

KIC 011199412

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})
011199412-01	OBS	No	422.172508	553.606059	1760.9	9.424	34.9	4.9	3.12	7693	13.26	16.73
011199412-02	OBS	No	390.063038	209.005270	409.1	5.000	33.1	-1.0	3.12	7693	6.33	18.59

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011199412-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_SATURATED
011199412-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—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 for comment definitions.

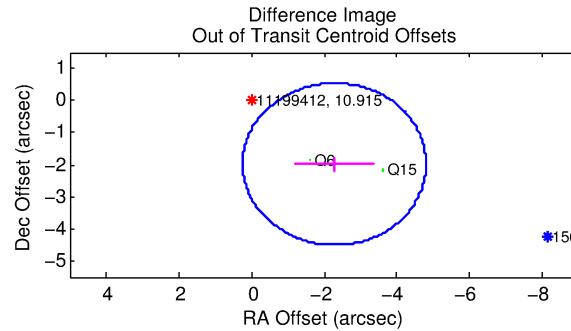
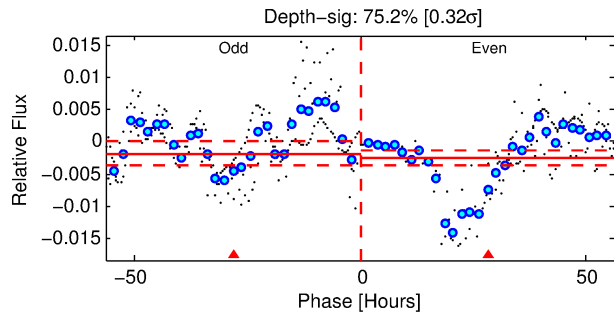
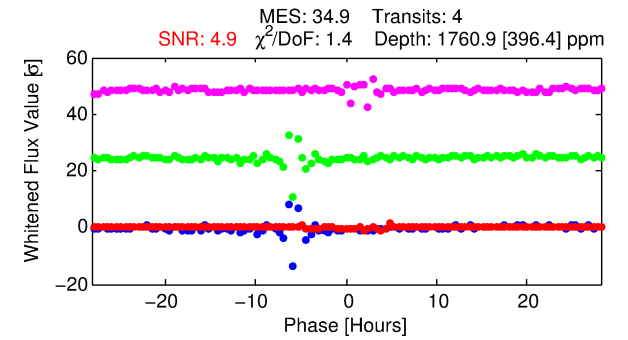
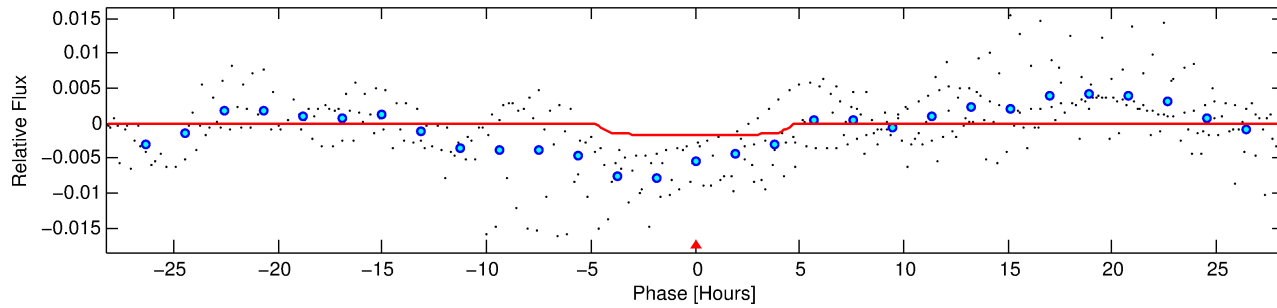
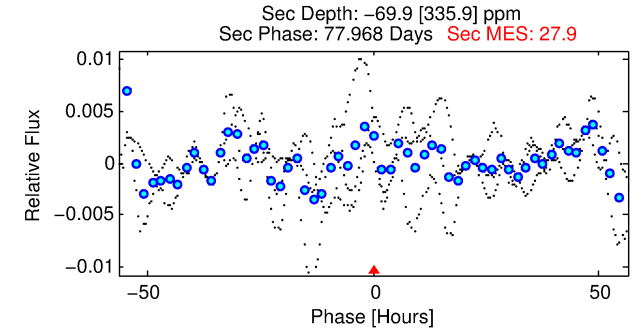
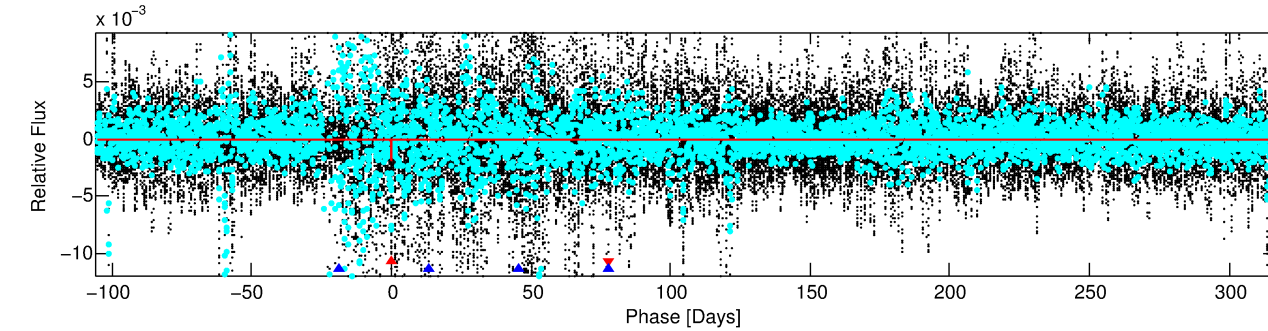
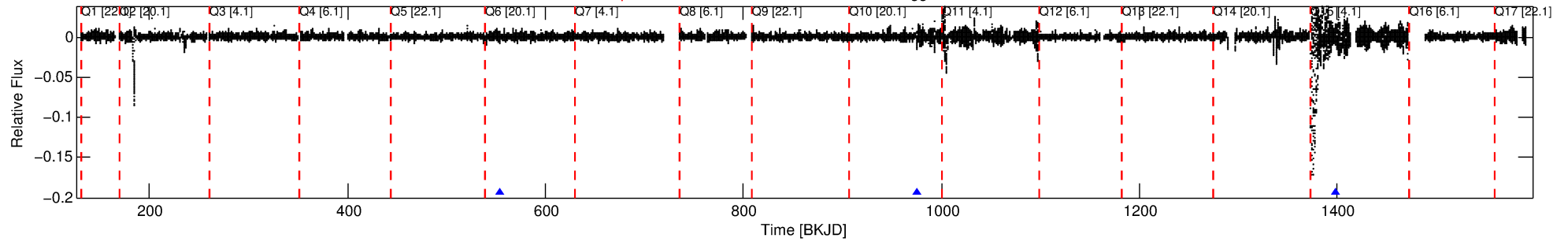
Ephemeris Match Information For 011199412-01

No Significant Match Found

DV One-Page Summary

KIC: 11199412 Candidate: 1 of 2 Period: 422.173 d

Kp: 10.91 R*: 3.12 Rs Teff: 7693.0 K Logg: 3.71 Fe/H: -0.260



DV Fit Results:

Period = 422.17251 [0.00692] d
Epoch = 553.6061 [0.0041] BKJD
Rp/R* = 0.0390 [0.0095]
a/R* = 336.75 [318.35]
b = 0.33 [2.50]
Seff = 16.73 [13.29]
Teq = 516 [102] K
Rp = 13.26 [7.26] Re
a = 1.3489 [0.6486] AU
Ag = N/A
Teffp = N/A

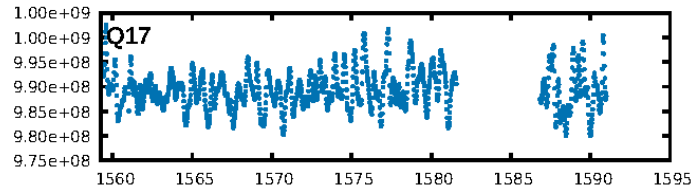
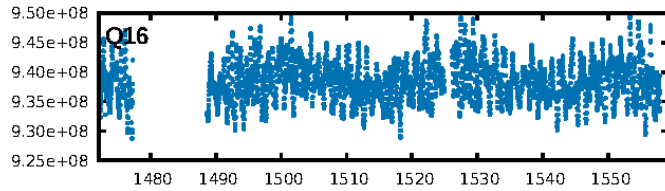
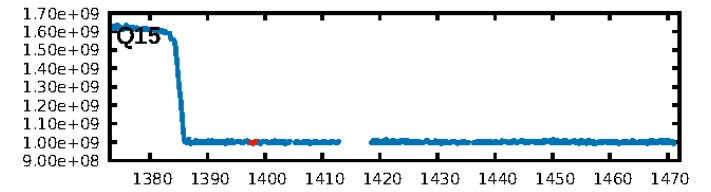
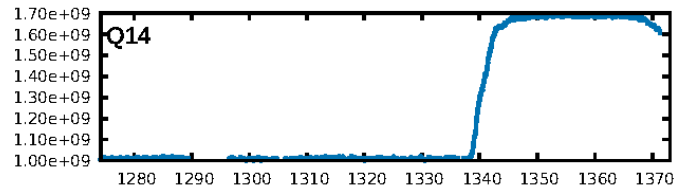
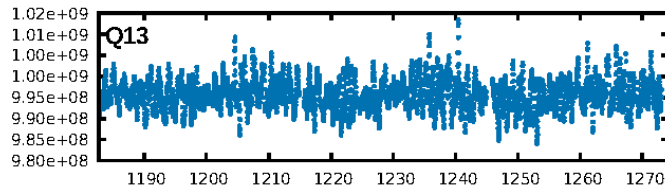
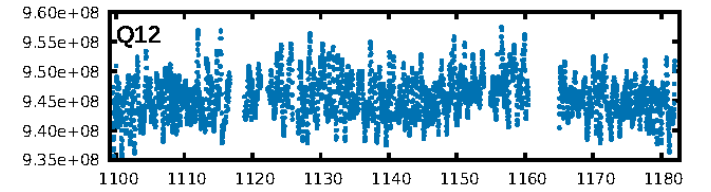
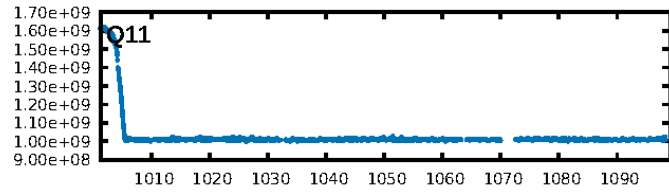
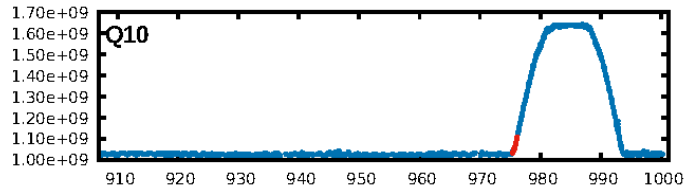
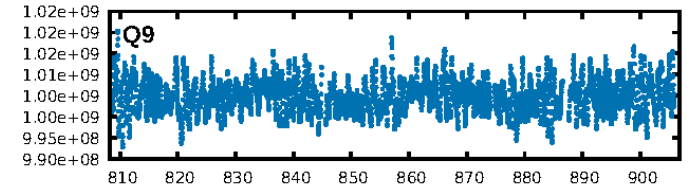
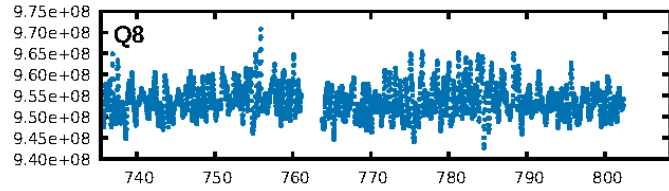
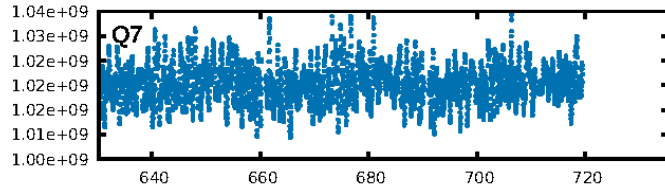
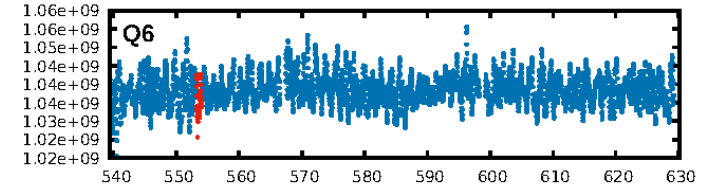
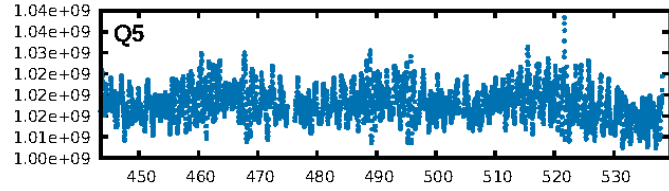
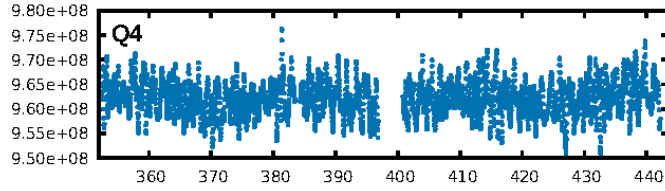
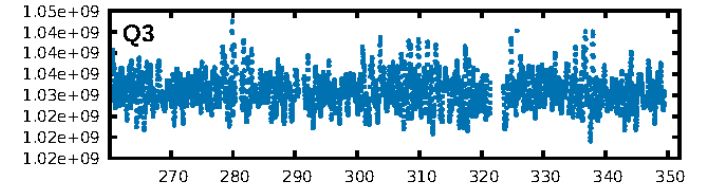
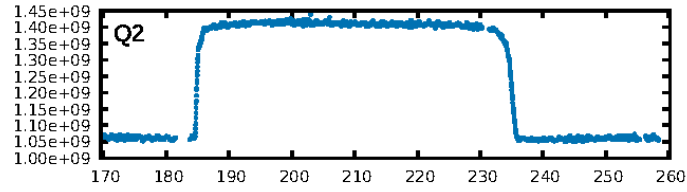
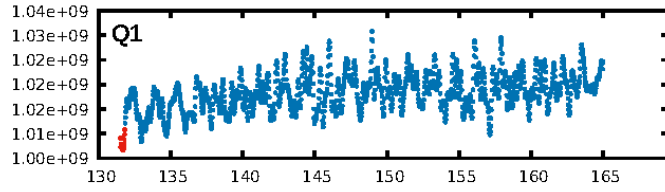
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [72.23σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 35.7%
Bootstrap-pfa: 1.05e-13
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -4.662
Centroid-sig: 26.1%
Centroid-so: 0.767 arcsec [0.58σ]
OotOffset-rm: 3.024 arcsec [3.60σ]
KicOffset-rm: 2.959 arcsec [7.55σ]
OotOffset-st: 1/1/0/0 [2]
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

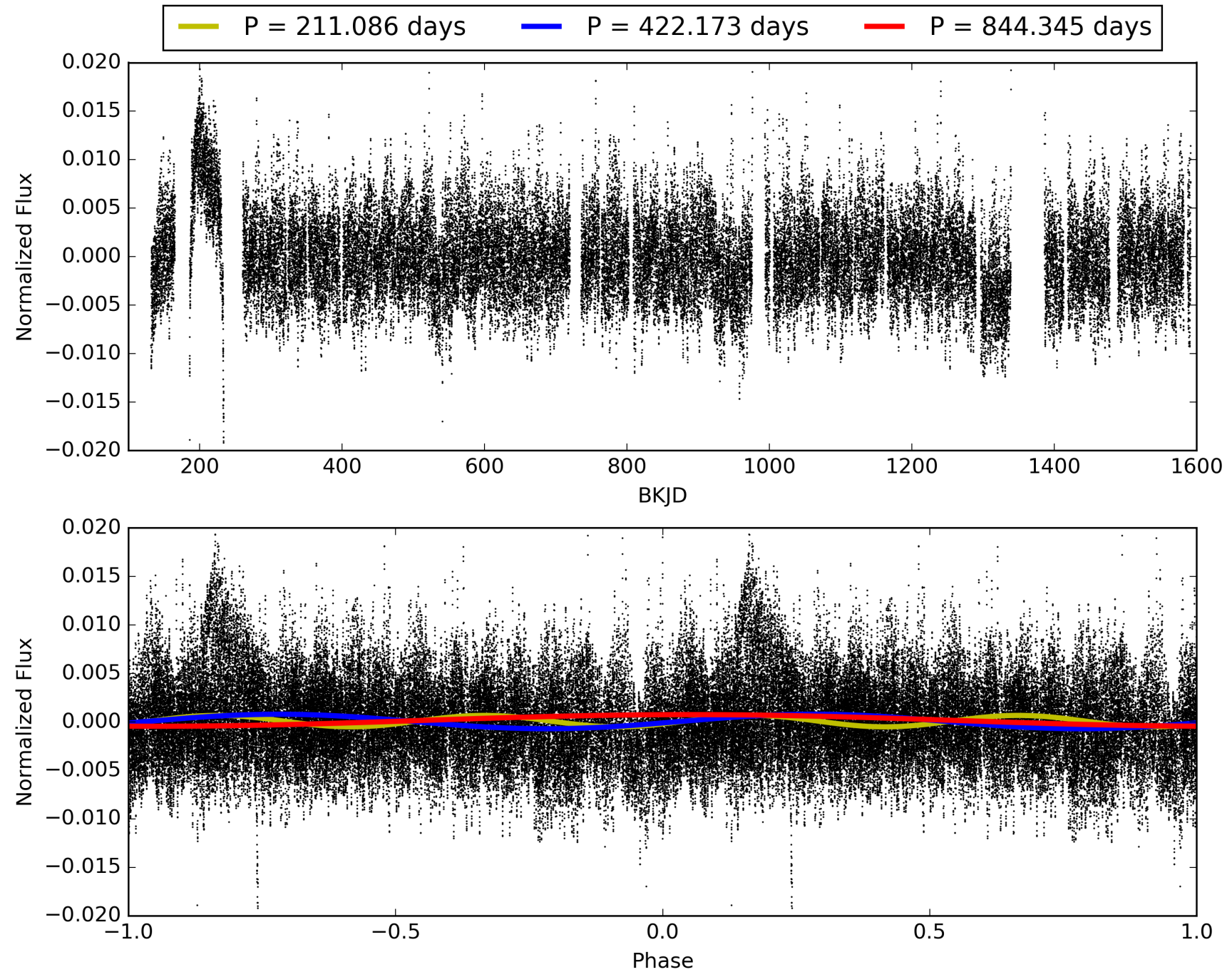
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 011199412-01, PDC Light Curves

