

# KIC 007529266

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007529266-01	OBS	0680.01	8.600153	134.641736	4509.1	9.066	1015.4	978.3	3.91	6093	26.85	1991.67

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007529266-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

**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.

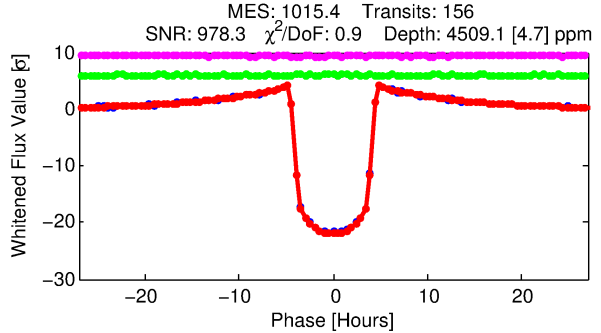
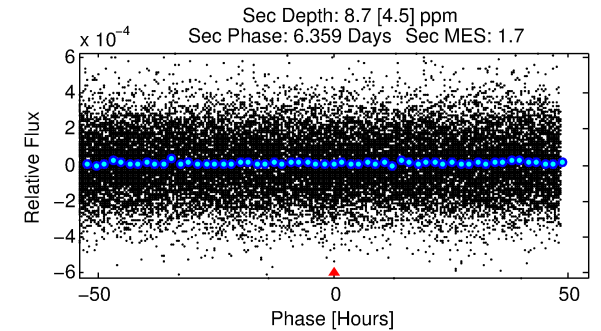
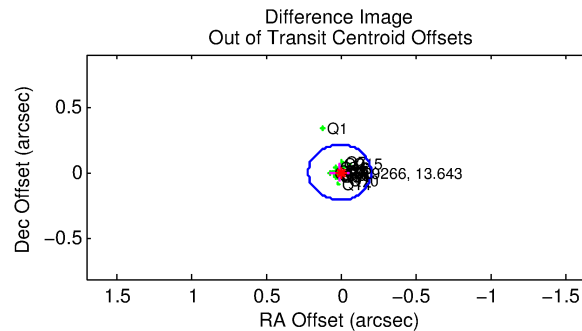
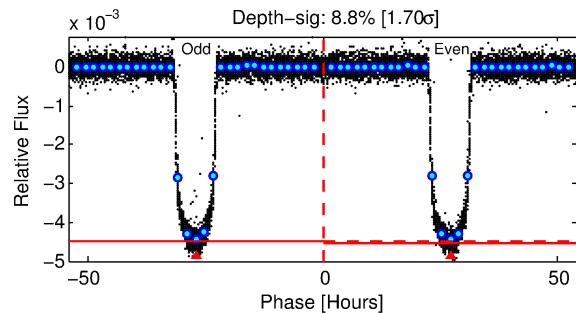
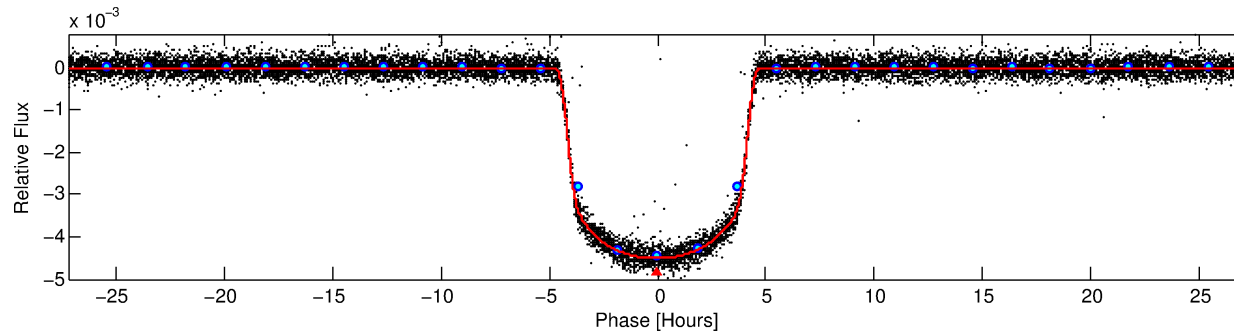
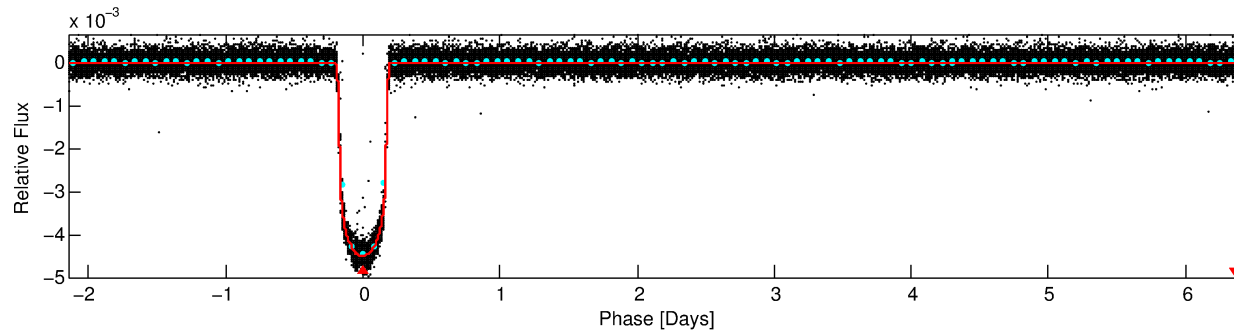
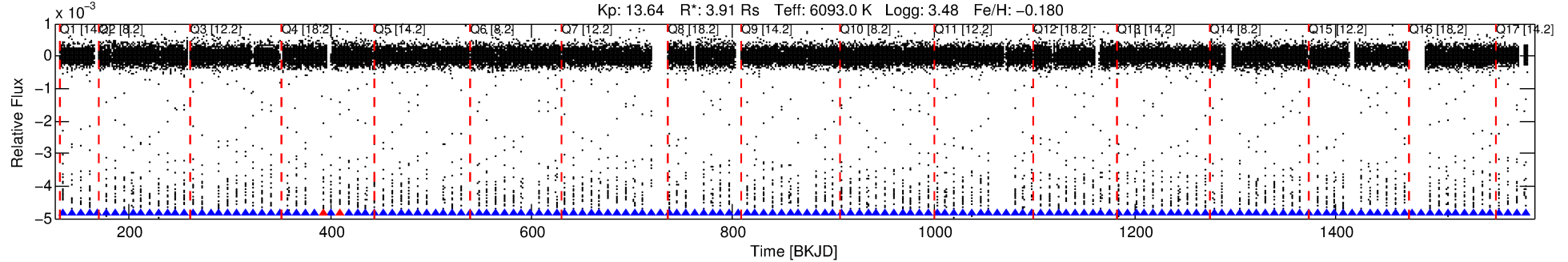
## Ephemeris Match Information For 007529266-01

No Significant Match Found

# DV One-Page Summary

KIC: 7529266 Candidate: 1 of 1 Period: 8.600 d  
KOI: K00680.01 Name: Kepler-435b Corr: 0.997

Kp: 13.64 R\*: 3.91 Rs Teff: 6093.0 K Logg: 3.48 Fe/H: -0.180



## DV Fit Results:

Period = 8.60015 [0.00000] d  
Epoch = 134.6417 [0.0001] BKJD  
Rp/R\* = 0.0629 [0.0001]  
a/R\* = 7.03 [0.08]  
b = 0.45 [0.02]  
Seff = 1991.67 [995.15]  
Teq = 1703 [213] K  
Rp = 26.85 [9.48] Re  
a = 0.0974 [0.0313] AU  
Ag = 0.06 [0.04] [-20.85σ]  
Teff = 1320 [170] K [-1.41σ]

