

# KIC 005479605

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
005479605-01	OBS	No	4.406542	133.796979	31.7	7.357	8.8	7.9	3.04	6458	1.73	3921.50

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005479605-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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

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

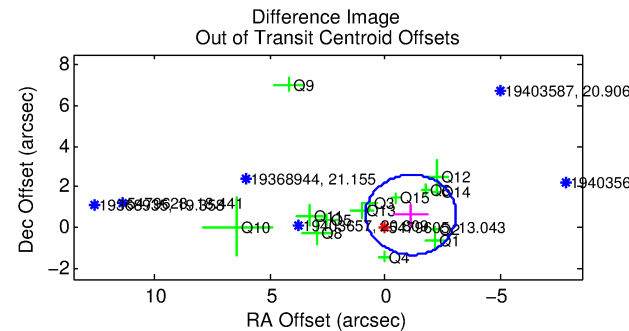
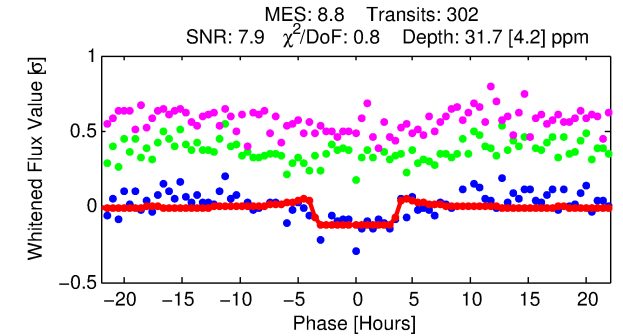
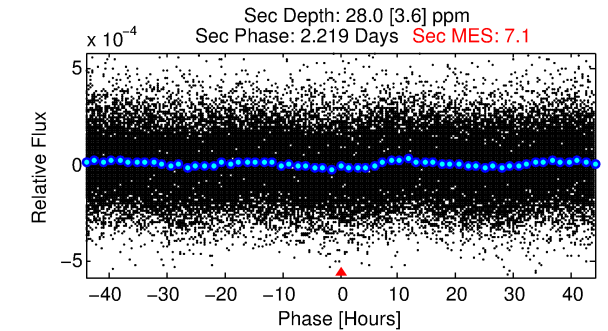
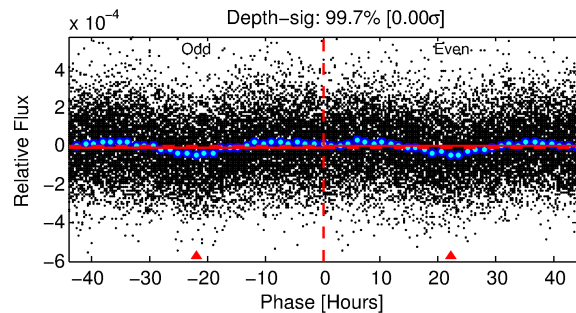
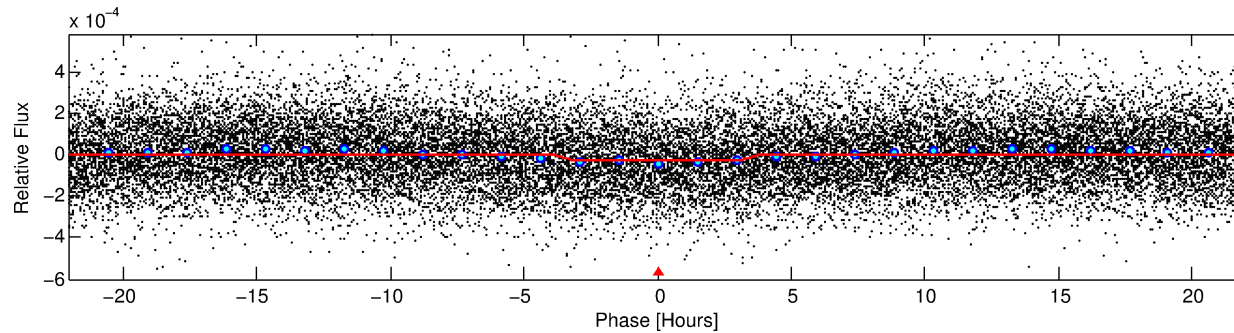
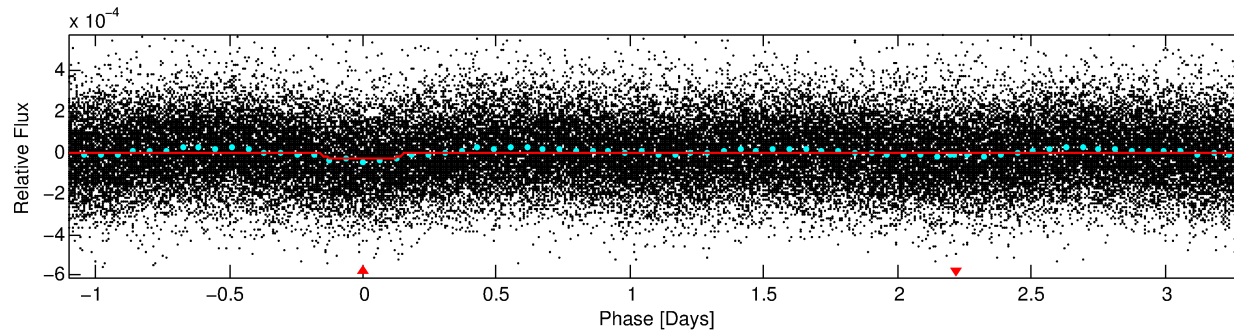
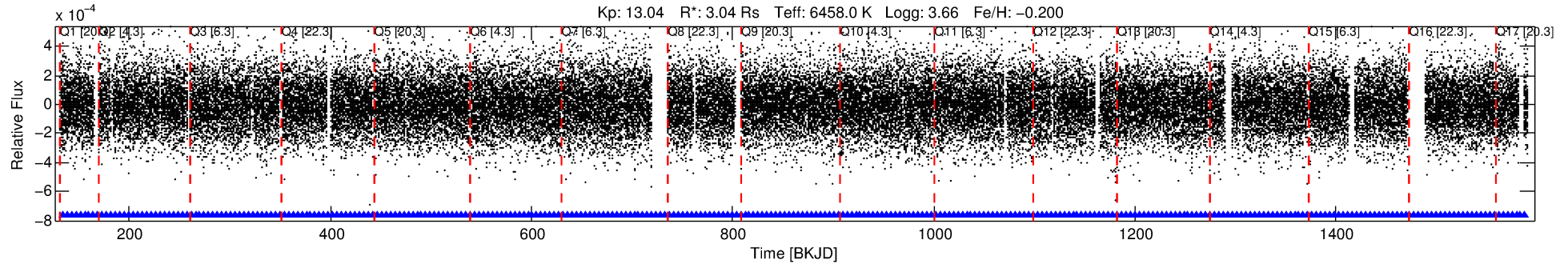
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 005479605-01

No Significant Match Found

# DV One-Page Summary

KIC: 5479605 Candidate: 1 of 1 Period: 4.407 d



## DV Fit Results:

Period = 4.40654 [0.00005] d  
Epoch = 133.7970 [0.0075] BKJD  
Rp/R\* = 0.0052 [0.0032]  
a/R\* = 4.49 [13.64]  
b = 0.26 [11.73]  
Seff = 3921.50 [2337.44]  
Teq = 2018 [301] K  
Rp = 1.73 [1.26] Re  
a = 0.0605 [0.0226] AU  
Ag = 18.90 [25.70] [0.70σ]  
Teffp = 6505 [2003] K [2.22σ]

