

KIC 007132798

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})
007132798-01	OBS	0220.01	2.422083	132.940549	1868.5	2.672	399.4	397.8	0.83	5598	3.88	513.05
007132798-02	OBS	0220.02	4.125105	133.642720	112.2	3.002	16.8	18.9	0.83	5598	1.04	252.25

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007132798-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
007132798-02	OBS	PC	1.00	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.

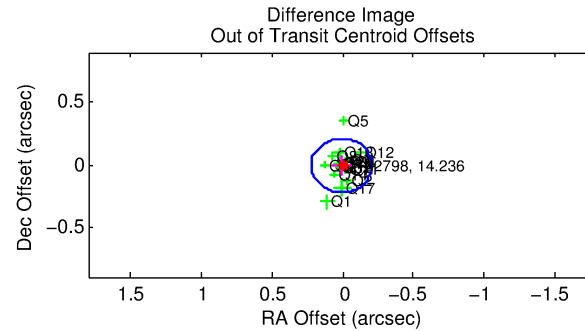
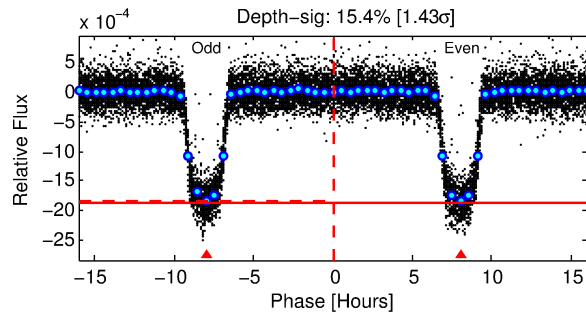
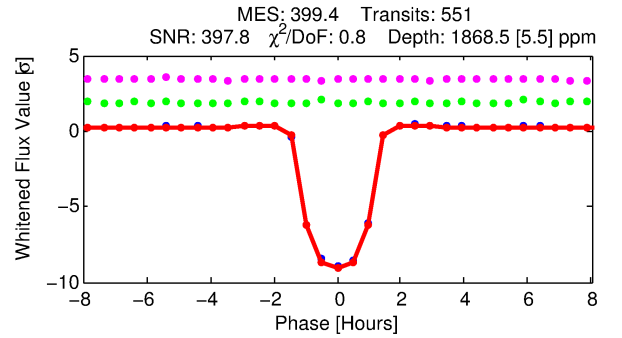
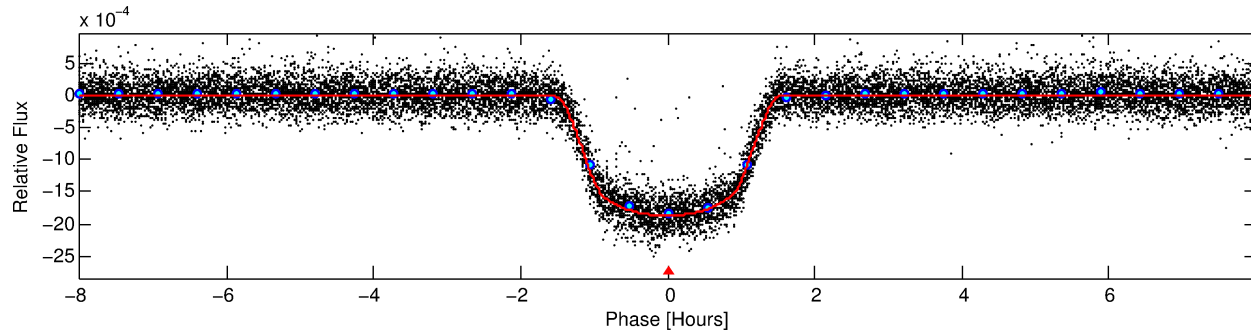
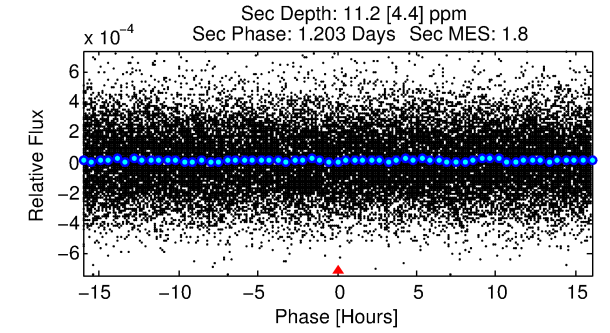
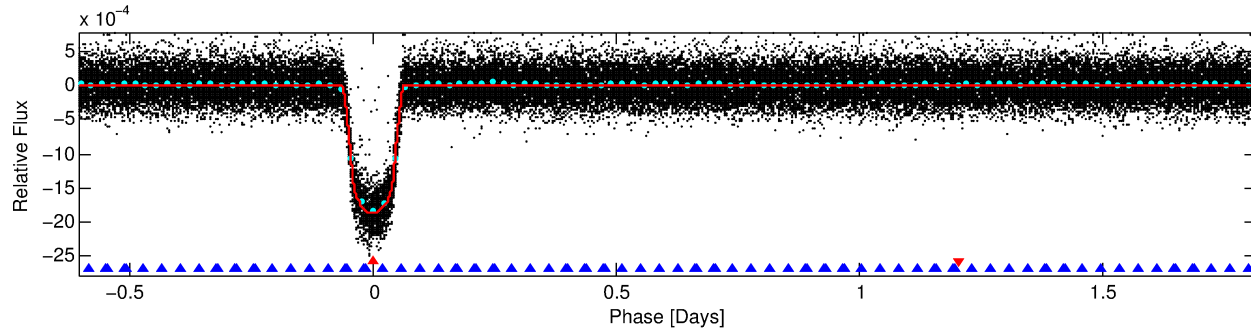
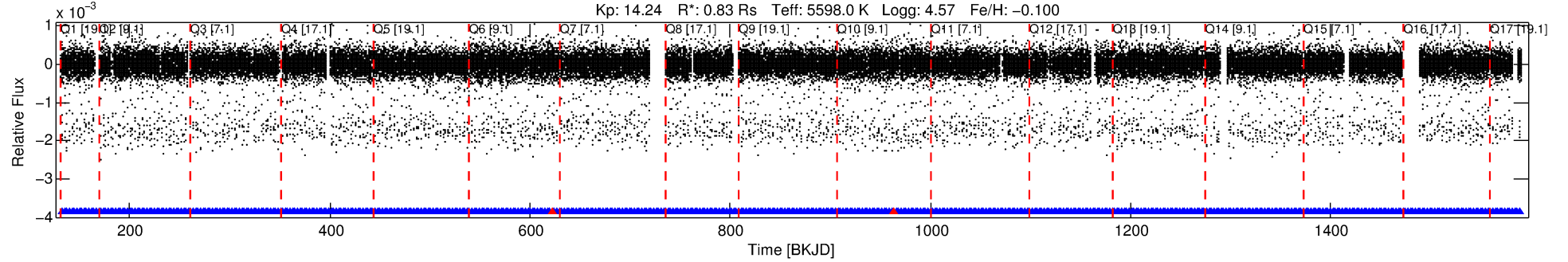
Ephemeris Match Information For 007132798-01

No Significant Match Found

DV One-Page Summary

KIC: 7132798 Candidate: 1 of 2 Period: 2.422 d
KOI: K00220.01 Name: Kepler-119b Corr: 0.979

Kp: 14.24 R*: 0.83 Rs Teff: 5598.0 K Logg: 4.57 Fe/H: -0.100



DV Fit Results:

Period = 2.42208 [0.00000] d
Epoch = 132.9405 [0.0001] BKJD
Rp/R* = 0.0429 [0.0008]
a/R* = 5.18 [0.38]
b = 0.74 [0.05]
Seff = 513.05 [147.73]
Teq = 1214 [87] K
Rp = 3.88 [0.83] Re
a = 0.0344 [0.0062] AU
Ag = 0.48 [0.23] [-2.24σ]
Teffp = 1565 [162] K [1.91σ]

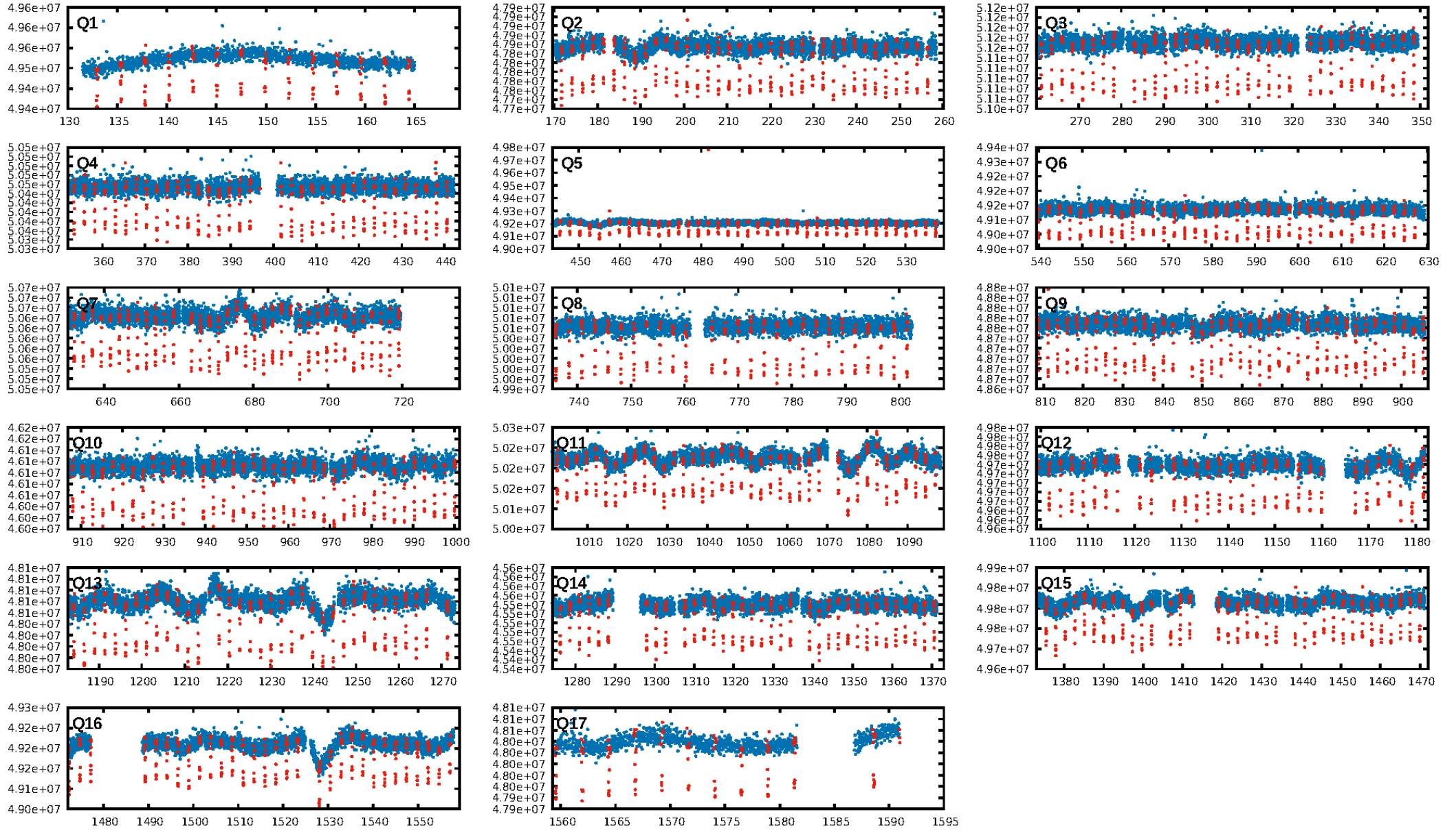
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [10.17σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [523/525]
GhostDiagnostic-chr: 8.538
Centroid-sig: 0.0%
Centroid-so: 0.217 arcsec [7.38σ]
OotOffset-rm: 0.010 arcsec [0.15σ]
KicOffset-rm: 0.203 arcsec [2.78σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

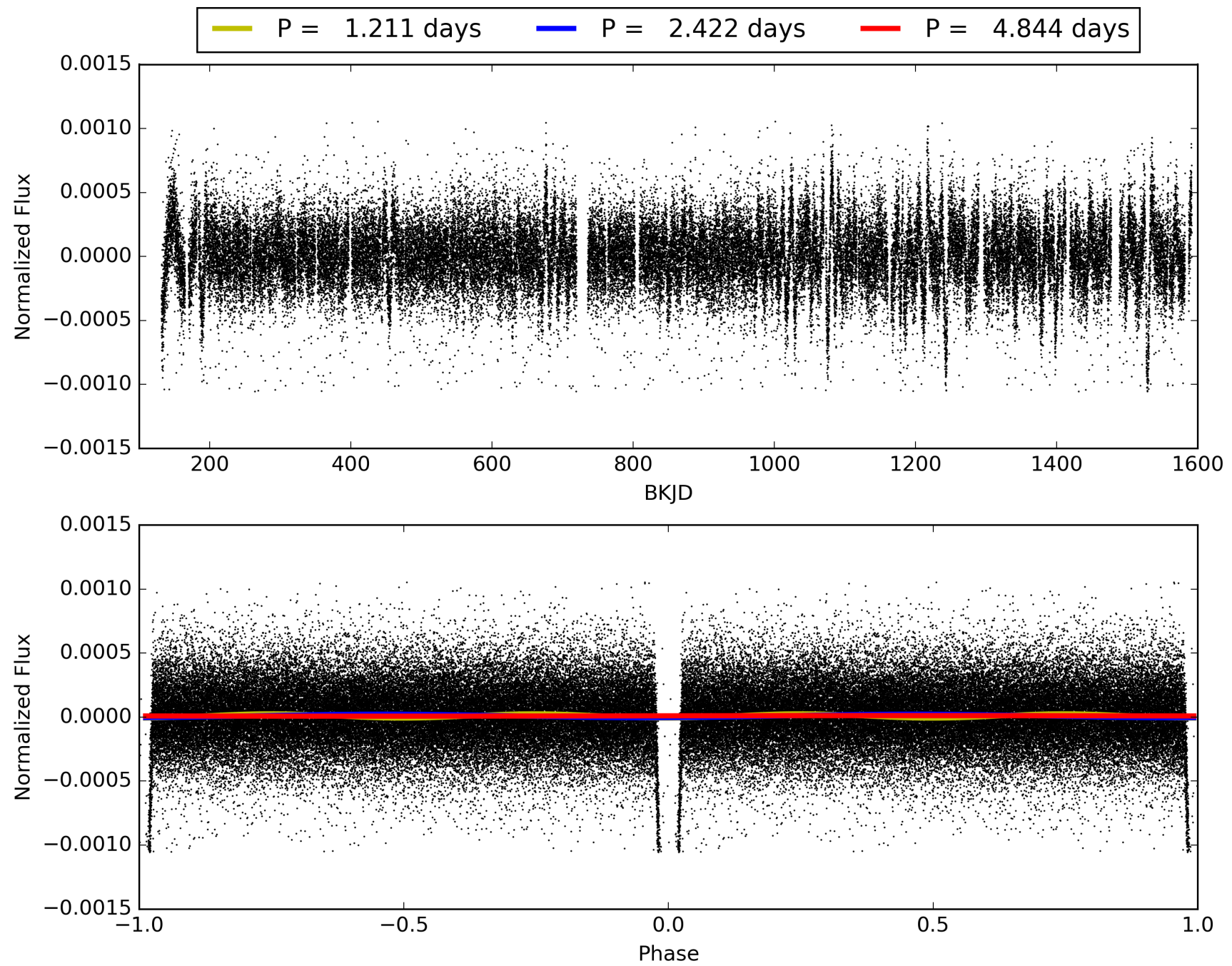
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 08:22:34 Z

