

KIC 007907119

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})
007907119-01	OBS	No	536.997023	491.790391	876.1	12.189	15.6	5.6	0.60	4074	1.79	0.08
007907119-02	OBS	No	555.868651	285.706831	459.0	0.986	13.7	2.8	0.60	4074	2.51	0.07
007907119-03	OBS	No	555.899372	285.123731	1039.5	3.736	14.5	7.3	0.60	4074	1.98	0.07
007907119-04	OBS	No	311.855100	233.088025	835.2	3.160	12.4	6.3	0.60	4074	1.95	0.16
007907119-05	OBS	No	477.265858	148.860211	1.1	25.140	10.3	0.0	0.60	4074	0.07	0.09
007907119-06	OBS	No	342.173315	465.173002	908.8	3.510	11.0	7.5	0.60	4074	1.84	0.14

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007907119-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007907119-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007907119-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—SAME_NTL_PERIOD—CENT_FEW_DIFFS
007907119-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—CENT_FEW_DIFFS
007907119-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007907119-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

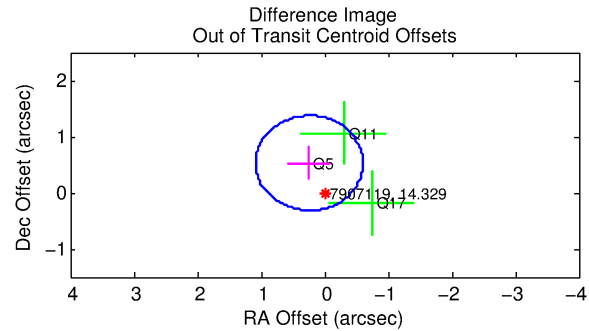
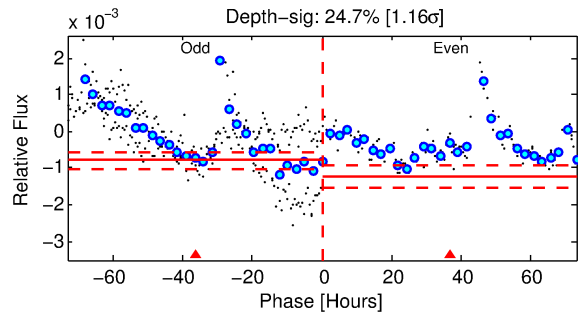
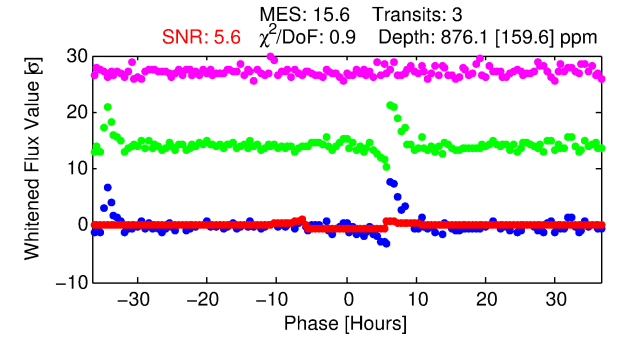
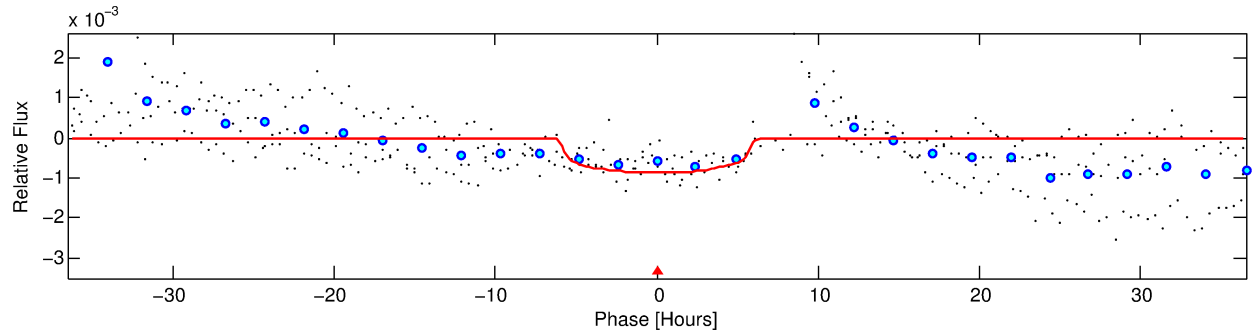
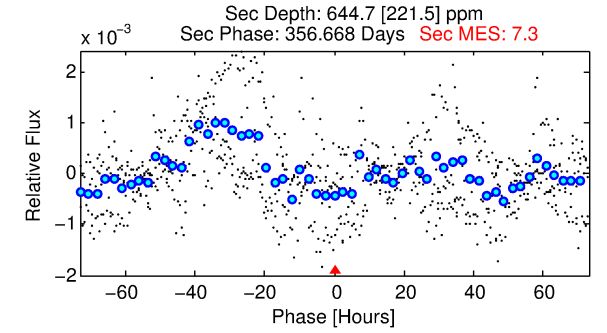
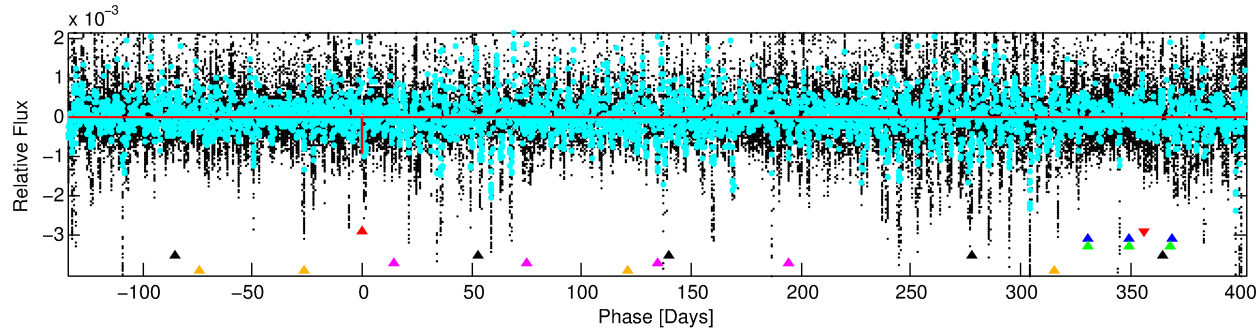
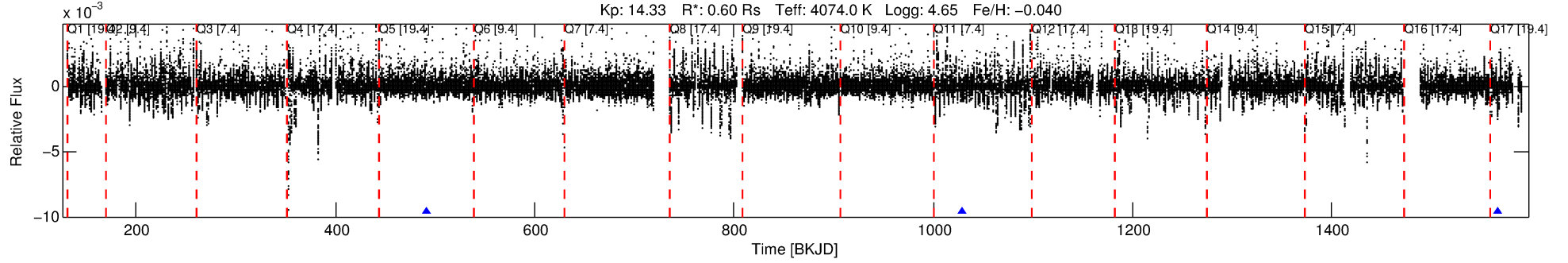
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007907119-01

No Significant Match Found

DV One-Page Summary

KIC: 7907119 Candidate: 1 of 6 Period: 536.997 d



DV Fit Results:

Period = 536.99702 [0.00795] d
Epoch = 491.7904 [0.0113] BKJD
Rp/R* = 0.0272 [0.0159]
a/R* = 310.71 [631.29]
b = 0.45 [3.63]
Seff = 0.08 [0.01]
Teq = 134 [6] K
Rp = 1.79 [1.07] Re
a = 1.0894 [0.0979] AU
Ag = 130979.62 [161006.32] [0.81 σ]
Teffp = 3940 [1214] K [3.13 σ]

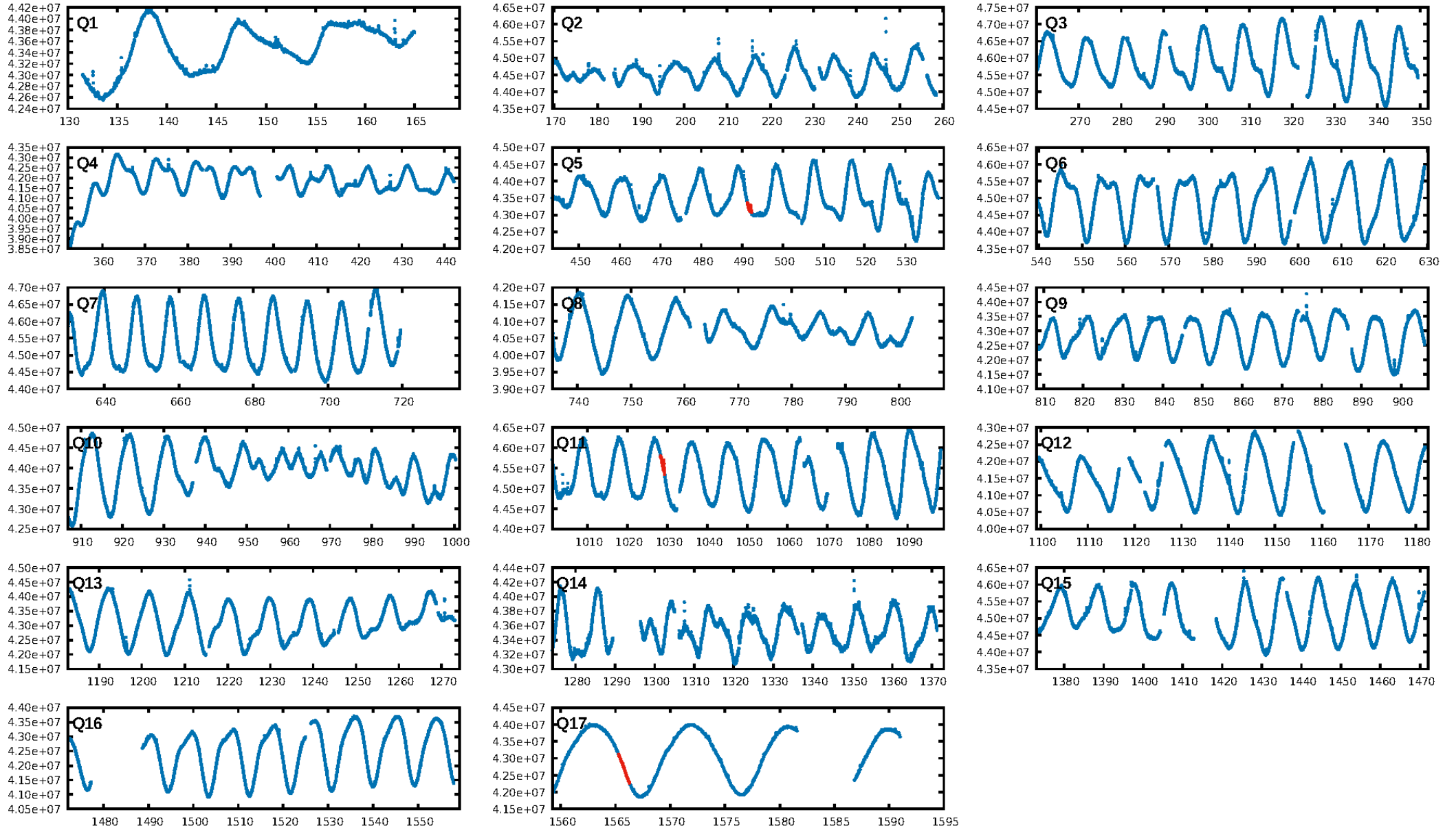
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [51.31 σ]
LongPeriod-sig: 100.0% [37.04 σ]
ModelChiSquare2-sig: 5.7%
ModelChiSquareGof-sig: 99.4%
Bootstrap-pfa: 8.12e-14
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: -4.748
Centroid-sig: 38.9%
Centroid-so: 0.294 arcsec [0.62 σ]
OotOffset-rm: 0.582 arcsec [2.07 σ]
OotOffset-st: 0/1/0/2 [3]
KicOffset-rm: 0.704 arcsec [2.49 σ]
KicOffset-st: 0/1/0/2 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

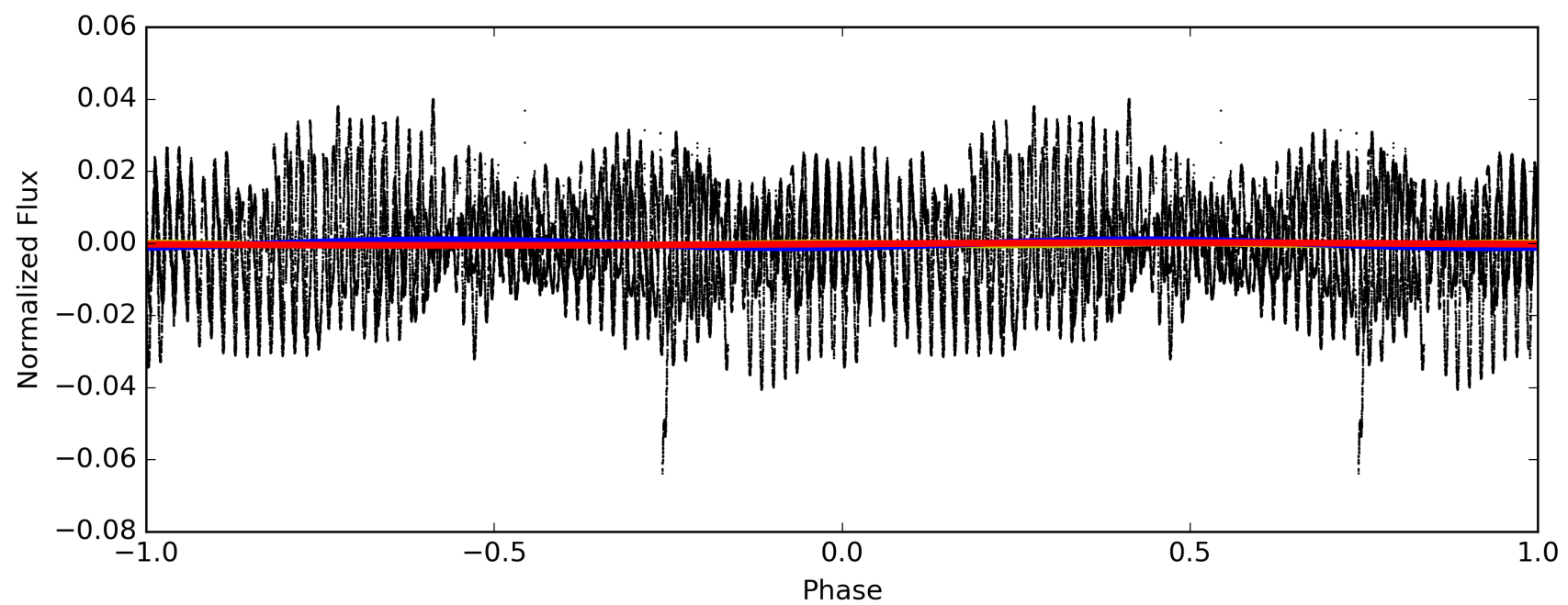
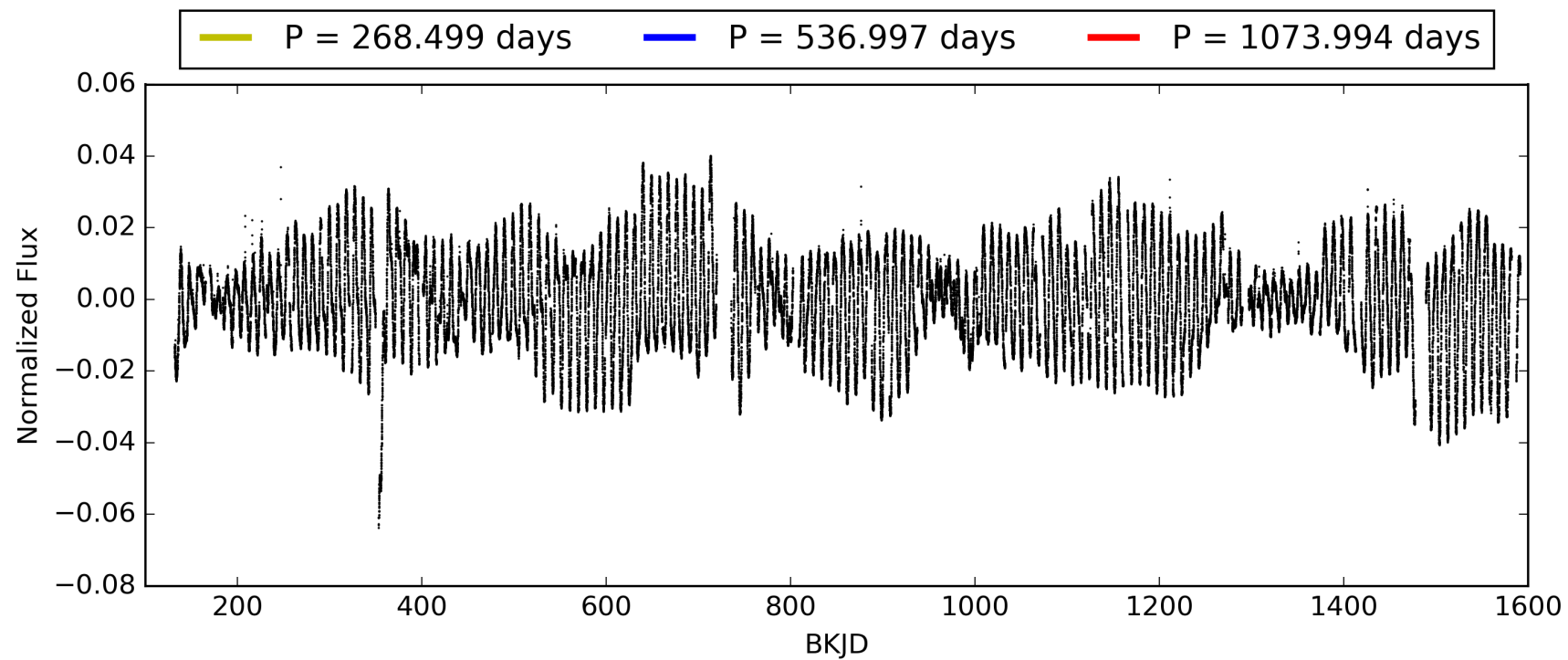
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 05:17:32 Z

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

TCE 007907119-01, PDC Light Curves

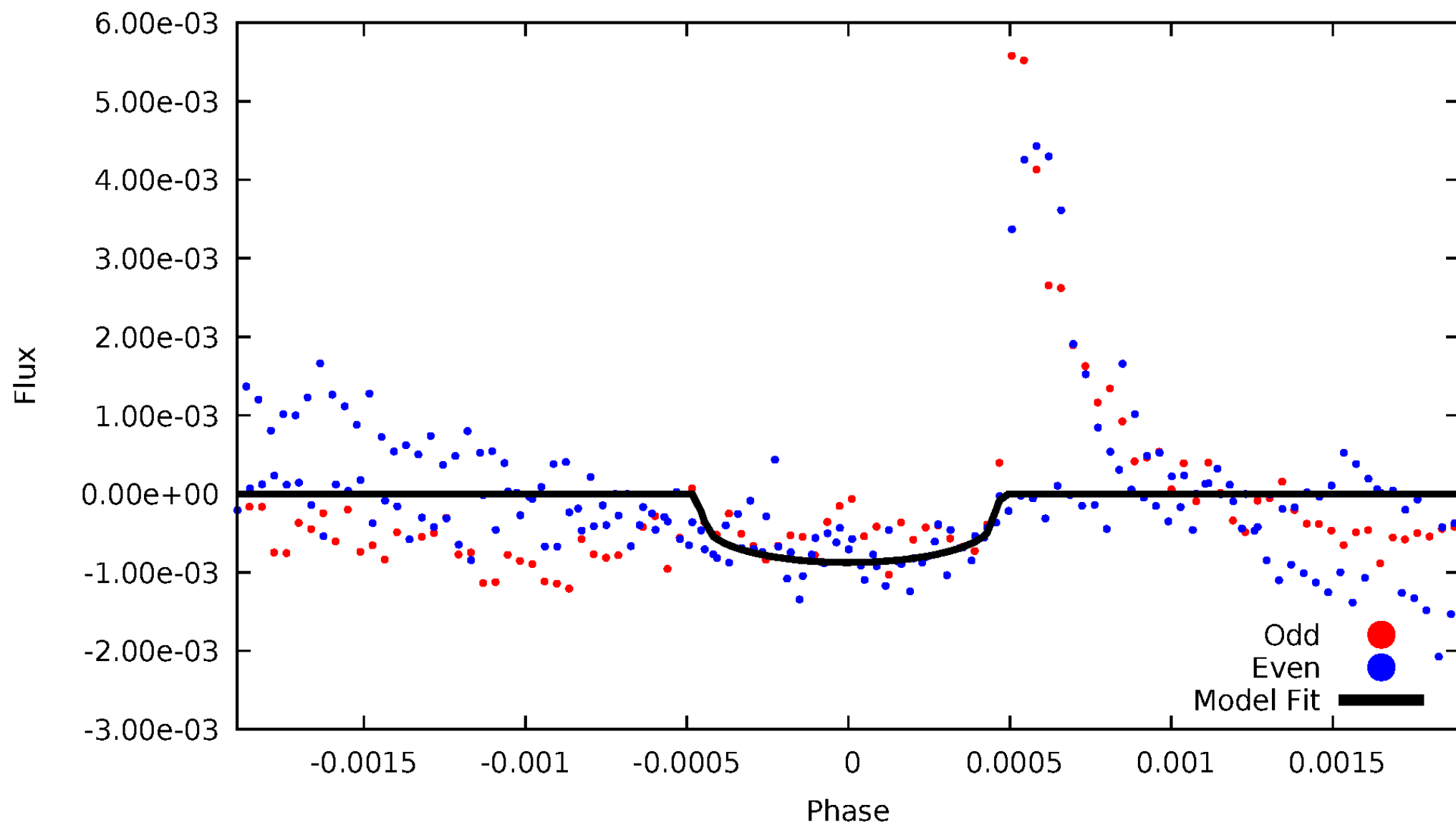


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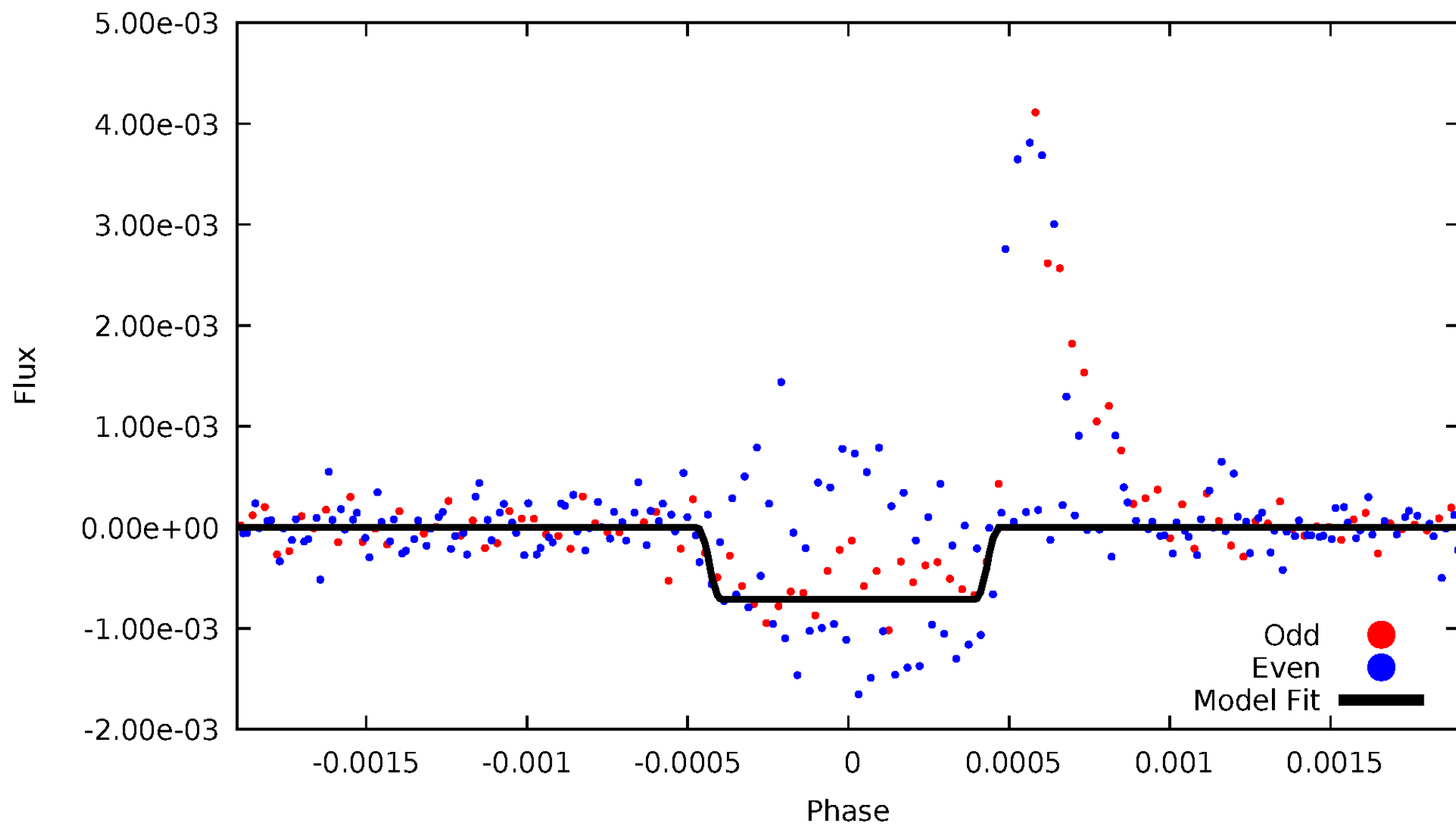
DV Odd/Even

TCE 007907119-01



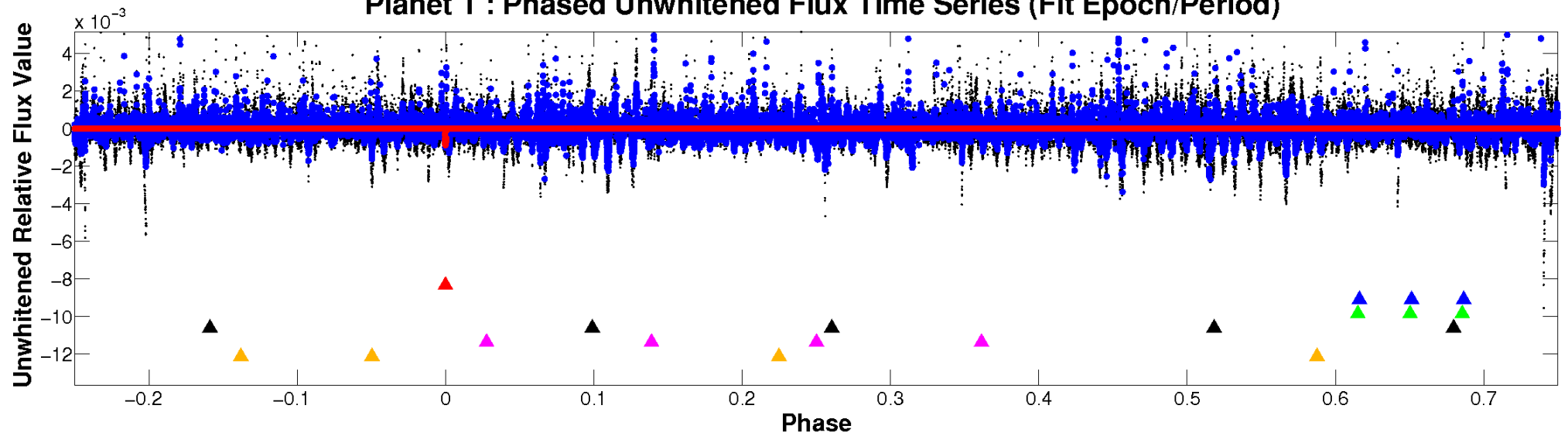
ALT Odd/Even

TCE 007907119-01

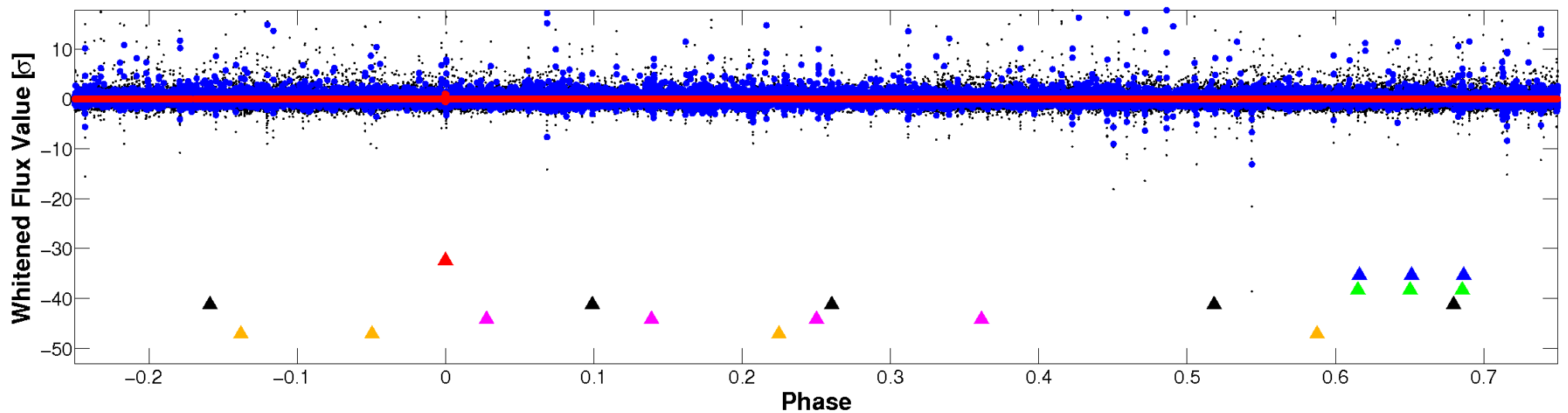


Non-Whitened Vs. Whitened Light Curve

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

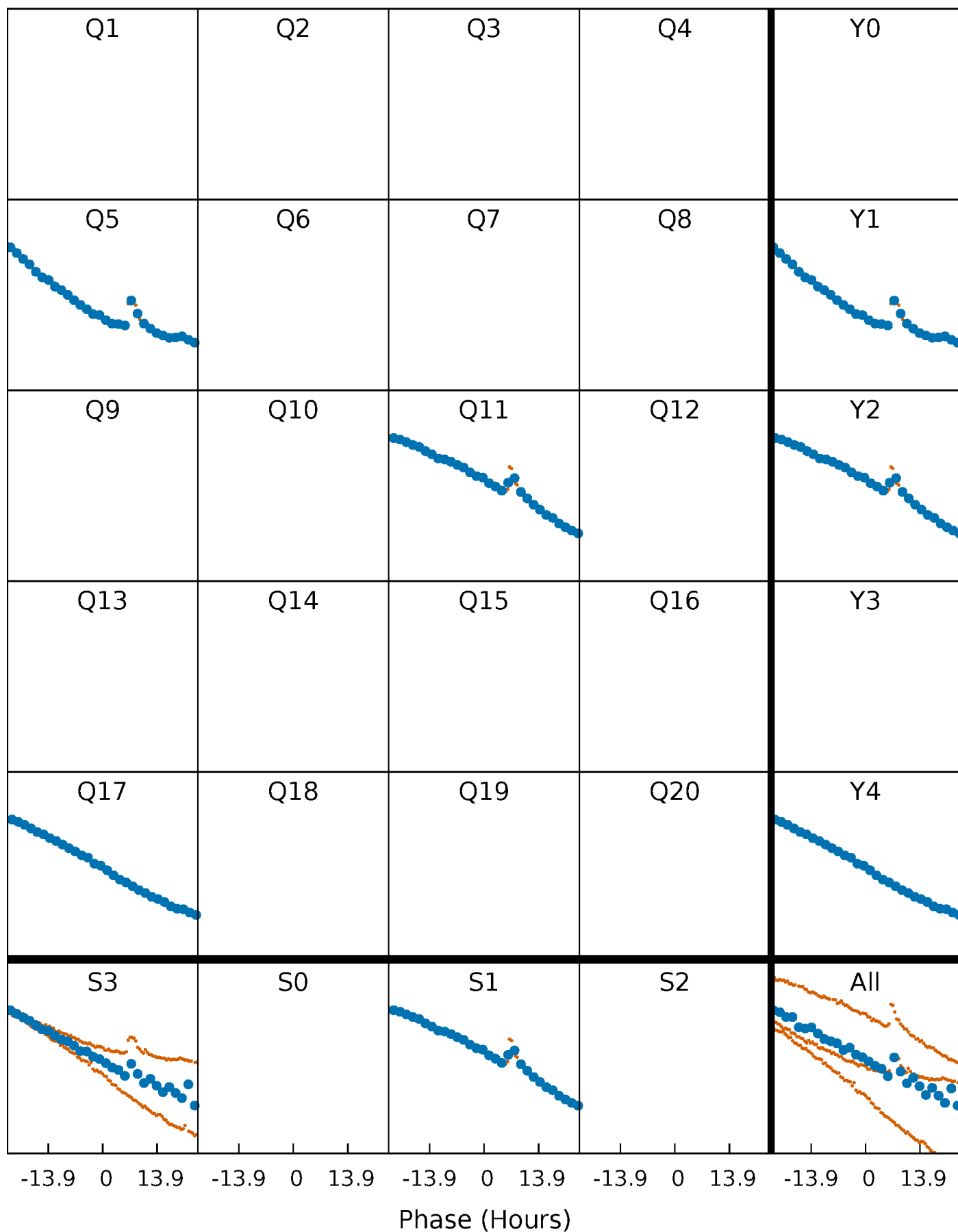


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



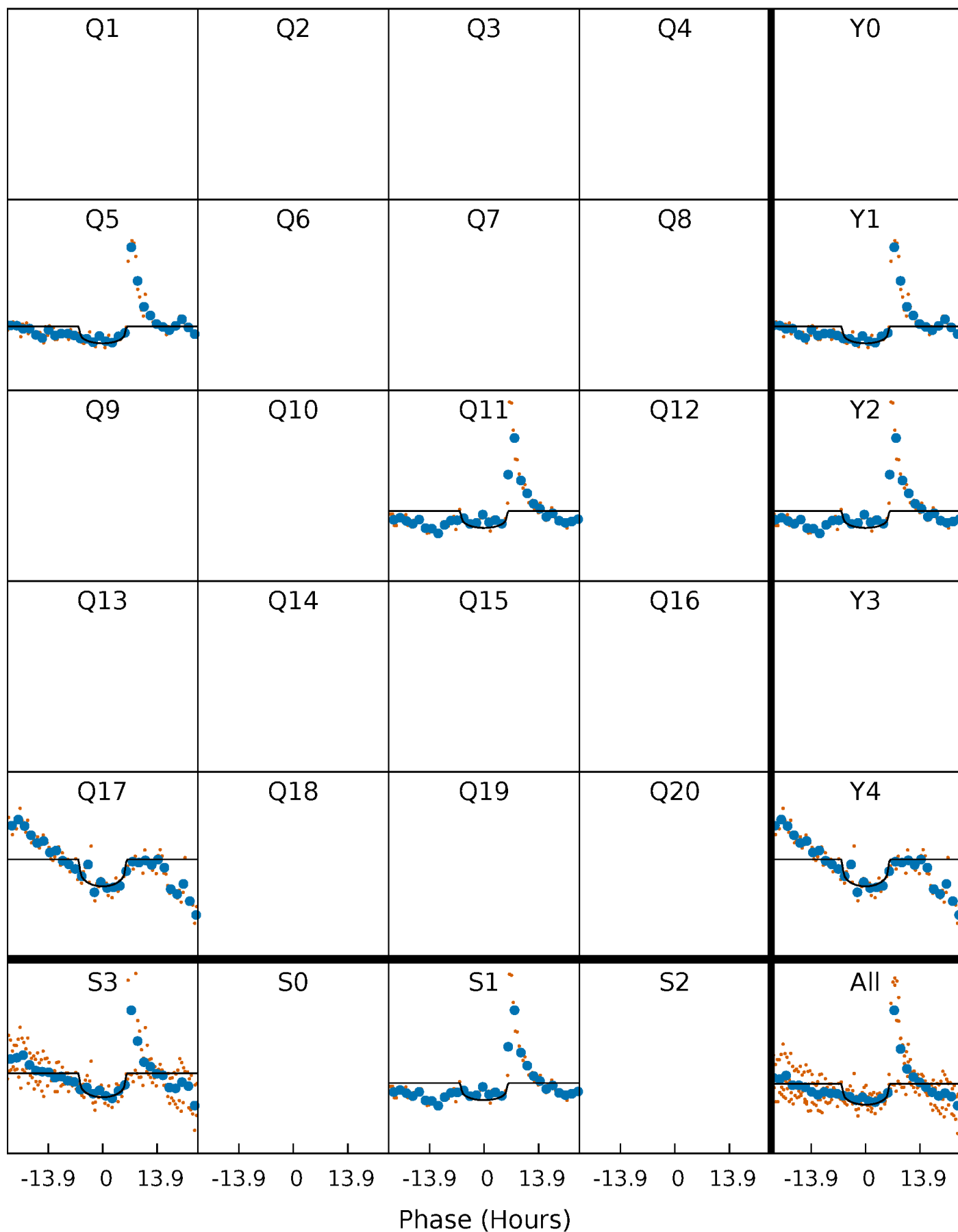
PDC Quarter-Phased Transit Curves

TCE 007907119-01 P=536.997023 Days $T_0=491.790391$ (BKJD)



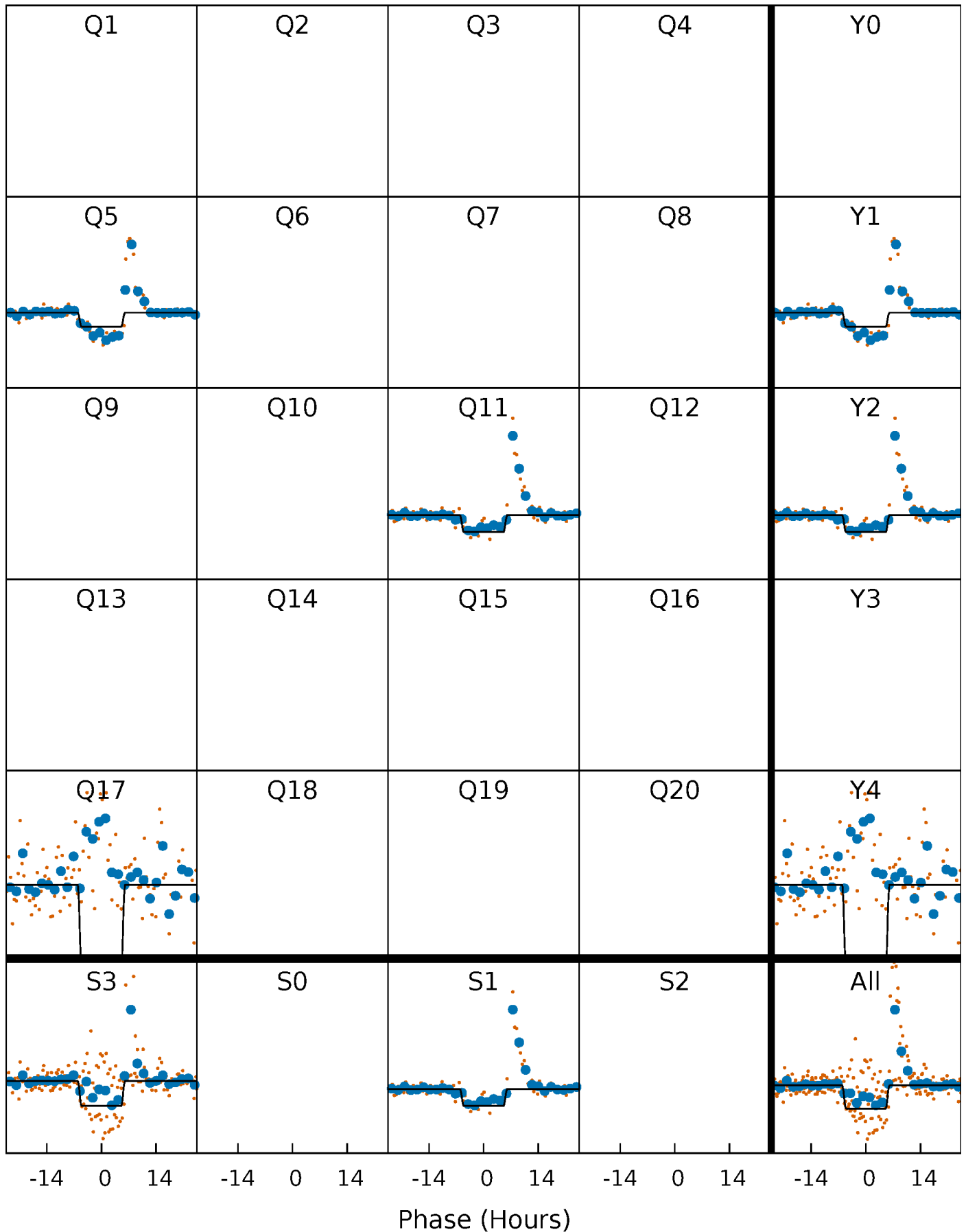
DV Quarter-Phased Transit Curves

TCE 007907119-01 P=536.997023 Days $T_0=491.790391$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

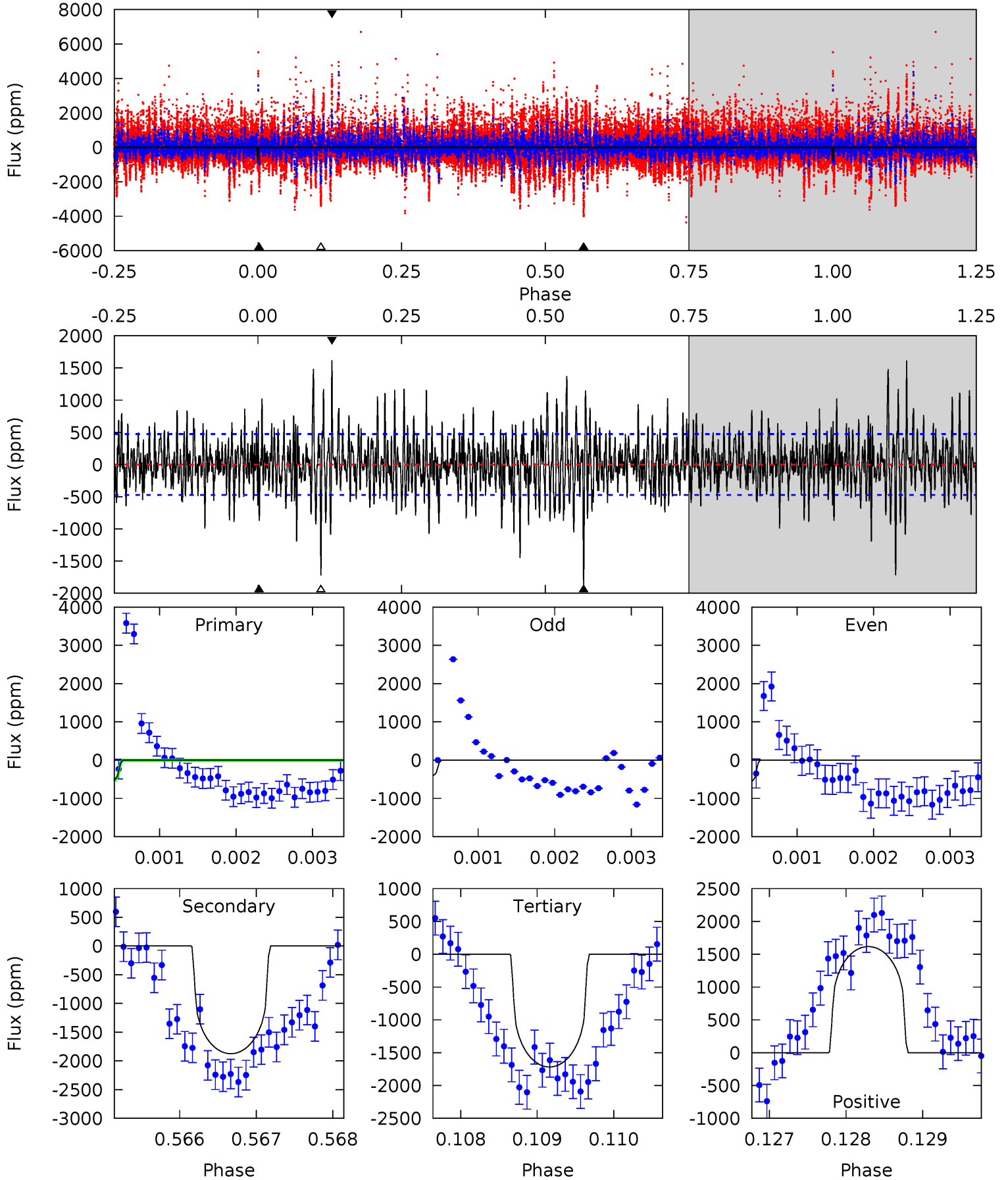
TCE 007907119-01 P=536.987146 Days $T_0=491.800106$ (BKJD)



DV Model-Shift Uniqueness Test

007907119-01, P = 536.997023 Days, E = 491.790391 Days

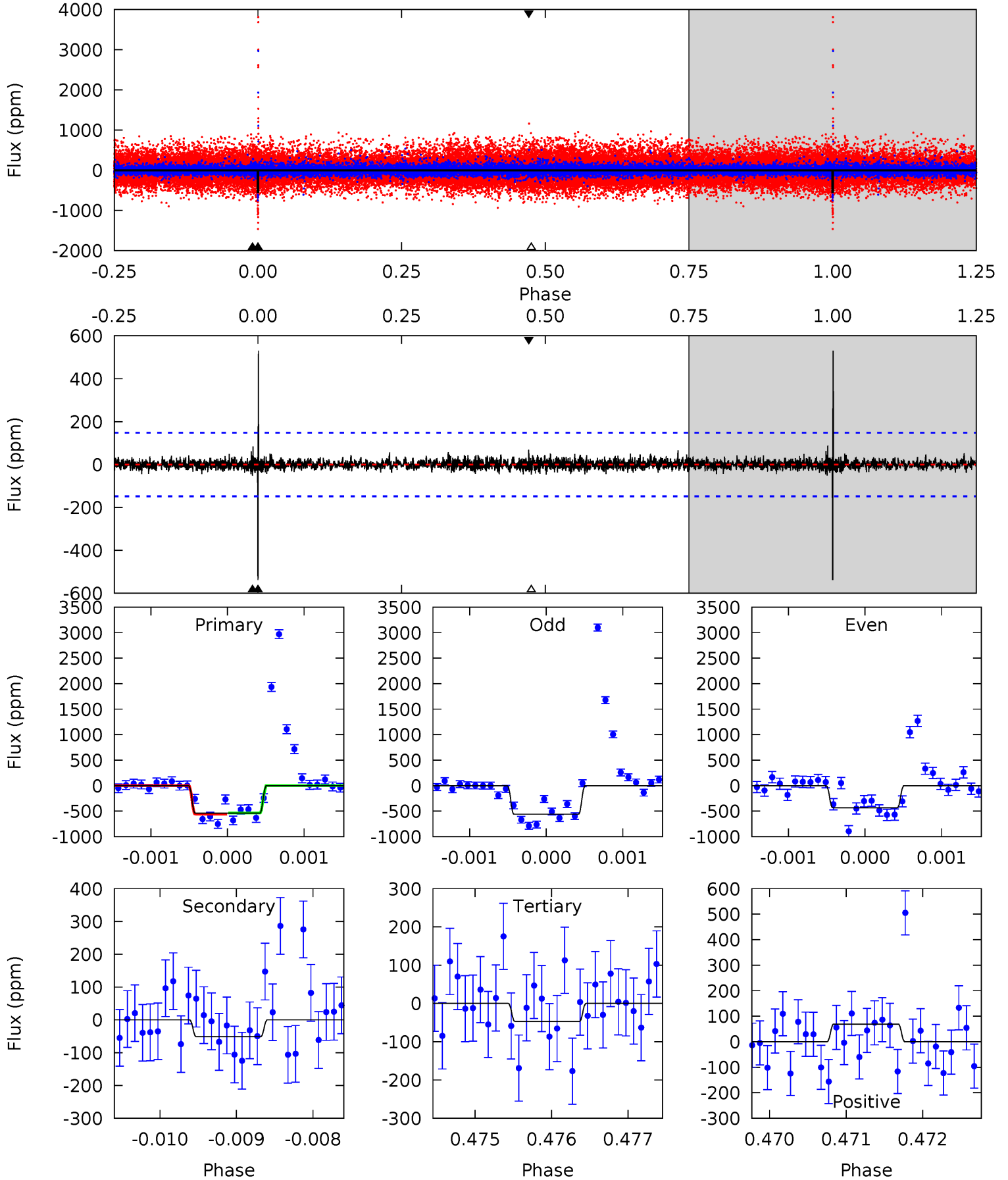
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.36	21.6	19.8	18.7	5.46	3.30	4.16	-11.5	-10.3	1.81	2.98	1.05	0.95	0.46	0.55



Alt Model-Shift Uniqueness Test

007907119-01, P = 536.987146 Days, E = 491.800106 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.8	1.89	1.73	2.55	5.46	3.31	0.54	18.1	17.3	0.16	-0.66	2.35	0.80	0.50	0.38



Stellar Parameters For KIC 007907119

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4074^{+127}_{-155}	$4.651^{+0.060}_{-0.024}$	$-0.040^{+0.300}_{-0.300}$	$0.605^{+0.043}_{-0.070}$	$0.598^{+0.057}_{-0.063}$	$3.804^{+1.124}_{-0.400}$
	+3%/-4%	+1%/-1%	+750%/-750%	+7%/-12%	+10%/-11%	+30%/-11%
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 007907119-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1875 ± 87	$1.86^{+0.98}_{-1.05}$	186^{+7}_{-8}	4803^{+2319}_{-786}	$364730^{+1538267}_{-213778}$
Alt.	-51 ± 27	$1.84^{+0.99}_{-0.95}$	185^{+7}_{-7}	2675^{+588}_{-367}	9442^{+31493}_{-6345}

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 $A_{obs} \gg 1.0$

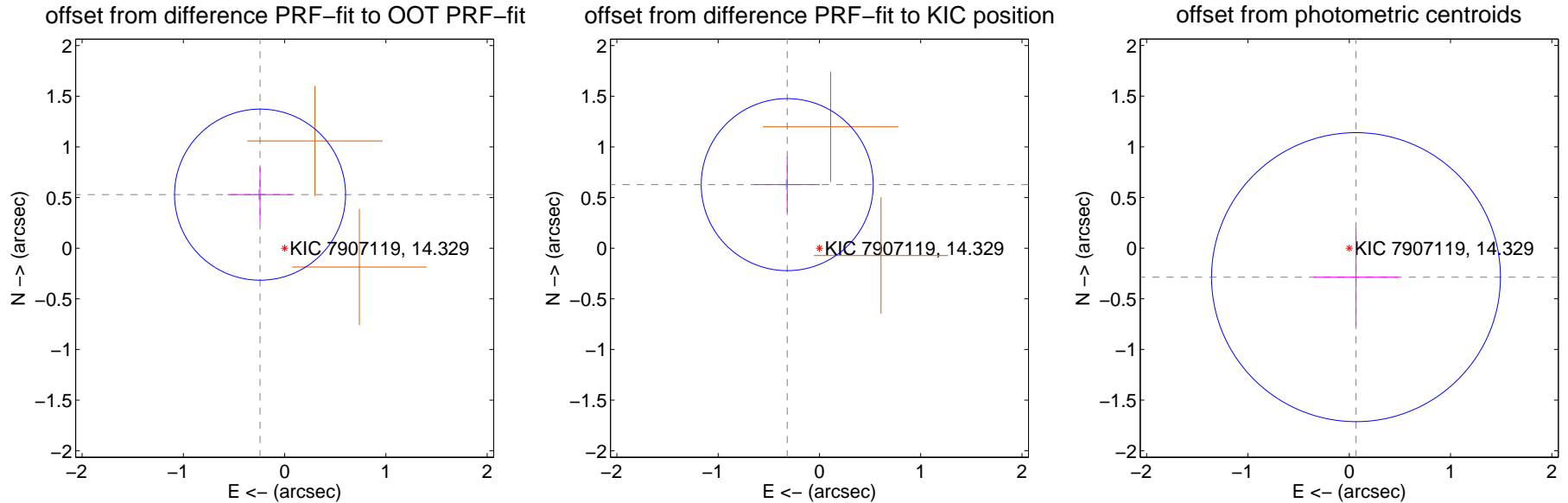
DV Centroid Data

Supplemental centroid analysis for 007907119-01. Kepler magnitude: 14.33. Transit SNR 5.61

