st: 3/2/4/4 [13]  
DiffImageQuality-fgm: 0.46 [6/13]  
DiffImageOverlap-fno: 1.00 [17/17]

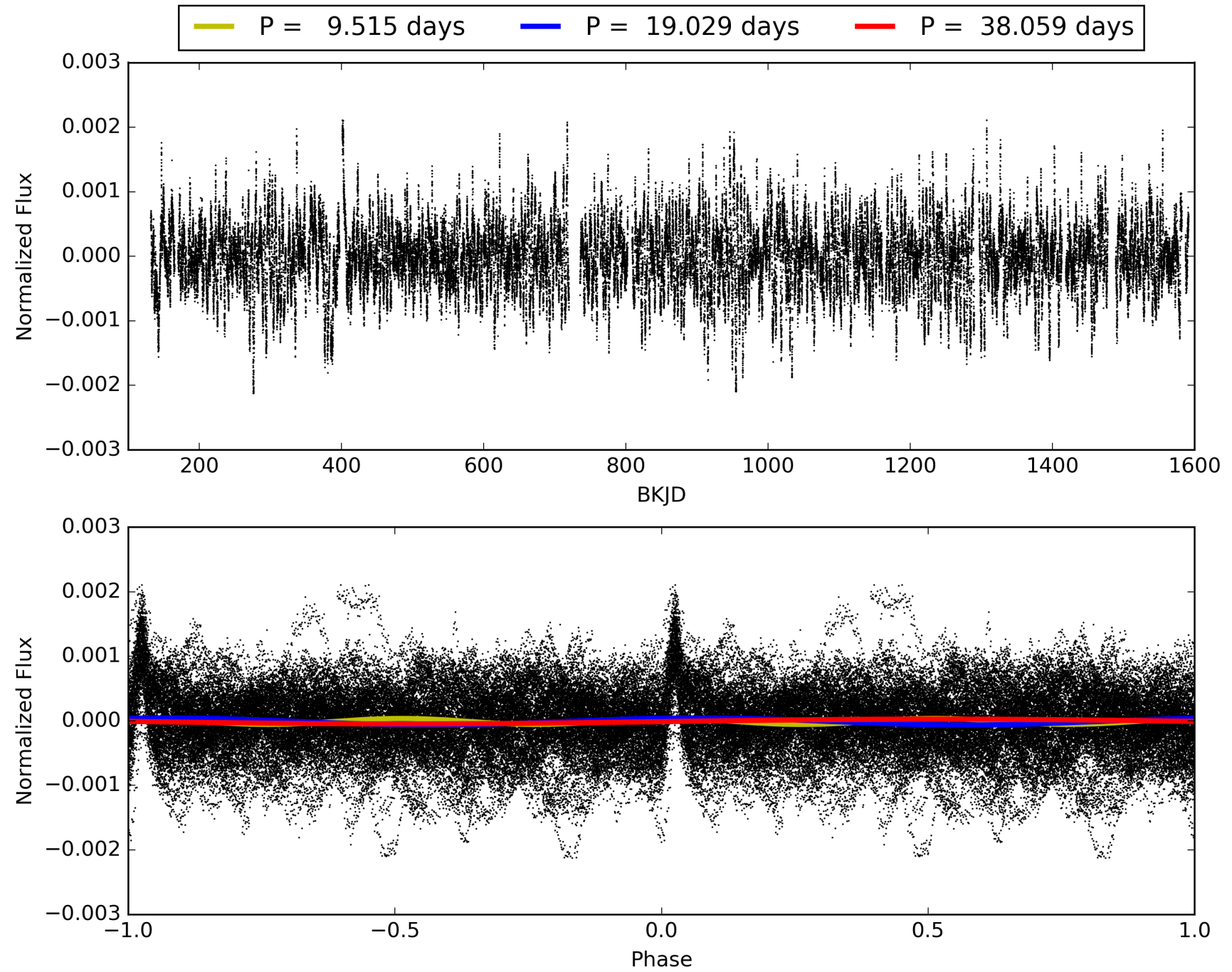
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 23:26:22 Z