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

TCE 007132798-01, PDC Light Curves

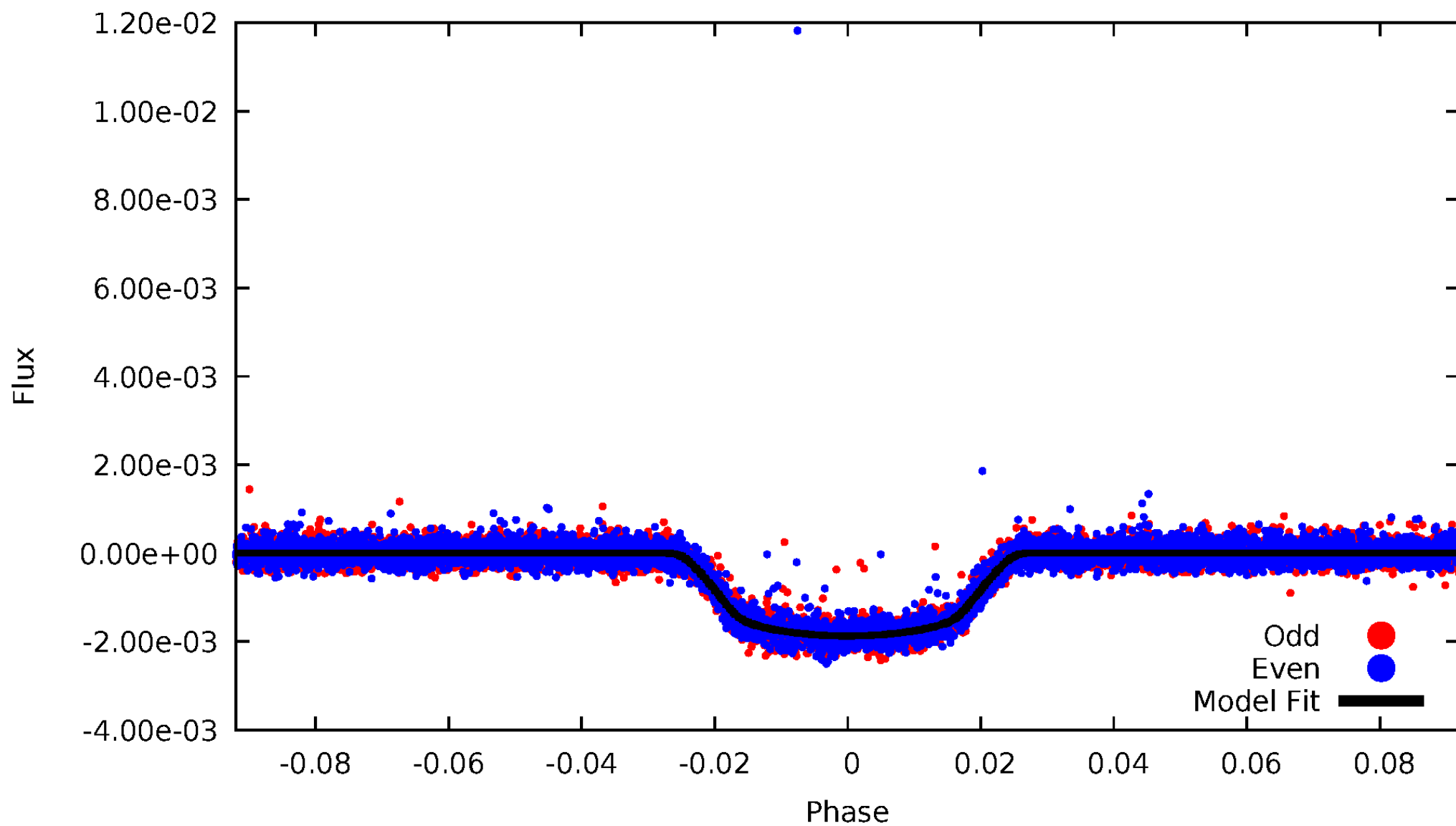


TCE 007132798-01



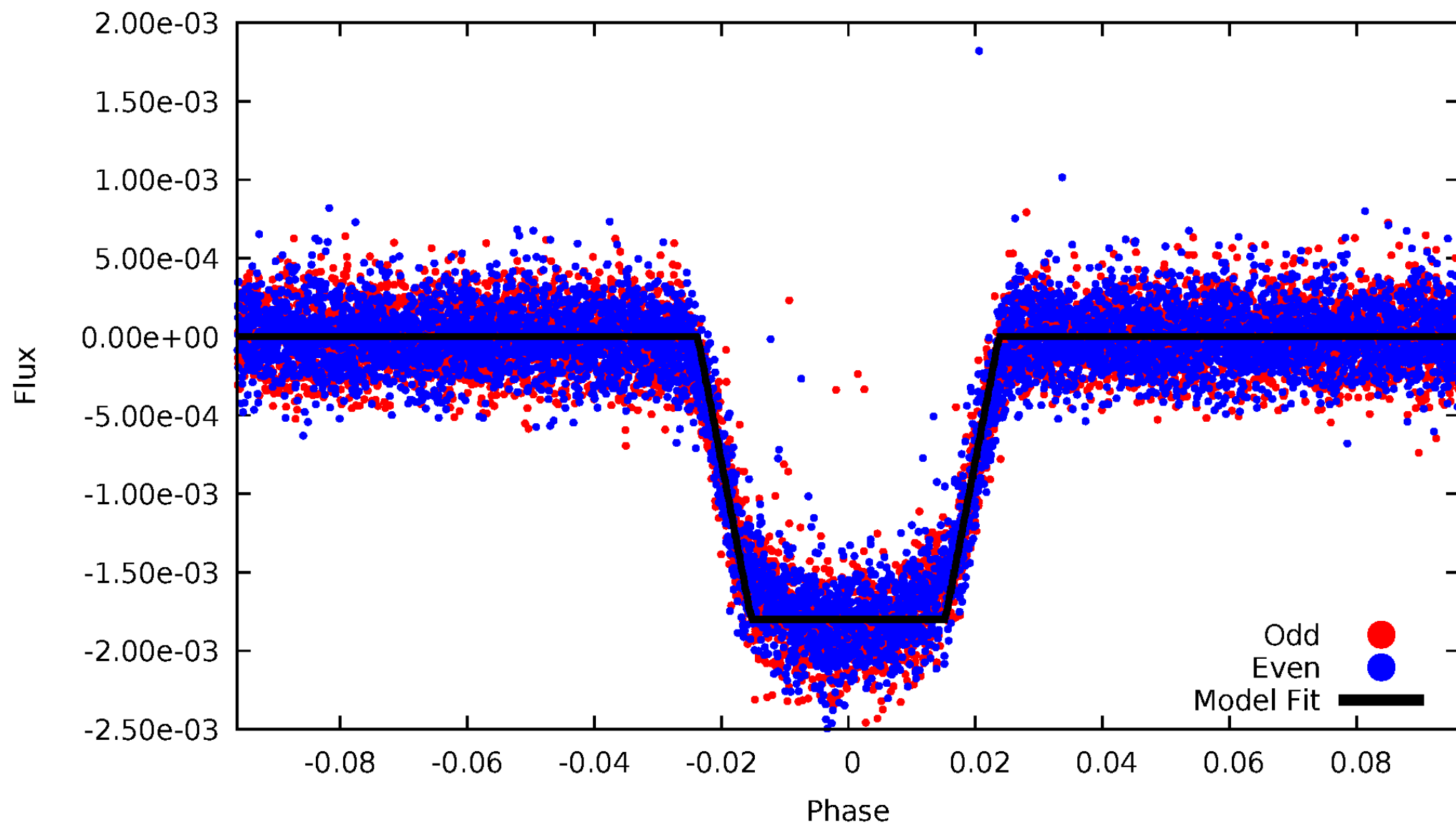
DV Odd/Even

TCE 007132798-01



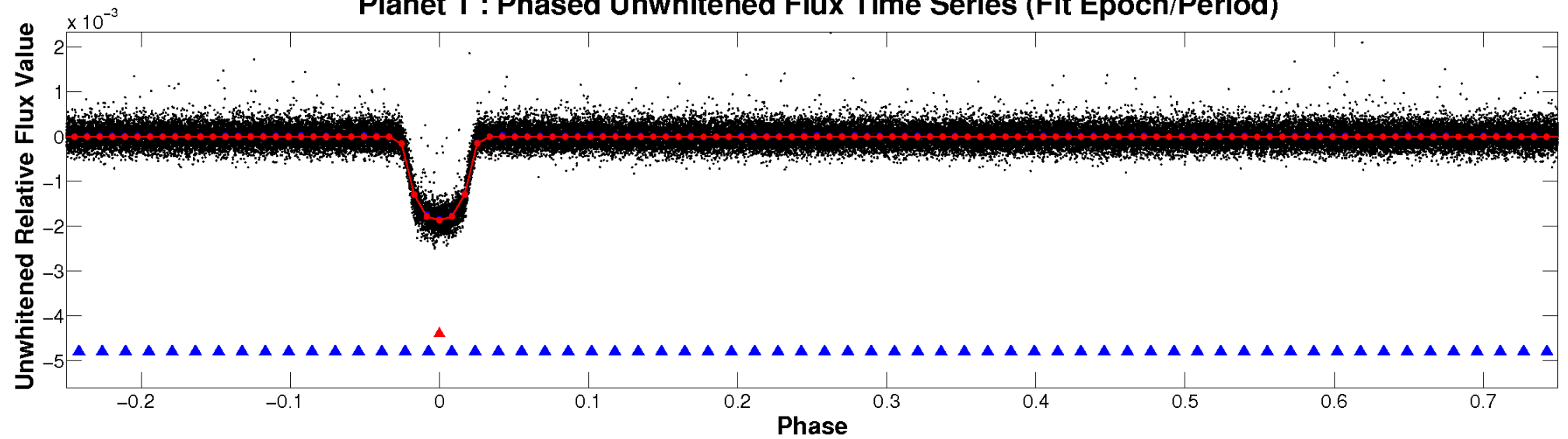
ALT Odd/Even

TCE 007132798-01

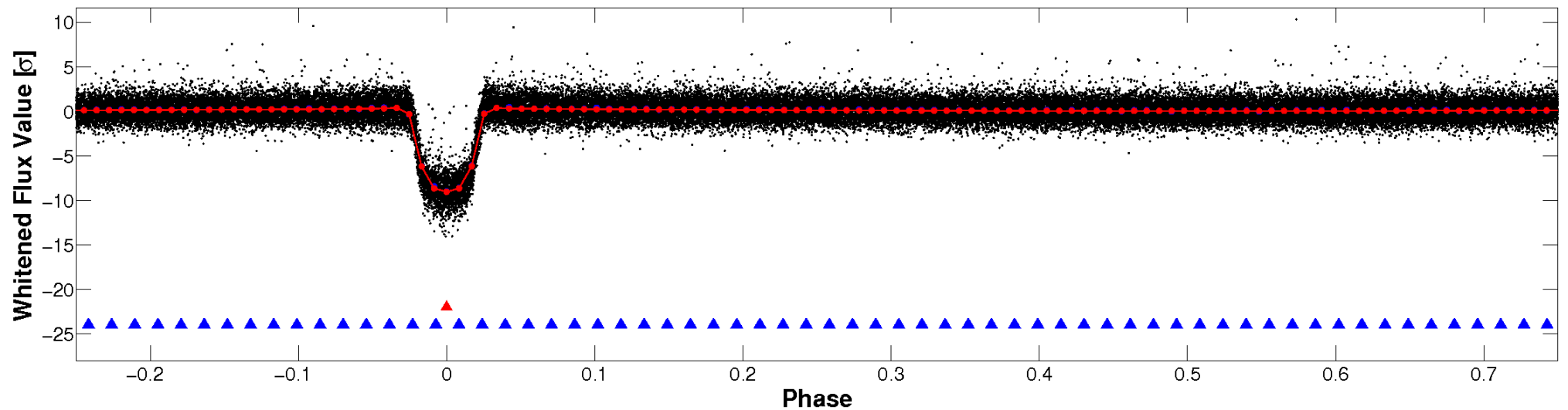


Non-Whitened Vs. Whitened Light Curve

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

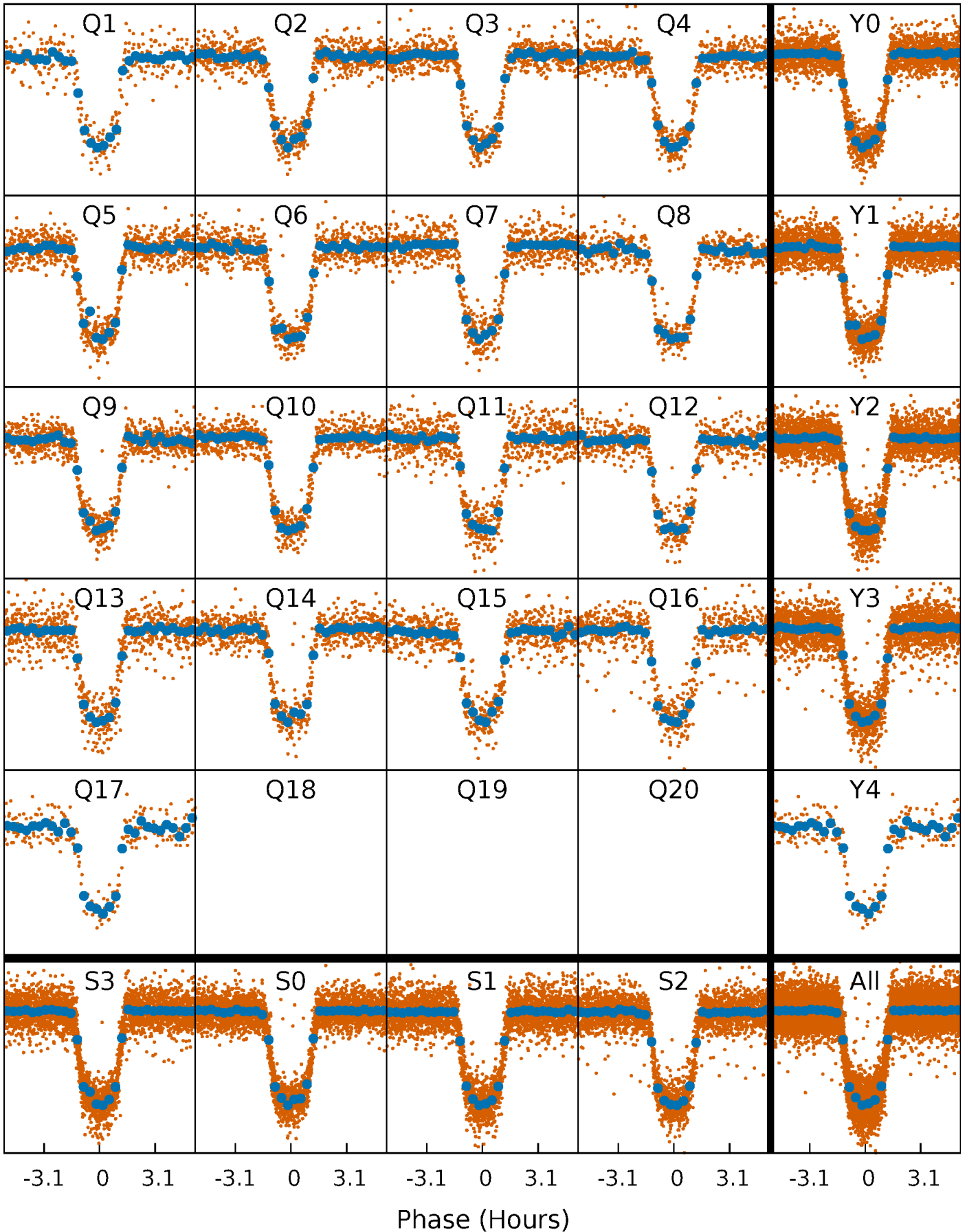


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



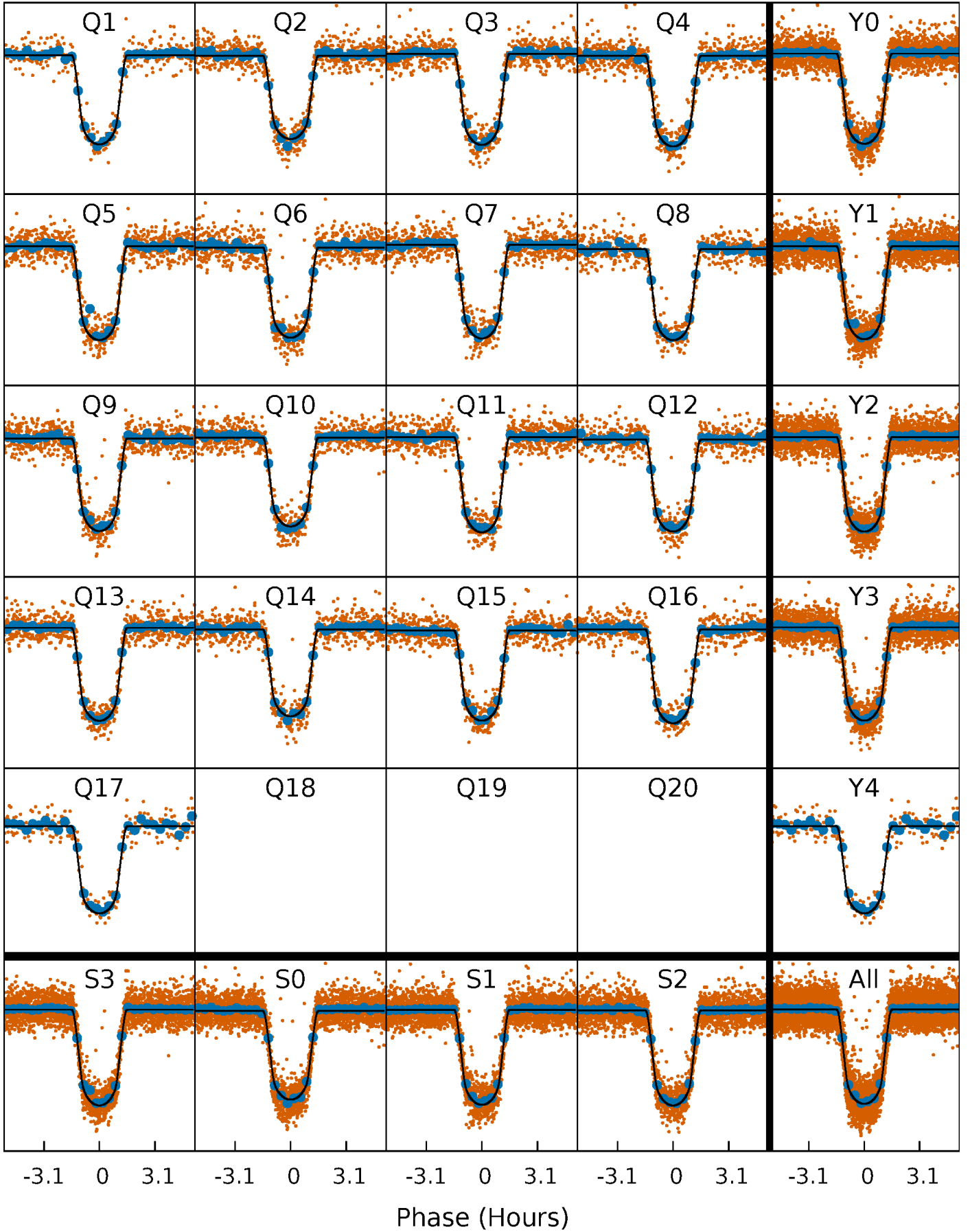
PDC Quarter-Phased Transit Curves

TCE 007132798-01 P= 2.422083 Days $T_0=132.940550$ (BKJD)



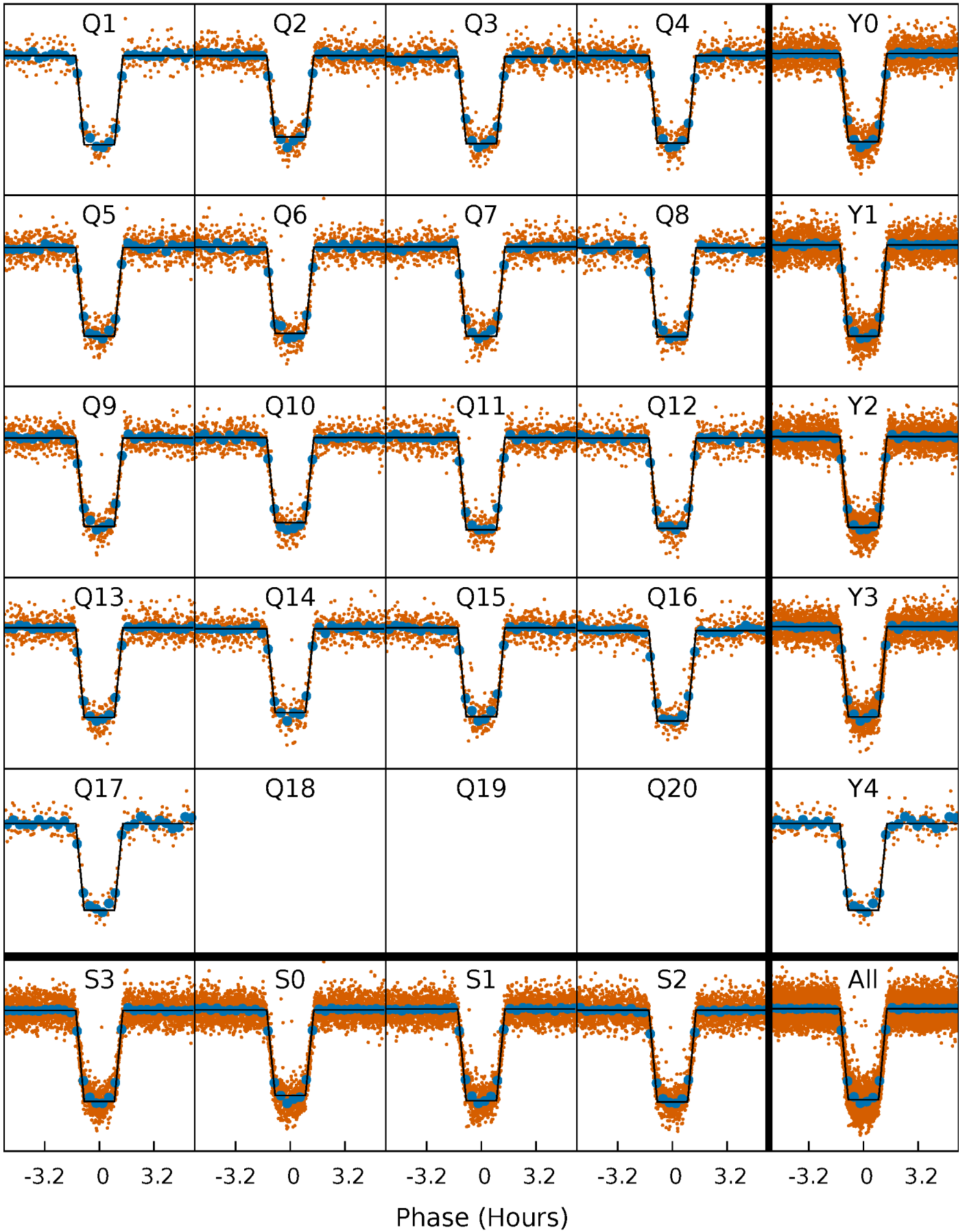
DV Quarter-Phased Transit Curves

TCE 007132798-01 P= 2.422083 Days $T_0=132.940550$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

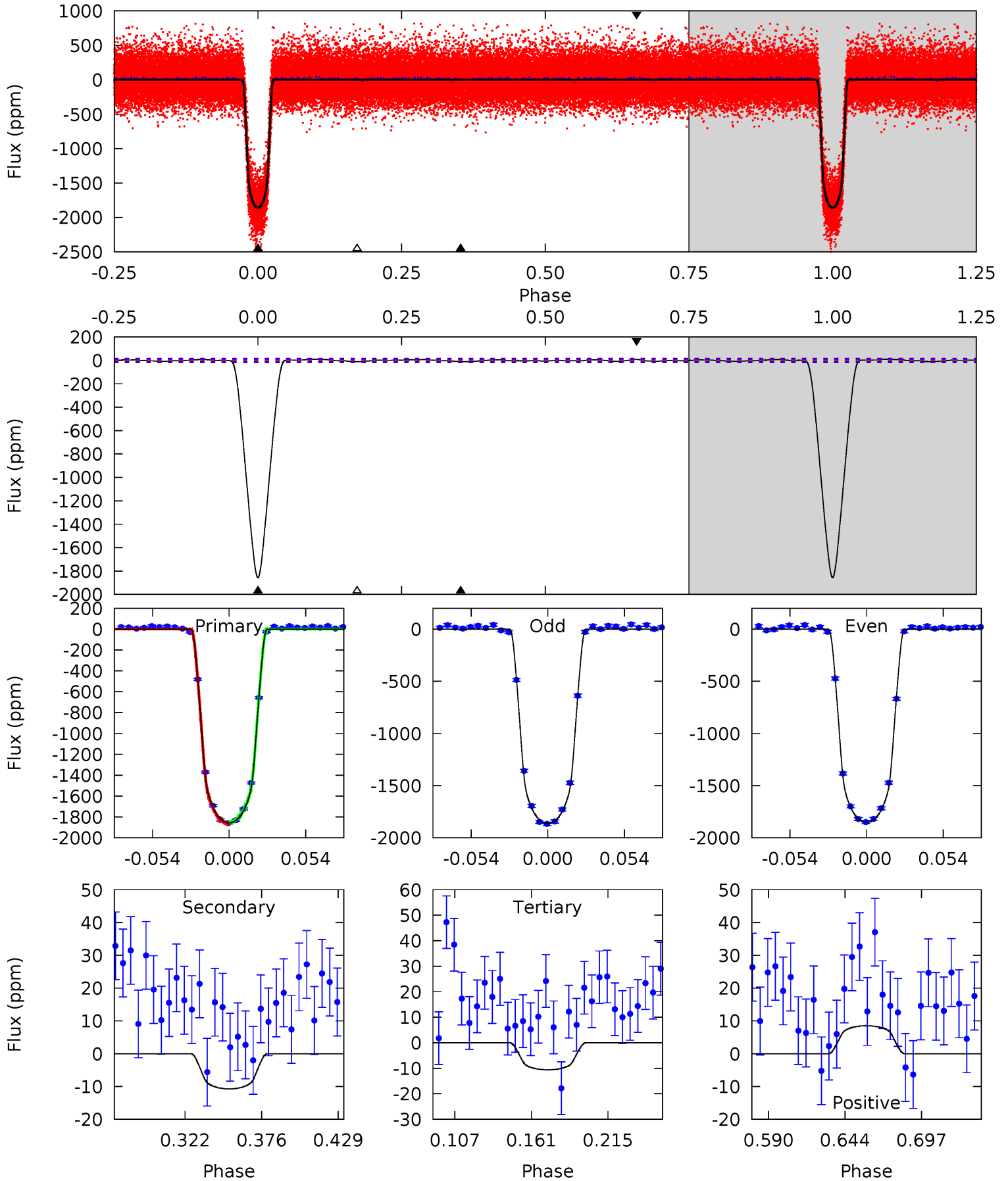
TCE 007132798-01 P= 2.422088 Days $T_0=132.939052$ (BKJD)



DV Model-Shift Uniqueness Test

007132798-01, P = 2.422083 Days, E = 130.518467 Days

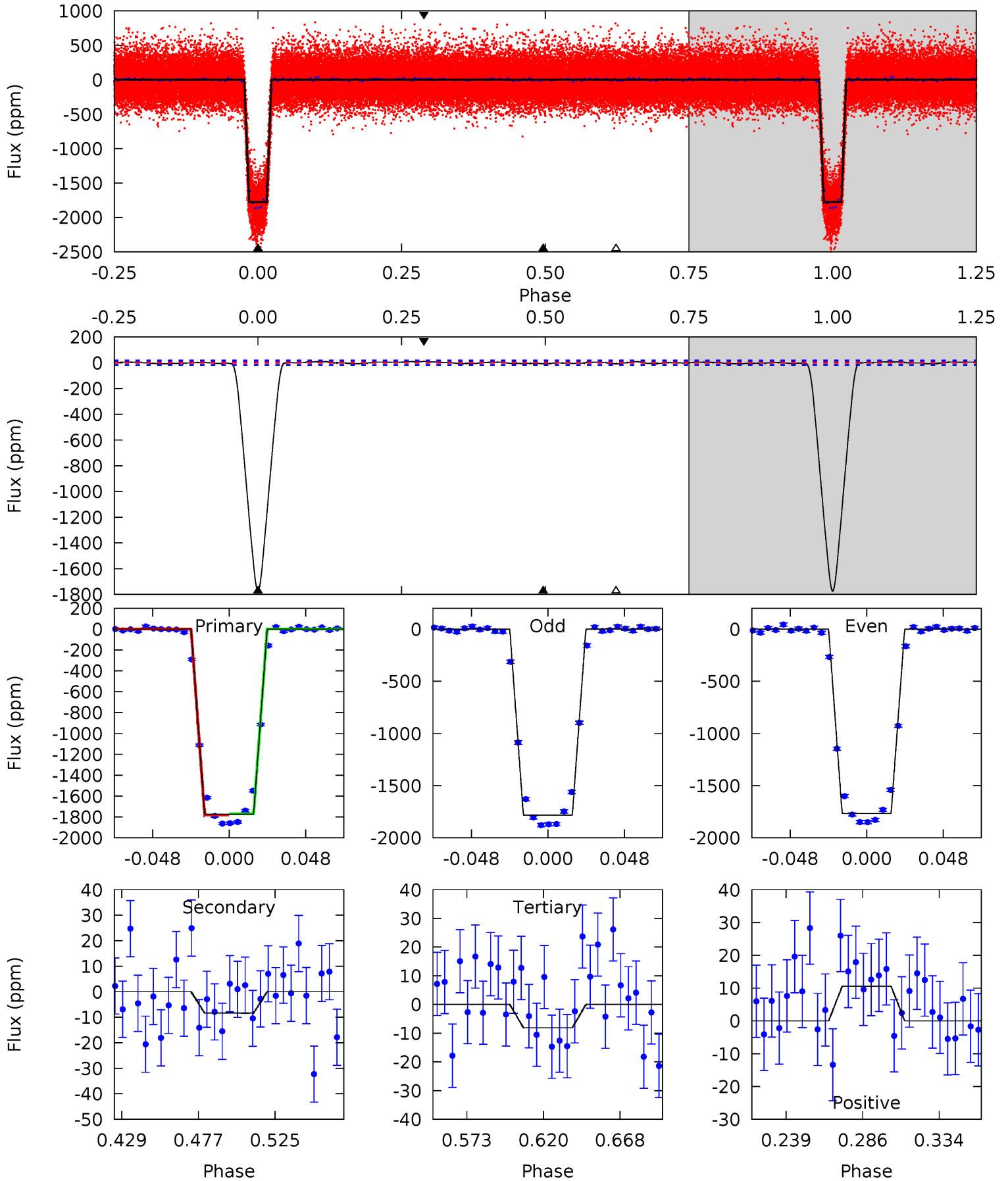
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
554.0	3.20	3.16	2.54	4.69	1.93	1.39	550.8	551.4	0.04	0.66	1.67	0.99	0.01	2.17



