

# KIC 009364192

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
009364192-01	OBS	No	0.584178	131.929623	11.0	4.637	10.4	5.9	2.83	8156	0.96	112622.97

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009364192-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_FEW_MEAS

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

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

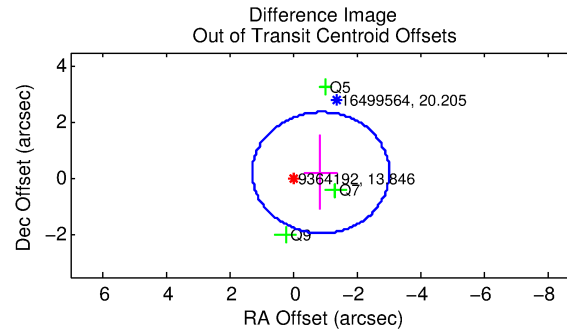
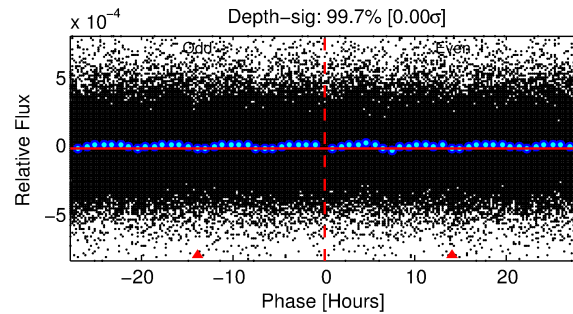
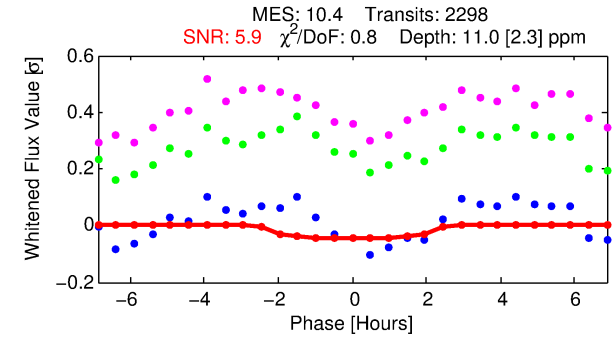
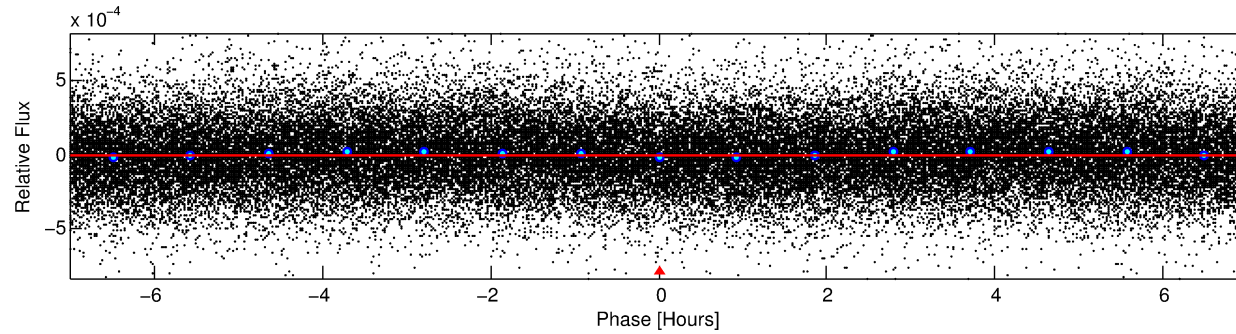
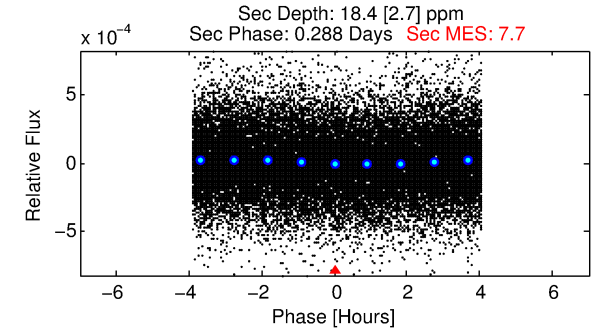
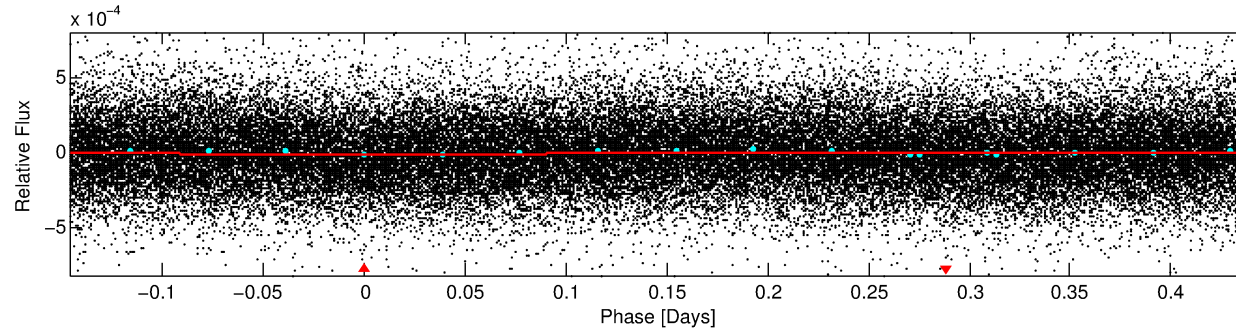
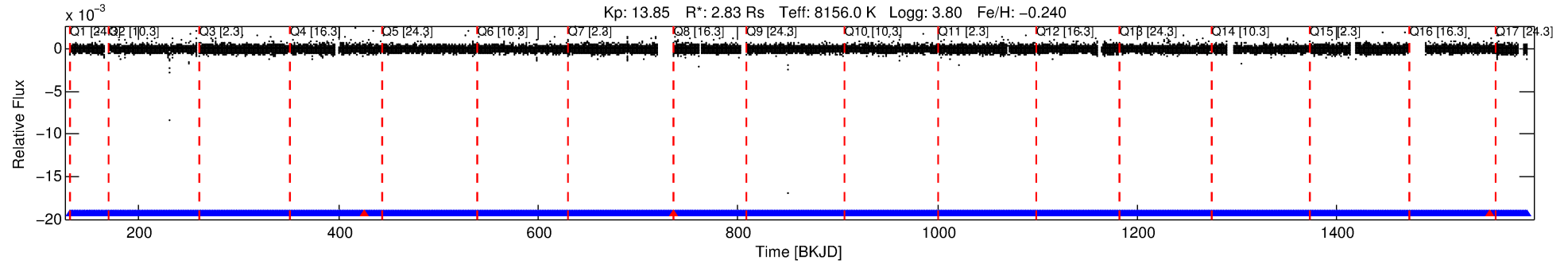
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 009364192-01

No Significant Match Found

# DV One-Page Summary

KIC: 9364192 Candidate: 1 of 1 Period: 0.584 d



## DV Fit Results:

Period = 0.58418 [0.00002] d  
Epoch = 131.9296 [0.0082] BKJD  
Rp/R\* = 0.0031 [0.0040]  
a/R\* = 1.13 [1.82]  
b = 0.45 [12.93]  
Seff = 112622.97 [77008.22]  
Teq = 4671 [799] K  
Rp = 0.97 [1.31] Re  
a = 0.0168 [0.0069] AU  
Ag = 3.06 [8.17] [0.25σ]  
Teffp = 9552 [6186] K [0.78σ]

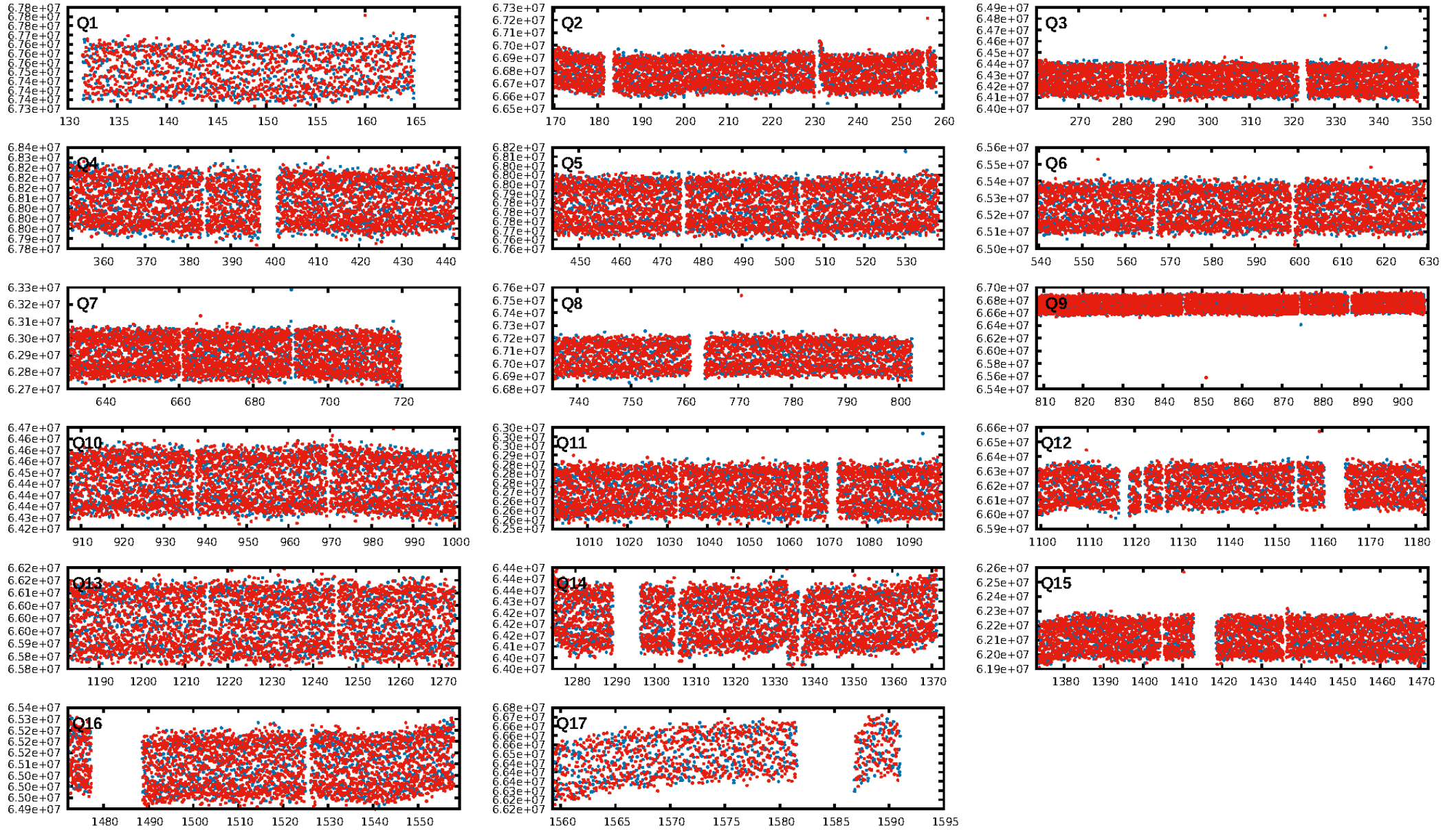
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [2193/2196]  
GhostDiagnostic-chr: -2.639  
Centroid-sig: 22.4%  
Centroid-so: 2.104 arcsec [1.02σ]  
OotOffset-rm: 0.905 arcsec [1.26σ]  
KicOffset-rm: 1.003 arcsec [2.15σ]  
OotOffset-st: 0/1/0/2 [3]  
KicOffset-st: 0/1/0/2 [3]  
DiffImageQuality-fgm: 0.67 [2/3]  
DiffImageOverlap-fno: 1.00 [17/17]

