

# KIC 011495654

## 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) | $R_p$ ( $R_{\oplus}$ ) | $S_p$ ( $S_{\oplus}$ ) |
|--------------|----------|------|---------------|--------------|-------------|------------------|------|-----|-----------------------------|-----------------|------------------------|------------------------|
| 011495654-01 | OBS      | No   | 369.079530    | 465.577074   | 23.0        | 1.171            | 27.5 | 1.8 | 1.00                        | 5780            | 0.56                   | 0.99                   |
| 011495654-02 | OBS      | No   | 356.970951    | 143.839102   | 14.9        | 8.685            | 10.6 | 1.5 | 1.00                        | 5780            | 0.46                   | 1.03                   |

## Robovetter Results

| TCE          | Run Type | Disp | Score | N | S | C | E | Comments   |
|--------------|----------|------|-------|---|---|---|---|--|
| 011495654-01 | OBS      | FP   | 0.00  | 1 | 0 | 0 | 0 | INDIV_TRANS_CHASES_MARSHALL_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED |
| 011495654-02 | OBS      | FP   | 0.00  | 1 | 0 | 0 | 0 | INDIV_TRANS_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED                                    |

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

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

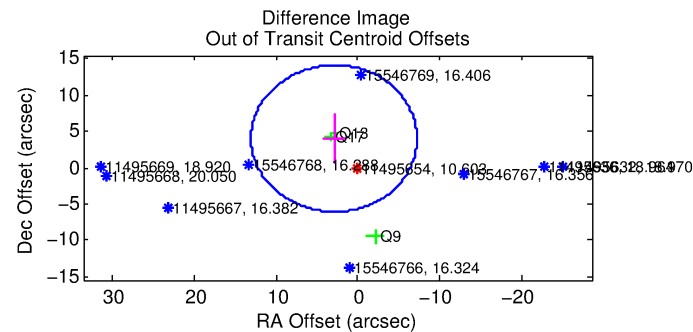
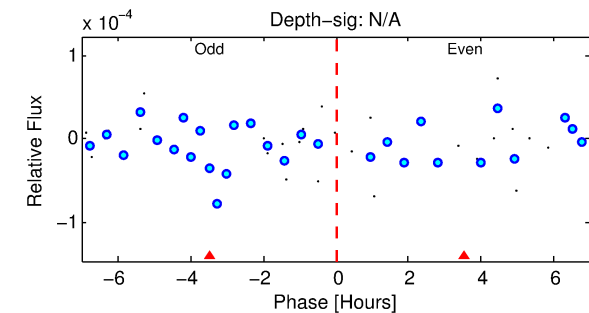
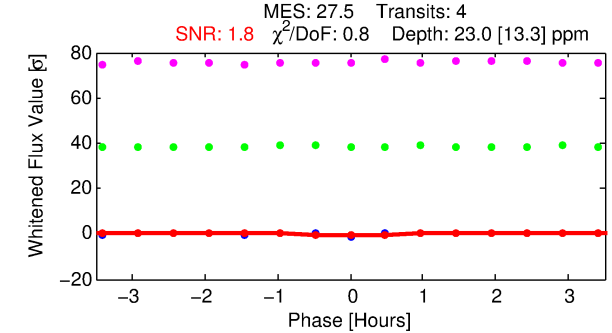
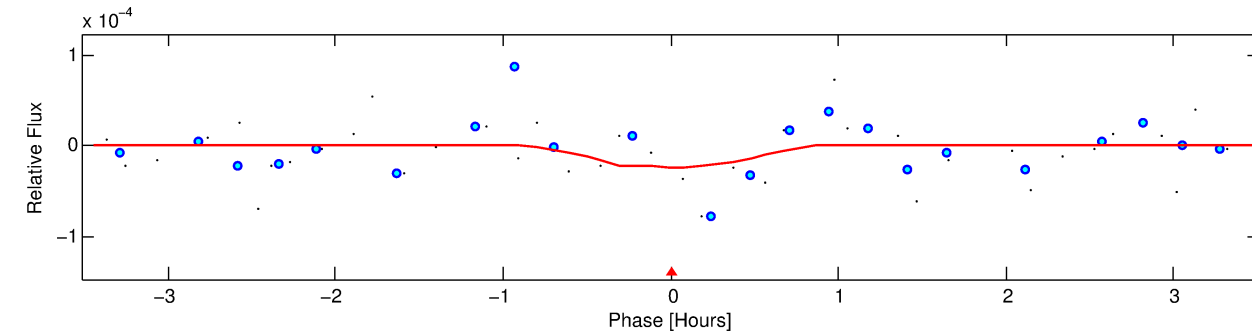
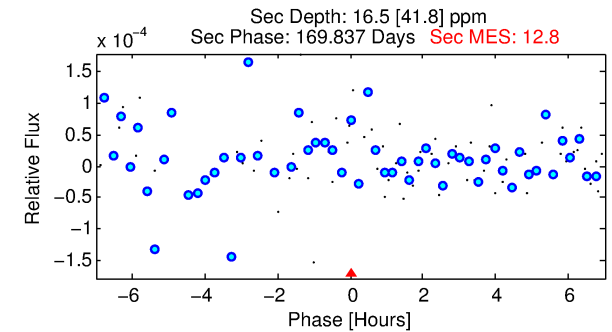
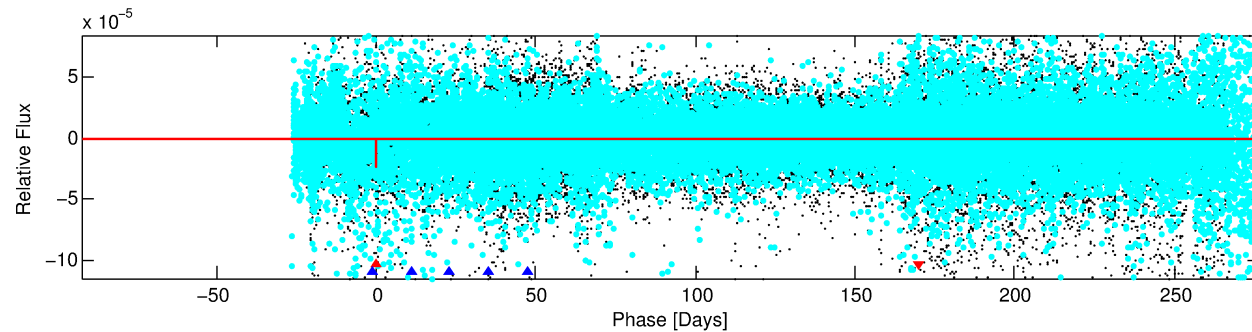
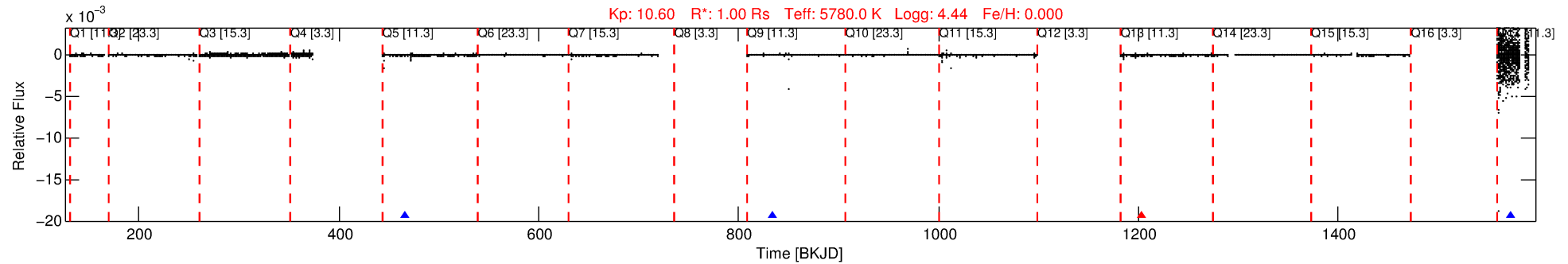
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 011495654-01

No Significant Match Found

# DV One-Page Summary

KIC: 11495654 Candidate: 1 of 2 Period: 369.080 d



## DV Fit Results:

Period = 369.07953 [0.01072] d  
Epoch = 465.5771 [0.0144] BKJD  
Rp/R\* = 0.0051 [0.0084]  
a/R\* = 1194.60 [9365.48]  
b = 0.87 [2.11]  
Seff = 0.99 [0.00]  
Teq = 254 [0] K  
Rp = 0.56 [0.92] Re  
a = 1.0072 [0.0000] AU  
Ag = 29372.74 [121503.50] [0.24] $\sigma$   
Teff = 5143 [5318] K [0.92] $\sigma$

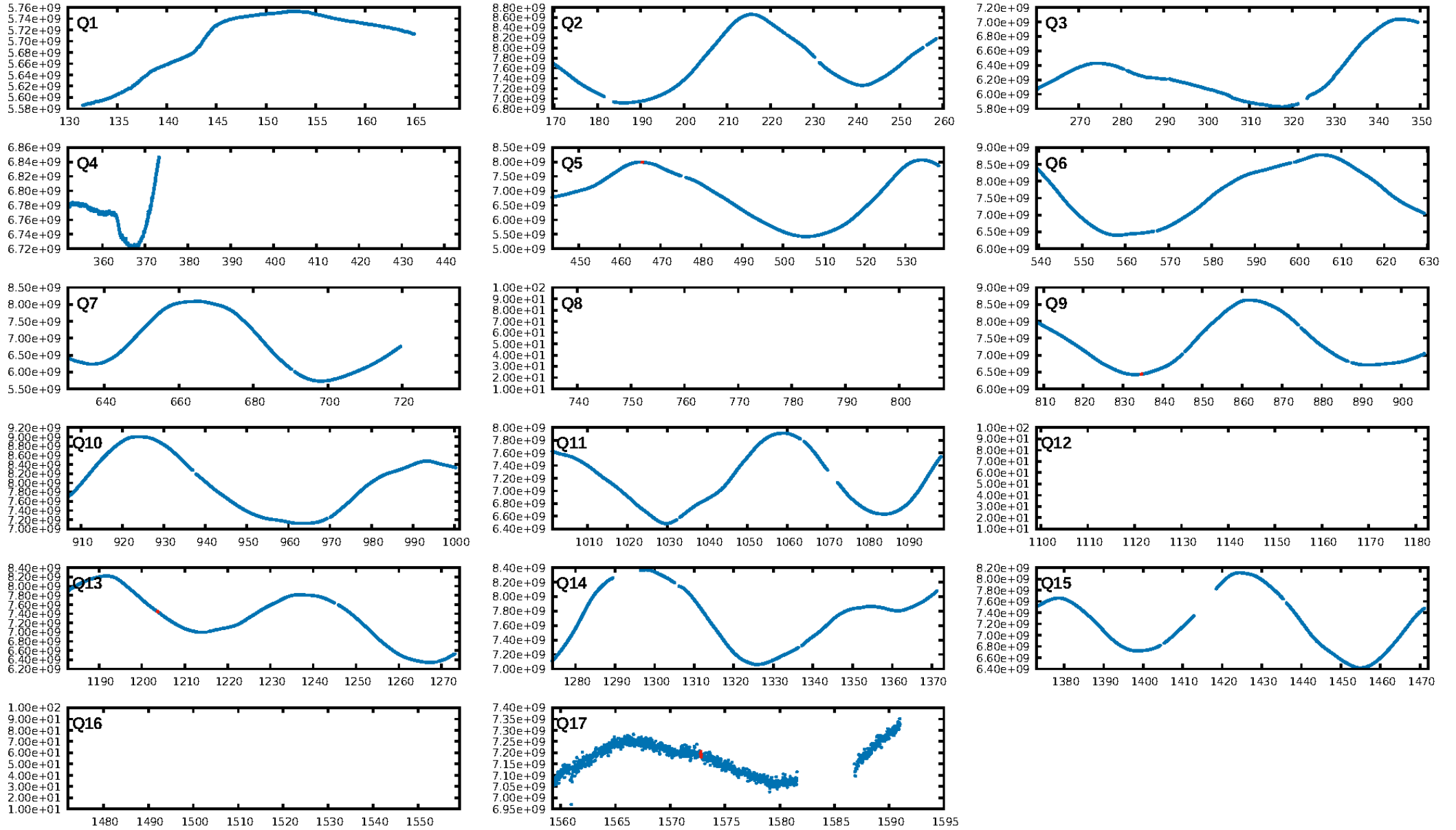
## DV Diagnostic Results:

ShortPeriod-sig: 100.0% [33.16] $\sigma$   
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 81.7%  
ModelChiSquareGof-sig: 71.7%  
**Bootstrap-pfa: 5.21e-11**  
**RollingBand-fgt: 0.67 [2/3]**  
GhostDiagnostic-chr: N/A  
Centroid-sig: 35.0%  
Centroid-so: 38.719 arcsec [1.23] $\sigma$   
OotOffset-rm: 4.983 arcsec [1.48] $\sigma$   
OotOffset-st: 0/0/0/3 [3]  
KicOffset-rm: 5.733 arcsec [1.60] $\sigma$   
KicOffset-st: 0/0/0/3 [3]  
DiffImageQuality-fgm: 0.00 [0/3]  
DiffImageOverlap-fno: 1.00 [4/4]

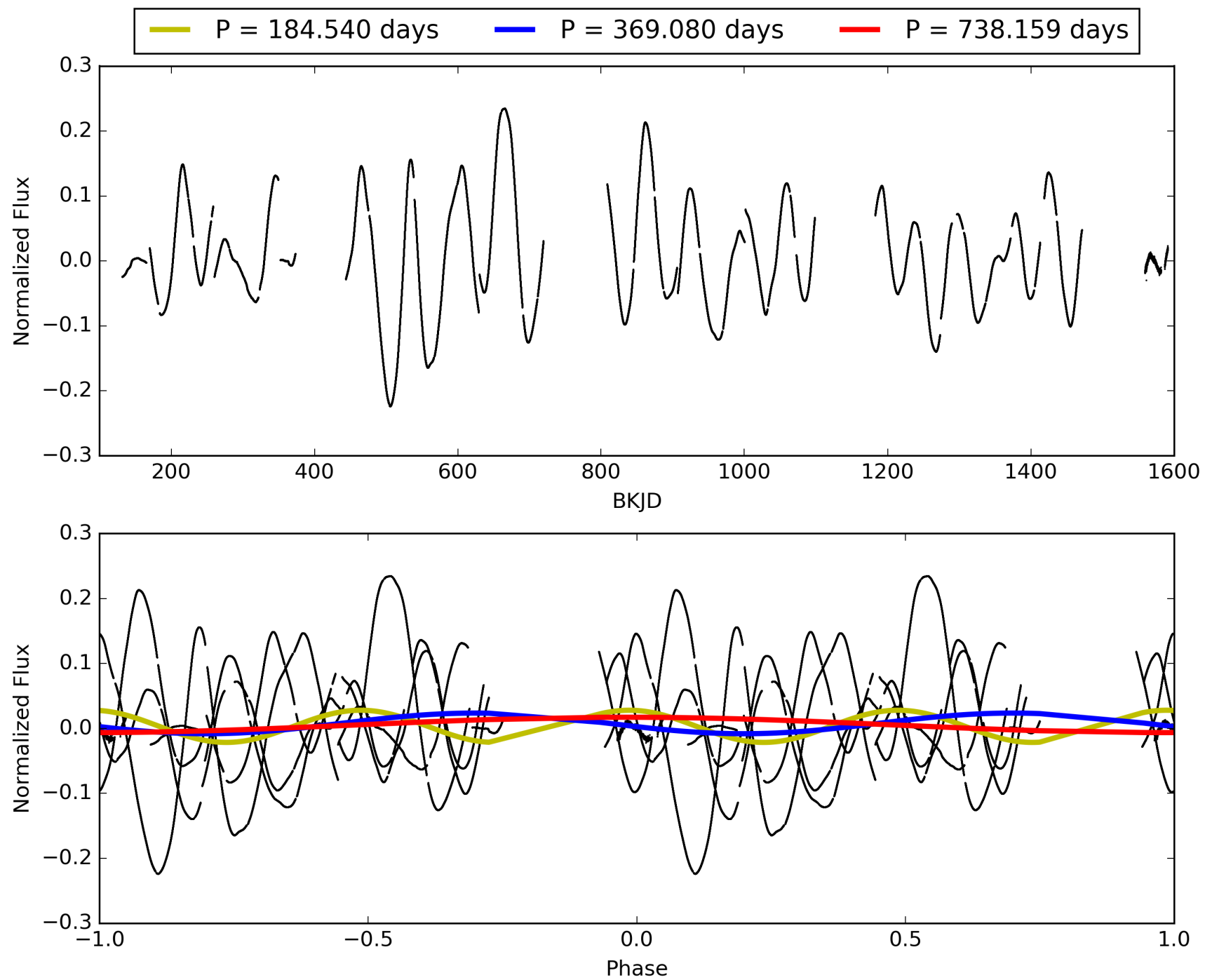
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 02:27:56 Z

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

# TCE 011495654-01, PDC Light Curves

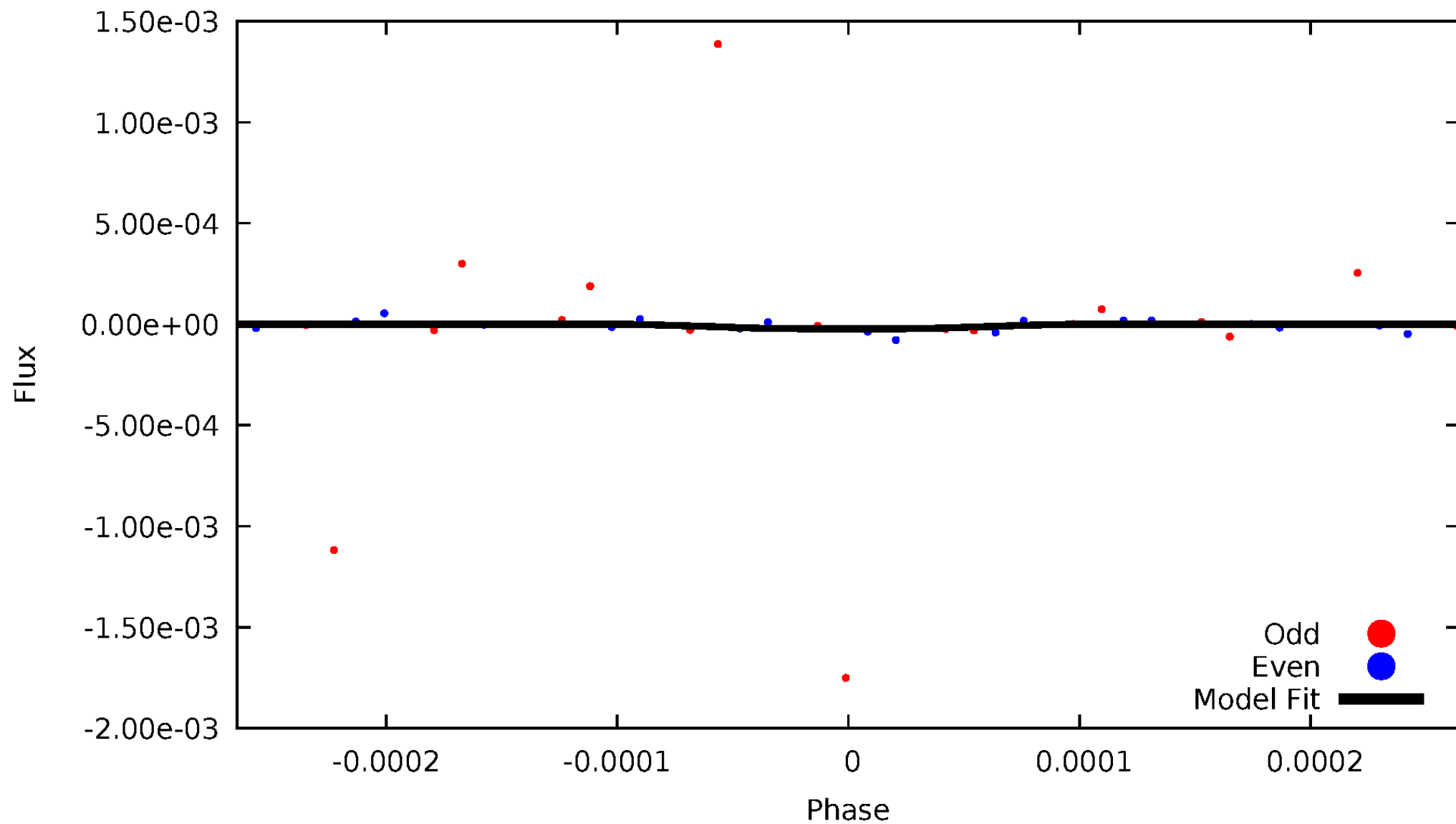


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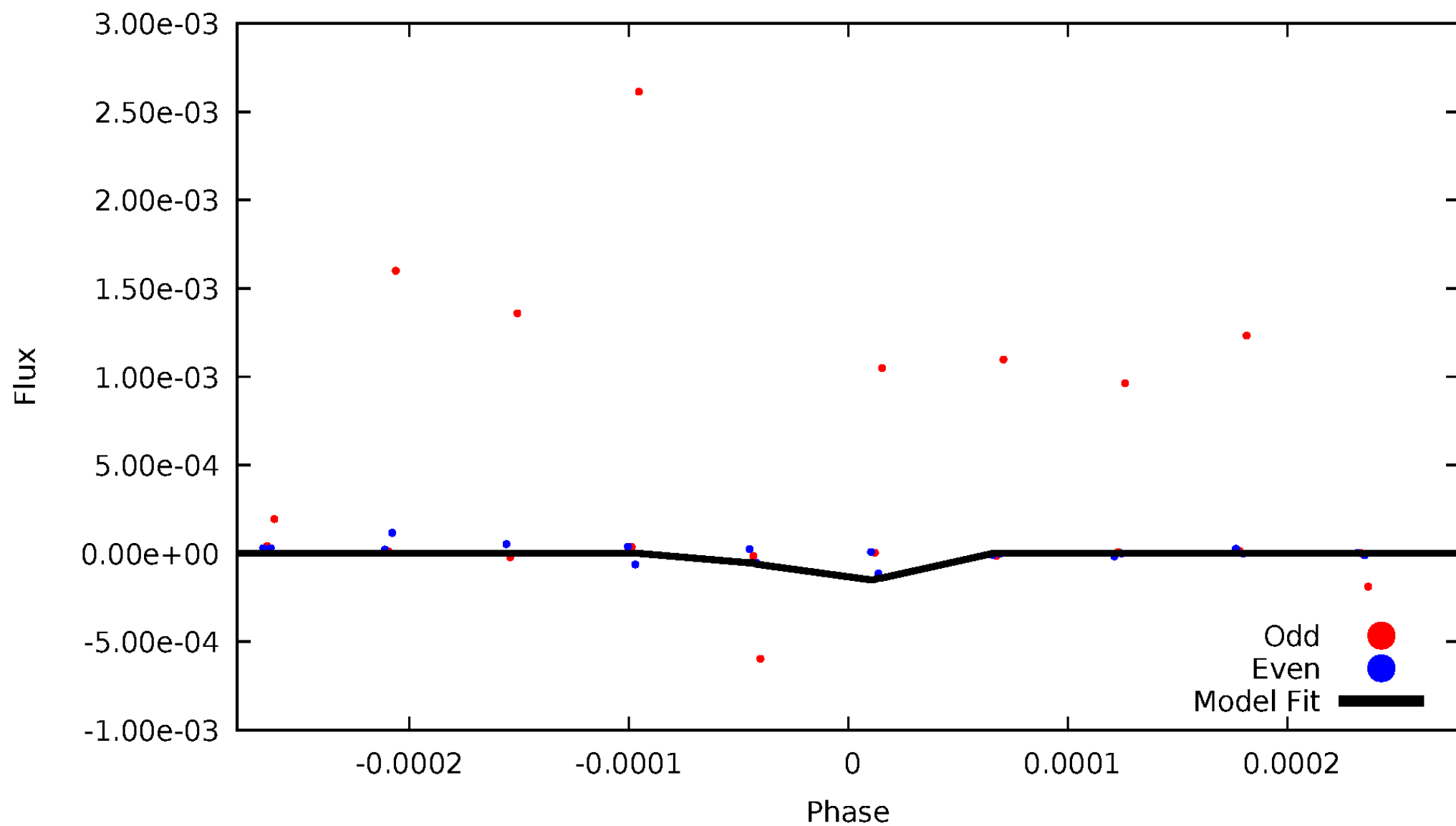
# DV Odd/Even

