

# KIC 011071207

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011071207-01	OBS	7405.01	8.049651	138.649117	280906.7	3.500	12314.4	-1.0	1.49	6698	64.58	572.08
011071207-02	OBS	No	8.049625	135.599930	139263.4	8.657	6184.4	5623.0	1.49	6698	82.06	572.08
011071207-03	OBS	No	5.365856	133.091332	593.6	17.010	945.7	18.7	1.49	6698	4.57	982.44

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011071207-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_NOFITS
011071207-02	OBS	FP	0.00	1	0	0	0	SAME_NTL_PERIOD
011071207-03	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—CENT_FEW_DIFFS—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.

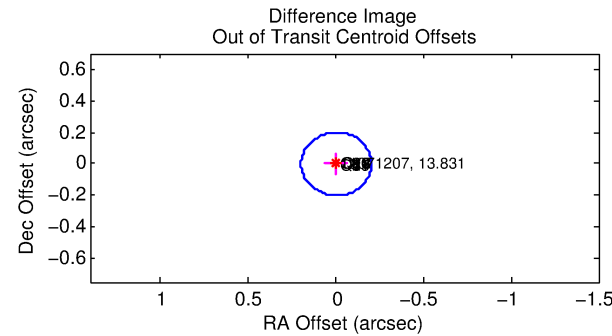
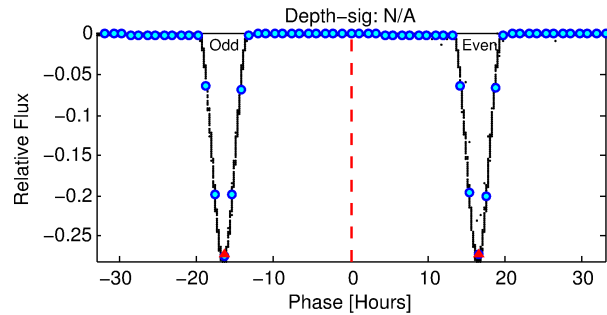
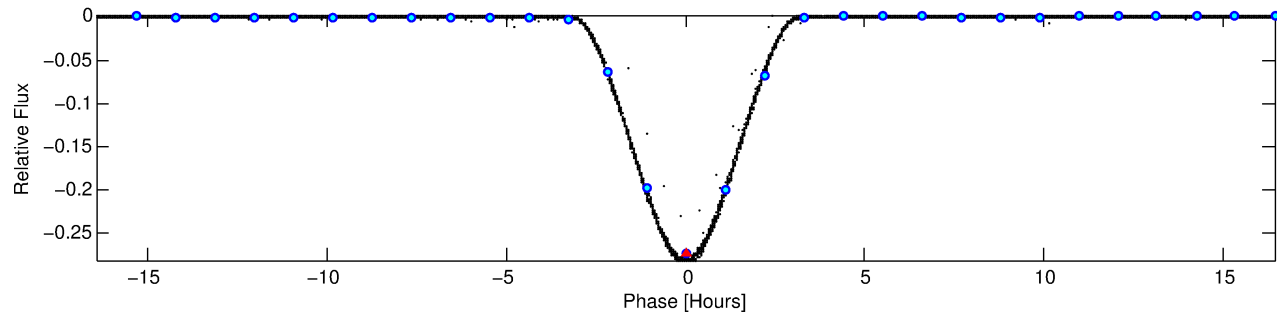
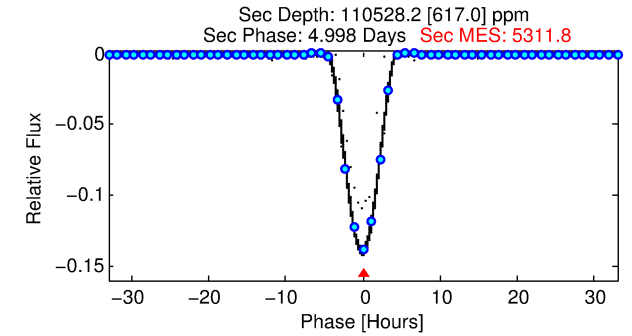
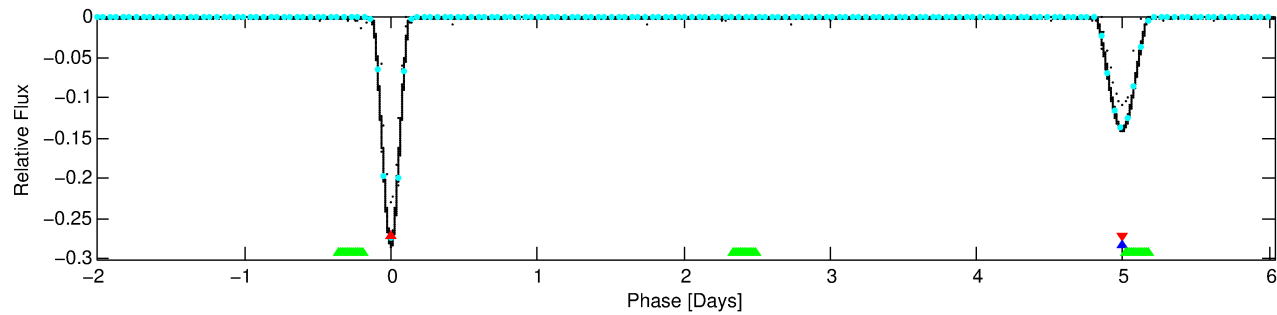
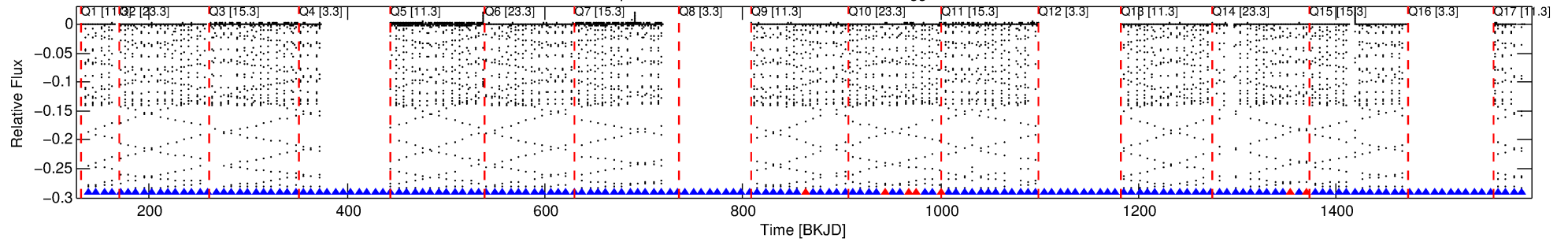
Ephemeris Match Information For 011071207-01

No Significant Match Found

# DV One-Page Summary

KIC: 11071207 Candidate: 1 of 3 Period: 8.050 d  
KOI: K07405.01 Corr: 0.763

Kp: 13.83 R\*: 1.49 Rs Teff: 6698.0 K Logg: 4.17 Fe/H: -0.380



## TPS TCE Results:

Period = 8.04965 d  
Epoch = 138.6491 BKJD

DV fit results are unavailable

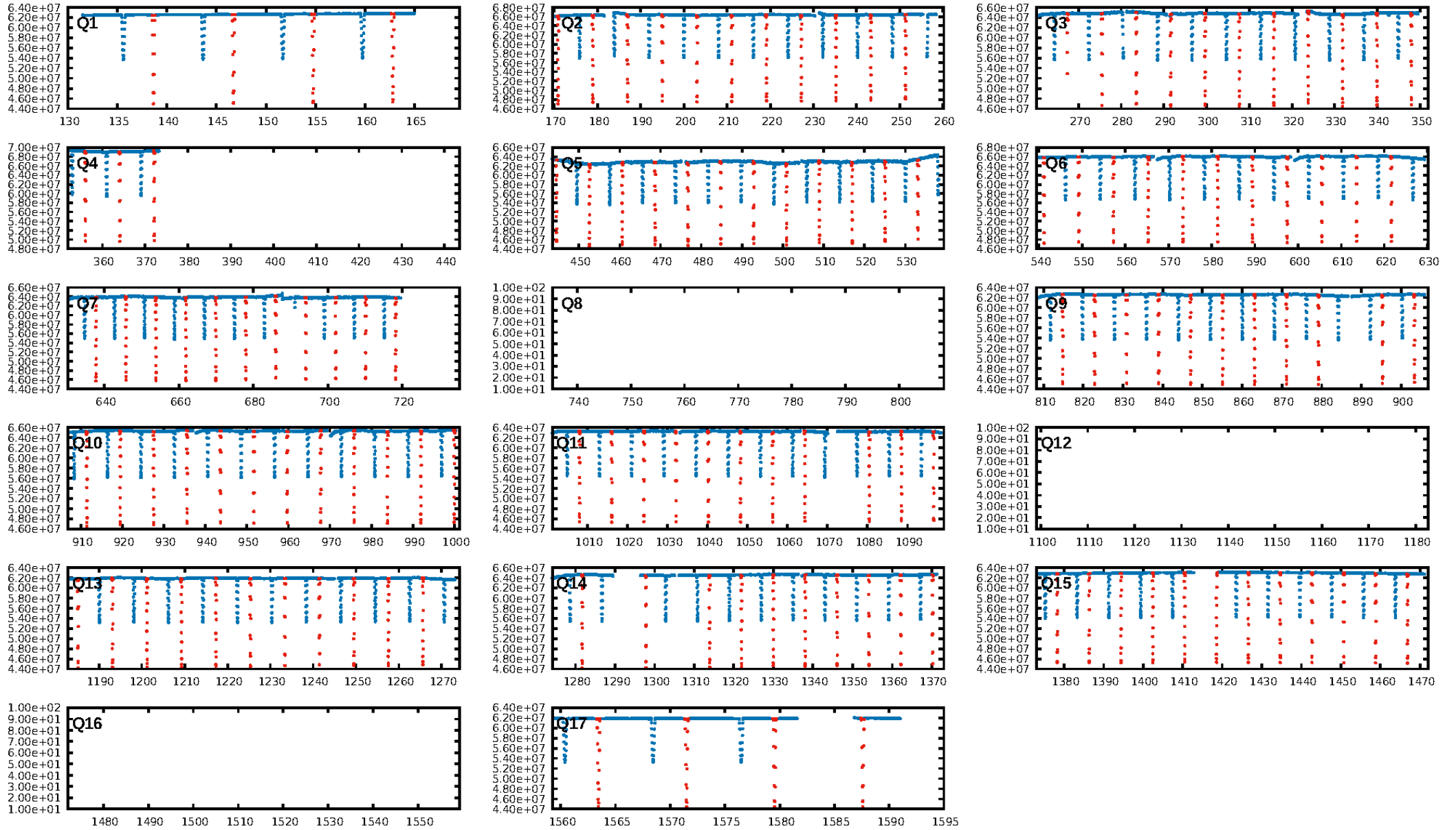
## DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 $\sigma$ ]  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 0.94 [116/123]  
GhostDiagnostic-chr: 1.584  
Centroid-sig: 0.0%  
Centroid-so: 0.095 arcsec [194.32 $\sigma$ ]  
OotOffset-rm: 0.004 arcsec [0.05 $\sigma$ ]  
KicOffset-rm: 0.054 arcsec [0.78 $\sigma$ ]  
OotOffset-st: 4/4/1/5 [14]  
KicOffset-st: 4/4/1/5 [14]  
DiffImageQuality-fgm: 1.00 [14/14]  
DiffImageOverlap-fno: 1.00 [14/14]

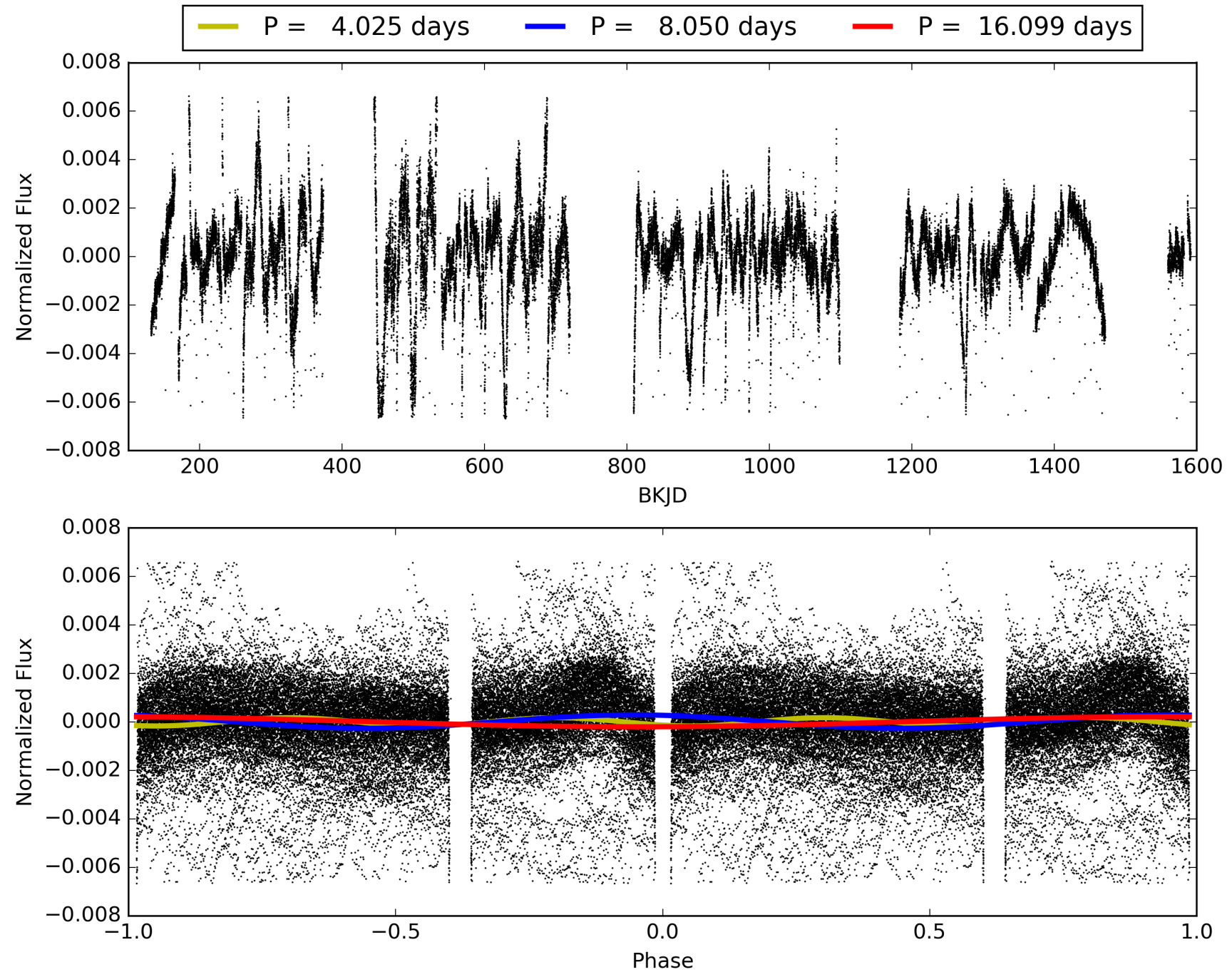
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:36:51 Z

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

# TCE 011071207-01, PDC Light Curves

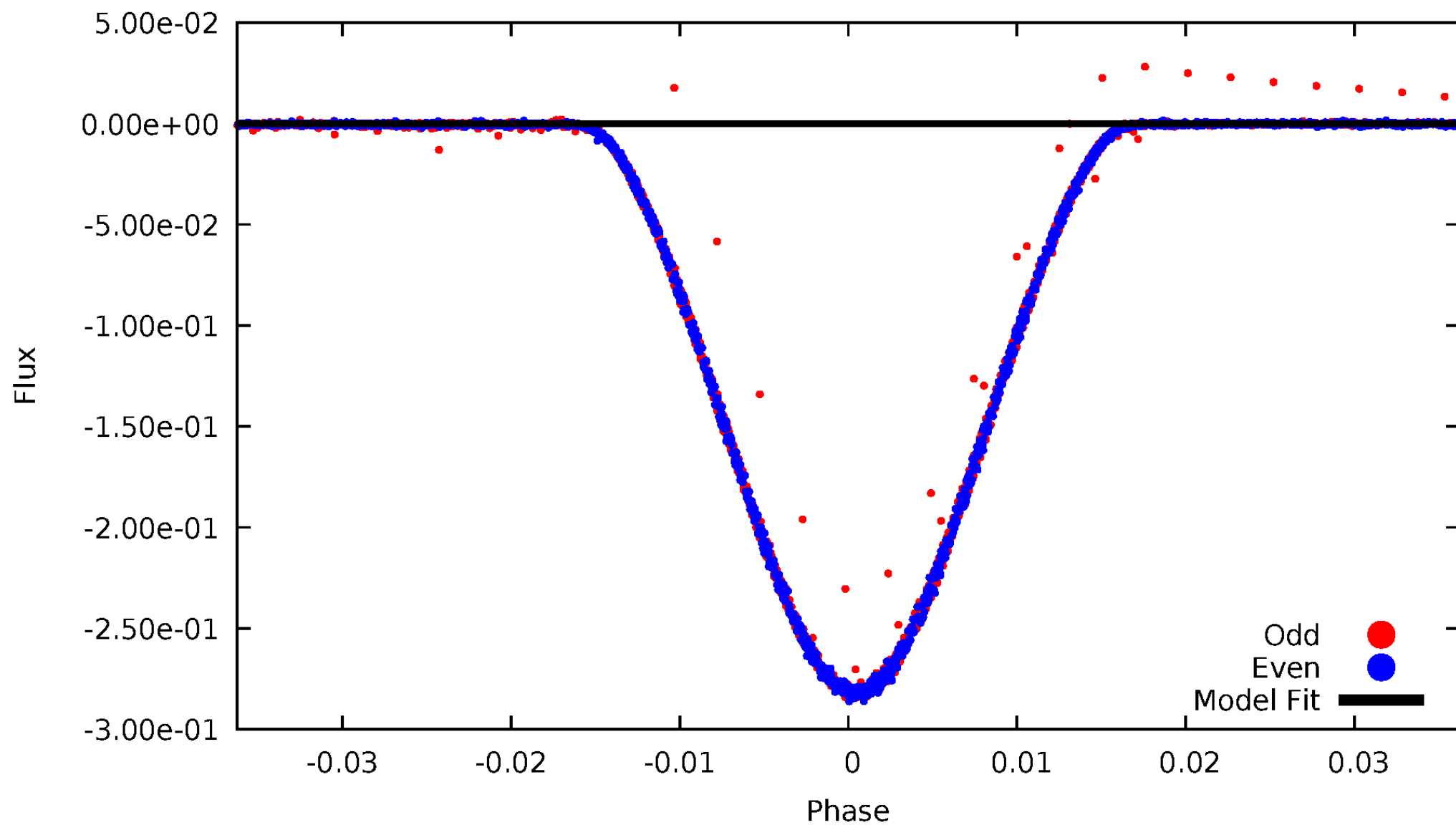


TCE 011071207-01



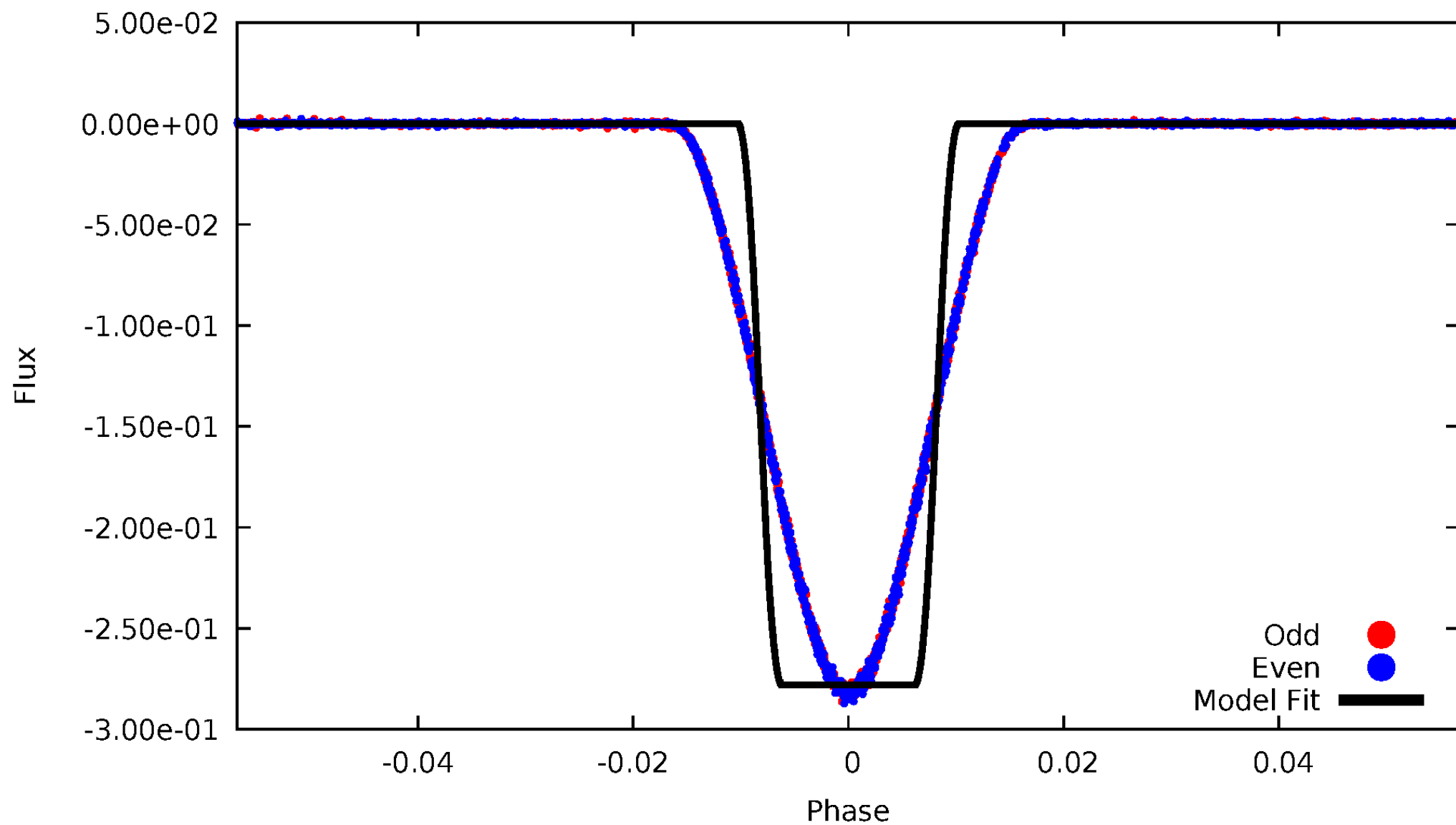
# DV Odd/Even

TCE 011071207-01



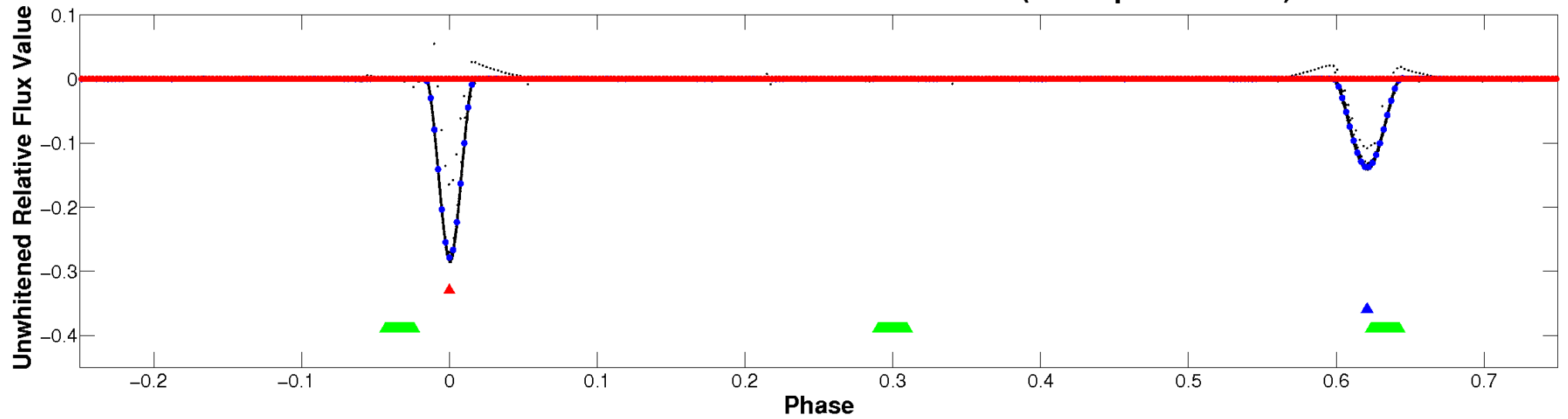
# ALT Odd/Even

TCE 011071207-01

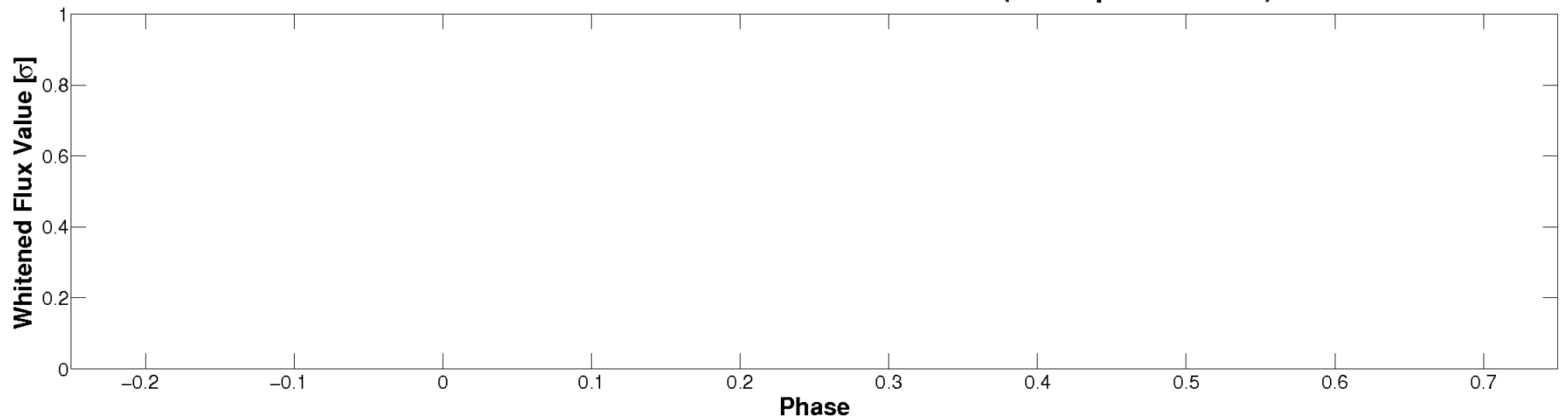


# Non-Whitened Vs. Whitened Light Curve

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

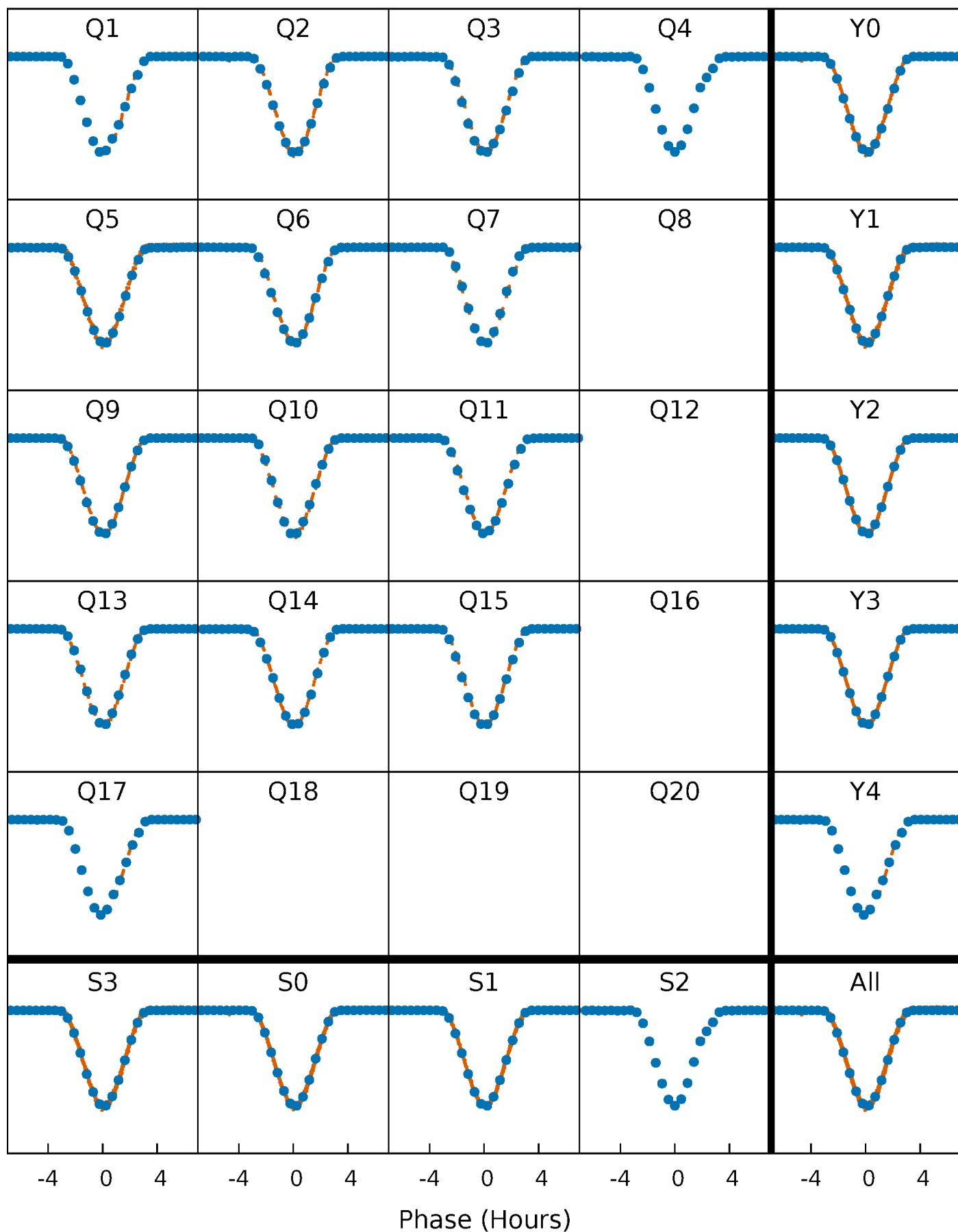


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



# PDC Quarter-Phased Transit Curves

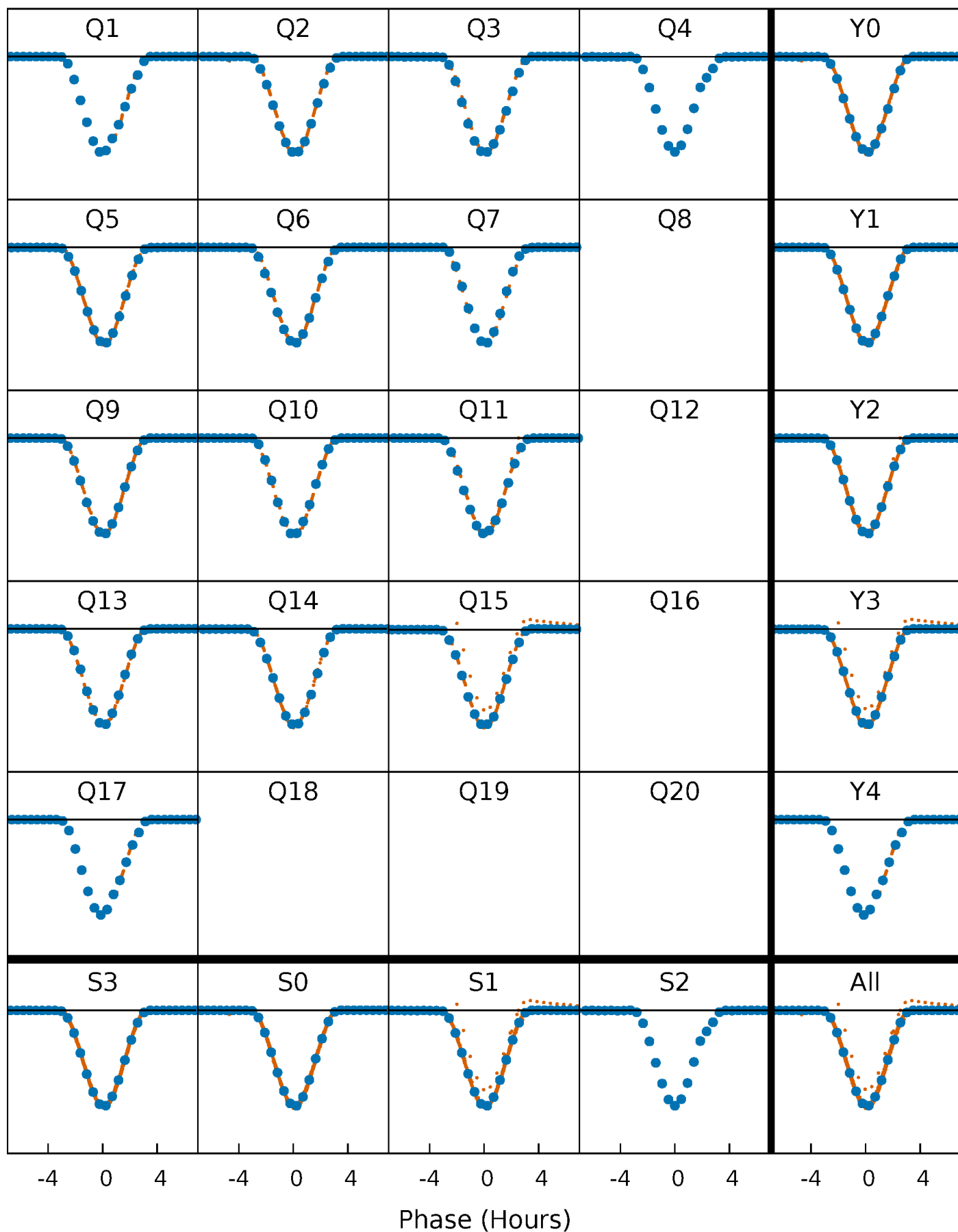
TCE 011071207-01 P= 8.049651 Days  $T_0=138.649117$  (BKJD)





