

# KIC 010226487

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
010226487-01	OBS	No	0.660291	131.674029	0.0	1.508	9.6	0.0	0.74	5288	0.01	1988.69

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010226487-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV

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

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

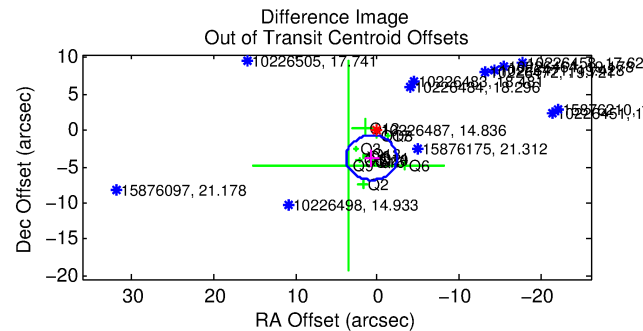
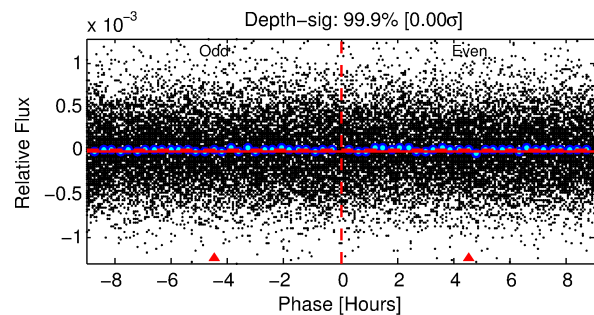
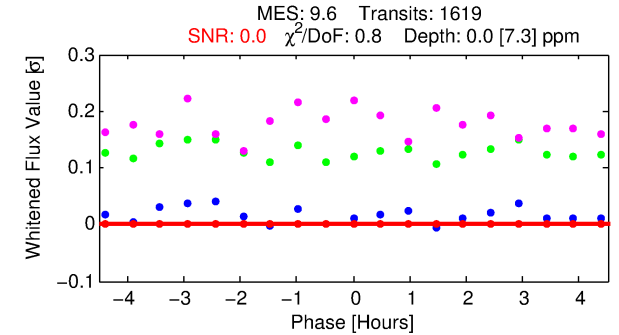
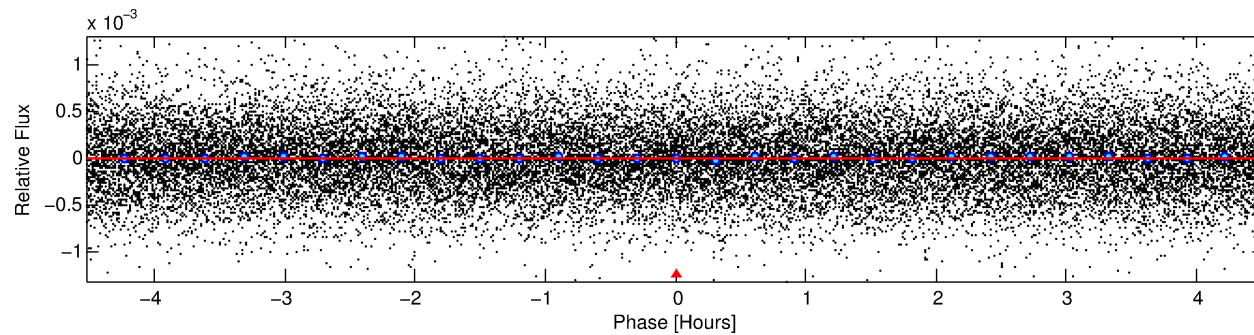
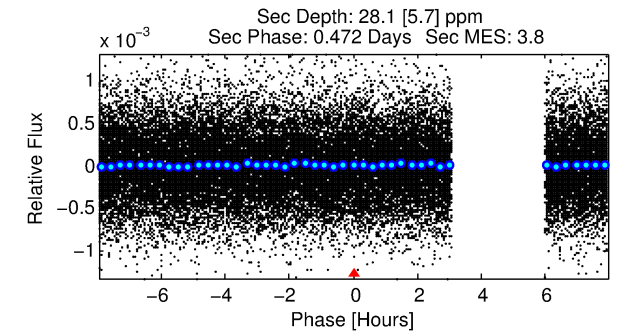
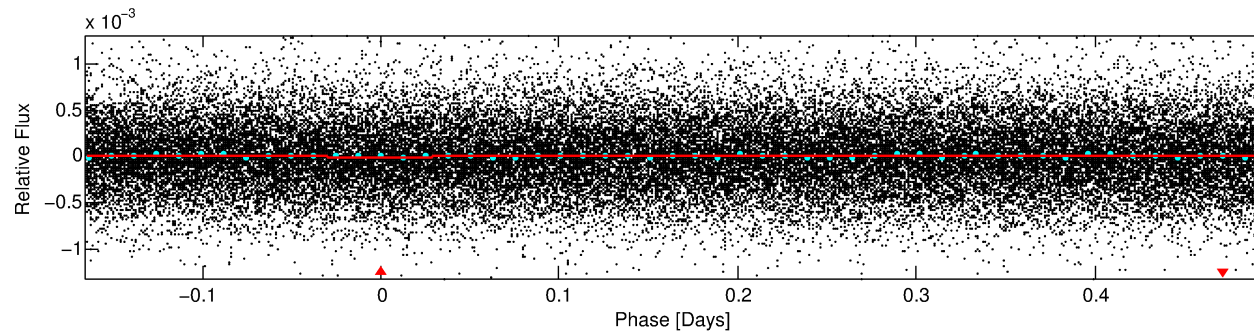
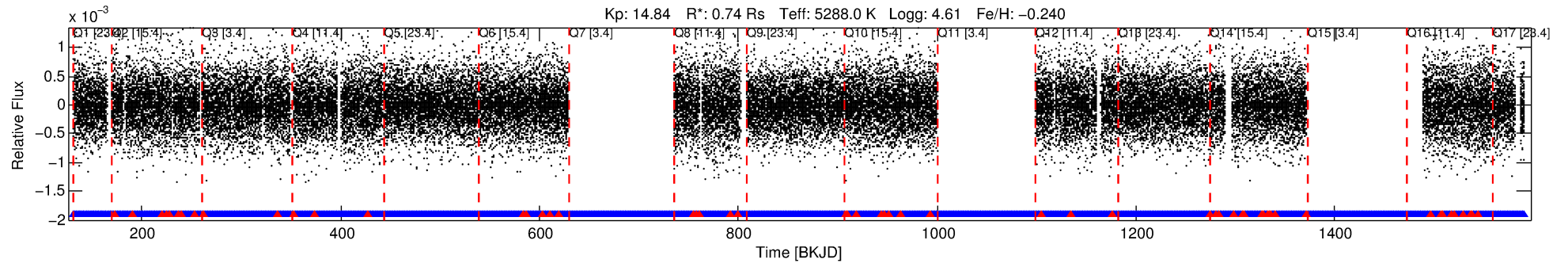
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 010226487-01

No Significant Match Found

# DV One-Page Summary

KIC: 10226487 Candidate: 1 of 1 Period: 0.660 d



## DV Fit Results:

Period = 0.66029 [0.03530] d  
Epoch = 131.6740 [8.5404] BKJD  
Rp/R\* = 0.0002 [0.0352]  
a/R\* = 1.41 [94.17]  
b = 0.95 [17.59]  
Seff = 1988.69 [439.38]  
Teff = 1703 [94] K  
Rp = 0.01 [2.84] Re  
a = 0.0139 [0.0018] AU  
Ag = 19629.09 [9044898.61] [0.00σ]  
Teffp = 31163 [3590198] K [0.01σ]

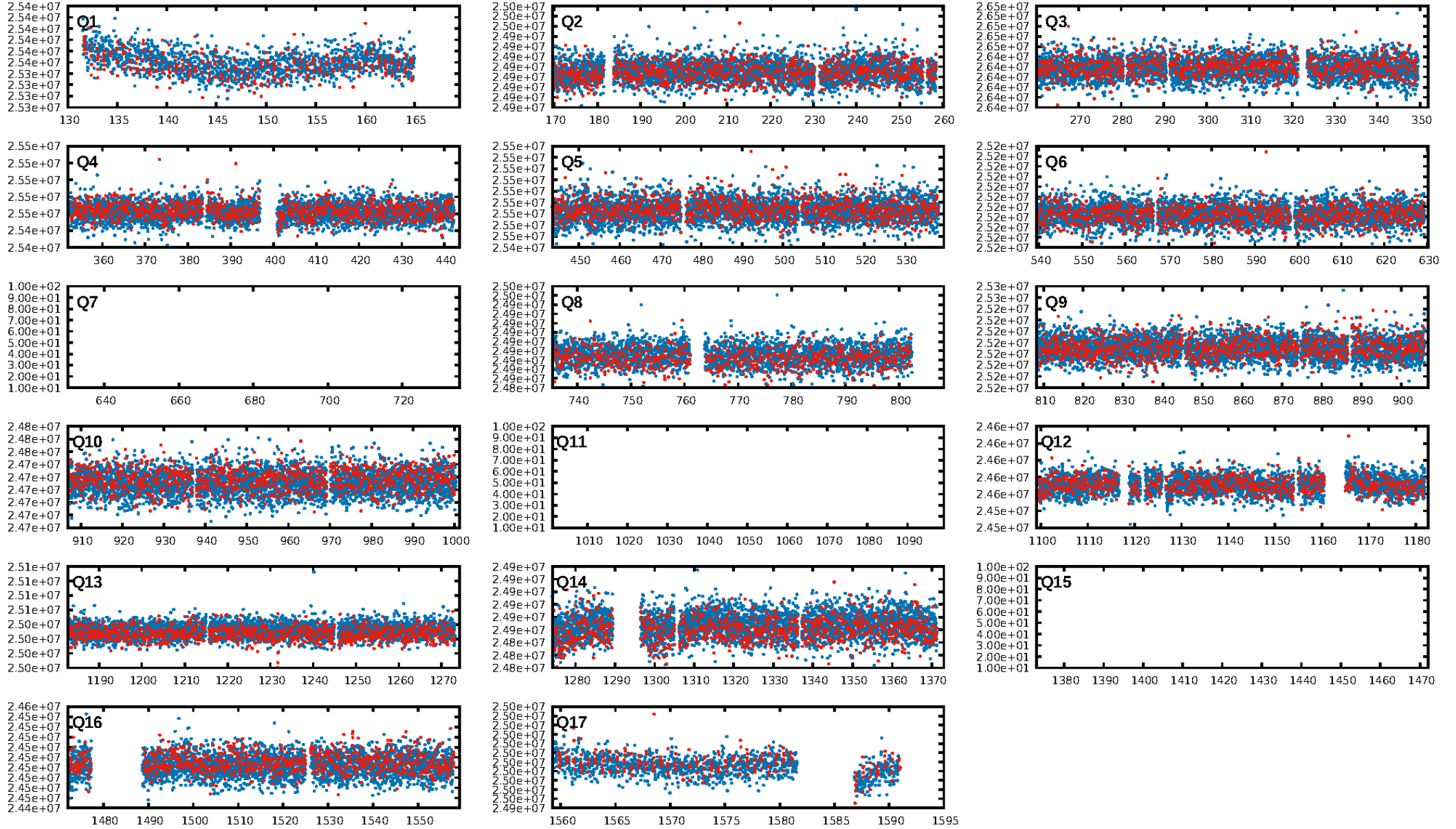
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 1.46e-21  
RollingBand-fgt: 0.96 [1467/1527]  
GhostDiagnostic-chr: N/A  
Centroid-sig: N/A  
Centroid-so: N/A  
OotOffset-rm: 3.830 arcsec [3.72σ]  
KicOffset-rm: 3.998 arcsec [3.87σ]  
OotOffset-st: 4/1/4/5 [14]  
KicOffset-st: 4/1/4/5 [14]  
DiffImageQuality-fgm: 0.00 [0/14]  
DiffImageOverlap-fno: 1.00 [14/14]

