

# KIC 011819430

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011819430-01	OBS	No	476.493523	142.914926	166.5	9.906	7.4	7.0	1.06	5942	1.73	0.80

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011819430-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—ALL_TRANS_CHASES—INCONSISTENT_TRANS

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

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

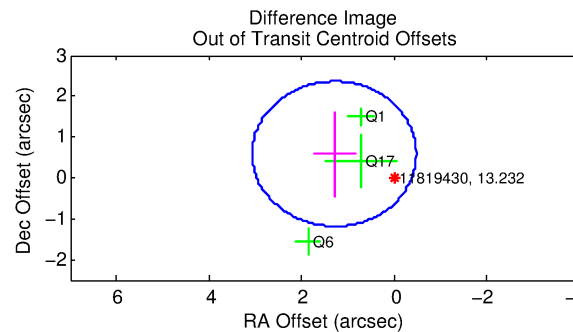
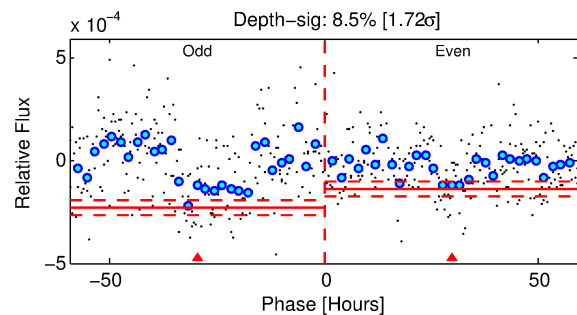
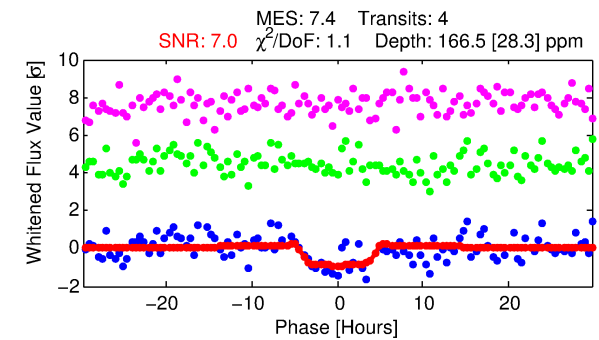
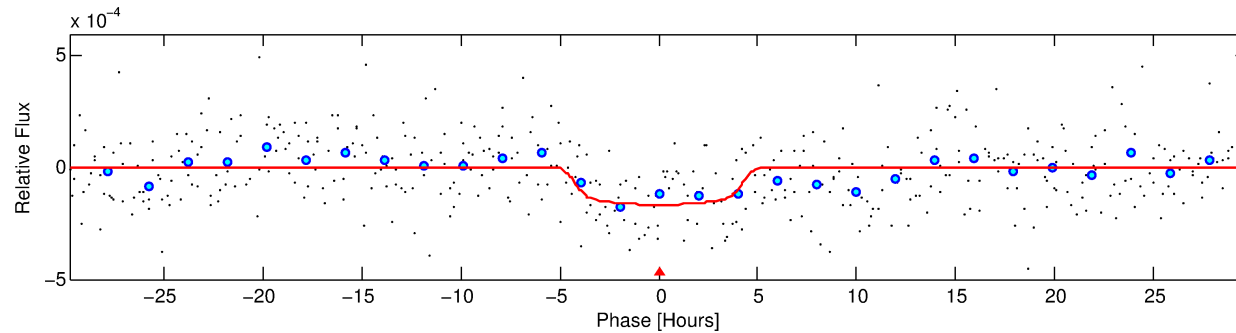
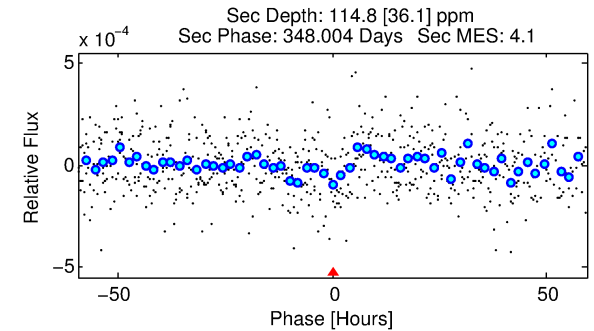
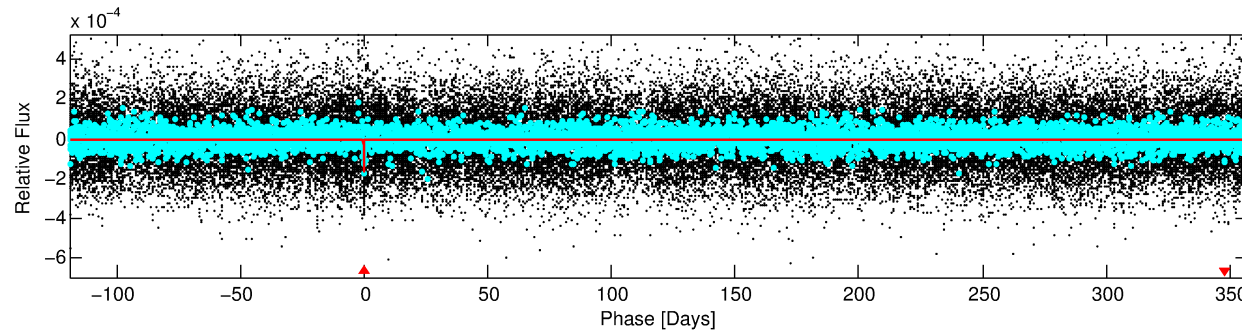
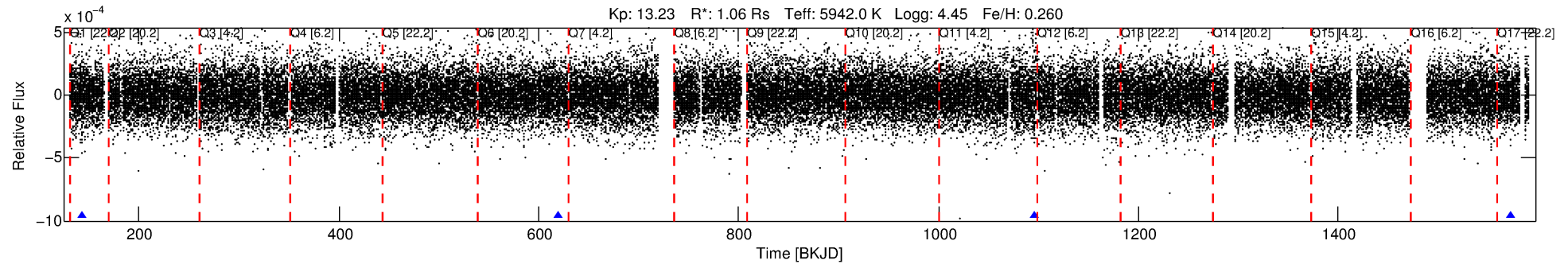
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 011819430-01

No Significant Match Found

# DV One-Page Summary

KIC: 11819430 Candidate: 1 of 1 Period: 476.494 d



## DV Fit Results:

Period = 476.49352 [0.01198] d  
Epoch = 142.9149 [0.0229] BKJD  
Rp/R\* = 0.0150 [0.0023]  
a/R\* = 130.88 [81.35]  
b = 0.95 [0.06]  
Seff = 0.80 [0.33]  
Teq = 241 [25] K  
Rp = 1.73 [0.59] Re  
a = 1.2458 [0.3266] AU  
Ag = 32765.18 [19299.21] [1.70σ]  
Teffp = 5023 [581] K [8.22σ]

