

KIC 007906892

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})
007906892-01	OBS	4773.02	11.143609	131.742098	40.9	8.386	7.9	8.5	1.11	6095	0.79	159.33
007906892-02	OBS	4773.01	8.849339	139.790689	42.6	7.024	7.9	9.1	1.11	6095	0.84	216.67

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007906892-01	OBS	PC	0.99	0	0	0	0	NO_COMMENT
007906892-02	OBS	PC	0.52	0	0	0	0	NO_COMMENT

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

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

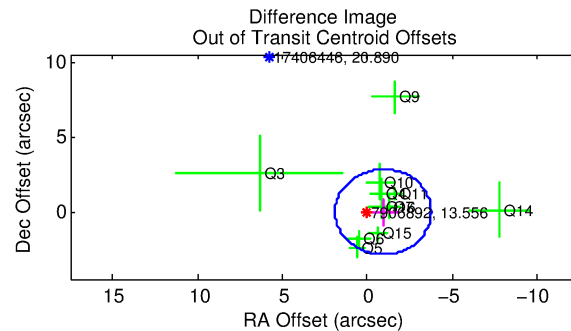
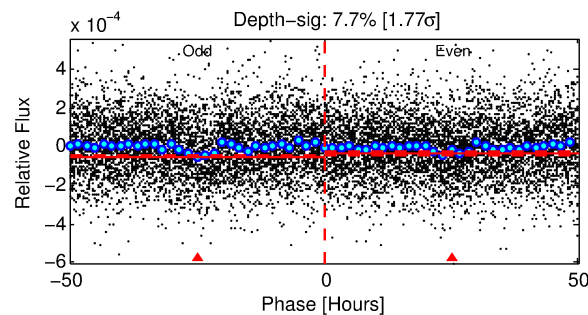
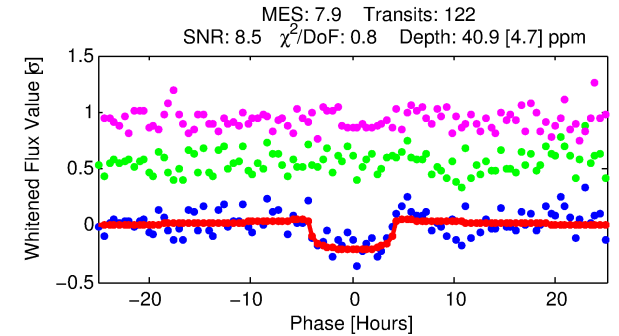
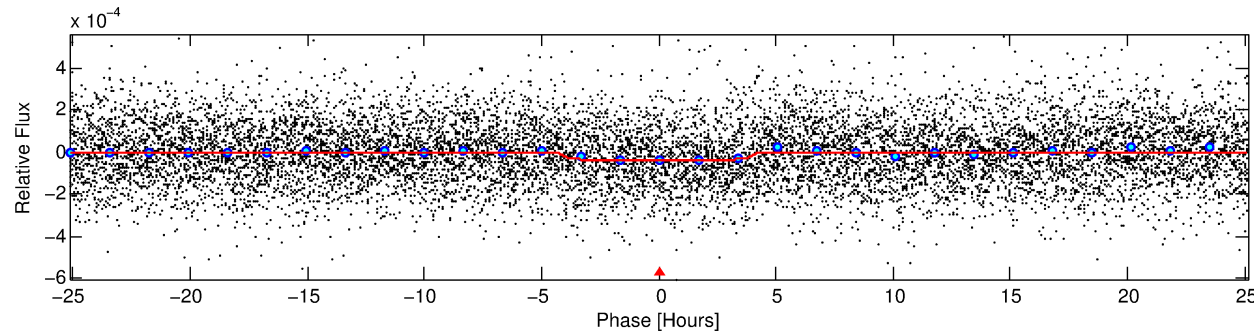
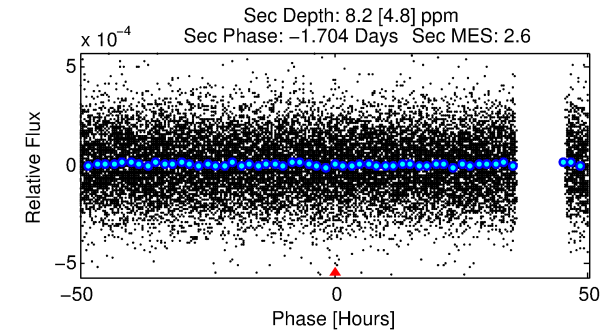
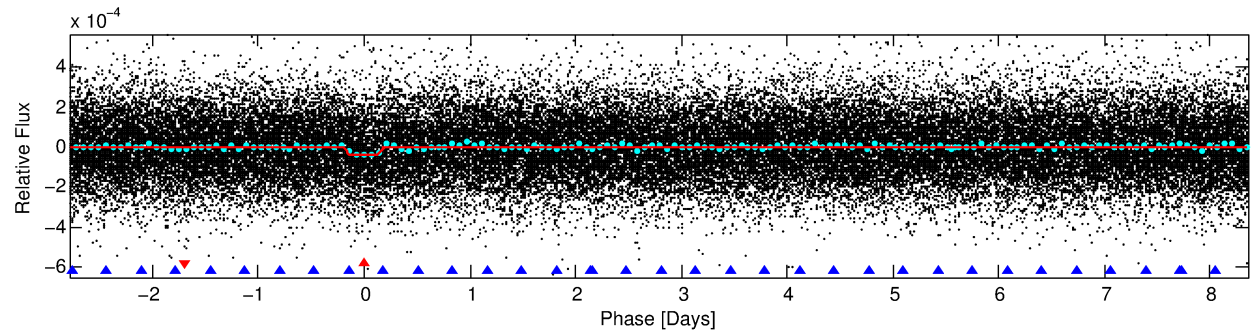
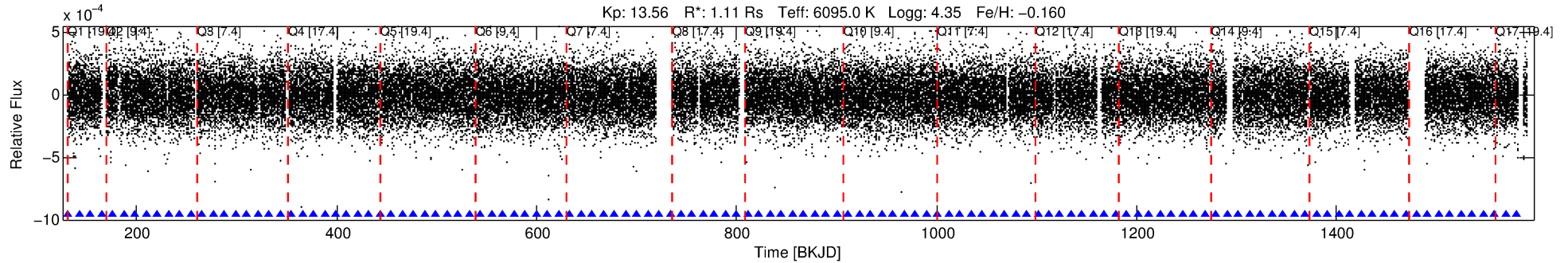
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007906892-01

No Significant Match Found

DV One-Page Summary

KIC: 7906892 Candidate: 1 of 2 Period: 11.144 d
KOI: K04773 Corr: No Ephemeris Match



DV Fit Results:

Period = 11.14361 [0.00018] d
Epoch = 131.7421 [0.0131] BKJD
Rp/R* = 0.0065 [0.0027]
a/R* = 6.05 [12.41]
b = 0.82 [0.87]
Seff = 159.33 [36.91]
Teq = 906 [52] K
Rp = 0.79 [0.35] Re
a = 0.0978 [0.0138] AU
Ag = 68.69 [71.39] [0.95σ]
Teffp = 4032 [1029] K [3.03σ]

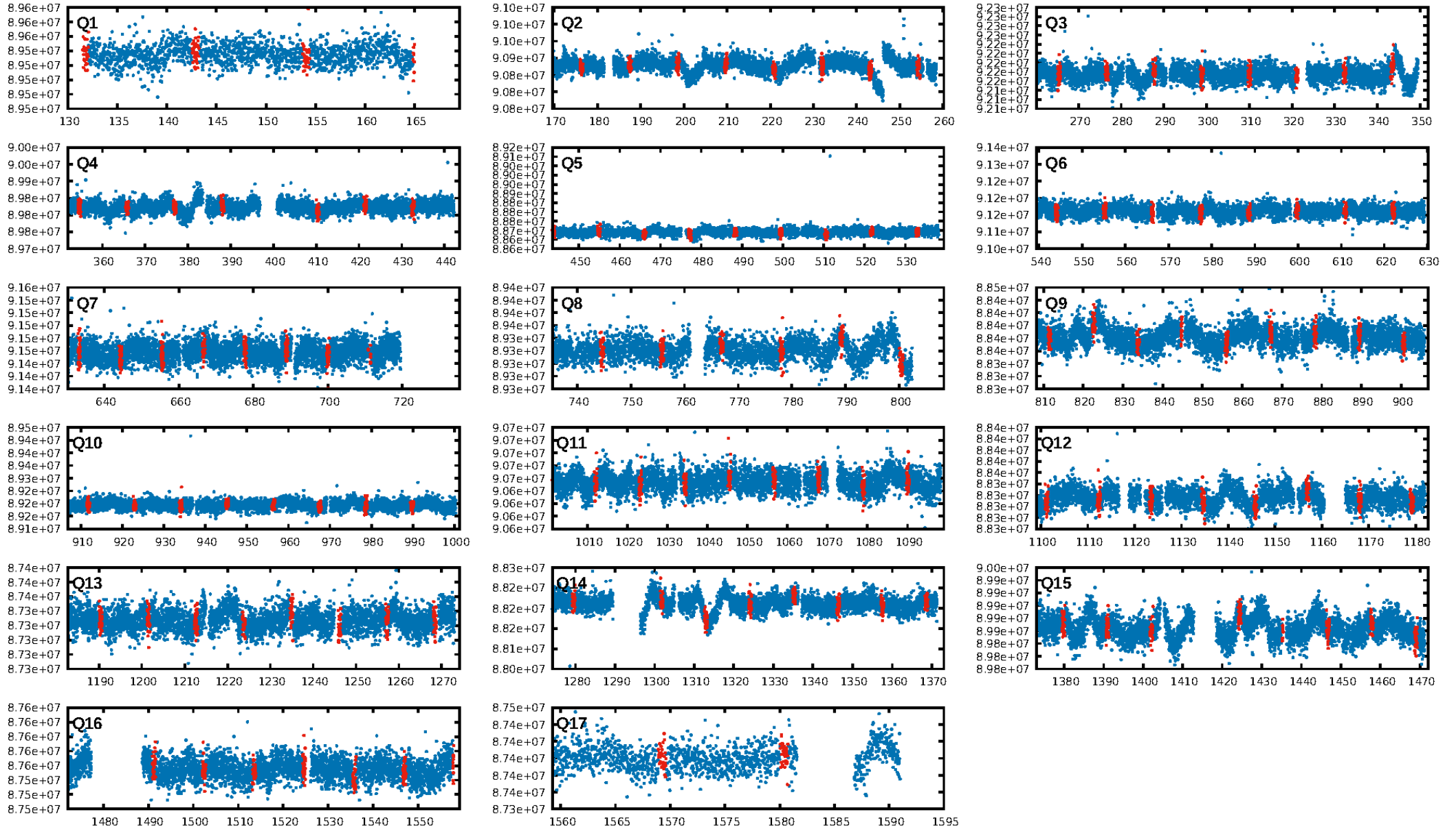
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [5.03σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 95.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 7.93e-14
RollingBand-fgt: 1.00 [117/117]
GhostDiagnostic-chr: 2.167
Centroid-sig: 31.9%
Centroid-so: 1.003 arcsec [0.82σ]
OotOffset-rm: 0.950 arcsec [1.00σ]
KicOffset-rm: 0.759 arcsec [0.87σ]
OotOffset-st: 3/4/2/2 [11]
KicOffset-st: 3/4/2/2 [11]
DiffImageQuality-fgm: 0.55 [6/11]
DiffImageOverlap-fno: 1.00 [17/17]

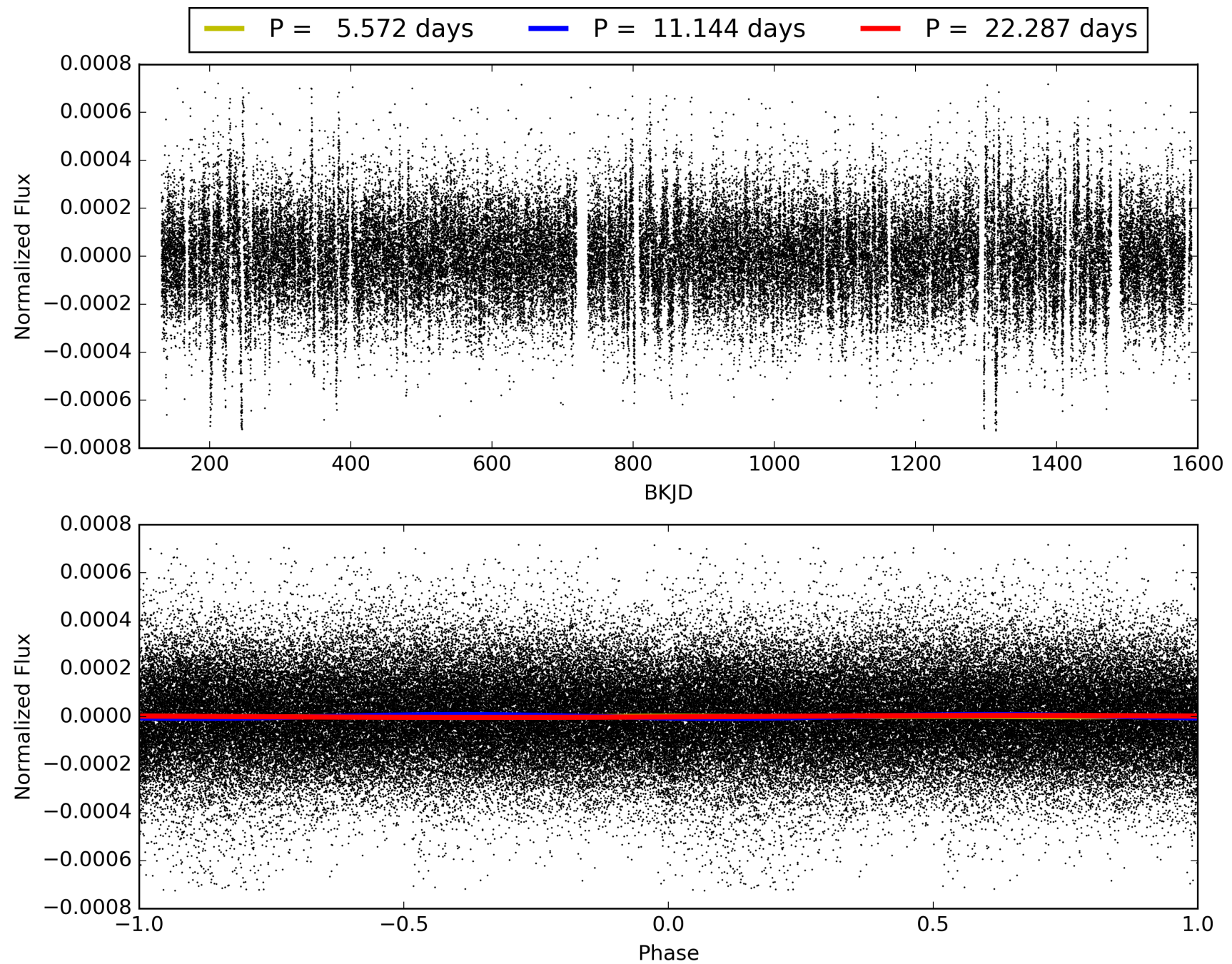
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:21:18 Z