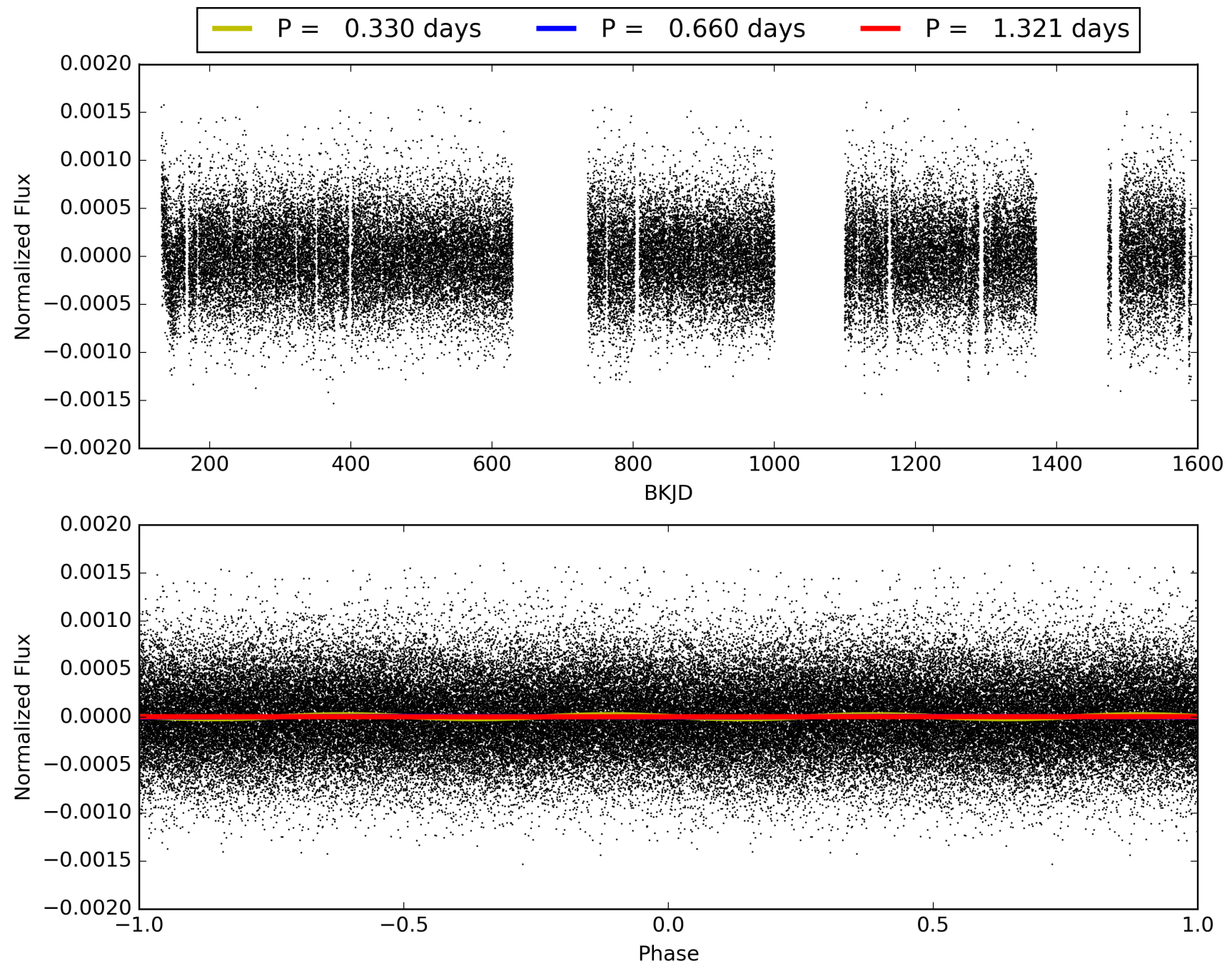
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 14:15:50 Z