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

# TCE 011572363-01, PDC Light Curves

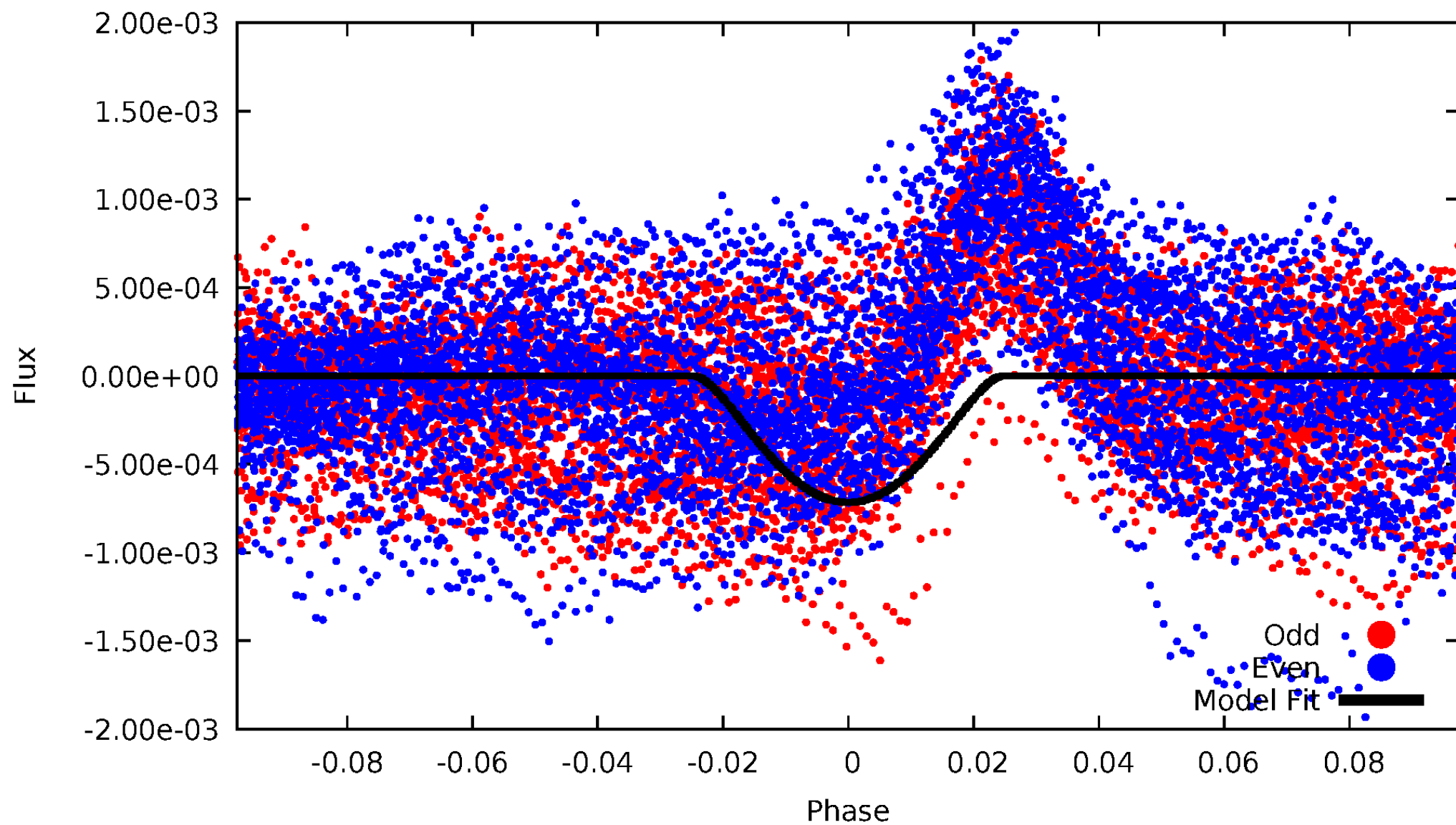


# TCE 011572363-01



# DV Odd/Even

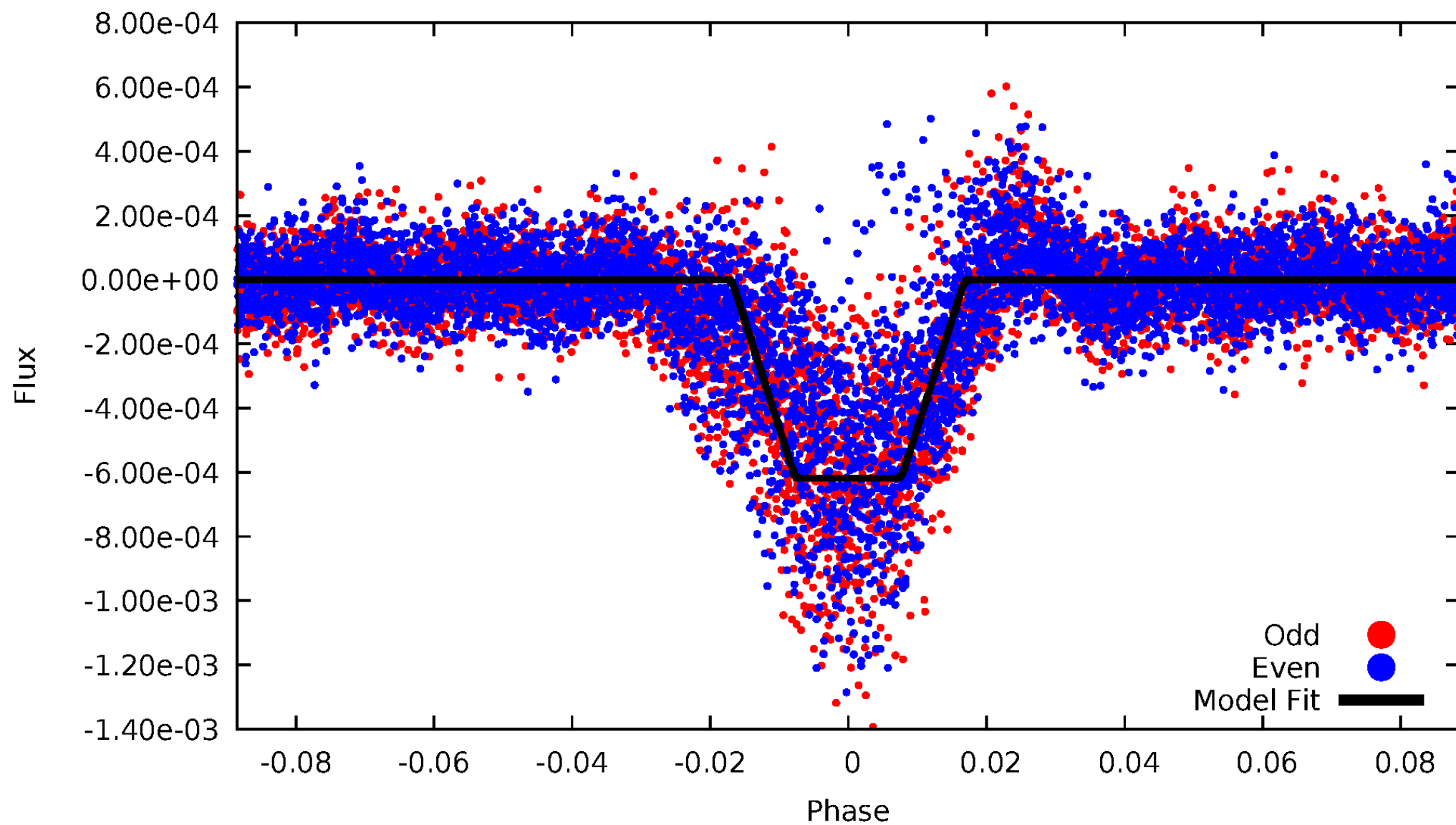
TCE 011572363-01



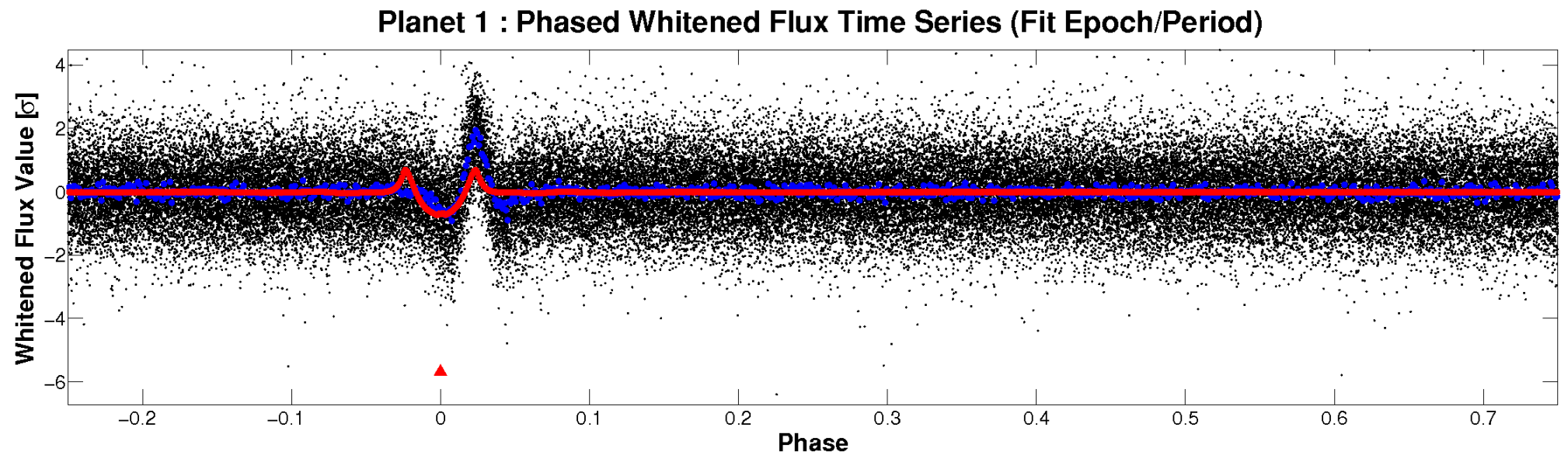
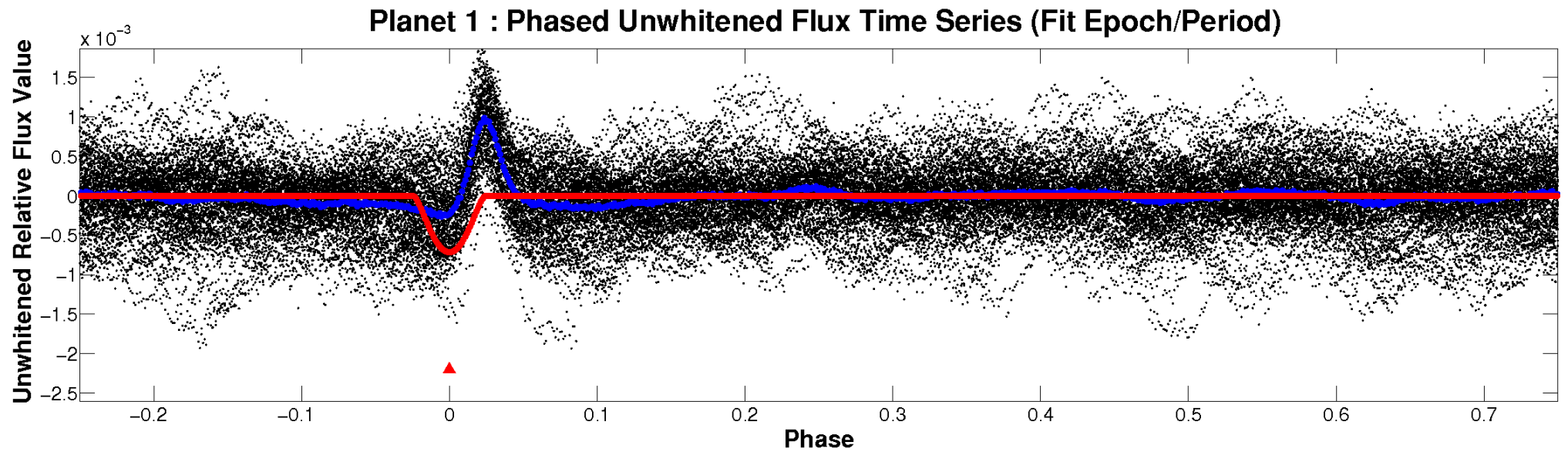