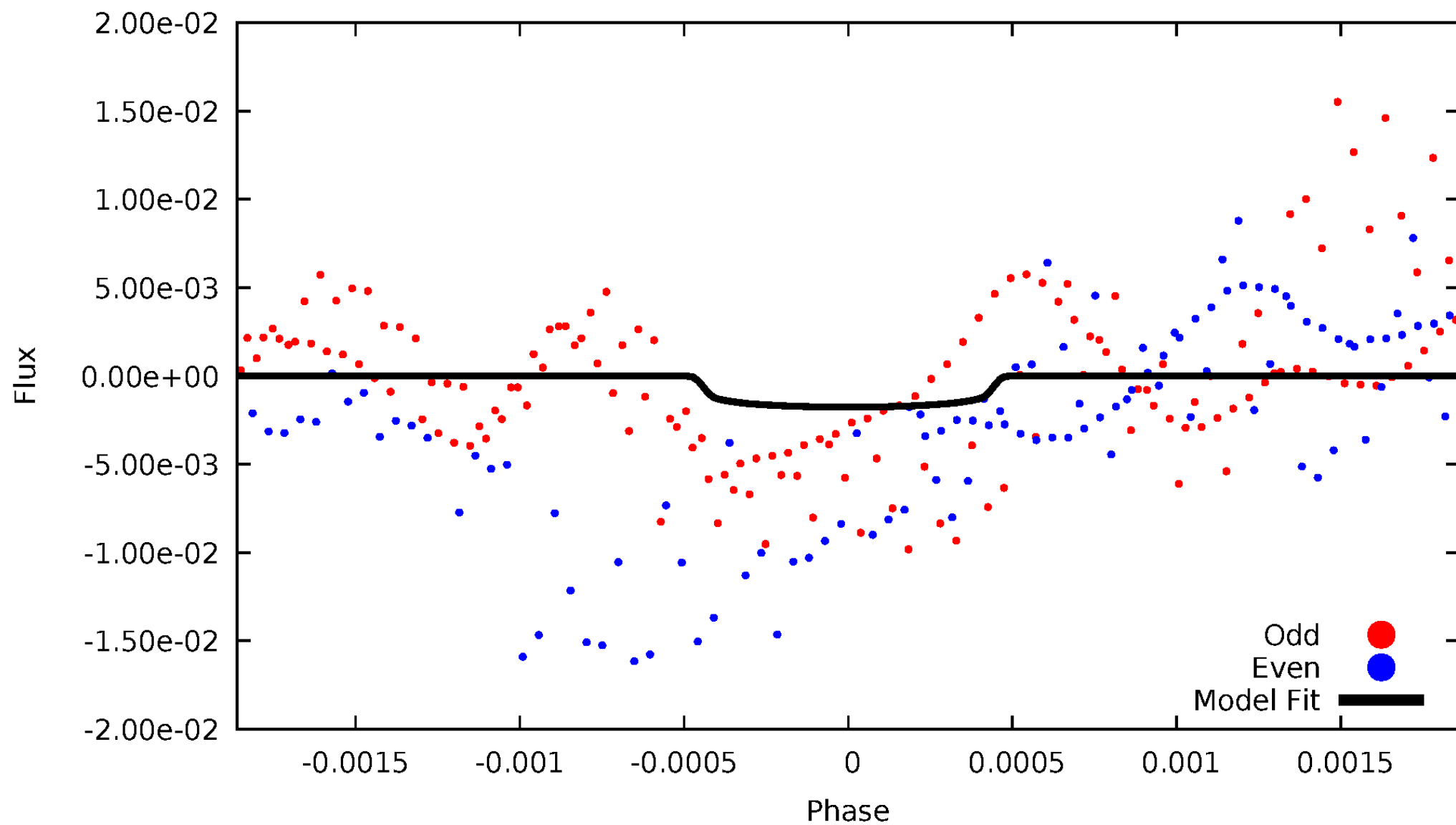


TCE 011199412-01



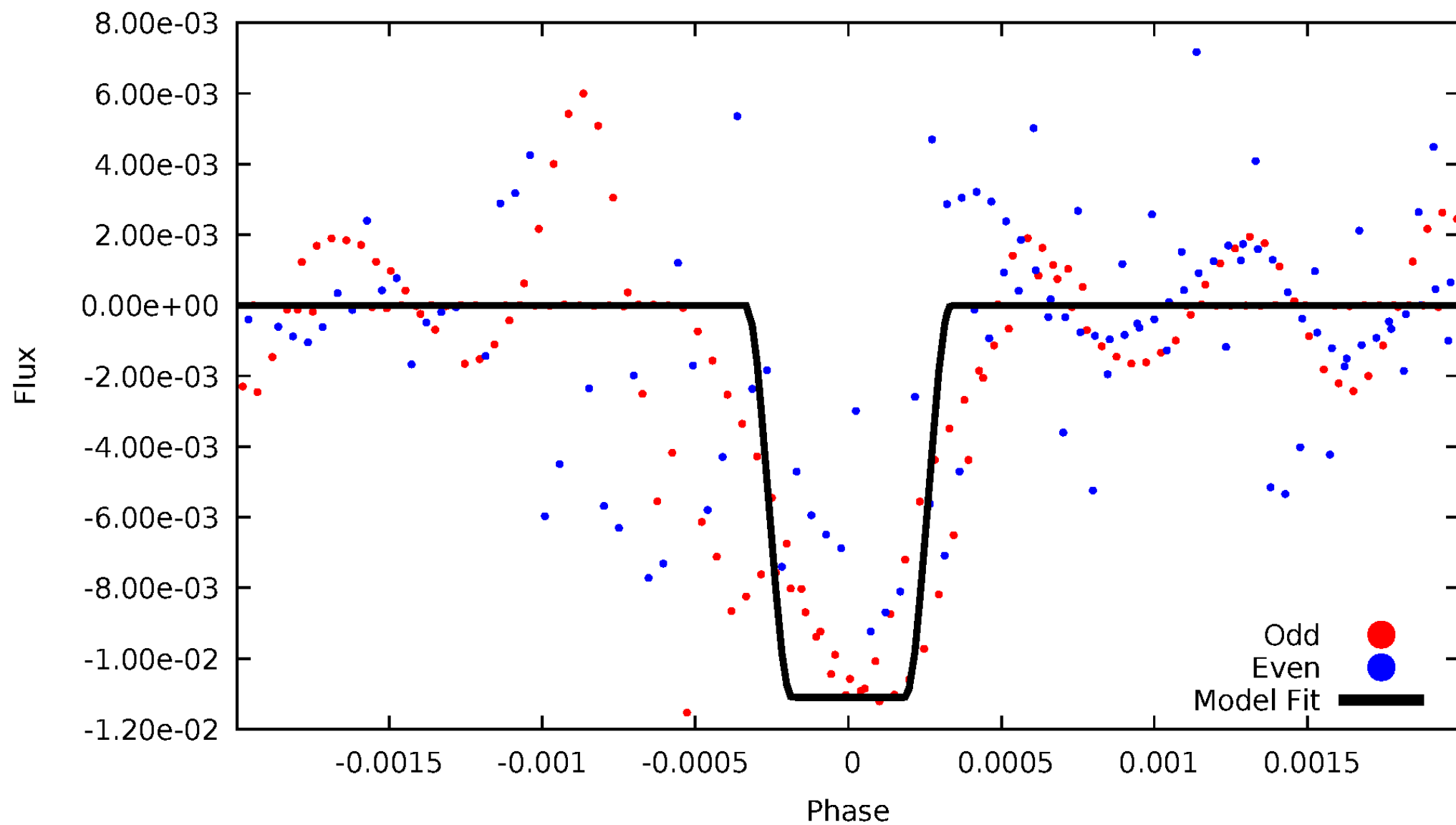
DV Odd/Even

TCE 011199412-01



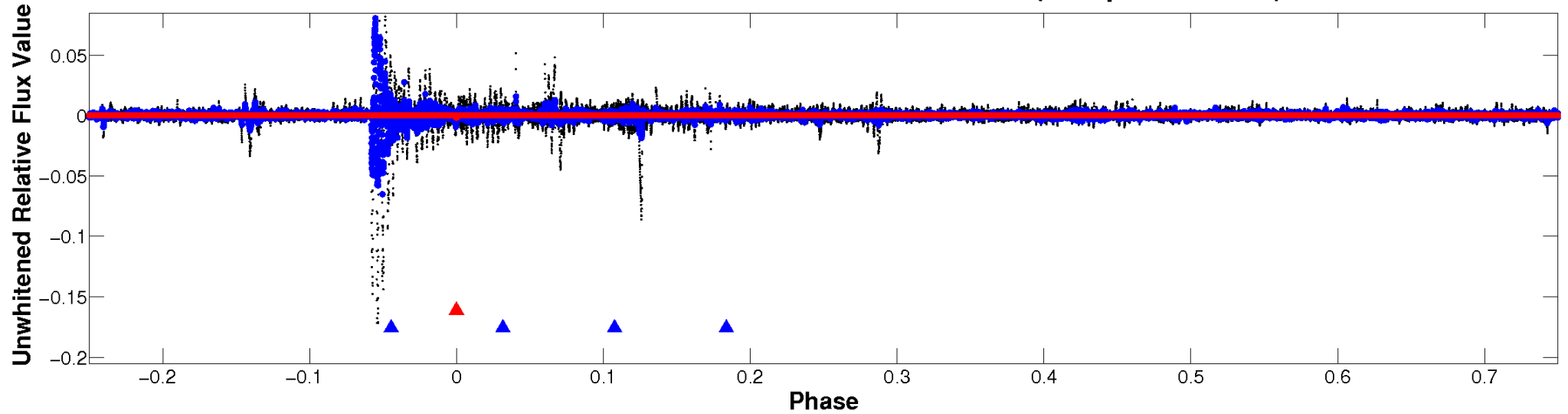
ALT Odd/Even

TCE 011199412-01

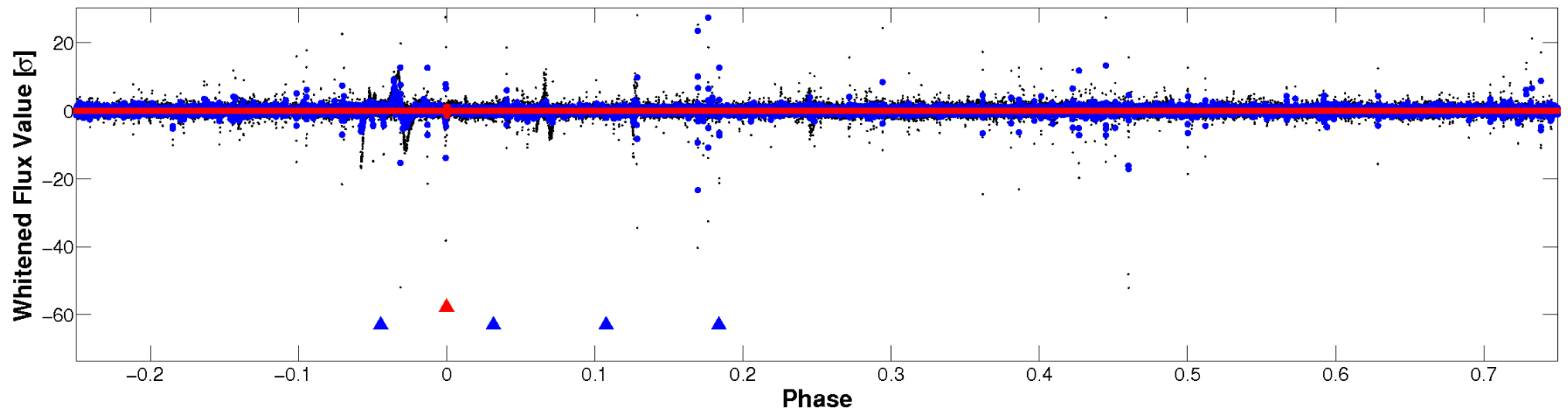


Non-Whitened Vs. Whitened Light Curve

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

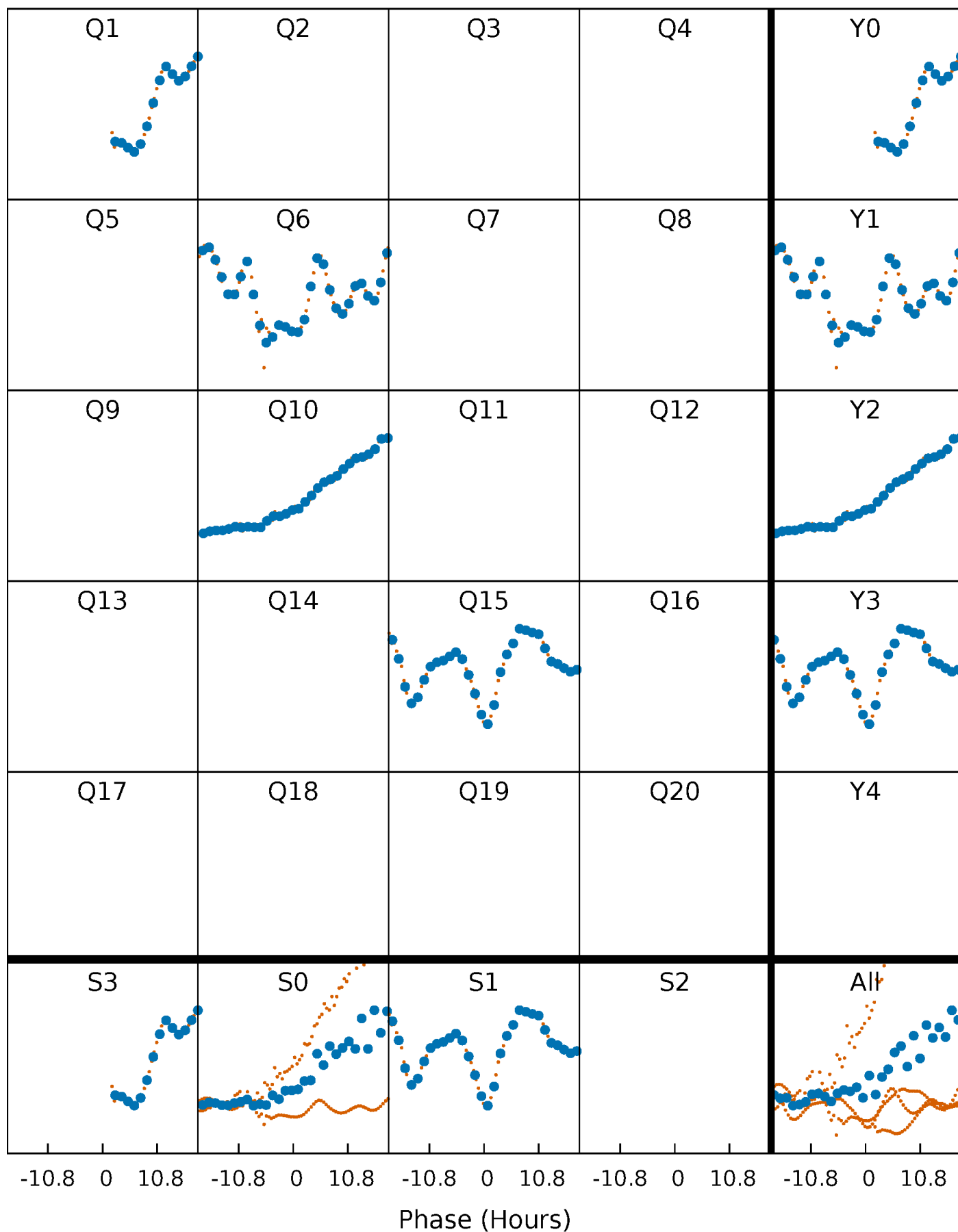


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 011199412-01 P=422.172508 Days $T_0=553.606059$ (BKJD)



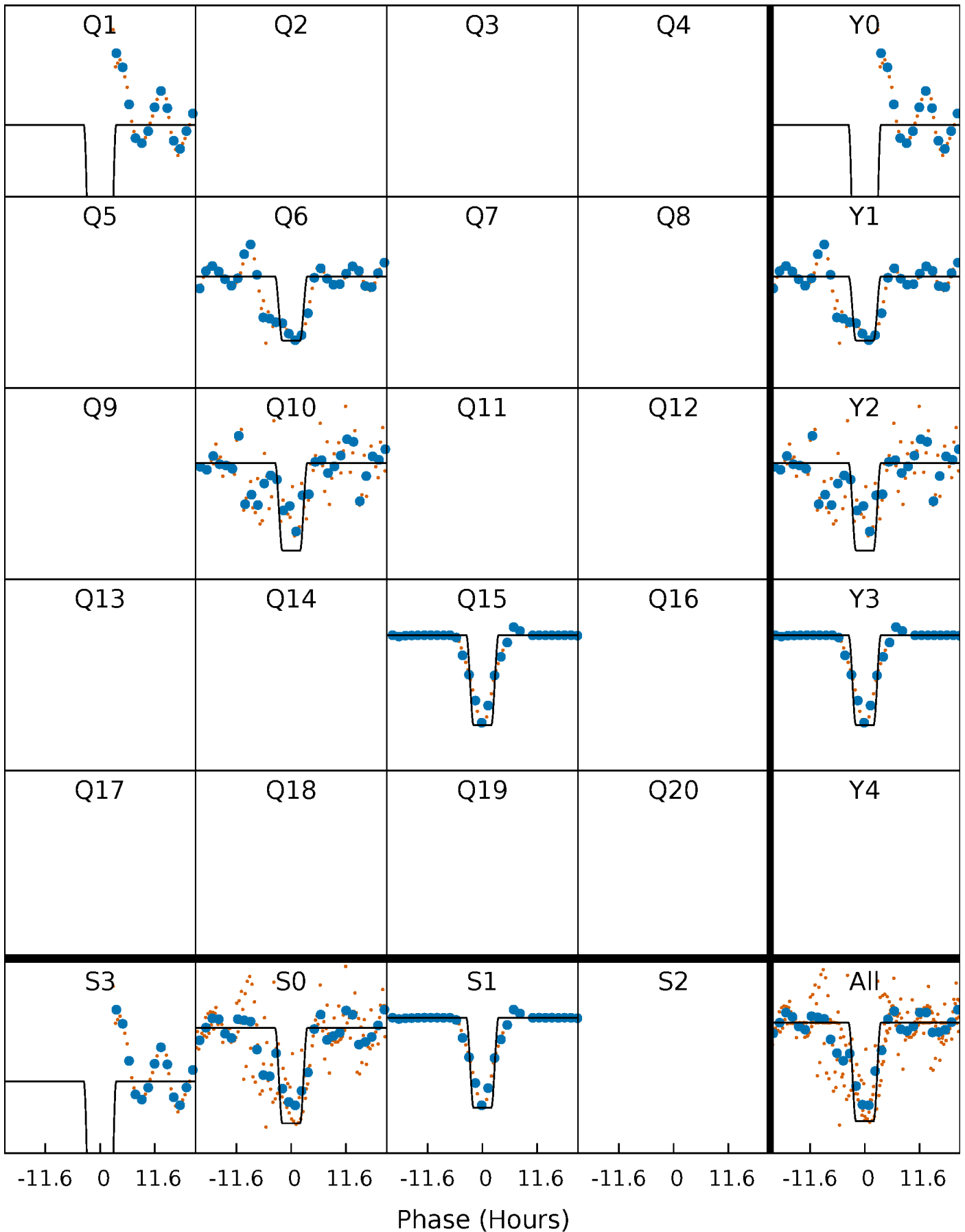
DV Quarter-Phased Transit Curves

TCE 011199412-01 P=422.172508 Days $T_0=553.606059$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

