

# KIC 005302889

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
005302889-01	OBS	No	0.554945	131.760348	123.3	1.036	7.6	12.8	1.01	6363	1.32	8241.30

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005302889-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET

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

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

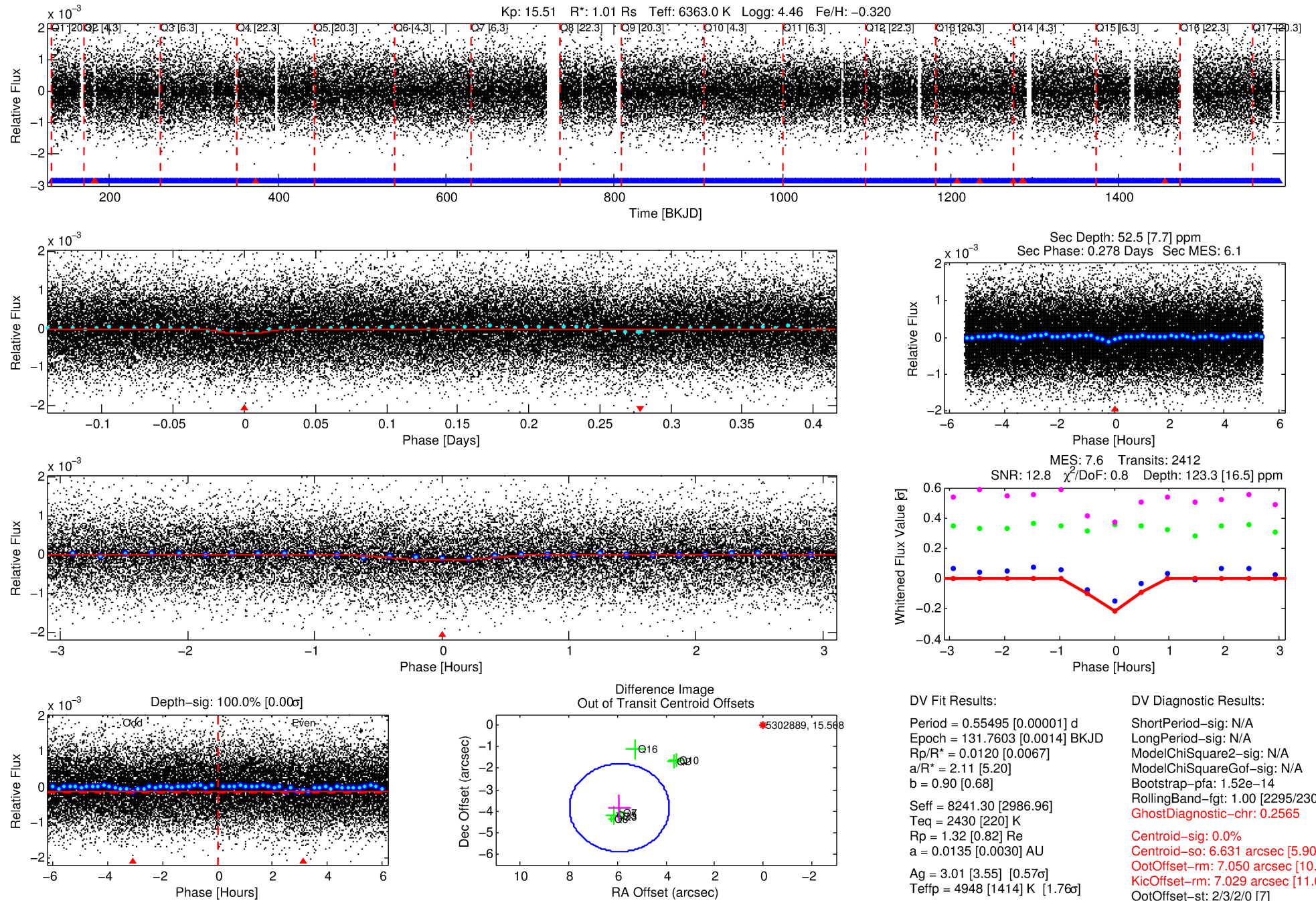
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 005302889-01

No Significant Match Found

# DV One-Page Summary

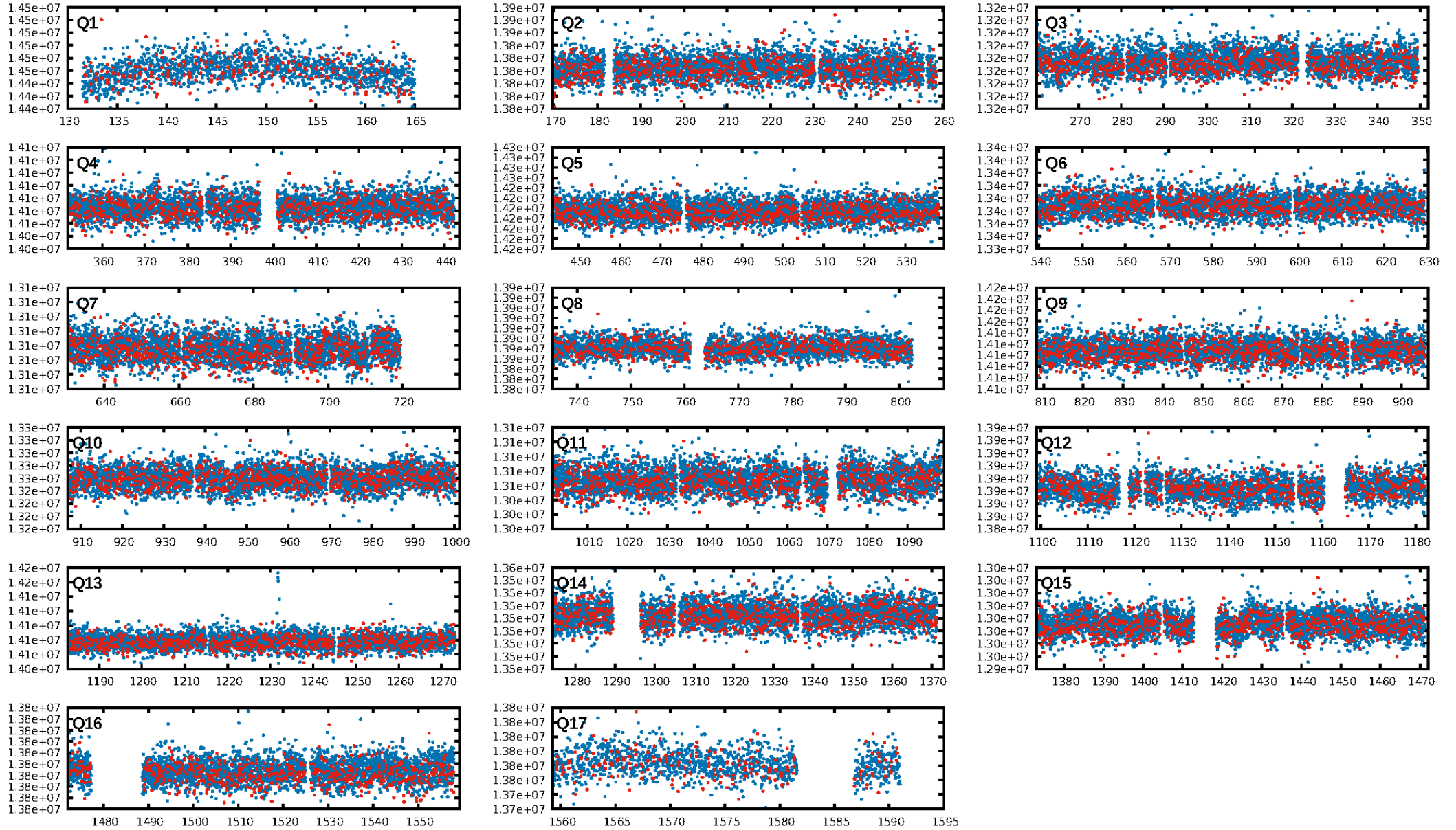
KIC: 5302889 Candidate: 1 of 1 Period: 0.555 d



Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 14:34:21 Z

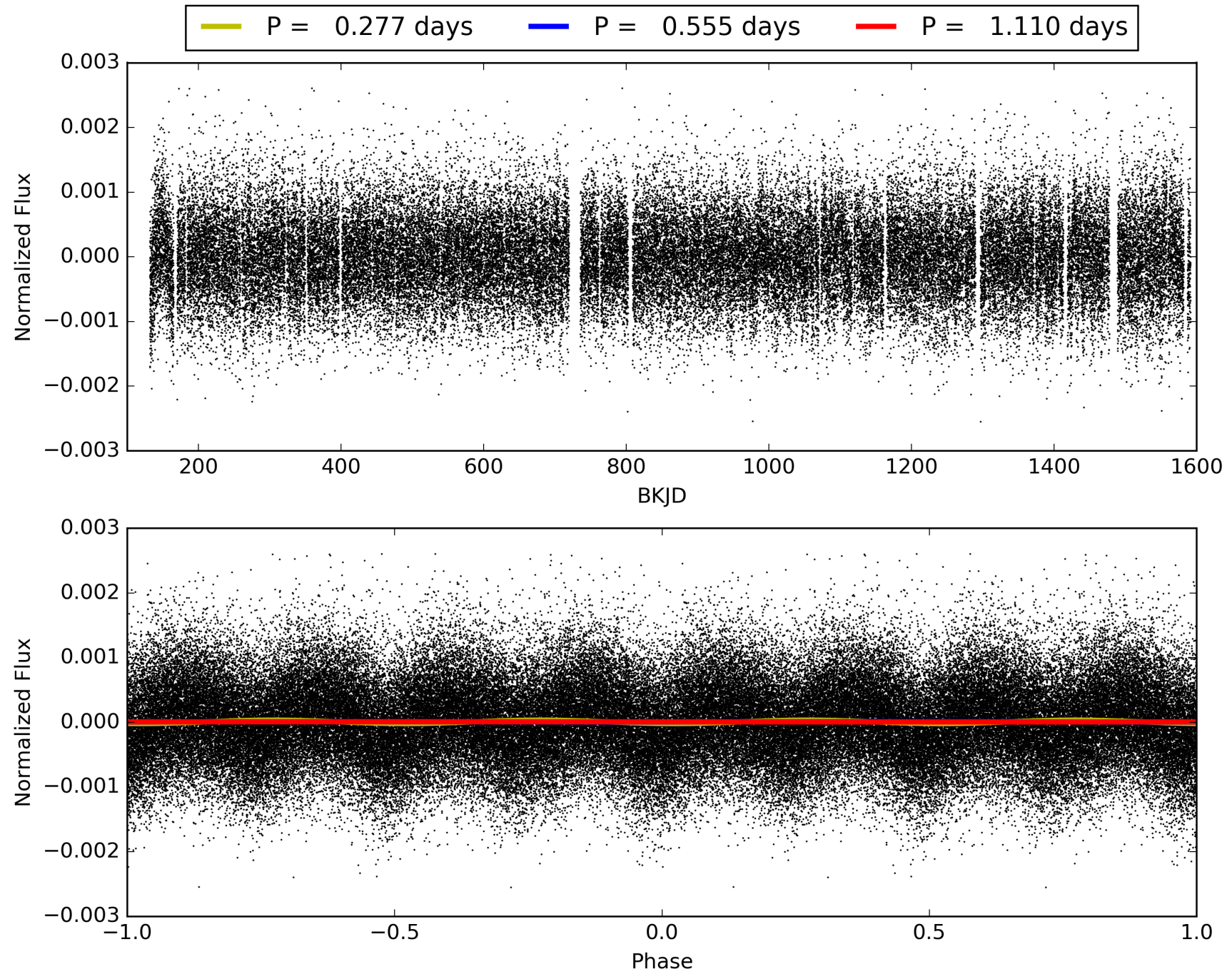
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 005302889-01, PDC Light Curves