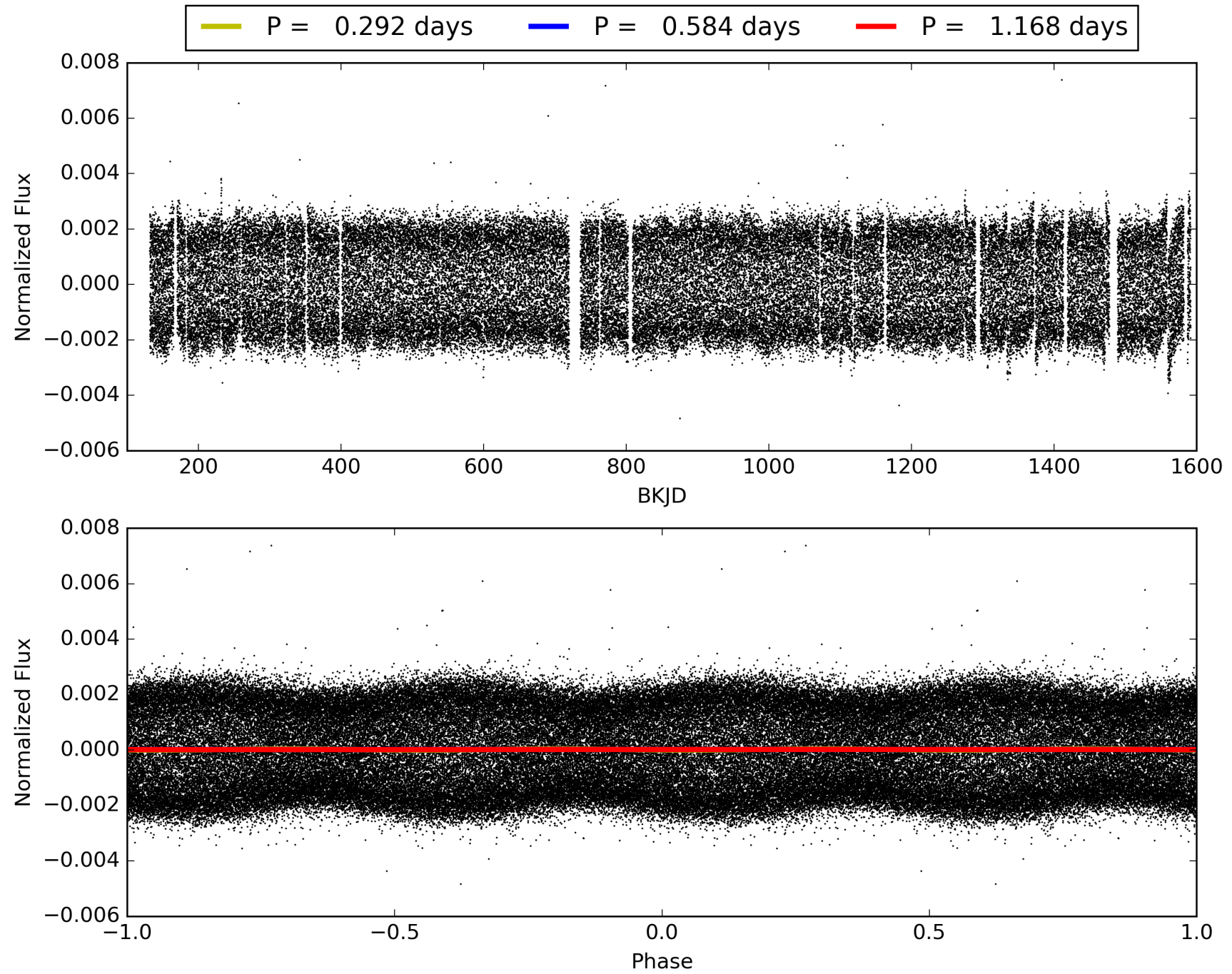
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 08:21:11 Z

