

# KIC 007621793

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007621793-01	OBS	No	0.558703	131.749041	94.1	1.935	8.1	8.3	2.01	6804	2.27	32876.56

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007621793-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT

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

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

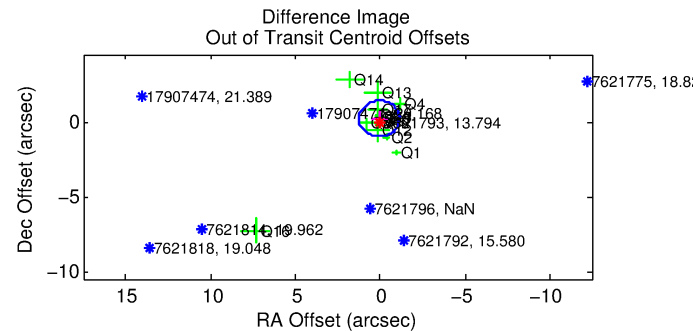
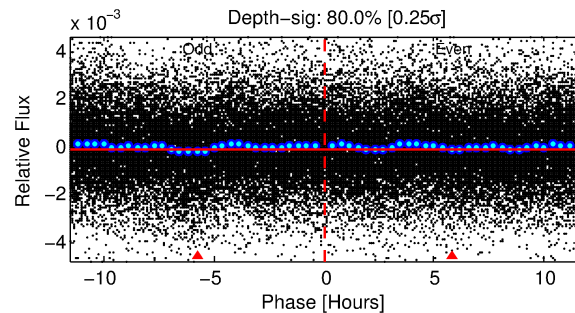
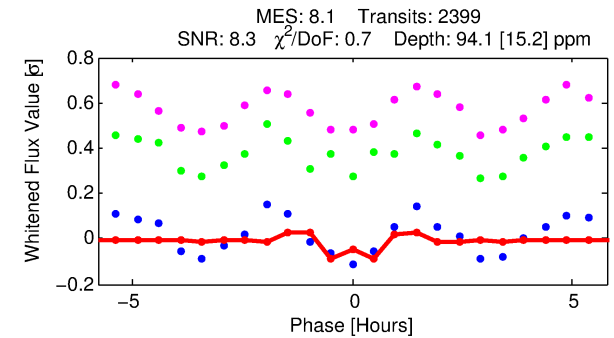
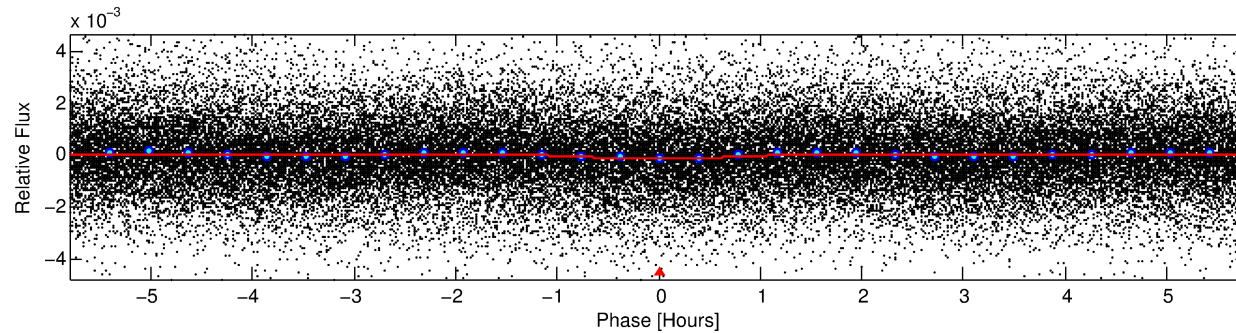
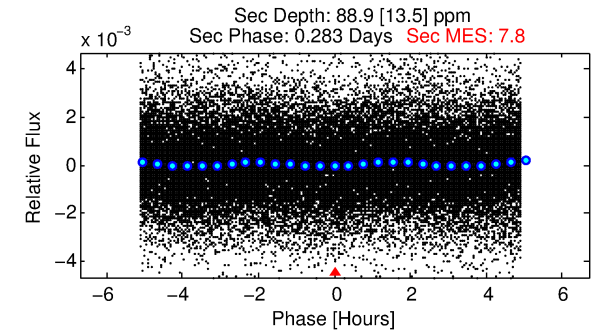
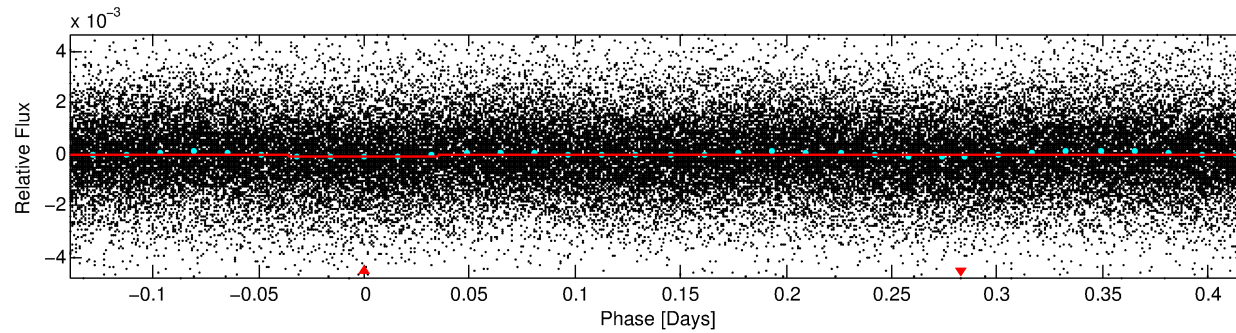
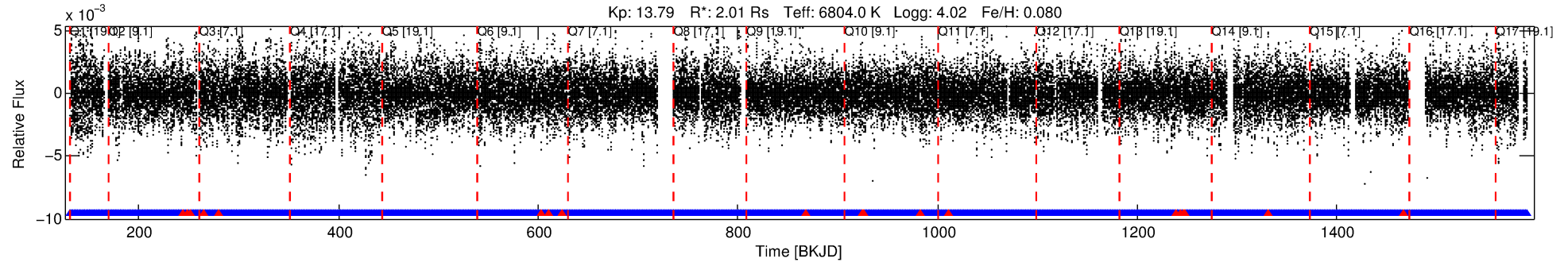
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 007621793-01

No Significant Match Found

# DV One-Page Summary

KIC: 7621793 Candidate: 1 of 1 Period: 0.559 d



## DV Fit Results:

Period = 0.55870 [0.00001] d  
Epoch = 131.7490 [0.0012] BKJD  
Rp/R\* = 0.0104 [0.0028]  
a/R\* = 1.38 [0.98]  
b = 0.90 [0.32]  
Seff = 32876.55 [15281.58]  
Teff = 3434 [399] K  
Rp = 2.27 [0.92] Re  
a = 0.0153 [0.0042] AU  
Ag = 2.23 [1.57] [0.78σ]  
Teffp = 6487 [955] K [2.95σ]

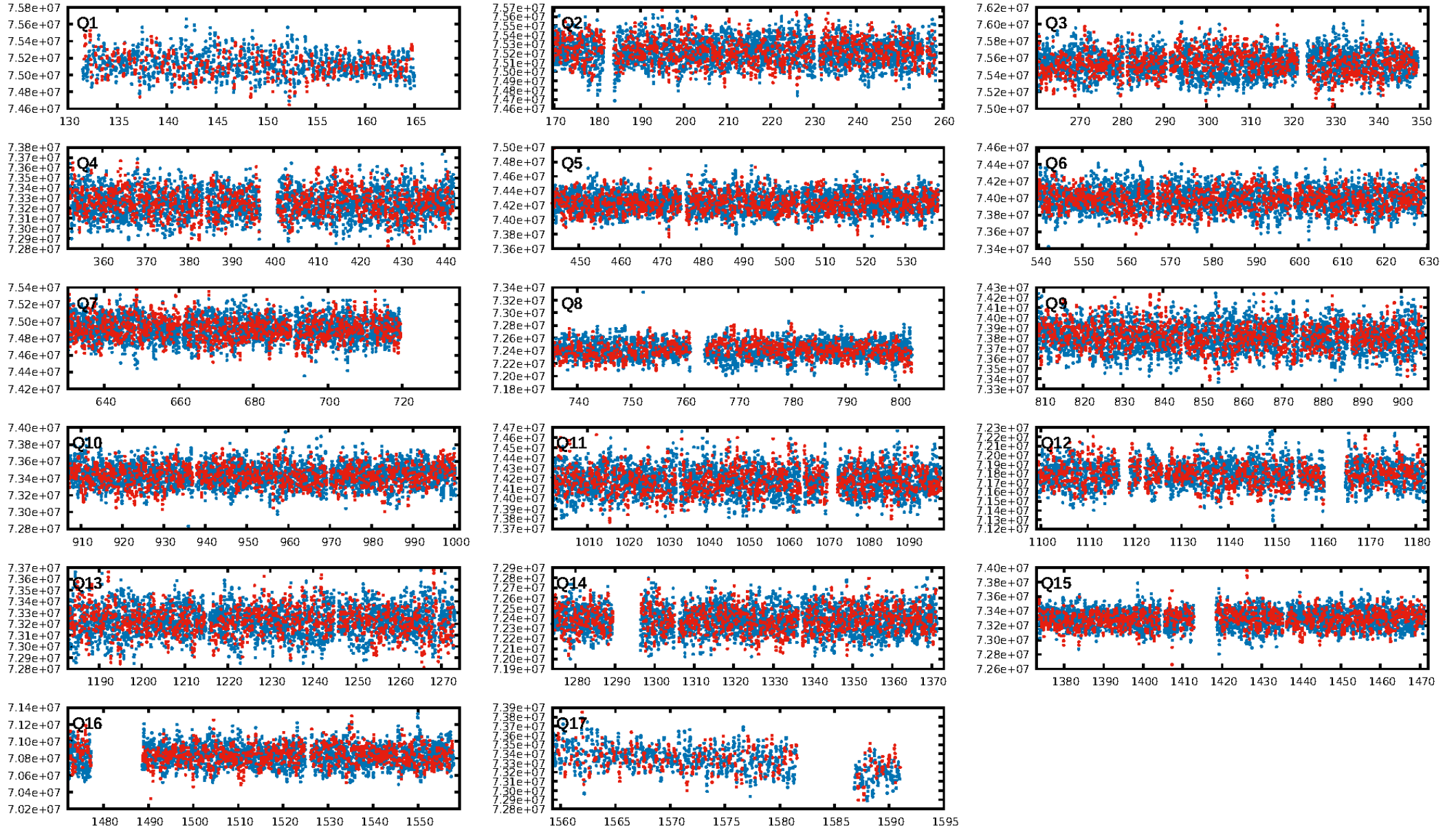
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 5.31e-14  
RollingBand-fgt: 0.99 [2271/2292]  
GhostDiagnostic-chr: 6.393  
**Centroid-sig: 0.0%**  
**Centroid-so: 1.232 arcsec [3.68σ]**  
OotOffset-rm: 0.214 arcsec [0.53σ]  
KicOffset-rm: 0.191 arcsec [0.45σ]  
OotOffset-st: 4/4/4/5 [17]  
KicOffset-st: 4/4/4/5 [17]  
DiffImageQuality-fgm: 0.59 [10/17]  
DiffImageOverlap-fno: 1.00 [17/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 02:04:42 Z