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.582 ± 0.282	2.07	0.243 ± 0.321	0.529 ± 0.272
PRF-fit source offset from KIC position	0.704 ± 0.283	2.49	0.318 ± 0.321	0.628 ± 0.272
photometric centroid source offset	0.29 ± 0.48	0.62	-0.07 ± 0.42	-0.29 ± 0.48

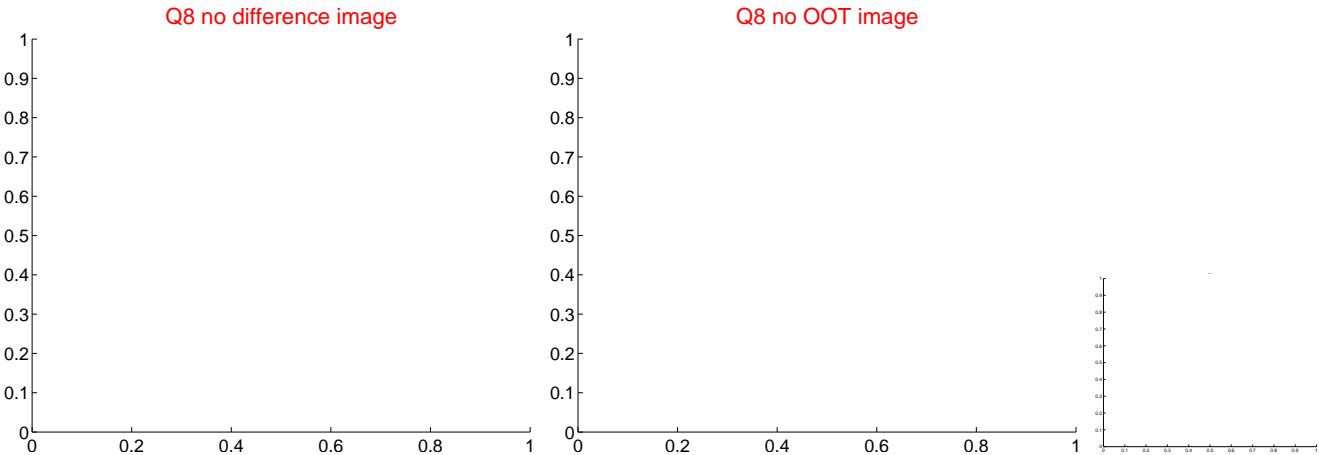
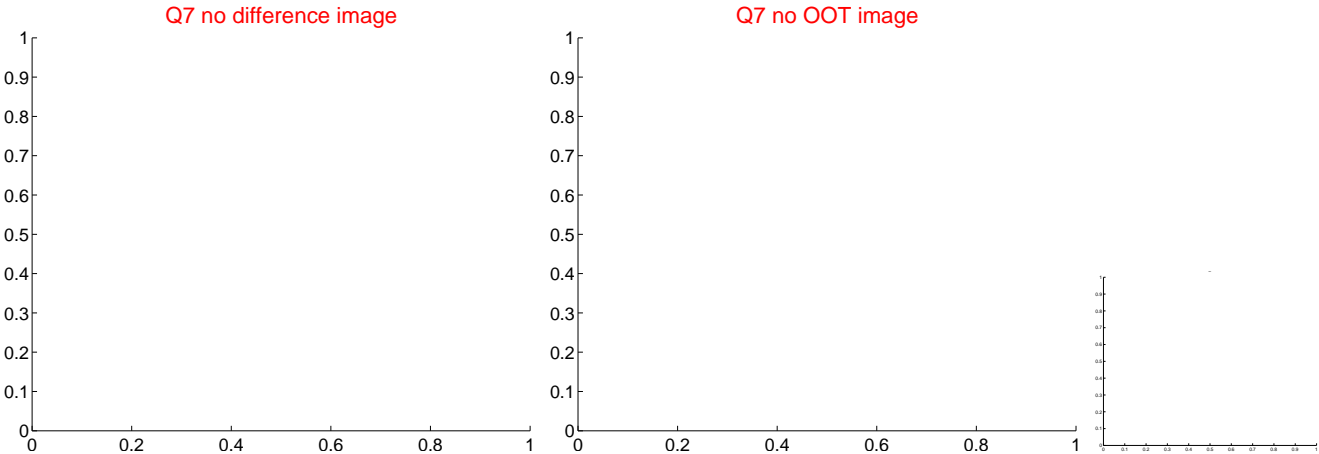
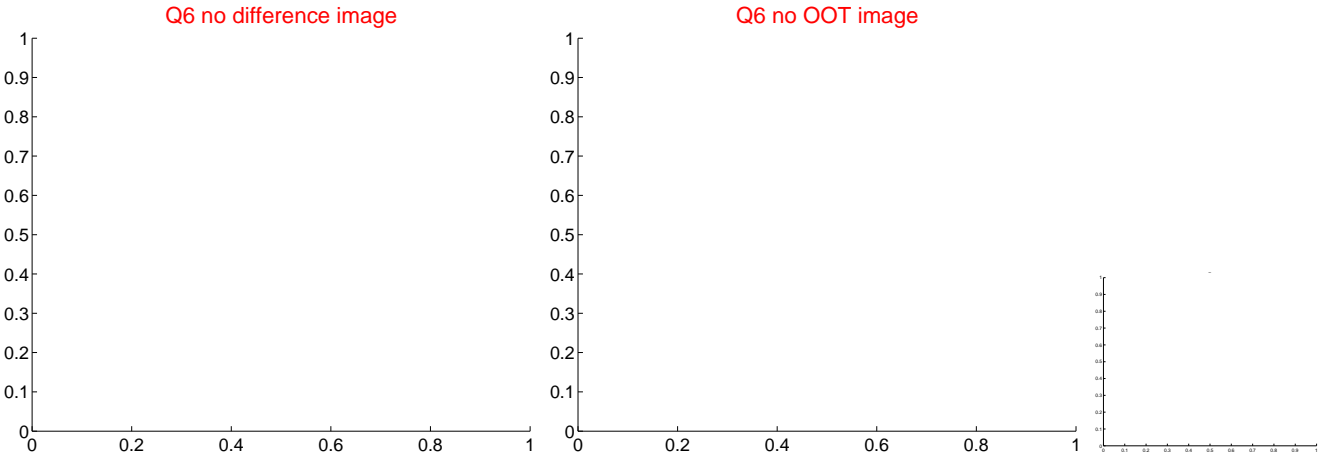
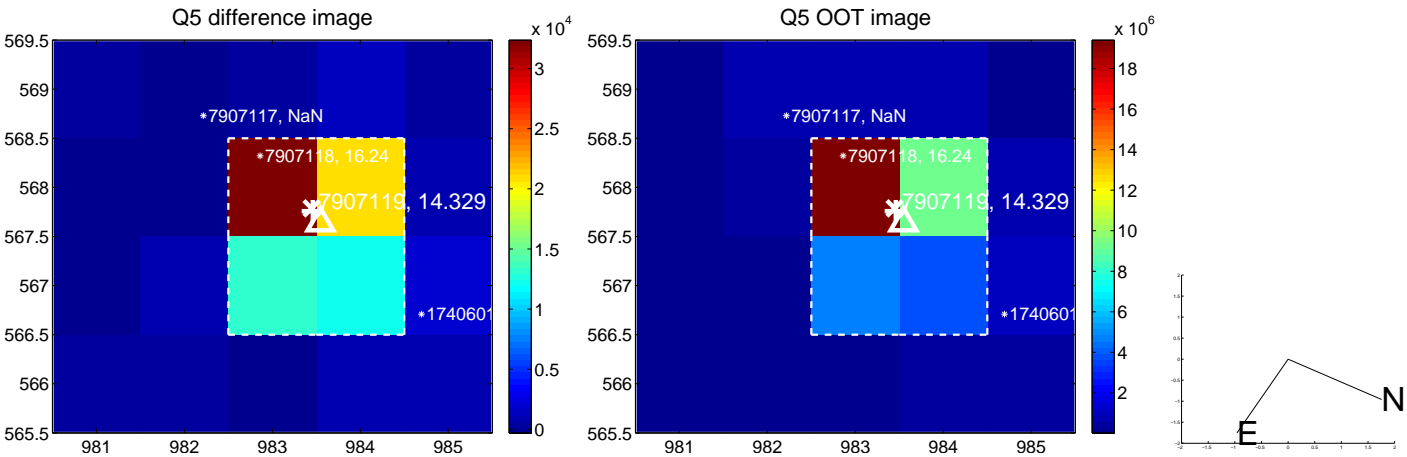


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . 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 ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

Q9 no difference image



Q9 no OOT image



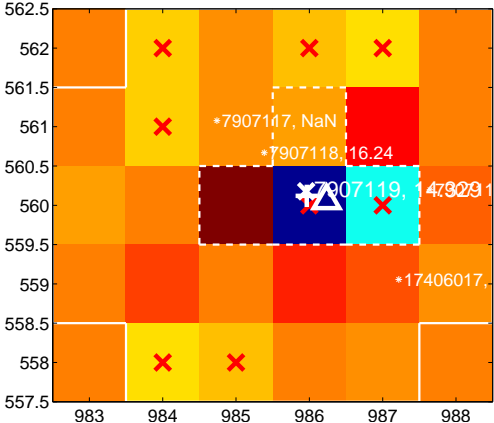
Q10 no difference image



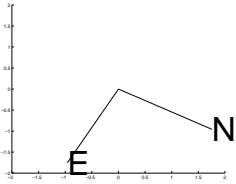
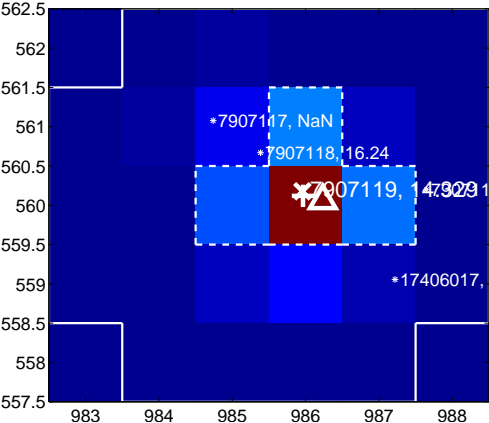
Q10 no OOT image



Q11 difference image. Poor Quality



Q11 OOT image



Q12 no difference image



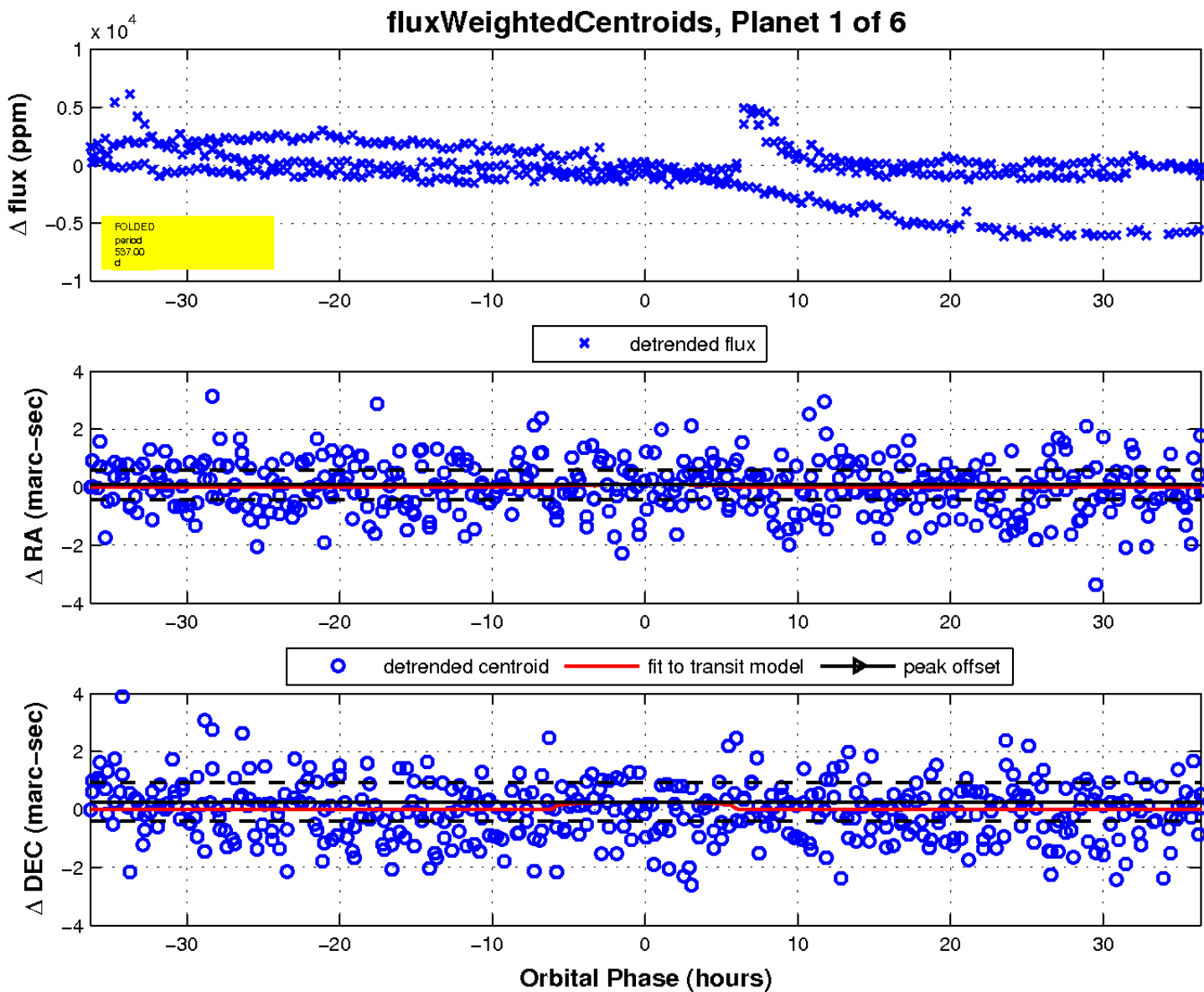
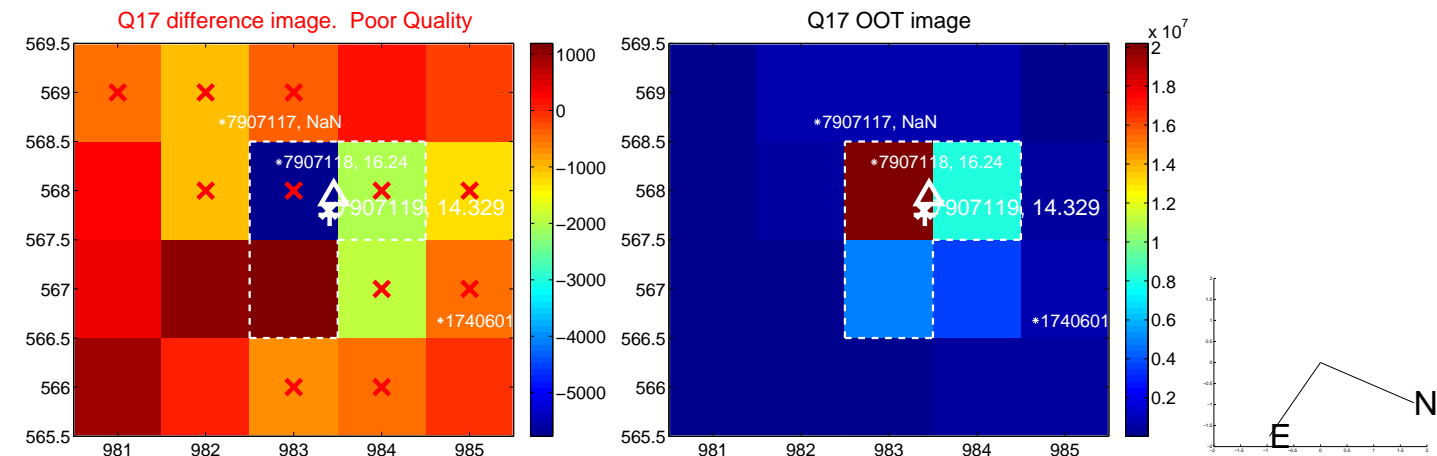
Q12 no OOT image



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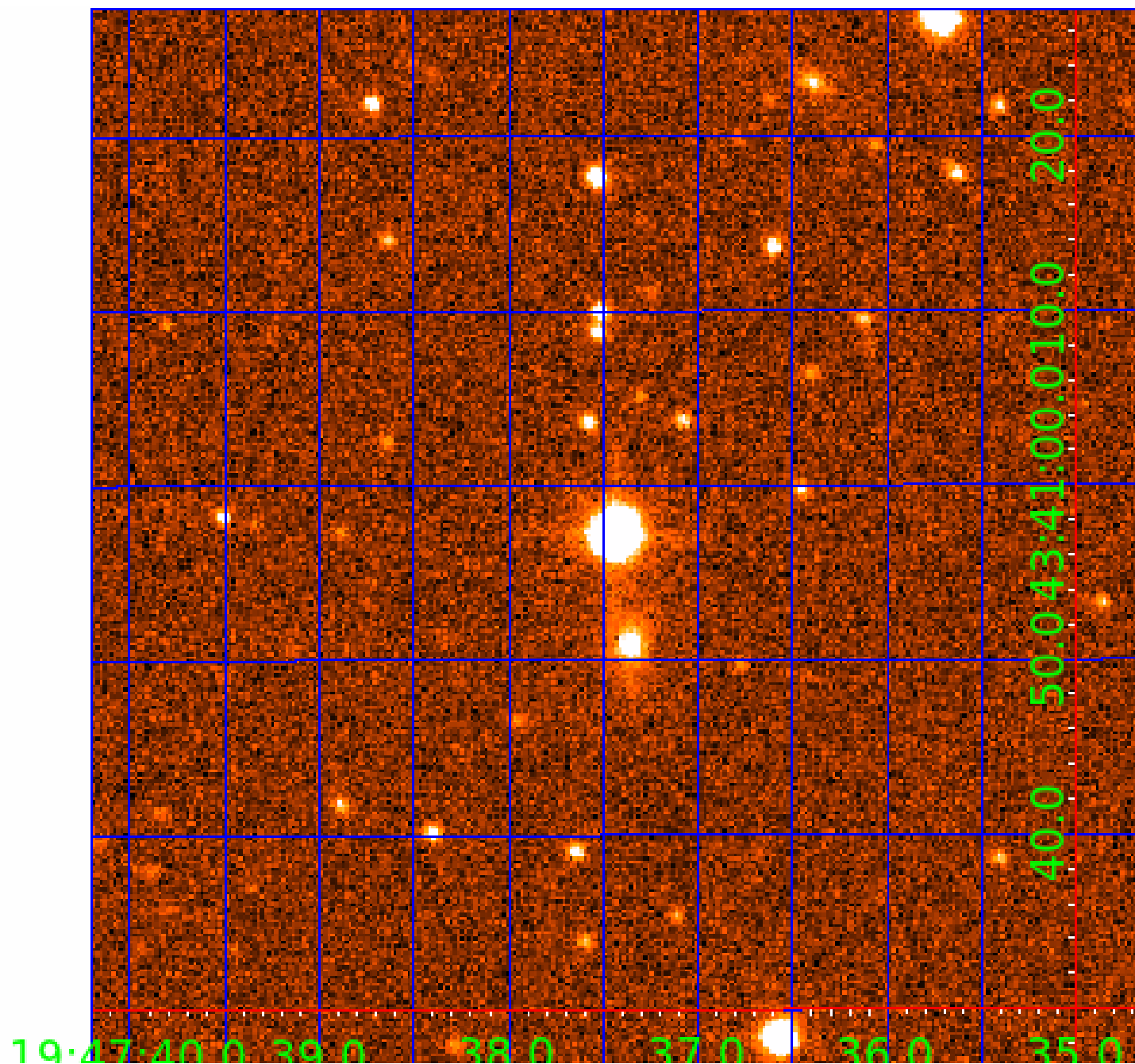


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007907119

Q1-17 DR25 TCE Parameters

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007907119-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—SAME_NTL_PERIOD—CENT_FEW_DIFFS
007907119-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—CENT_FEW_DIFFS
007907119-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007907119-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

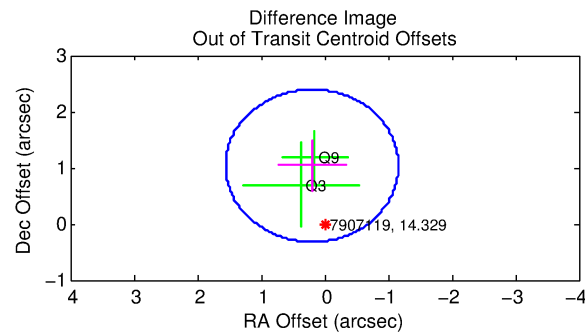
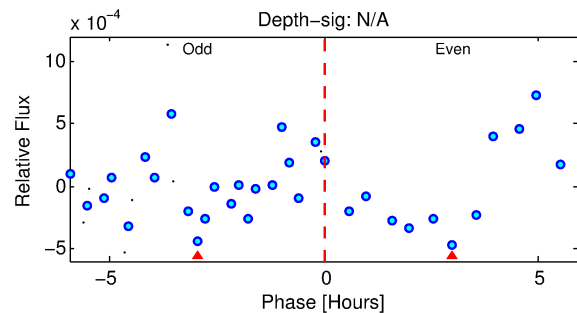
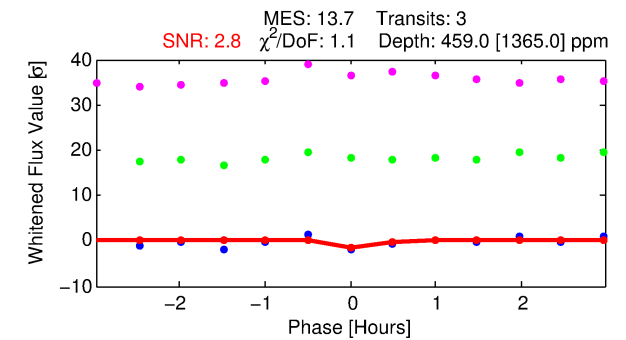
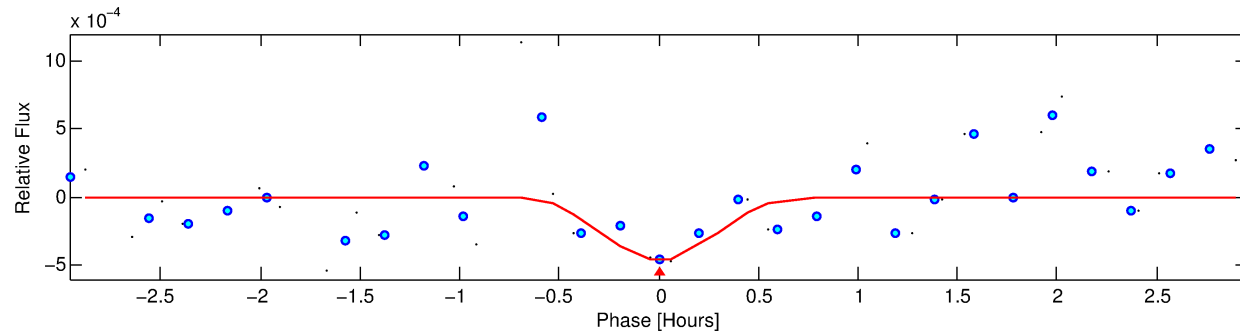
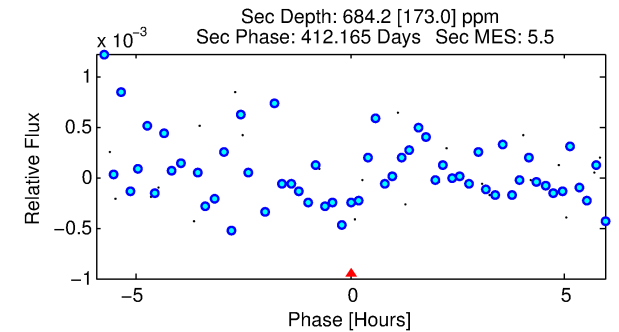
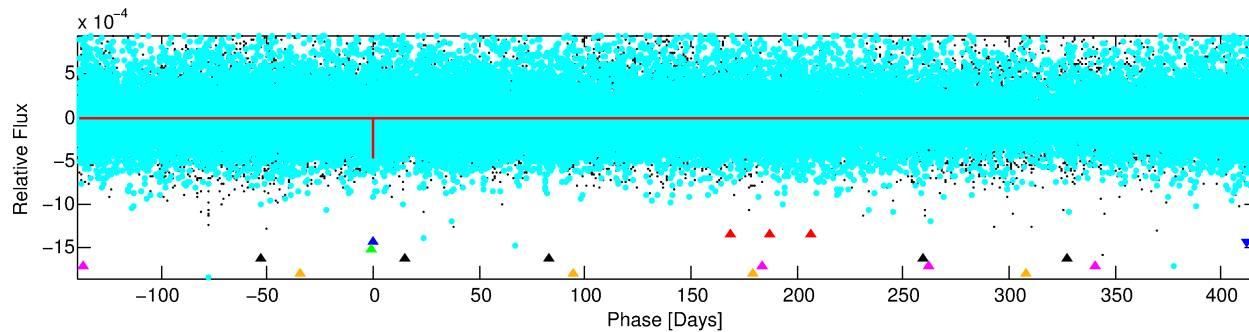
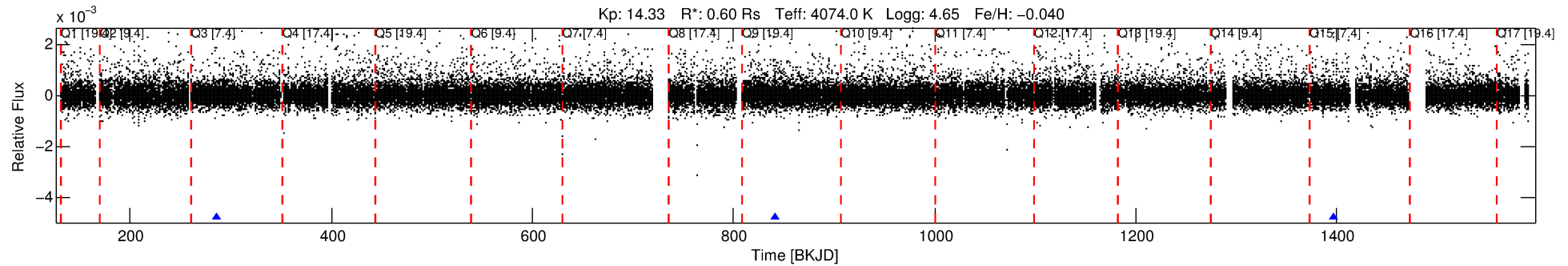
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007907119-02

No Significant Match Found

DV One-Page Summary

KIC: 7907119 Candidate: 2 of 6 Period: 555.869 d



DV Fit Results:

Period = 555.86865 [0.00646] d
Epoch = 285.7068 [0.0104] BKJD
Rp/R* = 0.0380 [2.5788]
a/R* = 1328.73 [26415.93]
b = 0.99 [4.27]
Seff = 0.07 [0.01]
Teq = 132 [6] K
Rp = 2.51 [170.25] Re
a = 1.1148 [0.1001] AU
Ag = 74230.56 [10069109.63] [0.01]
Teffp = 3379 [114588] K [0.03]

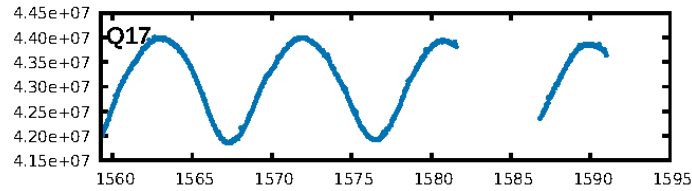
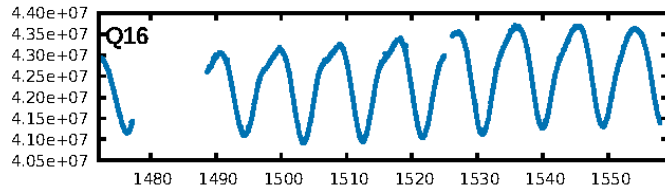
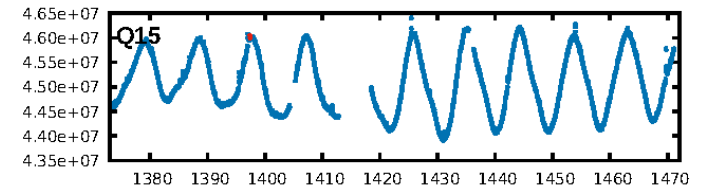
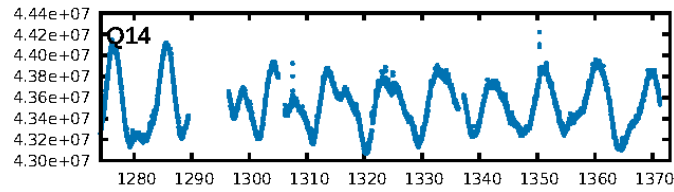
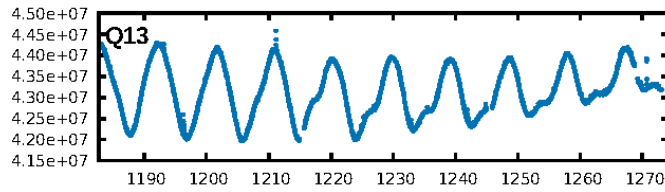
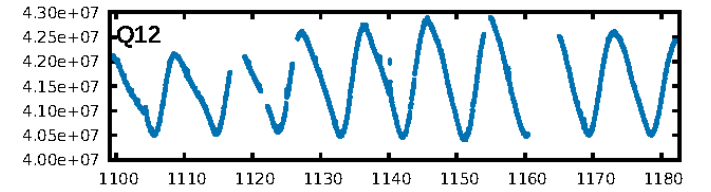
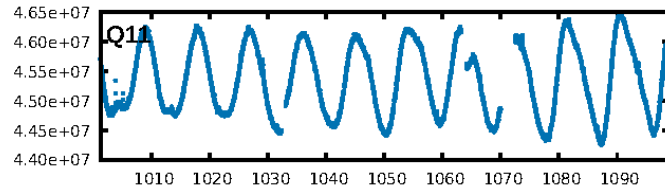
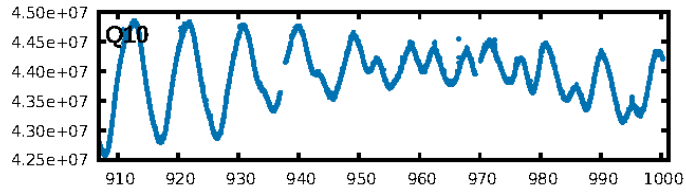
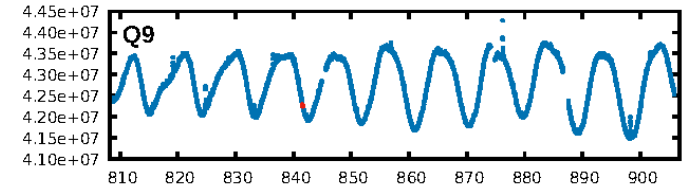
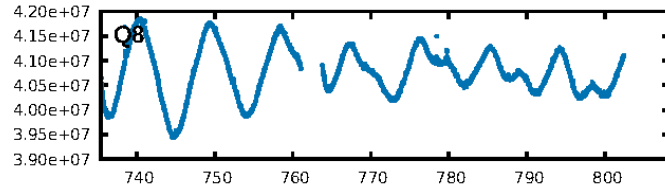
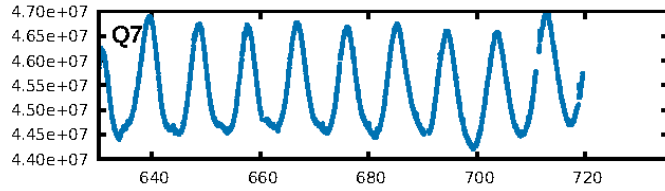
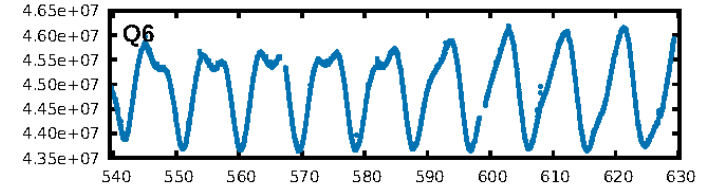
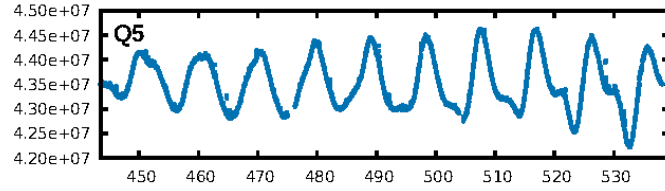
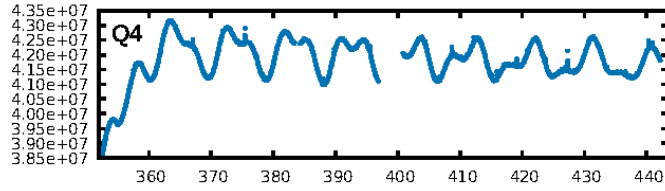
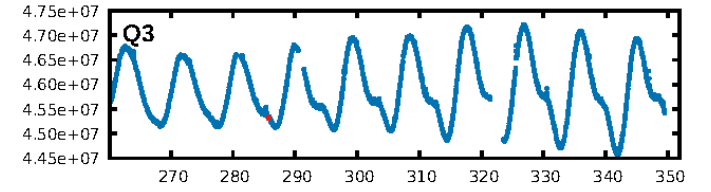
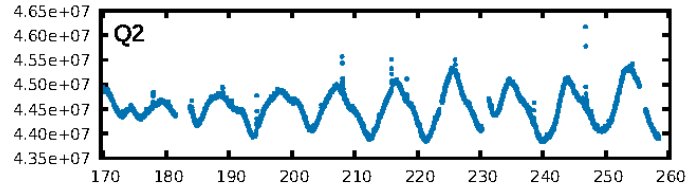
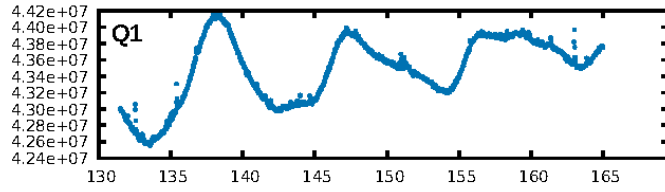
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [37.04]
LongPeriod-sig: 15.1% [0.19]
ModelChiSquare2-sig: 98.8%
ModelChiSquareGof-sig: 99.0%
Bootstrap-pfa: 2.43e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.7853
Centroid-sig: 25.4%
Centroid-so: 4.557 arcsec [1.24]
OotOffset-rm: 1.053 arcsec [2.33]
OotOffset-st: 0/1/0/1 [2]
KicOffset-rm: 1.189 arcsec [2.61]
KicOffset-st: 0/1/0/1 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

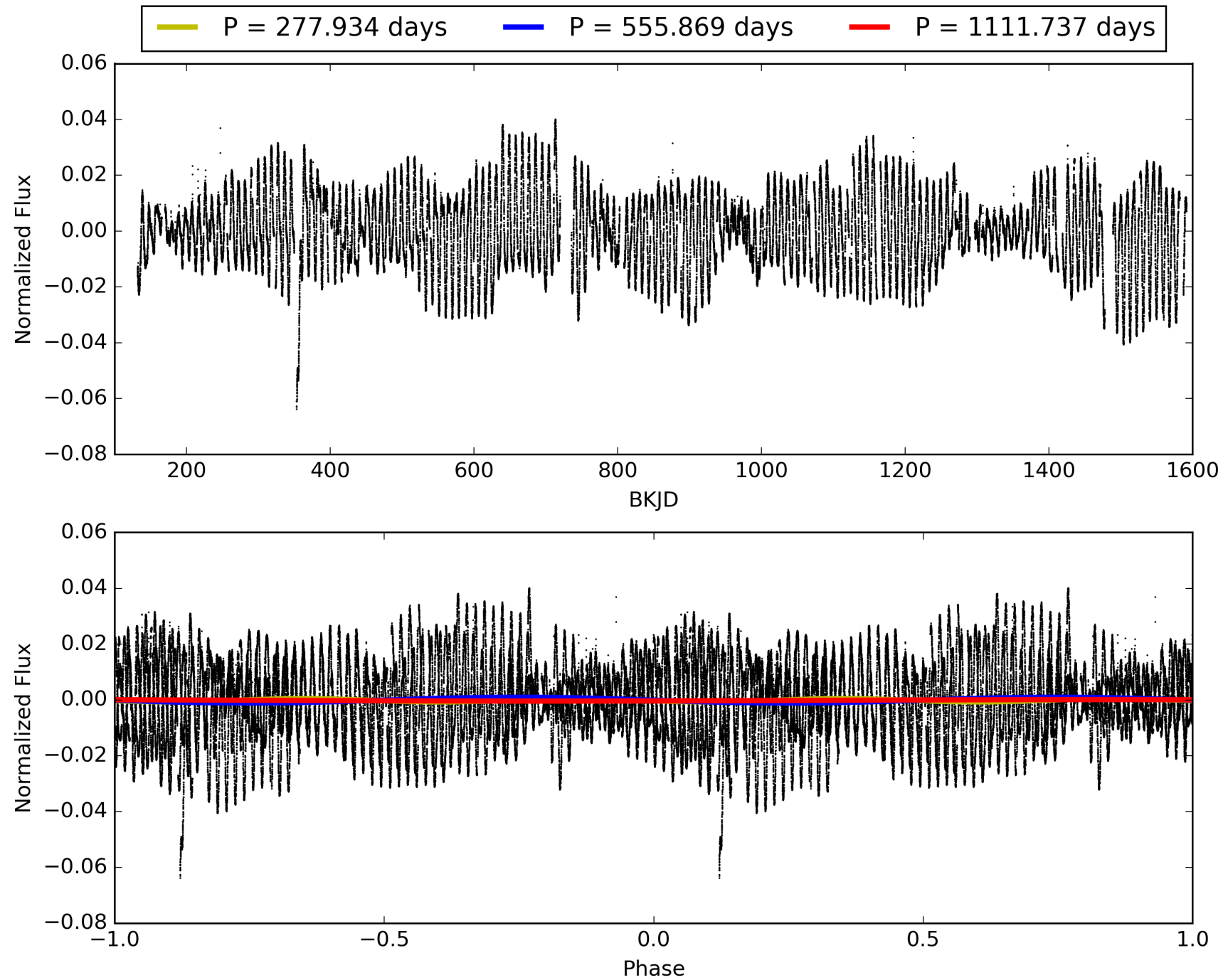
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 05:18:33 Z

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

TCE 007907119-02, PDC Light Curves

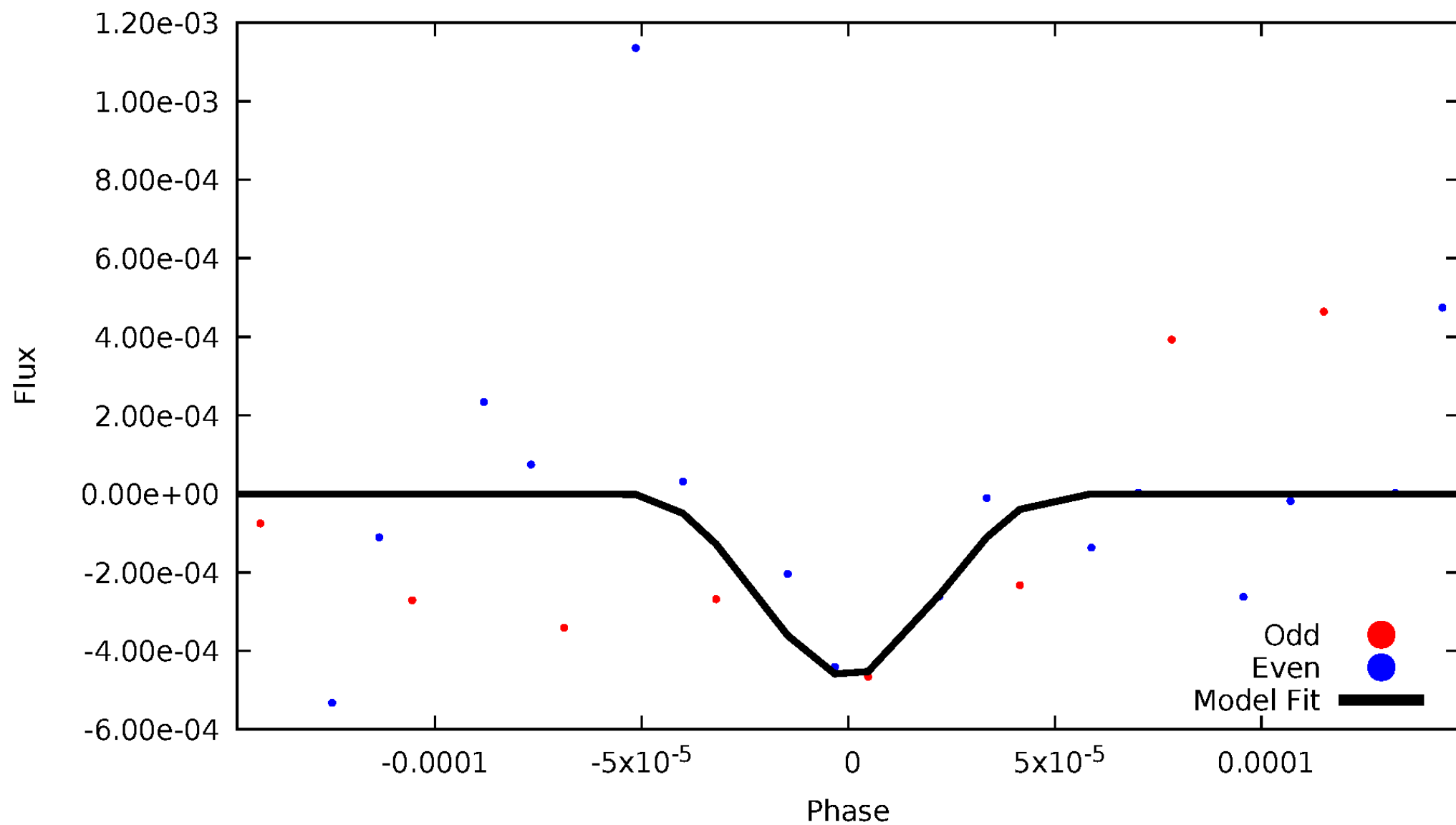


TCE 007907119-02



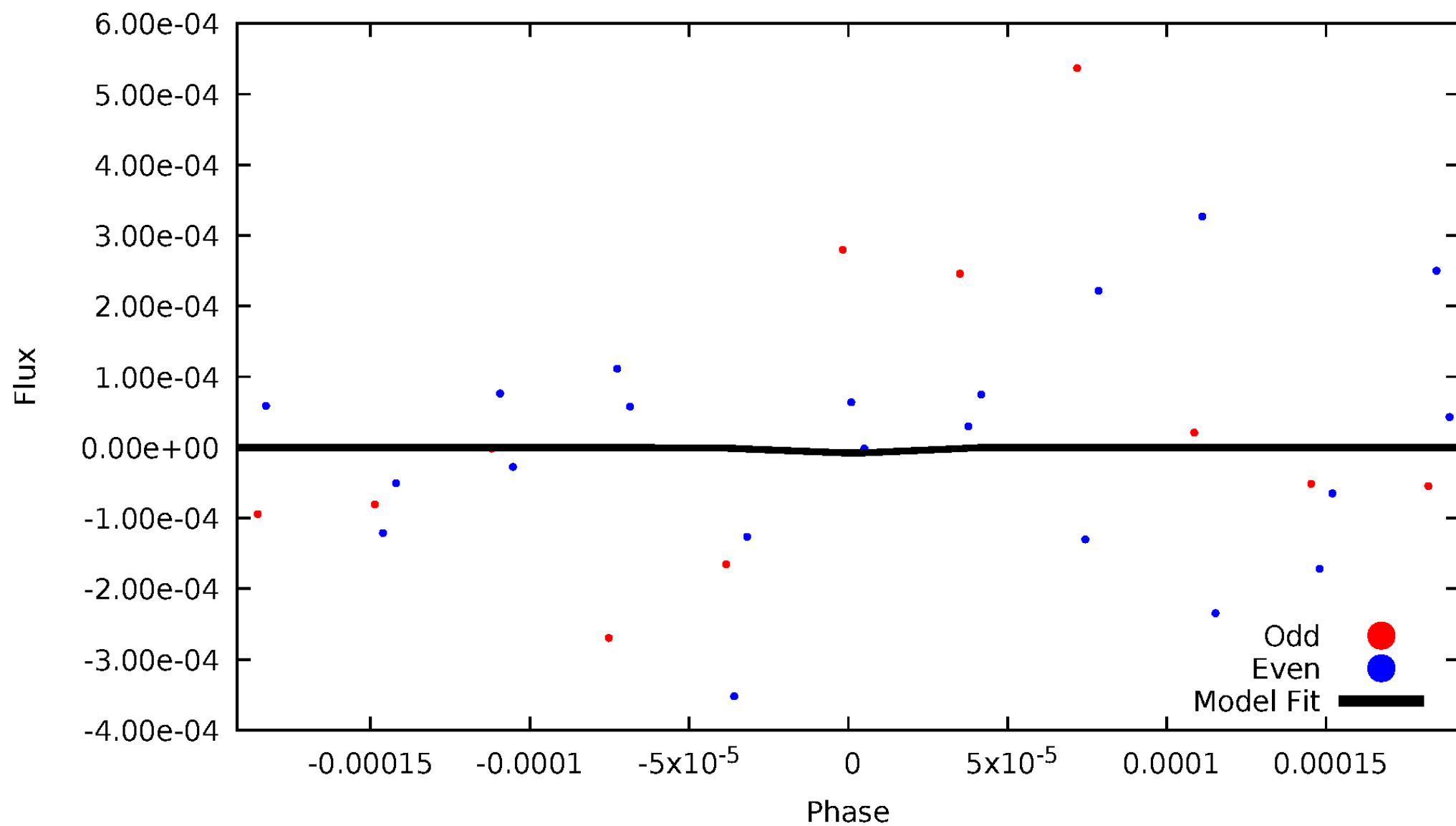
DV Odd/Even

TCE 007907119-02



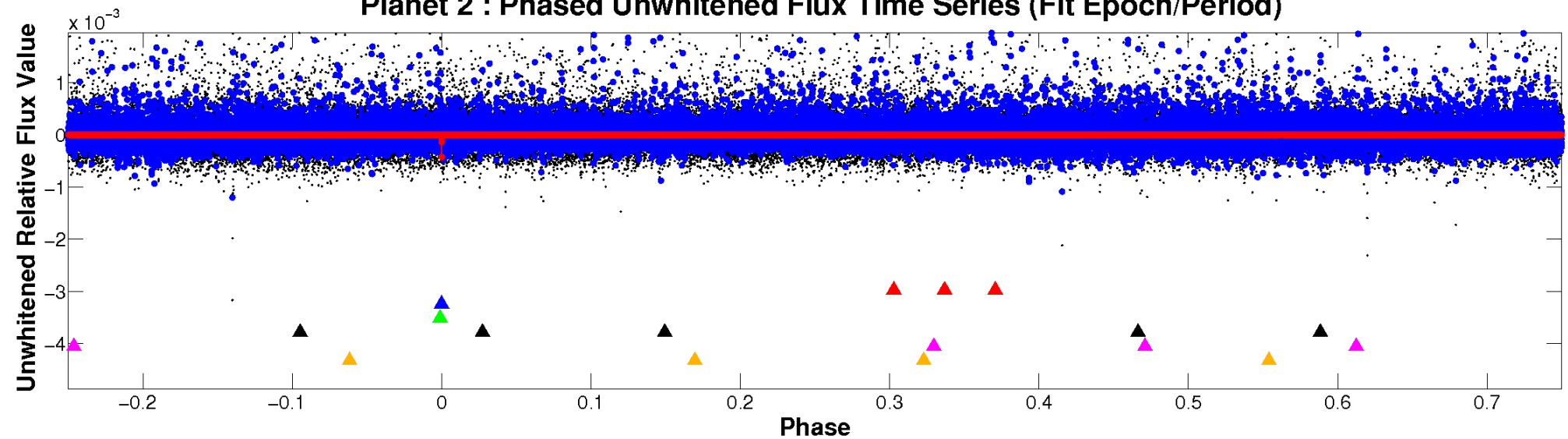
ALT Odd/Even

TCE 007907119-02

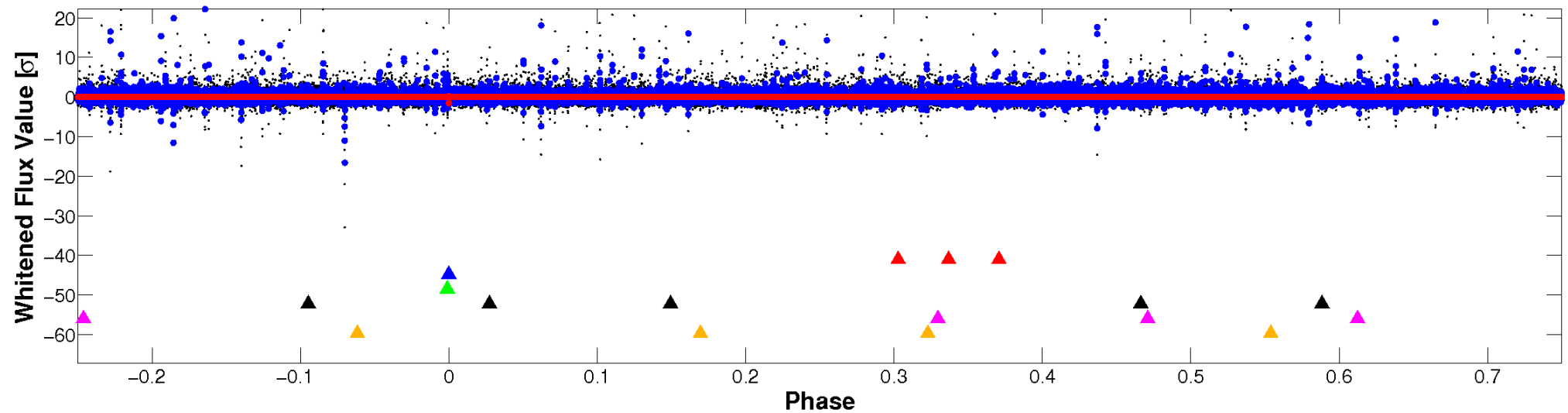


Non-Whitened Vs. Whitened Light Curve

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

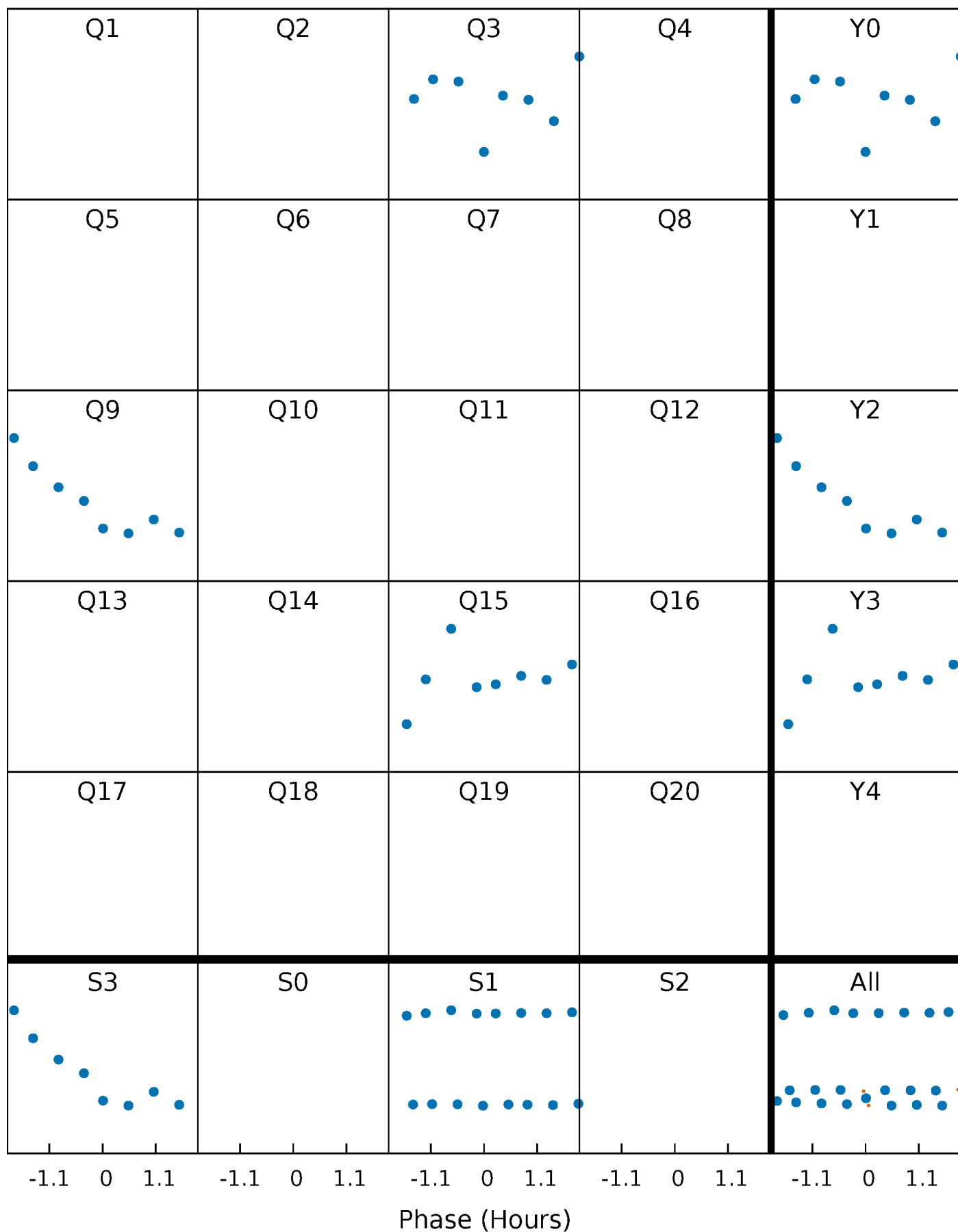


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



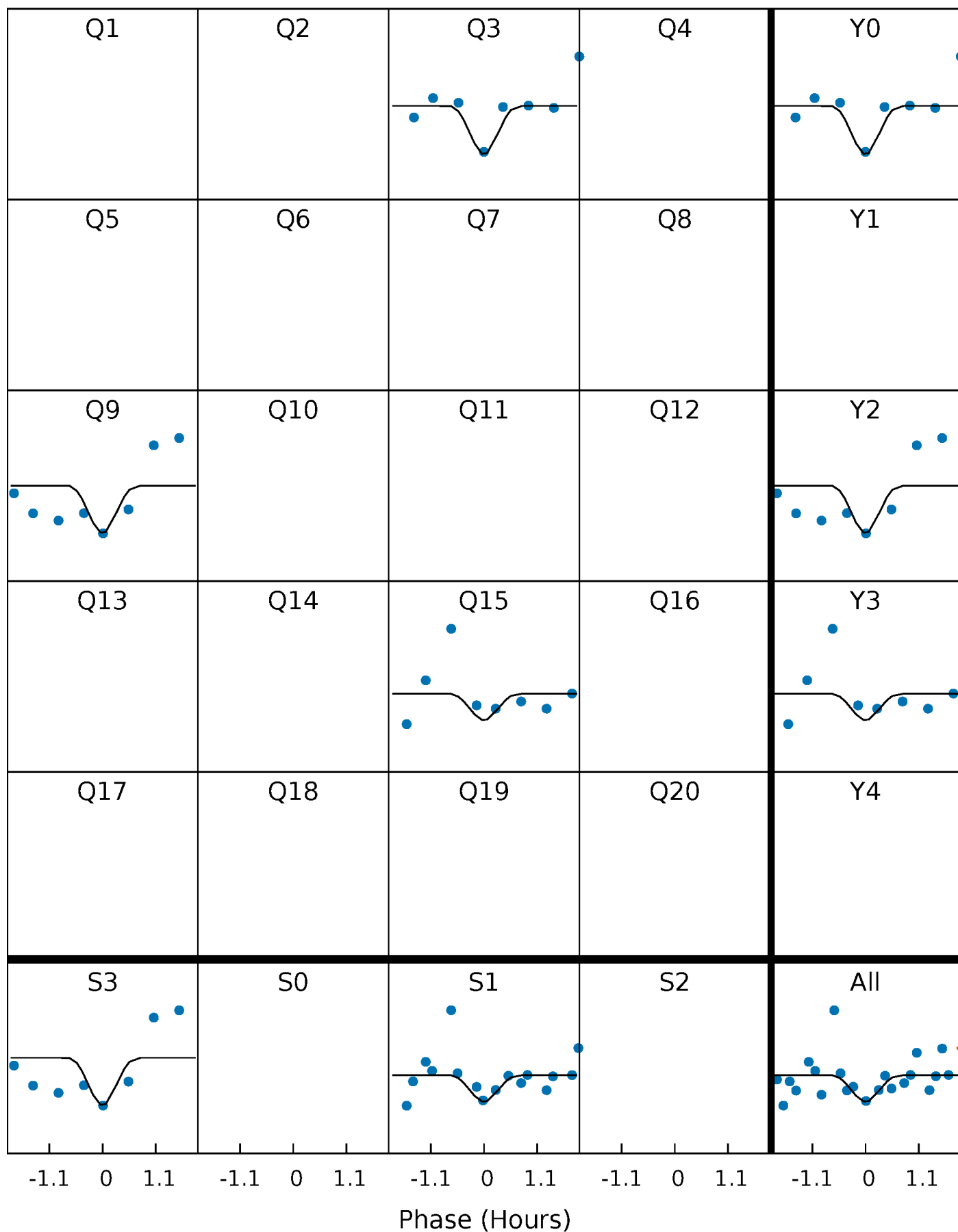
PDC Quarter-Phased Transit Curves

TCE 007907119-02 P=555.868651 Days $T_0=285.706831$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 007907119-02 P=555.868651 Days $T_0=285.706831$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