# ALT Odd/Even

TCE 011572363-01

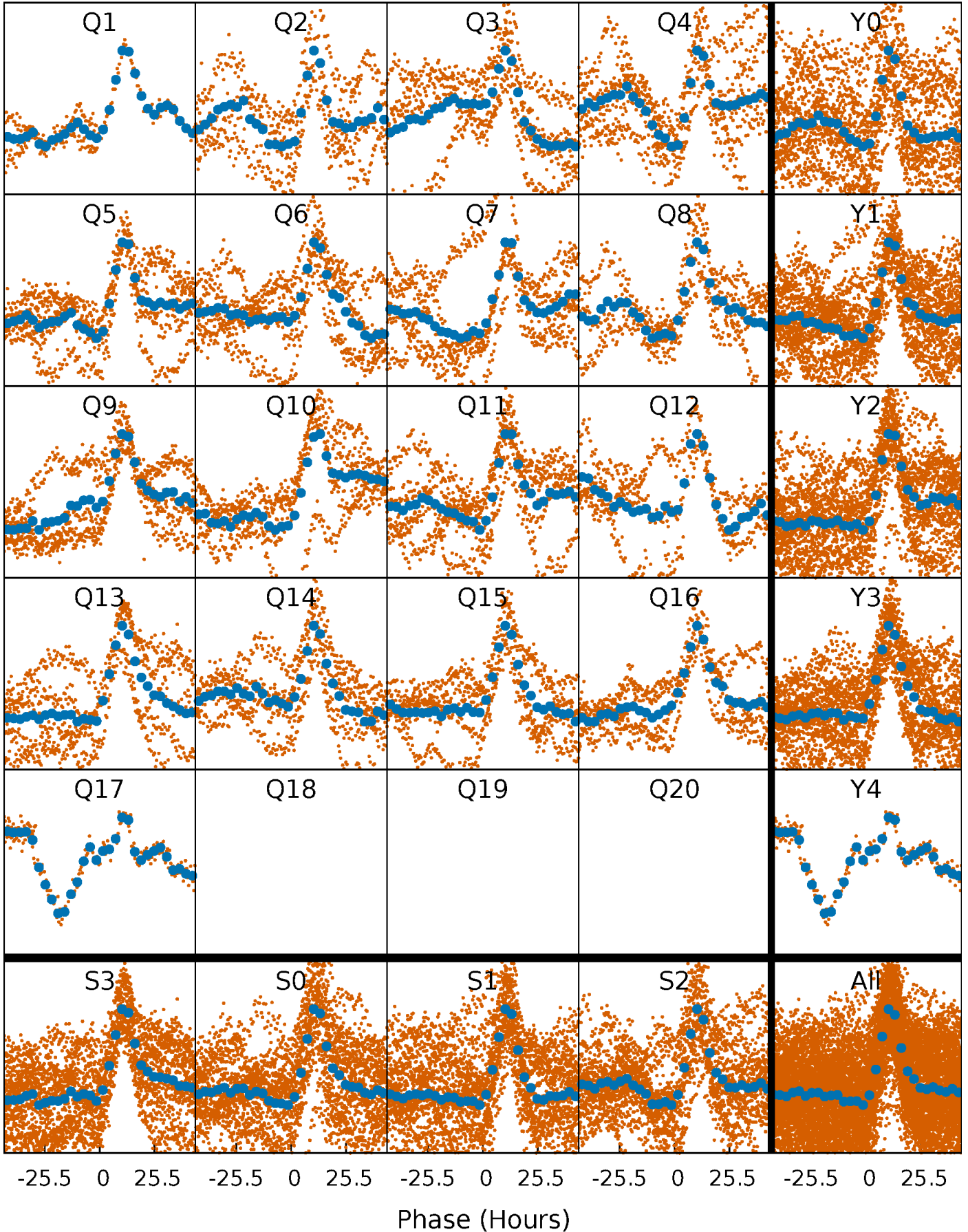


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

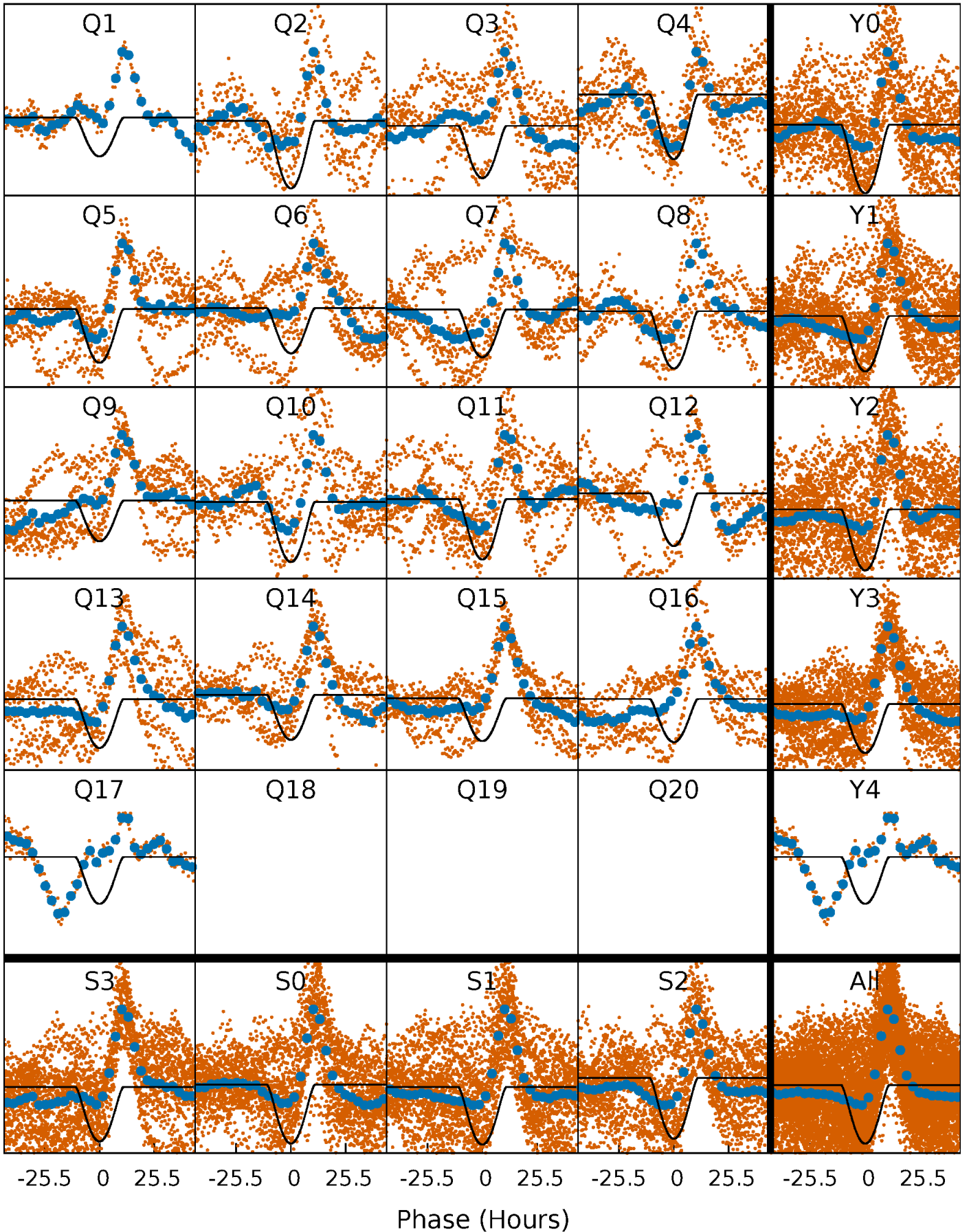
TCE 011572363-01 P= 19.029449 Days  $T_0=146.004513$  (BKJD)





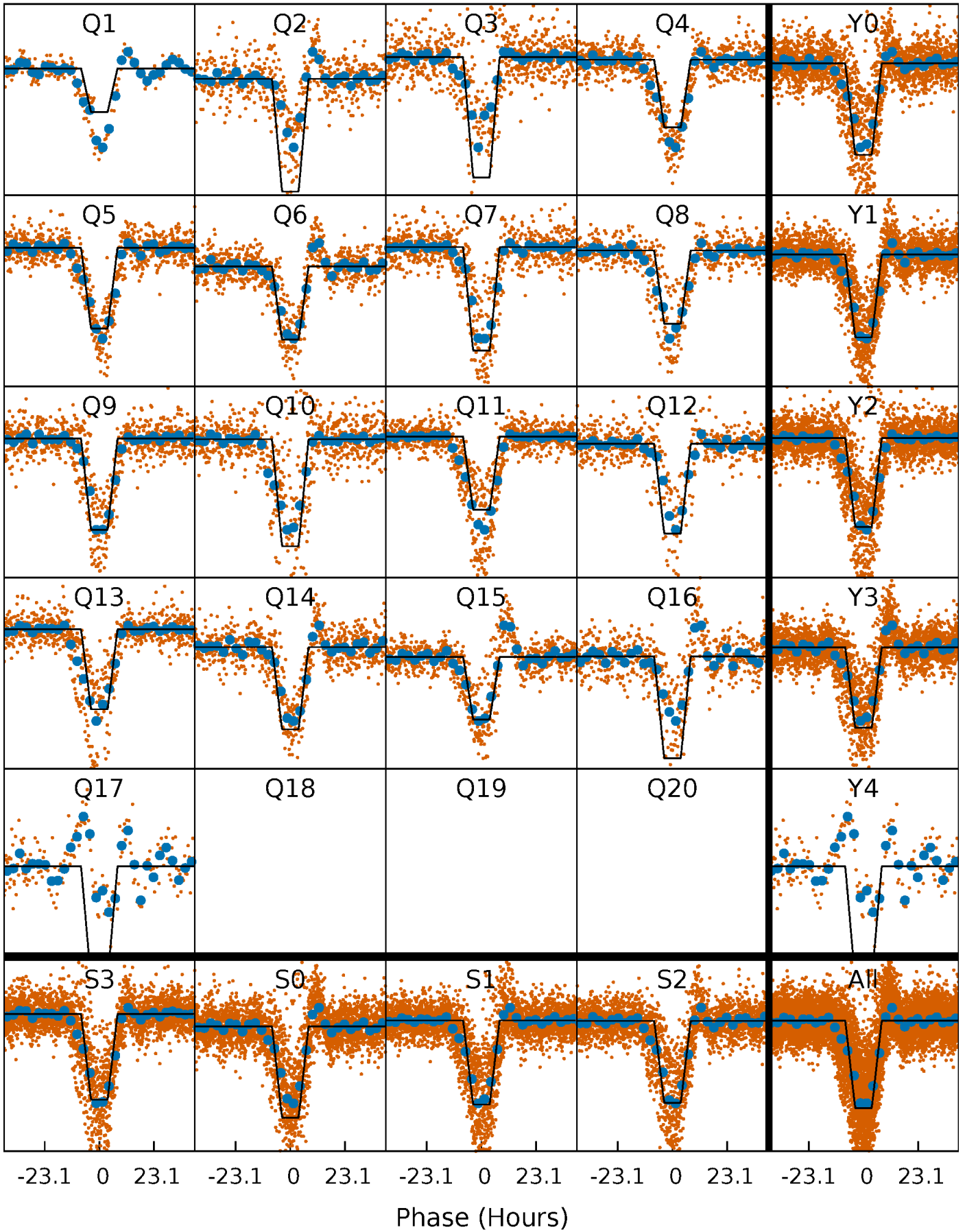
# DV Quarter-Phased Transit Curves

TCE 011572363-01 P= 19.029449 Days  $T_0=146.004513$  (BKJD)



