

# KIC 007701204

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007701204-01	OBS	No	425.501608	208.869705	209.7	12.838	7.9	7.4	2.62	5064	4.05	3.39

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007701204-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_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.

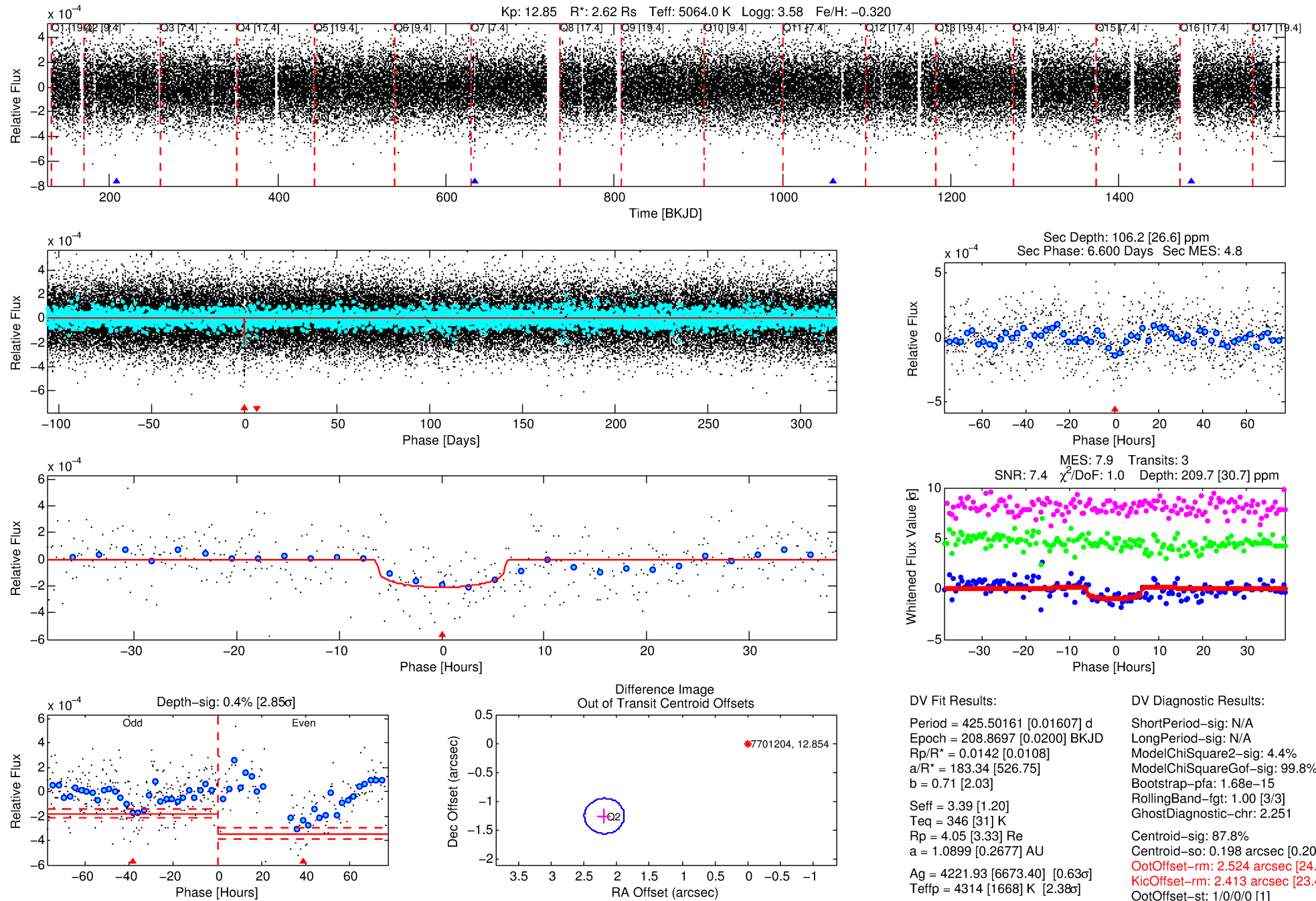
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 007701204-01

No Significant Match Found

# DV One-Page Summary

KIC: 7701204 Candidate: 1 of 1 Period: 425.502 d



## DV Fit Results:

Period = 425.50161 [0.01607] d  
Epoch = 208.8697 [0.0200] BKJD  
Rp/R\* = 0.0142 [0.0108]  
a/R\* = 183.34 [526.75]  
b = 0.71 [2.03]  
Seff = 3.39 [1.20]  
Teq = 346 [31] K  
Rp = 4.05 [3.33] Re  
a = 1.0899 [0.2677] AU  
Ag = 4221.93 [6673.40] [0.63 $\sigma$ ]  
Teff = 4314 [1668] K [2.38 $\sigma$ ]