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

# TCE 010226487-01, PDC Light Curves



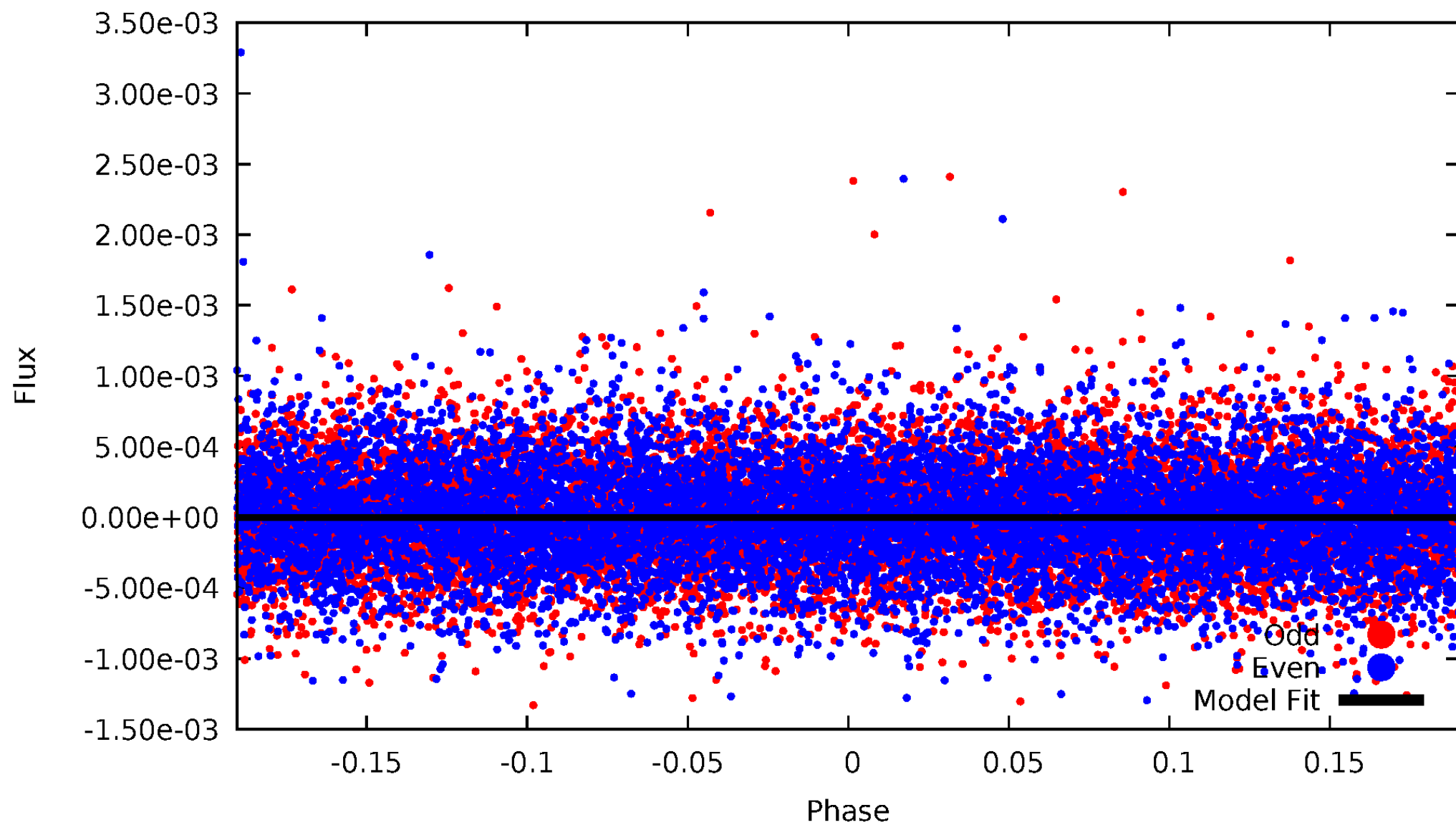
TCE 010226487-01





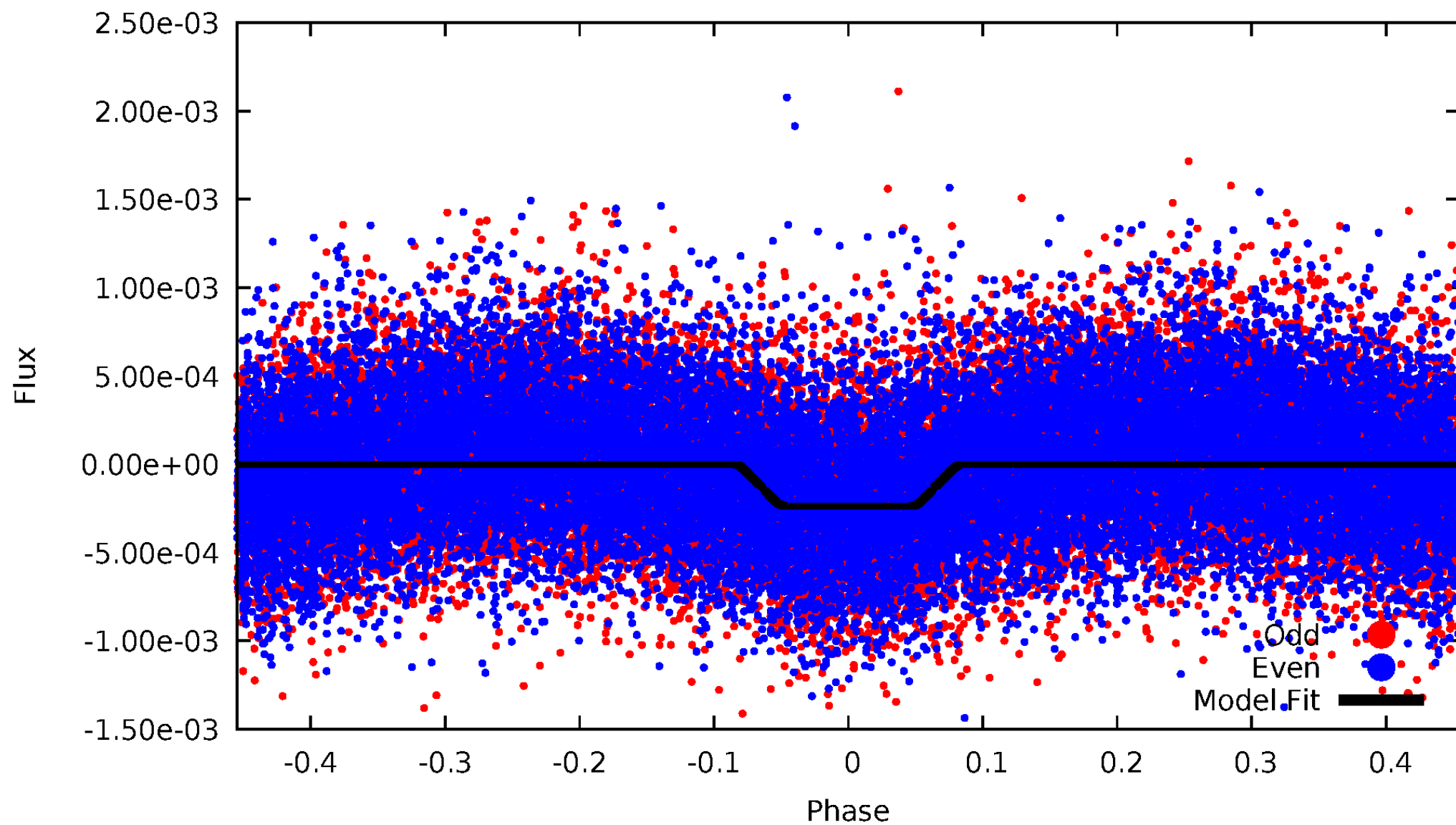
# DV Odd/Even

TCE 010226487-01

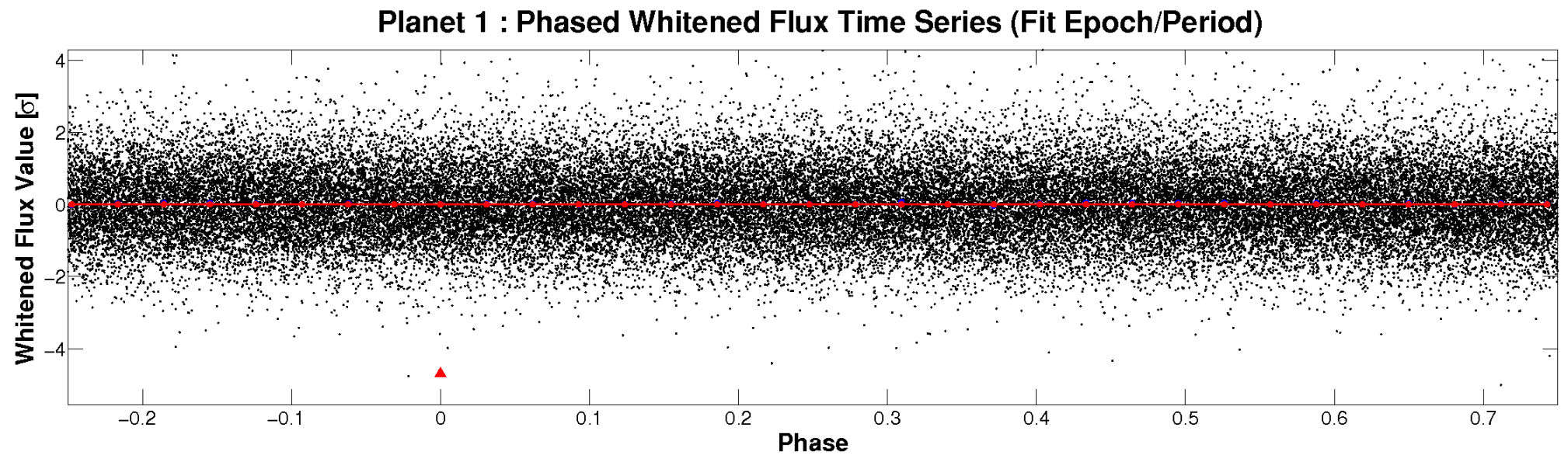
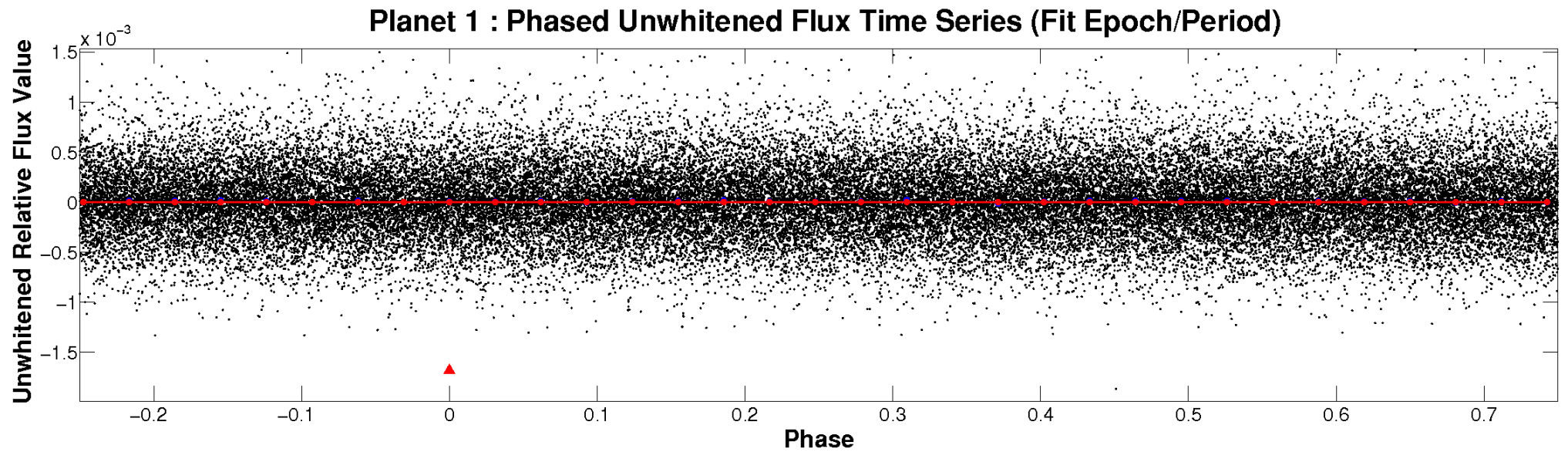