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

TCE 007906892-01, PDC Light Curves

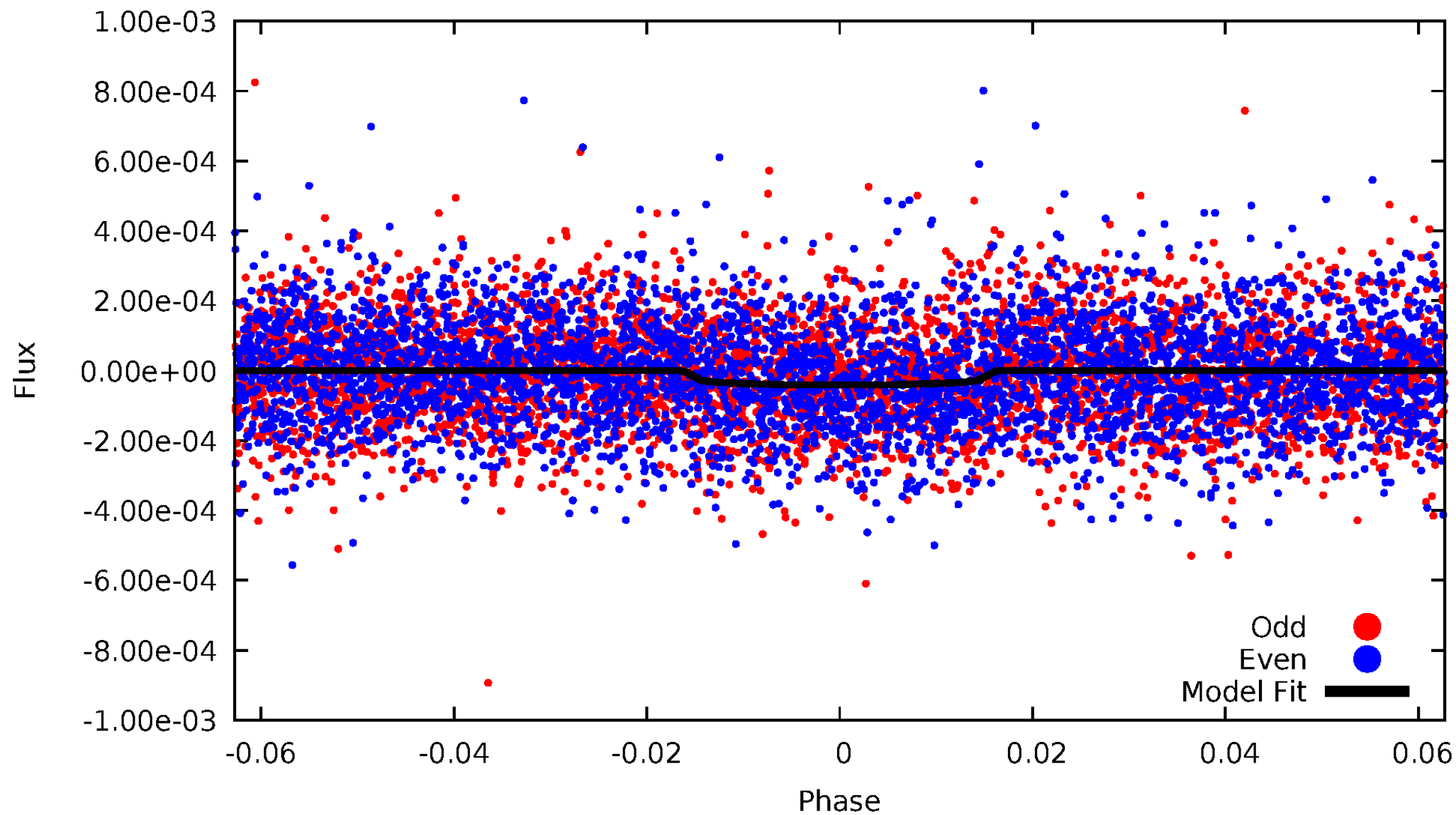


TCE 007906892-01



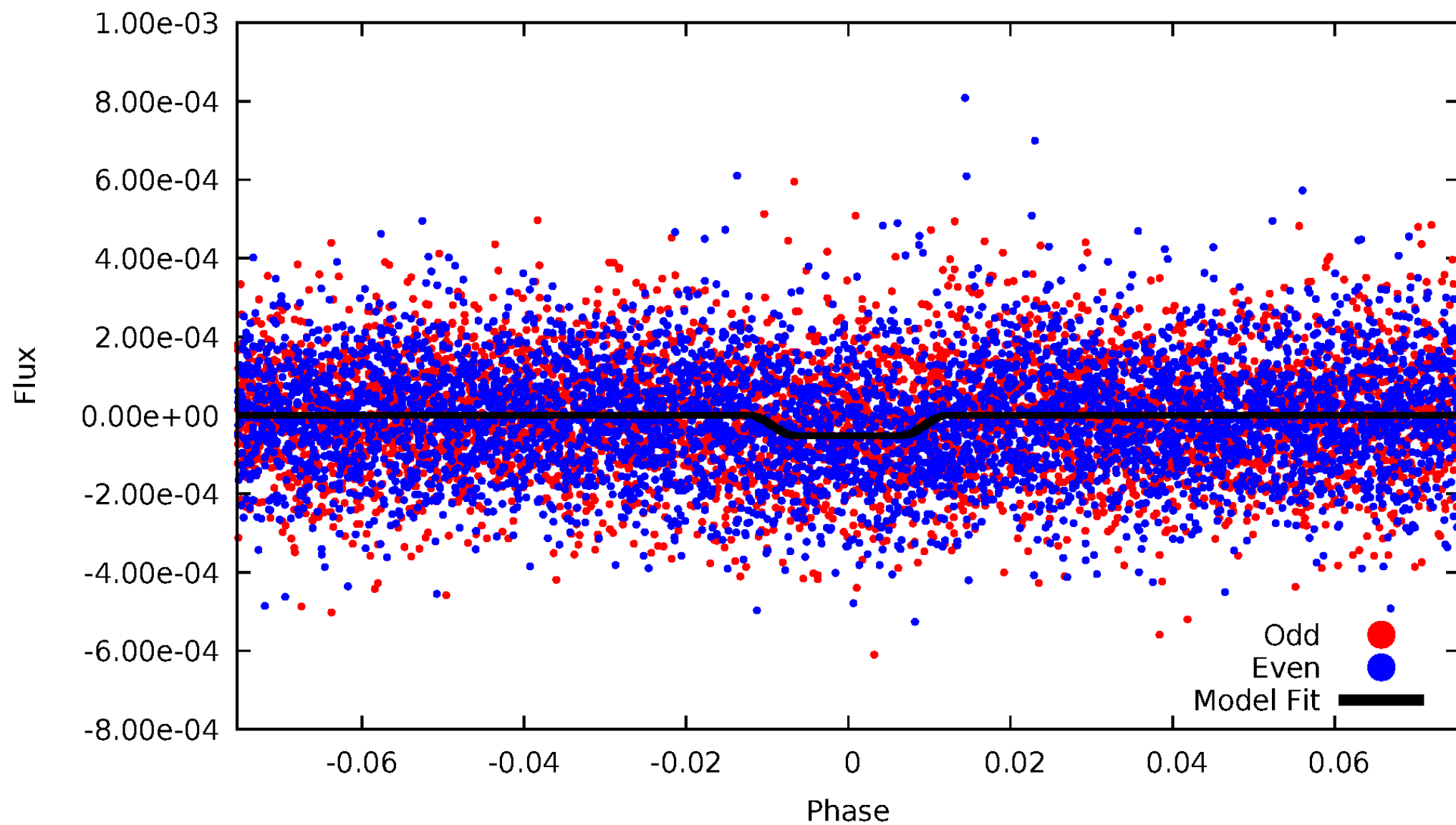
DV Odd/Even

TCE 007906892-01



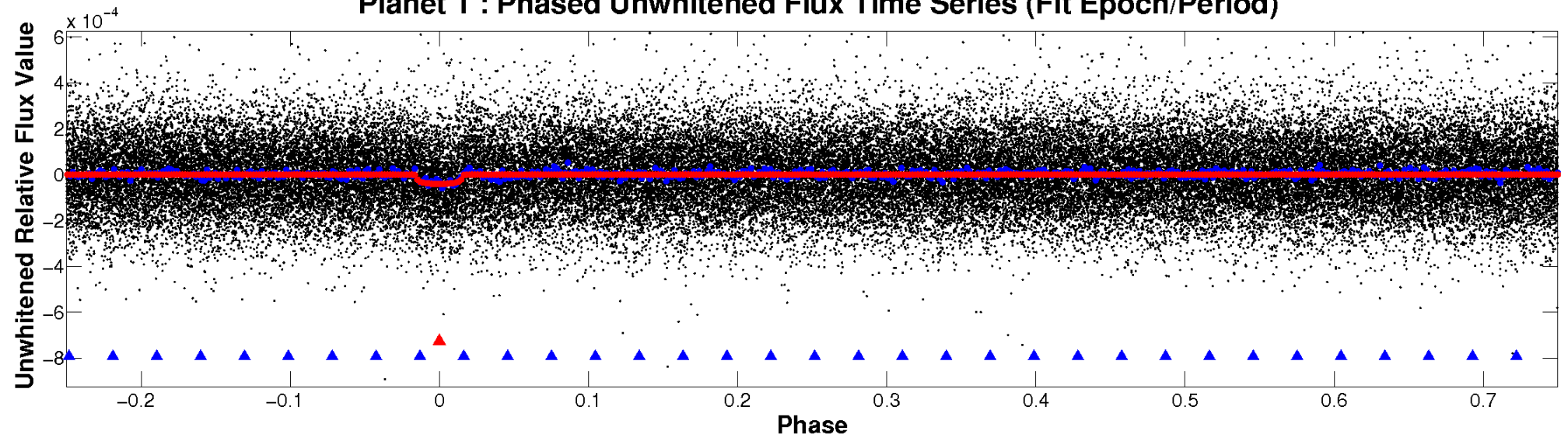
ALT Odd/Even

TCE 007906892-01

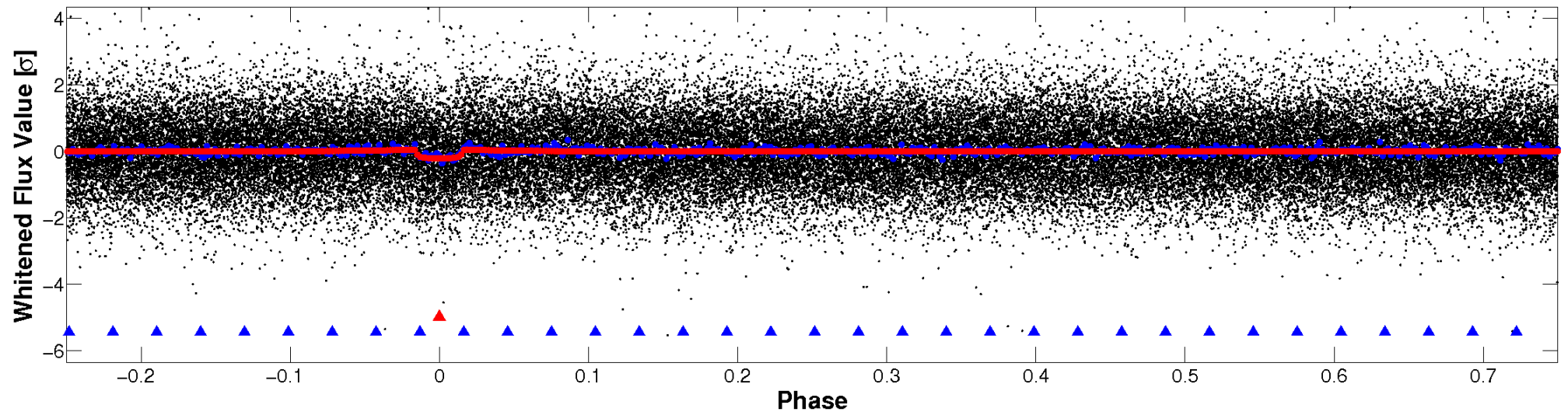


Non-Whitened Vs. Whitened Light Curve

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

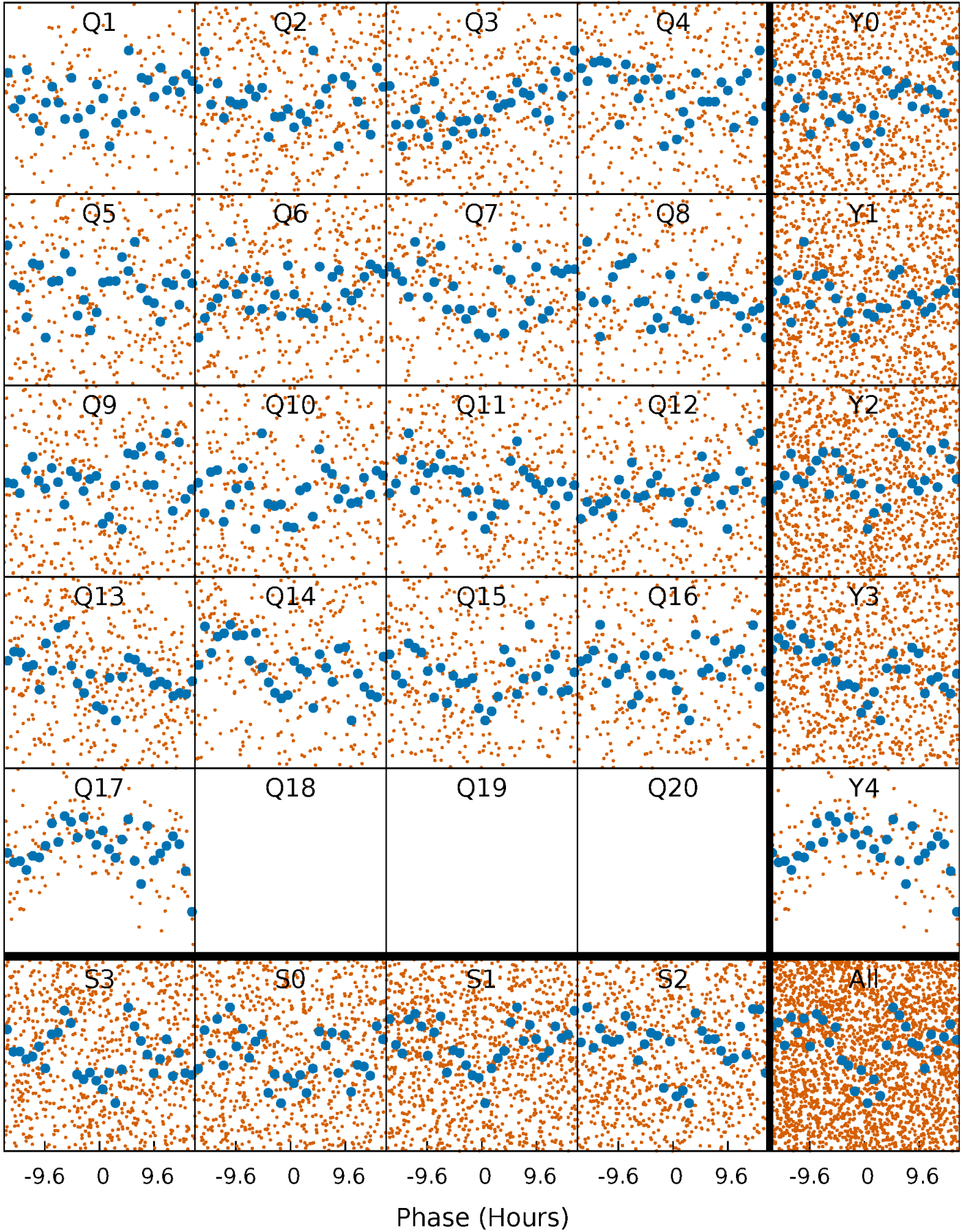


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



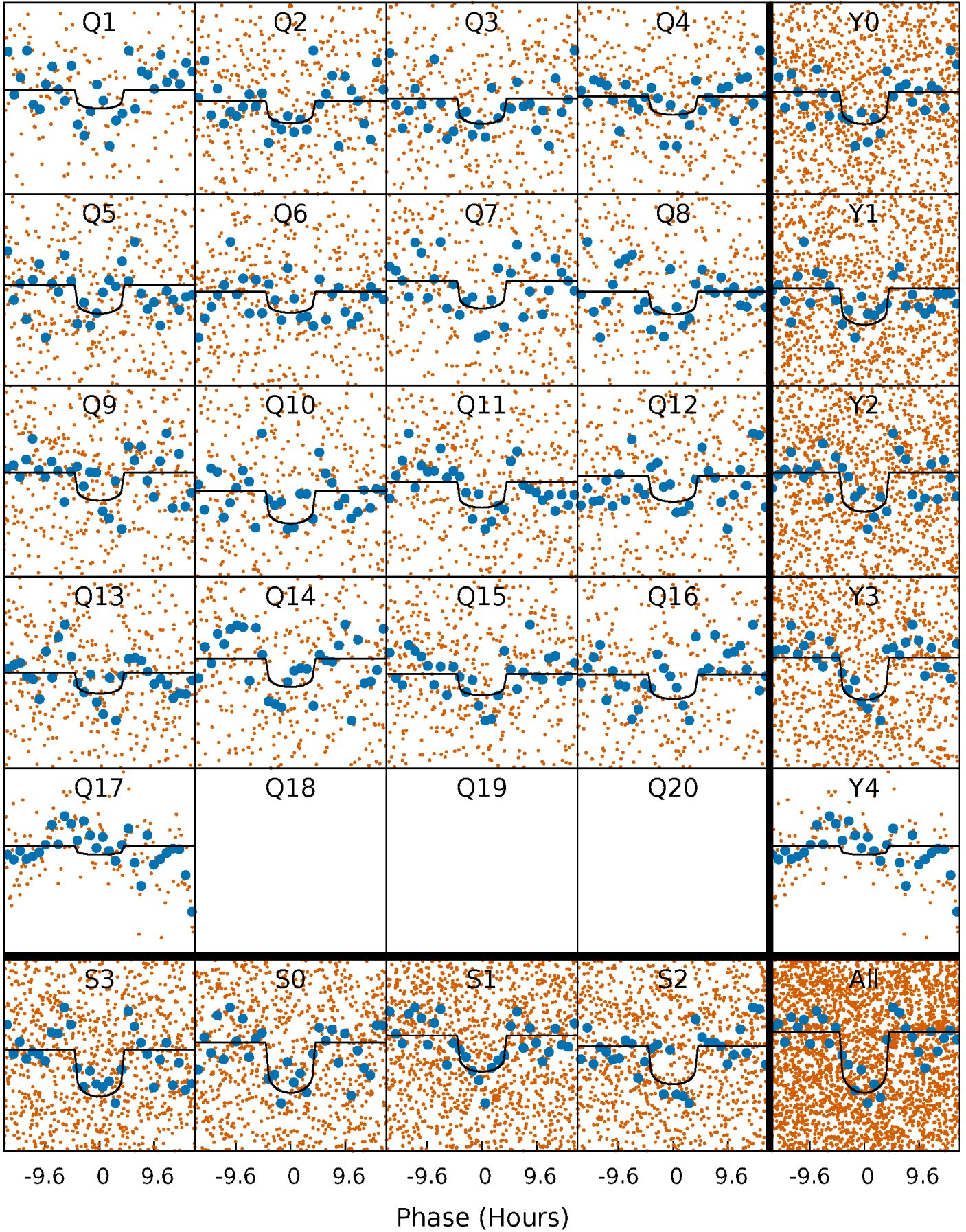
PDC Quarter-Phased Transit Curves

TCE 007906892-01 P= 11.143609 Days $T_0=131.742098$ (BKJD)



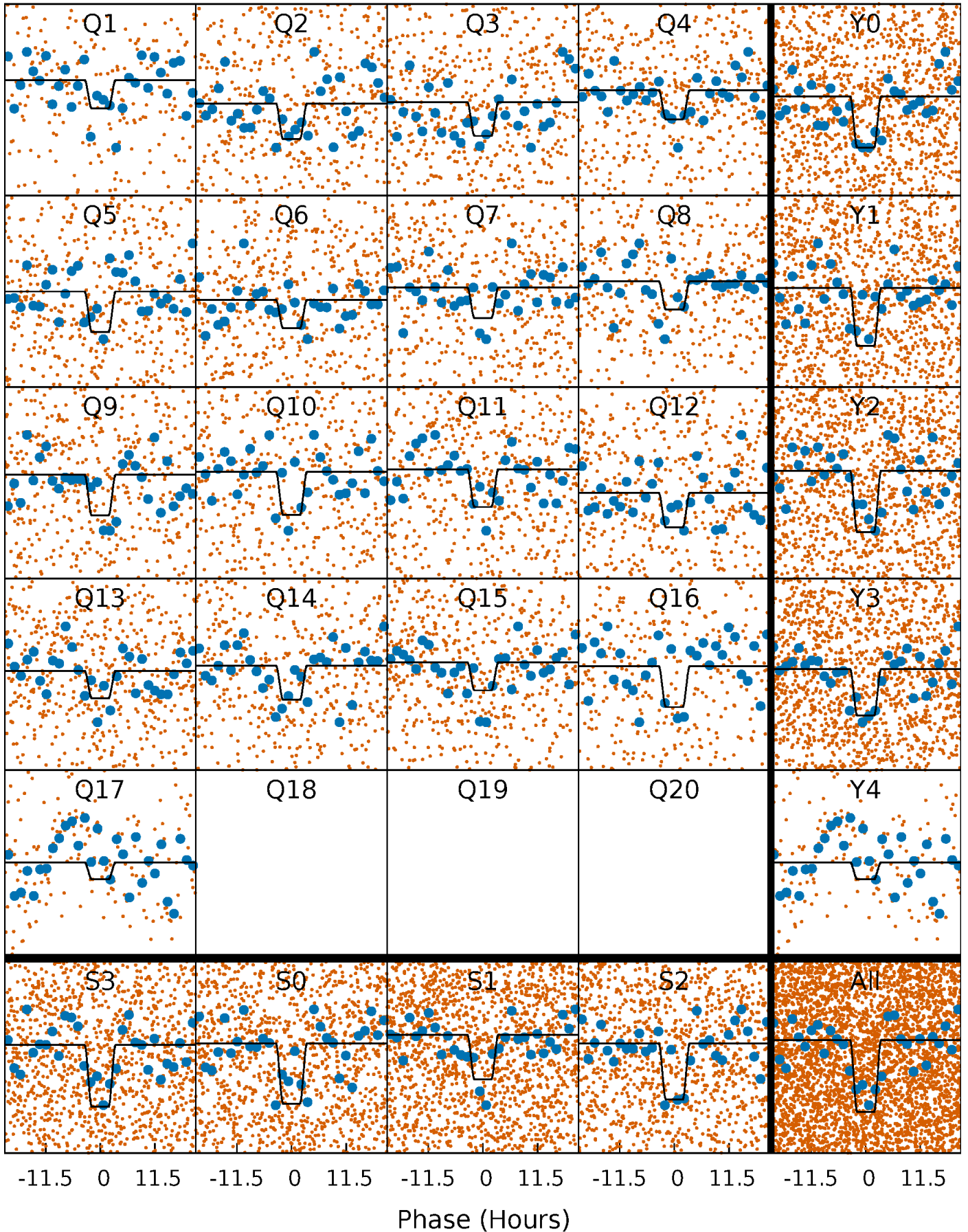
DV Quarter-Phased Transit Curves

TCE 007906892-01 P= 11.143609 Days $T_0=131.742098$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

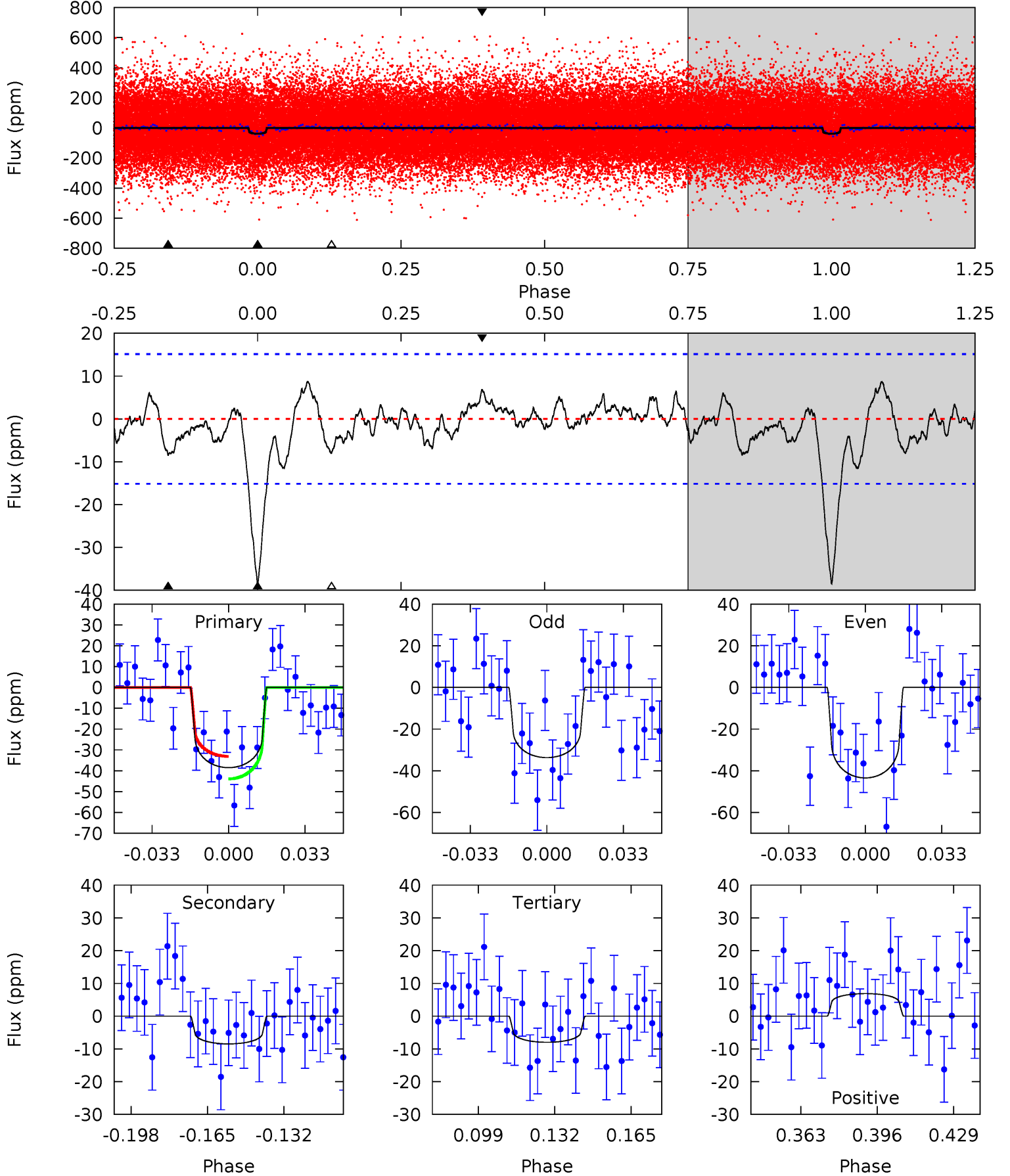
TCE 007906892-01 P= 11.144124 Days $T_0=131.710695$ (BKJD)



