

# KIC 006891124

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006891124-01	OBS	7796.01	3.523629	134.188493	78.3	3.464	8.8	9.2	1.08	6269	1.12	740.15

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006891124-01	OBS	PC	0.97	0	0	0	0	NO_COMMENT

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

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

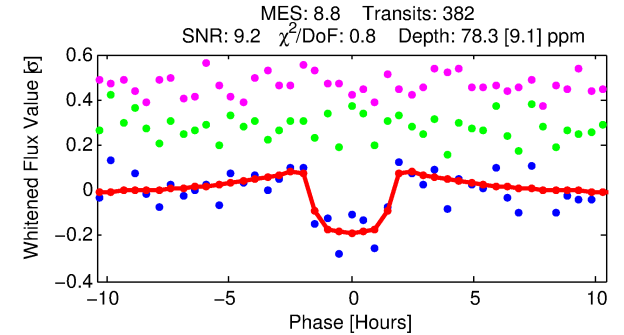
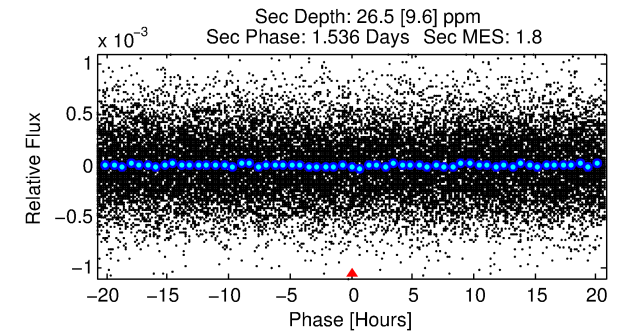
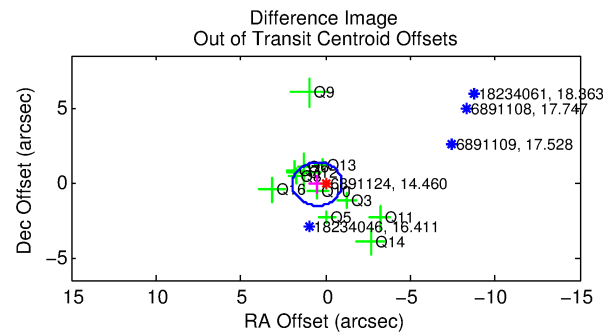
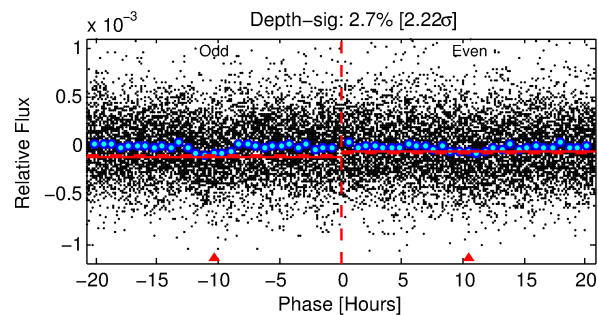
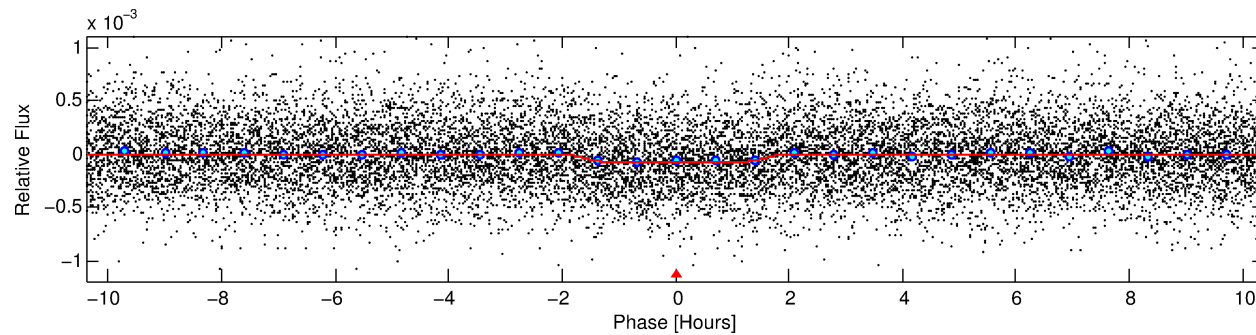
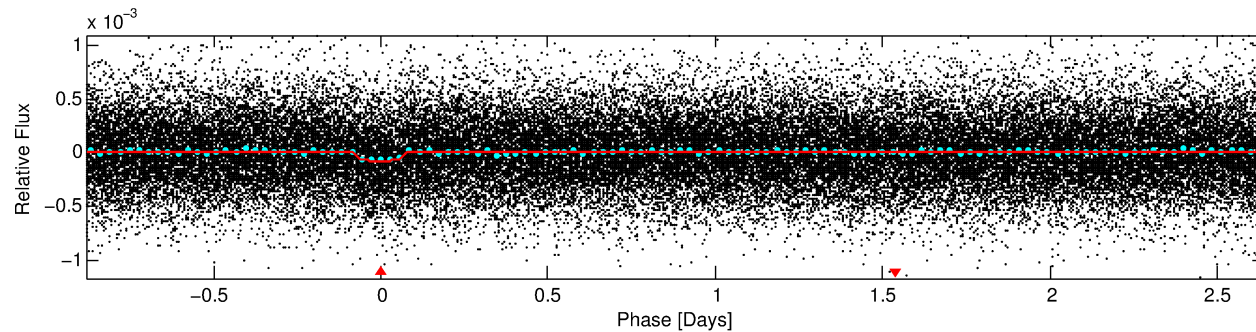
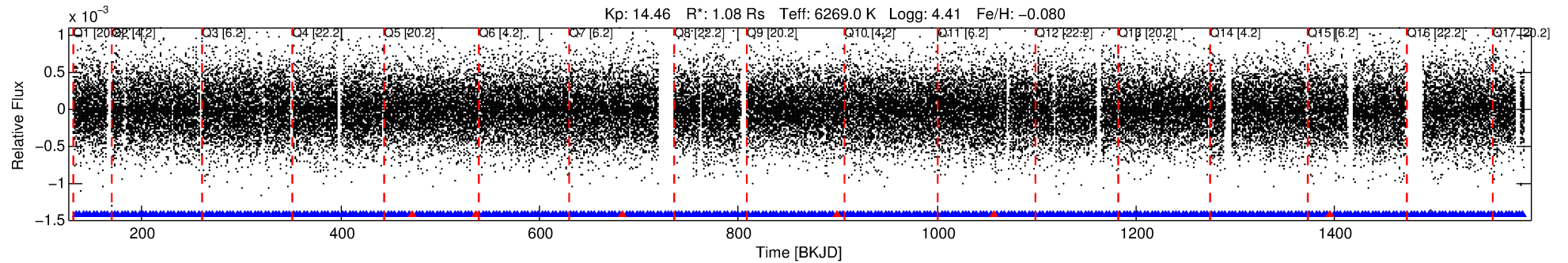
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 006891124-01

No Significant Match Found

# DV One-Page Summary

KIC: 6891124 Candidate: 1 of 1 Period: 3.524 d



## DV Fit Results:

Period = 3.52363 [0.00002] d  
Epoch = 134.1885 [0.0043] BKJD  
Rp/R\* = 0.0095 [0.0043]  
a/R\* = 3.71 [8.37]  
b = 0.90 [0.53]  
Seff = 740.15 [307.38]  
Teq = 1330 [138] K  
Rp = 1.12 [0.63] Re  
a = 0.0469 [0.0129] AU  
Ag = 25.40 [26.48] [0.92 $\sigma$ ]  
Teffp = 4616 [1127] K [2.90 $\sigma$ ]

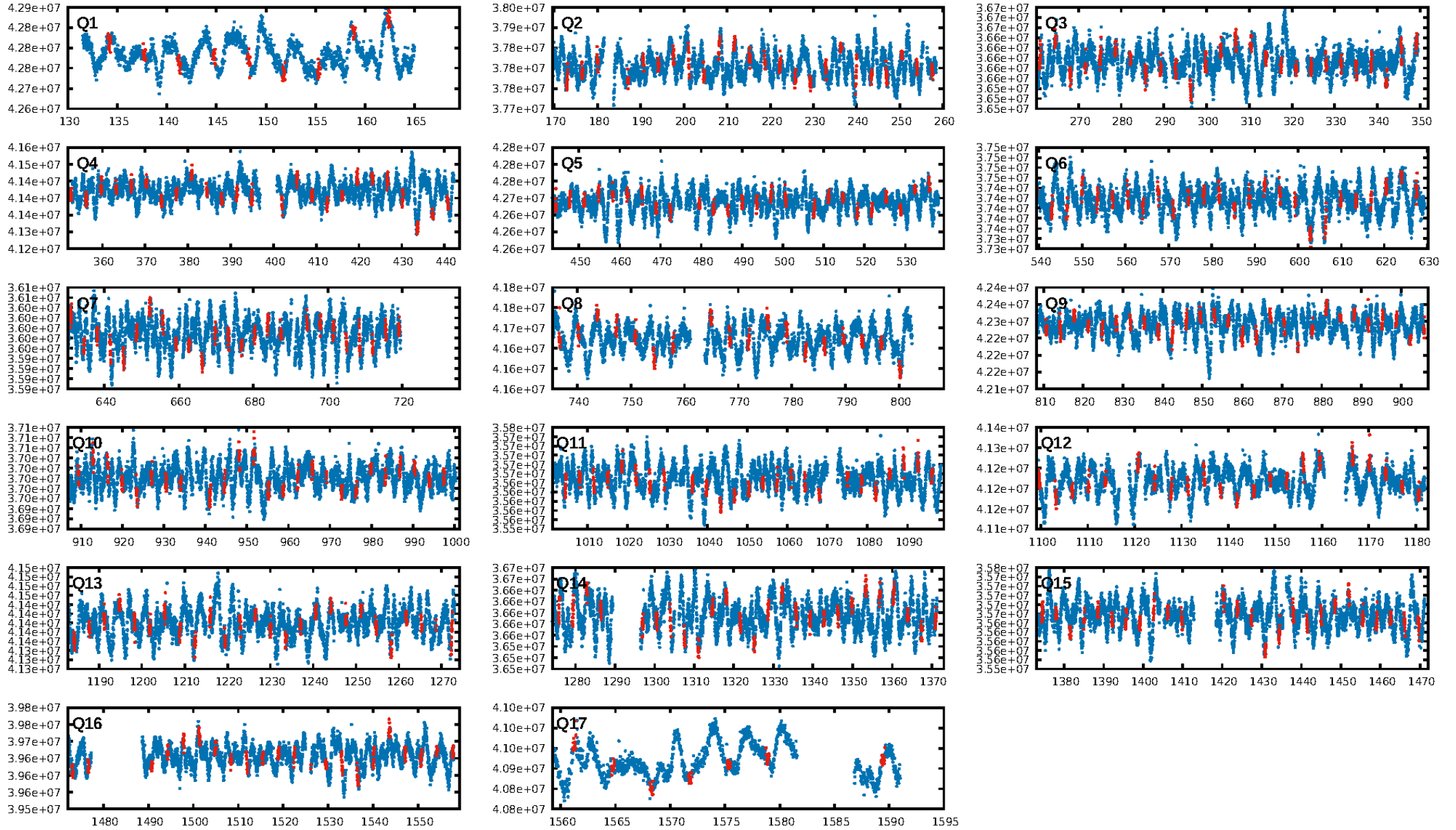
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 9.61e-19  
RollingBand-fgt: 0.98 [360/366]  
GhostDiagnostic-chr: 2.585  
Centroid-sig: 16.8%  
Centroid-so: 1.148 arcsec [0.97 $\sigma$ ]  
OotOffset-rm: 0.500 arcsec [1.03 $\sigma$ ]  
KicOffset-rm: 0.621 arcsec [1.22 $\sigma$ ]  
OotOffset-st: 3/3/3 [12]  
KicOffset-st: 3/3/3 [12]  
DiffImageQuality-fgm: 0.67 [8/12]  
DiffImageOverlap-fno: 1.00 [17/17]

