

# KIC 007967283

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007967283-01	OBS	No	550.496223	427.995171	795.6	17.485	7.6	6.5	0.96	6137	2.88	0.67

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007967283-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

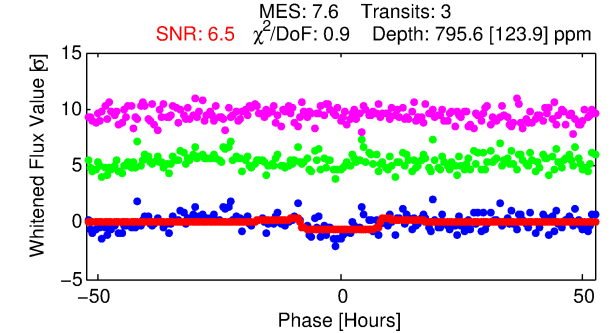
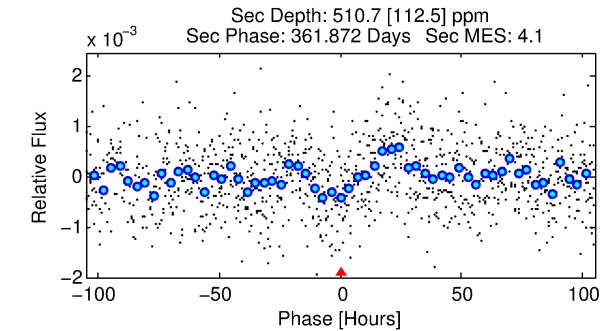
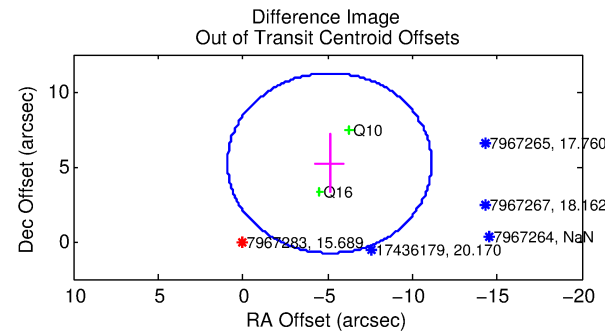
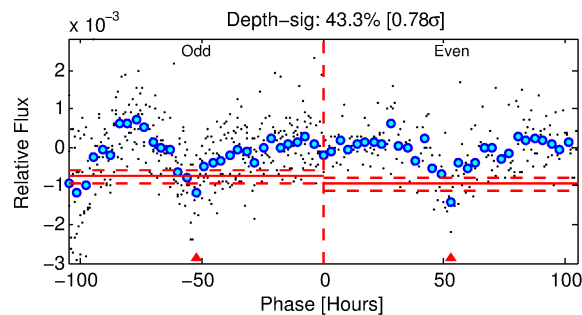
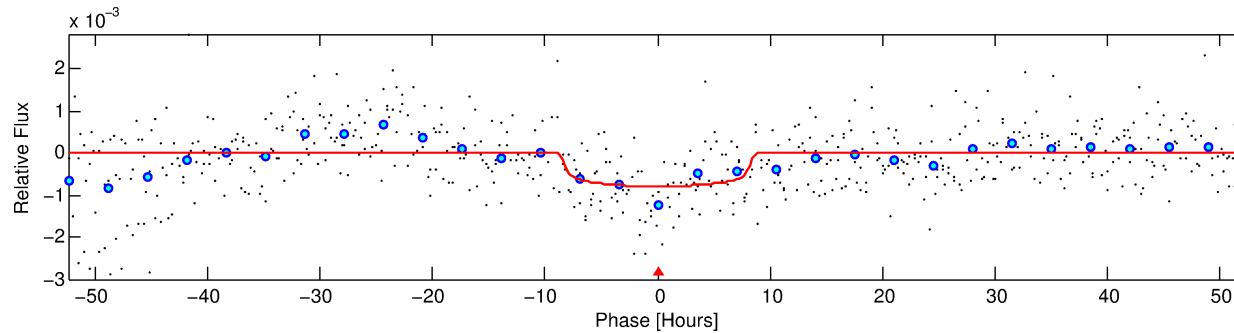
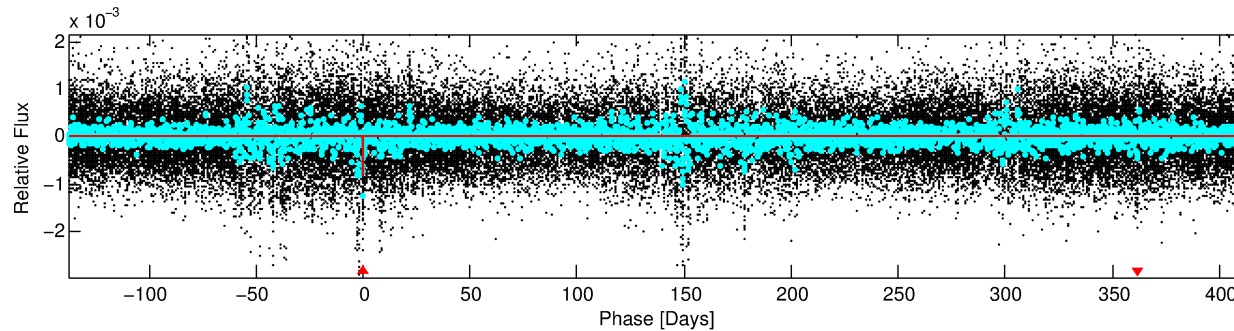
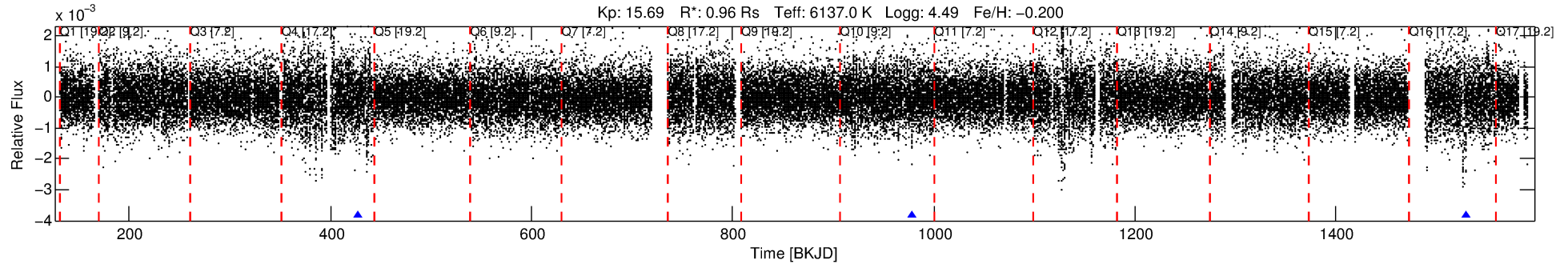
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 007967283-01

No Significant Match Found

# DV One-Page Summary

KIC: 7967283 Candidate: 1 of 1 Period: 550.496 d



## DV Fit Results:

Period = 550.49622 [0.01837] d  
Epoch = 427.9952 [0.0238] BKJD  
Rp/R\* = 0.0274 [0.0072]  
a/R\* = 188.18 [228.56]  
b = 0.67 [1.02]  
Seff = 0.66 [0.27]  
Teq = 230 [23] K  
Rp = 2.88 [1.19] Re  
a = 1.3313 [0.3546] AU  
Ag = 60100.63 [41188.10] [1.46 $\sigma$ ]  
Teffp = 5574 [814] K [6.66 $\sigma$ ]