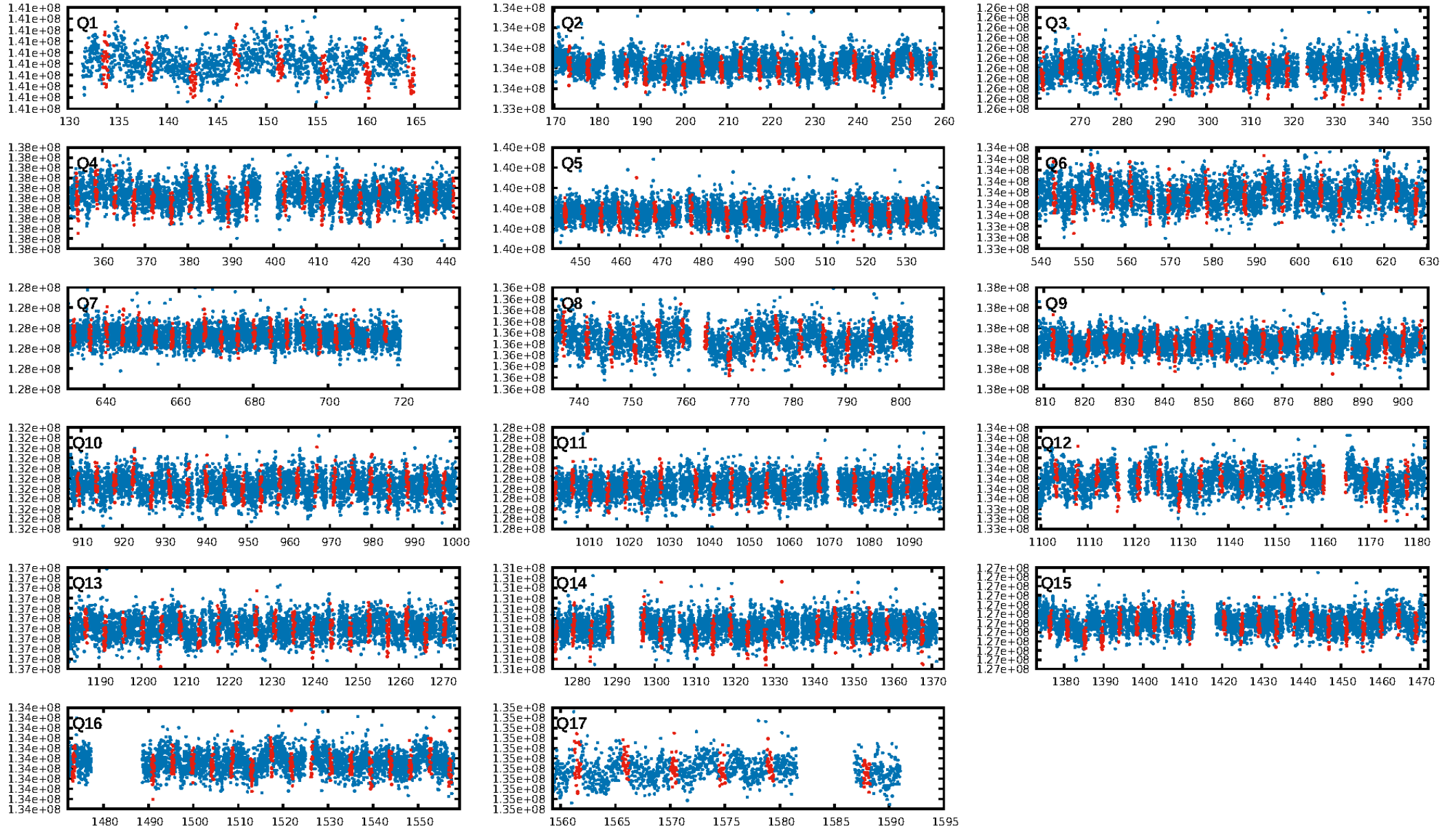
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 2.70e-15  
RollingBand-fgt: 1.00 [288/288]  
GhostDiagnostic-chr: 13.54  
Centroid-sig: N/A  
Centroid-so: 1.061 arcsec [0.94σ]  
OotOffset-rm: 1.281 arcsec [1.96σ]  
KicOffset-rm: 1.411 arcsec [2.20σ]  
OotOffset-st: 4/3/3/4 [14]  
KicOffset-st: 4/3/3/4 [14]  
DiffImageQuality-fgm: 0.64 [9/14]  
DiffImageOverlap-fno: 1.00 [17/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 07:35:48 Z

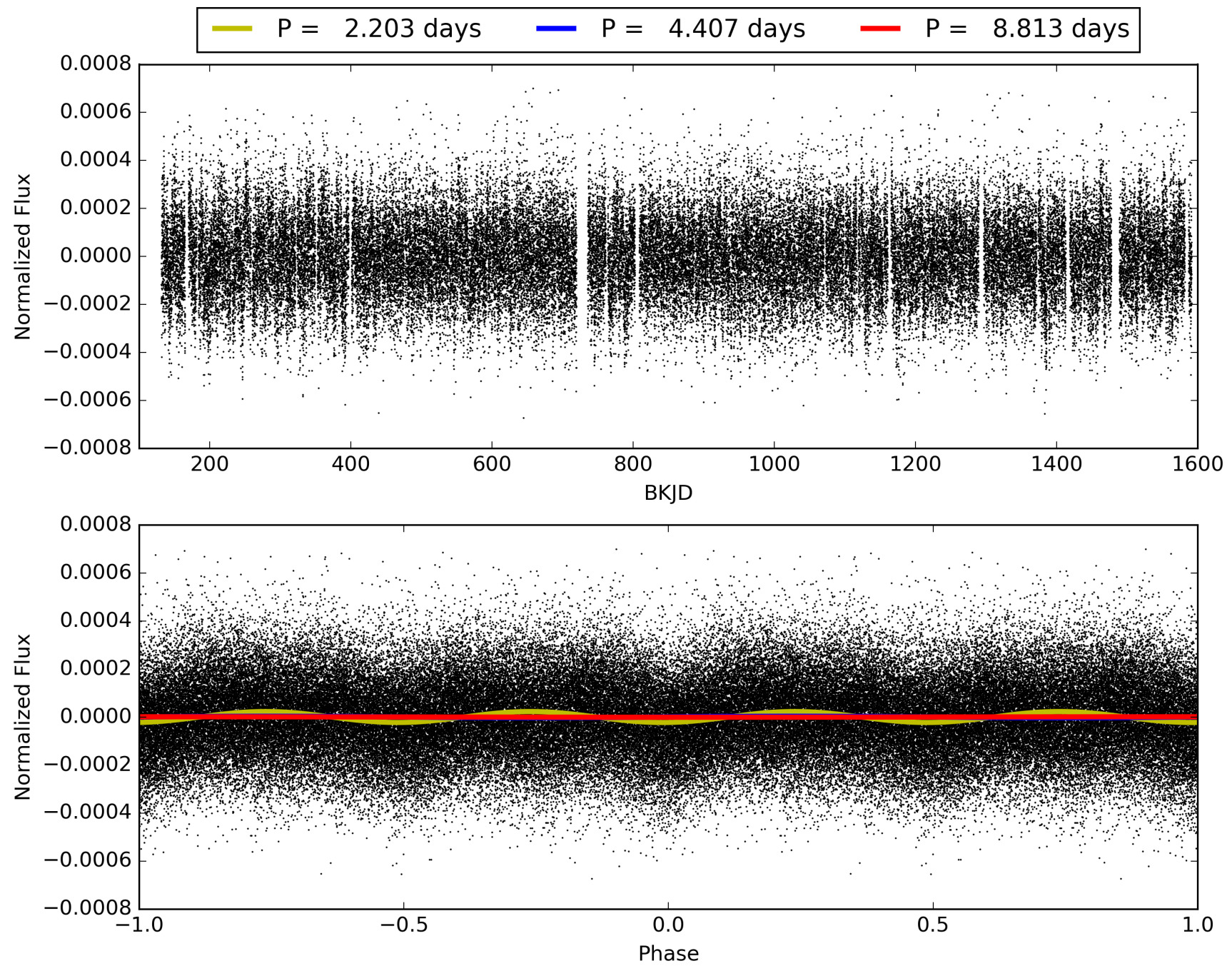
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 005479605-01, PDC Light Curves



