

# KIC 008113425

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008113425-01	OBS	No	385.867347	271.474069	3716.9	3.500	53.5	-1.0	1.20	6973	7.40	2.48

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008113425-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS—CENT_NOFITS

**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.

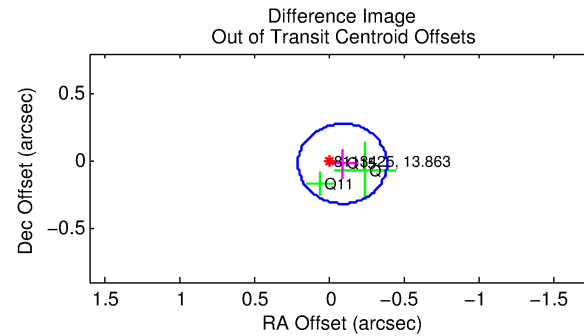
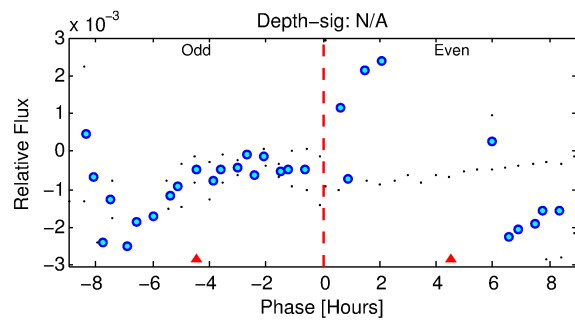
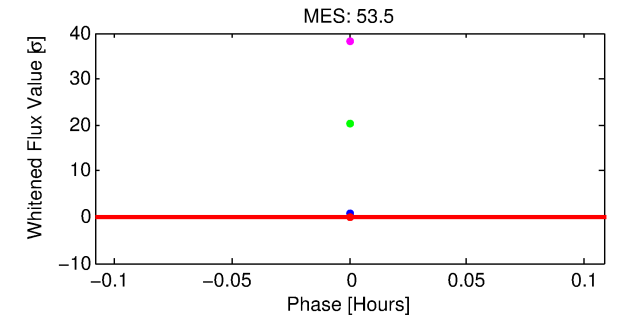
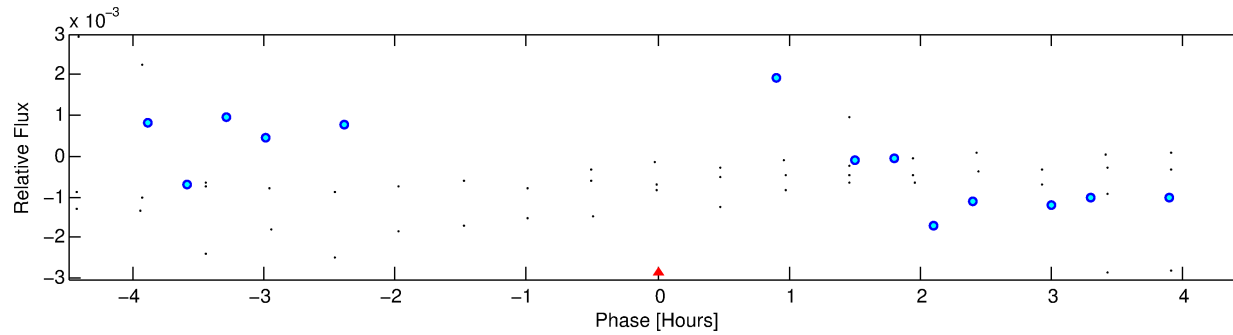
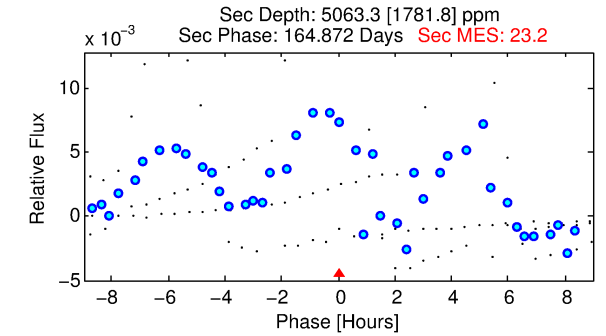
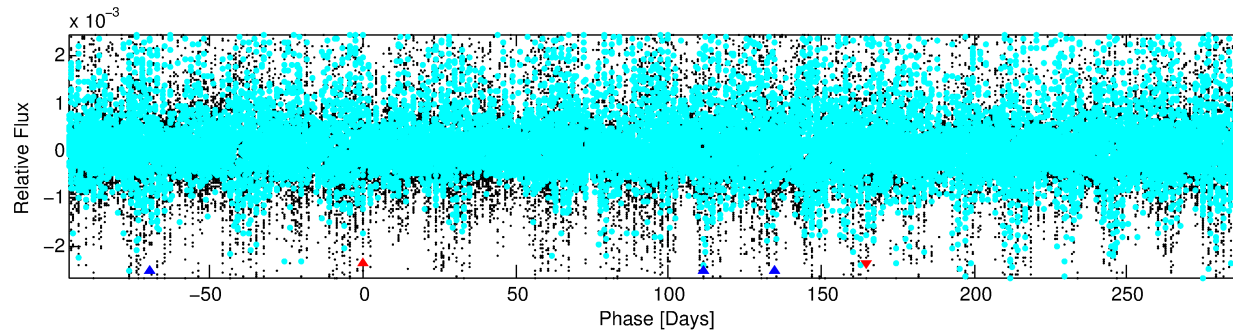
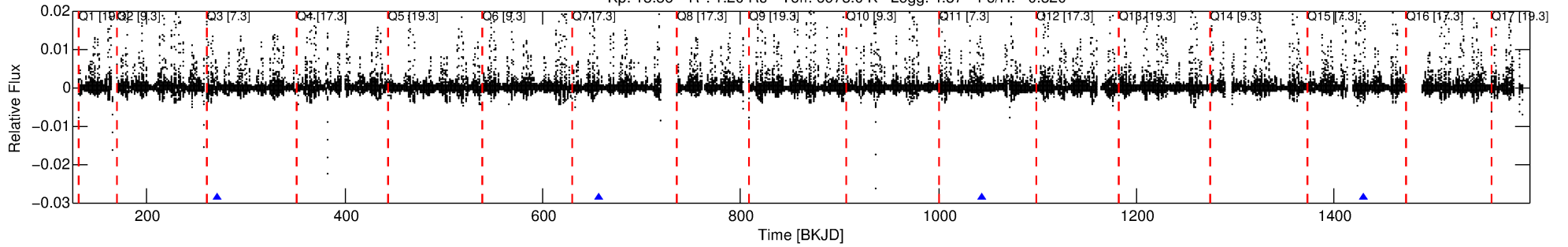
## Ephemeris Match Information For 008113425-01

