

# KIC 005785707

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
005785707-01	OBS	No	5.612109	136.229607	14.2	23.968	9.5	9.0	4.74	7906	2.03	11315.61

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005785707-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_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.

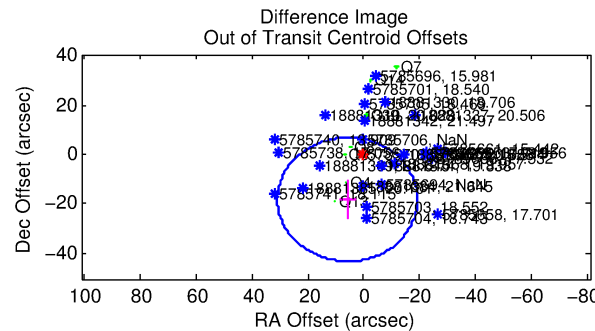
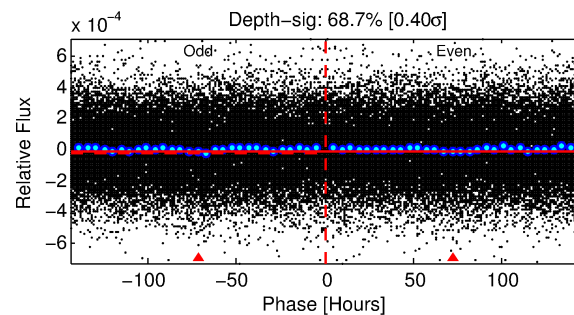
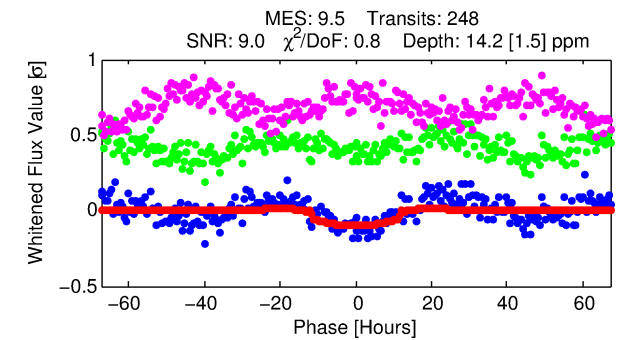
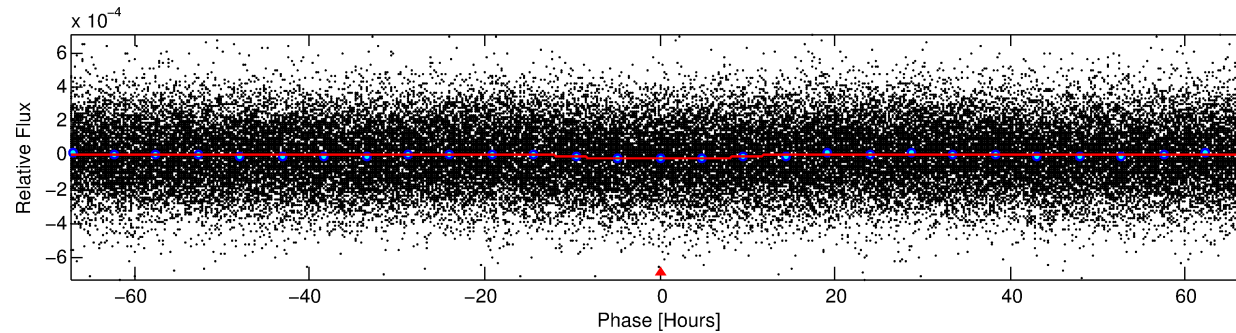
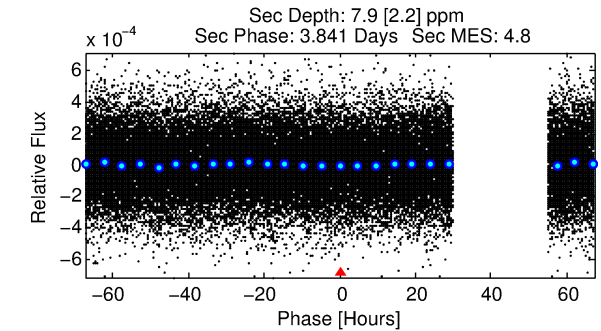
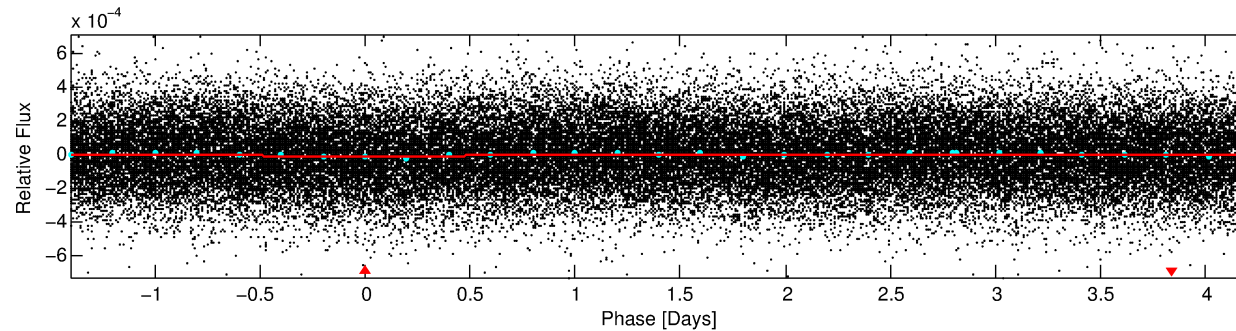
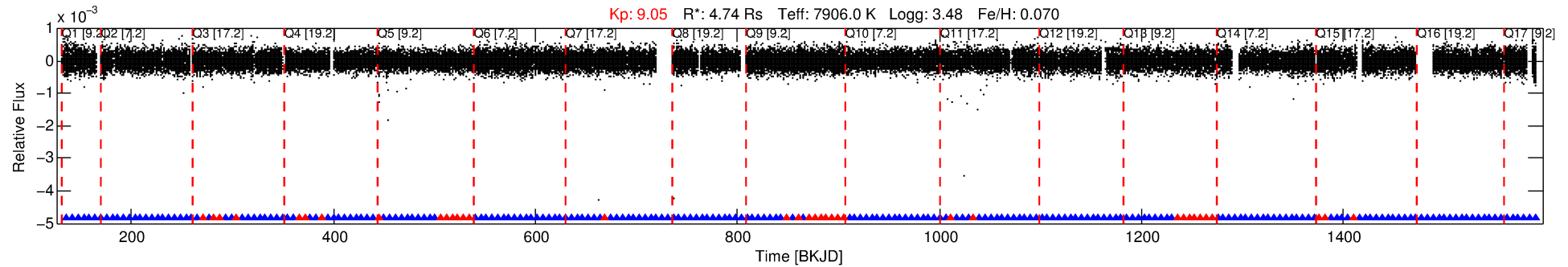
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 005785707-01

No Significant Match Found

# DV One-Page Summary

KIC: 5785707 Candidate: 1 of 1 Period: 5.612 d



## DV Fit Results:

Period = 5.61211 [0.00023] d  
Epoch = 136.2296 [0.0295] BKJD  
Rp/R\* = 0.0039 [0.0009]  
a/R\* = 1.30 [0.72]  
b = 0.86 [0.41]  
Seff = 11315.61 [6618.32]  
Teq = 2630 [385] K  
Rp = 2.03 [0.92] Re  
a = 0.0834 [0.0306] AU  
Ag = 7.30 [5.77] [1.09σ]  
Teff = 6684 [912] K [4.10σ]

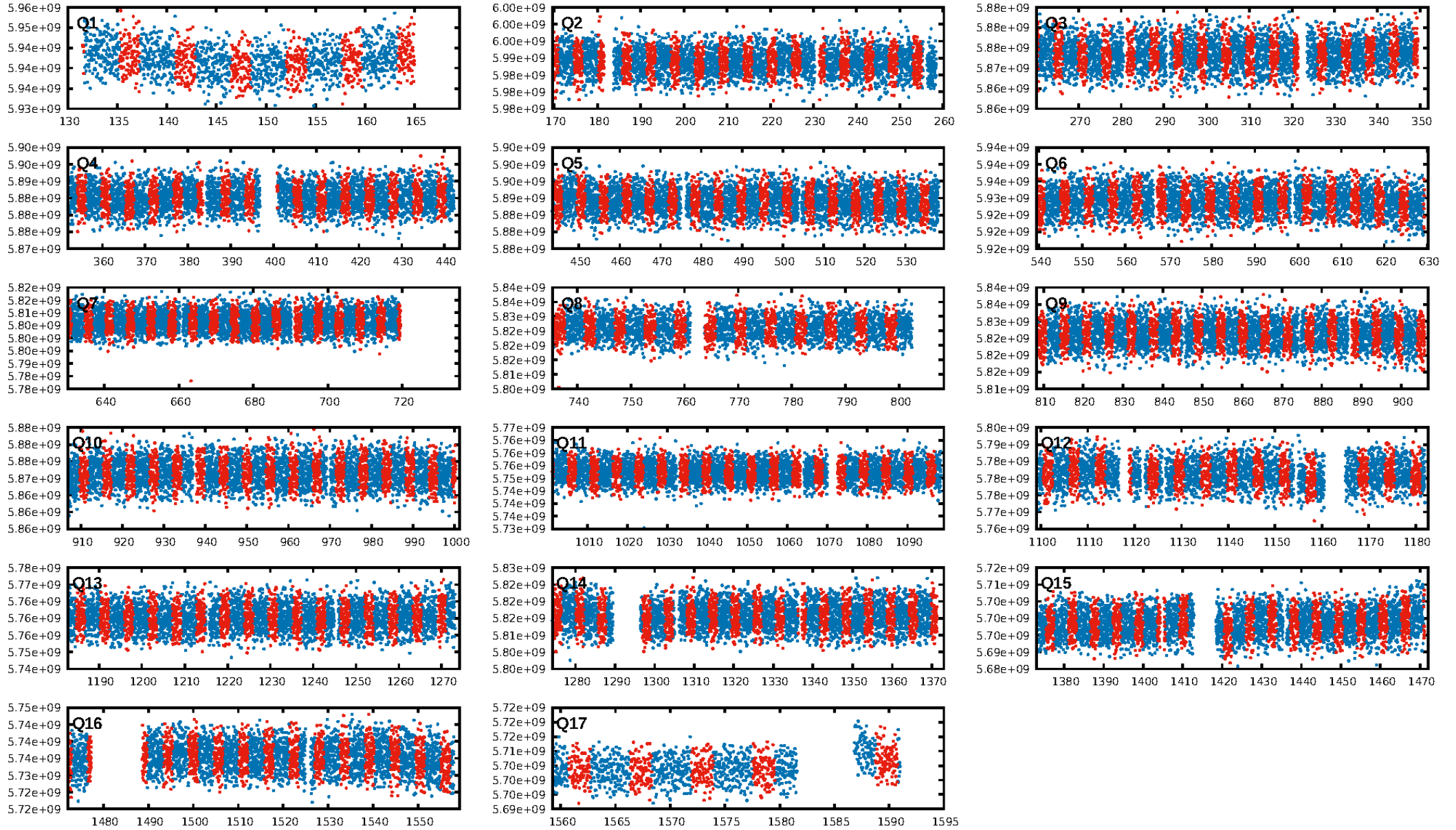
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 4.42e-34  
RollingBand-fgt: 0.85 [201/237]  
GhostDiagnostic-chr: N/A  
Centroid-sig: 8.2%  
Centroid-so: 6.011 arcsec [1.93σ]  
OotOffset-rm: 19.234 arcsec [2.30σ]  
KicOffset-rm: 9.105 arcsec [1.06σ]  
OotOffset-st: 2/1/2/2 [7]  
KicOffset-st: 2/1/2/2 [7]  
DiffImageQuality-fgm: 0.00 [0/7]  
DiffImageOverlap-fno: 1.00 [17/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 15:28:56 Z

