

KIC 002718663

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})
002718663-01	OBS	No	0.996222	131.676991	76.1	2.887	8.2	7.9	1.52	7031	1.55	10591.43
002718663-02	OBS	No	0.996239	132.164959	94.7	1.732	8.3	9.2	1.52	7031	1.76	10591.18
002718663-03	OBS	No	178.694229	211.152516	2295.3	1.808	7.6	9.4	1.52	7031	7.41	10.47

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002718663-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_KIC_POS
002718663-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_KIC_POS
002718663-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—TRANS_GAPPED—MOD_NONUNIQ_ALT—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.

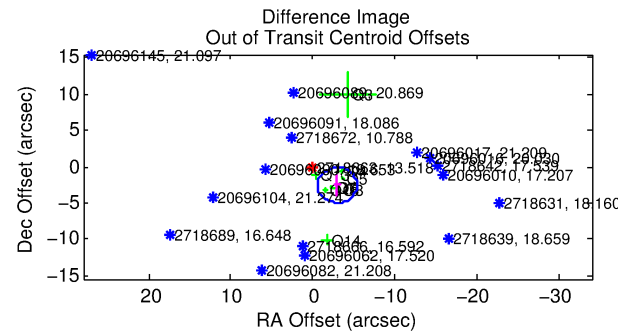
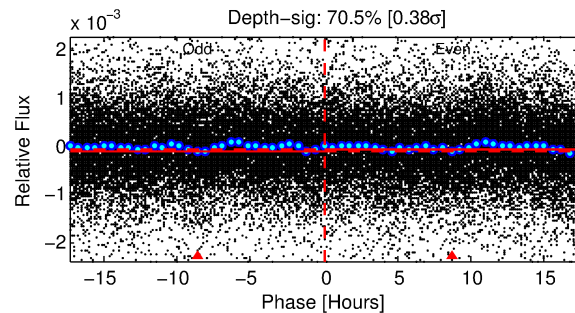
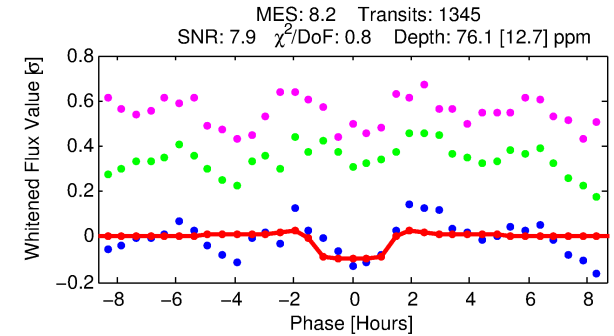
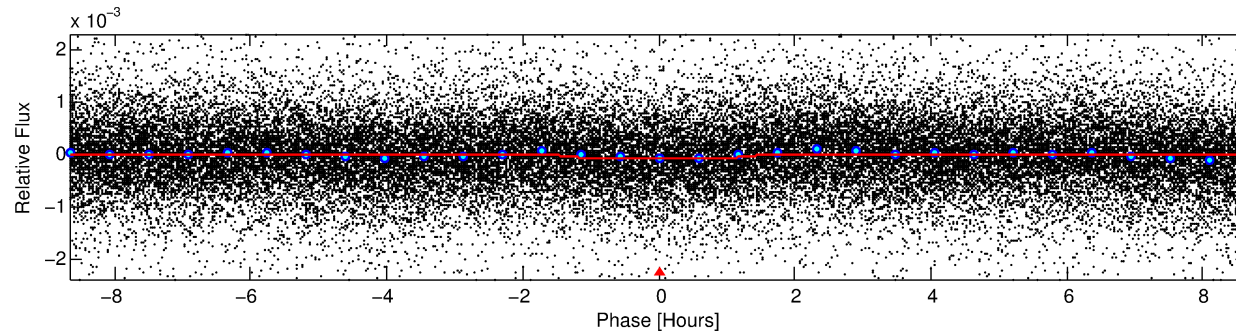
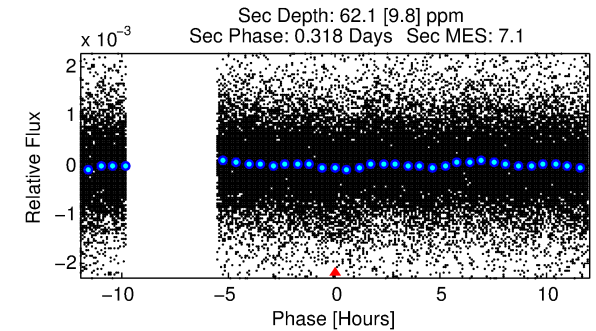
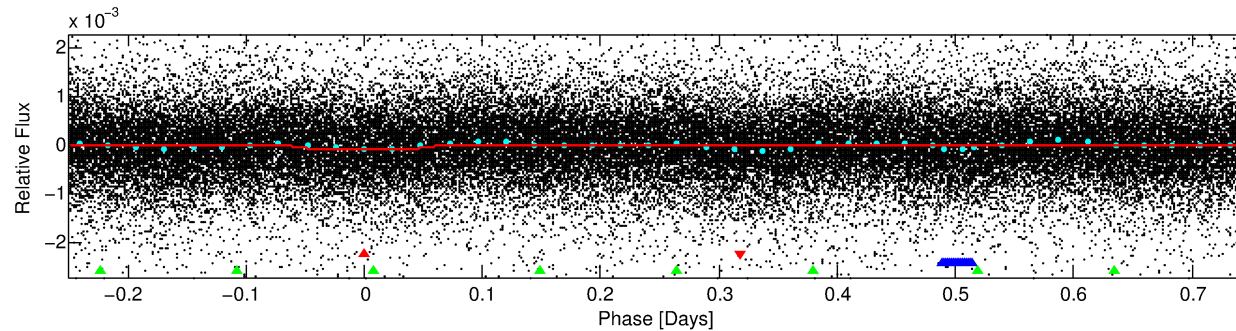
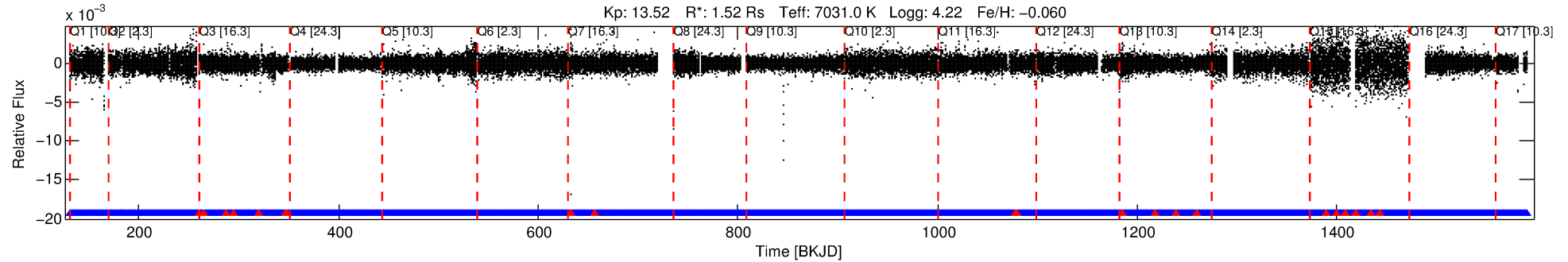
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002718663-01

No Significant Match Found

DV One-Page Summary

KIC: 2718663 Candidate: 1 of 3 Period: 0.996 d



DV Fit Results:

Period = 0.99622 [0.00001] d
Epoch = 131.6770 [0.0036] BKJD
Rp/R* = 0.0093 [0.0047]
a/R* = 1.52 [2.66]
b = 0.90 [0.65]
Seff = 10591.43 [4720.46]
Teq = 2587 [288] K
Rp = 1.55 [0.94] Re
a = 0.0219 [0.0060] AU
Ag = 6.85 [7.50] [0.78σ]
Teffp = 6471 [1689] K [2.27σ]

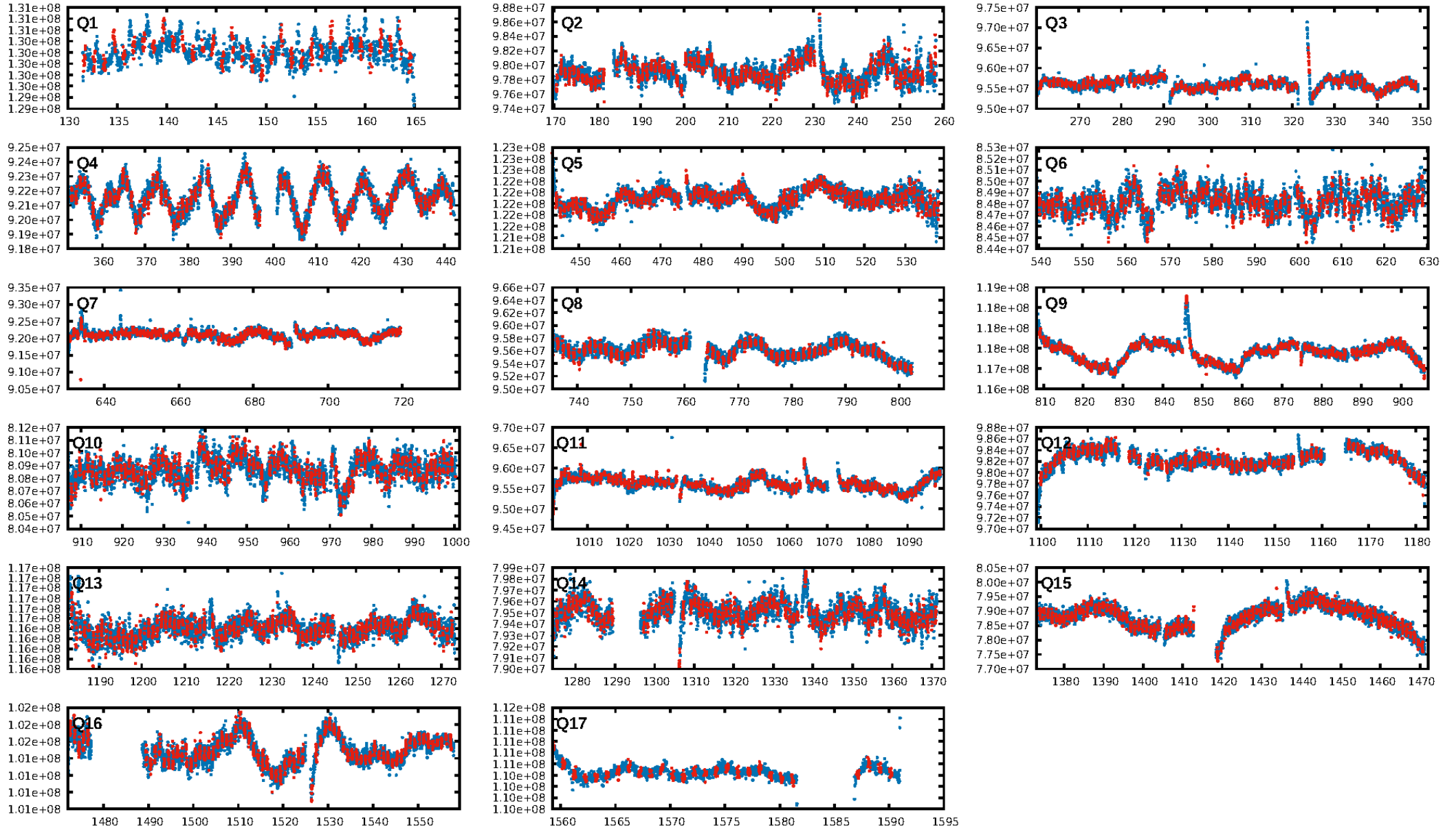
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.82e-12
RollingBand-fgt: 0.98 [1263/1284]
GhostDiagnostic-chr: 0.9784
Centroid-sig: 0.0%
Centroid-so: 2.555 arcsec [20.08σ]
OotOffset-rm: 3.923 arcsec [4.86σ]
KicOffset-rm: 0.603 arcsec [0.32σ]
OotOffset-st: 2/2/3/2 [9]
KicOffset-st: 2/2/3/2 [9]
DiffImageQuality-fgm: 0.56 [5/9]
DiffImageOverlap-fno: 1.00 [17/17]

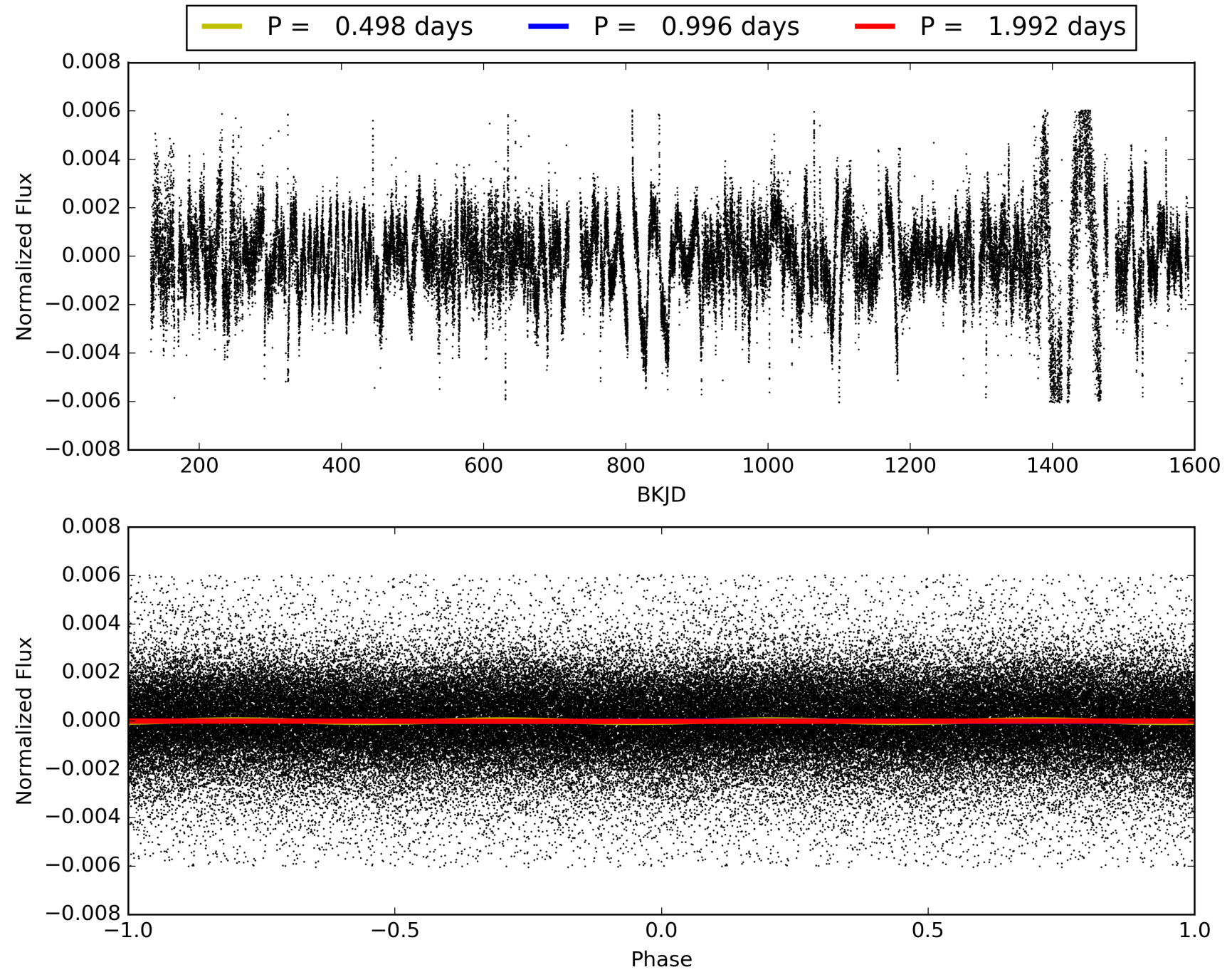
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:20:15 Z

