

# KIC 006463047

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006463047-01	OBS	No	1.558204	131.719288	57.3	18.698	11.3	19.7	2.15	8439	2.08	20602.60

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006463047-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_SATURATED

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

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

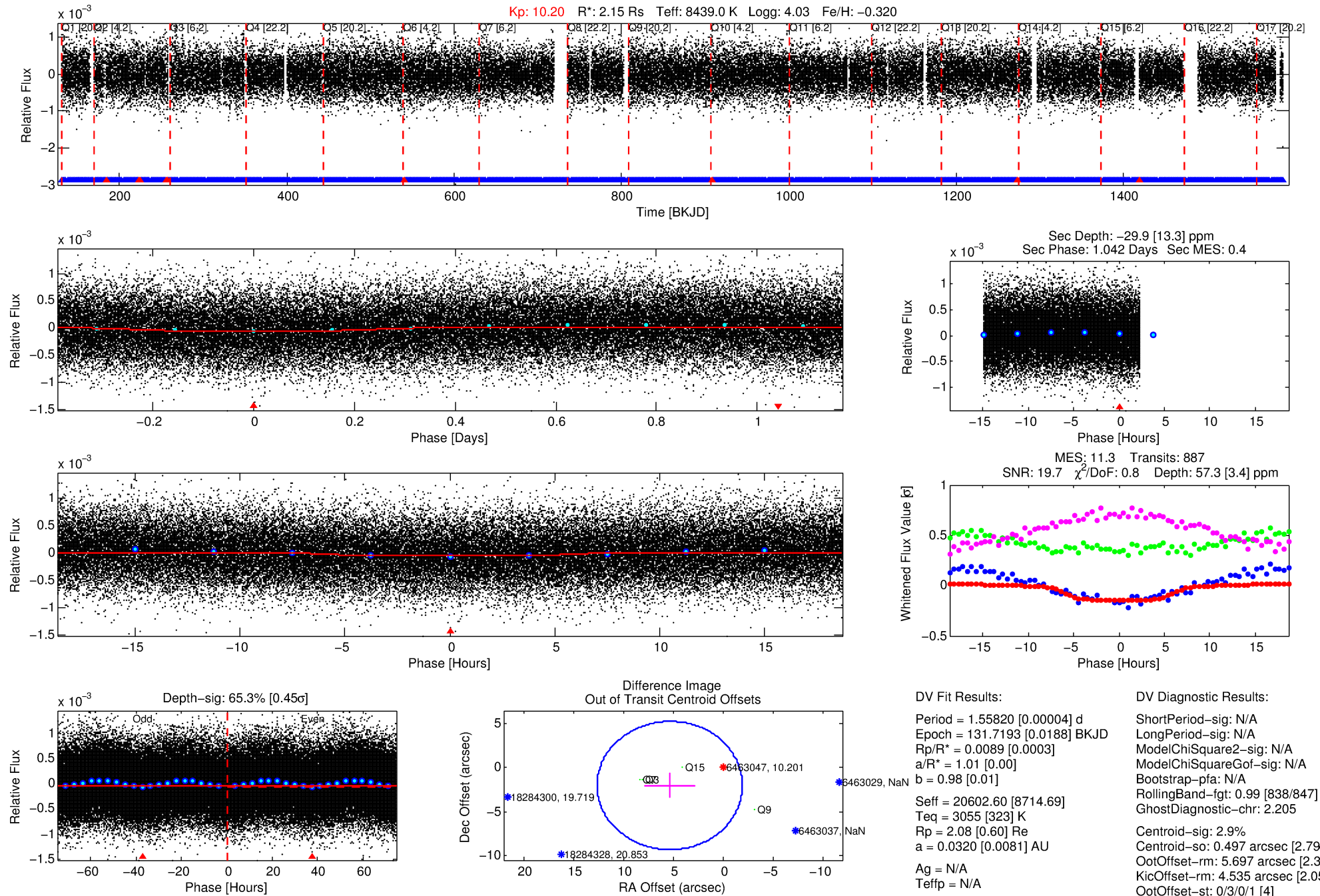
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 006463047-01

No Significant Match Found

# DV One-Page Summary

KIC: 6463047 Candidate: 1 of 1 Period: 1.558 d



## DV Fit Results:

Period = 1.55820 [0.00004] d  
Epoch = 131.7193 [0.0188] BKJD  
Rp/R\* = 0.0089 [0.0003]  
a/R\* = 1.01 [0.00]  
b = 0.98 [0.01]  
Seff = 20602.60 [8714.69]  
Teq = 3055 [323] K  
Rp = 2.08 [0.60] Re  
a = 0.0320 [0.0081] AU  
Ag = N/A  
Teffp = N/A

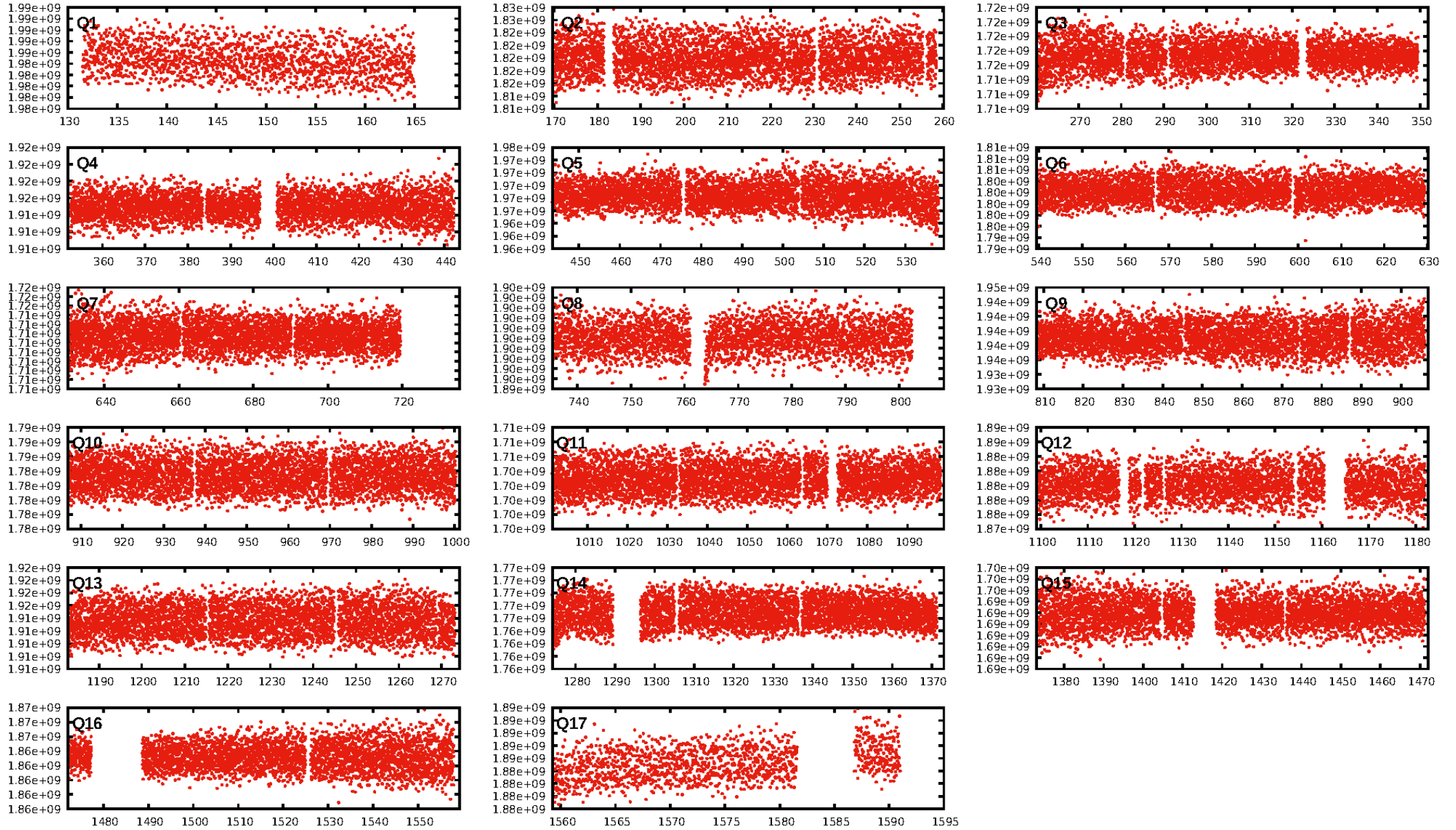
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 0.99 [838/847]  
GhostDiagnostic-chr: 2.205  
Centroid-sig: 2.9%  
Centroid-so: 0.497 arcsec [2.79σ]  
OotOffset-rm: 5.697 arcsec [2.34σ]  
KicOffset-rm: 4.535 arcsec [2.05σ]  
OotOffset-st: 0/3/0/1 [4]  
KicOffset-st: 0/3/0/1 [4]  
DiffImageQuality-fgm: 0.25 [1/4]  
DiffImageOverlap-fno: 1.00 [17/17]

