

# KIC 005026326

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
005026326-01	OBS	4280.01	1.397659	132.376388	140.5	4.128	13.1	13.3	1.11	6006	1.58	2287.13

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005026326-01	OBS	FP	0.00	0	0	1	0	CENT_RESOLVED_OFFSET—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 005026326-01

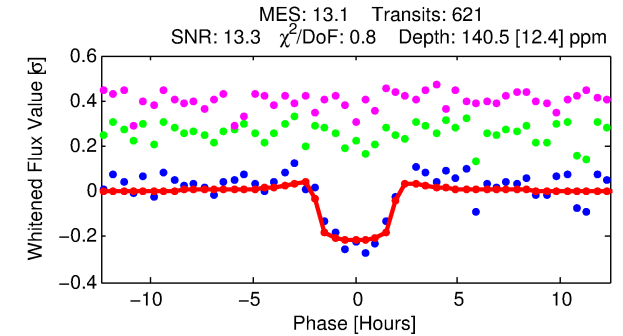
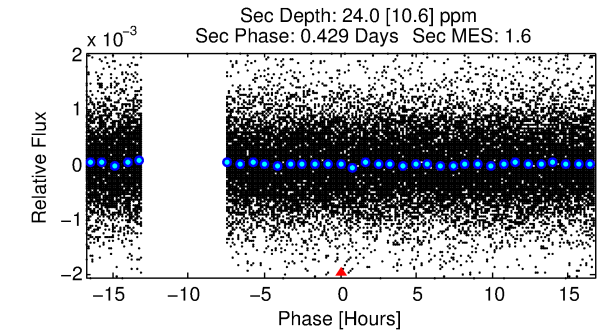
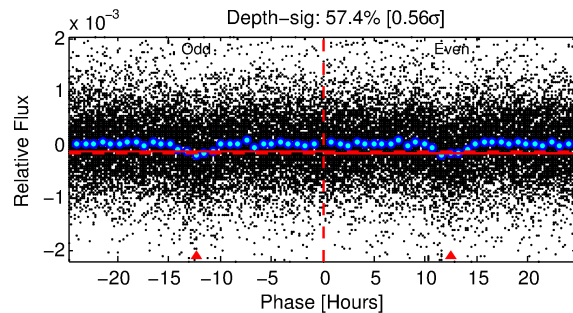
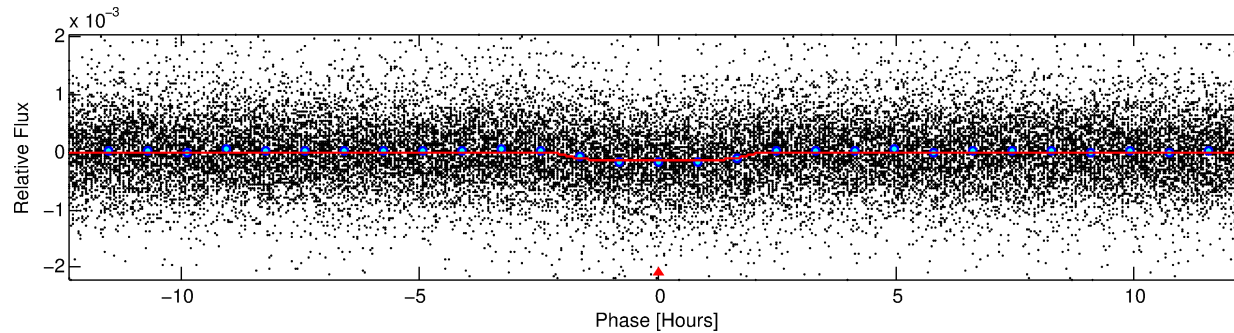
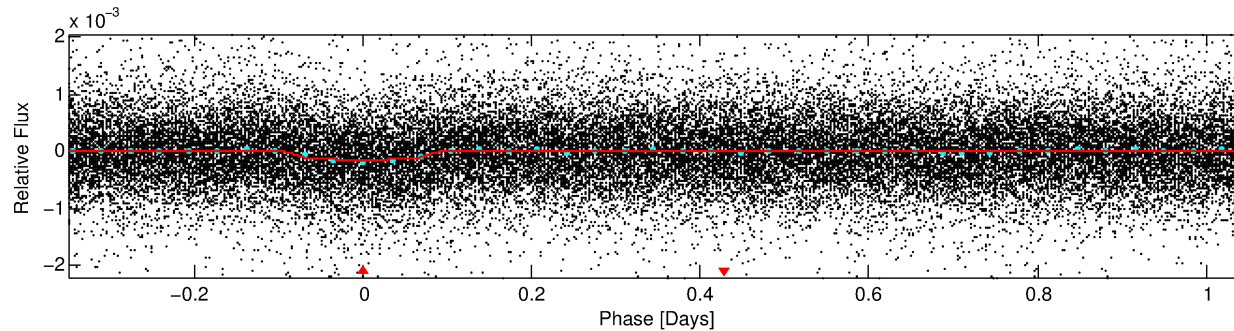
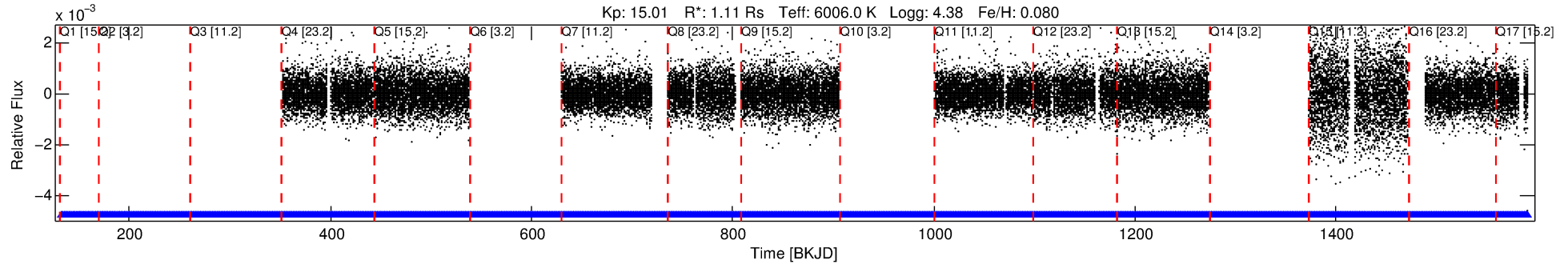
No Significant Match Found

# DV One-Page Summary

KIC: 5026326 Candidate: 1 of 1 Period: 1.398 d

KOI: K04280.01 Corr: 0.874

Kp: 15.01 R\*: 1.11 Rs Teff: 6006.0 K Logg: 4.38 Fe/H: 0.080



## DV Fit Results:

Period = 1.39766 [0.00001] d  
Epoch = 132.3764 [0.0034] BKJD  
Rp/R\* = 0.0130 [0.0034]  
a/R\* = 1.49 [1.08]  
b = 0.91 [0.25]  
Seff = 2287.13 [947.61]  
Teff = 1763 [183] K  
Rp = 1.58 [0.65] Re  
a = 0.0252 [0.0066] AU  
Ag = 3.36 [2.64] [0.89σ]  
Teffp = 3692 [649] K [2.86σ]

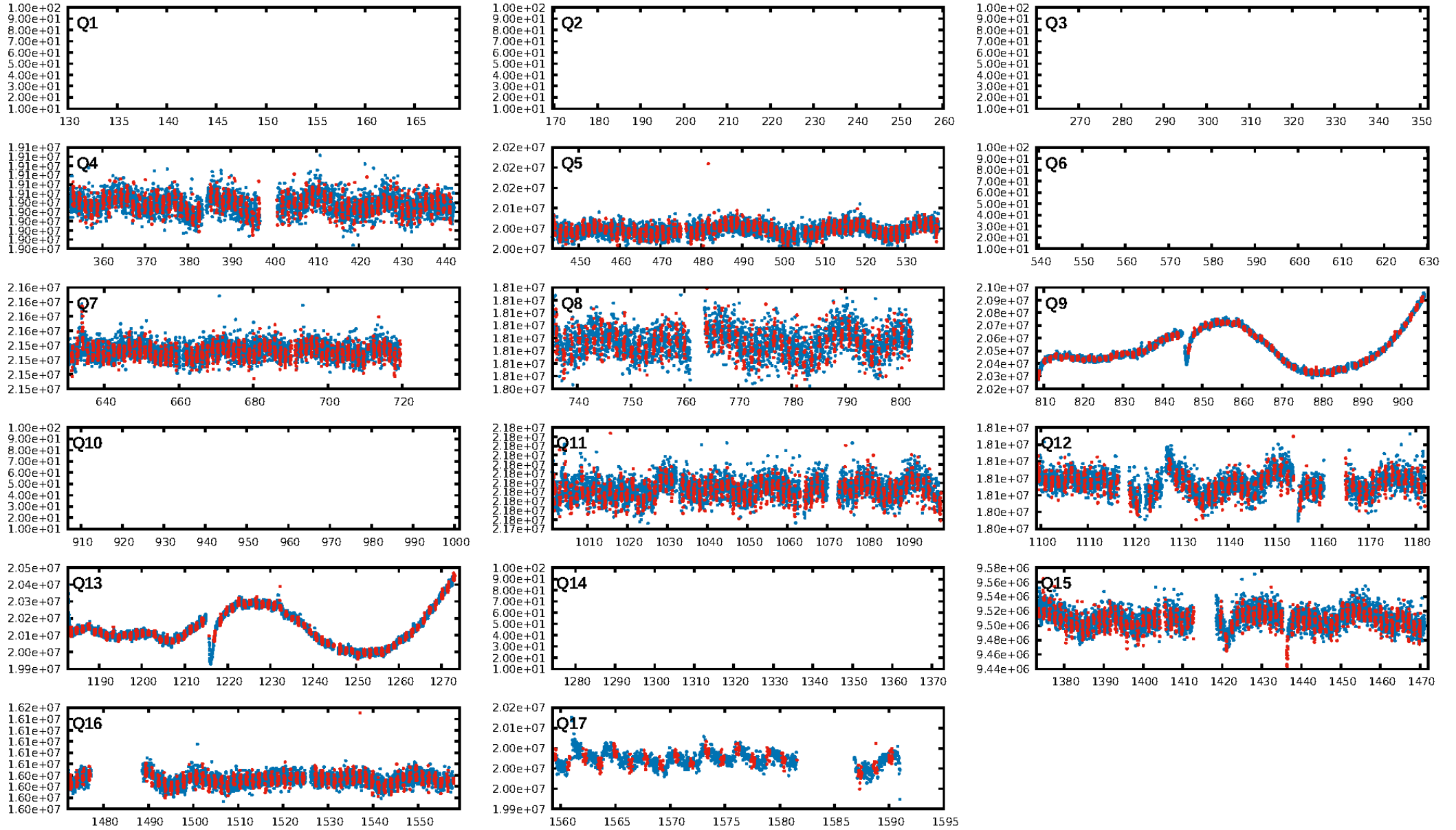
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 3.27e-33  
RollingBand-fgm: 1.00 [602/602]  
GhostDiagnostic-chr: -0.03386  
Centroid-sig: 0.0%  
Centroid-so: 4.673 arcsec [22.82σ]  
OotOffset-rm: N/A  
KicOffset-rm: N/A  
OotOffset-st: 0/0/0/0 [0]  
KicOffset-st: 0/0/0/0 [0]  
DiffImageQuality-fgm: N/A  
DiffImageOverlap-fno: 1.00 [11/11]