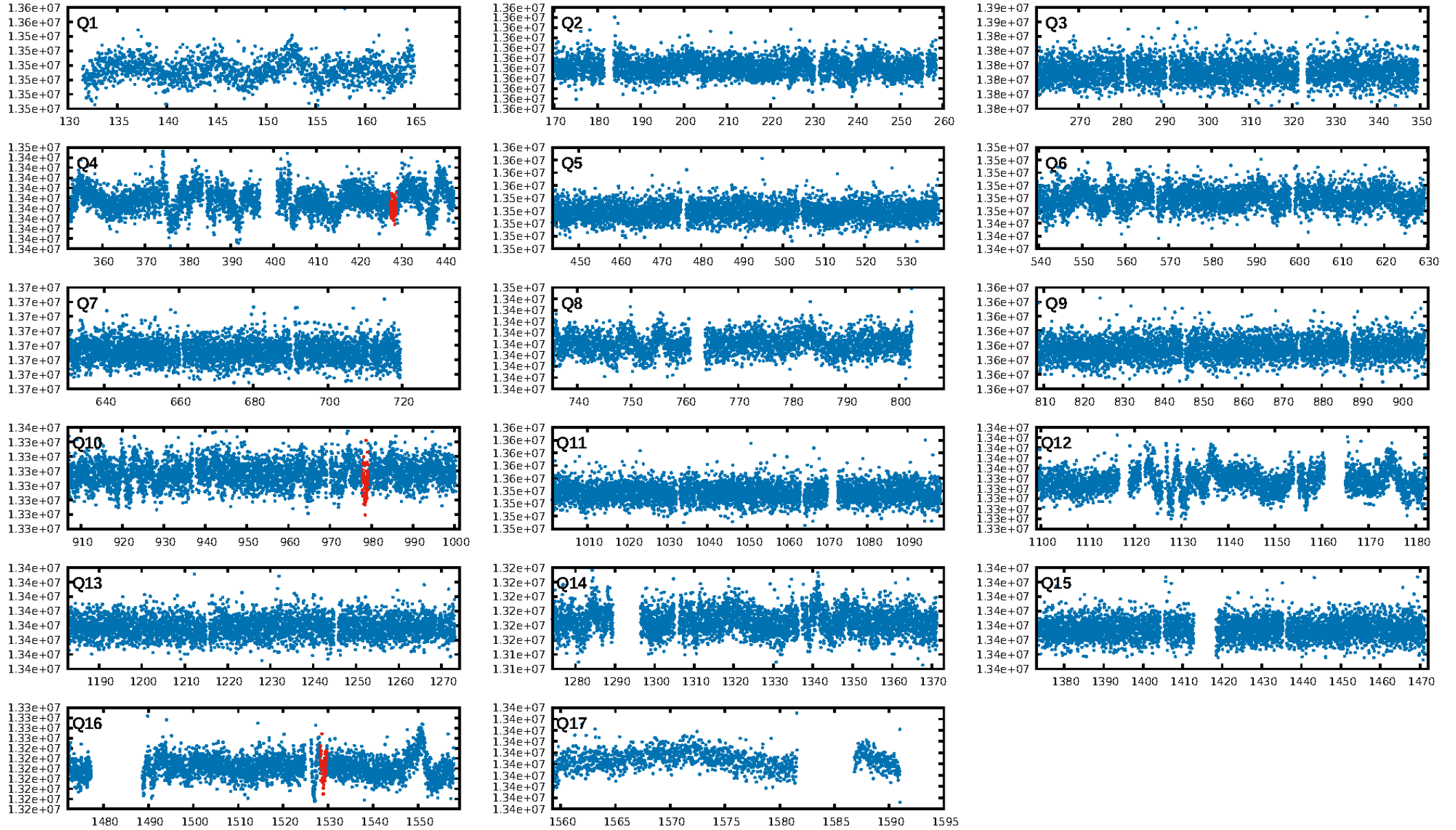
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 12.8%  
ModelChiSquareGof-sig: 99.5%  
Bootstrap-pfa: 2.23e-08  
RollingBand-fgt: 1.00 [3/3]  
GhostDiagnostic-chr: -0.9993  
Centroid-sig: 0.1%  
Centroid-so: 7.857 arcsec [2.20 $\sigma$ ]  
OotOffset-rm: 7.324 arcsec [3.66 $\sigma$ ]  
OotOffset-st: 1/0/1/0 [2]  
KicOffset-rm: 7.299 arcsec [2.90 $\sigma$ ]  
KicOffset-st: 1/0/1/0 [2]  
DiffImageQuality-fgm: 0.00 [0/2]  
DiffImageOverlap-fno: 1.00 [3/3]

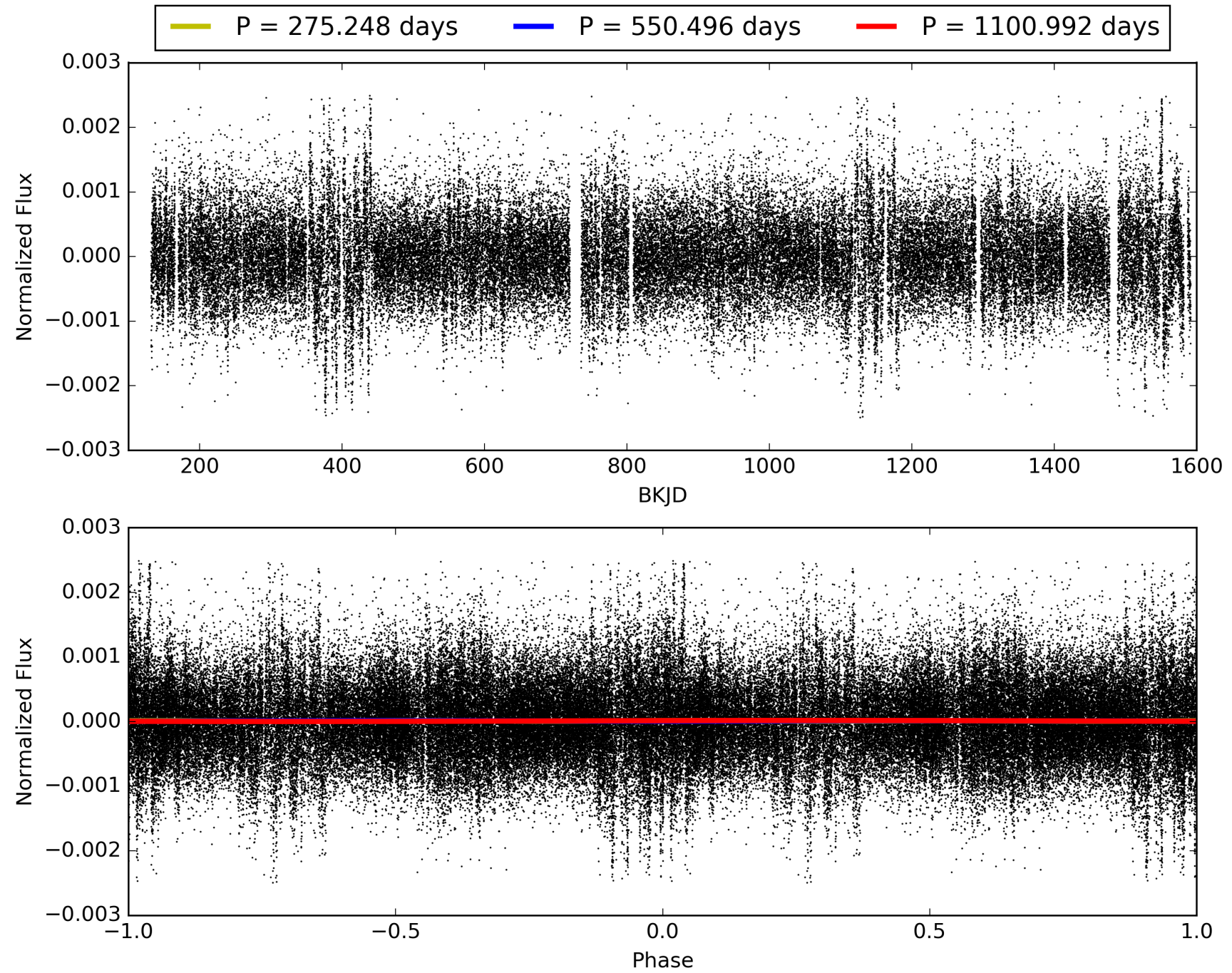
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:53:13 Z