No Significant Match Found

# DV One-Page Summary

KIC: 8113425 Candidate: 1 of 2 Period: 385.867 d

Kp: 13.86 R\*: 1.20 Rs Teff: 6973.0 K Logg: 4.37 Fe/H: -0.320



## TPS TCE Results:

Period = 385.86735 d  
Epoch = 271.4741 BKJD

DV fit results are unavailable

## DV Diagnostic Results:

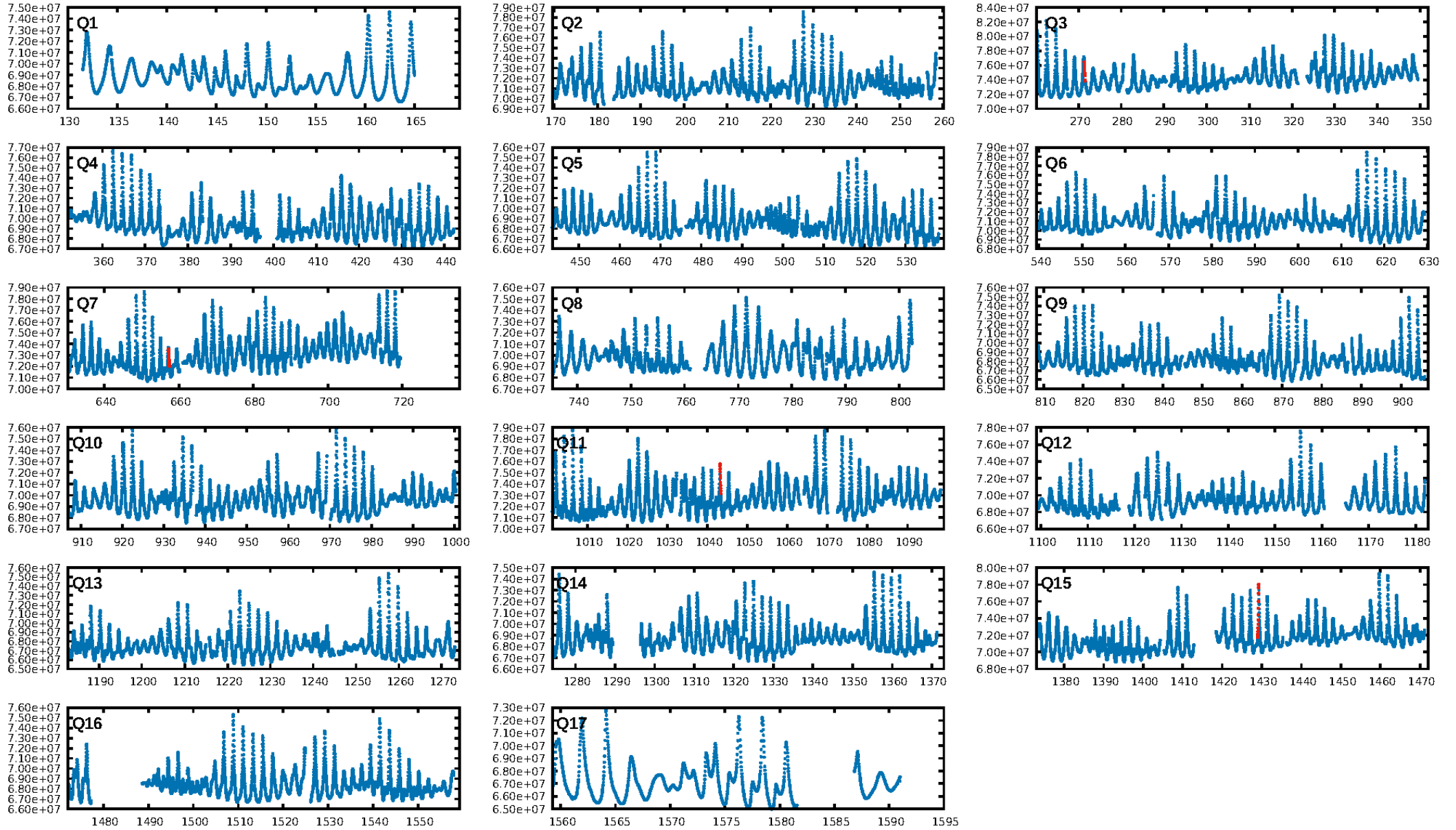
ShortPeriod-sig: N/A  
LongPeriod-sig: 100.0% [368.38σ]  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [4/4]  
GhostDiagnostic-chr: 1.914

Centroid-sig: 72.3%  
Centroid-so: 28.625 arcsec [0.37σ]  
OotOffset-rm: 0.095 arcsec [0.96σ]  
KicOffset-rm: 0.156 arcsec [1.58σ]  
OotOffset-st: 0/3/0/0 [3]  
KicOffset-st: 0/3/0/0 [3]  
DiffImageQuality-fgm: 0.67 [2/3]  
DiffImageOverlap-fno: 1.00 [3/3]

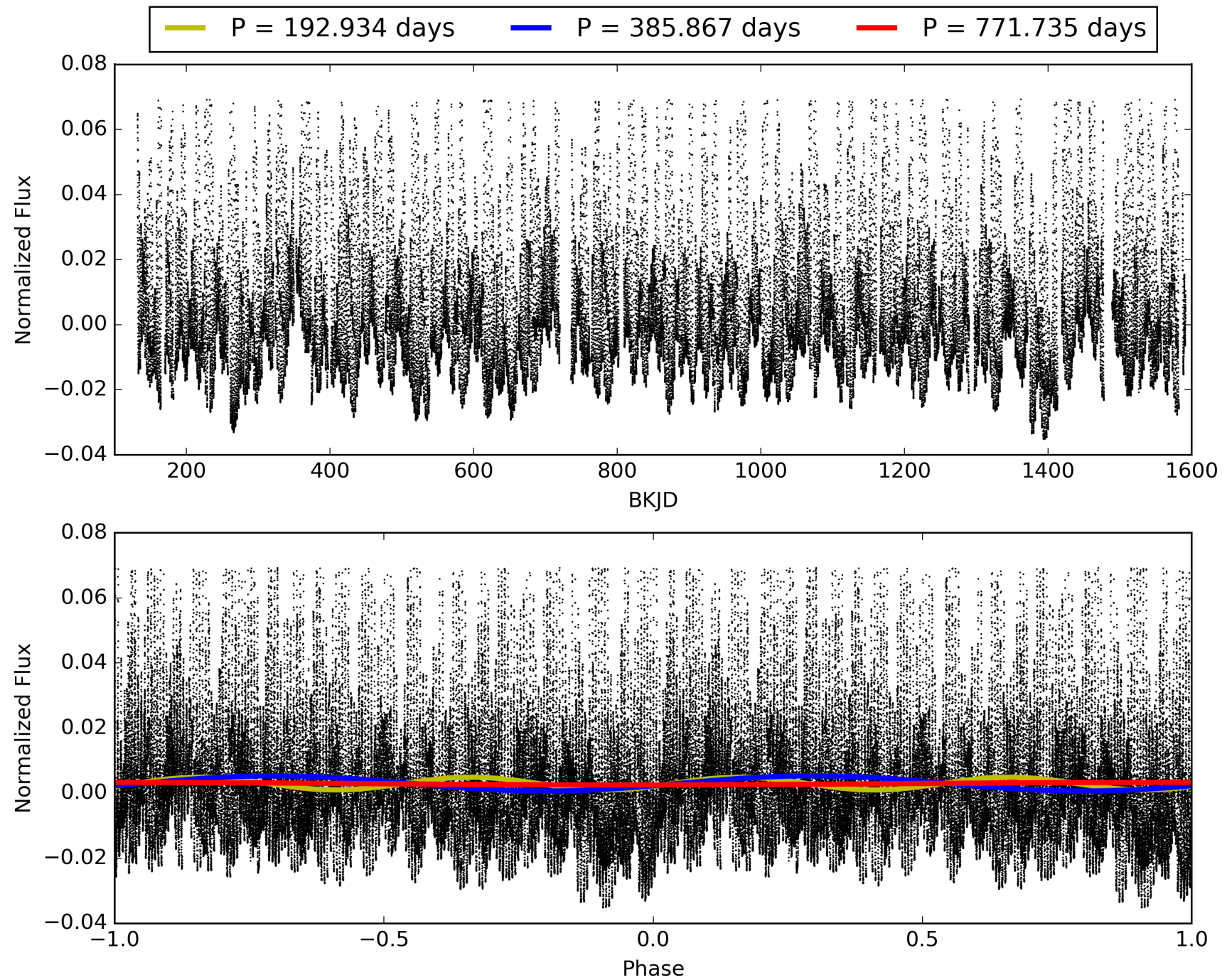
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:58:26 Z

