

# KIC 011295805

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011295805-01	OBS	No	2.057358	132.483326	6.6	6.228	10.7	2.6	3.33	6807	0.99	15904.79
011295805-02	OBS	No	2.057371	131.983168	16.0	24.119	9.3	8.1	3.33	6807	1.62	15904.65

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011295805-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
011295805-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—SWEET_NTL—LPP_DV—SAME_NTL_PERIOD—CENT_FEW_MEAS

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

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

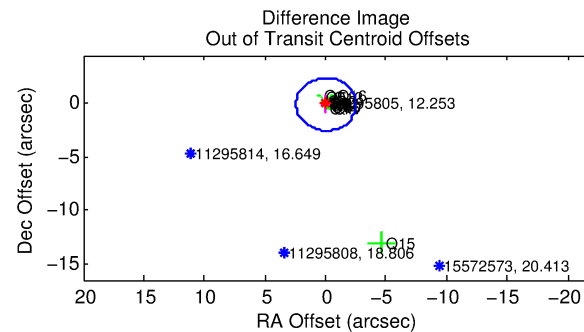
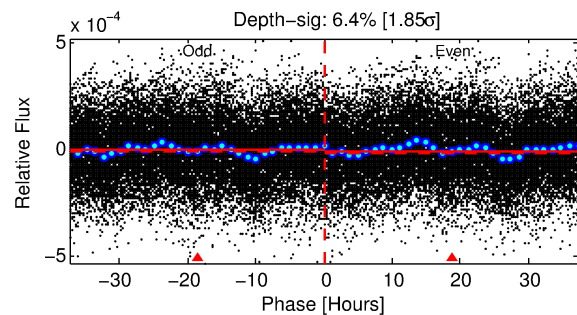
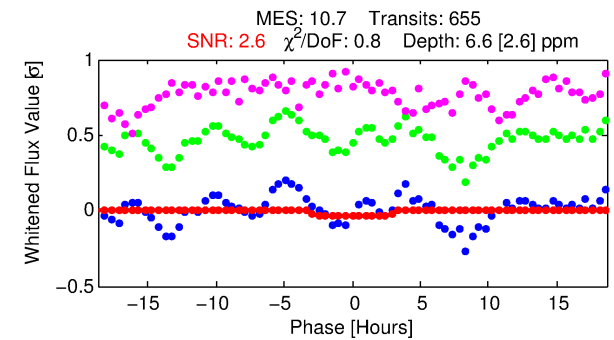
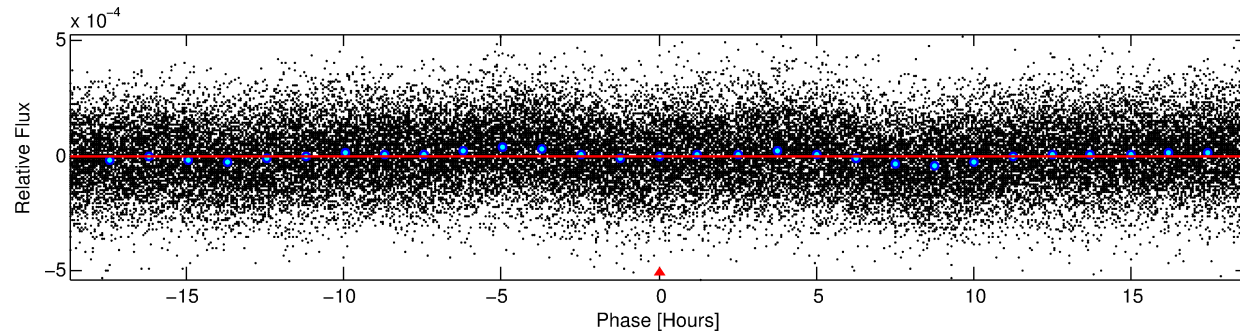
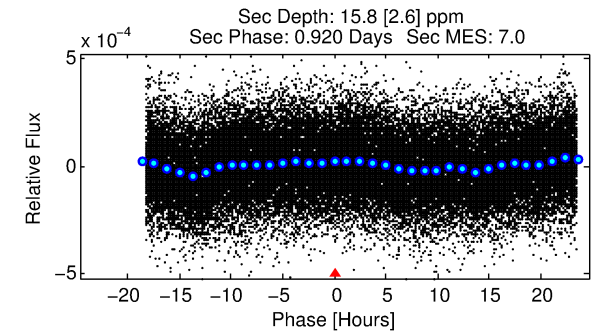
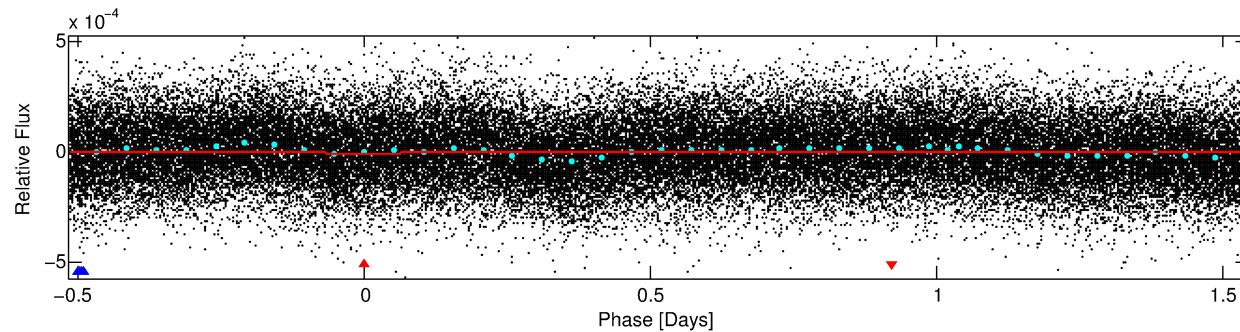
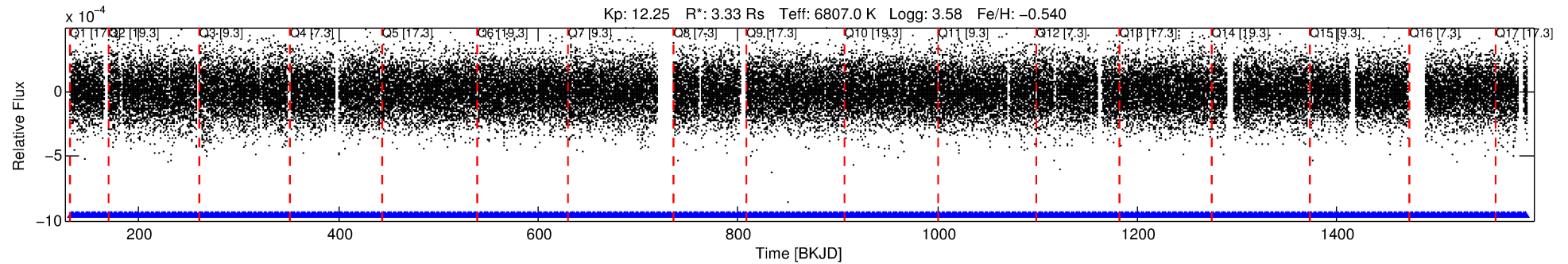
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 011295805-01

No Significant Match Found

# DV One-Page Summary

KIC: 11295805 Candidate: 1 of 2 Period: 2.057 d



## DV Fit Results:

Period = 2.05736 [0.00007] d  
Epoch = 132.4833 [0.0161] BKJD  
Rp/R\* = 0.0027 [0.0014]  
a/R\* = 1.46 [2.20]  
b = 0.90 [0.61]  
Seff = 15904.79 [9409.59]  
Teq = 2864 [424] K  
Rp = 0.99 [0.63] Re  
a = 0.0367 [0.0135] AU  
Ag = 11.85 [13.76] [0.79σ]  
Teffp = 8214 [2082] K [2.52σ]

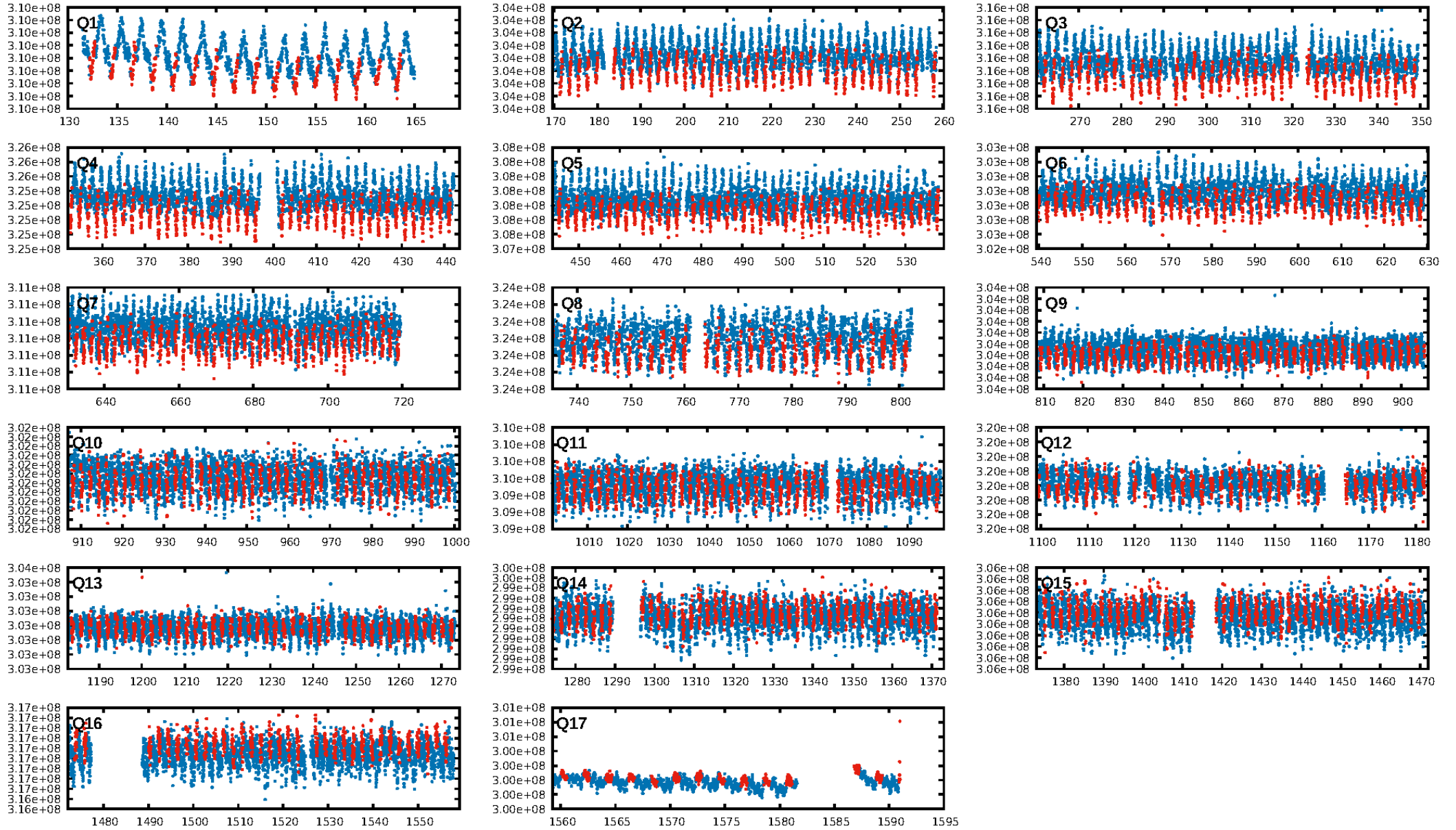
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: 0.0% [0.00σ]  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [626/626]  
GhostDiagnostic-chr: 4.074  
Centroid-sig: 20.5%  
Centroid-so: 2.235 arcsec [1.34σ]  
OotOffset-rm: 0.090 arcsec [0.11σ]  
KicOffset-rm: 0.130 arcsec [0.19σ]  
OotOffset-st: 4/4/4/5 [17]  
KicOffset-st: 4/4/4/5 [17]  
DiffImageQuality-fgm: 0.82 [14/17]  
DiffImageOverlap-fno: 0.00 [0/17]

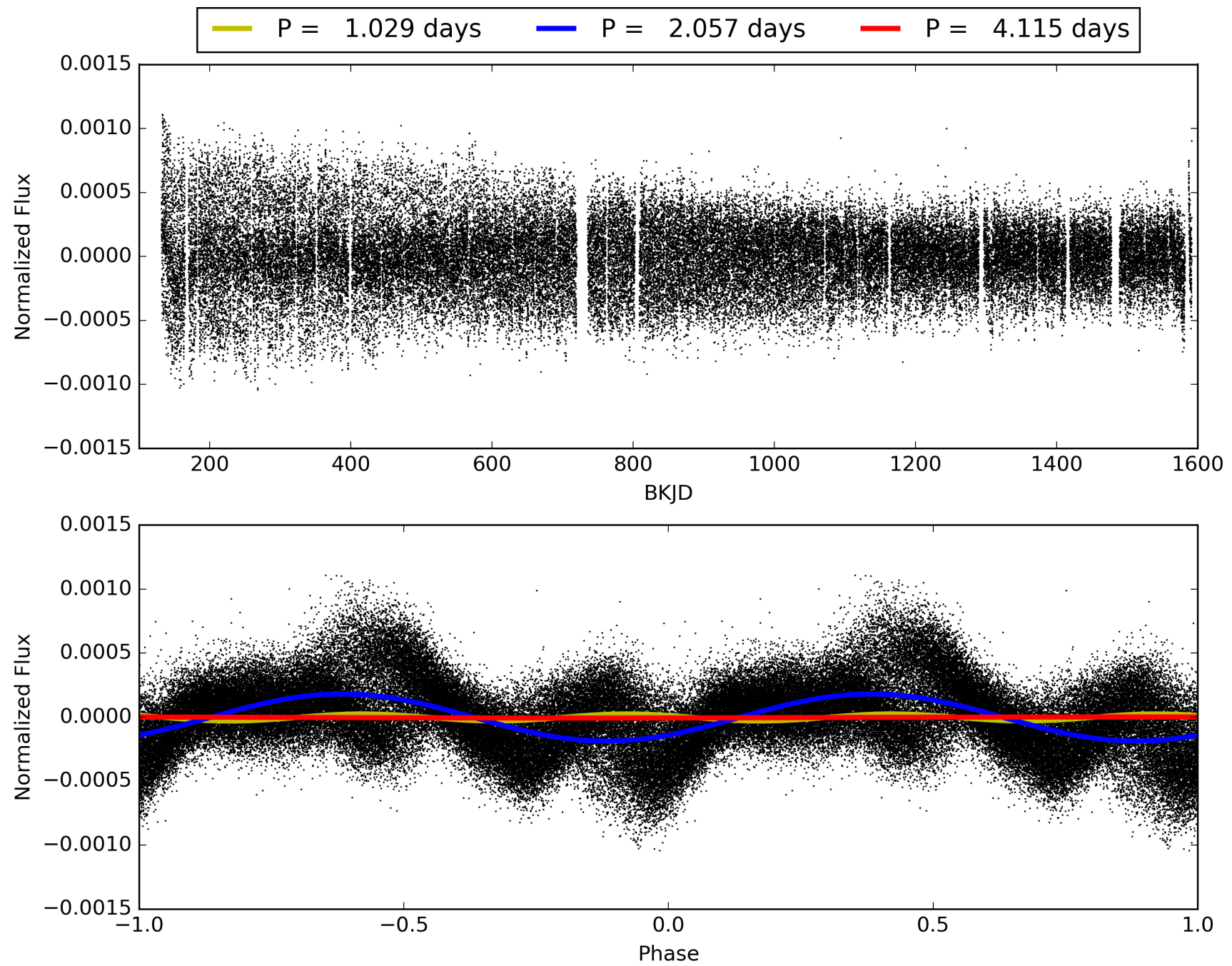
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 06:10:33 Z