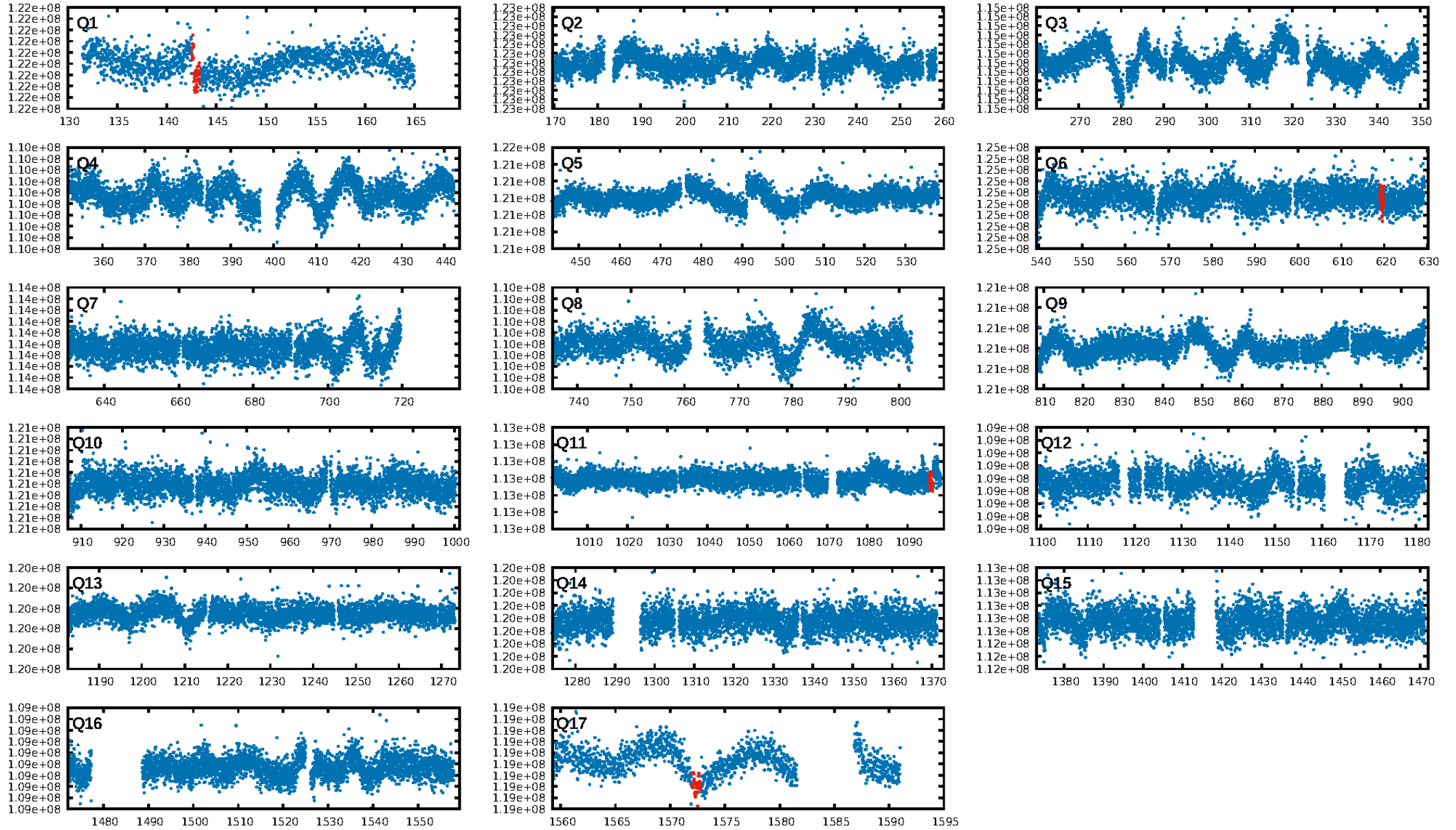
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 23.6%  
ModelChiSquareGof-sig: 97.6%  
**Bootstrap-pfa: 2.71e-09**  
RollingBand-fgt: 1.00 [2/2]  
GhostDiagnostic-chr: 2.825  
Centroid-sig: 31.8%  
Centroid-so: 1.777 arcsec [1.28σ]  
OotOffset-rm: 1.418 arcsec [2.40σ]  
OotOffset-st: 1/0/0/2 [3]  
KicOffset-rm: 1.327 arcsec [2.38σ]  
KicOffset-st: 1/0/0/2 [3]  
DiffImageQuality-fgm: 1.00 [3/3]  
DiffImageOverlap-fno: 1.00 [3/3]

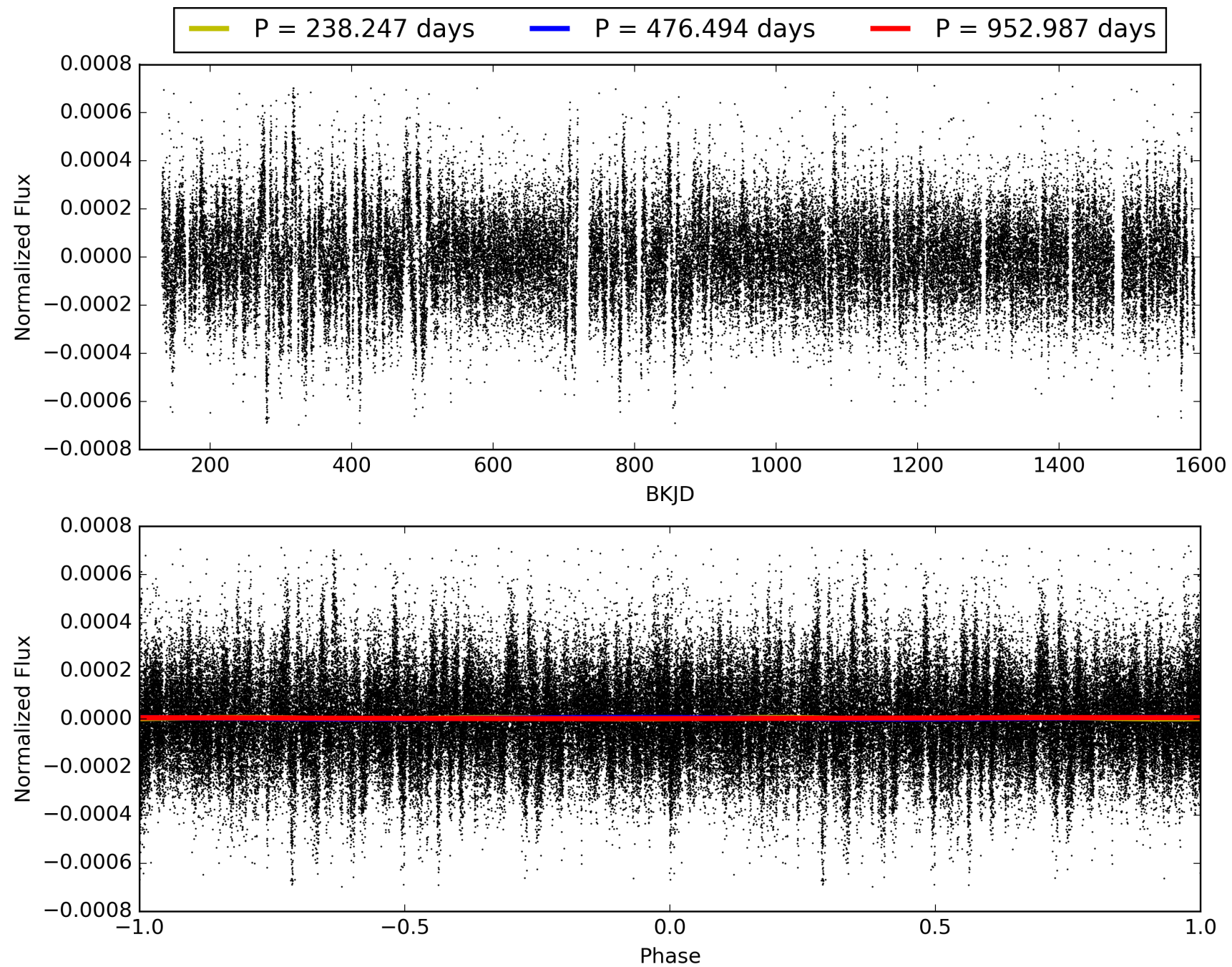
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:12:01 Z

