

# KIC 005382589

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
005382589-01	OBS	No	1.392574	131.831748	15.6	5.270	8.0	5.5	2.67	6537	1.32	14662.79

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005382589-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV

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

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

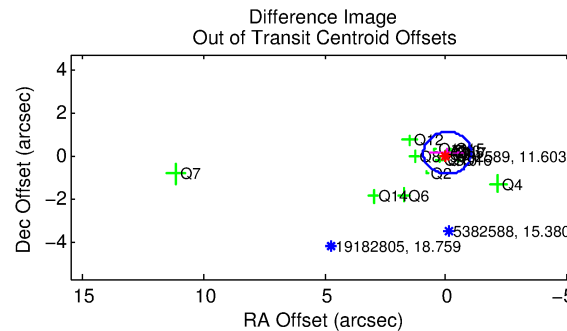
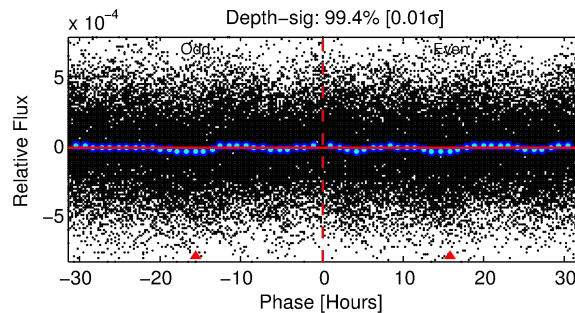
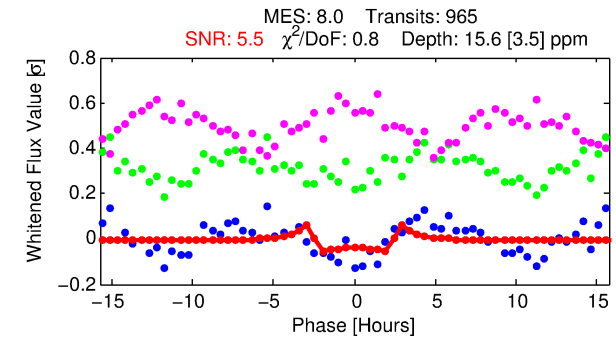
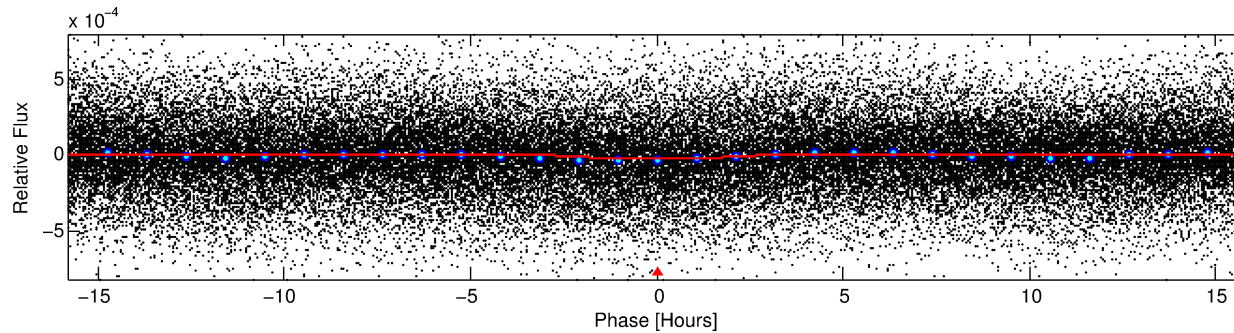
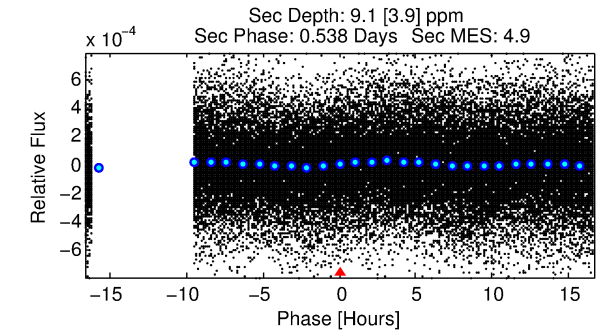
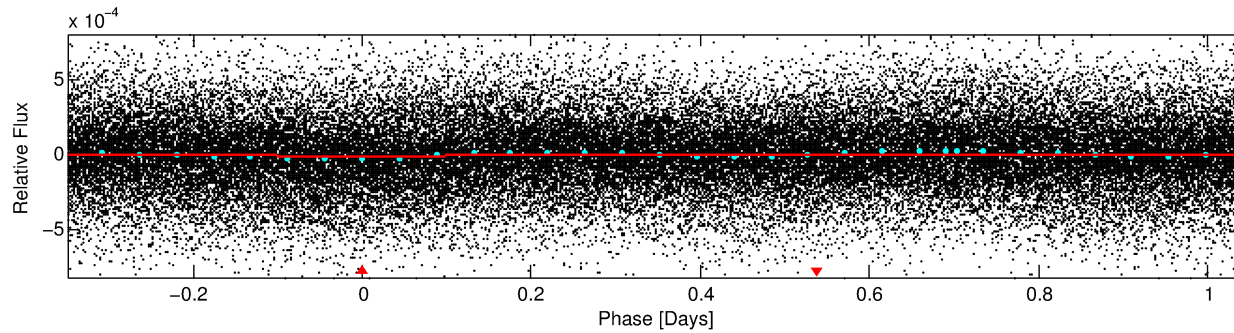
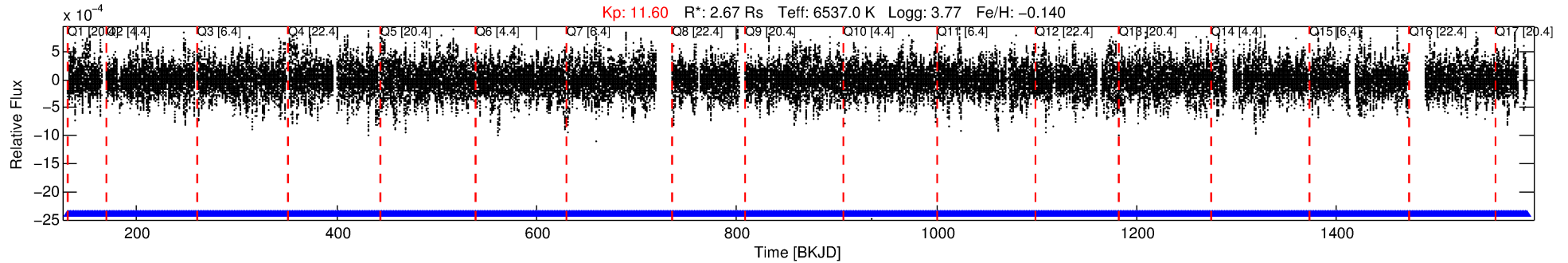
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 005382589-01

No Significant Match Found

# DV One-Page Summary

KIC: 5382589 Candidate: 1 of 1 Period: 1.393 d



## DV Fit Results:

Period = 1.39257 [0.00002] d  
Epoch = 131.8317 [0.0039] BKJD  
Rp/R\* = 0.0045 [0.0009]  
a/R\* = 1.15 [0.29]  
b = 0.96 [0.09]  
Seff = 14662.79 [7605.18]  
Teq = 2806 [364] K  
Rp = 1.32 [0.54] Re  
a = 0.0282 [0.0092] AU  
Ag = 2.29 [1.80] [0.72σ]  
Teffp = 5338 [812] K [2.85σ]