Alt Model-Shift Uniqueness Test

007132798-01, P = 2.422088 Days, E = 130.516964 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
499.6	2.36	2.28	2.97	4.72	1.98	1.31	497.3	496.7	0.08	-0.61	2.30	1.00	0.01	1.50



Stellar Parameters For KIC 007132798

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5598^{+149}_{-166}	$4.565^{+0.036}_{-0.144}$	$-0.100^{+0.300}_{-0.300}$	$0.830^{+0.176}_{-0.075}$	$0.928^{+0.083}_{-0.111}$	$2.285^{+0.433}_{-0.929}$
	+3%/-3%	+1%/-3%	+300%/-300%	+21%/-9%	+9%/-12%	+19%/-41%
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 007132798-01 / KOI 0220.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-11 ± 3	$3.99^{+0.44}_{-0.27}$	1722^{+90}_{-67}	2087^{+201}_{-3878}	$0.410^{+0.157}_{-0.131}$
Alt.	-8 ± 4	$3.93^{+0.45}_{-0.26}$	1719^{+94}_{-60}	1846^{+351}_{-3956}	$0.333^{+0.156}_{-0.150}$

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

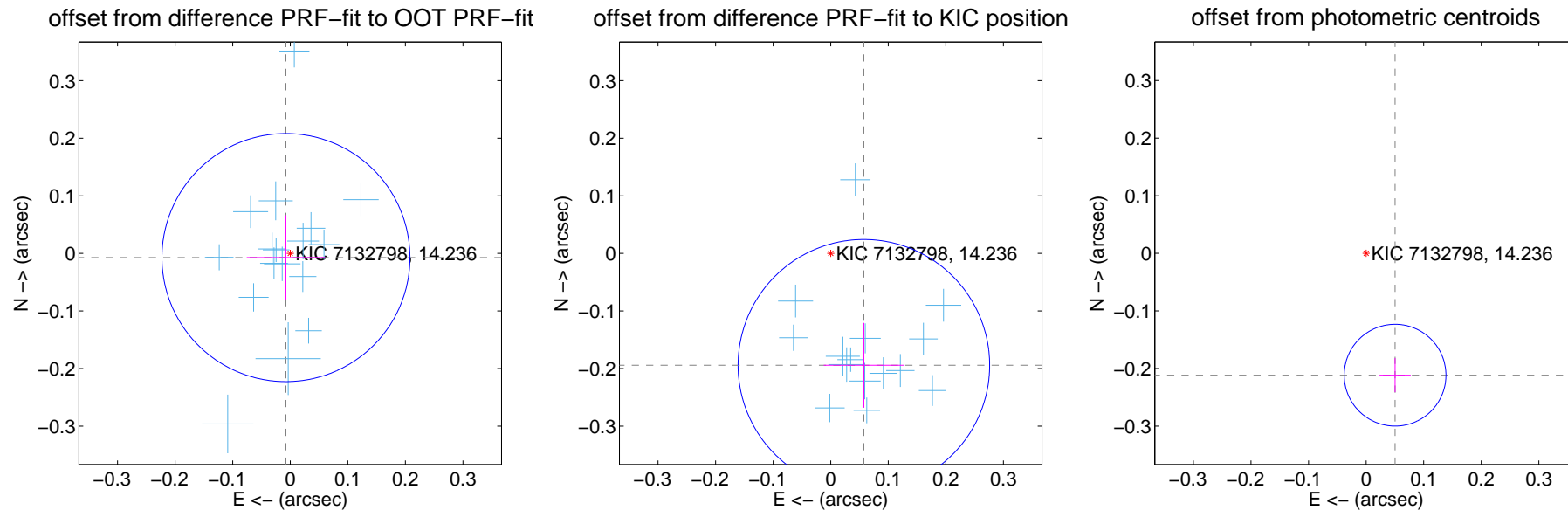
DV Centroid Data

Supplemental centroid analysis for 007132798-01. Kepler magnitude: 14.24. Transit SNR 397.84

There are 17 quarters with good PRF difference image offsets

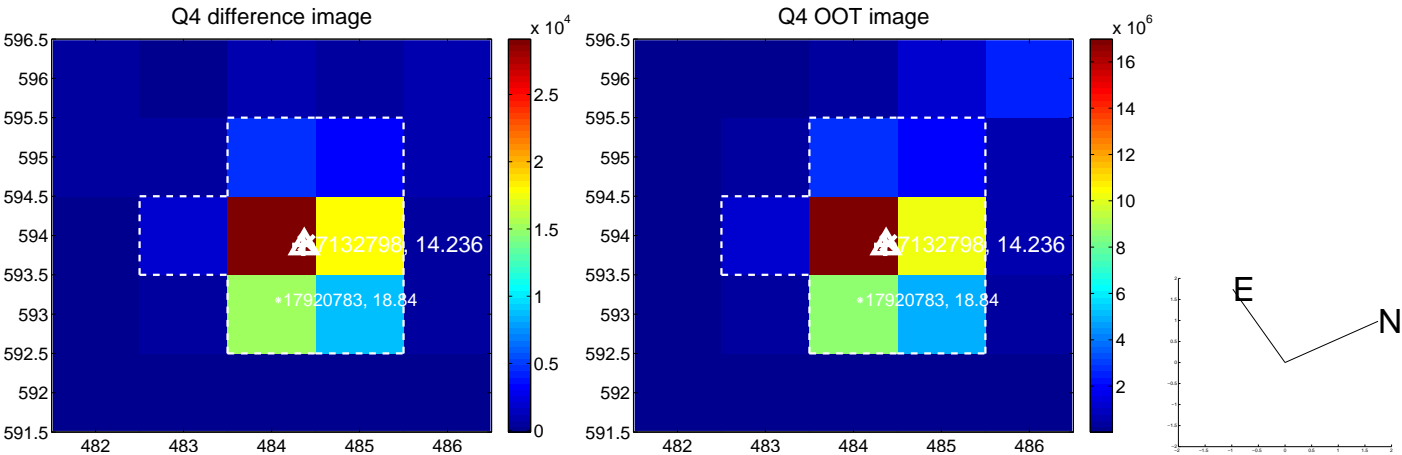
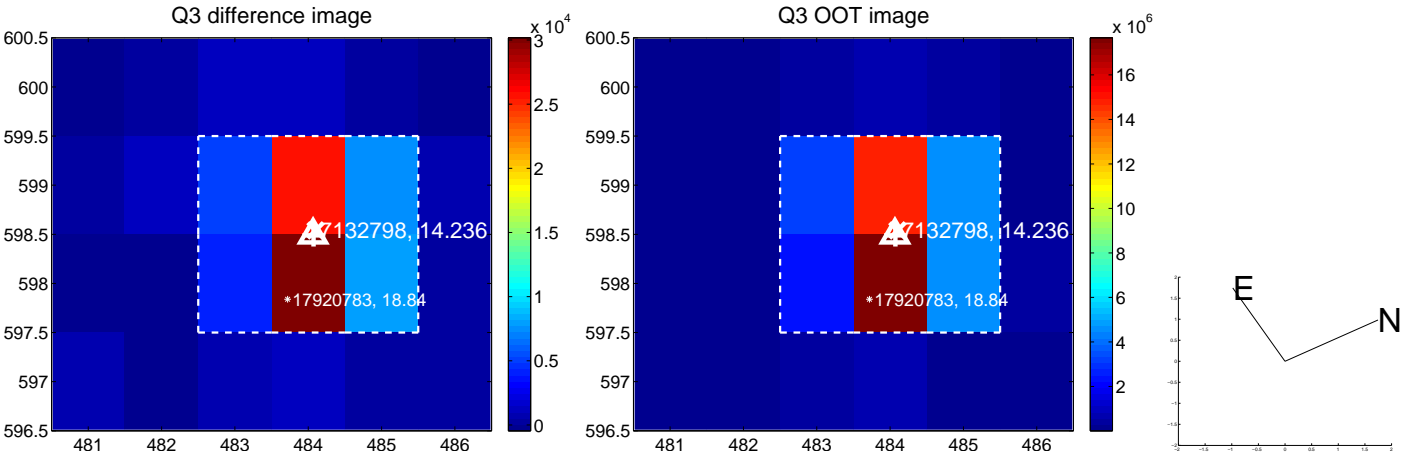
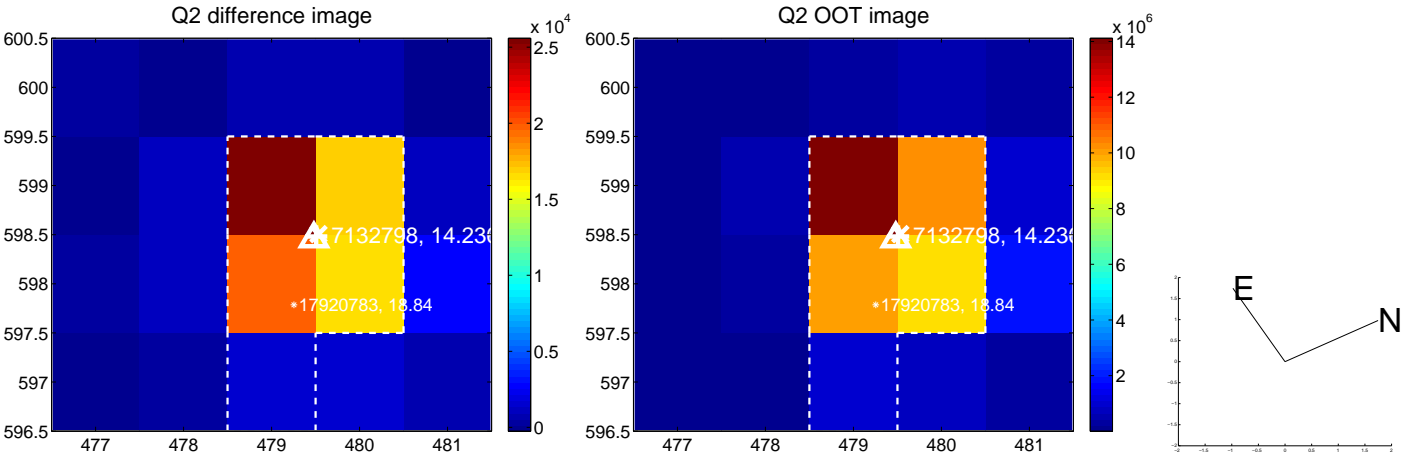
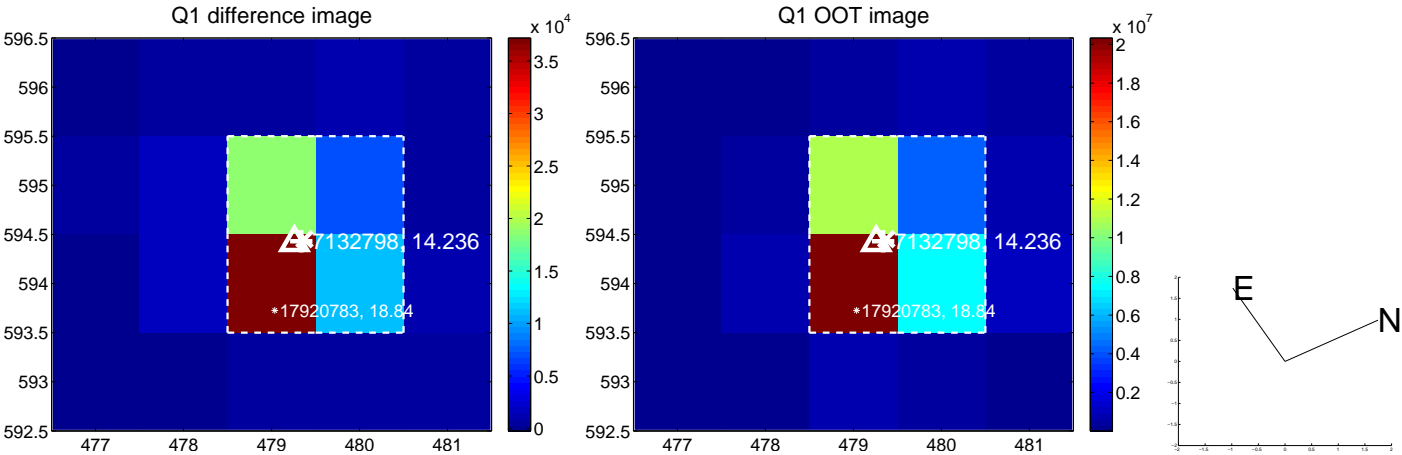
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.010 ± 0.072	0.15	0.007 ± 0.068	-0.007 ± 0.073
PRF-fit source offset from KIC position	0.203 ± 0.073	2.78	-0.058 ± 0.070	-0.194 ± 0.074
photometric centroid source offset	0.22 ± 0.03	7.38	-0.05 ± 0.03	-0.21 ± 0.03

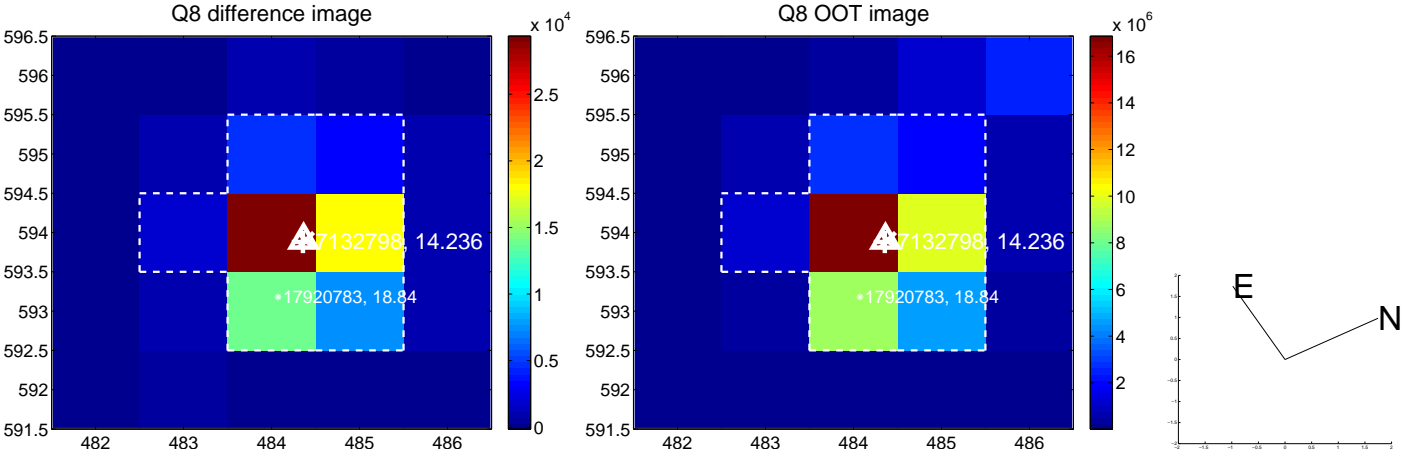
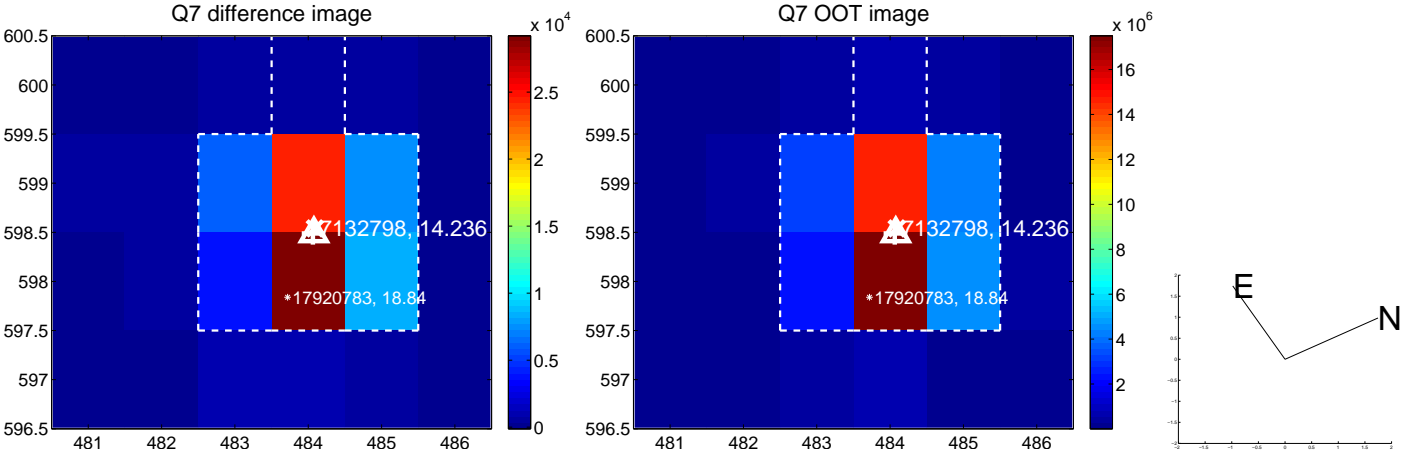
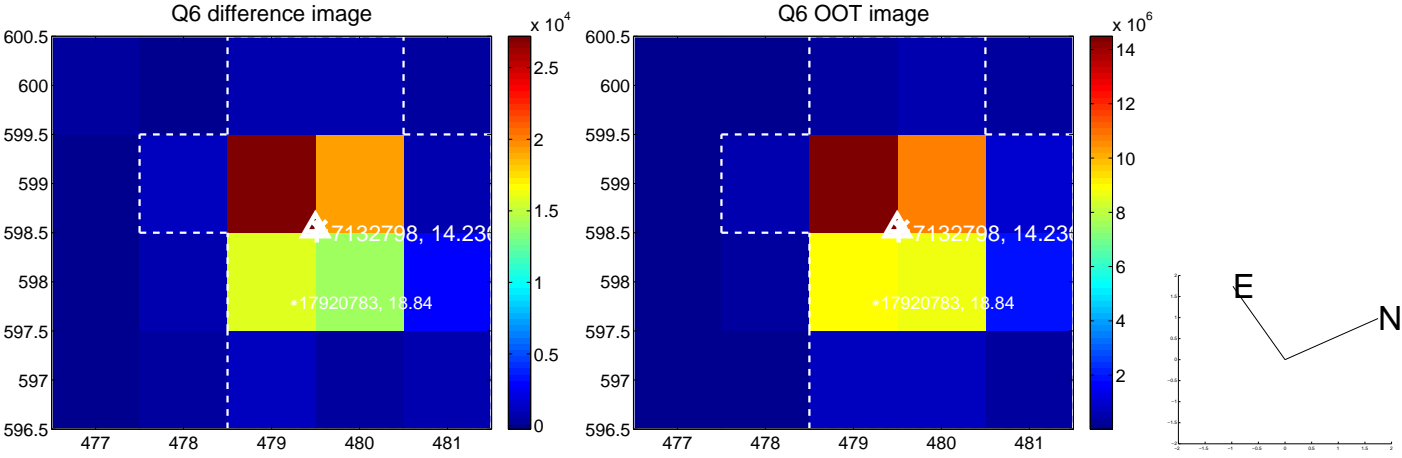
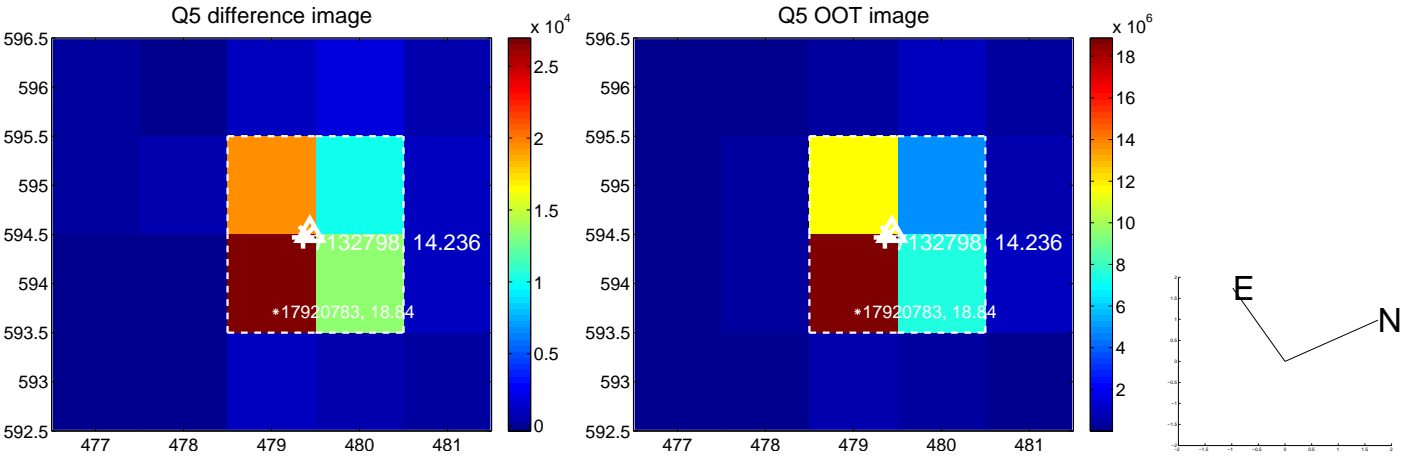