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

# TCE 008113425-01, PDC Light Curves

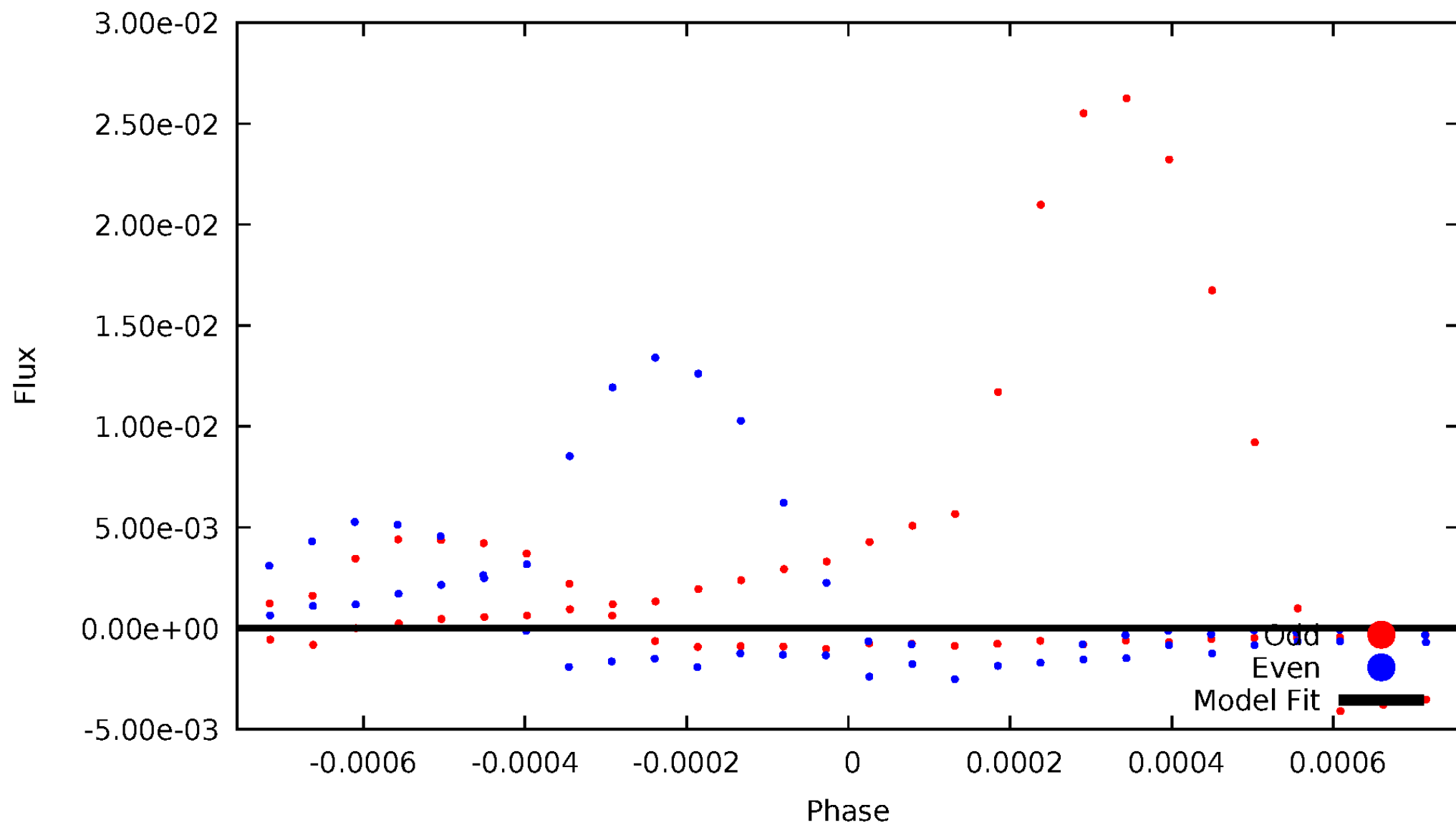


# TCE 008113425-01



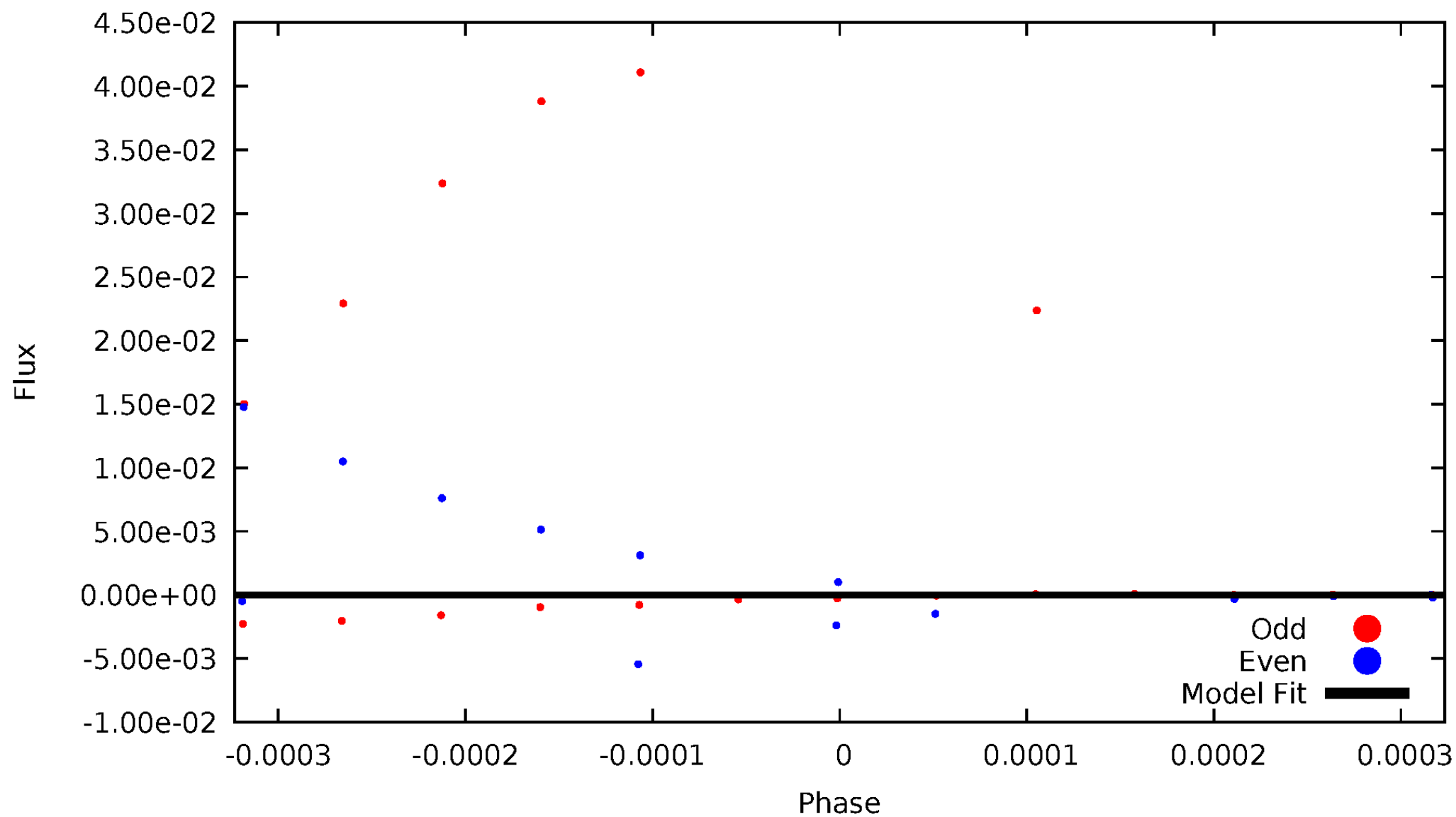
# DV Odd/Even

TCE 008113425-01



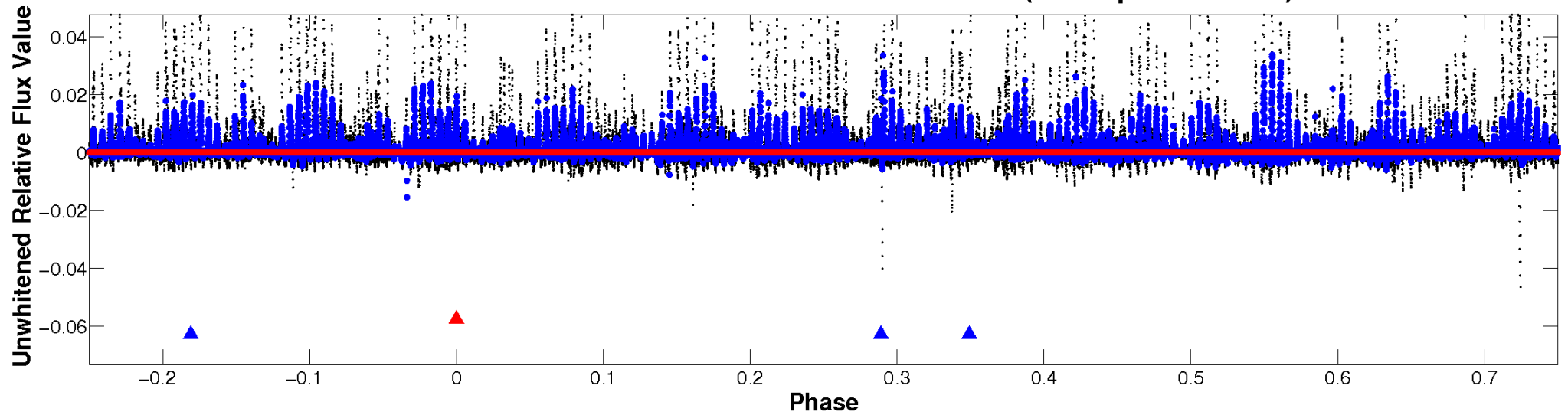
# ALT Odd/Even

TCE 008113425-01

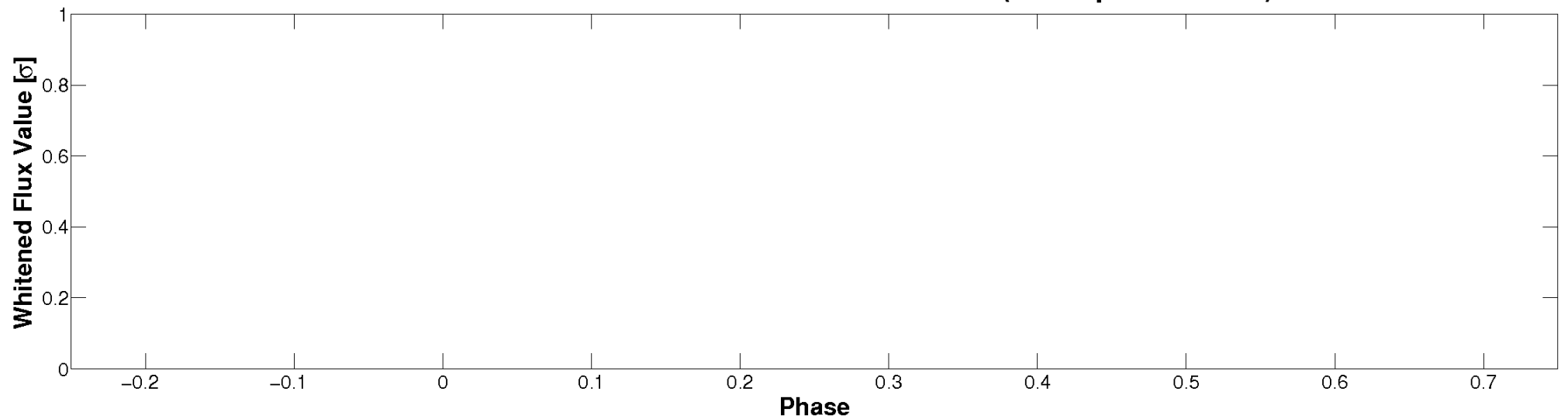