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

TCE 002718663-01, PDC Light Curves

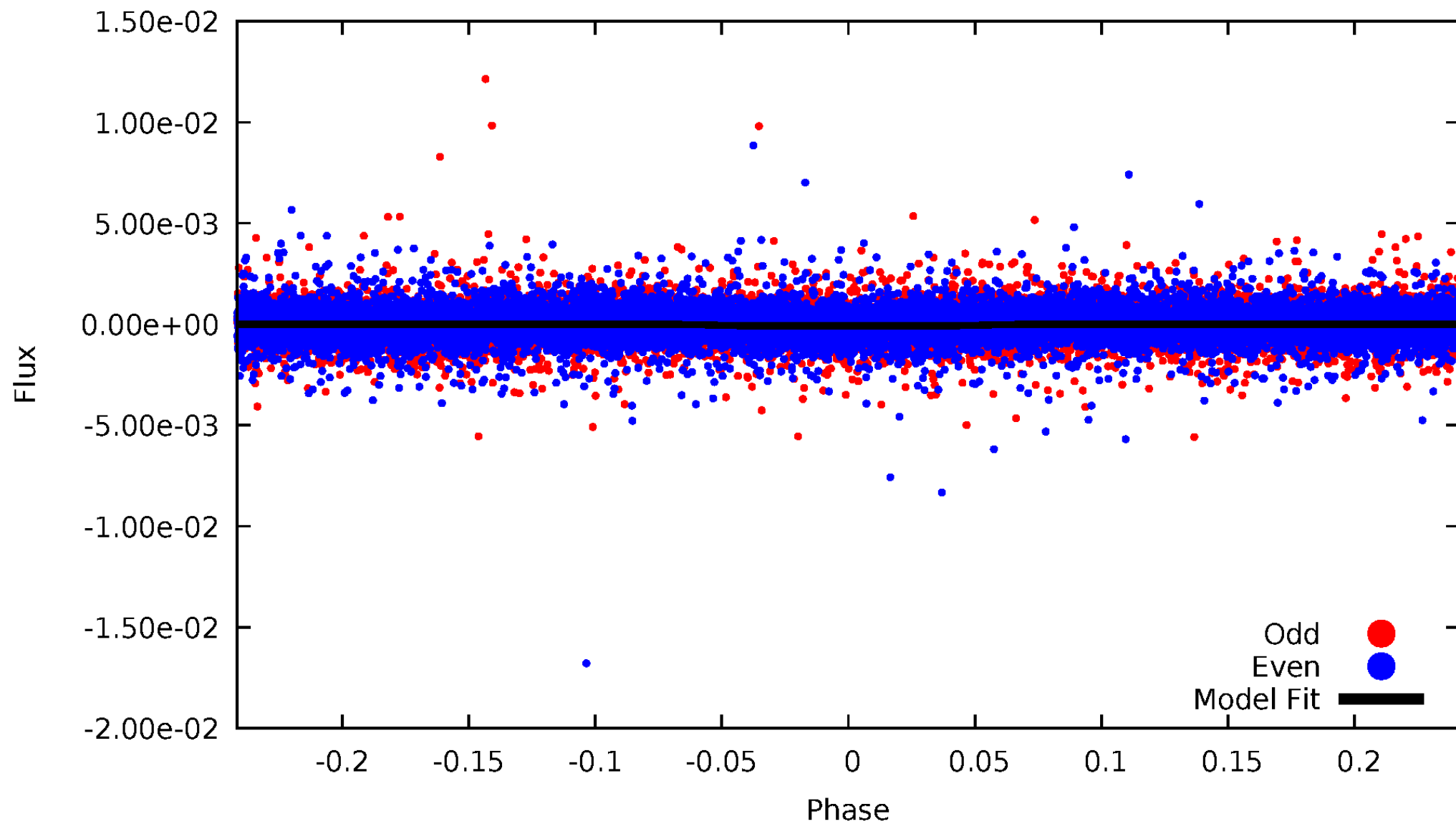


TCE 002718663-01



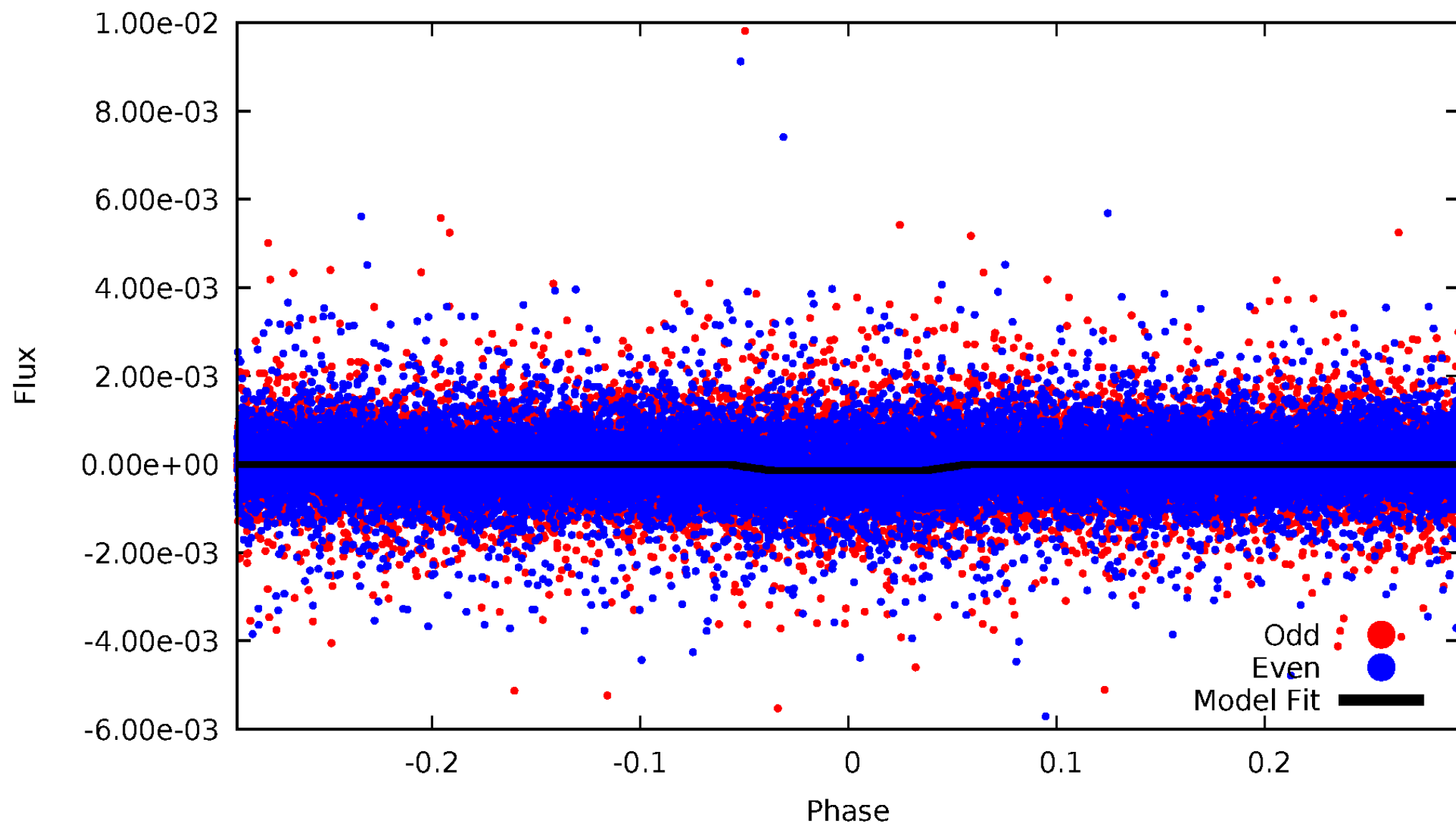
DV Odd/Even

TCE 002718663-01



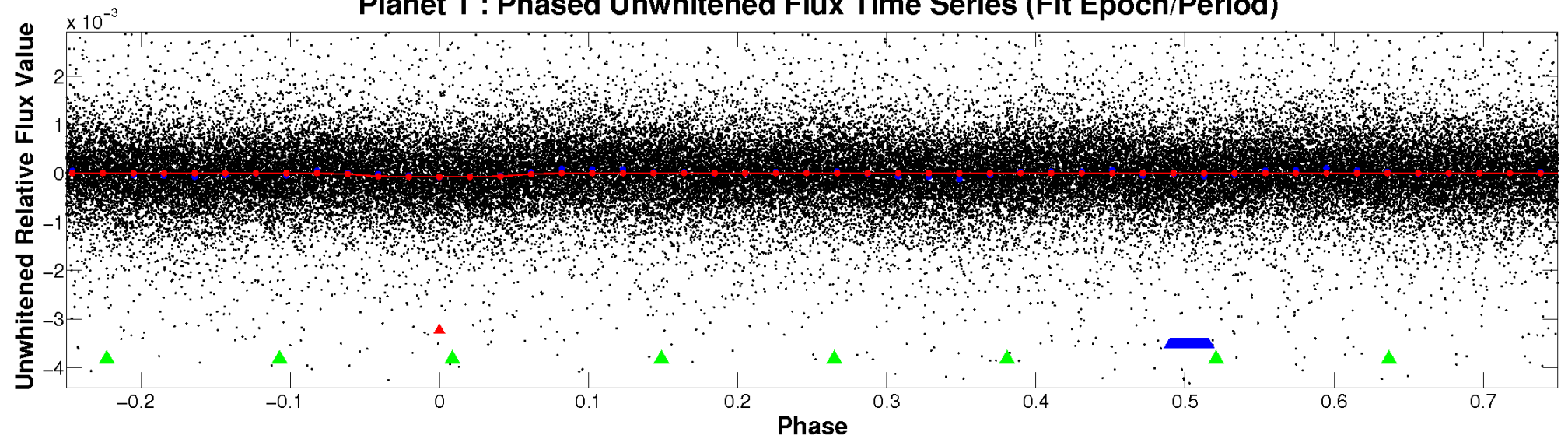
ALT Odd/Even

TCE 002718663-01

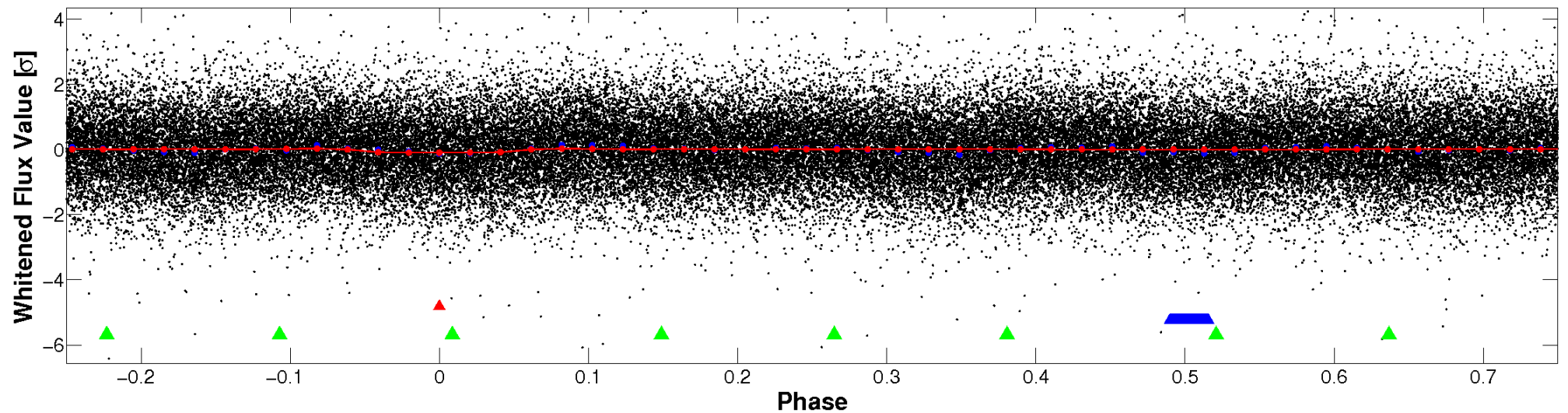


Non-Whitened Vs. Whitened Light Curve

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

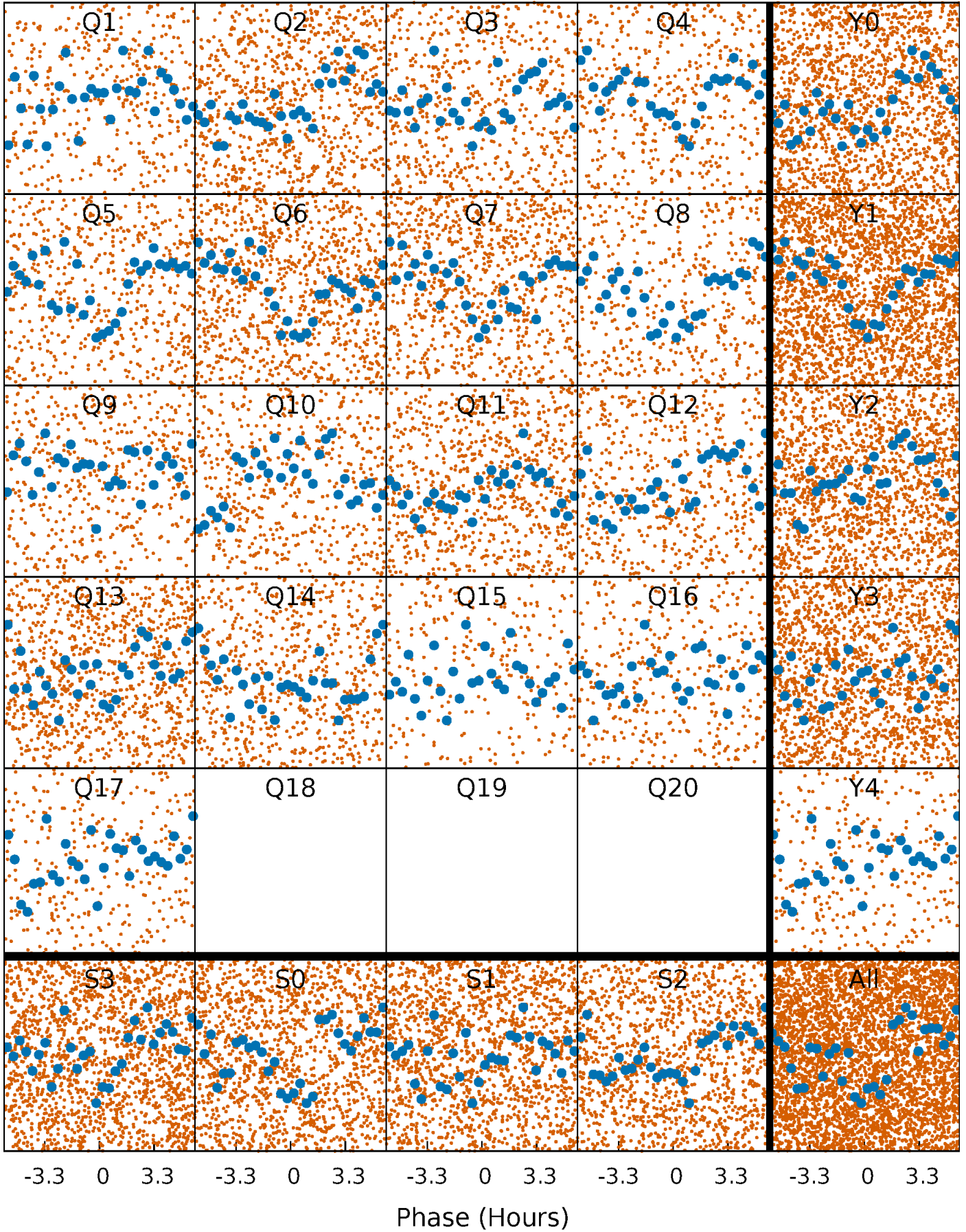


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



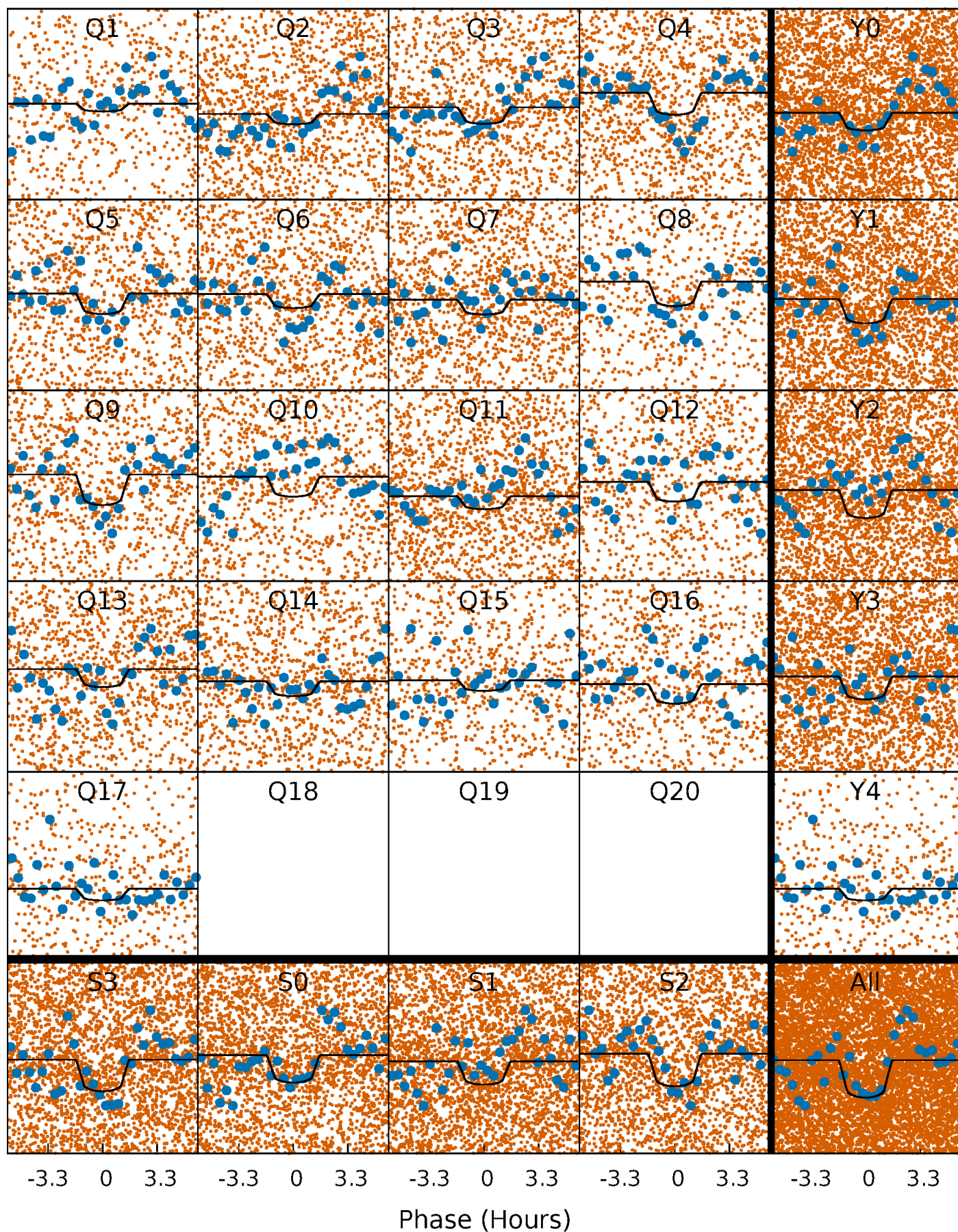
PDC Quarter-Phased Transit Curves

TCE 002718663-01 P= 0.996222 Days $T_0=131.676991$ (BKJD)



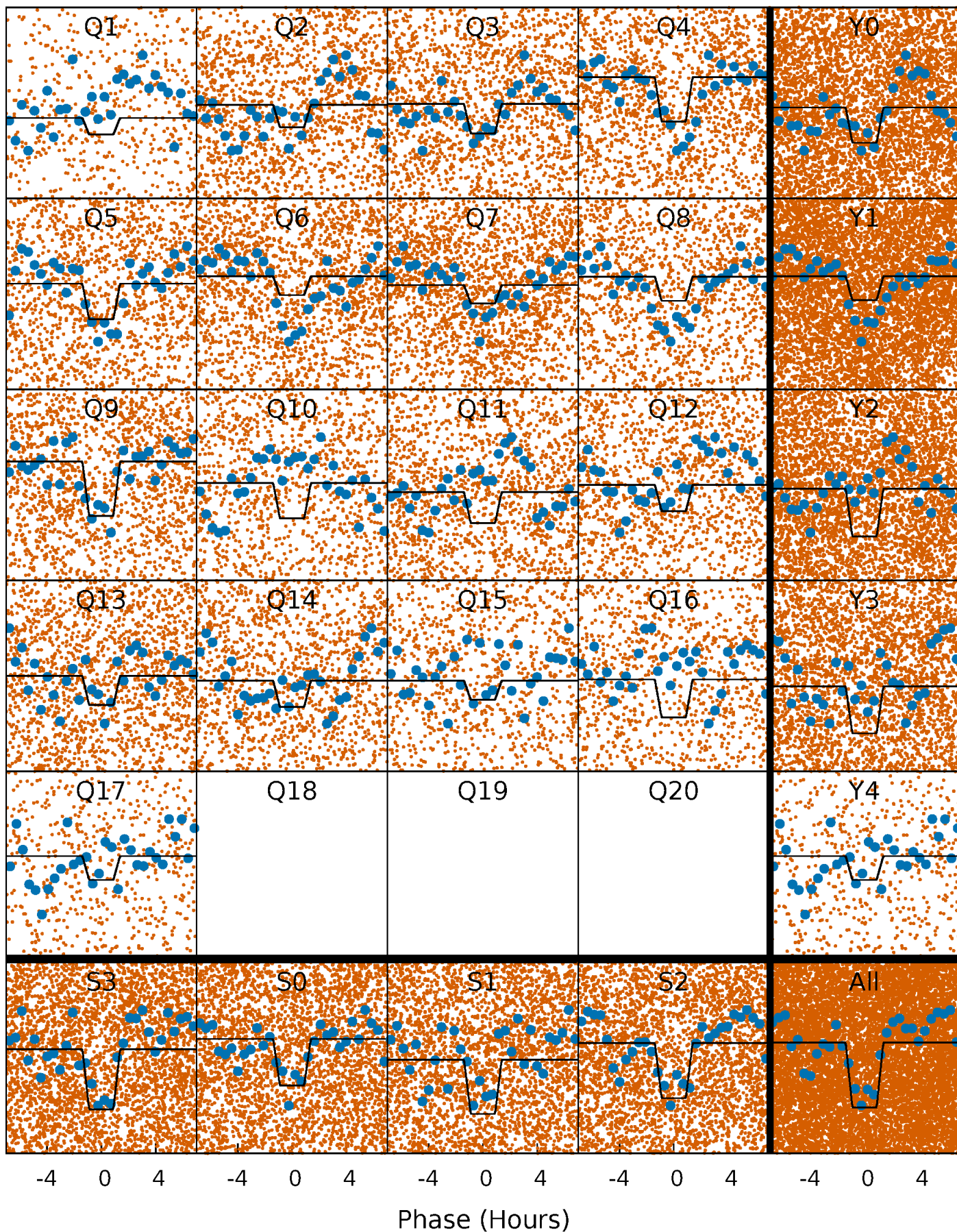
DV Quarter-Phased Transit Curves

TCE 002718663-01 P= 0.996222 Days $T_0=131.676991$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