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

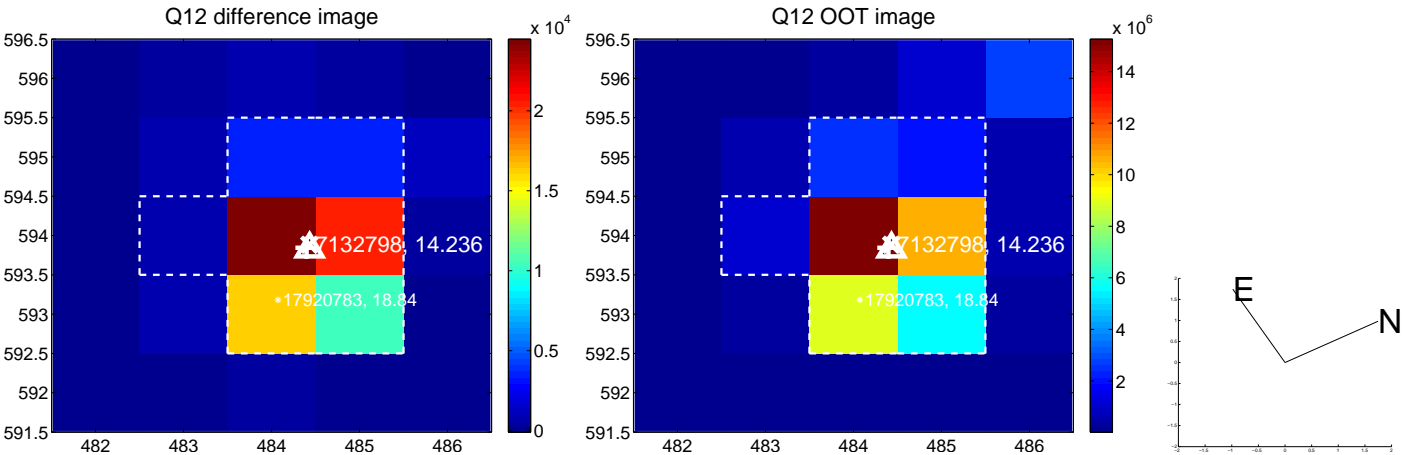
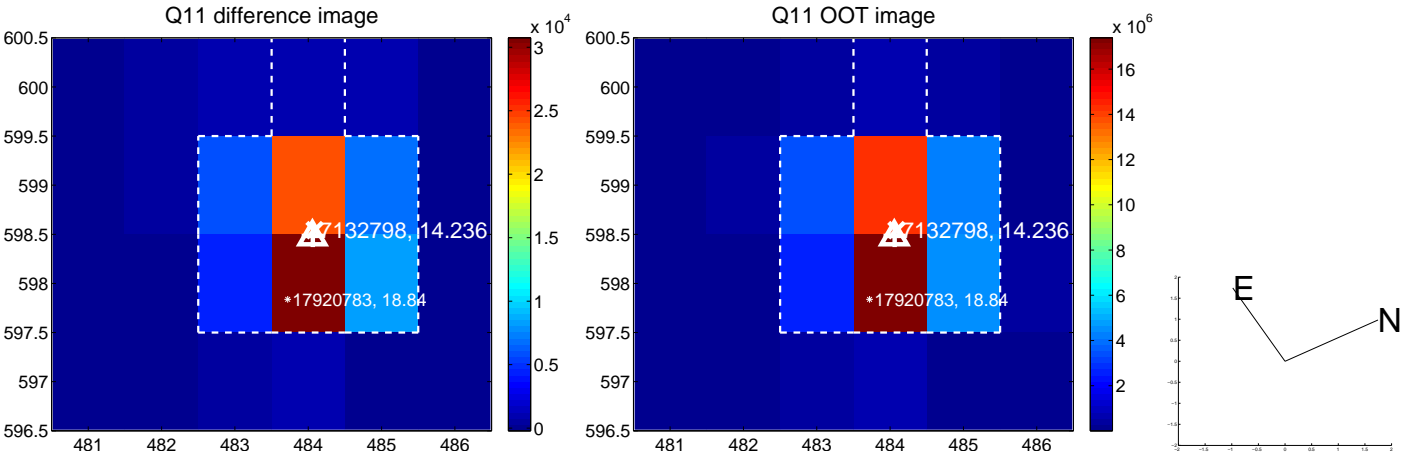
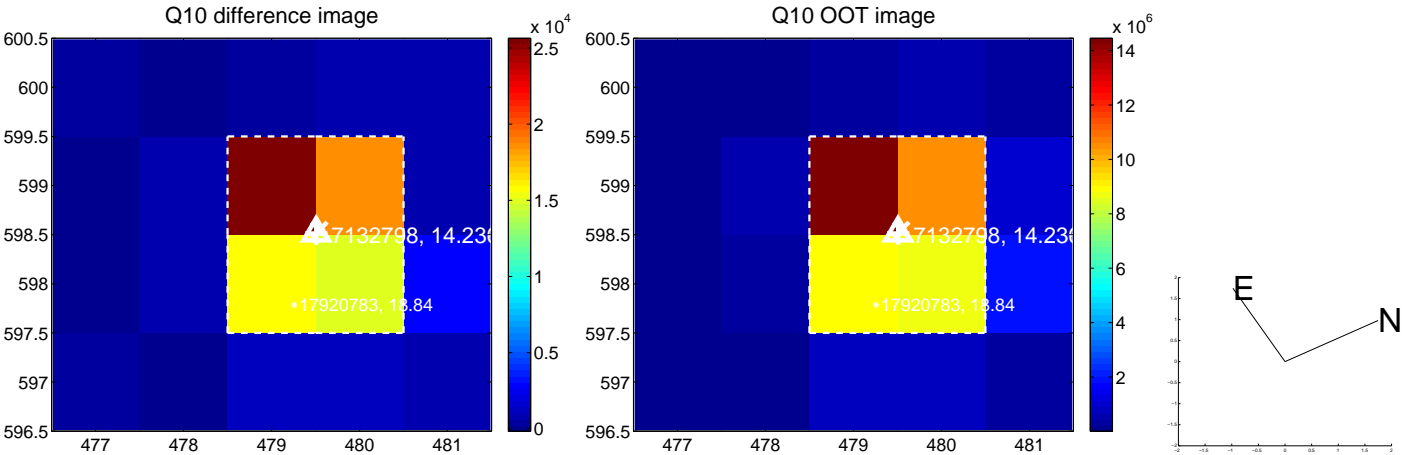
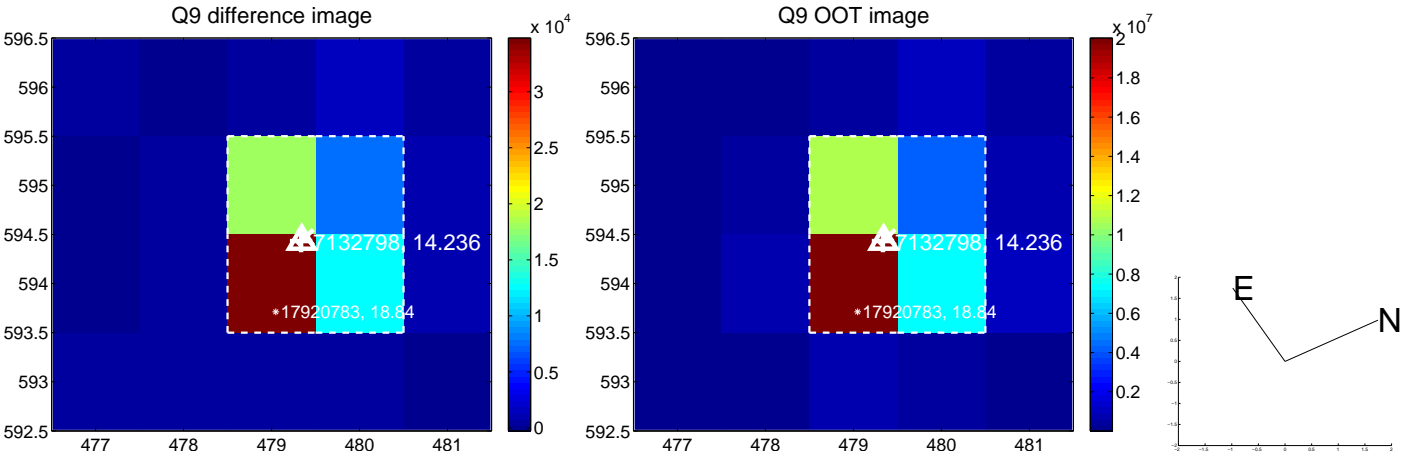
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



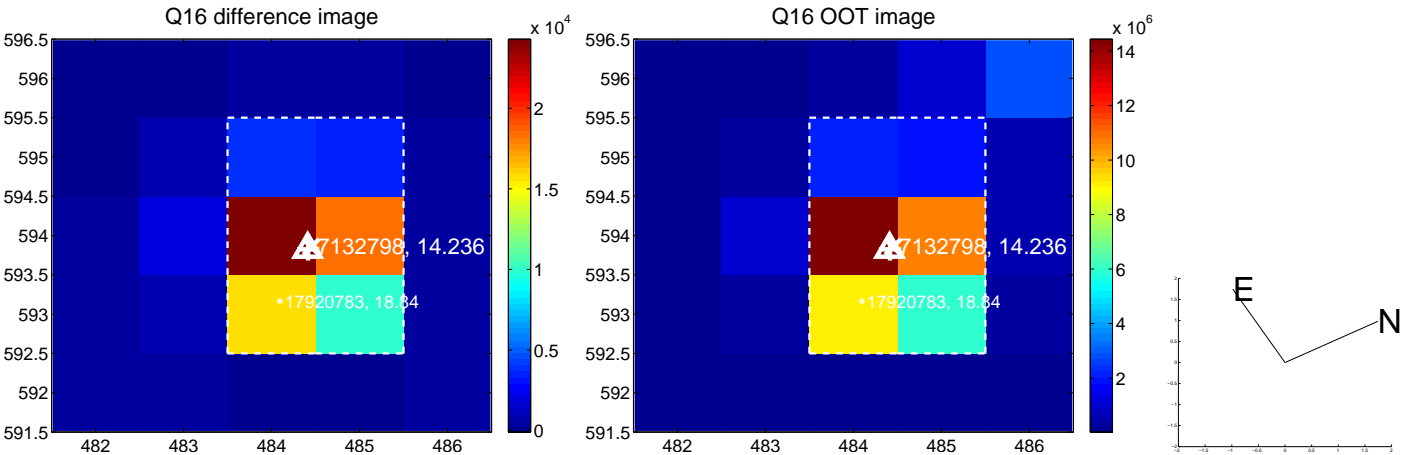
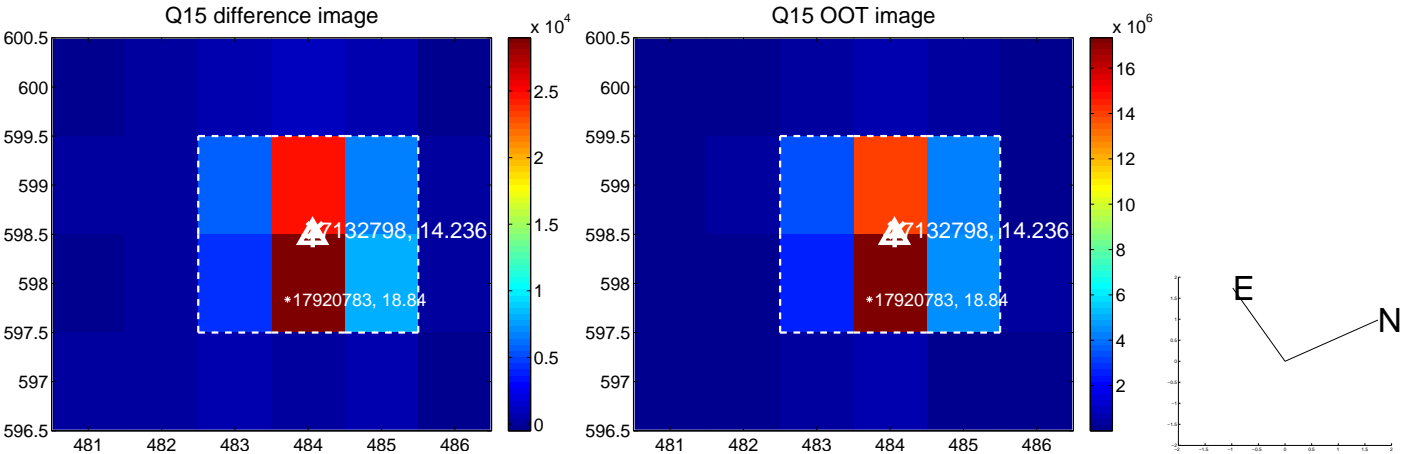
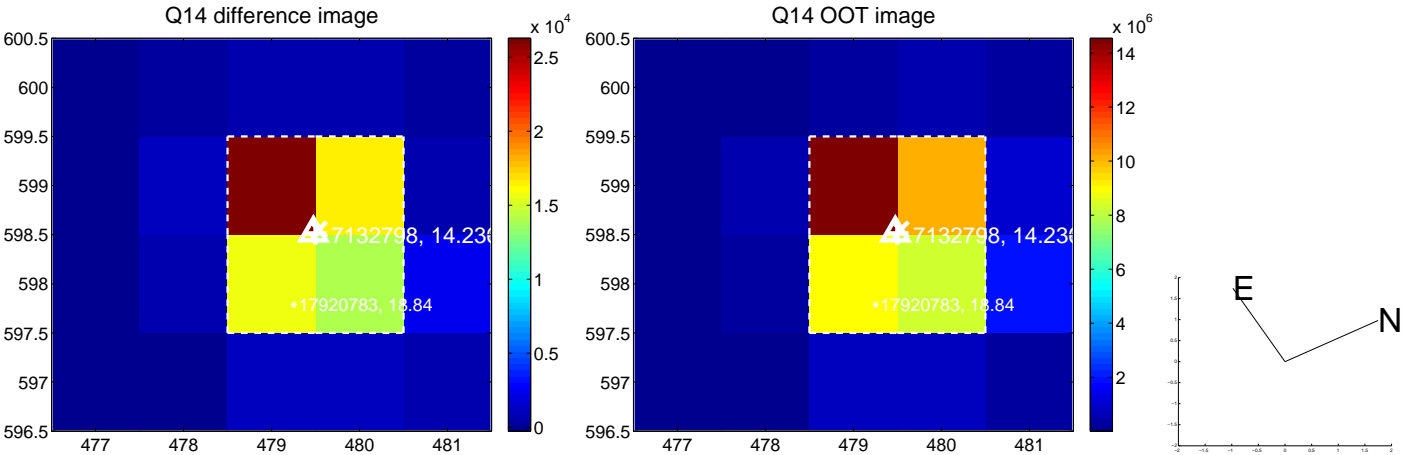
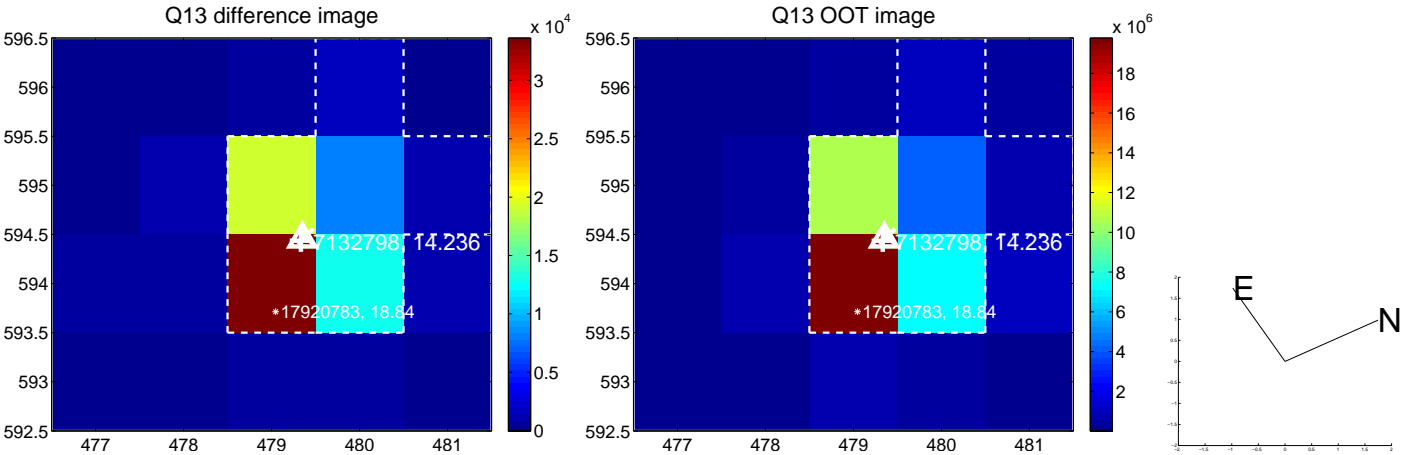
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



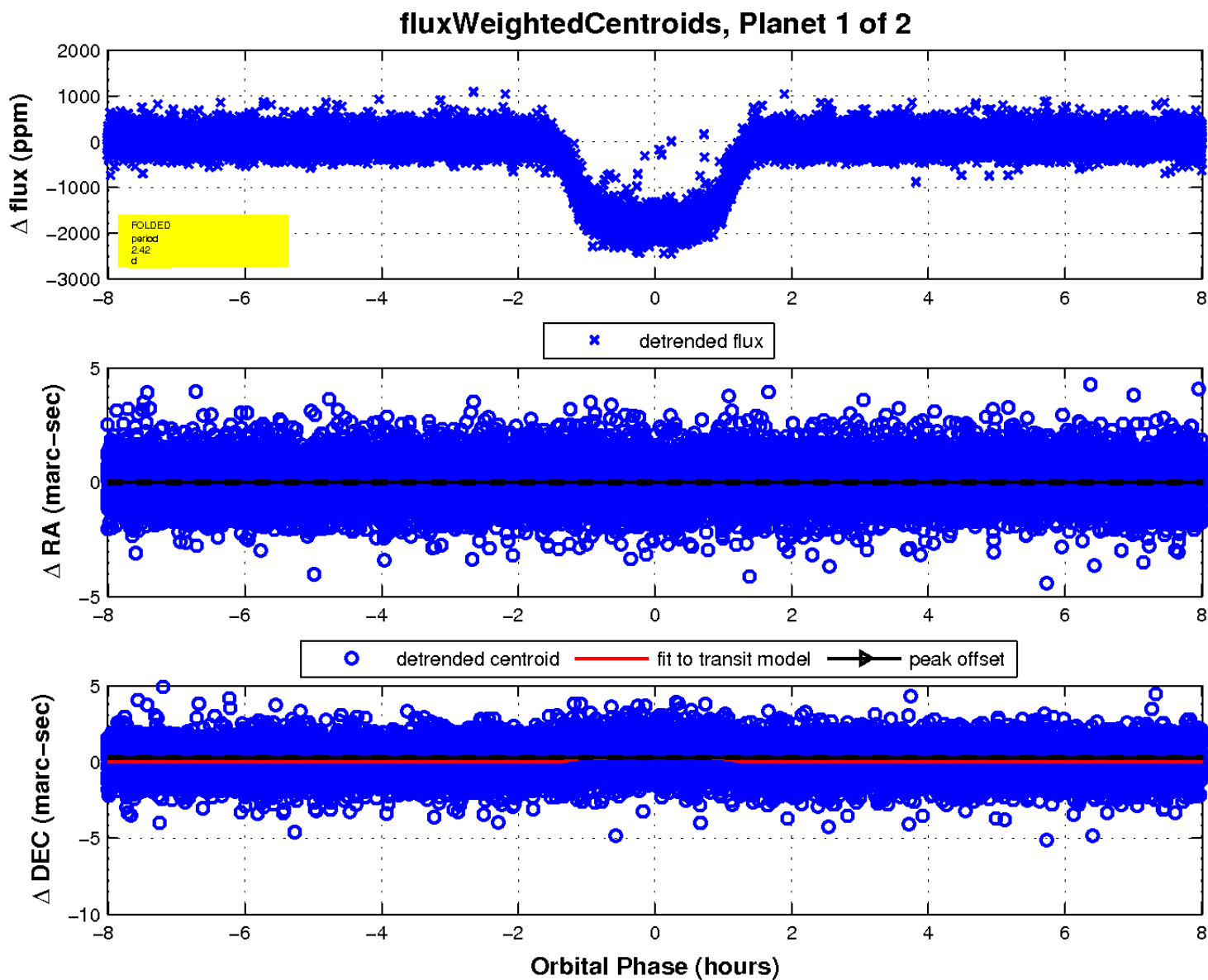
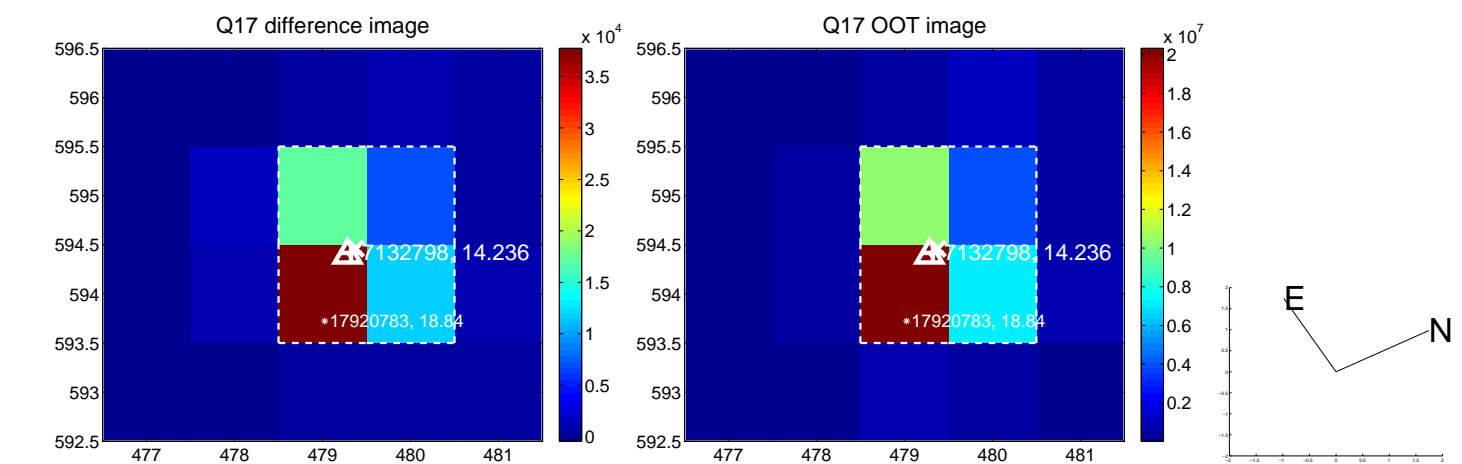
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

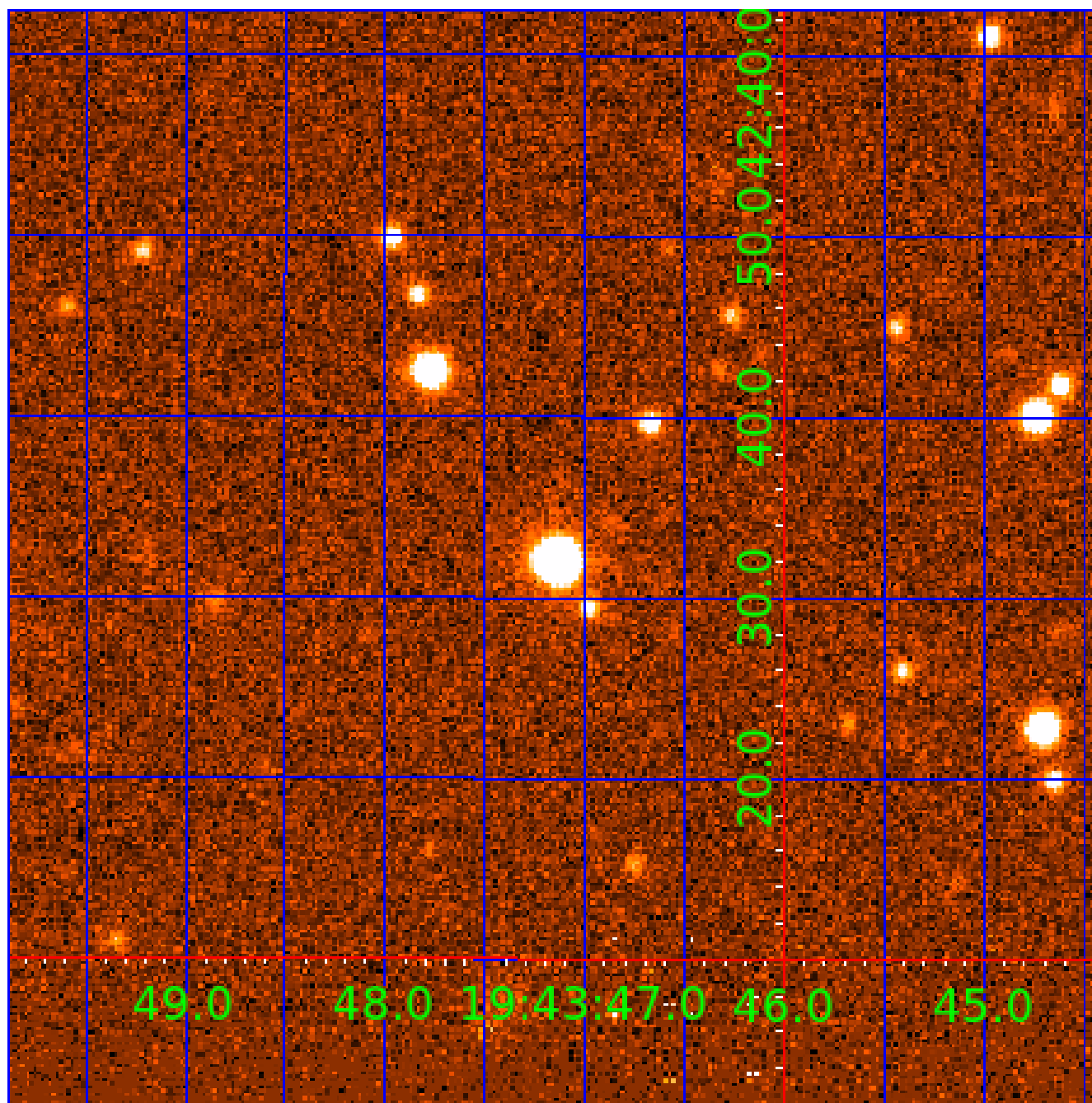


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007132798

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})
007132798-01	OBS	0220.01	2.422083	132.940549	1868.5	2.672	399.4	397.8	0.83	5598	3.88	513.05
007132798-02	OBS	0220.02	4.125105	133.642720	112.2	3.002	16.8	18.9	0.83	5598	1.04	252.25

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007132798-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
007132798-02	OBS	PC	1.00	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.