# Non-Whitened Vs. Whitened Light Curve

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



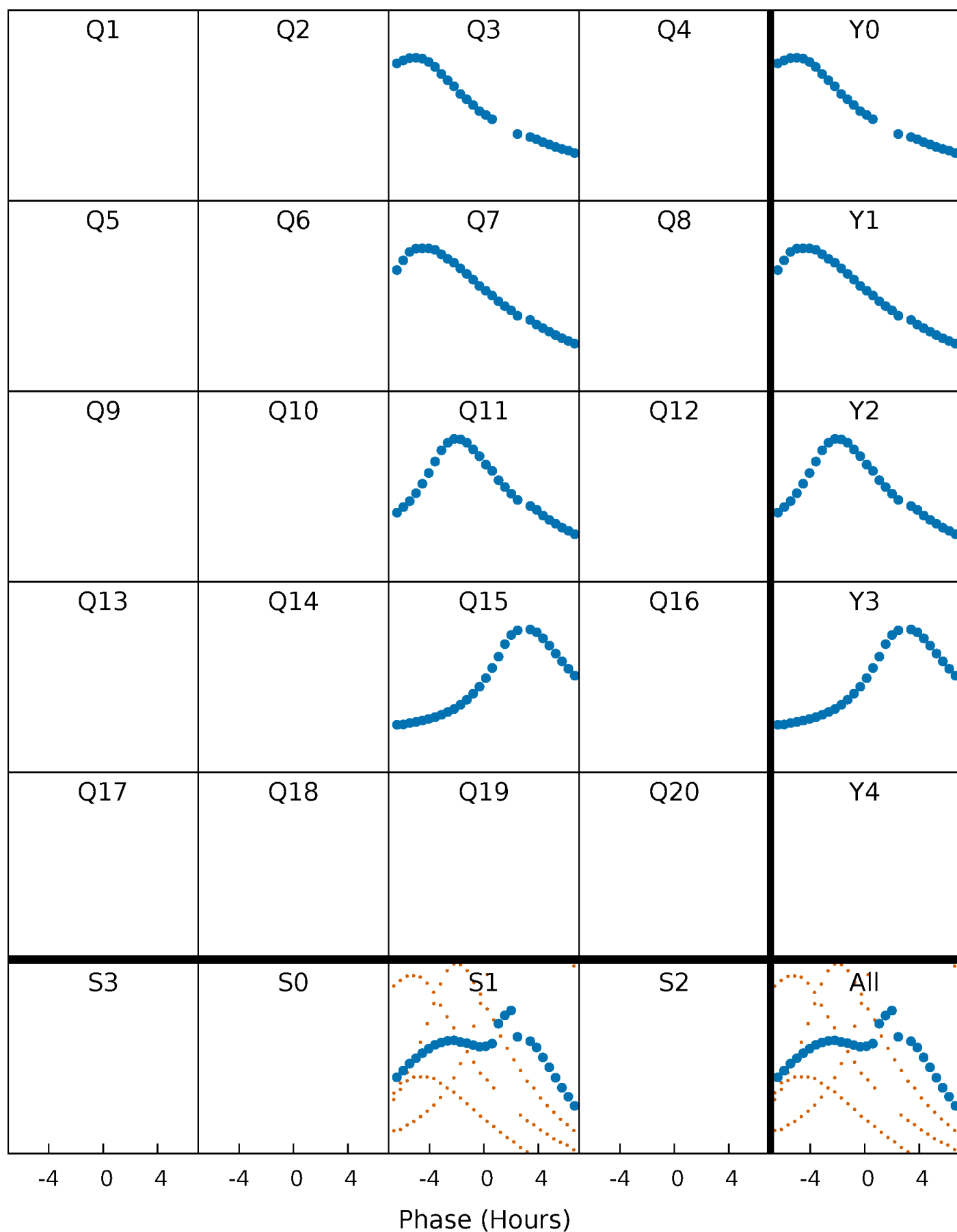
**Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)**





# PDC Quarter-Phased Transit Curves

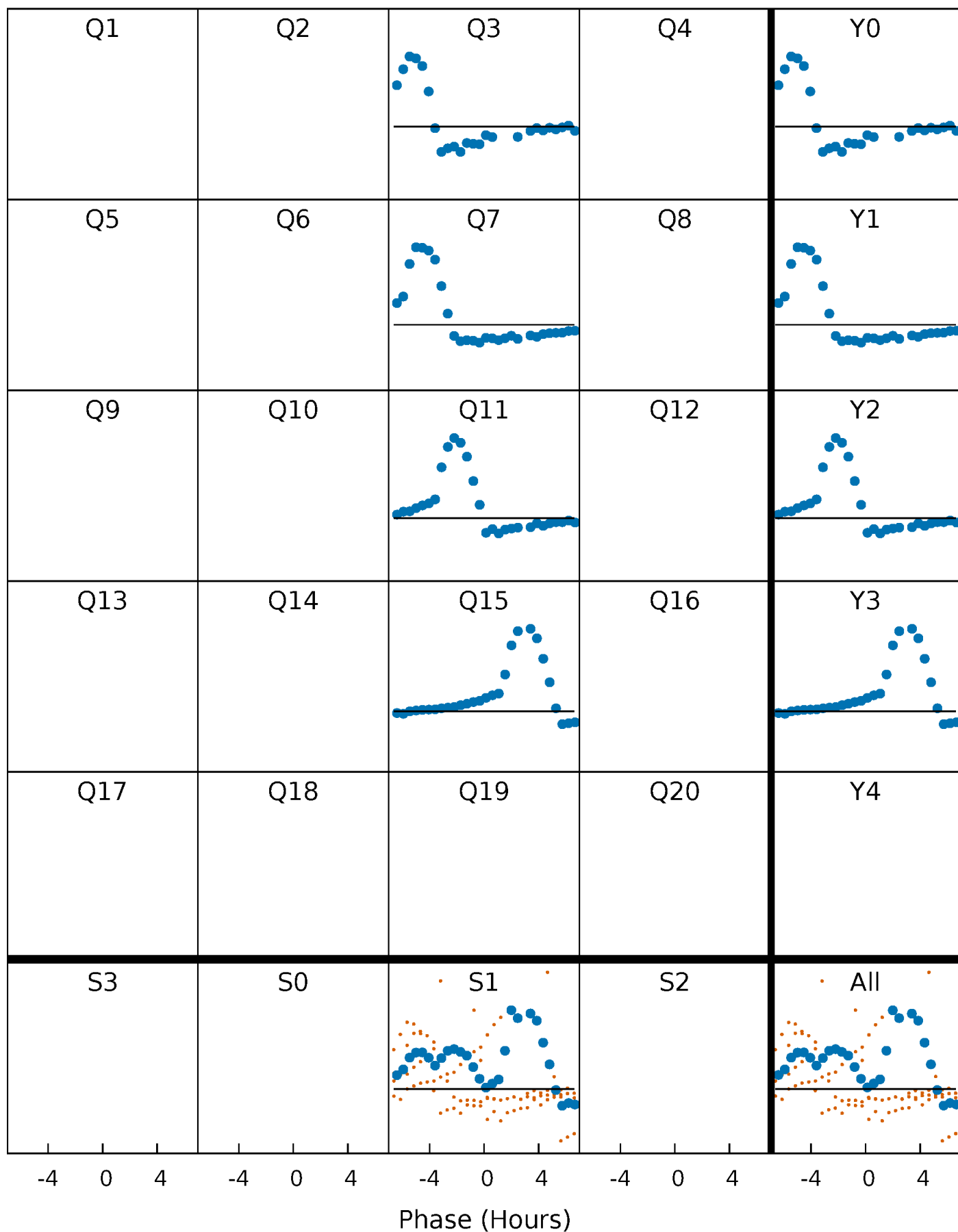
TCE 008113425-01 P=385.867347 Days  $T_0=271.474069$  (BKJD)