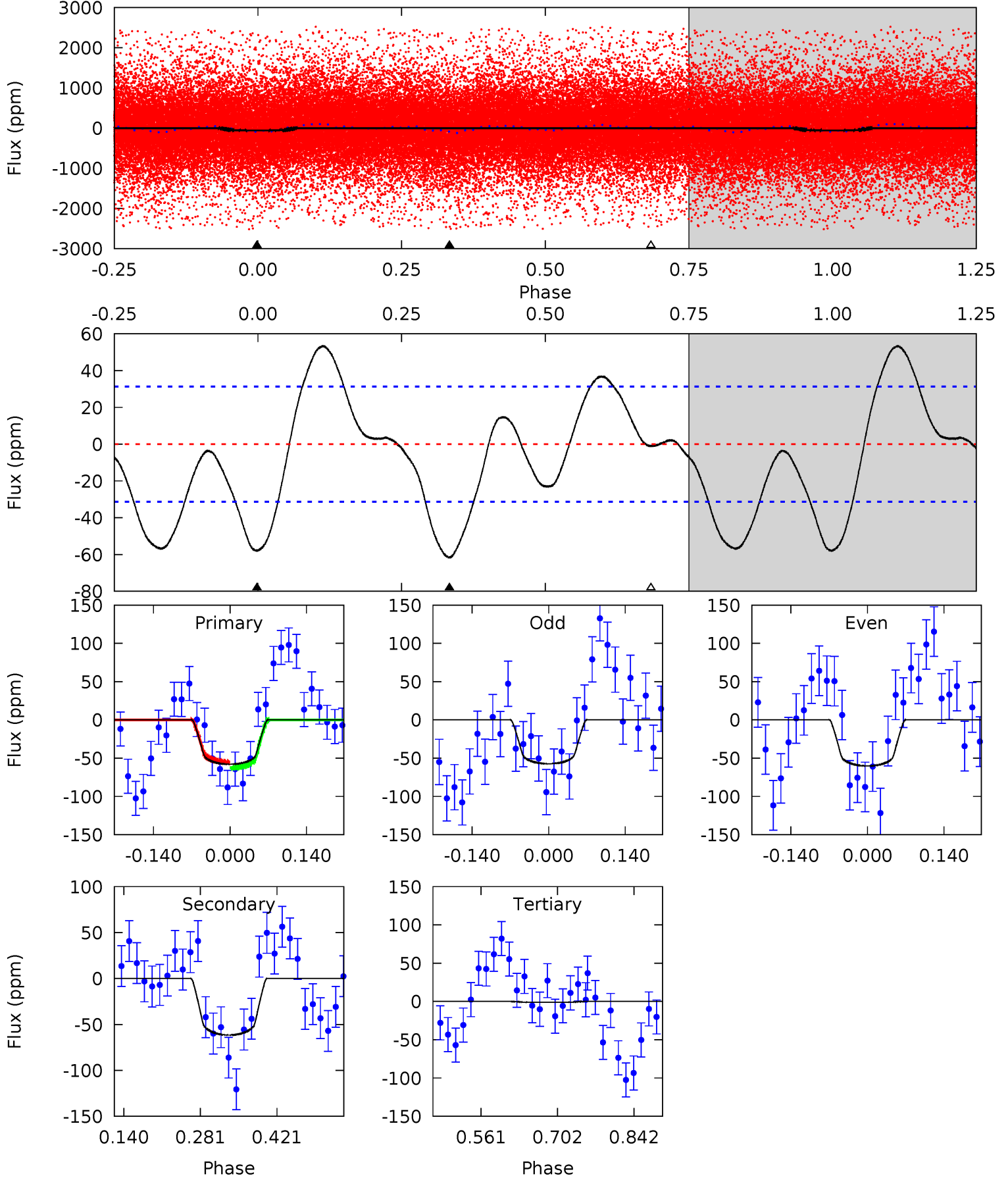
TCE 002718663-01 P= 0.996233 Days $T_0=131.676493$ (BKJD)



DV Model-Shift Uniqueness Test

002718663-01, P = 0.996222 Days, E = 130.680769 Days

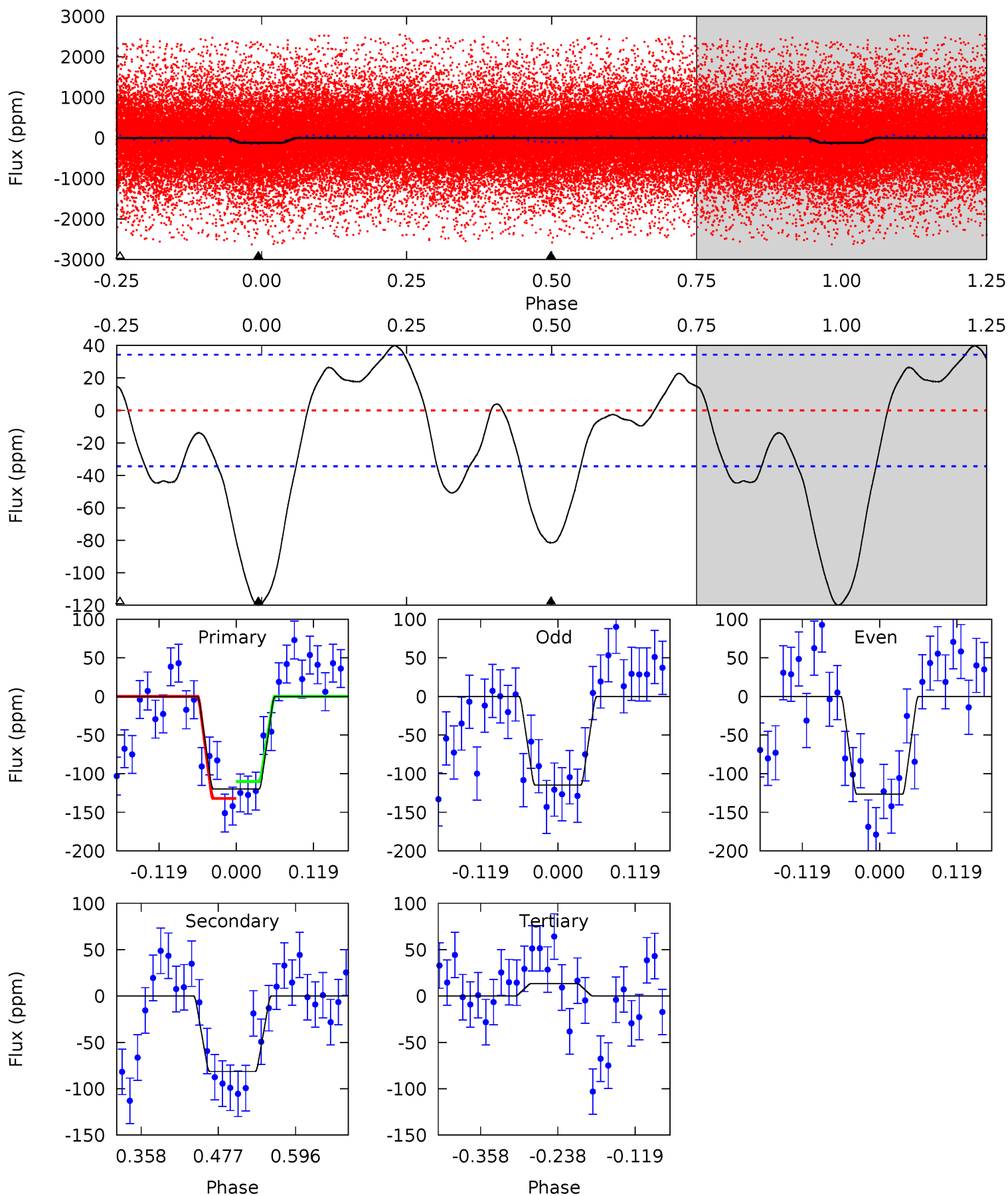
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.31	8.84	0.15	0	4.49	1.47	3.91	8.17	8.31	8.69	8.84	0.21	0.80	0.46	0.54



Alt Model-Shift Uniqueness Test

002718663-01, P = 0.996233 Days, E = 130.680260 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.8	10.7	-1.77	0	4.53	1.56	3.70	17.6	15.8	12.5	10.7	0.78	0.65	0.25	1.46



Stellar Parameters For KIC 002718663

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7031^{+218}_{-374}	$4.222^{+0.105}_{-0.210}$	$-0.060^{+0.250}_{-0.350}$	$1.523^{+0.508}_{-0.274}$	$1.415^{+0.216}_{-0.238}$	$0.564^{+0.287}_{-0.298}$
	+3%/-5%	+2%/-5%	+417%/-583%	+33%/-18%	+15%/-17%	+51%/-53%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 002718663-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-62 ± 7	$1.61^{+0.94}_{-0.74}$	3643^{+277}_{-245}	6213^{+2794}_{-1216}	$6.048^{+15.437}_{-3.583}$
Alt.	-81 ± 8	$2.04^{+1.00}_{-0.76}$	3622^{+316}_{-223}	5867^{+1761}_{-906}	$5.124^{+7.569}_{-2.810}$

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 $A_{obs} \gg 1.0$

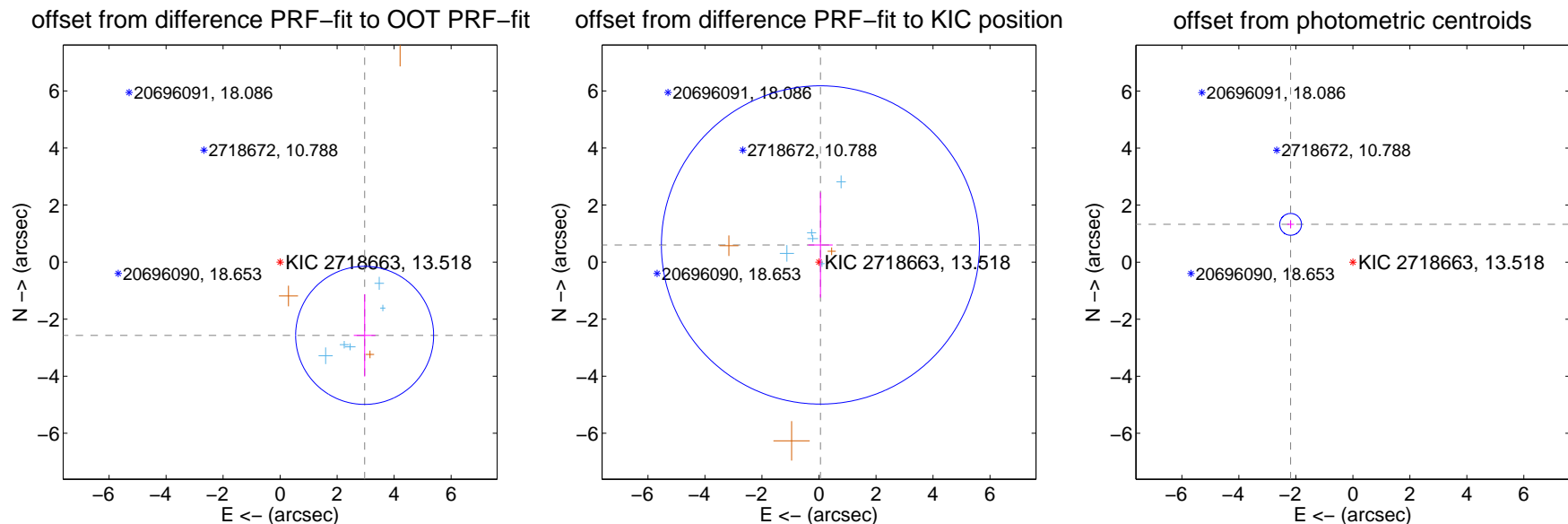
DV Centroid Data

Supplemental centroid analysis for 002718663-01. Kepler magnitude: 13.52. Transit SNR 7.91

There are 5 quarters with good PRF difference image offsets

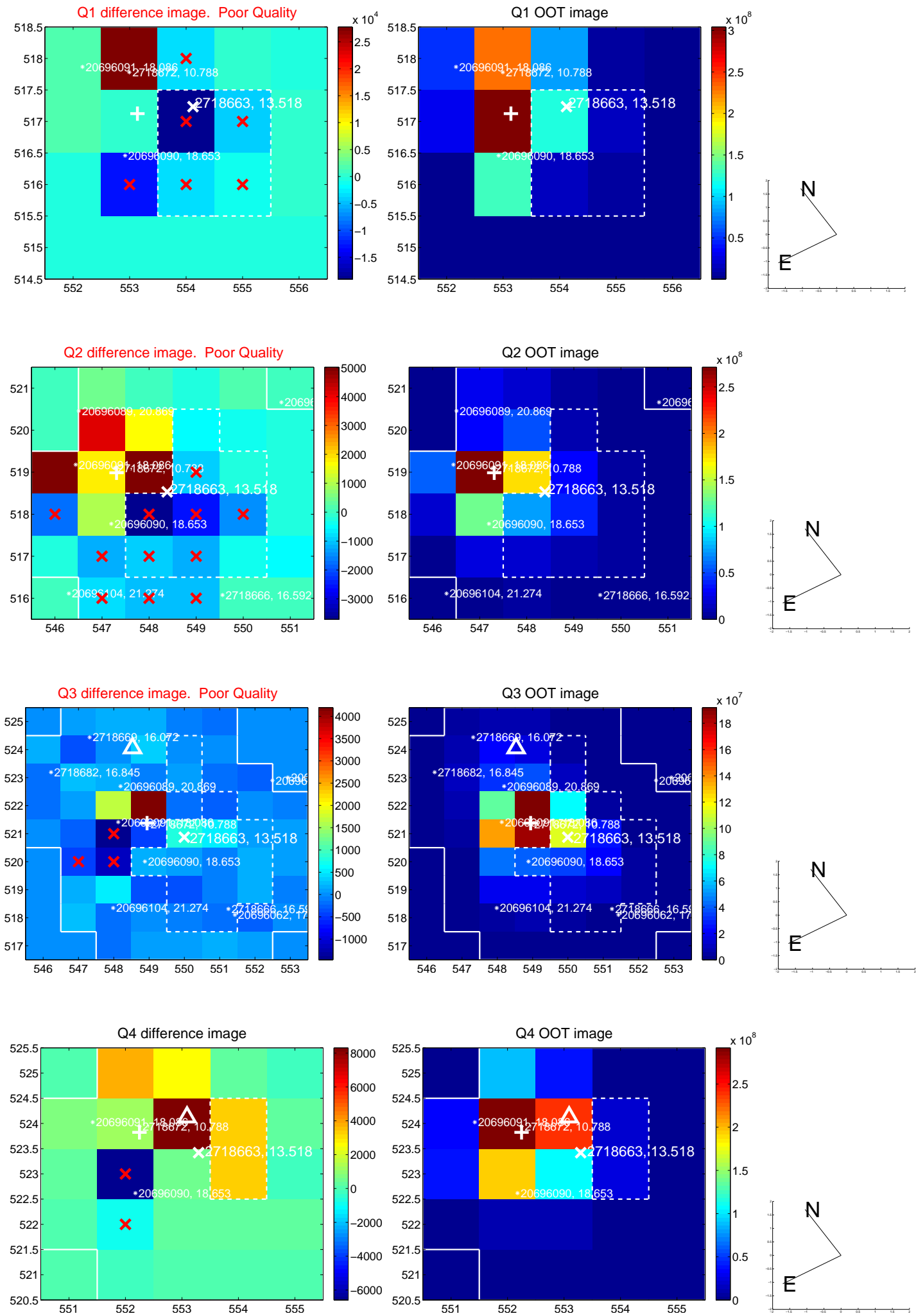
The OOT PRF centroid is offset from the target star catalog position by about 4.51 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.923 ± 0.807	4.86	-2.965 ± 0.380	-2.569 ± 1.442
PRF-fit source offset from KIC position	0.603 ± 1.859	0.32	-0.051 ± 0.430	0.601 ± 1.841
photometric centroid source offset	2.56 ± 0.13	20.08	2.18 ± 0.12	1.33 ± 0.14

