

# KIC 008044600

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008044600-01	OBS	4612.01	4.108306	134.907713	366.9	3.420	9.9	11.0	0.87	5730	1.95	296.24

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008044600-01	OBS	FP	0.00	0	0	1	0	CENT_FEW_DIFFS—HALO_GHOST

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

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

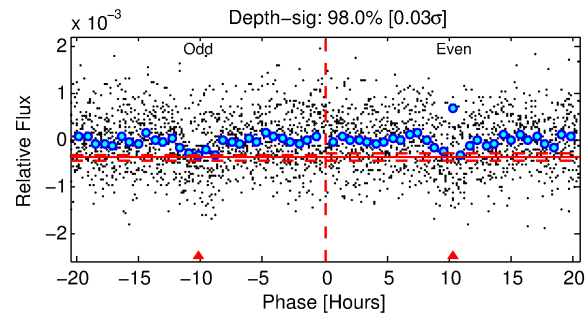
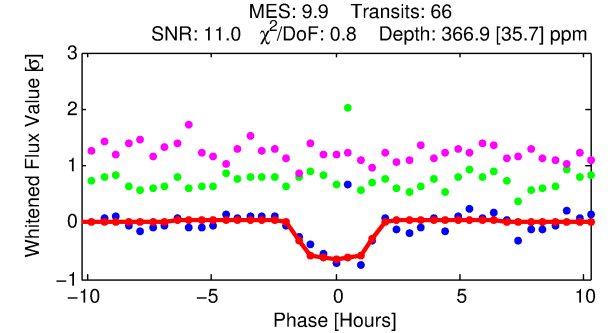
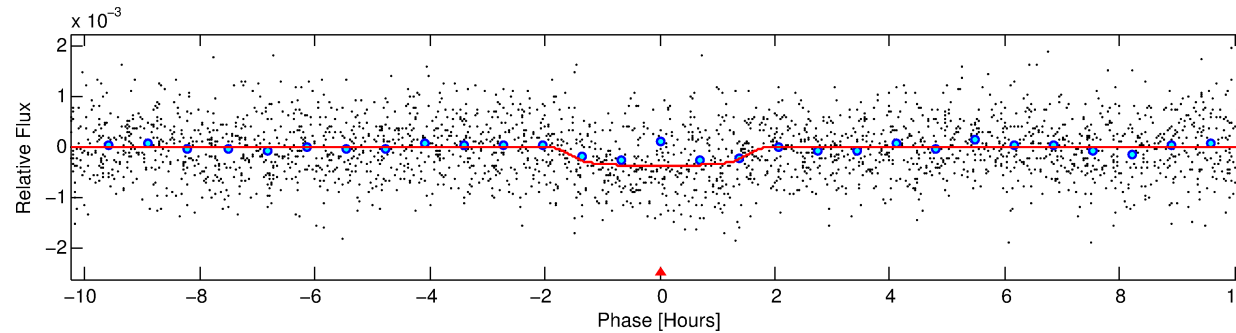
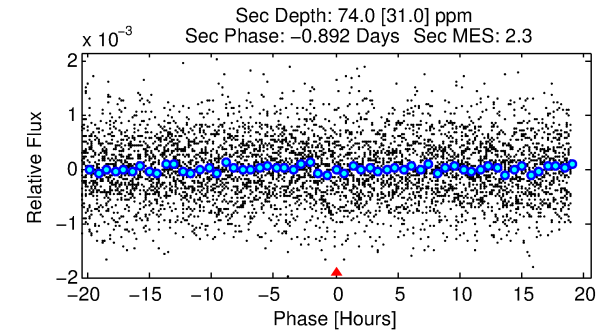
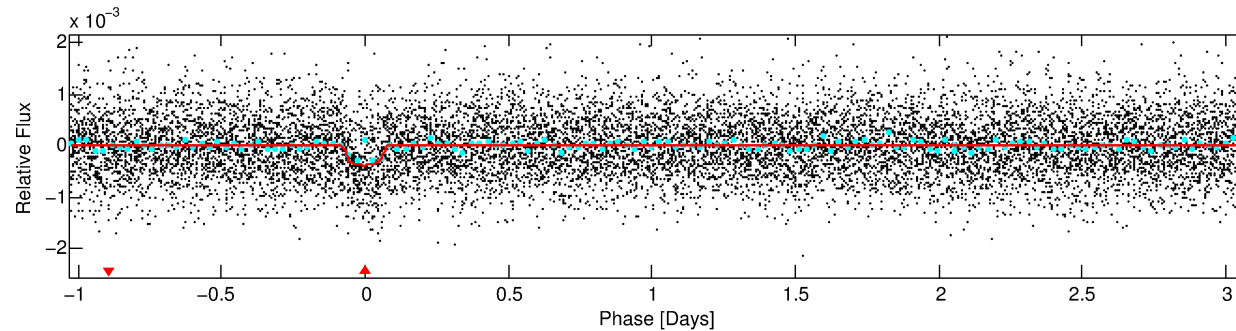
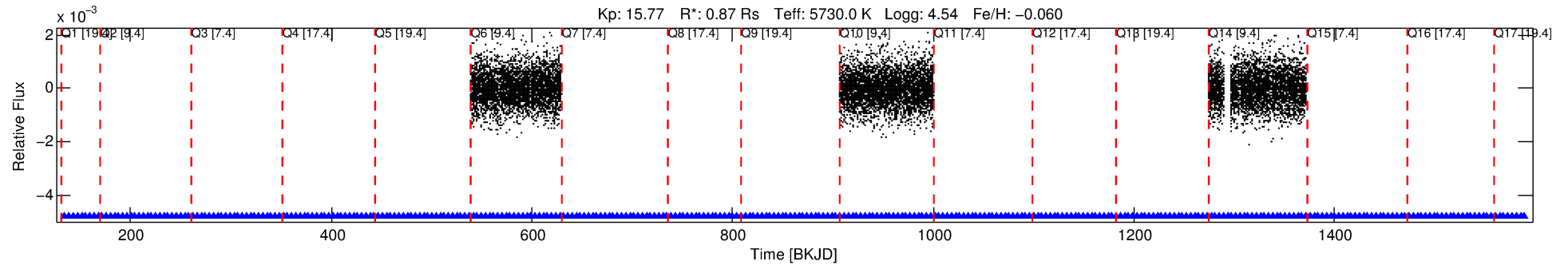
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008044600-01

No Significant Match Found

# DV One-Page Summary

KIC: 8044600 Candidate: 1 of 1 Period: 4.108 d  
KOI: K04612.01 Corr: 0.941



## DV Fit Results:

Period = 4.10831 [0.00003] d  
Epoch = 134.9077 [0.0058] BKJD  
Rp/R\* = 0.0205 [0.0097]  
a/R\* = 4.82 [10.09]  
b = 0.88 [0.57]  
Seff = 296.24 [112.95]  
Teq = 1058 [101] K  
Rp = 1.95 [1.07] Re  
a = 0.0497 [0.0119] AU  
Ag = 26.42 [28.81] [0.88σ]  
Teffp = 3708 [965] K [2.73σ]

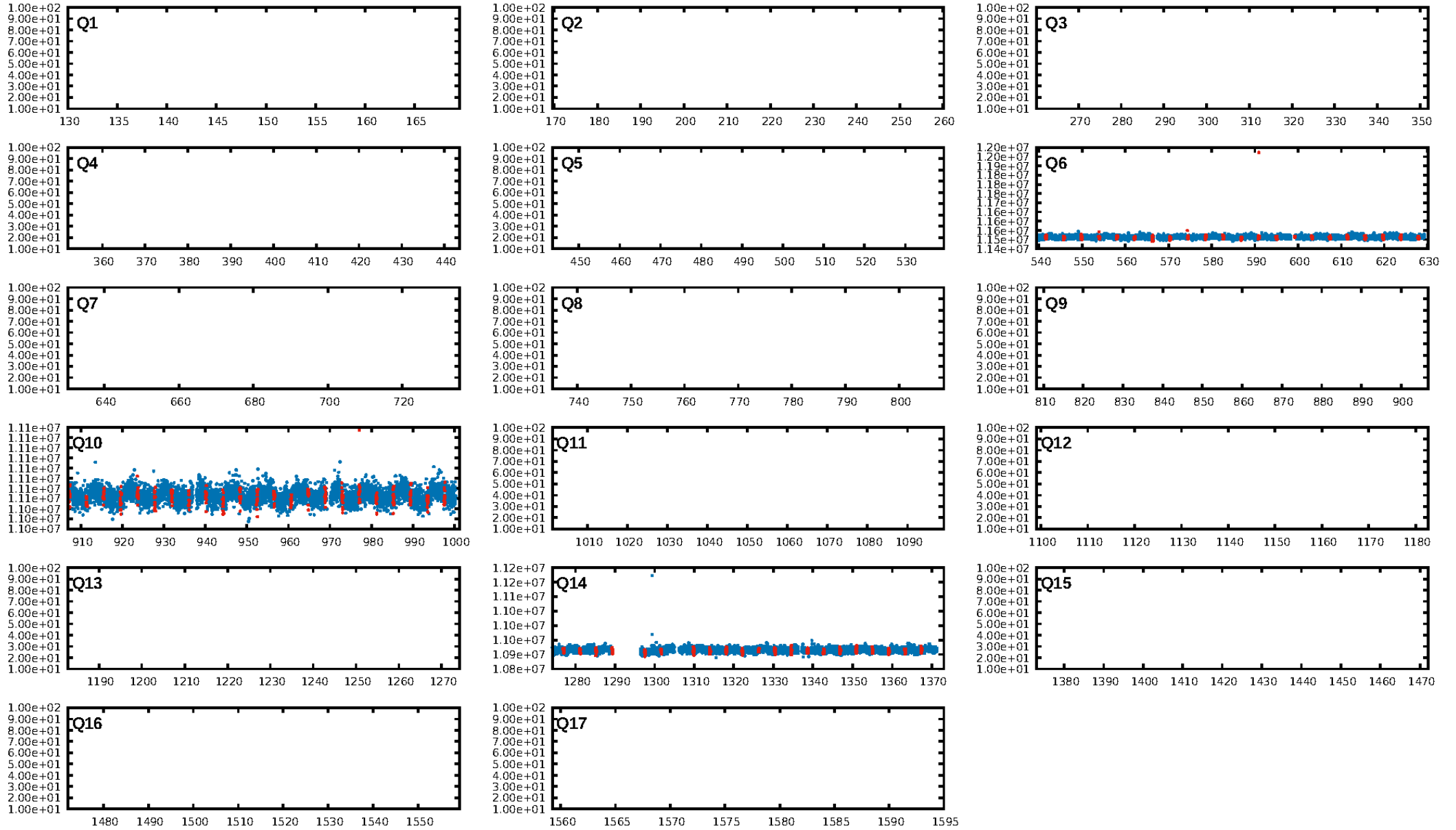
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 99.0%  
ModelChiSquareGoF-sig: 100.0%  
Bootstrap-pfa: 6.21e-22  
RollingBand-fgt: 1.00 [66/66]  
GhostDiagnostic-chr: -0.1988  
Centroid-sig: 0.0%  
Centroid-so: 31.239 arcsec [31.17σ]  
OotOffset-rm: N/A  
KicOffset-rm: N/A  
OotOffset-st: 0/0/0/0 [0]  
KicOffset-st: 0/0/0/0 [0]  
DiffImageQuality-fgm: N/A  
DiffImageOverlap-fno: 1.00 [3/3]