DV Model-Shift Uniqueness Test

007906892-01, $P = 11.143609$ Days, $E = 120.598489$ Days

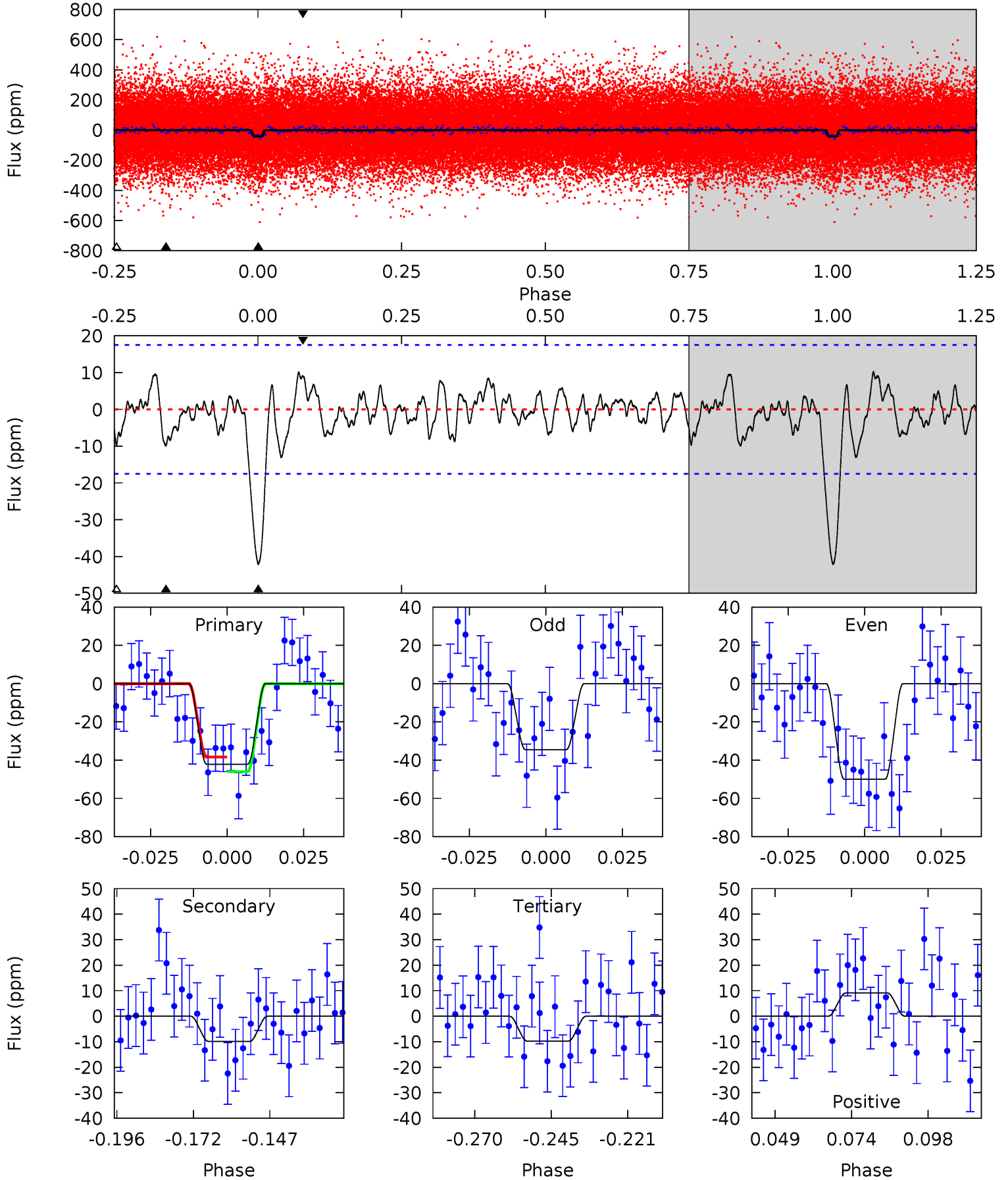
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.2	2.68	2.52	2.18	4.79	2.13	1.08	9.65	10.00	0.16	0.50	1.55	0.92	0.18	1.71



Alt Model-Shift Uniqueness Test

007906892-01, P = 11.144124 Days, E = 120.566571 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.7	2.74	2.70	2.53	4.85	2.25	1.08	8.97	9.14	0.03	0.21	2.14	1.19	0.19	1.05



Stellar Parameters For KIC 007906892

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6095^{+122}_{-134}	$4.349^{+0.099}_{-0.121}$	$-0.160^{+0.150}_{-0.150}$	$1.110^{+0.178}_{-0.119}$	$1.004^{+0.081}_{-0.059}$	$1.034^{+0.423}_{-0.354}$
	+2%/-2%	+2%/-3%	+94%/-94%	+16%/-11%	+8%/-6%	+41%/-34%
Source	SPE12	SPE12	SPE12	DSEP		

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

Secondary Eclipse Parameters for KIC 007906892-01 / KOI 4773.02

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-8 ± 3	$0.80^{+0.34}_{-0.35}$	1270^{+62}_{-55}	4316^{+1173}_{-593}	71^{+168}_{-39}
Alt.	-10 ± 4	$0.88^{+0.34}_{-0.34}$	1268^{+61}_{-51}	4280^{+941}_{-582}	66^{+114}_{-35}

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 $A_{obs} \gg 1.0$

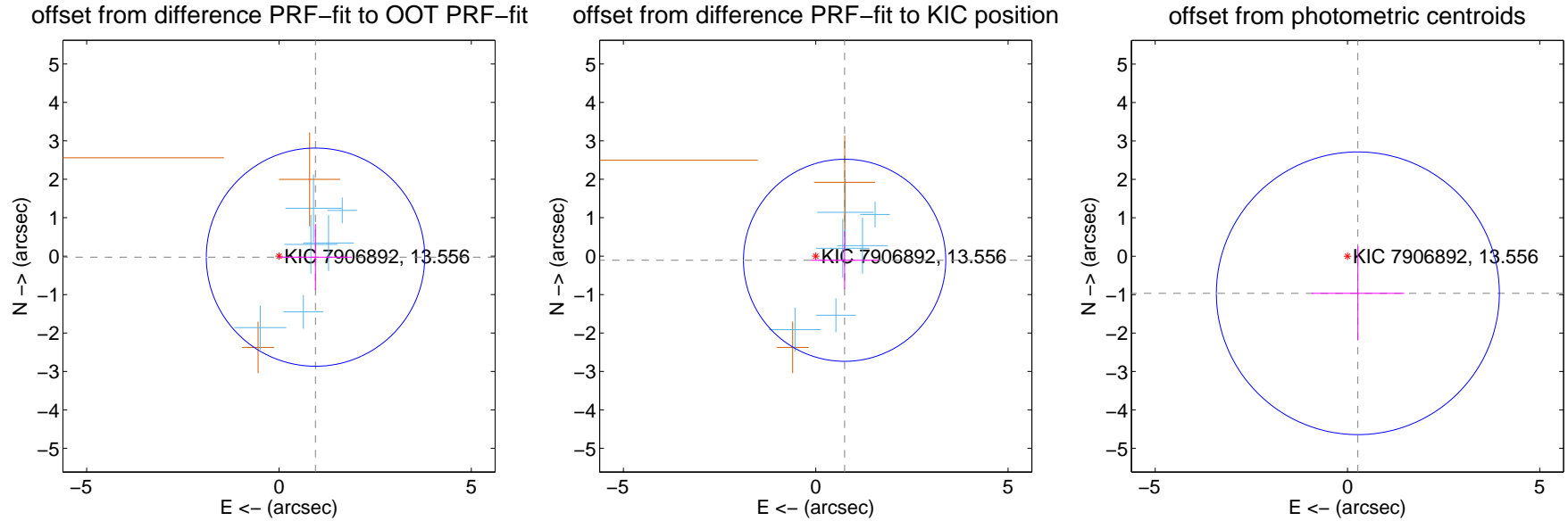
DV Centroid Data

Supplemental centroid analysis for 007906892-01. Kepler magnitude: 13.56. Transit SNR 8.47

There are 6 quarters with good PRF difference image offsets

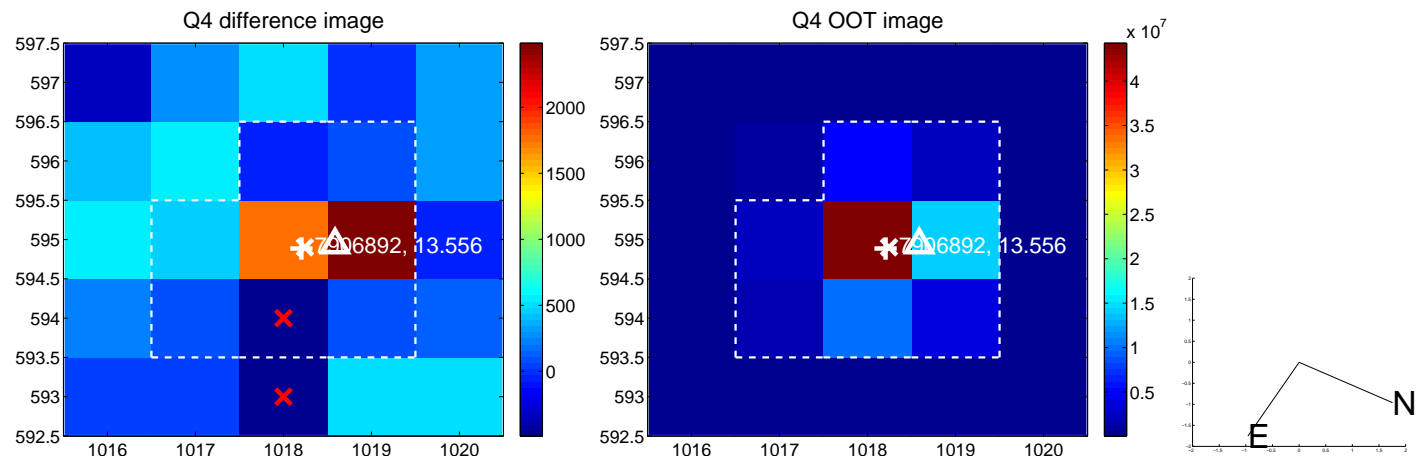
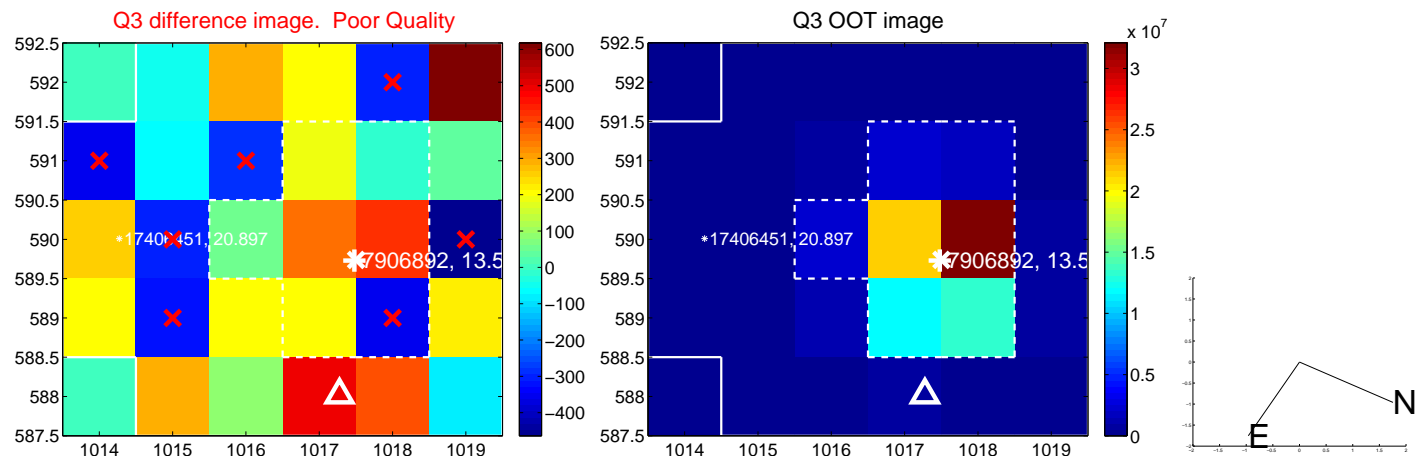
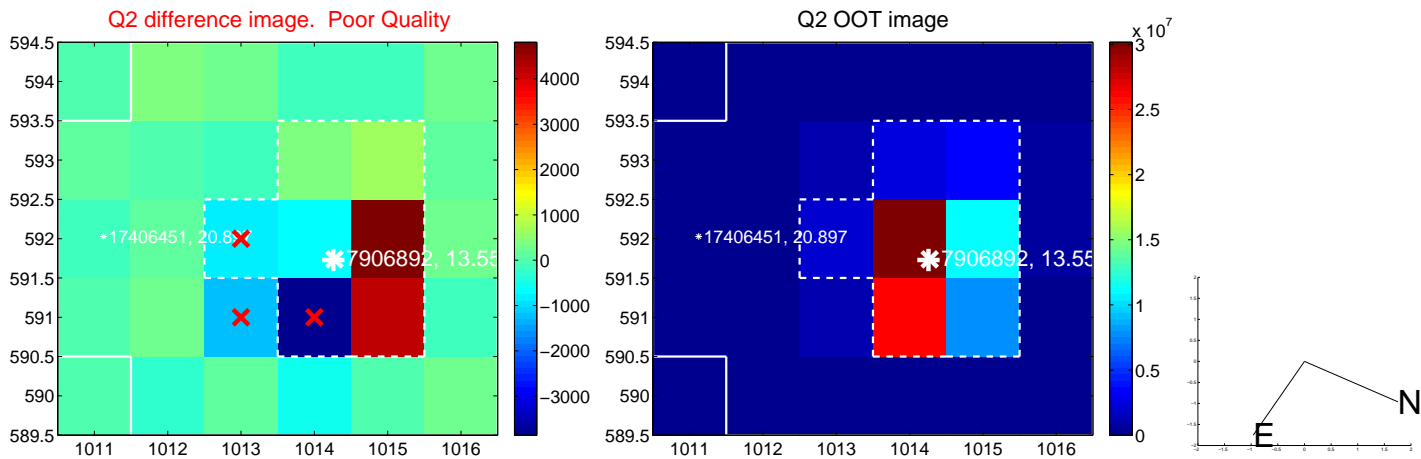
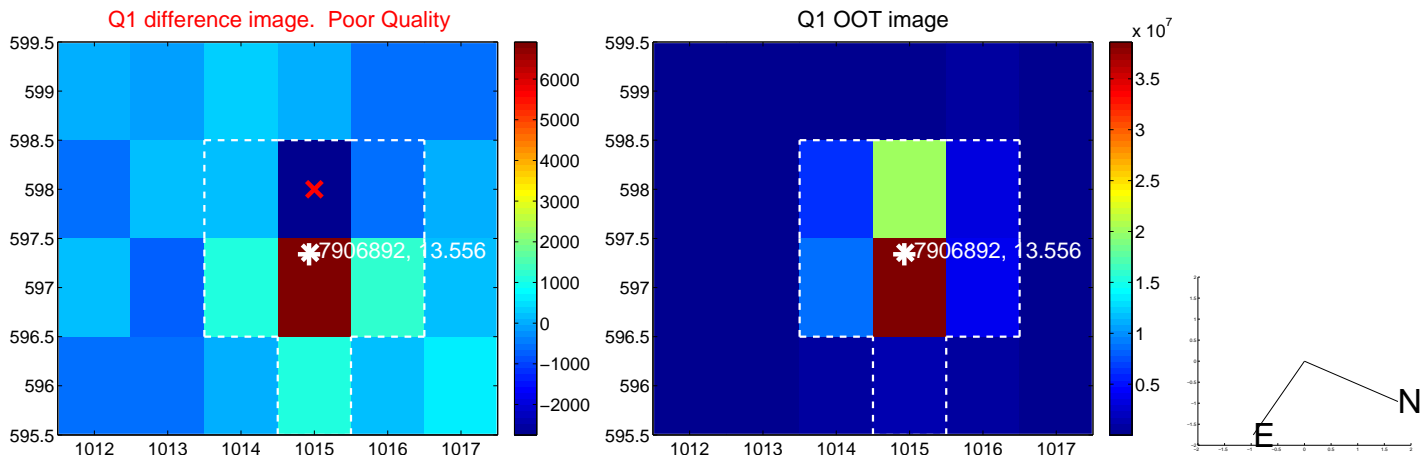
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.950 ± 0.947	1.00	-0.949 ± 0.946	-0.027 ± 0.860
PRF-fit source offset from KIC position	0.759 ± 0.877	0.87	-0.751 ± 0.874	-0.108 ± 0.749
photometric centroid source offset	1.00 ± 1.23	0.82	-0.27 ± 1.21	-0.97 ± 1.23

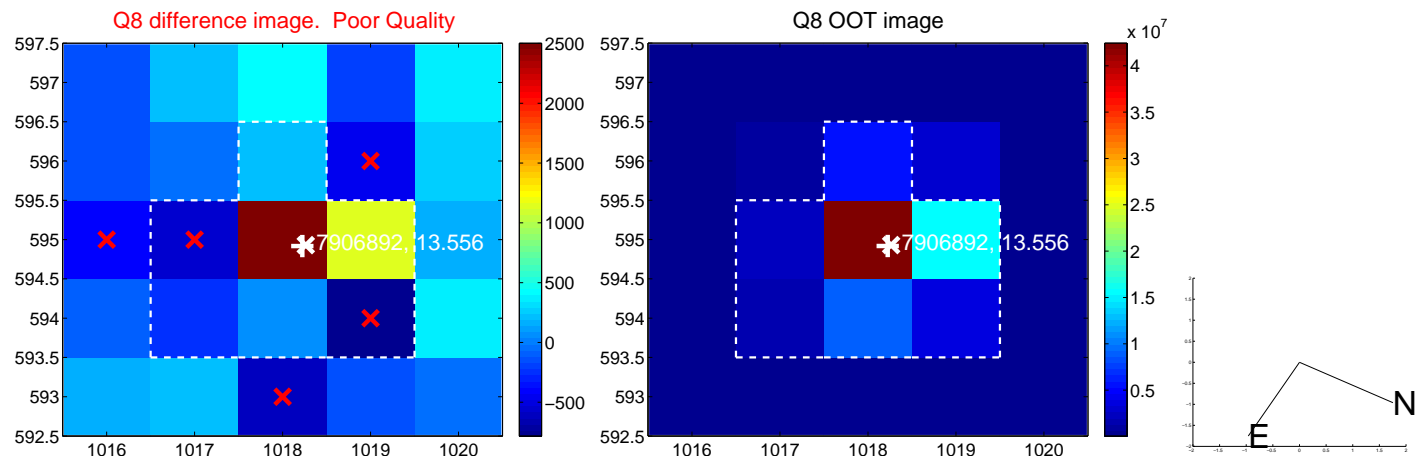
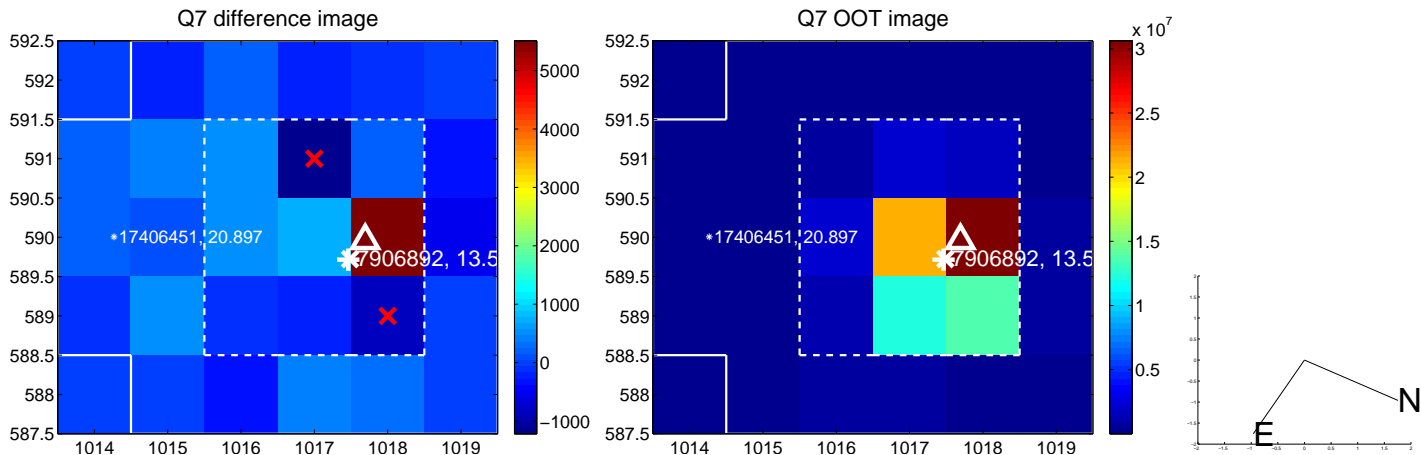
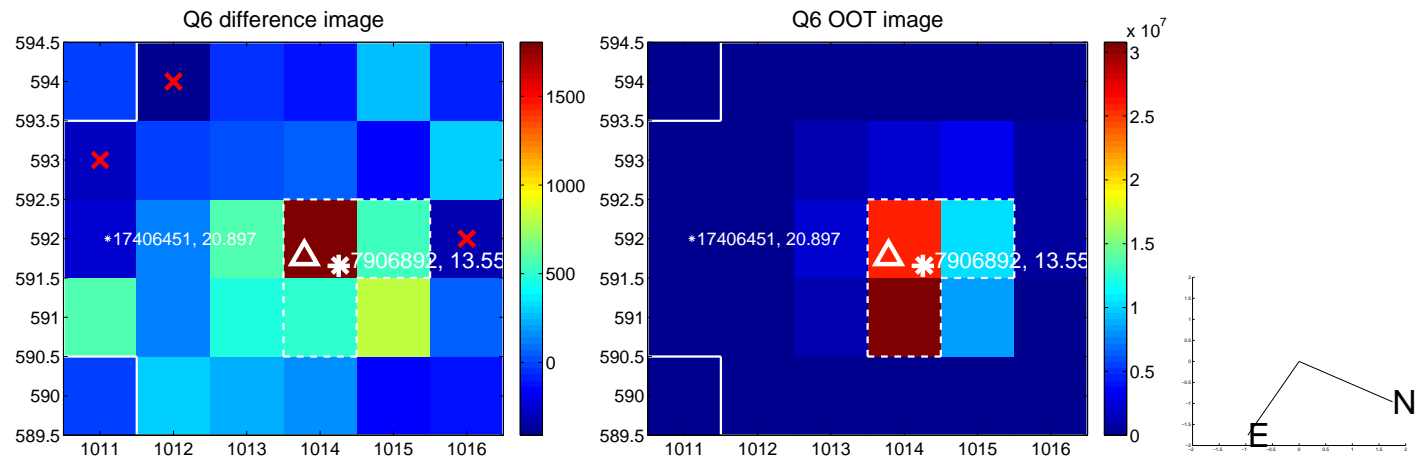
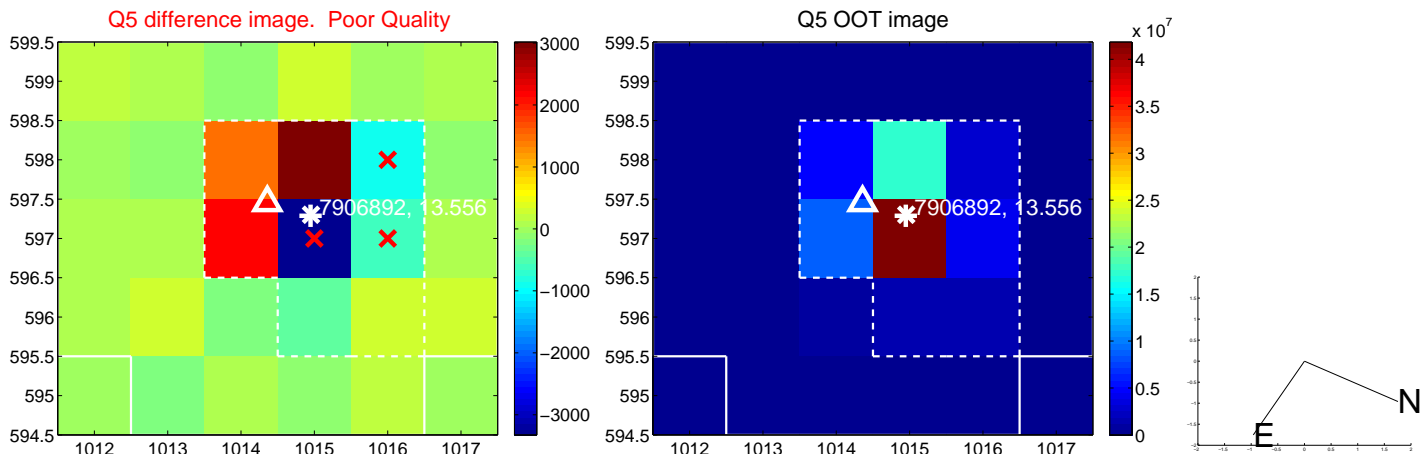