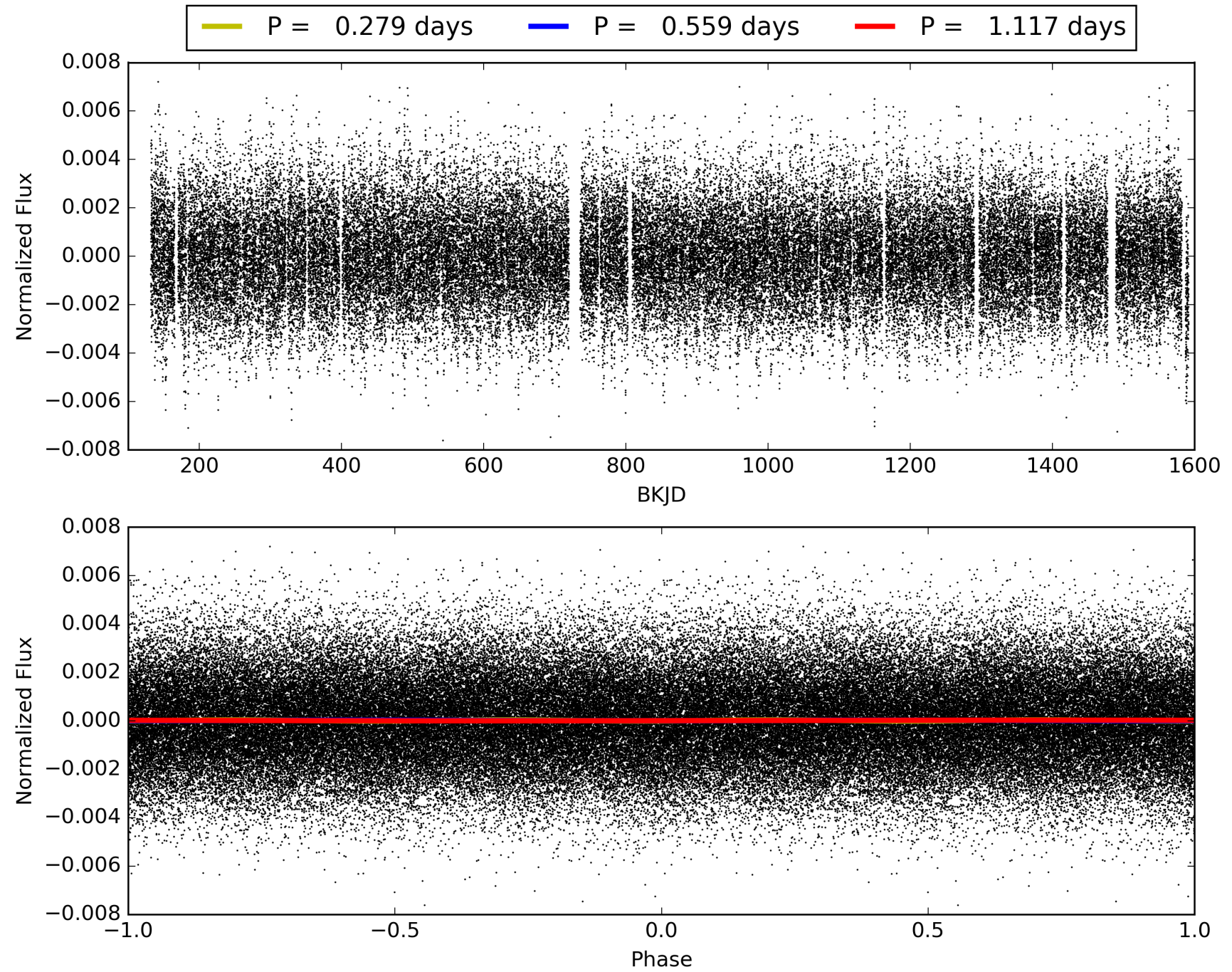
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 007621793-01, PDC Light Curves