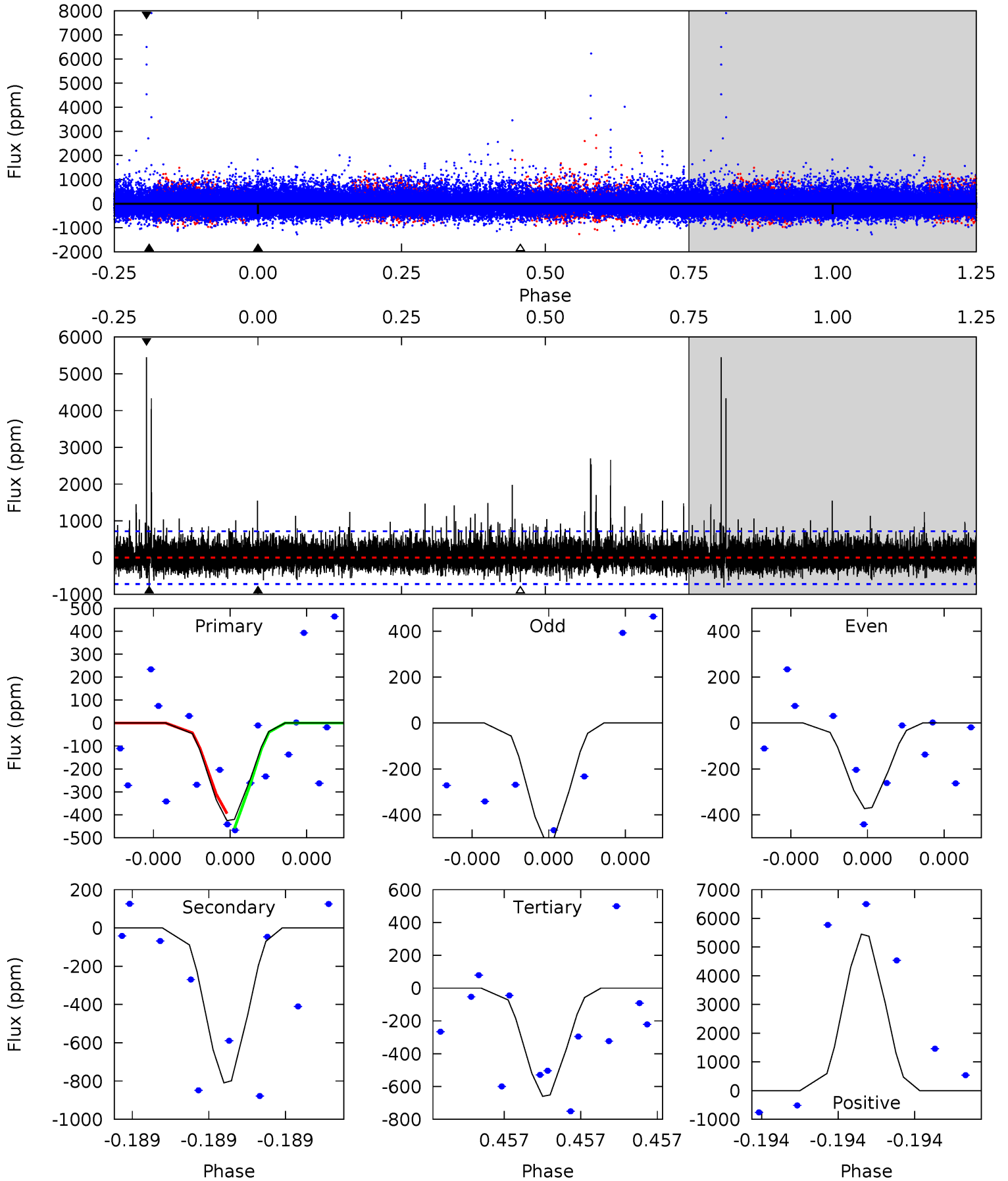
TCE 007907119-02 P=555.895000 Days $T_0=285.724938$ (BKJD)



DV Model-Shift Uniqueness Test

007907119-02, P = 555.868651 Days, E = 285.706831 Days

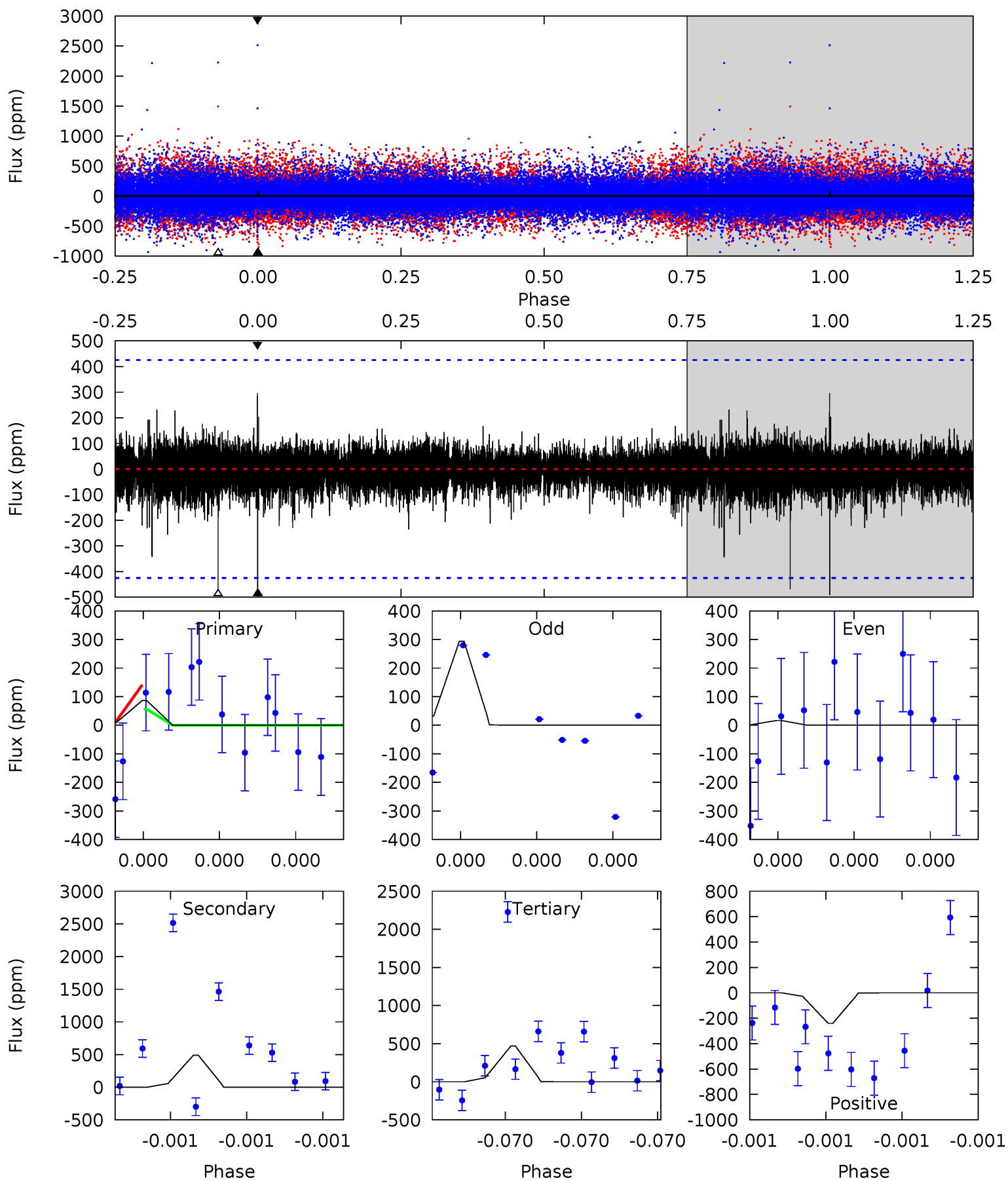
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.48	6.62	5.39	44.5	5.88	3.94	1.63	-1.92	-41.1	1.22	-37.9	0.45	1.02	0.87	0.27



Alt Model-Shift Uniqueness Test

007907119-02, P = 555.895000 Days, E = 285.724938 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.18	6.74	6.43	3.29	5.83	3.87	0.56	-5.25	-2.11	0.31	3.45	1.63	84.0	0.38	0.56



Stellar Parameters For KIC 007907119

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4074^{+127}_{-155}	$4.651^{+0.060}_{-0.024}$	$-0.040^{+0.300}_{-0.300}$	$0.605^{+0.043}_{-0.070}$	$0.598^{+0.057}_{-0.063}$	$3.804^{+1.124}_{-0.400}$
	+3%/-4%	+1%/-1%	+750%/-750%	+7%/-12%	+10%/-11%	+30%/-11%
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 007907119-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-810 ± 122	$111.20^{+116.84}_{-78.48}$	183^{+7}_{-7}	1539^{+371}_{-175}	45^{+484}_{-35}
Alt.	-491 ± 73	$121.66^{+132.14}_{-82.97}$	183^{+7}_{-7}	1459^{+324}_{-160}	23^{+200}_{-18}

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 $A_{obs} \gg 1.0$

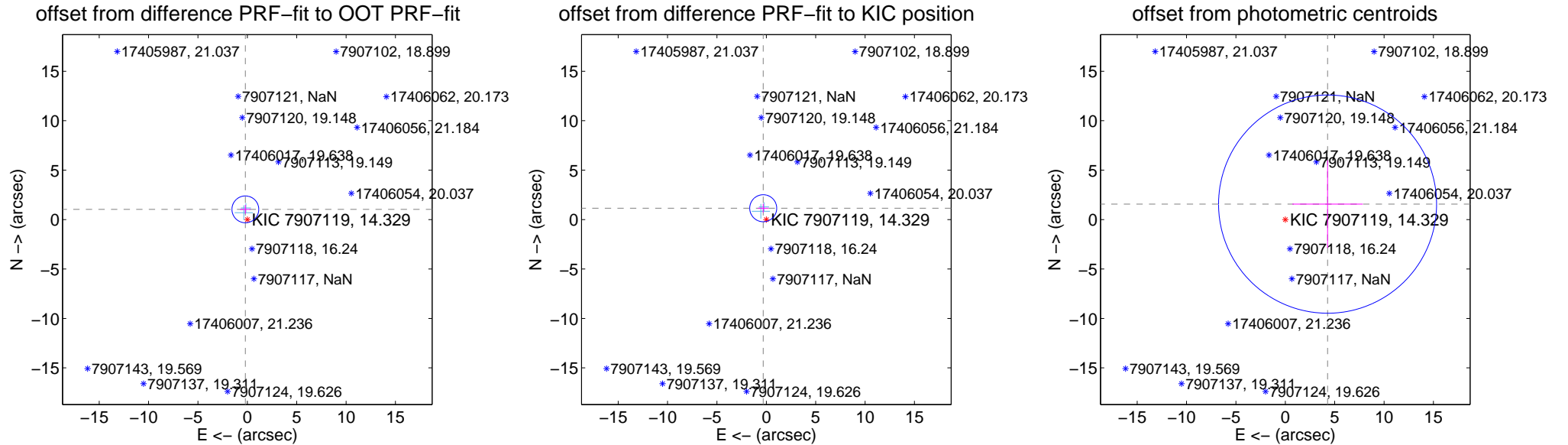
DV Centroid Data

Supplemental centroid analysis for 007907119-02. Kepler magnitude: 14.33. Transit SNR 2.81

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.053 ± 0.453	2.33	0.199 ± 0.530	1.034 ± 0.449
PRF-fit source offset from KIC position	1.189 ± 0.455	2.61	0.313 ± 0.530	1.147 ± 0.449
photometric centroid source offset	4.56 ± 3.68	1.24	-4.28 ± 3.57	1.56 ± 4.44



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

Q1 no difference image



Q1 no OOT image



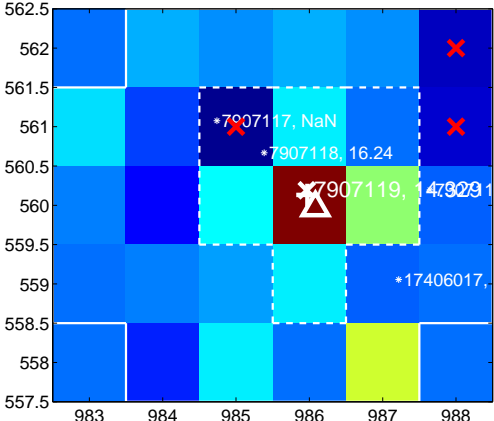
Q2 no difference image



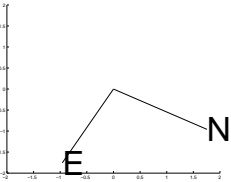
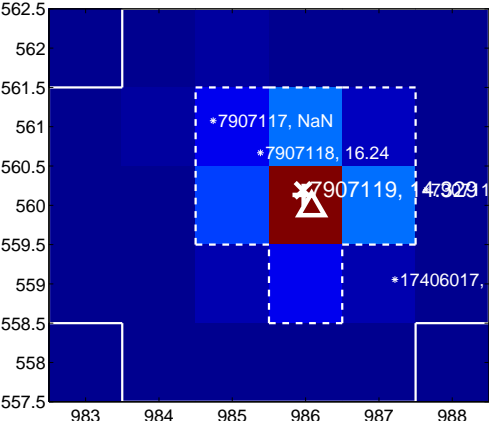
Q2 no OOT image



Q3 difference image



Q3 OOT image



Q4 no difference image



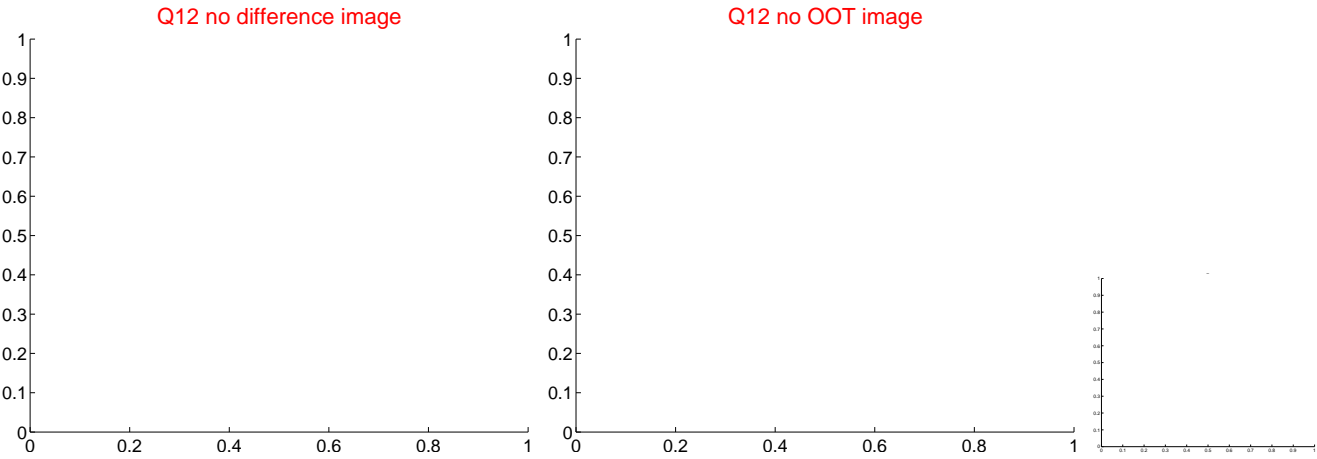
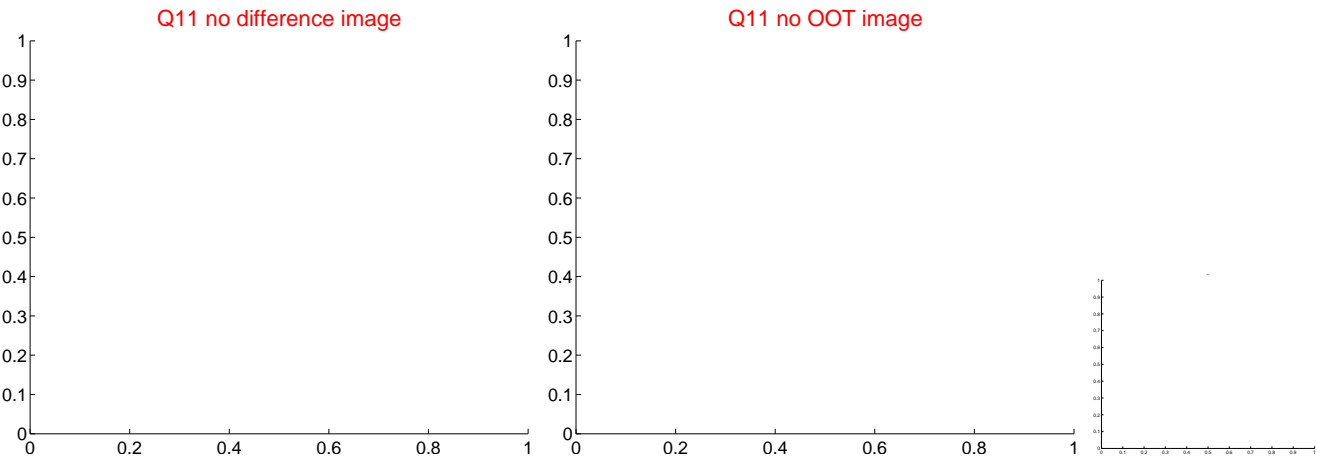
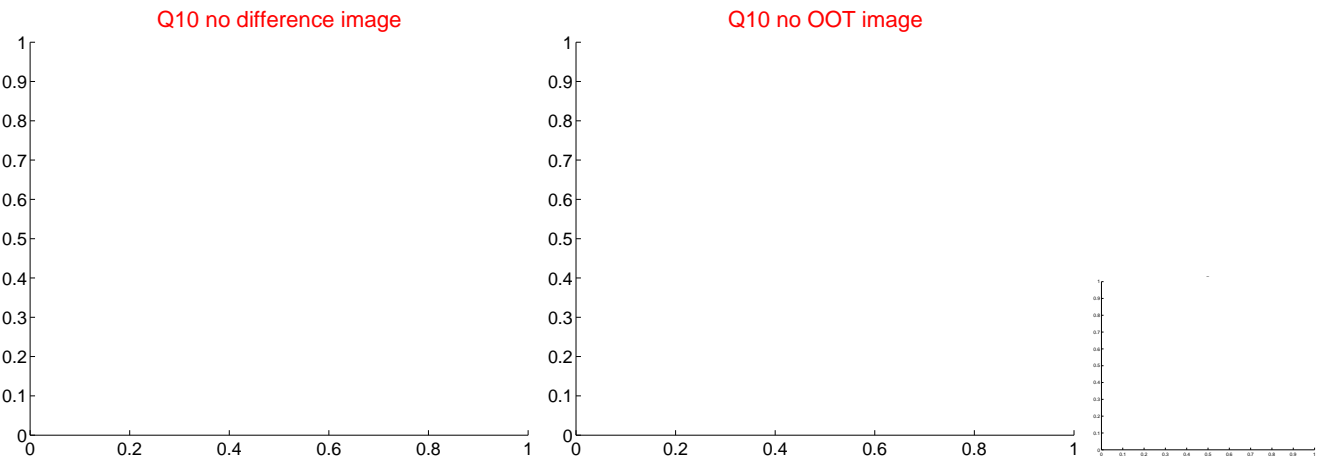
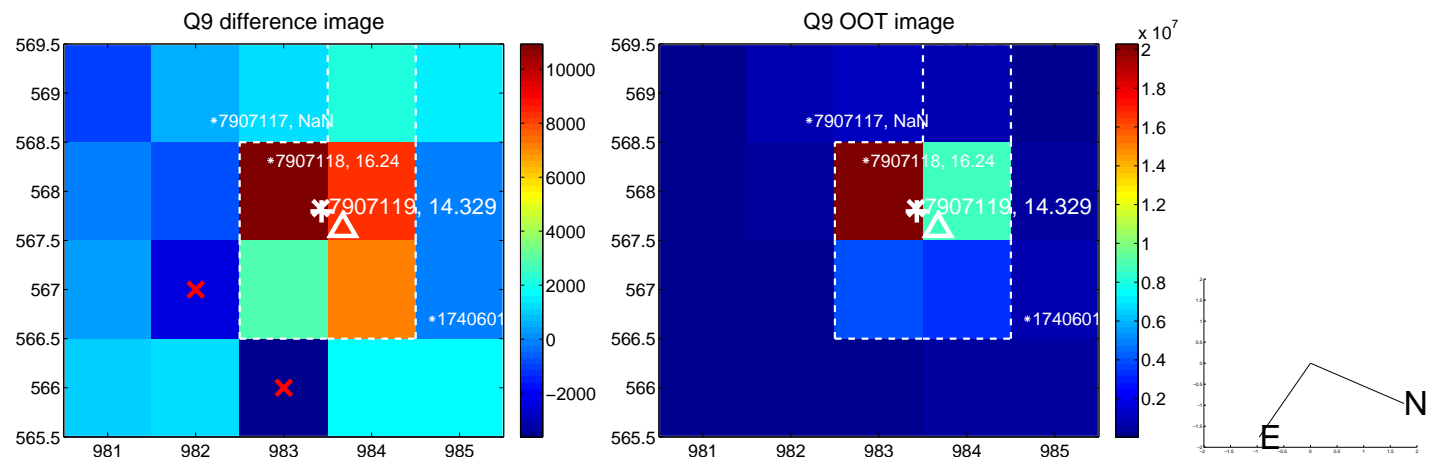
Q4 no OOT image



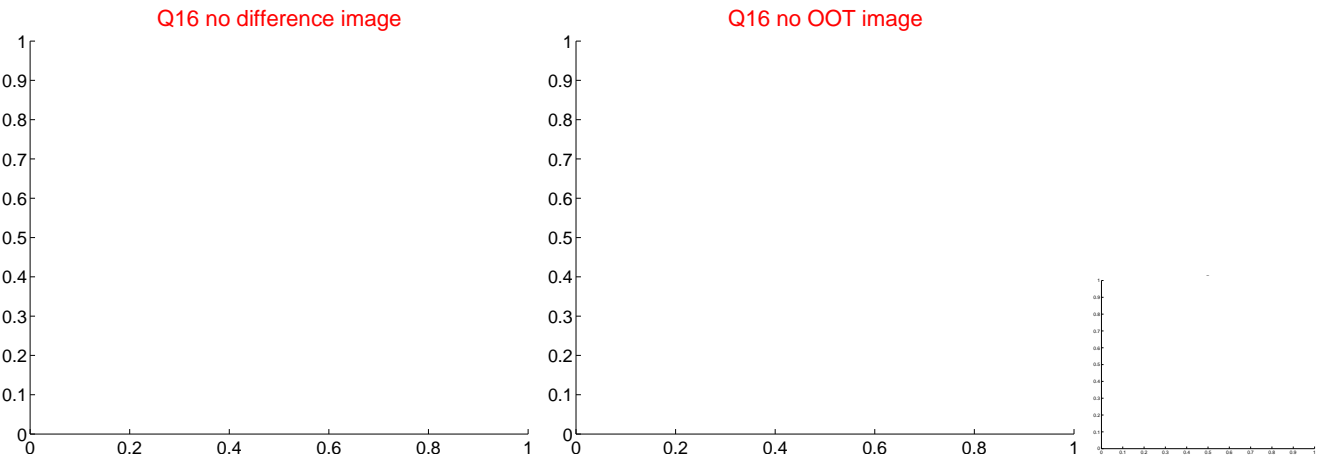
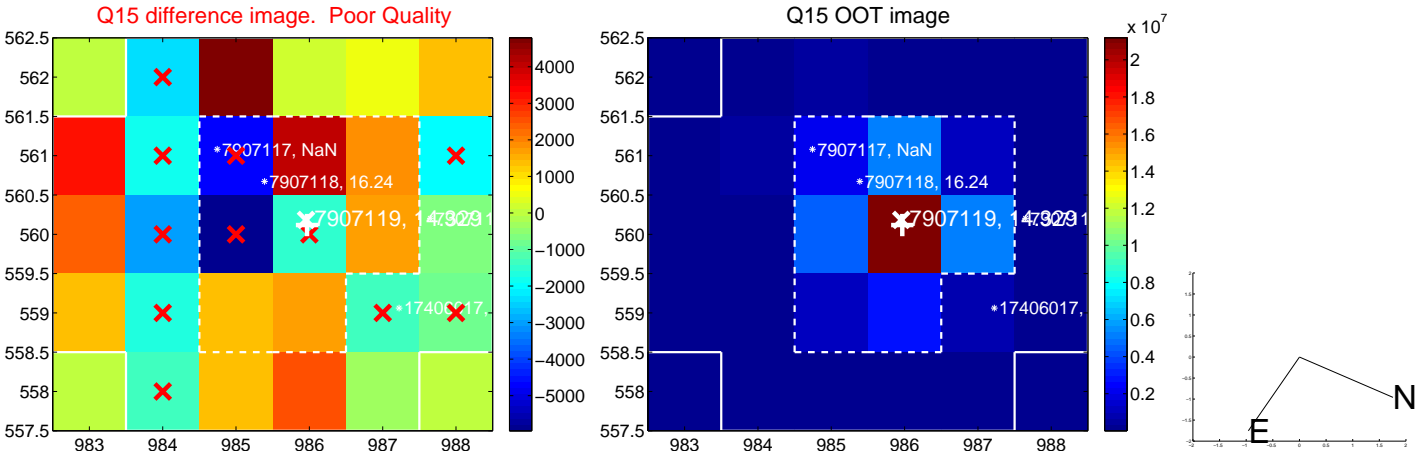
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



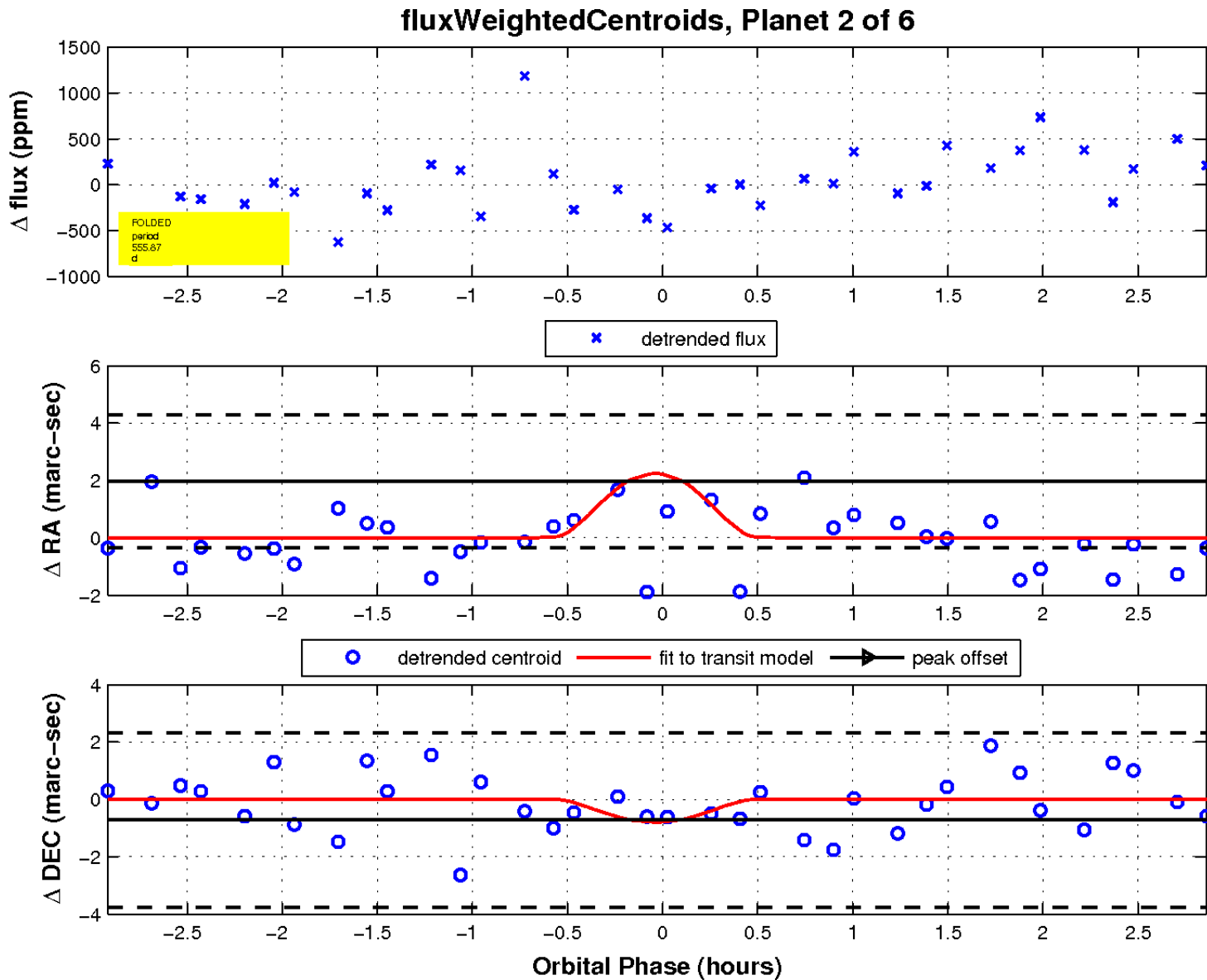
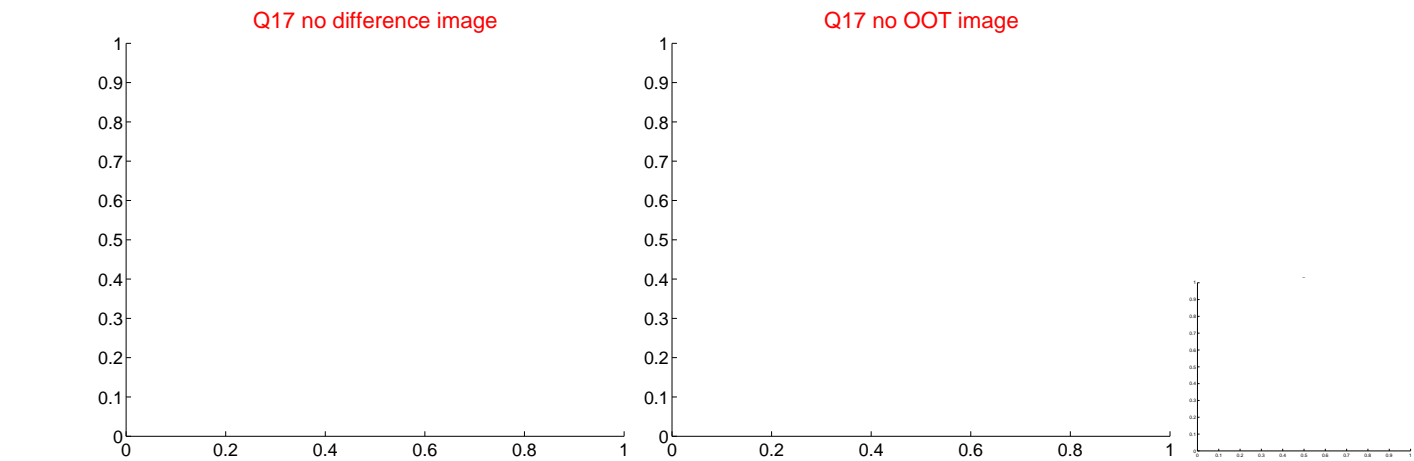
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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

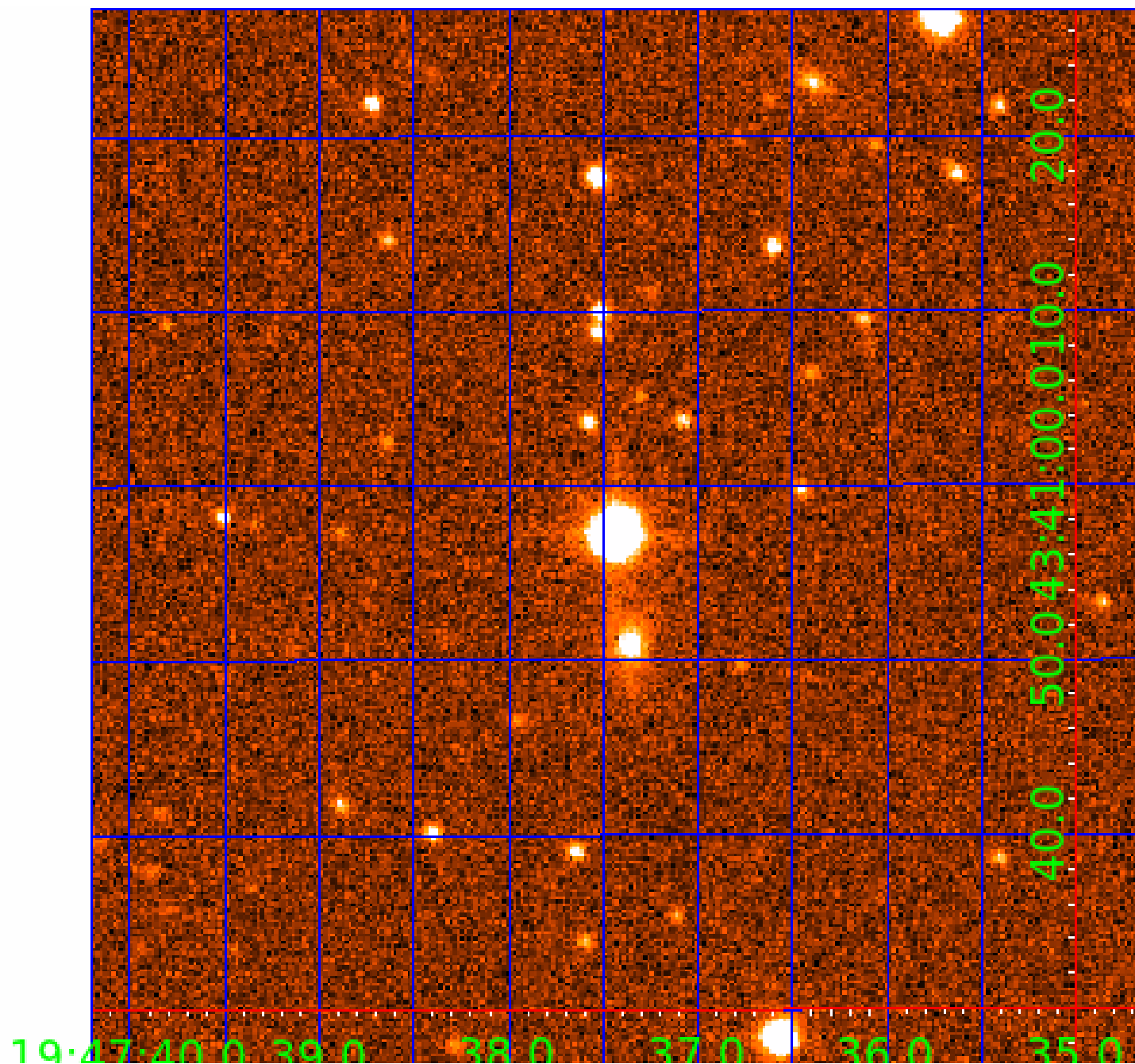


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007907119

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})
007907119-01	OBS	No	536.997023	491.790391	876.1	12.189	15.6	5.6	0.60	4074	1.79	0.08
007907119-02	OBS	No	555.868651	285.706831	459.0	0.986	13.7	2.8	0.60	4074	2.51	0.07
007907119-03	OBS	No	555.899372	285.123731	1039.5	3.736	14.5	7.3	0.60	4074	1.98	0.07
007907119-04	OBS	No	311.855100	233.088025	835.2	3.160	12.4	6.3	0.60	4074	1.95	0.16
007907119-05	OBS	No	477.265858	148.860211	1.1	25.140	10.3	0.0	0.60	4074	0.07	0.09
007907119-06	OBS	No	342.173315	465.173002	908.8	3.510	11.0	7.5	0.60	4074	1.84	0.14

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007907119-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007907119-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007907119-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—SAME_NTL_PERIOD—CENT_FEW_DIFFS
007907119-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—CENT_FEW_DIFFS
007907119-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007907119-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

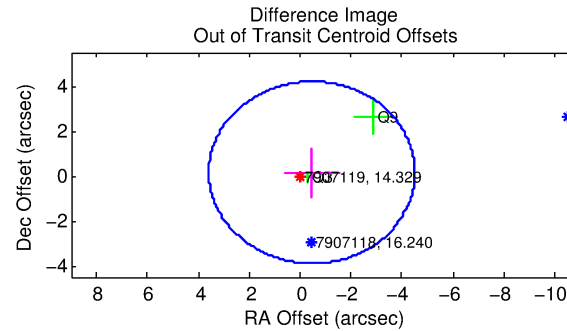
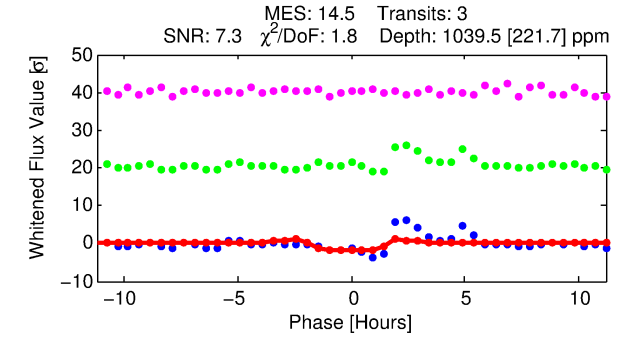
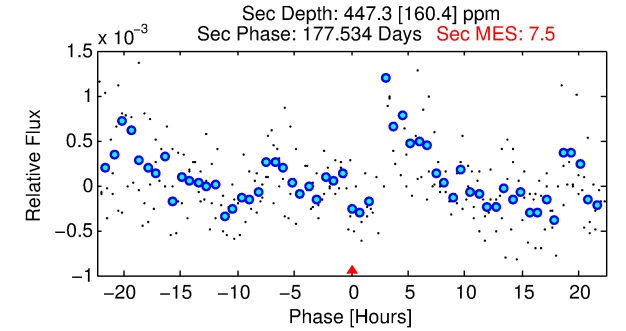
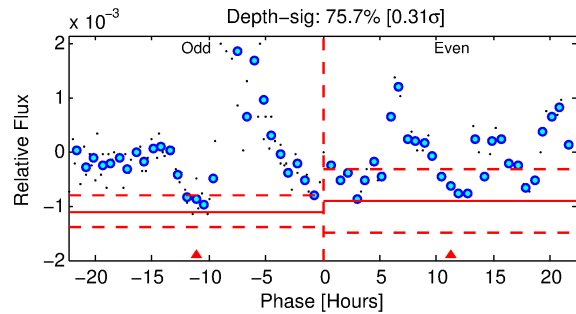
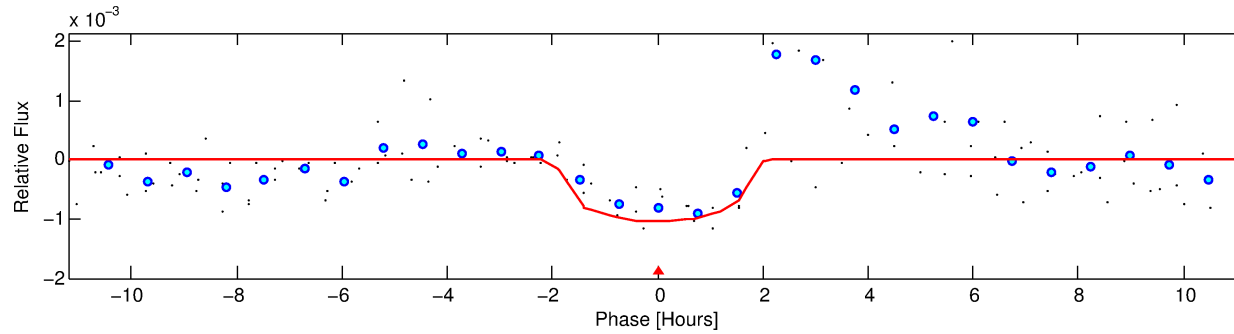
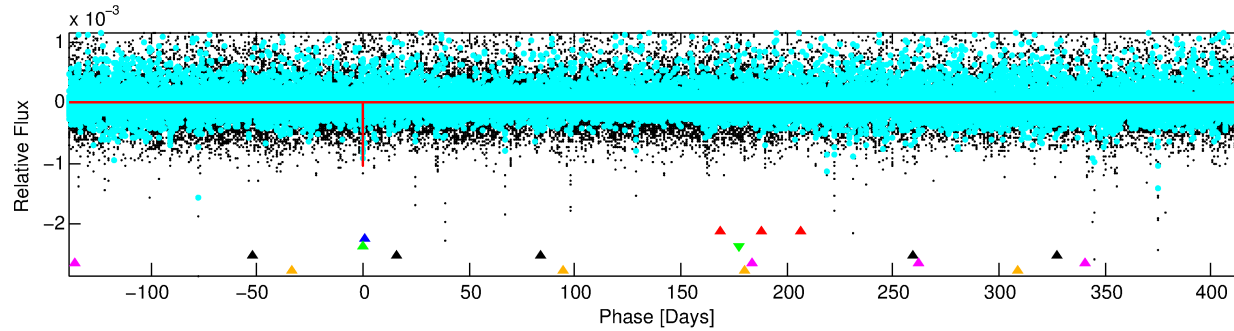
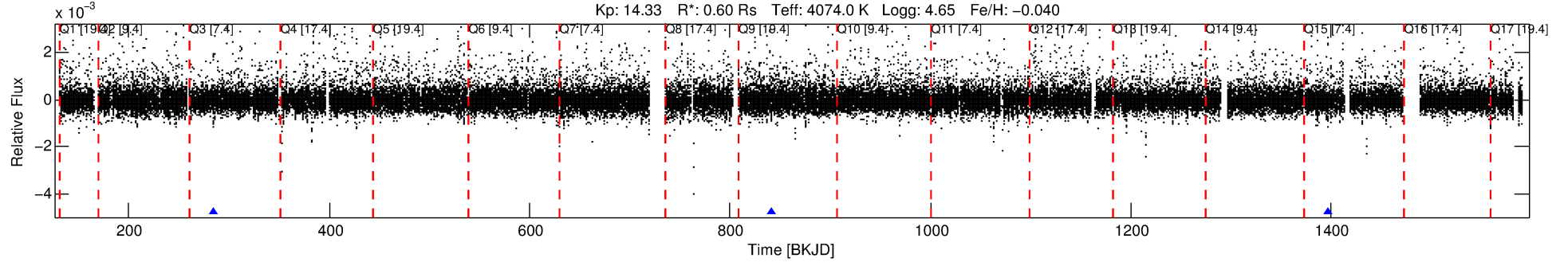
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007907119-03

No Significant Match Found

DV One-Page Summary

KIC: 7907119 Candidate: 3 of 6 Period: 555.899 d



DV Fit Results:

Period = 555.89937 [0.00605] d
Epoch = 285.1237 [0.0071] BKJD
Rp/R* = 0.0300 [0.0455]
a/R* = 1004.83 [5291.72]
b = 0.53 [7.29]
Seff = 0.07 [0.01]
Teq = 132 [6] K
Rp = 1.98 [3.01] Re
a = 1.1148 [0.1001] AU
Ag = 77722.60 [237075.08] [0.33σ]
Teffp = 3418 [2608] K [1.26σ]

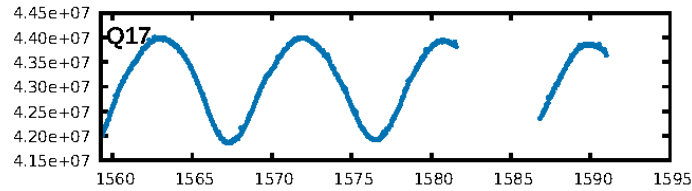
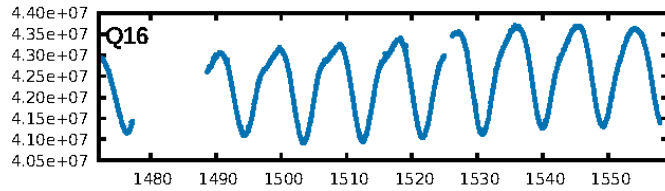
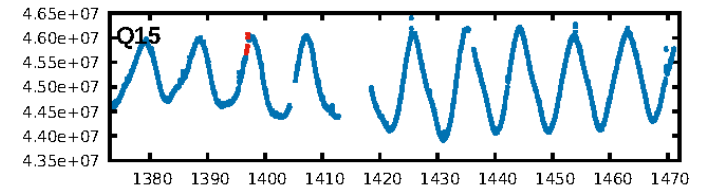
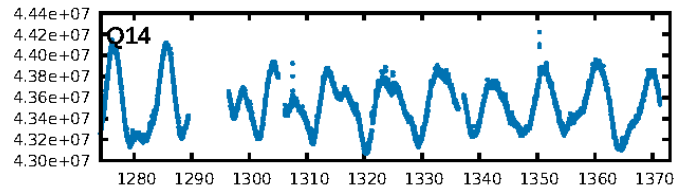
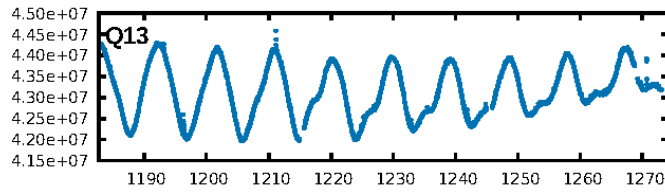
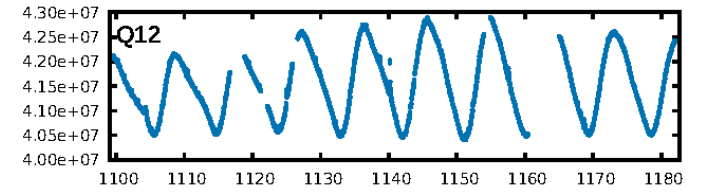
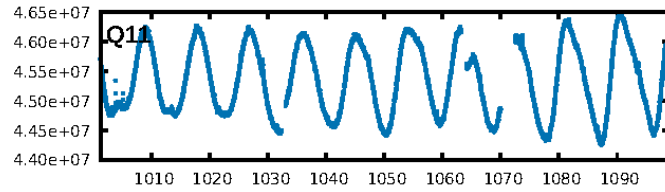
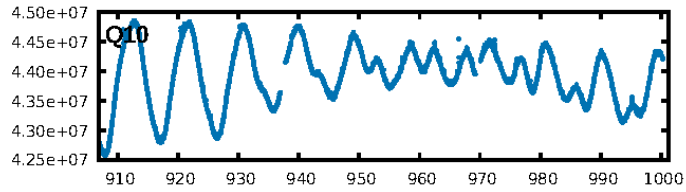
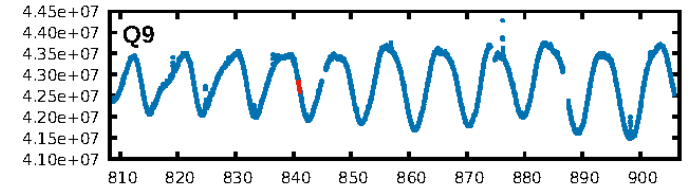
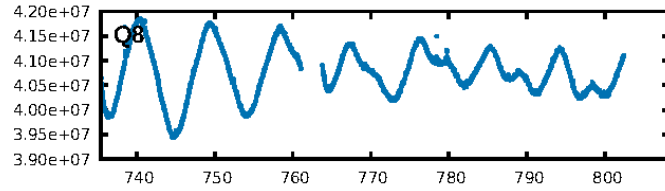
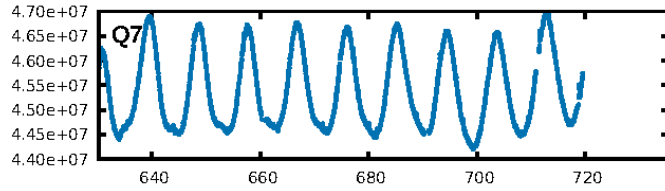
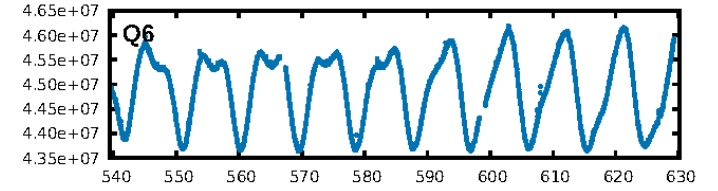
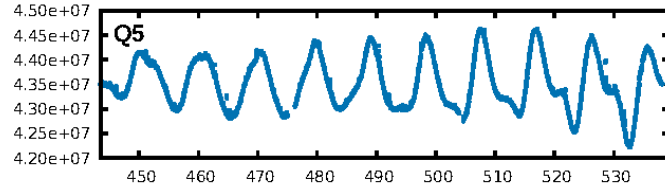
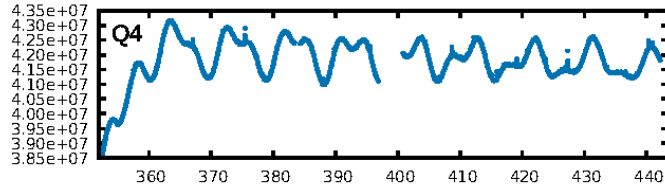
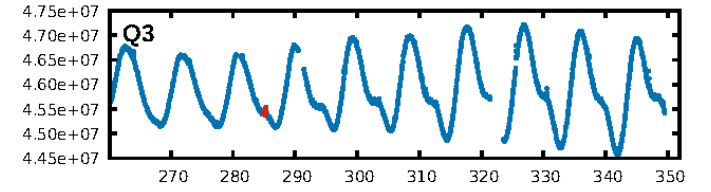
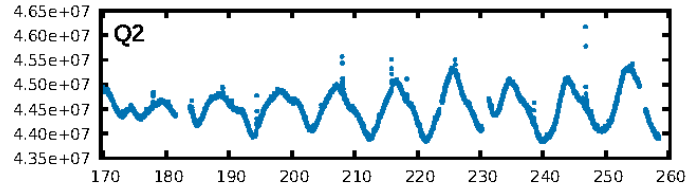
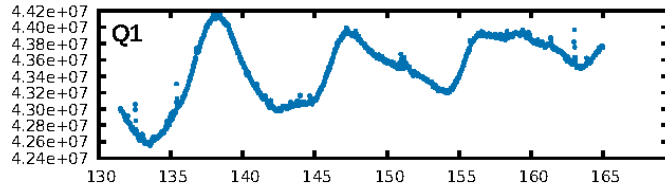
DV Diagnostic Results:

ShortPeriod-sig: 15.1% [0.19σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 41.8%
ModelChiSquareGof-sig: 63.4%
Bootstrap-pfa: 1.24e-14
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.549
Centroid-sig: 9.9%
Centroid-so: 0.968 arcsec [1.06σ]
OotOffset-rm: 0.486 arcsec [0.36σ]
KicOffset-rm: 0.399 arcsec [0.37σ]
OotOffset-st: 0/1/0/1 [2]
KicOffset-st: 0/1/0/1 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

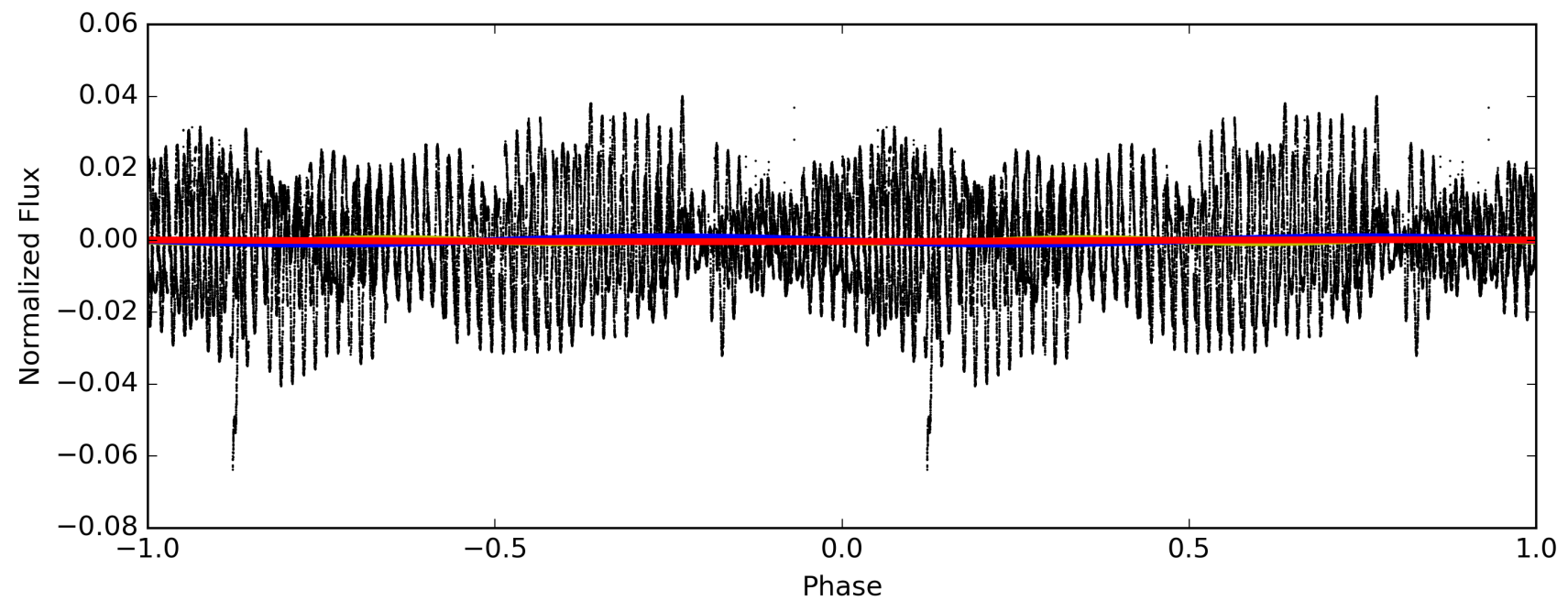
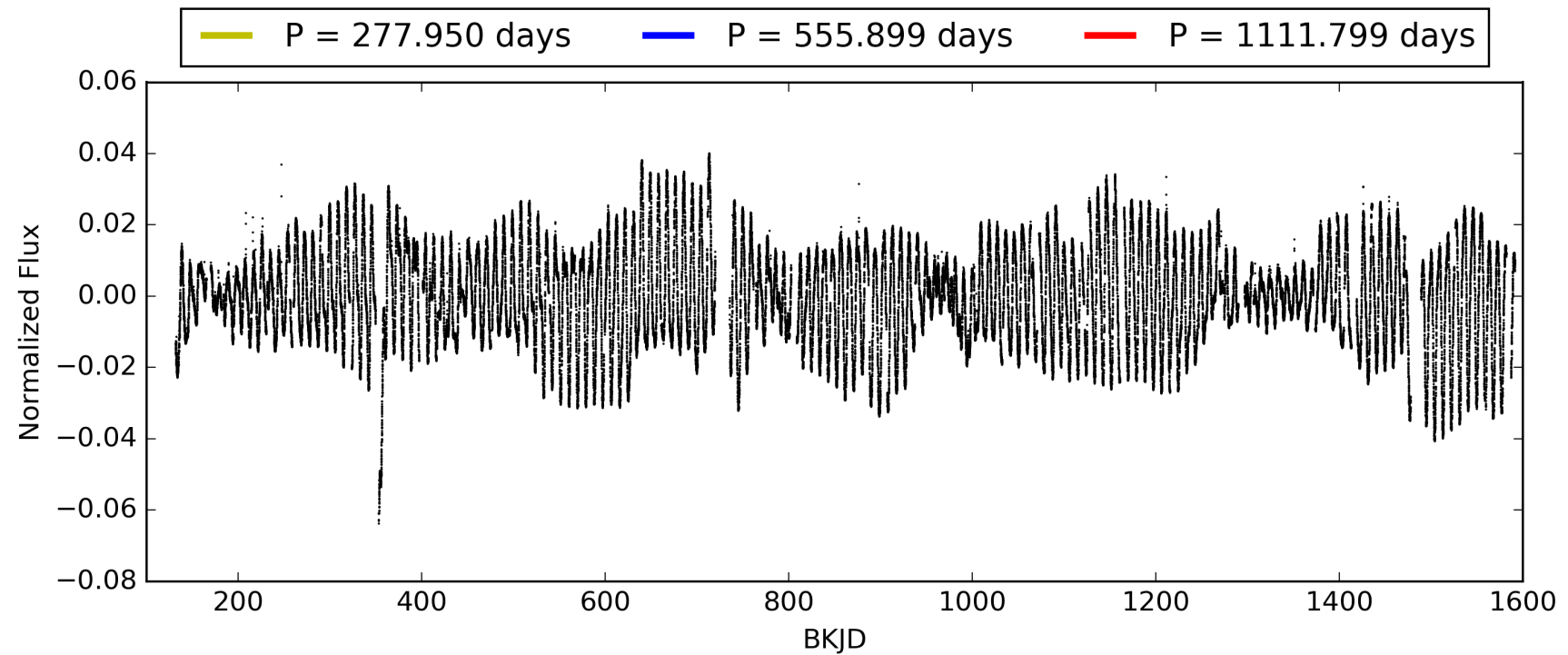
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 007907119-03, PDC Light Curves

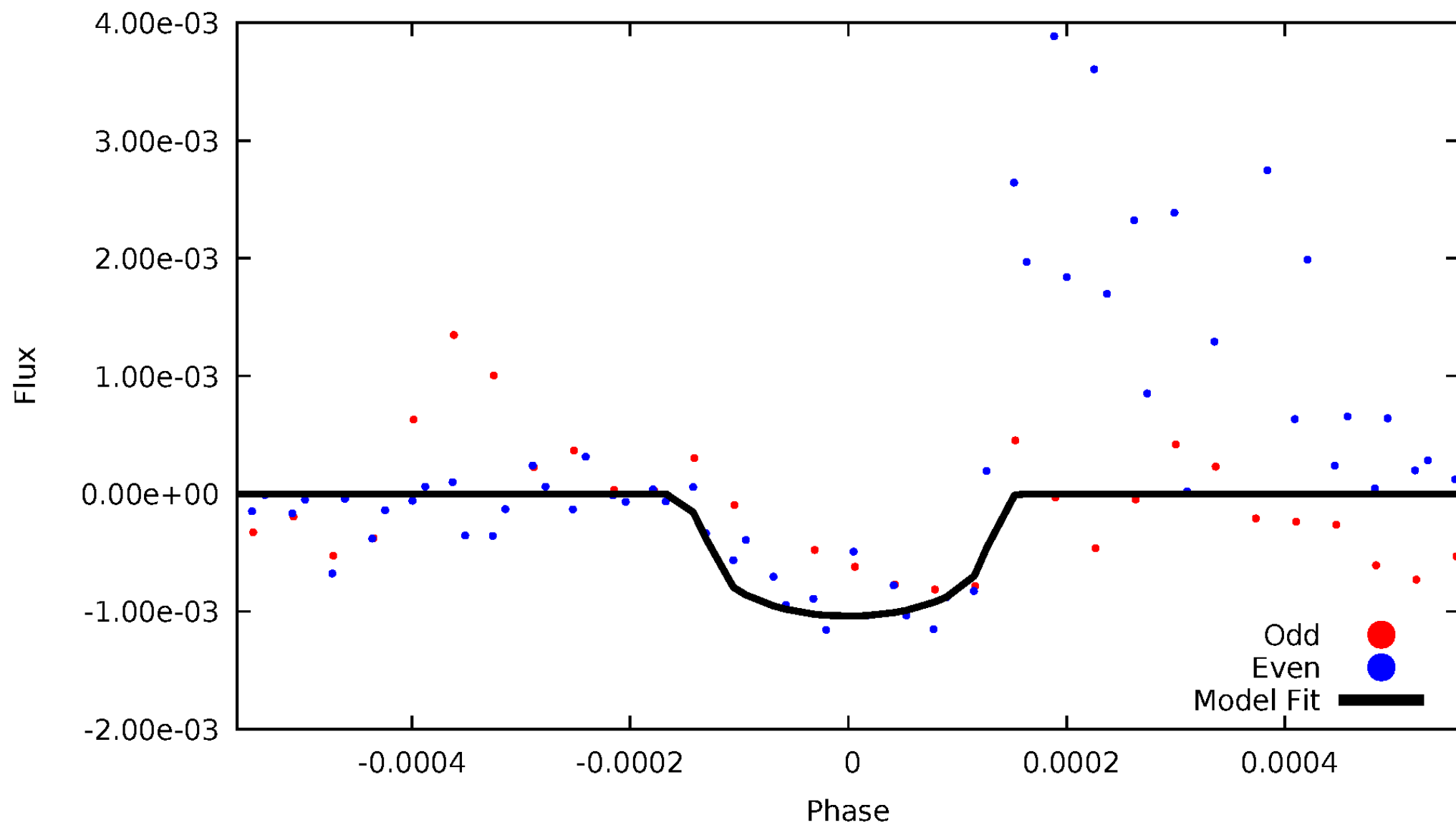


TCE 007907119-03



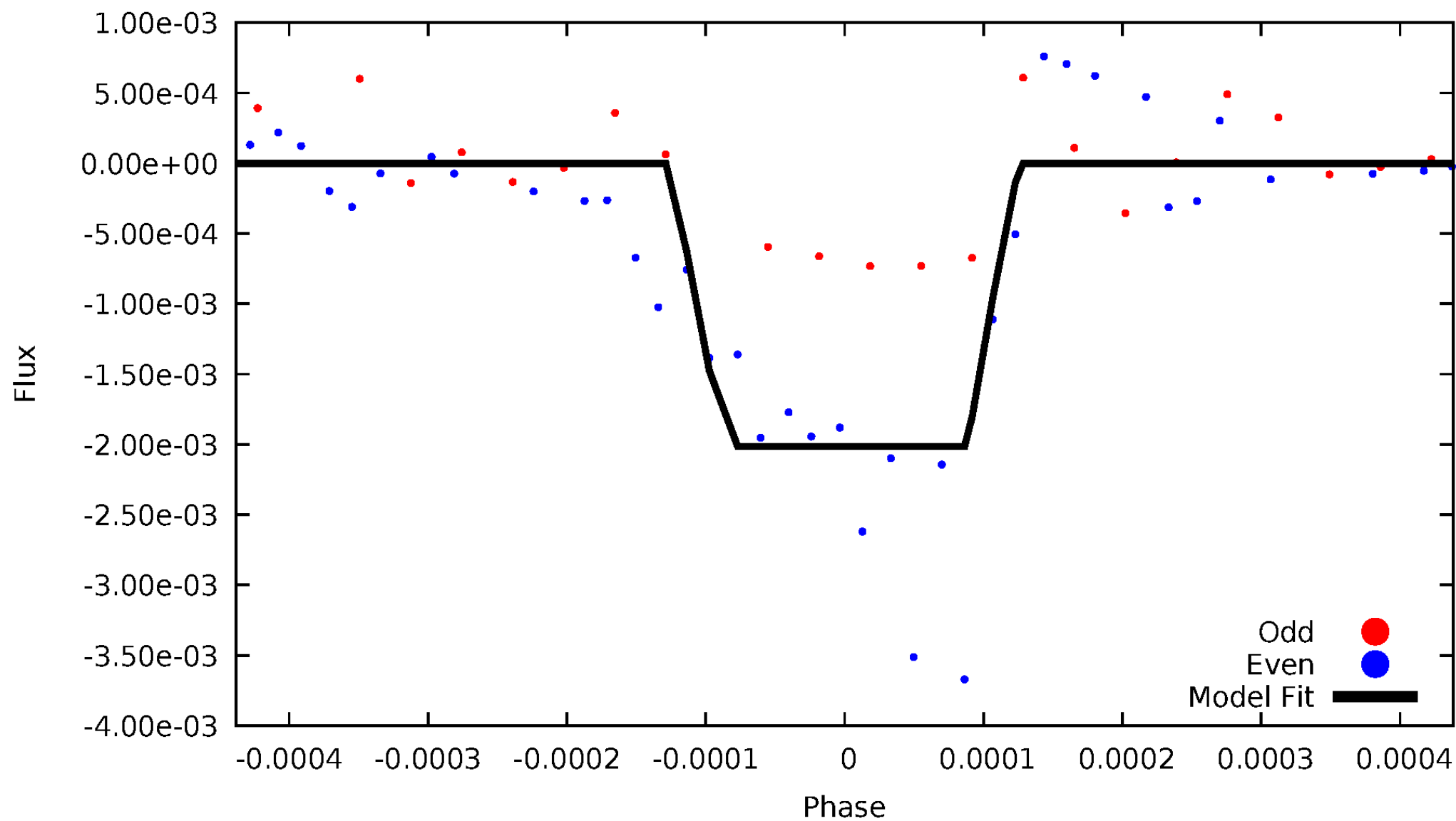
DV Odd/Even

TCE 007907119-03



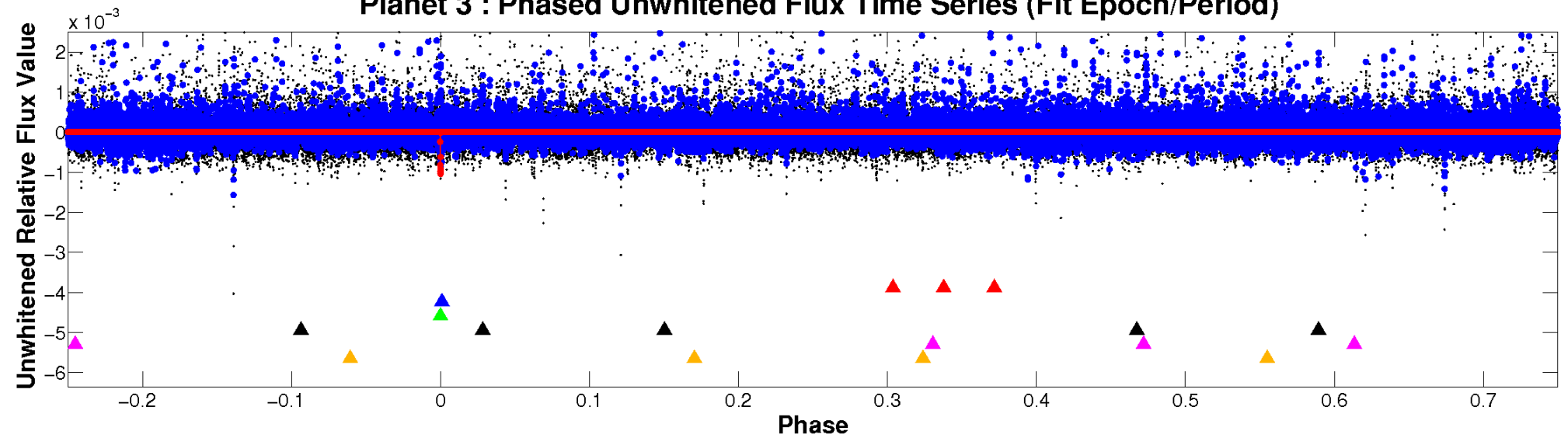
ALT Odd/Even

TCE 007907119-03

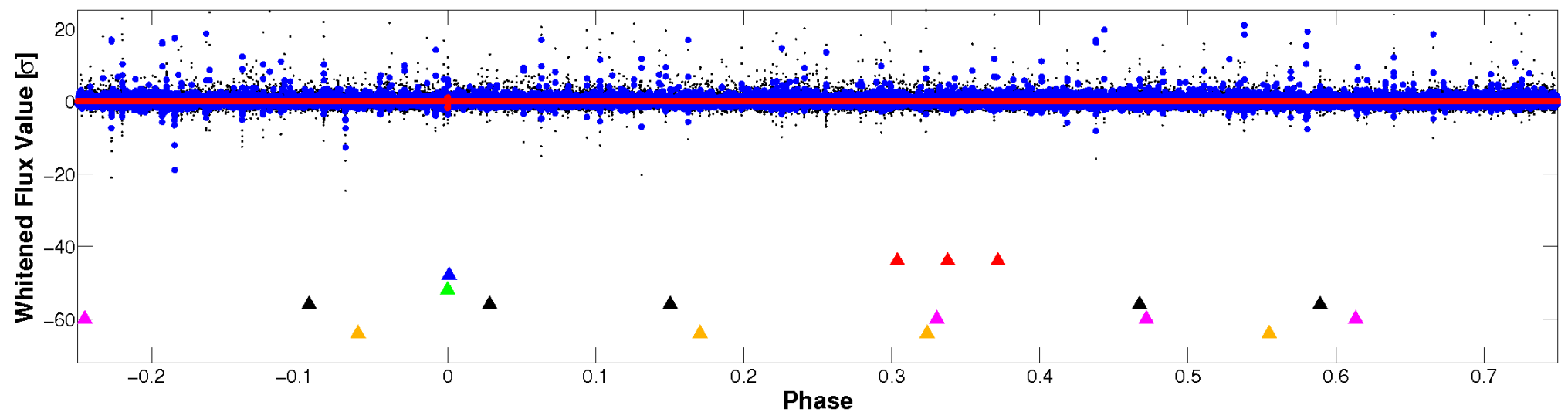


Non-Whitened Vs. Whitened Light Curve

Planet 3 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

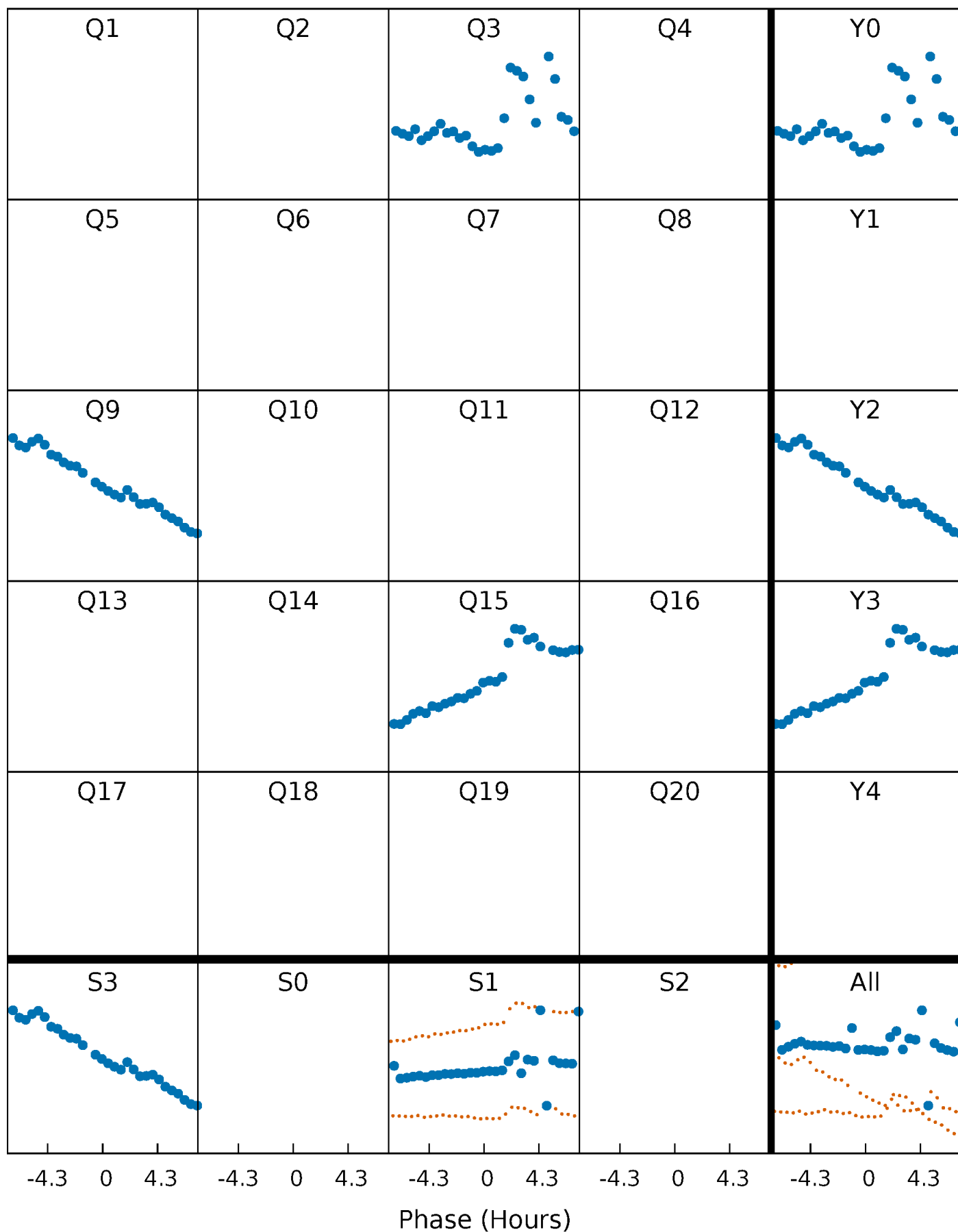


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



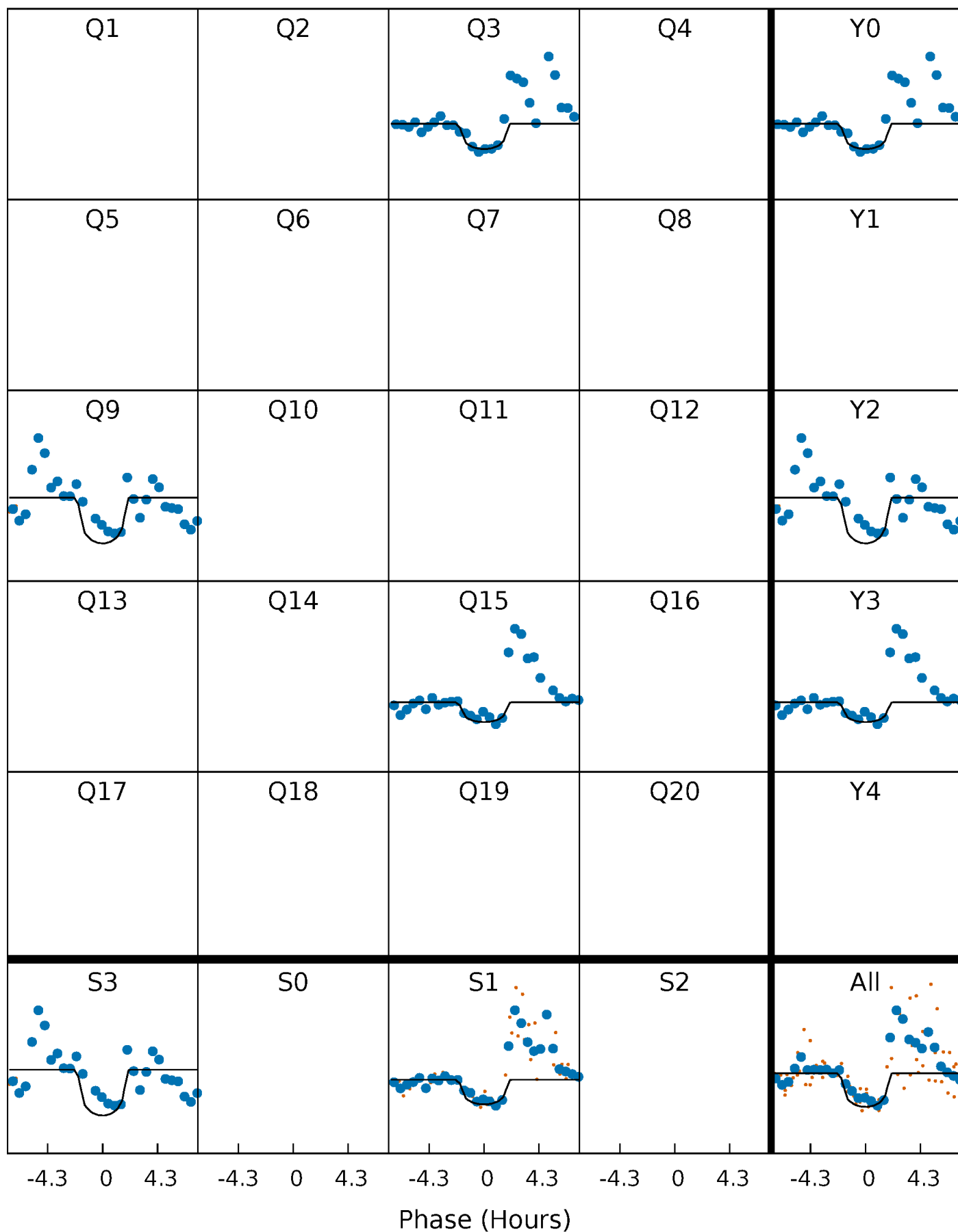
PDC Quarter-Phased Transit Curves

TCE 007907119-03 P=555.899372 Days $T_0=285.123731$ (BKJD)



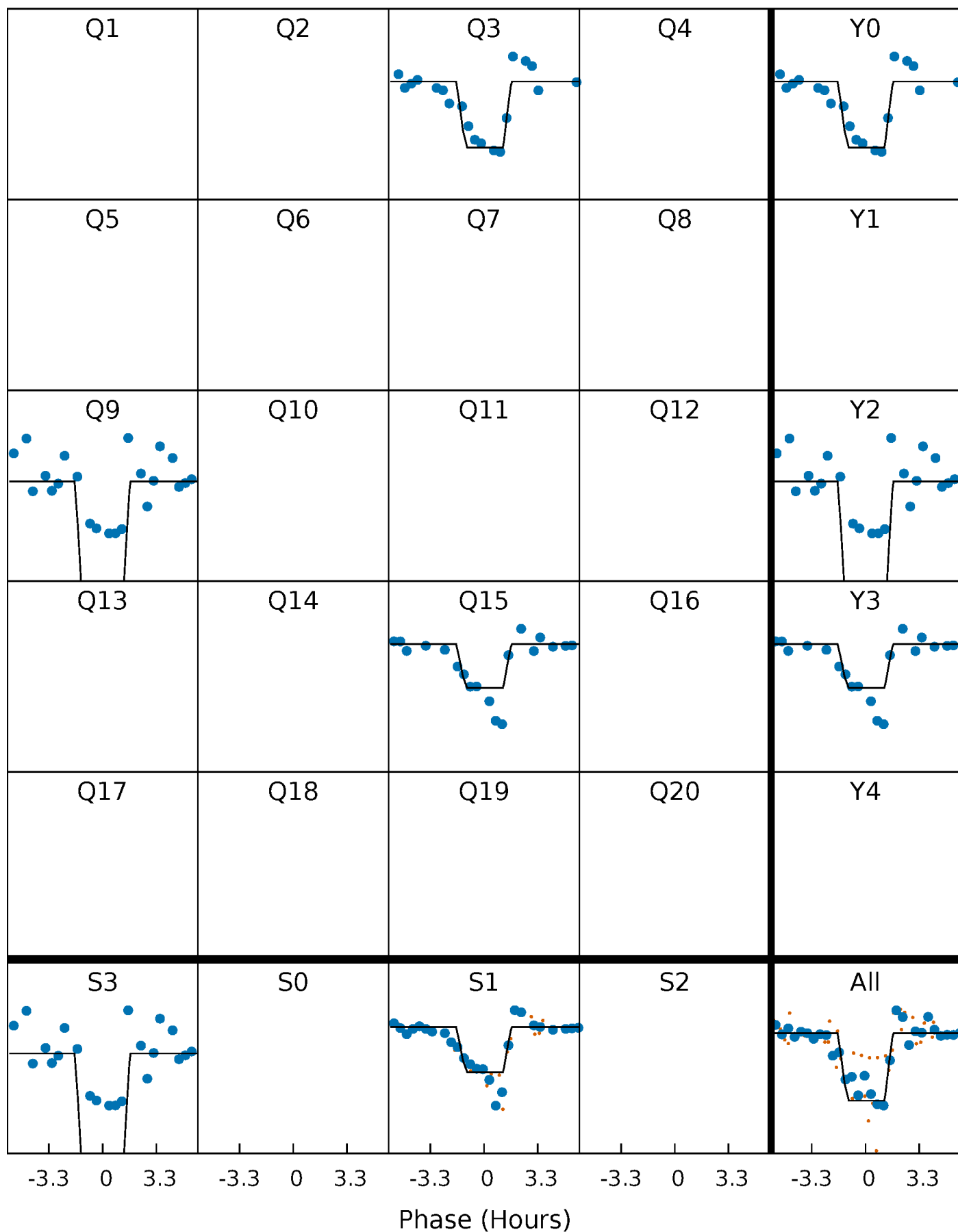
DV Quarter-Phased Transit Curves

TCE 007907119-03 P=555.899372 Days $T_0=285.123731$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

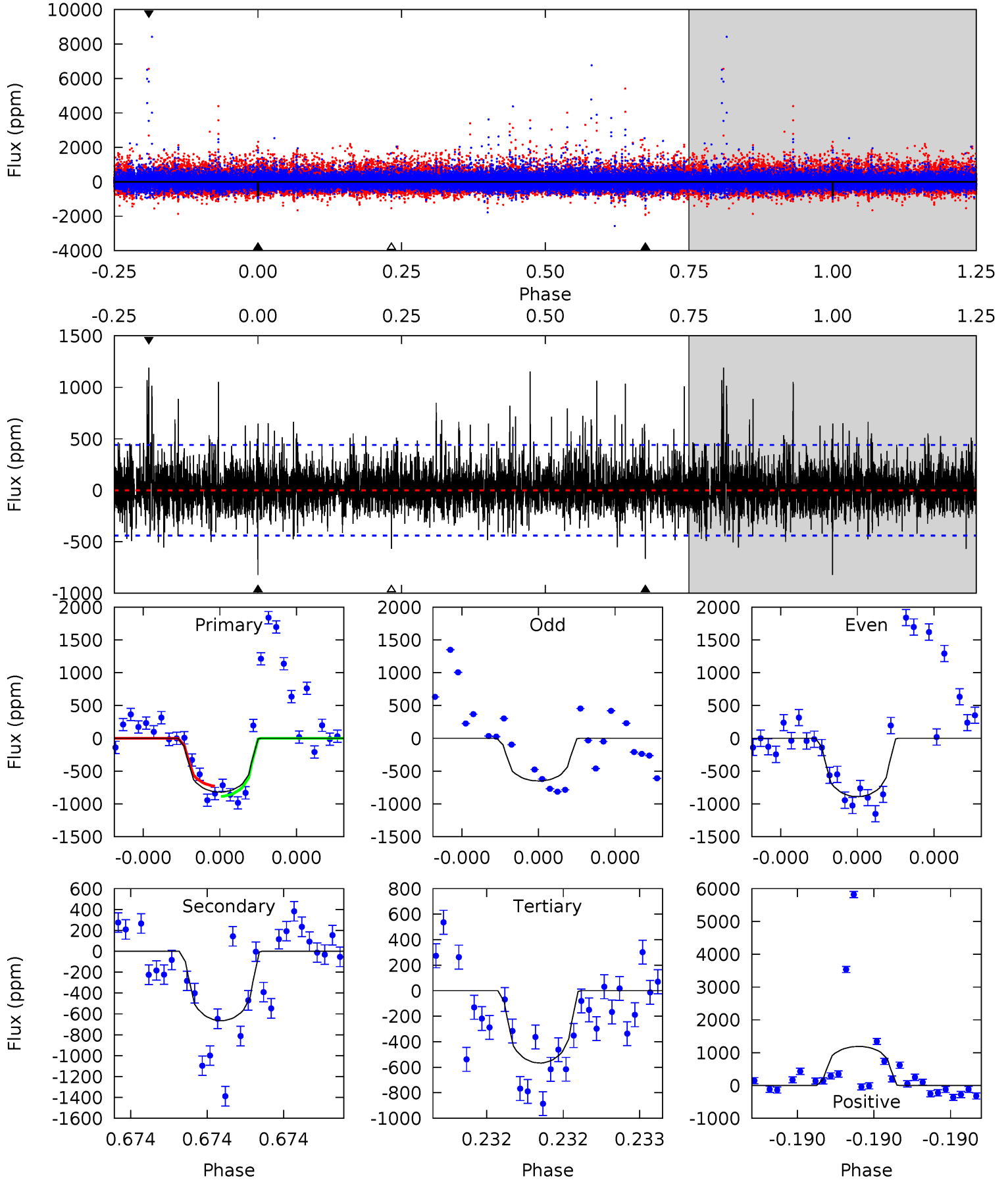
TCE 007907119-03 P=555.901811 Days $T_0=285.134829$ (BKJD)



DV Model-Shift Uniqueness Test

007907119-03, P = 555.899372 Days, E = 285.123731 Days

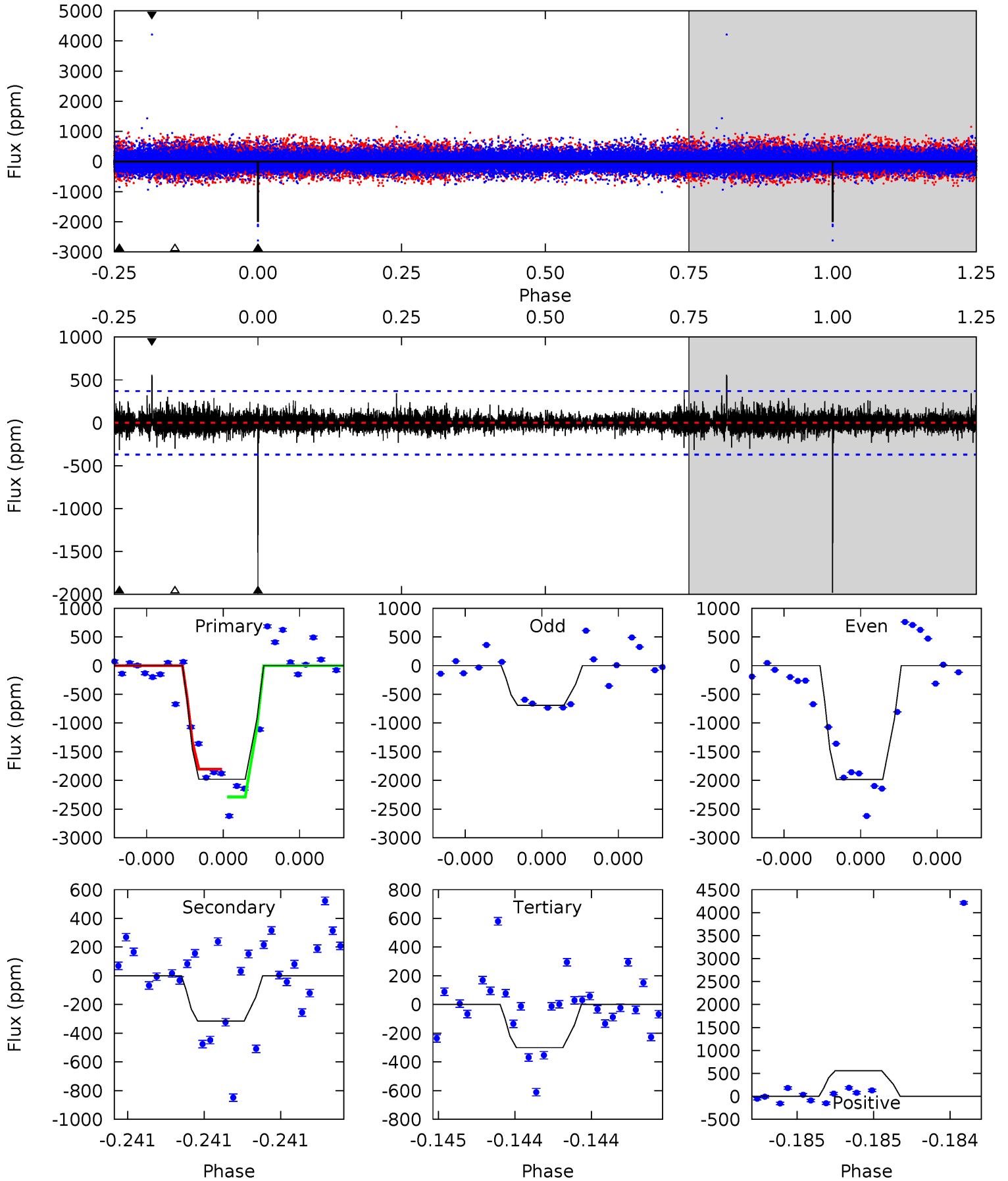
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.6	8.54	7.28	15.3	5.66	3.61	1.98	3.28	-4.74	1.25	-6.76	1.20	0.96	0.59	0.99



Alt Model-Shift Uniqueness Test

007907119-03, P = 555.901811 Days, E = 285.134829 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.5	4.86	4.63	8.60	5.70	3.67	0.82	25.9	21.9	0.23	-3.75	11.4	0.93	0.22	3.73



Stellar Parameters For KIC 007907119

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4074^{+127}_{-155}	$4.651^{+0.060}_{-0.024}$	$-0.040^{+0.300}_{-0.300}$	$0.605^{+0.043}_{-0.070}$	$0.598^{+0.057}_{-0.063}$	$3.804^{+1.124}_{-0.400}$
	+3%/-4%	+1%/-1%	+750%/-750%	+7%/-12%	+10%/-11%	+30%/-11%
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 007907119-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-665 ± 78	$2.97^{+2.56}_{-1.95}$	183^{+7}_{-8}	3367^{+1603}_{-574}	$49494^{+402518}_{-34607}$
Alt.	-315 ± 65	$3.73^{+2.69}_{-2.23}$	183^{+7}_{-7}	2839^{+861}_{-381}	15923^{+79658}_{-10994}

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 $A_{obs} \gg 1.0$

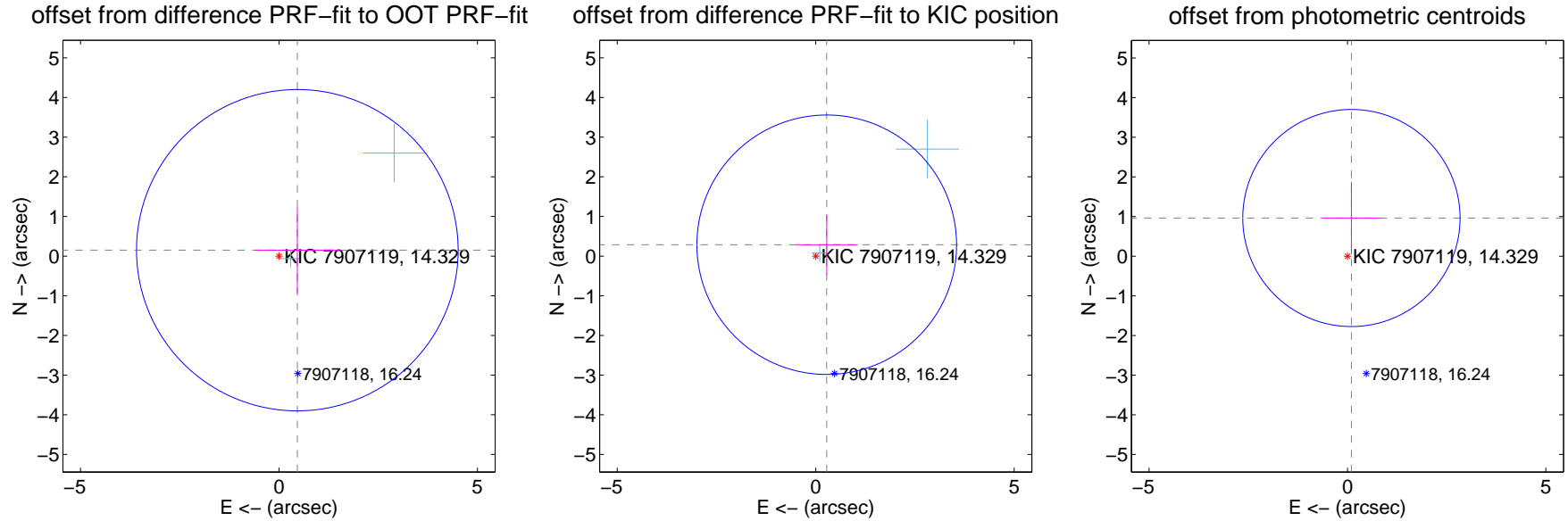
DV Centroid Data

Supplemental centroid analysis for 007907119-03. Kepler magnitude: 14.33. Transit SNR 7.30

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.486 ± 1.350	0.36	-0.462 ± 1.068	0.150 ± 1.088
PRF-fit source offset from KIC position	0.399 ± 1.090	0.37	-0.277 ± 0.786	0.288 ± 0.759
photometric centroid source offset	0.97 ± 0.91	1.06	-0.10 ± 0.73	0.96 ± 0.91



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

Q1 no difference image



Q1 no OOT image



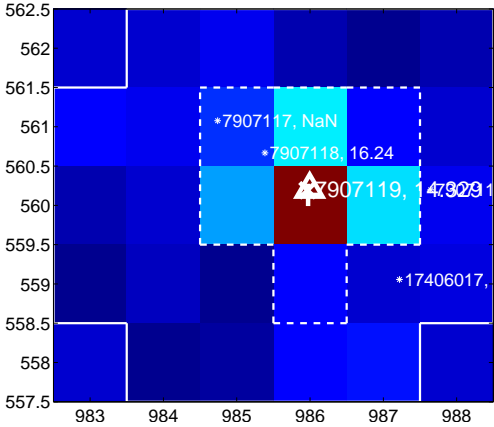
Q2 no difference image



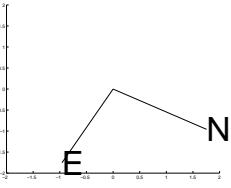
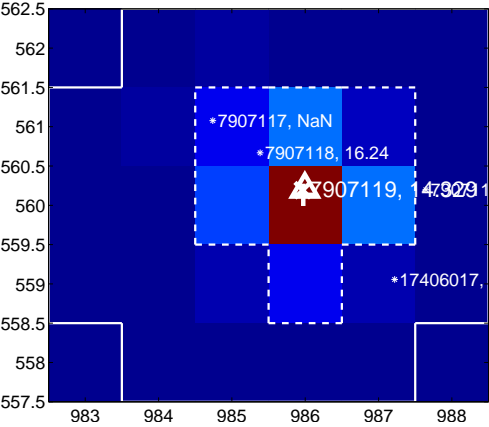
Q2 no OOT image



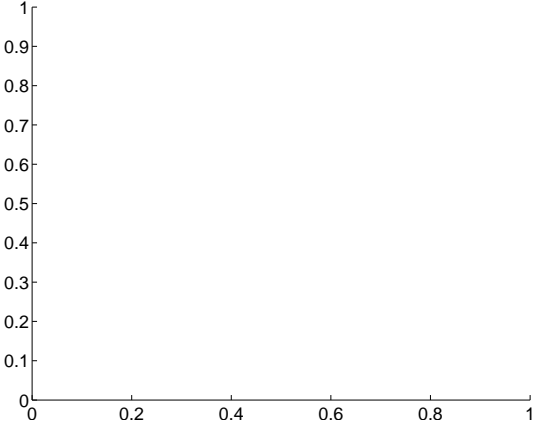
Q3 difference image



Q3 OOT image



Q4 no difference image



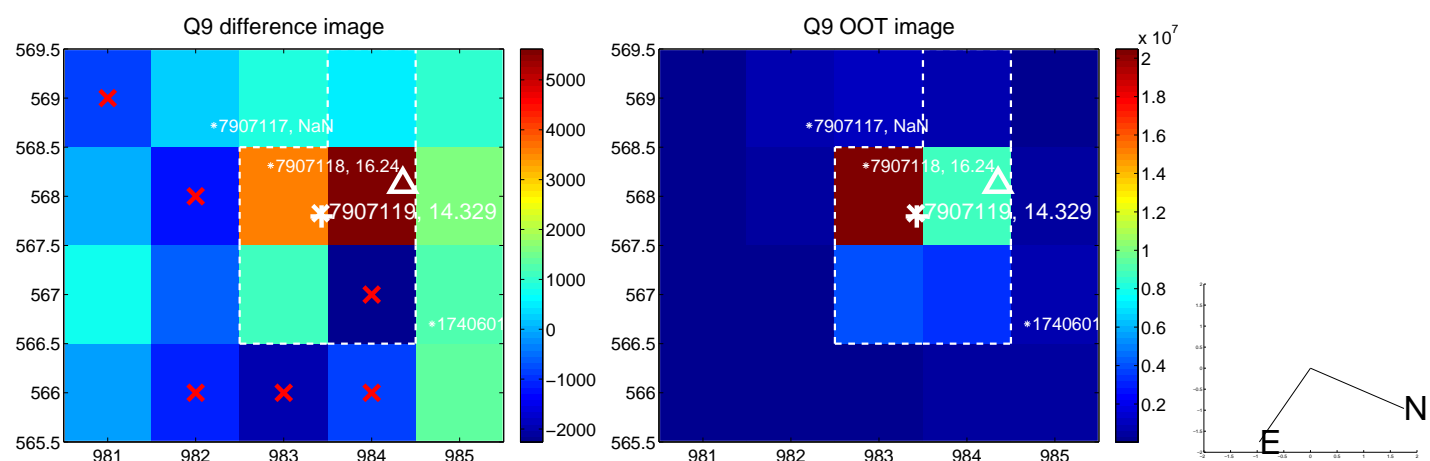
Q4 no OOT image



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



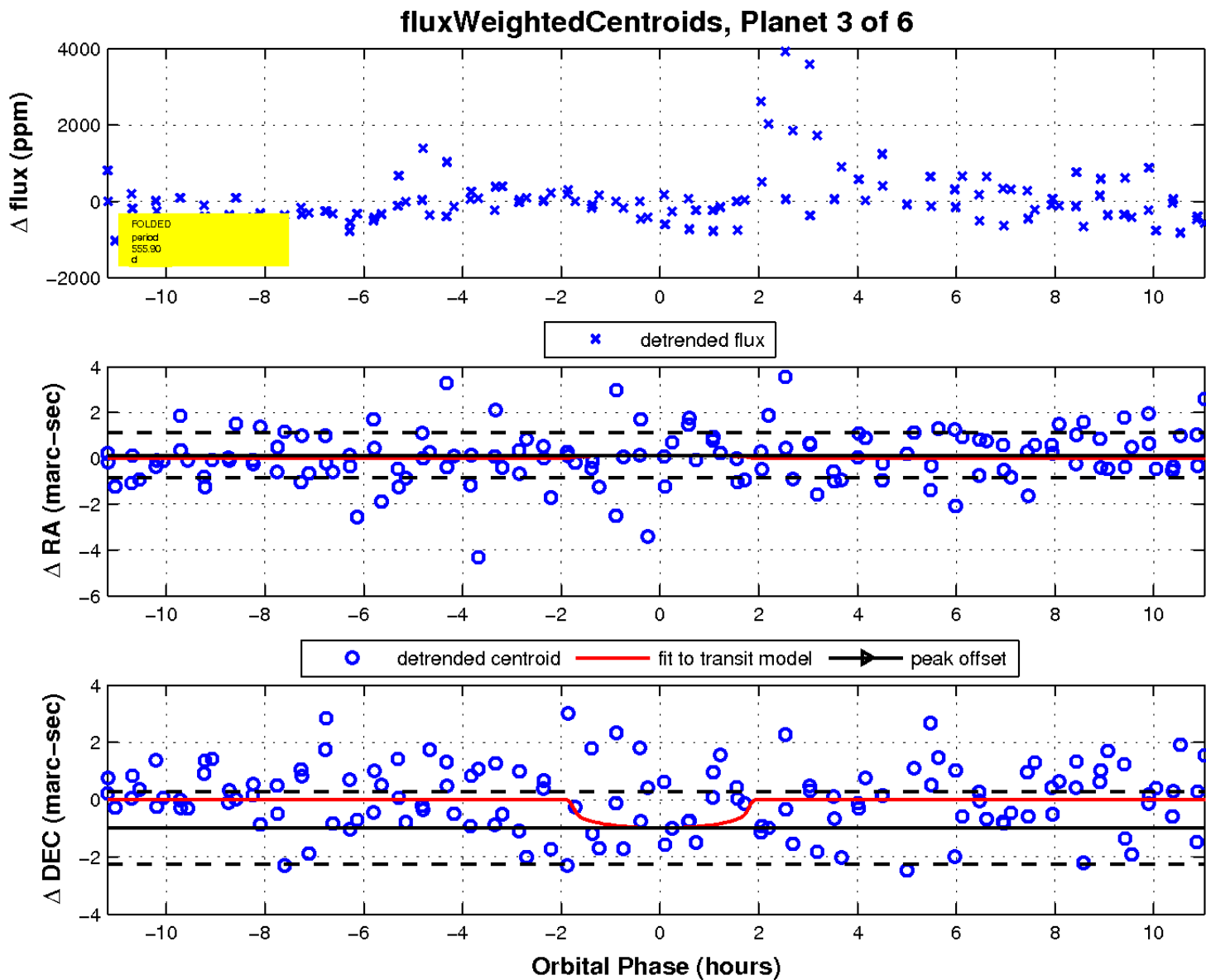
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