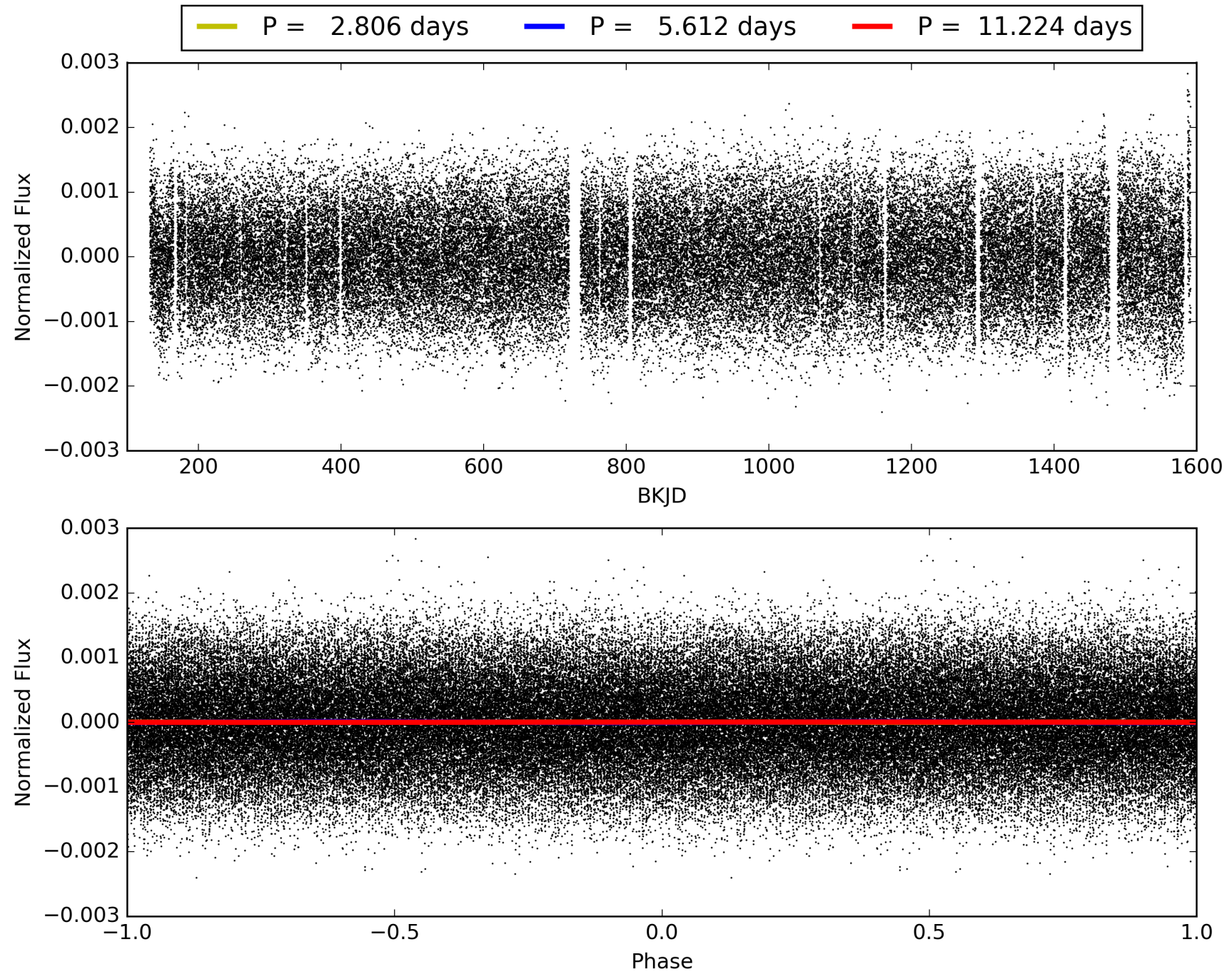
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 005785707-01, PDC Light Curves