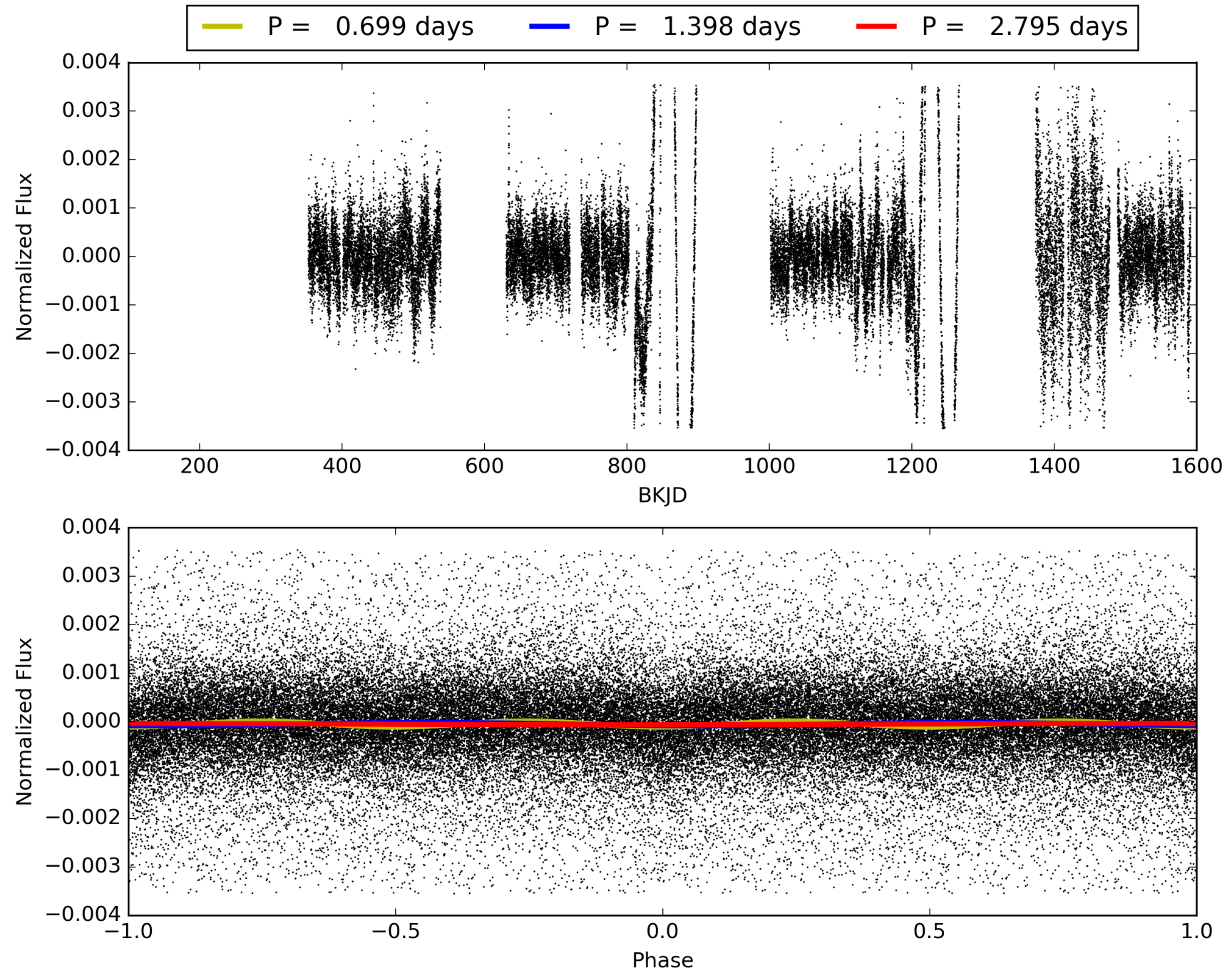
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 02:55:36 Z