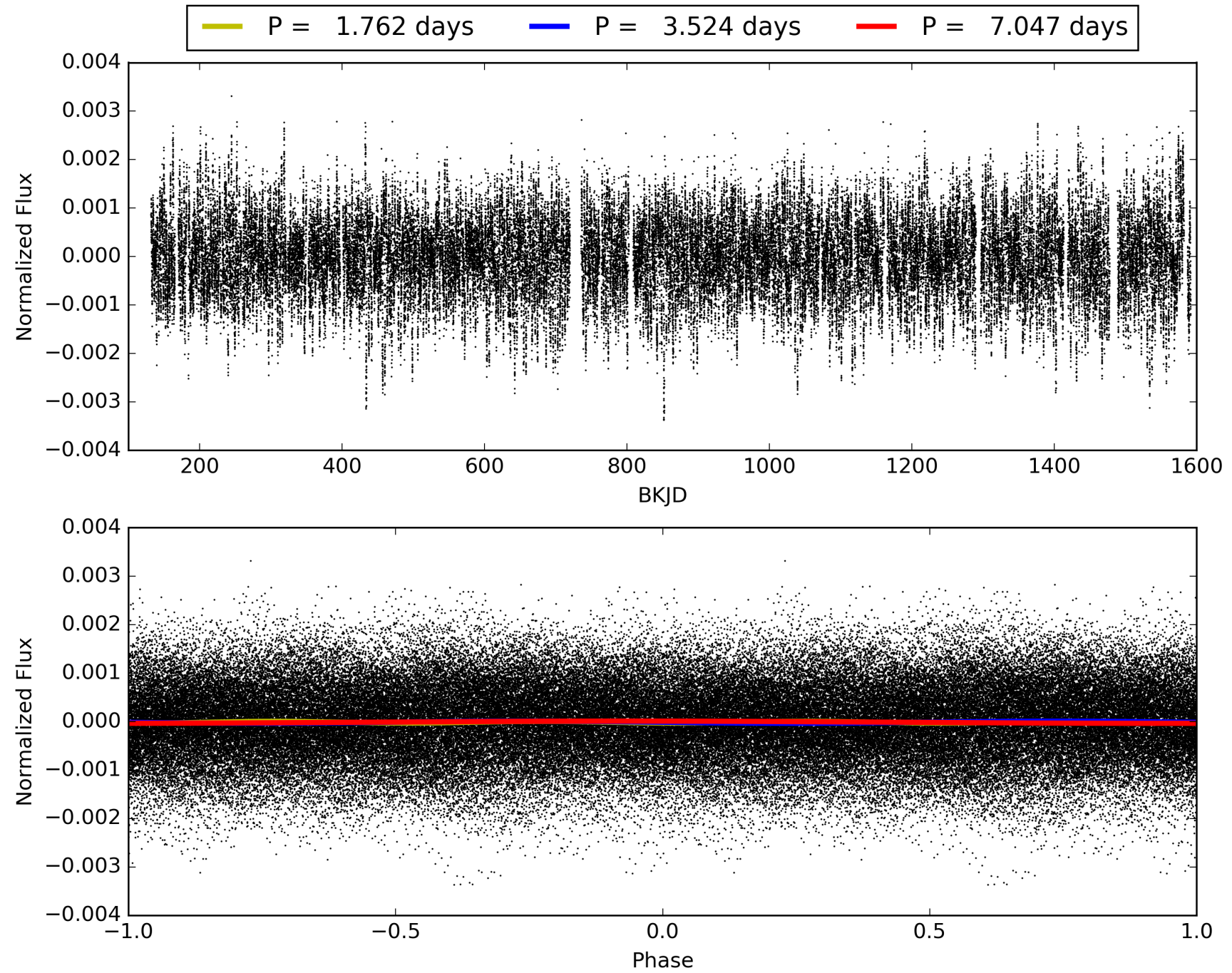
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 21:18:13 Z