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

# TCE 011819430-01, PDC Light Curves

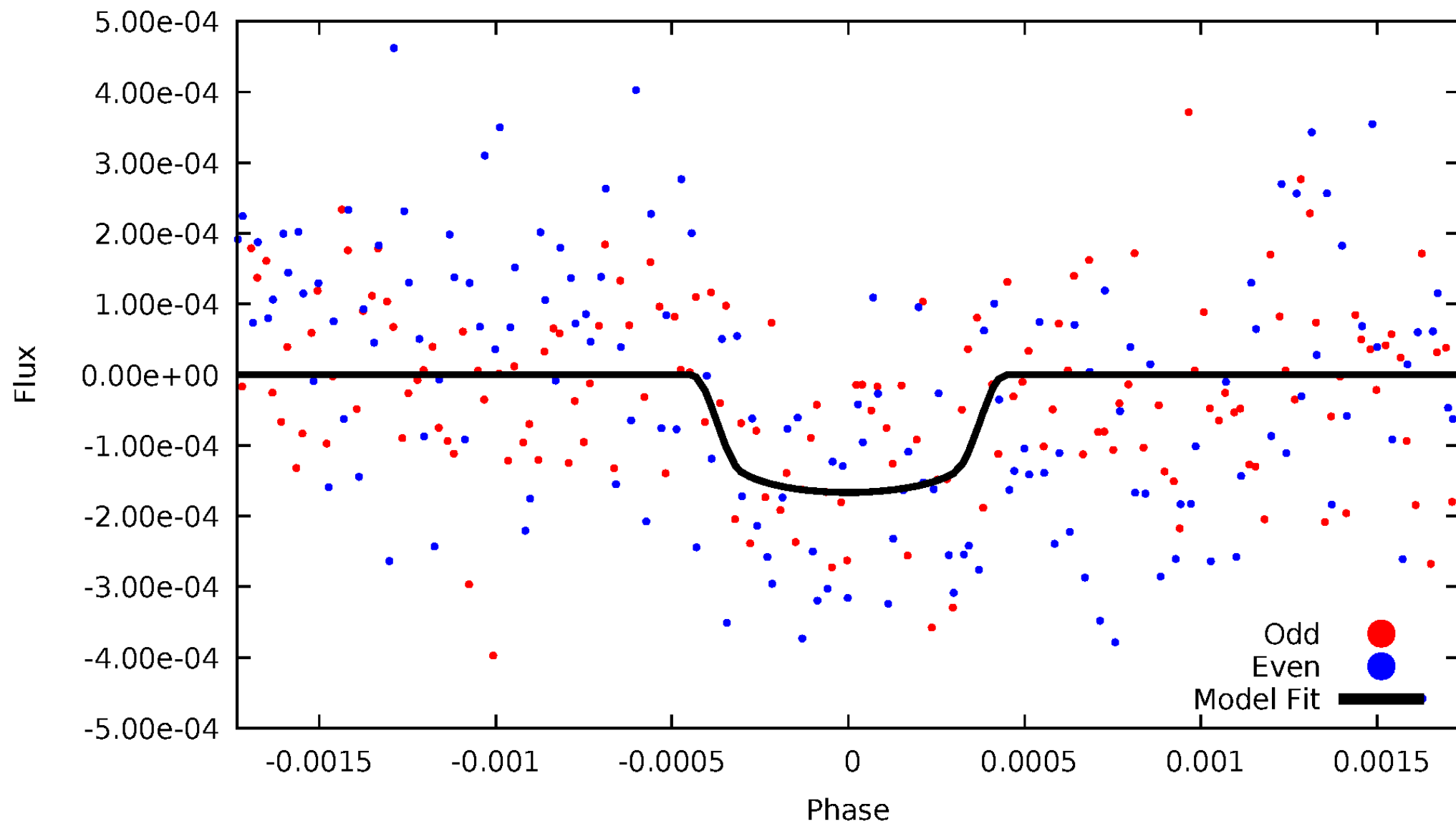


# TCE 011819430-01



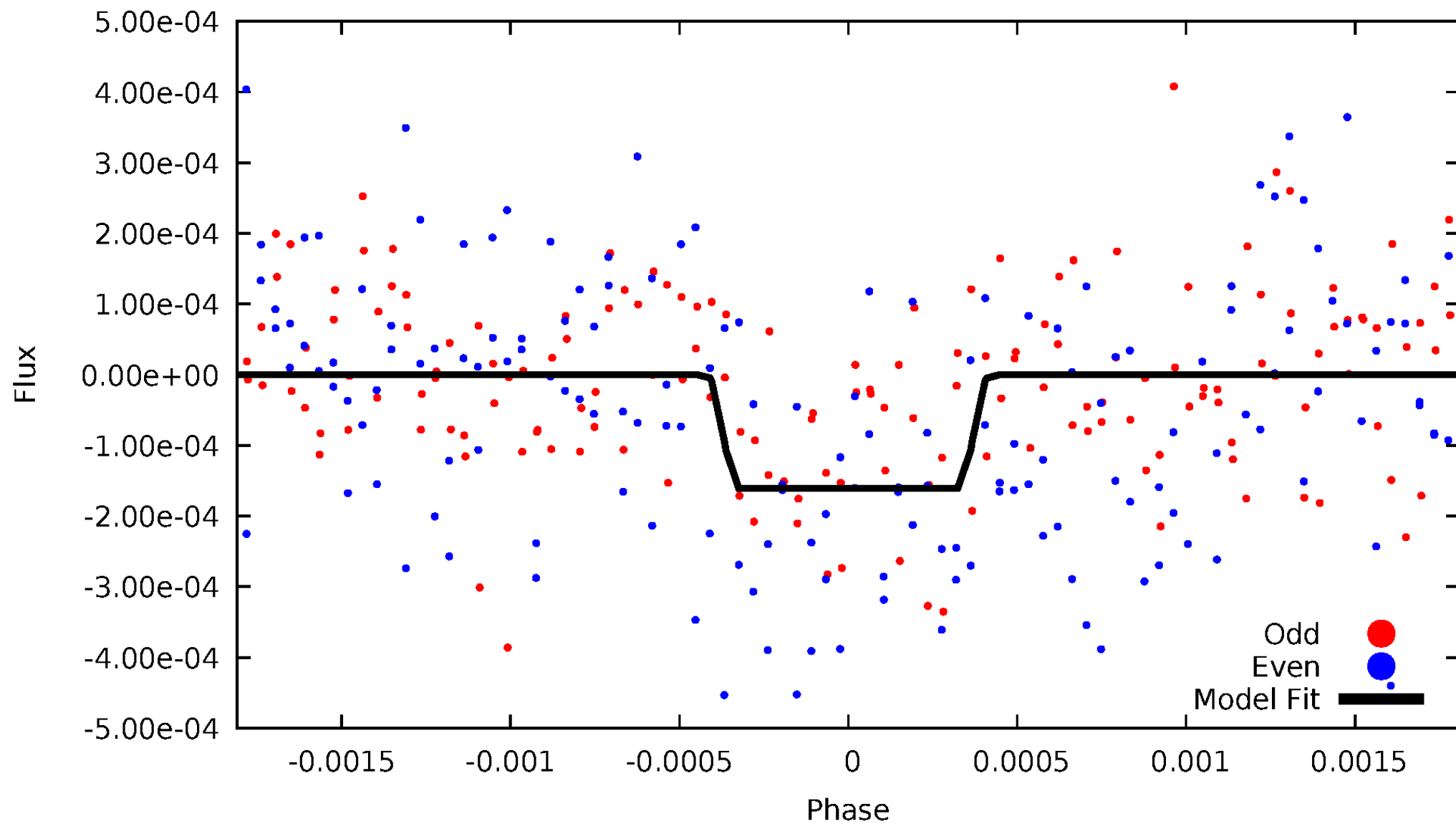
# DV Odd/Even

TCE 011819430-01



# ALT Odd/Even

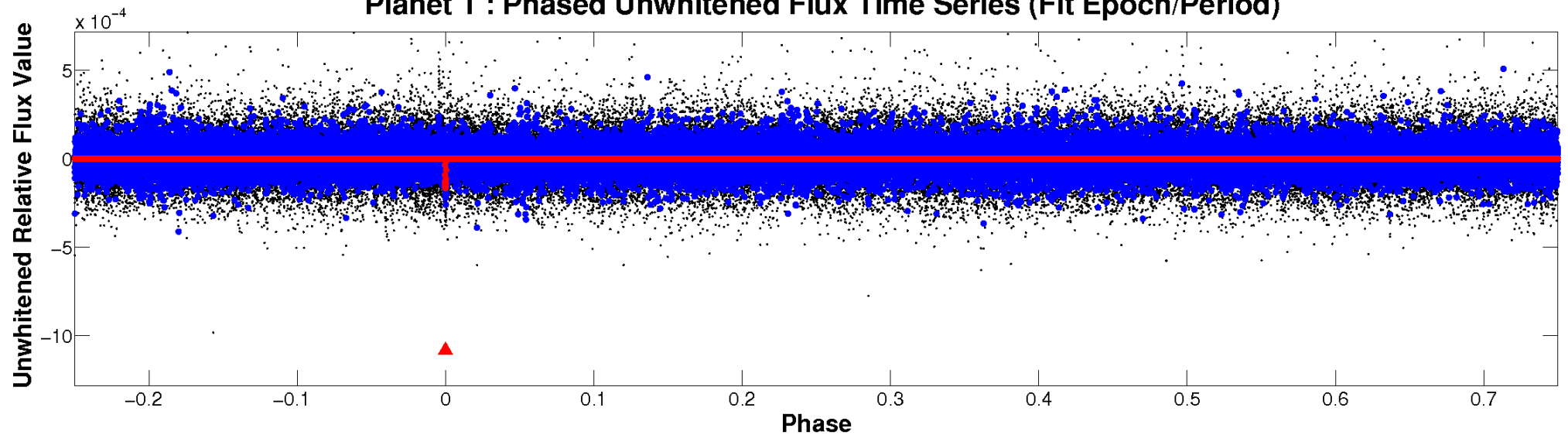
