

# KIC 011127190

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011127190-01	OBS	No	0.638923	131.694231	12.8	0.832	10.1	3.0	3.42	7841	1.25	109912.78

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011127190-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— CENT_SATURATED—HALO_GHOST

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

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

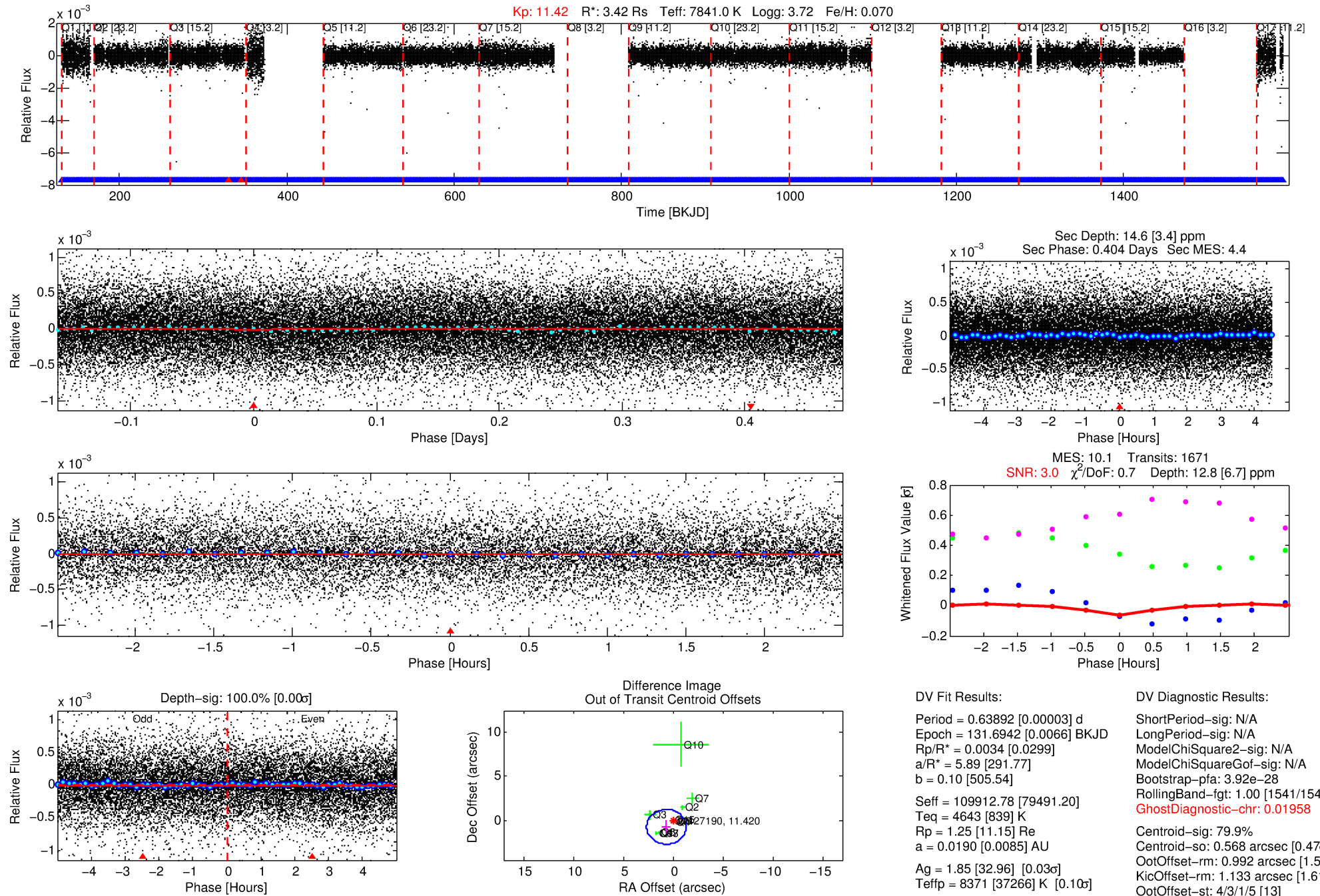
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 011127190-01

No Significant Match Found

# DV One-Page Summary

KIC: 11127190 Candidate: 1 of 1 Period: 0.639 d



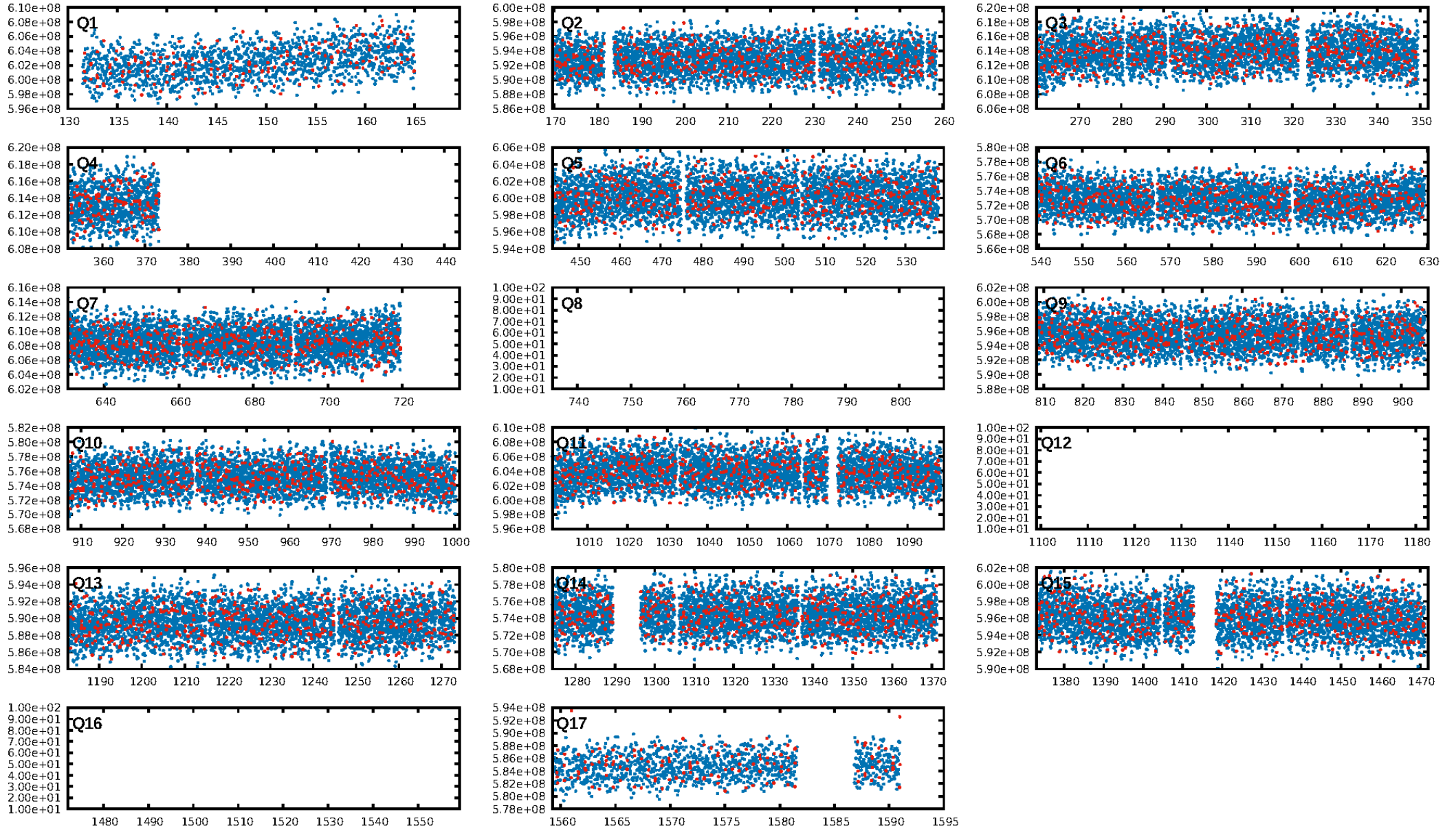
## DV Fit Results:

Period = 0.63892 [0.00003] d  
Epoch = 131.6942 [0.0066] BKJD  
Rp/R\* = 0.0034 [0.0299]  
a/R\* = 5.89 [291.77]  
b = 0.10 [505.54]  
Seff = 109912.78 [79491.20]  
Teq = 4643 [839] K  
Rp = 1.25 [11.15] Re  
a = 0.0190 [0.0085] AU  
Ag = 1.85 [32.96] [0.03σ]  
Teffp = 8371 [37266] K [0.10σ]

## DV Diagnostic Results:

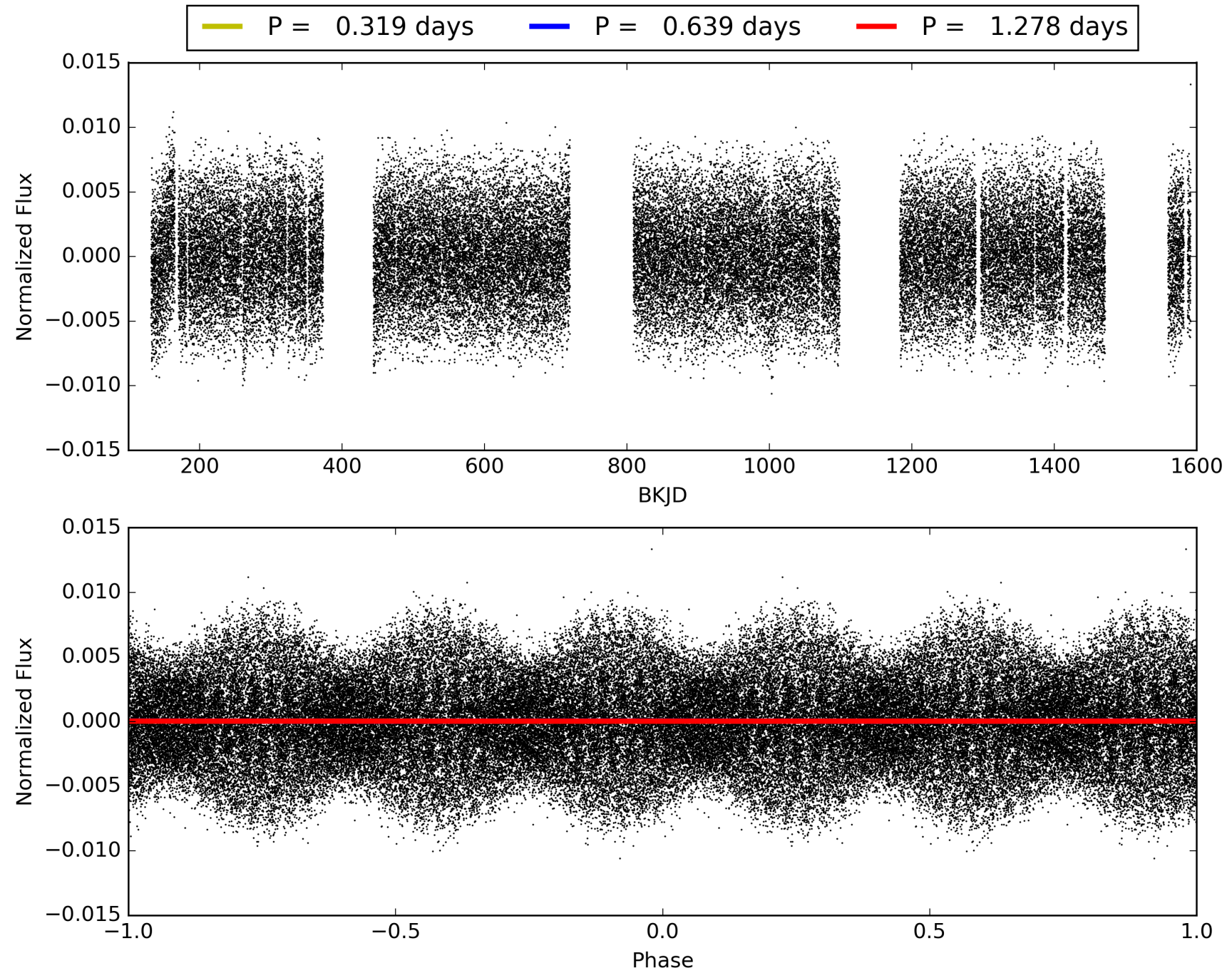
ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 3.92e-28  
RollingBand-fgt: 1.00 [1541/1543]  
GhostDiagnostic-chr: 0.01958  
Centroid-sig: 79.9%  
Centroid-so: 0.568 arcsec [0.47σ]  
OotOffset-rm: 0.992 arcsec [1.51σ]  
KicOffset-rm: 1.133 arcsec [1.61σ]  
OotOffset-st: 4/3/1/5 [13]  
KicOffset-st: 4/3/1/5 [13]  
DiffImageQuality-fgm: 0.38 [5/13]  
DiffImageOverlap-fno: 1.00 [14/14]