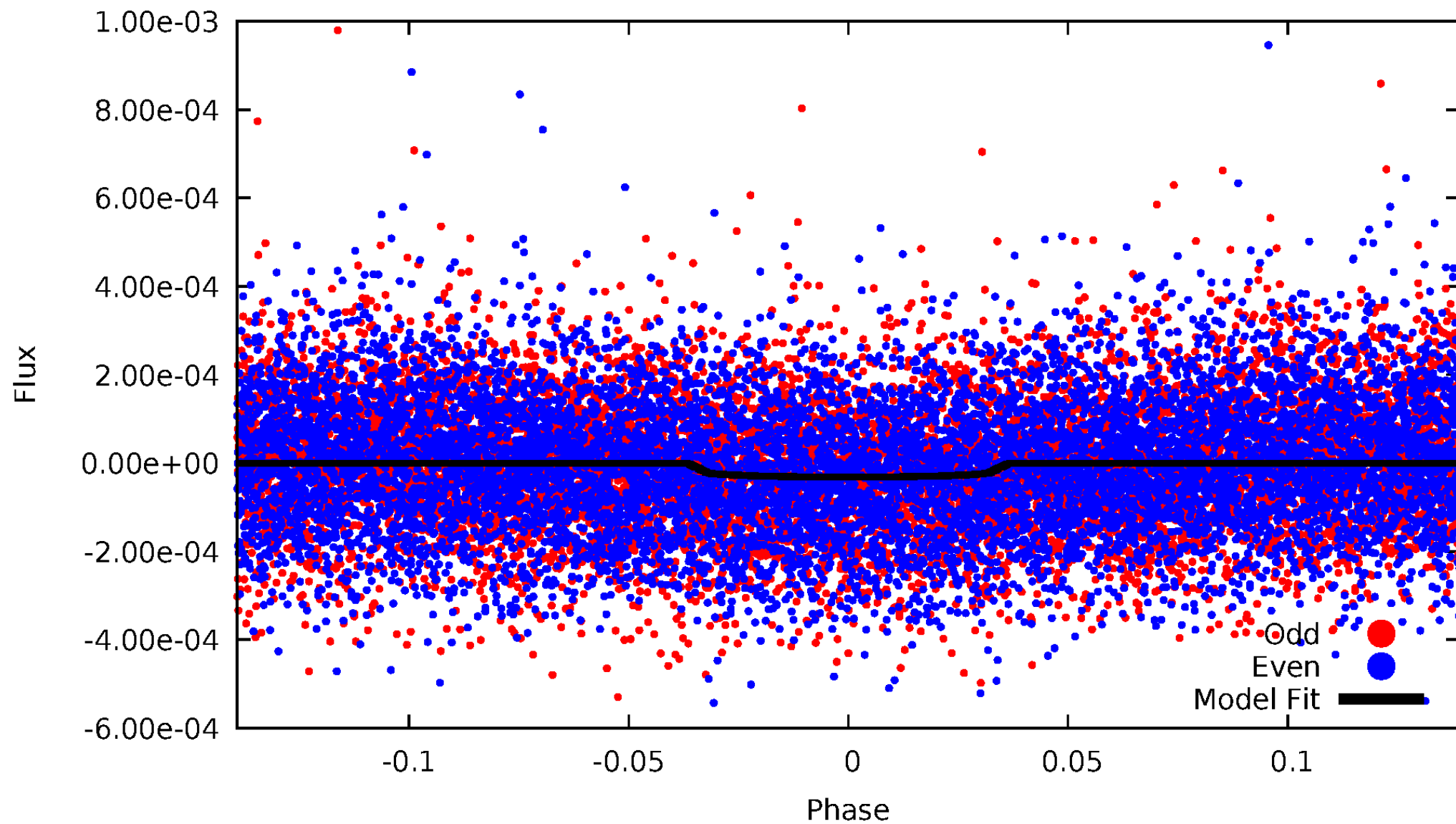


TCE 005479605-01



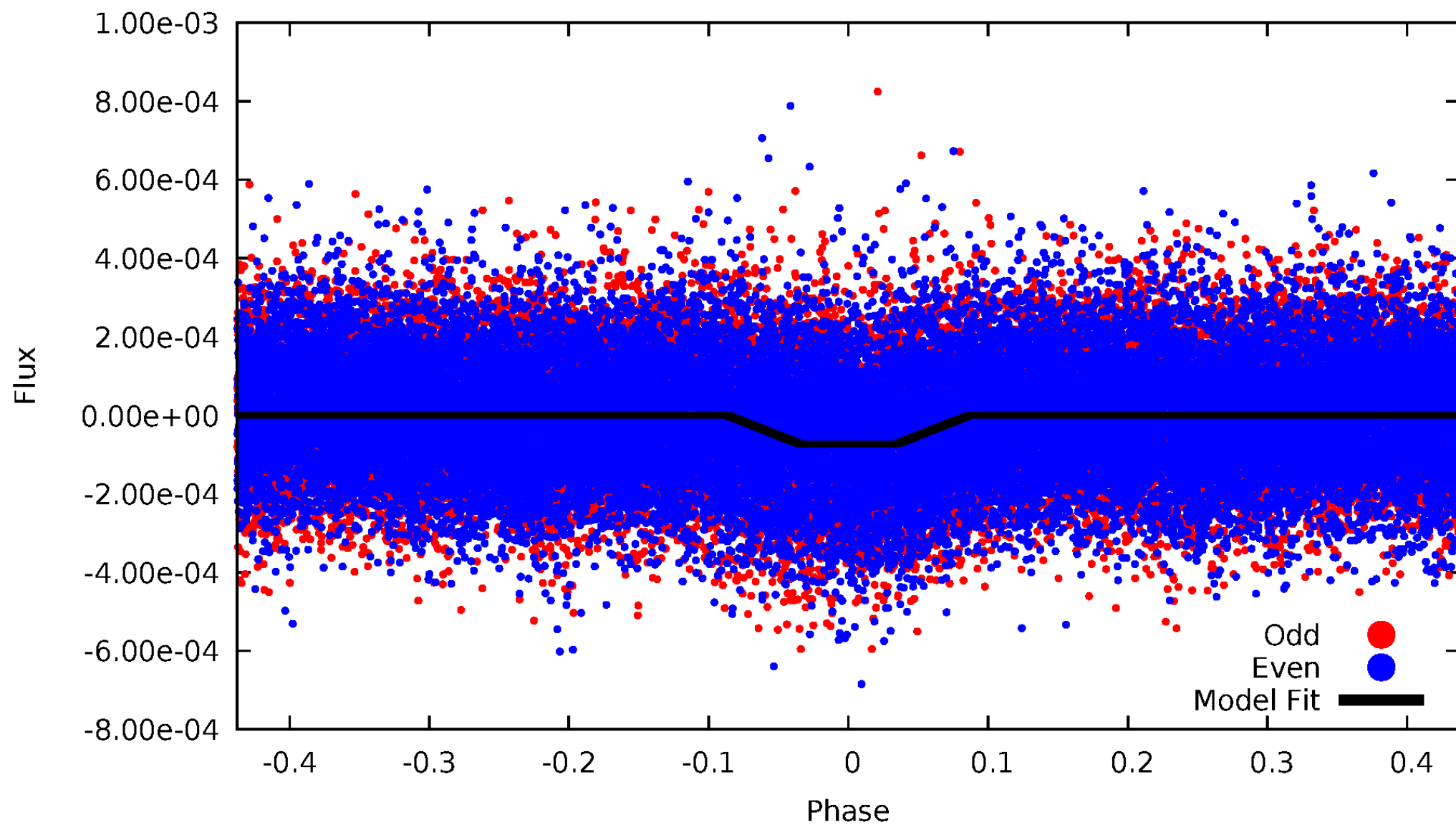
# DV Odd/Even

TCE 005479605-01



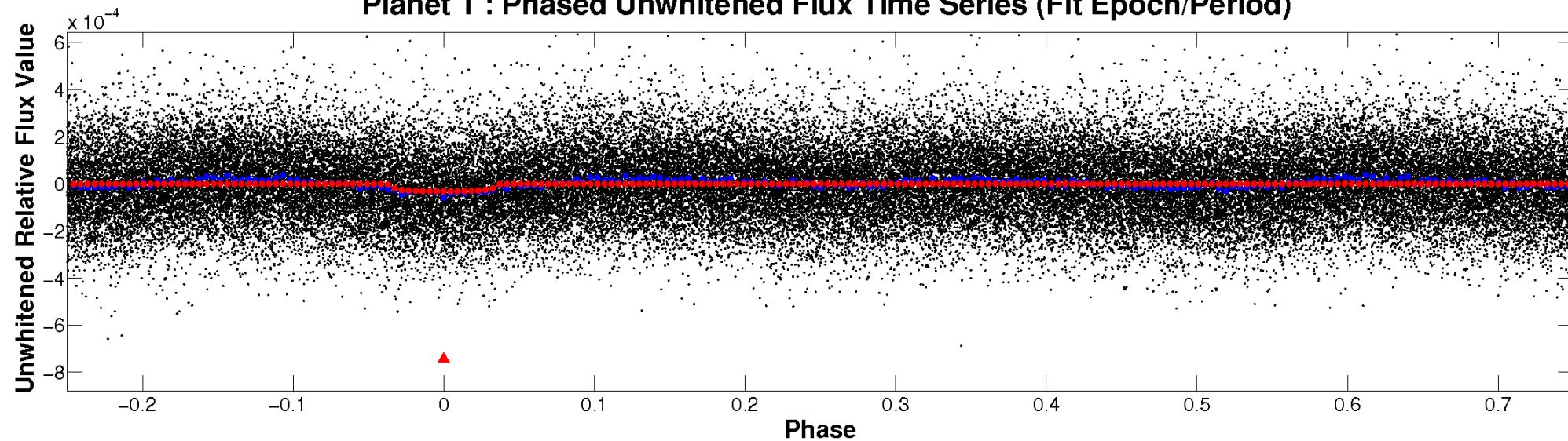
# ALT Odd/Even

TCE 005479605-01

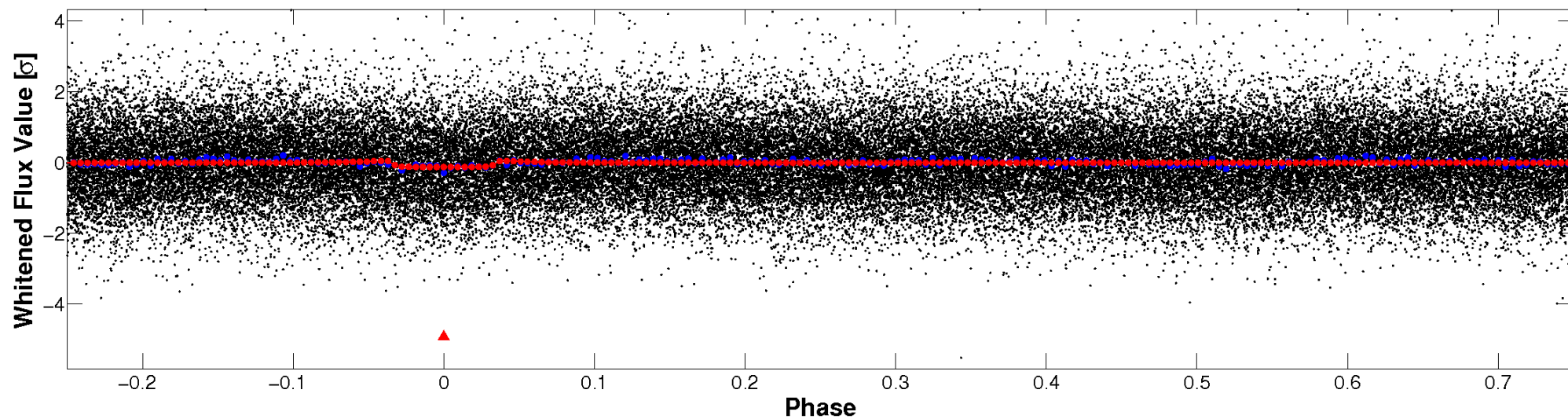


# Non-Whitened Vs. Whitened Light Curve

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



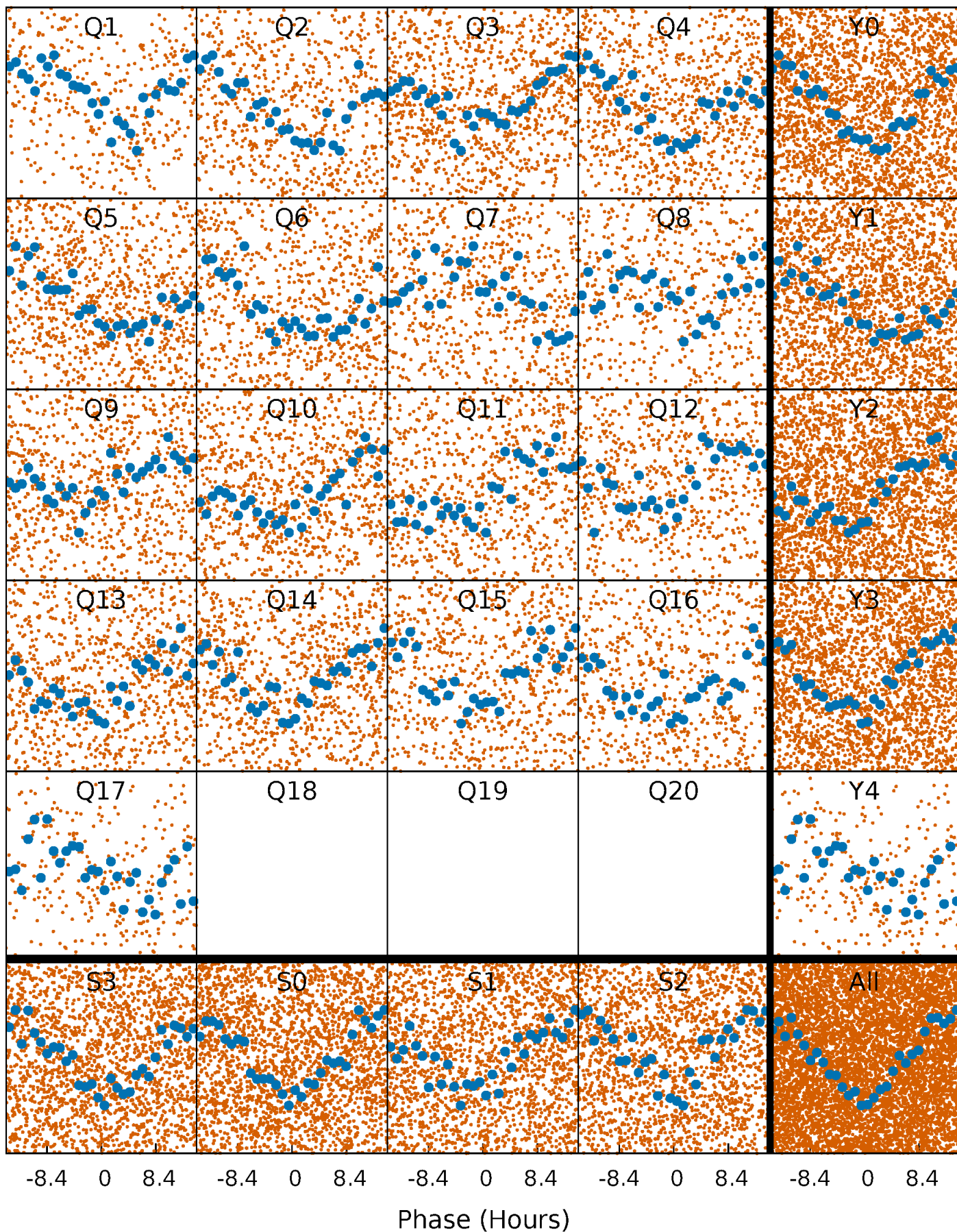