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

# TCE 007967283-01, PDC Light Curves

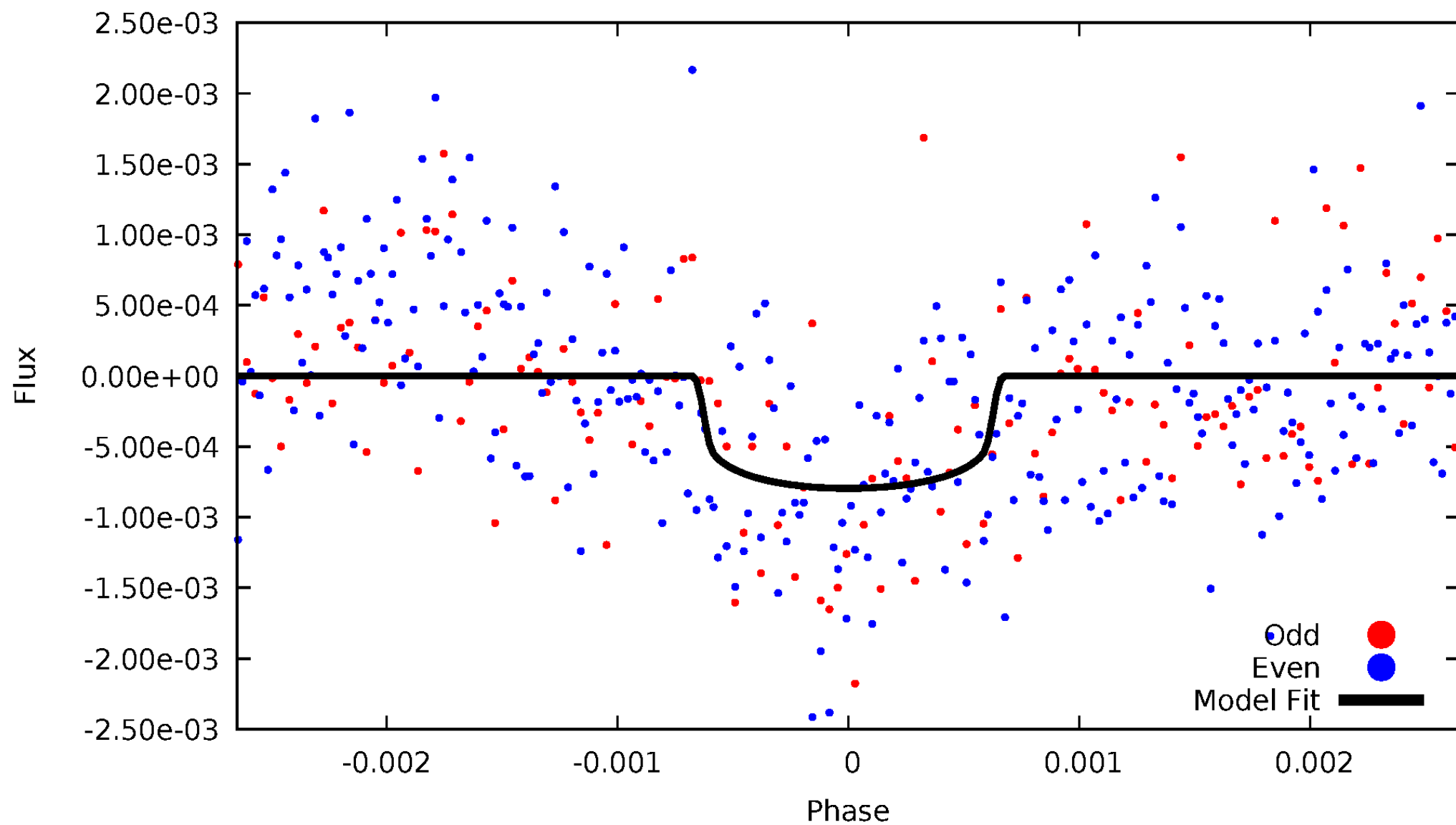


TCE 007967283-01



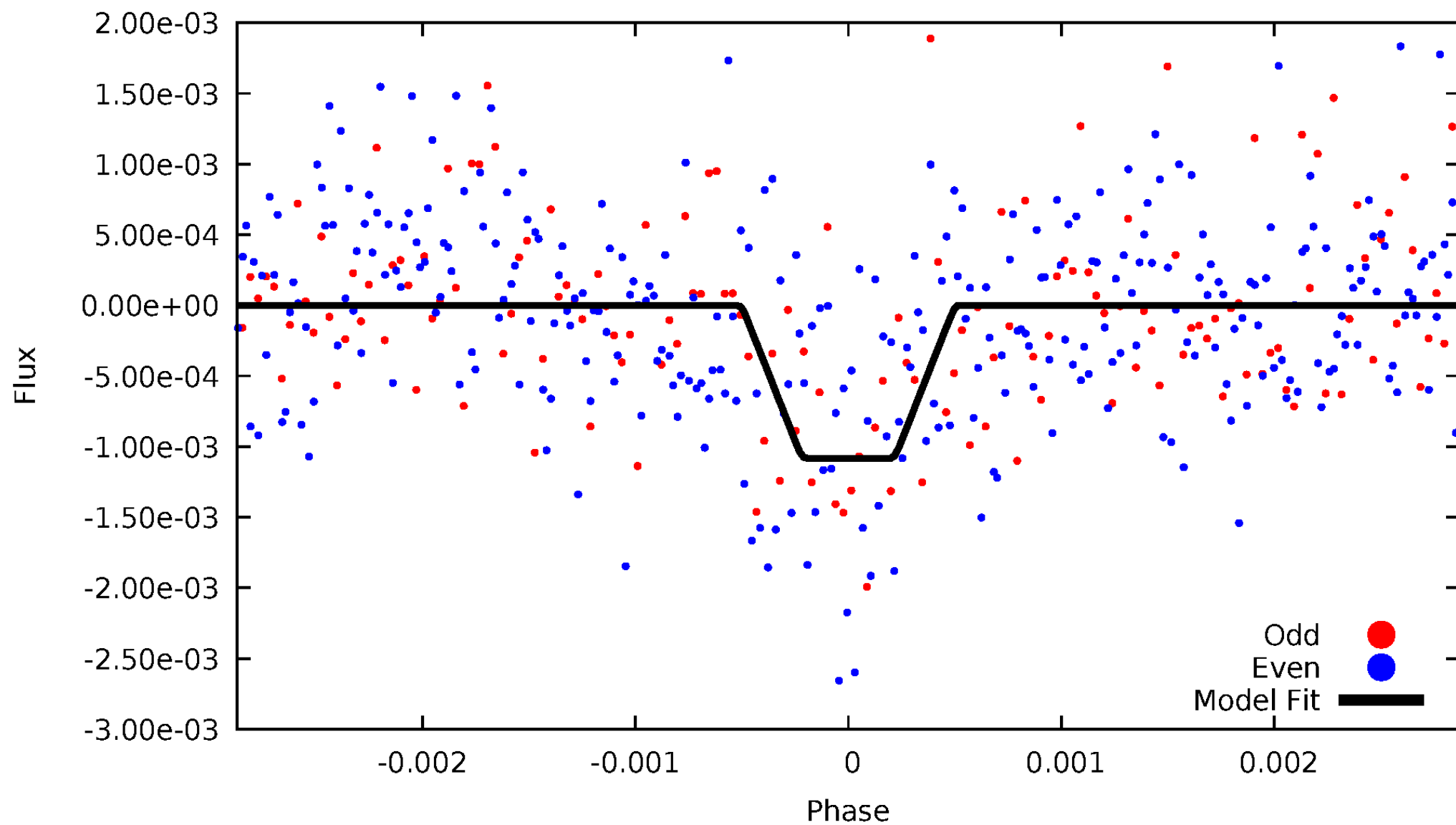
# DV Odd/Even

TCE 007967283-01



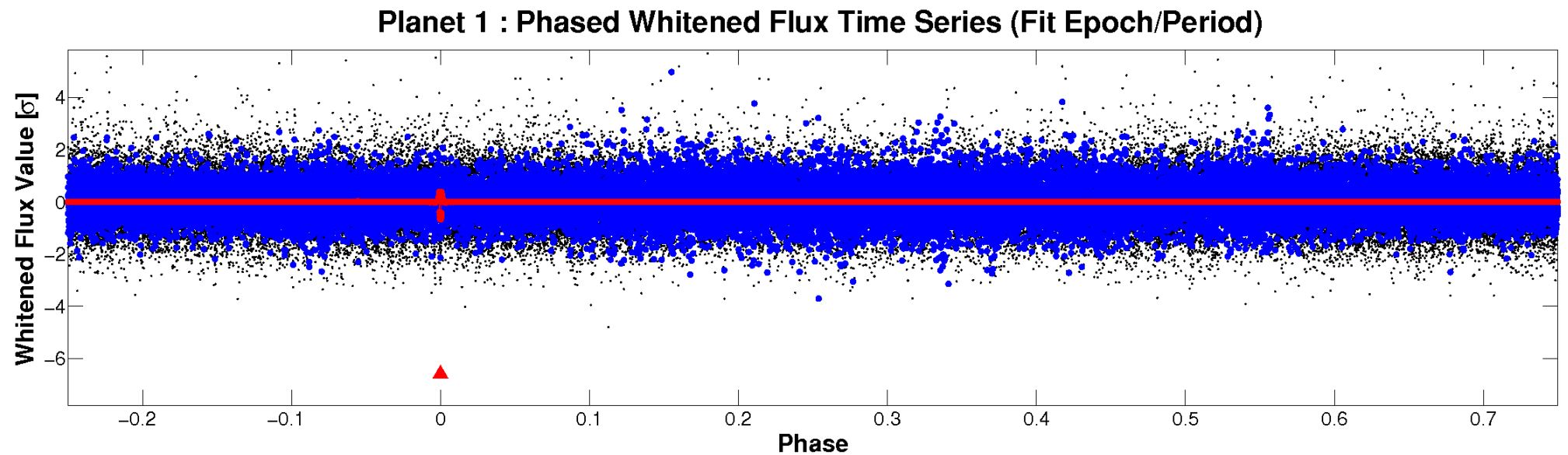
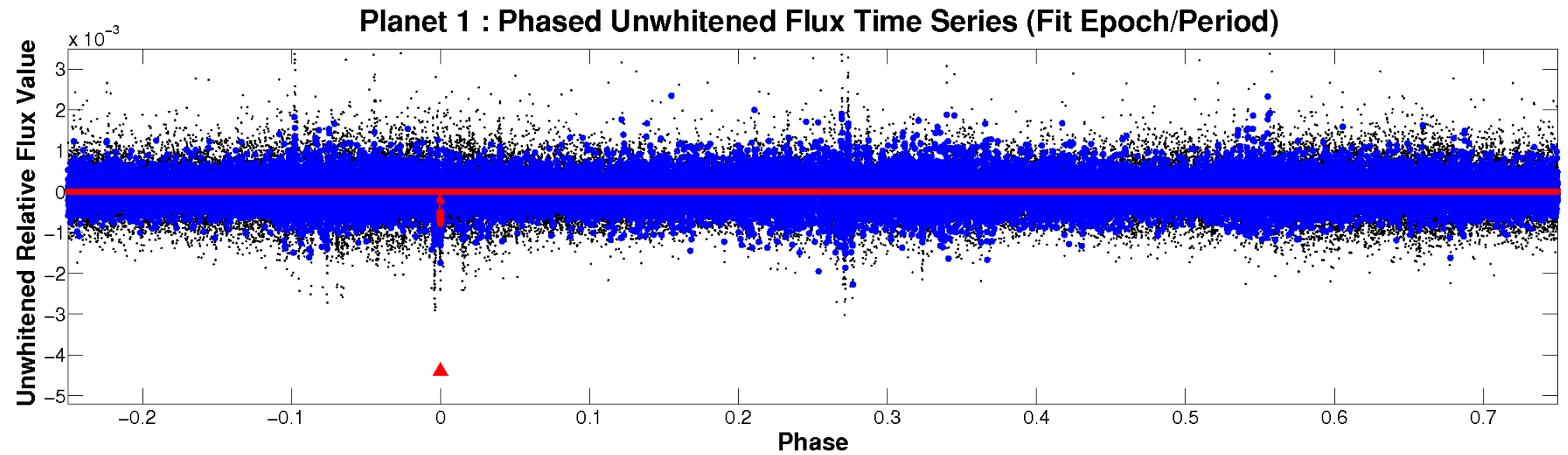
# ALT Odd/Even

