

# KIC 008759145

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008759145-01	OBS	No	1.106322	132.421100	18.8	7.992	13.1	6.3	2.14	7244	1.07	18599.55

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008759145-01	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.

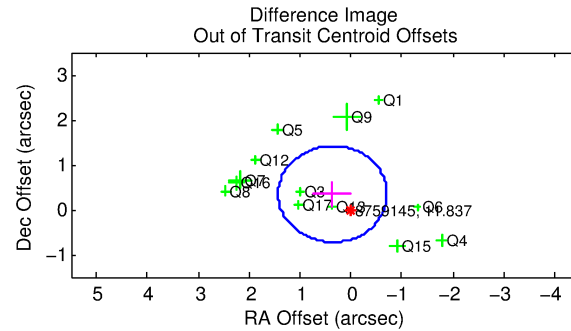
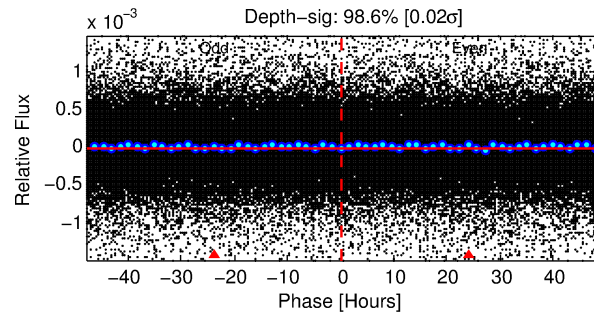
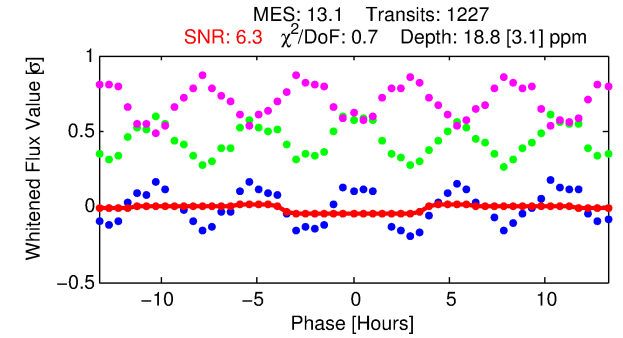
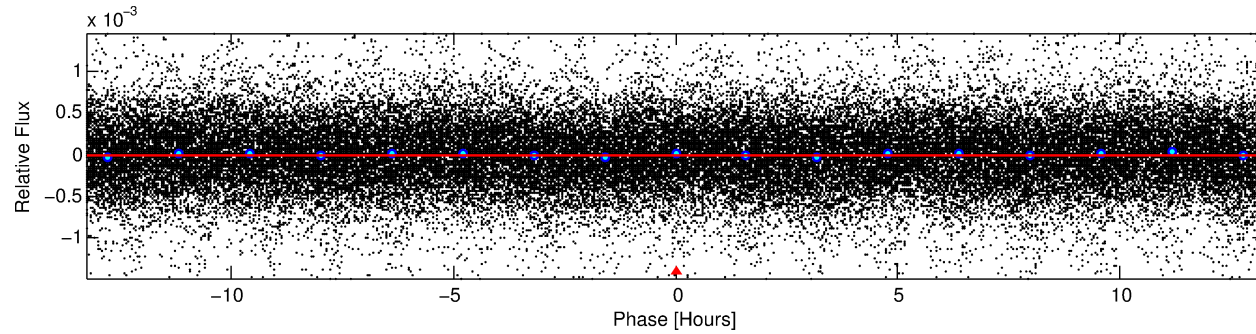
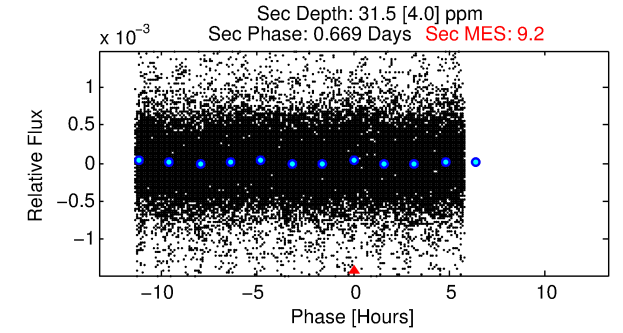
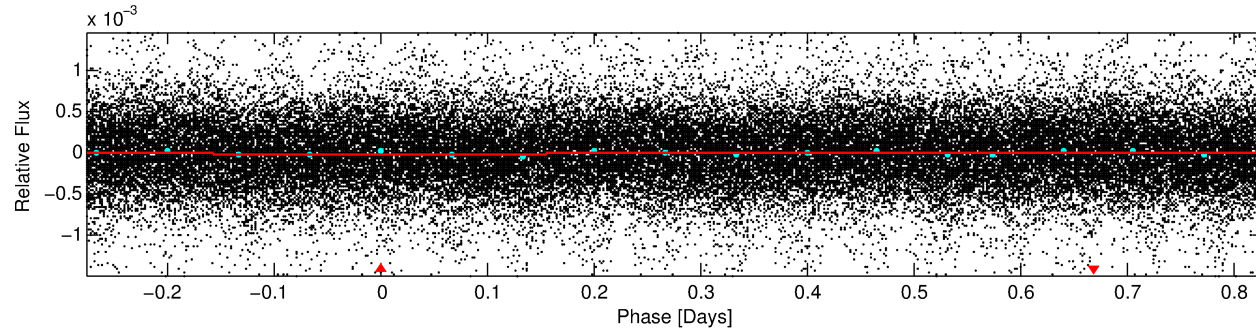
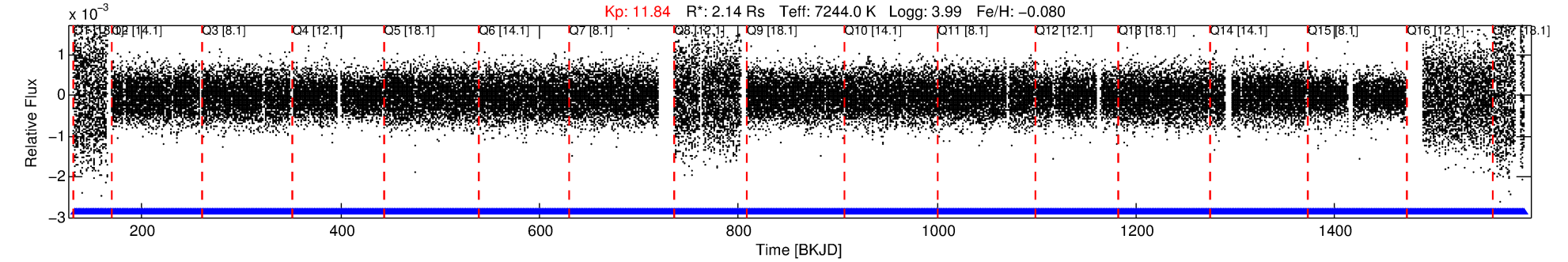
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008759145-01

No Significant Match Found

# DV One-Page Summary

KIC: 8759145 Candidate: 1 of 1 Period: 1.106 d



## DV Fit Results:

Period = 1.10632 [0.00002] d  
Epoch = 132.4211 [0.0098] BKJD  
Rp/R\* = 0.0046 [0.0036]  
a/R\* = 1.06 [0.54]  
b = 0.90 [1.09]  
Seff = 18599.55 [7901.20]  
Teff = 2978 [316] K  
Rp = 1.07 [0.88] Re  
a = 0.0246 [0.0063] AU  
Ag = 9.14 [14.70] [0.55σ]  
Teffp = 8006 [3133] K [1.60σ]