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

# TCE 011295805-01, PDC Light Curves

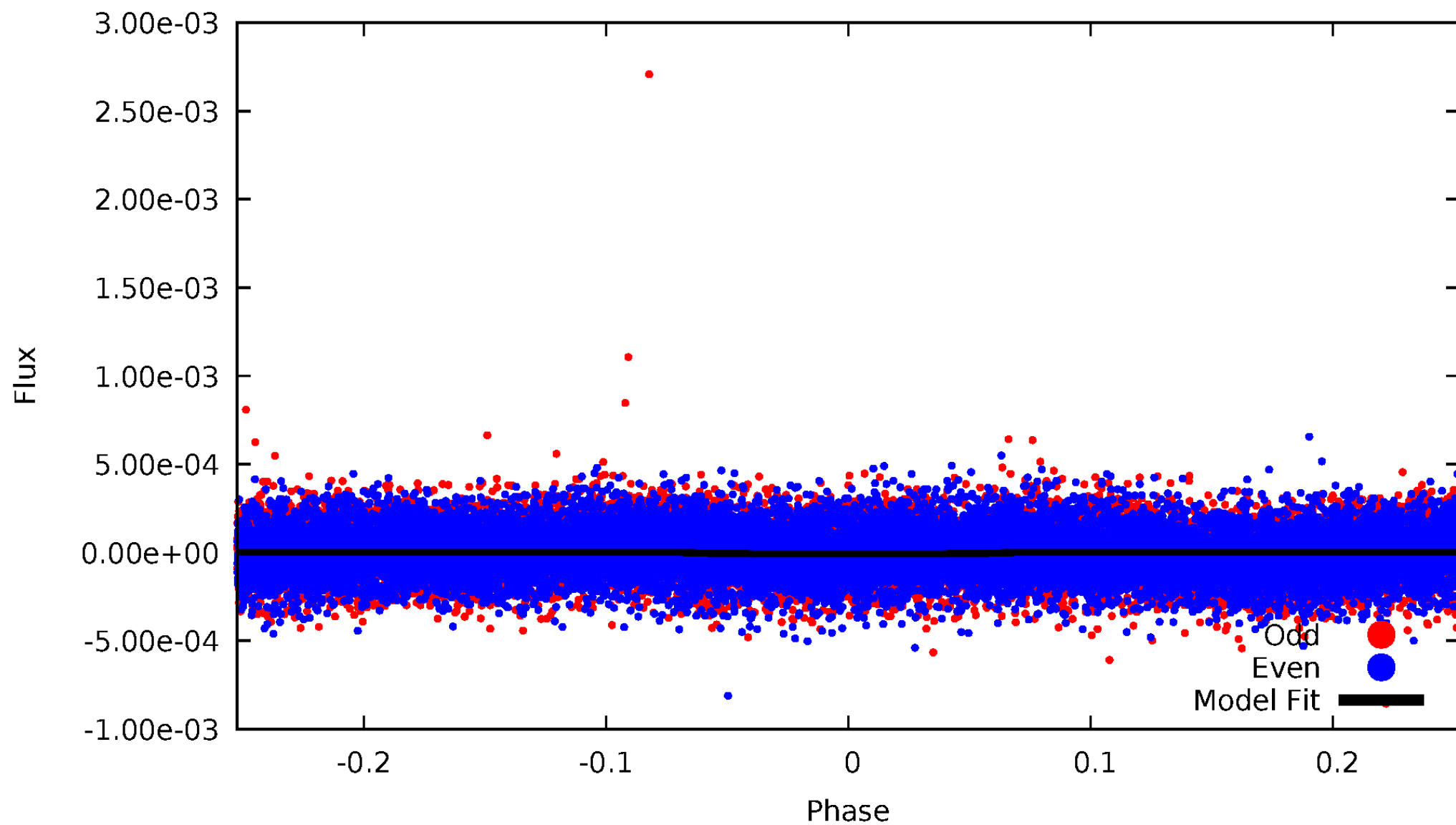


TCE 011295805-01



# DV Odd/Even

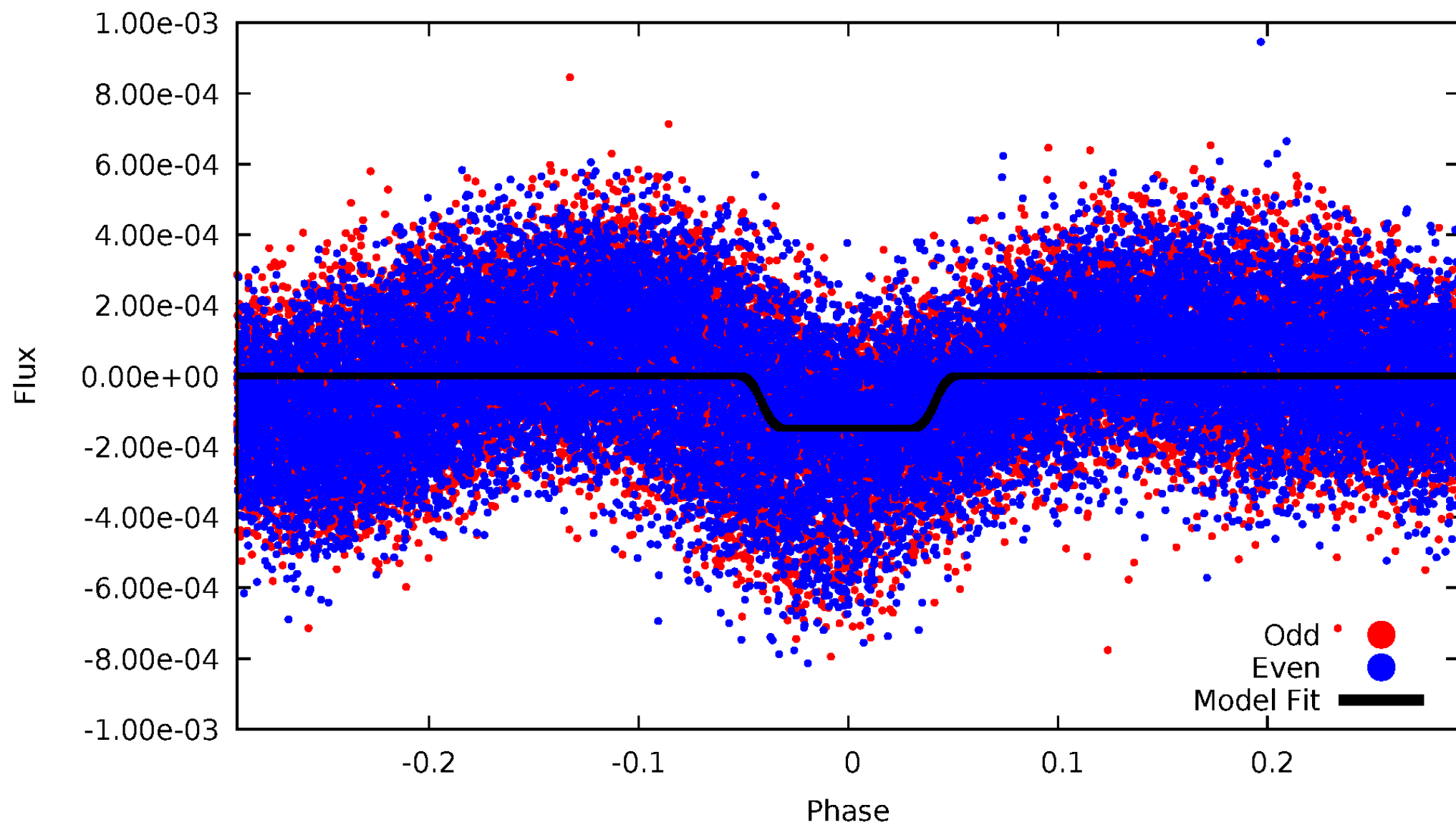
TCE 011295805-01



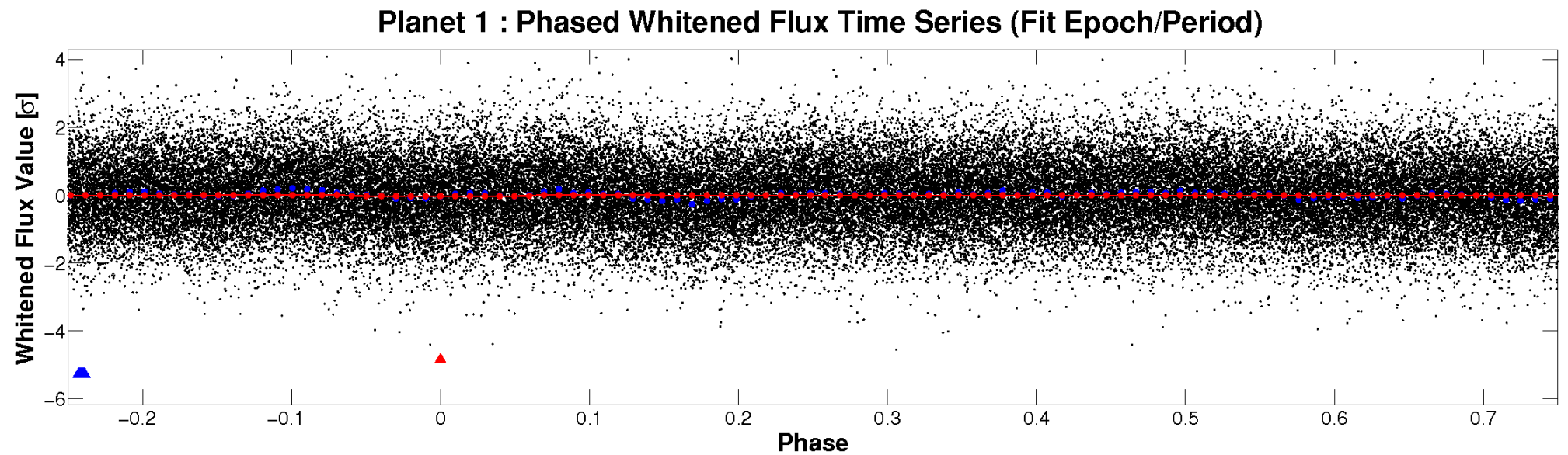
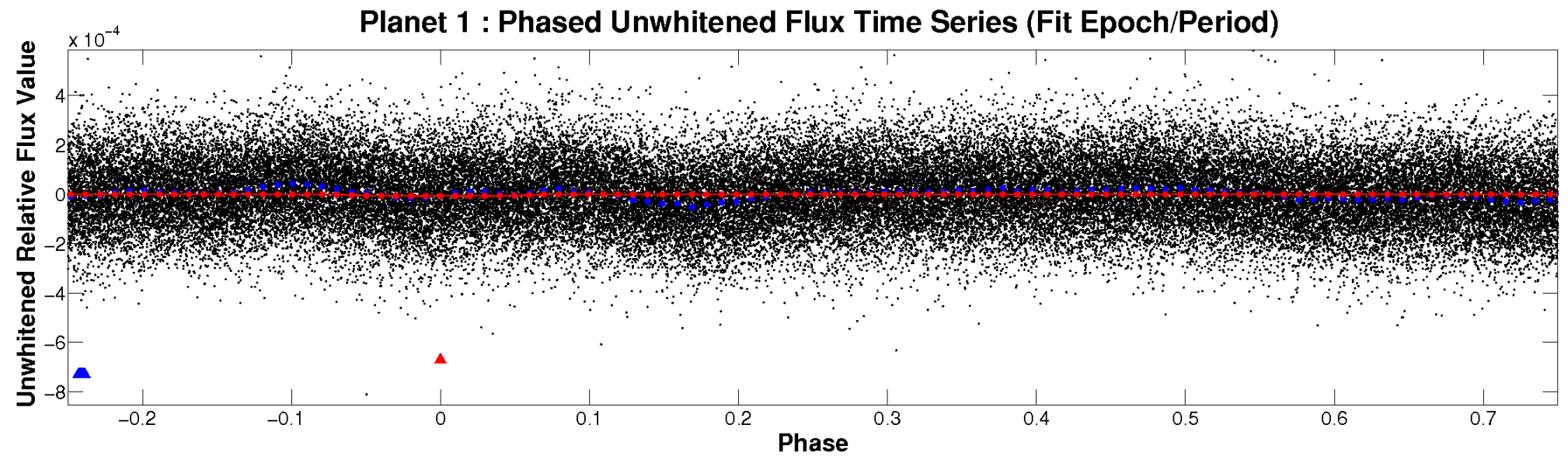


# ALT Odd/Even

TCE 011295805-01

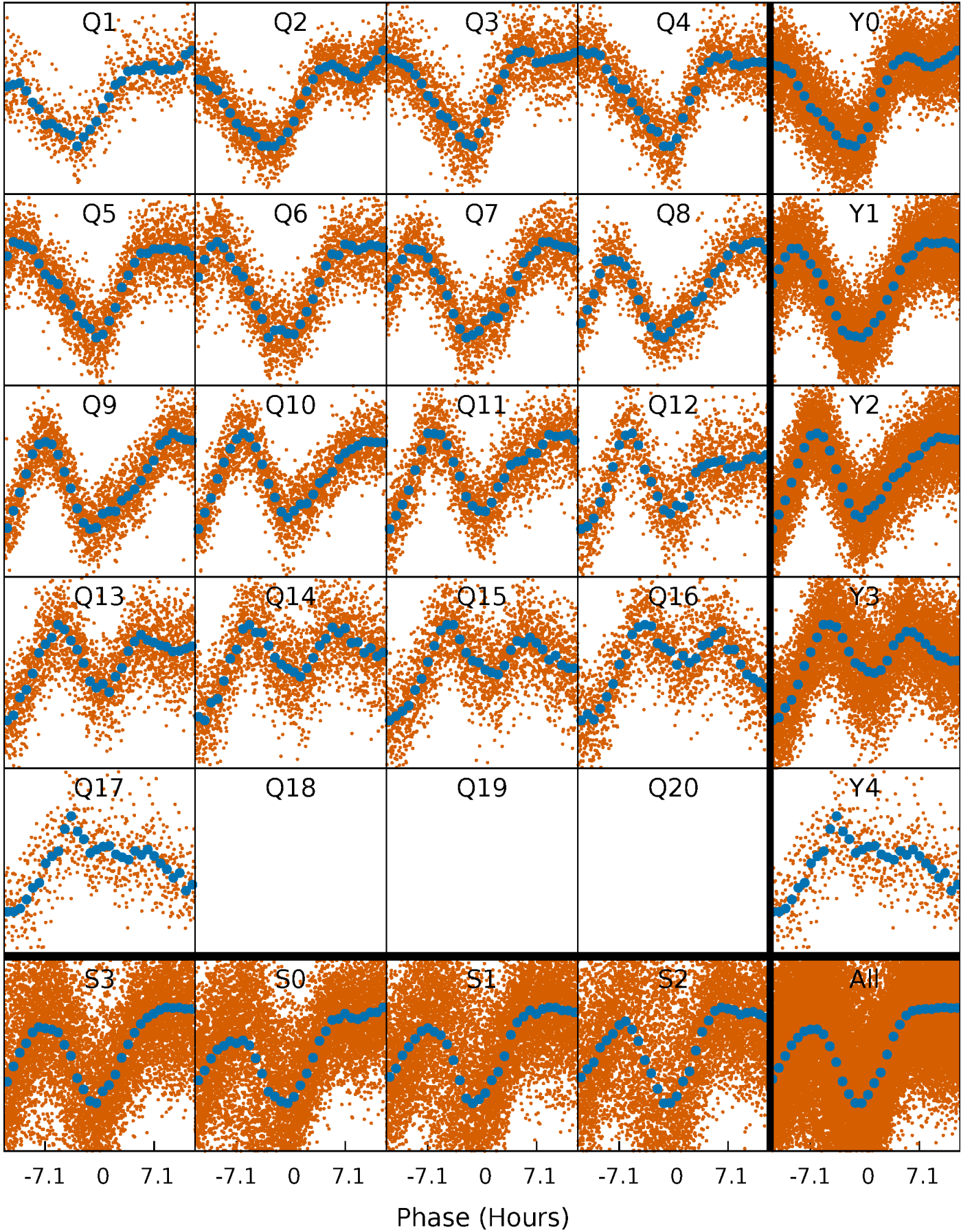


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

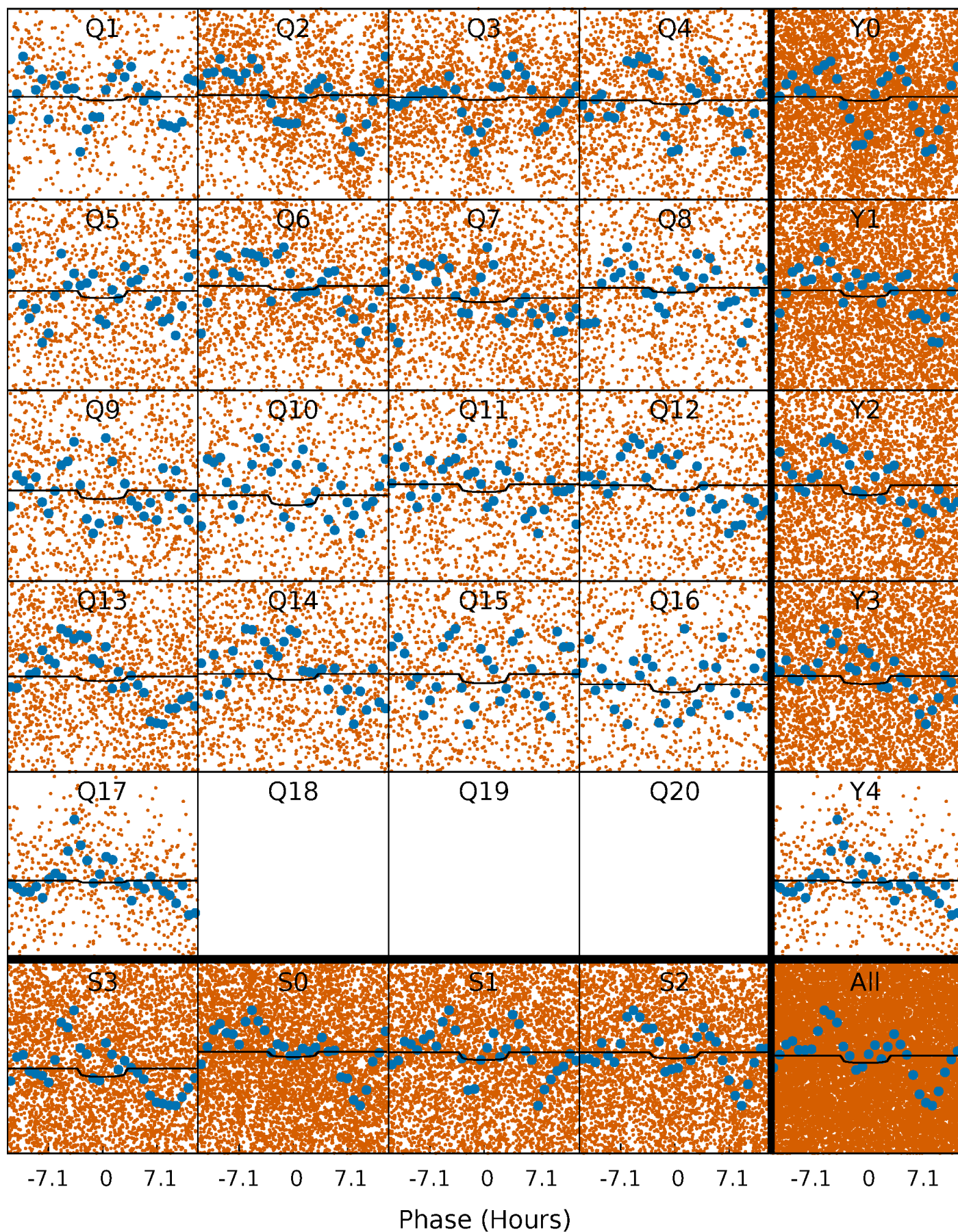
TCE 011295805-01   P= 2.057358 Days    $T_0=132.483326$  (BKJD)





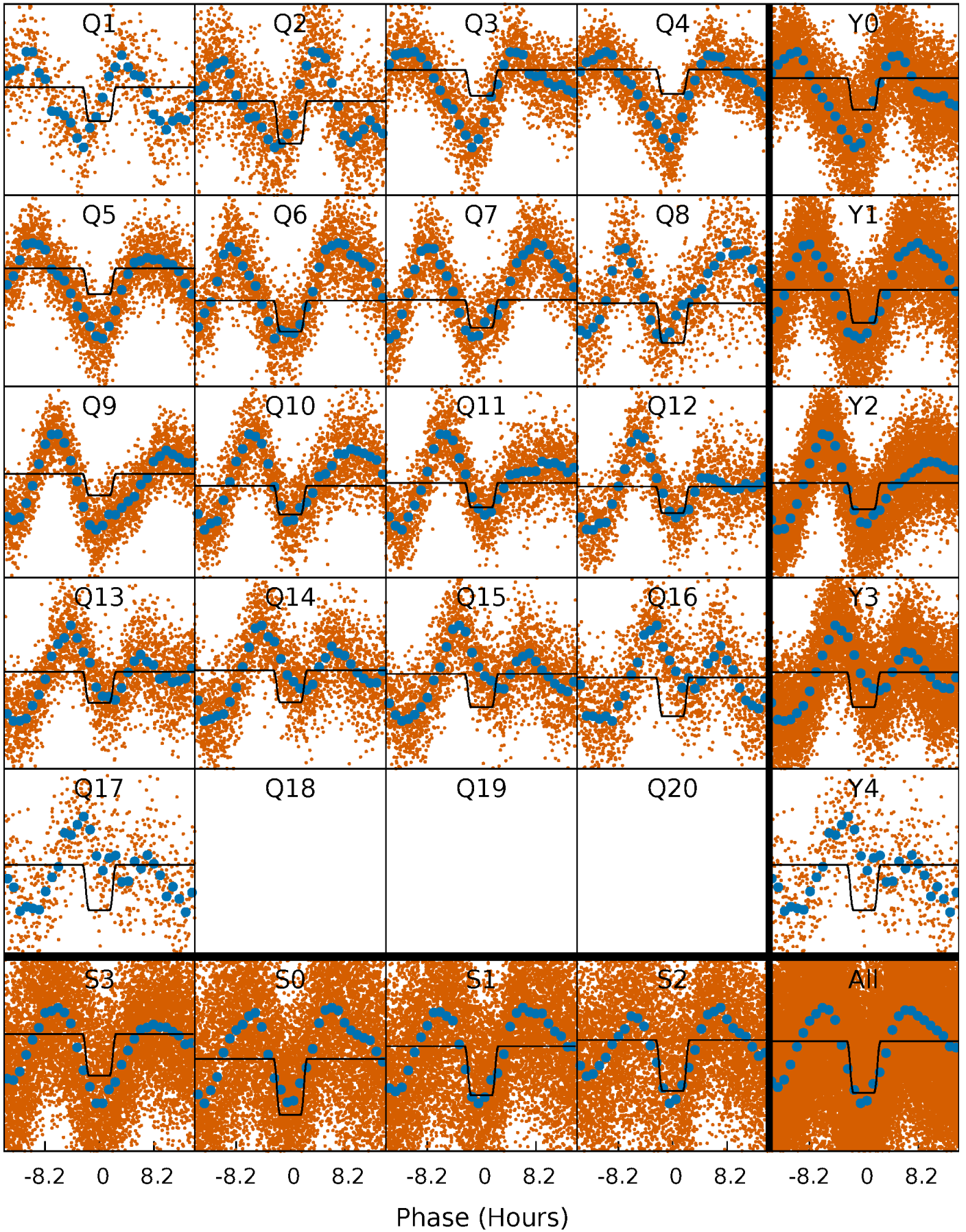
# DV Quarter-Phased Transit Curves

TCE 011295805-01 P= 2.057358 Days  $T_0=132.483326$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

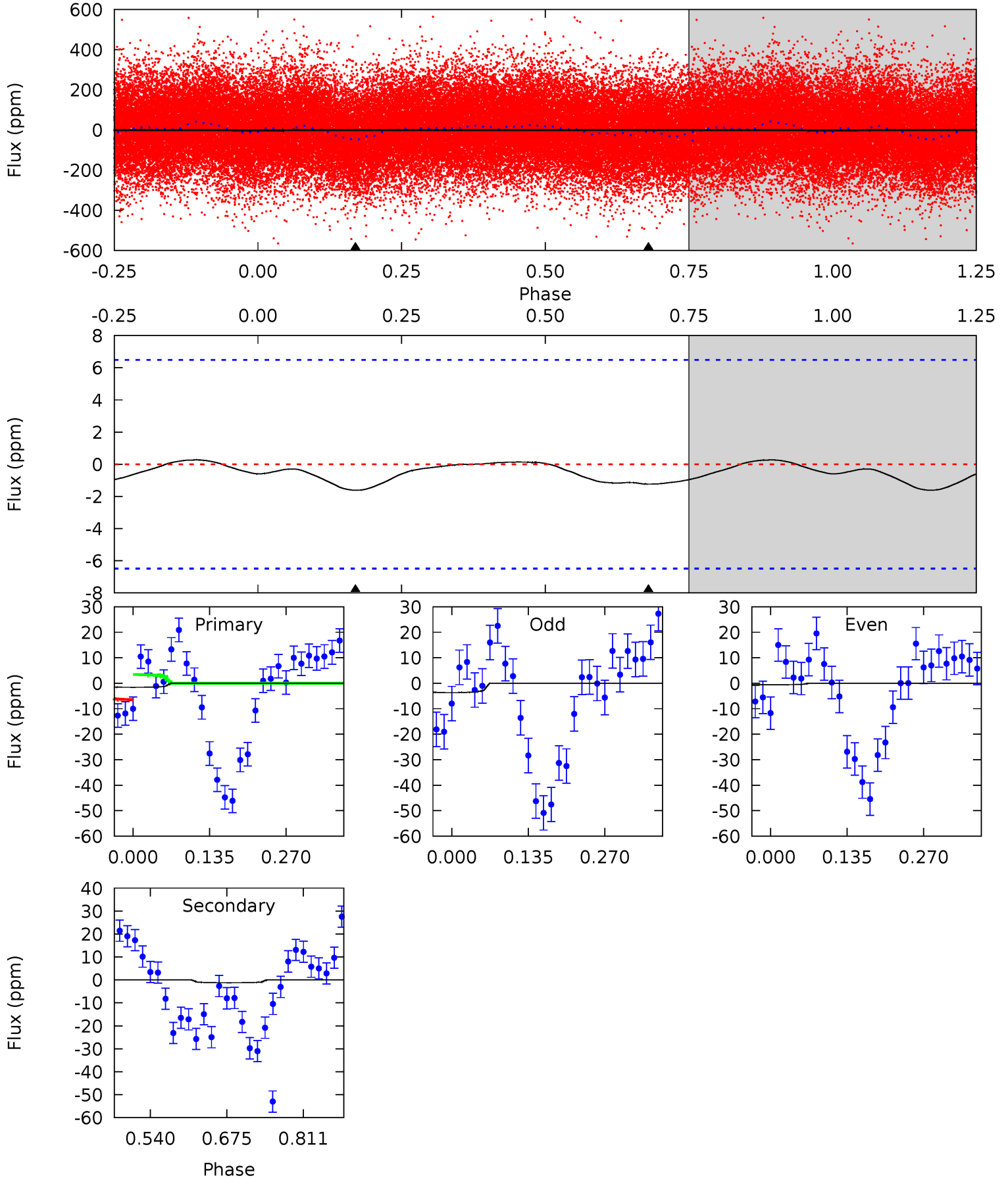
TCE 011295805-01 P= 2.057289 Days  $T_0=132.483859$  (BKJD)



# DV Model-Shift Uniqueness Test

011295805-01, P = 2.057358 Days, E = 130.425968 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
1.12	0.85	0	0	4.50	1.49	0.17	1.12	1.12	0.85	0.85	1.09	0.39	0.14	1.04

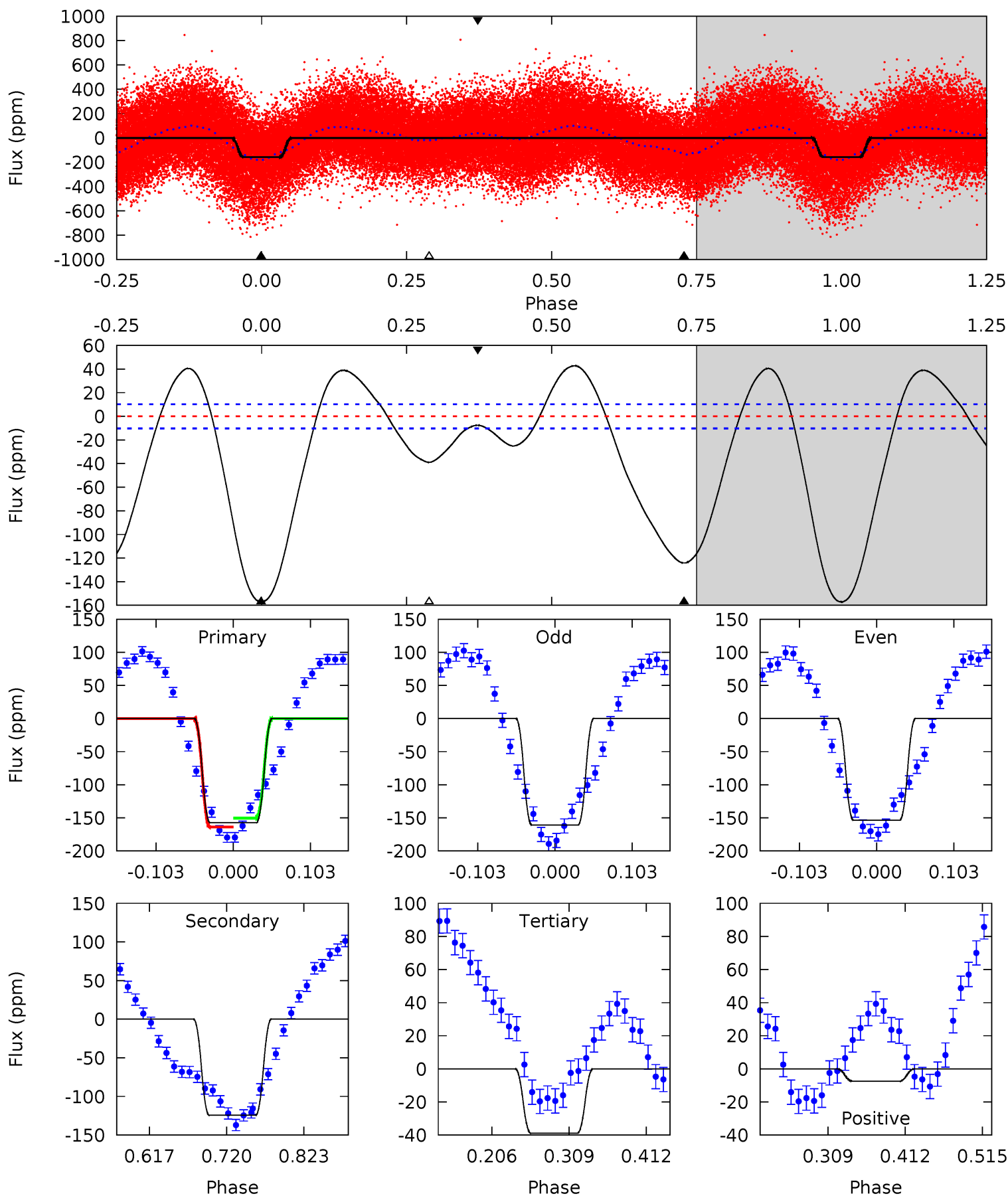




# Alt Model-Shift Uniqueness Test

011295805-01, P = 2.057289 Days, E = 130.426570 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
69.8	55.2	17.3	-3.34	4.56	1.63	11.8	52.6	73.2	37.9	58.5	1.60	1.26	0.21	3.01