TCE 011495654-01



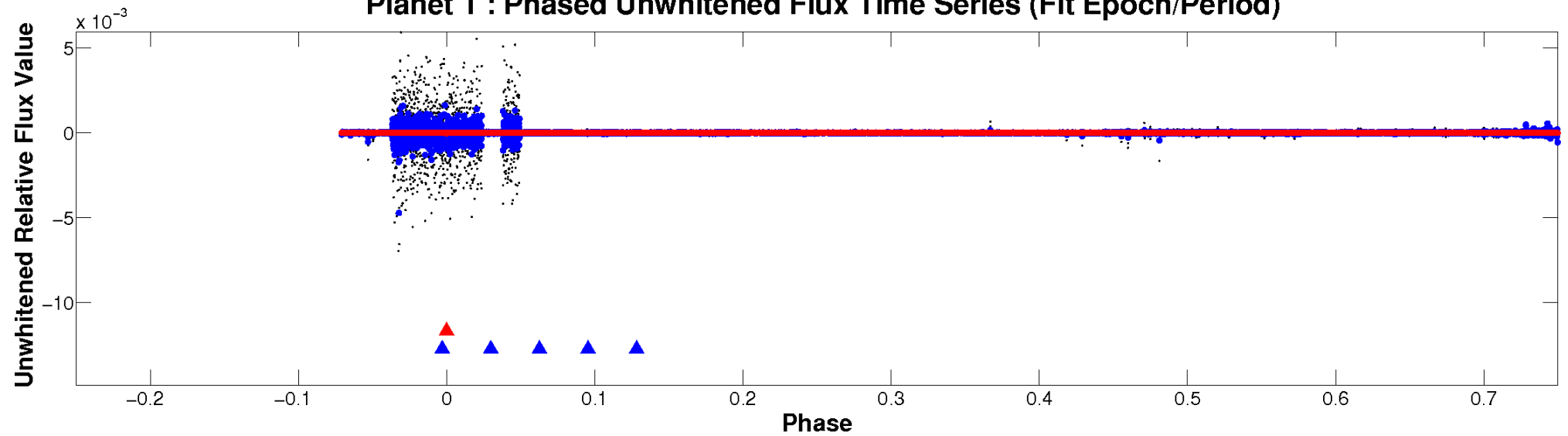
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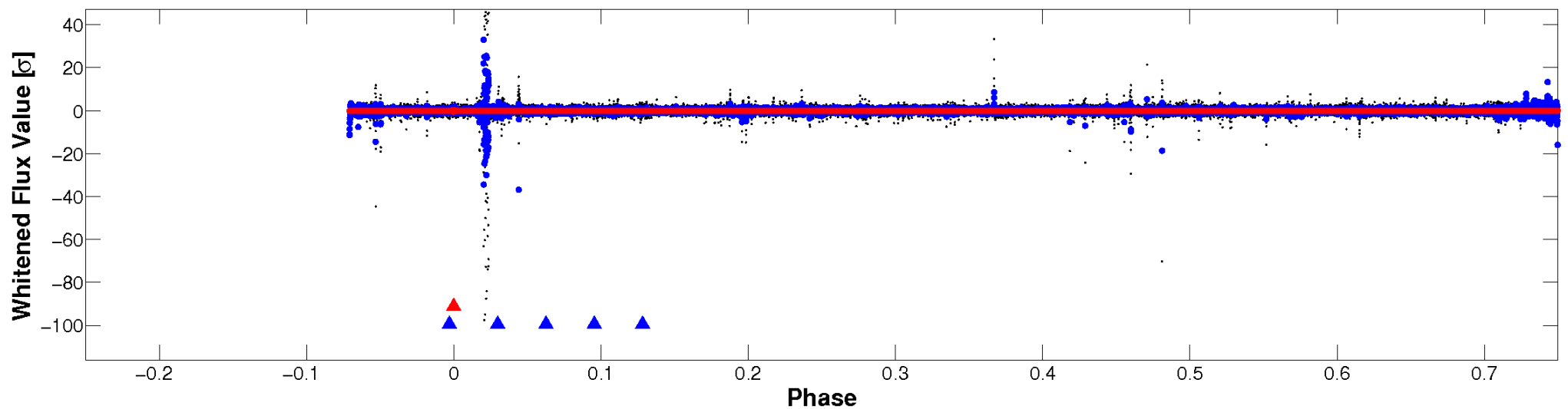


# Non-Whitened Vs. Whitened Light Curve

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

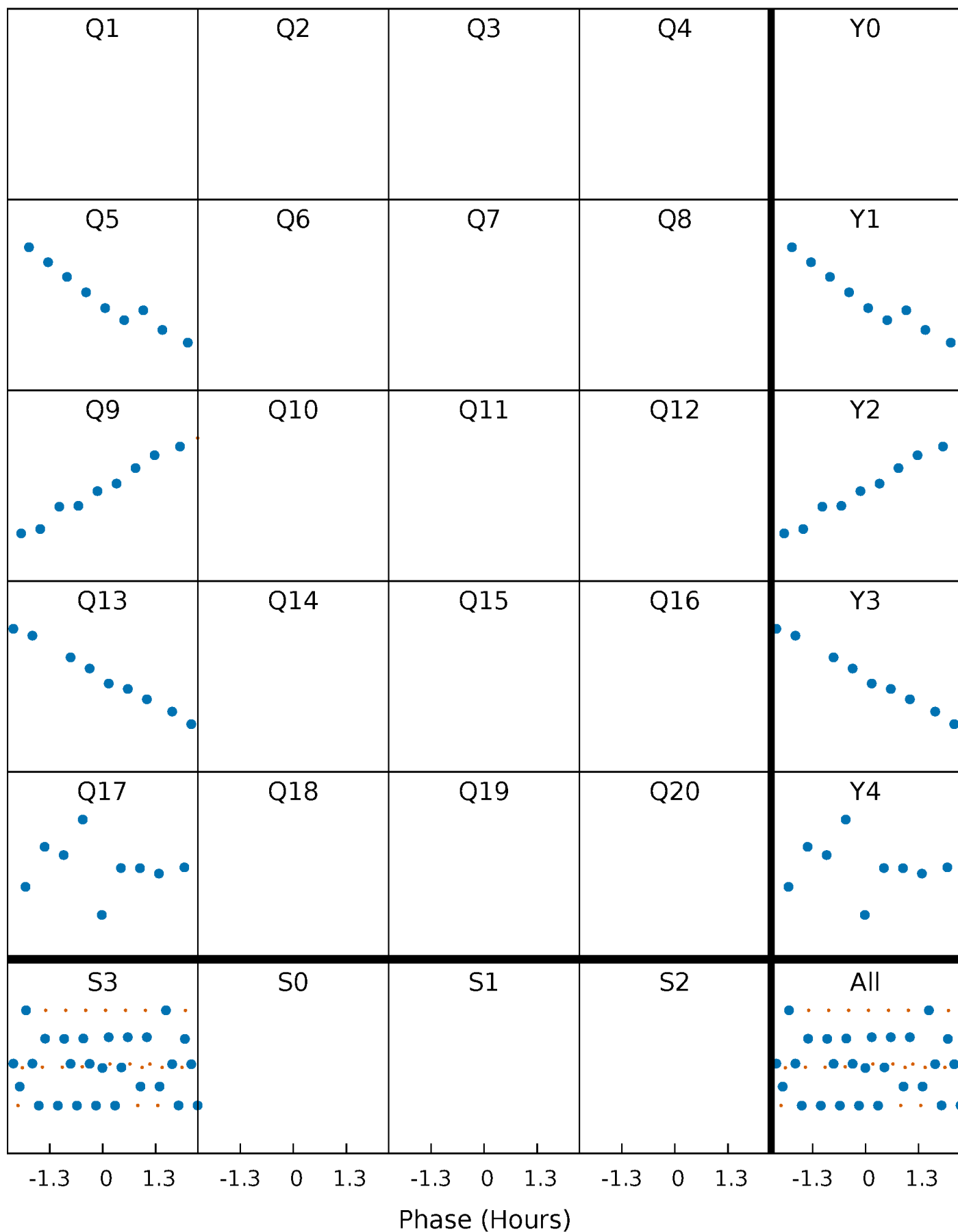


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

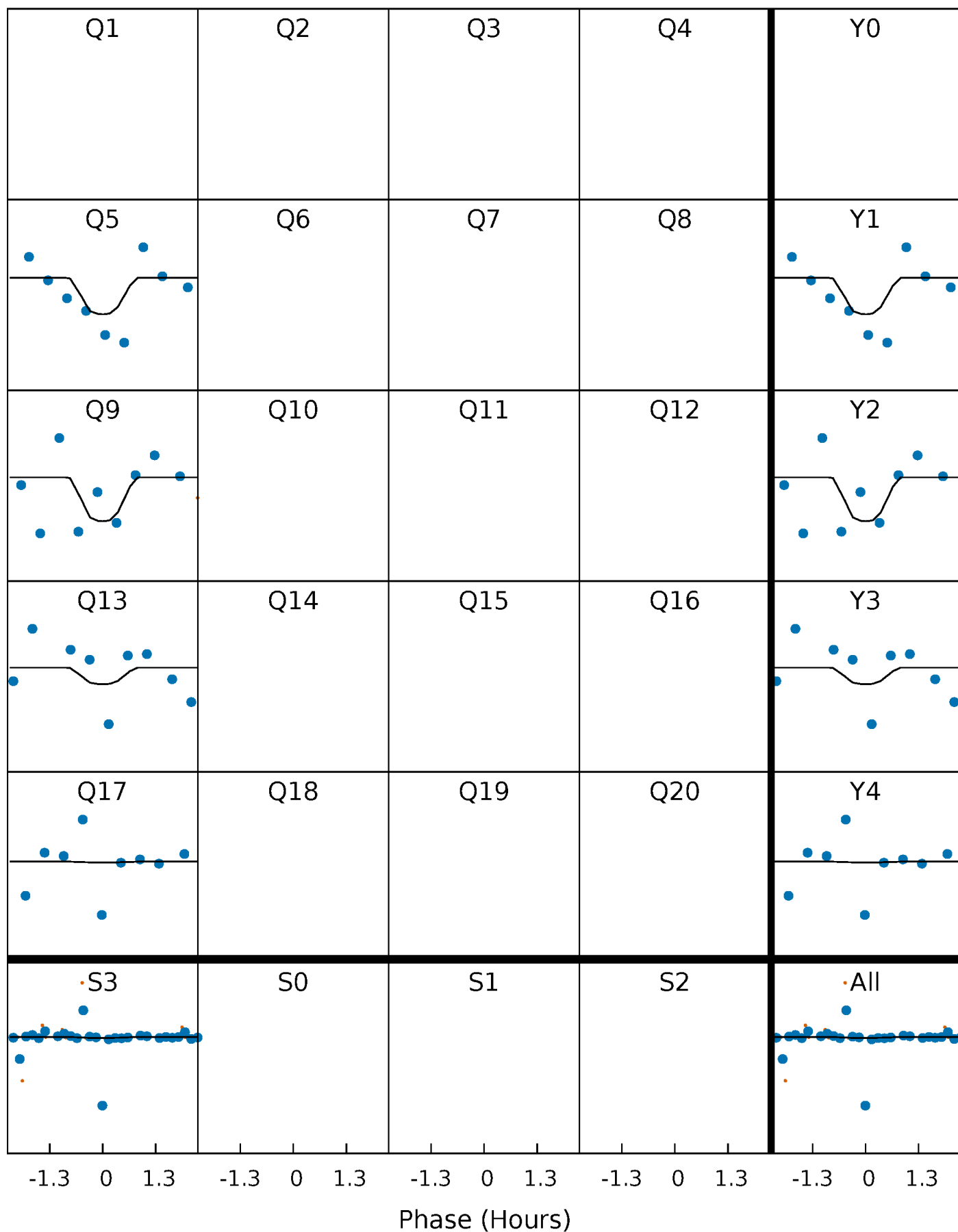
TCE 011495654-01     $P=369.079530$  Days     $T_0=465.577074$  (BKJD)





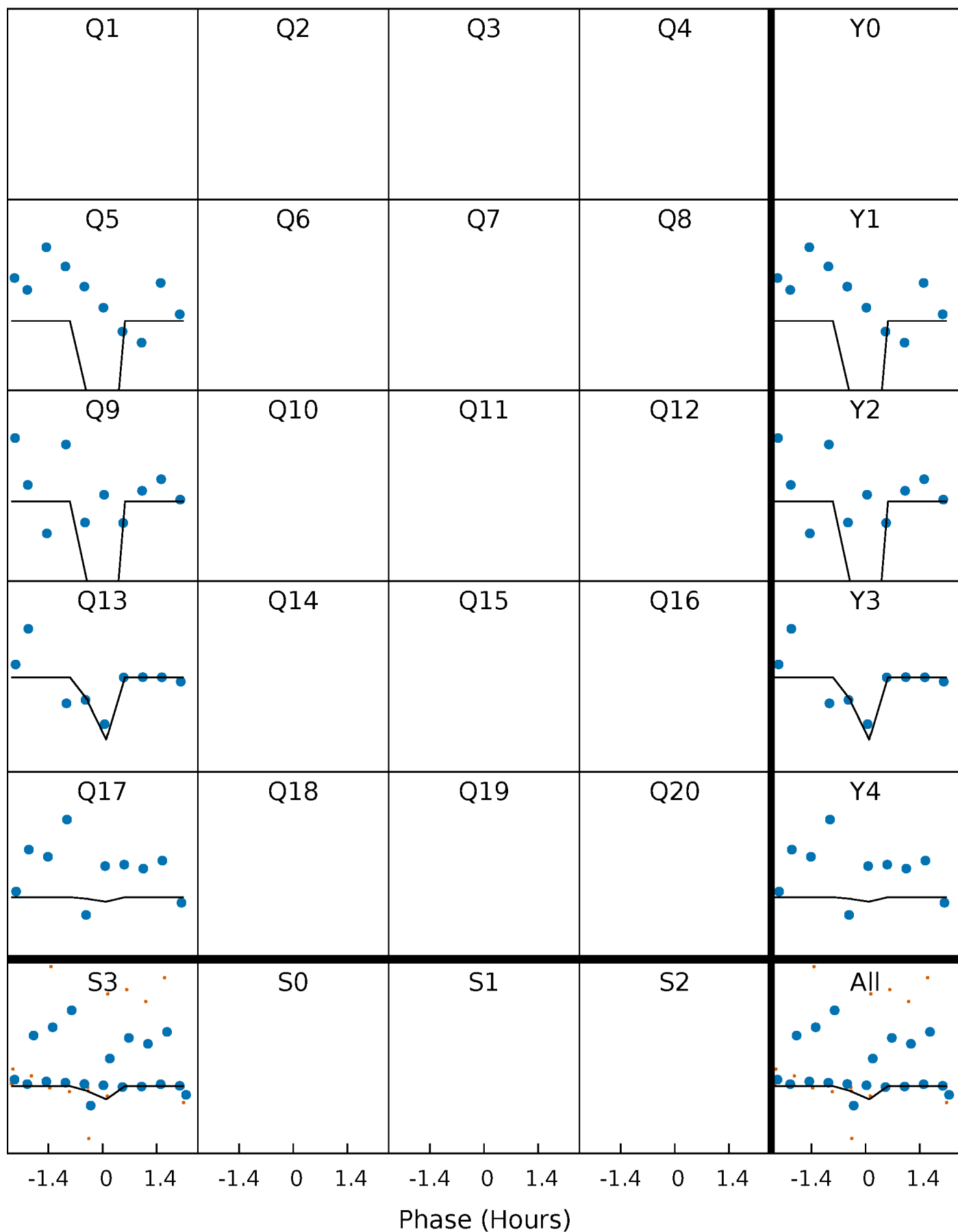
# DV Quarter-Phased Transit Curves

TCE 011495654-01 P=369.079530 Days  $T_0=465.577074$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

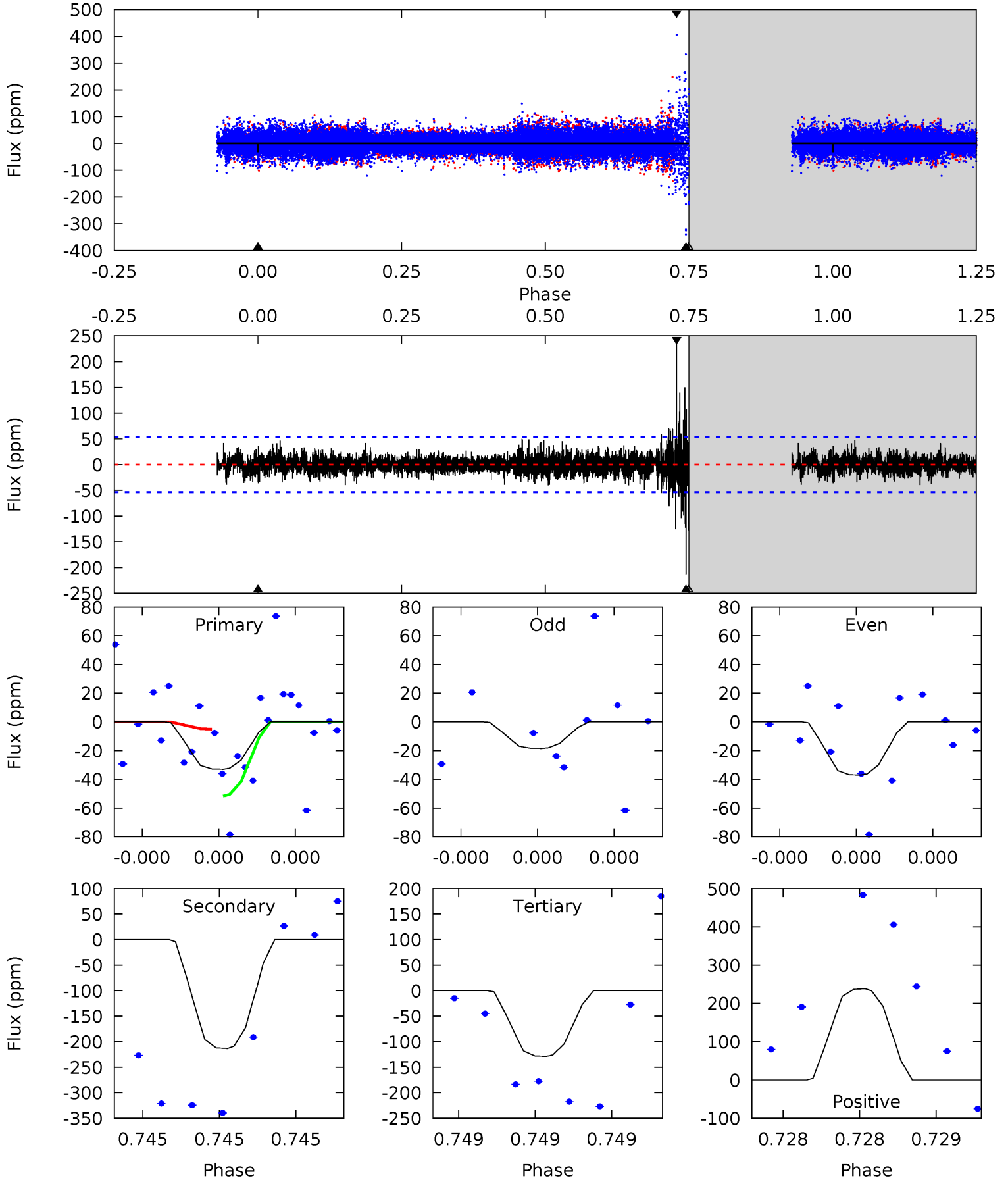
TCE 011495654-01 P=369.091394 Days  $T_0=465.555885$  (BKJD)



