

# KIC 010492985

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
010492985-01	OBS	No	4.228713	134.585354	12.1	30.415	8.0	3.6	3.26	6212	1.14	4093.01

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010492985-01	OBS	FP	0.00	1	0	1	0	LPP_DV—MOD_NONUNIQ_DV—HALO_GHOST

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

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

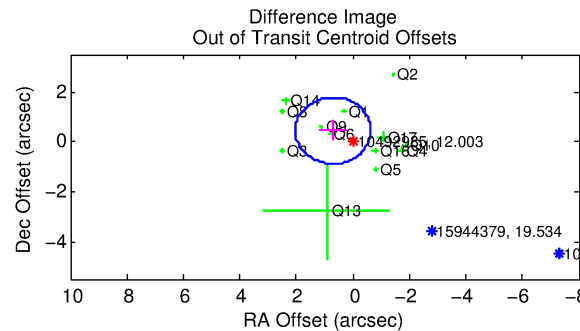
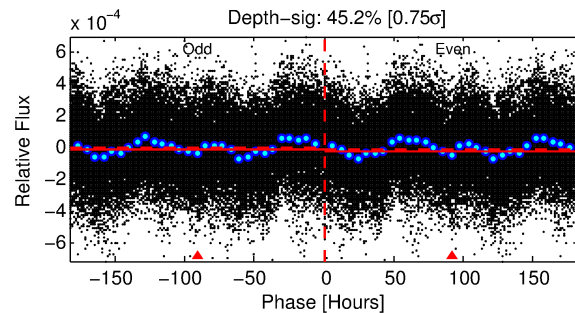
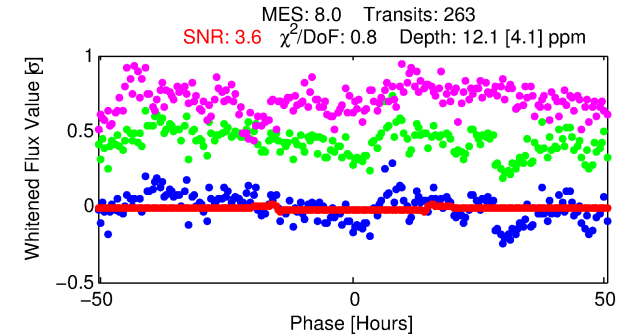
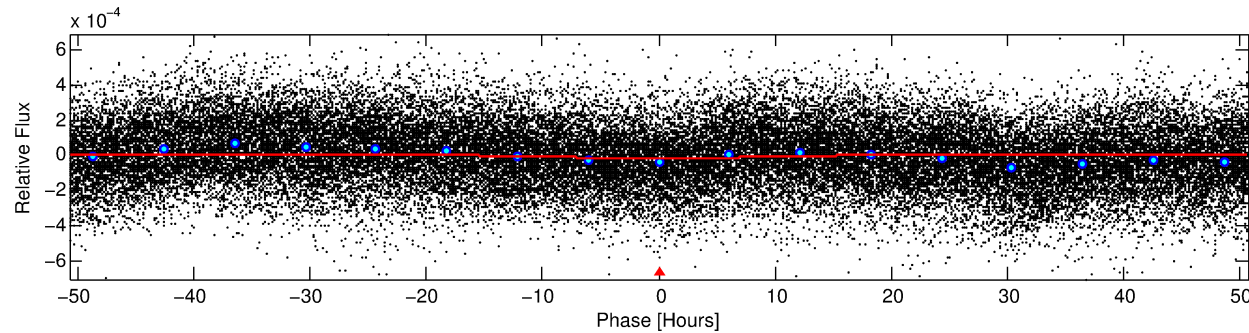
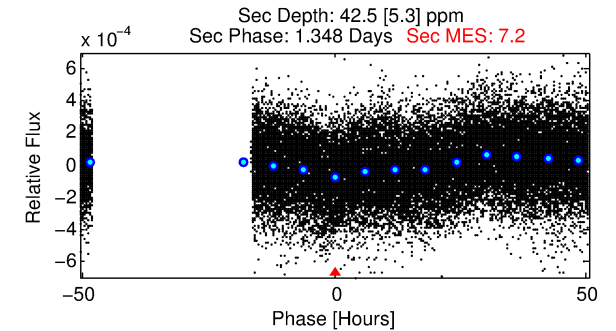
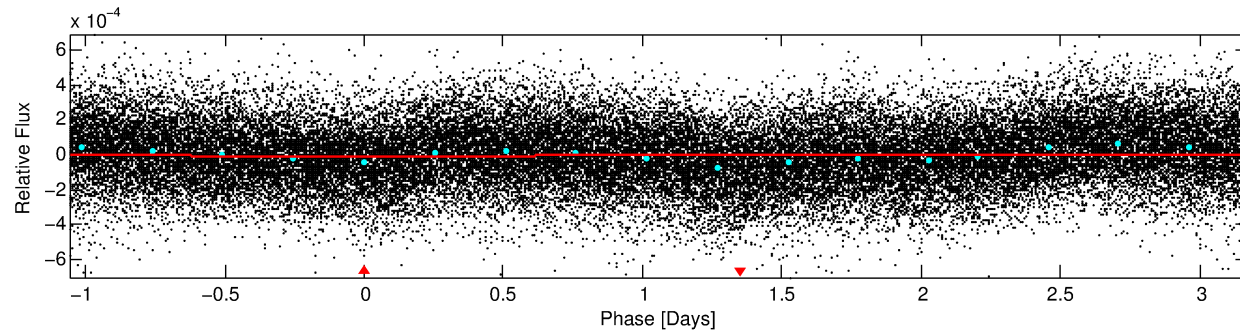
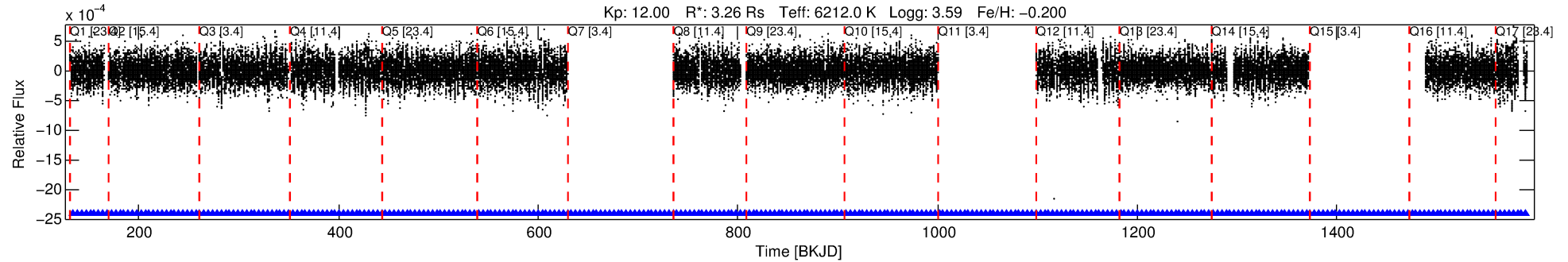
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 010492985-01

No Significant Match Found

# DV One-Page Summary

KIC: 10492985 Candidate: 1 of 1 Period: 4.229 d



## DV Fit Results:

Period = 4.22871 [0.00017] d  
Epoch = 134.5854 [0.0248] BKJD  
Rp/R\* = 0.0032 [0.0056]  
a/R\* = 1.23 [3.77]  
b = 0.23 [36.93]  
Seff = 4093.01 [2486.51]  
Teq = 2040 [310] K  
Rp = 1.14 [2.05] Re  
a = 0.0589 [0.0223] AU  
Ag = 62.23 [220.97] [0.28σ]  
Teffp = 8857 [7756] K [0.88σ]