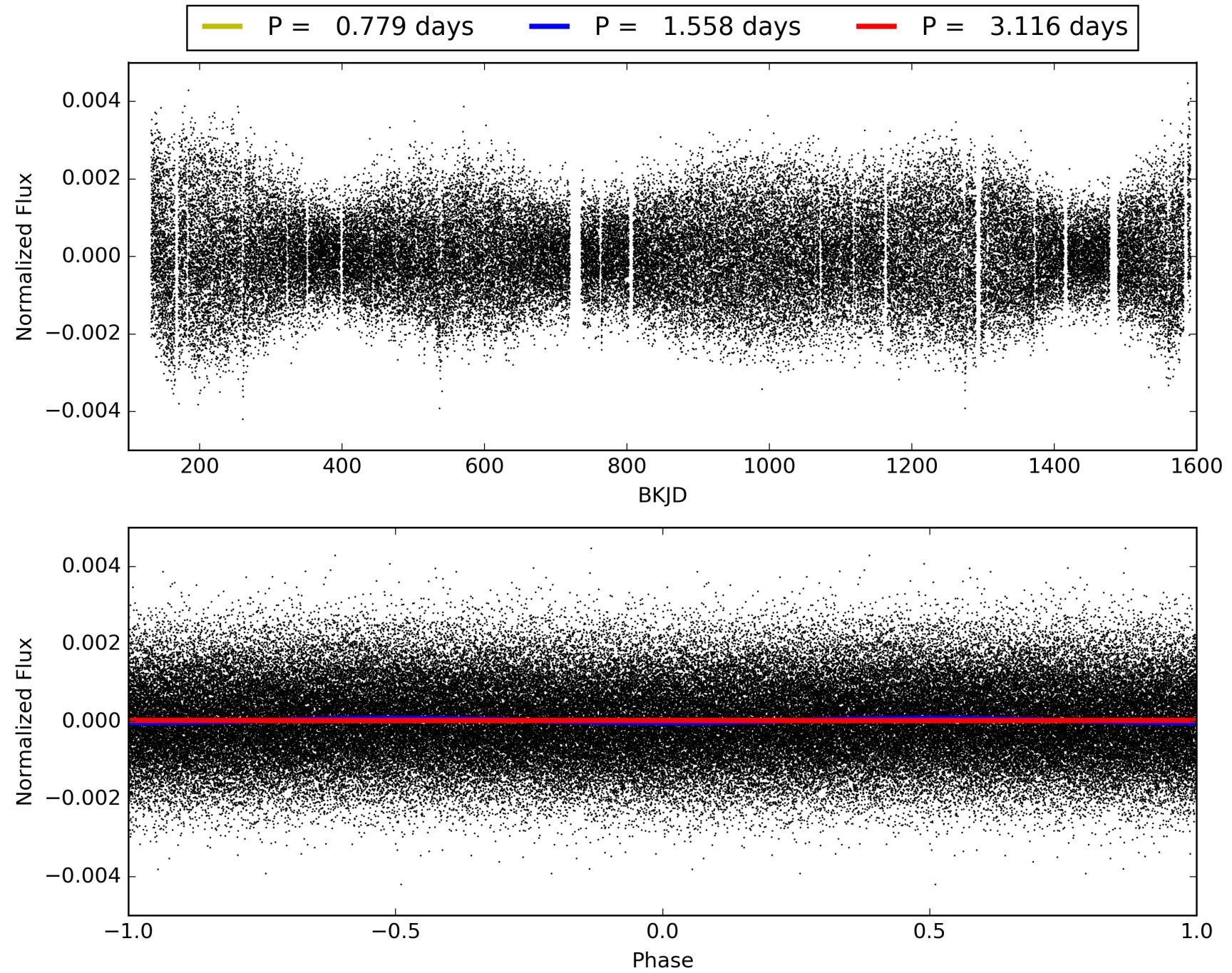
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 21:22:07 Z