# DV Model-Shift Uniqueness Test

011495654-01, P = 369.079530 Days, E = 96.497544 Days

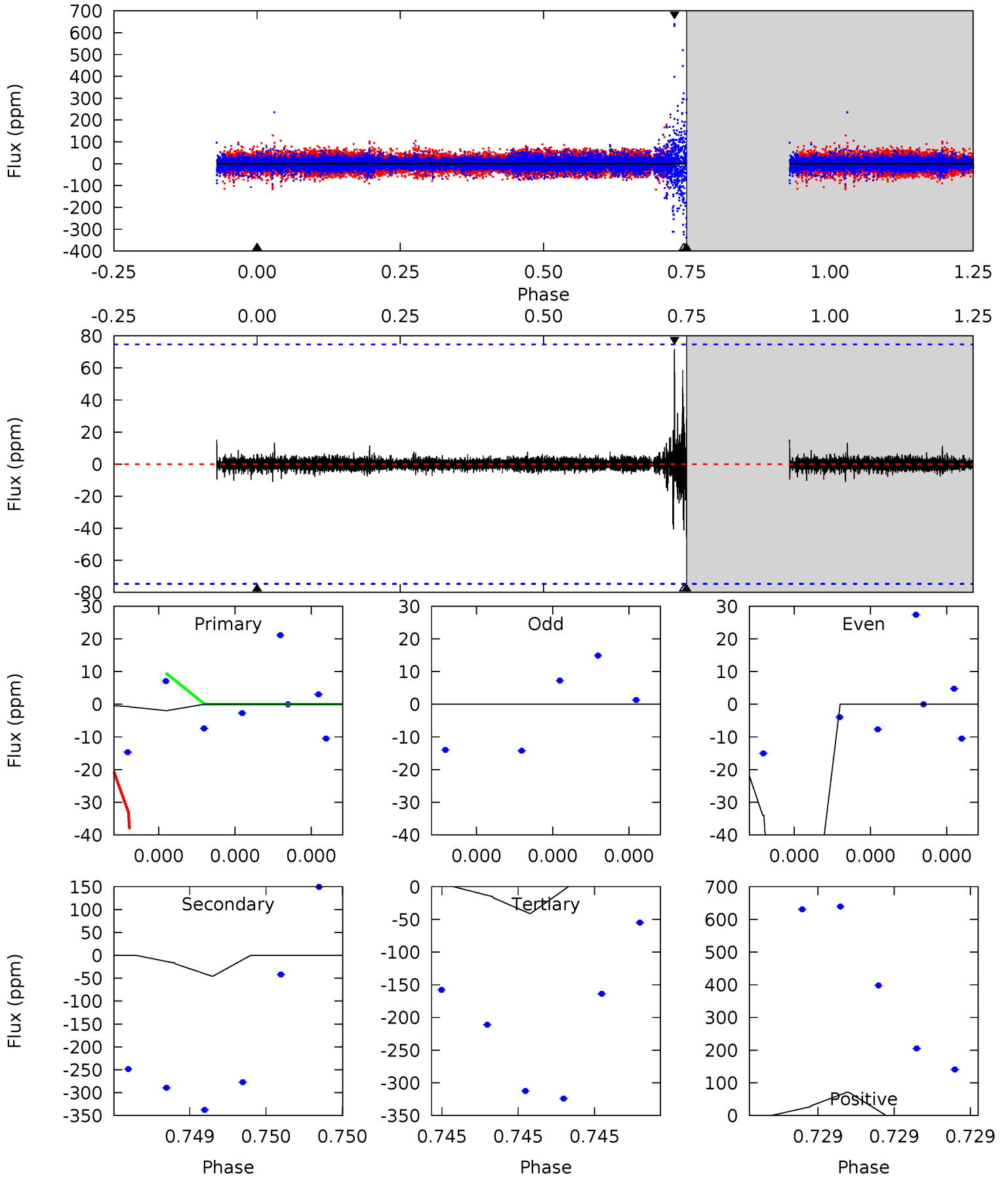
| Pri  | Sec  | Ter  | Pos  | FA <sub>1</sub> | FA <sub>2</sub> | F <sub>Red</sub> | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM  | Shape | TAT |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|-----|
| 3.57 | 23.1 | 13.9 | 25.8 | 5.79            | 3.80            | 1.26             | -10.3   | -22.2   | 9.15    | -2.71   | 0.69    | 4.80 | 0.53  | 0   |



# Alt Model-Shift Uniqueness Test

011495654-01, P = 369.091394 Days, E = 96.464491 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 |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|-----|
| 0.15 | 3.57 | 3.21 | 5.61 | 5.83            | 3.87            | 0.17             | -3.06   | -5.46   | 0.36    | -2.04   | 0       | 18.3 | 0.61  | 0   |



### Stellar Parameters For KIC 011495654

|        | $T_{\text{eff}}(K)$ | $\log(g)$                 | [Fe/H]                    | $R (R_{\odot})$           | $M(M_{\odot})$             | $p_{\star} (\text{g}\cdot\text{cm}^{-3})$ |
|--------|---------------------|---------------------------|---------------------------|---------------------------|----------------------------|---|
|        | $5780^{+1}_{-1}$    | $4.438^{+1.000}_{-1.000}$ | $0.000^{+1.000}_{-1.000}$ | $1.000^{+1.000}_{-1.000}$ | $-1.000^{+1.000}_{-1.000}$ | $-1.000^{+1.000}_{-1.000}$                |
|        | +0%/-0%             | +23%/-23%                 | +inf%/-inf%               | +100%/-100%               | +100%/-100%                | +100%/-100%                               |
| Source | Solar               | Solar                     | Solar                     | Solar                     |                            |   |

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology  
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

### Secondary Eclipse Parameters for KIC 011495654-01 / KOI

| Detrend | Depth (ppm)  | $R_p (R_{\oplus})$     | $T_{\text{max}} (K)$ | $T_{\text{obs}} (K)$    | $A_{\text{obs}}$              |
|---------|--------------|------------------------|----------------------|-------------------------|-------------------------------|
| DV      | $-213 \pm 9$ | $0.89^{+0.76}_{-0.60}$ | $355^{+18}_{-17}$    | $8023^{+12021}_{-2337}$ | $154089^{+1234177}_{-110253}$ |
| Alt.    | $-46 \pm 13$ | $1.44^{+0.94}_{-0.82}$ | $356^{+17}_{-16}$    | $4331^{+1947}_{-765}$   | $11824^{+53855}_{-7913}$      |

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

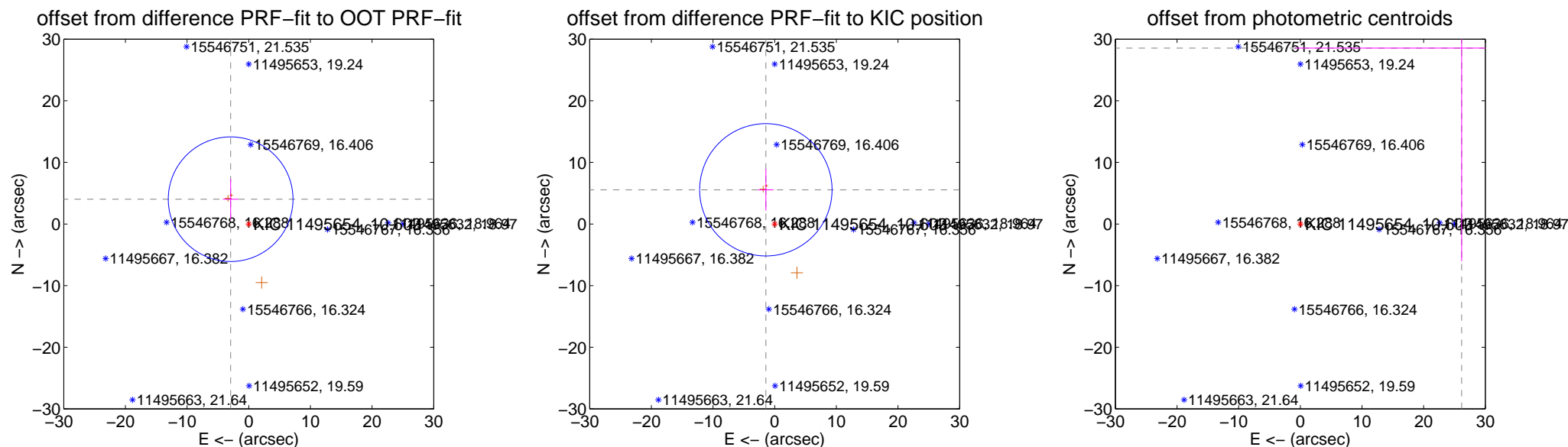
## DV Centroid Data

Supplemental centroid analysis for 011495654-01. **Kepler magnitude: 10.60.** Transit SNR 1.75

There are 0 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 2.10 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

|   | Distance in arcsec | Distance / $\sigma$ | $\Delta$ RA        | $\Delta$ Dec      |
|---|--------------------|---------------------|--------------------|-------------------|
| PRF-fit source offset from OOT          | $4.983 \pm 3.371$  | 1.48                | $2.937 \pm 1.242$  | $4.026 \pm 3.275$ |
| PRF-fit source offset from KIC position | $5.733 \pm 3.579$  | 1.60                | $1.433 \pm 1.252$  | $5.551 \pm 3.376$ |
| photometric centroid source offset      | $38.72 \pm 31.37$  | 1.23                | $-26.16 \pm 27.06$ | $28.54 \pm 34.59$ |

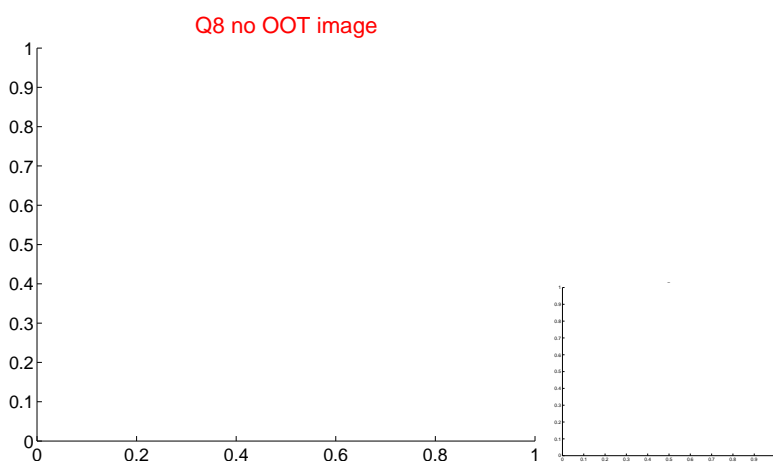
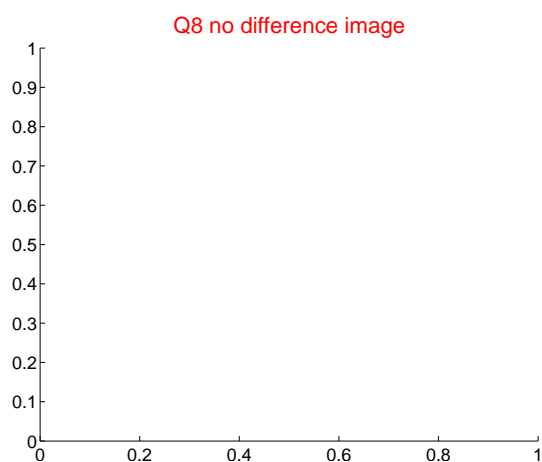
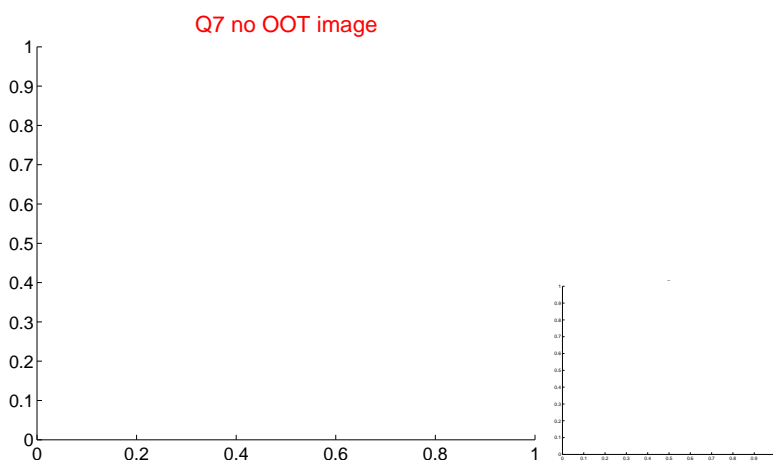
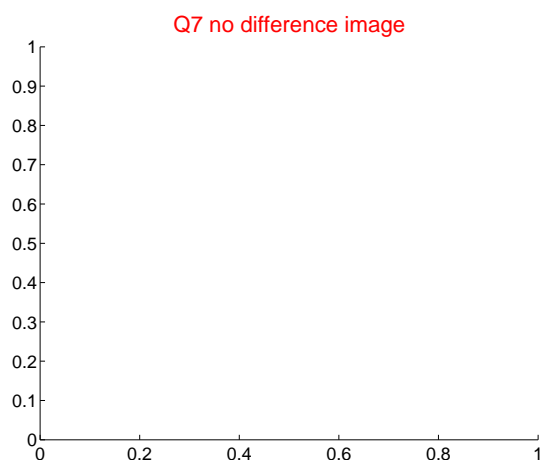
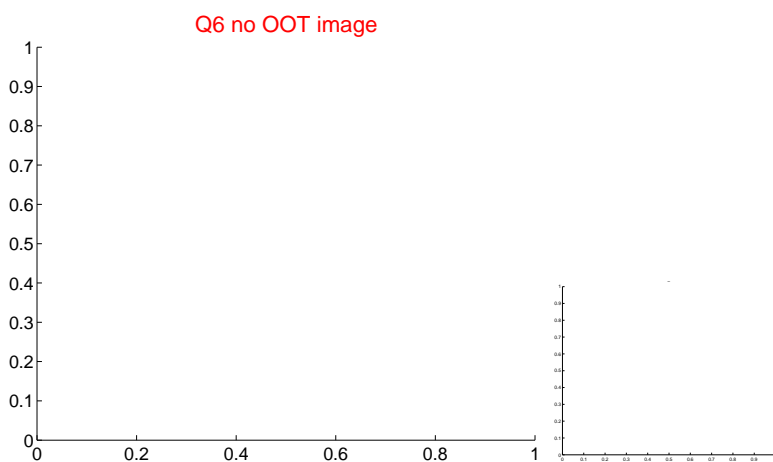
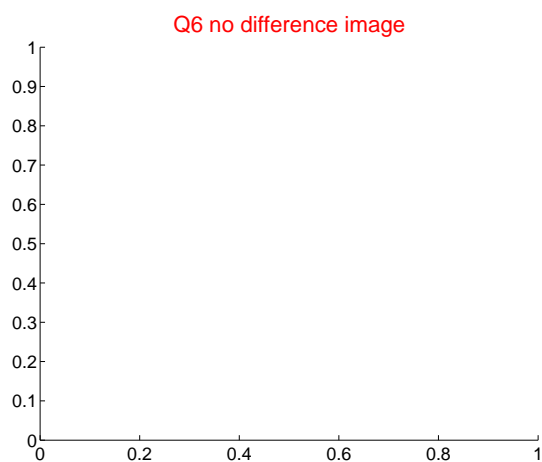
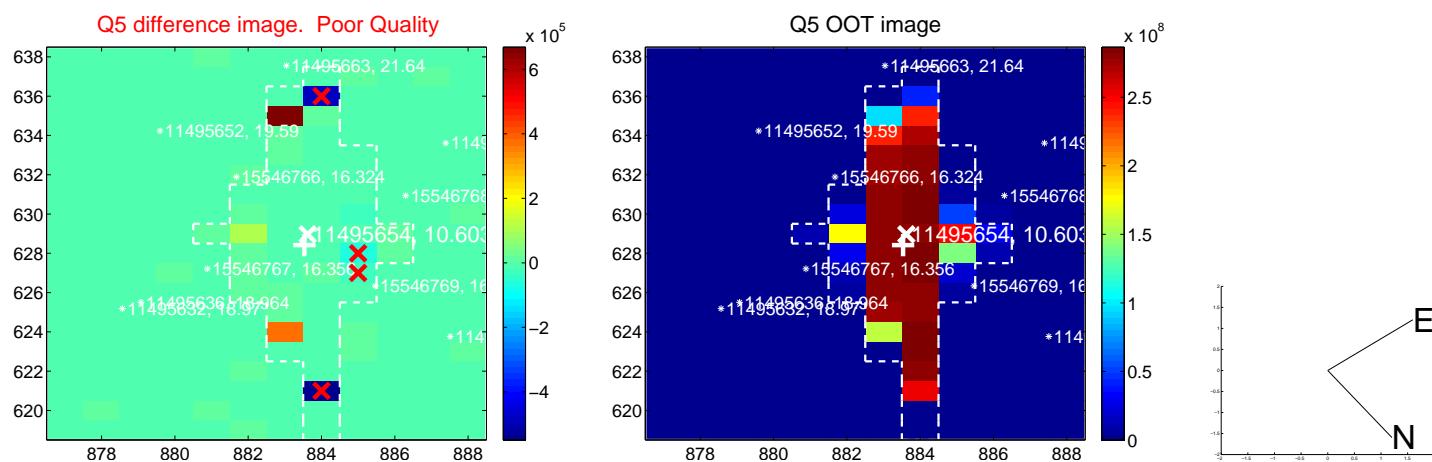


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

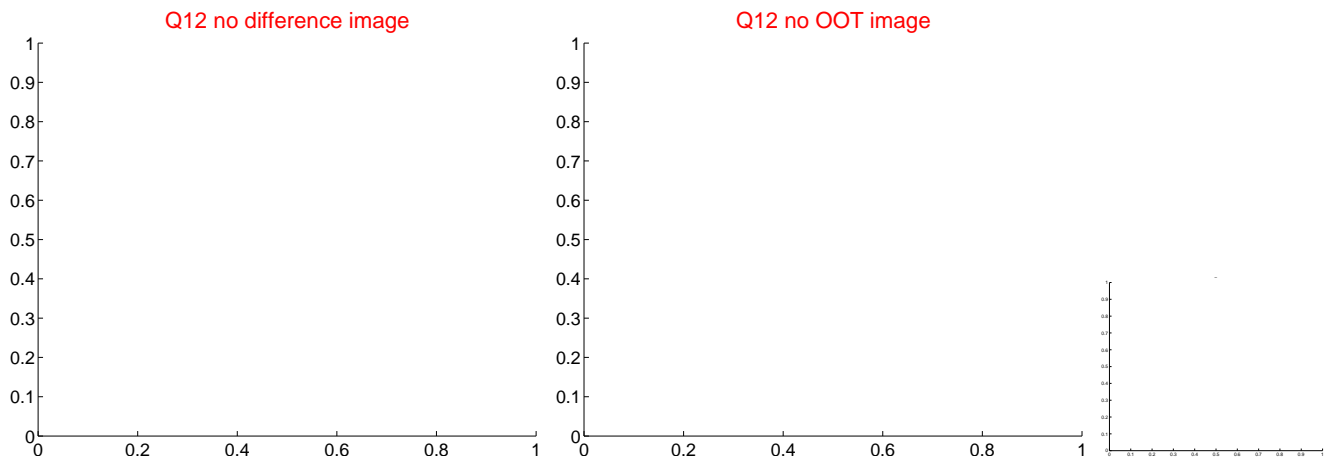
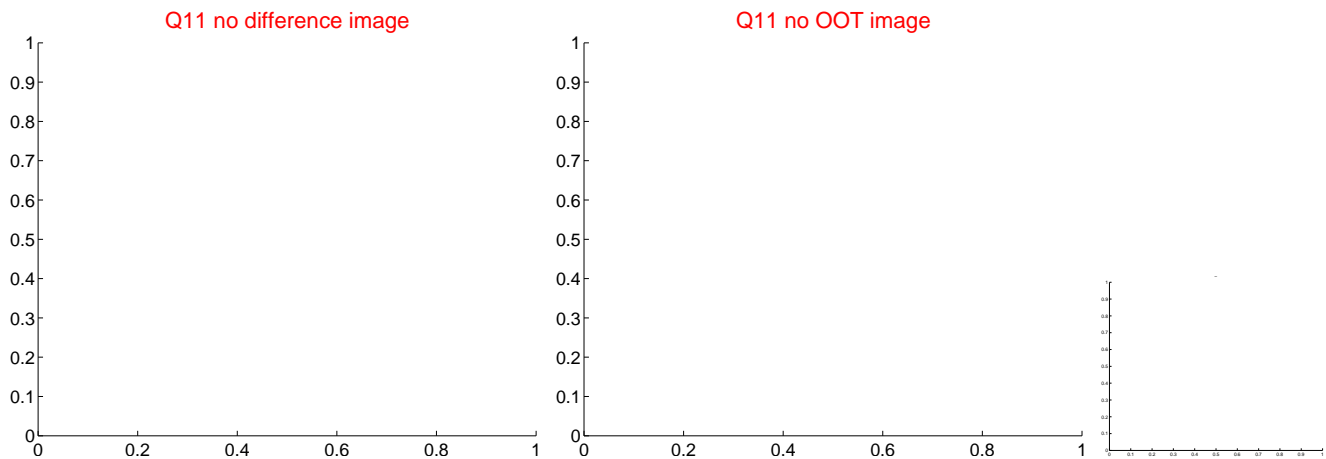
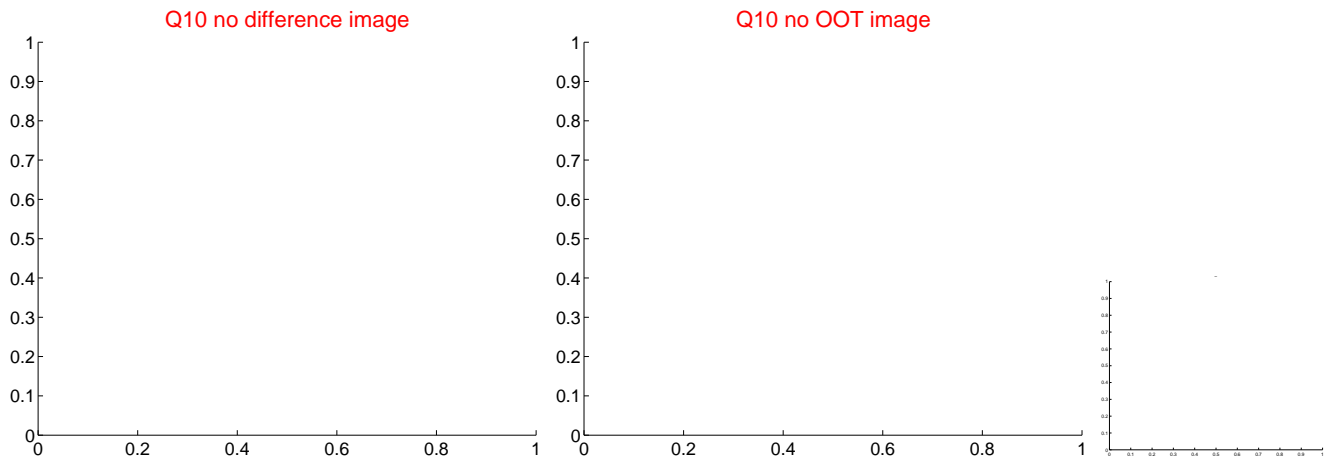
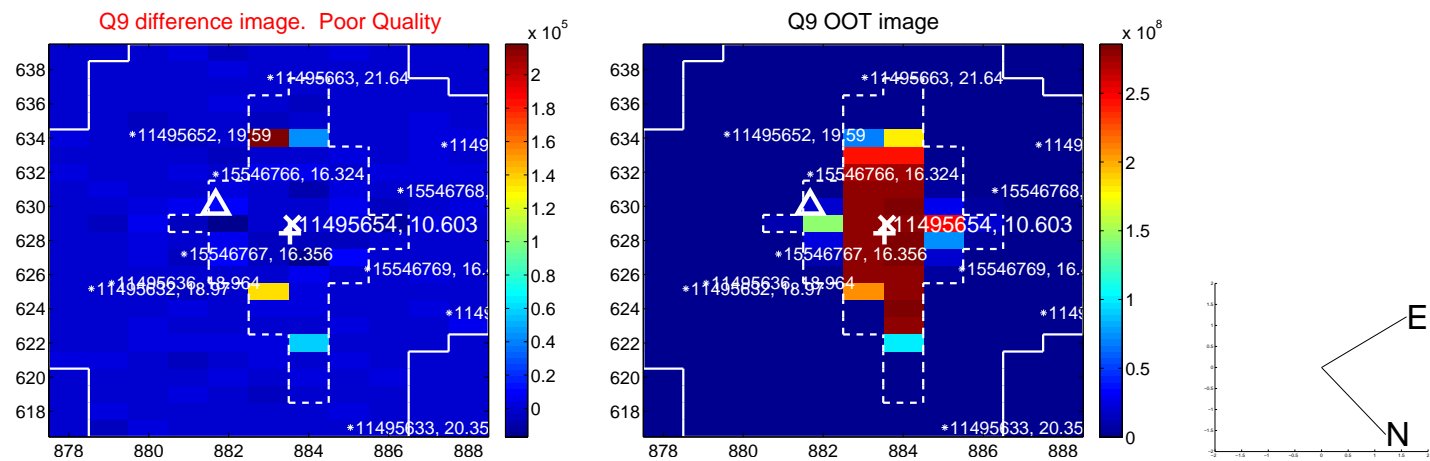