# ALT Odd/Even

TCE 010226487-01

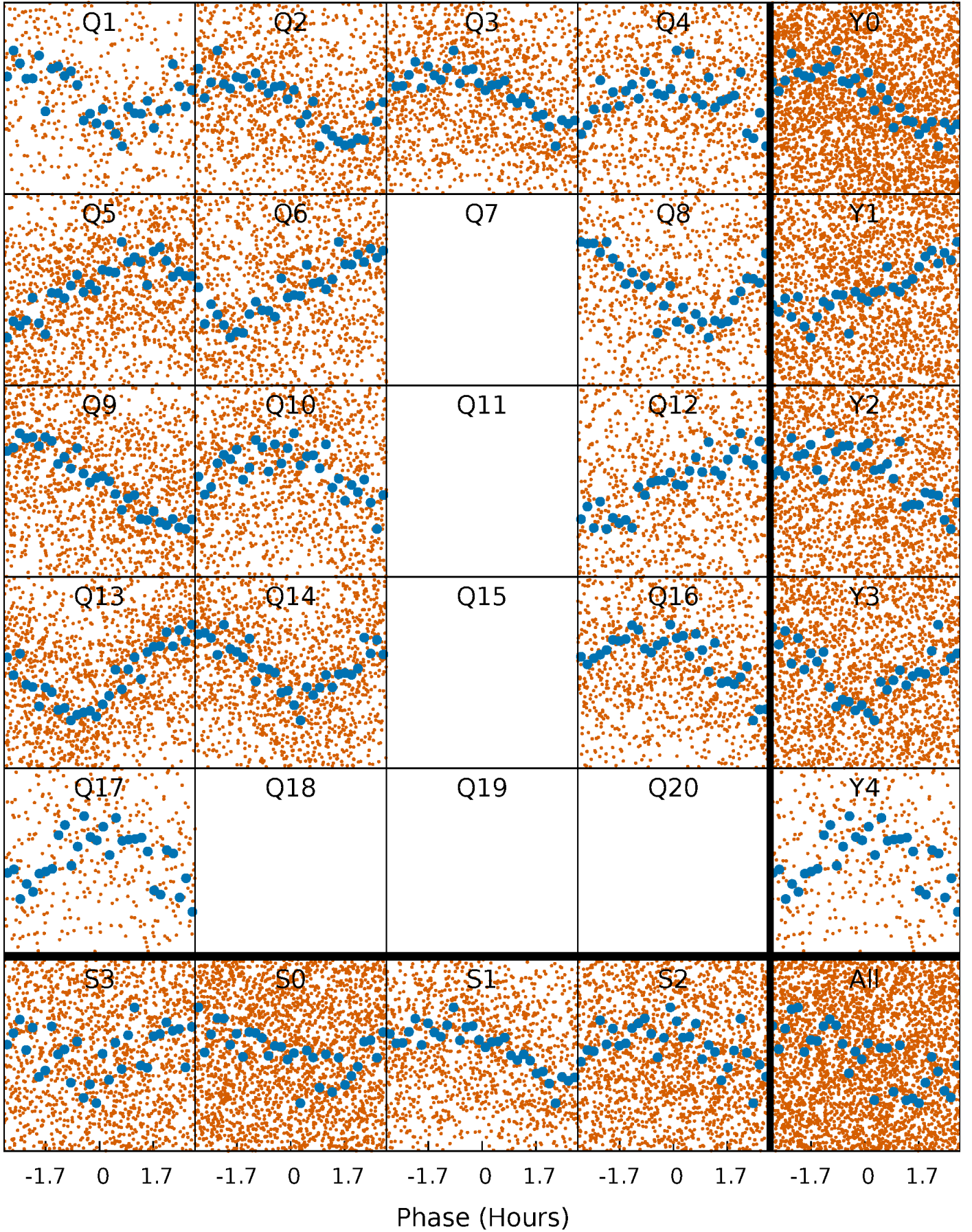


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

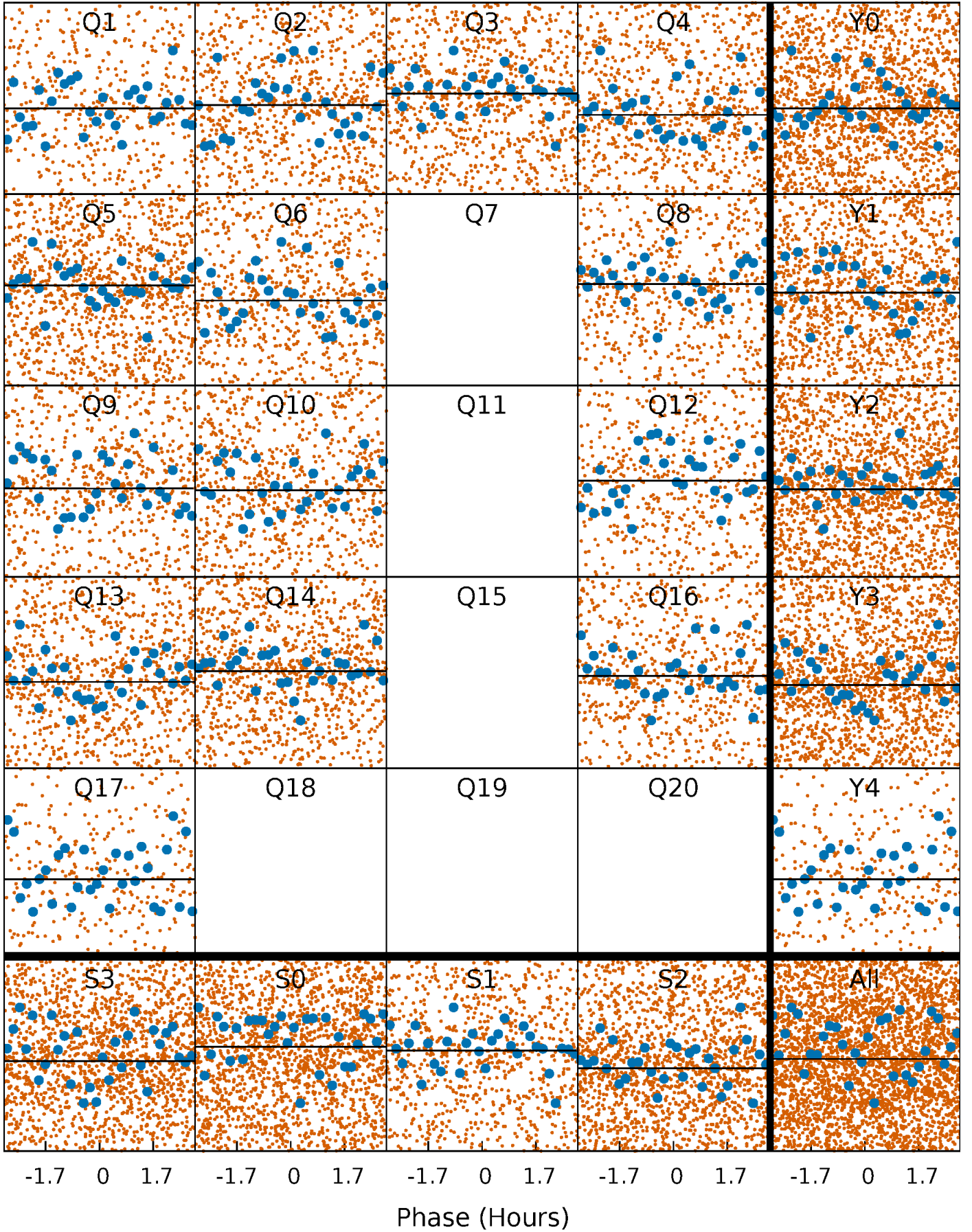
TCE 010226487-01   P= 0.660291 Days    $T_0=131.674029$  (BKJD)





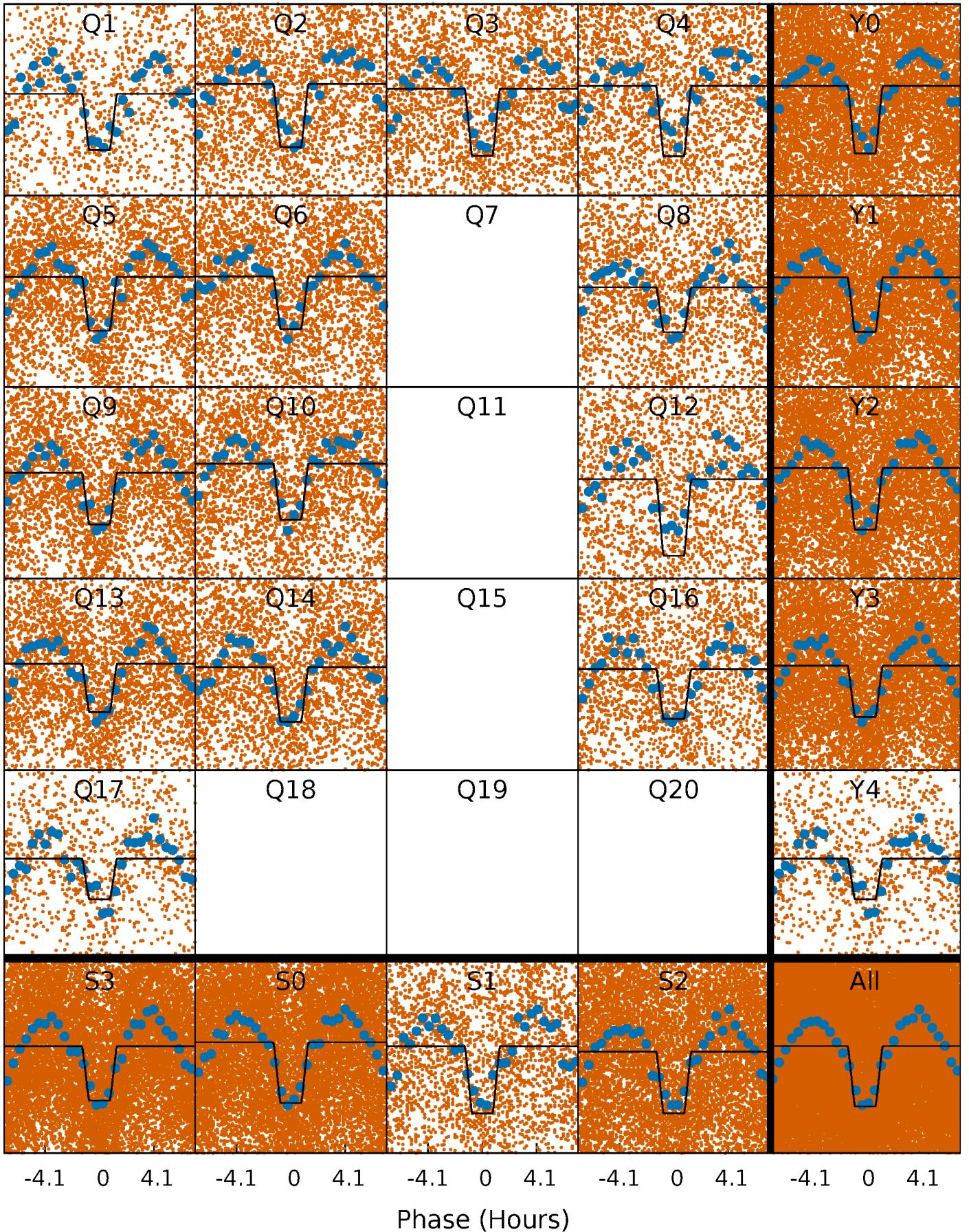
# DV Quarter-Phased Transit Curves

TCE 010226487-01   P= 0.660291 Days    $T_0=131.674029$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

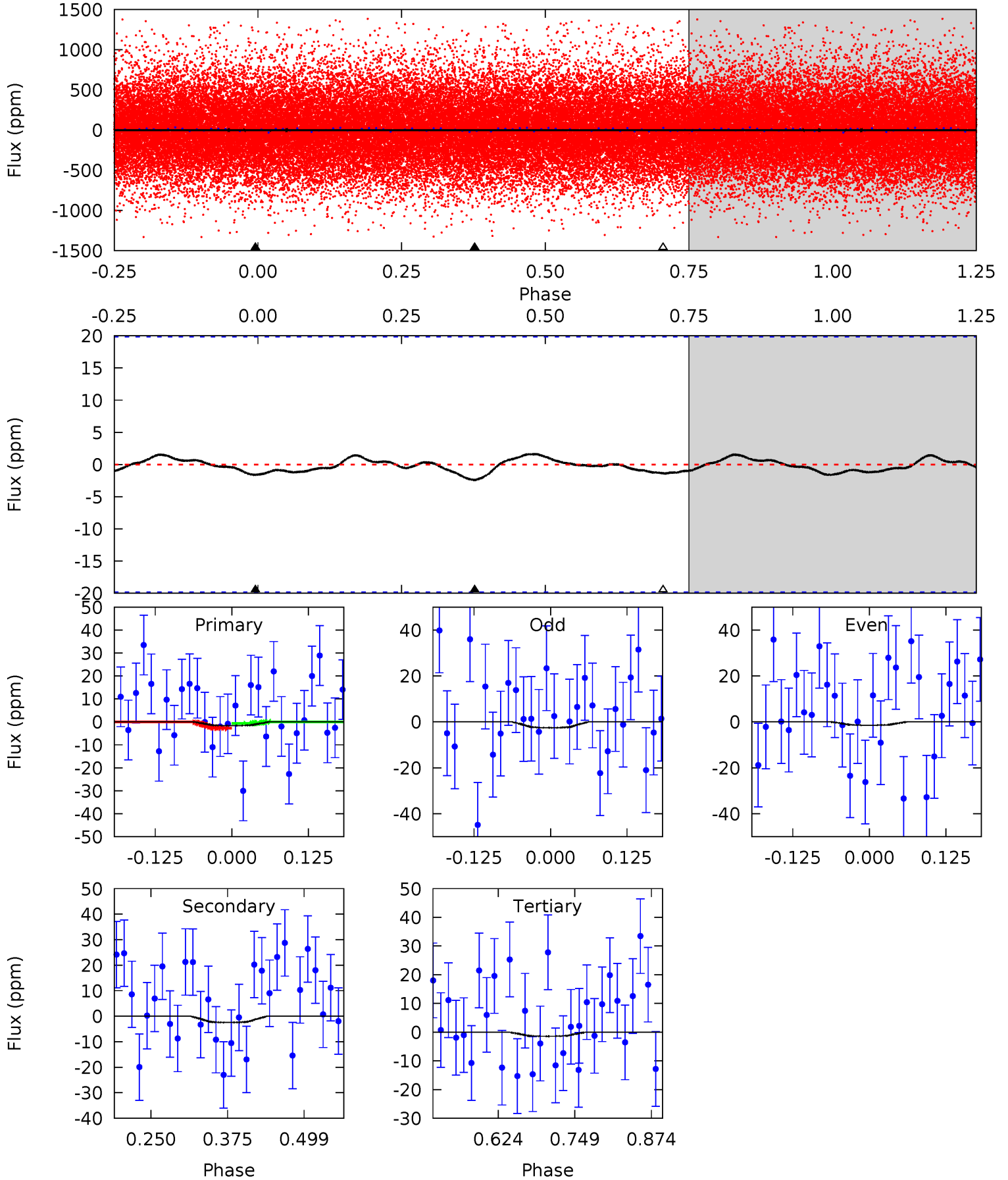
TCE 010226487-01 P= 0.660662 Days  $T_0=131.686427$  (BKJD)



# DV Model-Shift Uniqueness Test

010226487-01, P = 0.660291 Days, E = 131.013738 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
0.37	0.56	0.32	0	4.52	1.53	0.18	0.05	0.37	0.23	0.56	0.12	2.11	0.40	0.23