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

# TCE 006463047-01, PDC Light Curves



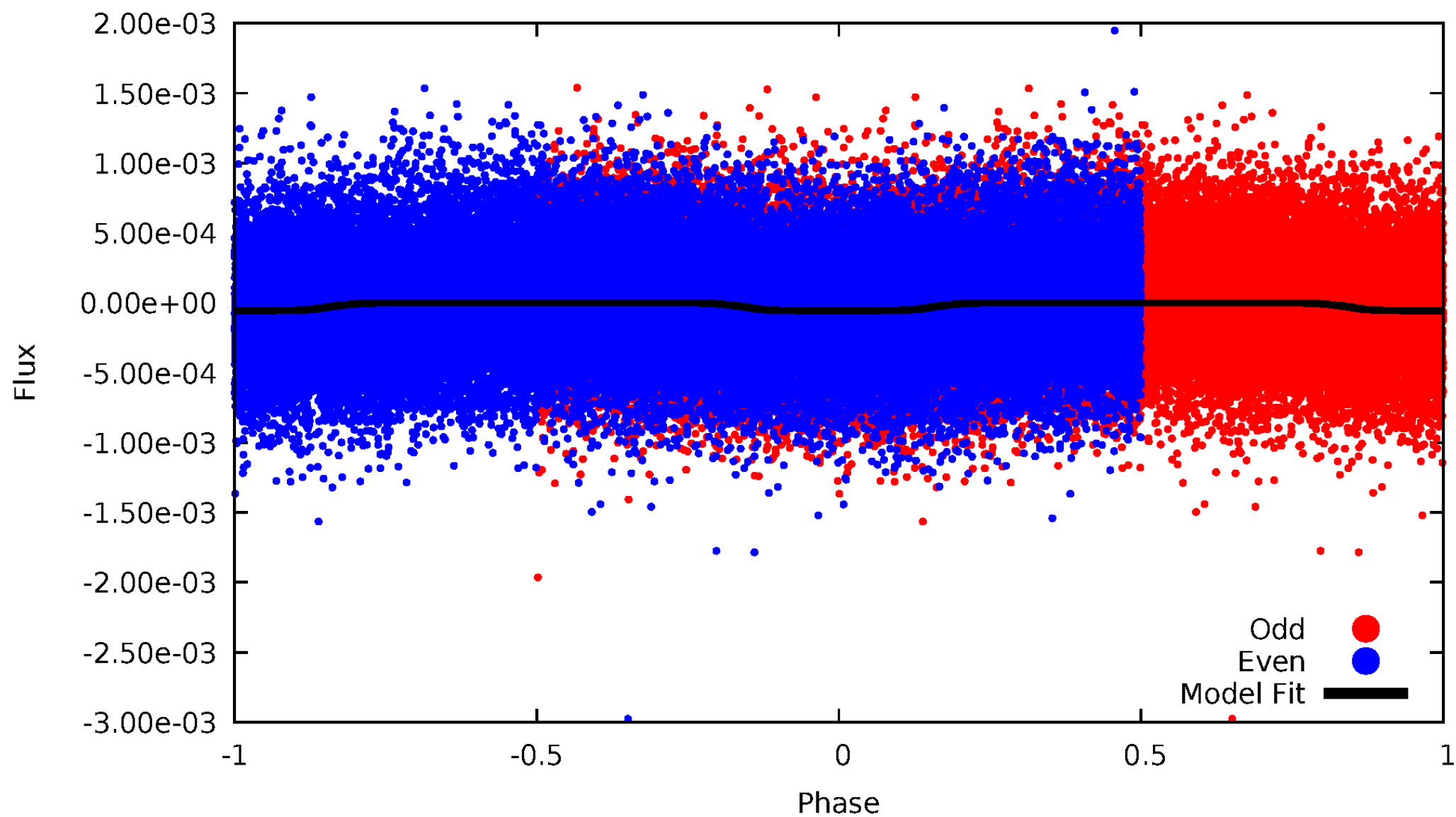
TCE 006463047-01





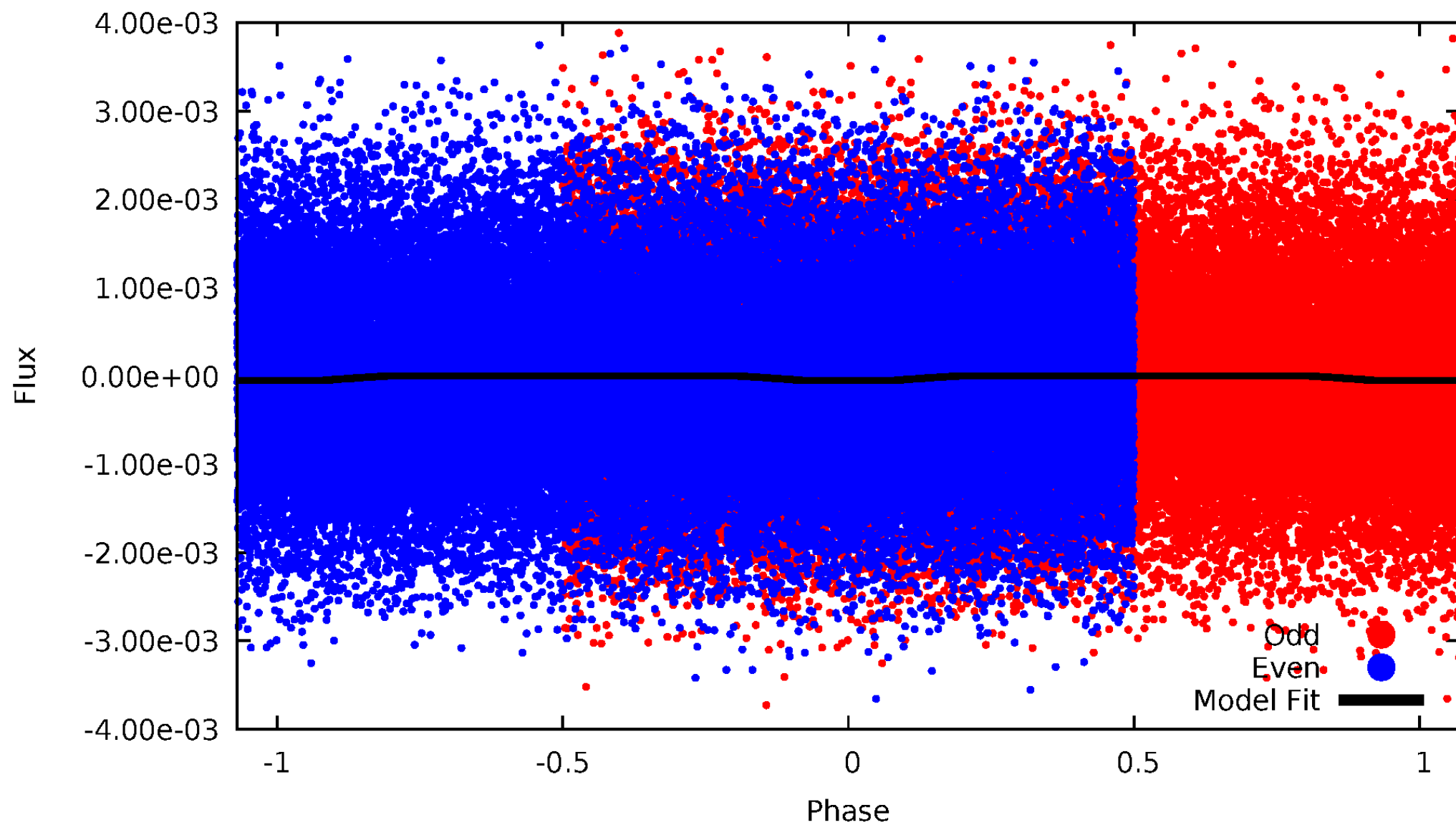
# DV Odd/Even

TCE 006463047-01



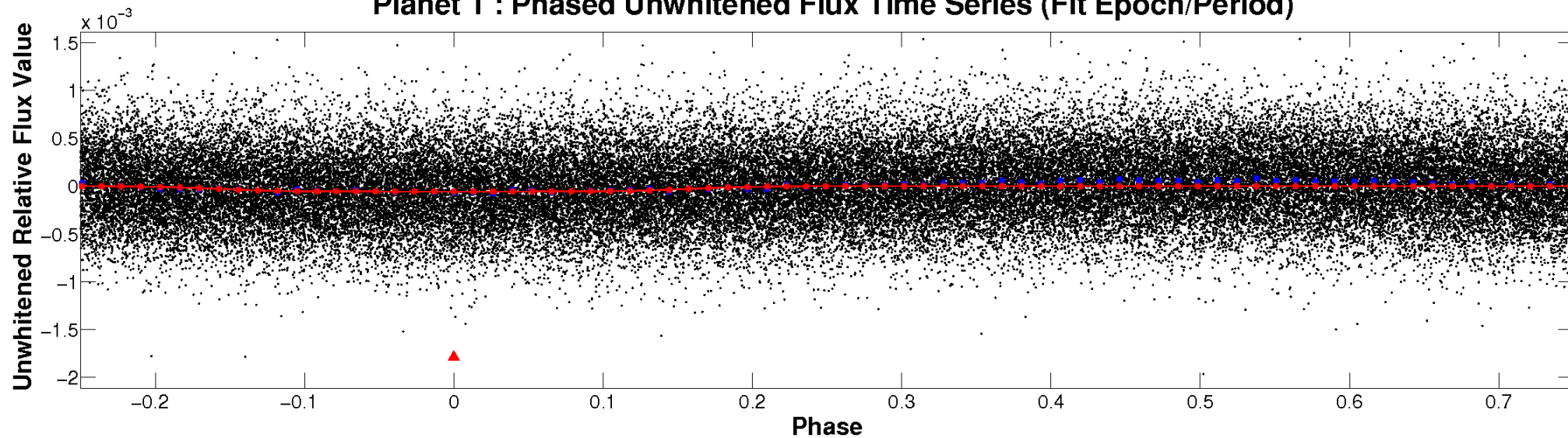
# ALT Odd/Even

TCE 006463047-01

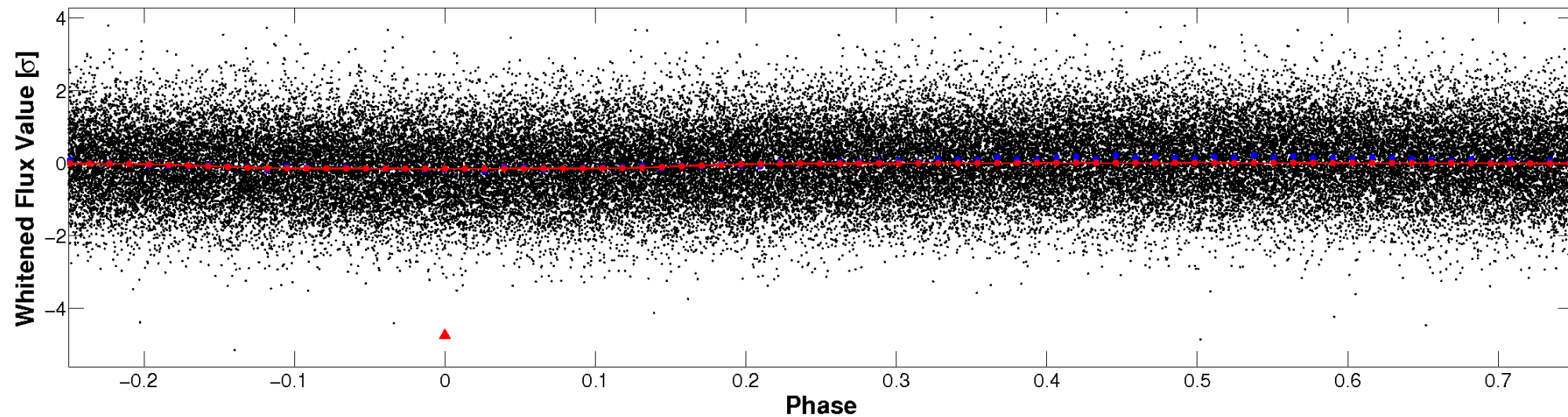


# Non-Whitened Vs. Whitened Light Curve

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