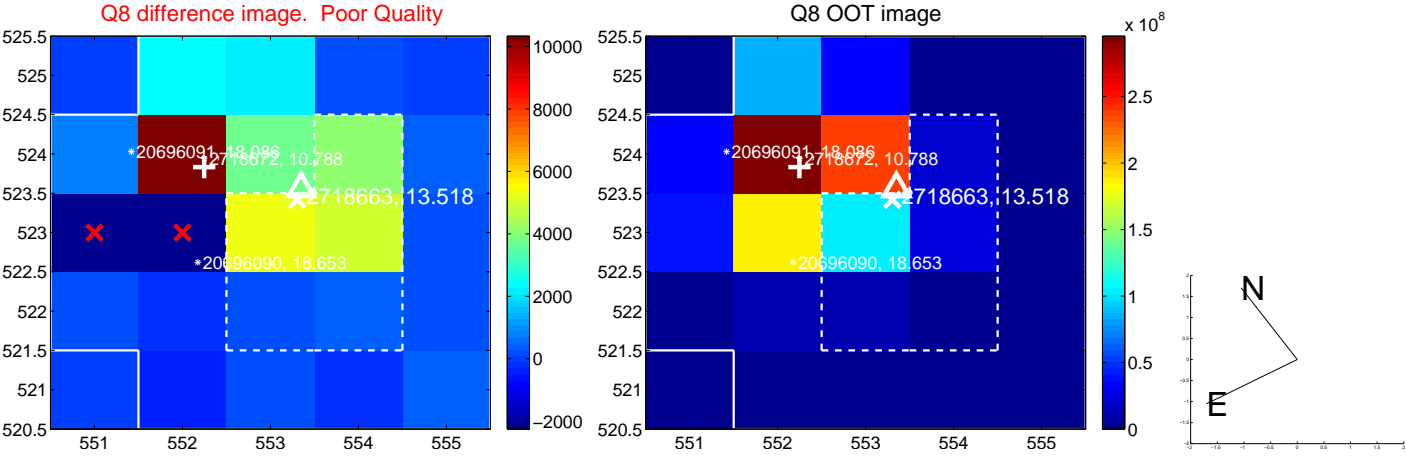
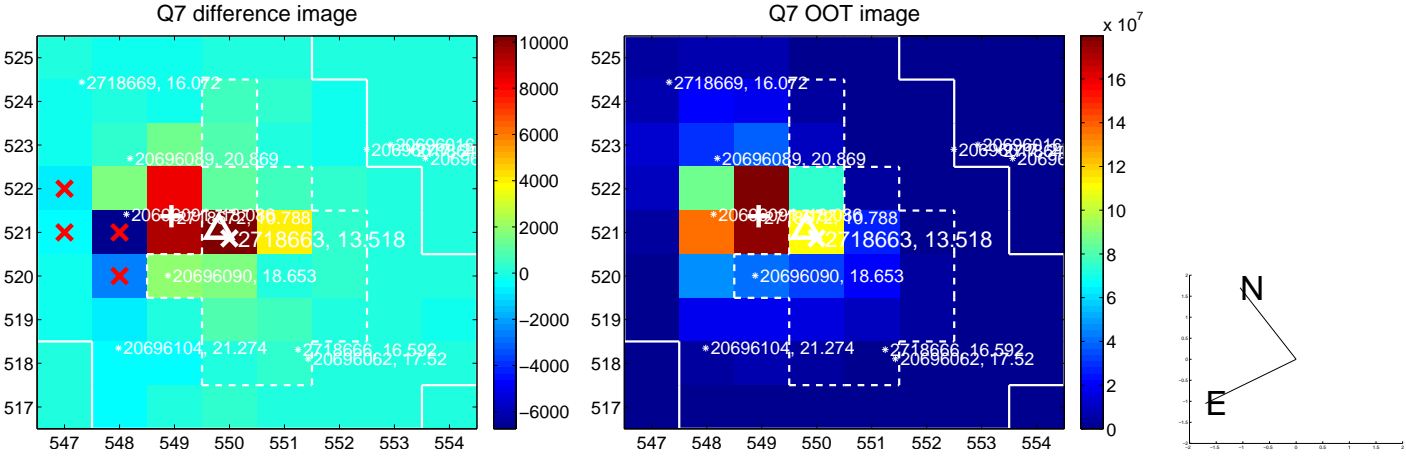
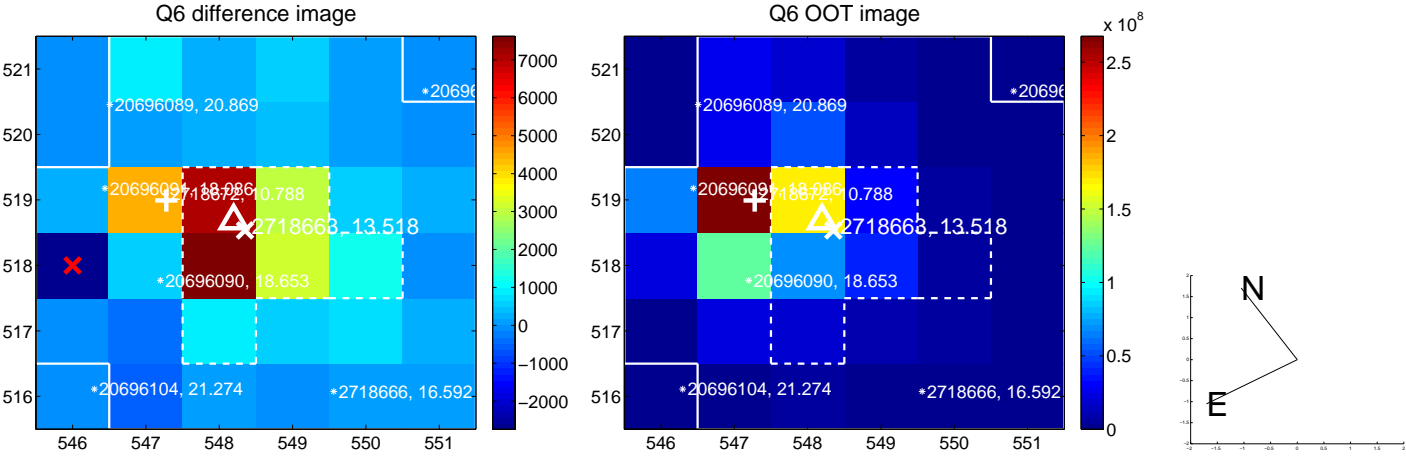
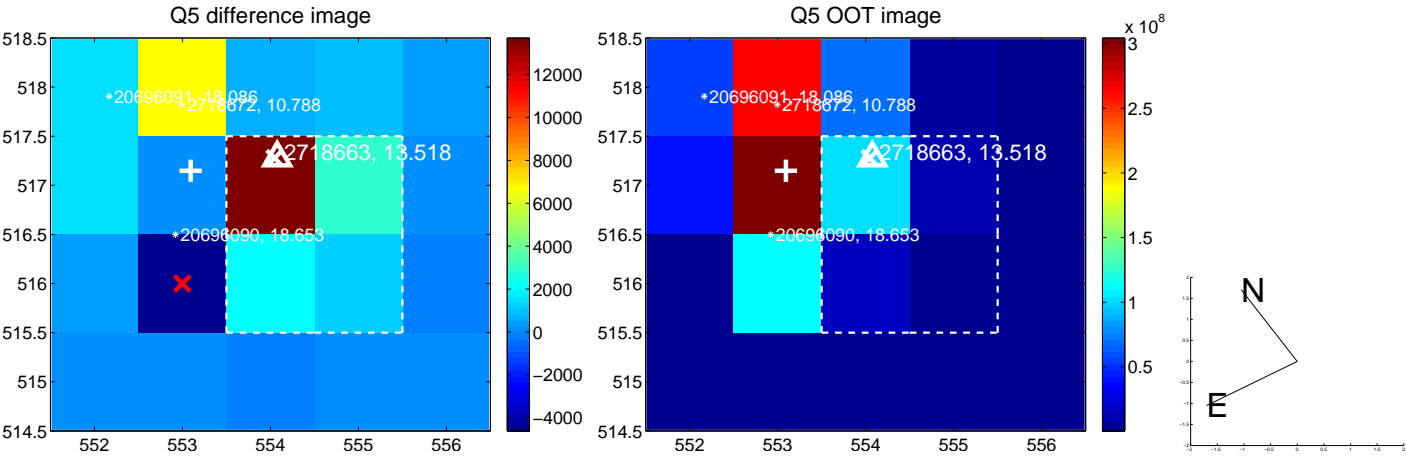


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

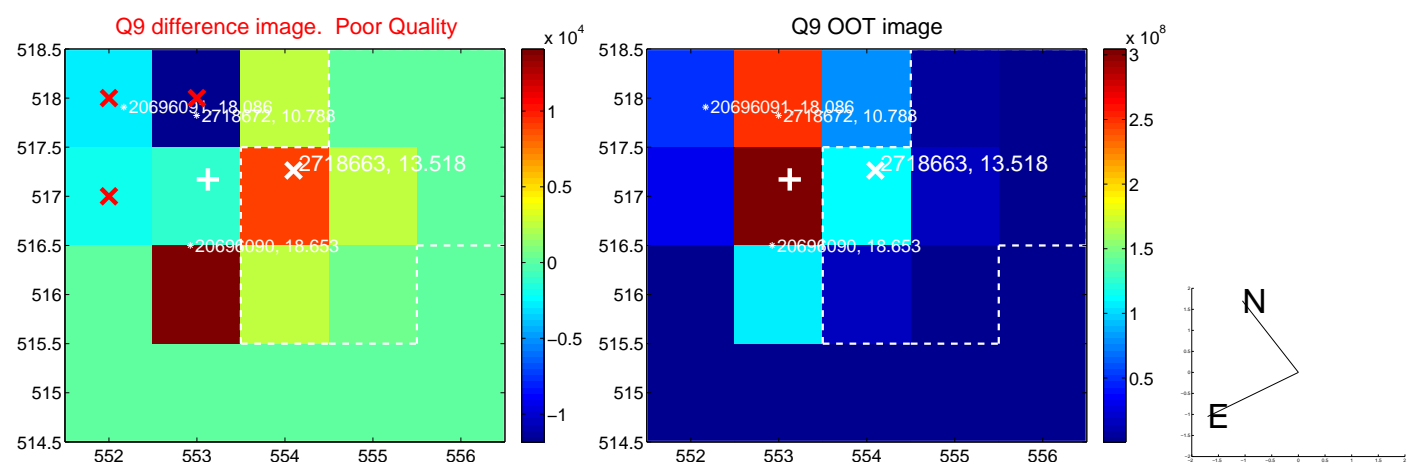
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



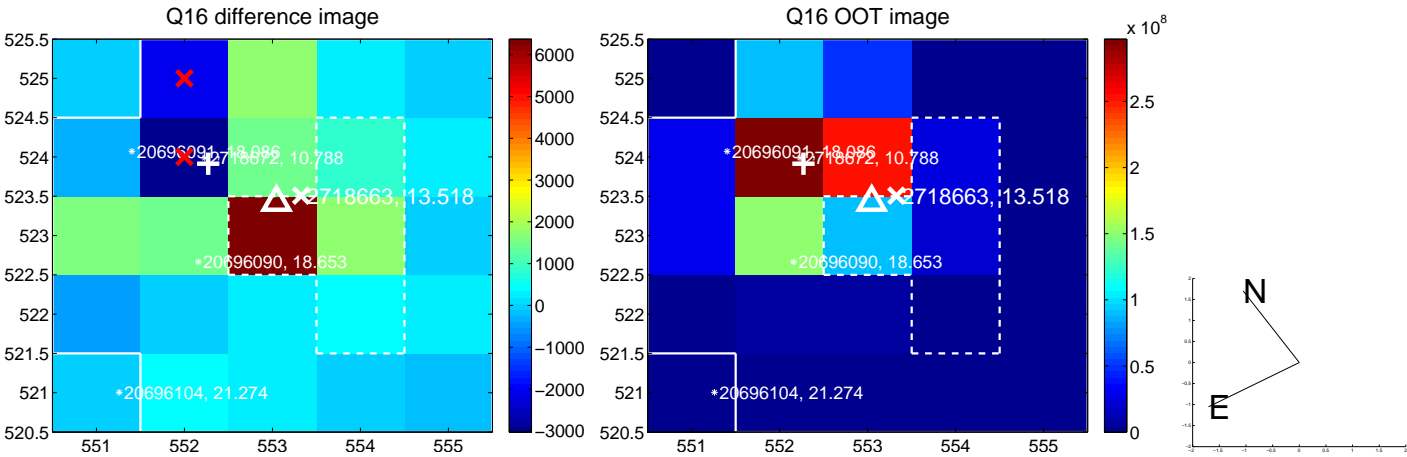
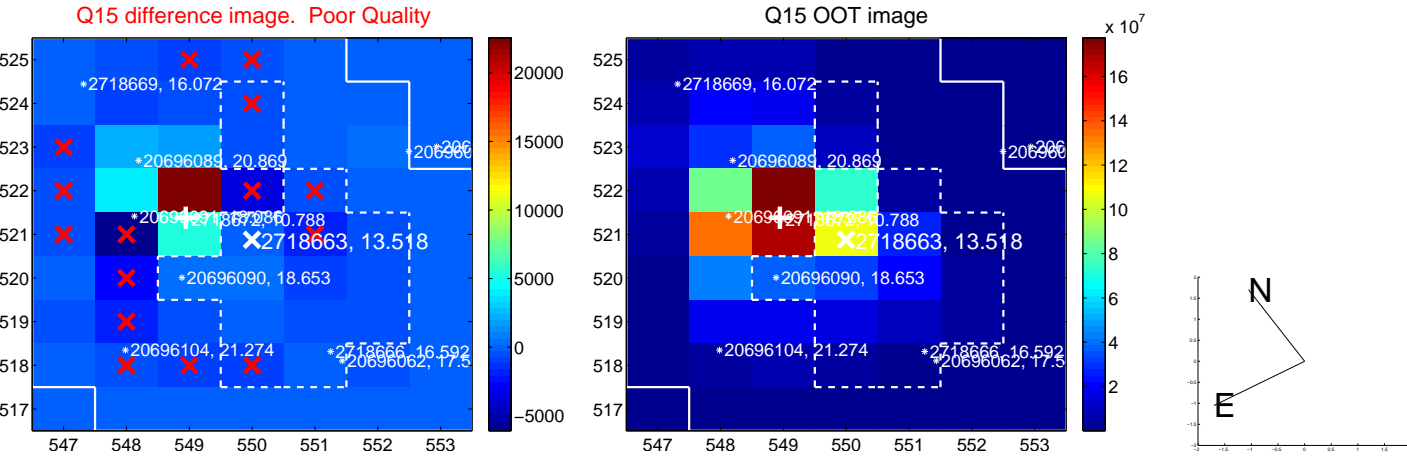
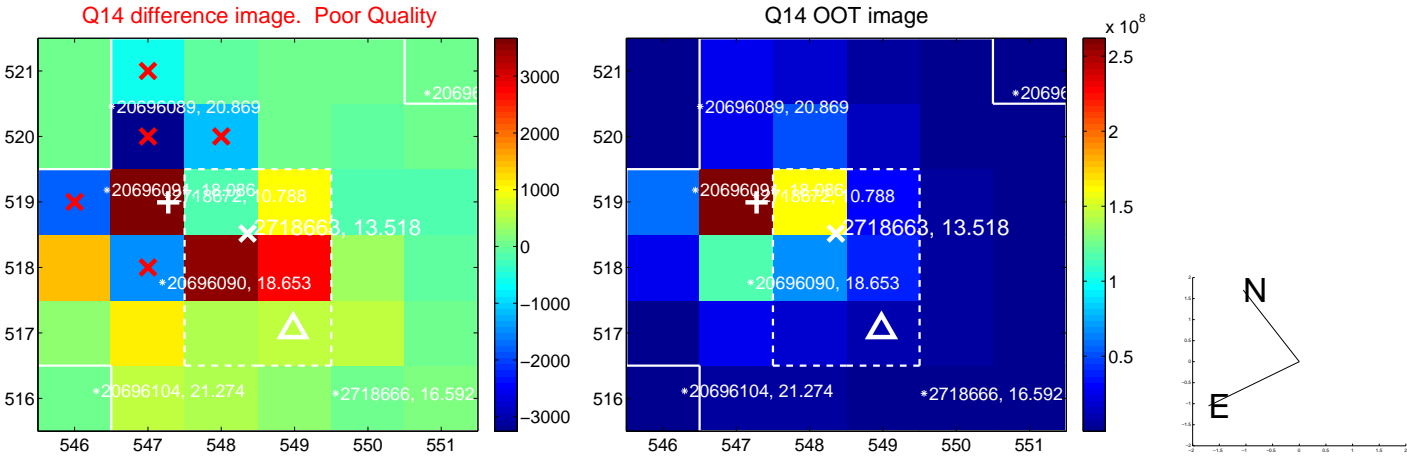
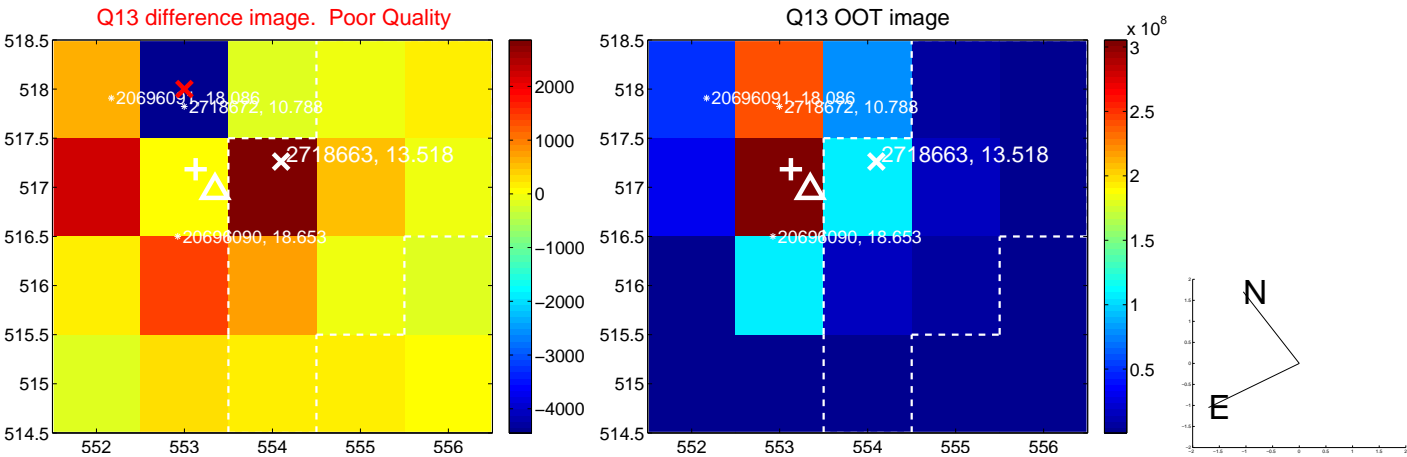
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