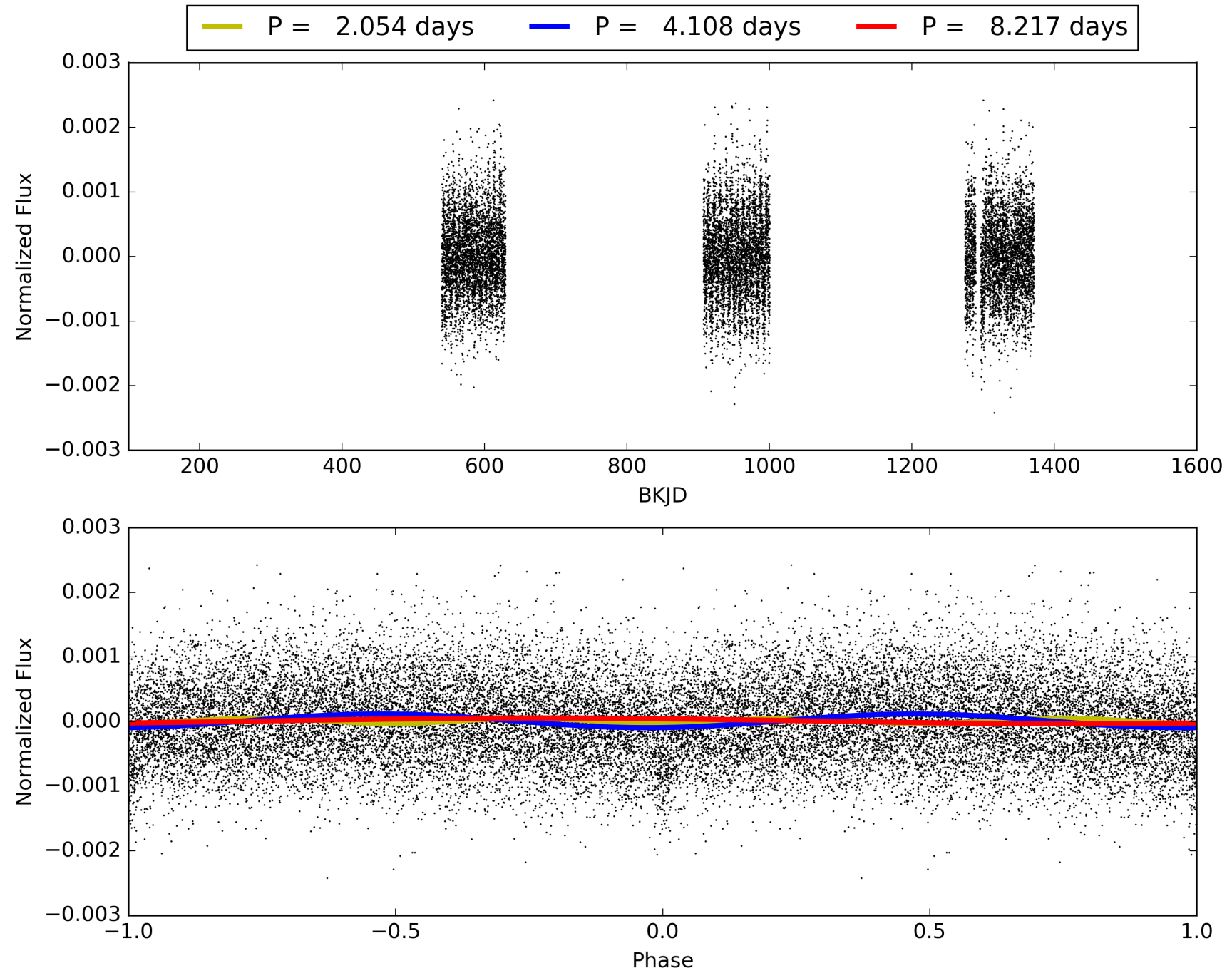
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 23:21:19 Z