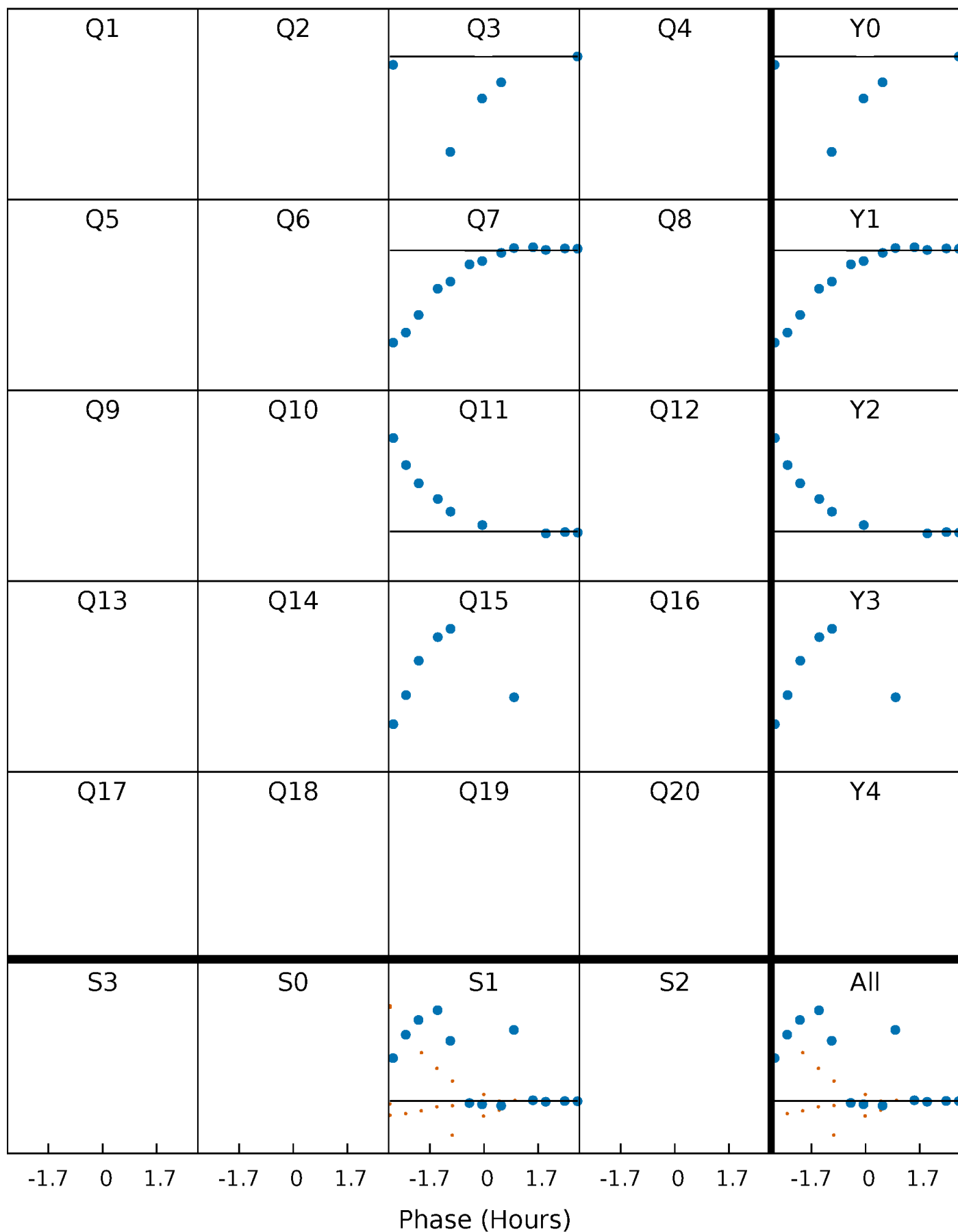
# DV Quarter-Phased Transit Curves

TCE 008113425-01 P=385.867347 Days  $T_0=271.474069$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

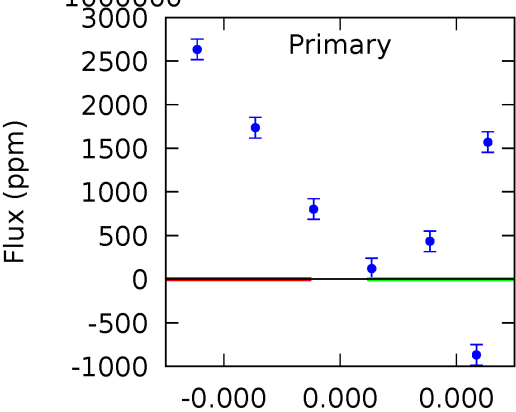
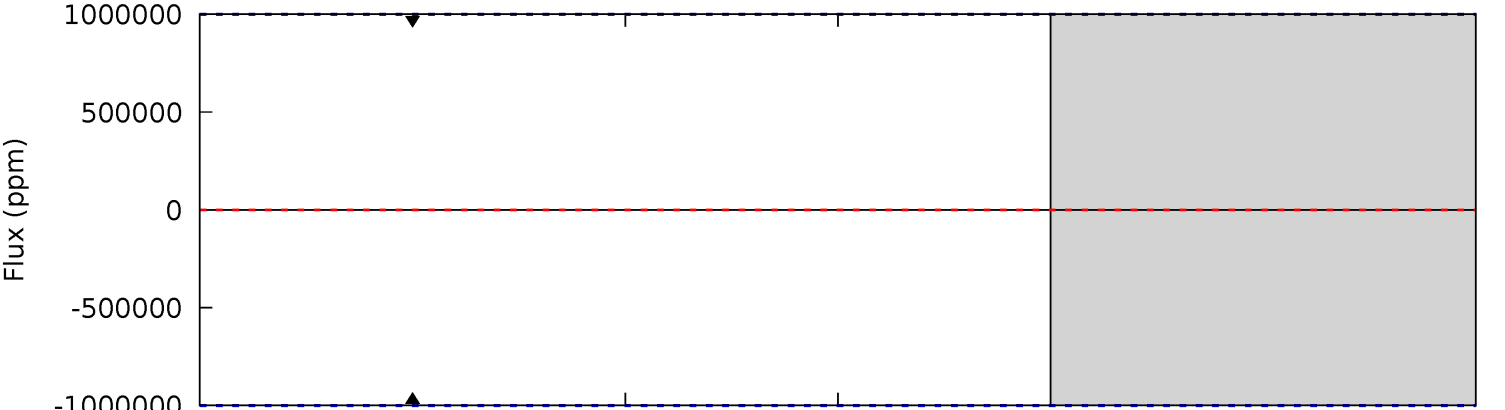
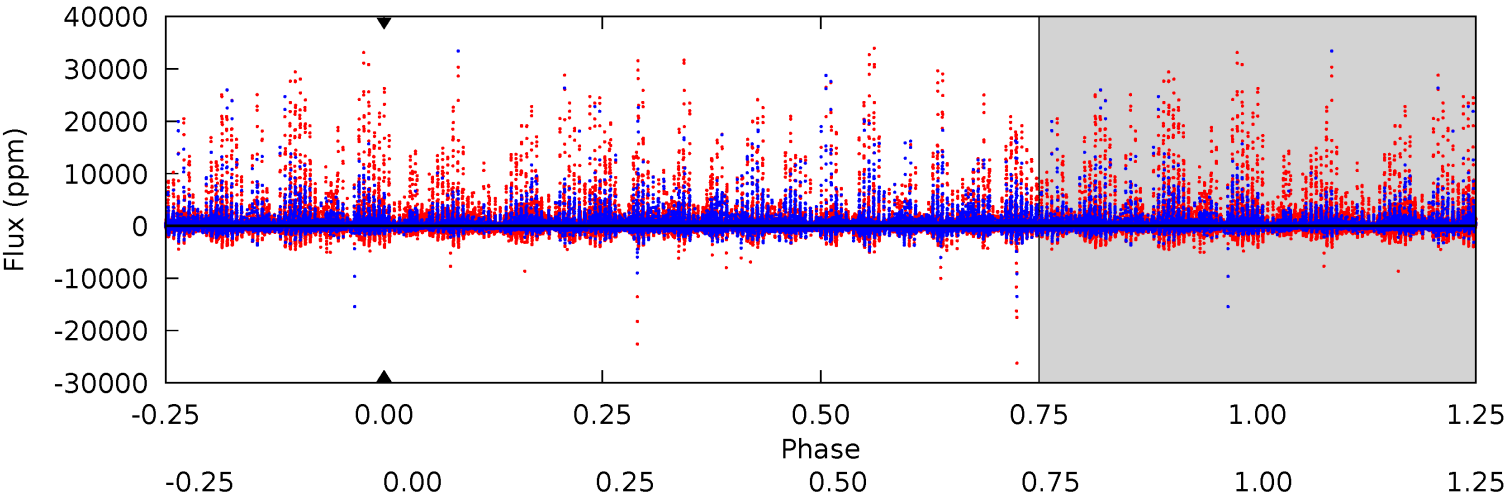
TCE 008113425-01 P=385.867347 Days  $T_0=271.627446$  (BKJD)