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

# TCE 005026326-01, PDC Light Curves

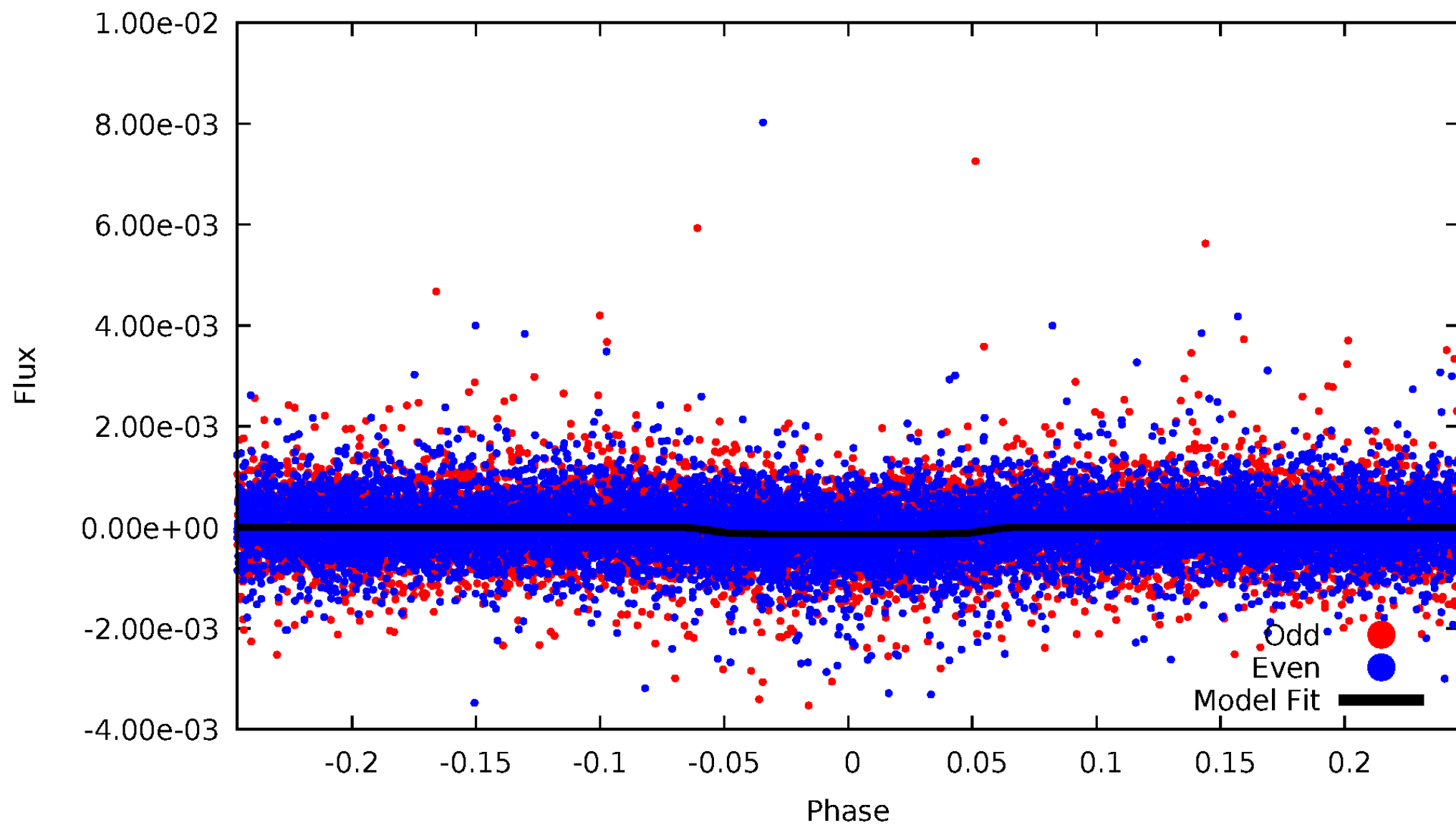


TCE 005026326-01



# DV Odd/Even

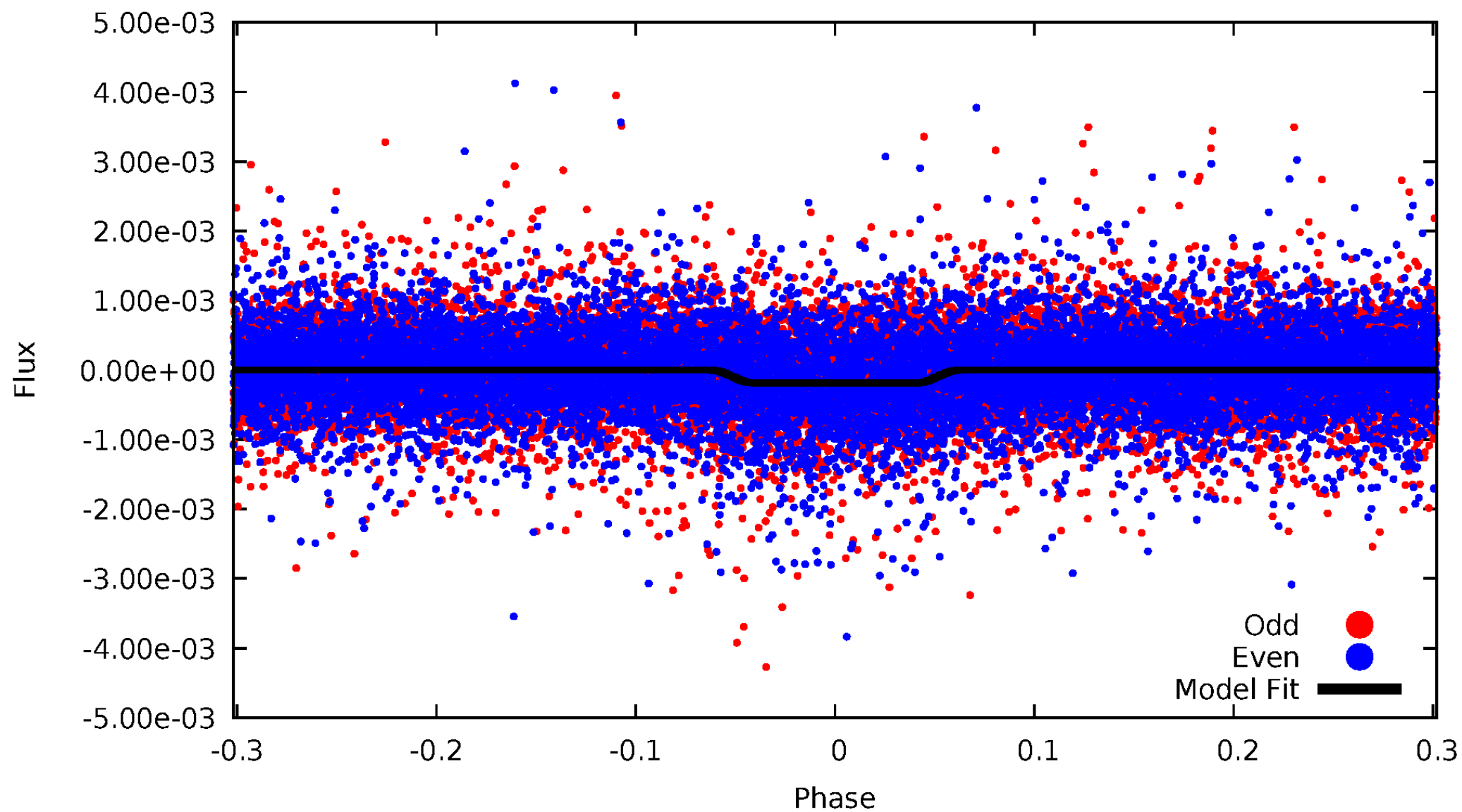
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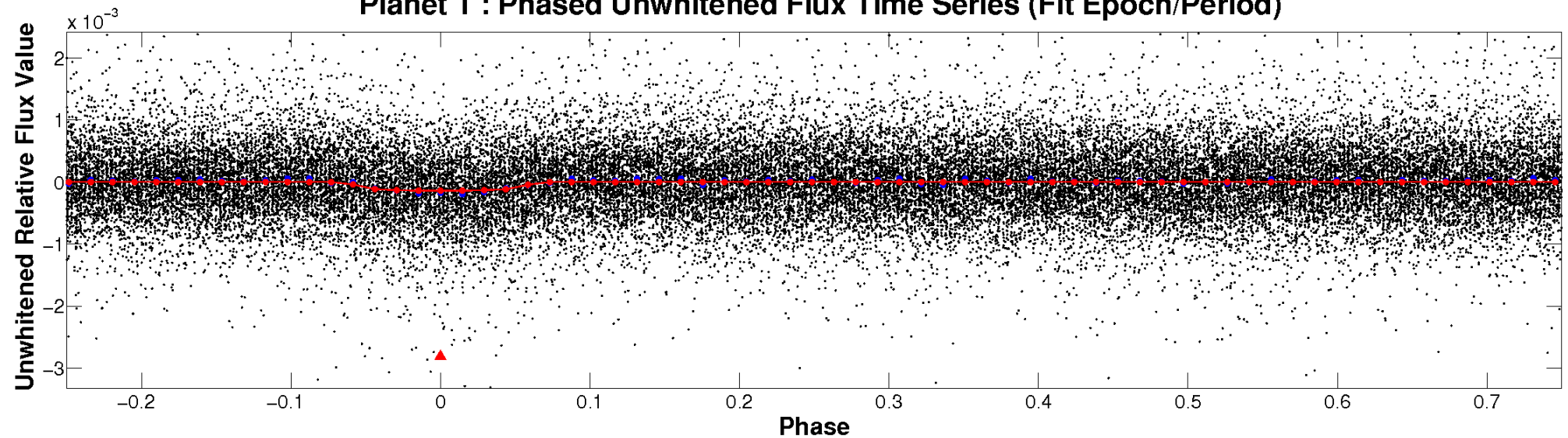
# ALT Odd/Even