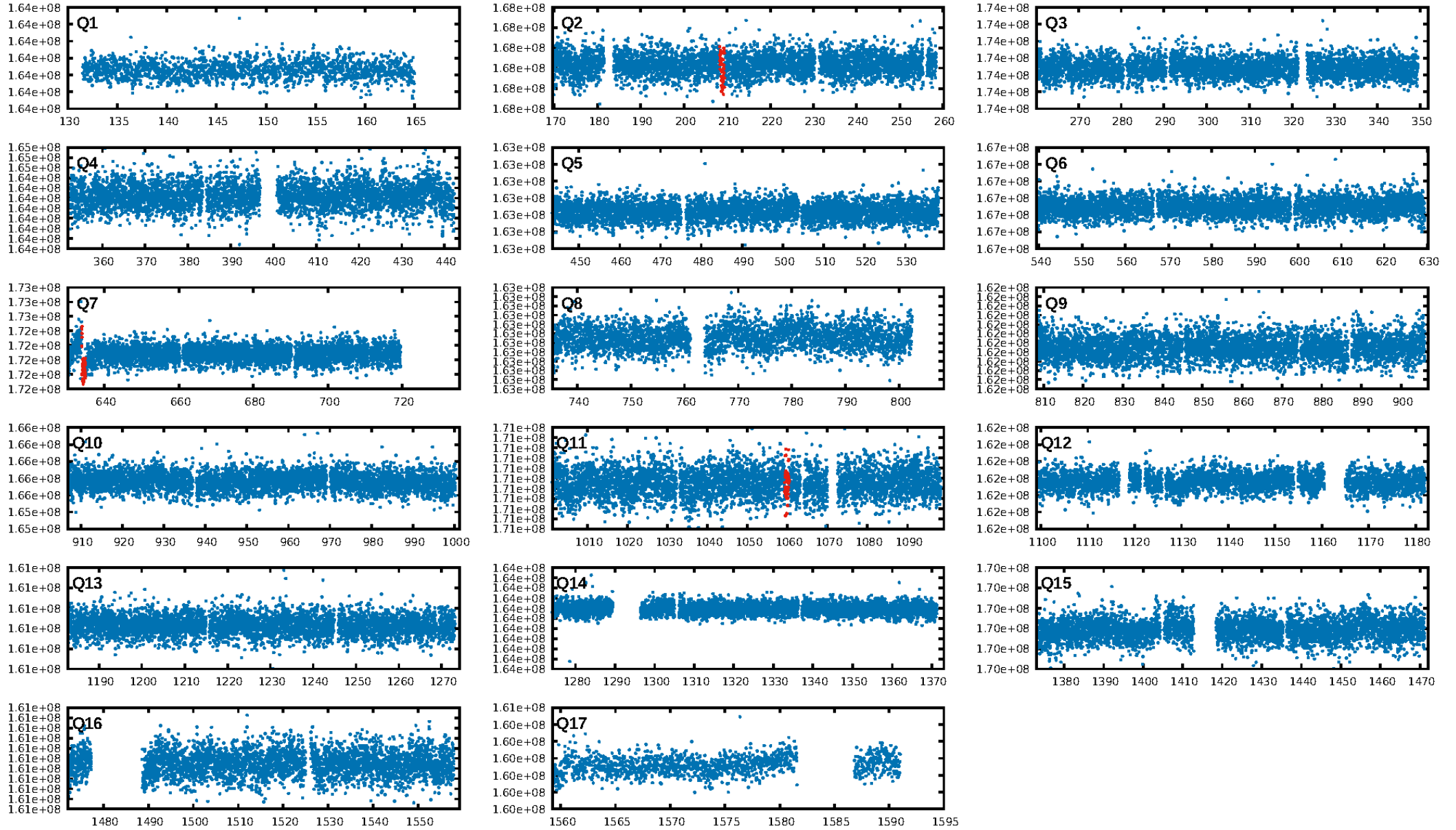
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 4.4%  
ModelChiSquareGof-sig: 99.8%  
Bootstrap-pfa: 1.68e-15  
RollingBand-fgt: 1.00 [3/3]  
GhostDiagnostic-chr: 2.251  
Centroid-sig: 87.8%  
Centroid-so: 0.198 arcsec [0.20 $\sigma$ ]  
OotOffset-rm: 2.524 arcsec [24.84 $\sigma$ ]  
KicOffset-rm: 2.413 arcsec [23.43 $\sigma$ ]  
OotOffset-st: 1/0/0/0 [1]  
KicOffset-st: 1/0/0/0 [1]  
DiffImageQuality-fgm: 1.00 [1/1]  
DiffImageOverlap-fno: 1.00 [2/2]

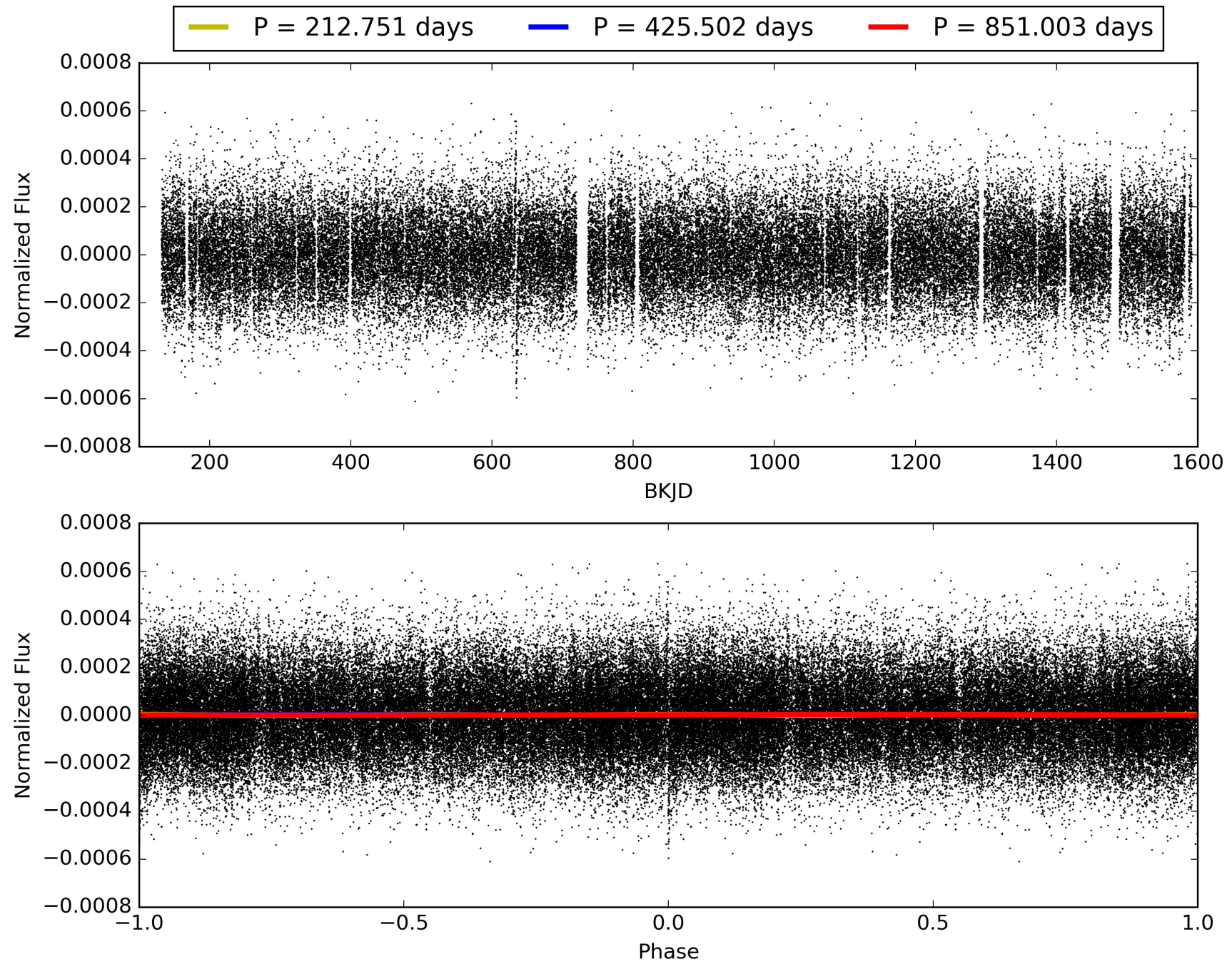
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 21:14:08 Z