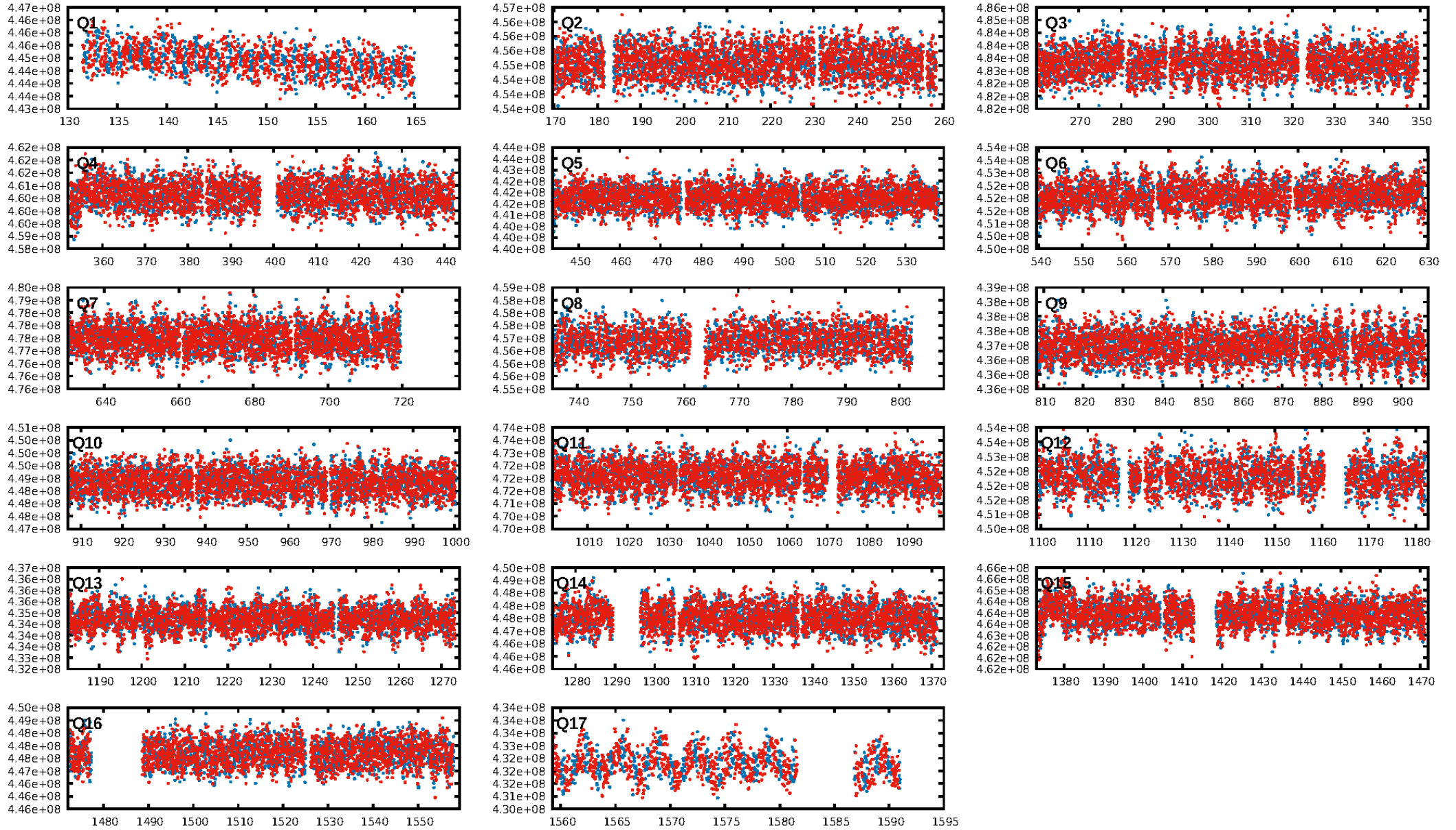
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 4.14e-54  
RollingBand-fgt: 1.00 [1172/1172]  
GhostDiagnostic-chr: 2.57  
Centroid-sig: 22.6%  
Centroid-so: 0.500 arcsec [1.38σ]  
OotOffset-rm: 0.498 arcsec [1.40σ]  
KicOffset-rm: 0.517 arcsec [1.52σ]  
OotOffset-st: 1/3/4/5 [13]  
KicOffset-st: 1/3/4/5 [13]  
DiffImageQuality-fgm: 0.69 [9/13]  
DiffImageOverlap-fno: 1.00 [17/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 19:34:18 Z

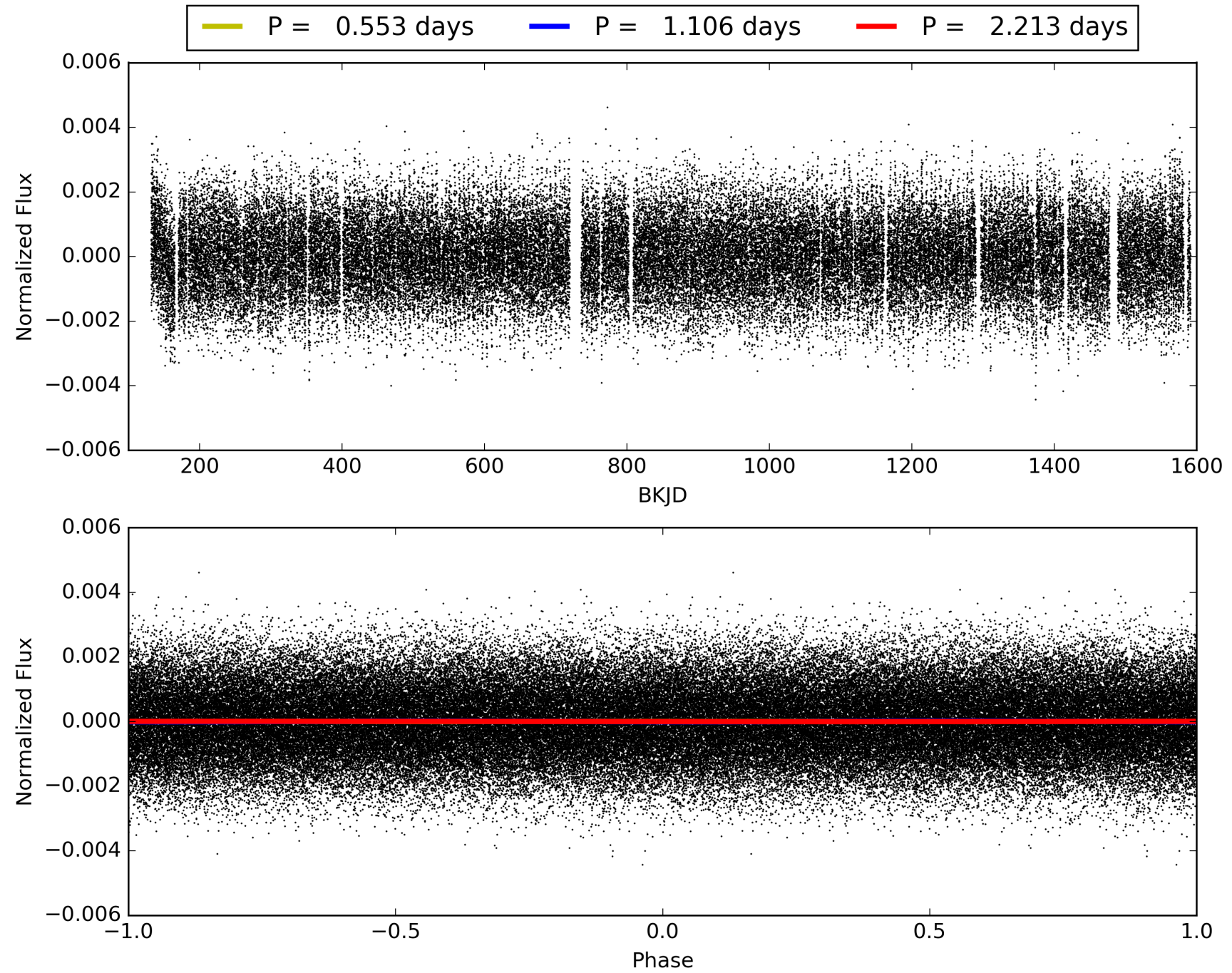
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 008759145-01, PDC Light Curves