TCE 011819430-01



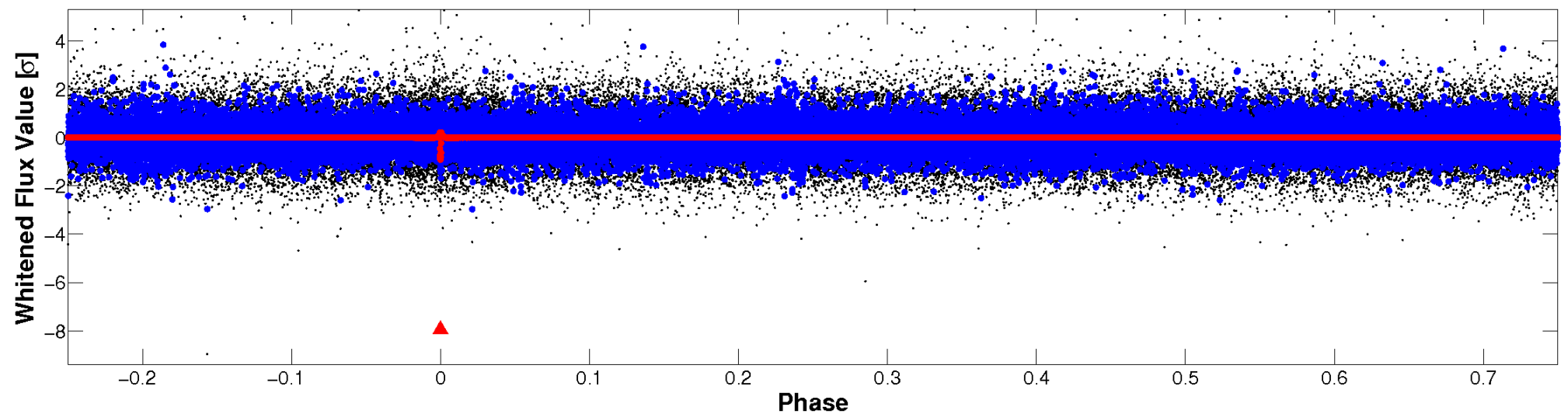


# Non-Whitened Vs. Whitened Light Curve

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

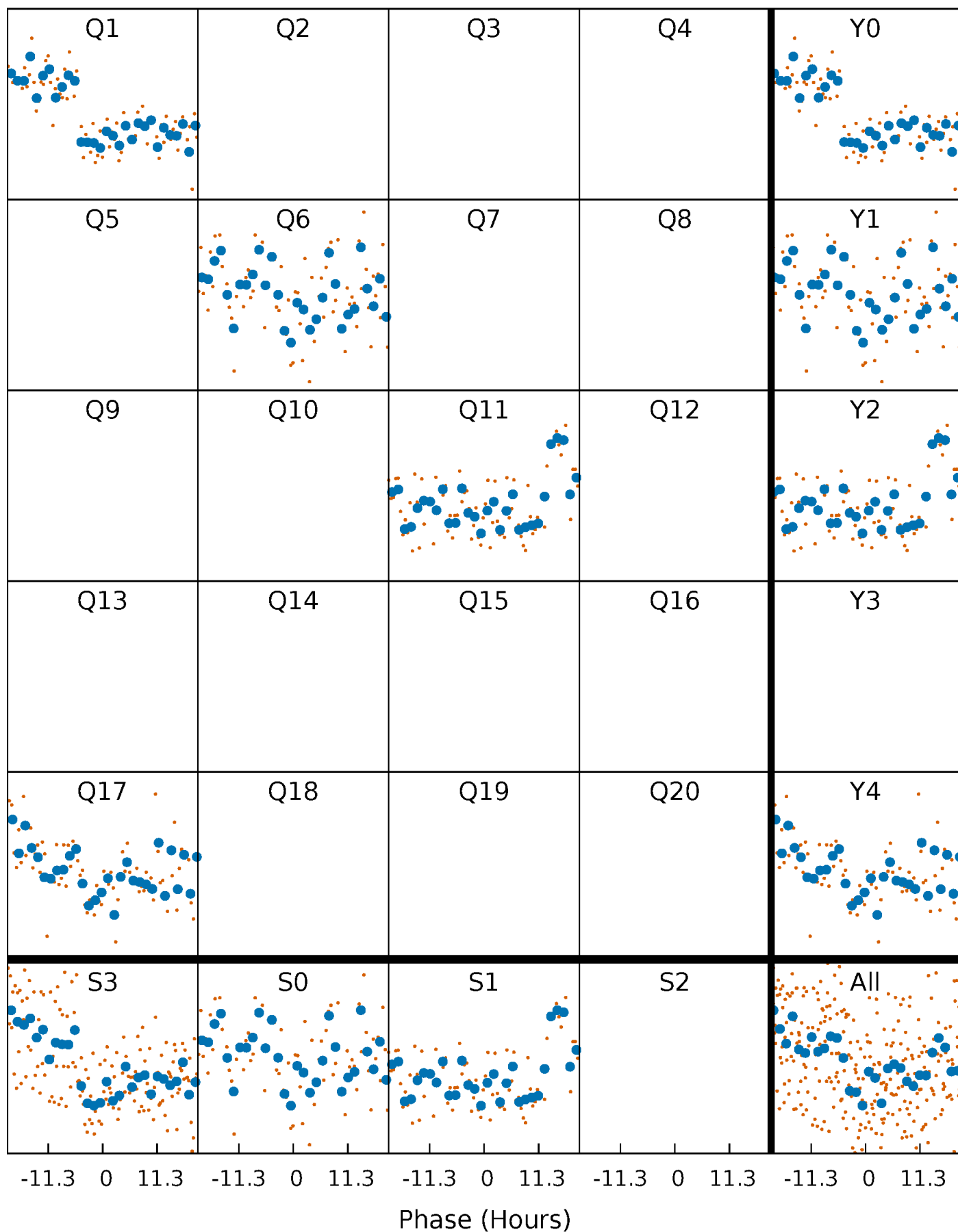


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