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

# TCE 006891124-01, PDC Light Curves



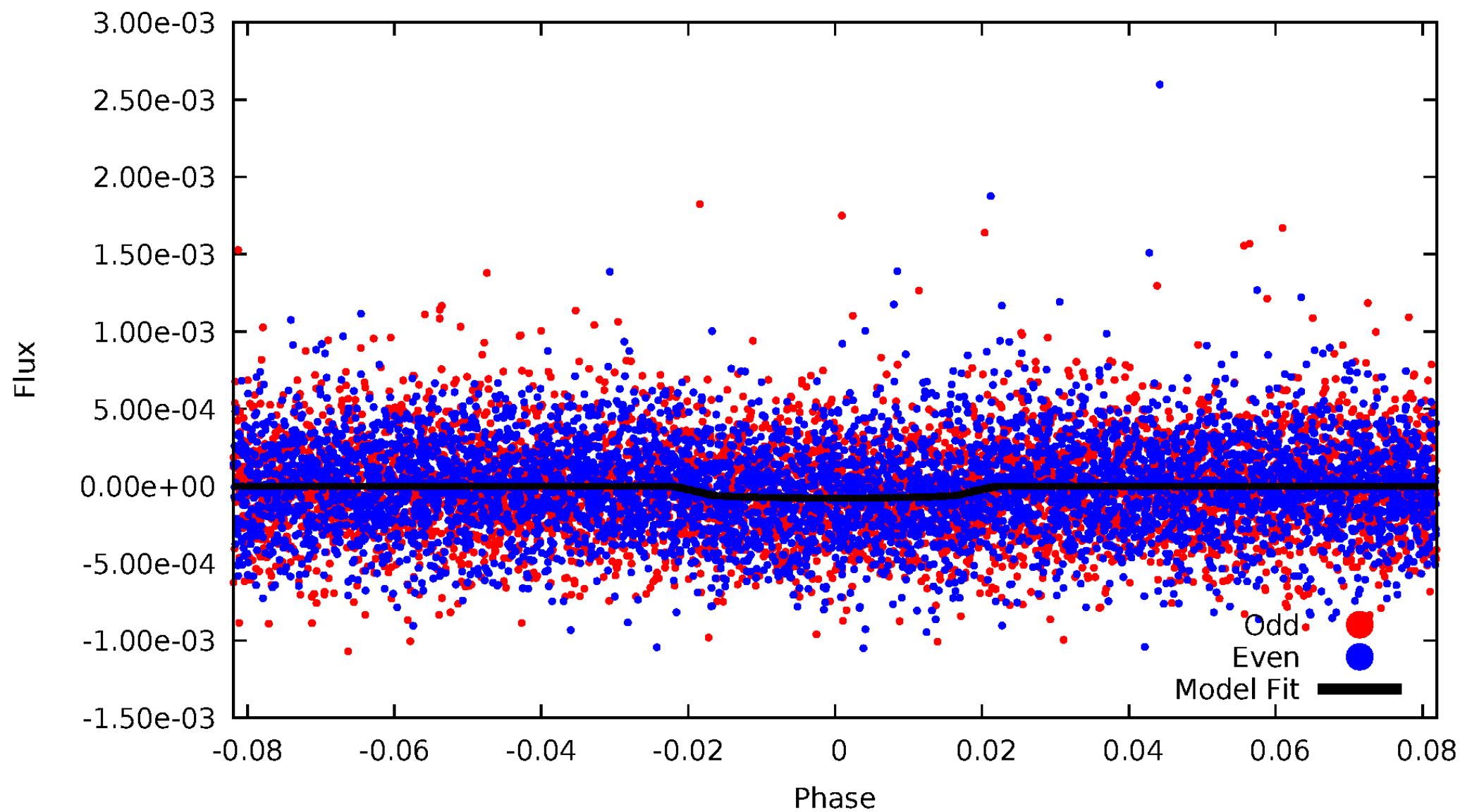
TCE 006891124-01





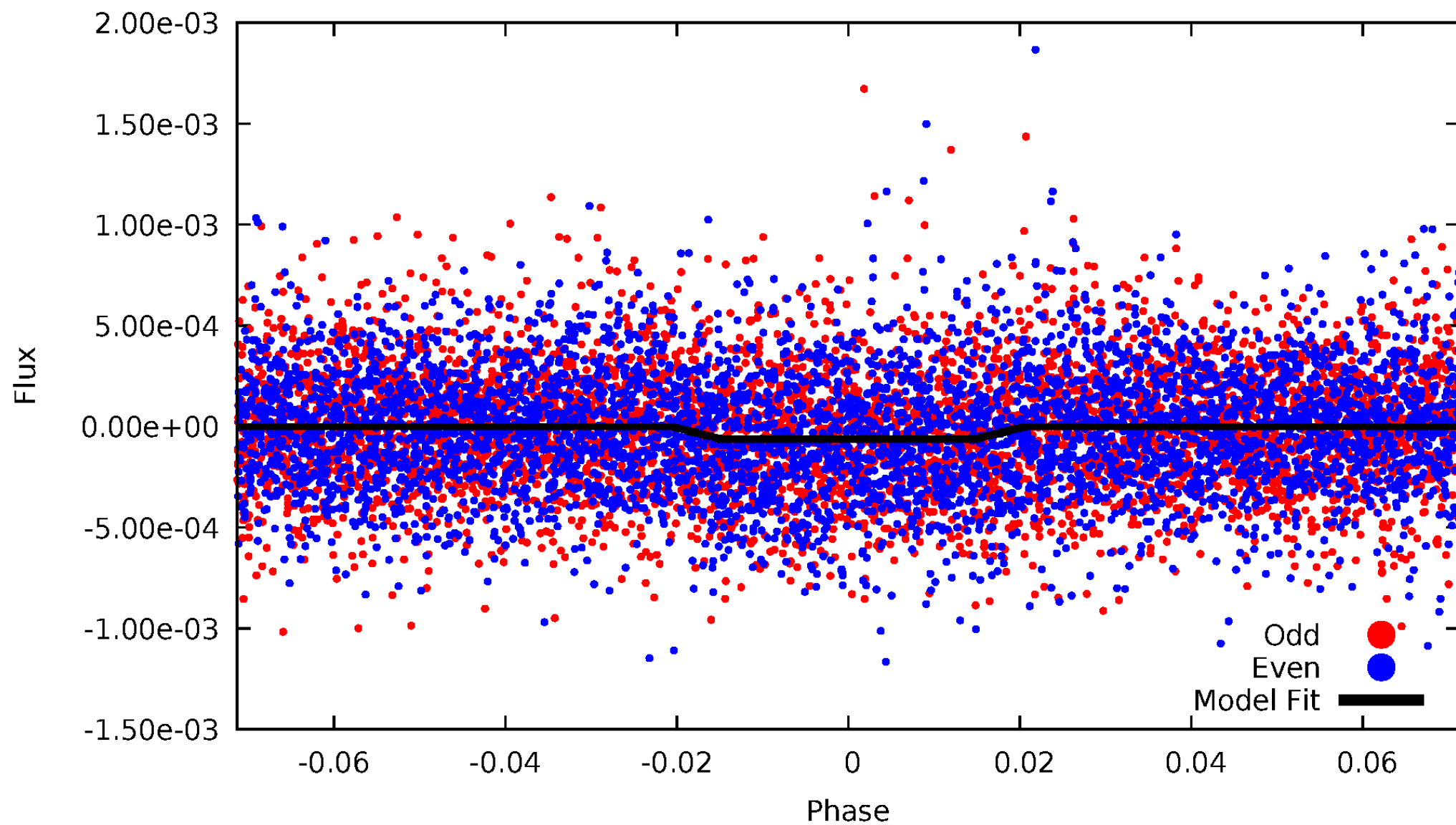
# DV Odd/Even

TCE 006891124-01

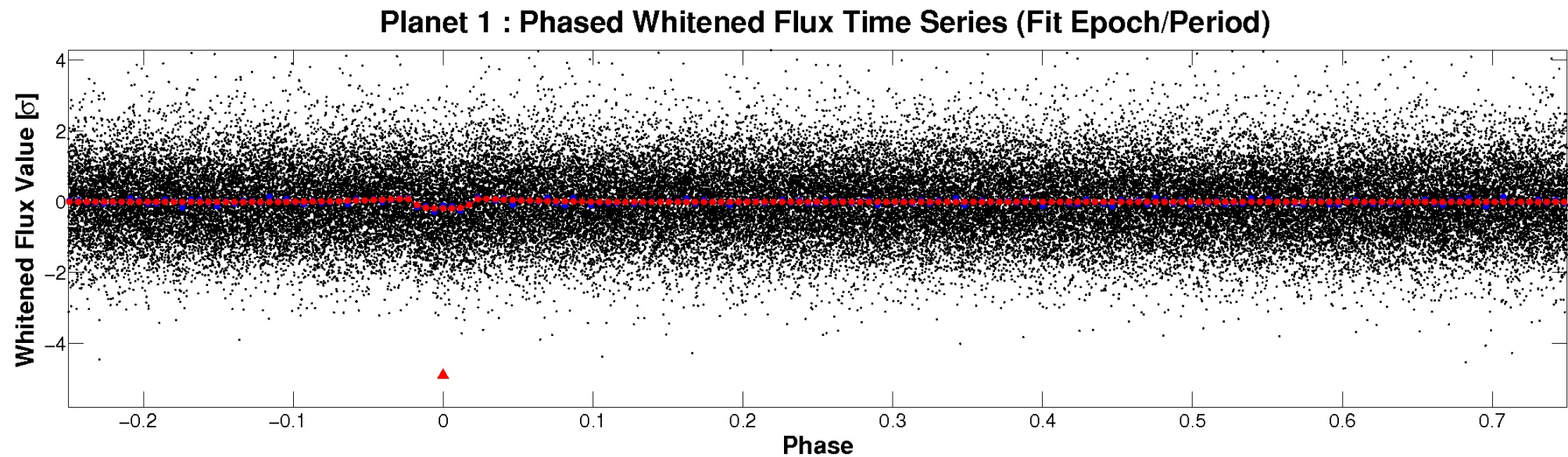
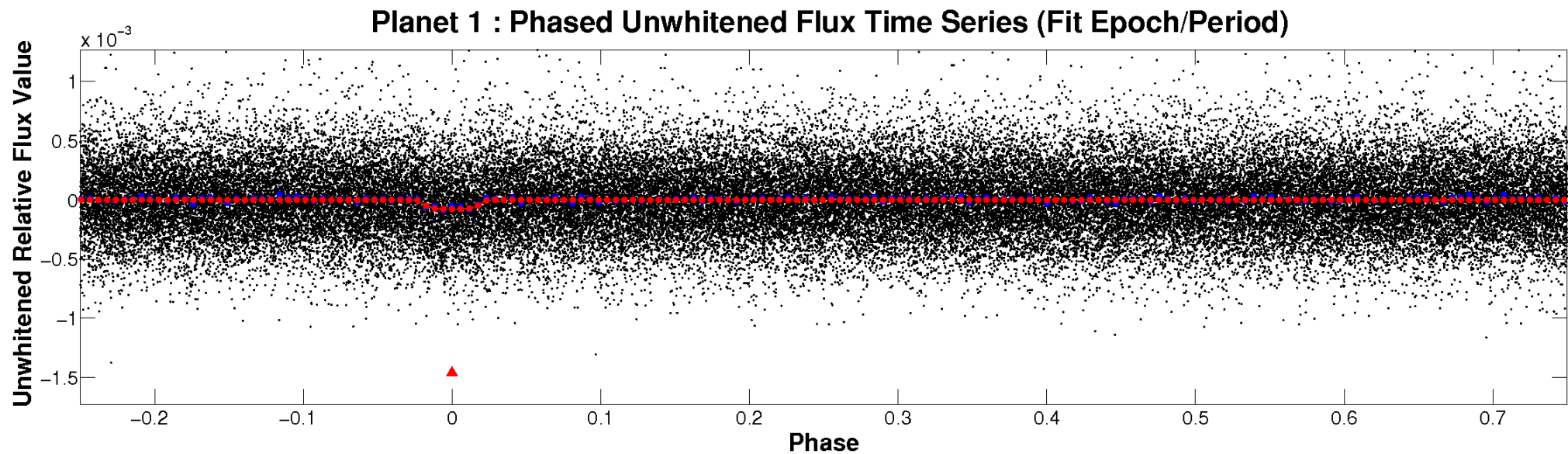