TCE 007967283-01



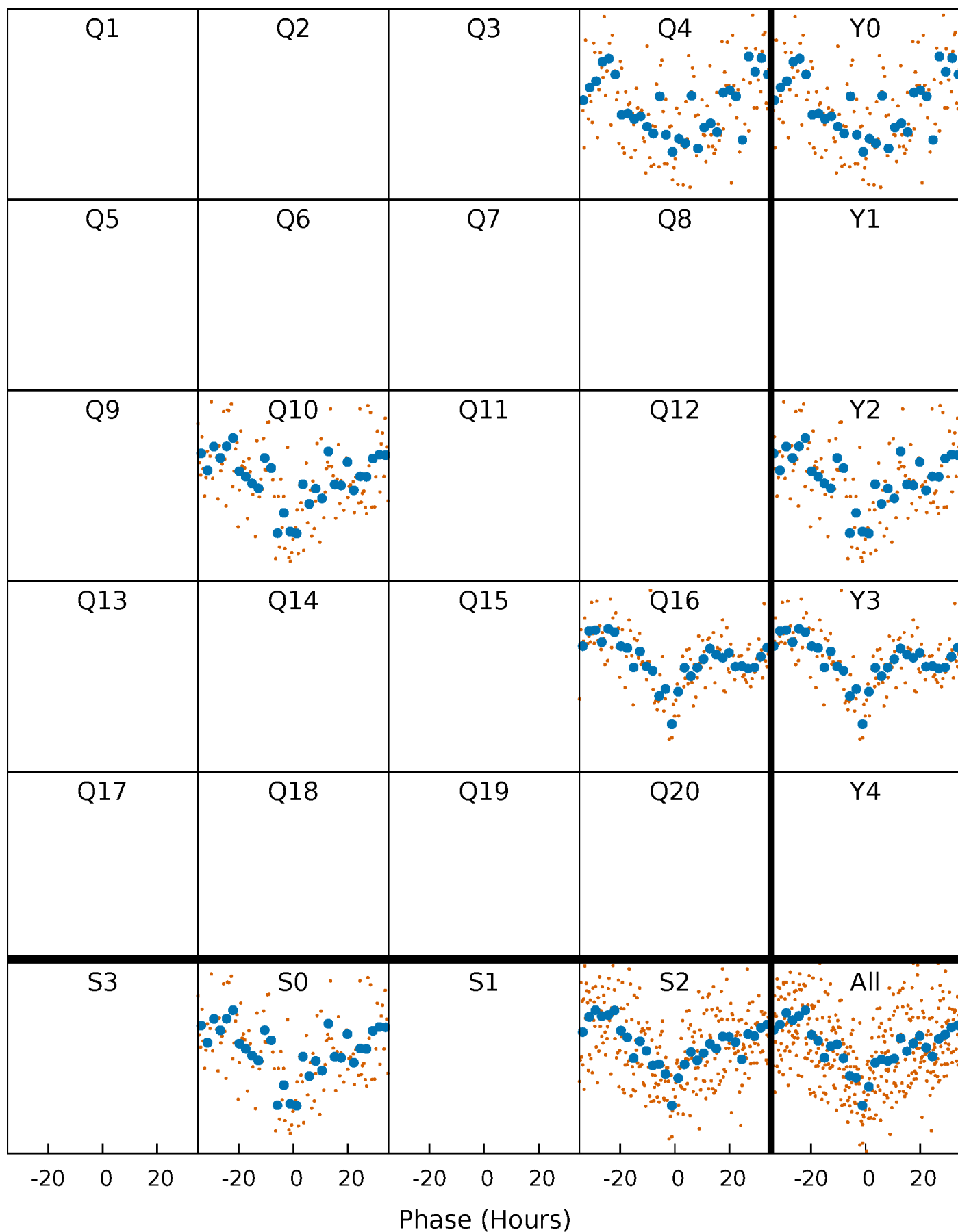


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

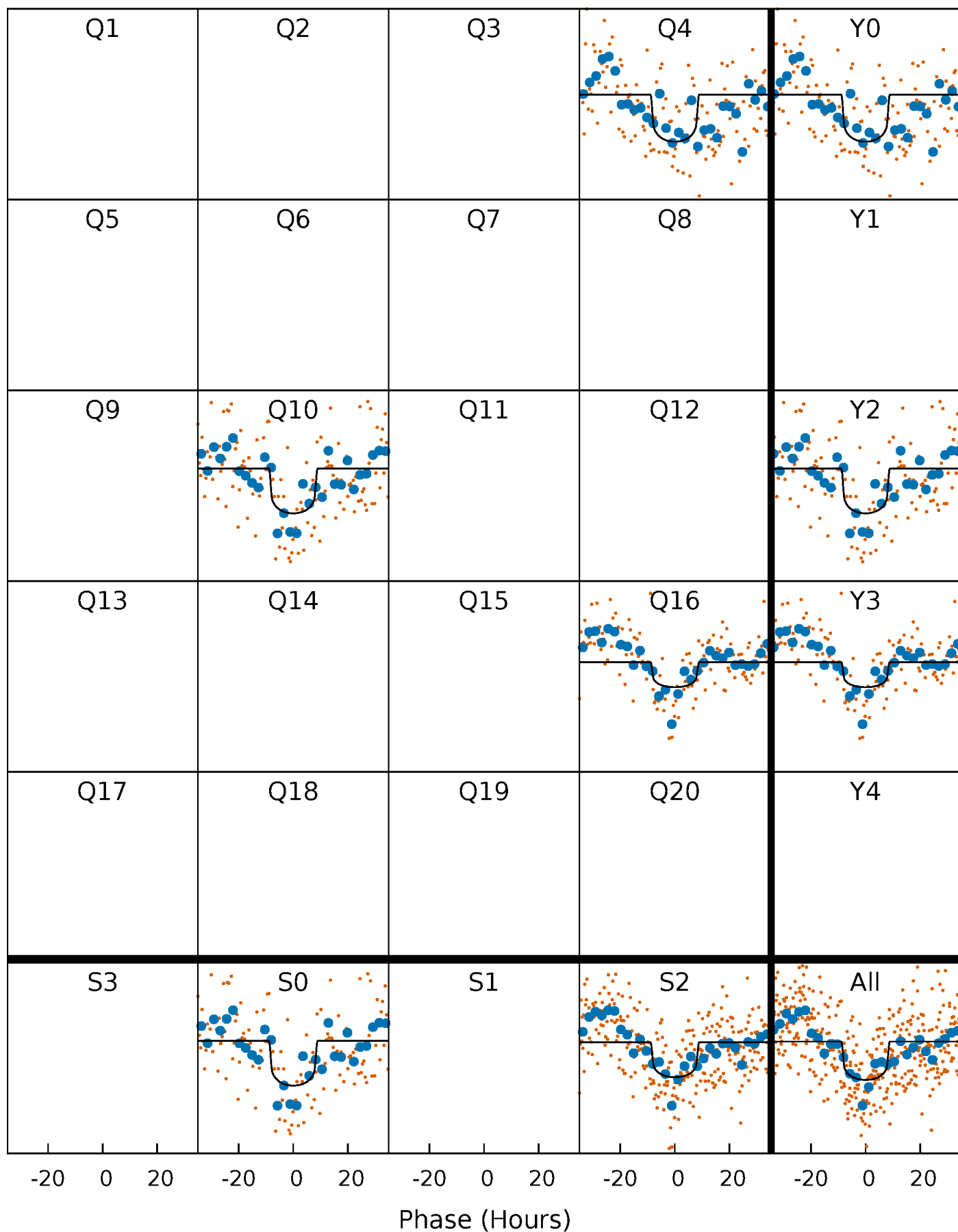
TCE 007967283-01 P=550.496223 Days  $T_0=427.995171$  (BKJD)