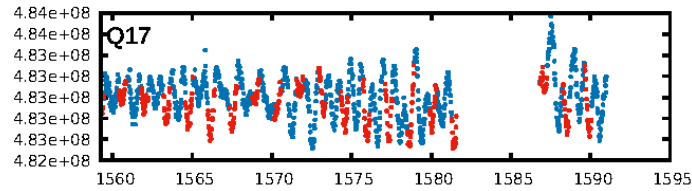
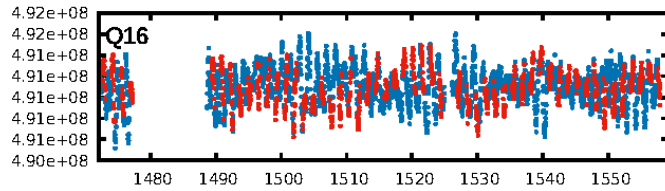
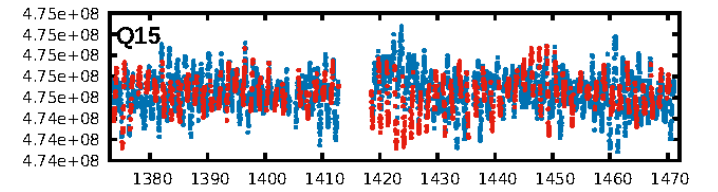
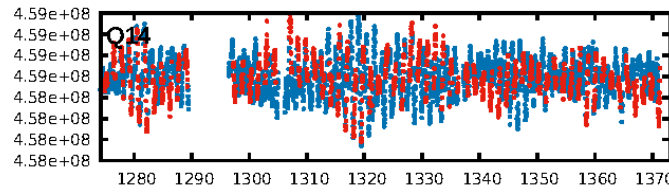
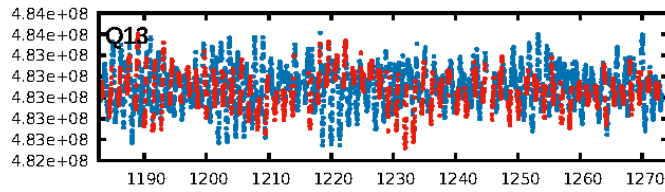
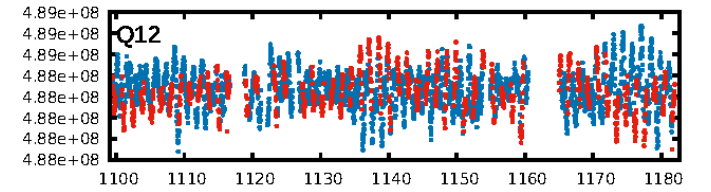
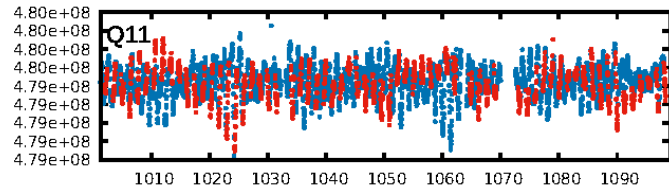
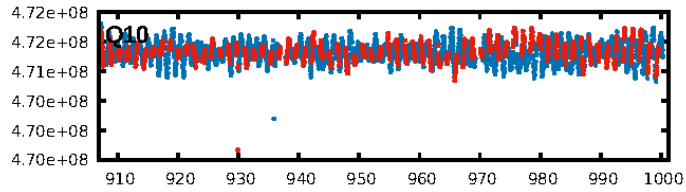
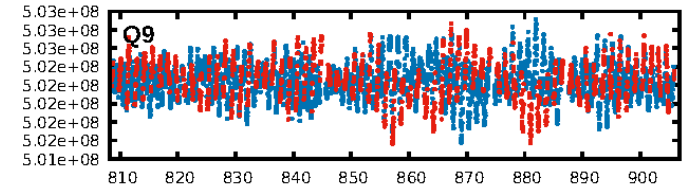
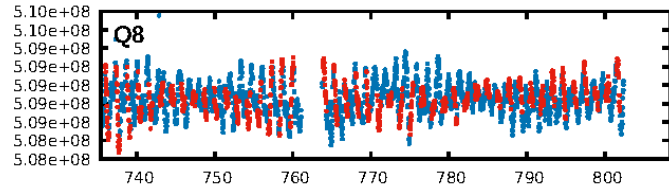
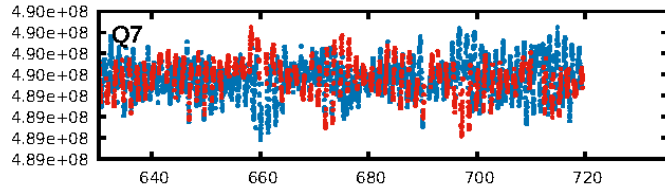
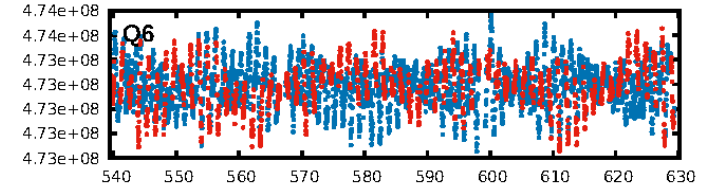
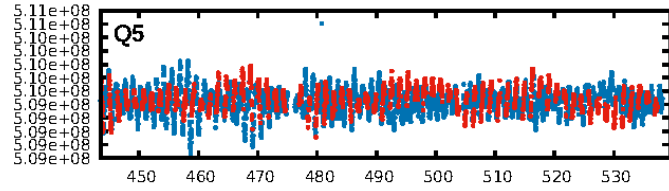
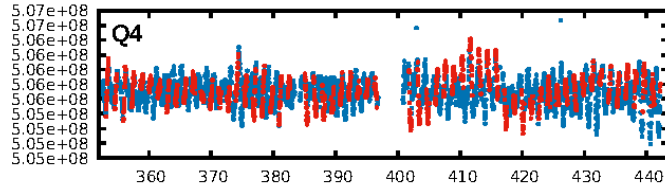
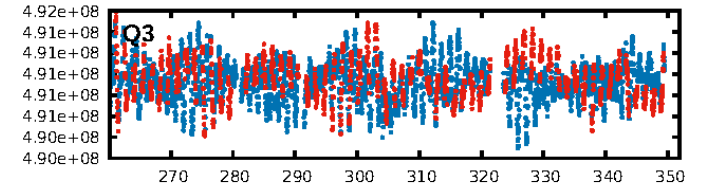
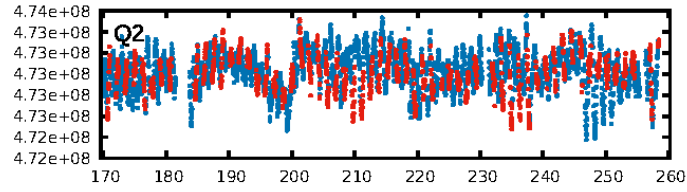
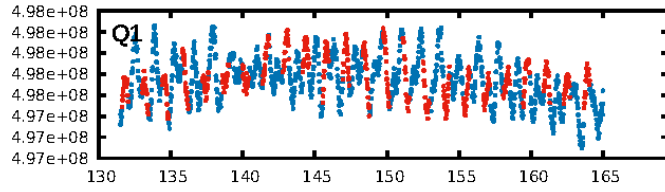
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
**Bootstrap-pfa: 6.51e-12**  
RollingBand-fgt: 1.00 [921/921]  
GhostDiagnostic-chr: 1.082  
Centroid-sig: 1.3%  
Centroid-so: 1.541 arcsec [1.68σ]  
OotOffset-rm: 0.149 arcsec [0.45σ]  
KicOffset-rm: 0.058 arcsec [0.11σ]  
OotOffset-st: 4/4/4/5 [17]  
KicOffset-st: 4/4/4/5 [17]  
DiffImageQuality-fgm: 0.53 [9/17]  
DiffImageOverlap-fno: 1.00 [17/17]

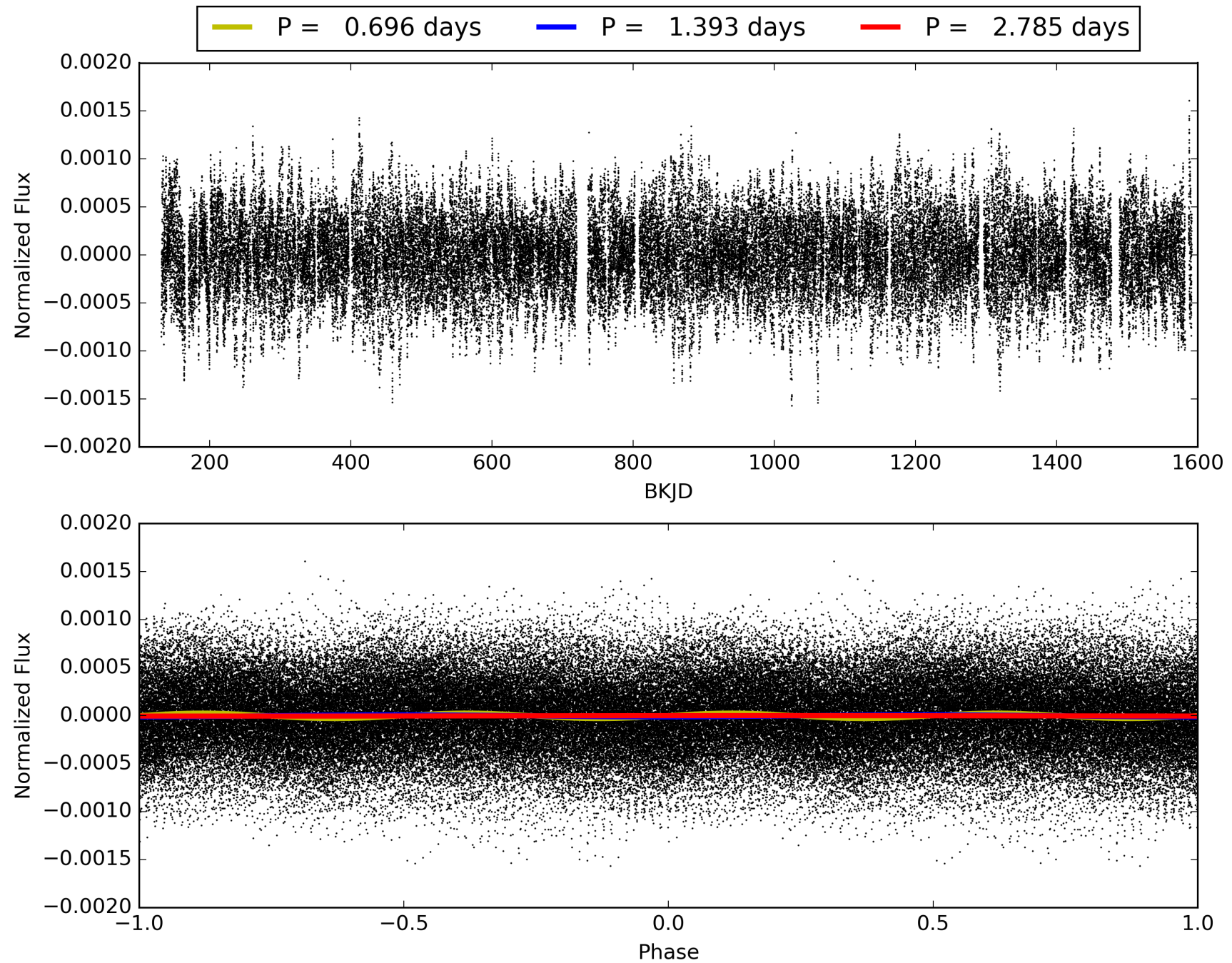
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 09:21:12 Z