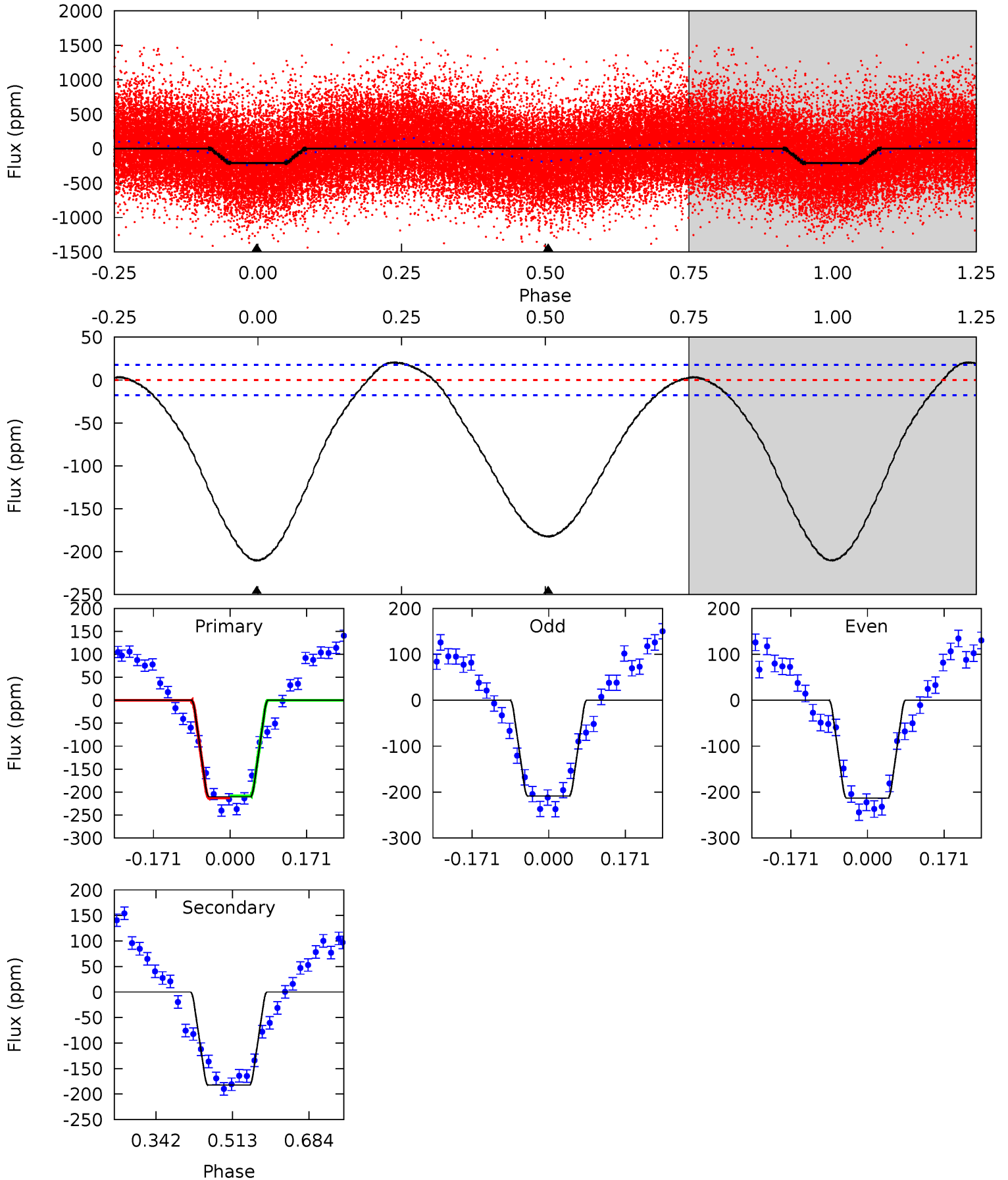




# Alt Model-Shift Uniqueness Test

010226487-01, P = 0.660662 Days, E = 131.025765 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
52.9	45.8	0	0	4.45	1.37	3.23	52.9	52.9	45.8	45.8	0.56	0.98	0.09	0.52





### Stellar Parameters For KIC 010226487

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5288^{+143}_{-159}$	$4.613^{+0.036}_{-0.090}$	$-0.240^{+0.300}_{-0.300}$	$0.740^{+0.112}_{-0.060}$	$0.828^{+0.070}_{-0.096}$	$2.883^{+0.470}_{-0.856}$
	+3%/-3%	+1%/-2%	+125%/-125%	+15%/-8%	+8%/-12%	+16%/-30%
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 010226487-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-2 \pm 4$	$2.07^{+2.31}_{-1.51}$	$2404^{+103}_{-107}$	$-2664^{+5495}_{-144}$	$0.033^{+0.606}_{-0.071}$
Alt.	$-182 \pm 4$	$2.43^{+2.40}_{-1.62}$	$2403^{+116}_{-101}$	$3812^{+2284}_{-872}$	$3.297^{+24.845}_{-2.471}$

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

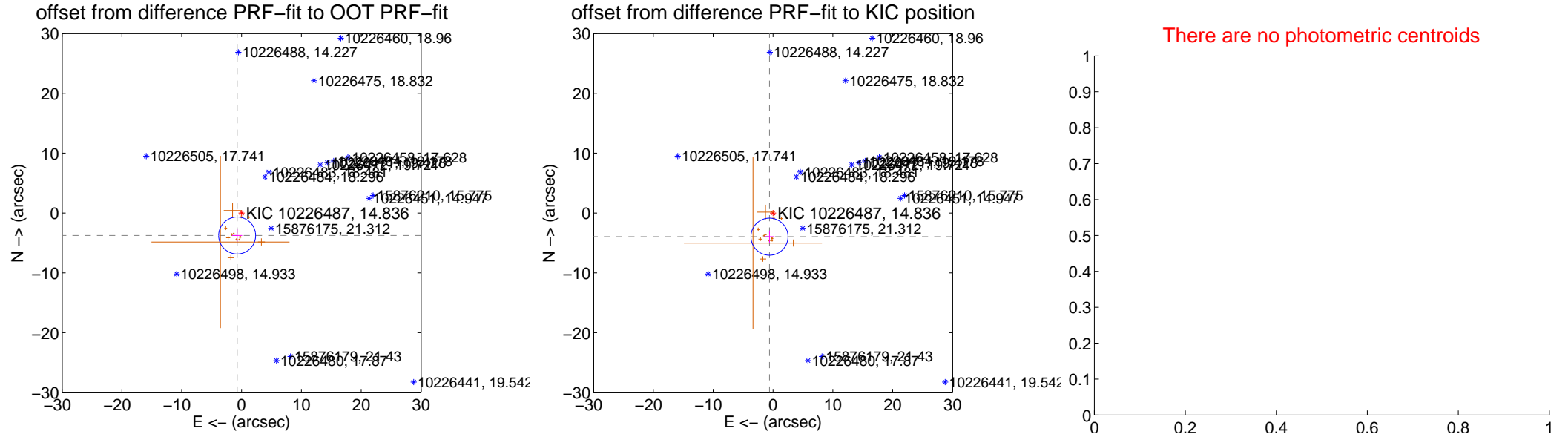
## DV Centroid Data

Supplemental centroid analysis for 010226487-01. Kepler magnitude: 14.84. Transit SNR 0.00