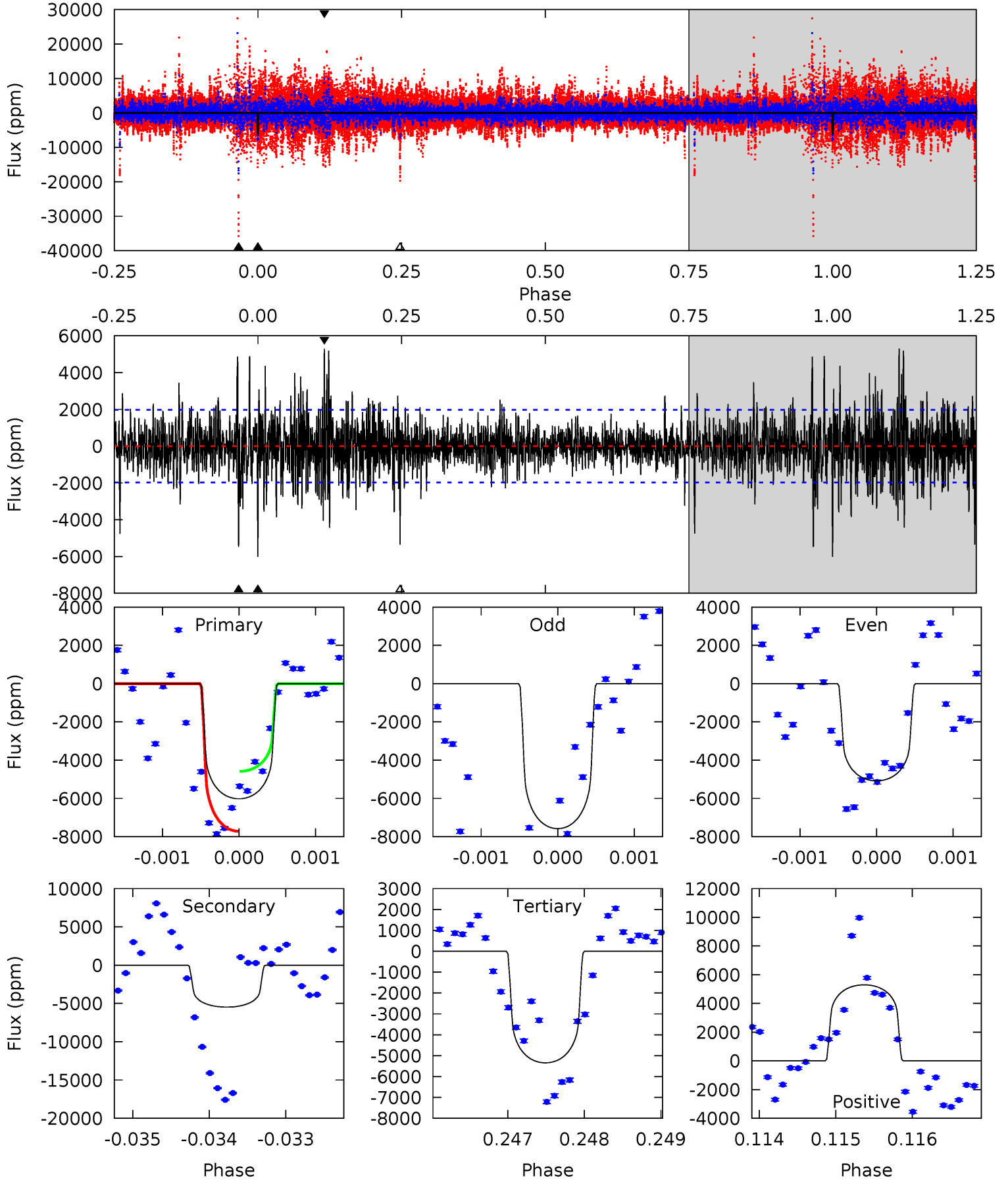
TCE 011199412-01 P=422.191405 Days $T_0=553.587658$ (BKJD)



DV Model-Shift Uniqueness Test

011199412-01, P = 422.172508 Days, E = 131.433551 Days

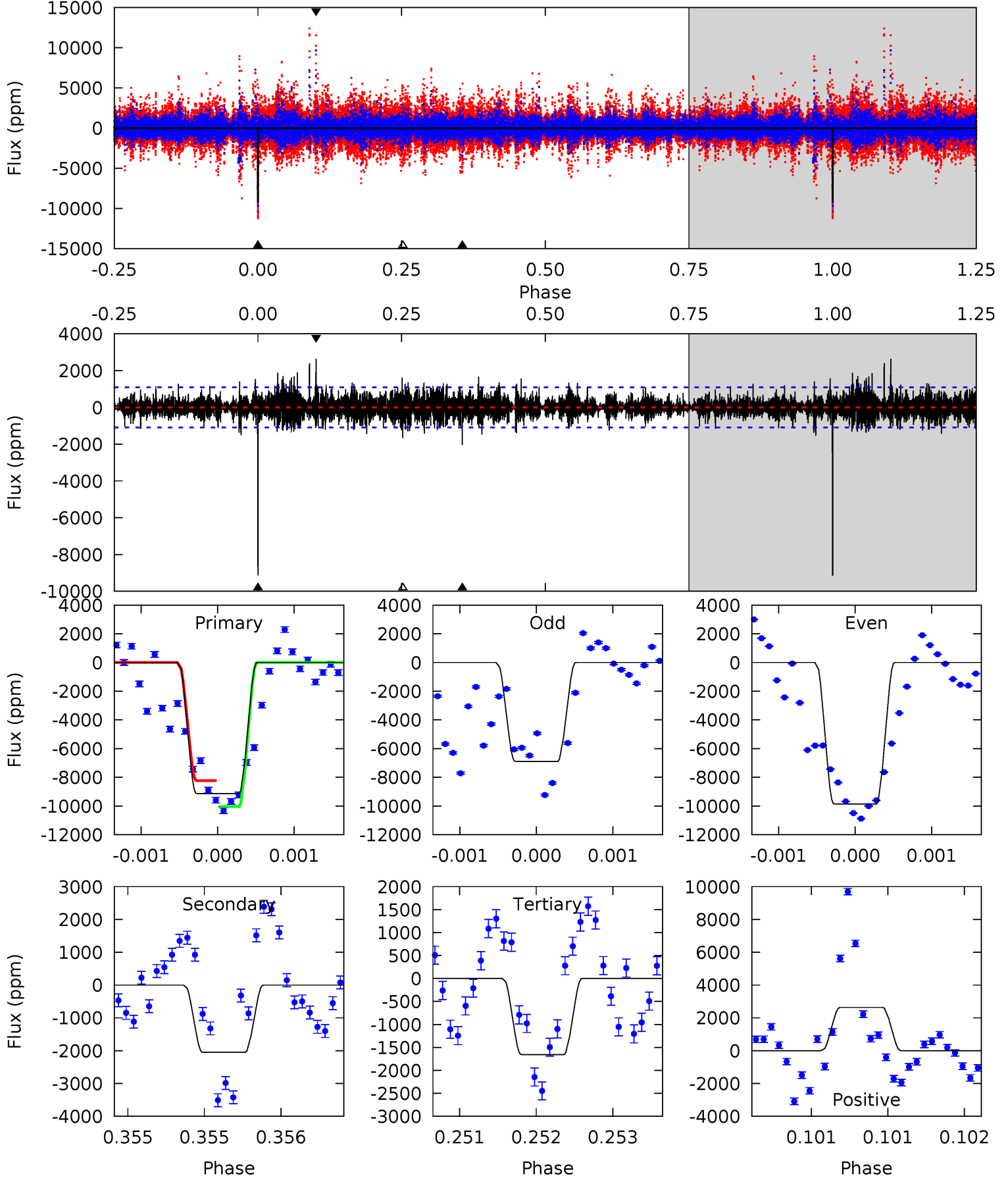
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.7	15.2	14.8	14.7	5.46	3.30	2.83	1.87	2.00	0.37	0.49	2.25	1.04	0.47	4.42



Alt Model-Shift Uniqueness Test

011199412-01, P = 422.191405 Days, E = 131.396253 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
46.2	10.4	8.38	13.3	5.53	3.41	2.10	37.8	32.8	1.98	-2.97	6.51	0.42	0.22	4.55



Stellar Parameters For KIC 011199412

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7693^{+239}_{-319}	$3.715^{+0.459}_{-0.077}$	$-0.260^{+0.200}_{-0.300}$	$3.115^{+0.360}_{-1.529}$	$1.834^{+0.142}_{-0.425}$	$0.085^{+0.359}_{-0.022}$
	+3%/-4%	+12%/-2%	+77%/-115%	+12%/-49%	+8%/-23%	+420%/-25%
Source	KIC0	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 011199412-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-5476 ± 361	$12.10^{+4.12}_{-3.96}$	701^{+46}_{-82}	11985^{+3719}_{-1966}	36894^{+43748}_{-15978}
Alt.	-2049 ± 198	$33.98^{+5.32}_{-8.80}$	697^{+50}_{-78}	5014^{+271}_{-247}	1769^{+1208}_{-446}

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 $A_{obs} \gg 1.0$

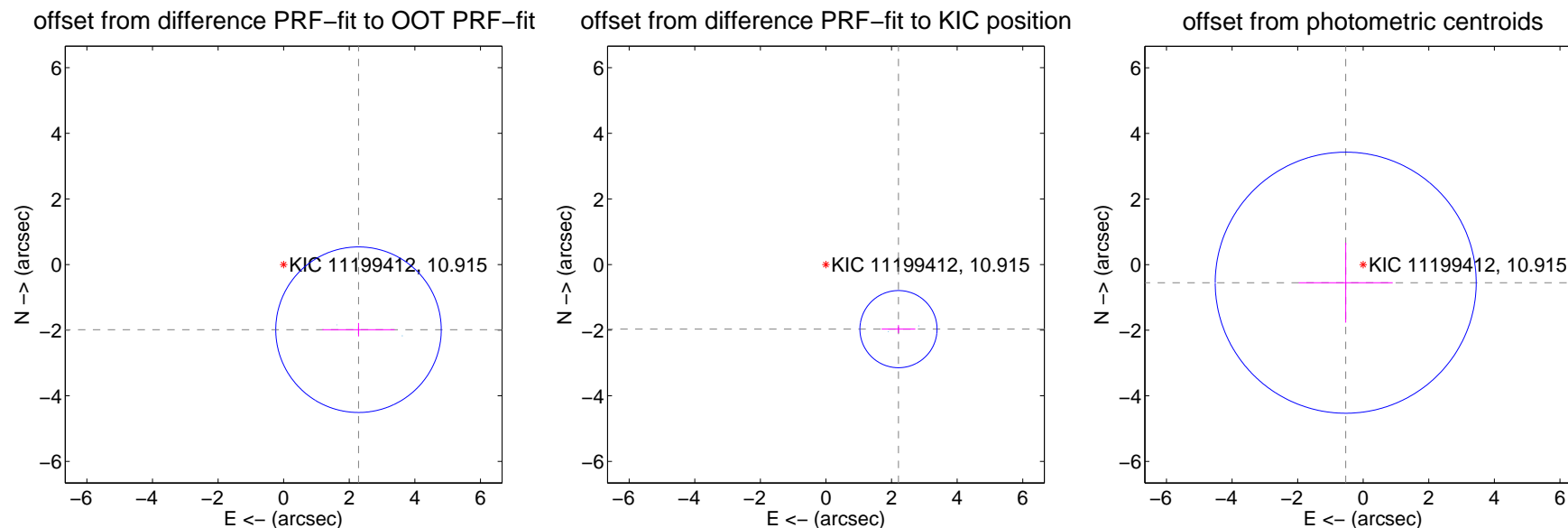
DV Centroid Data

Supplemental centroid analysis for 011199412-01. **Kepler magnitude: 10.91.** Transit SNR 4.95

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.84 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.024 ± 0.841	3.60	-2.281 ± 1.100	-1.985 ± 0.205
PRF-fit source offset from KIC position	2.959 ± 0.392	7.55	-2.210 ± 0.513	-1.968 ± 0.123
photometric centroid source offset	0.77 ± 1.33	0.58	0.53 ± 1.43	-0.55 ± 1.22

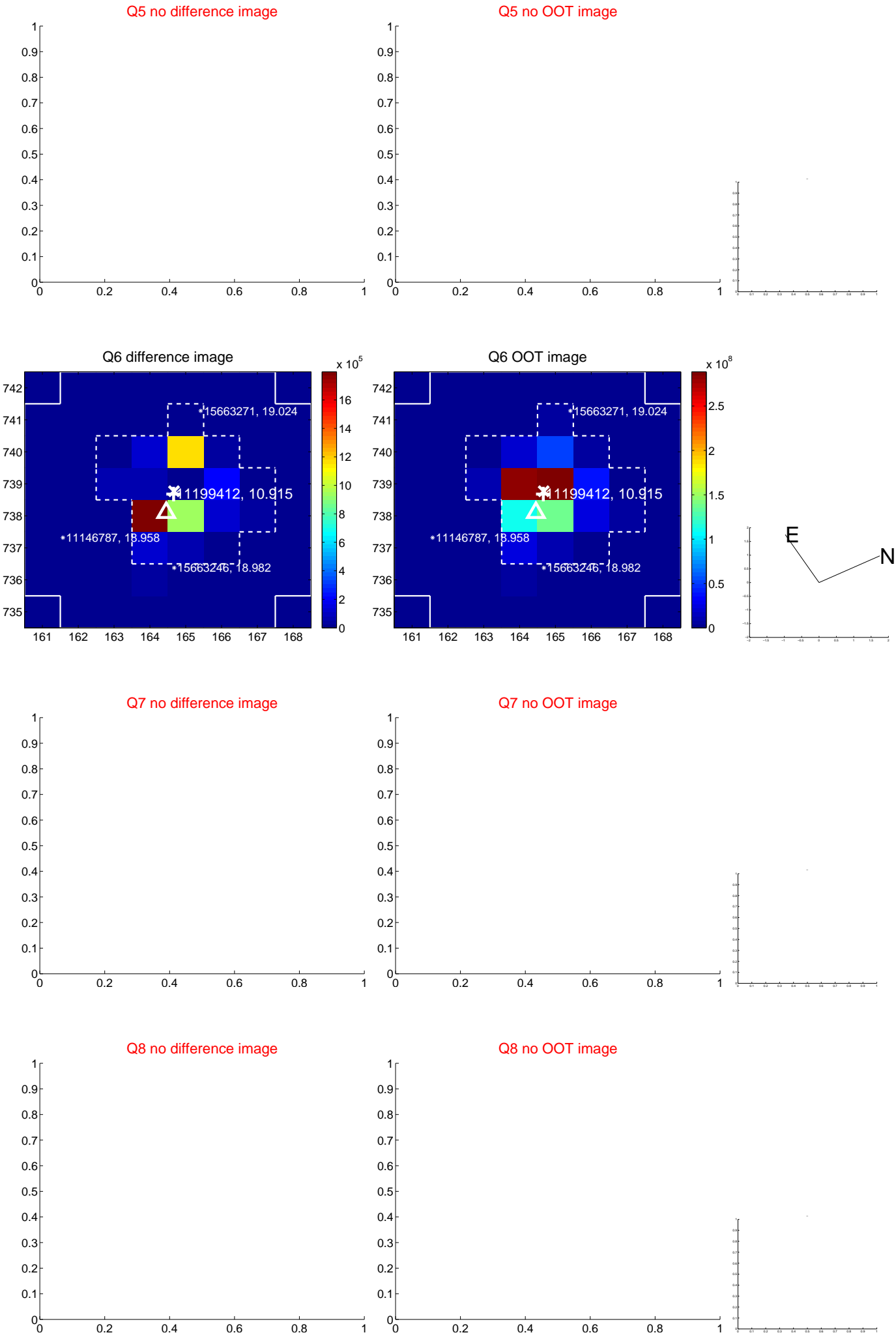


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

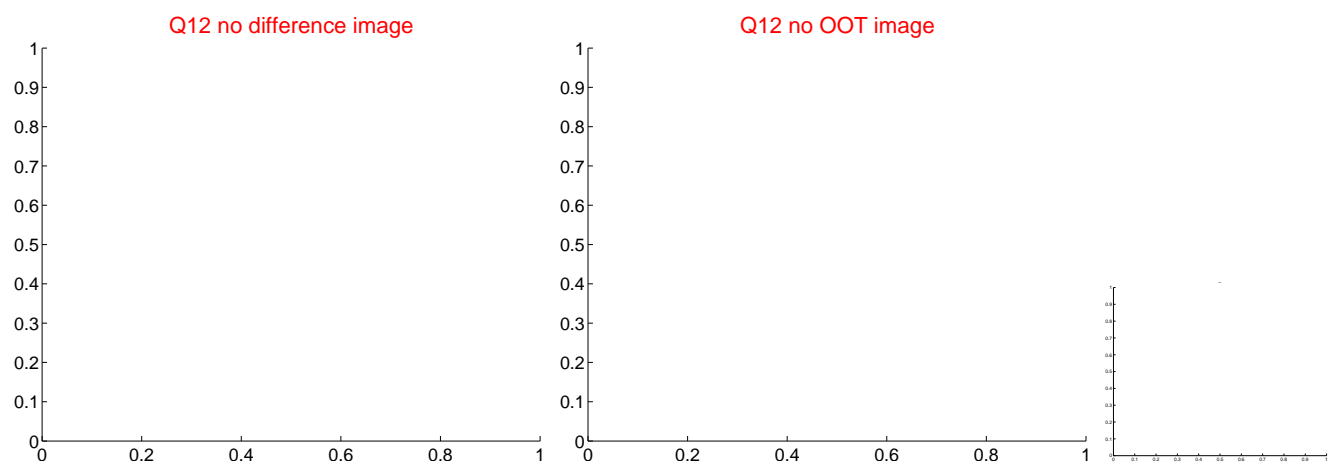
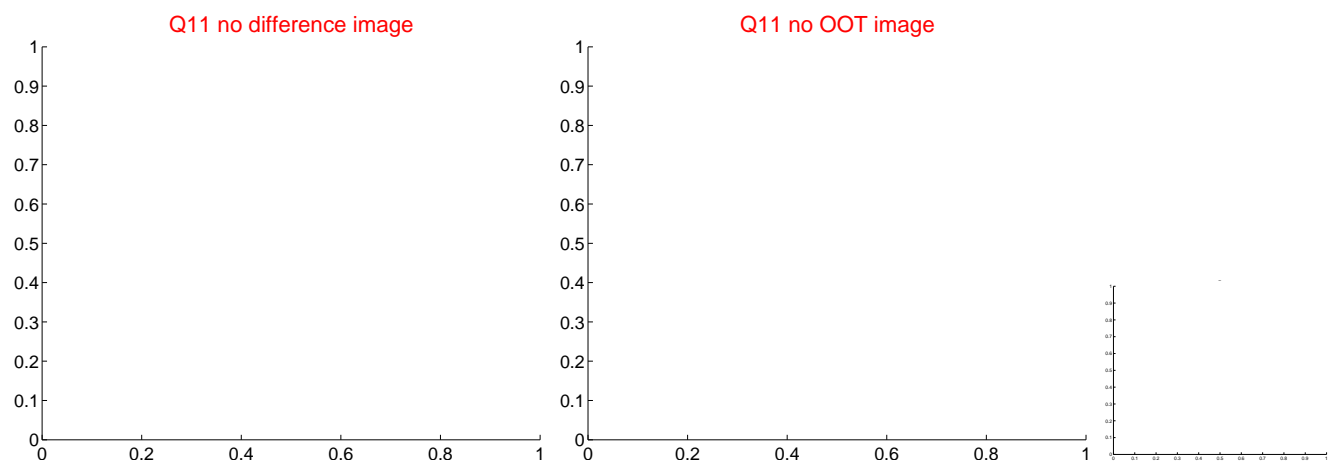
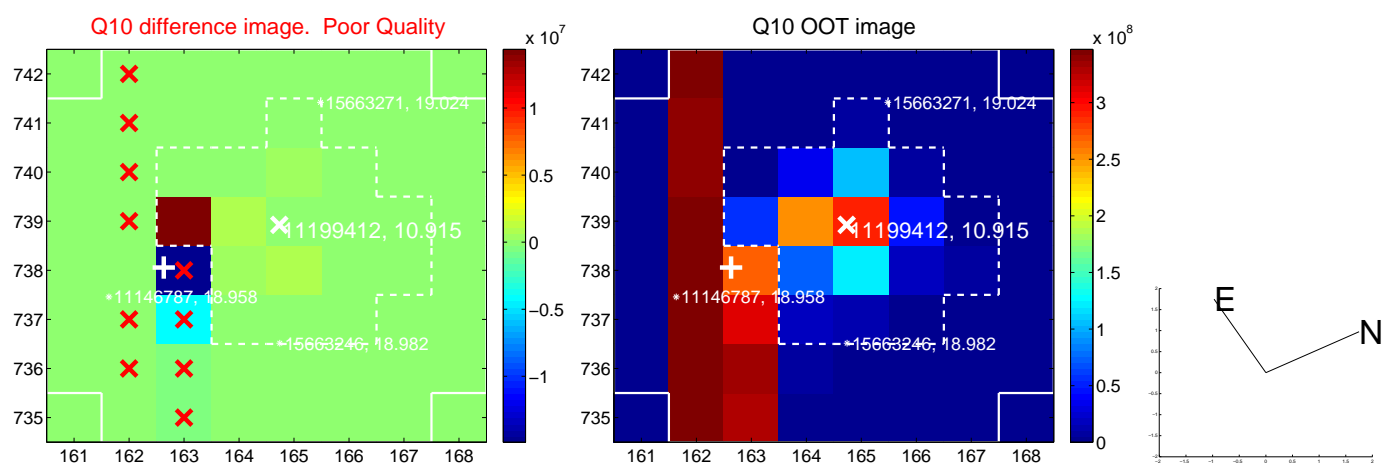
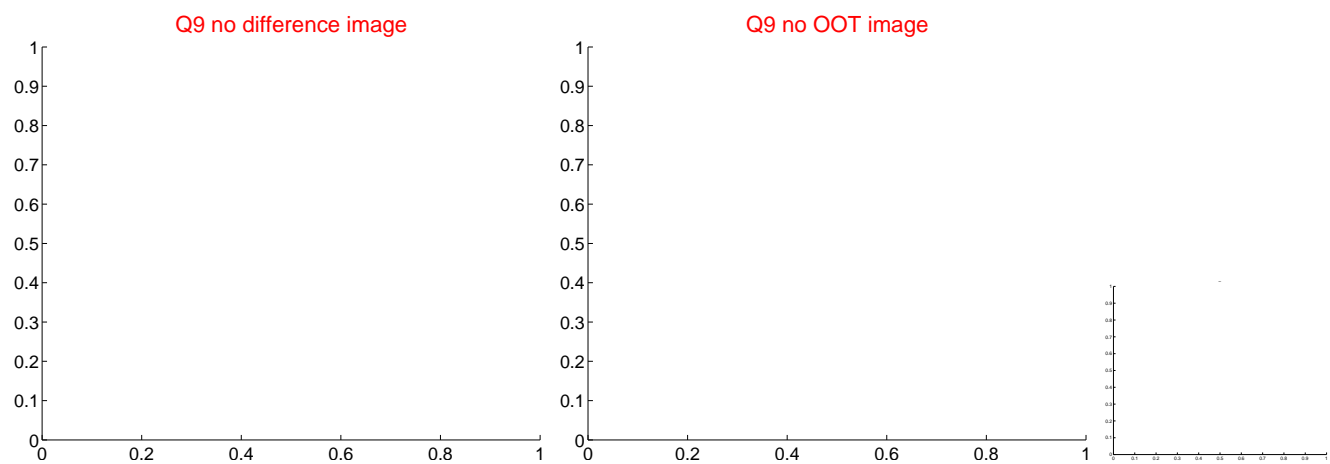
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