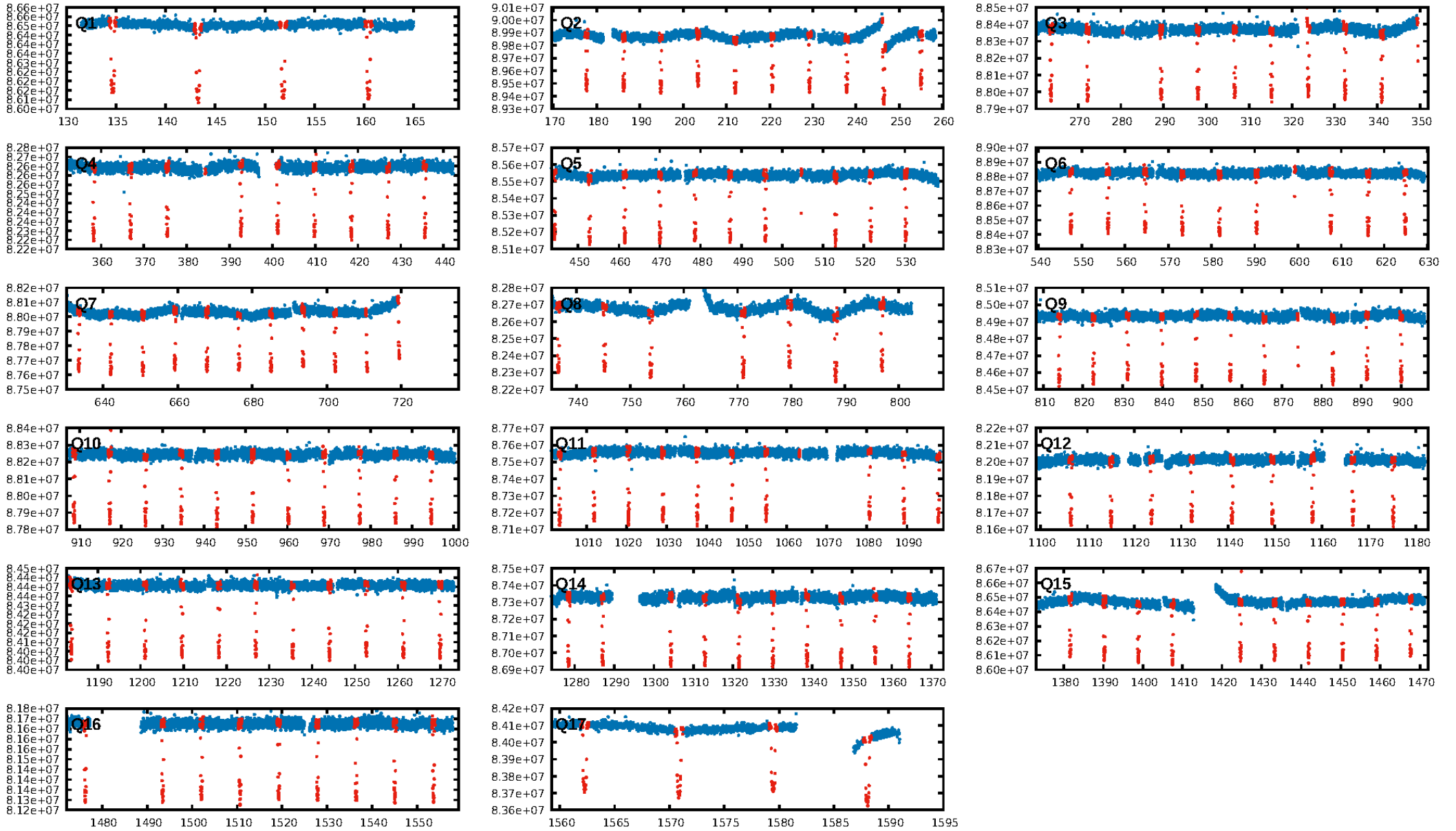
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 0.0%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: 0.00e+00  
RollingBand-fgt: 0.99 [146/148]  
GhostDiagnostic-chr: 7.078  
Centroid-sig: 0.1%  
Centroid-so: 0.070 arcsec [6.73σ]  
OotOffset-rm: 0.009 arcsec [0.12σ]  
KicOffset-rm: 0.016 arcsec [0.23σ]  
OotOffset-st: 4/4/4/5 [17]  
KicOffset-st: 4/4/4/5 [17]  
DiffImageQuality-fgm: 1.00 [17/17]  
DiffImageOverlap-fno: 1.00 [17/17]

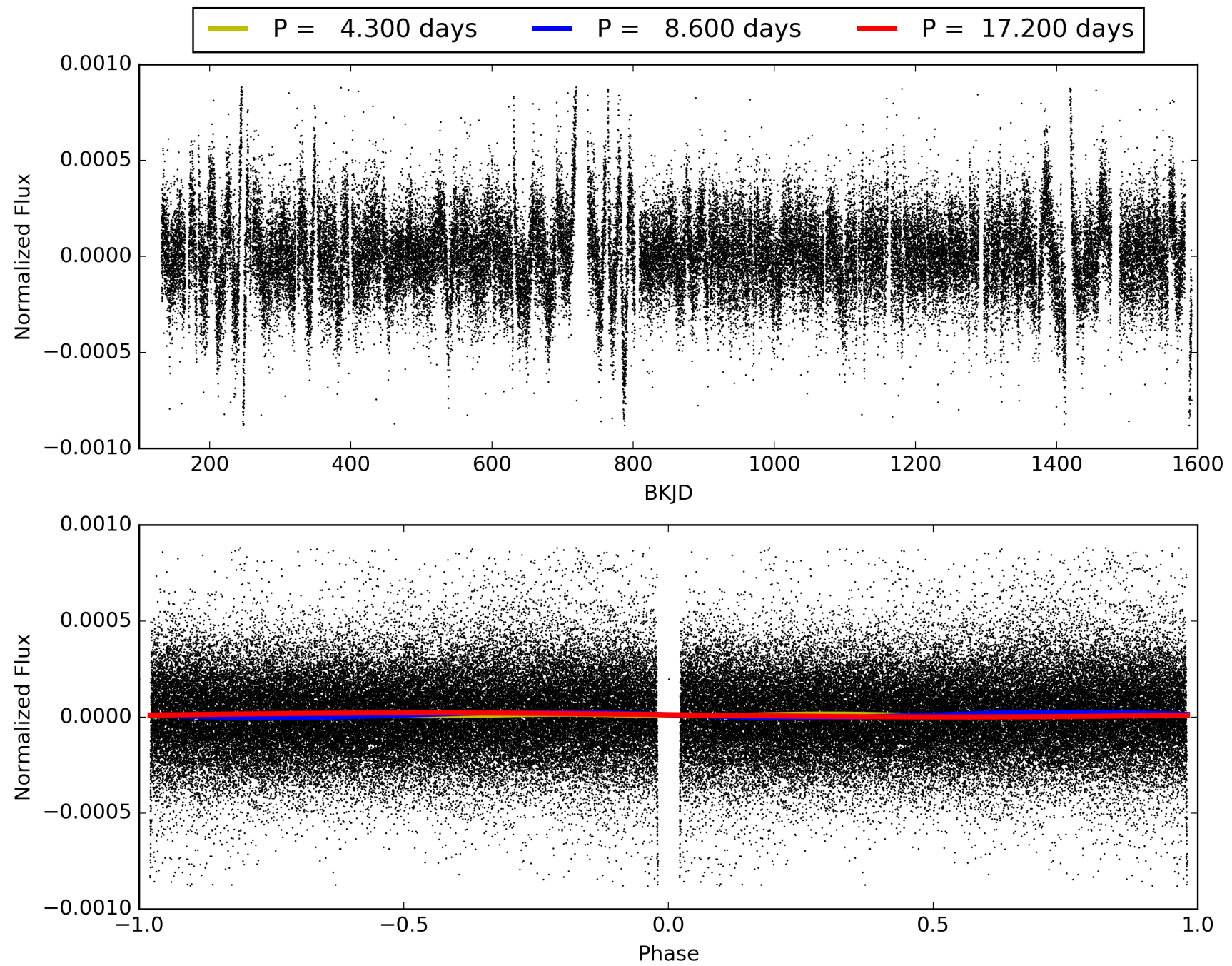
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 11:11:04 Z