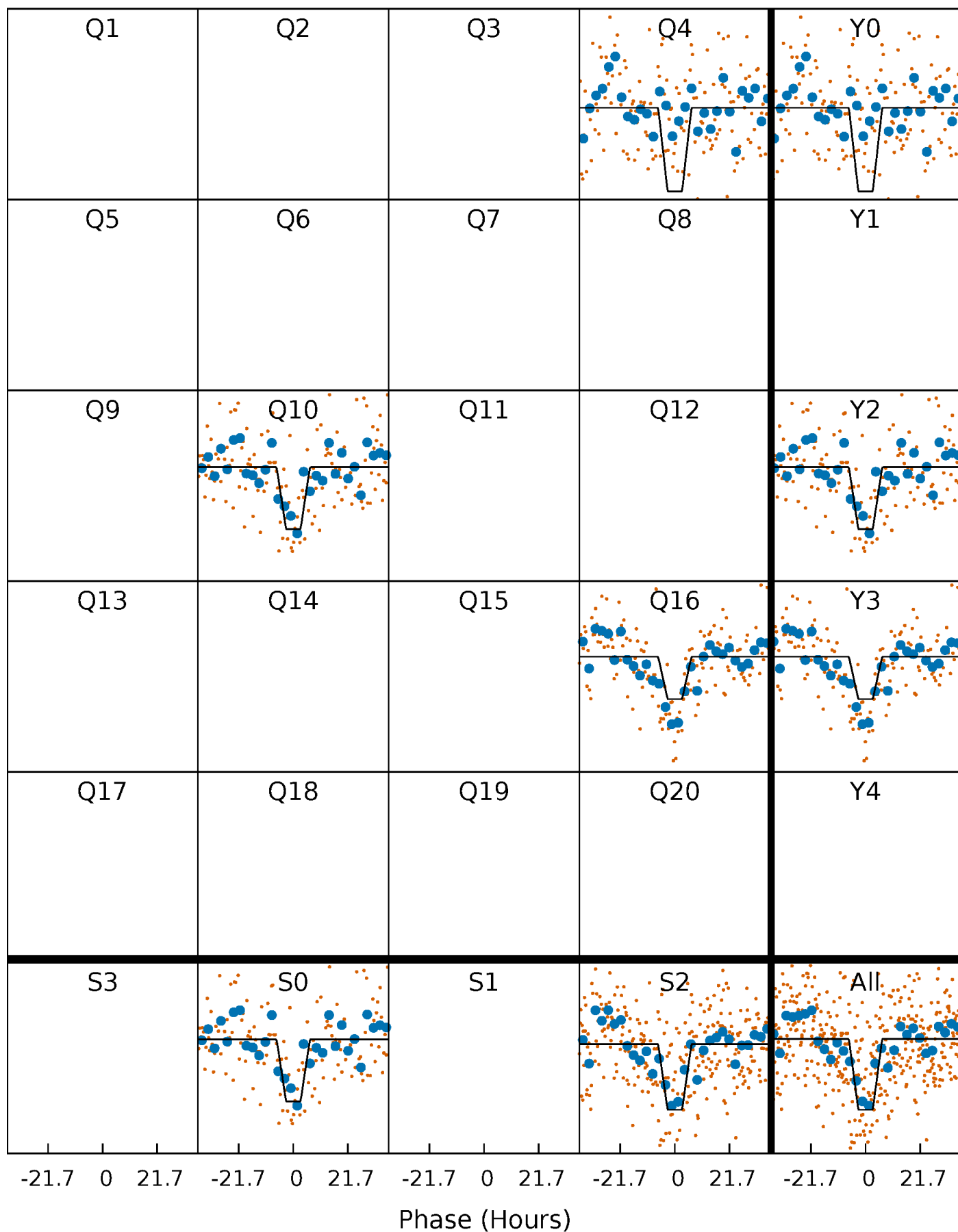
# DV Quarter-Phased Transit Curves

TCE 007967283-01 P=550.496223 Days  $T_0=427.995171$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

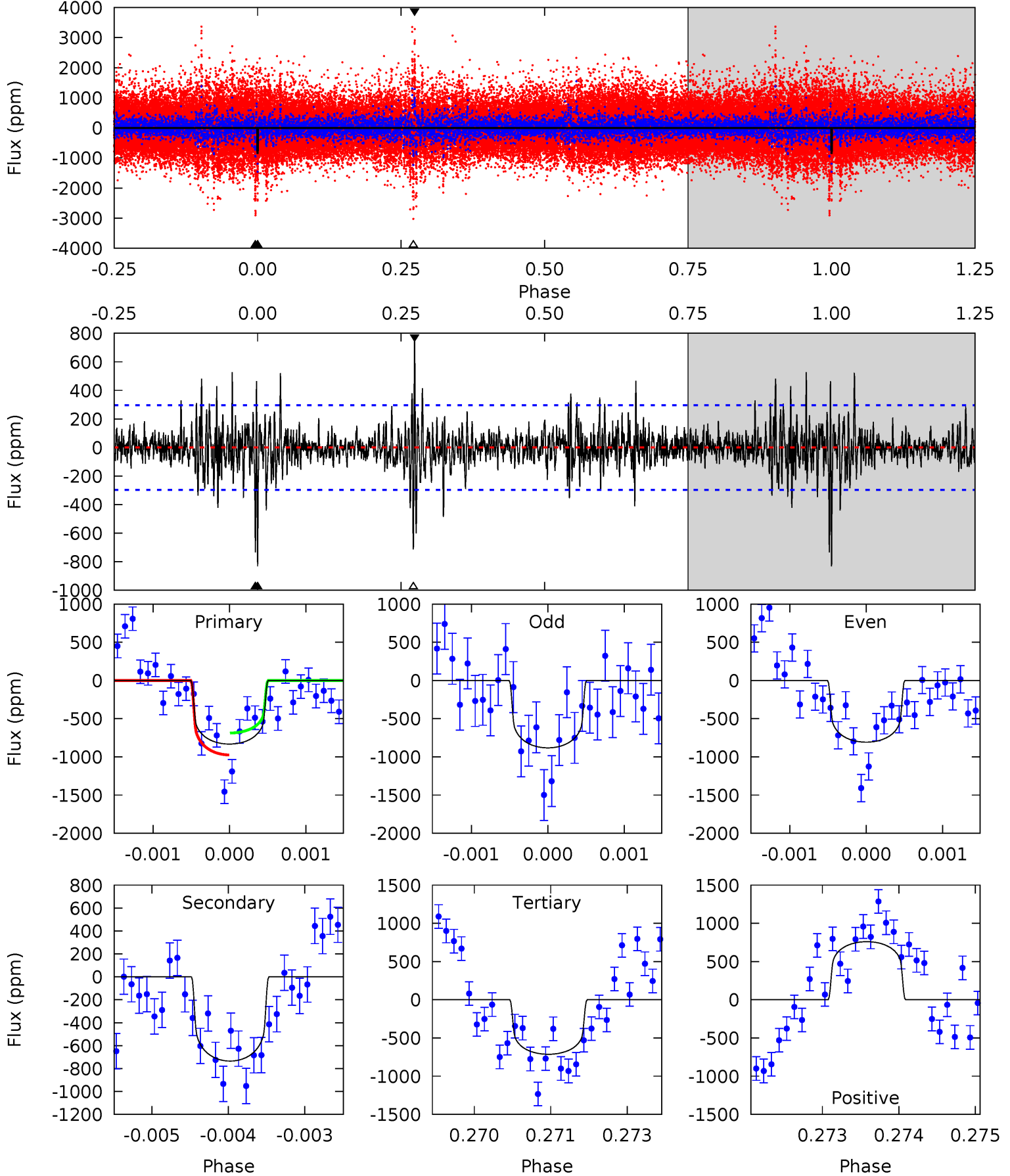
TCE 007967283-01 P=550.466484 Days  $T_0=427.992607$  (BKJD)