# TCE 011127190-01, PDC Light Curves



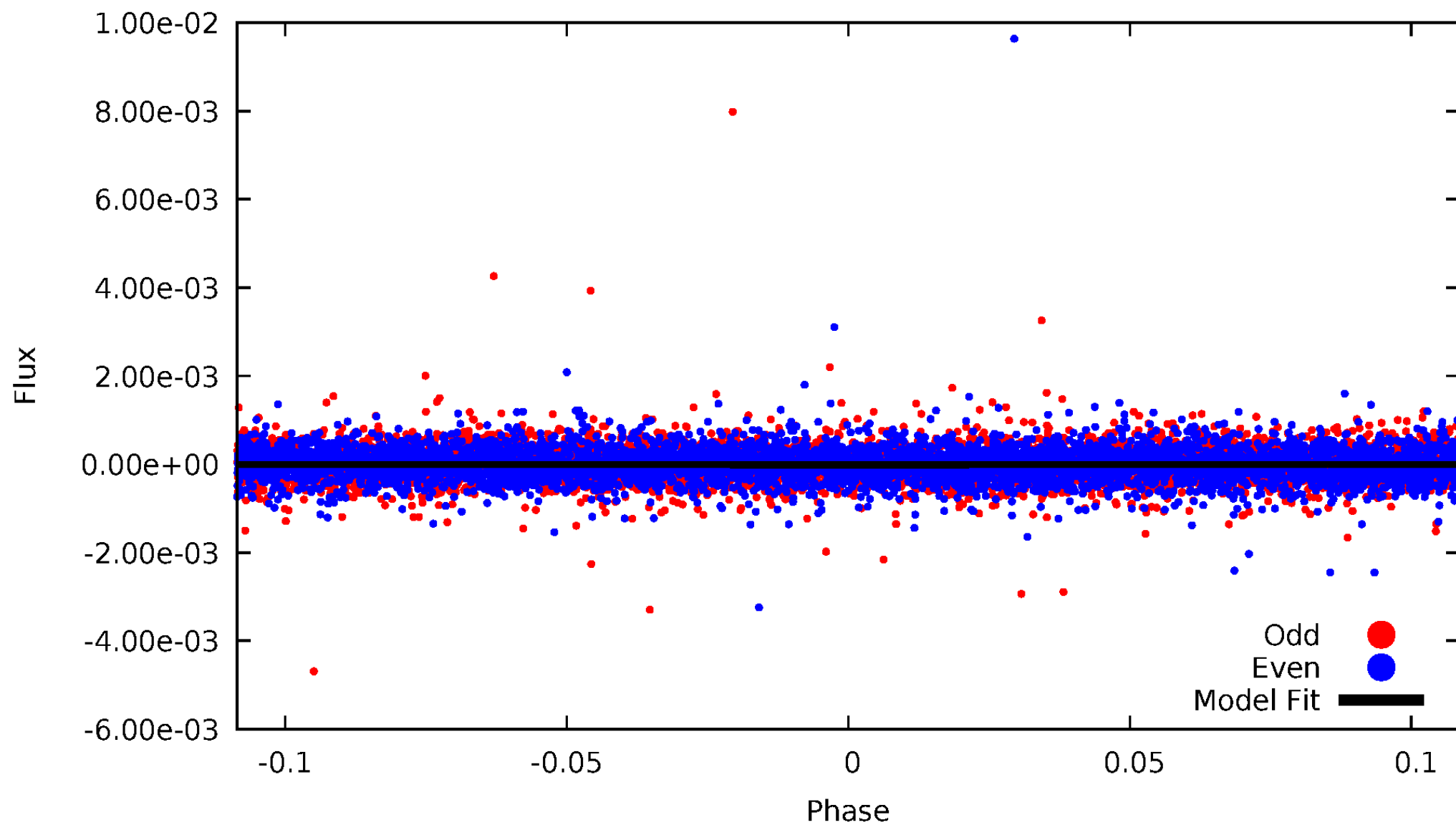


# TCE 011127190-01



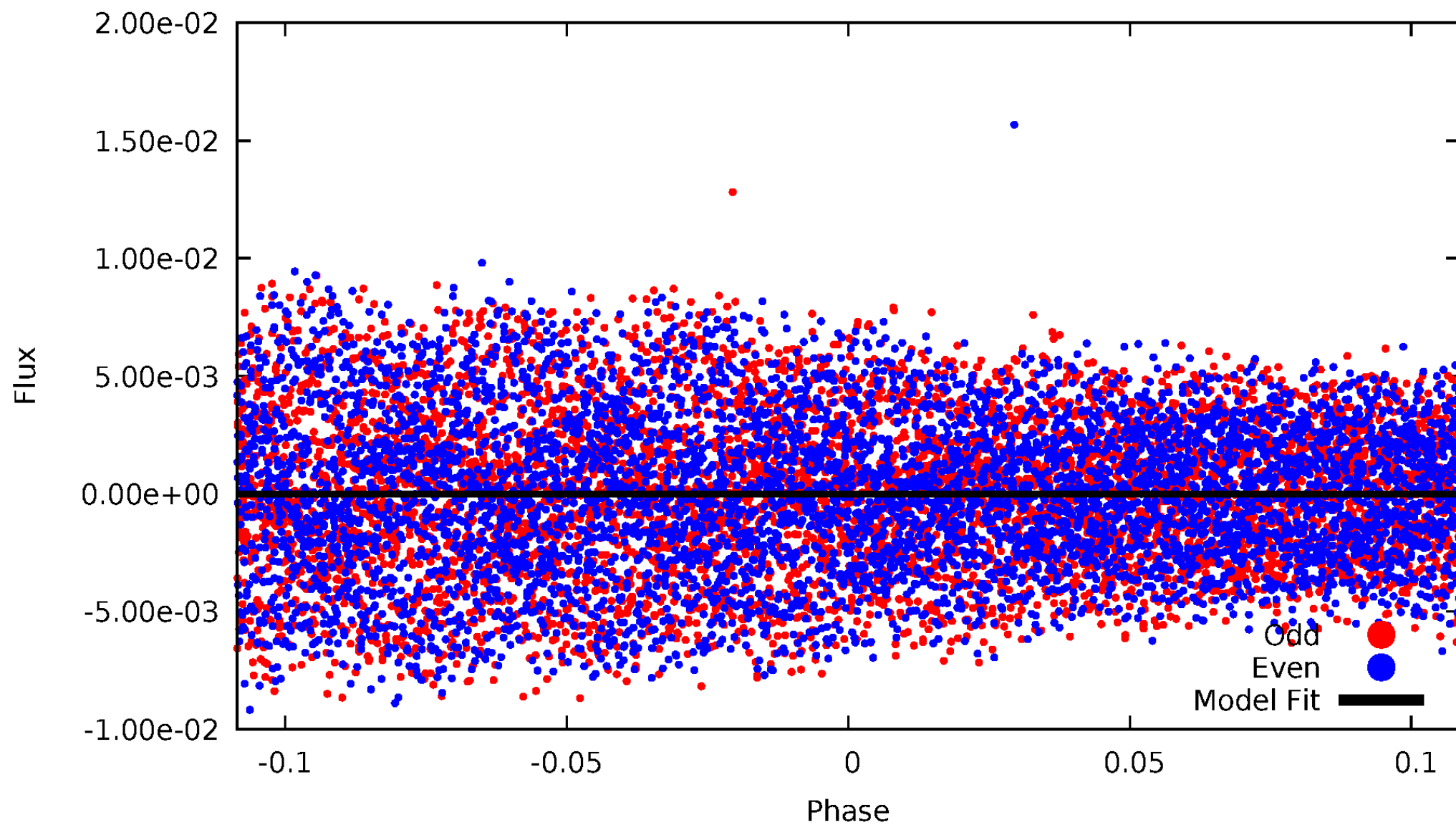
# DV Odd/Even

TCE 011127190-01



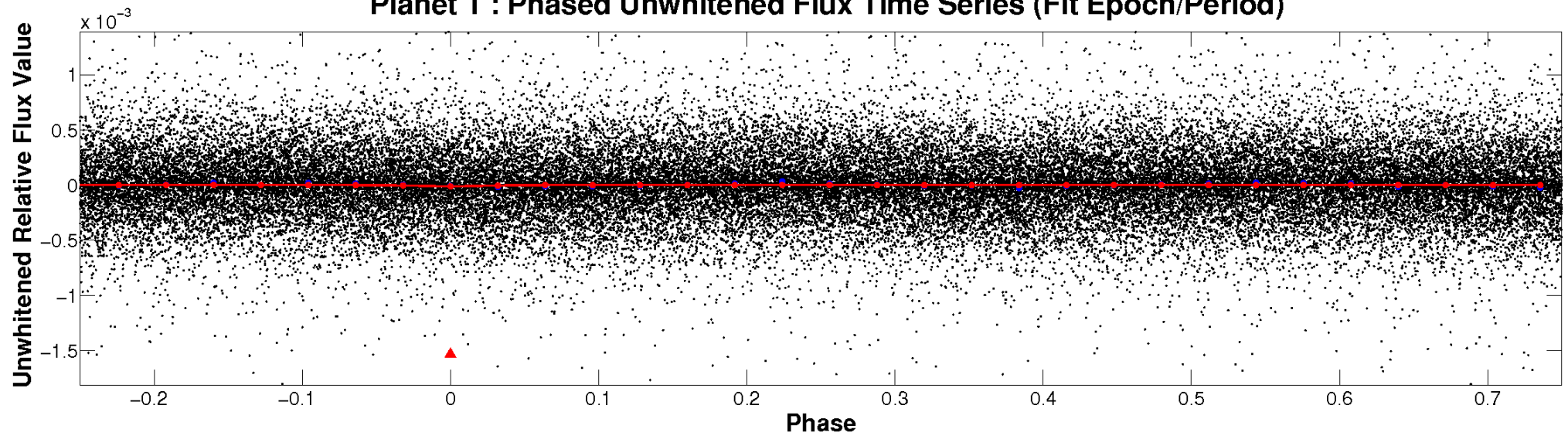
# ALT Odd/Even

TCE 011127190-01

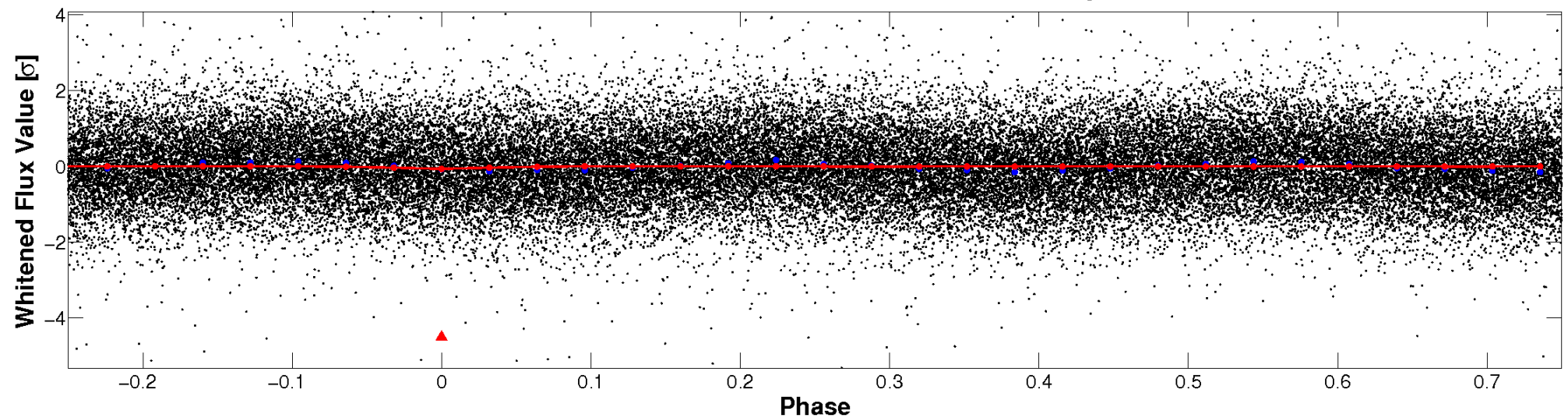