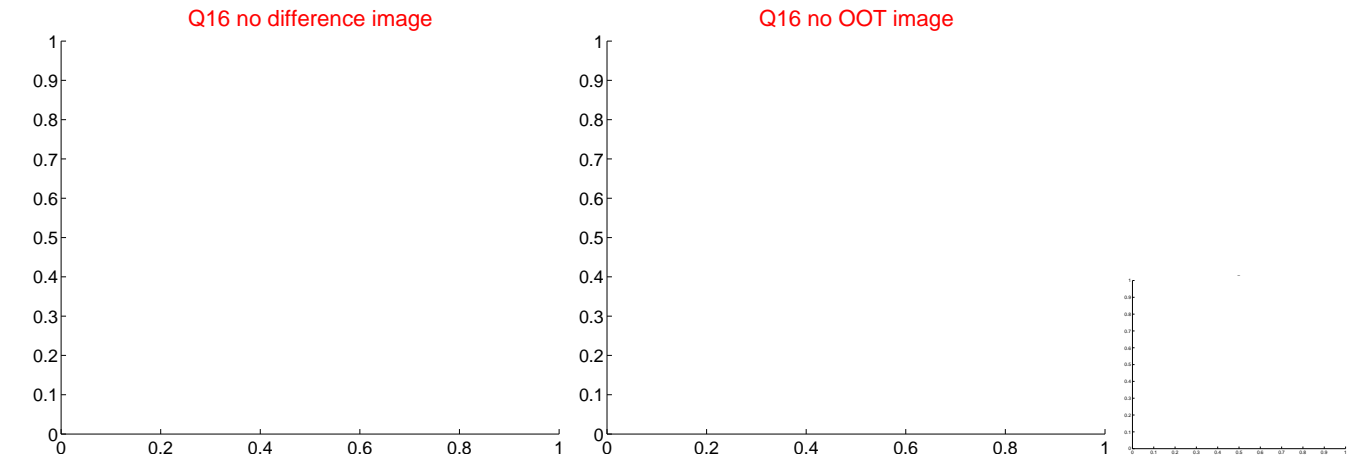
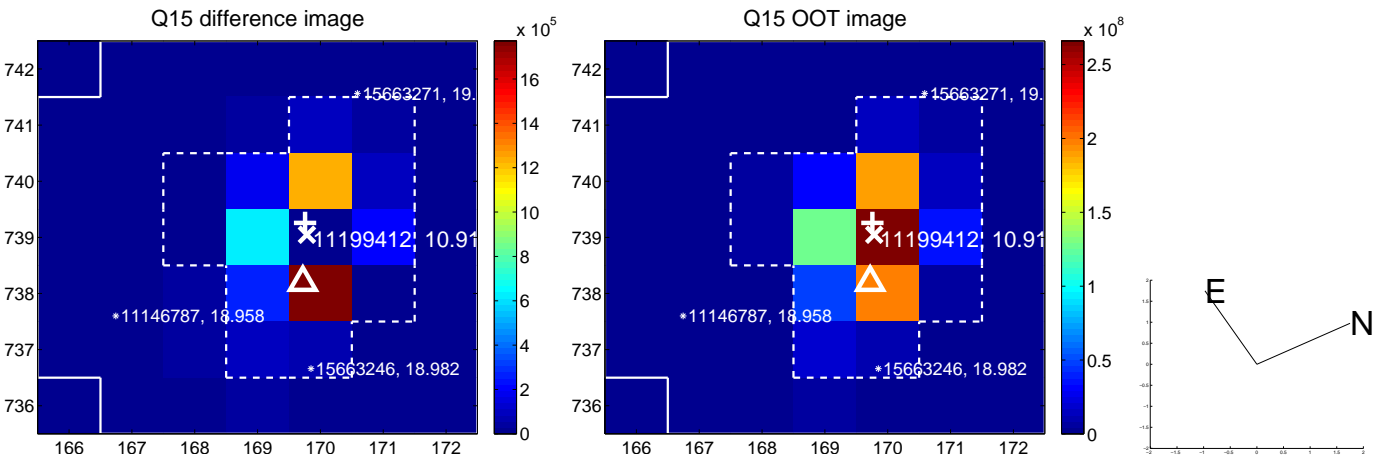
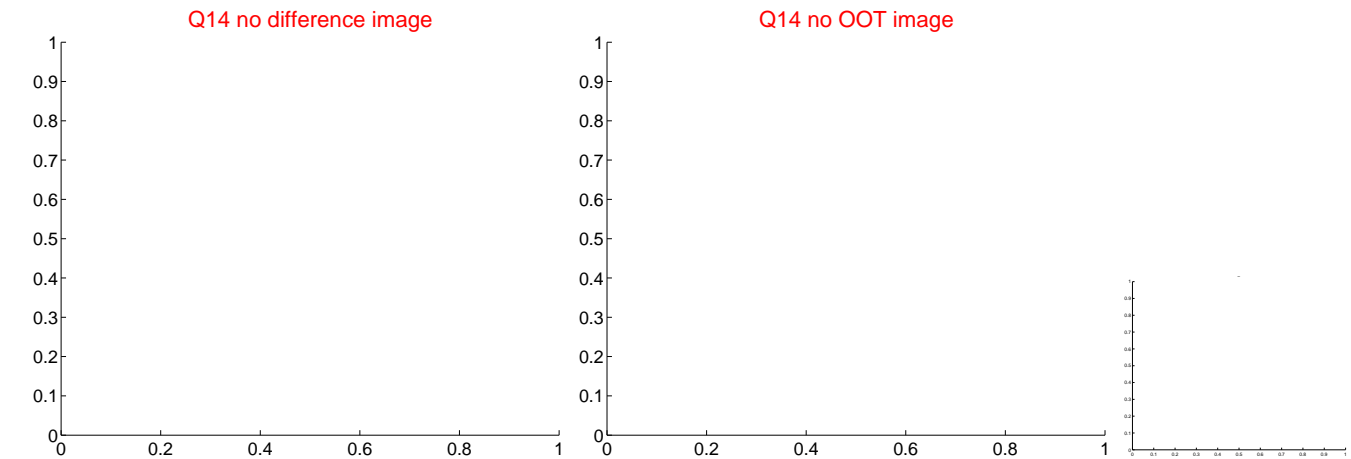
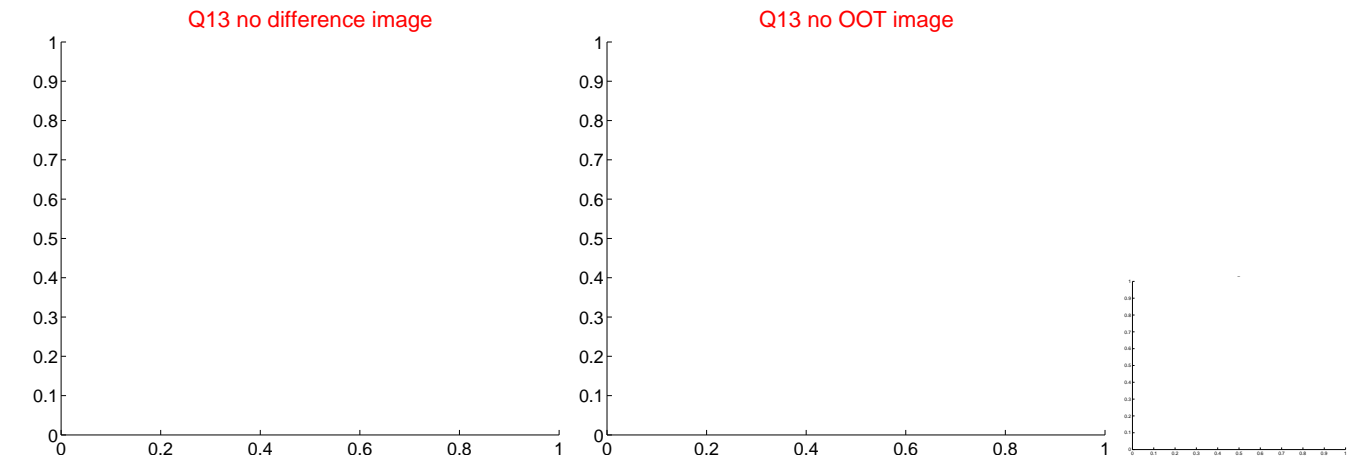
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



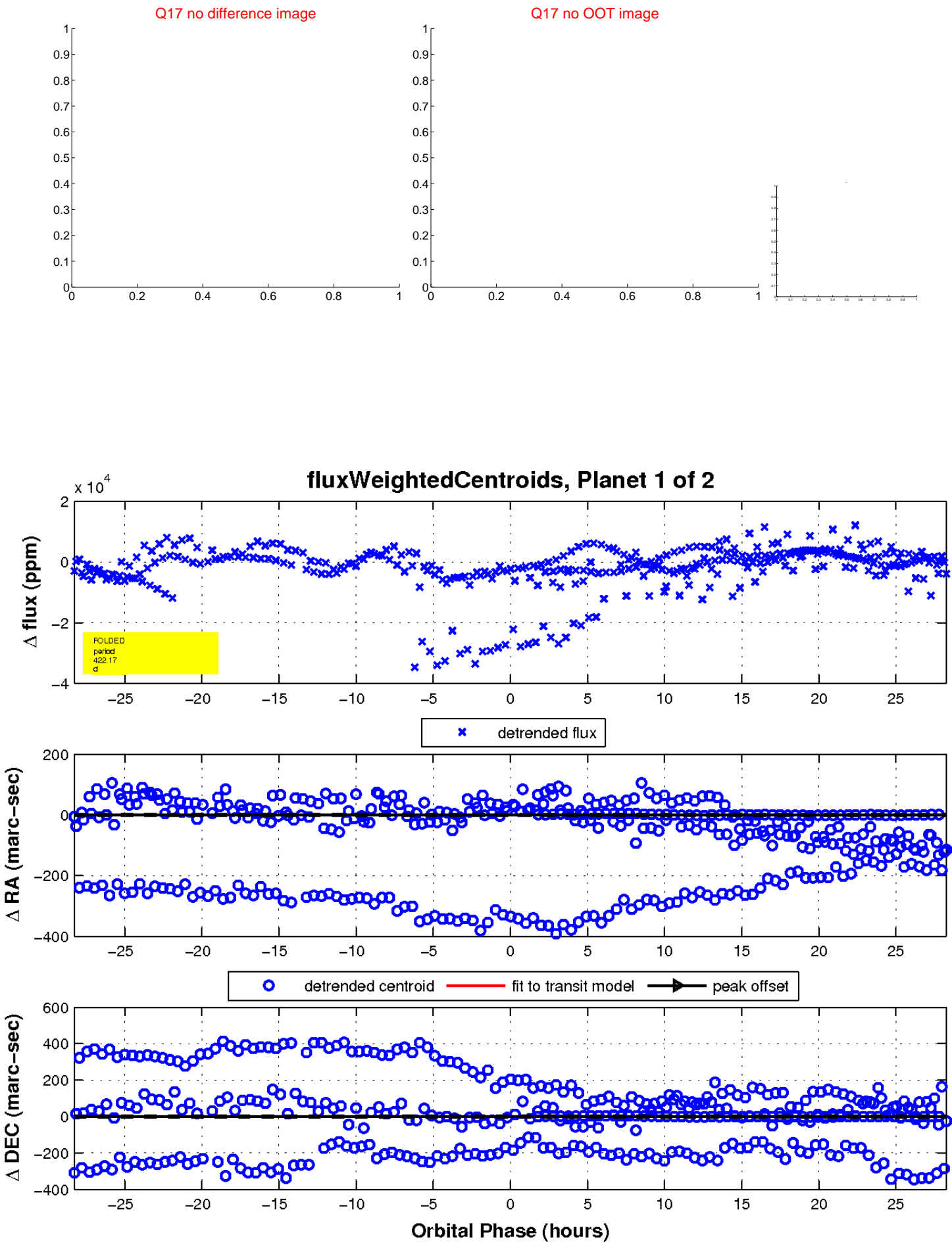
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

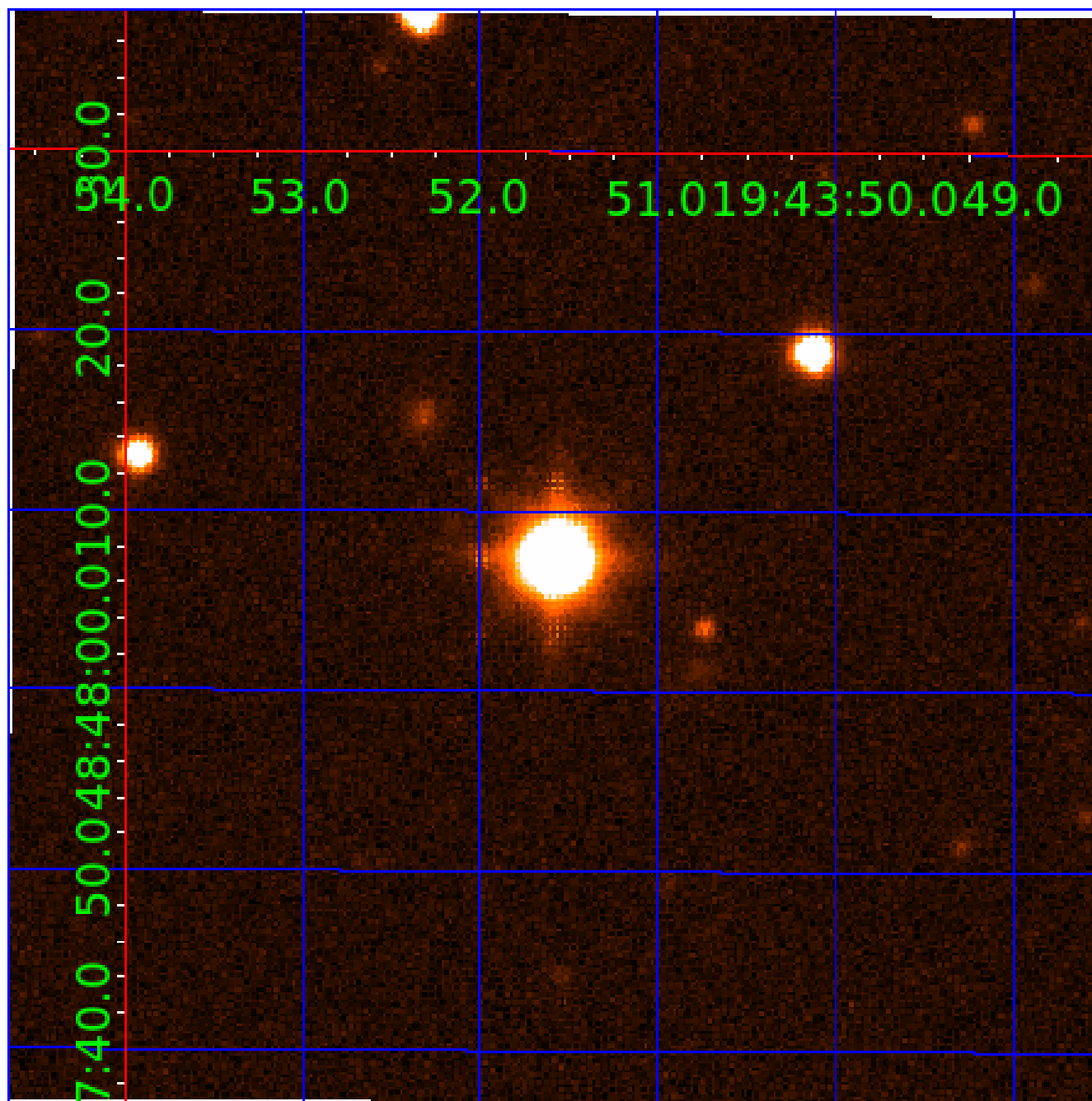


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011199412

Q1-17 DR25 TCE Parameters

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Robovetter Results

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011199412-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED

