

# KIC 011288684

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011288684-01	OBS	No	22.213452	144.474148	127.9	50.240	12.4	21.0	2.04	6113	3.32	203.81

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011288684-01	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.

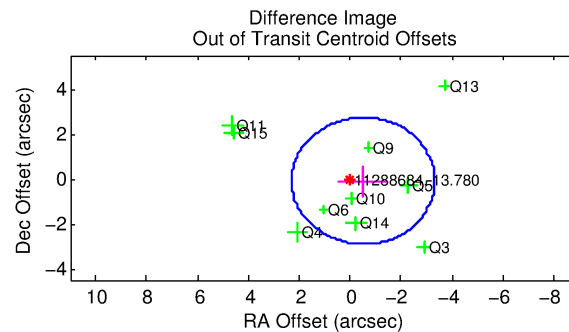
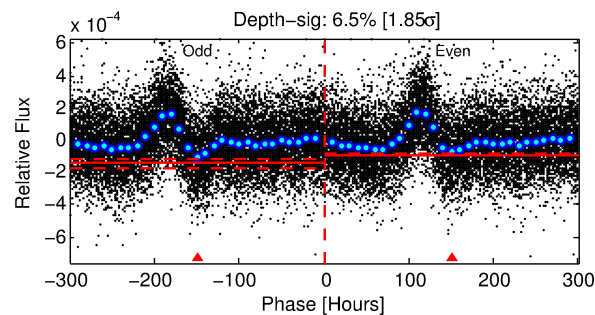
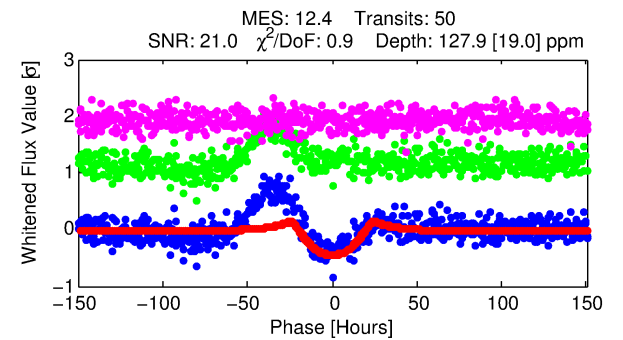
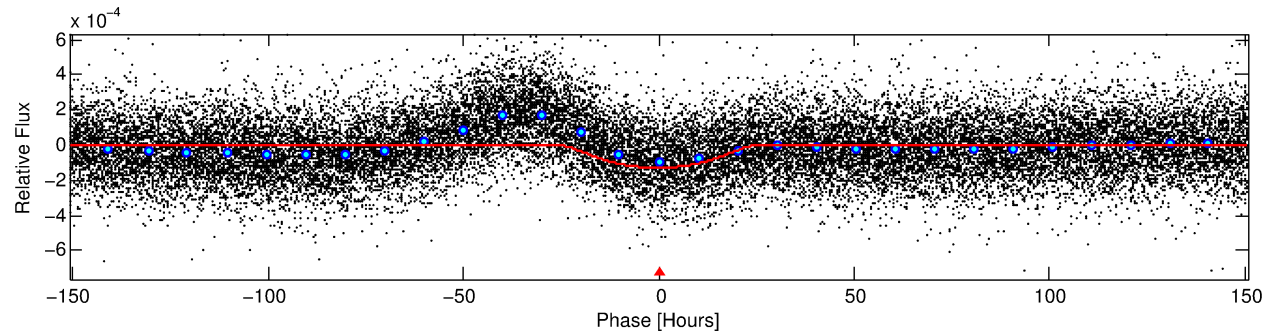
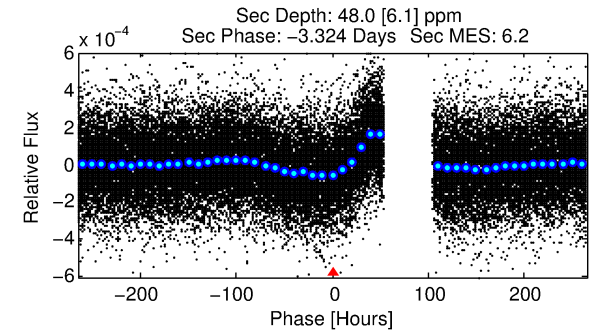
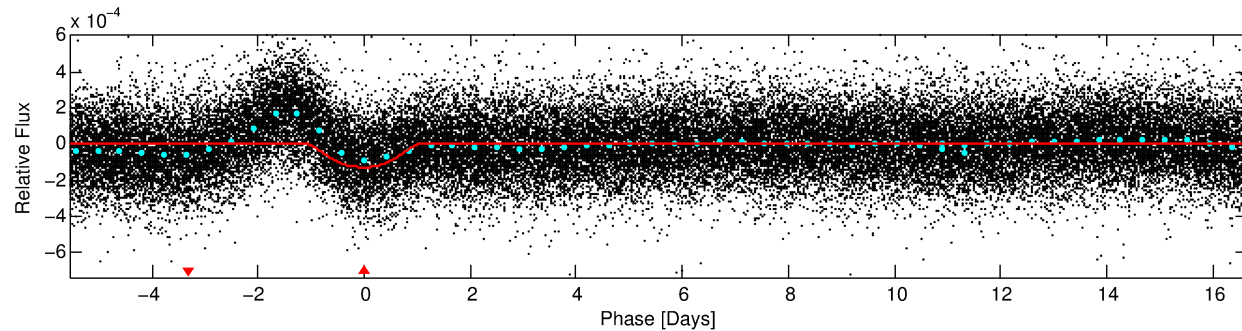
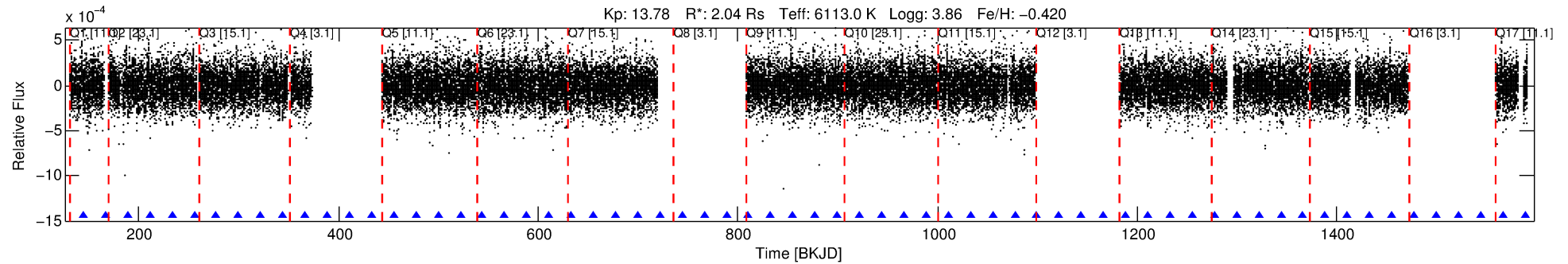
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 011288684-01

No Significant Match Found

# DV One-Page Summary

KIC: 11288684 Candidate: 1 of 1 Period: 22.213 d



## DV Fit Results:

Period = 22.21345 [0.00117] d  
Epoch = 144.4741 [0.0438] BKJD  
Rp/R\* = 0.0149 [0.0021]  
a/R\* = 1.26 [0.04]  
b = 0.99 [0.01]  
Seff = 203.81 [174.30]  
Teq = 963 [206] K  
Rp = 3.32 [1.77] Re  
a = 0.1597 [0.0824] AU  
Ag = 61.14 [55.00] [1.09σ]  
Teffp = 4165 [356] K [7.78σ]

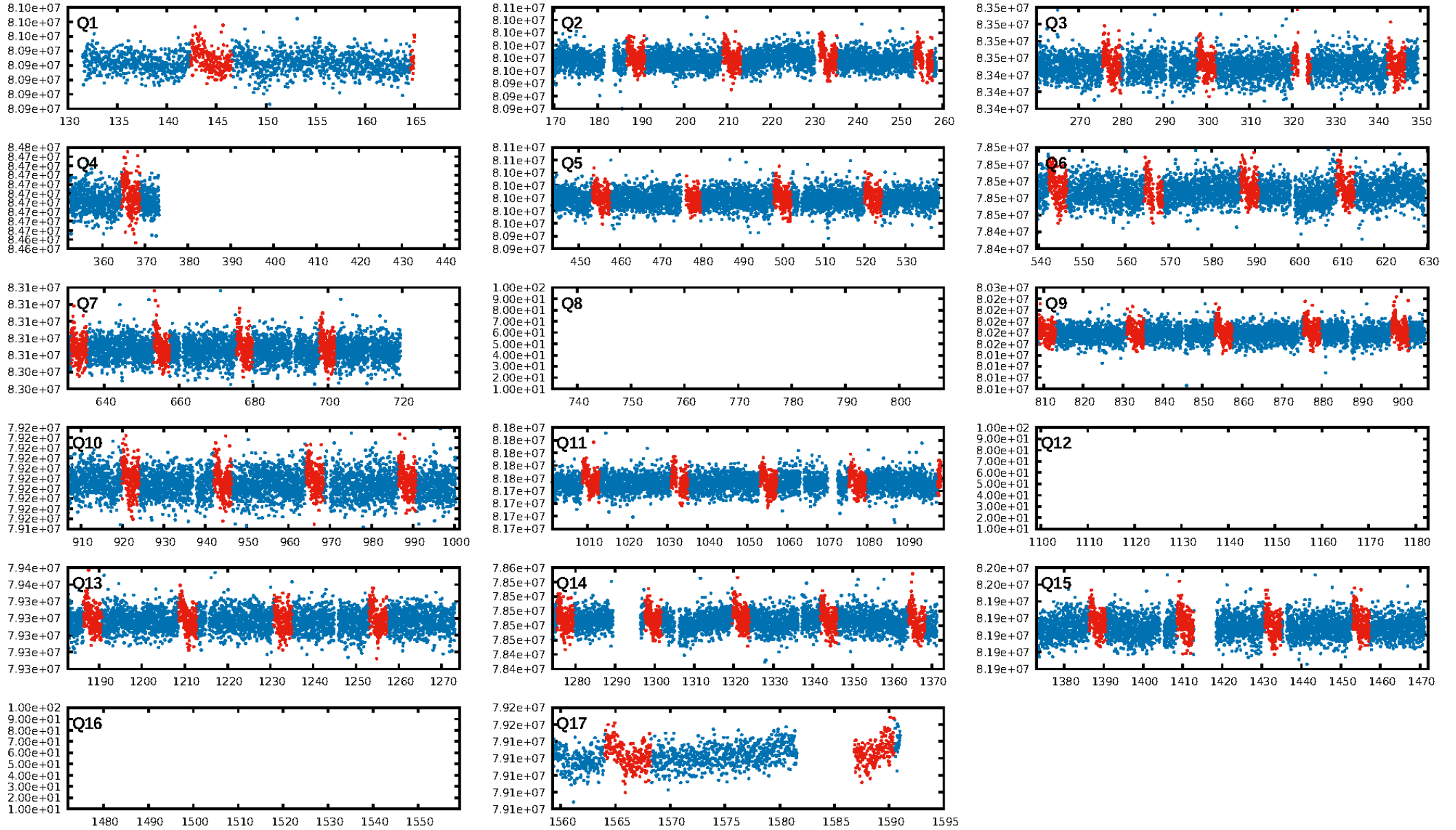
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 99.9%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: 2.84e-36  
RollingBand-fgt: 1.00 [46/46]  
GhostDiagnostic-chr: -3.719  
Centroid-sig: 38.6%  
Centroid-so: 0.246 arcsec [0.64σ]  
OotOffset-rm: 0.523 arcsec [0.56σ]  
KicOffset-rm: 0.581 arcsec [0.55σ]  
OotOffset-st: 3/3/1/3 [10]  
KicOffset-st: 3/3/1/3 [10]  
DiffImageQuality-fgm: 0.70 [7/10]  
DiffImageOverlap-fno: 1.00 [14/14]