# DV Model-Shift Uniqueness Test

008113425-01, P = 385.867347 Days, E = 271.474069 Days

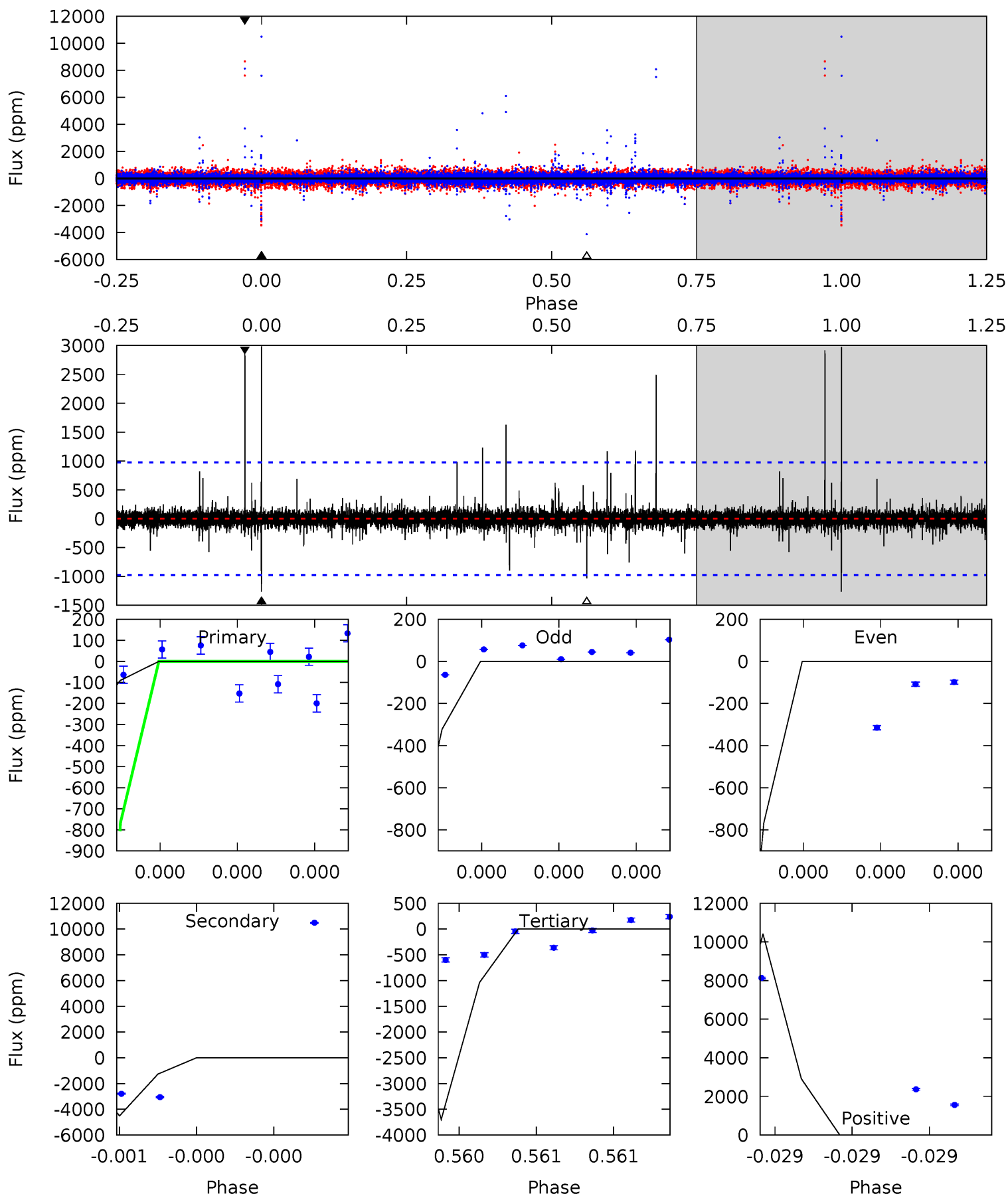
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



# Alt Model-Shift Uniqueness Test

008113425-01, P = 385.867347 Days, E = 271.627446 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
0.54	7.55	6.20	17.5	5.84	3.88	0.40	-5.66	-16.9	1.35	-9.92	0.91	1.00	0.70	0



### Stellar Parameters For KIC 008113425

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	$6973^{+192}_{-288}$	$4.365^{+0.056}_{-0.224}$	$-0.320^{+0.250}_{-0.350}$	$1.197^{+0.425}_{-0.113}$	$1.230^{+0.189}_{-0.171}$	$1.010^{+0.239}_{-0.580}$
	+3%/-4%	+1%/-5%	+78%/-109%	+36%/-9%	+15%/-14%	+24%/-57%
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 008113425-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$0 \pm 1000000$	$12.49^{+11.91}_{-8.09}$	$456^{+34}_{-24}$	$-6058^{+28145}_{-18478}$	$-19770.342^{+657574.214}_{-705749.313}$
Alt.	$-1261 \pm 167$	$9.47^{+11.15}_{-6.75}$	$456^{+34}_{-24}$	$5023^{+5187}_{-1259}$	$9256^{+104362}_{-7314}$

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

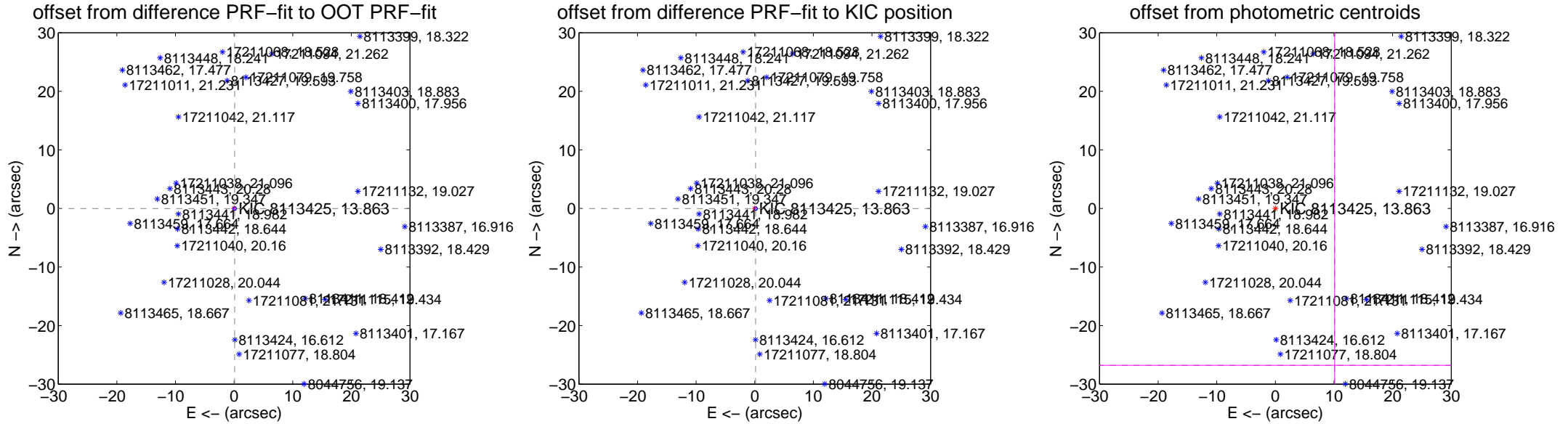
# DV Centroid Data

Supplemental centroid analysis for 008113425-01. Kepler magnitude: 13.86. Transit SNR -1.00

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.095 \pm 0.099$	0.96	$-0.092 \pm 0.099$	$-0.020 \pm 0.100$
PRF-fit source offset from KIC position	$0.156 \pm 0.099$	1.58	$-0.154 \pm 0.099$	$-0.026 \pm 0.100$
photometric centroid source offset	$28.63 \pm 77.67$	0.37	$-10.11 \pm 82.59$	$-26.78 \pm 76.94$



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.





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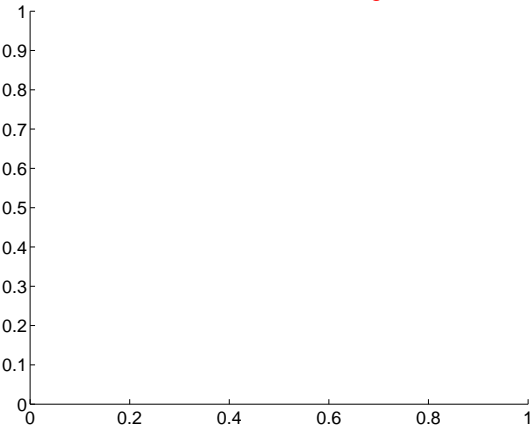
Q5 no difference image