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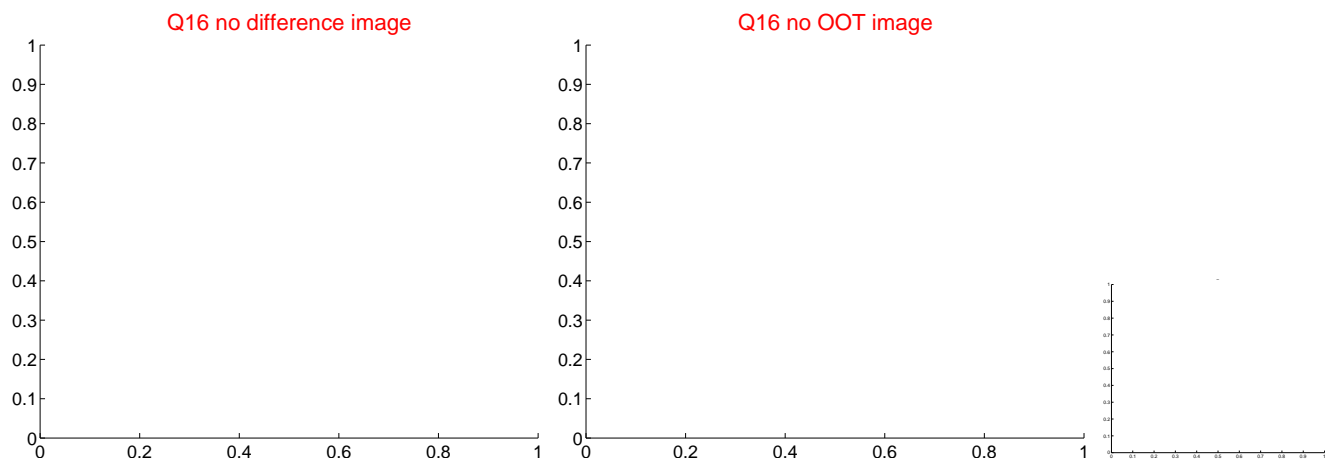
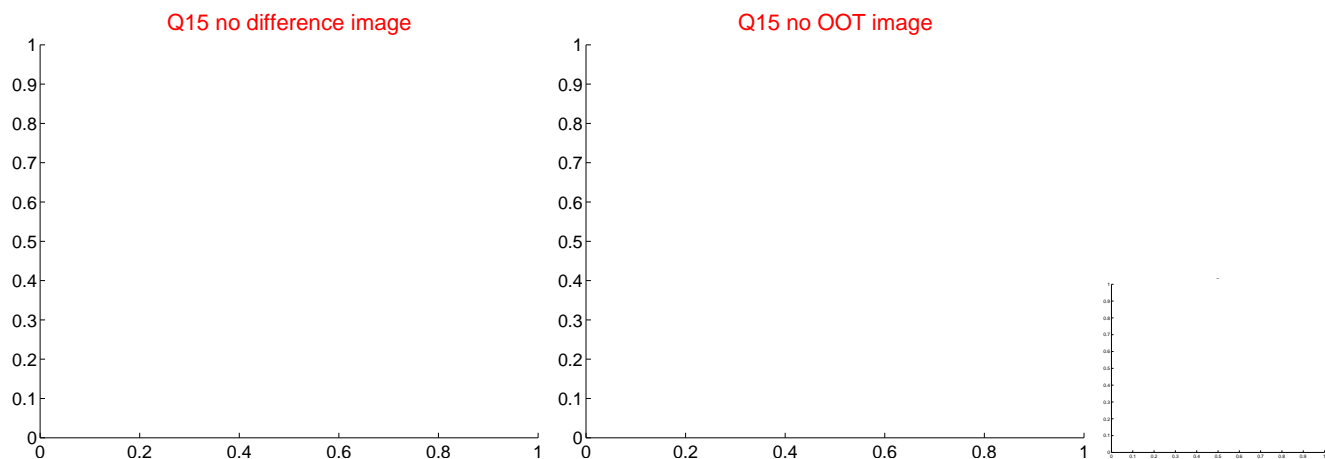
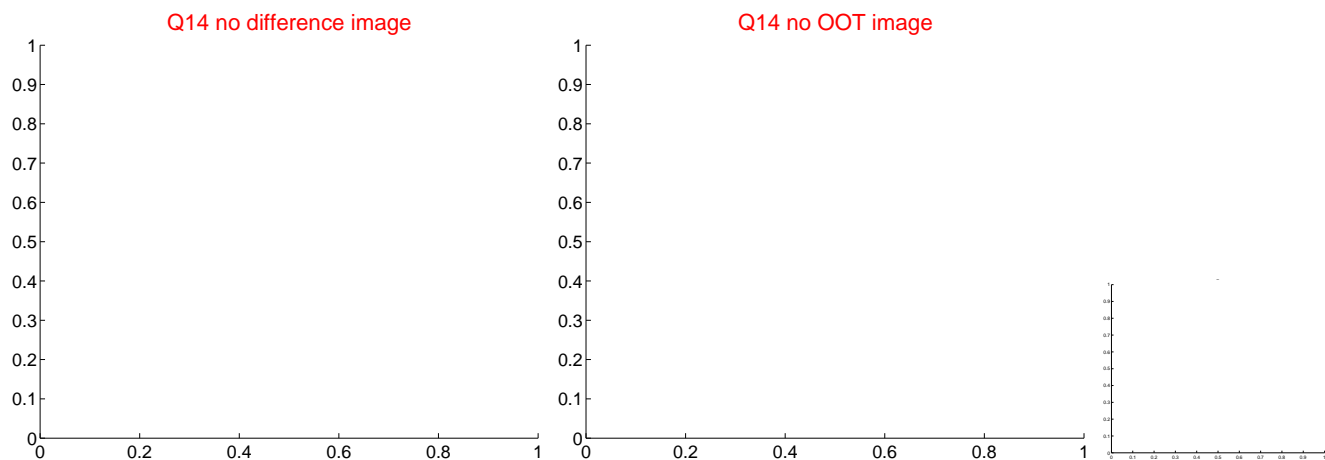
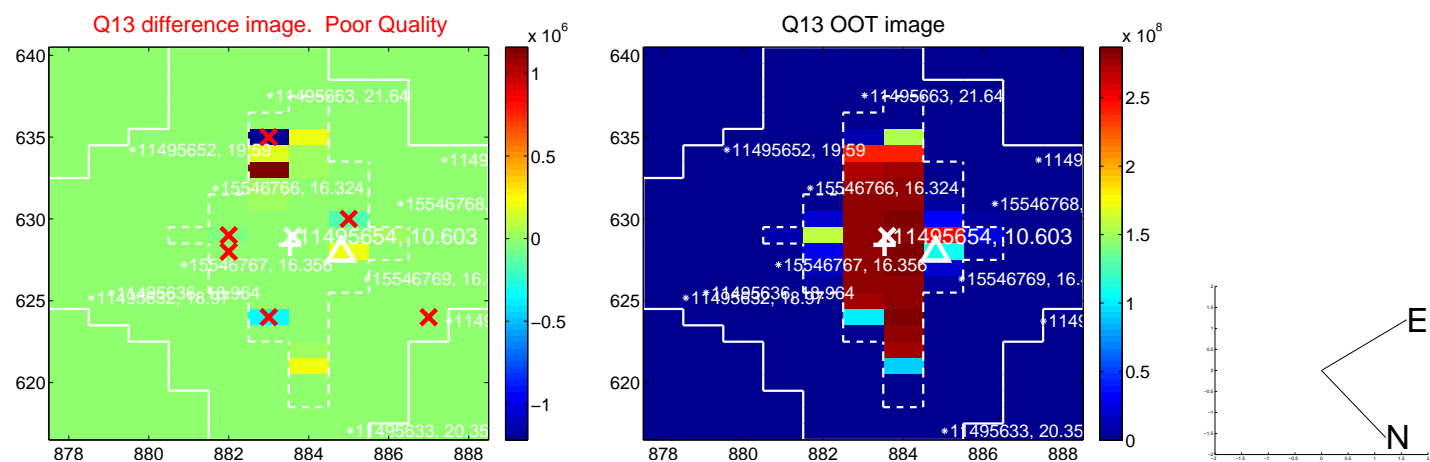




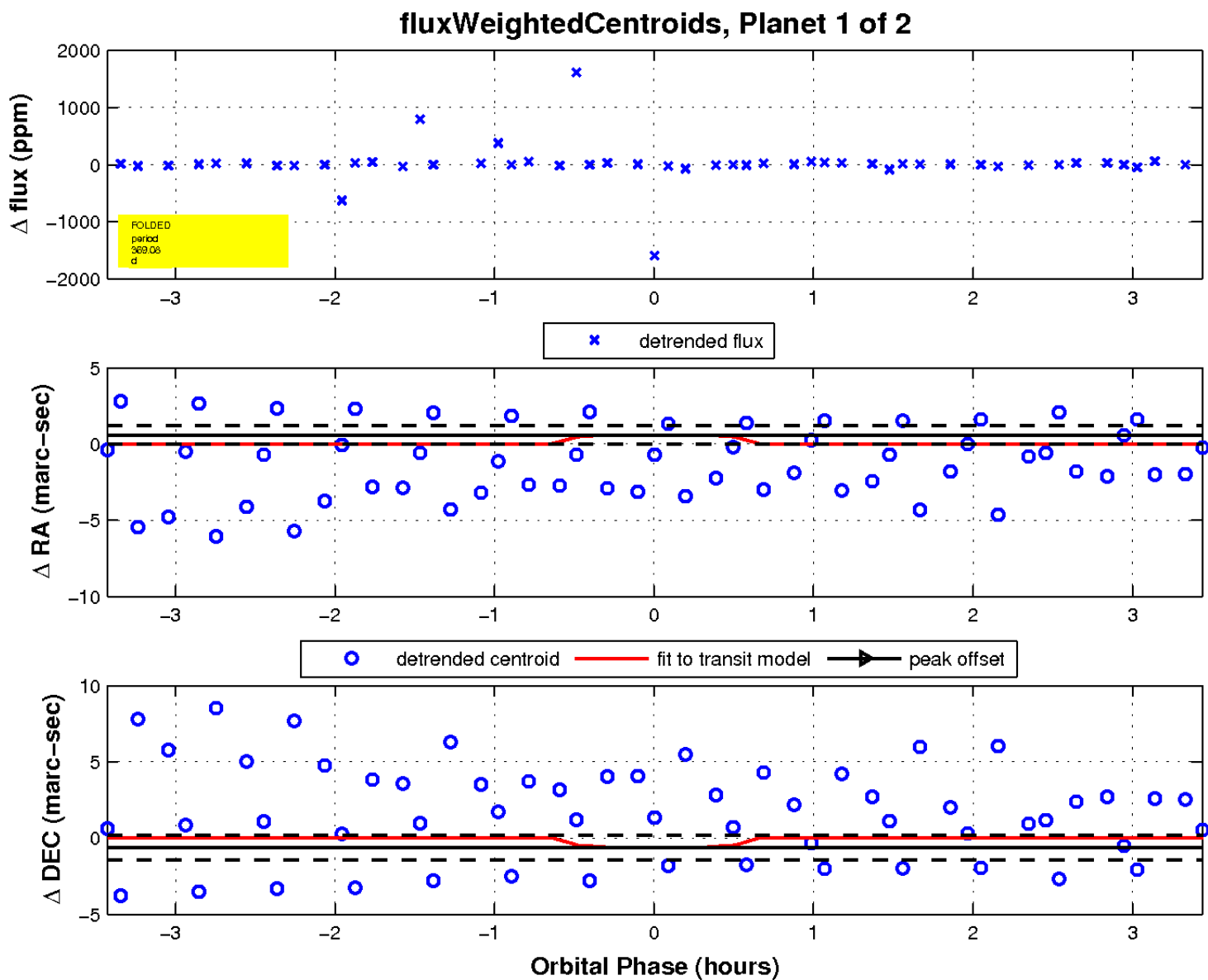
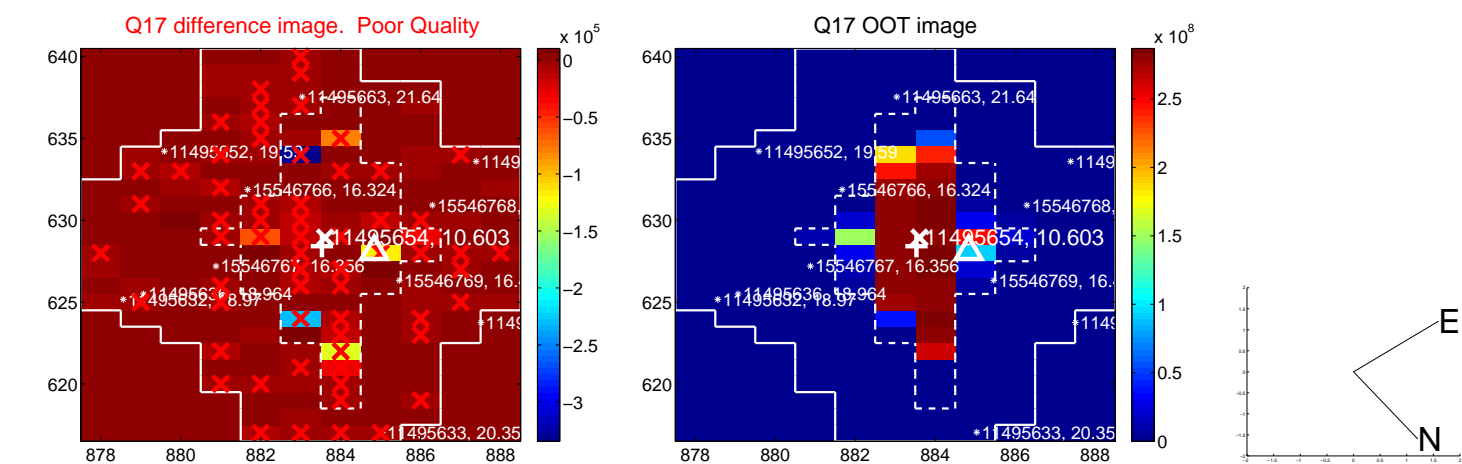
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



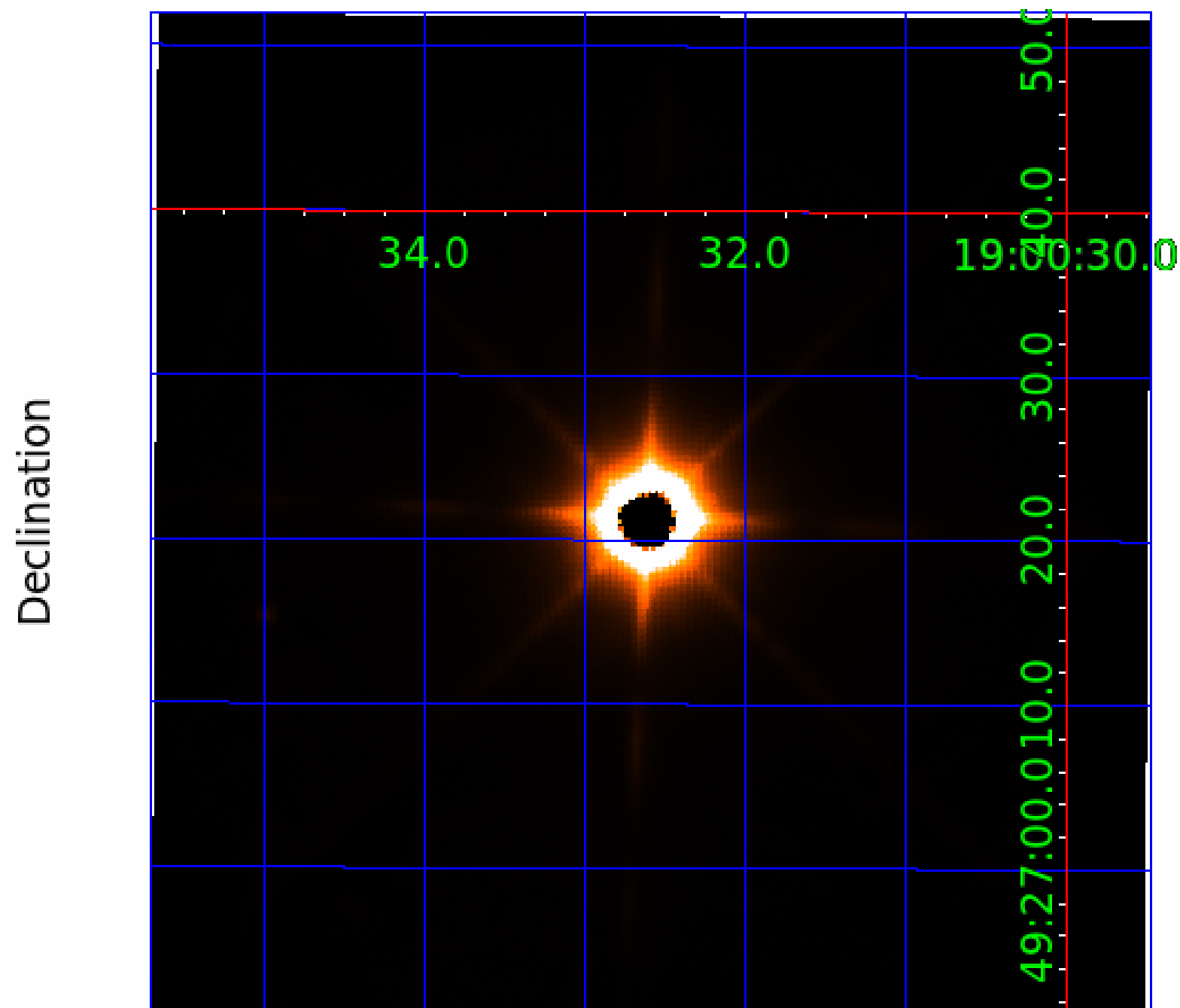
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



UKIRT Image



# KIC 011495654

## 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) | $R_p$ ( $R_{\oplus}$ ) | $S_p$ ( $S_{\oplus}$ ) |
|--------------|----------|------|---------------|--------------|-------------|------------------|------|-----|-----------------------------|-----------------|------------------------|------------------------|
| 011495654-01 | OBS      | No   | 369.079530    | 465.577074   | 23.0        | 1.171            | 27.5 | 1.8 | 1.00                        | 5780            | 0.56                   | 0.99                   |
| 011495654-02 | OBS      | No   | 356.970951    | 143.839102   | 14.9        | 8.685            | 10.6 | 1.5 | 1.00                        | 5780            | 0.46                   | 1.03                   |