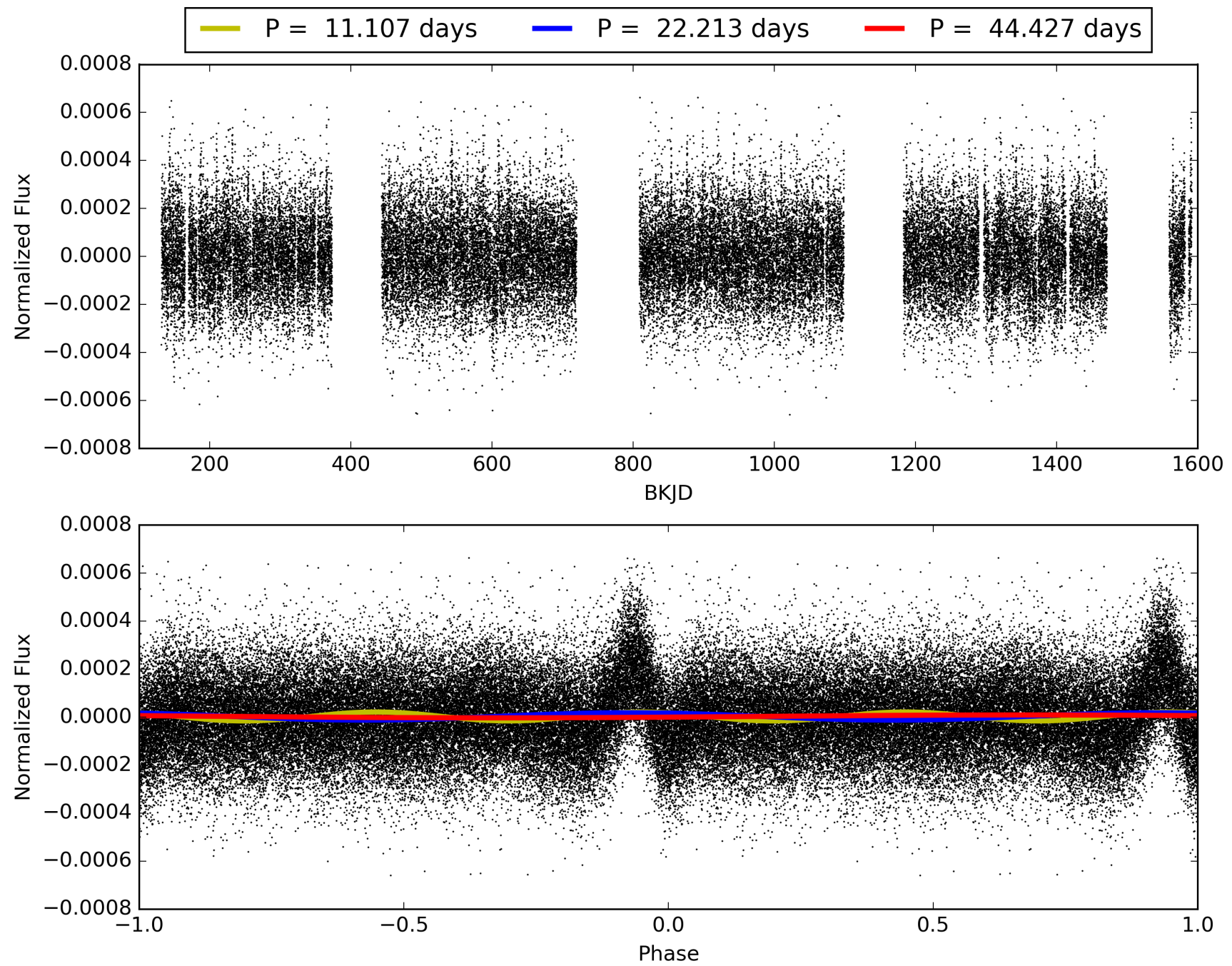
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 23:33:05 Z