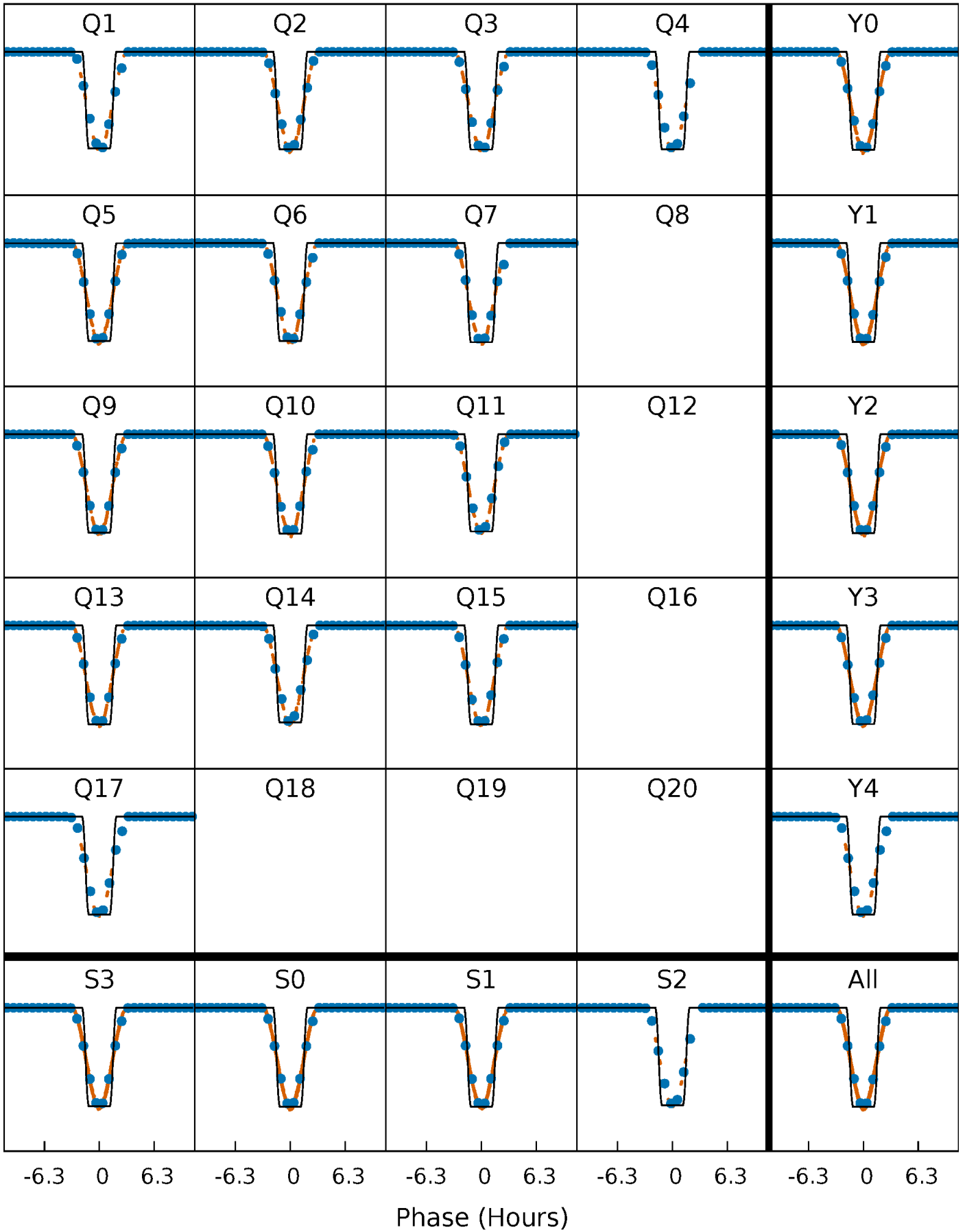
# DV Quarter-Phased Transit Curves

TCE 011071207-01 P= 8.049651 Days  $T_0=138.649117$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

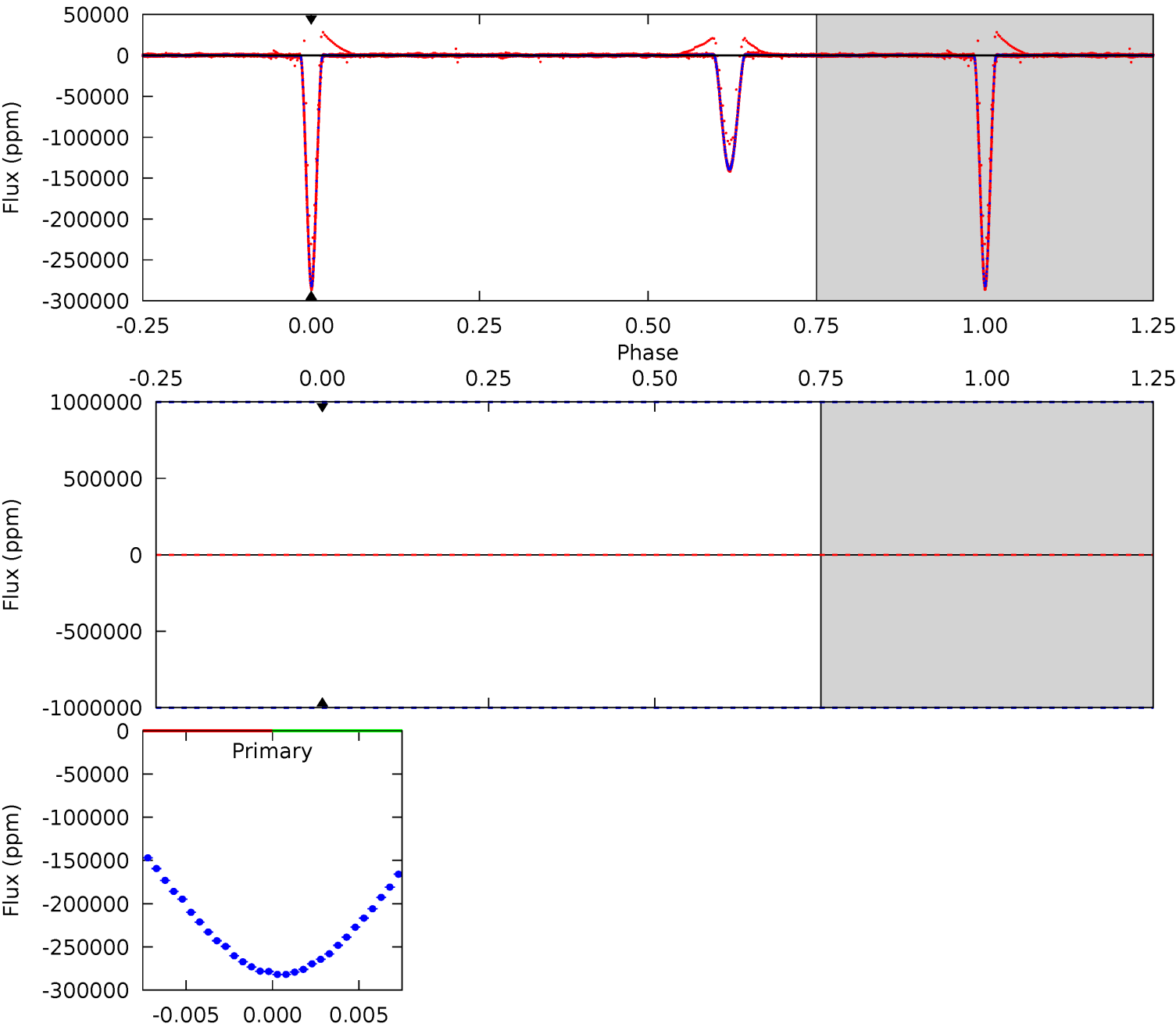
TCE 011071207-01 P= 8.049651 Days  $T_0=138.652498$  (BKJD)



# DV Model-Shift Uniqueness Test

011071207-01, P = 8.049651 Days, E = 130.599466 Days

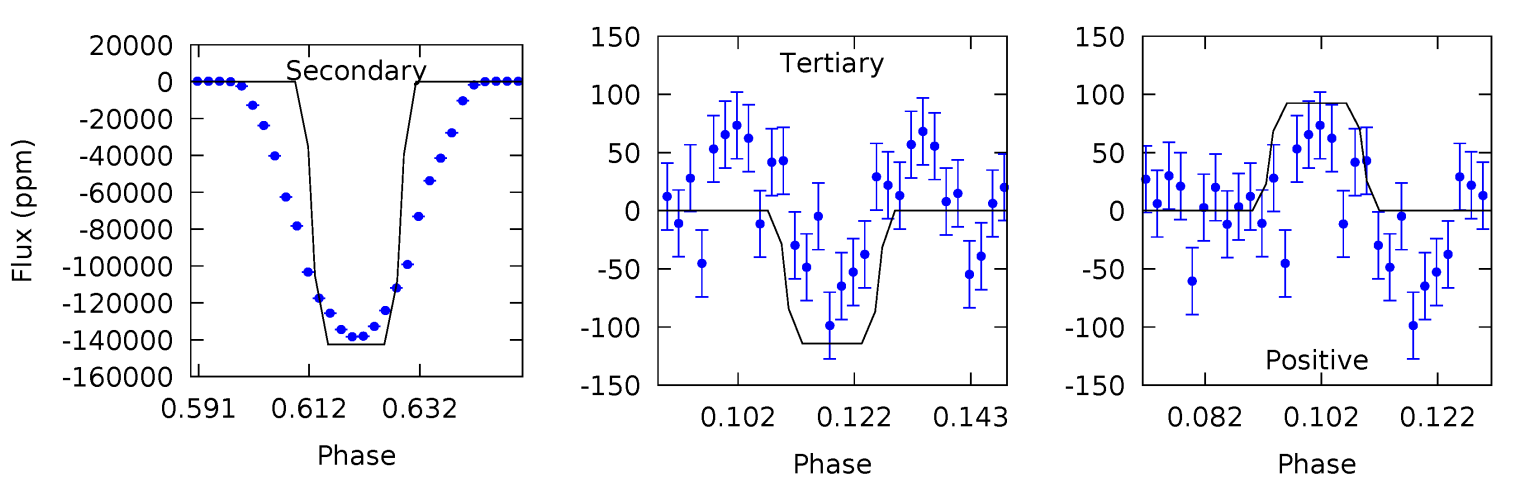
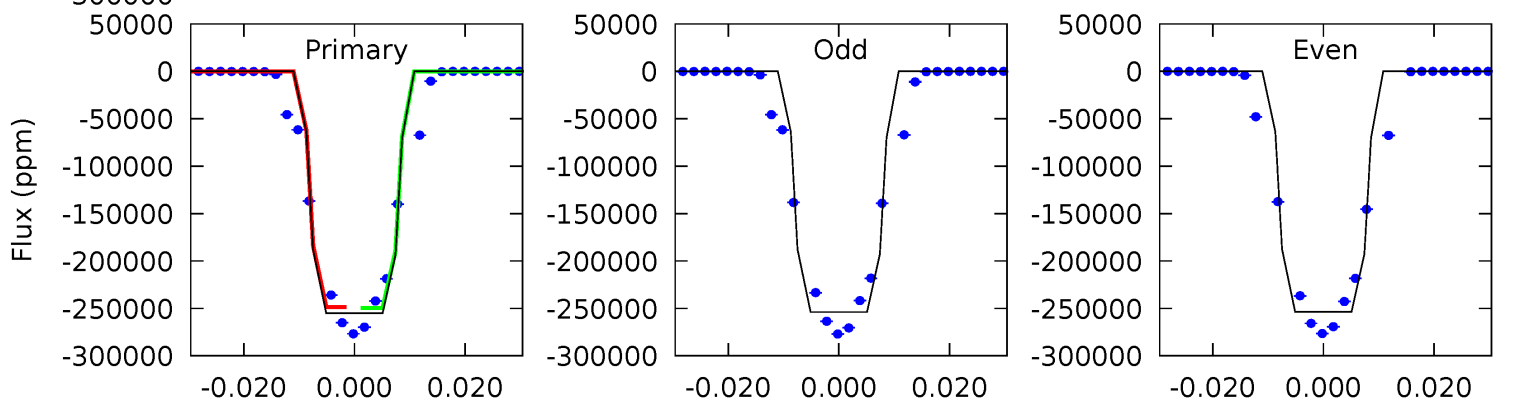
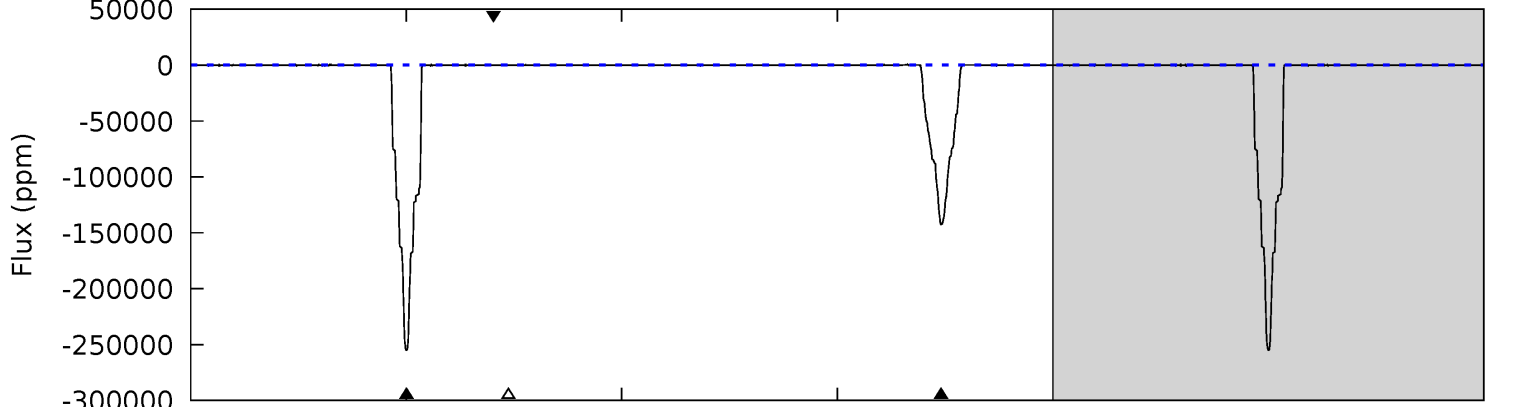
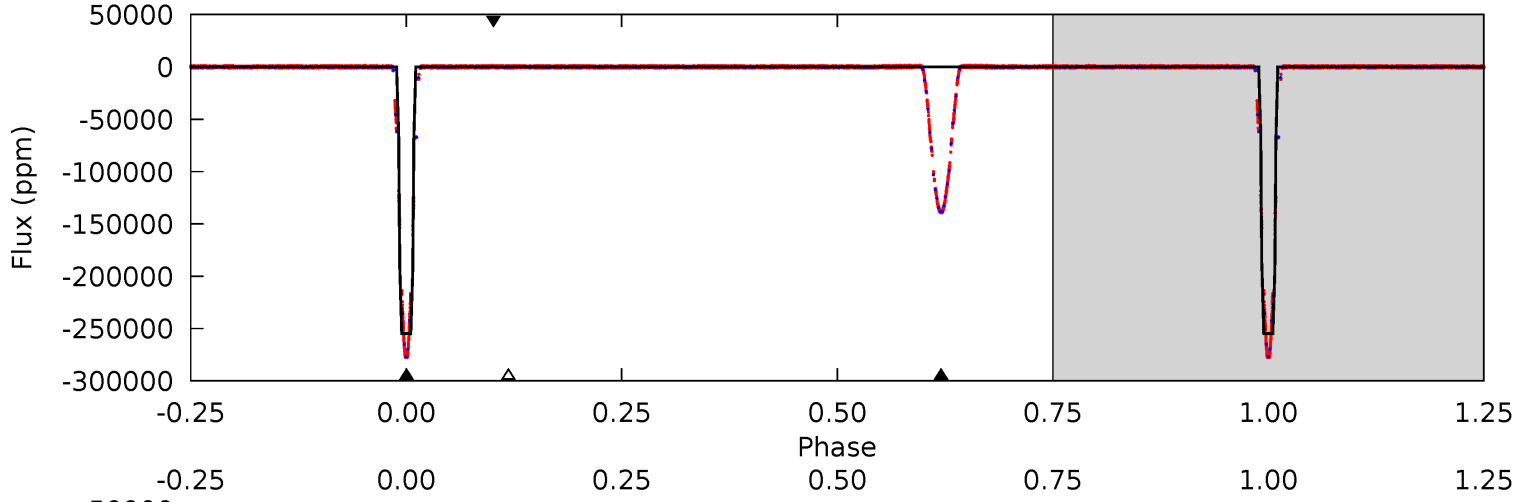
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



# Alt Model-Shift Uniqueness Test

011071207-01, P = 8.049651 Days, E = 130.602847 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
10723	5990	4.80	3.89	4.89	2.32	32.7	10718	10719	5985	5986	3.51	1.00	0.00	0



### Stellar Parameters For KIC 011071207

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$6698^{+169}_{-220}$	$4.171^{+0.185}_{-0.185}$	$-0.380^{+0.250}_{-0.300}$	$1.485^{+0.410}_{-0.336}$	$1.197^{+0.175}_{-0.175}$	$0.515^{+0.563}_{-0.250}$
	+3%/-3%	+4%/-4%	+66%/-79%	+28%/-23%	+15%/-15%	+109%/-49%
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 011071207-01 / KOI 7405.01

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$0 \pm 1000000$	$65.04^{+20.35}_{-18.64}$	$1749^{+125}_{-121}$	$2846^{+3285}_{-8714}$	$1.579^{+102.835}_{-92.199}$
Alt.	$-142399 \pm 24$	$86.95^{+22.08}_{-20.12}$	$1752^{+134}_{-124}$	$5850^{+651}_{-484}$	$84^{+52}_{-29}$

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

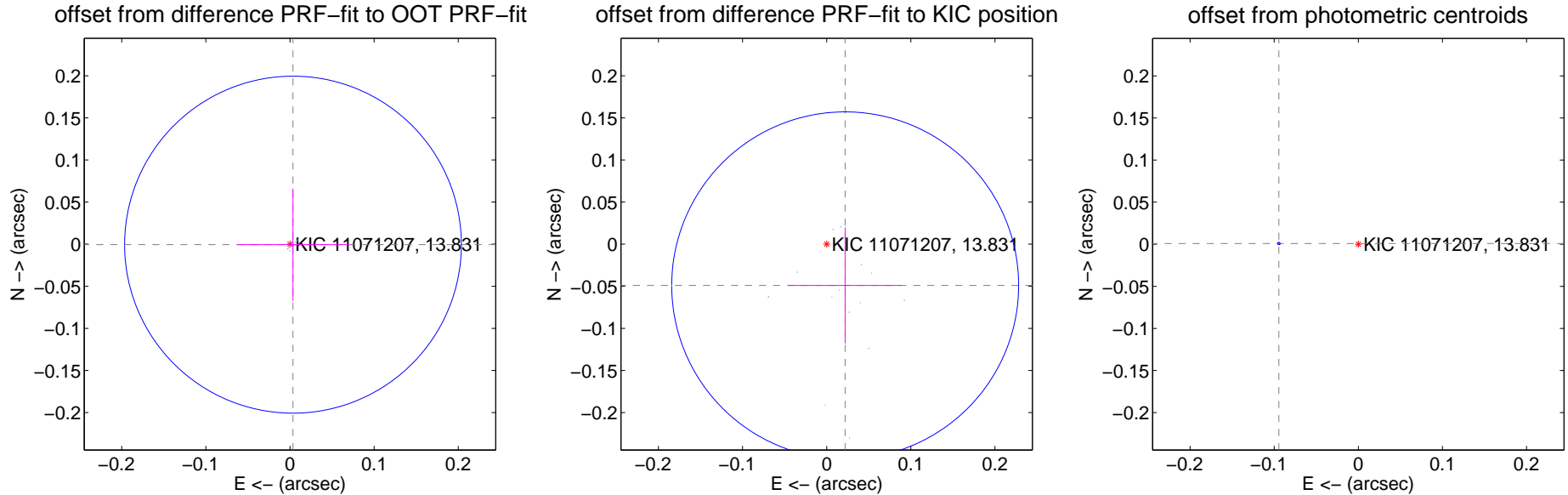
## DV Centroid Data

Supplemental centroid analysis for 011071207-01. Kepler magnitude: 13.83. Transit SNR -1.00

There are 14 quarters with good PRF difference image offsets

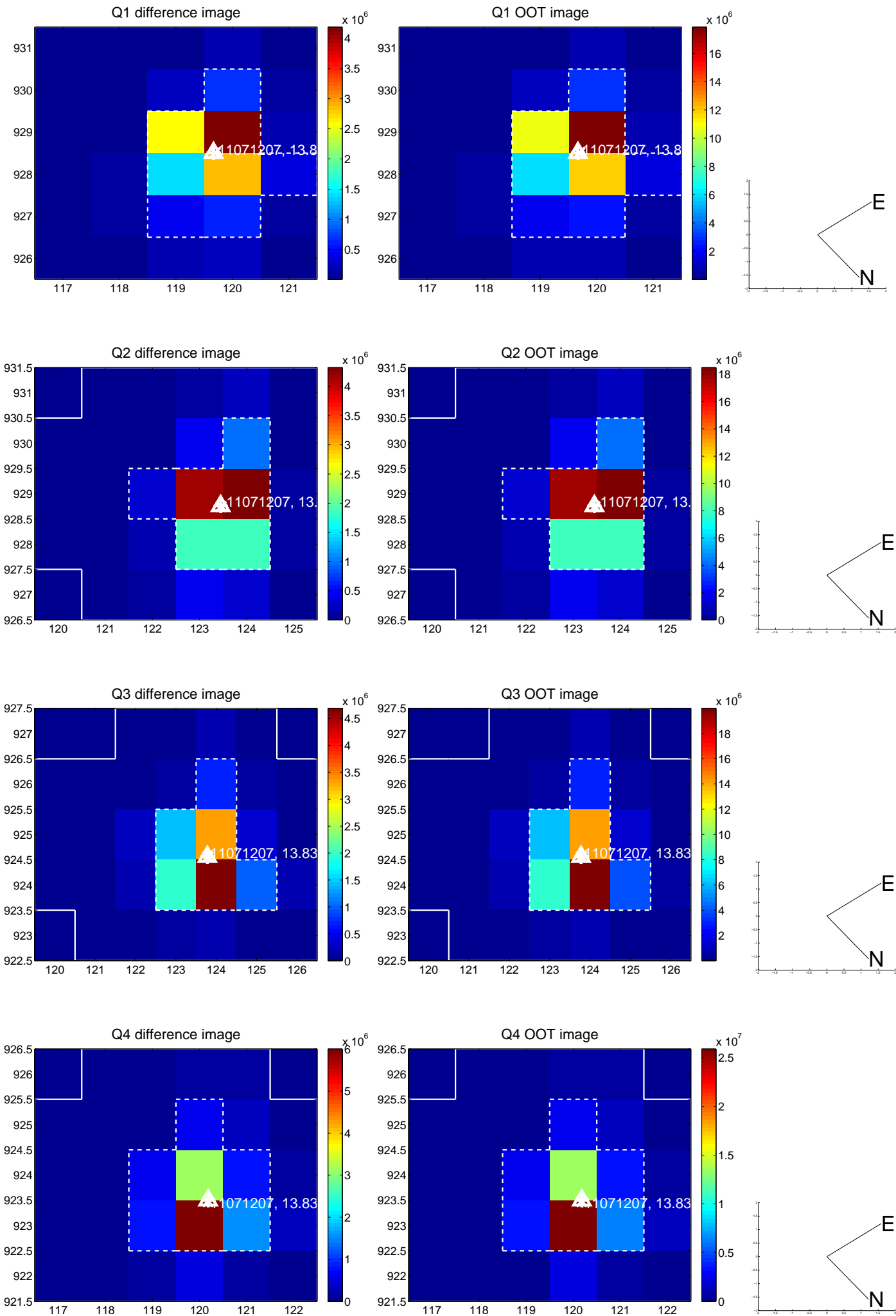
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.004 \pm 0.067$	0.05	$-0.004 \pm 0.067$	$-0.001 \pm 0.067$
PRF-fit source offset from KIC position	$0.054 \pm 0.069$	0.78	$-0.022 \pm 0.067$	$-0.049 \pm 0.069$
photometric centroid source offset	$0.09 \pm 0.00$	194.32	$0.09 \pm 0.00$	$0.00 \pm 0.00$

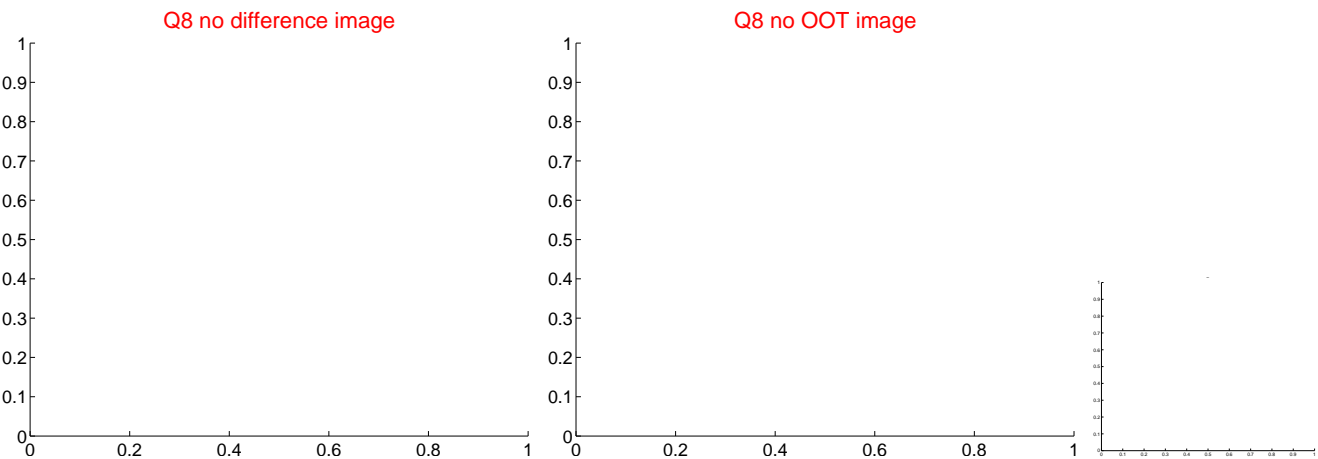
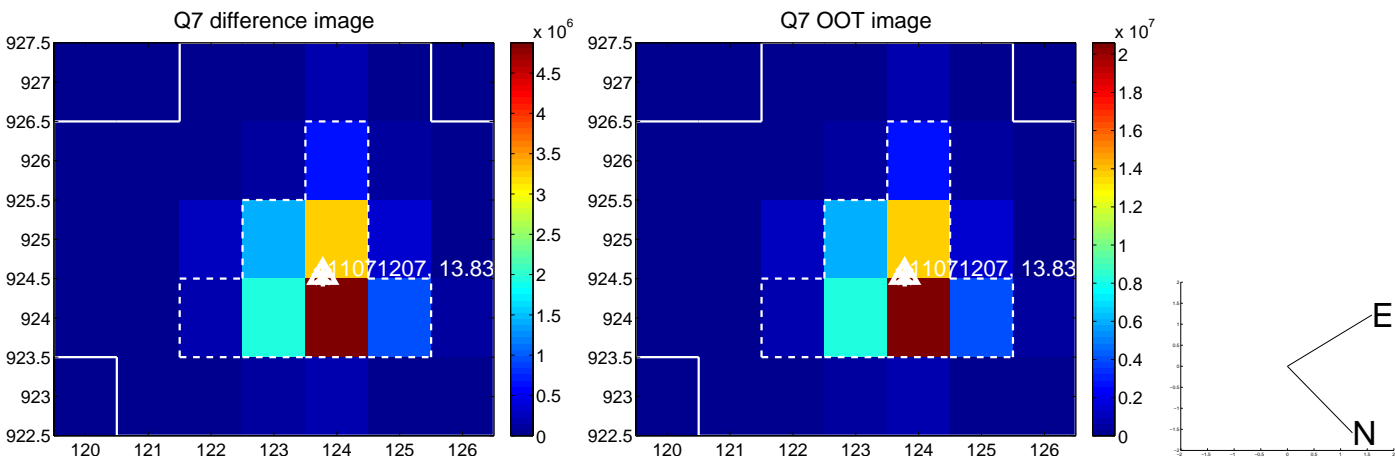
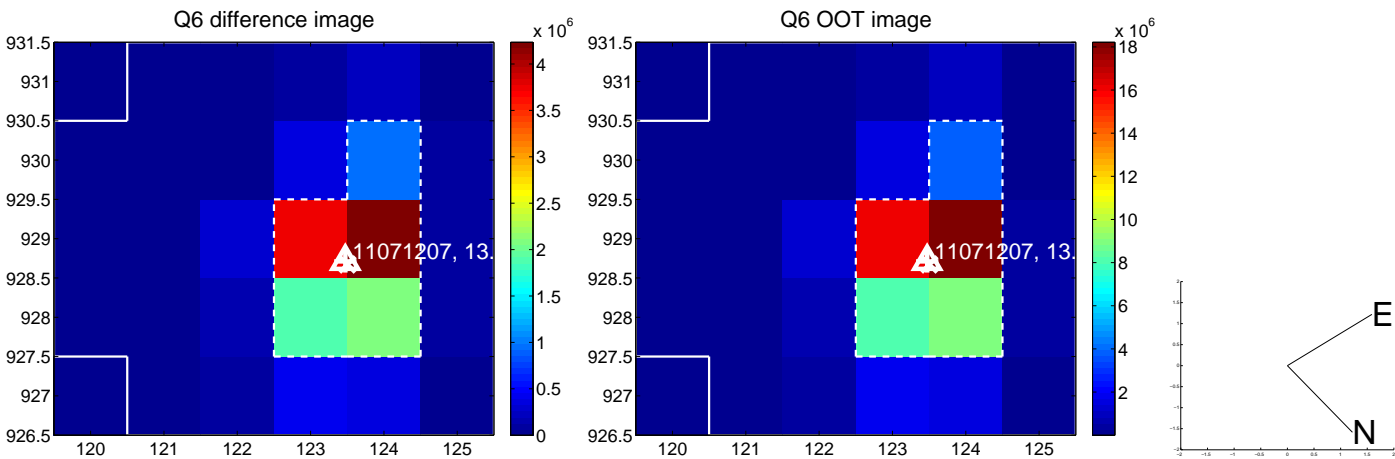
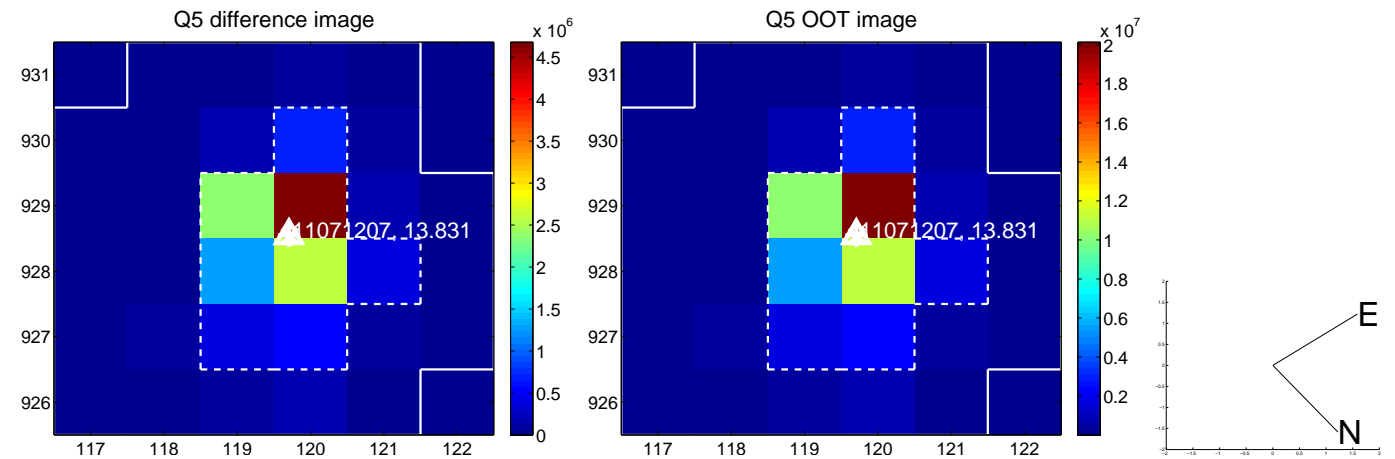