TCE 005026326-01

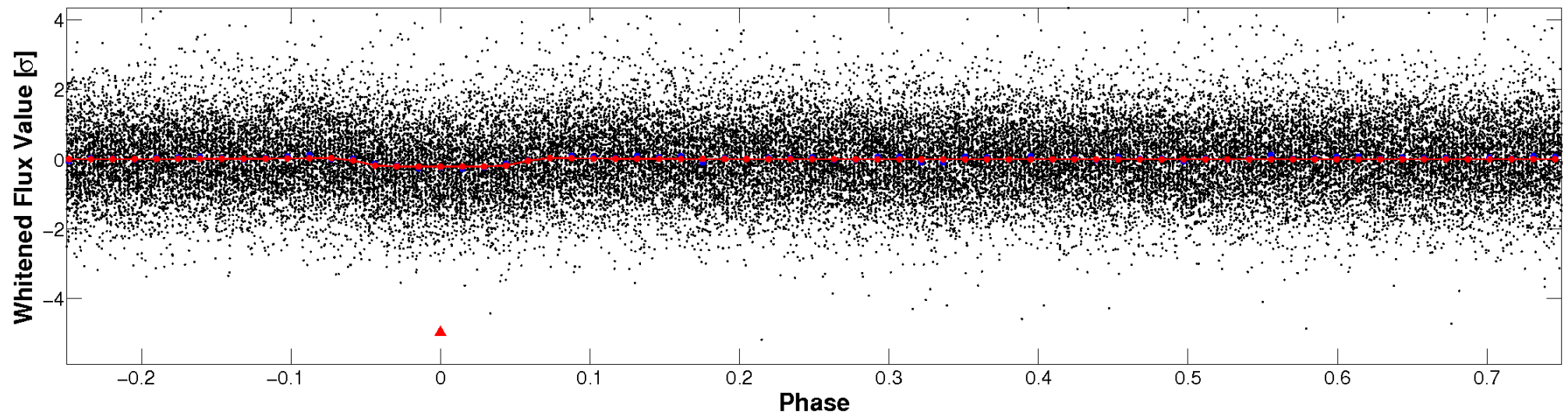


# Non-Whitened Vs. Whitened Light Curve

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

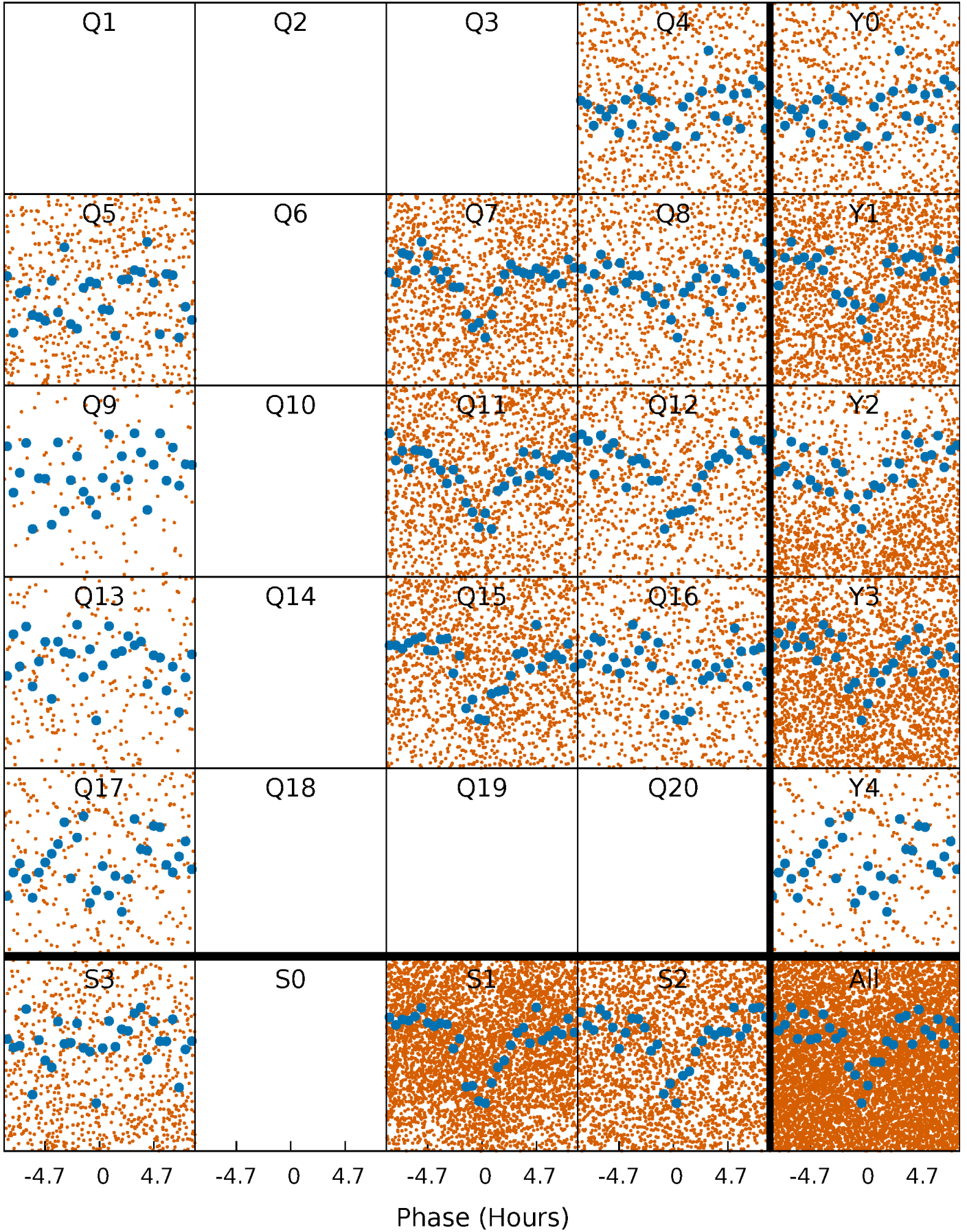


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

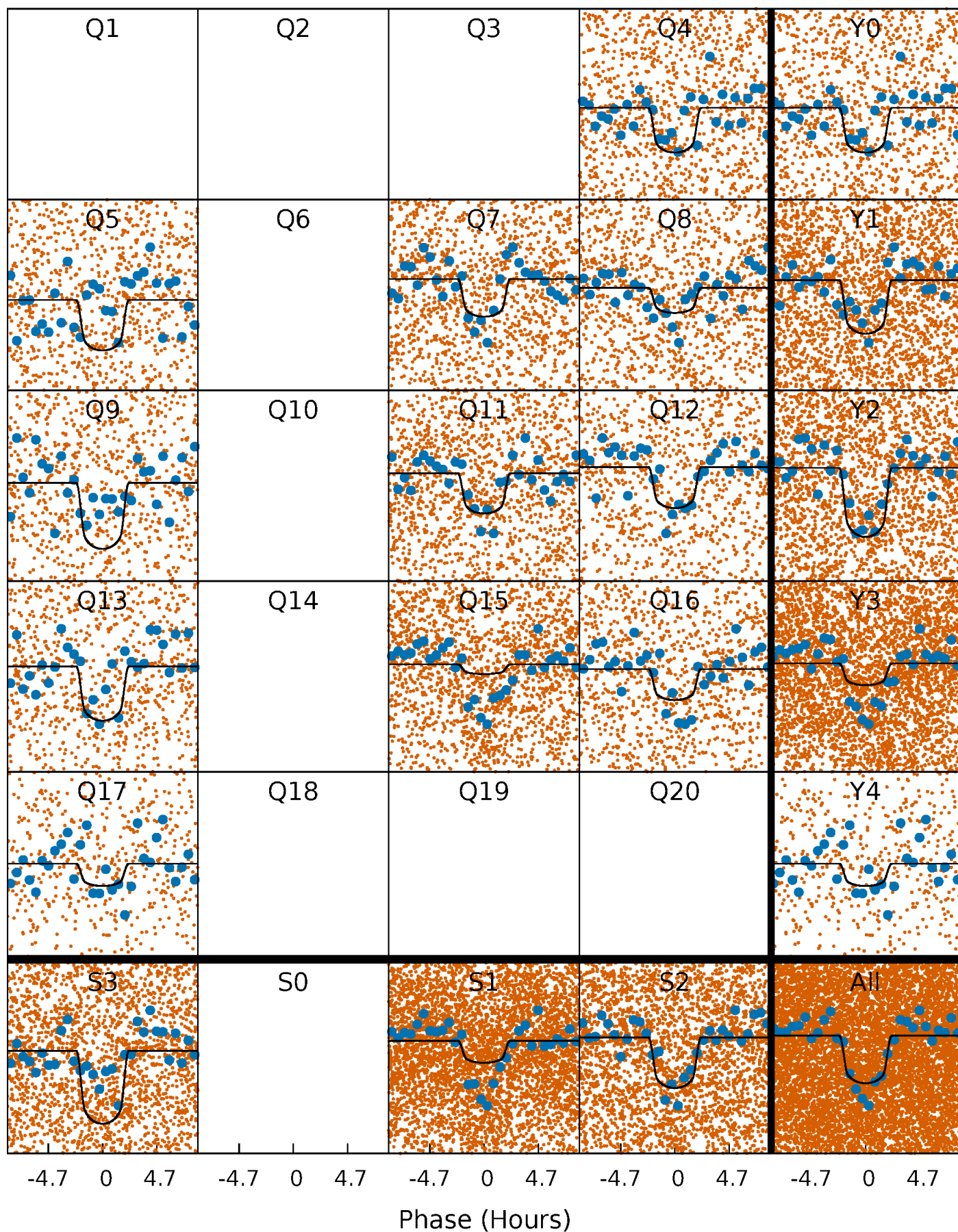
TCE 005026326-01 P= 1.397659 Days  $T_0=132.376388$  (BKJD)





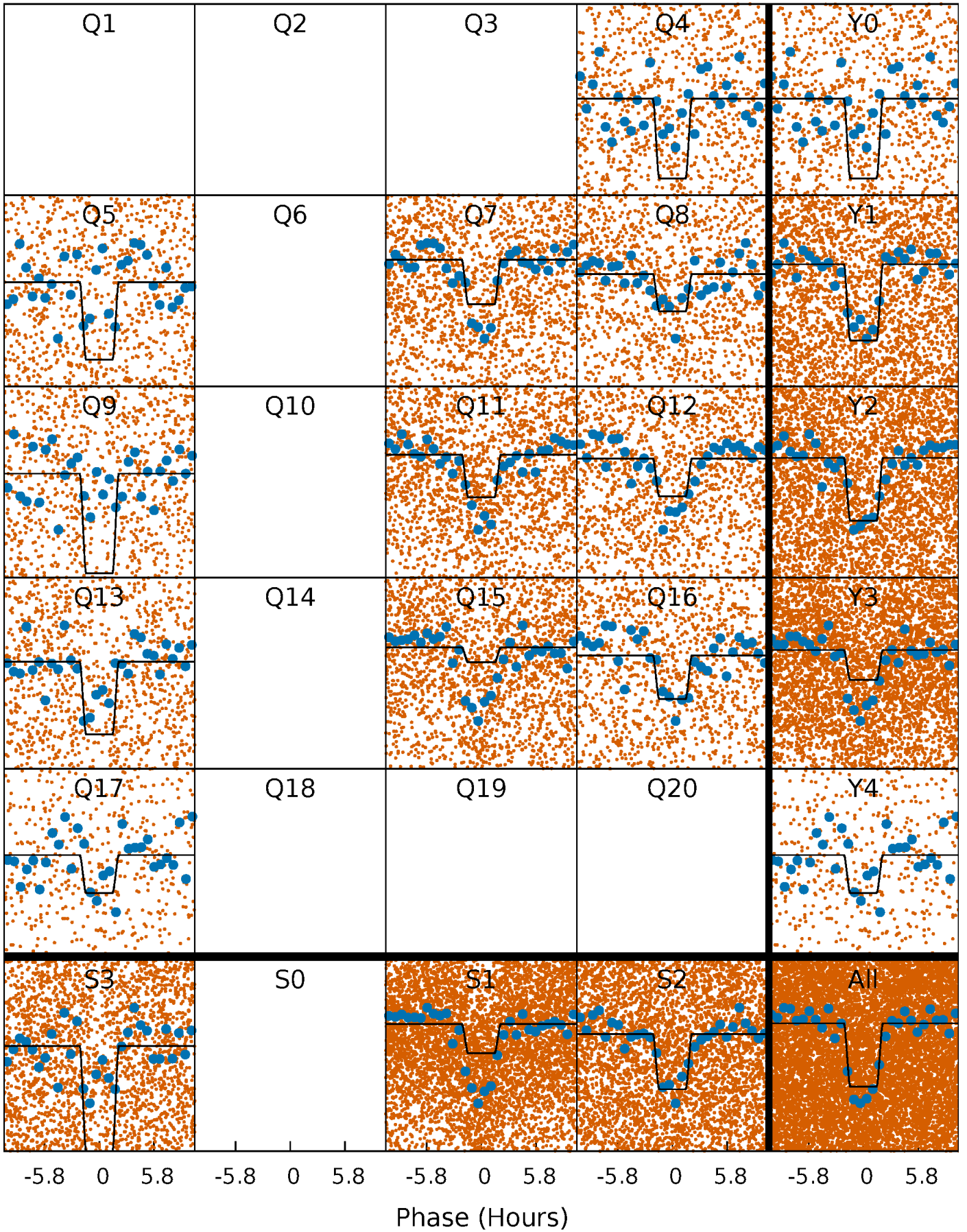
# DV Quarter-Phased Transit Curves

TCE 005026326-01 P= 1.397659 Days  $T_0=132.376388$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