### Stellar Parameters For KIC 011295805

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$6807^{+183}_{-204}$	$3.583^{+0.337}_{-0.090}$	$-0.540^{+0.400}_{-0.250}$	$3.333^{+0.435}_{-1.304}$	$1.551^{+0.227}_{-0.340}$	$0.059^{+0.160}_{-0.017}$
	+3%/-3%	+9%/-3%	+74%/-46%	+13%/-39%	+15%/-22%	+272%/-28%
Source	PHO1	FLK73	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 011295805-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-1\pm1$	$0.90^{+0.53}_{-0.43}$	$3919^{+224}_{-336}$	$4086^{+2013}_{-7986}$	$0.892^{+3.848}_{-1.027}$
Alt.	$-124\pm2$	$4.23^{+0.77}_{-0.89}$	$3920^{+228}_{-338}$	$6405^{+498}_{-400}$	$5.199^{+2.698}_{-1.369}$

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

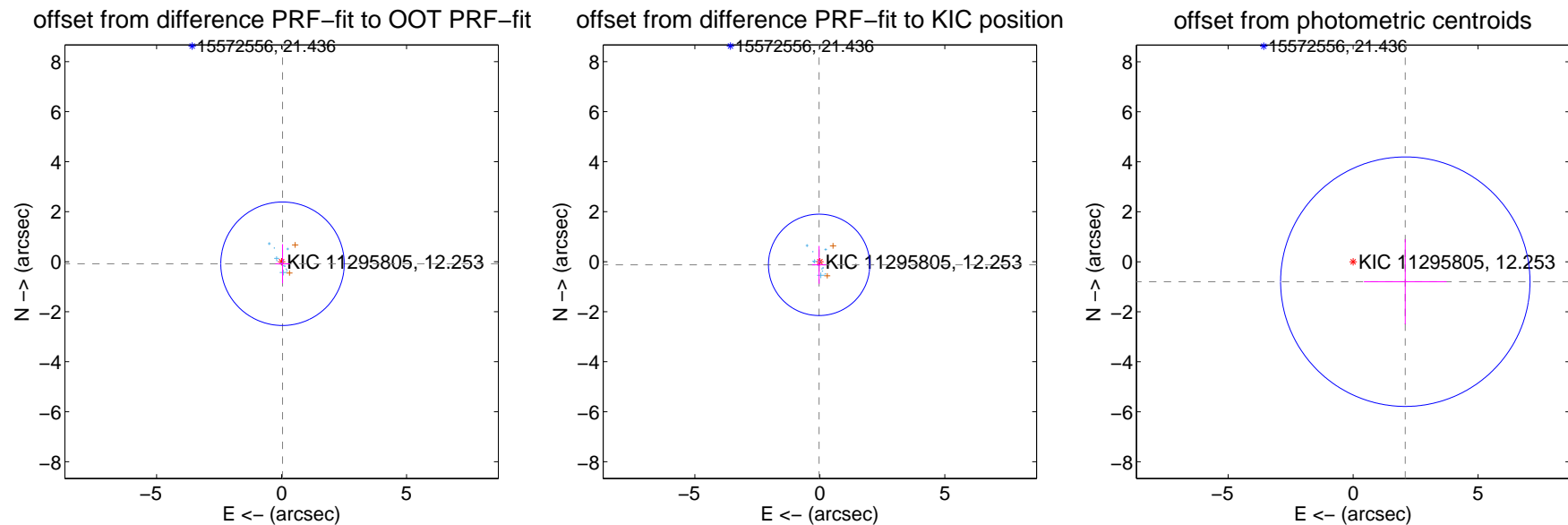
## DV Centroid Data

Supplemental centroid analysis for 011295805-01. Kepler magnitude: 12.25. Transit SNR 2.56

There are 14 quarters with good PRF difference image offsets

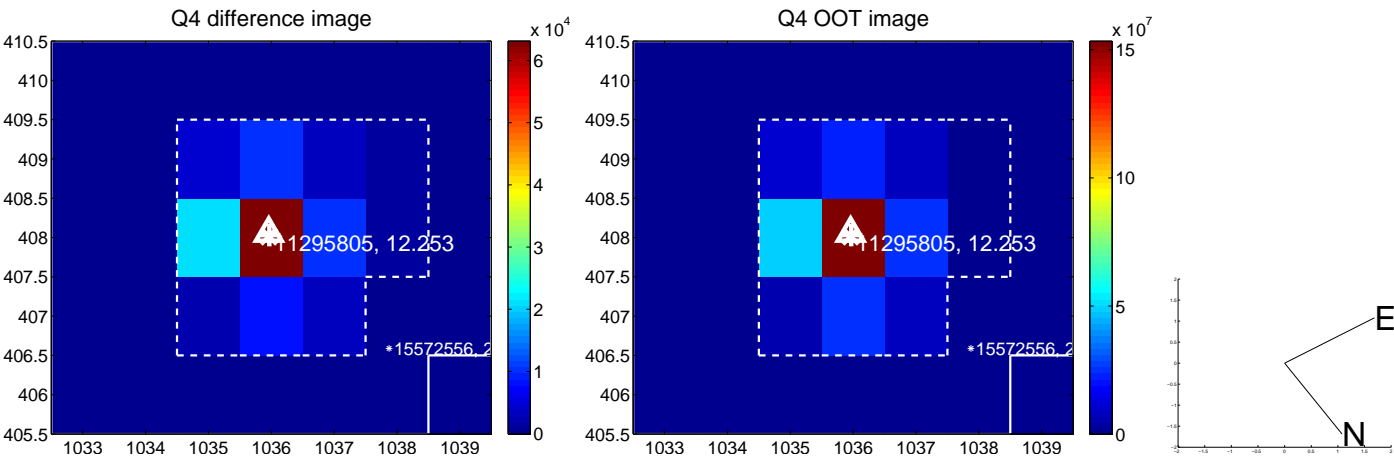
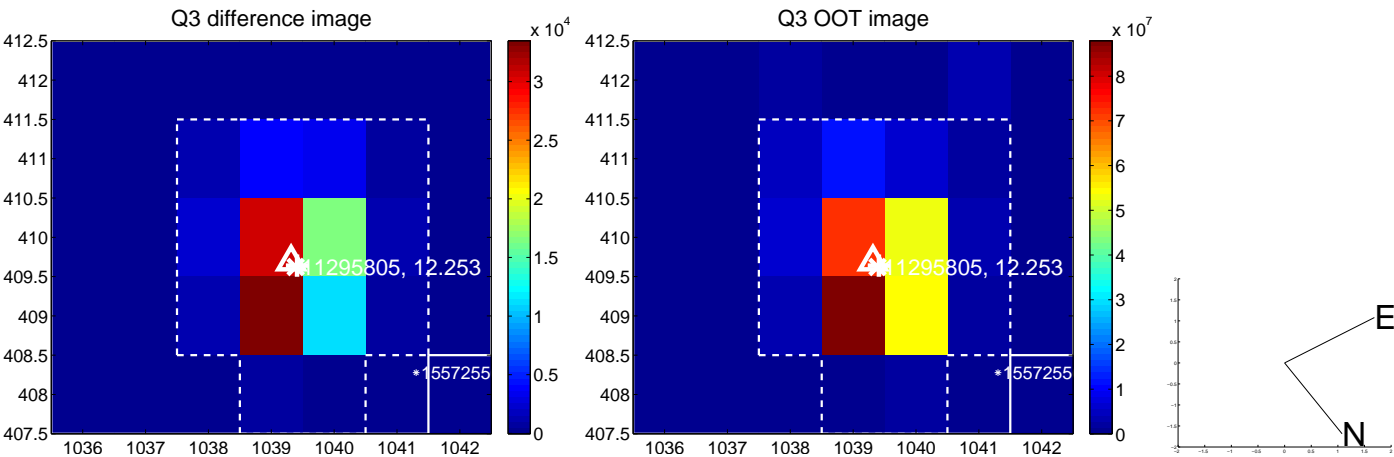
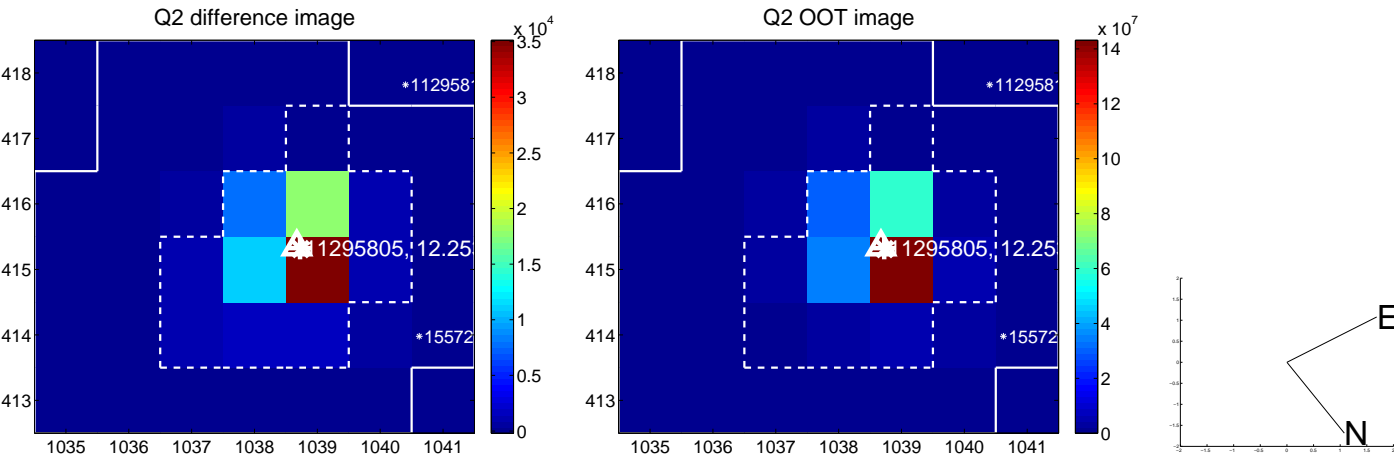
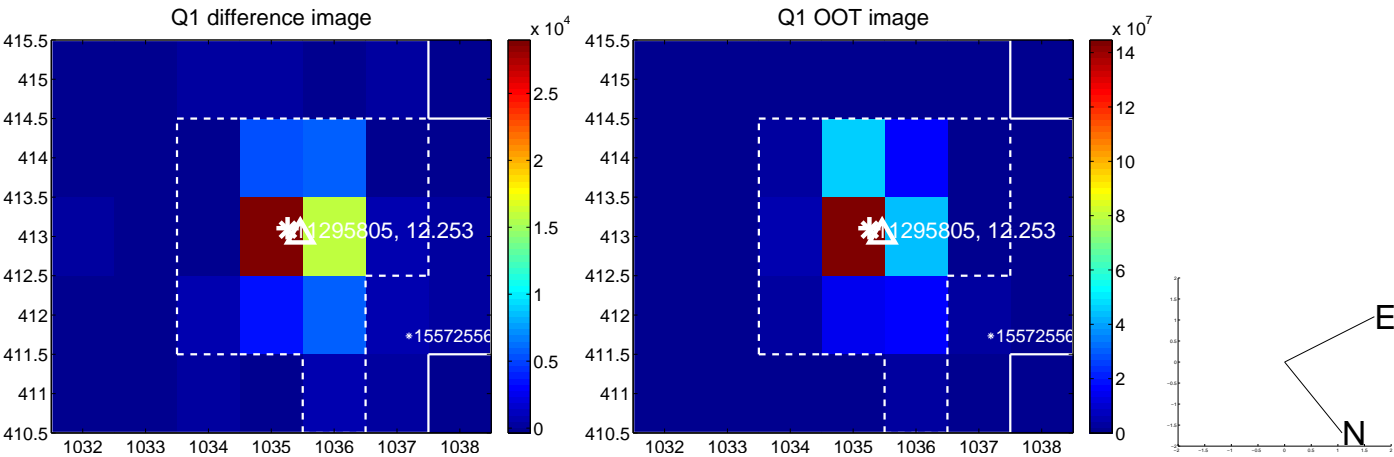
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.090 \pm 0.823$	0.11	$-0.038 \pm 0.283$	$-0.082 \pm 0.781$
PRF-fit source offset from KIC position	$0.130 \pm 0.676$	0.19	$0.029 \pm 0.282$	$-0.126 \pm 0.755$
photometric centroid source offset	$2.24 \pm 1.66$	1.34	$-2.09 \pm 1.66$	$-0.80 \pm 1.70$

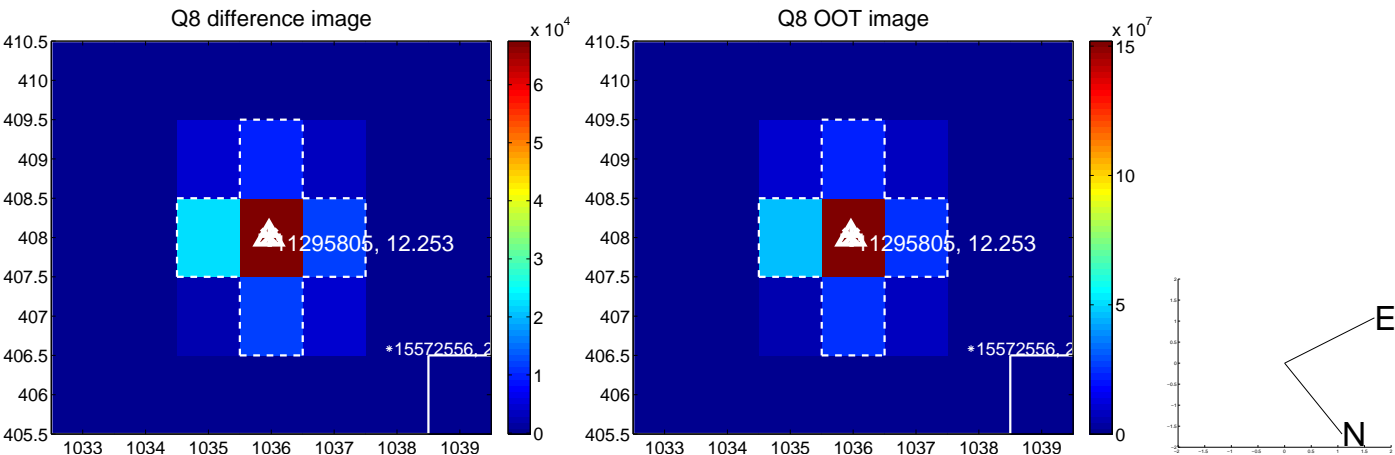
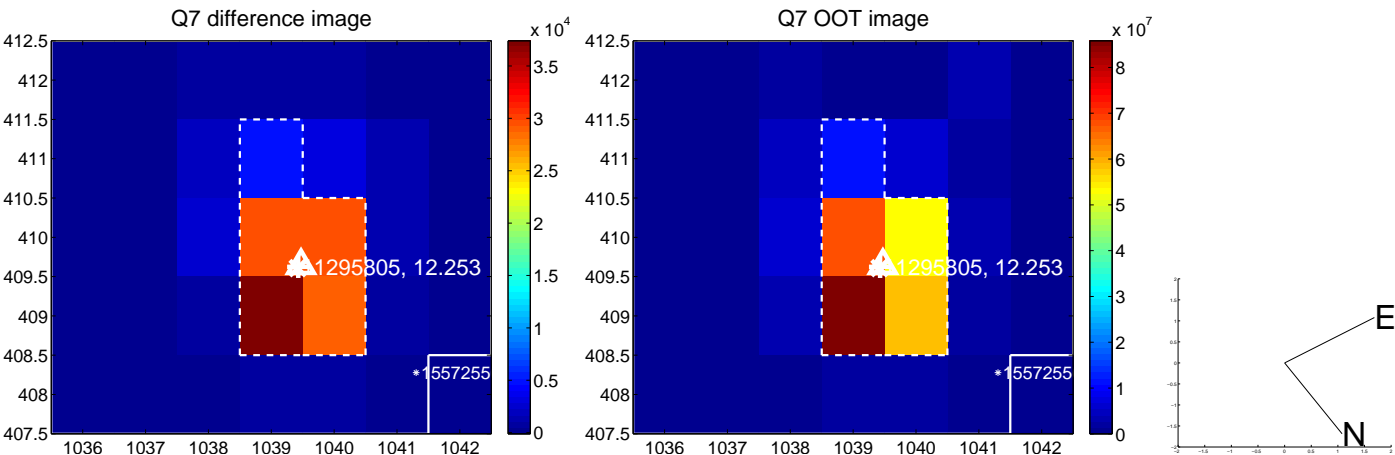
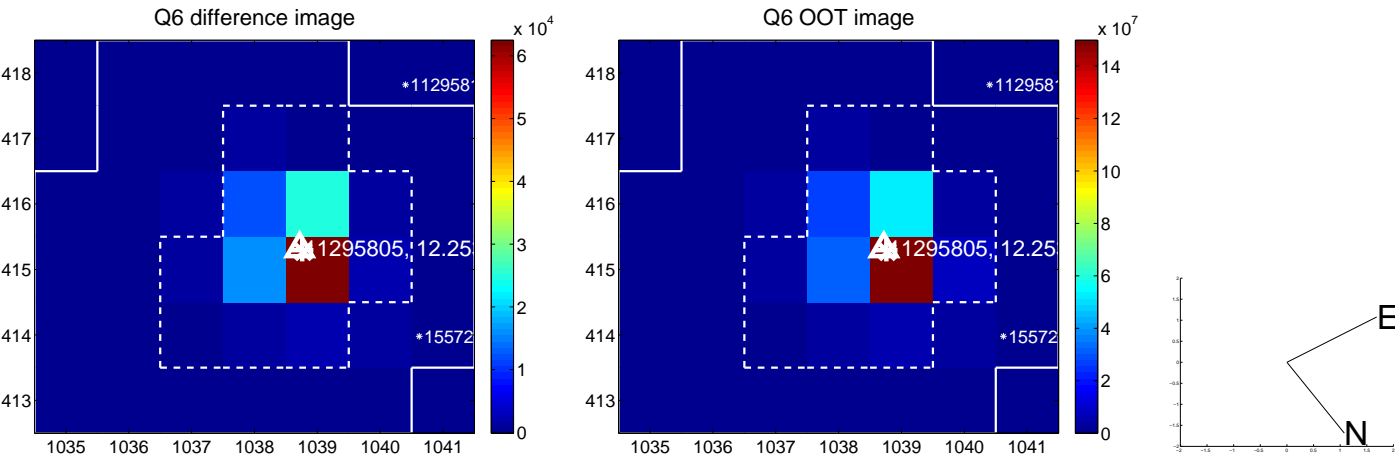
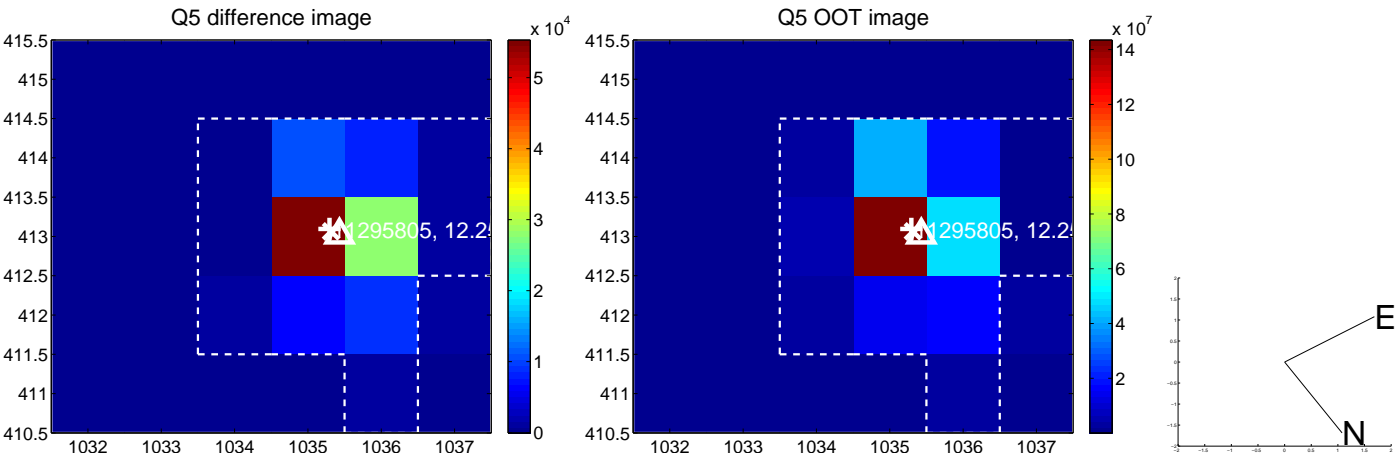