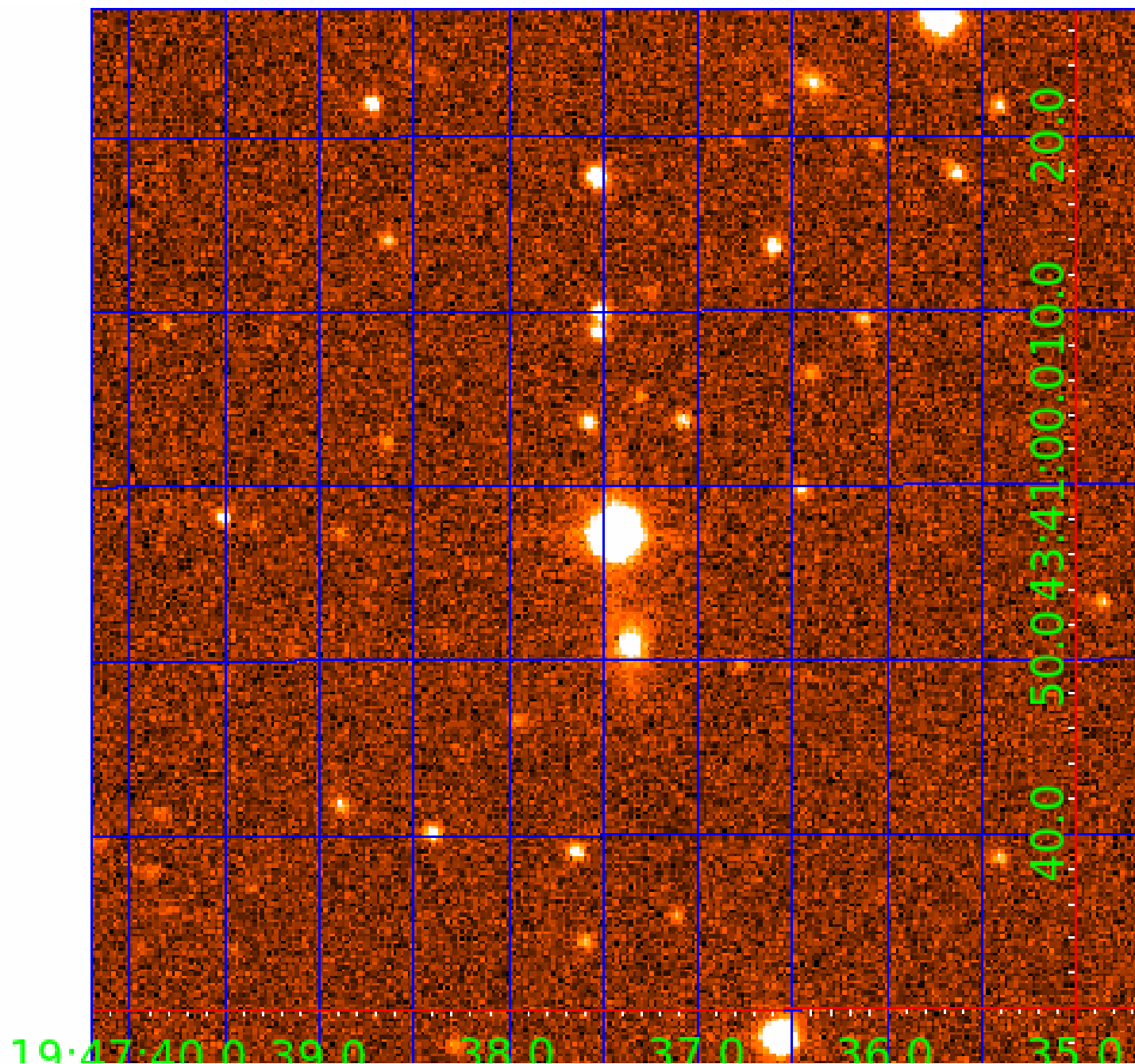


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007907119

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})
007907119-01	OBS	No	536.997023	491.790391	876.1	12.189	15.6	5.6	0.60	4074	1.79	0.08
007907119-02	OBS	No	555.868651	285.706831	459.0	0.986	13.7	2.8	0.60	4074	2.51	0.07
007907119-03	OBS	No	555.899372	285.123731	1039.5	3.736	14.5	7.3	0.60	4074	1.98	0.07
007907119-04	OBS	No	311.855100	233.088025	835.2	3.160	12.4	6.3	0.60	4074	1.95	0.16
007907119-05	OBS	No	477.265858	148.860211	1.1	25.140	10.3	0.0	0.60	4074	0.07	0.09
007907119-06	OBS	No	342.173315	465.173002	908.8	3.510	11.0	7.5	0.60	4074	1.84	0.14

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007907119-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007907119-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007907119-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—SAME_NTL_PERIOD—CENT_FEW_DIFFS
007907119-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—CENT_FEW_DIFFS
007907119-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007907119-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

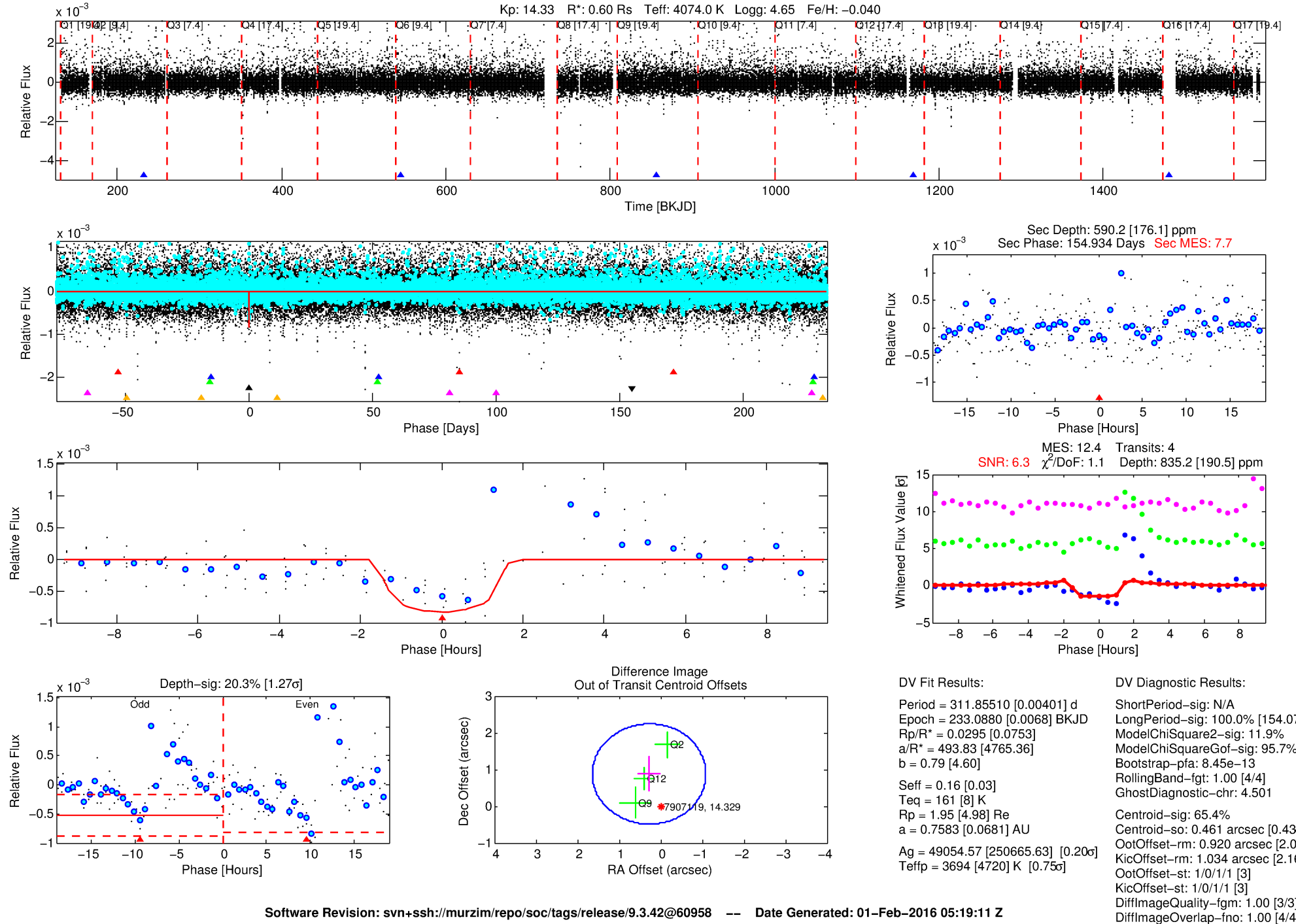
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007907119-04

No Significant Match Found

DV One-Page Summary

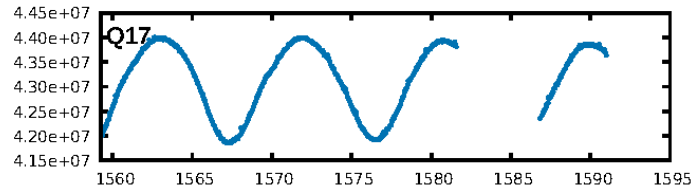
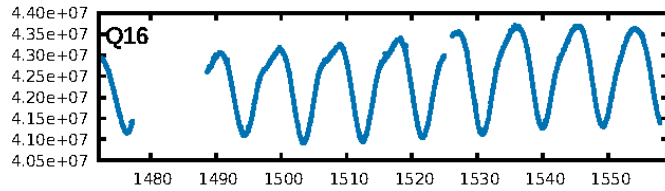
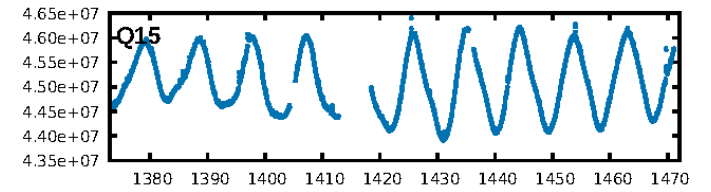
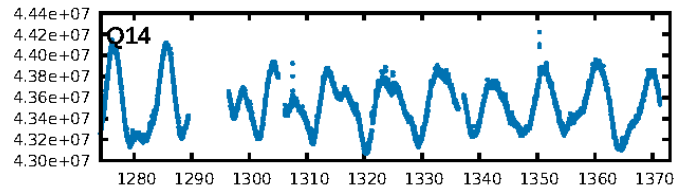
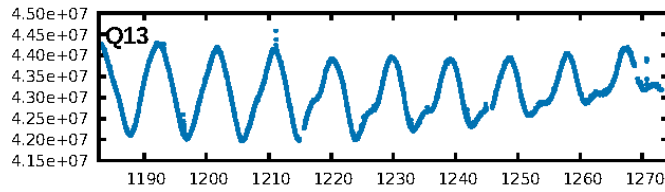
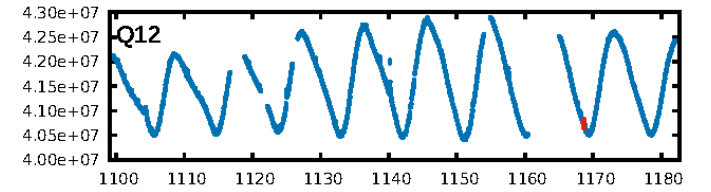
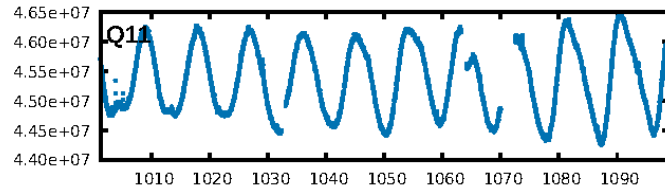
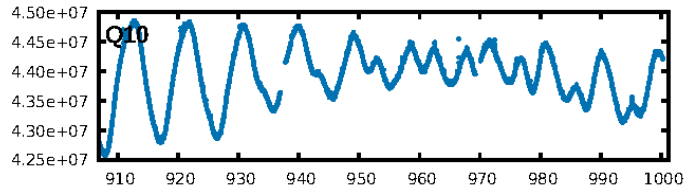
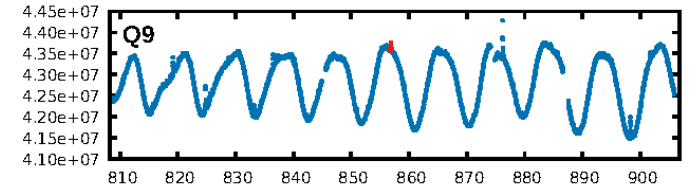
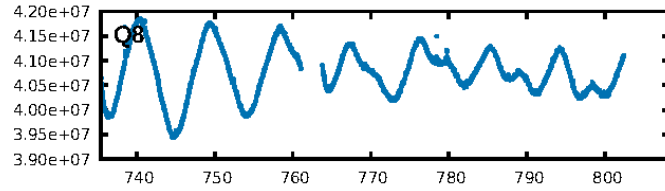
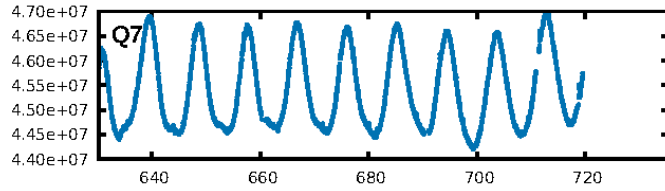
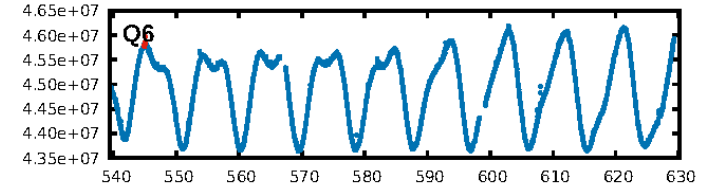
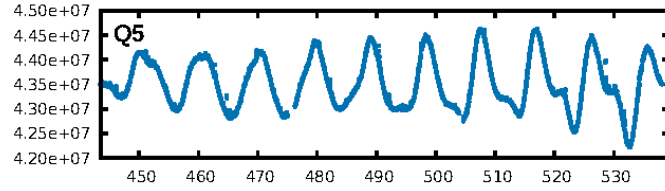
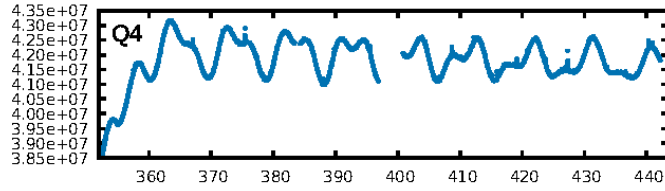
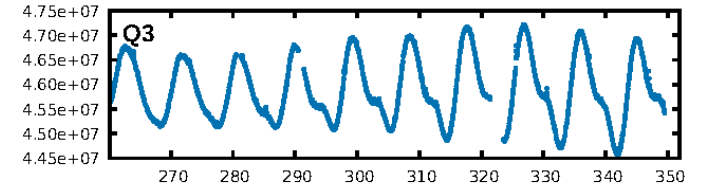
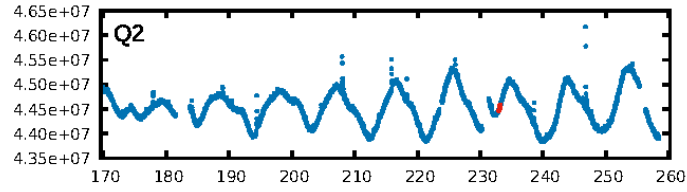
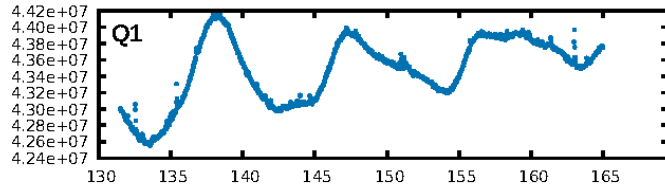
KIC: 7907119 Candidate: 4 of 6 Period: 311.855 d



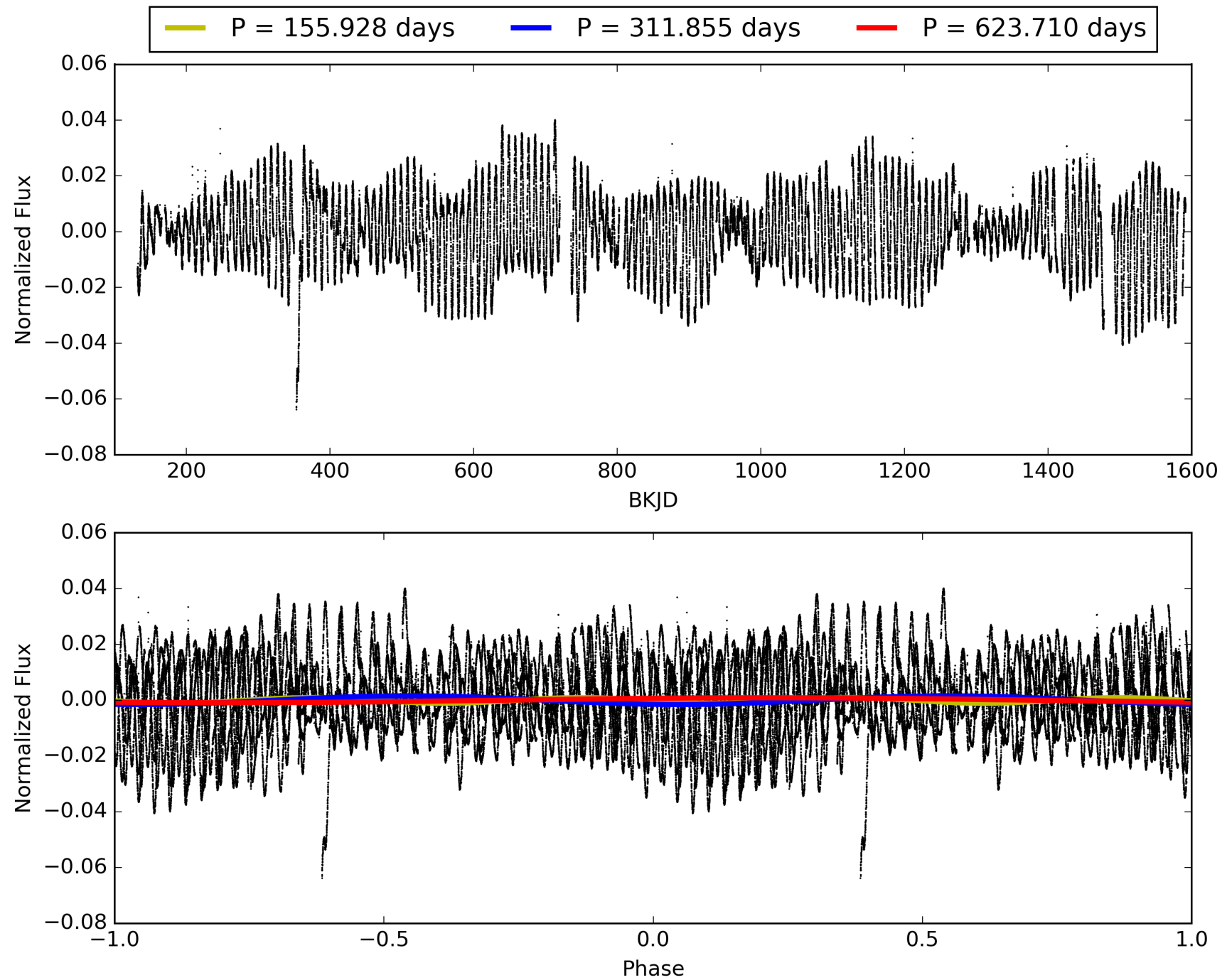
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 05:19:11 Z

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

TCE 007907119-04, PDC Light Curves

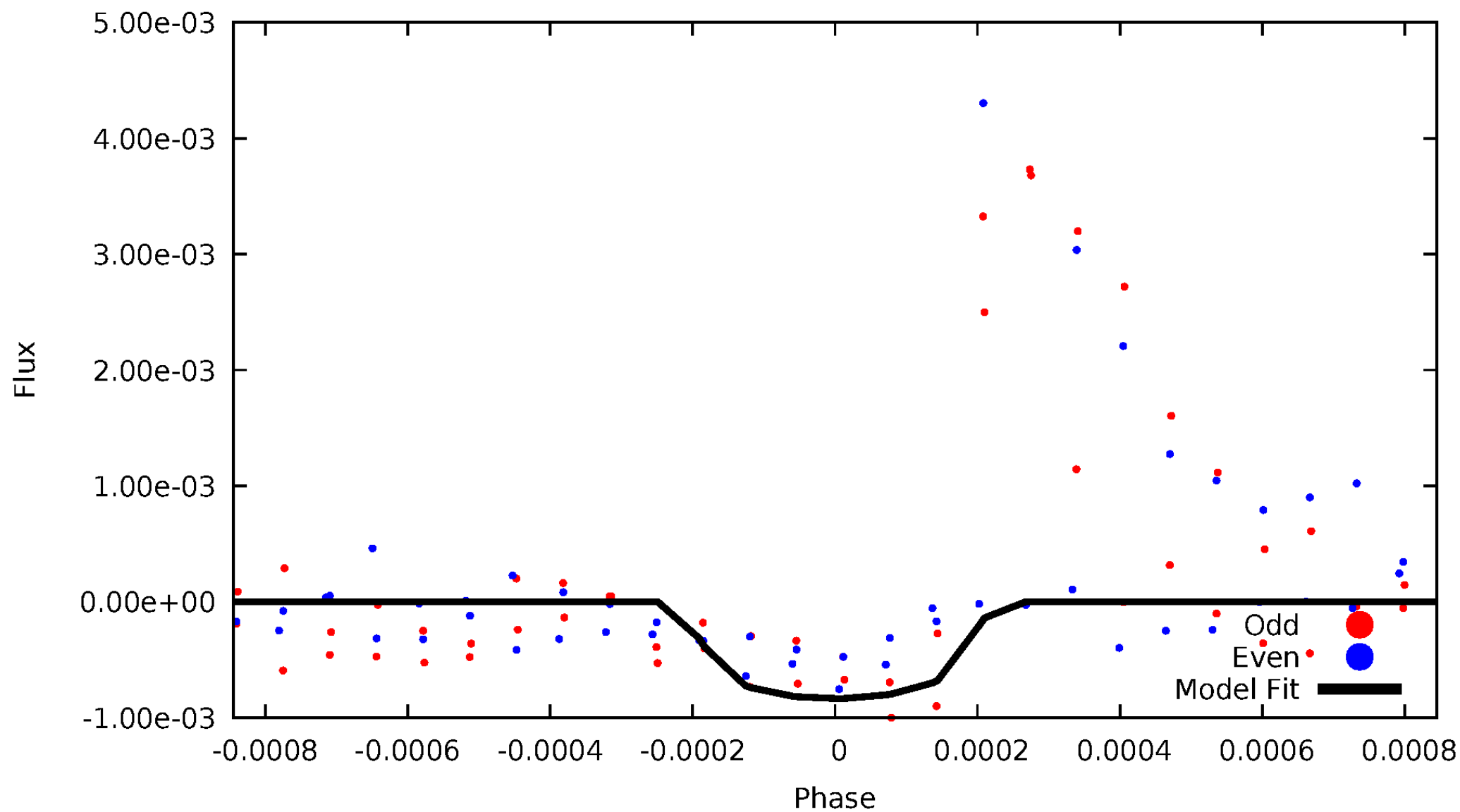


TCE 007907119-04



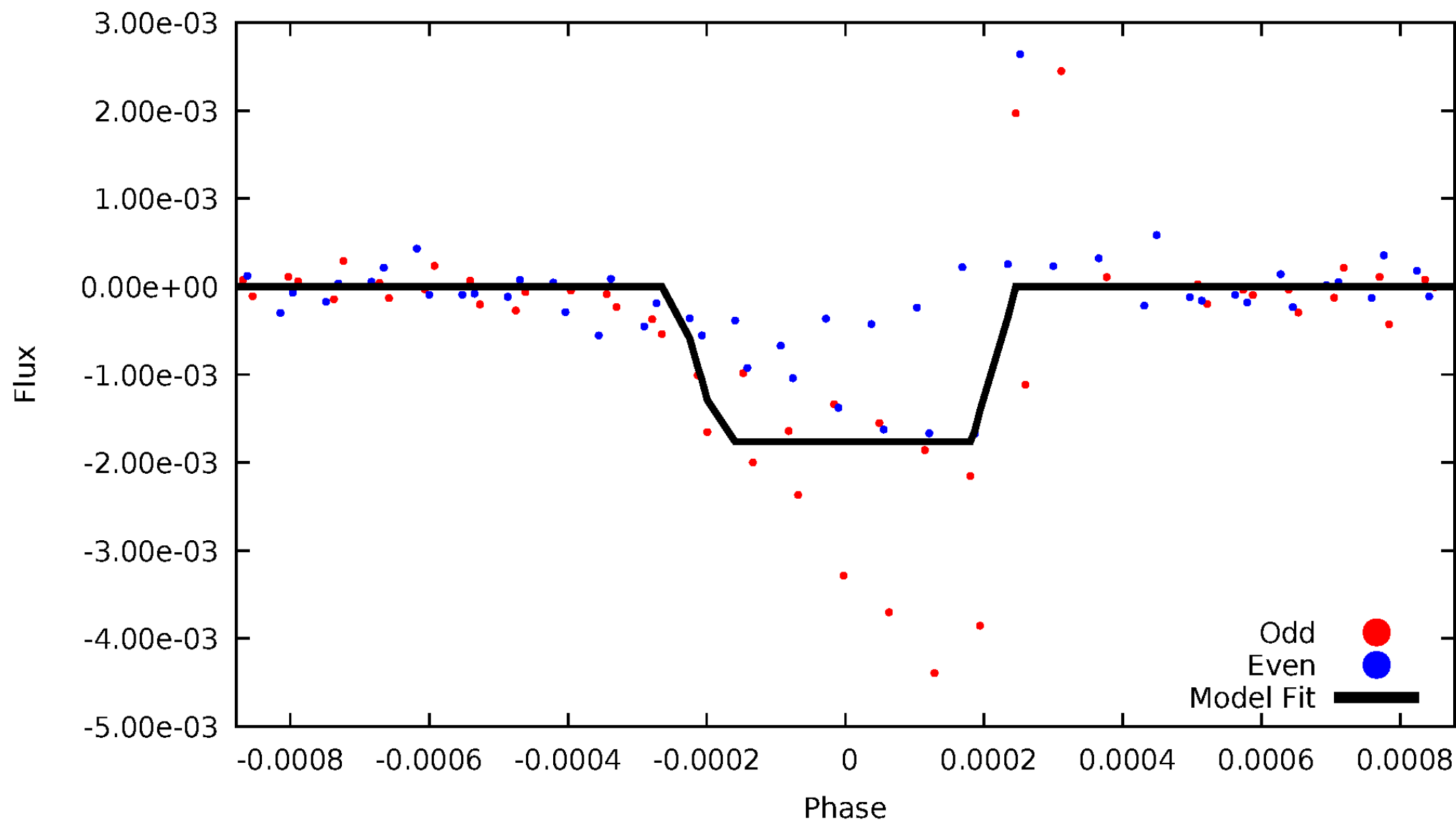
DV Odd/Even

TCE 007907119-04



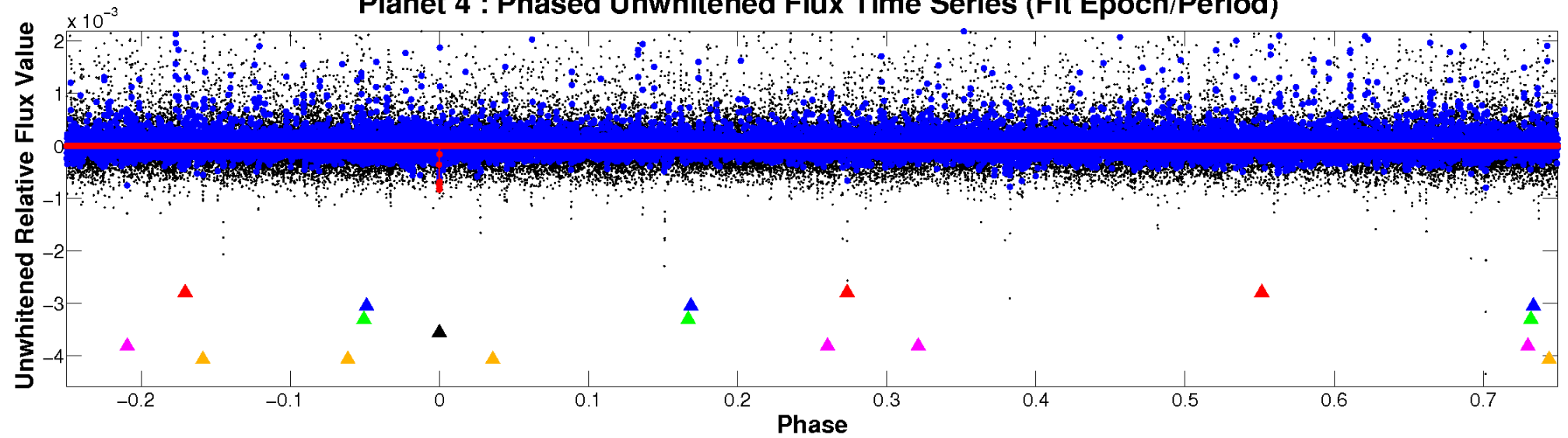
ALT Odd/Even

TCE 007907119-04

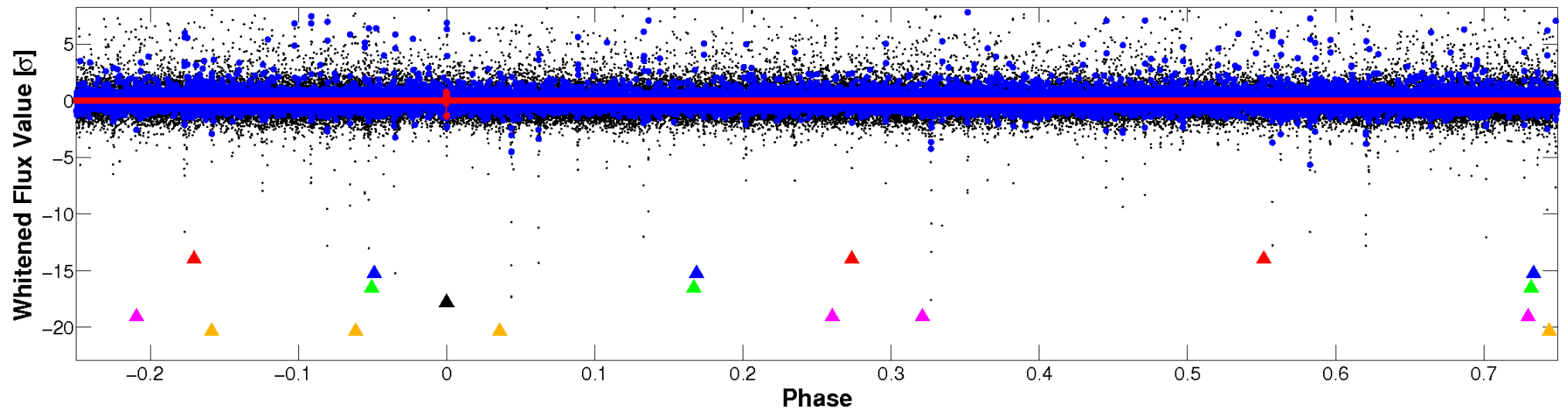


Non-Whitened Vs. Whitened Light Curve

Planet 4 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

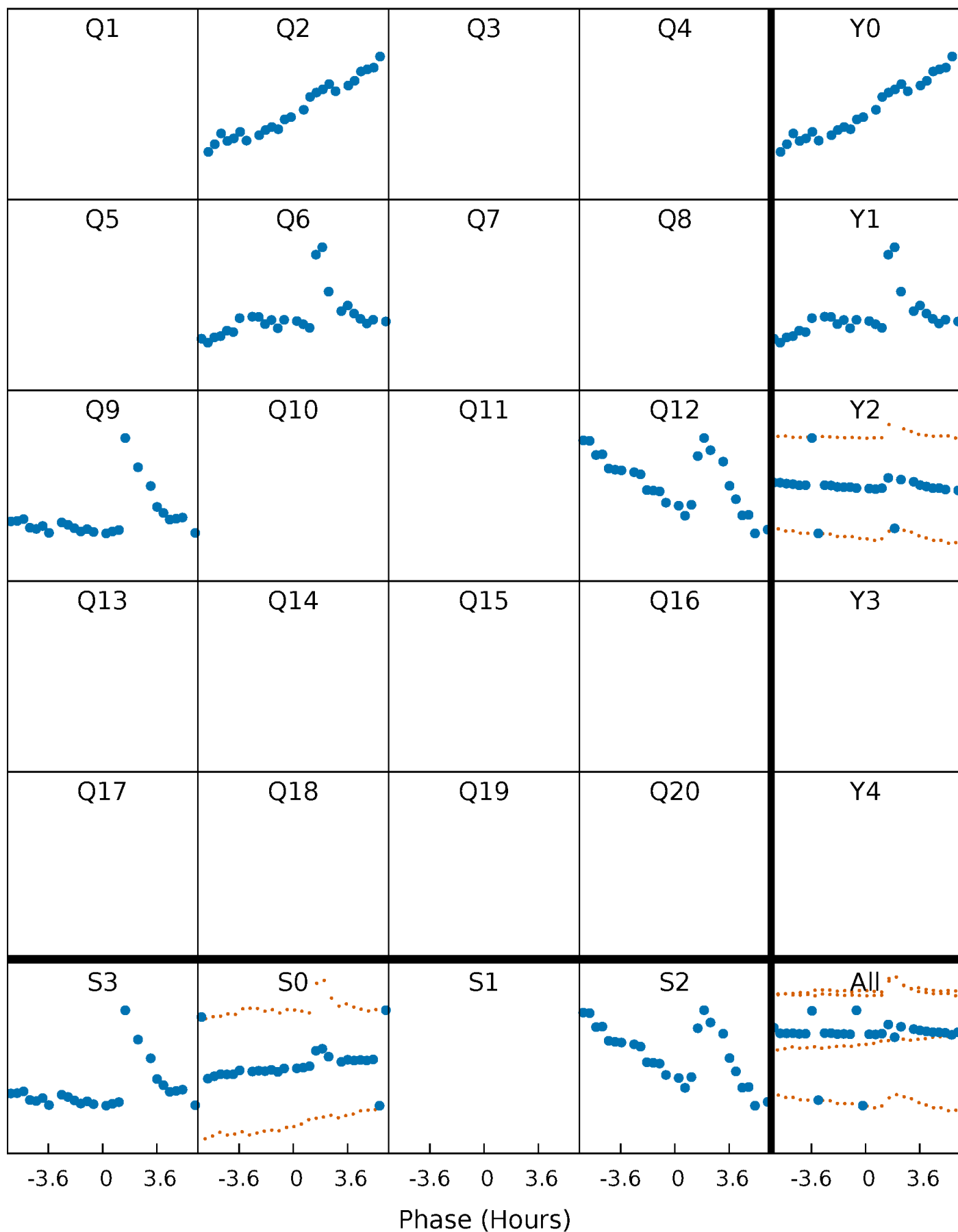


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



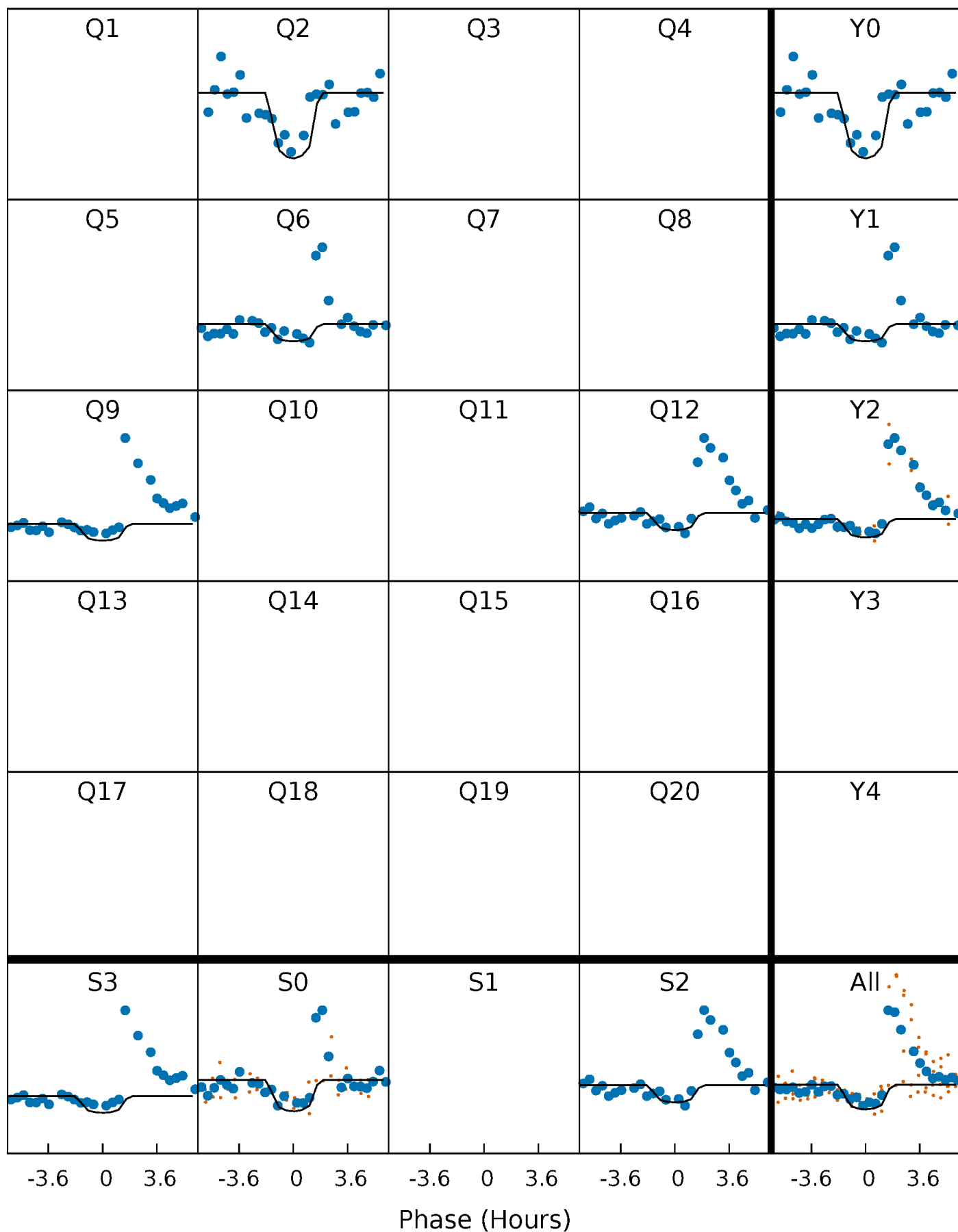
PDC Quarter-Phased Transit Curves

TCE 007907119-04 P=311.855100 Days $T_0=233.088024$ (BKJD)



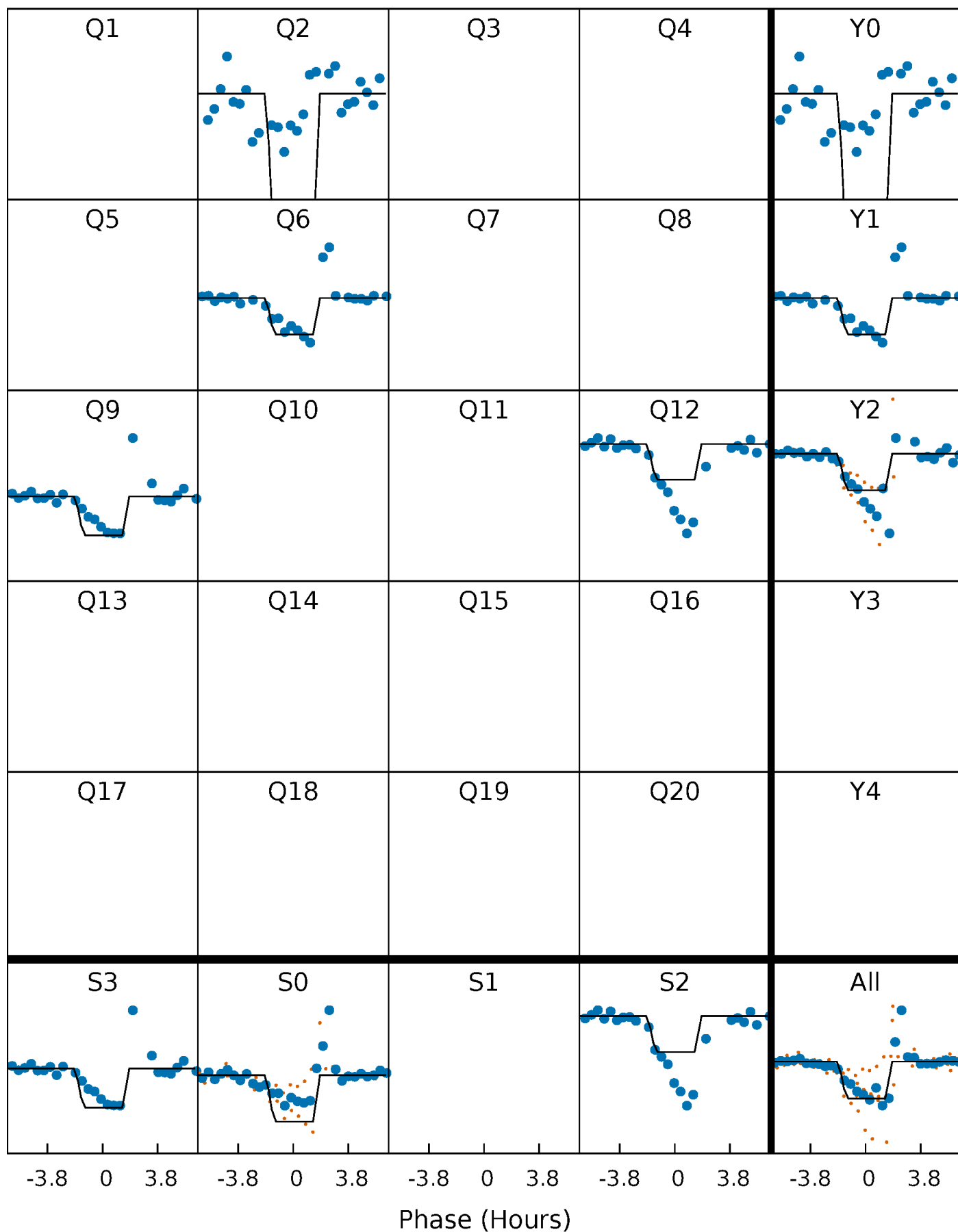
DV Quarter-Phased Transit Curves

TCE 007907119-04 P=311.855100 Days $T_0=233.088024$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

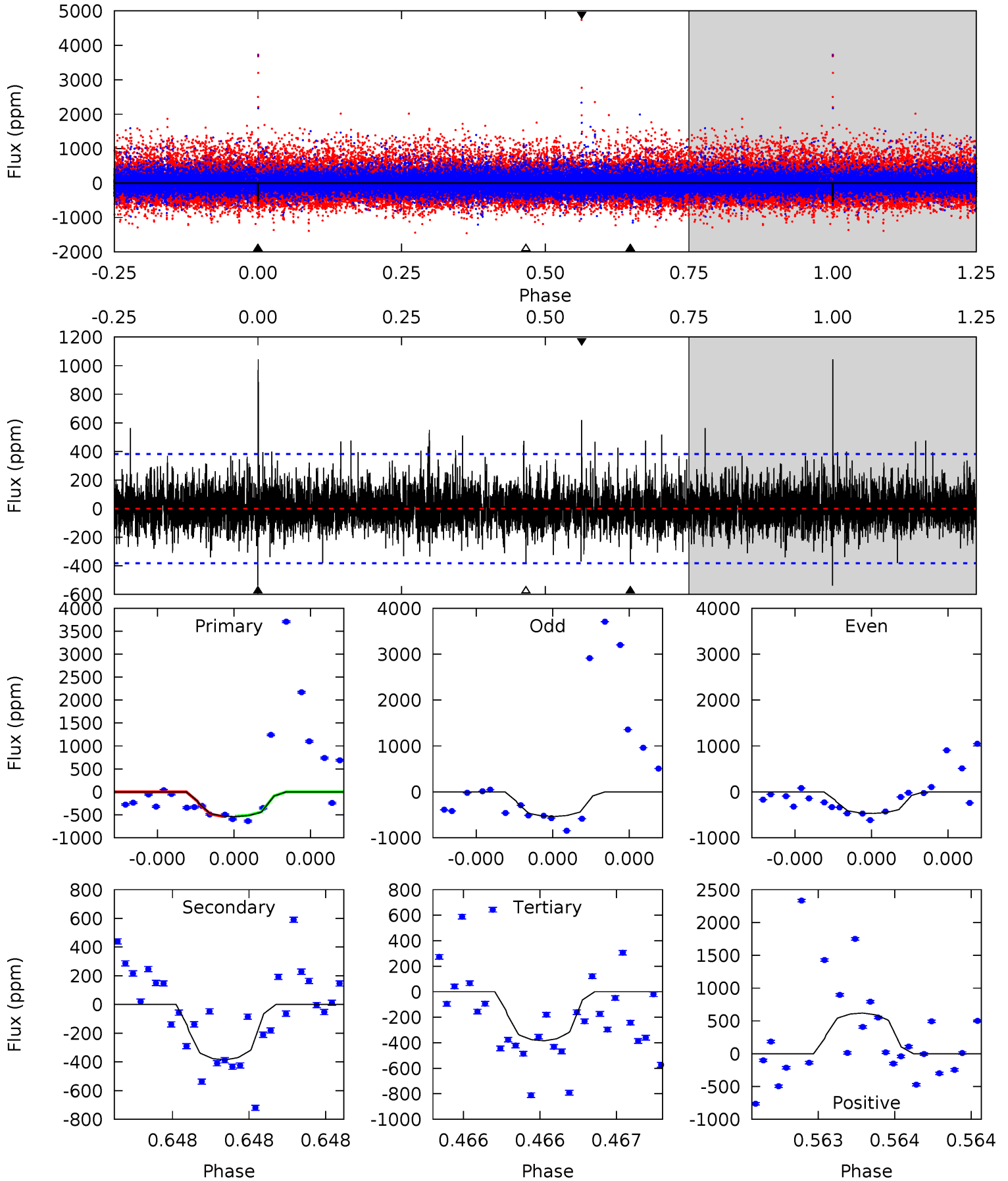
TCE 007907119-04 P=311.853234 Days $T_0=233.078109$ (BKJD)



DV Model-Shift Uniqueness Test

007907119-04, P = 311.855100 Days, E = 233.088024 Days

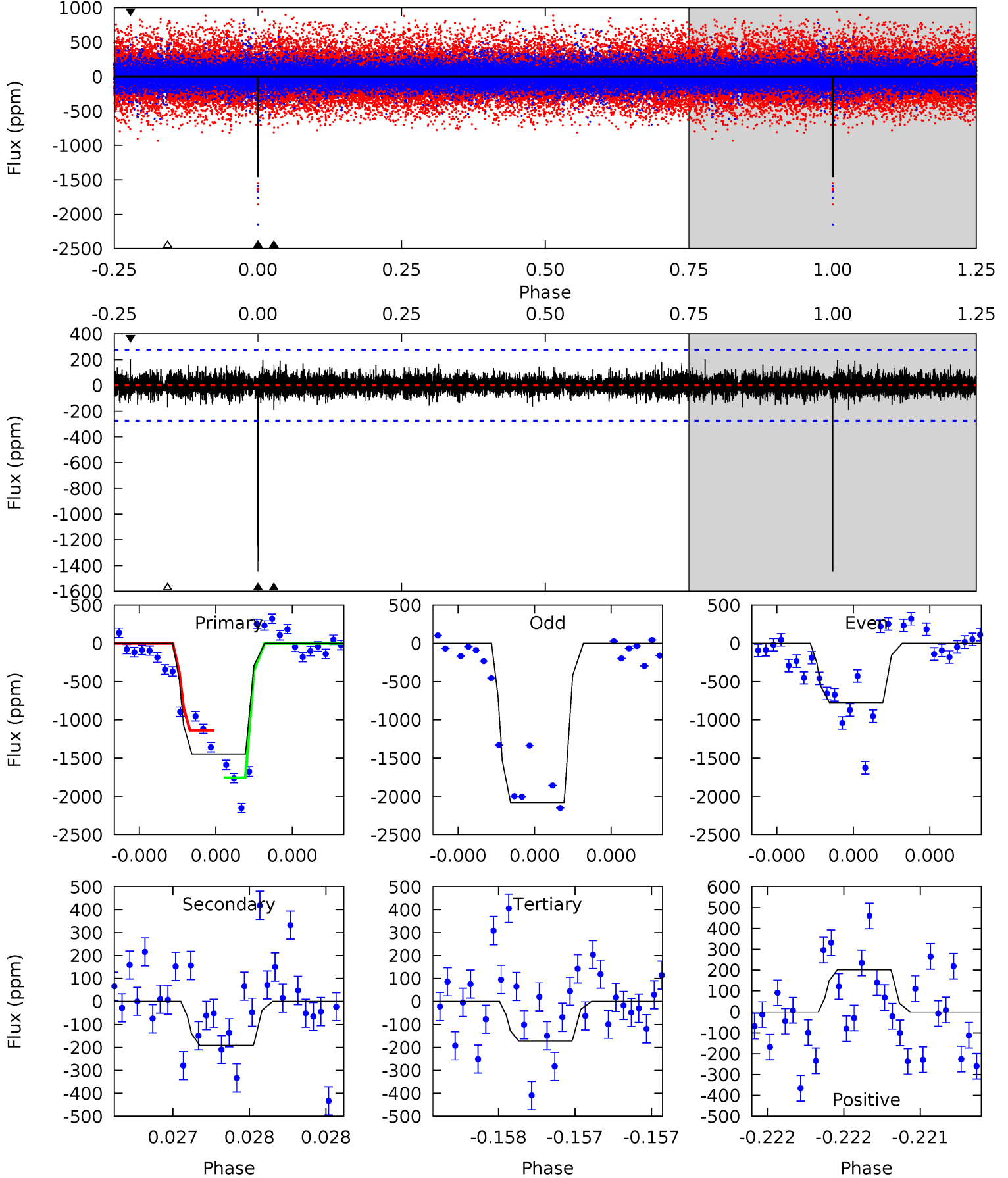
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.91	5.66	5.64	9.09	5.61	3.54	1.55	2.26	-1.18	0.02	-3.43	0.44	0.86	0.66	0.06



Alt Model-Shift Uniqueness Test

007907119-04, P = 311.853234 Days, E = 233.078109 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.3	3.88	3.50	4.09	5.58	3.50	0.83	25.8	25.2	0.38	-0.22	15.5	1.10	0.12	0



Stellar Parameters For KIC 007907119

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4074^{+127}_{-155}	$4.651^{+0.060}_{-0.024}$	$-0.040^{+0.300}_{-0.300}$	$0.605^{+0.043}_{-0.070}$	$0.598^{+0.057}_{-0.063}$	$3.804^{+1.124}_{-0.400}$
	+3%/-4%	+1%/-1%	+750%/-750%	+7%/-12%	+10%/-11%	+30%/-11%
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 007907119-04 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-385 ± 68	$4.03^{+4.52}_{-2.66}$	222^{+8}_{-9}	2841^{+1070}_{-475}	7293^{+55978}_{-5622}
Alt.	-191 ± 49	$4.52^{+3.92}_{-3.09}$	222^{+8}_{-9}	2520^{+935}_{-357}	2933^{+28392}_{-2105}

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 $A_{obs} \gg 1.0$

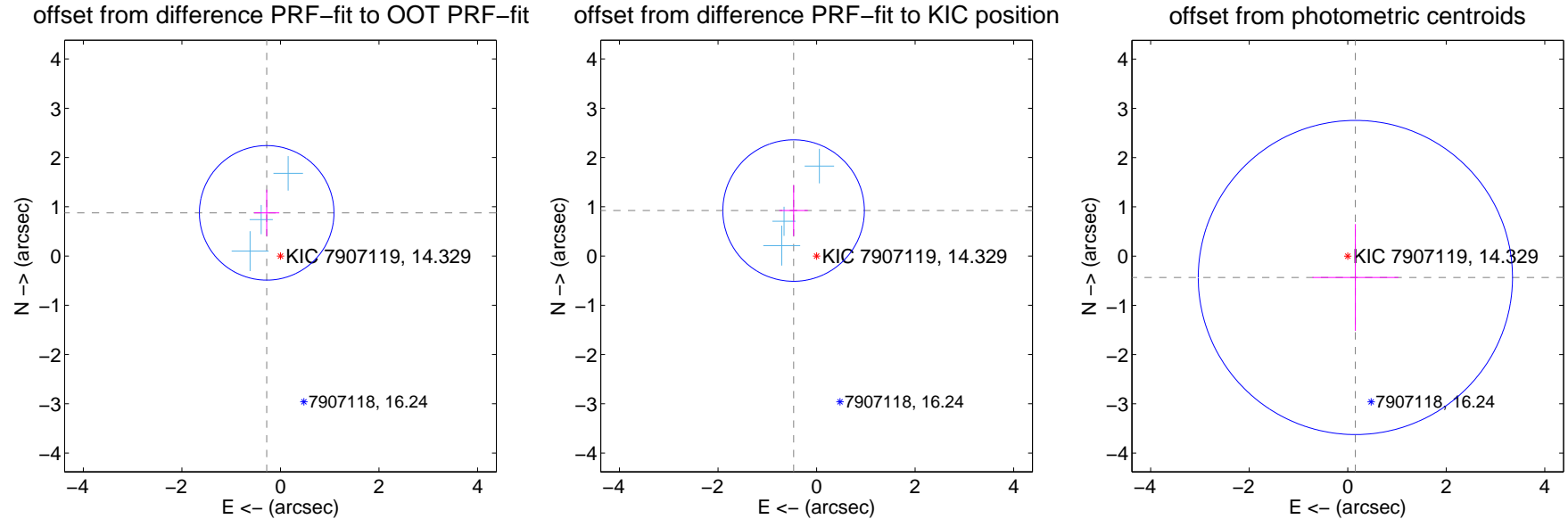
DV Centroid Data

Supplemental centroid analysis for 007907119-04. Kepler magnitude: 14.33. Transit SNR 6.28

There are 3 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	0.920 ± 0.455	2.02	0.279 ± 0.255	0.876 ± 0.471
PRF-fit source offset from KIC position	1.034 ± 0.479	2.16	0.466 ± 0.289	0.923 ± 0.516
photometric centroid source offset	0.46 ± 1.06	0.43	-0.16 ± 0.87	-0.43 ± 1.09