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

# TCE 009364192-01, PDC Light Curves

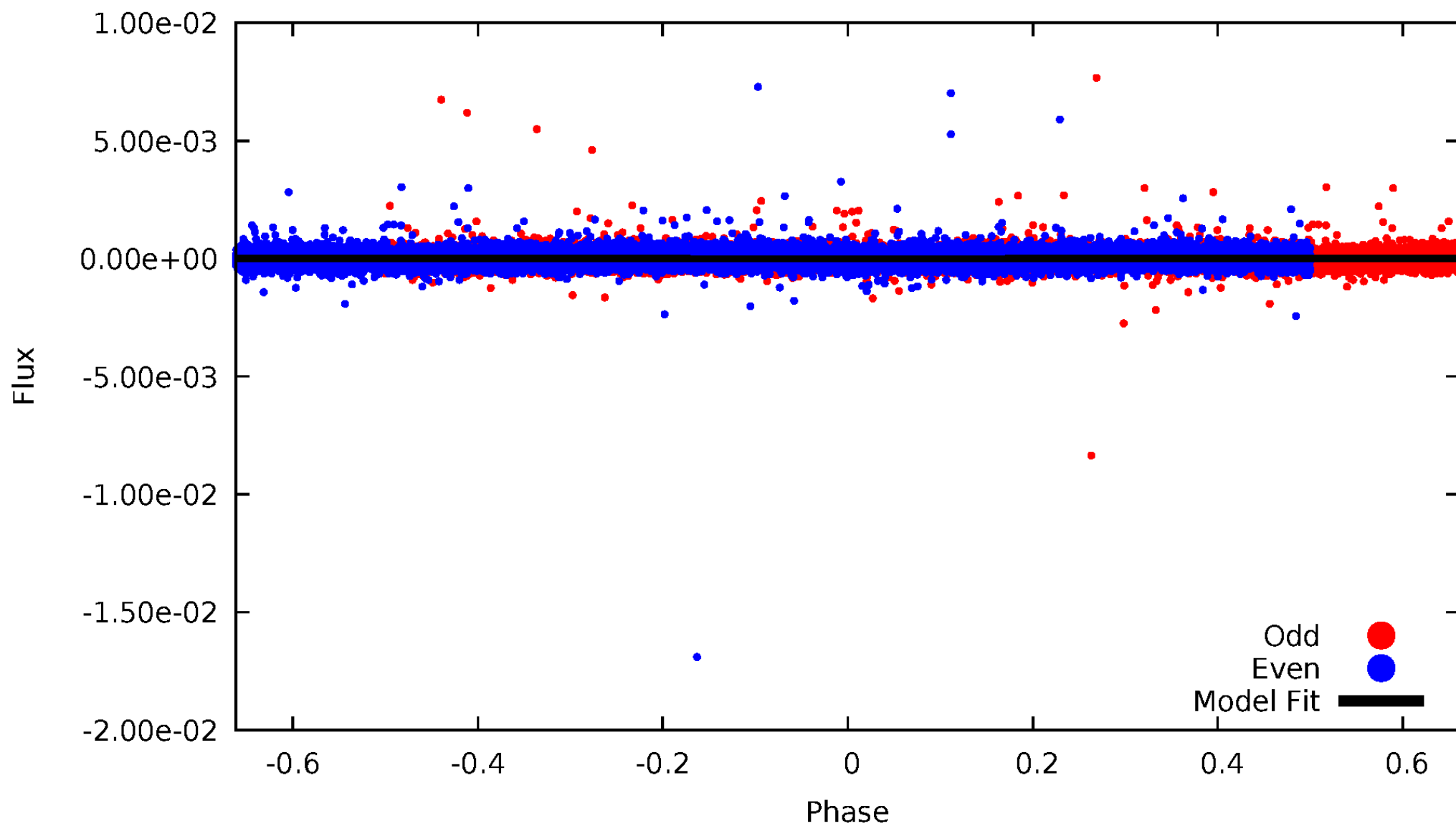


TCE 009364192-01



# DV Odd/Even

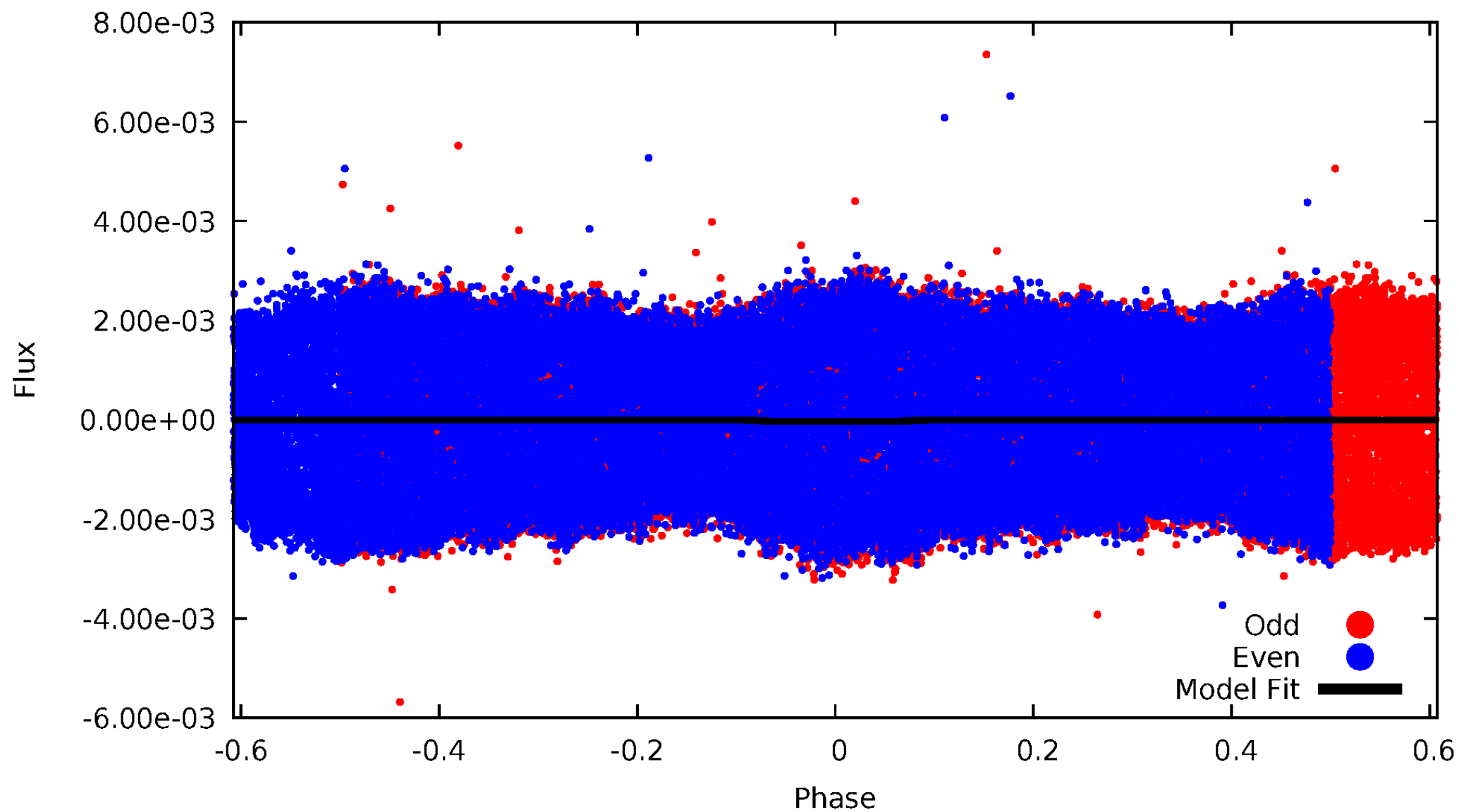
TCE 009364192-01



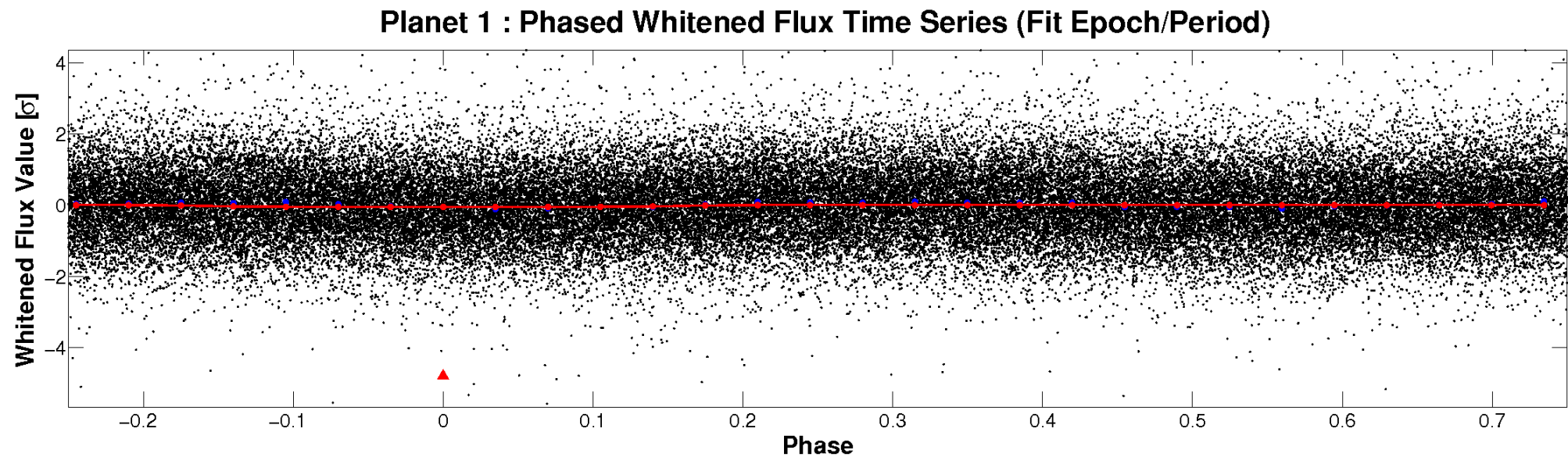
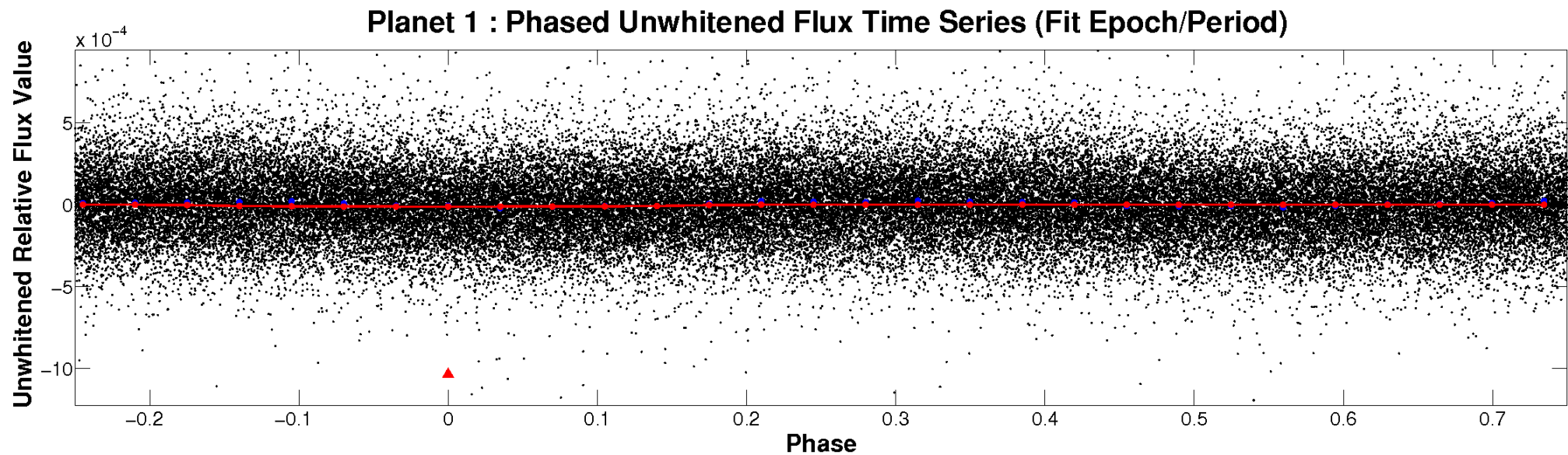