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

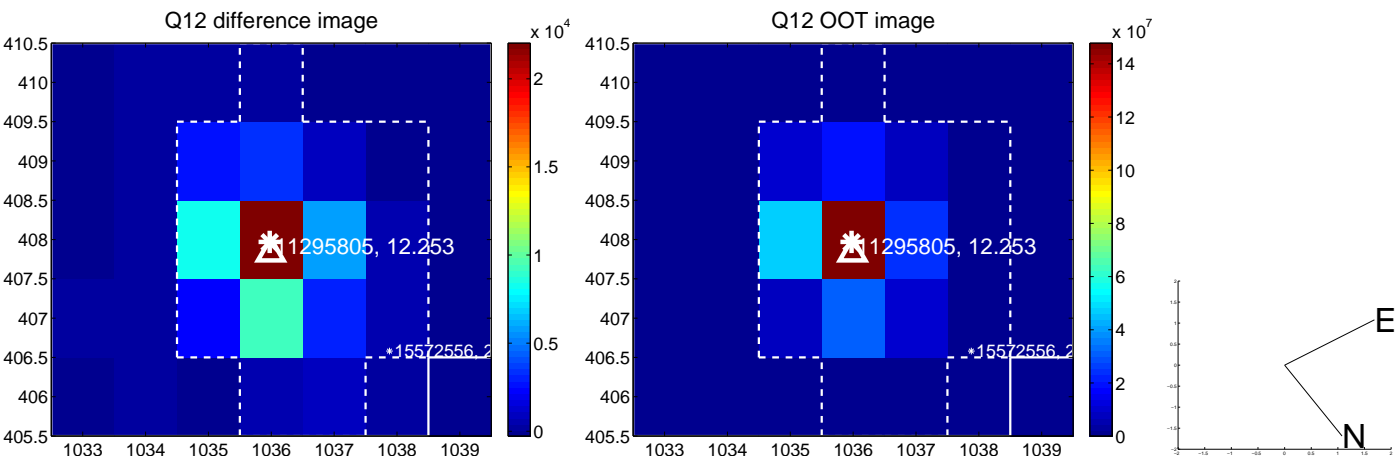
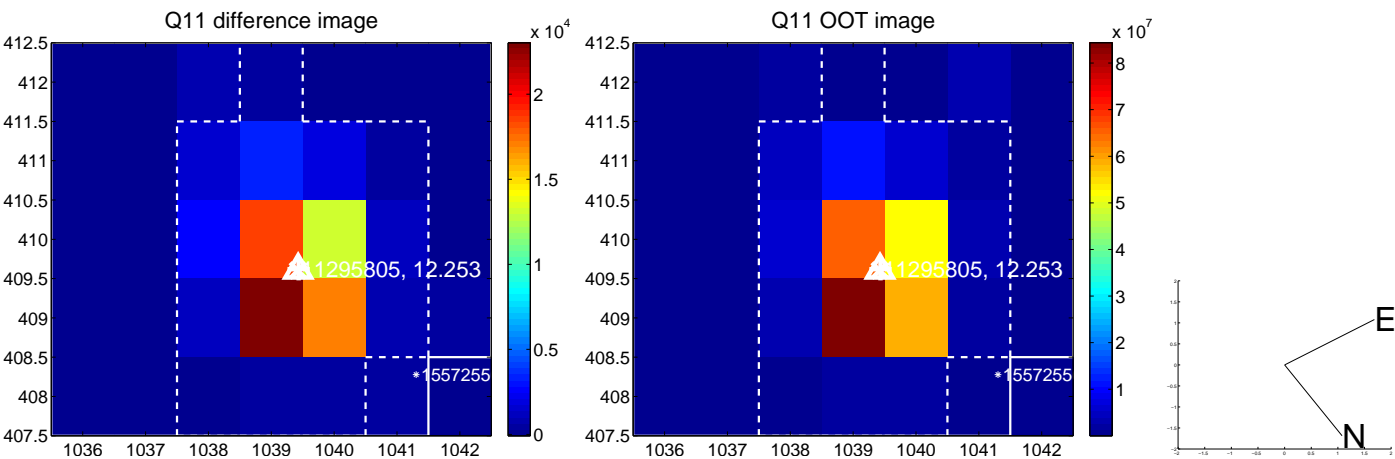
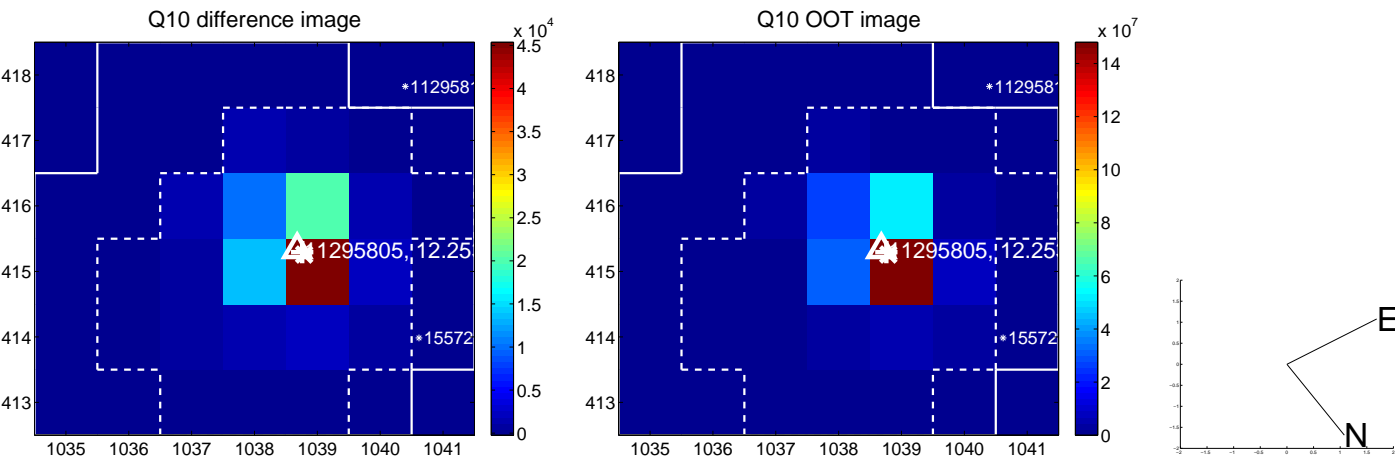
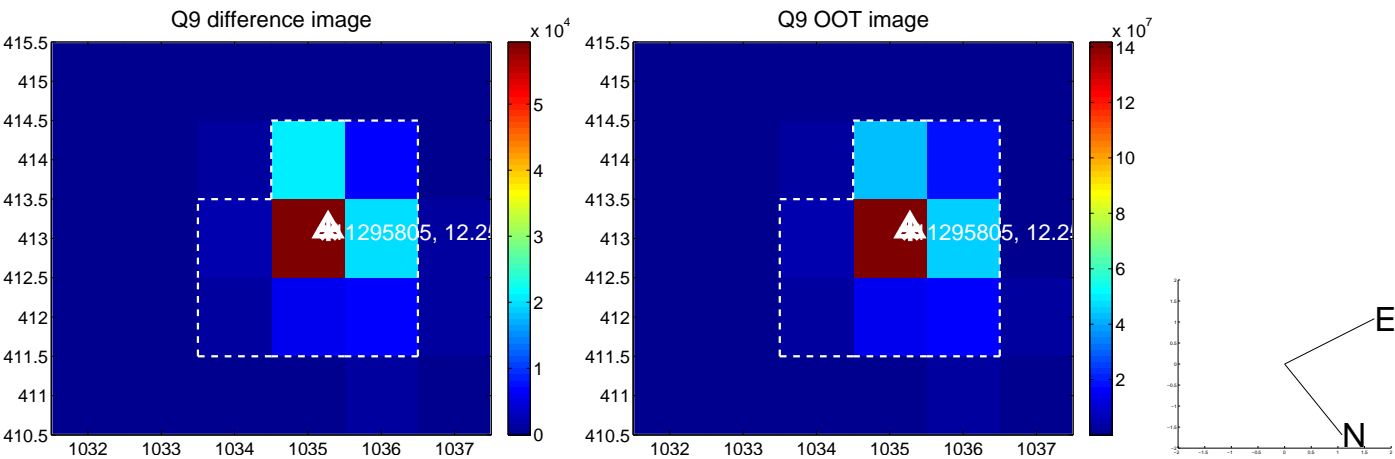


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

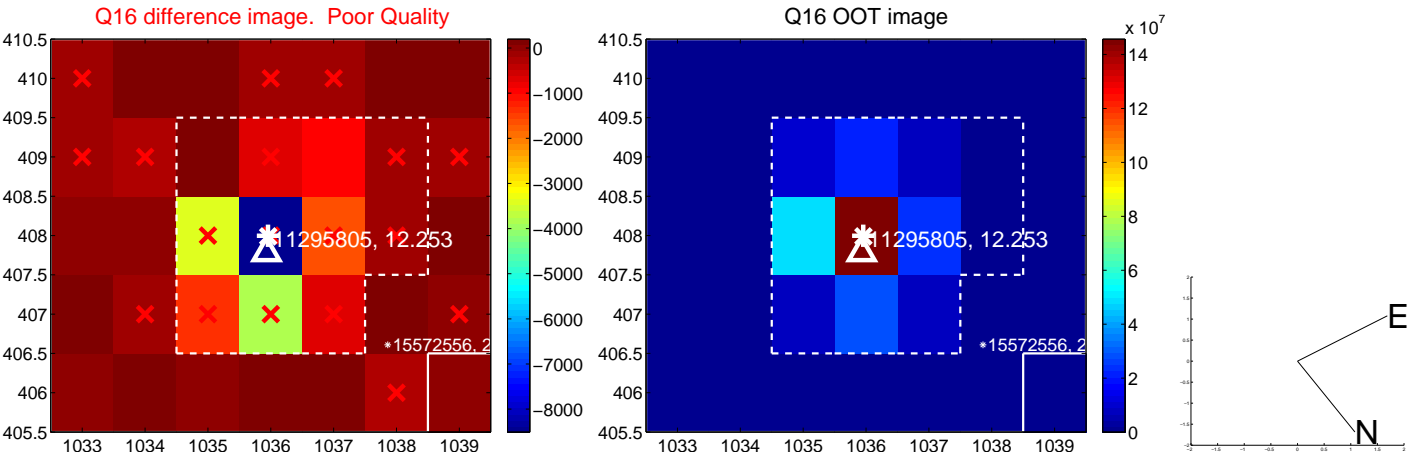
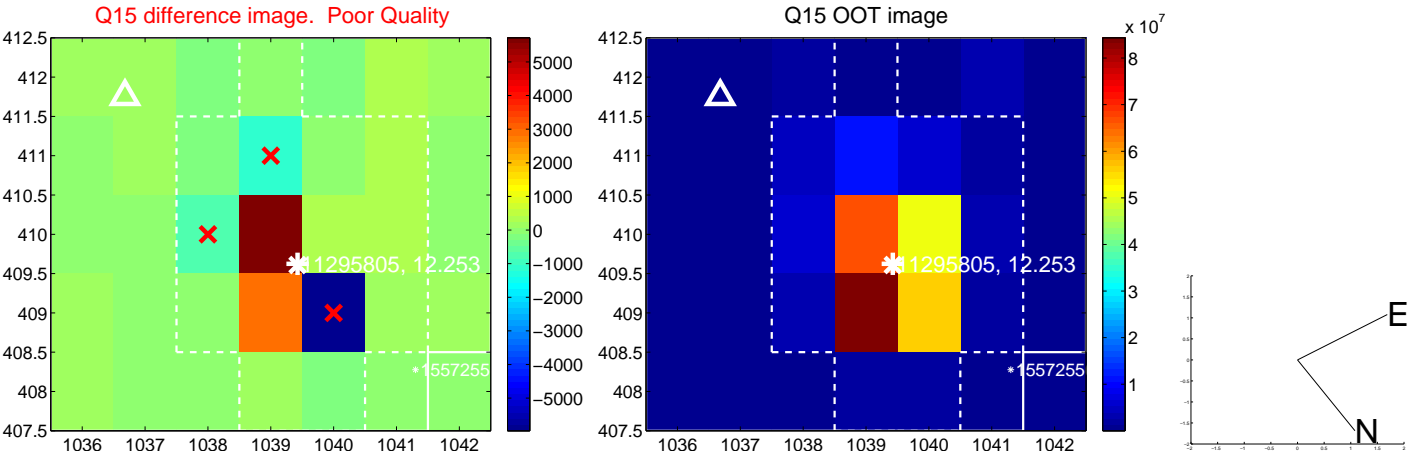
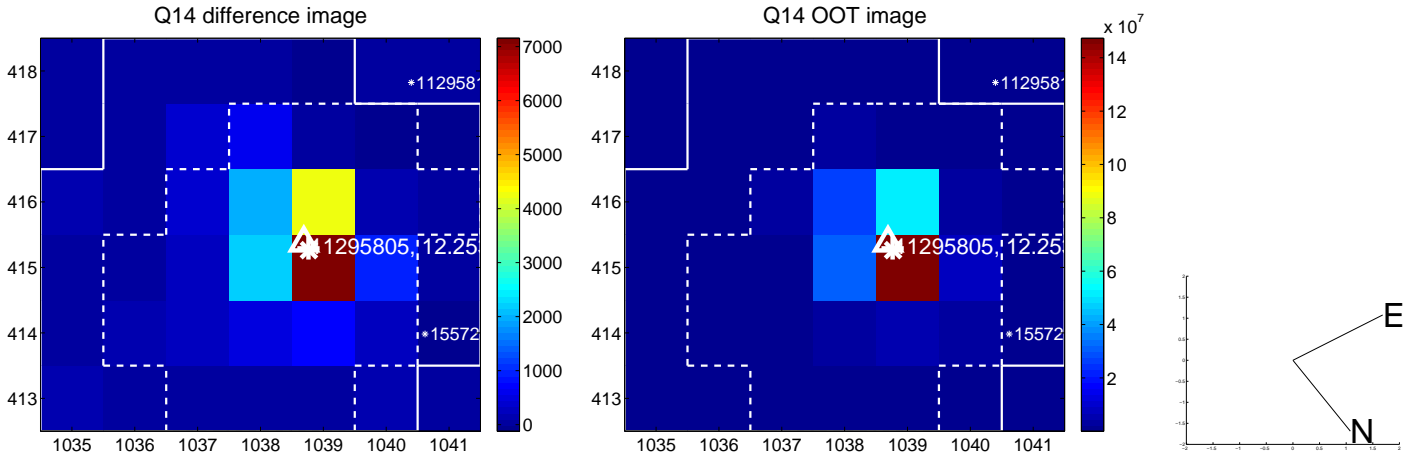
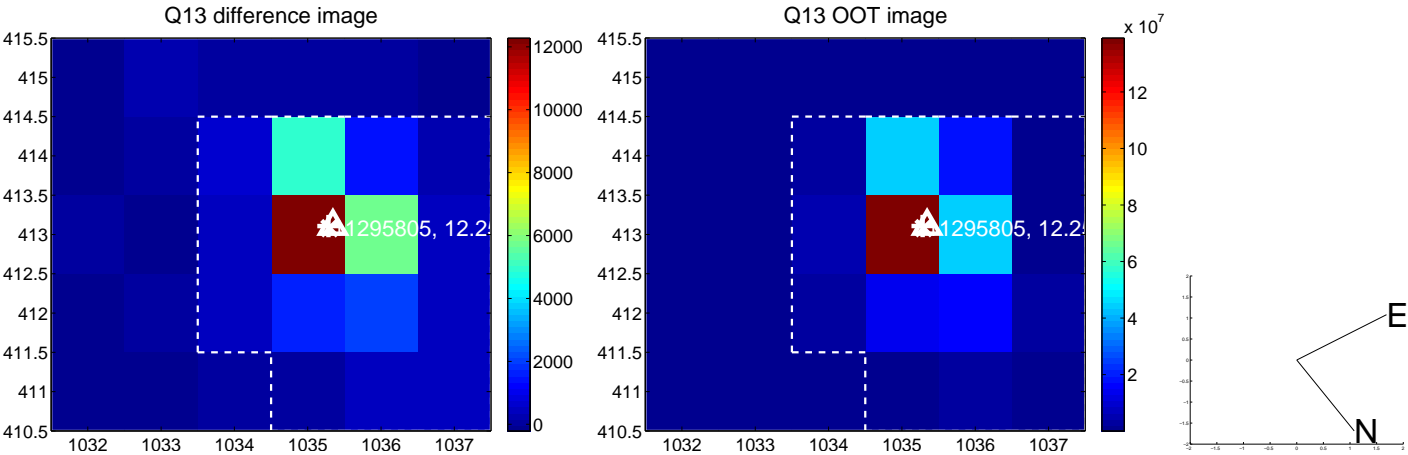




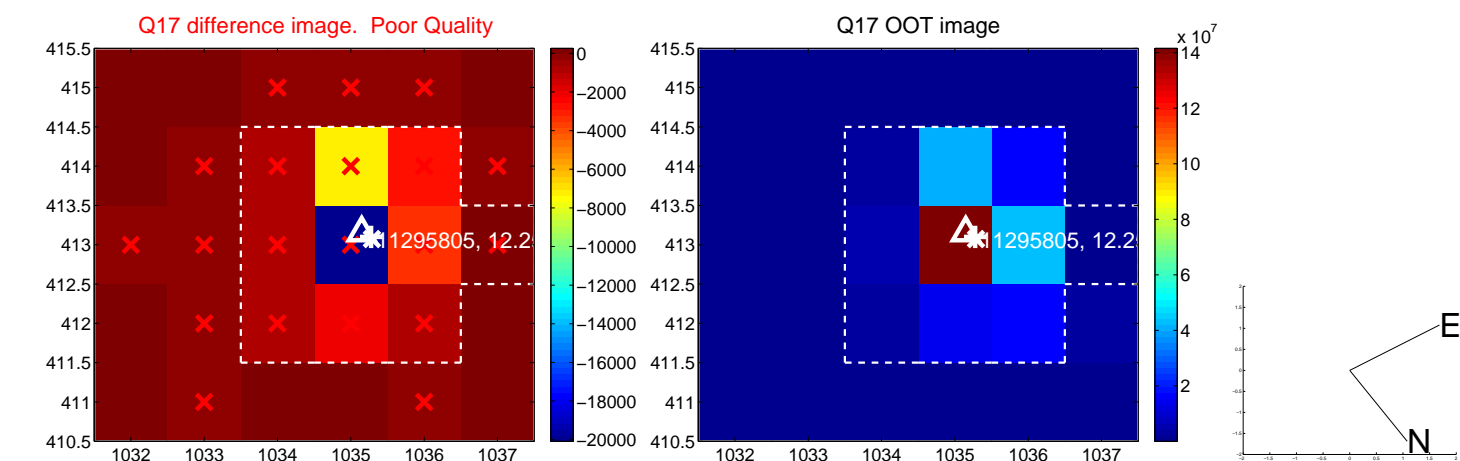
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



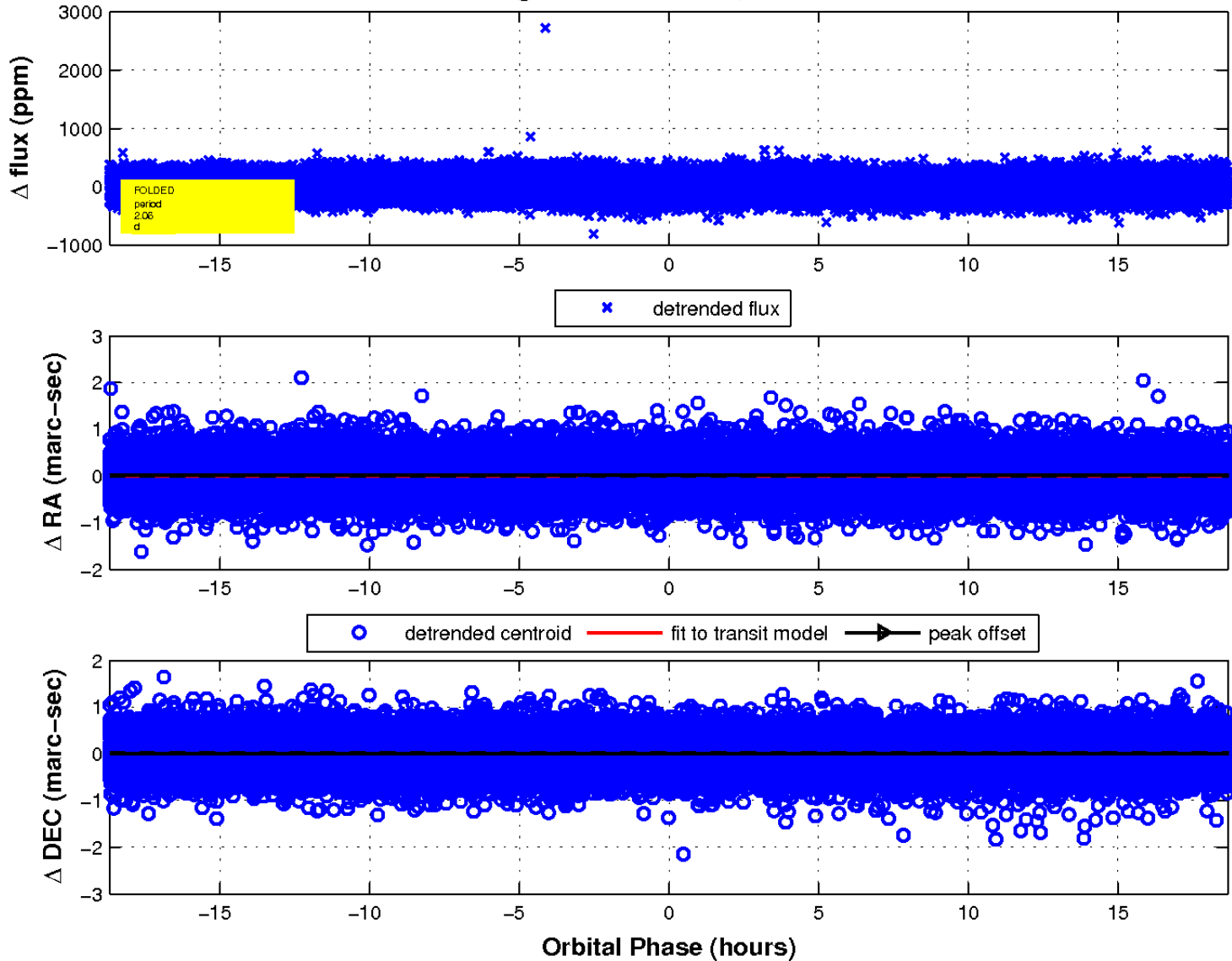
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