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

# TCE 008044600-01, PDC Light Curves

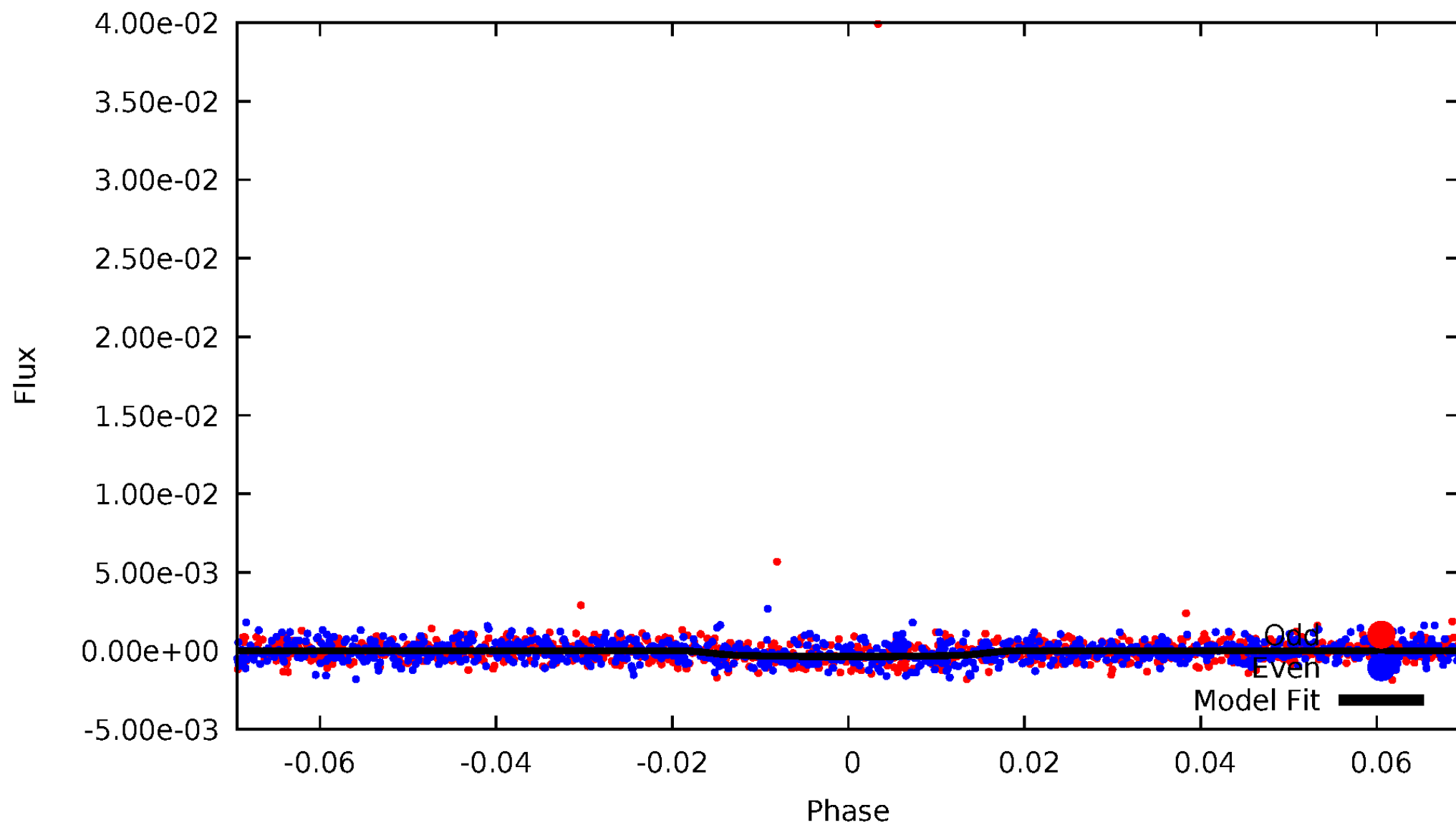


TCE 008044600-01



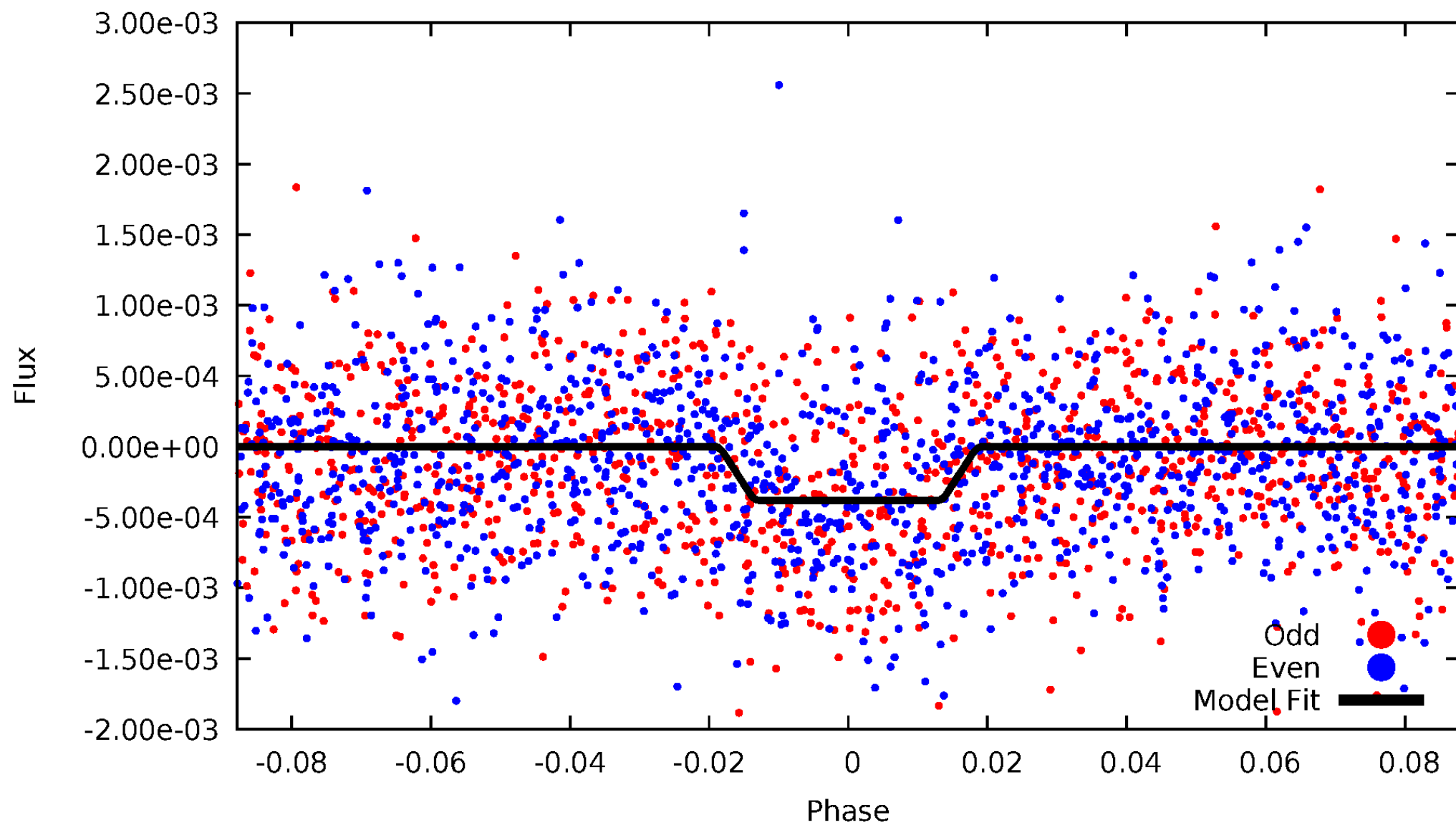
# DV Odd/Even

TCE 008044600-01

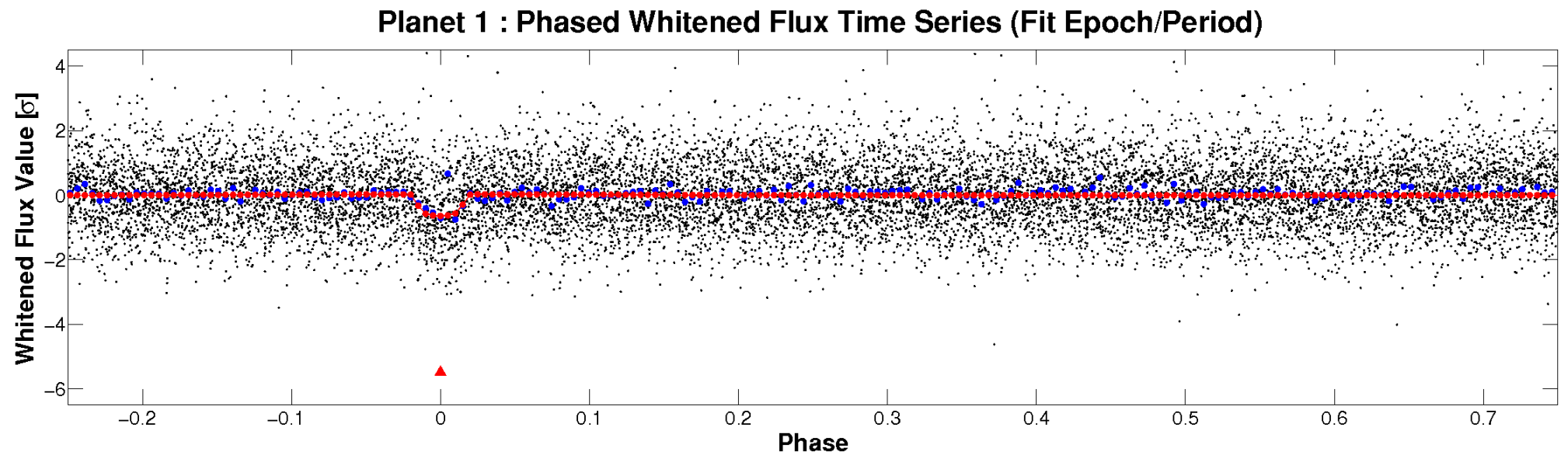
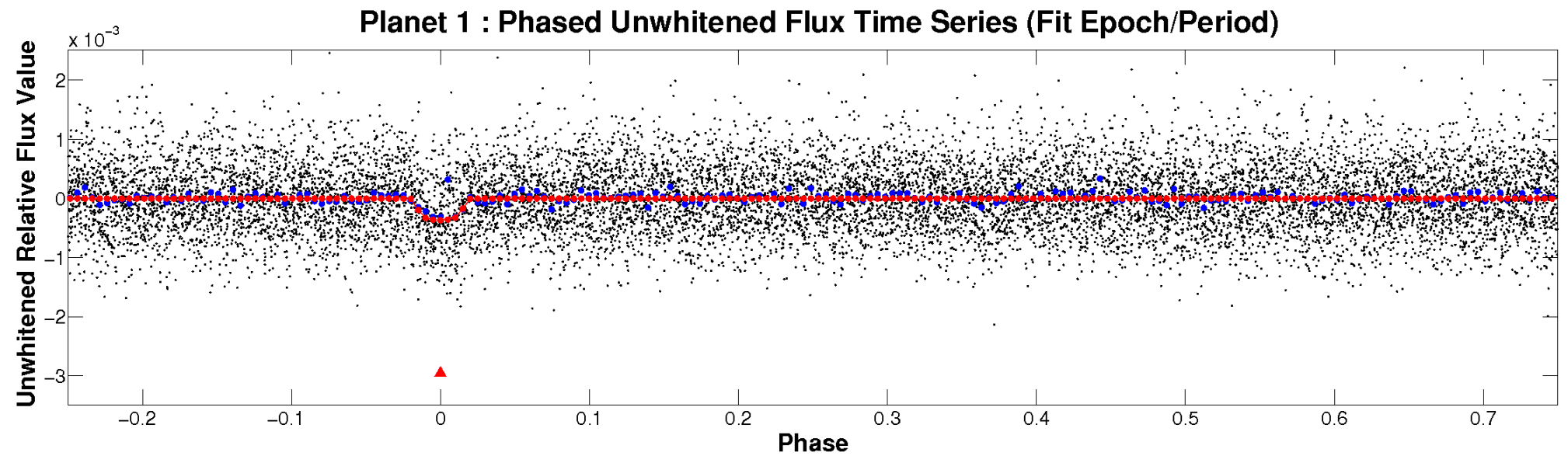