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

# TCE 005382589-01, PDC Light Curves



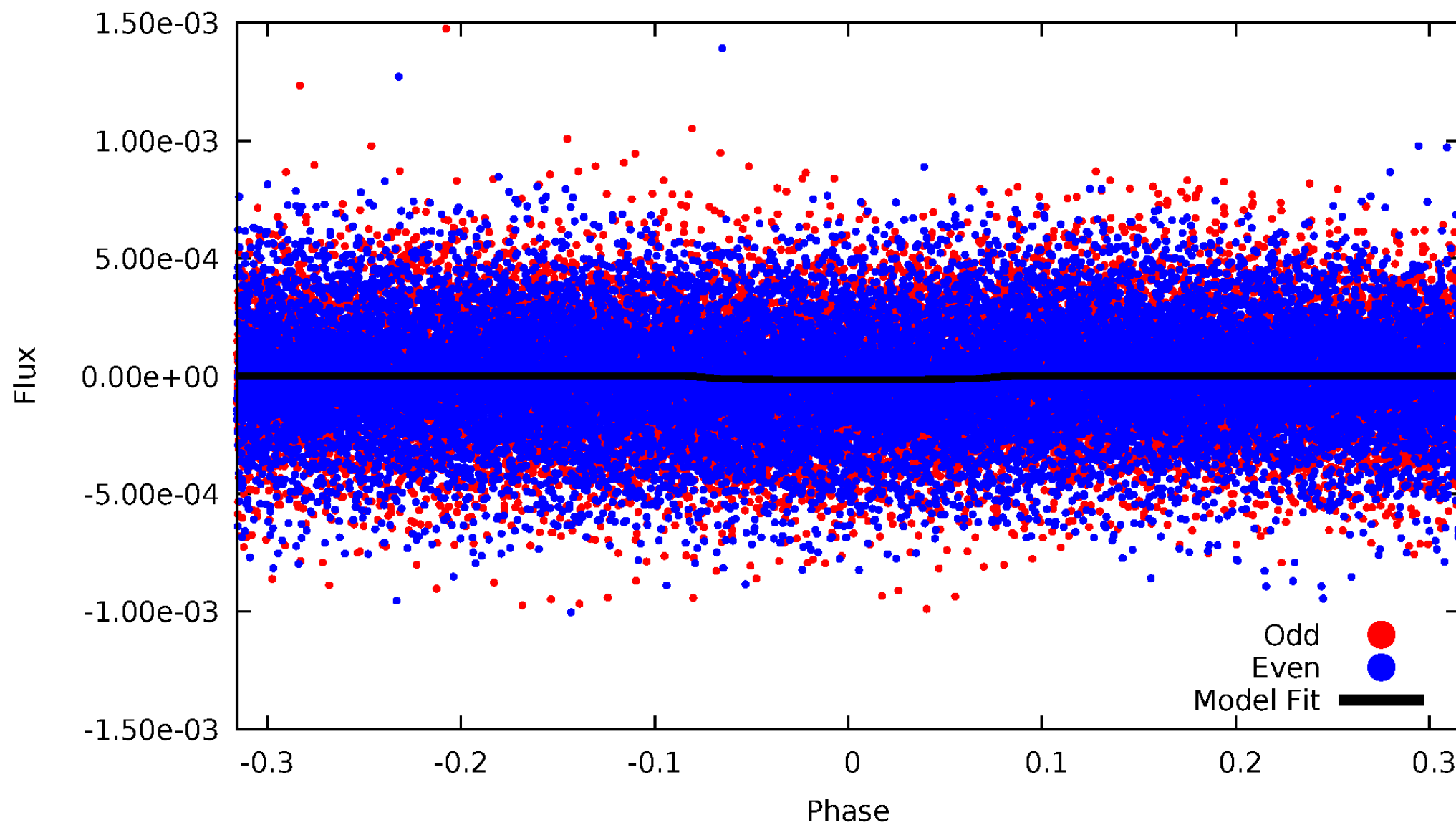
TCE 005382589-01





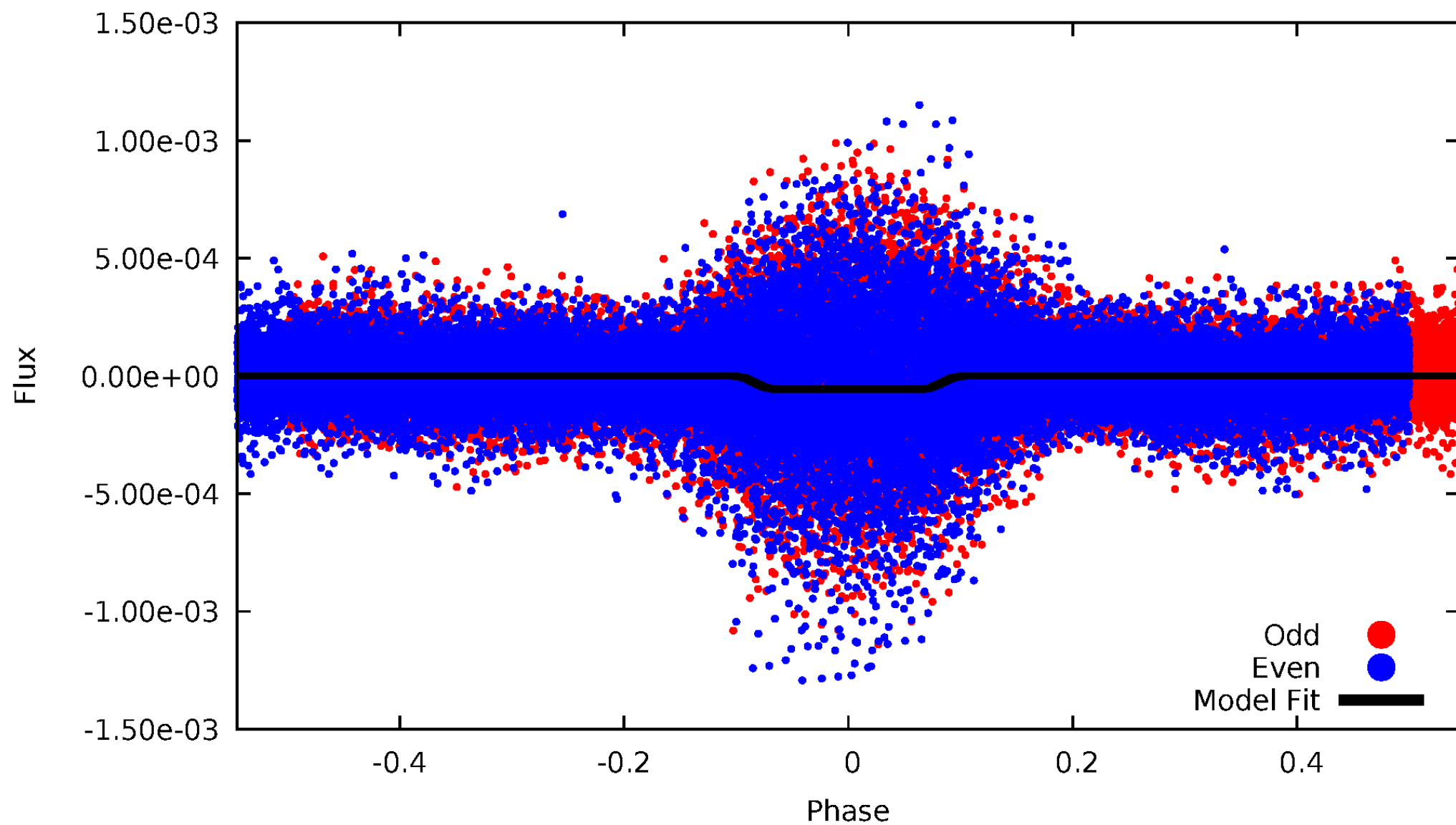
# DV Odd/Even

TCE 005382589-01

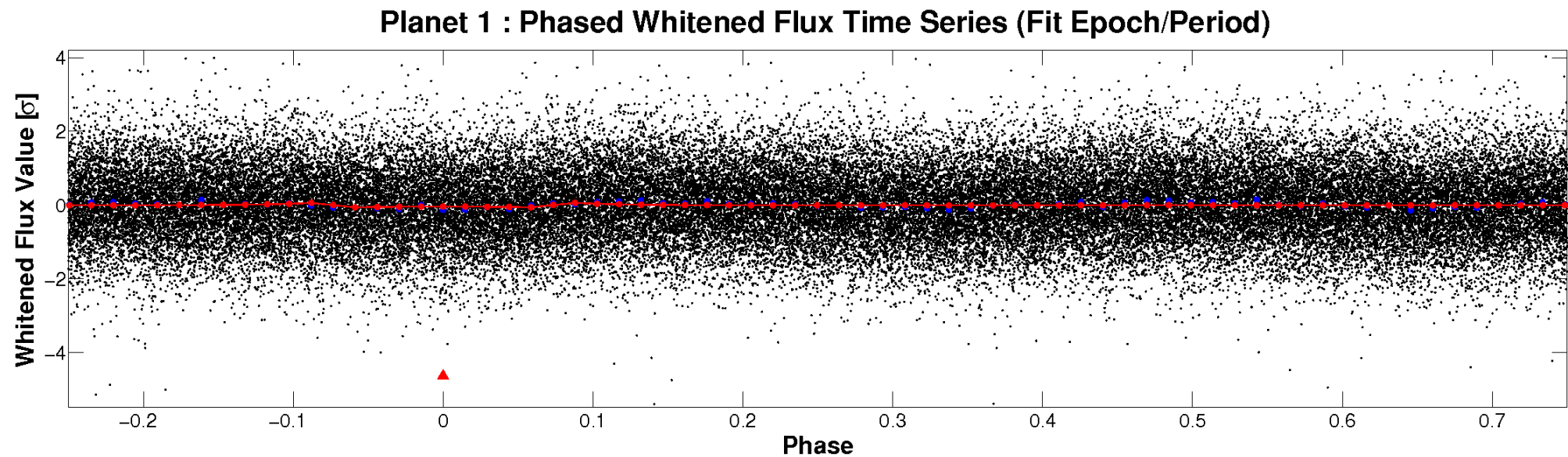
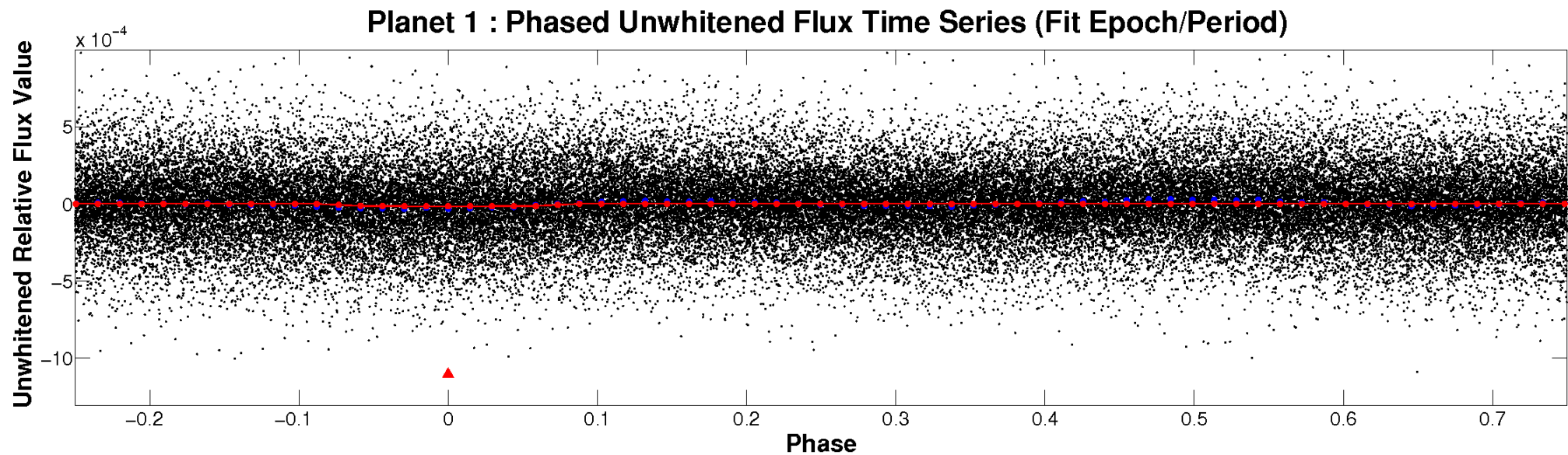