# Non-Whitened Vs. Whitened Light Curve

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



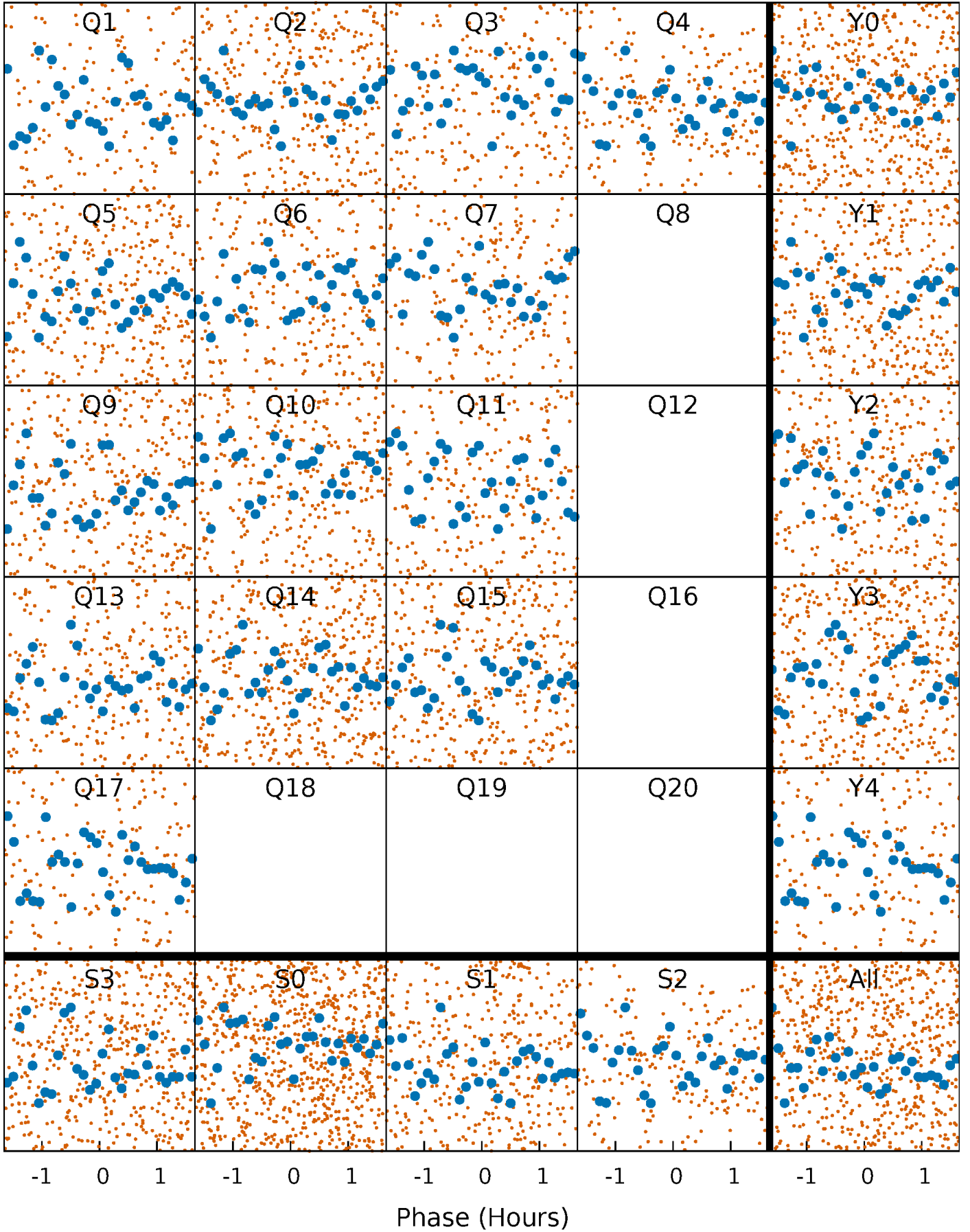
**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**





# PDC Quarter-Phased Transit Curves

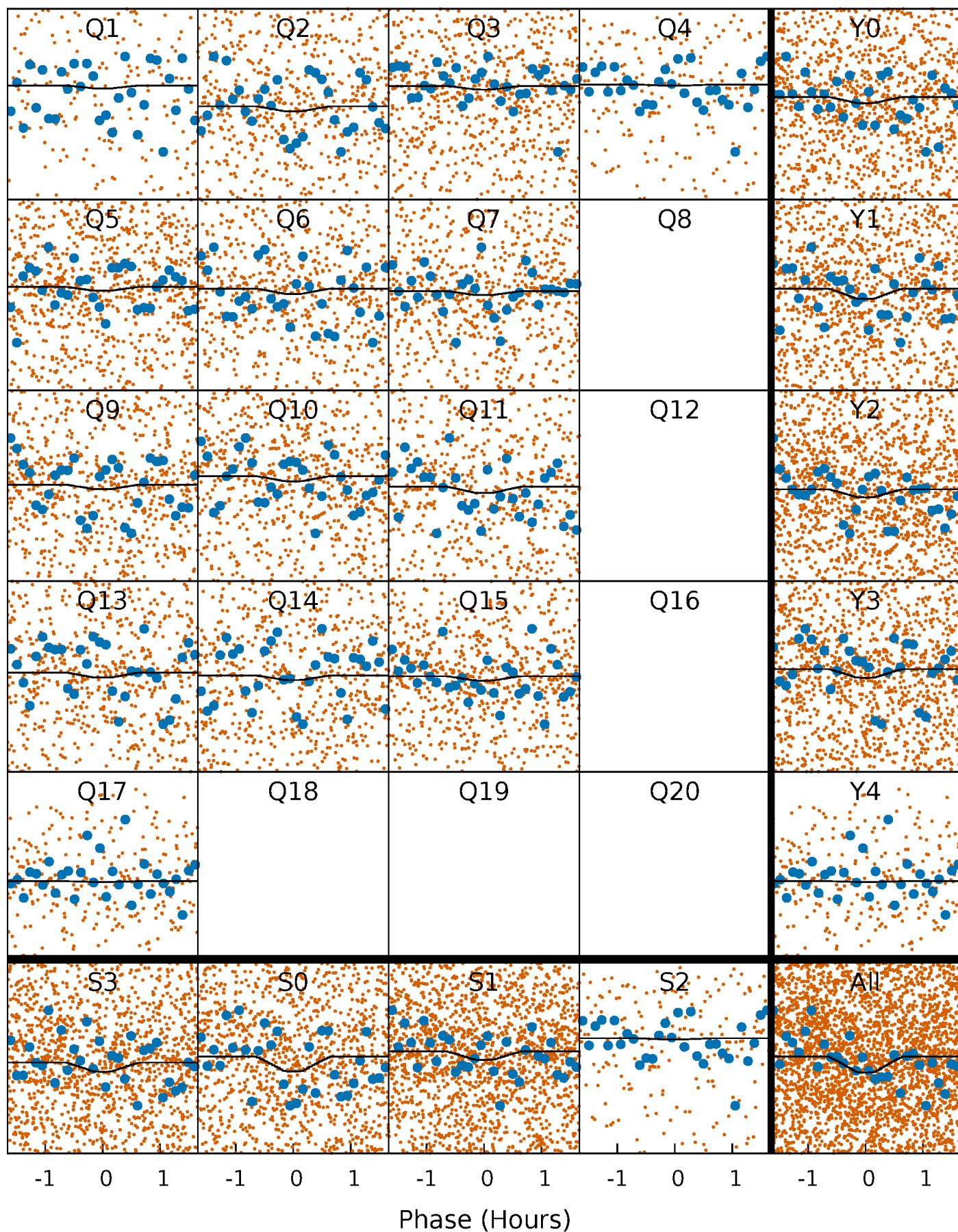
TCE 011127190-01 P= 0.638923 Days  $T_0=131.694231$  (BKJD)