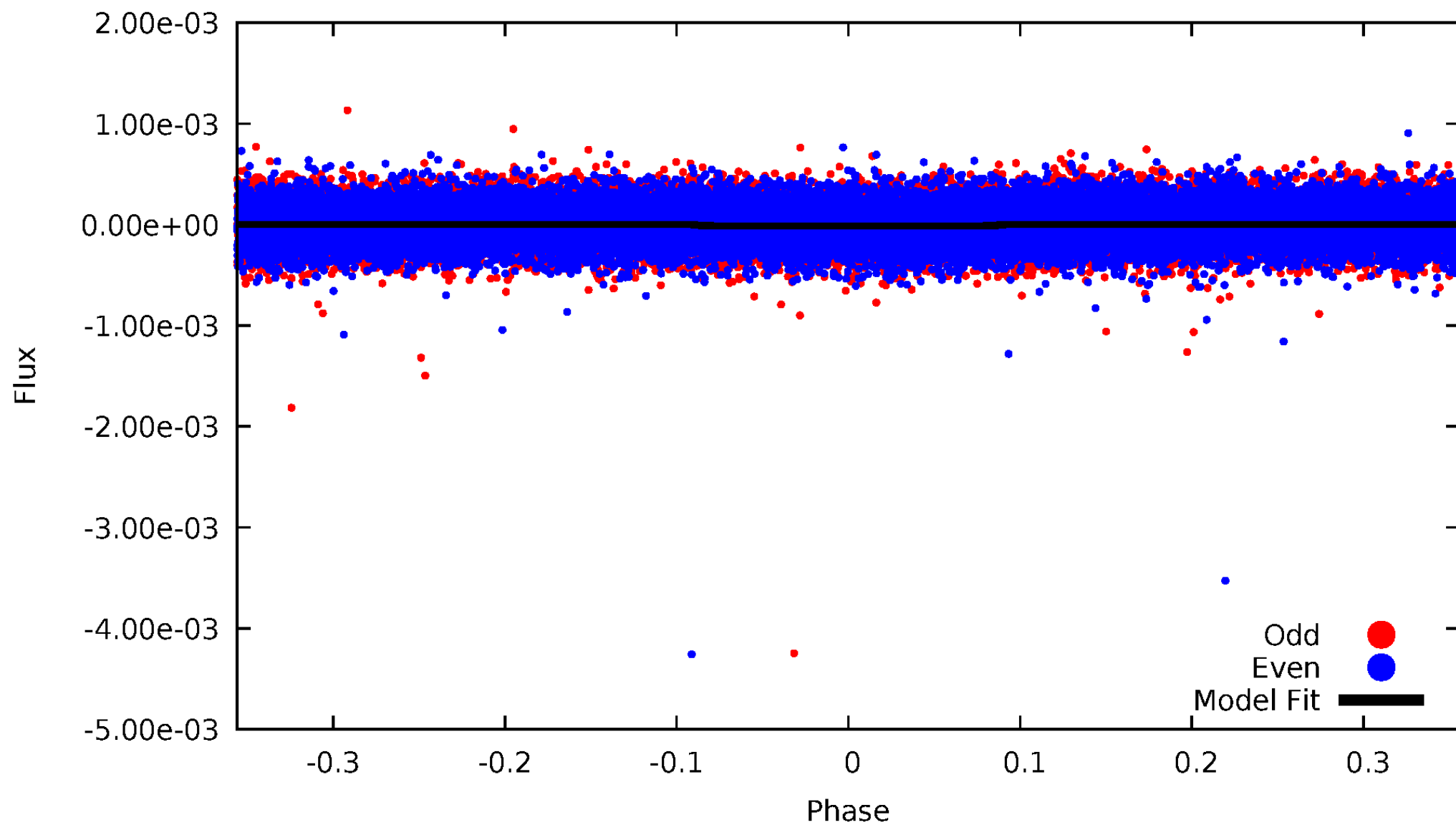


TCE 005785707-01



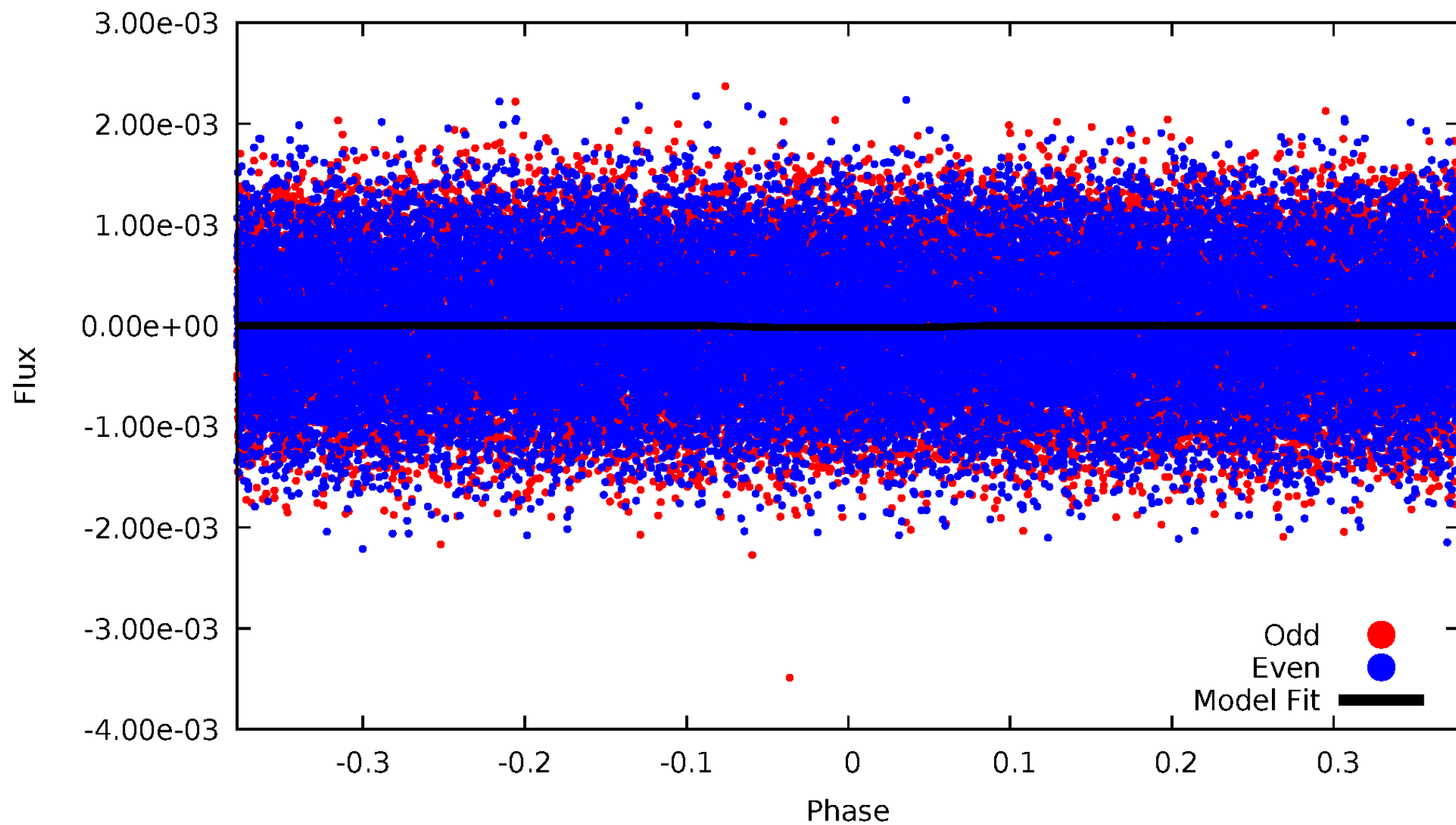
# DV Odd/Even

TCE 005785707-01



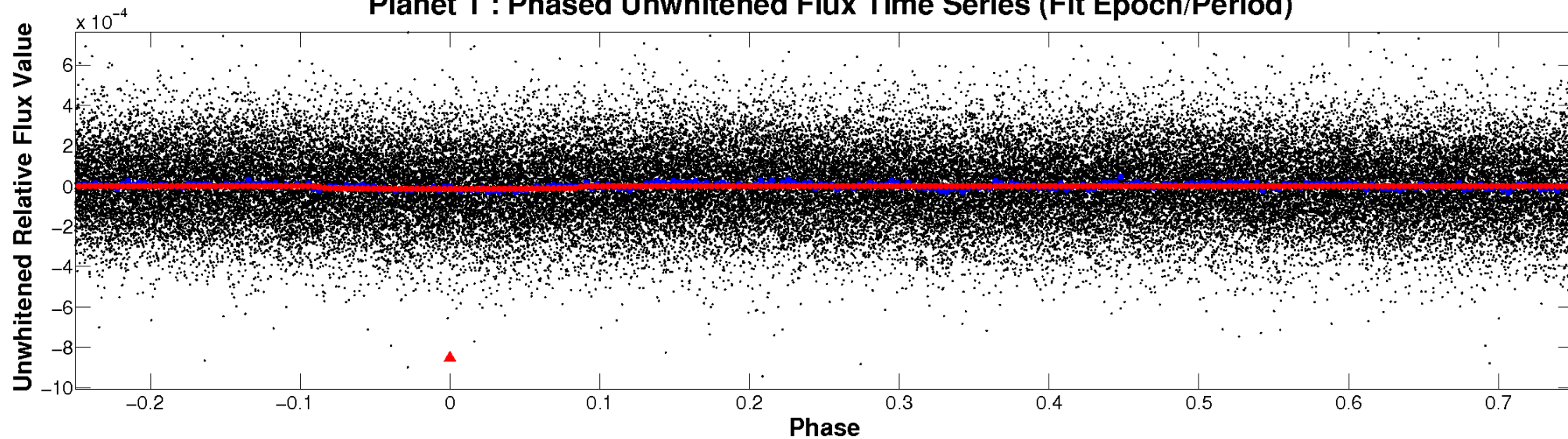
# ALT Odd/Even

TCE 005785707-01

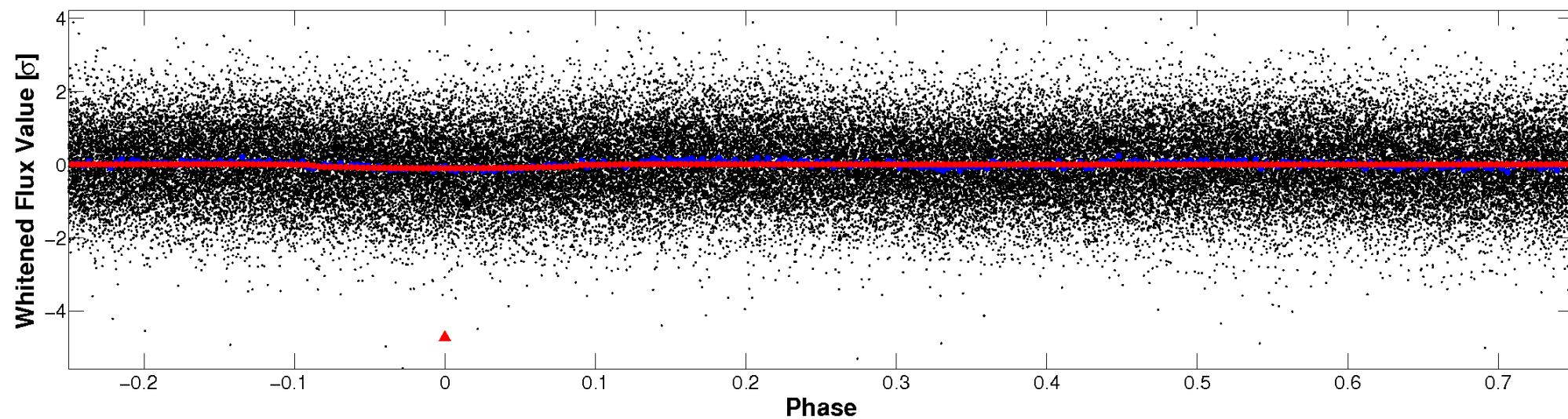


# Non-Whitened Vs. Whitened Light Curve

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



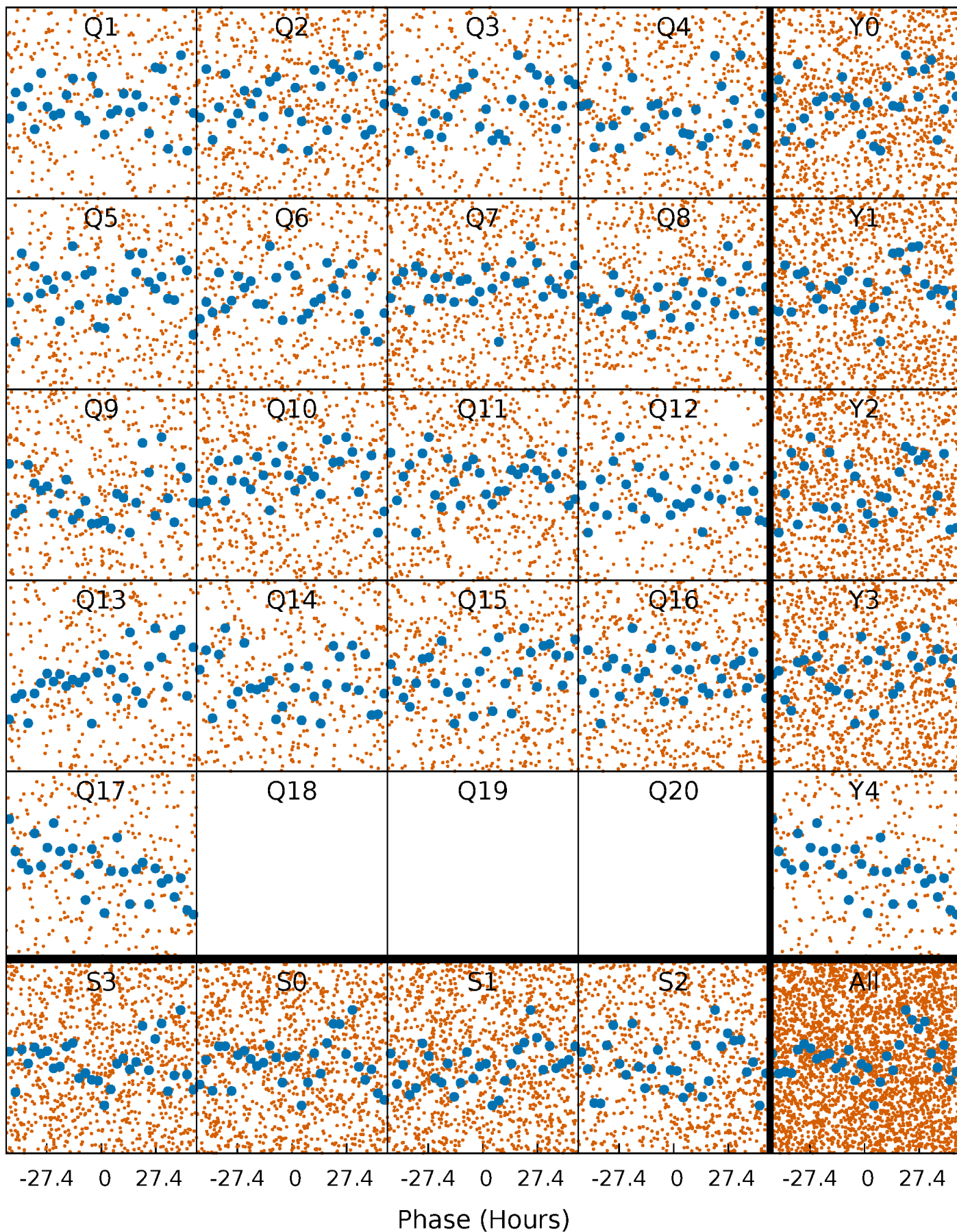
**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**