## Robovetter Results

| TCE          | Run Type | Disp | Score | N | S | C | E | Comments   |
|--------------|----------|------|-------|---|---|---|---|--|
| 011495654-01 | OBS      | FP   | 0.00  | 1 | 0 | 0 | 0 | INDIV_TRANS_CHASES_MARSHALL_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED |
| 011495654-02 | OBS      | FP   | 0.00  | 1 | 0 | 0 | 0 | INDIV_TRANS_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED                                    |

**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.

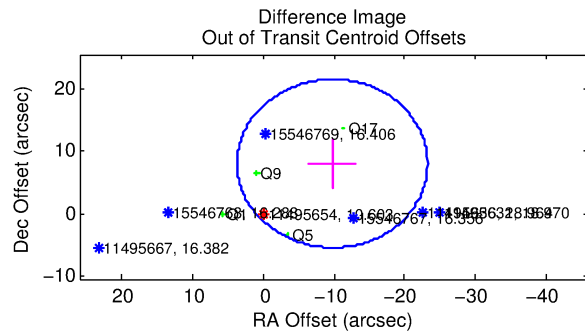
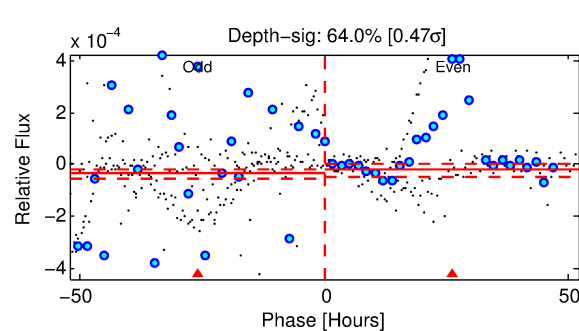
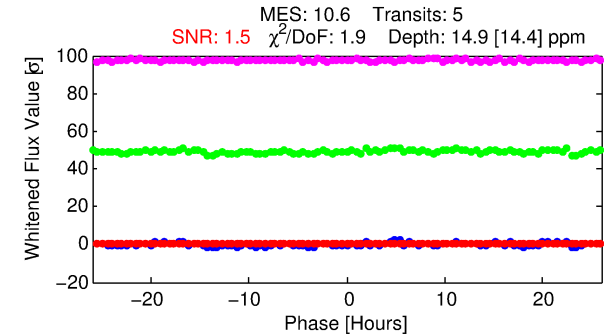
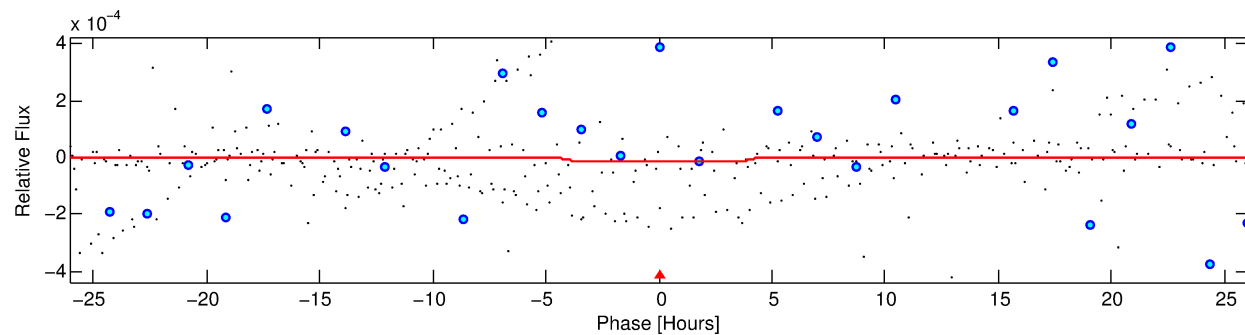
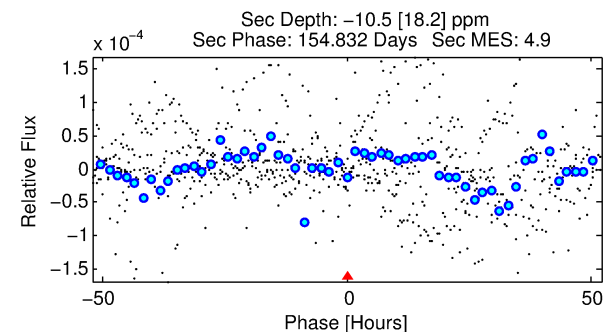
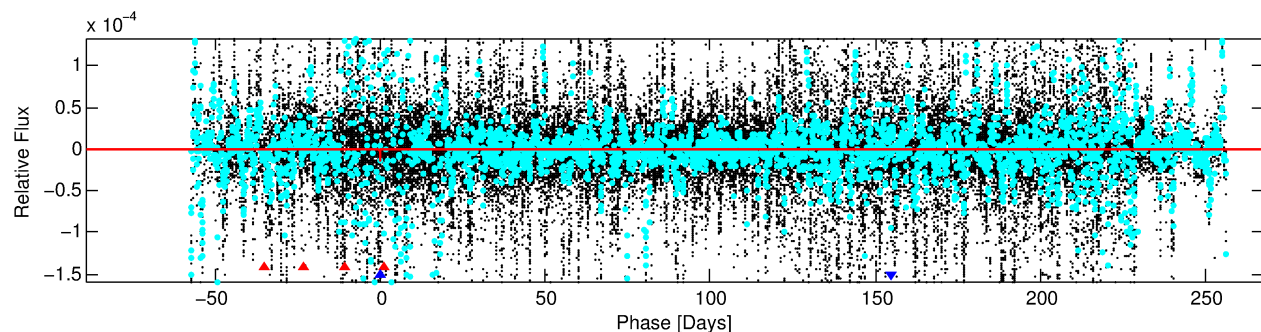
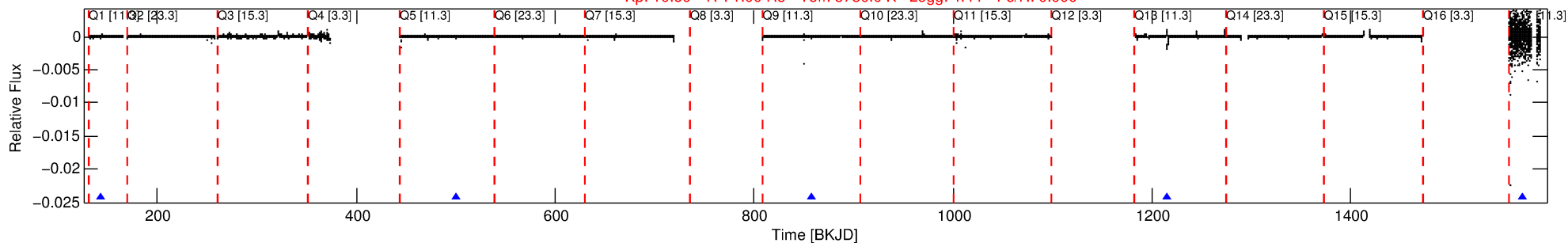
## Ephemeris Match Information For 011495654-02

No Significant Match Found

# DV One-Page Summary

KIC: 11495654    Candidate: 2 of 2    Period: 356.971 d

Kp: 10.60 R\*: 1.00 Rs Teff: 5780.0 K Logg: 4.44 Fe/H: 0.000



DV Fit Results:

Period = 356.97095 [0.03360] d  
 Epoch = 143.8391 [0.0873] BKJD  
 Rp/R\* = 0.0042 [0.0074]  
 a/R\* = 145.91 [1175.44]  
 b = 0.89 [1.91]  
 Seff = 1.03 [0.00]  
 Teq = 257 [0] K  
 Rp = 0.45 [0.81] Re  
 a = 0.9850 [0.0001] AU  
 Ag = N/A  
 Teffp = N/A

DV Diagnostic Results:

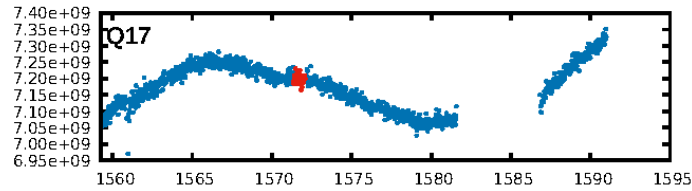
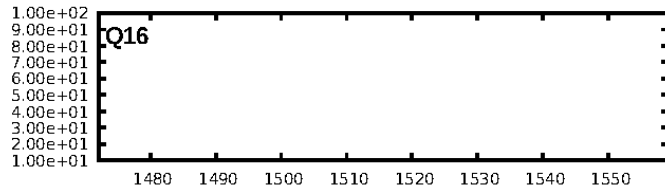
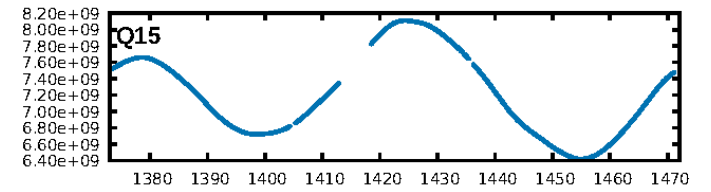
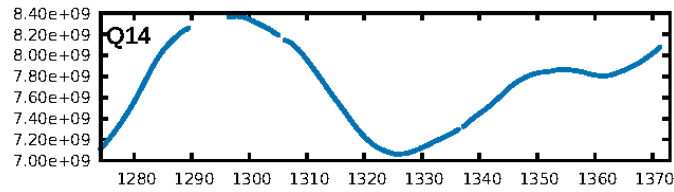
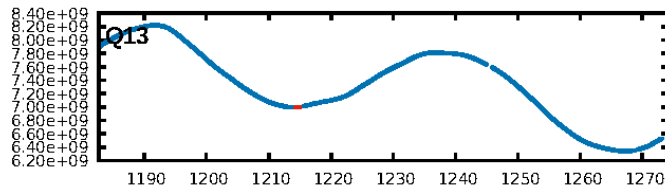
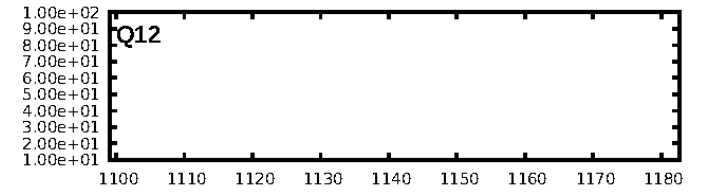
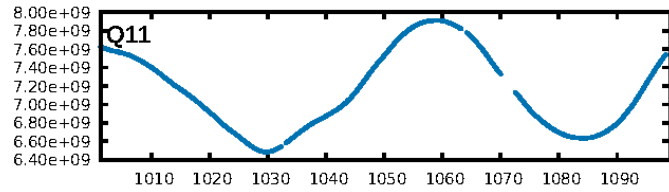
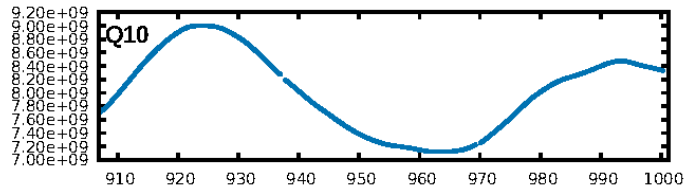
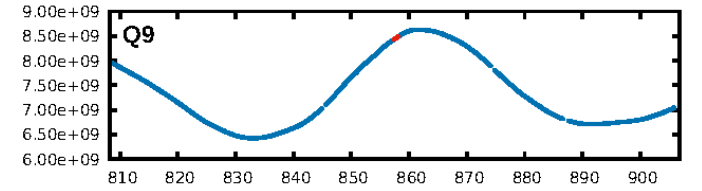
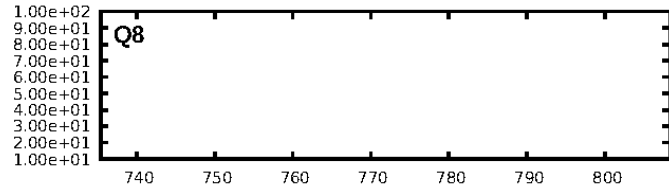
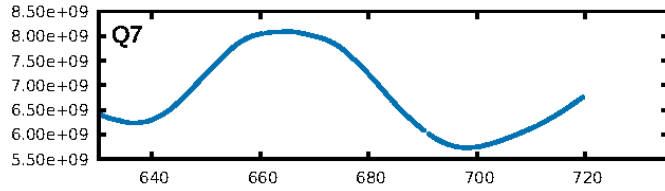
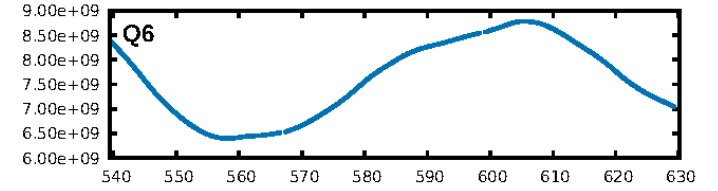
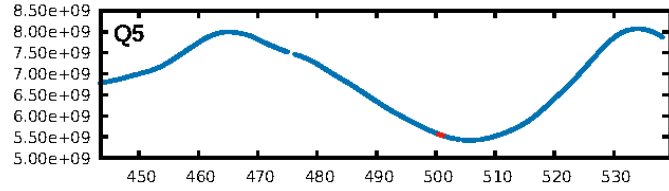
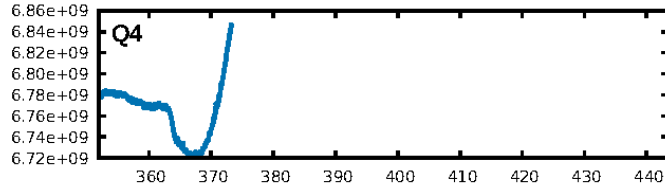
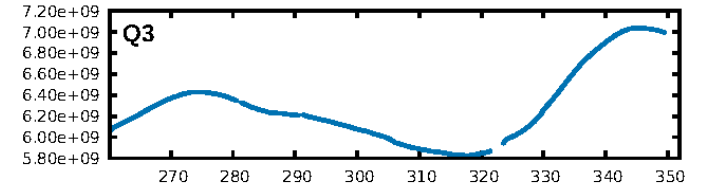
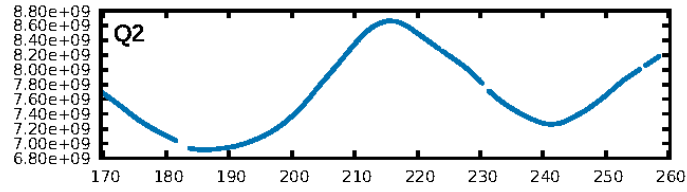
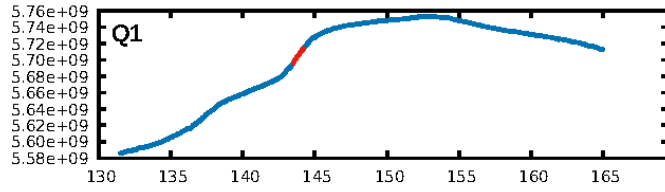
ShortPeriod-sig: N/A  
LongPeriod-sig: 100.0% [33.16σ]  
ModelChiSquare2-sig: 0.4%  
ModelChiSquareGof-sig: 4.9%  
**Bootstrap-pfa: 5.81e-06**  
RollingBand-fgt: 1.00 [3/3]  
GhostDiagnostic-chr: N/A

Centroid-sig: 76.4%  
Centroid-so: 22.698 arcsec [0.49σ]  
OotOffset-rm: 12.635 arcsec [2.81σ]  
**KicOffset-rm: 14.524 arcsec [3.10σ]**  
OotOffset-st: 0/0/0/4 [4]  
KicOffset-st: 0/0/0/4 [4]  
DiffImageQuality-fgm: 0.00 [0/4]  
DiffImageOverlap-fno: 1.00 [4/4]

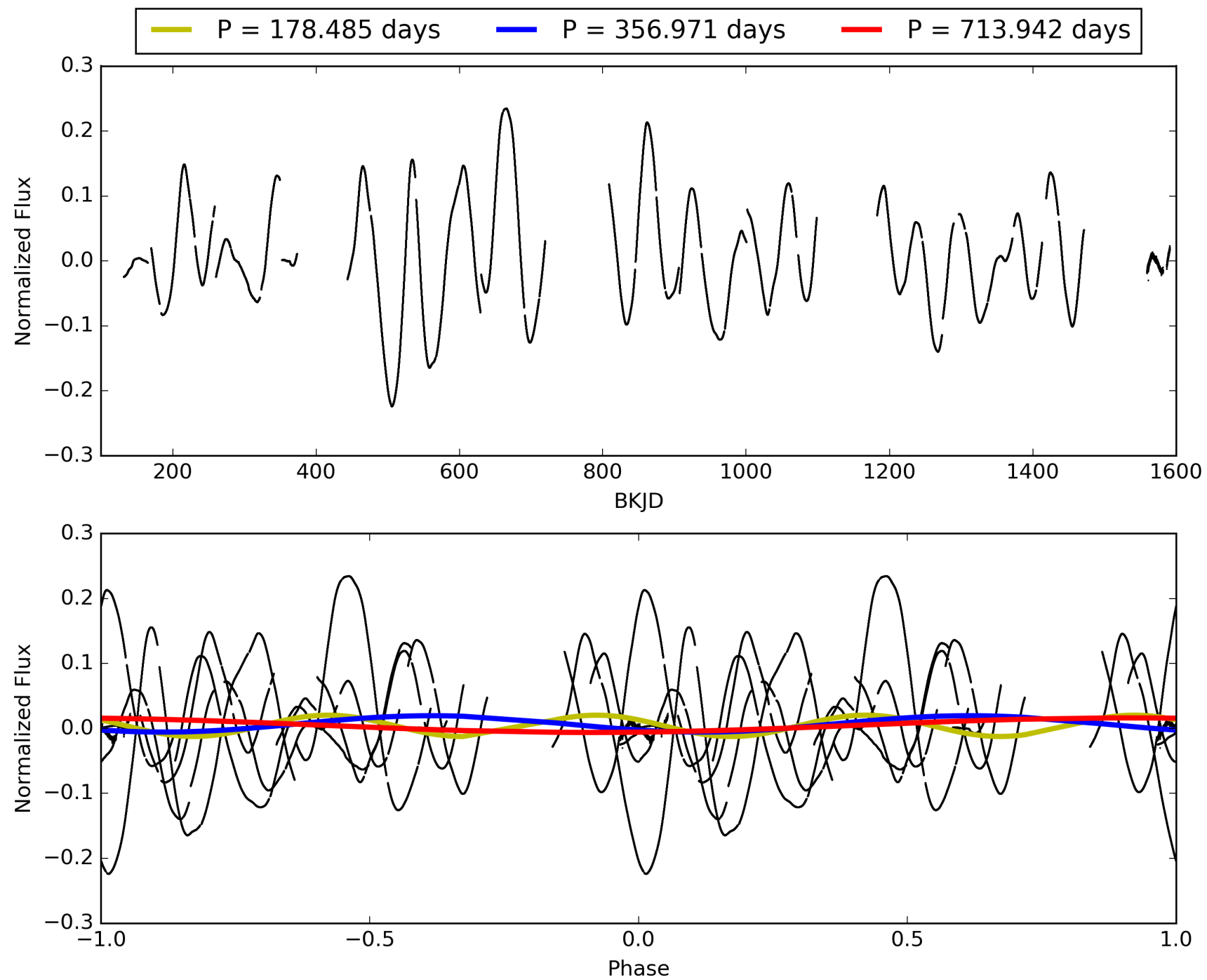
**Software Revision:** svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- **Date Generated:** 30-Jan-2016 02:28:05 Z