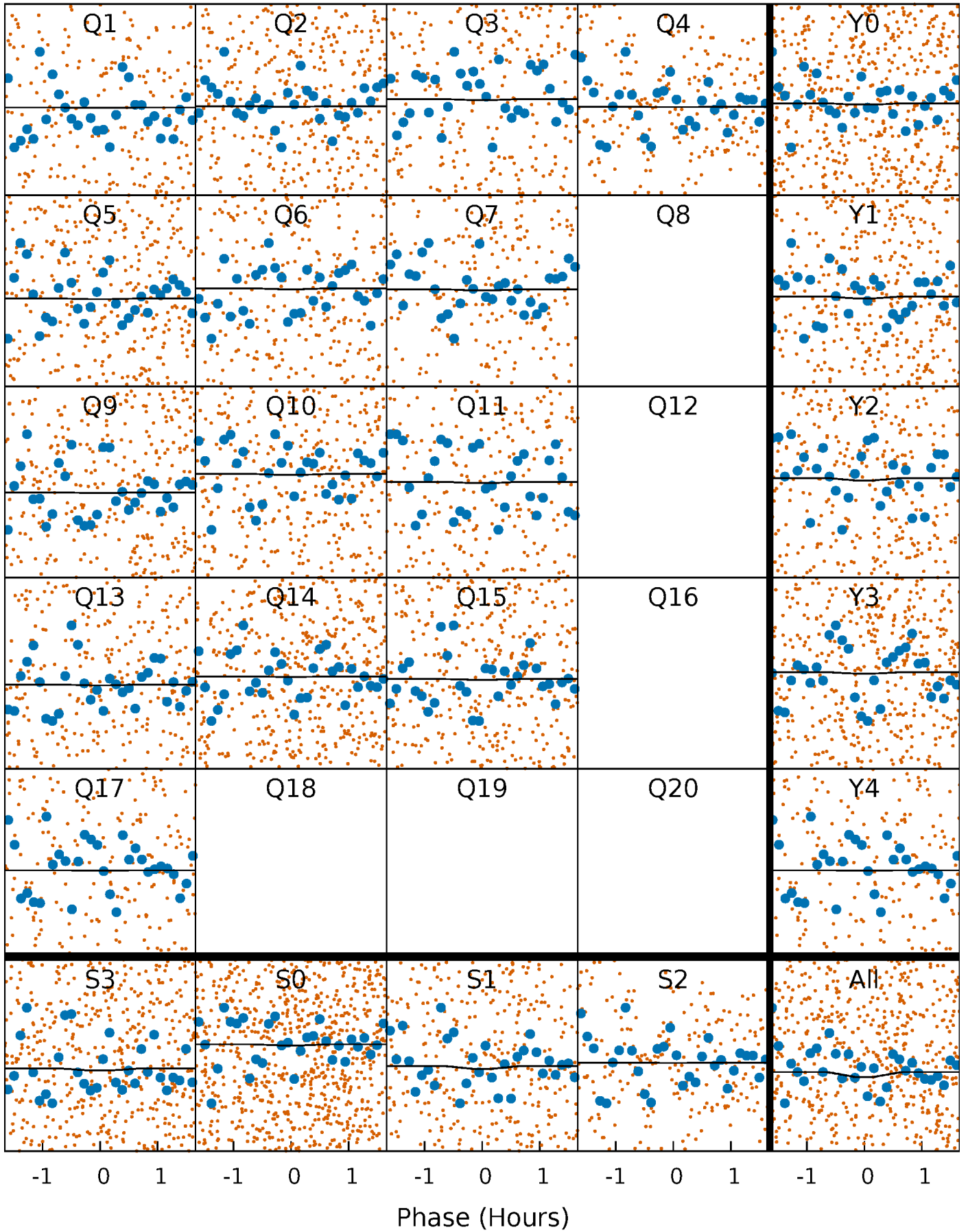
# DV Quarter-Phased Transit Curves

TCE 011127190-01 P= 0.638923 Days  $T_0=131.694231$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

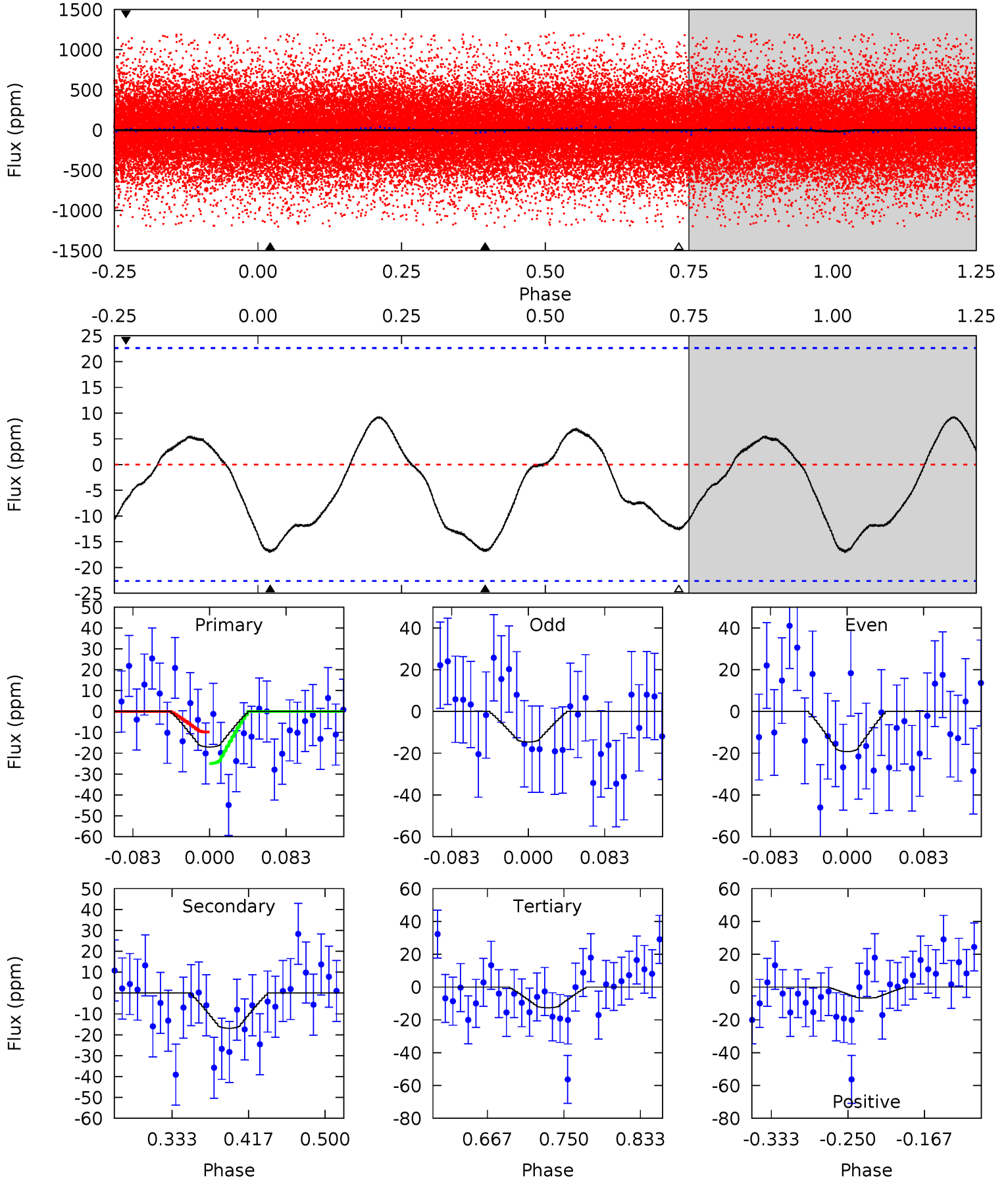
TCE 011127190-01 P= 0.638923 Days  $T_0=131.694231$  (BKJD)