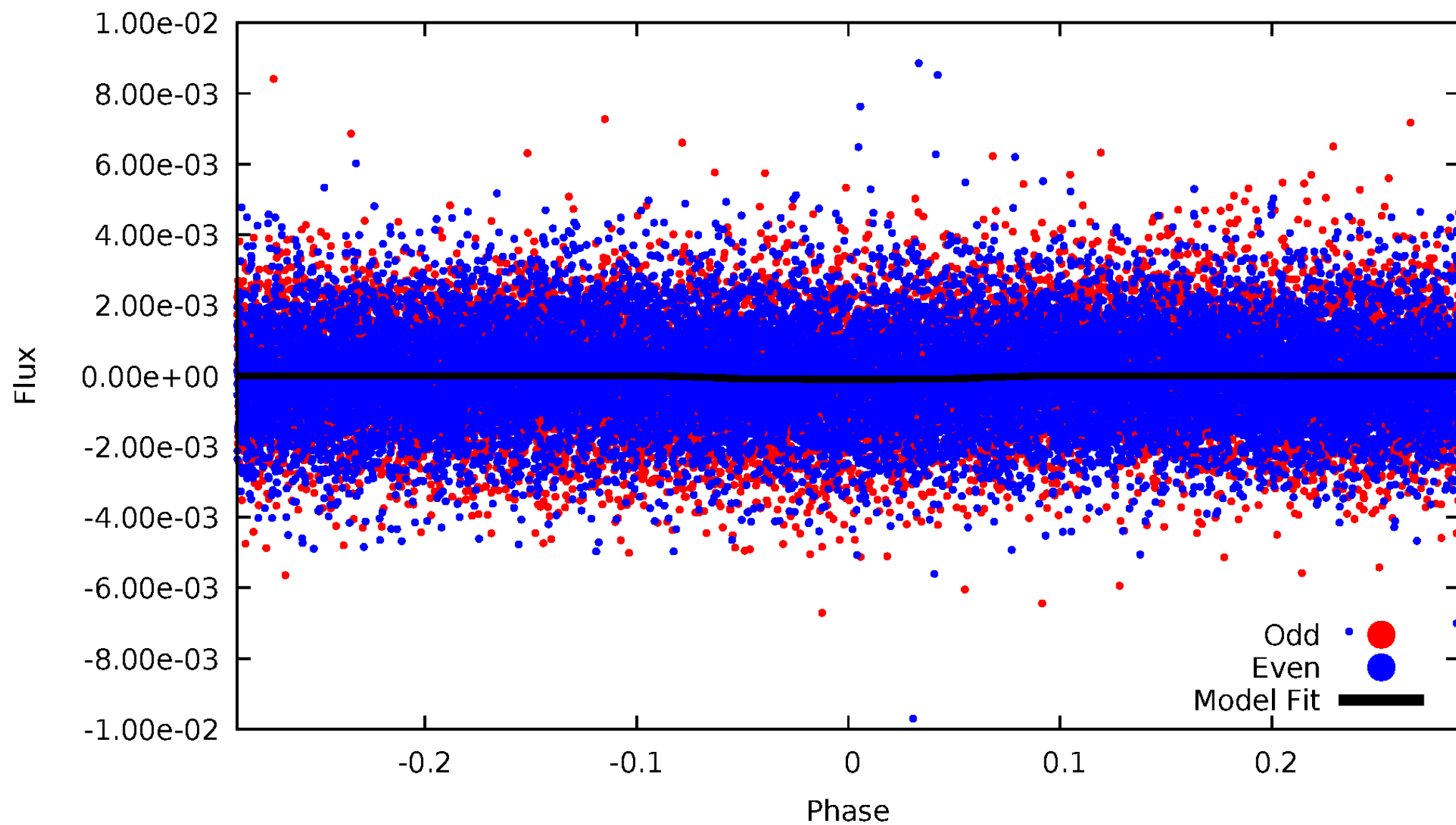


# TCE 007621793-01



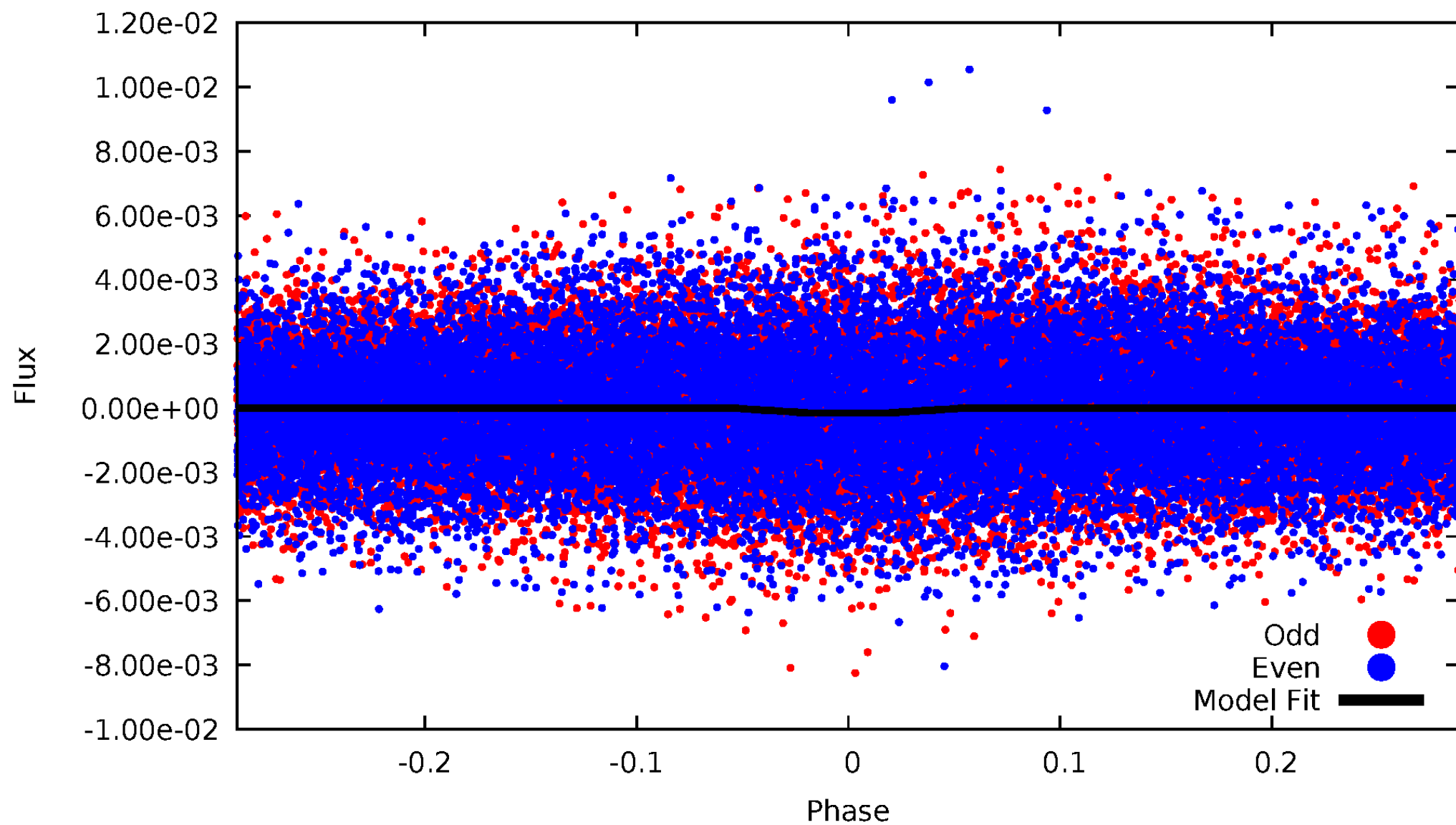
# DV Odd/Even

TCE 007621793-01

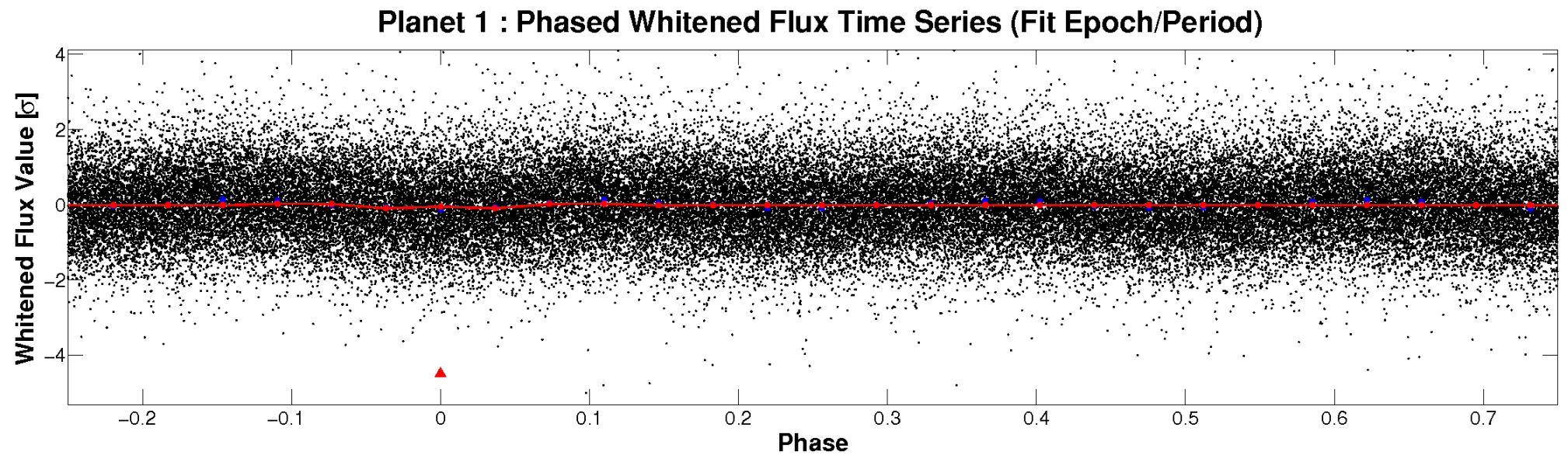
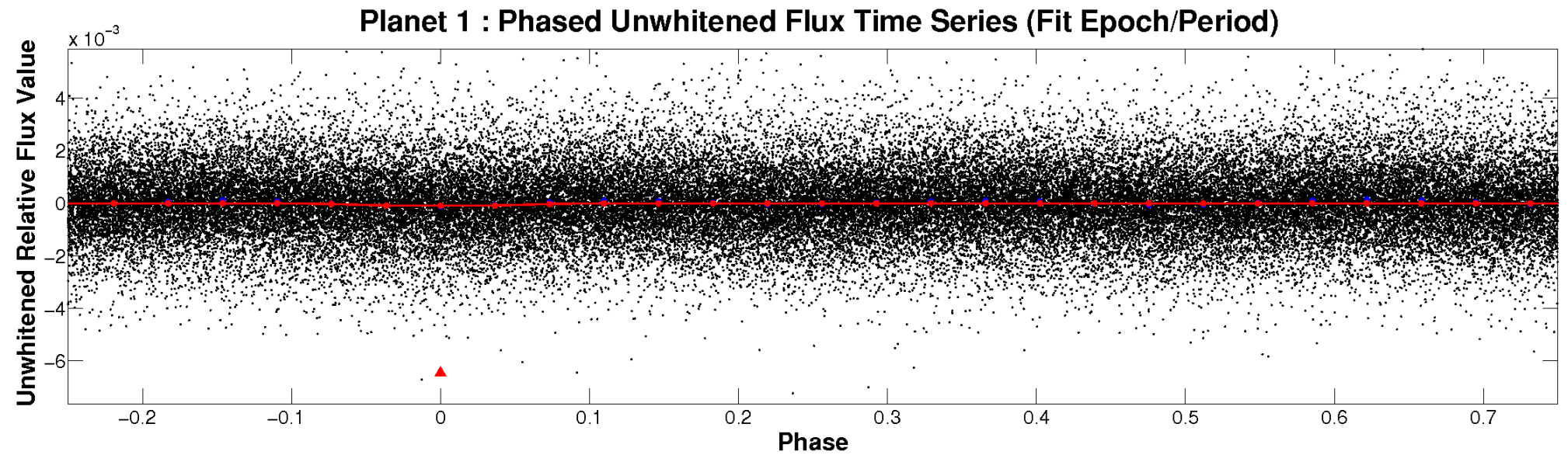


# ALT Odd/Even

TCE 007621793-01



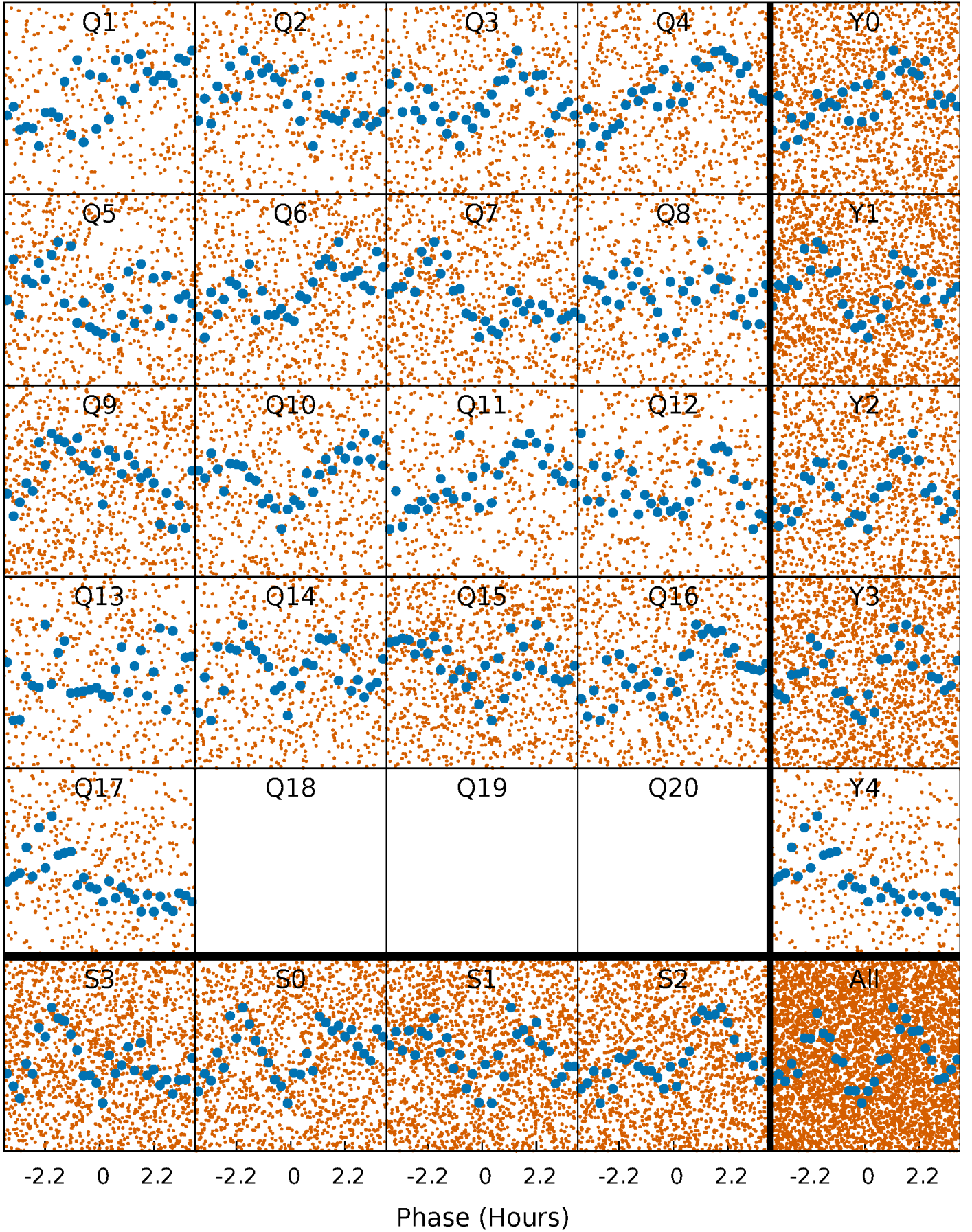
# Non-Whitened Vs. Whitened Light Curve





# PDC Quarter-Phased Transit Curves

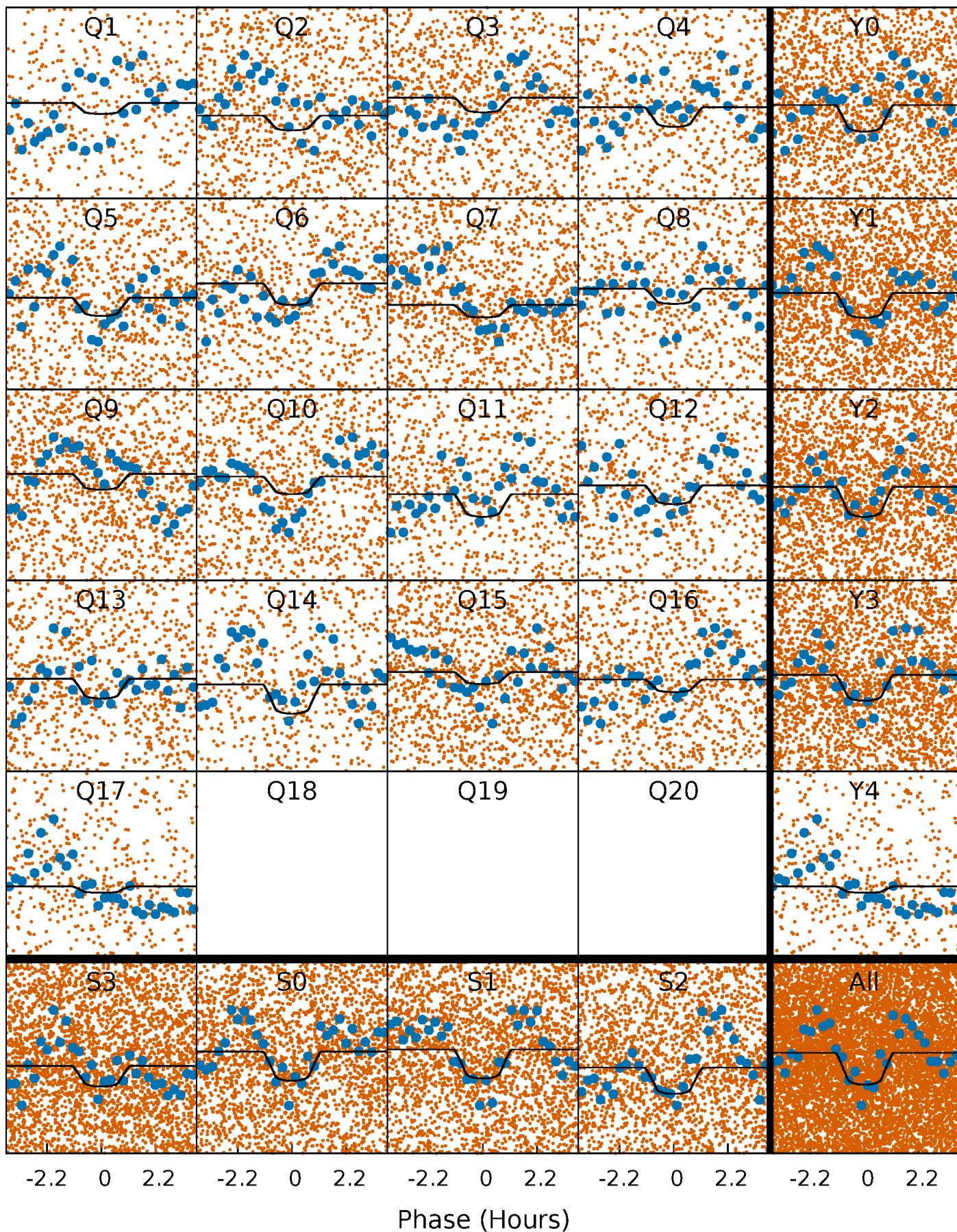
TCE 007621793-01 P= 0.558703 Days  $T_0=131.749041$  (BKJD)