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

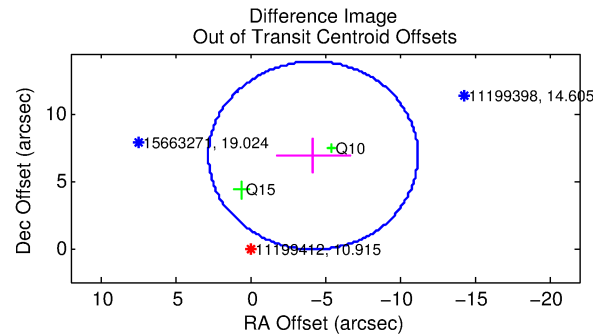
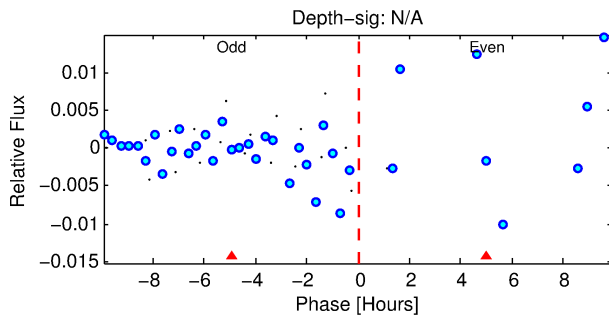
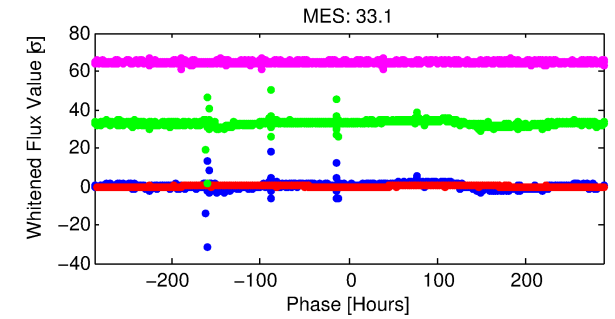
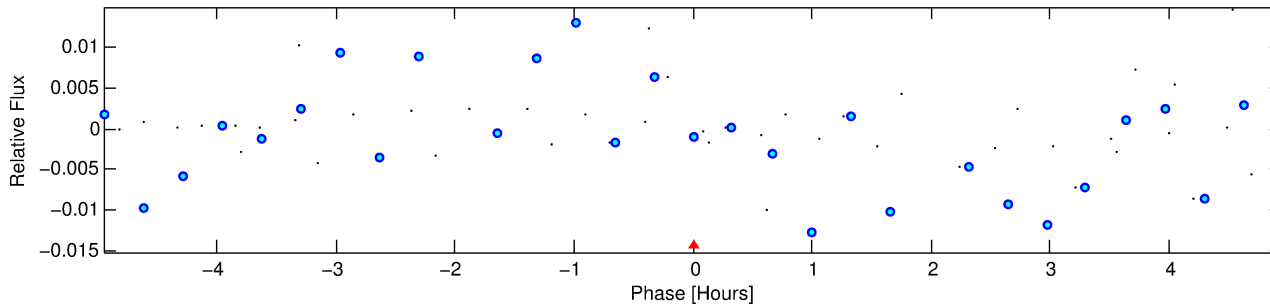
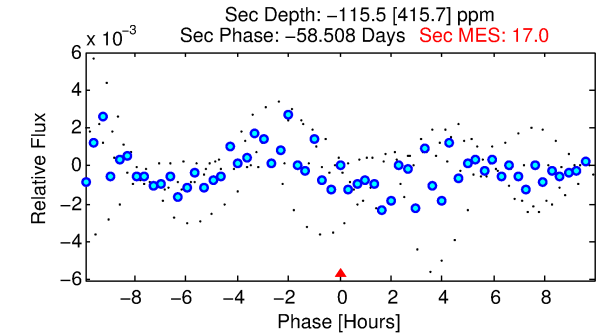
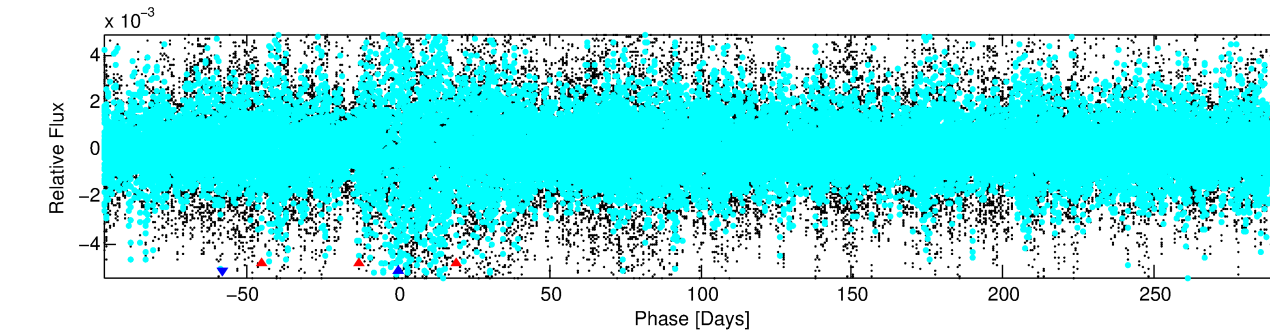
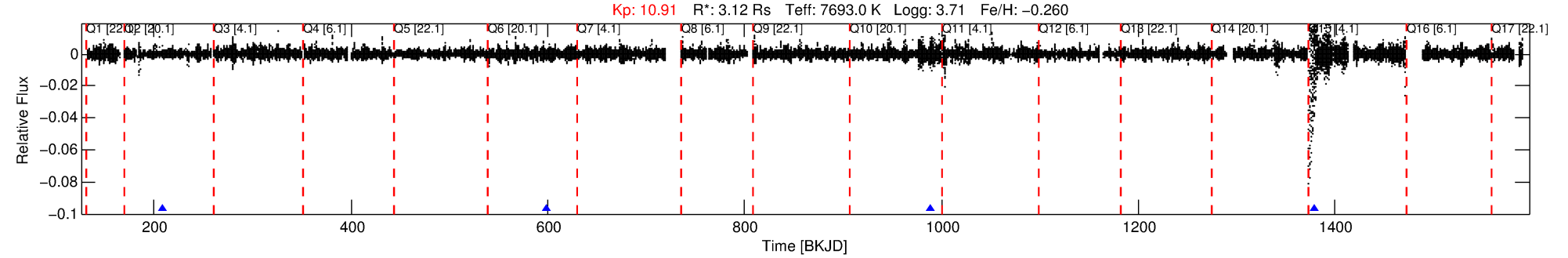
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011199412-02

No Significant Match Found

DV One-Page Summary

KIC: 11199412 Candidate: 2 of 2 Period: 390.063 d



TPS TCE Results:

Period = 390.06304 d
Epoch = 209.0053 BKJD

DV fit results are unavailable

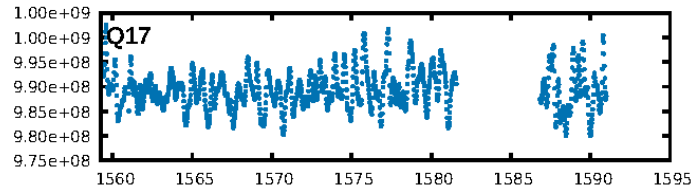
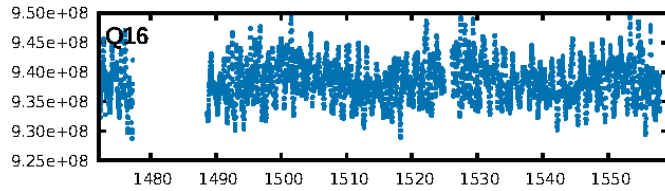
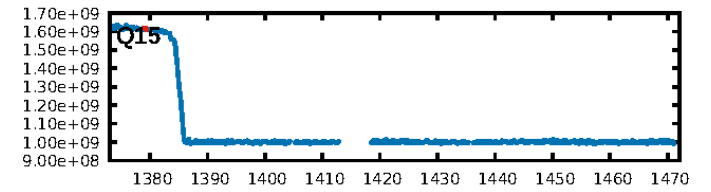
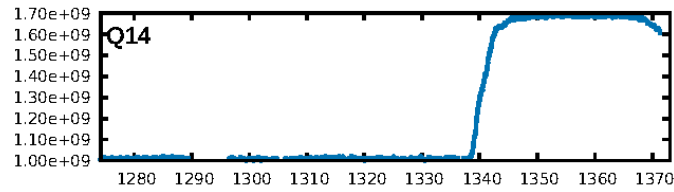
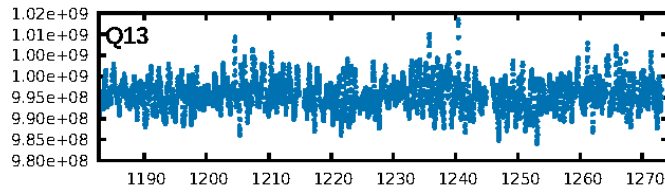
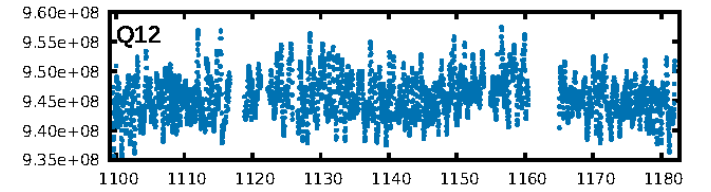
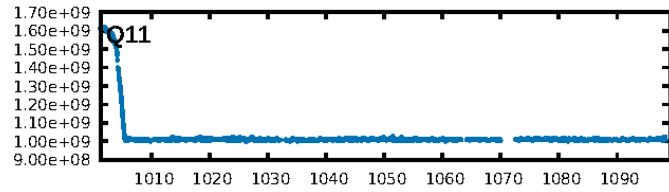
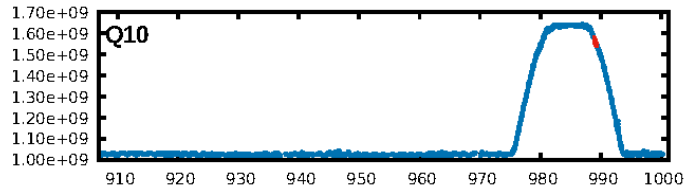
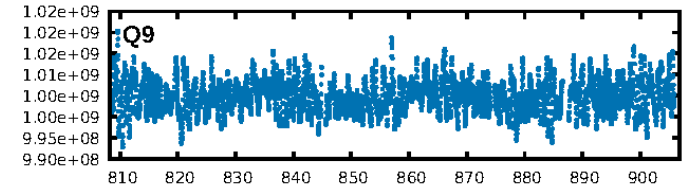
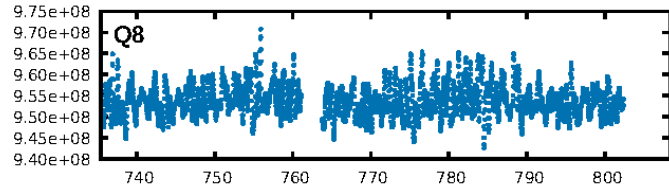
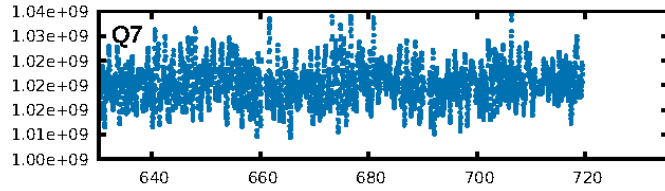
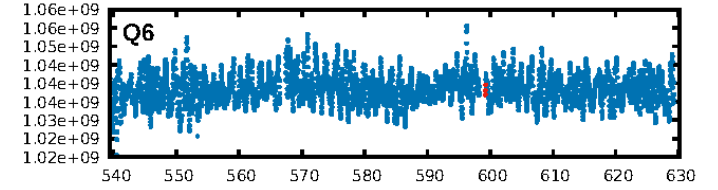
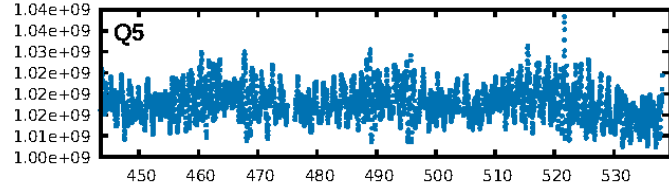
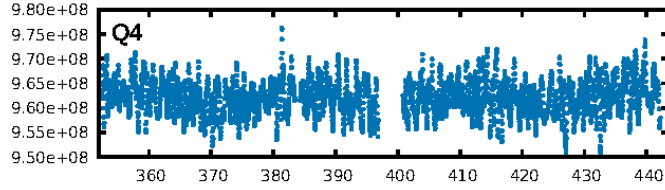
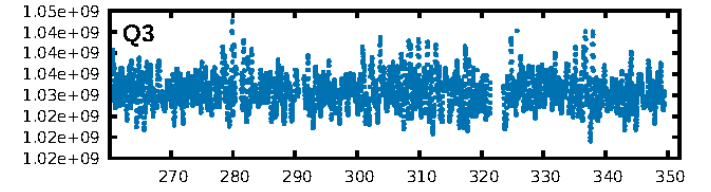
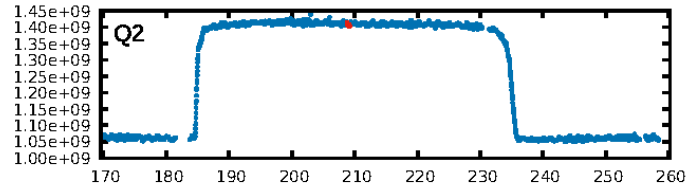
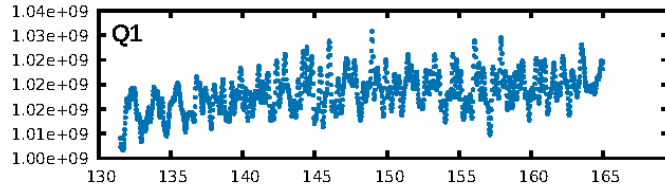
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [72.23σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.29e-14
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.3519
Centroid-sig: 71.2%
Centroid-so: 143.291 arcsec [0.51σ]
OotOffset-rm: 8.103 arcsec [3.48σ]
KicOffset-rm: 2.702 arcsec [1.09σ]
OotOffset-st: 1/1/0/0 [2]
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [3/3]

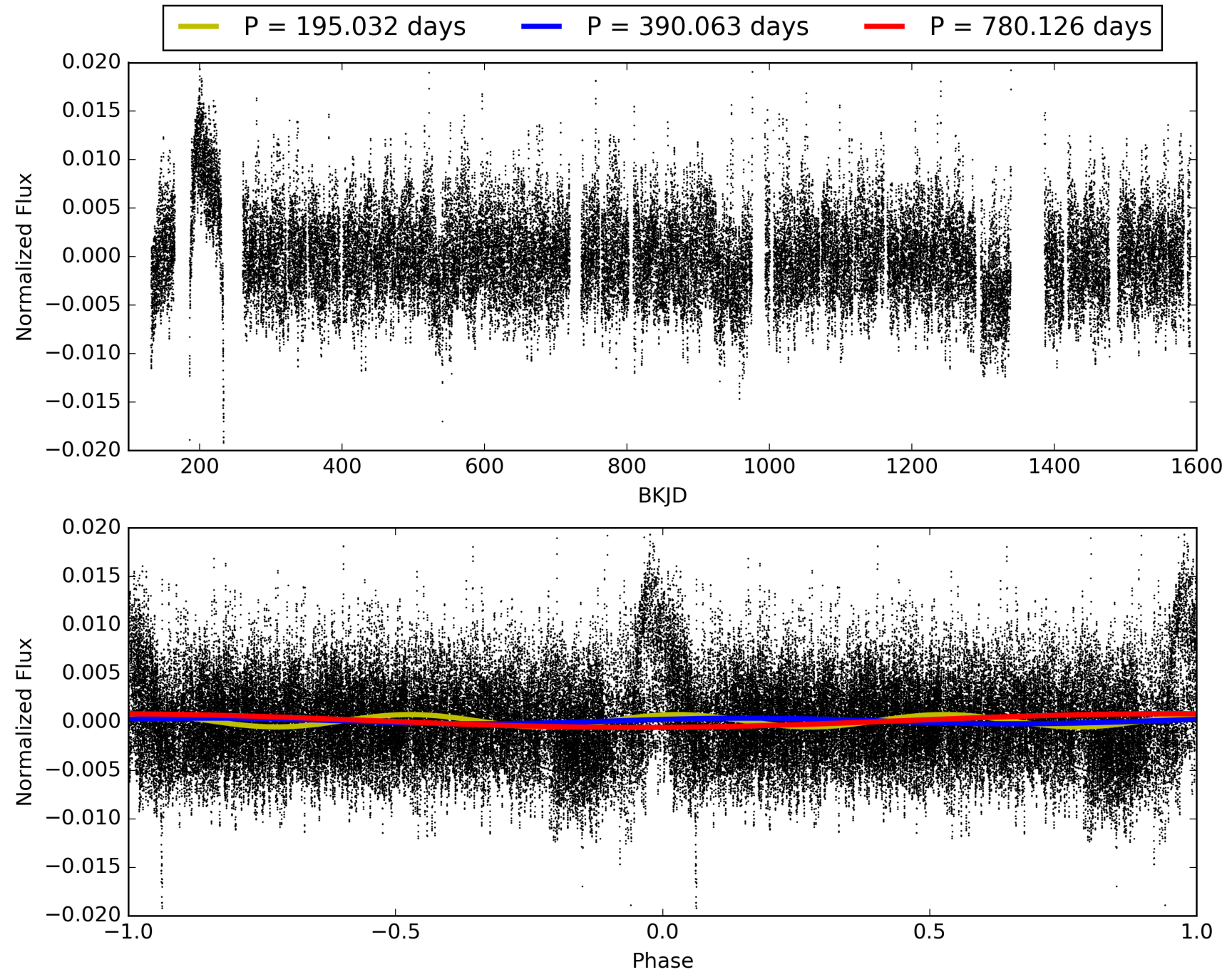
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 01:10:09 Z