# DV Model-Shift Uniqueness Test

007967283-01, P = 550.496223 Days, E = 427.995171 Days

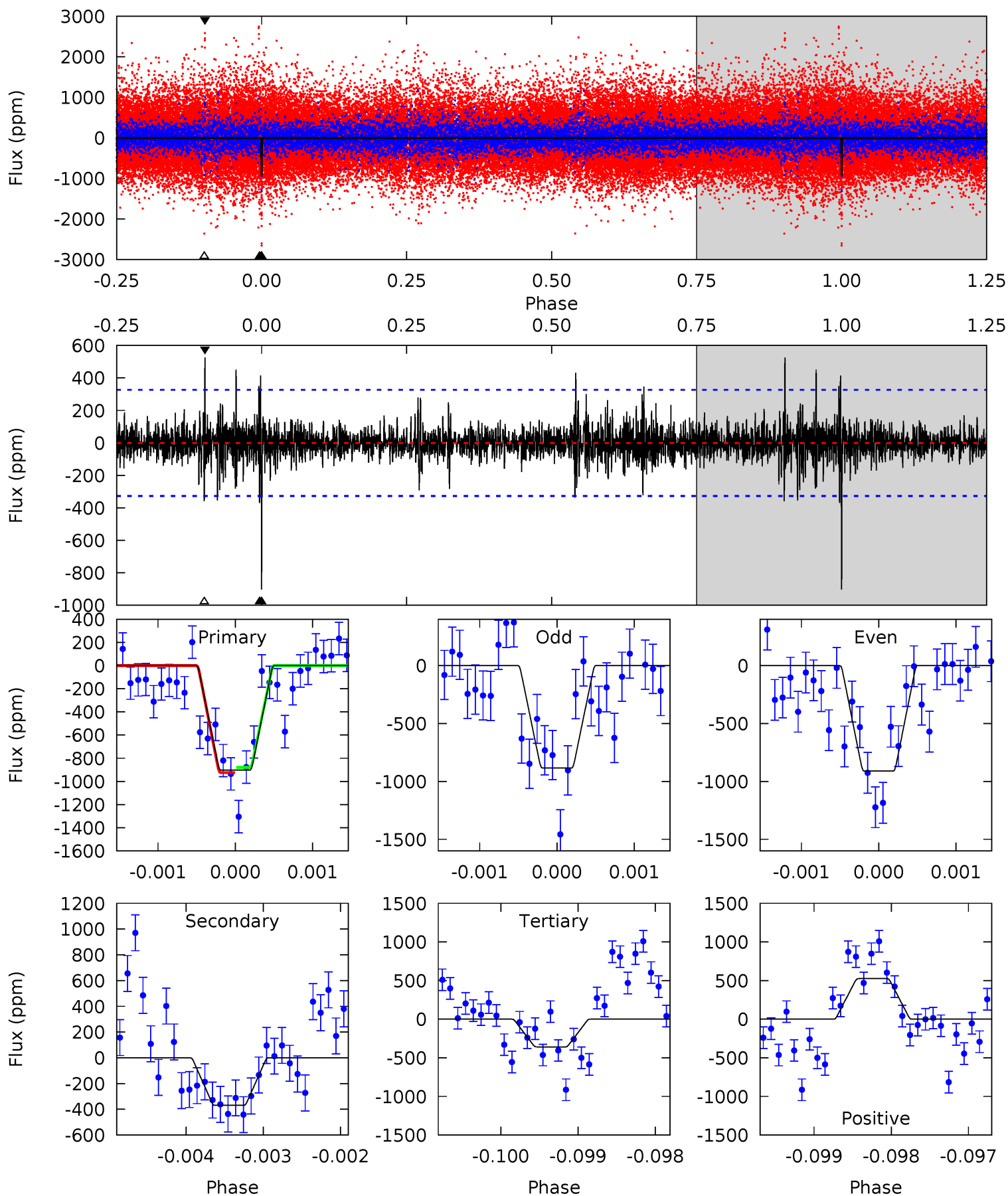
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.1	13.4	13.0	13.8	5.40	3.21	2.01	2.17	1.32	0.39	-0.46	0.64	0.94	0.48	2.61



# Alt Model-Shift Uniqueness Test

007967283-01, P = 550.466484 Days, E = 427.992607 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
15.0	6.15	5.97	8.73	5.44	3.28	1.29	9.03	6.27	0.18	-2.58	0.21	1.02	0.37	0.38



### Stellar Parameters For KIC 007967283

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6137^{+191}_{-212}$	$4.487^{+0.052}_{-0.208}$	$-0.200^{+0.300}_{-0.300}$	$0.963^{+0.308}_{-0.096}$	$1.038^{+0.139}_{-0.139}$	$1.638^{+0.450}_{-0.848}$
	+3%/-3%	+1%/-5%	+150%/-150%	+32%/-10%	+13%/-13%	+27%/-52%
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 007967283-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-735 \pm 55$	$3.08^{+0.81}_{-0.85}$	$329^{+24}_{-15}$	$6062^{+1037}_{-631}$	$74571^{+67183}_{-28255}$
Alt.	$-370 \pm 60$	$3.57^{+0.88}_{-0.83}$	$328^{+23}_{-16}$	$4816^{+575}_{-367}$	$27318^{+19726}_{-10013}$

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

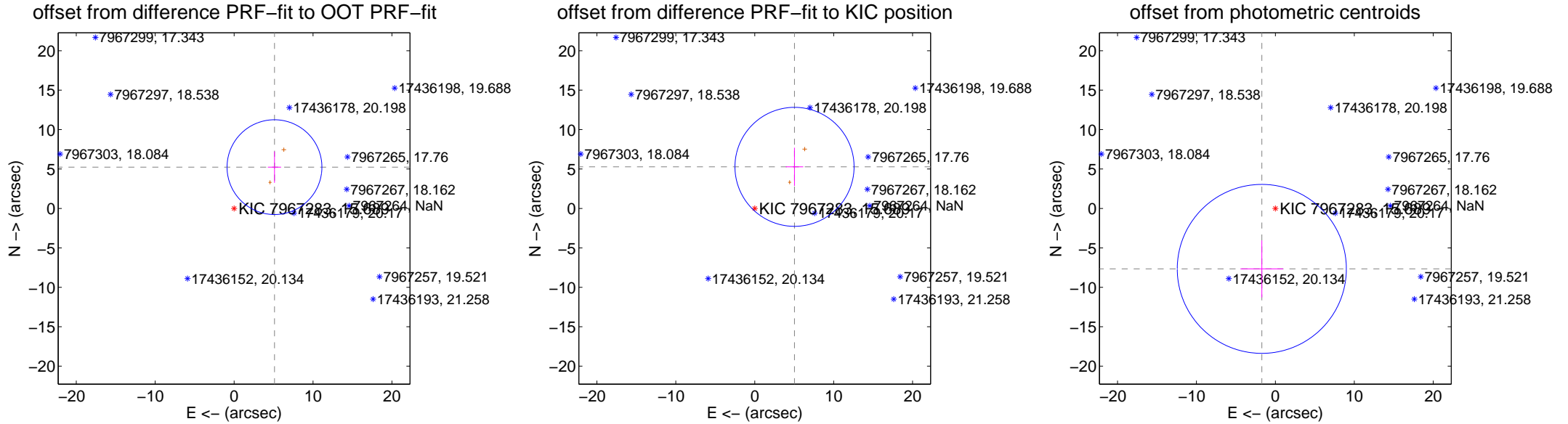
## DV Centroid Data

Supplemental centroid analysis for 007967283-01. Kepler magnitude: 15.69. Transit SNR 6.50

There are 0 quarters with good PRF difference image offsets

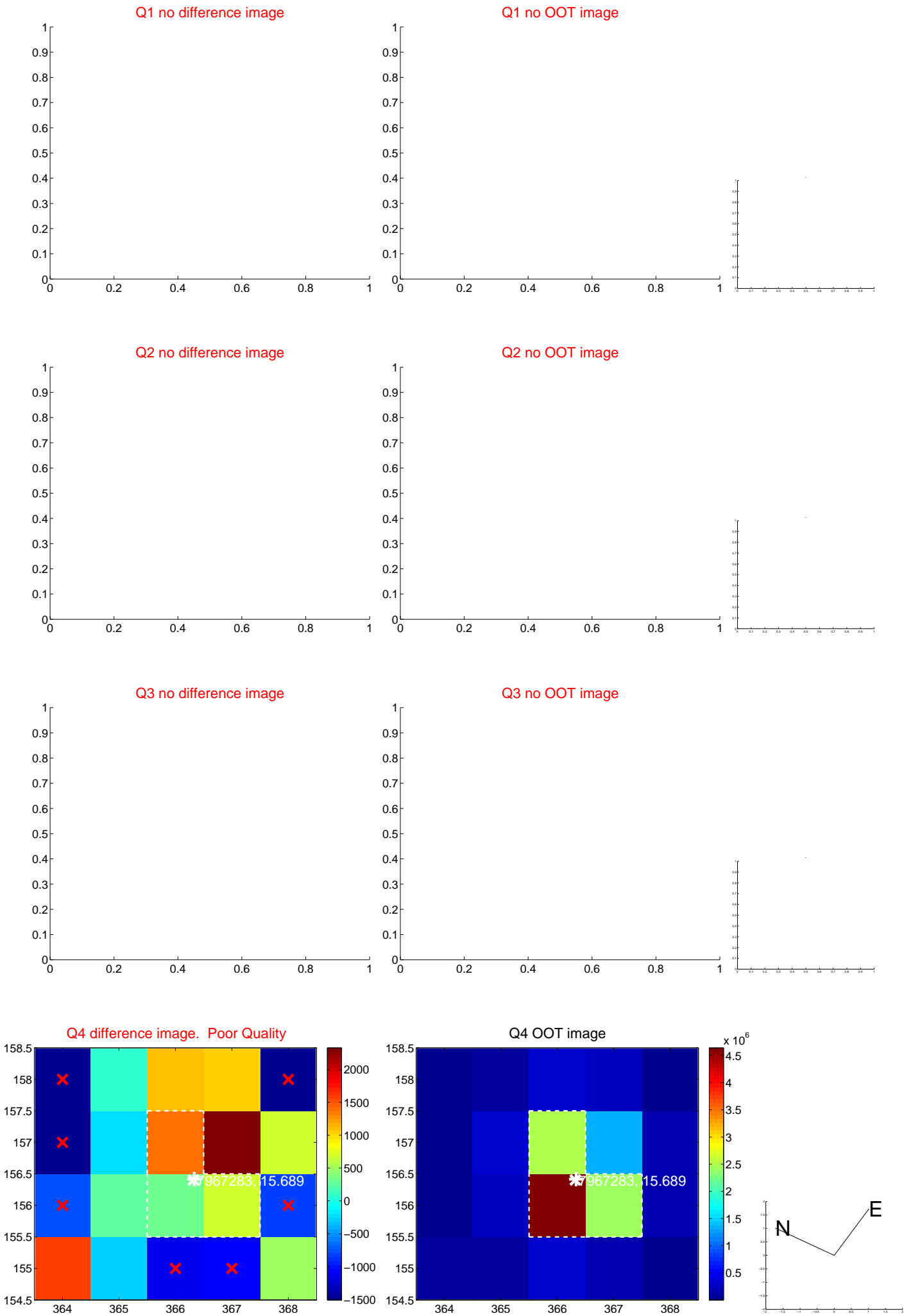
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	7.324 $\pm$ 2.004	3.66	-5.117 $\pm$ 0.837	5.239 $\pm$ 1.985
PRF-fit source offset from KIC position	7.299 $\pm$ 2.516	2.90	-5.042 $\pm$ 1.101	5.278 $\pm$ 2.429
photometric centroid source offset	7.86 $\pm$ 3.57	2.20	1.72 $\pm$ 2.70	-7.67 $\pm$ 3.61



