

# KIC 011971449

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011971449-01	OBS	No	5.730744	135.823508	11.4	35.088	9.7	2.6	1.96	7535	0.72	2015.47

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011971449-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_KIC_POS

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

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

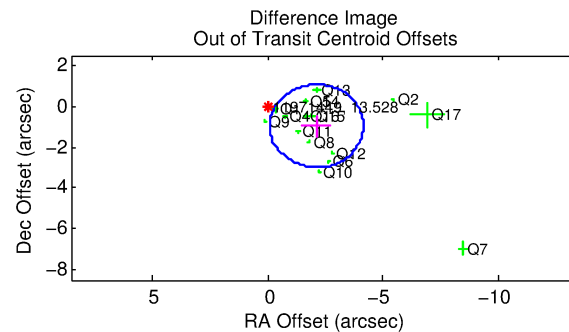
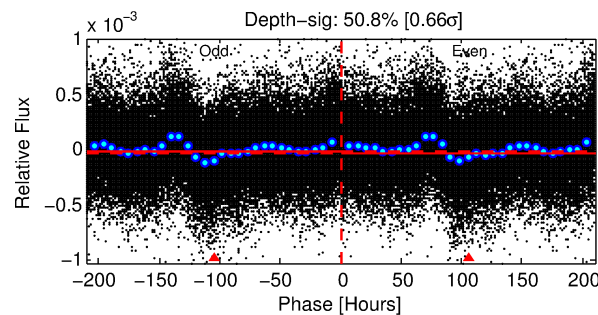
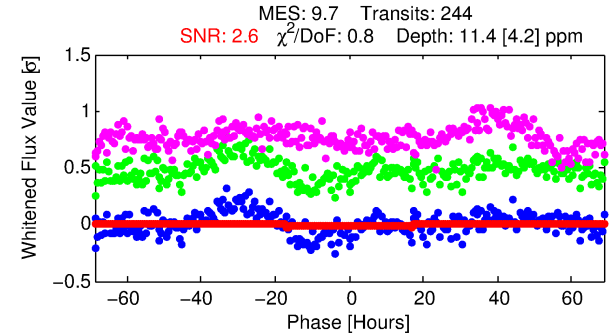
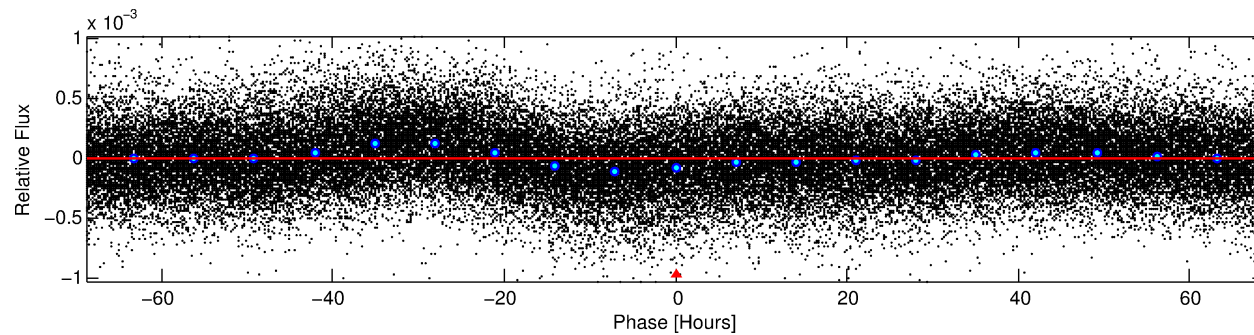
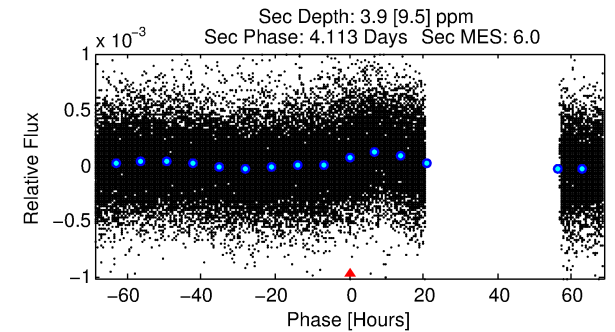
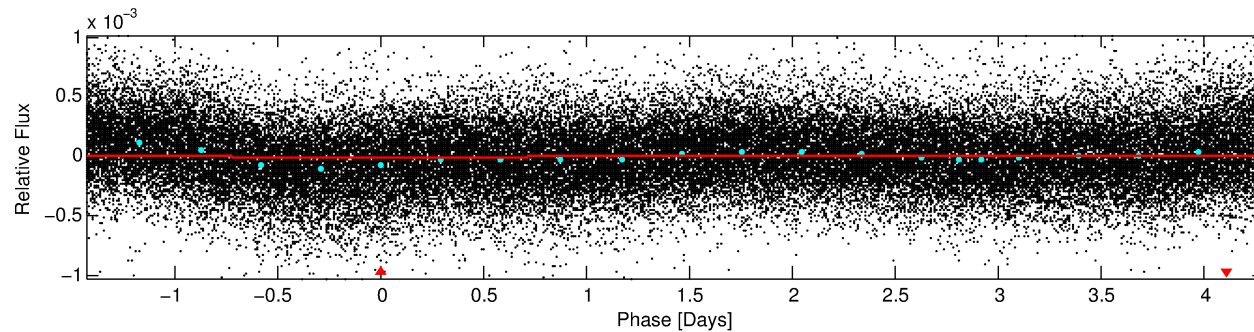
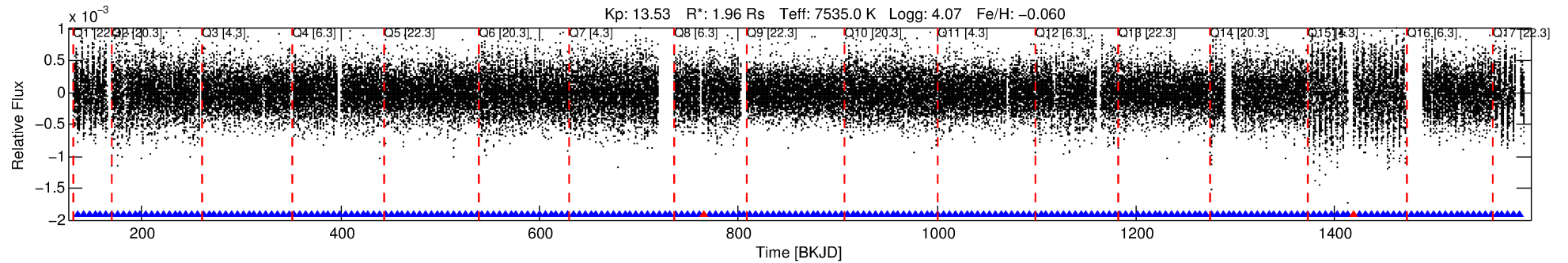
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 011971449-01

No Significant Match Found

# DV One-Page Summary

KIC: 11971449 Candidate: 1 of 1 Period: 5.731 d



## DV Fit Results:

Period = 5.73074 [0.00043] d  
Epoch = 135.8235 [0.0512] BKJD  
Rp/R\* = 0.0034 [0.0017]  
a/R\* = 1.19 [1.06]  
b = 0.75 [1.75]  
Seff = 2015.47 [742.87]  
Teq = 1709 [157] K  
Rp = 0.72 [0.41] Re  
a = 0.0740 [0.0169] AU  
Ag = 22.90 [60.58] [0.36 $\sigma$ ]  
Teffp = 5778 [3802] K [1.07 $\sigma$ ]

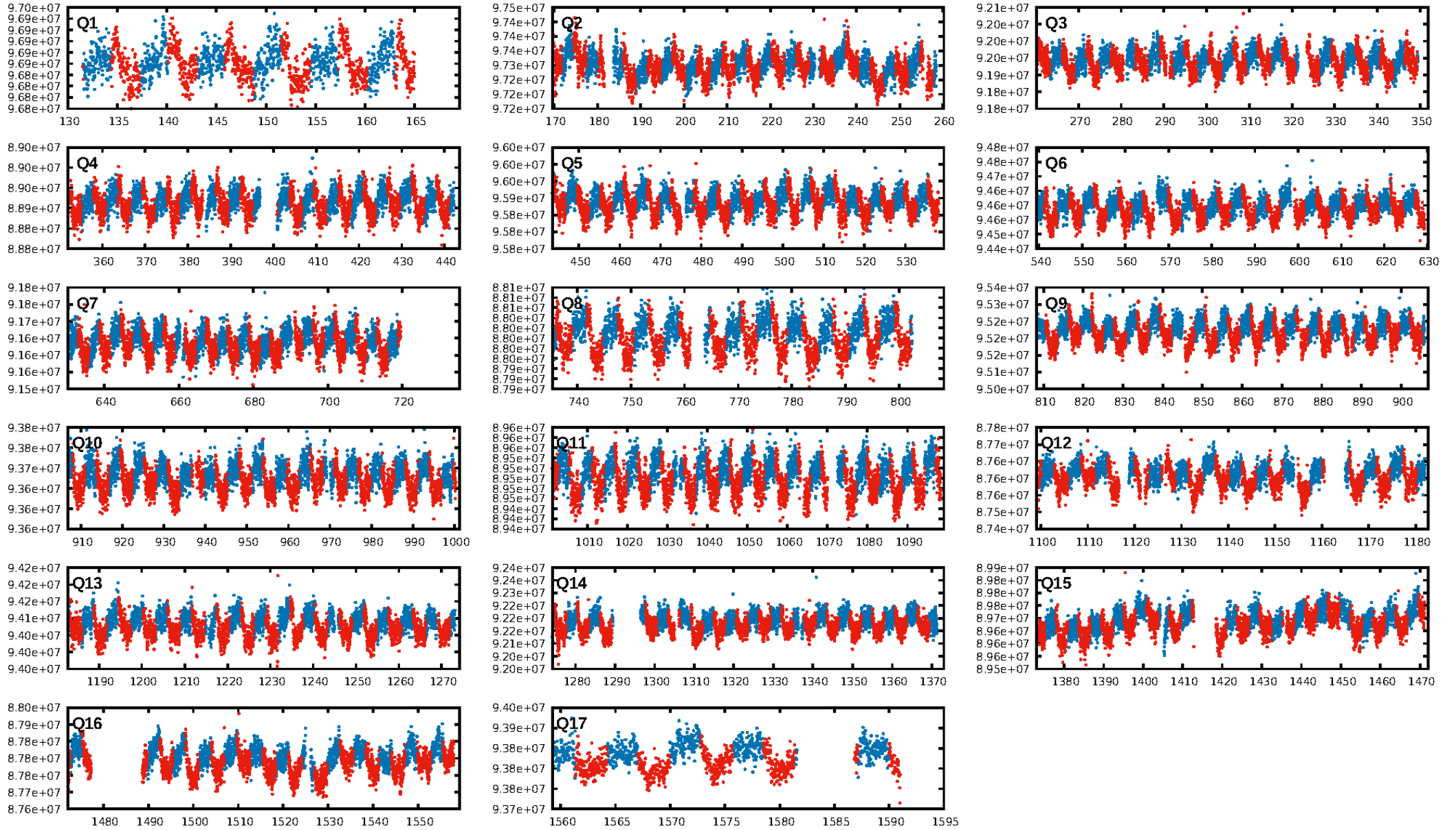
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 5.86e-23  
RollingBand-fgt: 0.99 [231/233]  
GhostDiagnostic-chr: 3.134  
Centroid-sig: 0.0%  
Centroid-so: 20.532 arcsec [9.83 $\sigma$ ]  
OotOffset-rm: 2.321 arcsec [3.44 $\sigma$ ]  
KicOffset-rm: 0.303 arcsec [0.42 $\sigma$ ]  
OotOffset-st: 4/3/4/5 [16]  
KicOffset-st: 4/3/4/5 [16]  
DiffImageQuality-fgm: 0.56 [9/16]  
DiffImageOverlap-fno: 1.00 [17/17]