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

# TCE 007701204-01, PDC Light Curves

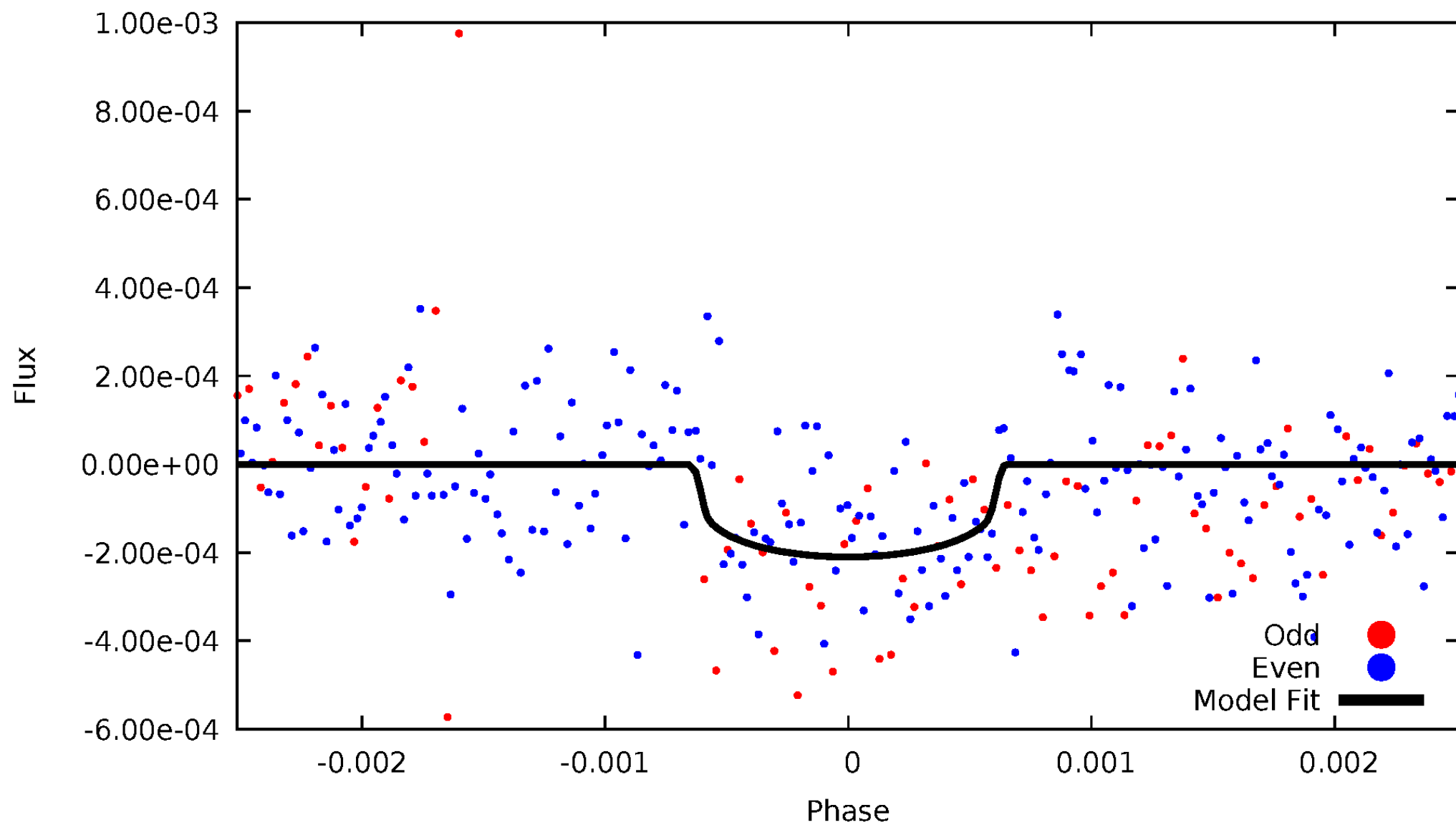


TCE 007701204-01



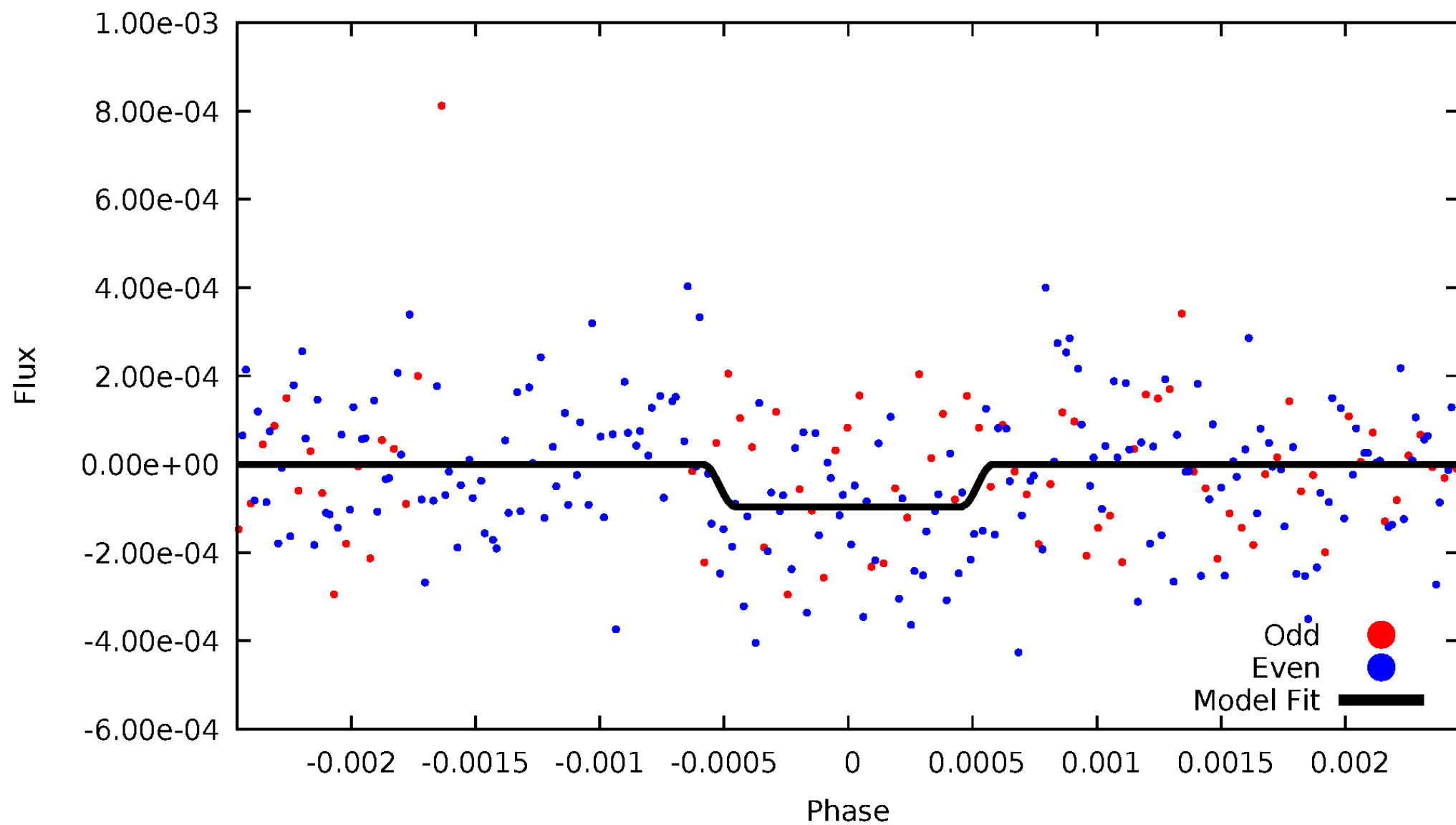
# DV Odd/Even

TCE 007701204-01