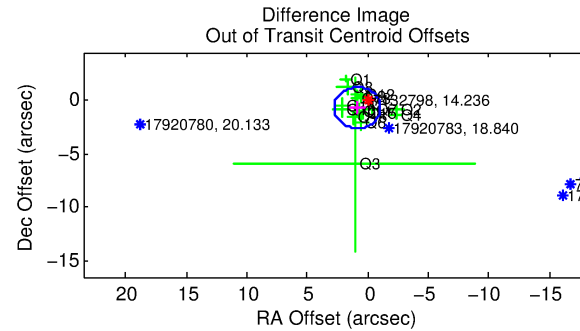
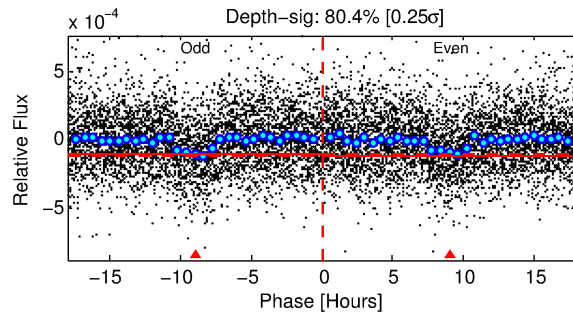
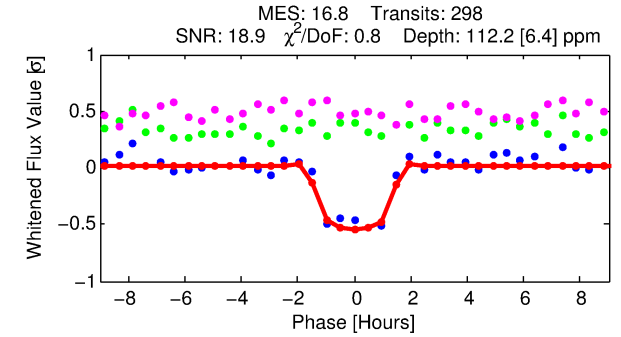
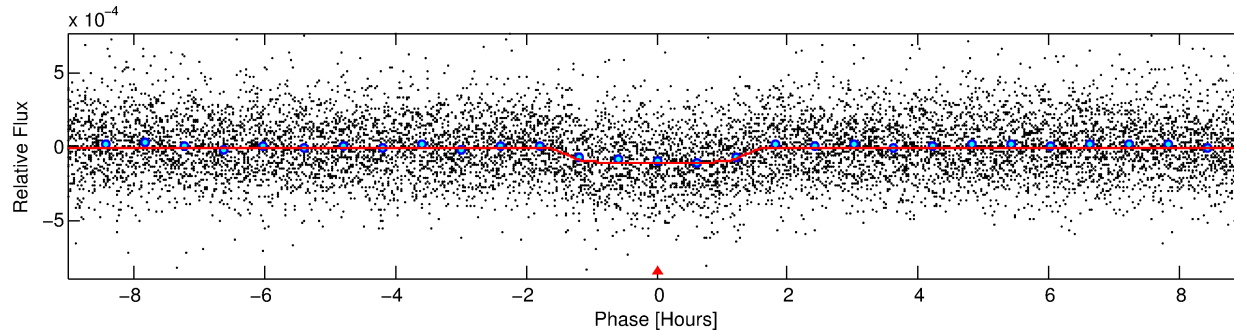
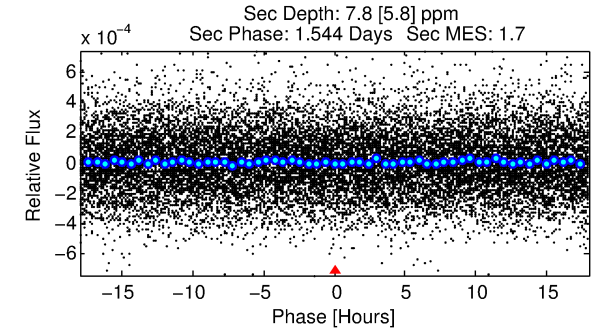
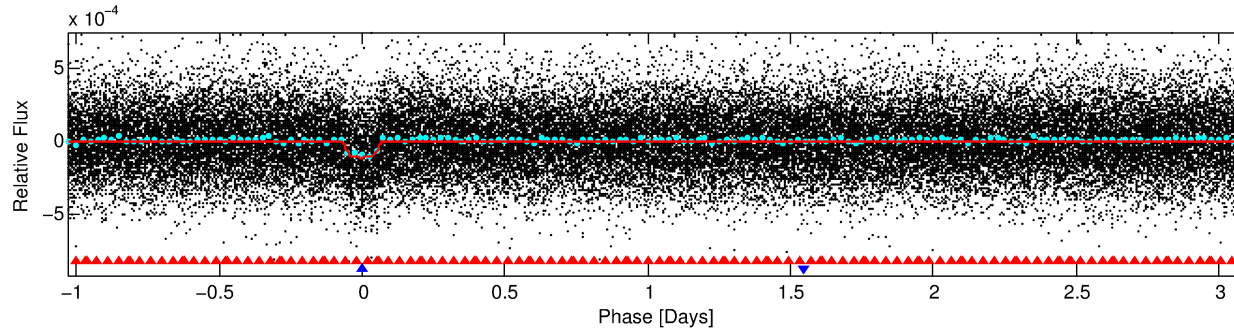
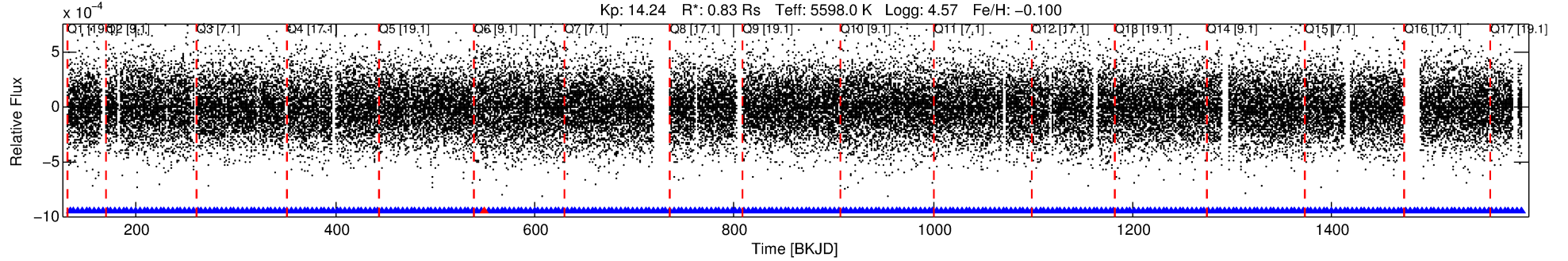
Ephemeris Match Information For 007132798-02

No Significant Match Found

DV One-Page Summary

KIC: 7132798 Candidate: 2 of 2 Period: 4.125 d
KOI: K00220.02 Name: Kepler-119c Corr: 0.977

Kp: 14.24 R*: 0.83 Rs Teff: 5598.0 K Logg: 4.57 Fe/H: -0.100



DV Fit Results:

Period = 4.12511 [0.00002] d
Epoch = 133.6427 [0.0027] BKJD
Rp/R* = 0.0115 [0.0047]
a/R* = 5.14 [9.38]
b = 0.89 [0.45]
Seff = 252.25 [72.64]
Teff = 1016 [73] K
Rp = 1.04 [0.48] Re
a = 0.0490 [0.0088] AU
Ag = 9.57 [10.86] [0.79σ]
Teffp = 2763 [767] K [2.27σ]

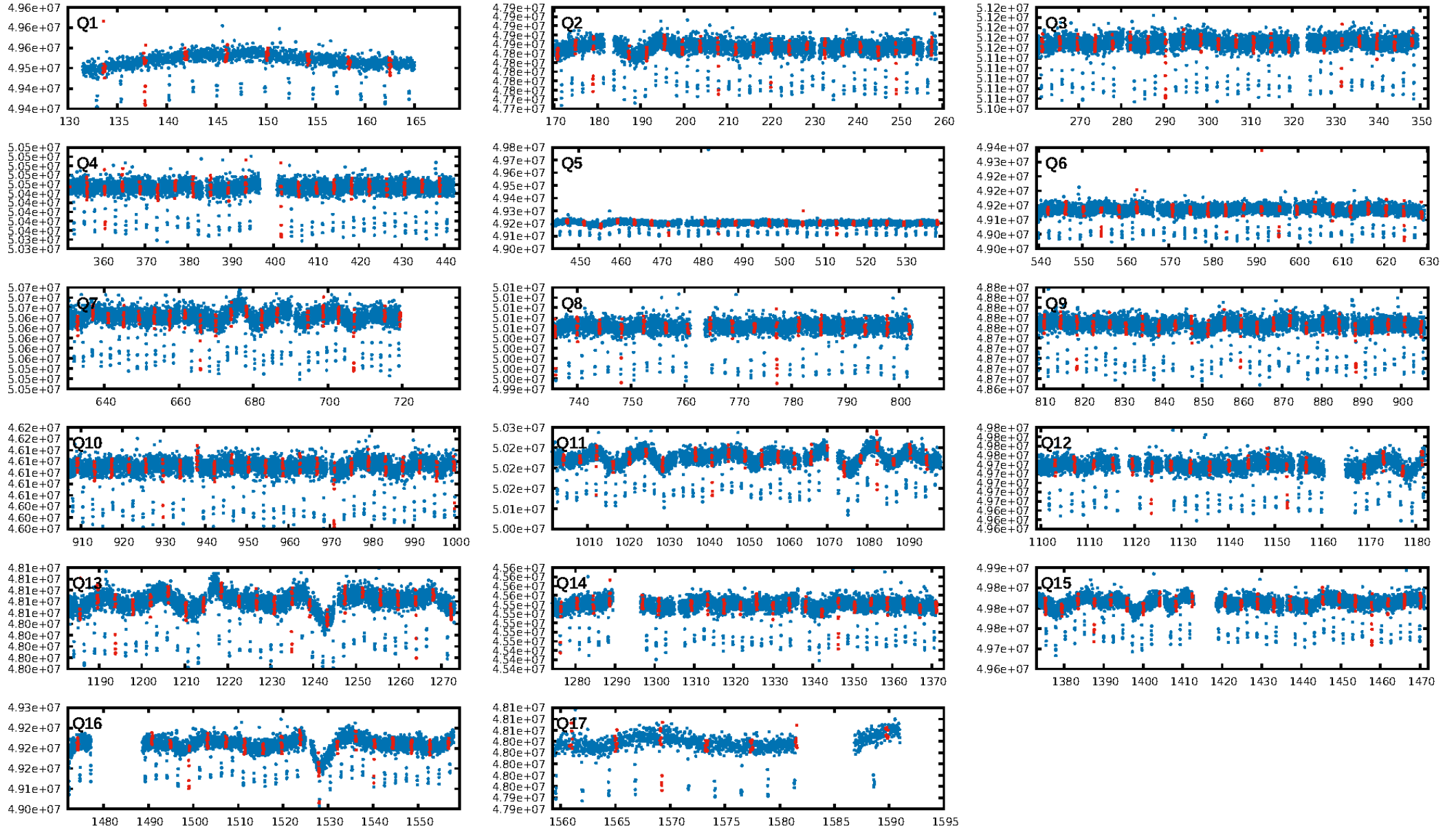
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [10.17σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.22e-64
RollingBand-fgt: 1.00 [284/285]
GhostDiagnostic-chr: -89.24
Centroid-sig: 0.0%
Centroid-so: 1.687 arcsec [2.88σ]
OotOffset-rm: 1.128 arcsec [1.77σ]
KicOffset-rm: 1.212 arcsec [1.95σ]
OotOffset-st: 4/4/4/3 [15]
KicOffset-st: 4/4/4/3 [15]
DiffImageQuality-fgm: 0.93 [14/15]
DiffImageOverlap-fno: 1.00 [17/17]

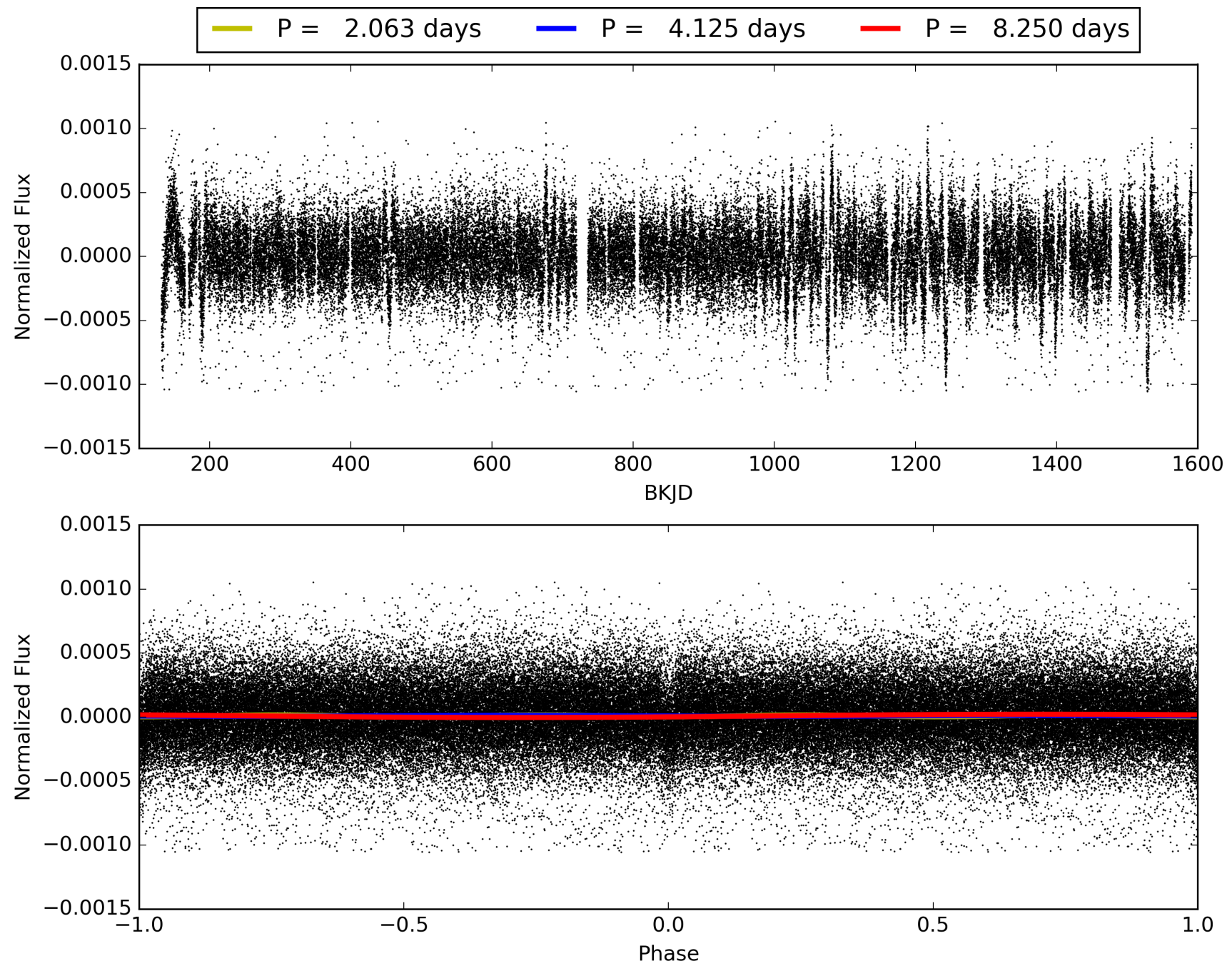
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 08:22:42 Z