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.

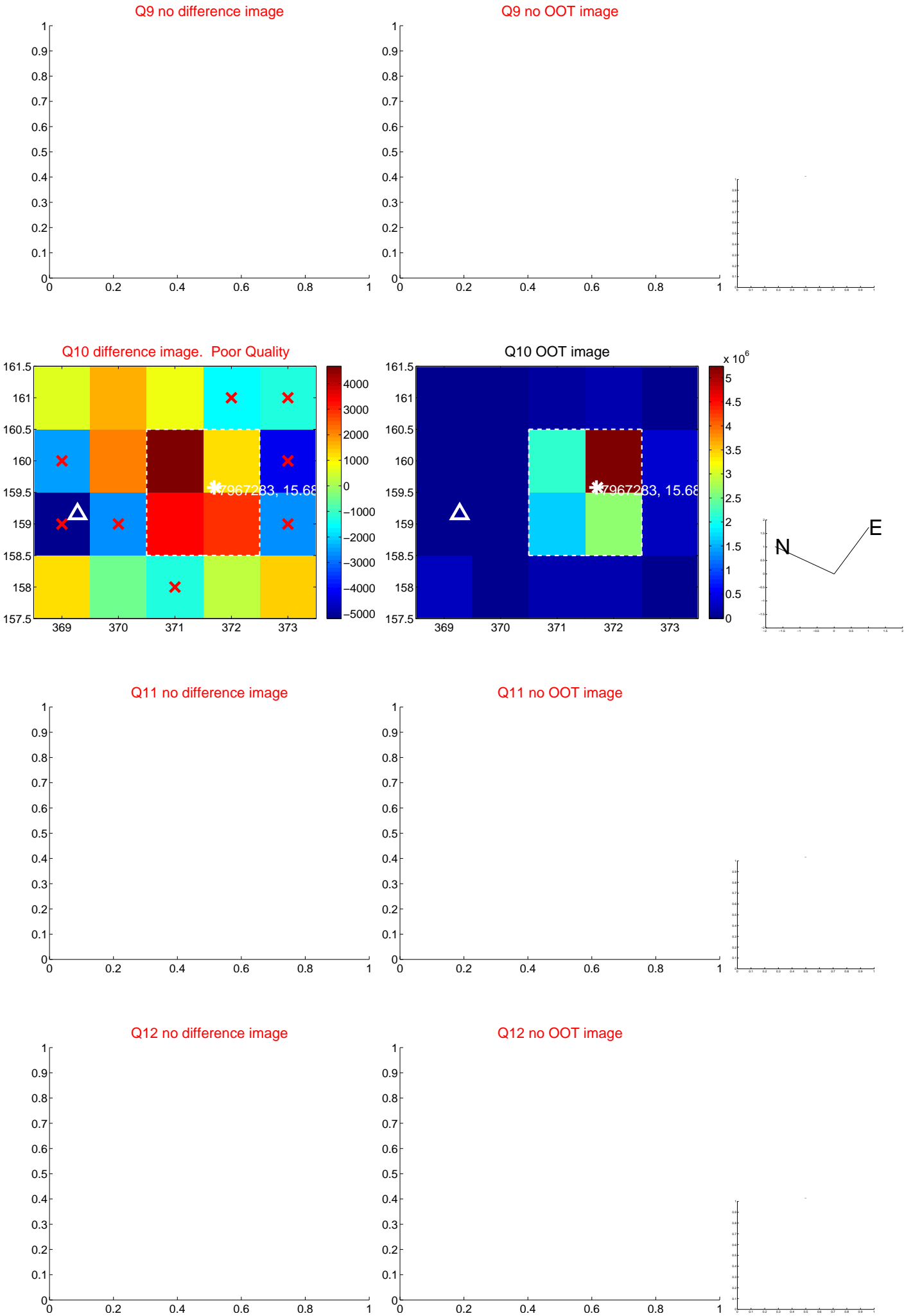




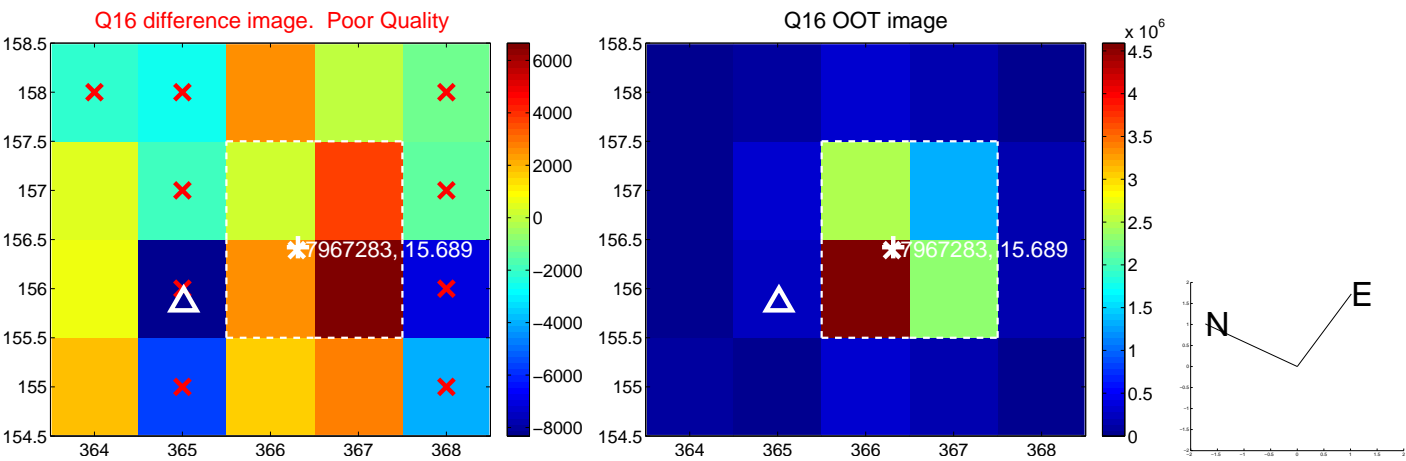
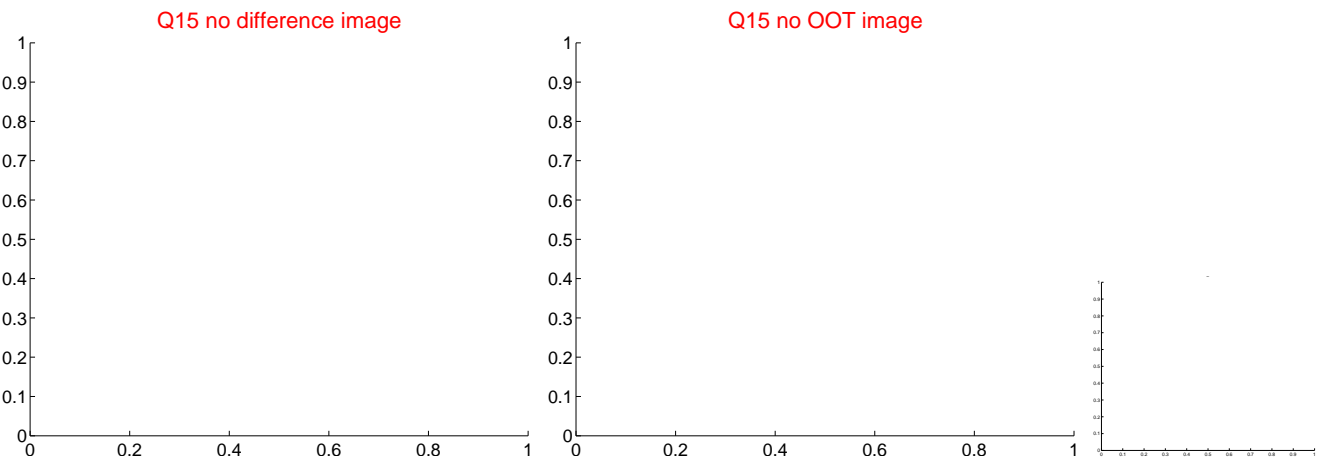
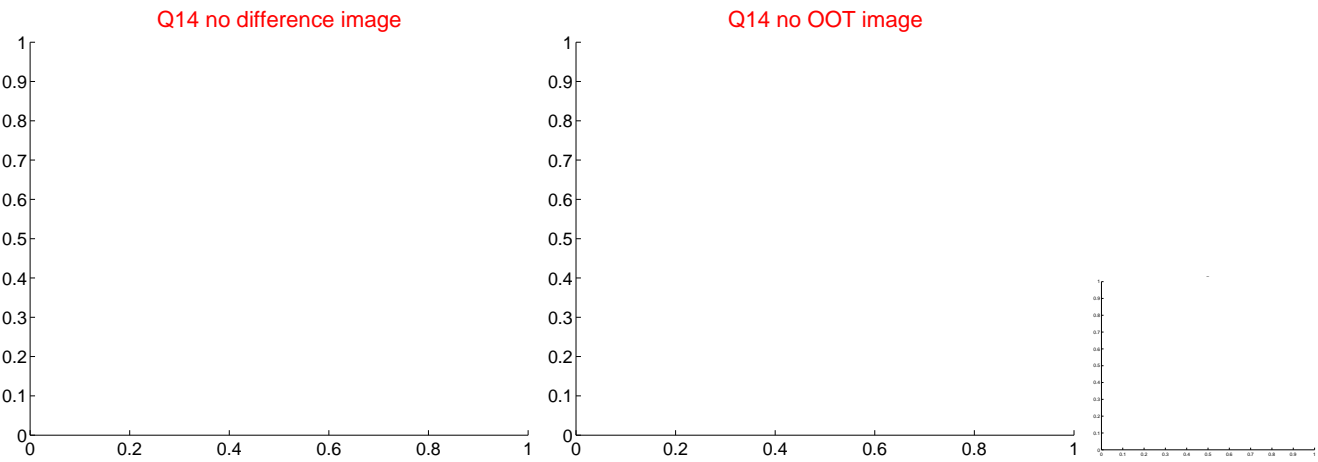