# ALT Odd/Even

TCE 006891124-01

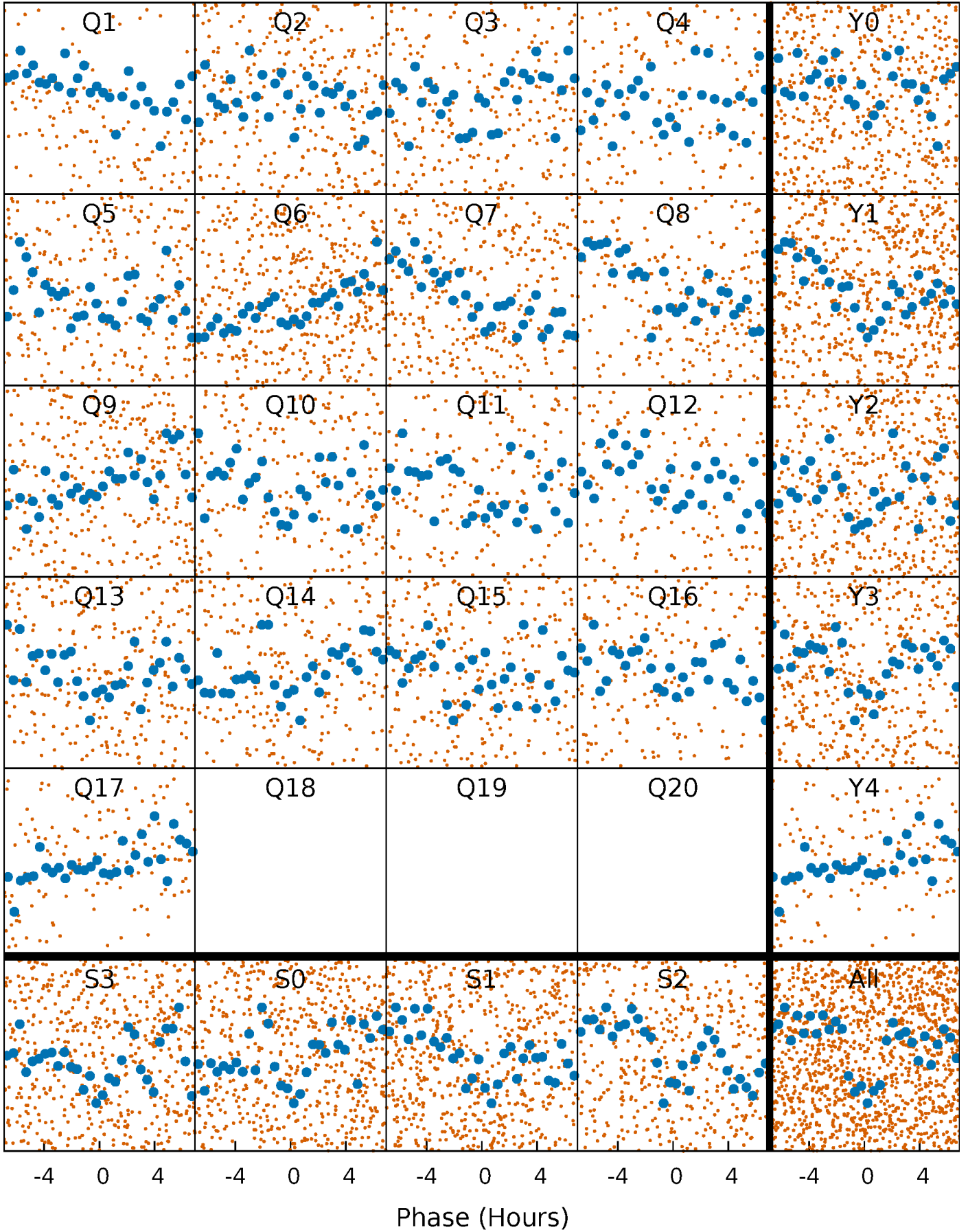


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

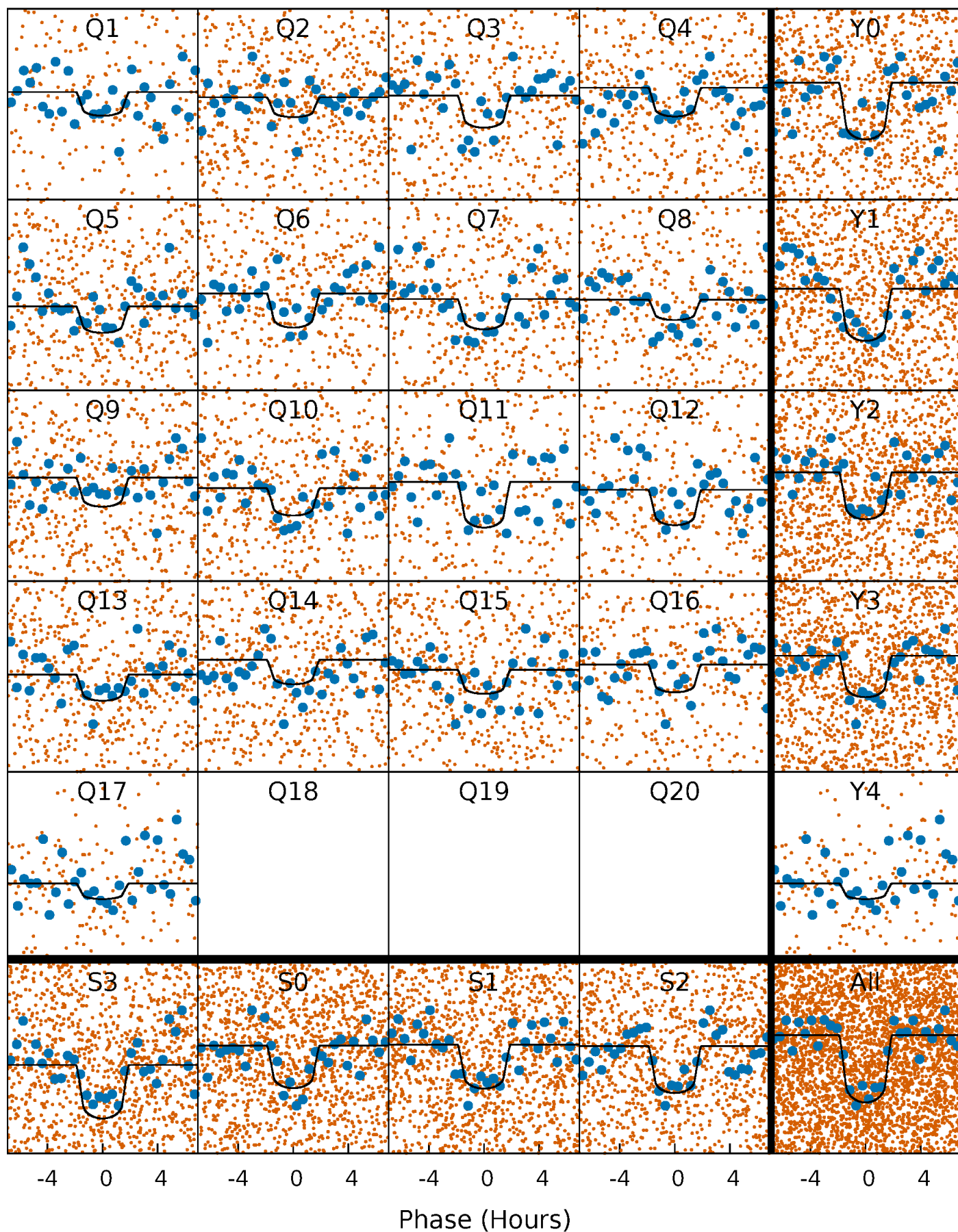
TCE 006891124-01 P= 3.523629 Days  $T_0=134.188493$  (BKJD)





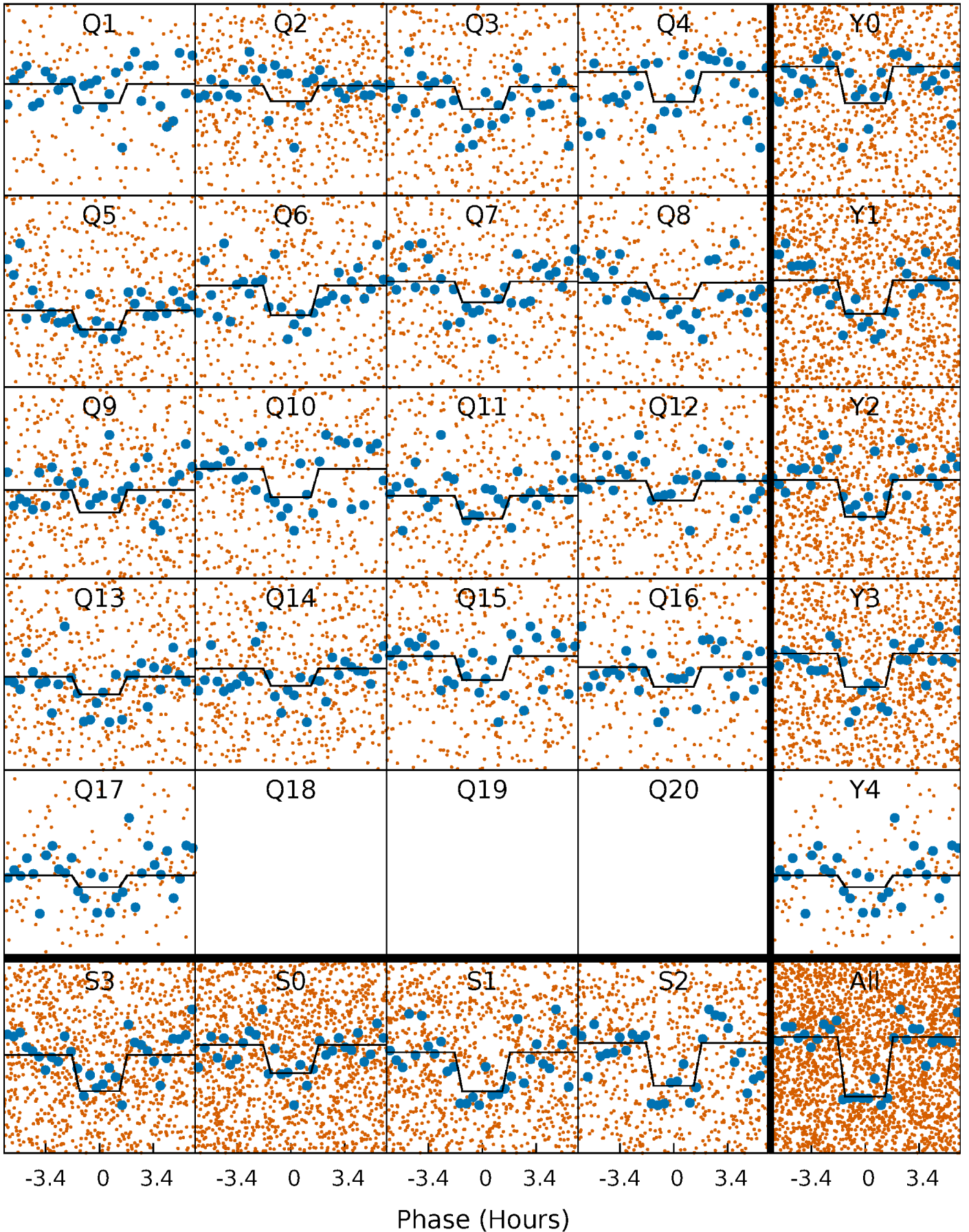
# DV Quarter-Phased Transit Curves

TCE 006891124-01 P= 3.523629 Days  $T_0=134.188493$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

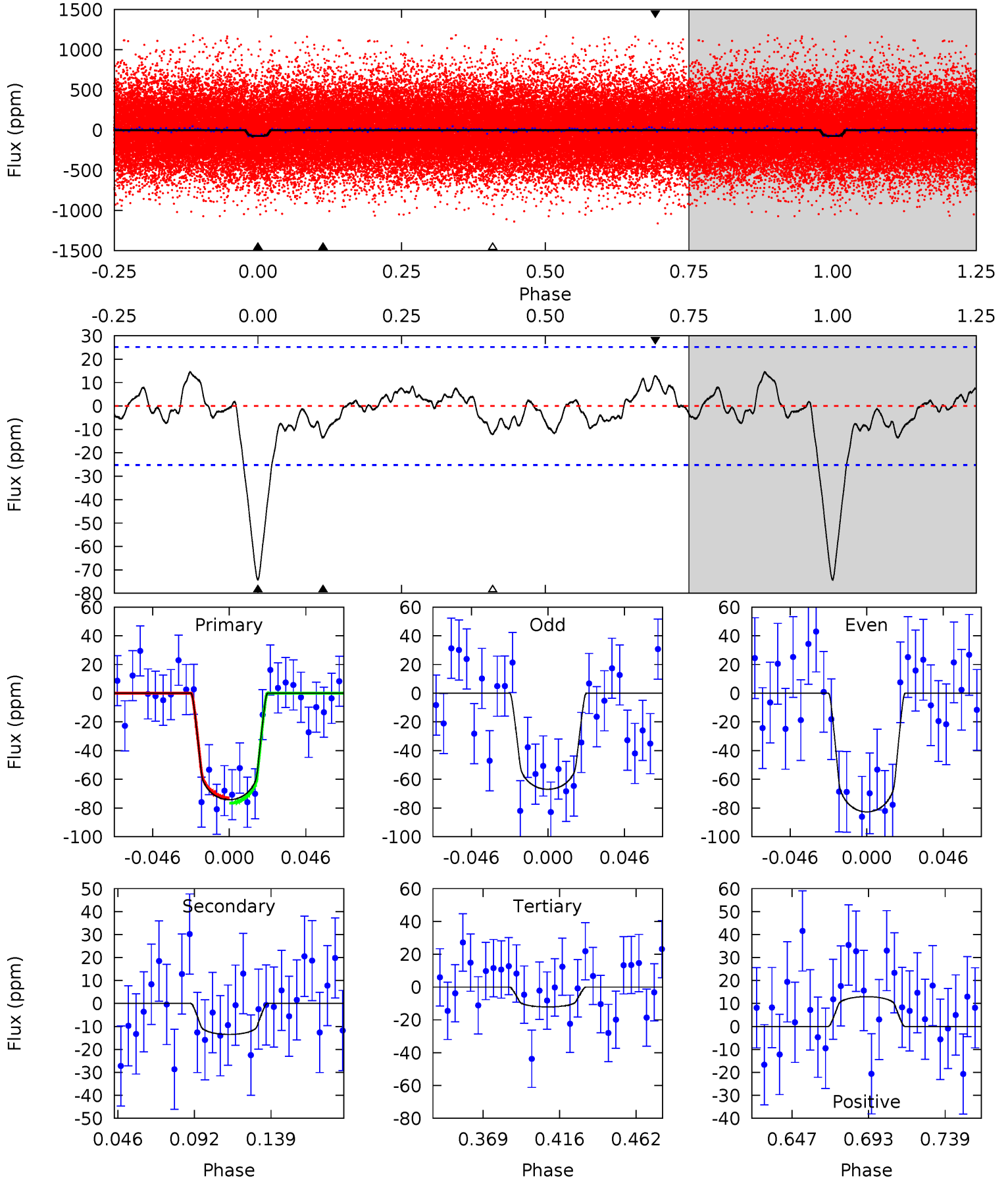
TCE 006891124-01 P= 3.523638 Days  $T_0=134.183801$  (BKJD)