# ALT Odd/Even

TCE 005382589-01

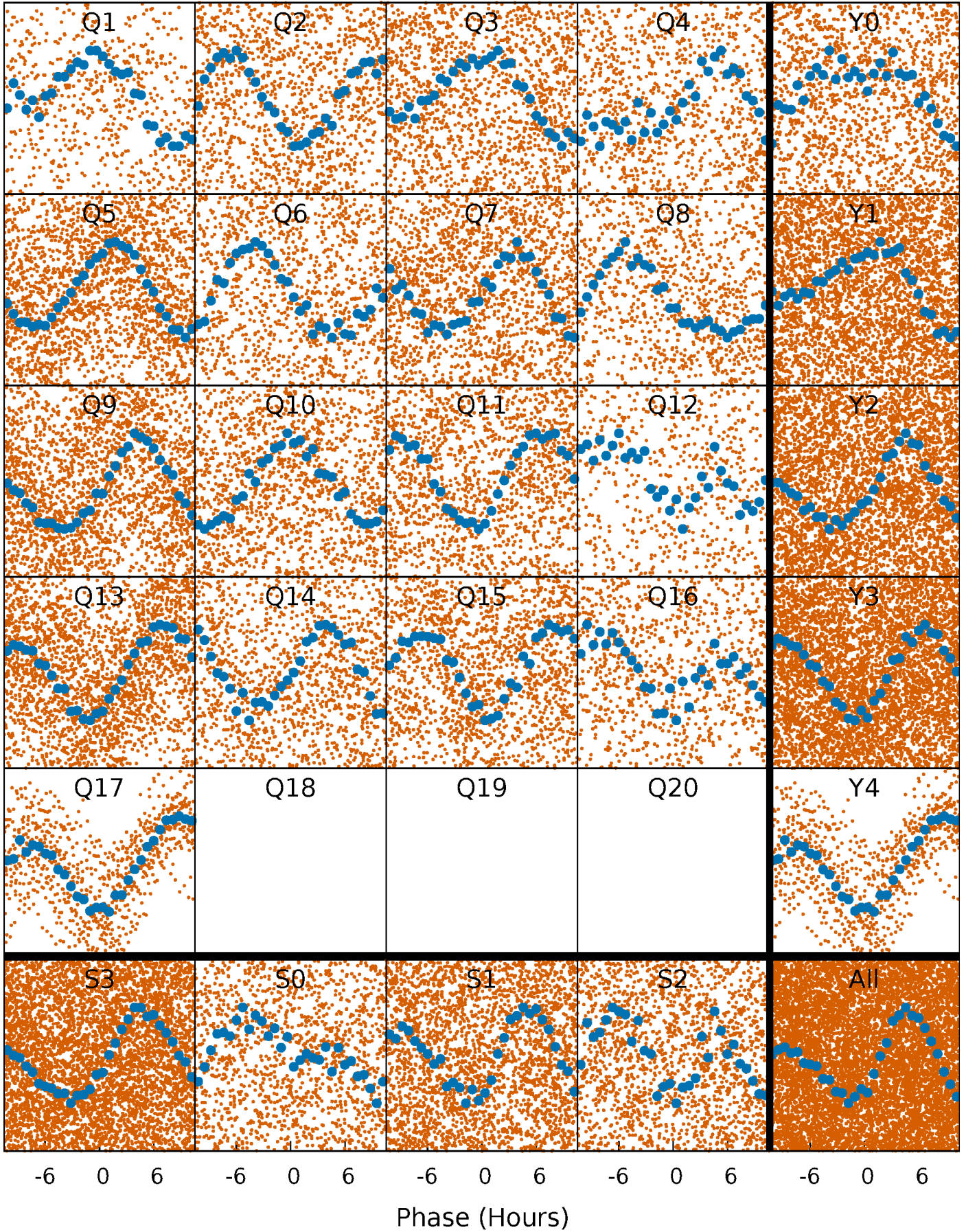


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

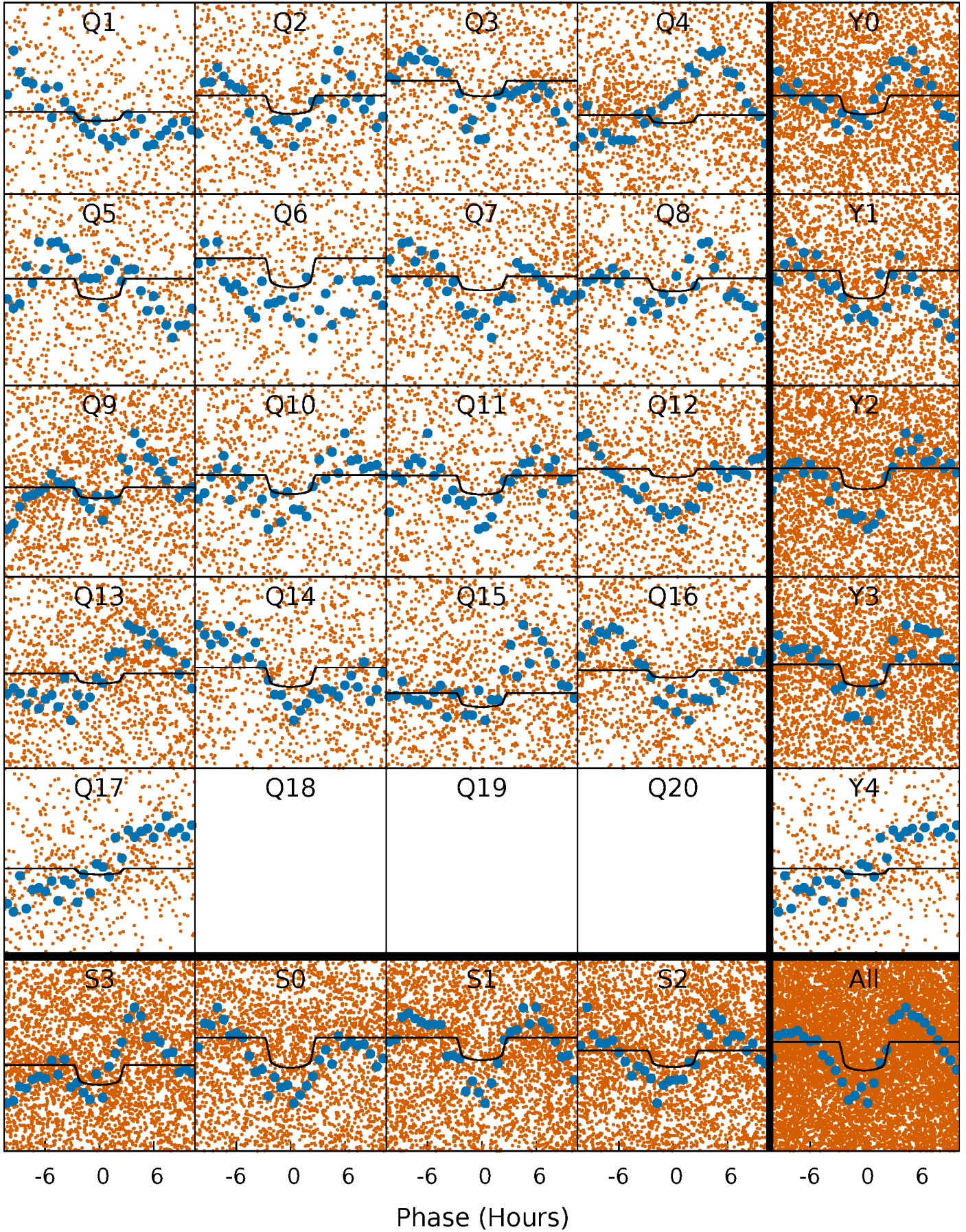
TCE 005382589-01 P= 1.392574 Days  $T_0=131.831748$  (BKJD)





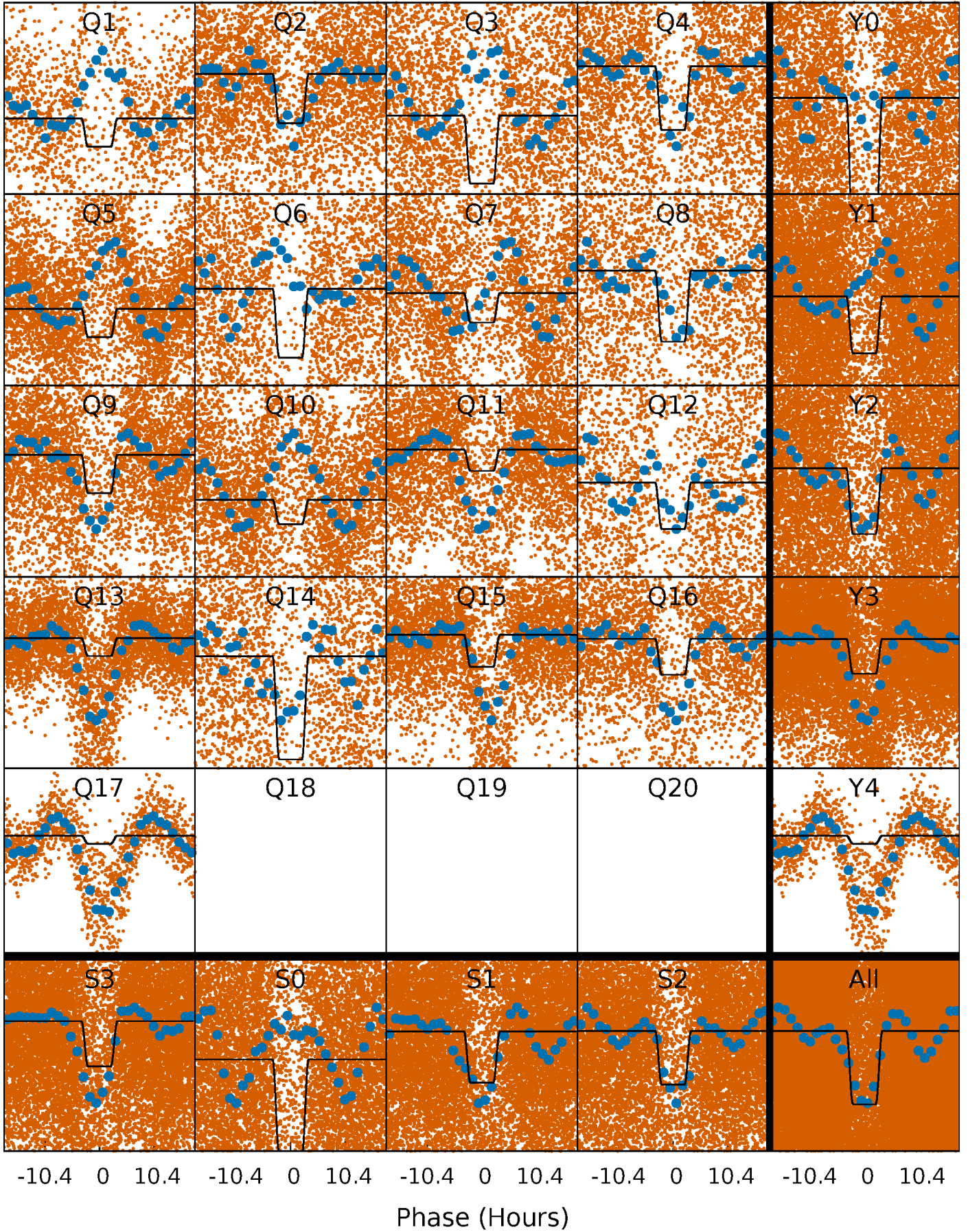
# DV Quarter-Phased Transit Curves

TCE 005382589-01 P= 1.392574 Days  $T_0=131.831748$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 005382589-01 P= 1.392590 Days  $T_0=131.792458$  (BKJD)