TCE 011819430-01 P=476.493523 Days  $T_0=142.914926$  (BKJD)





# DV Quarter-Phased Transit Curves

TCE 011819430-01 P=476.493523 Days  $T_0=142.914926$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

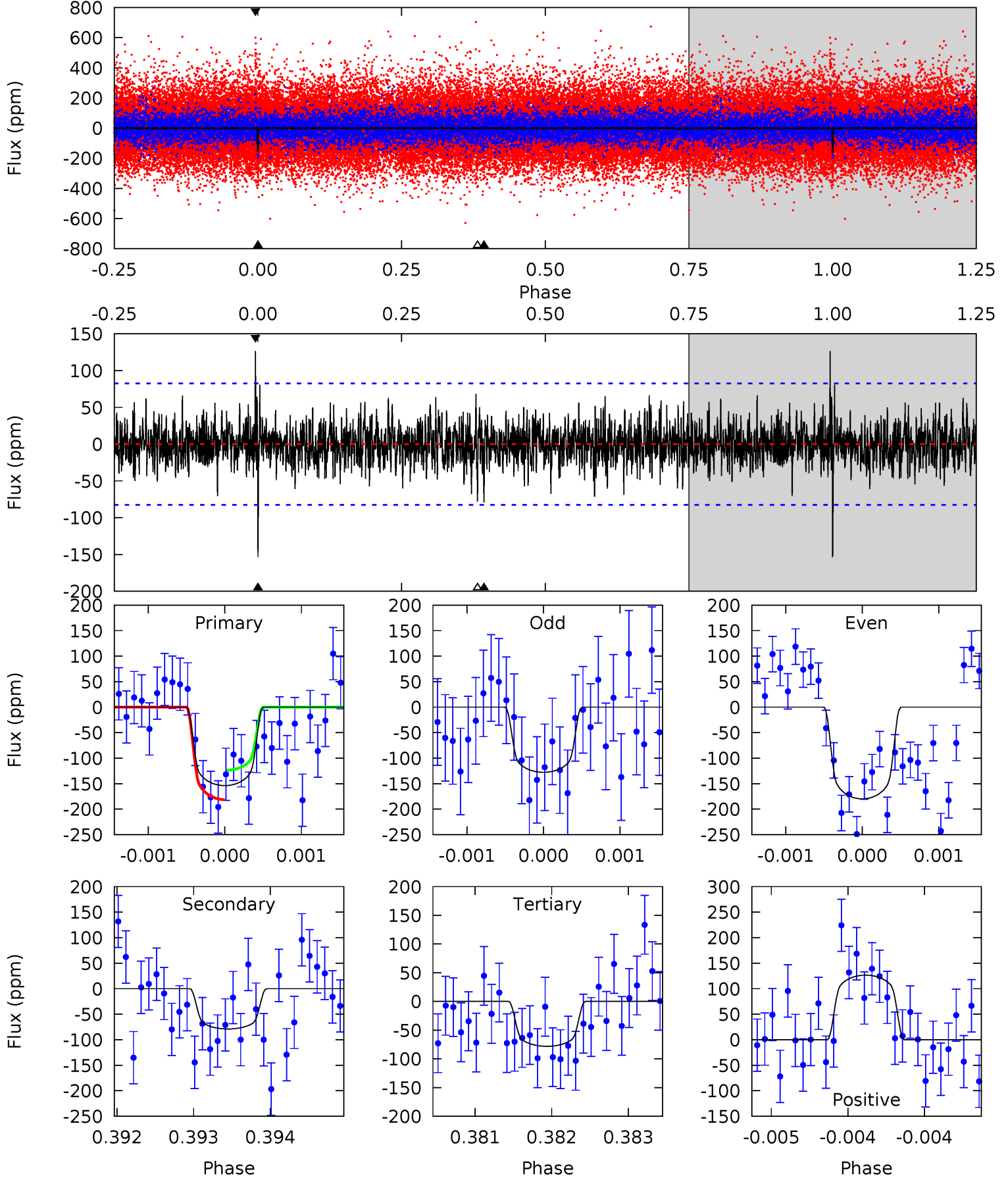
TCE 011819430-01 P=476.490186 Days  $T_0=142.925606$  (BKJD)