## Alt. Detrend Quarter-Phased Transit Curves

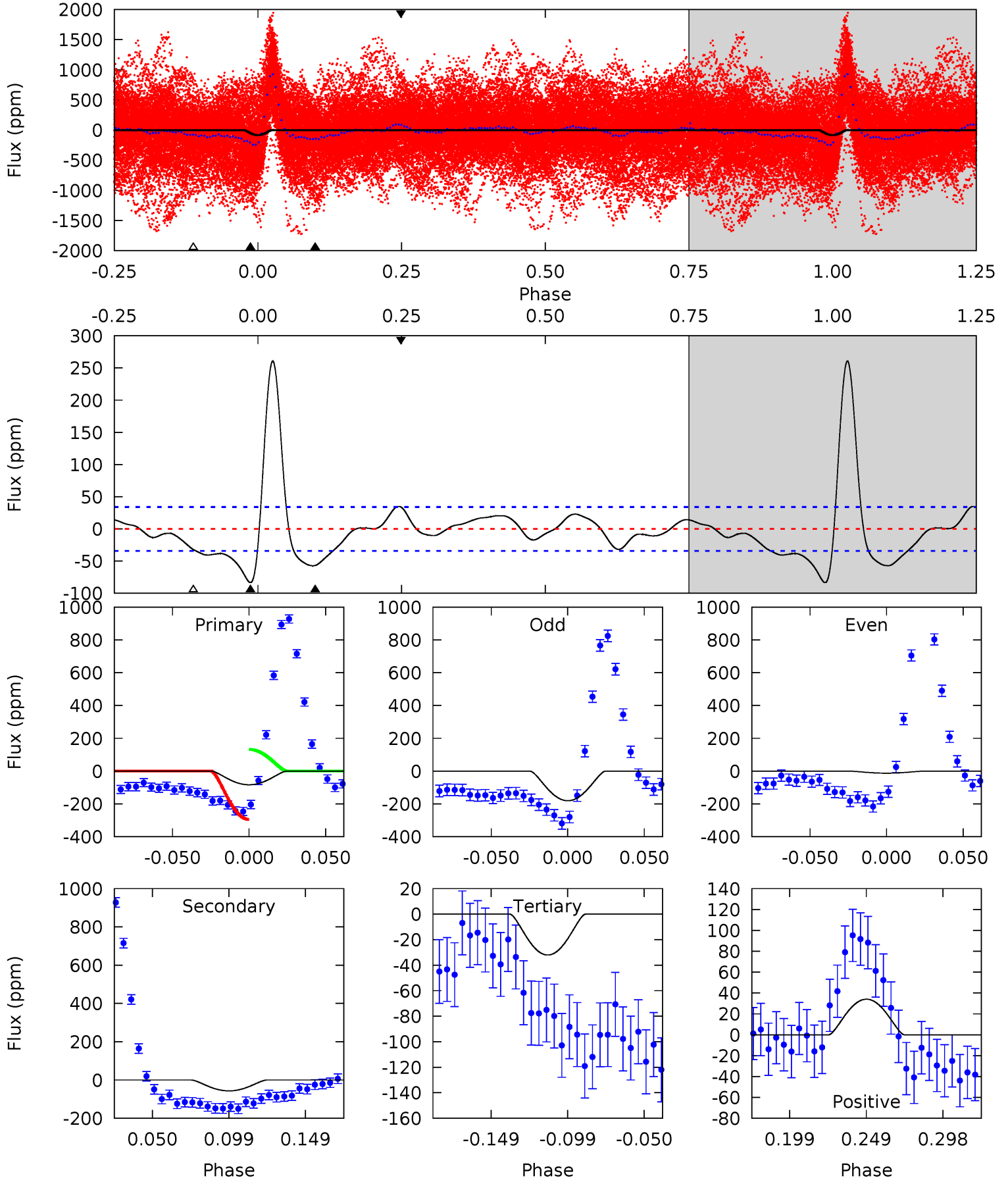
TCE 011572363-01   P= 19.029126 Days    $T_0=146.045943$  (BKJD)



# DV Model-Shift Uniqueness Test

011572363-01, P = 19.029449 Days, E = 126.975064 Days

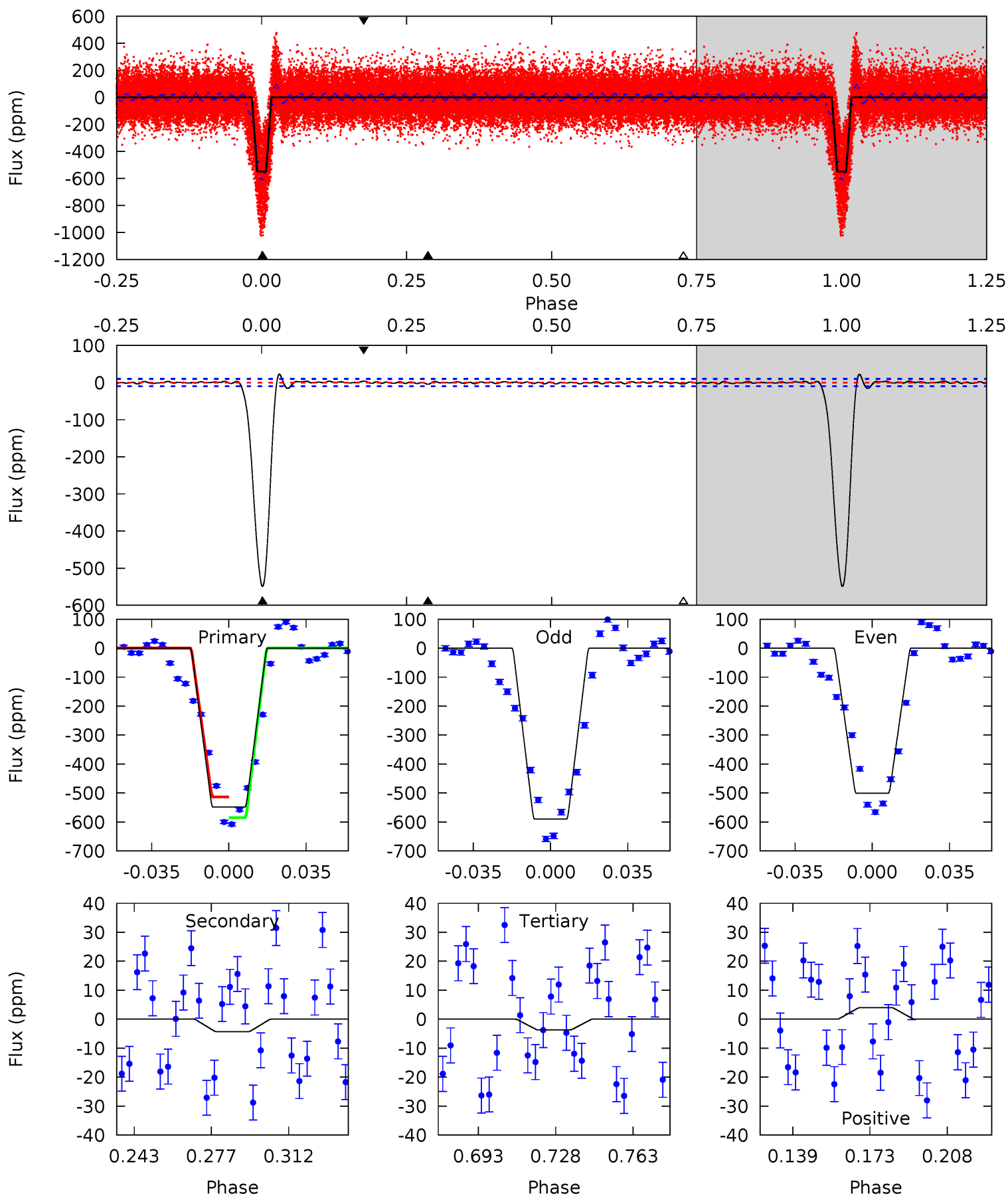
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.5	7.84	4.42	4.70	4.71	1.96	3.08	7.10	6.82	3.42	3.14	11.7	0.74	0.76	11.3



# Alt Model-Shift Uniqueness Test

011572363-01, P = 19.029126 Days, E = 127.016817 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
268.7	2.10	1.81	1.94	4.78	2.11	1.16	266.9	266.8	0.29	0.17	21.7	1.01	0.04	17.4





### Stellar Parameters For KIC 011572363

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6300^{+173}_{-173}$	$3.852^{+0.293}_{-0.098}$	$-0.320^{+0.350}_{-0.250}$	$2.166^{+0.413}_{-0.707}$	$1.216^{+0.224}_{-0.224}$	$0.169^{+0.323}_{-0.063}$
	+3%/-3%	+8%/-3%	+109%/-78%	+19%/-33%	+18%/-18%	+192%/-37%
Source	PHO1	FLK73	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 011572363-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-57 \pm 7$	$10.61^{+3.48}_{-3.17}$	$1456^{+85}_{-124}$	$3114^{+324}_{-221}$	$6.168^{+6.176}_{-2.464}$
Alt.	$-4 \pm 2$	$5.63^{+2.83}_{-2.57}$	$1441^{+95}_{-120}$	$2514^{+509}_{-448}$	$1.578^{+4.022}_{-1.036}$