# PDC Quarter-Phased Transit Curves

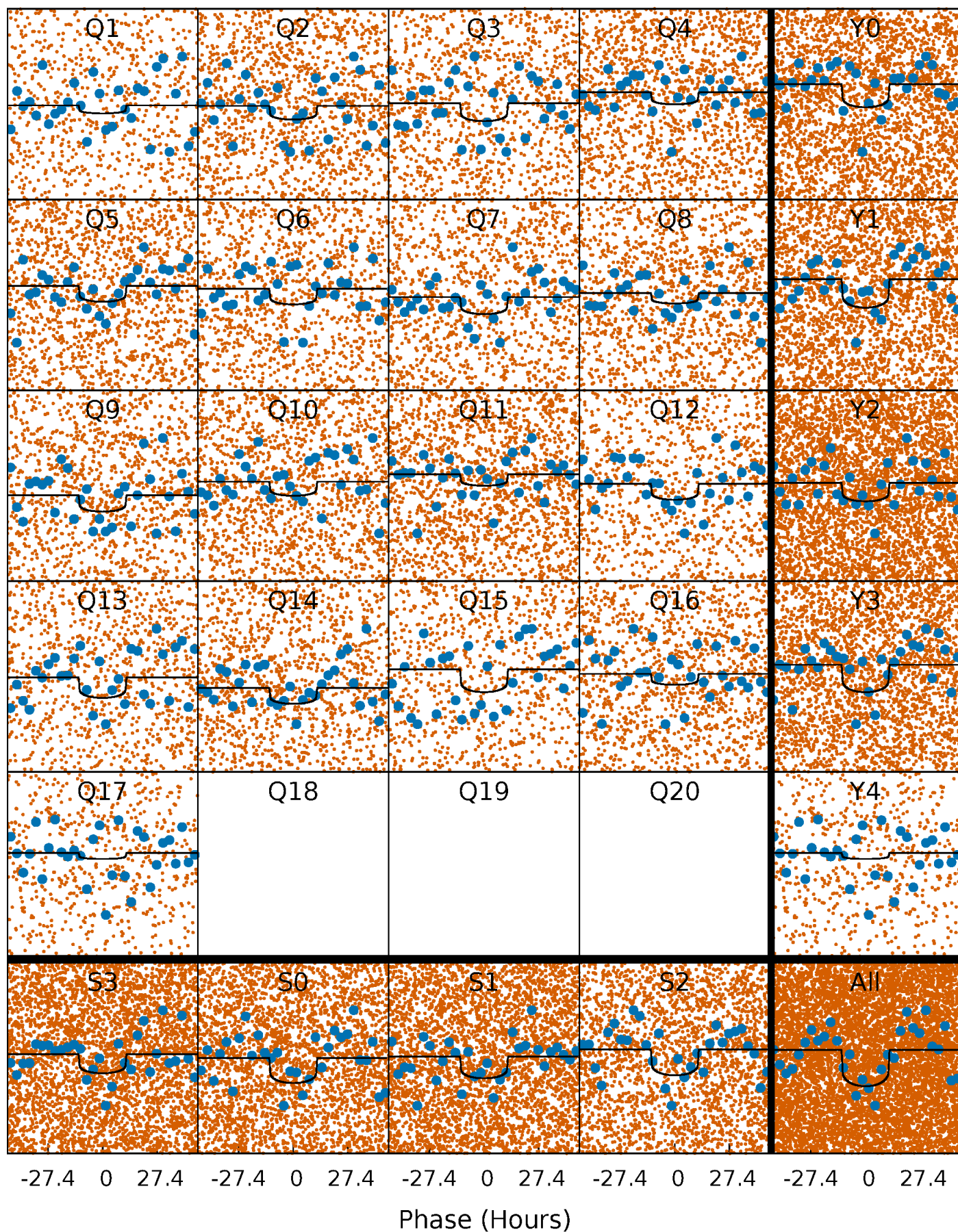
TCE 005785707-01 P= 5.612109 Days  $T_0=136.229607$  (BKJD)





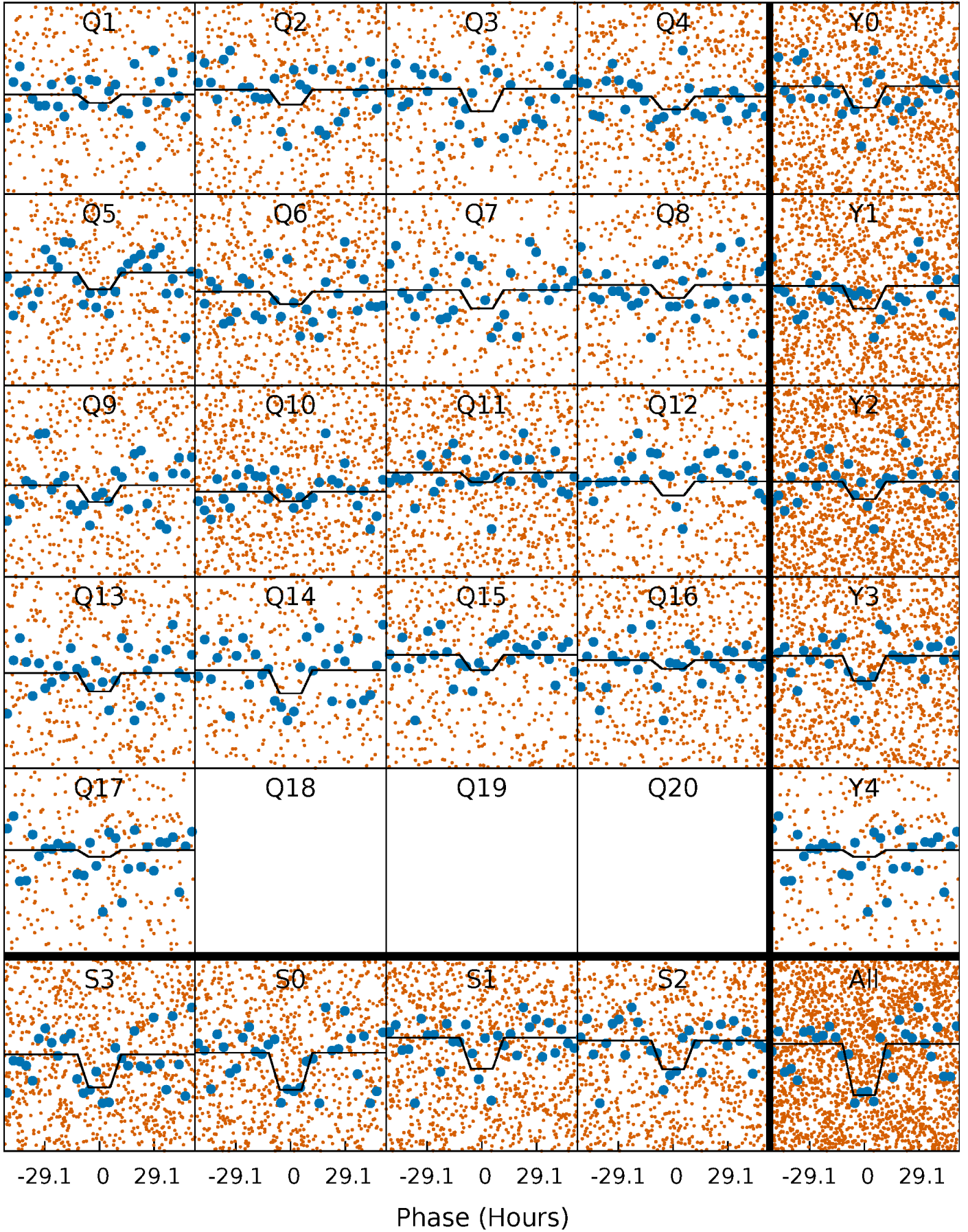
# DV Quarter-Phased Transit Curves

TCE 005785707-01 P= 5.612109 Days  $T_0=136.229607$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