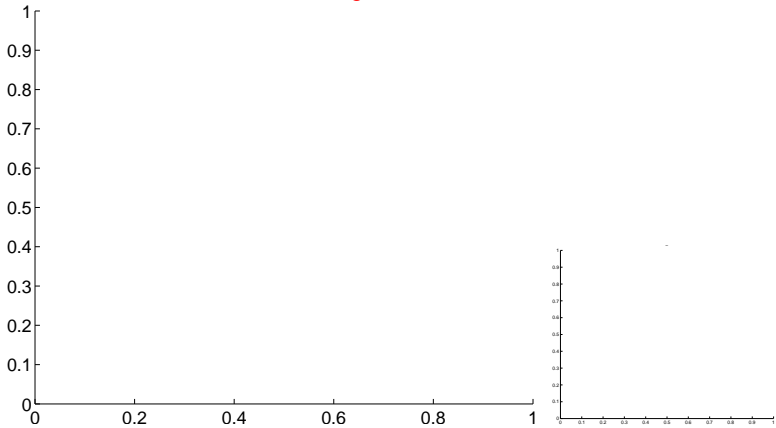
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

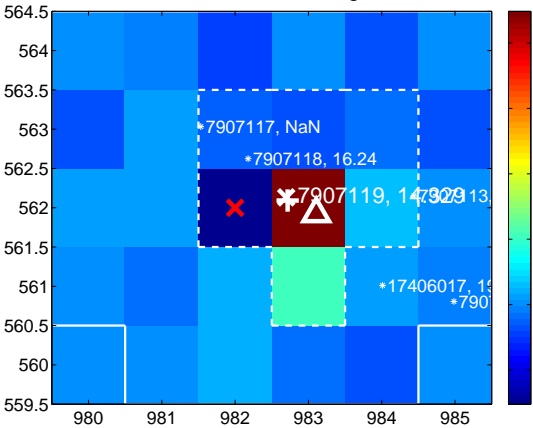
Q1 no difference image



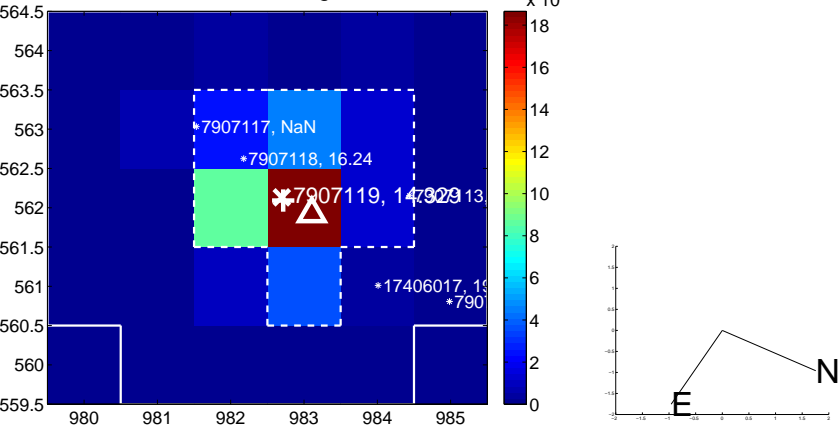
Q1 no OOT image



Q2 difference image



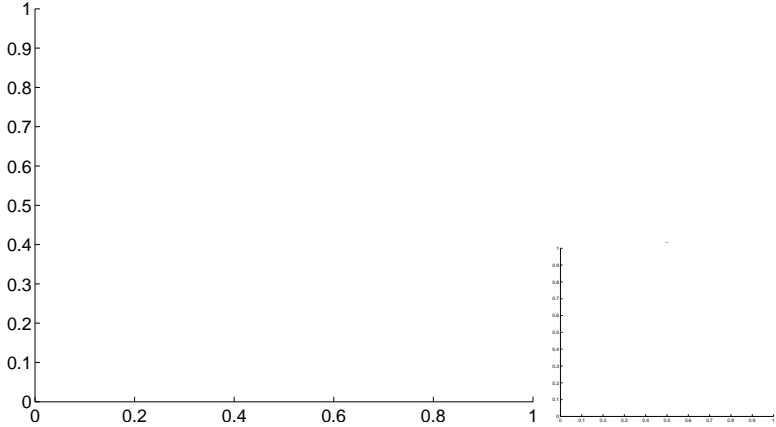
Q2 OOT image



Q3 no difference image



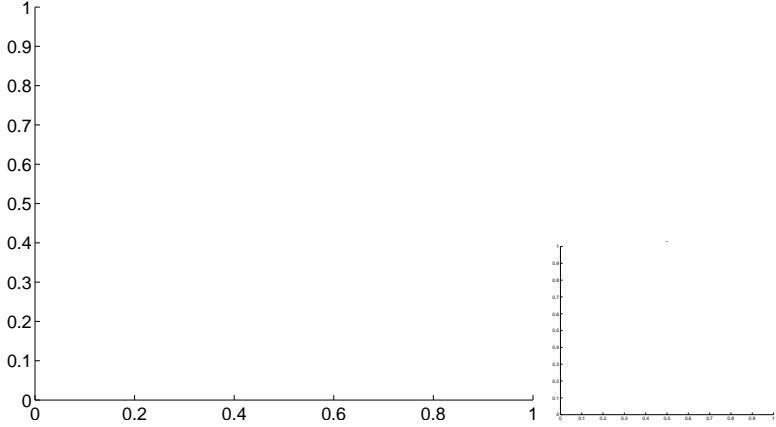
Q3 no OOT image



Q4 no difference image



Q4 no OOT image

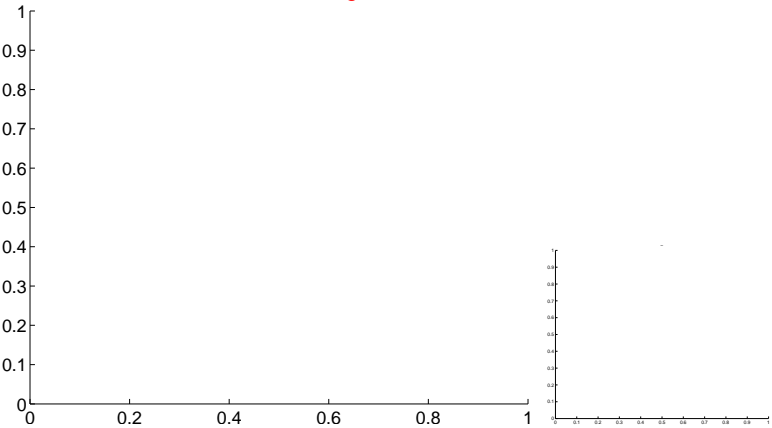


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

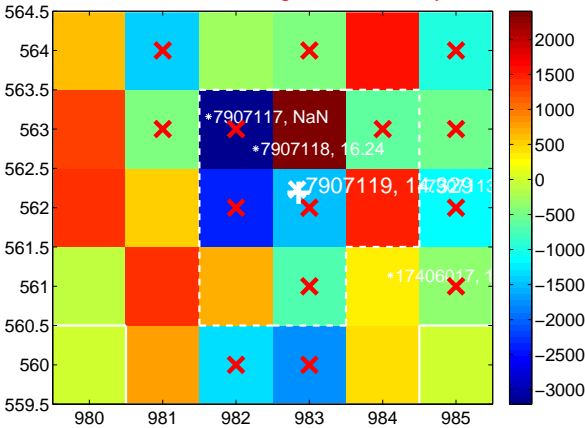
Q5 no difference image



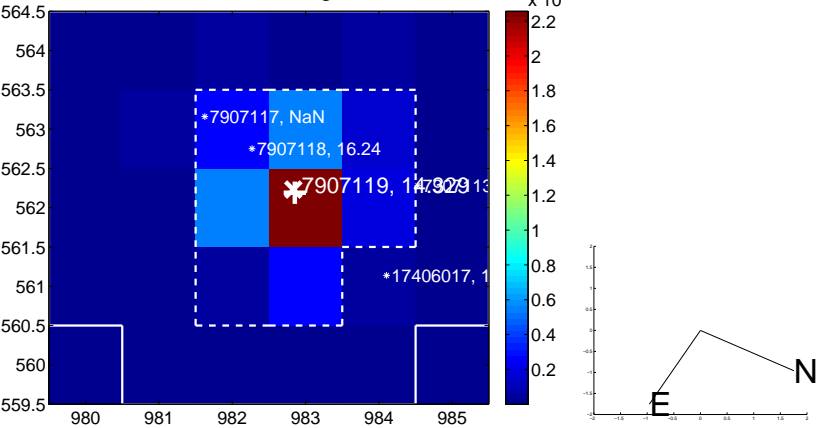
Q5 no OOT image



Q6 difference image. Poor Quality



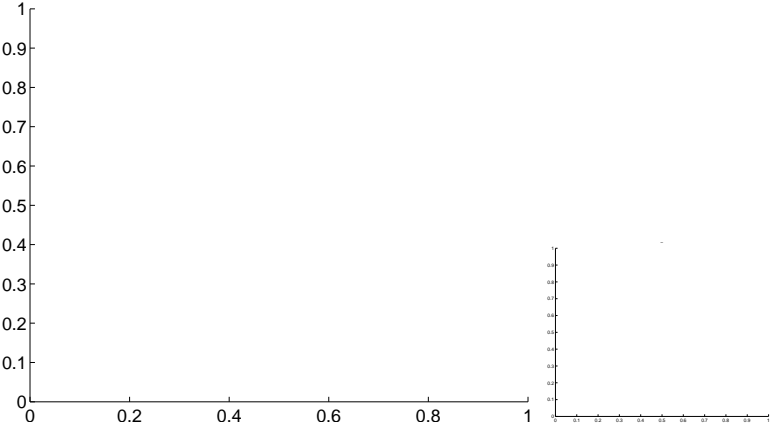
Q6 OOT image



Q7 no difference image



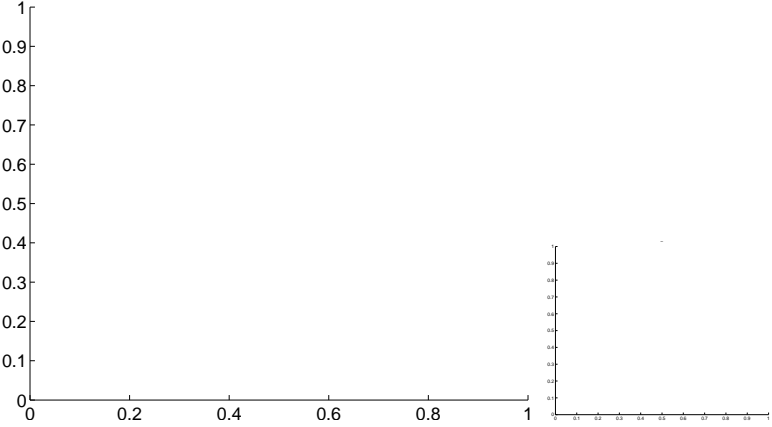
Q7 no OOT image



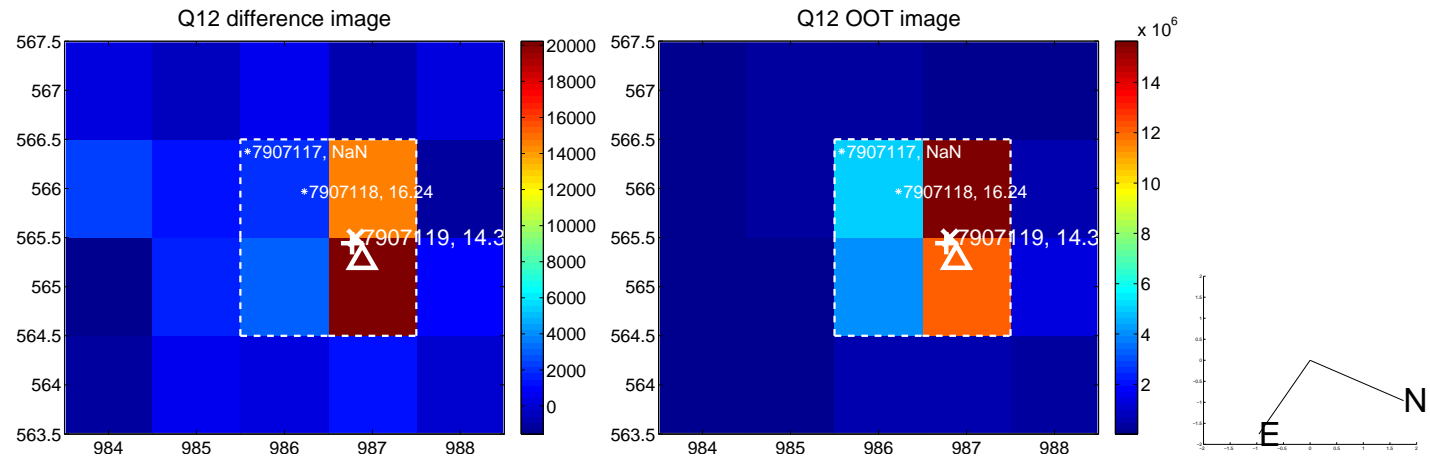
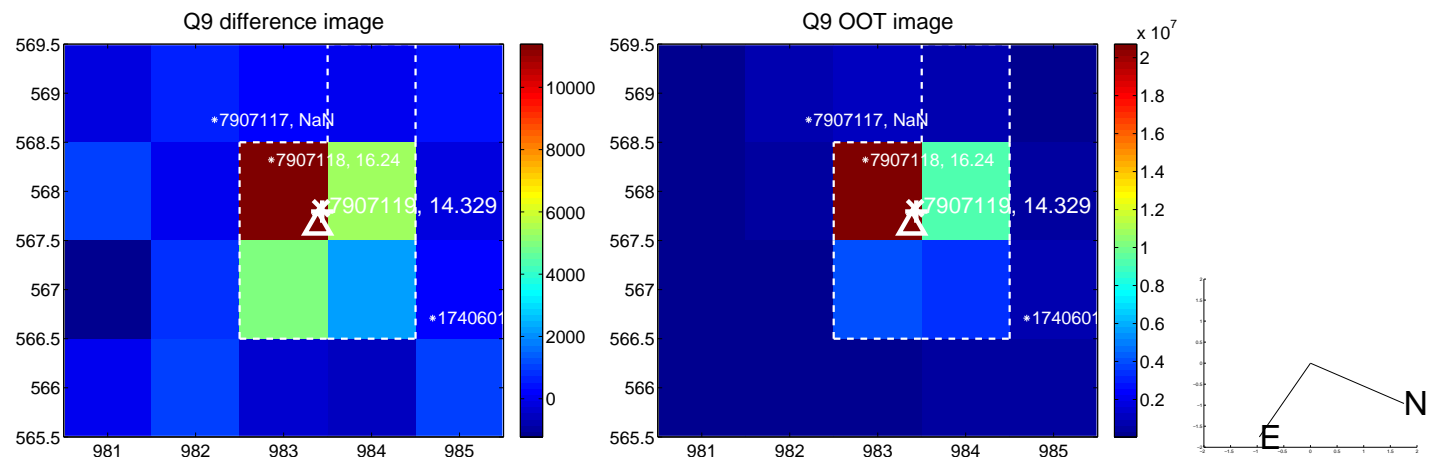
Q8 no difference image



Q8 no OOT image



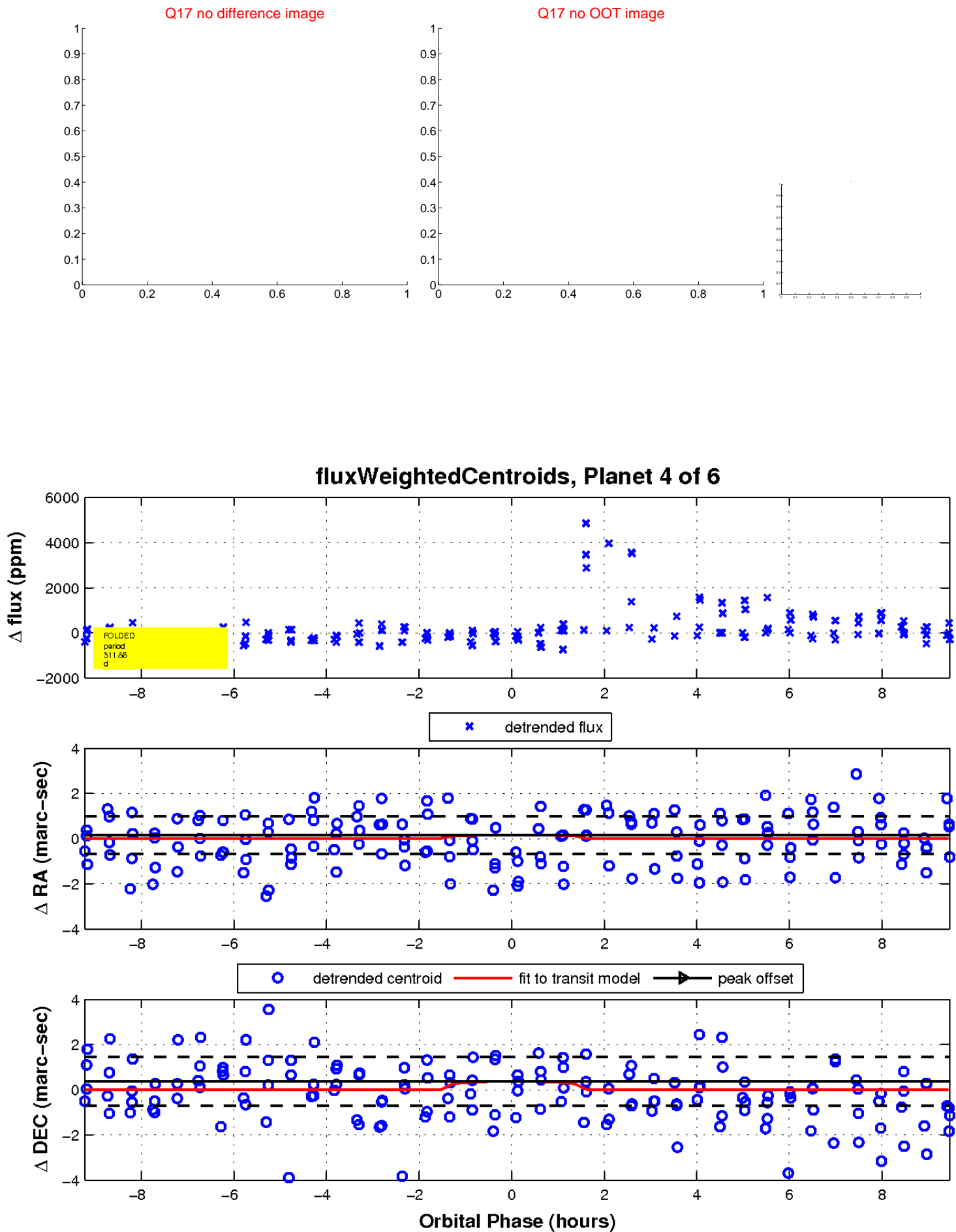
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

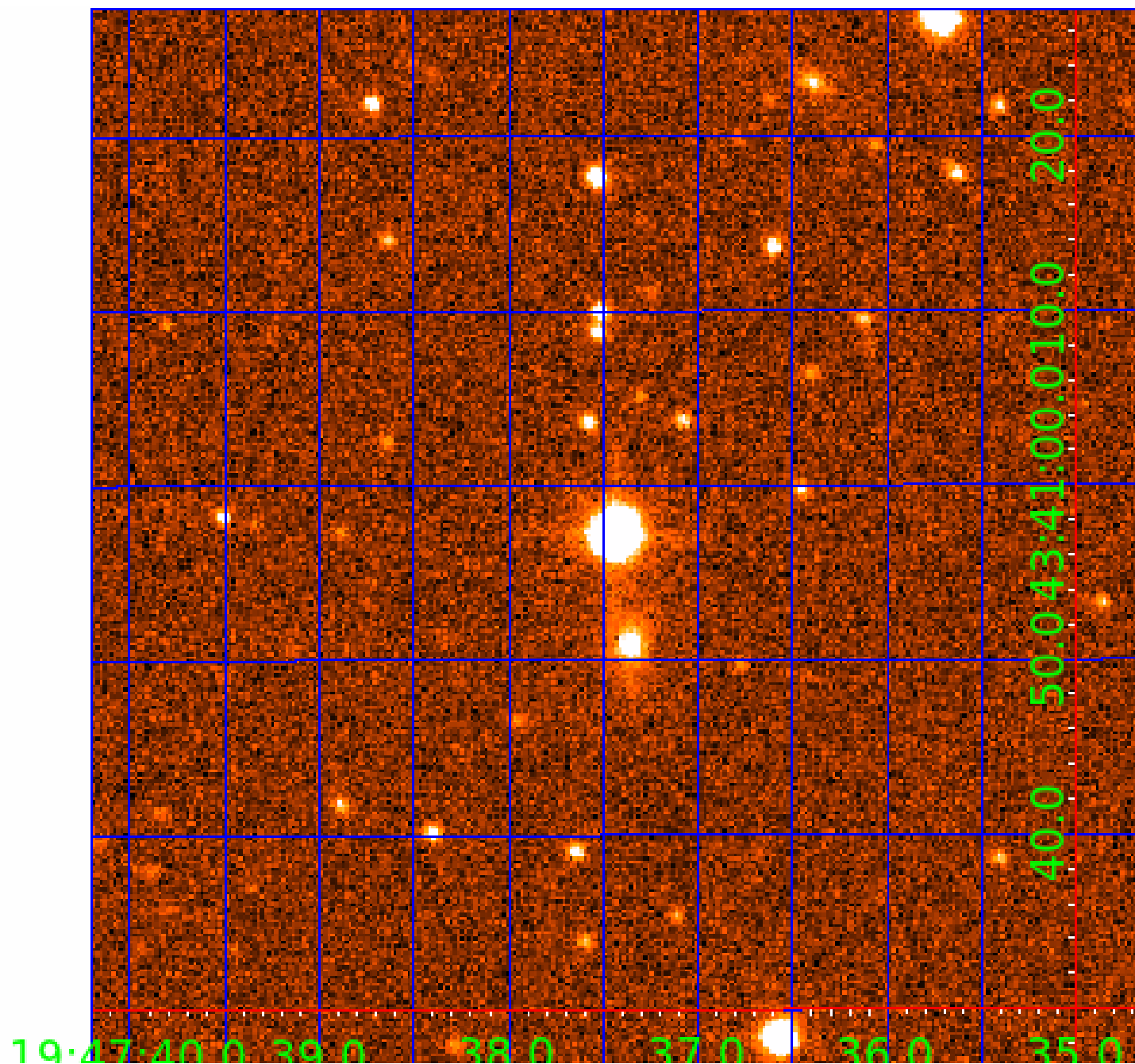


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007907119

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})
007907119-01	OBS	No	536.997023	491.790391	876.1	12.189	15.6	5.6	0.60	4074	1.79	0.08
007907119-02	OBS	No	555.868651	285.706831	459.0	0.986	13.7	2.8	0.60	4074	2.51	0.07
007907119-03	OBS	No	555.899372	285.123731	1039.5	3.736	14.5	7.3	0.60	4074	1.98	0.07
007907119-04	OBS	No	311.855100	233.088025	835.2	3.160	12.4	6.3	0.60	4074	1.95	0.16
007907119-05	OBS	No	477.265858	148.860211	1.1	25.140	10.3	0.0	0.60	4074	0.07	0.09
007907119-06	OBS	No	342.173315	465.173002	908.8	3.510	11.0	7.5	0.60	4074	1.84	0.14

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007907119-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007907119-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007907119-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—SAME_NTL_PERIOD—CENT_FEW_DIFFS
007907119-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—CENT_FEW_DIFFS
007907119-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007907119-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

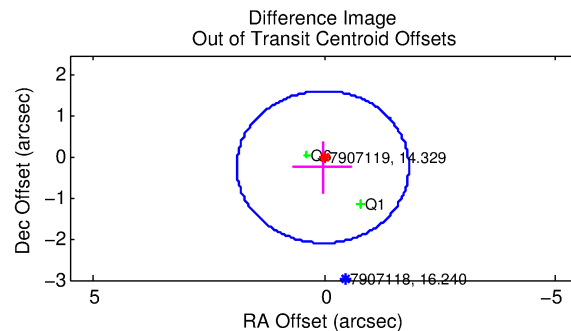
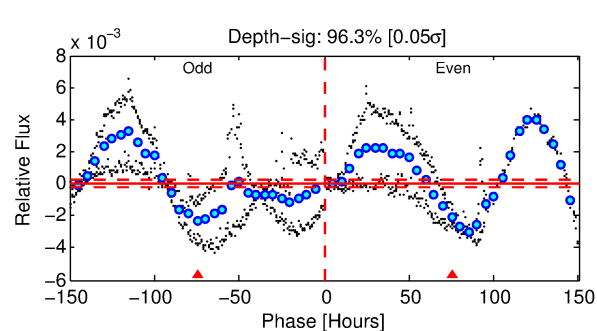
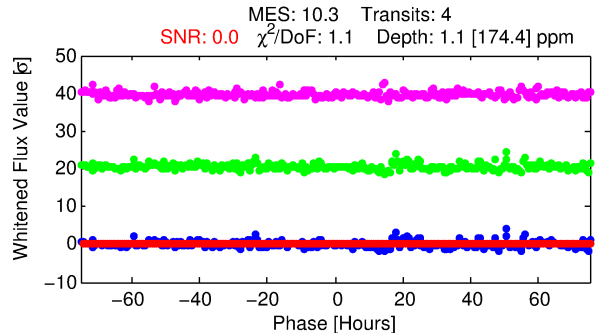
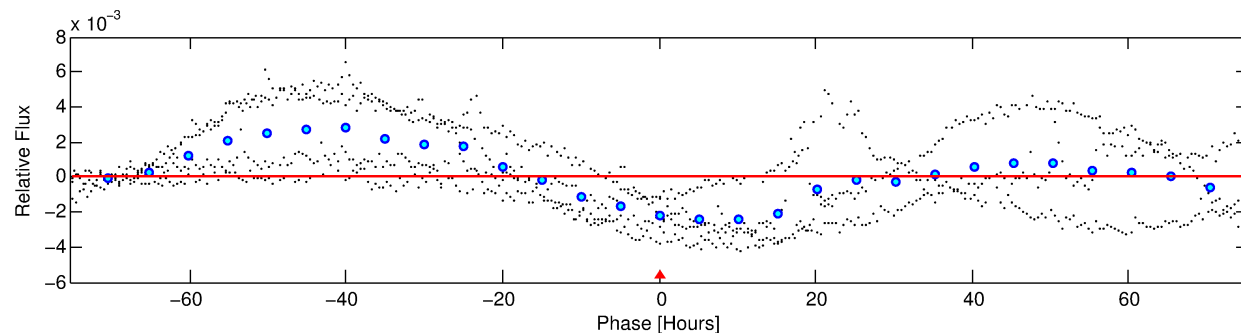
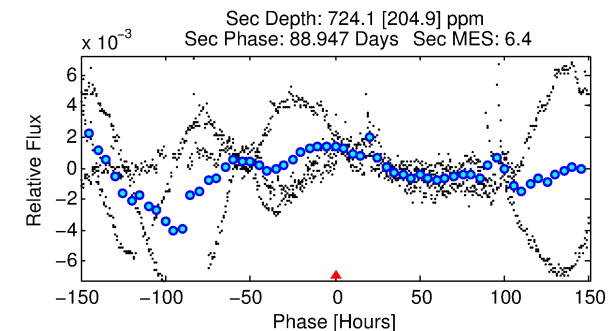
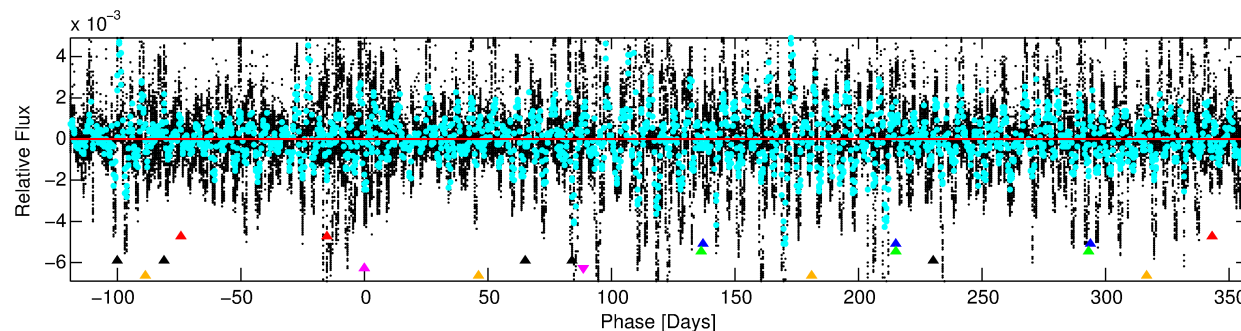
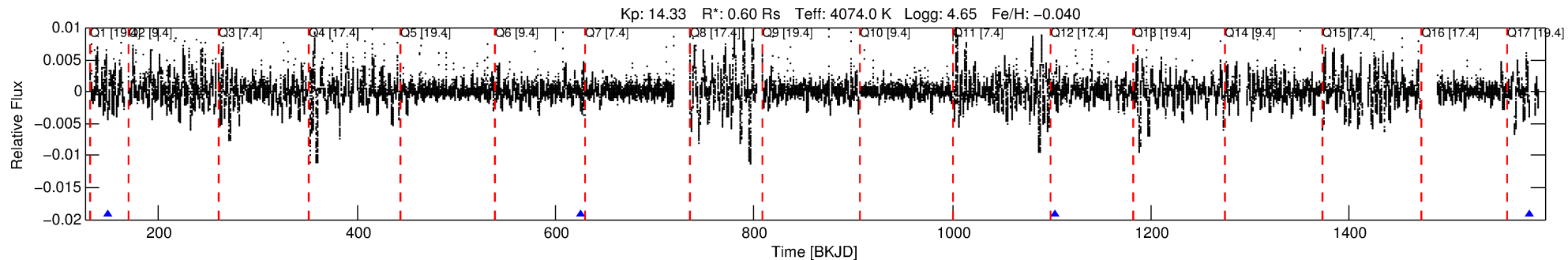
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007907119-05

No Significant Match Found

DV One-Page Summary

KIC: 7907119 Candidate: 5 of 6 Period: 477.266 d



DV Fit Results:

Period = 477.26586 [3.47392] d
Epoch = 148.8602 [8.2377] BKJD
Rp/R* = 0.0011 [0.0983]
a/R* = 68.30 [5427.18]
b = 0.88 [19.06]
Seff = 0.09 [0.02]
Teq = 139 [7] K
Rp = 0.07 [6.49] Re
a = 1.0070 [0.0906] AU
Ag = 72964963.62 [12733597676.18] [0.01σ]
Teff = 19907 [868499] K [0.02σ]

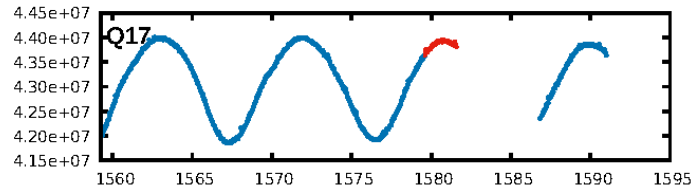
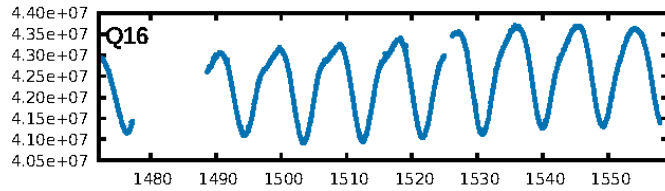
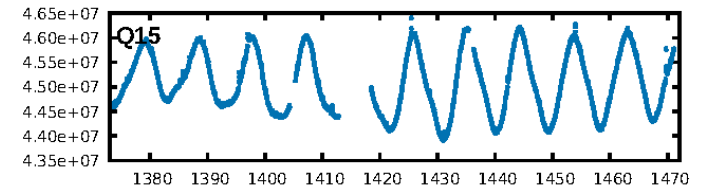
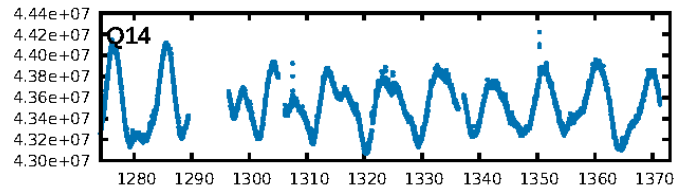
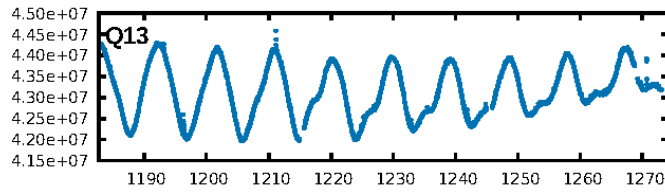
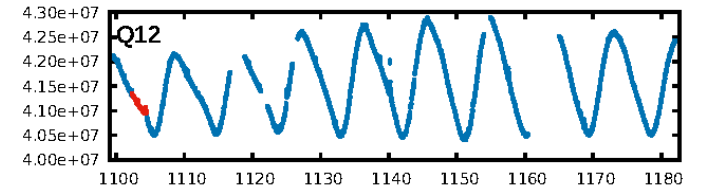
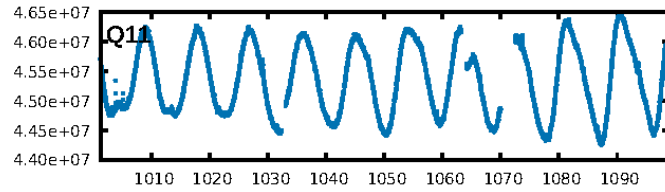
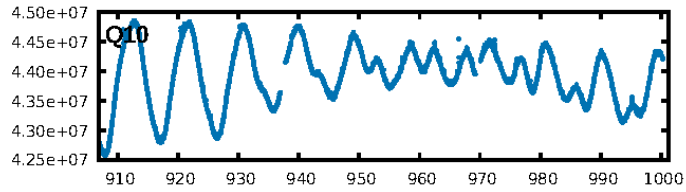
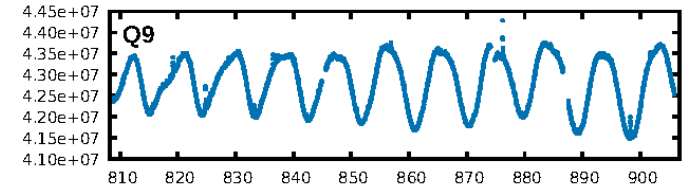
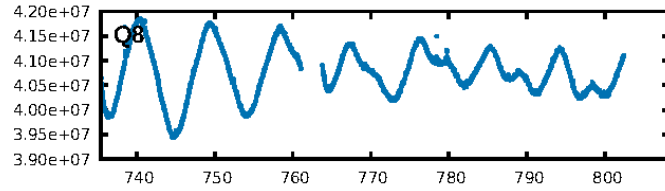
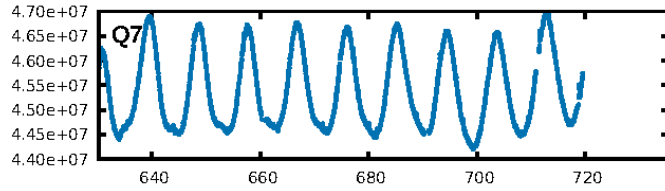
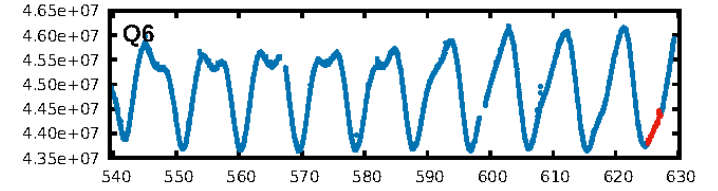
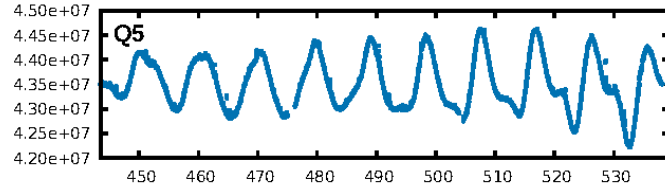
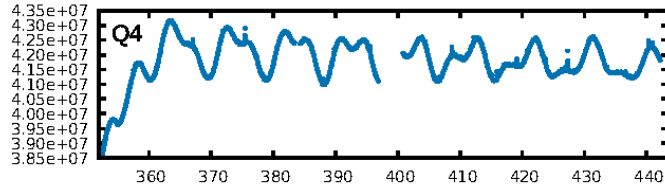
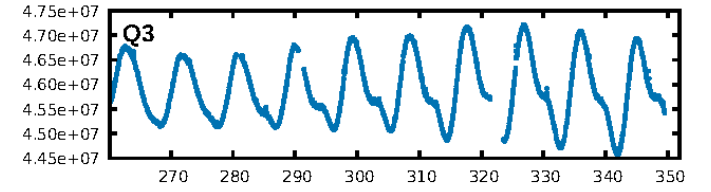
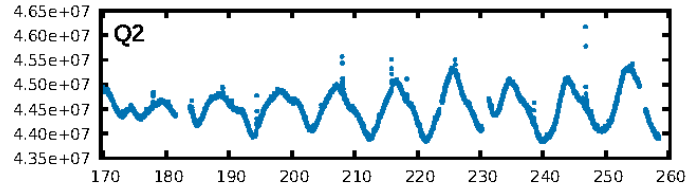
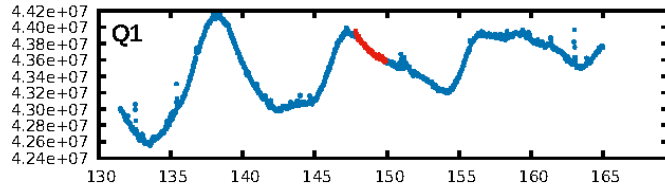
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [127.73σ]
LongPeriod-sig: 100.0% [51.31σ]
ModelChiSquare2-sig: 11.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.59e-08
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
QotOffset-rm: 0.237 arcsec [0.38σ]
KicOffset-rm: 0.182 arcsec [0.29σ]
QotOffset-st: 1/0/0/1 [2]
KicOffset-st: 1/0/0/1 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

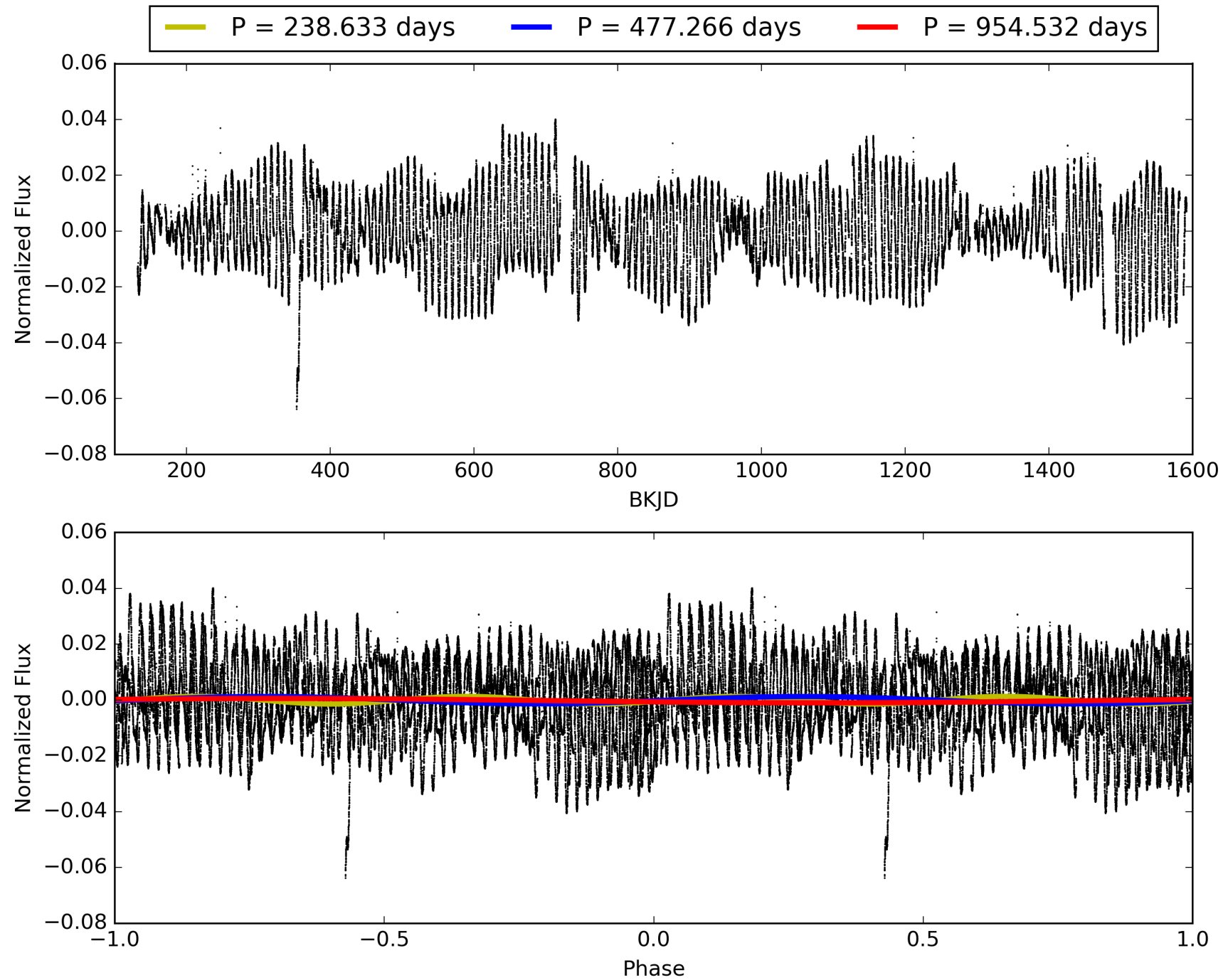
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 05:19:19 Z

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

TCE 007907119-05, PDC Light Curves

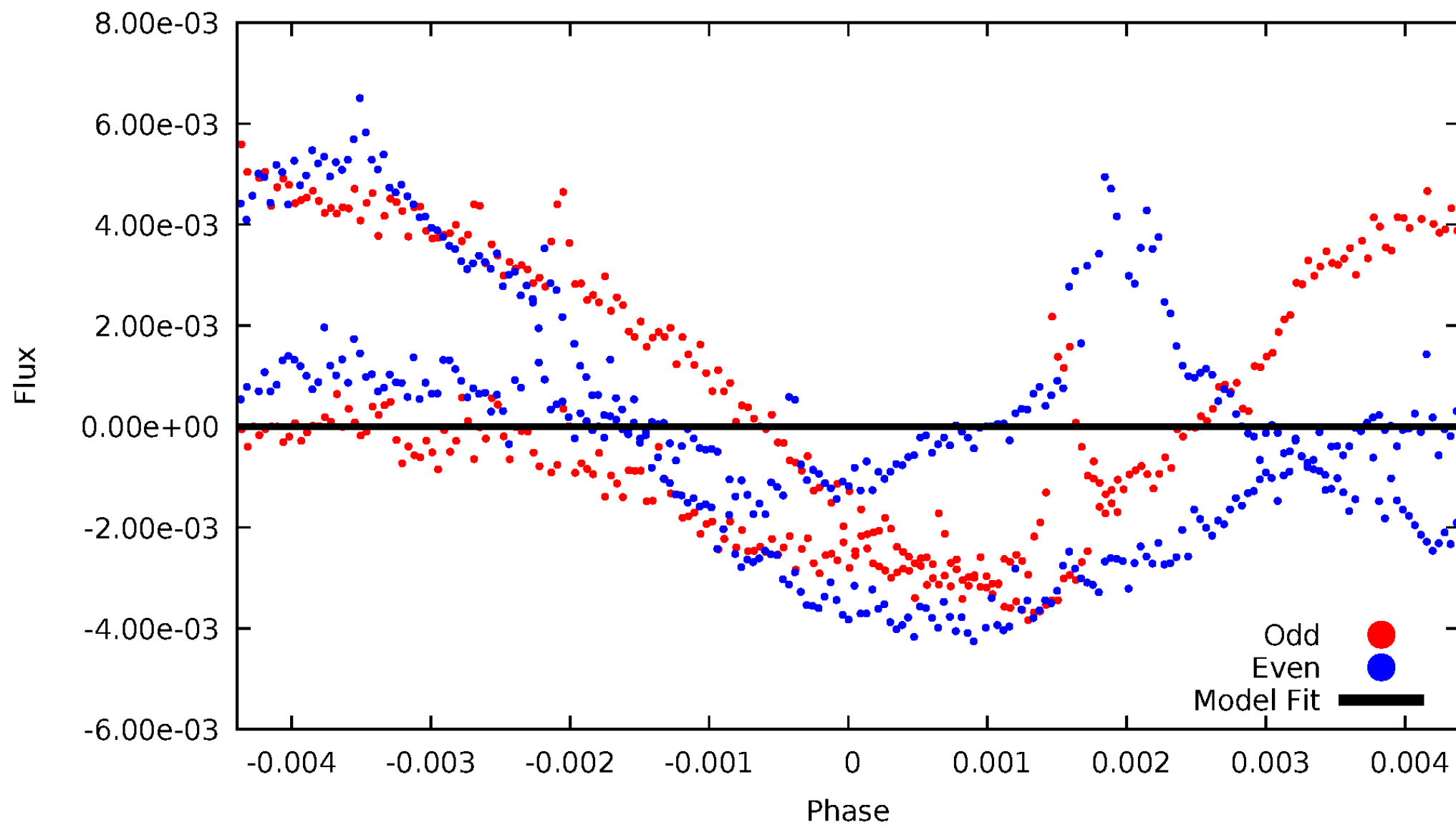


TCE 007907119-05



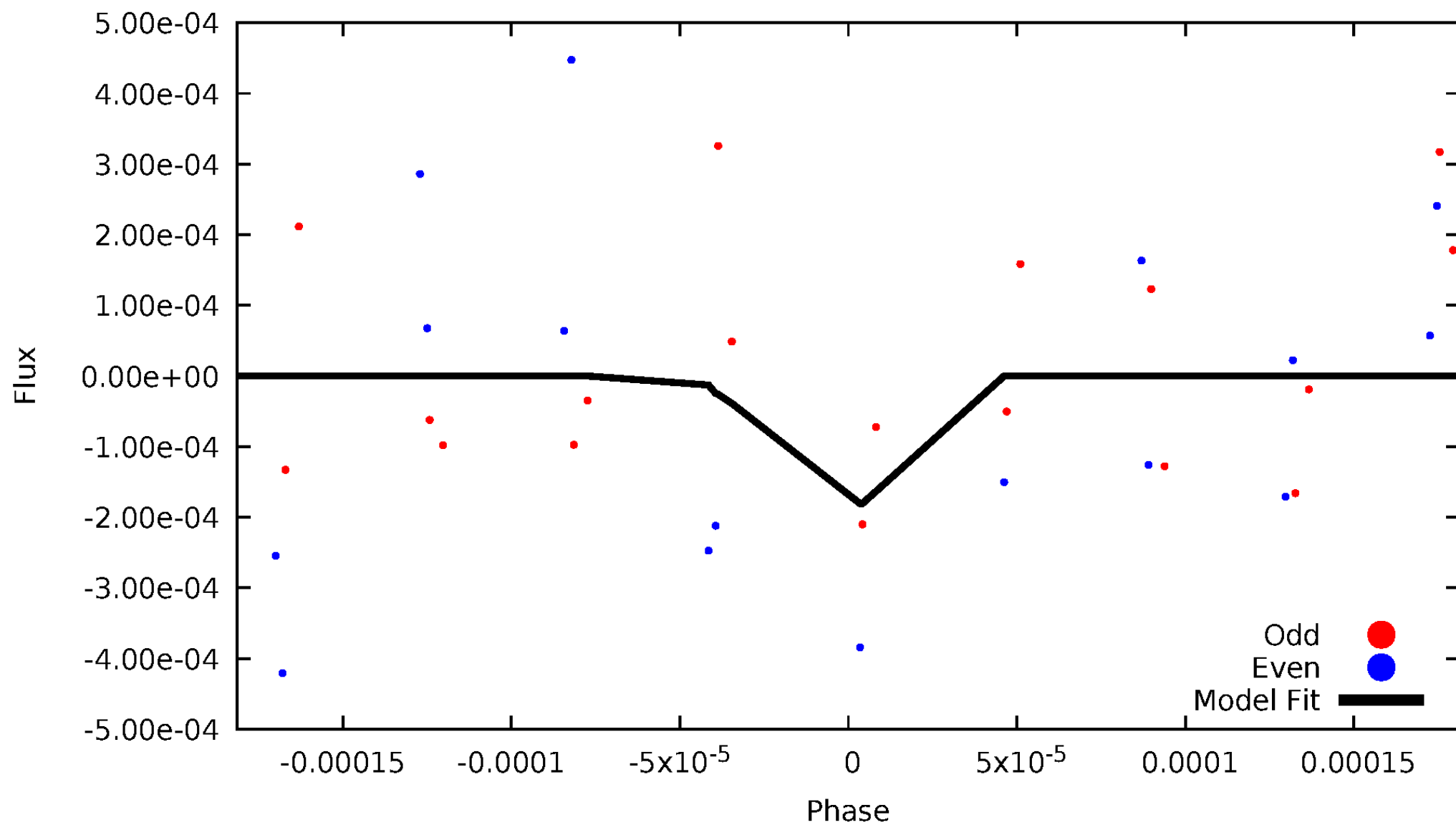
DV Odd/Even

TCE 007907119-05



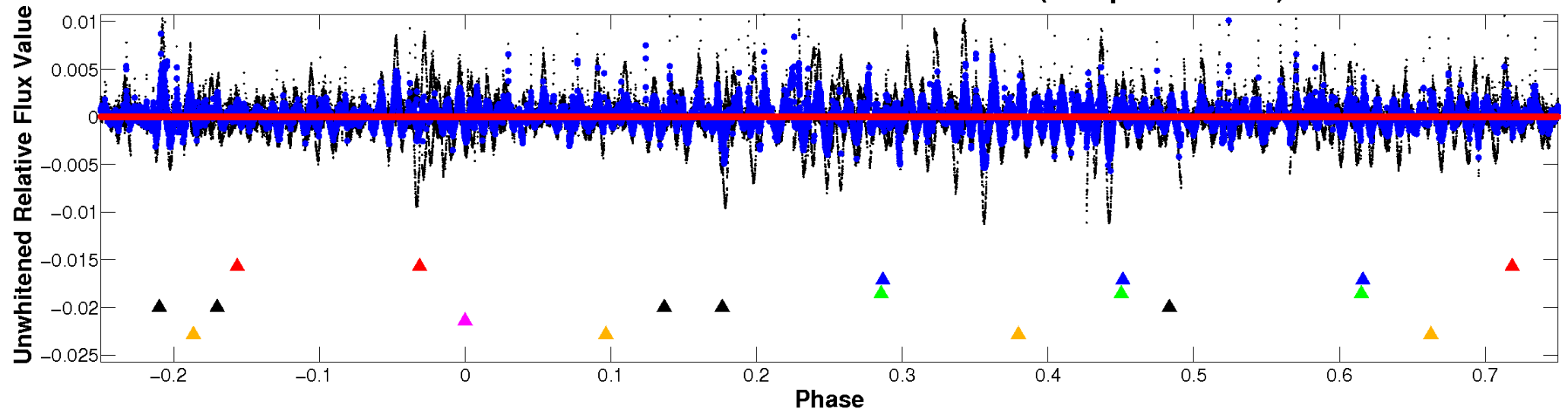
ALT Odd/Even

TCE 007907119-05

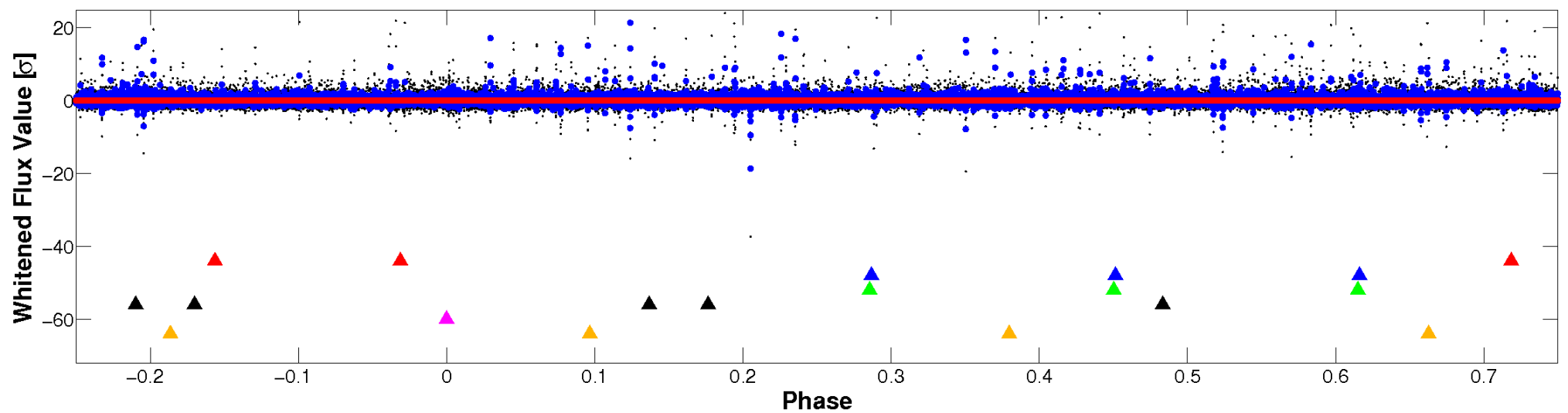


Non-Whitened Vs. Whitened Light Curve

Planet 5 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

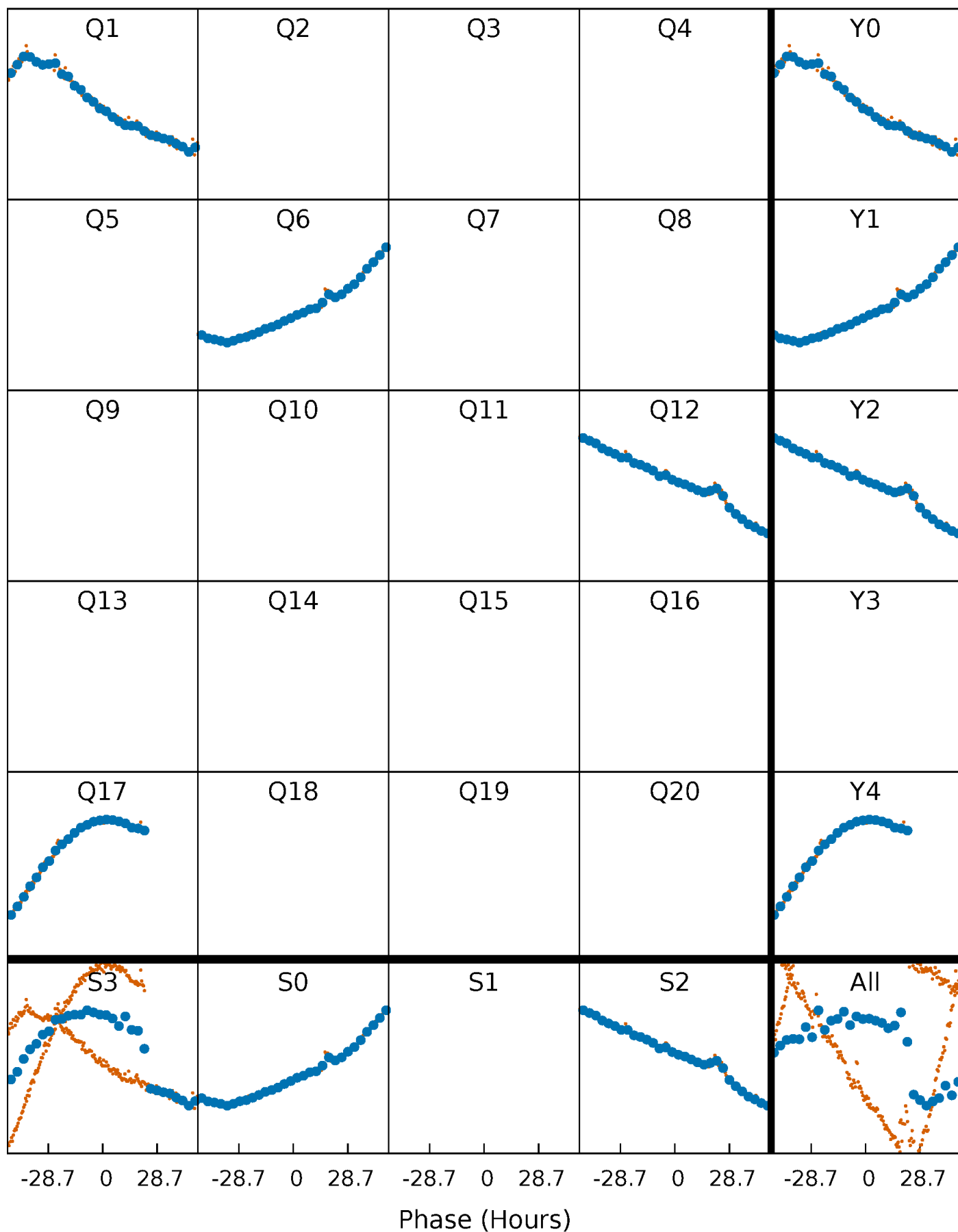


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



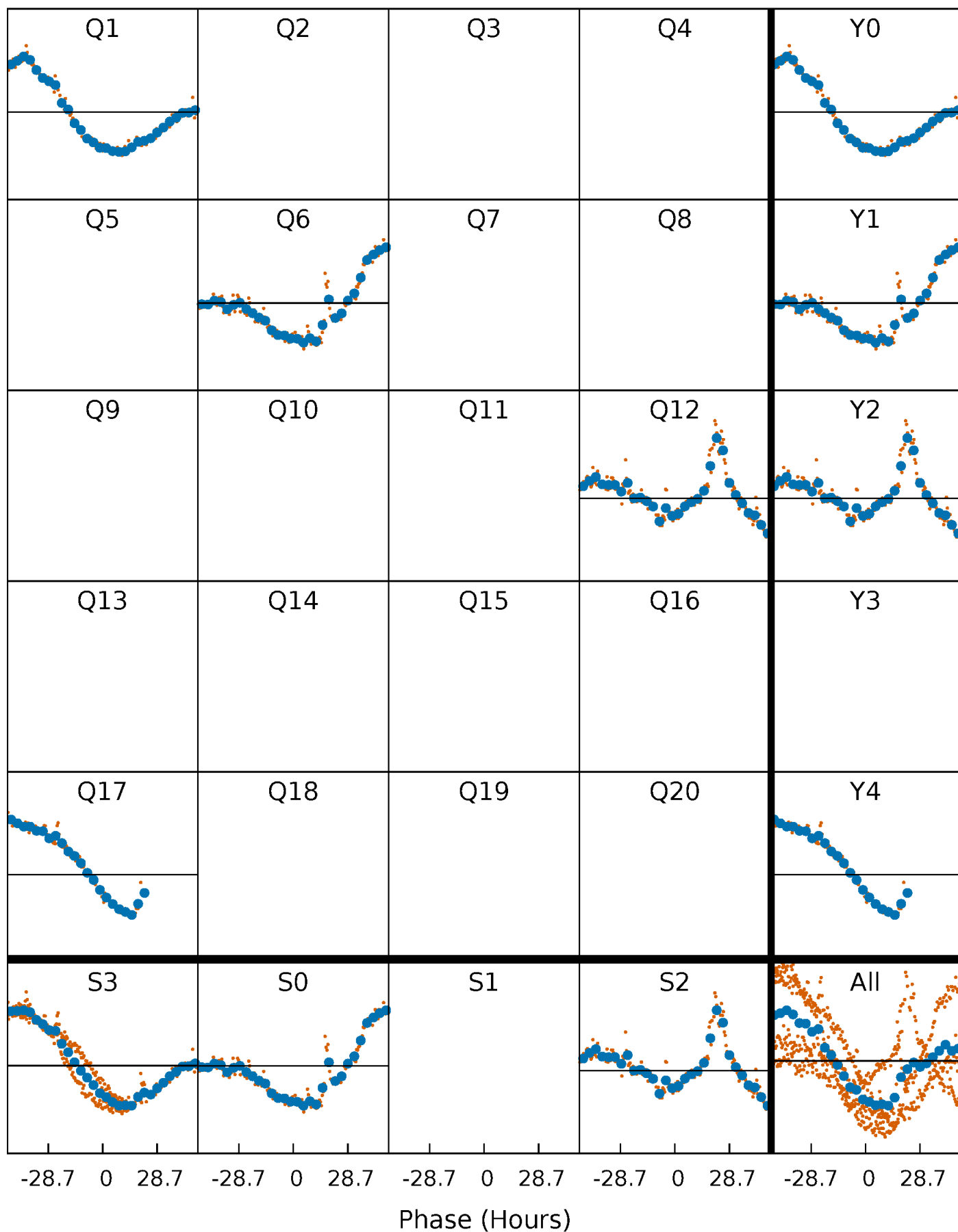
PDC Quarter-Phased Transit Curves

TCE 007907119-05 $P=477.265858$ Days $T_0=148.860211$ (BKJD)