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

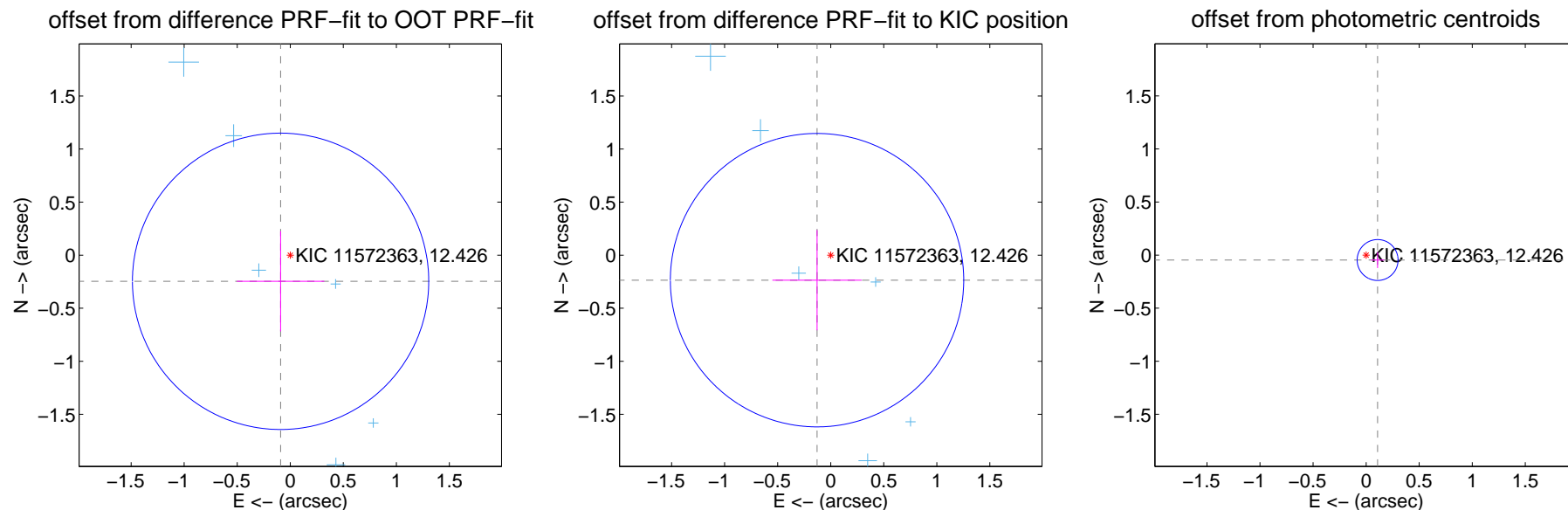
## DV Centroid Data

Supplemental centroid analysis for 011572363-01. Kepler magnitude: 12.43. Transit SNR 31.00

There are 6 quarters with good PRF difference image offsets

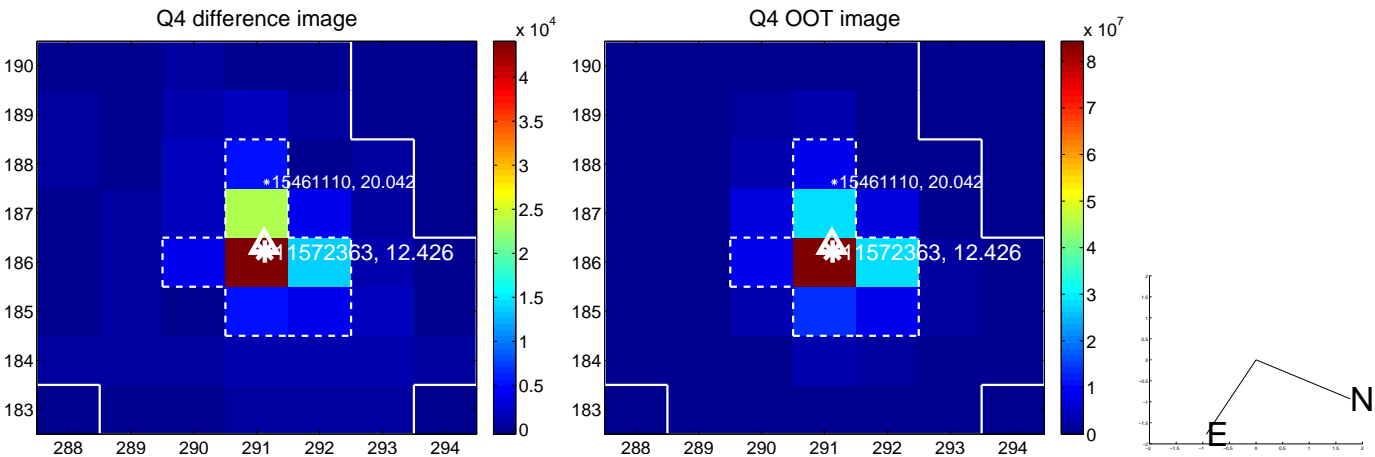
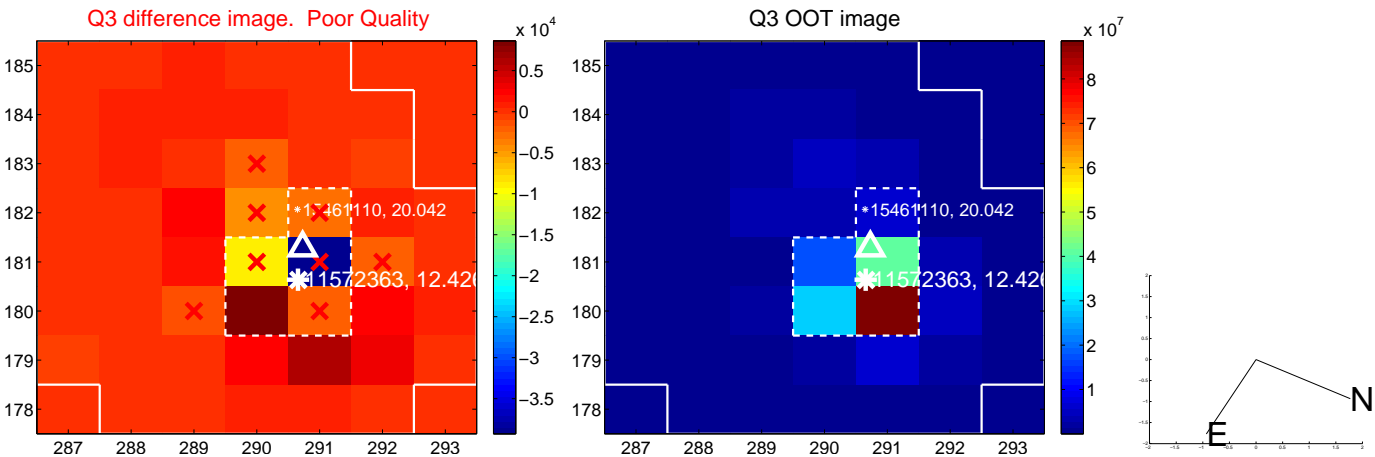
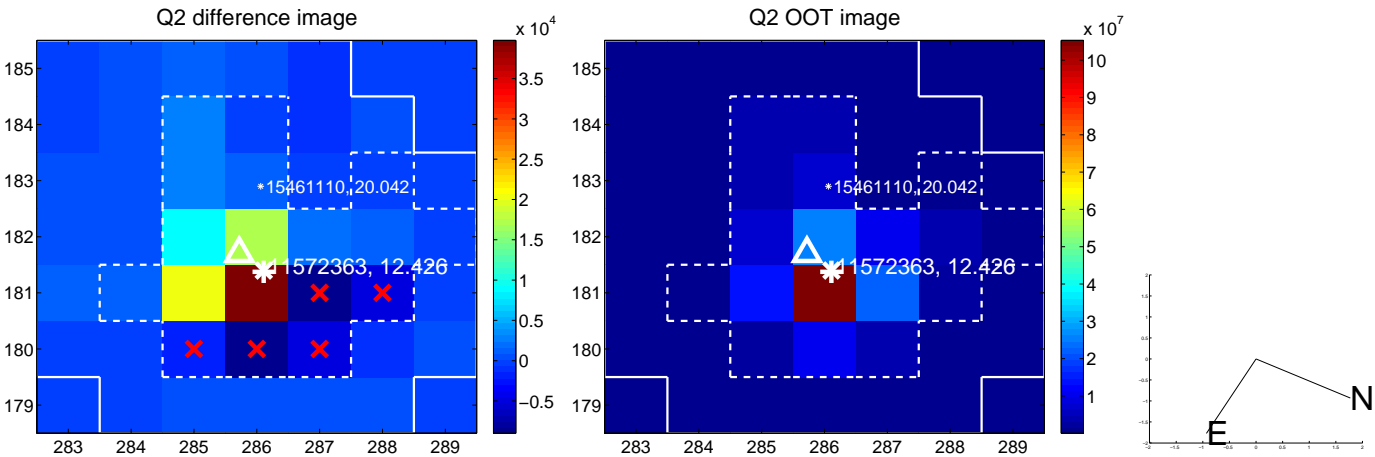
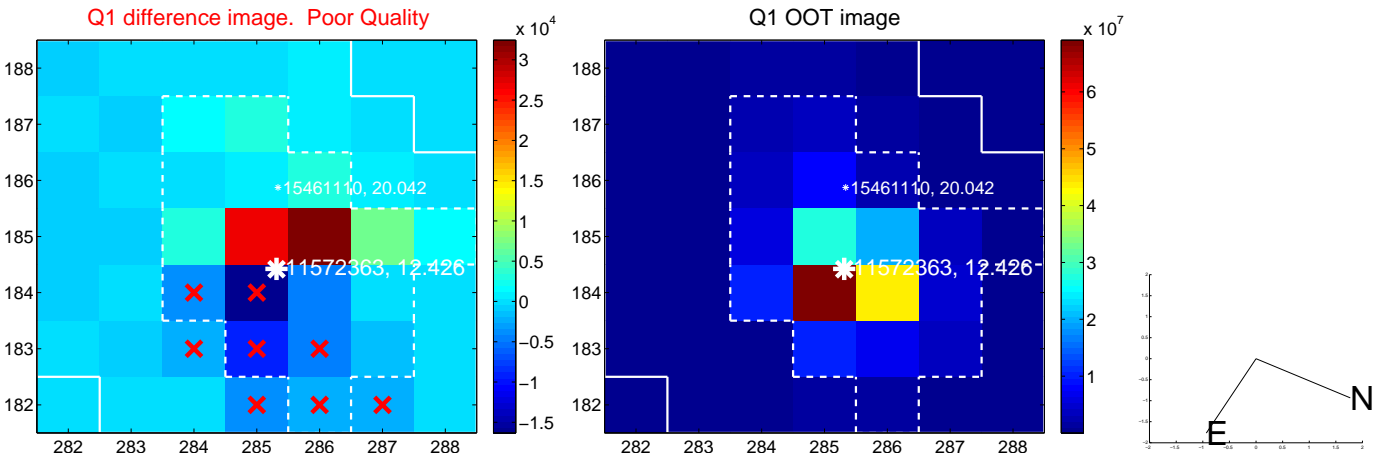
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.263 \pm 0.465$	0.56	$0.091 \pm 0.412$	$-0.247 \pm 0.472$
PRF-fit source offset from KIC position	$0.269 \pm 0.461$	0.58	$0.129 \pm 0.421$	$-0.236 \pm 0.472$
photometric centroid source offset	$0.12 \pm 0.06$	1.83	$-0.11 \pm 0.06$	$-0.05 \pm 0.08$