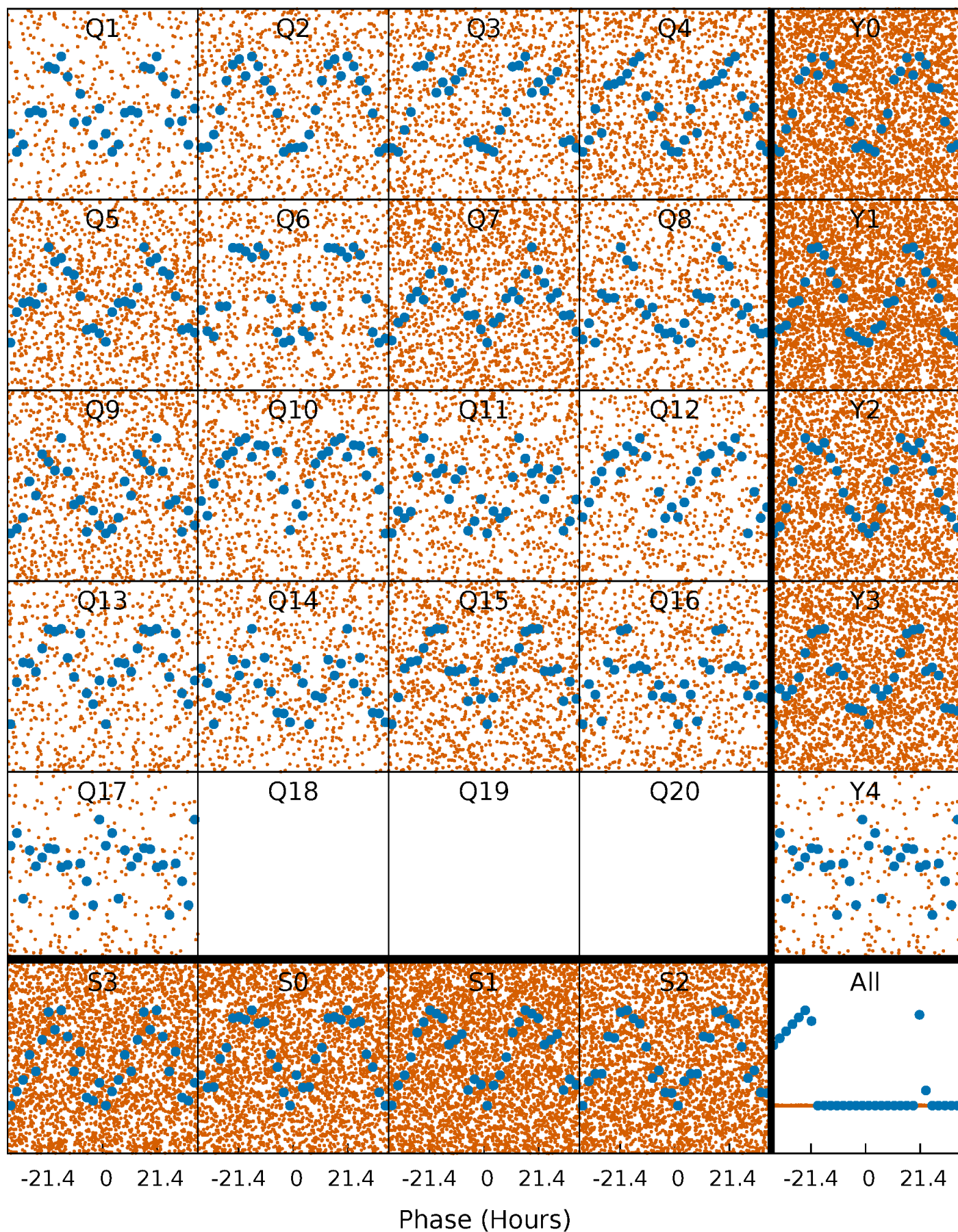


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

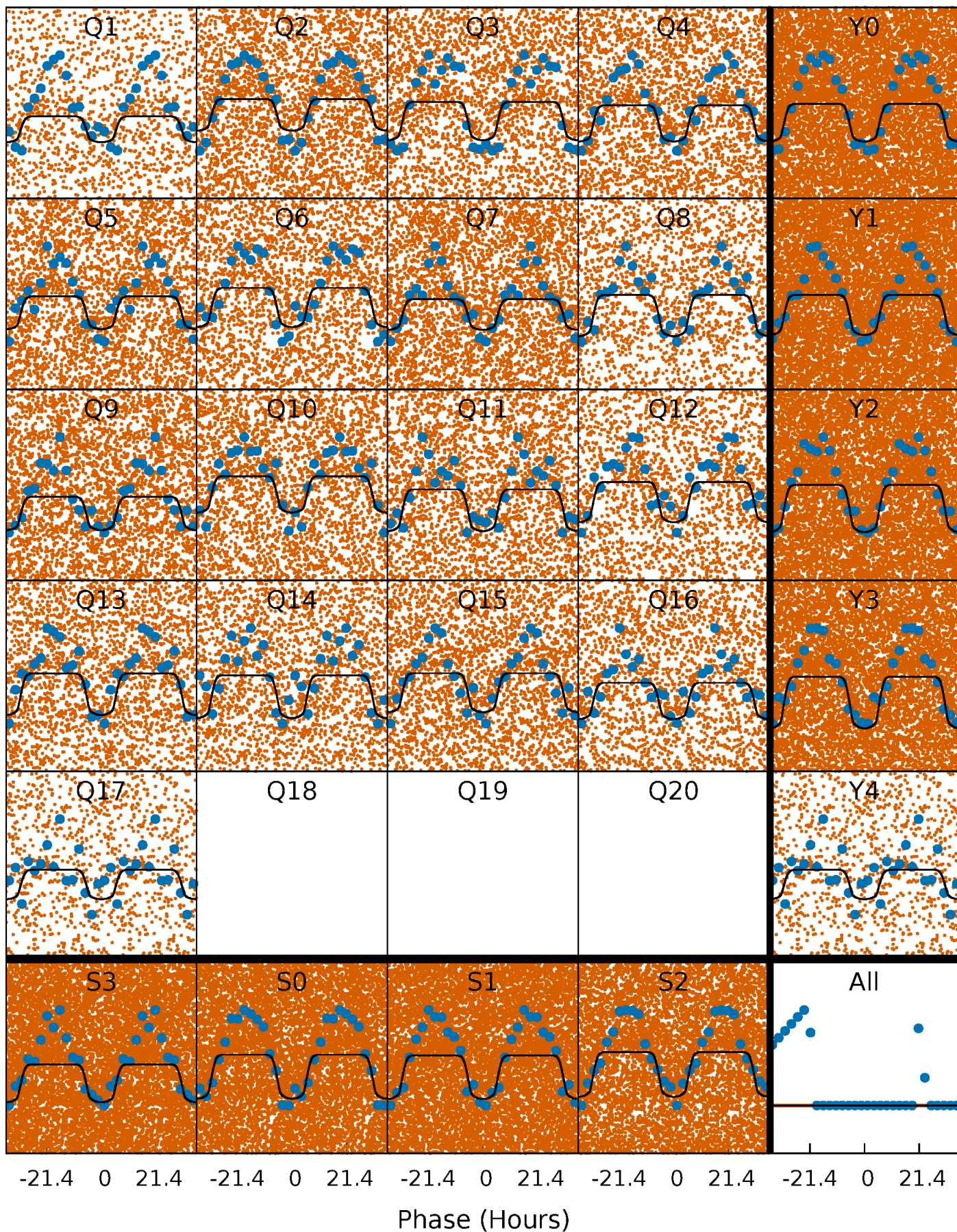
TCE 006463047-01 P= 1.558204 Days  $T_0=131.719288$  (BKJD)





# DV Quarter-Phased Transit Curves

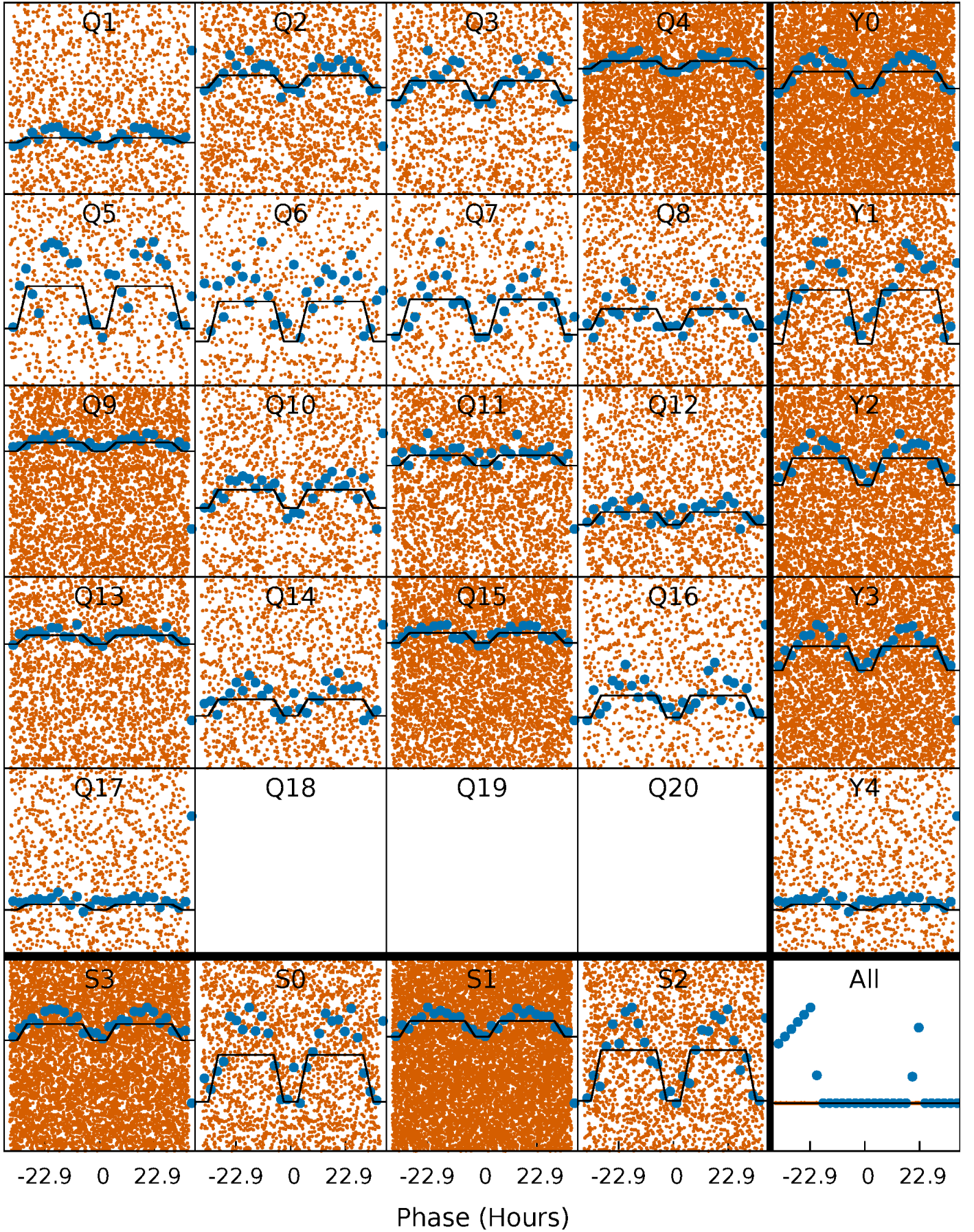
TCE 006463047-01   P= 1.558204 Days    $T_0=131.719288$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