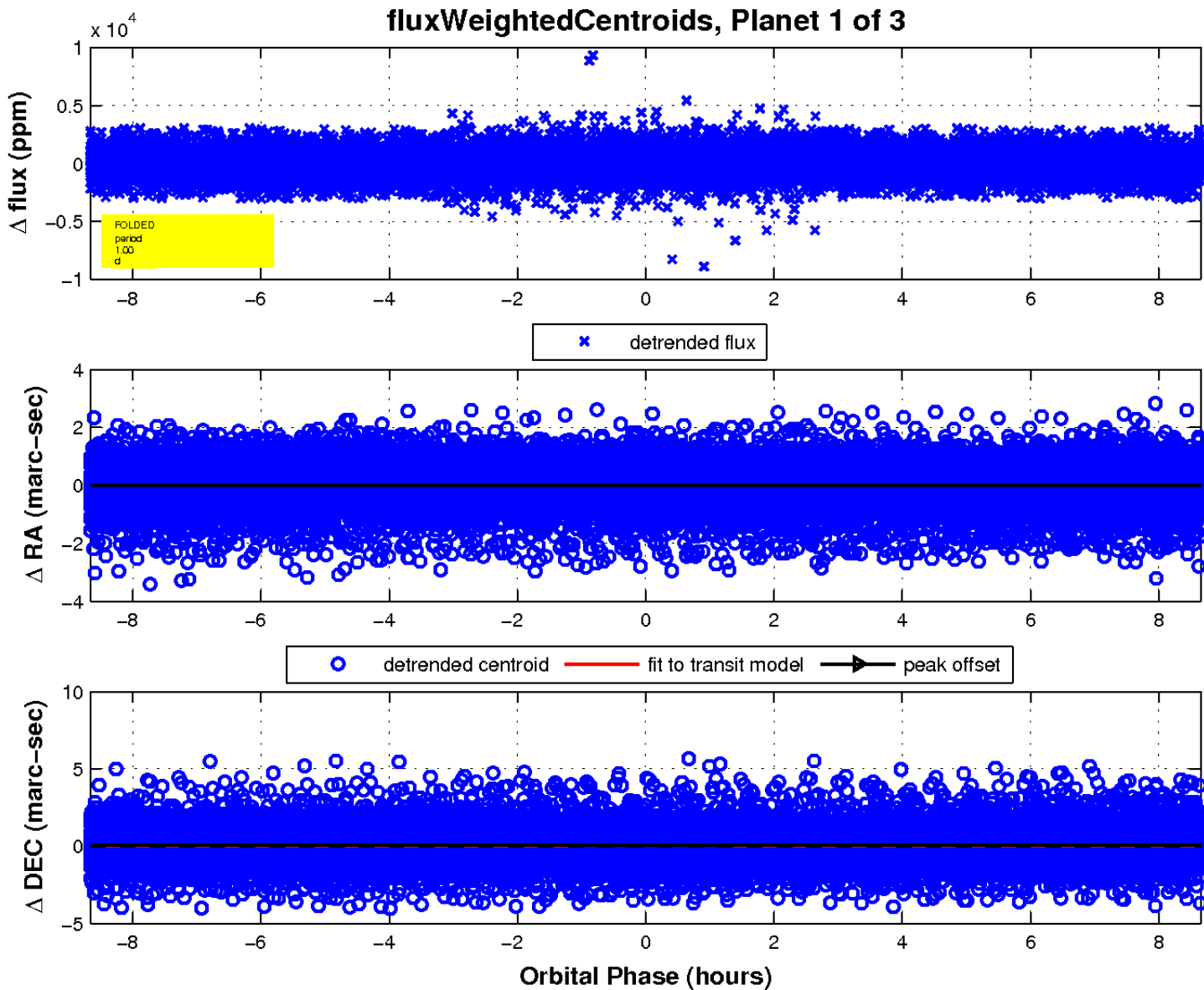
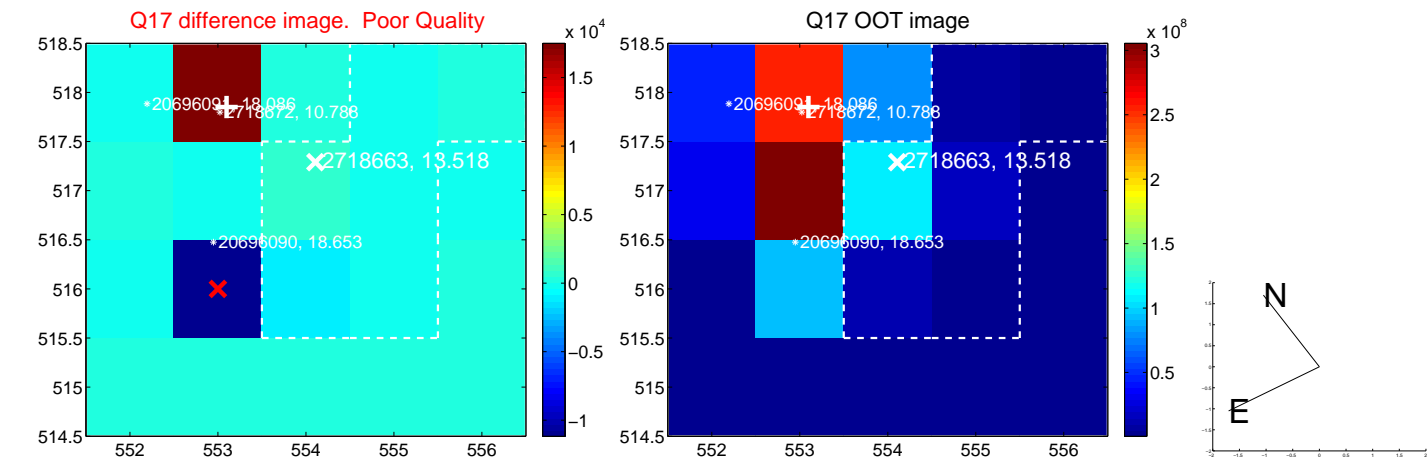
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

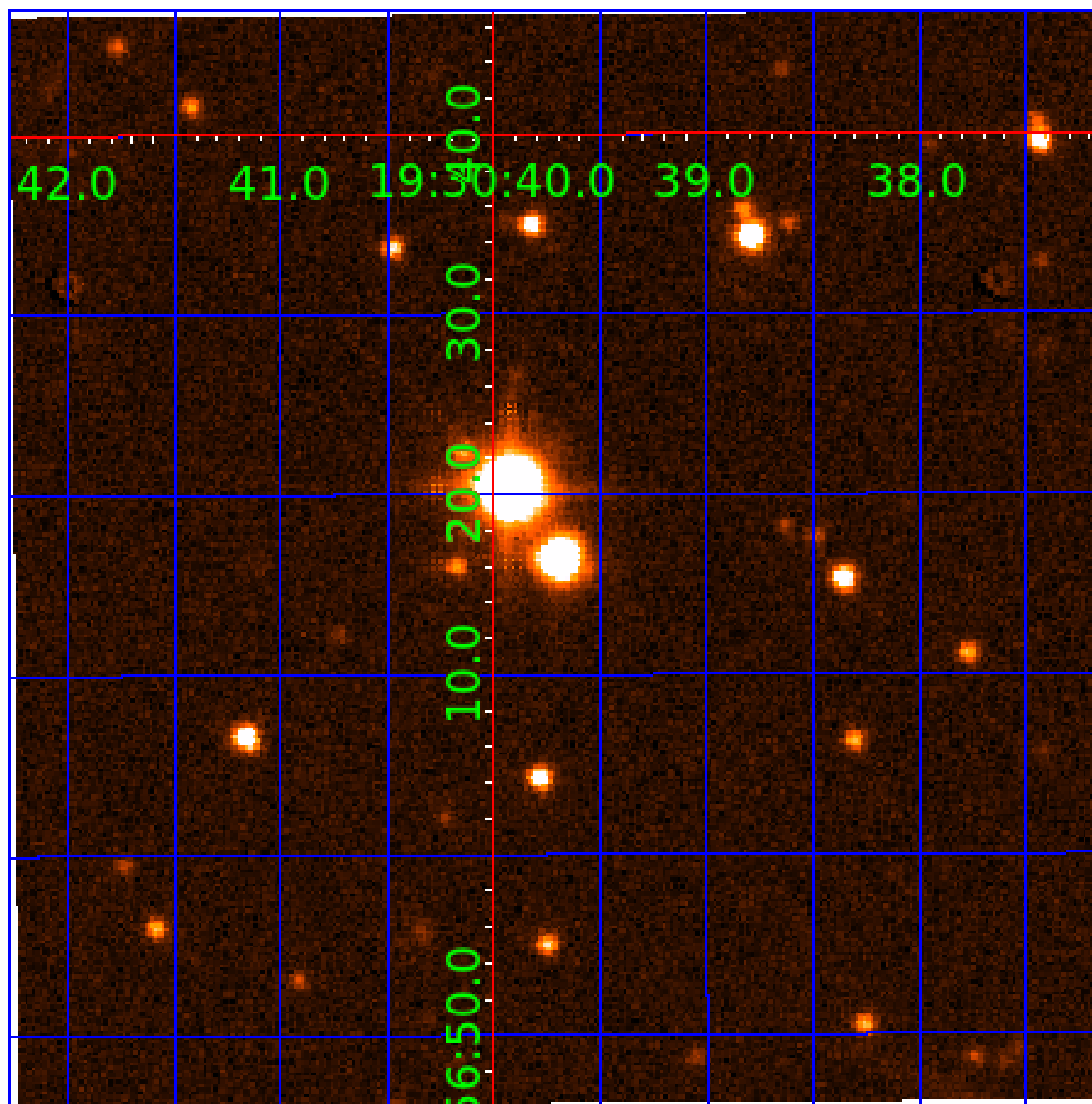


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 002718663

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})
002718663-01	OBS	No	0.996222	131.676991	76.1	2.887	8.2	7.9	1.52	7031	1.55	10591.43
002718663-02	OBS	No	0.996239	132.164959	94.7	1.732	8.3	9.2	1.52	7031	1.76	10591.18
002718663-03	OBS	No	178.694229	211.152516	2295.3	1.808	7.6	9.4	1.52	7031	7.41	10.47

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002718663-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_KIC_POS
002718663-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_KIC_POS
002718663-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—TRANS_GAPPED—MOD_NONUNIQ_ALT—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.

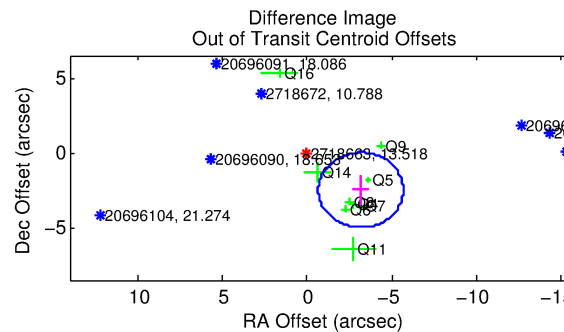
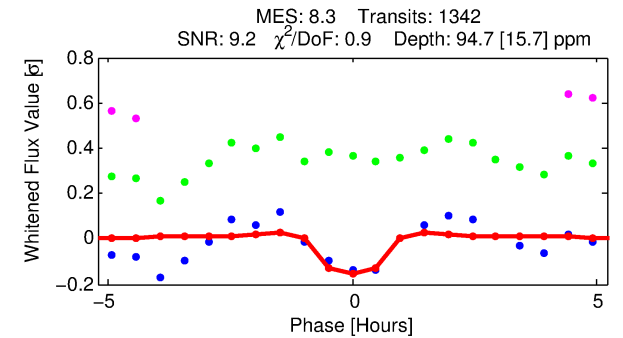
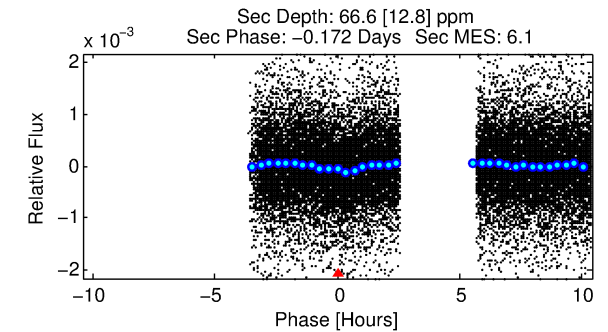
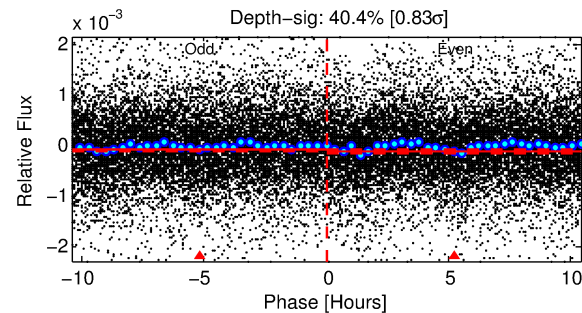
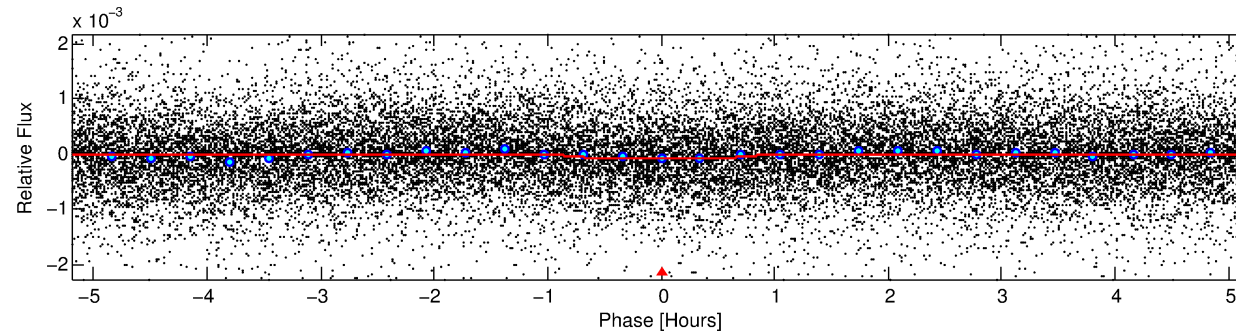
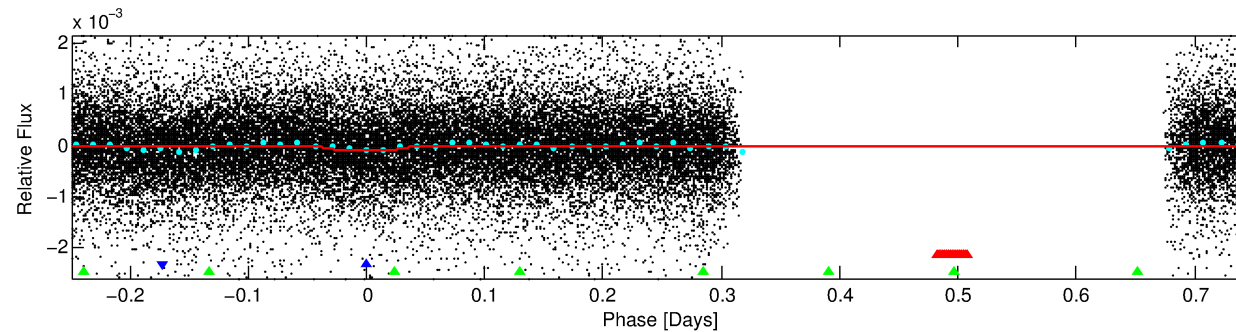
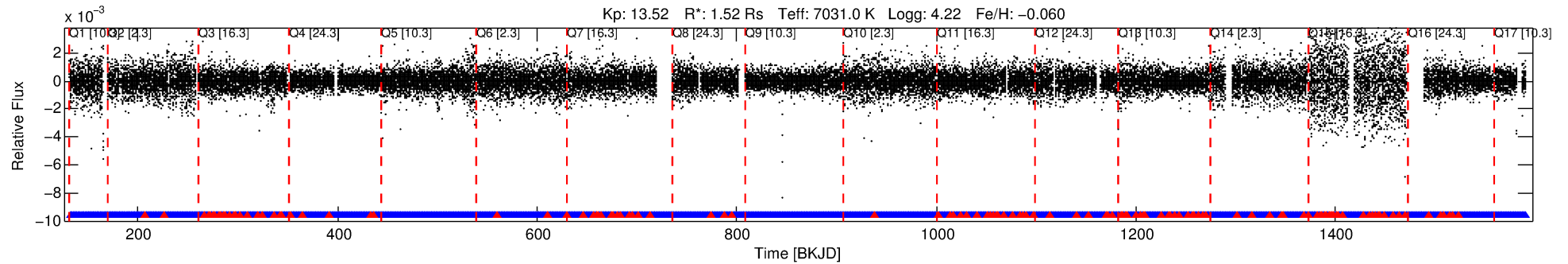
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002718663-02

No Significant Match Found

DV One-Page Summary

KIC: 2718663 Candidate: 2 of 3 Period: 0.996 d



DV Fit Results:

Period = 0.99624 [0.00001] d
Epoch = 132.1650 [0.0025] BKJD
Rp/R* = 0.0106 [0.0063]
a/R* = 2.06 [5.81]
b = 0.92 [0.61]
Seff = 10591.18 [4720.35]
Teq = 2587 [288] K
Rp = 1.76 [1.20] Re
a = 0.0219 [0.0060] AU
Ag = 5.69 [7.24] [0.65 σ]
Teffp = 6177 [1898] K [1.87 σ]

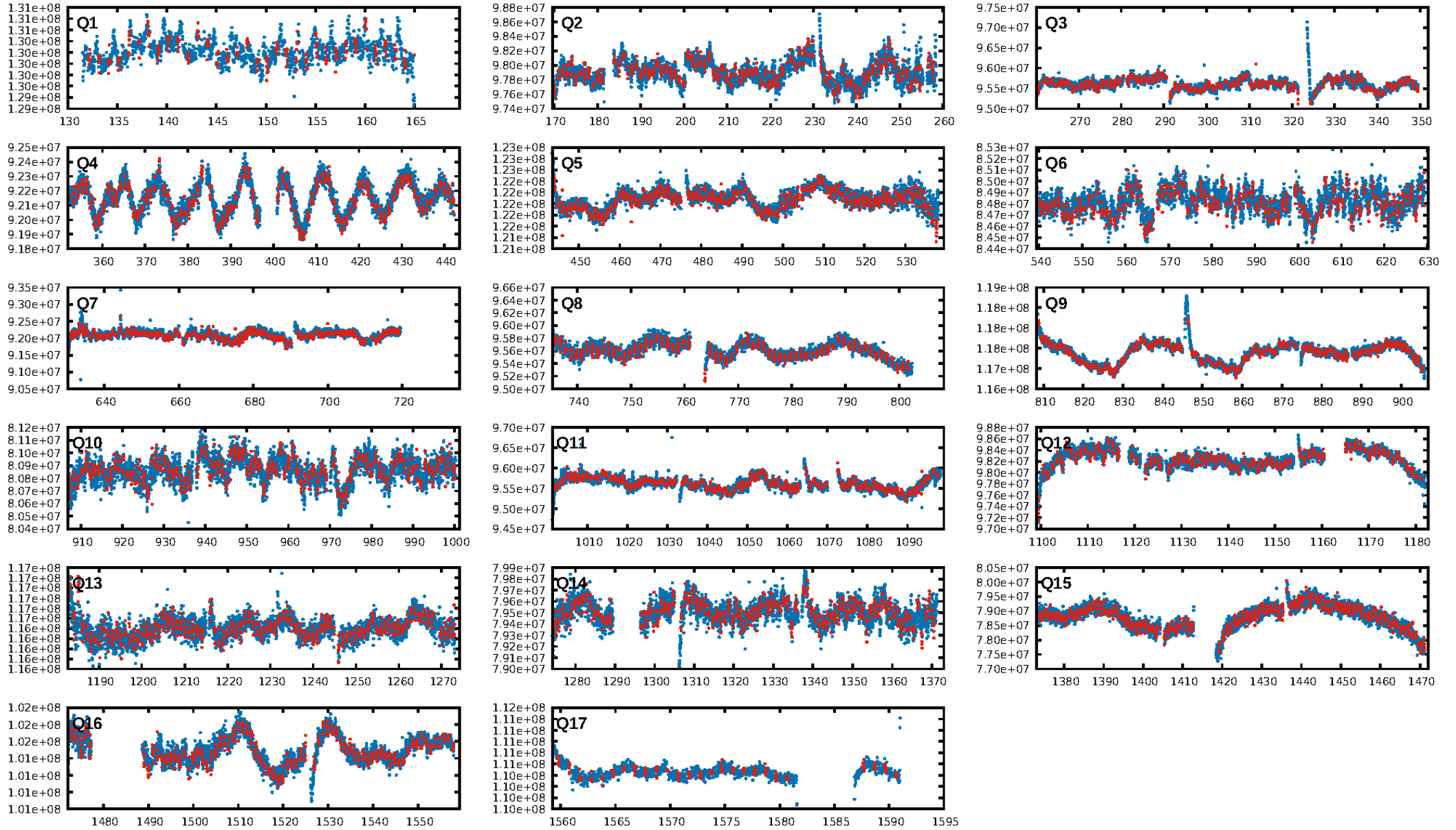
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: 100.0% [1703.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.06e-14
RollingBand-igt: 0.90 [1153/1283]
GhostDiagnostic-chr: 1.321
Centroid-sig: 0.0%
Centroid-so: 2.578 arcsec [20.38 σ]
OotOffset-rm: 4.017 arcsec [4.82 σ]
KicOffset-rm: 0.221 arcsec [0.31 σ]
OotOffset-st: 2/2/3/2 [9]
KicOffset-st: 2/2/3/2 [9]
DiffImageQuality-fgm: 0.67 [6/9]
DiffImageOverlap-fno: 1.00 [17/17]