# DV Model-Shift Uniqueness Test

011127190-01, P = 0.638923 Days, E = 131.055308 Days

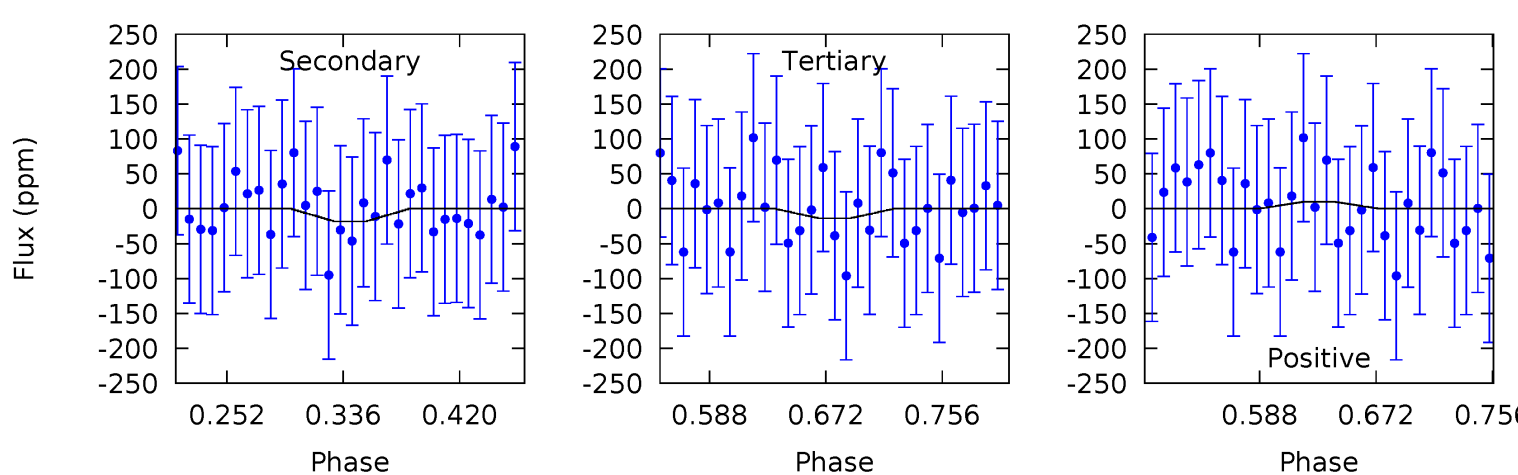
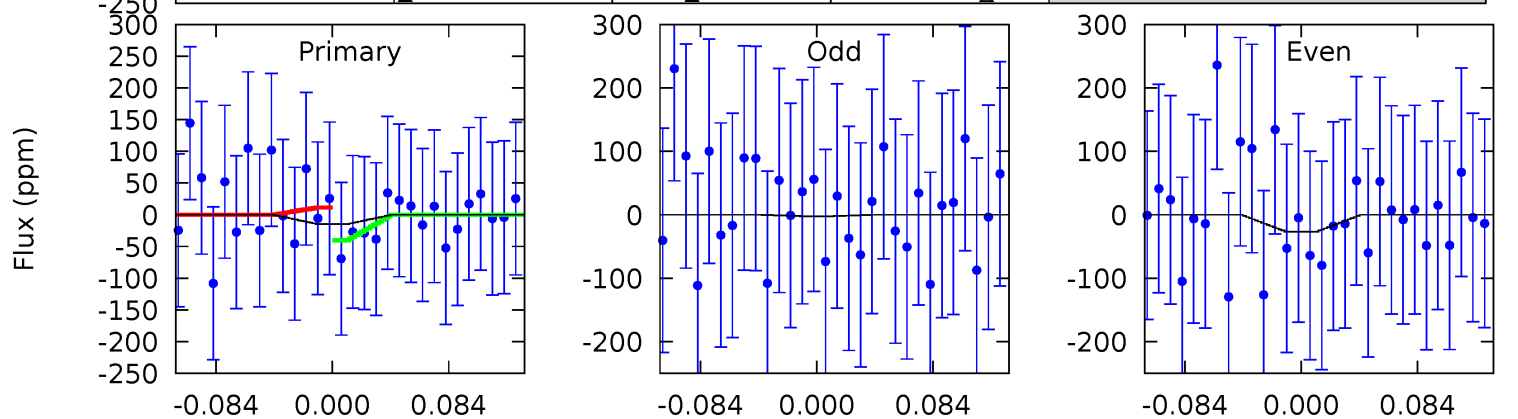
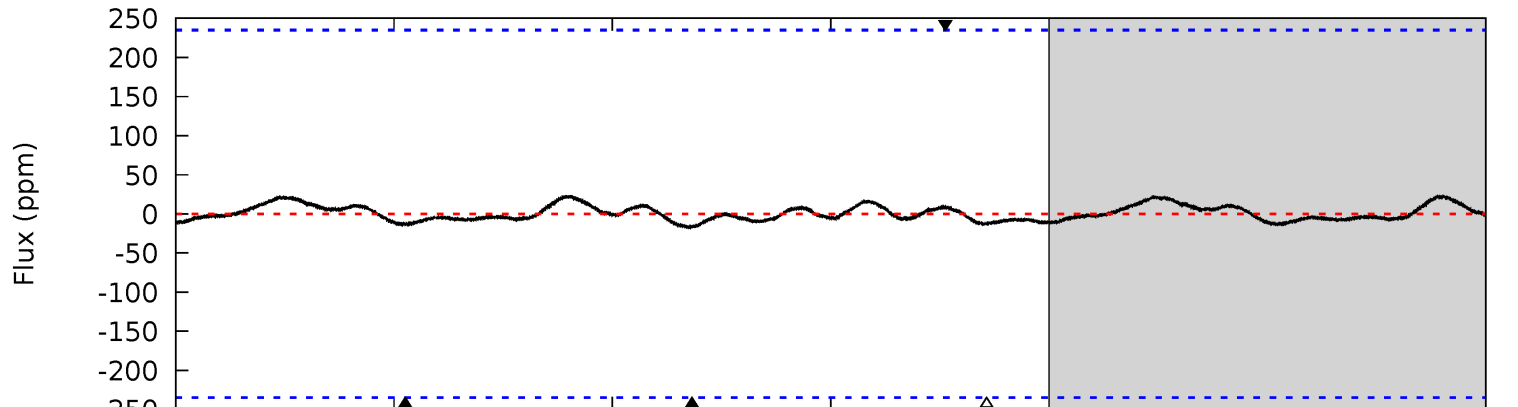
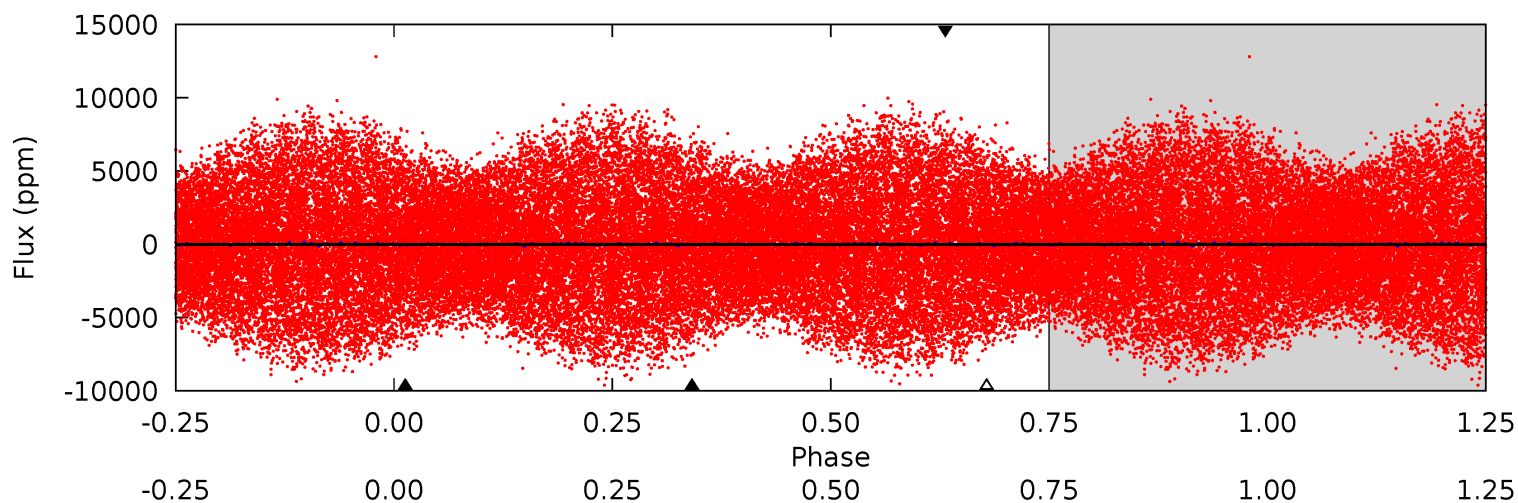
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.47	3.44	2.57	-1.36	4.60	1.73	1.23	0.90	4.82	0.87	4.79	0.47	0.87	0.35	1.55



# Alt Model-Shift Uniqueness Test

011127190-01, P = 0.638923 Days, E = 131.055308 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
0.29	0.36	0.27	0.20	4.60	1.73	0.18	0.02	0.09	0.09	0.16	0.25	0.92	0.56	0.31





### Stellar Parameters For KIC 011127190

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$7841^{+217}_{-326}$	$3.719^{+0.408}_{-0.102}$	$0.070^{+0.200}_{-0.350}$	$3.419^{+0.824}_{-1.647}$	$2.235^{+0.267}_{-0.667}$	$0.079^{+0.300}_{-0.030}$
	+3%/-4%	+11%/-3%	+286%/-500%	+24%/-48%	+12%/-30%	+381%/-38%
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 011127190-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-17 \pm 5$	$7.03^{+8.28}_{-5.05}$	$6232^{+470}_{-669}$	$-4657^{+9963}_{-535}$	$0.059^{+0.730}_{-0.045}$
Alt.	$-18 \pm 51$	$6.83^{+9.30}_{-4.71}$	$6225^{+516}_{-667}$	$-4883^{+10042}_{-776}$	$0.030^{+0.648}_{-0.180}$

$T_{max}$  = 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

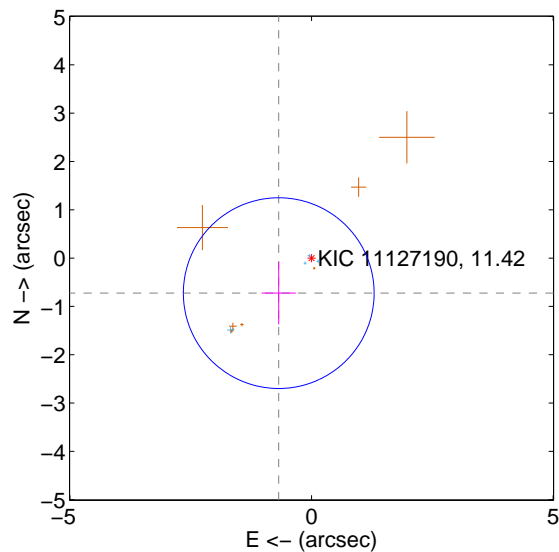
Supplemental centroid analysis for 011127190-01. **Kepler magnitude: 11.42.** Transit SNR 3.04

There are 5 quarters with good PRF difference image offsets

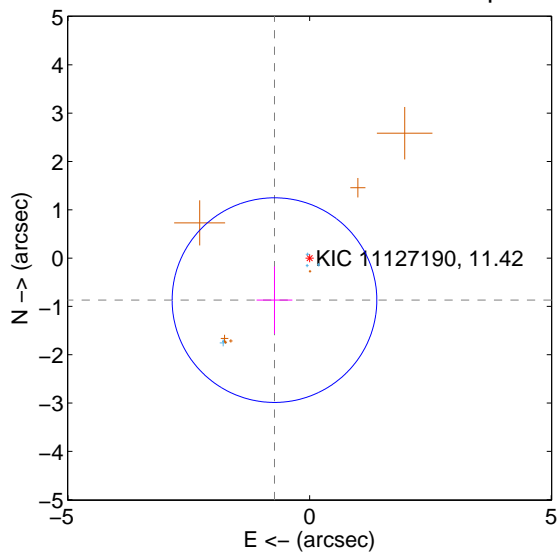
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.992 \pm 0.658$	1.51	$0.678 \pm 0.355$	$-0.725 \pm 0.646$
PRF-fit source offset from KIC position	$1.133 \pm 0.706$	1.61	$0.727 \pm 0.370$	$-0.870 \pm 0.698$
photometric centroid source offset	$0.57 \pm 1.20$	0.47	$-0.50 \pm 1.22$	$0.27 \pm 1.15$

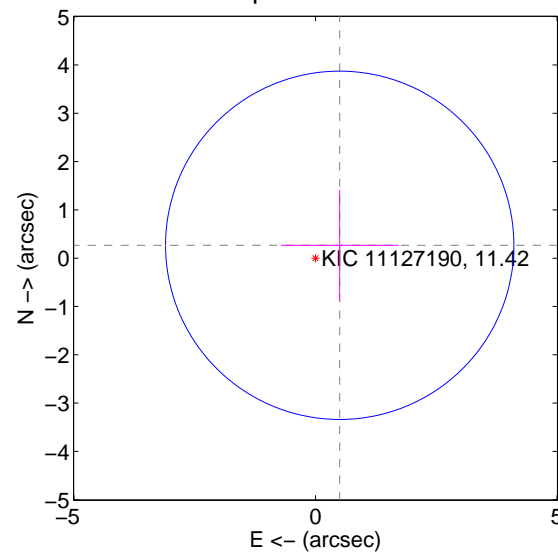
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