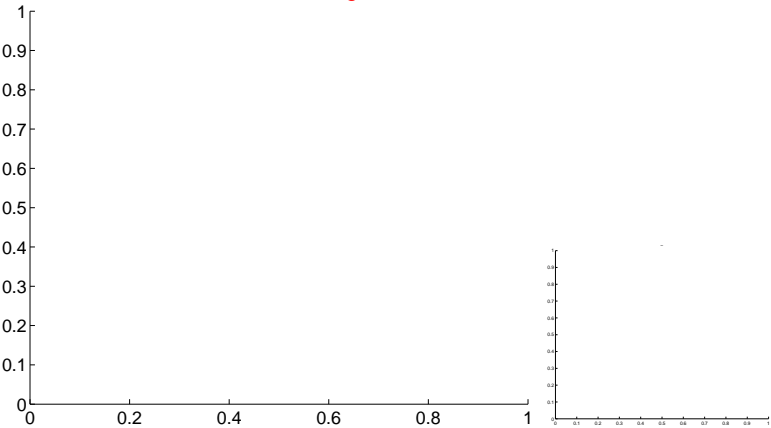
Q5 no OOT image



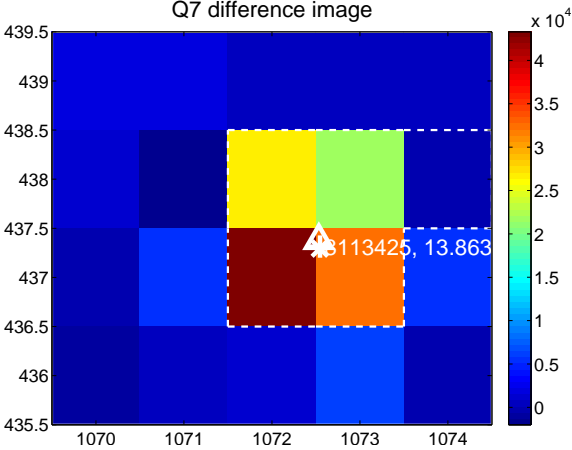
Q6 no difference image



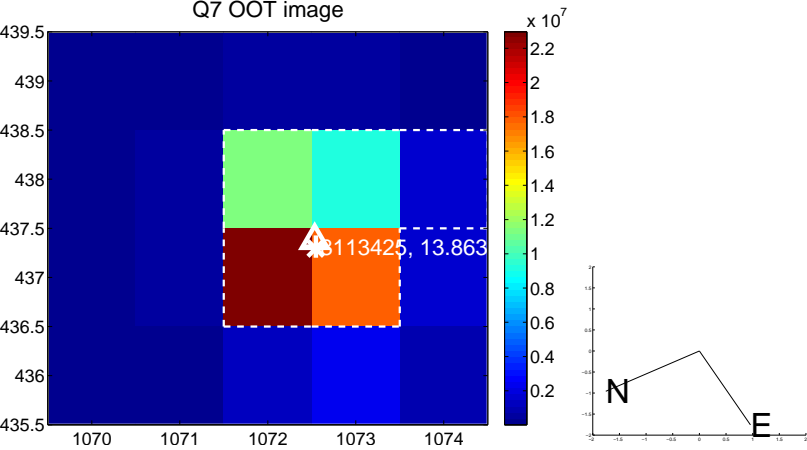
Q6 no OOT image



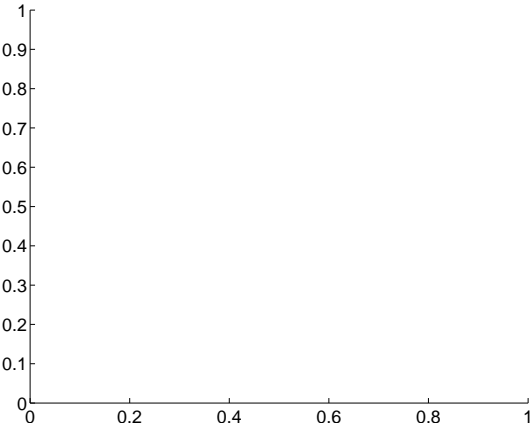
Q7 difference image



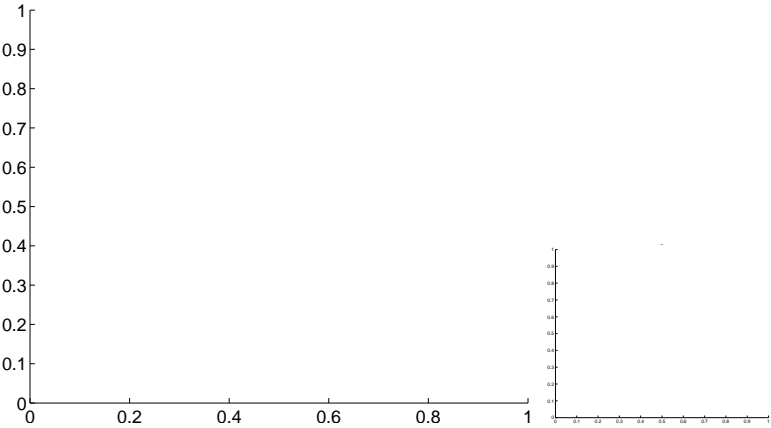
Q7 OOT image