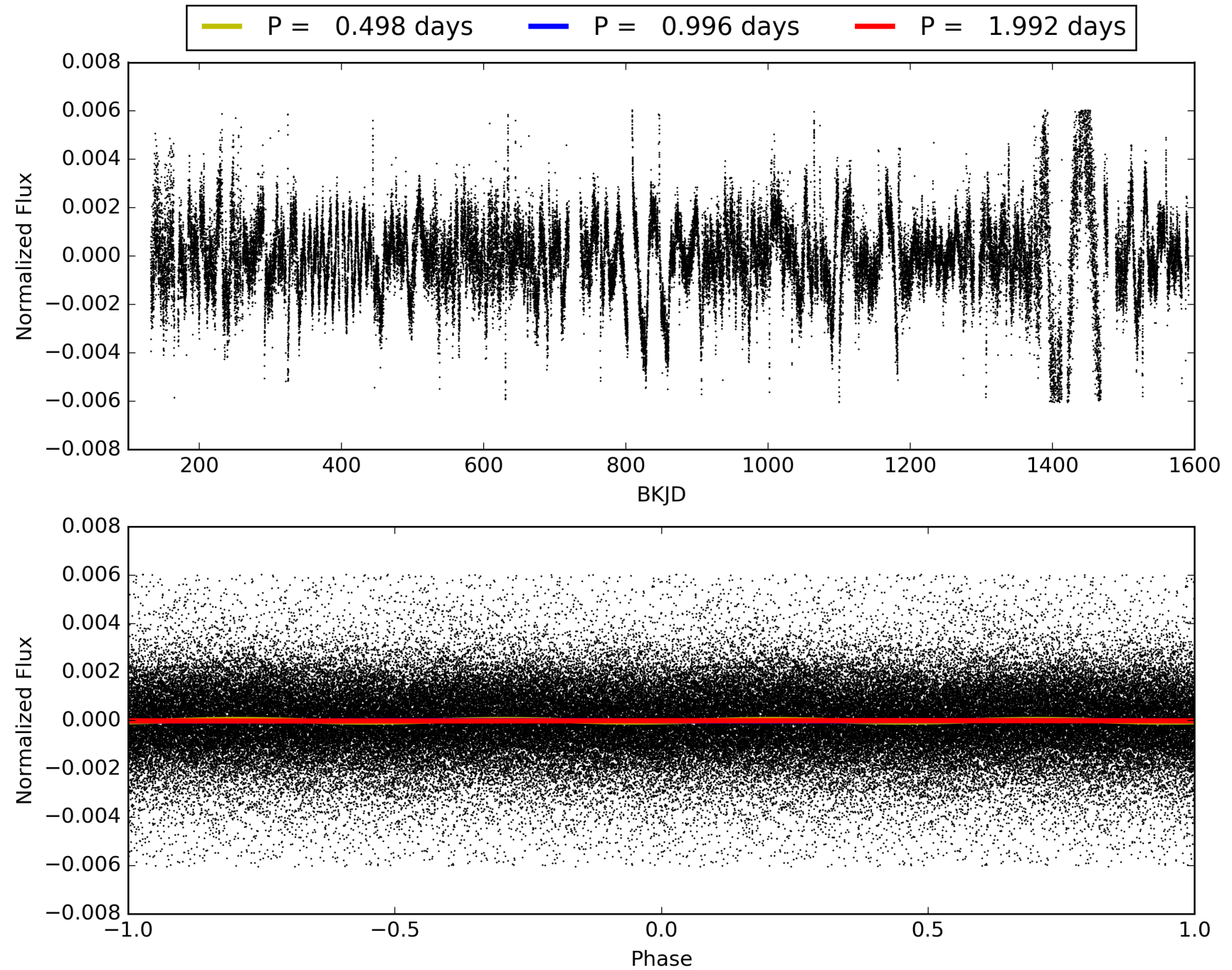
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:20:25 Z