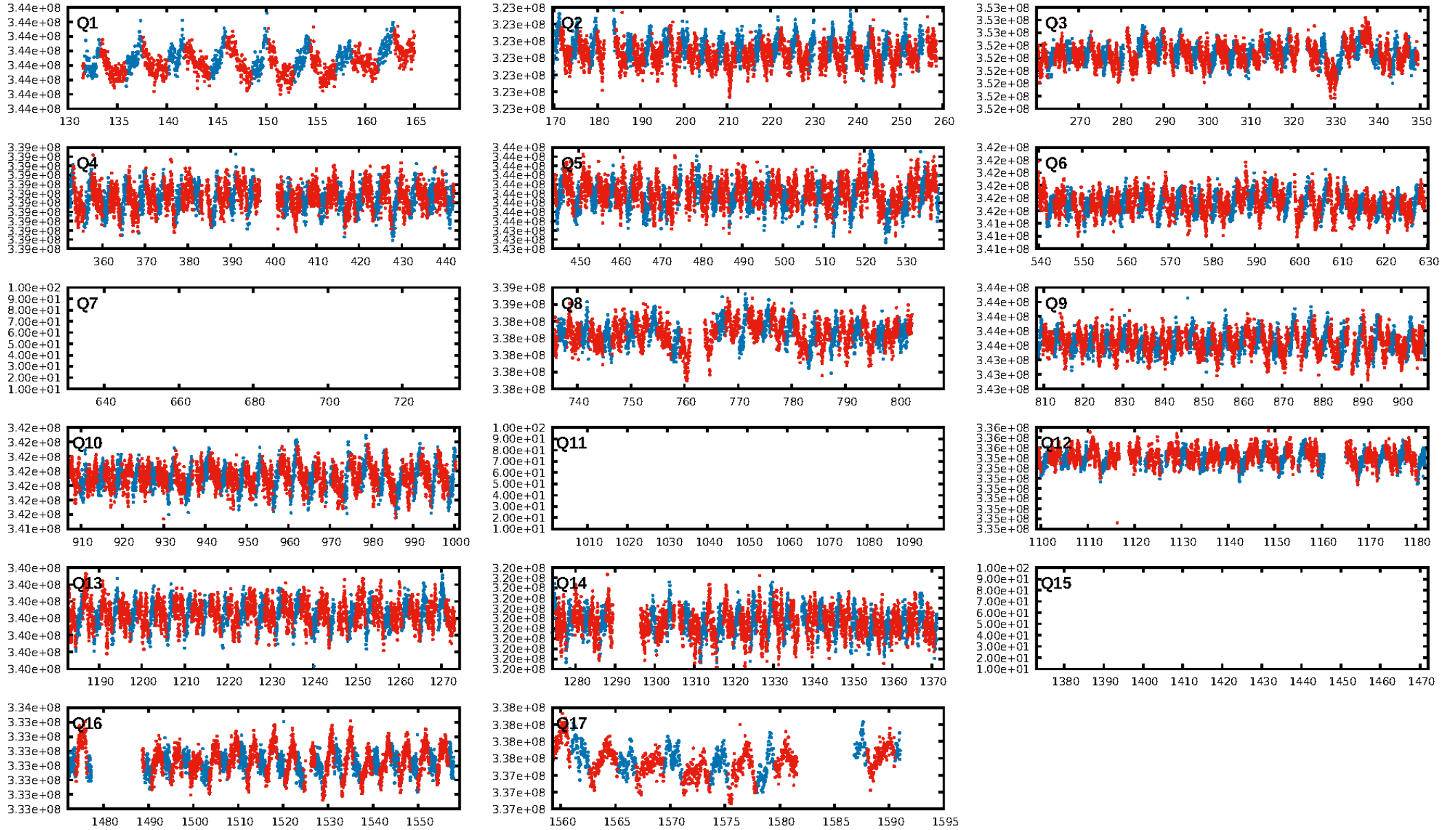
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [248/248]  
**GhostDiagnostic-chr: 0.03871**  
Centroid-sig: 55.2%  
Centroid-so: 0.520 arcsec [0.39σ]  
OotOffset-rm: 0.834 arcsec [1.88σ]  
KicOffset-rm: 0.670 arcsec [1.48σ]  
OotOffset-st: 4/1/3/5 [13]  
KicOffset-st: 4/1/3/5 [13]  
DiffImageQuality-fgm: 0.46 [6/13]  
DiffImageOverlap-fno: 1.00 [14/14]

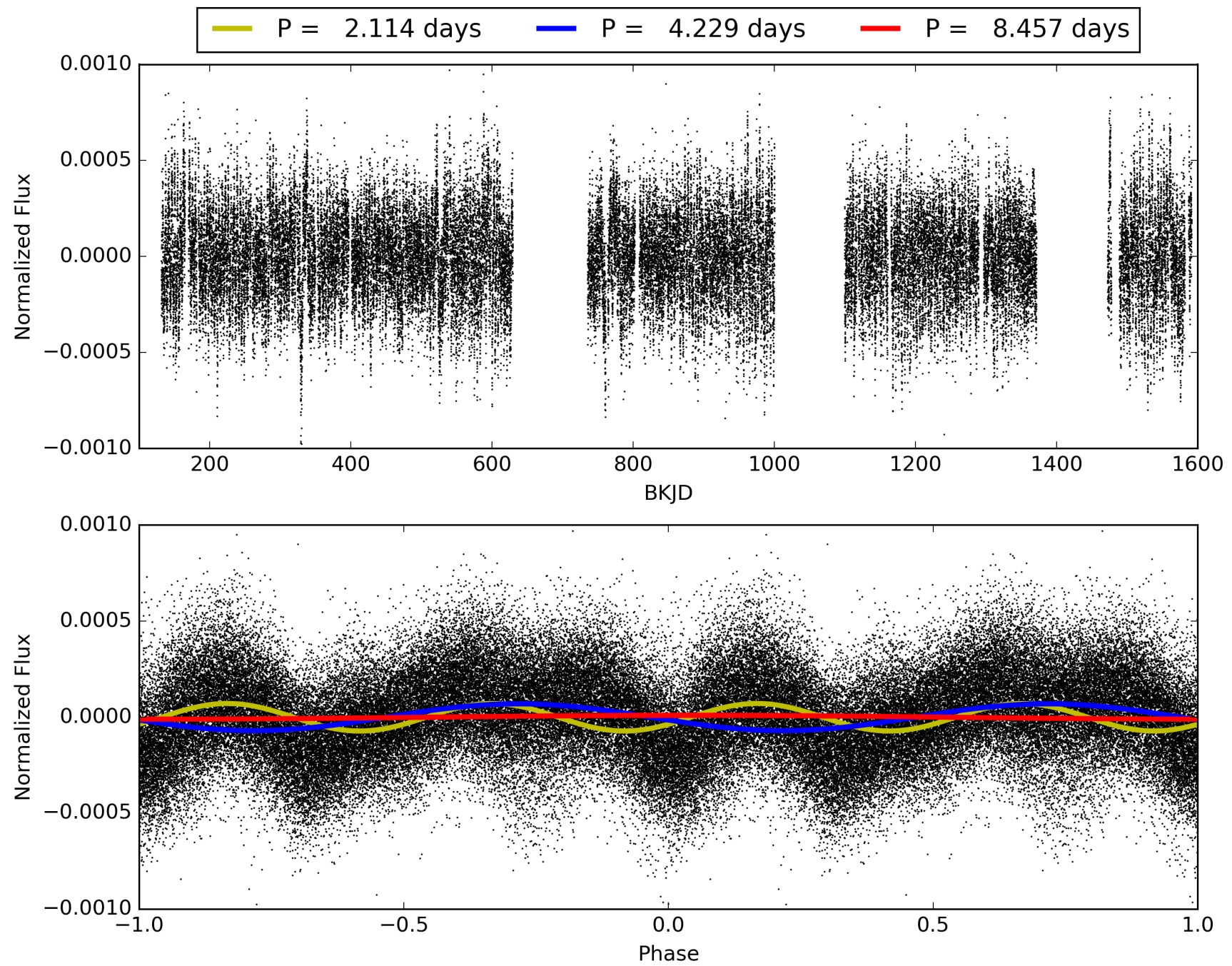
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 08:32:14 Z