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

TCE 007132798-02, PDC Light Curves

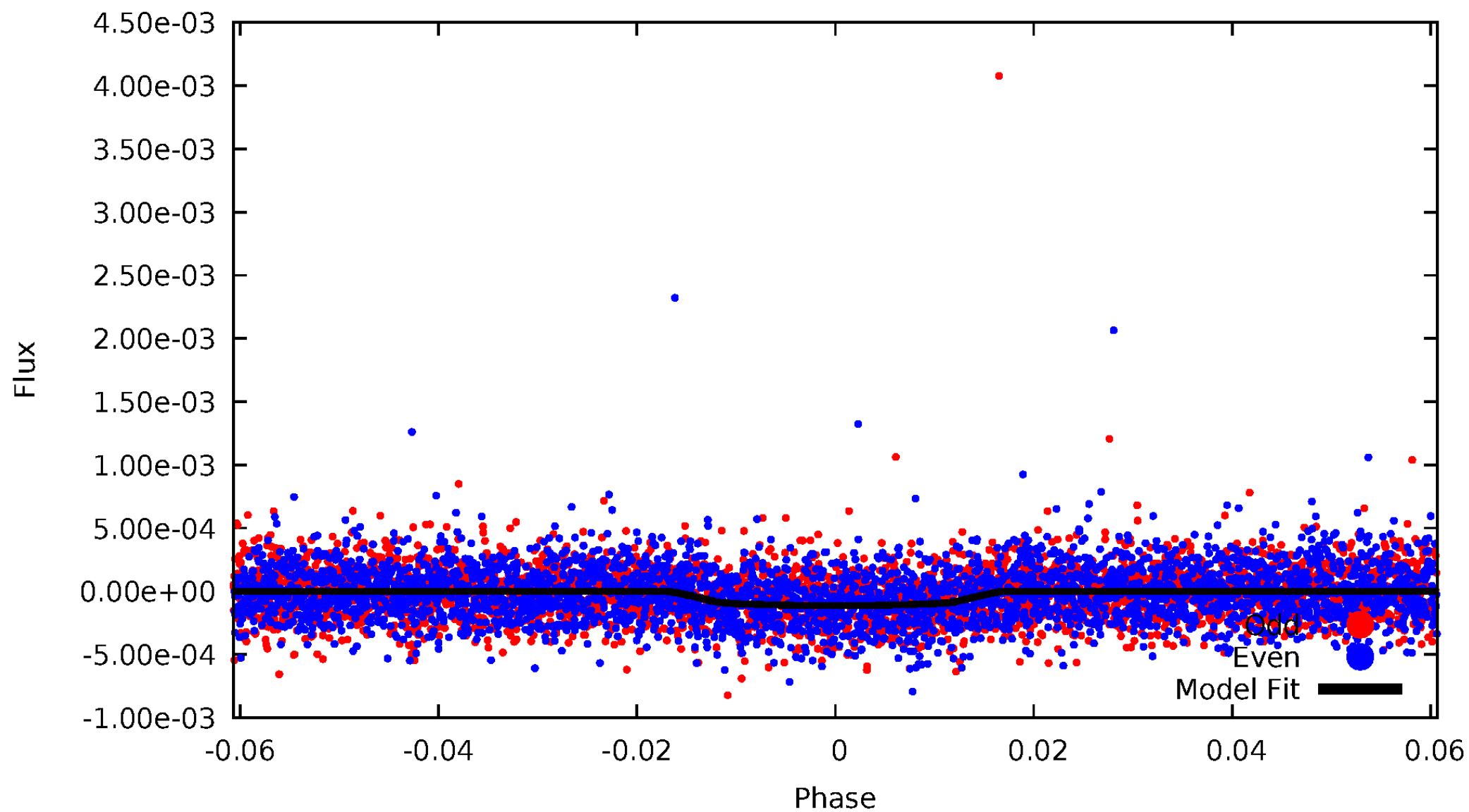


TCE 007132798-02



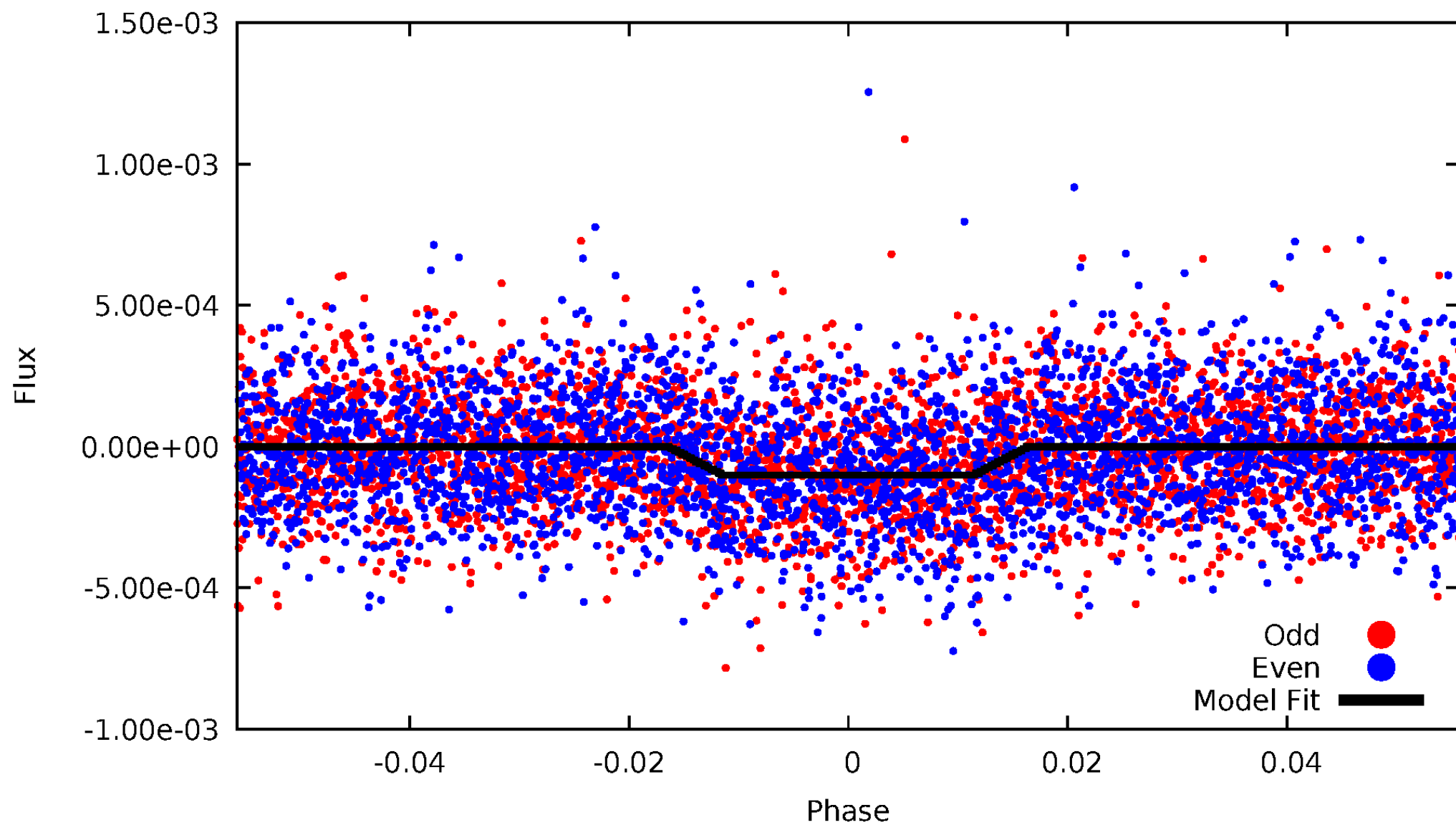
DV Odd/Even

TCE 007132798-02



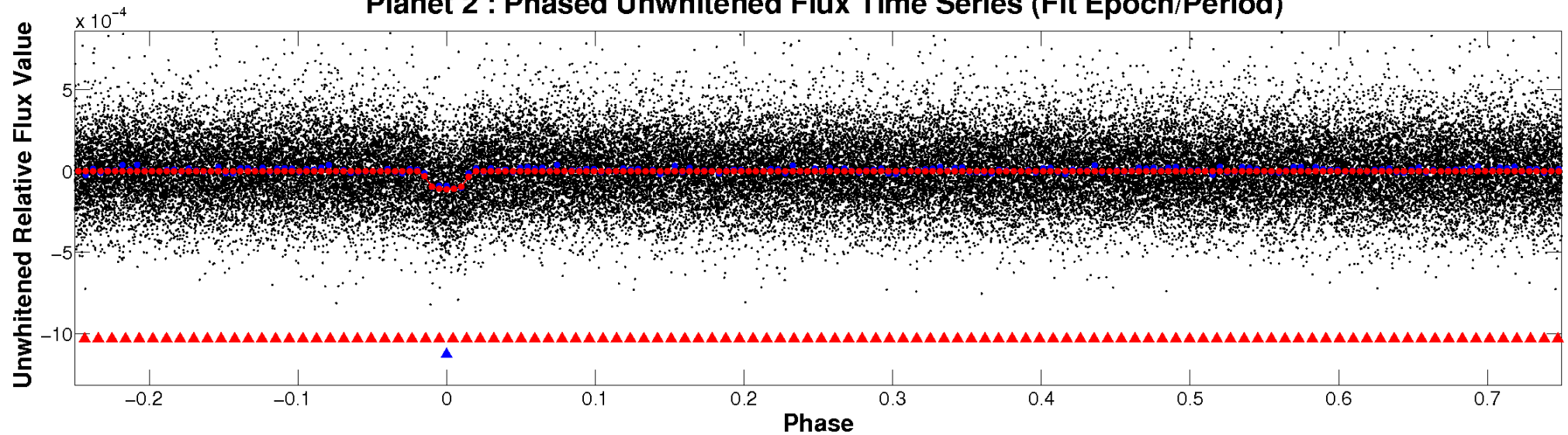
ALT Odd/Even

TCE 007132798-02

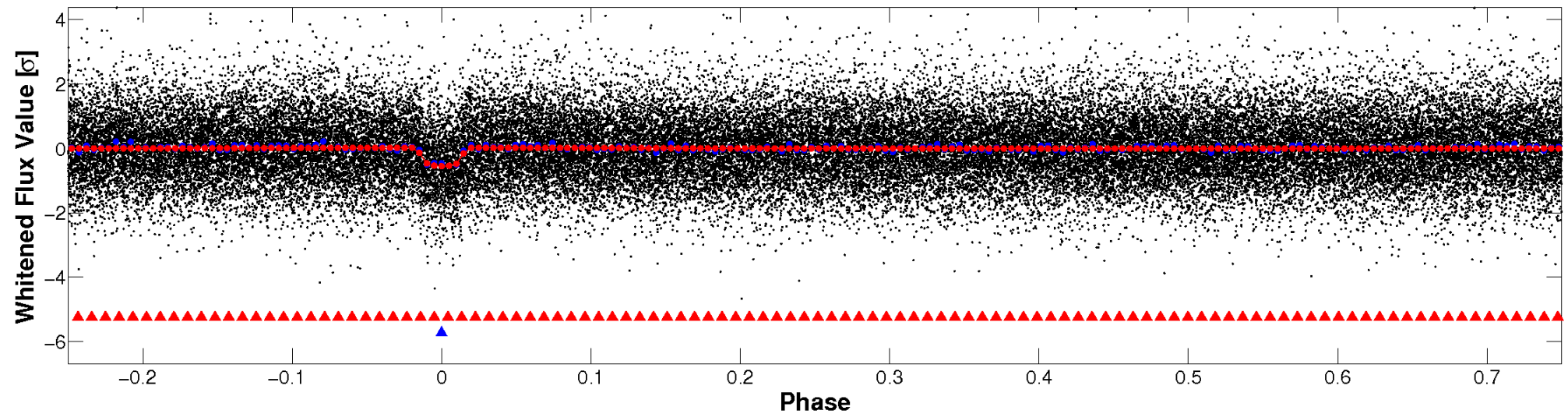


Non-Whitened Vs. Whitened Light Curve

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

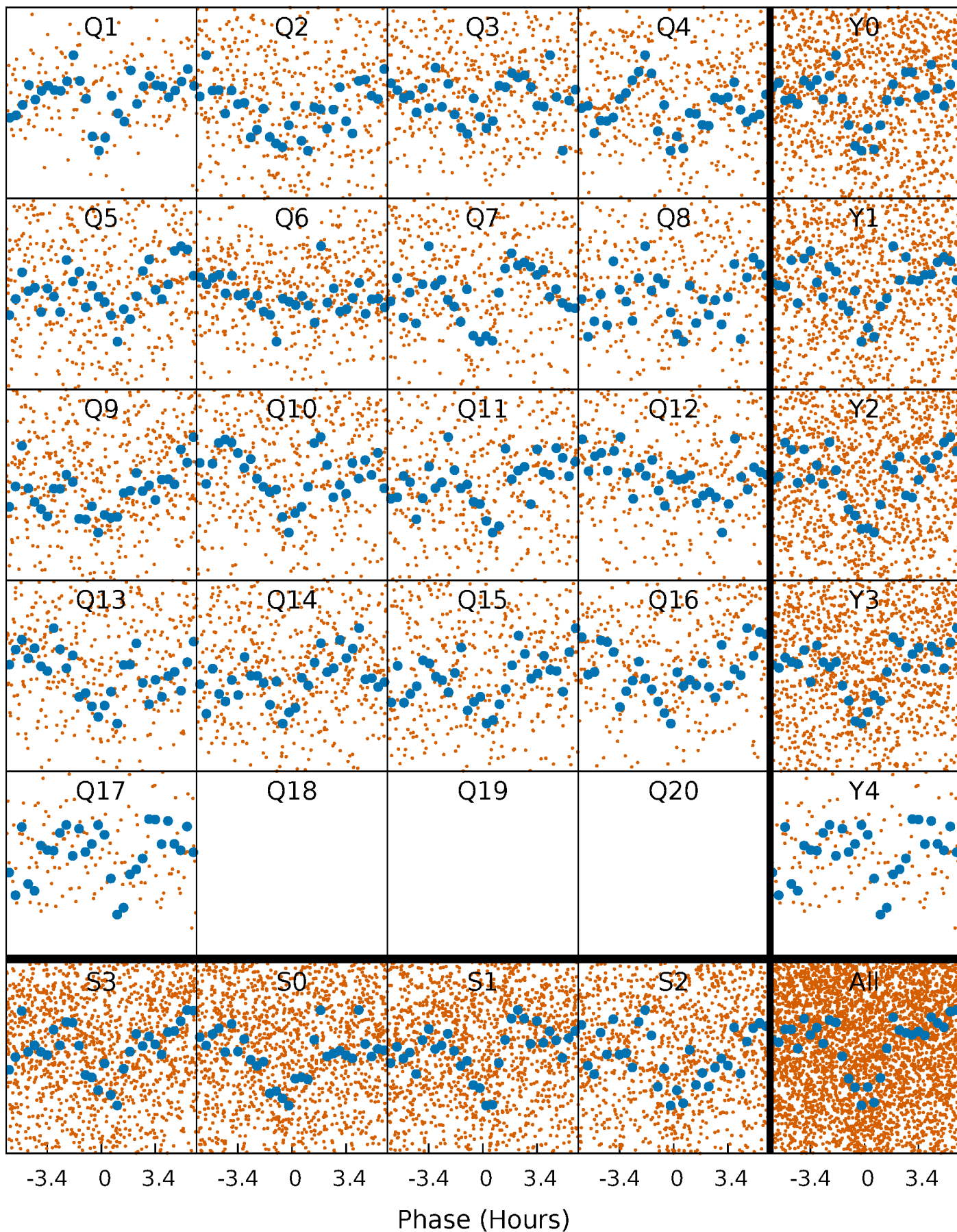


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



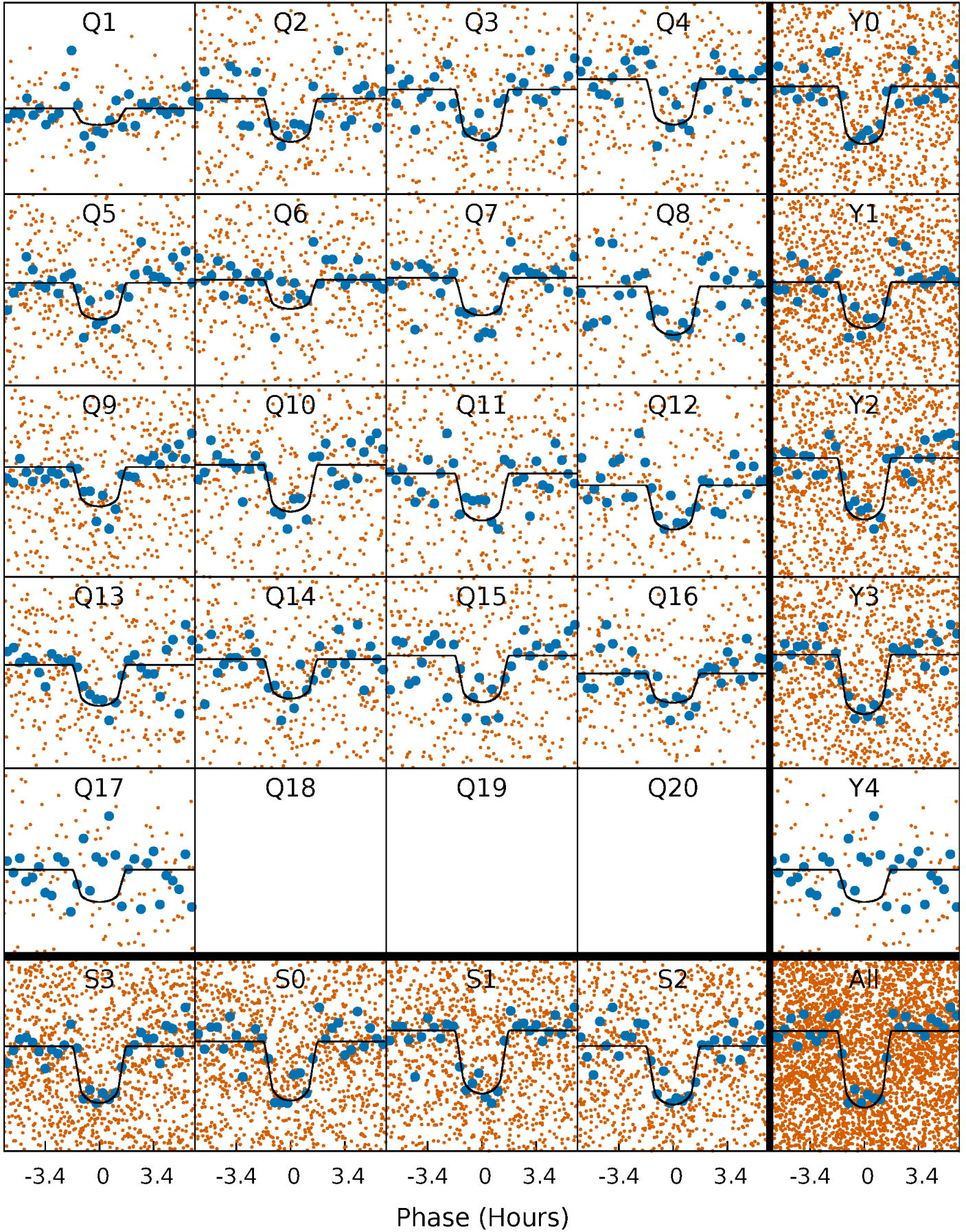
PDC Quarter-Phased Transit Curves

TCE 007132798-02 P= 4.125105 Days $T_0=133.642720$ (BKJD)



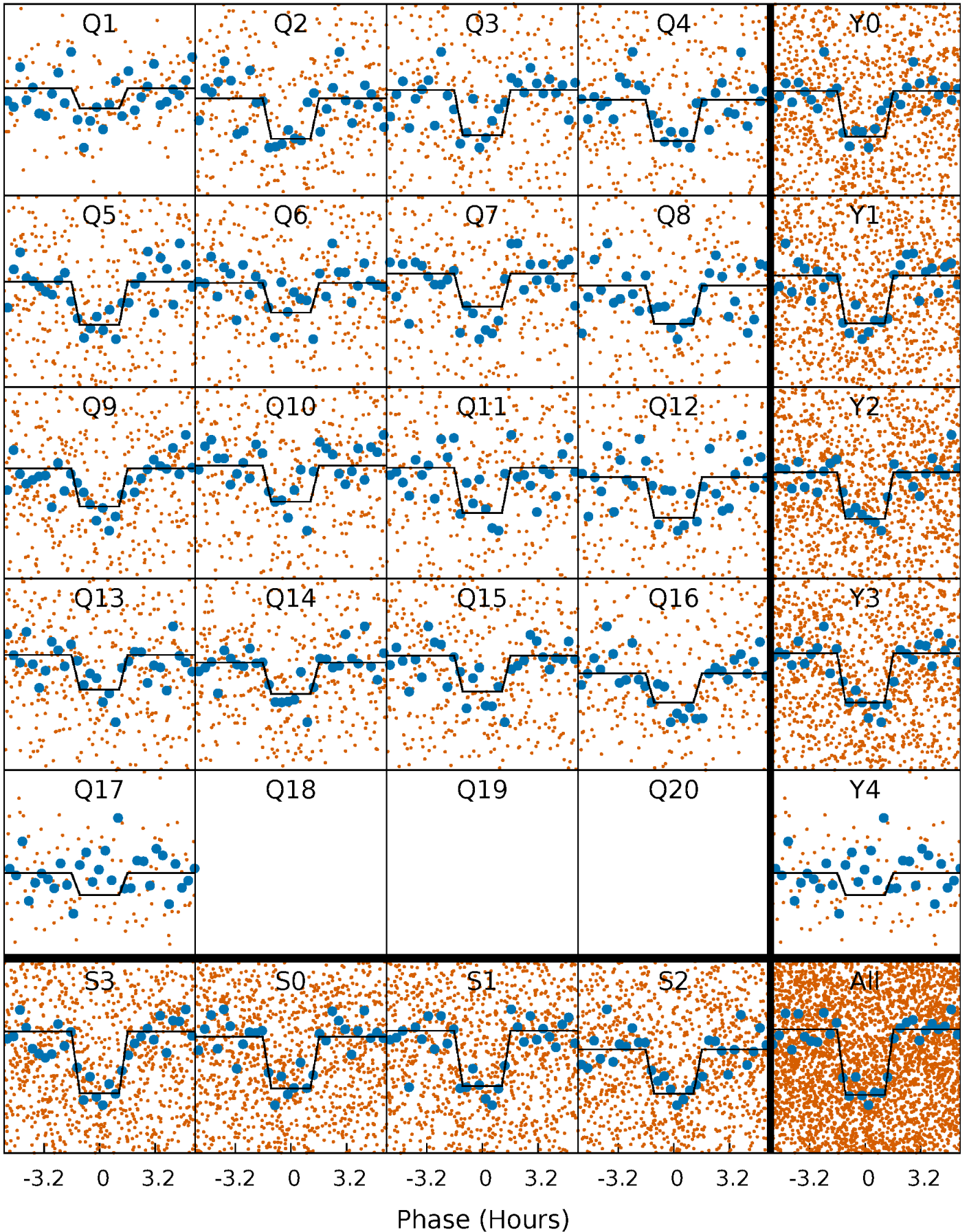
DV Quarter-Phased Transit Curves

TCE 007132798-02 P= 4.125105 Days $T_0=133.642720$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

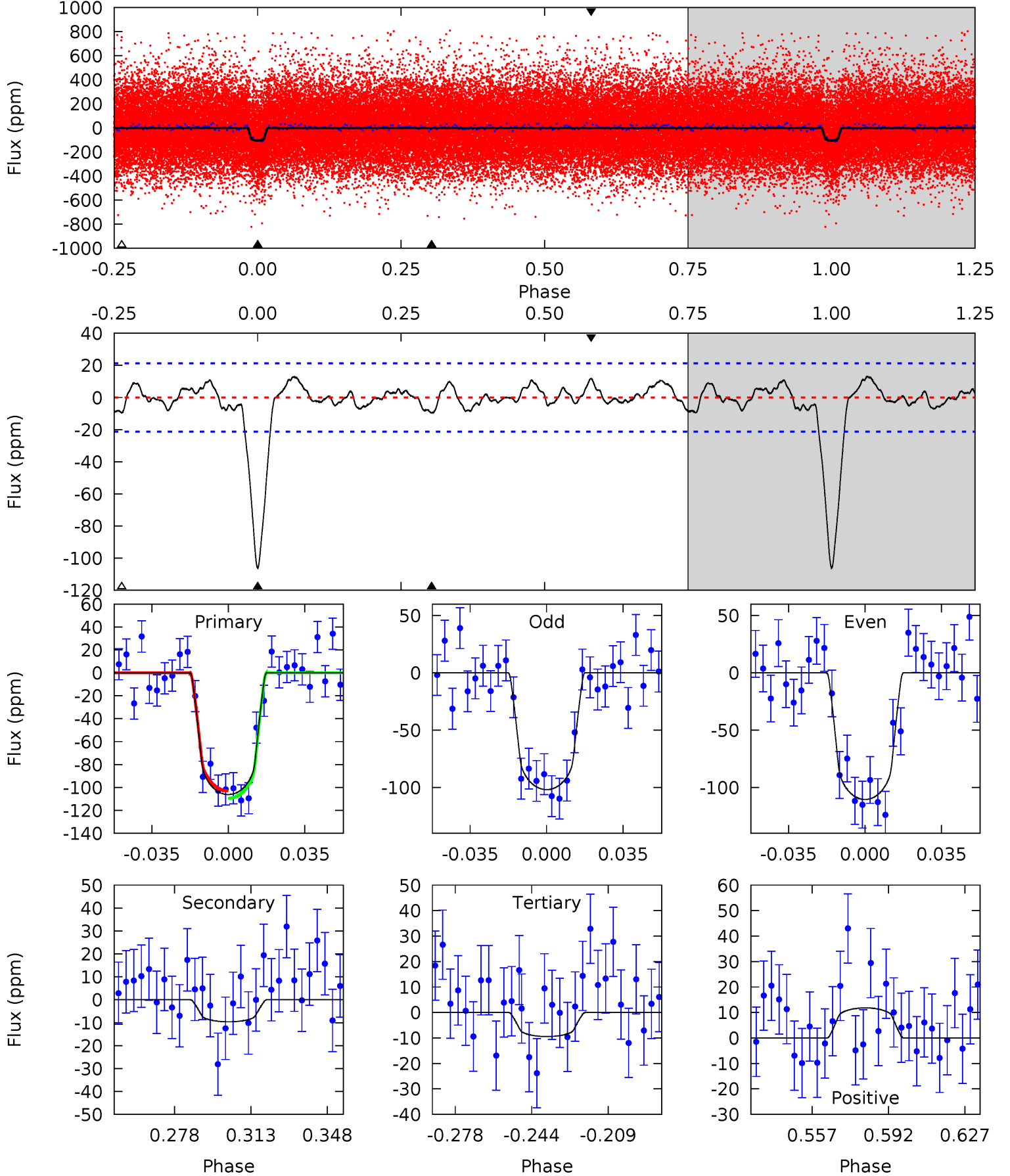
TCE 007132798-02 P= 4.125055 Days $T_0=133.649854$ (BKJD)



