

# KIC 008261157

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008261157-01	OBS	No	1.172152	131.795293	24.9	5.739	10.4	10.4	1.44	6892	0.88	7071.83

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008261157-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT

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

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

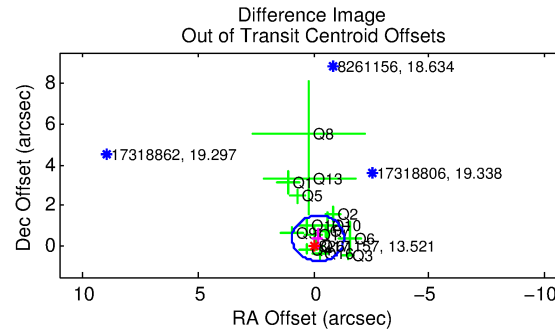
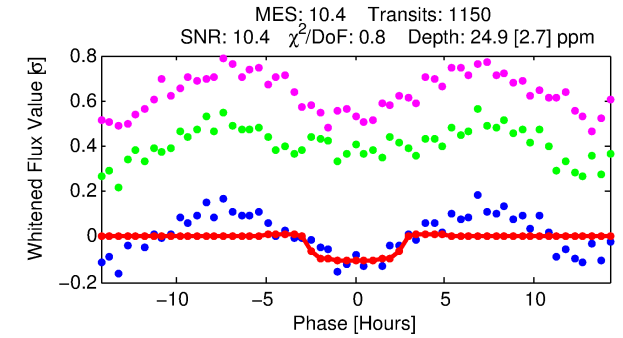
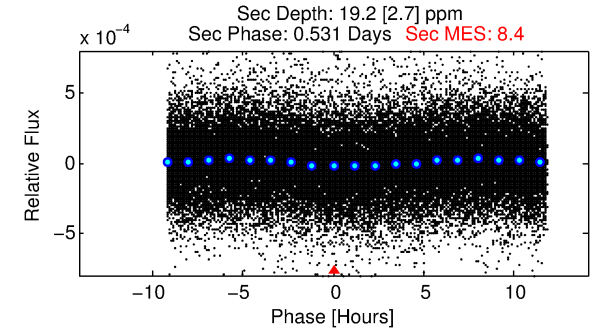
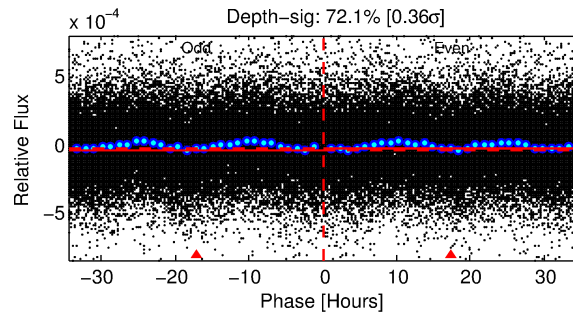
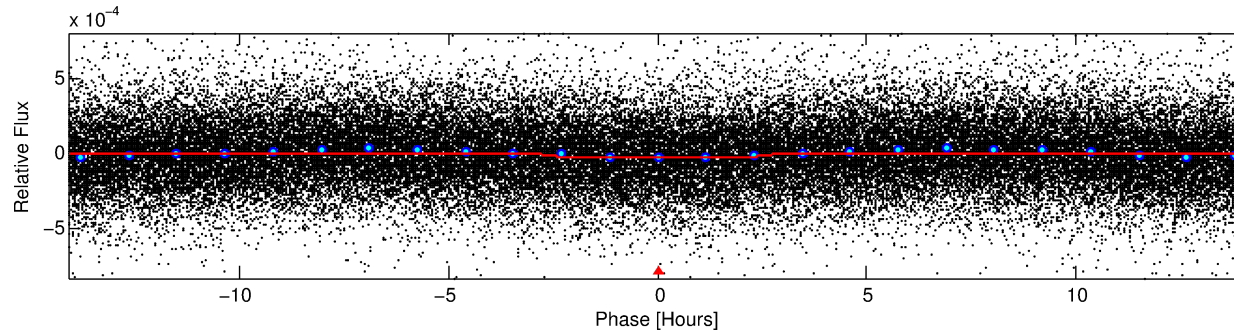
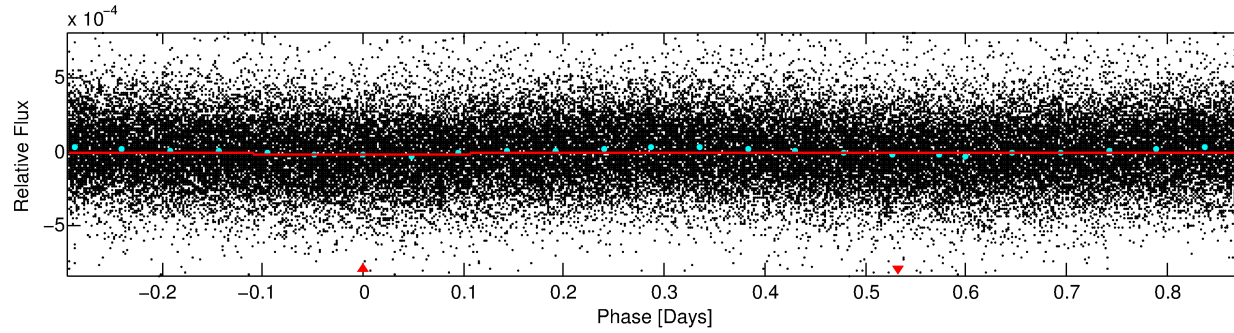
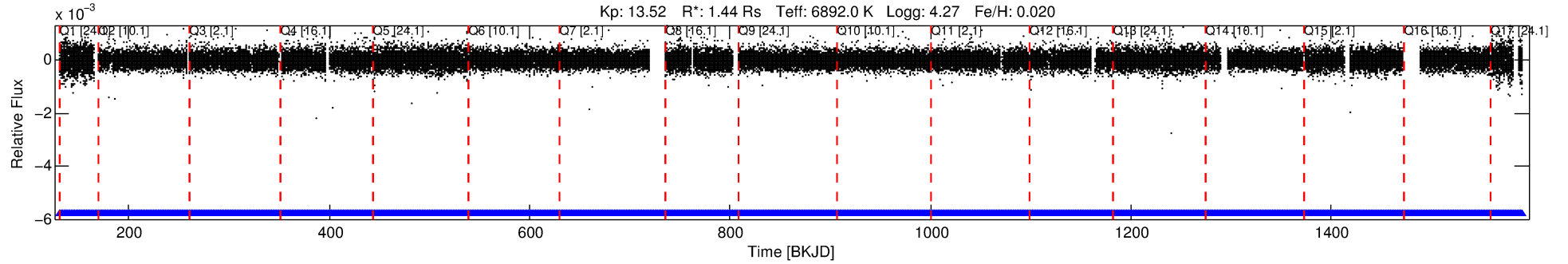
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008261157-01

No Significant Match Found

# DV One-Page Summary

KIC: 8261157 Candidate: 1 of 1 Period: 1.172 d



## DV Fit Results:

Period = 1.17215 [0.00001] d  
Epoch = 131.7953 [0.0055] BKJD  
Rp/R\* = 0.0056 [0.0012]  
a/R\* = 1.09 [0.23]  
b = 0.95 [0.12]  
Seff = 7071.83 [2936.04]  
Teq = 2338 [243] K  
Rp = 0.88 [0.35] Re  
a = 0.0243 [0.0067] AU  
Ag = 7.95 [4.64] [1.50 $\sigma$ ]  
Teffp = 6071 [705] K [5.00 $\sigma$ ]