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

# TCE 007529266-01, PDC Light Curves

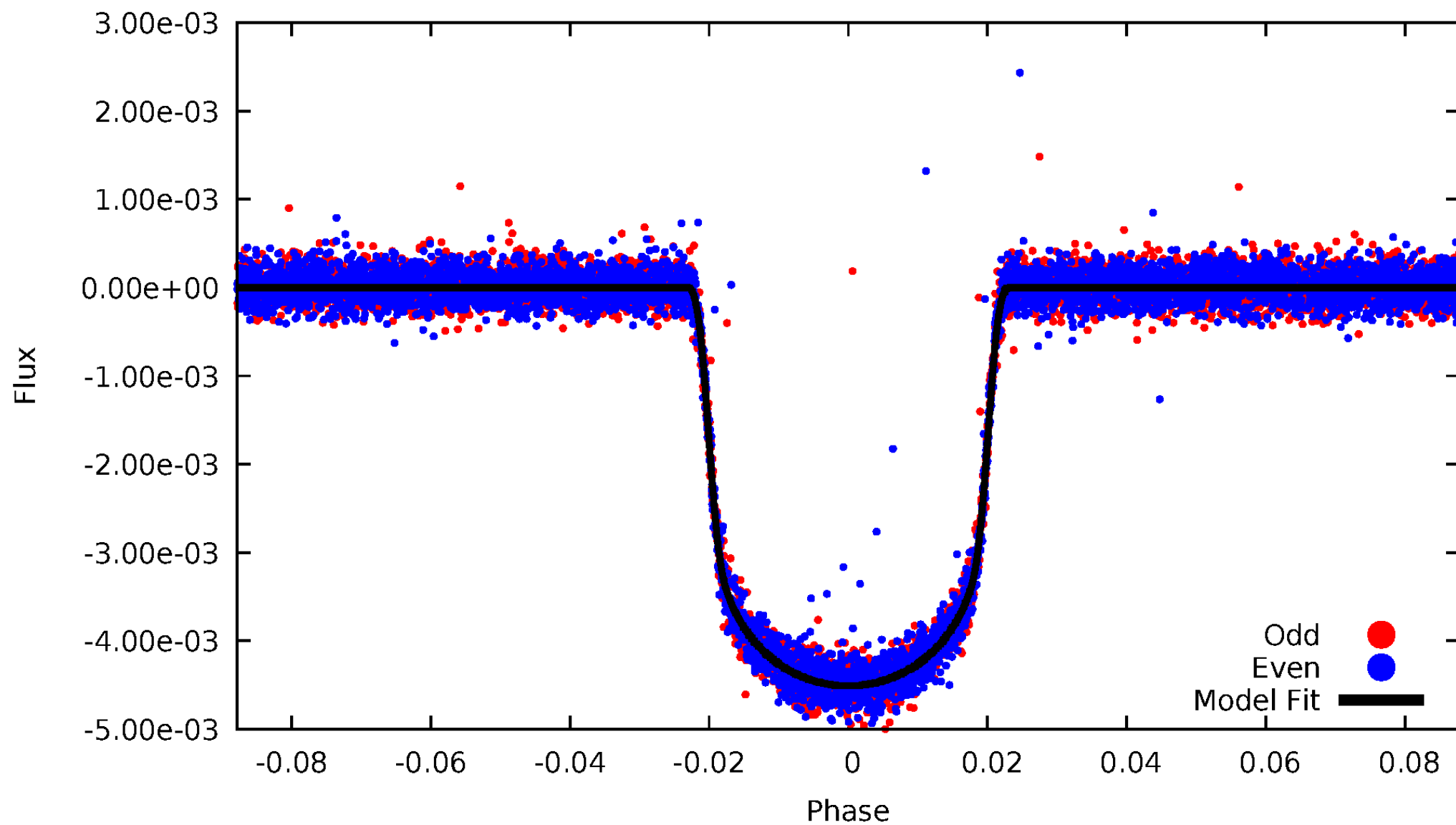


TCE 007529266-01



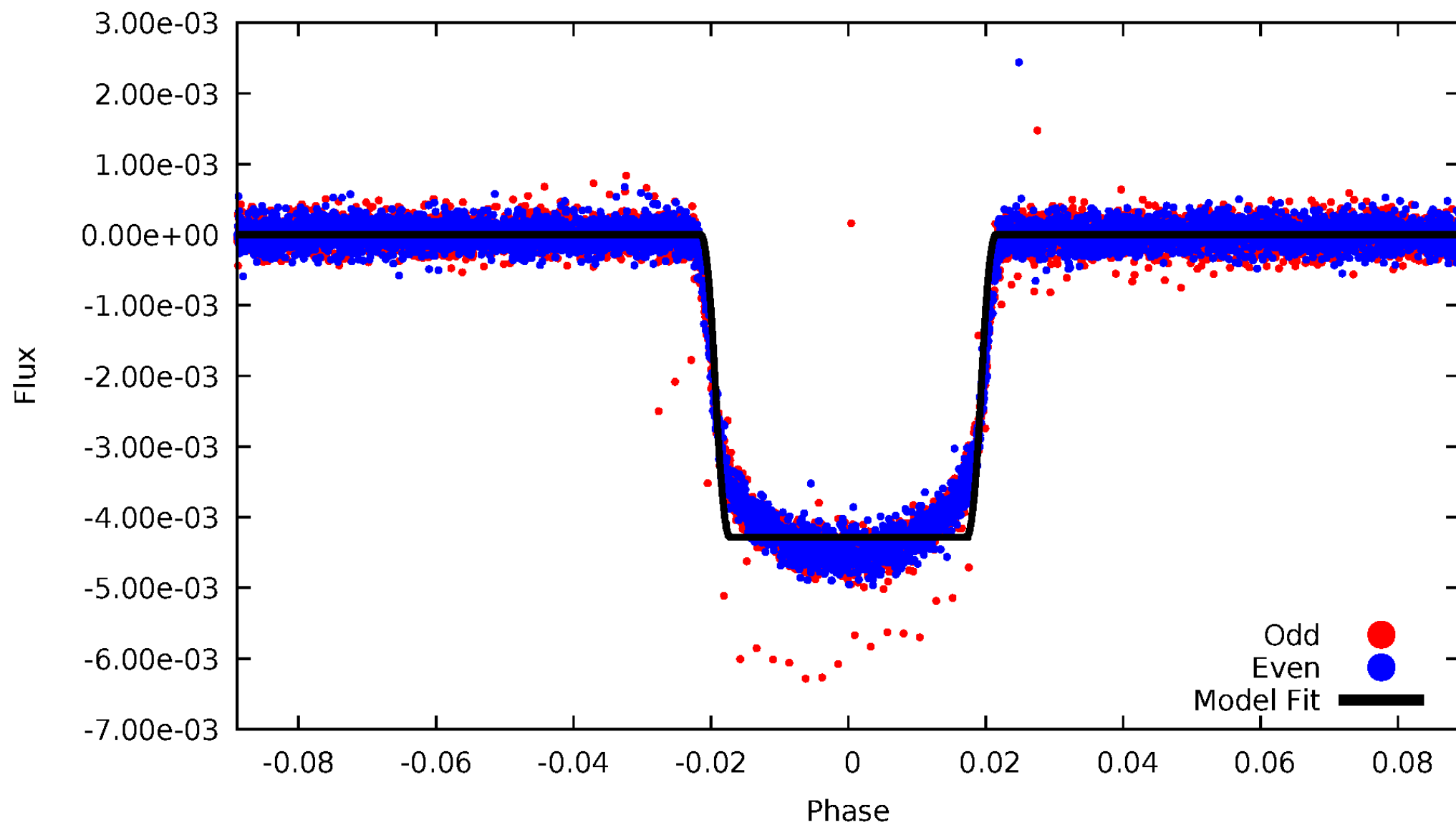
# DV Odd/Even

TCE 007529266-01



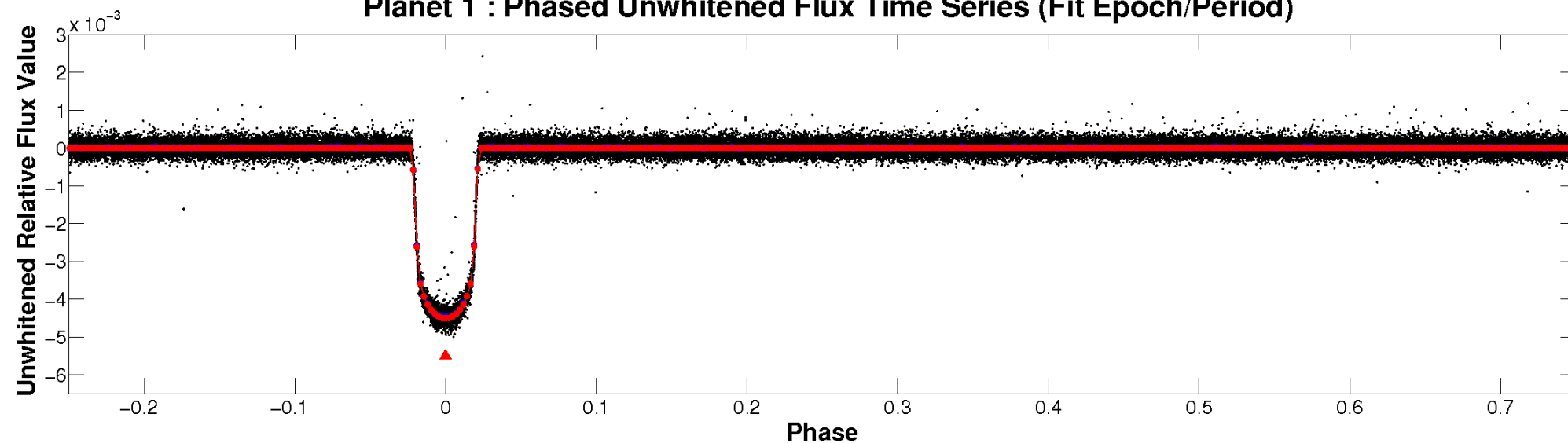
# ALT Odd/Even

TCE 007529266-01

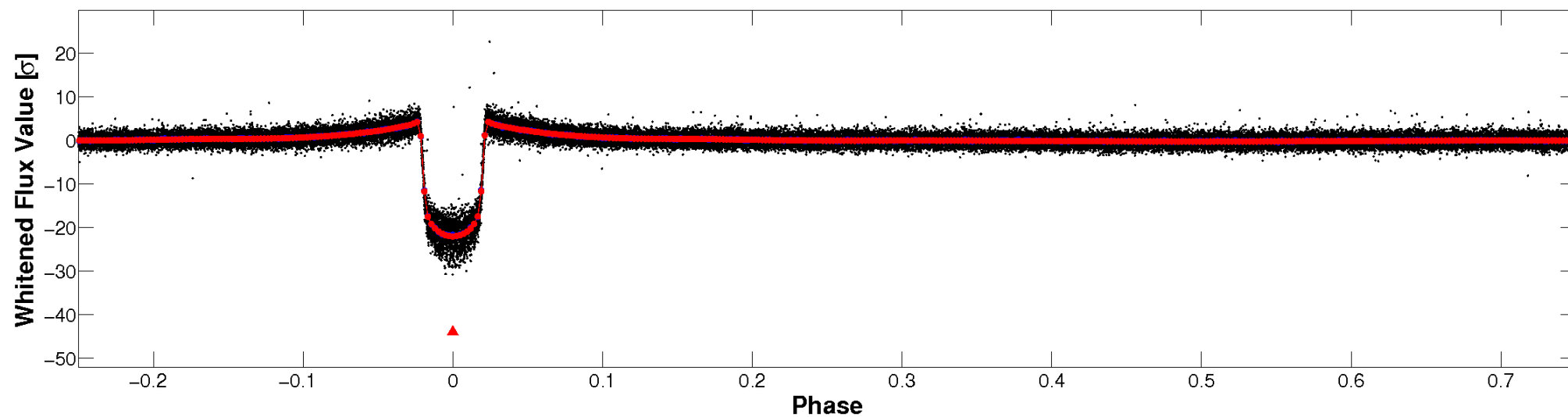


# Non-Whitened Vs. Whitened Light Curve

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