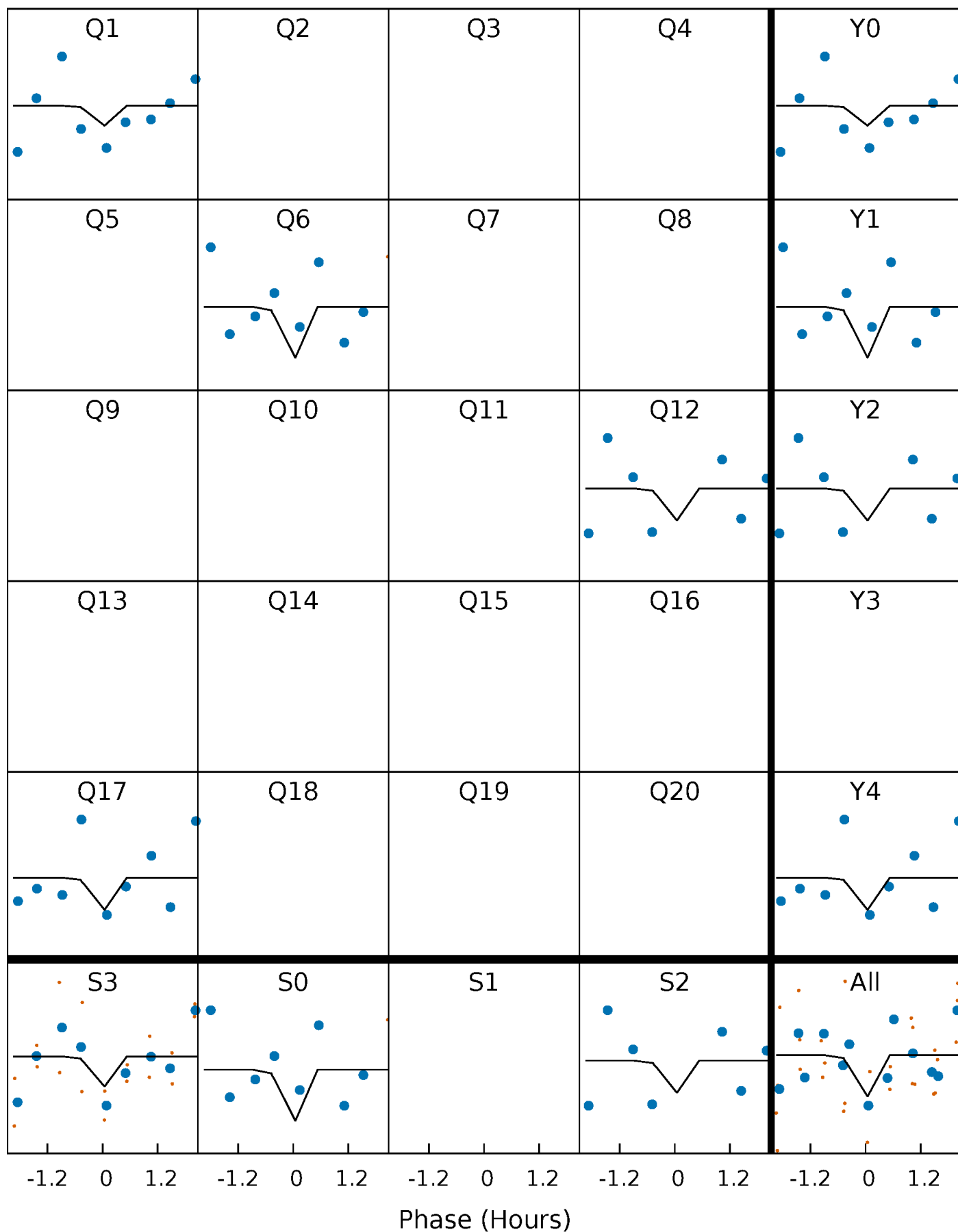
DV Quarter-Phased Transit Curves

TCE 007907119-05 $P=477.265858$ Days $T_0=148.860211$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

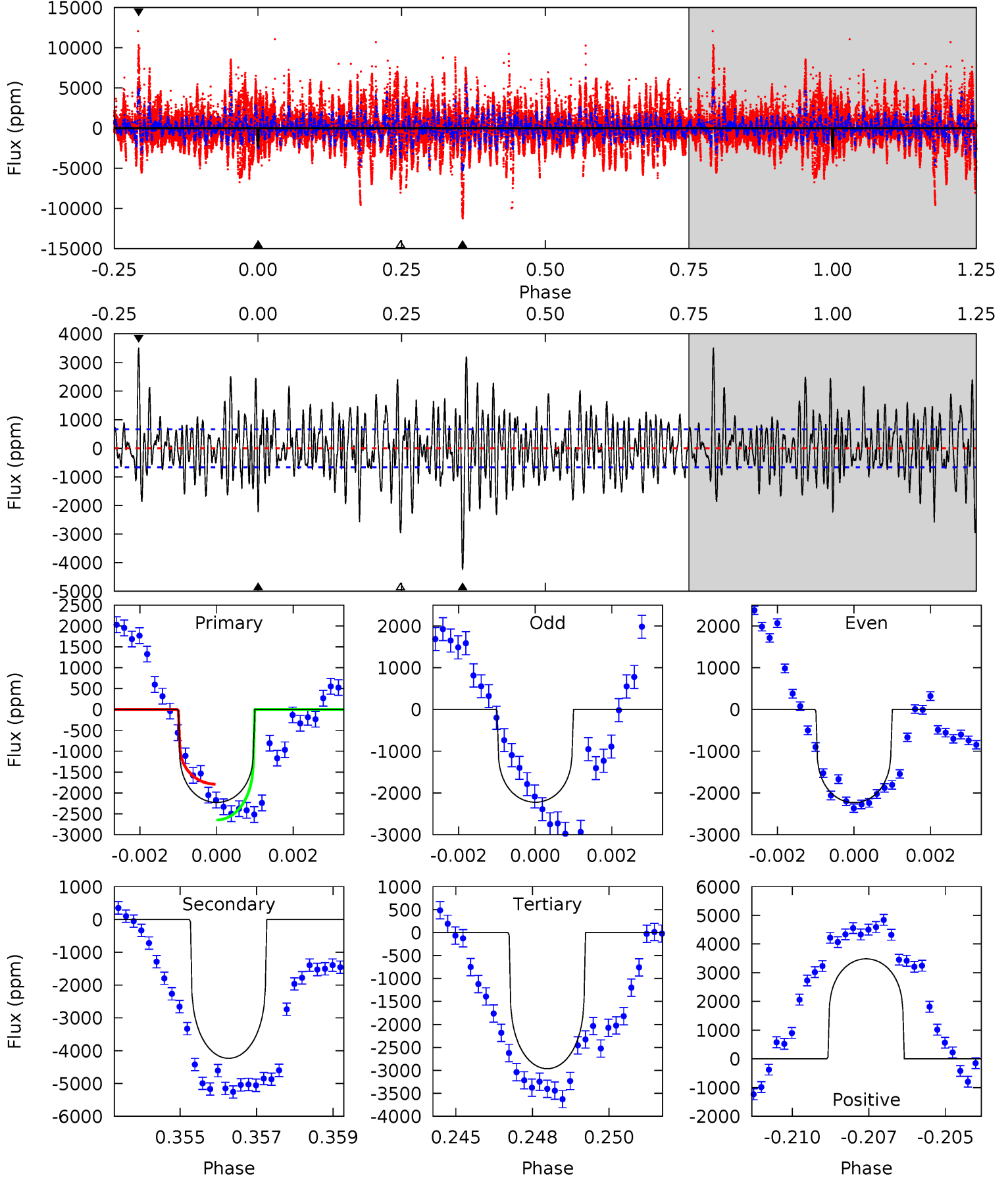
TCE 007907119-05 P=477.348395 Days $T_0=148.491369$ (BKJD)



DV Model-Shift Uniqueness Test

007907119-05, P = 477.265858 Days, E = 148.860211 Days

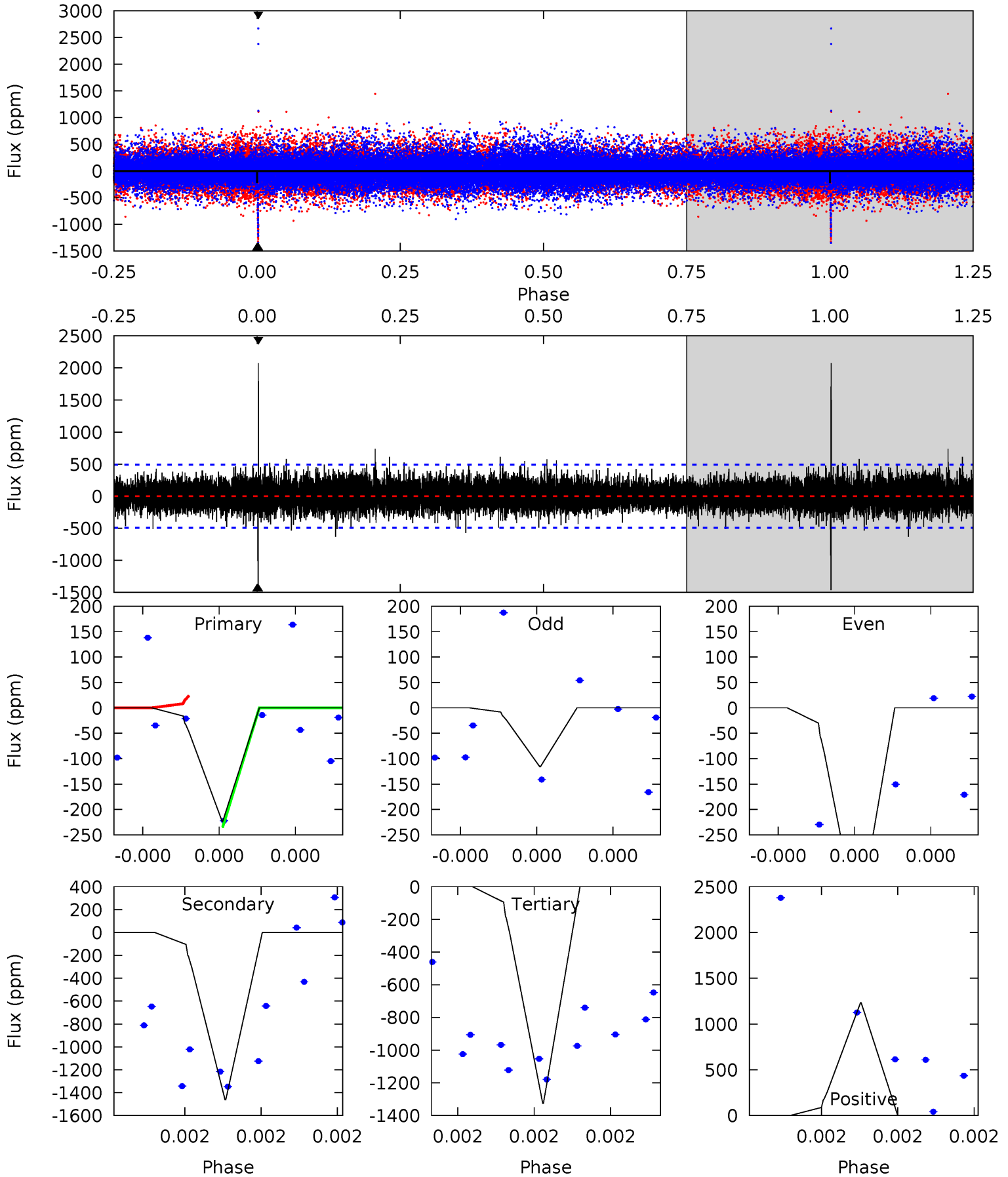
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.8	33.9	23.7	27.9	5.31	3.06	6.92	-5.89	-10.1	10.2	5.99	0.04	1.00	0.45	3.45



Alt Model-Shift Uniqueness Test

007907119-05, P = 477.348395 Days, E = 148.491369 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.66	17.4	15.8	14.7	5.87	3.92	1.41	-13.1	-12.0	1.63	2.75	1.42	1.31	0.59	1.25



Stellar Parameters For KIC 007907119

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4074^{+127}_{-155}	$4.651^{+0.060}_{-0.024}$	$-0.040^{+0.300}_{-0.300}$	$0.605^{+0.043}_{-0.070}$	$0.598^{+0.057}_{-0.063}$	$3.804^{+1.124}_{-0.400}$
	+3%/-4%	+1%/-1%	+750%/-750%	+7%/-12%	+10%/-11%	+30%/-11%
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 007907119-05 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-4233 ± 125	$4.16^{+4.59}_{-2.99}$	193^{+7}_{-8}	4087^{+3097}_{-887}	$137659^{+1608936}_{-106230}$
Alt.	-1463 ± 84	$4.66^{+4.91}_{-3.36}$	193^{+7}_{-8}	3301^{+2028}_{-596}	$37440^{+442936}_{-28430}$

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

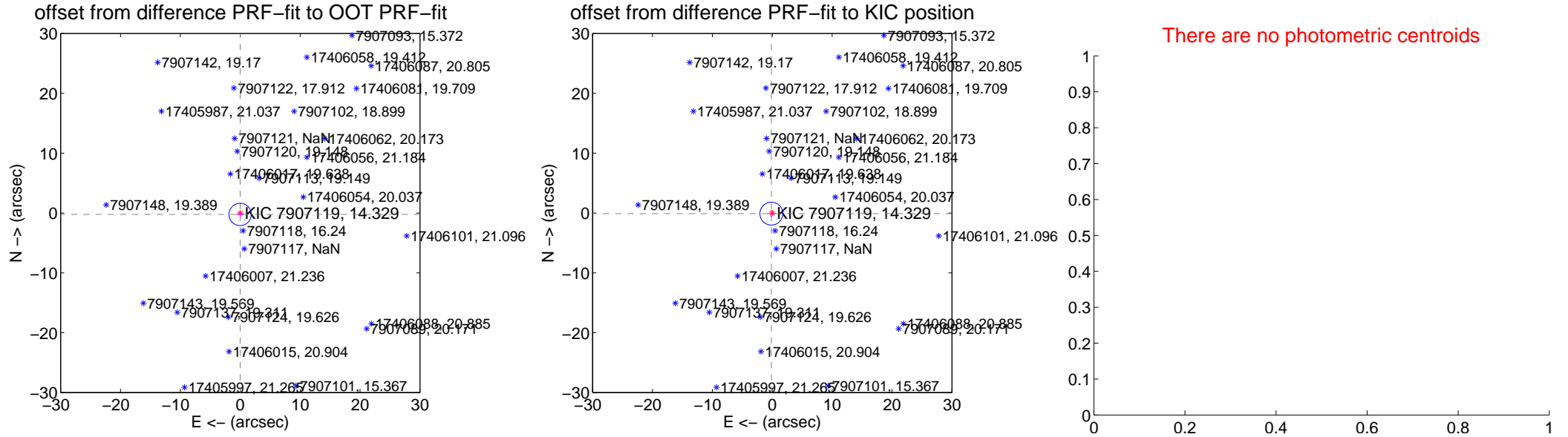
DV Centroid Data

Supplemental centroid analysis for 007907119-05. Kepler magnitude: 14.33. Transit SNR 0.01

There are 2 quarters with good PRF difference image offsets

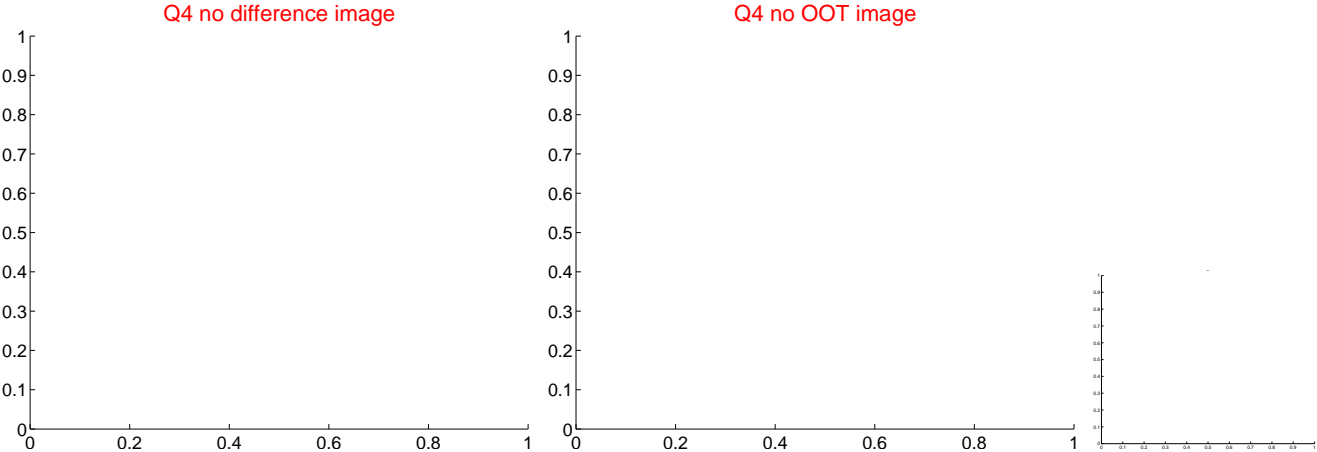
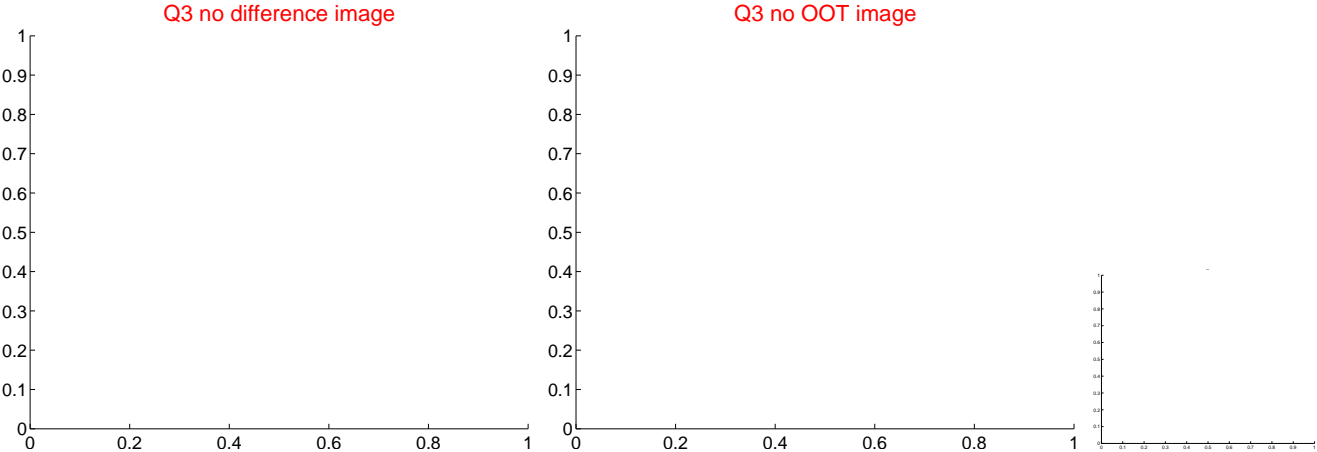
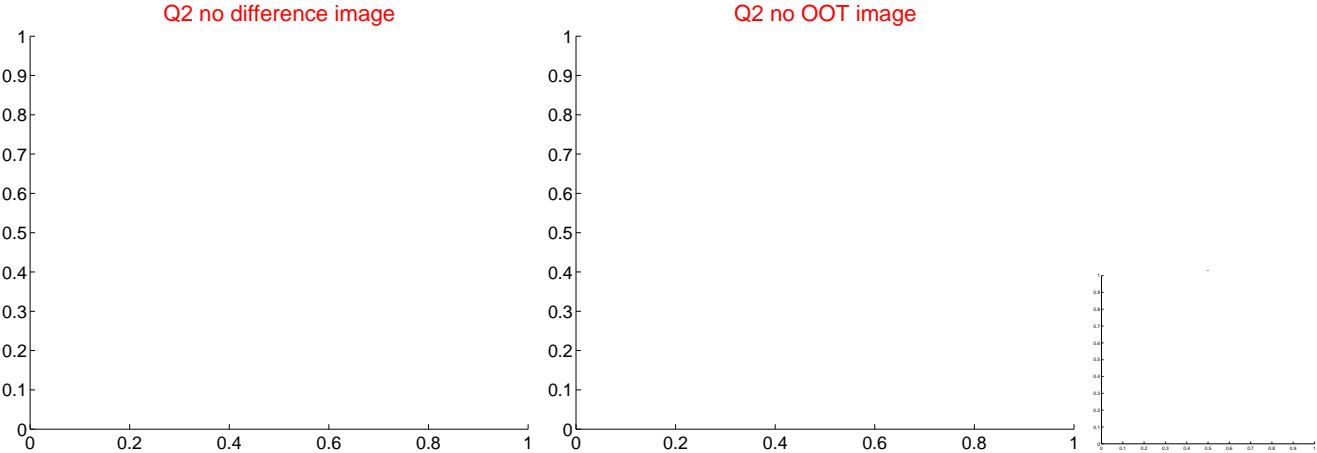
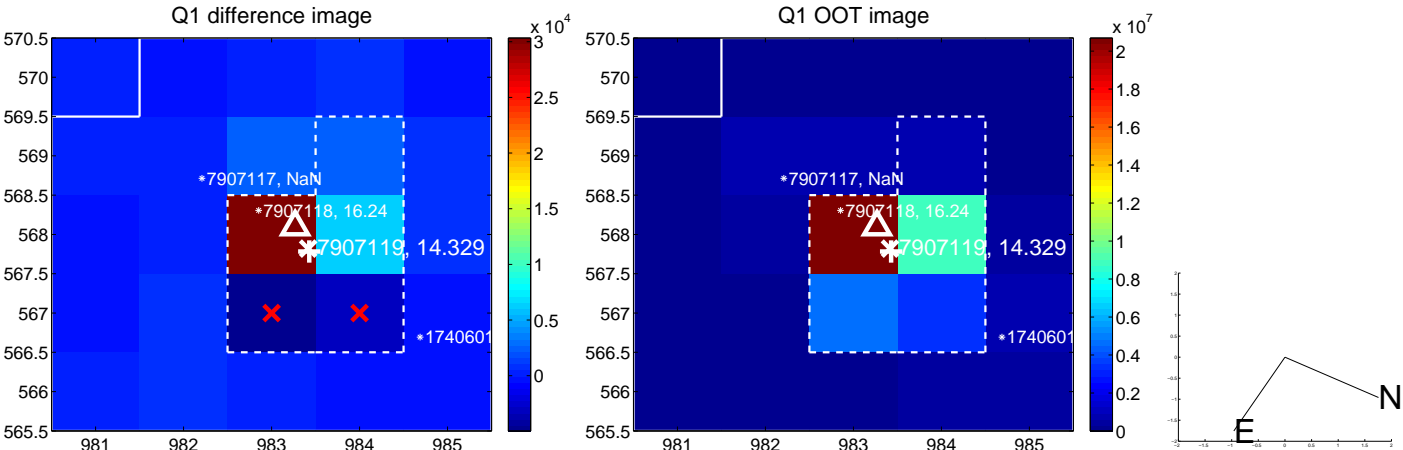
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.237 ± 0.621	0.38	0.028 ± 0.626	-0.235 ± 0.621
PRF-fit source offset from KIC position	0.182 ± 0.638	0.29	0.150 ± 0.639	-0.103 ± 0.634
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.

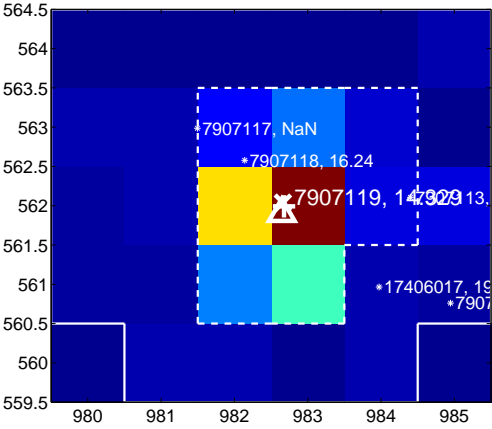
Q5 no difference image



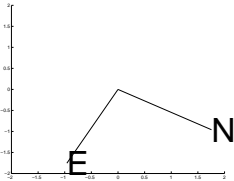
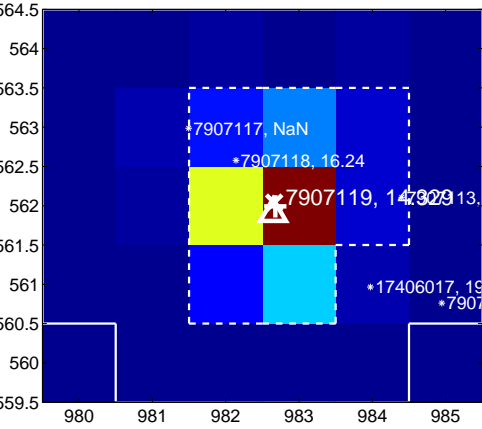
Q5 no OOT image



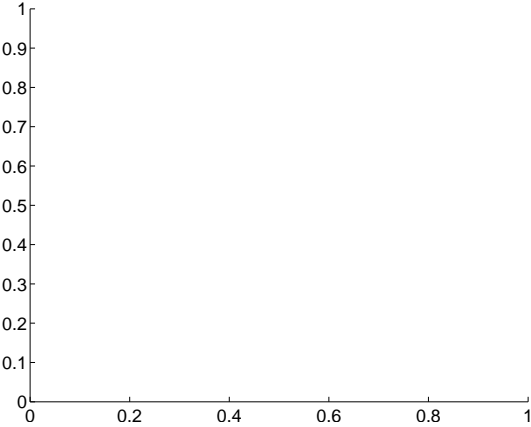
Q6 difference image



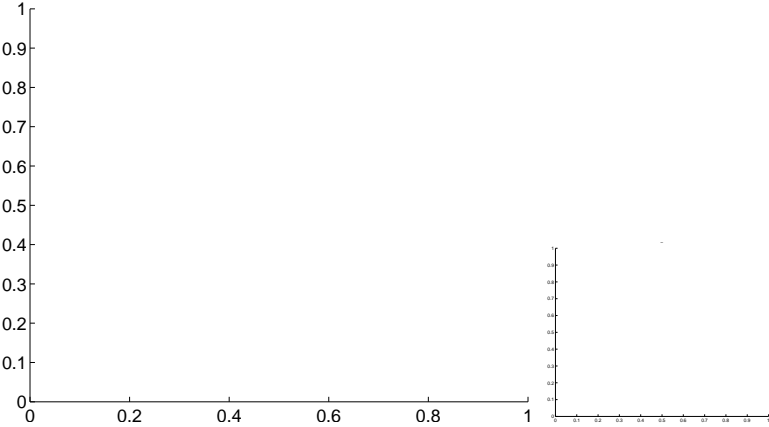
Q6 OOT image



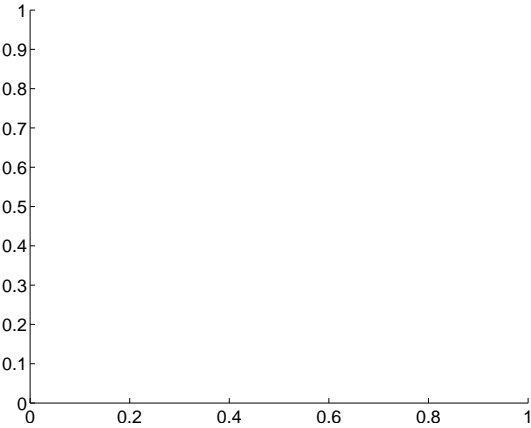
Q7 no difference image



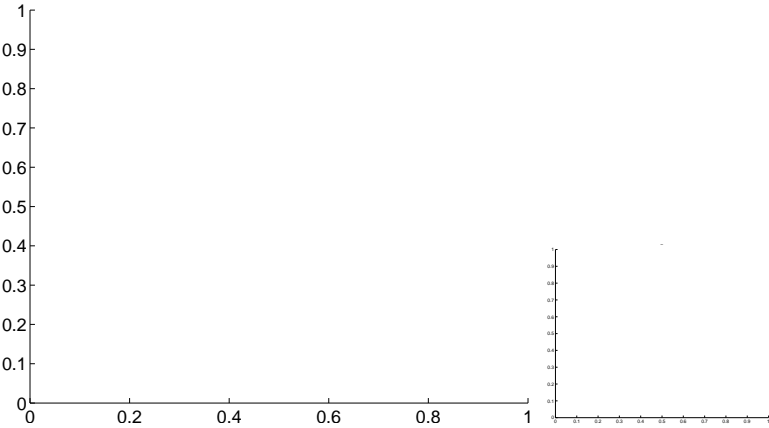
Q7 no OOT image



Q8 no difference image



Q8 no OOT image



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.



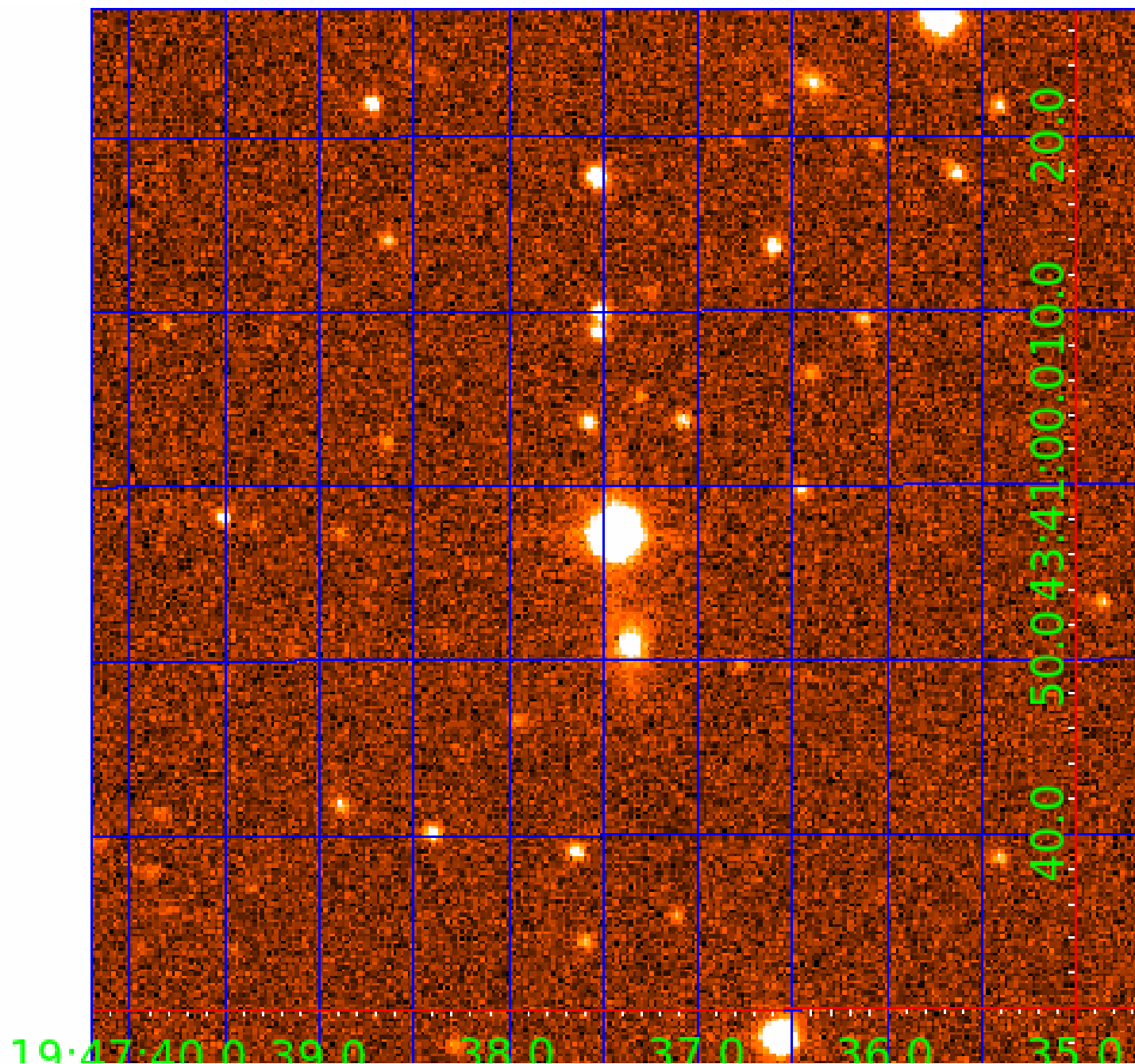
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 007907119

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})
007907119-01	OBS	No	536.997023	491.790391	876.1	12.189	15.6	5.6	0.60	4074	1.79	0.08
007907119-02	OBS	No	555.868651	285.706831	459.0	0.986	13.7	2.8	0.60	4074	2.51	0.07
007907119-03	OBS	No	555.899372	285.123731	1039.5	3.736	14.5	7.3	0.60	4074	1.98	0.07
007907119-04	OBS	No	311.855100	233.088025	835.2	3.160	12.4	6.3	0.60	4074	1.95	0.16
007907119-05	OBS	No	477.265858	148.860211	1.1	25.140	10.3	0.0	0.60	4074	0.07	0.09
007907119-06	OBS	No	342.173315	465.173002	908.8	3.510	11.0	7.5	0.60	4074	1.84	0.14

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007907119-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007907119-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007907119-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—SAME_NTL_PERIOD—CENT_FEW_DIFFS
007907119-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—CENT_FEW_DIFFS
007907119-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007907119-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

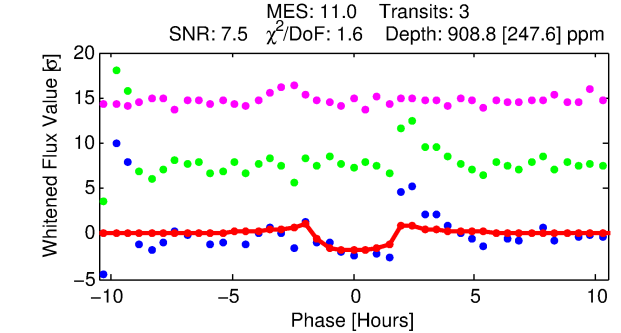
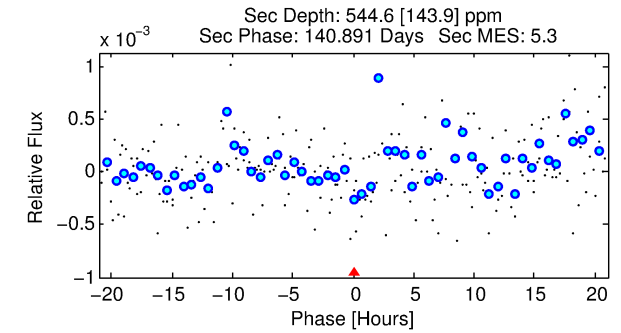
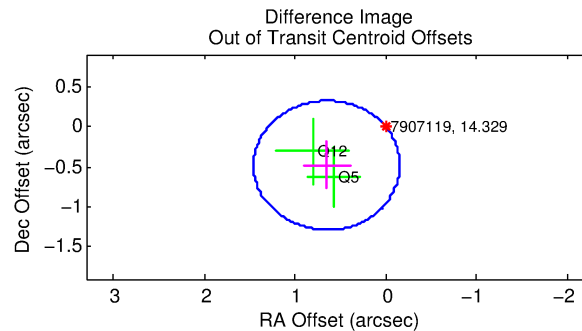
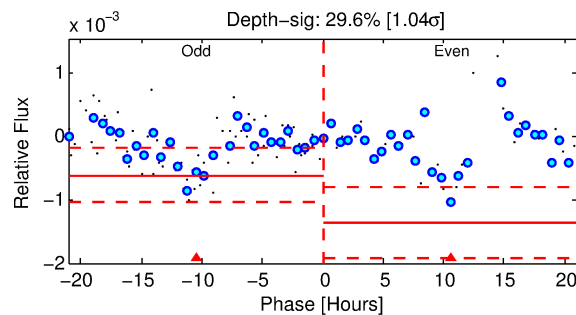
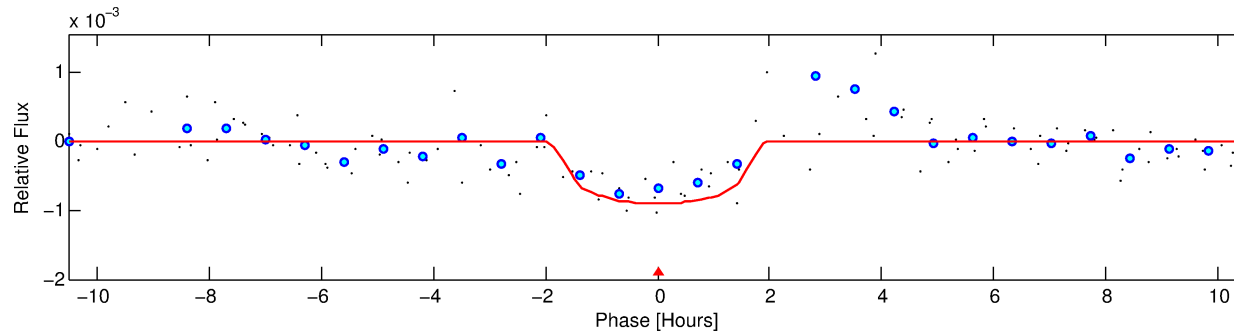
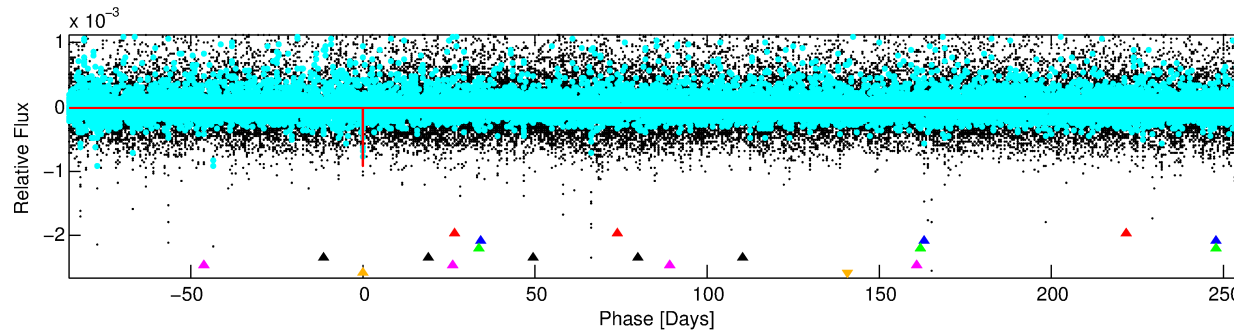
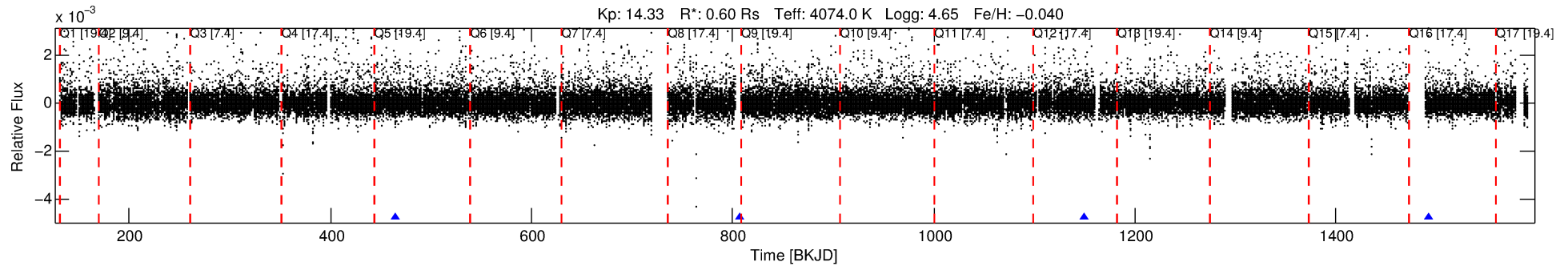
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007907119-06

No Significant Match Found

DV One-Page Summary

KIC: 7907119 Candidate: 6 of 6 Period: 342.173 d



DV Fit Results:

Period = 342.17332 [0.00538] d
Epoch = 465.1730 [0.0123] BKJD
Rp/R* = 0.0278 [0.0696]
a/R* = 677.52 [5805.10]
b = 0.48 [14.07]
Seff = 0.14 [0.03]
Teq = 156 [8] K
Rp = 1.84 [4.60] Re
a = 0.8067 [0.0725] AU
Ag = 57812.60 [289722.29] [0.20 σ]
Teffp = 3732 [4676] K [0.76 σ]

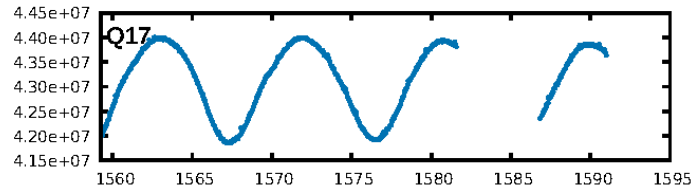
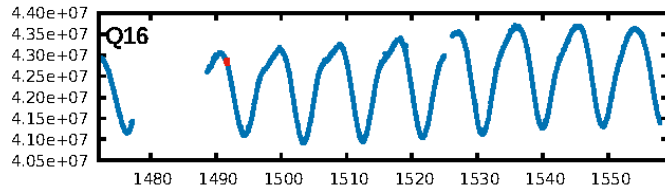
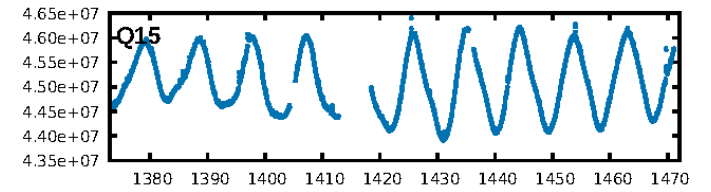
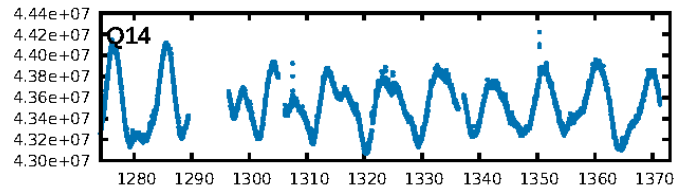
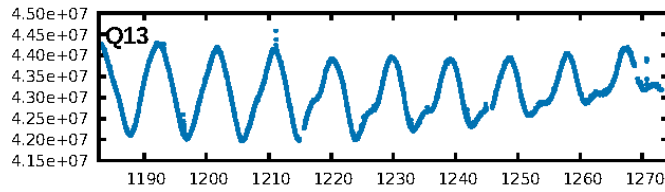
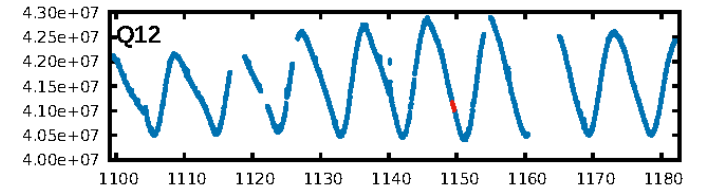
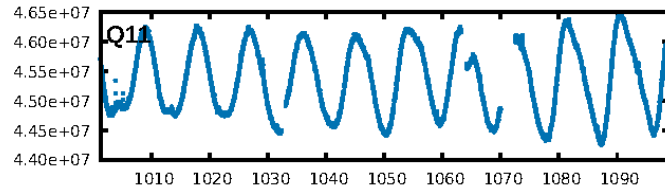
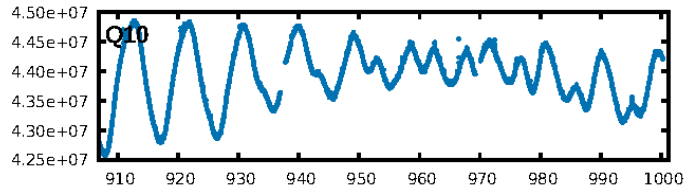
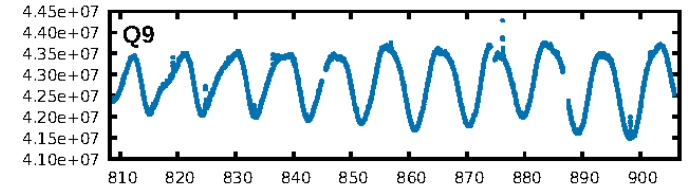
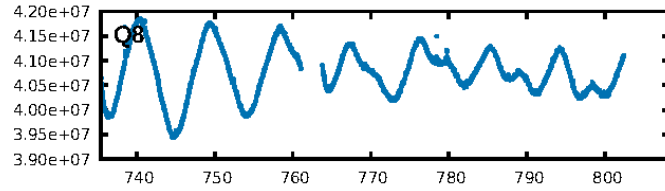
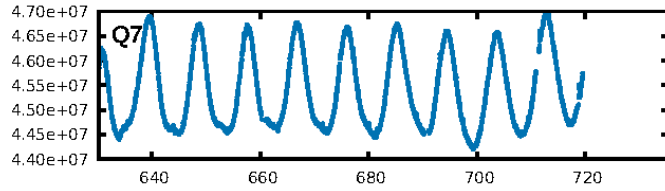
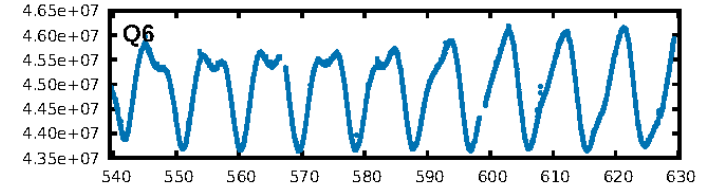
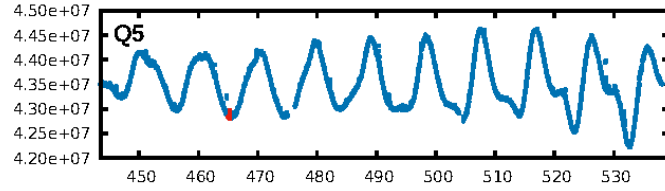
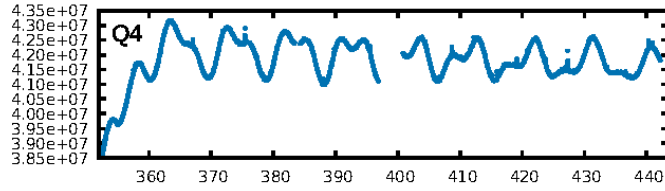
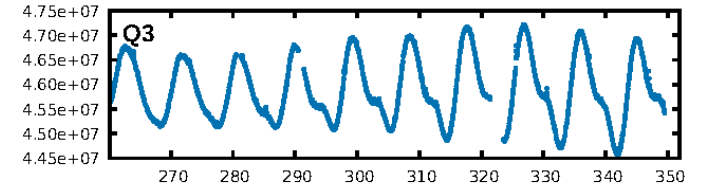
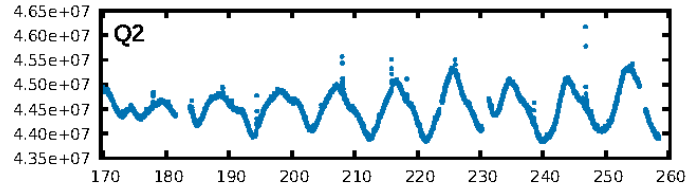
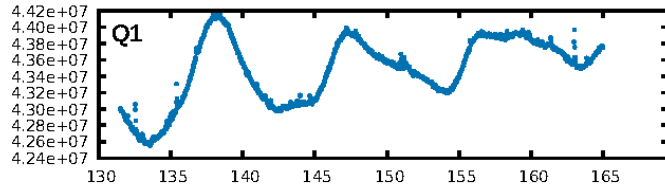
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [154.07 σ]
LongPeriod-sig: 100.0% [127.73 σ]
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 33.9%
Bootstrap-pfa: 1.83e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.3112
Centroid-sig: 77.8%
Centroid-so: 0.361 arcsec [0.48 σ]
OotOffset-rm: 0.813 arcsec [3.03 σ]
KicOffset-rm: 0.915 arcsec [3.46 σ]
OotOffset-st: 0/0/1/1 [2]
KicOffset-st: 0/0/1/1 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