# ALT Odd/Even

TCE 009364192-01

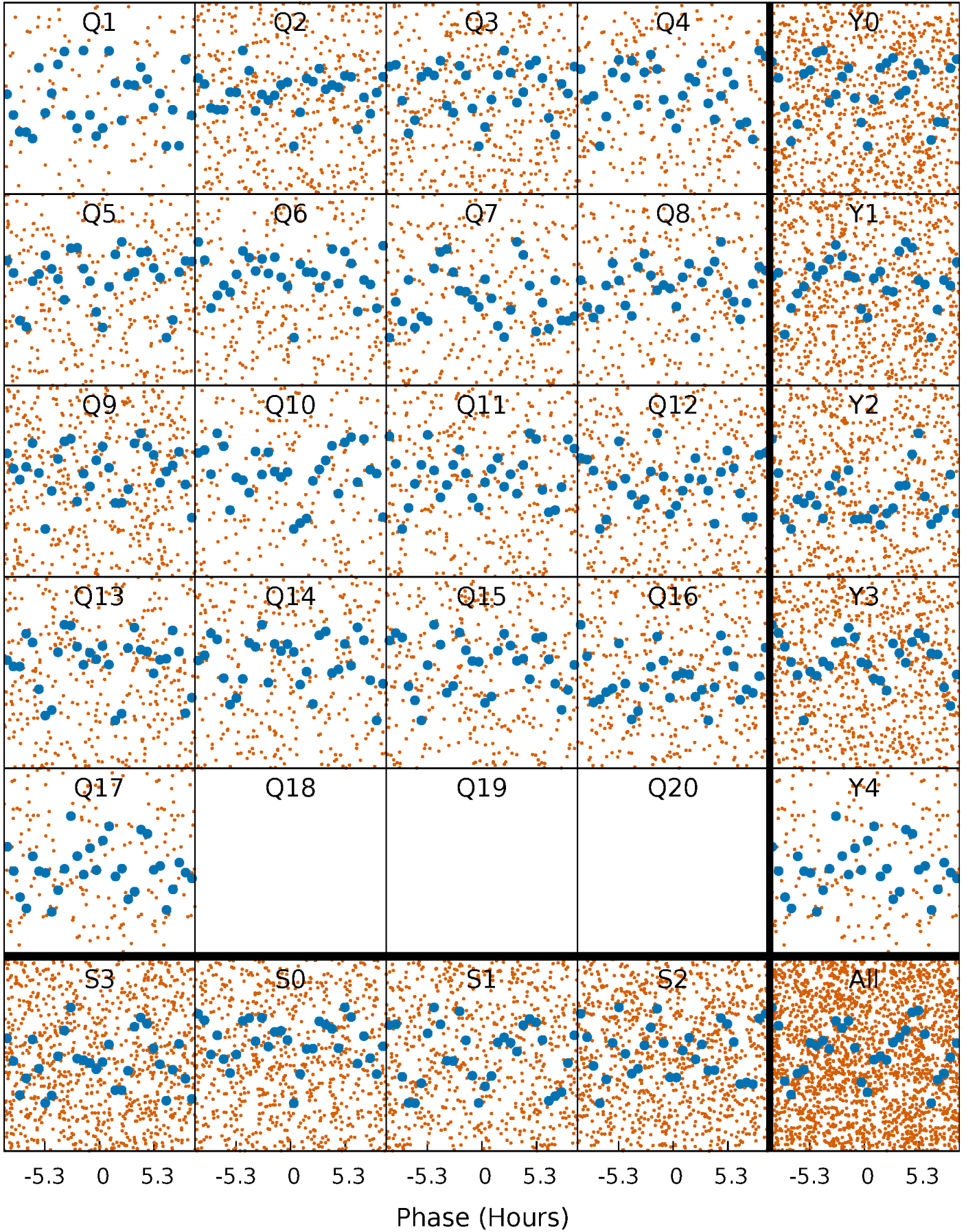


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

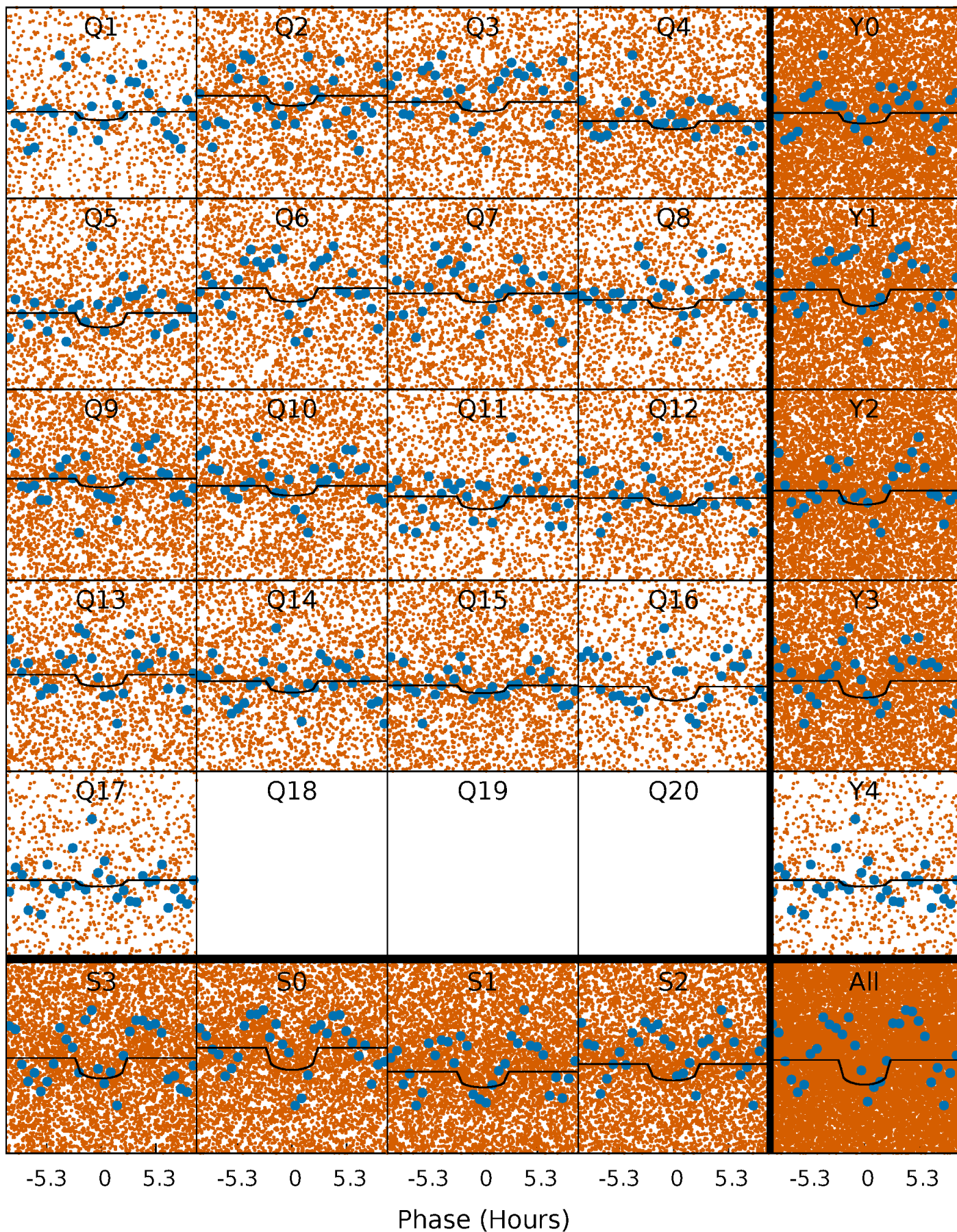
TCE 009364192-01 P= 0.584178 Days  $T_0=131.929623$  (BKJD)





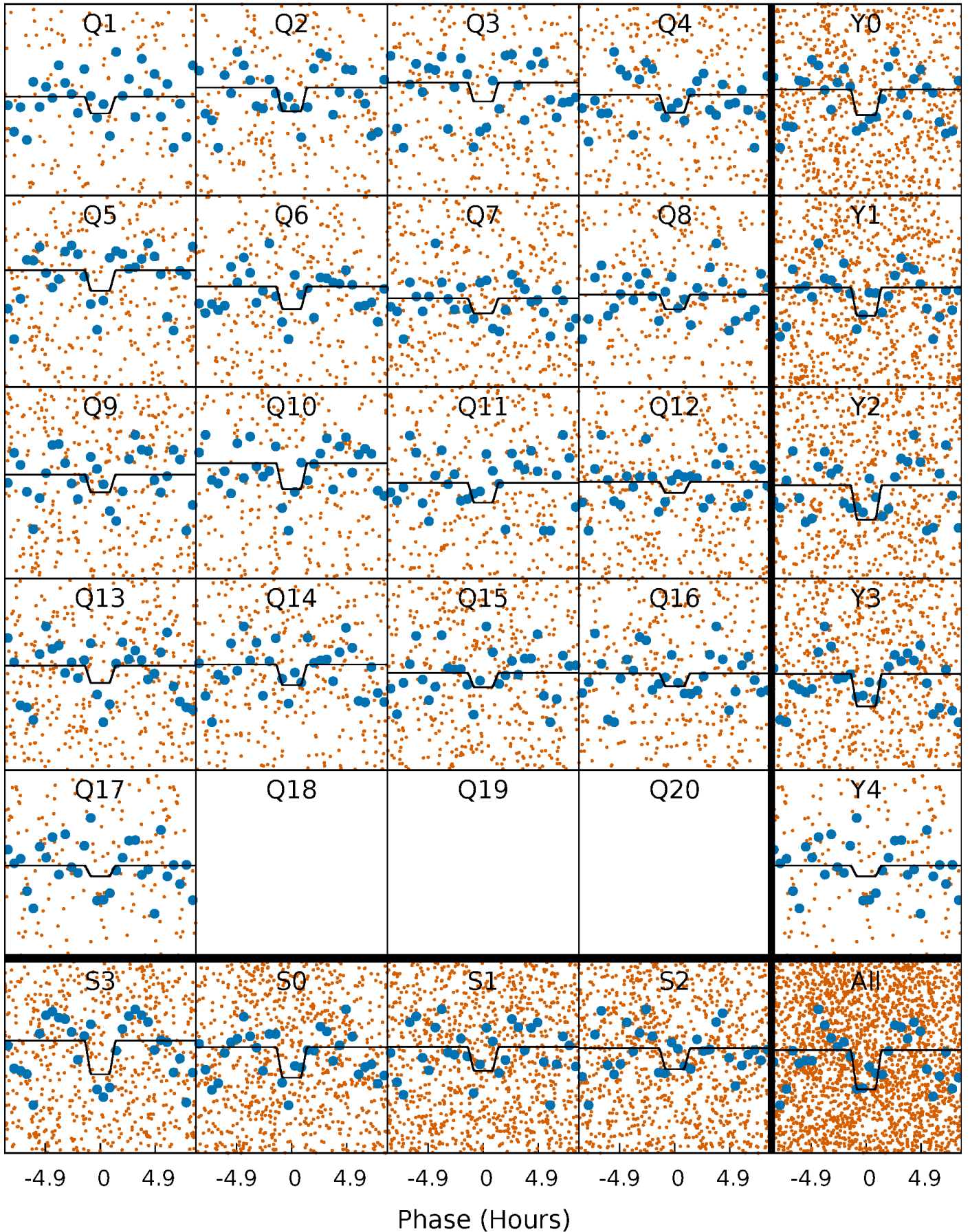
# DV Quarter-Phased Transit Curves

TCE 009364192-01 P= 0.584178 Days  $T_0=131.929623$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