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

# TCE 010492985-01, PDC Light Curves

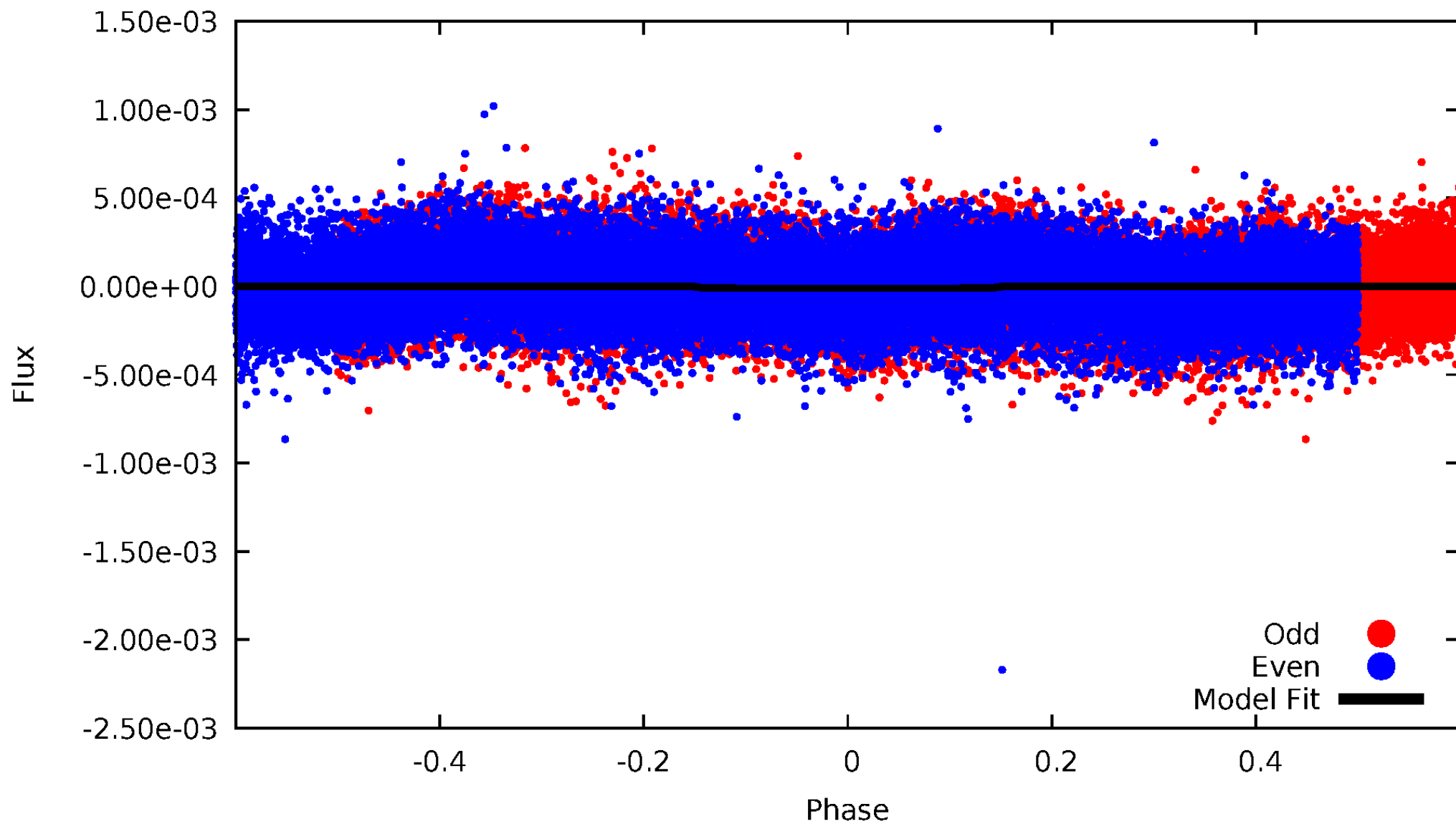


TCE 010492985-01



# DV Odd/Even

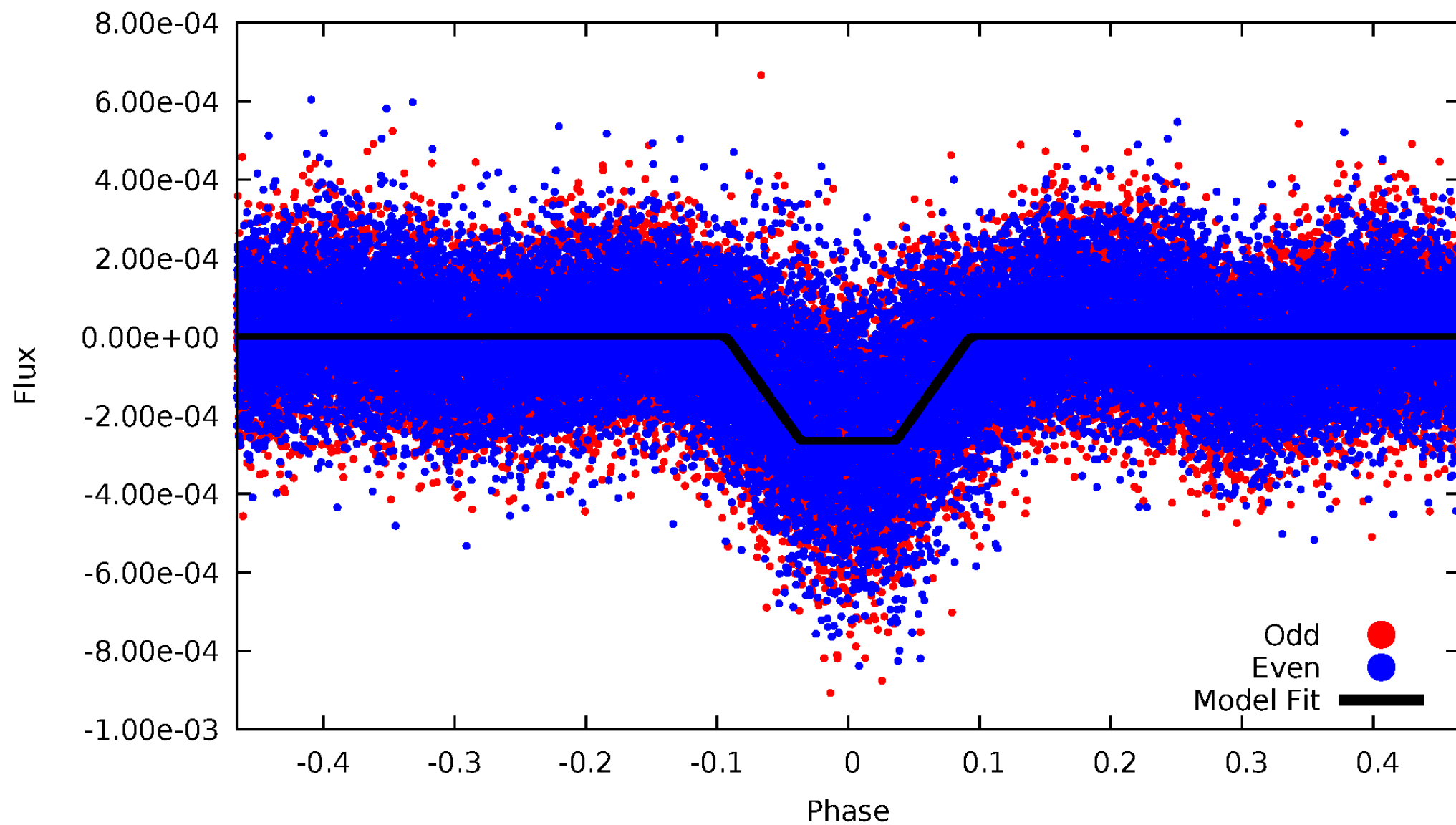
TCE 010492985-01





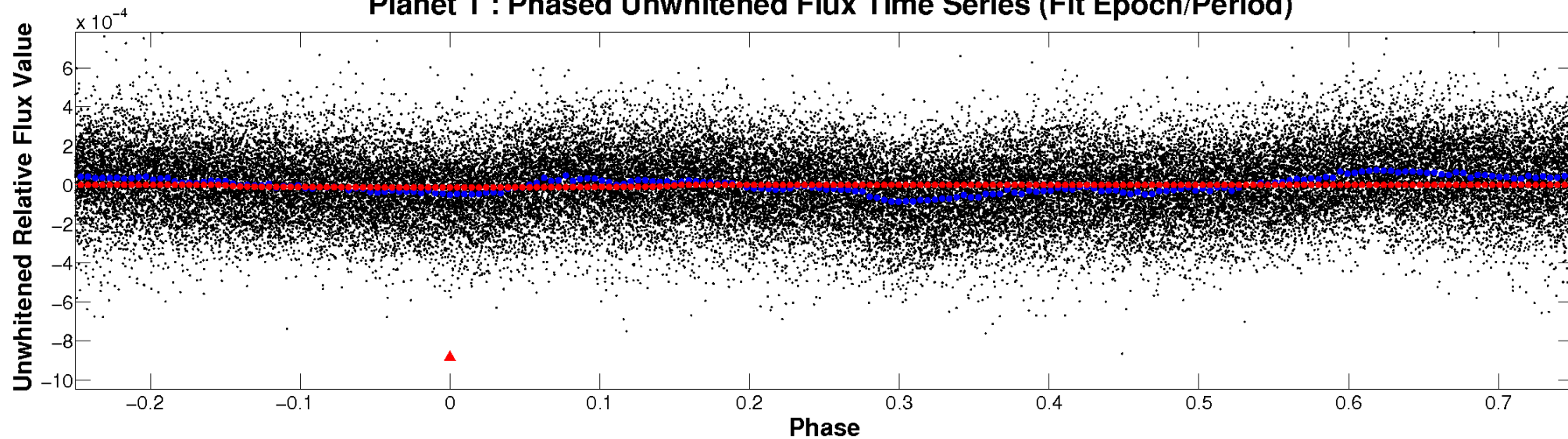
# ALT Odd/Even

TCE 010492985-01

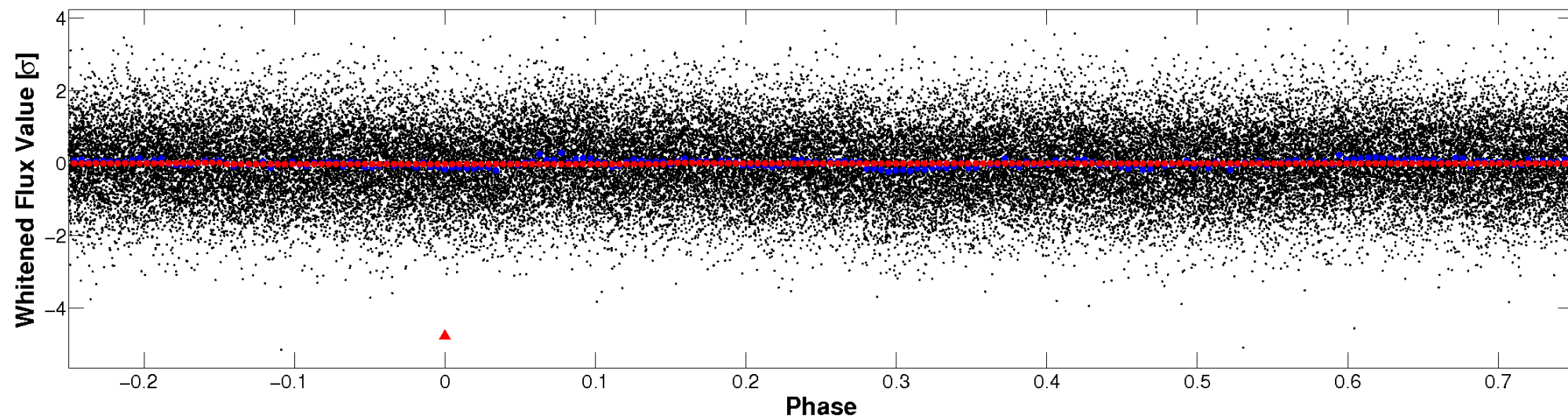


# Non-Whitened Vs. Whitened Light Curve

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