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

TCE 002718663-02, PDC Light Curves

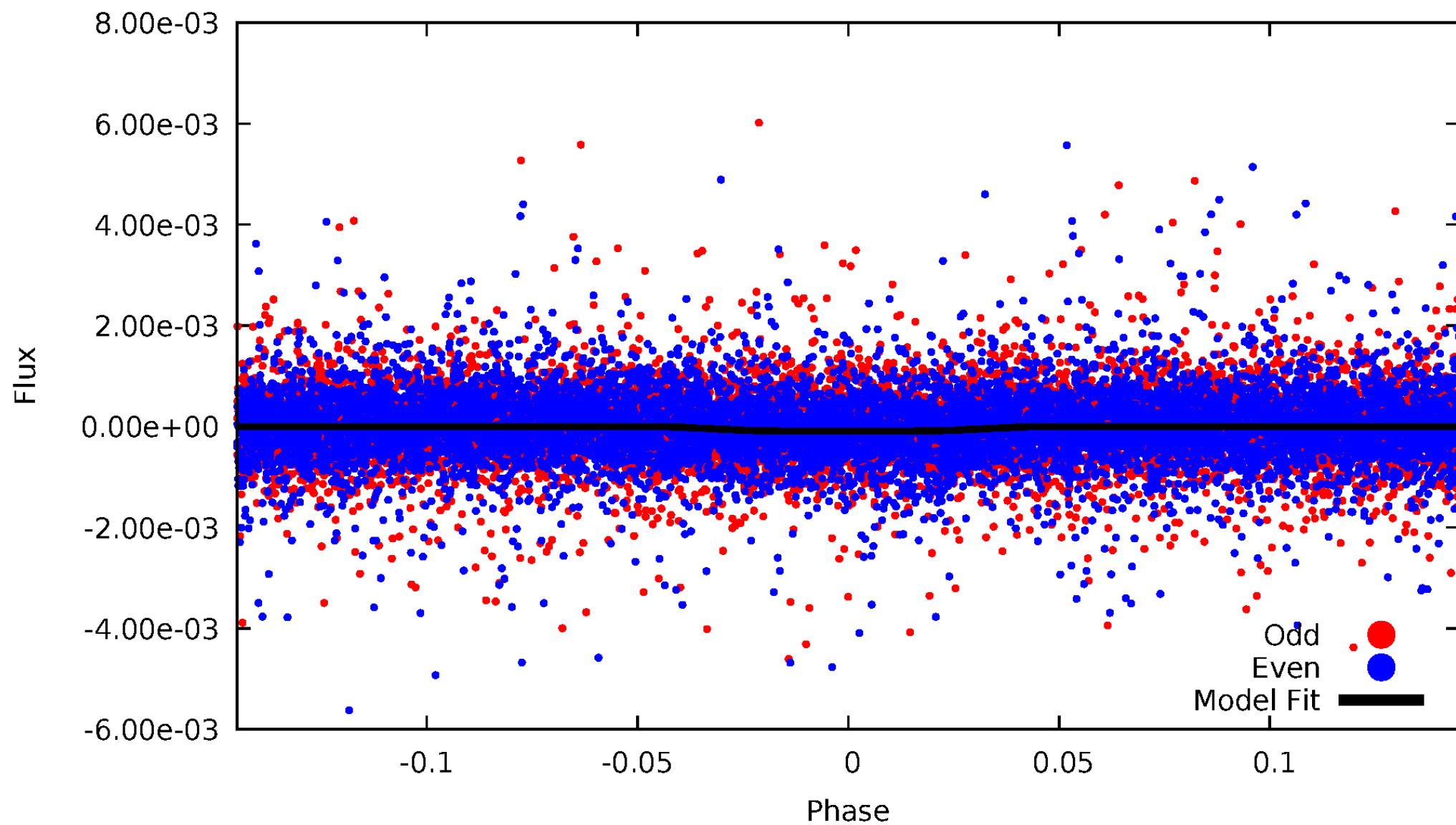


TCE 002718663-02



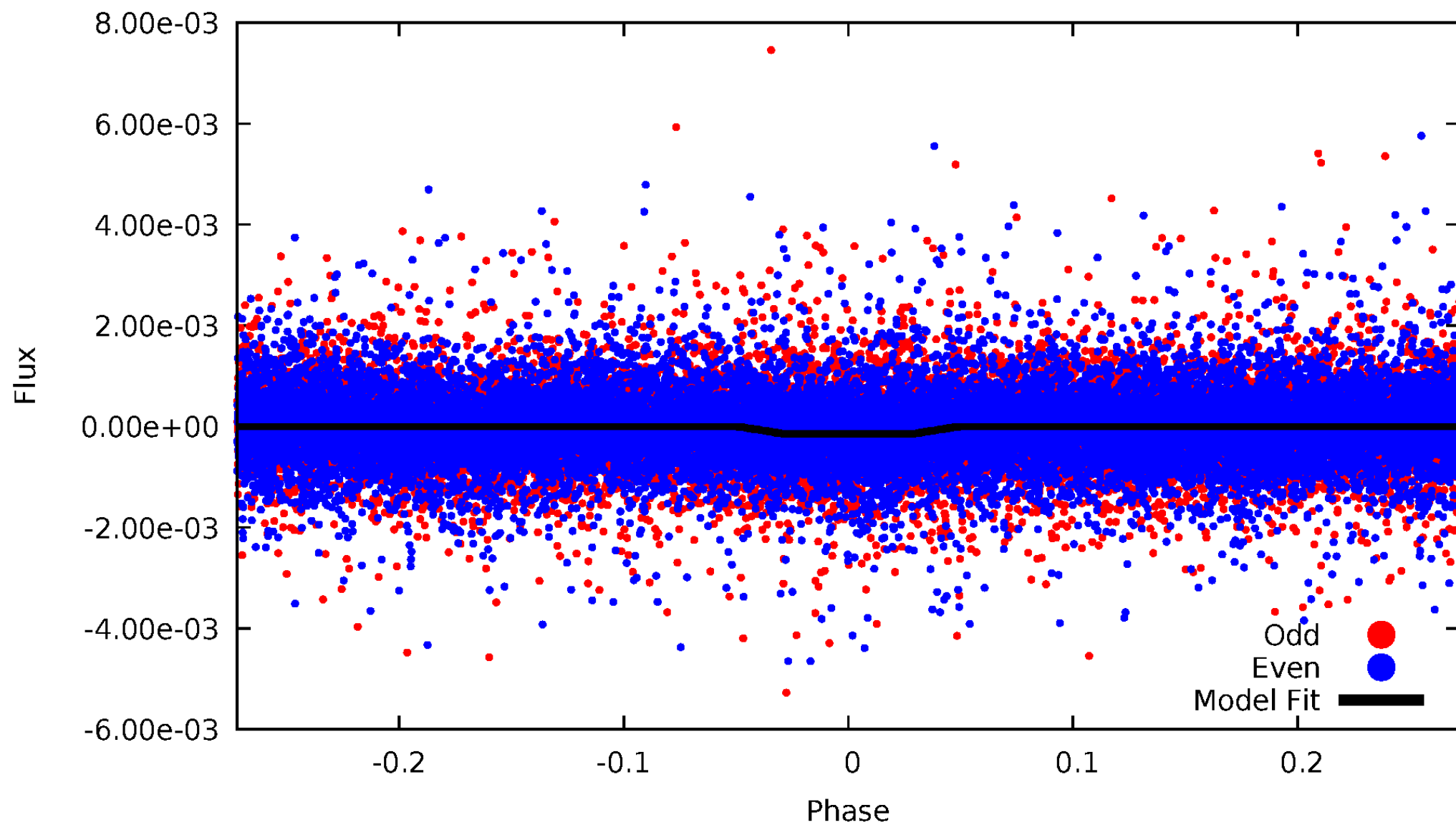
DV Odd/Even

TCE 002718663-02



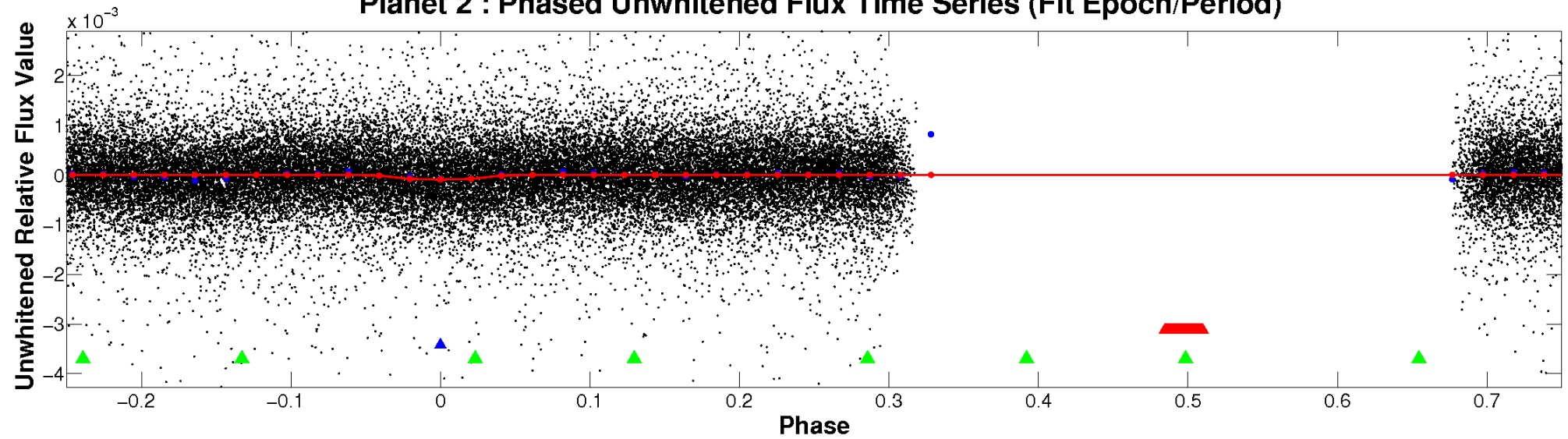
ALT Odd/Even

TCE 002718663-02

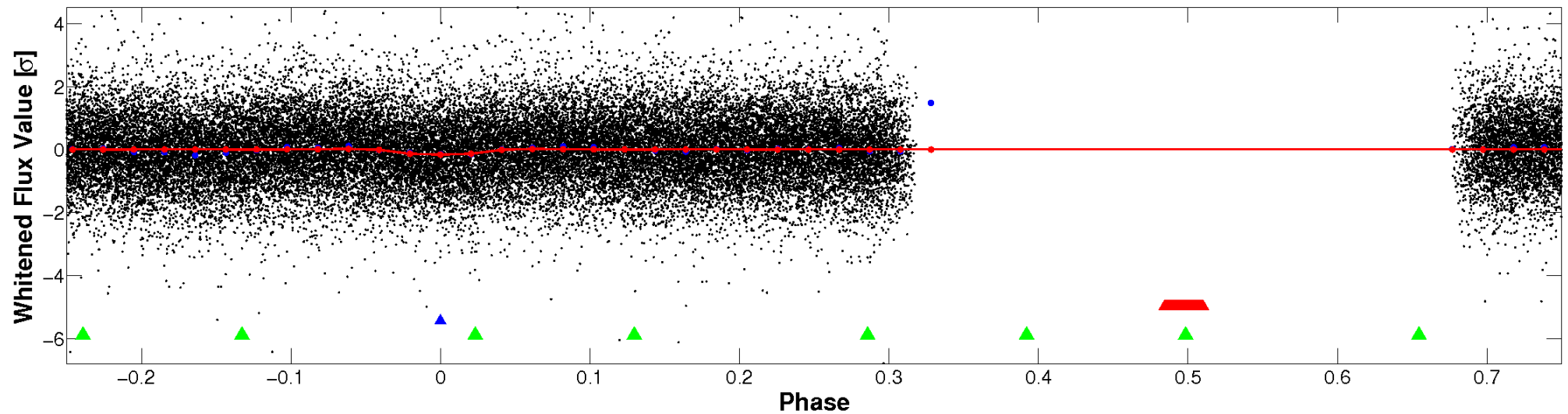


Non-Whitened Vs. Whitened Light Curve

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

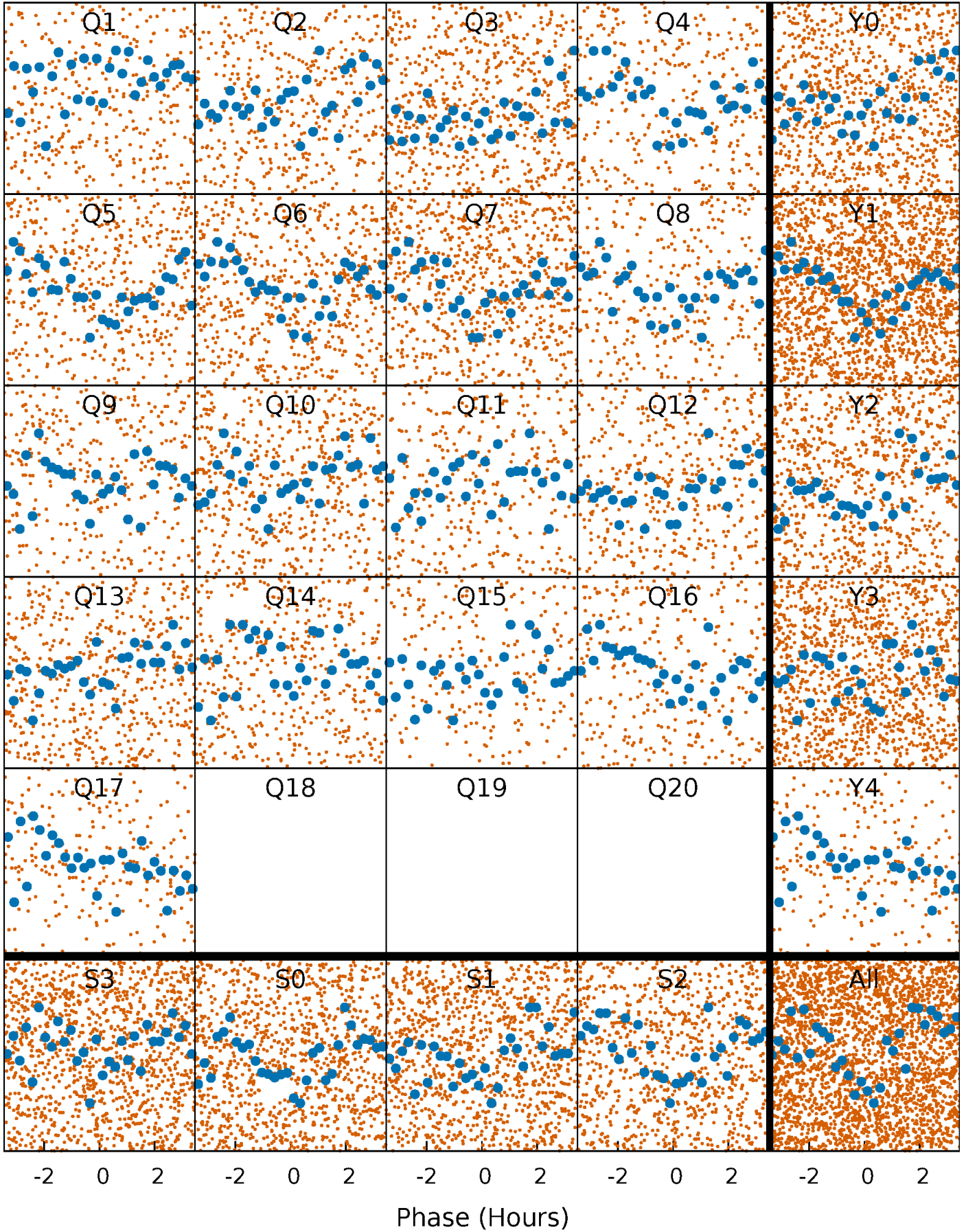


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



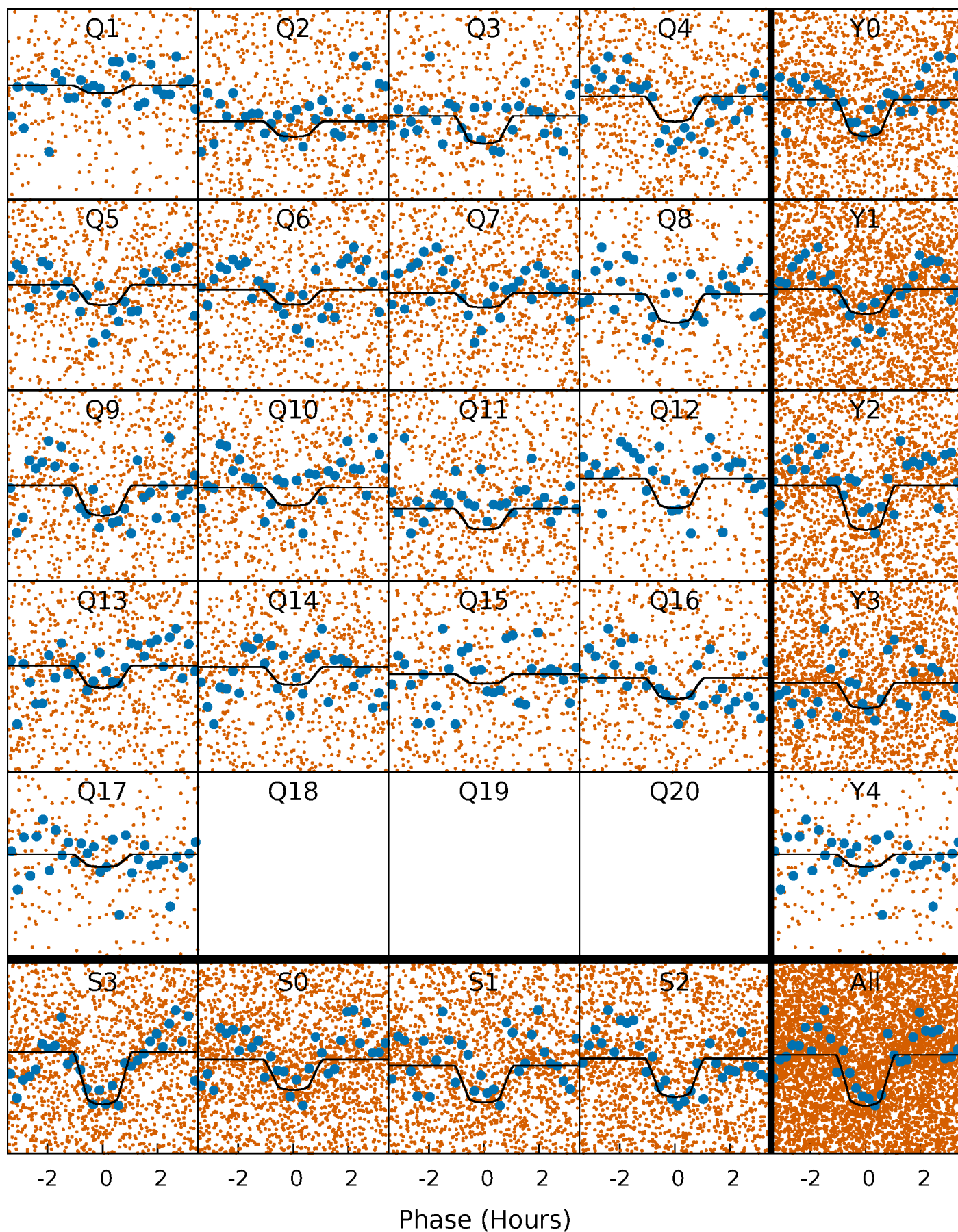
PDC Quarter-Phased Transit Curves

TCE 002718663-02 P= 0.996239 Days $T_0=132.164959$ (BKJD)



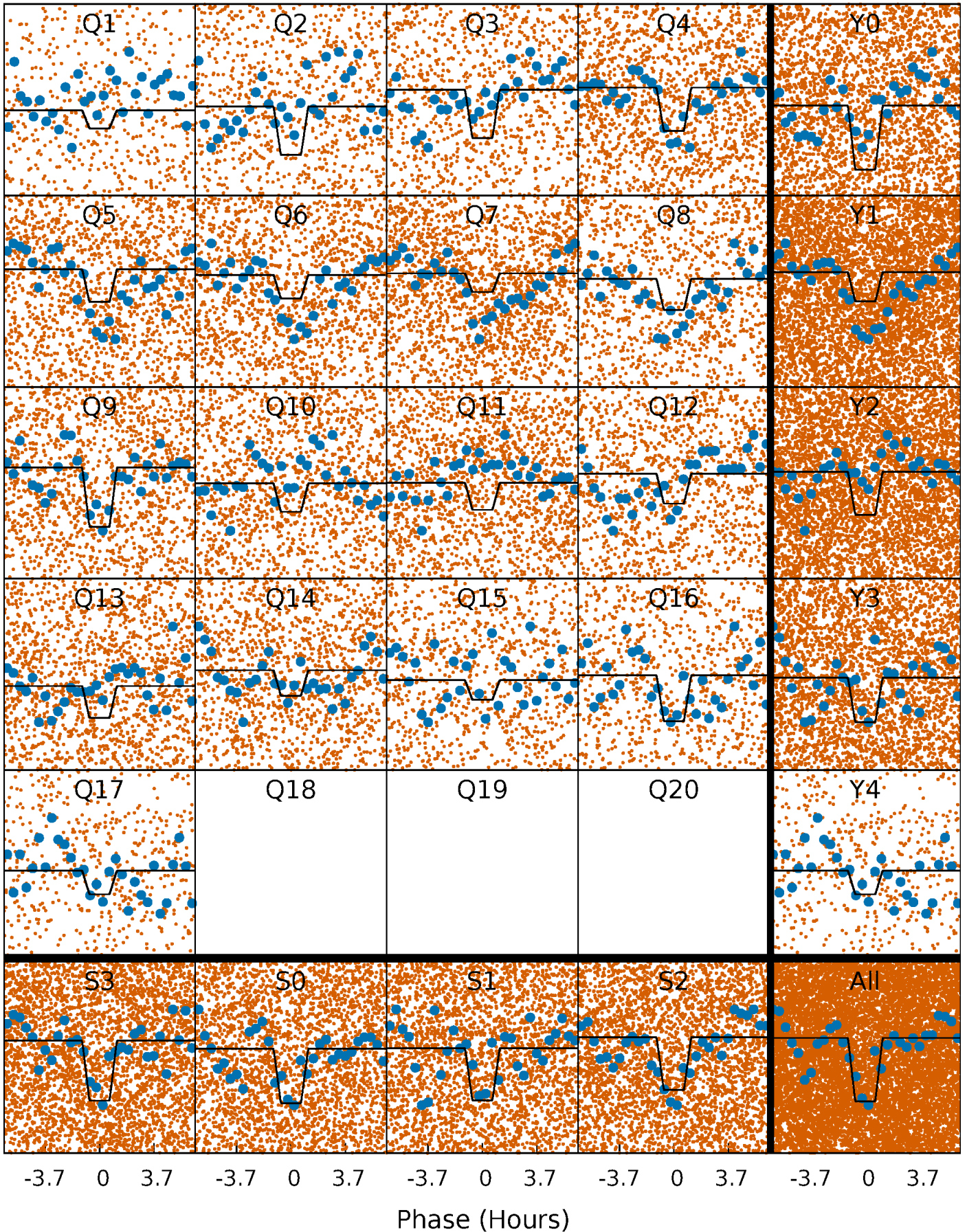
DV Quarter-Phased Transit Curves

TCE 002718663-02 P= 0.996239 Days $T_0=132.164959$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

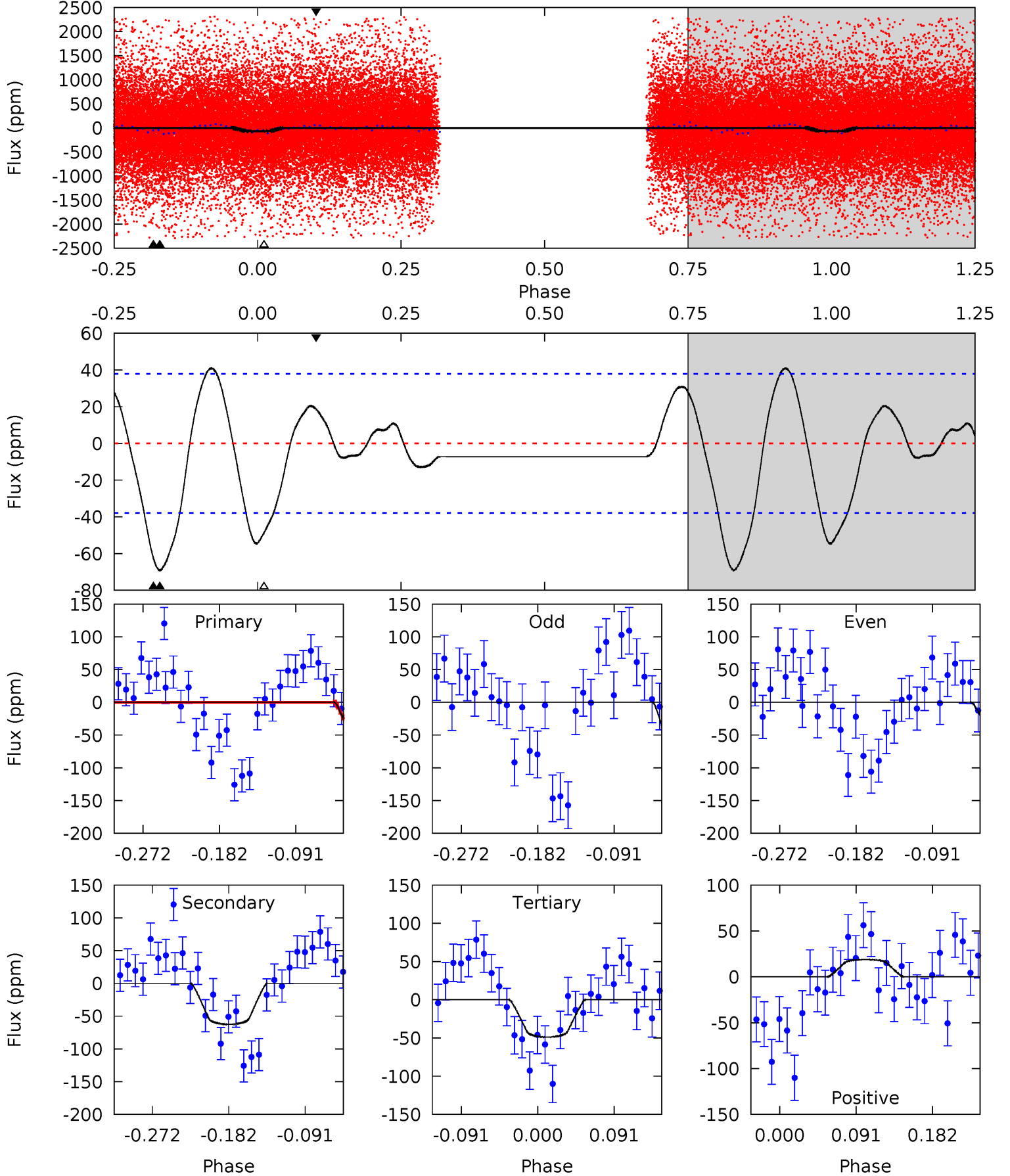
TCE 002718663-02 P= 0.996252 Days $T_0=132.161804$ (BKJD)



DV Model-Shift Uniqueness Test

002718663-02, P = 0.996239 Days, E = 131.168720 Days

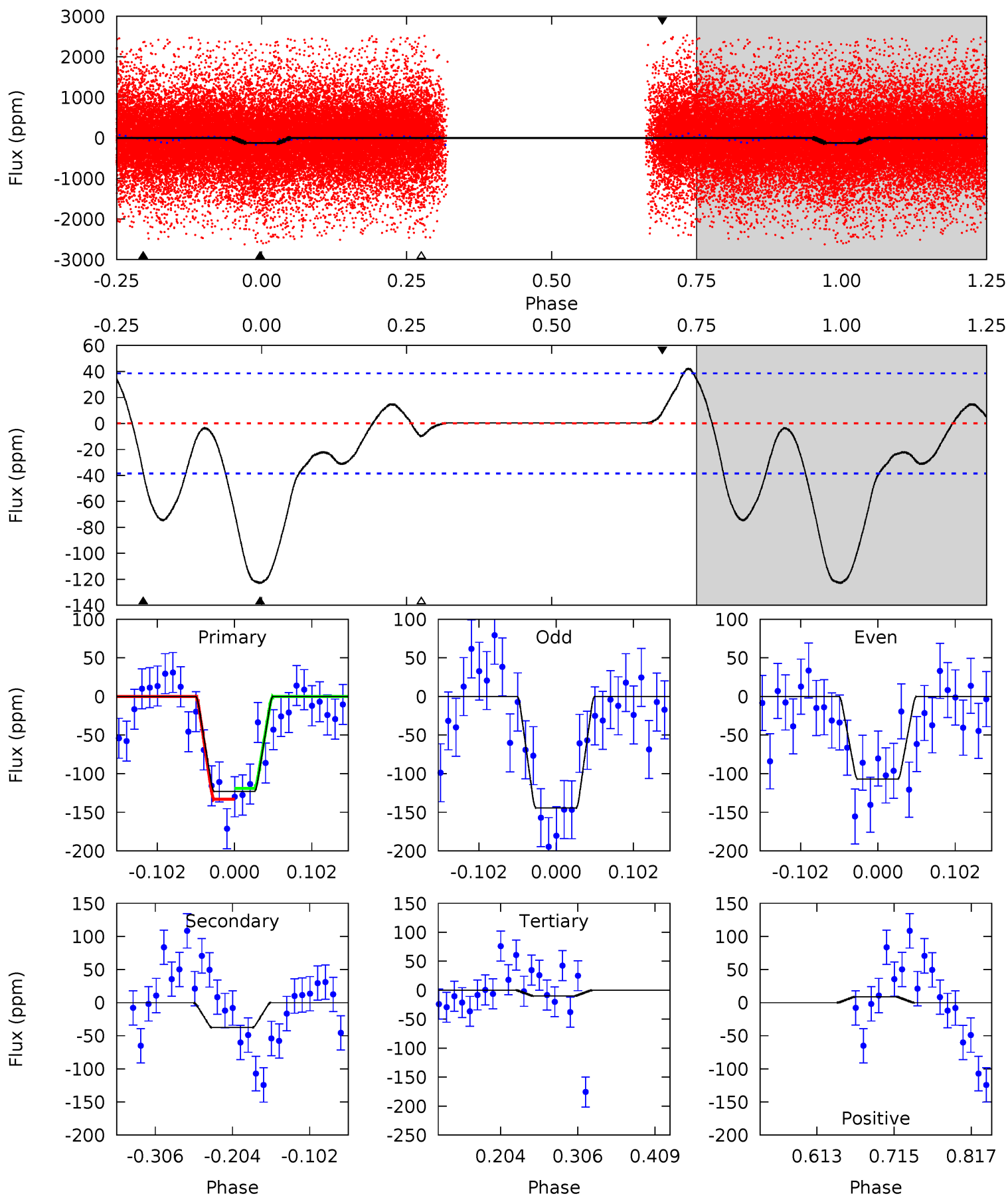
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.37	7.57	5.91	2.27	4.59	1.69	2.67	2.46	6.10	1.66	5.30	2.48	0.90	0.37	0.70



Alt Model-Shift Uniqueness Test

002718663-02, P = 0.996252 Days, E = 131.165552 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.5	4.45	1.16	1.04	4.56	1.63	2.46	13.4	13.5	3.28	3.41	2.23	0.93	0.26	0.85



Stellar Parameters For KIC 002718663

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7031^{+218}_{-374}	$4.222^{+0.105}_{-0.210}$	$-0.060^{+0.250}_{-0.350}$	$1.523^{+0.508}_{-0.274}$	$1.415^{+0.216}_{-0.238}$	$0.564^{+0.287}_{-0.298}$
	+3%/-5%	+2%/-5%	+417%/-583%	+33%/-18%	+15%/-17%	+51%/-53%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 002718663-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-63 ± 8	$1.85^{+1.10}_{-1.02}$	3643^{+304}_{-244}	5748^{+3491}_{-1109}	$4.801^{+18.133}_{-2.975}$
Alt.	-38 ± 8	$2.10^{+1.09}_{-0.99}$	3648^{+301}_{-255}	4817^{+1900}_{-888}	$2.148^{+5.900}_{-1.249}$