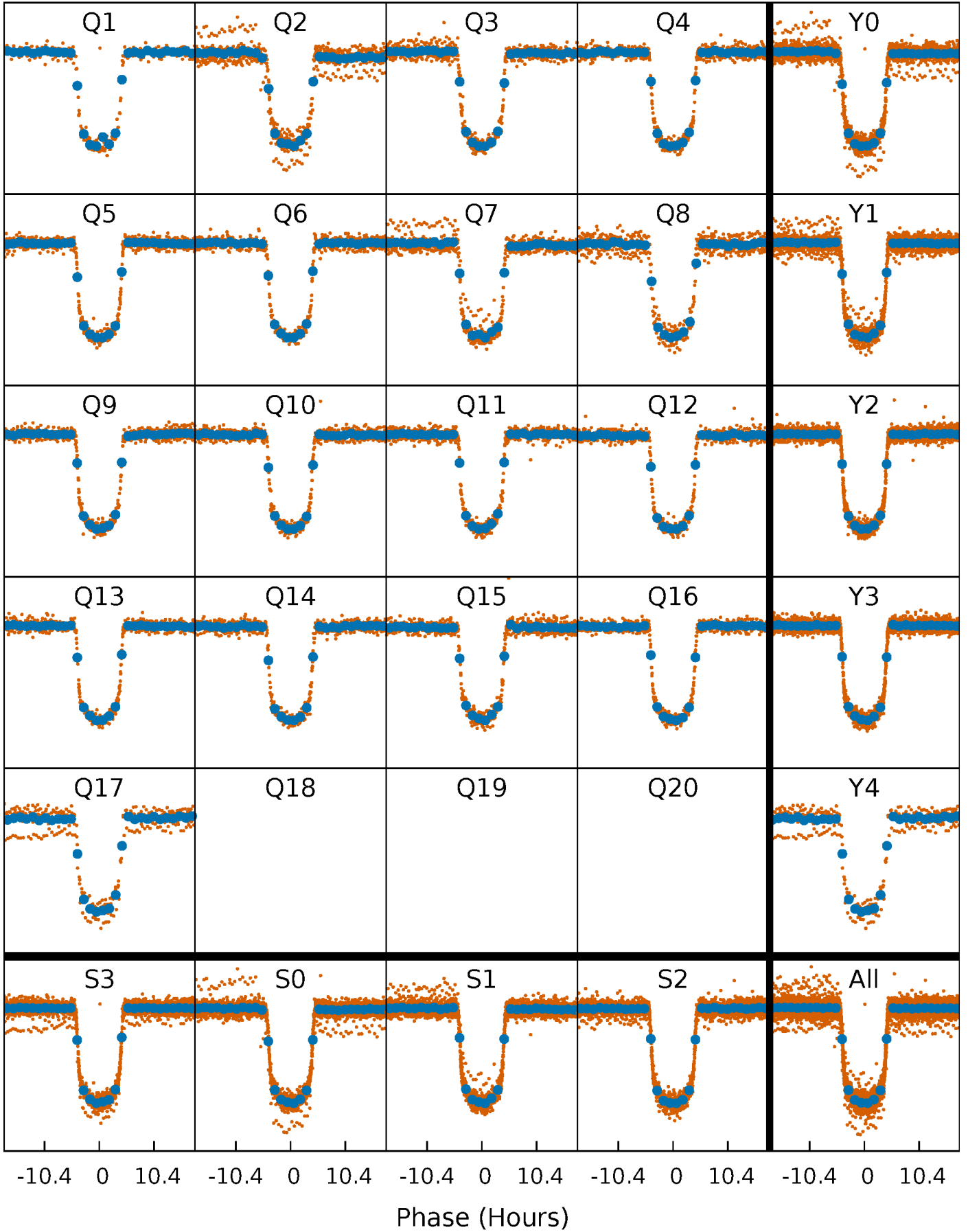


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

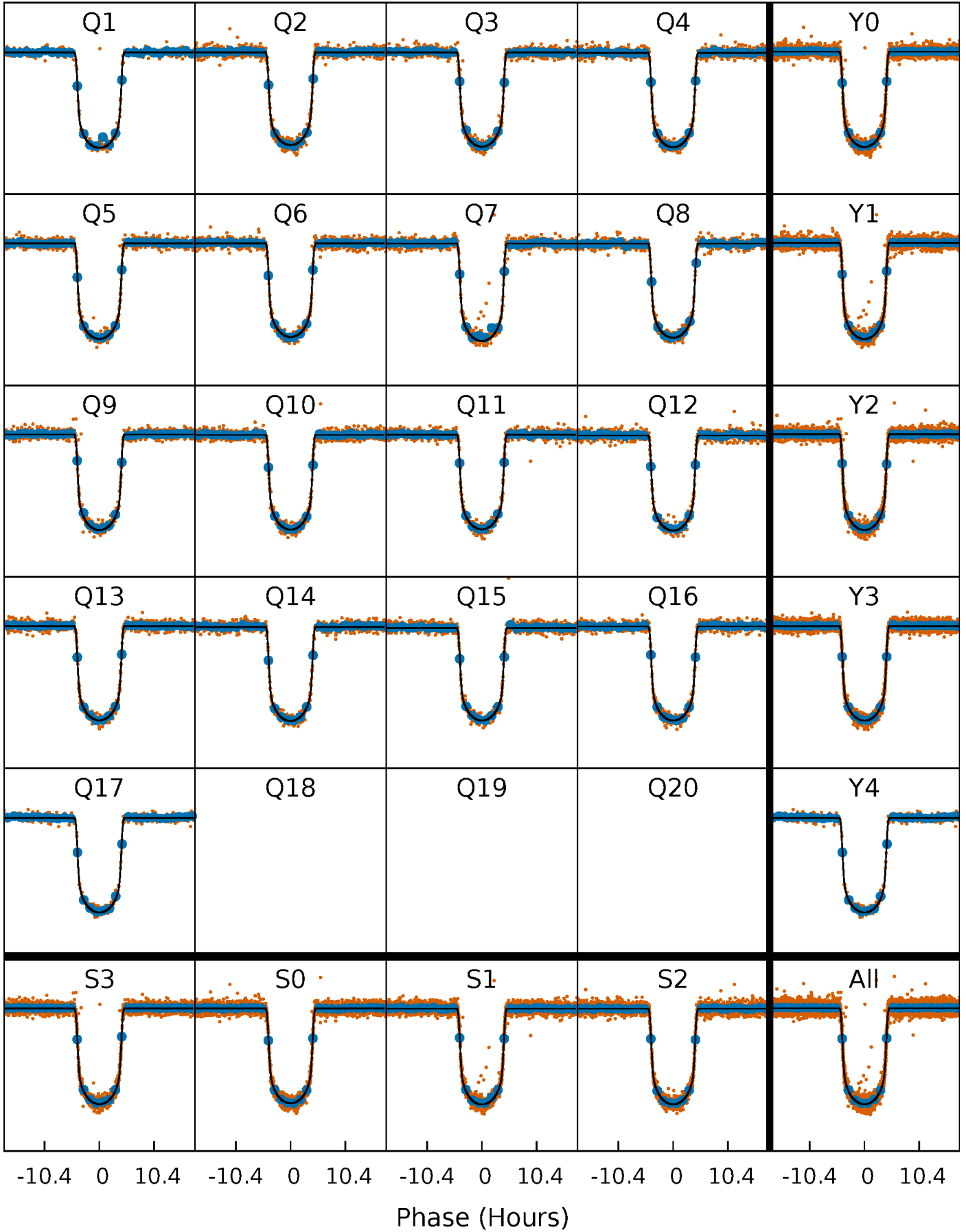
TCE 007529266-01   P= 8.600153 Days    $T_0=134.641736$  (BKJD)





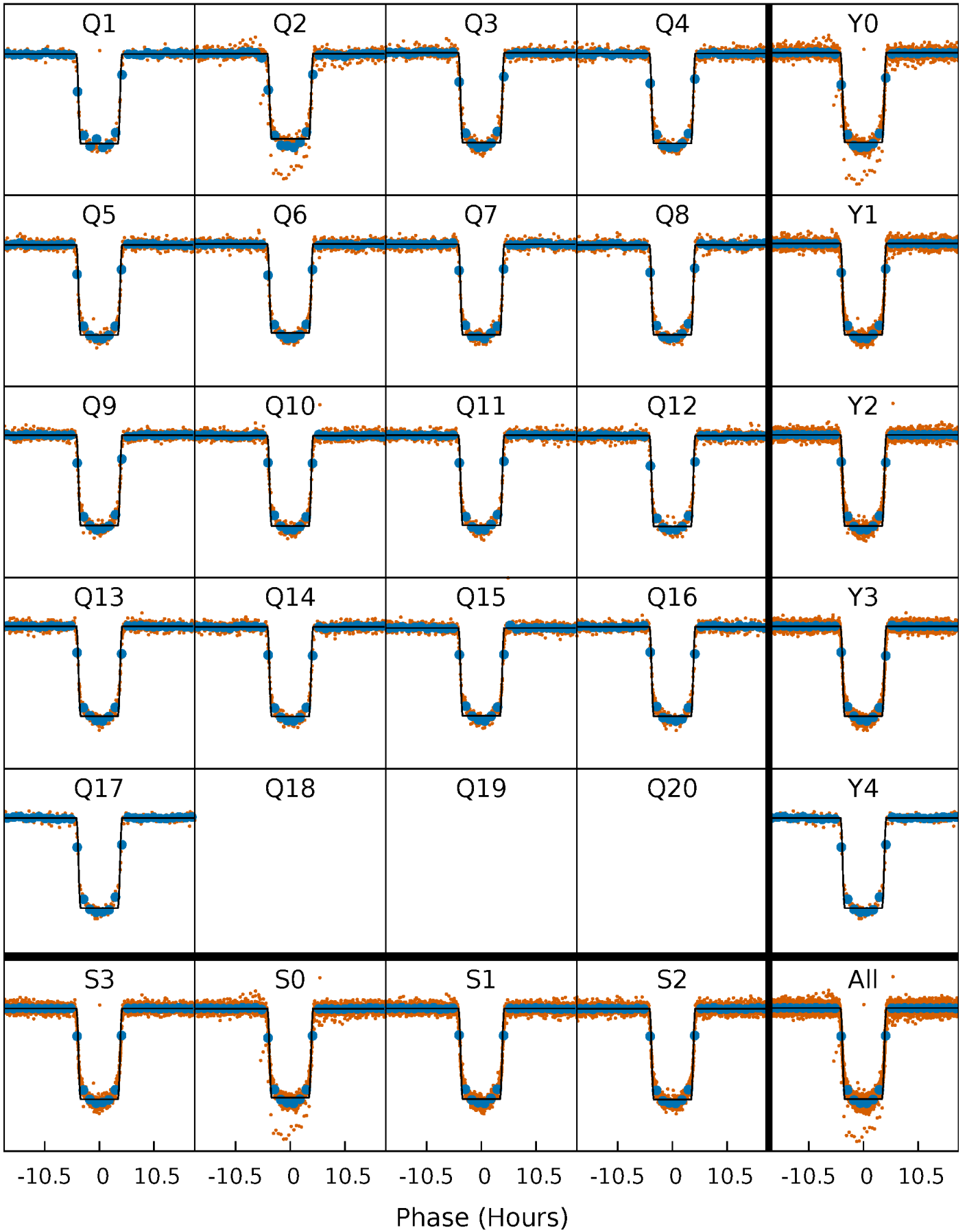
# DV Quarter-Phased Transit Curves

TCE 007529266-01 P= 8.600153 Days  $T_0=134.641736$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