# DV Model-Shift Uniqueness Test

006891124-01, P = 3.523629 Days, E = 130.664864 Days

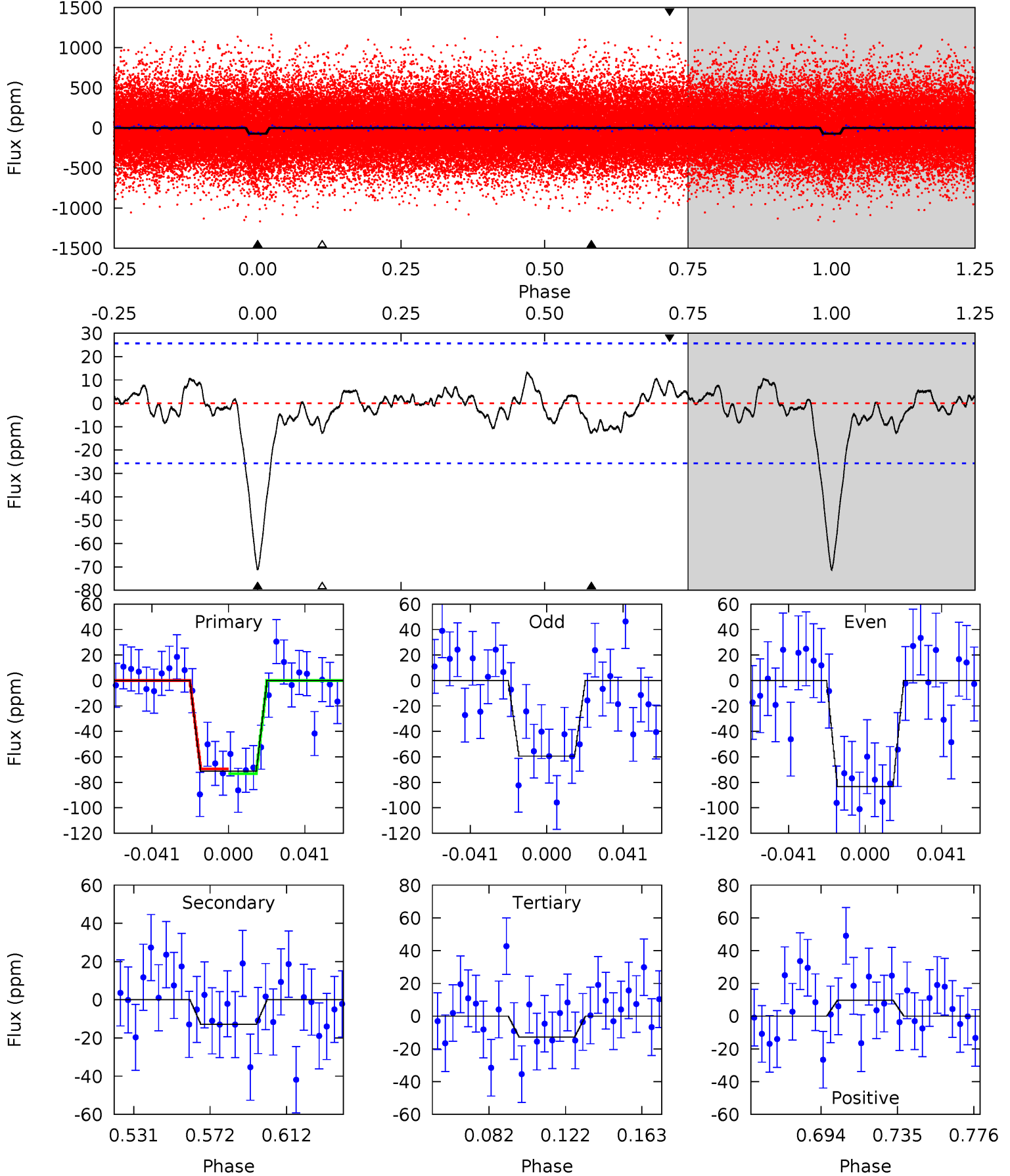
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.9	2.53	2.27	2.43	4.72	1.99	1.10	11.6	11.5	0.26	0.10	1.48	1.04	0.16	0.35



# Alt Model-Shift Uniqueness Test

006891124-01, P = 3.523638 Days, E = 130.660163 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
13.2	2.37	2.37	1.79	4.75	2.05	0.96	10.8	11.4	0.00	0.58	2.22	1.17	0.16	0.34





### Stellar Parameters For KIC 006891124

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6269^{+174}_{-218}$	$4.412^{+0.070}_{-0.210}$	$-0.080^{+0.250}_{-0.300}$	$1.085^{+0.361}_{-0.120}$	$1.106^{+0.171}_{-0.140}$	$1.221^{+0.446}_{-0.653}$
	+3%/-3%	+2%/-5%	+312%/-375%	+33%/-11%	+15%/-13%	+37%/-54%
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 006891124-01 / KOI 7796.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-13 \pm 5$	$1.17^{+0.58}_{-0.52}$	$1886^{+140}_{-99}$	$4107^{+1105}_{-594}$	$11^{+28}_{-7}$
Alt.	$-13 \pm 5$	$1.02^{+0.56}_{-0.52}$	$1890^{+138}_{-100}$	$4322^{+1497}_{-723}$	$15^{+43}_{-10}$

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

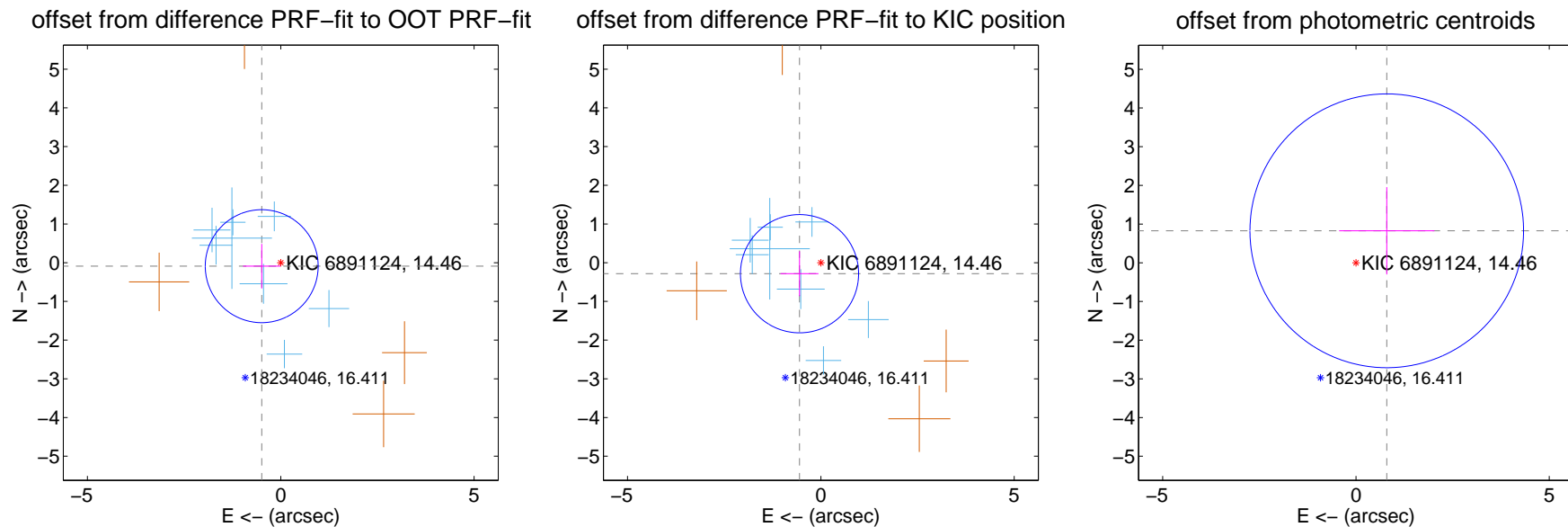
## DV Centroid Data

Supplemental centroid analysis for 006891124-01. Kepler magnitude: 14.46. Transit SNR 9.15