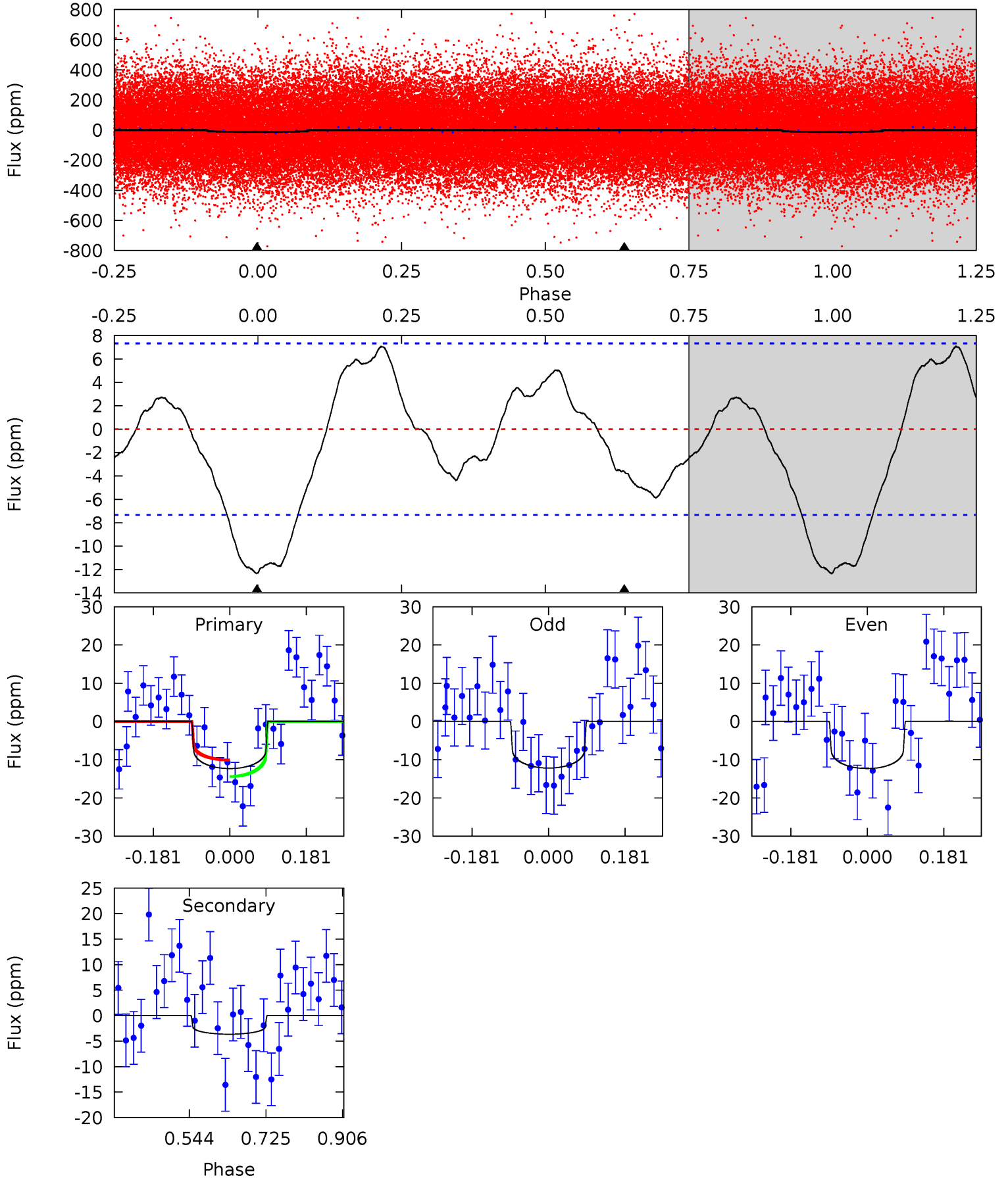
TCE 005785707-01 P= 5.612193 Days  $T_0=136.247022$  (BKJD)



# DV Model-Shift Uniqueness Test

005785707-01, P = 5.612109 Days, E = 130.617498 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
7.47	2.20	0	0	4.44	1.34	2.17	7.47	7.47	2.20	2.20	0.04	0.99	0.36	1.32

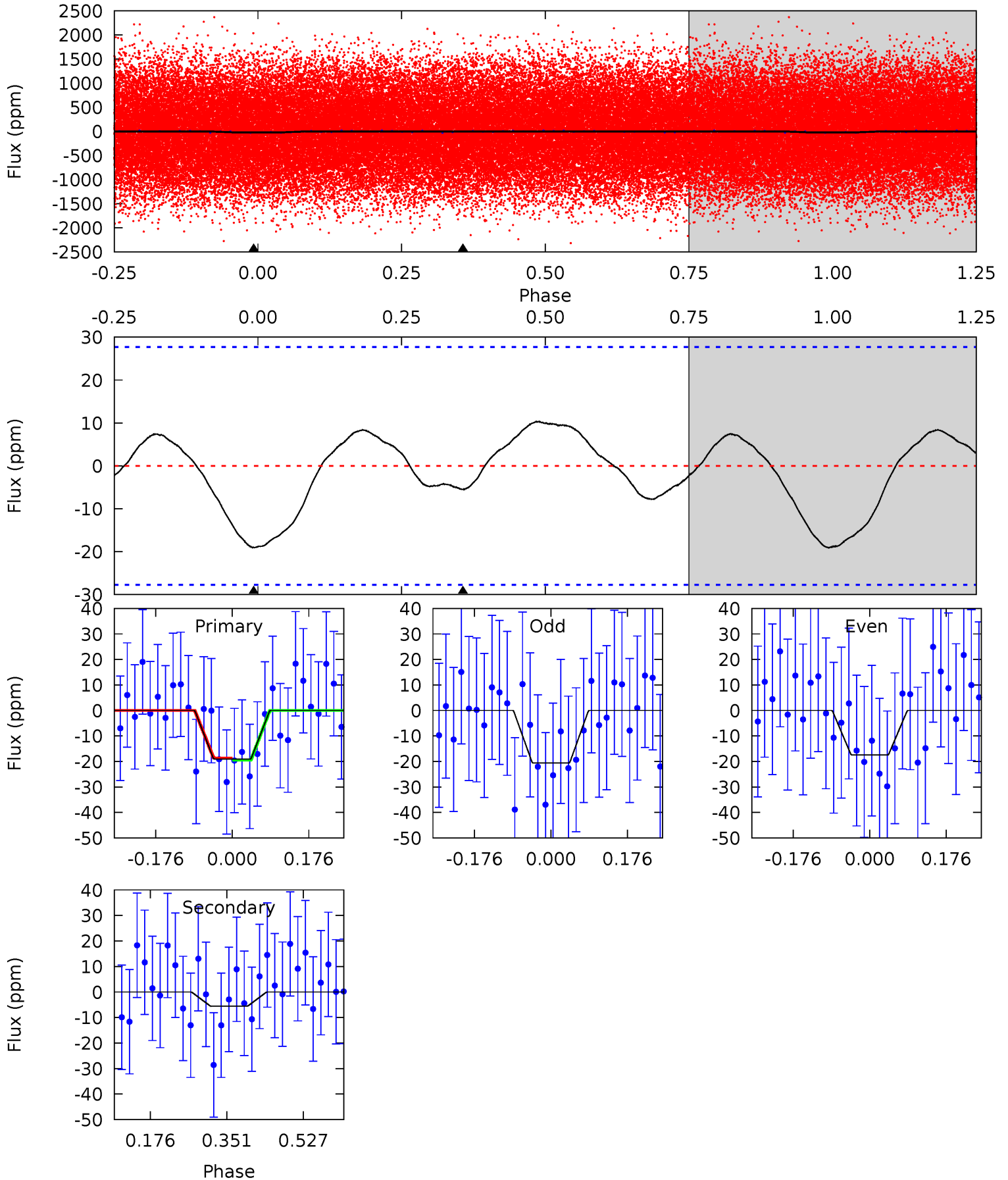




# Alt Model-Shift Uniqueness Test

005785707-01, P = 5.612193 Days, E = 130.634829 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
3.06	0.89	0	0	4.45	1.35	0.87	3.06	3.06	0.89	0.89	0.25	-0.83	0.35	0.07





### Stellar Parameters For KIC 005785707

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$7906^{+138}_{-178}$	$3.476^{+0.336}_{-0.144}$	$0.070^{+0.150}_{-0.350}$	$4.739^{+0.618}_{-1.853}$	$2.451^{+0.129}_{-0.550}$	$0.032^{+0.081}_{-0.014}$
	+2%/-2%	+10%/-4%	+214%/-500%	+13%/-39%	+5%/-22%	+250%/-42%
Source	SPE4	SPE4	SPE4	DSEP		

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

### Secondary Eclipse Parameters for KIC 005785707-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-4 \pm 2$	$1.93^{+0.55}_{-0.56}$	$3670^{+174}_{-379}$	$5271^{+998}_{-912}$	$3.482^{+4.014}_{-2.014}$
Alt.	$-6 \pm 6$	$2.27^{+0.60}_{-0.57}$	$3664^{+208}_{-336}$	$5337^{+1461}_{-9599}$	$3.786^{+6.250}_{-4.501}$

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

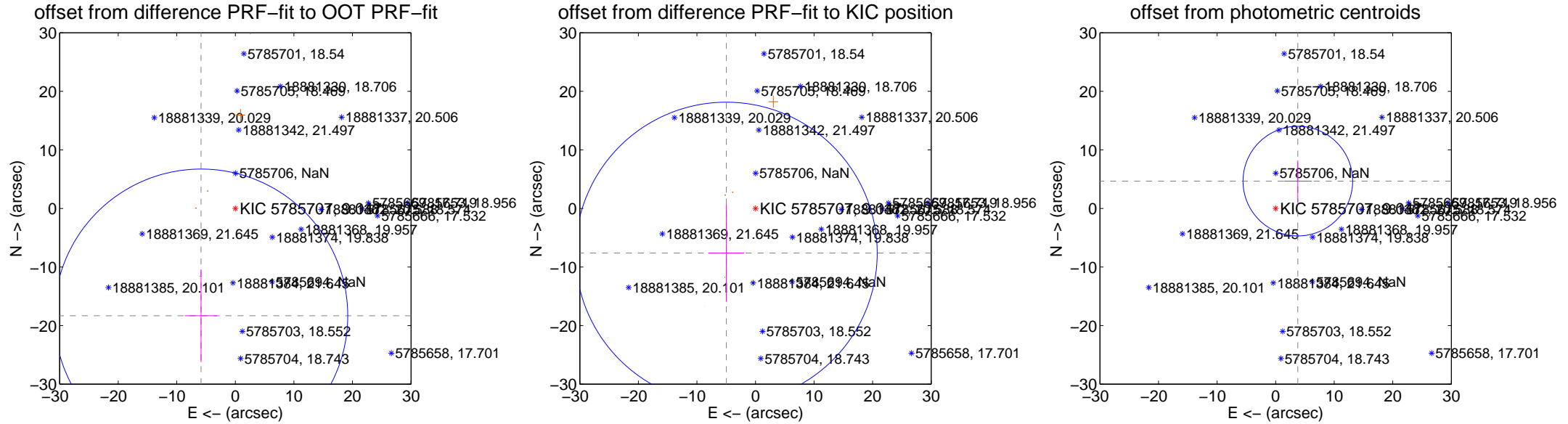
## DV Centroid Data

Supplemental centroid analysis for 005785707-01. **Kepler magnitude: 9.05.** Transit SNR 9.04