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

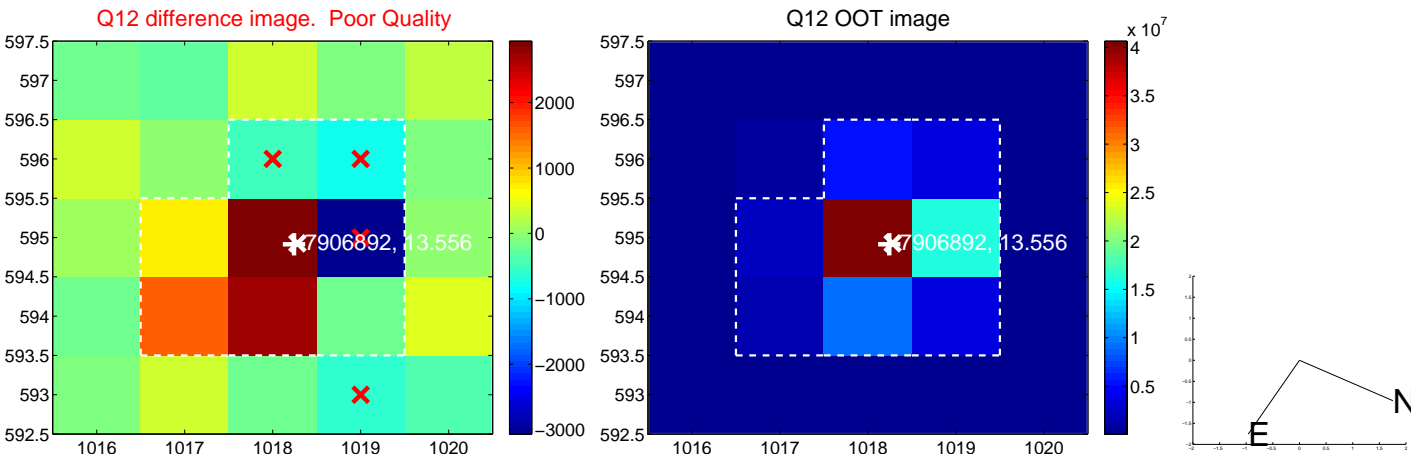
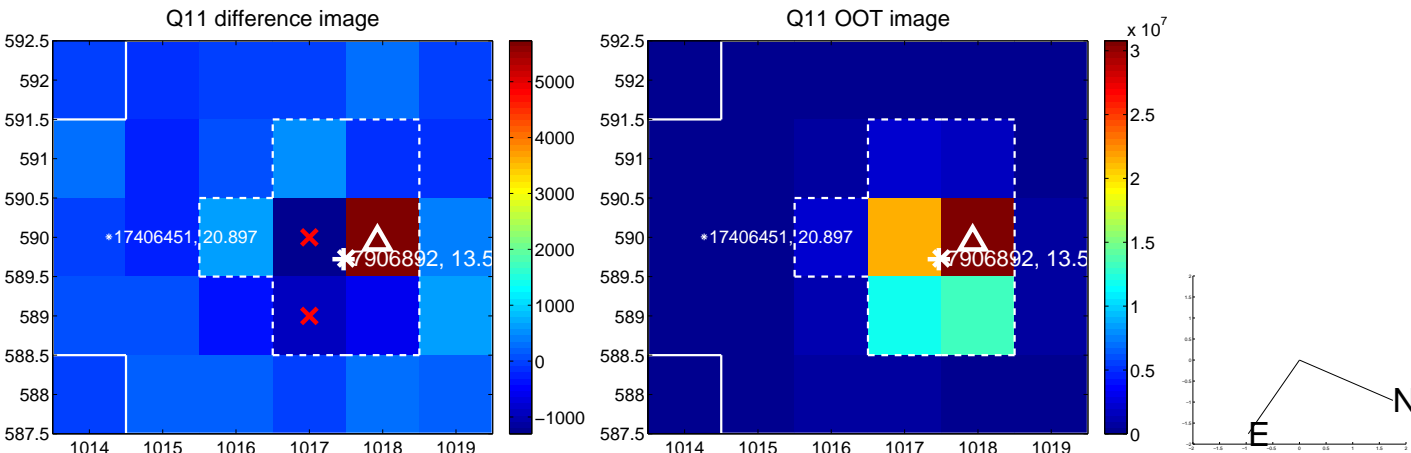
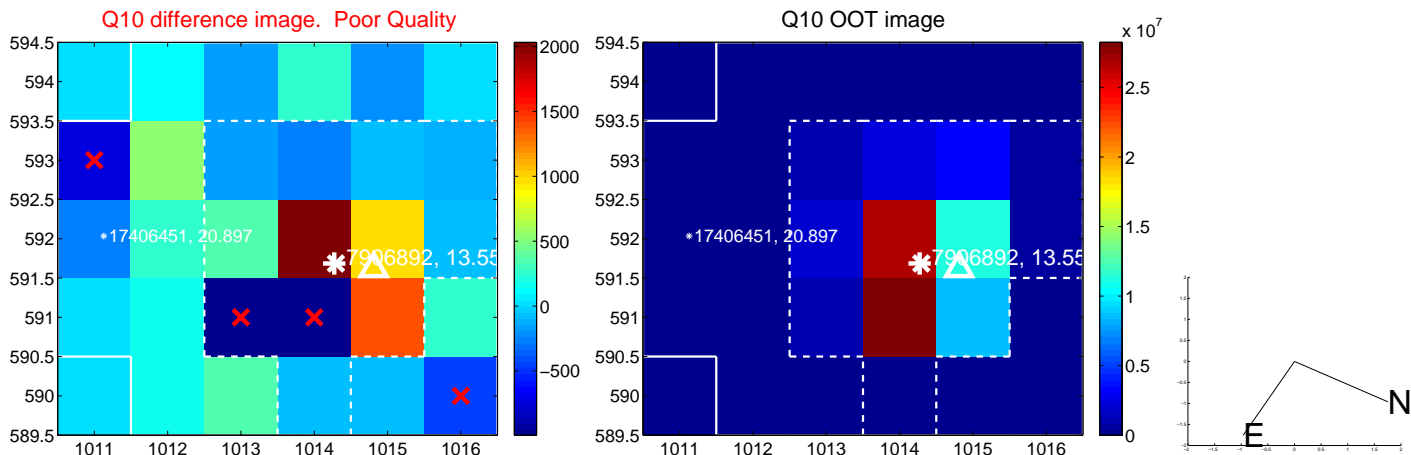
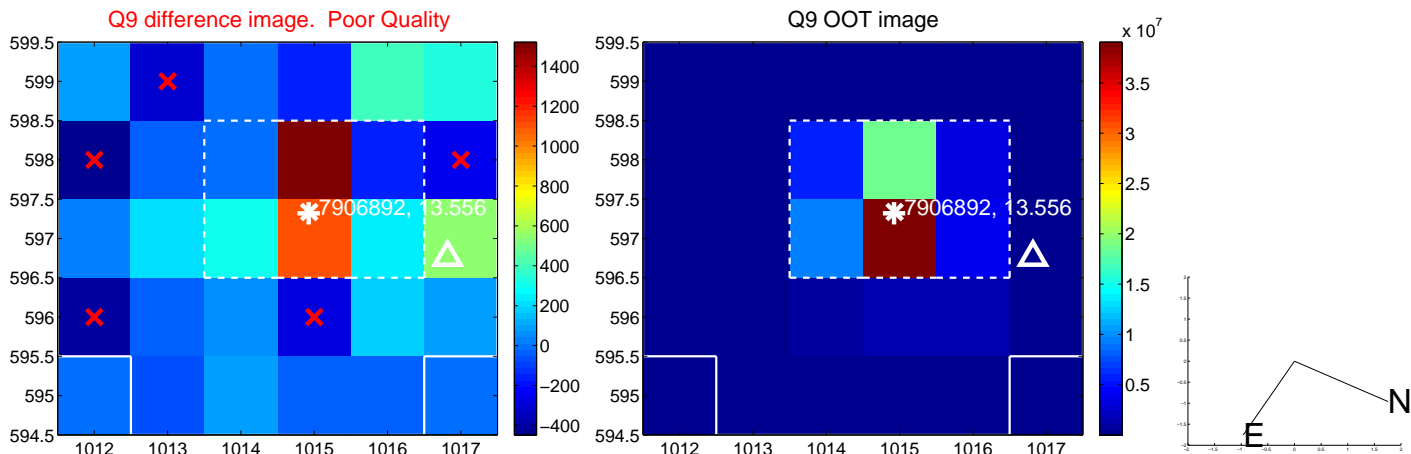
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



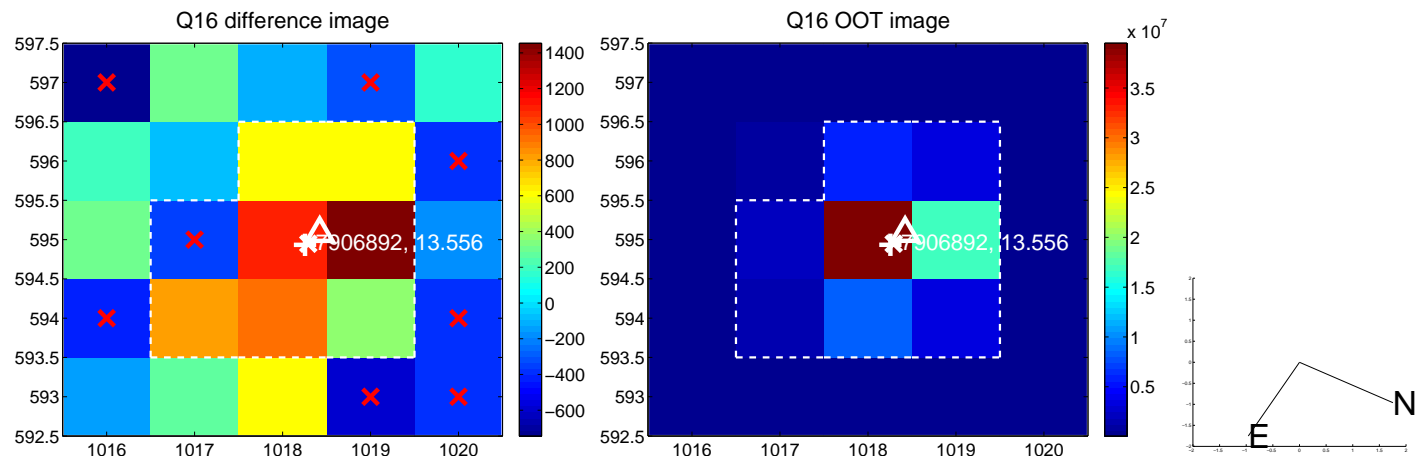
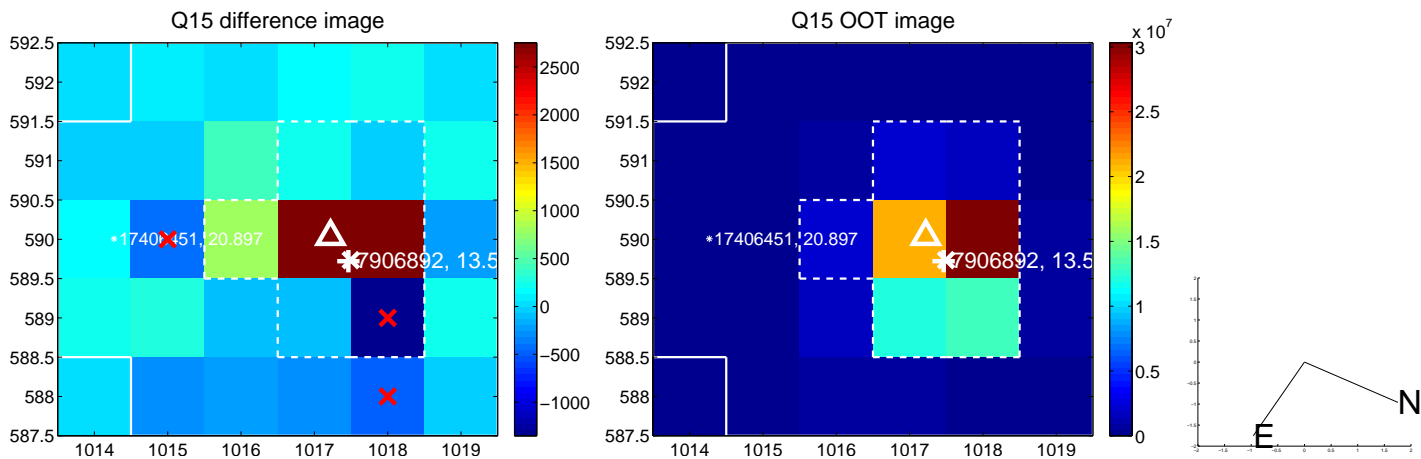
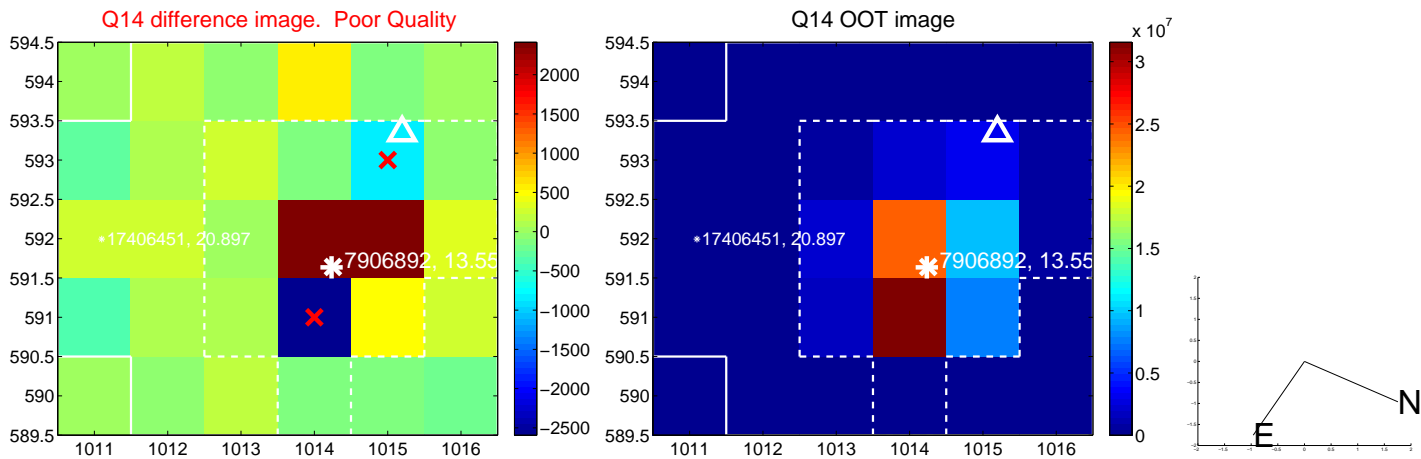
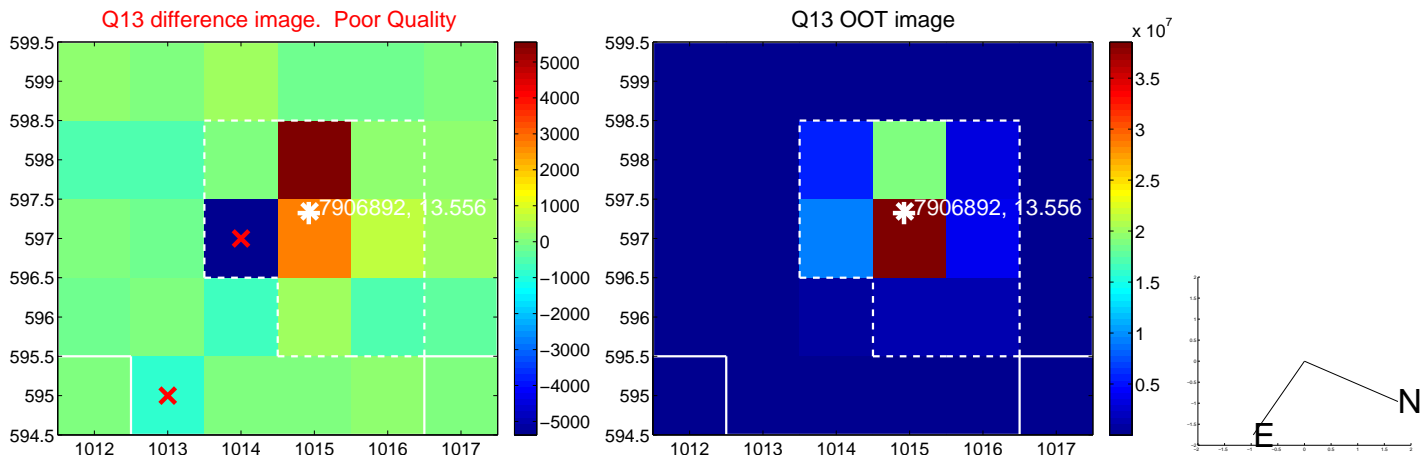
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



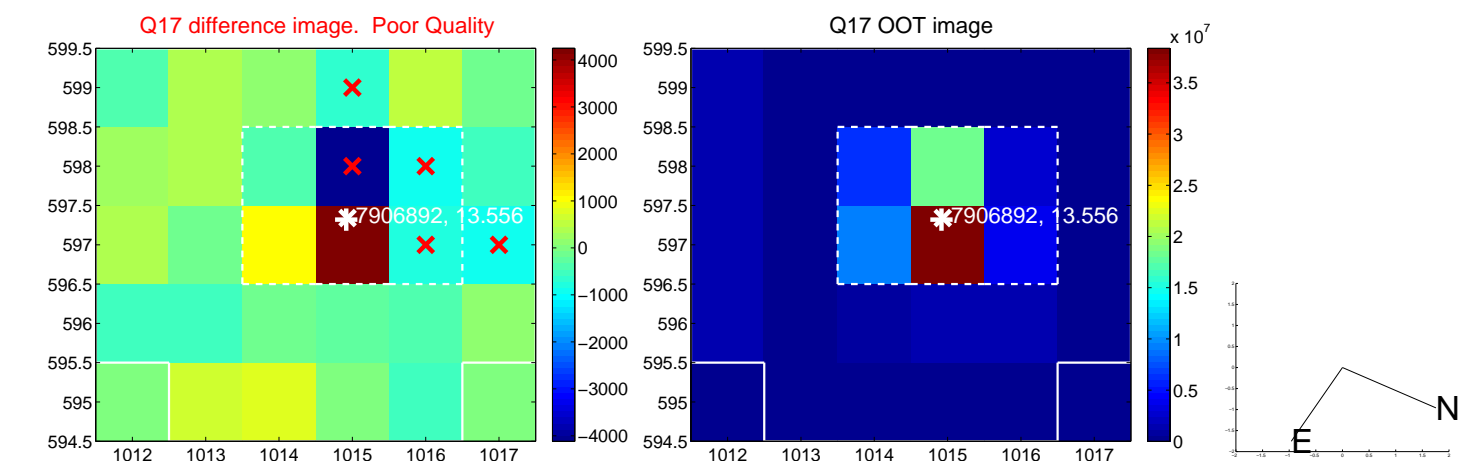
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