There are 8 quarters with good PRF difference image offsets

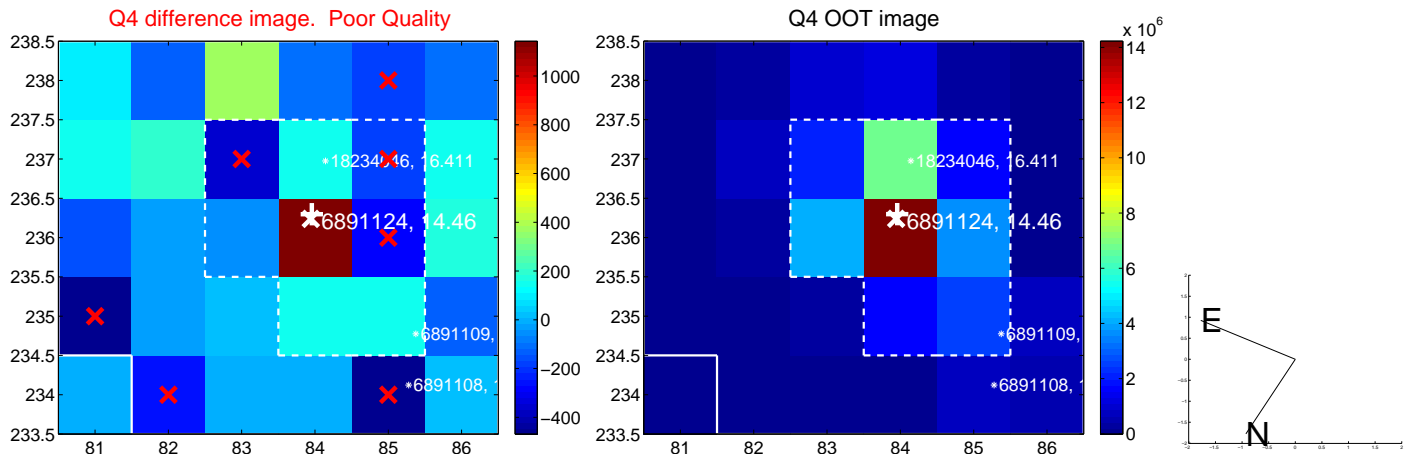
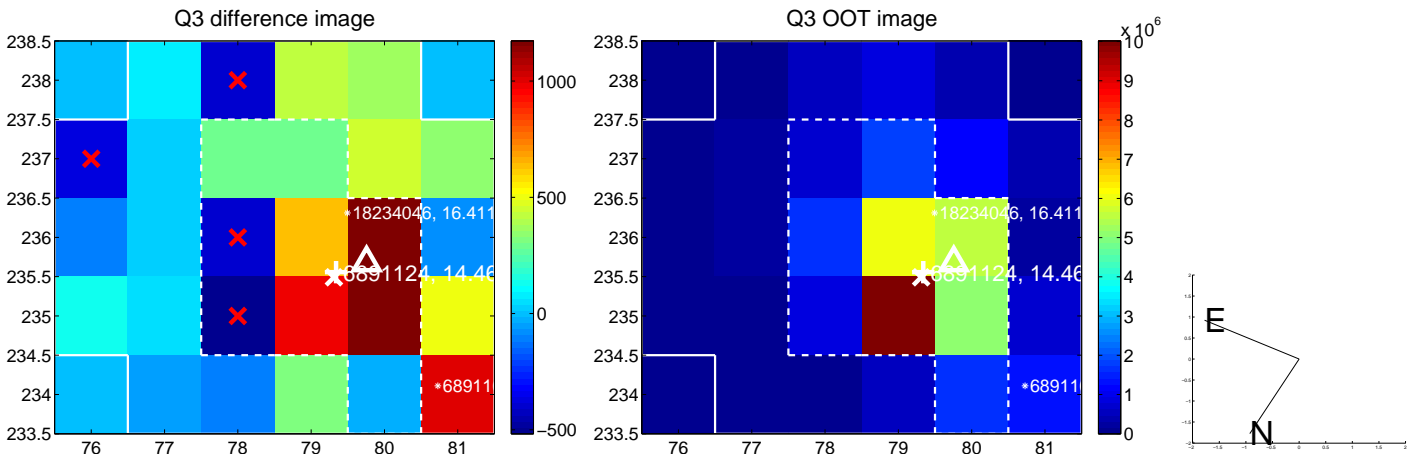
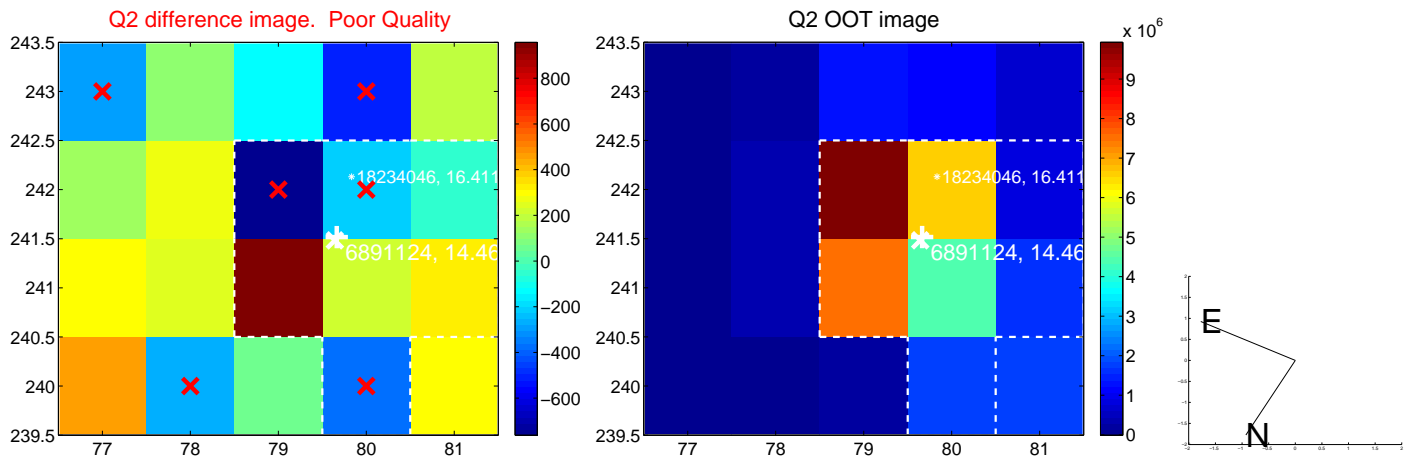
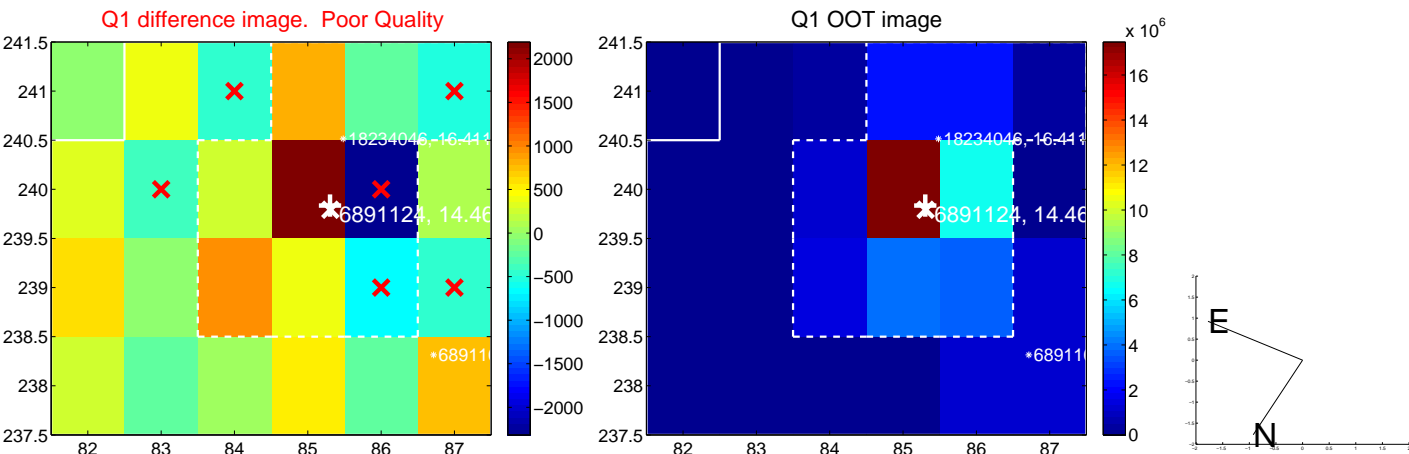
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.500 \pm 0.486$	1.03	$0.492 \pm 0.483$	$-0.090 \pm 0.577$
PRF-fit source offset from KIC position	$0.621 \pm 0.509$	1.22	$0.552 \pm 0.489$	$-0.284 \pm 0.578$
photometric centroid source offset	$1.15 \pm 1.18$	0.97	$-0.80 \pm 1.23$	$0.83 \pm 1.13$



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.