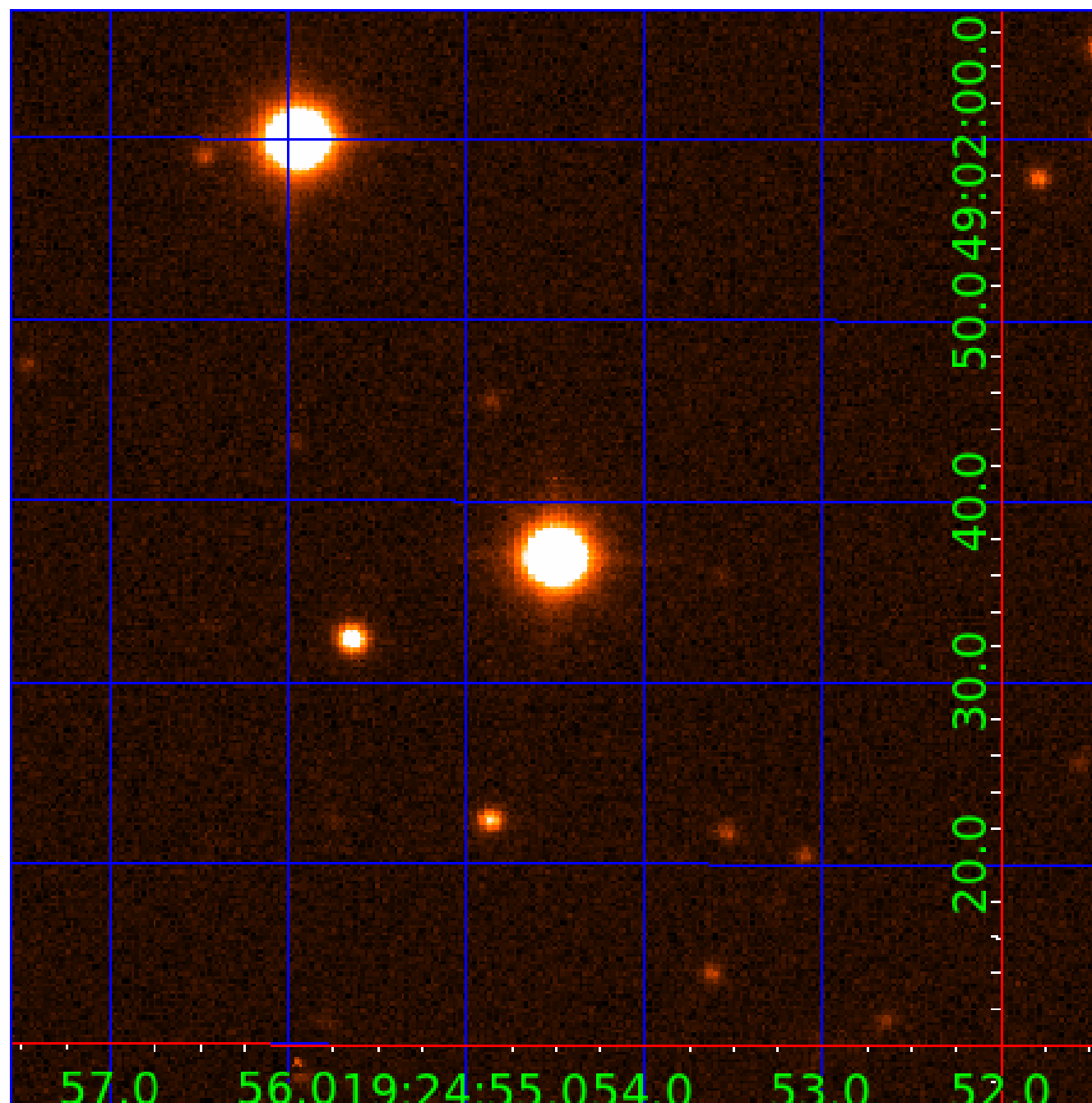


fluxWeightedCentroids, Planet 1 of 2



UKIRT Image

Declination





# KIC 011295805

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011295805-01	OBS	No	2.057358	132.483326	6.6	6.228	10.7	2.6	3.33	6807	0.99	15904.79
011295805-02	OBS	No	2.057371	131.983168	16.0	24.119	9.3	8.1	3.33	6807	1.62	15904.65

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011295805-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
011295805-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—SWEET_NTL—LPP_DV—SAME_NTL_PERIOD—CENT_FEW_MEAS

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

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

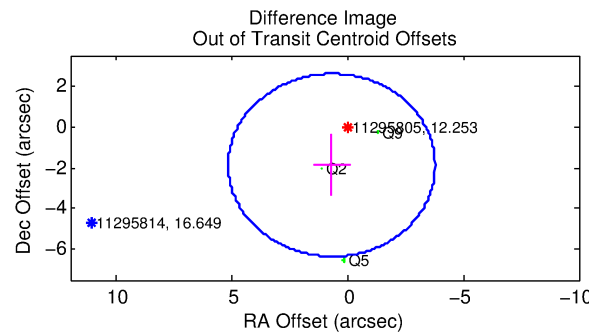
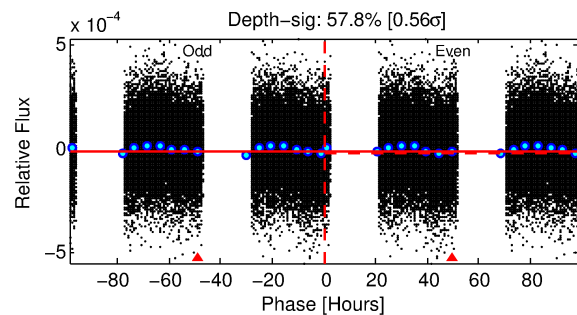
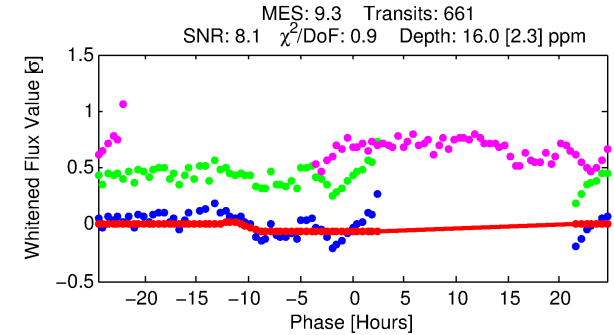
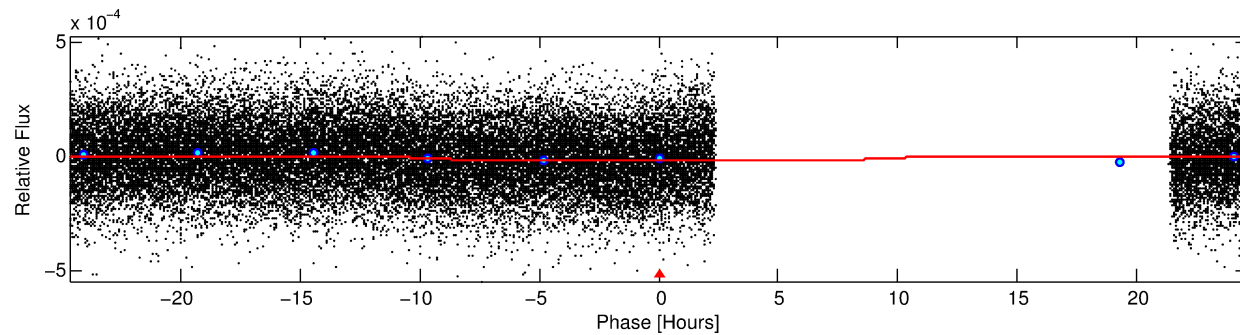
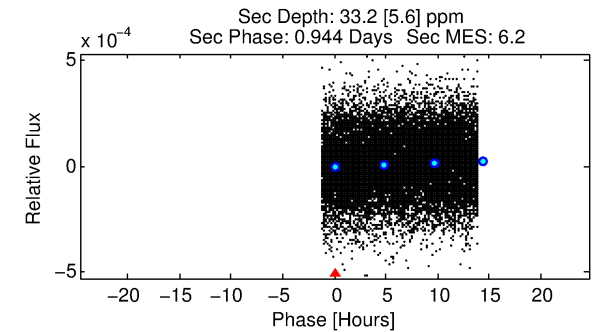
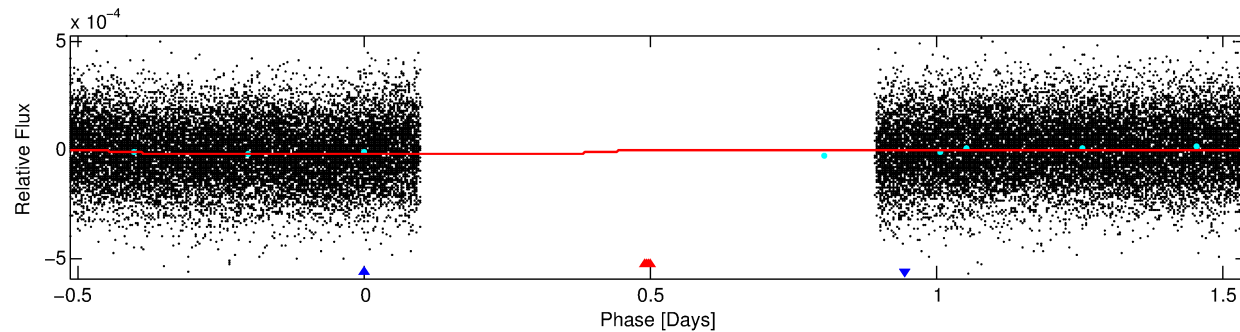
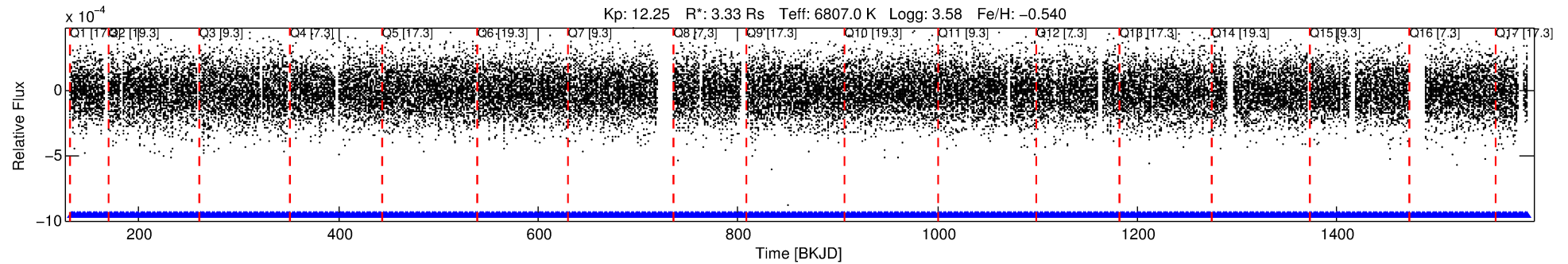
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 011295805-02

No Significant Match Found

# DV One-Page Summary

KIC: 11295805 Candidate: 2 of 2 Period: 2.057 d



## DV Fit Results:

Period = 2.05737 [0.00010] d  
Epoch = 131.9832 [0.1374] BKJD  
Rp/R\* = 0.0045 [0.0007]  
a/R\* = 1.00 [0.01]  
b = 0.95 [0.12]  
Seff = 15904.65 [9409.51]  
Teq = 2864 [424] K  
Rp = 1.62 [0.68] Re  
a = 0.0367 [0.0135] AU  
Ag = 9.28 [6.24] [1.33σ]  
Teffp = 7728 [697] K [5.96σ]

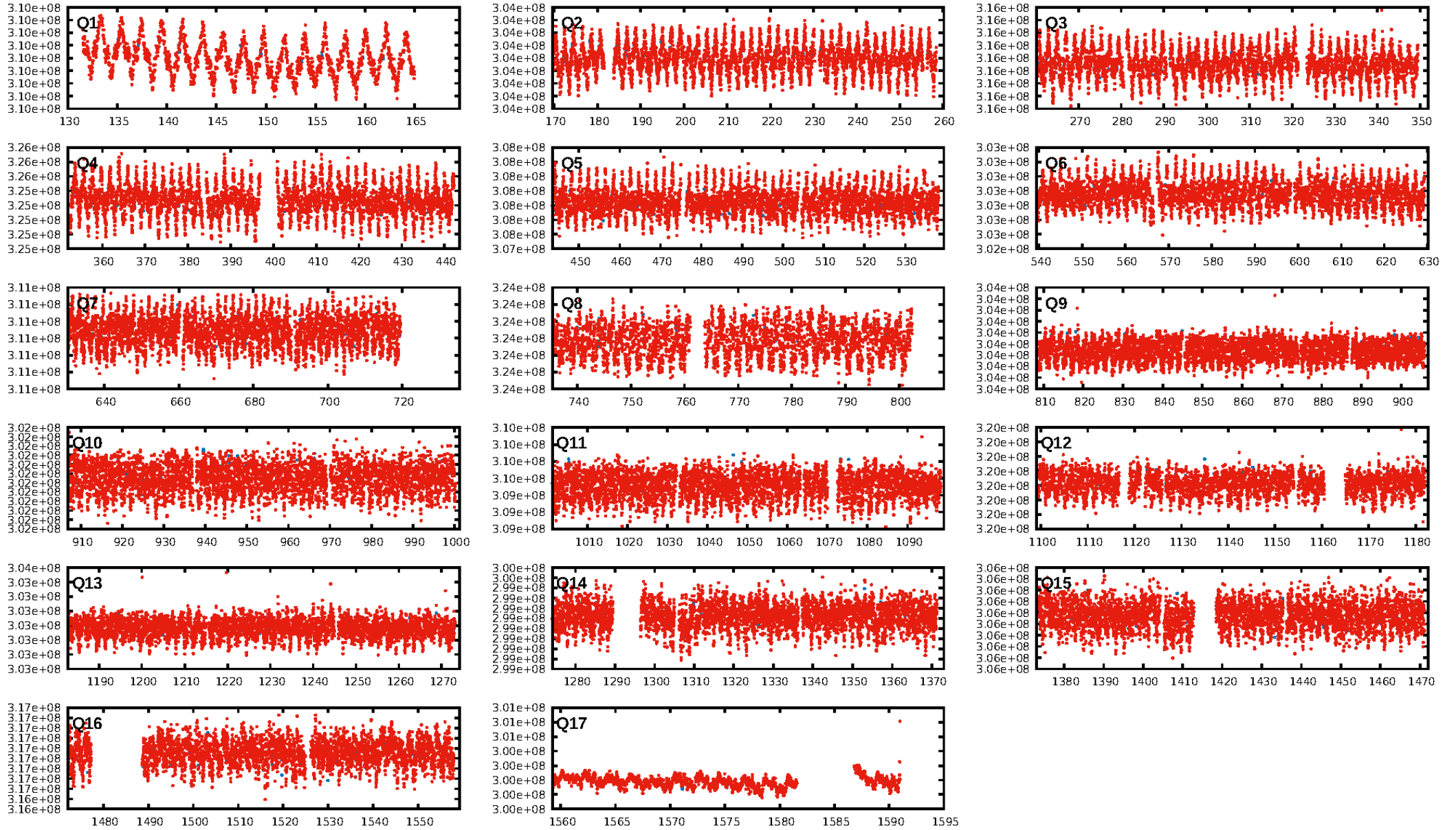
## DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [631/631]  
GhostDiagnostic-chr: 0.3338  
Centroid-sig: 2.6%  
Centroid-so: 0.939 arcsec [2.15σ]  
OotOffset-rm: 2.000 arcsec [1.34σ]  
KicOffset-rm: 2.073 arcsec [1.61σ]  
OotOffset-st: 1/0/0/2 [3]  
KicOffset-st: 1/0/0/2 [3]  
DiffImageQuality-fgm: 0.67 [2/3]  
DiffImageOverlap-fno: 0.00 [0/17]

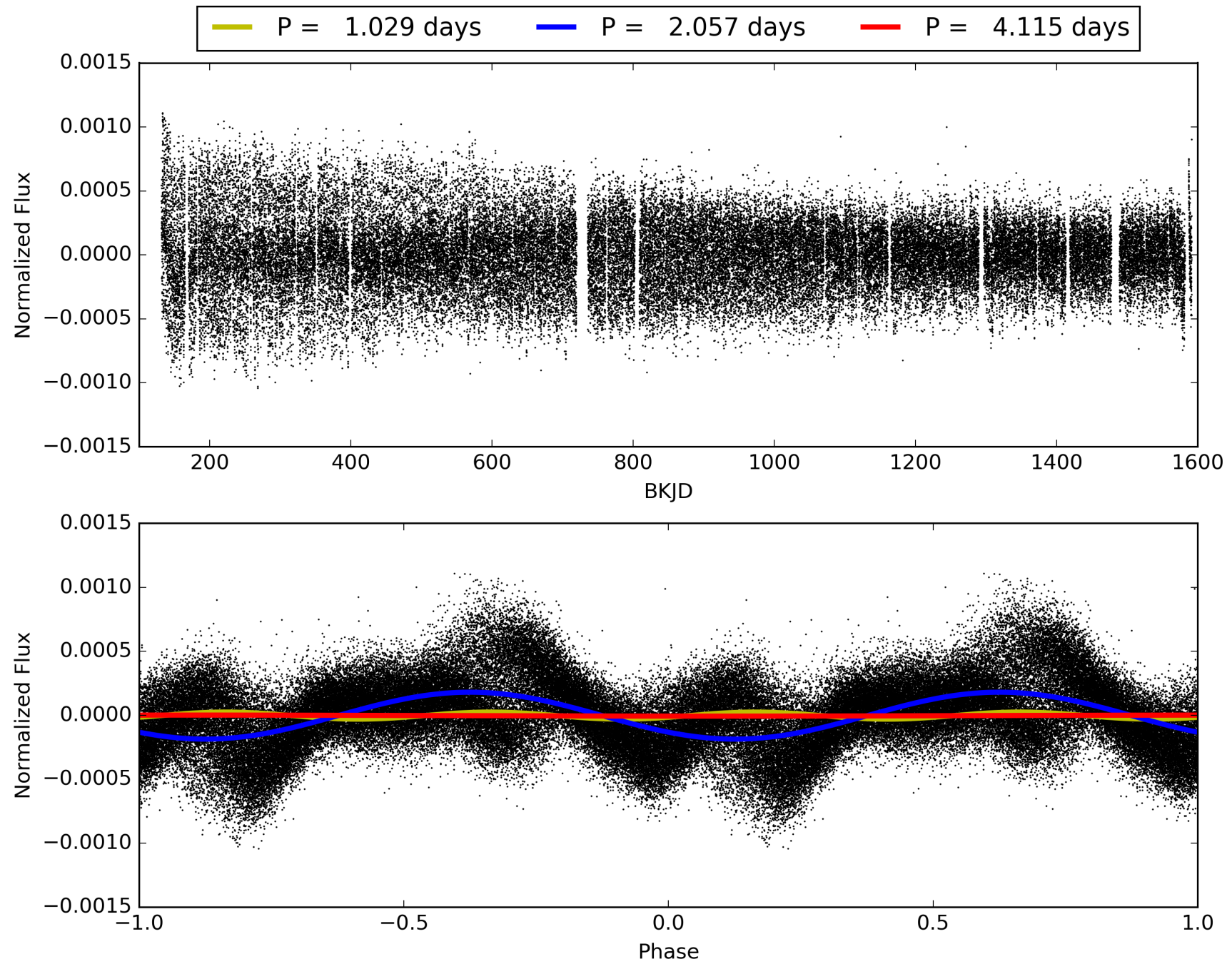
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 06:10:49 Z

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

# TCE 011295805-02, PDC Light Curves



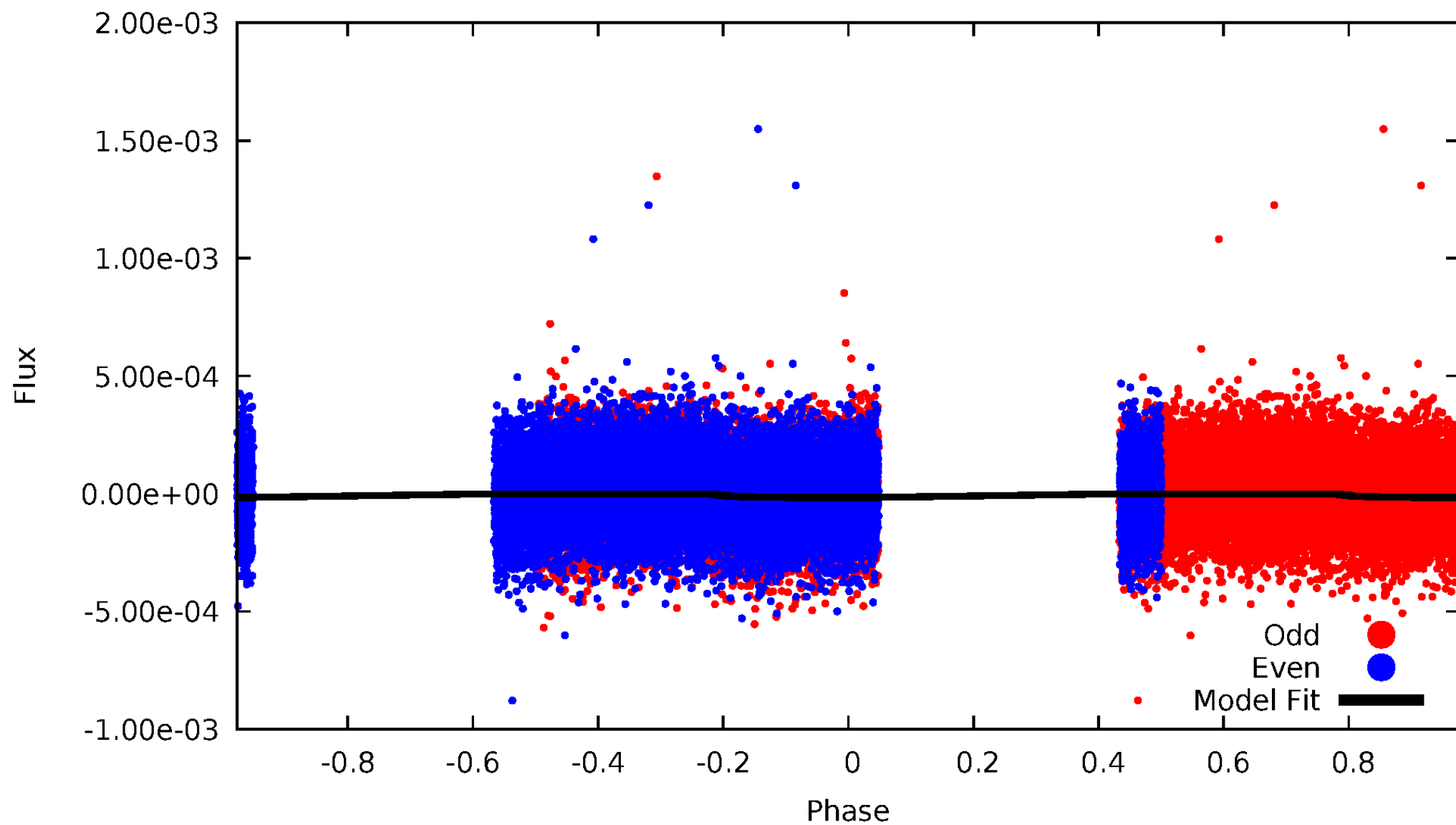
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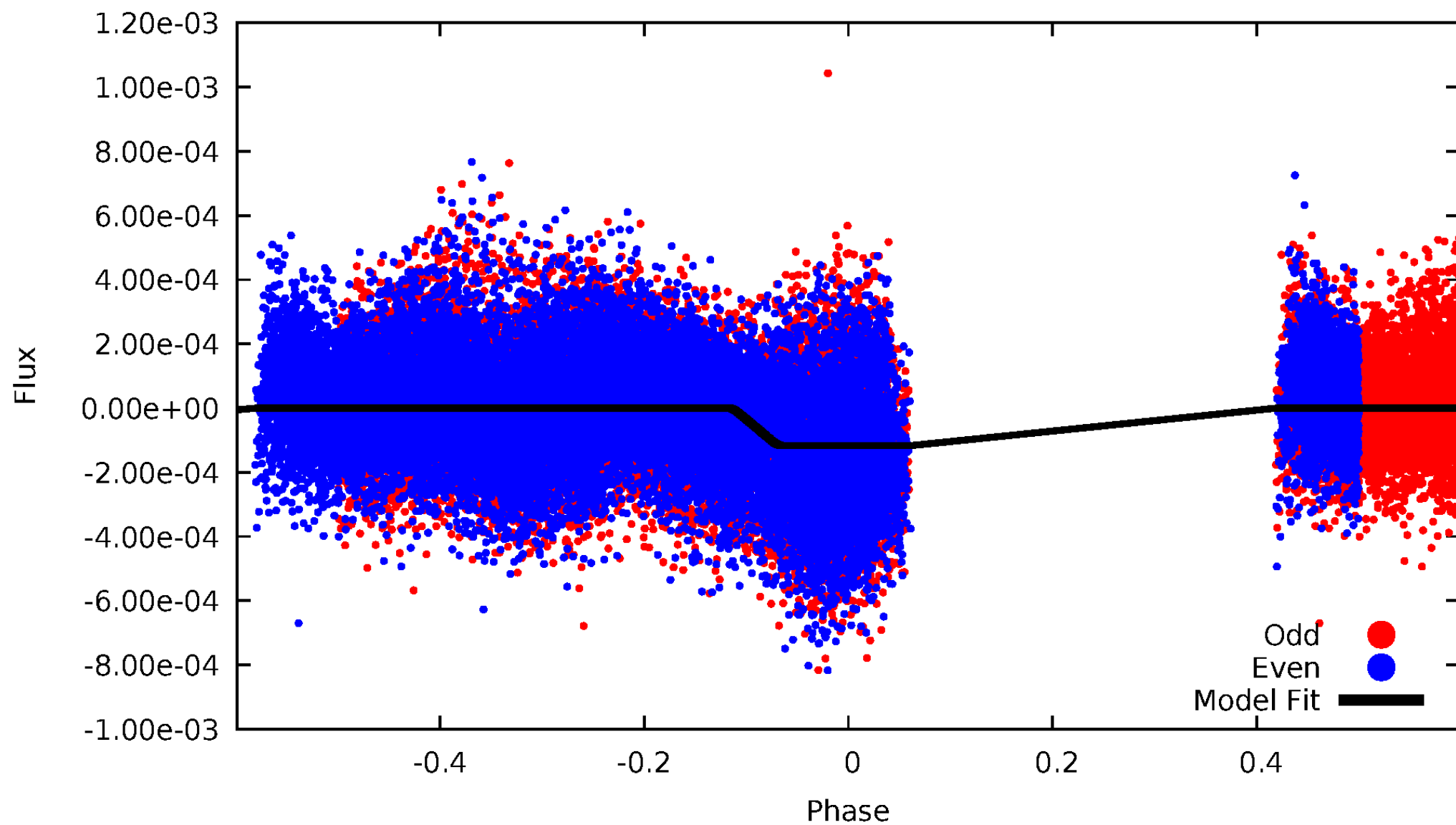
# DV Odd/Even