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

# TCE 011495654-02, PDC Light Curves



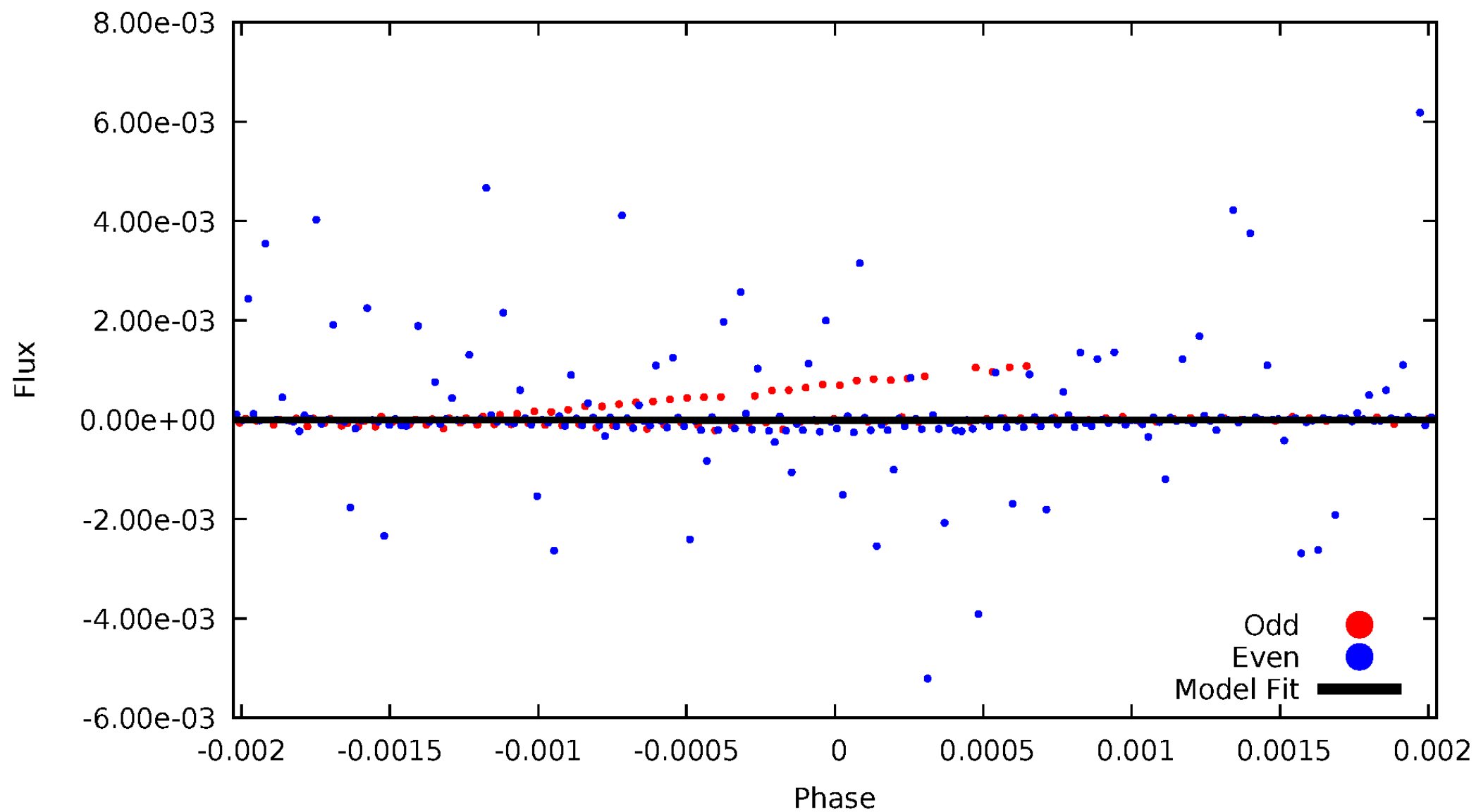
# TCE 011495654-02





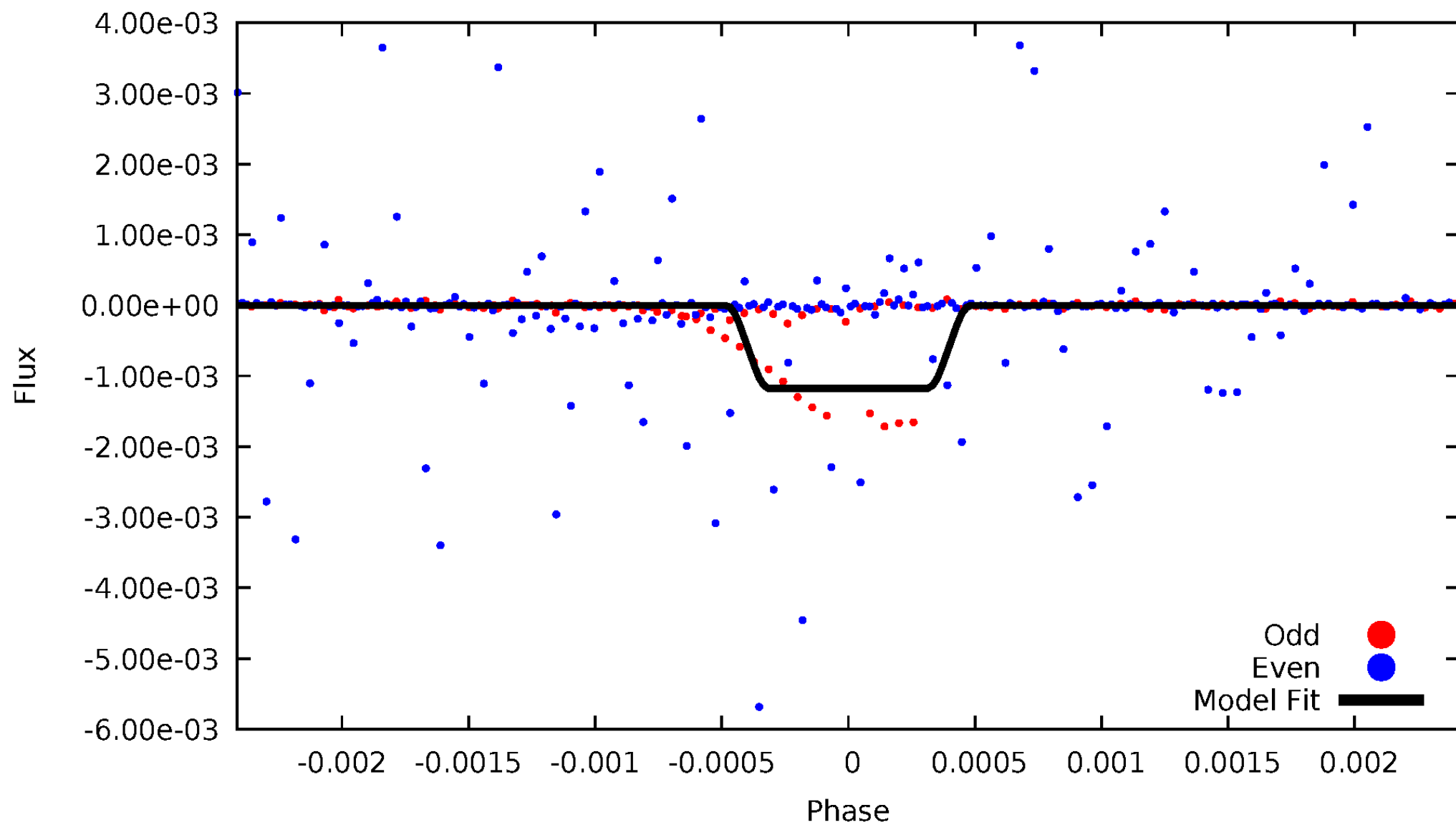
# DV Odd/Even

TCE 011495654-02



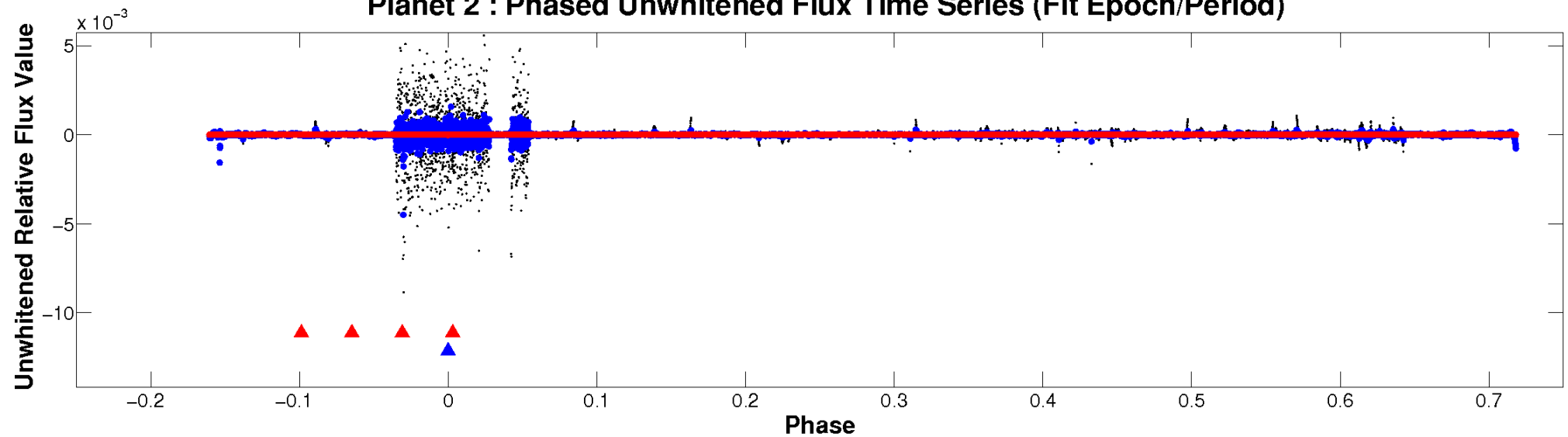
# ALT Odd/Even

TCE 011495654-02

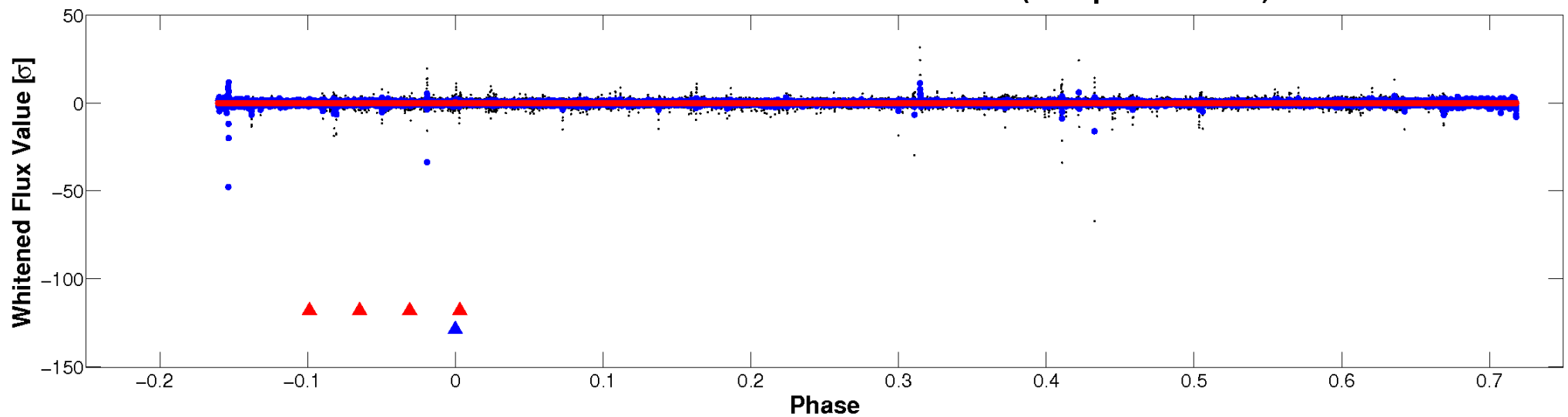


# Non-Whitened Vs. Whitened Light Curve

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

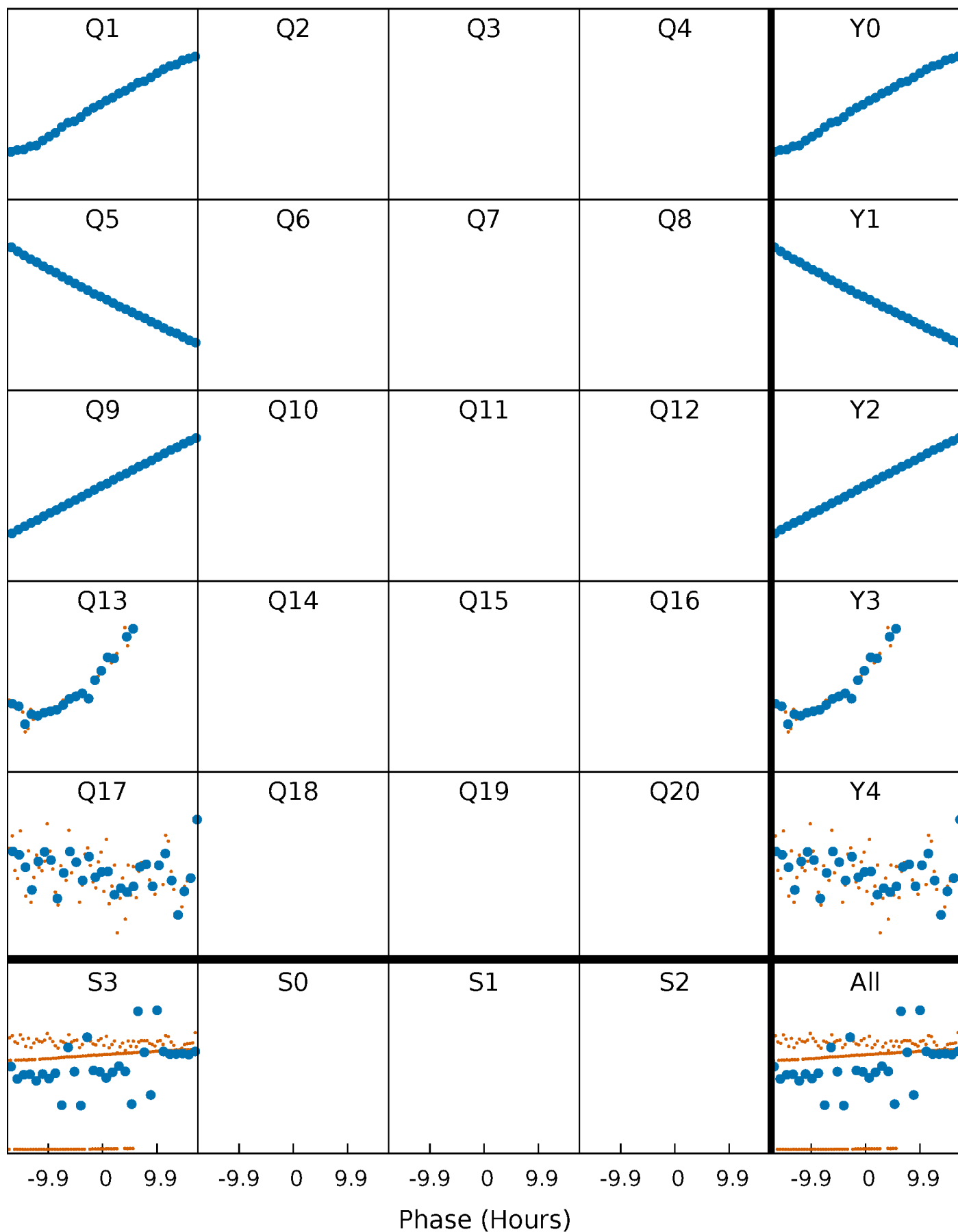


## Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



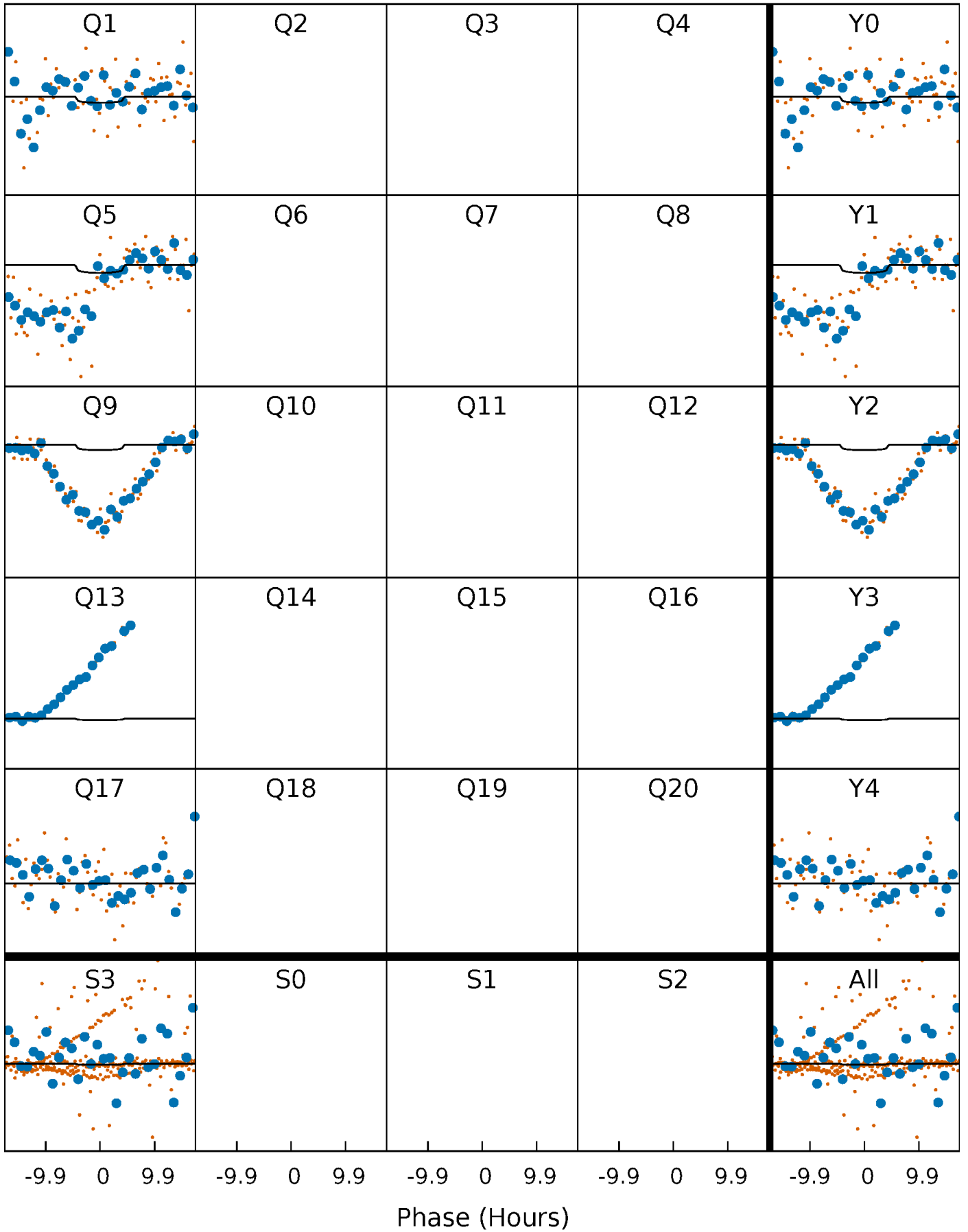
# PDC Quarter-Phased Transit Curves

TCE 011495654-02     $P=356.970951$  Days     $T_0=143.839102$  (BKJD)



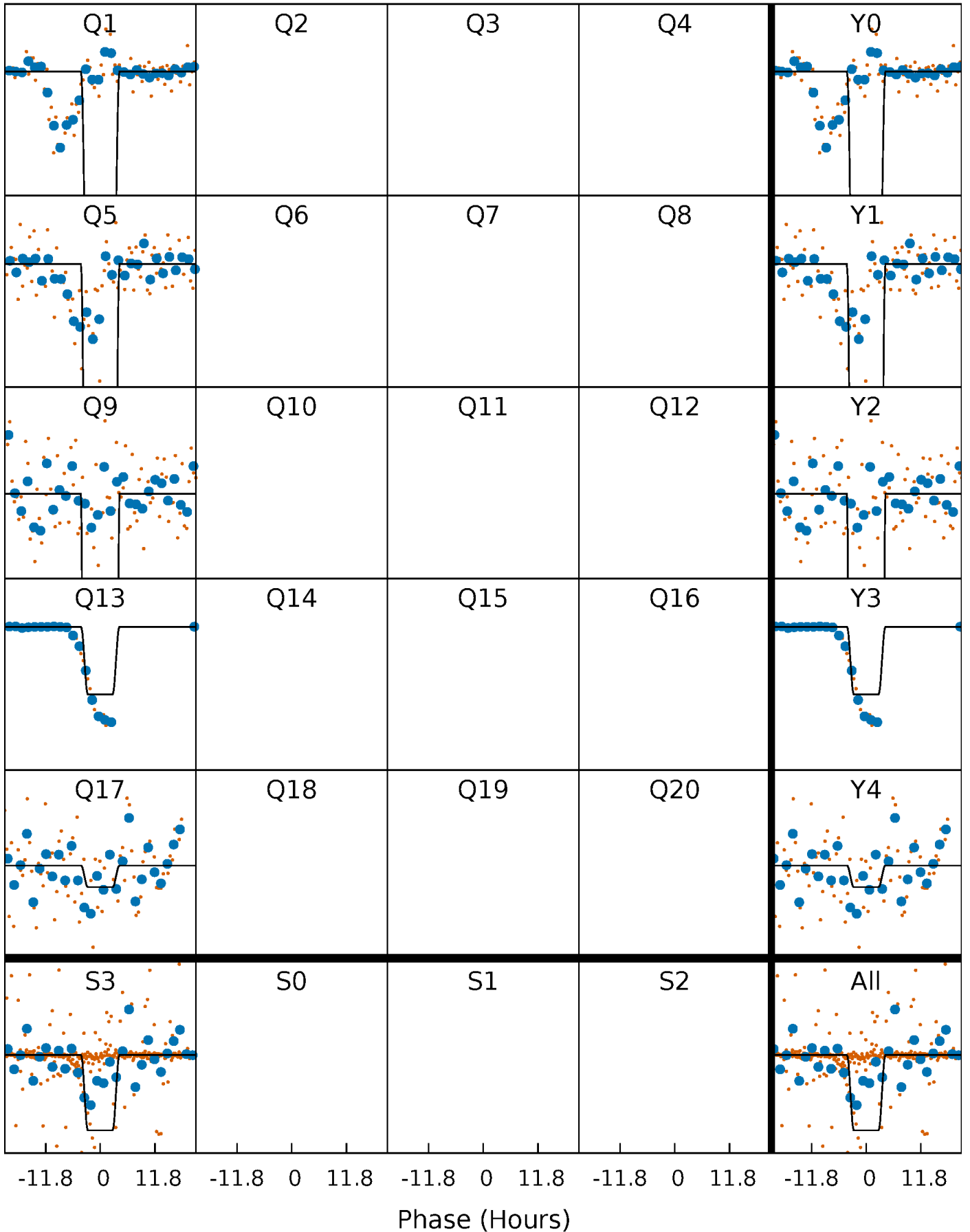
# DV Quarter-Phased Transit Curves

TCE 011495654-02     $P=356.970951$  Days     $T_0=143.839102$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