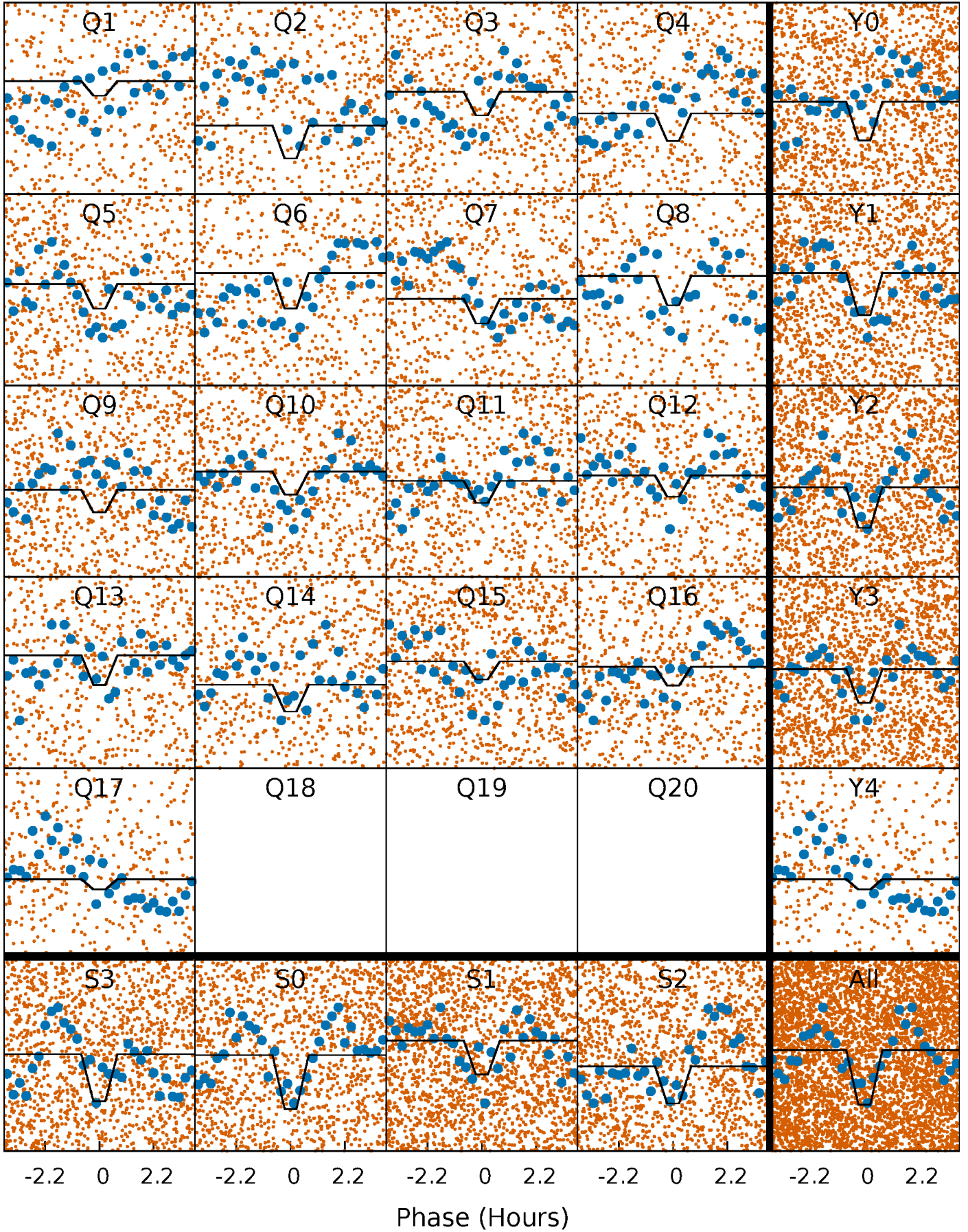
# DV Quarter-Phased Transit Curves

TCE 007621793-01 P= 0.558703 Days  $T_0=131.749041$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

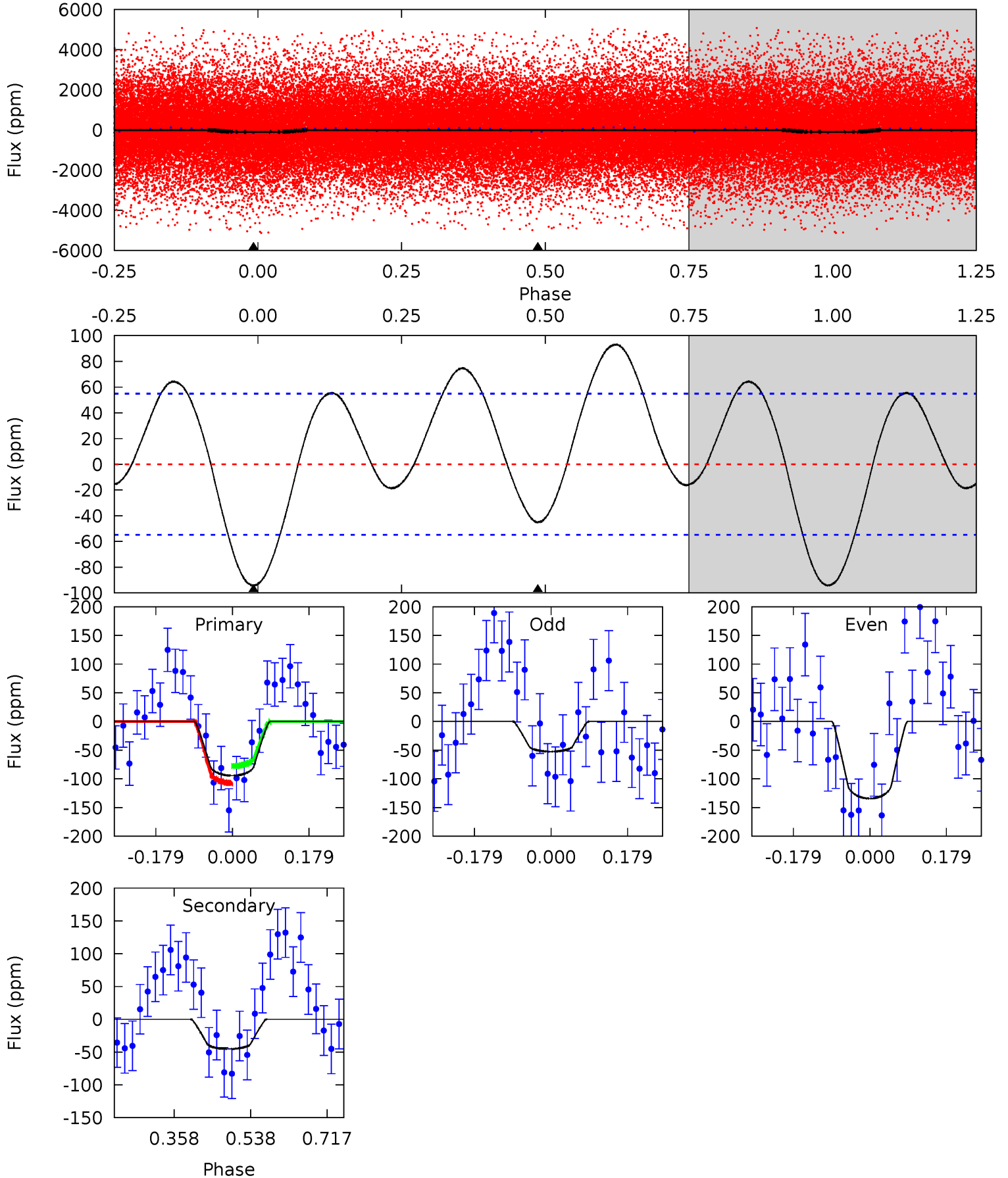
TCE 007621793-01 P= 0.558699 Days  $T_0=131.748295$  (BKJD)



# DV Model-Shift Uniqueness Test

007621793-01, P = 0.558703 Days, E = 131.190338 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
7.65	3.67	0	0	4.44	1.34	1.58	7.65	7.65	3.67	3.67	3.31	1.08	0.50	1.21