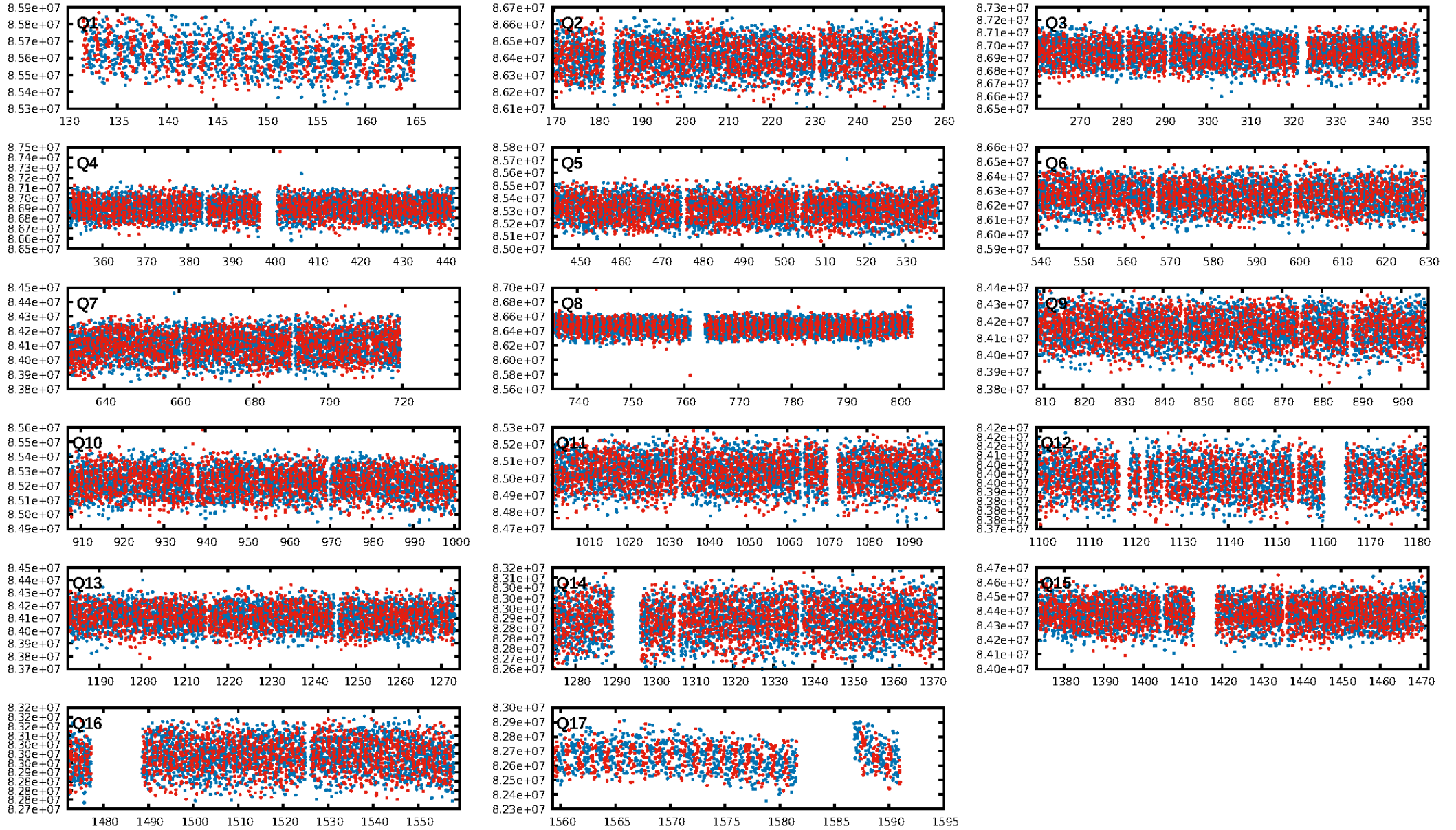
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 8.04e-16  
RollingBand-fgt: 1.00 [1098/1098]  
GhostDiagnostic-chr: 4.151  
Centroid-sig: 57.4%  
Centroid-so: 0.780 arcsec [0.71 $\sigma$ ]  
OotOffset-rm: 0.435 arcsec [1.16 $\sigma$ ]  
KicOffset-rm: 0.423 arcsec [1.23 $\sigma$ ]  
OotOffset-st: 3/3/4/5 [15]  
KicOffset-st: 3/3/4/5 [15]  
DiffImageQuality-fgm: 0.87 [13/15]  
DiffImageOverlap-fno: 1.00 [17/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 22:54:54 Z

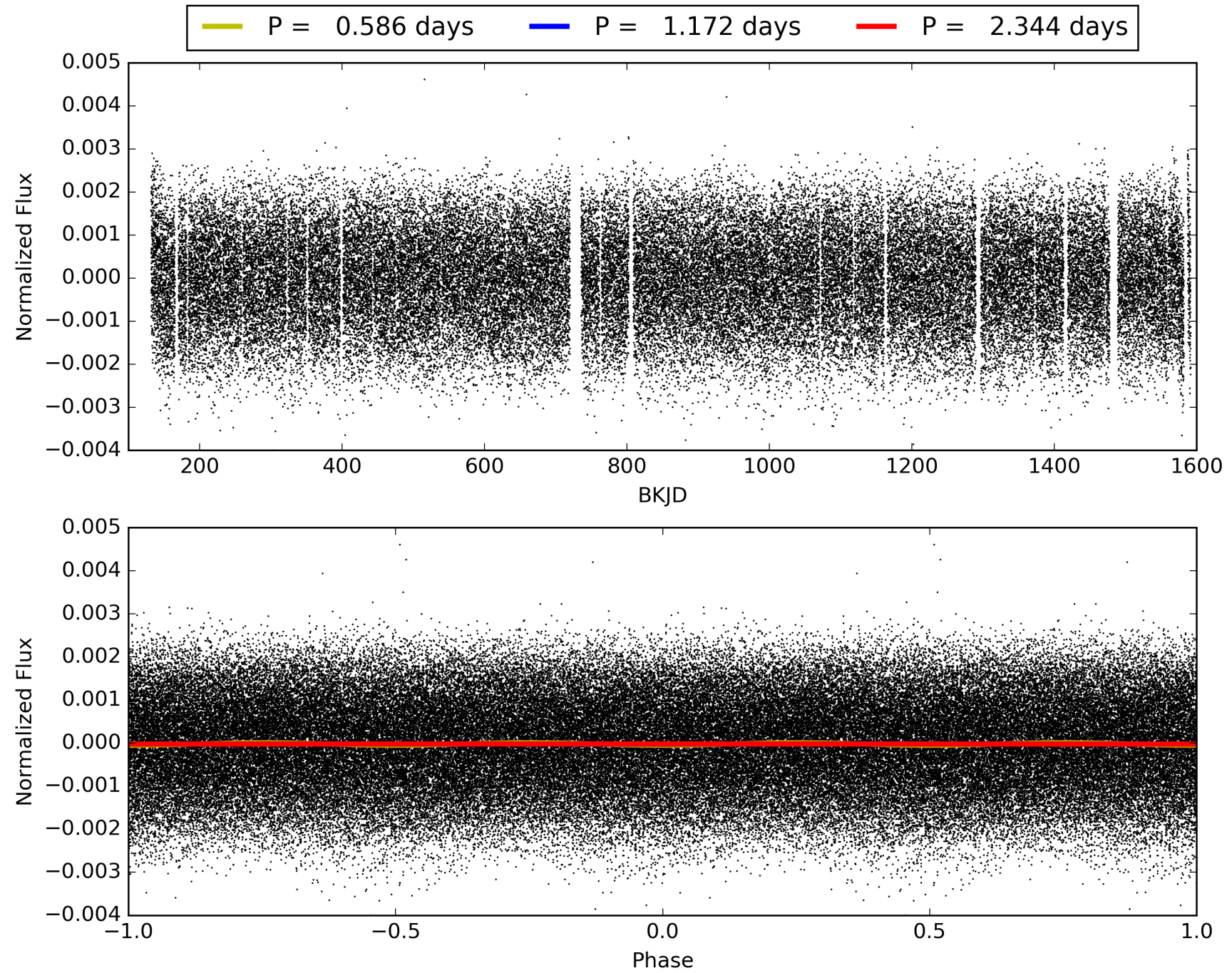
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 008261157-01, PDC Light Curves