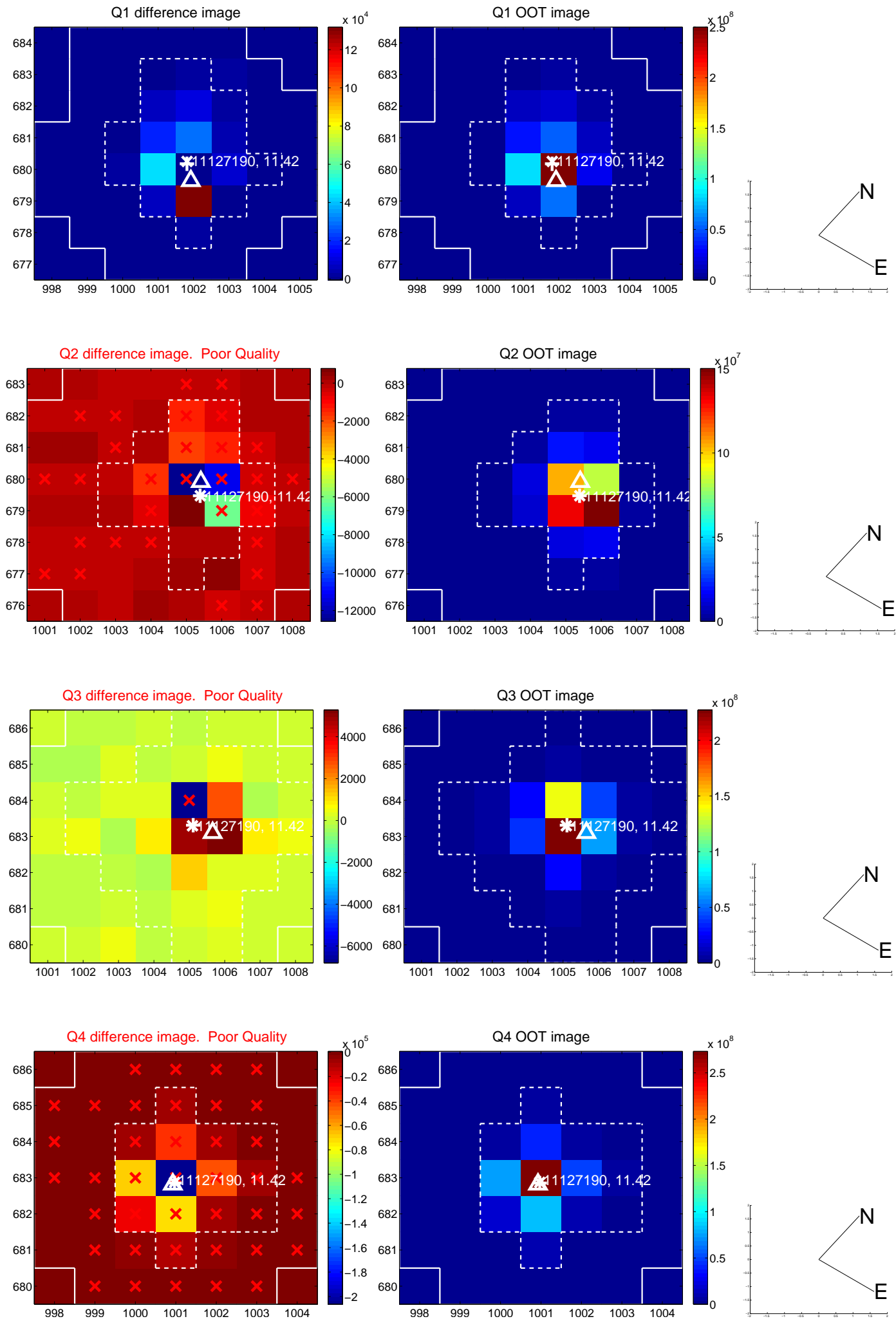


offset from photometric centroids

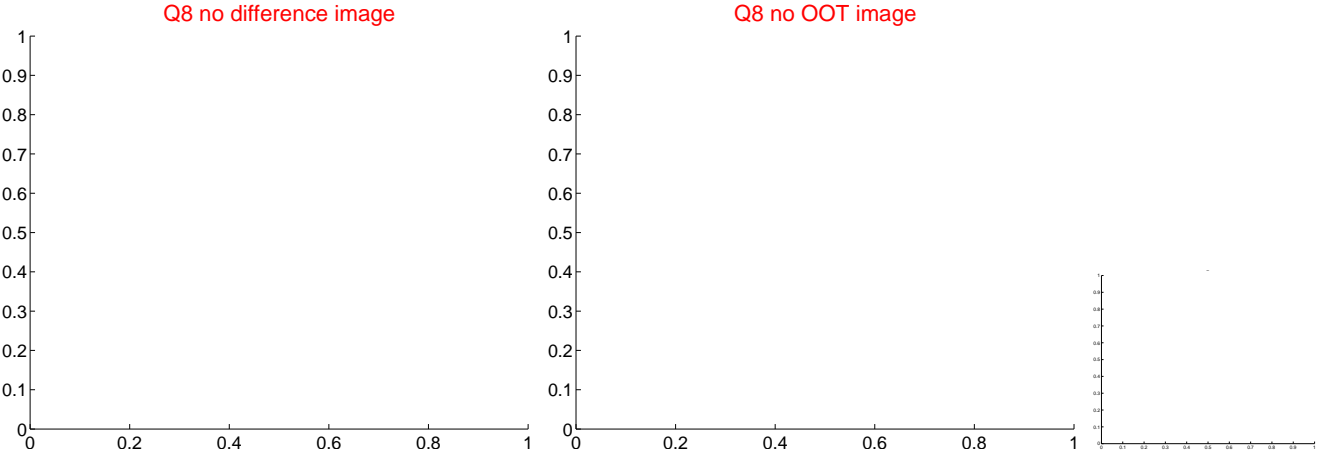
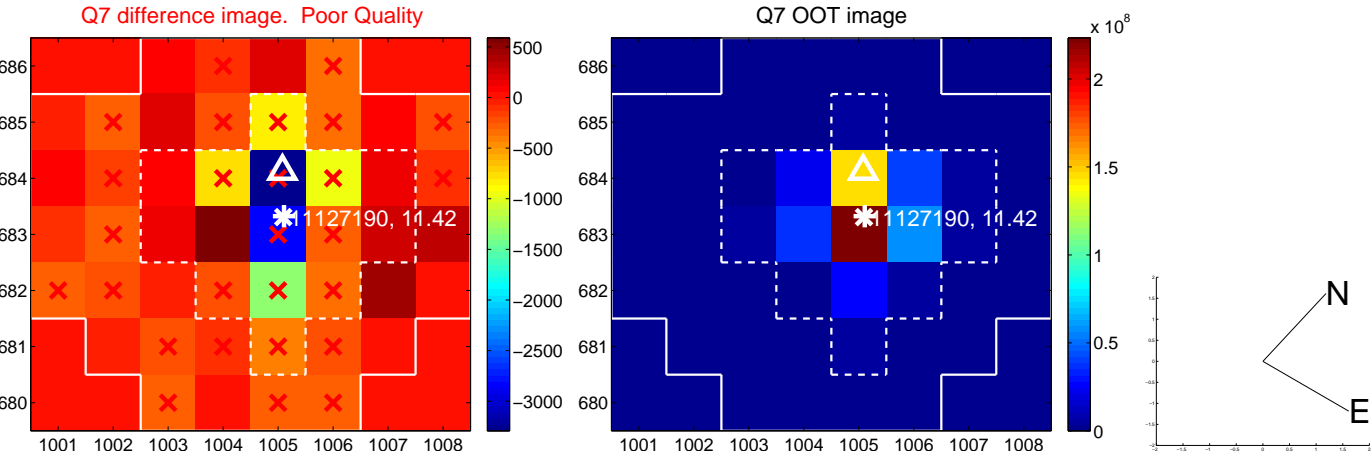
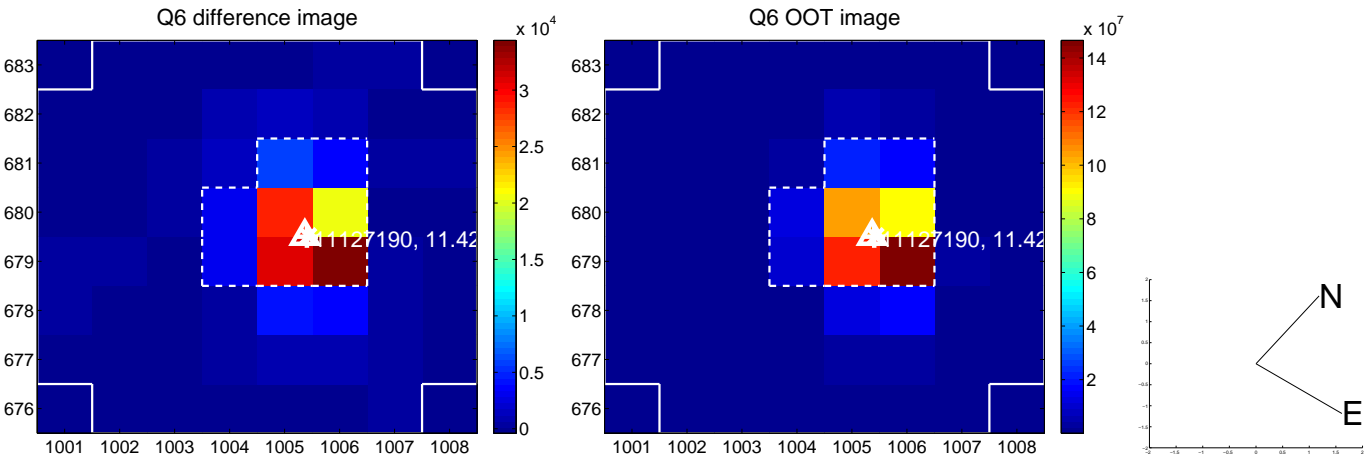
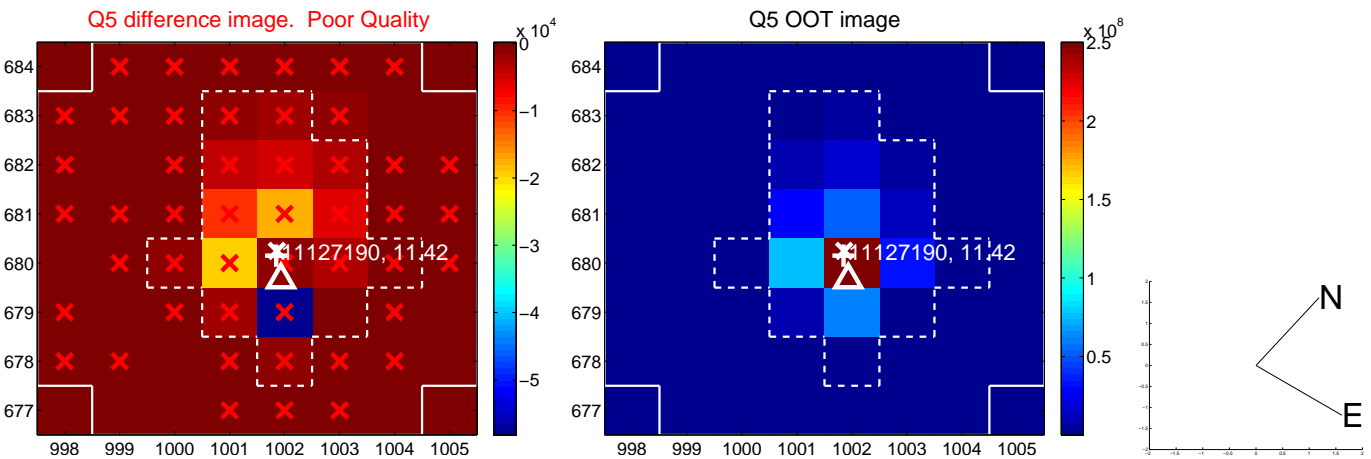