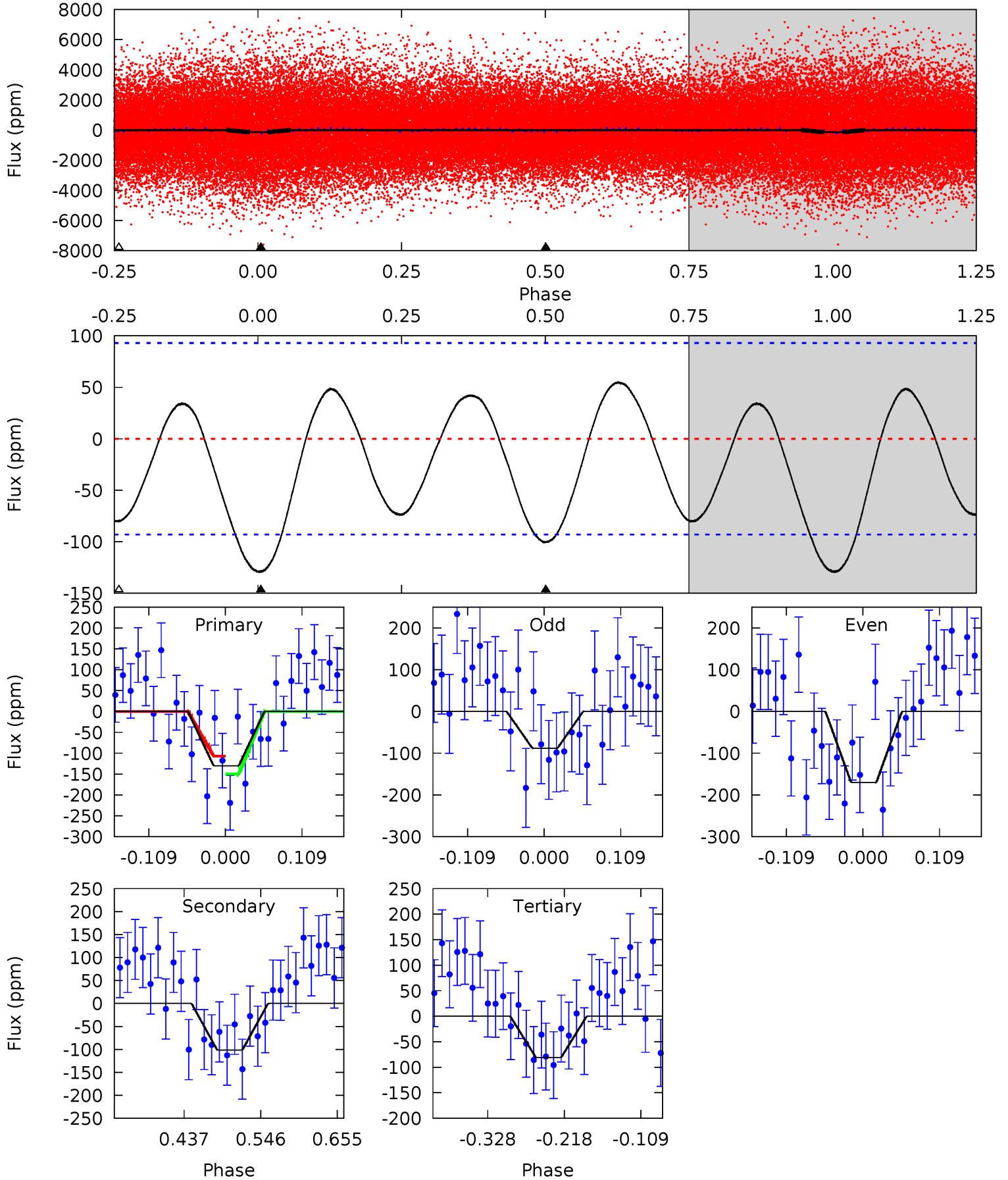




# Alt Model-Shift Uniqueness Test

007621793-01, P = 0.558699 Days, E = 131.189596 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
6.36	4.95	3.96	0	4.55	1.60	2.18	2.40	6.36	0.99	4.95	1.95	1.17	0.30	1.05





### Stellar Parameters For KIC 007621793

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6804^{+189}_{-307}$	$4.021^{+0.246}_{-0.164}$	$0.080^{+0.250}_{-0.350}$	$2.008^{+0.548}_{-0.609}$	$1.544^{+0.196}_{-0.318}$	$0.269^{+0.417}_{-0.124}$
	+3%/-5%	+6%/-4%	+312%/-438%	+27%/-30%	+13%/-21%	+155%/-46%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology  
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

### Secondary Eclipse Parameters for KIC 007621793-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-45 \pm 12$	$2.21^{+0.78}_{-0.68}$	$4747^{+345}_{-402}$	$5064^{+1085}_{-889}$	$1.171^{+1.231}_{-0.580}$
Alt.	$-101 \pm 20$	$2.66^{+0.80}_{-0.72}$	$4738^{+397}_{-406}$	$5754^{+1023}_{-757}$	$1.748^{+1.770}_{-0.732}$

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

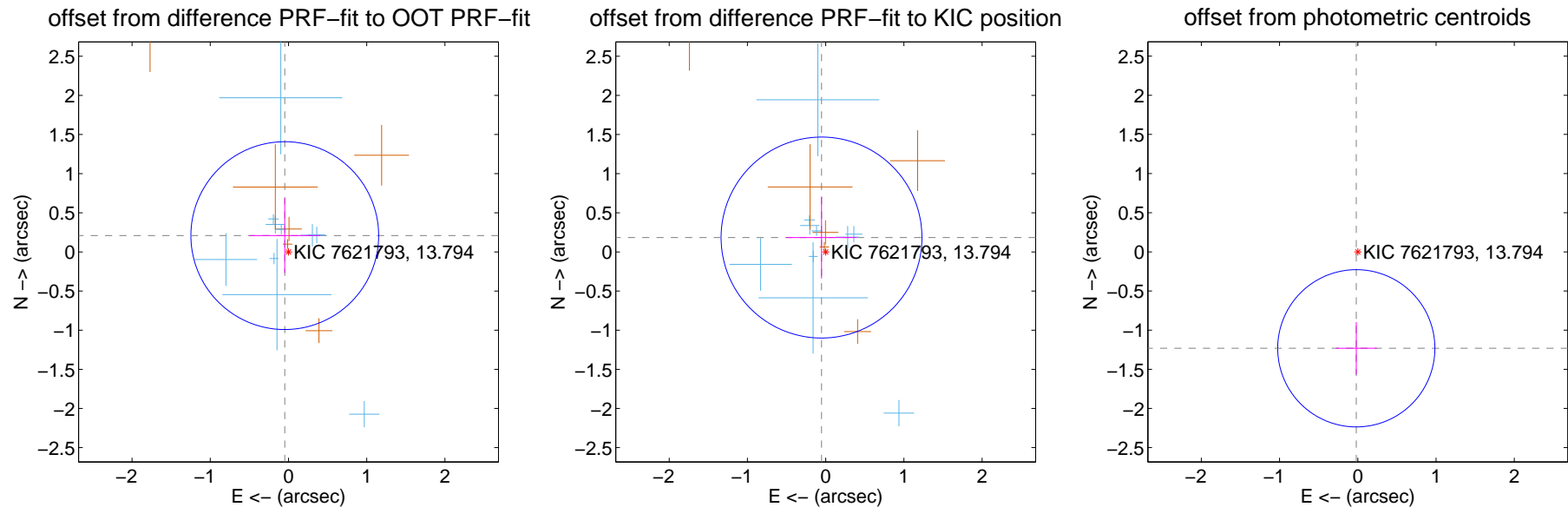
## DV Centroid Data

Supplemental centroid analysis for 007621793-01. Kepler magnitude: 13.79. Transit SNR 8.28

There are 10 quarters with good PRF difference image offsets

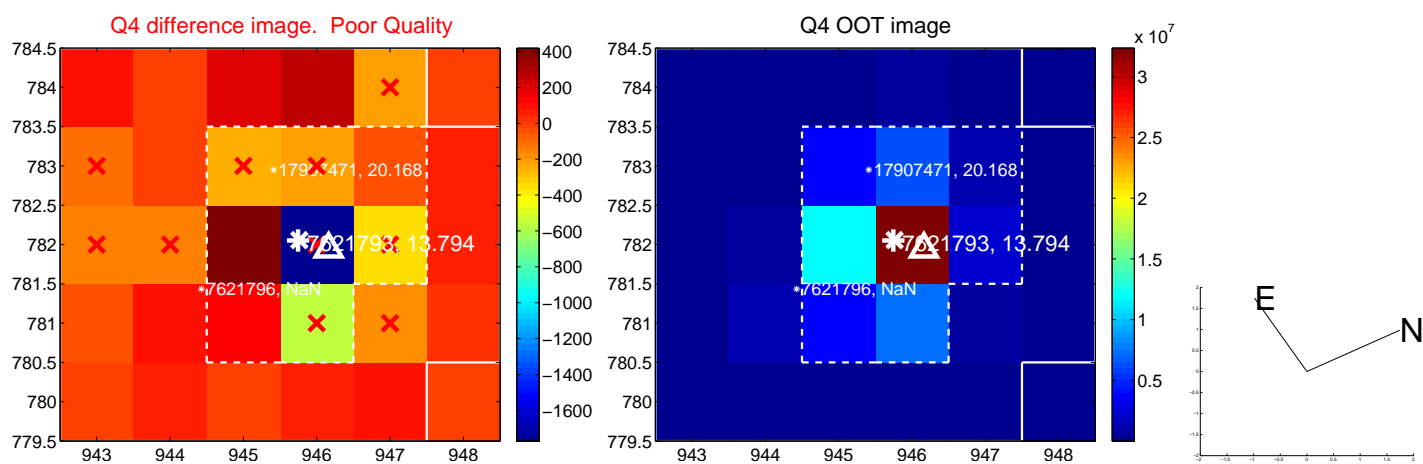
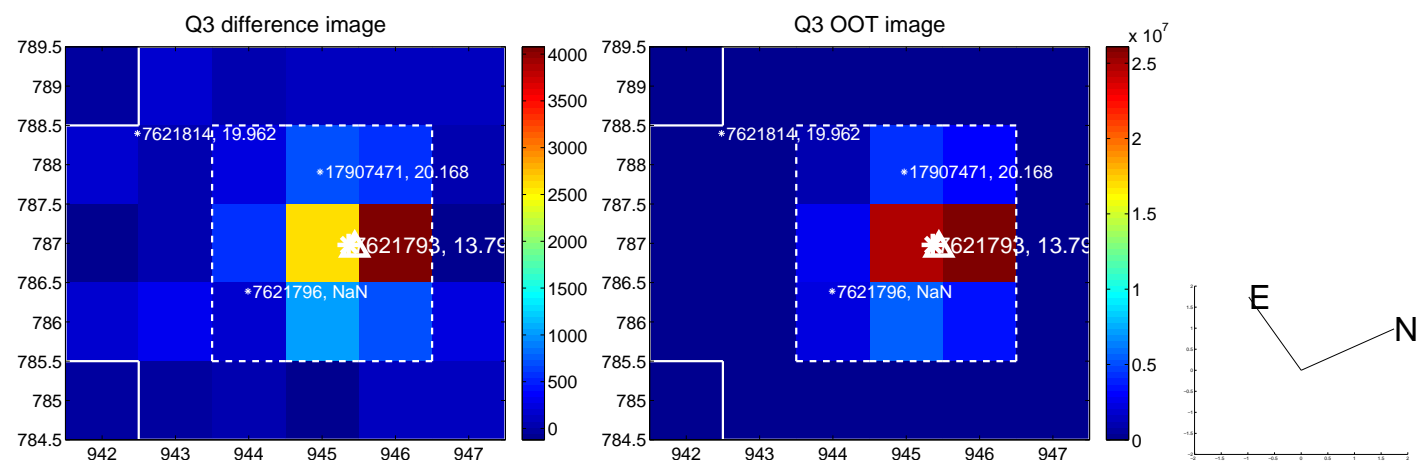
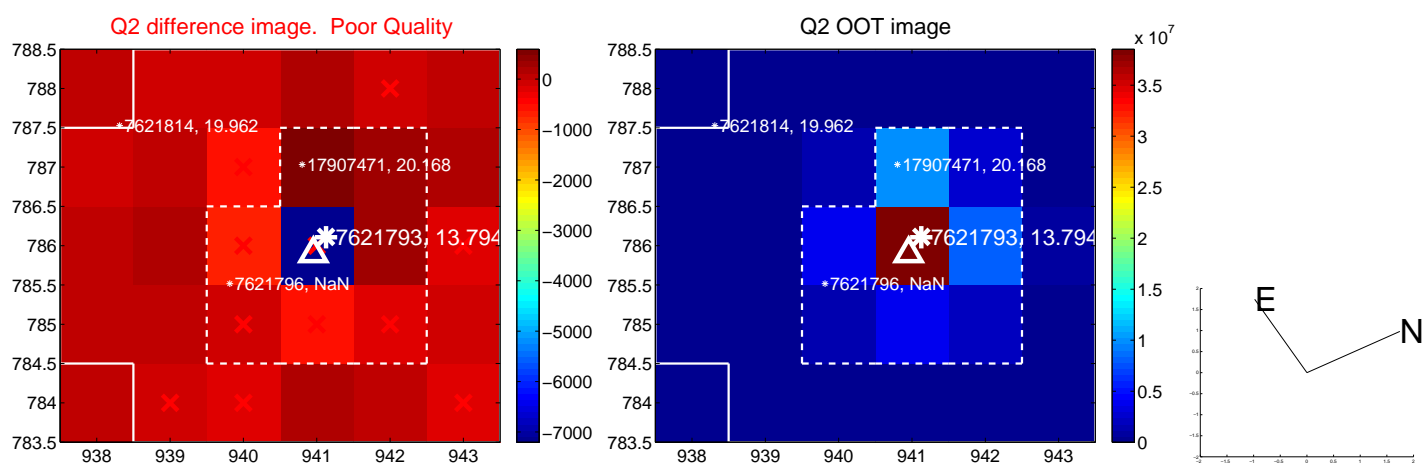
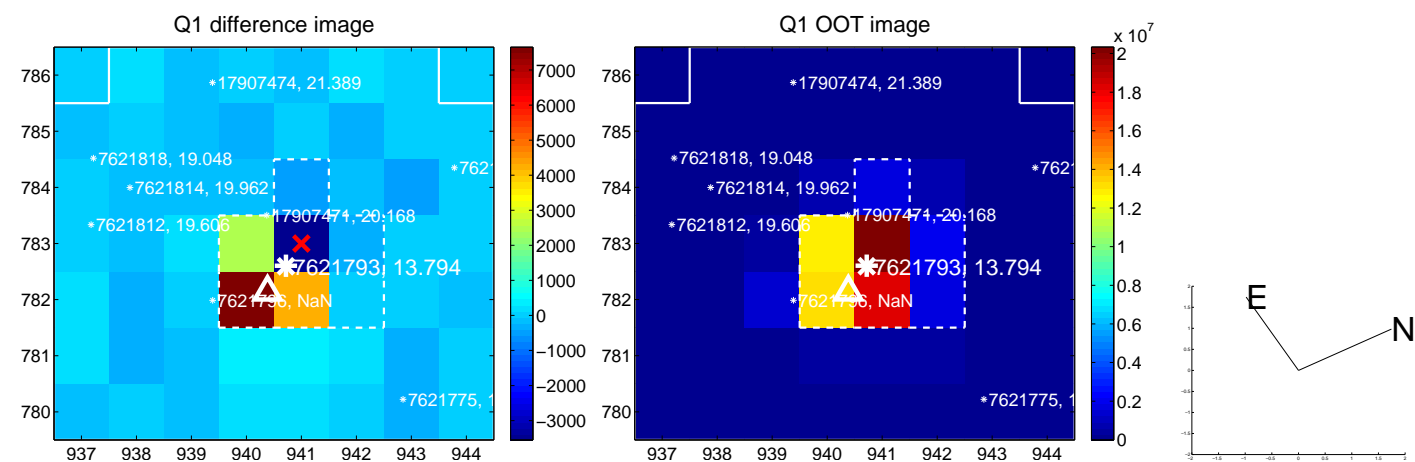
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.214 \pm 0.400$	0.53	$0.048 \pm 0.453$	$0.208 \pm 0.477$
PRF-fit source offset from KIC position	$0.191 \pm 0.428$	0.45	$0.053 \pm 0.451$	$0.183 \pm 0.523$
photometric centroid source offset	$1.23 \pm 0.33$	3.68	$0.02 \pm 0.26$	$-1.23 \pm 0.33$