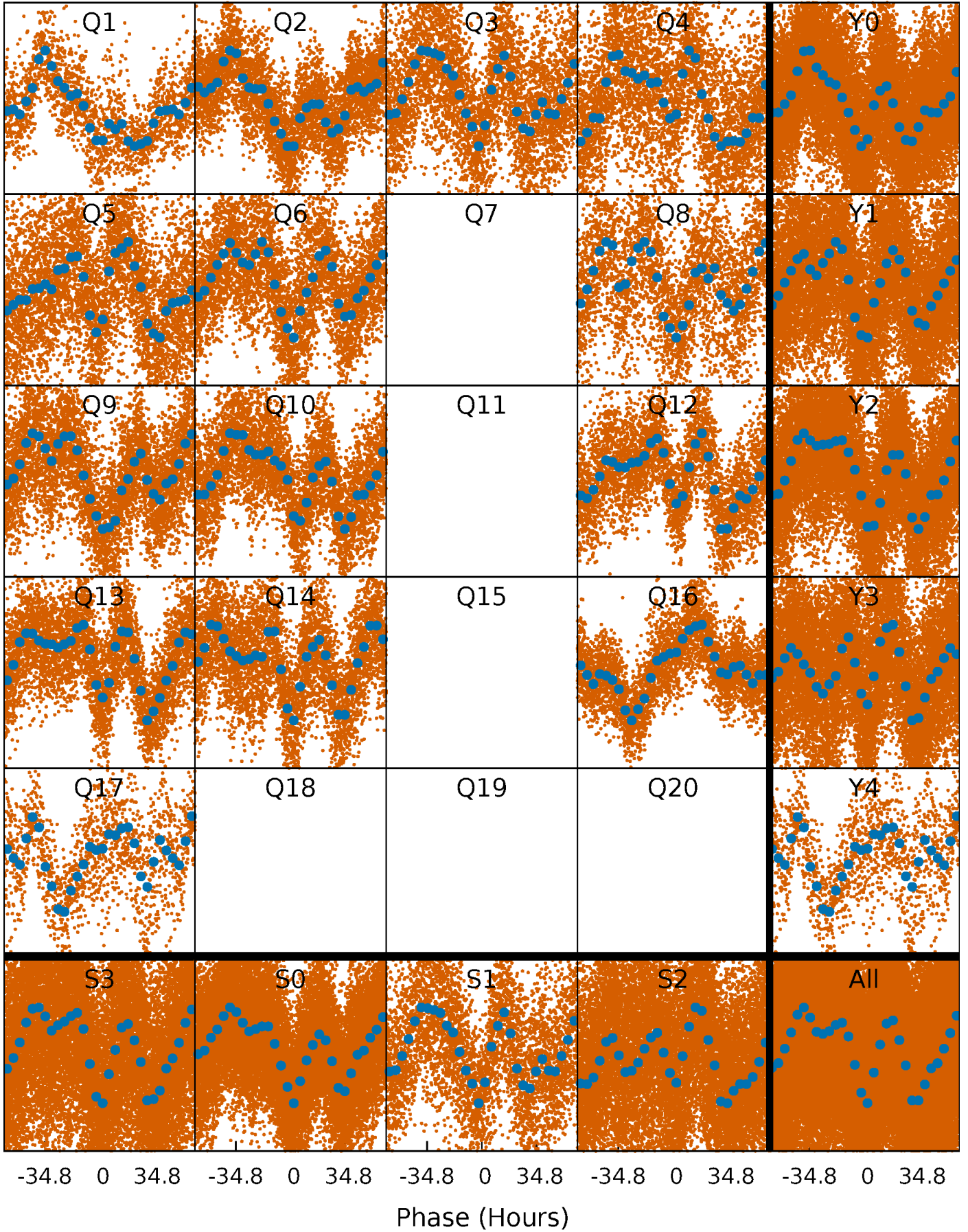


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

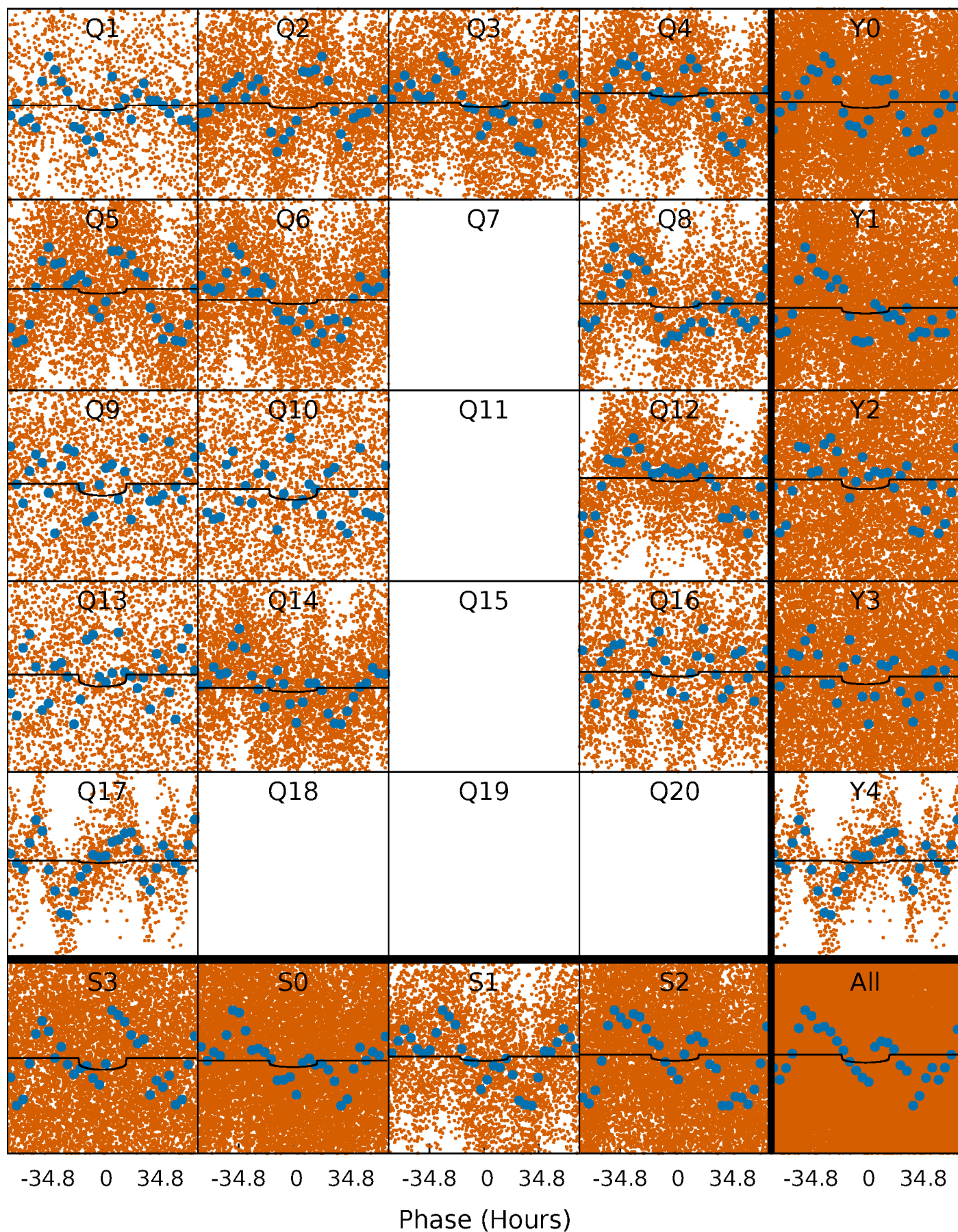
TCE 010492985-01 P= 4.228713 Days  $T_0=134.585354$  (BKJD)





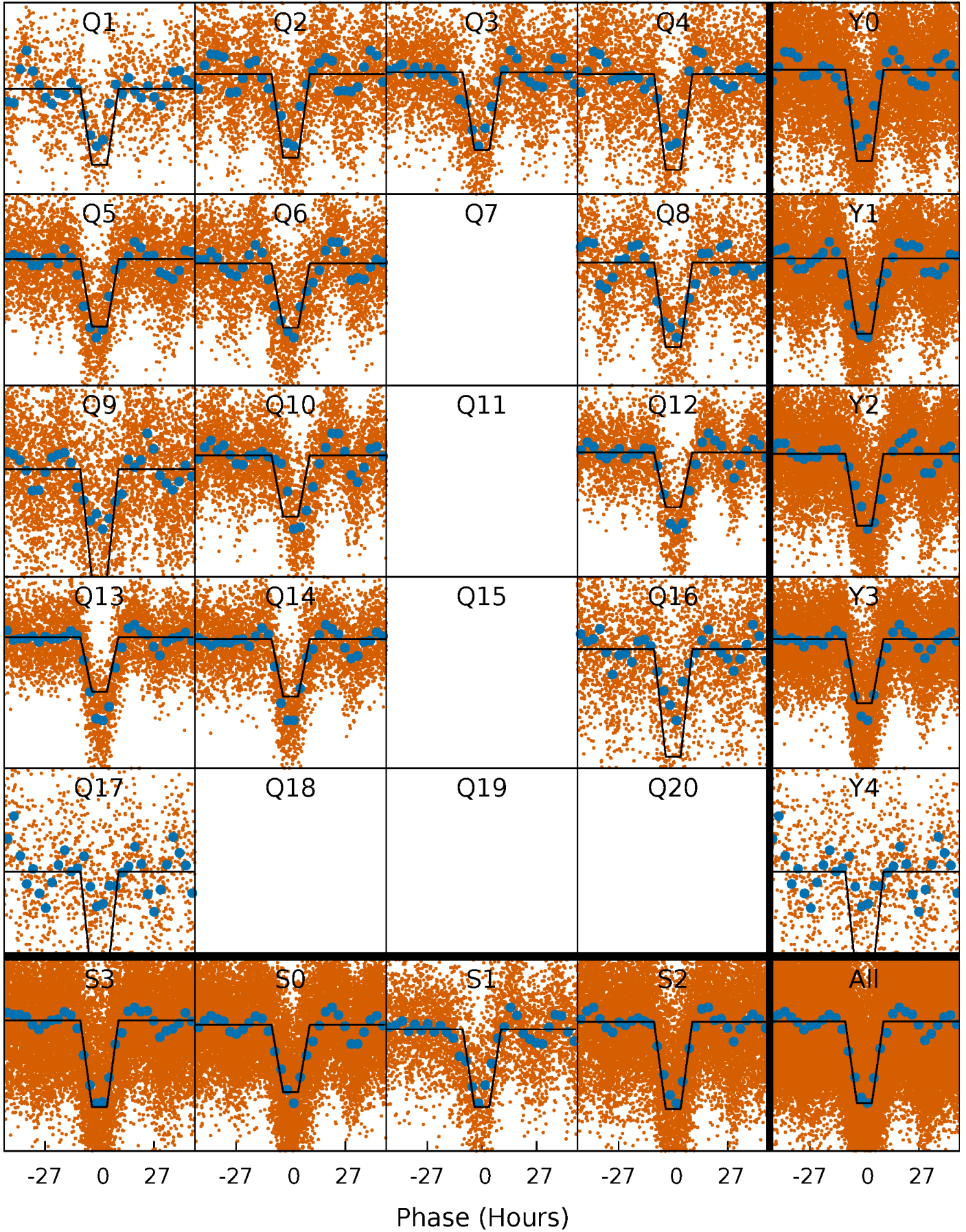
# DV Quarter-Phased Transit Curves

TCE 010492985-01   P= 4.228713 Days    $T_0=134.585354$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