# ALT Odd/Even

TCE 008044600-01

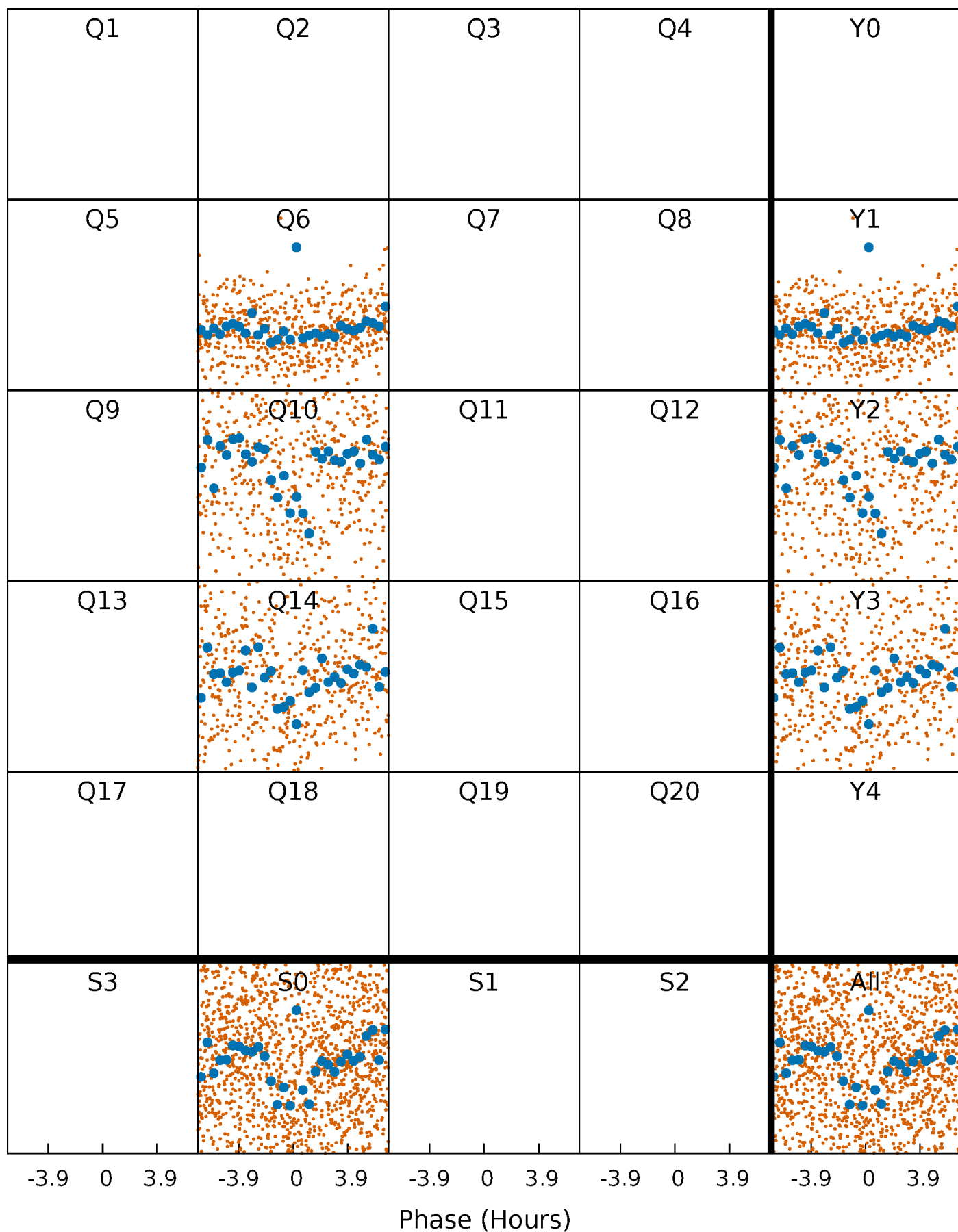


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

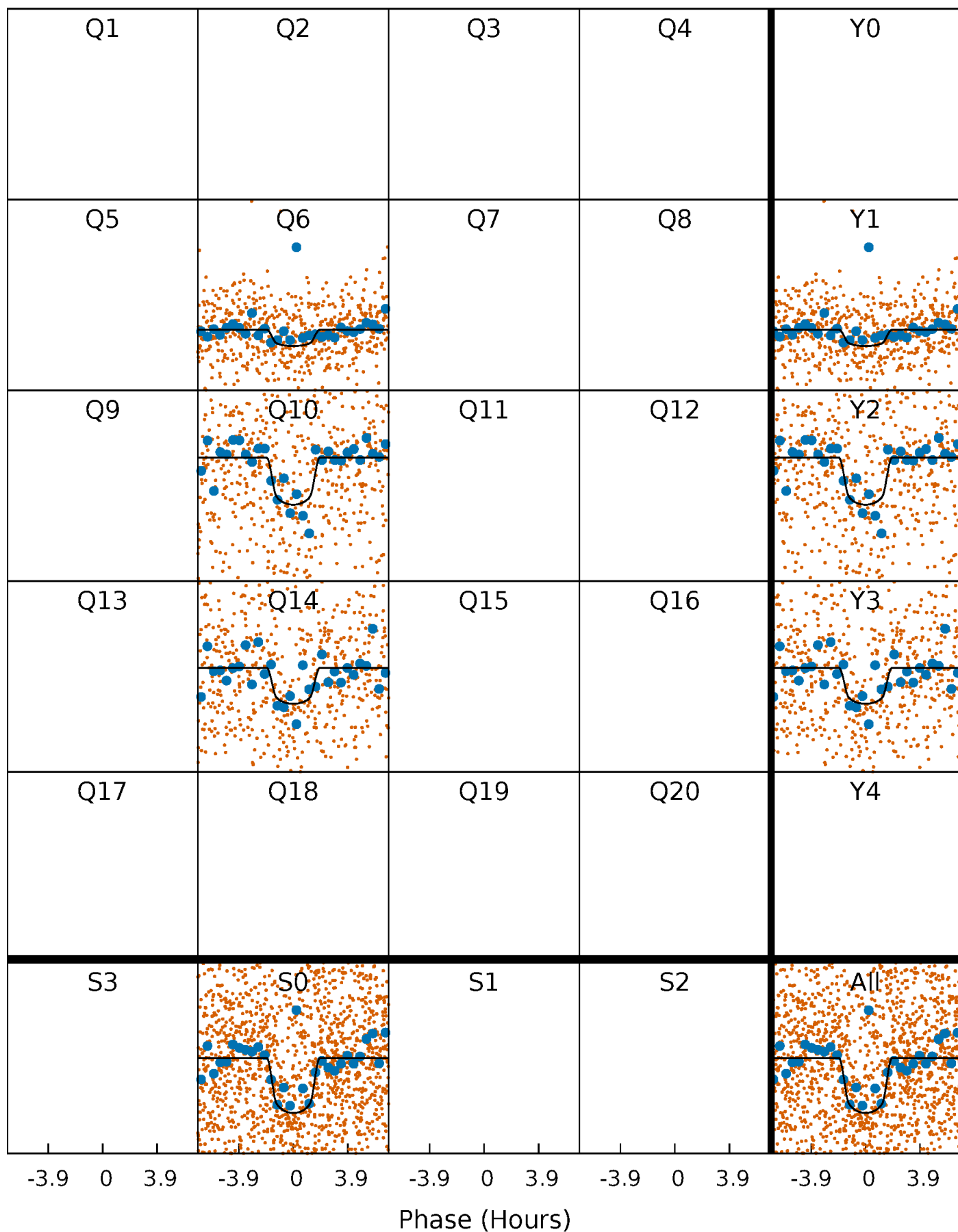
TCE 008044600-01 P= 4.108306 Days  $T_0=134.907713$  (BKJD)