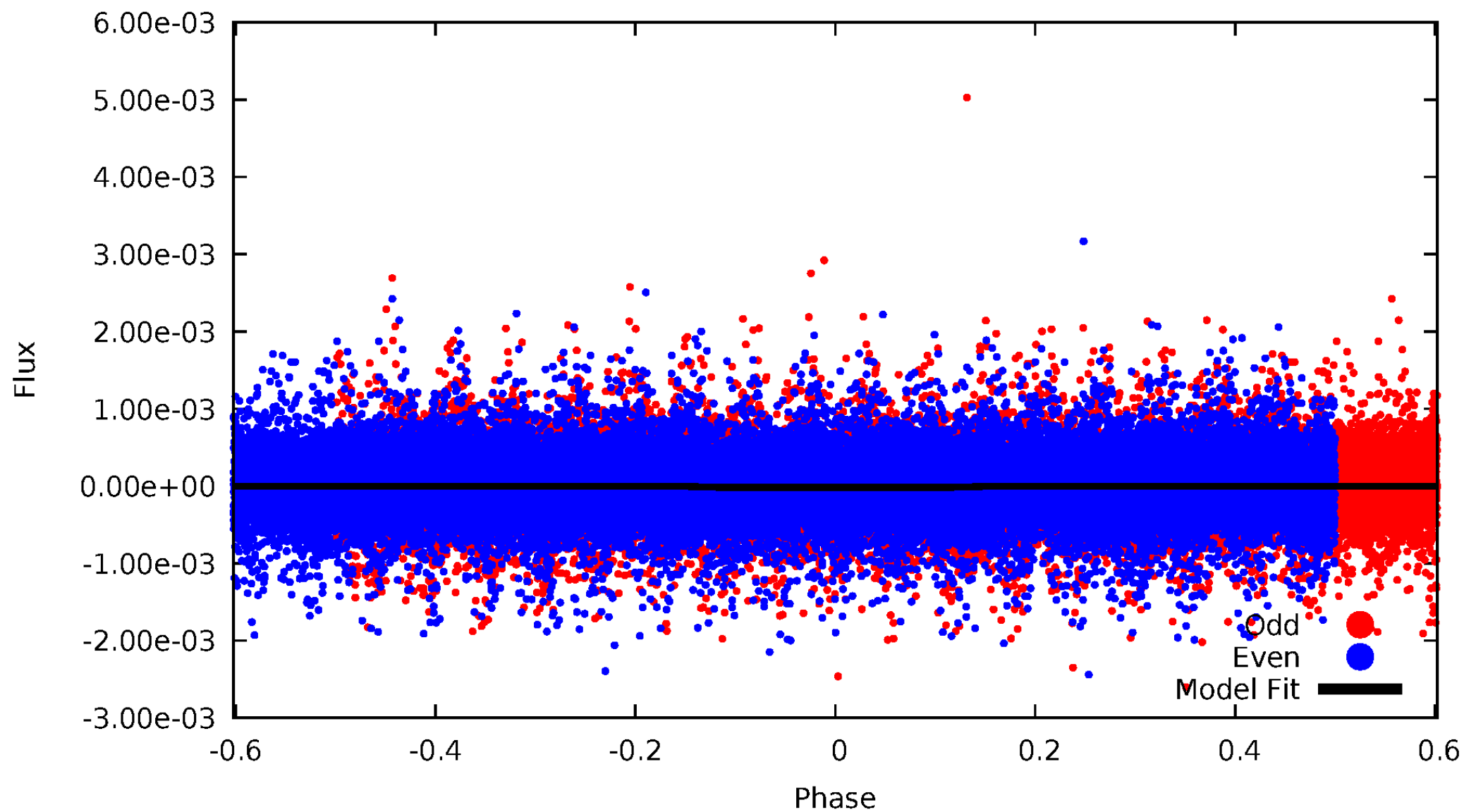


TCE 008759145-01



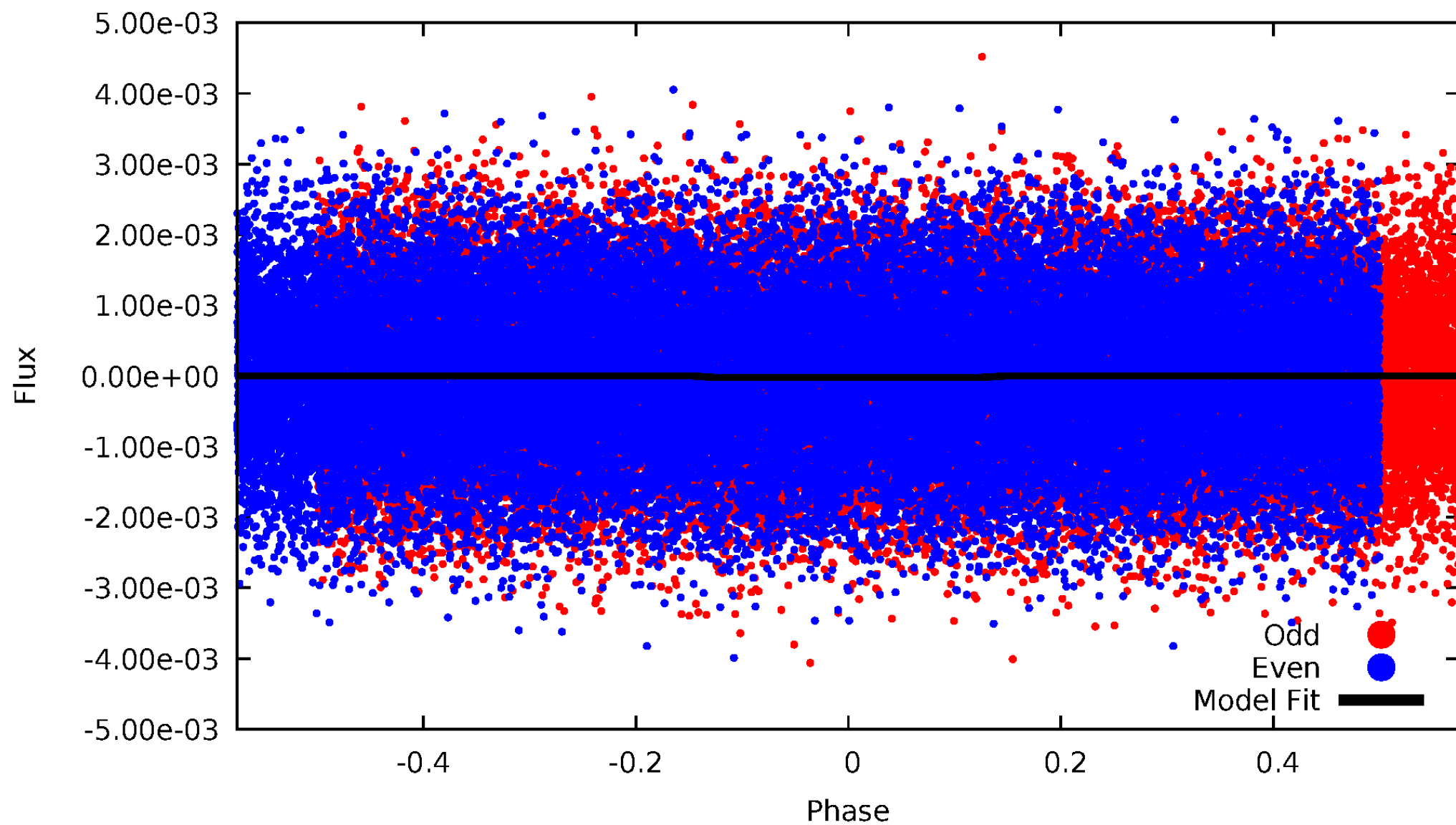
# DV Odd/Even

TCE 008759145-01



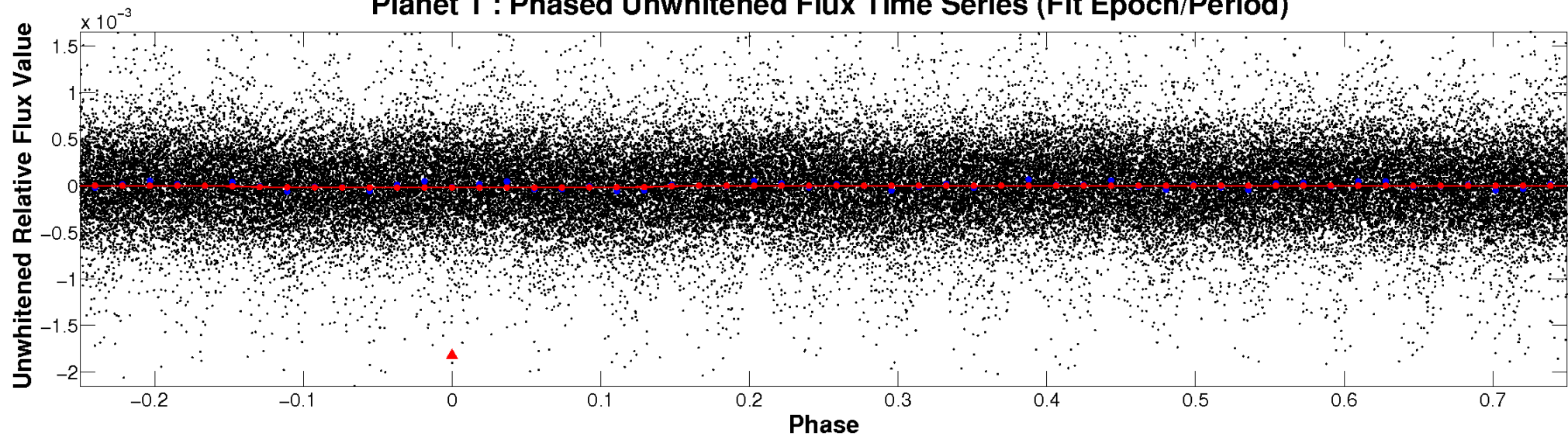
# ALT Odd/Even

TCE 008759145-01

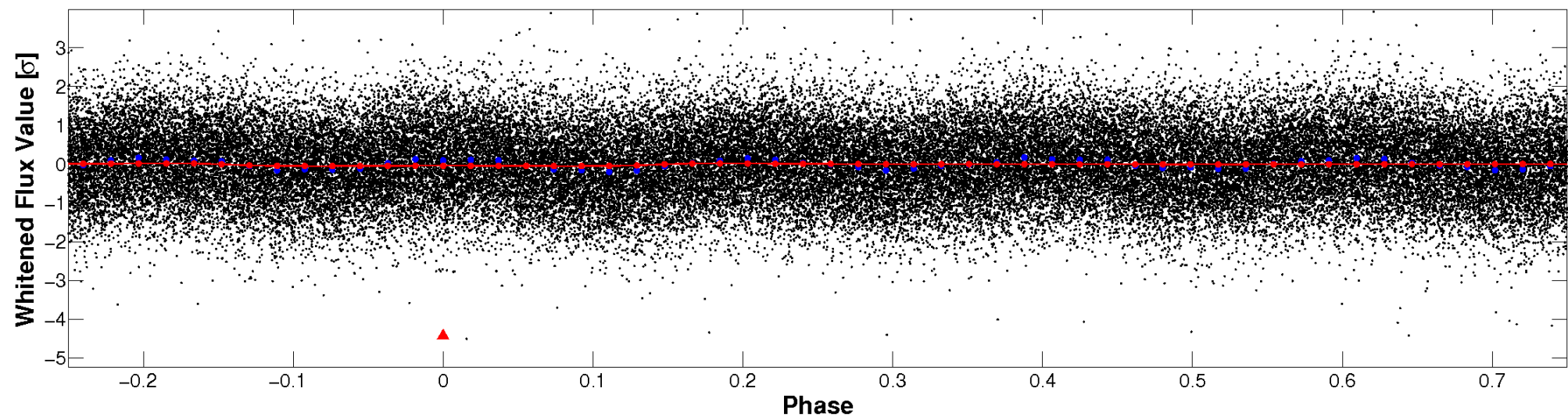


# Non-Whitened Vs. Whitened Light Curve

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



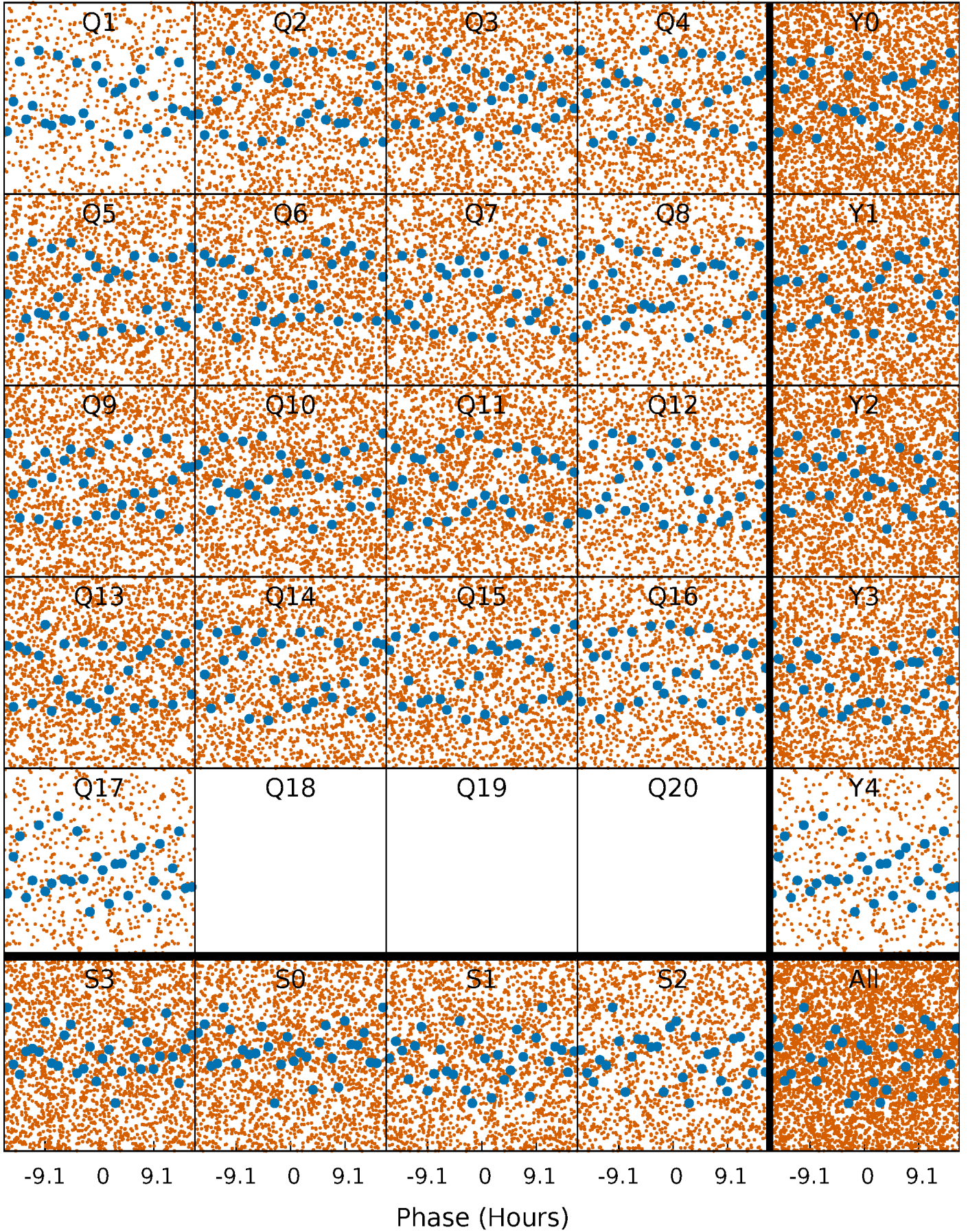