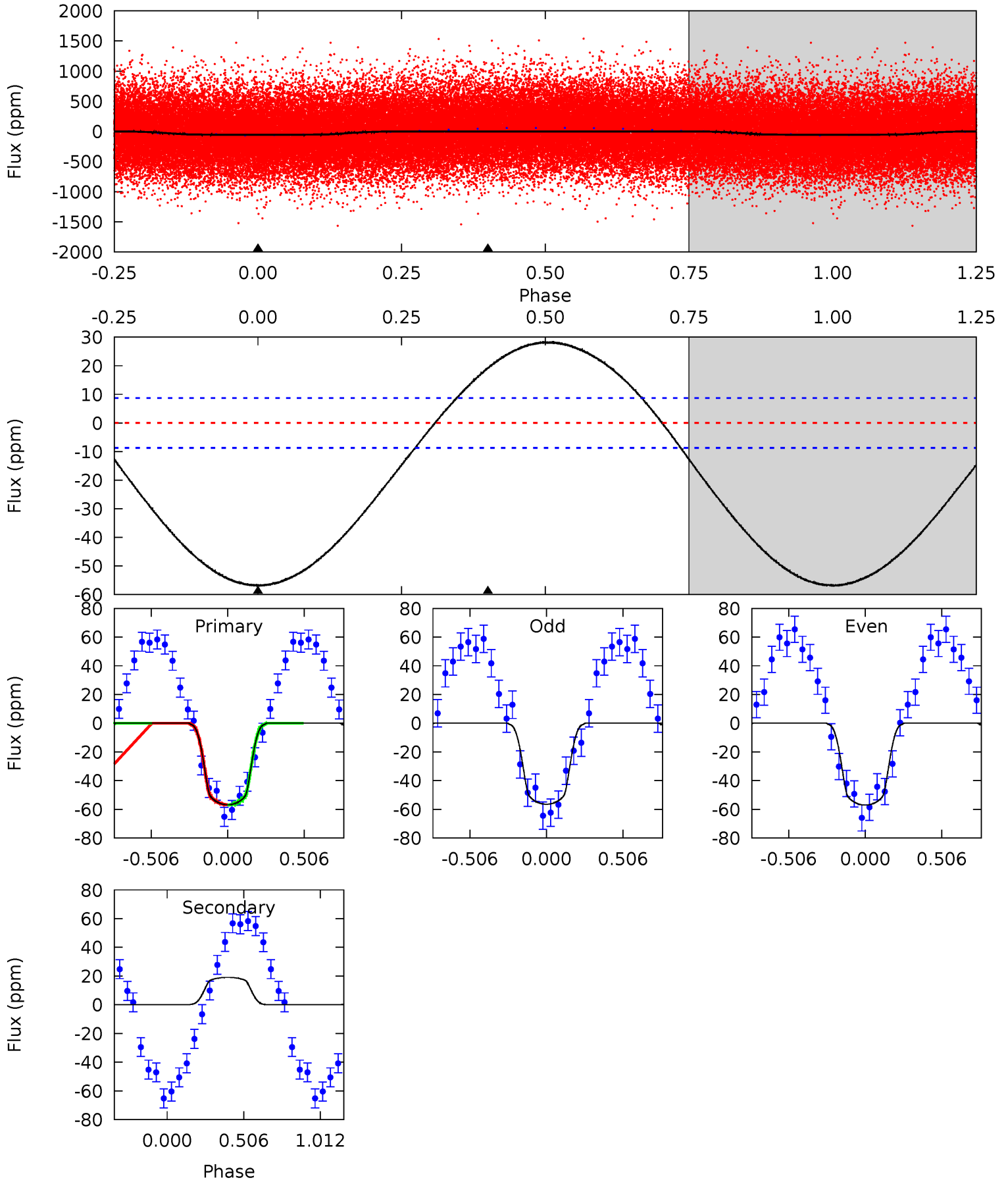
TCE 006463047-01 P= 1.558199 Days  $T_0=131.728967$  (BKJD)



# DV Model-Shift Uniqueness Test

006463047-01, P = 1.558204 Days, E = 130.161084 Days

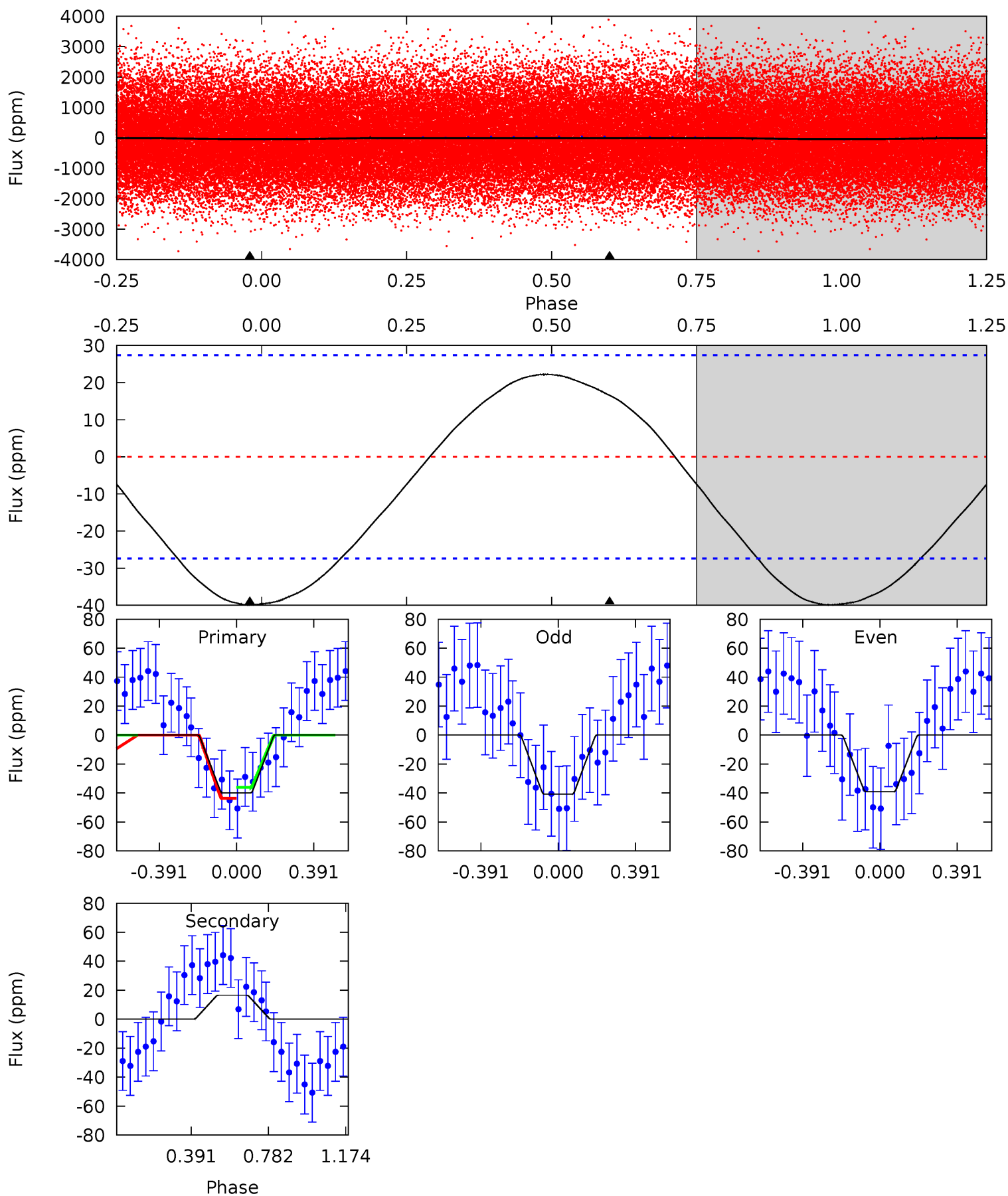
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.5	-9.25	0	0	4.21	0.67	3.74	27.5	27.5	-9.25	-9.25	0.14	1.48	0.34	0.04