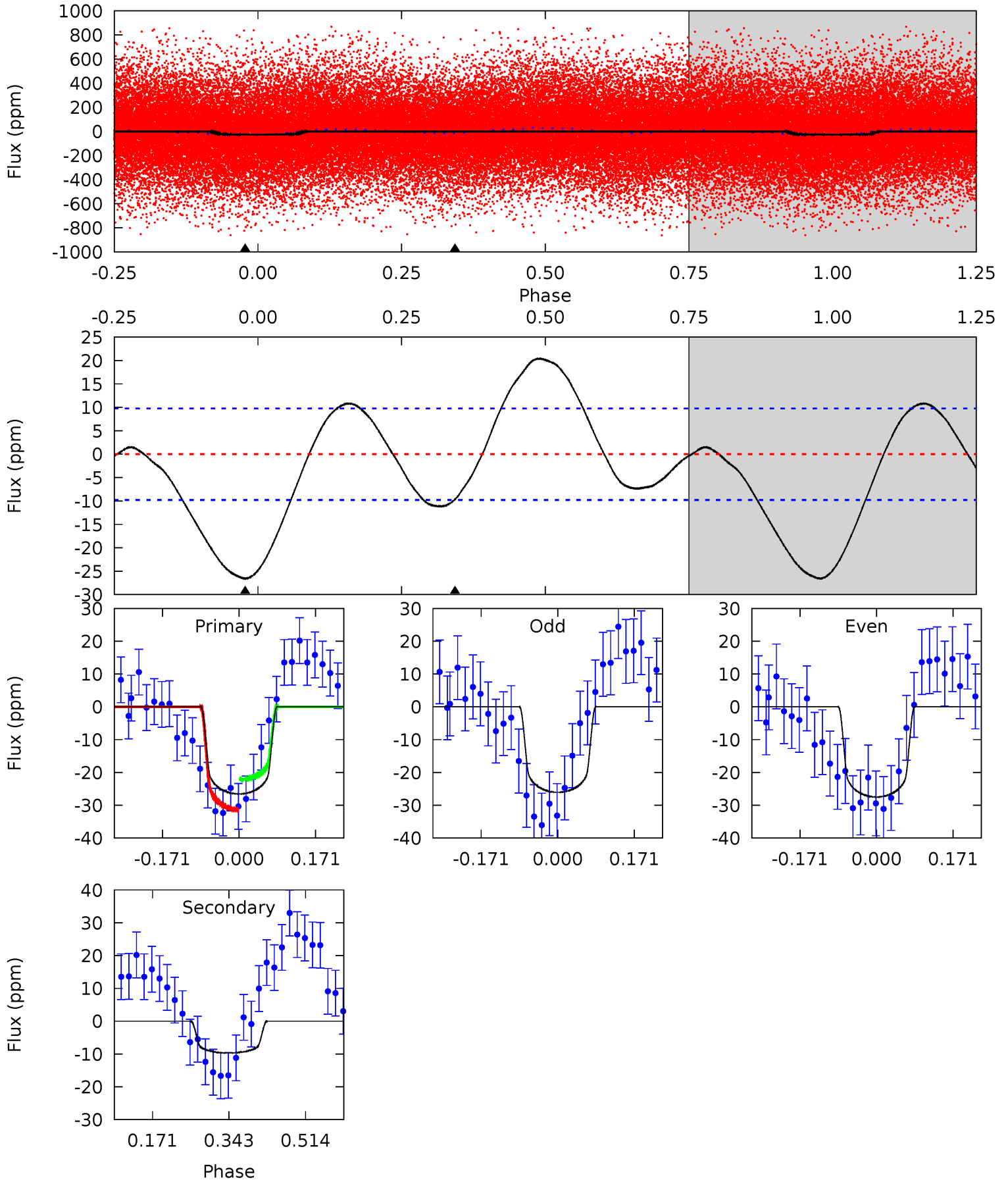




# DV Model-Shift Uniqueness Test

005382589-01, P = 1.392574 Days, E = 130.439174 Days

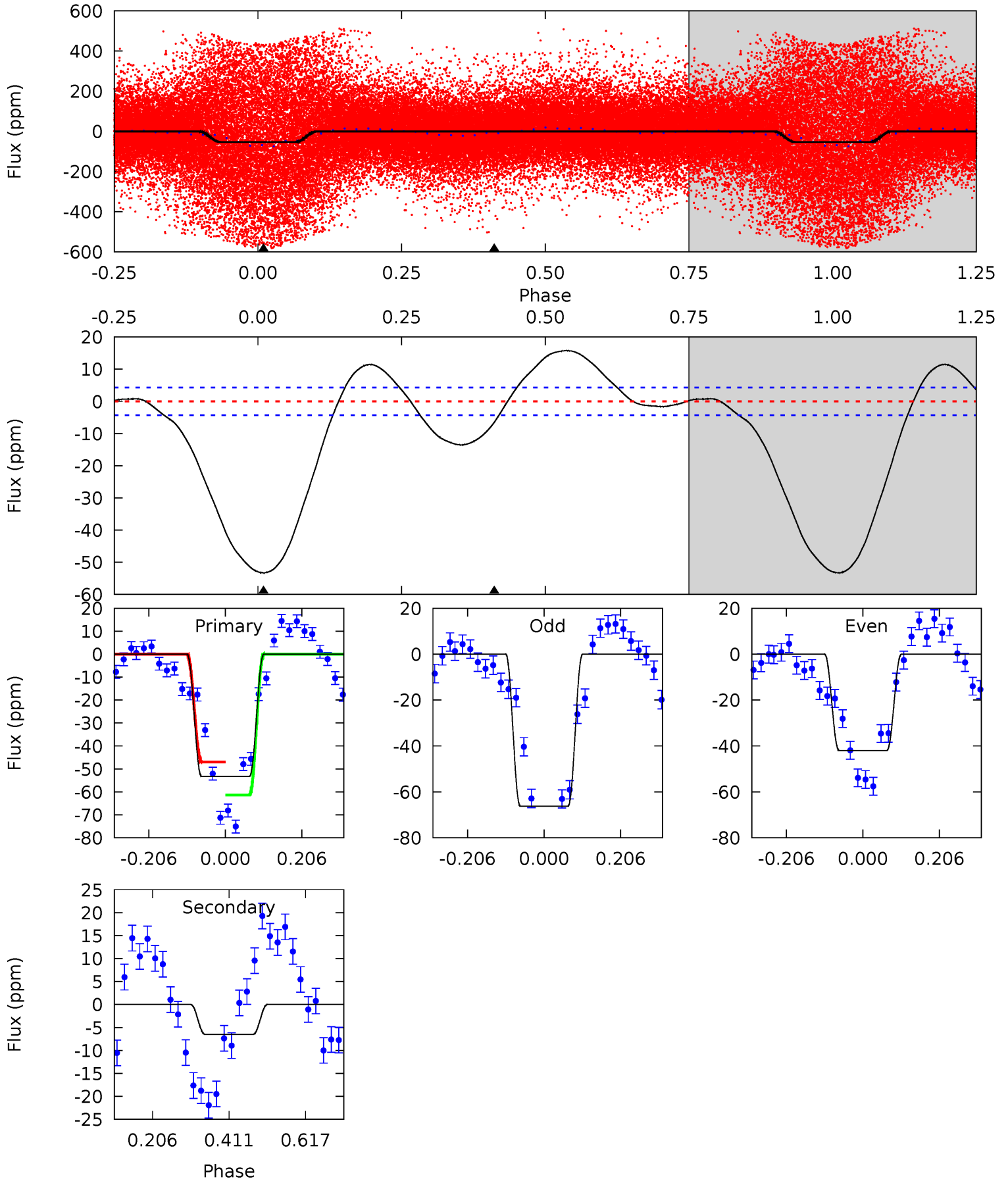
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.1	4.40	0	0	4.45	1.37	3.60	12.1	12.1	4.40	4.40	0.33	1.02	0.43	2.14



# Alt Model-Shift Uniqueness Test

005382589-01, P = 1.392590 Days, E = 130.399868 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
54.5	6.67	0	0	4.41	1.27	1.70	54.5	54.5	6.67	6.67	12.3	0.69	0.23	7.45





### Stellar Parameters For KIC 005382589

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6537^{+156}_{-176}$	$3.773^{+0.293}_{-0.098}$	$-0.140^{+0.300}_{-0.250}$	$2.669^{+0.434}_{-0.940}$	$1.541^{+0.192}_{-0.357}$	$0.114^{+0.240}_{-0.036}$
	+2%/-3%	+8%/-3%	+214%/-179%	+16%/-35%	+12%/-23%	+210%/-31%
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 005382589-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-10 \pm 2$	$1.24^{+0.35}_{-0.32}$	$3844^{+226}_{-331}$	$5254^{+830}_{-570}$	$2.682^{+2.478}_{-1.095}$
Alt.	$-7 \pm 1$	$2.07^{+0.41}_{-0.45}$	$3859^{+224}_{-311}$	$3714^{+347}_{-427}$	$0.672^{+0.356}_{-0.217}$

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

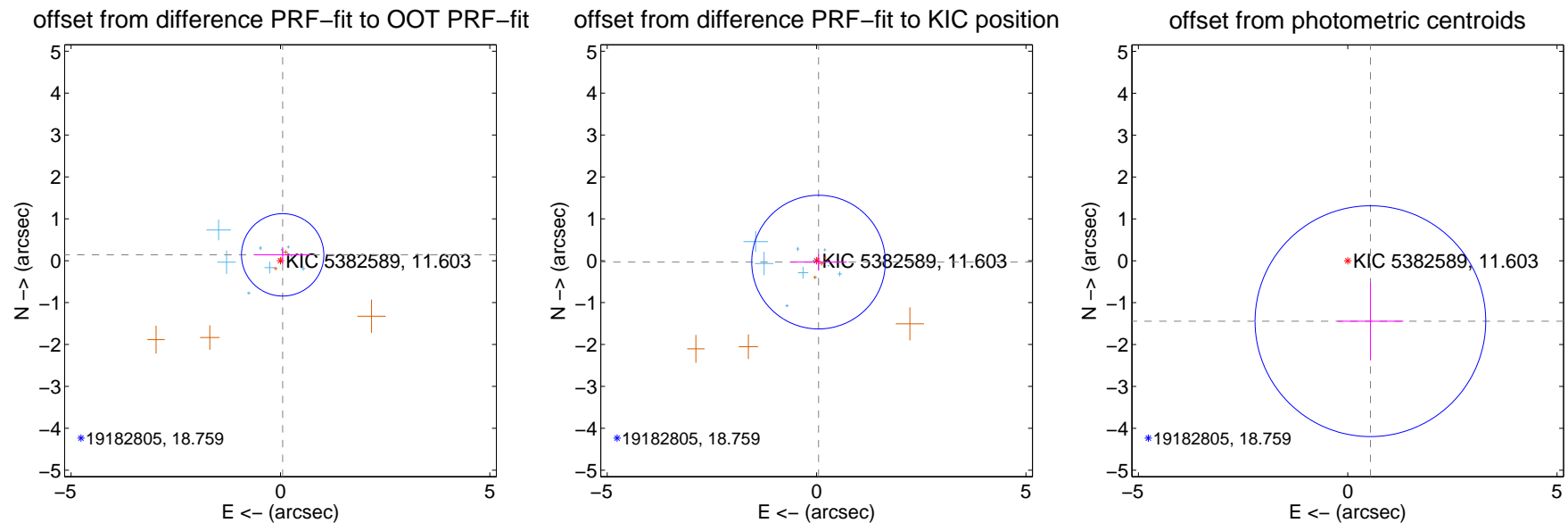
## DV Centroid Data

Supplemental centroid analysis for 005382589-01. **Kepler magnitude: 11.60.** Transit SNR 5.52