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

TCE 011199412-02, PDC Light Curves

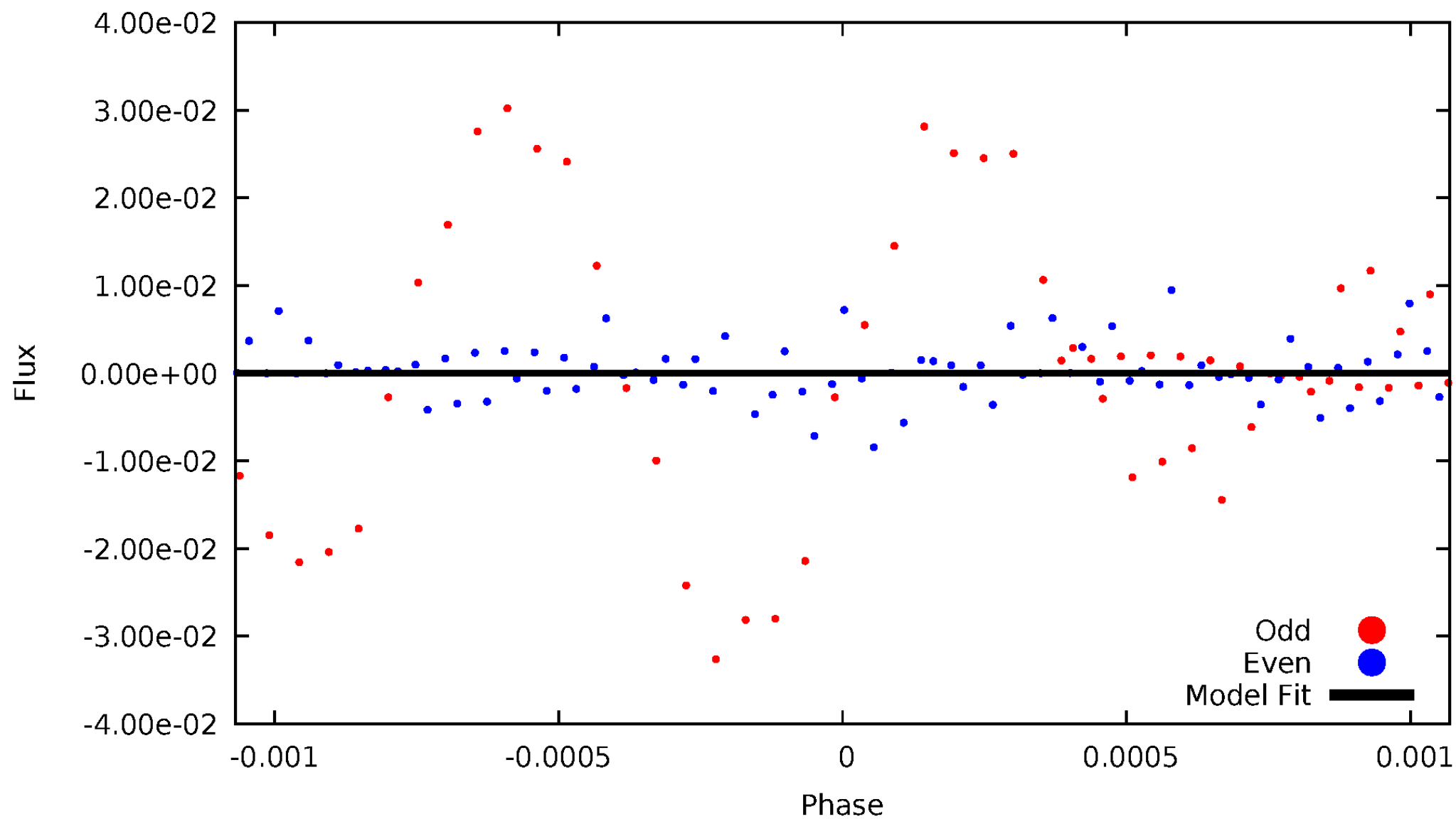


TCE 011199412-02



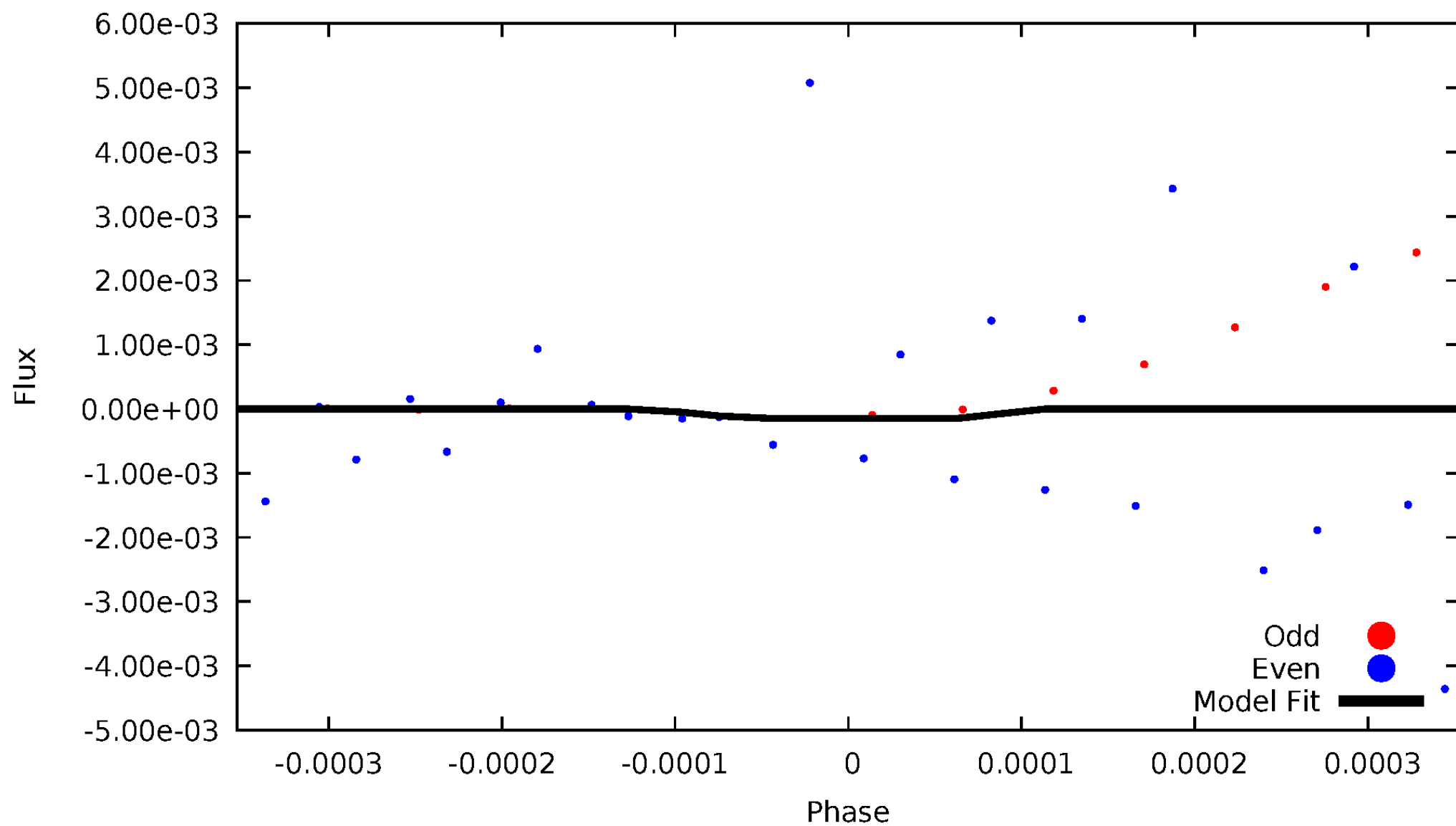
DV Odd/Even

TCE 011199412-02



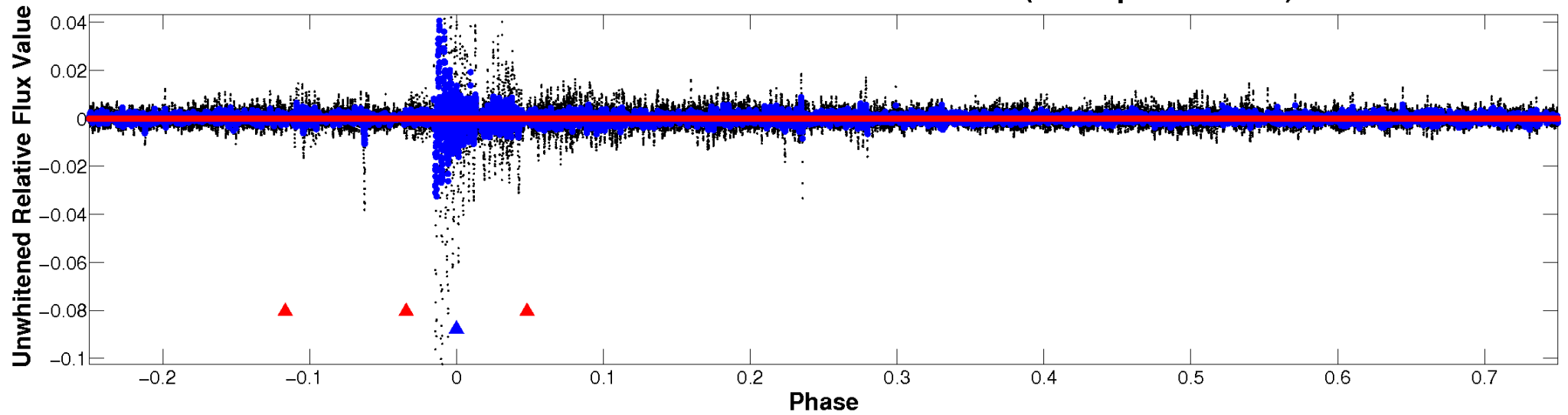
ALT Odd/Even

TCE 011199412-02

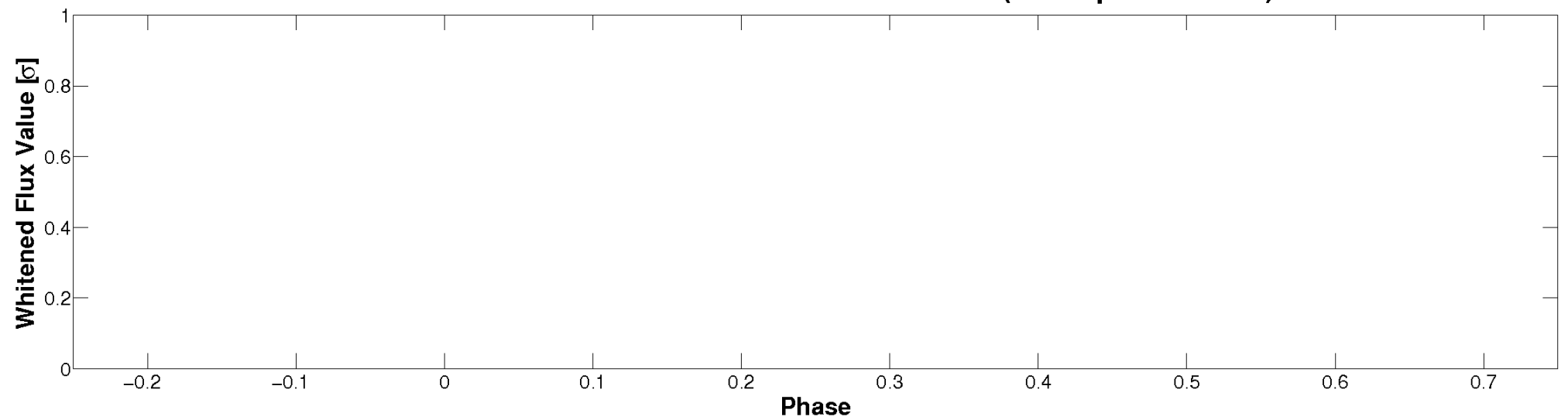


Non-Whitened Vs. Whitened Light Curve

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

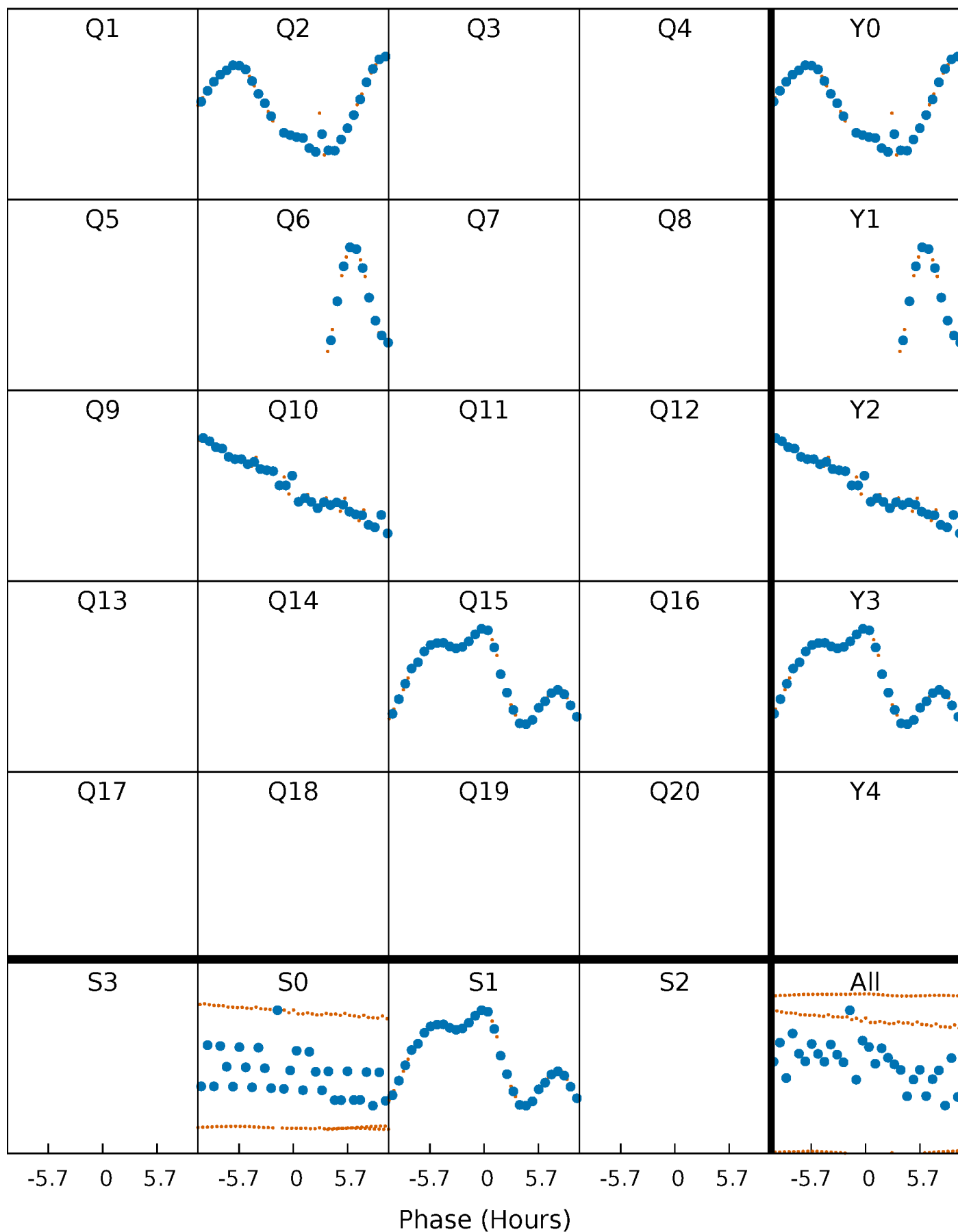


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



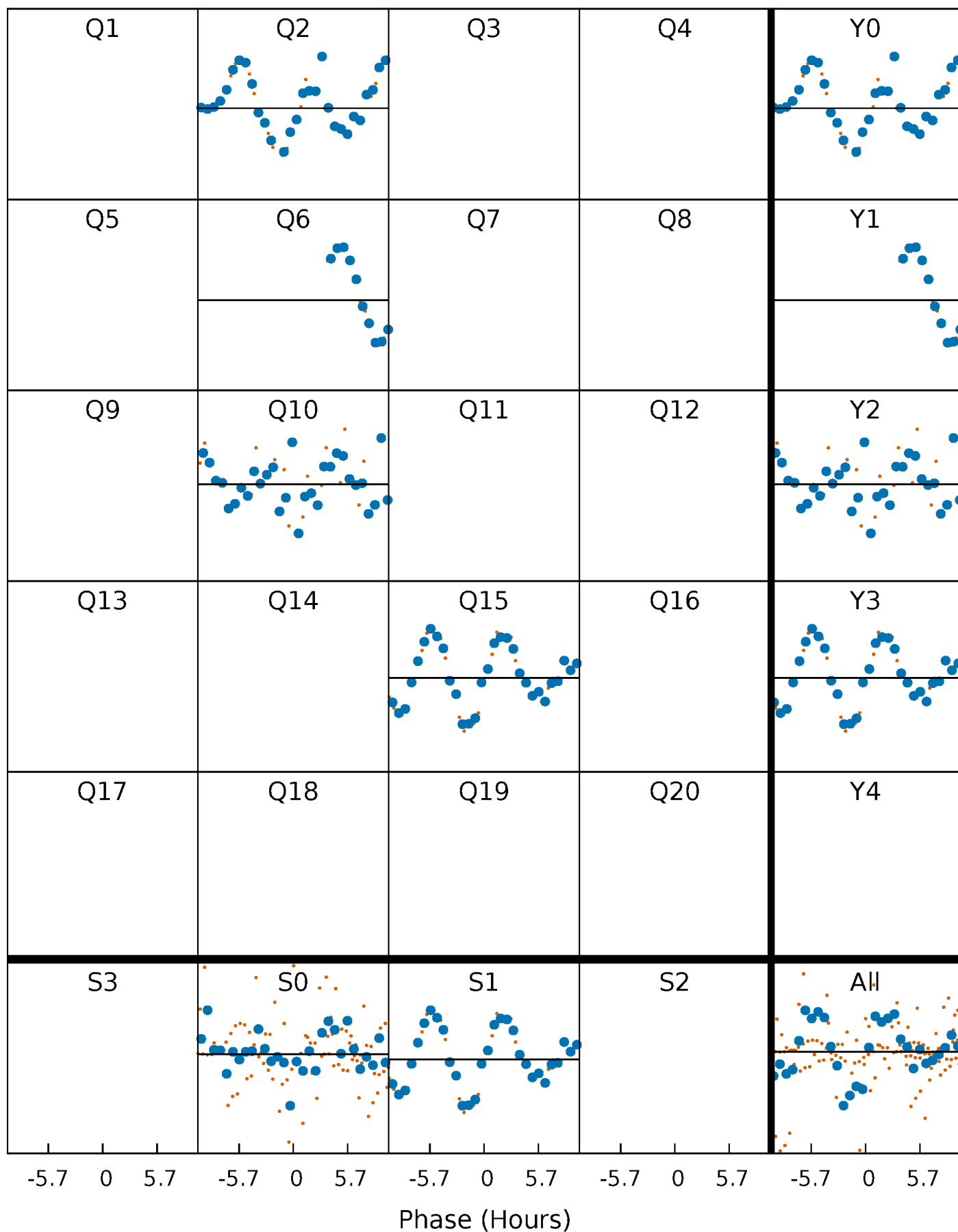
PDC Quarter-Phased Transit Curves

TCE 011199412-02 P=390.063038 Days $T_0=209.005270$ (BKJD)



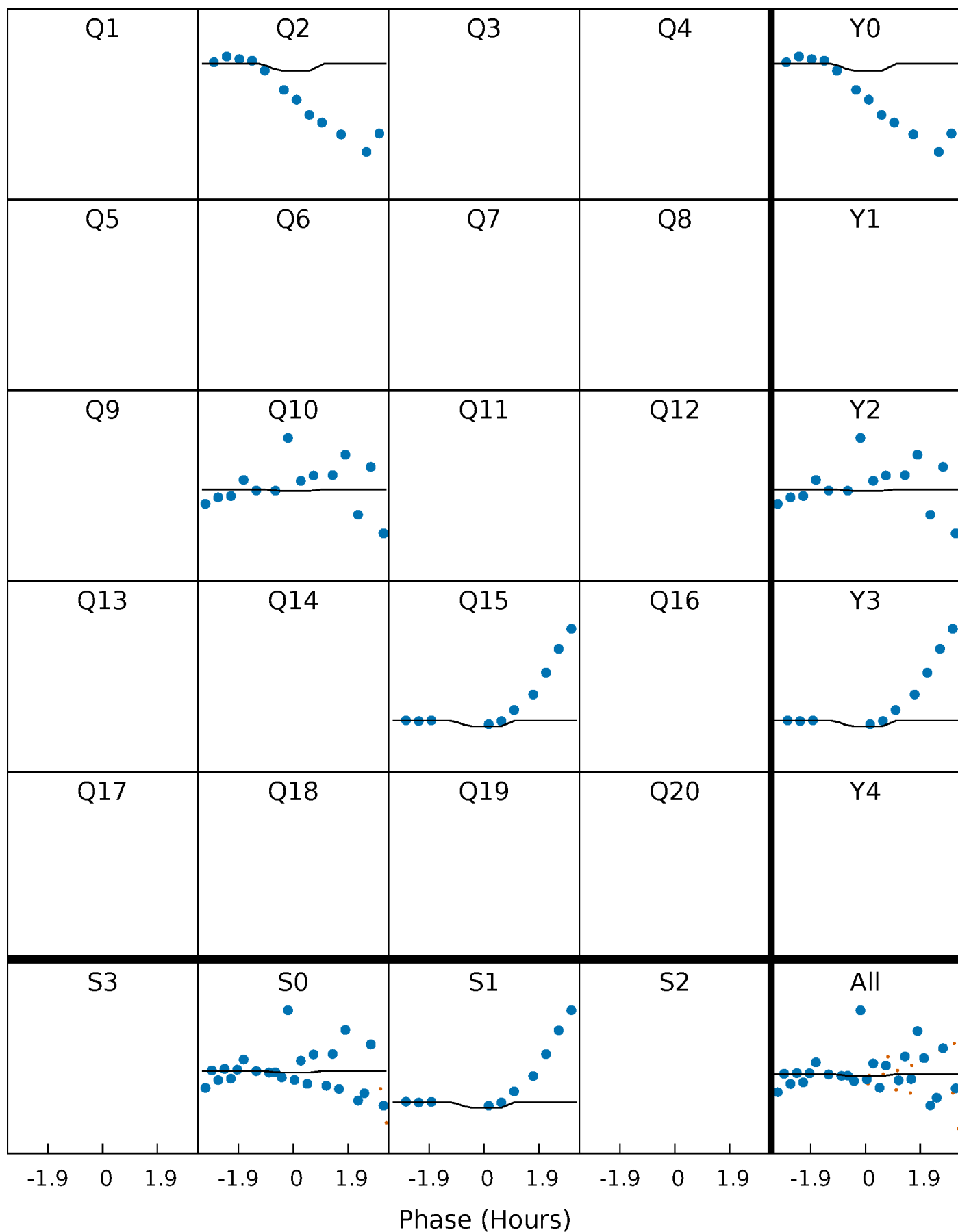
DV Quarter-Phased Transit Curves

TCE 011199412-02 P=390.063038 Days $T_0=209.005270$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