# Alt Model-Shift Uniqueness Test

006463047-01, P = 1.558199 Days, E = 130.170768 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
6.22	-2.58	0	0	4.27	0.86	0.82	6.22	6.22	-2.58	-2.58	0.13	0.49	0.36	0.59





### Stellar Parameters For KIC 006463047

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$8439^{+236}_{-354}$	$4.026^{+0.221}_{-0.119}$	$-0.320^{+0.150}_{-0.350}$	$2.153^{+0.407}_{-0.610}$	$1.796^{+0.082}_{-0.329}$	$0.253^{+0.334}_{-0.092}$
	+3%/-4%	+5%/-3%	+47%/-109%	+19%/-28%	+5%/-18%	+132%/-36%
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 006463047-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$19 \pm 2$	$2.04^{+0.24}_{-0.30}$	$4215^{+274}_{-331}$	$-5844^{+232}_{-217}$	$-2.512^{+0.543}_{-0.956}$
Alt.	$17 \pm 6$	$1.63^{+0.18}_{-0.26}$	$4221^{+262}_{-332}$	$-6270^{+618}_{-616}$	$-3.515^{+1.376}_{-1.827}$

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

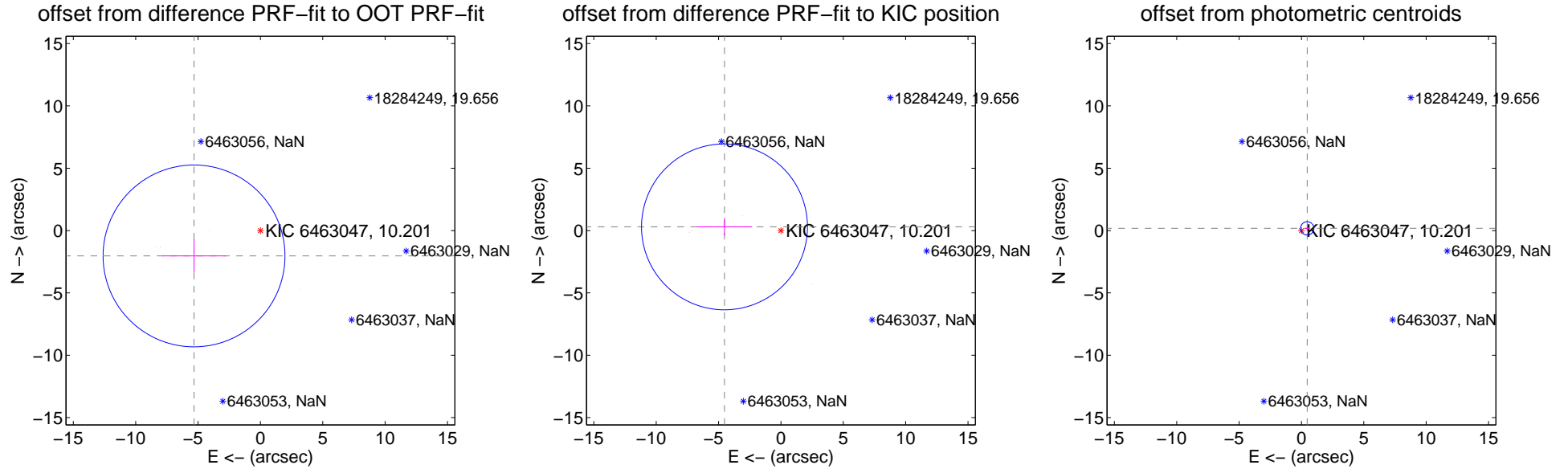
## DV Centroid Data

Supplemental centroid analysis for 006463047-01. **Kepler magnitude: 10.20.** Transit SNR 19.69

**There are 1 quarters with good PRF difference image offsets**

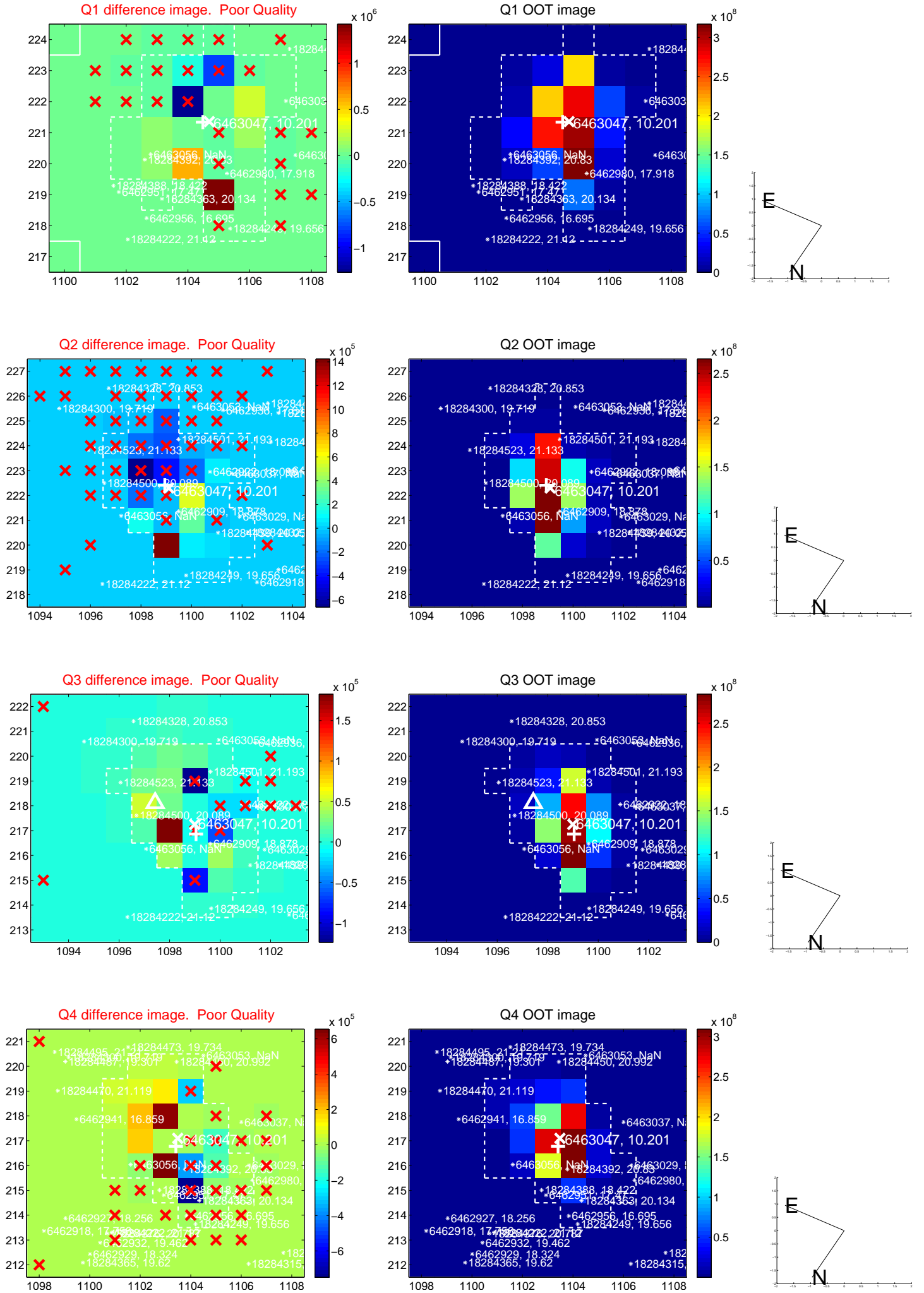
The direct PRF centroid is offset from the target star catalog position by about 1.50 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$5.697 \pm 2.430$	2.34	$5.321 \pm 2.551$	$-2.033 \pm 1.338$
PRF-fit source offset from KIC position	$4.535 \pm 2.217$	2.05	$4.525 \pm 2.221$	$0.297 \pm 0.707$
photometric centroid source offset	$0.50 \pm 0.18$	2.79	$-0.46 \pm 0.17$	$0.18 \pm 0.23$