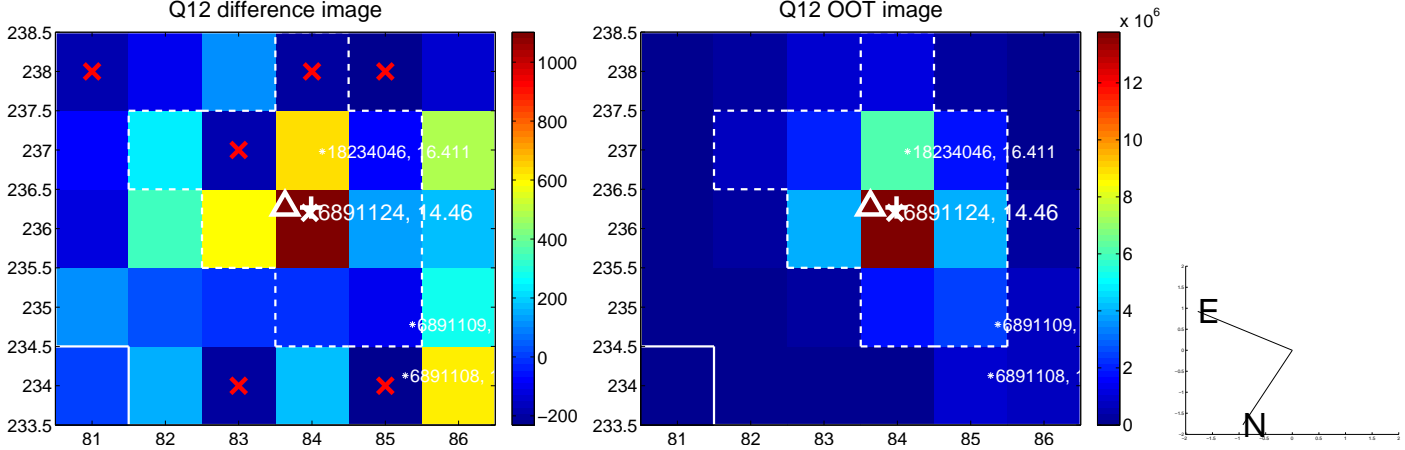
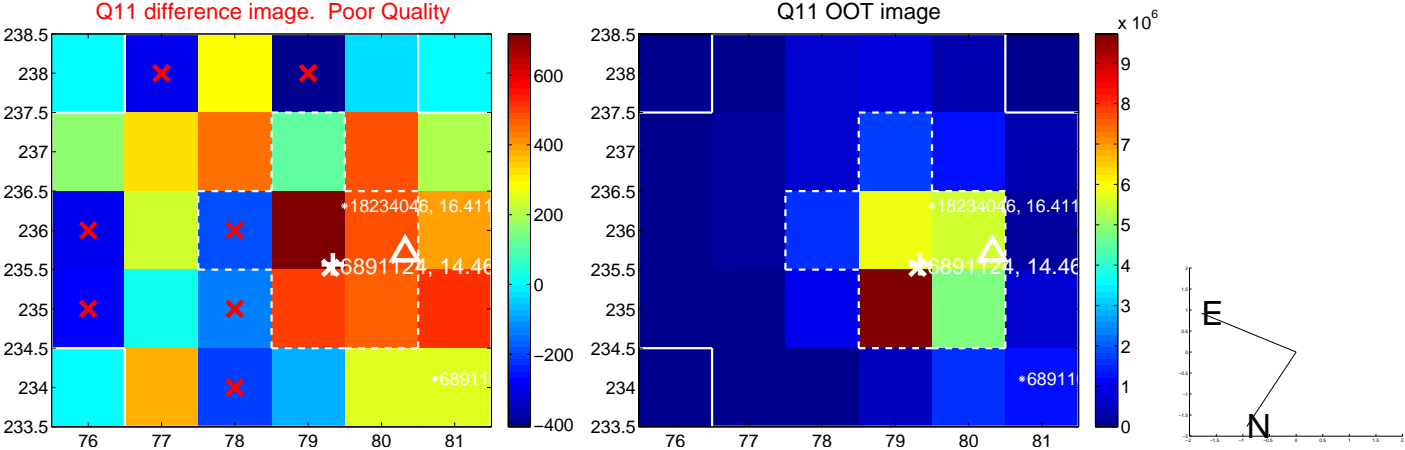
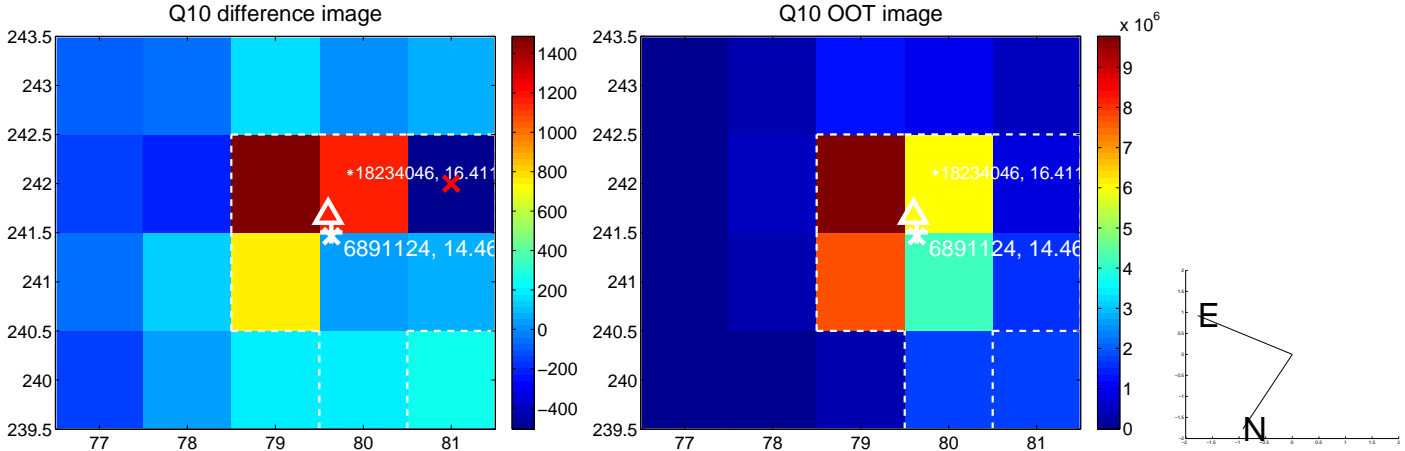
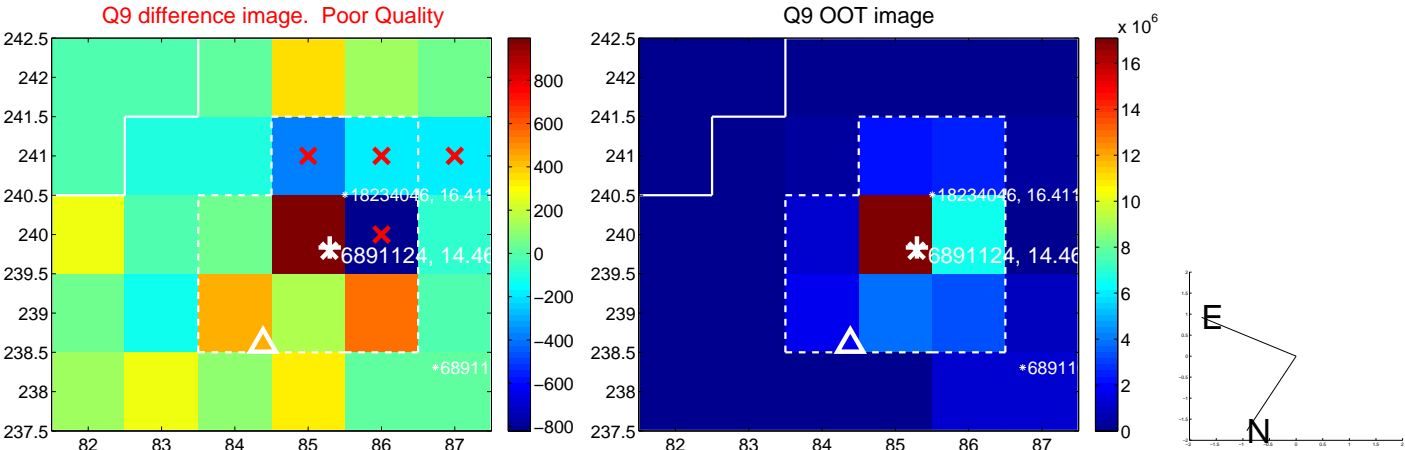
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