DV Model-Shift Uniqueness Test

007132798-02, P = 4.125105 Days, E = 129.517615 Days

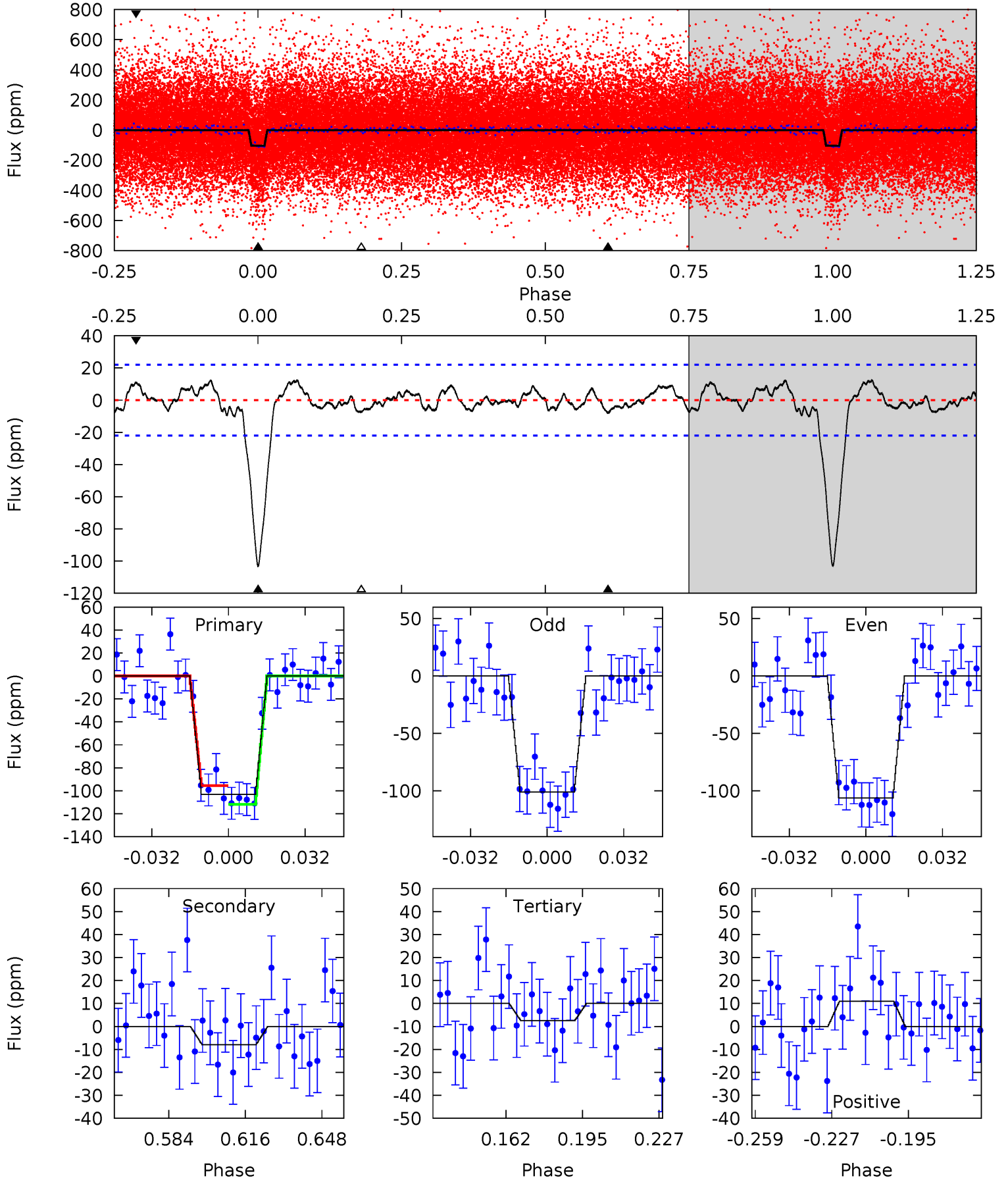
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.8	2.16	2.12	2.65	4.78	2.11	1.15	21.7	21.2	0.04	-0.49	0.97	1.01	0.11	0.72



Alt Model-Shift Uniqueness Test

007132798-02, P = 4.125055 Days, E = 129.524799 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.5	1.73	1.63	2.40	4.80	2.14	1.09	20.9	20.1	0.09	-0.67	0.57	0.94	0.11	1.77



Stellar Parameters For KIC 007132798

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5598^{+149}_{-166}	$4.565^{+0.036}_{-0.144}$	$-0.100^{+0.300}_{-0.300}$	$0.830^{+0.176}_{-0.075}$	$0.928^{+0.083}_{-0.111}$	$2.285^{+0.433}_{-0.929}$
	+3%/-3%	+1%/-3%	+300%/-300%	+21%/-9%	+9%/-12%	+19%/-41%
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 007132798-02 / KOI 0220.02

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-10 ± 4	$1.07^{+0.46}_{-0.42}$	1447^{+78}_{-62}	3386^{+652}_{-488}	11^{+21}_{-7}
Alt.	-8 ± 5	$0.96^{+0.44}_{-0.43}$	1448^{+71}_{-58}	3403^{+892}_{-510}	11^{+31}_{-7}

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

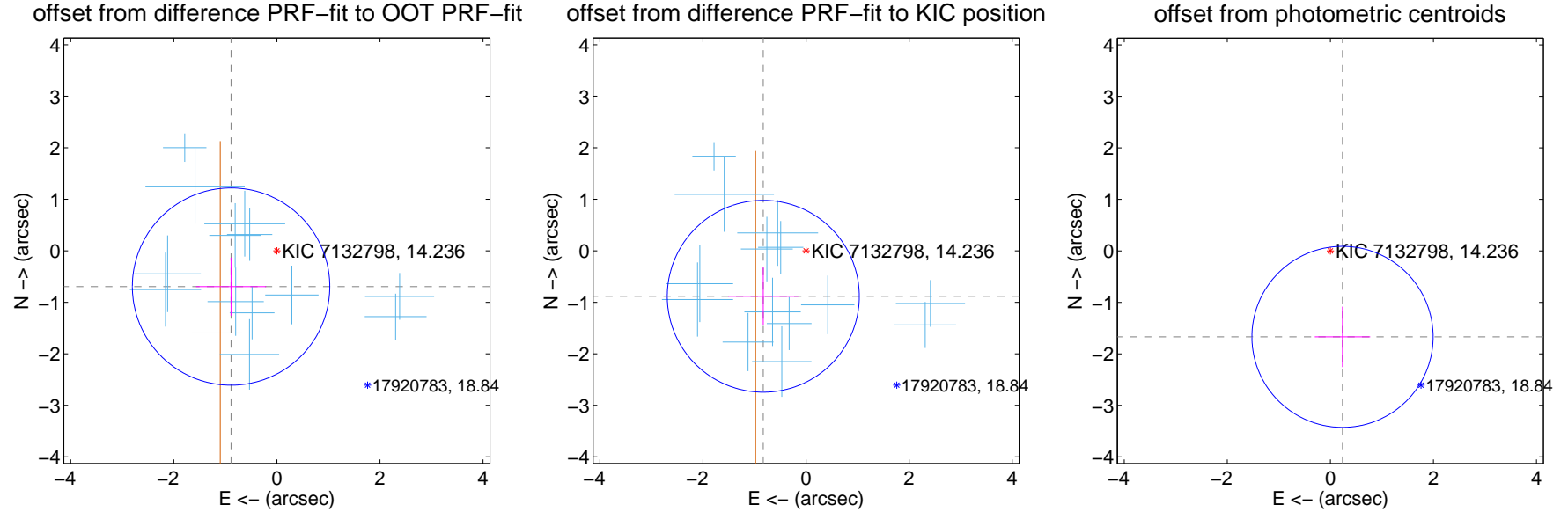
DV Centroid Data

Supplemental centroid analysis for 007132798-02. Kepler magnitude: 14.24. Transit SNR 18.89

There are 14 quarters with good PRF difference image offsets

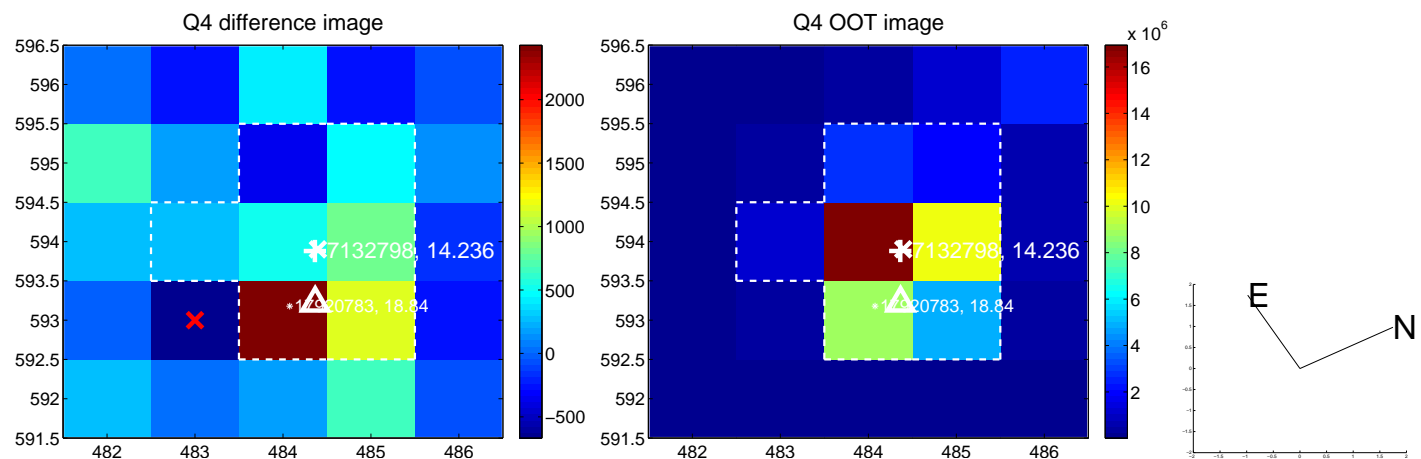
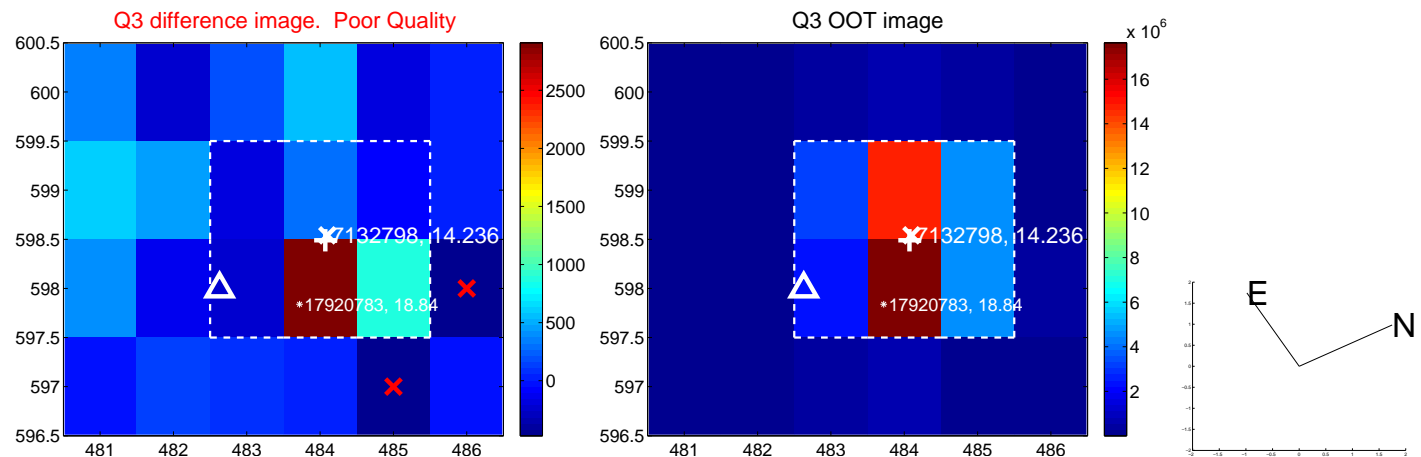
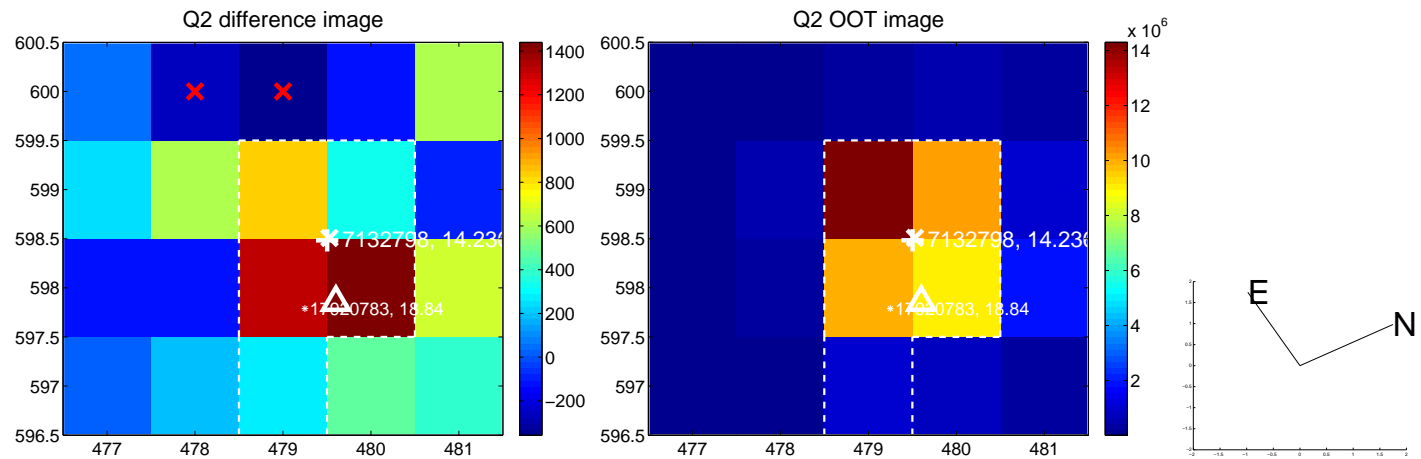
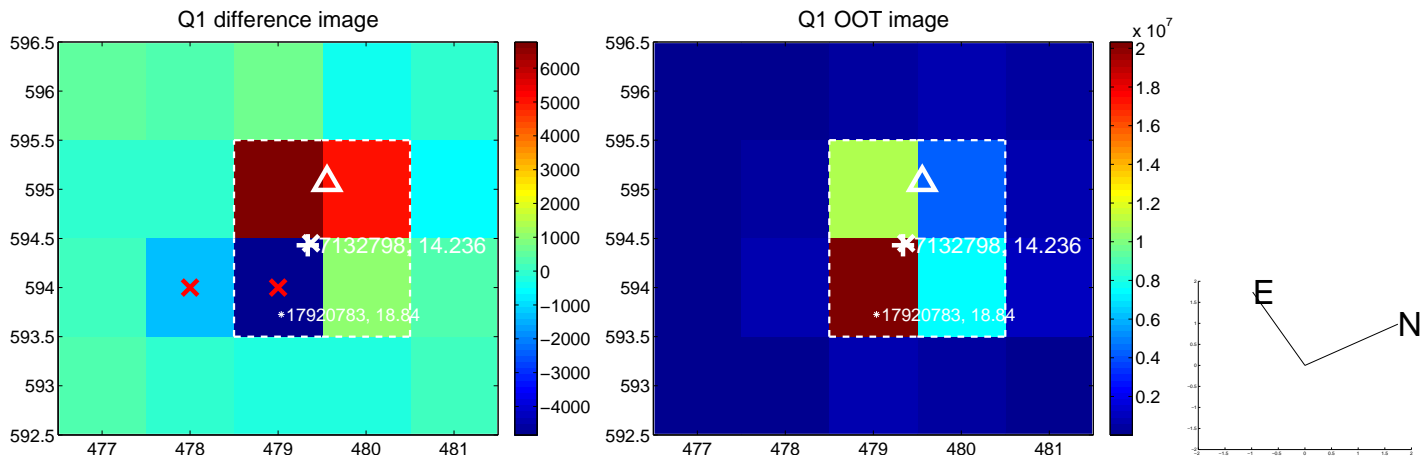
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.128 ± 0.638	1.77	0.889 ± 0.680	-0.695 ± 0.563
PRF-fit source offset from KIC position	1.212 ± 0.621	1.95	0.830 ± 0.680	-0.883 ± 0.563
photometric centroid source offset	1.69 ± 0.59	2.88	-0.24 ± 0.54	-1.67 ± 0.59

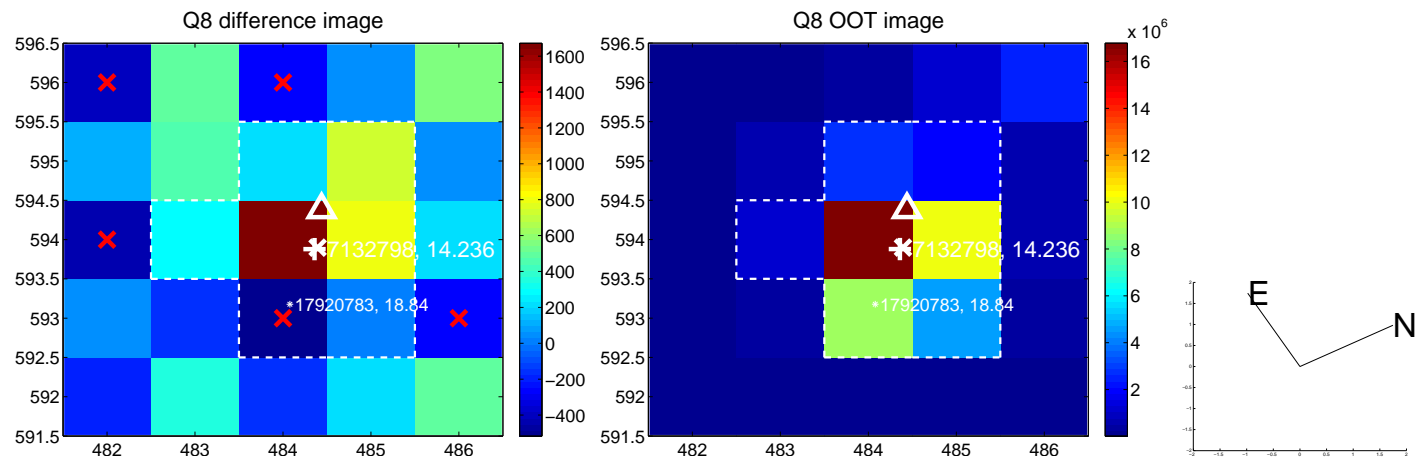
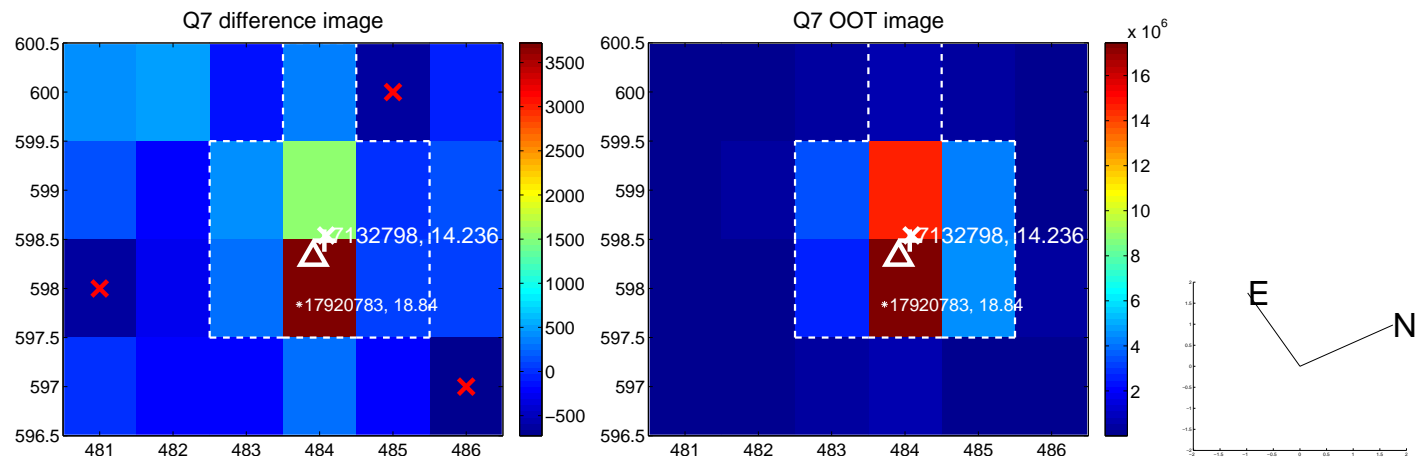
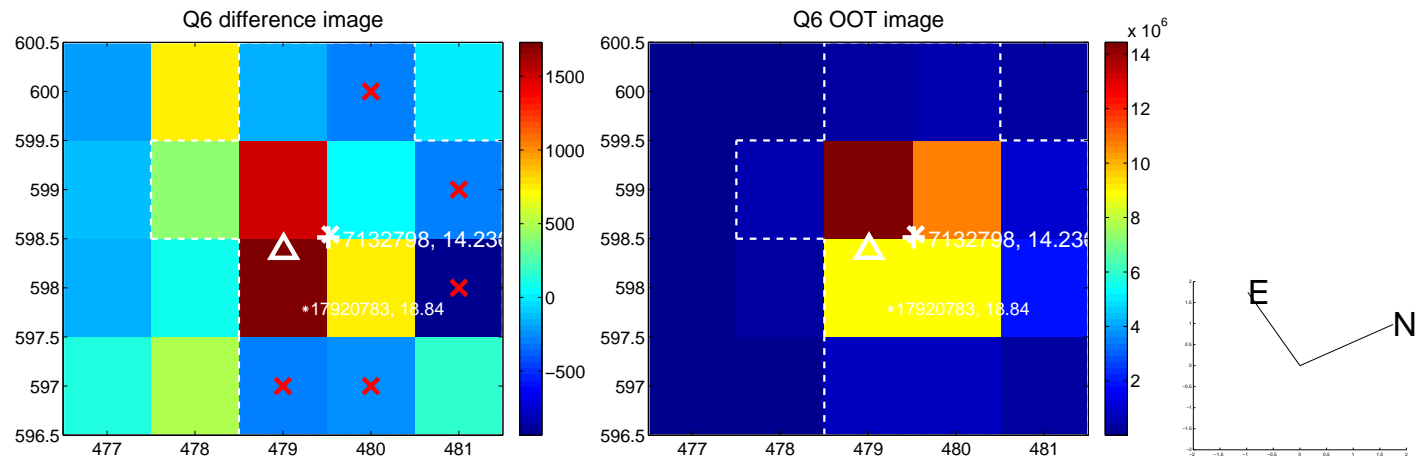
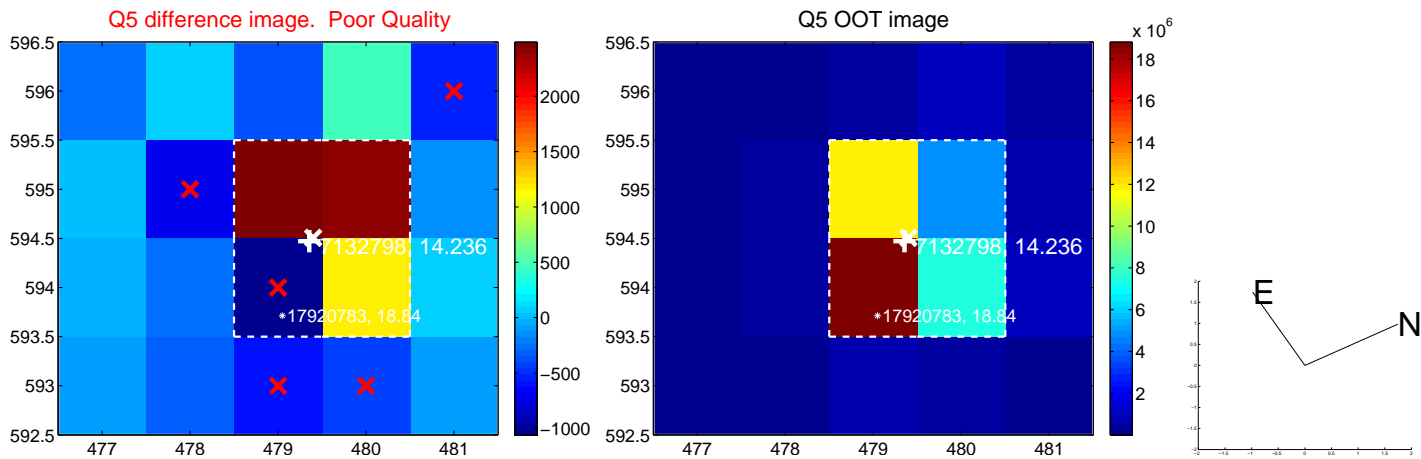