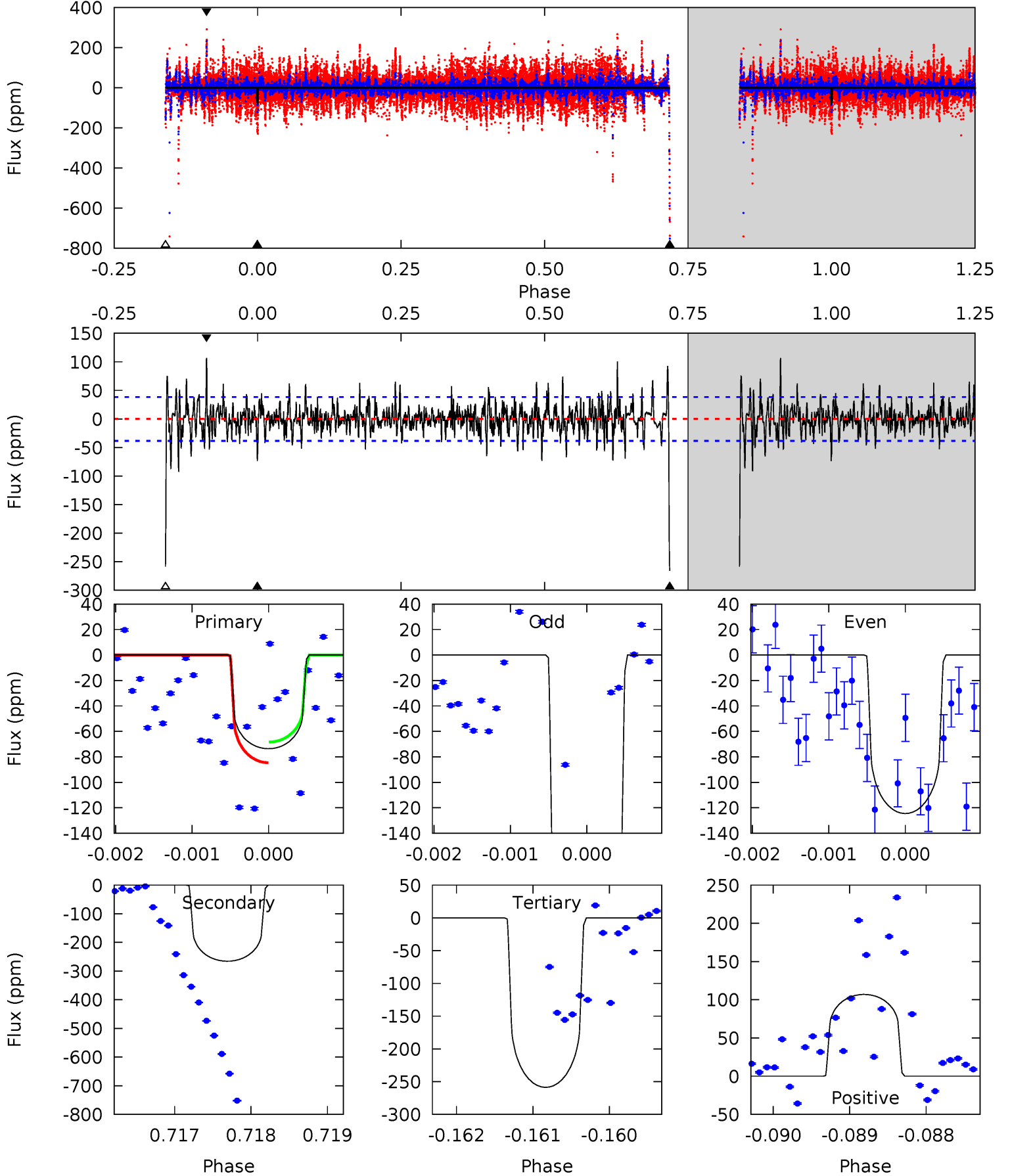
TCE 011495654-02     $P=357.069650$  Days     $T_0=143.681666$  (BKJD)



# DV Model-Shift Uniqueness Test

011495654-02, P = 356.970951 Days, E = 143.839102 Days

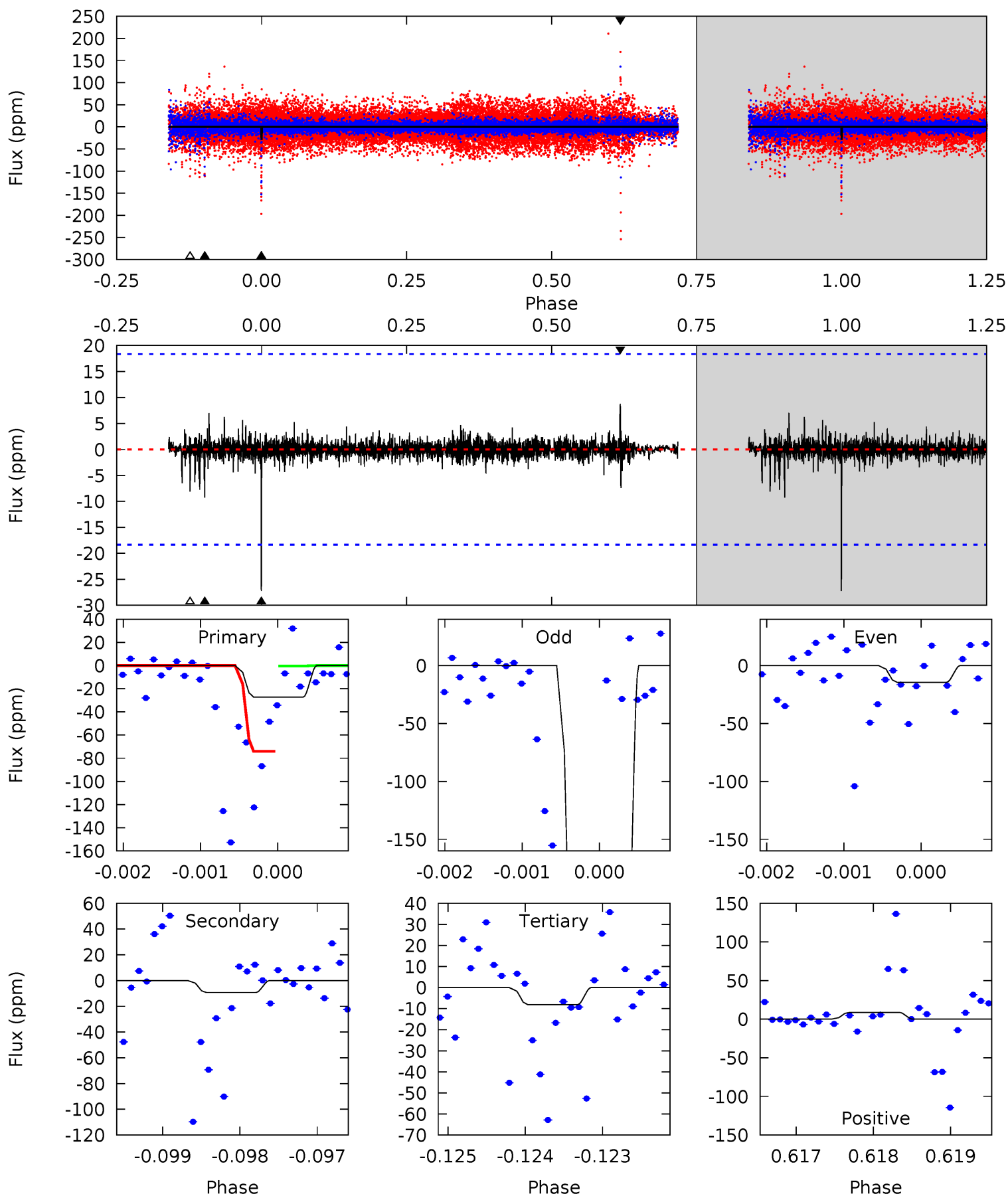
| Pri  | Sec  | Ter  | Pos  | FA <sub>1</sub> | FA <sub>2</sub> | F <sub>Red</sub> | Pri-Ter | Pri-Pos | Sec-Ter | Sec-Pos | Odd-Evn | DMM   | Shape | TAT  |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|-------|-------|------|
| 10.4 | 37.6 | 36.6 | 15.2 | 5.44            | 3.28            | 2.82             | -26.2   | -4.73   | 0.97    | 22.5    | 9.45    | -0.54 | 0.29  | 1.11 |



# Alt Model-Shift Uniqueness Test

011495654-02, P = 357.069650 Days, E = 143.681666 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 |
|------|------|------|------|-----------------|-----------------|------------------|---------|---------|---------|---------|---------|------|-------|-----|
| 8.11 | 2.76 | 2.41 | 2.61 | 5.46            | 3.30            | 0.32             | 5.70    | 5.50    | 0.35    | 0.16    | 34.8    | 7.42 | 0.24  | 0   |





### Stellar Parameters For KIC 011495654

|        | $T_{\text{eff}}(K)$ | $\log(g)$                 | [Fe/H]                    | $R (R_{\odot})$           | $M(M_{\odot})$             | $p_{\star} (\text{g}\cdot\text{cm}^{-3})$ |
|--------|---------------------|---------------------------|---------------------------|---------------------------|----------------------------|---|
|        | $5780^{+1}_{-1}$    | $4.438^{+1.000}_{-1.000}$ | $0.000^{+1.000}_{-1.000}$ | $1.000^{+1.000}_{-1.000}$ | $-1.000^{+1.000}_{-1.000}$ | $-1.000^{+1.000}_{-1.000}$                |
|        | +0%/-0%             | +23%/-23%                 | +inf%/-inf%               | +100%/-100%               | +100%/-100%                | +100%/-100%                               |
| Source | Solar               | Solar                     | Solar                     | Solar                     |                            |   |

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology  
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

### Secondary Eclipse Parameters for KIC 011495654-02 / KOI

| Detrend | Depth (ppm)  | $R_p (R_{\oplus})$     | $T_{\text{max}} (K)$ | $T_{\text{obs}} (K)$    | $A_{\text{obs}}$              |
|---------|--------------|------------------------|----------------------|-------------------------|-------------------------------|
| DV      | $-266 \pm 7$ | $0.70^{+0.70}_{-0.46}$ | $361^{+16}_{-18}$    | $9982^{+18085}_{-3427}$ | $287261^{+2010297}_{-215264}$ |
| Alt.    | $-9 \pm 3$   | $3.73^{+0.90}_{-0.84}$ | $359^{+17}_{-17}$    | $2543^{+222}_{-180}$    | $344^{+313}_{-158}$           |

$T_{\text{max}}$  = 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

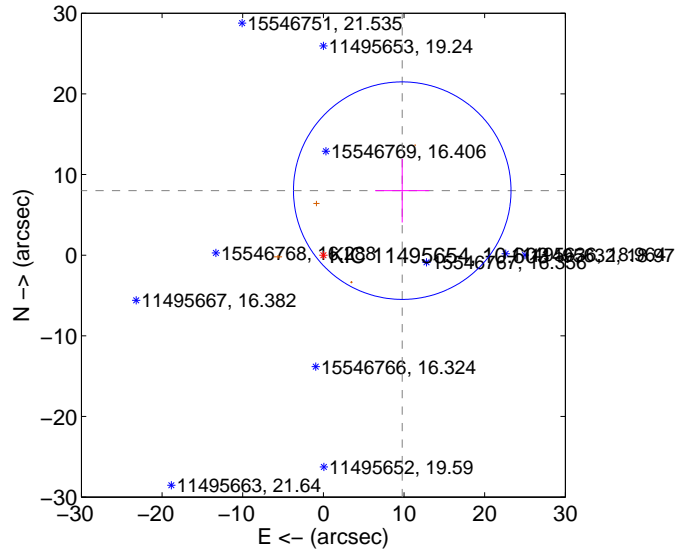
Supplemental centroid analysis for 011495654-02. **Kepler magnitude: 10.60.** Transit SNR 1.54

There are 0 quarters with good PRF difference image offsets

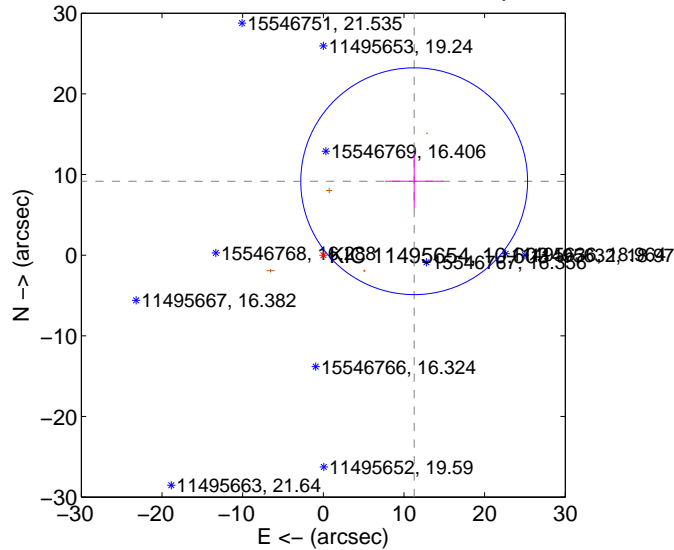
The OOT PRF centroid is offset from the target star catalog position by about 2.09 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

|   | Distance in arcsec                   | Distance / $\sigma$ | $\Delta$ RA         | $\Delta$ Dec       |
|---|--------------------------------------|---------------------|---------------------|--------------------|
| PRF-fit source offset from OOT          | $12.635 \pm 4.495$                   | 2.81                | $-9.779 \pm 3.349$  | $8.000 \pm 3.953$  |
| PRF-fit source offset from KIC position | <b><math>14.524 \pm 4.687</math></b> | <b>3.10</b>         | $-11.266 \pm 3.633$ | $9.167 \pm 3.394$  |
| photometric centroid source offset      | $22.70 \pm 46.12$                    | 0.49                | $16.22 \pm 40.19$   | $-15.88 \pm 51.60$ |

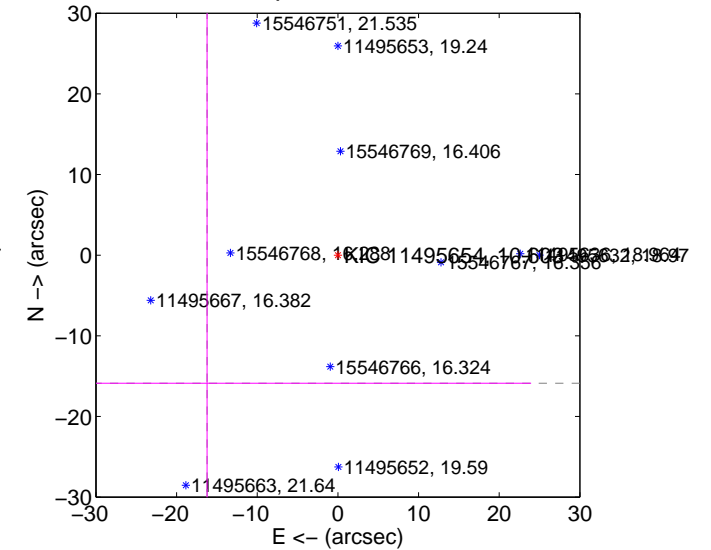
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

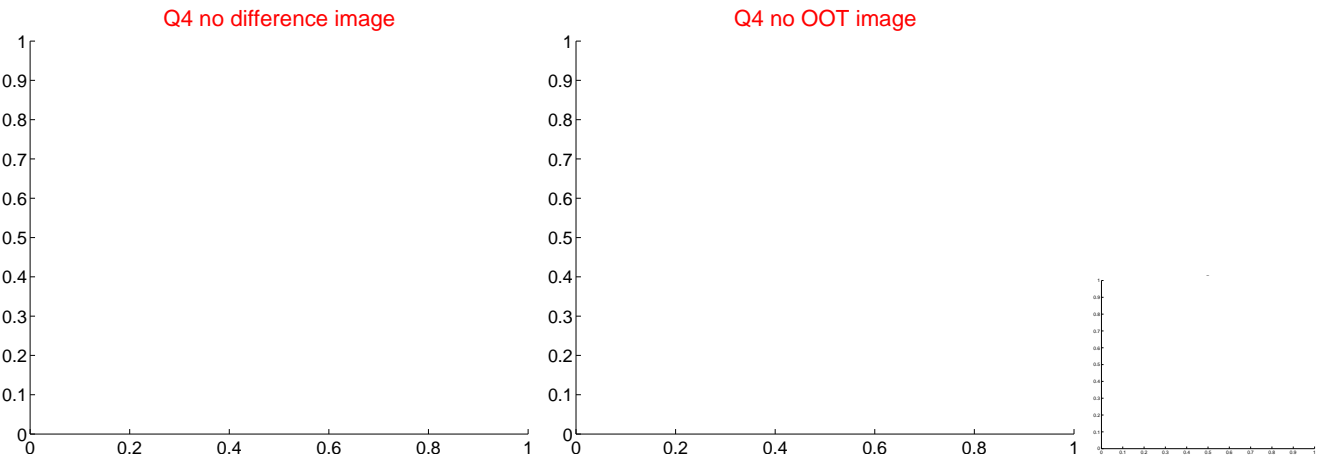
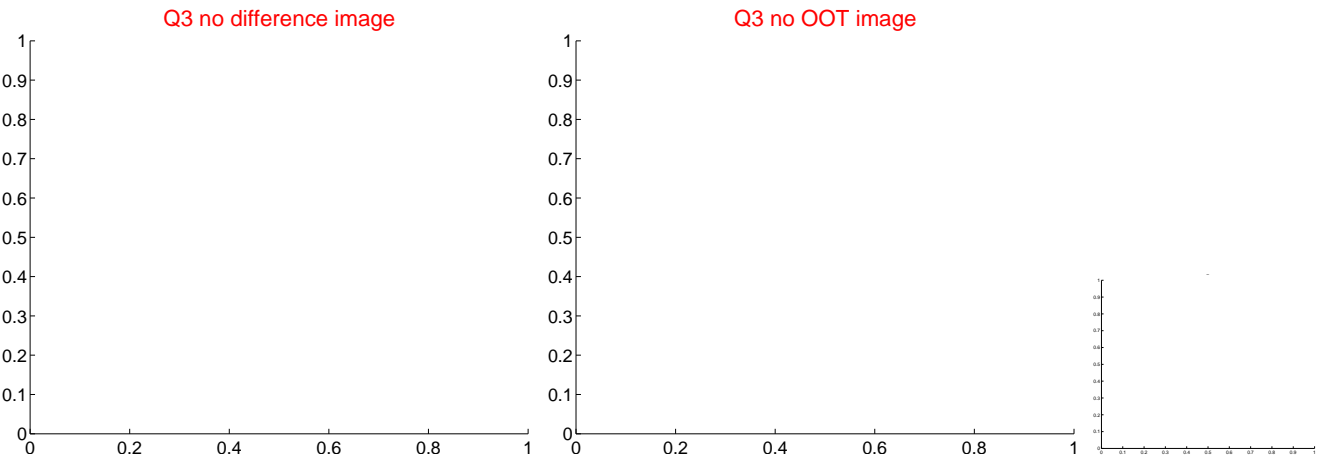
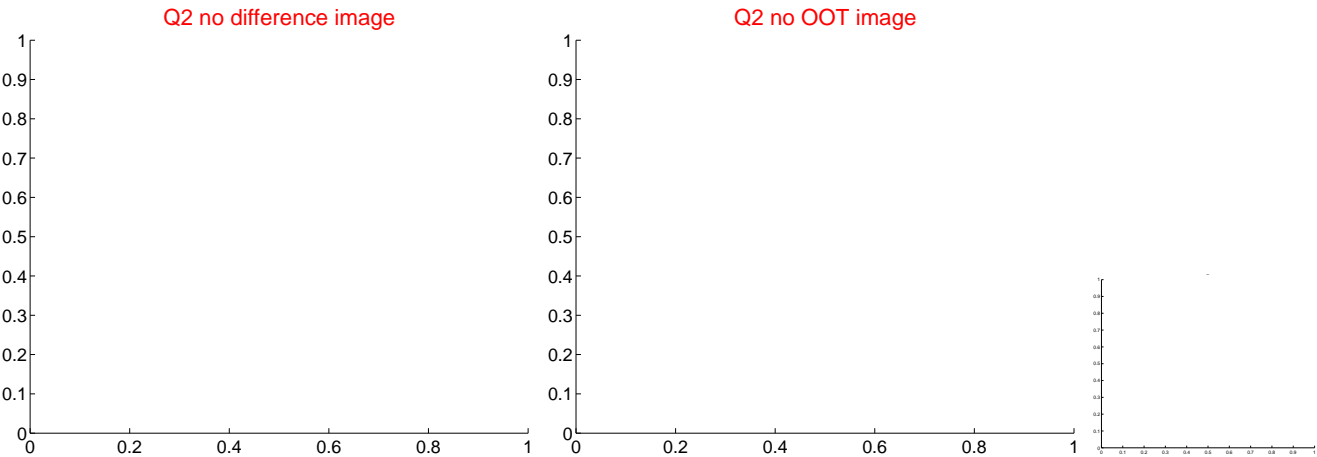
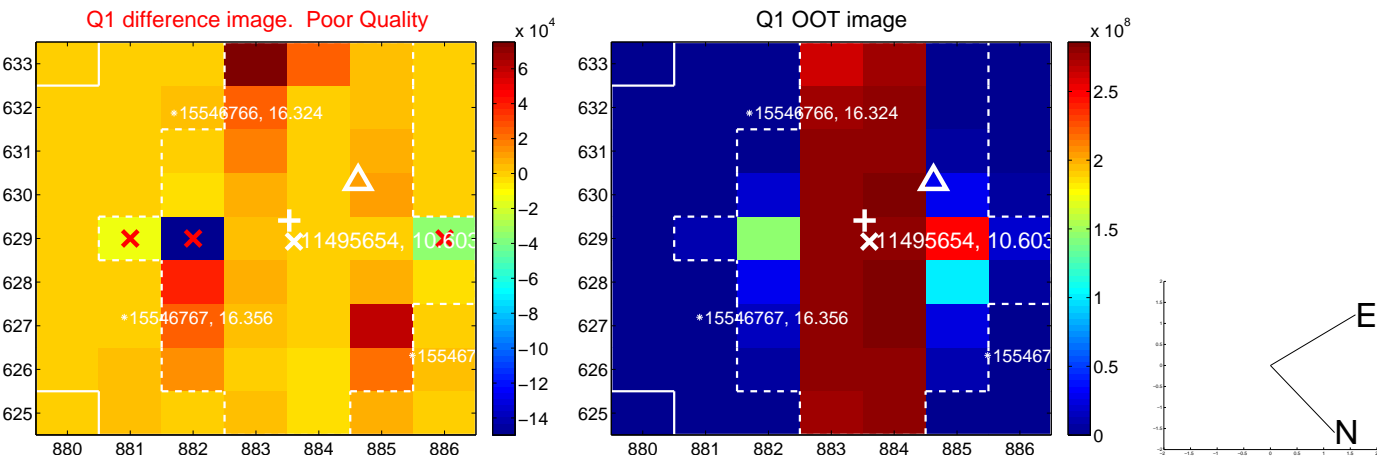