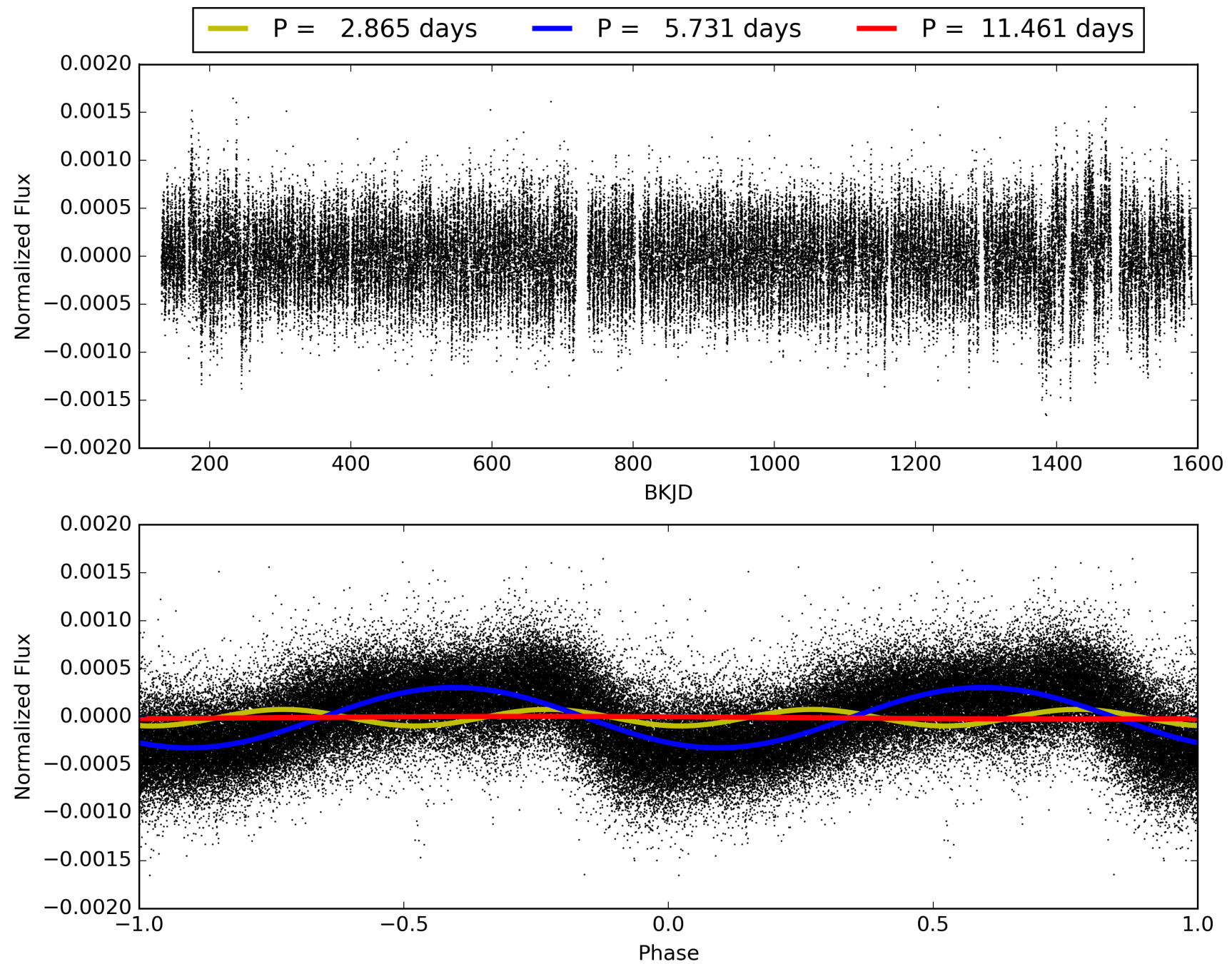
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 22:32:29 Z