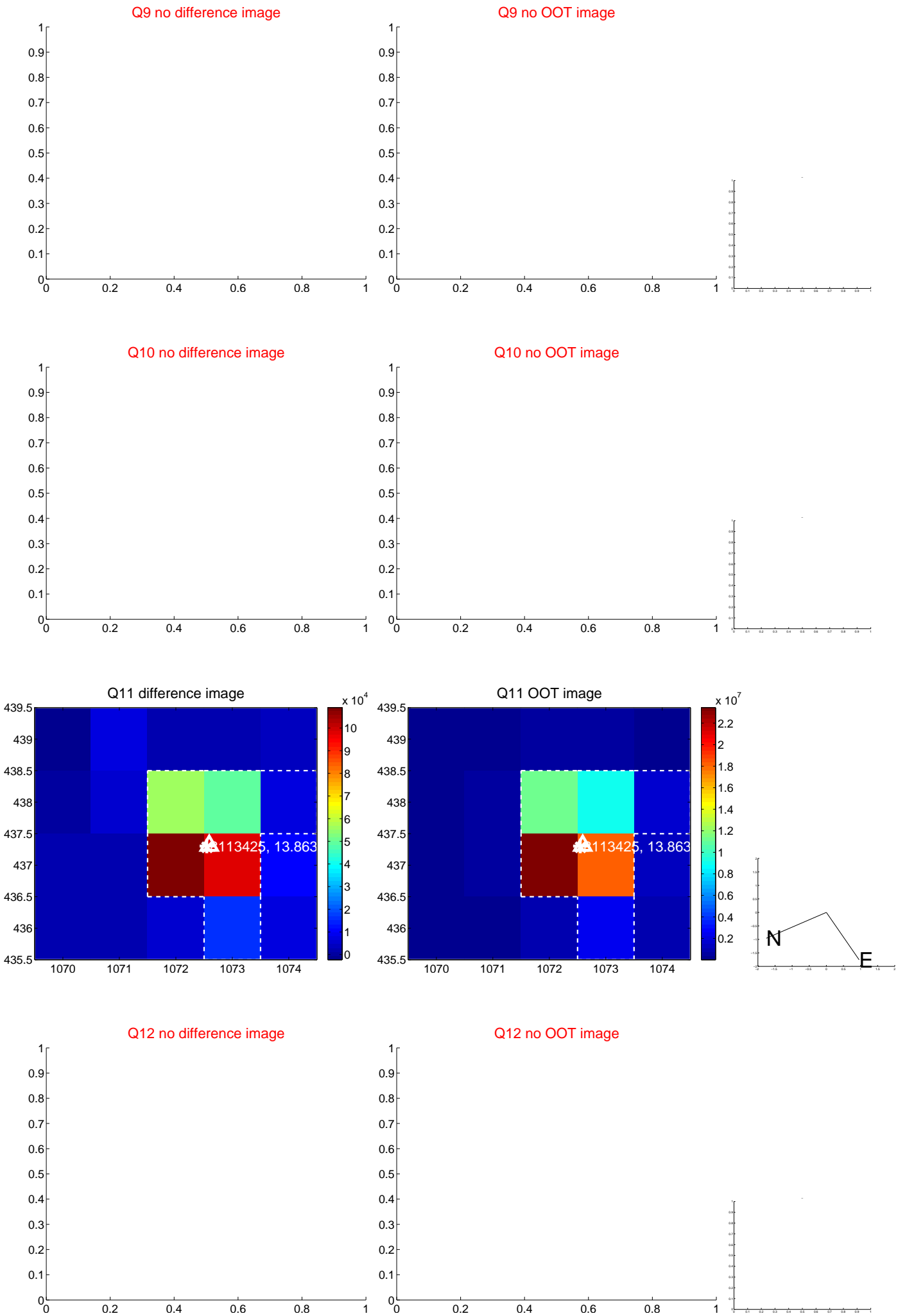
Q8 no difference image



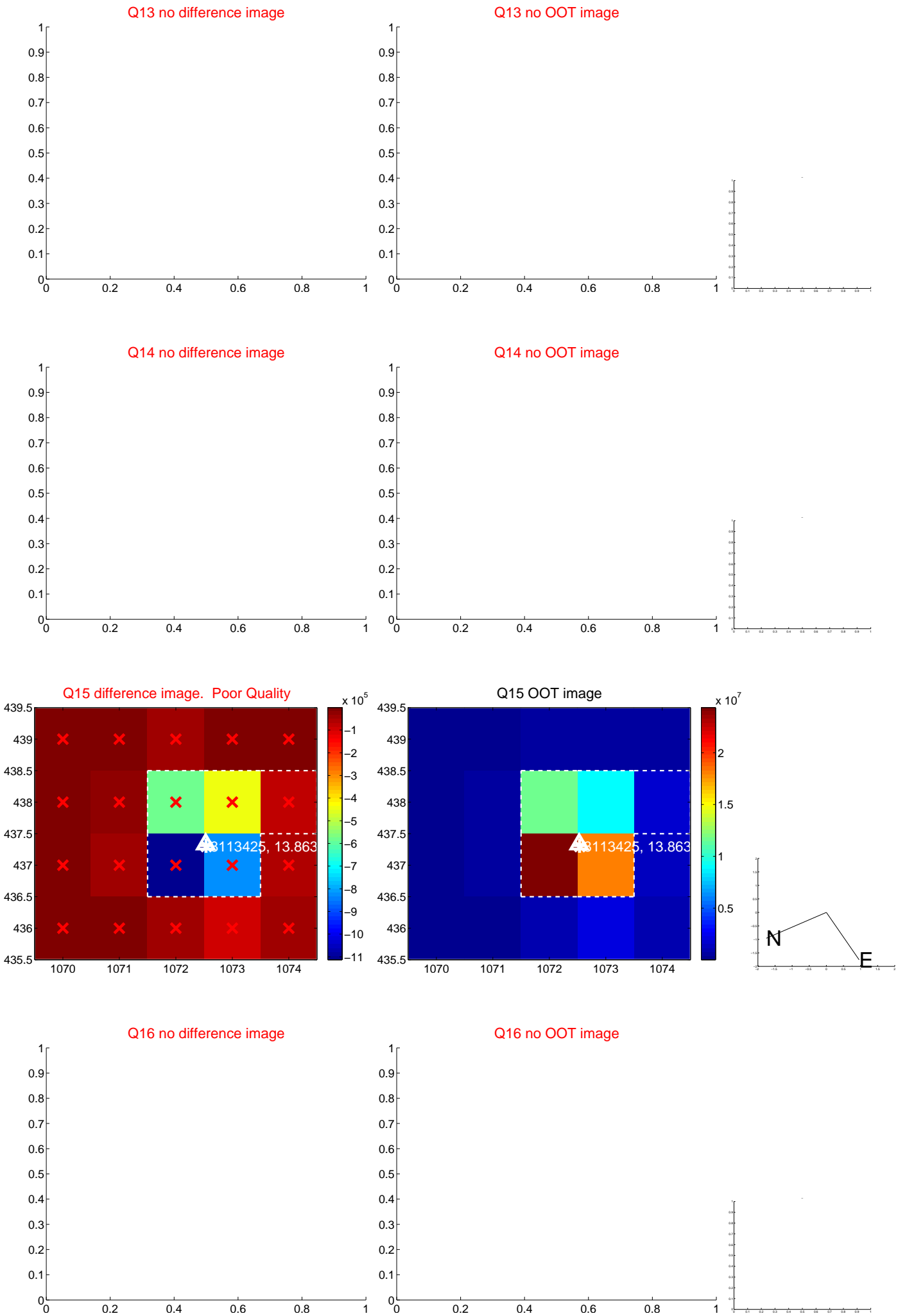
Q8 no OOT image



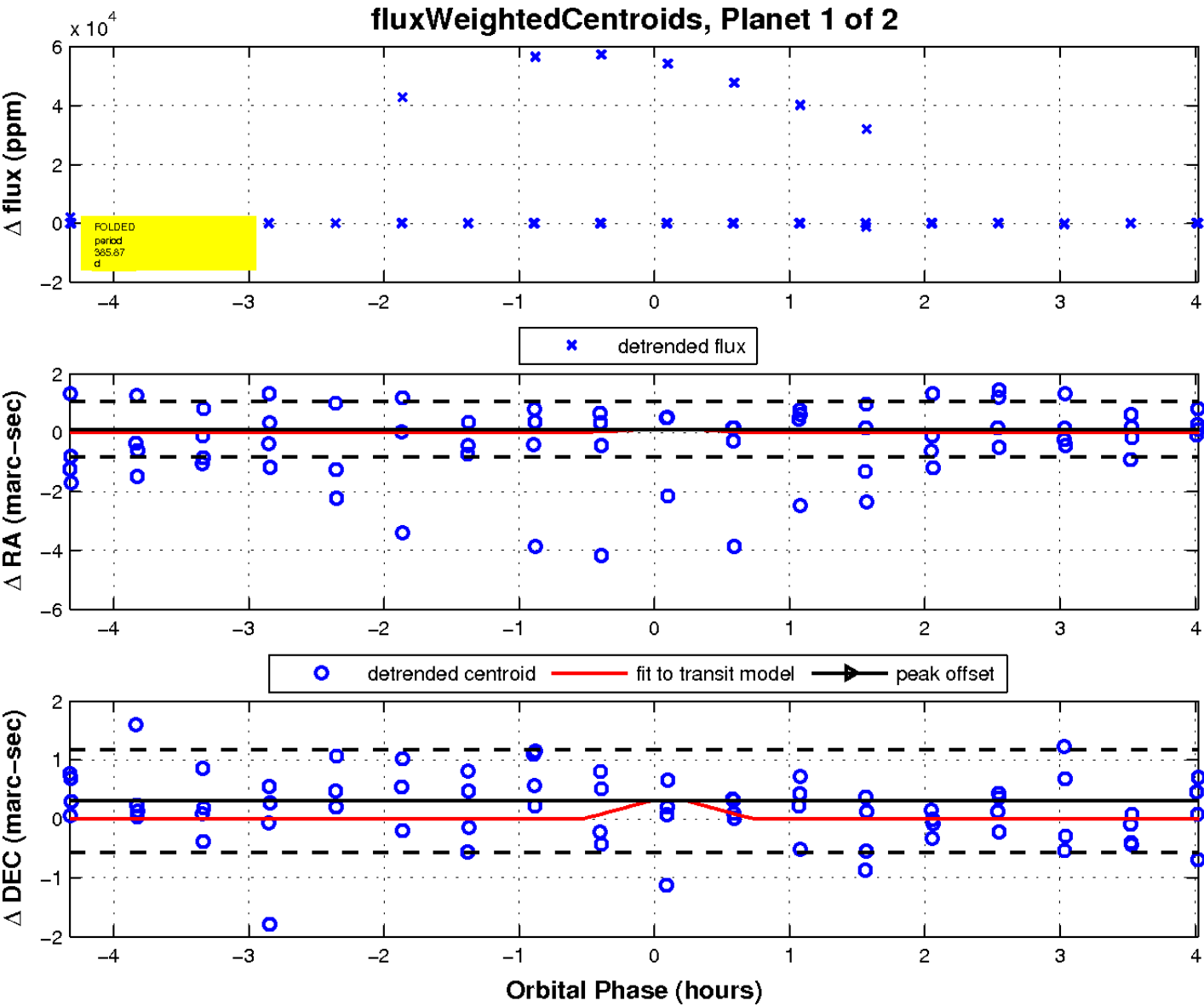
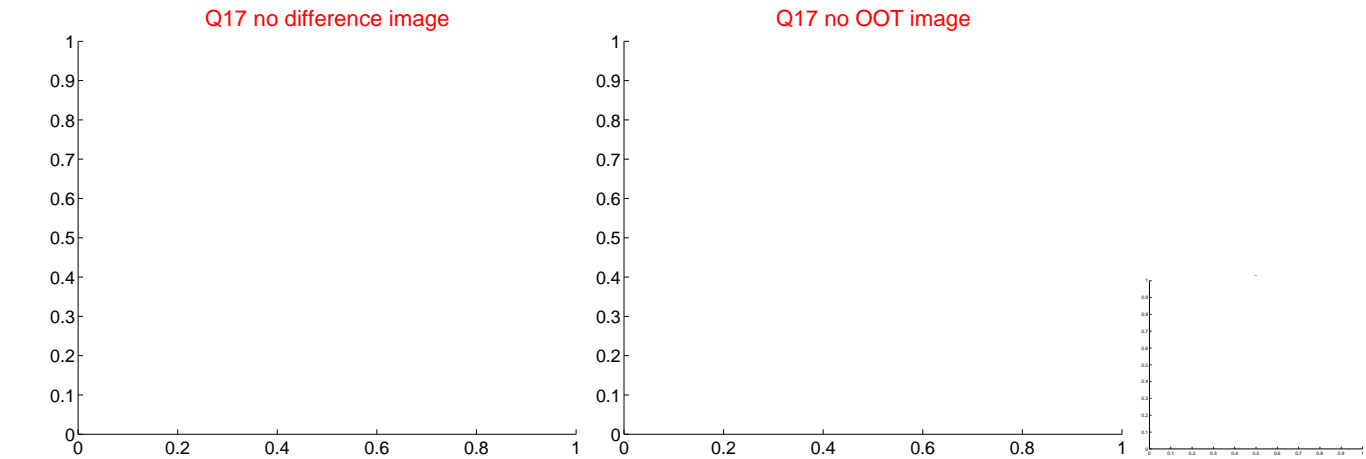
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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UKIRT Image

Declination