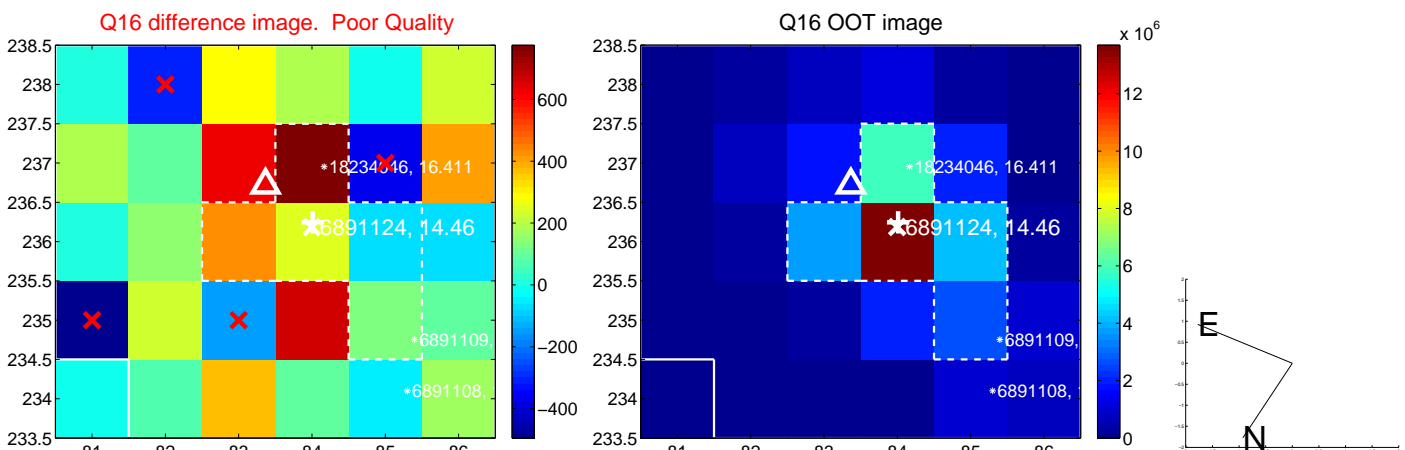
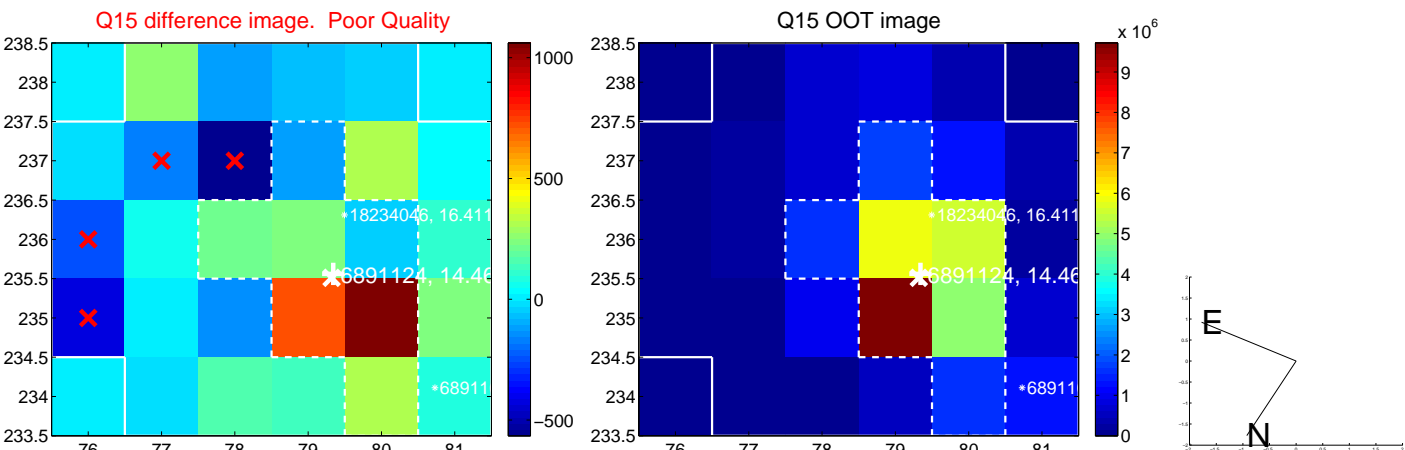
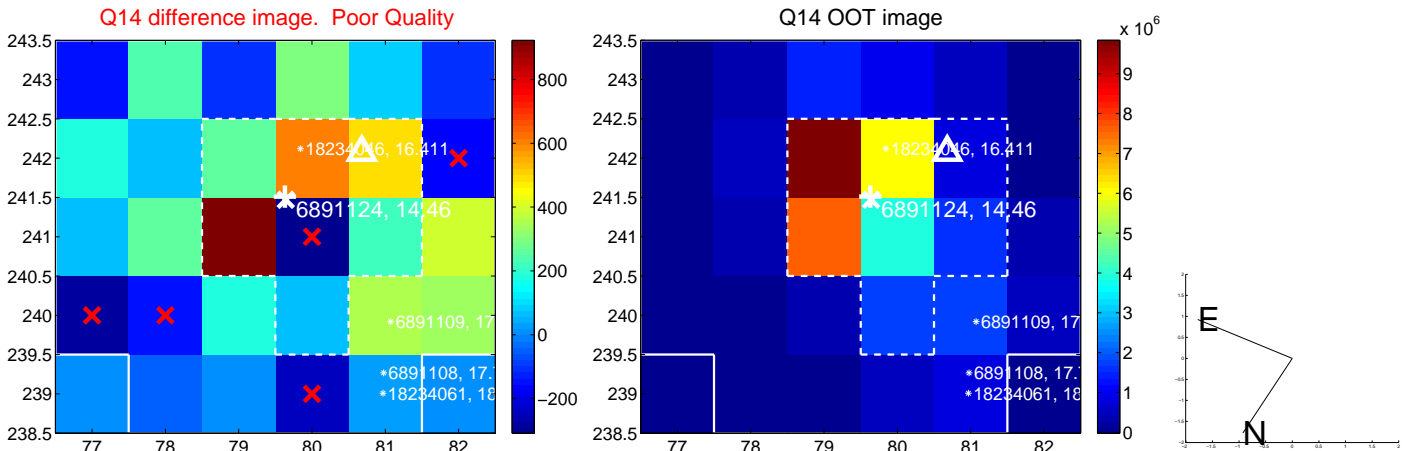
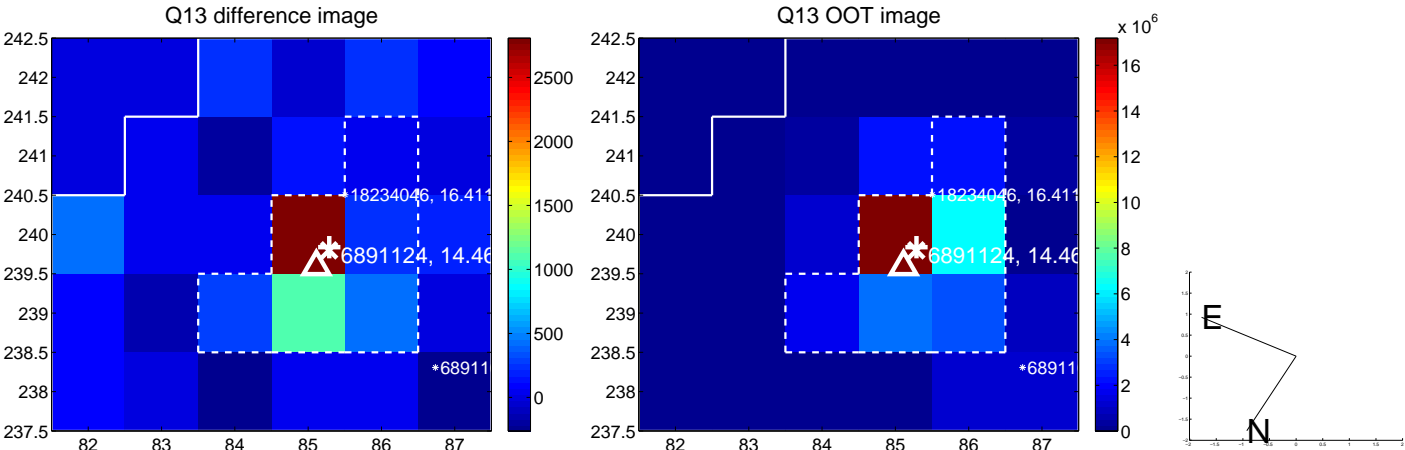




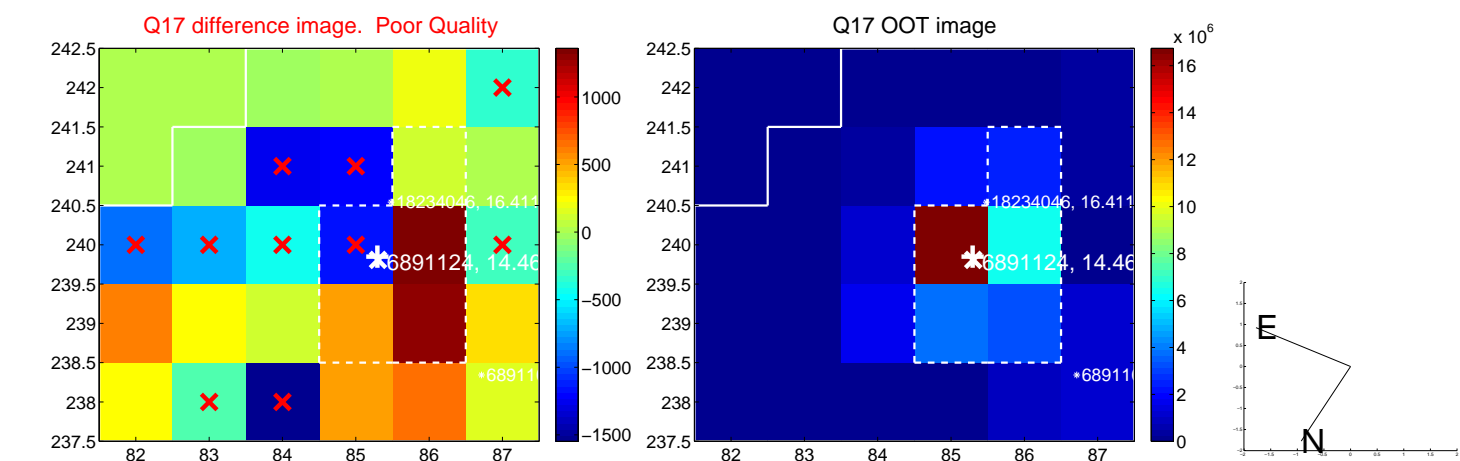
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



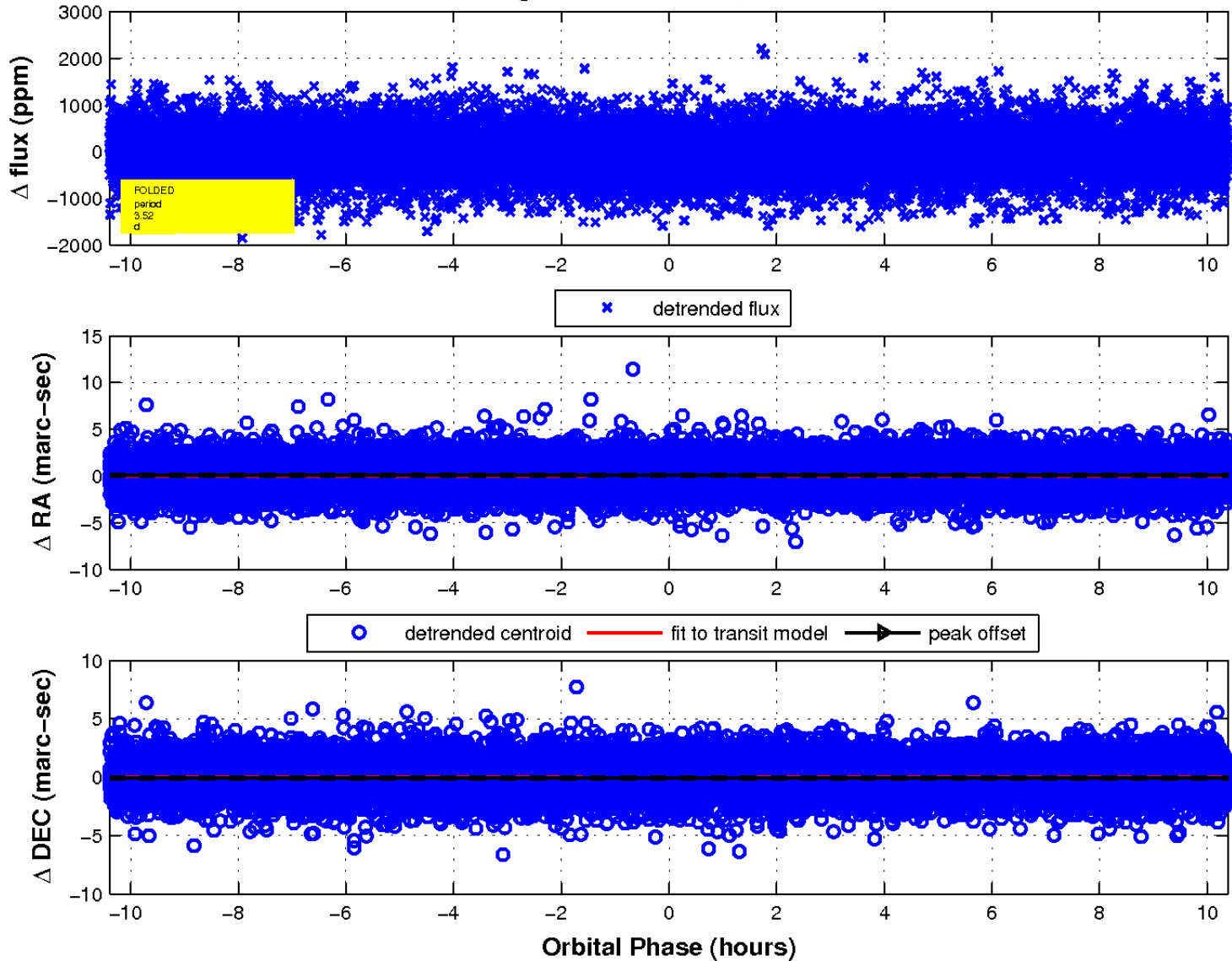
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



# UKIRT Image

Declination