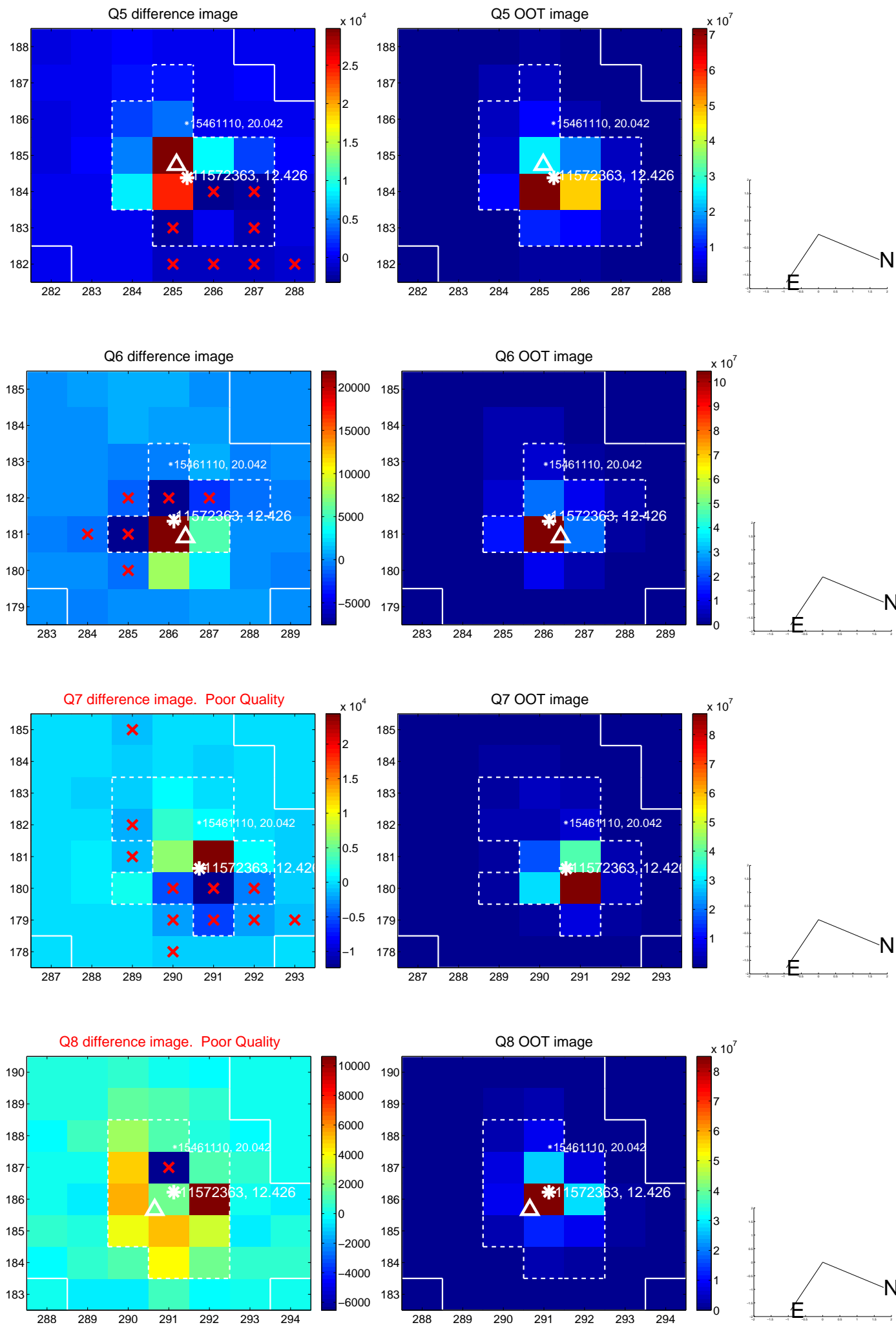


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

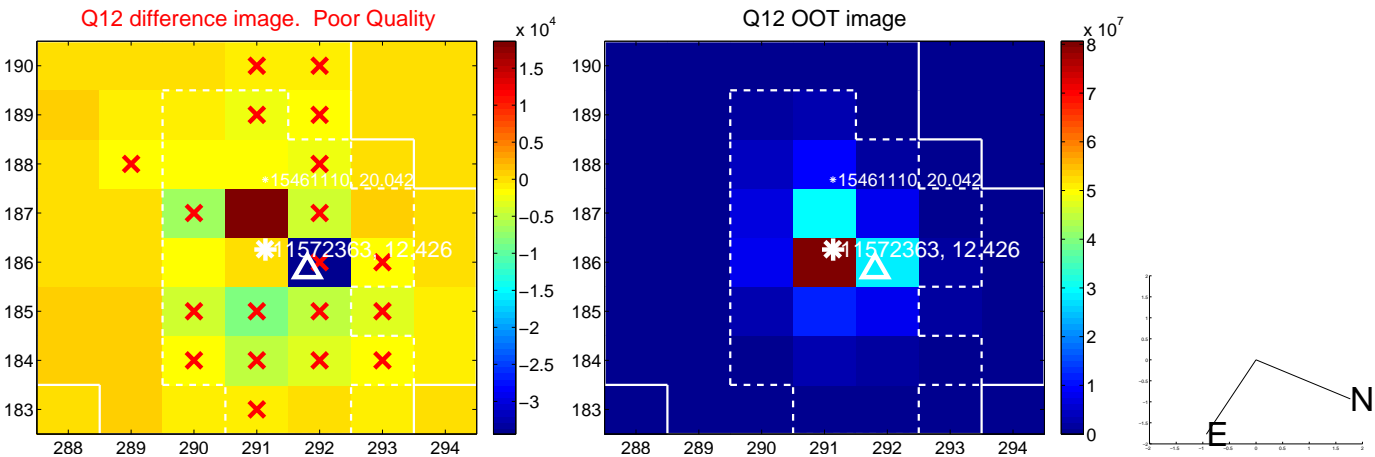
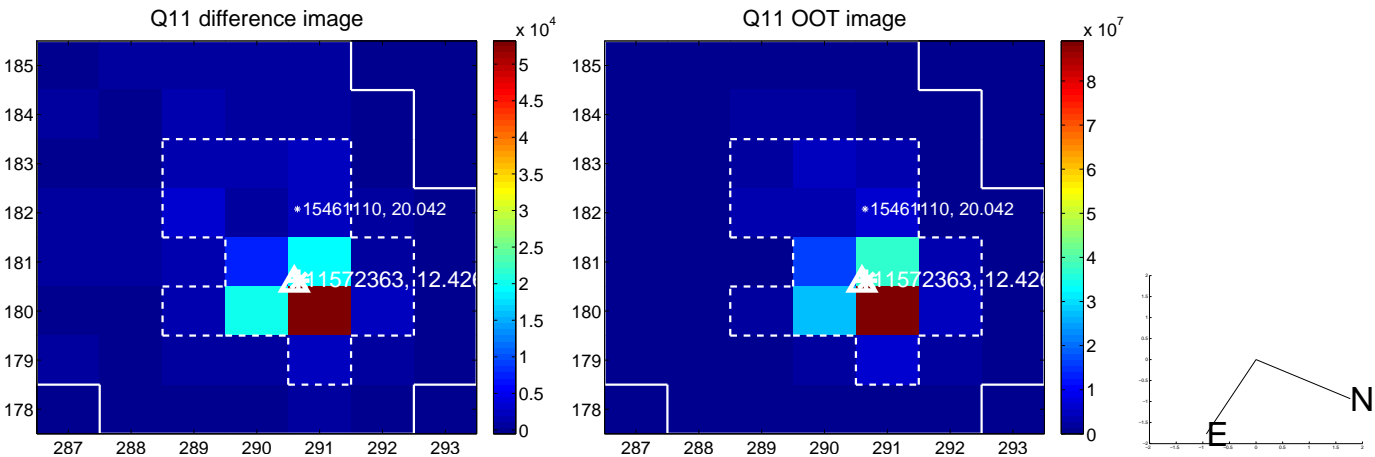
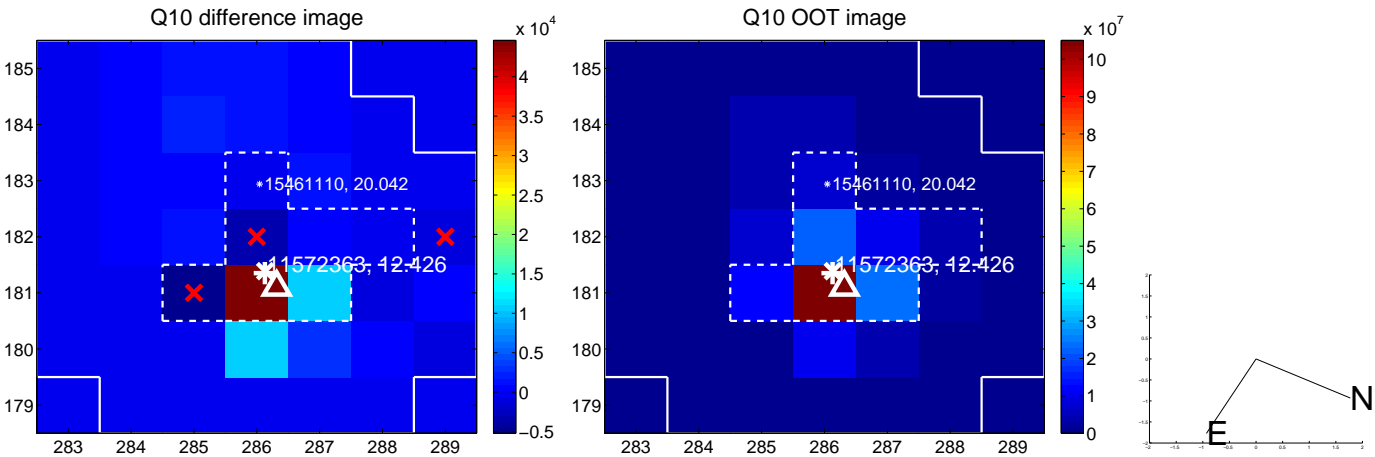
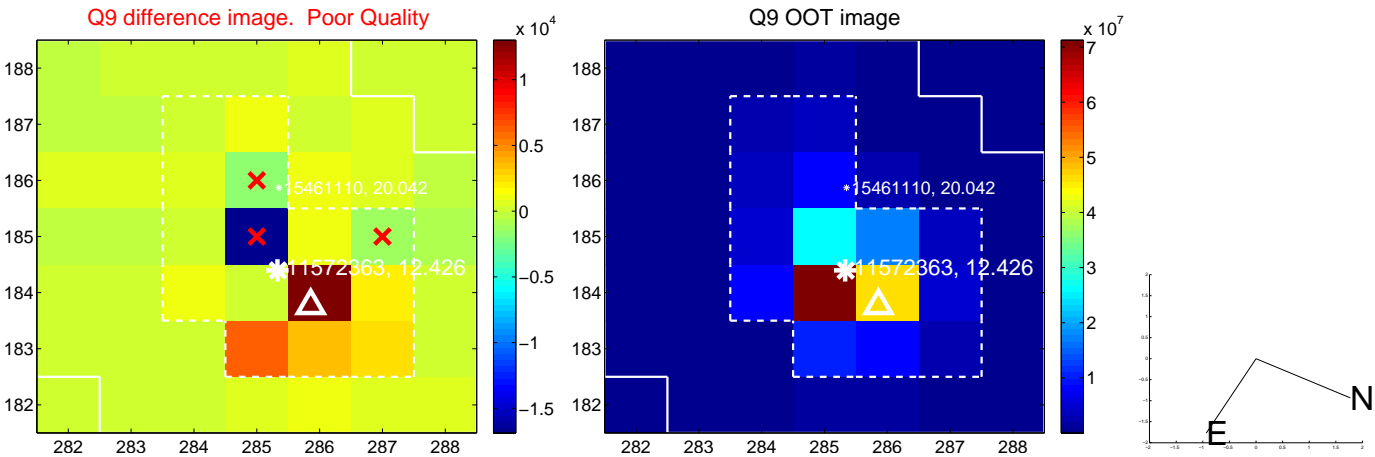