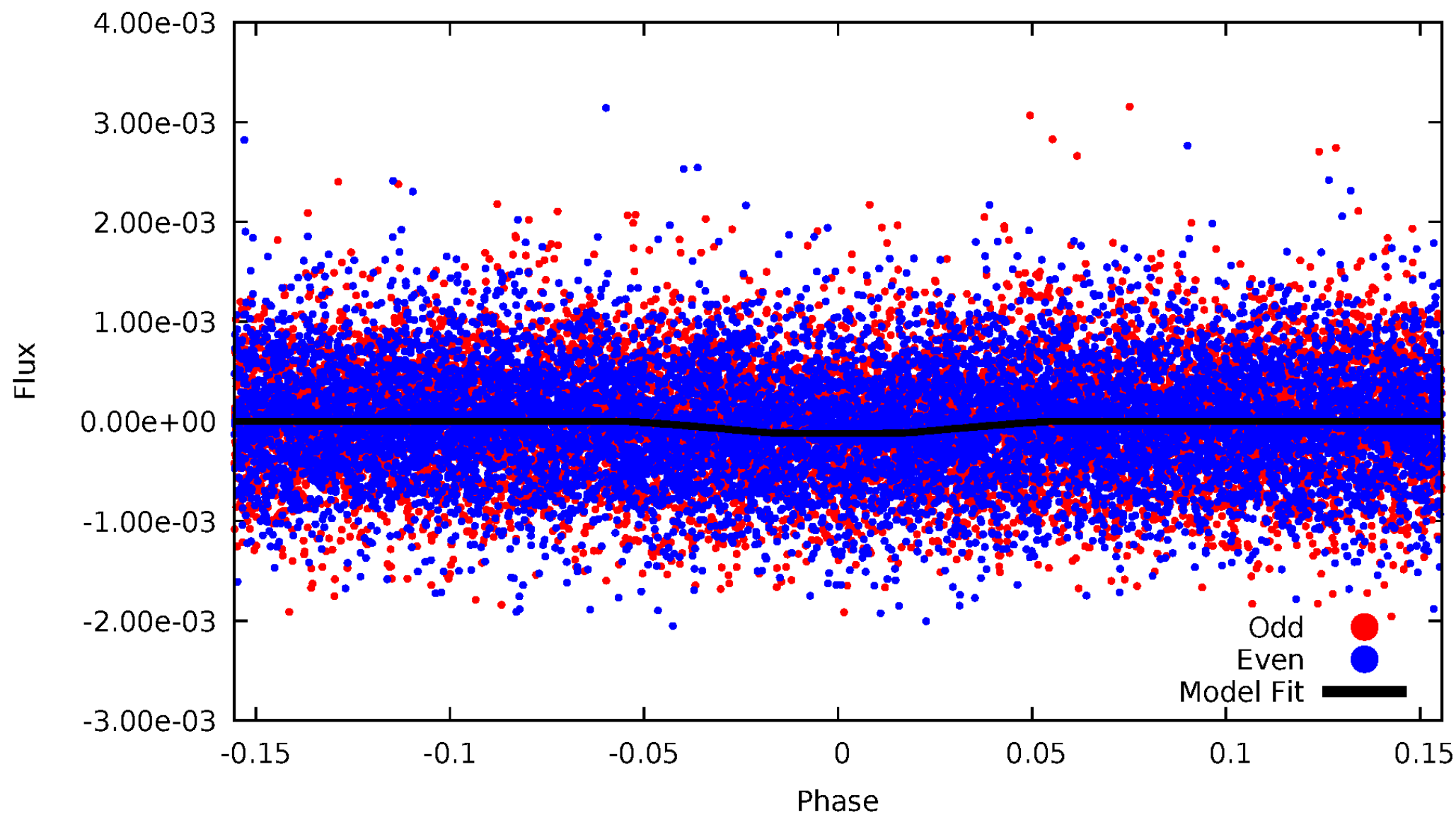


TCE 005302889-01



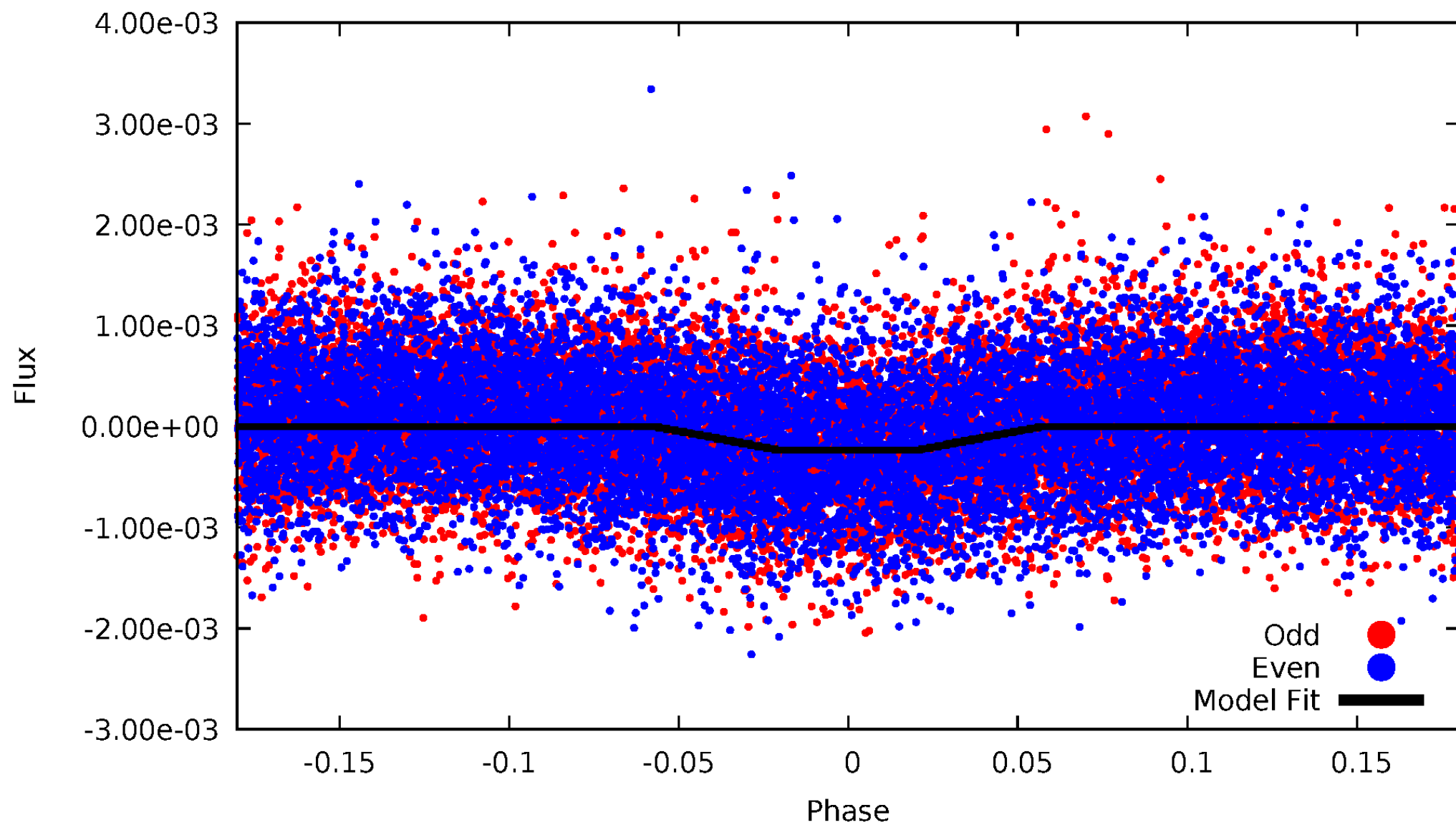
# DV Odd/Even

TCE 005302889-01



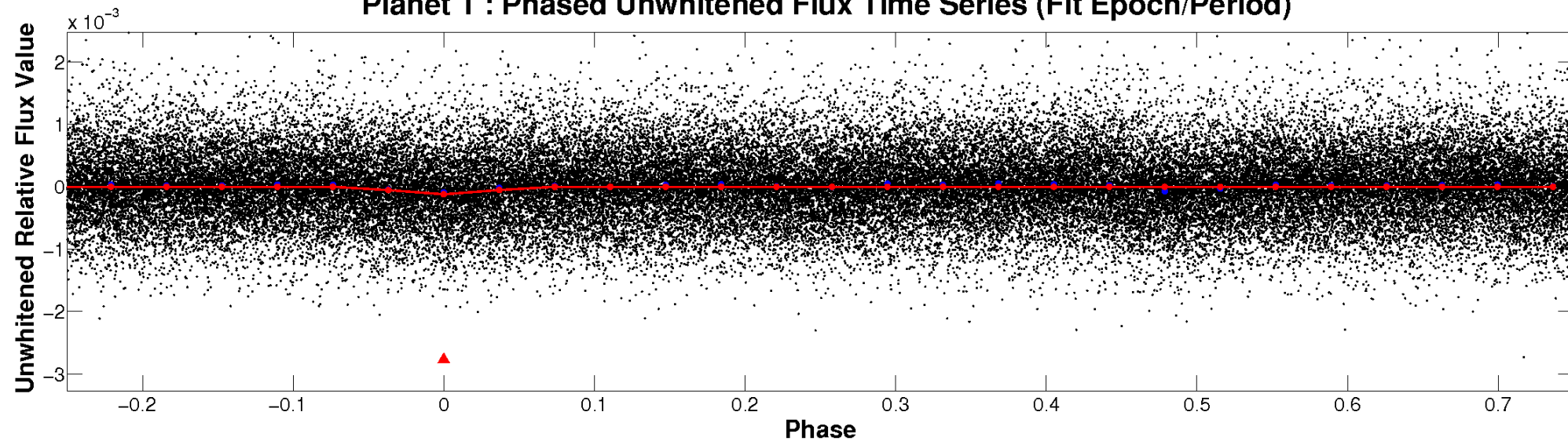
# ALT Odd/Even

TCE 005302889-01

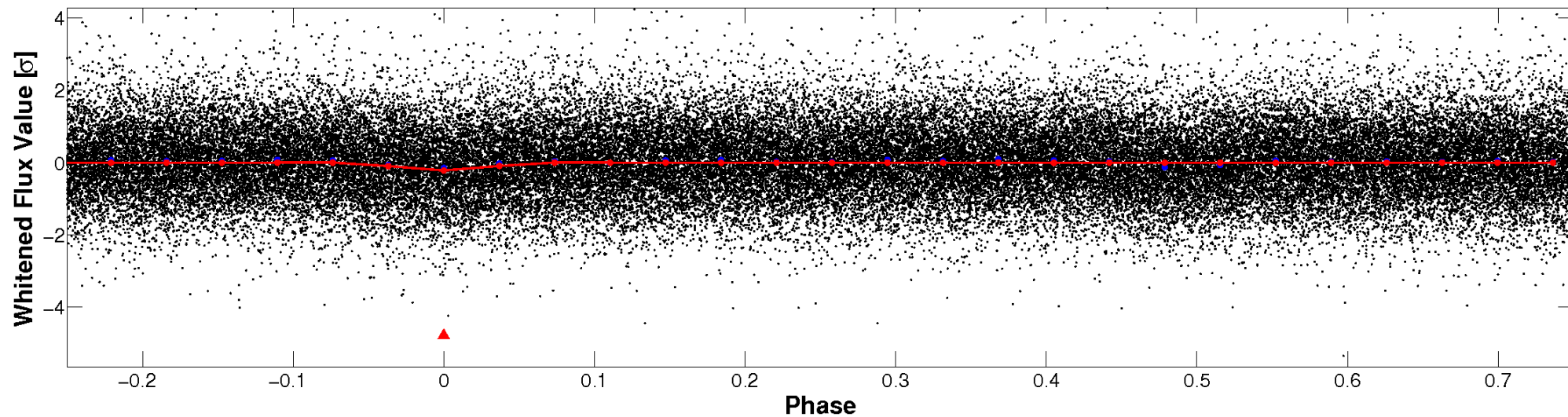