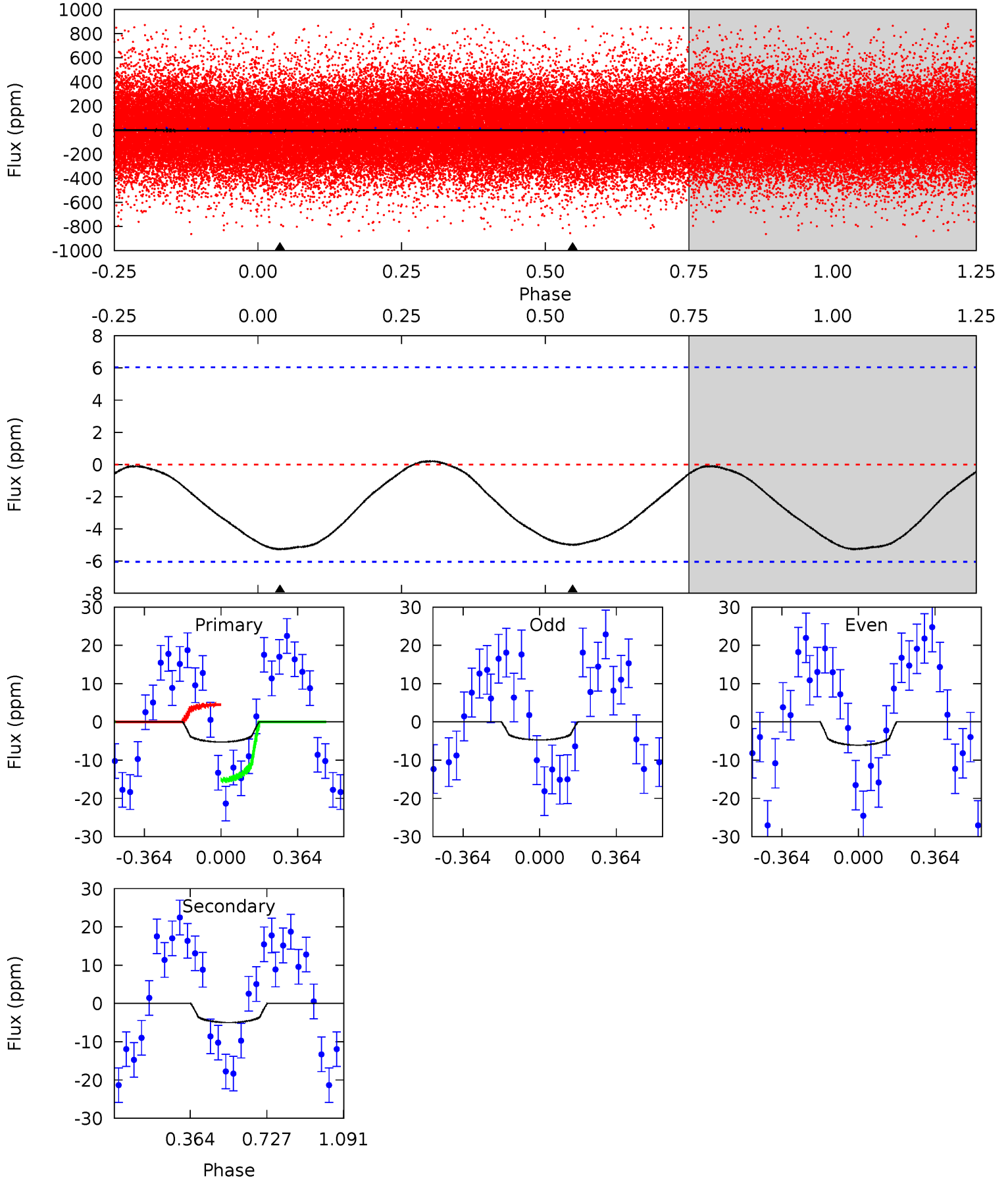
TCE 009364192-01 P= 0.584212 Days  $T_0=131.923032$  (BKJD)



# DV Model-Shift Uniqueness Test

009364192-01, P = 0.584178 Days, E = 131.345445 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
3.73	3.54	0	0	4.29	0.91	0.11	3.73	3.73	3.54	3.54	0.49	0.86	0.04	3.83

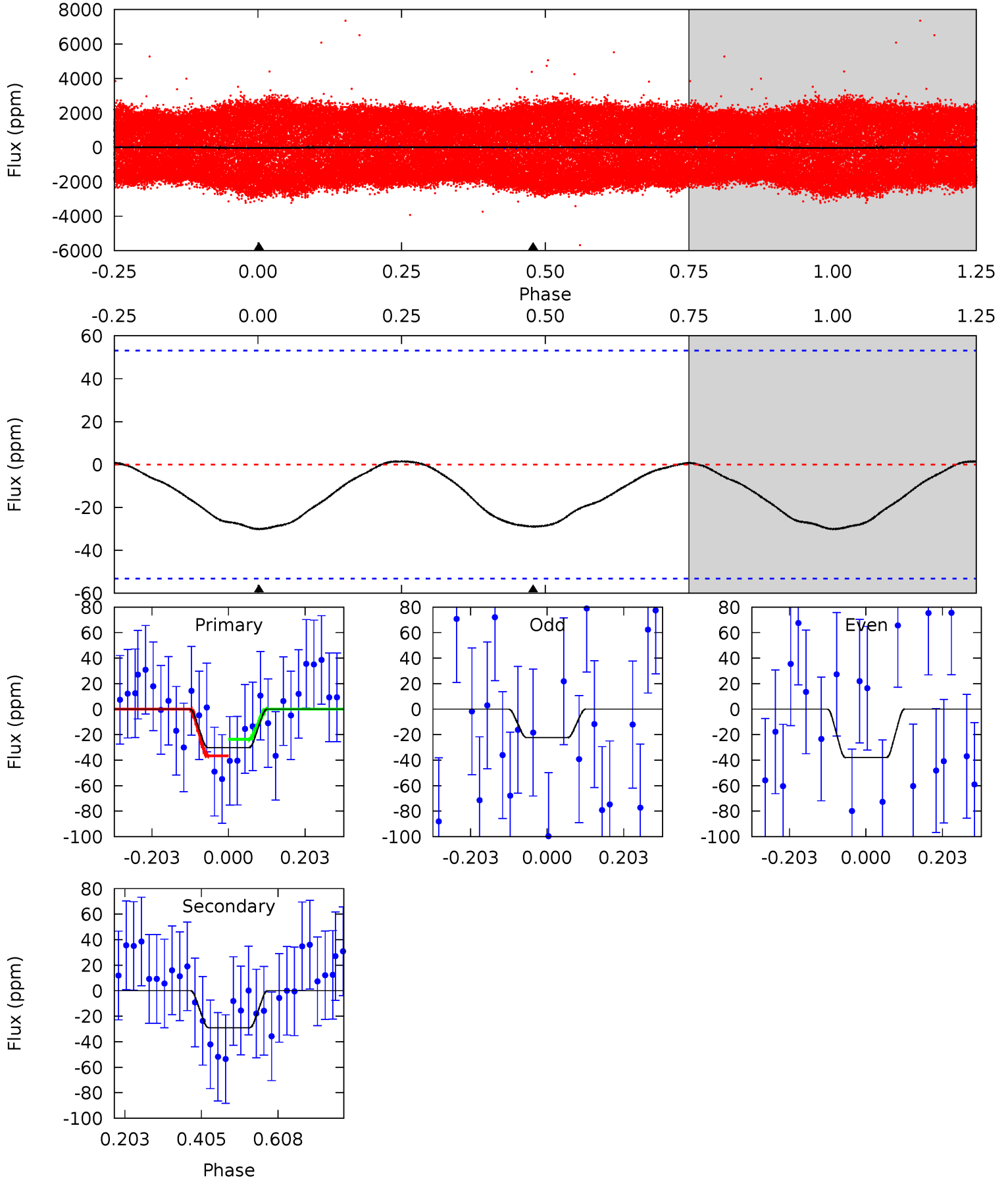




# Alt Model-Shift Uniqueness Test

009364192-01, P = 0.584212 Days, E = 131.338820 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
2.50	2.41	0	0	4.41	1.27	0.12	2.50	2.50	2.41	2.41	0.65	0.14	0.05	0.51



### Stellar Parameters For KIC 009364192

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$8156^{+225}_{-338}$	$3.801^{+0.391}_{-0.069}$	$-0.240^{+0.200}_{-0.300}$	$2.827^{+0.374}_{-1.198}$	$1.841^{+0.094}_{-0.374}$	$0.115^{+0.368}_{-0.025}$
	+3%/-4%	+10%/-2%	+83%/-125%	+13%/-42%	+5%/-20%	+320%/-22%
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 009364192-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-5 \pm 1$	$1.18^{+1.07}_{-0.76}$	$6271^{+432}_{-664}$	$4660^{+5292}_{-9114}$	$0.519^{+3.499}_{-0.372}$
Alt.	$-29 \pm 12$	$1.79^{+1.16}_{-1.03}$	$6288^{+444}_{-660}$	$6698^{+6417}_{-2424}$	$1.327^{+6.380}_{-0.915}$

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



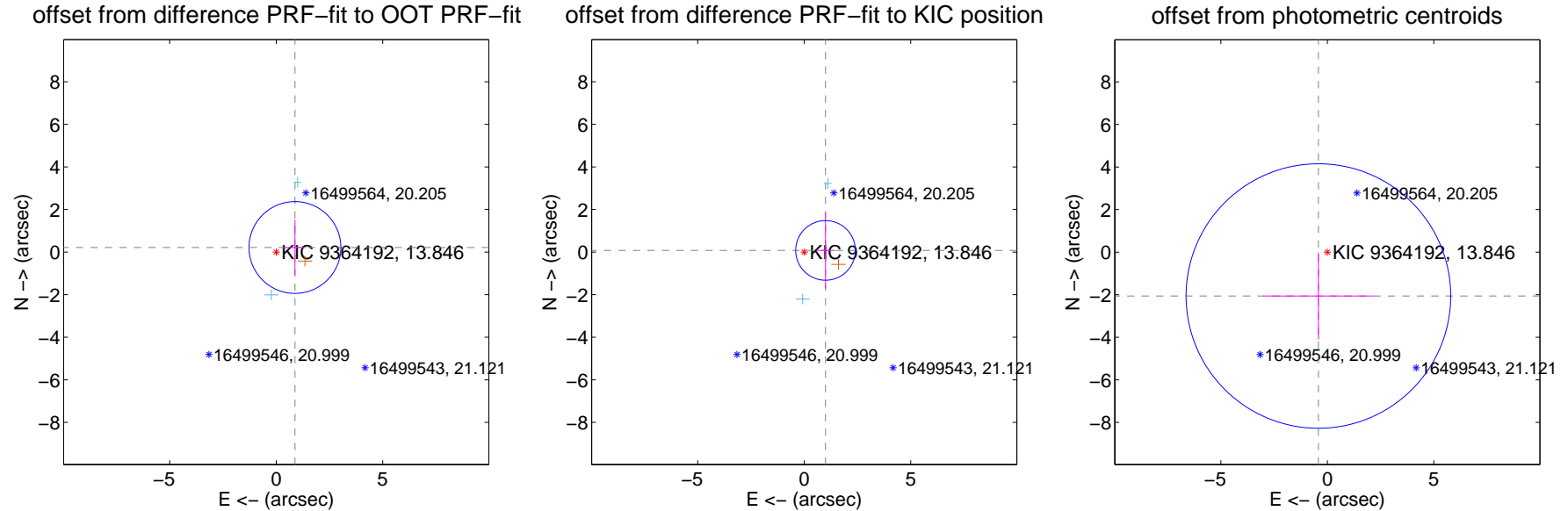
## DV Centroid Data

Supplemental centroid analysis for 009364192-01. Kepler magnitude: 13.85. Transit SNR 5.89