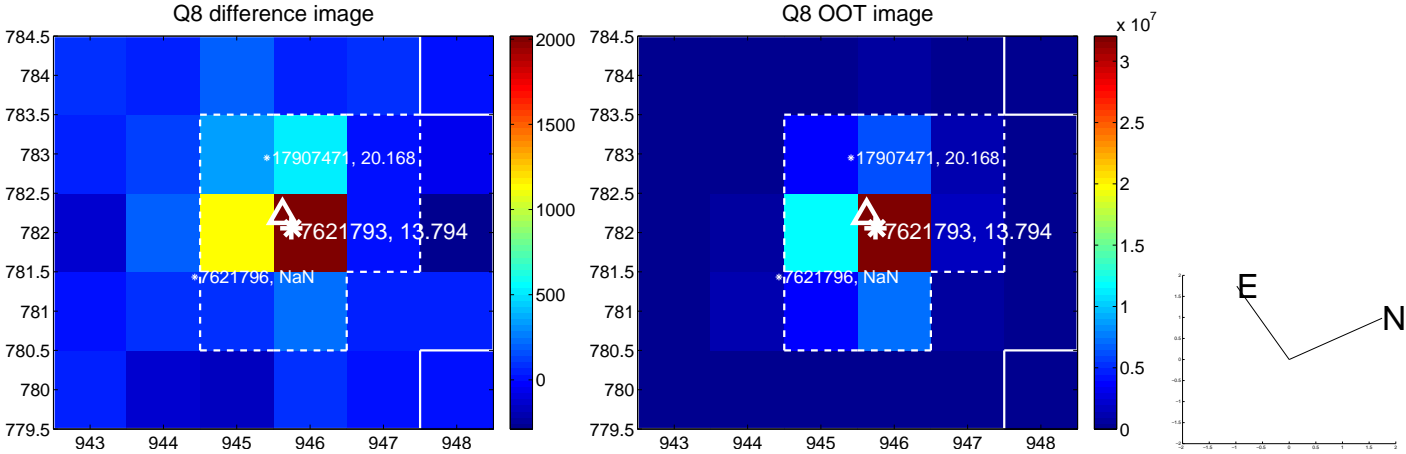
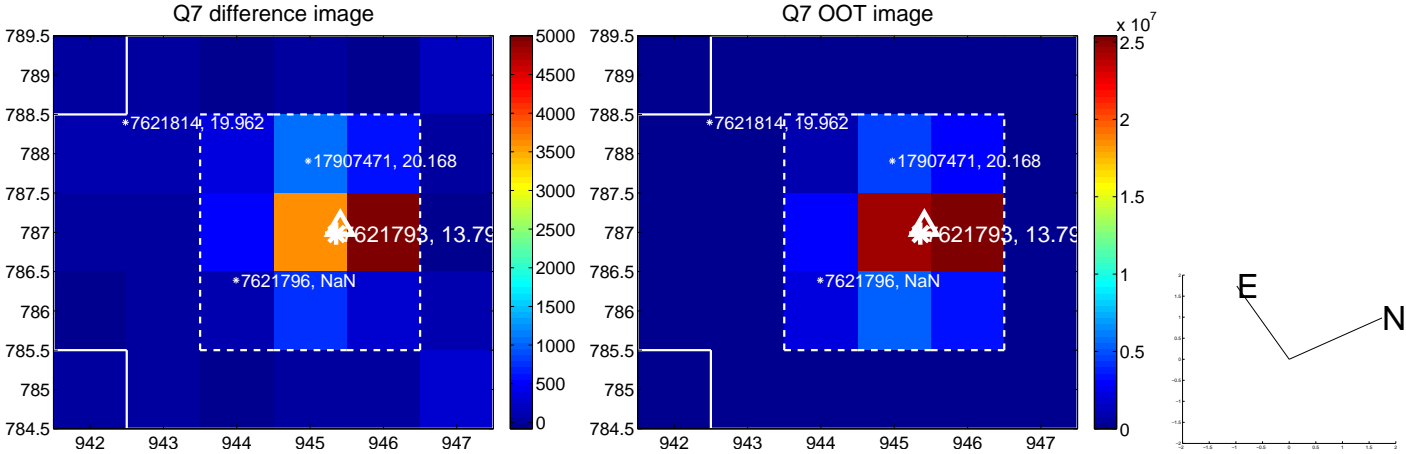
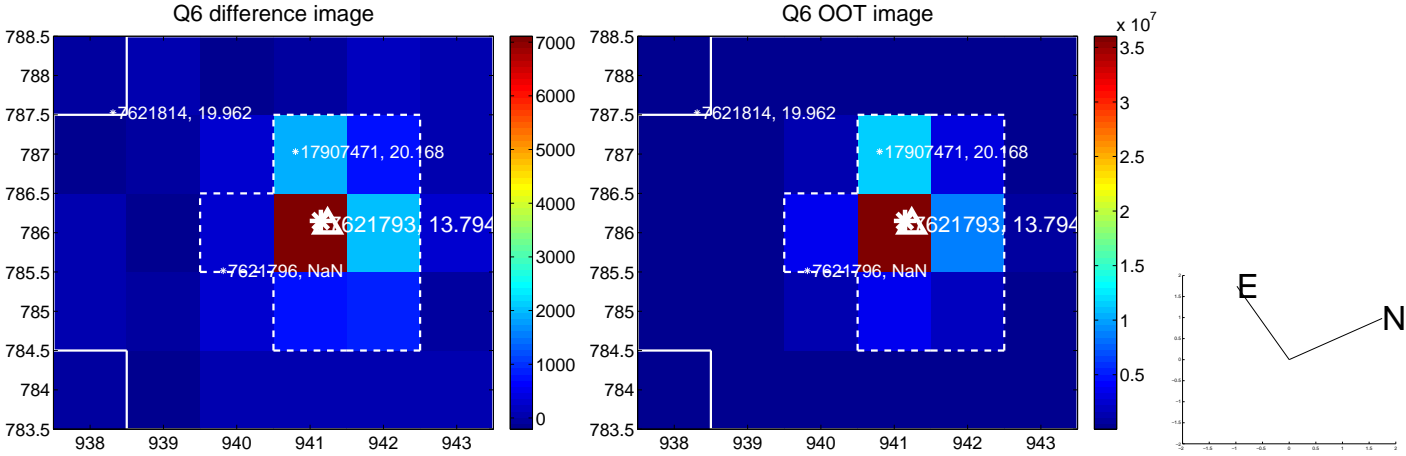
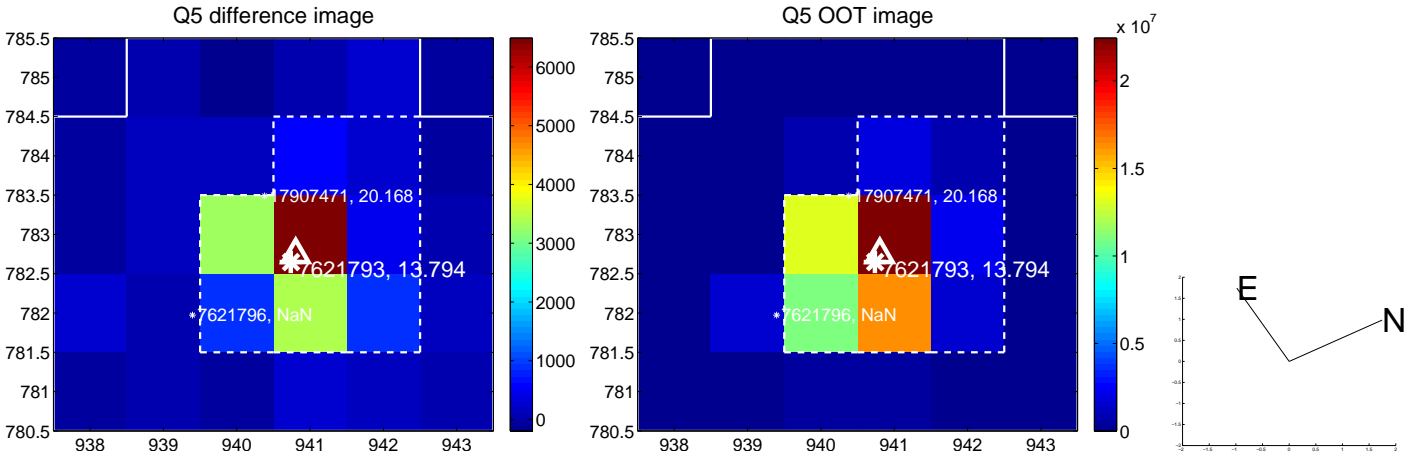