# Non-Whitened Vs. Whitened Light Curve

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



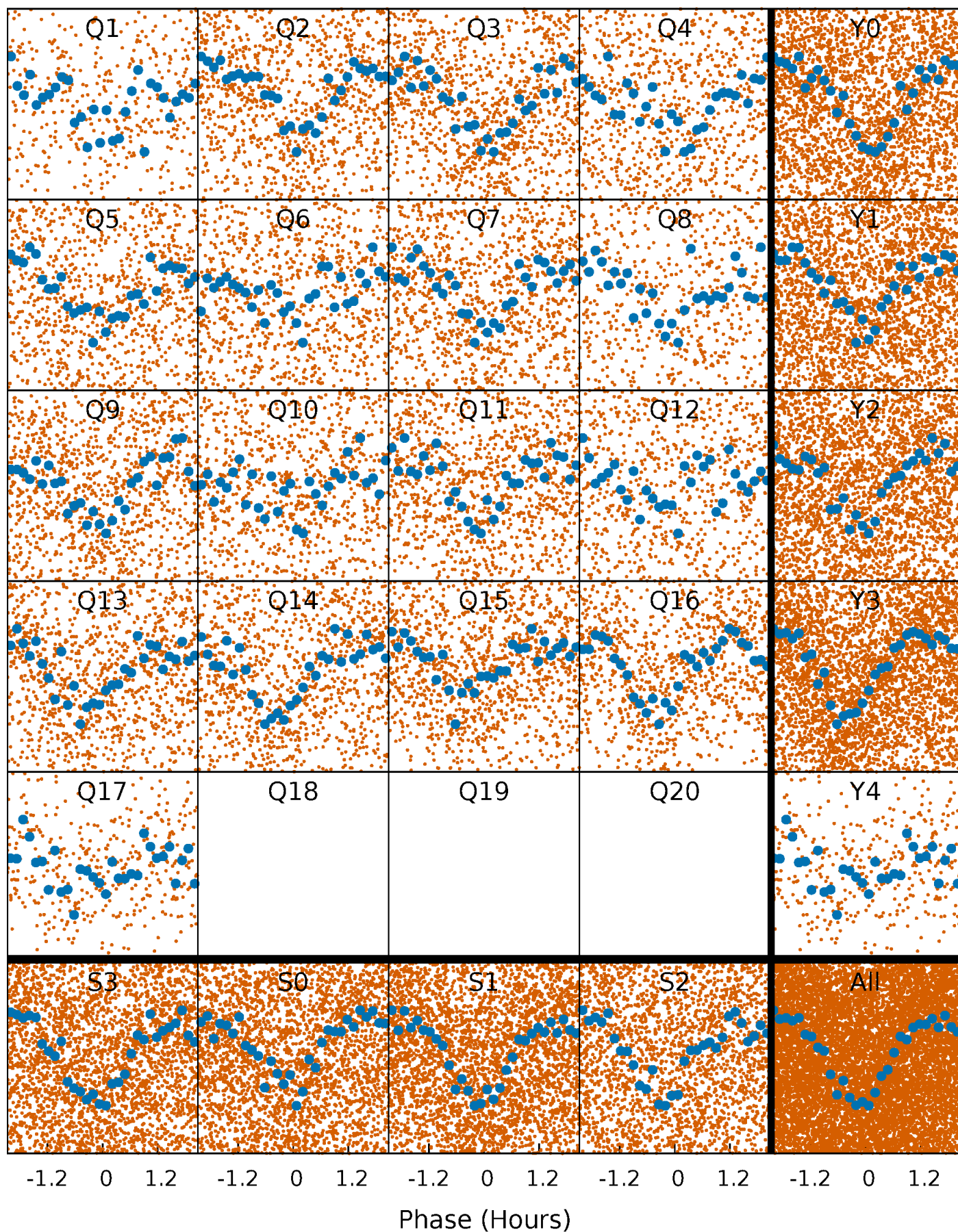
**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**





# PDC Quarter-Phased Transit Curves

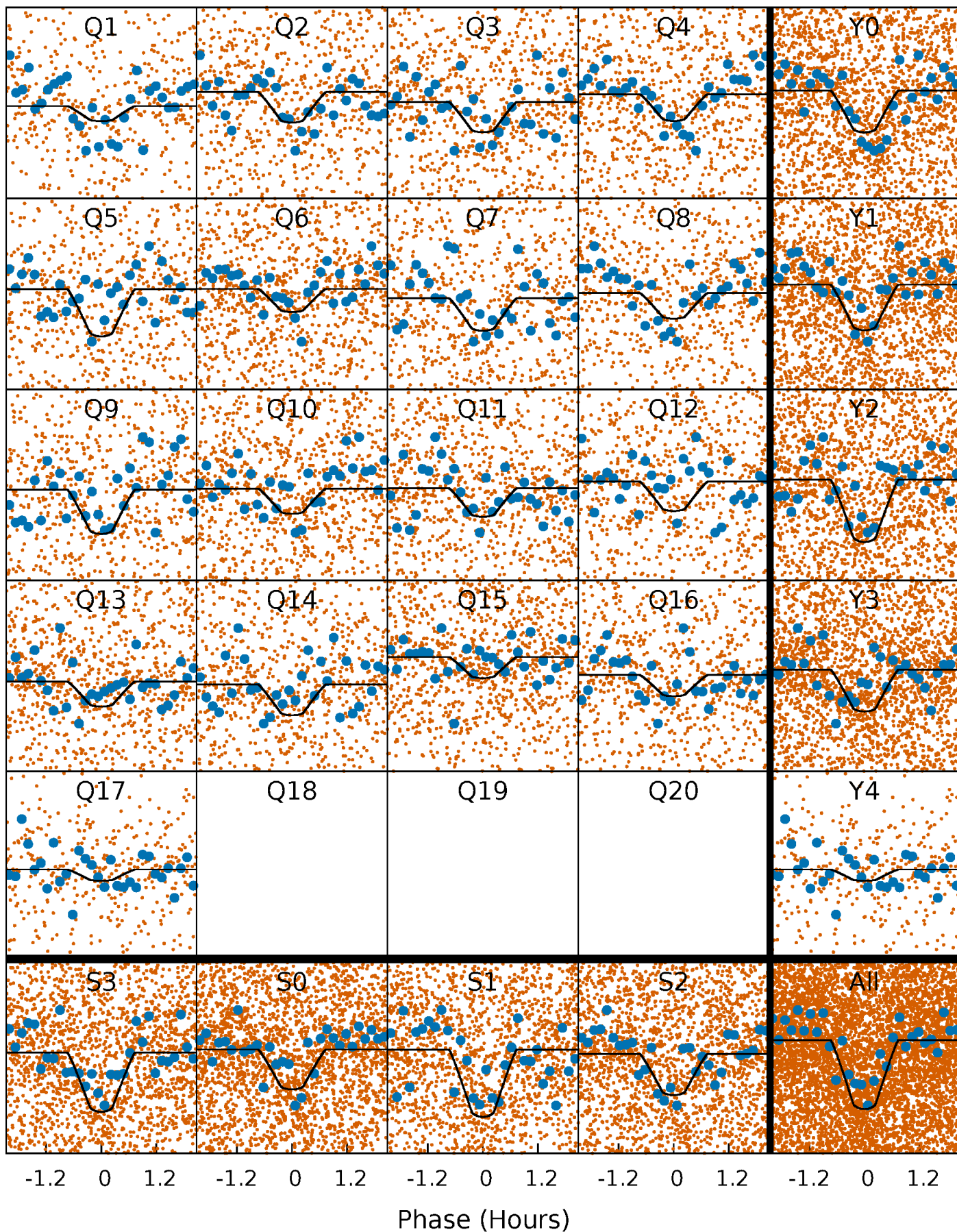
TCE 005302889-01 P= 0.554945 Days  $T_0=131.760348$  (BKJD)