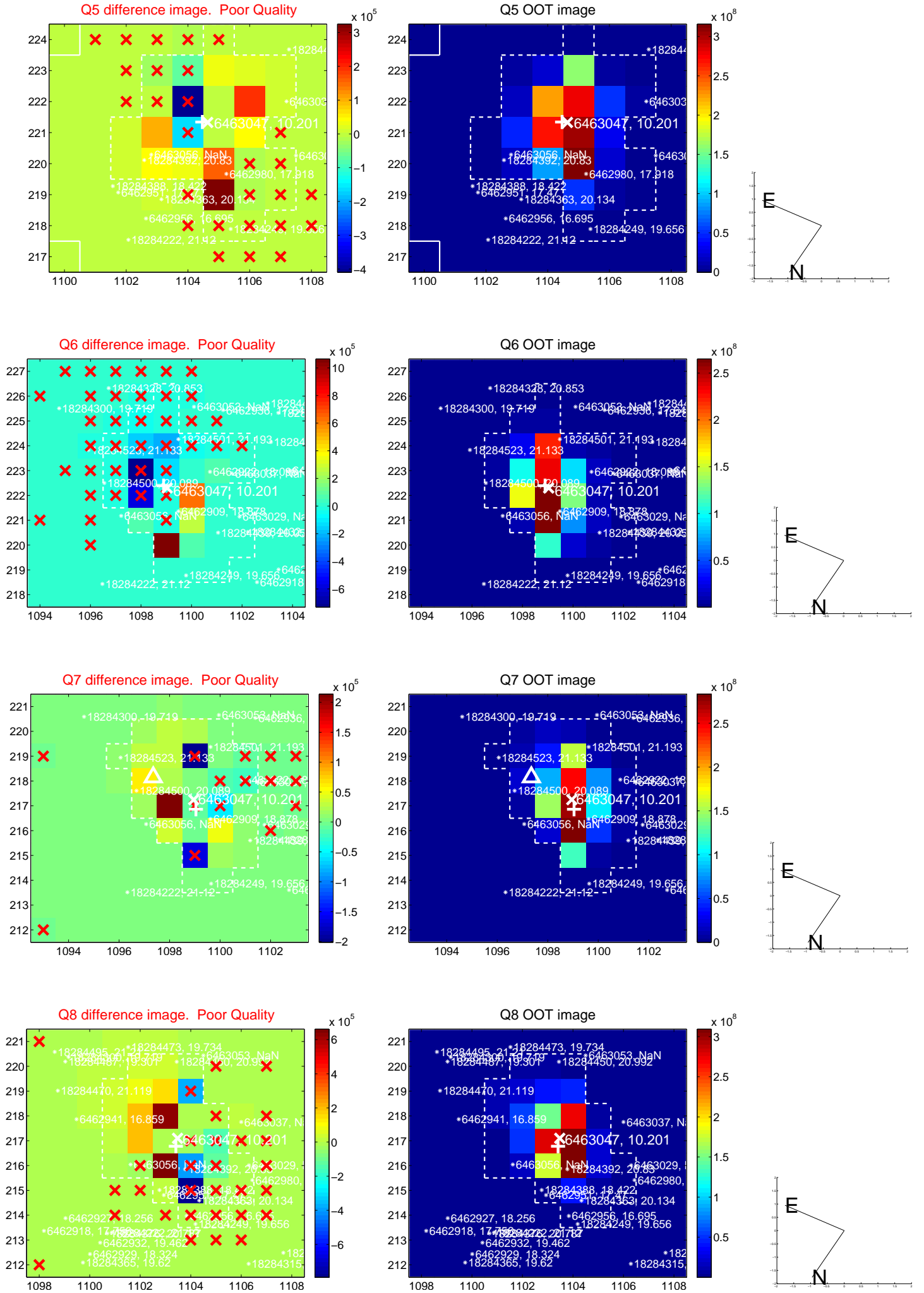


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

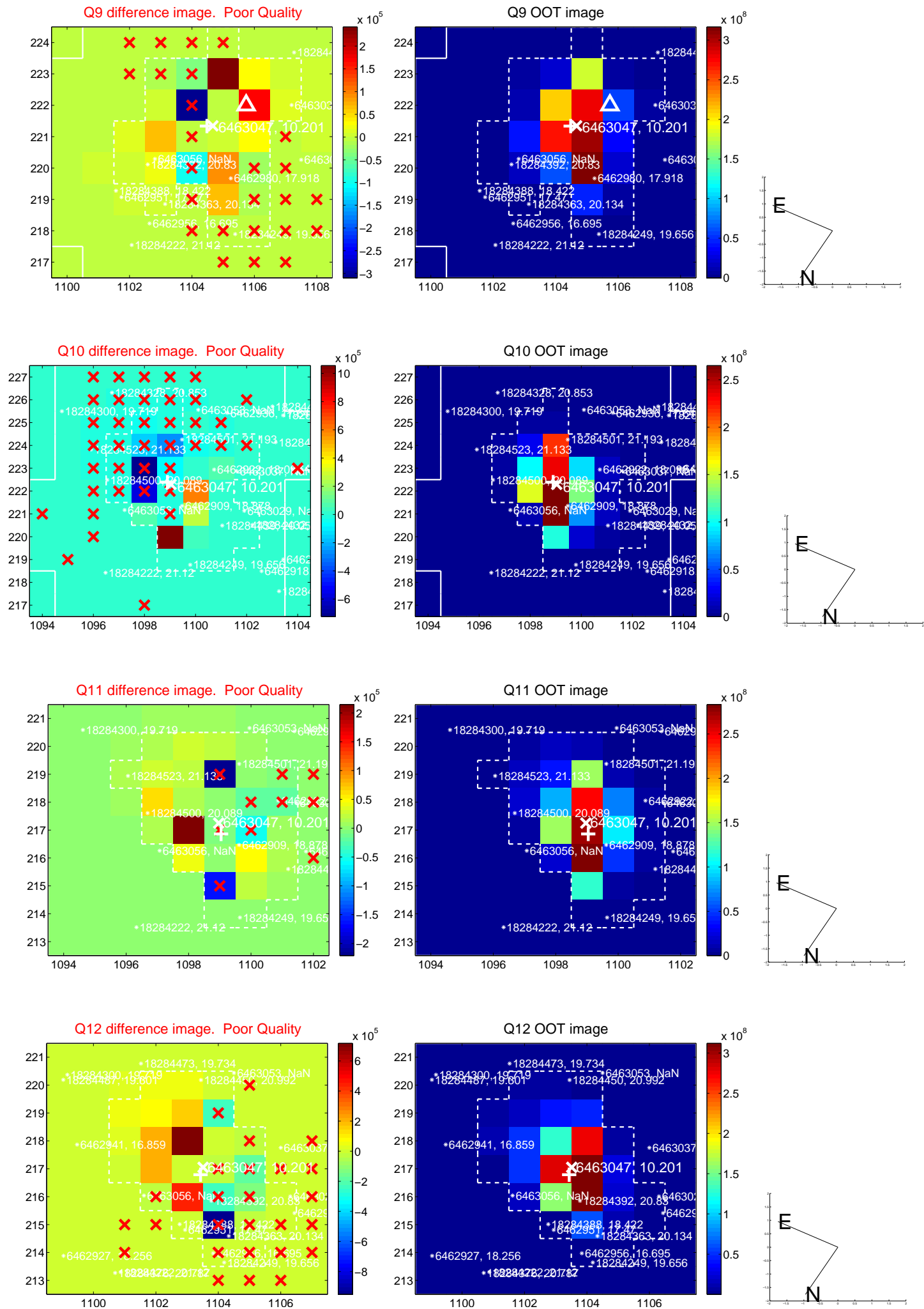


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

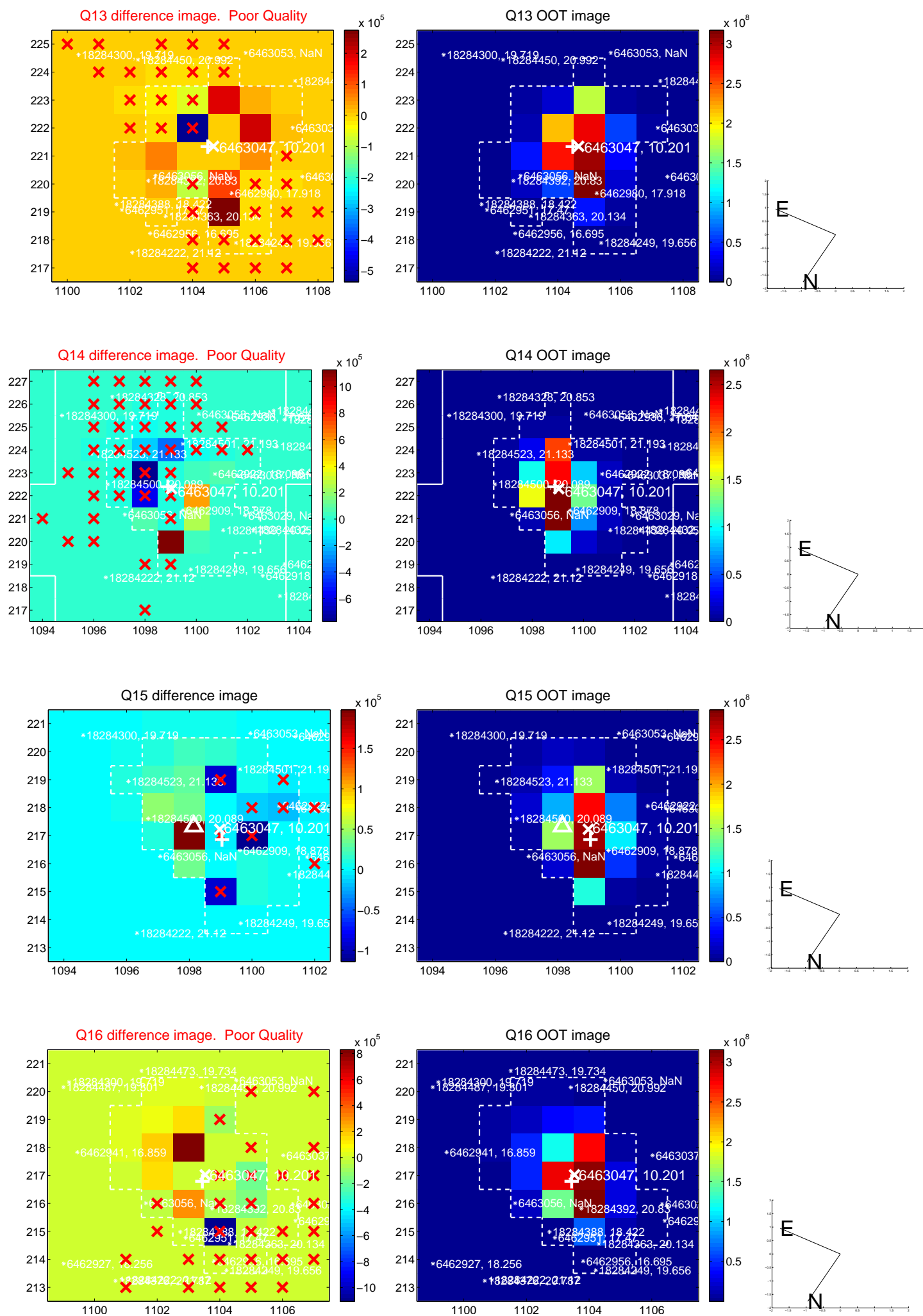