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

# TCE 011971449-01, PDC Light Curves

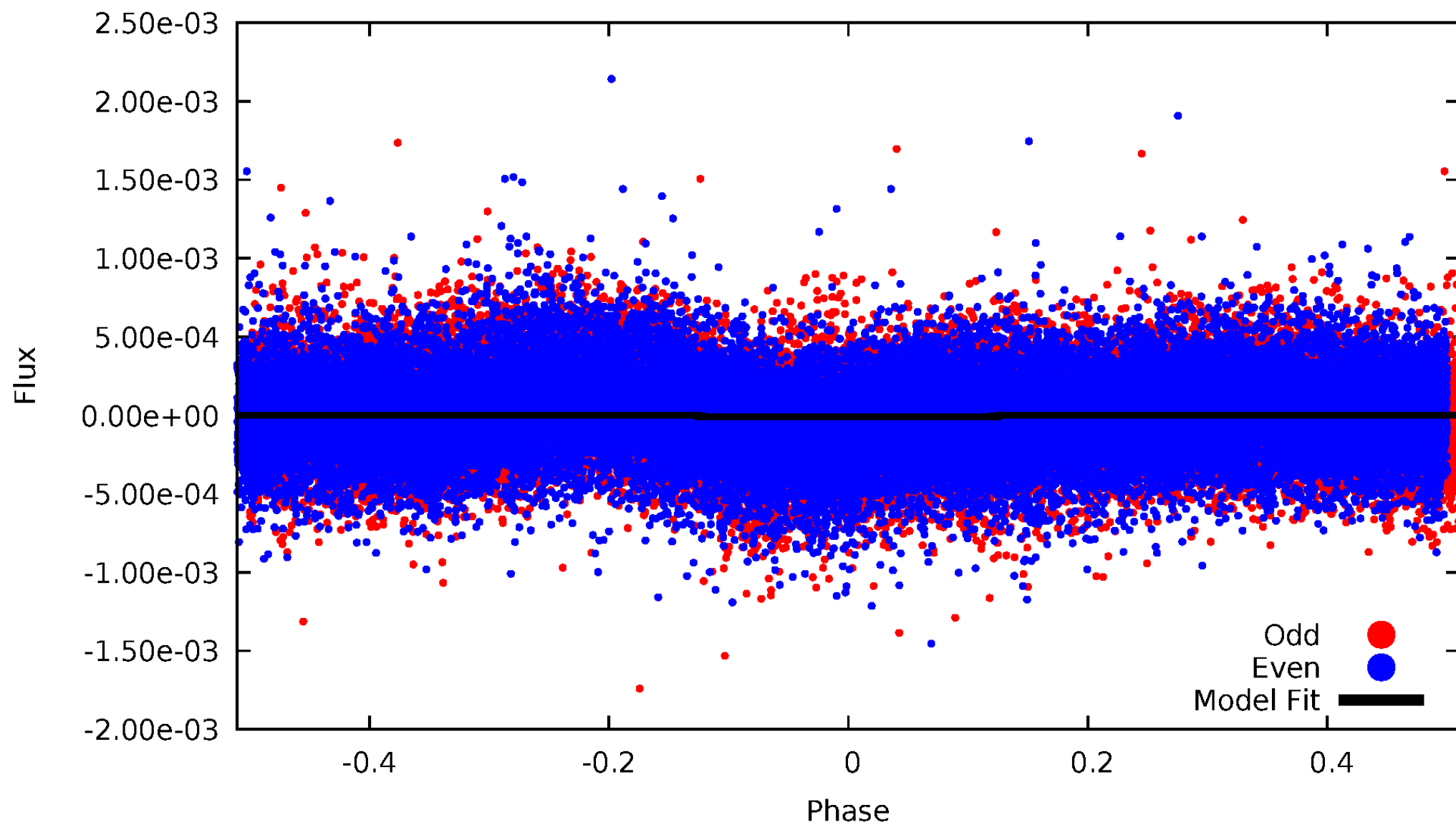


TCE 011971449-01



# DV Odd/Even

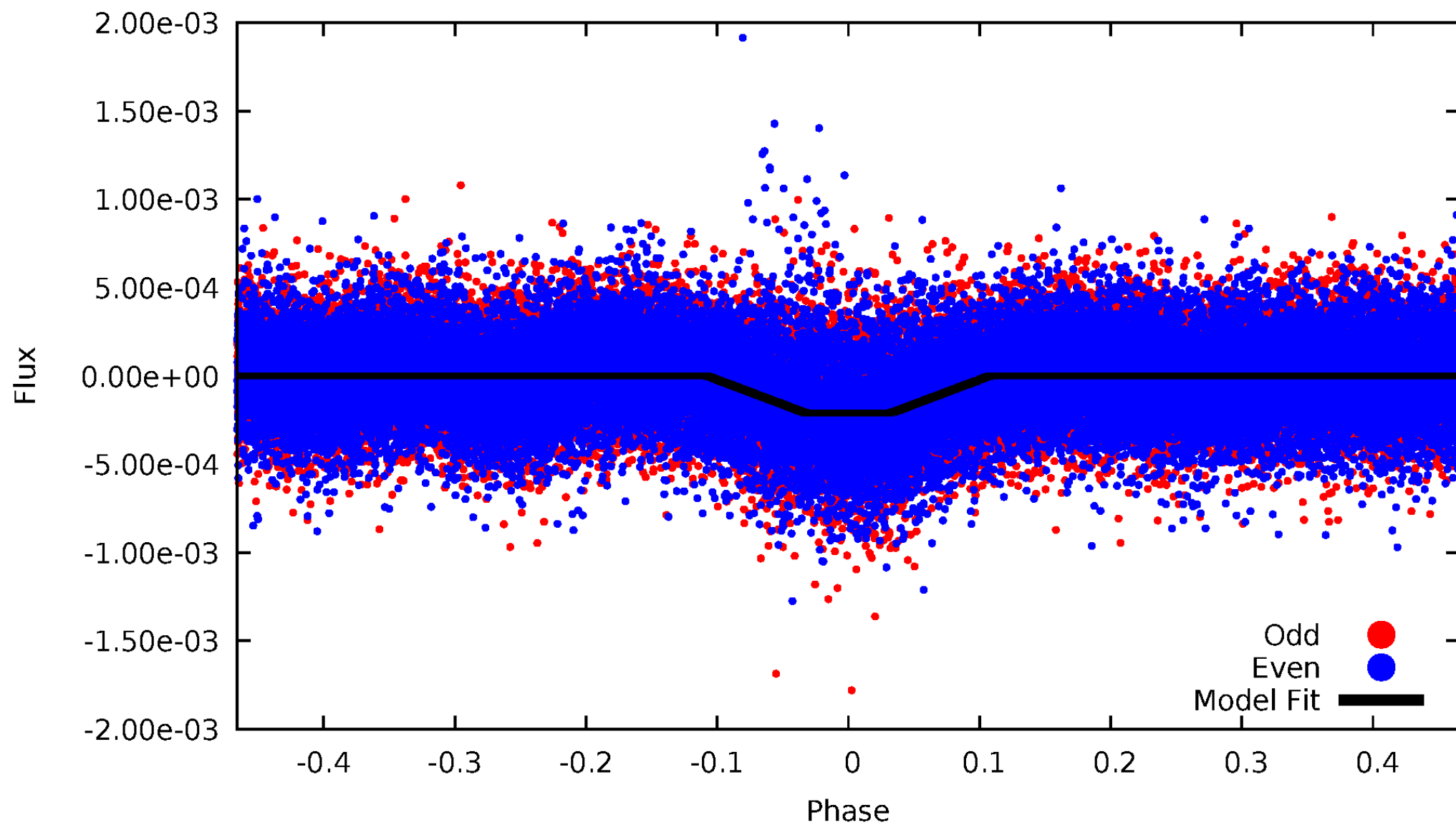
TCE 011971449-01



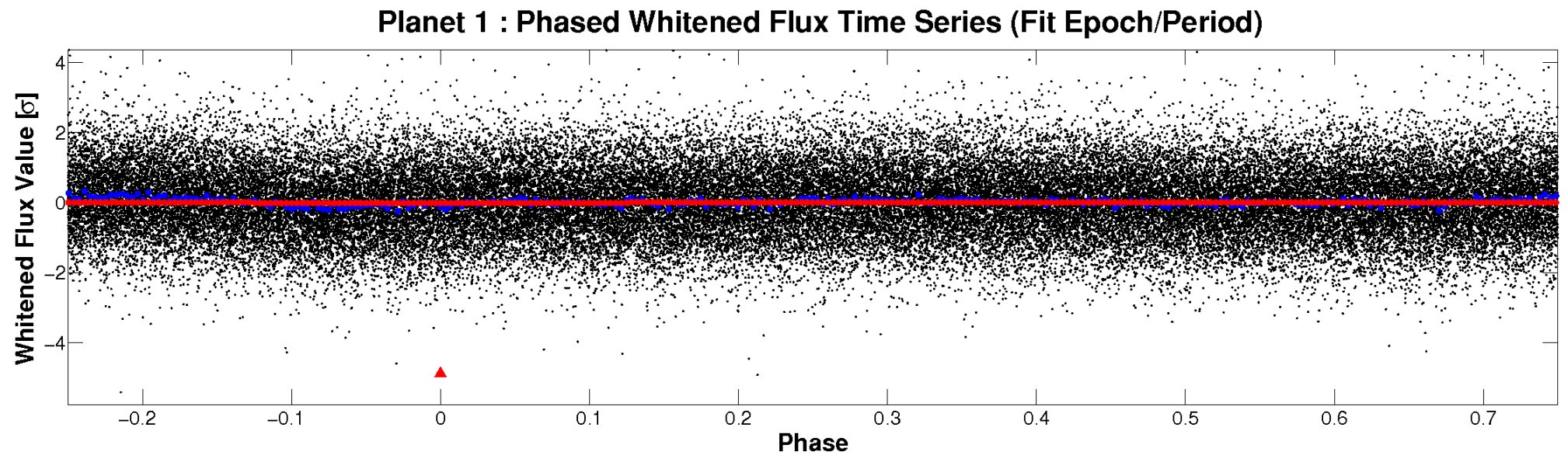
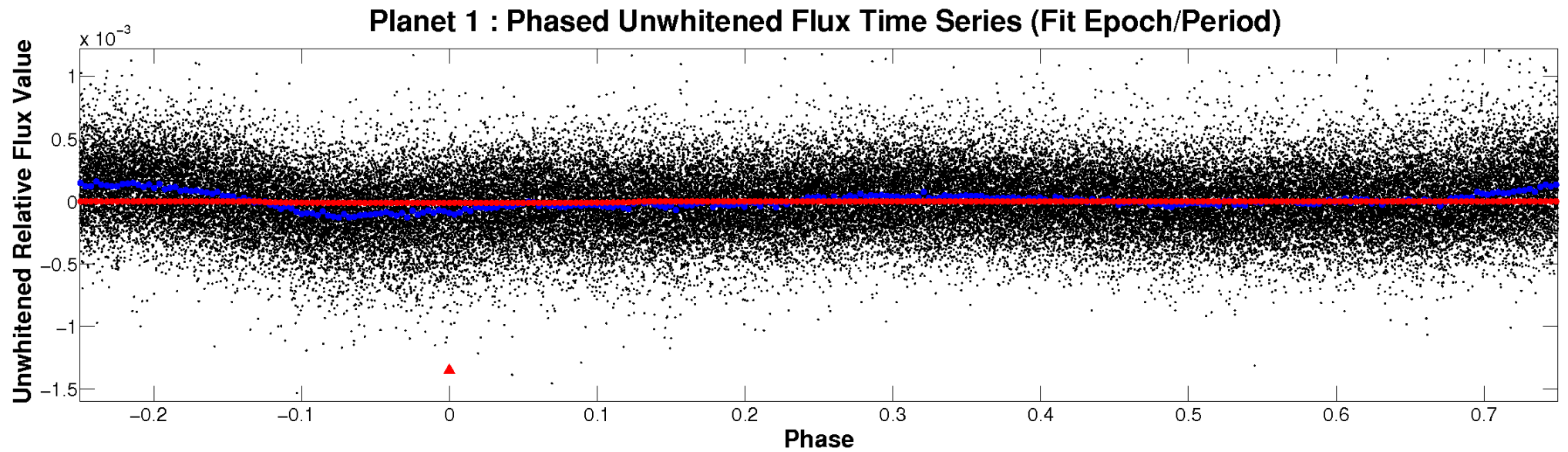


# ALT Odd/Even

TCE 011971449-01

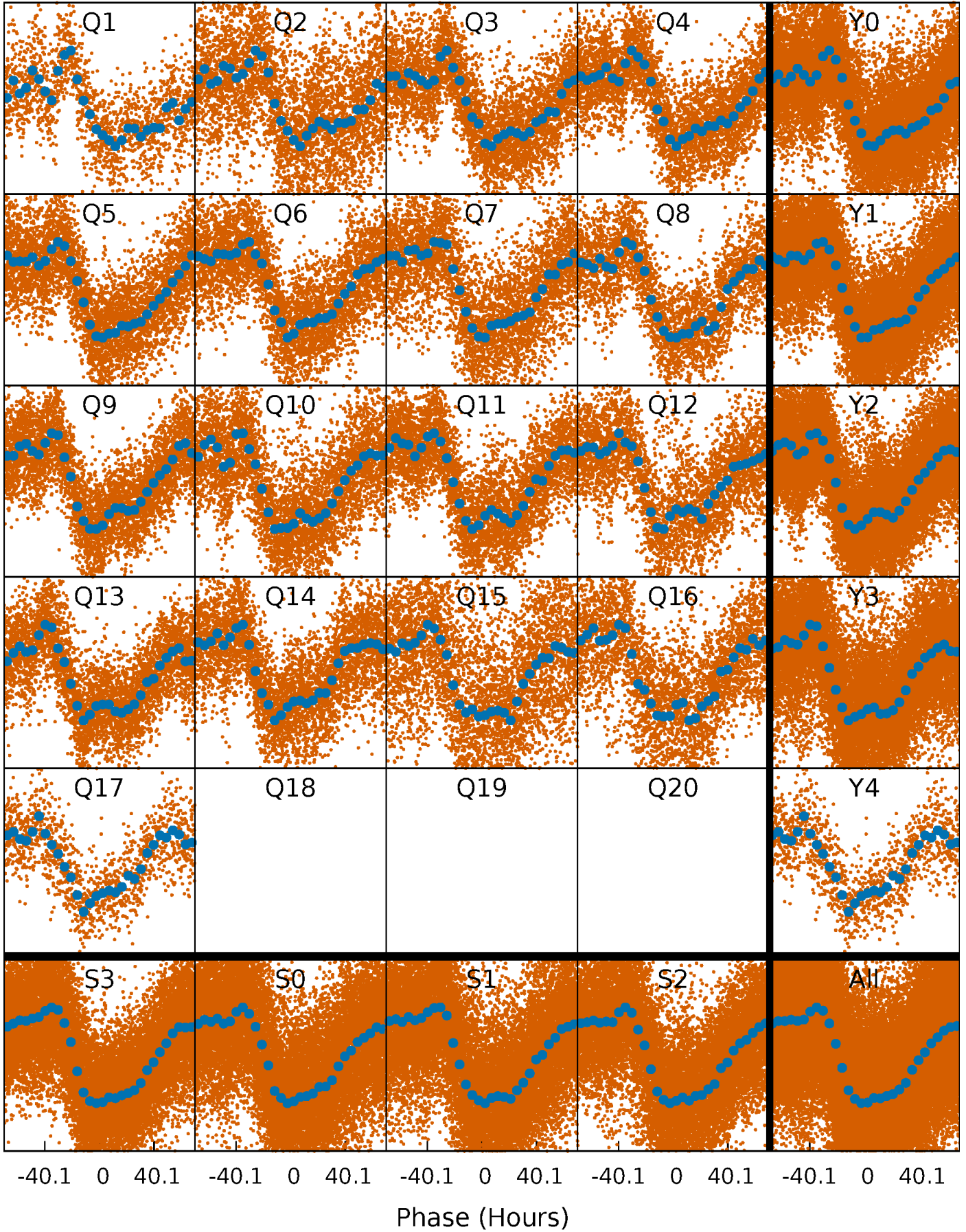


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

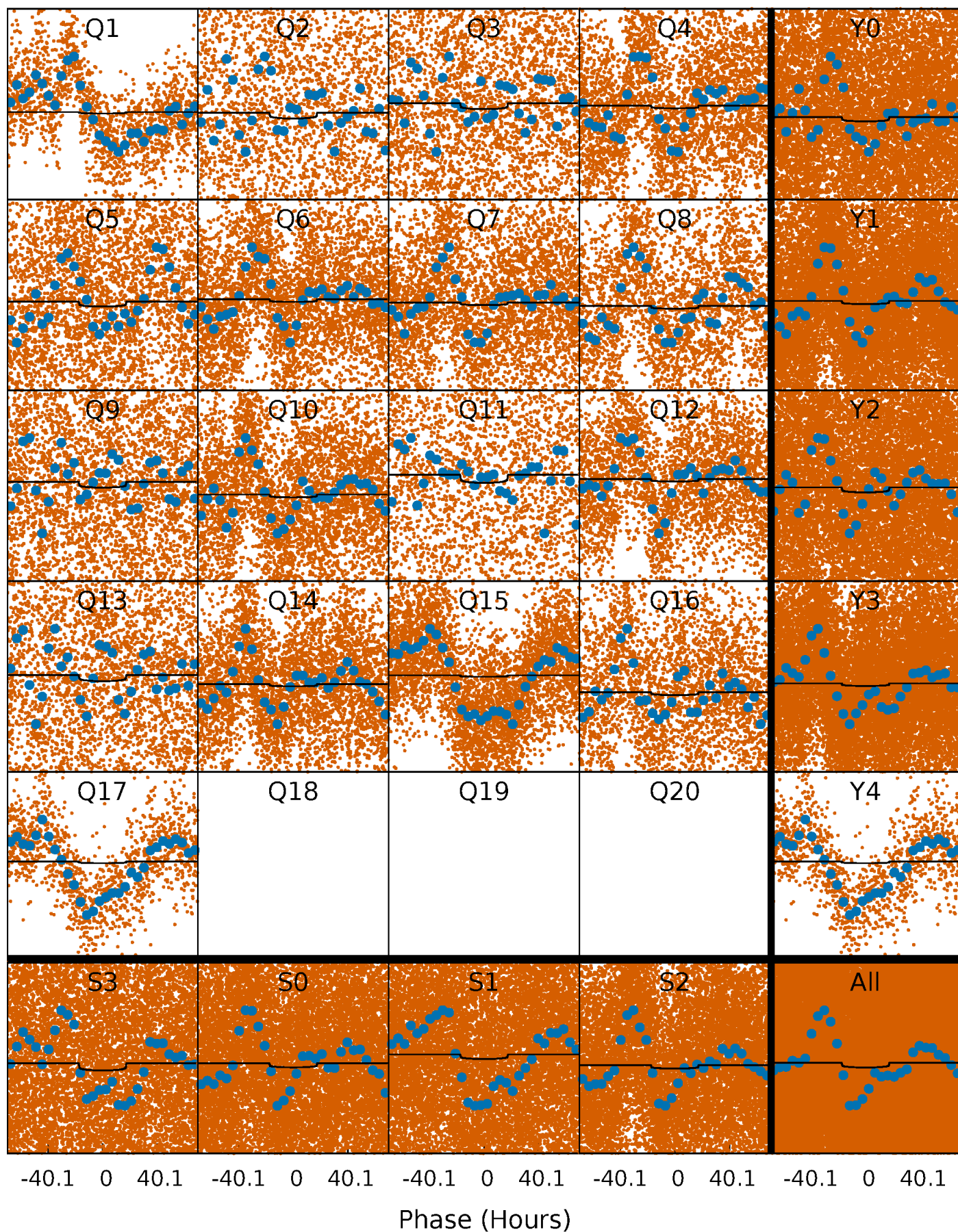
TCE 011971449-01 P= 5.730744 Days  $T_0=135.823508$  (BKJD)