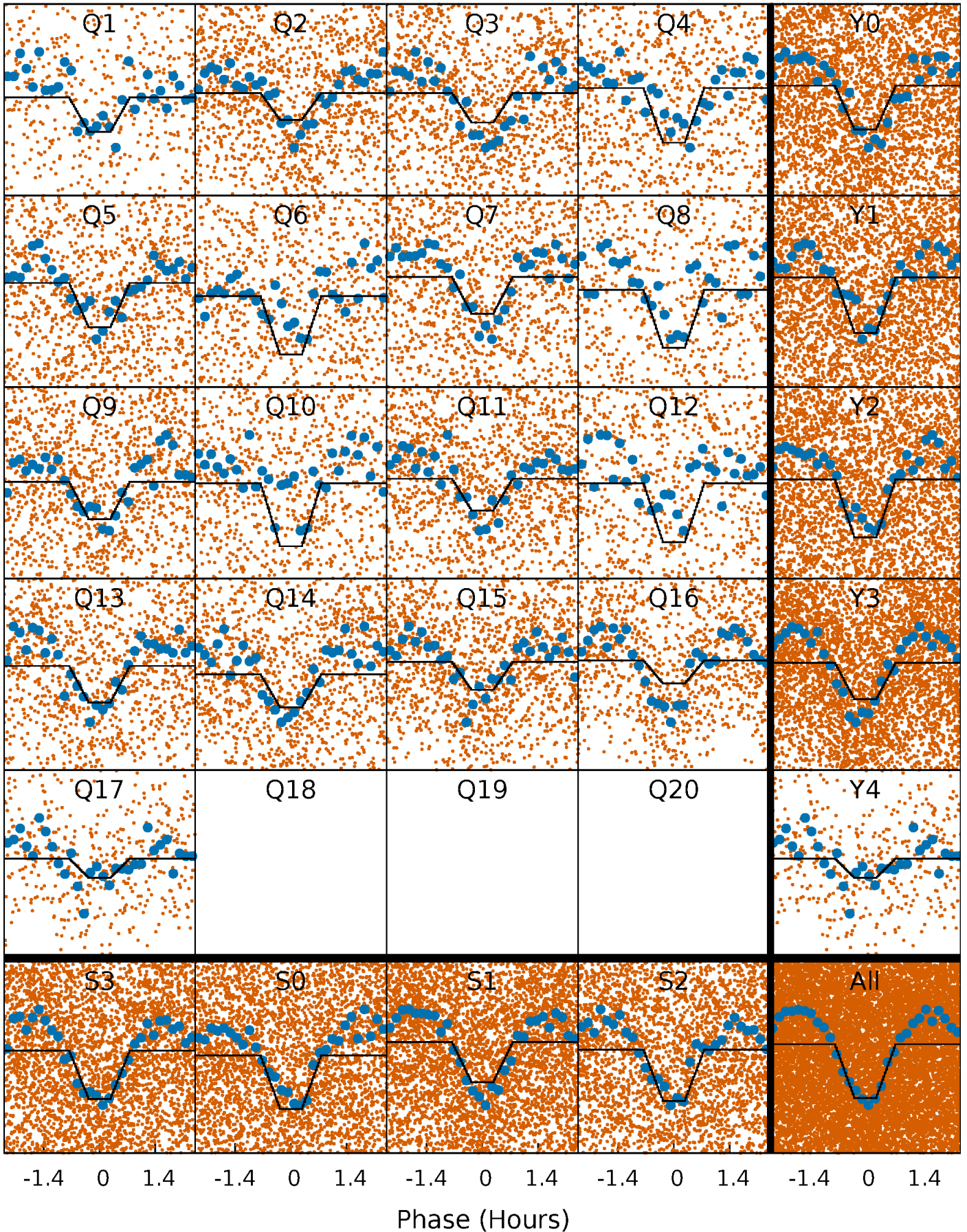
# DV Quarter-Phased Transit Curves

TCE 005302889-01 P= 0.554945 Days  $T_0=131.760348$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 005302889-01   P= 0.554941 Days    $T_0=131.759447$  (BKJD)

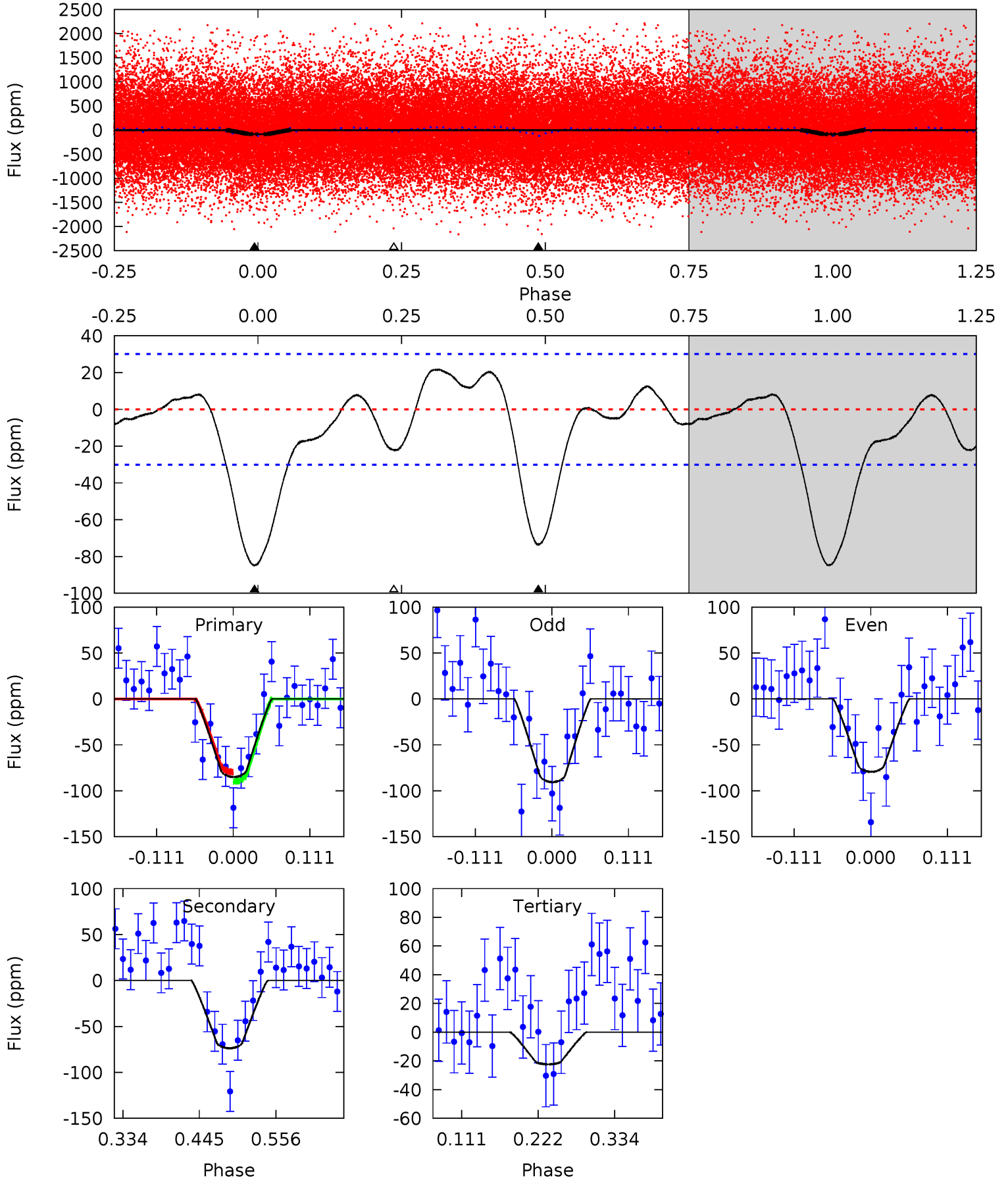




# DV Model-Shift Uniqueness Test

005302889-01, P = 0.554945 Days, E = 131.205403 Days

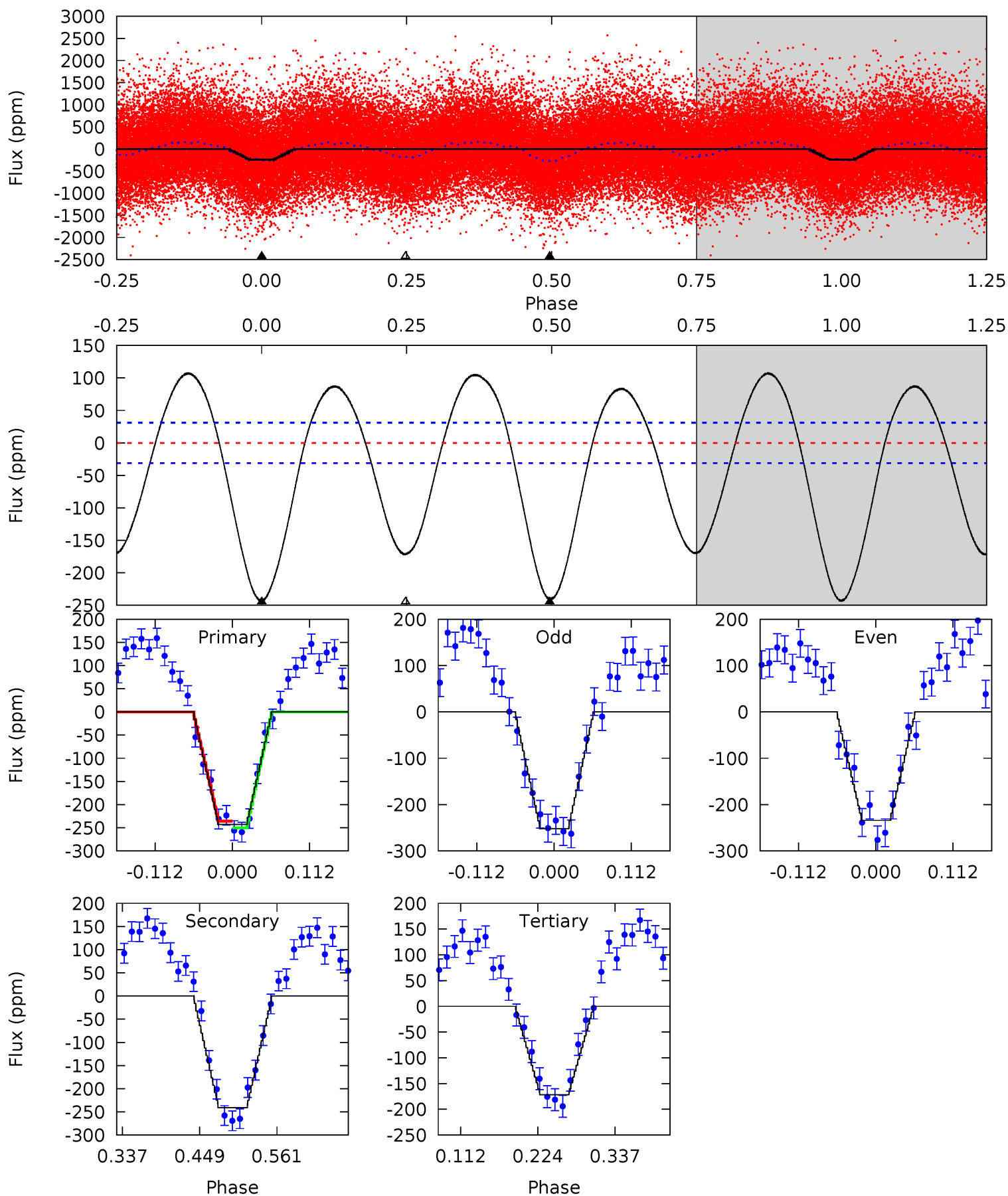
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.8	11.1	3.38	0	4.54	1.59	1.61	9.45	12.8	7.75	11.1	0.85	0.91	0.20	0.79