There are 0 quarters with good PRF difference image offsets

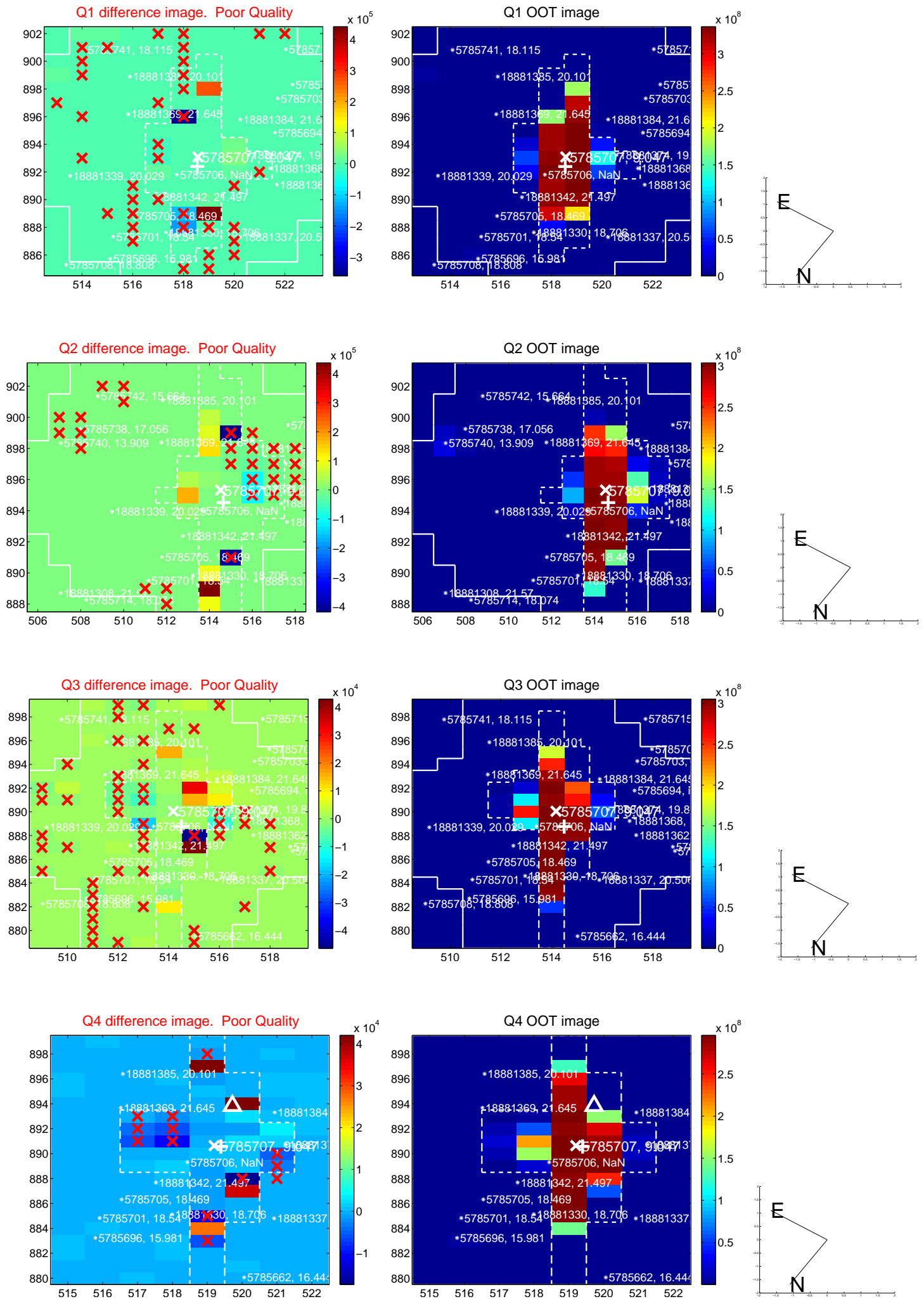
The OOT PRF centroid is offset from the target star catalog position by about 3.17 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$19.234 \pm 8.349$	2.30	$5.851 \pm 2.771$	$-18.322 \pm 7.910$
PRF-fit source offset from KIC position	$9.105 \pm 8.587$	1.06	$4.979 \pm 3.096$	$-7.623 \pm 8.316$
photometric centroid source offset	$6.01 \pm 3.12$	1.93	$-3.79 \pm 2.36$	$4.66 \pm 3.53$

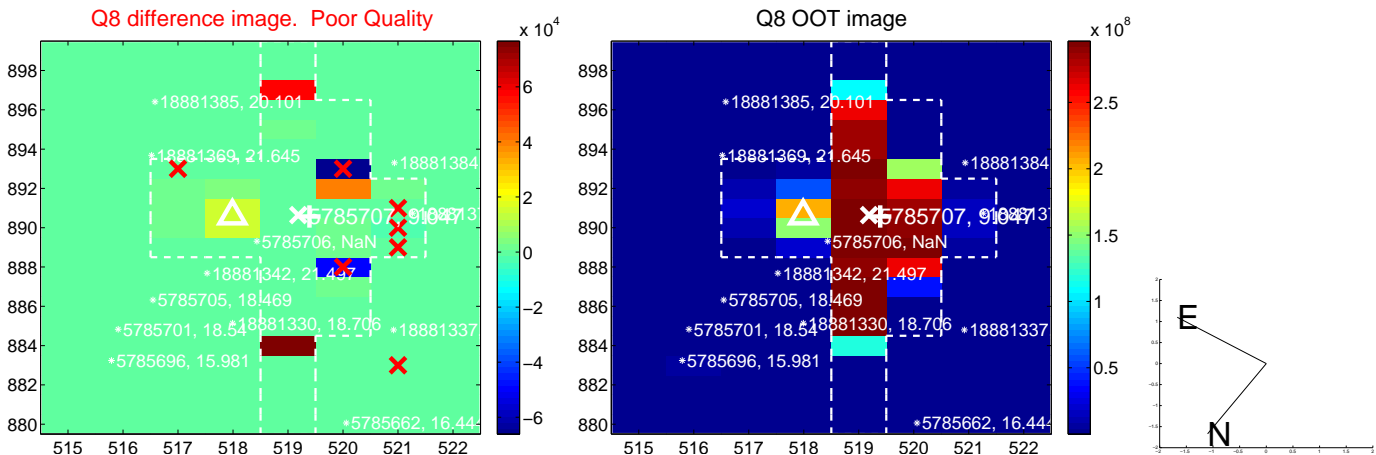
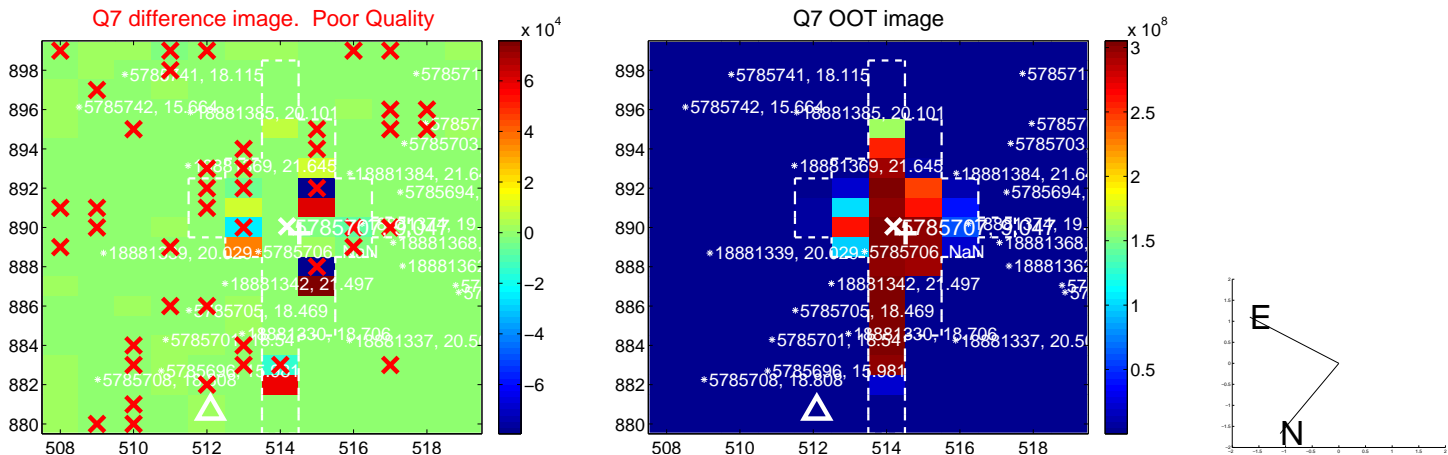
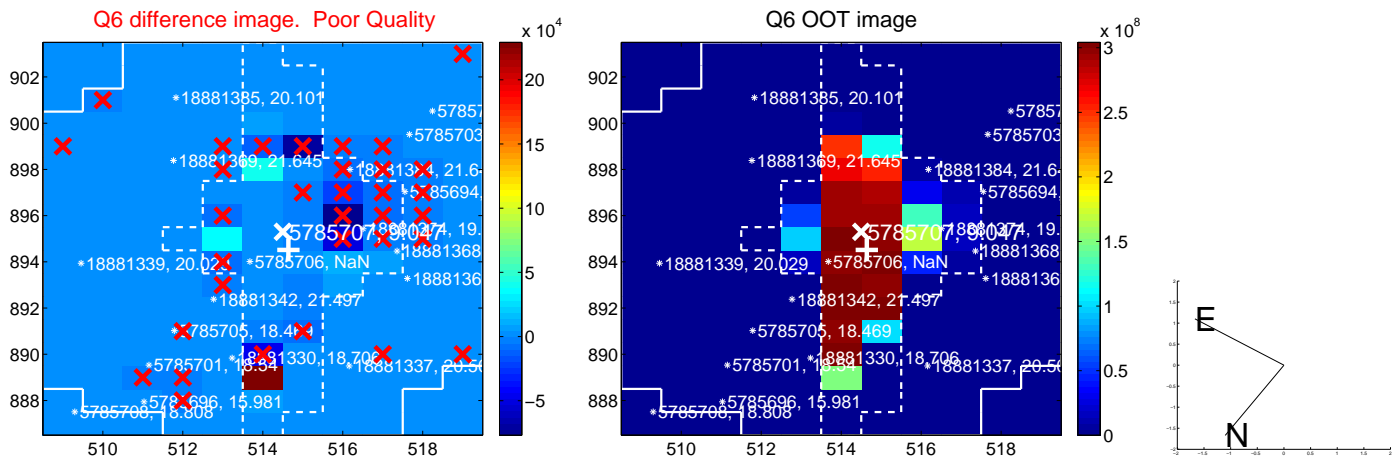
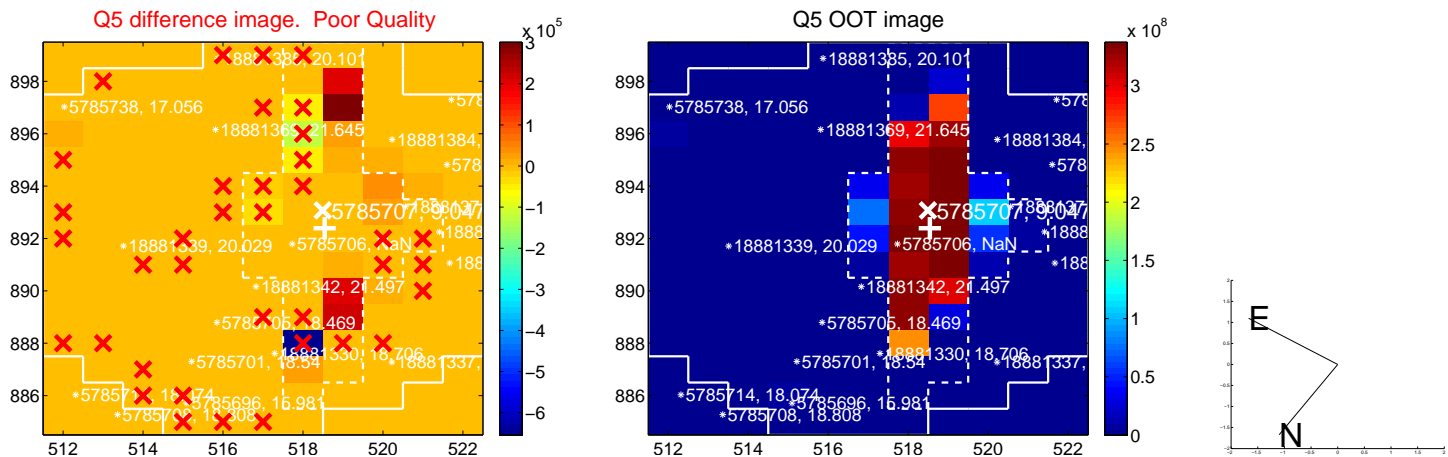