offset from photometric centroids

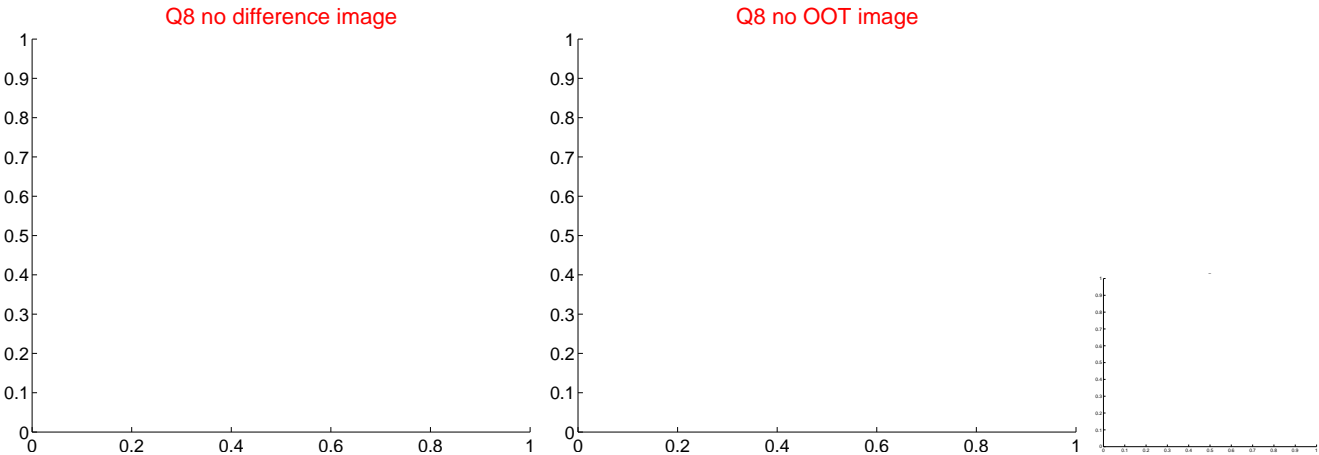
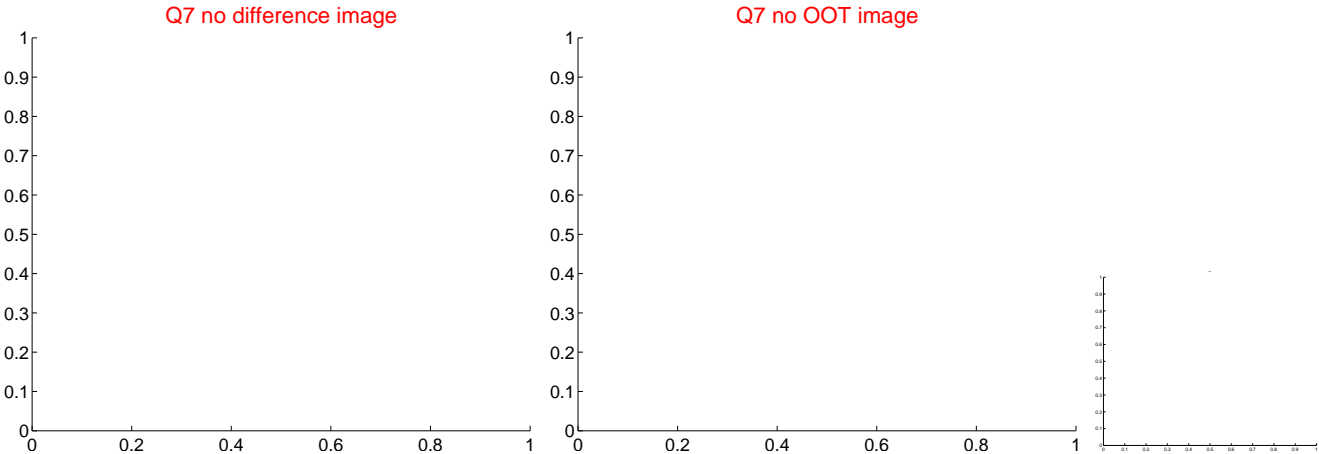
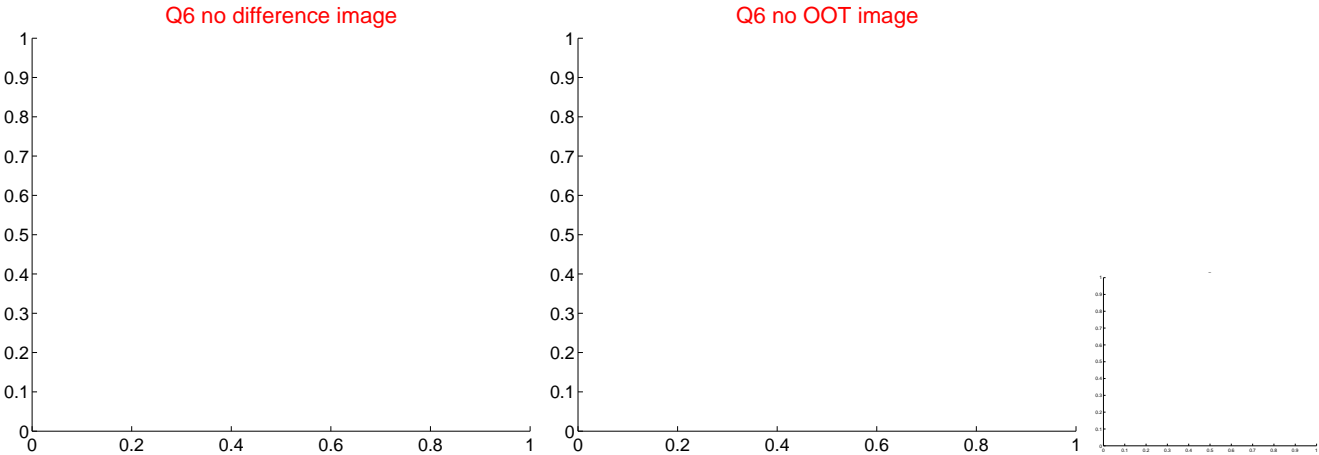
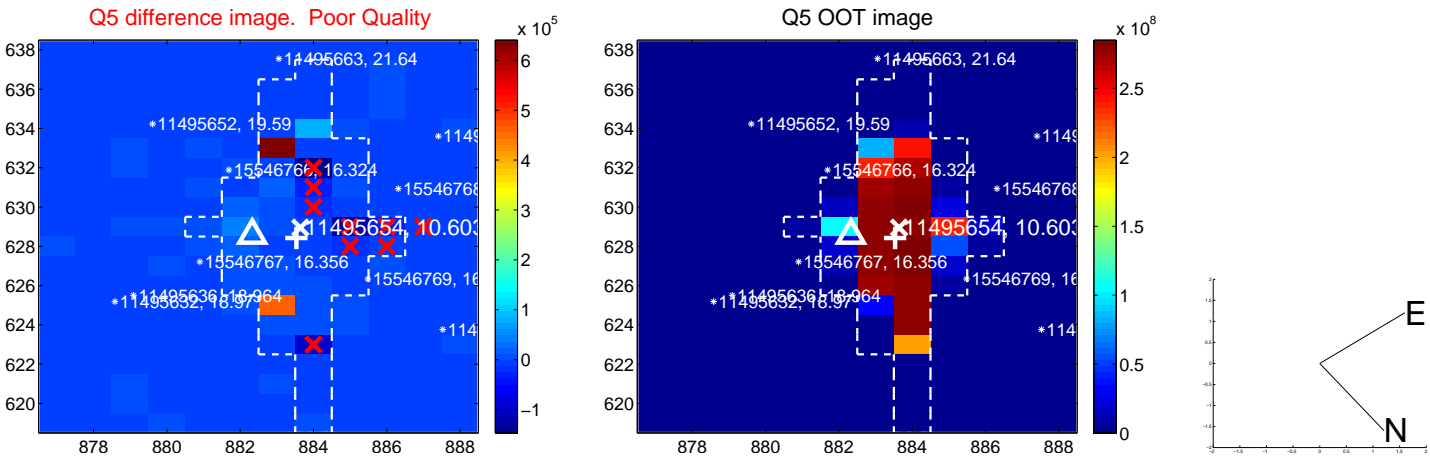


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

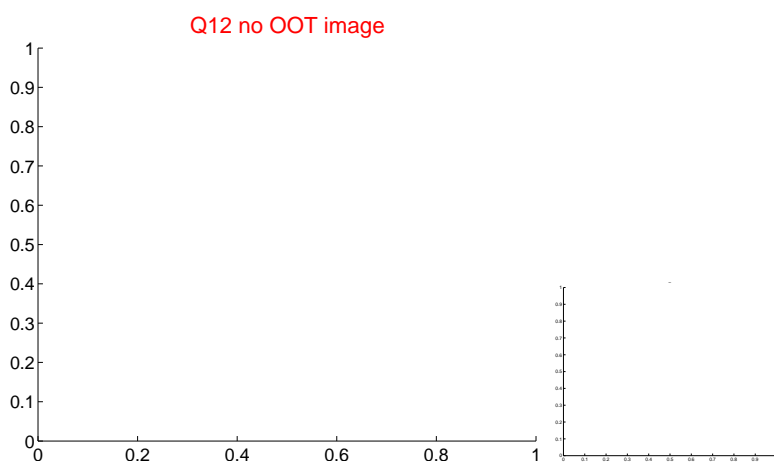
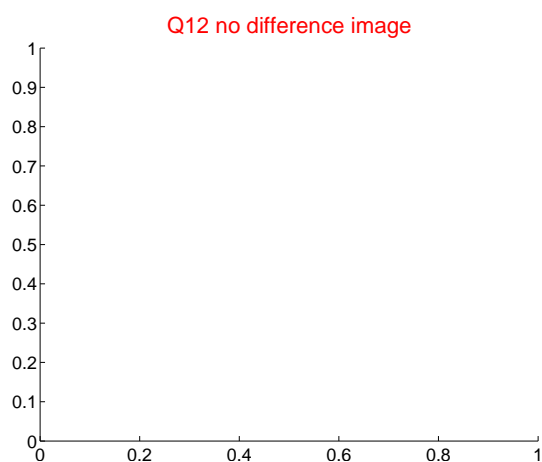
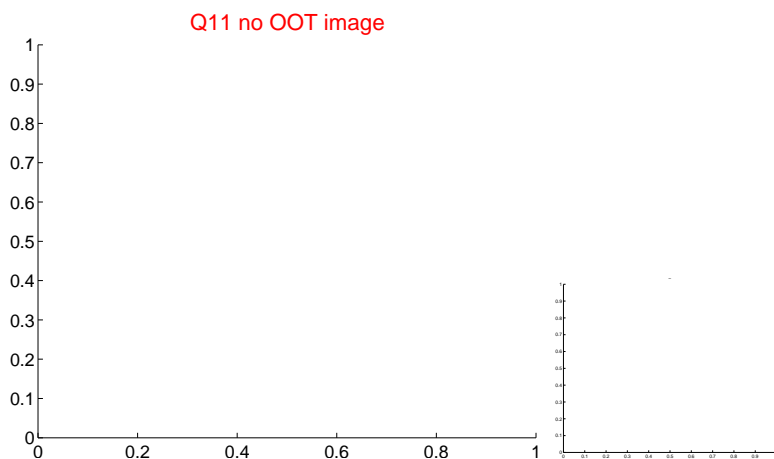
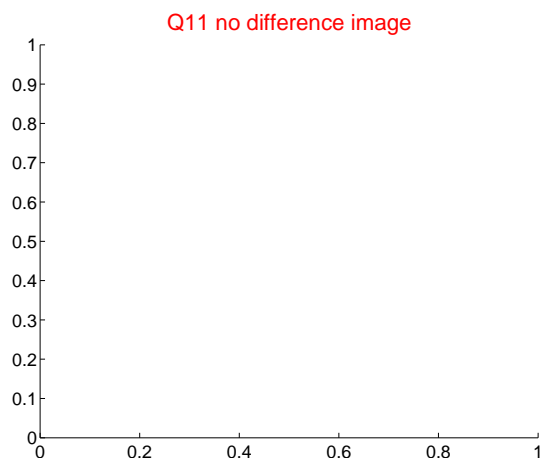
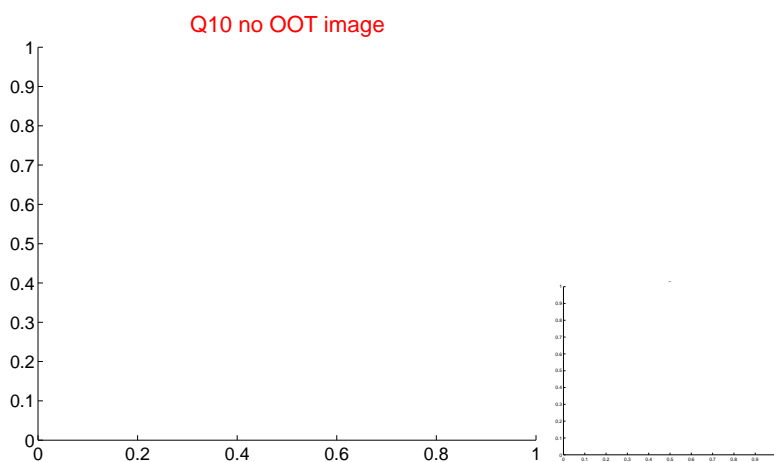
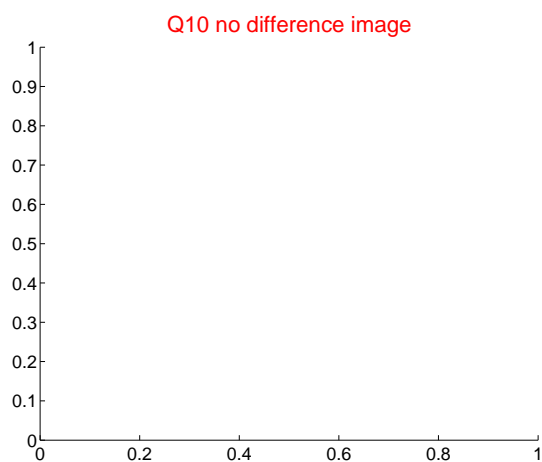
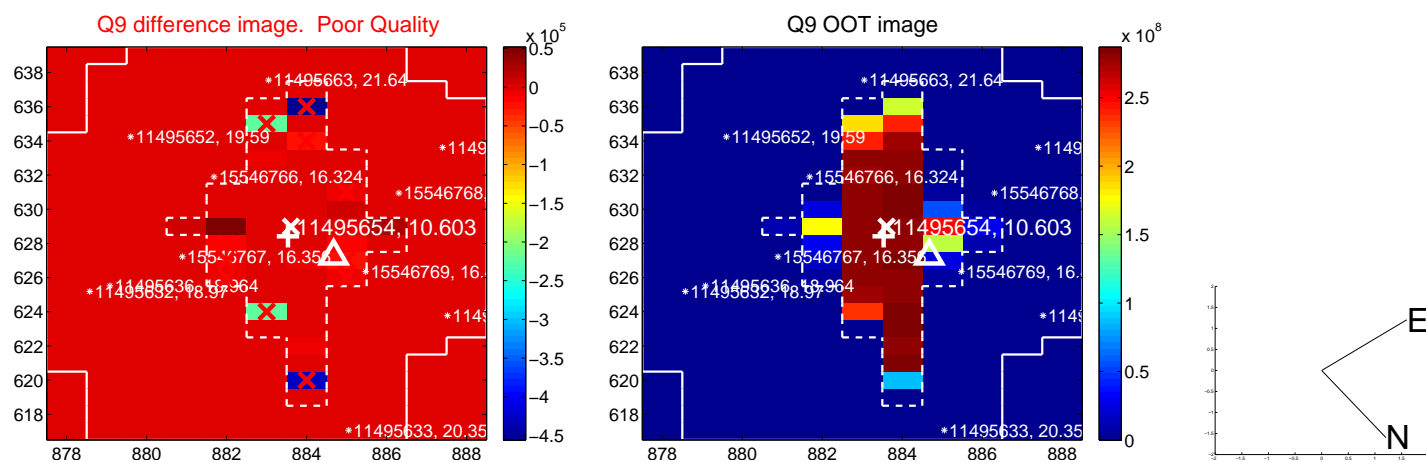
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



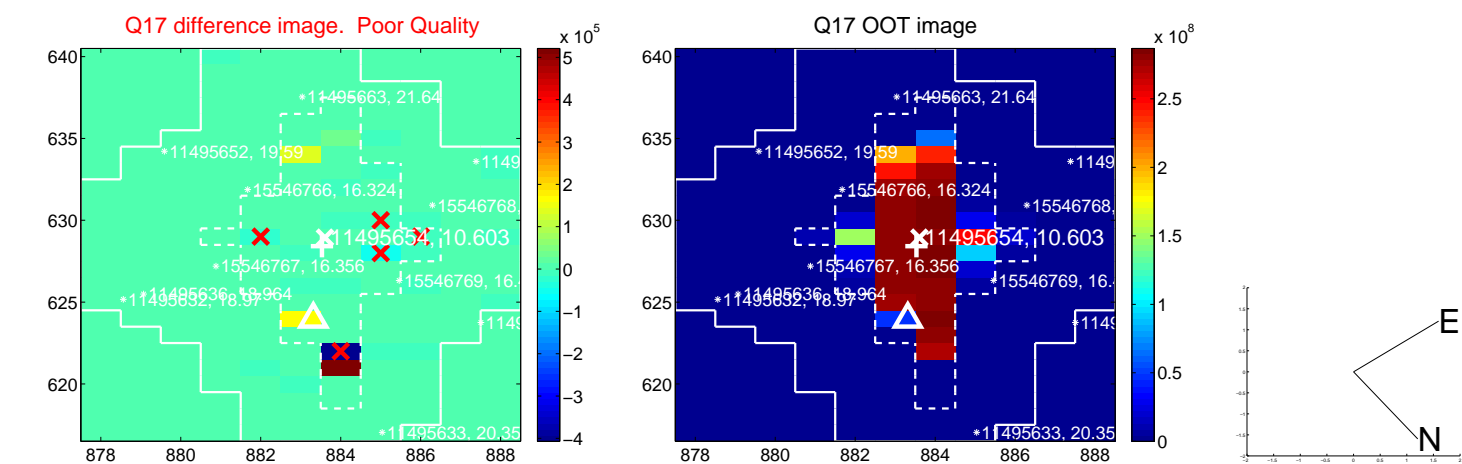
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



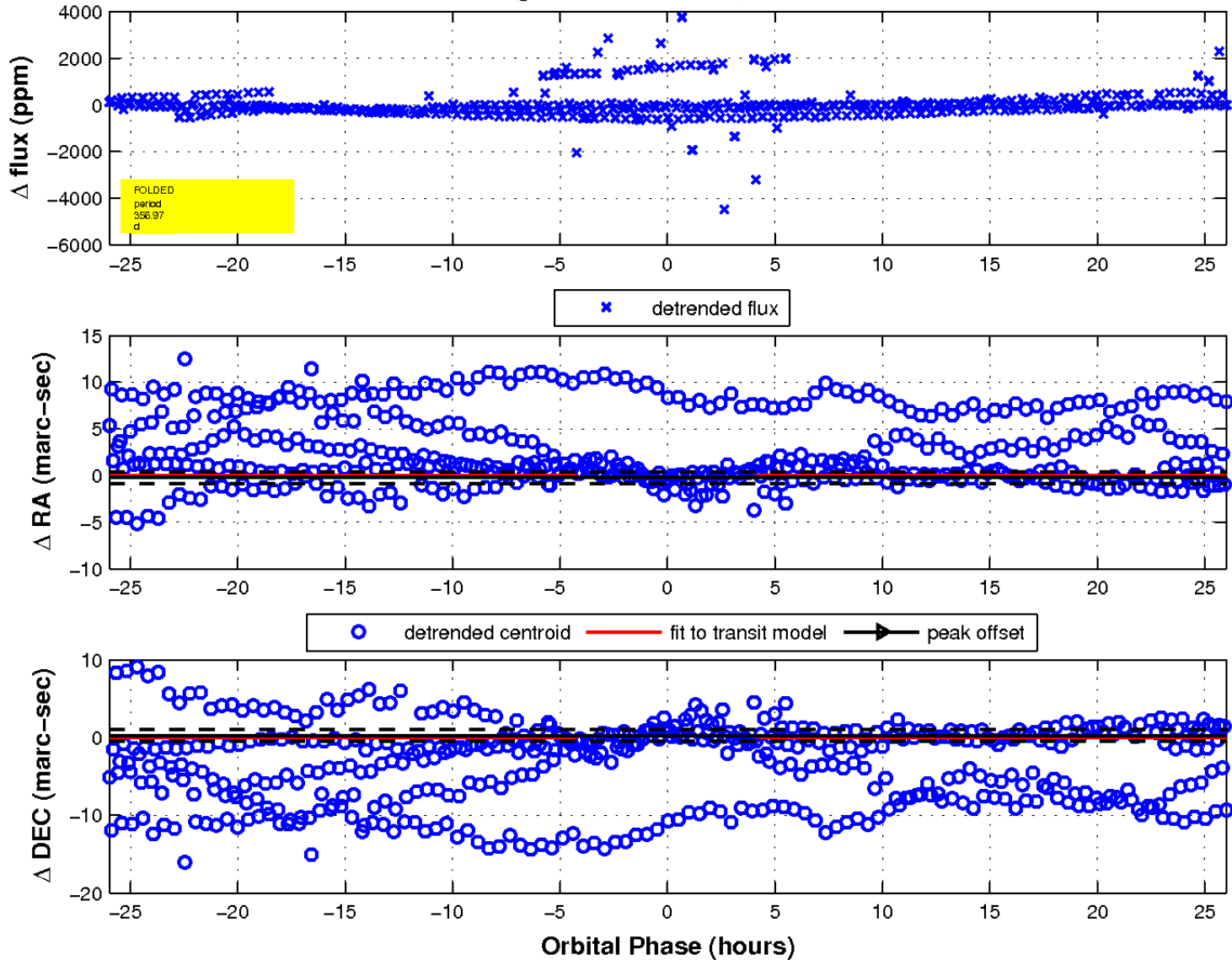
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



fluxWeightedCentroids, Planet 2 of 2



UKIRT Image