# Alt Model-Shift Uniqueness Test

005302889-01, P = 0.554941 Days, E = 131.204506 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
35.4	35.1	25.0	0	4.54	1.59	14.1	10.4	35.4	10.1	35.1	1.32	0.99	0.31	1.07





### Stellar Parameters For KIC 005302889

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M$ ( $M_{\odot}$ )	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$6363^{+176}_{-242}$	$4.456^{+0.060}_{-0.180}$	$-0.320^{+0.250}_{-0.350}$	$1.012^{+0.271}_{-0.116}$	$1.065^{+0.129}_{-0.143}$	$1.450^{+0.384}_{-0.740}$
	+3%/-4%	+1%/-4%	+78%/-109%	+27%/-11%	+12%/-13%	+26%/-51%
Source	PHO1	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 005302889-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$-74 \pm 7$	$1.39^{+0.78}_{-0.70}$	$3442^{+227}_{-173}$	$5240^{+2498}_{-984}$	$3.792^{+11.727}_{-2.265}$
Alt.	$-241 \pm 7$	$1.79^{+0.84}_{-0.76}$	$3459^{+205}_{-177}$	$6242^{+2396}_{-1022}$	$7.399^{+15.213}_{-3.982}$

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

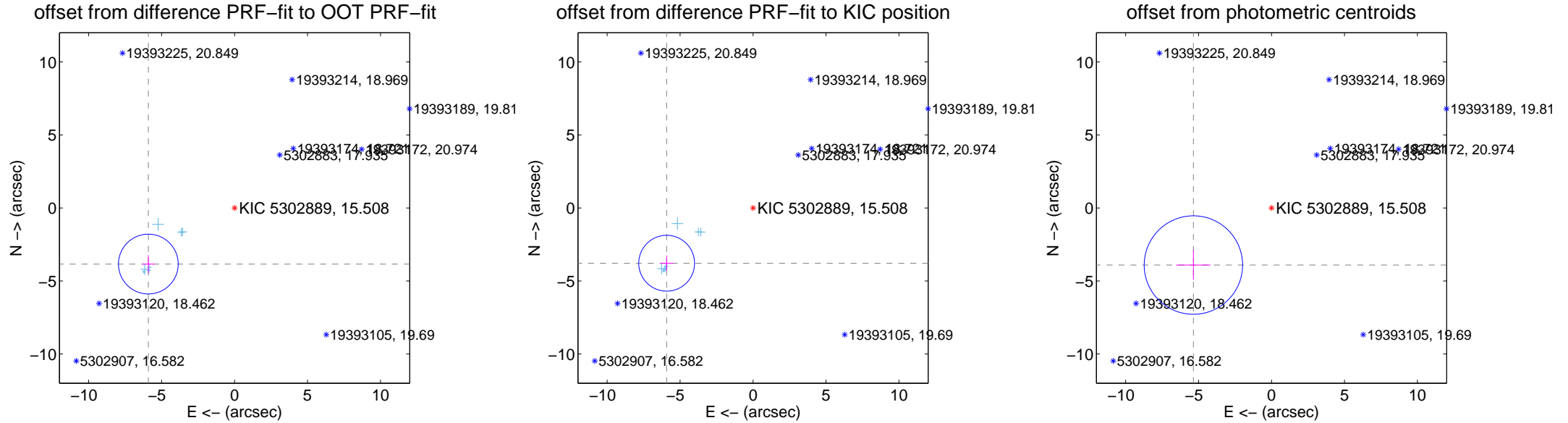
## DV Centroid Data

Supplemental centroid analysis for 005302889-01. Kepler magnitude: 15.51. Transit SNR 12.77

There are 7 quarters with good PRF difference image offsets

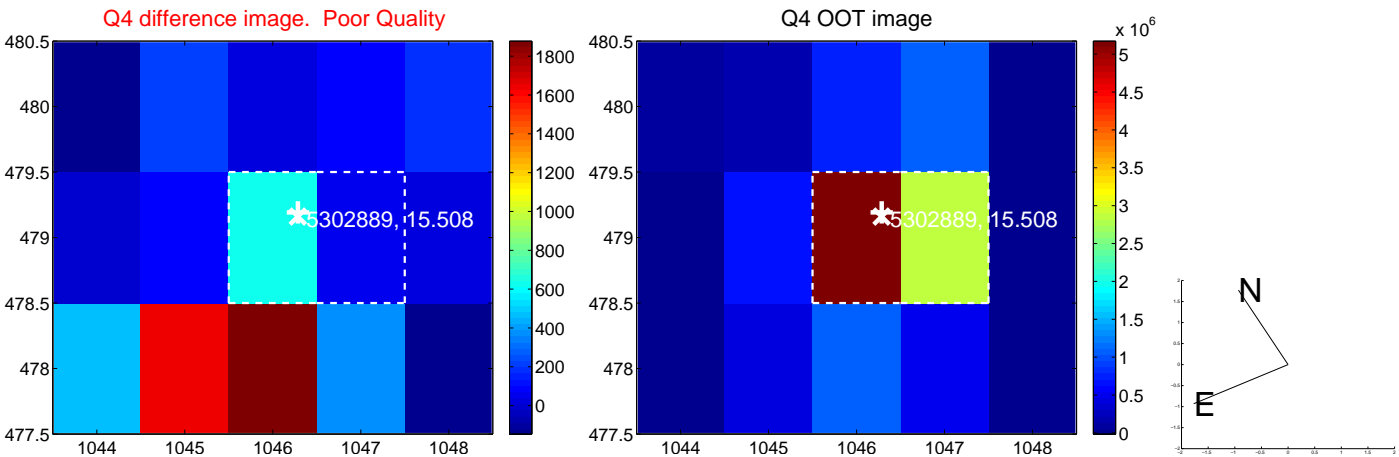
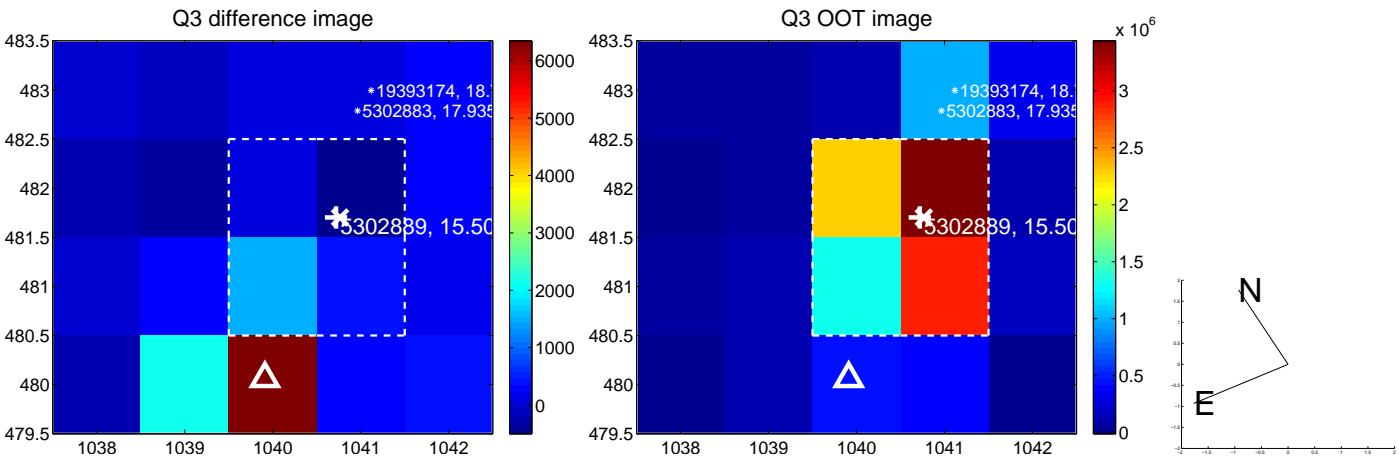
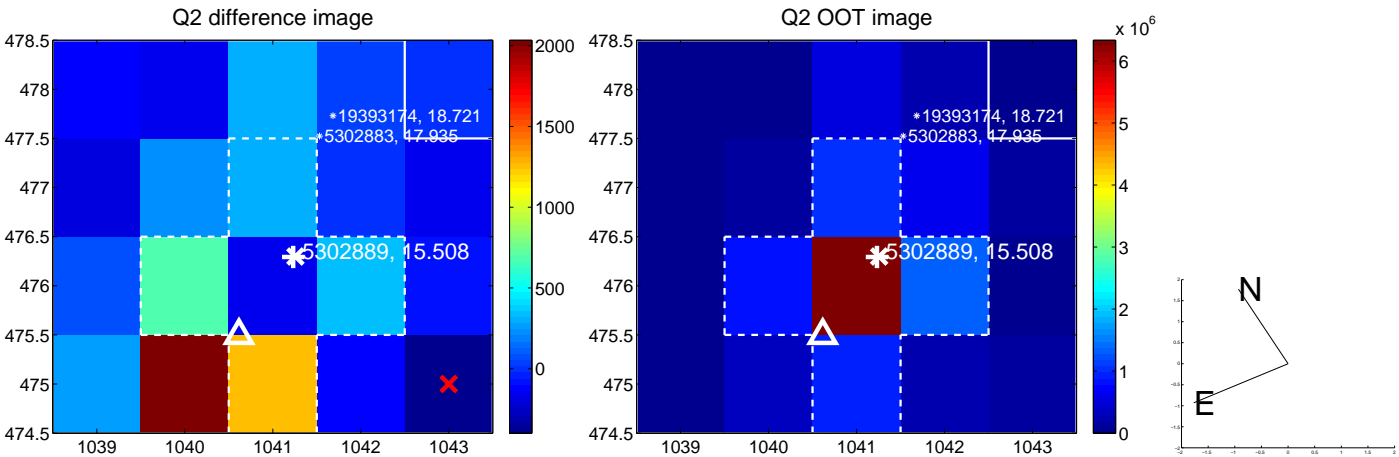
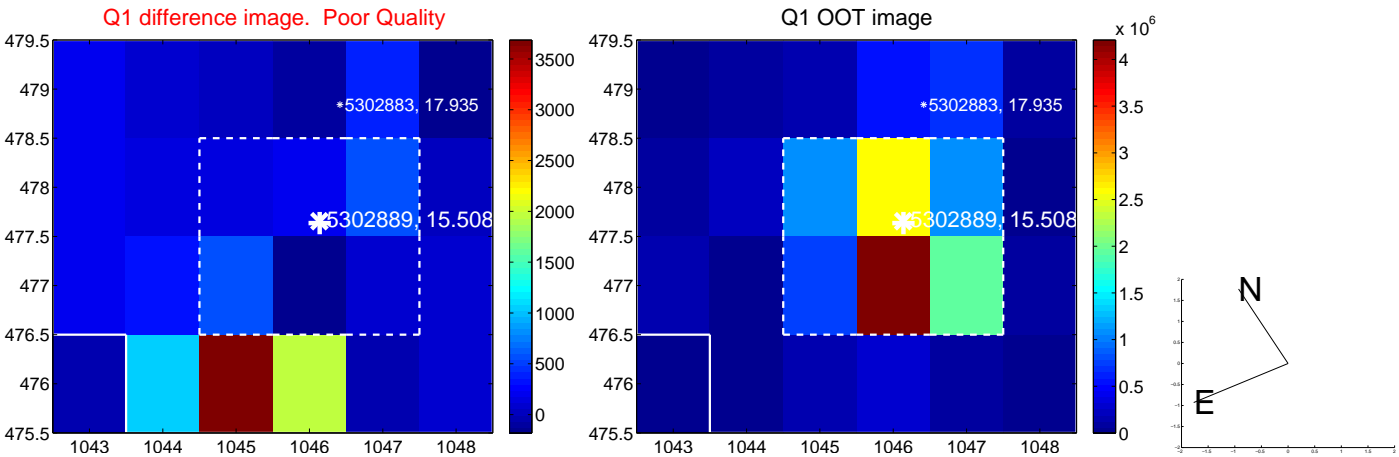
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	<b>7.050 <math>\pm</math> 0.683</b>	<b>10.33</b>	5.911 $\pm$ 0.448	-3.843 $\pm$ 0.609
PRF-fit source offset from KIC position	<b>7.029 <math>\pm</math> 0.638</b>	<b>11.02</b>	5.923 $\pm$ 0.452	-3.785 $\pm$ 0.531
photometric centroid source offset	<b>6.63 <math>\pm</math> 1.12</b>	<b>5.90</b>	5.36 $\pm$ 1.18	-3.91 $\pm$ 1.01