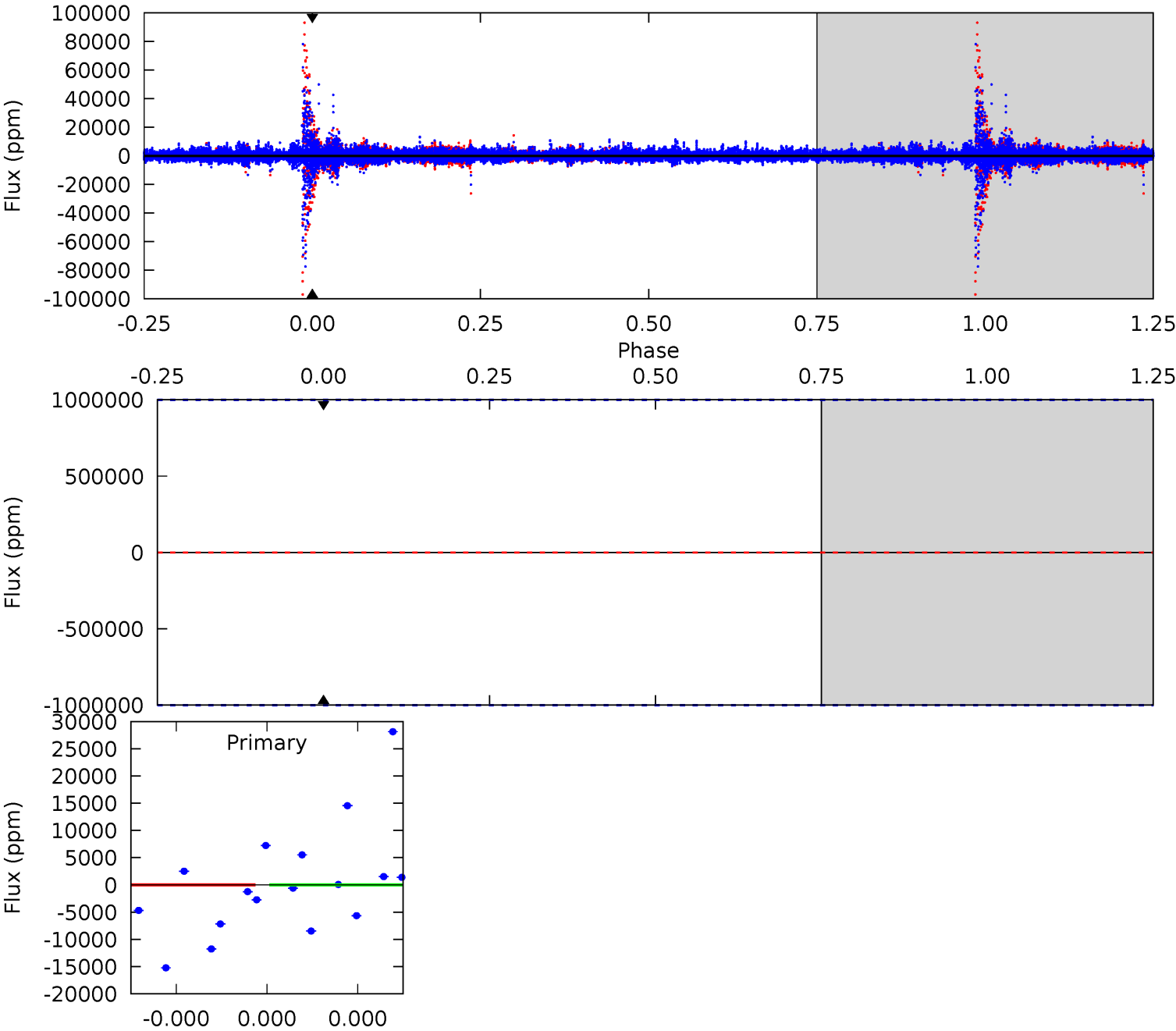
TCE 011199412-02 P=390.063038 Days $T_0=208.851592$ (BKJD)



DV Model-Shift Uniqueness Test

011199412-02, P = 390.063038 Days, E = 209.005270 Days

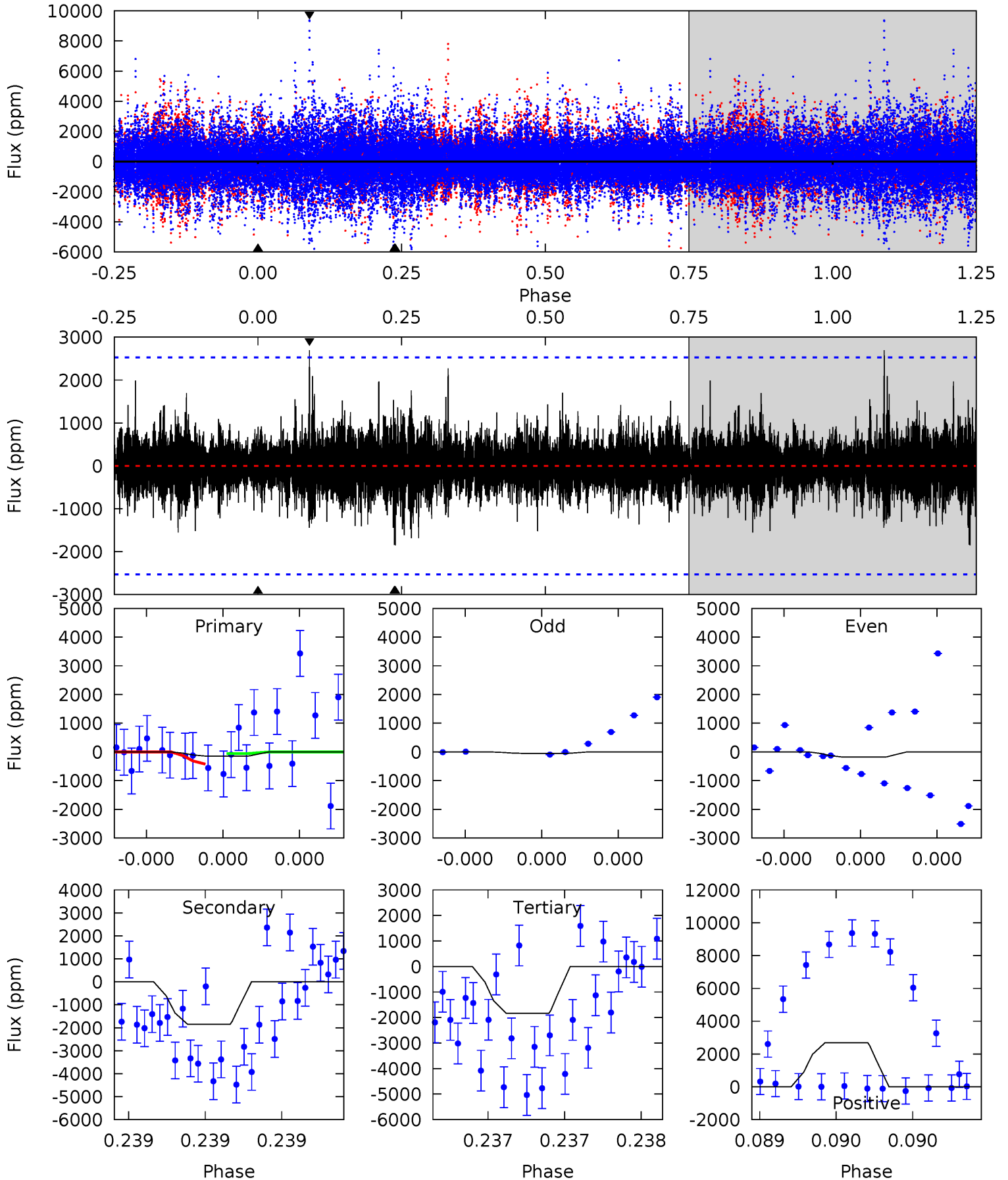
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

011199412-02, P = 390.063038 Days, E = 208.851592 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.33	4.20	4.17	6.12	5.74	3.73	0.97	-3.85	-5.79	0.02	-1.92	0.12	-8.90	0.59	0



Stellar Parameters For KIC 011199412

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7693^{+239}_{-319}	$3.715^{+0.459}_{-0.077}$	$-0.260^{+0.200}_{-0.300}$	$3.115^{+0.360}_{-1.529}$	$1.834^{+0.142}_{-0.425}$	$0.085^{+0.359}_{-0.022}$
	+3%/-4%	+12%/-2%	+77%/-115%	+12%/-49%	+8%/-23%	+420%/-25%
Source	KIC0	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 011199412-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$20.52^{+24.59}_{-13.48}$	718^{+48}_{-88}	5432^{+46718}_{-44632}	$2386^{+391010}_{-297549}$
Alt.	-1848 ± 440	$22.62^{+23.93}_{-16.59}$	717^{+48}_{-85}	5772^{+6881}_{-1504}	3334^{+43985}_{-2563}

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 $A_{\text{obs}} \gg 1.0$

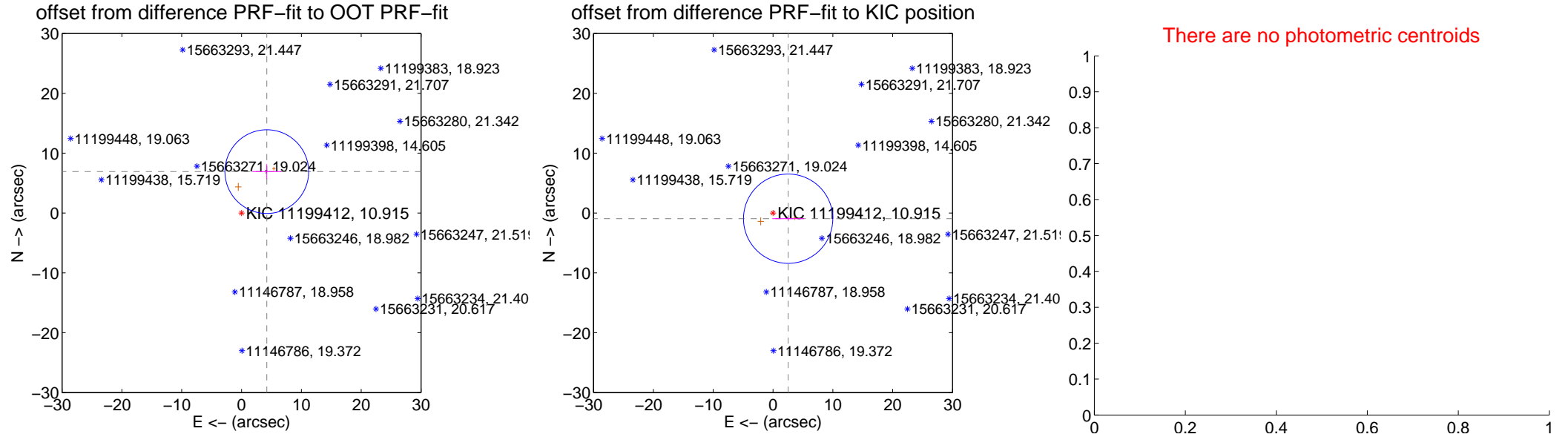
DV Centroid Data

Supplemental centroid analysis for 011199412-02. **Kepler magnitude: 10.91.** Transit SNR -1.00

There are 0 quarters with good PRF difference image offsets

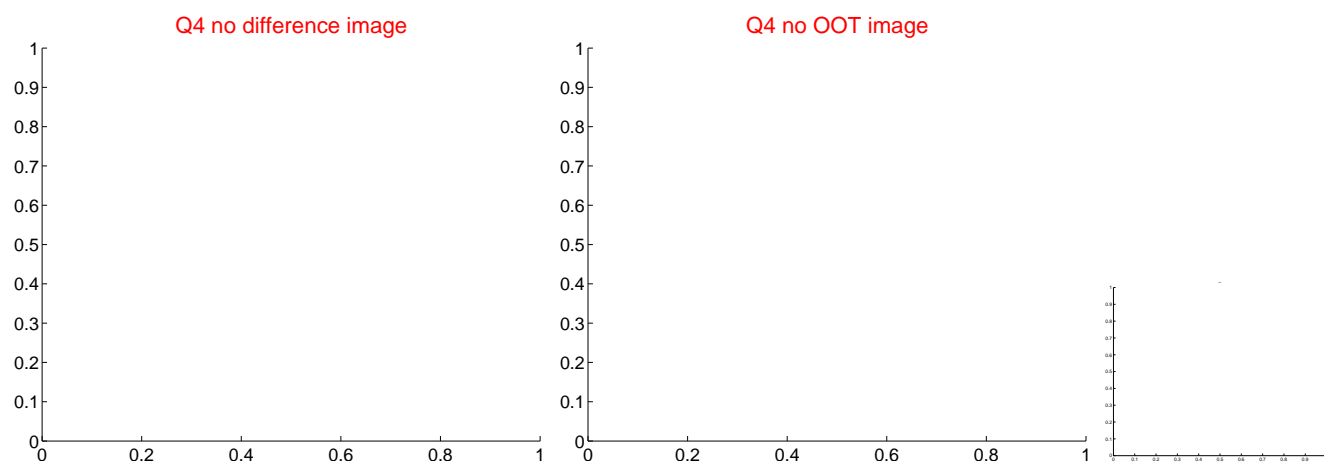
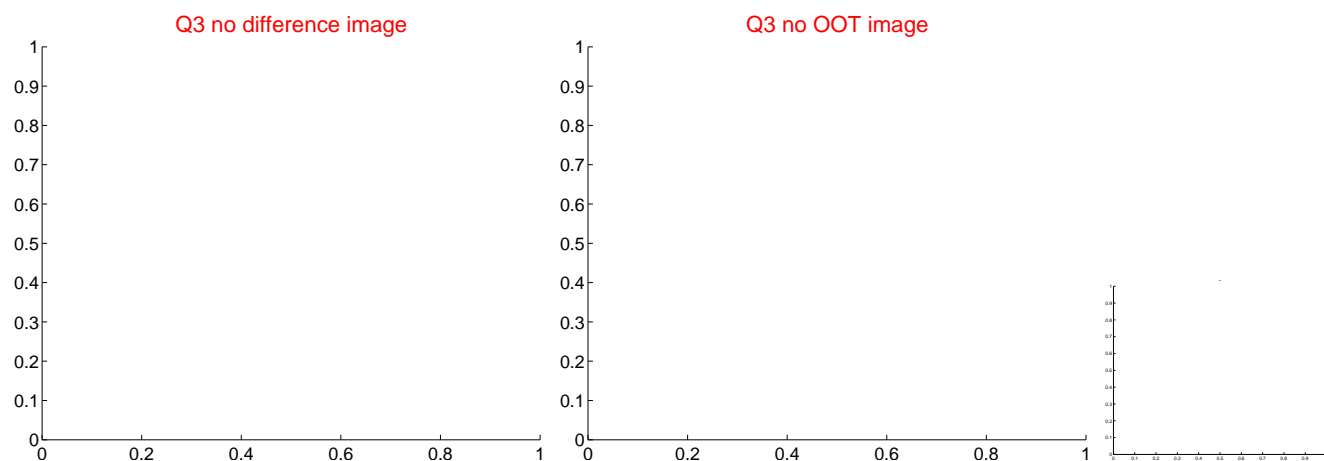
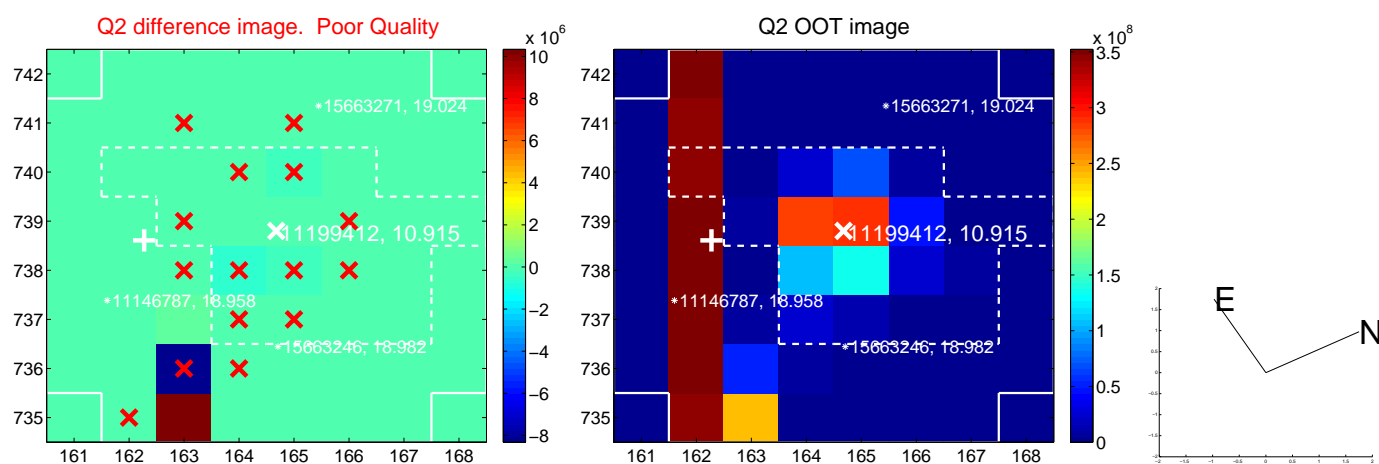
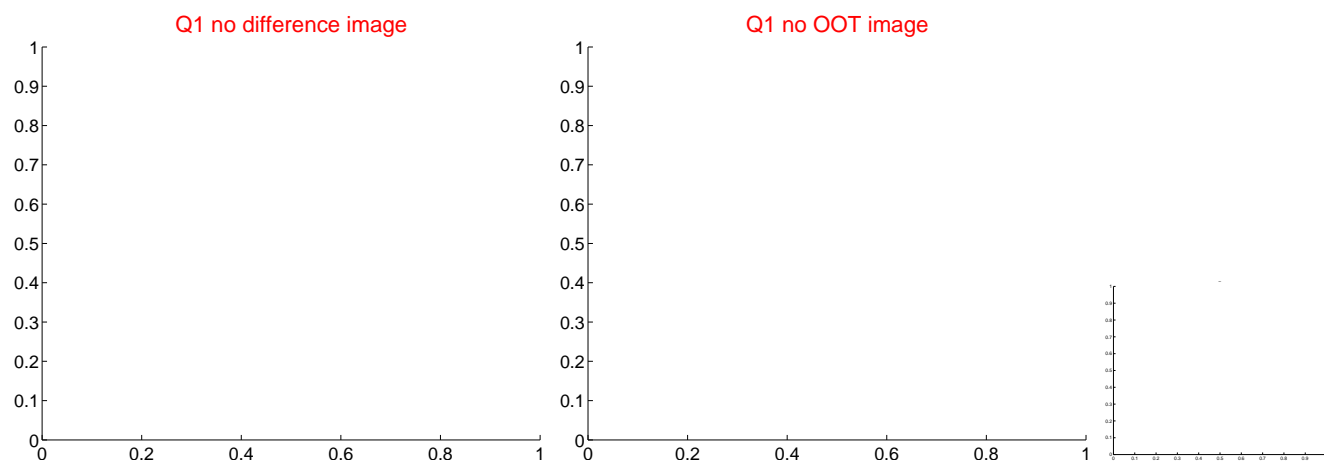
The OOT PRF centroid is offset from the target star catalog position by about 5.95 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	8.103 ± 2.331	3.48	-4.223 ± 2.427	6.916 ± 1.251
PRF-fit source offset from KIC position	2.702 ± 2.487	1.09	-2.529 ± 2.655	-0.950 ± 0.241
photometric centroid source offset	—	—	—	—



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.