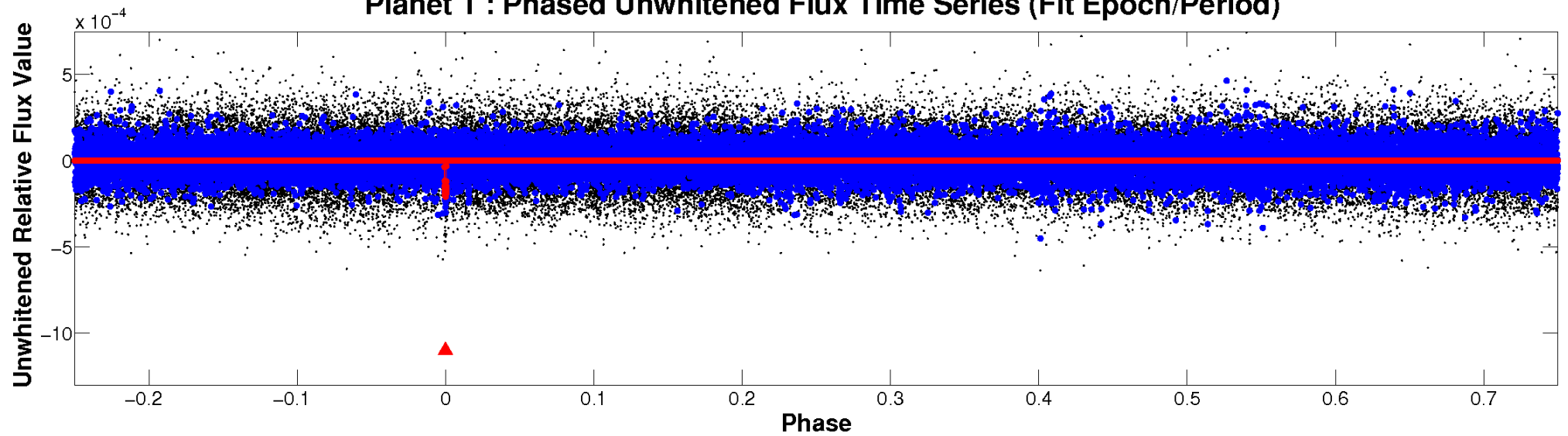
# ALT Odd/Even

TCE 007701204-01

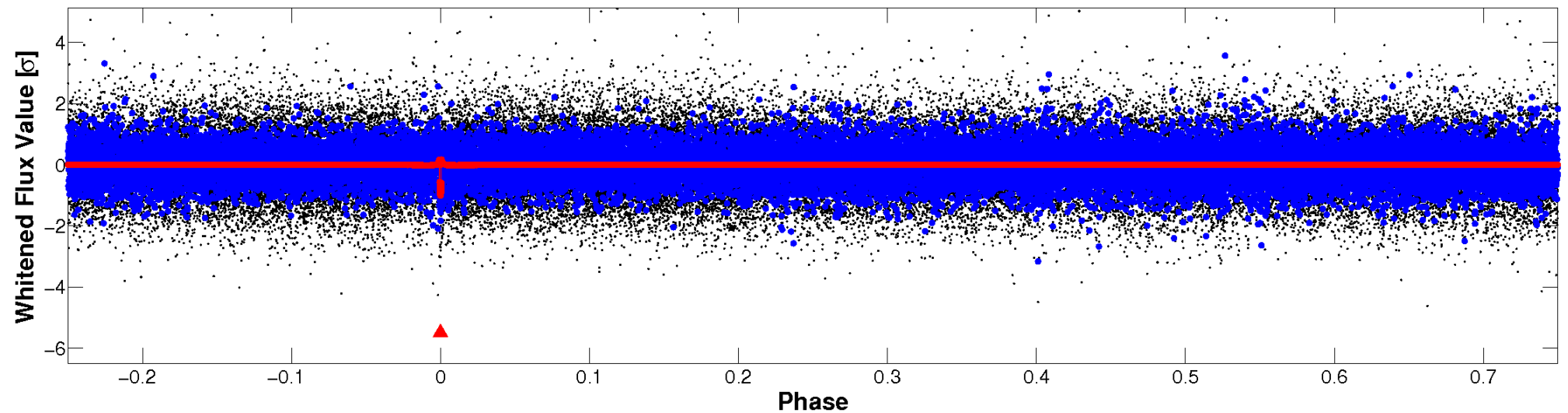


# Non-Whitened Vs. Whitened Light Curve

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 007701204-01 P=425.501608 Days  $T_0=208.869706$  (BKJD)