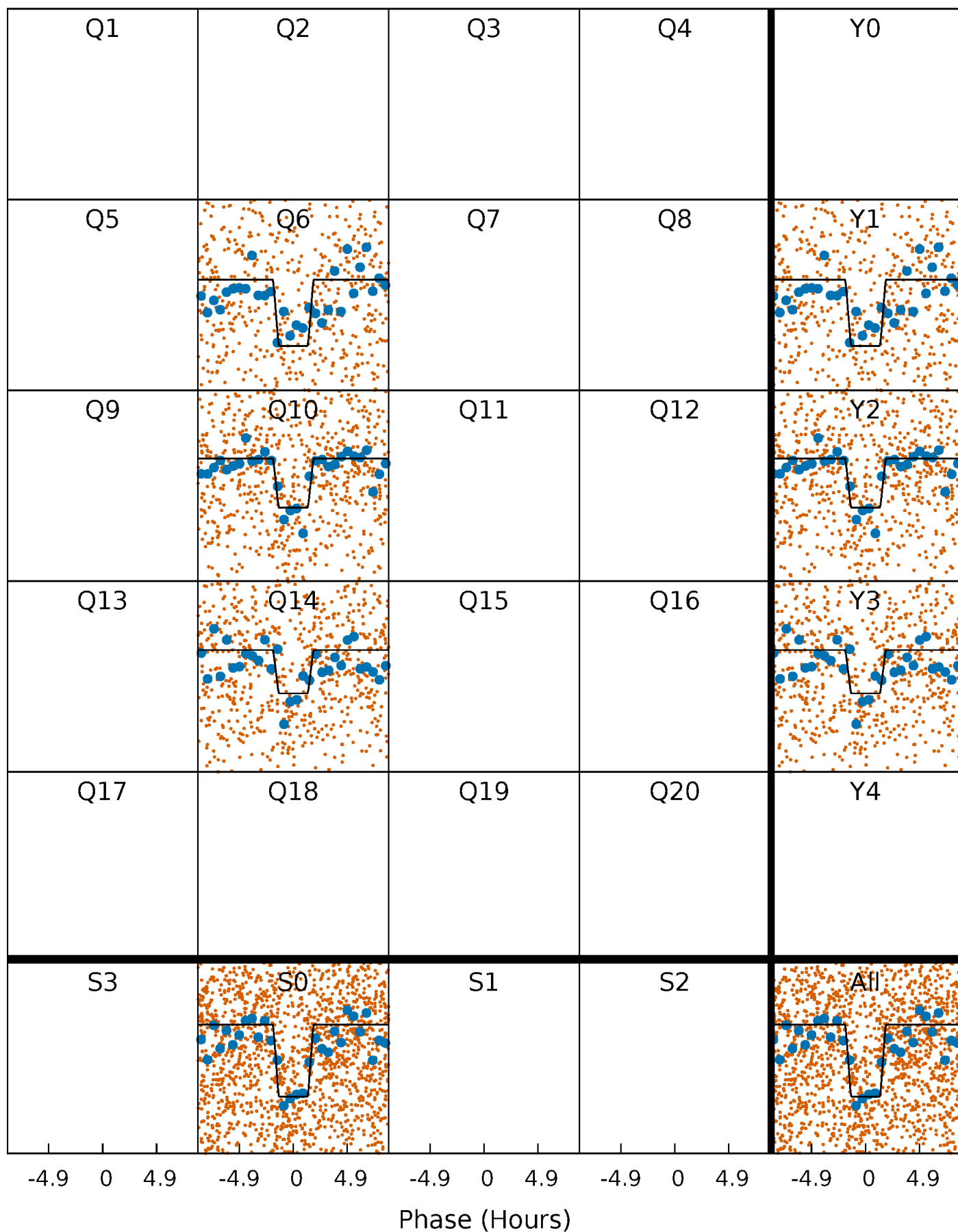
# DV Quarter-Phased Transit Curves

TCE 008044600-01 P= 4.108306 Days  $T_0=134.907713$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

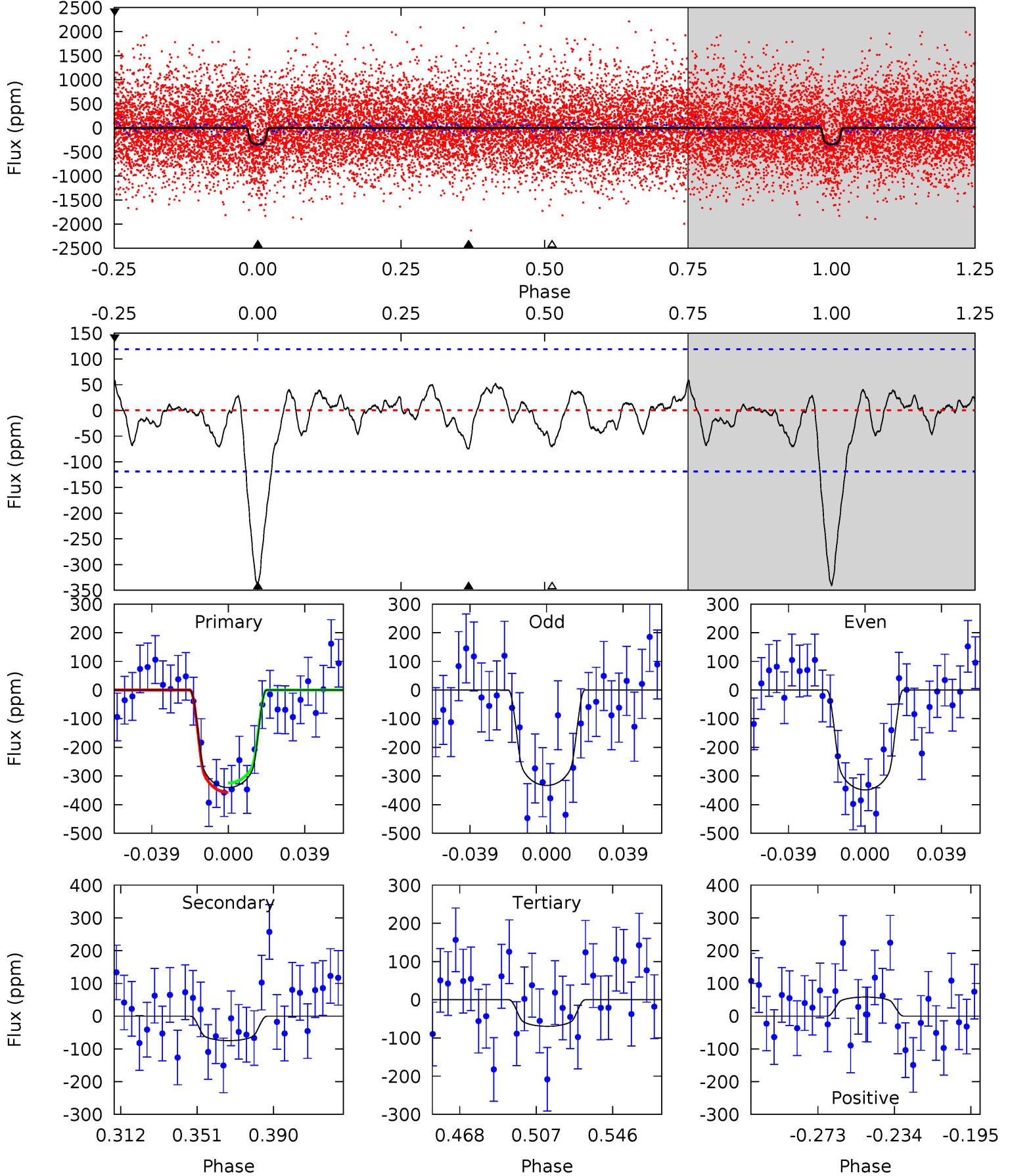
TCE 008044600-01 P= 4.108291 Days  $T_0=134.912534$  (BKJD)



# DV Model-Shift Uniqueness Test

008044600-01, P = 4.108306 Days, E = 134.907713 Days

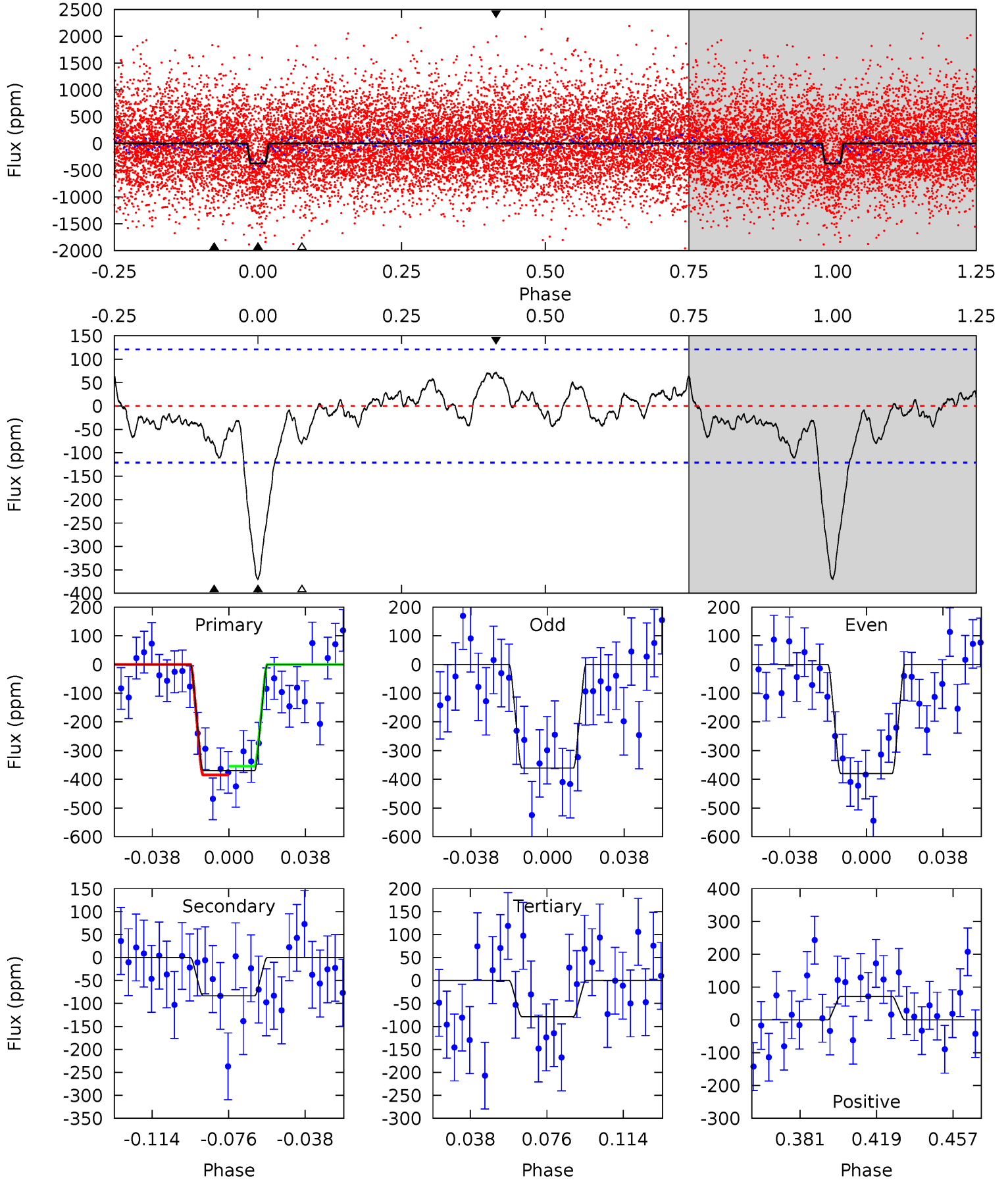
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.6	3.00	2.78	2.33	4.76	2.06	1.09	10.8	11.3	0.22	0.66	0.31	0.59	0.15	0.66