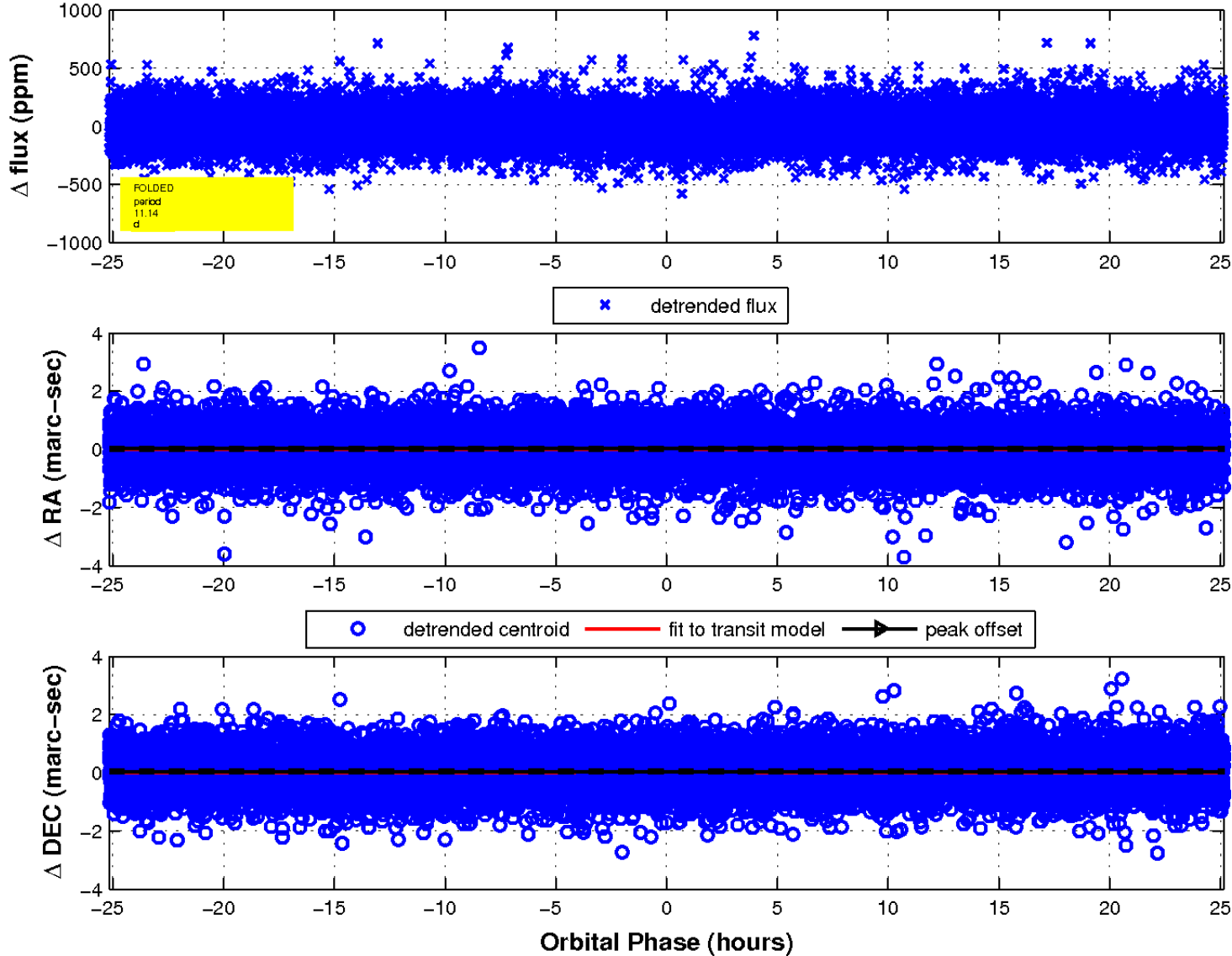
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

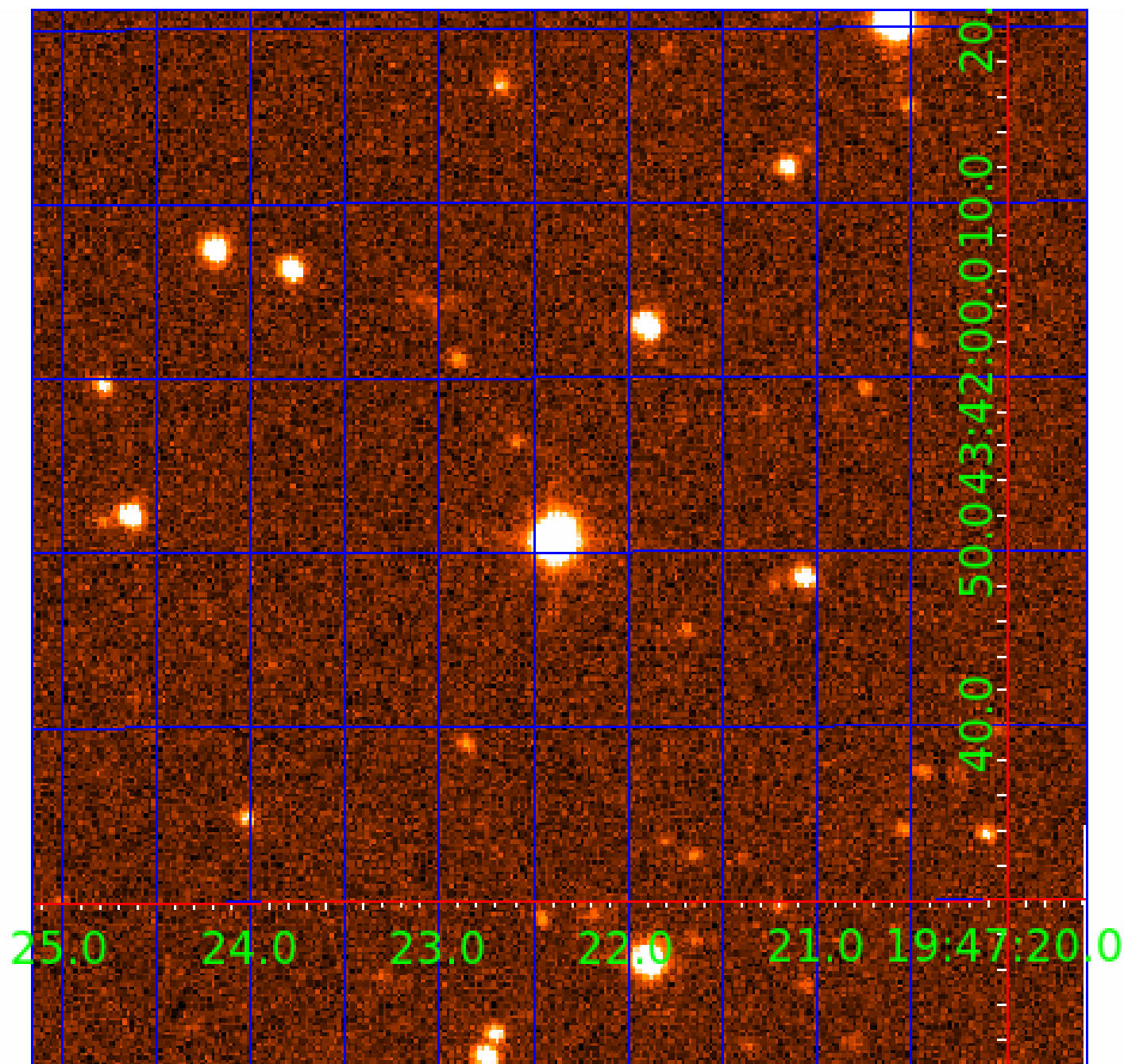


fluxWeightedCentroids, Planet 1 of 2



UKIRT Image

Declination



KIC 007906892

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})
007906892-01	OBS	4773.02	11.143609	131.742098	40.9	8.386	7.9	8.5	1.11	6095	0.79	159.33
007906892-02	OBS	4773.01	8.849339	139.790689	42.6	7.024	7.9	9.1	1.11	6095	0.84	216.67

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007906892-01	OBS	PC	0.99	0	0	0	0	NO_COMMENT
007906892-02	OBS	PC	0.52	0	0	0	0	NO_COMMENT

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 for comment definitions.

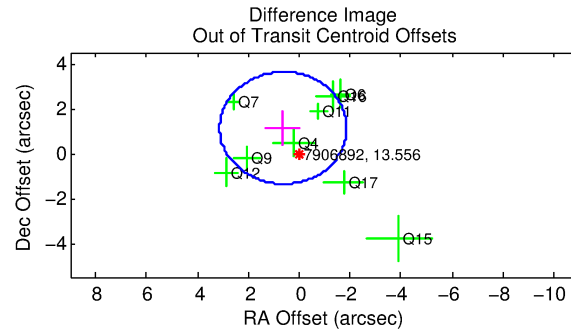
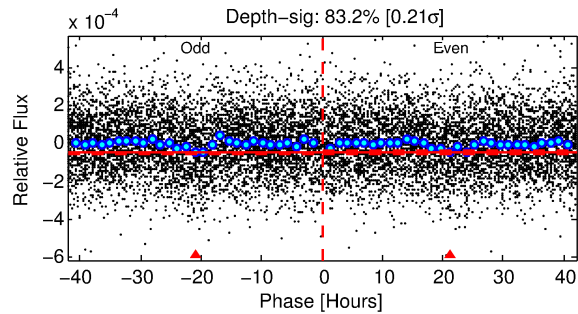
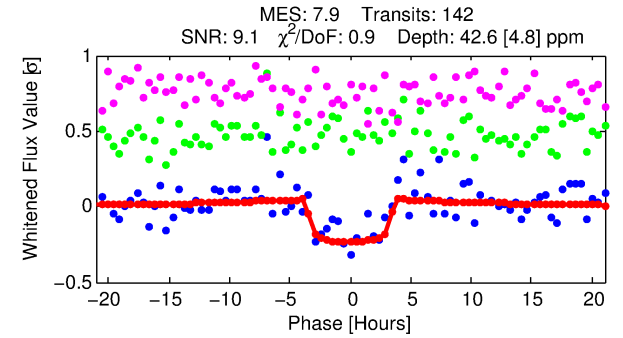
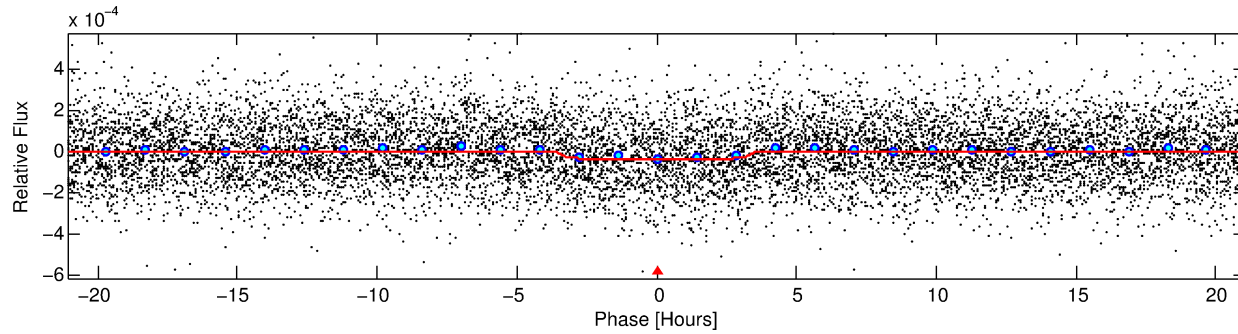
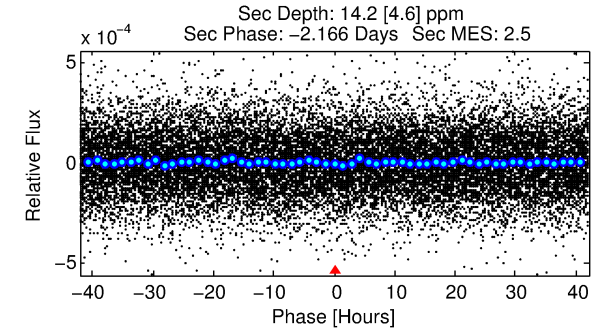
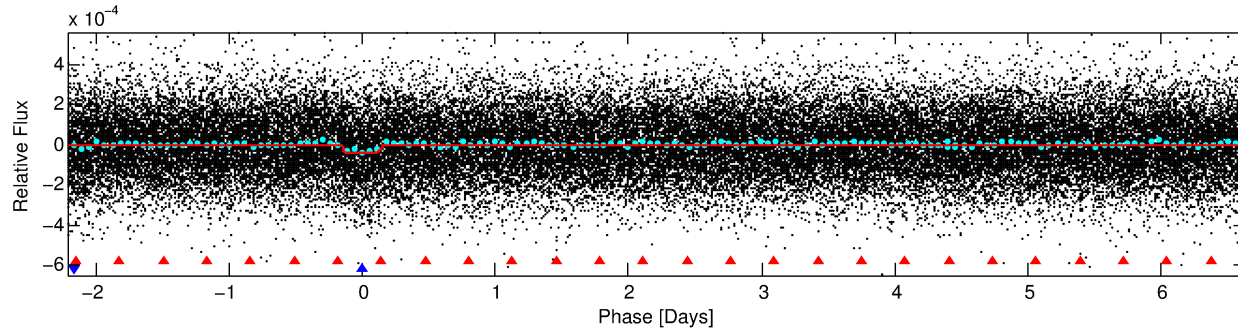
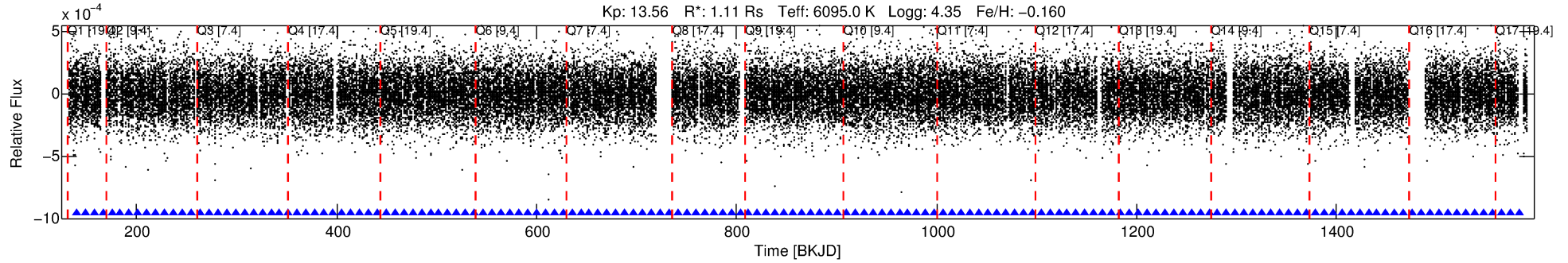
Ephemeris Match Information For 007906892-02

No Significant Match Found

DV One-Page Summary

KIC: 7906892 Candidate: 2 of 2 Period: 8.849 d

KOI: K04773.01 Corr: 0.993



DV Fit Results:

Period = 8.84934 [0.00013] d
Epoch = 139.7907 [0.0115] BKJD
Rp/R* = 0.0069 [0.0026]
a/R* = 4.78 [9.13]
b = 0.88 [0.51]
Seff = 216.67 [50.19]
Teq = 978 [57] K
Rp = 0.84 [0.35] Re
a = 0.0839 [0.0119] AU
Ag = 78.24 [66.93] [1.15σ]
Teffp = 4499 [937] K [3.75σ]

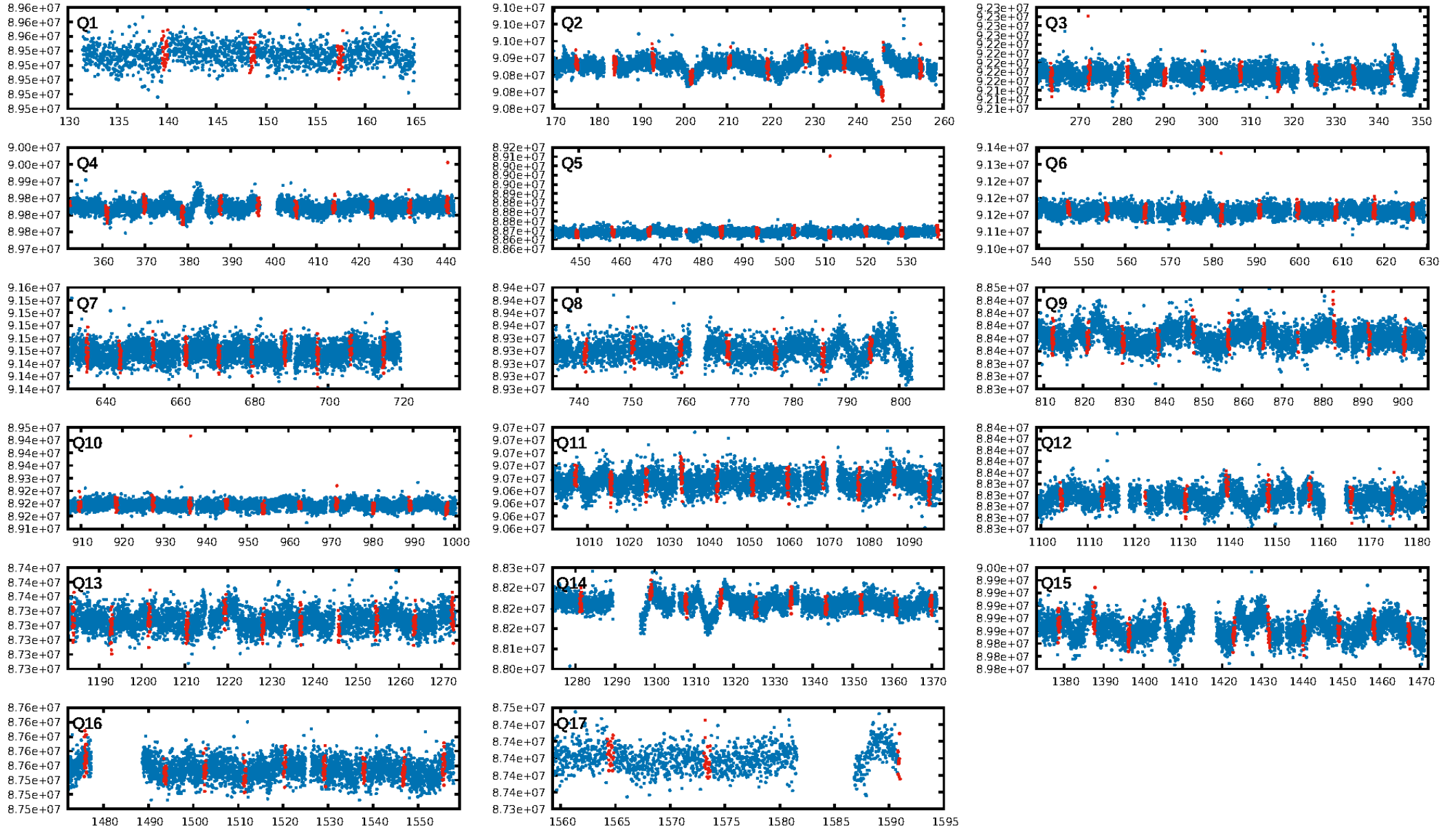
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [5.03σ]
ModelChiSquare2-sig: 99.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.84e-14
RollingBand-fgt: 1.00 [136/136]
GhostDiagnostic-chr: 3.335
Centroid-sig: 0.3%
Centroid-so: 2.520 arcsec [2.26σ]
OotOffset-rm: 1.298 arcsec [1.56σ]
KicOffset-rm: 1.281 arcsec [1.40σ]
OotOffset-st: 1/3/3/2 [9]
KicOffset-st: 1/3/3/2 [9]
DiffImageQuality-fgm: 0.78 [7/9]
DiffImageOverlap-fno: 1.00 [17/17]