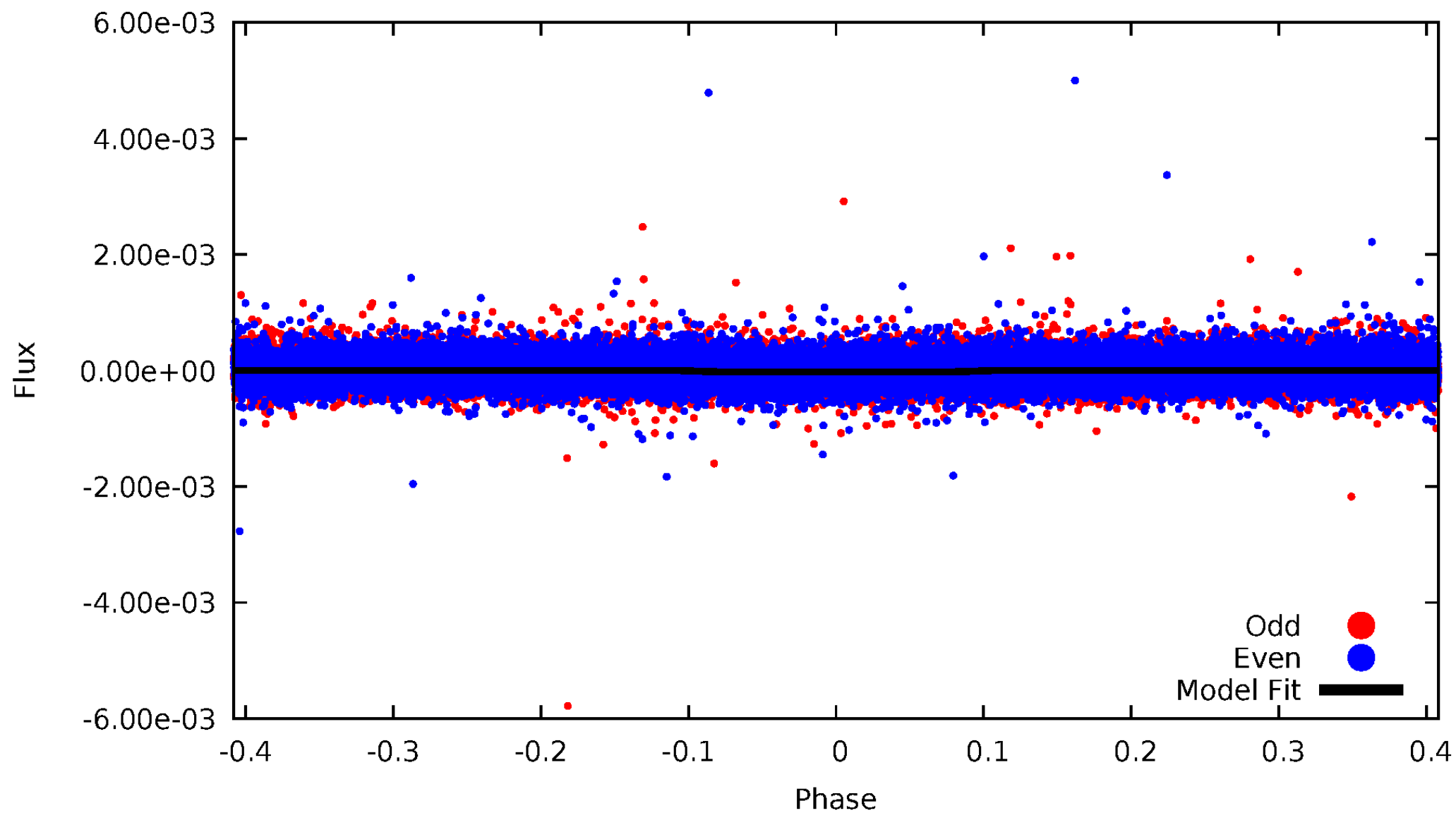


TCE 008261157-01



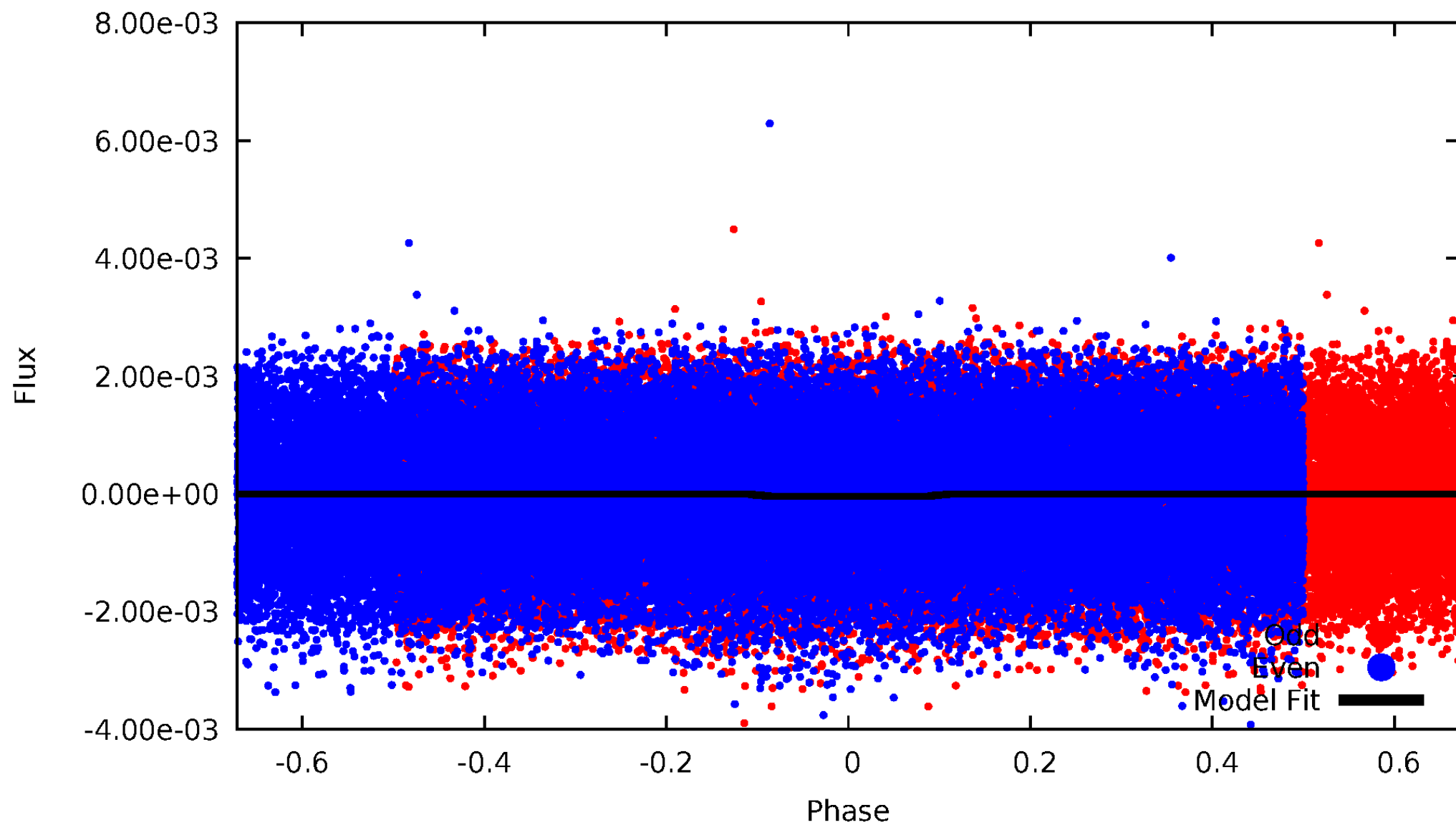
# DV Odd/Even

TCE 008261157-01



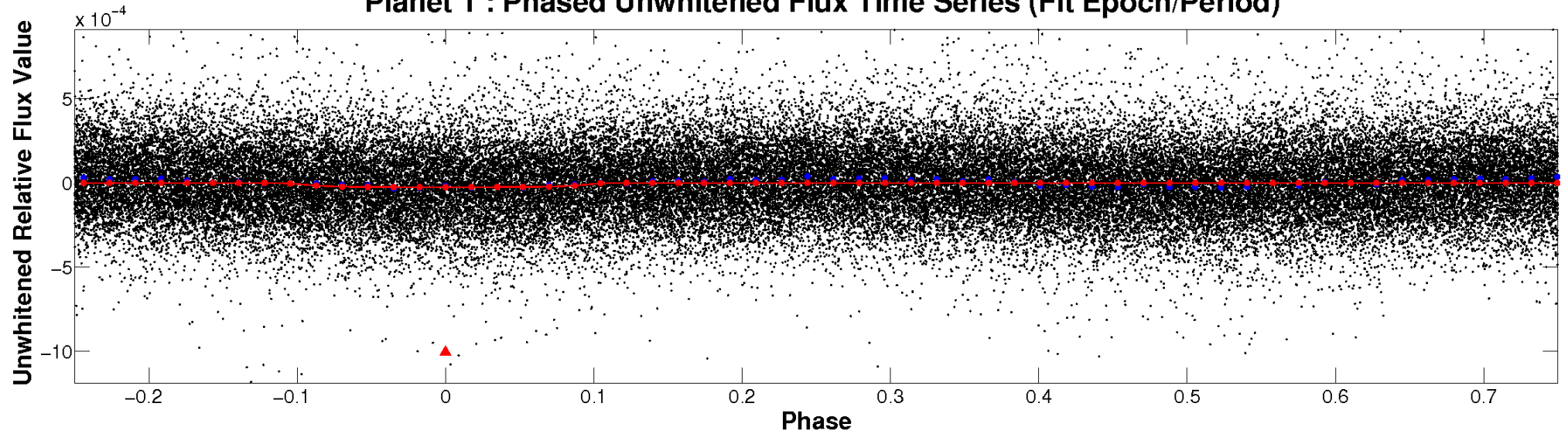
# ALT Odd/Even

TCE 008261157-01

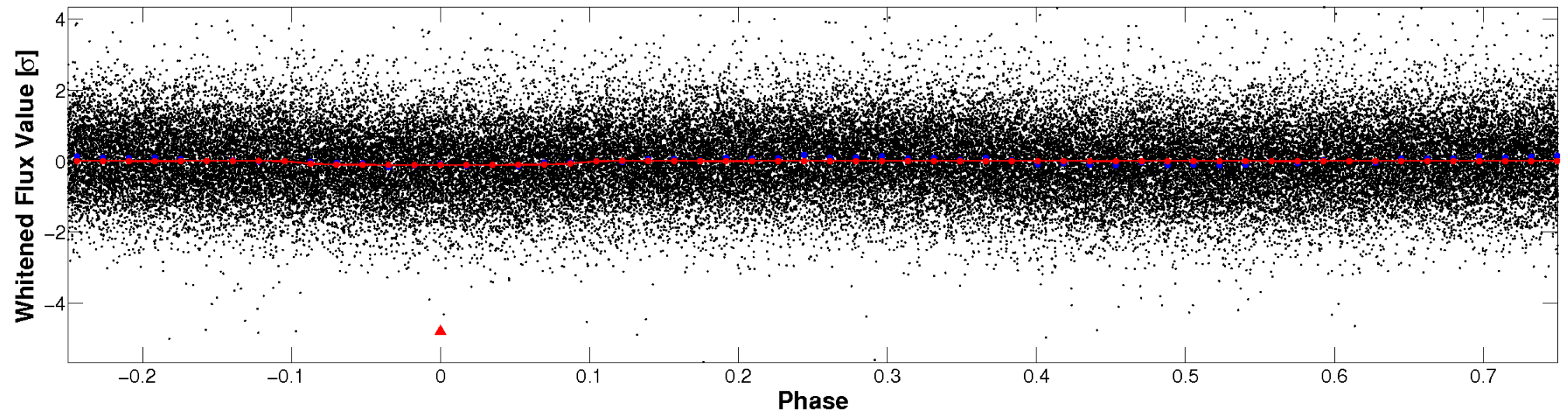


# Non-Whitened Vs. Whitened Light Curve

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



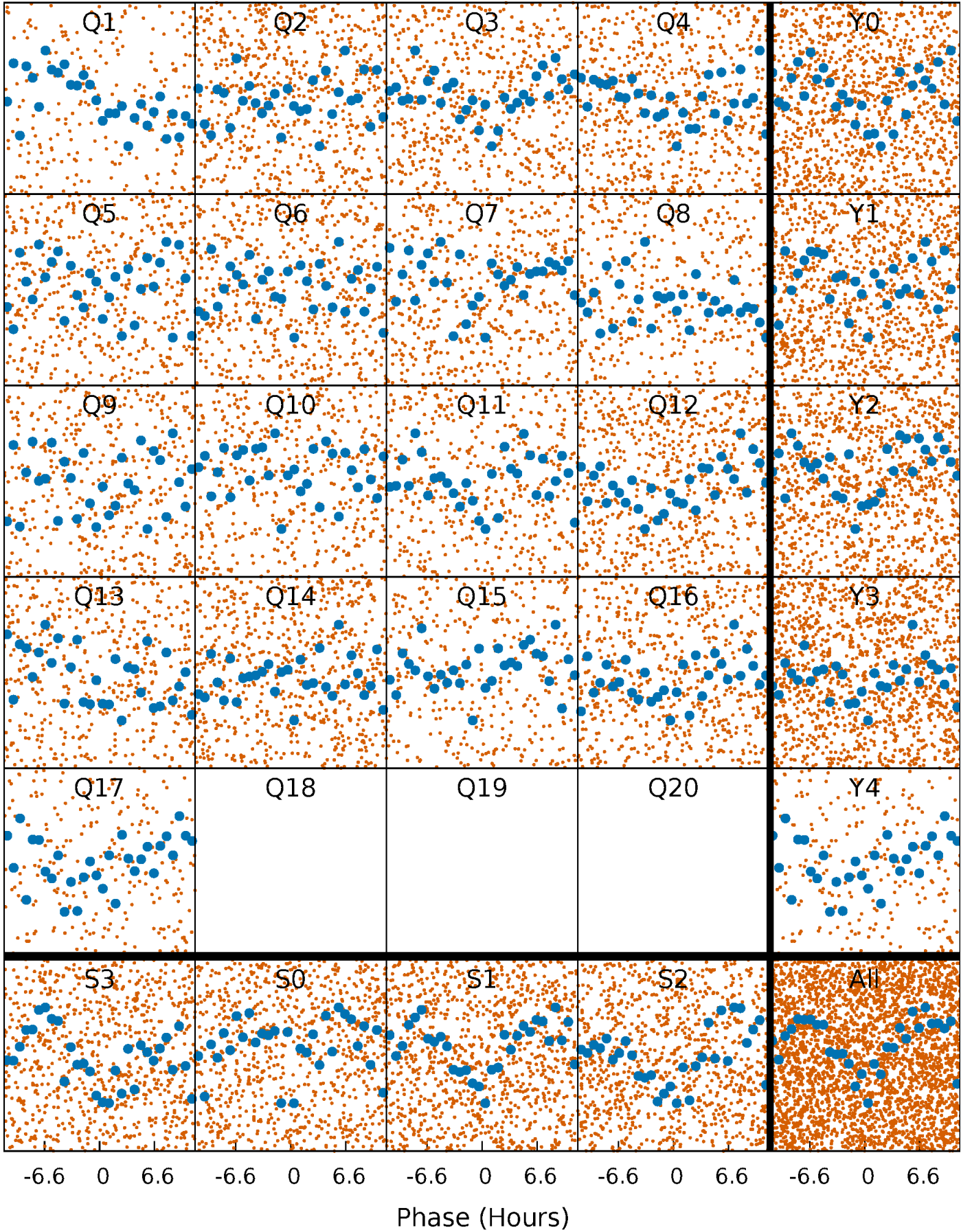