# DV Model-Shift Uniqueness Test

011819430-01, P = 476.493523 Days, E = 142.914926 Days

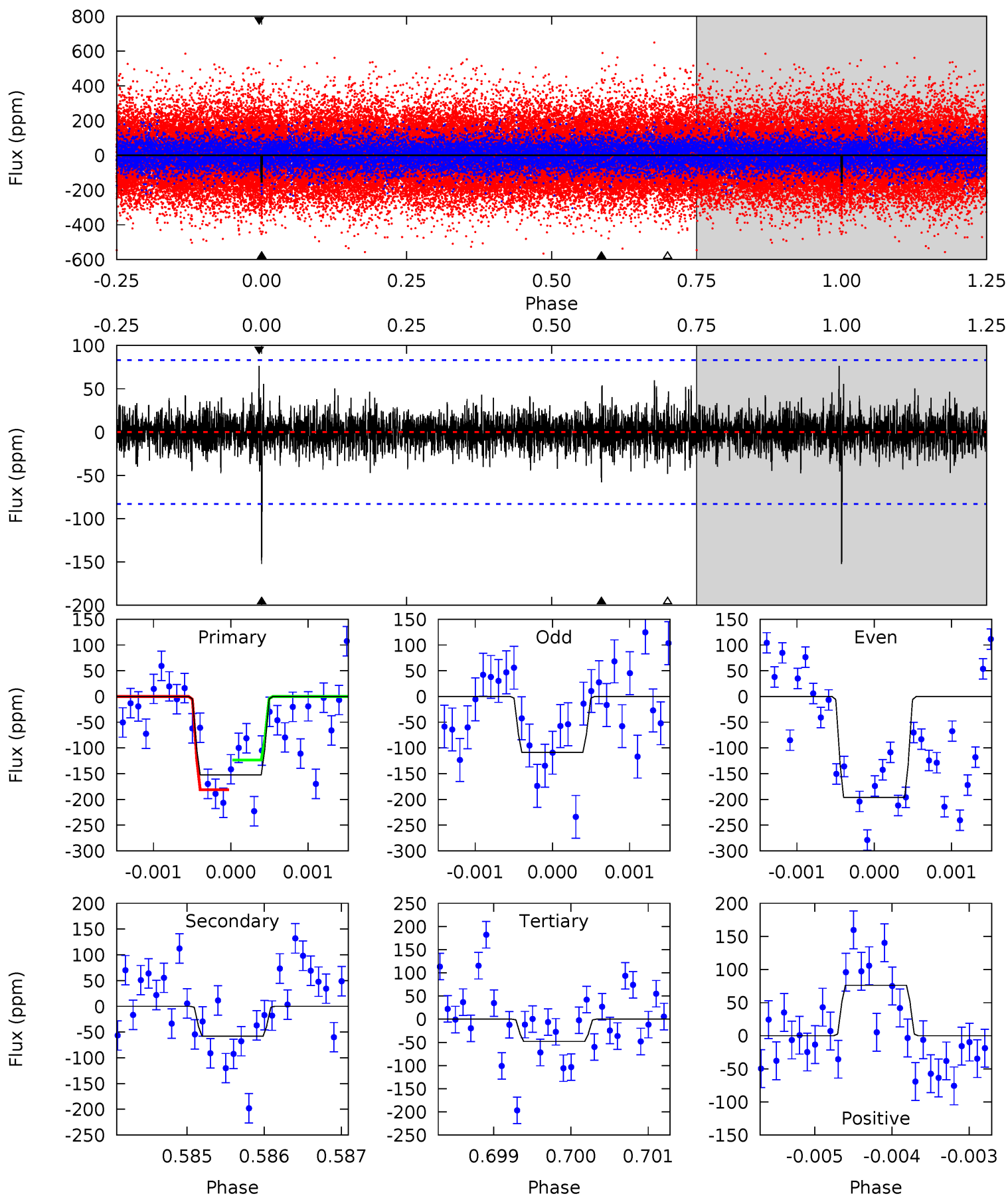
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.2	5.23	5.17	8.38	5.47	3.32	1.39	5.02	1.81	0.06	-3.15	1.72	1.06	0.45	1.90



# Alt Model-Shift Uniqueness Test

011819430-01, P = 476.490186 Days, E = 142.925606 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
10.1	3.83	3.17	5.03	5.49	3.35	0.91	6.89	5.03	0.66	-1.20	2.88	1.27	0.33	1.91



### Stellar Parameters For KIC 011819430

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5942^{+162}_{-203}$	$4.445^{+0.054}_{-0.216}$	$0.260^{+0.150}_{-0.300}$	$1.057^{+0.322}_{-0.107}$	$1.135^{+0.125}_{-0.150}$	$1.355^{+0.377}_{-0.743}$
	+3%/-3%	+1%/-5%	+58%/-115%	+30%/-10%	+11%/-13%	+28%/-55%
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 011819430-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-79 \pm 15$	$1.81^{+0.40}_{-0.33}$	$345^{+25}_{-18}$	$4700^{+418}_{-331}$	$20002^{+10670}_{-6921}$
Alt.	$-58 \pm 15$	$1.51^{+0.37}_{-0.32}$	$344^{+24}_{-18}$	$4730^{+511}_{-410}$	$20932^{+13733}_{-8359}$

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

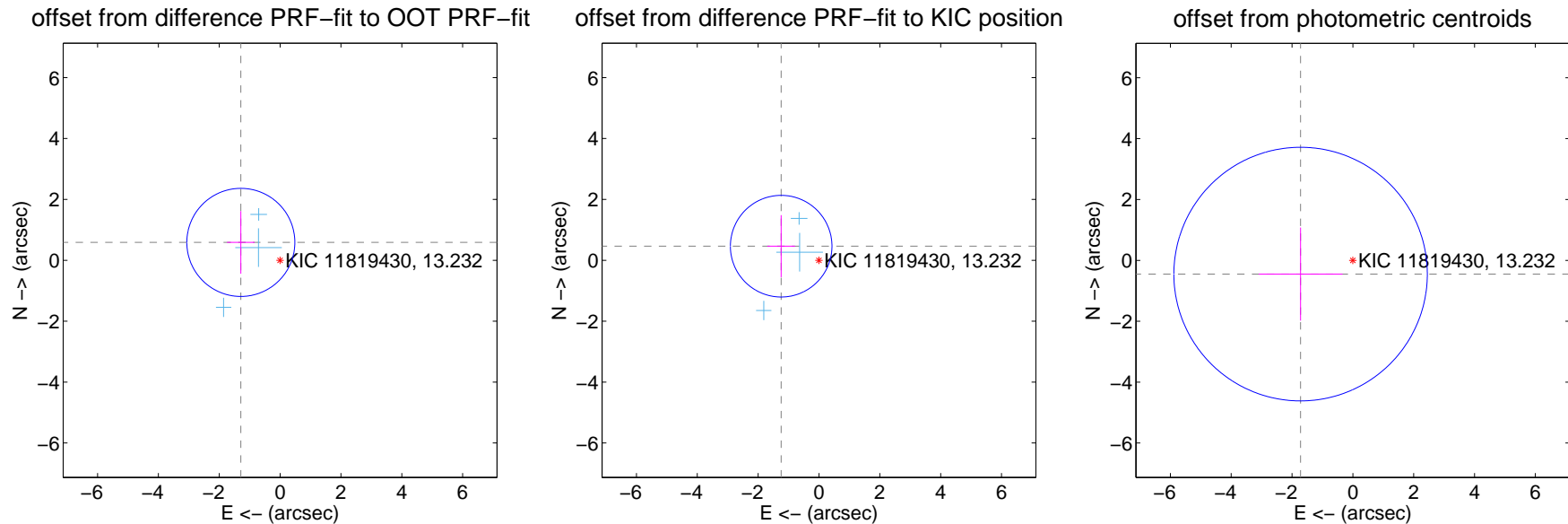
## DV Centroid Data

Supplemental centroid analysis for 011819430-01. Kepler magnitude: 13.23. Transit SNR 6.98

There are 3 quarters with good PRF difference image offsets

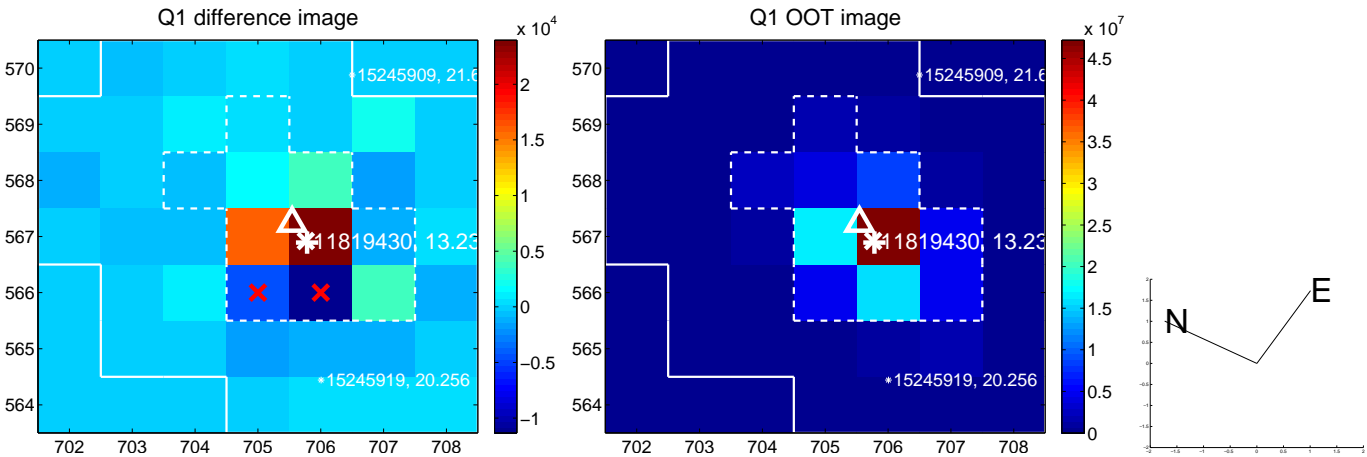
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.418 \pm 0.592$	2.40	$1.291 \pm 0.451$	$0.588 \pm 1.029$
PRF-fit source offset from KIC position	$1.327 \pm 0.556$	2.38	$1.243 \pm 0.456$	$0.463 \pm 1.020$
photometric centroid source offset	$1.78 \pm 1.39$	1.28	$1.72 \pm 1.38$	$-0.45 \pm 1.53$