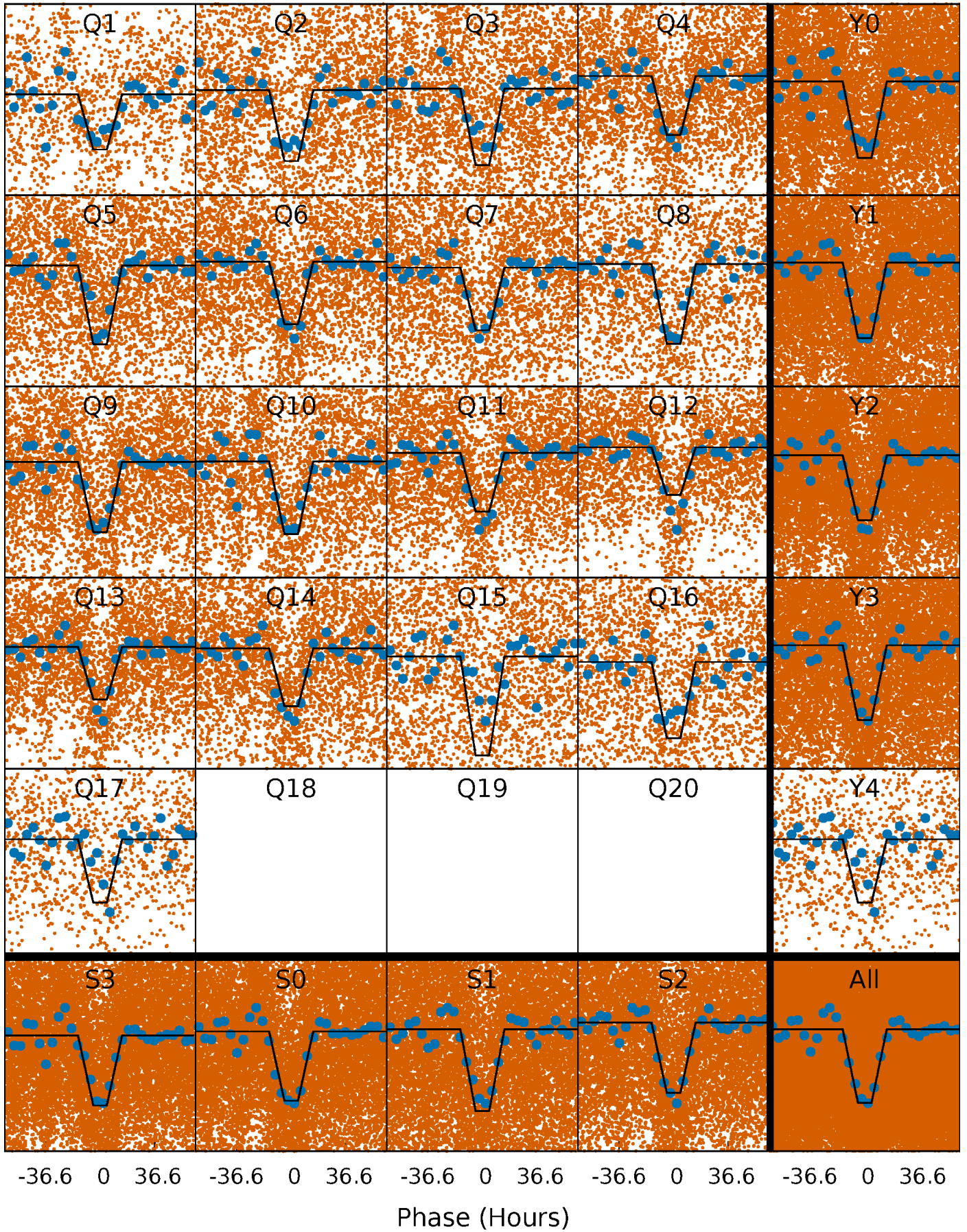
# DV Quarter-Phased Transit Curves

TCE 011971449-01 P= 5.730744 Days  $T_0=135.823508$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 011971449-01 P= 5.727535 Days  $T_0=135.856950$  (BKJD)

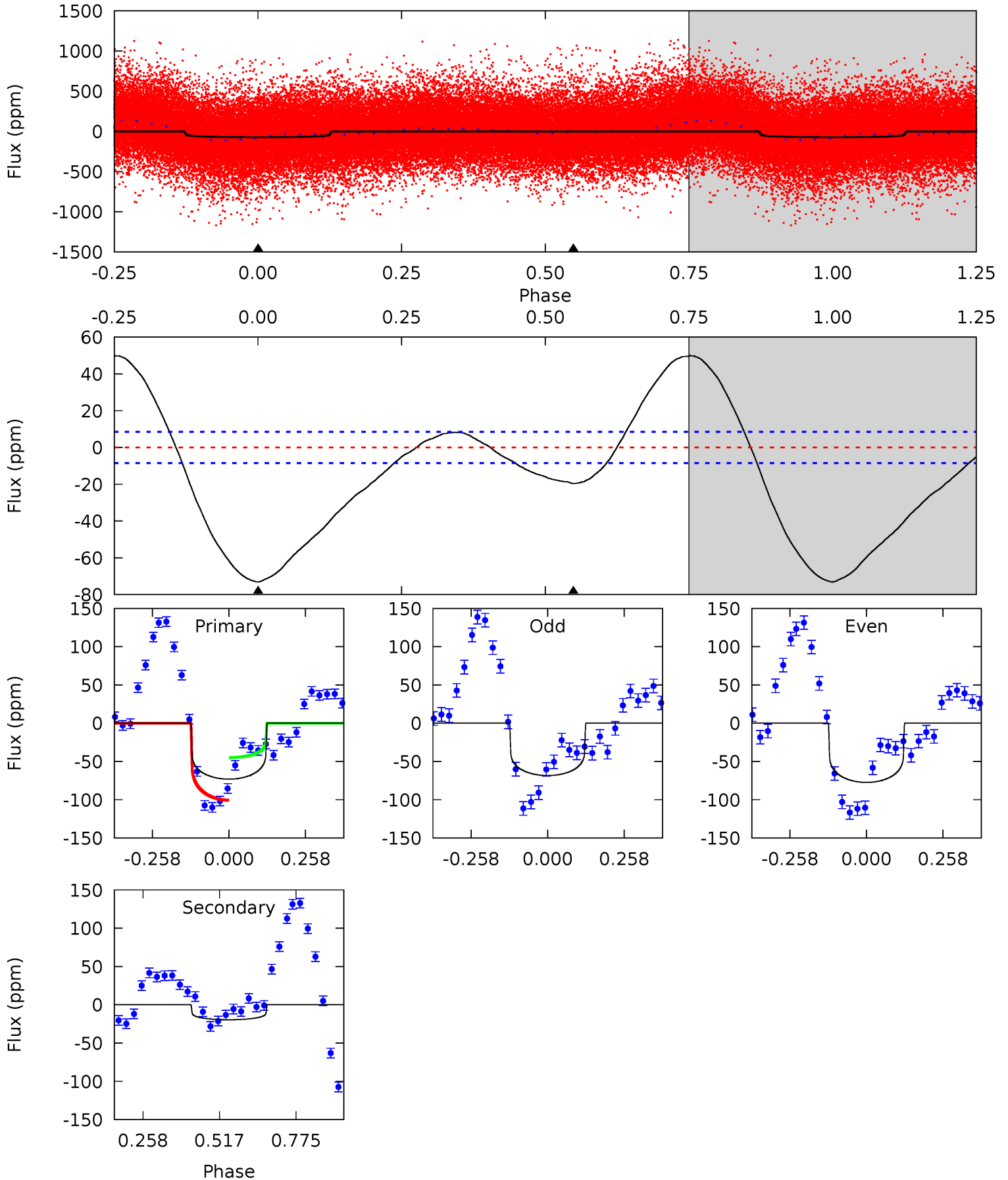




# DV Model-Shift Uniqueness Test

011971449-01, P = 5.730744 Days, E = 130.092764 Days

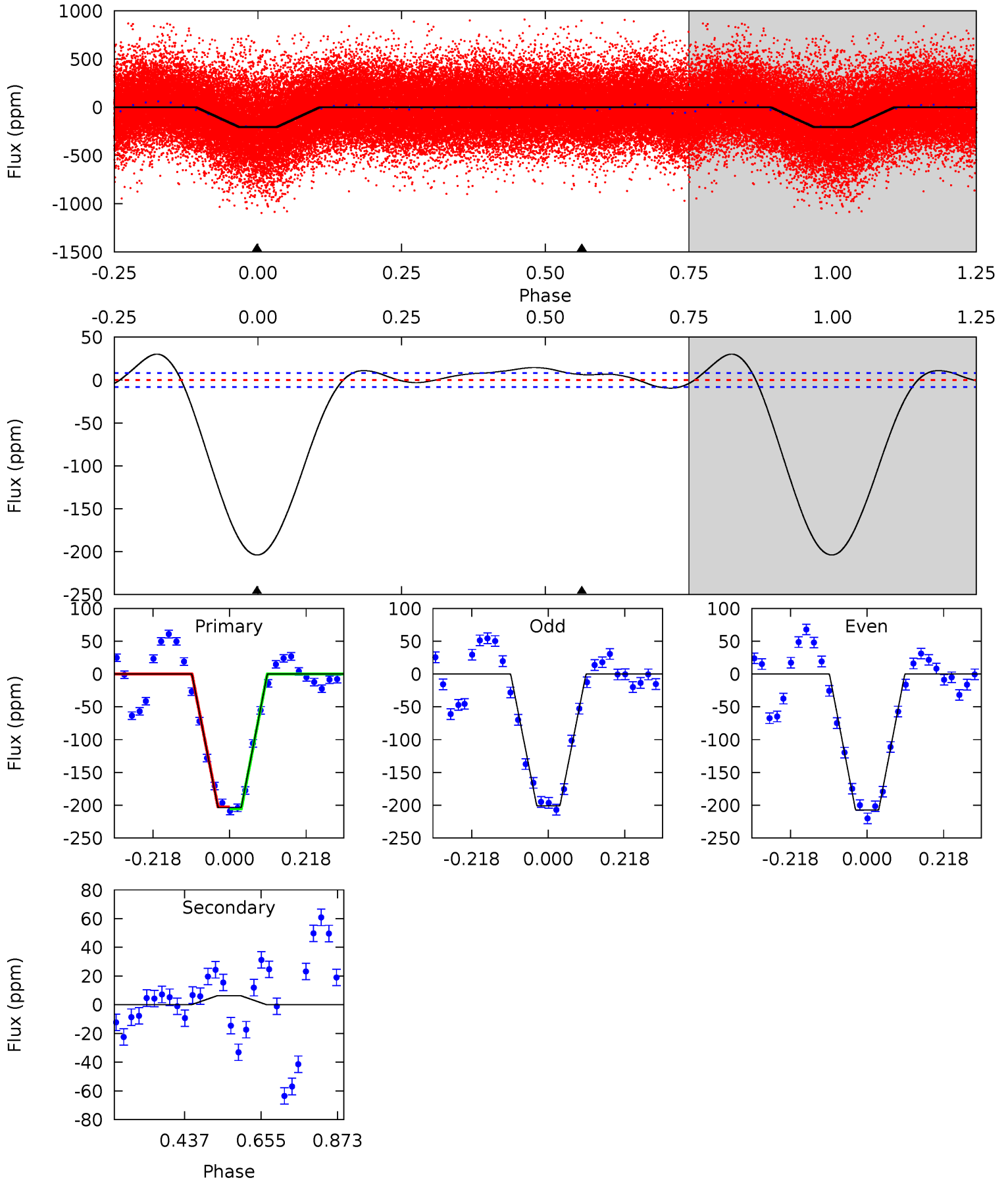
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
37.5	10.0	0	0	4.36	1.13	4.47	37.5	37.5	10.0	10.0	2.26	1.31	0.41	13.8