# Alt Model-Shift Uniqueness Test

008044600-01, P = 4.108291 Days, E = 134.912534 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
14.6	3.28	3.10	2.82	4.76	2.07	1.25	11.5	11.7	0.18	0.46	0.37	1.07	0.16	0.59



### Stellar Parameters For KIC 008044600

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M$ ( $M_{\odot}$ )	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$5730^{+182}_{-202}$	$4.545^{+0.035}_{-0.196}$	$-0.060^{+0.250}_{-0.300}$	$0.870^{+0.244}_{-0.081}$	$0.968^{+0.102}_{-0.114}$	$2.069^{+0.404}_{-1.063}$
	+3%/-4%	+1%/-4%	+417%/-500%	+28%/-9%	+11%/-12%	+20%/-51%
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 008044600-01 / KOI 4612.01

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$-75 \pm 25$	$2.03^{+1.06}_{-0.90}$	$1515^{+100}_{-74}$	$4015^{+978}_{-544}$	$24^{+51}_{-14}$
Alt.	$-83 \pm 25$	$1.99^{+1.00}_{-1.02}$	$1518^{+97}_{-77}$	$4140^{+1385}_{-636}$	$27^{+89}_{-16}$

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

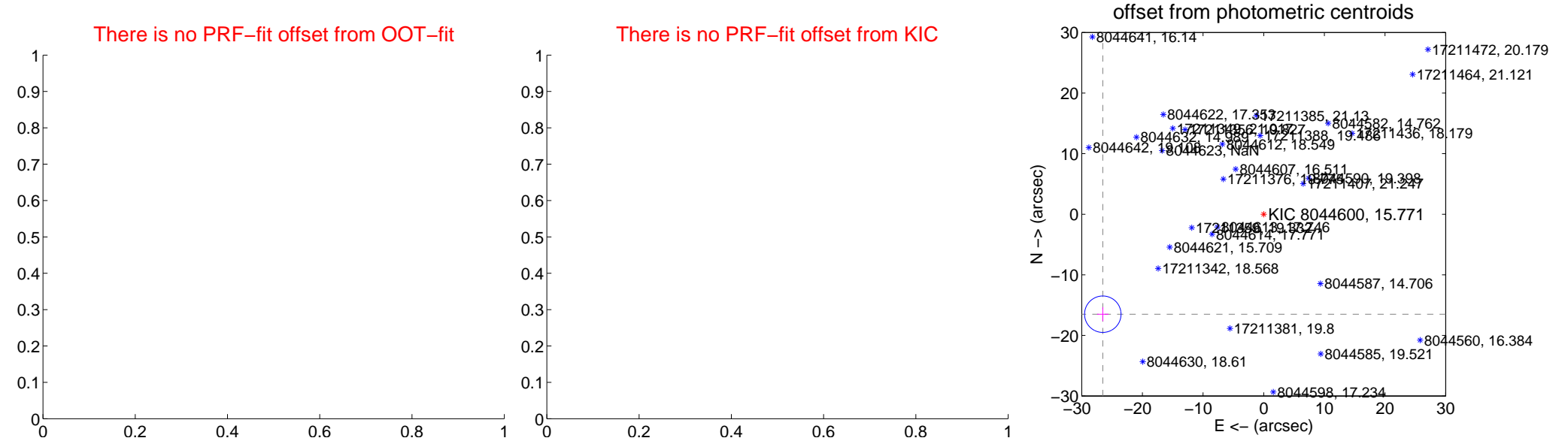
## DV Centroid Data

Supplemental centroid analysis for 008044600-01. Kepler magnitude: 15.77. Transit SNR 11.02

There are 0 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	$31.24 \pm 1.00$	$31.18$	$26.53 \pm 0.94$	$-16.50 \pm 1.15$



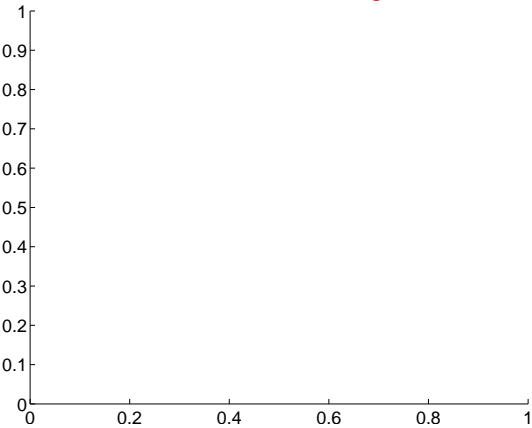
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