There are 2 quarters with good PRF difference image offsets

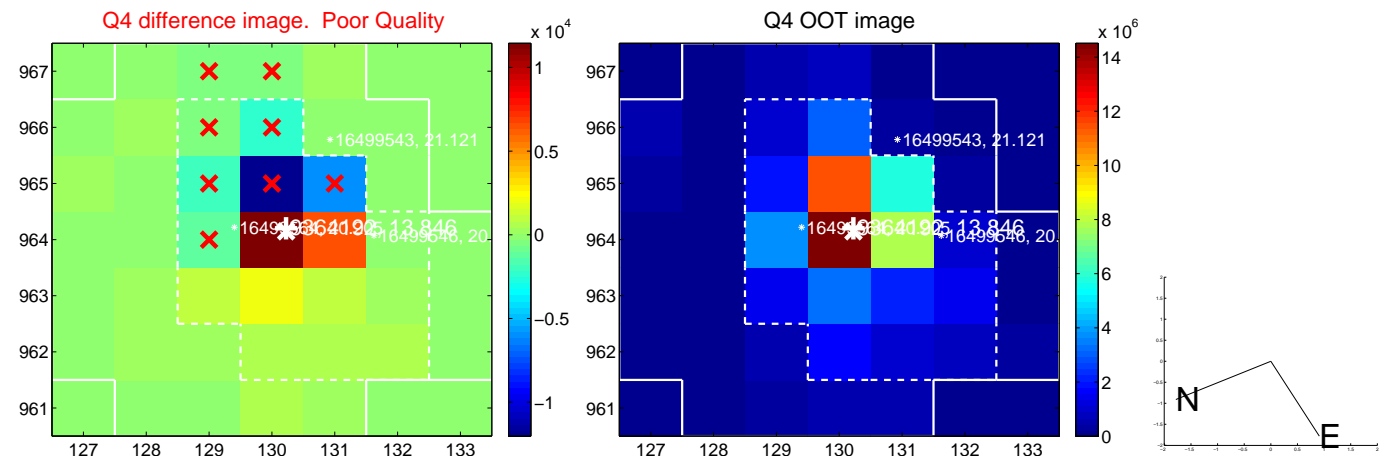
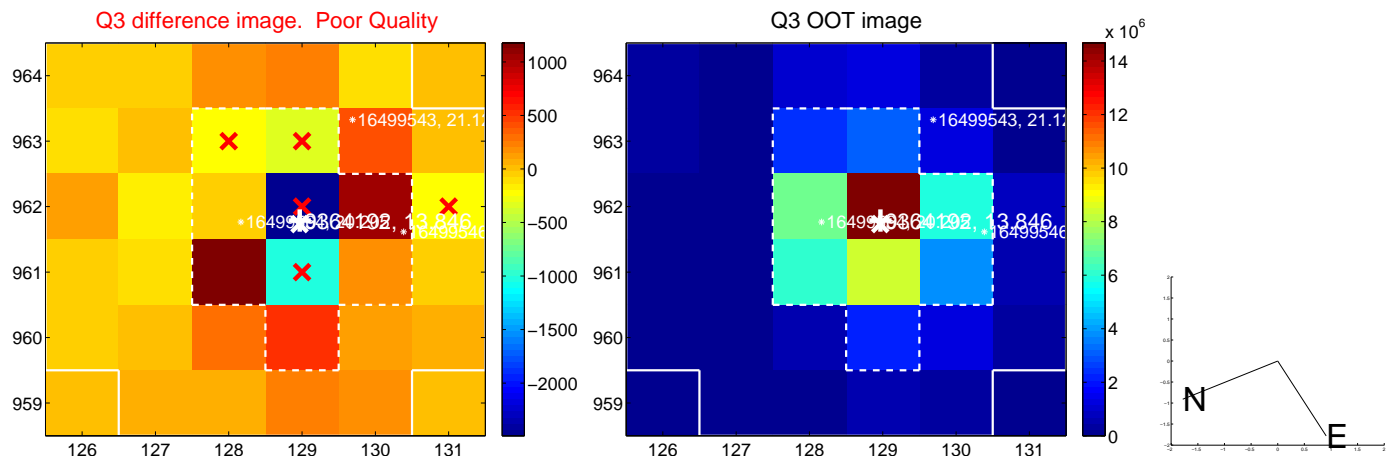
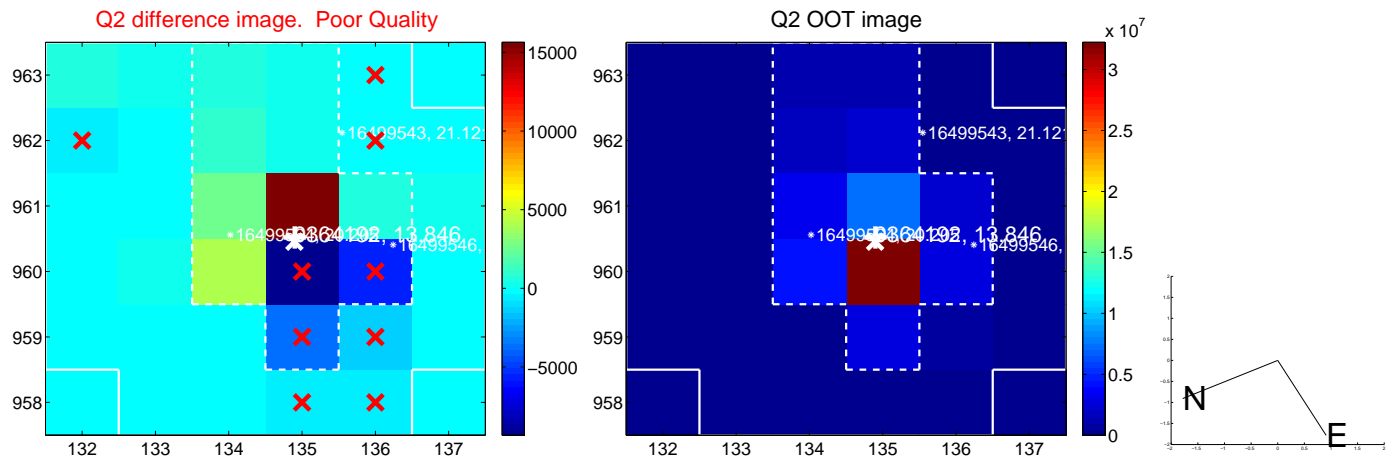
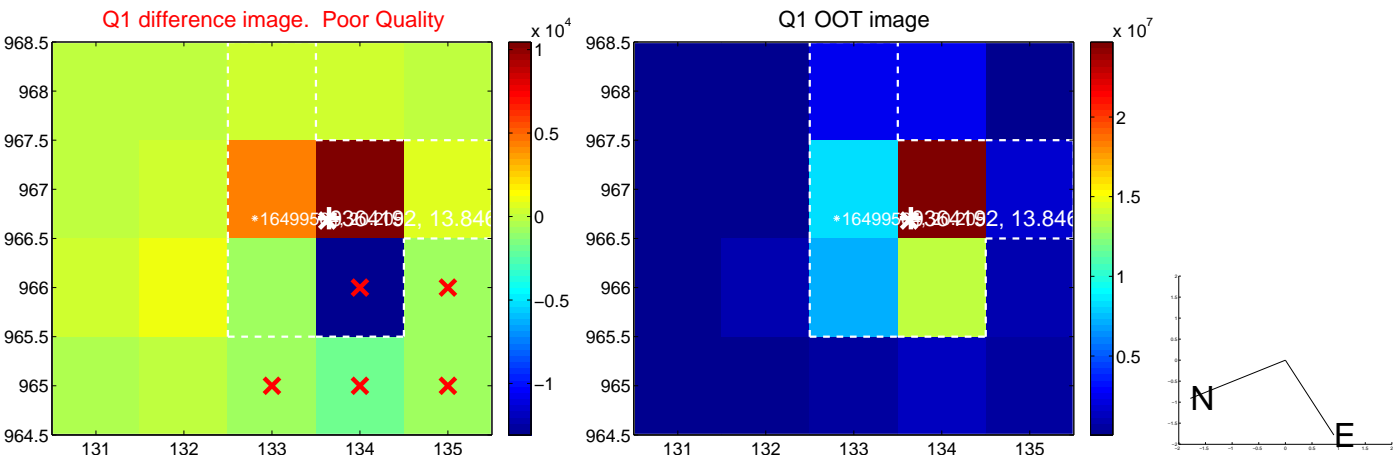
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.905 \pm 0.719$	1.26	$-0.879 \pm 0.495$	$0.214 \pm 1.305$
PRF-fit source offset from KIC position	$1.003 \pm 0.467$	2.15	$-1.000 \pm 0.447$	$0.078 \pm 1.788$
photometric centroid source offset	$2.10 \pm 2.07$	1.02	$0.42 \pm 2.58$	$-2.06 \pm 2.05$