**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**





# PDC Quarter-Phased Transit Curves

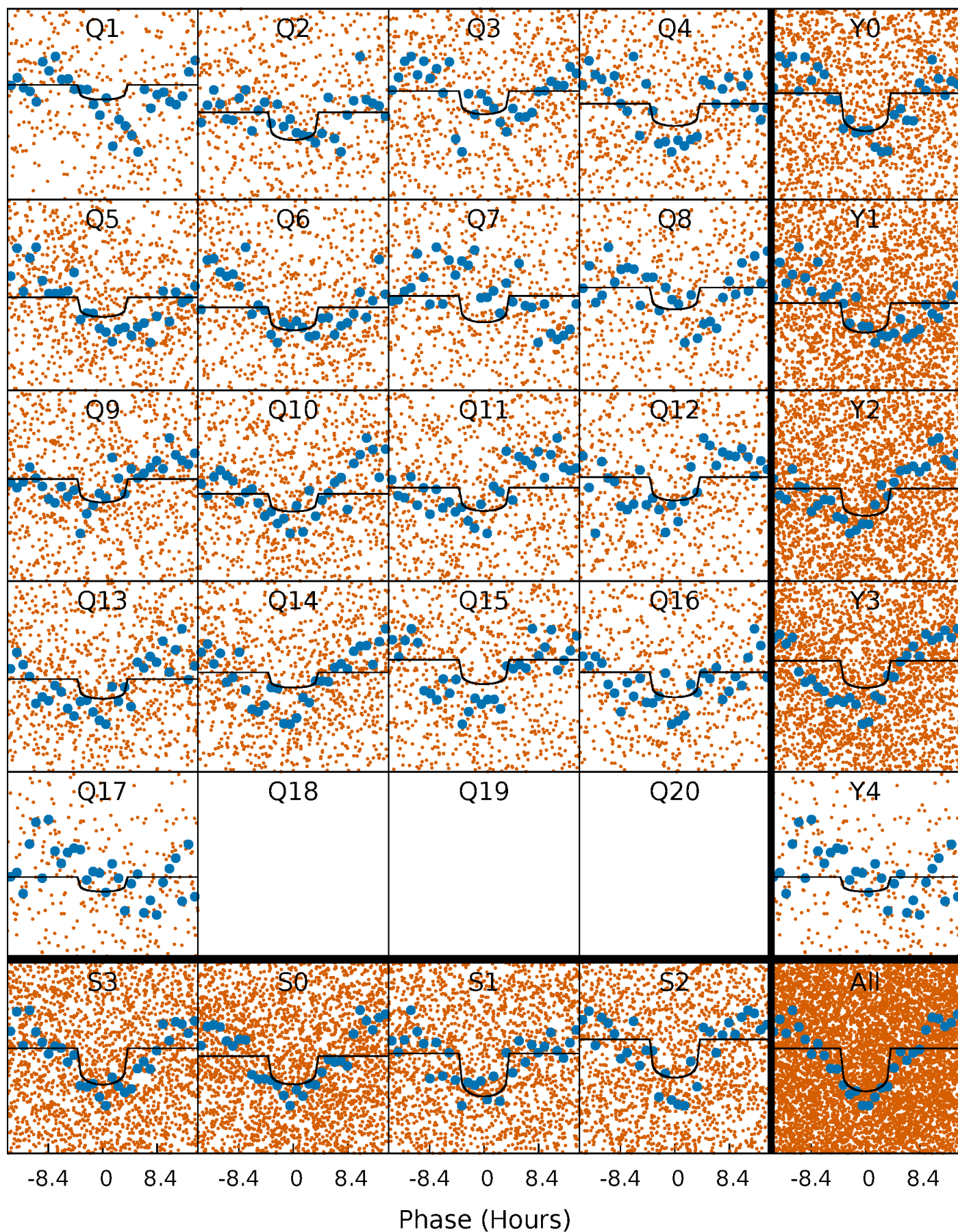
TCE 005479605-01 P= 4.406542 Days  $T_0=133.796979$  (BKJD)





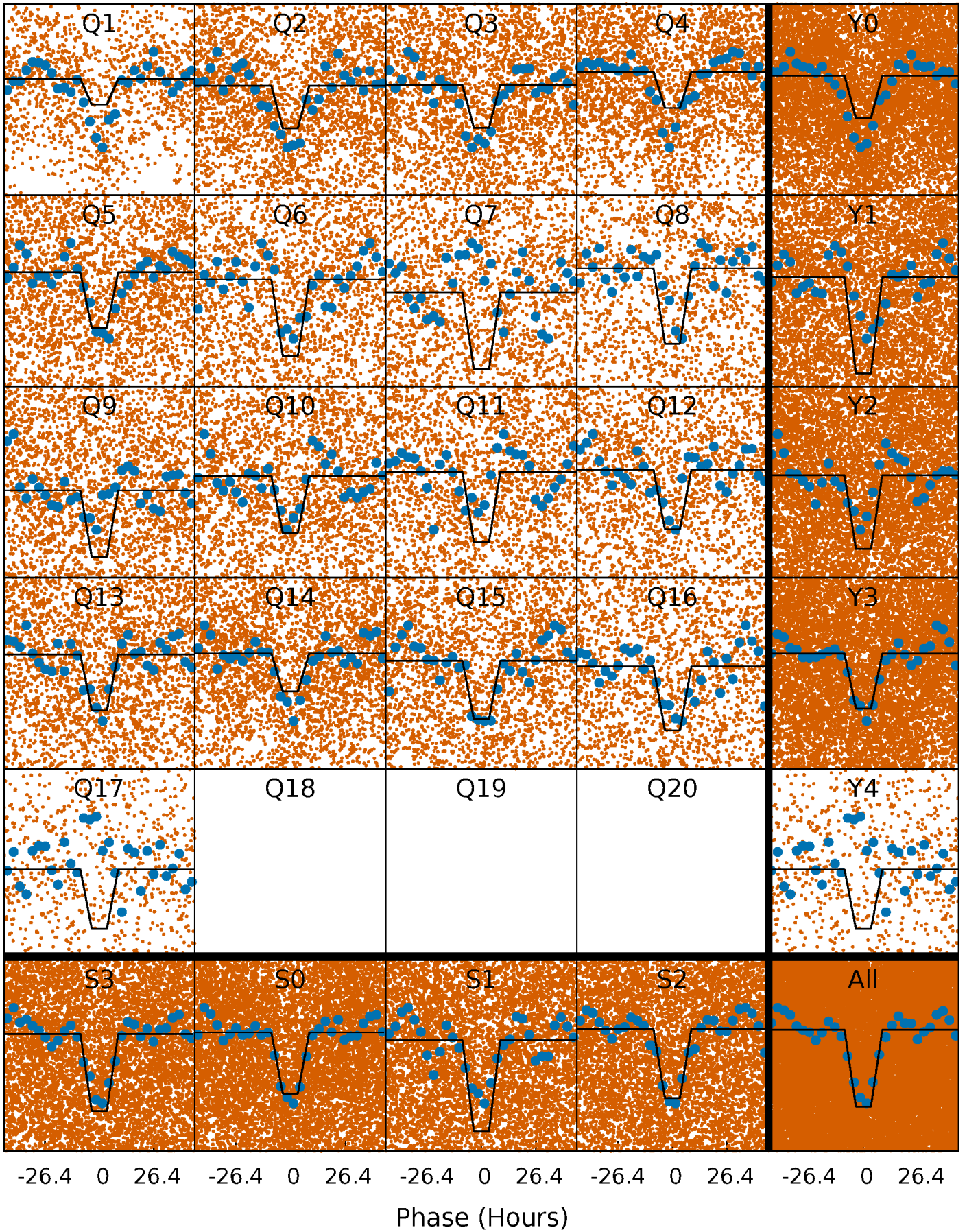
# DV Quarter-Phased Transit Curves

TCE 005479605-01 P= 4.406542 Days  $T_0=133.796979$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 005479605-01 P= 4.405673 Days  $T_0=133.931209$  (BKJD)