**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**





# PDC Quarter-Phased Transit Curves

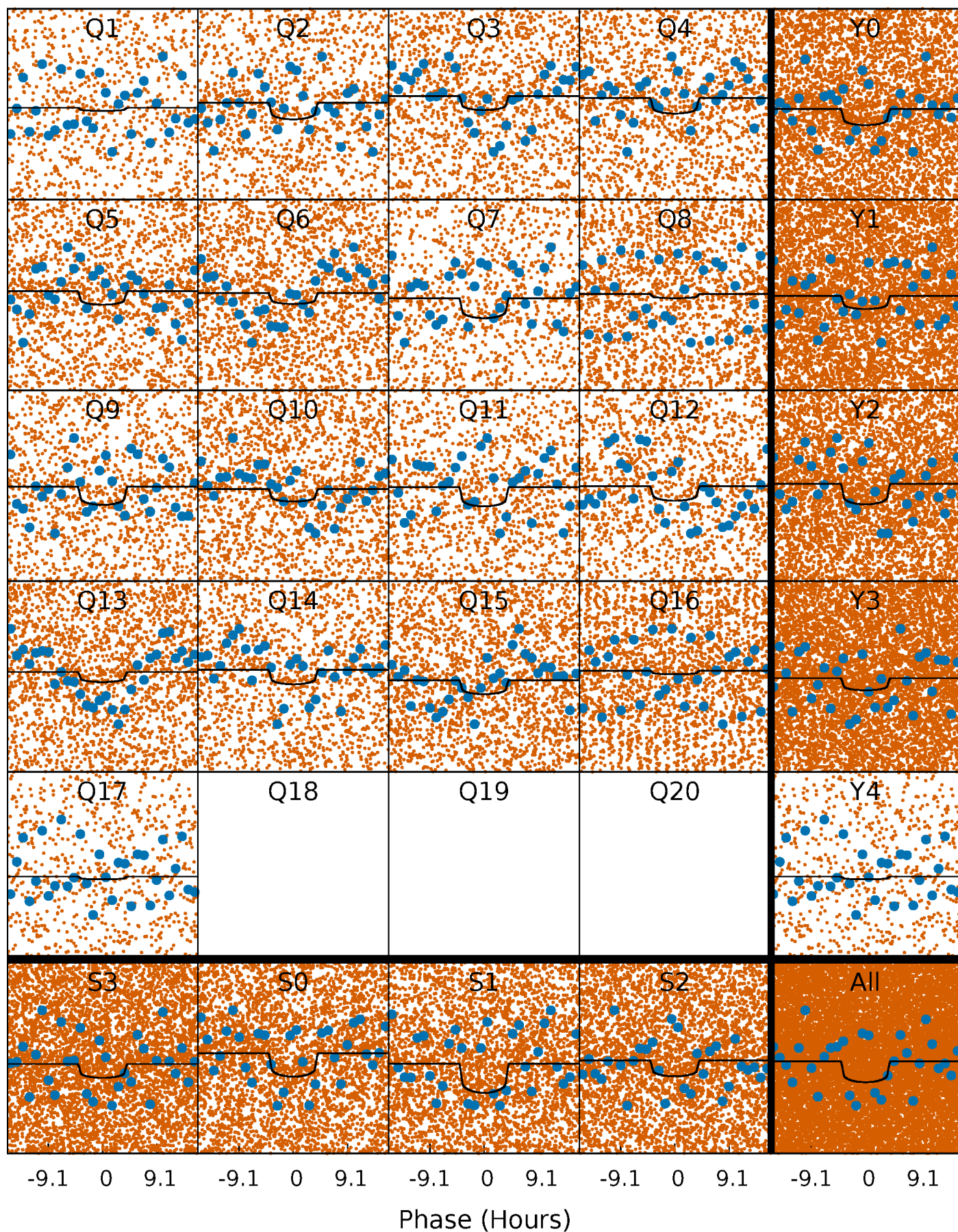
TCE 008759145-01 P= 1.106322 Days  $T_0=132.421100$  (BKJD)





# DV Quarter-Phased Transit Curves

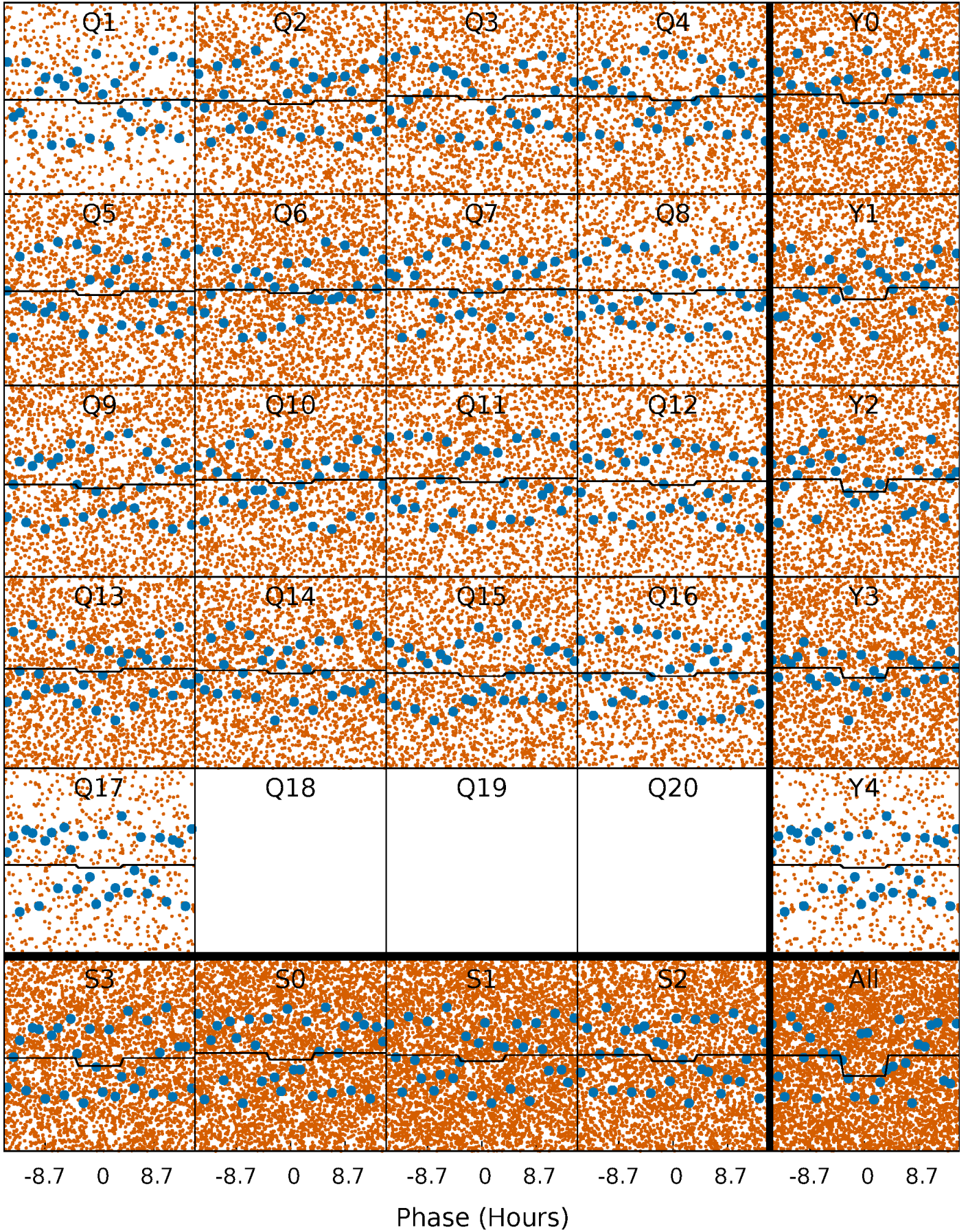
TCE 008759145-01 P= 1.106322 Days  $T_0=132.421100$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