There are 0 quarters with good PRF difference image offsets

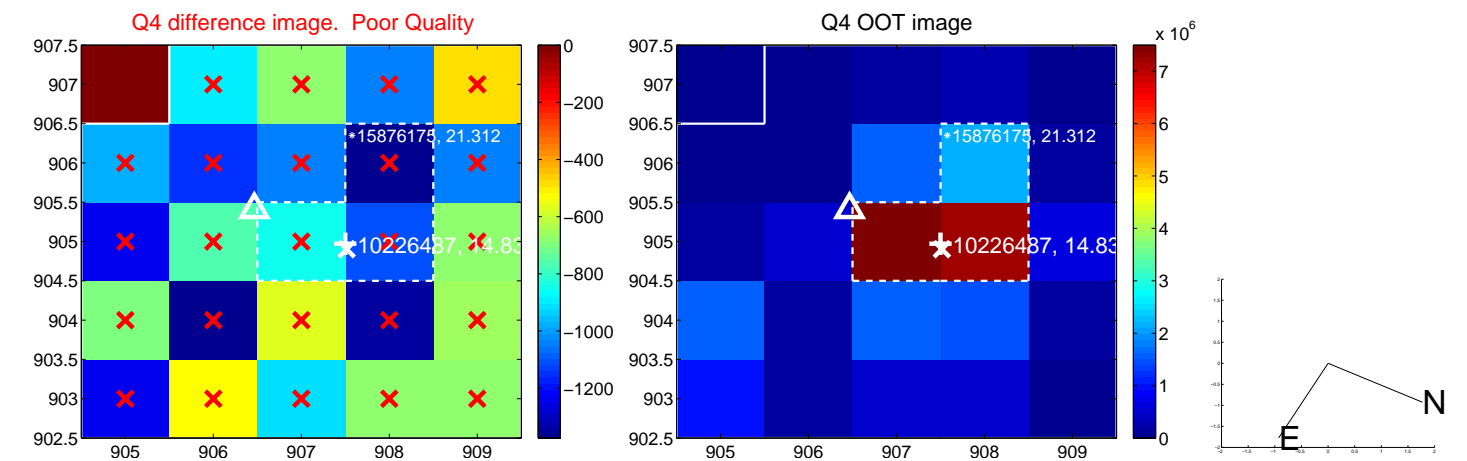
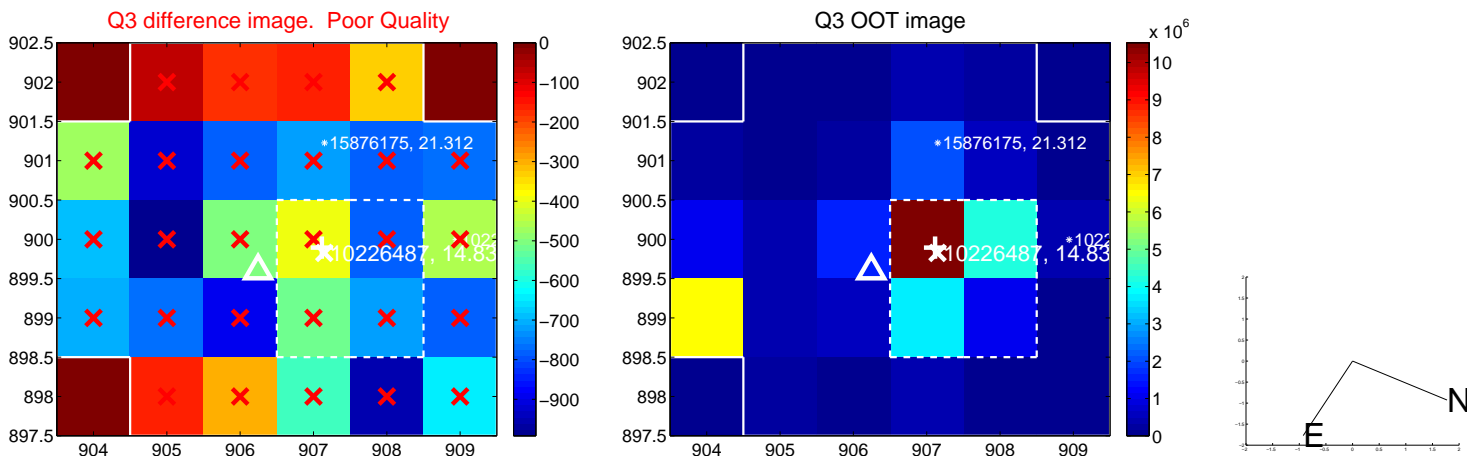
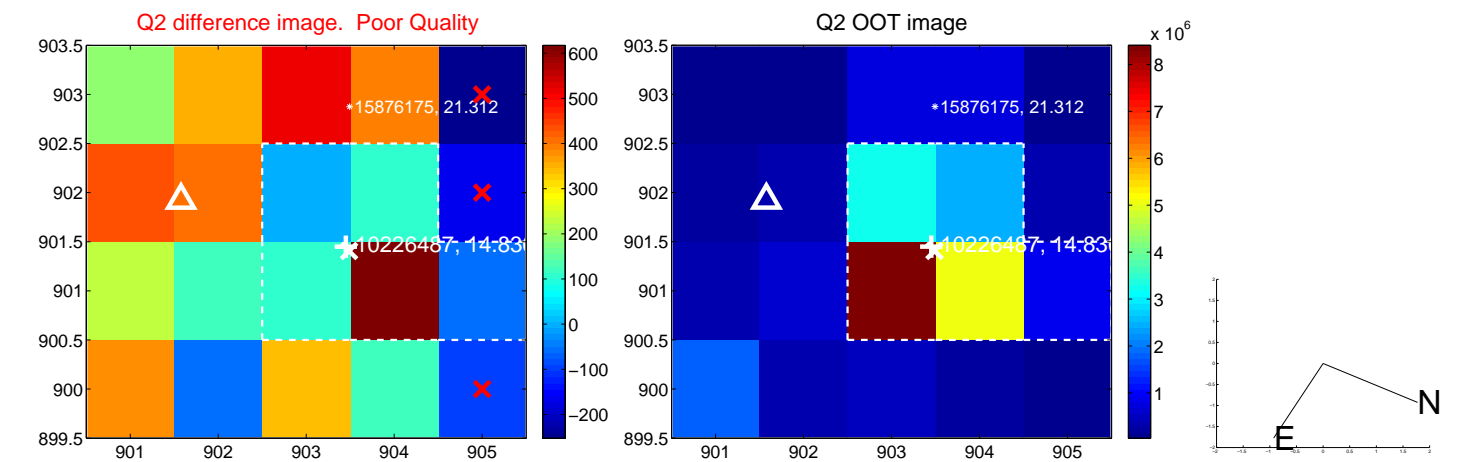
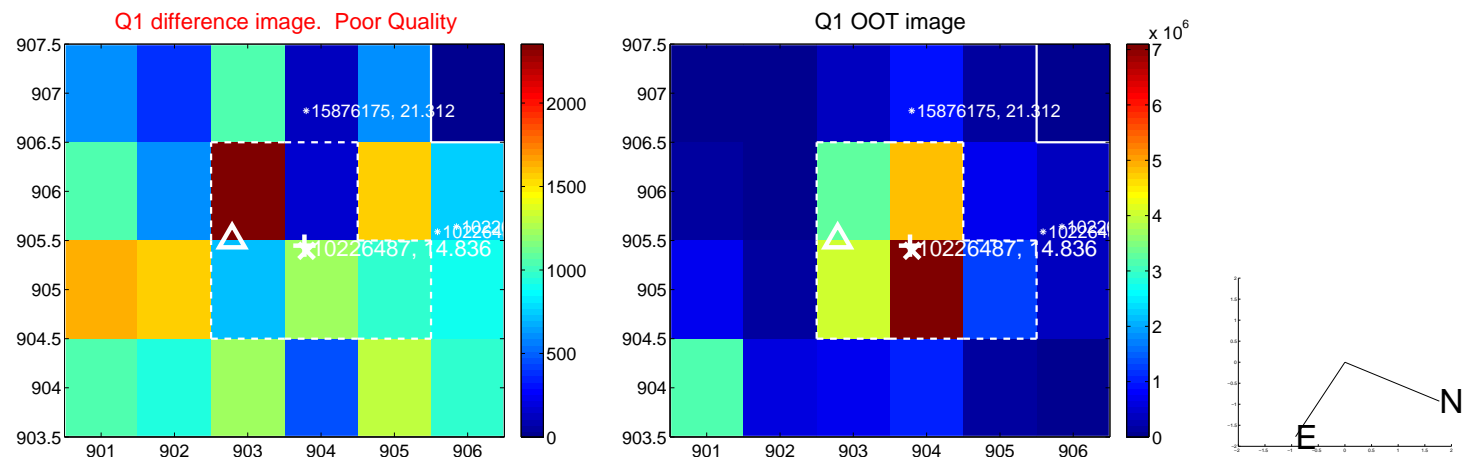
The direct PRF centroid is offset from the target star catalog position by about 0.28 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$3.830 \pm 1.029$	3.72	$0.734 \pm 0.837$	$-3.759 \pm 1.036$
PRF-fit source offset from KIC position	$3.998 \pm 1.032$	3.87	$0.590 \pm 0.837$	$-3.954 \pm 1.036$
photometric centroid source offset	—	—	—	—

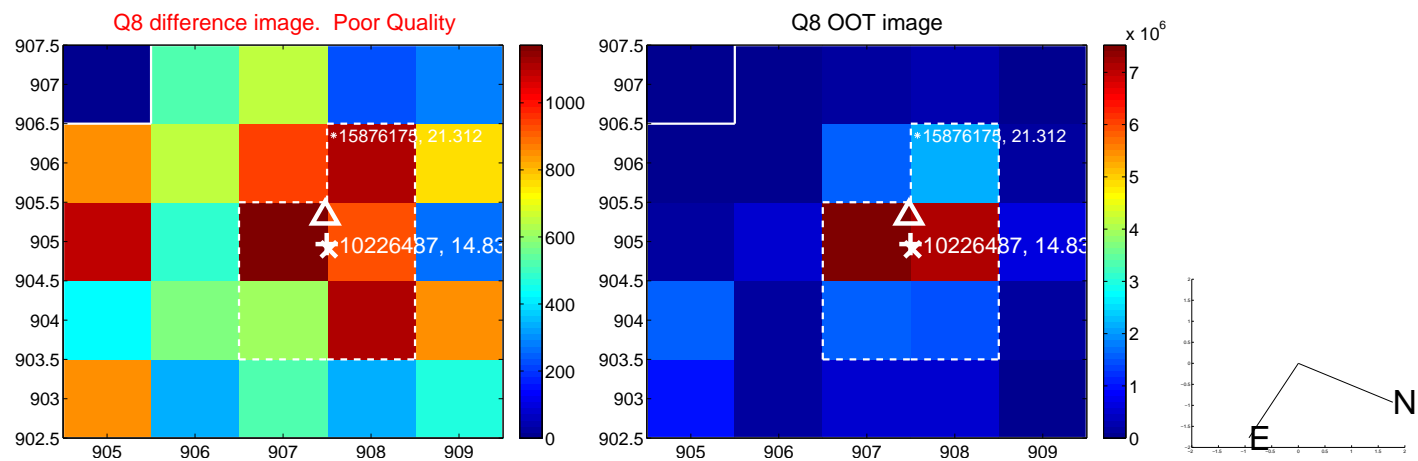
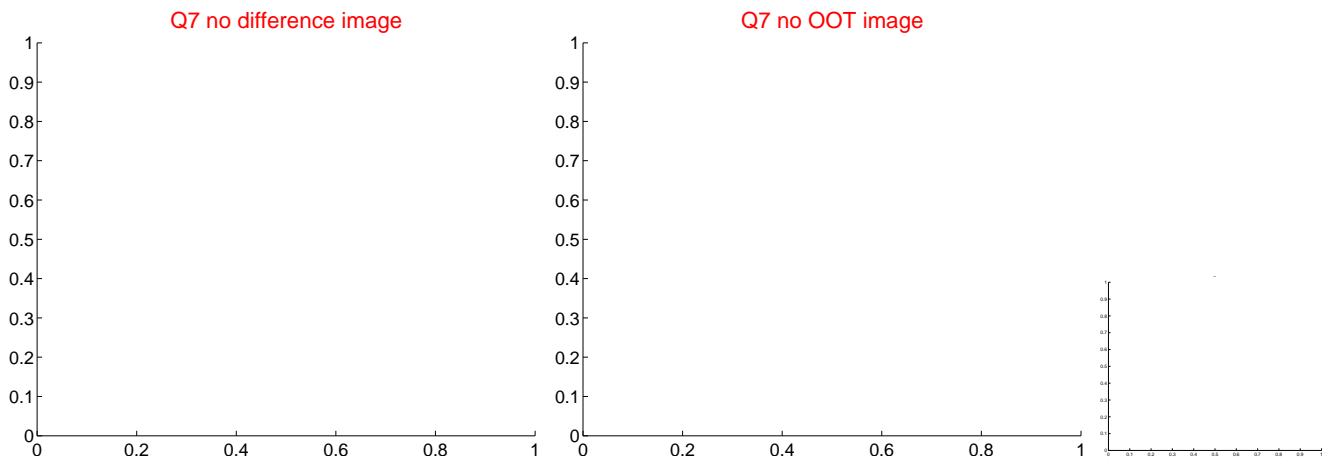
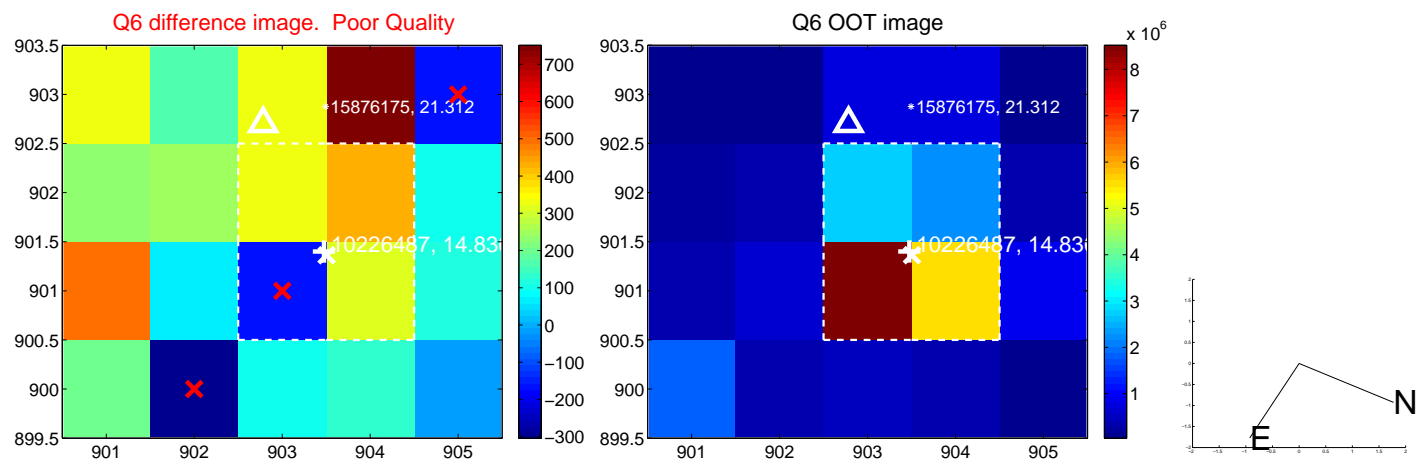
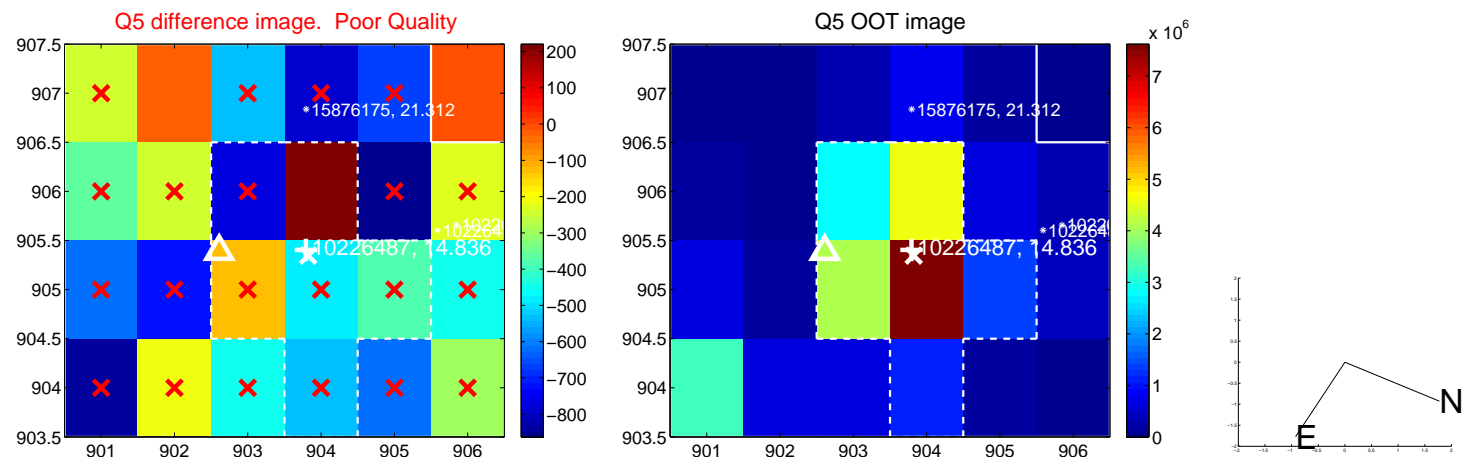