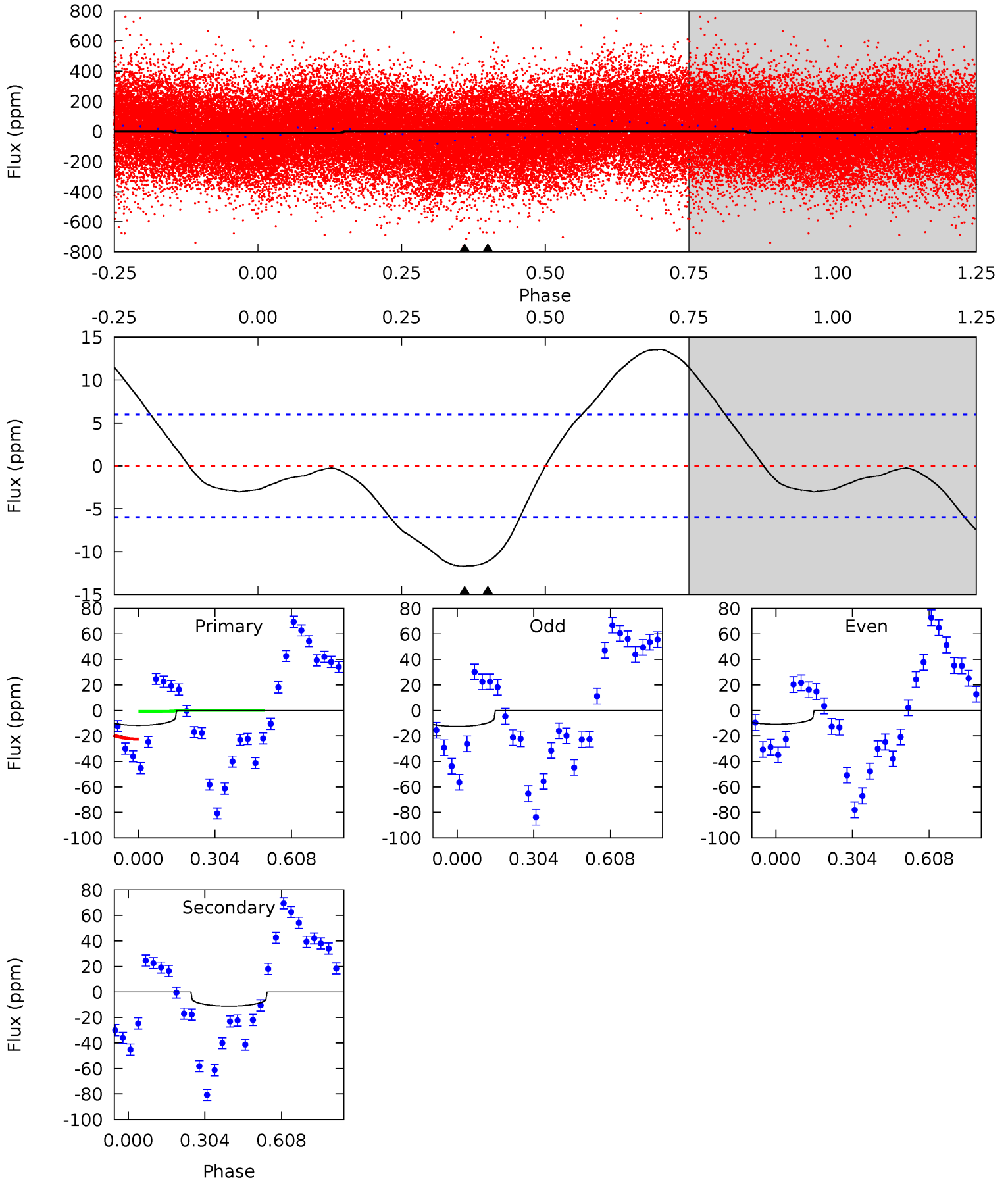
TCE 010492985-01 P= 4.228961 Days  $T_0=134.575044$  (BKJD)



# DV Model-Shift Uniqueness Test

010492985-01, P = 4.228713 Days, E = 130.356641 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
8.47	8.06	0	0	4.33	1.03	4.19	8.47	8.47	8.06	8.06	0.63	1.00	0.54	8.03

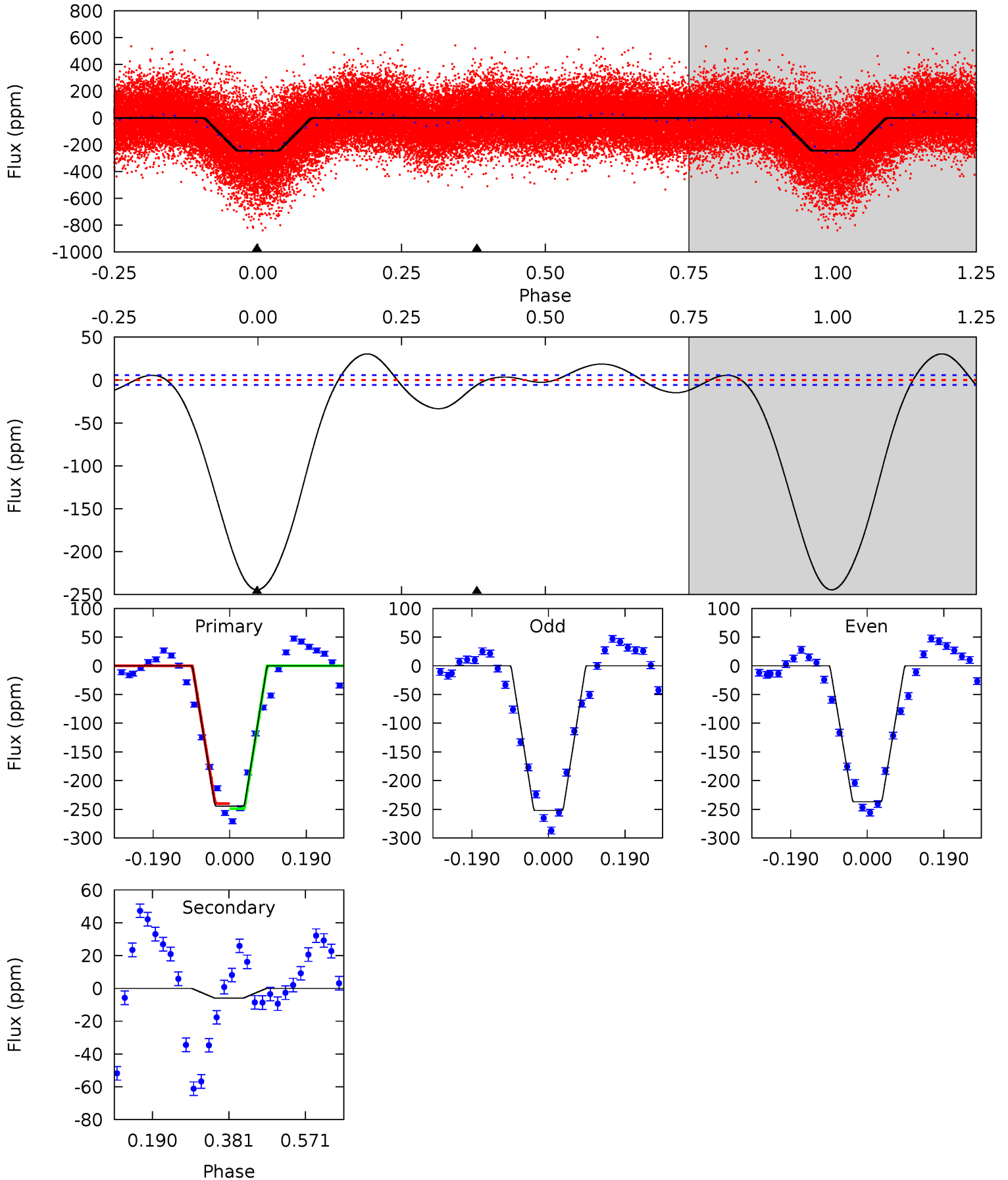




# Alt Model-Shift Uniqueness Test

010492985-01, P = 4.228961 Days, E = 130.346083 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
187.2	4.52	0	0	4.43	1.31	9.23	187.2	187.2	4.52	4.52	5.68	0.97	0.11	3.41





### Stellar Parameters For KIC 010492985

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$6212^{+191}_{-171}$	$3.594^{+0.345}_{-0.115}$	$-0.200^{+0.350}_{-0.300}$	$3.264^{+0.442}_{-1.327}$	$1.527^{+0.204}_{-0.380}$	$0.062^{+0.162}_{-0.018}$
	+3%/-3%	+10%/-3%	+175%/-150%	+14%/-41%	+13%/-25%	+263%/-29%
Source	PHO1	FLK73	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 010492985-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-11 \pm 1$	$1.65^{+1.84}_{-1.06}$	$2808^{+171}_{-255}$	$5009^{+3945}_{-1230}$	$7.604^{+53.079}_{-5.865}$
Alt.	$-6 \pm 1$	$5.51^{+2.05}_{-2.19}$	$2810^{+167}_{-275}$	$2446^{+815}_{-5087}$	$0.369^{+0.627}_{-0.187}$