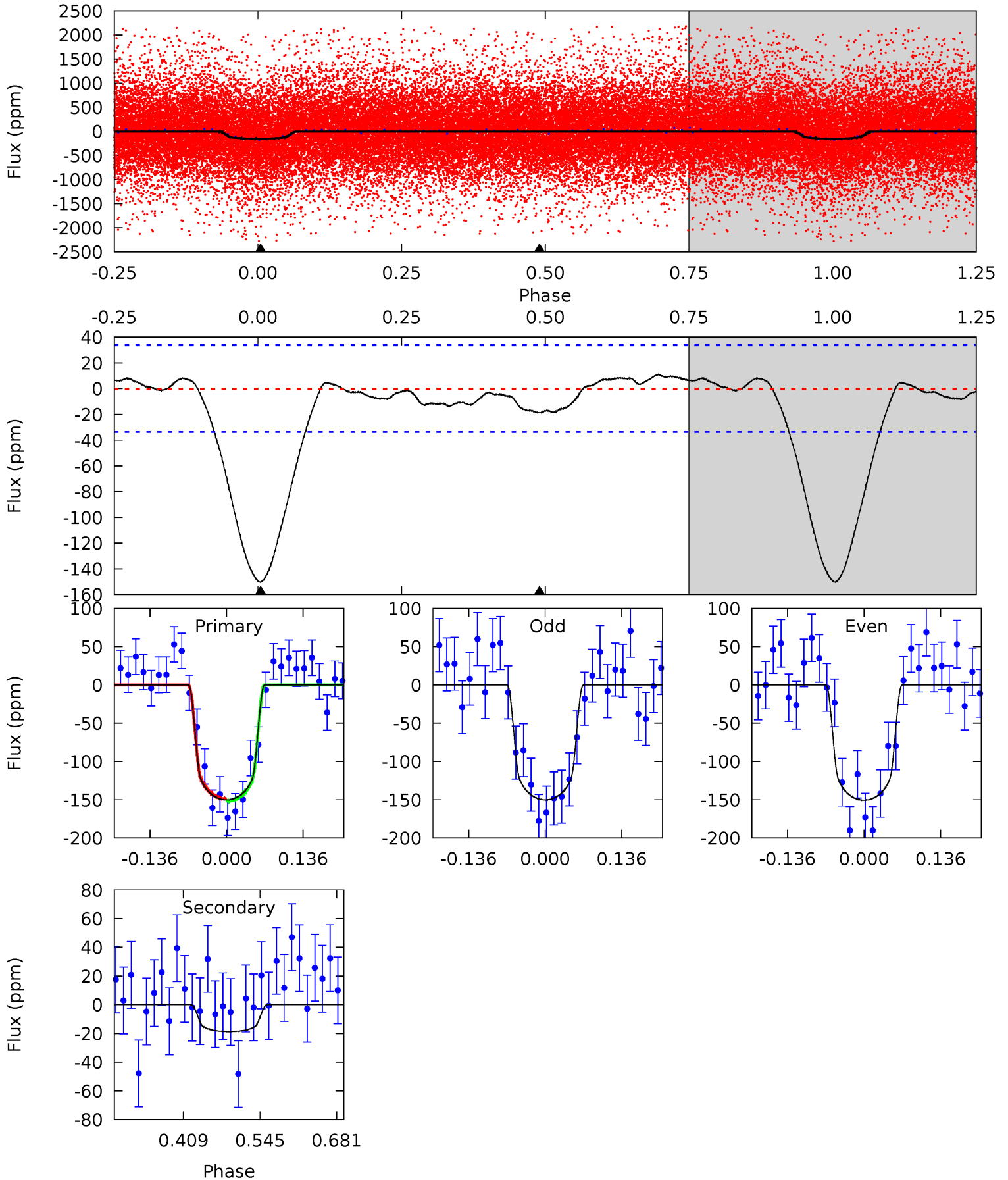
TCE 005026326-01 P= 1.397710 Days  $T_0=132.344744$  (BKJD)



# DV Model-Shift Uniqueness Test

005026326-01, P = 1.397659 Days, E = 132.376388 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
20.1	2.50	0	0	4.50	1.49	0.98	20.1	20.1	2.50	2.50	0.03	1.16	0.07	0.19

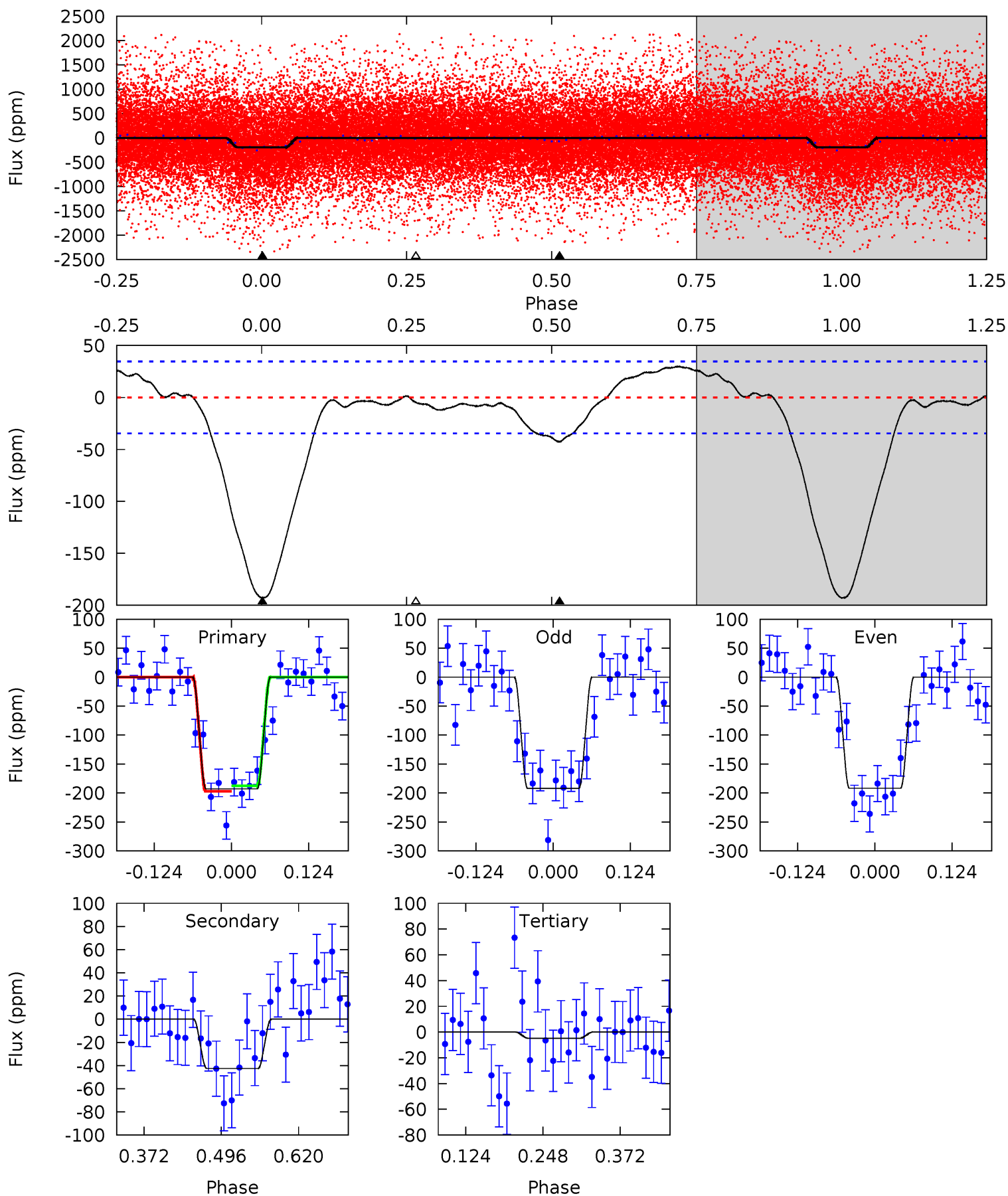




# Alt Model-Shift Uniqueness Test

005026326-01, P = 1.397710 Days, E = 132.344744 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
25.2	5.56	0.63	0	4.52	1.54	1.86	24.6	25.2	4.93	5.56	0.03	1.13	0.13	0.62



### Stellar Parameters For KIC 005026326

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6006^{+190}_{-232}$	$4.380^{+0.090}_{-0.210}$	$0.080^{+0.250}_{-0.300}$	$1.114^{+0.350}_{-0.150}$	$1.084^{+0.151}_{-0.151}$	$1.106^{+0.447}_{-0.582}$
	+3%/-4%	+2%/-5%	+312%/-375%	+31%/-13%	+14%/-14%	+40%/-53%
Source	KIC0	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 005026326-01 / KOI 4280.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-19 \pm 7$	$1.65^{+0.51}_{-0.45}$	$2499^{+216}_{-149}$	$3732^{+514}_{-466}$	$2.291^{+2.412}_{-1.139}$
Alt.	$-43 \pm 8$	$1.70^{+0.51}_{-0.46}$	$2499^{+185}_{-143}$	$4322^{+633}_{-424}$	$5.166^{+4.311}_{-2.220}$

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



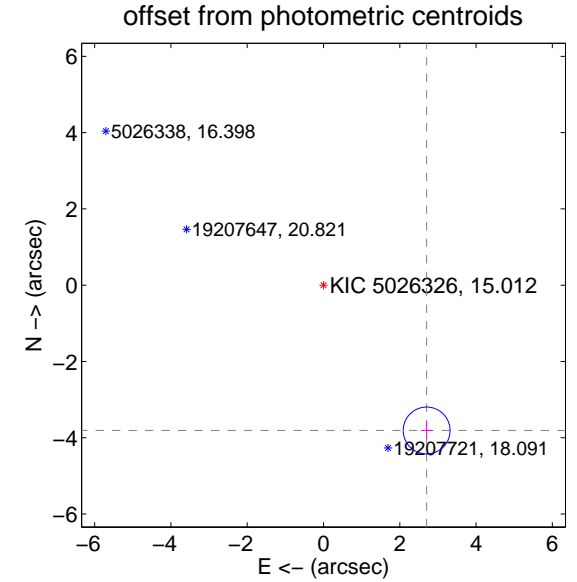
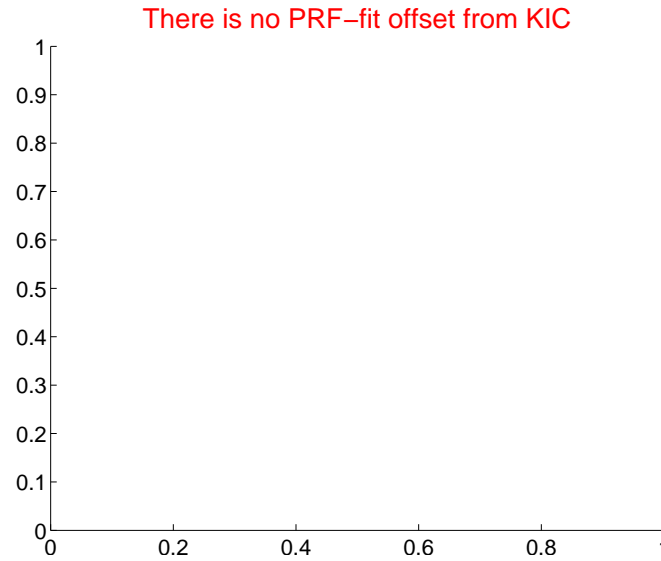
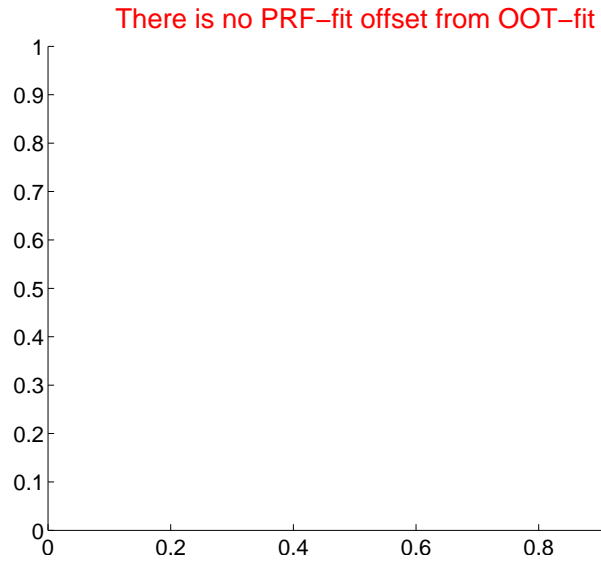
## DV Centroid Data