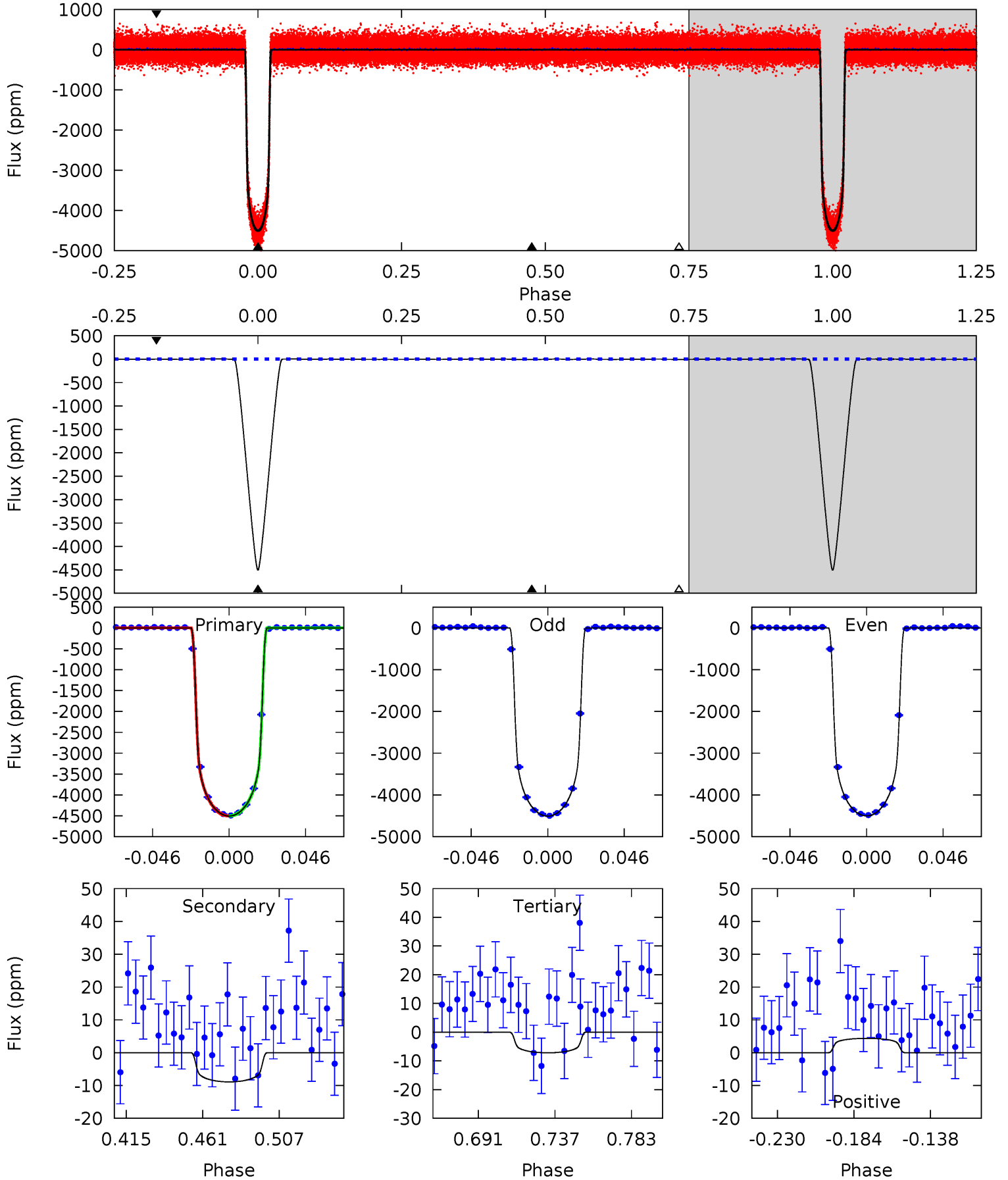
TCE 007529266-01 P= 8.600132 Days  $T_0=134.643448$  (BKJD)



# DV Model-Shift Uniqueness Test

007529266-01, P = 8.600153 Days, E = 126.041583 Days

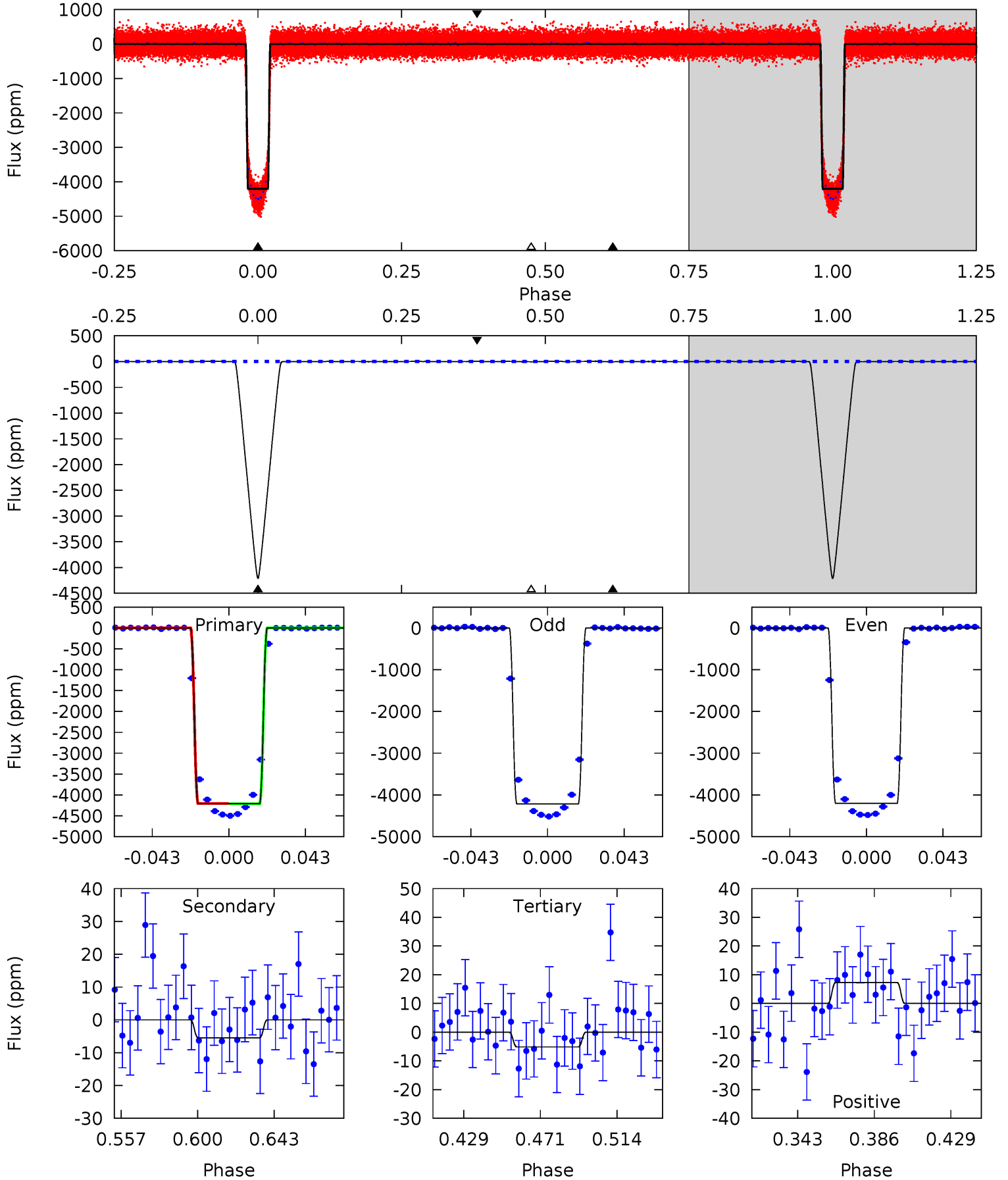
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1504	2.97	2.40	1.46	4.72	1.99	1.15	1501	1502	0.57	1.51	1.19	0.97	0.00	0.08



# Alt Model-Shift Uniqueness Test

007529266-01, P = 8.600132 Days, E = 126.043316 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
1376	1.79	1.68	2.39	4.74	2.03	0.84	1374	1373	0.11	-0.60	1.77	1.00	0.00	0.65



### Stellar Parameters For KIC 007529266

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6093^{+82}_{-82}$	$3.475^{+0.285}_{-0.095}$	$-0.180^{+0.150}_{-0.150}$	$3.913^{+0.531}_{-1.381}$	$1.667^{+0.150}_{-0.351}$	$0.039^{+0.081}_{-0.012}$
	+1%/-1%	+8%/-3%	+83%/-83%	+14%/-35%	+9%/-21%	+206%/-31%
Source	SPE76	SPE76	SPE76	DSEP		