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

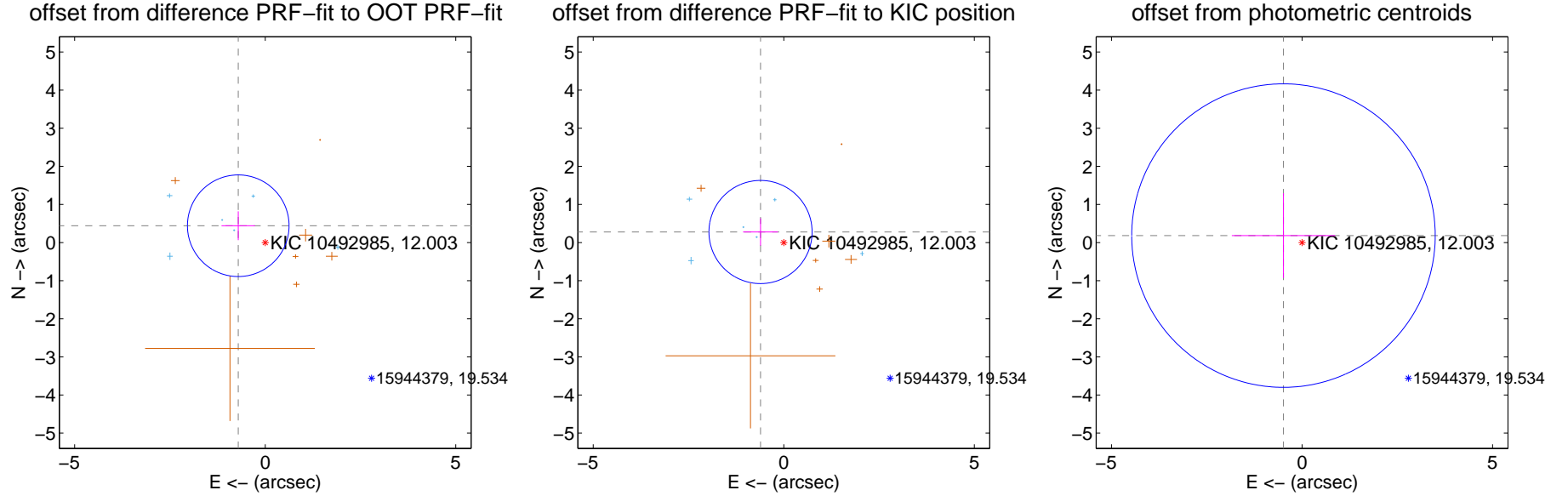
## DV Centroid Data

Supplemental centroid analysis for 010492985-01. Kepler magnitude: 12.00. Transit SNR 3.58

There are 6 quarters with good PRF difference image offsets

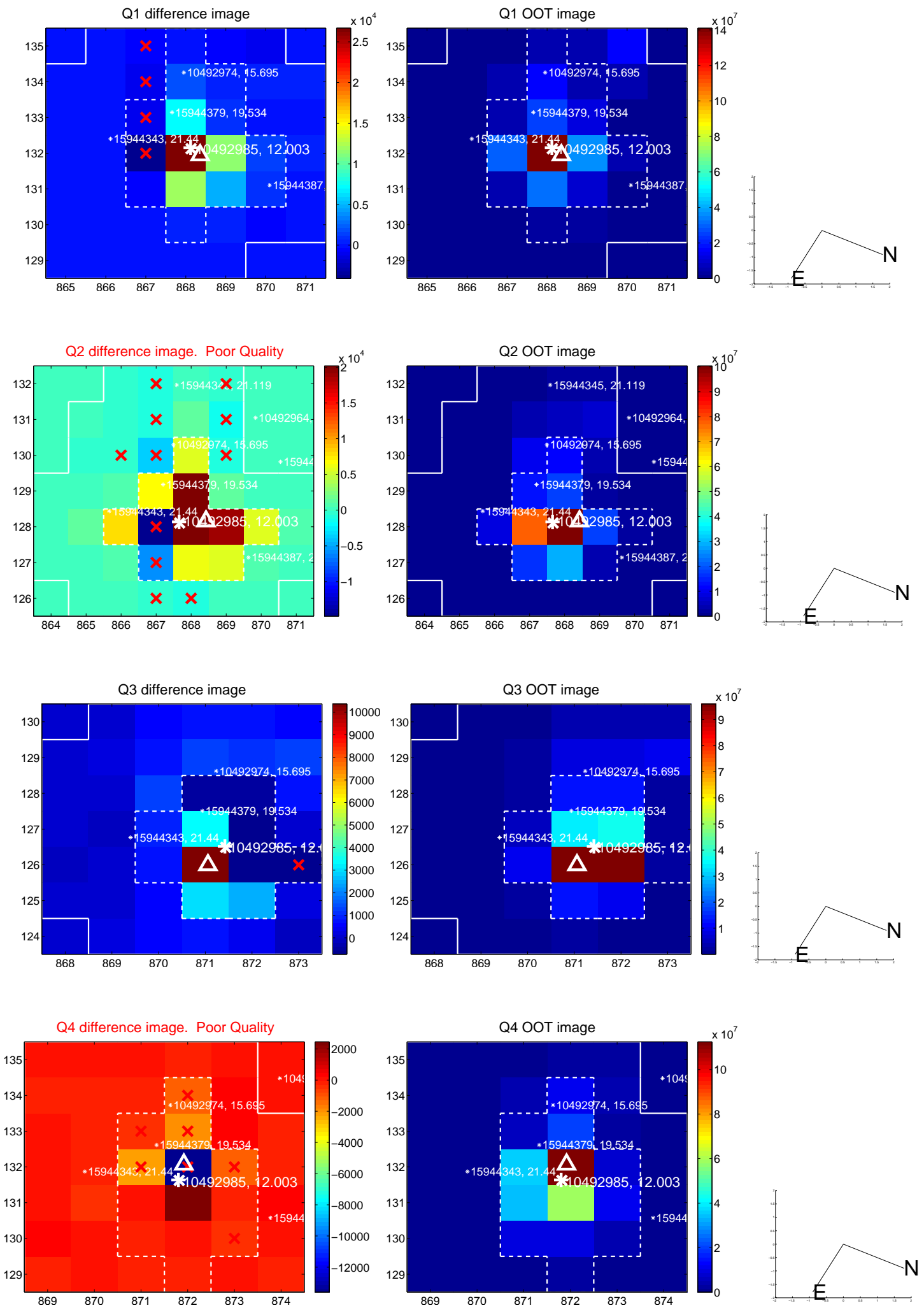
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.834 \pm 0.445$	1.88	$0.707 \pm 0.439$	$0.442 \pm 0.379$
PRF-fit source offset from KIC position	$0.670 \pm 0.451$	1.48	$0.610 \pm 0.457$	$0.277 \pm 0.359$
photometric centroid source offset	$0.52 \pm 1.33$	0.39	$0.49 \pm 1.36$	$0.18 \pm 1.11$