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

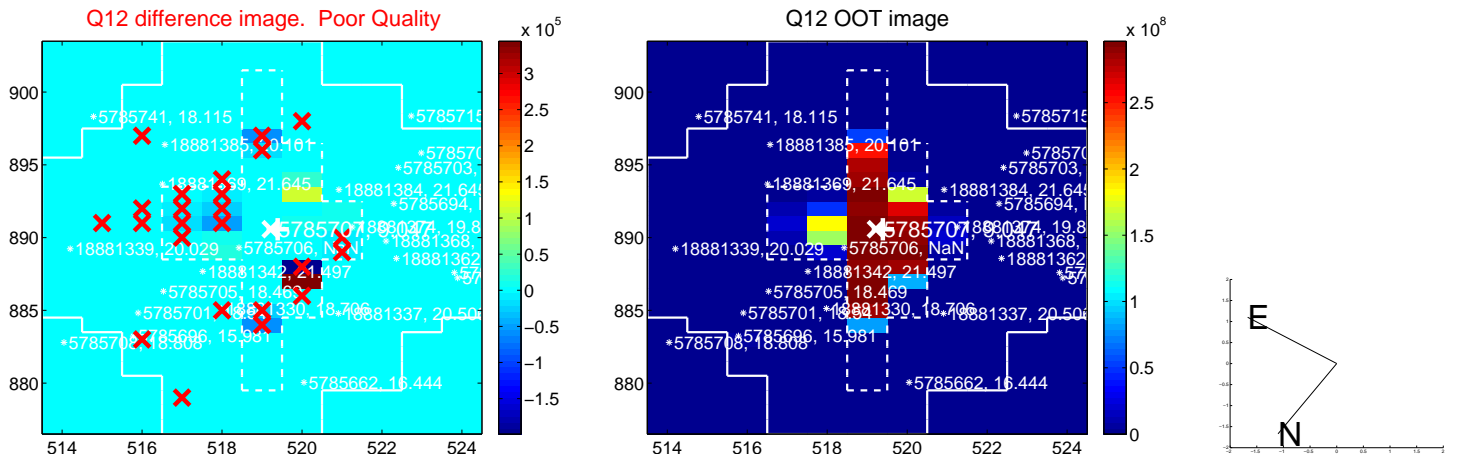
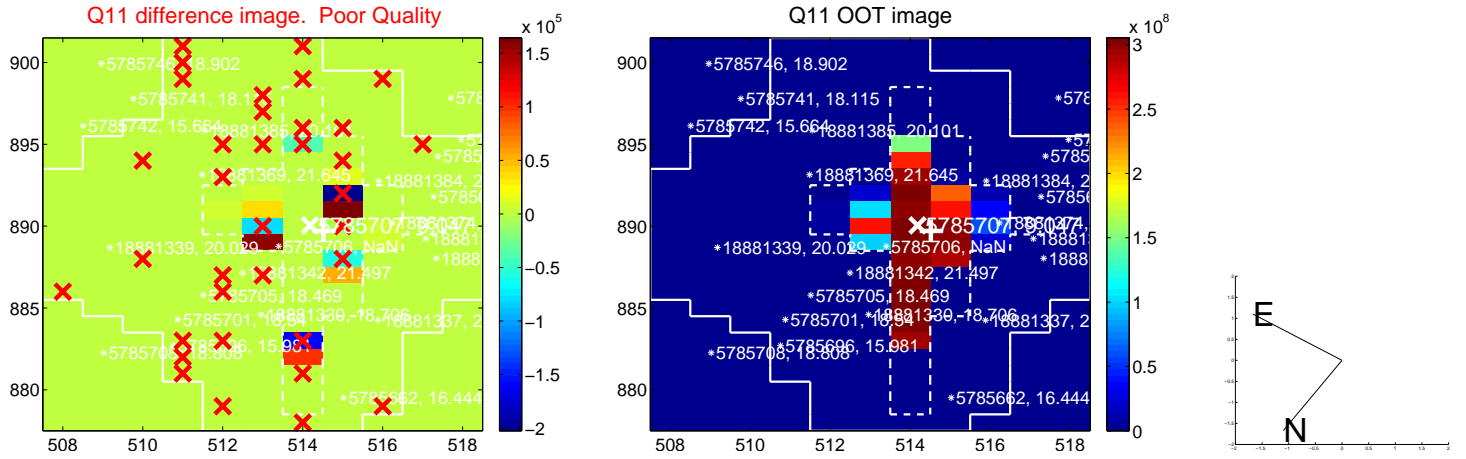
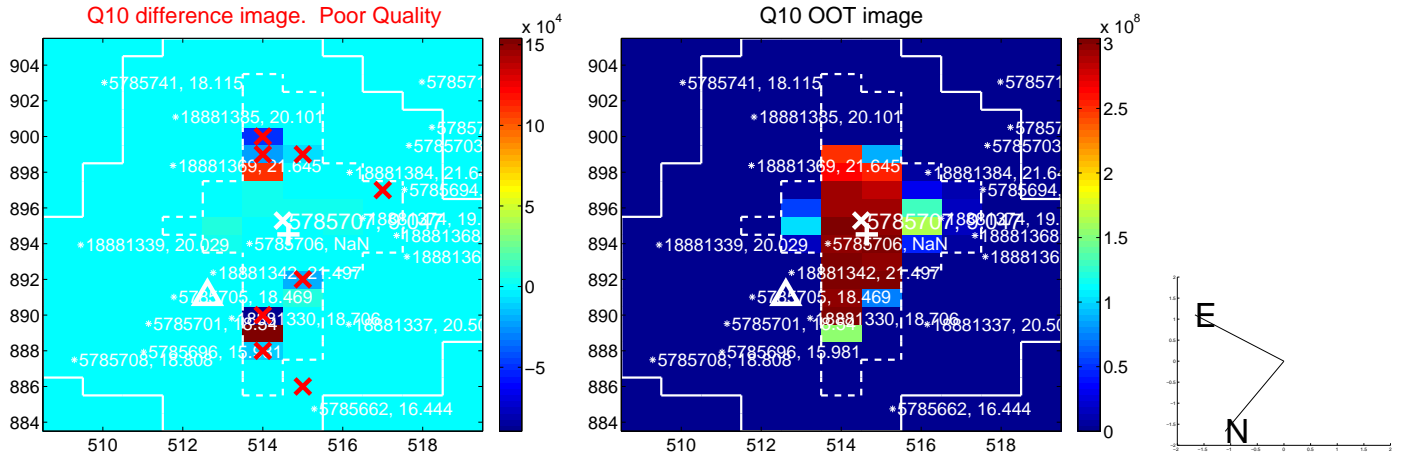
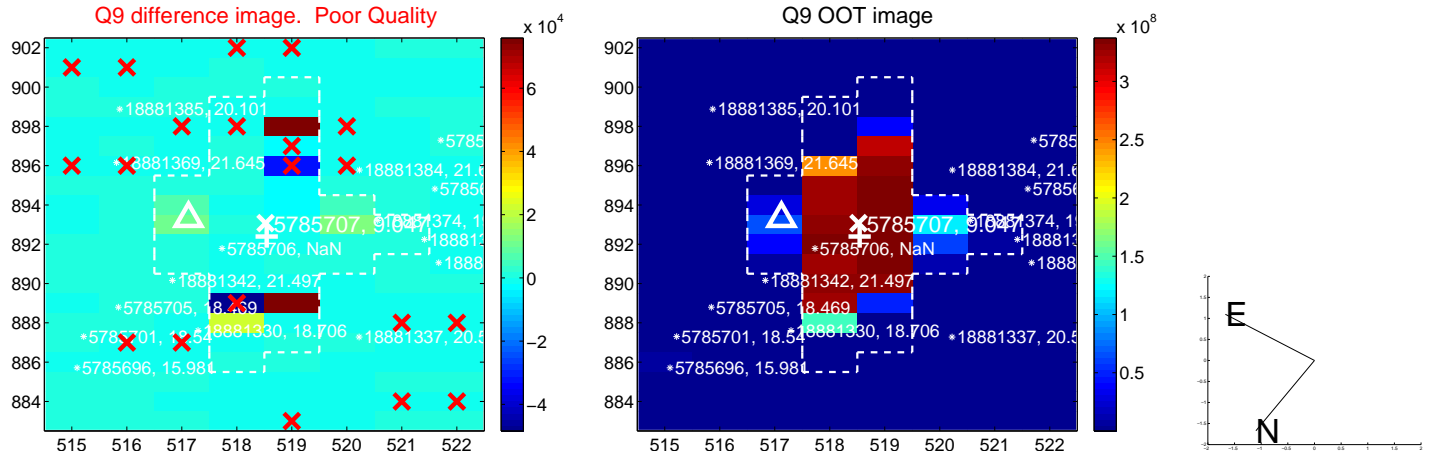