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

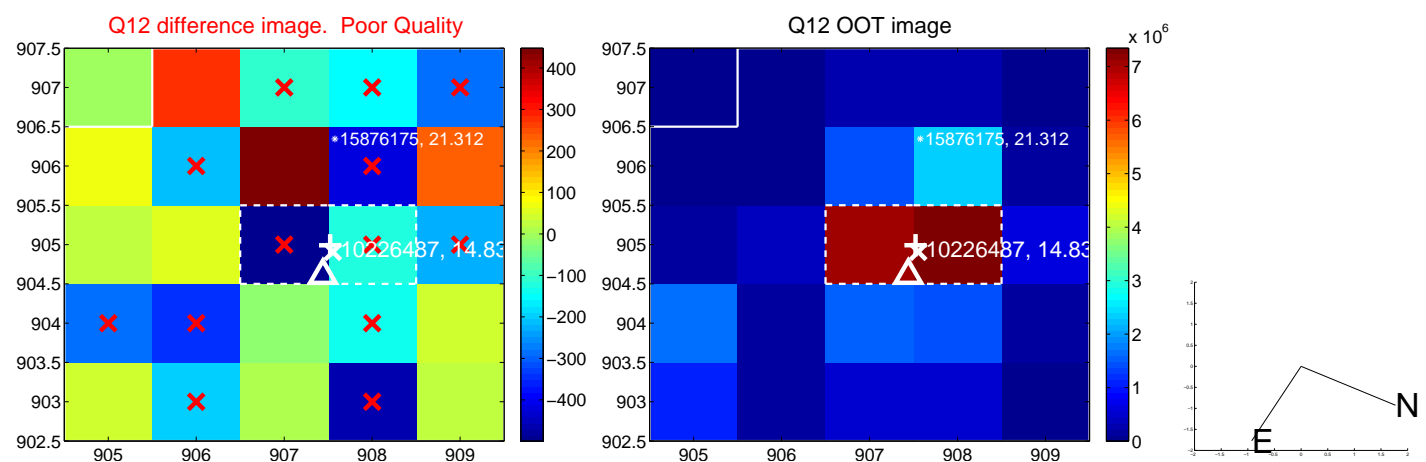
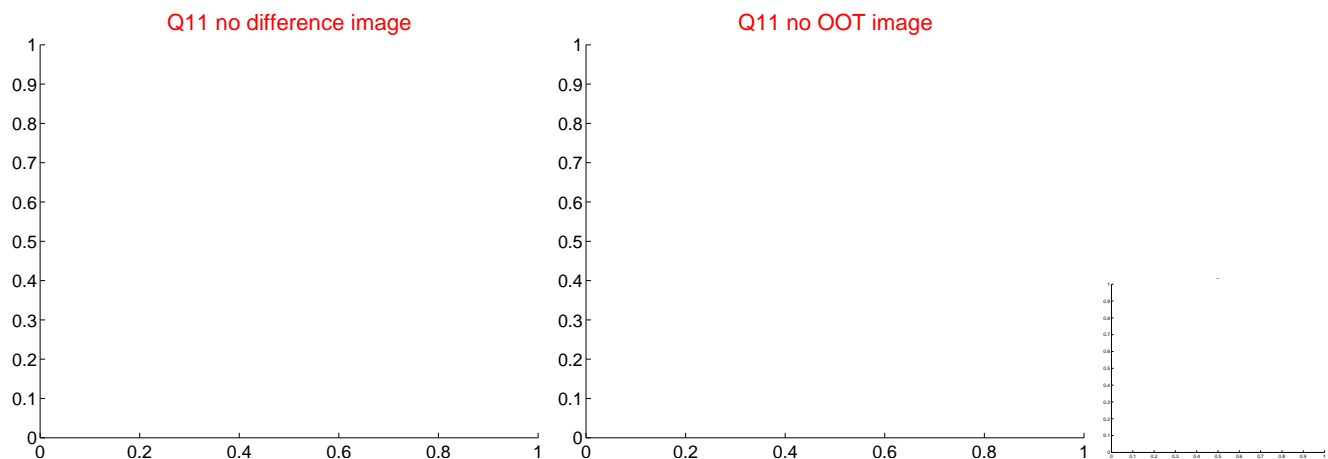
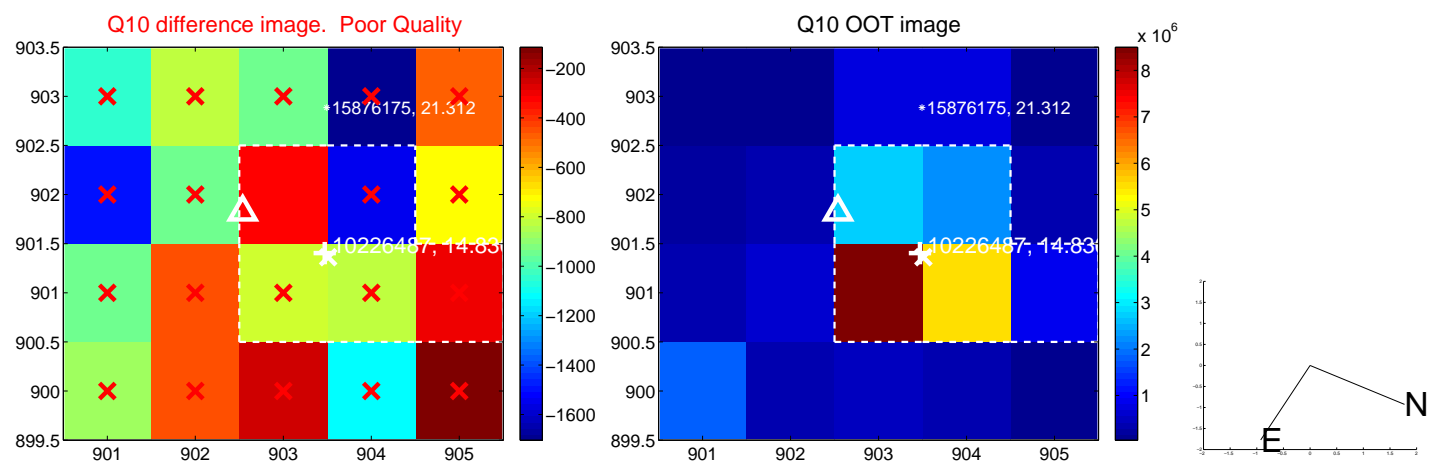
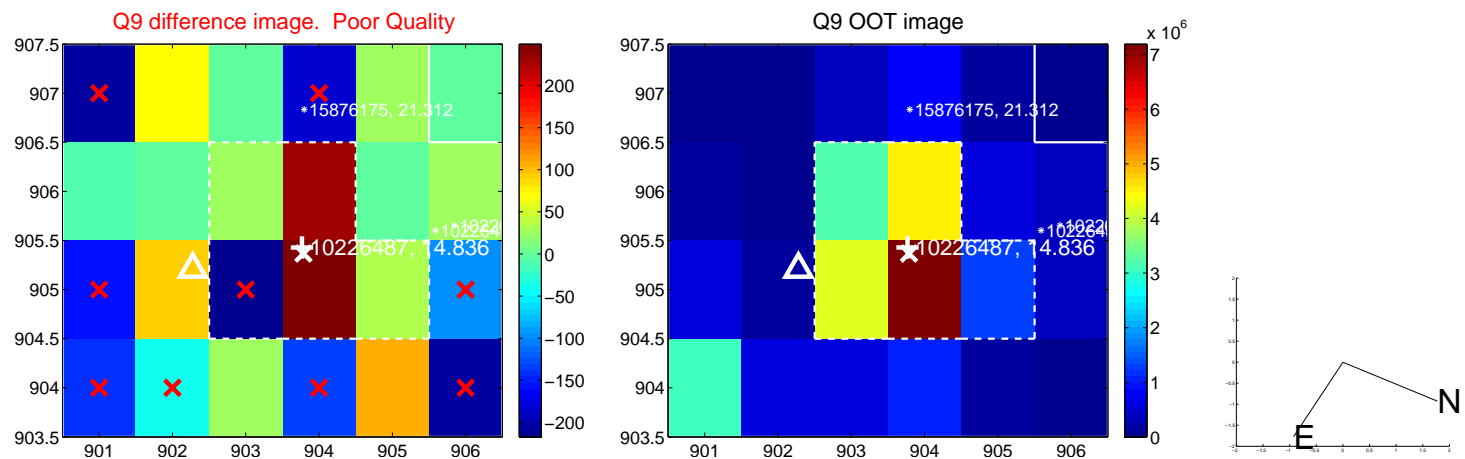


