

# KIC 011080489

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011080489-01	OBS	No	342.346085	409.111454	3137.8	7.478	9.0	7.9	0.65	4378	4.68	0.21

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011080489-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT— INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

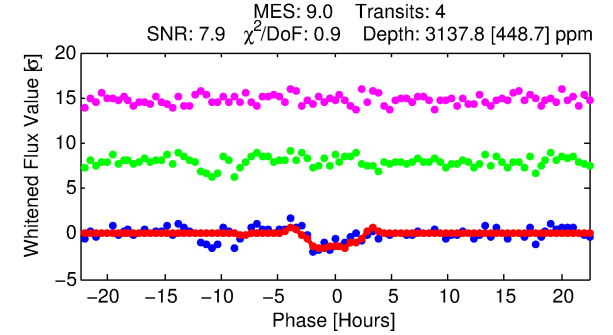
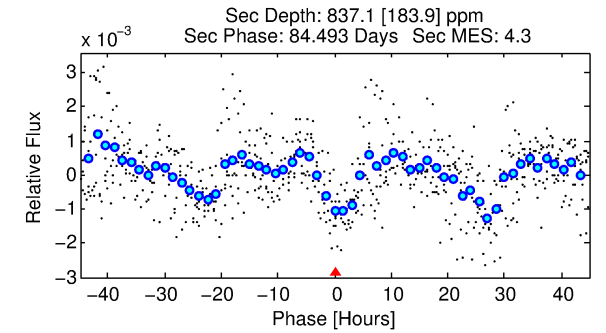
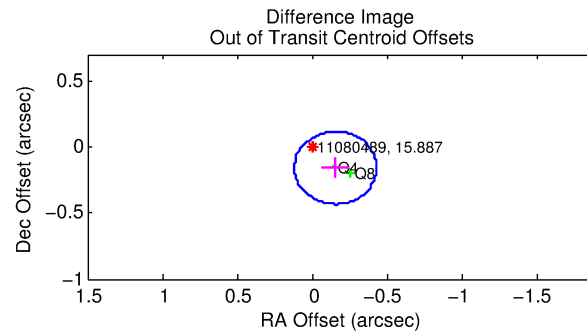
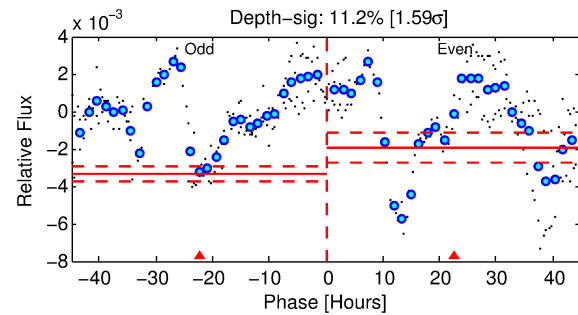
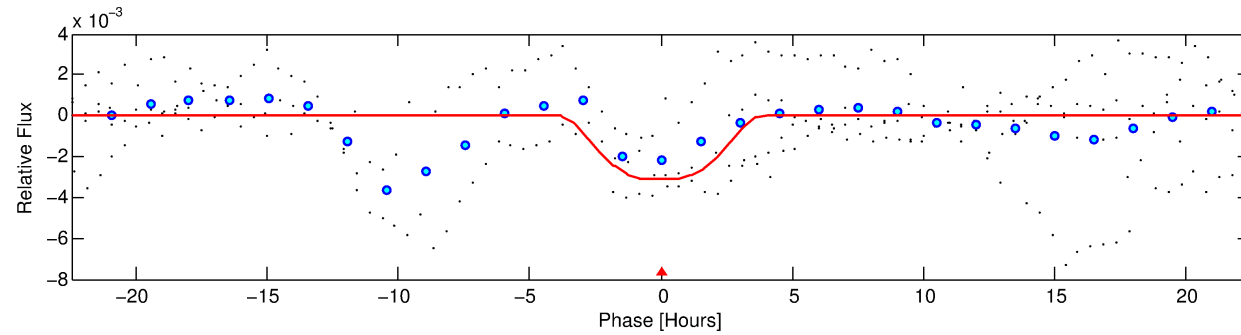
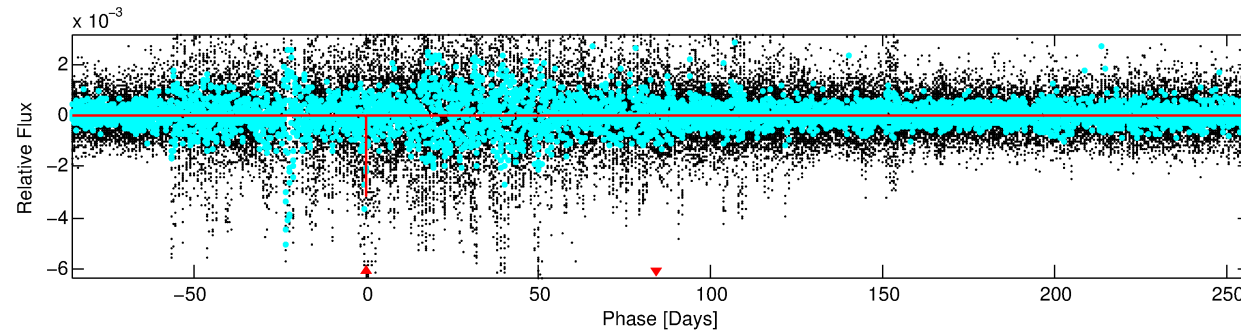
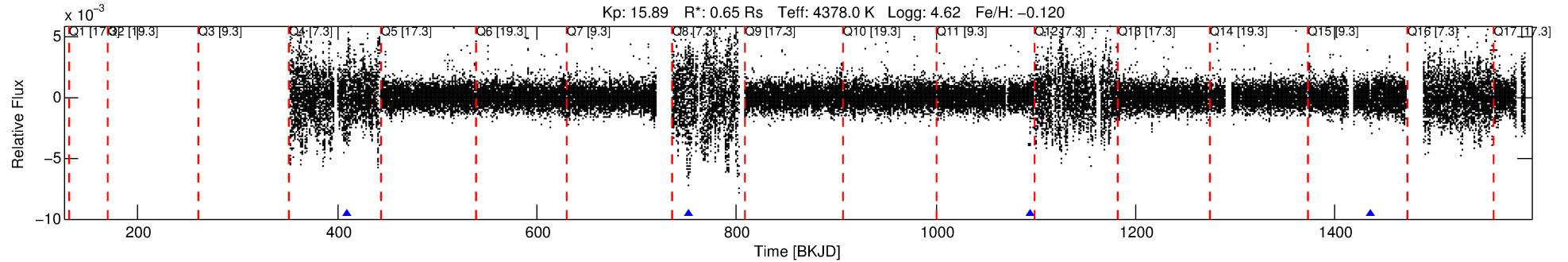
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 011080489-01

No Significant Match Found

# DV One-Page Summary

KIC: 11080489 Candidate: 1 of 1 Period: 342.346 d



## DV Fit Results:

Period = 342.34609 [0.00892] d  
Epoch = 409.1115 [0.0139] BKJD  
Rp/R\* = 0.0658 [0.0061]  
a/R\* = 186.42 [23.89]  
b = 0.92 [0.02]  
Seff = 0.21 [0.04]  
Teq = 172 [8] K  
Rp = 4.68 [0.61] Re  
a = 0.8251 [0.0604] AU  
Ag = 14299.81 [4359.92] [3.28σ]  
Teffp = 2903 [237] K [11.53σ]