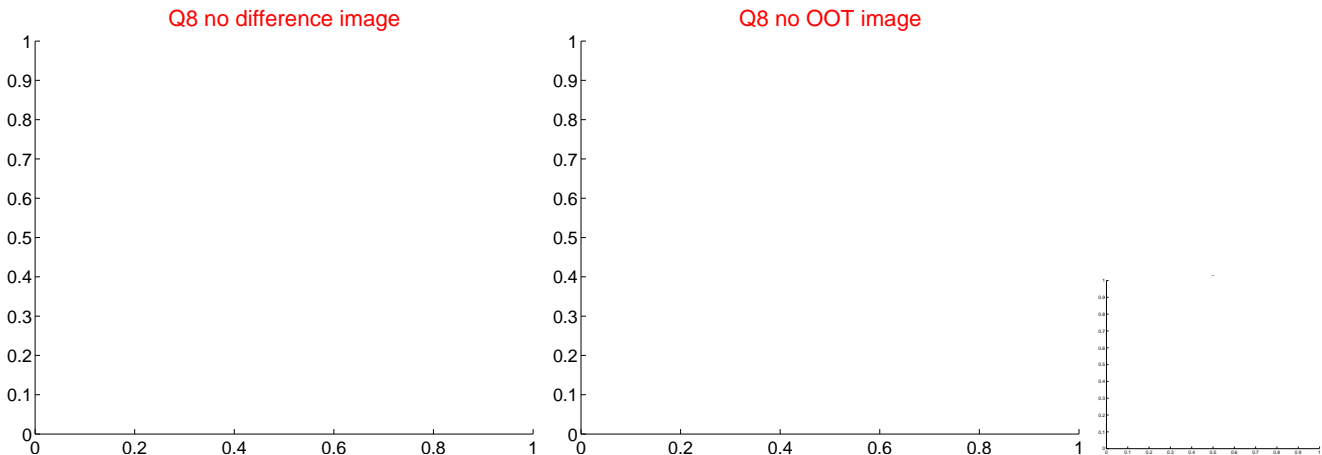
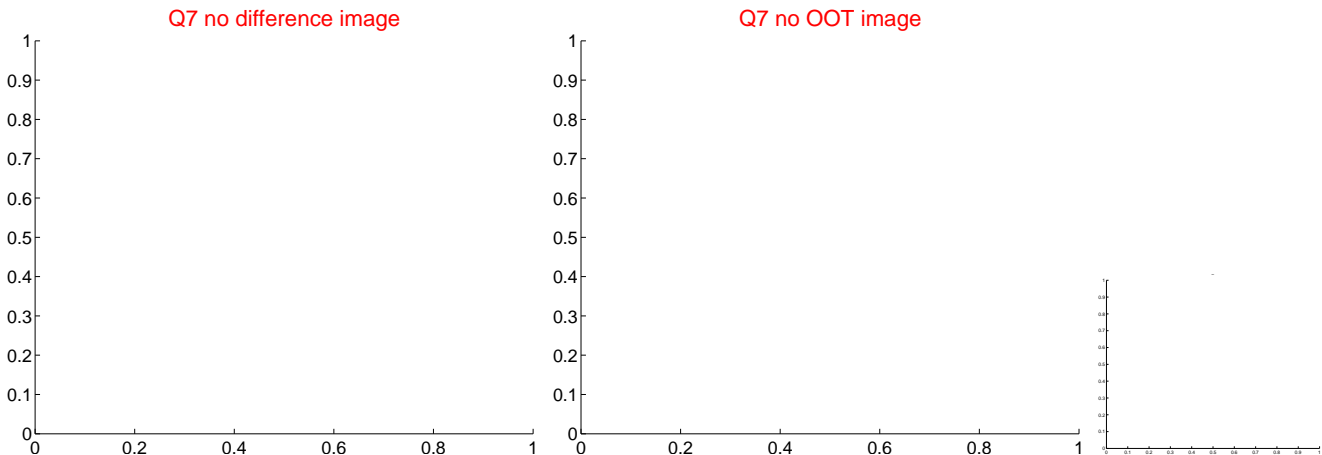
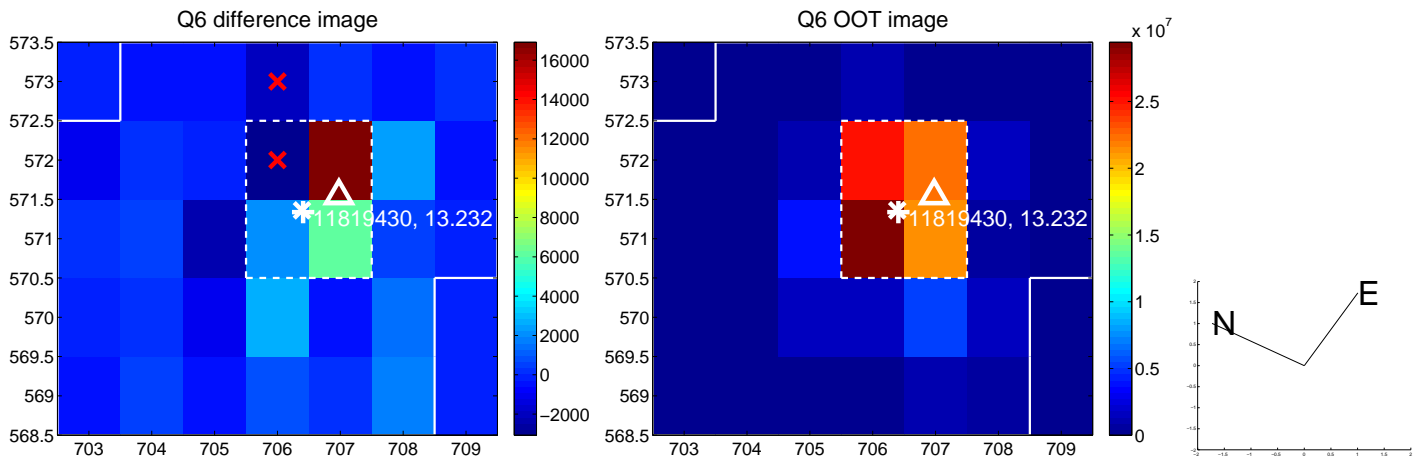
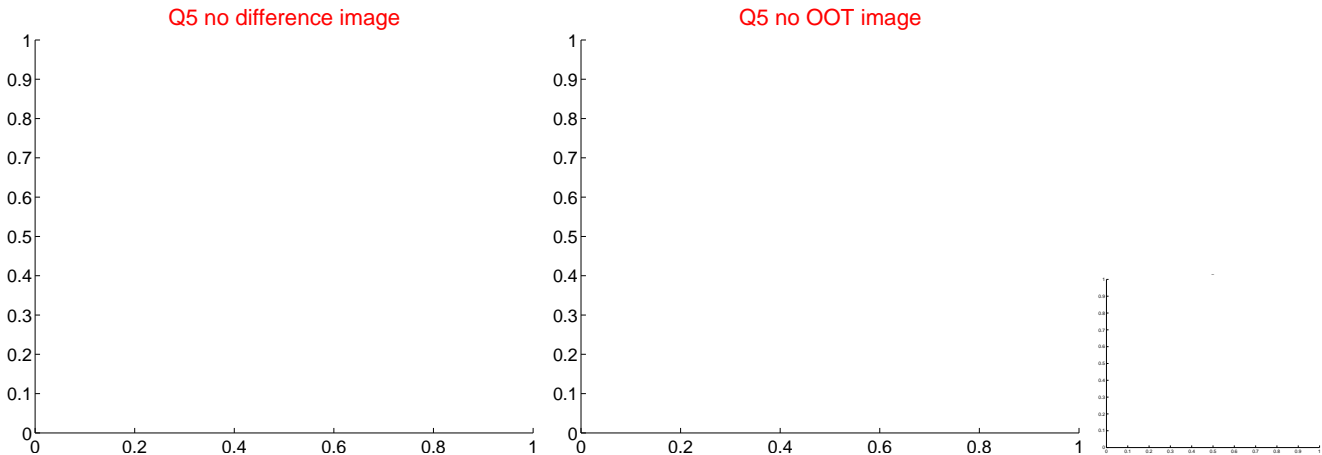
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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