**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**





# PDC Quarter-Phased Transit Curves

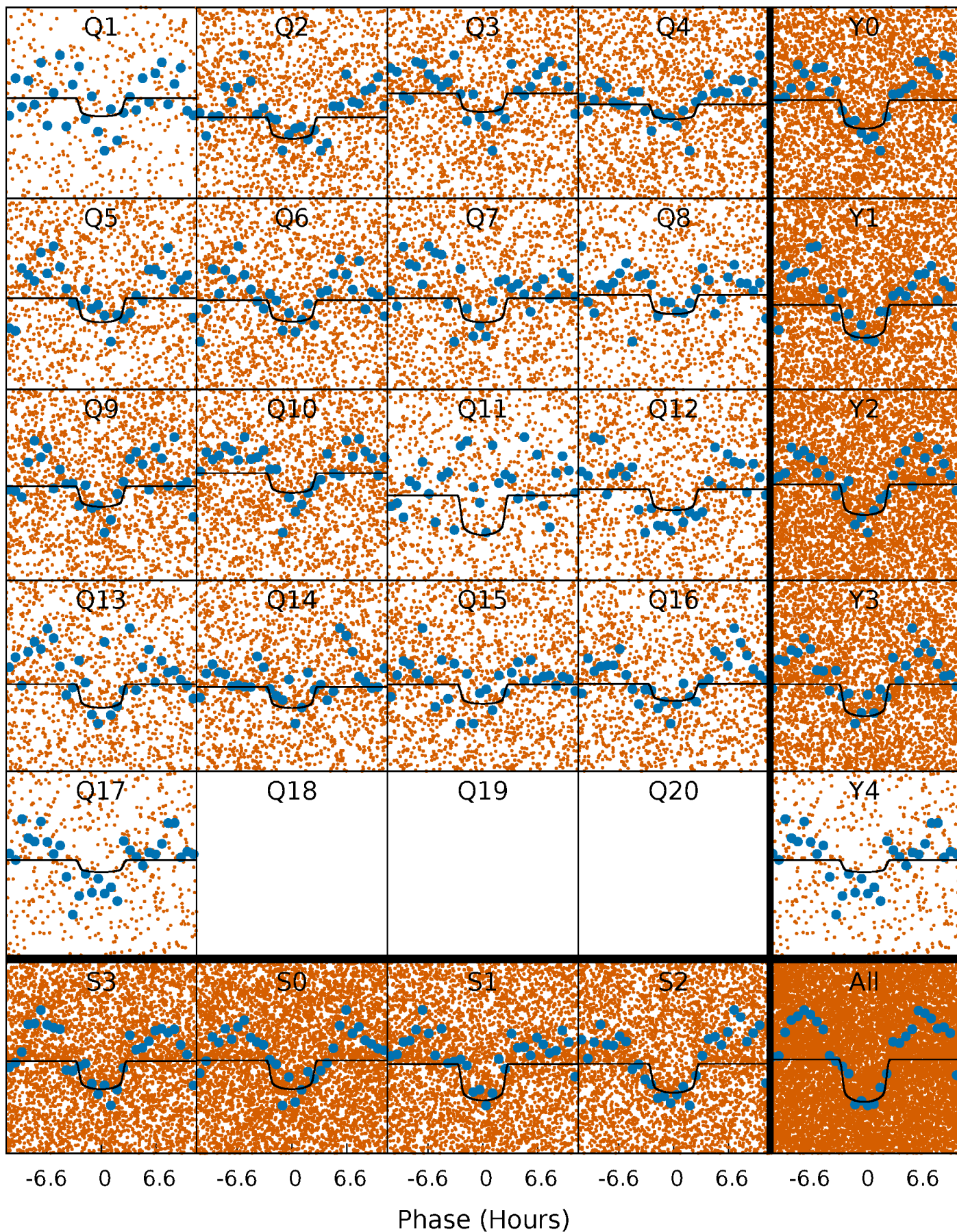
TCE 008261157-01   P= 1.172152 Days    $T_0=131.795293$  (BKJD)





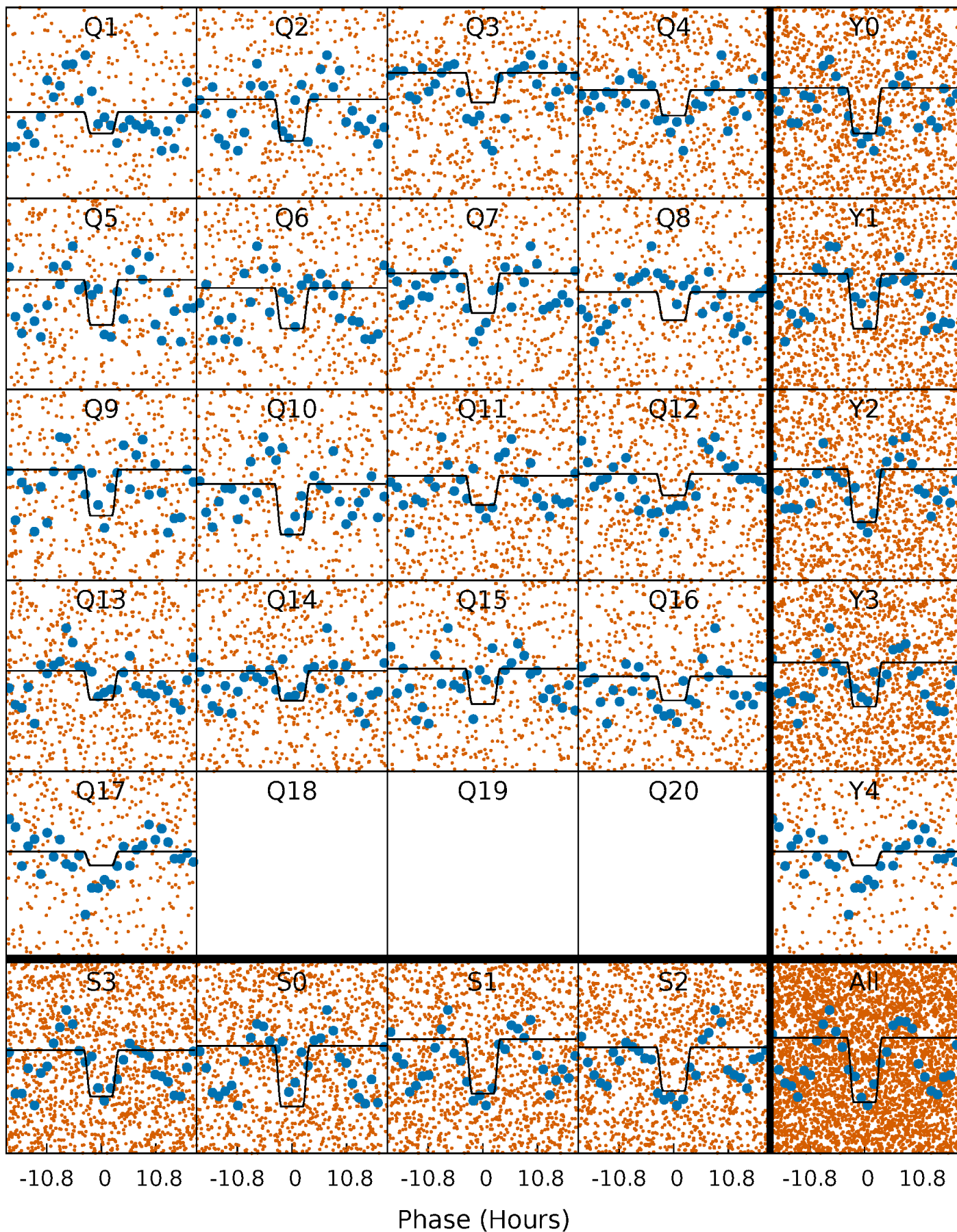
# DV Quarter-Phased Transit Curves

TCE 008261157-01 P= 1.172152 Days  $T_0=131.795293$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 008261157-01 P= 1.172116 Days  $T_0=131.813972$  (BKJD)