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

# TCE 011288684-01, PDC Light Curves

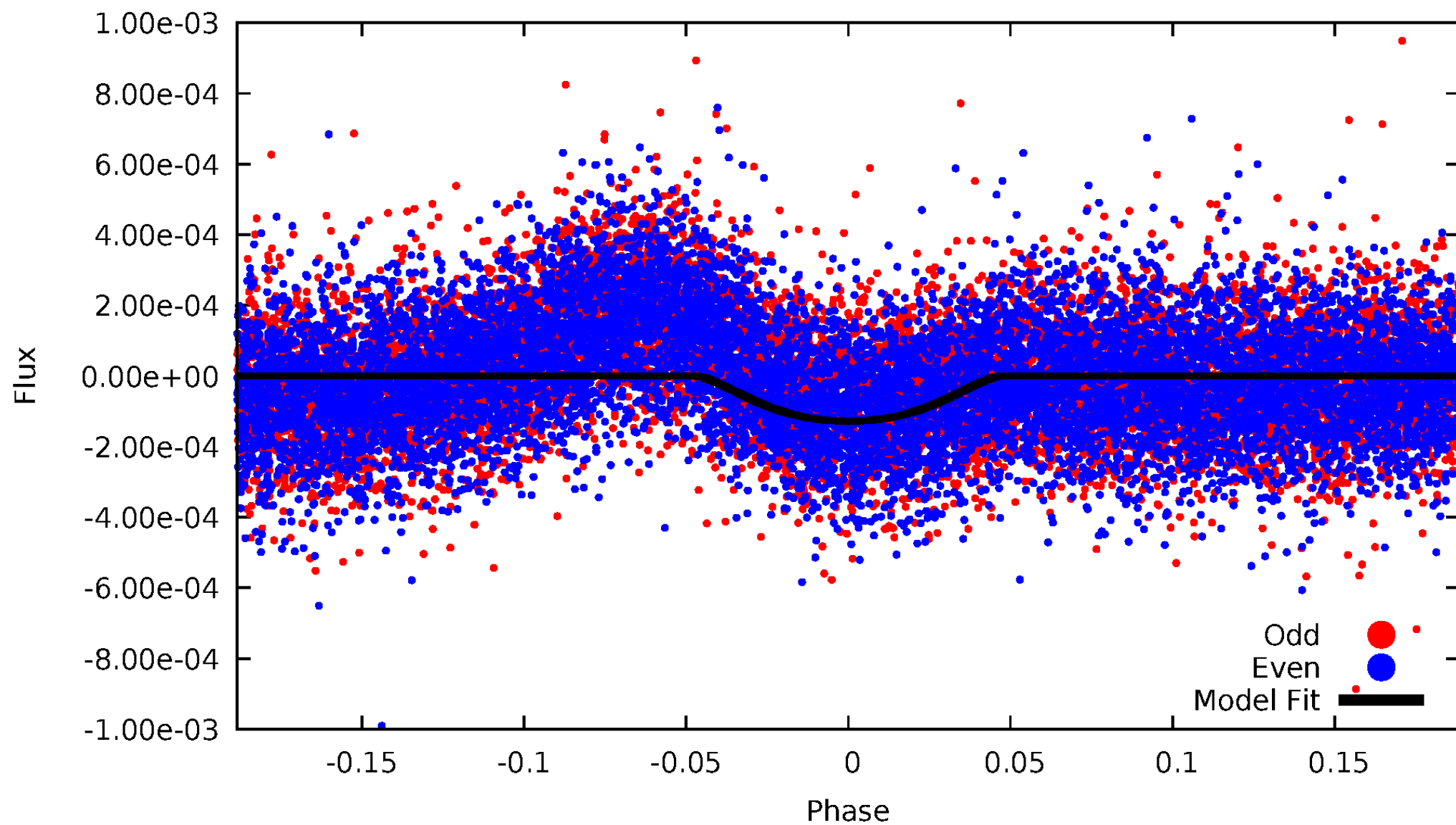


# TCE 011288684-01



# DV Odd/Even

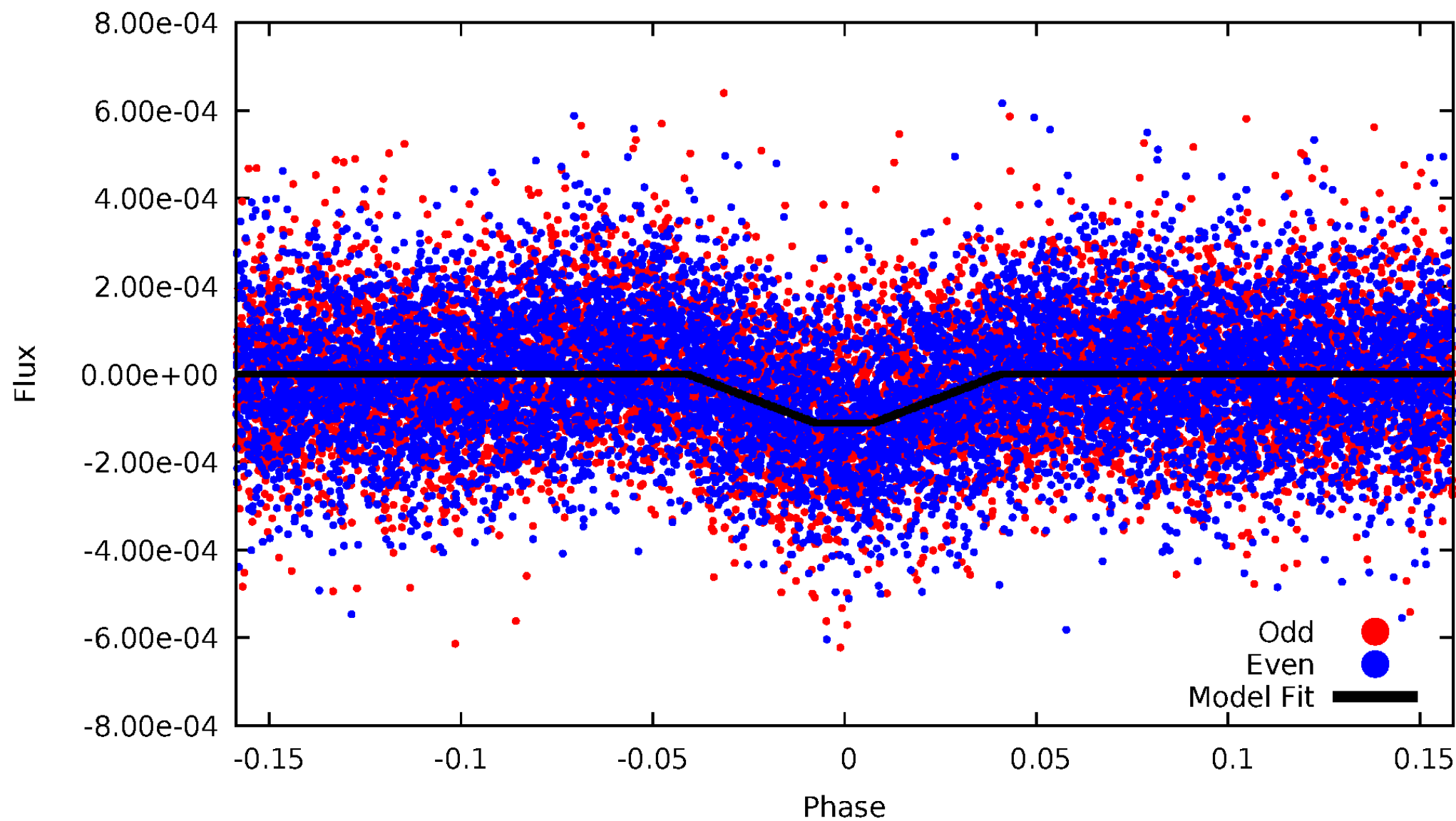
TCE 011288684-01



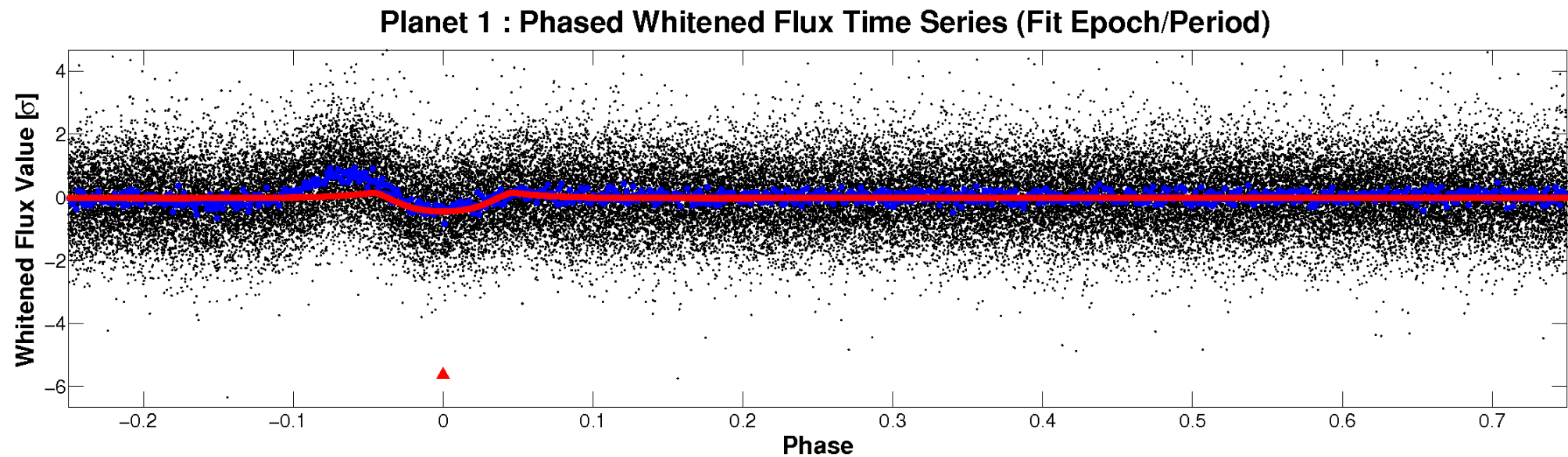
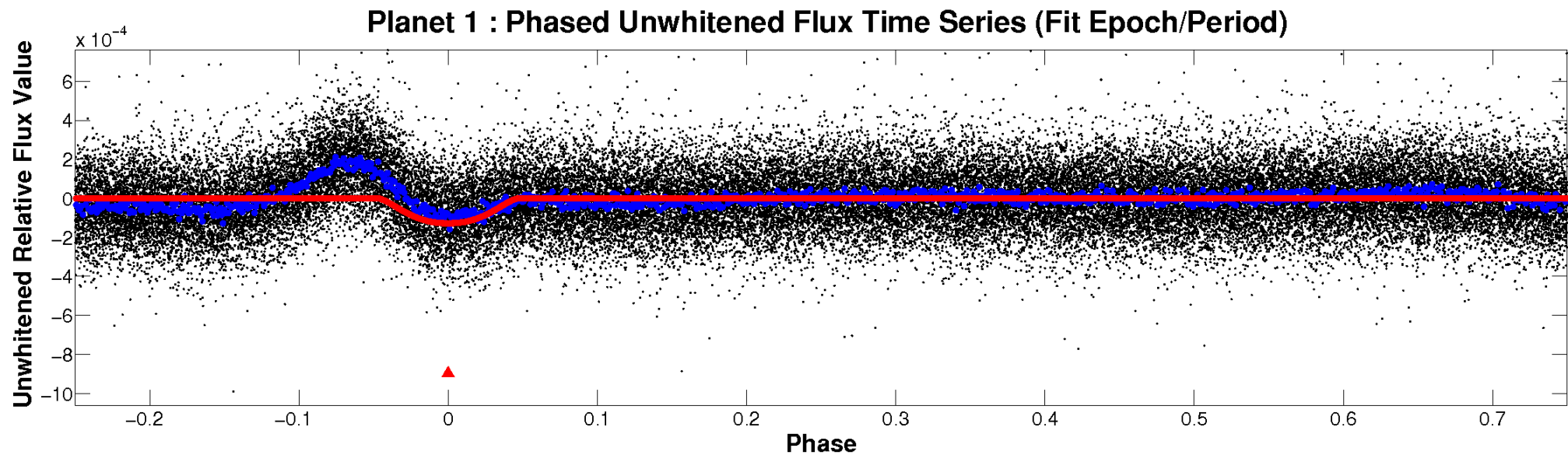