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

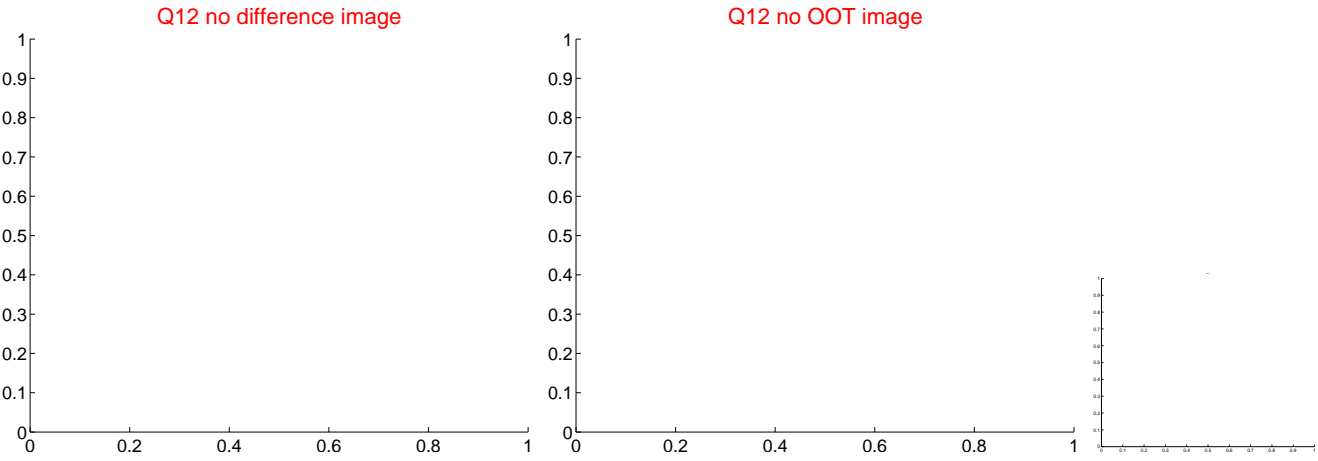
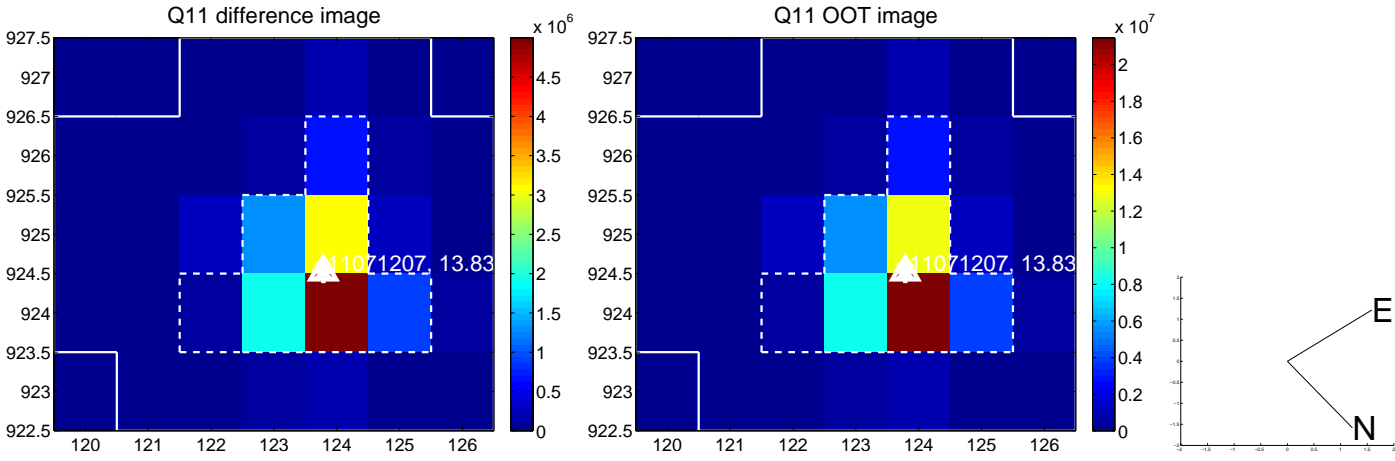
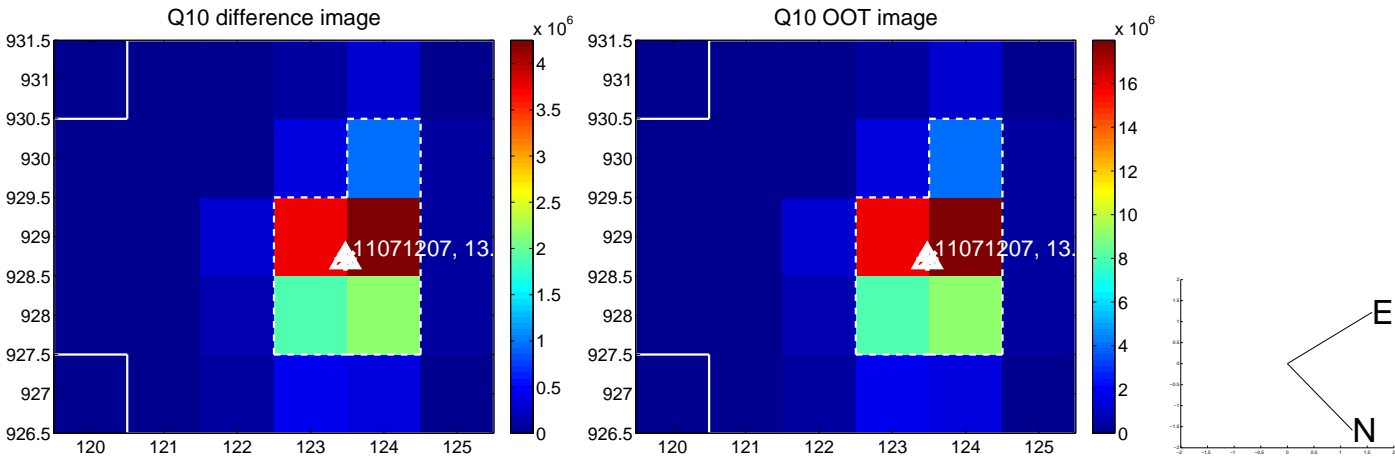
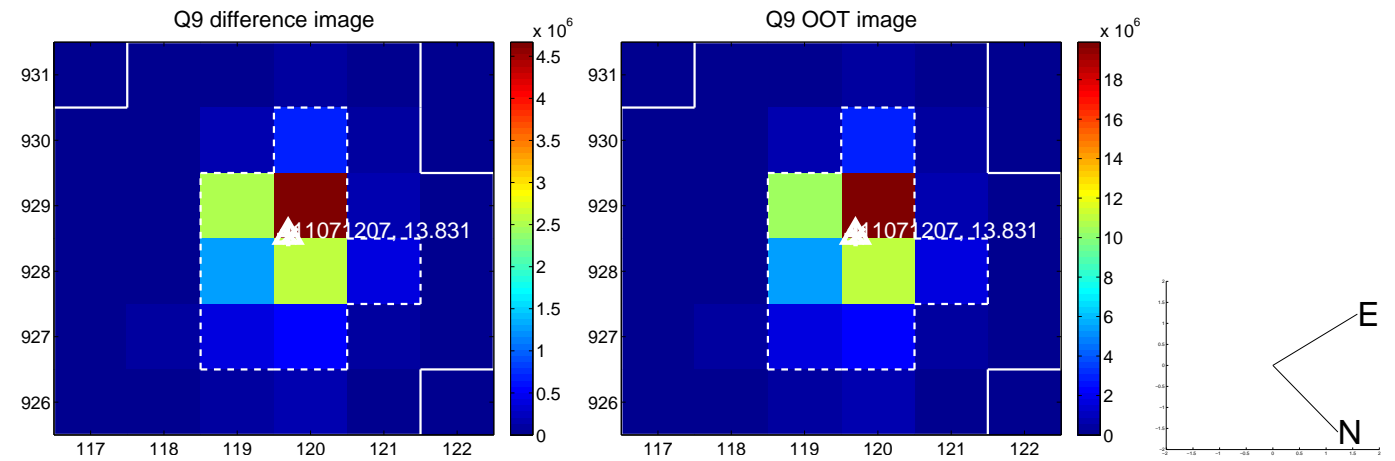


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

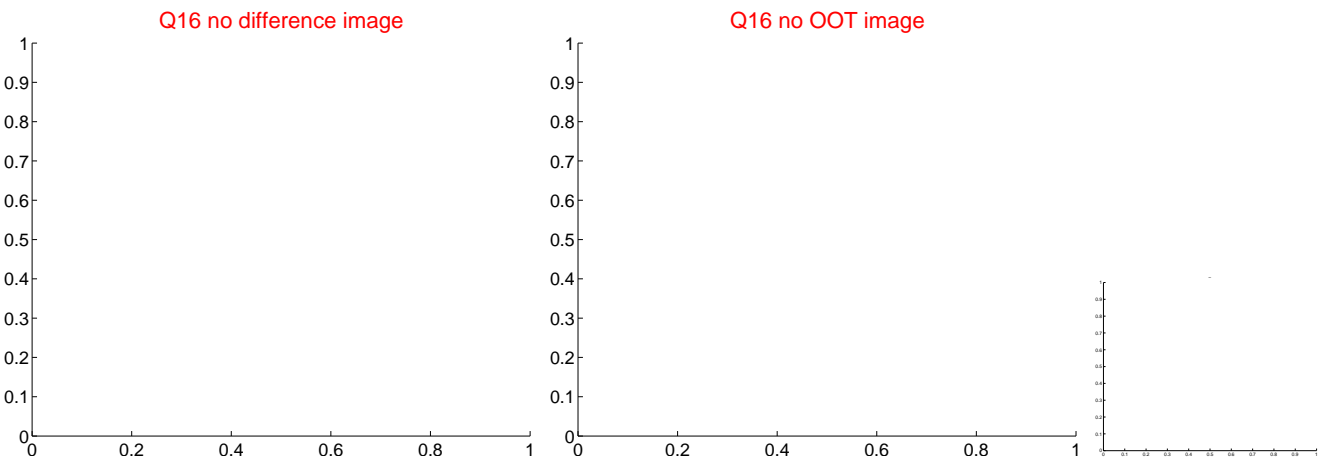
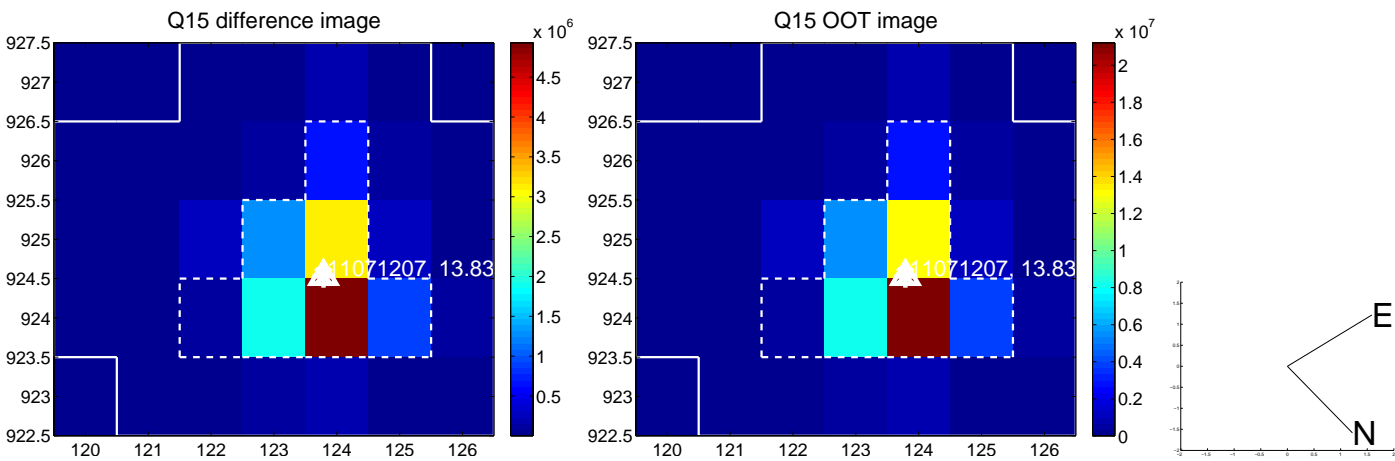
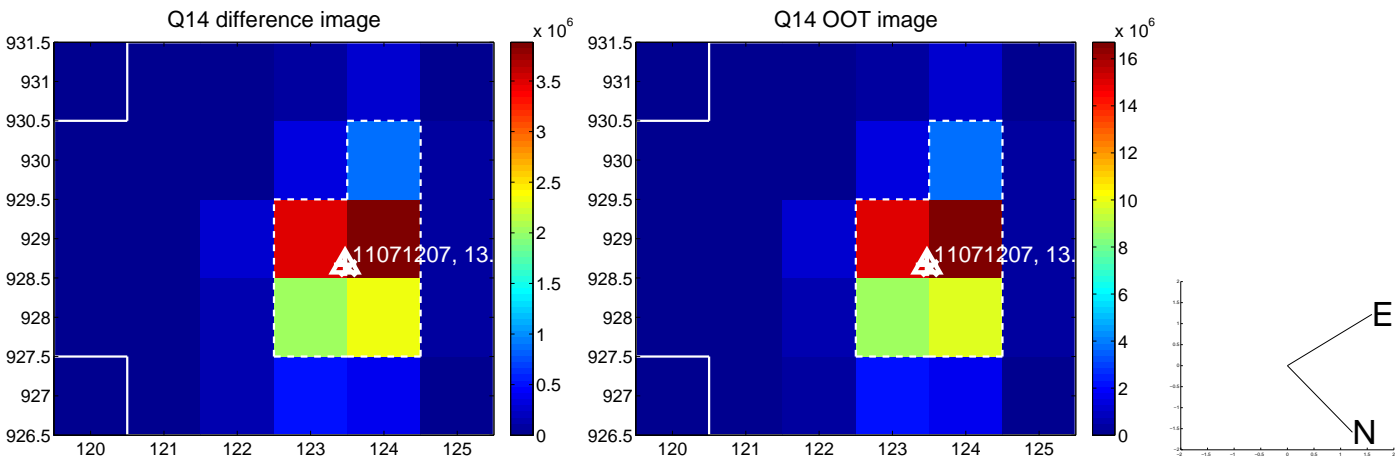
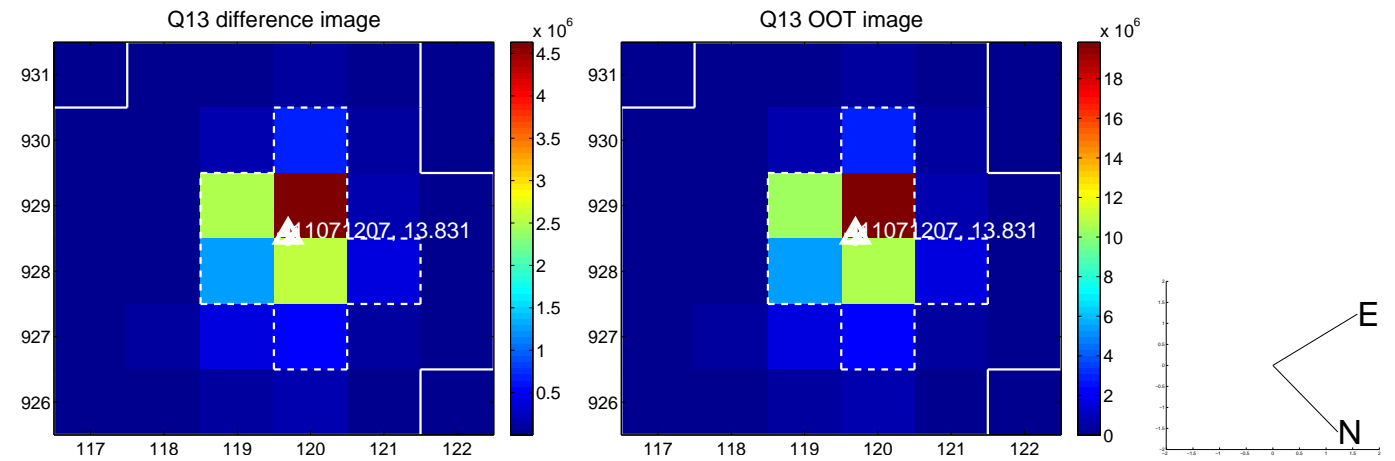




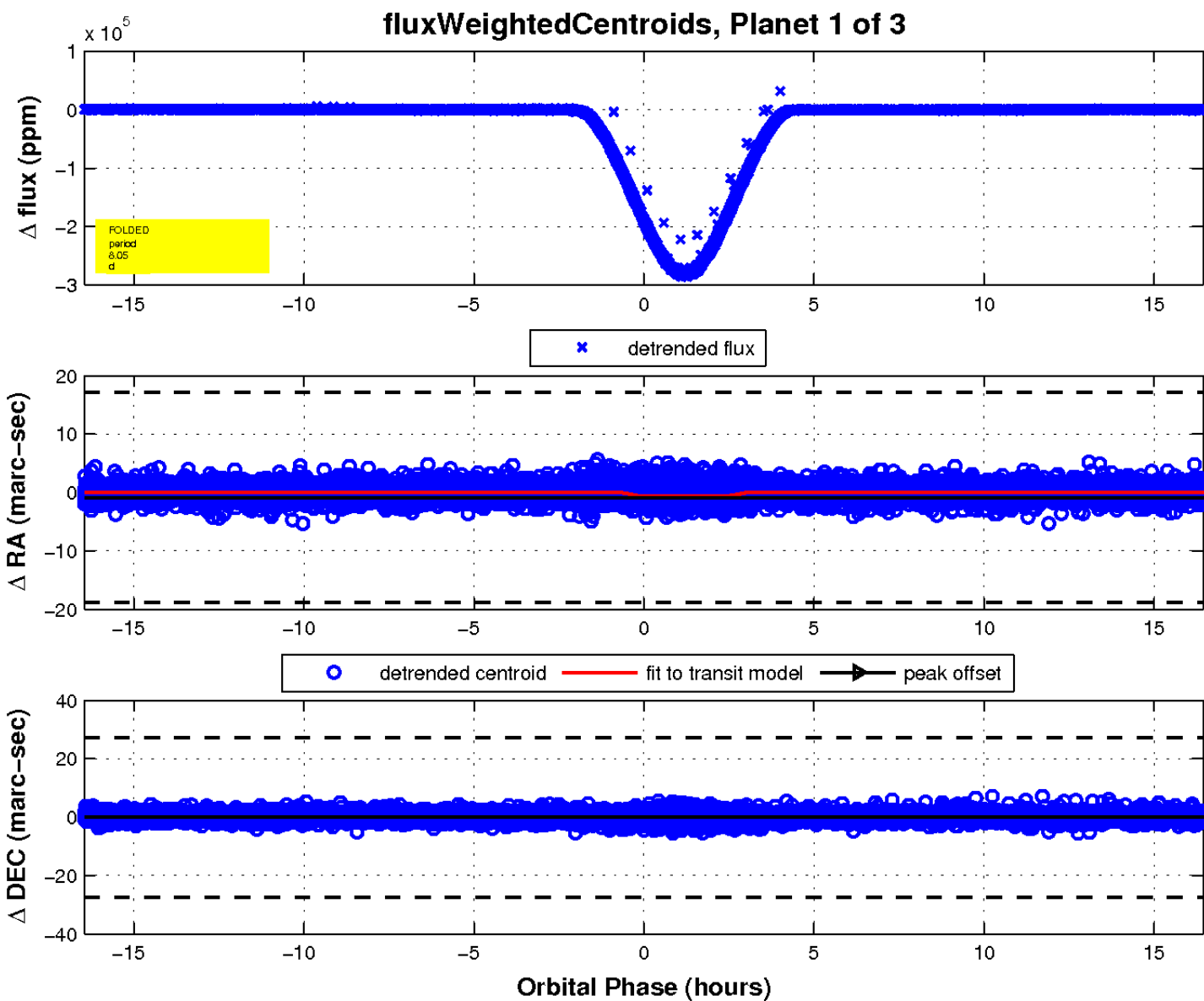
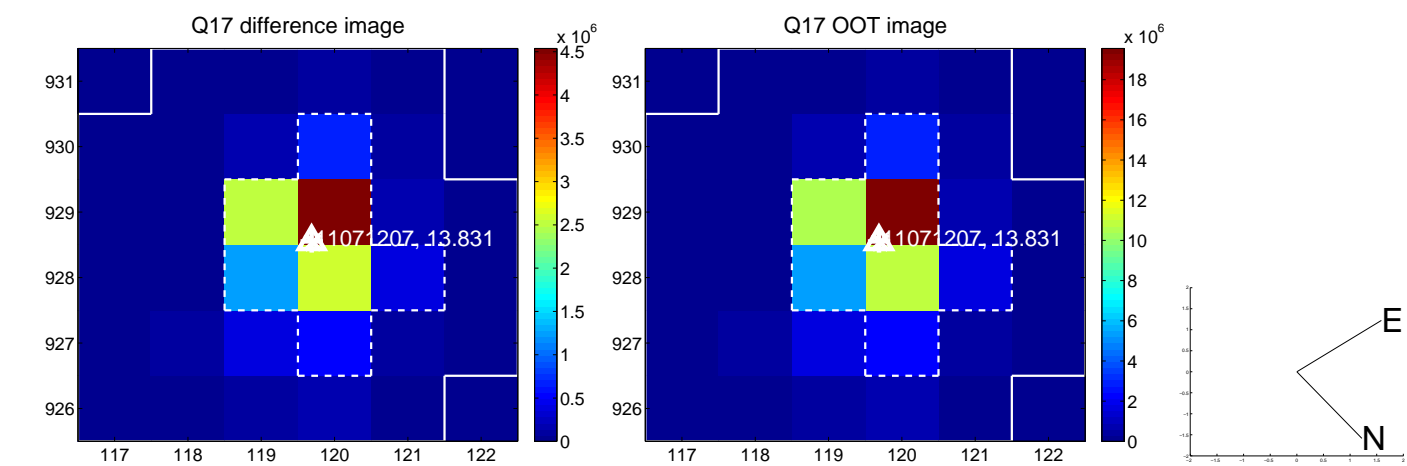
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

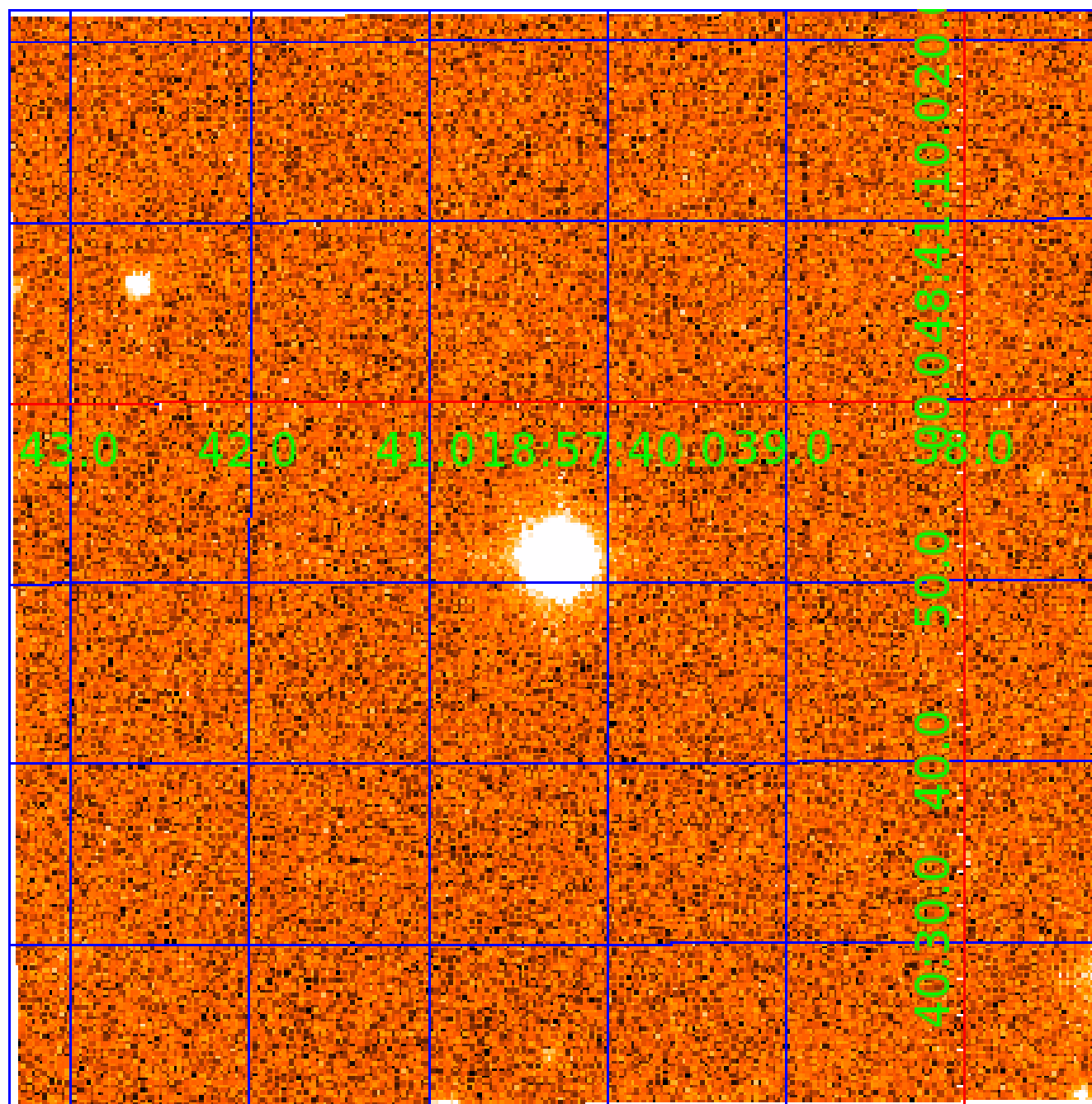


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination



# KIC 011071207

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011071207-01	OBS	7405.01	8.049651	138.649117	280906.7	3.500	12314.4	-1.0	1.49	6698	64.58	572.08
011071207-02	OBS	No	8.049625	135.599930	139263.4	8.657	6184.4	5623.0	1.49	6698	82.06	572.08
011071207-03	OBS	No	5.365856	133.091332	593.6	17.010	945.7	18.7	1.49	6698	4.57	982.44

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011071207-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_NOFITS
011071207-02	OBS	FP	0.00	1	0	0	0	SAME_NTL_PERIOD
011071207-03	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—CENT_FEW_DIFFS—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 011071207-02

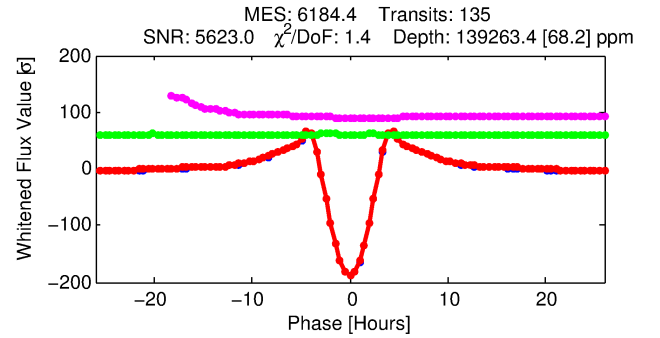
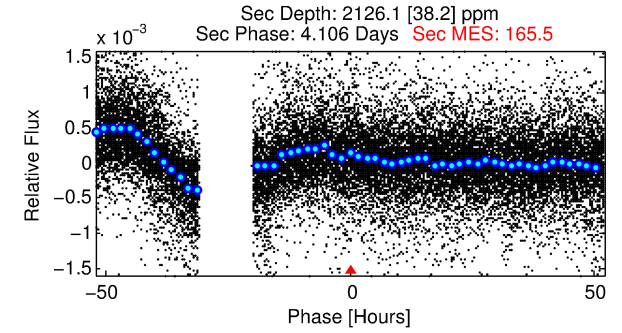
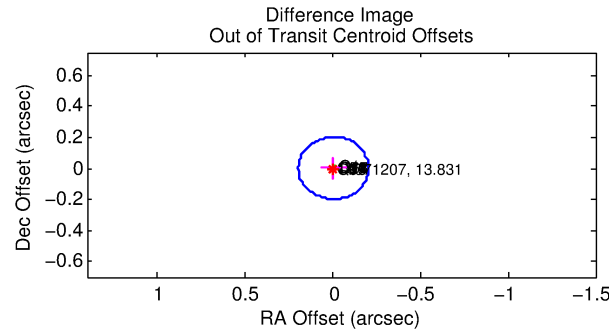
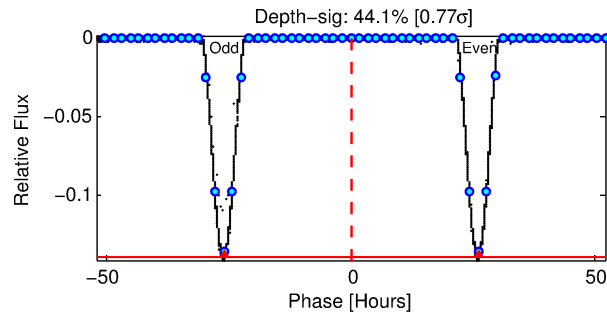
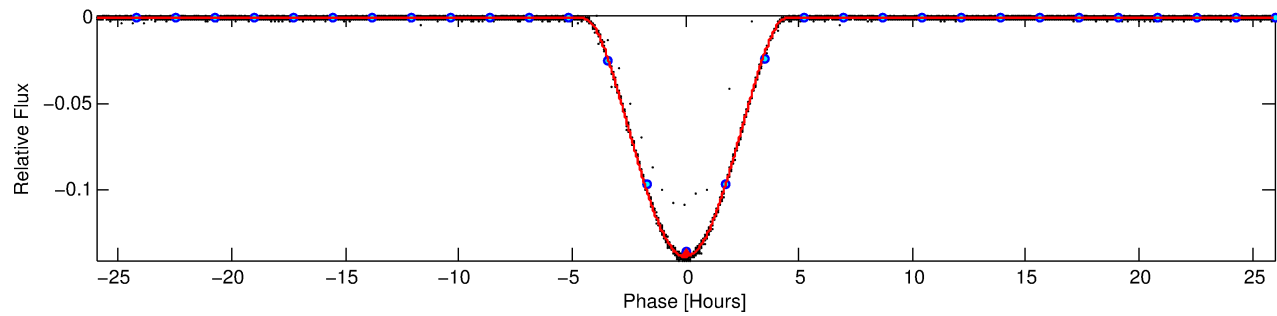
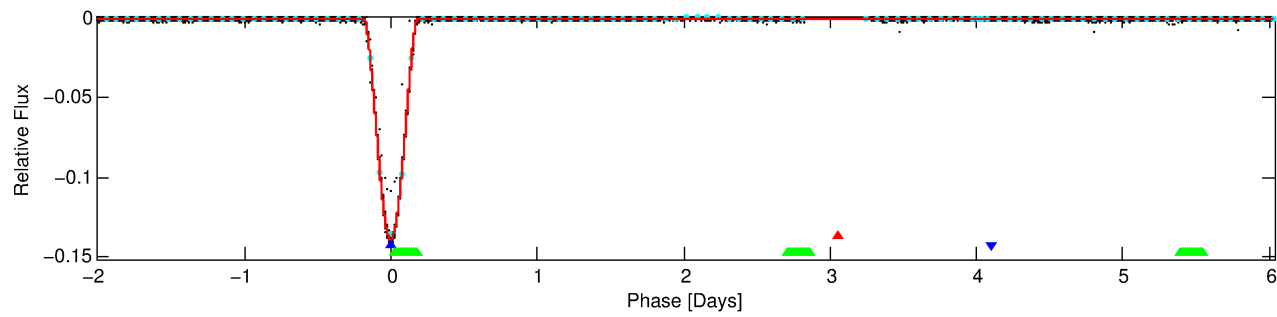
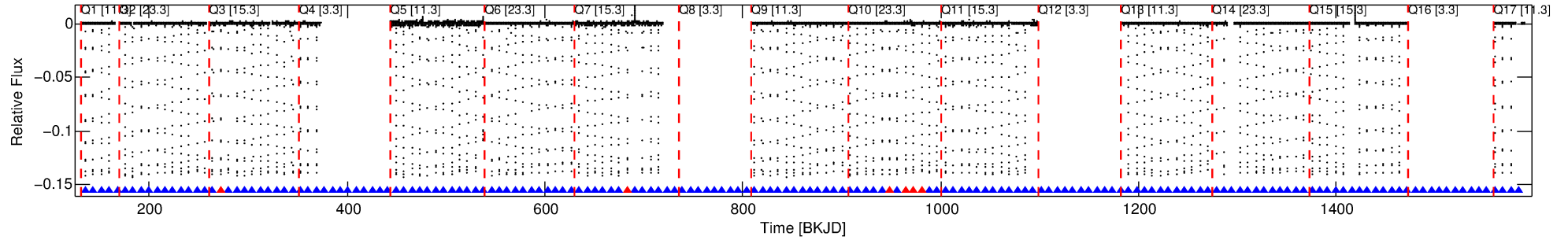
No Significant Match Found

# DV One-Page Summary

KIC: 11071207 Candidate: 2 of 3 Period: 8.050 d

KOI: K07405 Corr: No Ephemeris Match

Kp: 13.83 R\*: 1.49 Rs Teff: 6698.0 K Logg: 4.17 Fe/H: -0.380



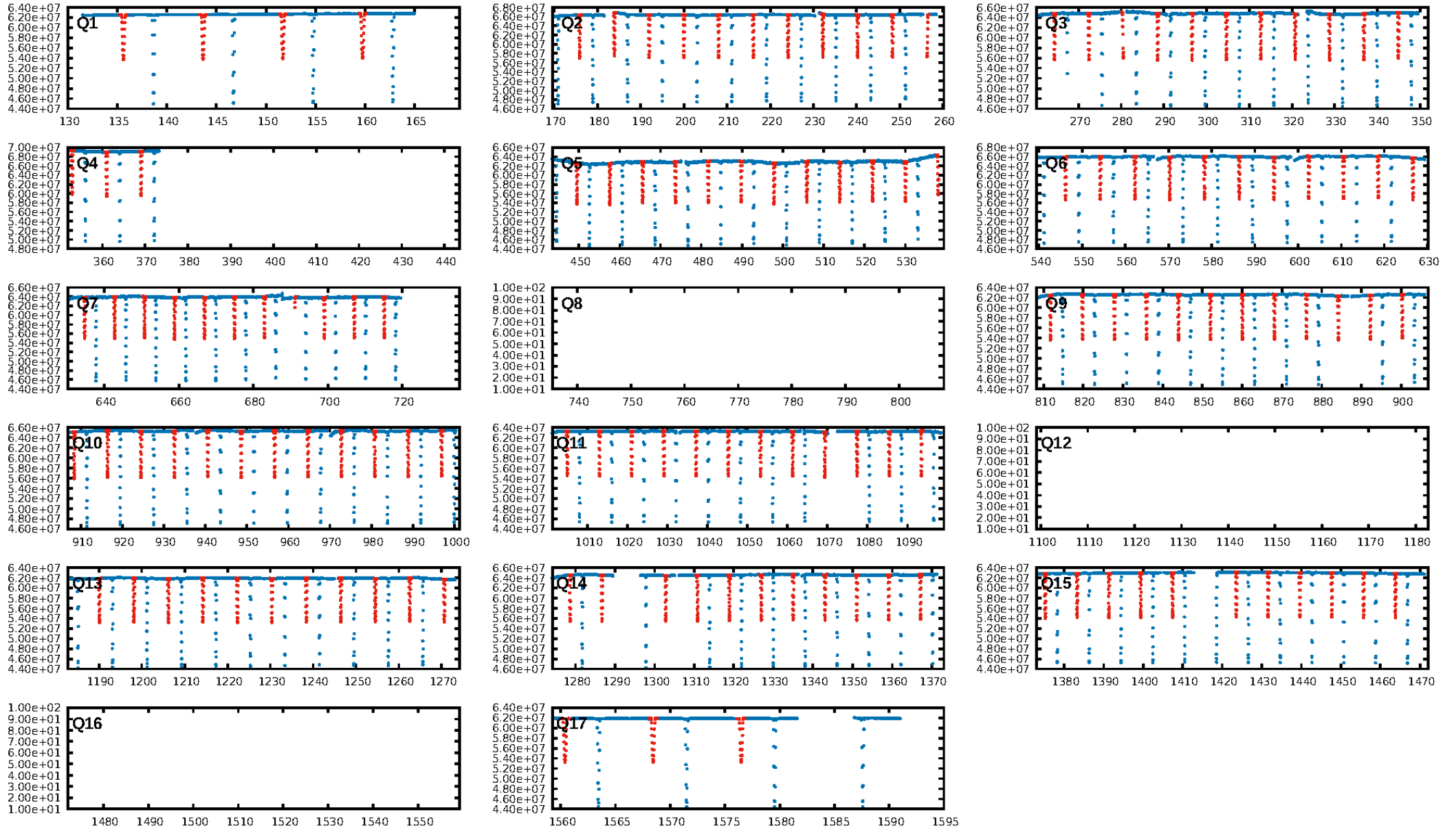
## DV Fit Results:

Period = 8.04963 [0.00000] d  
Epoch = 135.5999 [0.0000] BKJD  
Rp/R\* = 0.5064 [0.0221]  
a/R\* = 8.63 [0.03]  
b = 0.90 [0.03]  
Seff = 572.08 [207.68]  
Teq = 1247 [113] K  
Rp = 82.06 [22.94] Re  
a = 0.0834 [0.0194] AU  
Ag = 1.21 [0.42] [0.49σ]  
Teffp = 2021 [80] K [5.58σ]

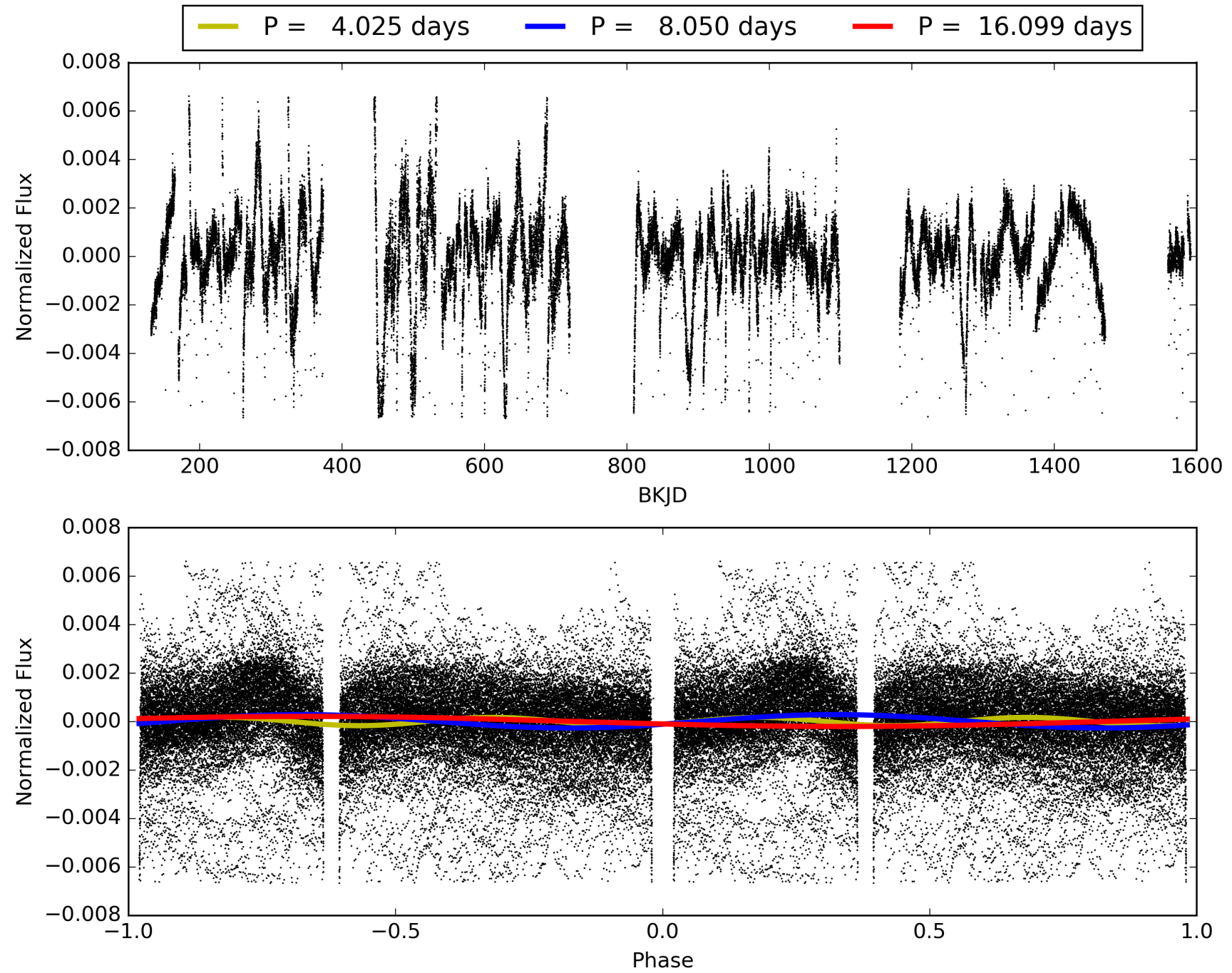
## DV Diagnostic Results:

ShortPeriod-sig: 99.9% [3.37σ]  
LongPeriod-sig: 0.0% [0.00σ]  
ModelChiSquare2-sig: 0.0%  
ModelChiSquareGof-sig: 0.0%  
Bootstrap-pfa: N/A  
RollingBand-fgt: 0.95 [119/125]  
GhostDiagnostic-chr: 3.56  
Centroid-sig: 0.0%  
Centroid-so: 0.092 arcsec [111.72σ]  
OotOffset-rm: 0.005 arcsec [0.08σ]  
KicOffset-rm: 0.043 arcsec [0.63σ]  
OotOffset-st: 4/4/1/5 [14]  
KicOffset-st: 4/4/1/5 [14]  
DiffImageQuality-fgm: 1.00 [14/14]  
DiffImageOverlap-fno: 1.00 [14/14]

# TCE 011071207-02, PDC Light Curves



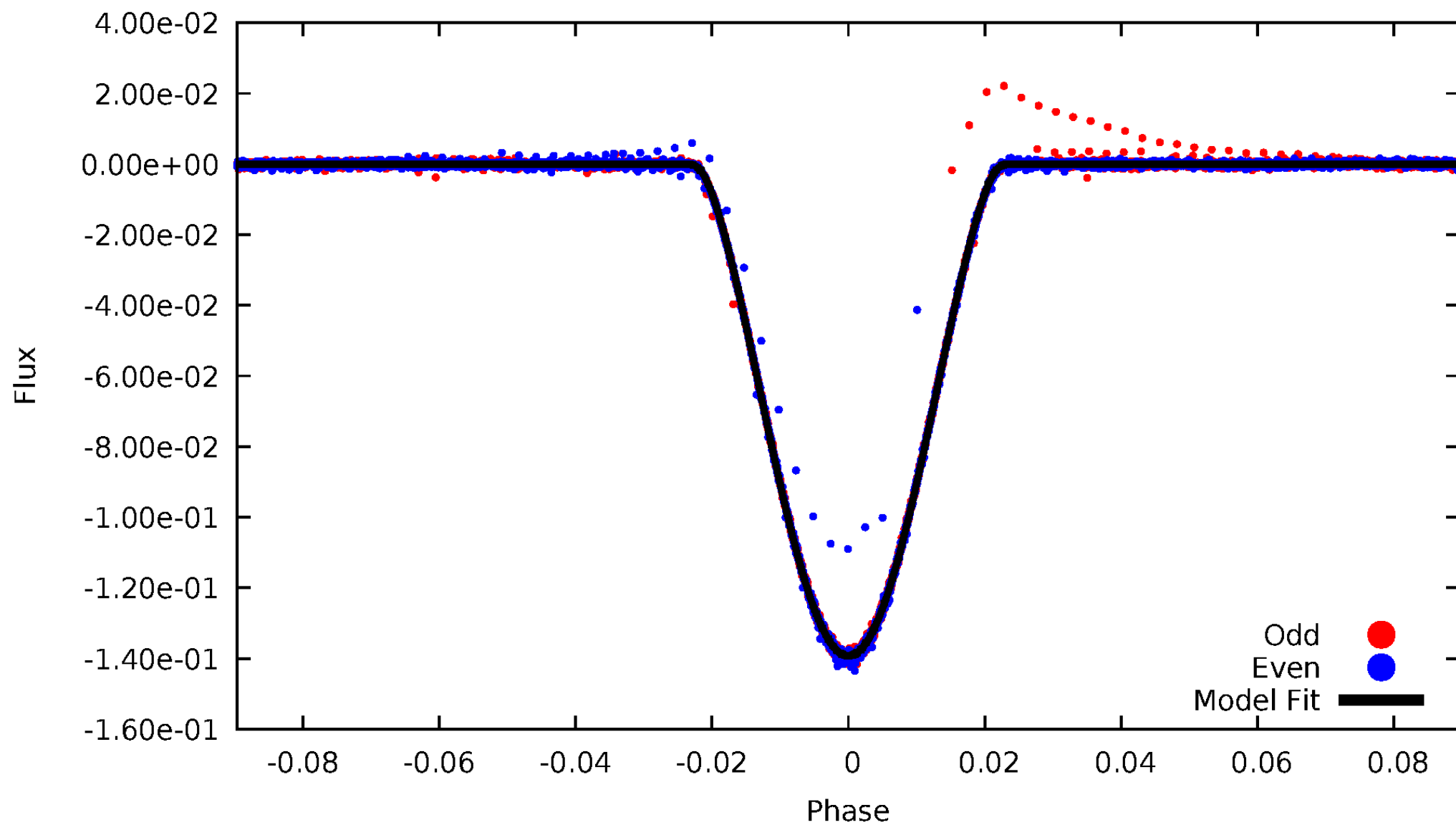
TCE 011071207-02





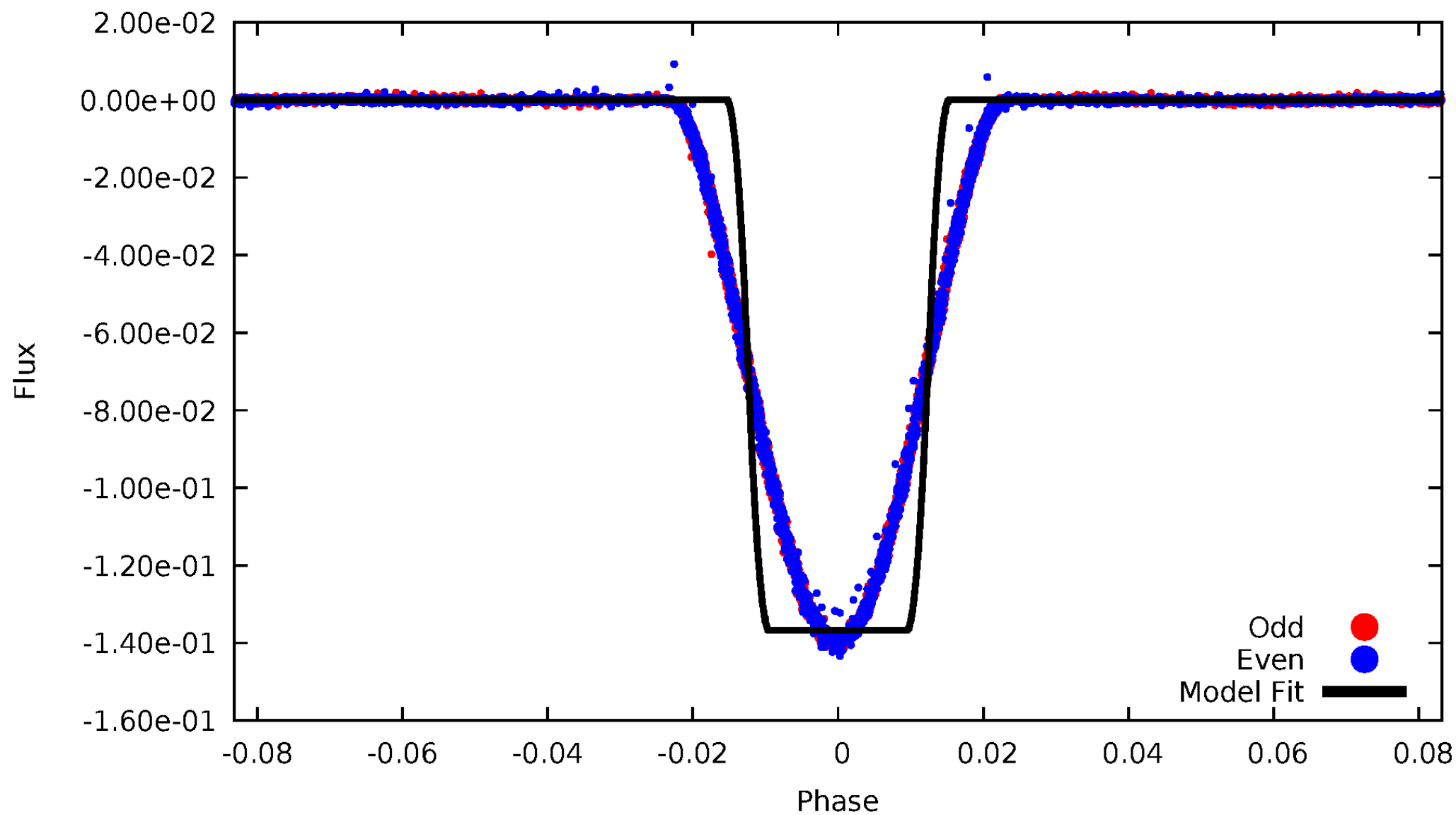
# DV Odd/Even

TCE 011071207-02



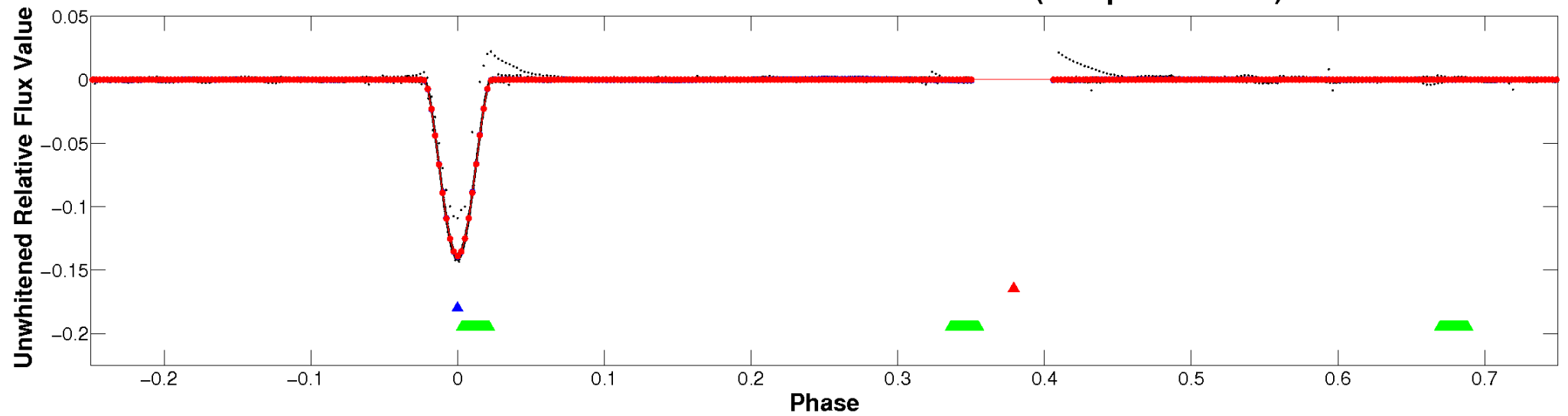
# ALT Odd/Even

TCE 011071207-02

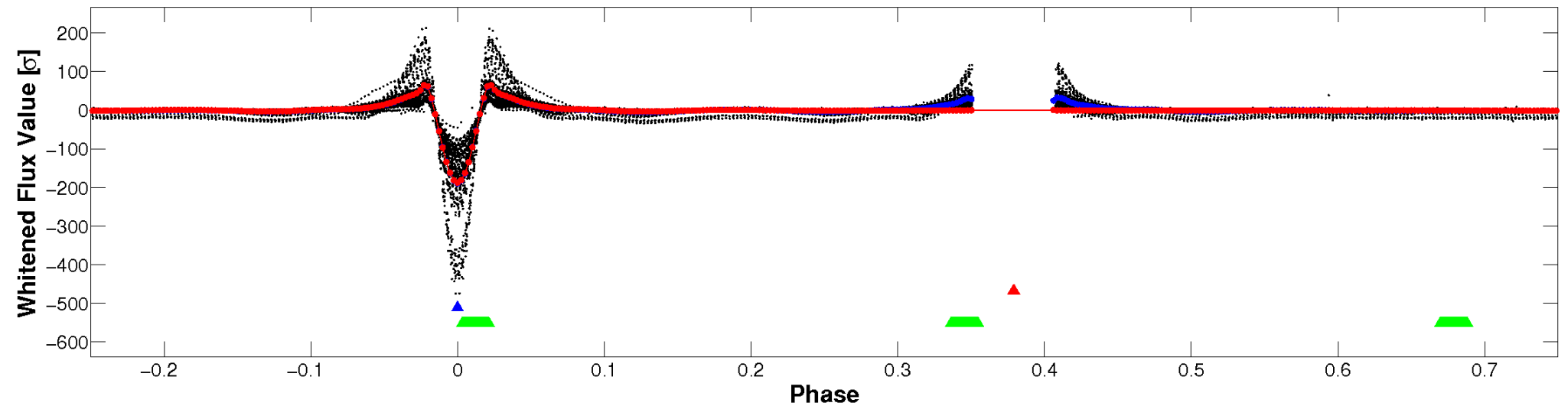


# Non-Whitened Vs. Whitened Light Curve

## Planet 2 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

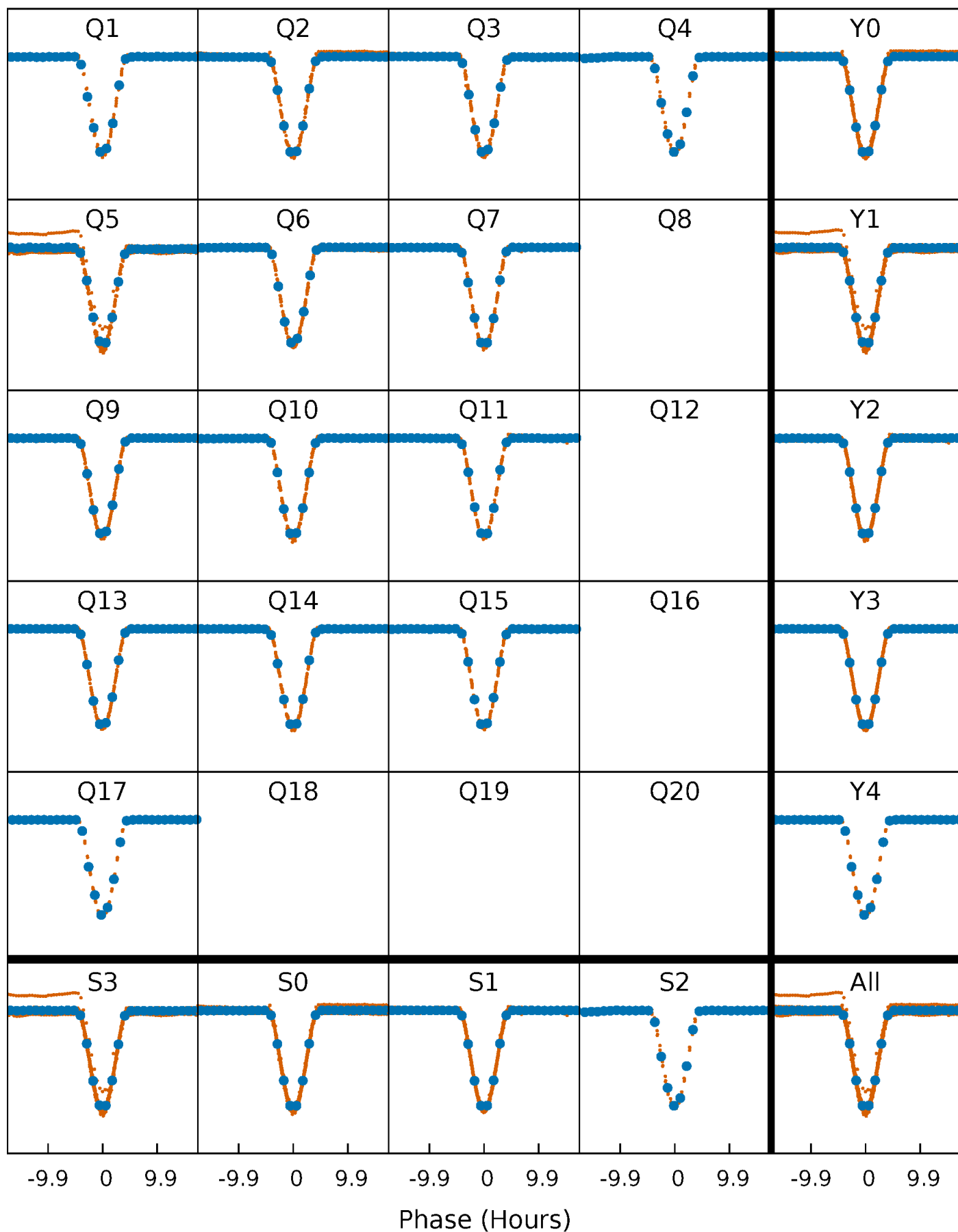


## Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



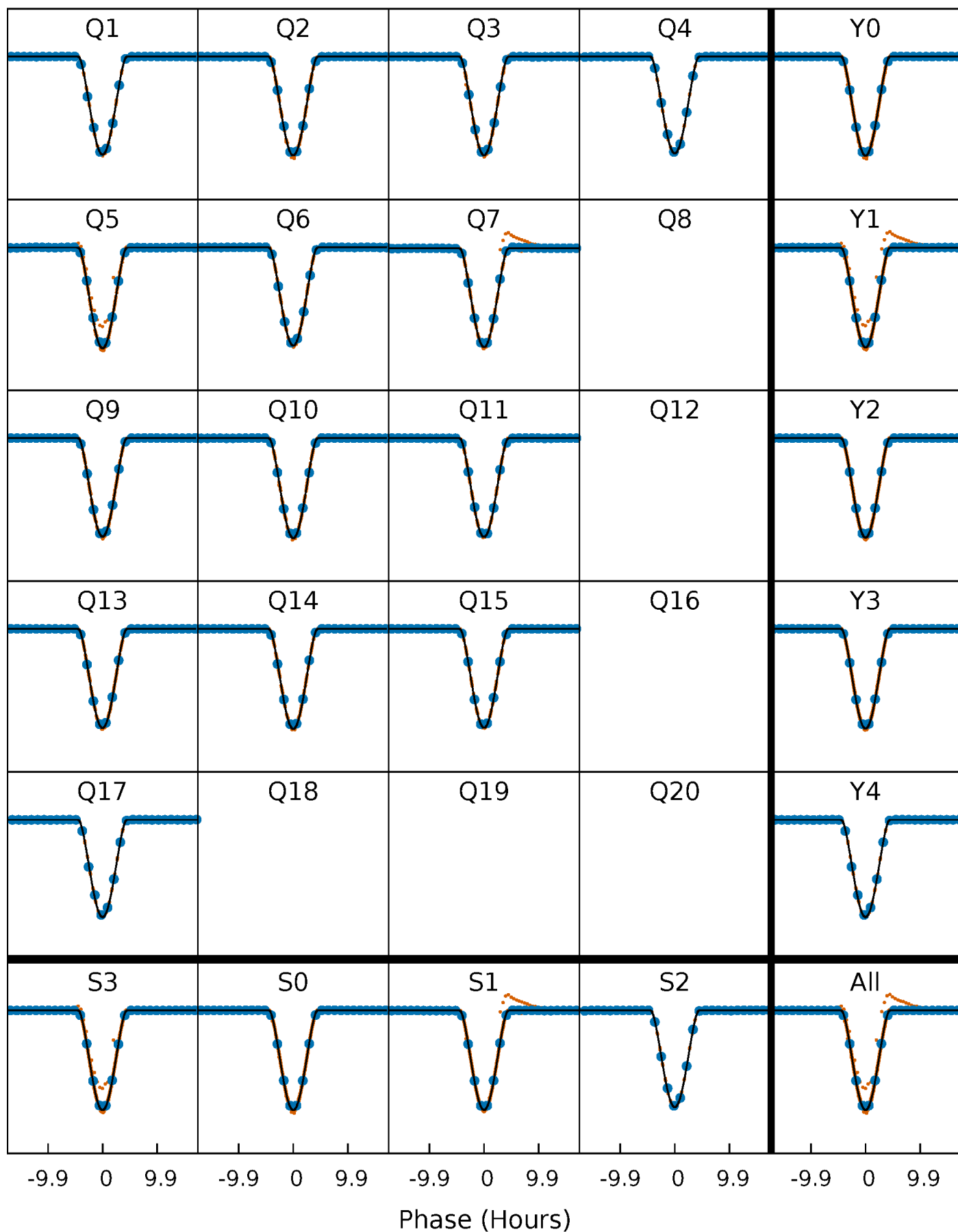
# PDC Quarter-Phased Transit Curves

TCE 011071207-02   P= 8.049625 Days    $T_0=135.599930$  (BKJD)



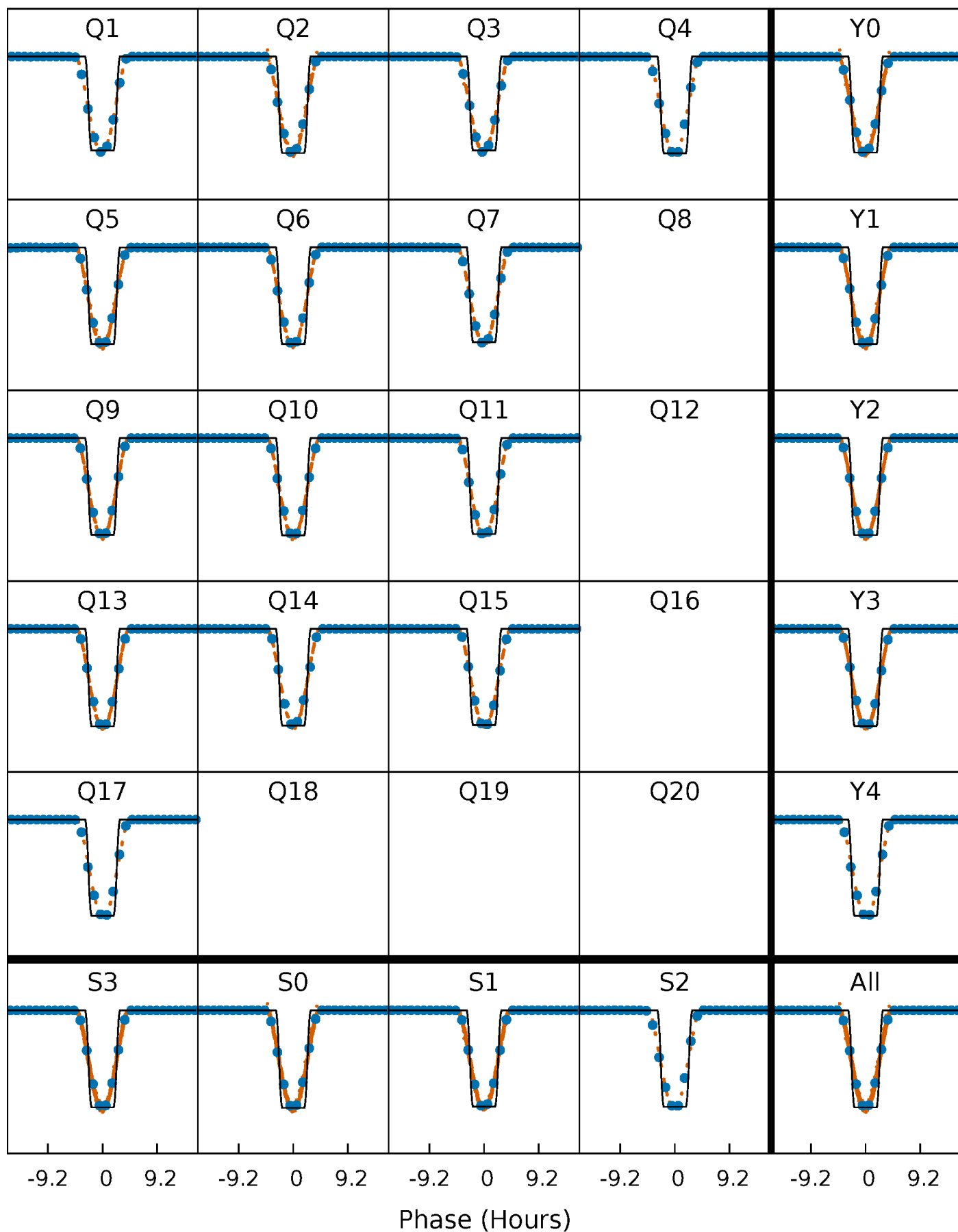
# DV Quarter-Phased Transit Curves

TCE 011071207-02 P= 8.049625 Days  $T_0=135.599930$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

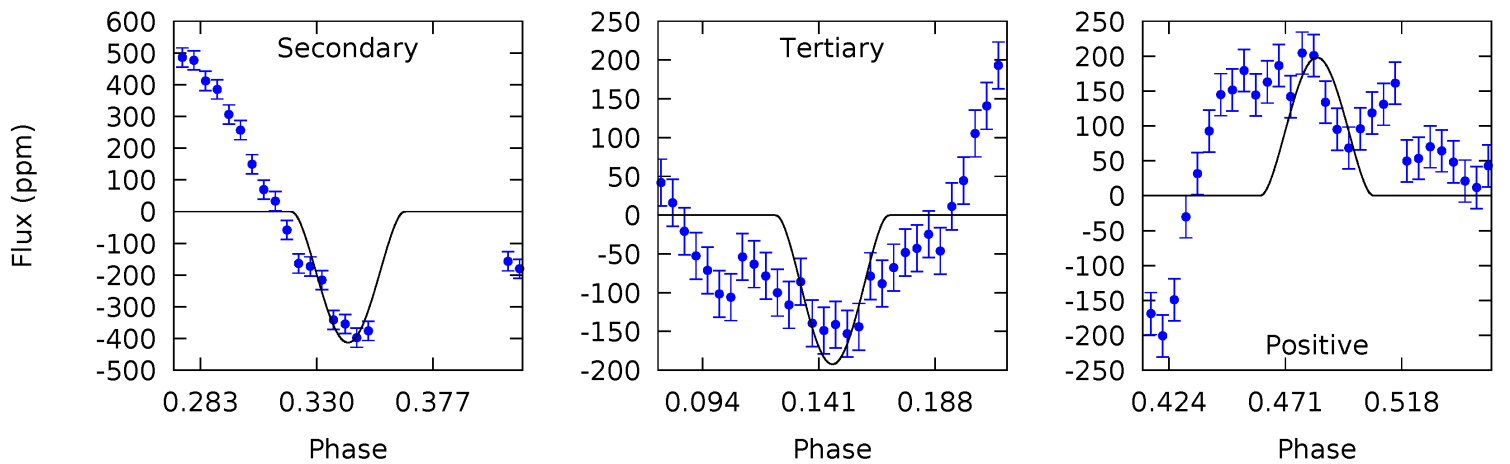
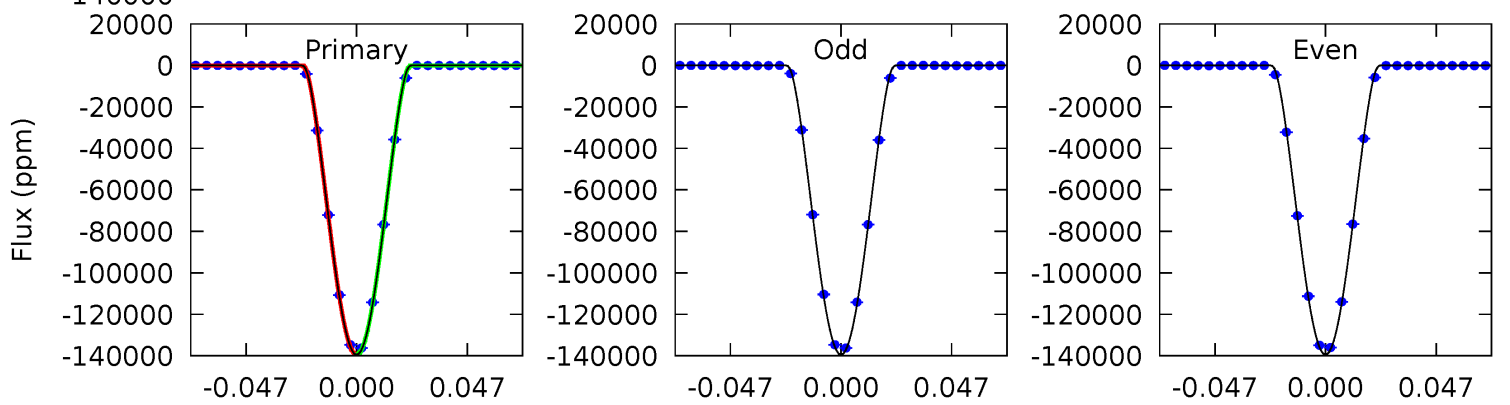
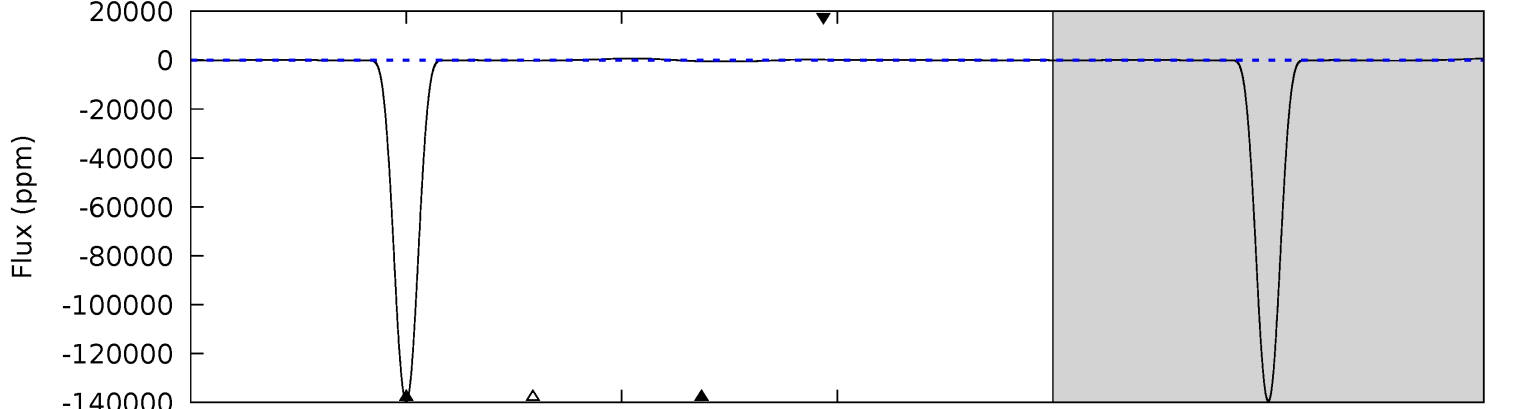
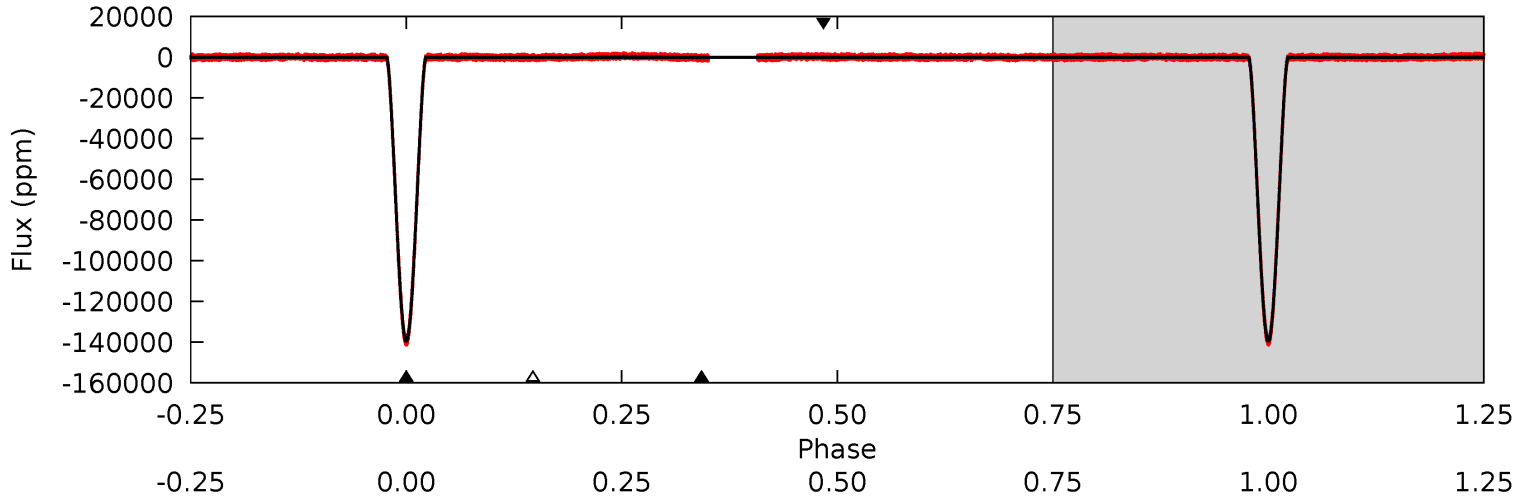
TCE 011071207-02     $P = 8.049566$  Days     $T_0 = 135.605781$  (BKJD)