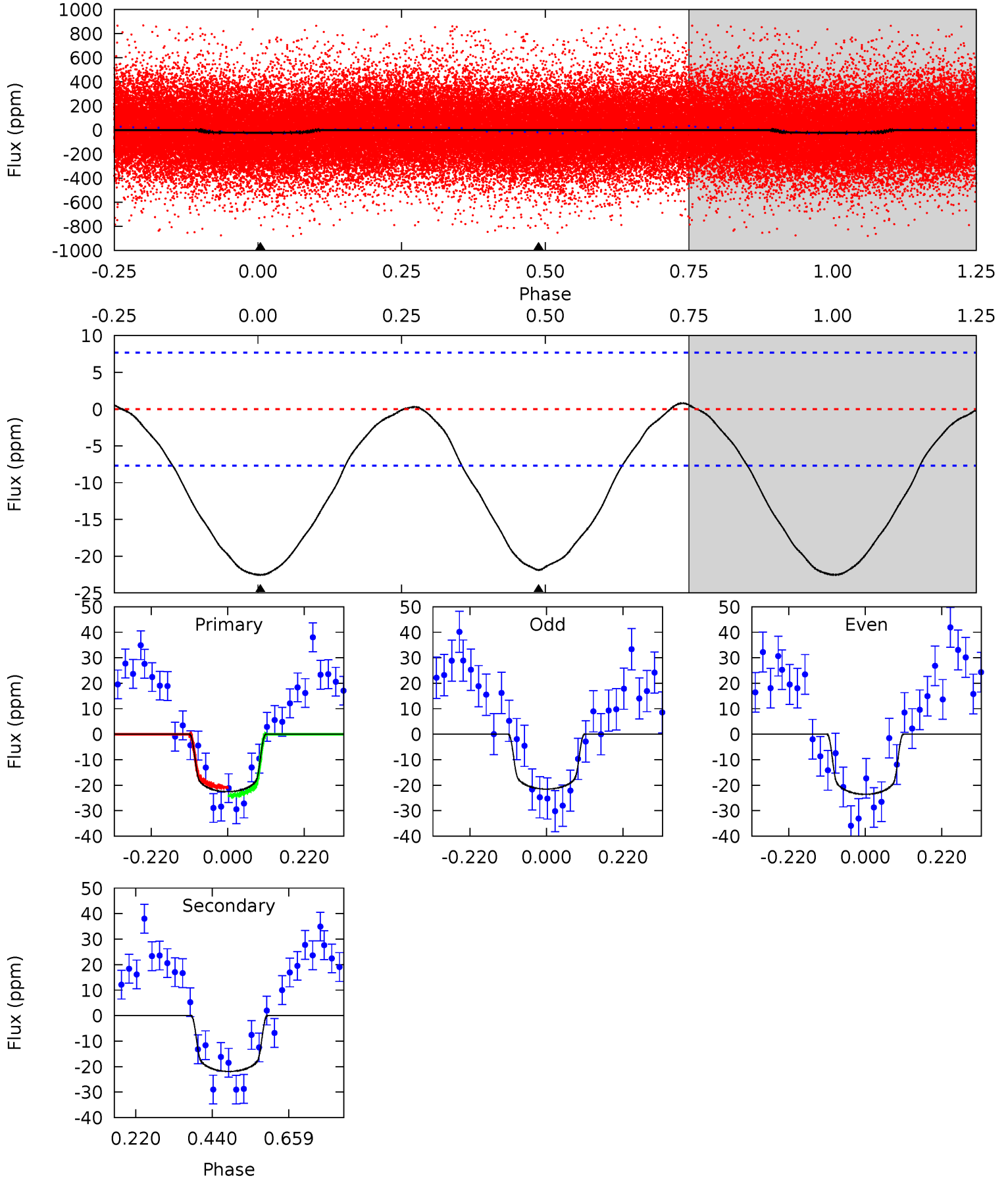




# DV Model-Shift Uniqueness Test

008261157-01, P = 1.172152 Days, E = 130.623141 Days

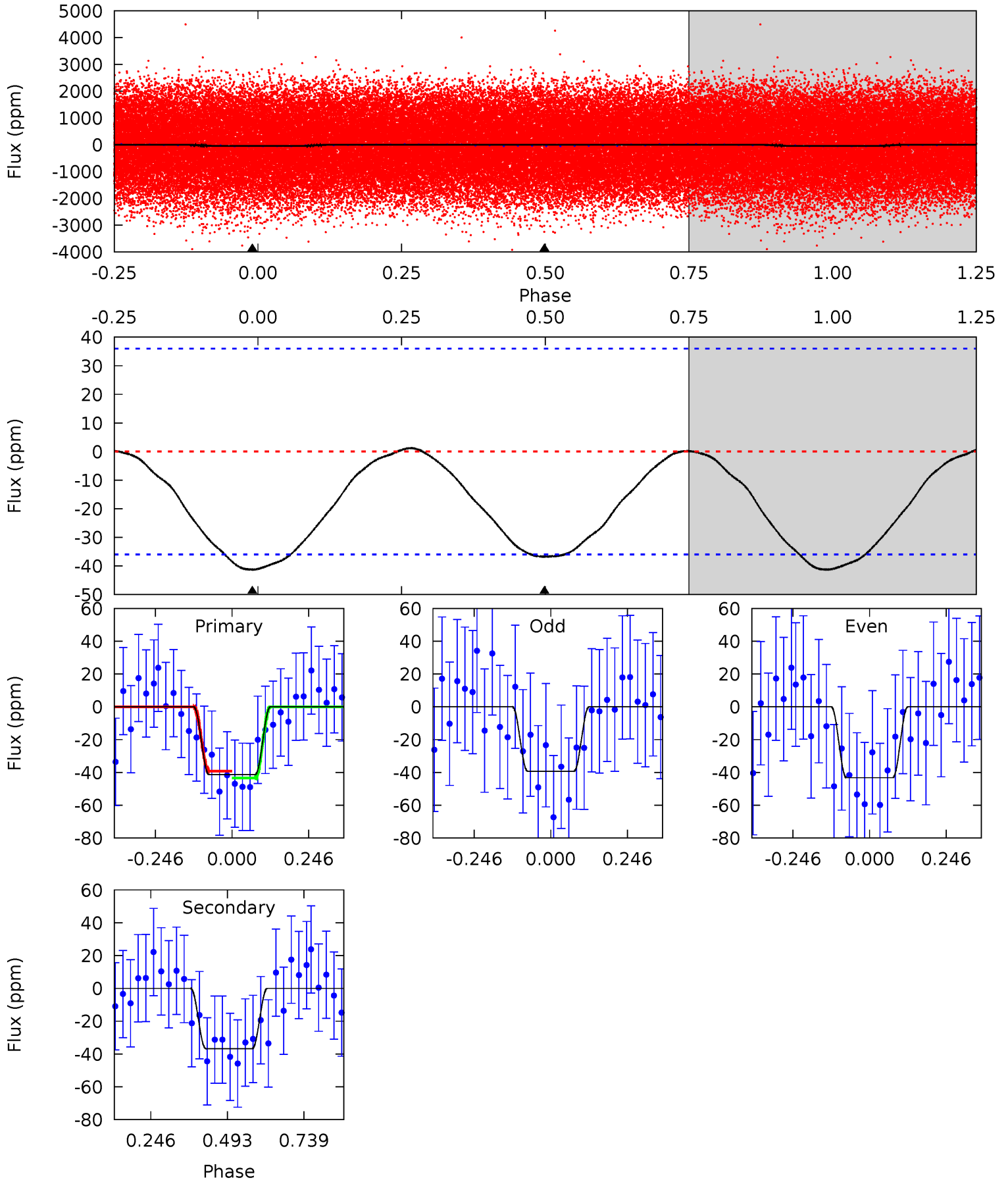
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.9	12.5	0	0	4.40	1.23	0.31	12.9	12.9	12.5	12.5	0.59	0.90	0.03	0.94



# Alt Model-Shift Uniqueness Test

008261157-01, P = 1.172116 Days, E = 130.641856 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
5.02	4.47	0	0	4.37	1.16	0.10	5.02	5.02	4.47	4.47	0.24	-1.54	0.03	0.24





### Stellar Parameters For KIC 008261157

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6892^{+193}_{-265}$	$4.266^{+0.087}_{-0.203}$	$0.020^{+0.200}_{-0.350}$	$1.435^{+0.489}_{-0.210}$	$1.386^{+0.199}_{-0.219}$	$0.661^{+0.261}_{-0.357}$
	+3%/-4%	+2%/-5%	+1000%/-1750%	+34%/-15%	+14%/-16%	+39%/-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 008261157-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-22 \pm 2$	$0.90^{+0.25}_{-0.19}$	$3306^{+237}_{-182}$	$6176^{+870}_{-619}$	$8.434^{+5.182}_{-2.961}$
Alt.	$-37 \pm 8$	$1.10^{+0.28}_{-0.21}$	$3316^{+263}_{-195}$	$6359^{+873}_{-664}$	$9.404^{+5.414}_{-3.430}$