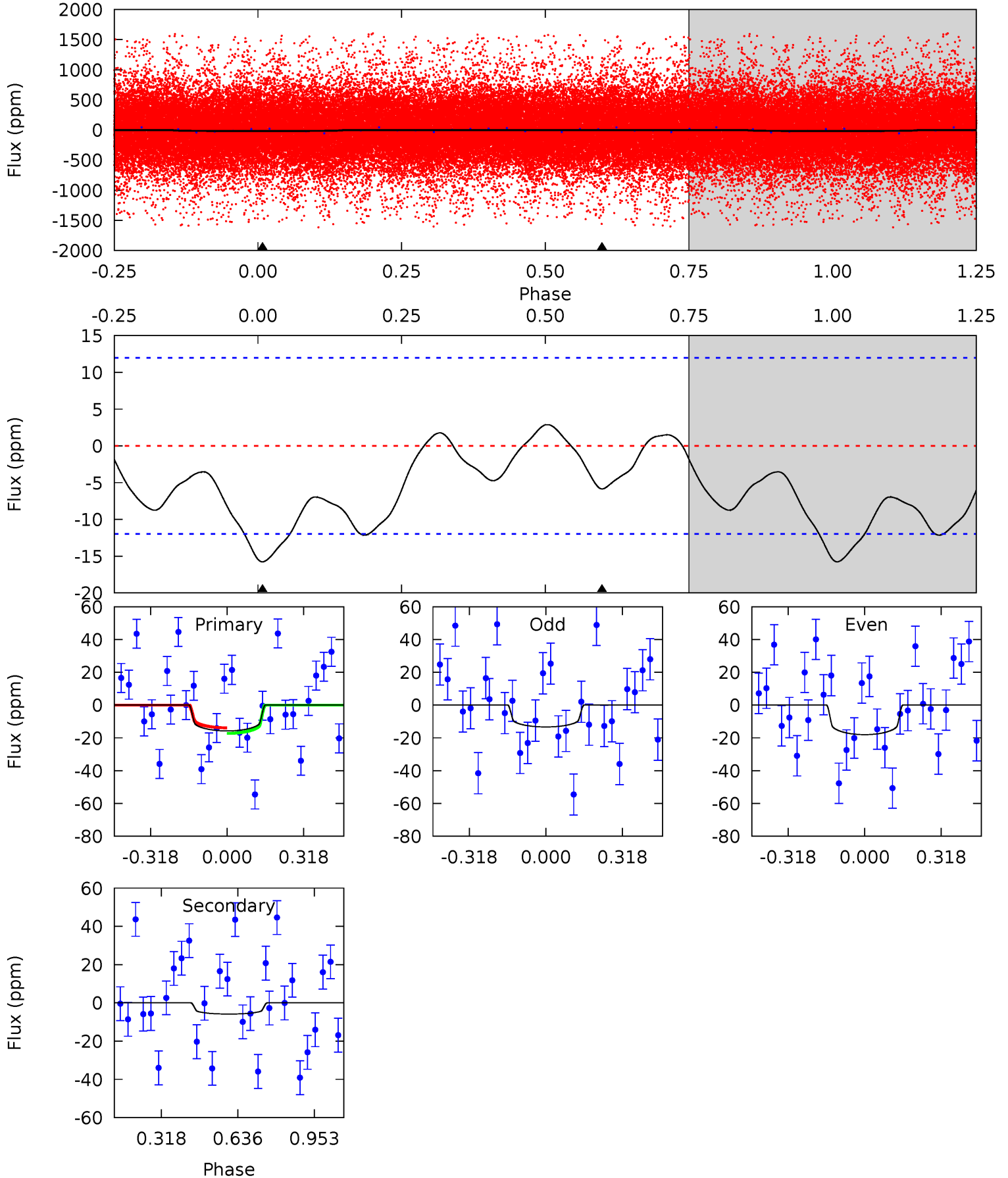
TCE 008759145-01 P= 1.106336 Days  $T_0=132.419308$  (BKJD)



# DV Model-Shift Uniqueness Test

008759145-01, P = 1.106322 Days, E = 131.314778 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
5.68	2.11	0	0	4.32	1.00	0.69	5.68	5.68	2.11	2.11	0.86	1.14	0.16	0.61

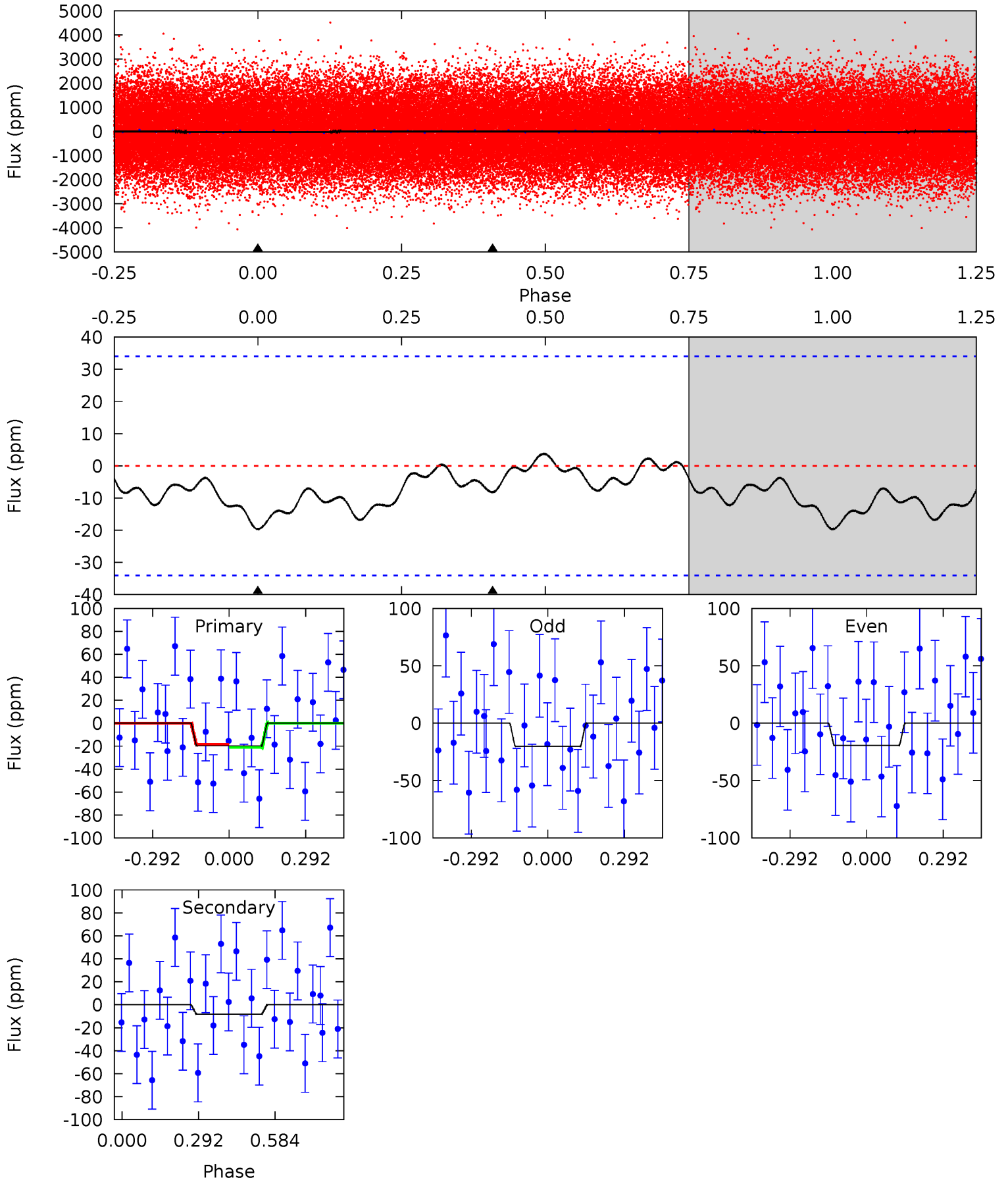




# Alt Model-Shift Uniqueness Test

008759145-01, P = 1.106336 Days, E = 131.312972 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
2.51	1.04	0	0	4.33	1.05	0.23	2.51	2.51	1.04	1.04	0.05	1.63	0.16	0.16



### Stellar Parameters For KIC 008759145

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$7244^{+201}_{-277}$	$3.989^{+0.228}_{-0.152}$	$-0.080^{+0.250}_{-0.350}$	$2.137^{+0.596}_{-0.596}$	$1.621^{+0.200}_{-0.275}$	$0.234^{+0.327}_{-0.104}$
	+3%/-4%	+6%/-4%	+312%/-438%	+28%/-28%	+12%/-17%	+140%/-44%
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 008759145-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-6 \pm 3$	$1.21^{+0.75}_{-0.71}$	$4120^{+310}_{-343}$	$4682^{+2756}_{-1649}$	$1.378^{+6.431}_{-0.998}$
Alt.	$-8 \pm 8$	$1.17^{+0.72}_{-0.66}$	$4103^{+346}_{-335}$	$4902^{+3160}_{-8578}$	$1.611^{+9.719}_{-1.572}$