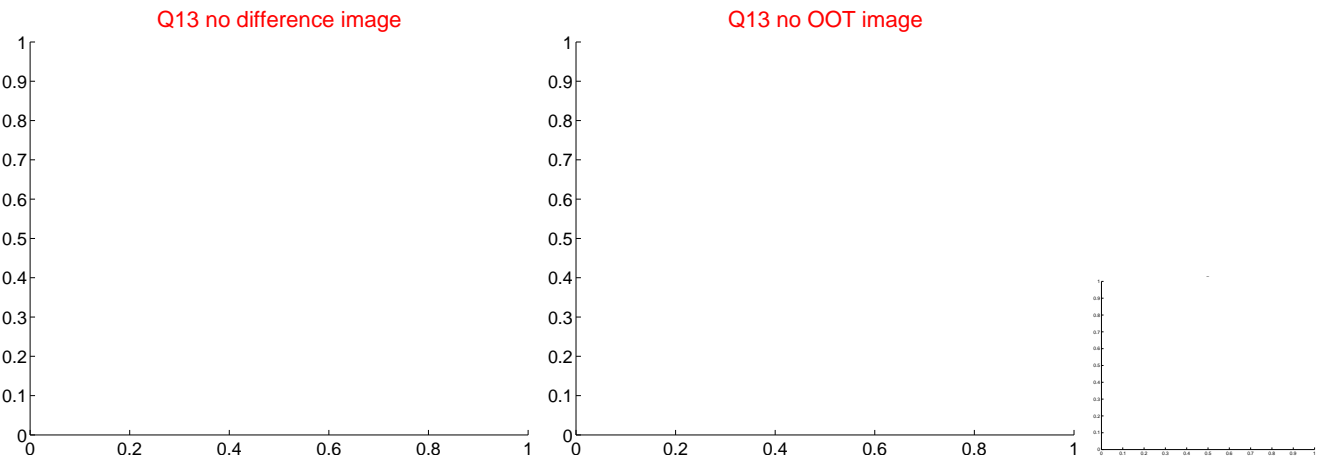
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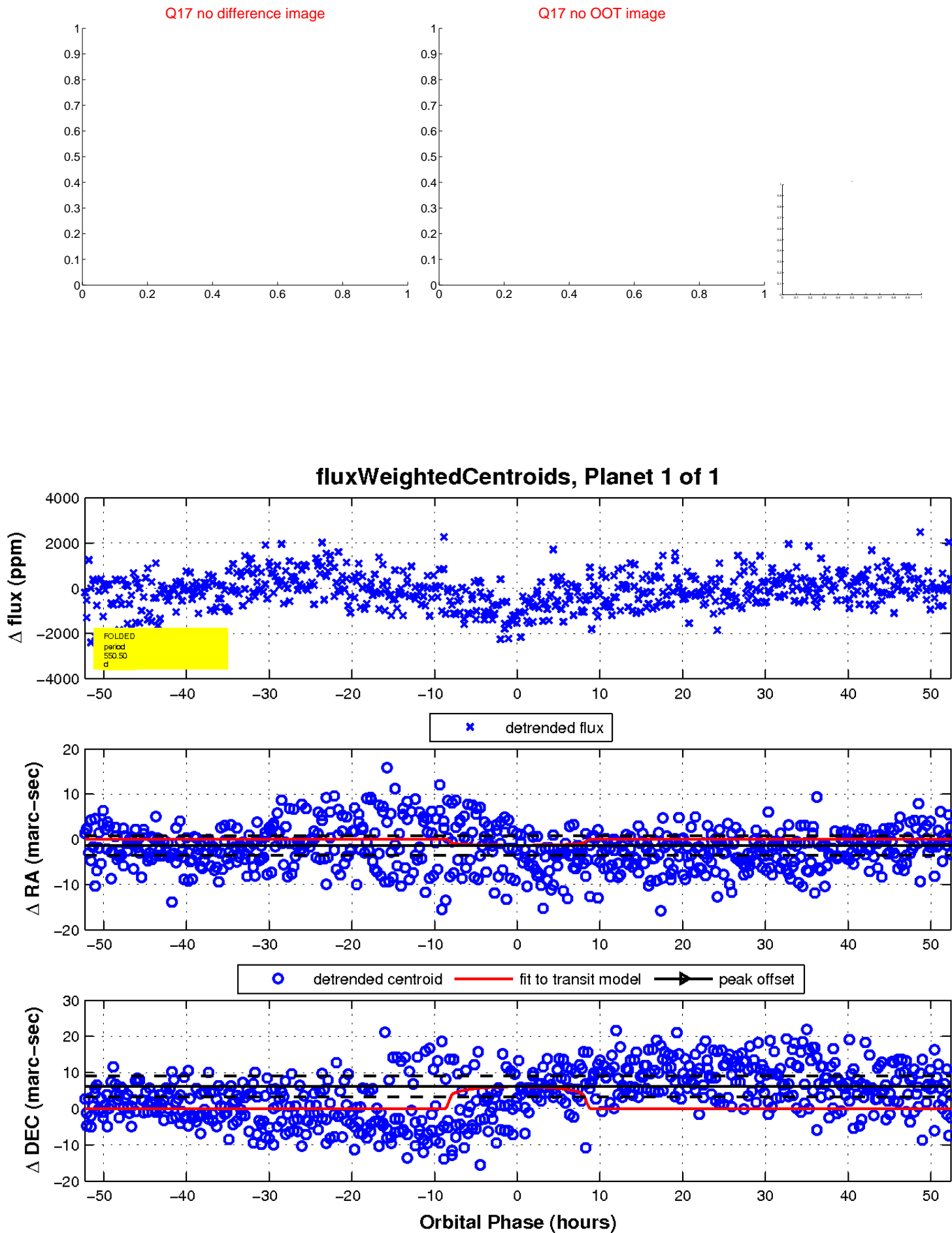
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UKIRT Image

Declination