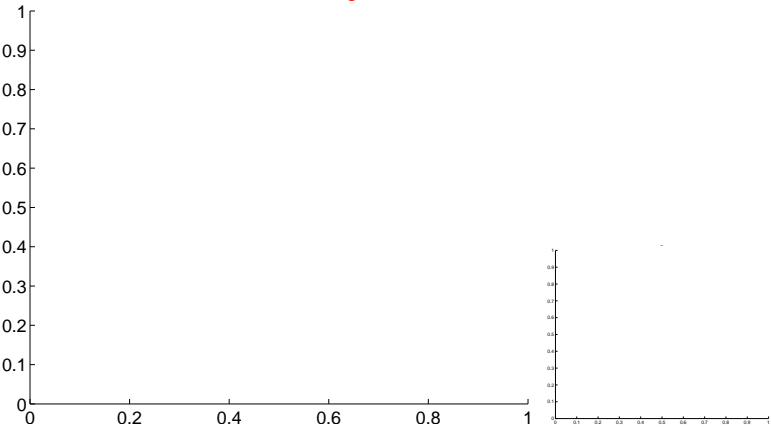


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

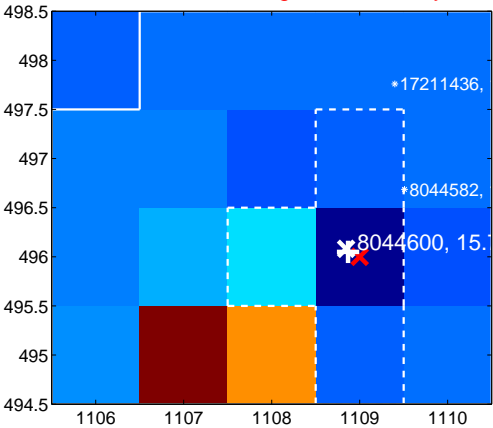
Q5 no difference image



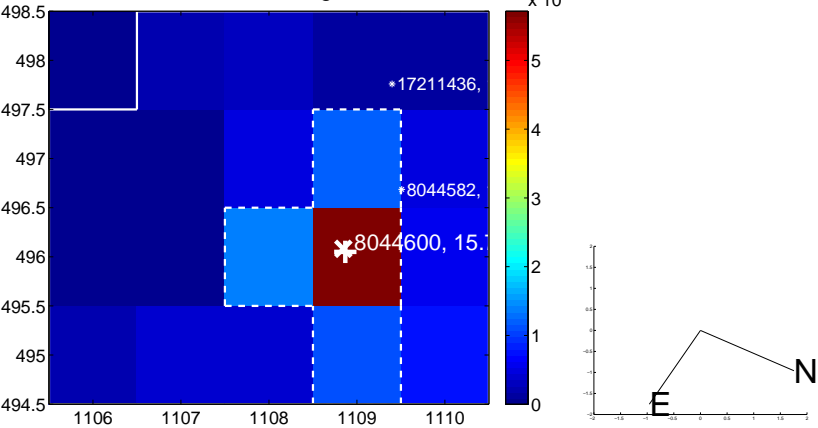
Q5 no OOT image



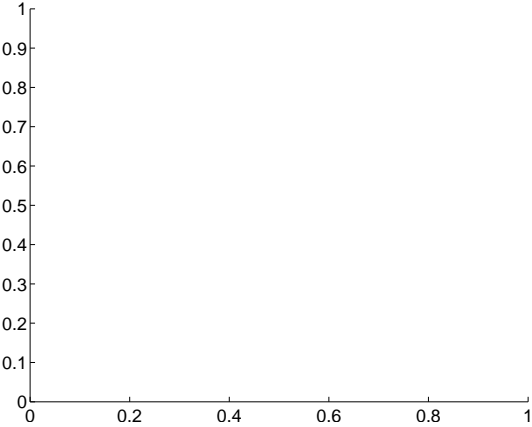
Q6 difference image. Poor Quality



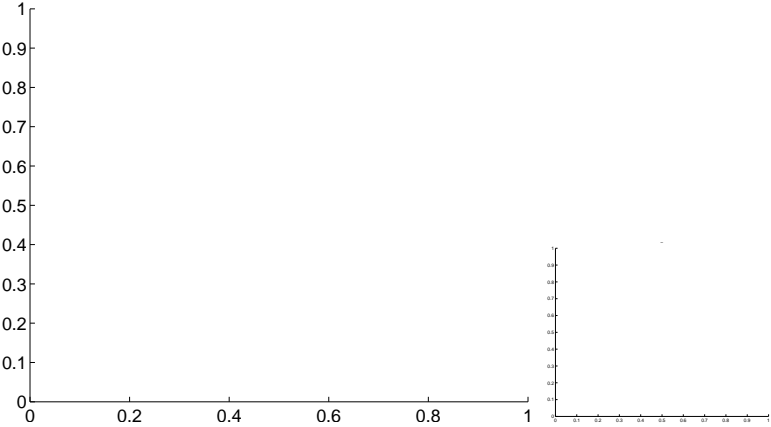
Q6 OOT image



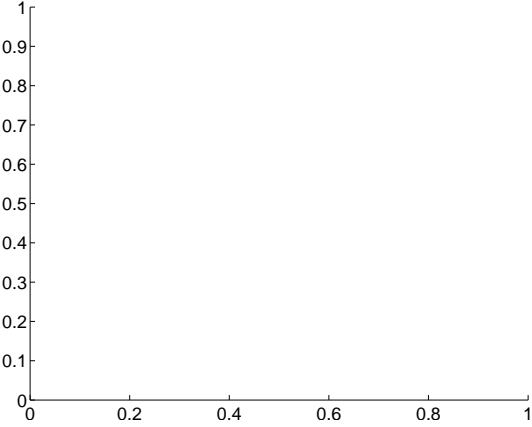
Q7 no difference image



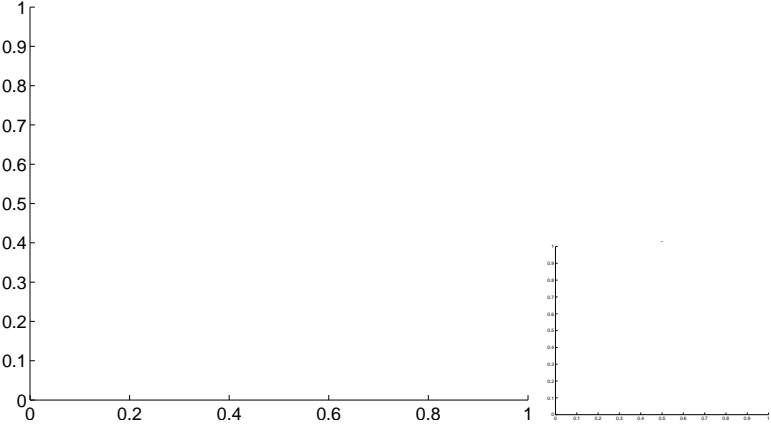