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

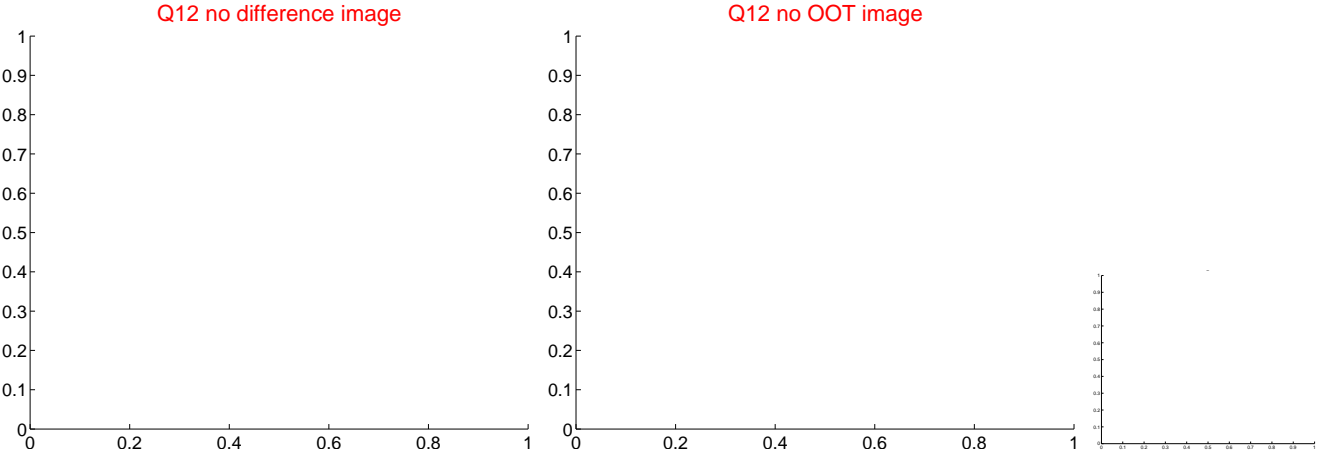
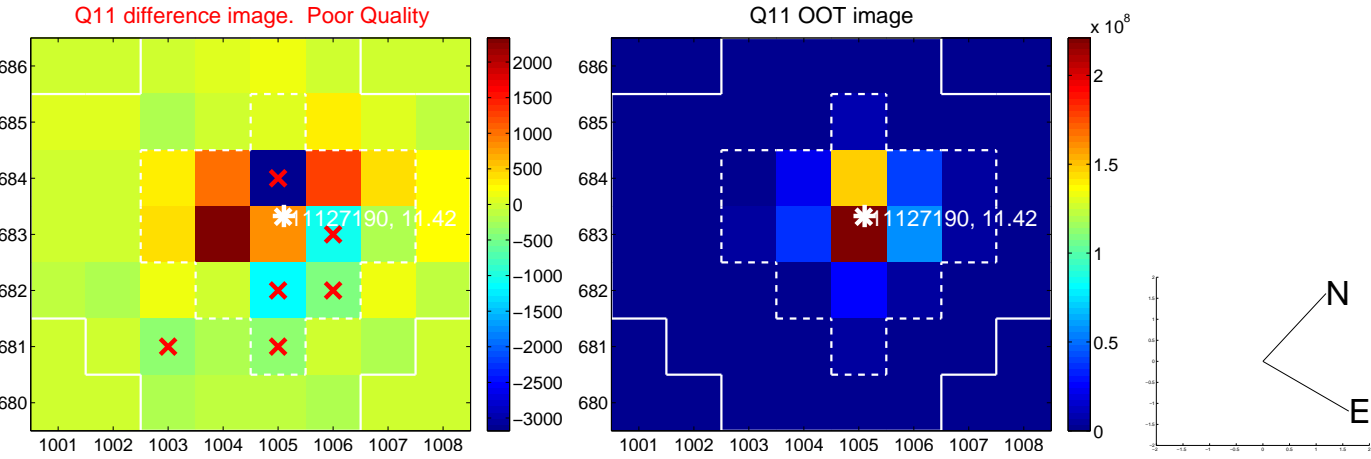
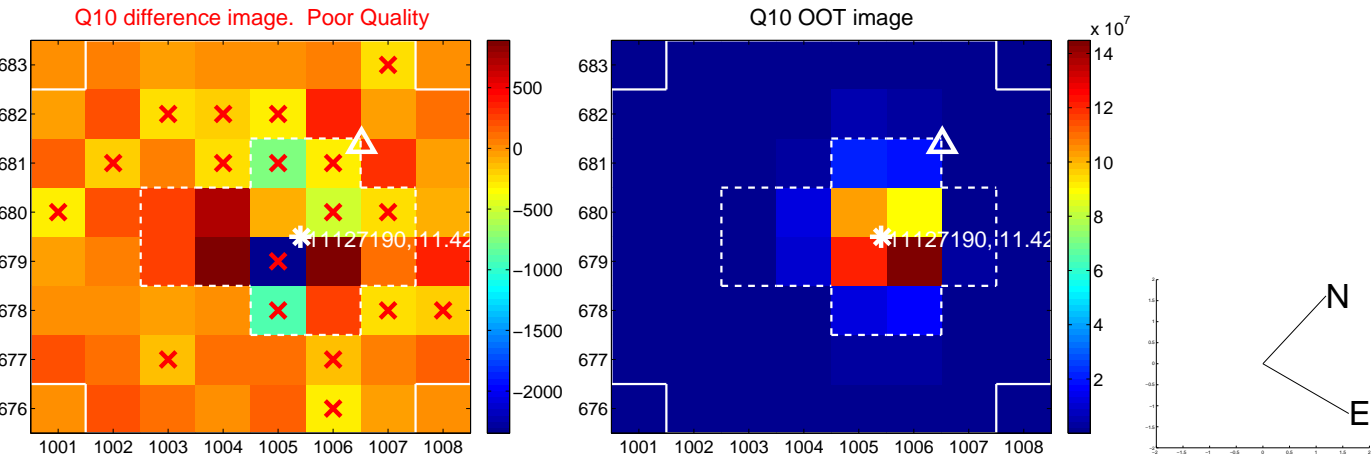
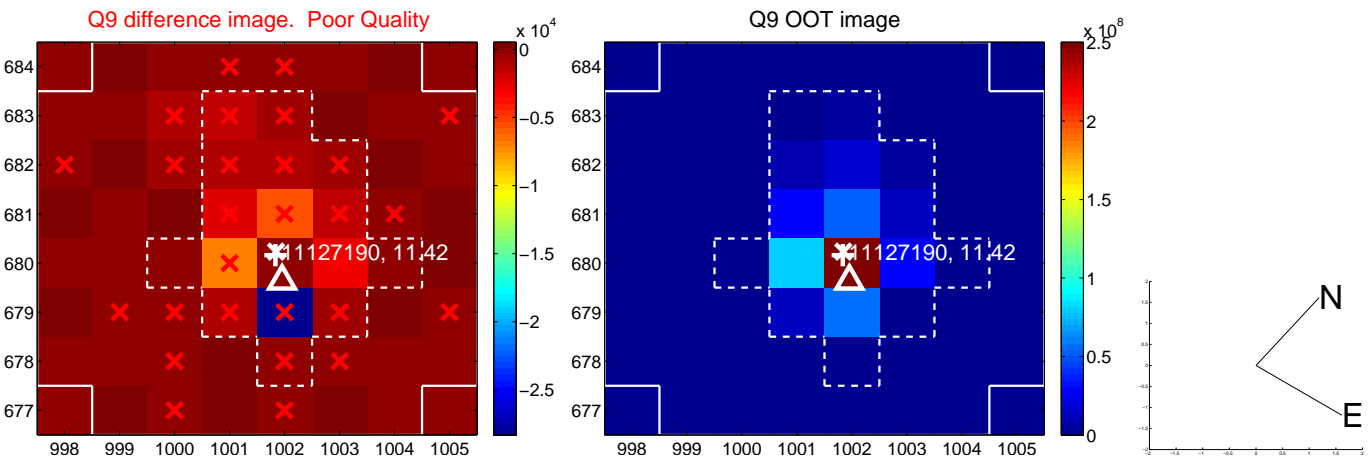