# ALT Odd/Even

TCE 011288684-01

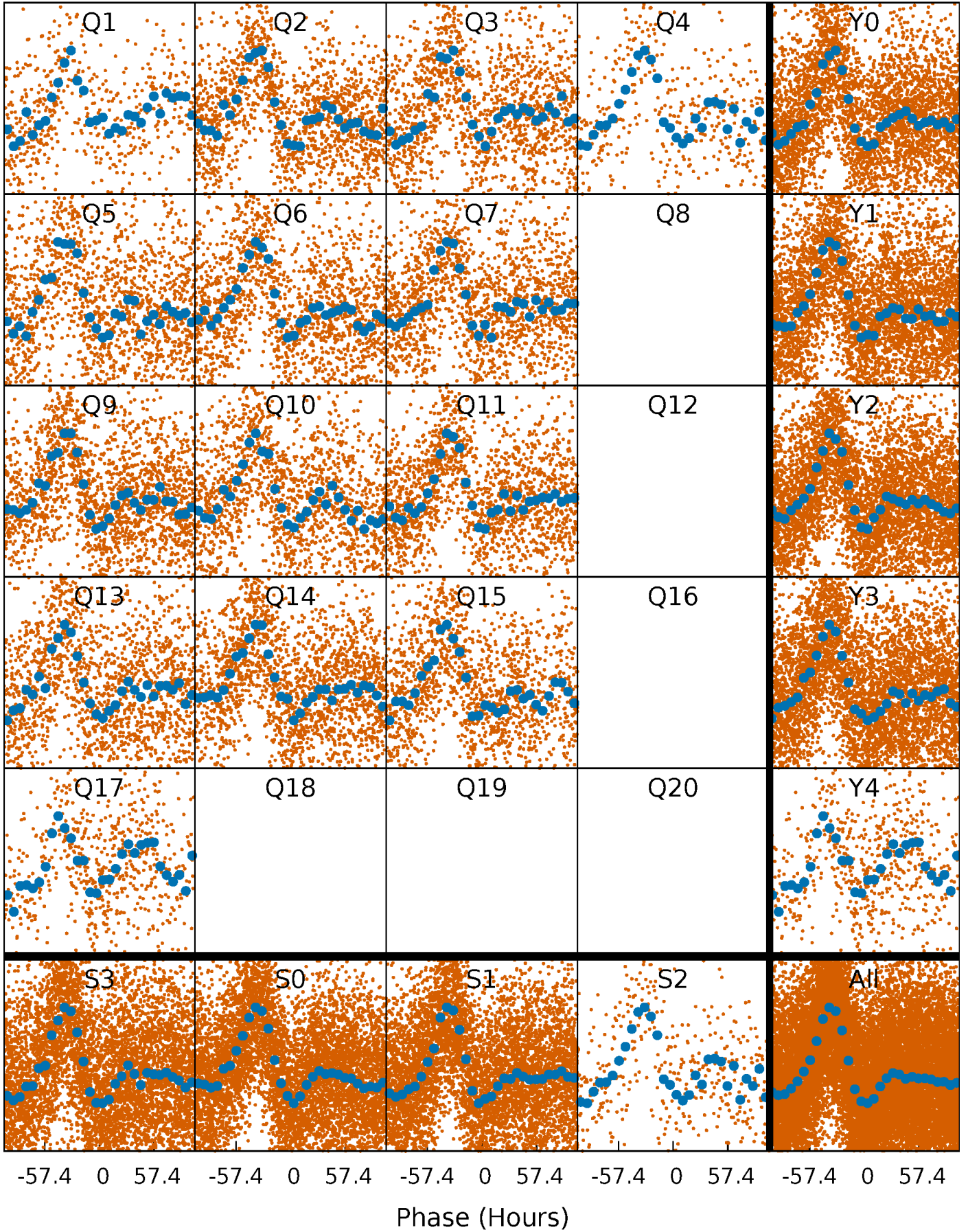


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

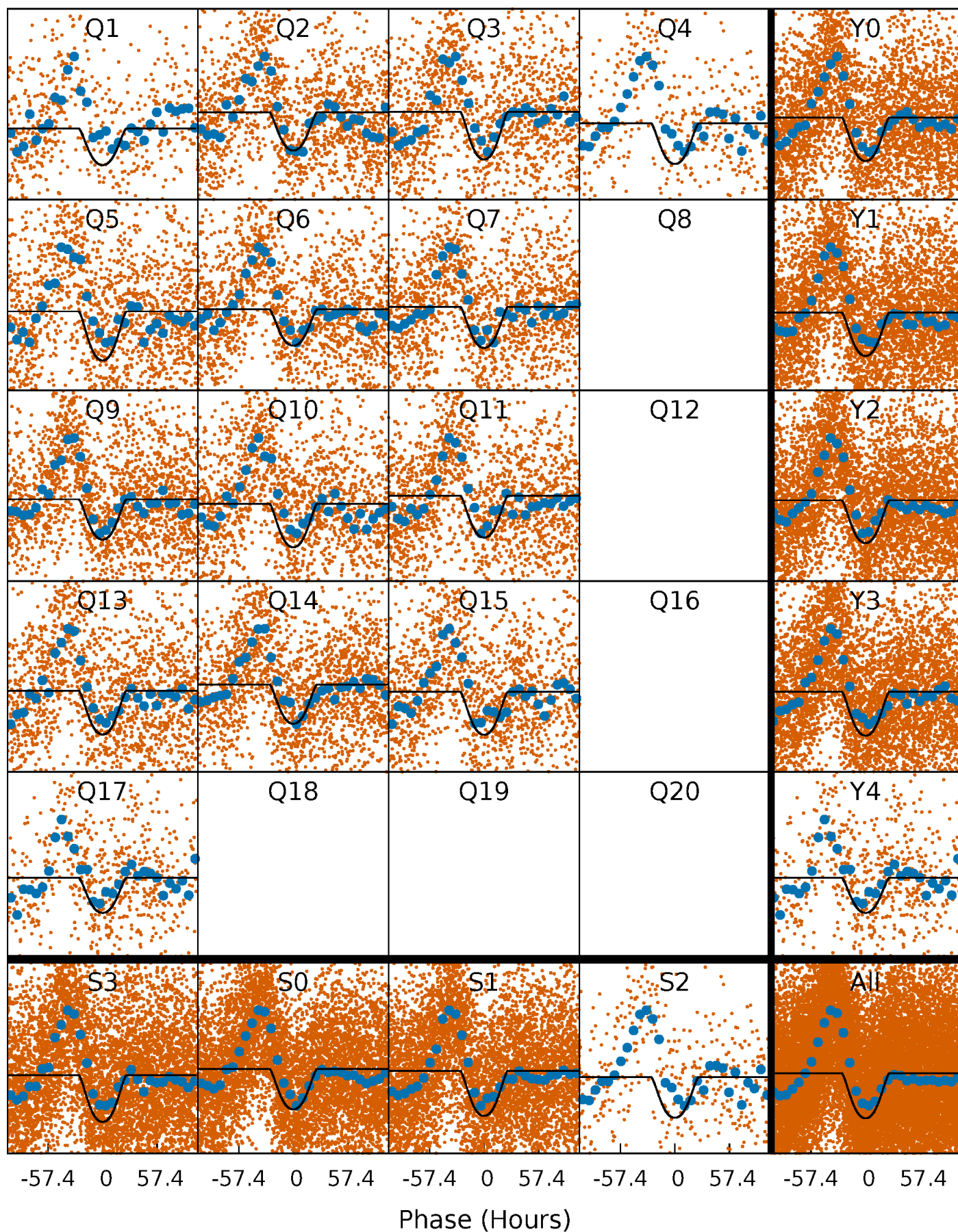
TCE 011288684-01 P= 22.213452 Days  $T_0=144.474148$  (BKJD)





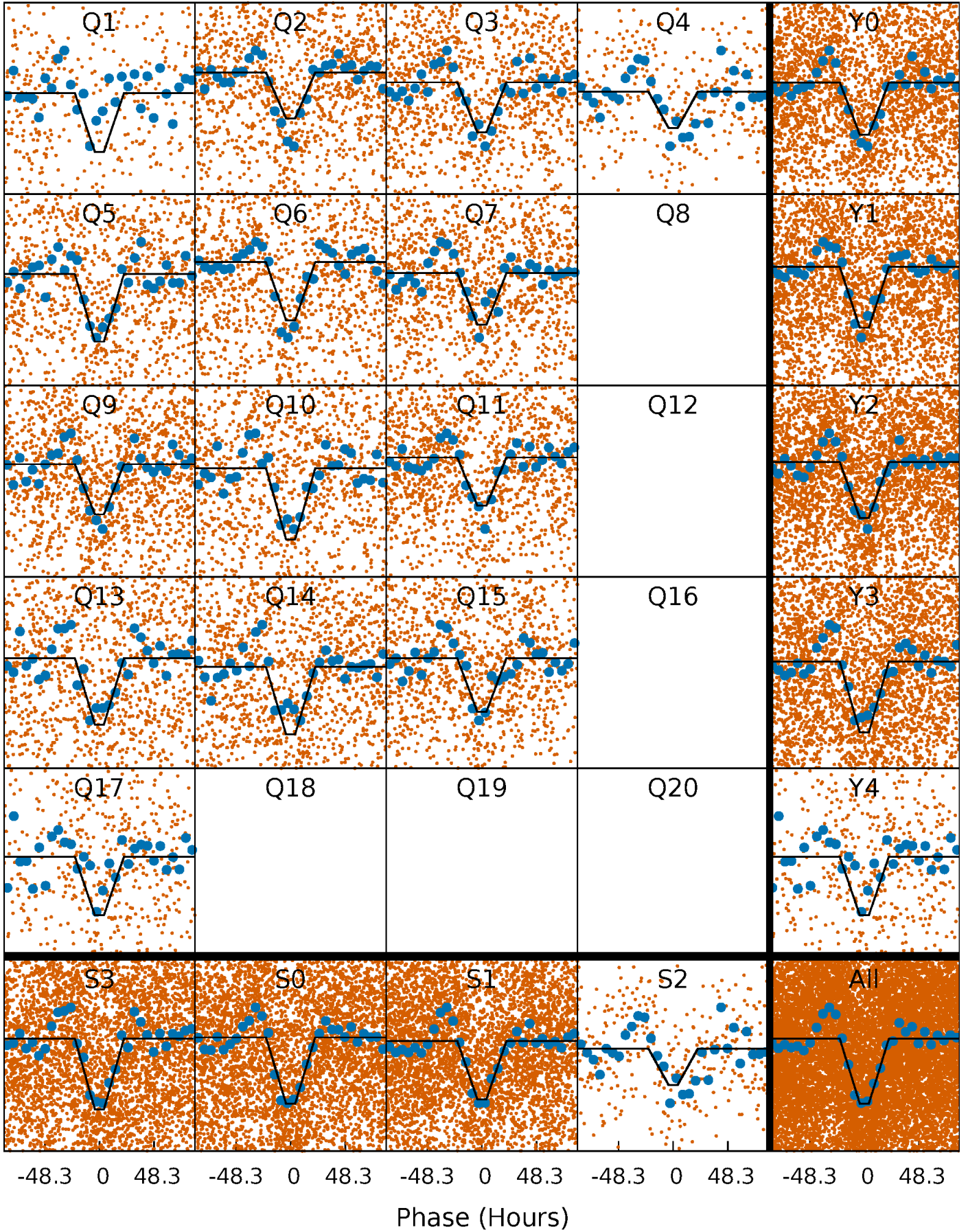
# DV Quarter-Phased Transit Curves

TCE 011288684-01 P= 22.213452 Days  $T_0=144.474148$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

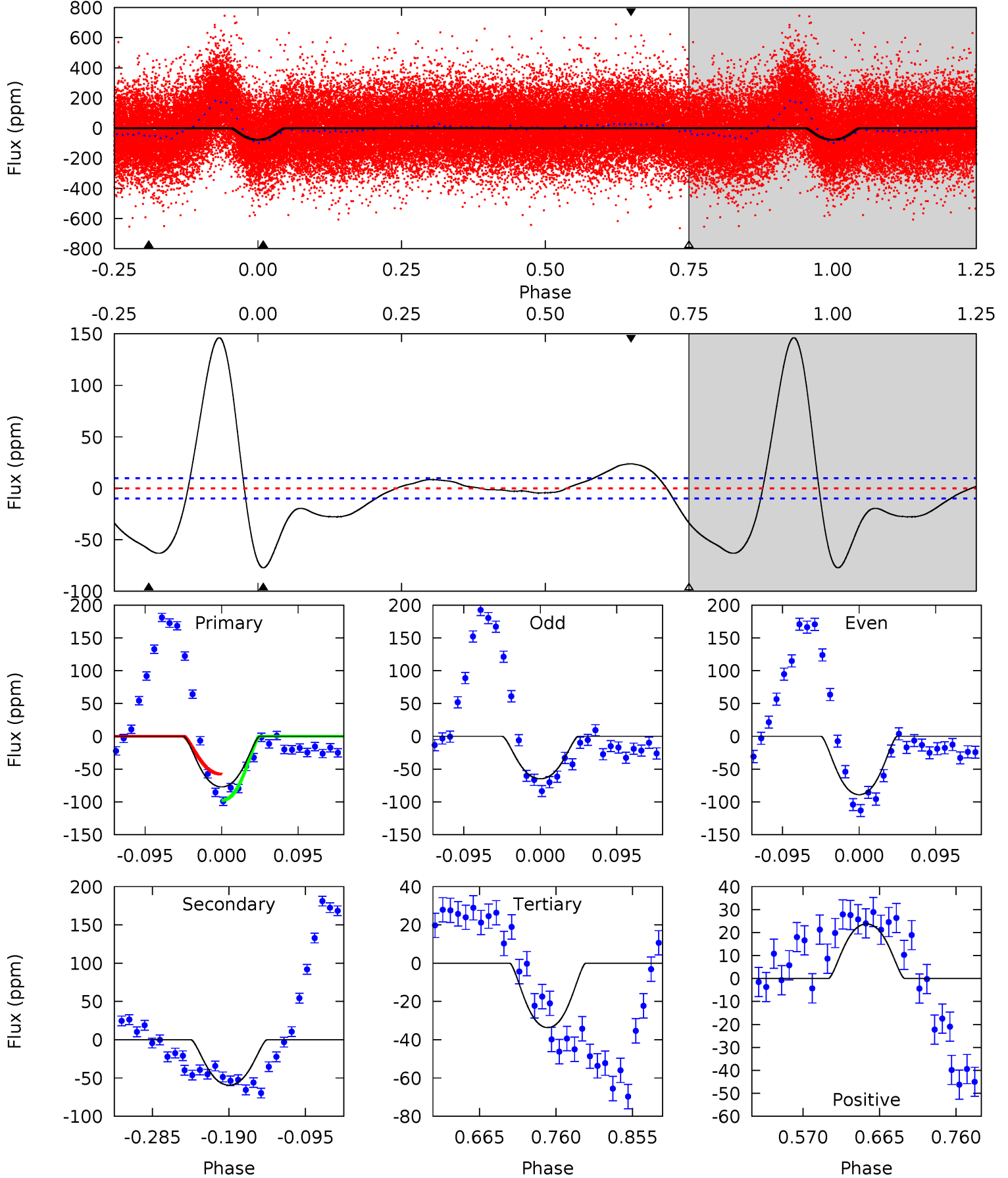
TCE 011288684-01 P= 22.210815 Days  $T_0=144.391665$  (BKJD)