Q7 no OOT image



Q8 no difference image

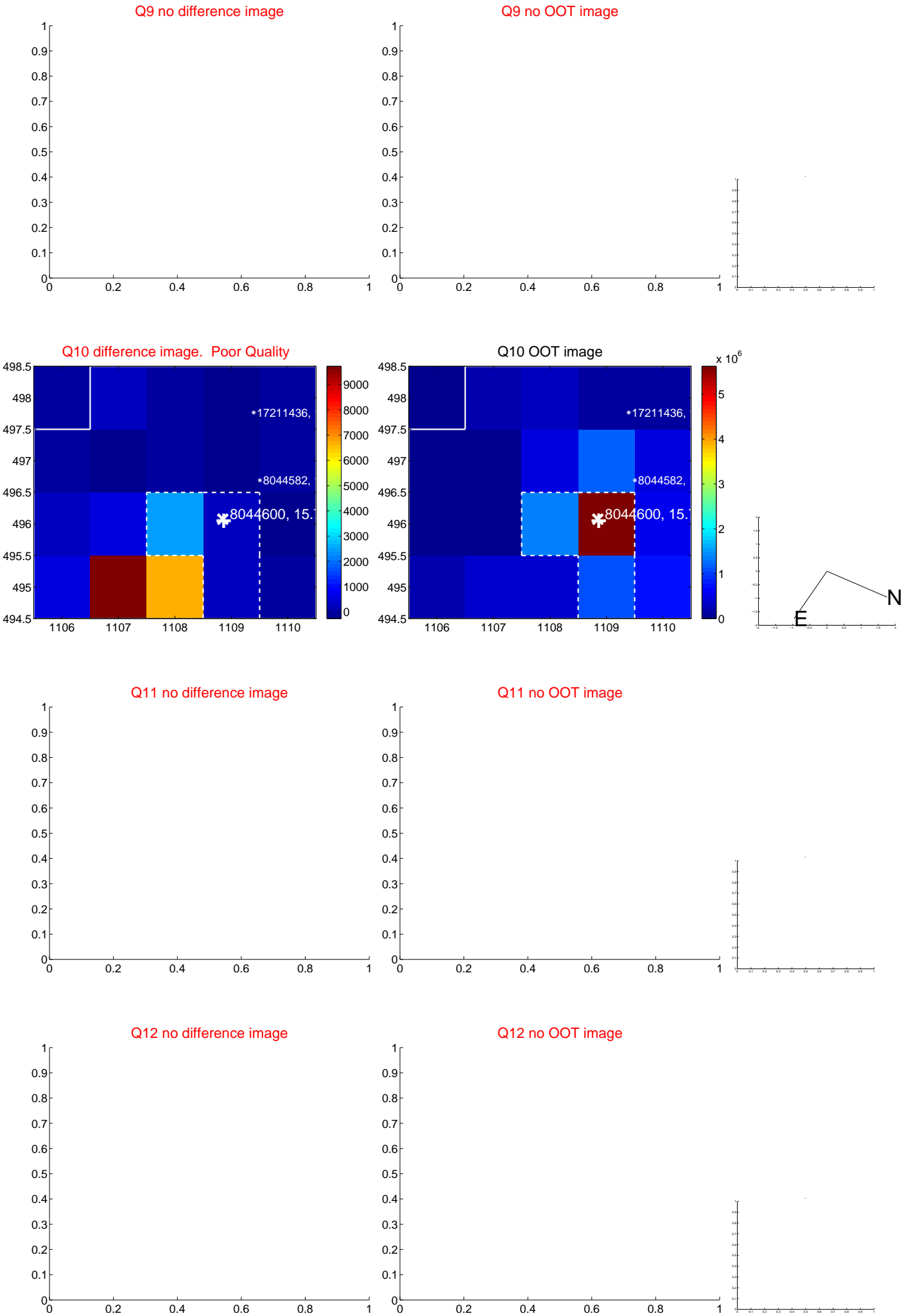


Q8 no OOT image

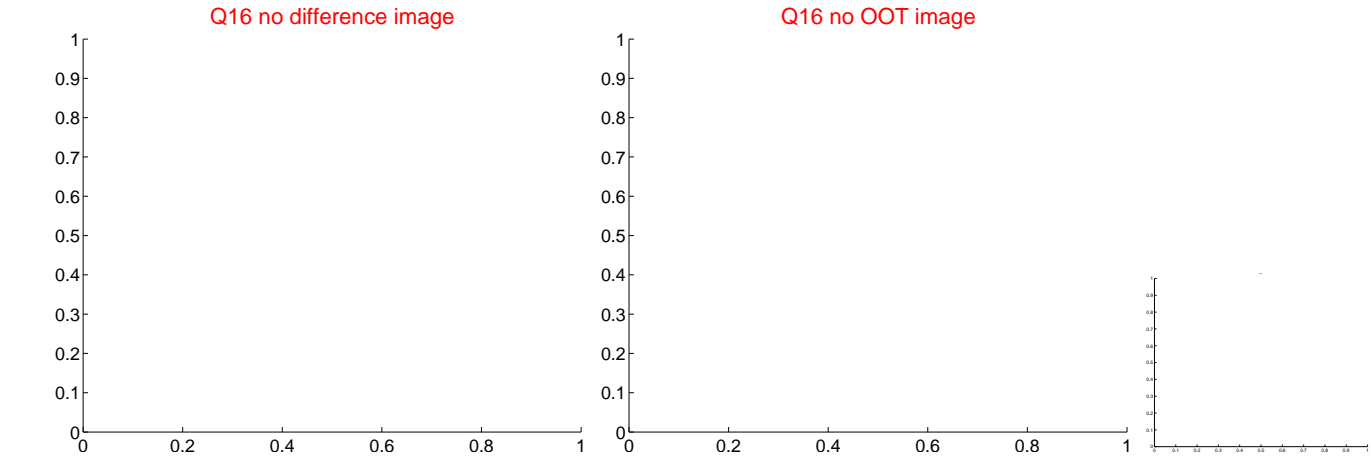
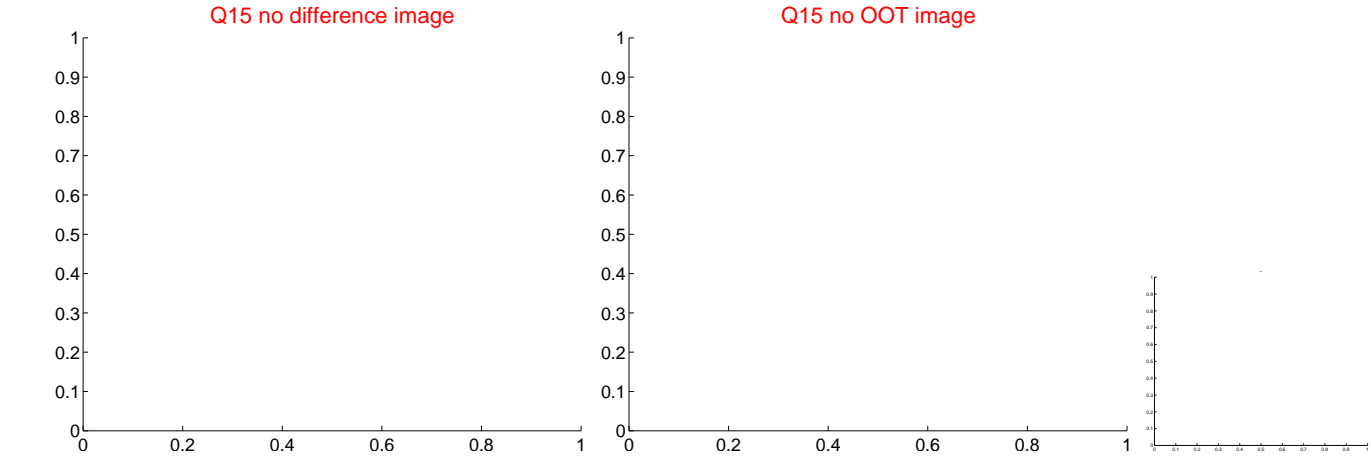
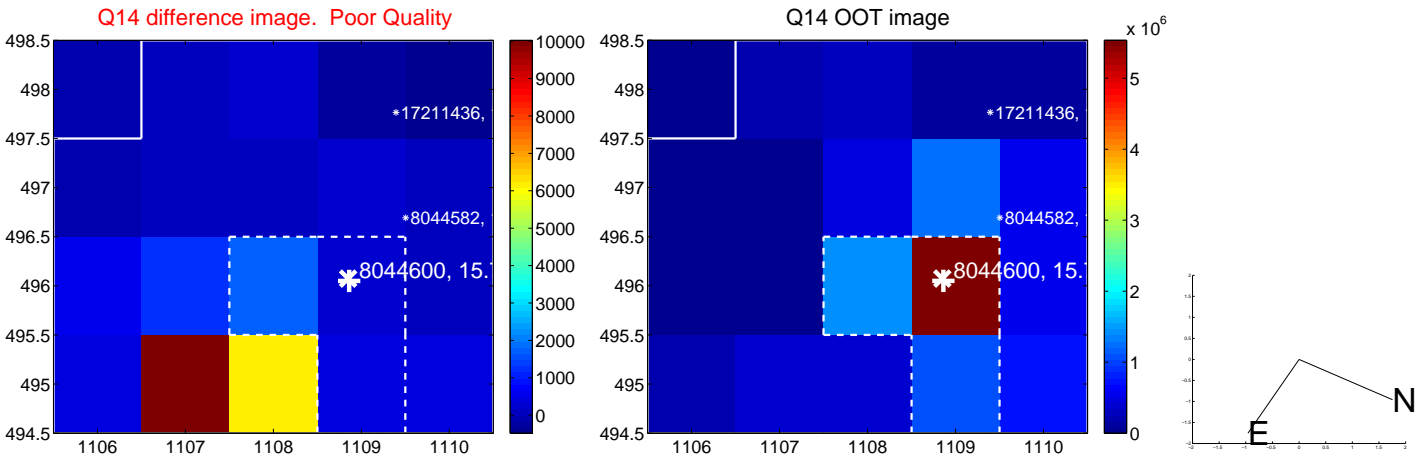
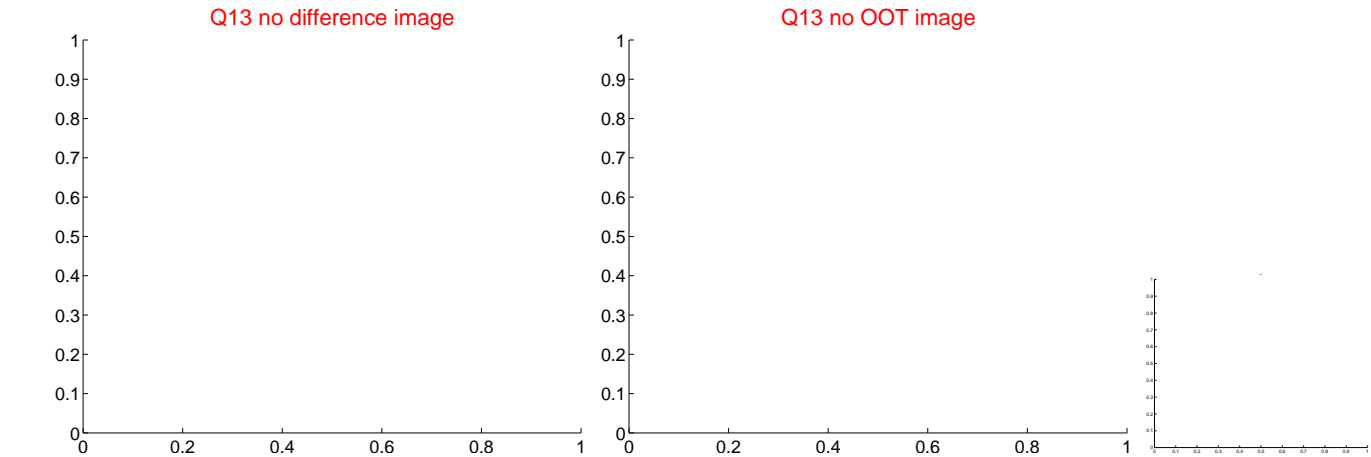




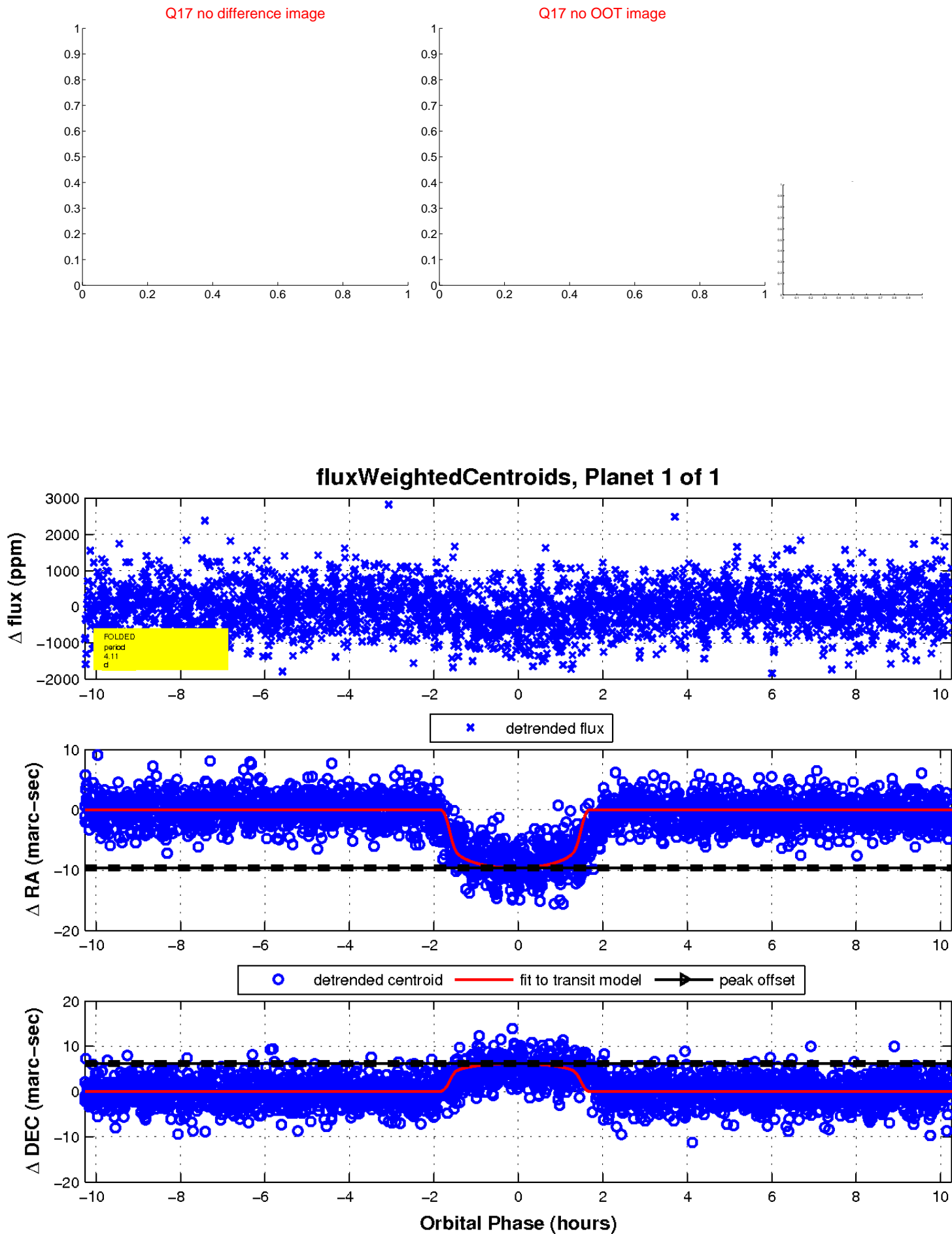
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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UKIRT Image