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

### Secondary Eclipse Parameters for KIC 007529266-01 / KOI 0680.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-9 \pm 3$	$26.52^{+2.45}_{-5.24}$	$2359^{+106}_{-221}$	$-2623^{+168}_{-84}$	$0.068^{+0.037}_{-0.024}$
Alt.	$-5 \pm 3$	$27.93^{+2.33}_{-5.22}$	$2354^{+117}_{-182}$	$-2662^{+125}_{-82}$	$0.039^{+0.028}_{-0.023}$

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

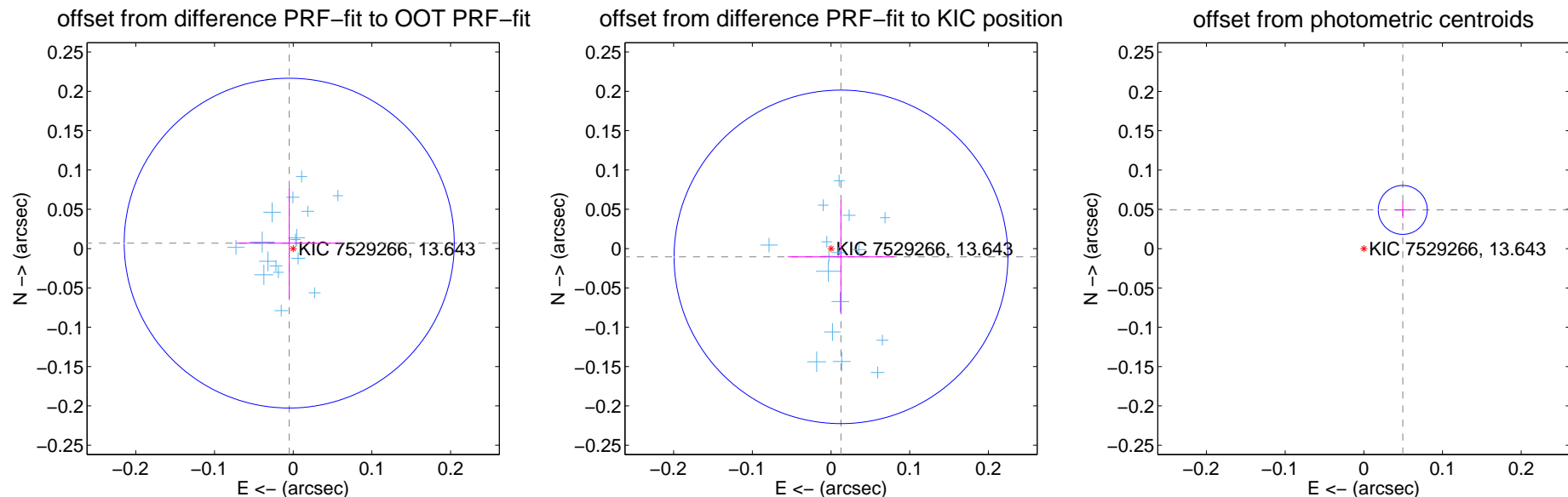
## DV Centroid Data

Supplemental centroid analysis for 007529266-01. Kepler magnitude: 13.64. Transit SNR 978.32

There are 17 quarters with good PRF difference image offsets

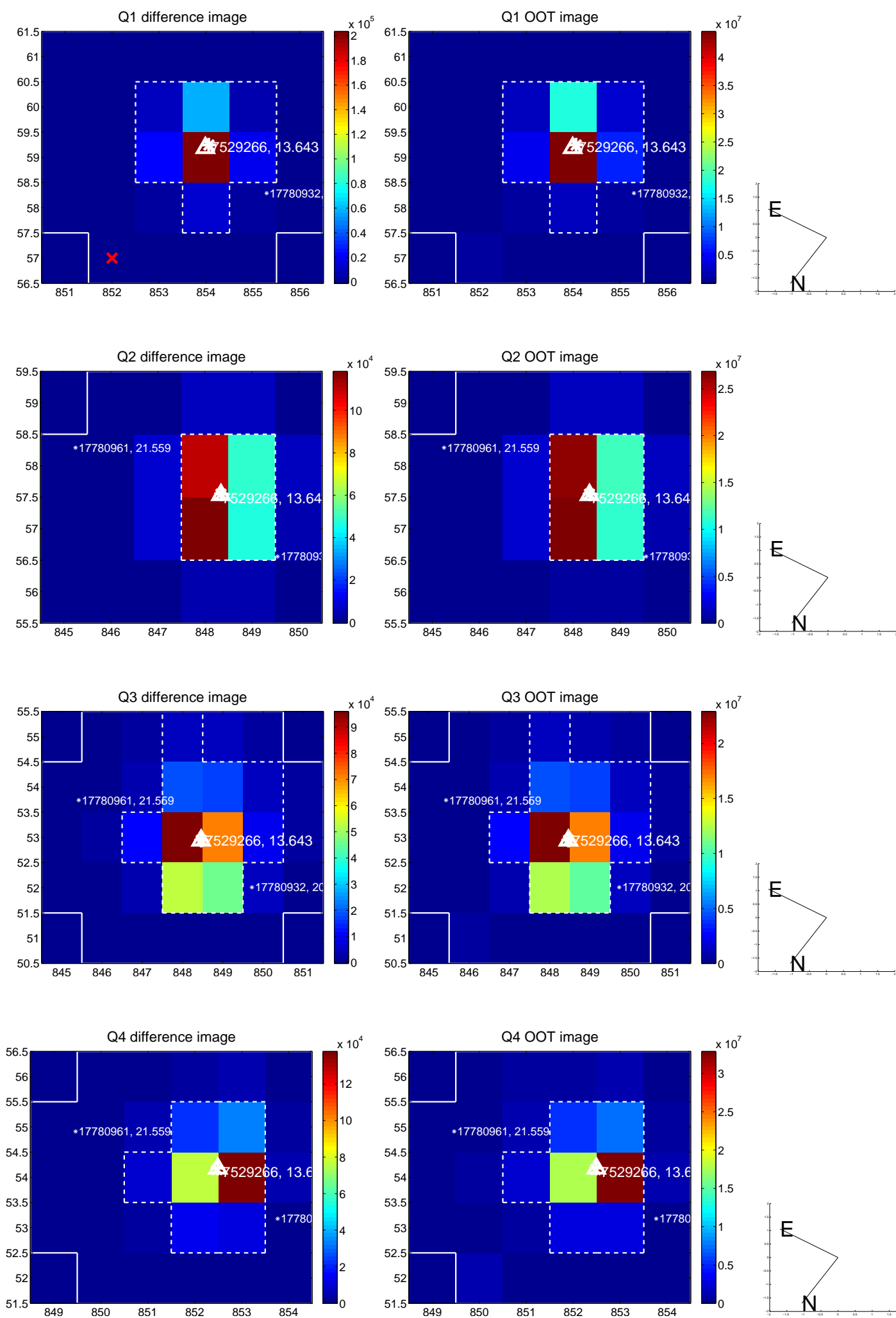
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.009 \pm 0.070$	0.12	$0.005 \pm 0.067$	$0.007 \pm 0.070$
PRF-fit source offset from KIC position	$0.016 \pm 0.071$	0.23	$-0.013 \pm 0.068$	$-0.011 \pm 0.072$
photometric centroid source offset	$0.07 \pm 0.01$	6.73	$-0.05 \pm 0.01$	$0.05 \pm 0.01$