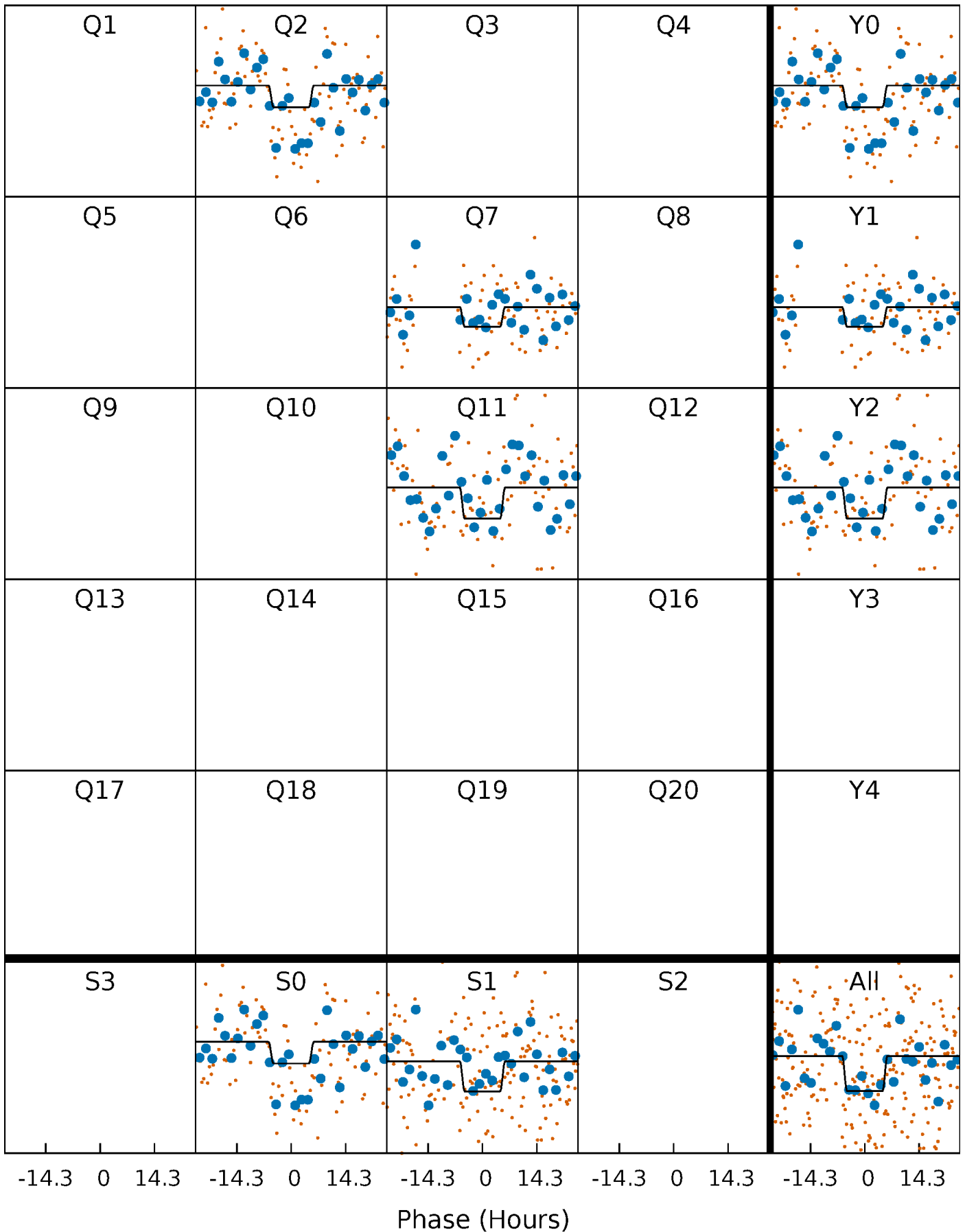
# DV Quarter-Phased Transit Curves

TCE 007701204-01 P=425.501608 Days  $T_0=208.869706$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

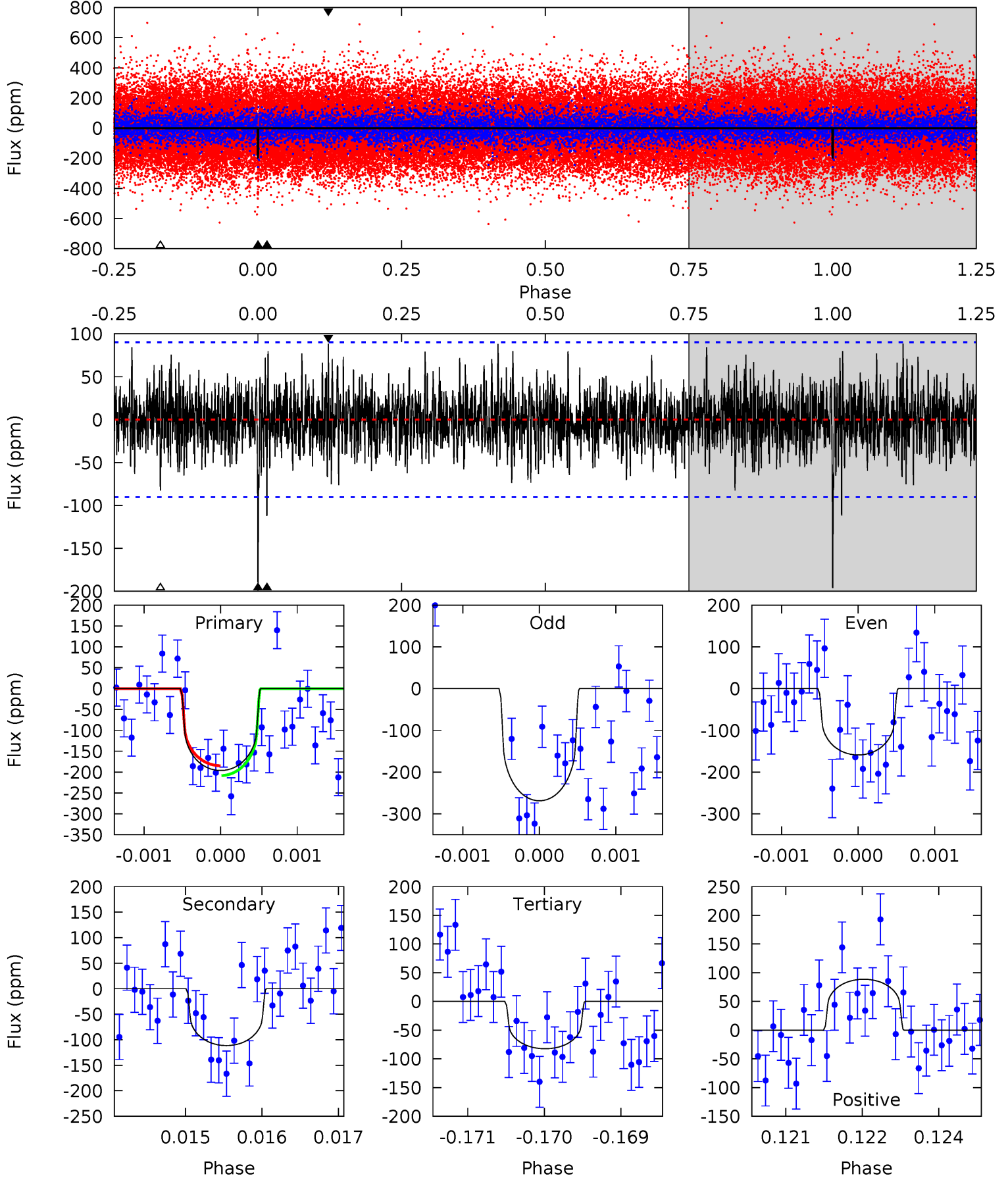
TCE 007701204-01 P=425.515265 Days  $T_0=208.870856$  (BKJD)