# DV Model-Shift Uniqueness Test

011288684-01, P = 22.213452 Days, E = 122.260696 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
35.8	27.5	15.6	11.0	4.58	1.67	8.55	20.2	24.8	11.9	16.5	5.54	1.07	0.65	9.21

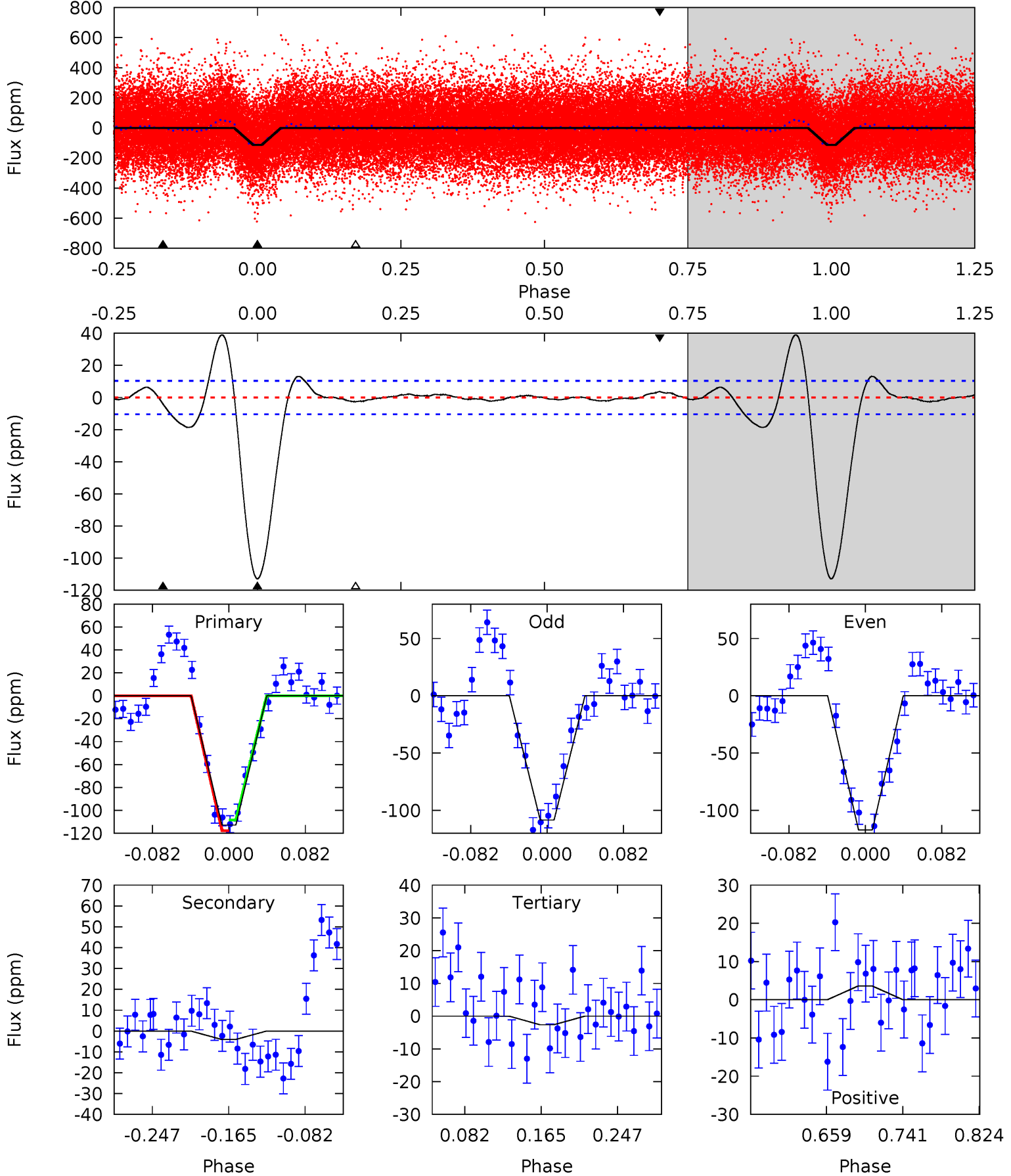




# Alt Model-Shift Uniqueness Test

011288684-01, P = 22.210815 Days, E = 122.180850 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
50.1	1.80	1.17	1.60	4.61	1.74	0.80	48.9	48.5	0.63	0.20	1.93	1.05	0.26	2.03





### Stellar Parameters For KIC 011288684

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M$ ( $M_{\odot}$ )	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$6113^{+214}_{-214}$	$3.861^{+0.502}_{-0.134}$	$-0.420^{+0.300}_{-0.300}$	$2.038^{+0.525}_{-1.050}$	$1.100^{+0.167}_{-0.222}$	$0.183^{+1.054}_{-0.067}$
	+4%/-4%	+13%/-3%	+71%/-71%	+26%/-52%	+15%/-20%	+576%/-37%
Source	PHO54	PHO54	PHO54	DSEP		

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

### Secondary Eclipse Parameters for KIC 011288684-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-59 \pm 2$	$3.09^{+0.77}_{-0.83}$	$1313^{+101}_{-171}$	$4550^{+356}_{-255}$	$87^{+70}_{-30}$
Alt.	$-4 \pm 2$	$2.13^{+0.66}_{-0.64}$	$1302^{+121}_{-170}$	$3220^{+375}_{-430}$	$12^{+17}_{-8}$

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

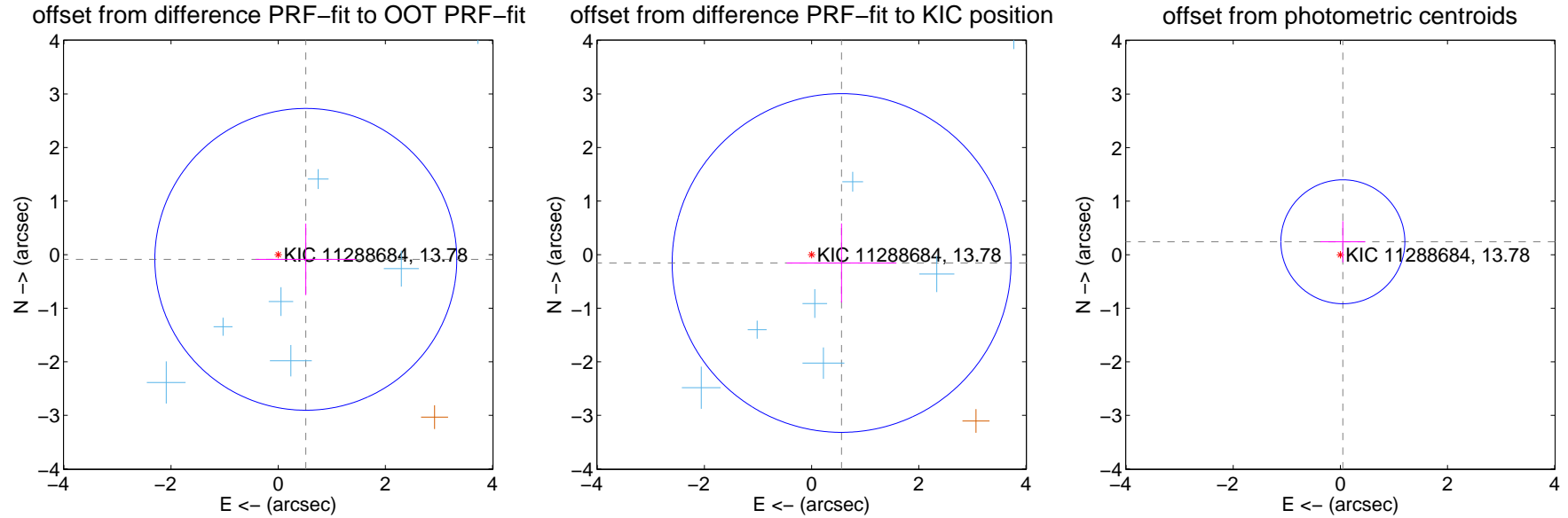
## DV Centroid Data

Supplemental centroid analysis for 011288684-01. Kepler magnitude: 13.78. Transit SNR 20.96