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

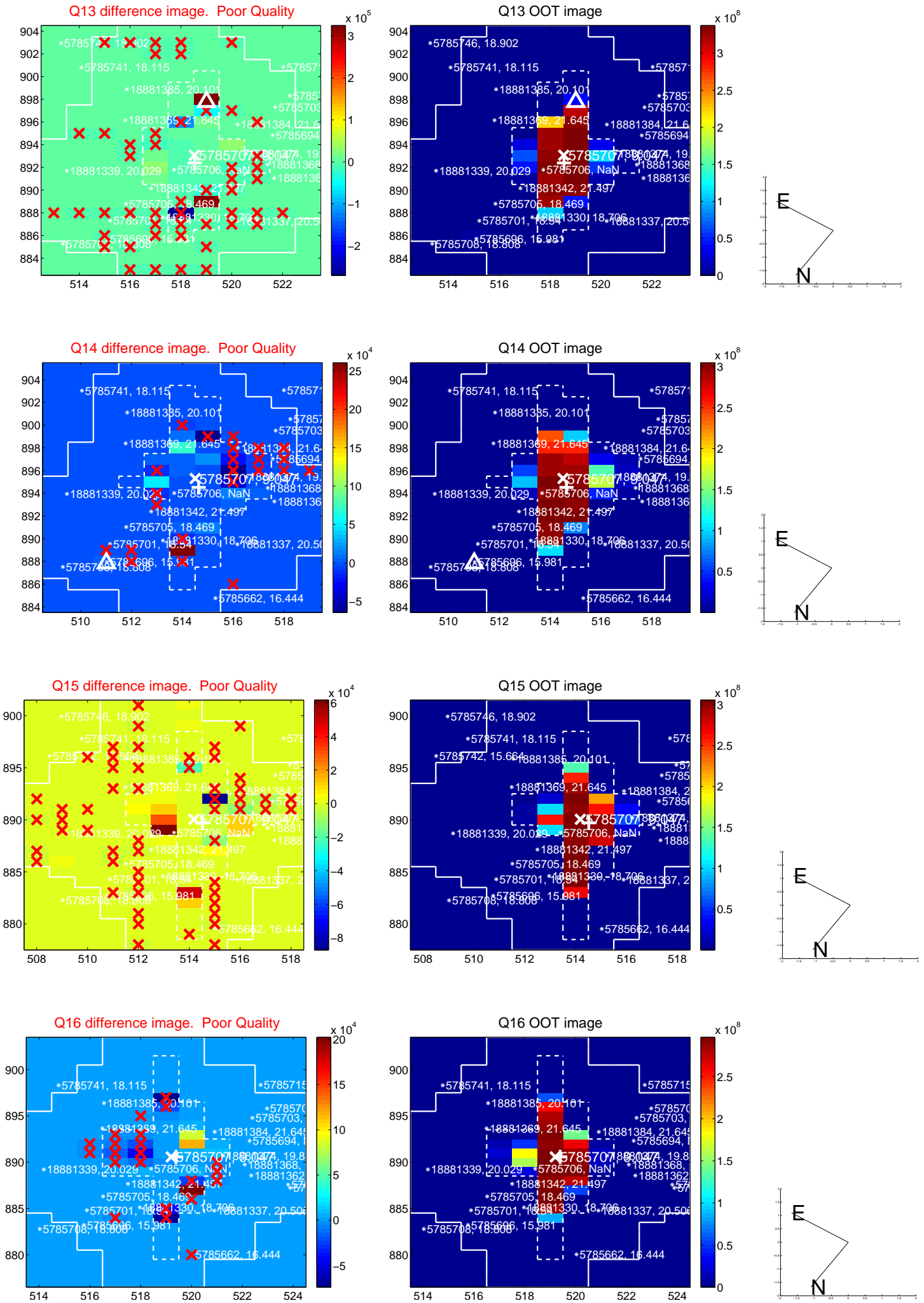




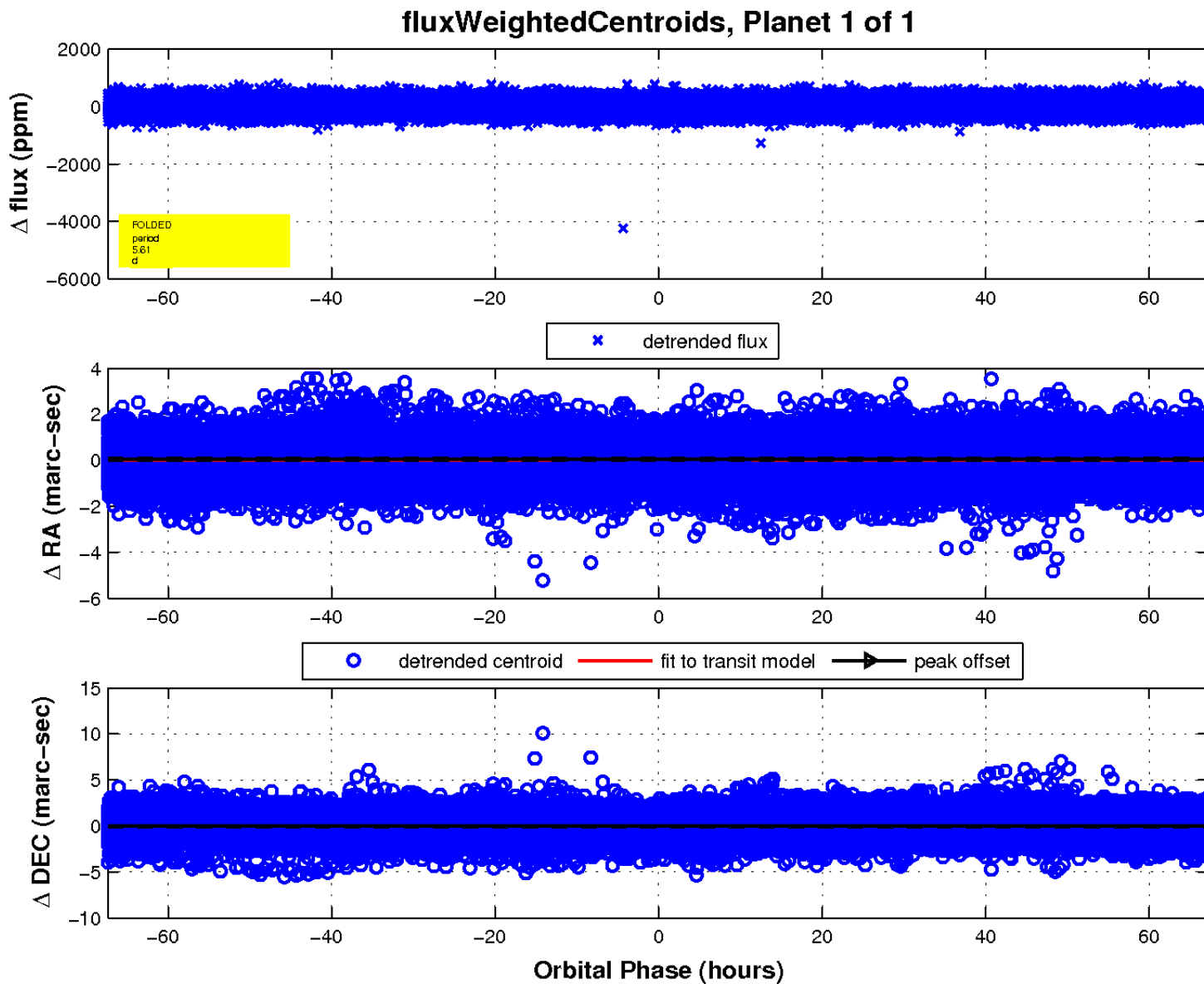
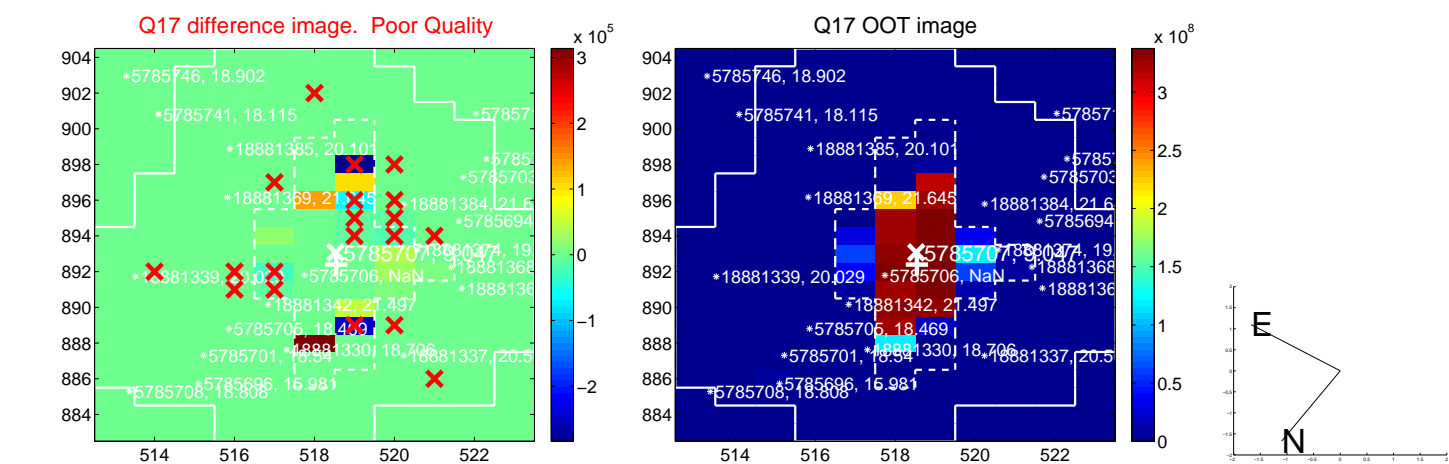
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



UKIRT Image