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

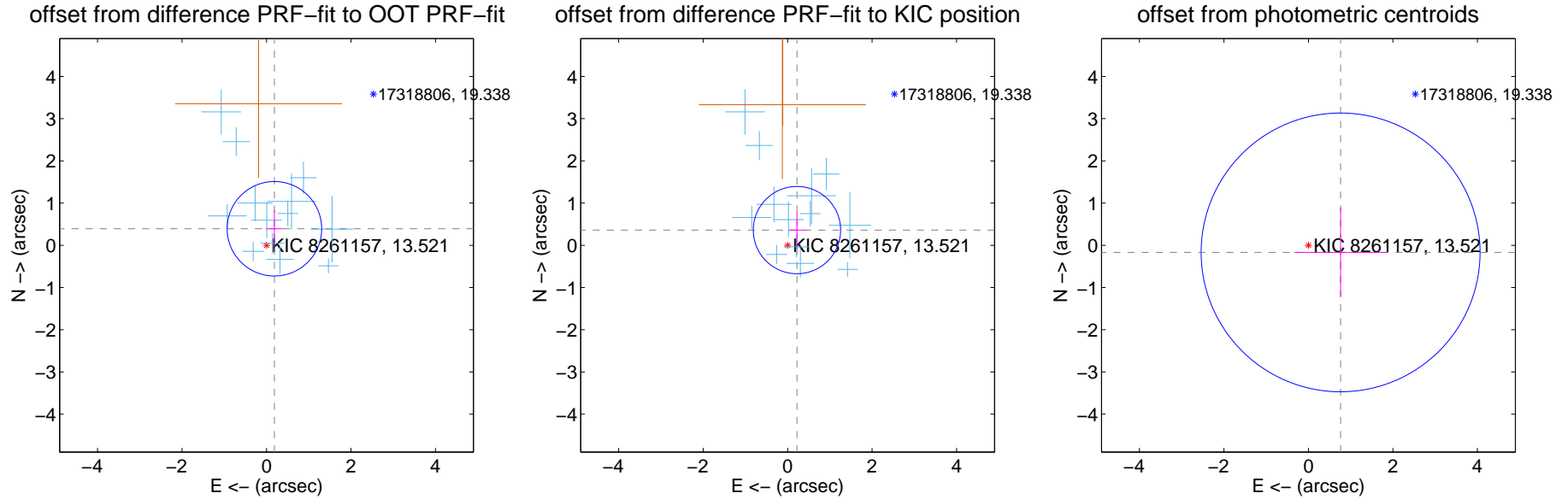
## DV Centroid Data

Supplemental centroid analysis for 008261157-01. Kepler magnitude: 13.52. Transit SNR 10.41

There are 13 quarters with good PRF difference image offsets

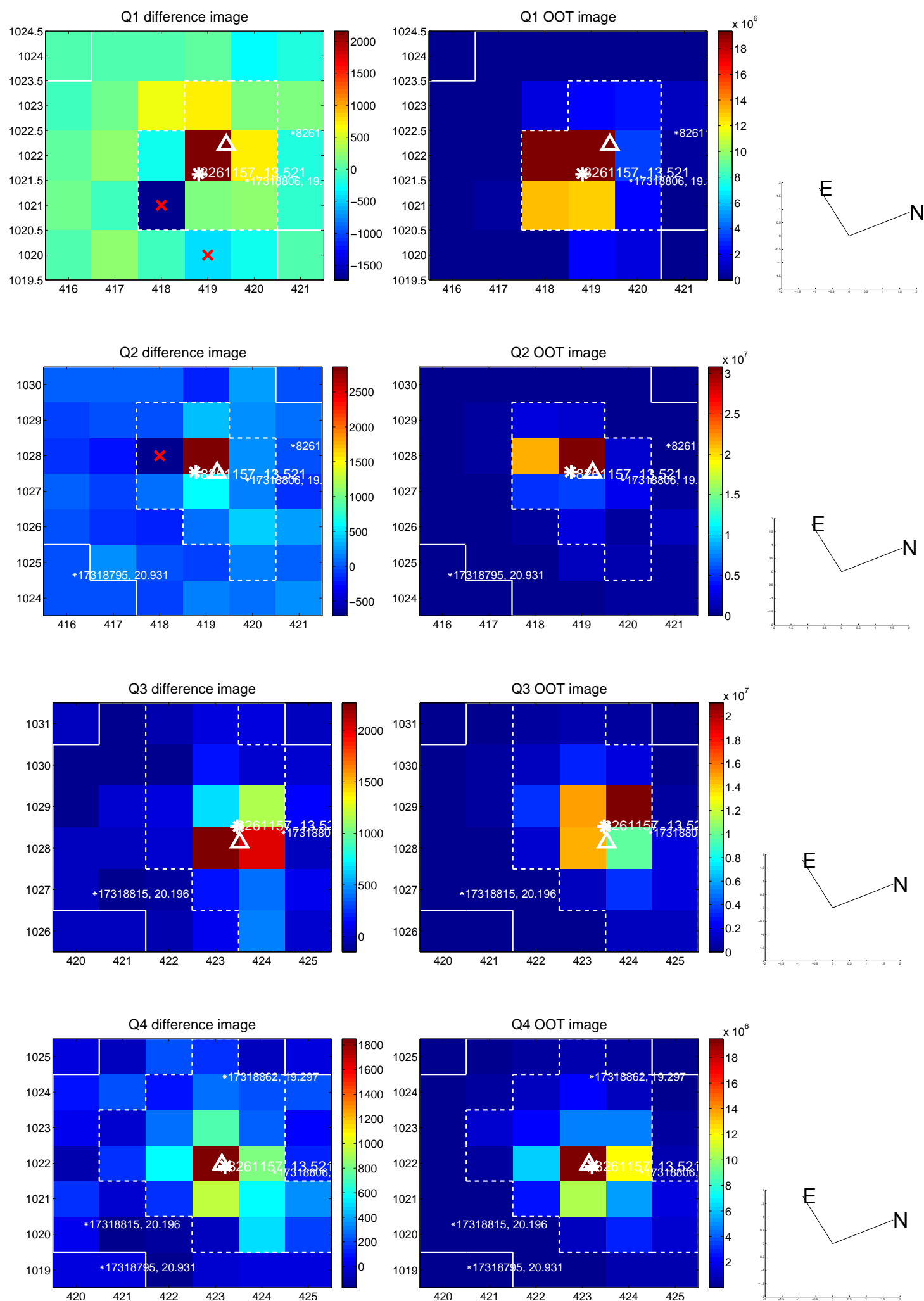
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.435 \pm 0.373$	1.16	$-0.187 \pm 0.202$	$0.392 \pm 0.437$
PRF-fit source offset from KIC position	$0.423 \pm 0.345$	1.23	$-0.221 \pm 0.205$	$0.361 \pm 0.434$
photometric centroid source offset	$0.78 \pm 1.10$	0.71	$-0.76 \pm 1.10$	$-0.17 \pm 1.06$