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

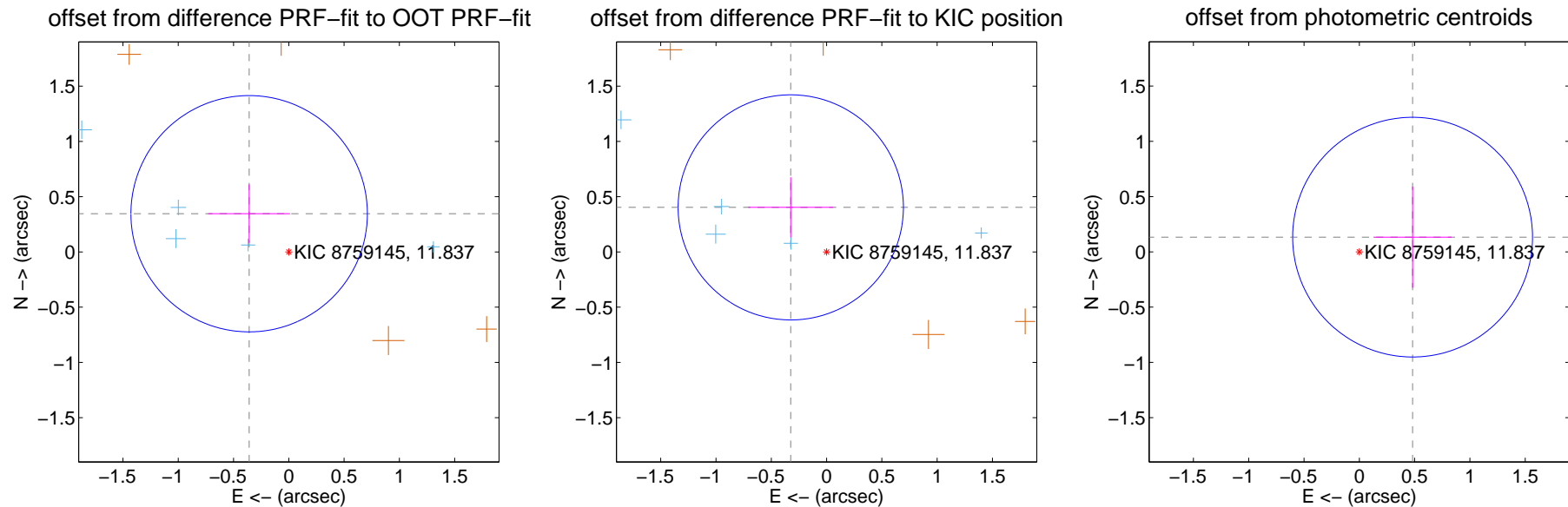
## DV Centroid Data

Supplemental centroid analysis for 008759145-01. **Kepler magnitude: 11.84.** Transit SNR 6.32

There are 9 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

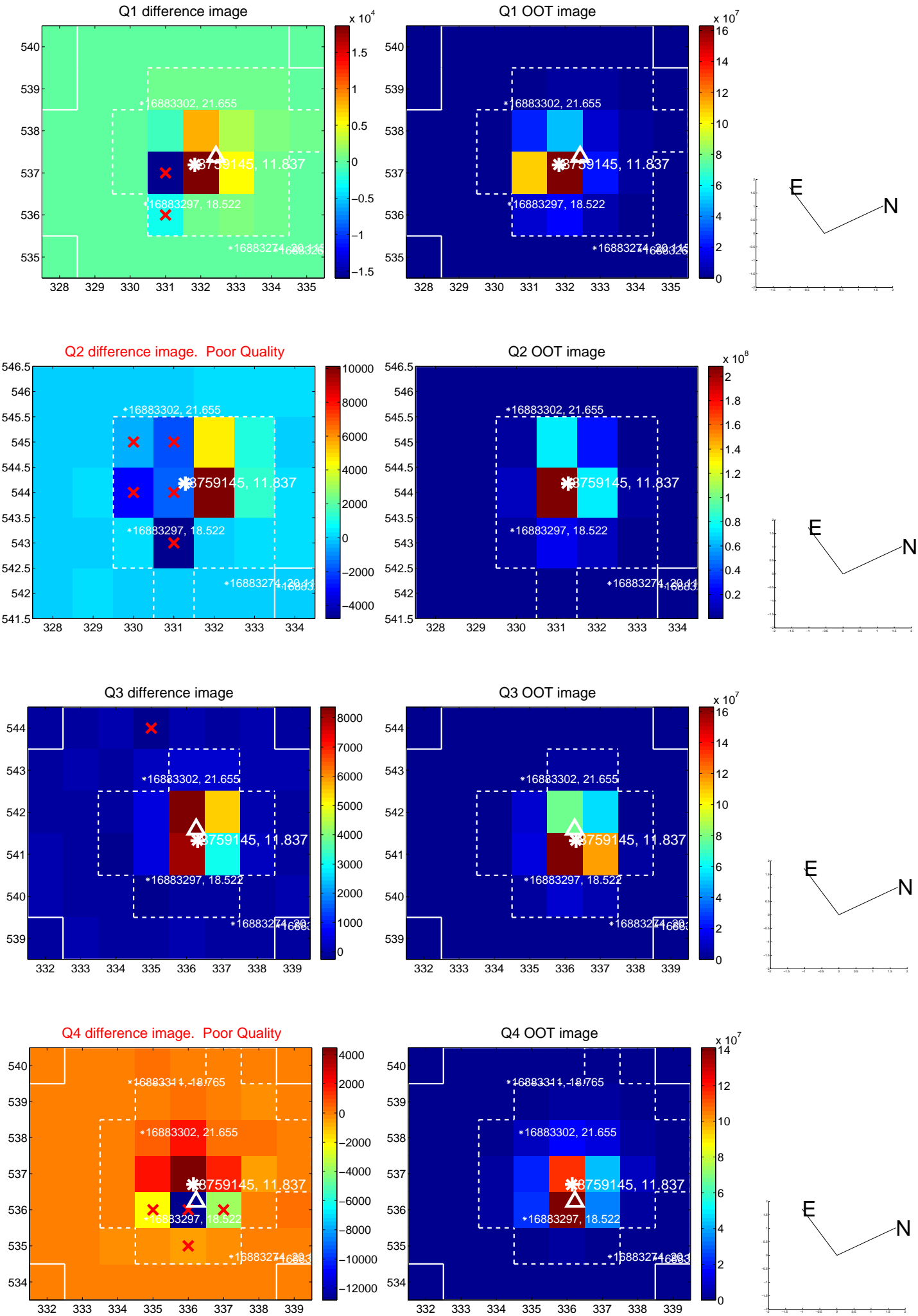
	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.498 \pm 0.356$	1.40	$0.359 \pm 0.370$	$0.346 \pm 0.264$
PRF-fit source offset from KIC position	$0.517 \pm 0.340$	1.52	$0.324 \pm 0.385$	$0.403 \pm 0.272$
photometric centroid source offset	$0.50 \pm 0.36$	1.38	$-0.48 \pm 0.35$	$0.13 \pm 0.46$



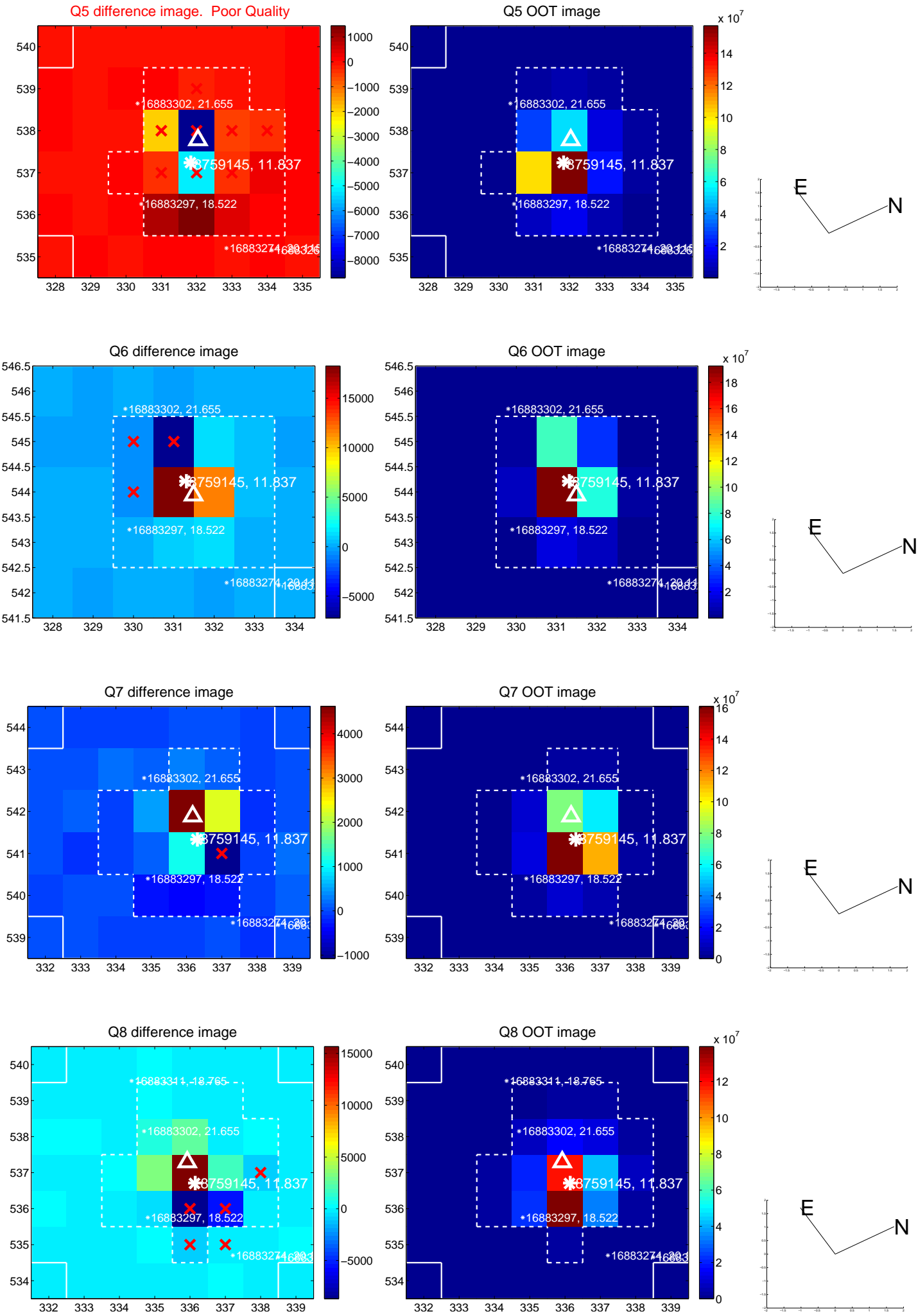
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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