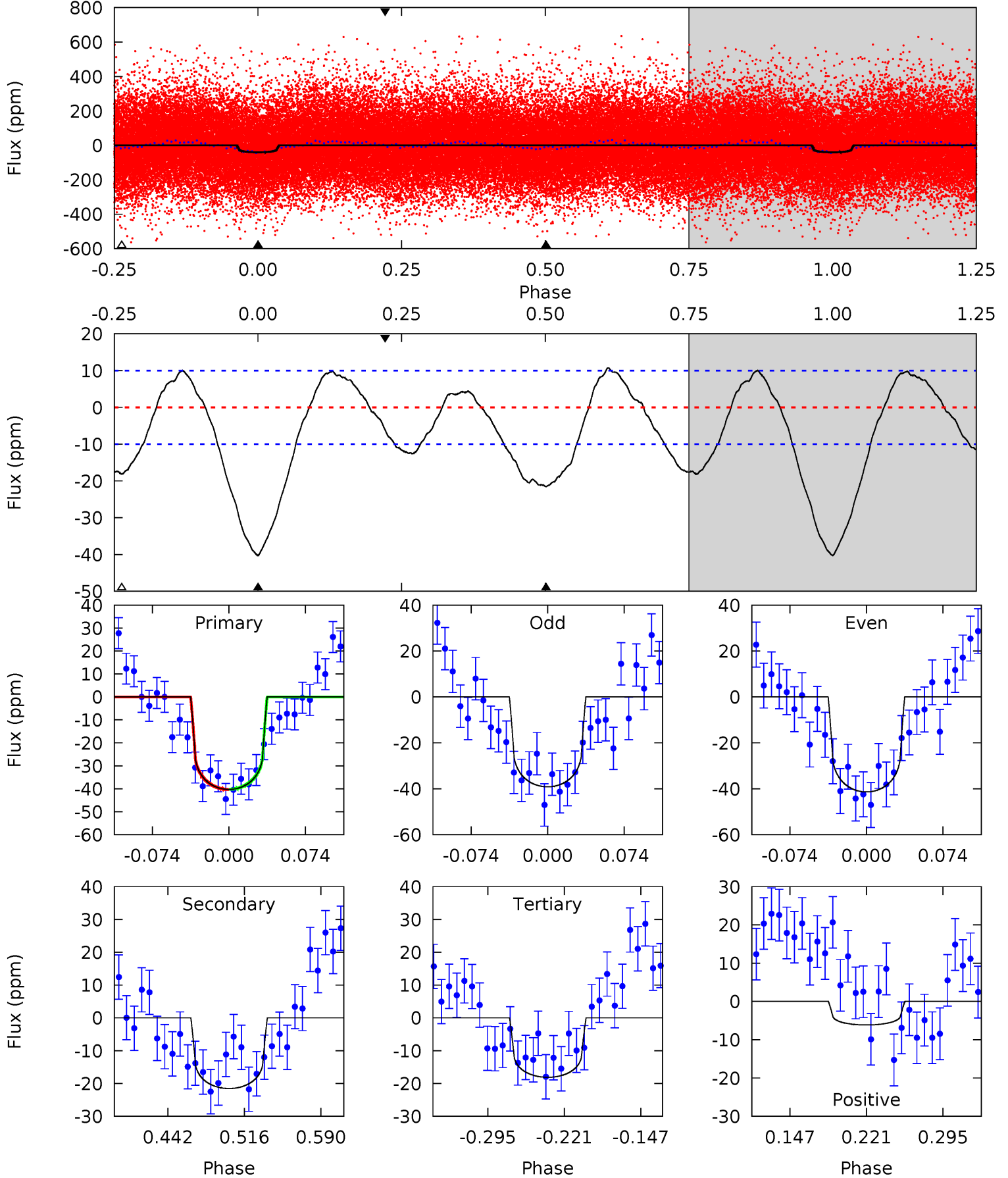




# DV Model-Shift Uniqueness Test

005479605-01, P = 4.406542 Days, E = 129.390437 Days

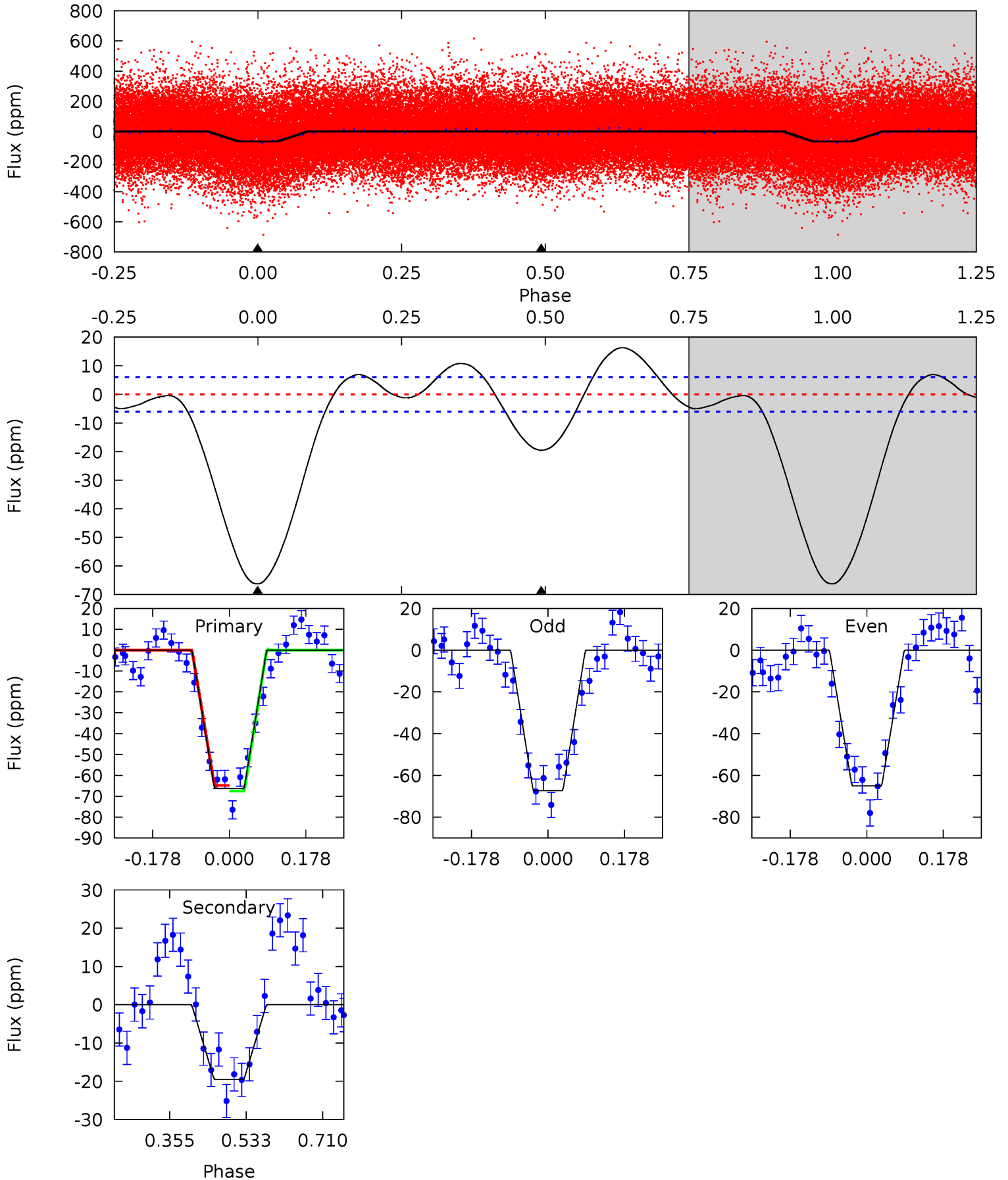
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.7	9.98	8.39	-2.84	4.63	1.79	3.78	10.3	21.5	1.58	12.8	0.52	1.23	0.21	0.02



# Alt Model-Shift Uniqueness Test

005479605-01, P = 4.405673 Days, E = 129.525536 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
49.1	14.5	0	0	4.44	1.35	3.13	49.1	49.1	14.5	14.5	0.86	0.98	0.20	1.00





### Stellar Parameters For KIC 005479605

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6458^{+175}_{-175}$	$3.656^{+0.340}_{-0.080}$	$-0.200^{+0.300}_{-0.250}$	$3.037^{+0.486}_{-1.215}$	$1.524^{+0.230}_{-0.346}$	$0.077^{+0.197}_{-0.021}$
	+3%/-3%	+9%/-2%	+150%/-125%	+16%/-40%	+15%/-23%	+258%/-28%
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 005479605-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-22 \pm 2$	$1.62^{+1.00}_{-0.92}$	$2764^{+153}_{-256}$	$6027^{+4014}_{-1181}$	$17^{+73}_{-10}$
Alt.	$-20 \pm 1$	$2.60^{+1.06}_{-1.06}$	$2763^{+162}_{-265}$	$4739^{+1161}_{-548}$	$5.947^{+10.920}_{-2.992}$