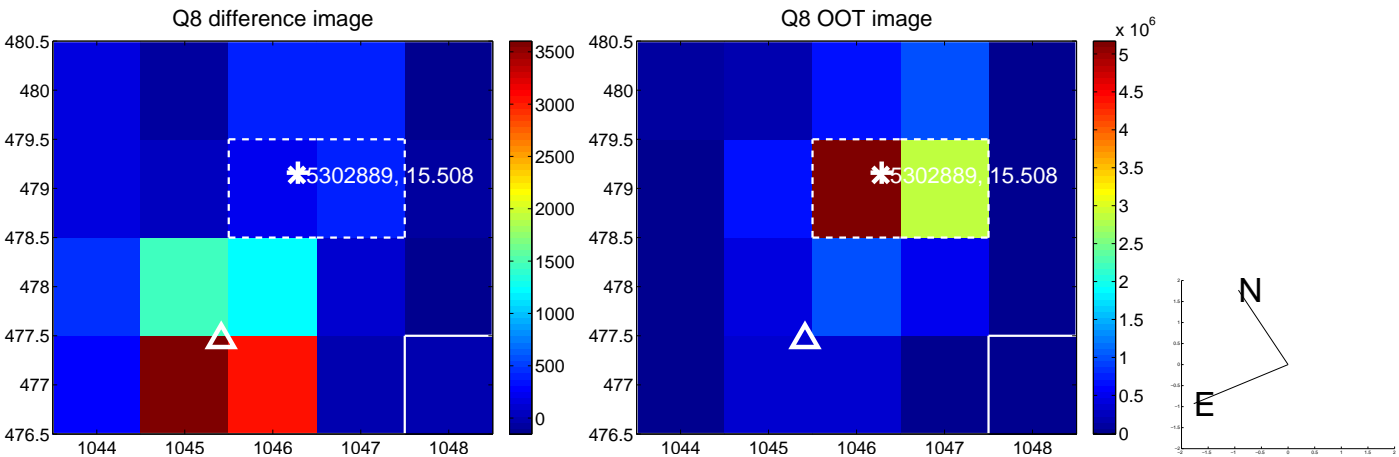
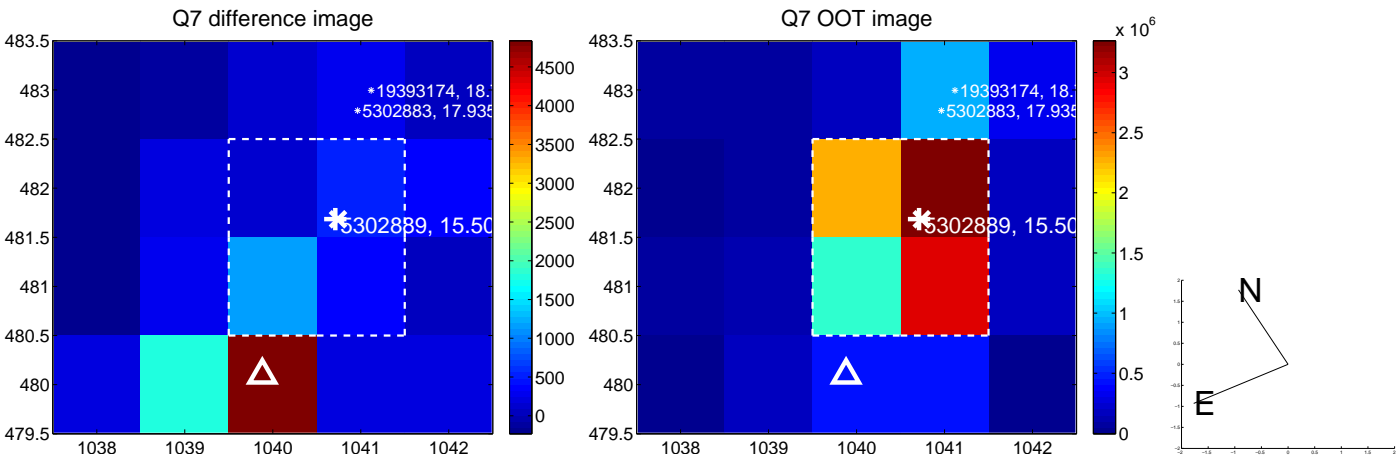
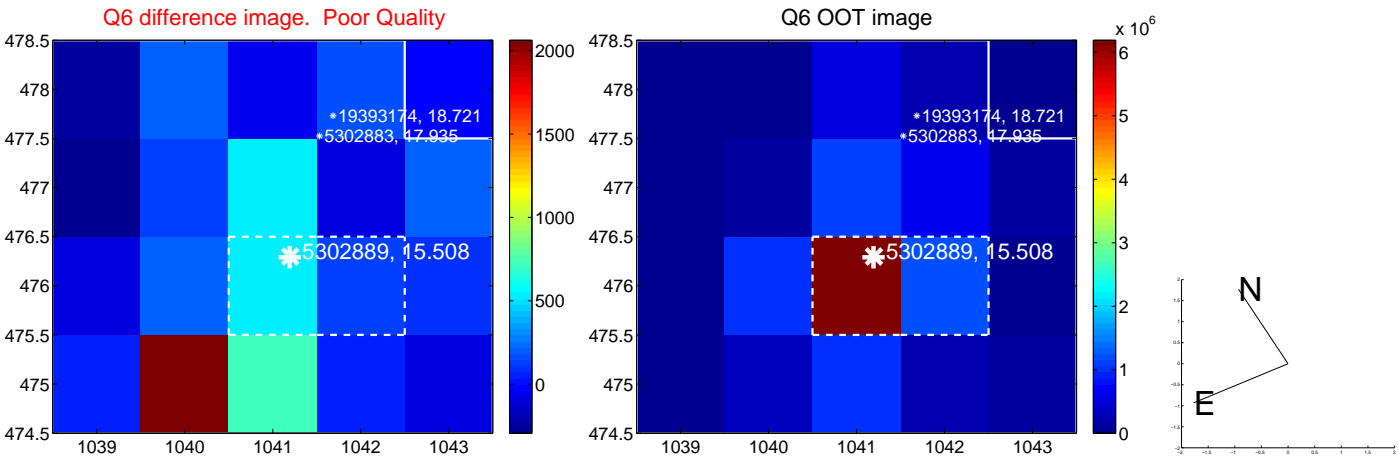
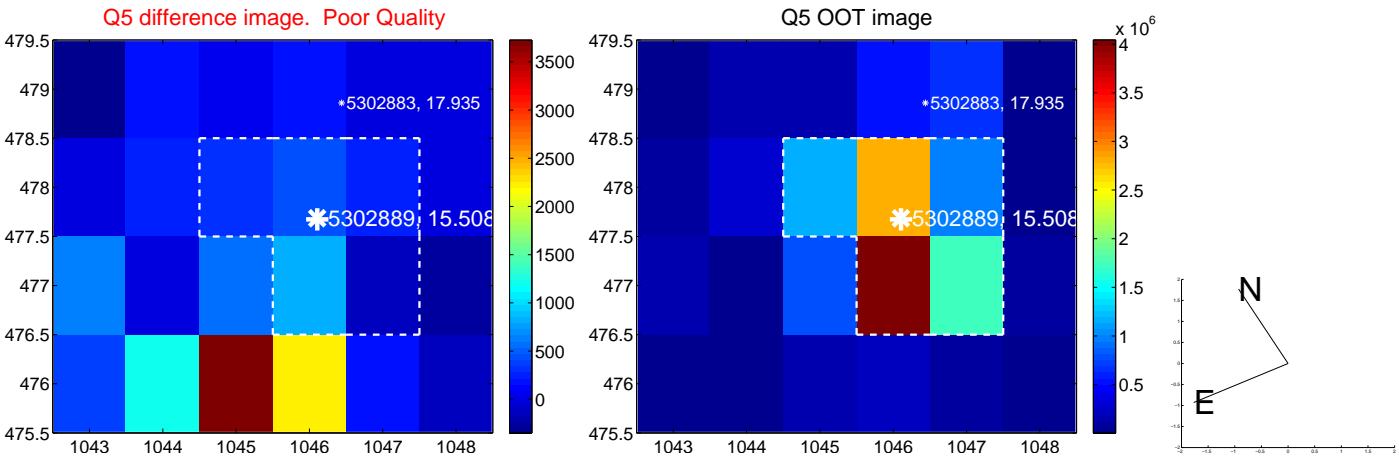