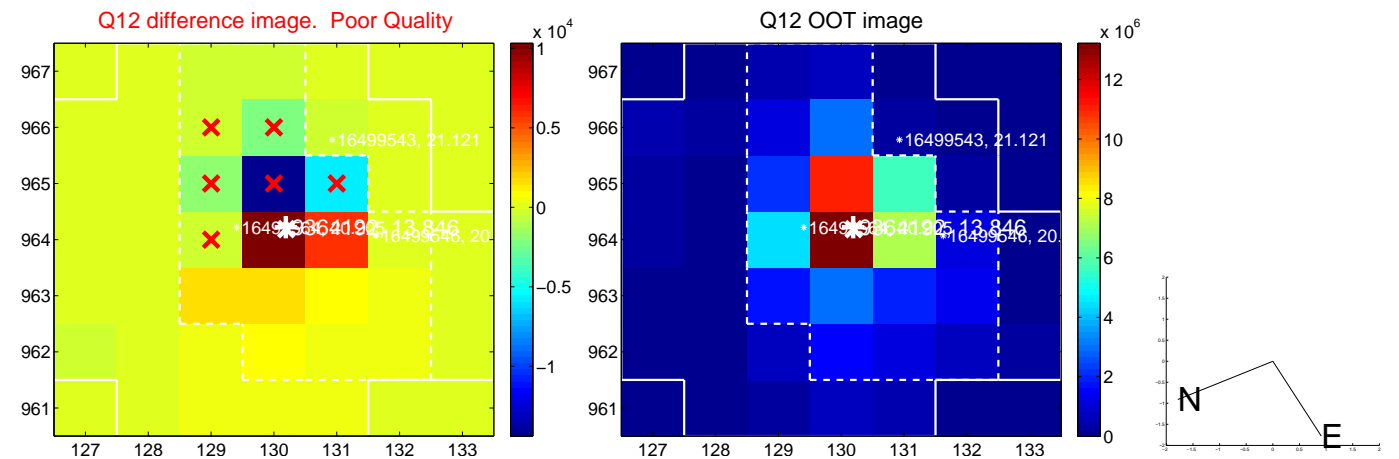
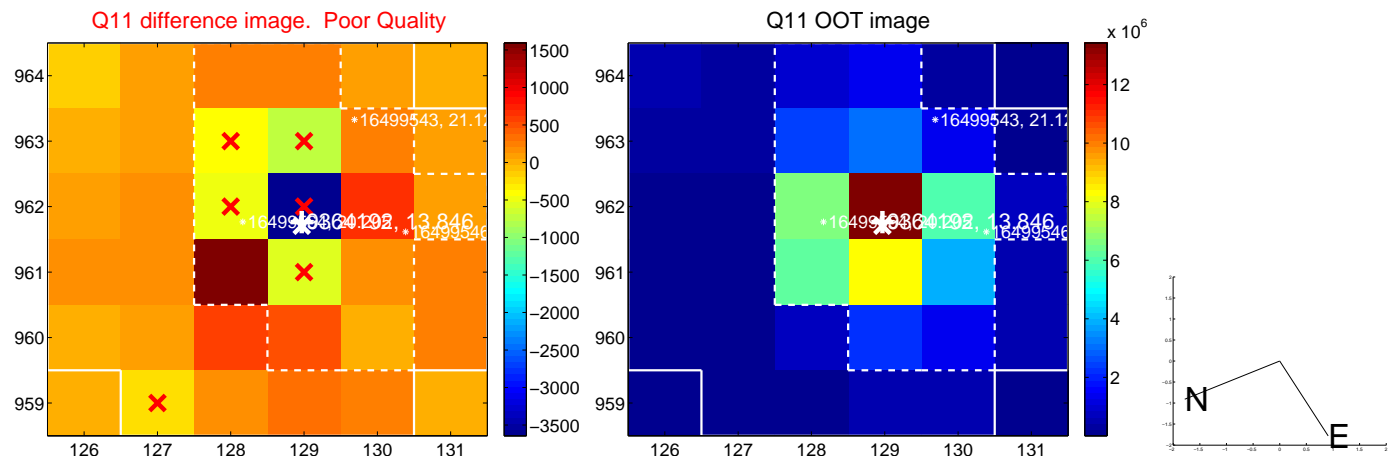
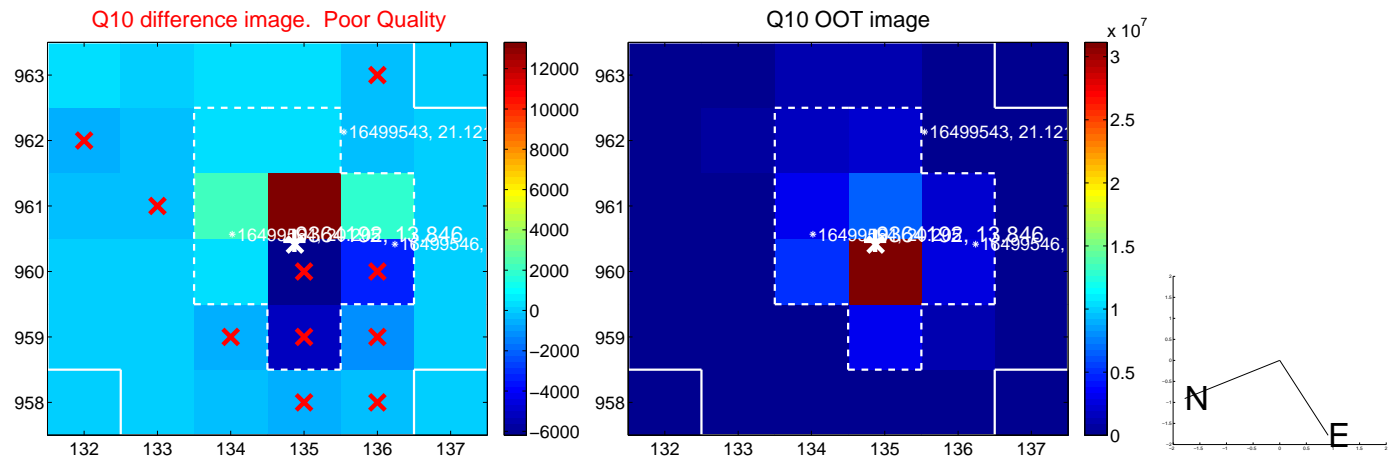
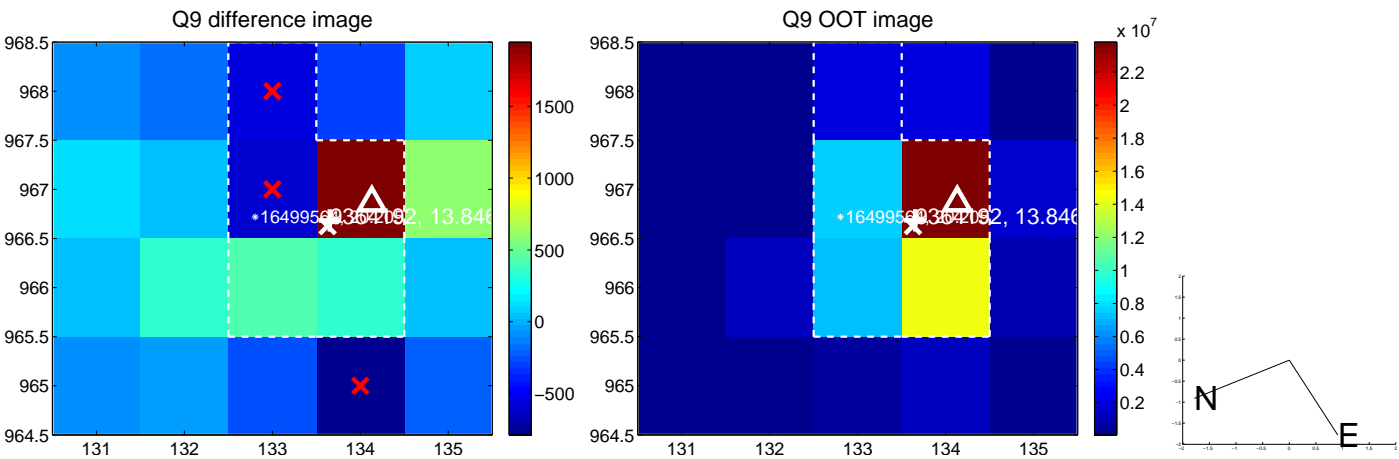
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