# DV Model-Shift Uniqueness Test

007701204-01,  $P = 425.501608$  Days,  $E = 208.869706$  Days

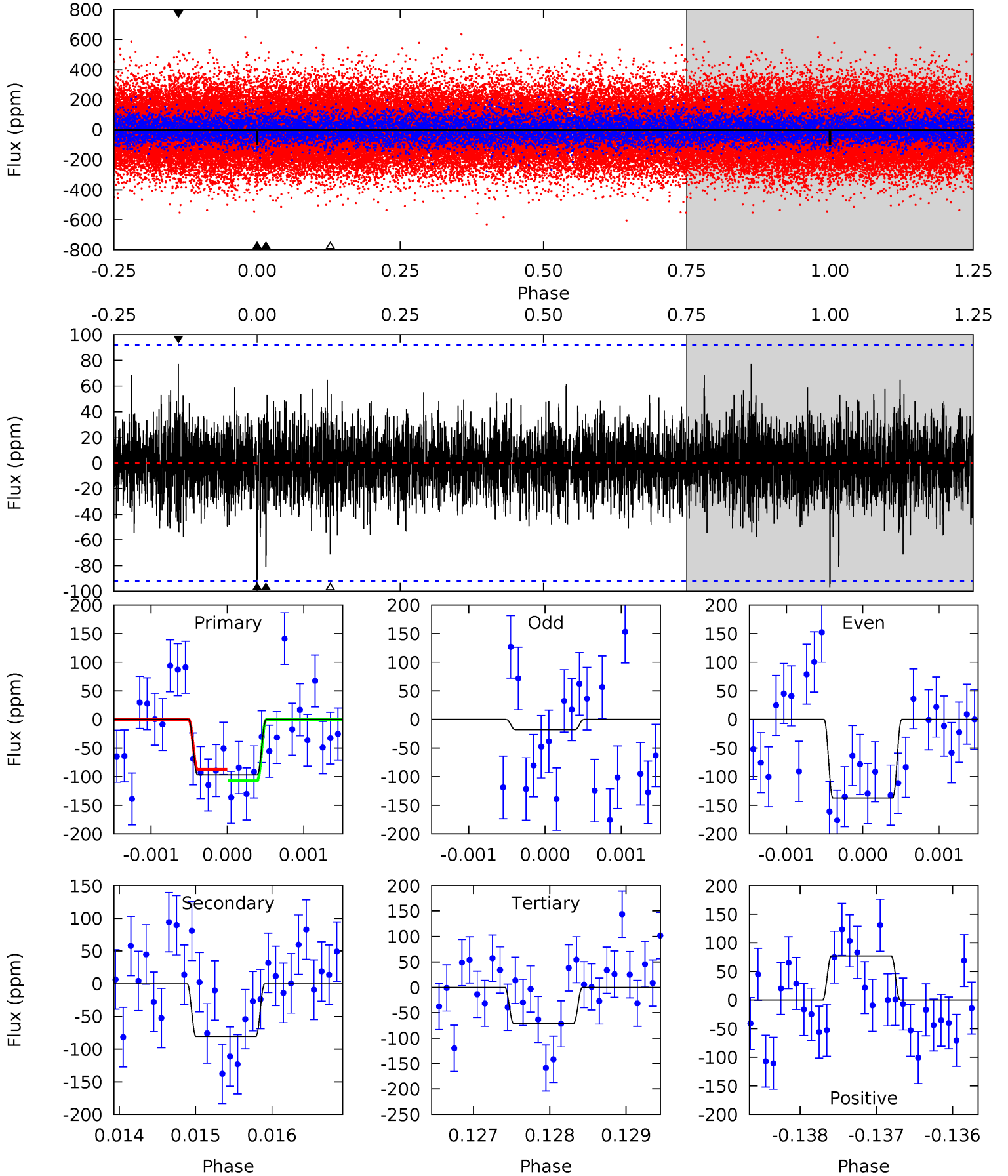
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.8	6.68	4.94	5.32	5.41	3.23	1.47	6.82	6.45	1.74	1.36	3.12	1.01	0.31	0.71



# Alt Model-Shift Uniqueness Test

007701204-01,  $P = 425.515265$  Days,  $E = 208.870856$  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
5.70	4.76	4.20	4.54	5.43	3.25	1.07	1.51	1.16	0.57	0.22	3.34	1.35	0.44	0.57



### Stellar Parameters For KIC 007701204

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$5064^{+128}_{-102}$	$3.582^{+0.144}_{-0.176}$	$-0.320^{+0.250}_{-0.200}$	$2.616^{+0.805}_{-0.434}$	$0.954^{+0.245}_{-0.065}$	$0.075^{+0.044}_{-0.035}$
	+3%/-2%	+4%/-5%	+78%/-62%	+31%/-17%	+26%/-7%	+59%/-47%
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 007701204-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-111 \pm 17$	$4.60^{+2.95}_{-2.69}$	$484^{+37}_{-26}$	$4353^{+2031}_{-710}$	$3539^{+16506}_{-2235}$
Alt.	$-81 \pm 17$	$3.57^{+2.85}_{-2.15}$	$485^{+36}_{-27}$	$4493^{+2435}_{-850}$	$4352^{+21888}_{-3047}$