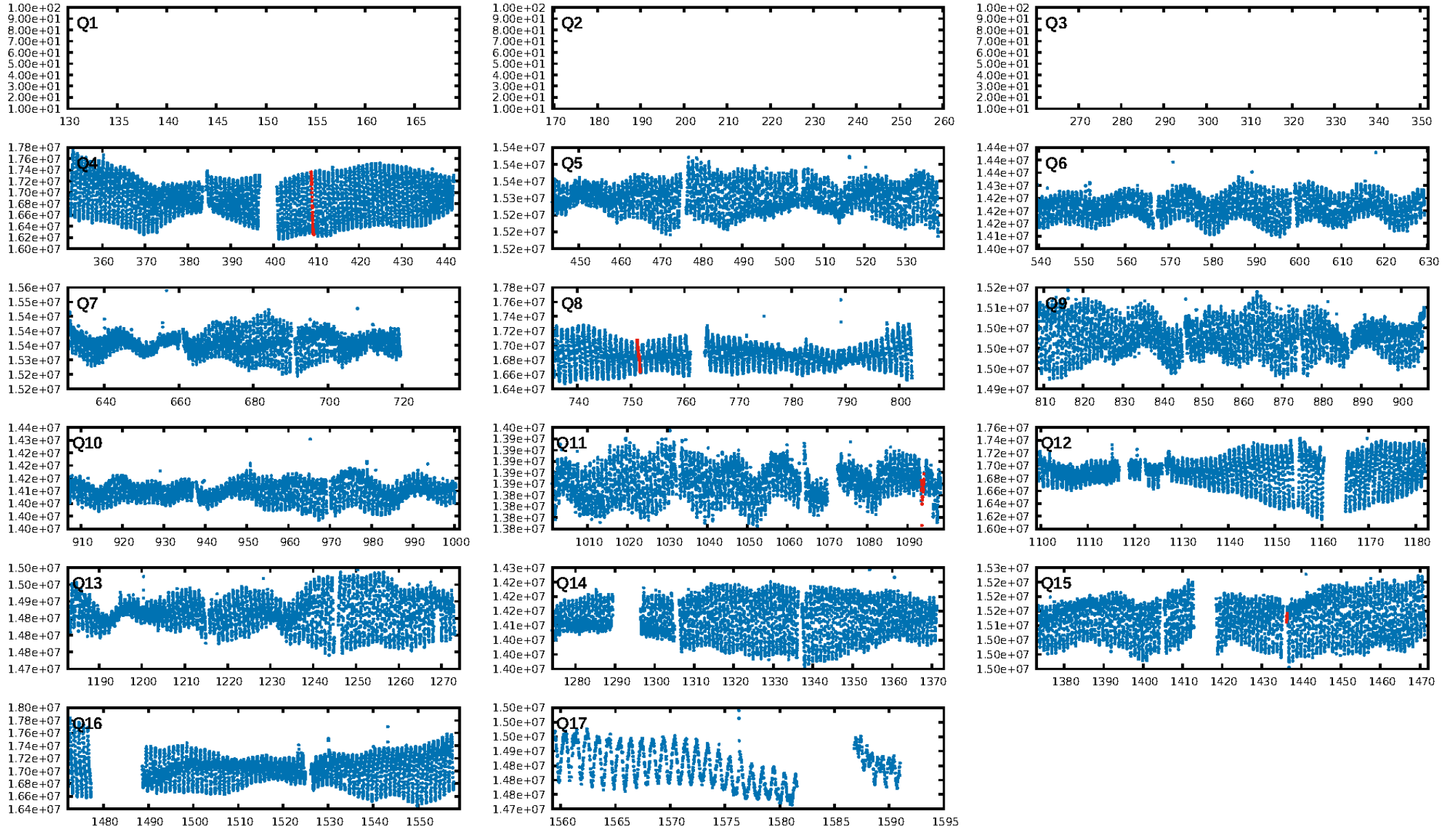
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 61.2%  
ModelChiSquareGof-sig: 100.0%  
**Bootstrap-pfa: 3.67e-11**  
RollingBand-fgt: 1.00 [4/4]  
**GhostDiagnostic-chr: 0.4553**  
Centroid-sig: 41.7%  
**Centroid-so: 2.709 arcsec [3.05σ]**  
OotOffset-rm: 0.224 arcsec [2.45σ]  
**KicOffset-rm: 6.897 arcsec [97.33σ]**  
OotOffset-st: 0/0/2/0 [2]  
KicOffset-st: 0/0/2/0 [2]  
DiffImageQuality-fgm: 0.50 [1/2]  
DiffImageOverlap-fno: 1.00 [2/2]

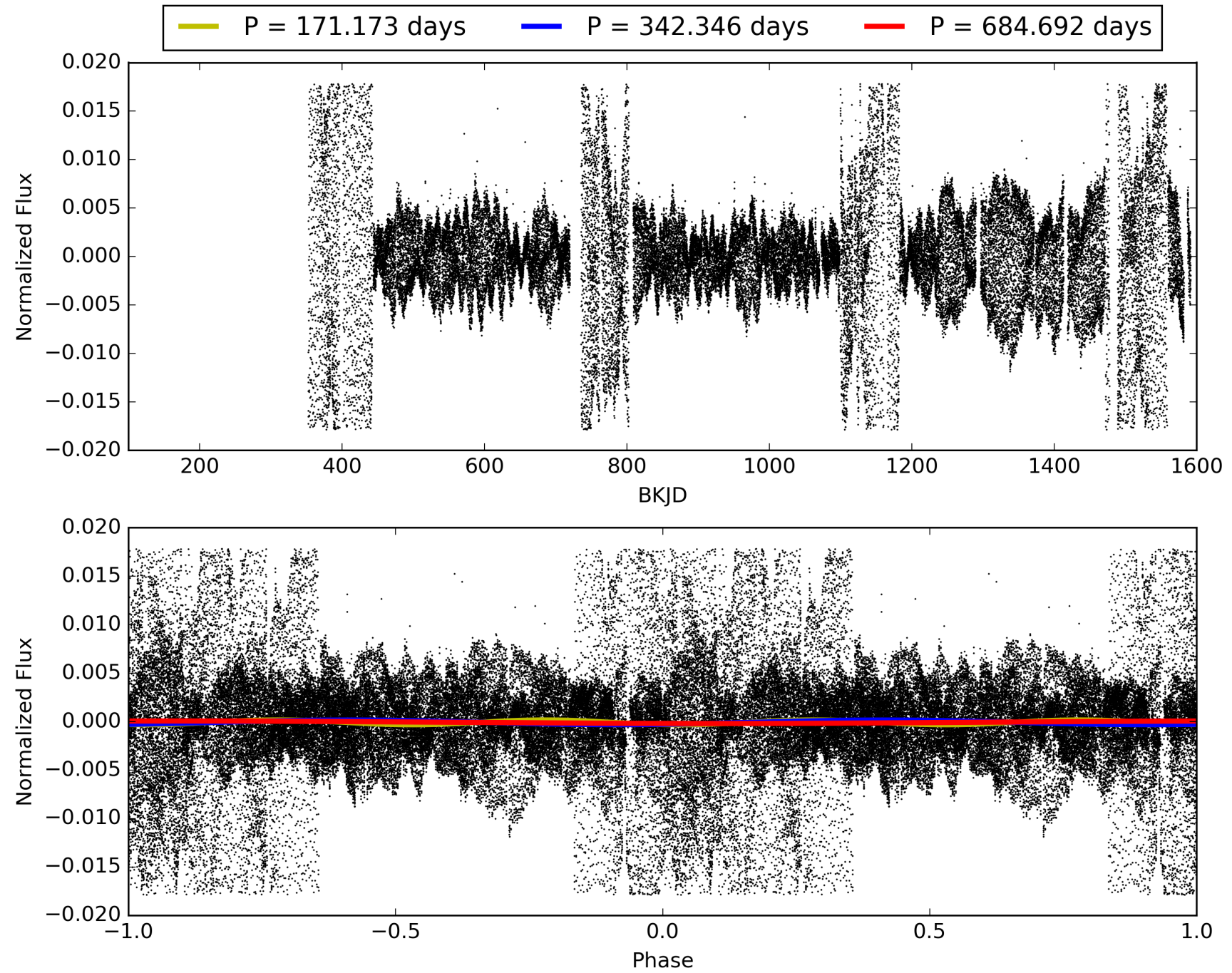
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 22:27:31 Z