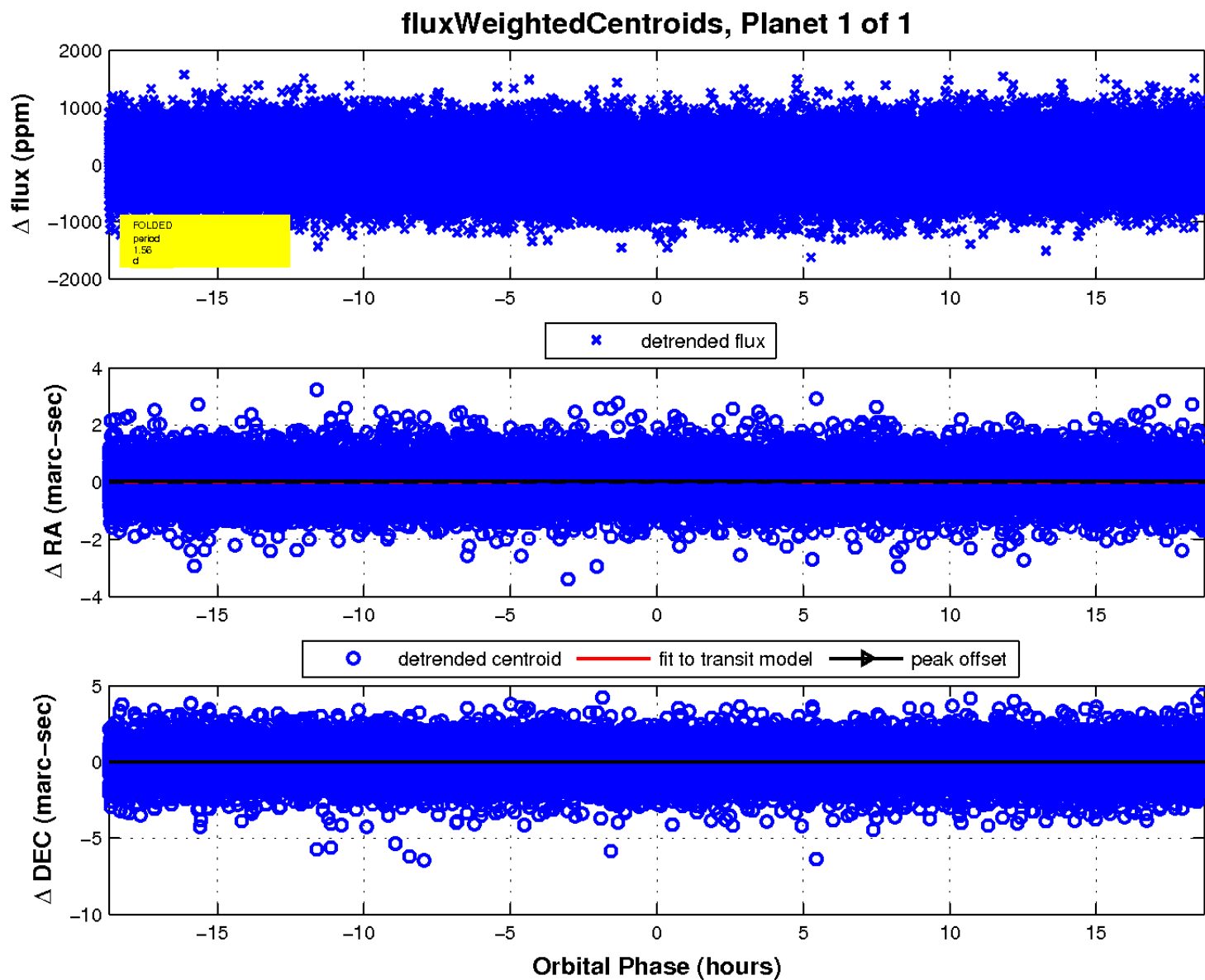
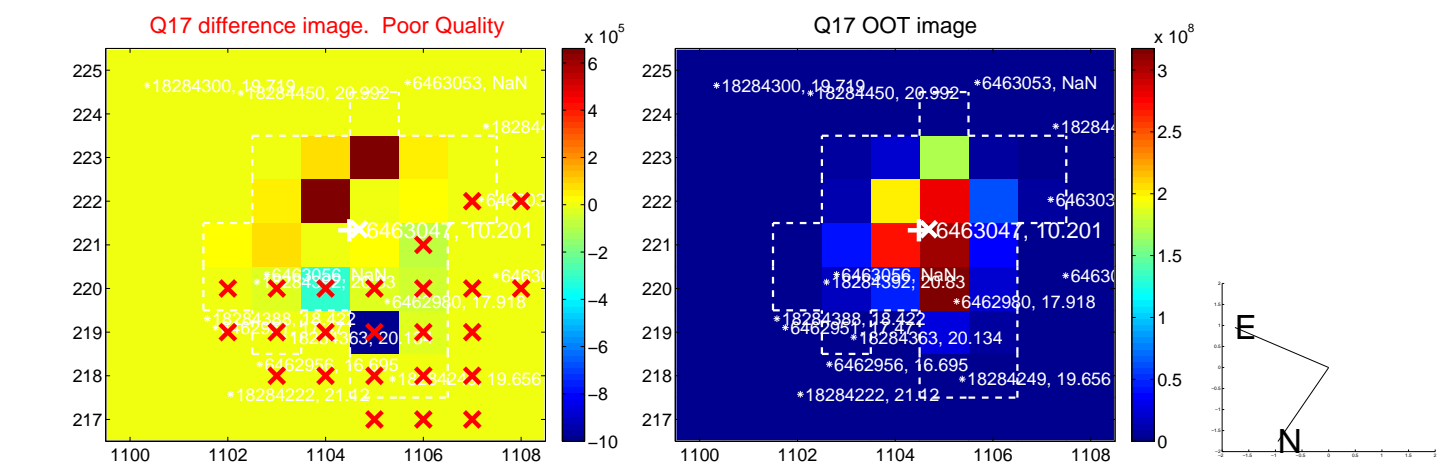
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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UKIRT Image

Declination