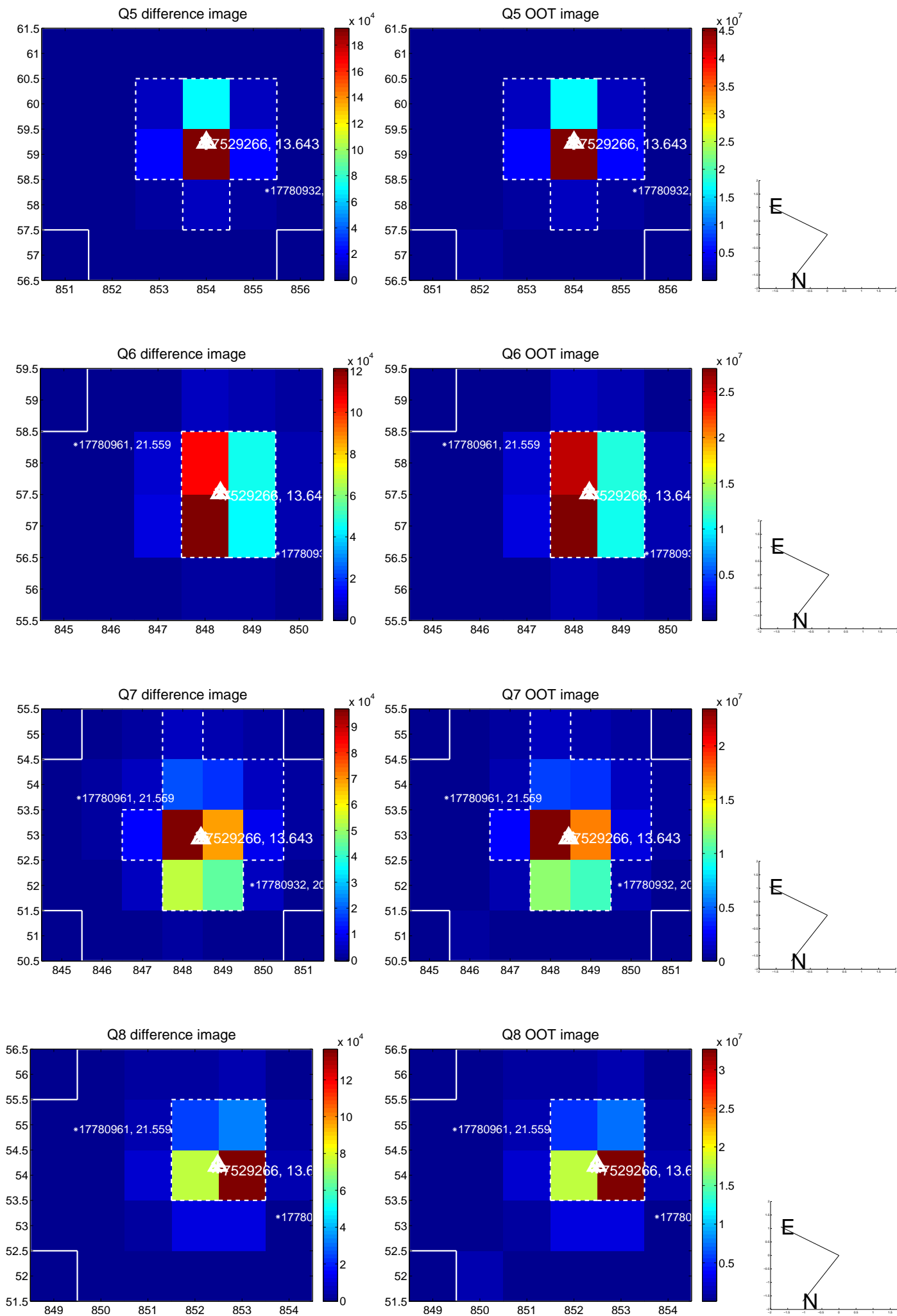


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

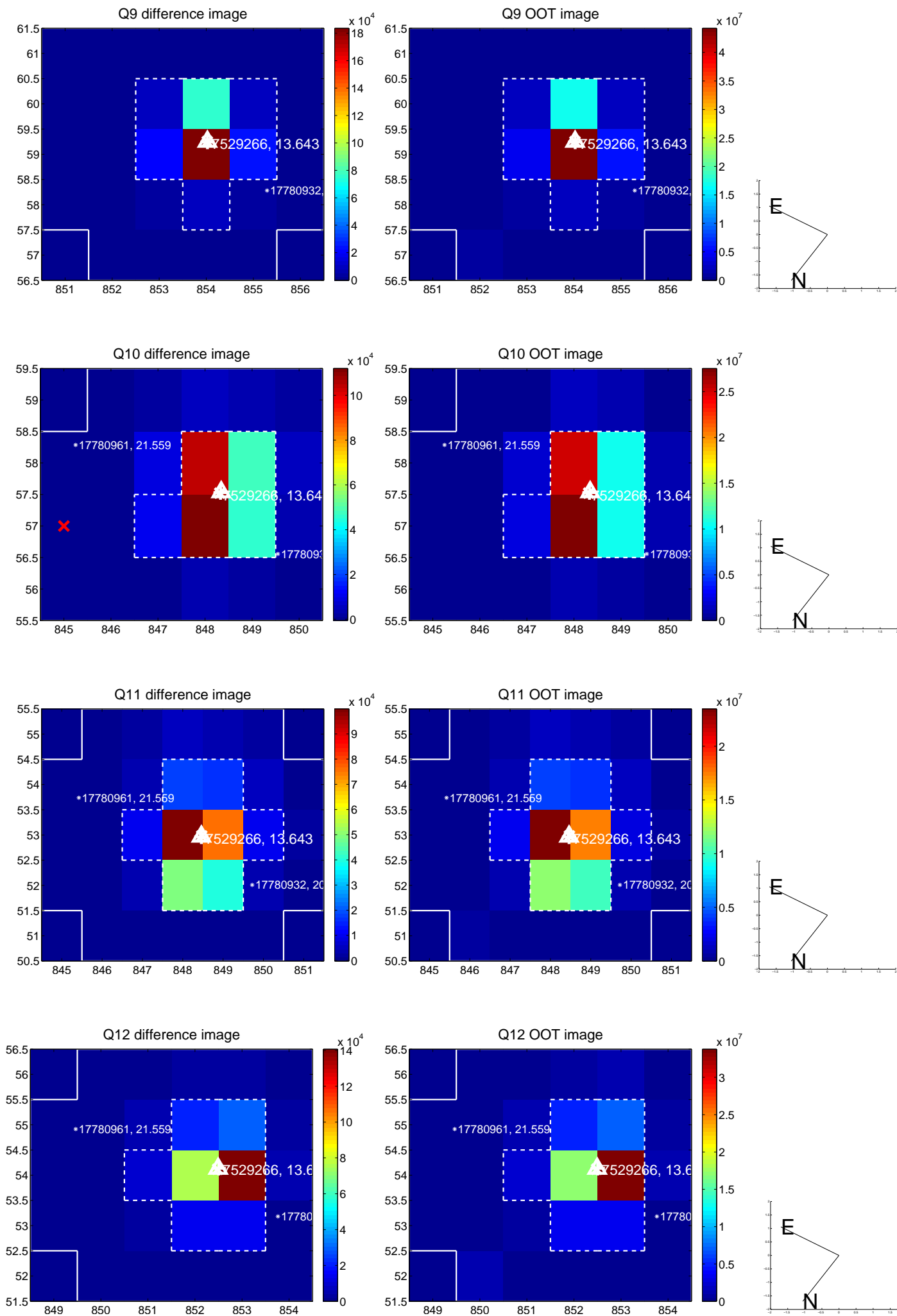


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

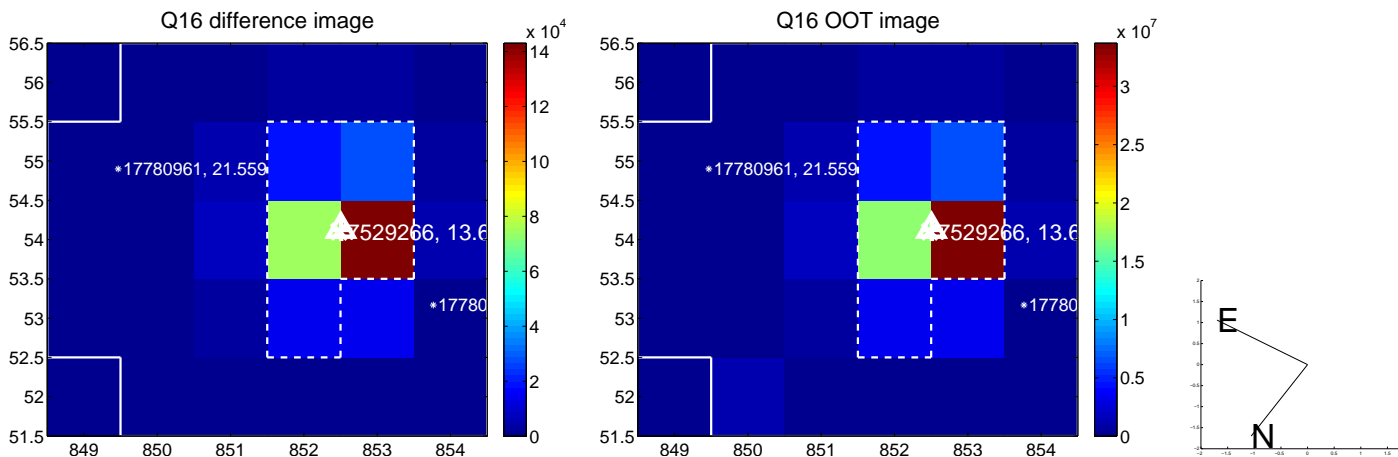
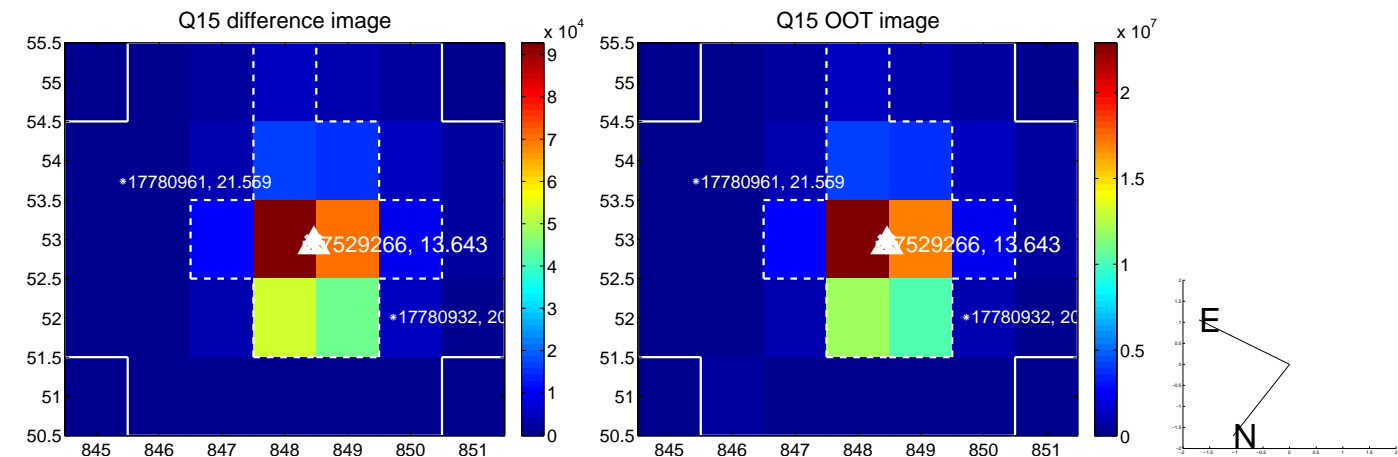
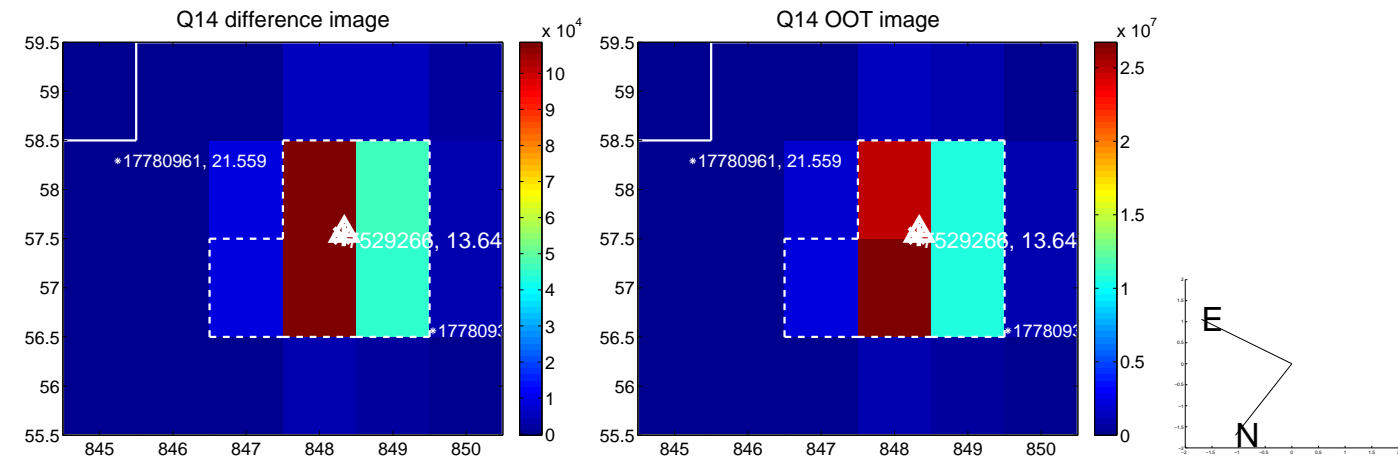
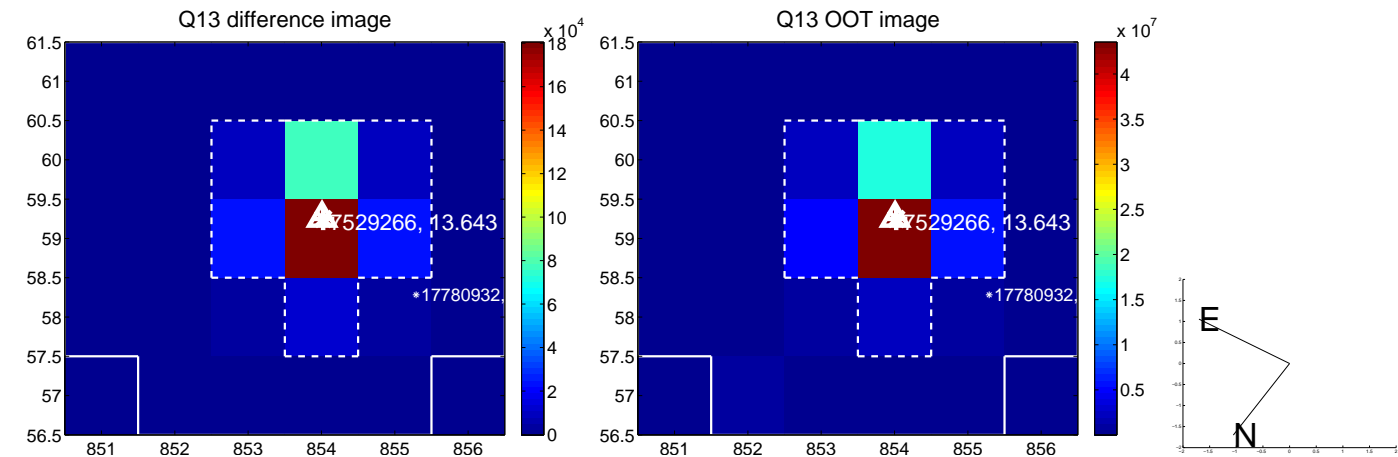