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

# TCE 011080489-01, PDC Light Curves

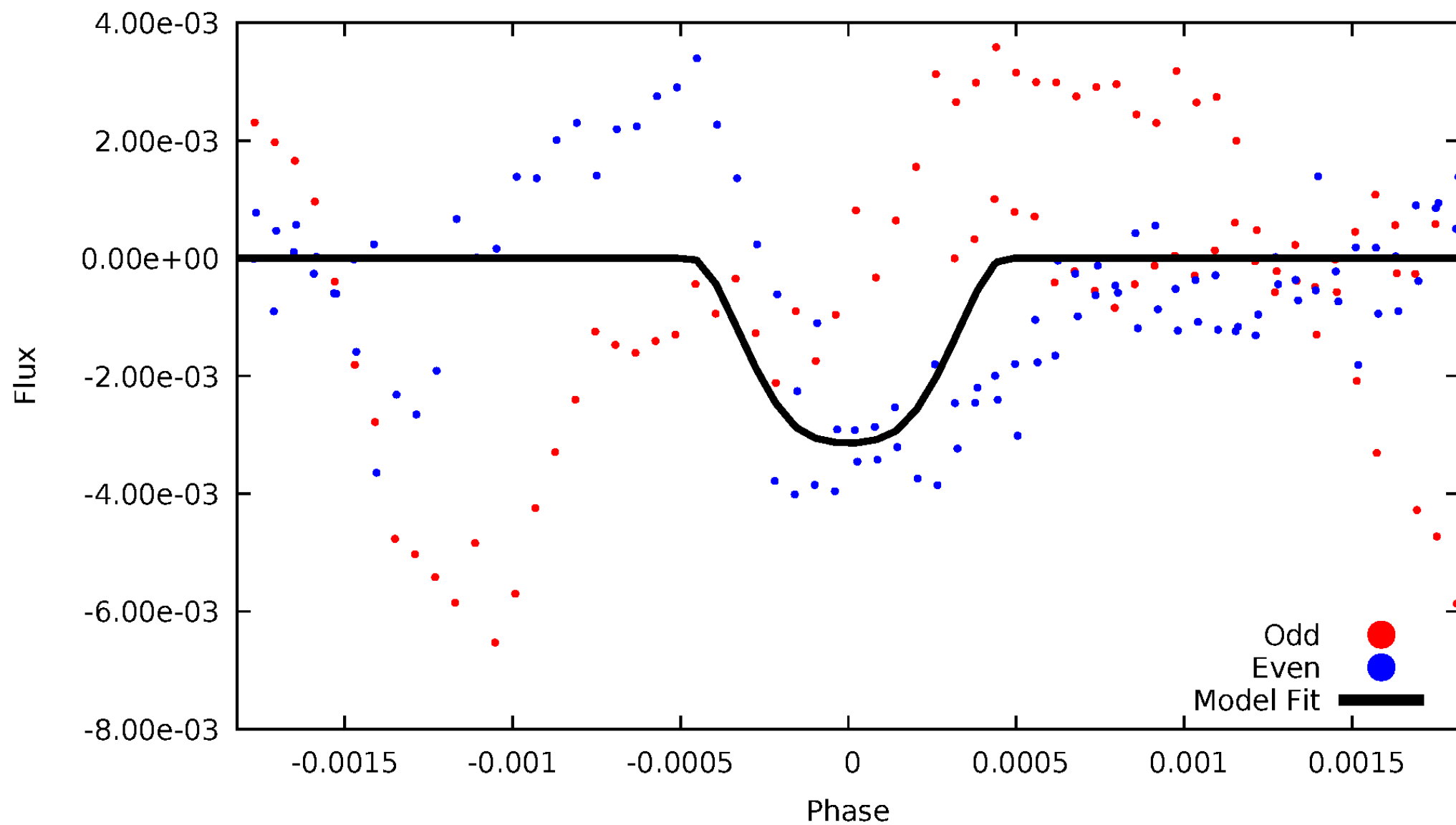