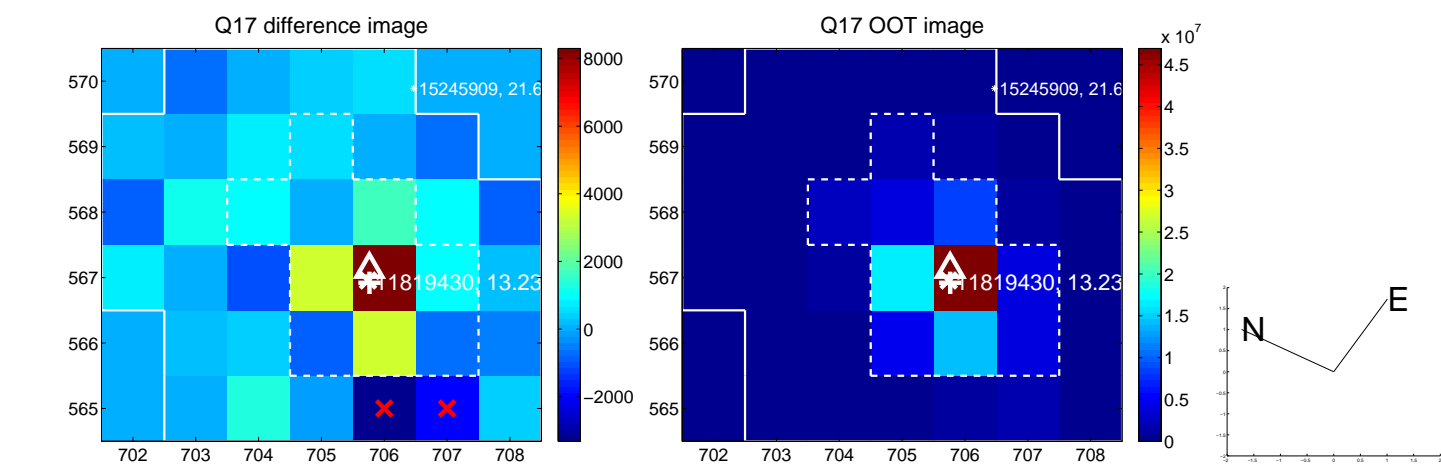
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



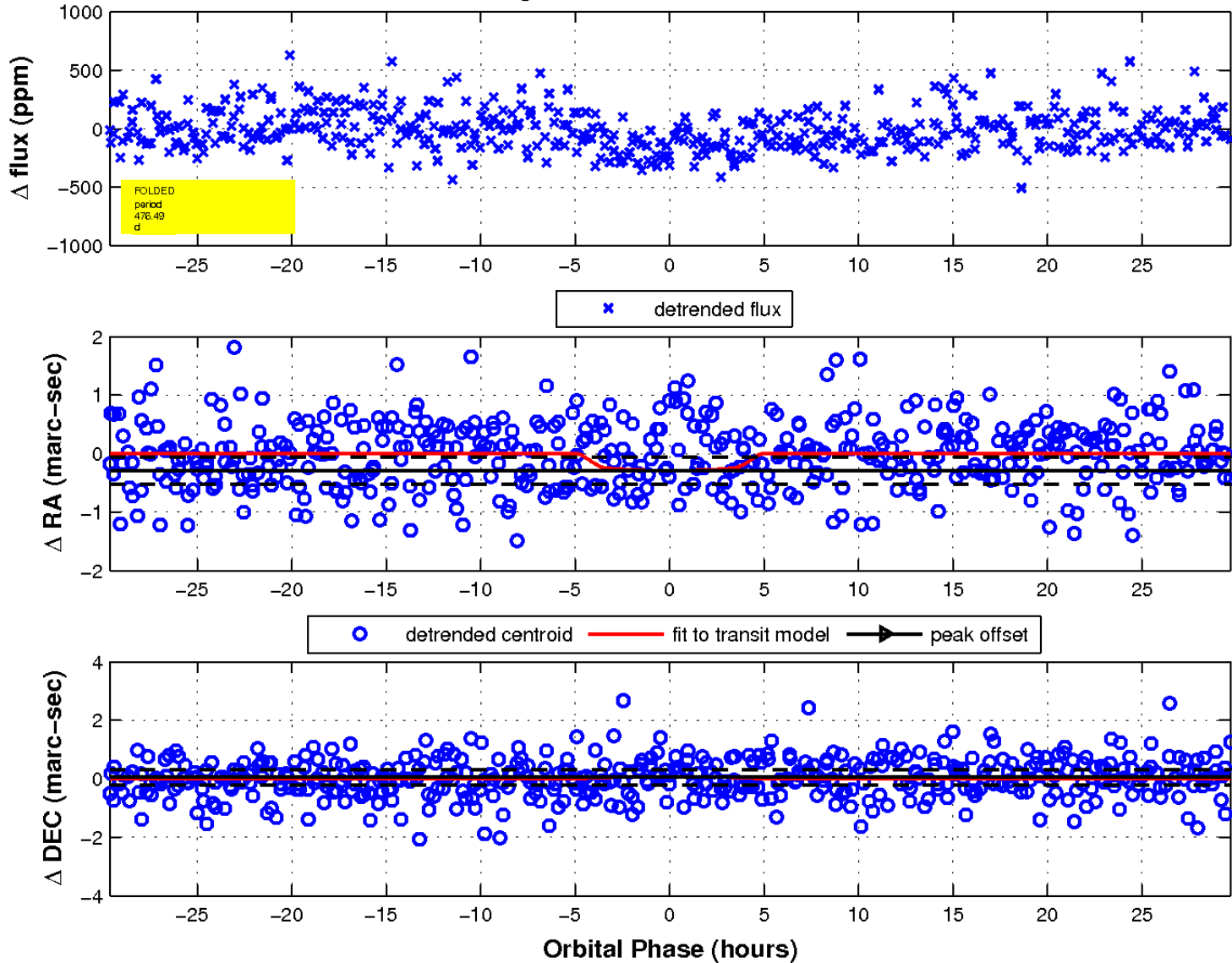
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