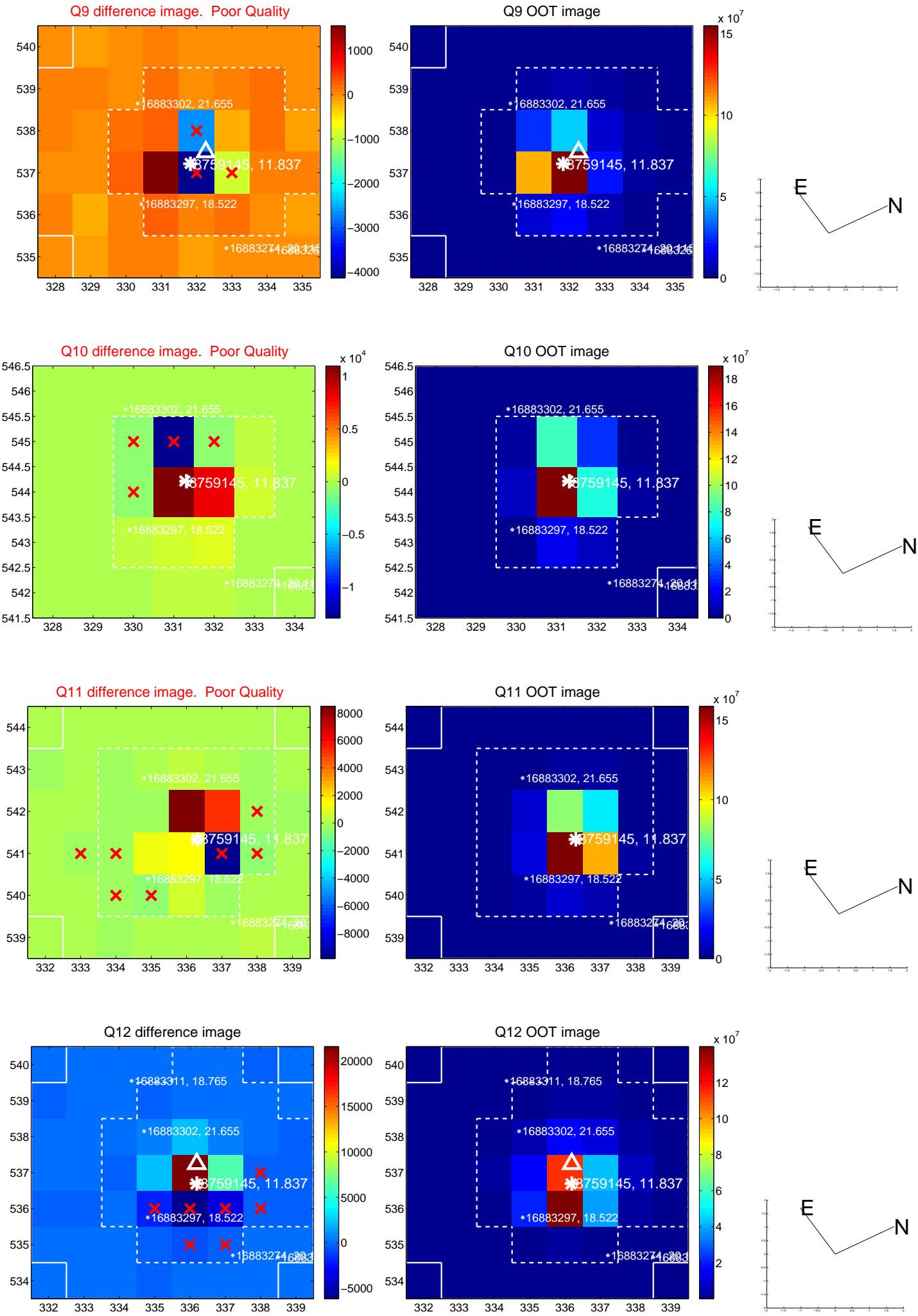
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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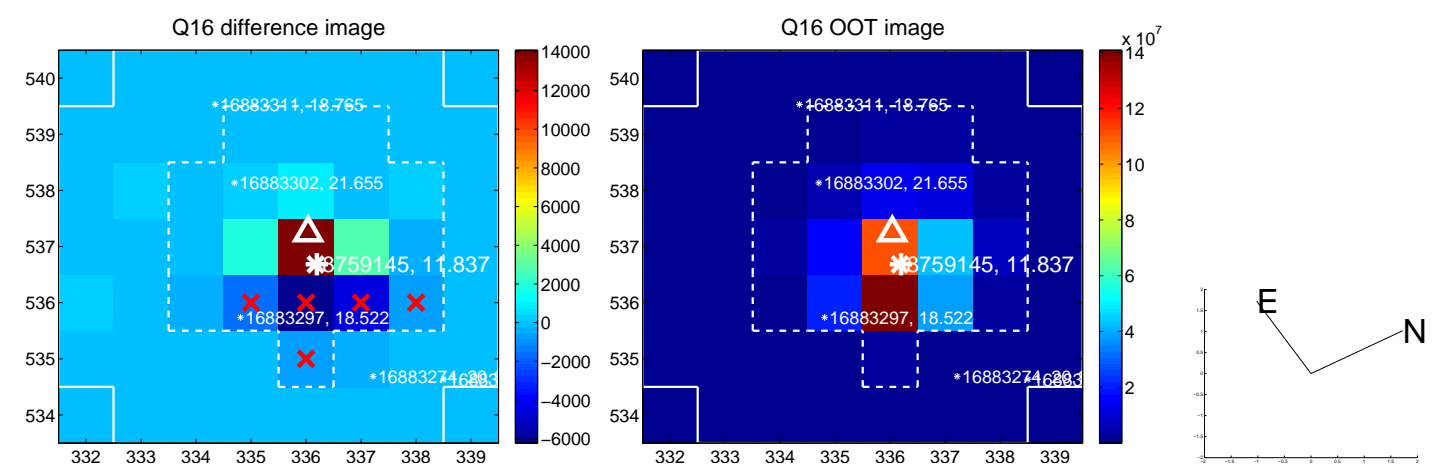
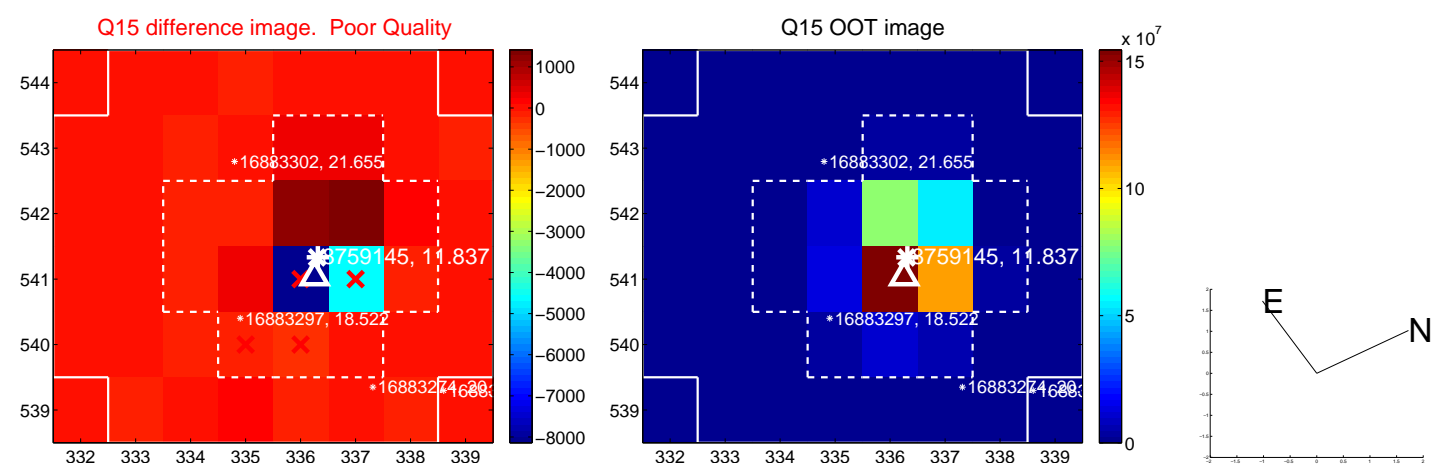
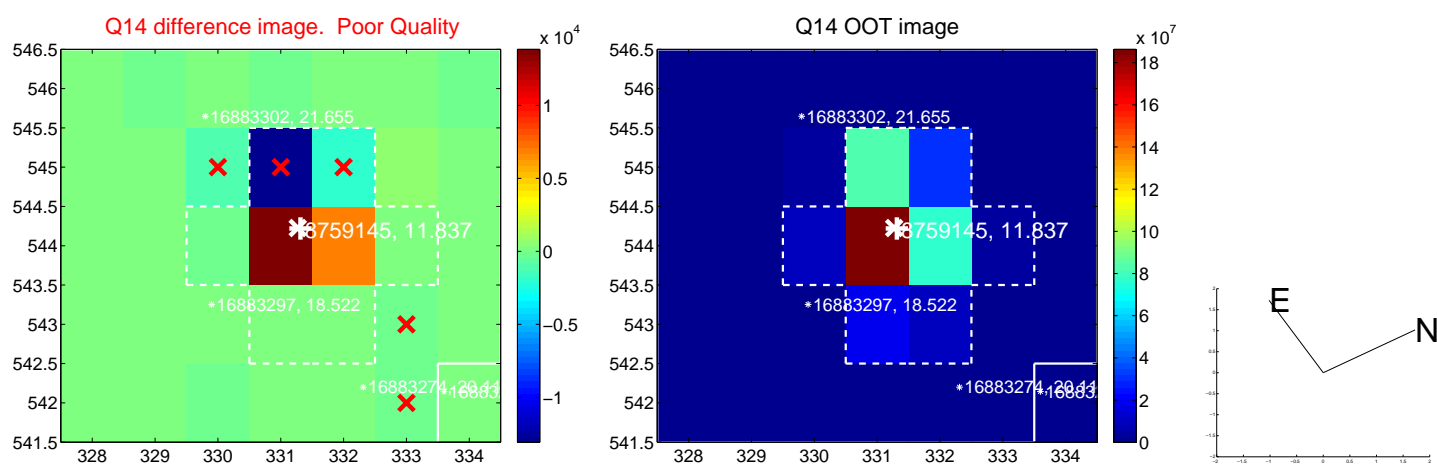
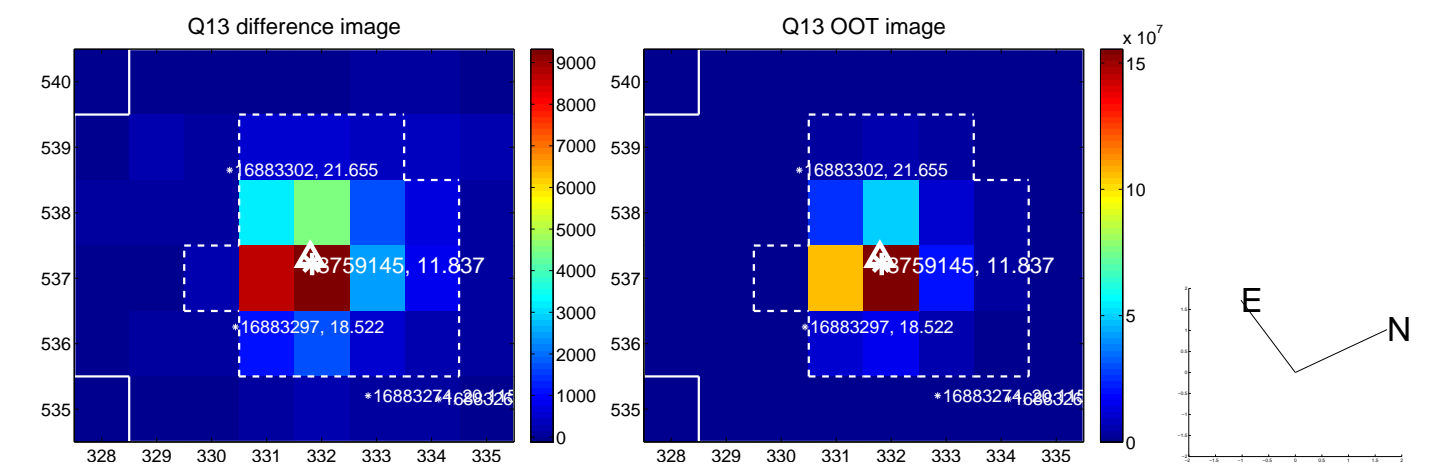