There are 7 quarters with good PRF difference image offsets

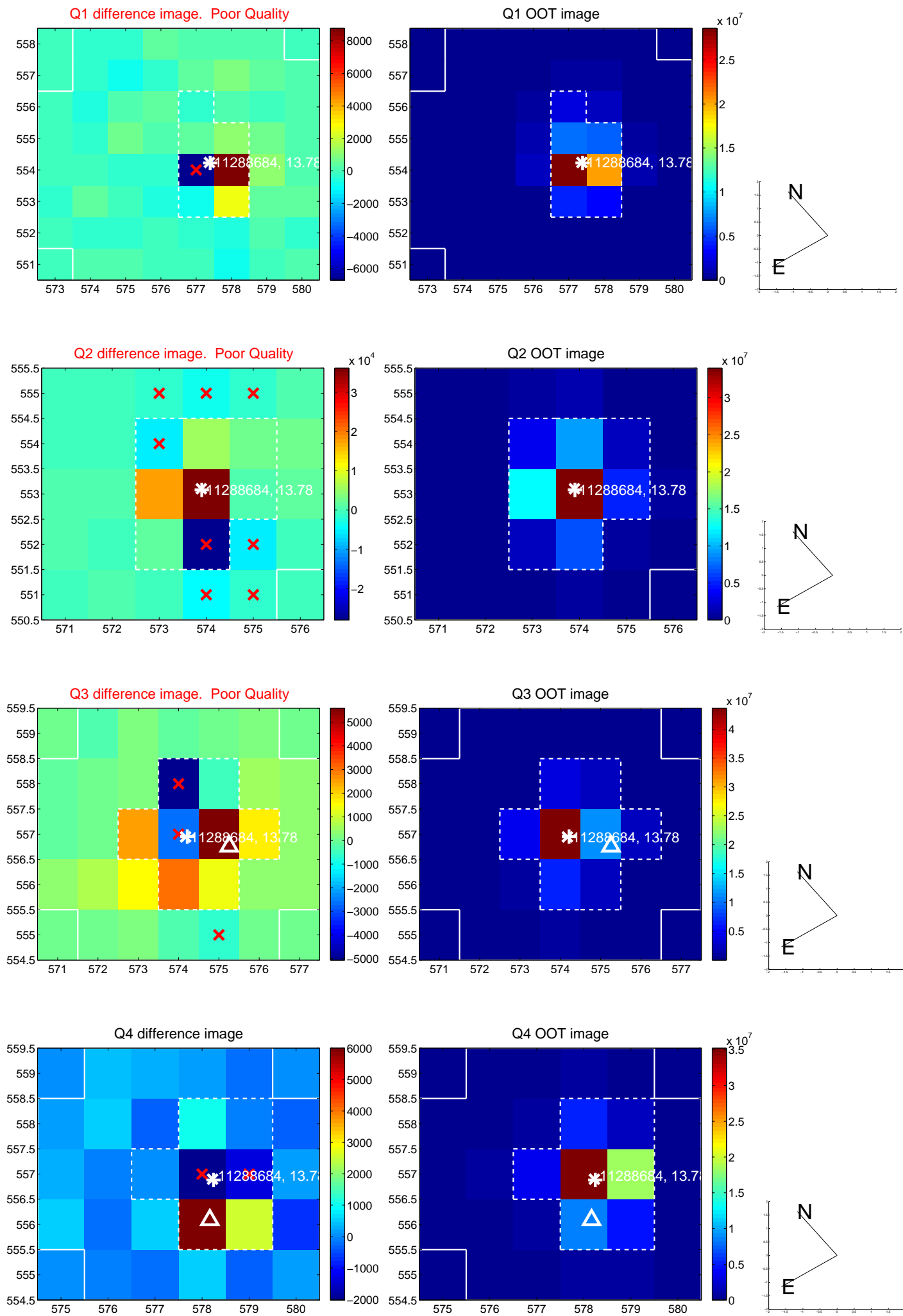
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.523 \pm 0.939$	0.56	$-0.515 \pm 0.934$	$-0.088 \pm 0.668$
PRF-fit source offset from KIC position	$0.581 \pm 1.054$	0.55	$-0.560 \pm 1.023$	$-0.156 \pm 0.739$
photometric centroid source offset	$0.25 \pm 0.39$	0.64	$-0.05 \pm 0.42$	$0.24 \pm 0.38$

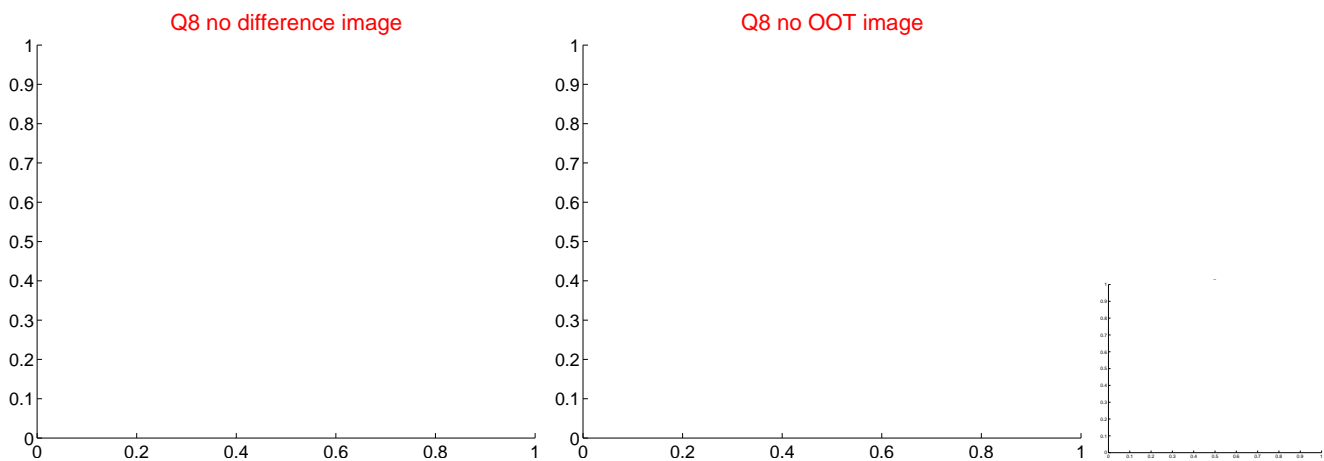
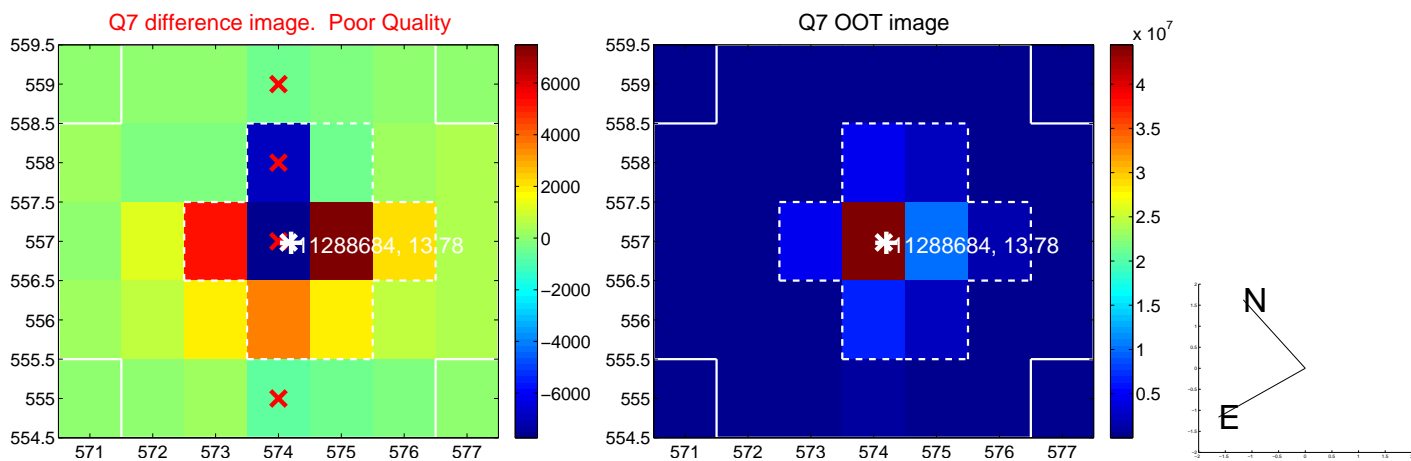
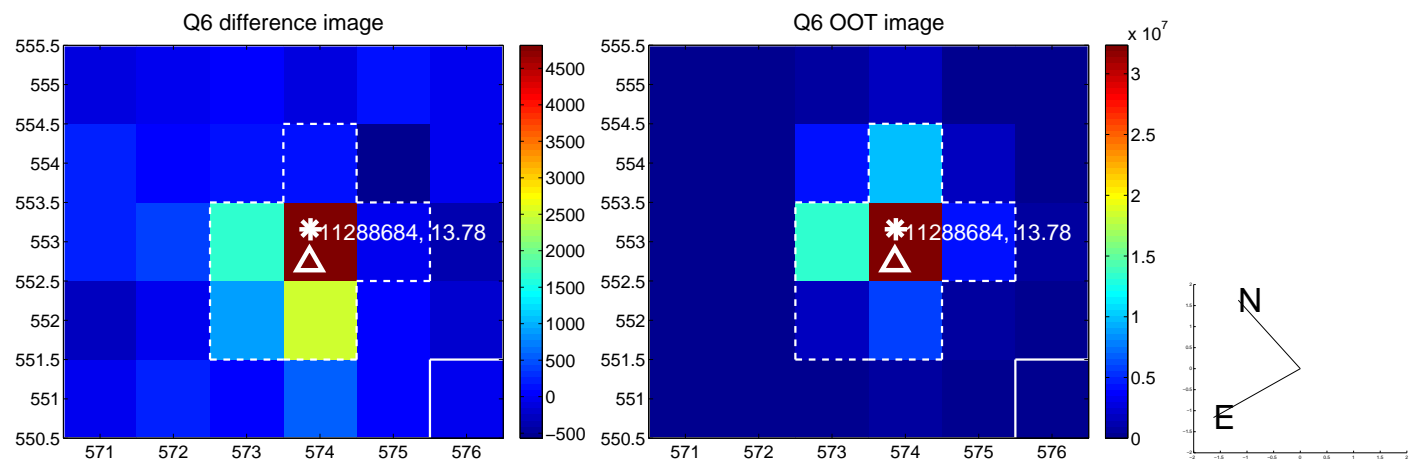
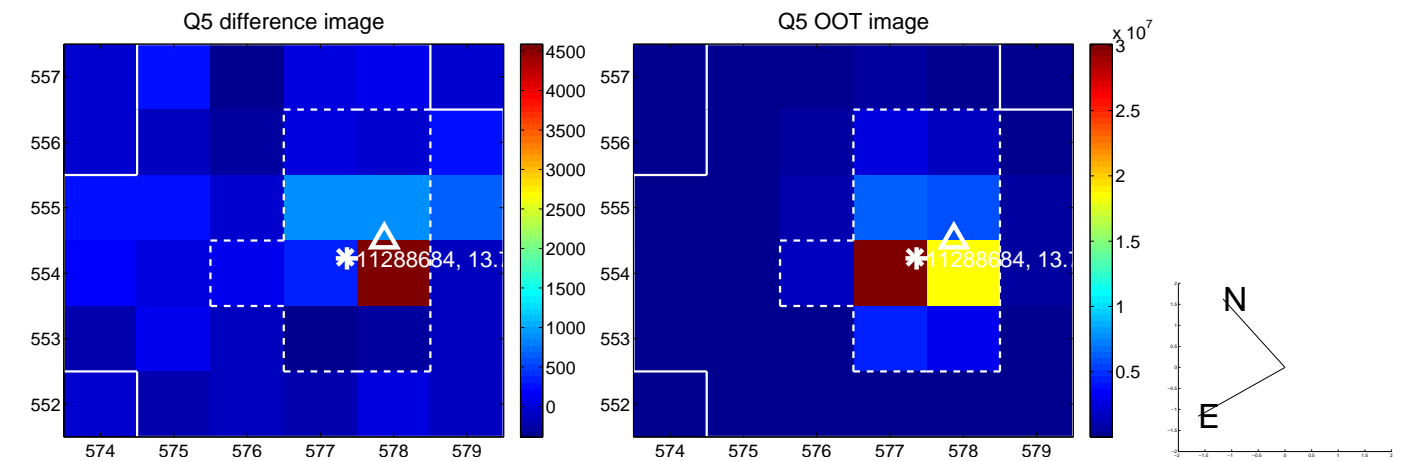