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

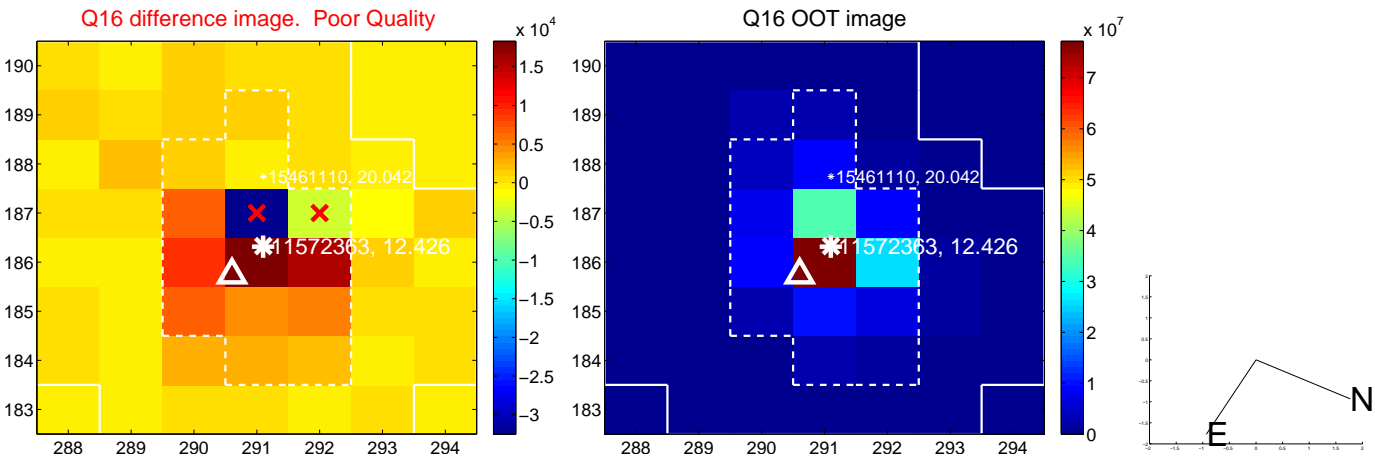
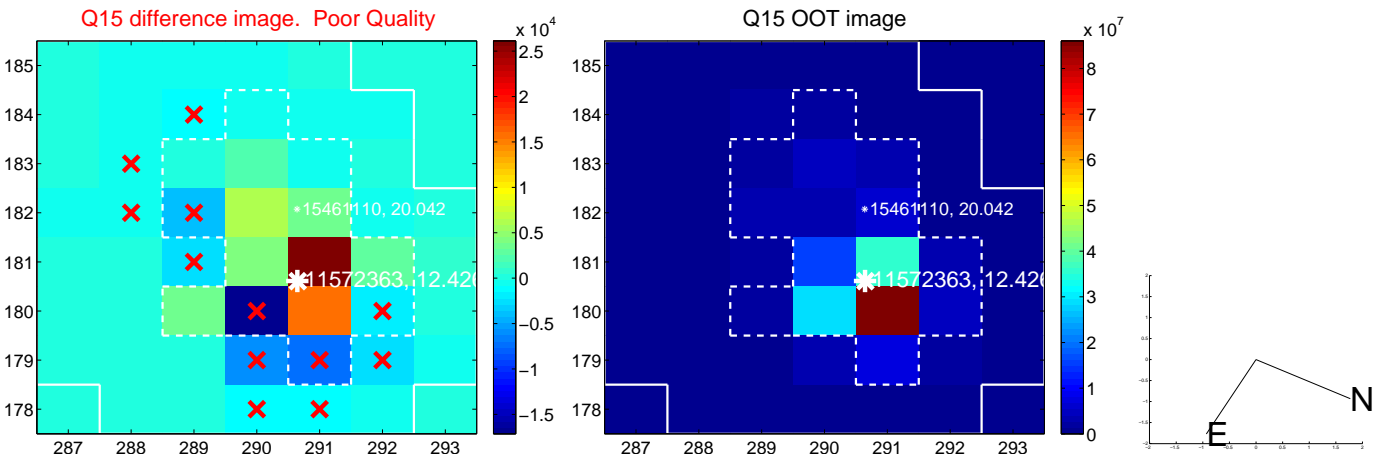
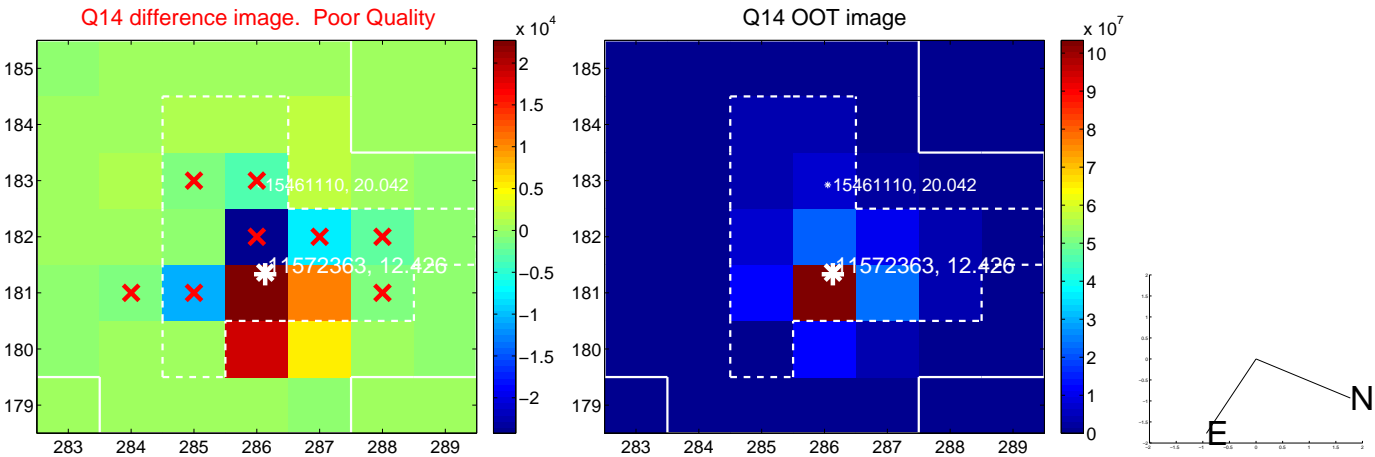
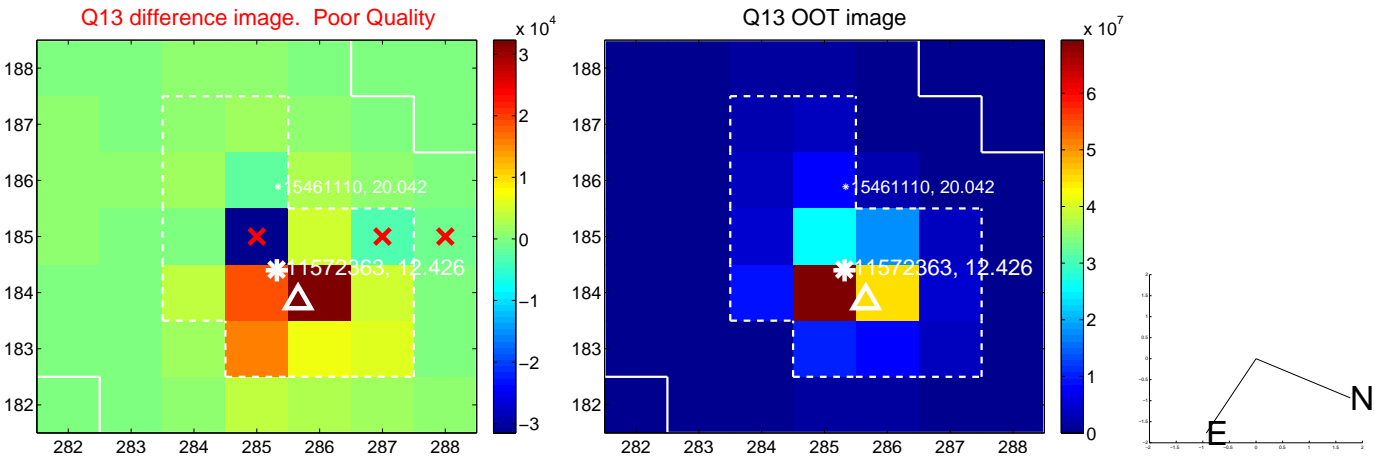