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

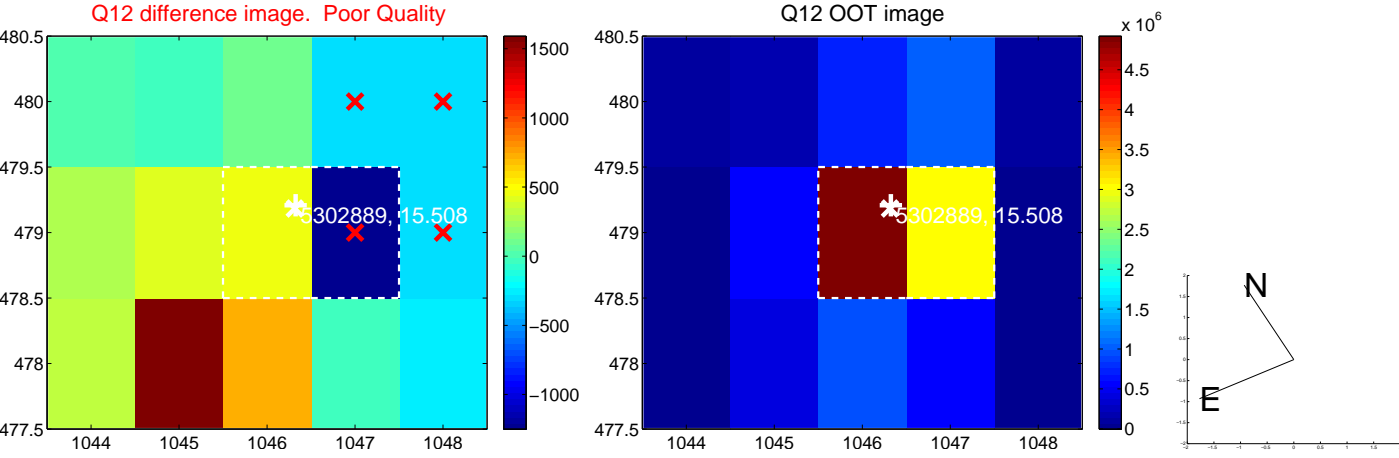
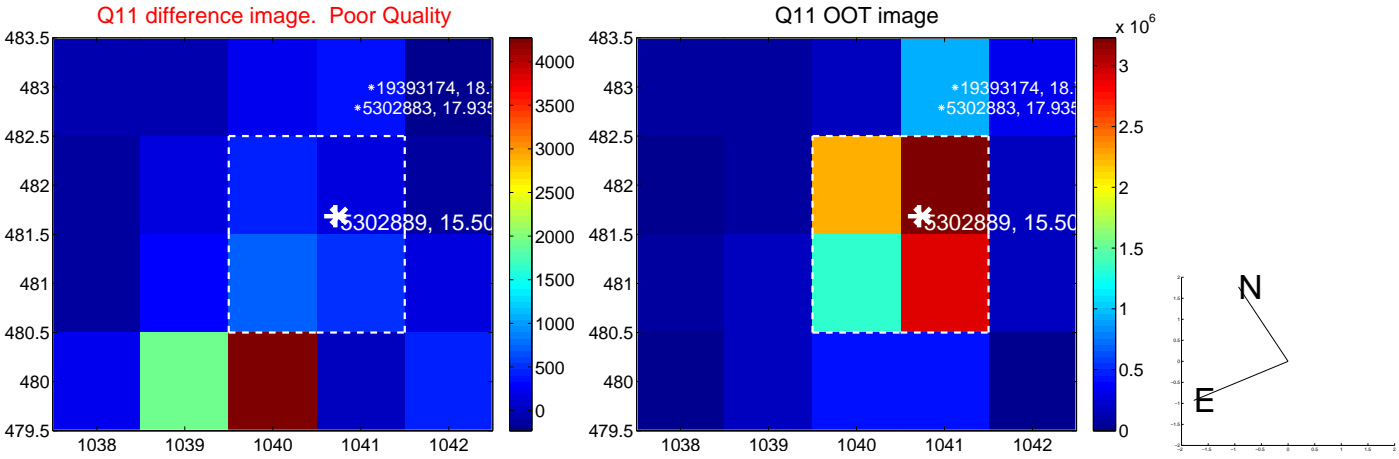
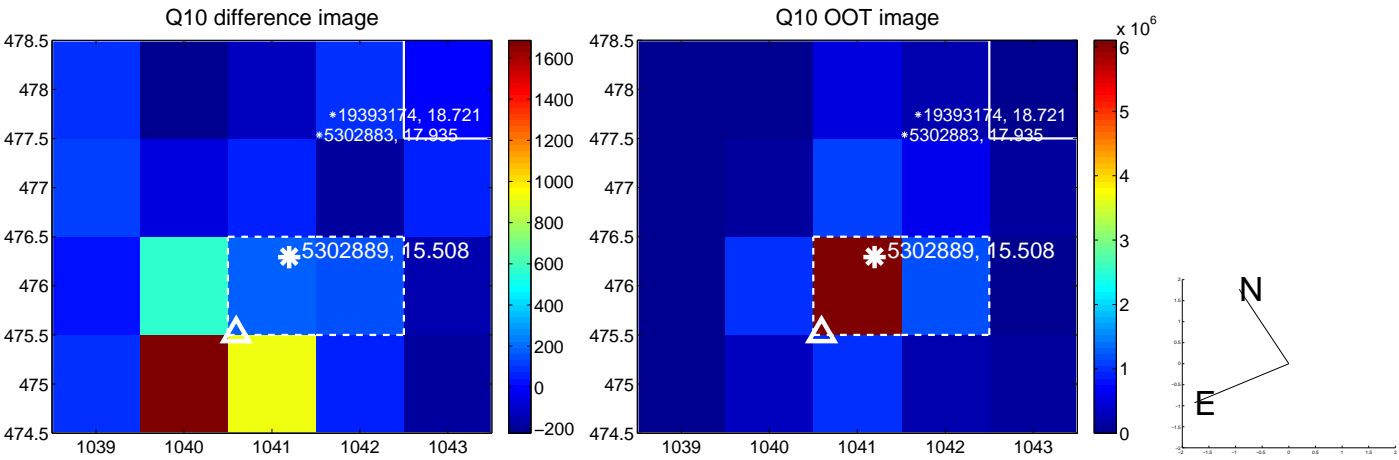
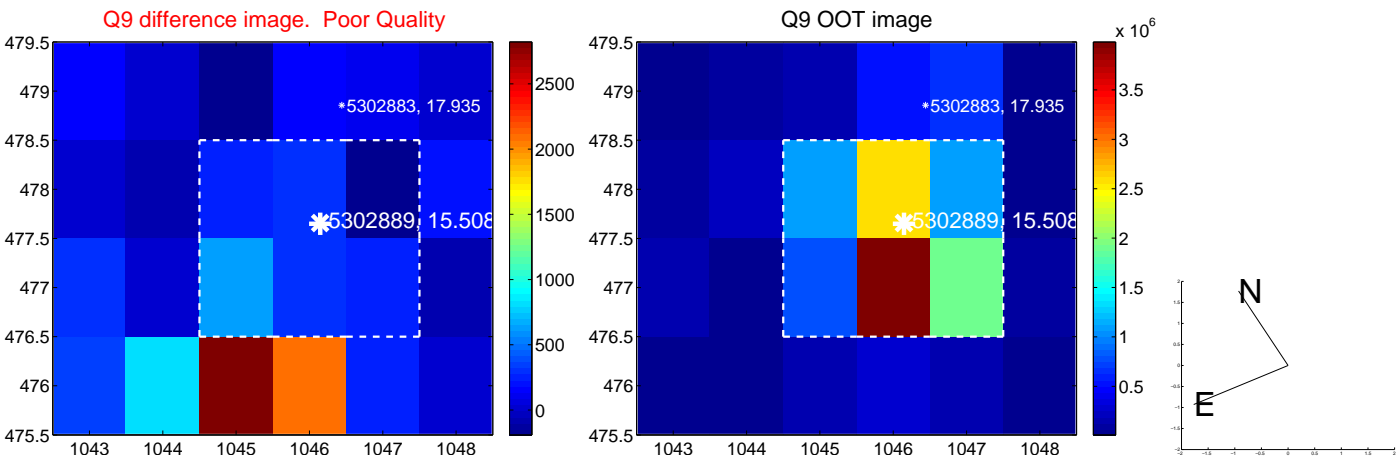