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

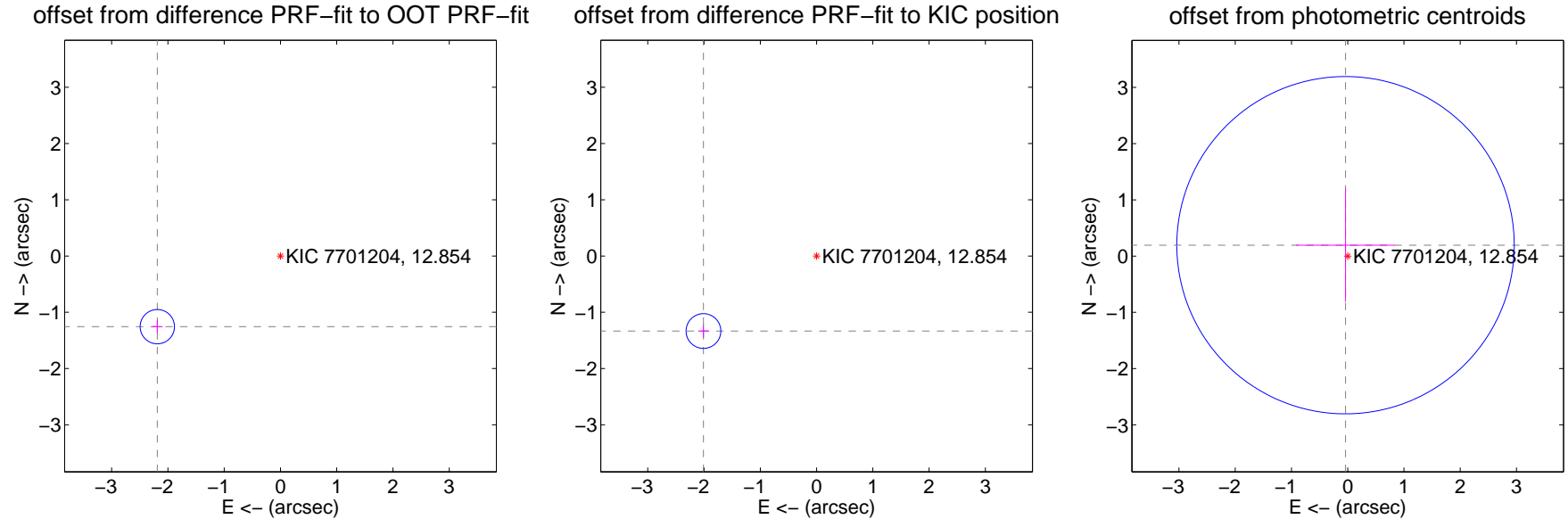
## DV Centroid Data

Supplemental centroid analysis for 007701204-01. Kepler magnitude: 12.85. Transit SNR 7.42

There are 1 quarters with good PRF difference image offsets

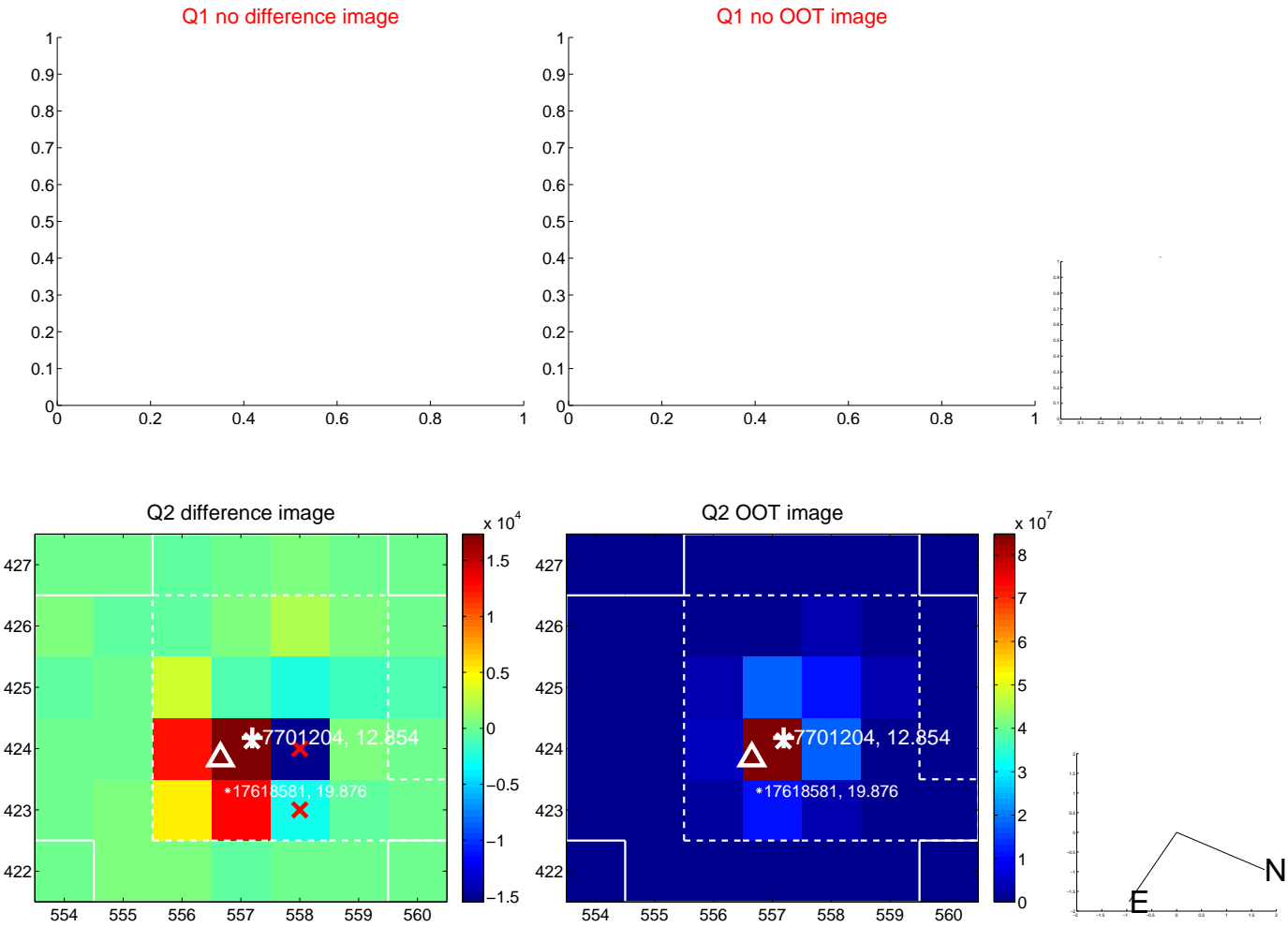
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$2.524 \pm 0.102$	24.84	$2.189 \pm 0.096$	$-1.256 \pm 0.118$
PRF-fit source offset from KIC position	$2.413 \pm 0.103$	23.43	$2.011 \pm 0.096$	$-1.334 \pm 0.118$
photometric centroid source offset	$0.20 \pm 1.00$	0.20	$0.04 \pm 0.88$	$0.19 \pm 1.00$



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.