Supplemental centroid analysis for 005026326-01. Kepler magnitude: 15.01. Transit SNR 13.27

There are 0 quarters with good PRF difference image offsets

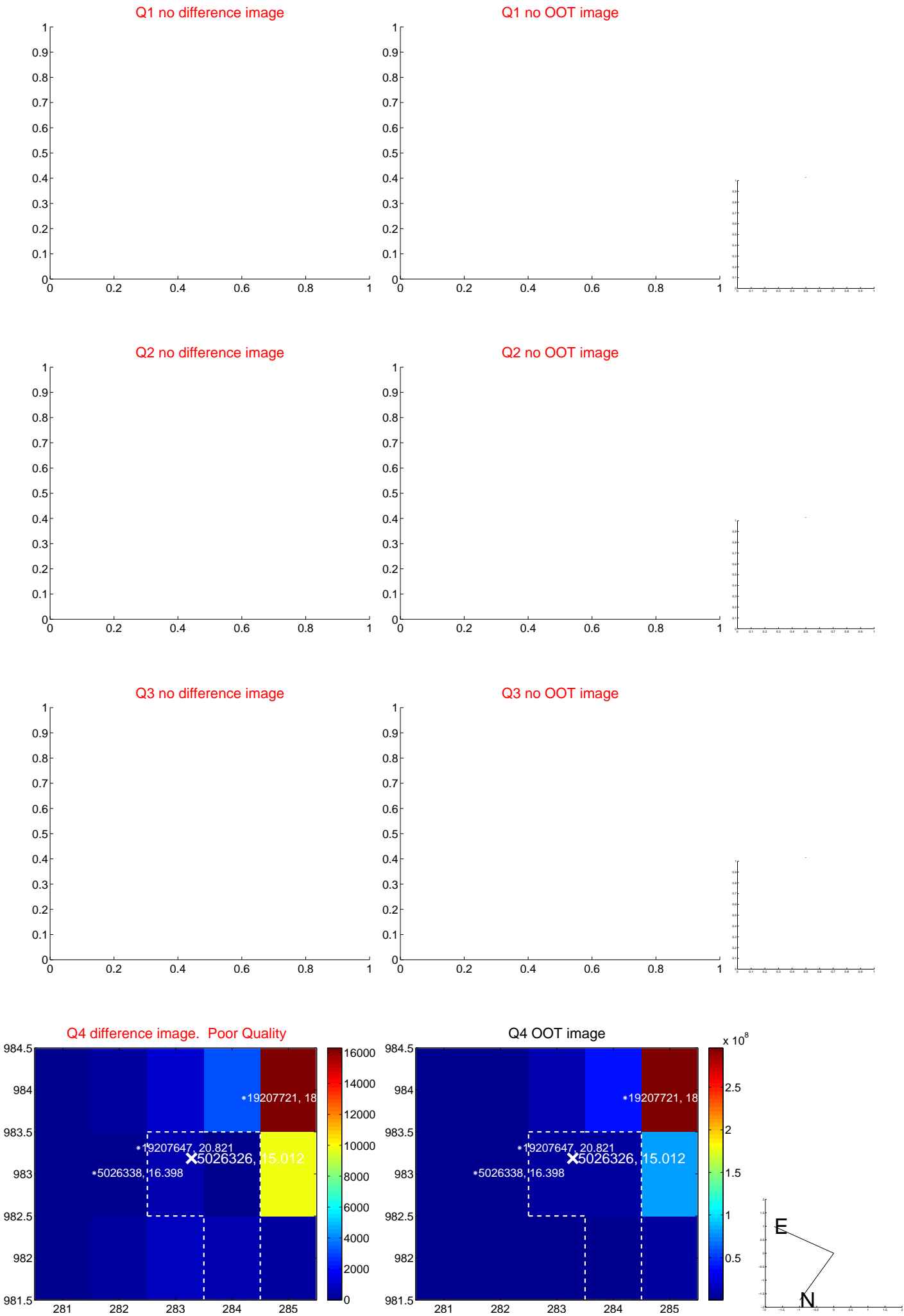
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	$4.67 \pm 0.20$	$22.82$	$-2.71 \pm 0.15$	$-3.81 \pm 0.23$

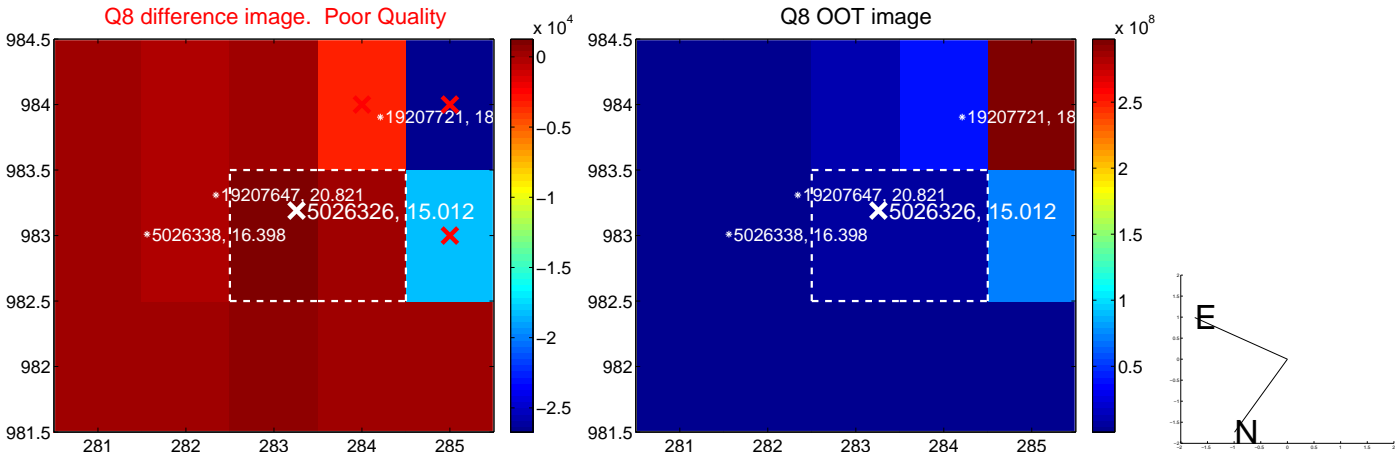
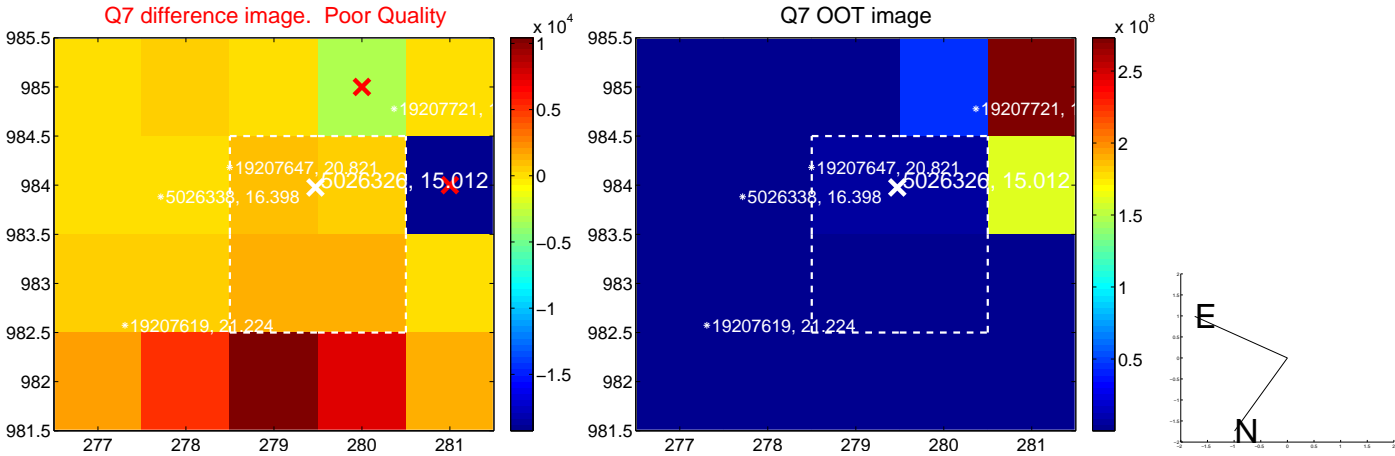
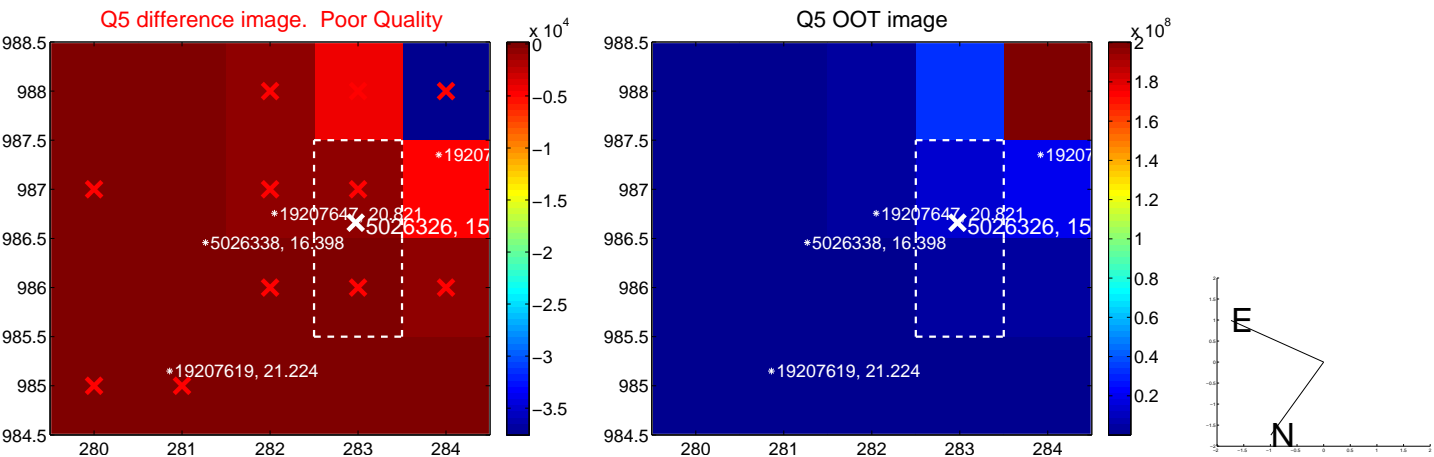