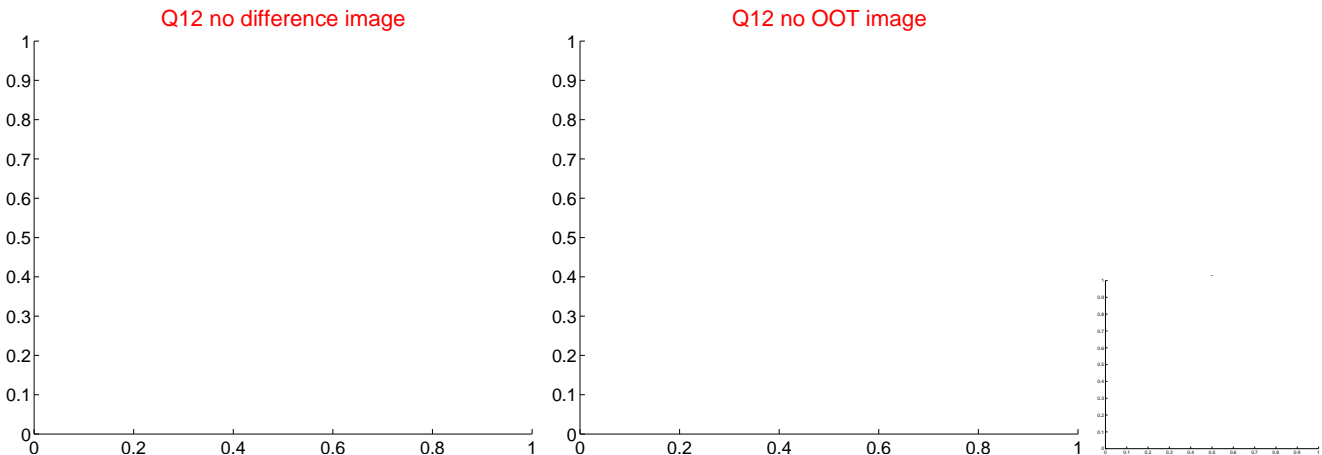
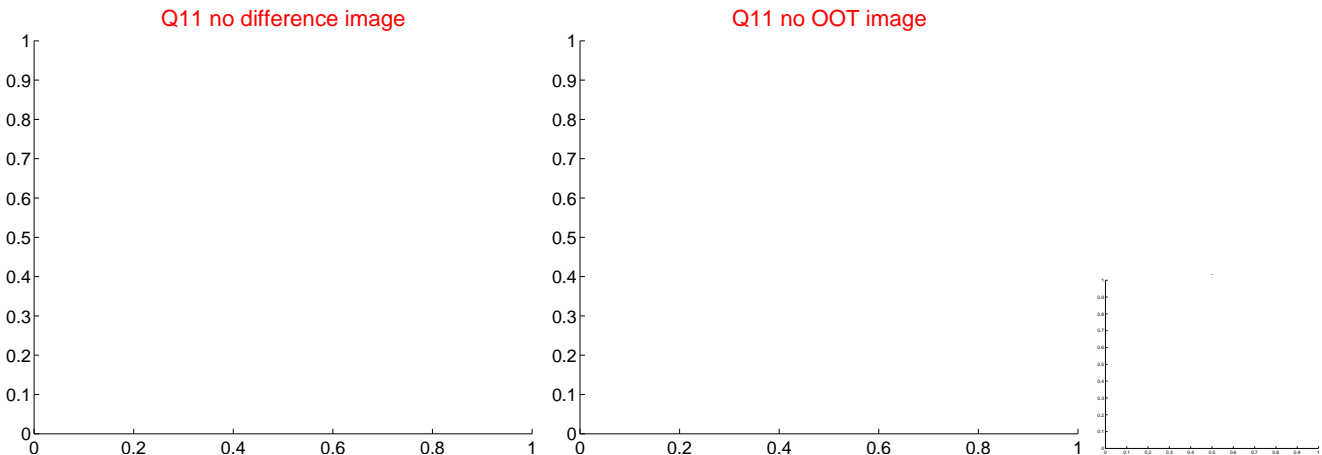
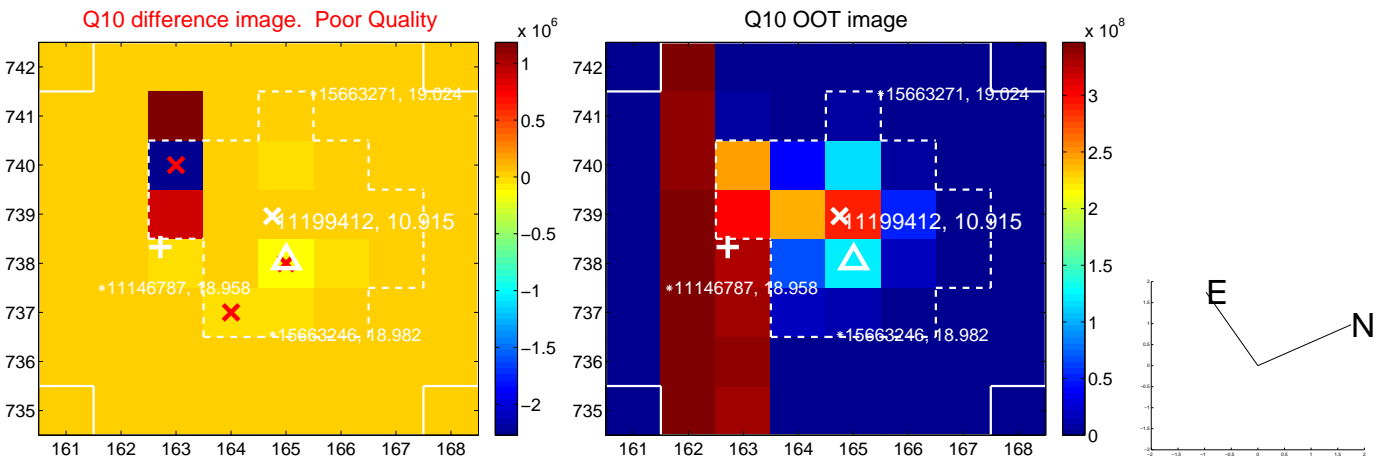
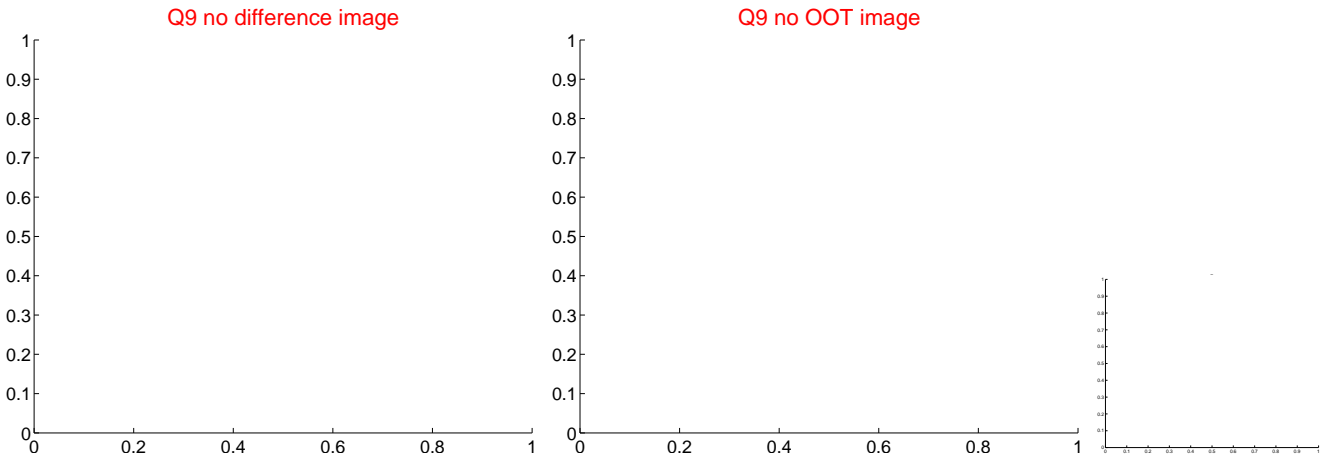
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



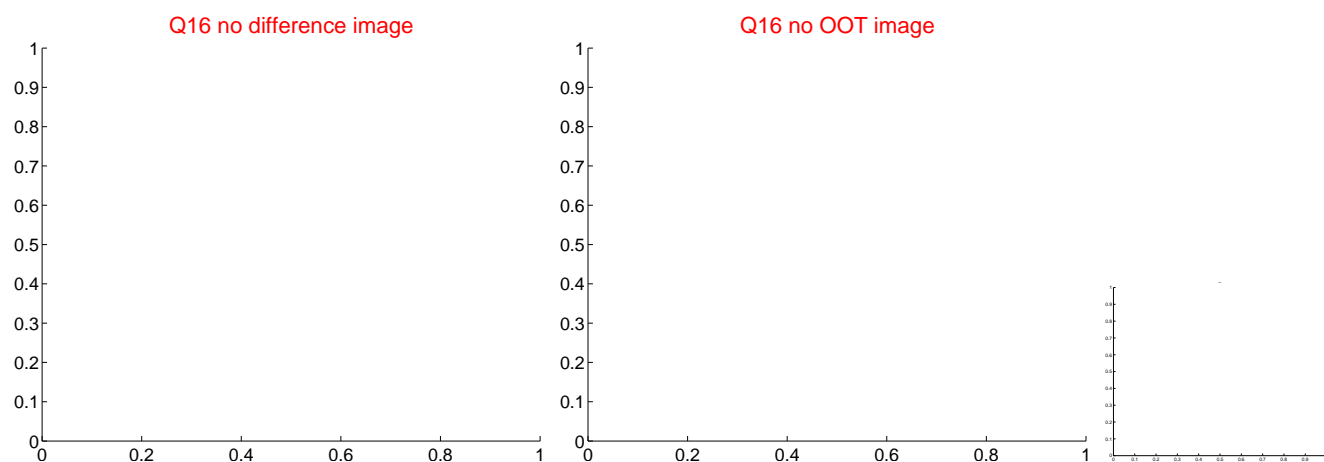
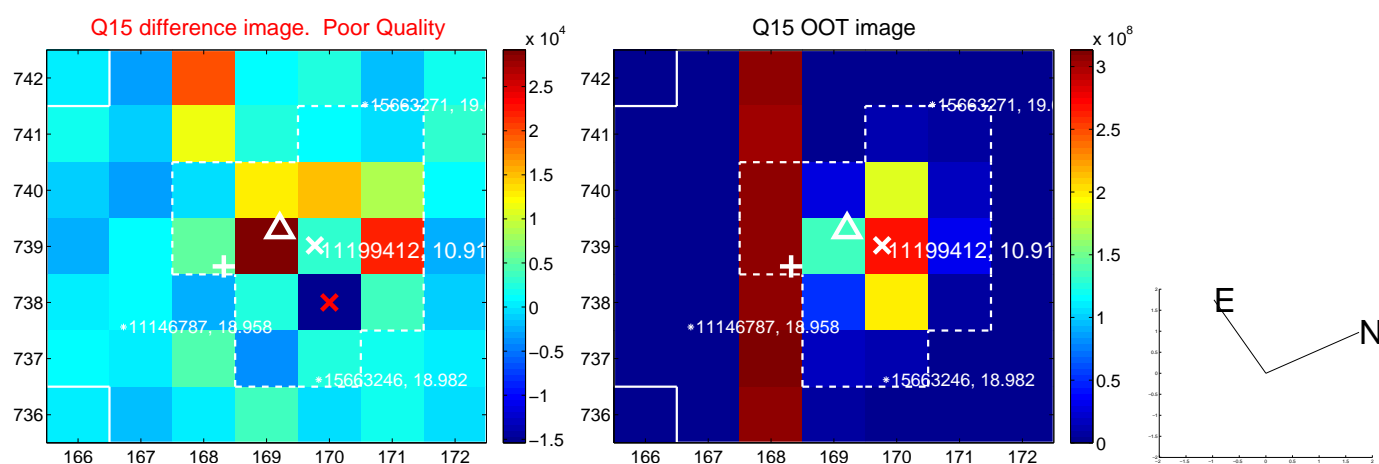
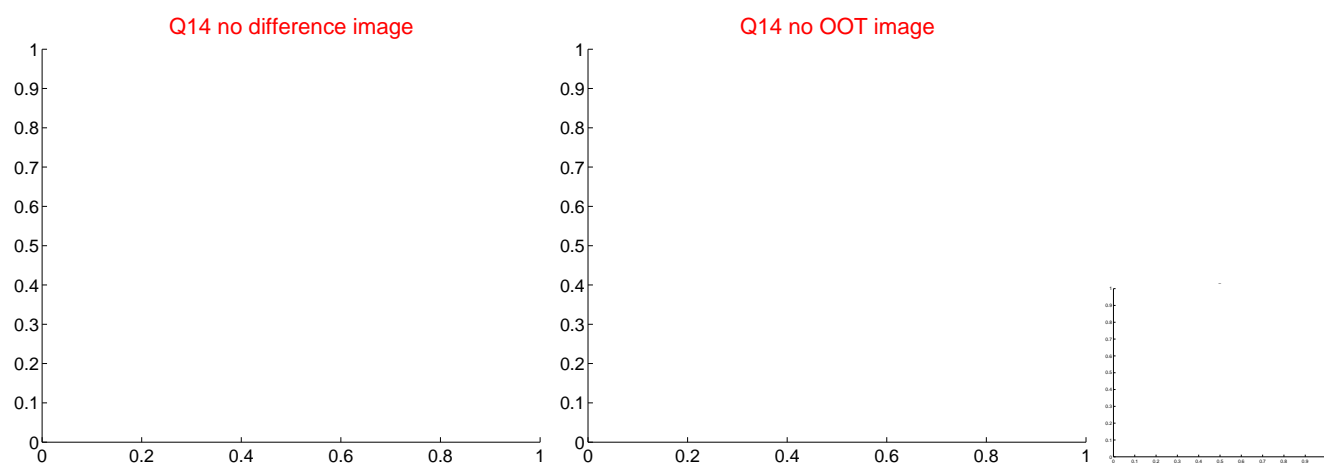
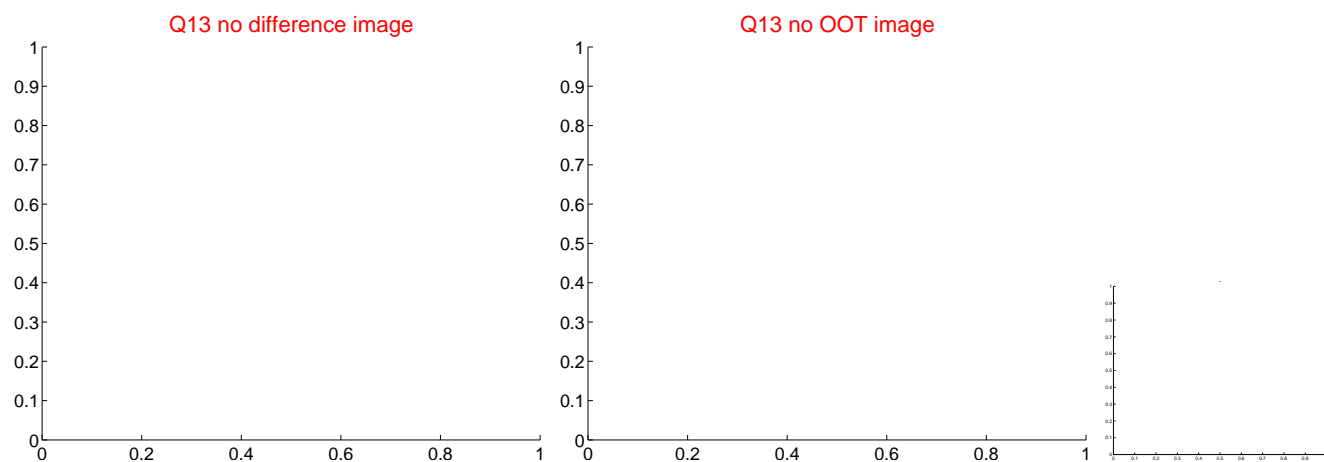
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



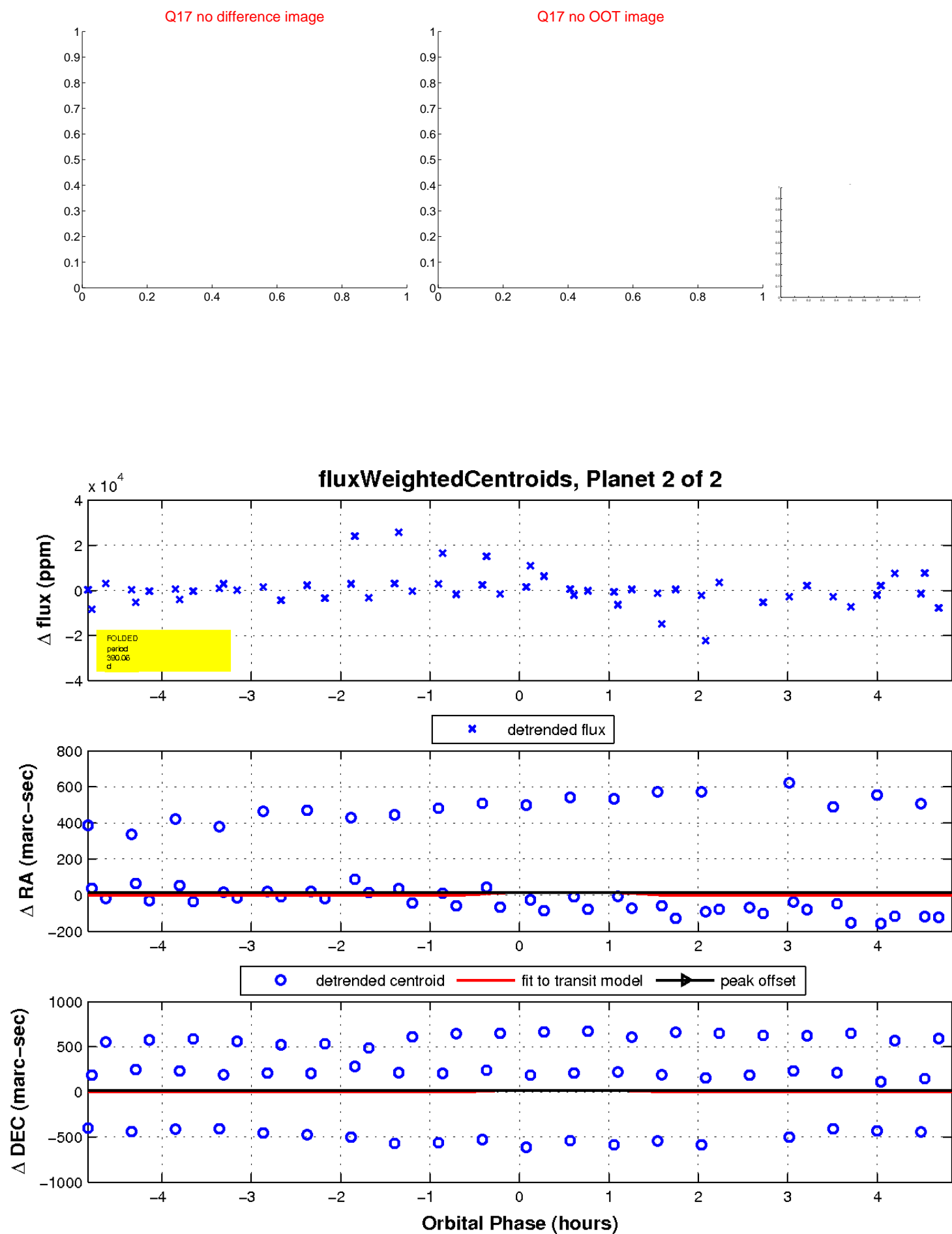
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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