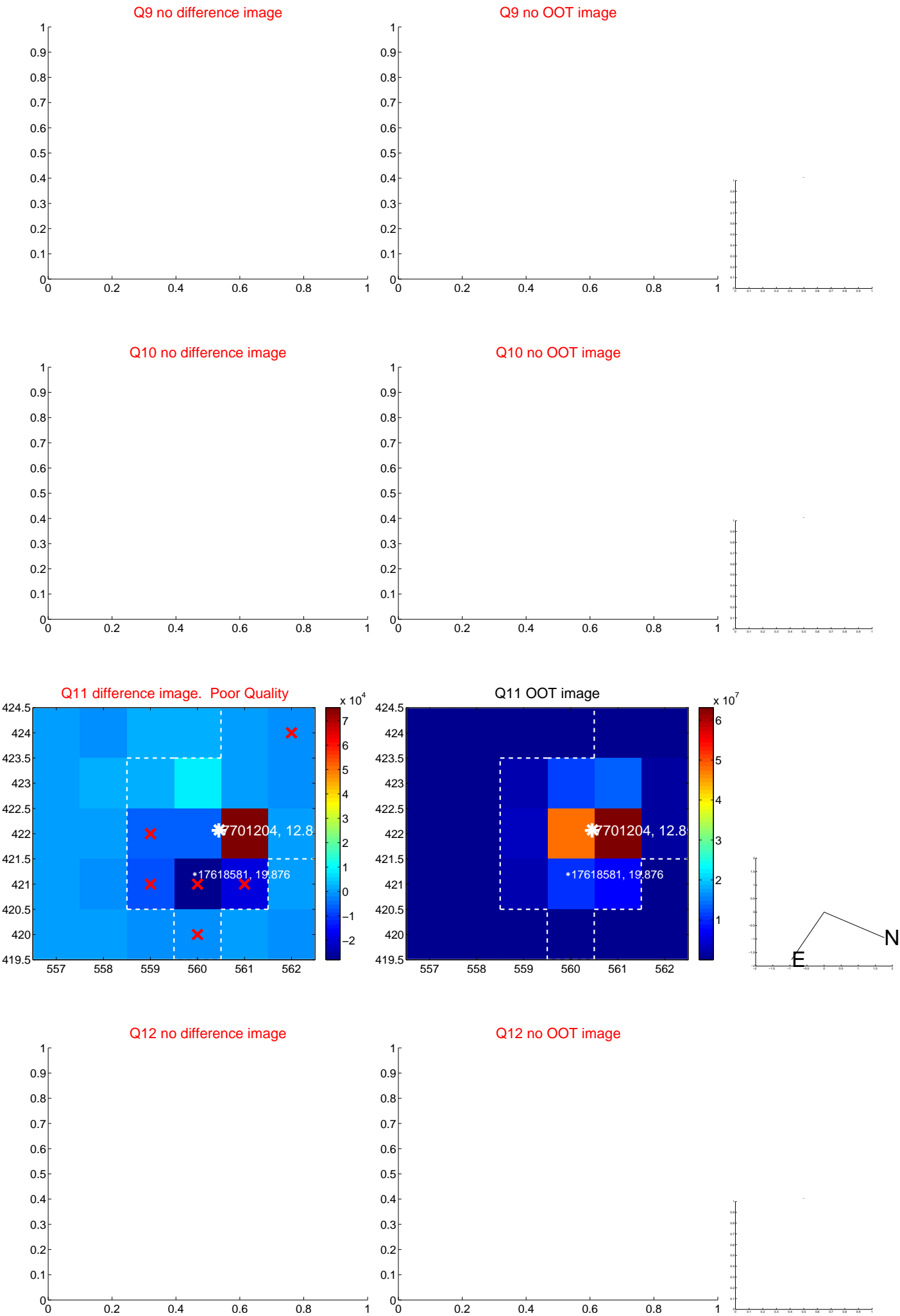
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



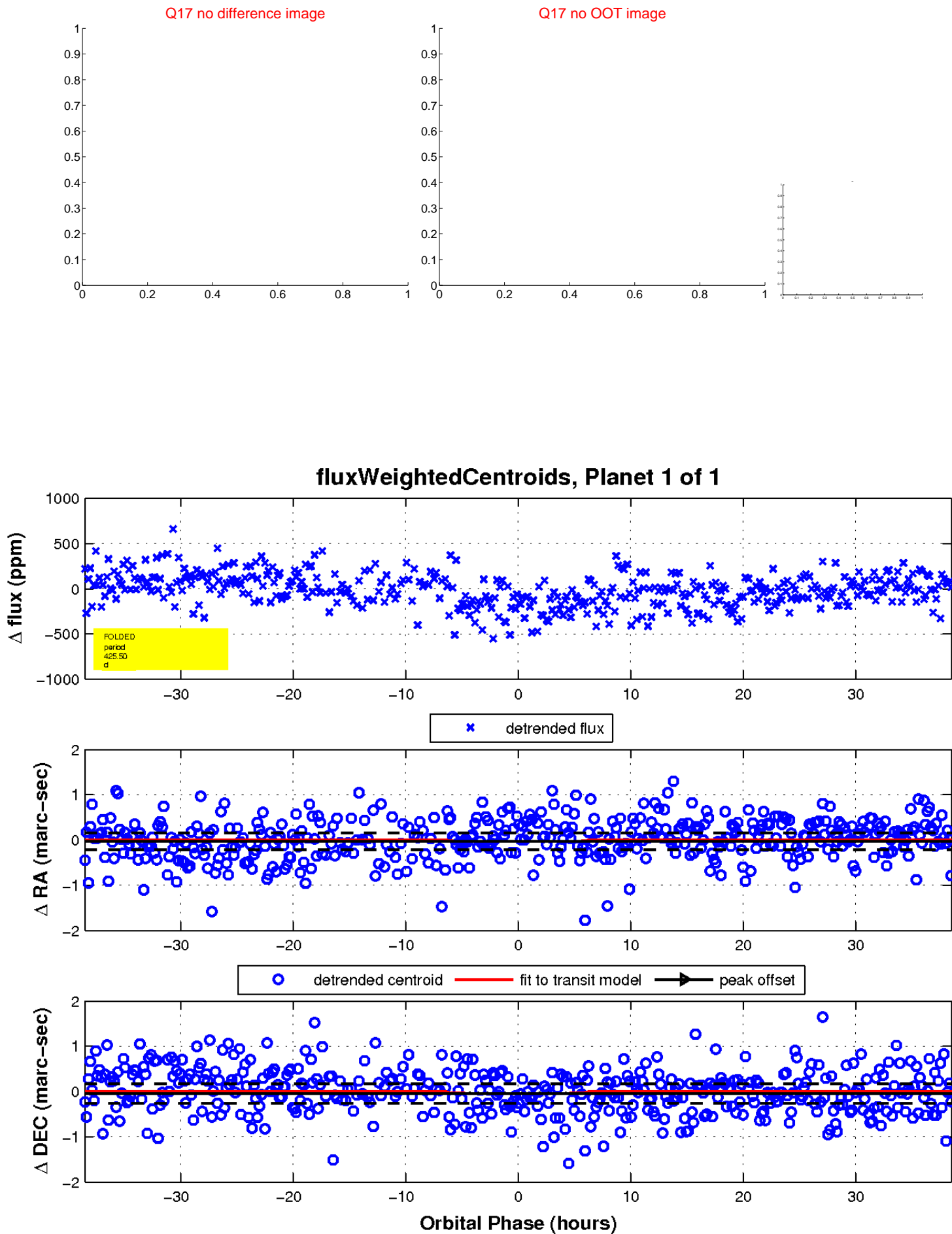
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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.



UKIRT Image

Declination