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

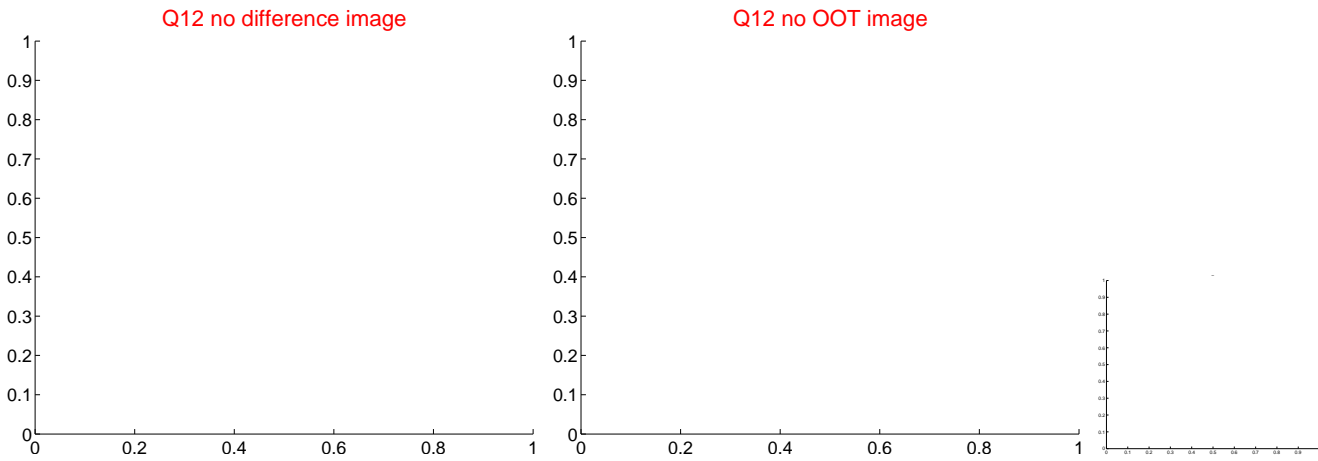
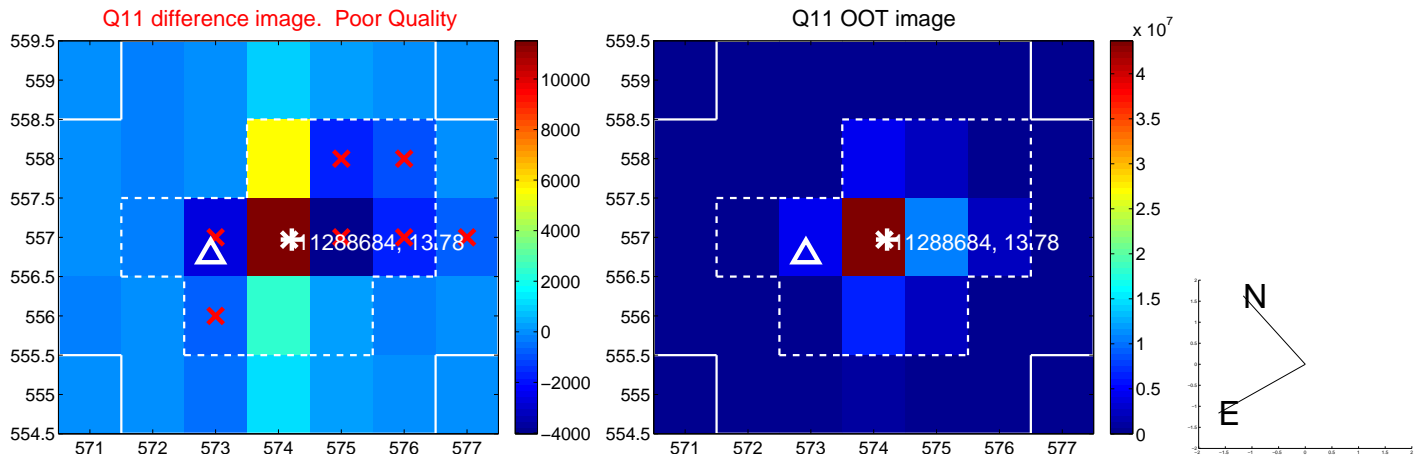
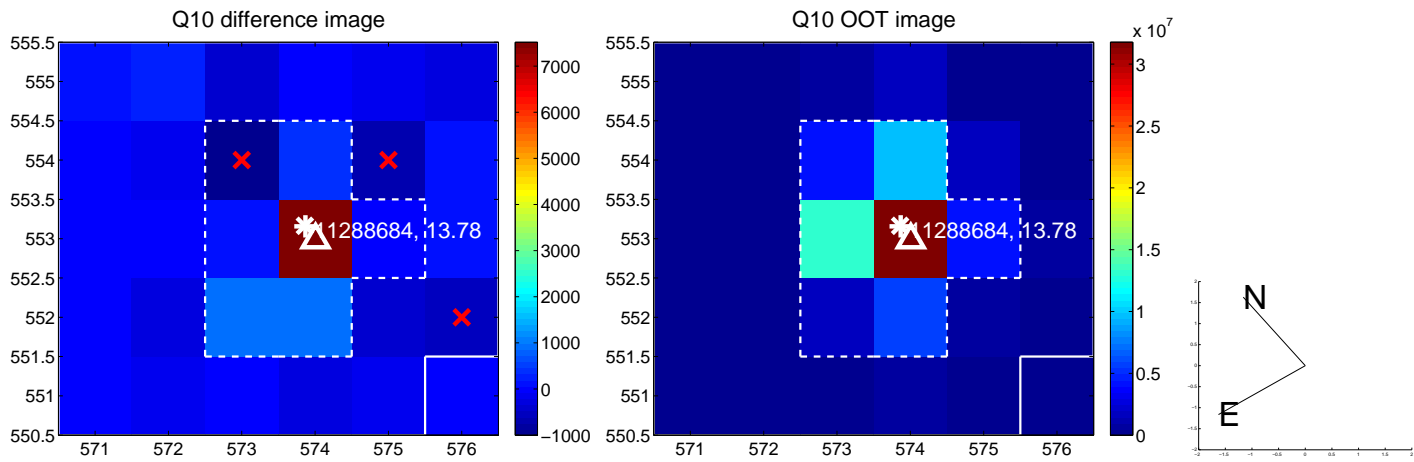
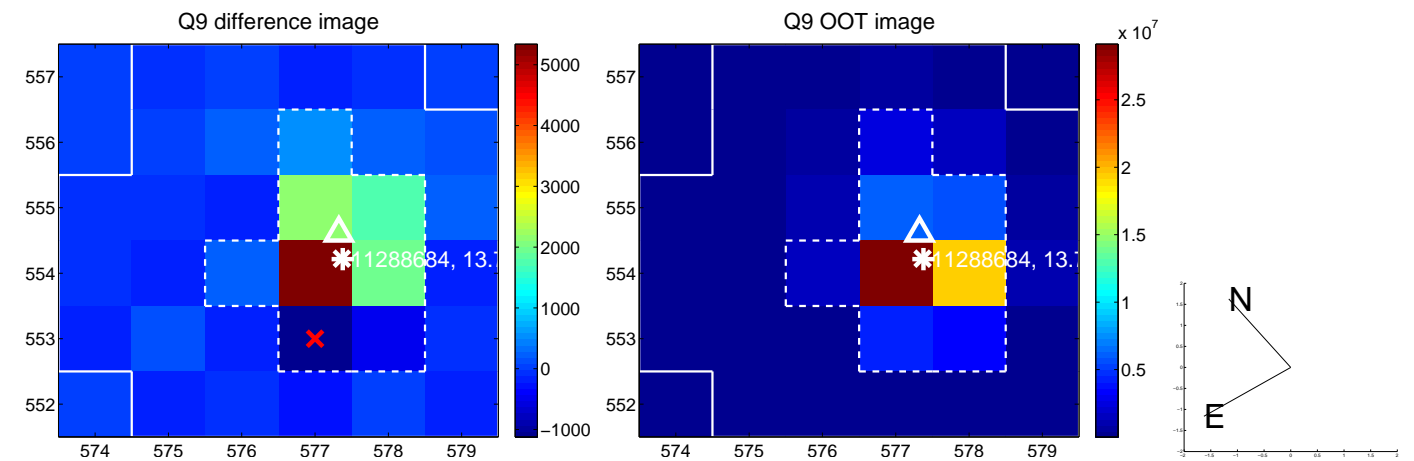