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

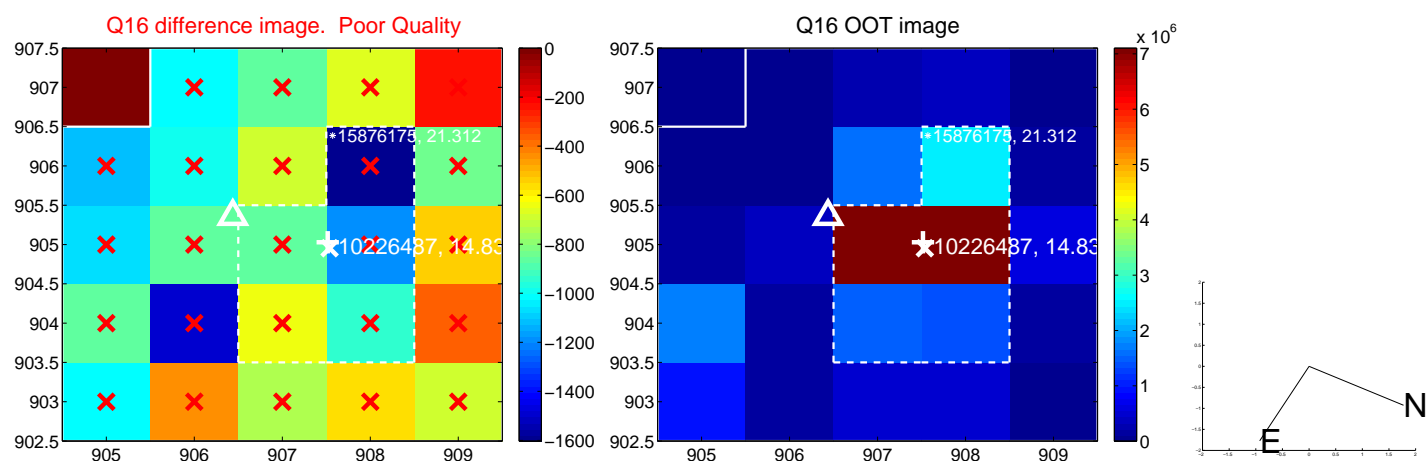
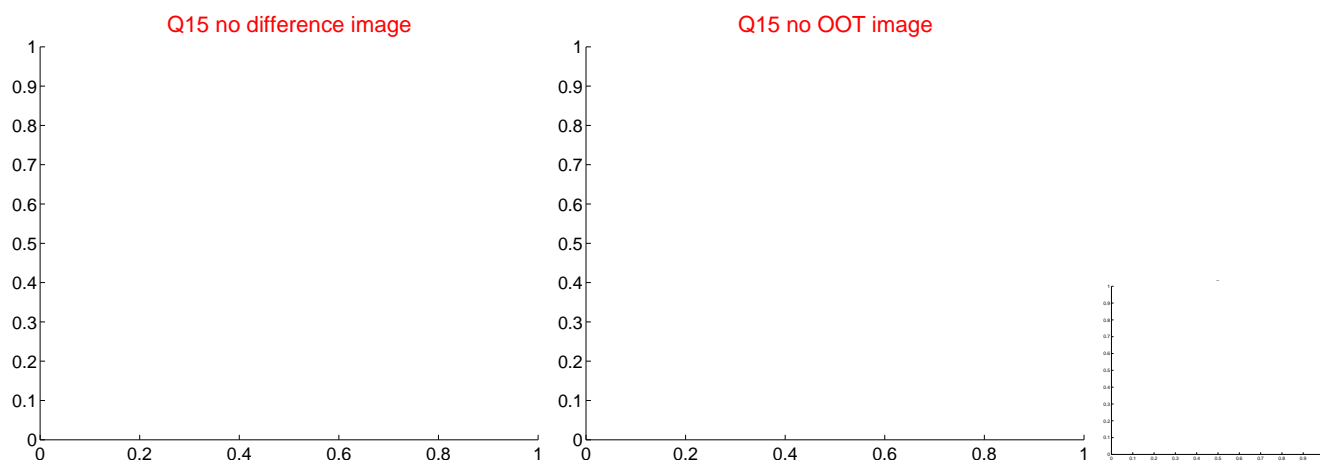
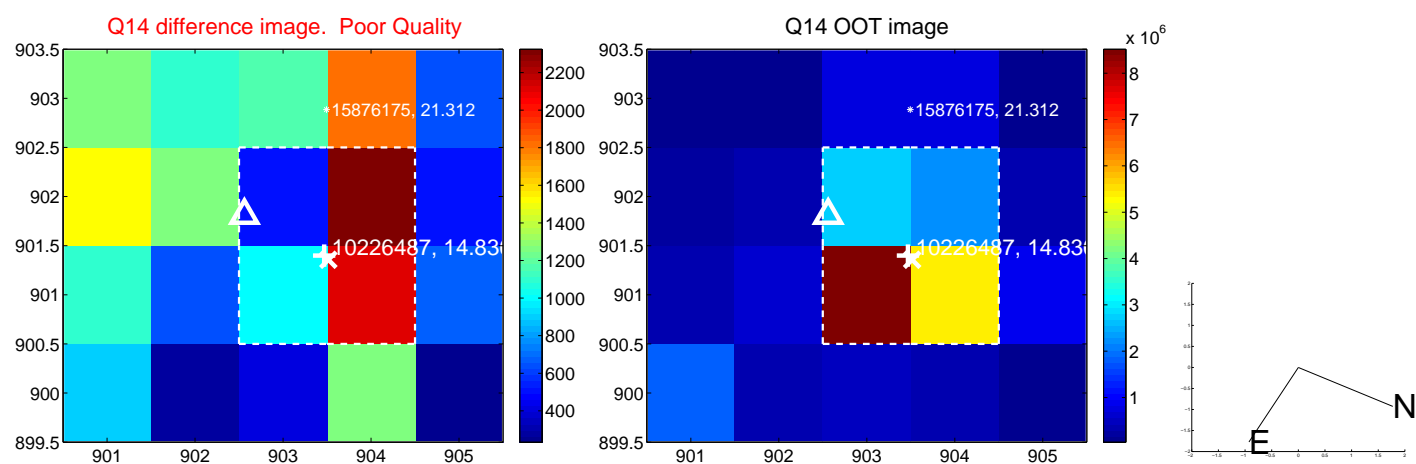
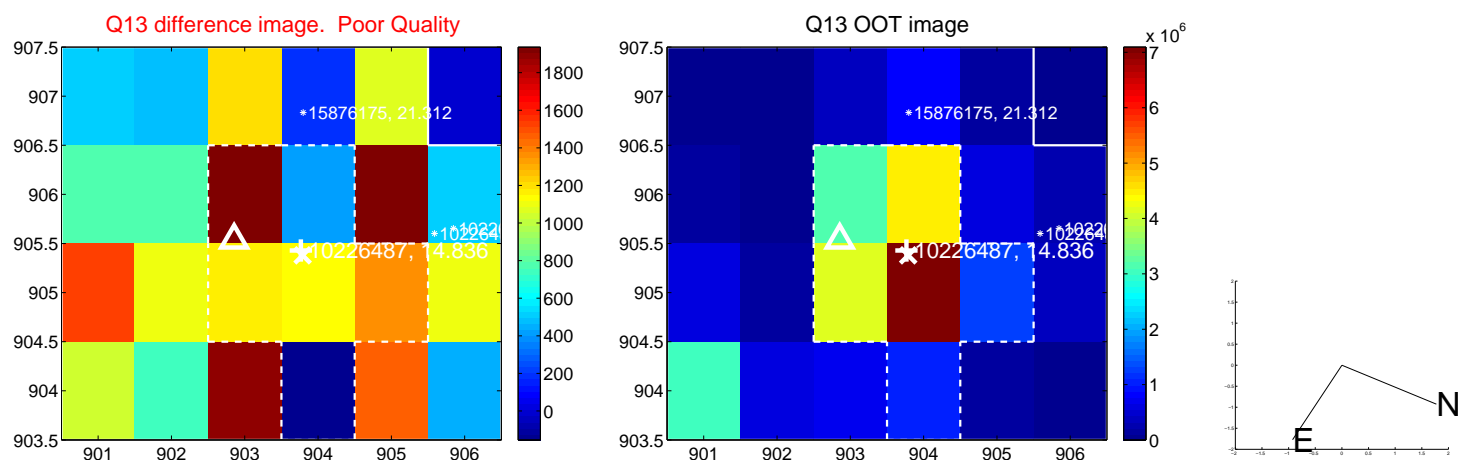




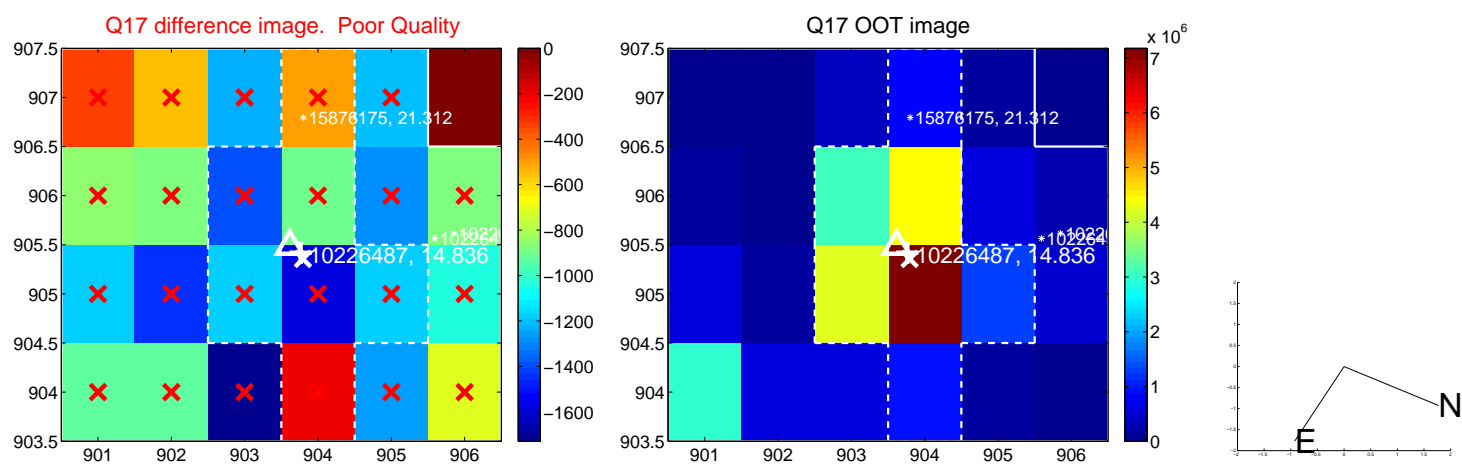
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



folded centroid time series figure for this object.



UKIRT Image

Declination