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

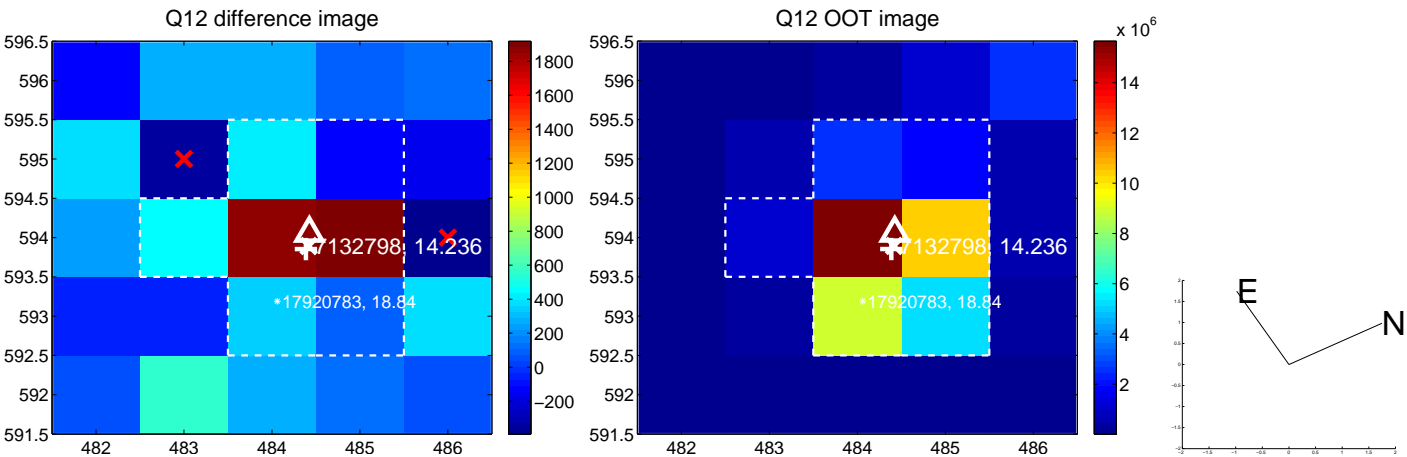
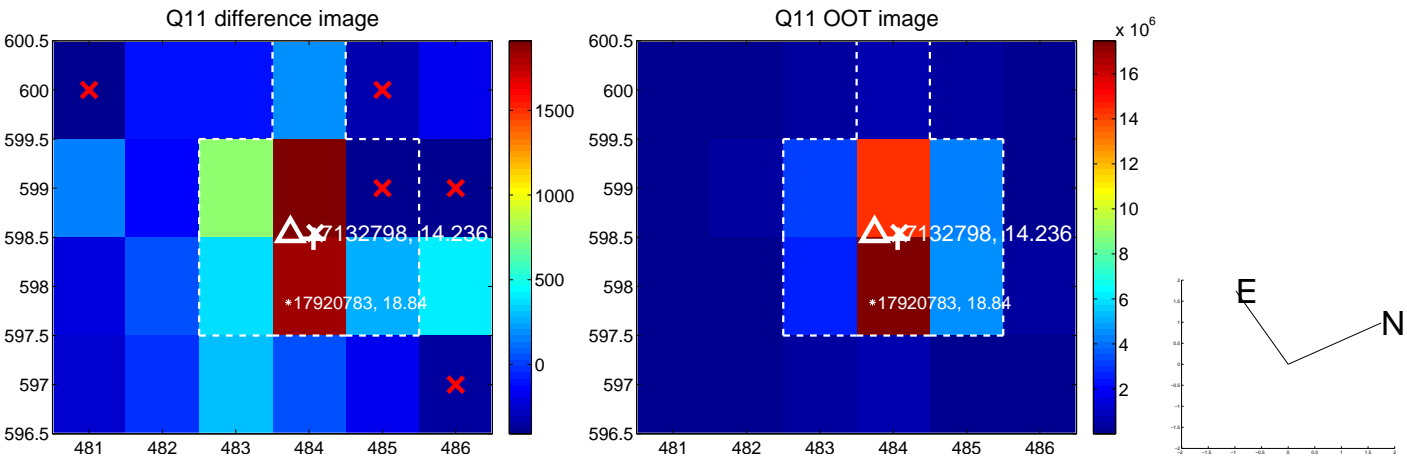
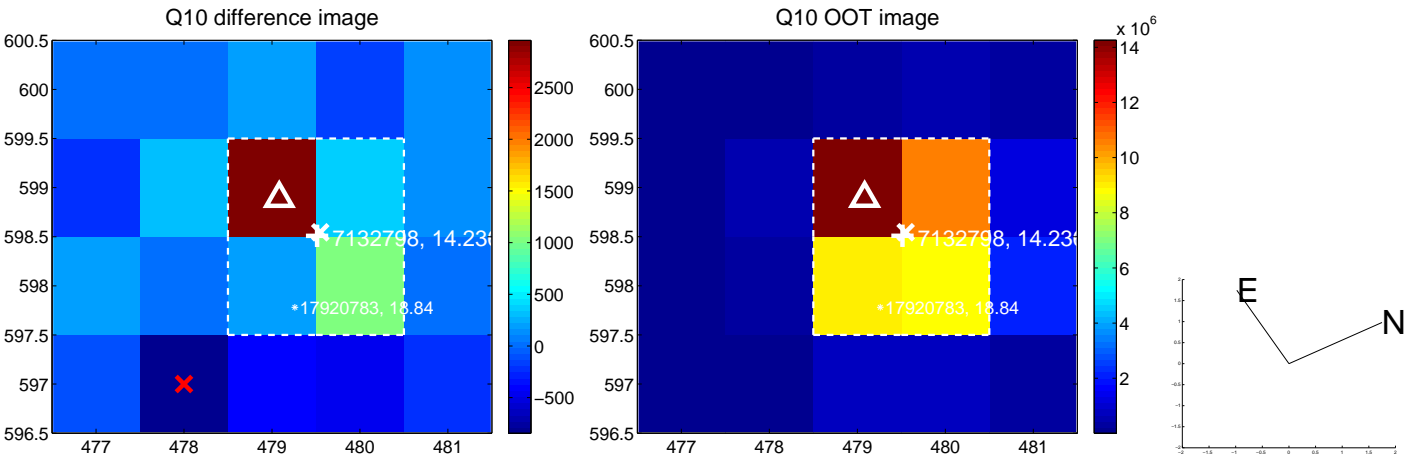
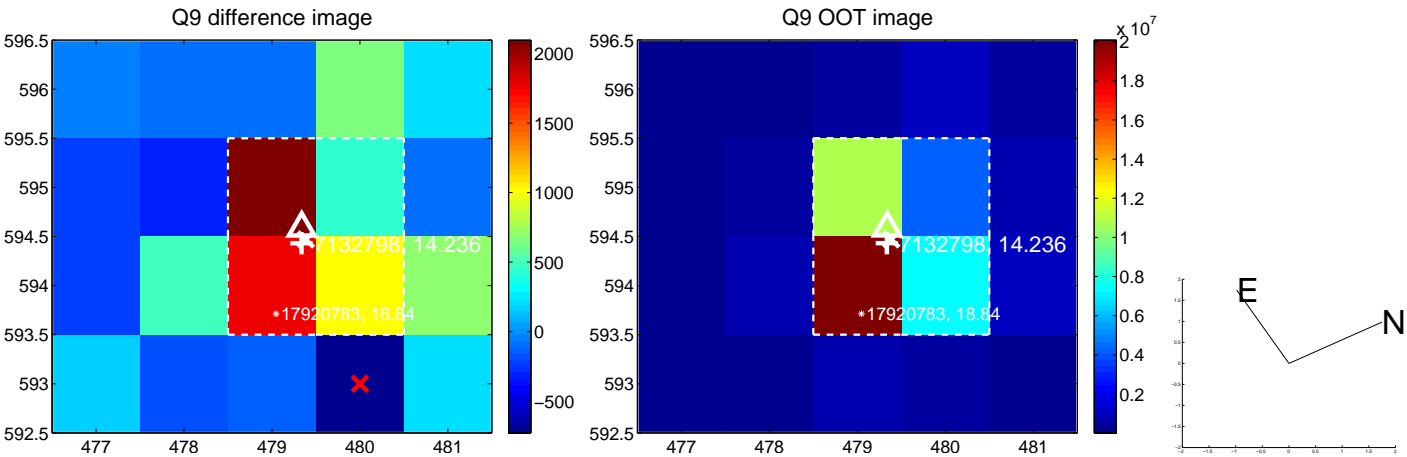
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



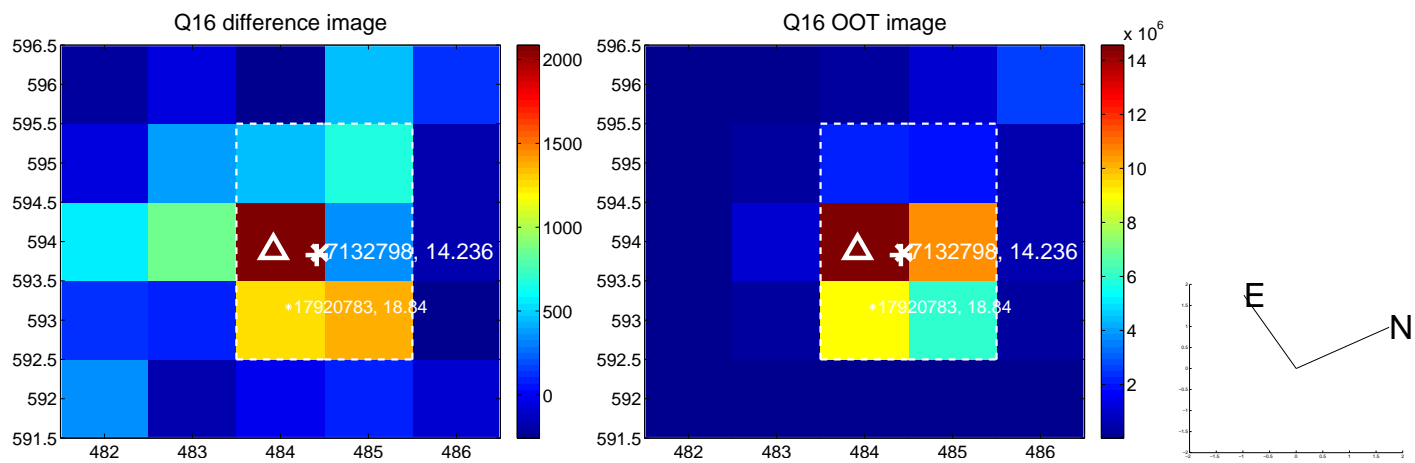
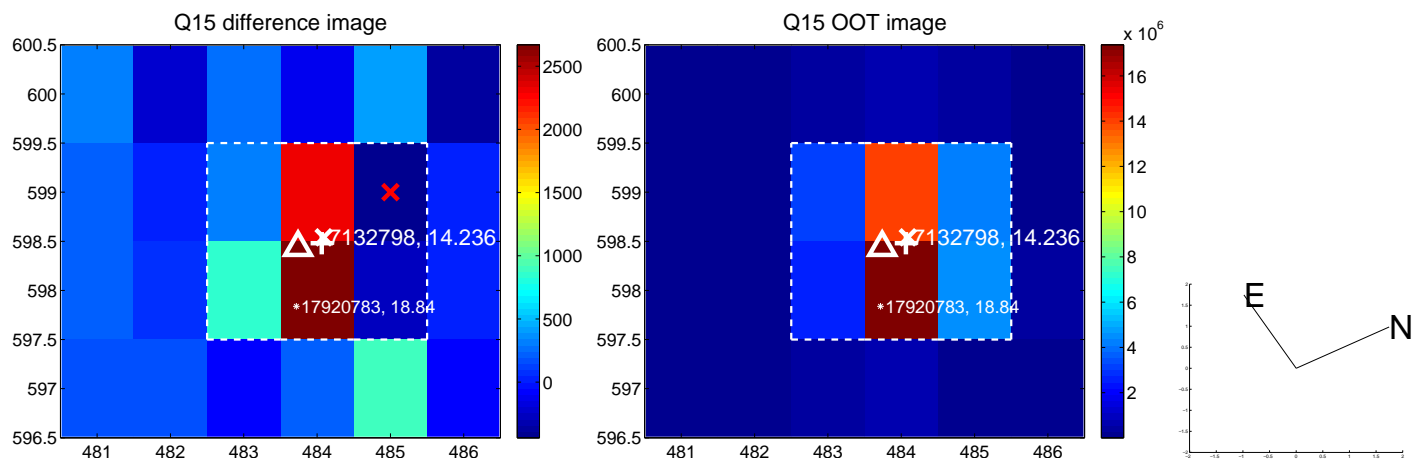
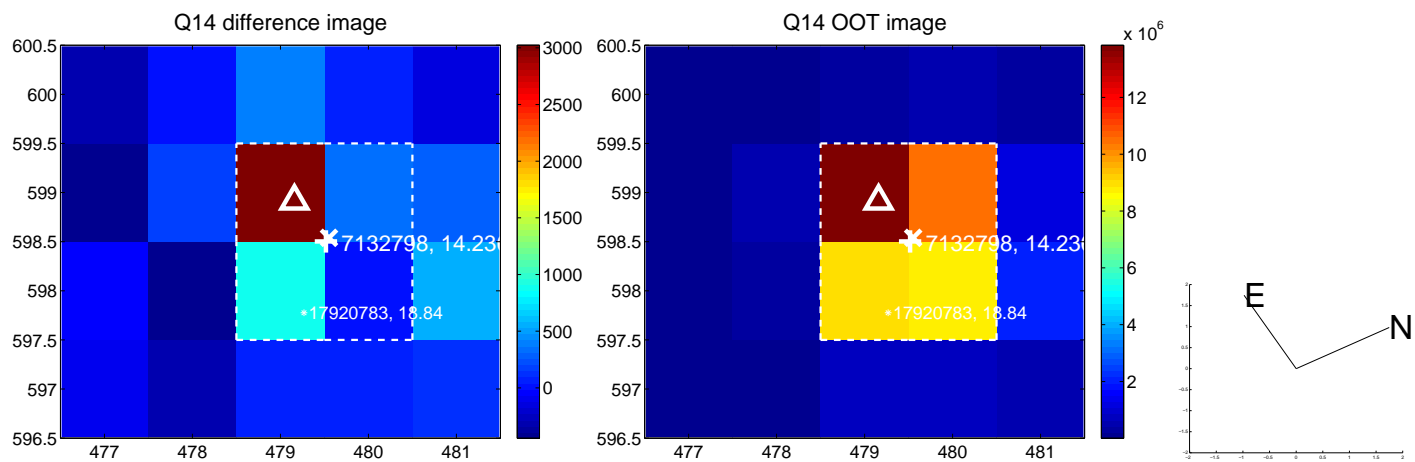
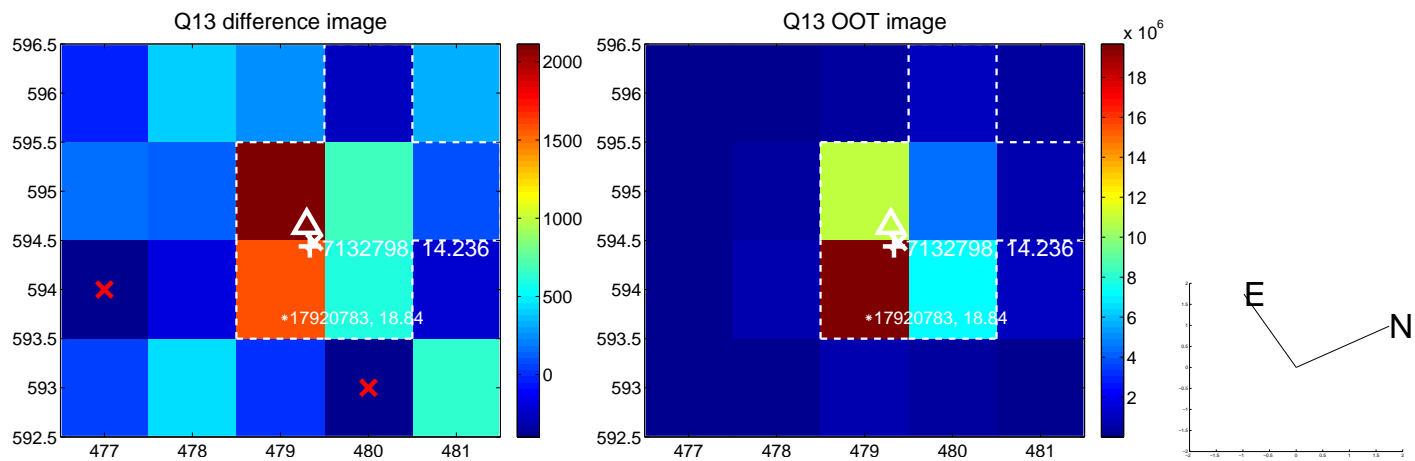
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



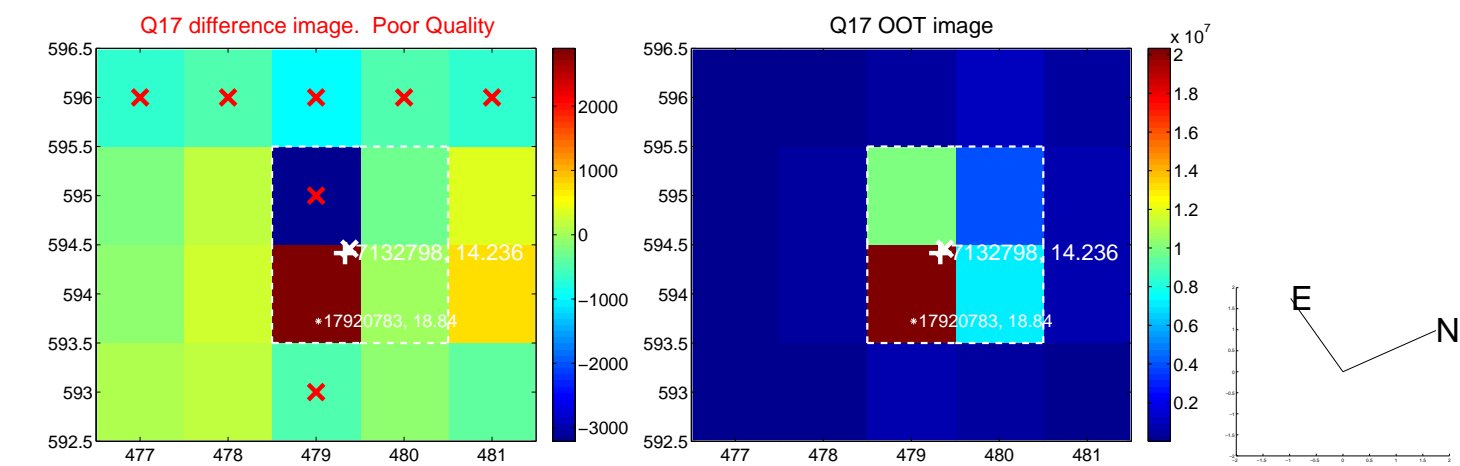
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



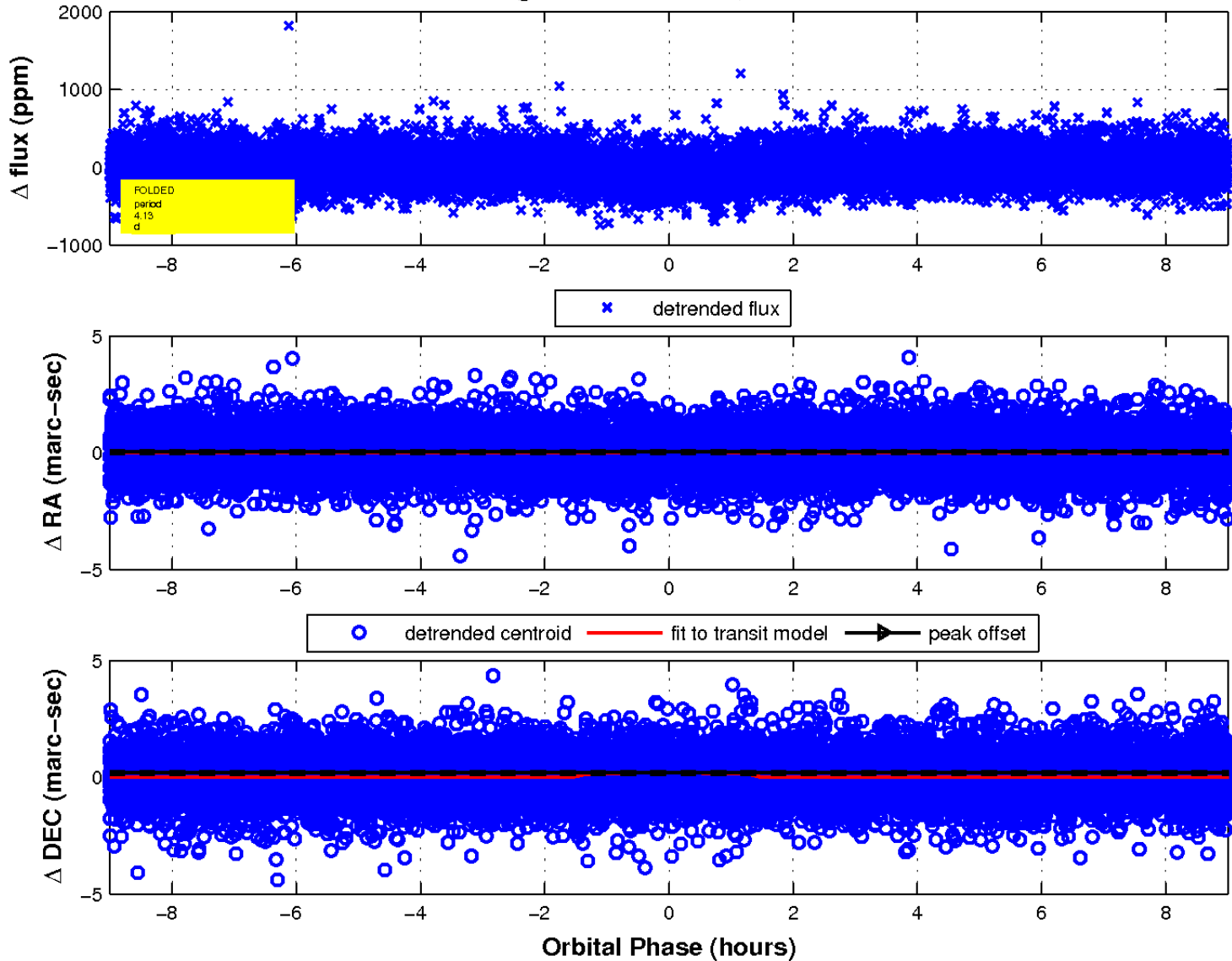
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 2 of 2



UKIRT Image

Declination