There are 9 quarters with good PRF difference image offsets

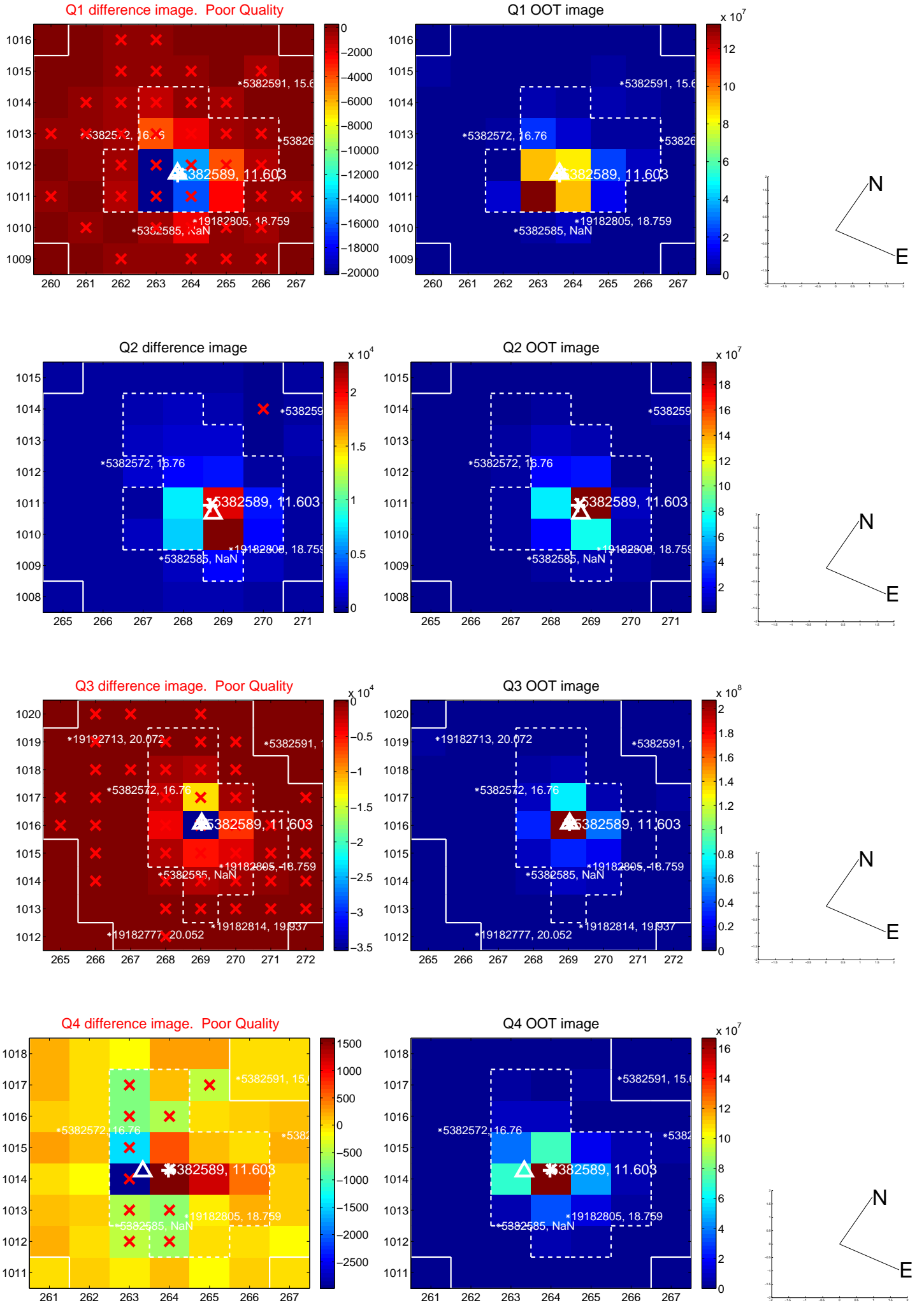
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.149 \pm 0.328$	0.45	$-0.053 \pm 0.678$	$0.139 \pm 0.188$
PRF-fit source offset from KIC position	$0.058 \pm 0.532$	0.11	$-0.047 \pm 0.673$	$-0.033 \pm 0.191$
photometric centroid source offset	$1.54 \pm 0.92$	1.68	$-0.54 \pm 0.79$	$-1.44 \pm 0.94$

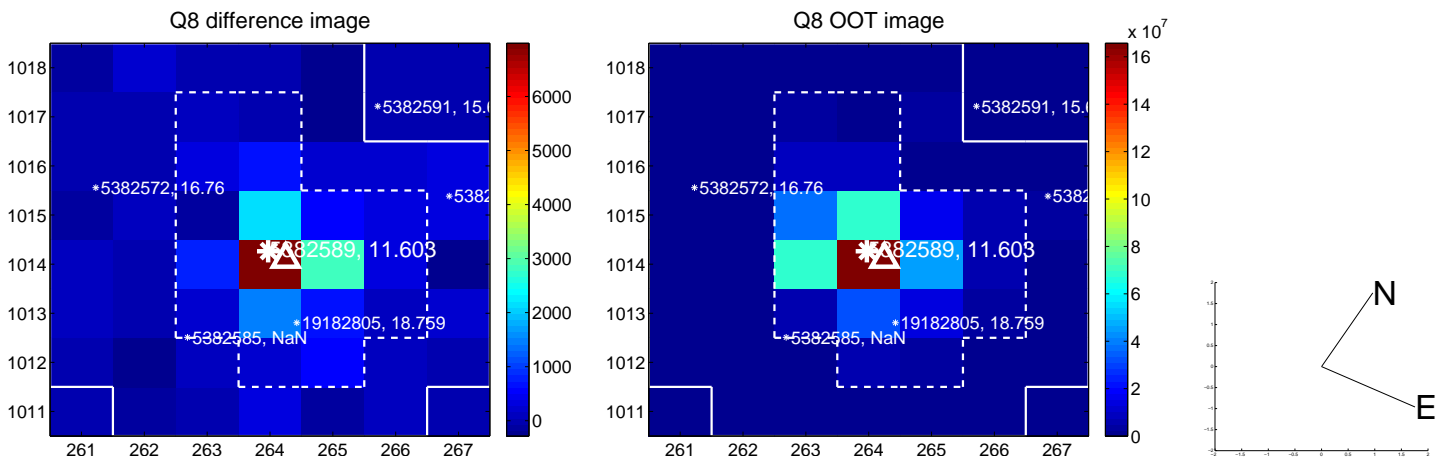
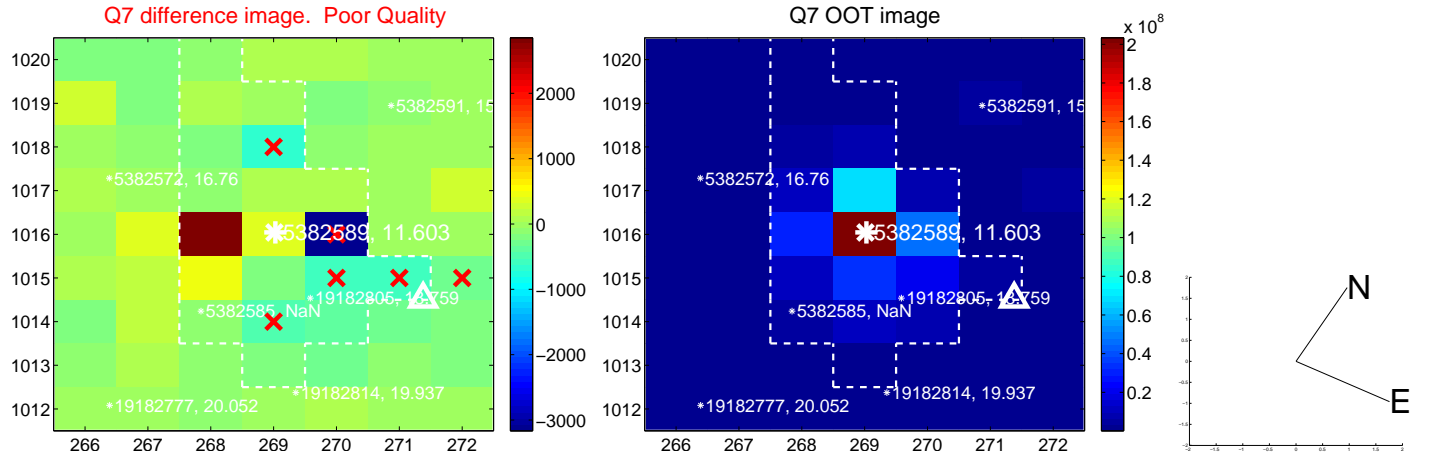
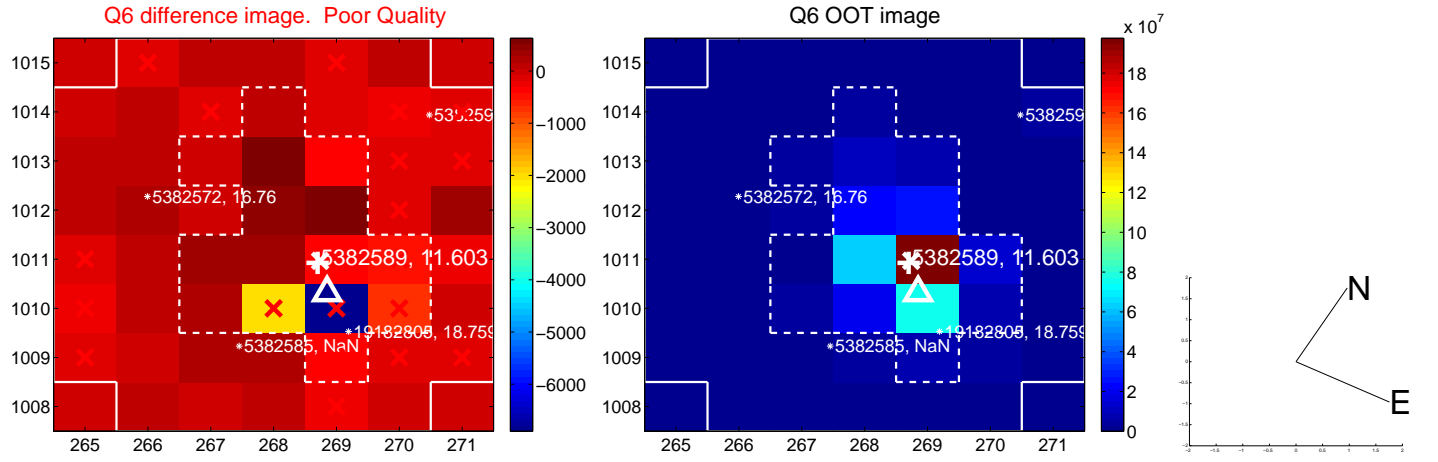
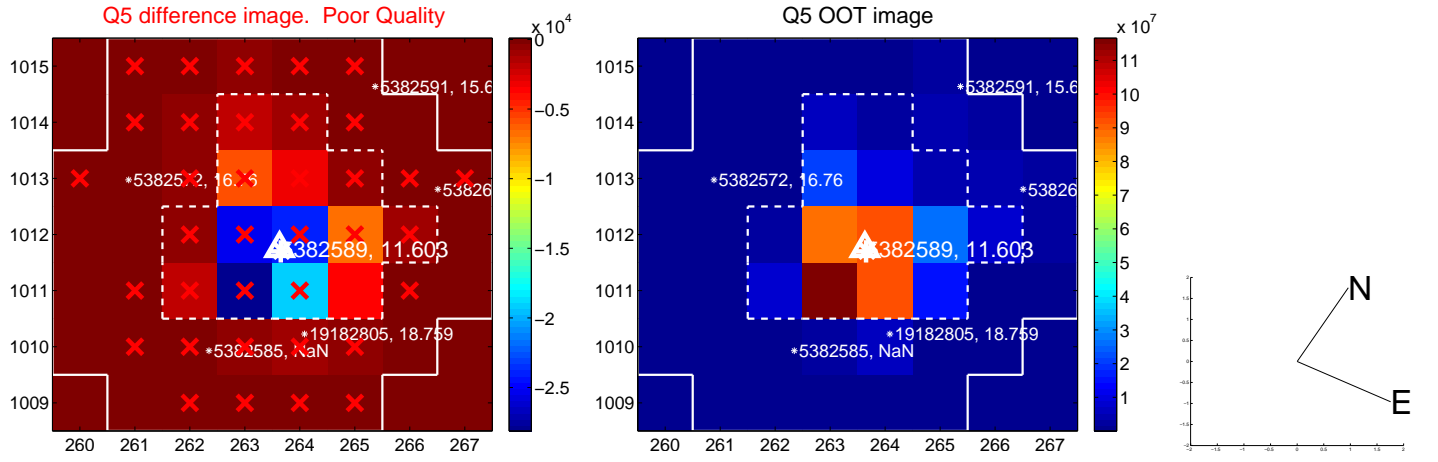