# TCE 011080489-01



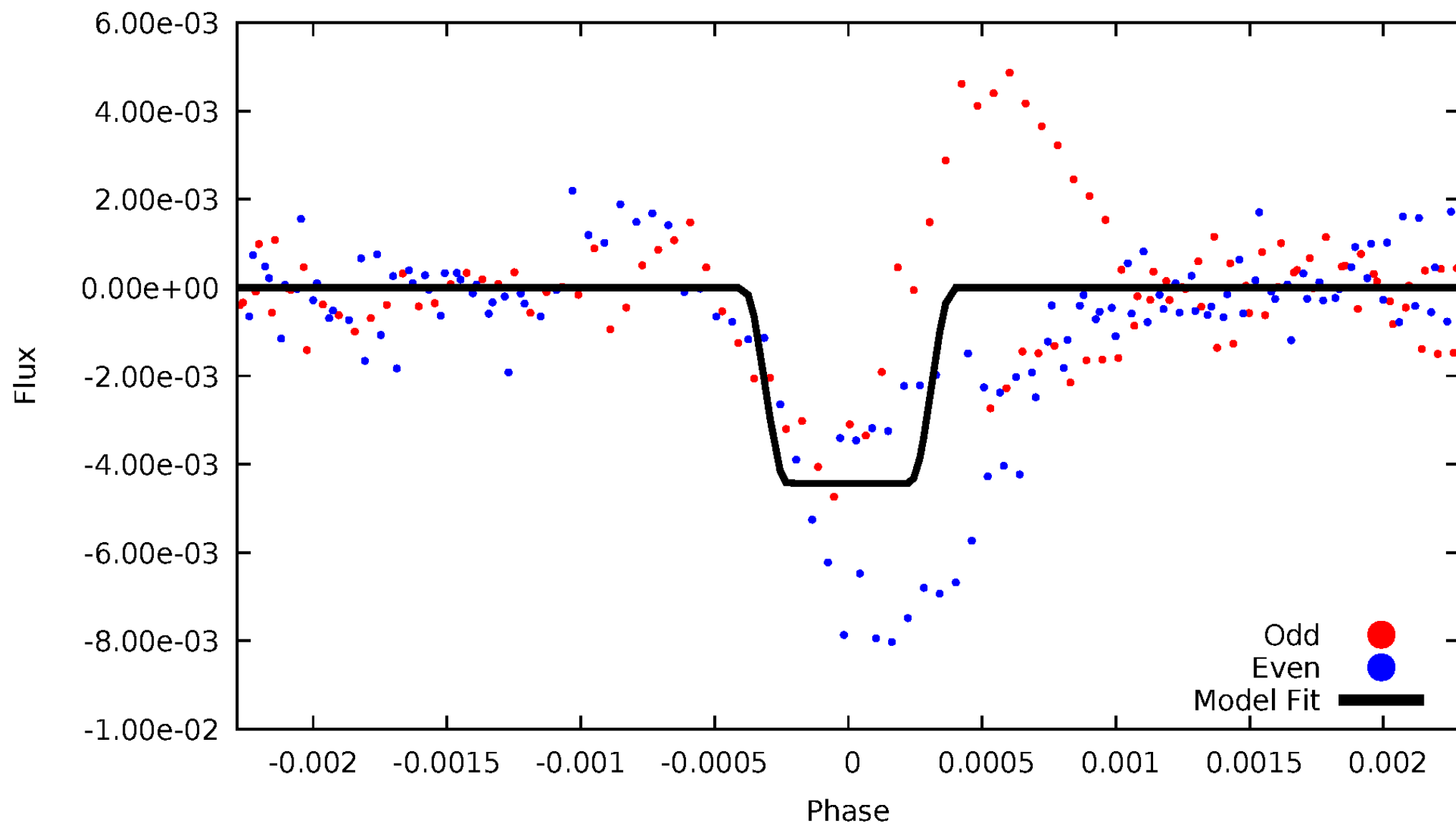
# DV Odd/Even

TCE 011080489-01

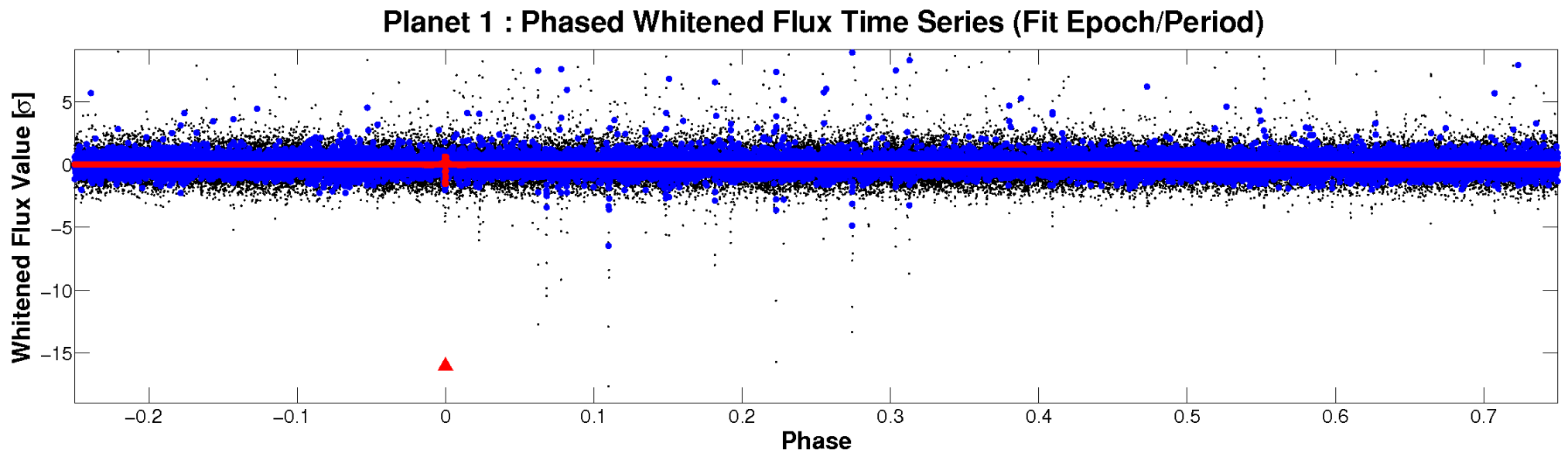
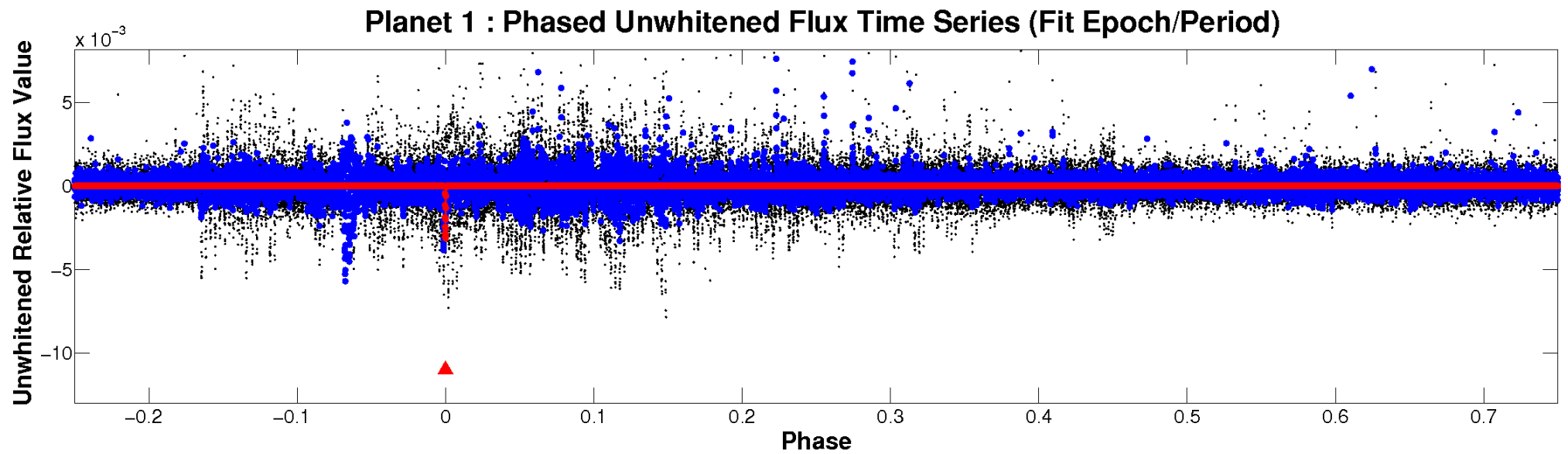