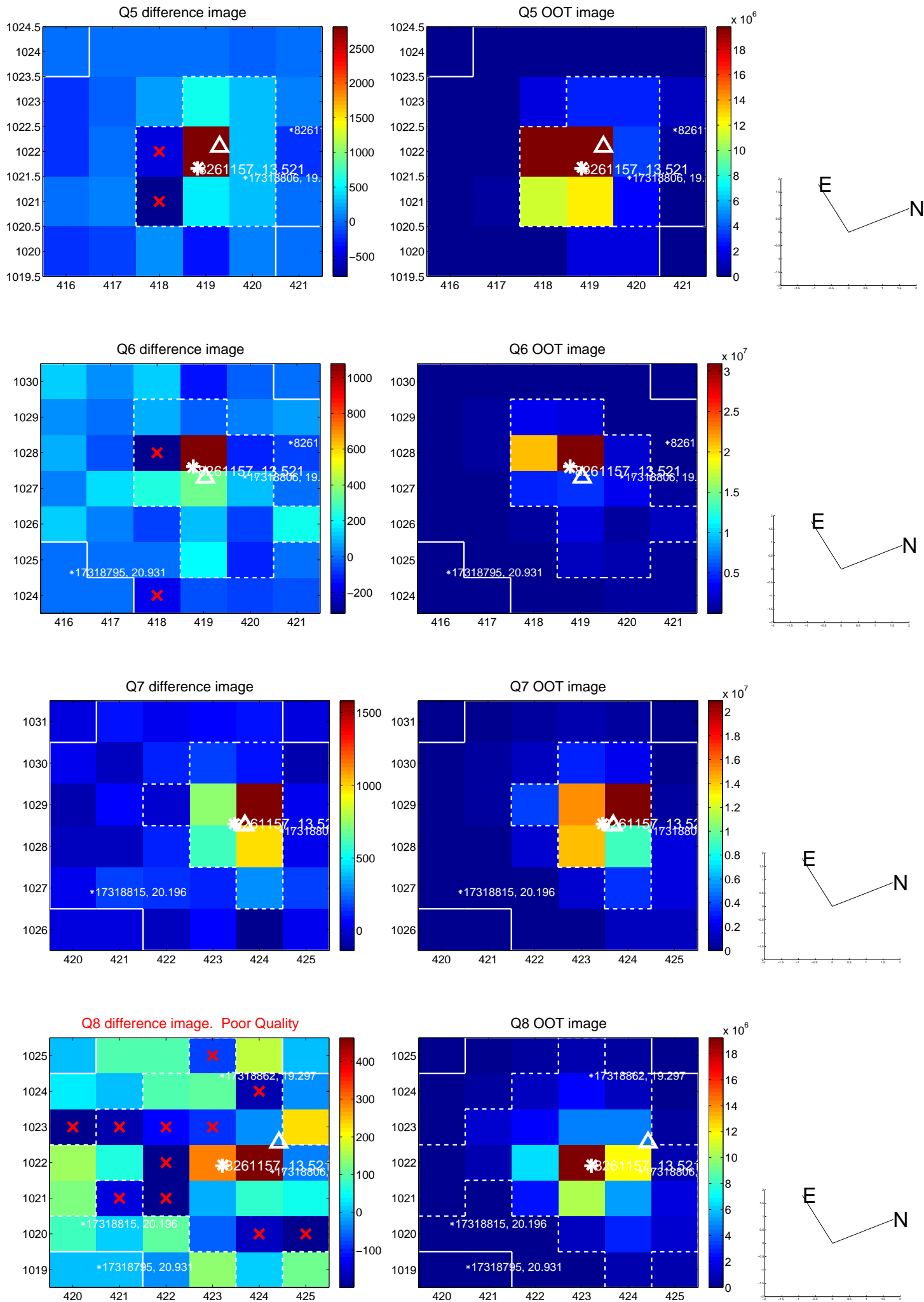


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

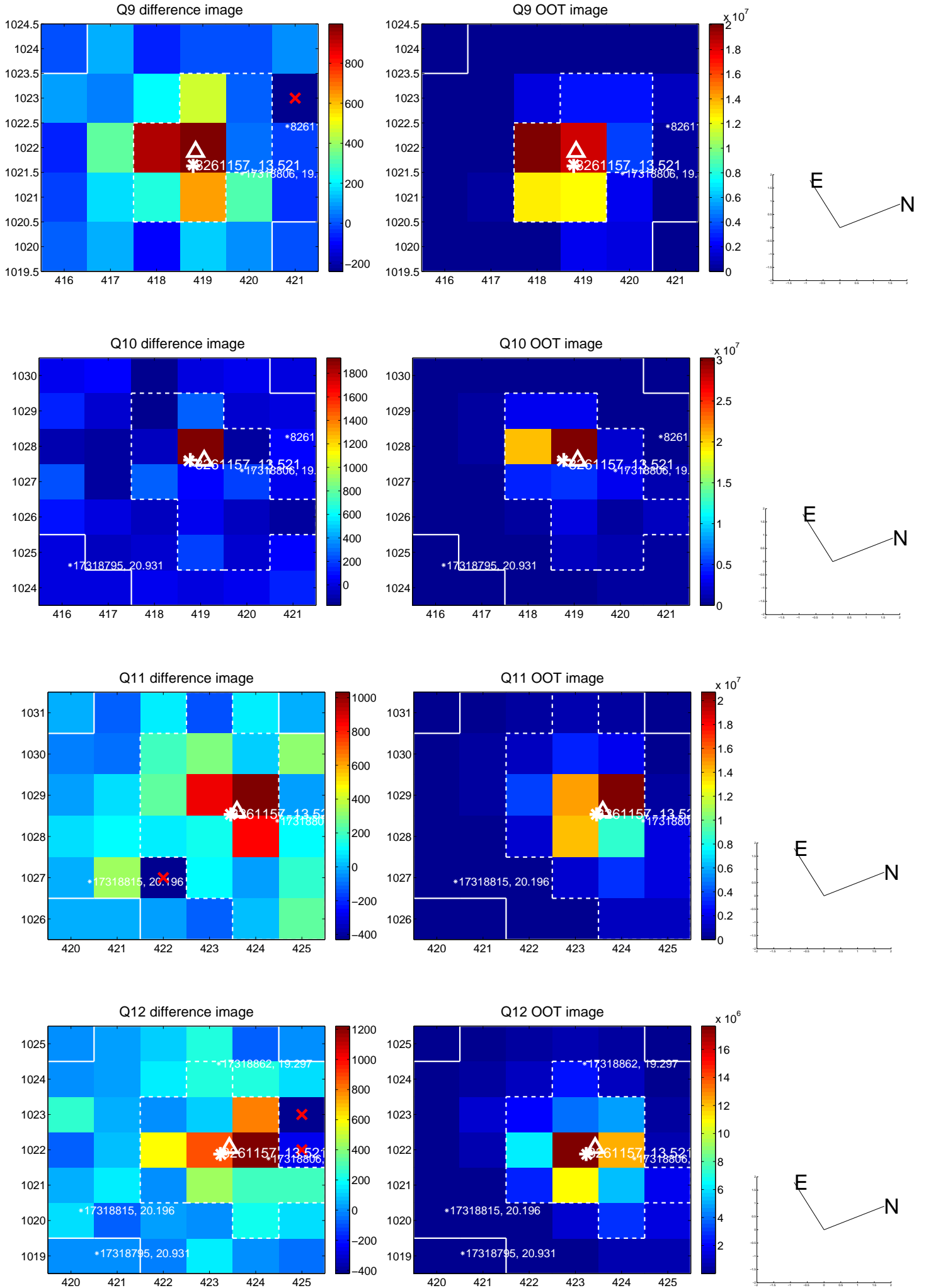


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

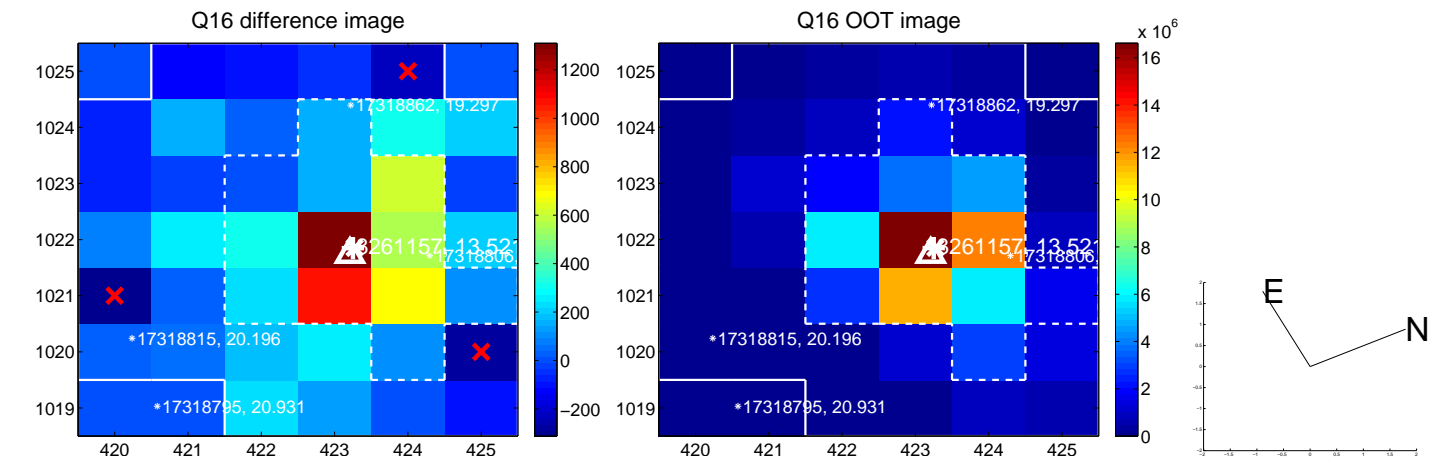
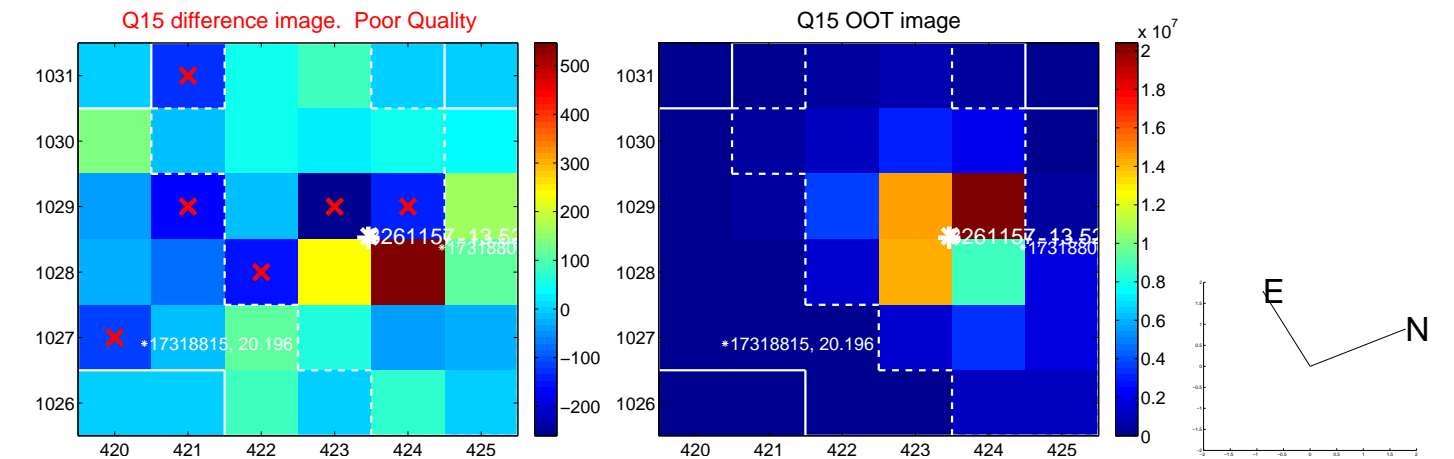
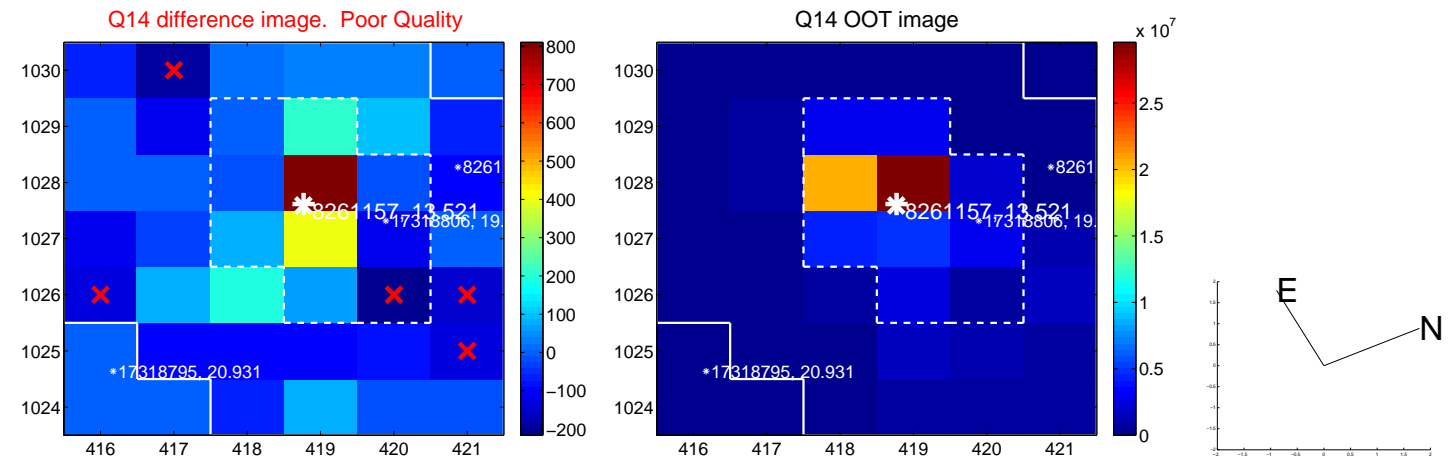
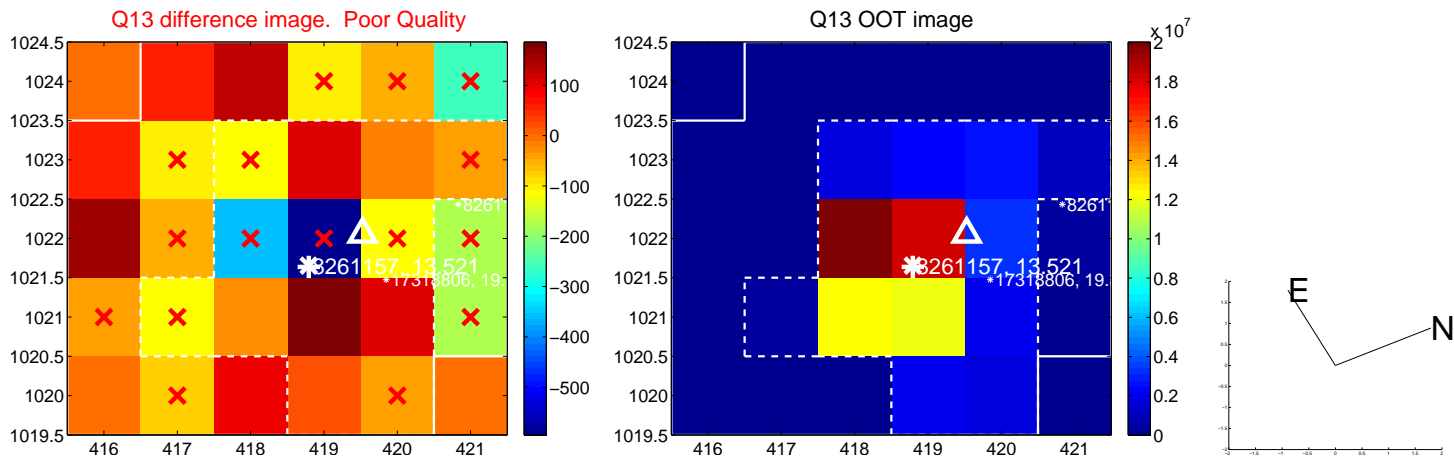