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

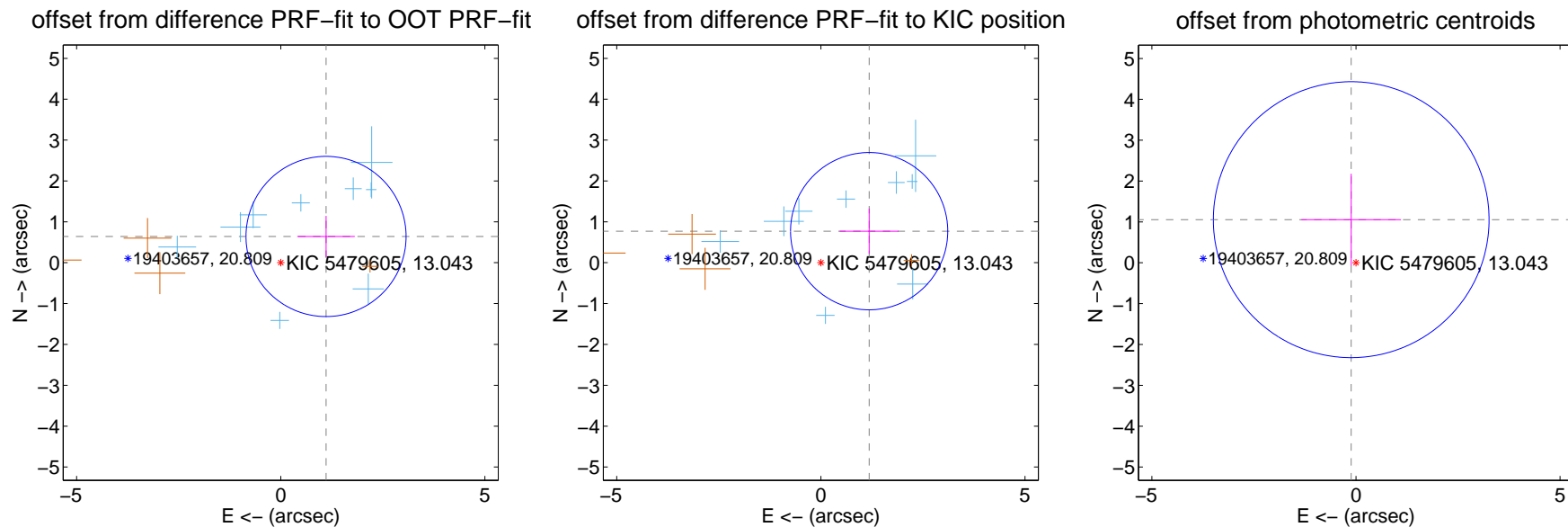
## DV Centroid Data

Supplemental centroid analysis for 005479605-01. Kepler magnitude: 13.04. Transit SNR 7.88

There are 9 quarters with good PRF difference image offsets

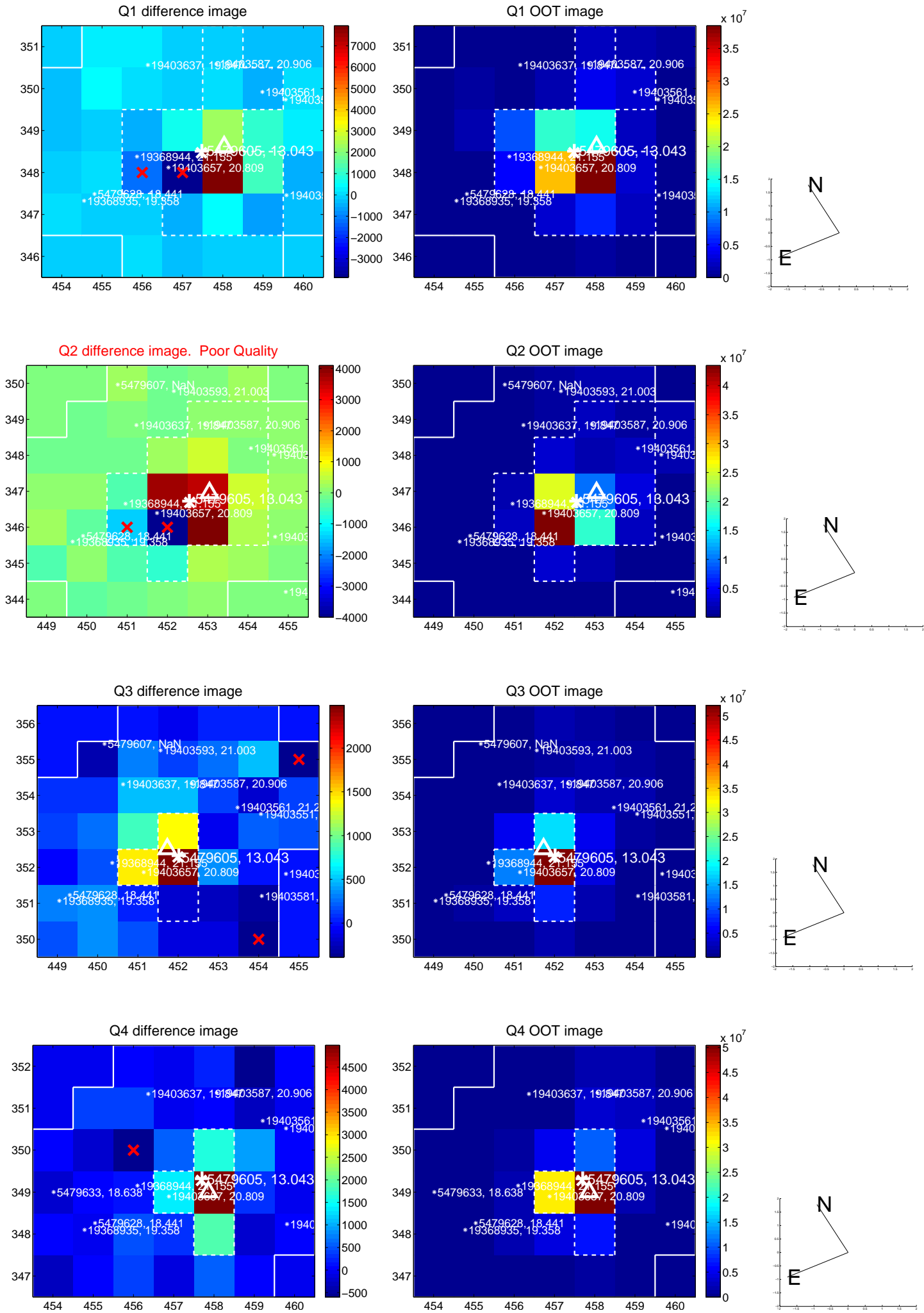
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.281 \pm 0.653$	1.96	$-1.109 \pm 0.704$	$0.642 \pm 0.504$
PRF-fit source offset from KIC position	$1.411 \pm 0.642$	2.20	$-1.182 \pm 0.723$	$0.771 \pm 0.553$
photometric centroid source offset	$1.06 \pm 1.13$	0.94	$0.12 \pm 1.22$	$1.05 \pm 1.12$