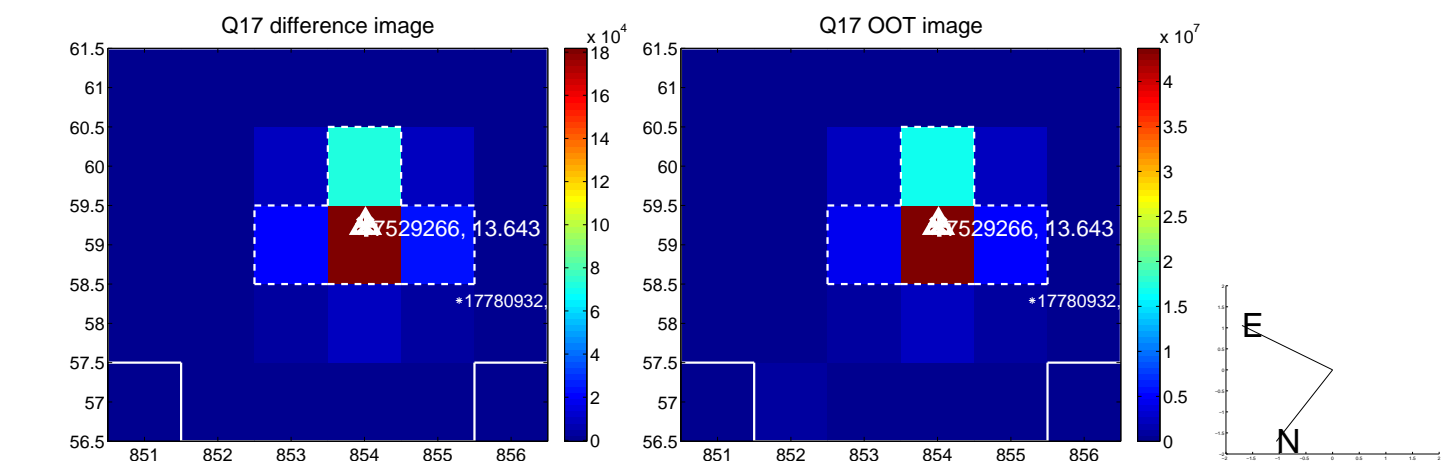
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



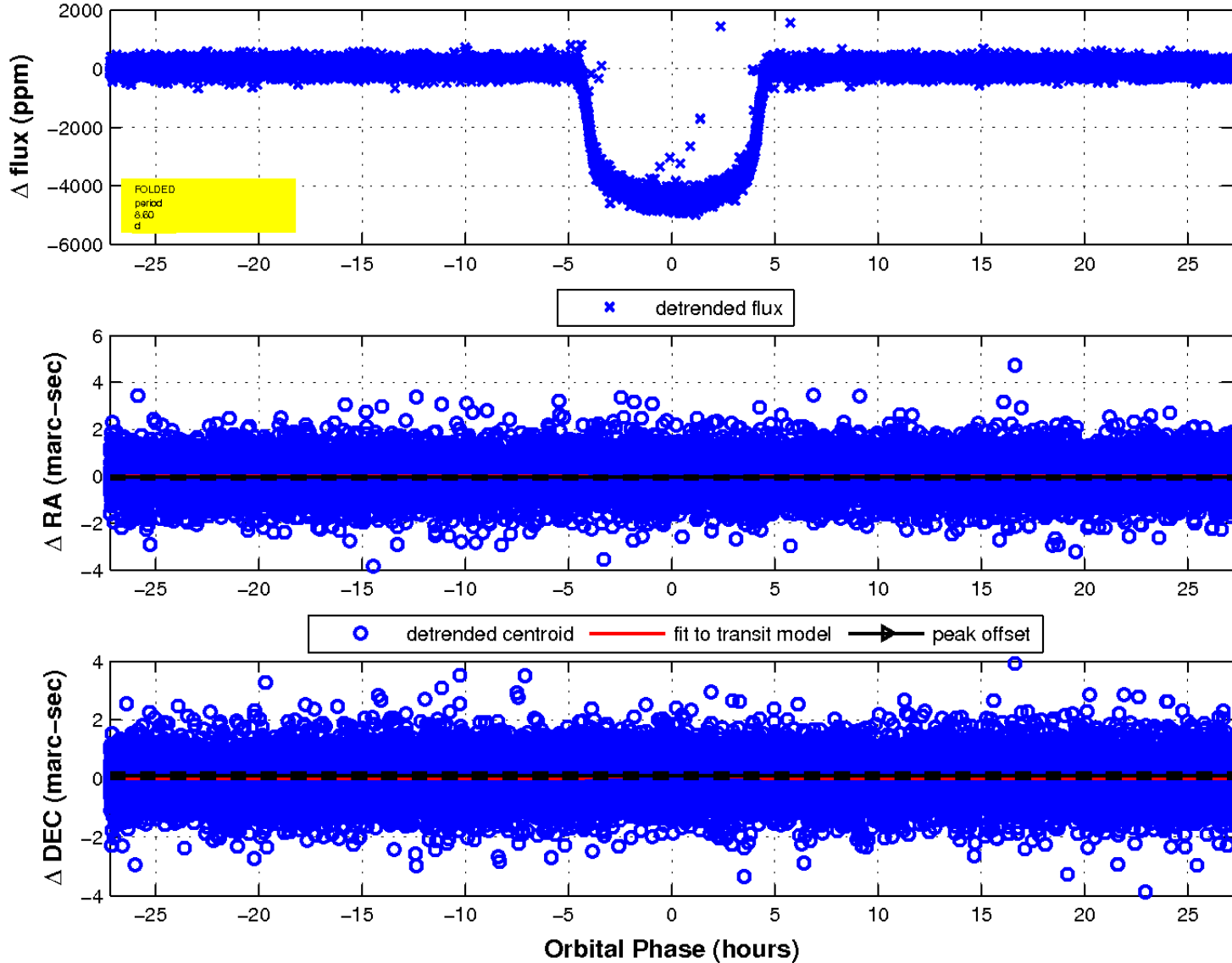
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white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