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

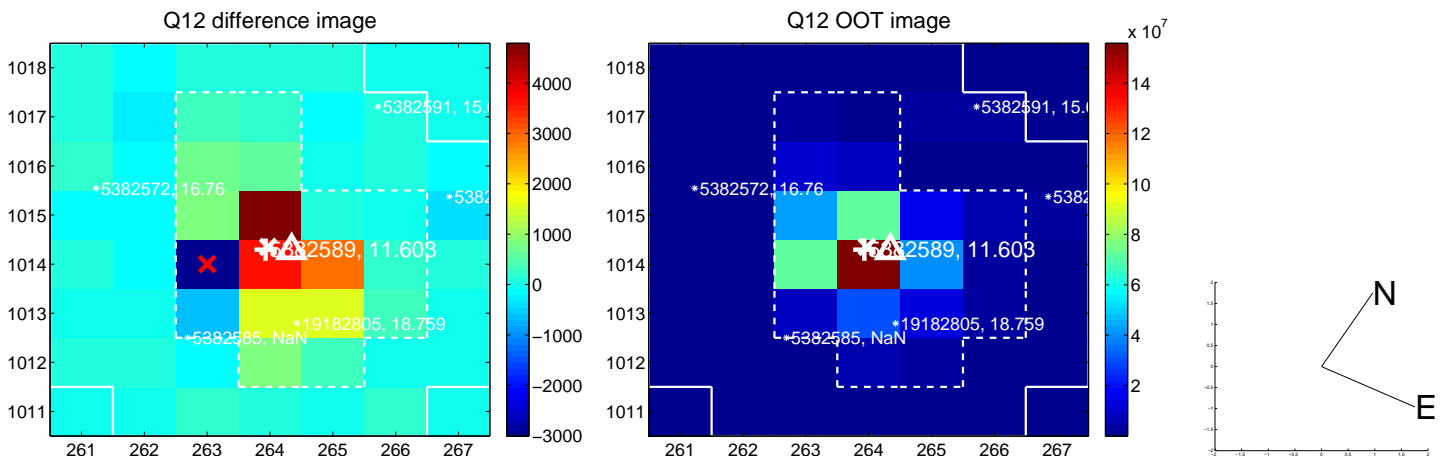
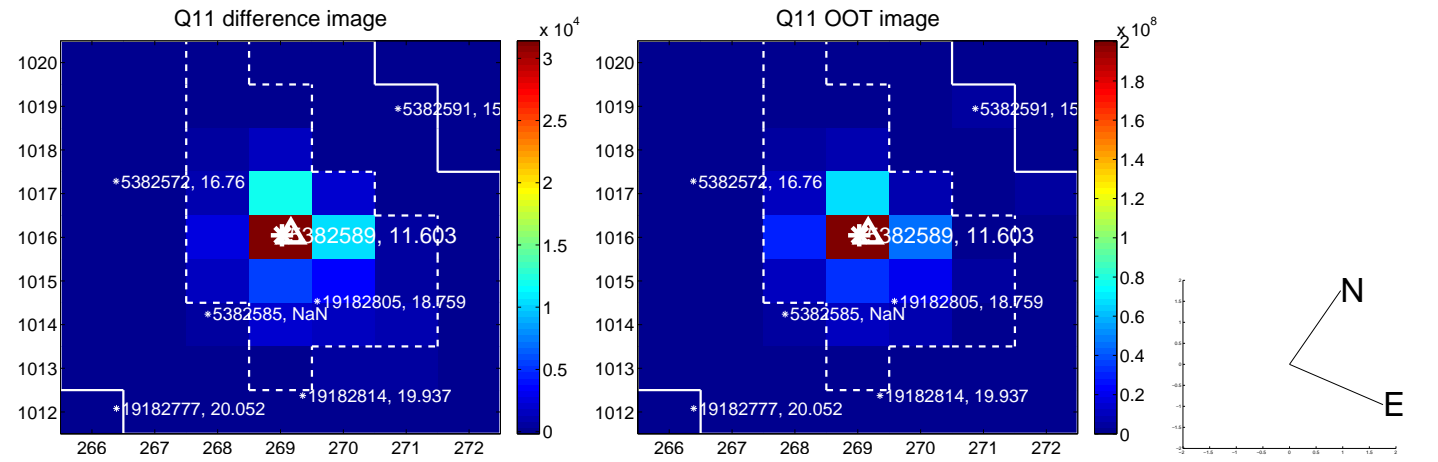
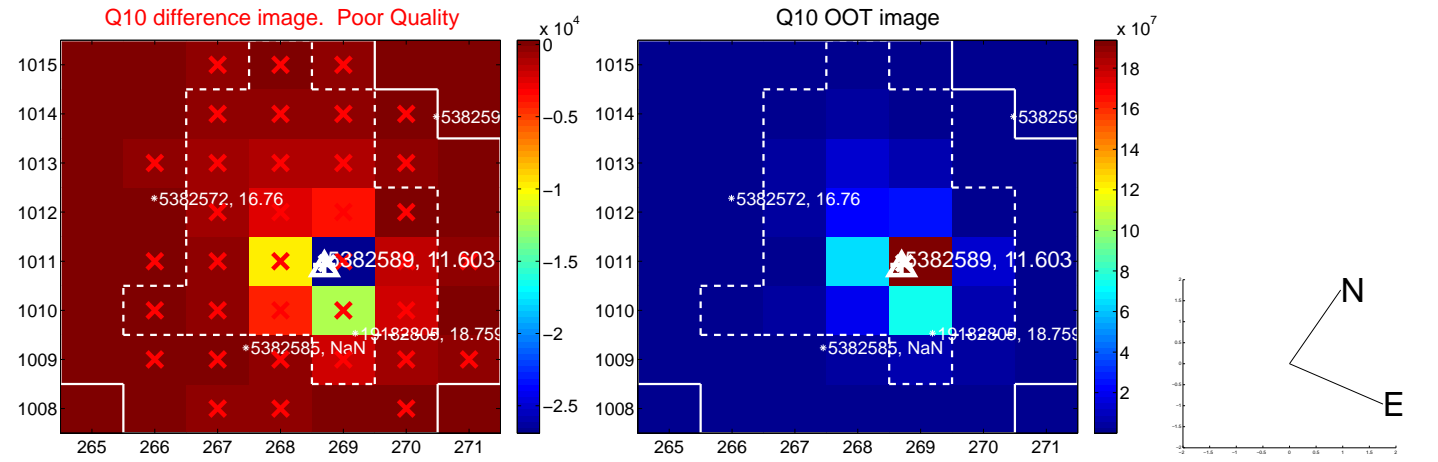
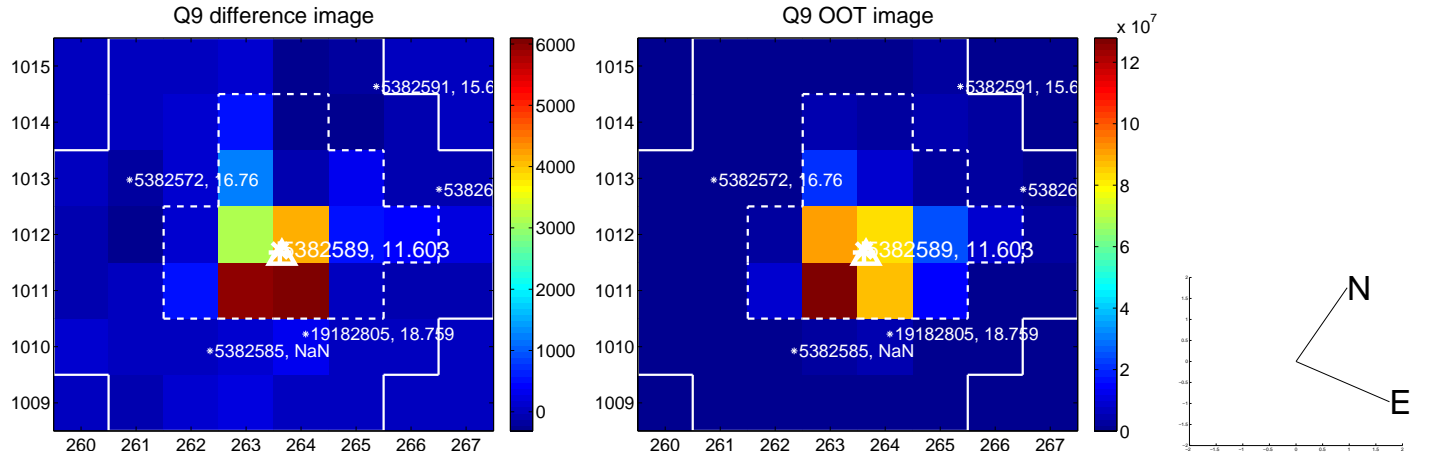