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

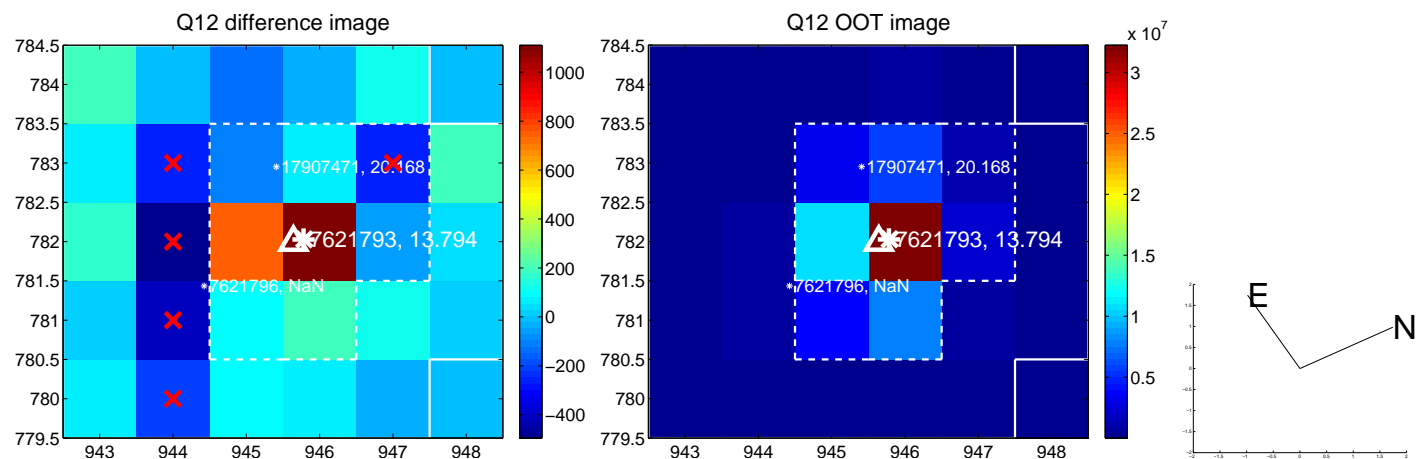
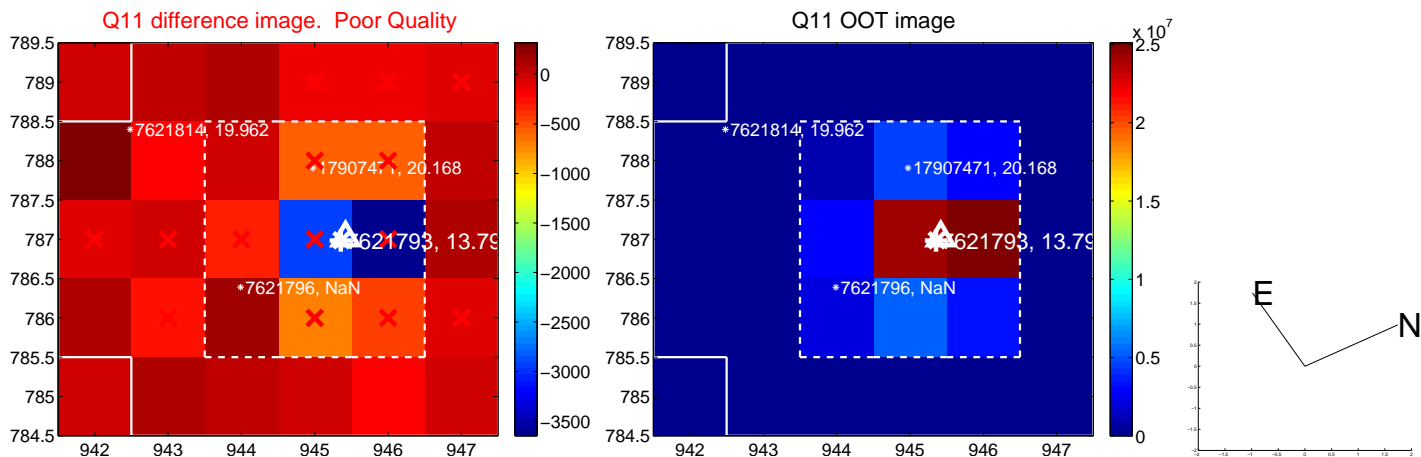
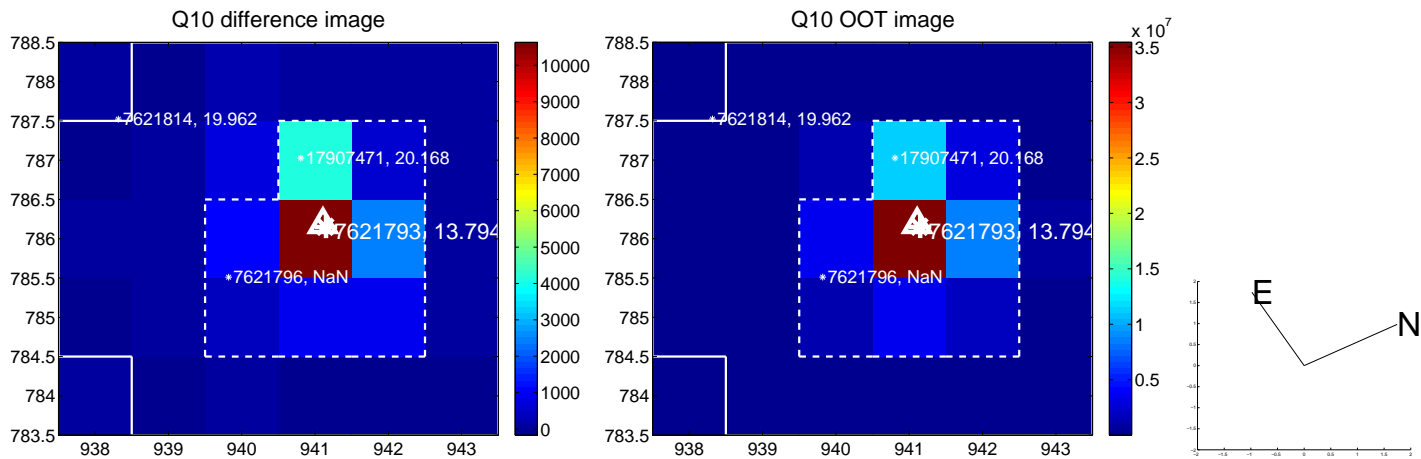
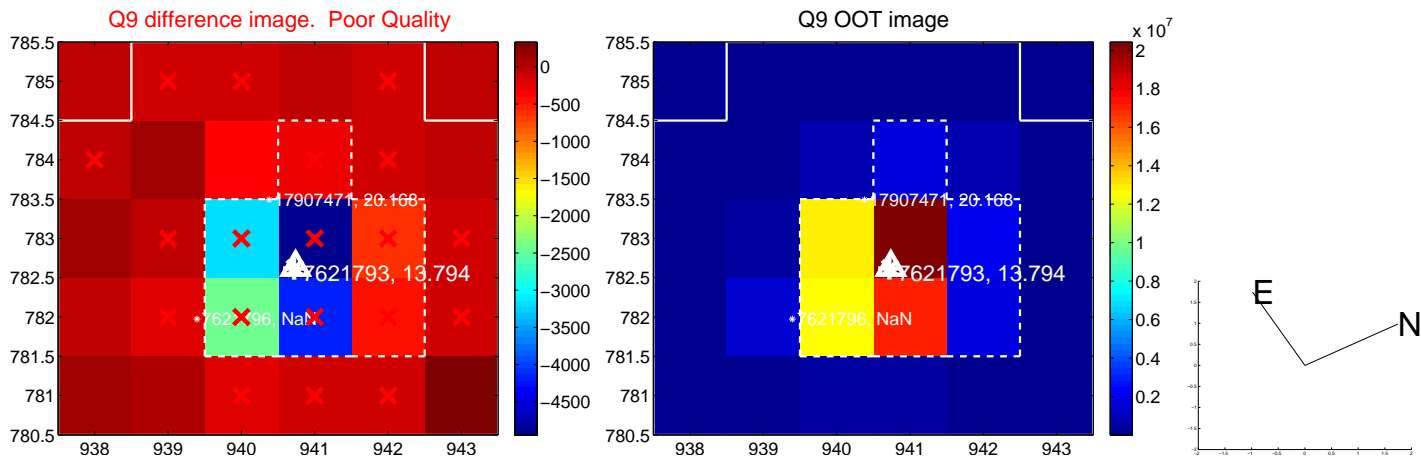