# Alt Model-Shift Uniqueness Test

011971449-01, P = 5.727535 Days, E = 130.129415 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
109.2	-3.40	0	0	4.40	1.23	1.46	109.2	109.2	-3.40	-3.40	1.73	0.99	0.13	0.86





### Stellar Parameters For KIC 011971449

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$7535^{+209}_{-340}$	$4.072^{+0.170}_{-0.170}$	$-0.060^{+0.200}_{-0.400}$	$1.955^{+0.550}_{-0.450}$	$1.642^{+0.188}_{-0.282}$	$0.310^{+0.282}_{-0.148}$
	+3%/-5%	+4%/-4%	+333%/-667%	+28%/-23%	+11%/-17%	+91%/-48%
Source	KIC0	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 011971449-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-20 \pm 2$	$0.71^{+0.38}_{-0.34}$	$2373^{+166}_{-171}$	$8938^{+5418}_{-1993}$	$116^{+312}_{-66}$
Alt.	$6 \pm 2$	$3.06^{+0.60}_{-0.49}$	$2377^{+185}_{-177}$	$-3632^{+229}_{-217}$	$-1.999^{+0.790}_{-1.045}$

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

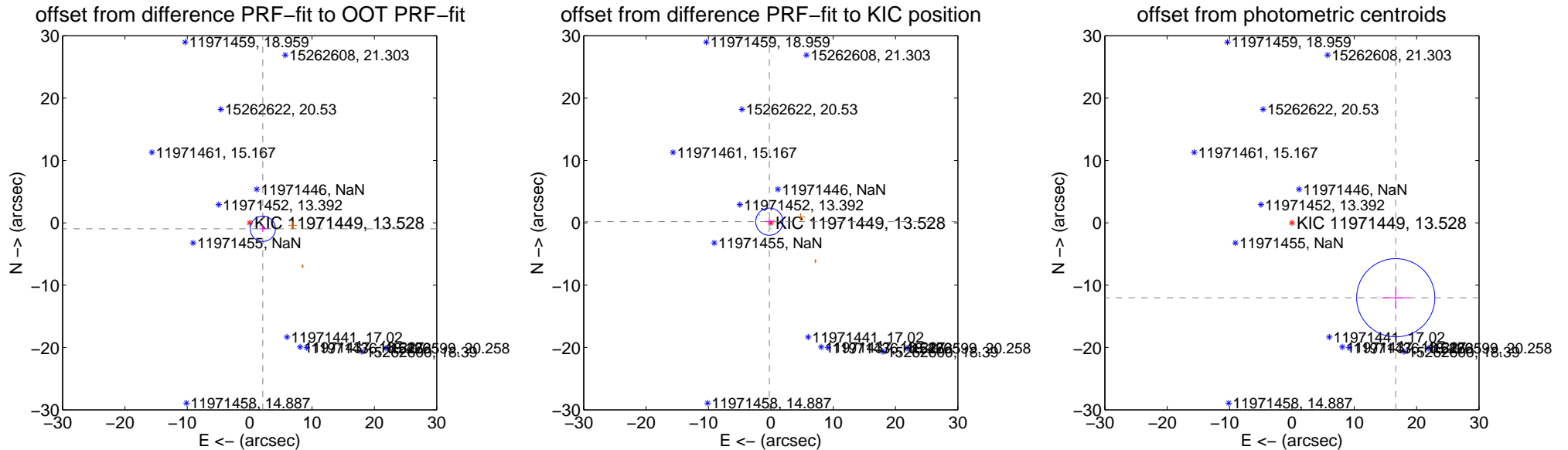
## DV Centroid Data

Supplemental centroid analysis for 011971449-01. Kepler magnitude: 13.53. Transit SNR 2.58

There are 9 quarters with good PRF difference image offsets

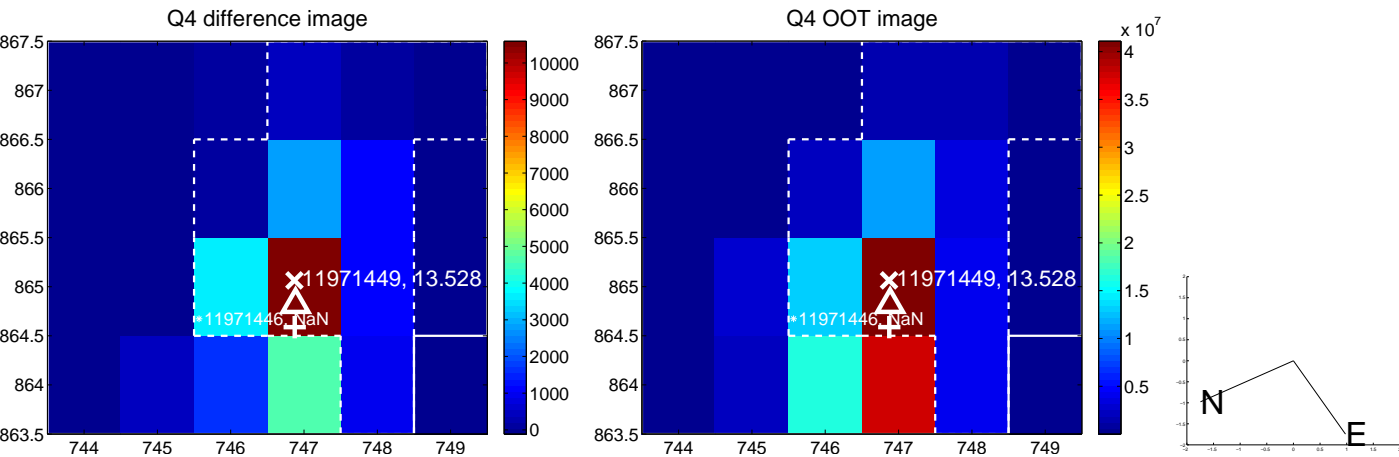
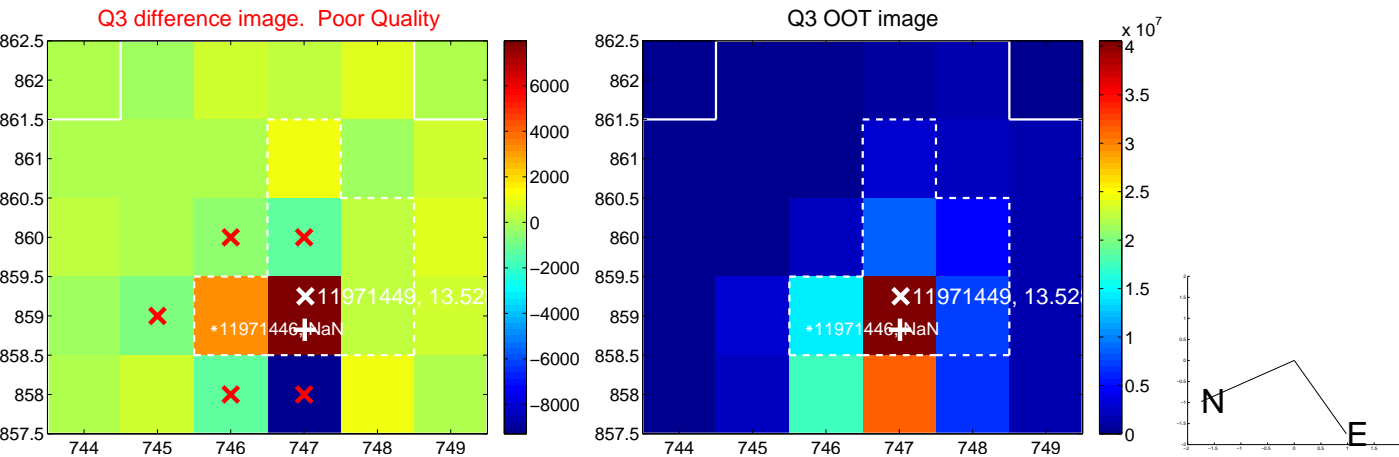
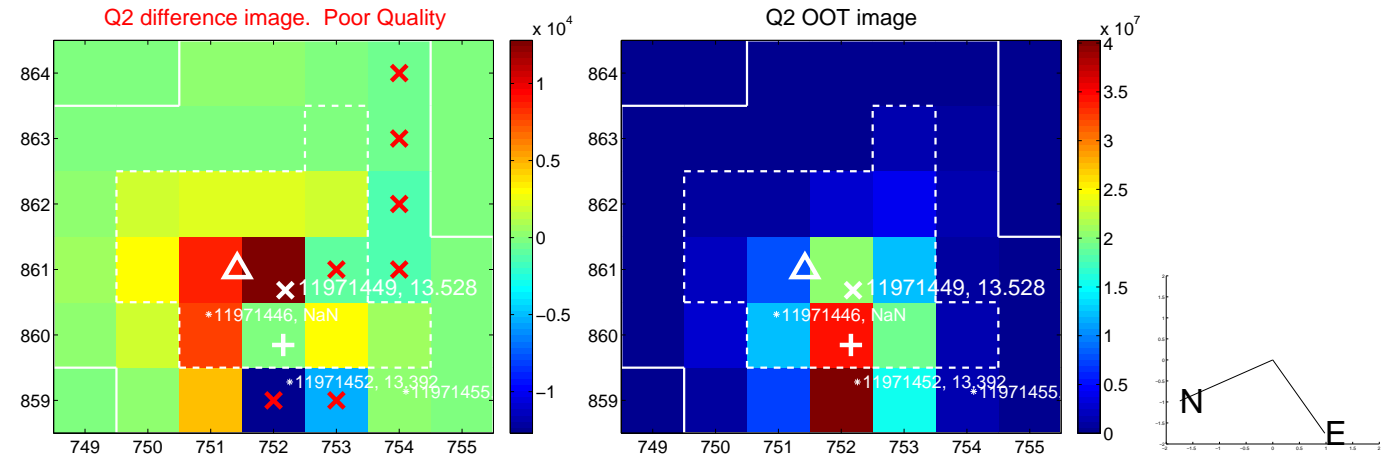
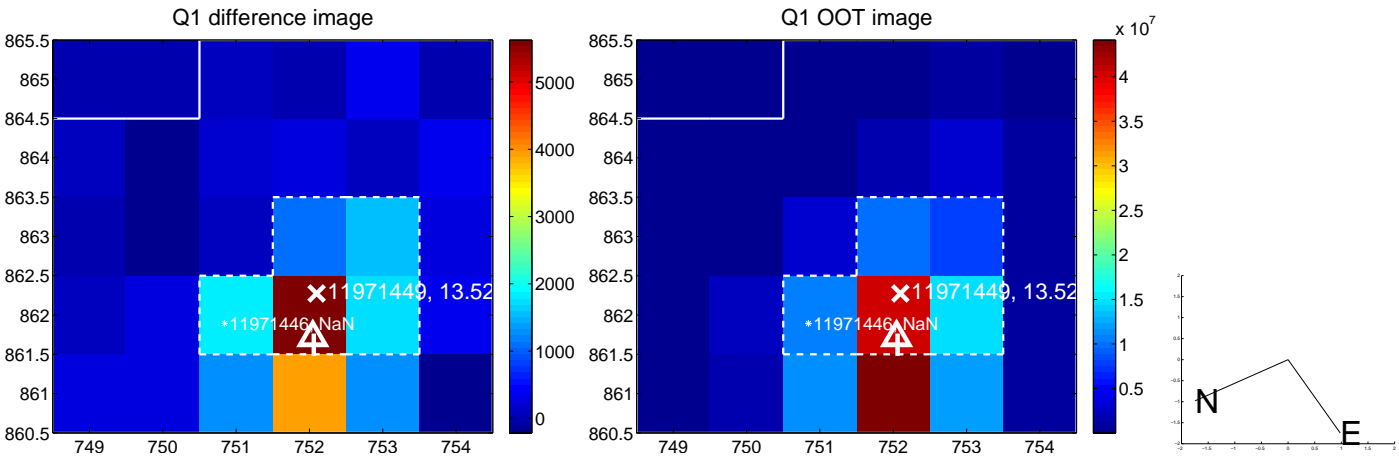
The OOT PRF centroid is offset from the target star catalog position by about 2.50 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$2.321 \pm 0.675$	3.44	$-2.112 \pm 0.597$	$-0.963 \pm 0.495$
PRF-fit source offset from KIC position	$0.303 \pm 0.726$	0.42	$0.238 \pm 0.598$	$0.187 \pm 0.532$
photometric centroid source offset	$20.53 \pm 2.09$	9.83	$-16.65 \pm 2.21$	$-12.02 \pm 1.85$