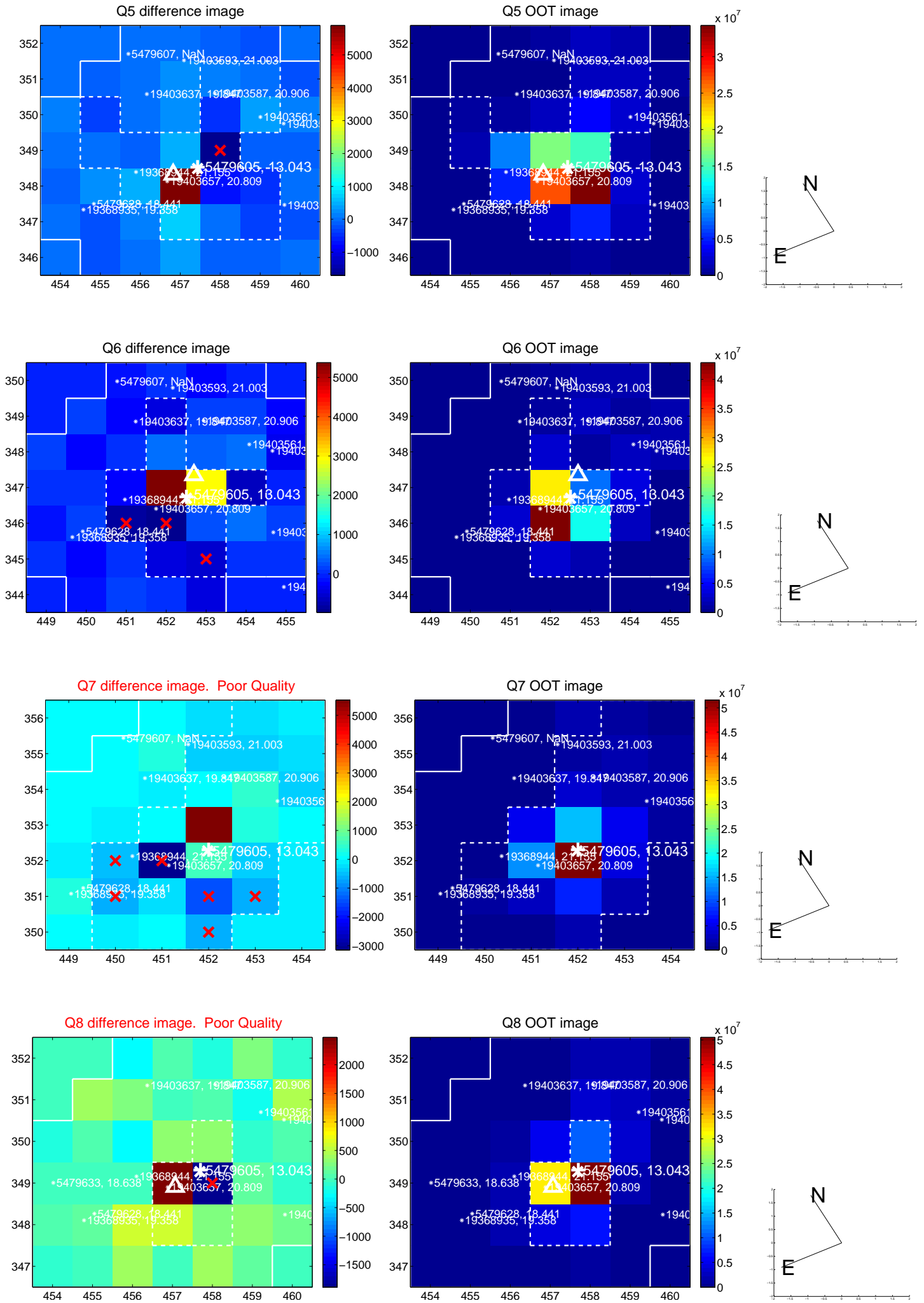


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

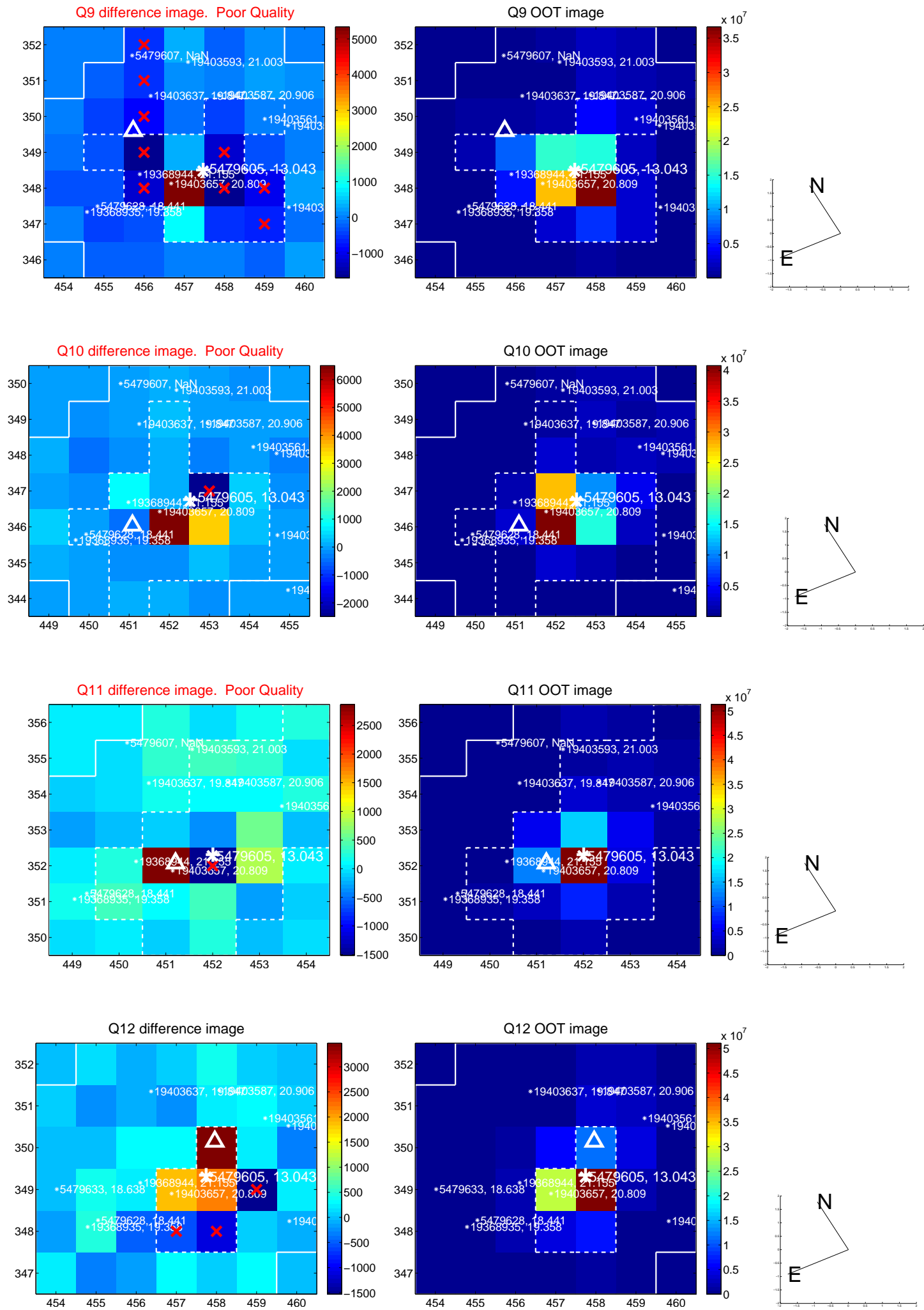


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

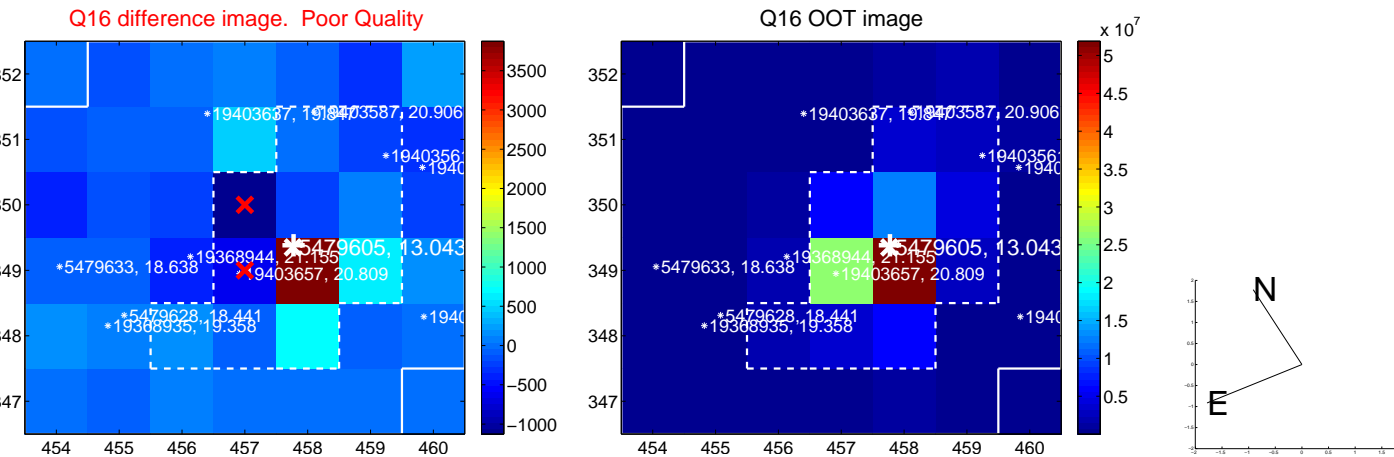
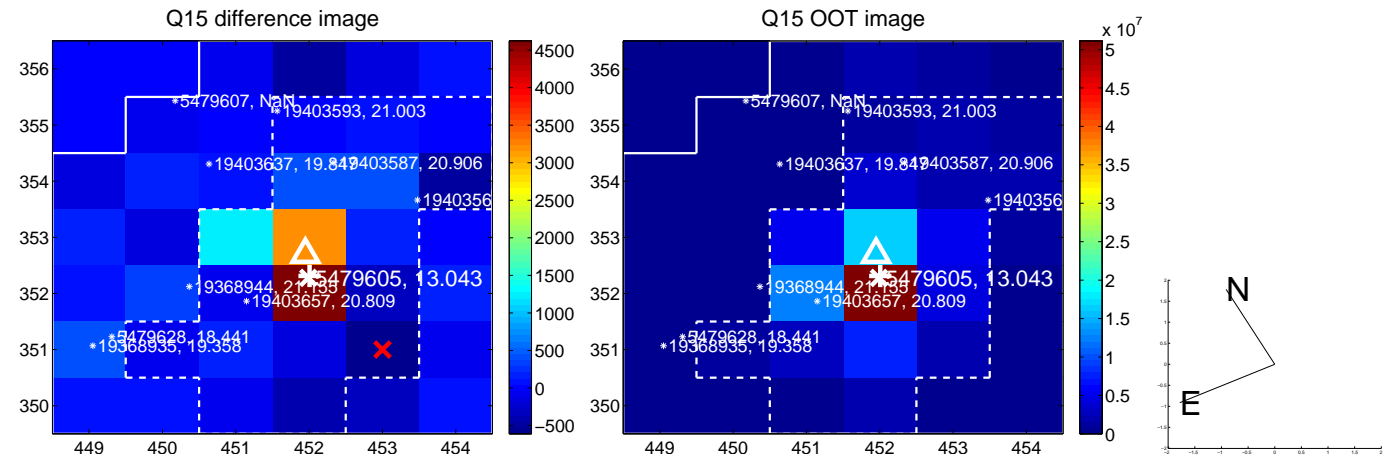
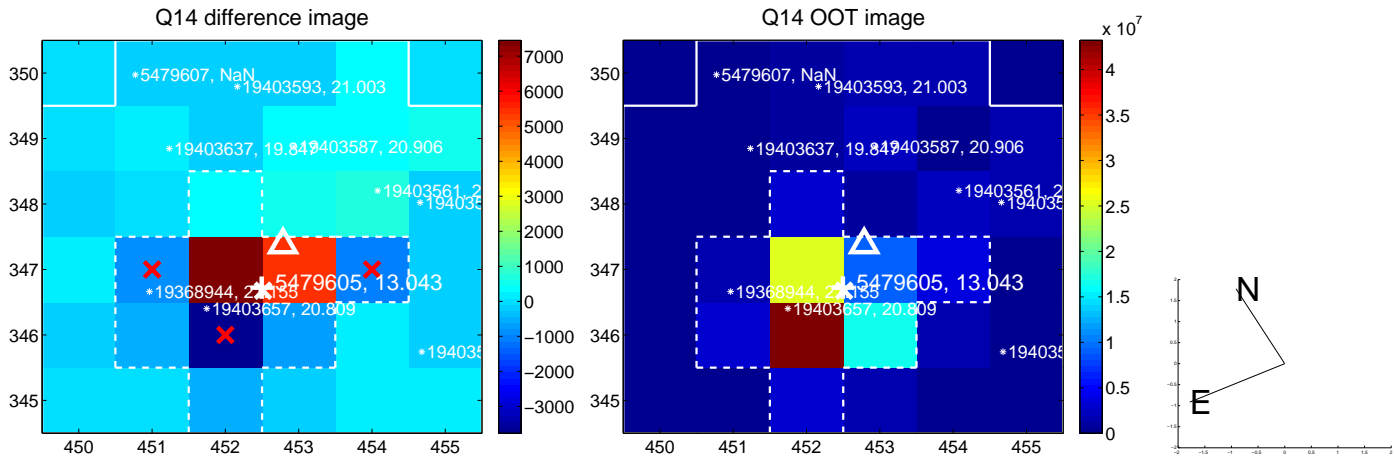
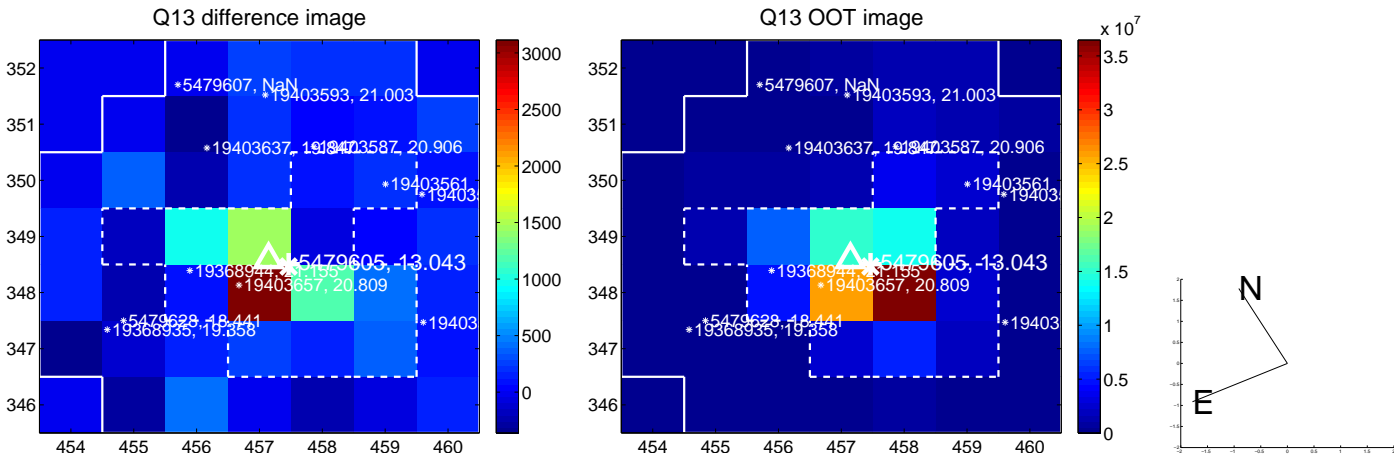