# DV Model-Shift Uniqueness Test

011071207-02, P = 8.049625 Days, E = 127.550305 Days

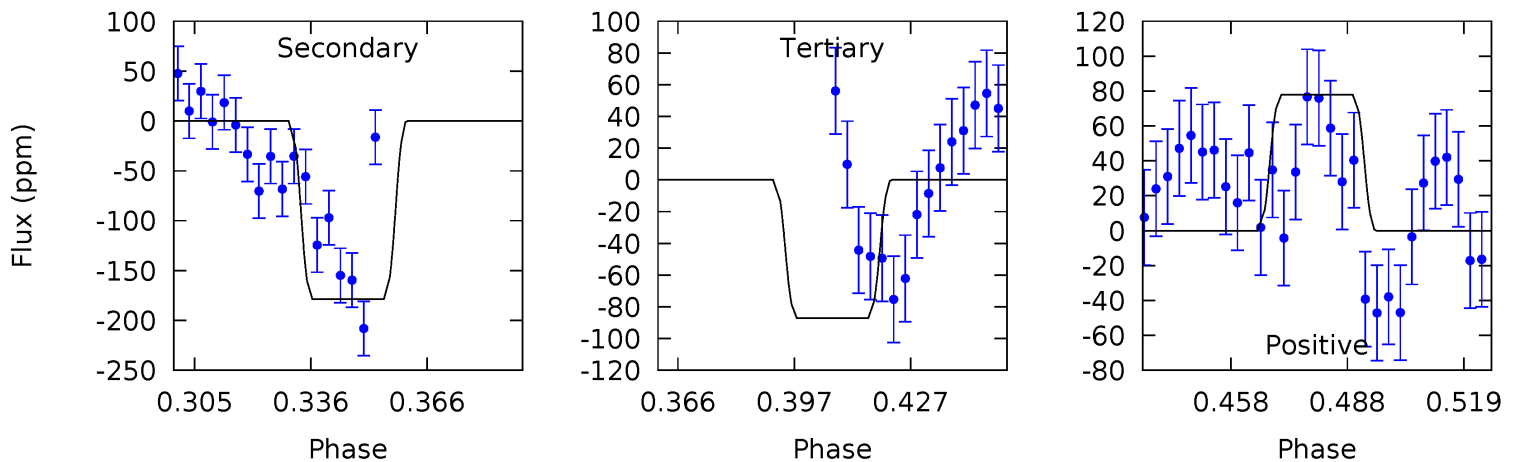
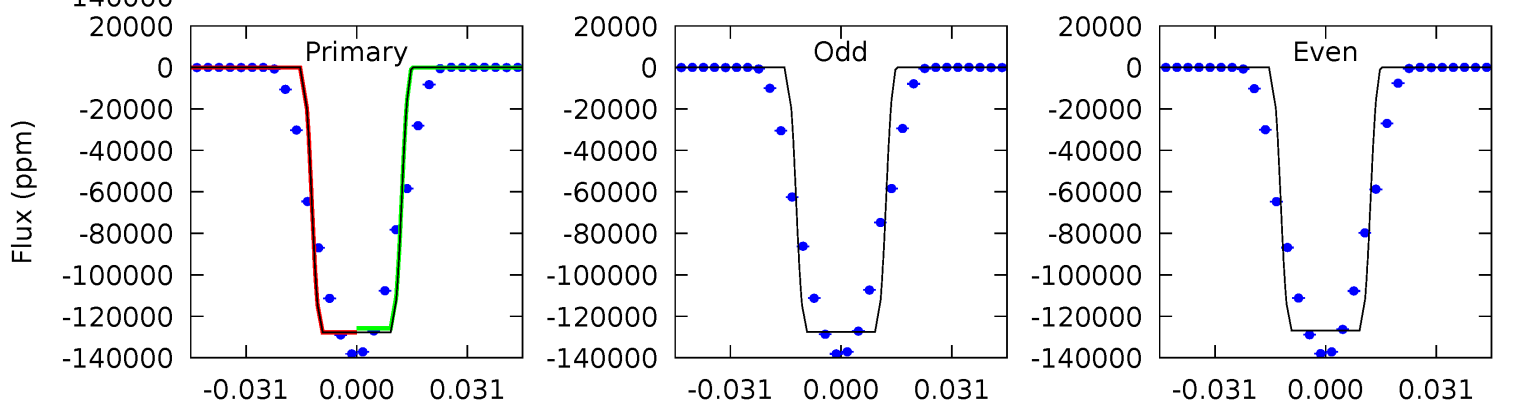
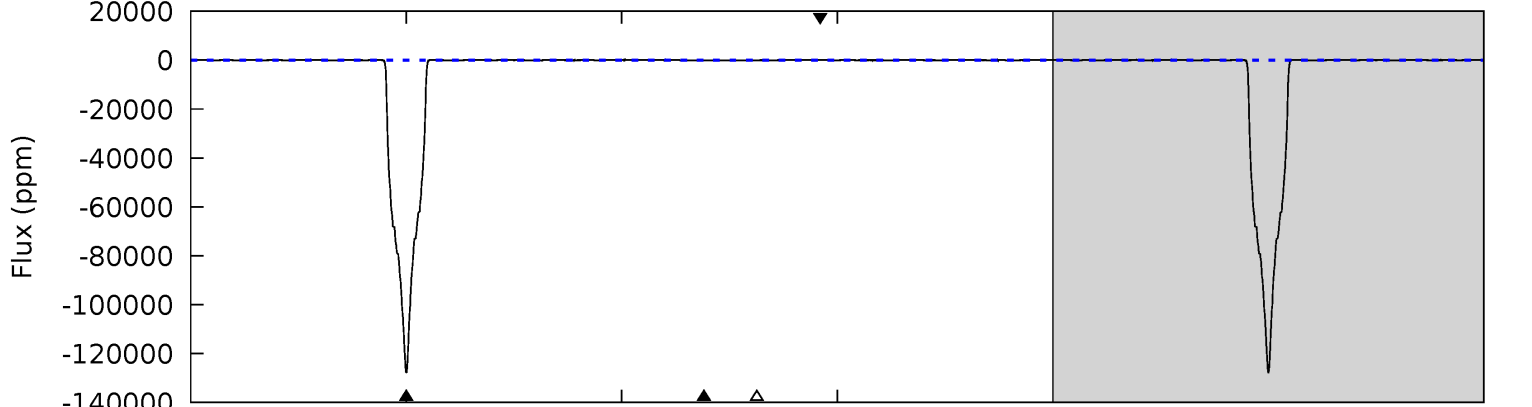
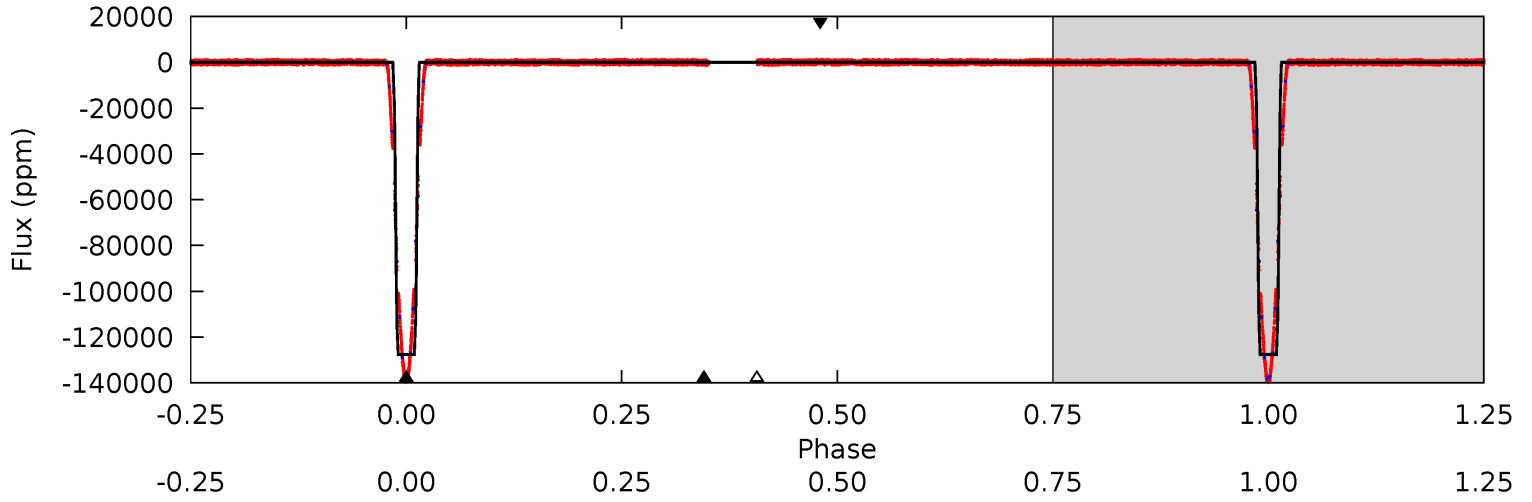
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14551	43.1	20.1	20.7	4.72	1.99	20.0	14530	14530	23.0	22.4	1.39	0.99	0.00	1.39



# Alt Model-Shift Uniqueness Test

011071207-02, P = 8.049566 Days, E = 127.556215 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
8252	11.6	5.63	5.03	4.81	2.16	1.97	8246	8247	5.92	6.52	21.1	1.00	0.00	61.8





### Stellar Parameters For KIC 011071207

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$6698^{+169}_{-220}$	$4.171^{+0.185}_{-0.185}$	$-0.380^{+0.250}_{-0.300}$	$1.485^{+0.410}_{-0.336}$	$1.197^{+0.175}_{-0.175}$	$0.515^{+0.563}_{-0.250}$
	+3%/-3%	+4%/-4%	+66%/-79%	+28%/-23%	+15%/-15%	+109%/-49%
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 011071207-02 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-413 \pm 10$	$82.01^{+14.28}_{-10.47}$	$1740^{+130}_{-120}$	$-1977^{+3519}_{-200}$	$0.236^{+0.070}_{-0.062}$
Alt.	$-179 \pm 15$	$59.52^{+10.75}_{-8.22}$	$1730^{+140}_{-109}$	$-2079^{+223}_{-160}$	$0.193^{+0.064}_{-0.053}$

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

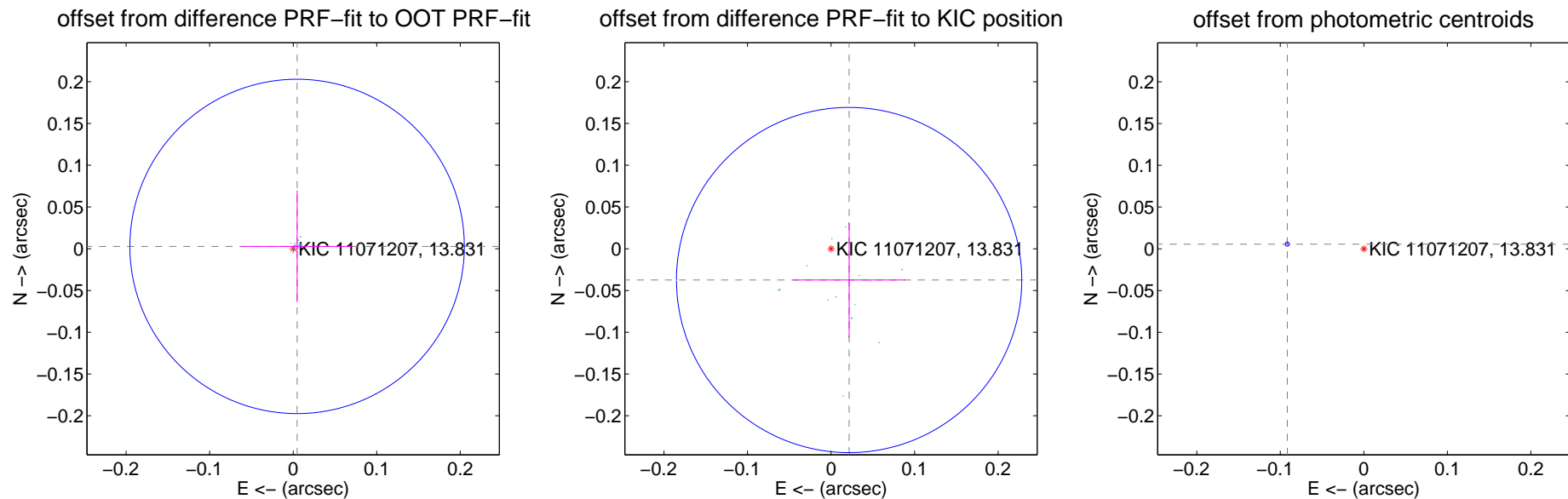
## DV Centroid Data

Supplemental centroid analysis for 011071207-02. Kepler magnitude: 13.83. Transit SNR 5623.03

There are 14 quarters with good PRF difference image offsets

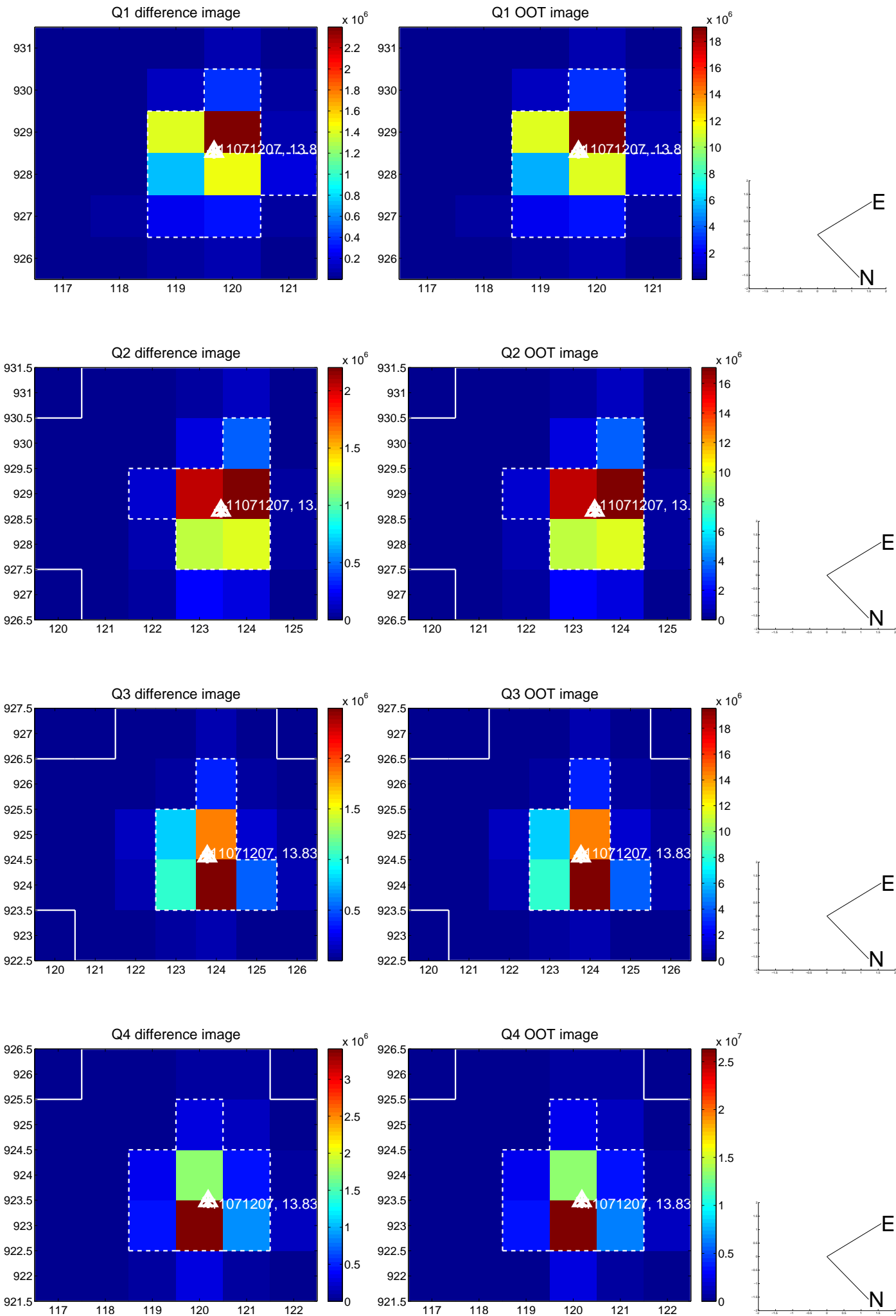
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.005 \pm 0.067$	0.08	$-0.005 \pm 0.067$	$0.003 \pm 0.067$
PRF-fit source offset from KIC position	$0.043 \pm 0.069$	0.63	$-0.022 \pm 0.067$	$-0.037 \pm 0.069$
photometric centroid source offset	$0.09 \pm 0.00$	111.72	$0.09 \pm 0.00$	$0.01 \pm 0.00$

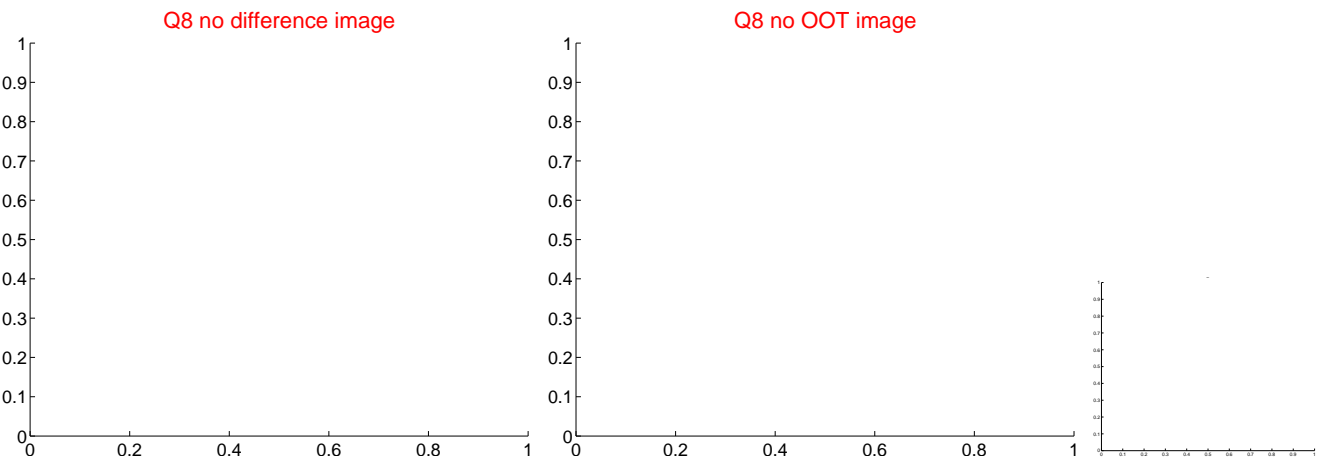
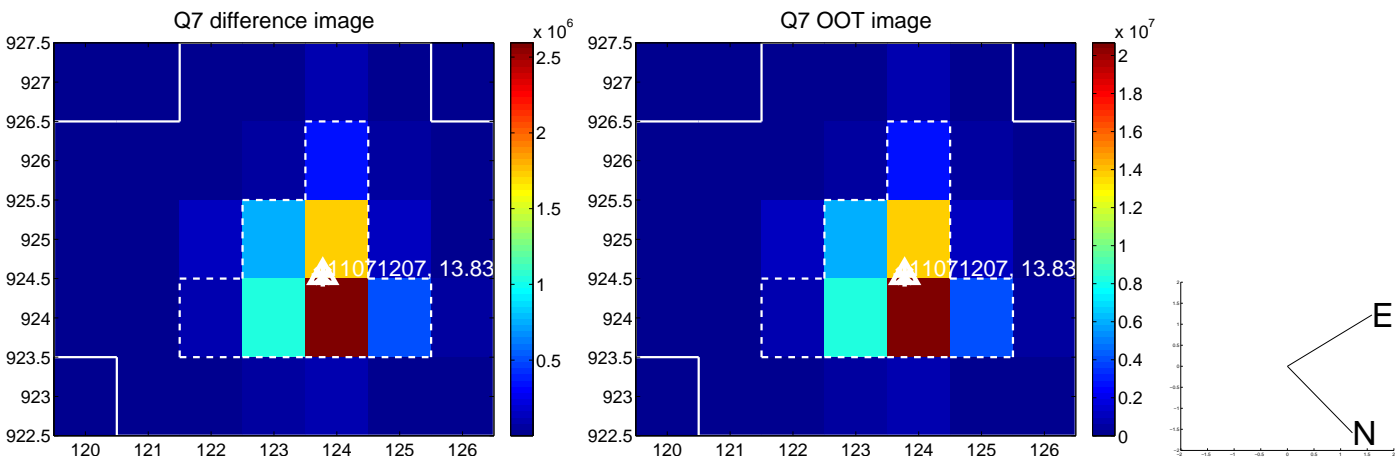
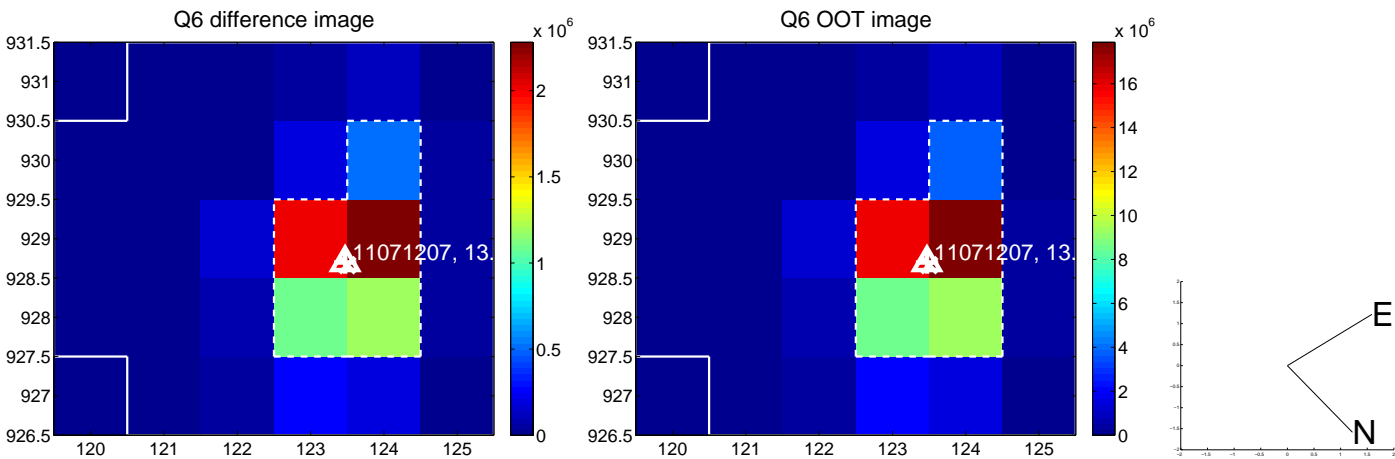
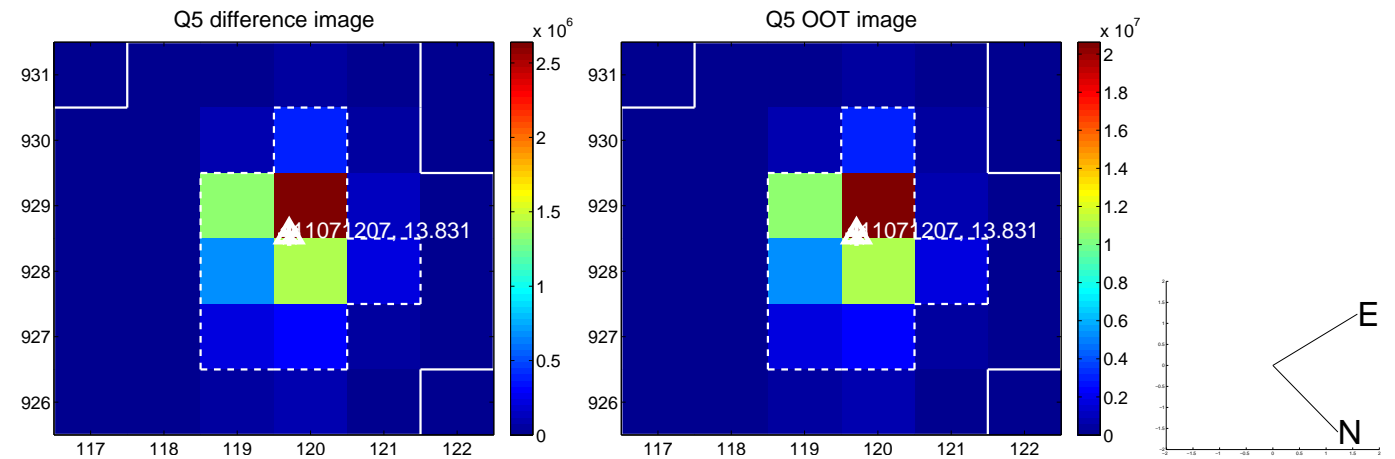


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

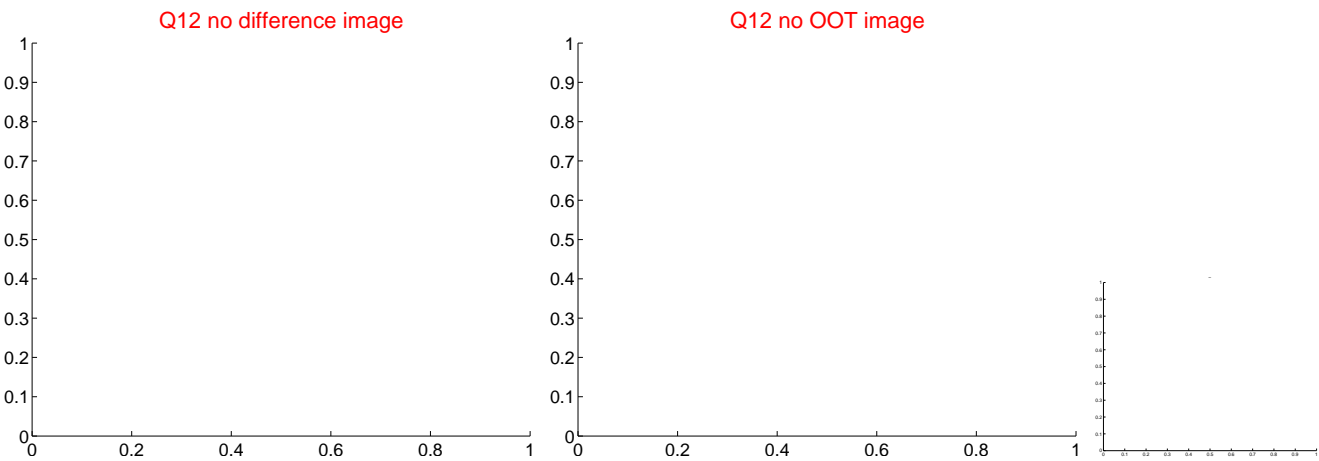
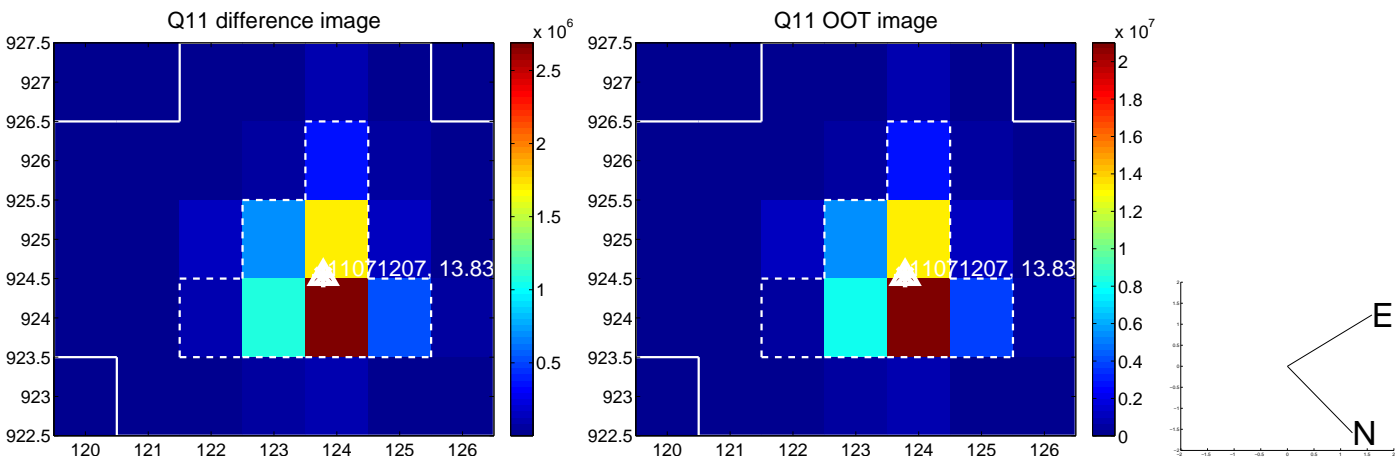
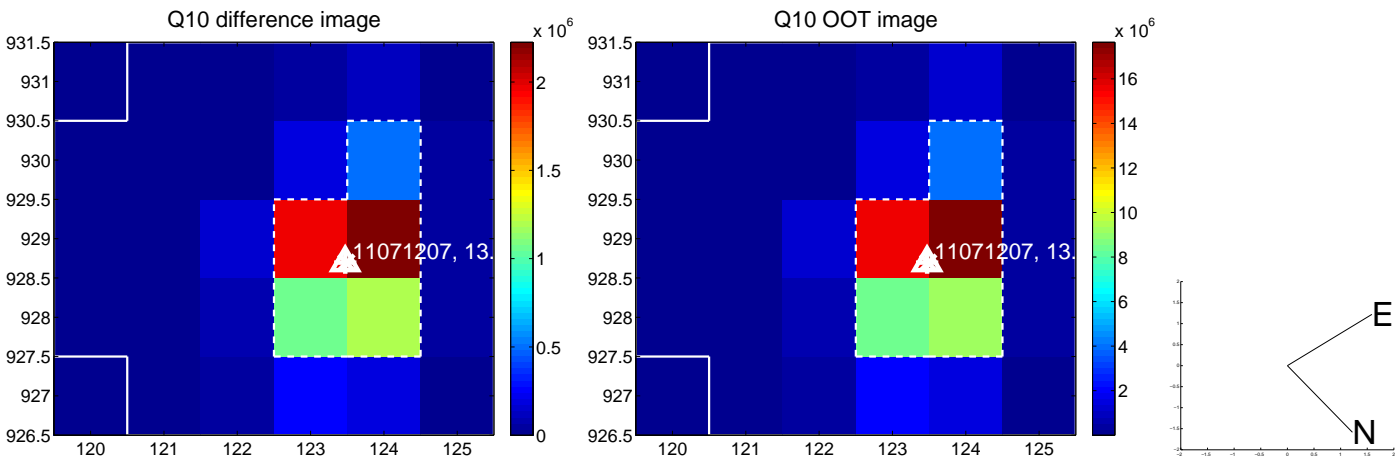
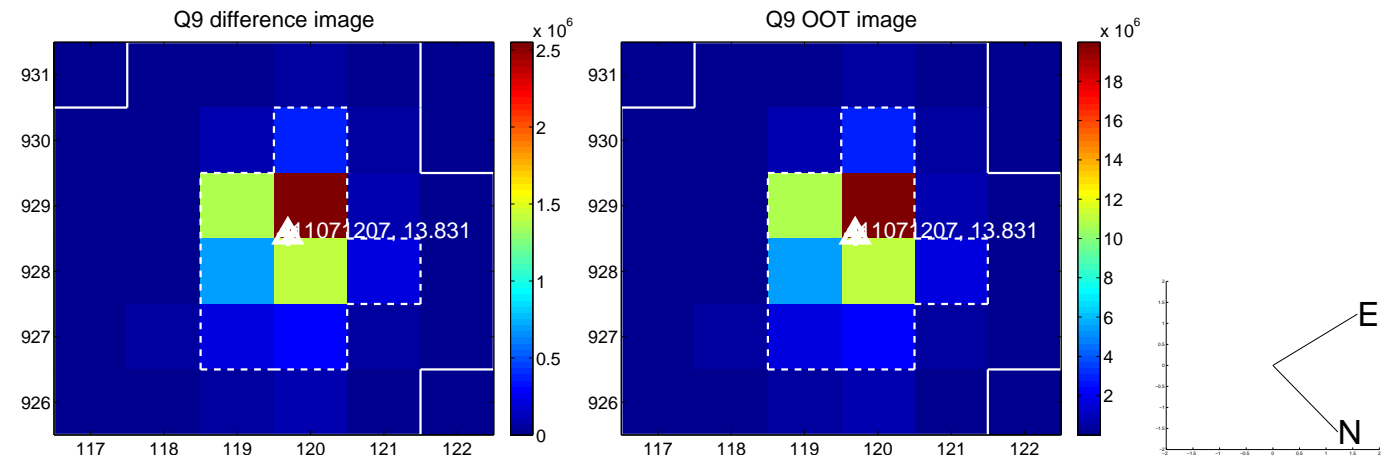
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