TCE 011295805-02



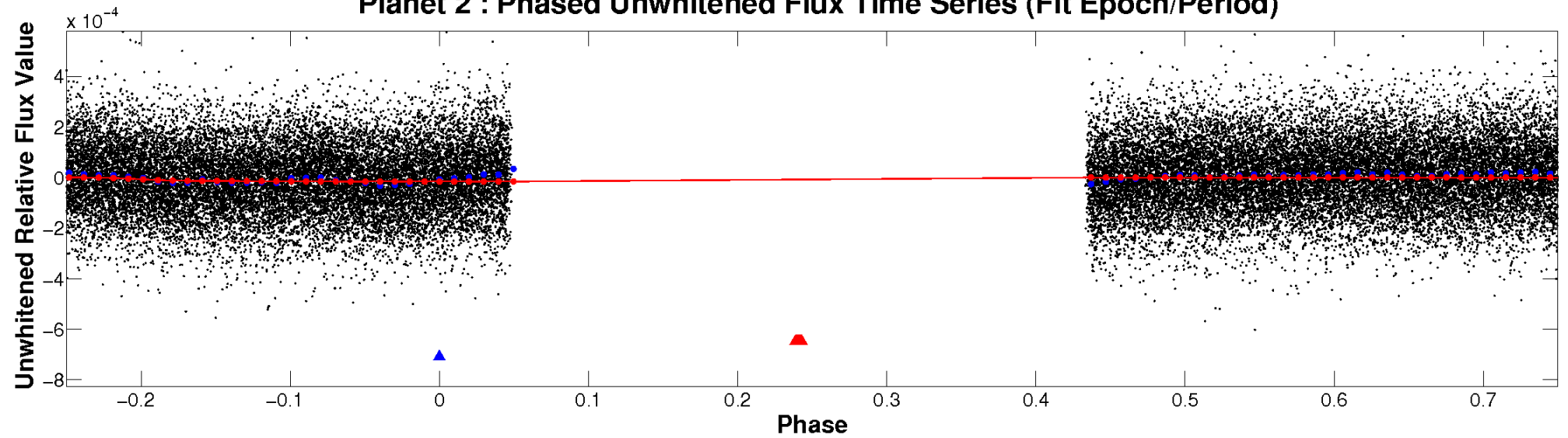
# ALT Odd/Even

TCE 011295805-02

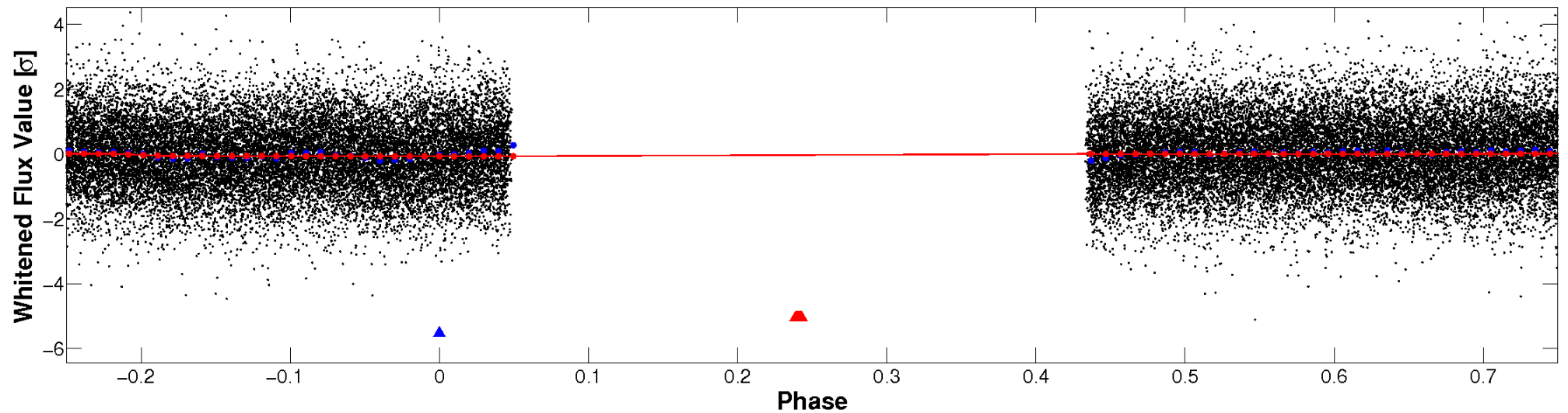


# Non-Whitened Vs. Whitened Light Curve

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

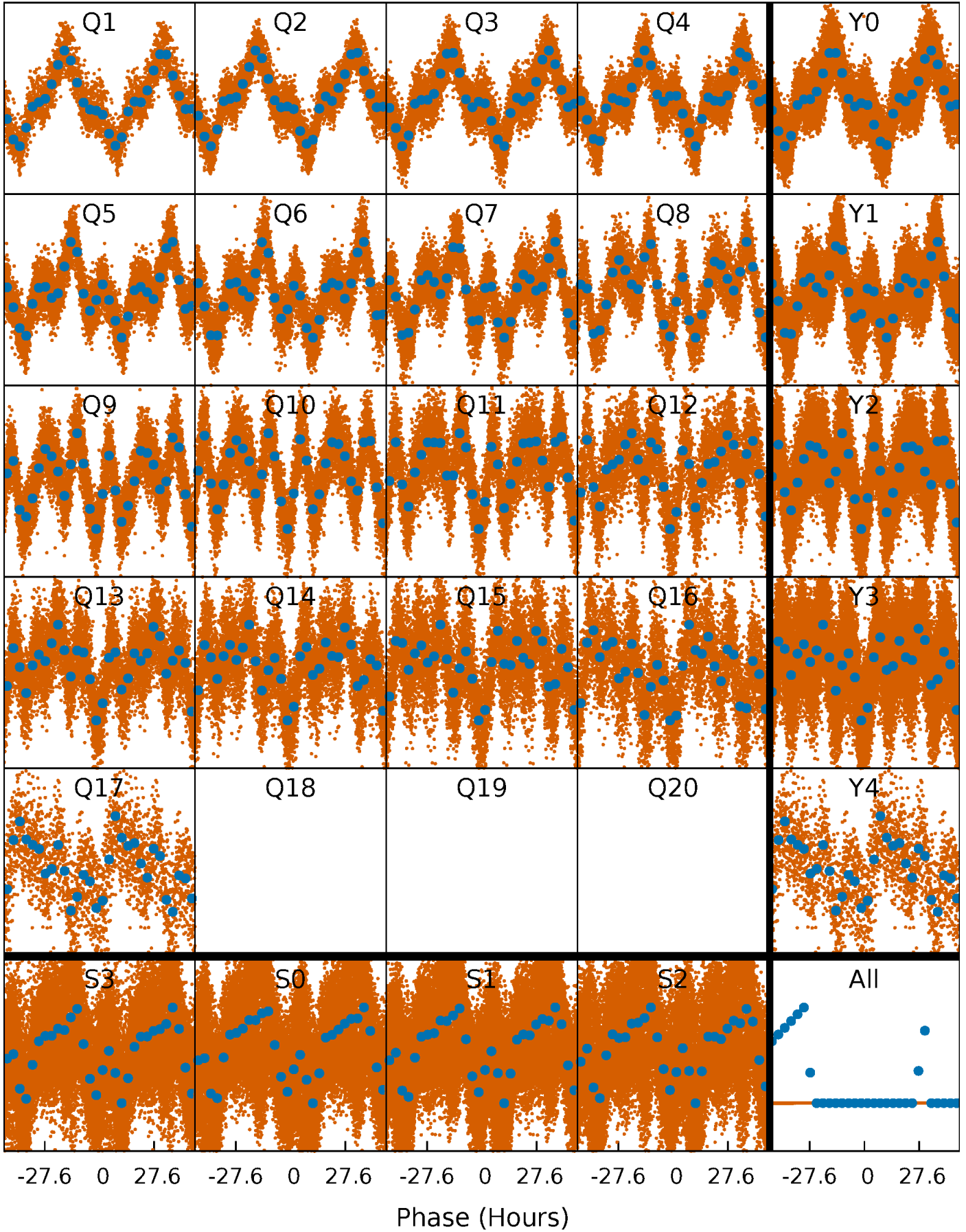


**Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



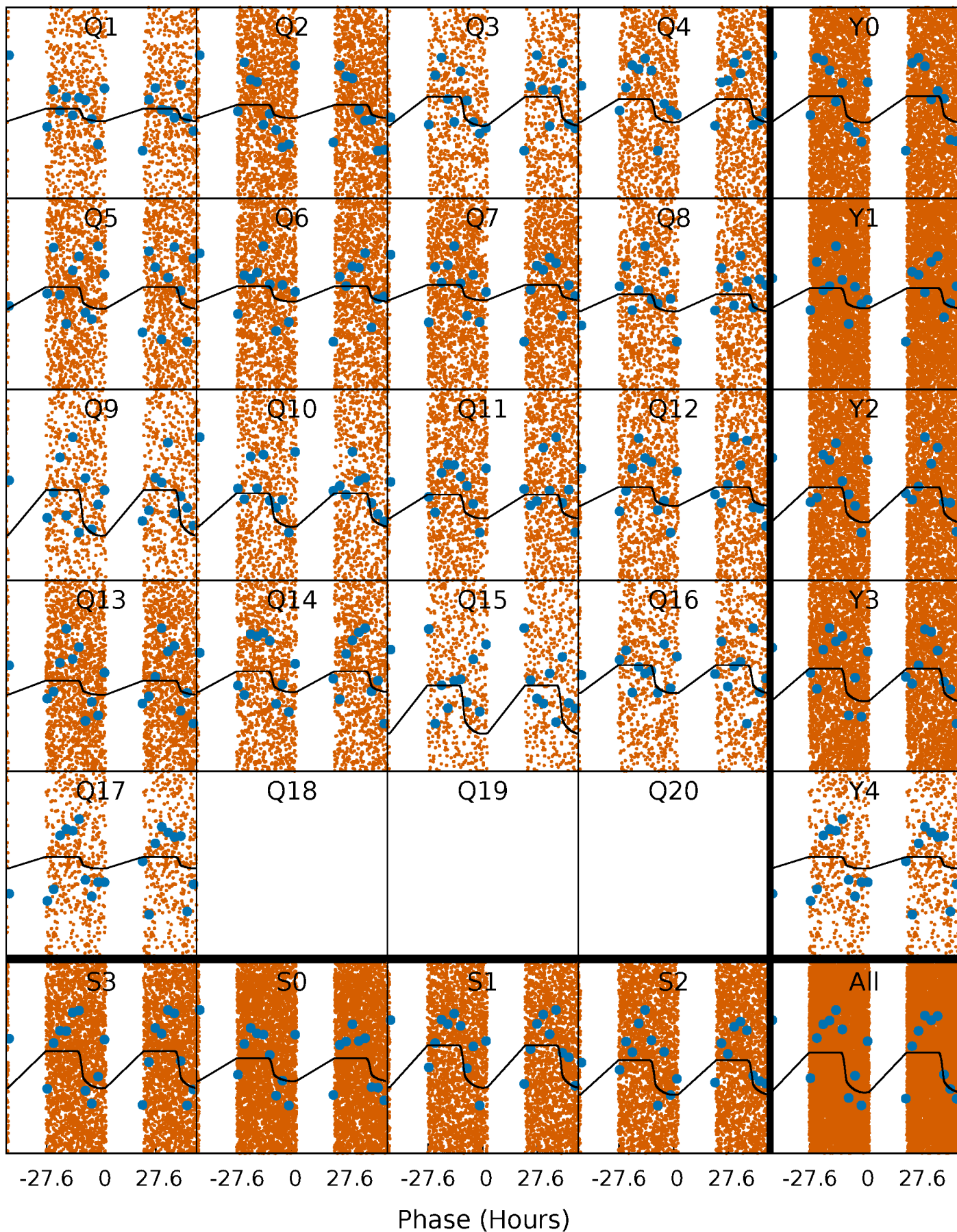
# PDC Quarter-Phased Transit Curves

TCE 011295805-02   P= 2.057371 Days    $T_0=131.983169$  (BKJD)



# DV Quarter-Phased Transit Curves

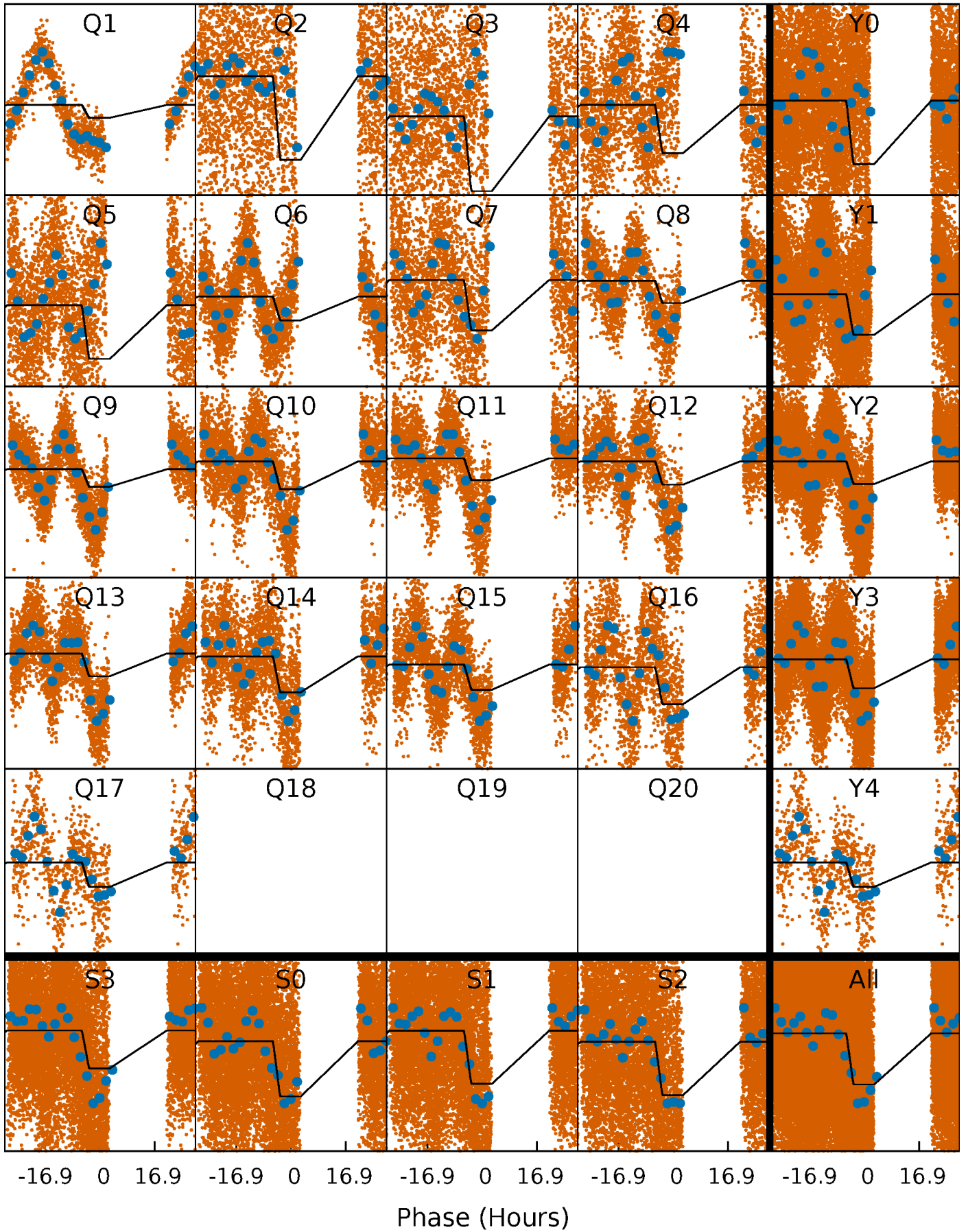
TCE 011295805-02 P= 2.057371 Days  $T_0=131.983169$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

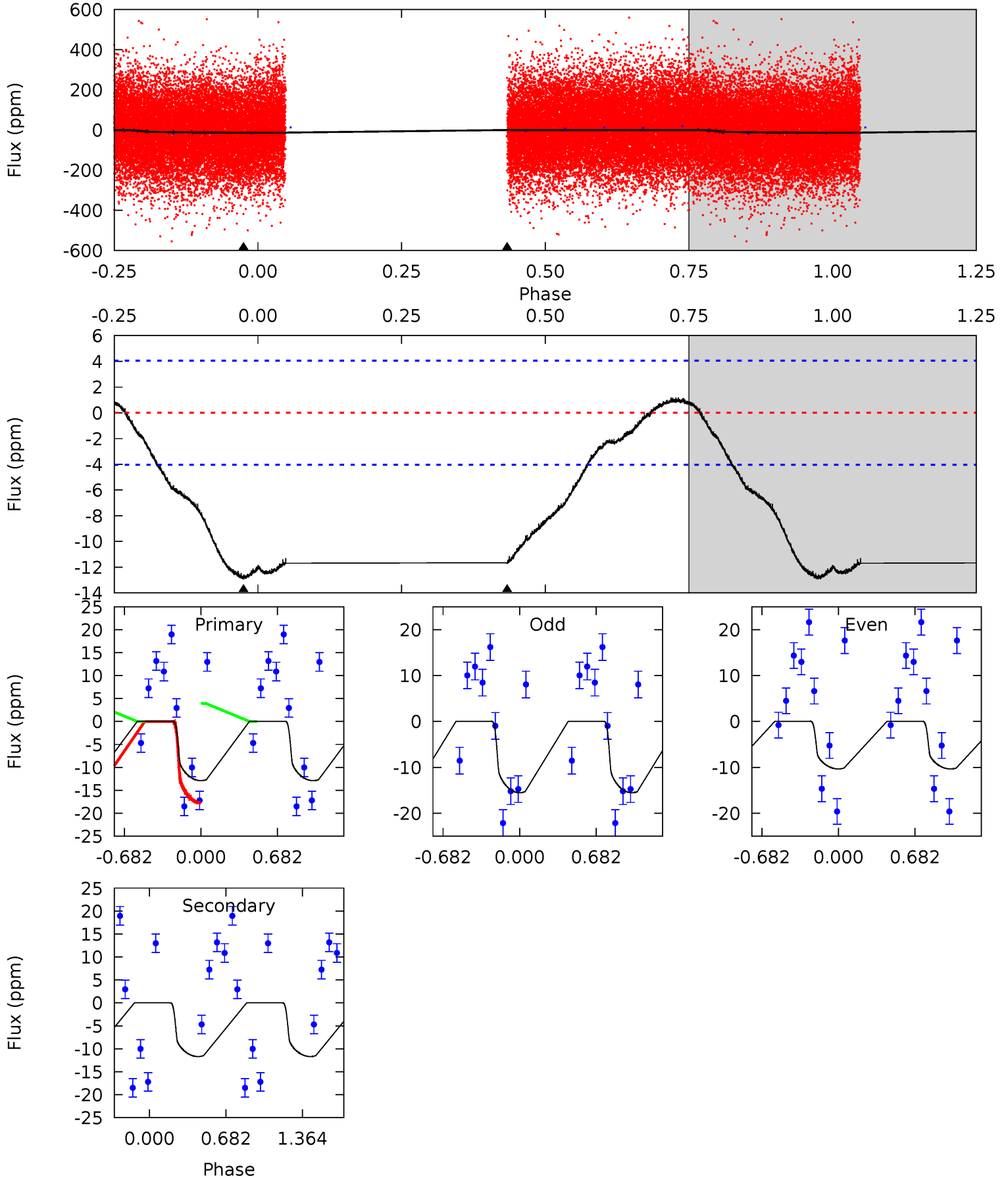
TCE 011295805-02 P= 2.057265 Days  $T_0=132.023200$  (BKJD)



# DV Model-Shift Uniqueness Test

011295805-02, P = 2.057371 Days, E = 129.925798 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
13.2	12.0	0	0	4.14	0.41	1.01	13.2	13.2	12.0	12.0	2.67	1.17	0.08	5.08