# ALT Odd/Even

TCE 011080489-01



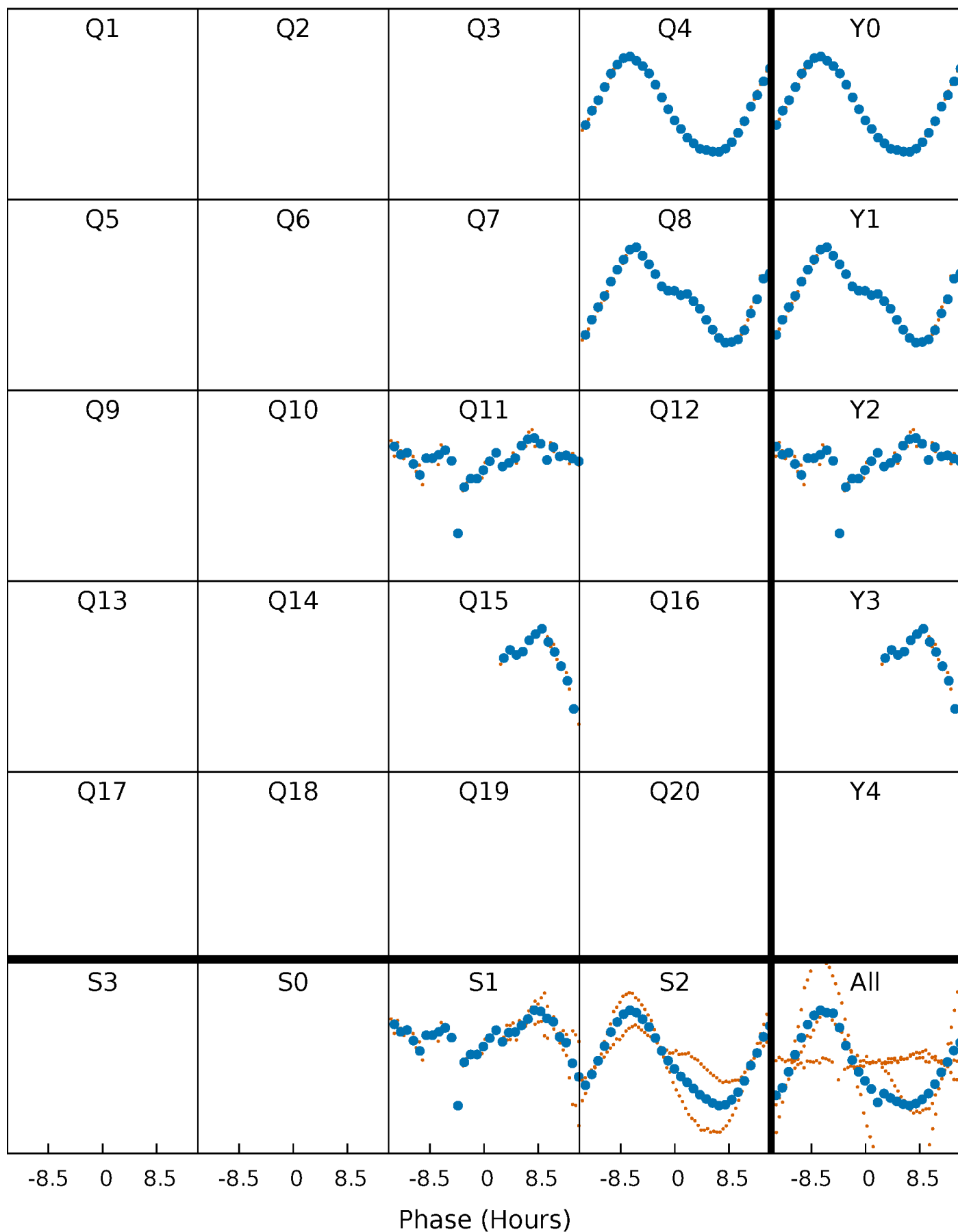
# Non-Whitened Vs. Whitened Light Curve





# PDC Quarter-Phased Transit Curves

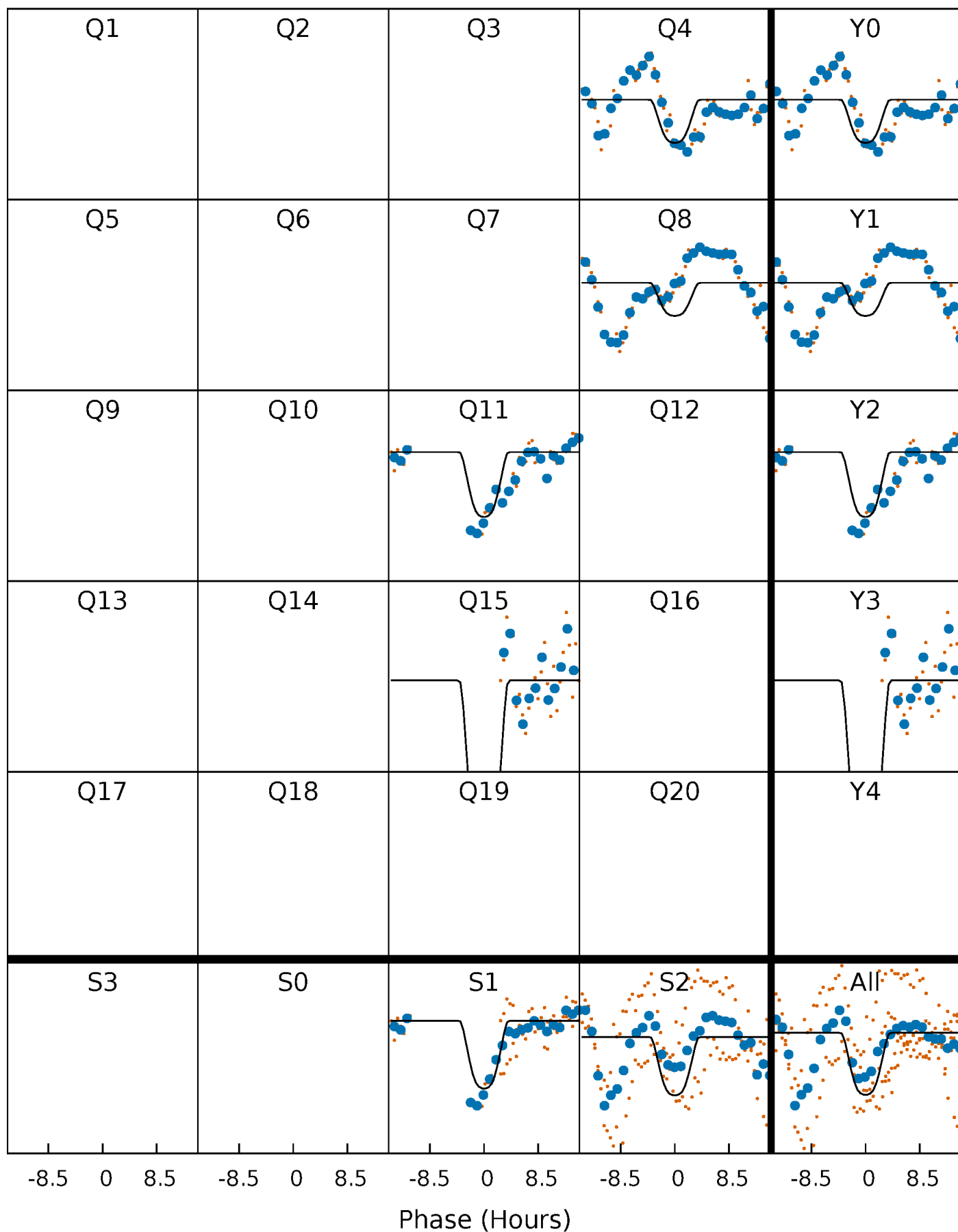
TCE 011080489-01 P=342.346086 Days  $T_0=409.111454$  (BKJD)





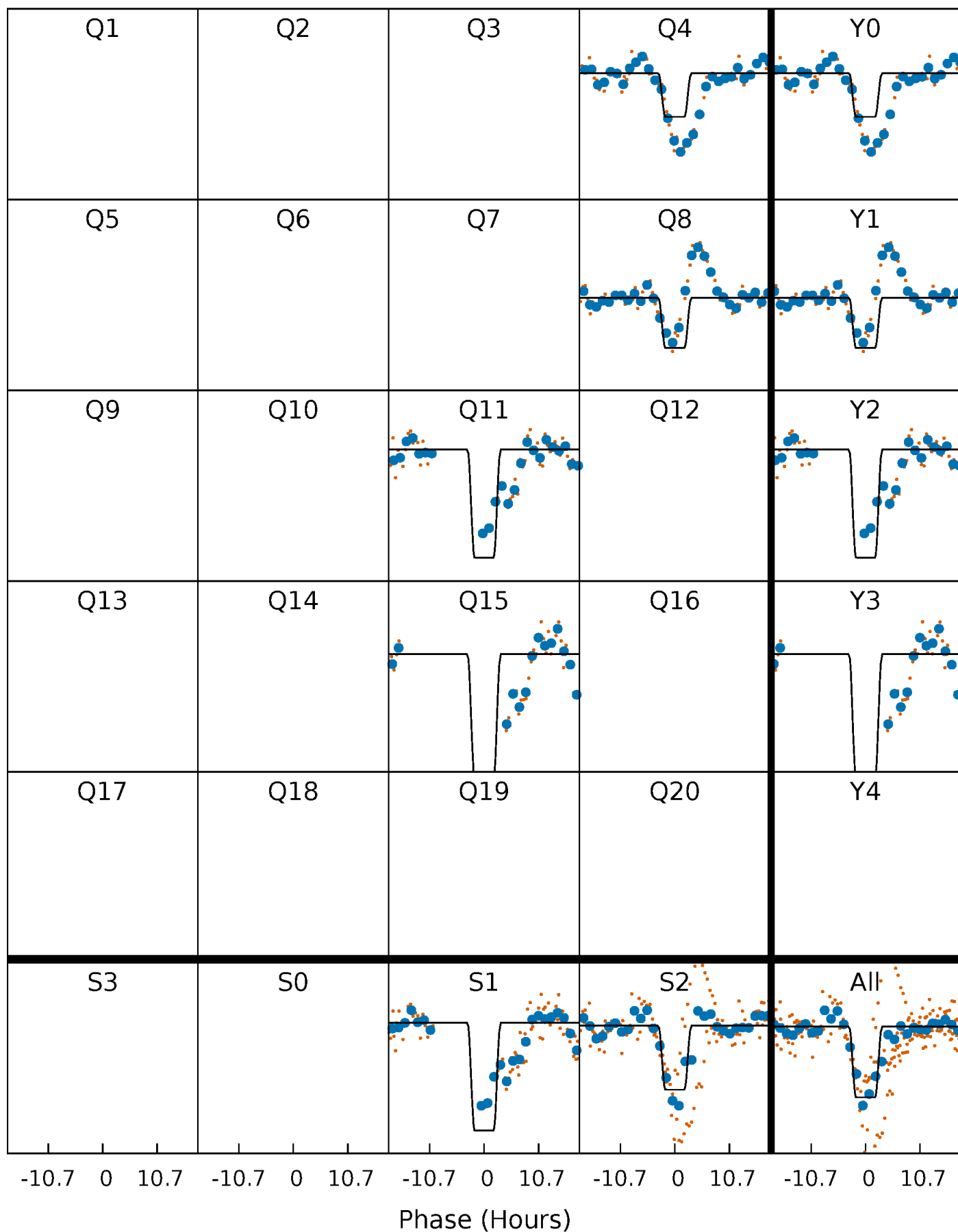
# DV Quarter-Phased Transit Curves

TCE 011080489-01 P=342.346086 Days  $T_0=409.111454$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