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

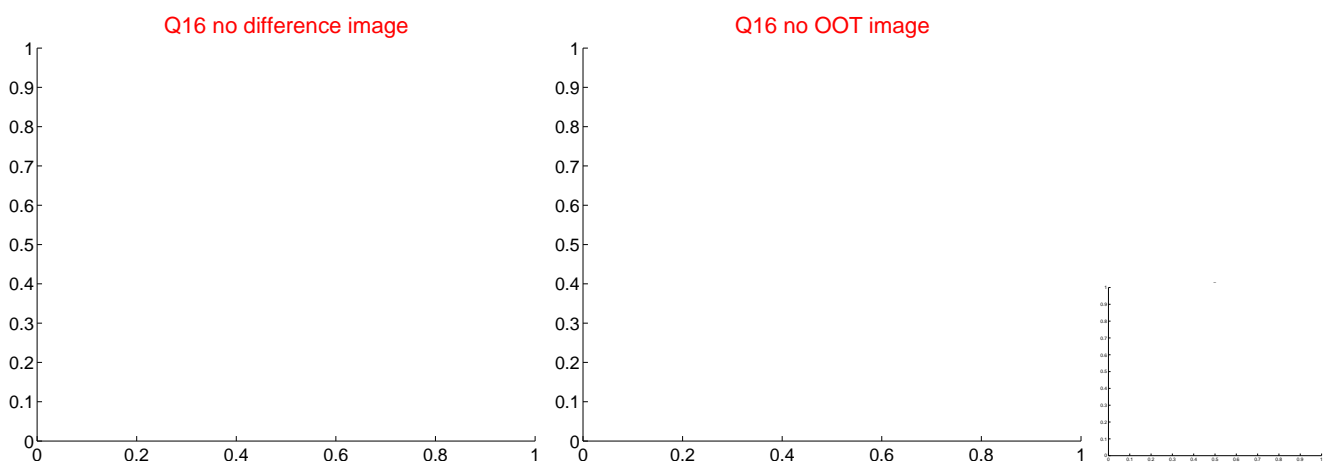
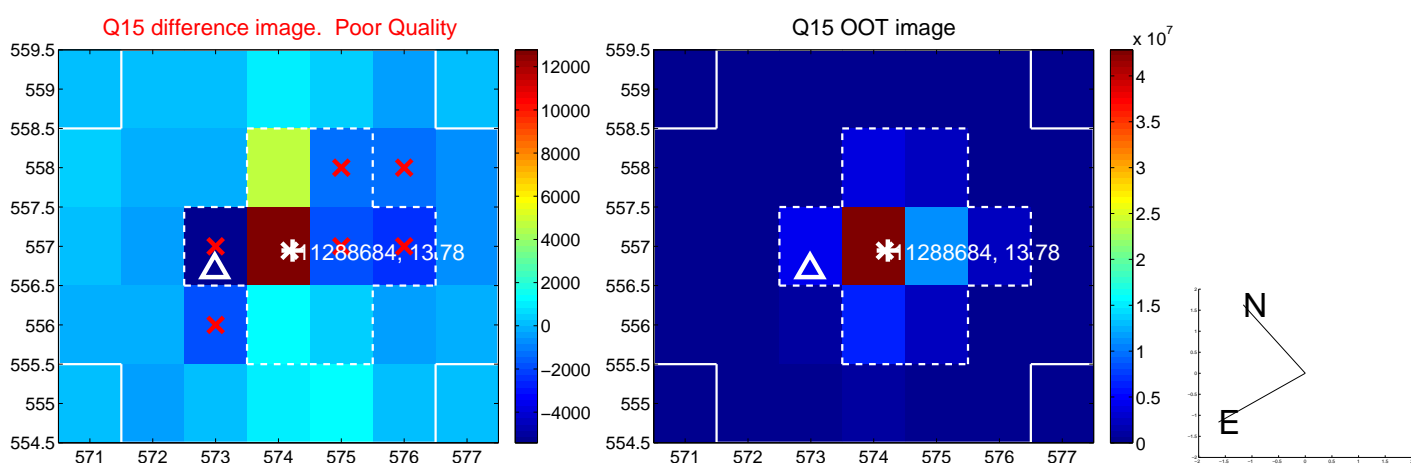
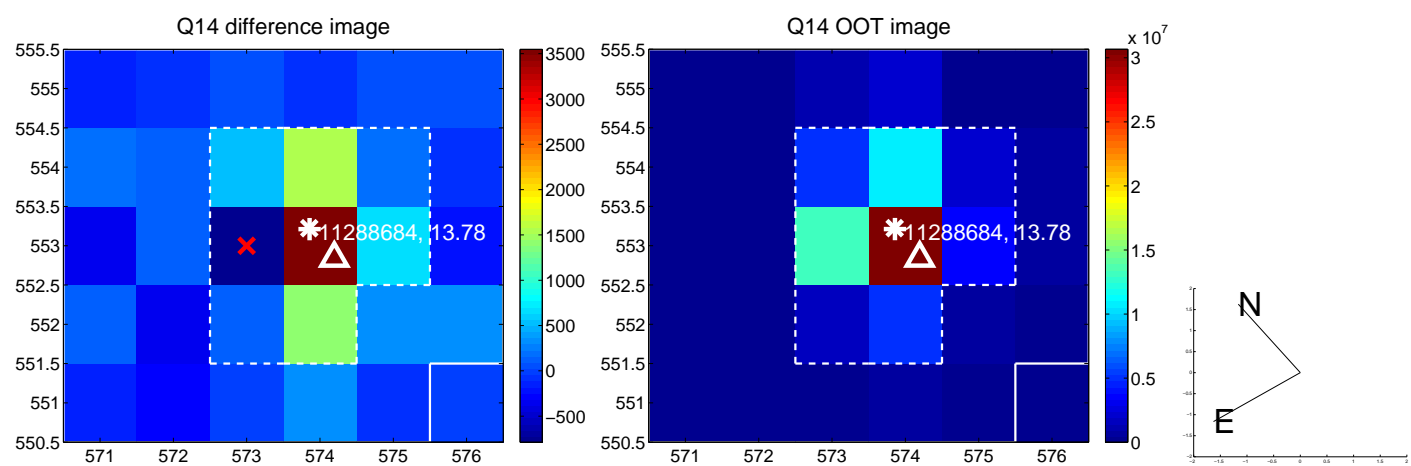
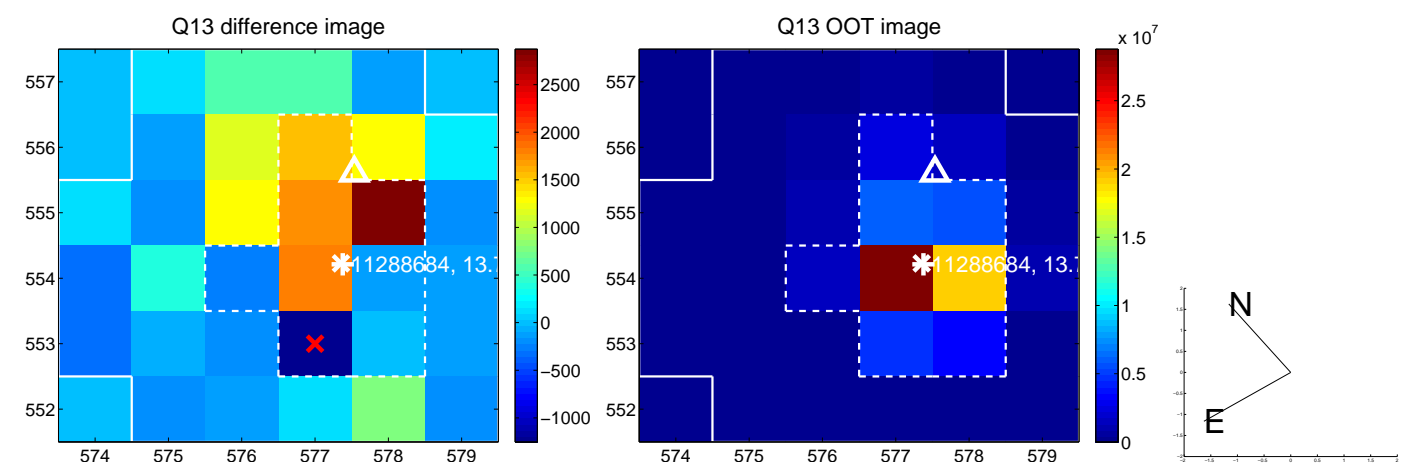




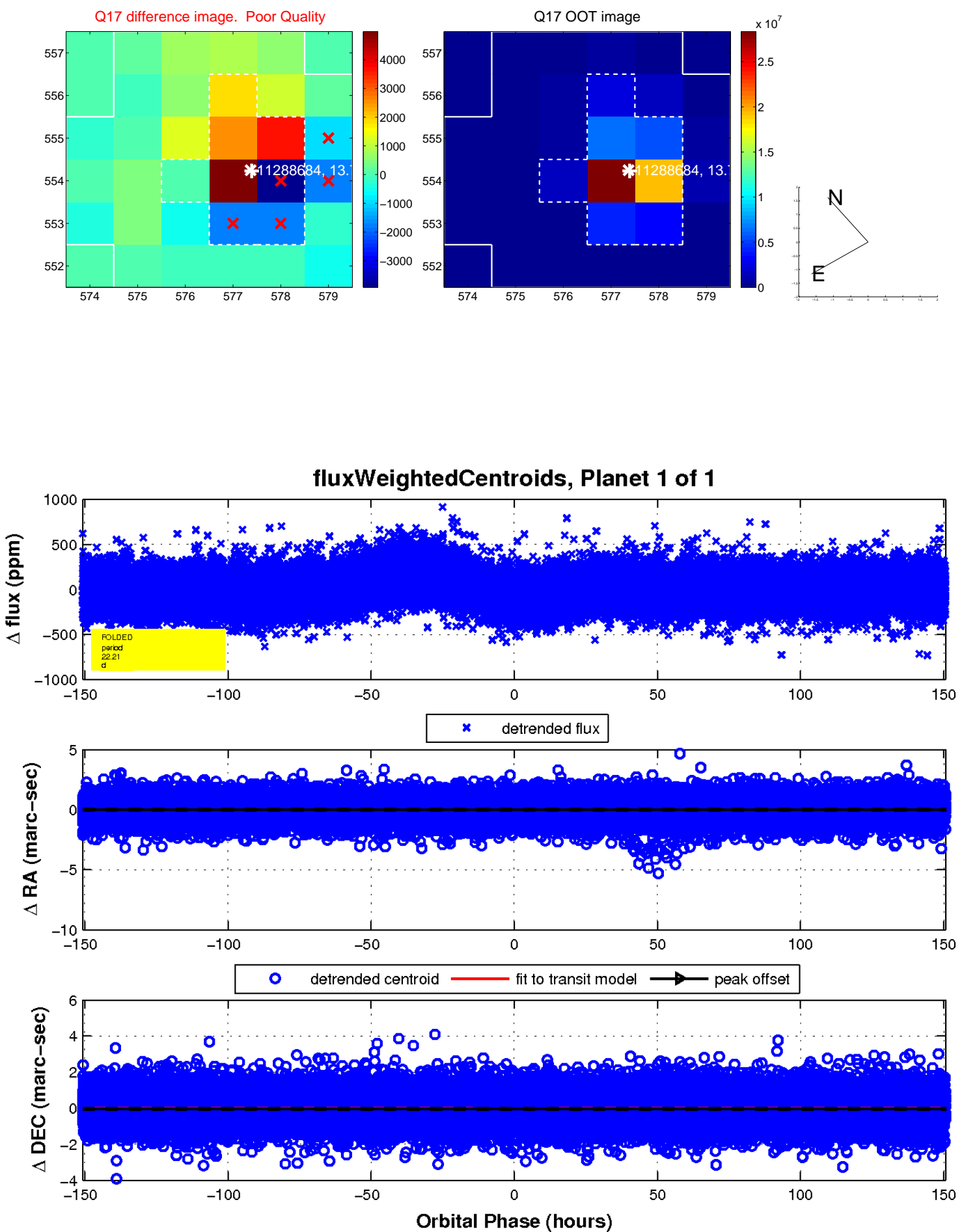
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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



UKIRT Image

Declination