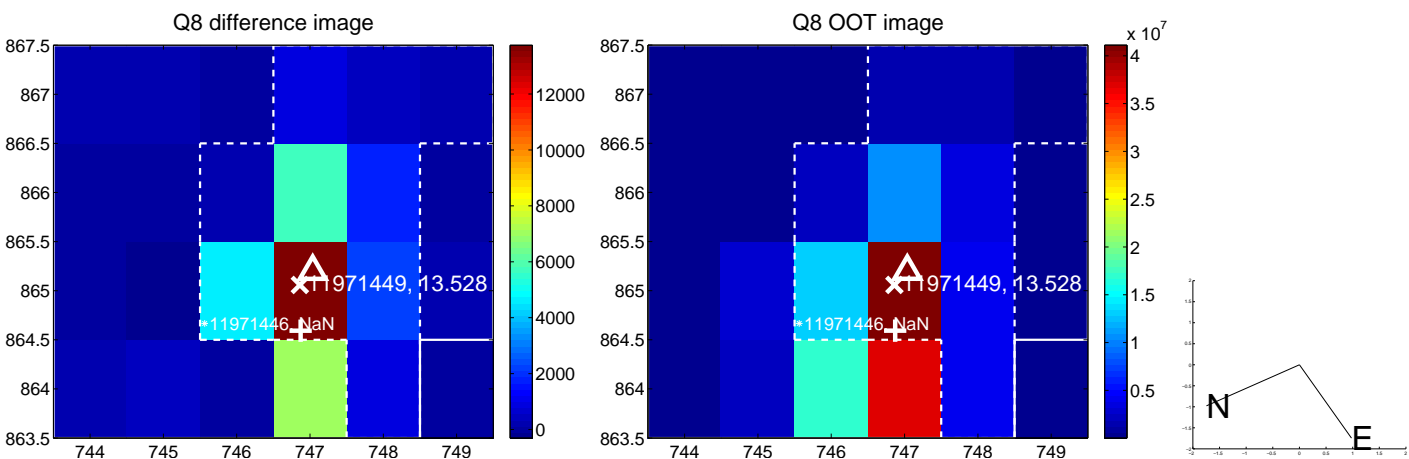
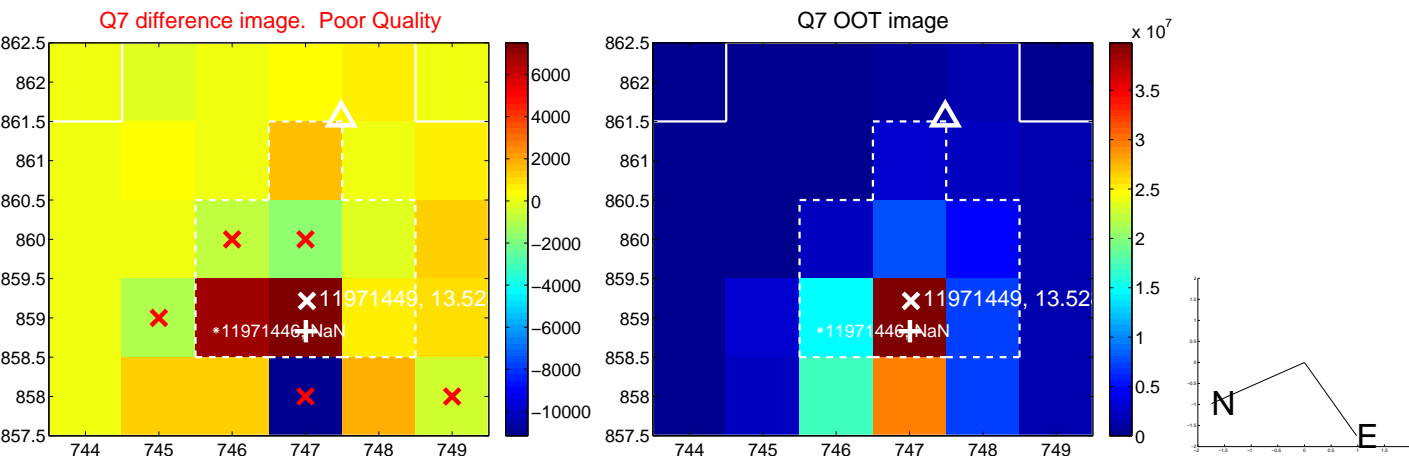
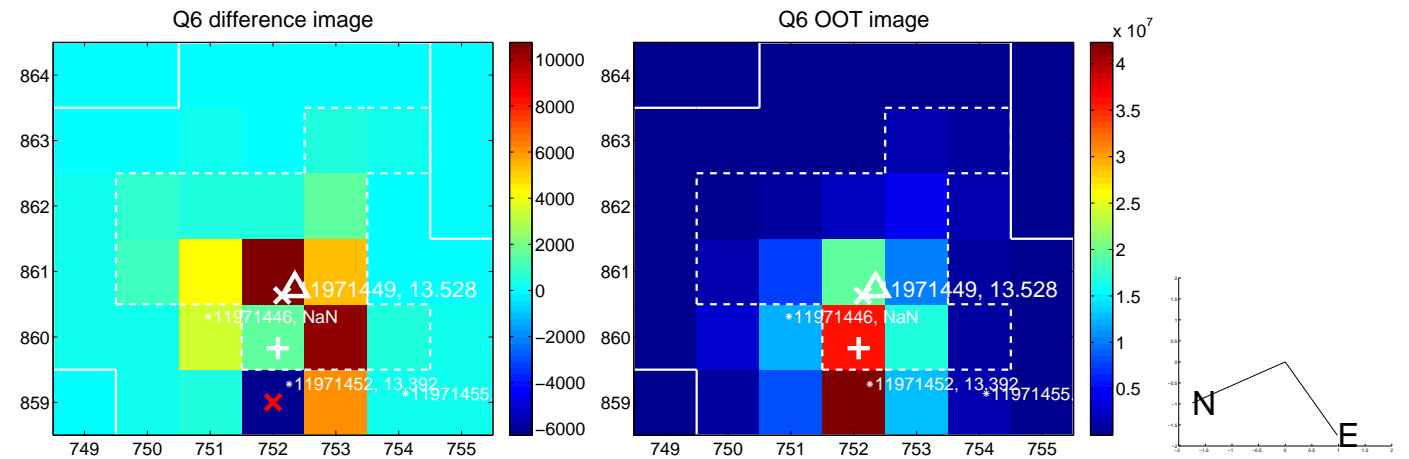
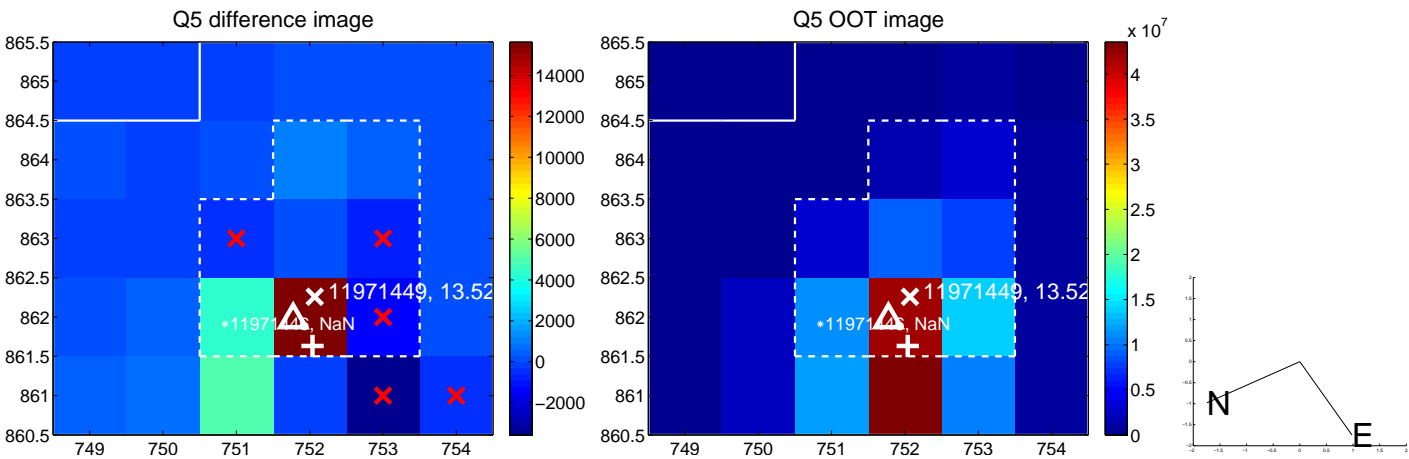