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

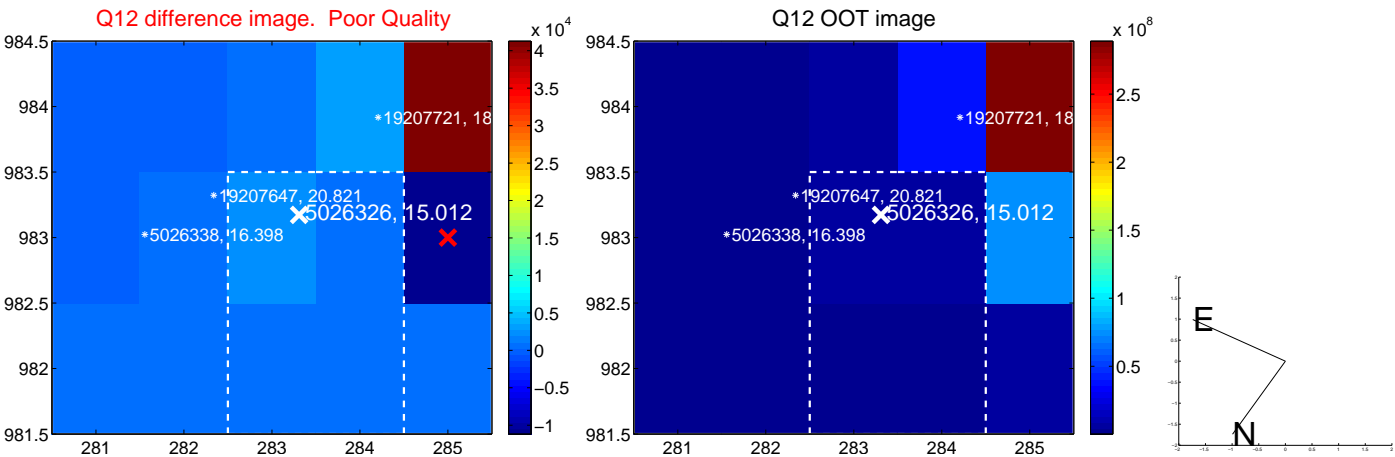
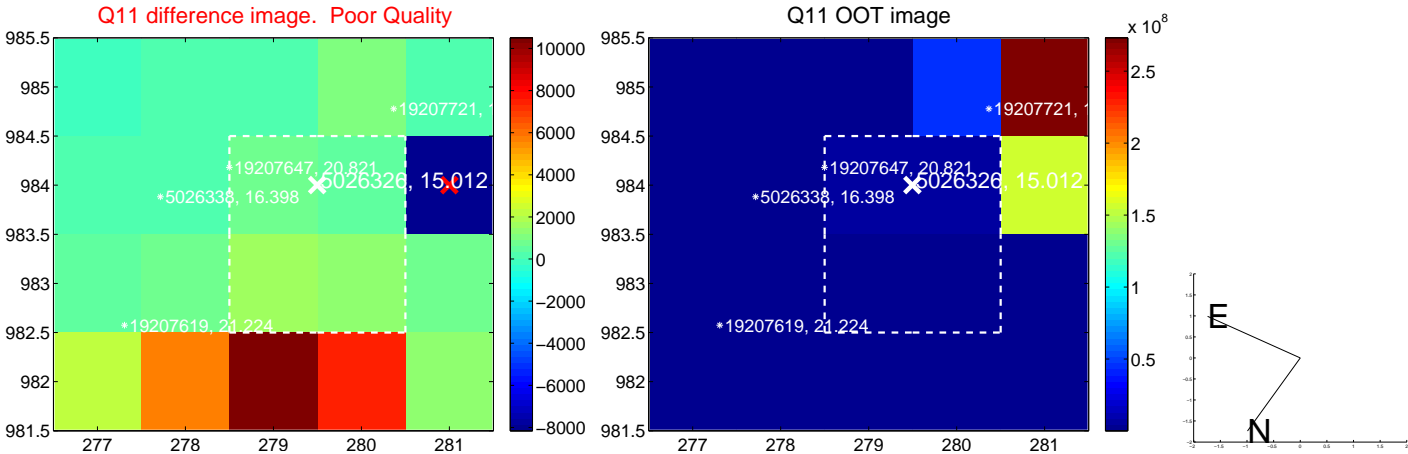
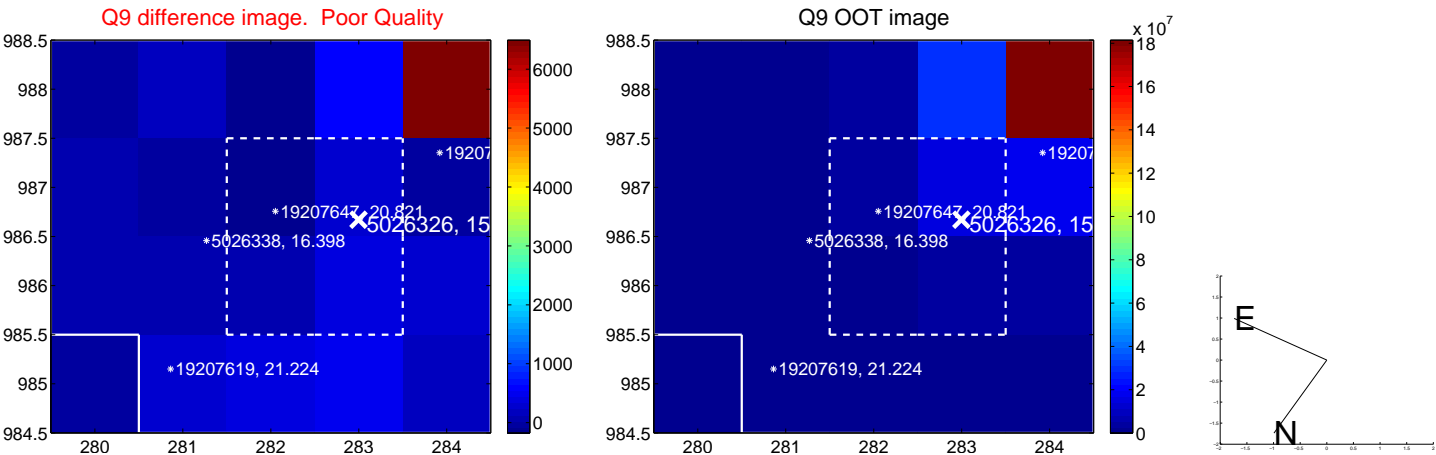
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