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

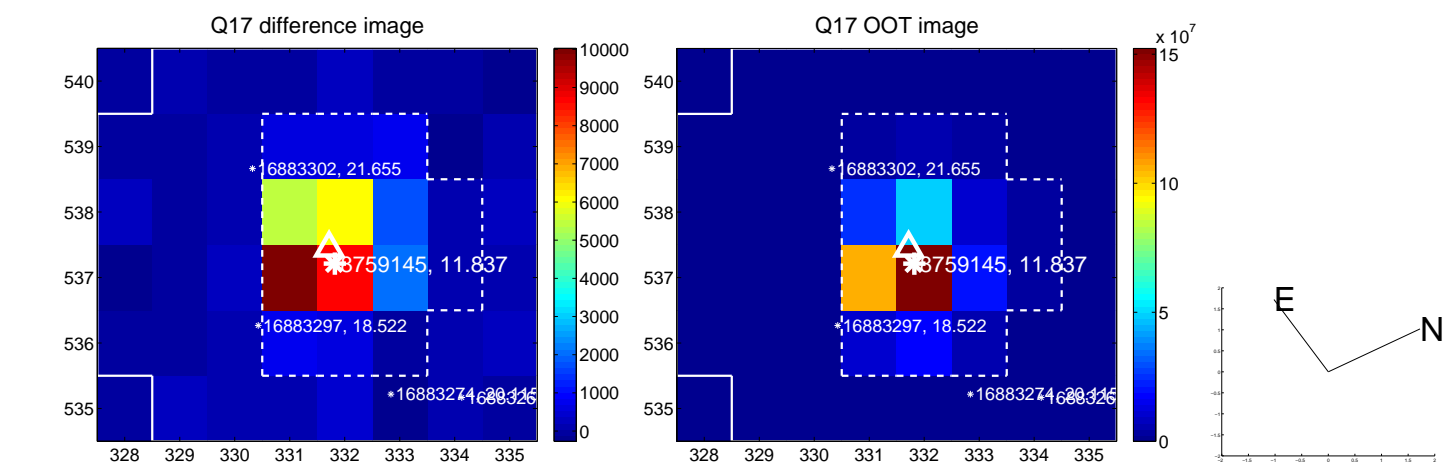




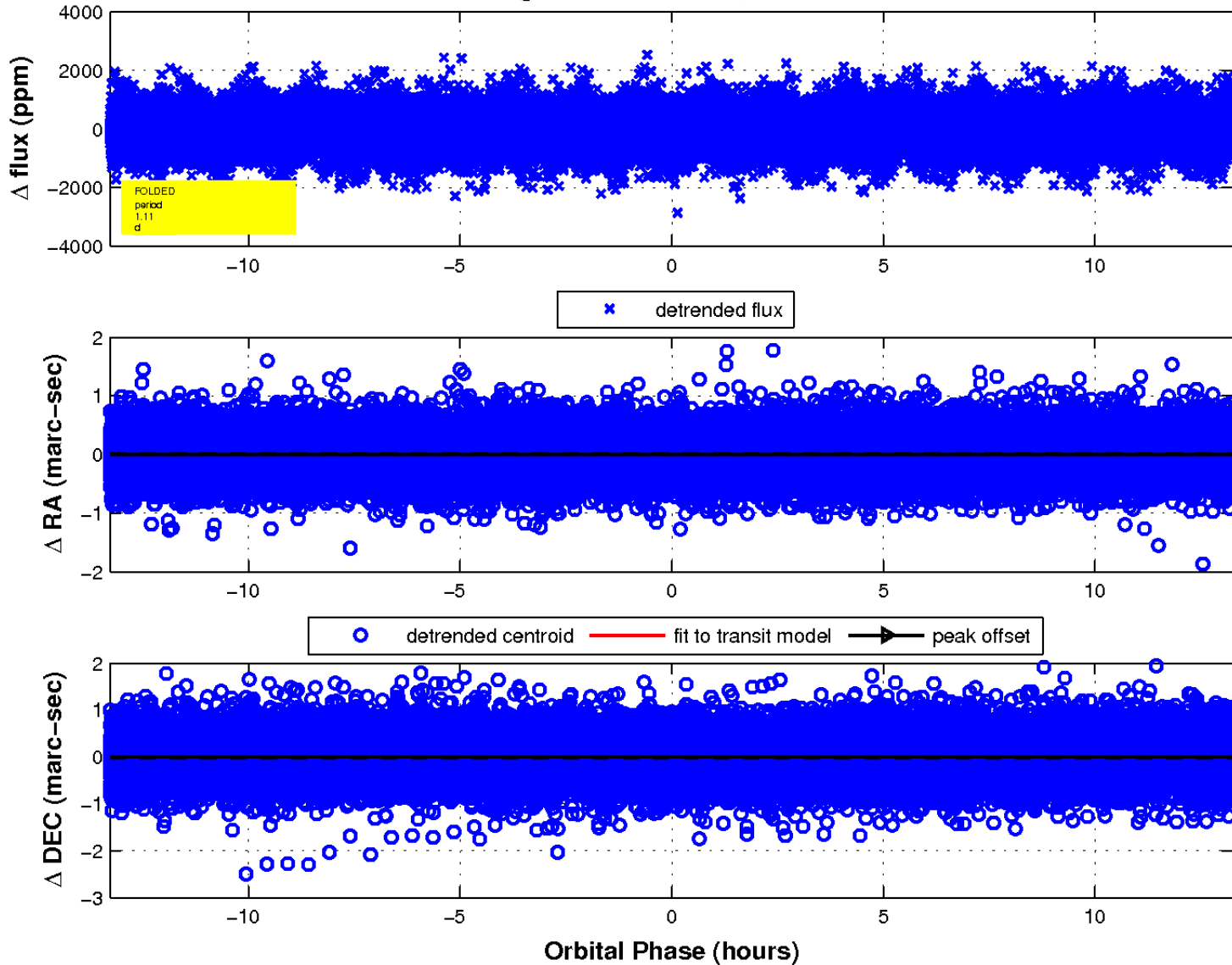
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