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

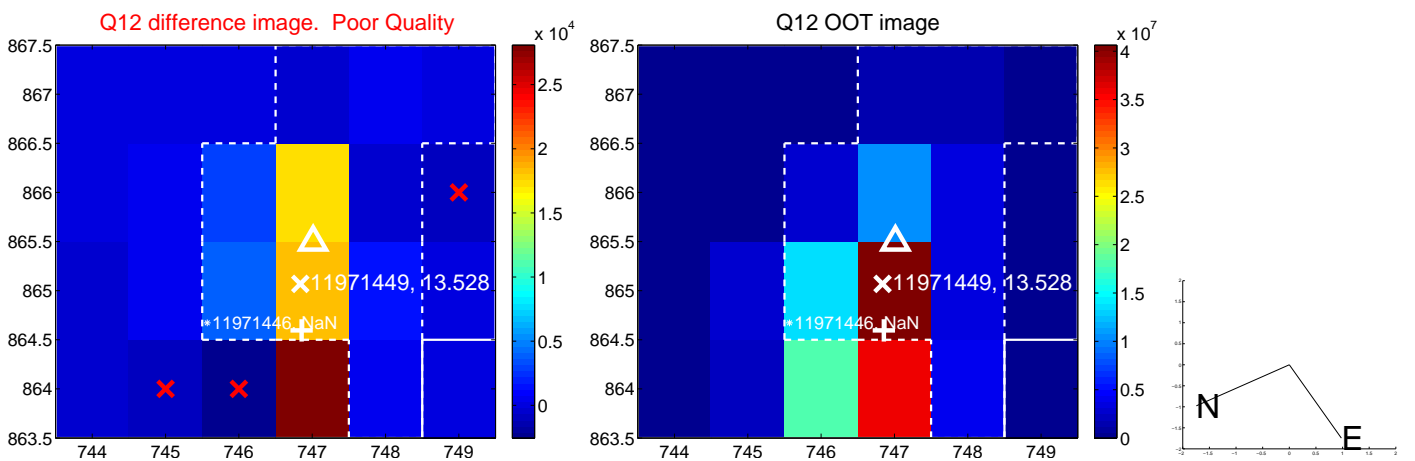
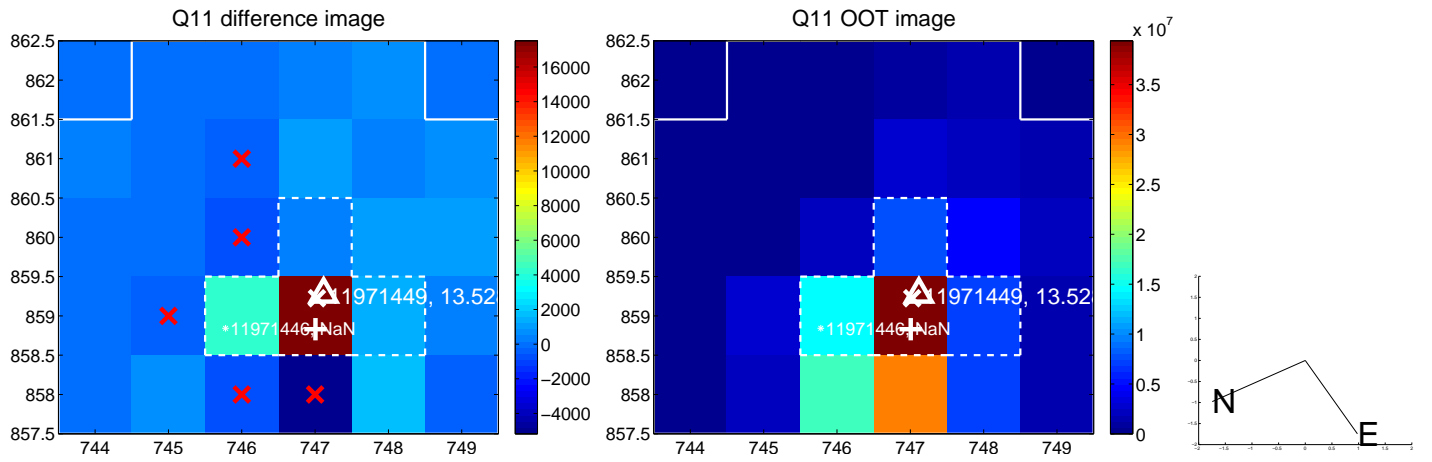
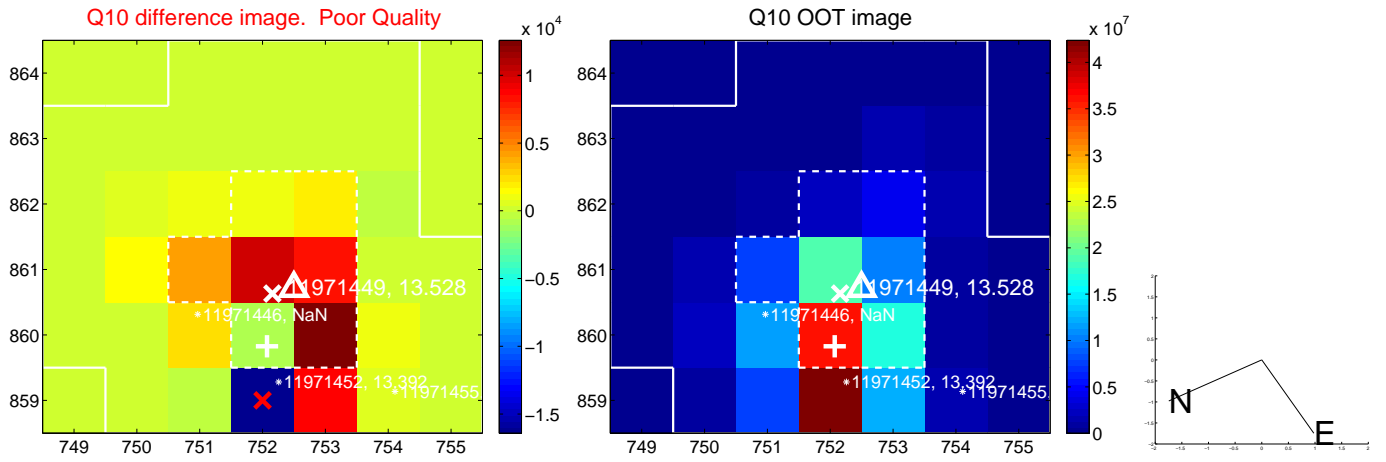
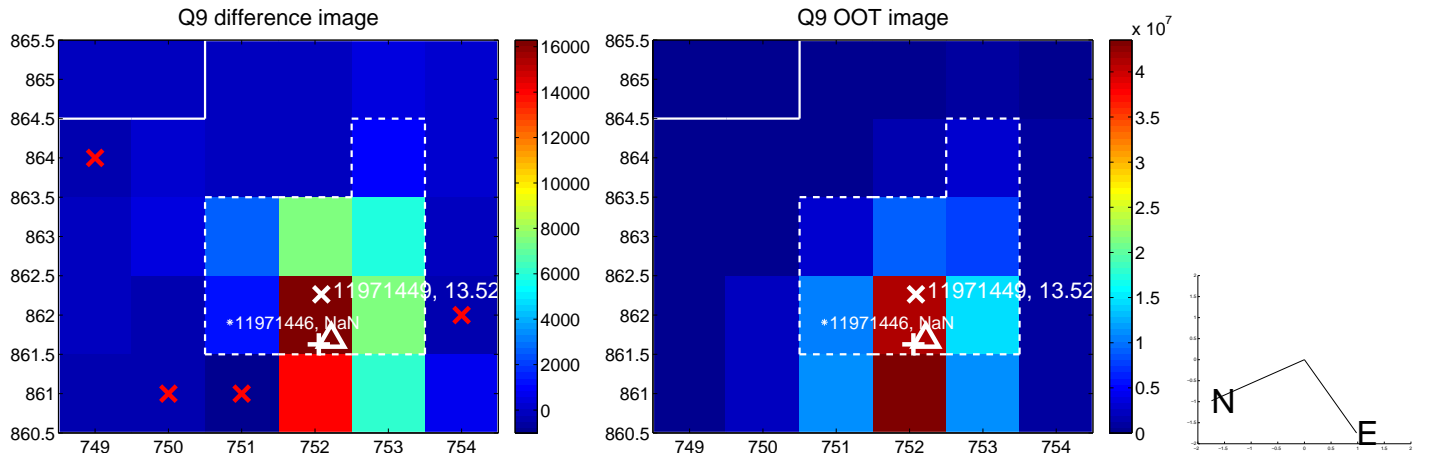