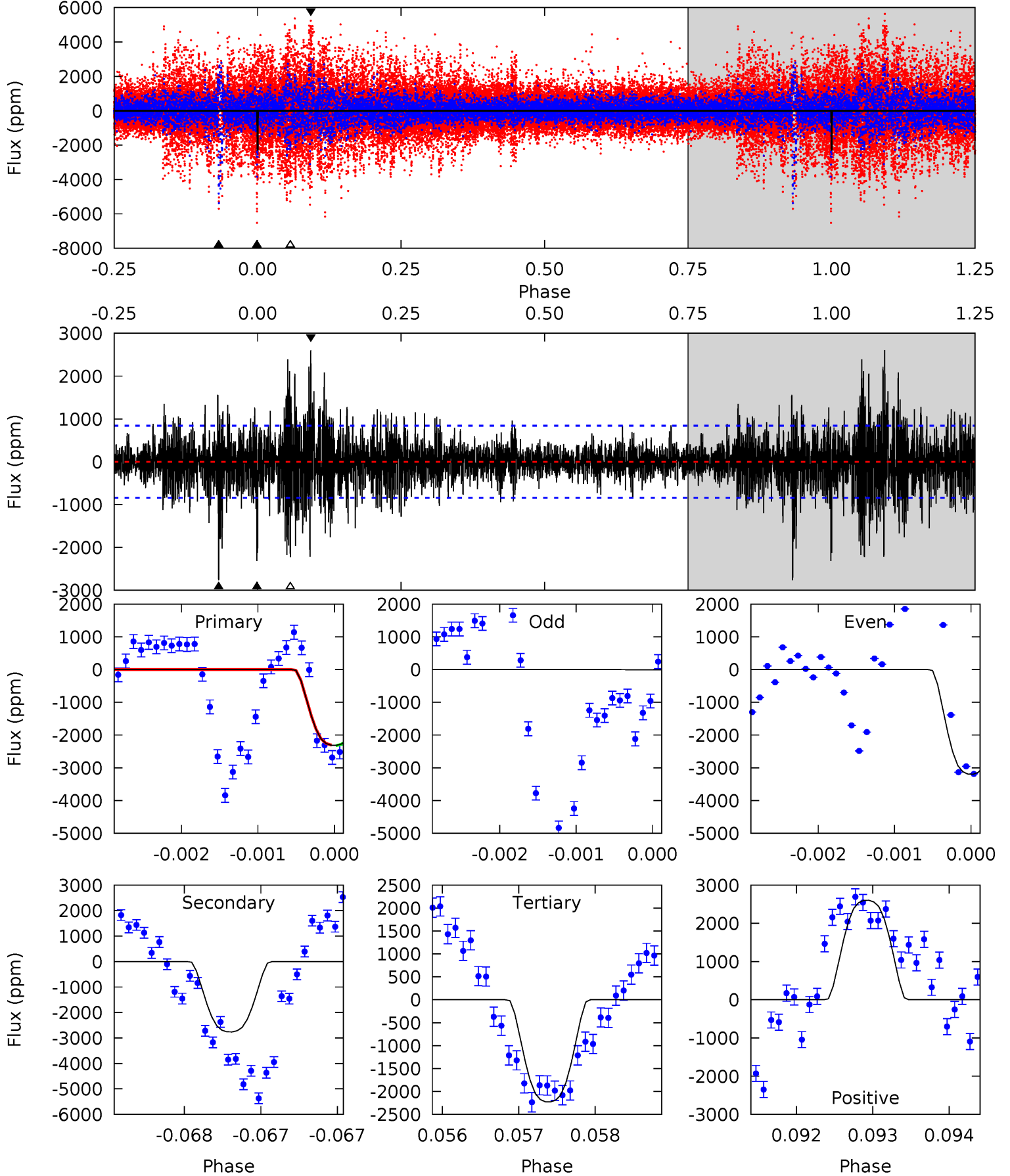
TCE 011080489-01 P=342.337053 Days  $T_0=409.064842$  (BKJD)



# DV Model-Shift Uniqueness Test

011080489-01, P = 342.346086 Days, E = 66.765368 Days

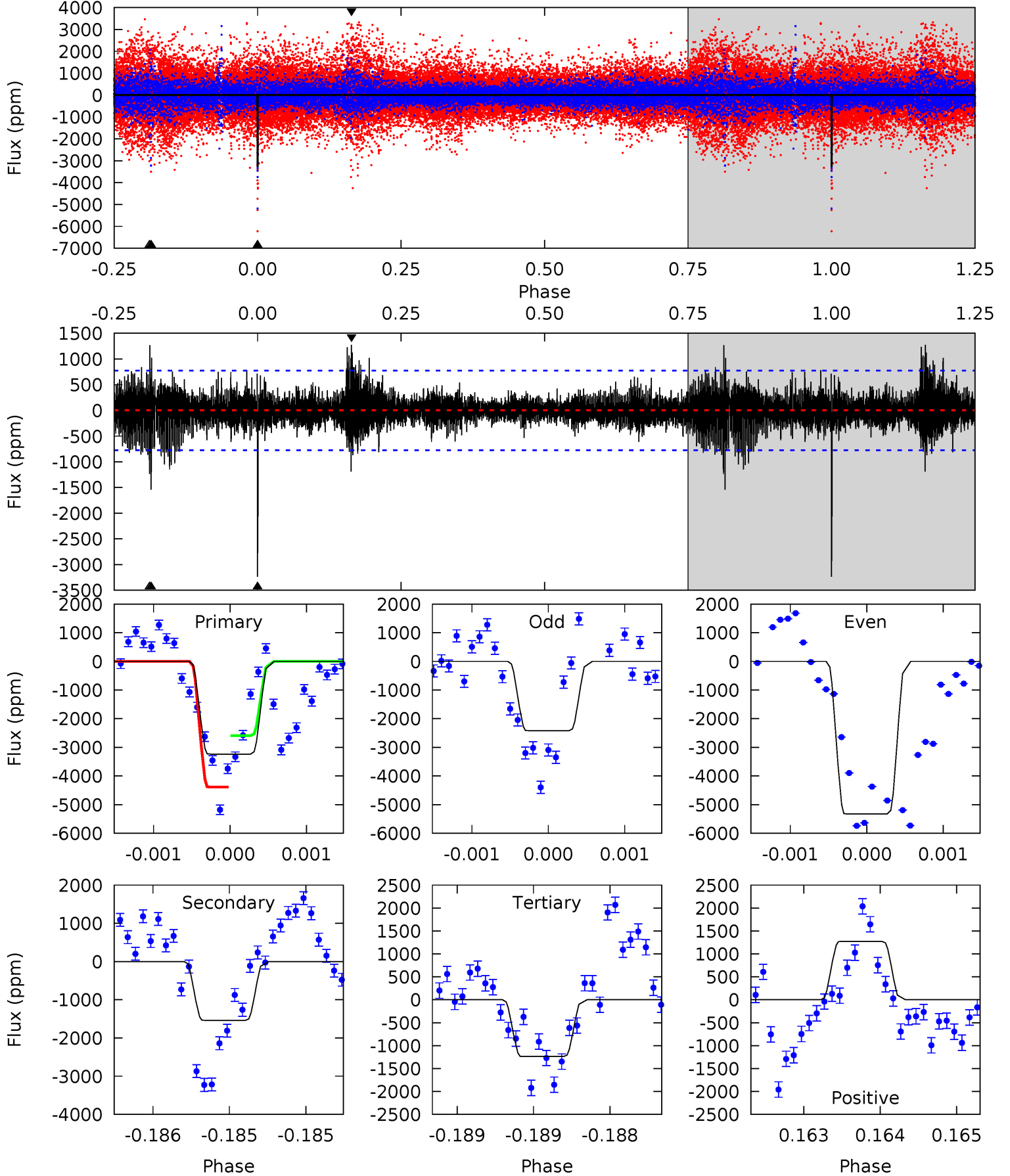
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.0	17.9	14.5	16.9	5.47	3.32	3.02	0.57	-1.87	3.47	1.03	9.45	1.08	0.49	0.06