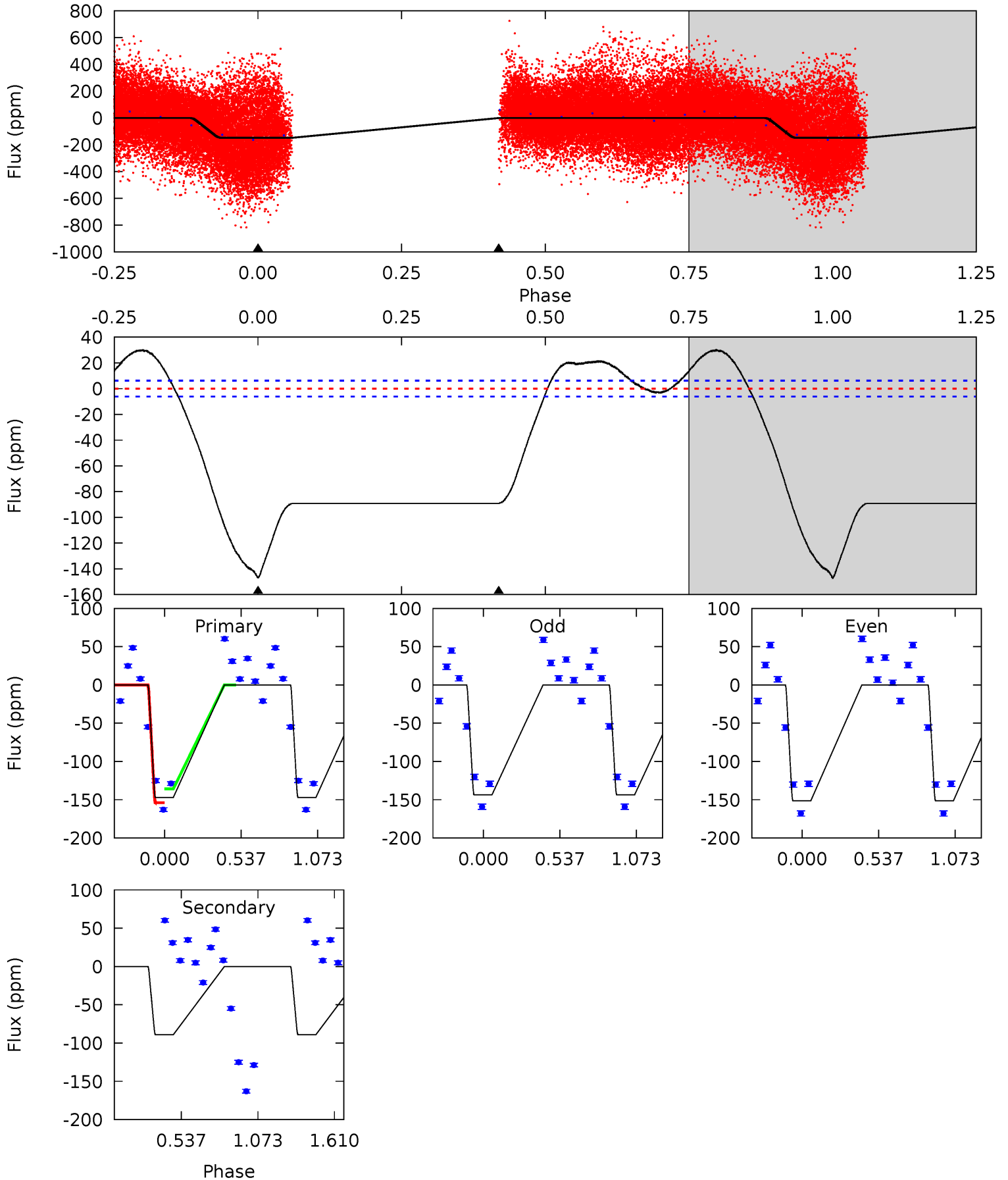




# Alt Model-Shift Uniqueness Test

011295805-02, P = 2.057265 Days, E = 129.965935 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
100.5	60.9	0	0	4.20	0.62	11.7	100.5	100.5	60.9	60.9	2.69	0.89	0.17	5.21



### Stellar Parameters For KIC 011295805

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$6807^{+183}_{-204}$	$3.583^{+0.337}_{-0.090}$	$-0.540^{+0.400}_{-0.250}$	$3.333^{+0.435}_{-1.304}$	$1.551^{+0.227}_{-0.340}$	$0.059^{+0.160}_{-0.017}$
	+3%/-3%	+9%/-3%	+74%/-46%	+13%/-39%	+15%/-22%	+272%/-28%
Source	PHO1	FLK73	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 011295805-02 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$-12 \pm 1$	$1.54^{+0.33}_{-0.36}$	$3922^{+231}_{-373}$	$5818^{+541}_{-484}$	$3.672^{+2.374}_{-1.153}$
Alt.	$-89 \pm 1$	$3.81^{+0.54}_{-0.73}$	$3923^{+224}_{-351}$	$6230^{+279}_{-275}$	$4.605^{+2.026}_{-0.971}$

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

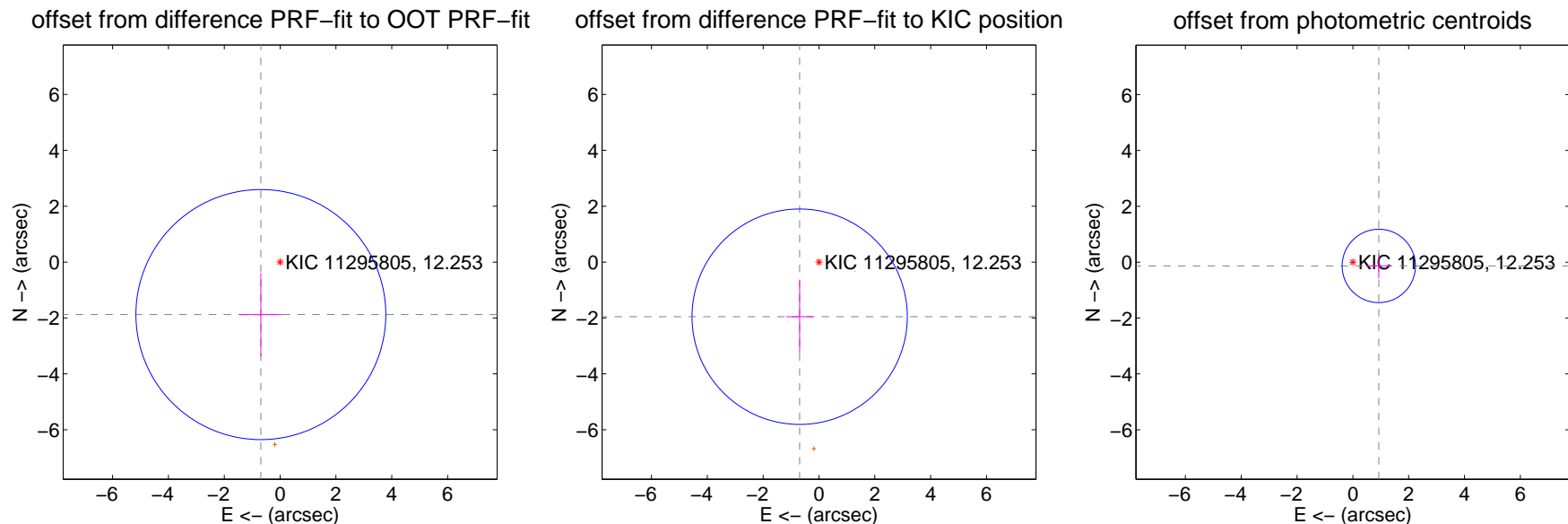
## DV Centroid Data

Supplemental centroid analysis for 011295805-02. Kepler magnitude: 12.25. Transit SNR 8.11

There are 2 quarters with good PRF difference image offsets

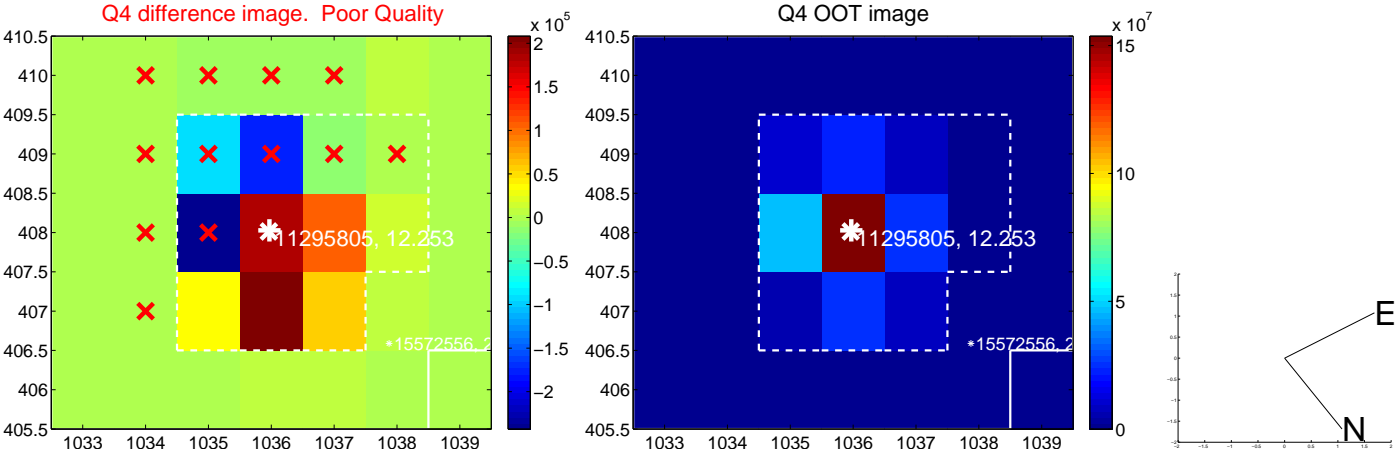
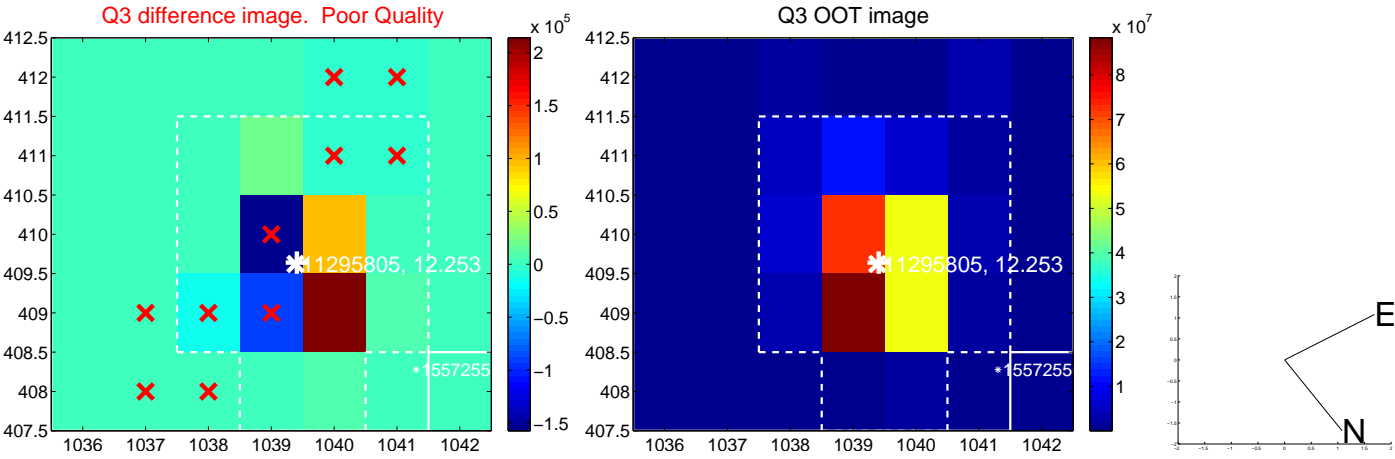
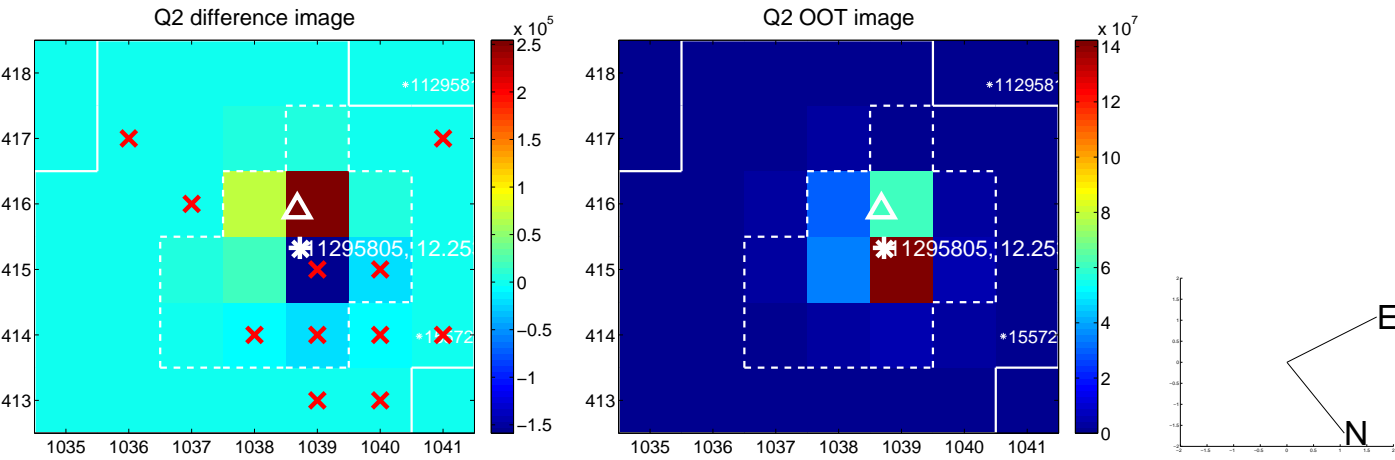
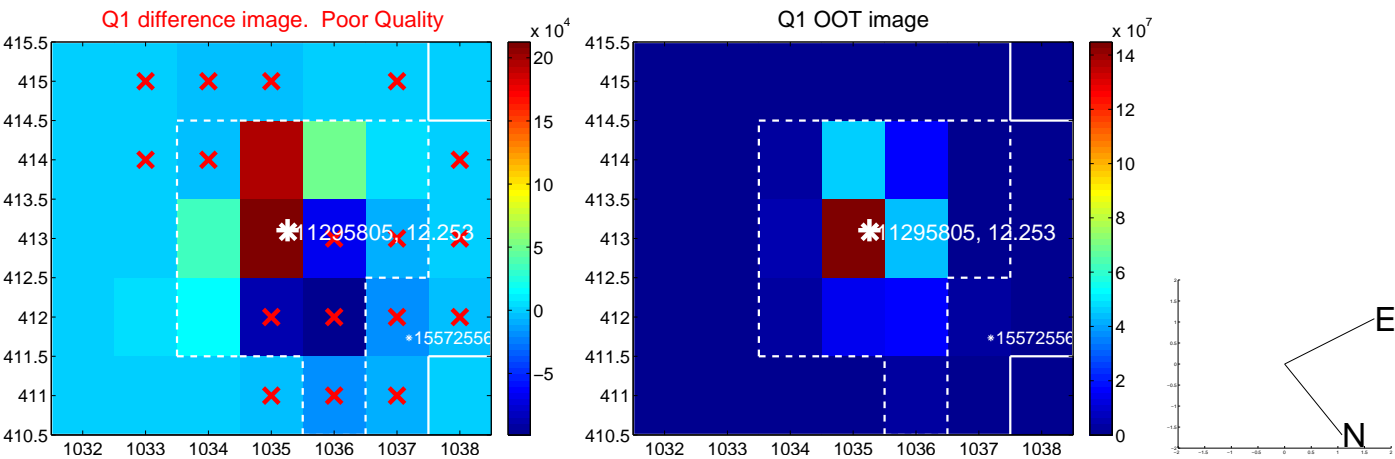
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$2.000 \pm 1.491$	1.34	$0.689 \pm 0.771$	$-1.878 \pm 1.486$
PRF-fit source offset from KIC position	$2.073 \pm 1.285$	1.61	$0.692 \pm 0.483$	$-1.954 \pm 1.301$
photometric centroid source offset	$0.94 \pm 0.44$	2.15	$-0.93 \pm 0.44$	$-0.13 \pm 0.44$

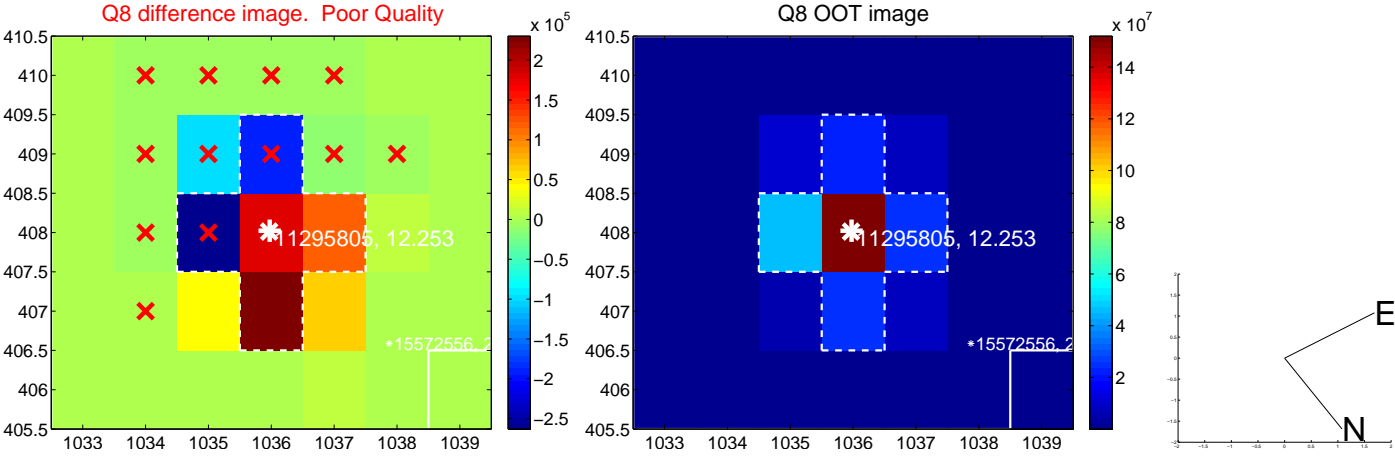
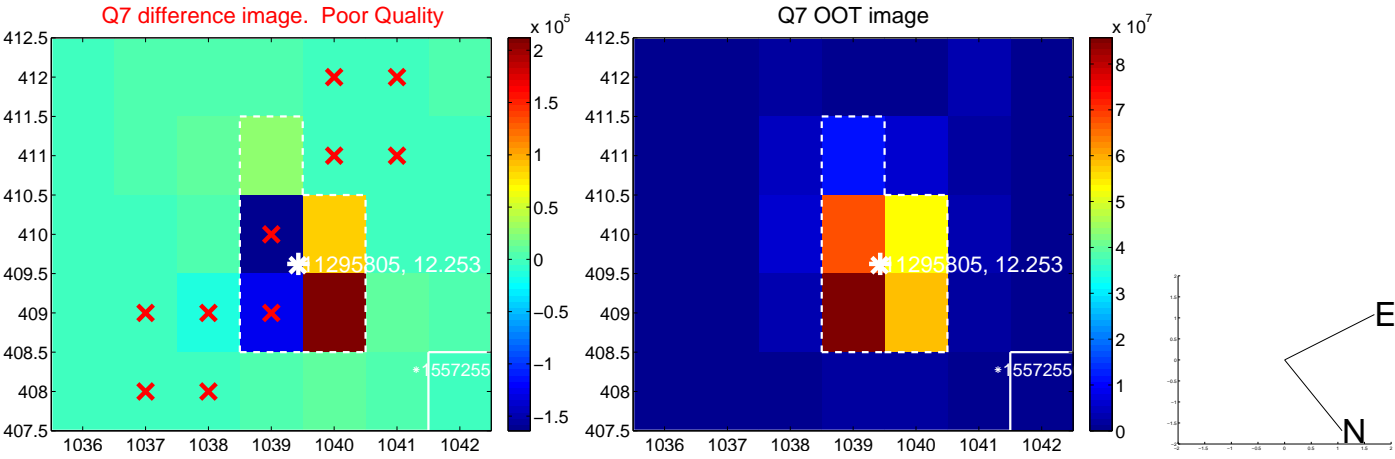
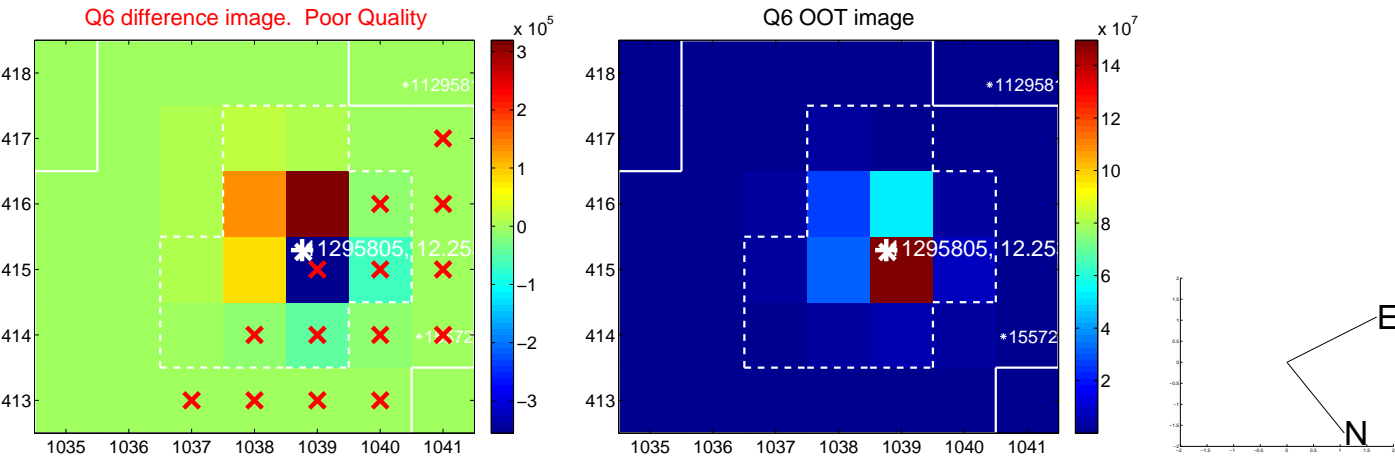
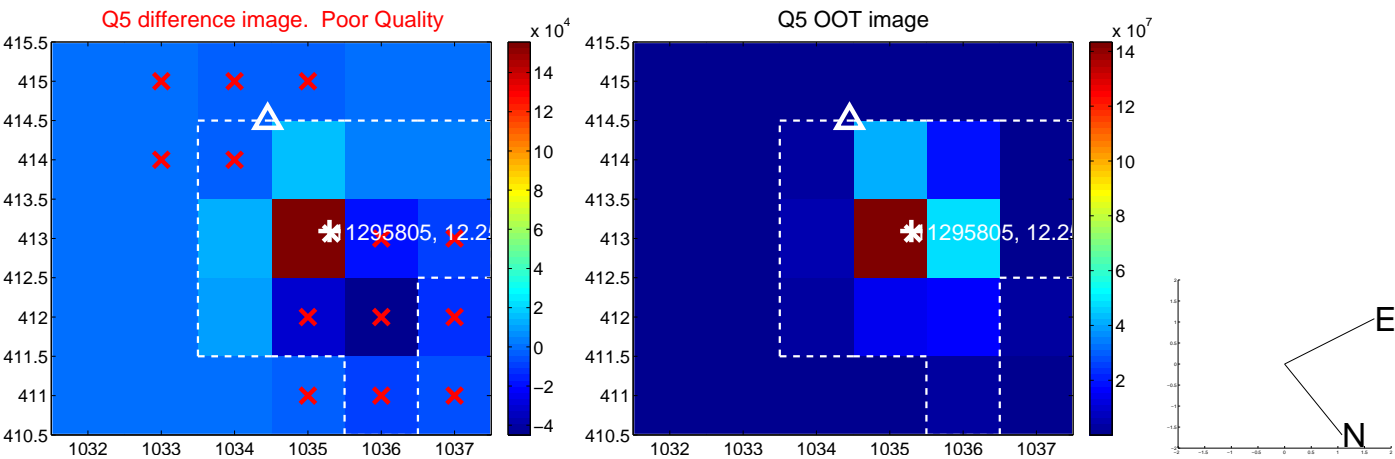