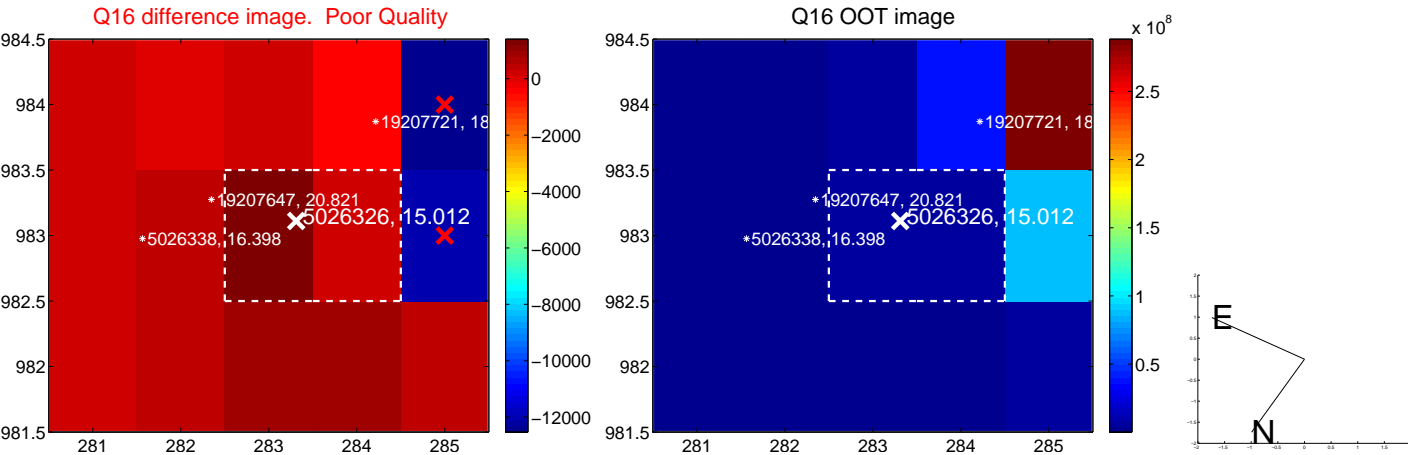
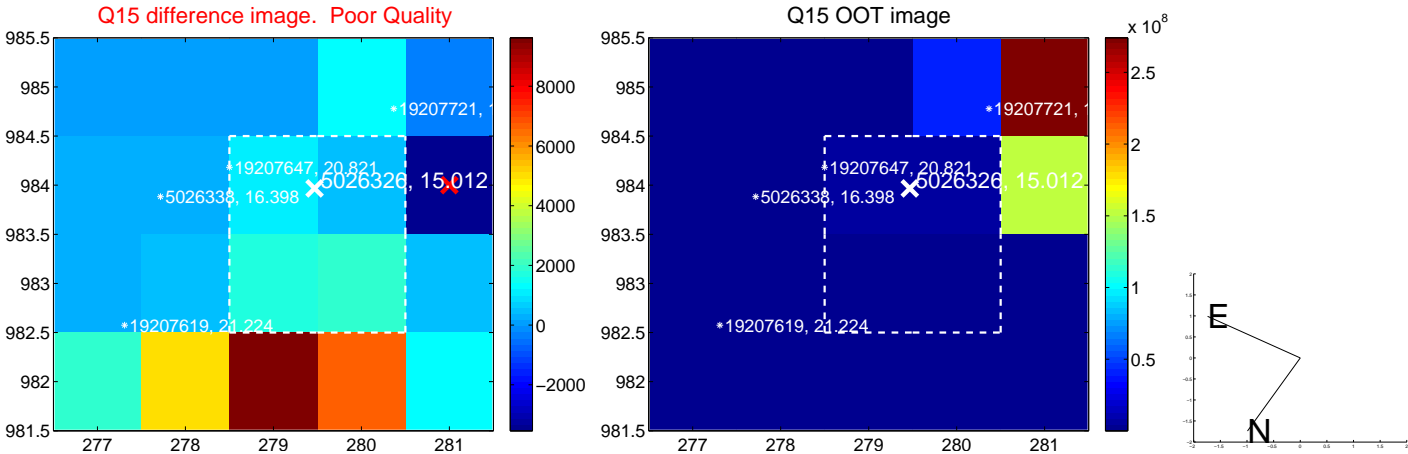
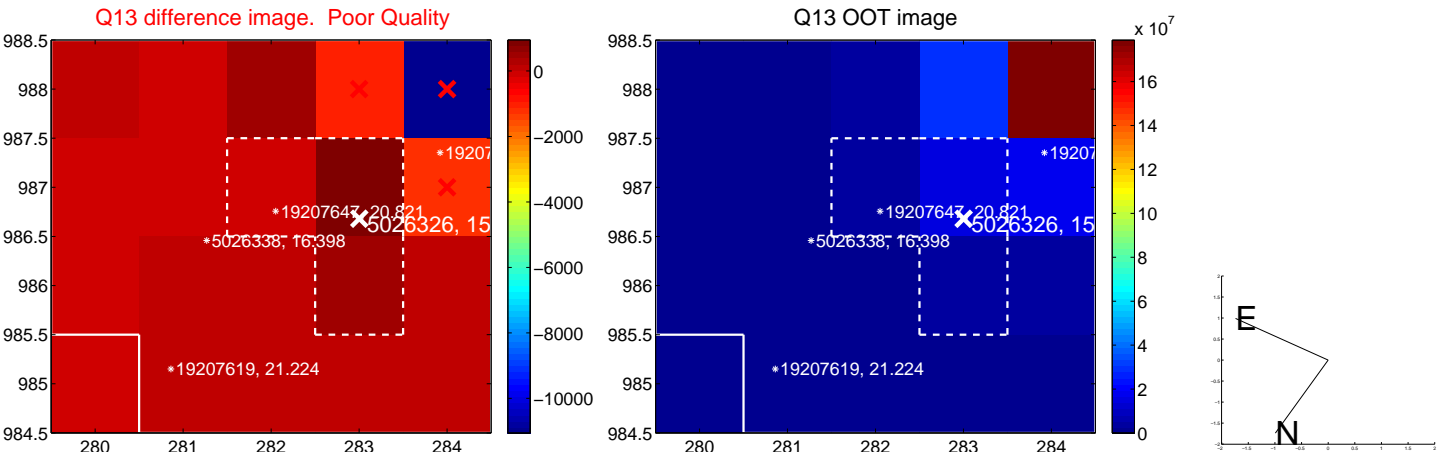
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

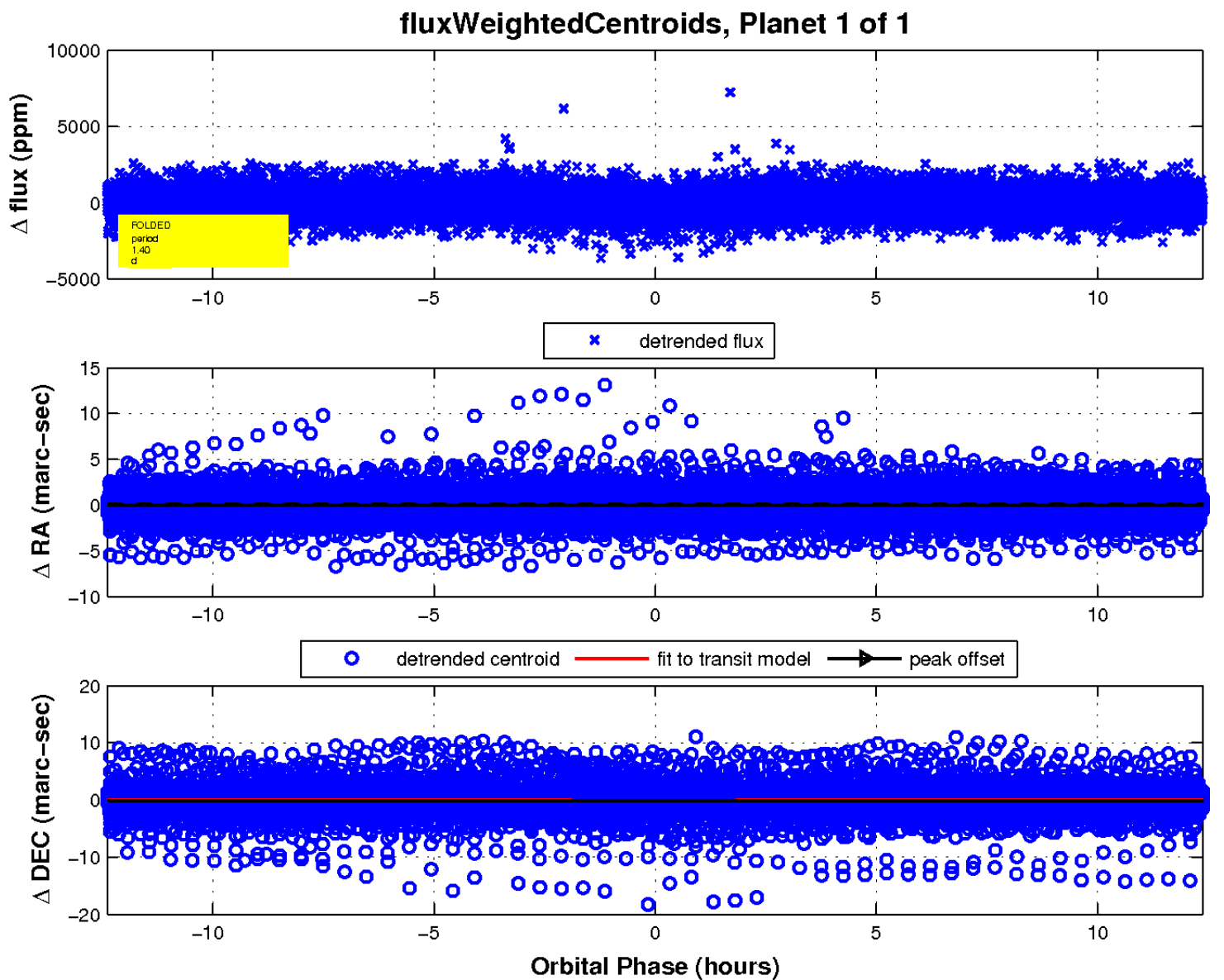
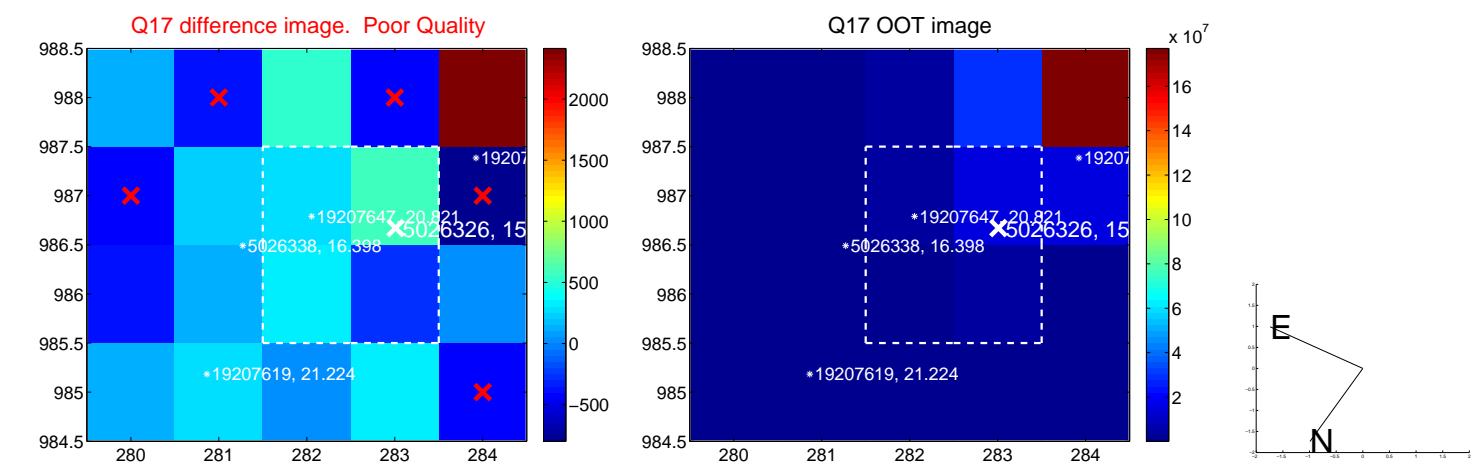


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.





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



UKIRT Image

Declination