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

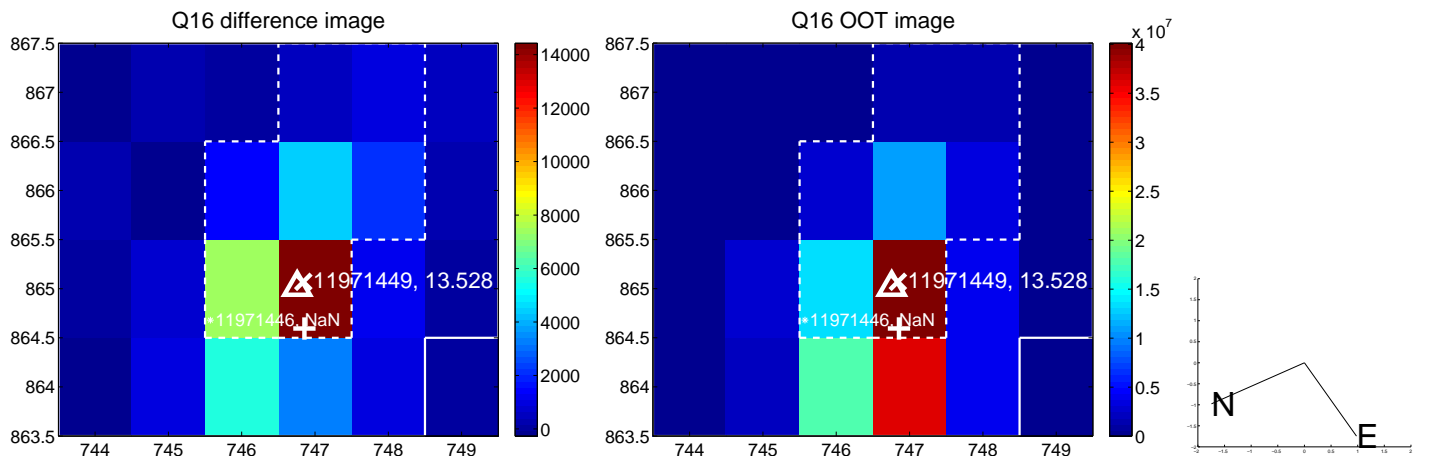
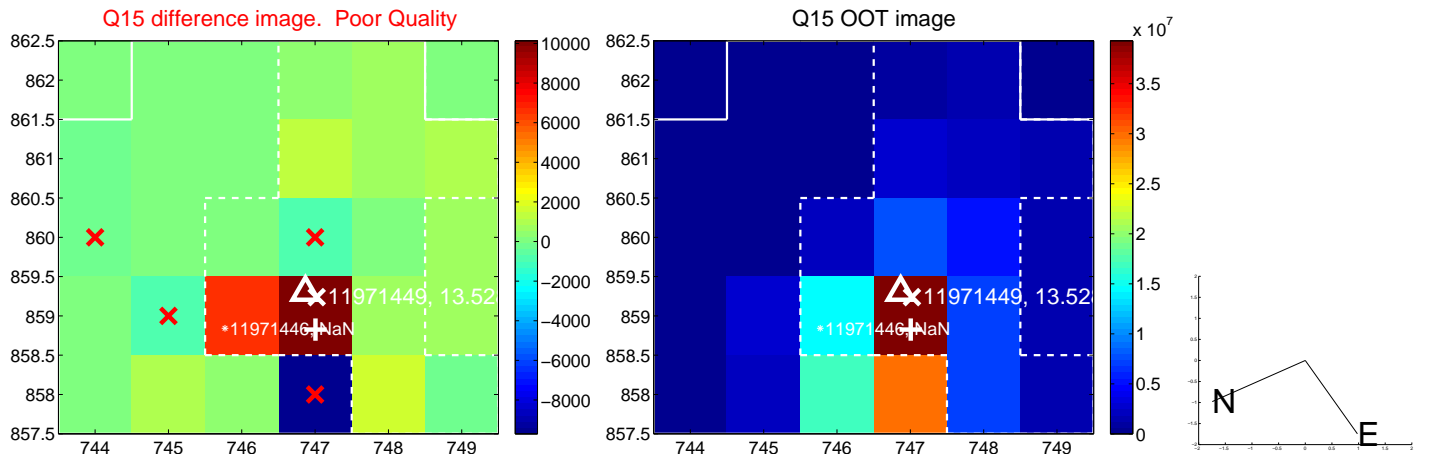
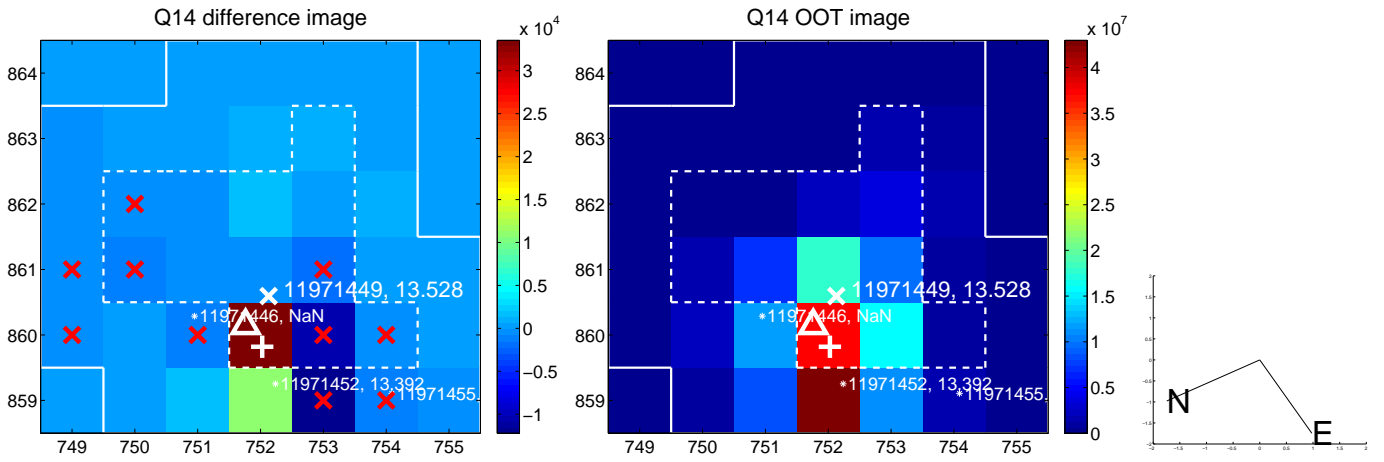
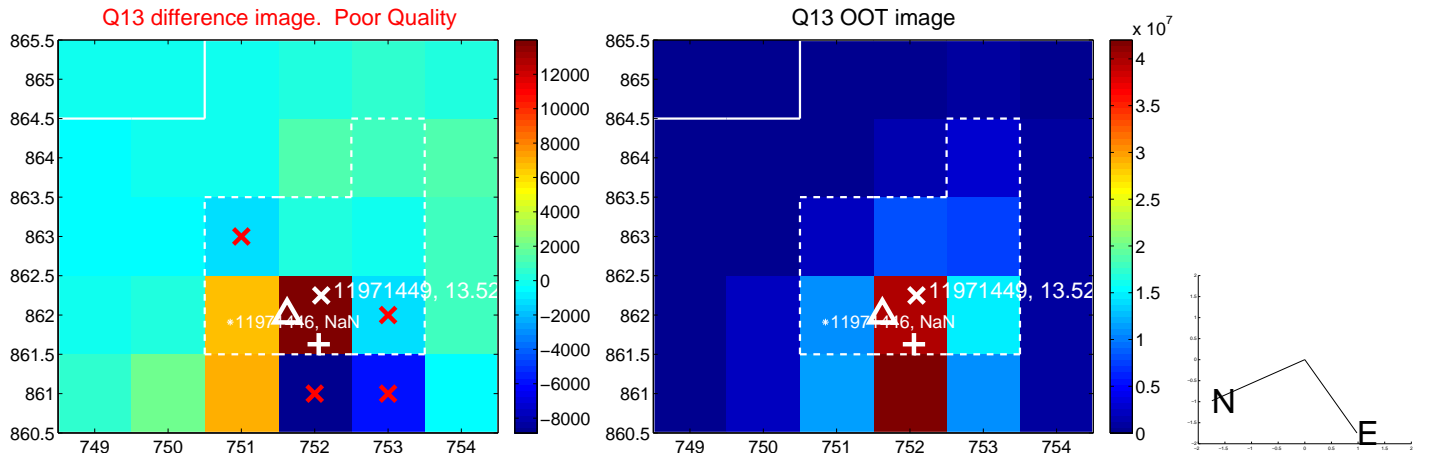




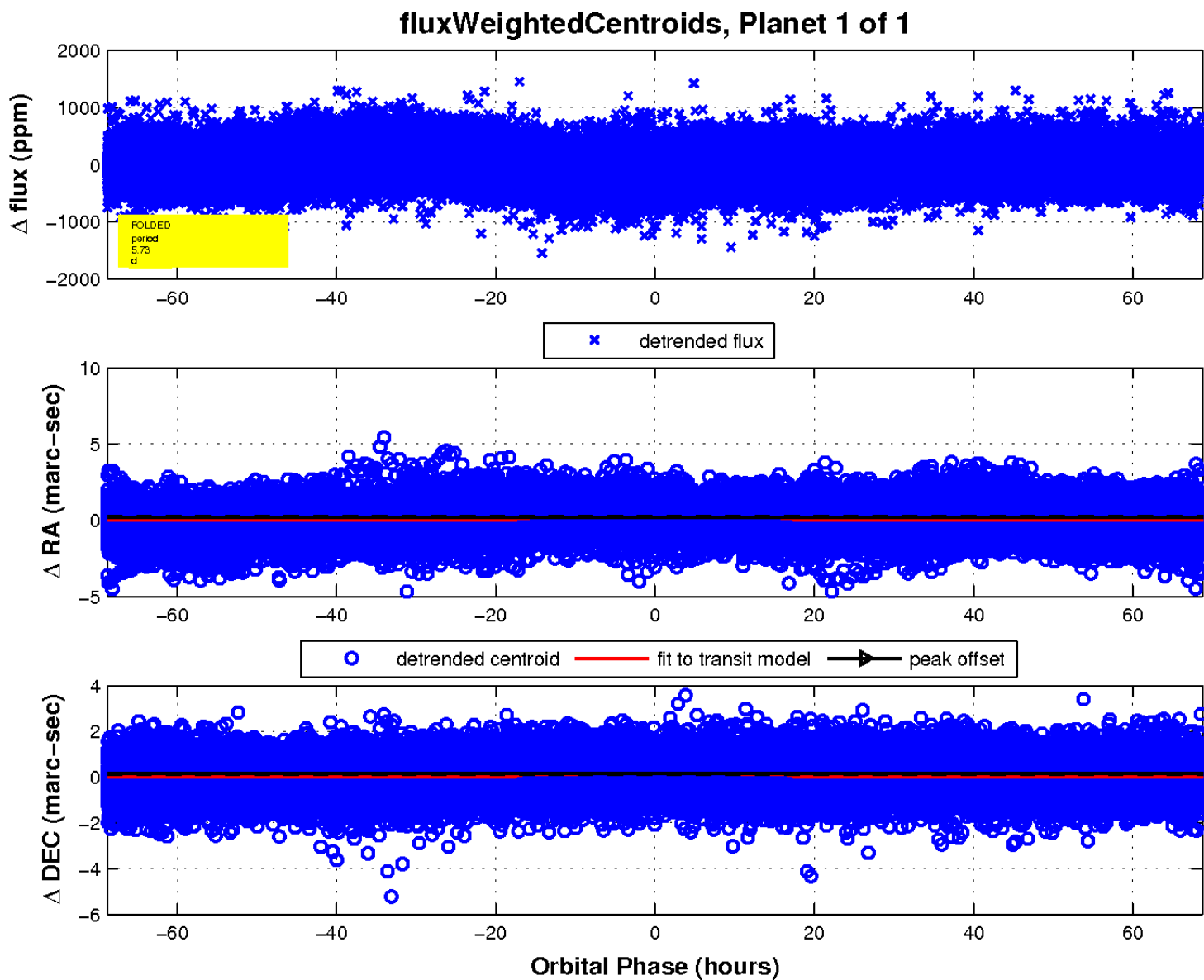
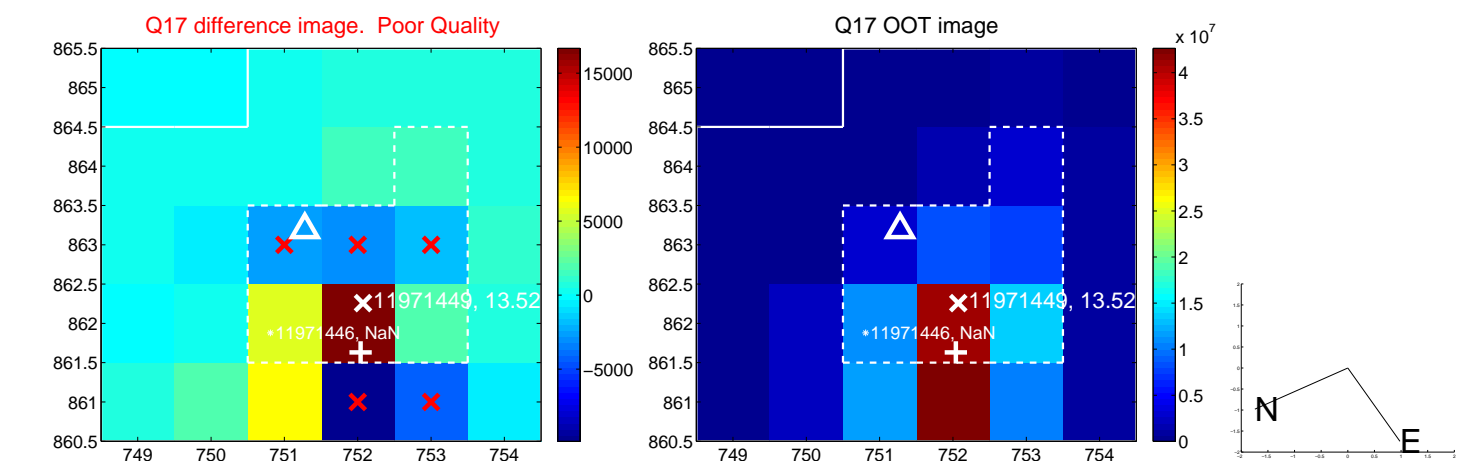
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



UKIRT Image

Declination