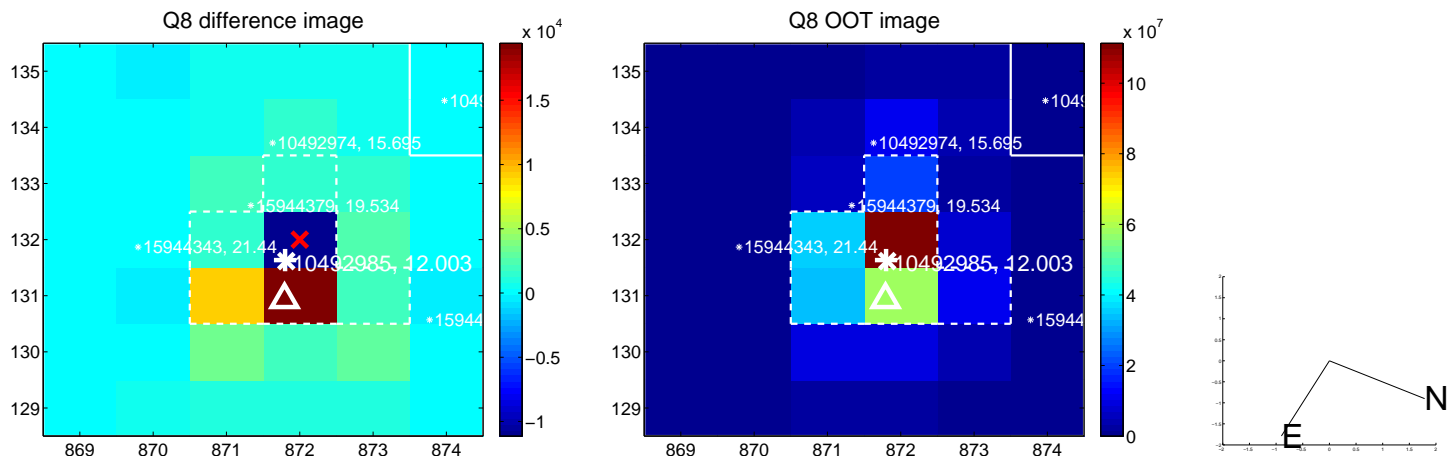
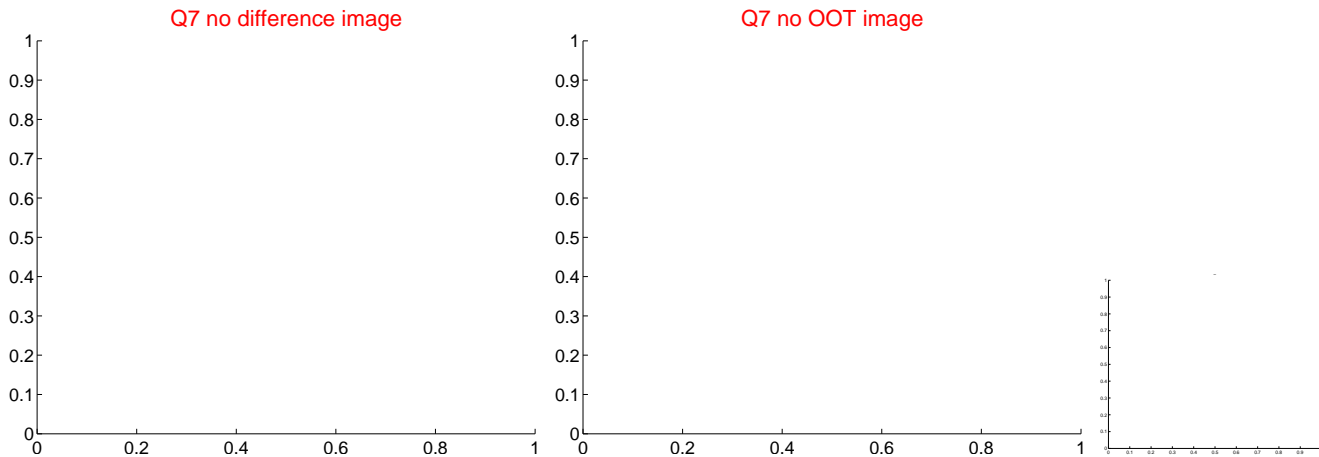
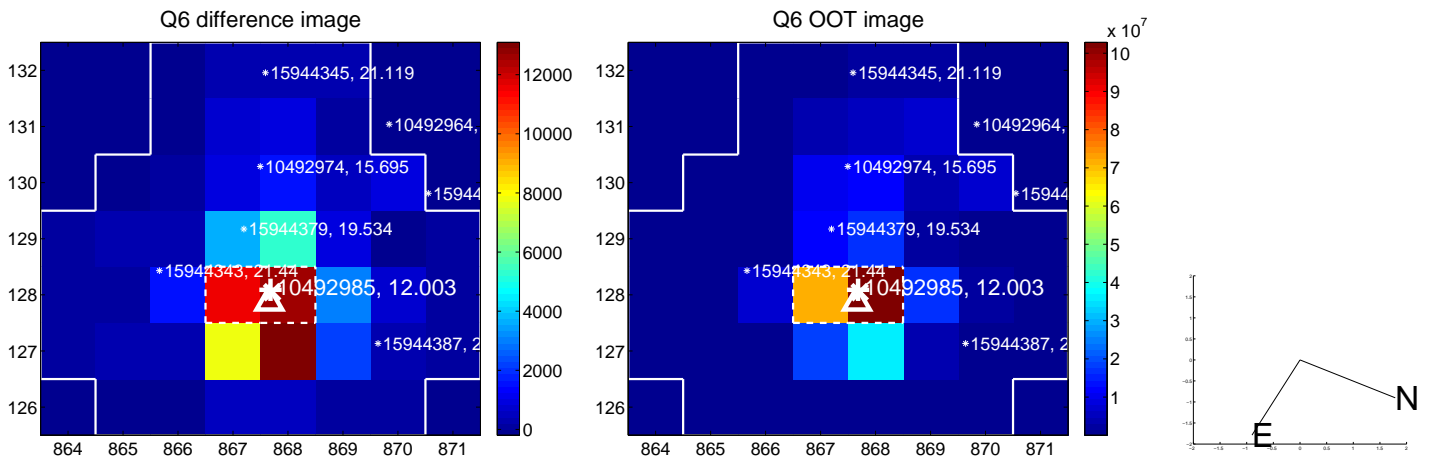
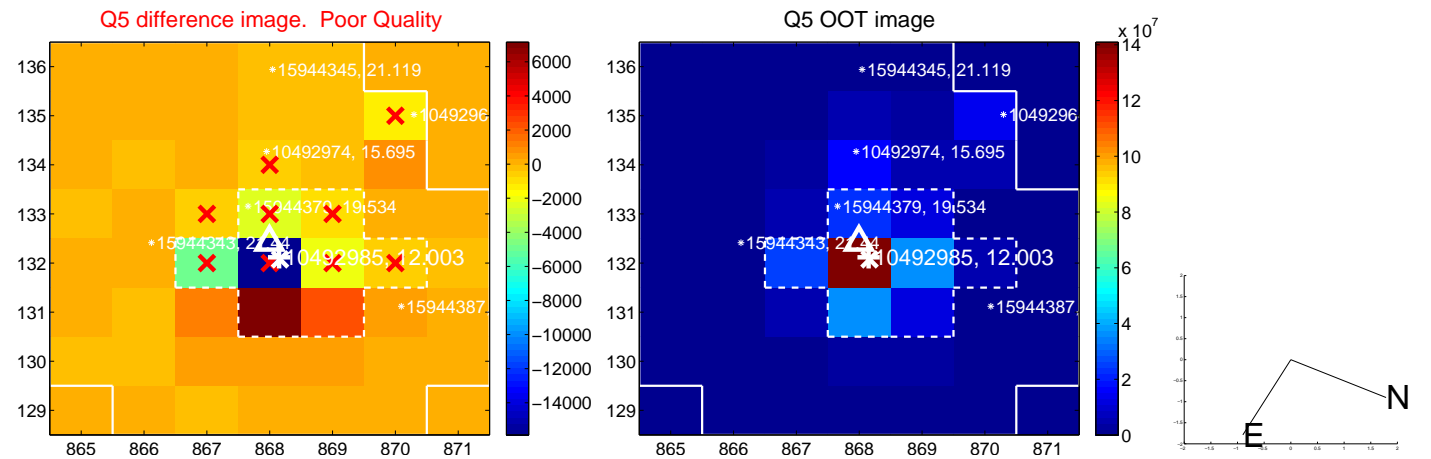