# Alt Model-Shift Uniqueness Test

011080489-01, P = 342.337053 Days, E = 66.727789 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
23.0	10.9	8.77	9.03	5.50	3.36	1.63	14.2	13.9	2.15	1.89	11.1	1.29	0.28	6.36



### Stellar Parameters For KIC 011080489

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	$4378^{+153}_{-168}$	$4.615^{+0.052}_{-0.021}$	$-0.120^{+0.300}_{-0.300}$	$0.652^{+0.042}_{-0.060}$	$0.640^{+0.071}_{-0.052}$	$3.250^{+0.758}_{-0.347}$
	+3%/-4%	+1%/-0%	+250%/-250%	+6%/-9%	+11%/-8%	+23%/-11%
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 011080489-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-2762 \pm 154$	$4.64^{+0.47}_{-0.46}$	$239^{+9}_{-11}$	$4042^{+208}_{-204}$	$49038^{+11065}_{-8688}$
Alt.	$-1540 \pm 141$	$4.71^{+0.47}_{-0.49}$	$238^{+10}_{-10}$	$3630^{+169}_{-166}$	$26450^{+6355}_{-5086}$

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

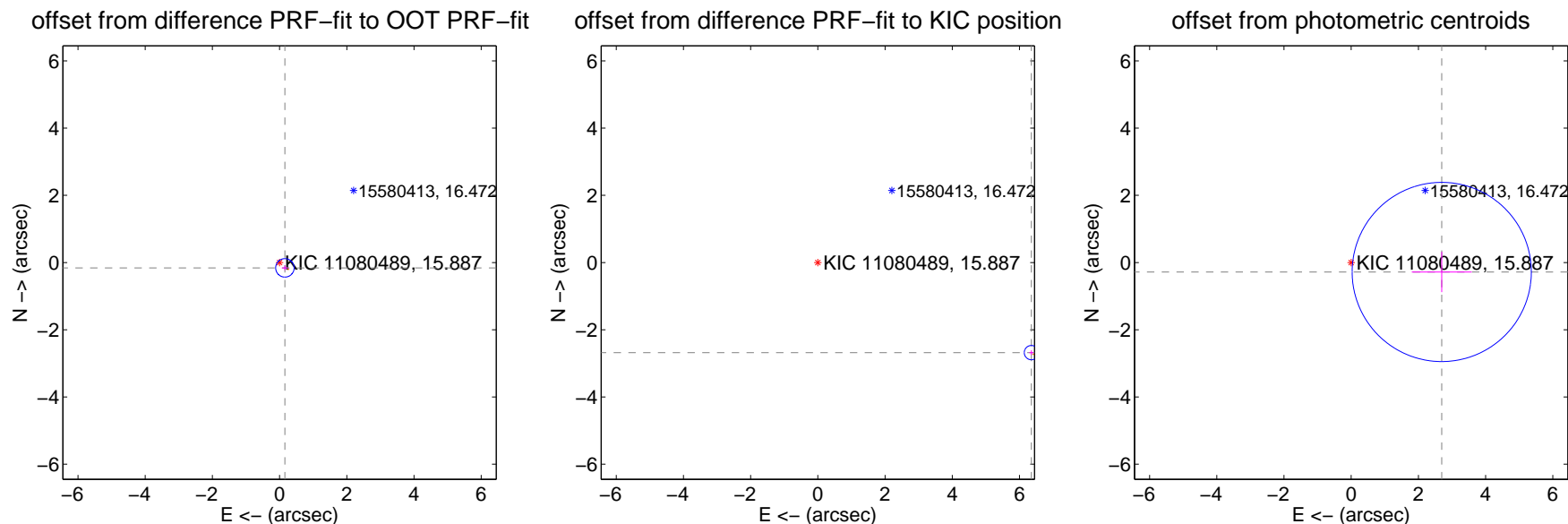
## DV Centroid Data

Supplemental centroid analysis for 011080489-01. Kepler magnitude: 15.89. Transit SNR 7.93

There are 1 quarters with good PRF difference image offsets

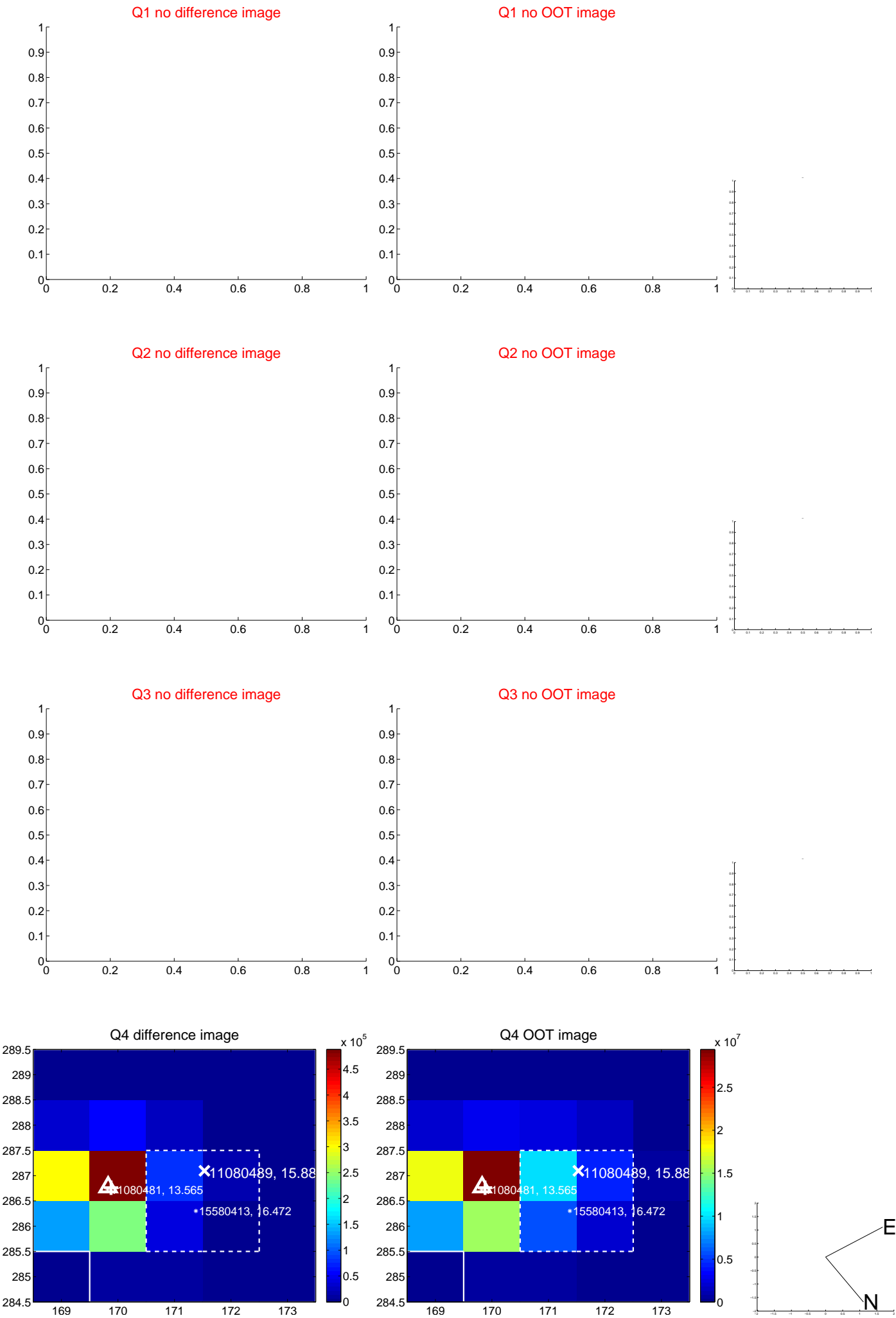
The OOT PRF centroid is offset from the target star catalog position by about 6.66 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.224 \pm 0.092$	2.45	$-0.158 \pm 0.091$	$-0.159 \pm 0.072$
PRF-fit source offset from KIC position	$6.897 \pm 0.071$	97.33	$-6.355 \pm 0.069$	$-2.681 \pm 0.068$
photometric centroid source offset	$2.71 \pm 0.89$	3.05	$-2.69 \pm 0.89$	$-0.28 \pm 0.60$