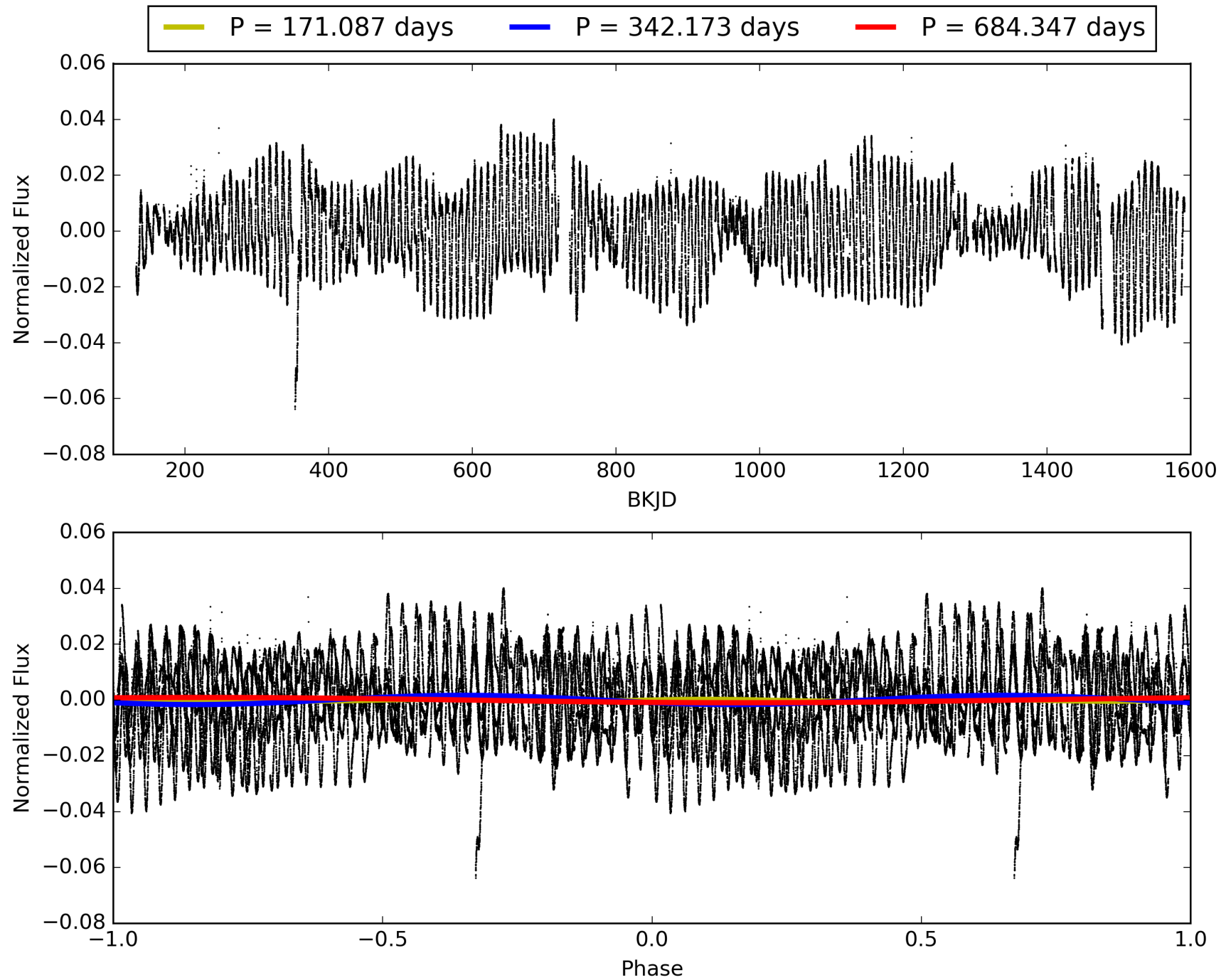
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 05:19:34 Z

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

TCE 007907119-06, PDC Light Curves

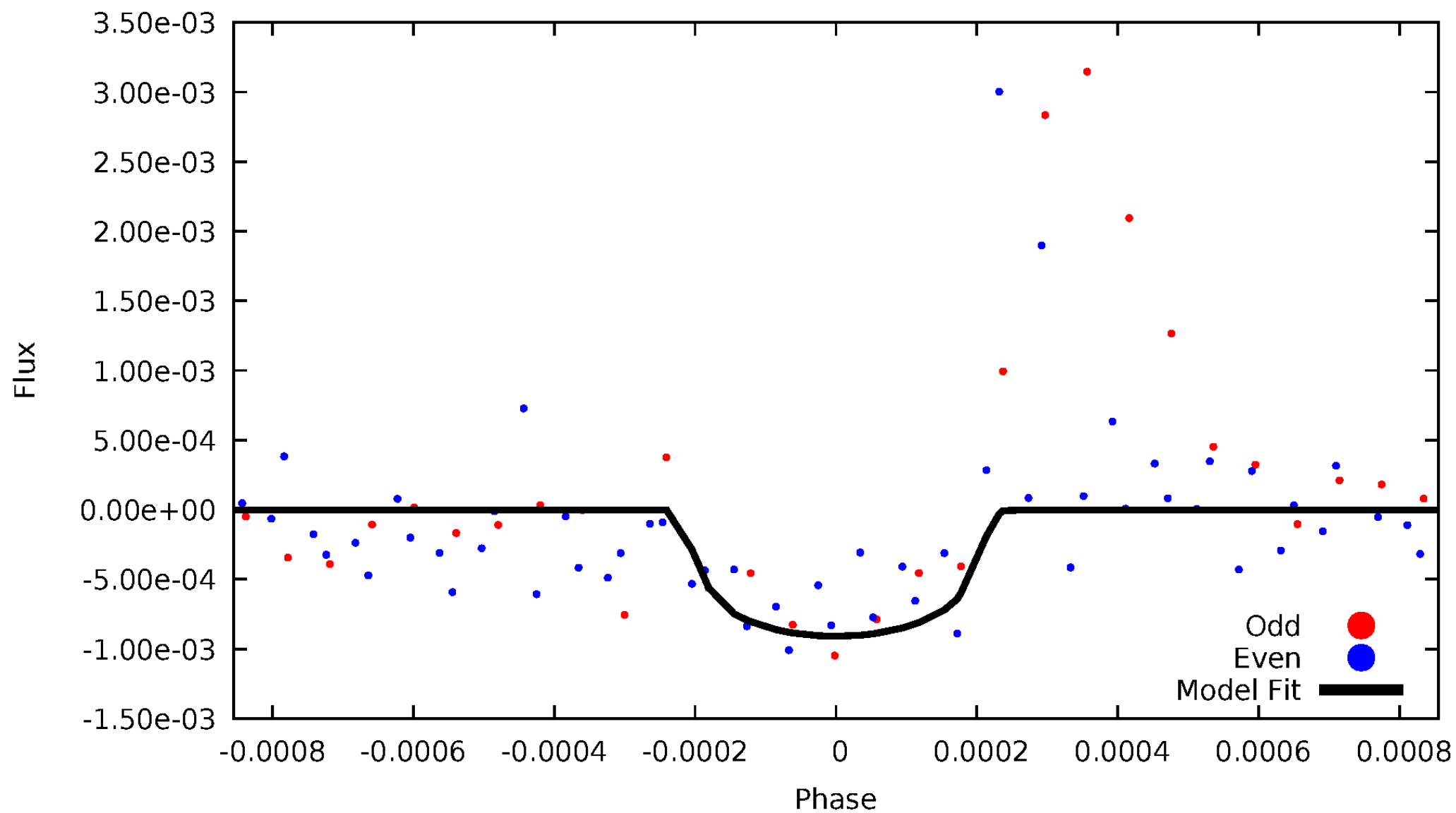


TCE 007907119-06



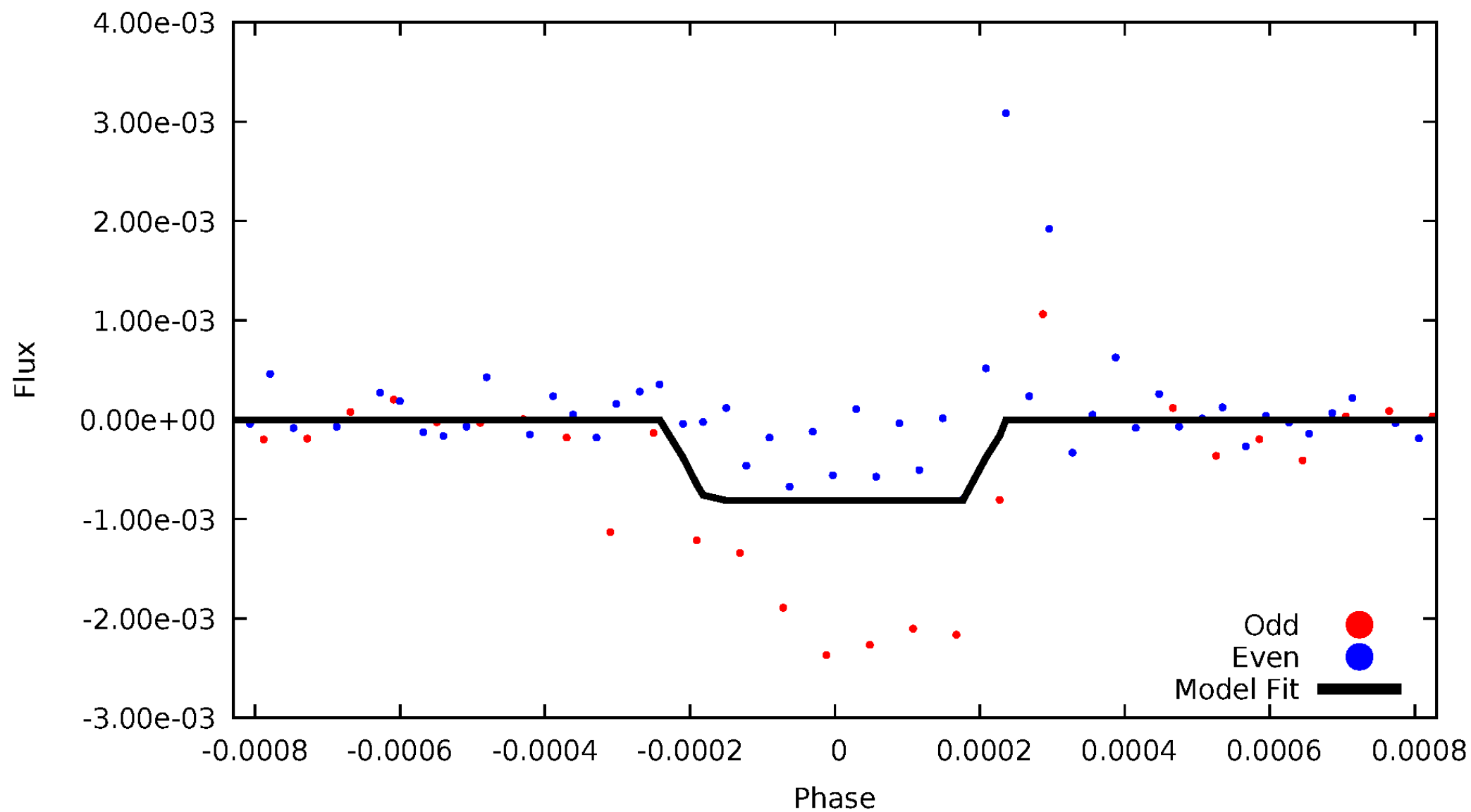
DV Odd/Even

TCE 007907119-06



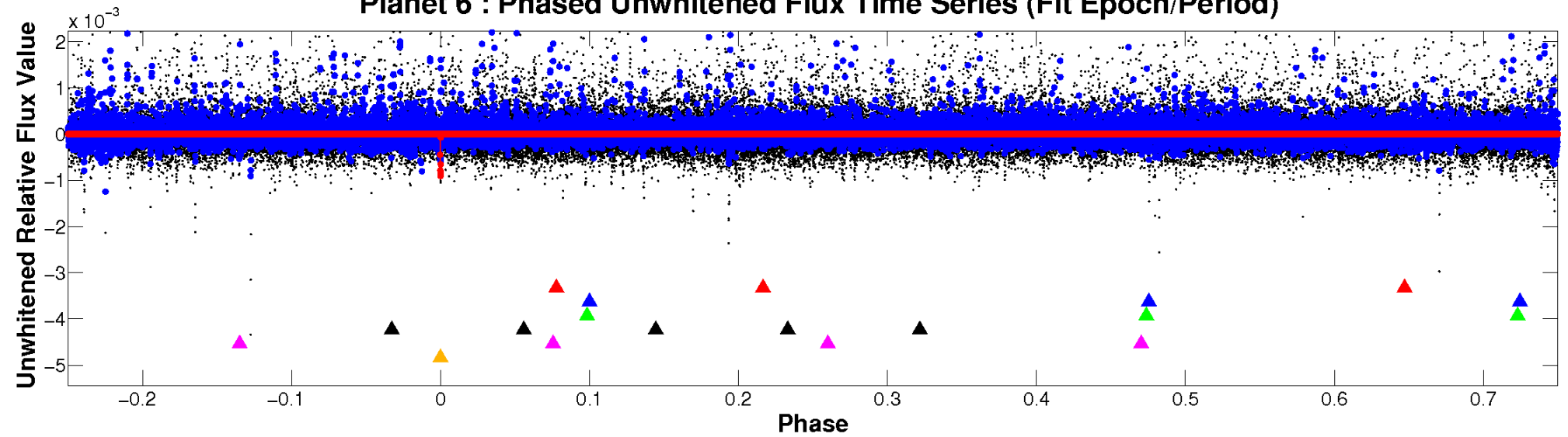
ALT Odd/Even

TCE 007907119-06

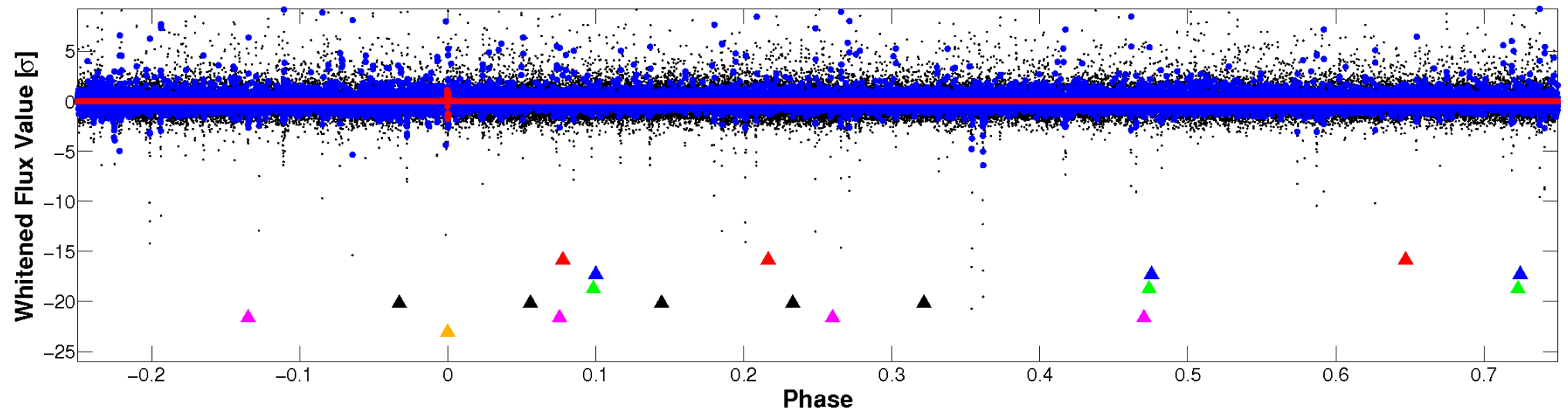


Non-Whitened Vs. Whitened Light Curve

Planet 6 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

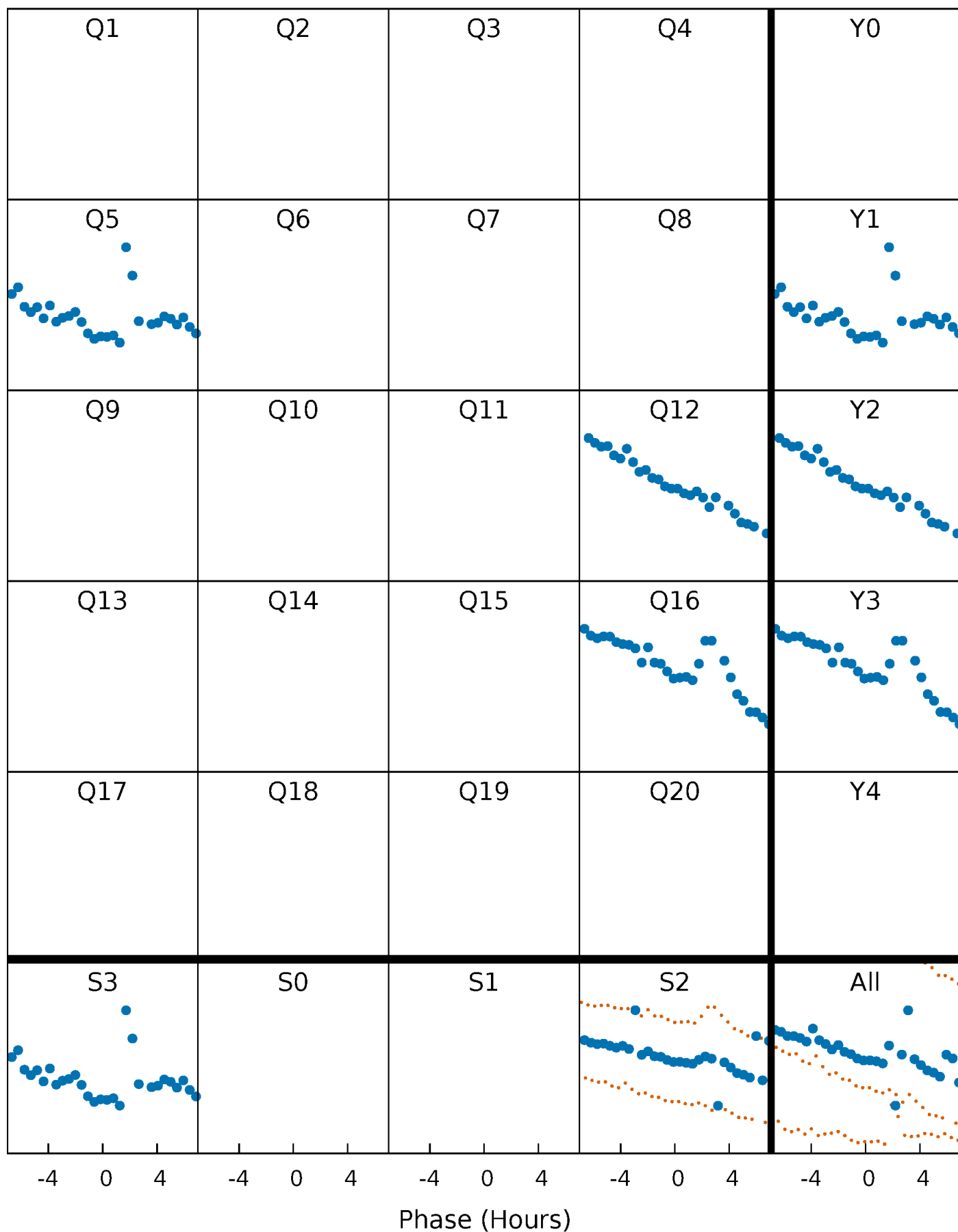


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



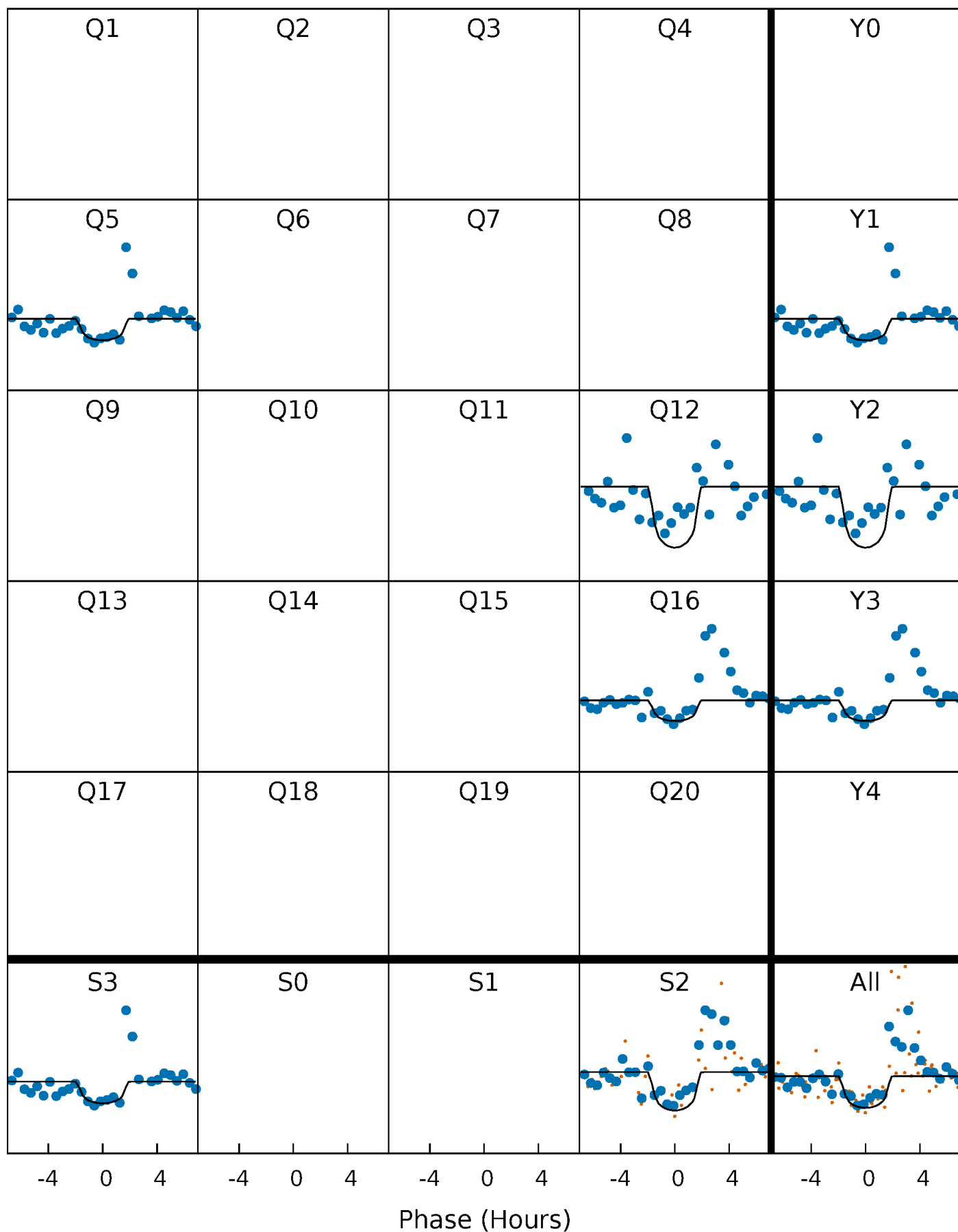
PDC Quarter-Phased Transit Curves

TCE 007907119-06 P=342.173315 Days $T_0=465.173002$ (BKJD)



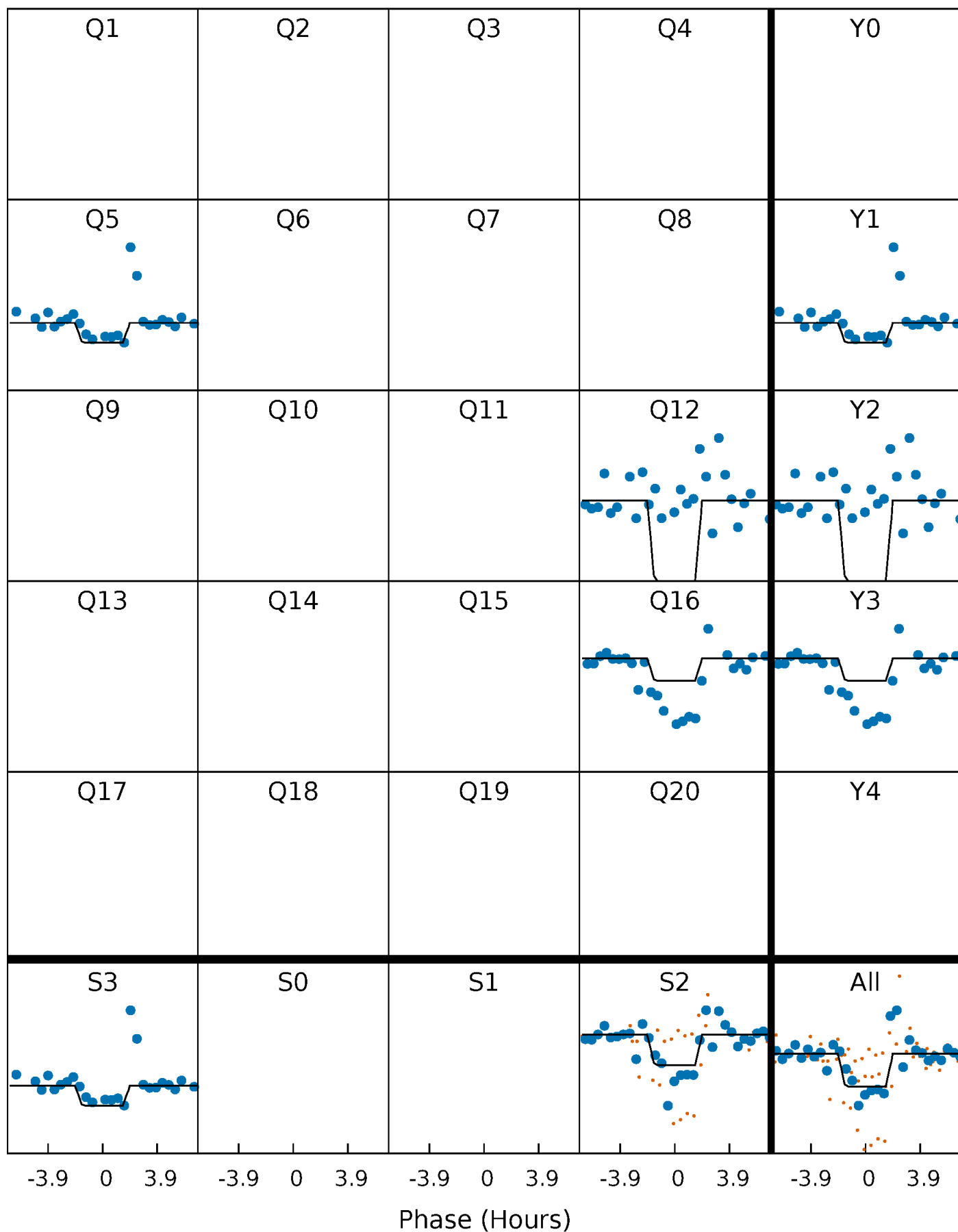
DV Quarter-Phased Transit Curves

TCE 007907119-06 P=342.173315 Days $T_0=465.173002$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

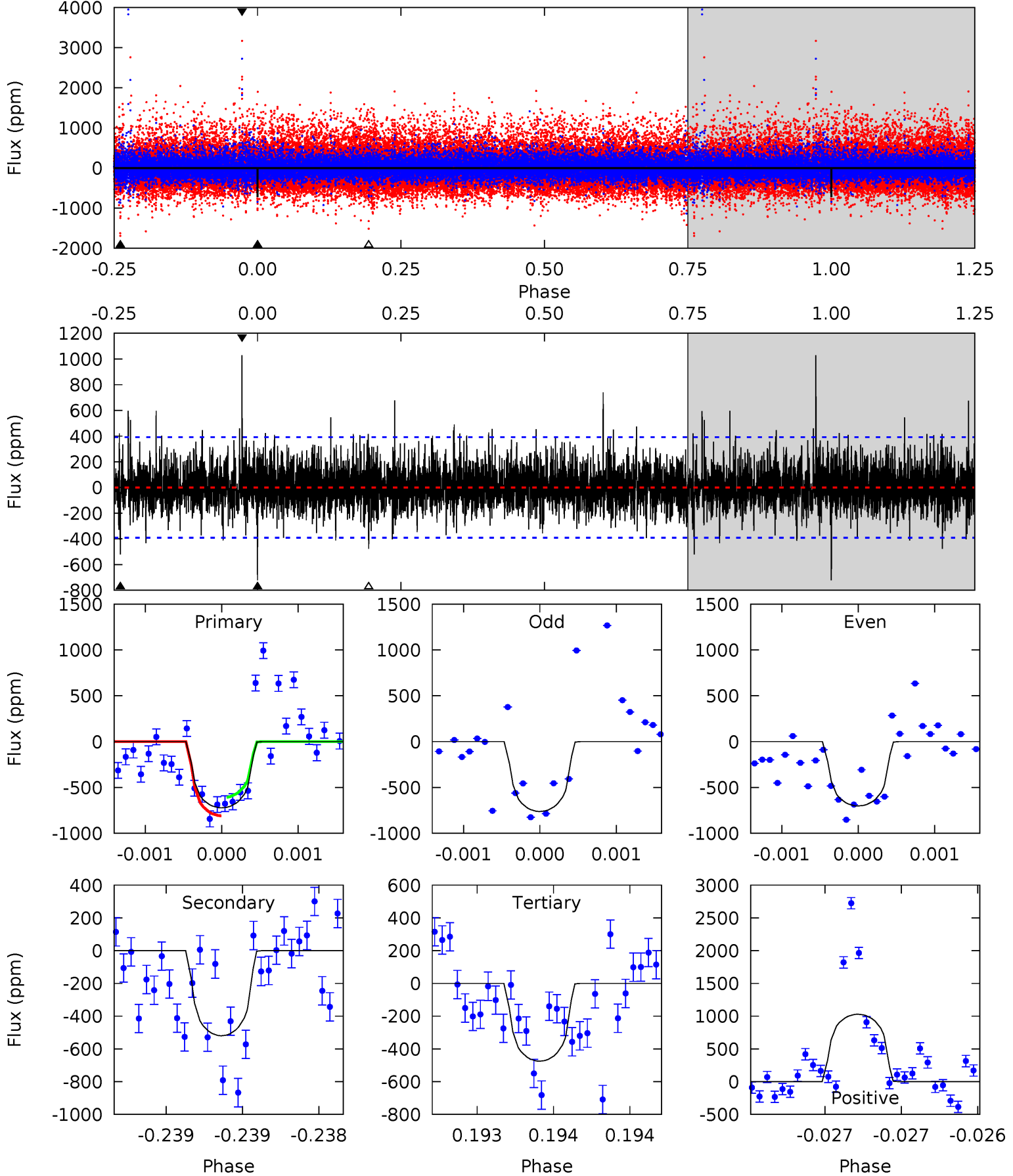
TCE 007907119-06 P=342.174908 Days $T_0=465.171589$ (BKJD)



DV Model-Shift Uniqueness Test

007907119-06, P = 342.173315 Days, E = 122.999687 Days

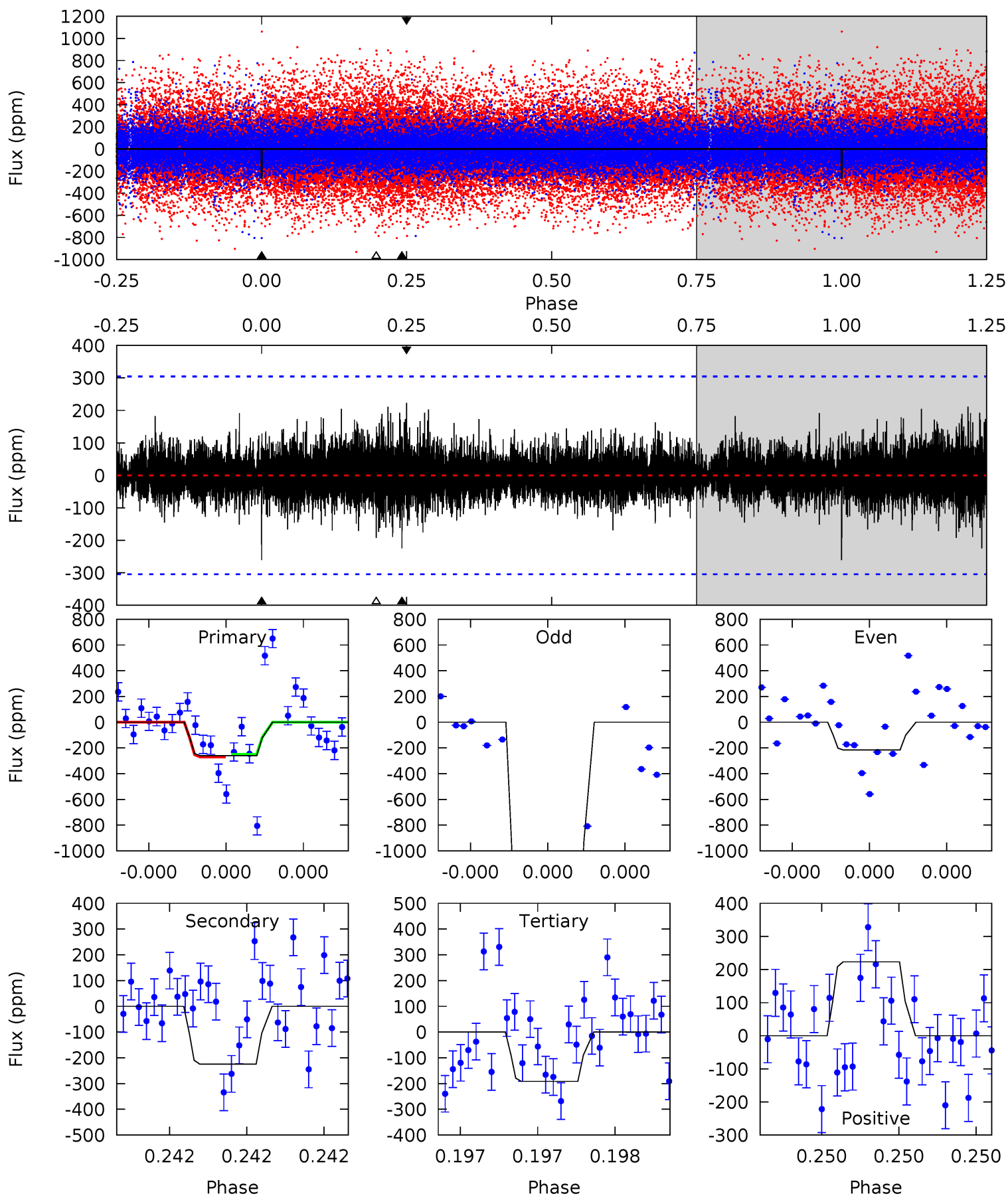
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	7.40	6.77	14.6	5.57	3.47	1.74	3.52	-4.36	0.64	-7.25	0.37	0.94	0.59	1.44



Alt Model-Shift Uniqueness Test

007907119-06, P = 342.174908 Days, E = 122.996681 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.79	4.12	3.52	4.10	5.59	3.51	0.79	1.27	0.69	0.60	0.02	19.3	1.58	0.46	0.19



Stellar Parameters For KIC 007907119

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4074^{+127}_{-155}	$4.651^{+0.060}_{-0.024}$	$-0.040^{+0.300}_{-0.300}$	$0.605^{+0.043}_{-0.070}$	$0.598^{+0.057}_{-0.063}$	$3.804^{+1.124}_{-0.400}$
	+3%/-4%	+1%/-1%	+750%/-750%	+7%/-12%	+10%/-11%	+30%/-11%
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 007907119-06 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-520 ± 70	$3.78^{+3.99}_{-2.61}$	215^{+7}_{-9}	3016^{+1448}_{-539}	$12947^{+123608}_{-9933}$
Alt.	-224 ± 54	$3.76^{+3.99}_{-2.47}$	215^{+9}_{-8}	2668^{+1031}_{-409}	5362^{+44816}_{-4037}

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

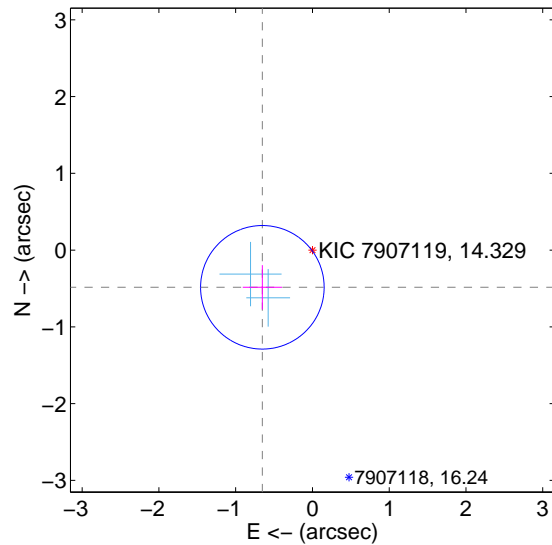
Supplemental centroid analysis for 007907119-06. Kepler magnitude: 14.33. Transit SNR 7.54

There are 2 quarters with good PRF difference image offsets

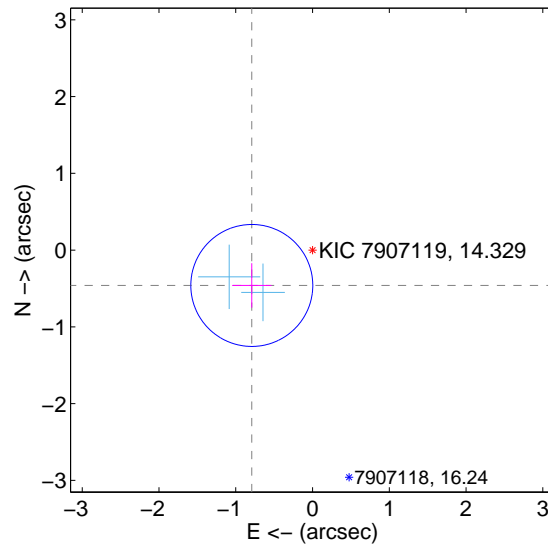
The direct PRF centroid is offset from the target star catalog position by about 0.28 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.813 ± 0.268	3.03	0.652 ± 0.256	-0.485 ± 0.289
PRF-fit source offset from KIC position	0.915 ± 0.265	3.46	0.791 ± 0.256	-0.461 ± 0.289
photometric centroid source offset	0.36 ± 0.76	0.48	0.34 ± 0.73	0.11 ± 0.99

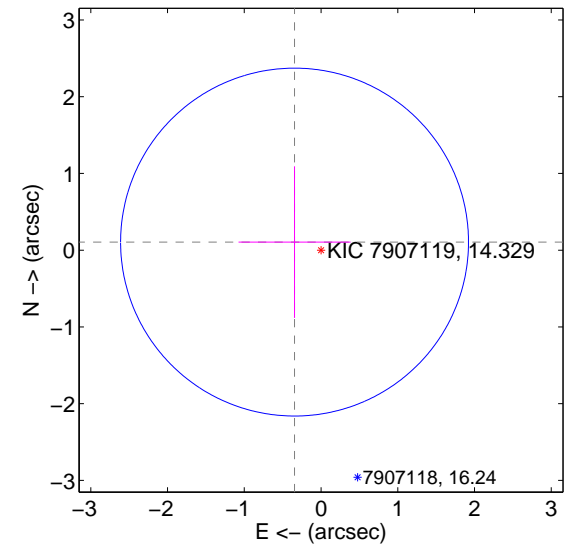
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

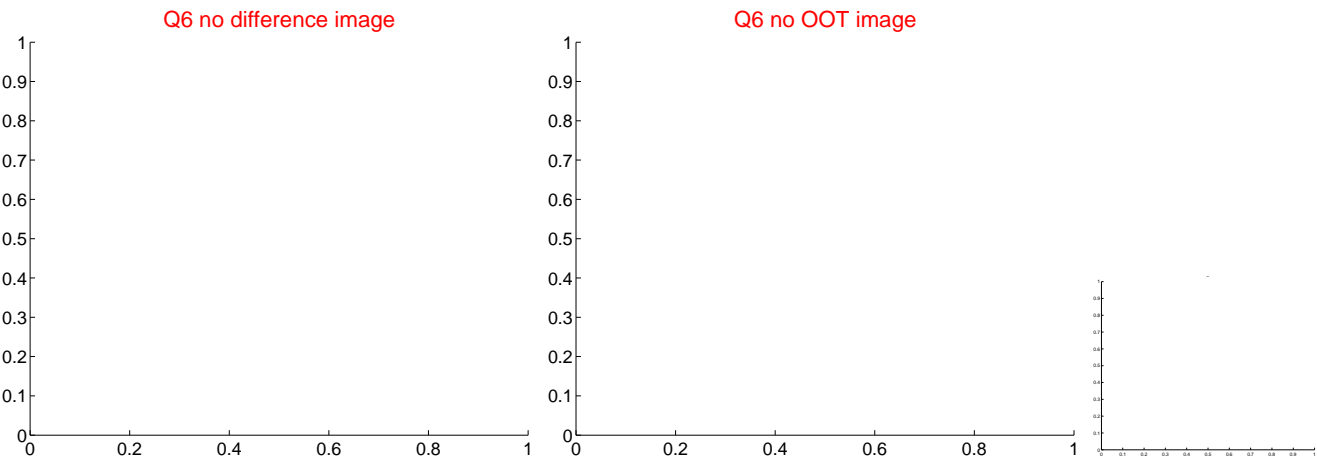
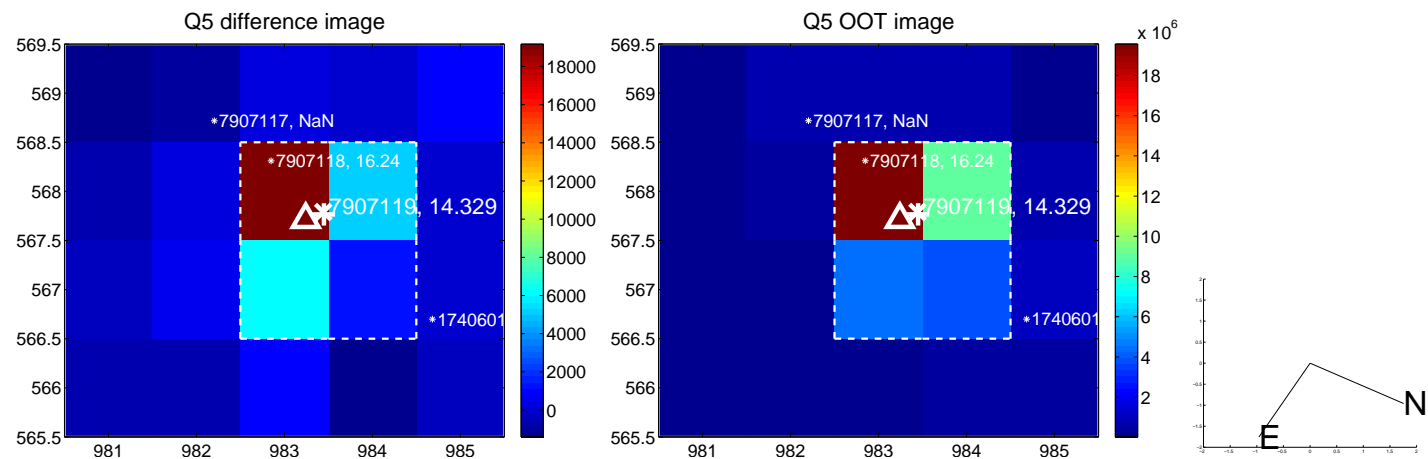


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

Q9 no difference image



Q9 no OOT image



Q10 no difference image



Q10 no OOT image



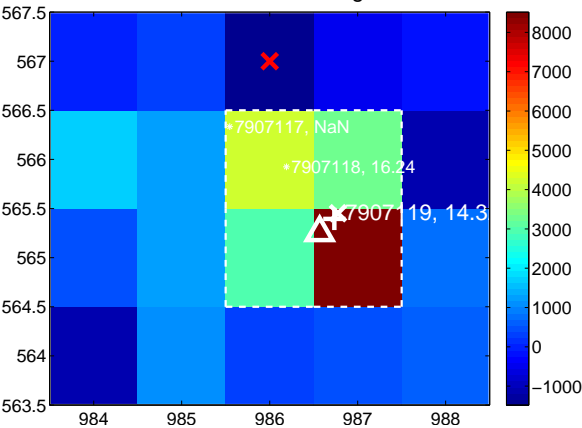
Q11 no difference image



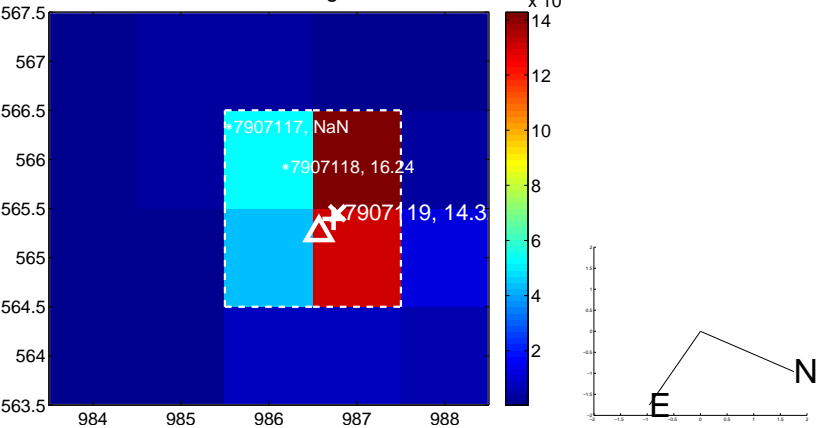
Q11 no OOT image



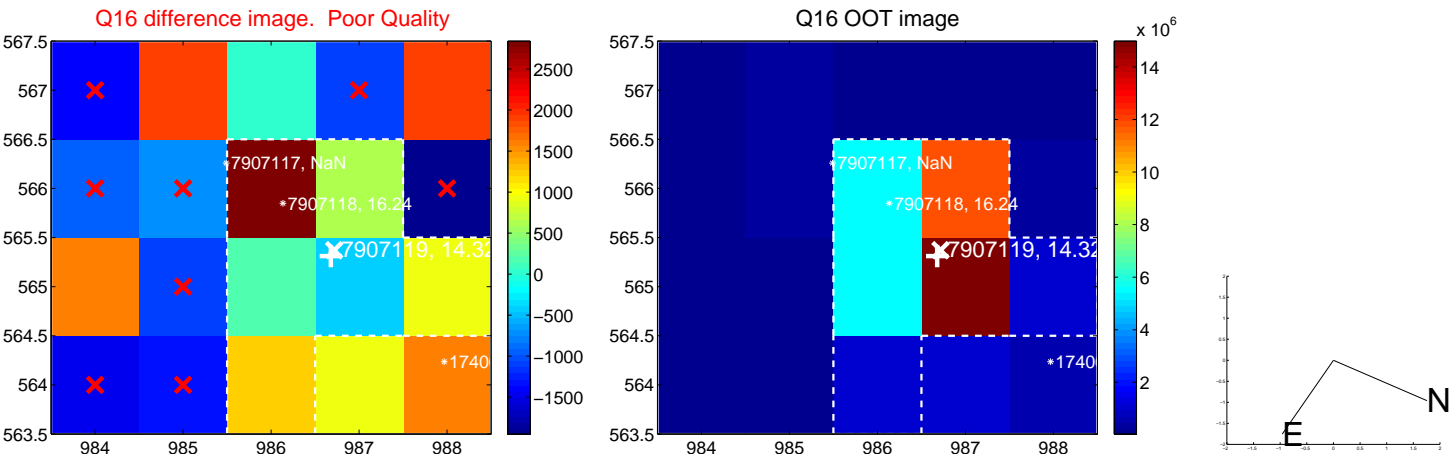
Q12 difference image



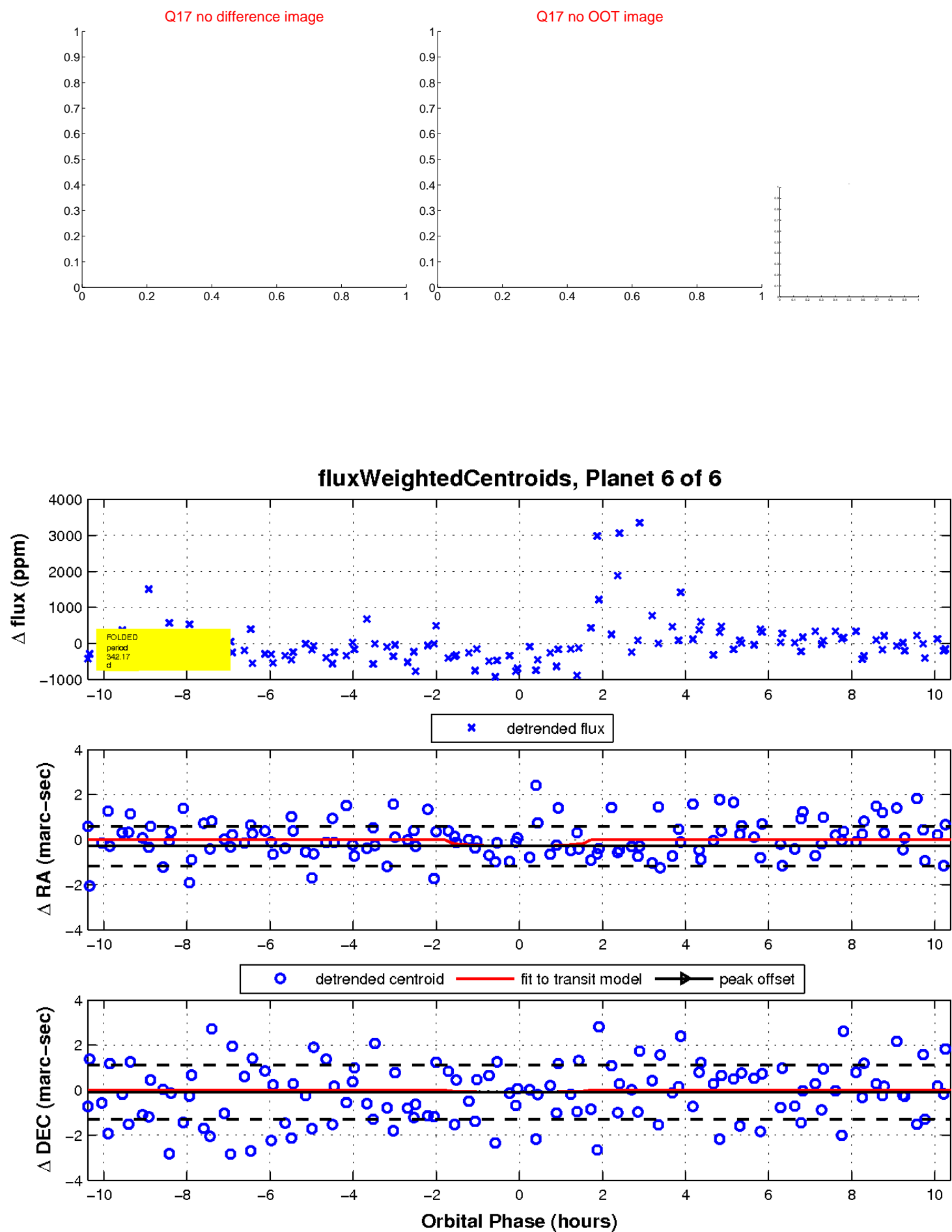
Q12 OOT image



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