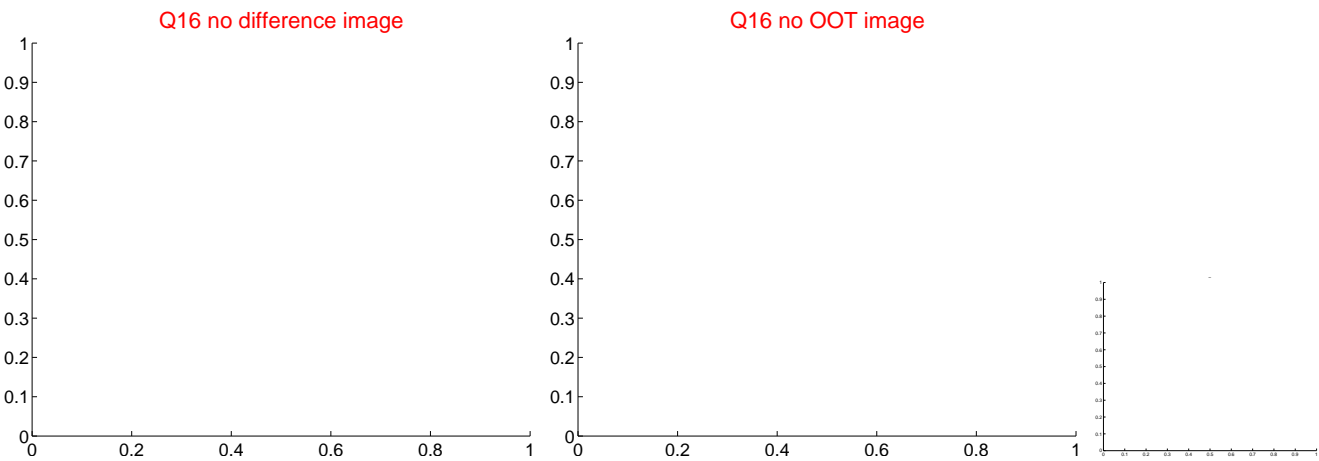
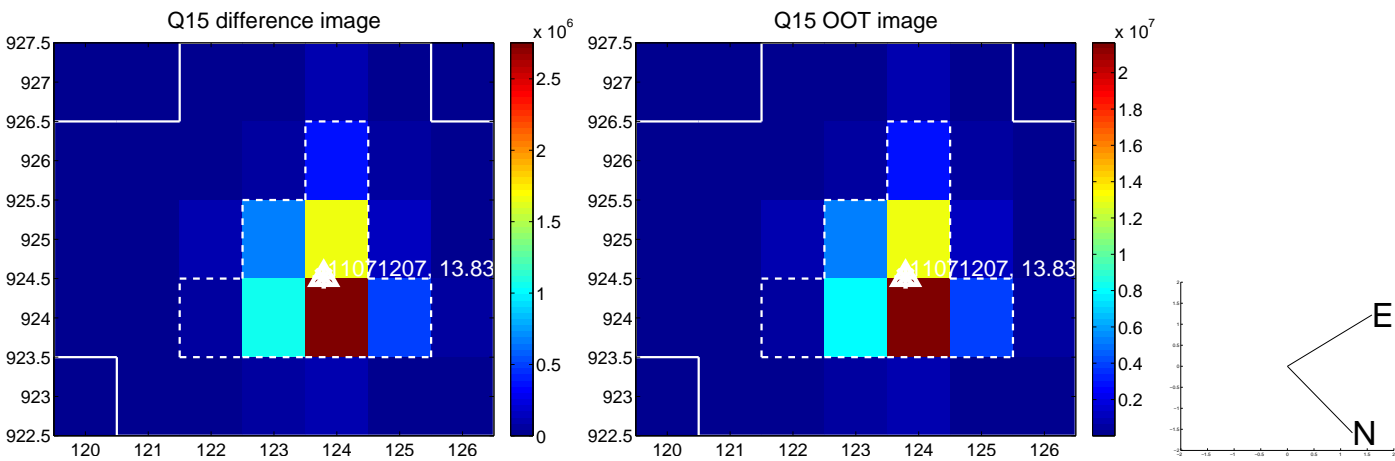
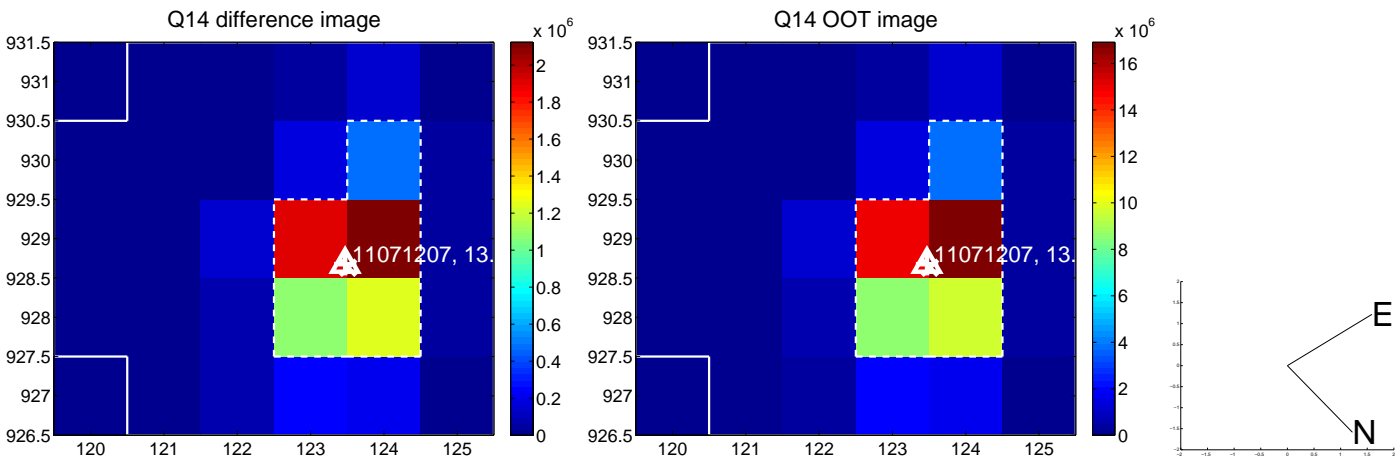
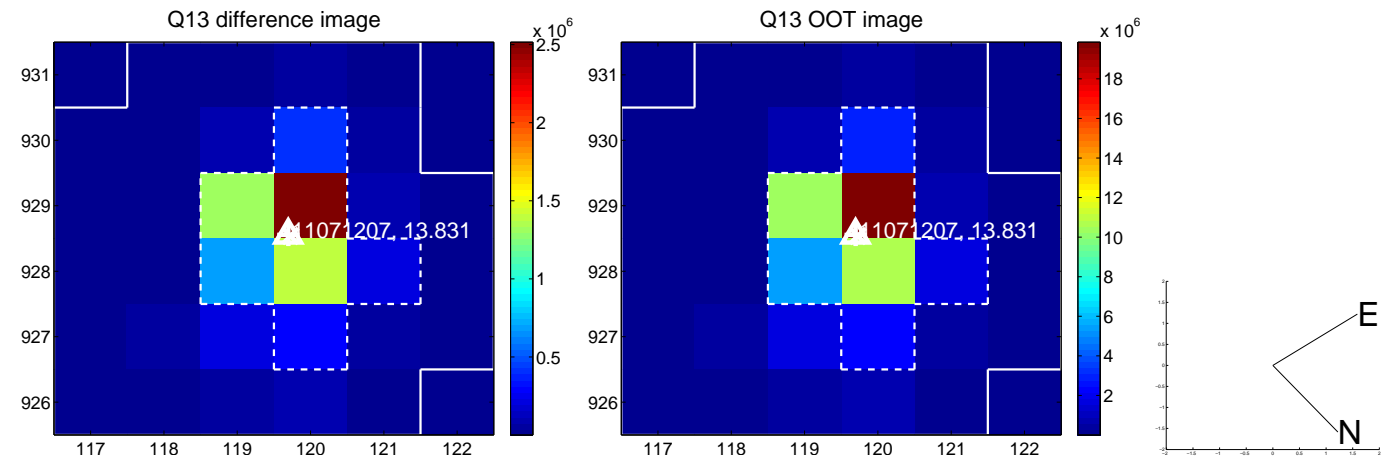
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



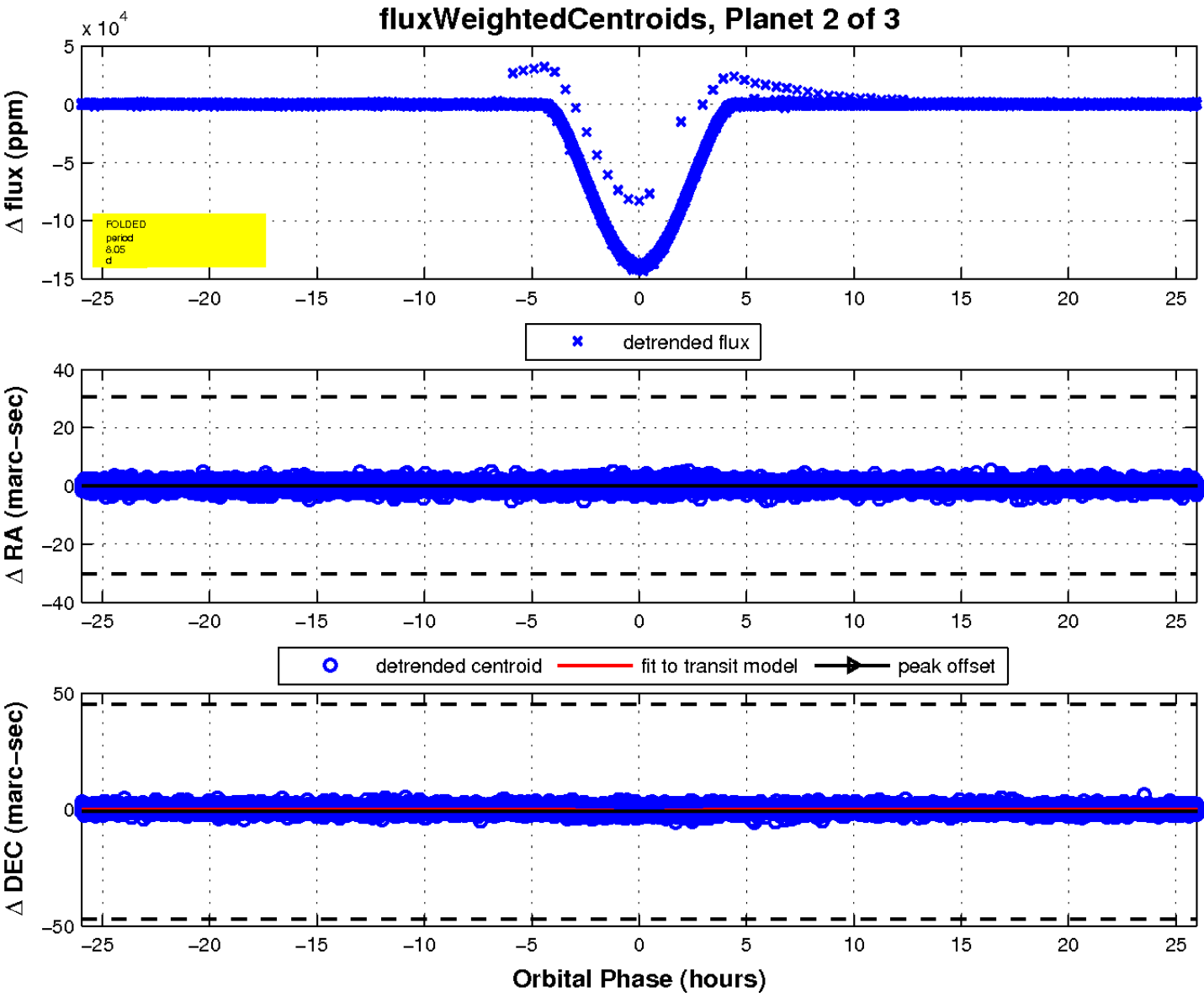
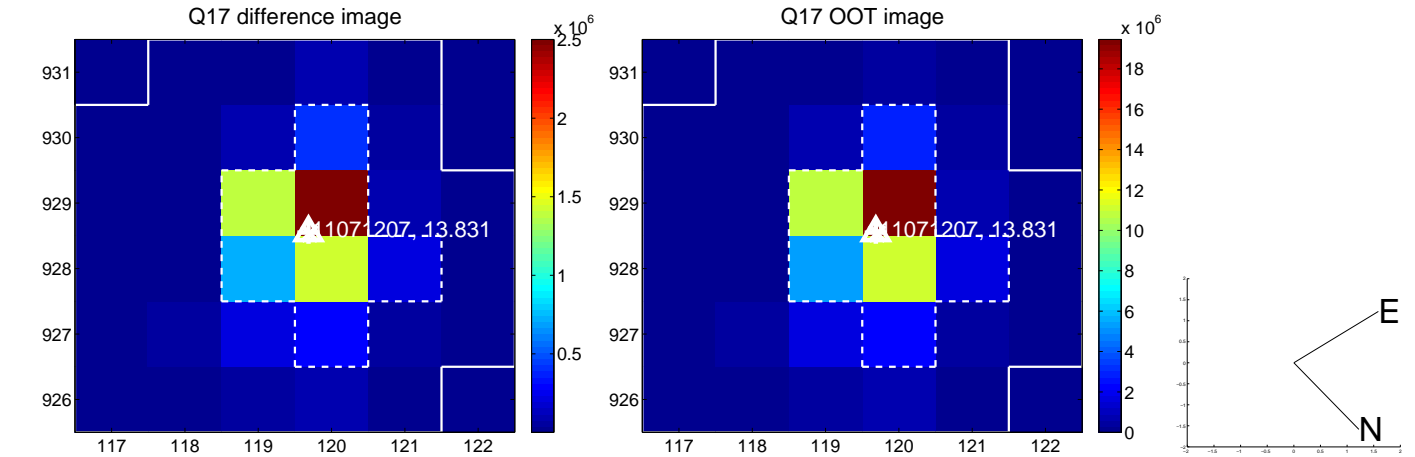
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

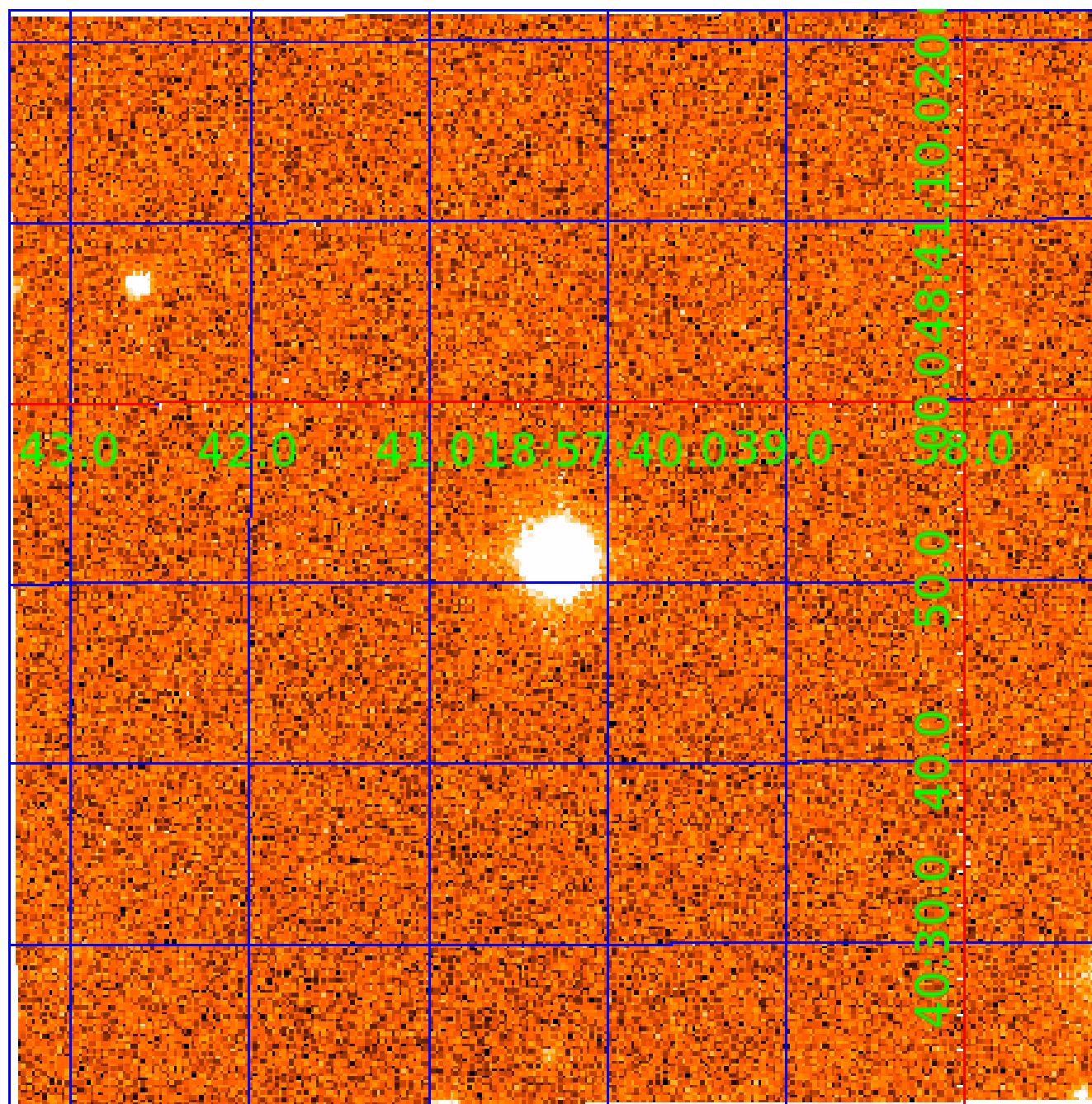


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination





# KIC 011071207

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011071207-01	OBS	7405.01	8.049651	138.649117	280906.7	3.500	12314.4	-1.0	1.49	6698	64.58	572.08
011071207-02	OBS	No	8.049625	135.599930	139263.4	8.657	6184.4	5623.0	1.49	6698	82.06	572.08
011071207-03	OBS	No	5.365856	133.091332	593.6	17.010	945.7	18.7	1.49	6698	4.57	982.44

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011071207-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_NOFITS
011071207-02	OBS	FP	0.00	1	0	0	0	SAME_NTL_PERIOD
011071207-03	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—CENT_FEW_DIFFS—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.

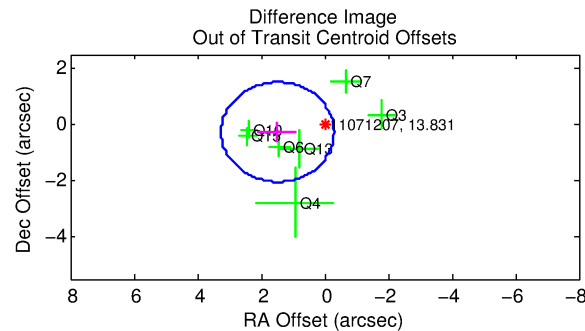
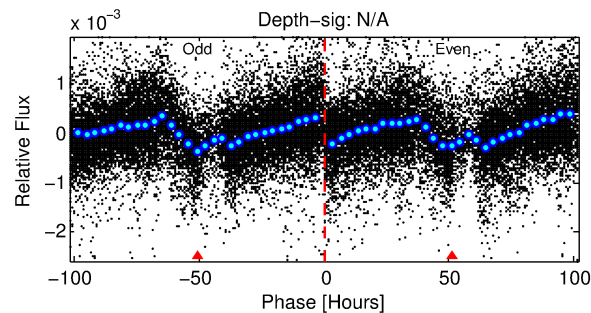
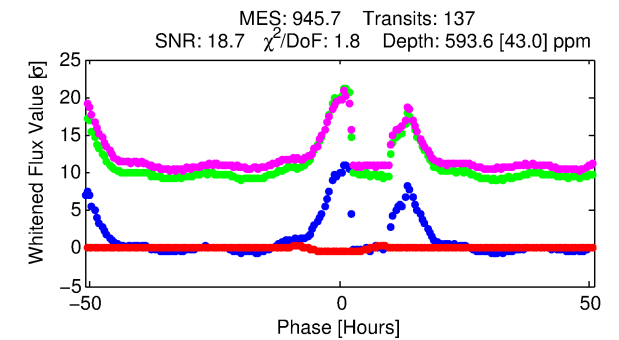
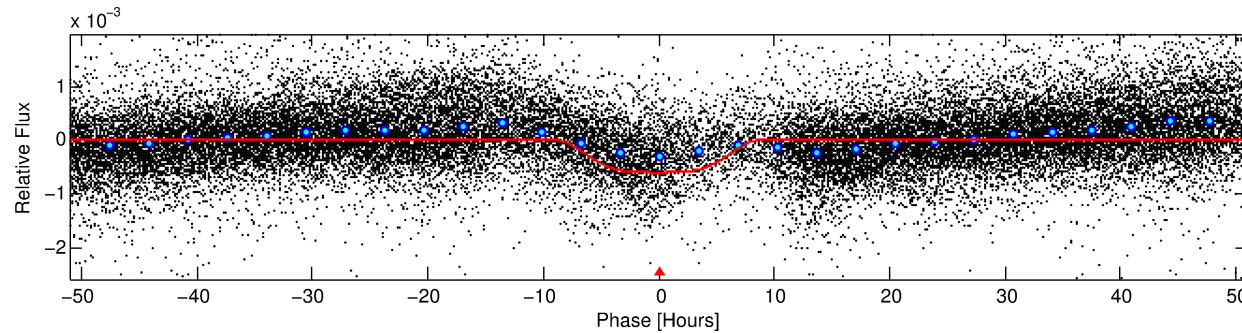
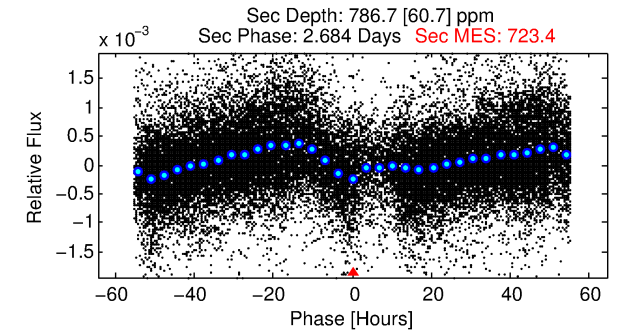
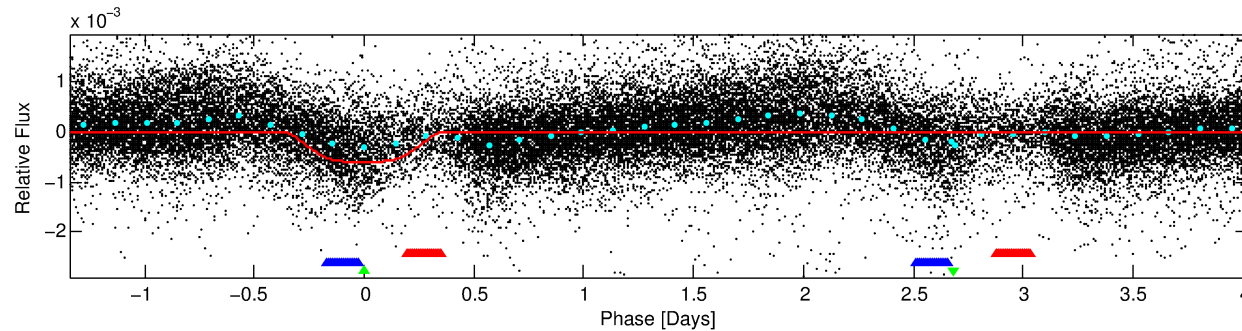
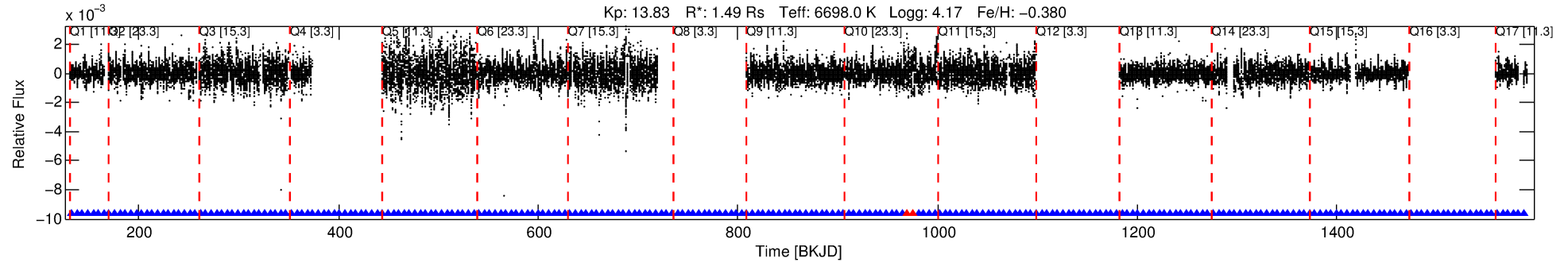
## Ephemeris Match Information For 011071207-03

No Significant Match Found

# DV One-Page Summary

KIC: 11071207 Candidate: 3 of 3 Period: 5.366 d

KOI: K07405 Corr: No Ephemeris Match



## DV Fit Results:

Period = 5.36586 [0.00008] d  
Epoch = 133.0913 [0.0144] BKJD  
Rp/R\* = 0.0282 [0.0011]  
a/R\* = 1.31 [0.03]  
b = 0.96 [0.00]  
Seff = 982.44 [356.65]  
Teq = 1428 [130] K  
Rp = 4.57 [1.27] Re  
a = 0.0636 [0.0148] AU  
Ag = 83.86 [29.84] [2.78σ]  
**Teffp = 6679 [286] K [16.71σ]**

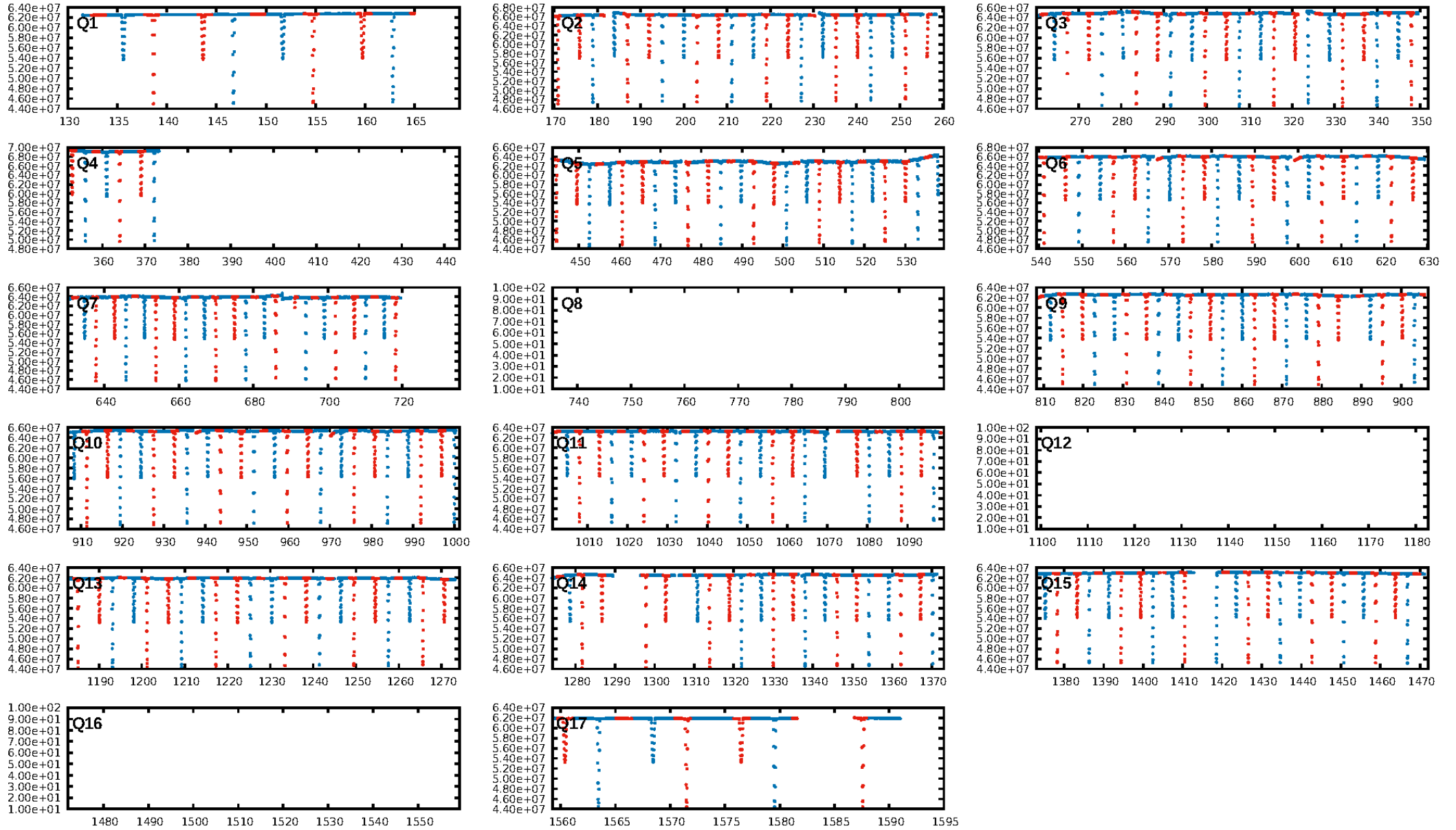
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: 99.9% [3.37σ]  
**ModelChiSquare2-sig: 0.0%**  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: N/A  
RollingBand-fgt: 0.98 [124/126]  
**GhostDiagnostic-chr: 0.05498**  
Centroid-sig: 33.3%  
Centroid-so: 0.193 arcsec [2.03σ]  
OotOffset-rm: 1.505 arcsec [2.54σ]  
OotOffset-st: 2/3/1/1 [7]  
KicOffset-rm: 1.499 arcsec [2.50σ]  
KicOffset-st: 2/3/1/1 [7]  
DiffImageQuality-fgm: 0.29 [2/7]  
DiffImageOverlap-fno: 1.00 [14/14]

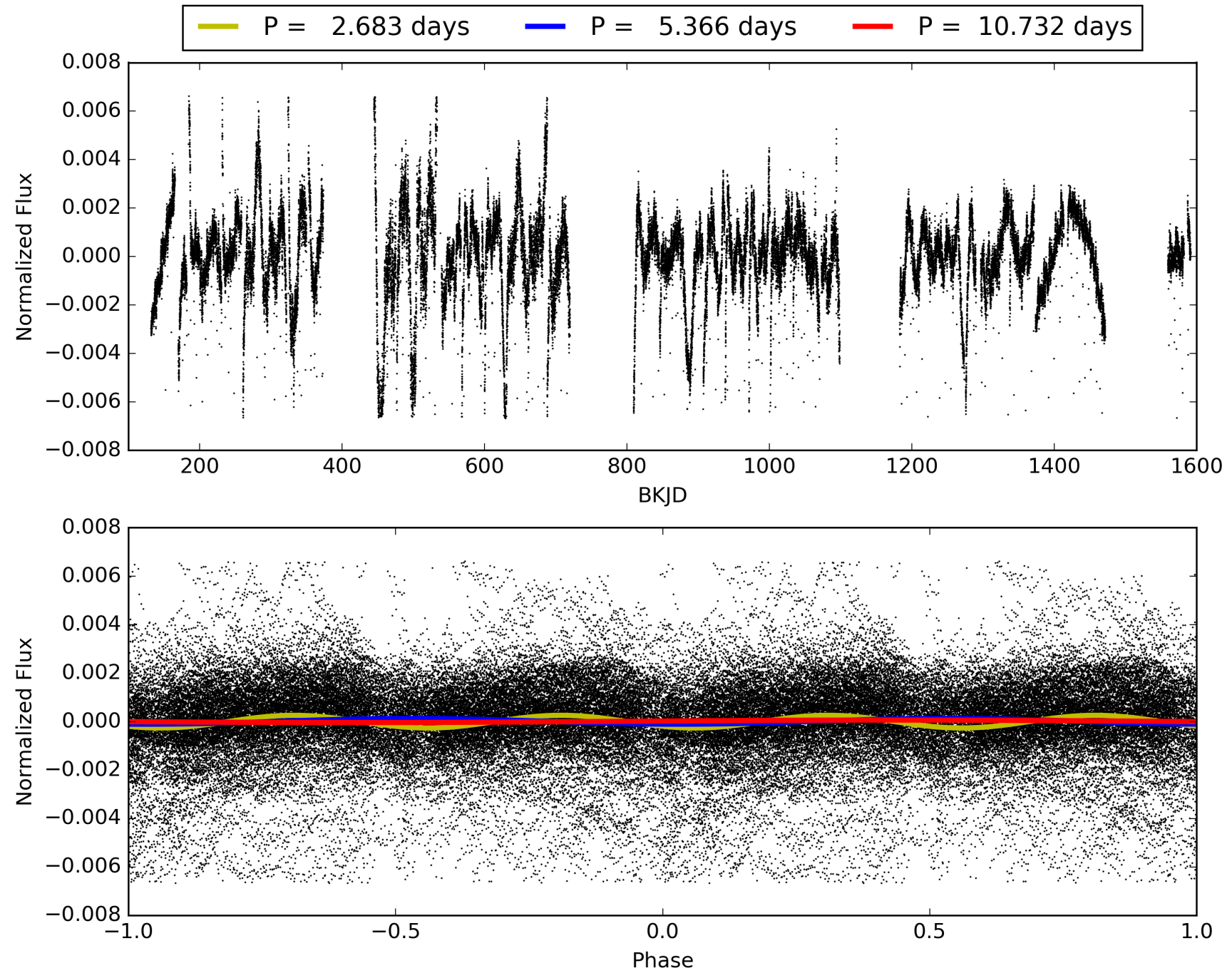
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:37:03 Z