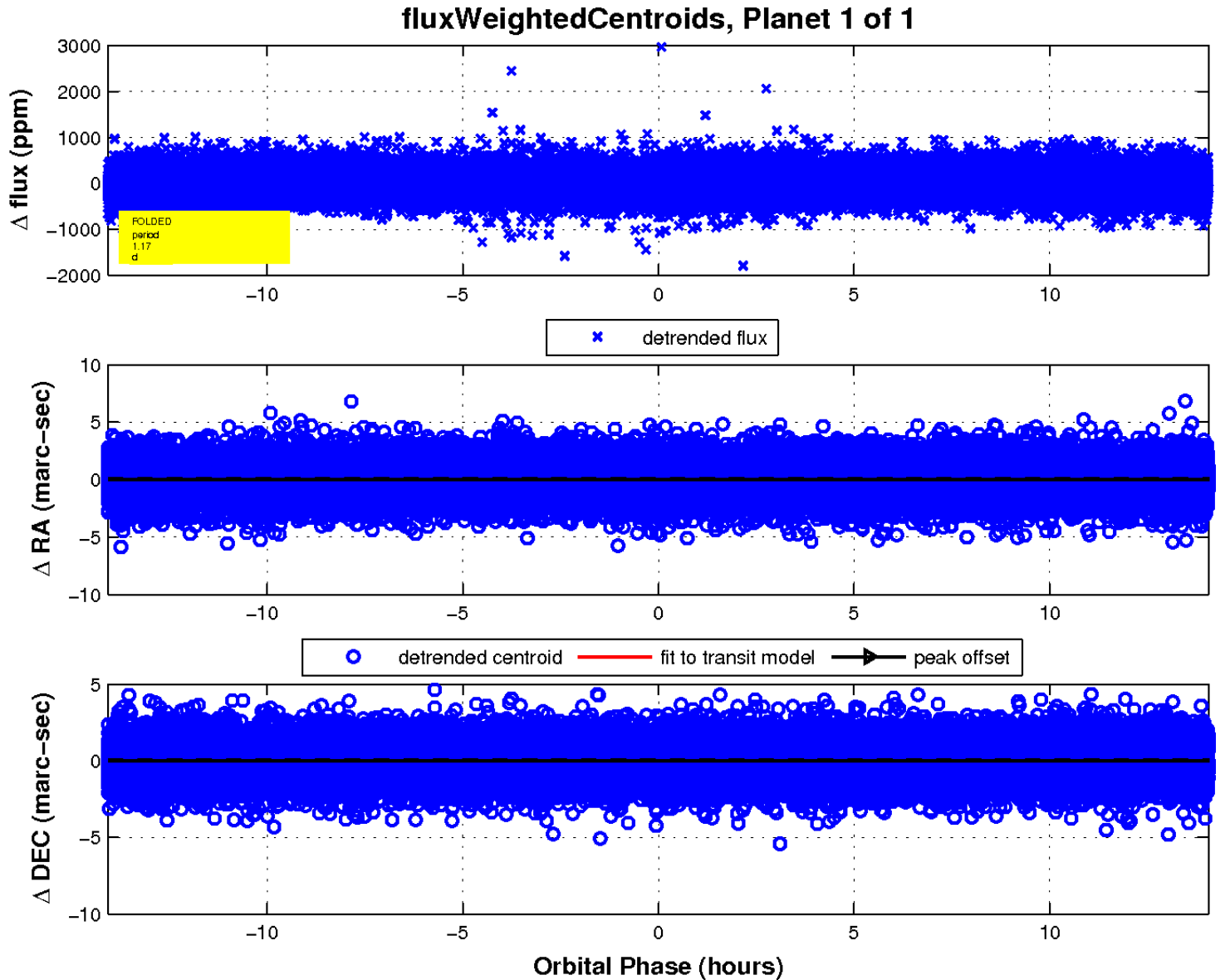
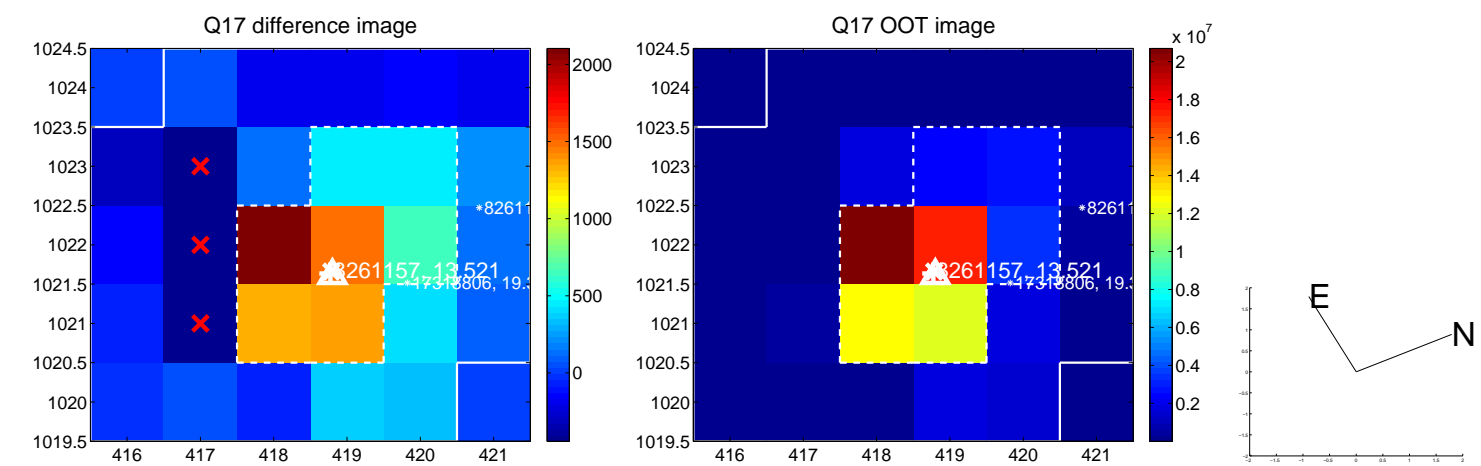
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



UKIRT Image

Declination