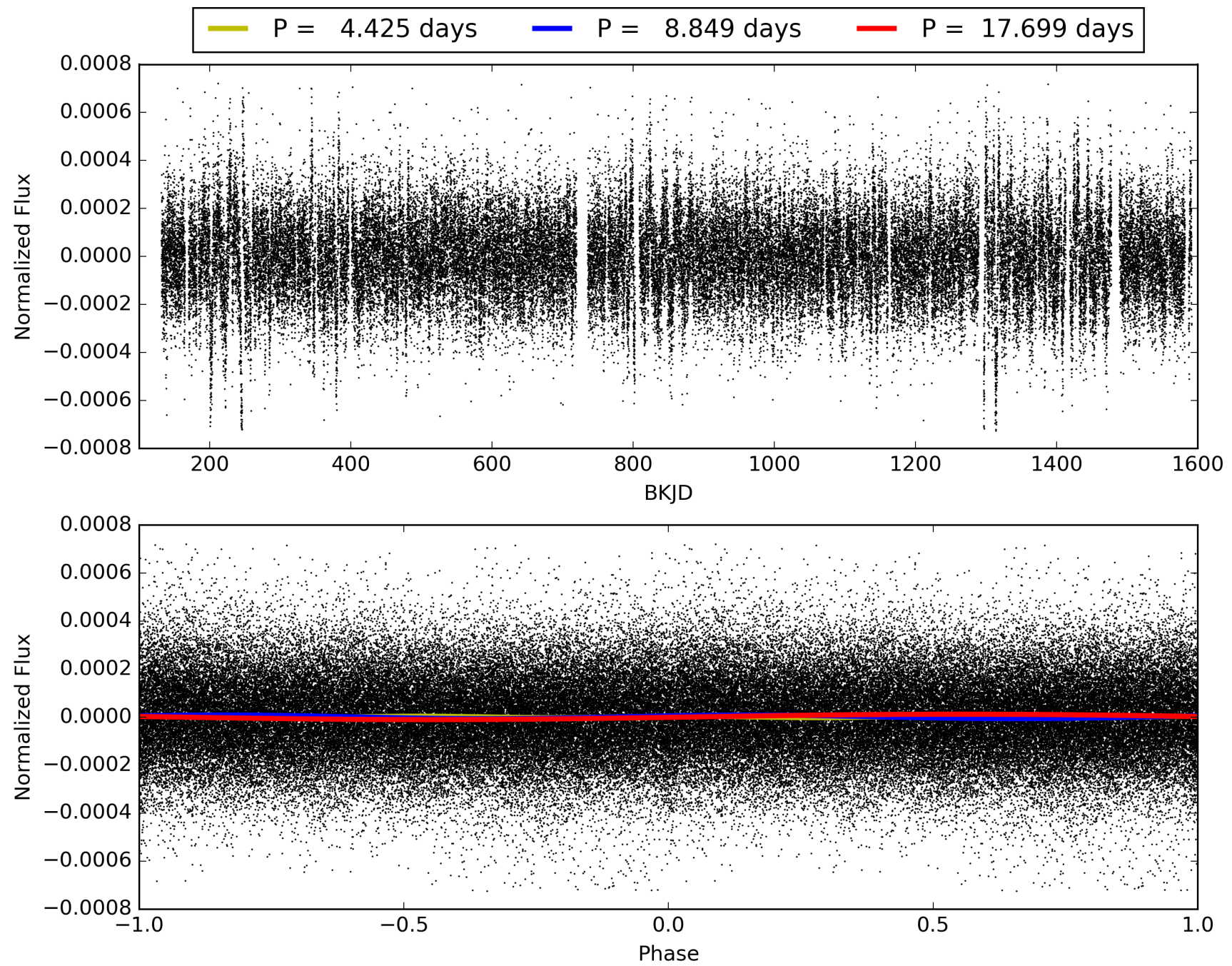
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:21:25 Z

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

TCE 007906892-02, PDC Light Curves

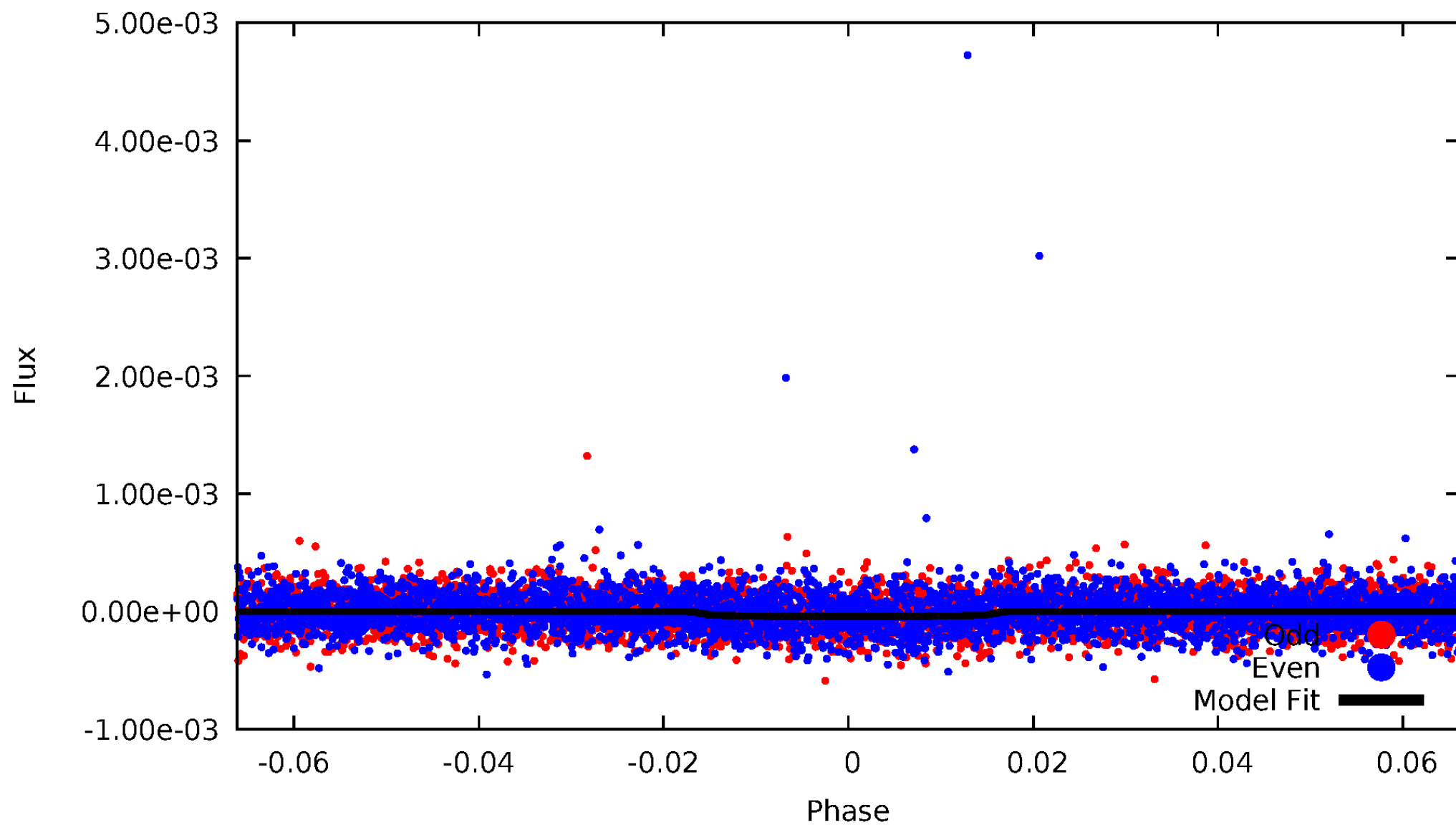


TCE 007906892-02



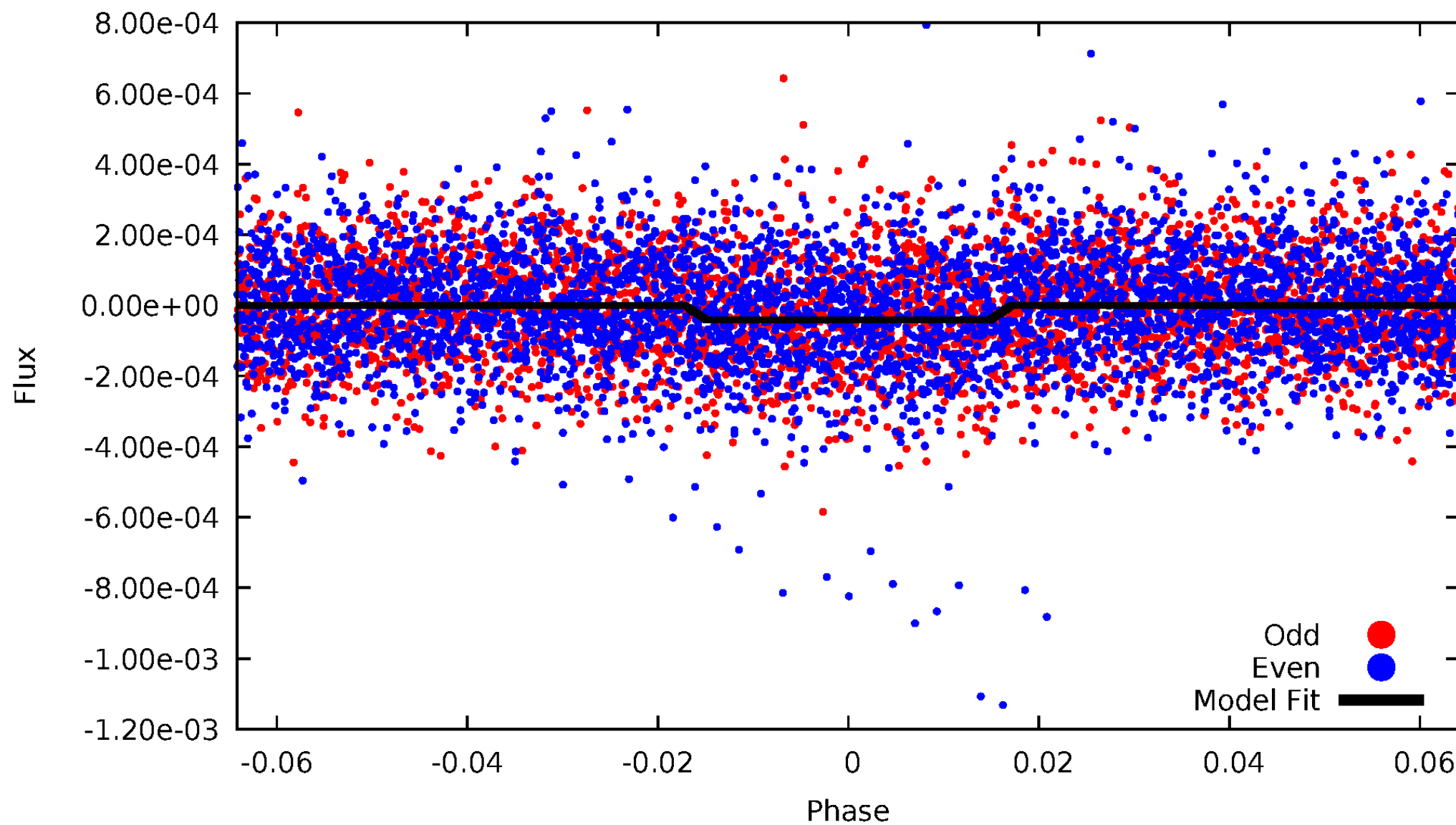
DV Odd/Even

TCE 007906892-02



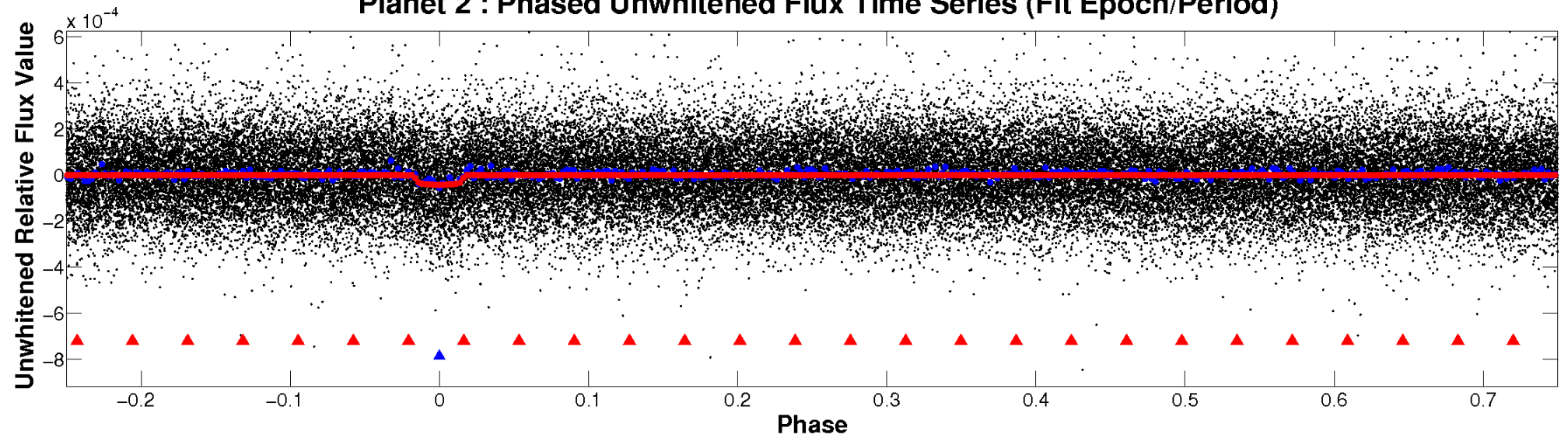
ALT Odd/Even

TCE 007906892-02

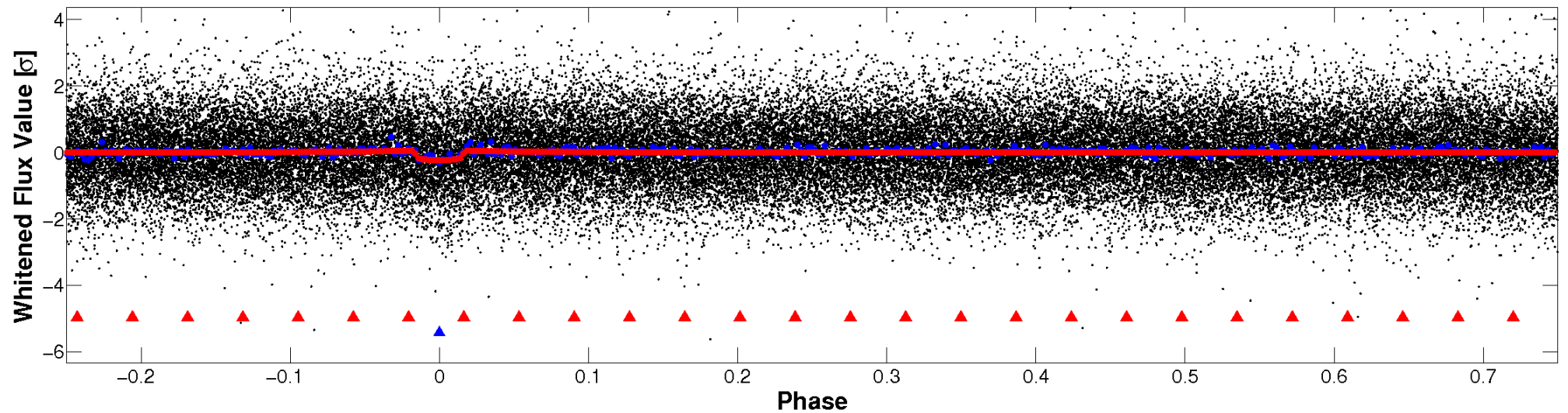


Non-Whitened Vs. Whitened Light Curve

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

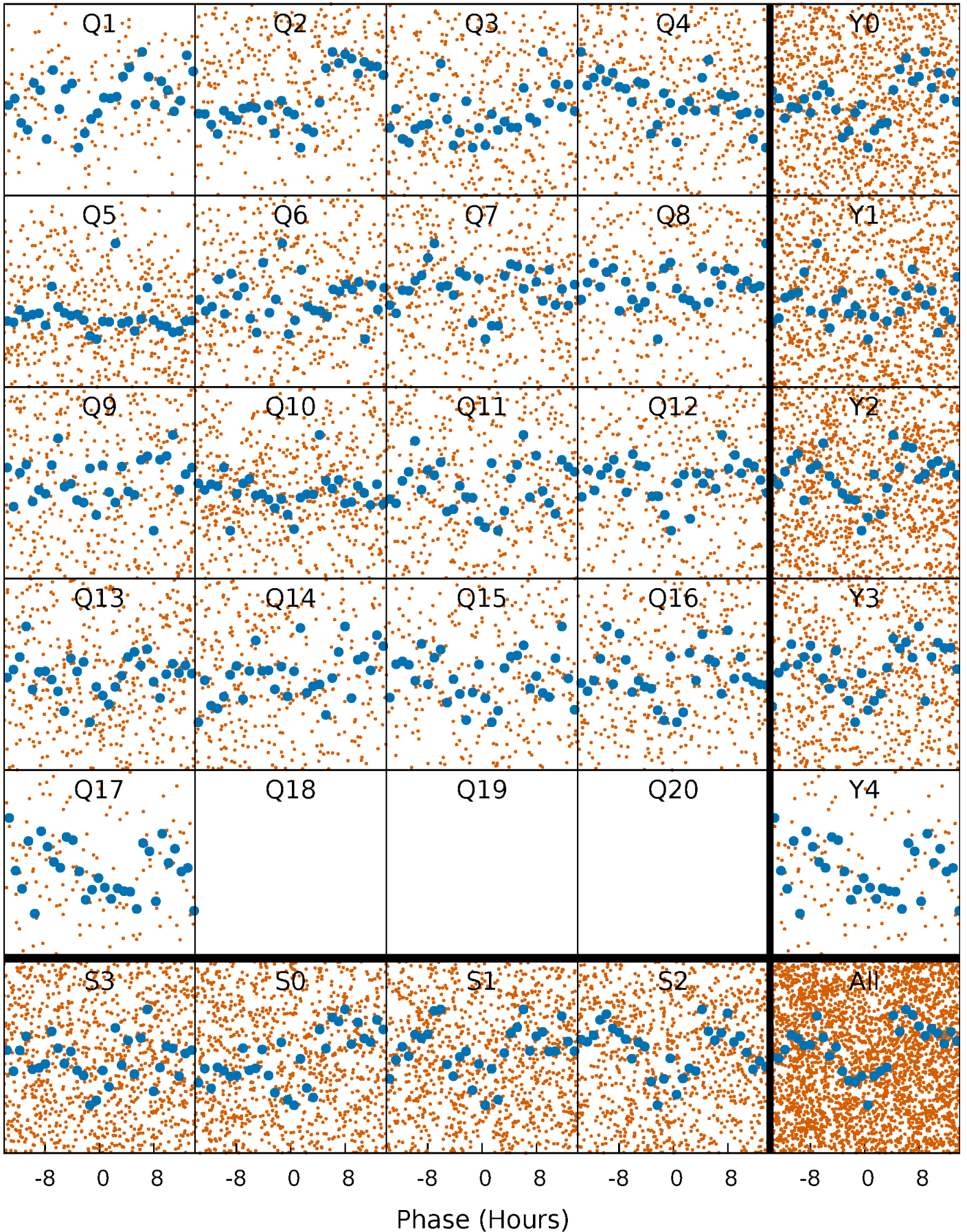


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



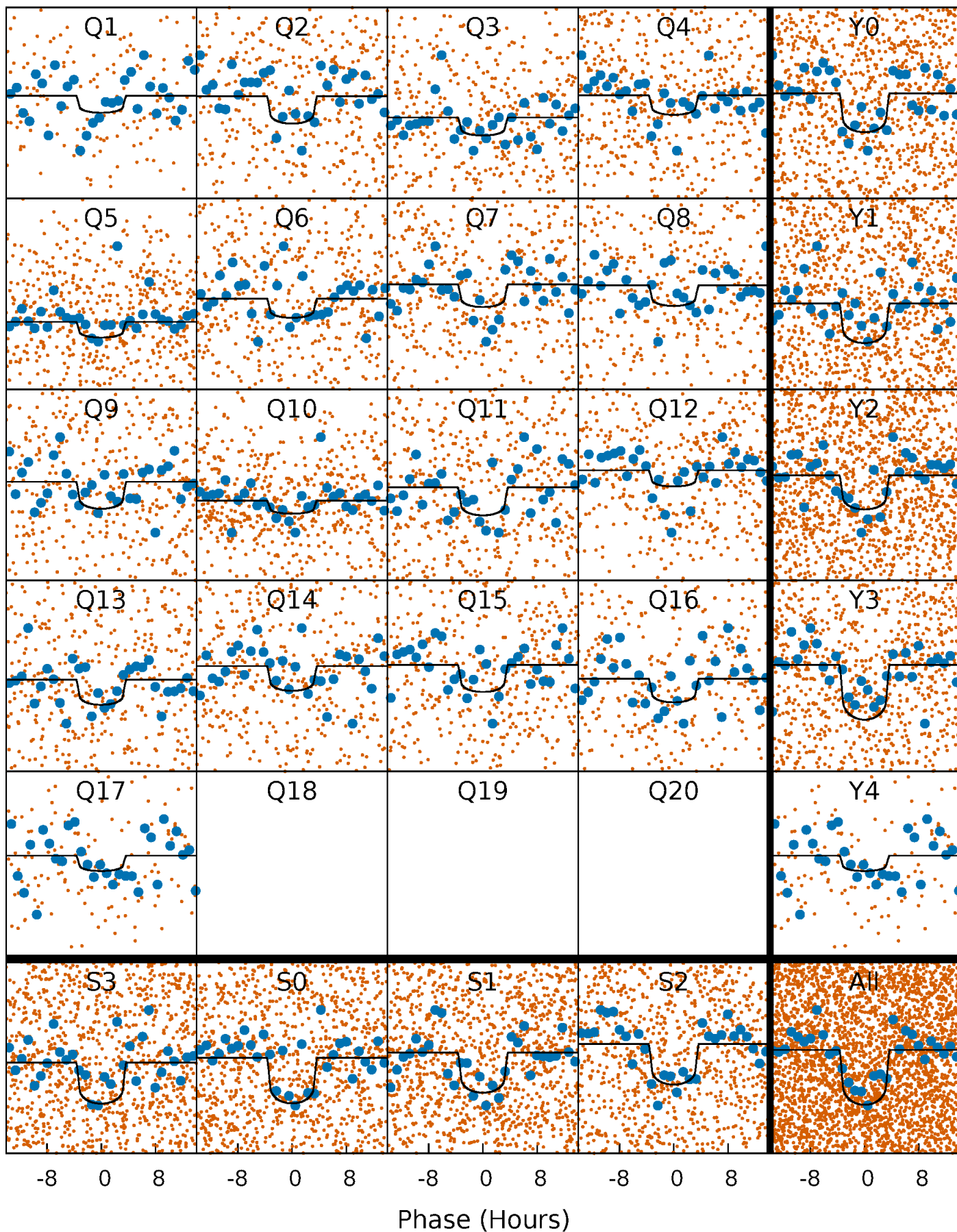
PDC Quarter-Phased Transit Curves

TCE 007906892-02 P= 8.849339 Days $T_0=139.790689$ (BKJD)