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

# TCE 011071207-03, PDC Light Curves

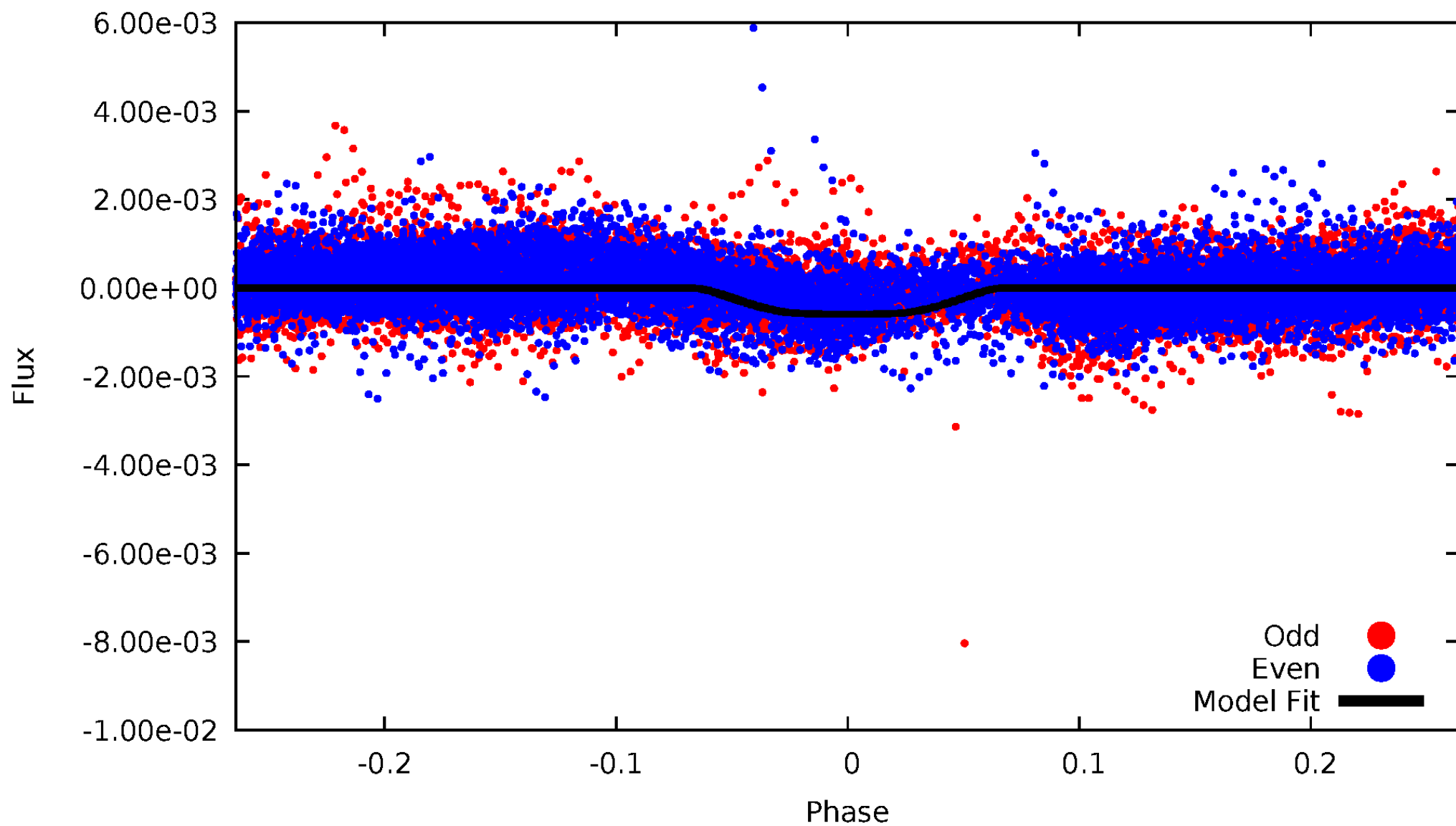


TCE 011071207-03



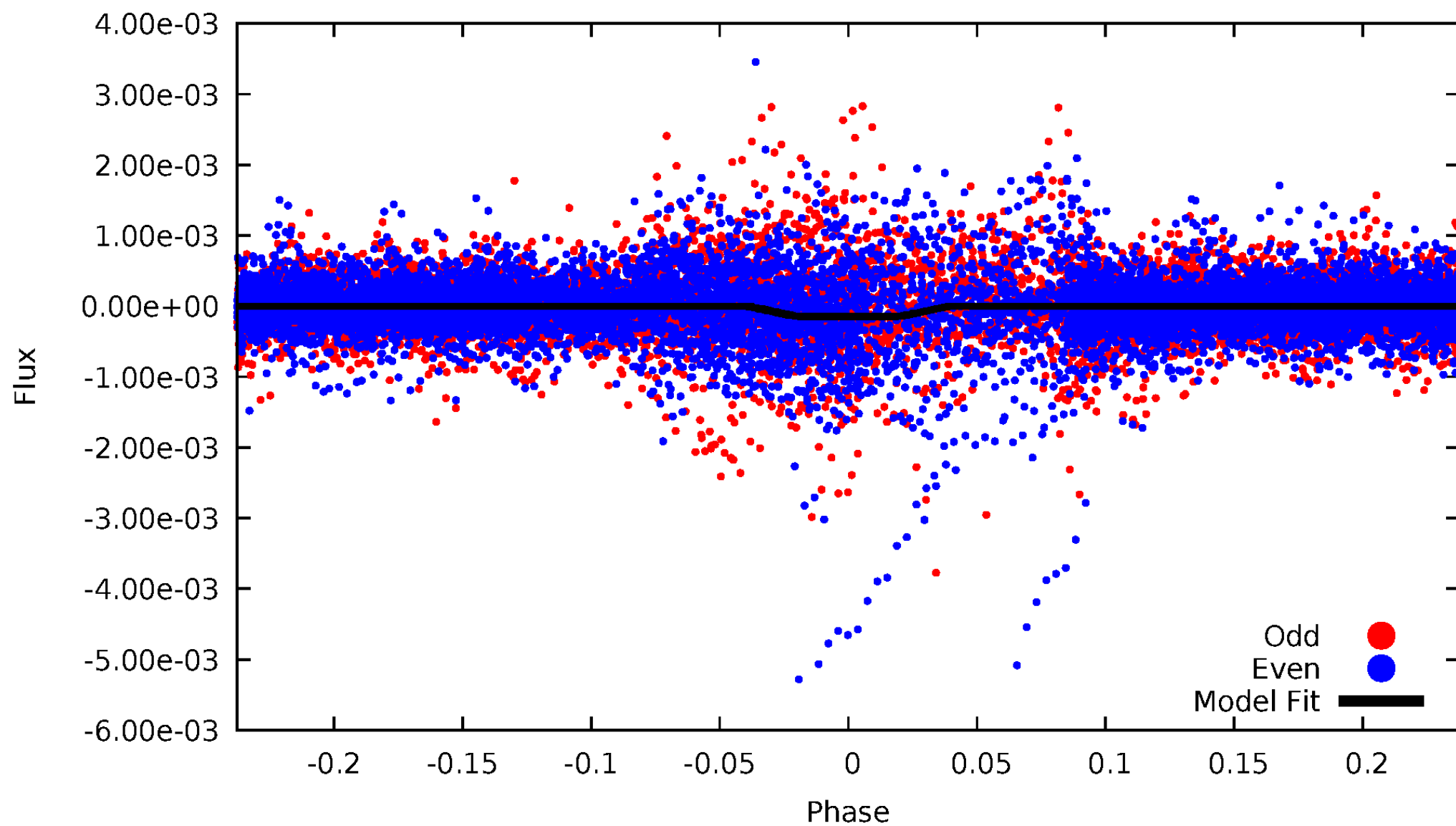
# DV Odd/Even

TCE 011071207-03



# ALT Odd/Even

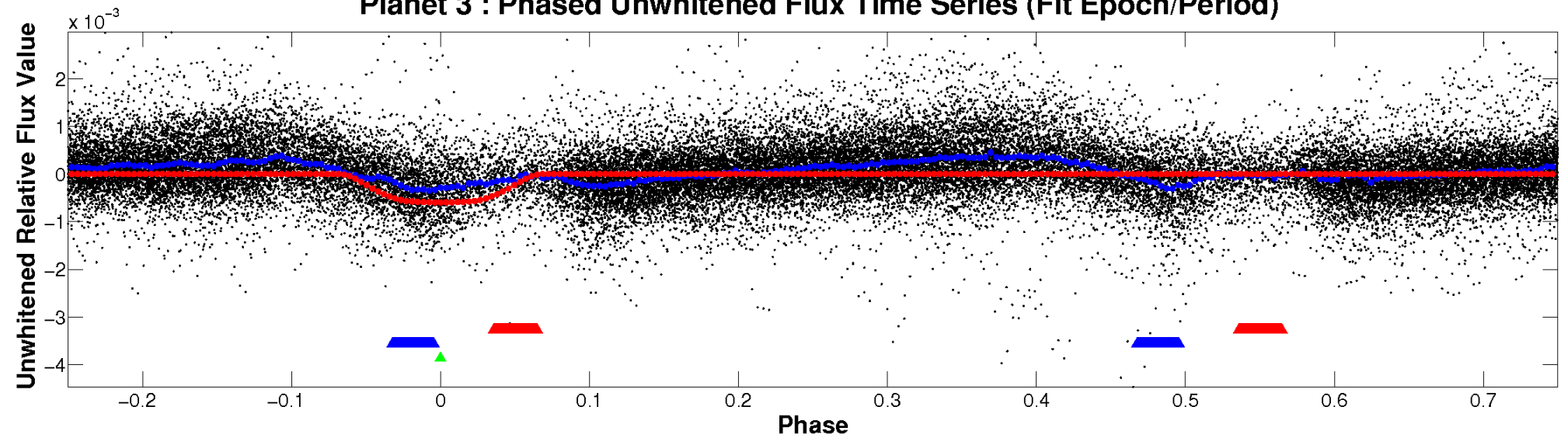
TCE 011071207-03



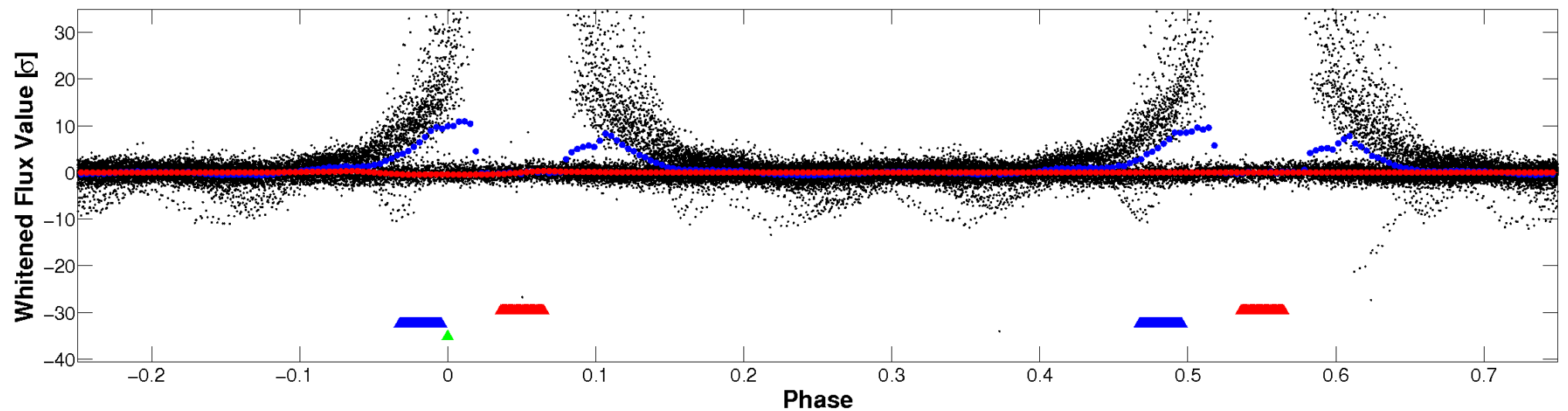


# Non-Whitened Vs. Whitened Light Curve

## Planet 3 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

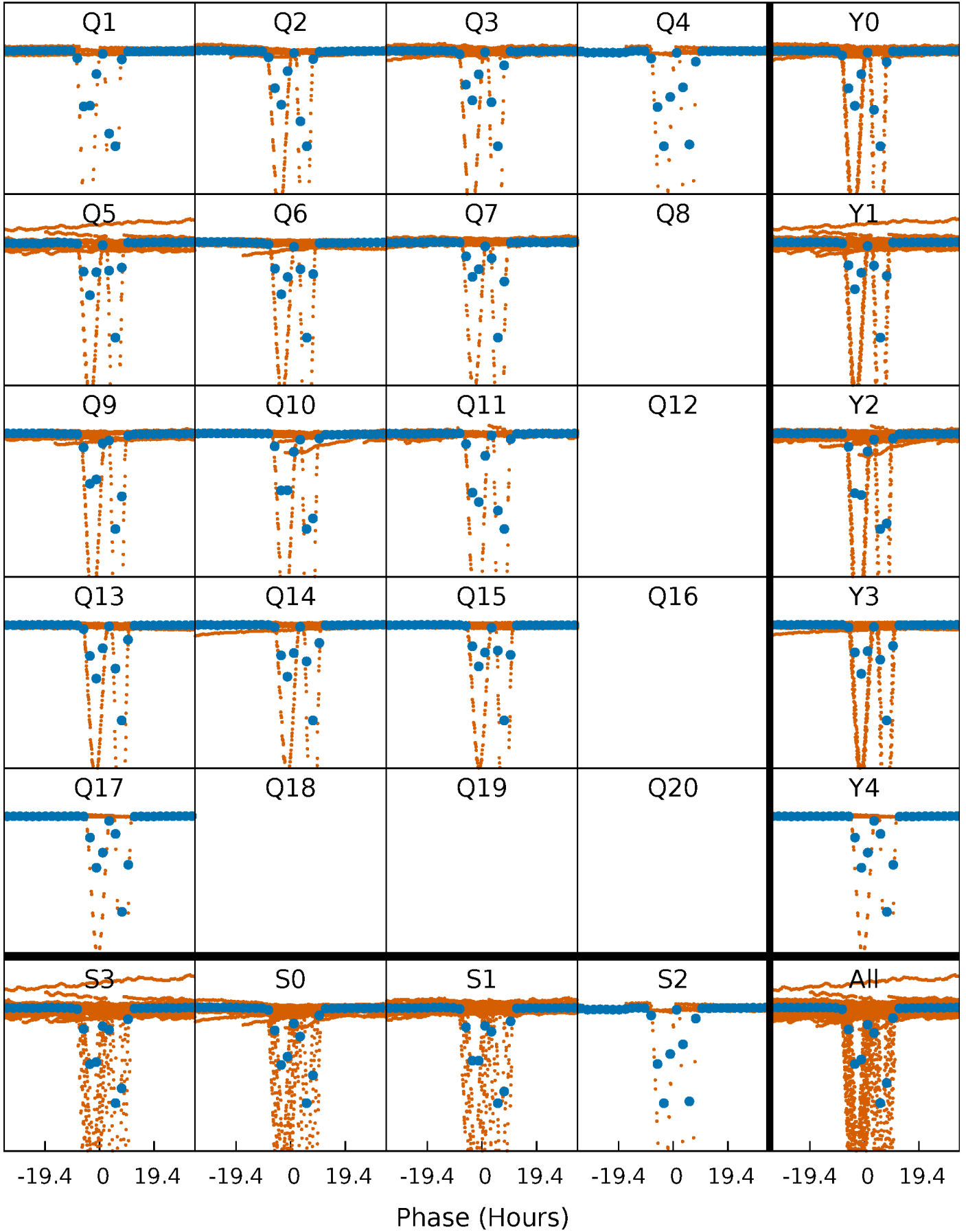


## Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



# PDC Quarter-Phased Transit Curves

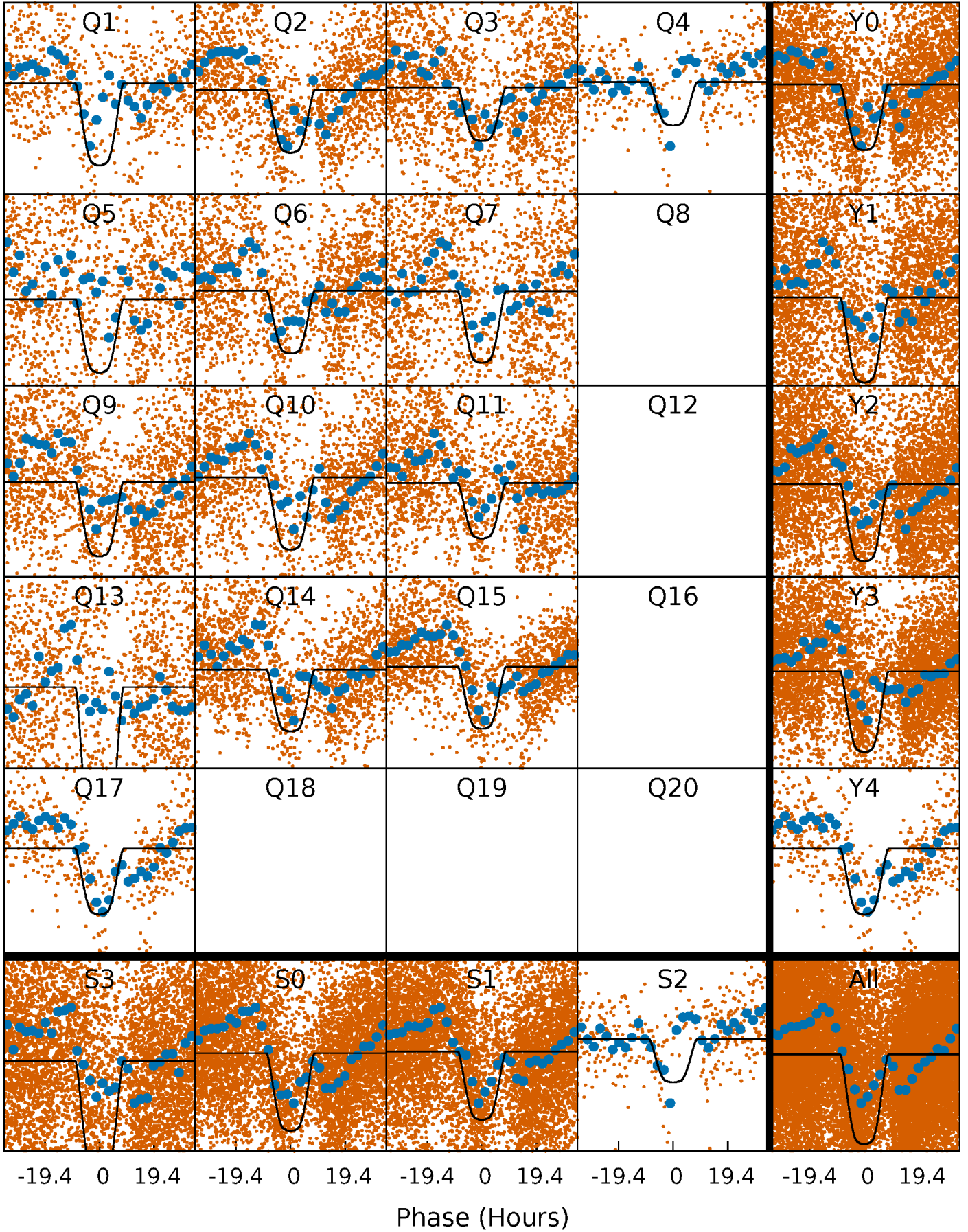
TCE 011071207-03 P= 5.365856 Days  $T_0=133.091332$  (BKJD)





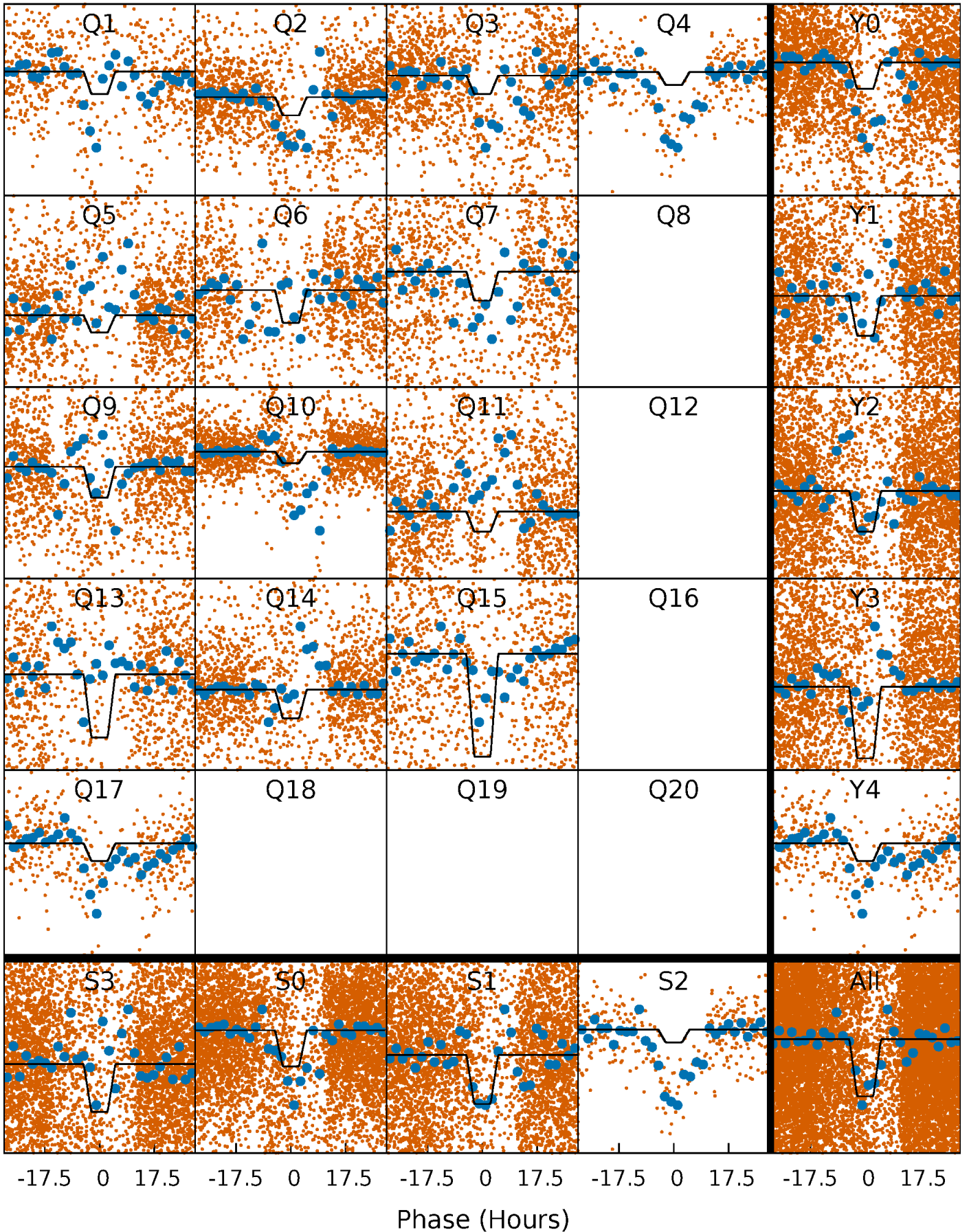
# DV Quarter-Phased Transit Curves

TCE 011071207-03   P= 5.365856 Days    $T_0=133.091332$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

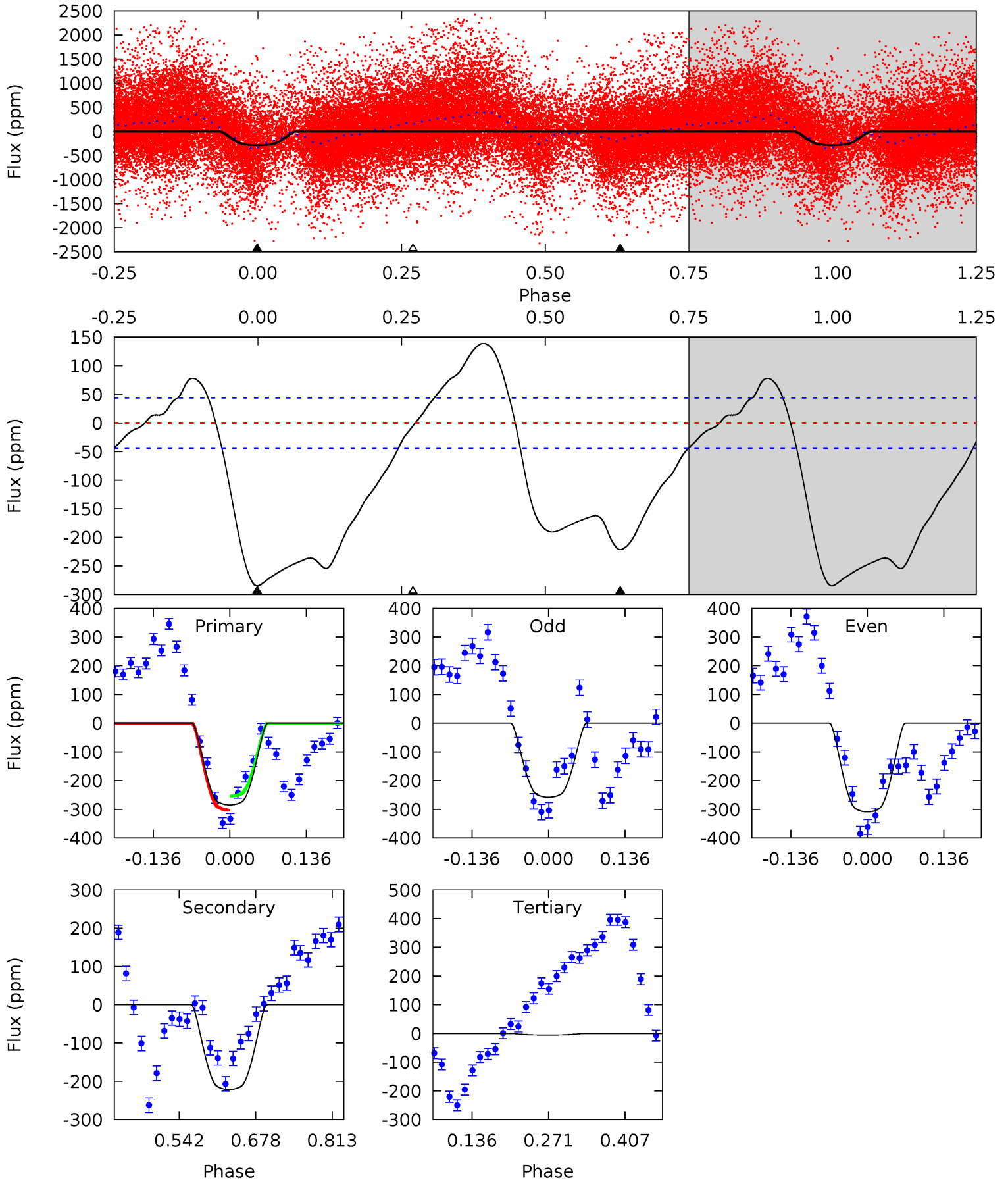
TCE 011071207-03 P= 5.366356 Days  $T_0=133.034431$  (BKJD)



# DV Model-Shift Uniqueness Test

011071207-03, P = 5.365856 Days, E = 127.725476 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
29.1	22.6	0.52	0	4.50	1.49	9.80	28.5	29.1	22.1	22.6	2.62	1.02	0.33	2.45

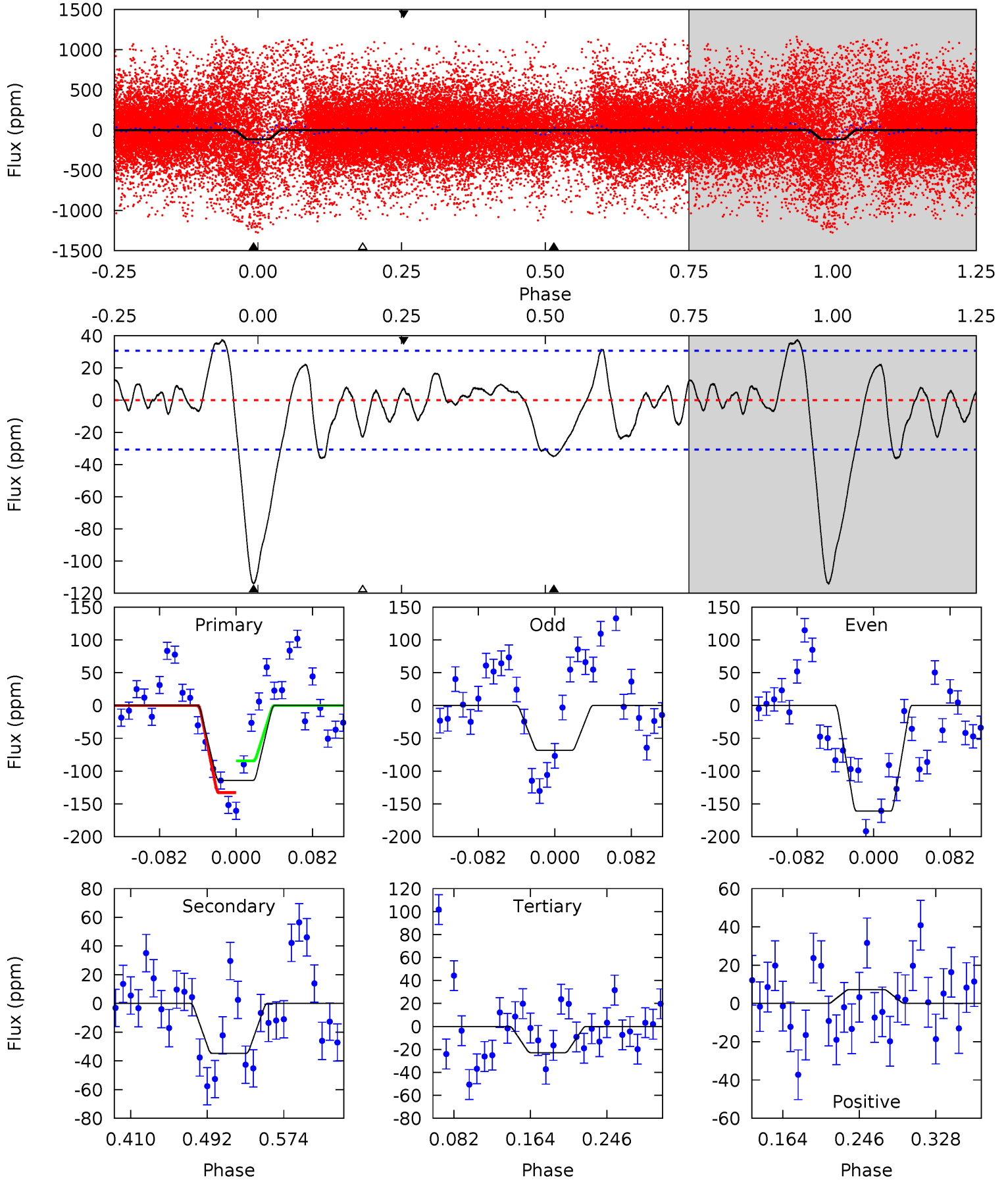




# Alt Model-Shift Uniqueness Test

011071207-03, P = 5.366356 Days, E = 127.668075 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
17.1	5.21	3.42	1.09	4.61	1.74	1.71	13.7	16.0	1.79	4.12	6.95	1.82	0.25	3.43



### Stellar Parameters For KIC 011071207

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$6698^{+169}_{-220}$	$4.171^{+0.185}_{-0.185}$	$-0.380^{+0.250}_{-0.300}$	$1.485^{+0.410}_{-0.336}$	$1.197^{+0.175}_{-0.175}$	$0.515^{+0.563}_{-0.250}$
	+3%/-3%	+4%/-4%	+66%/-79%	+28%/-23%	+15%/-15%	+109%/-49%
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 011071207-03 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$-221 \pm 10$	$4.63^{+0.75}_{-0.66}$	$1997^{+152}_{-146}$	$4922^{+142}_{-151}$	$23^{+8}_{-5}$
Alt.	$-35 \pm 7$	$1.95^{+0.37}_{-0.30}$	$1993^{+154}_{-138}$	$4747^{+318}_{-259}$	$20^{+10}_{-6}$

$T_{\text{max}}$  = 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

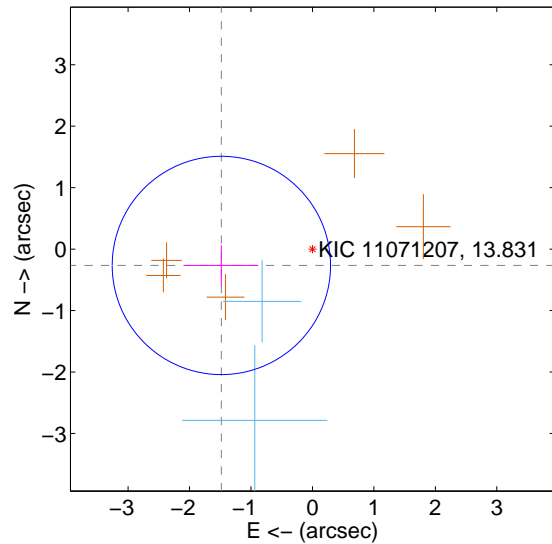
Supplemental centroid analysis for 011071207-03. Kepler magnitude: 13.83. Transit SNR 18.69

There are 2 quarters with good PRF difference image offsets

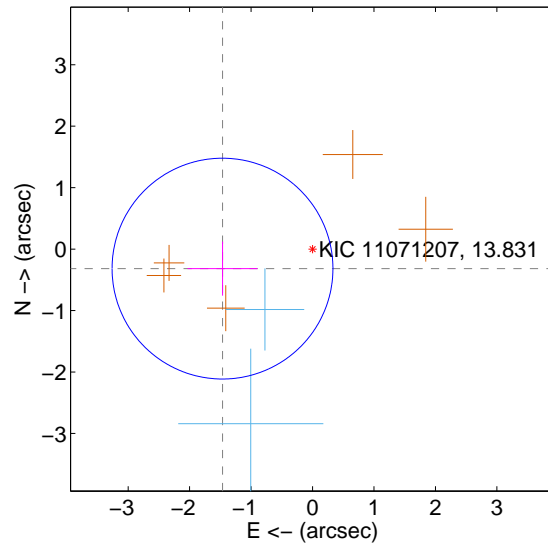
The direct PRF centroid is offset from the target star catalog position by about 0.01 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.505 \pm 0.592$	2.54	$1.482 \pm 0.598$	$-0.266 \pm 0.331$
PRF-fit source offset from KIC position	$1.499 \pm 0.599$	2.50	$1.465 \pm 0.570$	$-0.317 \pm 0.440$
photometric centroid source offset	$0.19 \pm 0.10$	2.03	$0.19 \pm 0.10$	$-0.05 \pm 0.10$

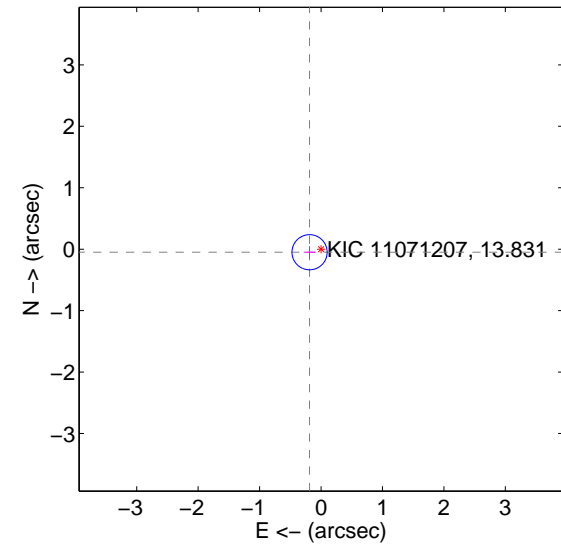
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