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

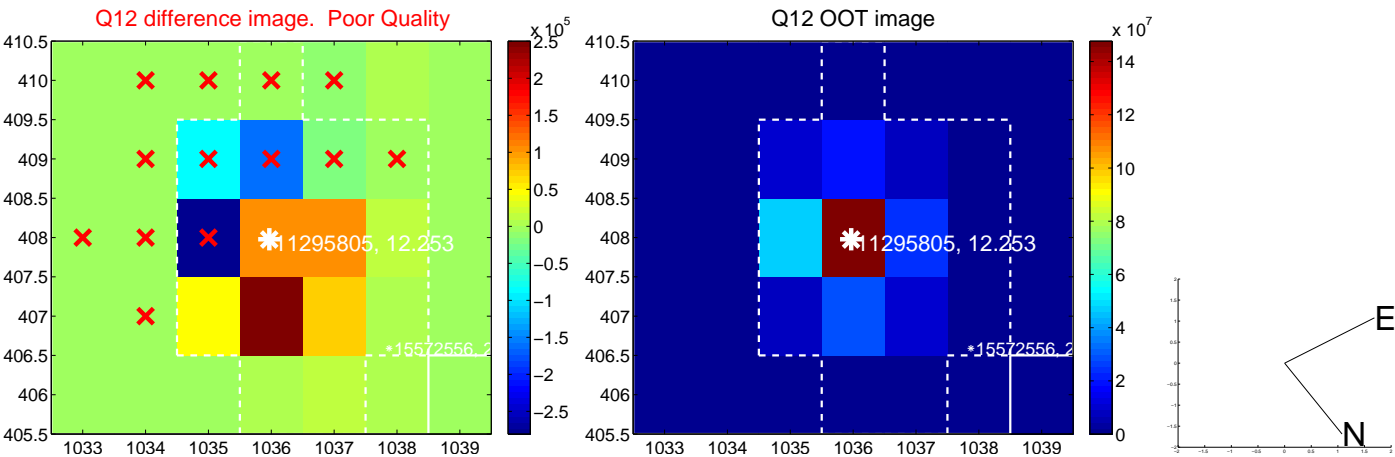
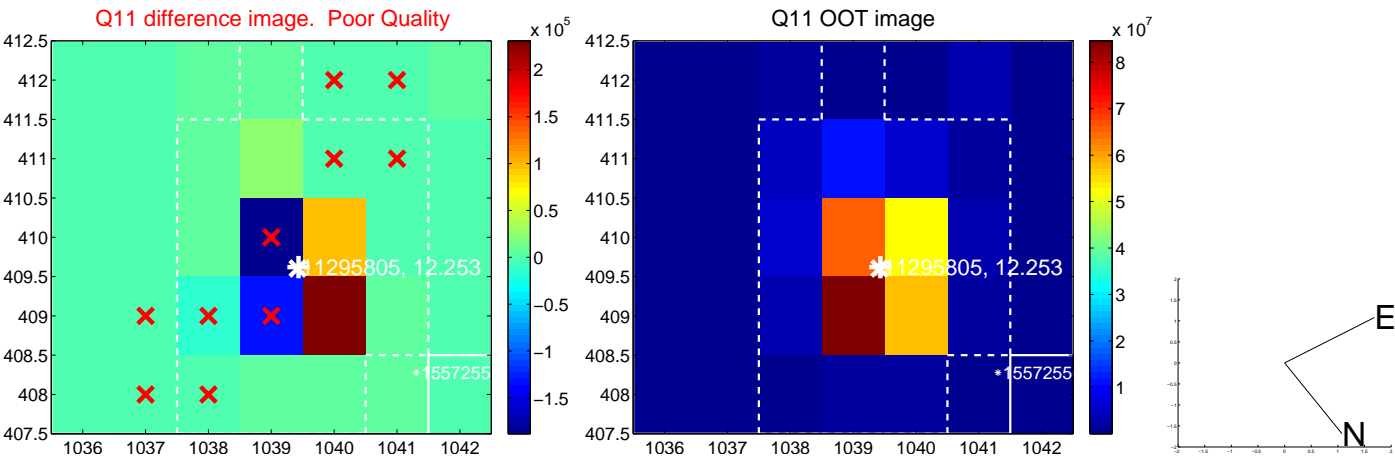
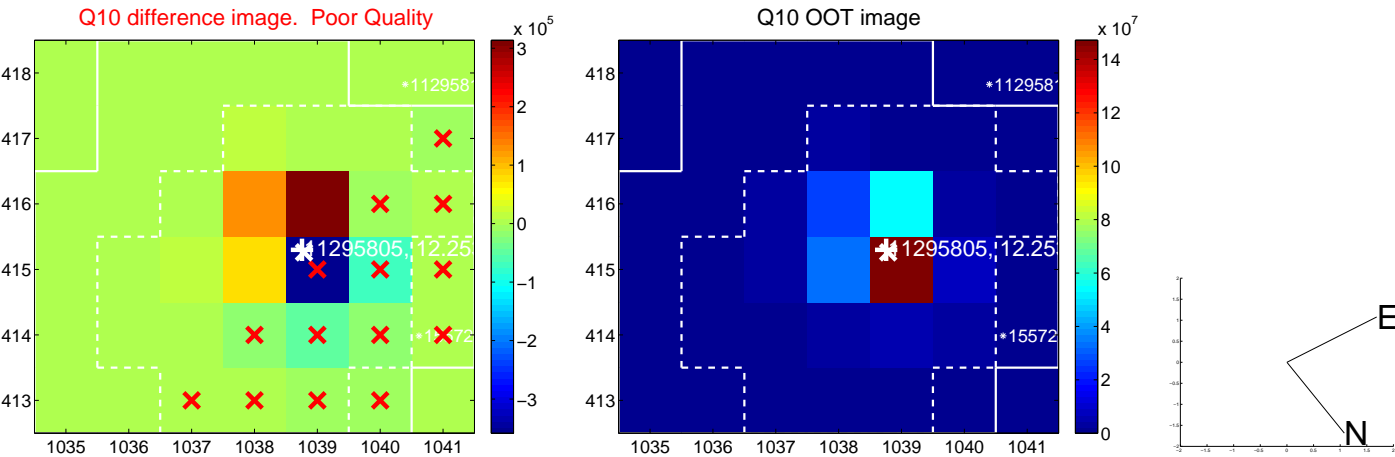
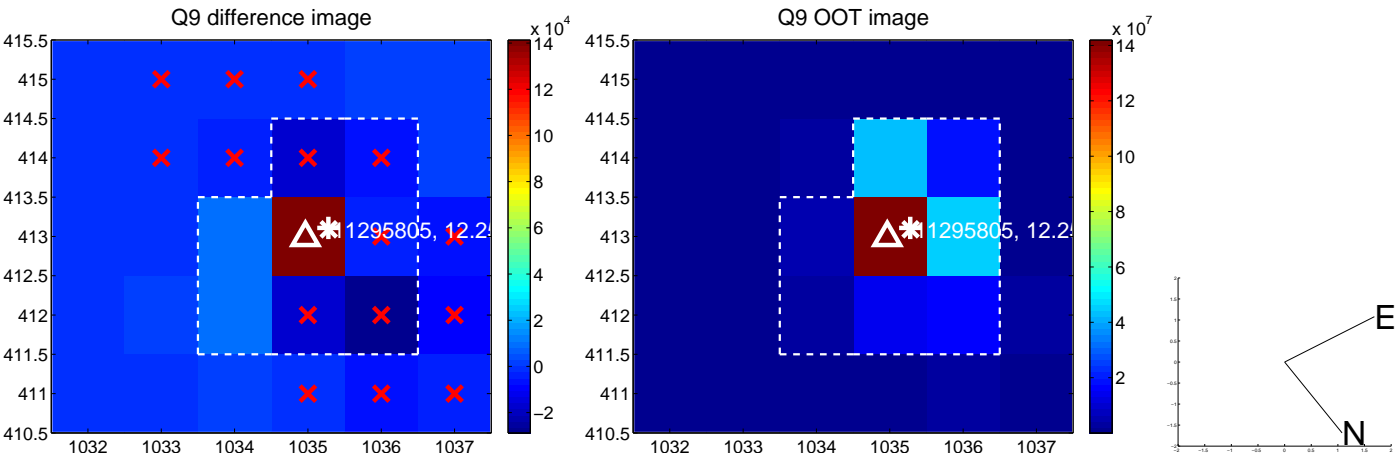
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



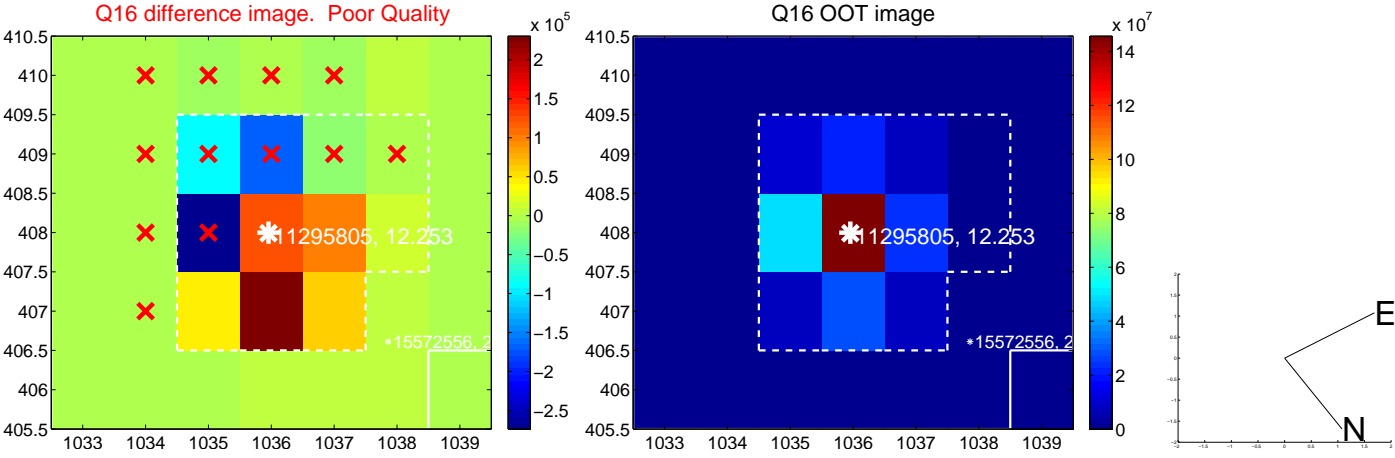
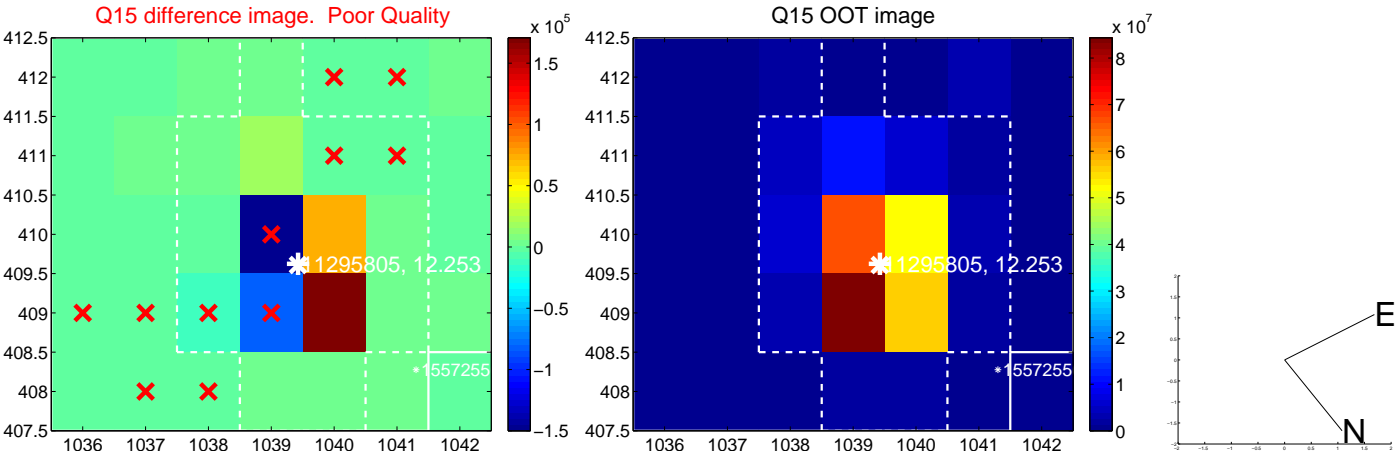
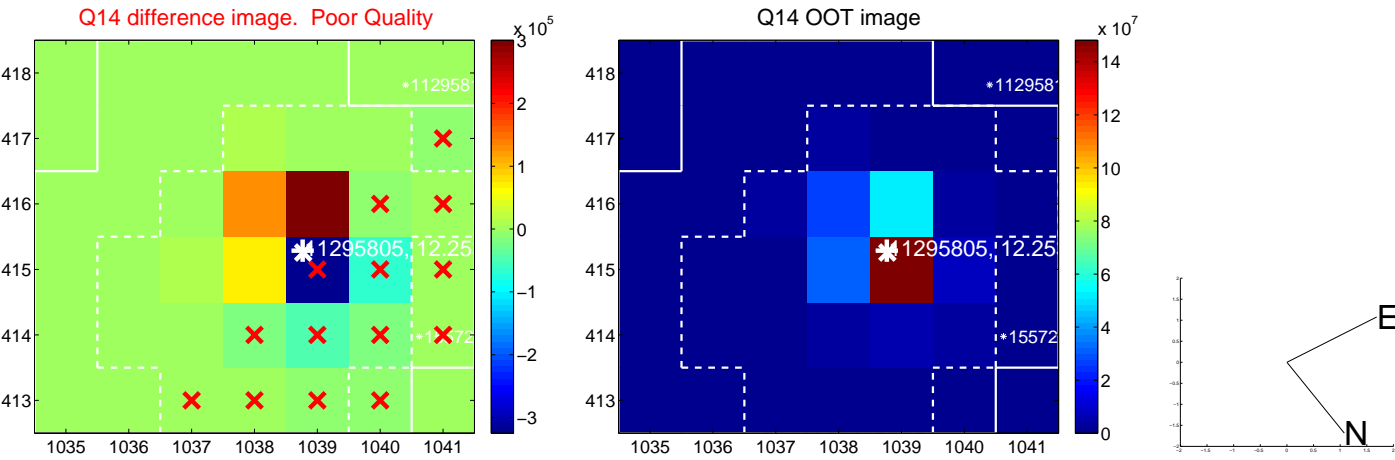
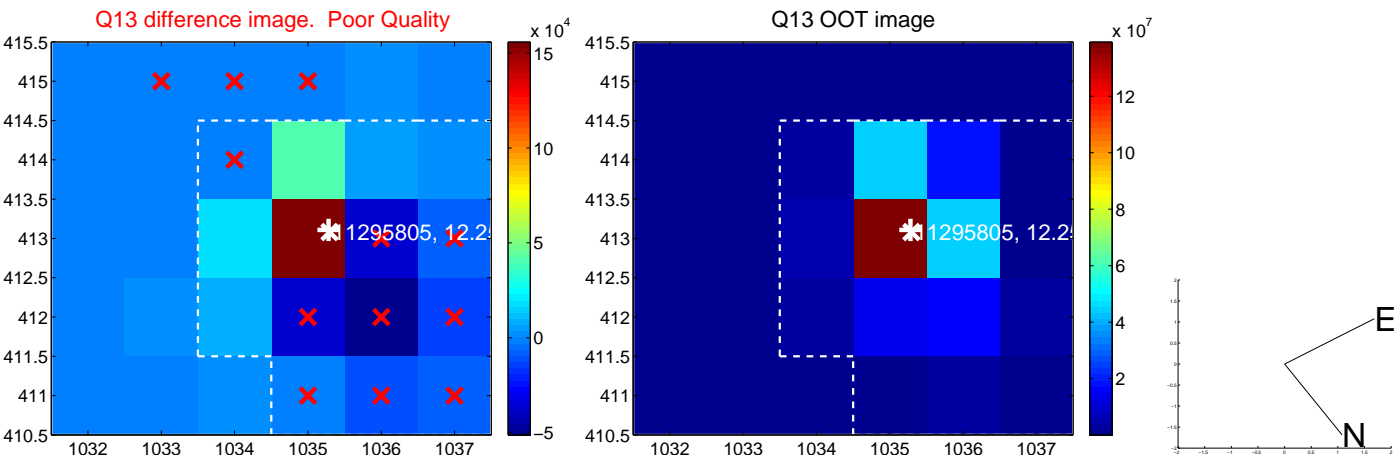
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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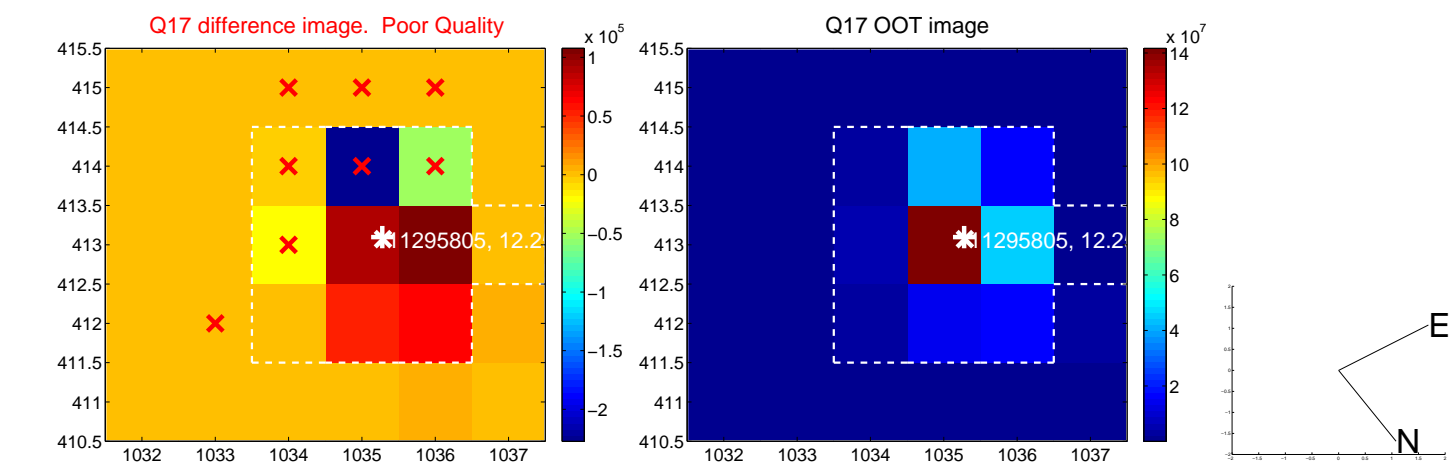


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

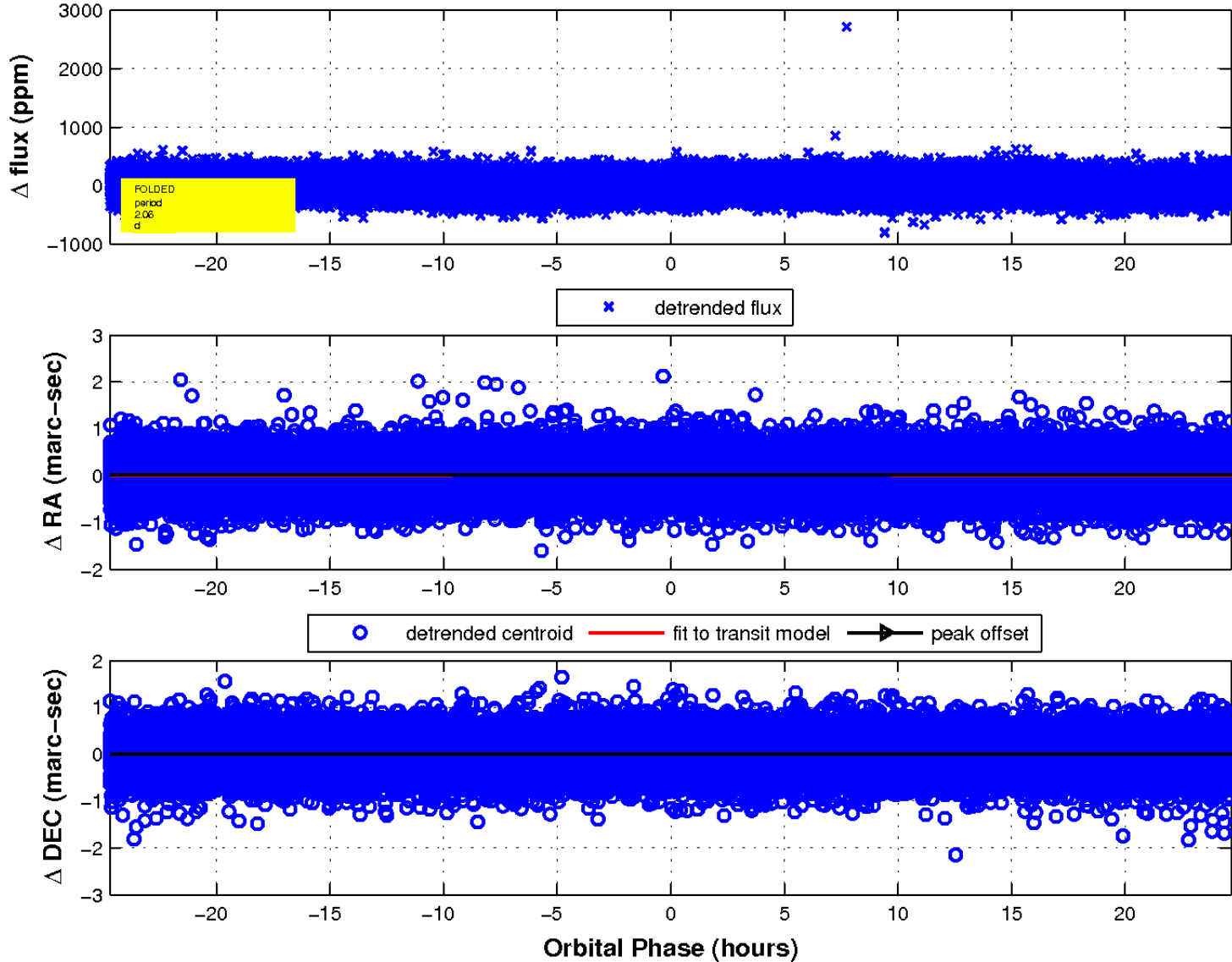




white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



fluxWeightedCentroids, Planet 2 of 2



UKIRT Image

Declination