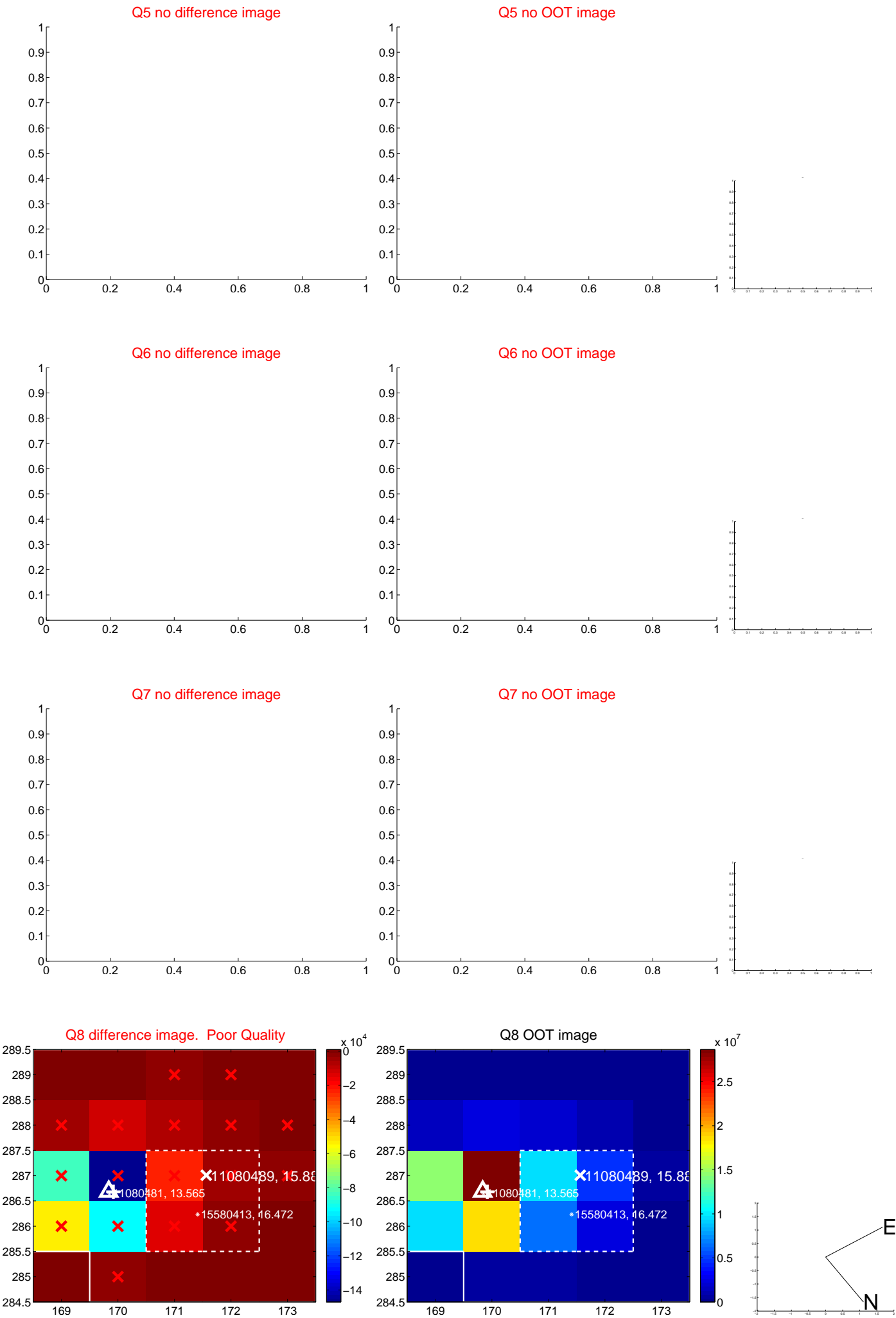
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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



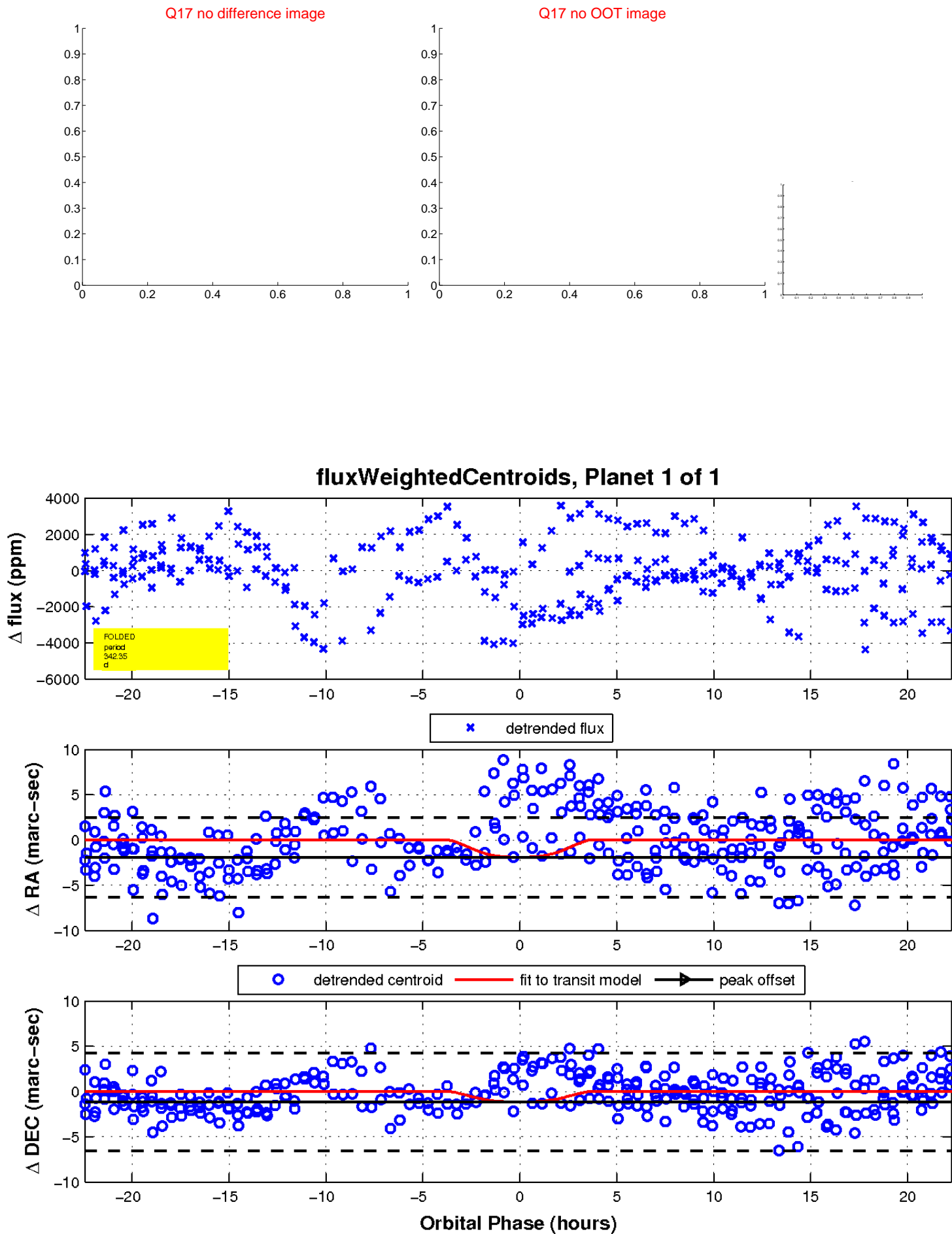
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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.



UKIRT Image

Declination