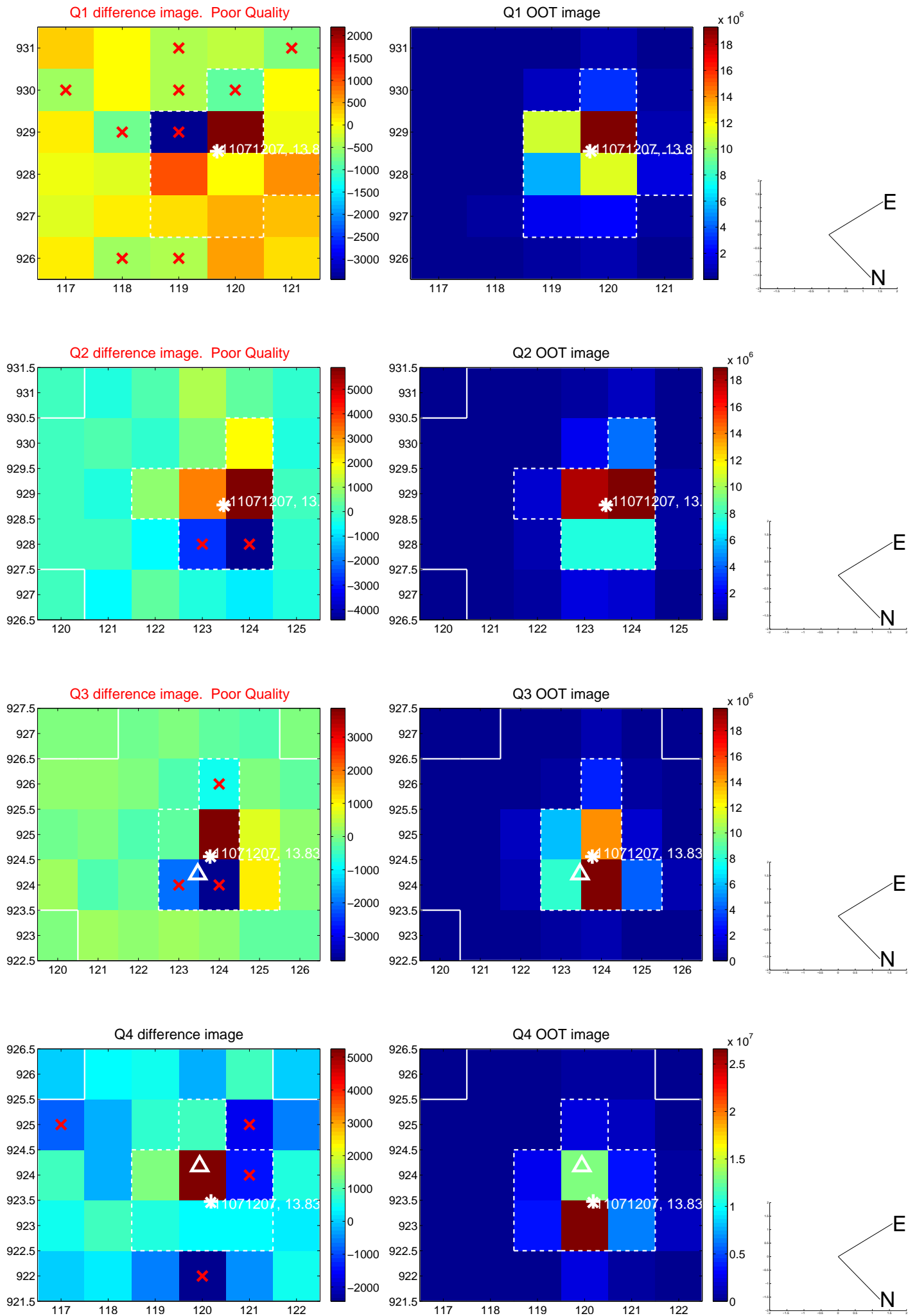


offset from photometric centroids

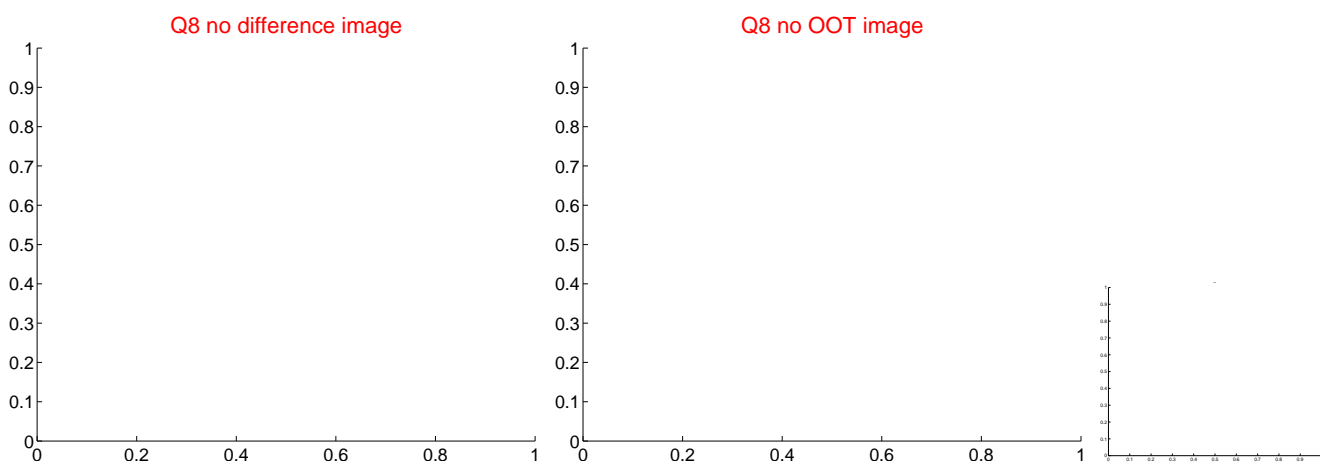
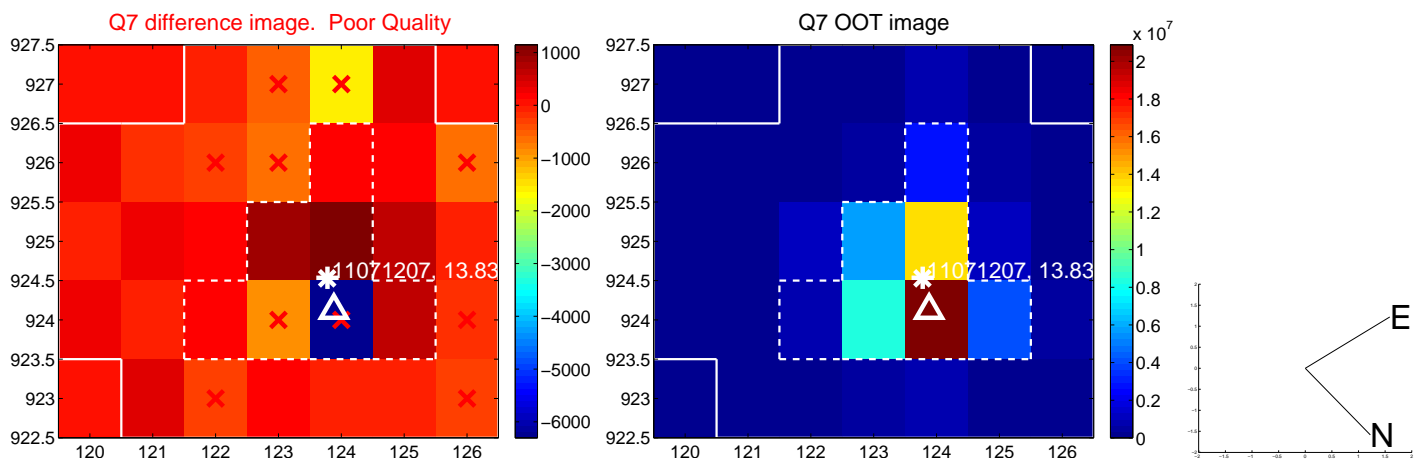
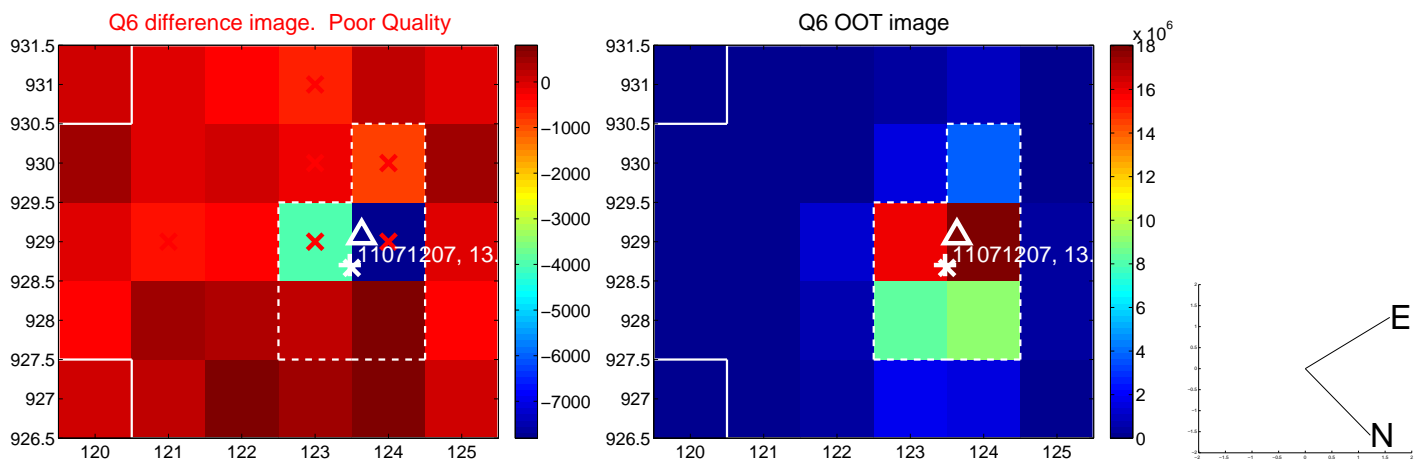
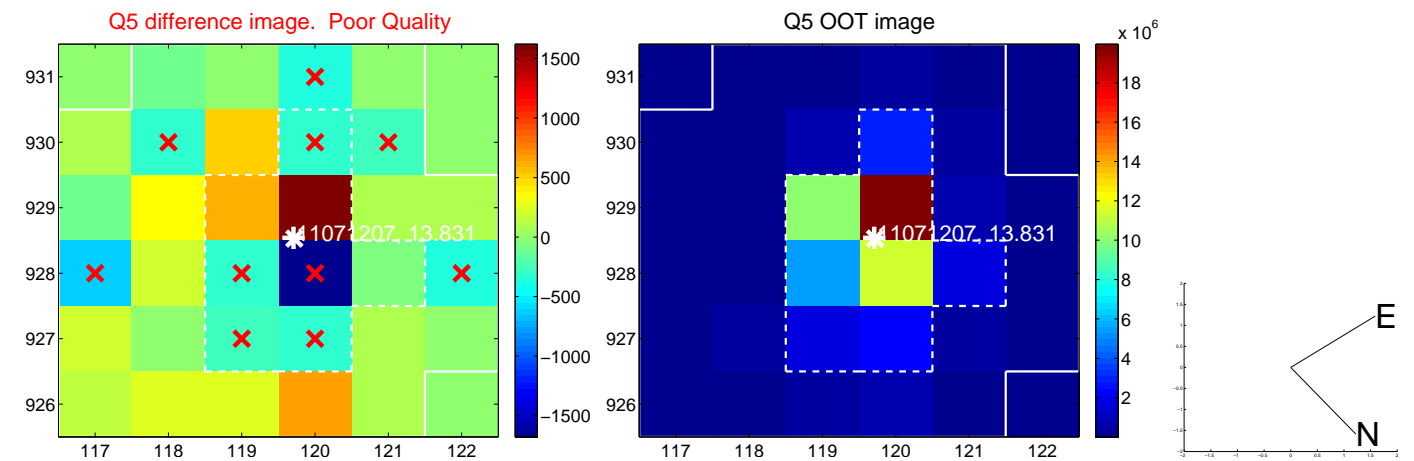


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

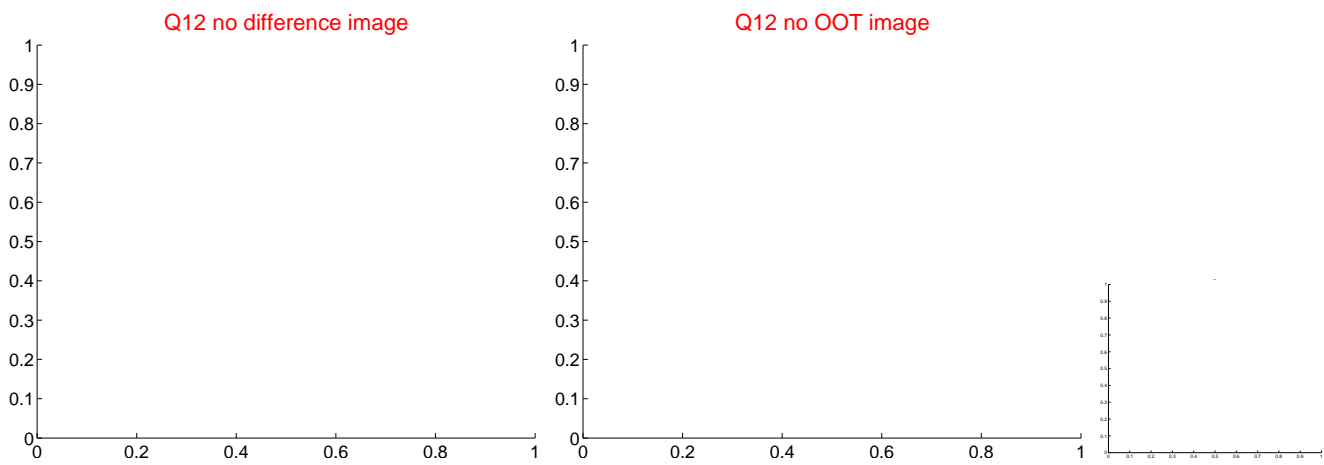
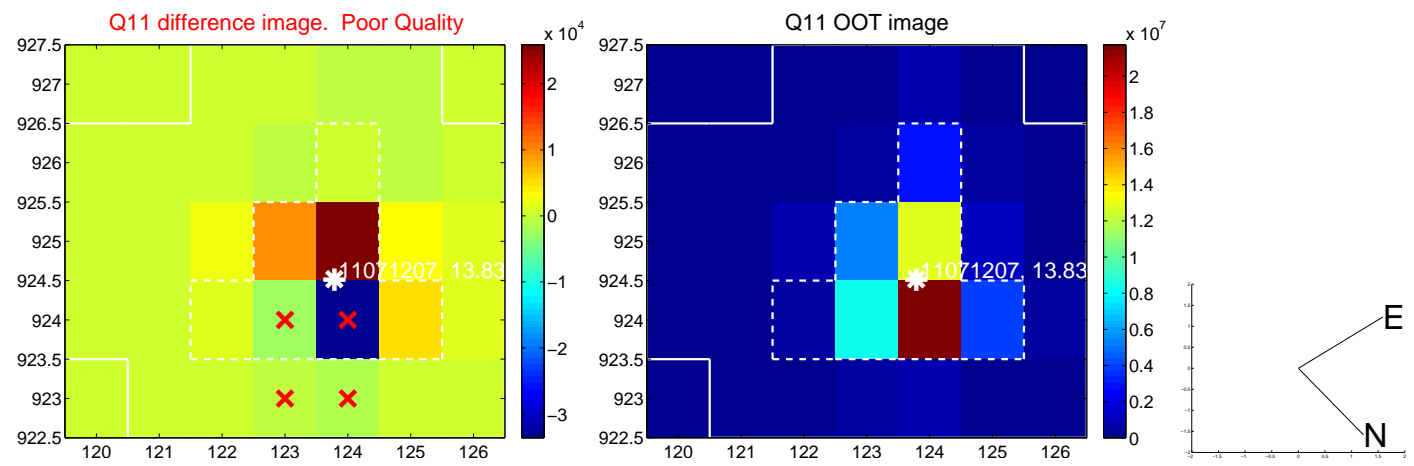
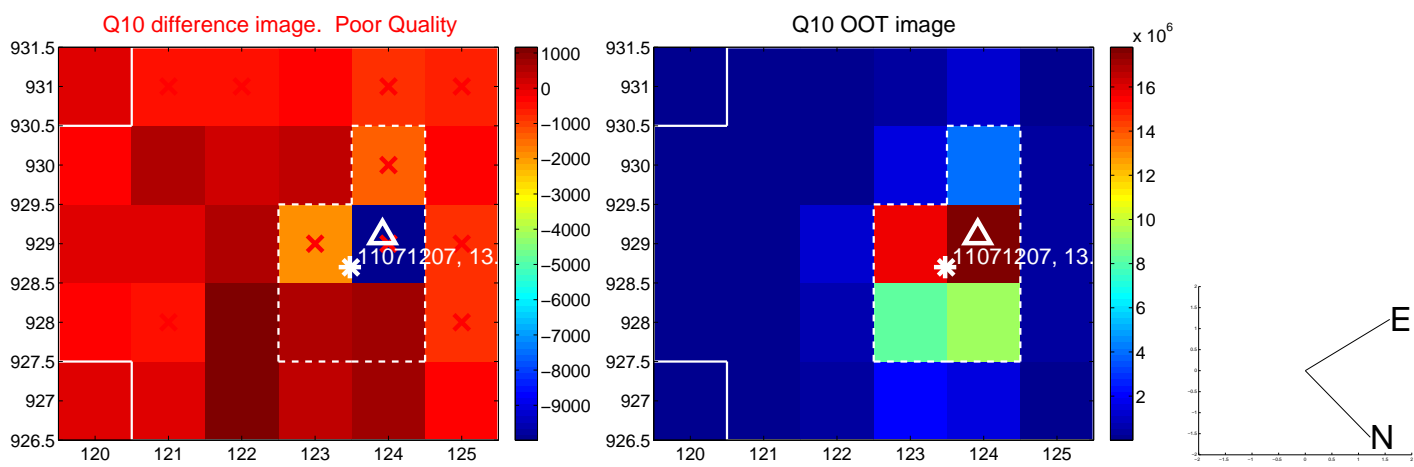
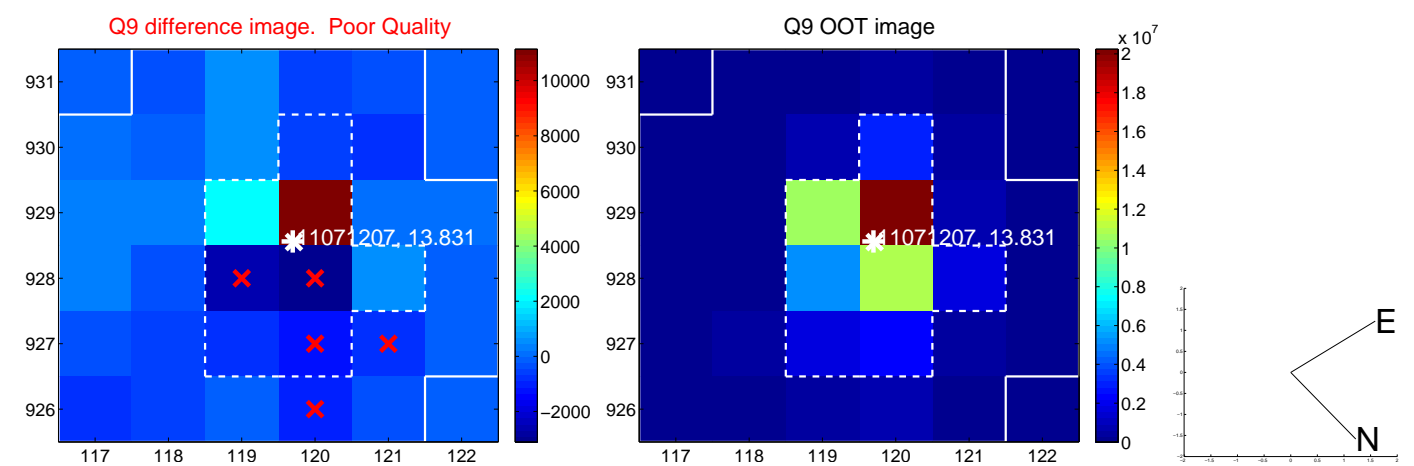


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

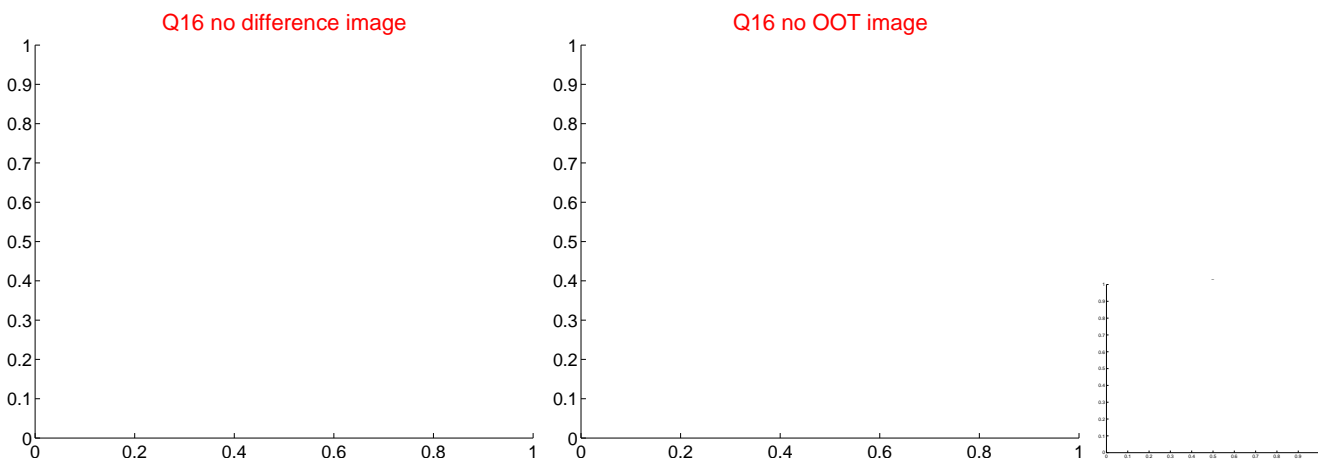
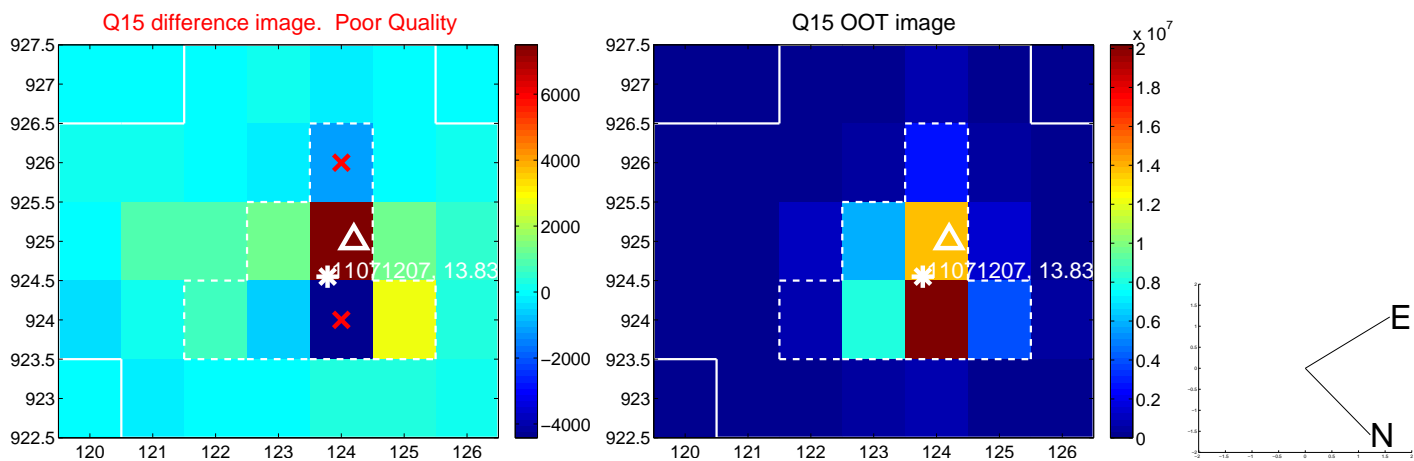
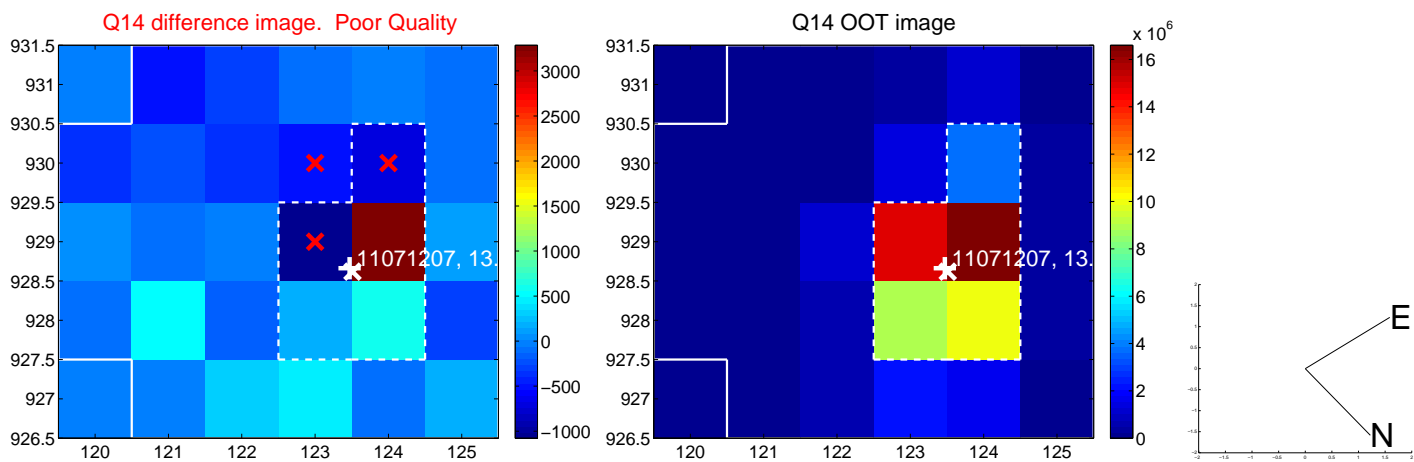
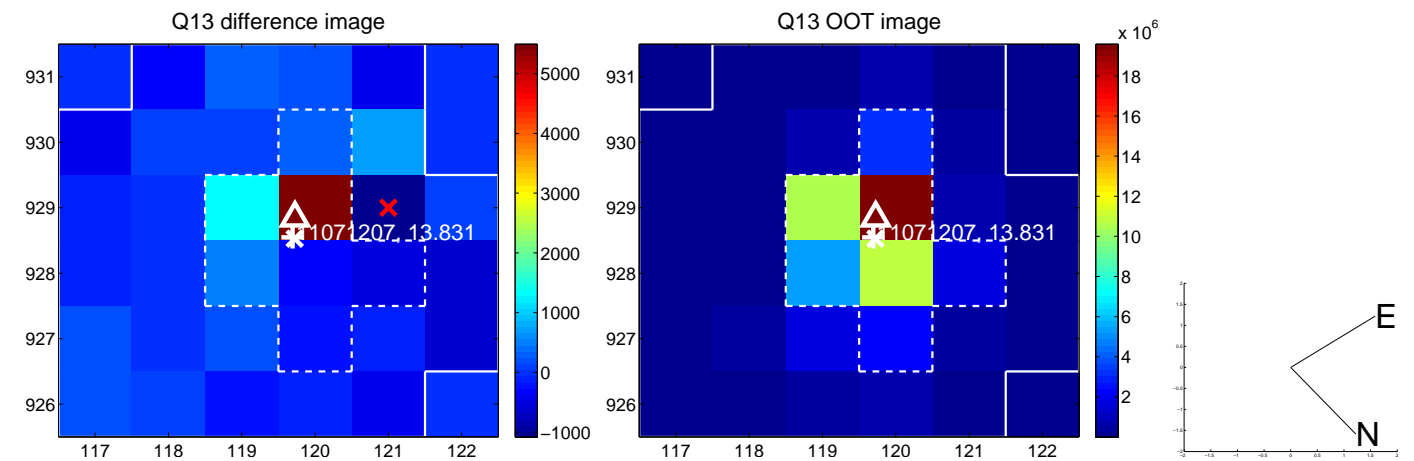




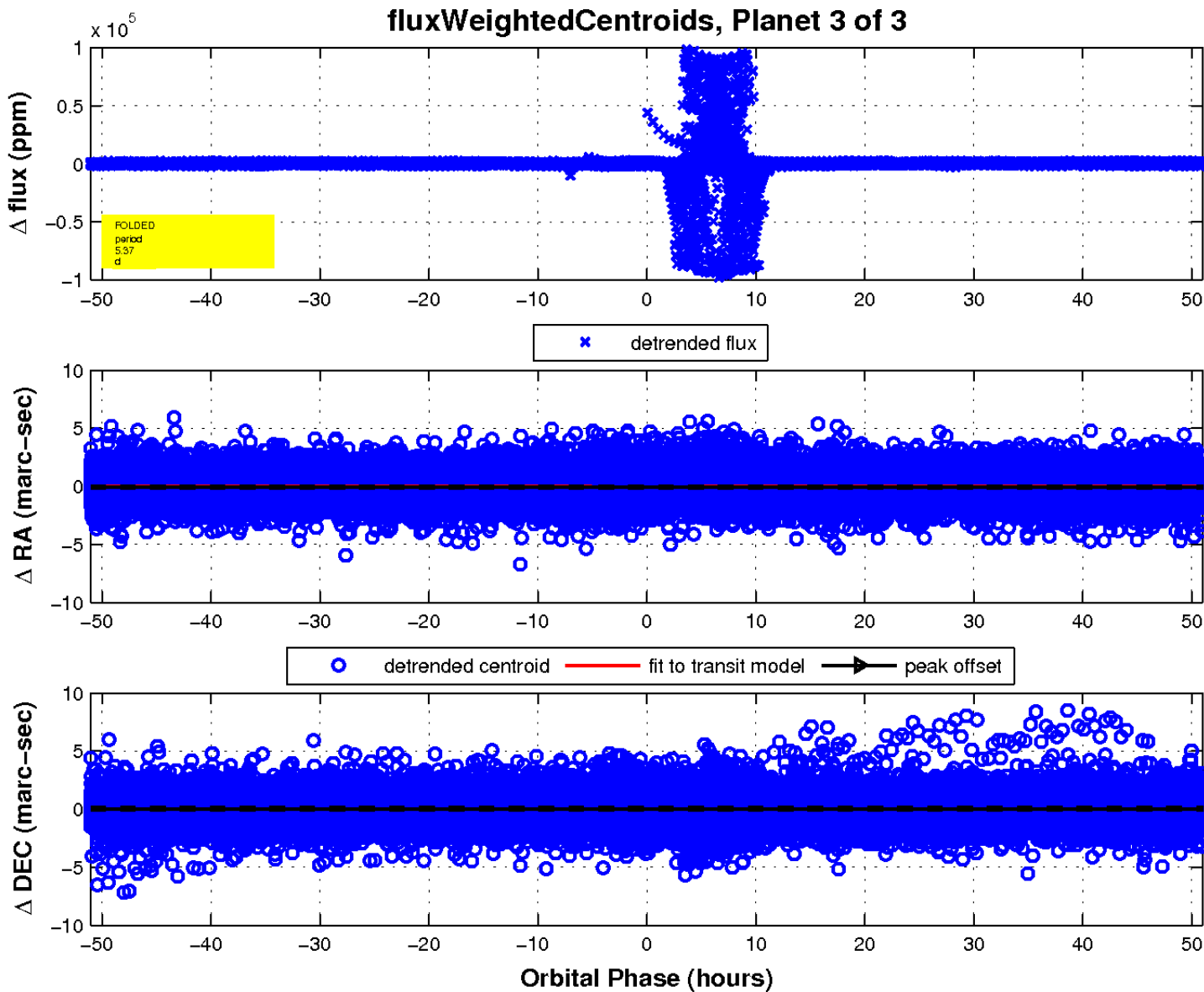
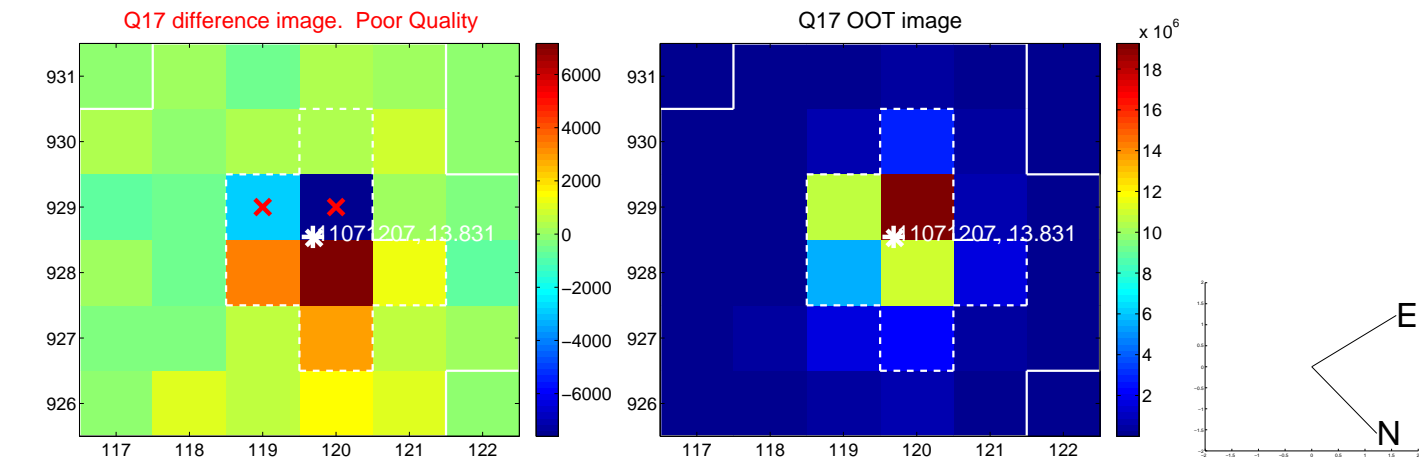
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