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

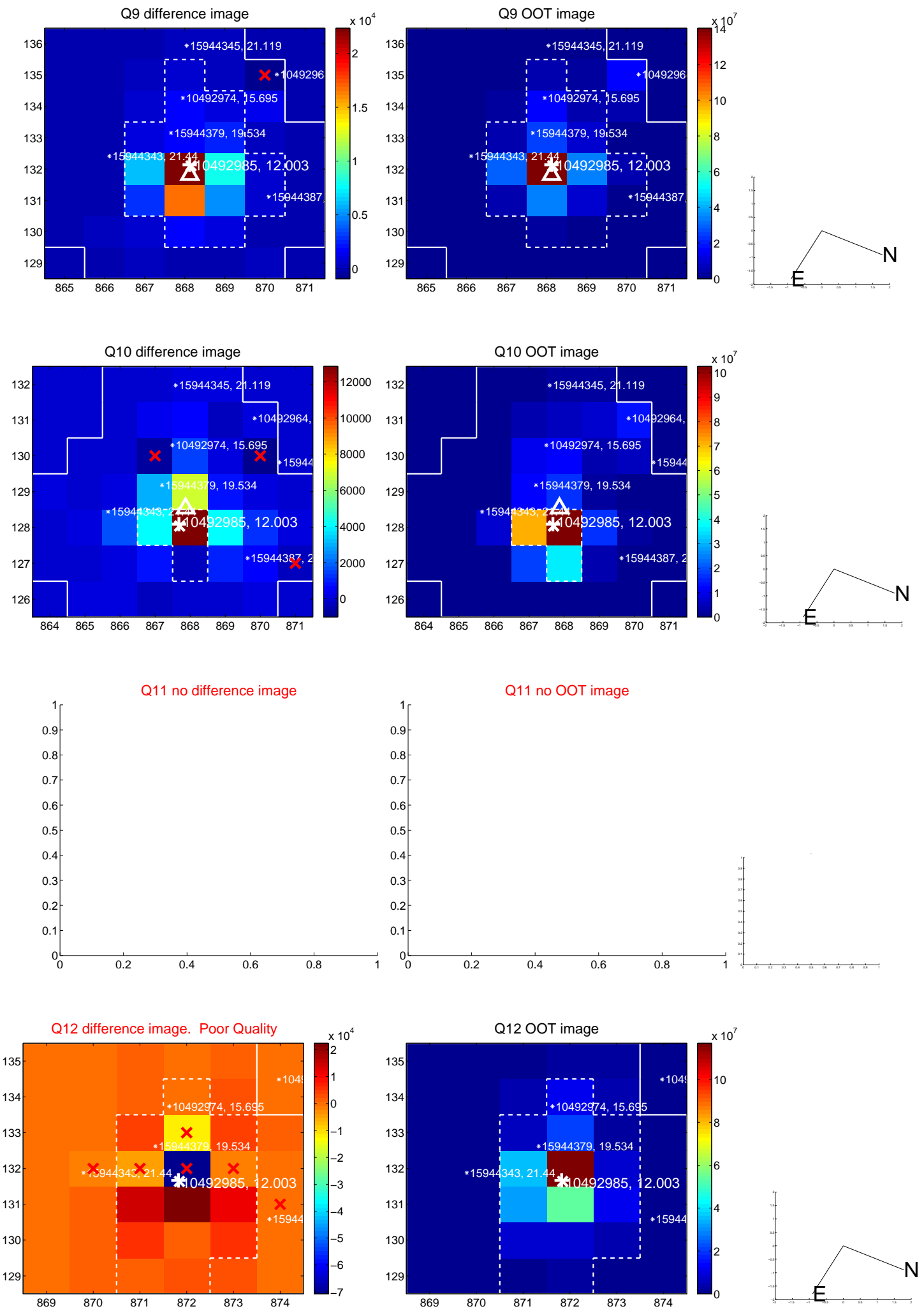


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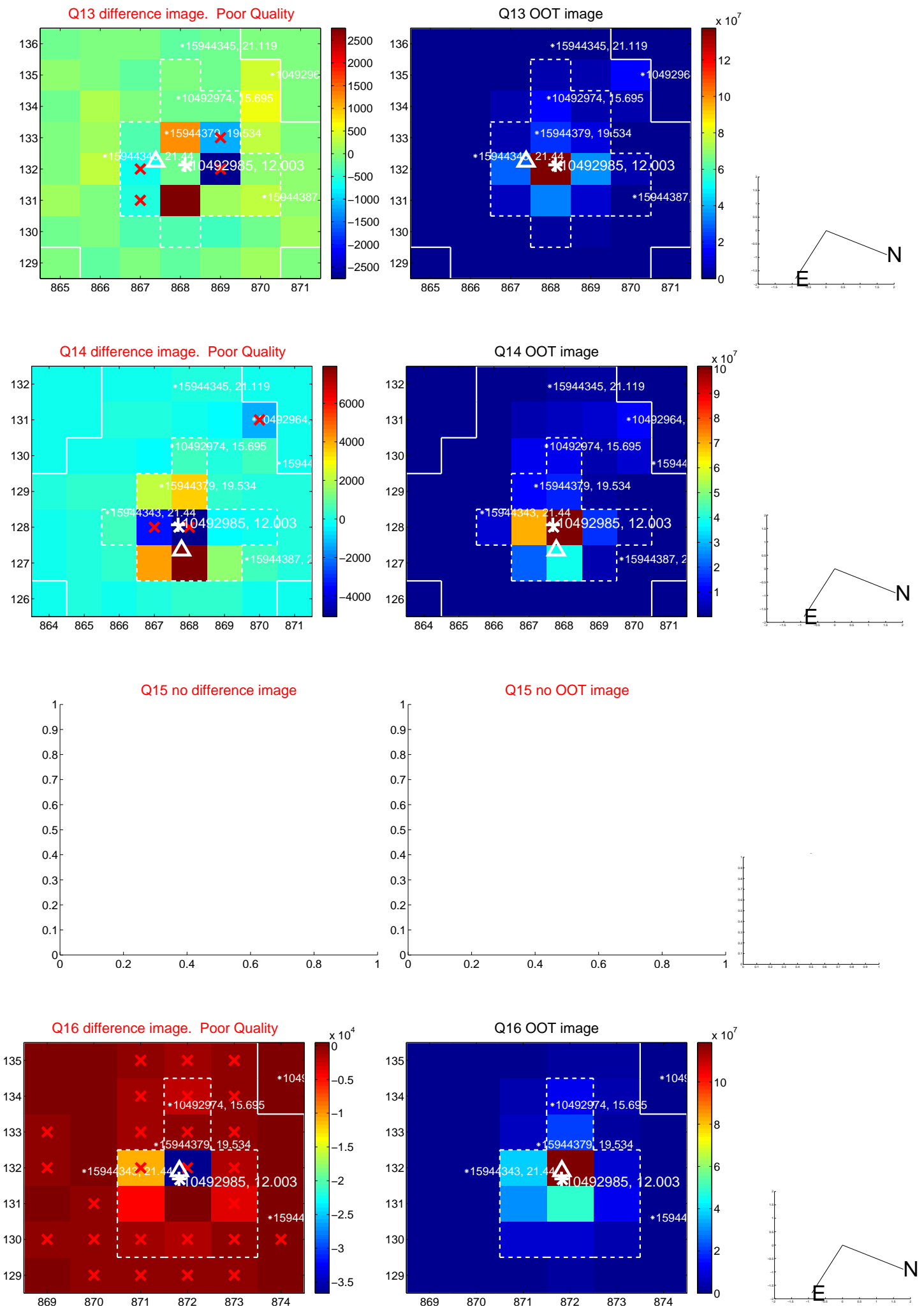




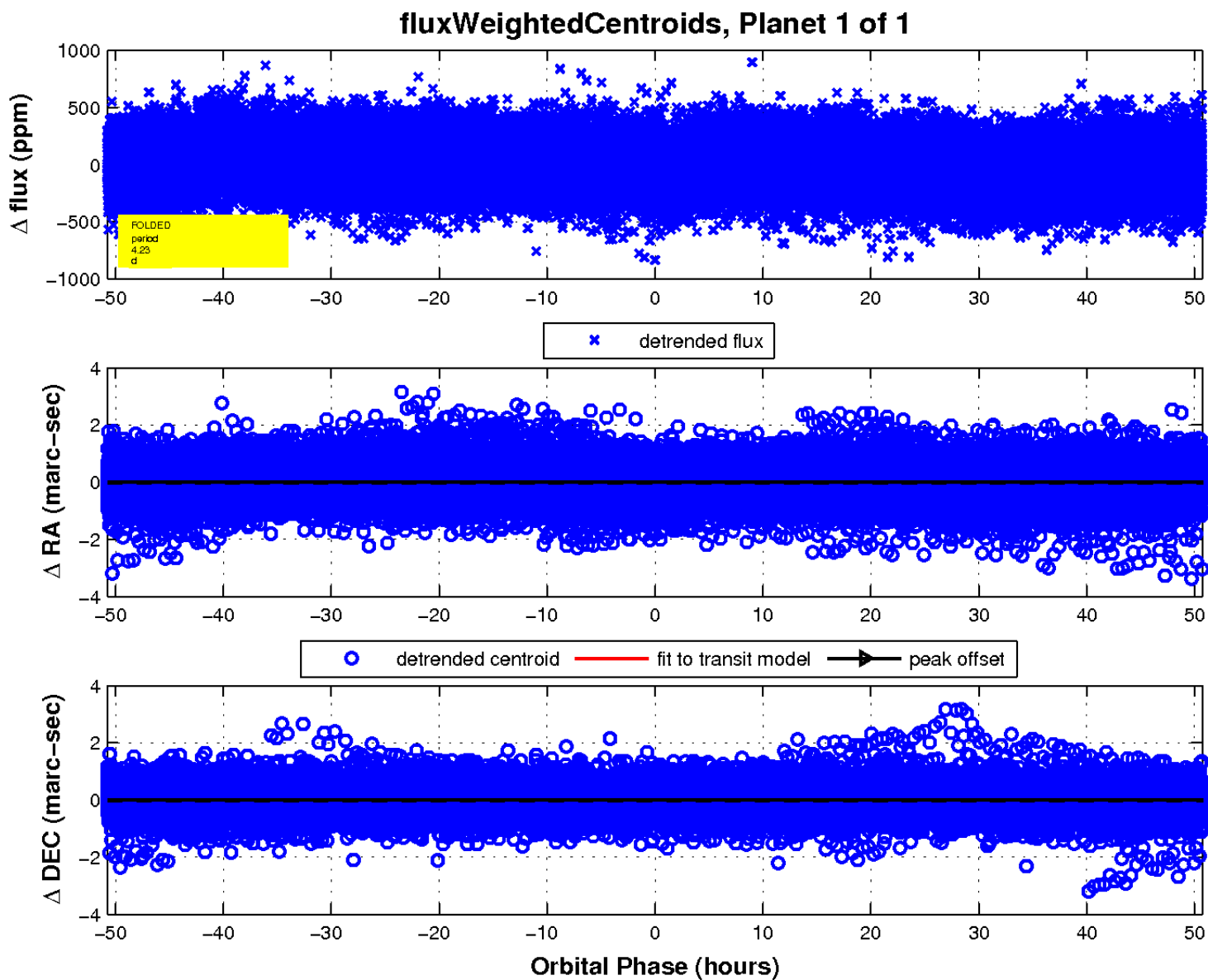
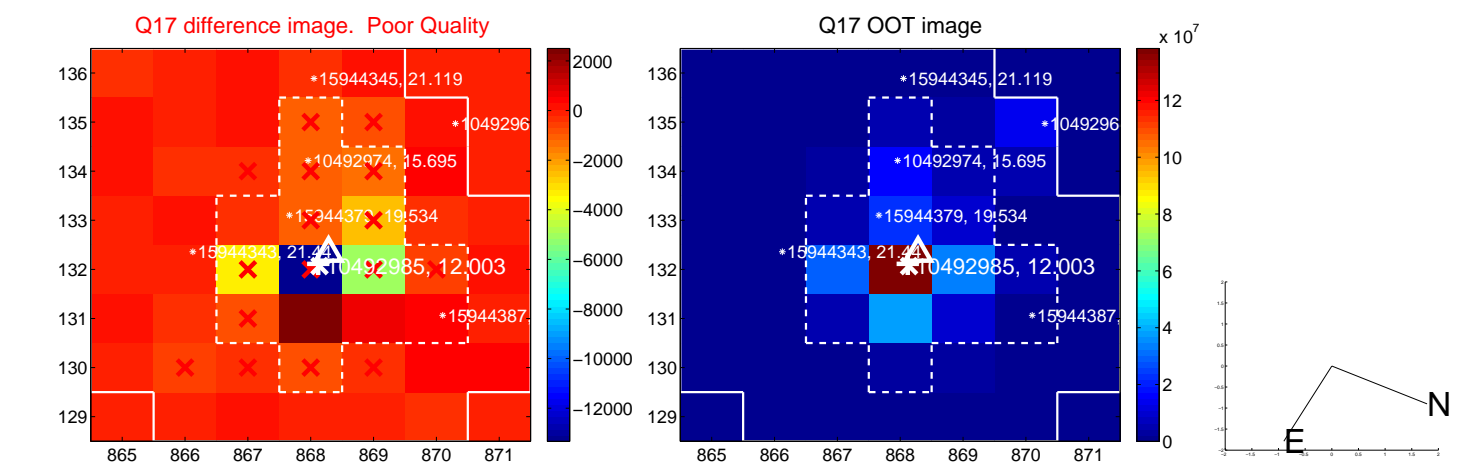
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



UKIRT Image

Declination