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

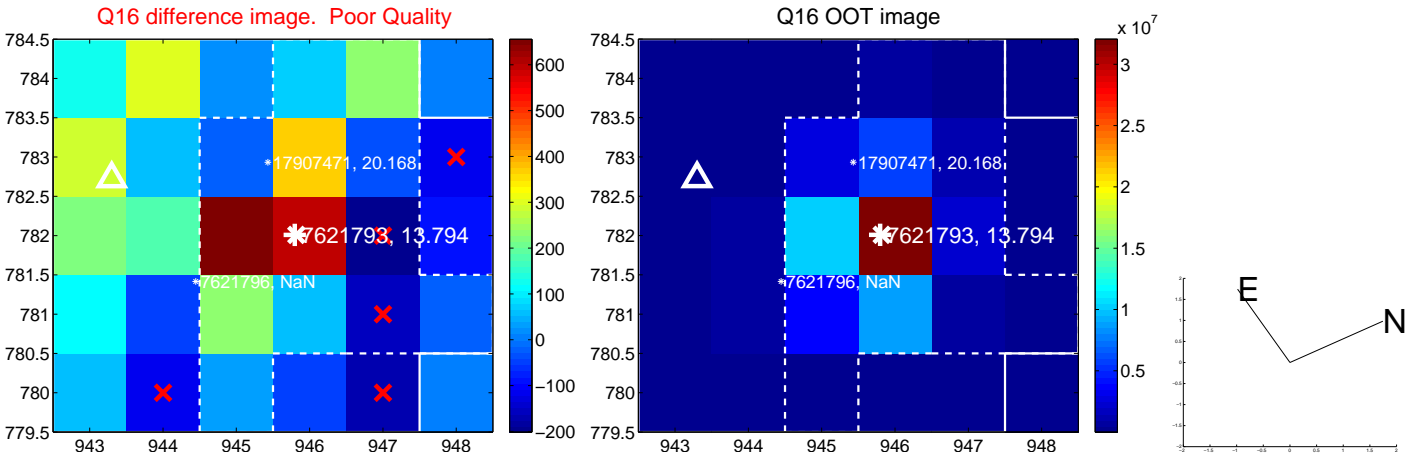
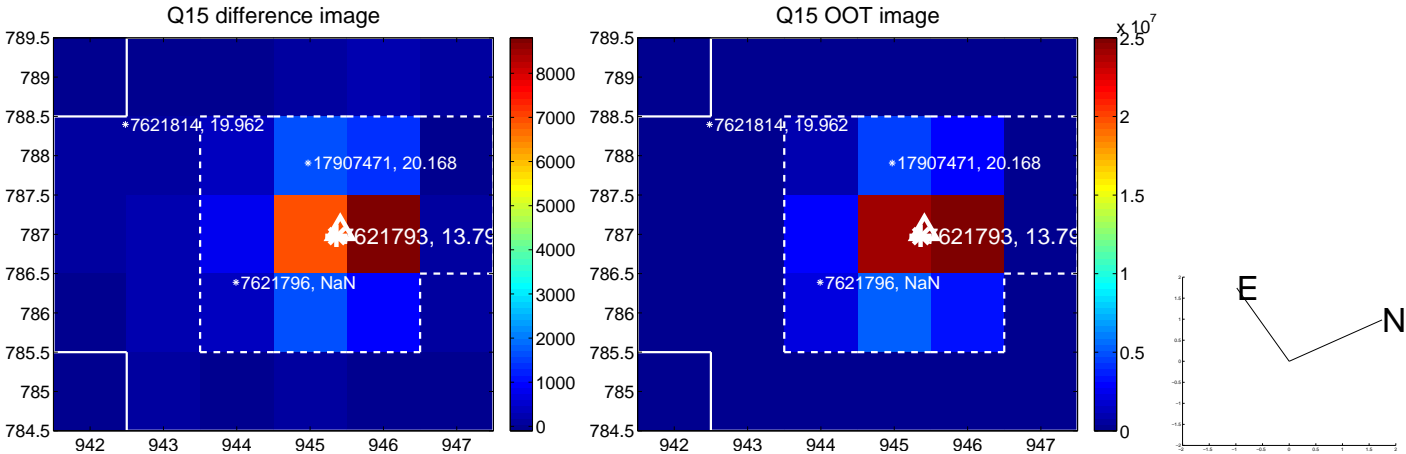
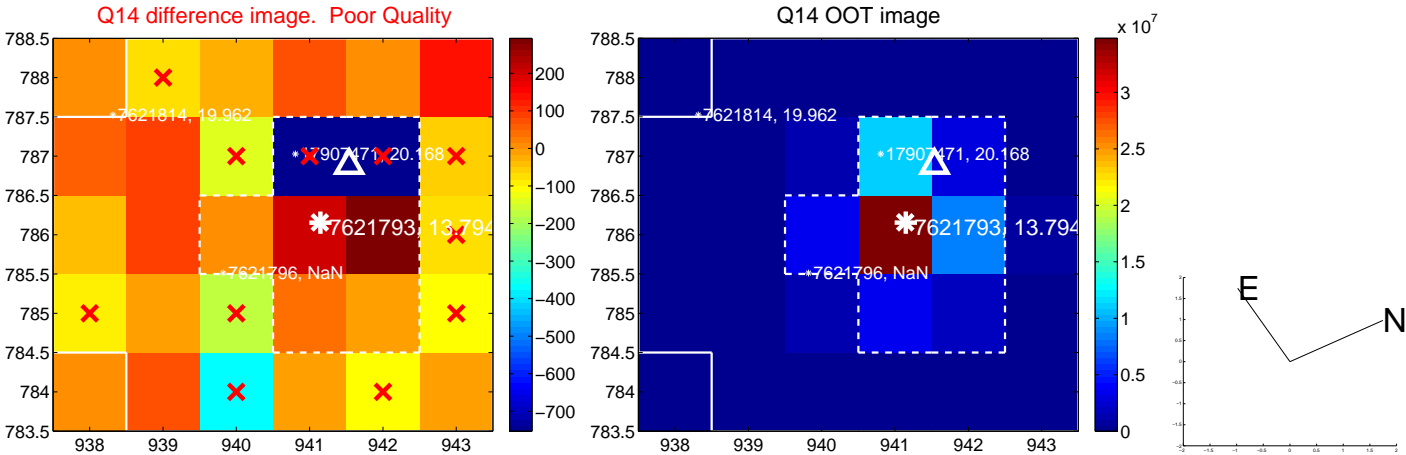
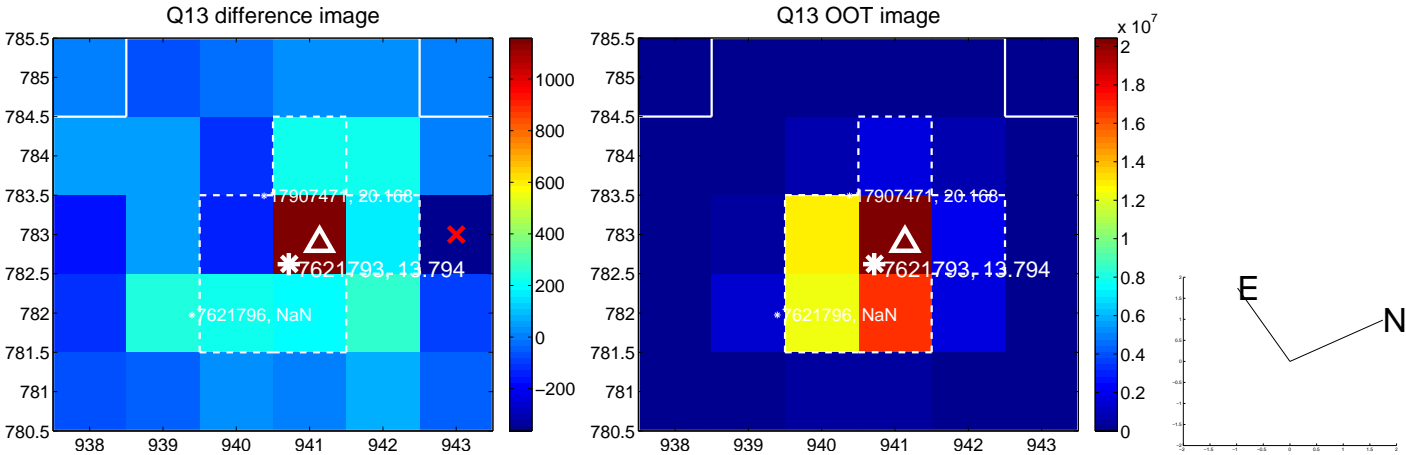




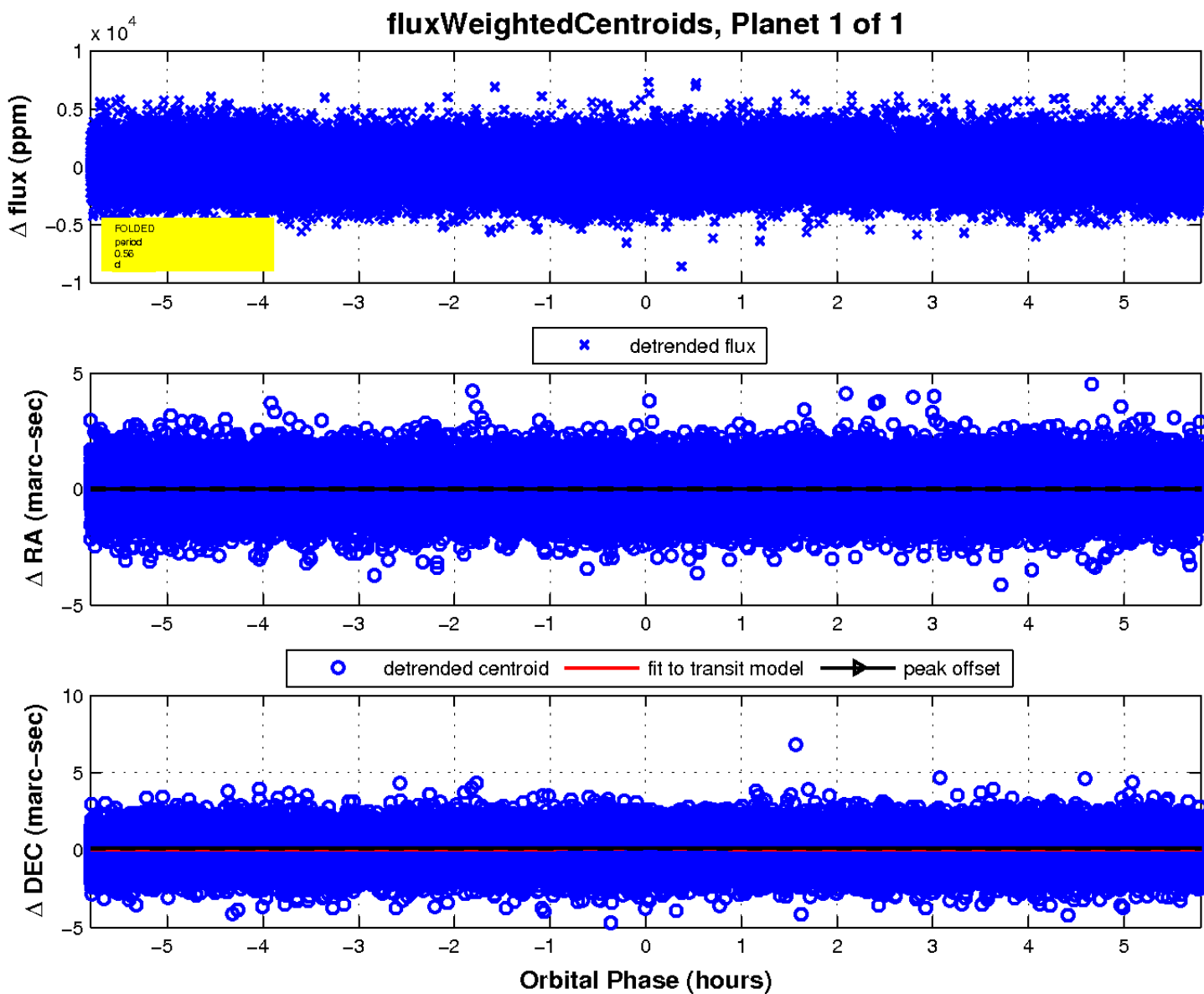
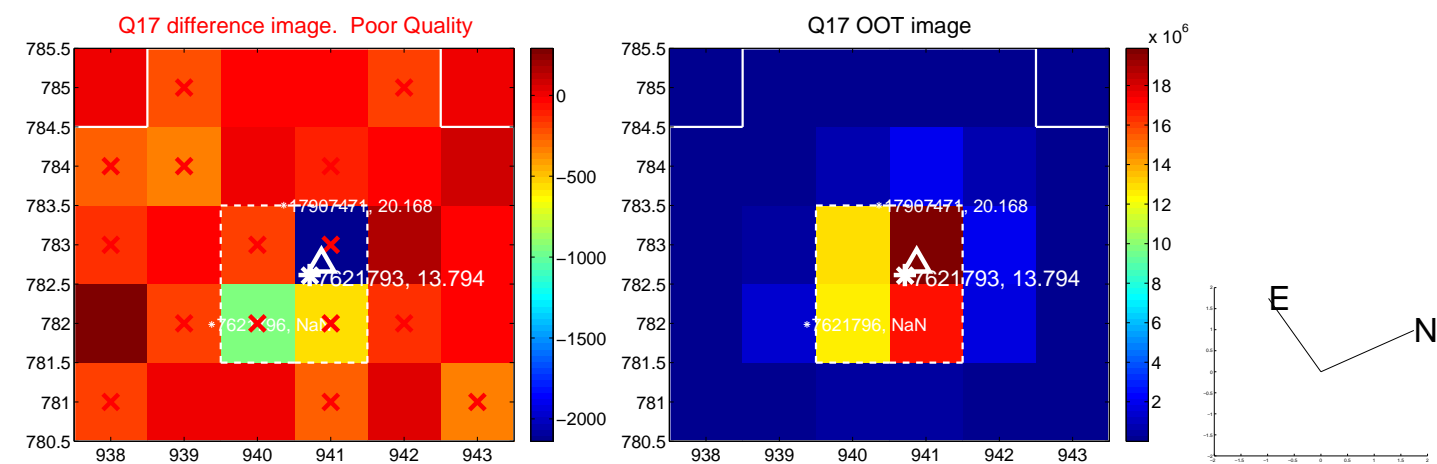
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



UKIRT Image

Declination