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

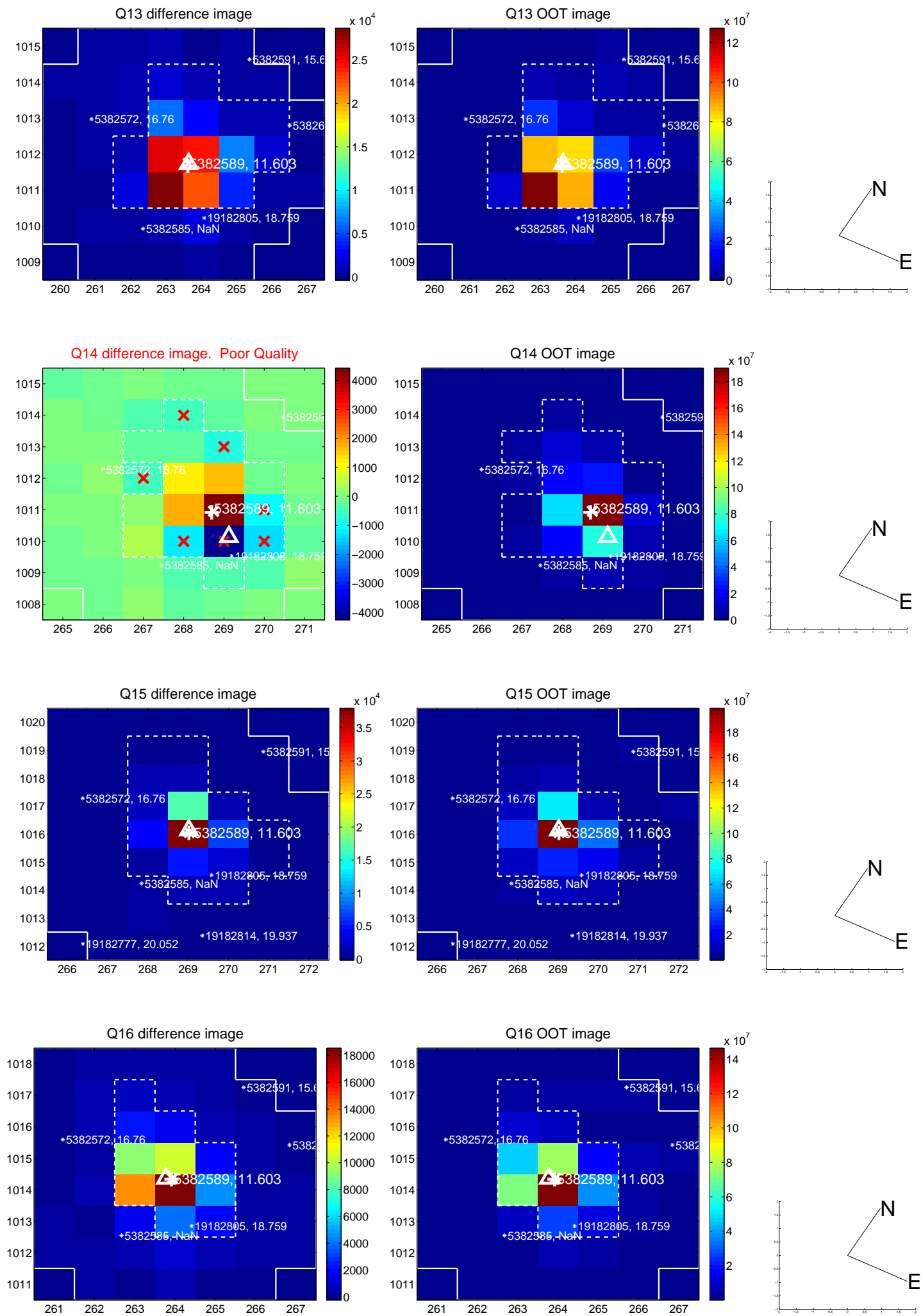




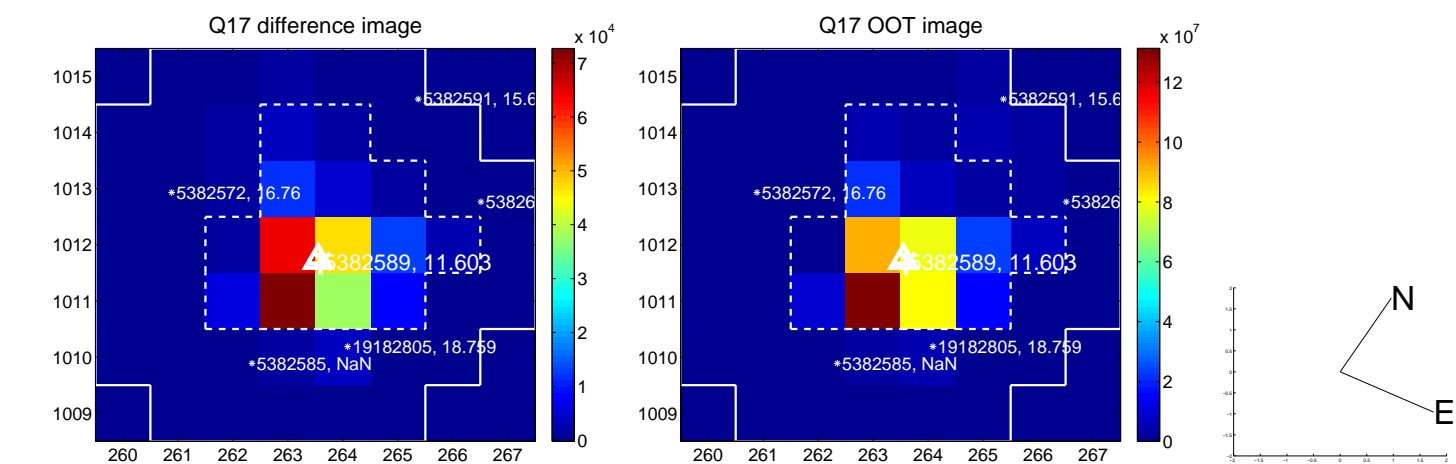
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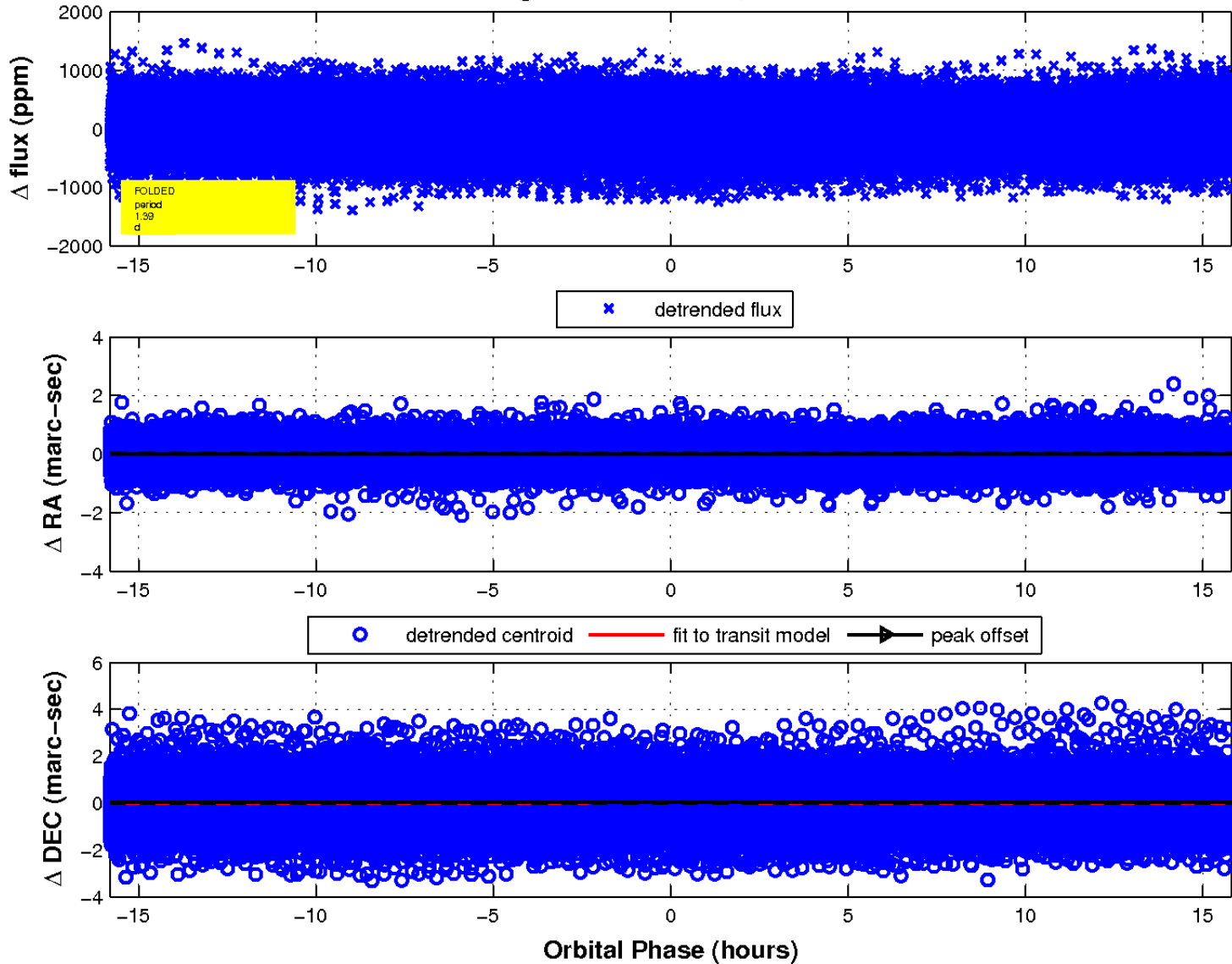
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