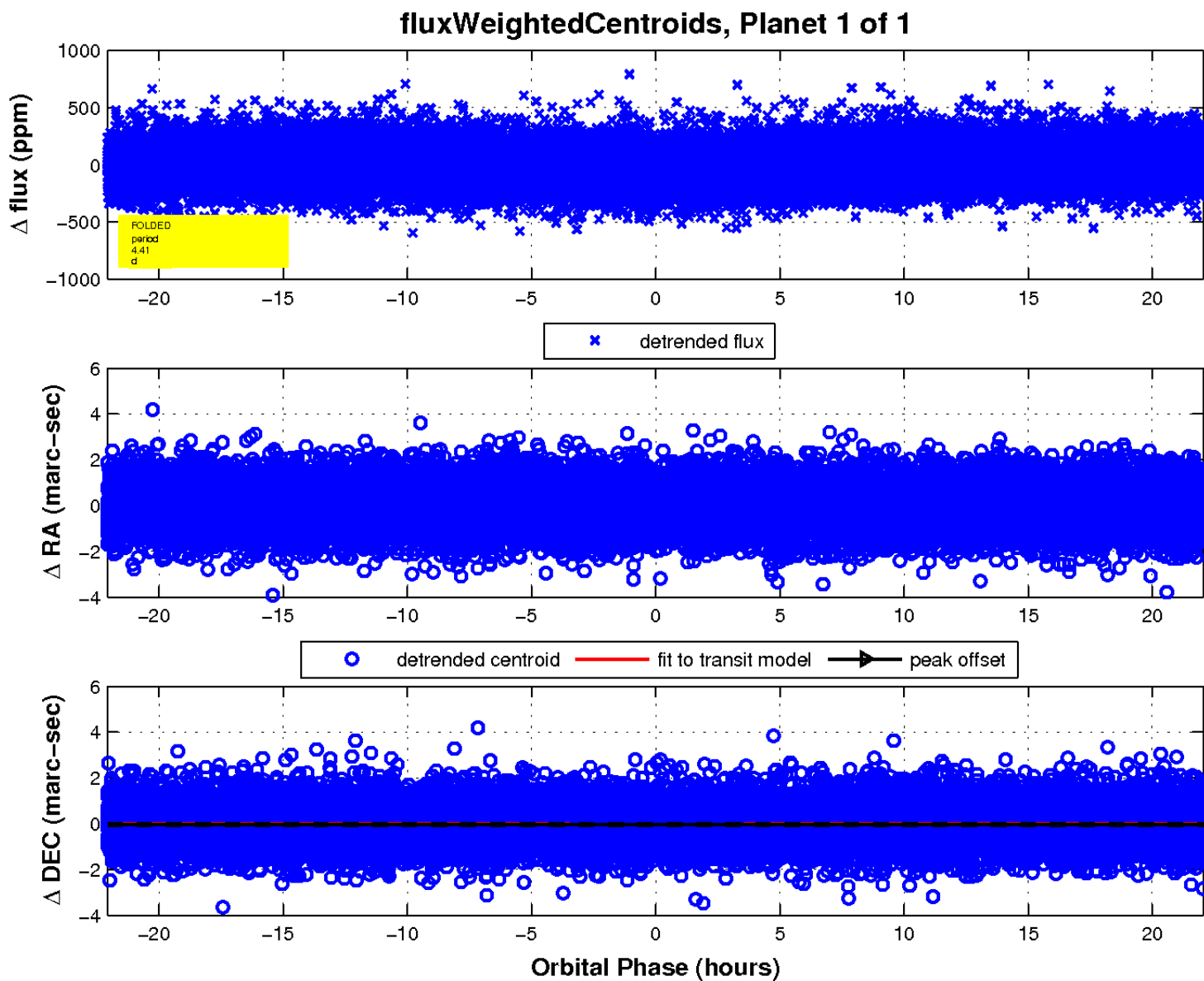
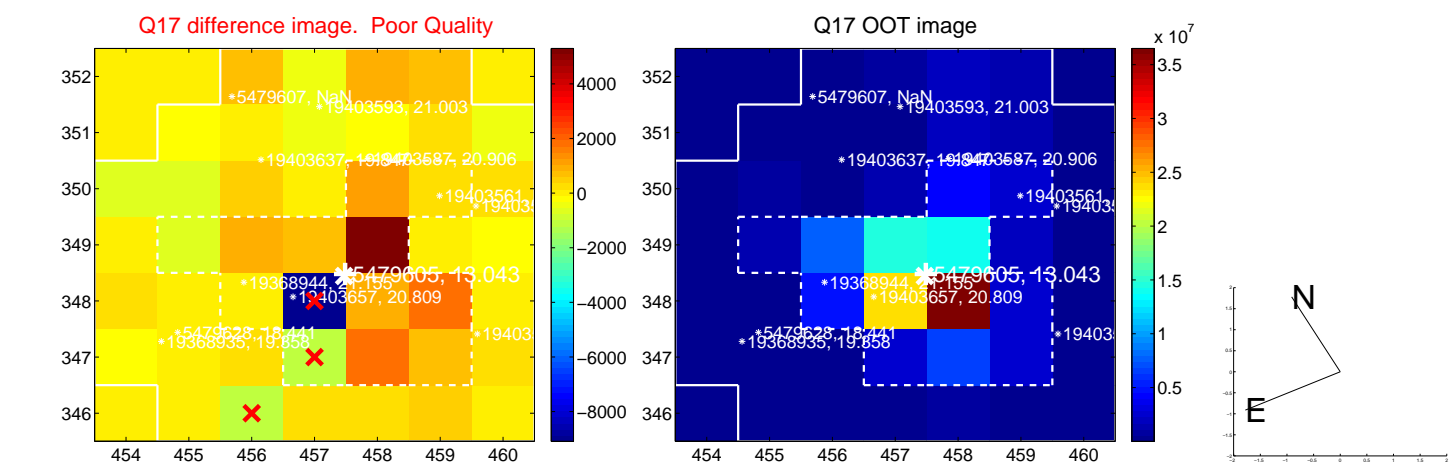
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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UKIRT Image

Declination