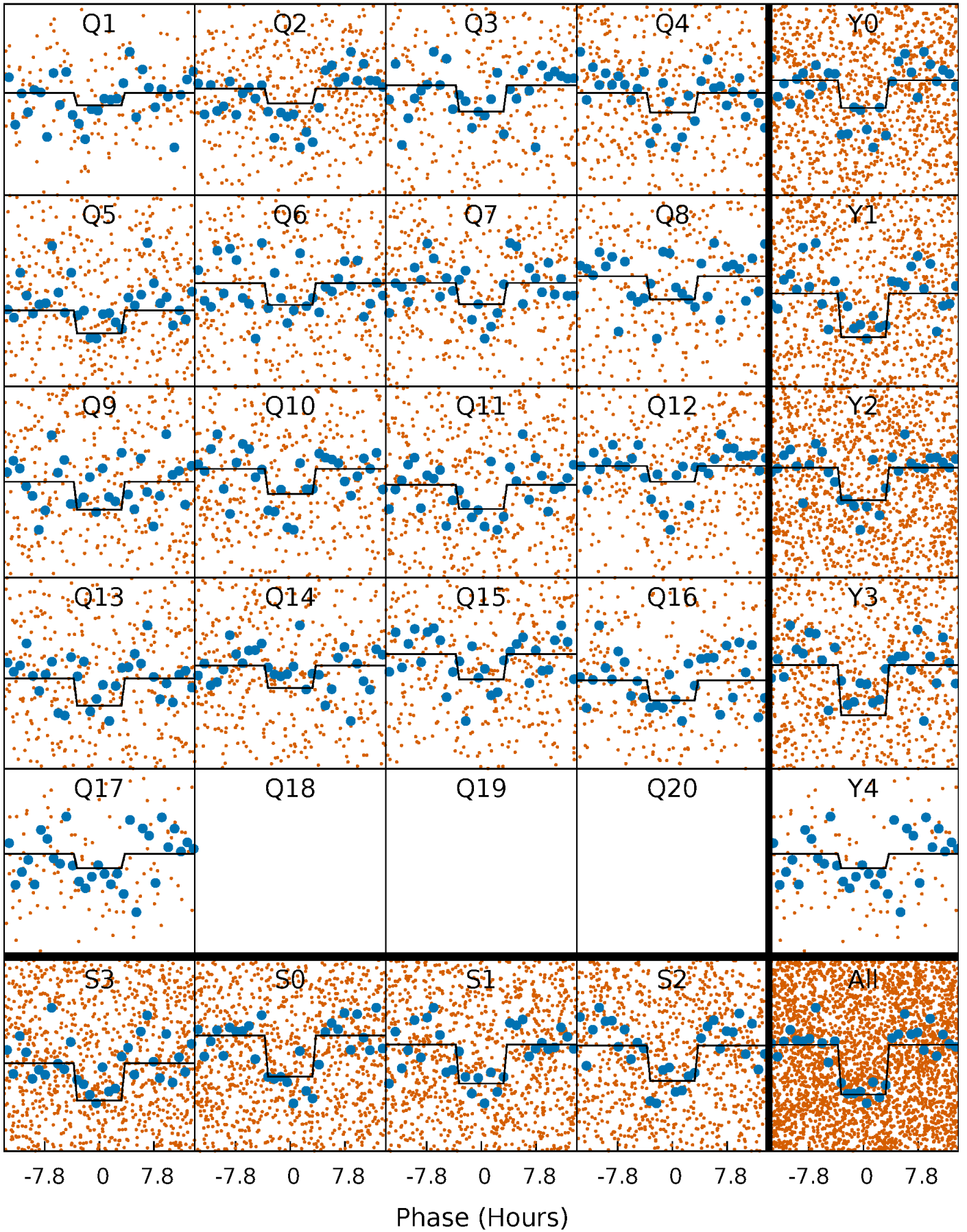
DV Quarter-Phased Transit Curves

TCE 007906892-02 P= 8.849339 Days $T_0=139.790689$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

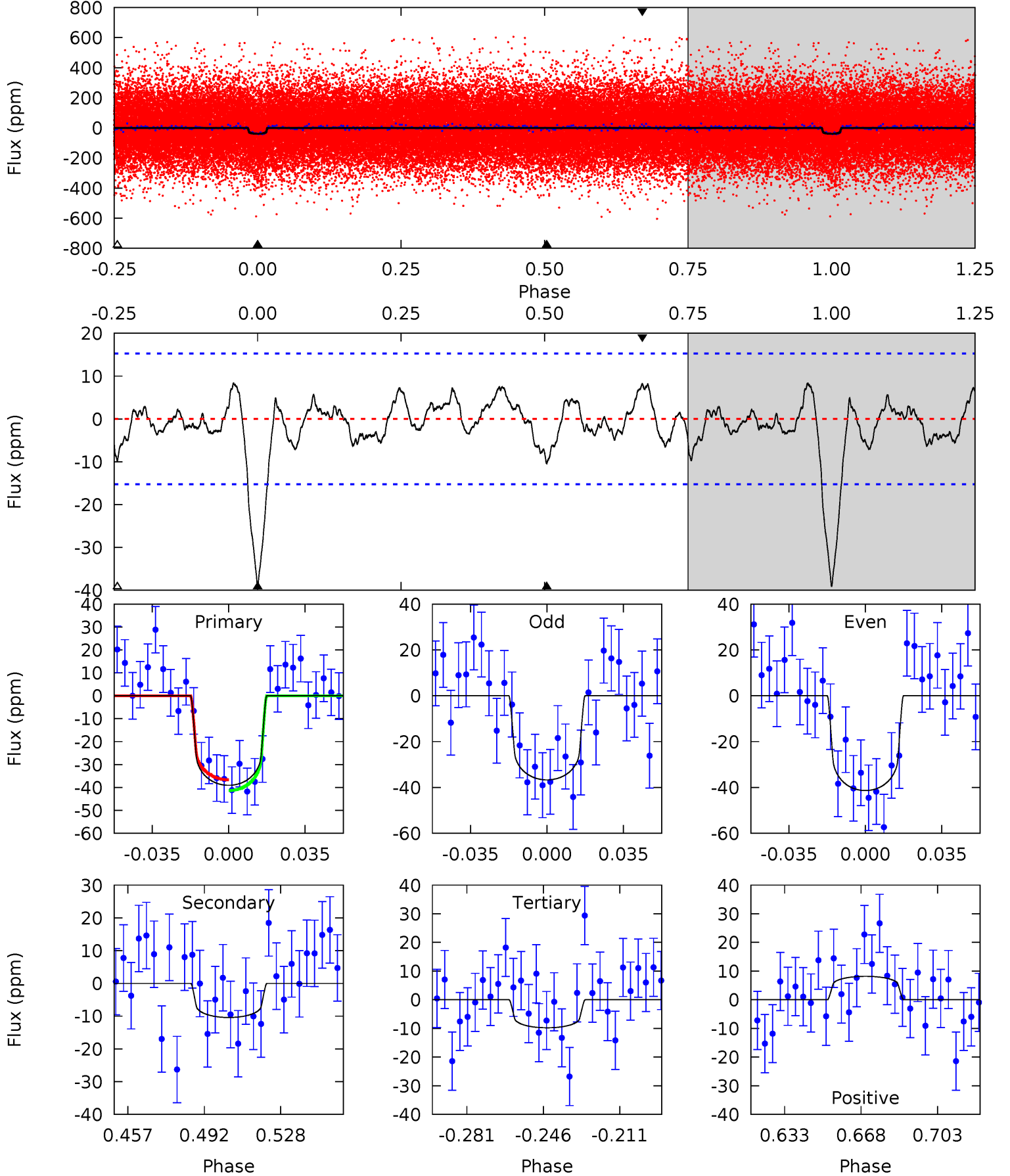
TCE 007906892-02 P= 8.849365 Days $T_0=139.790337$ (BKJD)



DV Model-Shift Uniqueness Test

007906892-02, P = 8.849339 Days, E = 130.941350 Days

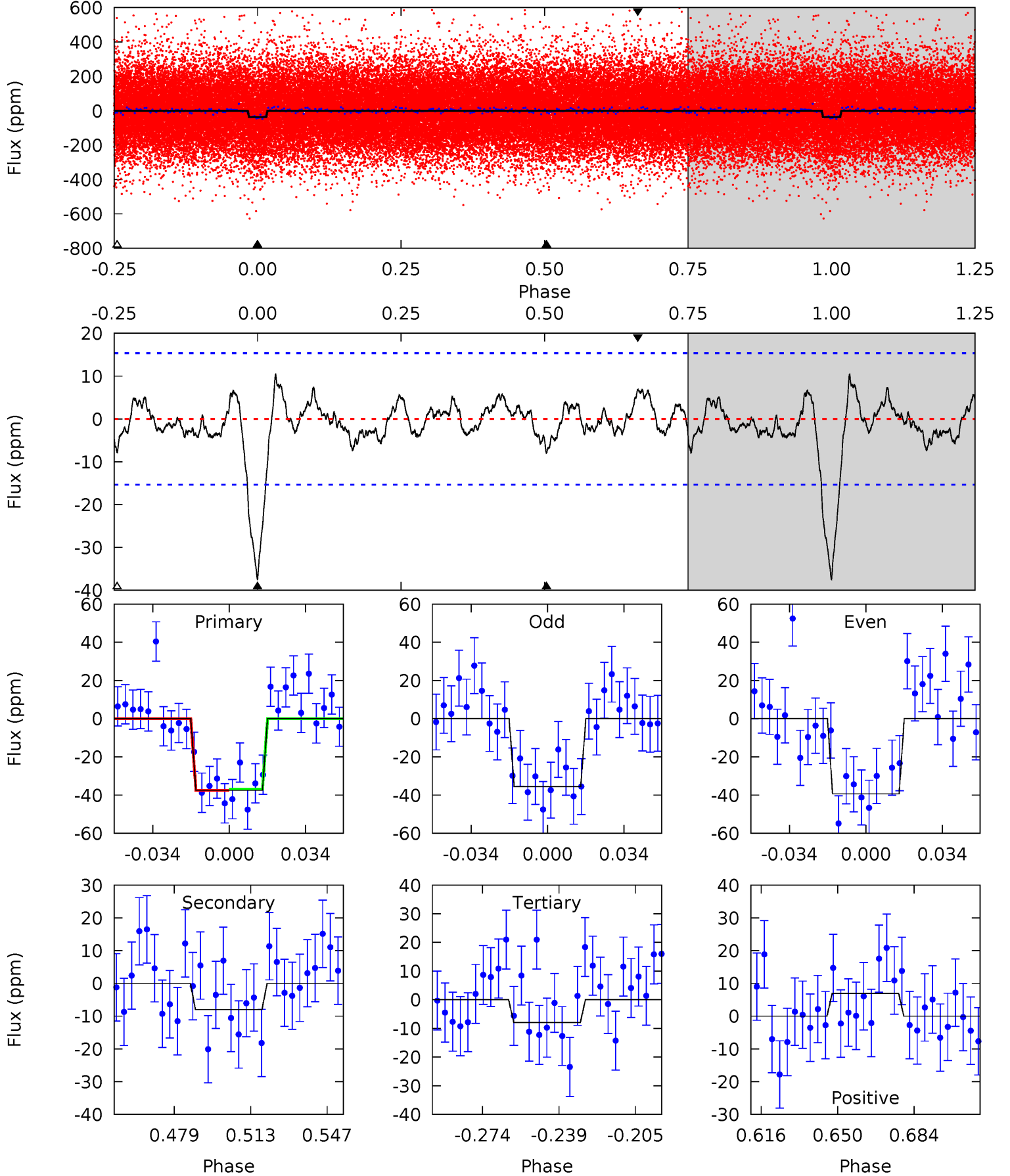
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.2	3.26	3.06	2.56	4.78	2.11	1.14	9.16	9.67	0.20	0.70	0.73	0.89	0.17	0.74



Alt Model-Shift Uniqueness Test

007906892-02, P = 8.849365 Days, E = 130.940972 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.7	2.49	2.48	2.16	4.78	2.12	0.99	9.19	9.51	0.01	0.33	0.59	0.89	0.22	0.10



Stellar Parameters For KIC 007906892

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6095^{+122}_{-134}	$4.349^{+0.099}_{-0.121}$	$-0.160^{+0.150}_{-0.150}$	$1.110^{+0.178}_{-0.119}$	$1.004^{+0.081}_{-0.059}$	$1.034^{+0.423}_{-0.354}$
	+2%/-2%	+2%/-3%	+94%/-94%	+16%/-11%	+8%/-6%	+41%/-34%
Source	SPE12	SPE12	SPE12	DSEP		

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

Secondary Eclipse Parameters for KIC 007906892-02 / KOI 4773.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-10 ± 3	$0.87^{+0.33}_{-0.35}$	1371^{+69}_{-57}	4303^{+947}_{-508}	52^{+93}_{-28}
Alt.	-8 ± 3	$0.77^{+0.34}_{-0.29}$	1367^{+64}_{-55}	4257^{+1040}_{-619}	48^{+95}_{-28}

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 $A_{obs} \gg 1.0$

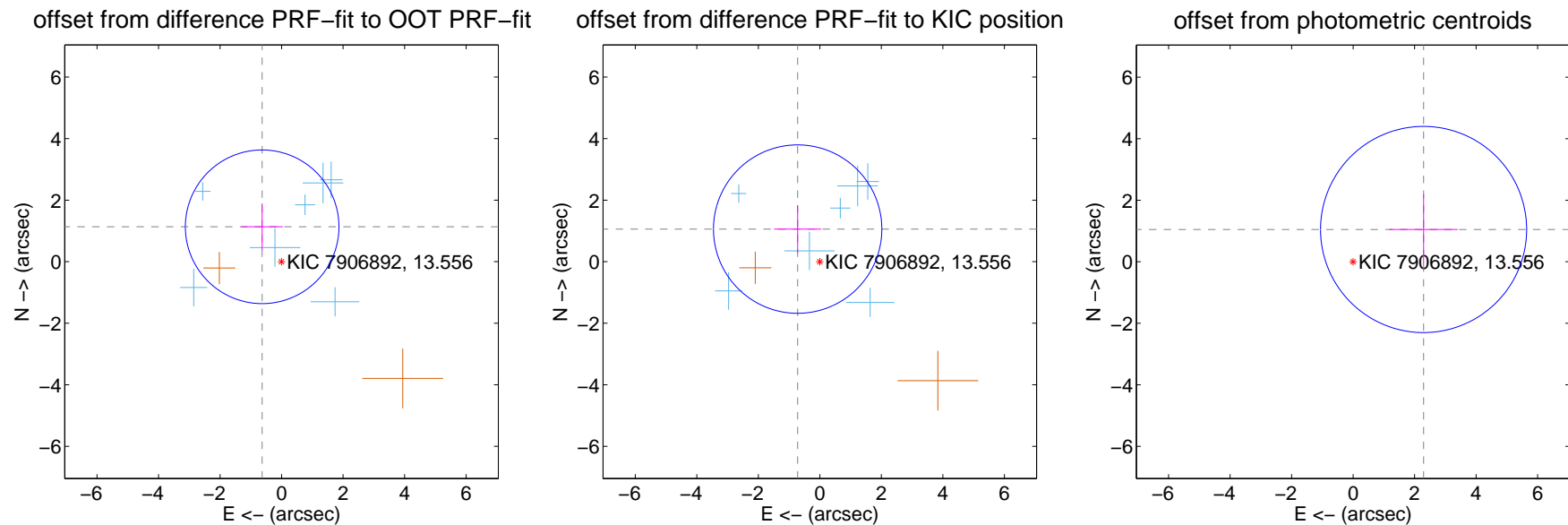
DV Centroid Data

Supplemental centroid analysis for 007906892-02. Kepler magnitude: 13.56. Transit SNR 9.05

There are 7 quarters with good PRF difference image offsets

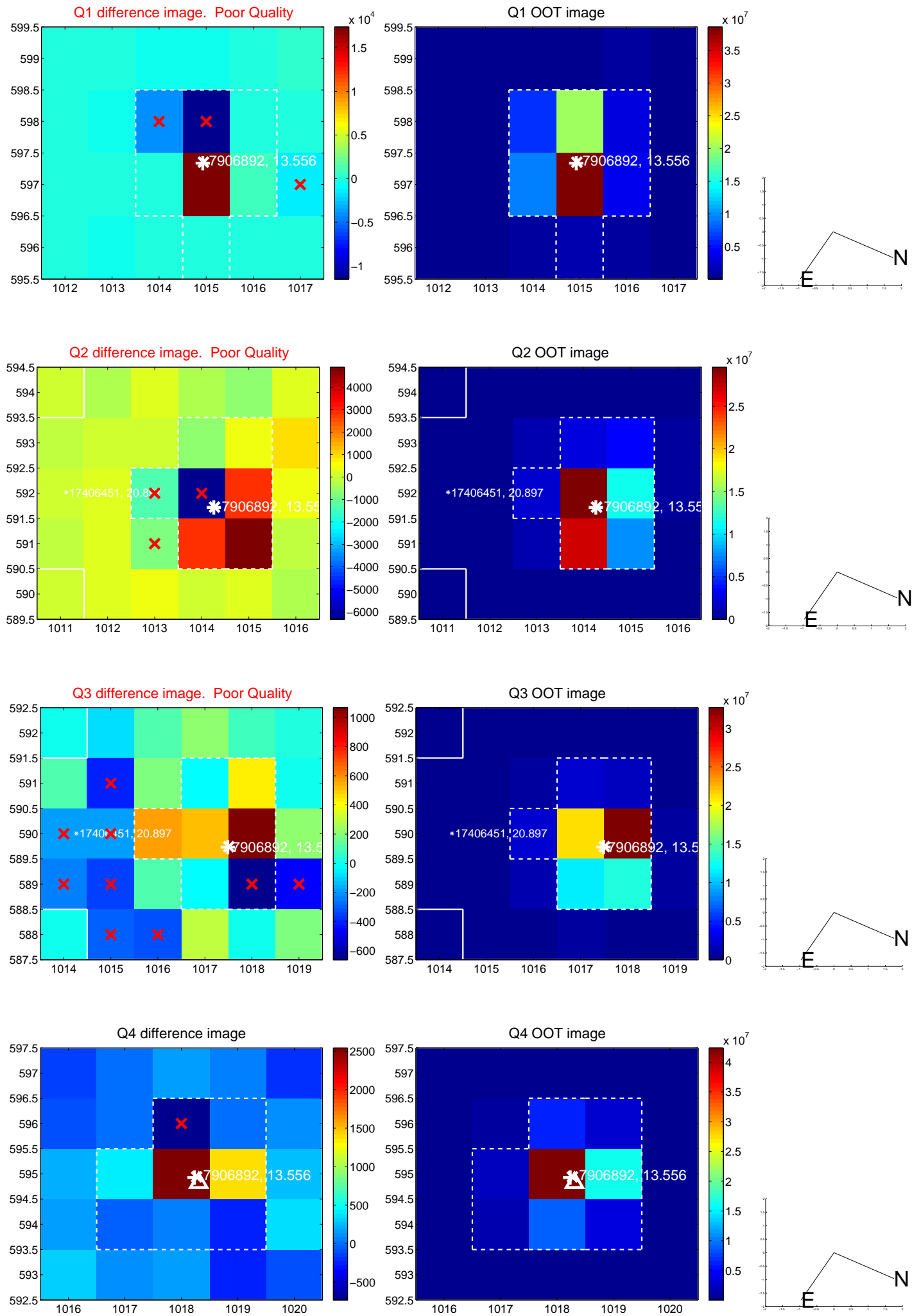
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.298 ± 0.832	1.56	0.632 ± 0.675	1.134 ± 0.760
PRF-fit source offset from KIC position	1.281 ± 0.912	1.40	0.722 ± 0.766	1.059 ± 0.773
photometric centroid source offset	2.52 ± 1.12	2.26	-2.29 ± 1.11	1.05 ± 1.14