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

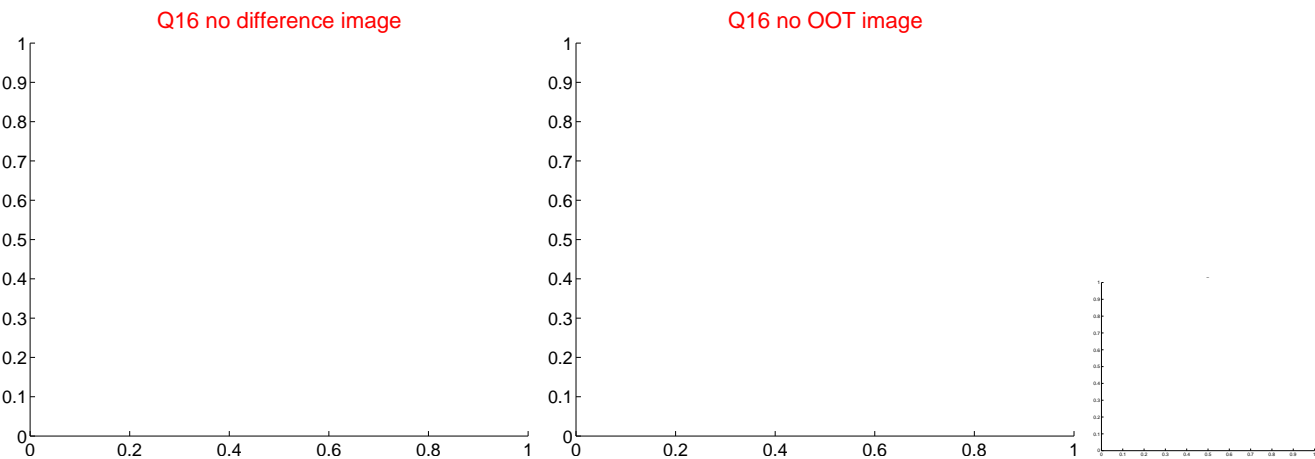
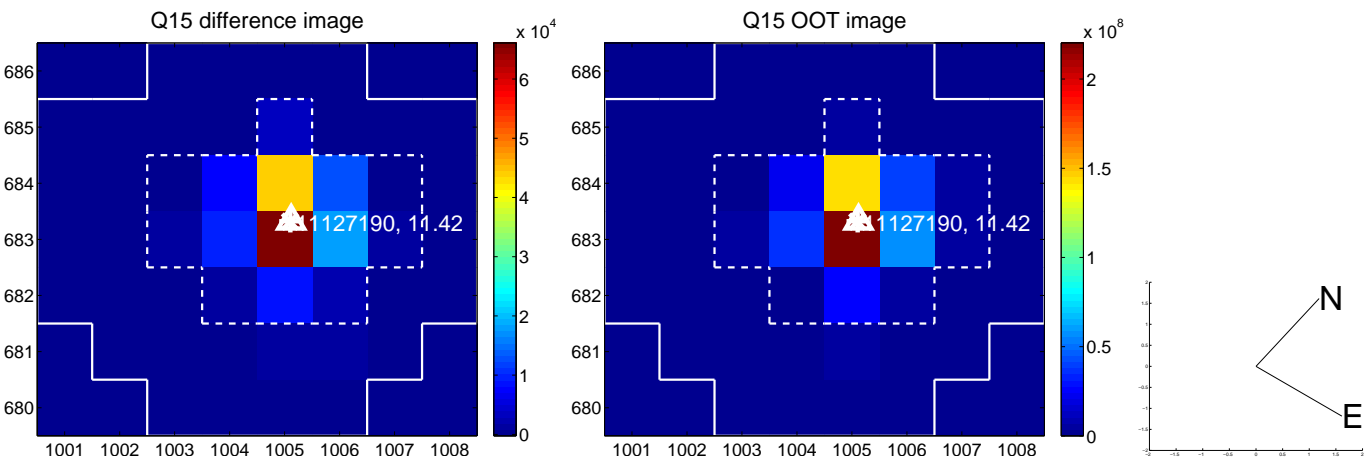
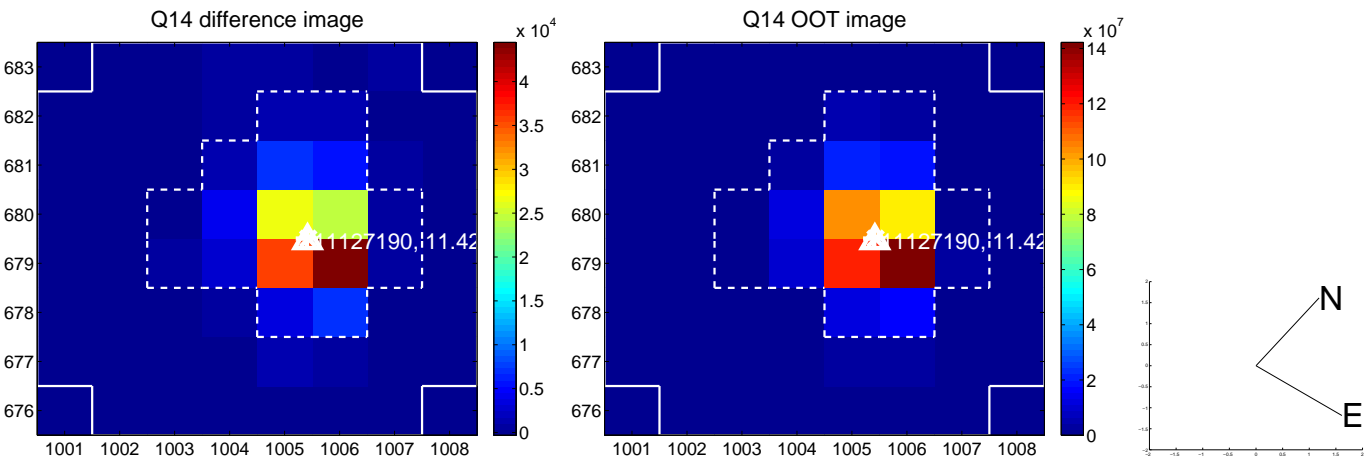
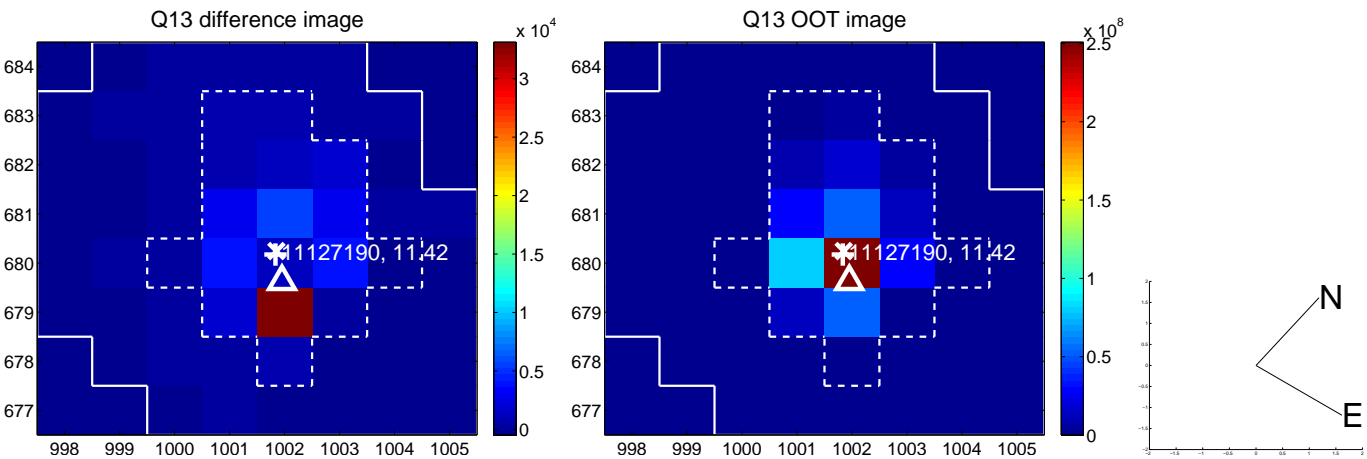




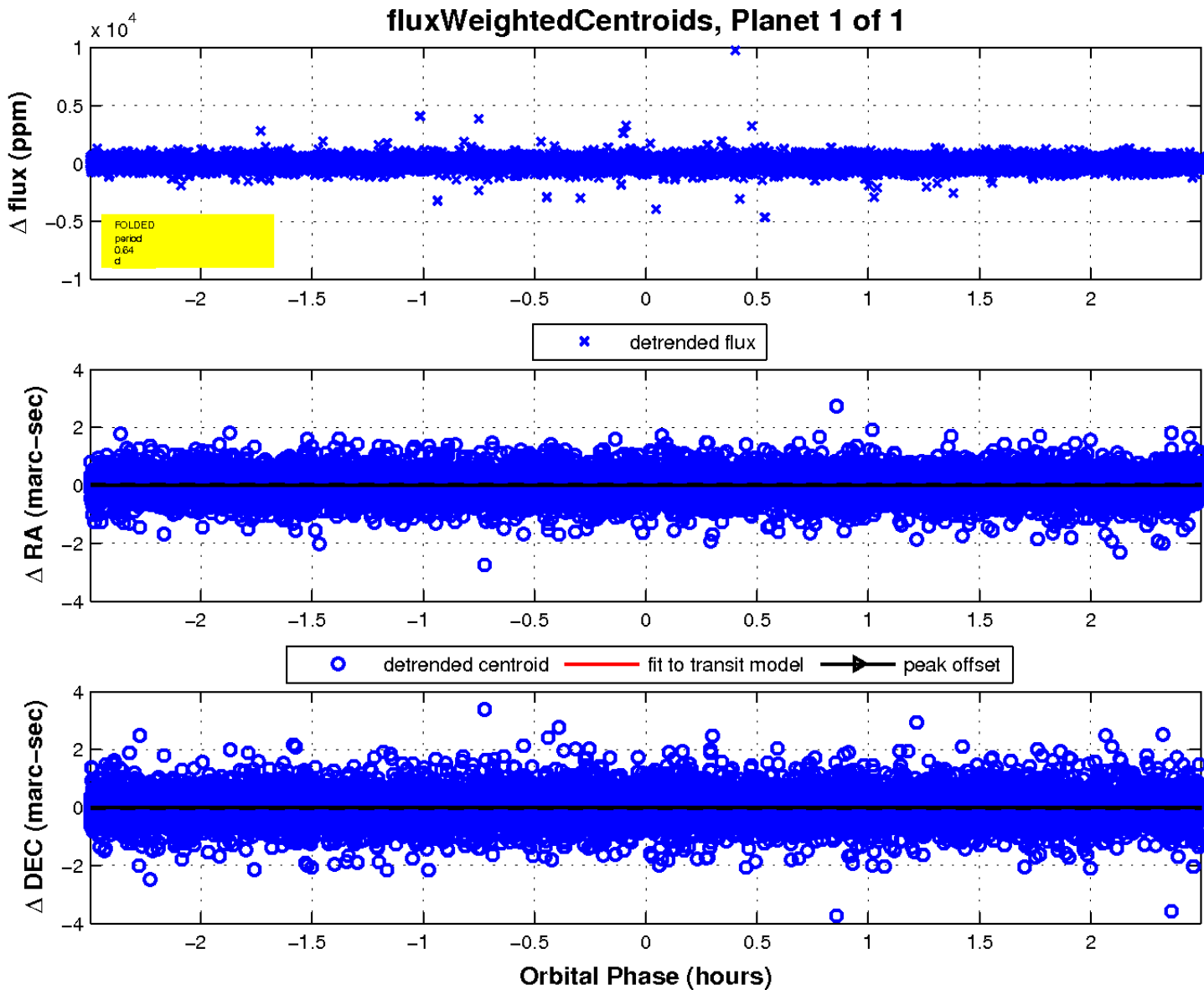
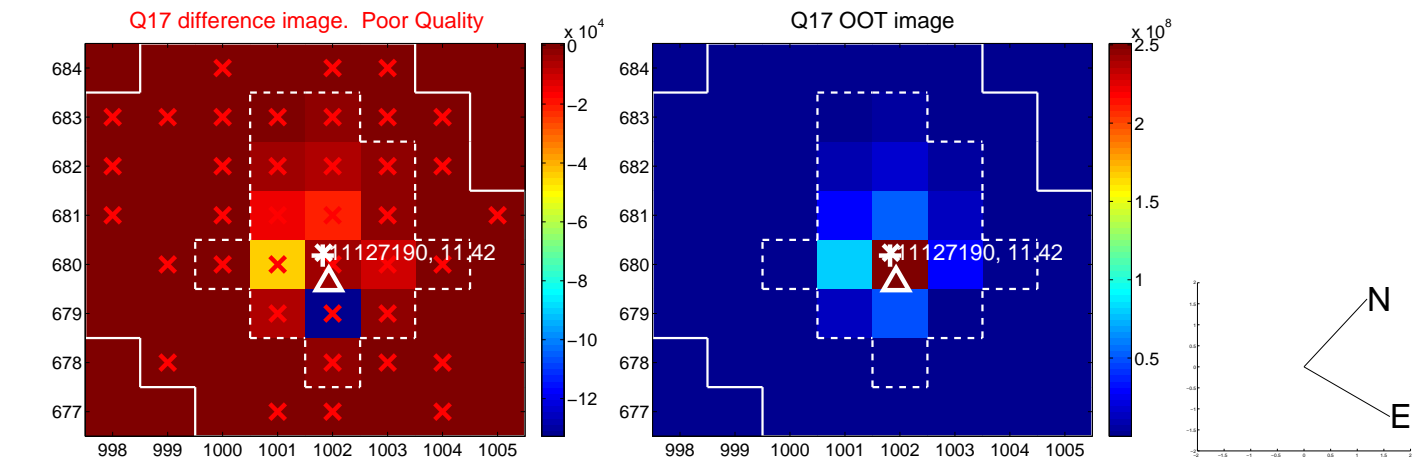
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



white  $\times$ : 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.



# UKIRT Image

Declination