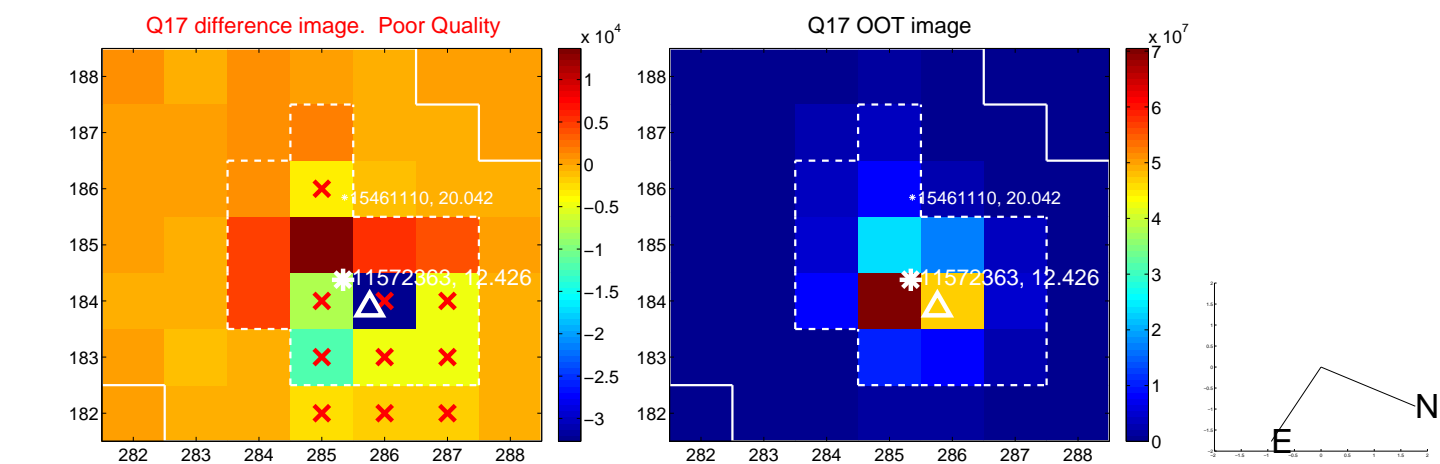
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



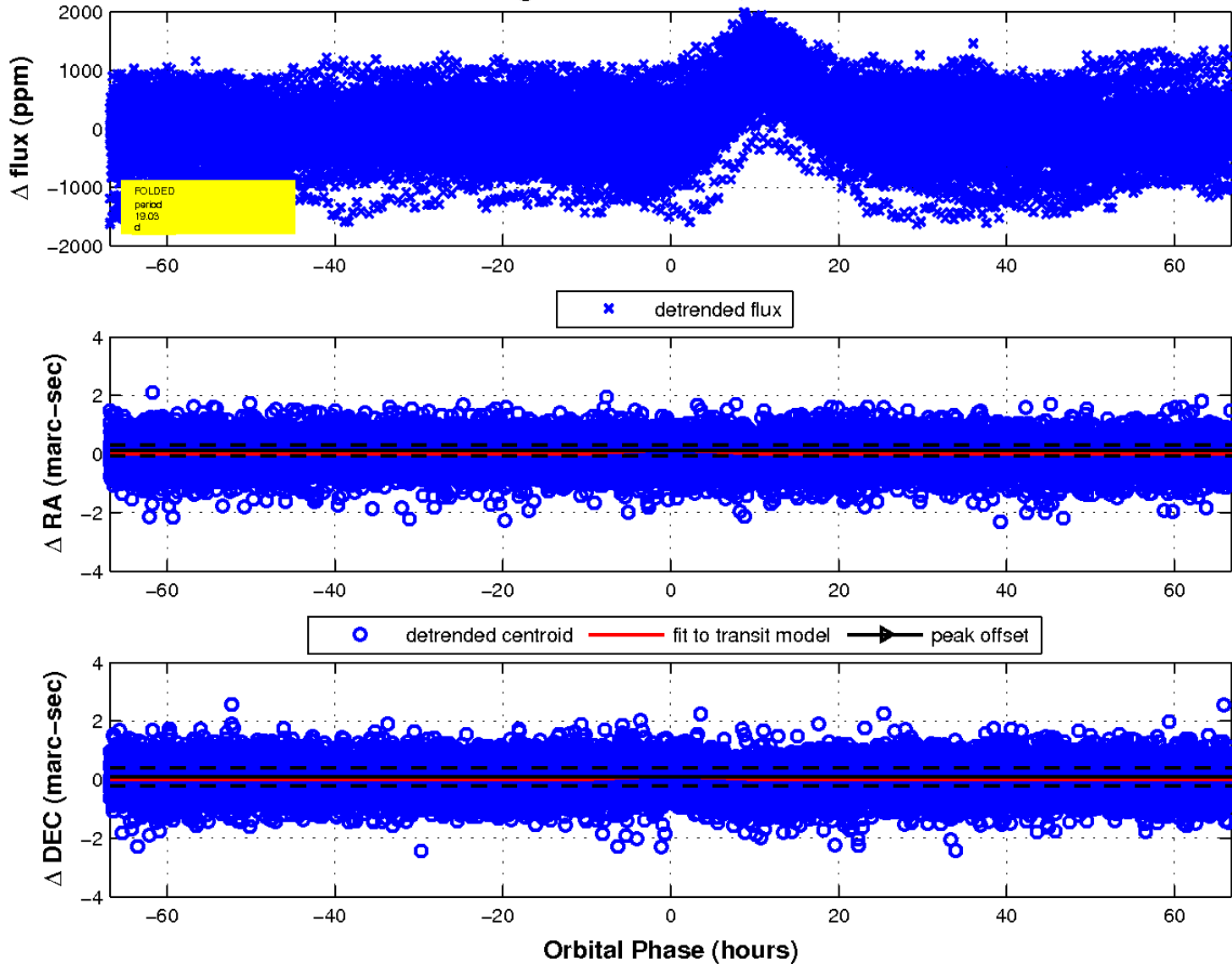
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