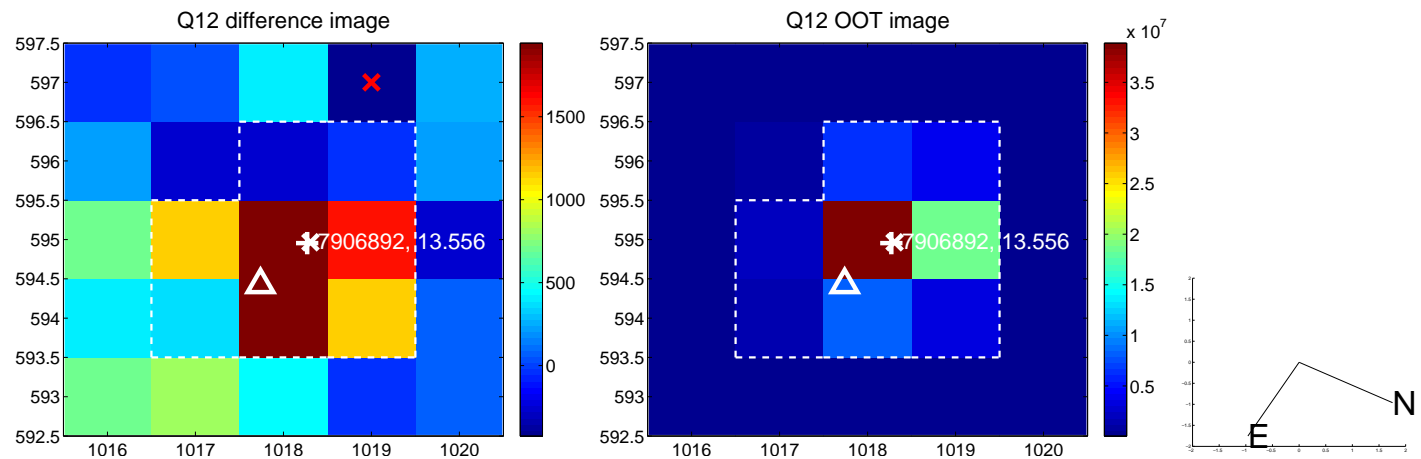
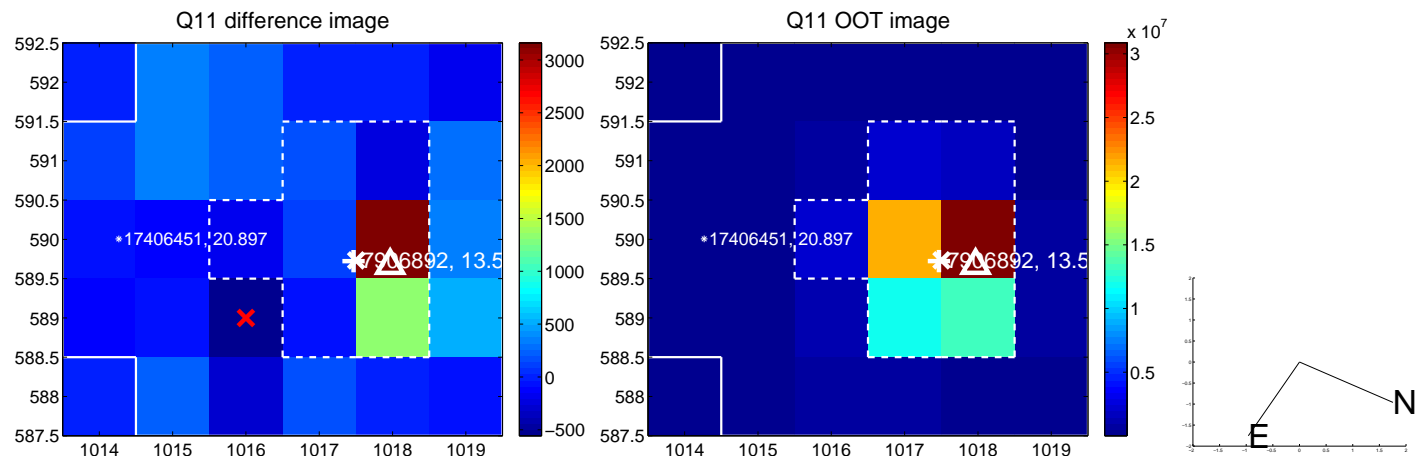
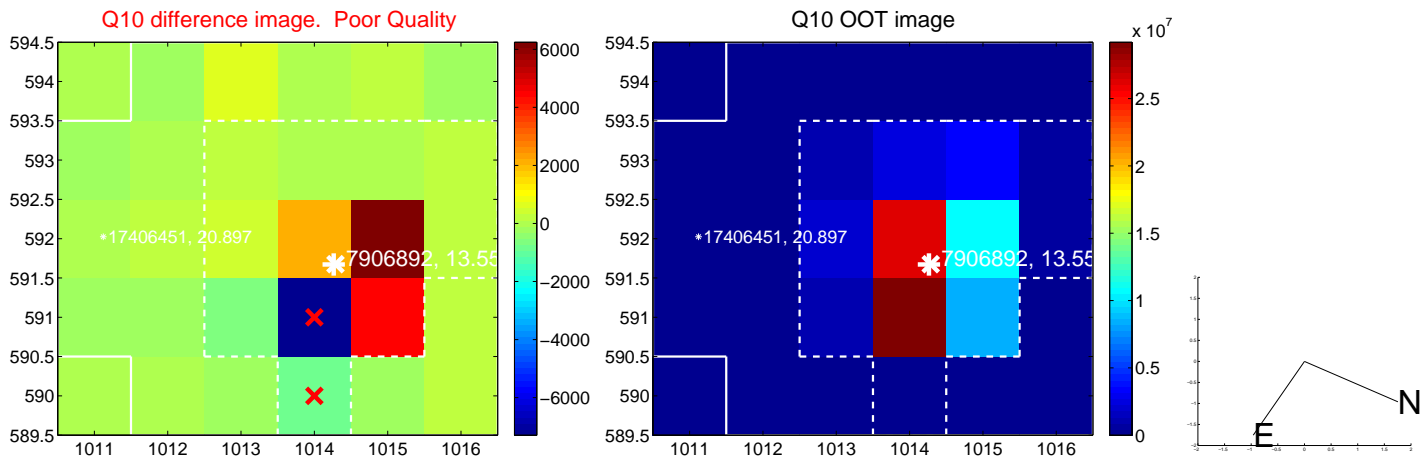
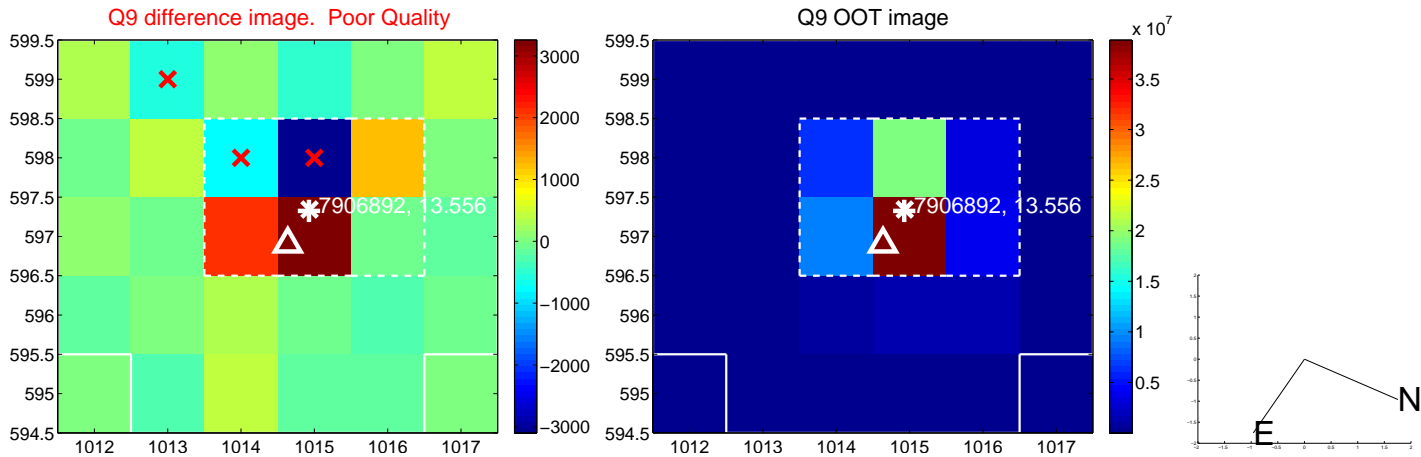


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

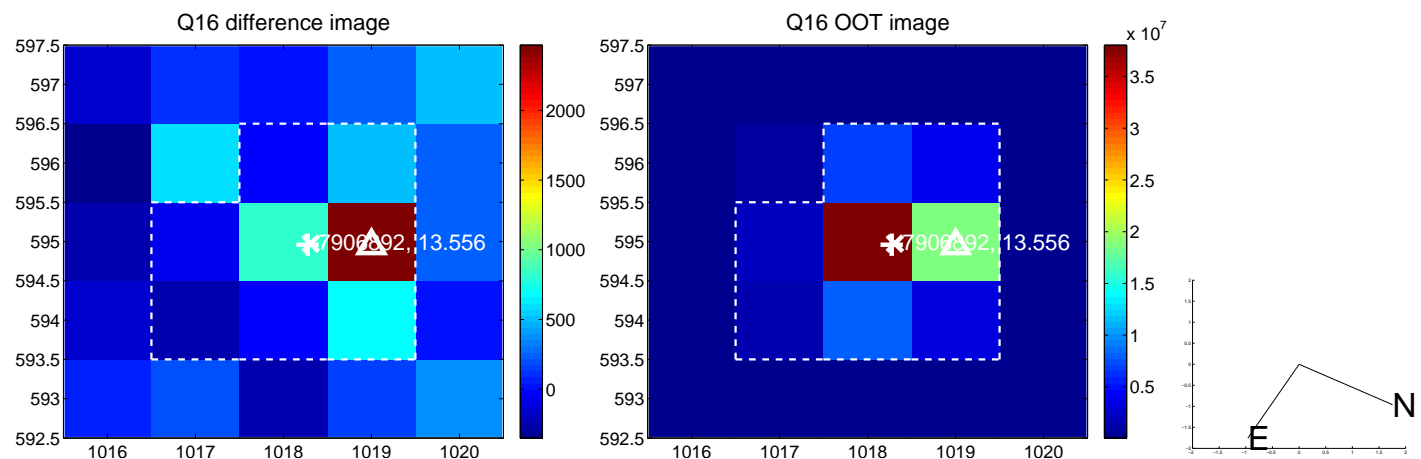
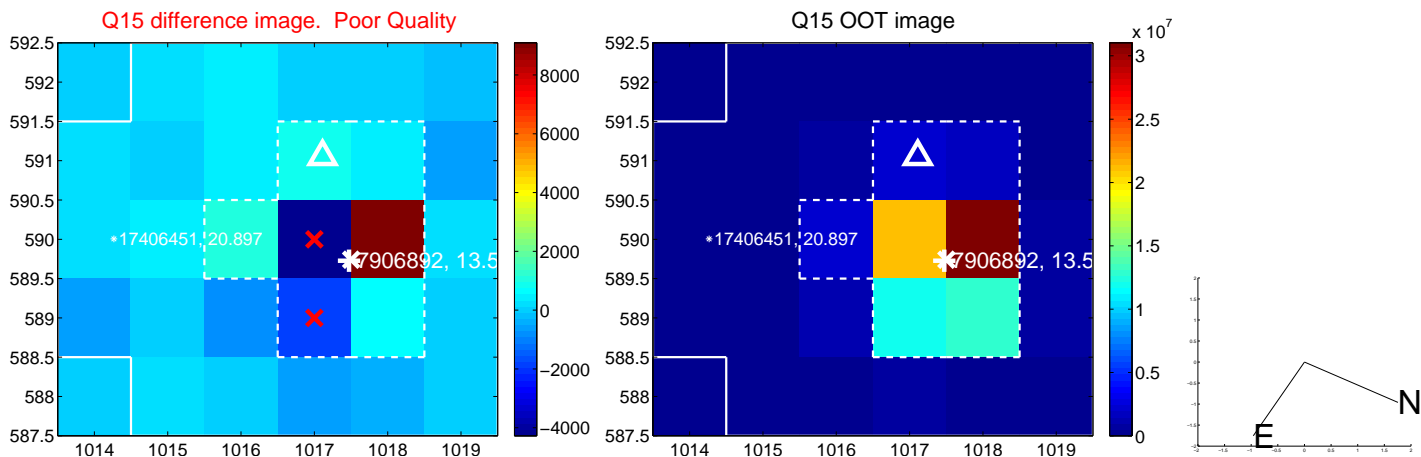
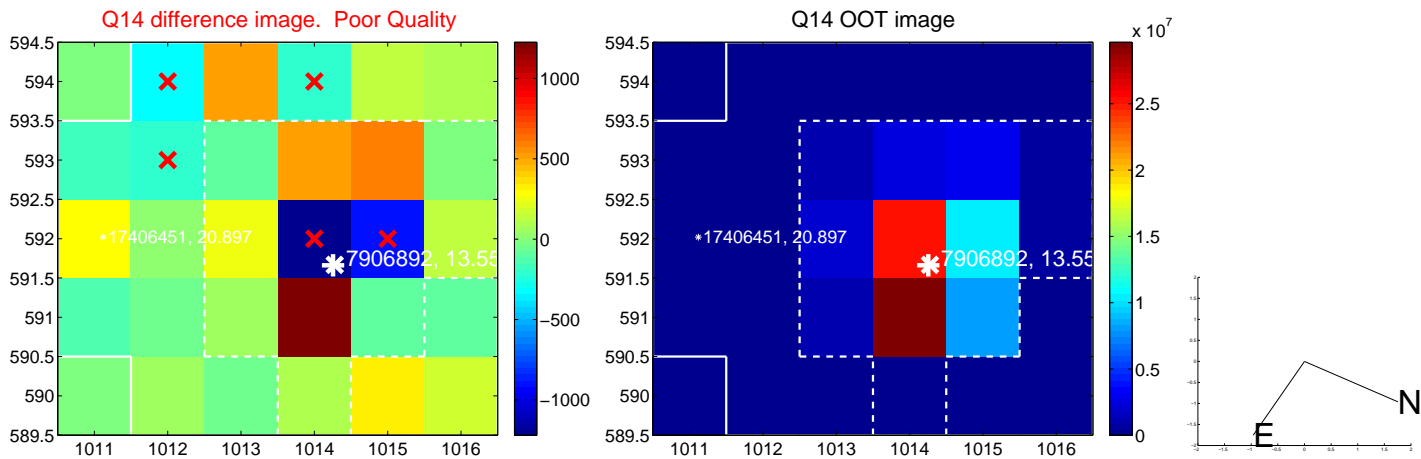
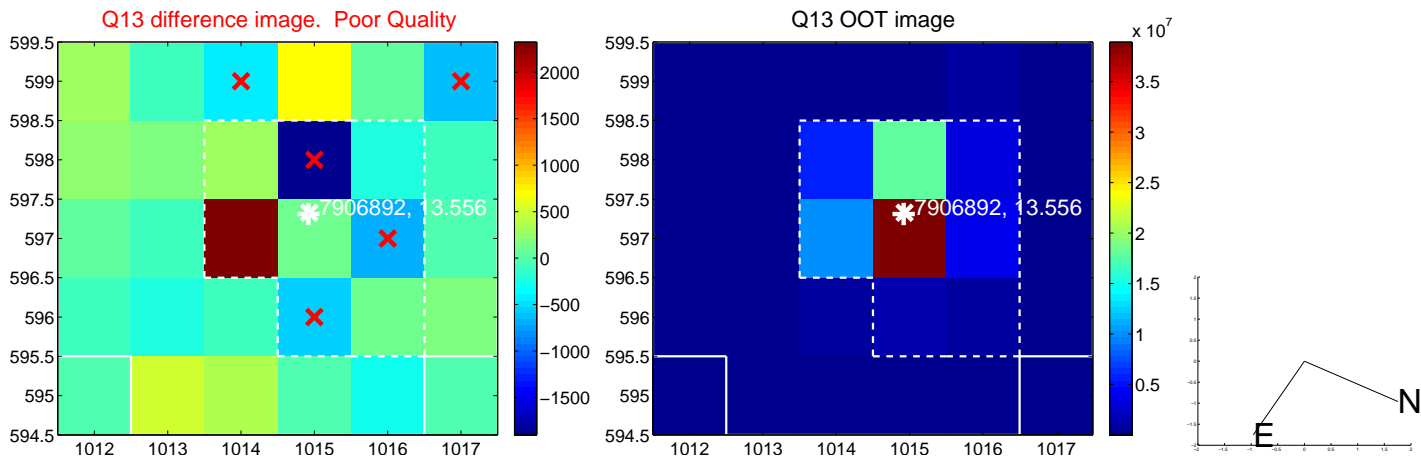
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



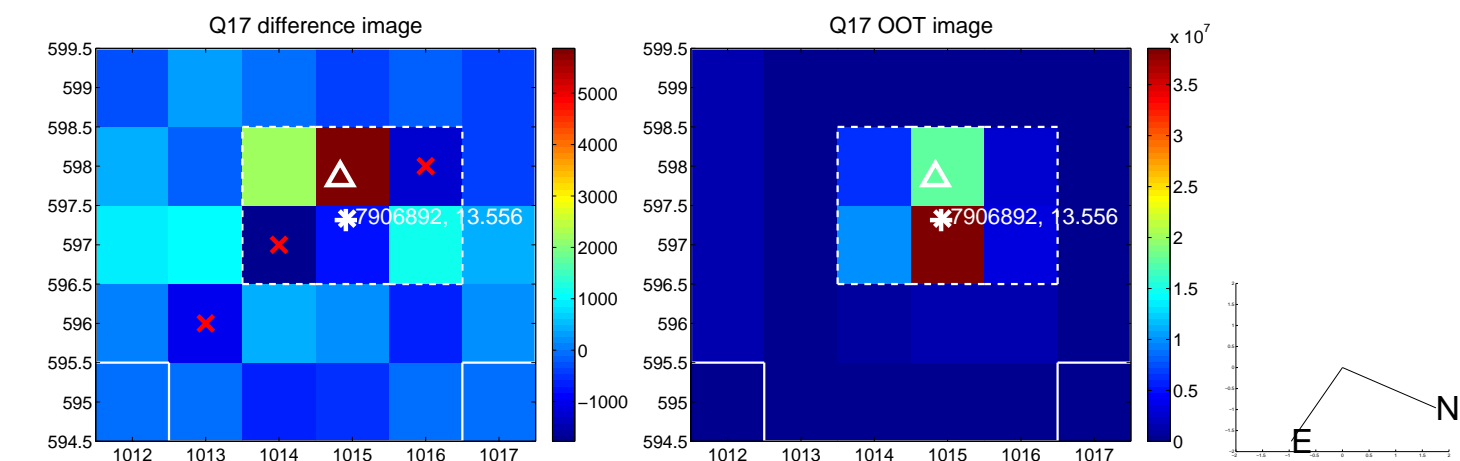
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



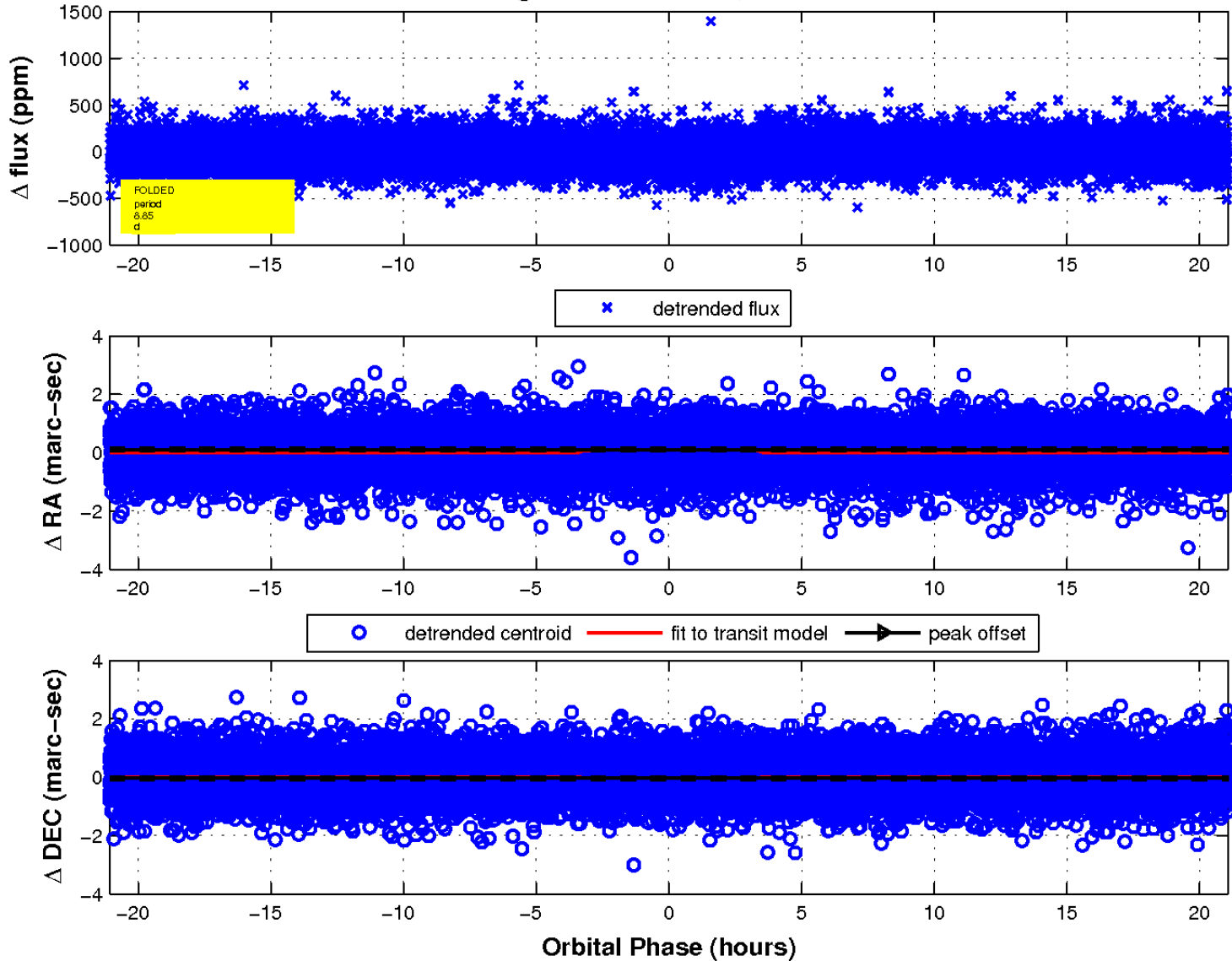
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 2 of 2



UKIRT Image

Declination