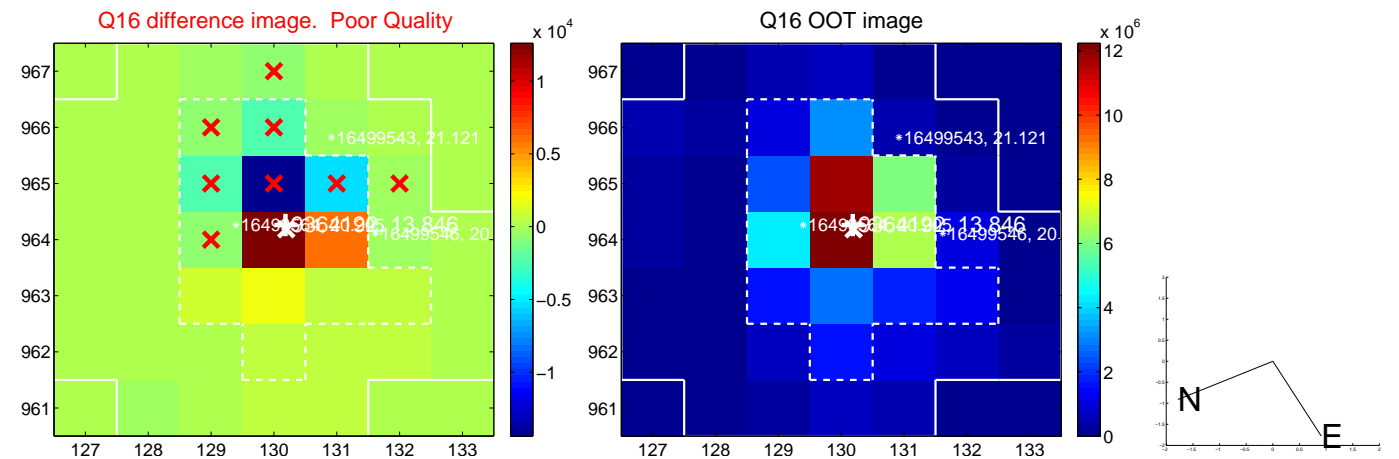
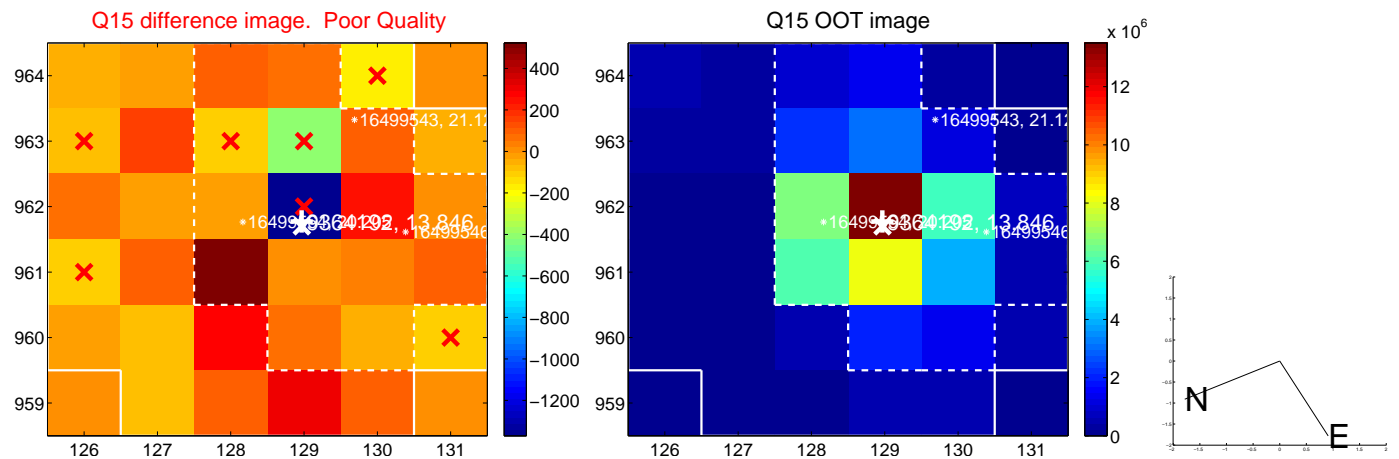
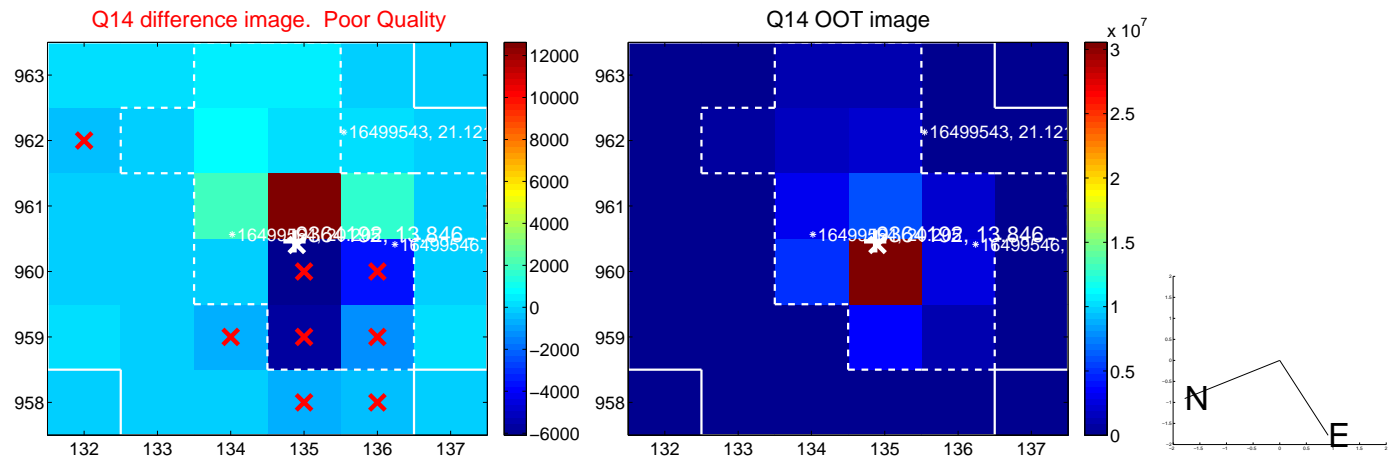
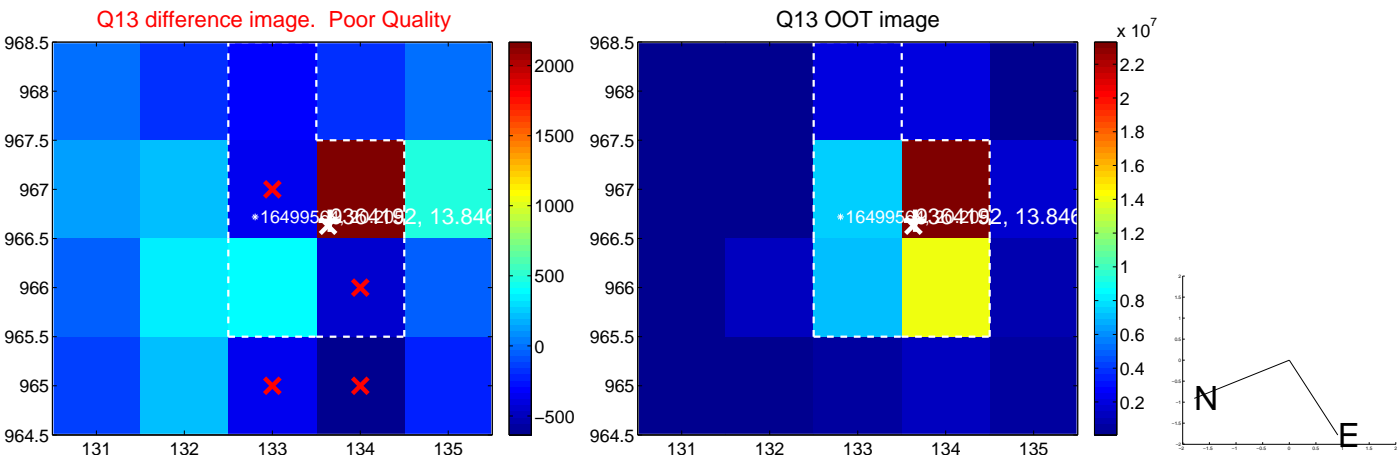




white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

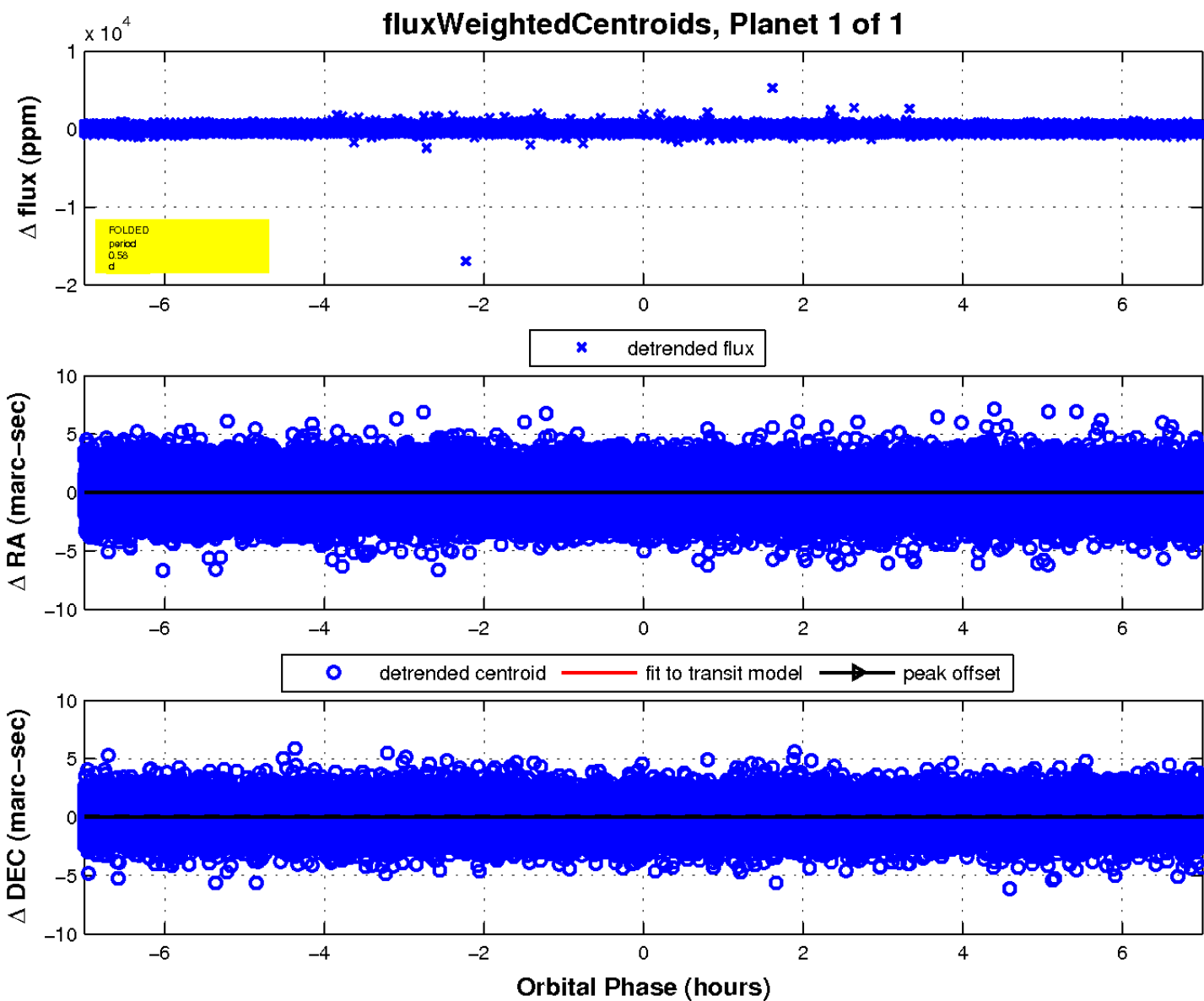
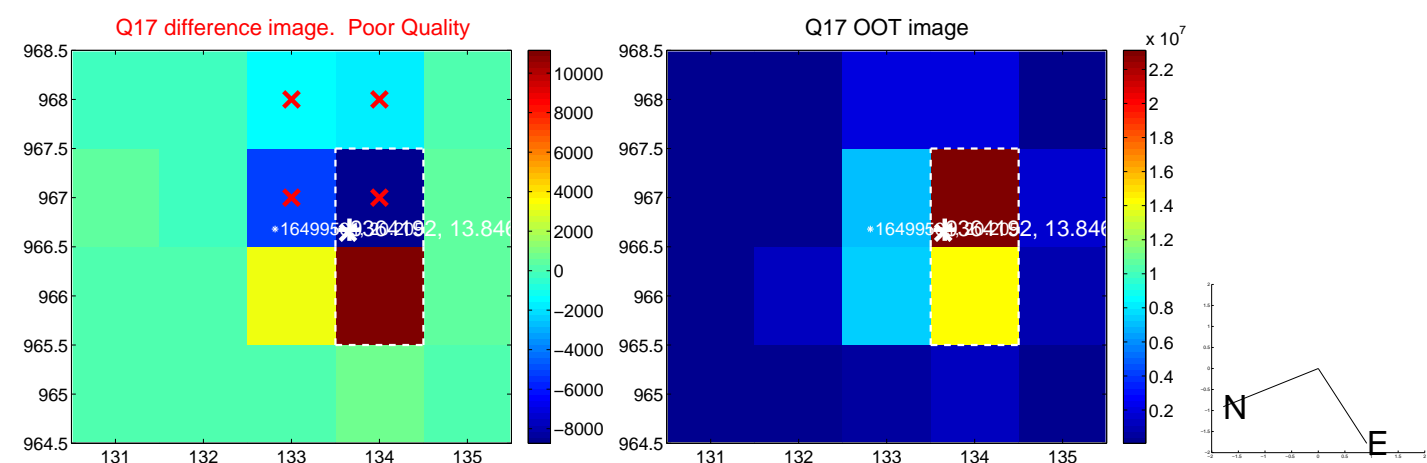


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.





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



# UKIRT Image

Declination