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

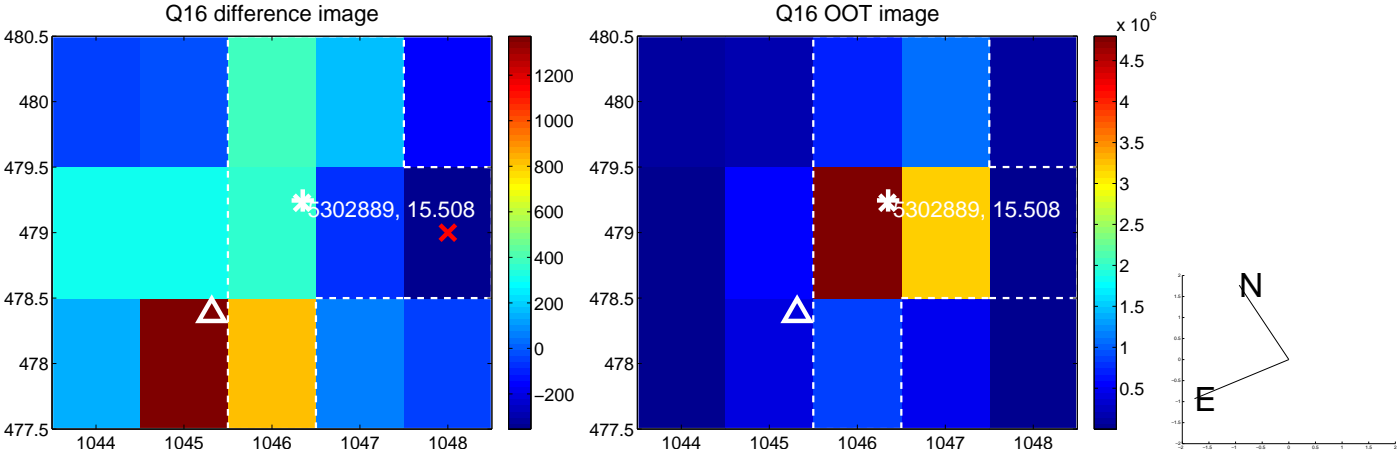
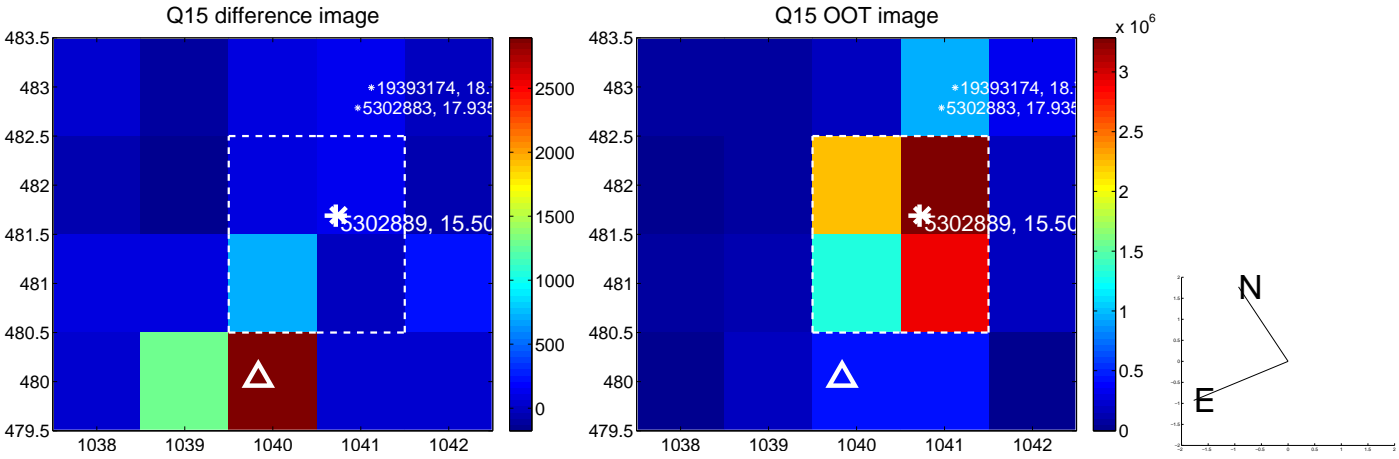
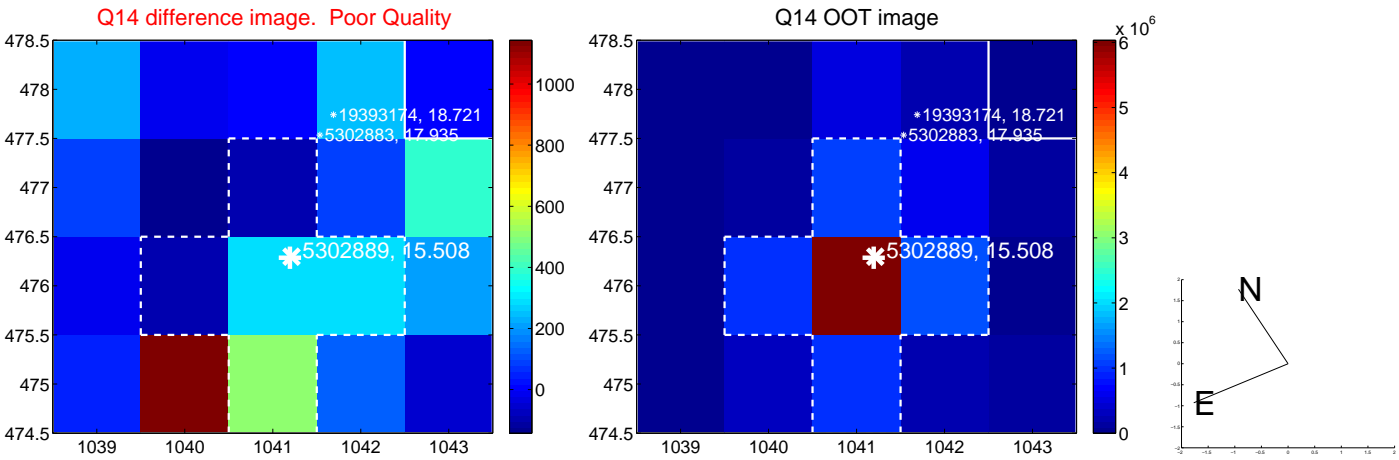
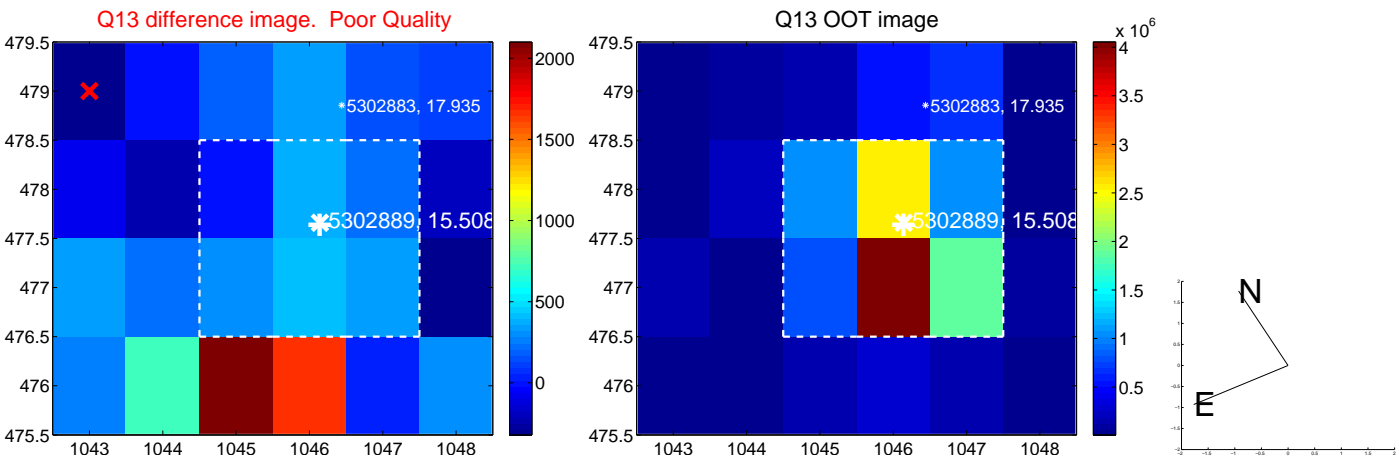




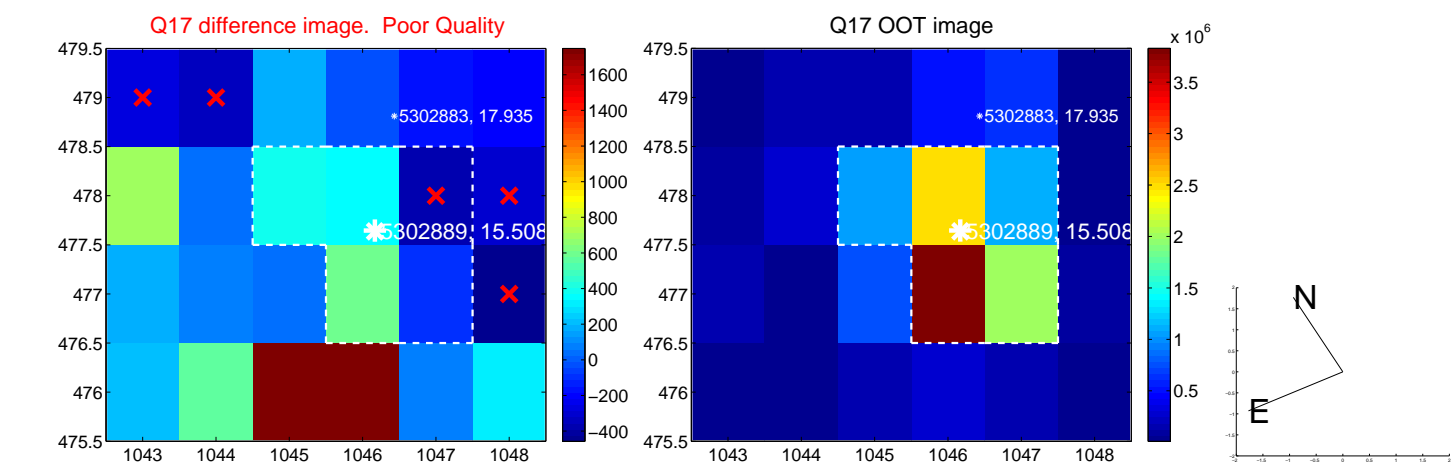
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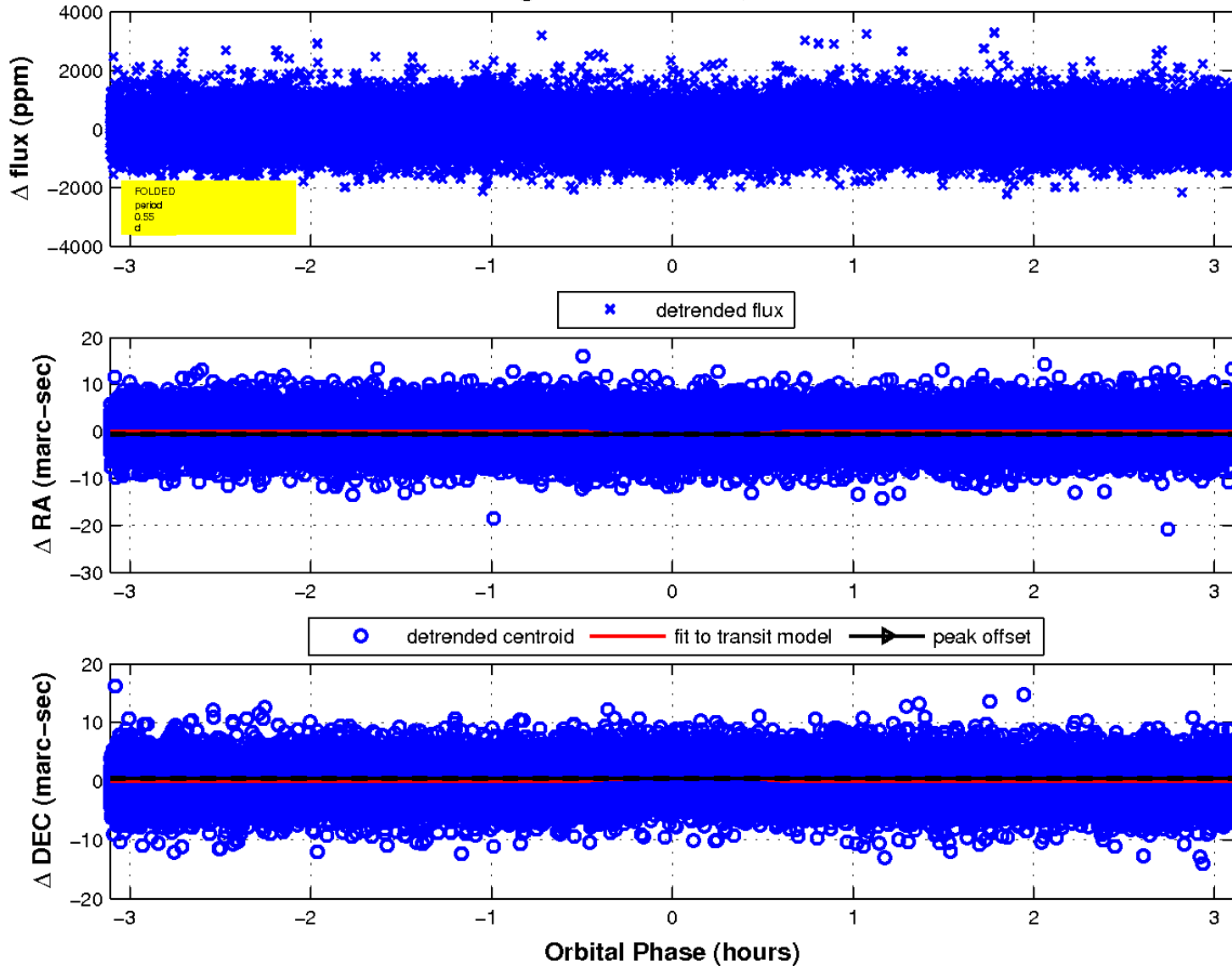
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