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

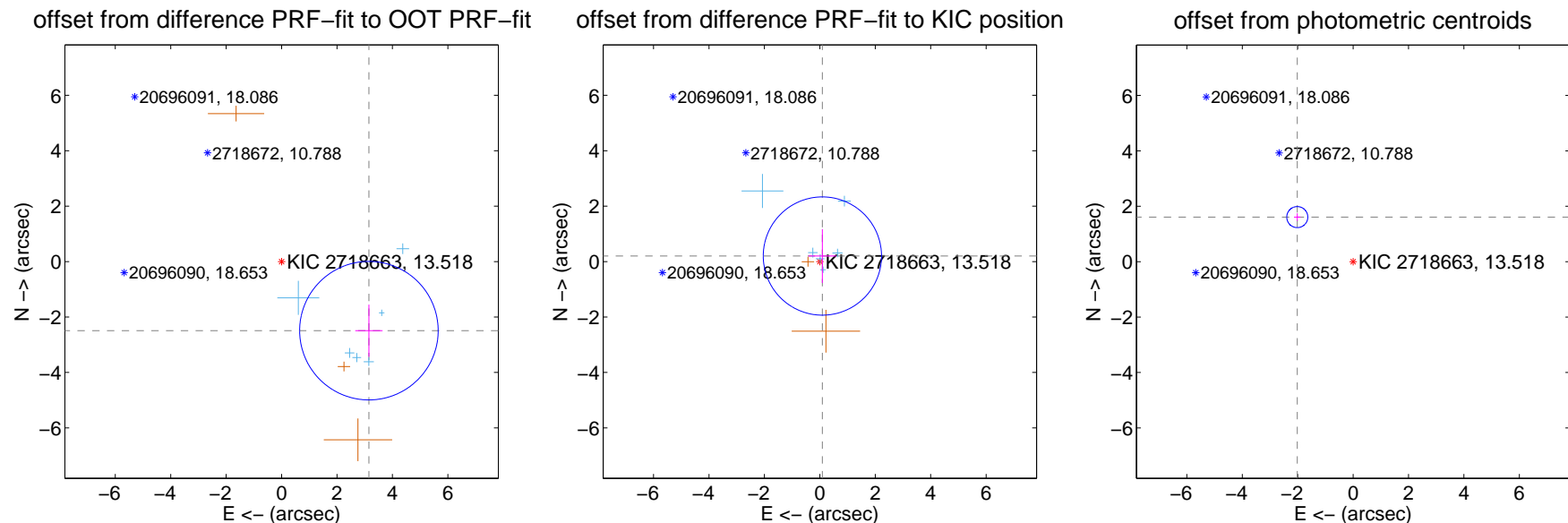
DV Centroid Data

Supplemental centroid analysis for 002718663-02. Kepler magnitude: 13.52. Transit SNR 9.21

There are 6 quarters with good PRF difference image offsets

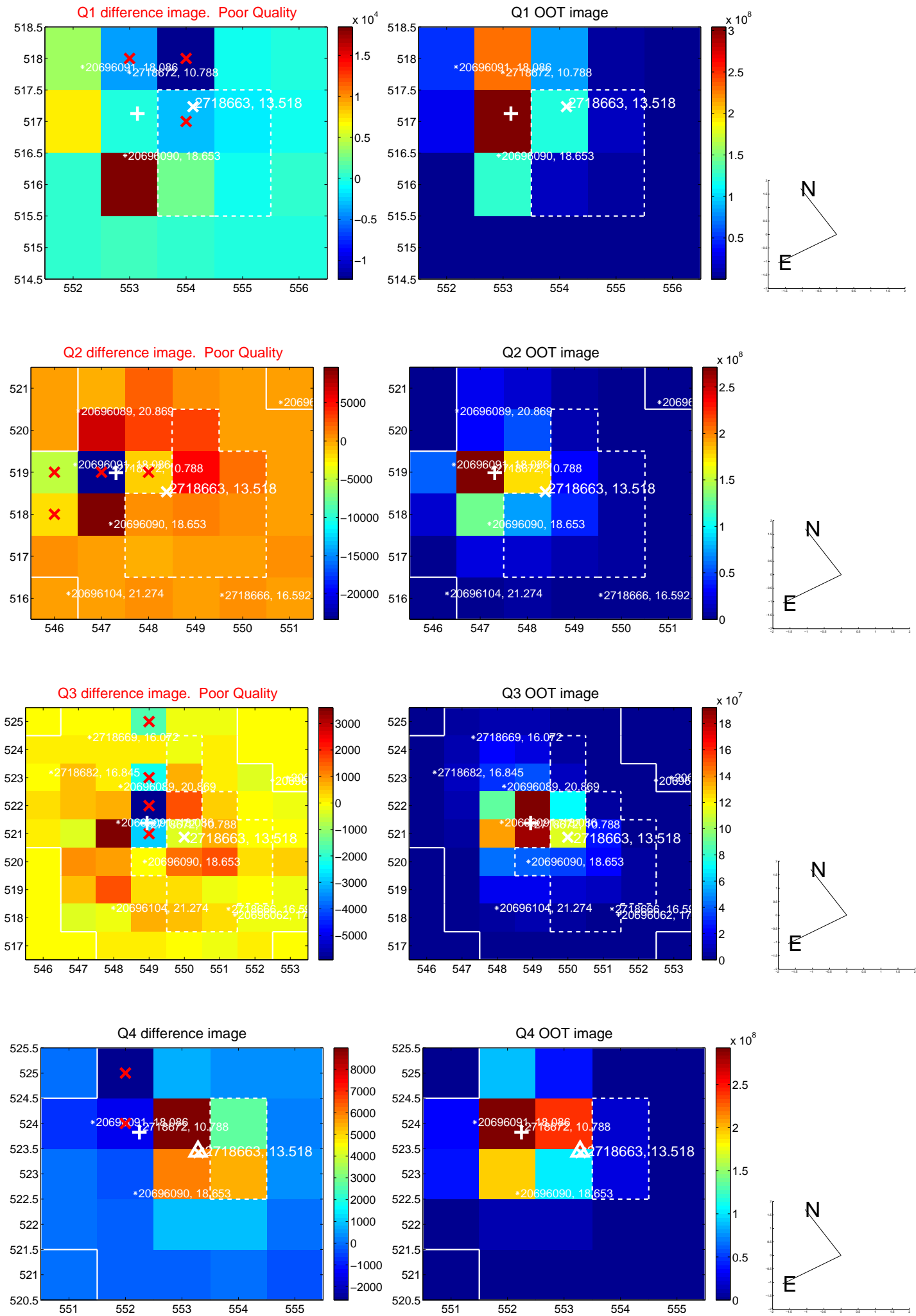
The OOT PRF centroid is offset from the target star catalog position by about 4.52 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.017 ± 0.833	4.82	-3.151 ± 0.492	-2.492 ± 0.941
PRF-fit source offset from KIC position	0.221 ± 0.711	0.31	-0.092 ± 0.503	0.200 ± 0.970
photometric centroid source offset	2.58 ± 0.13	20.38	2.01 ± 0.12	1.61 ± 0.14

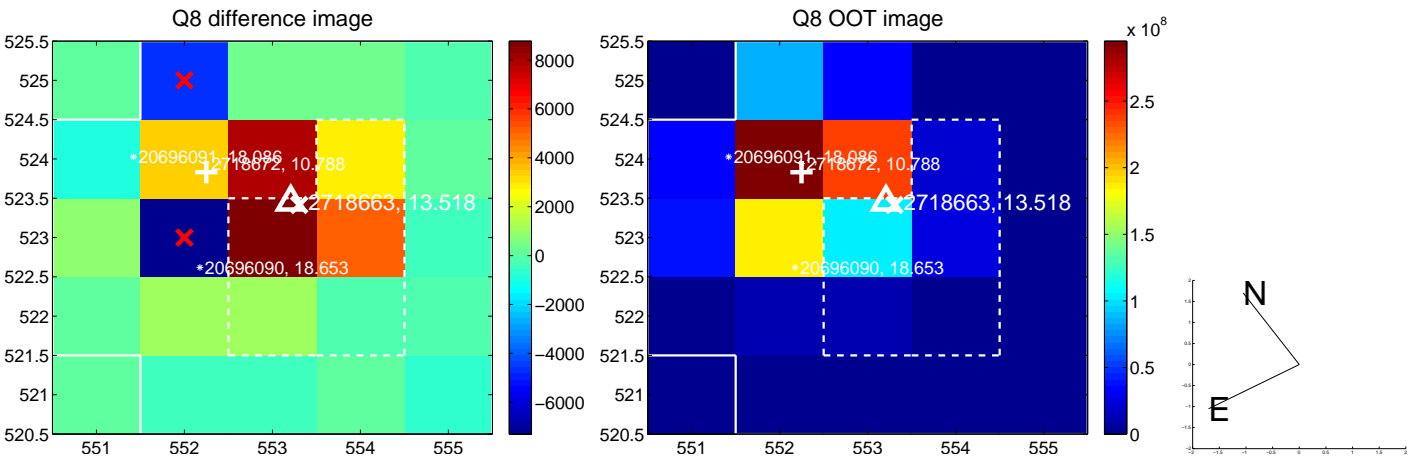
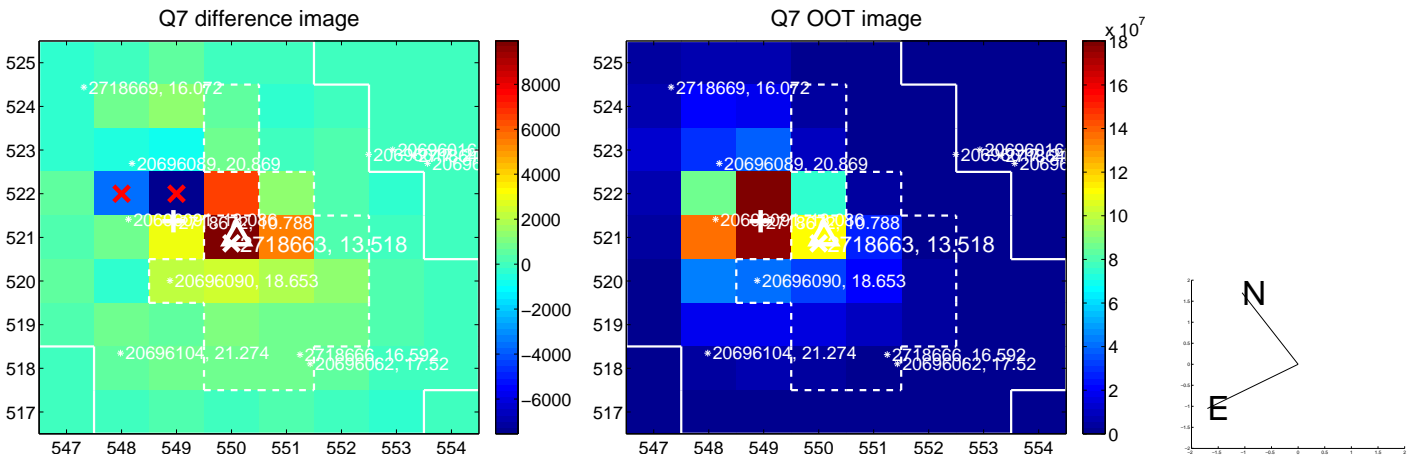
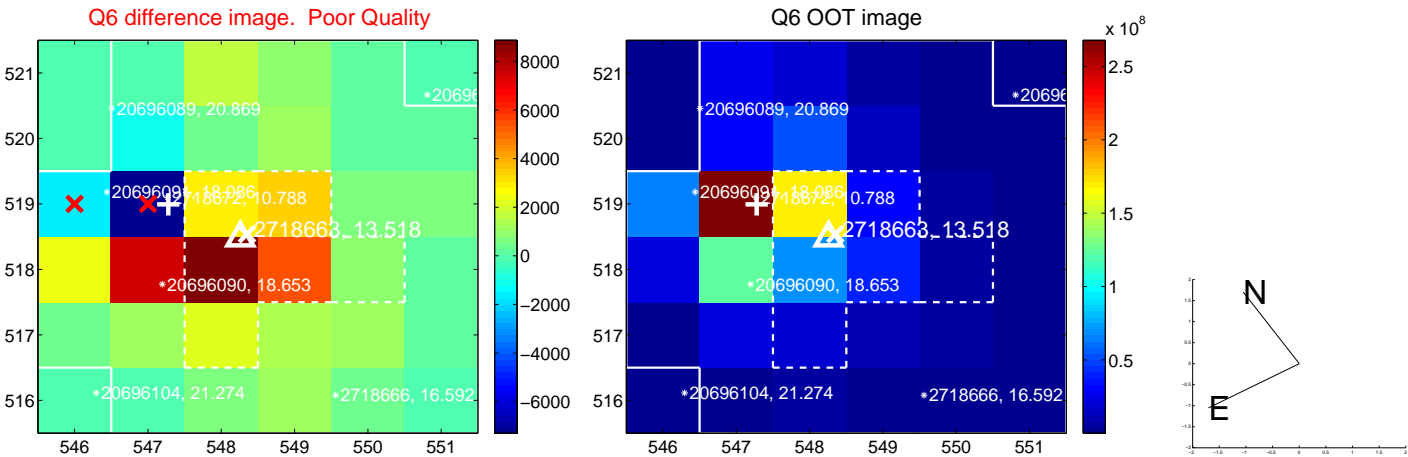
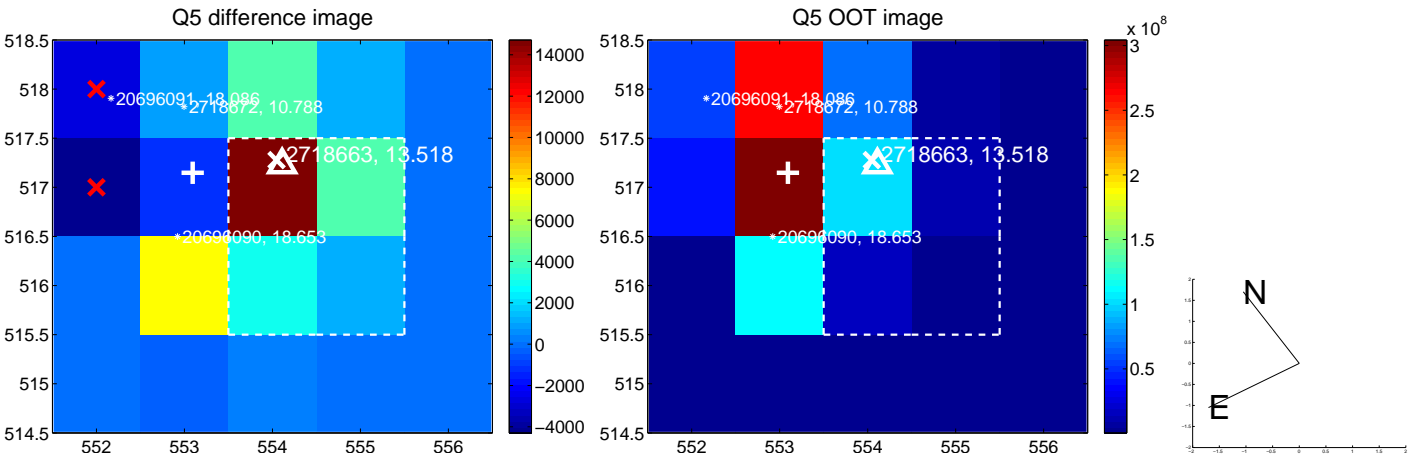


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

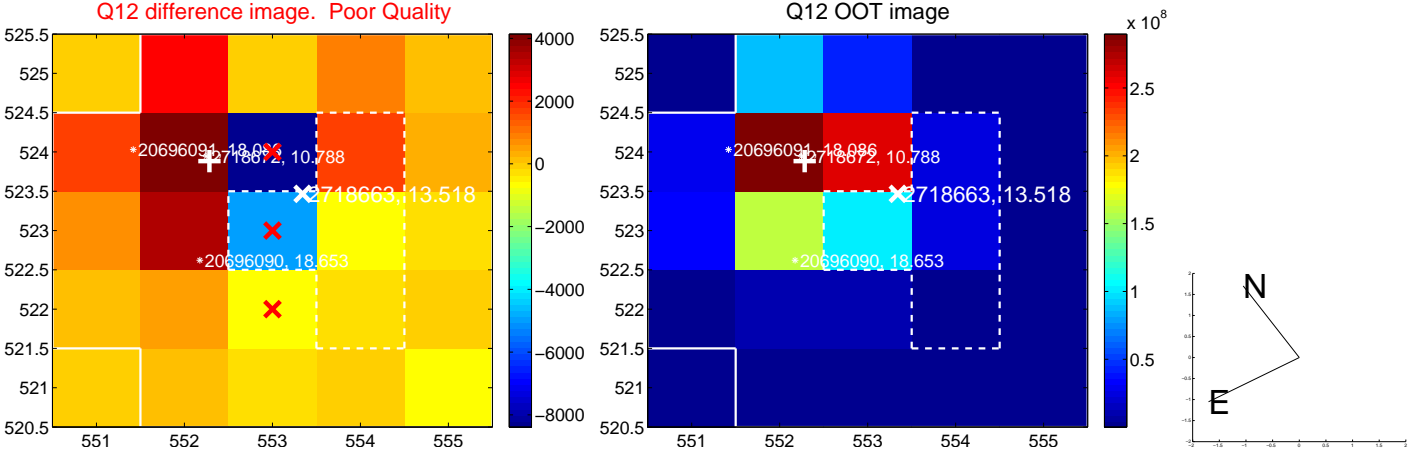
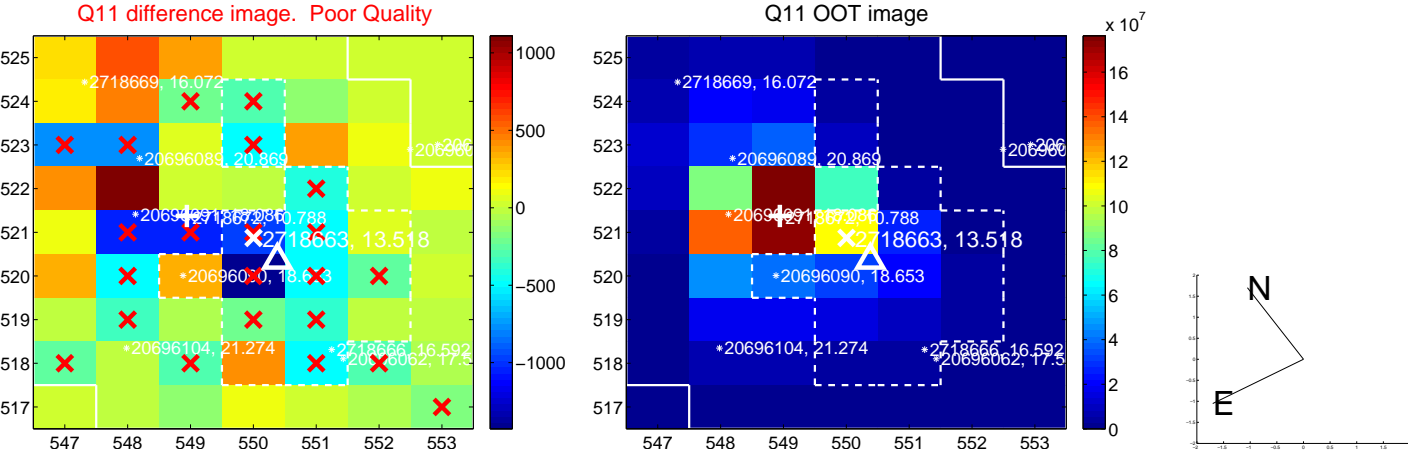
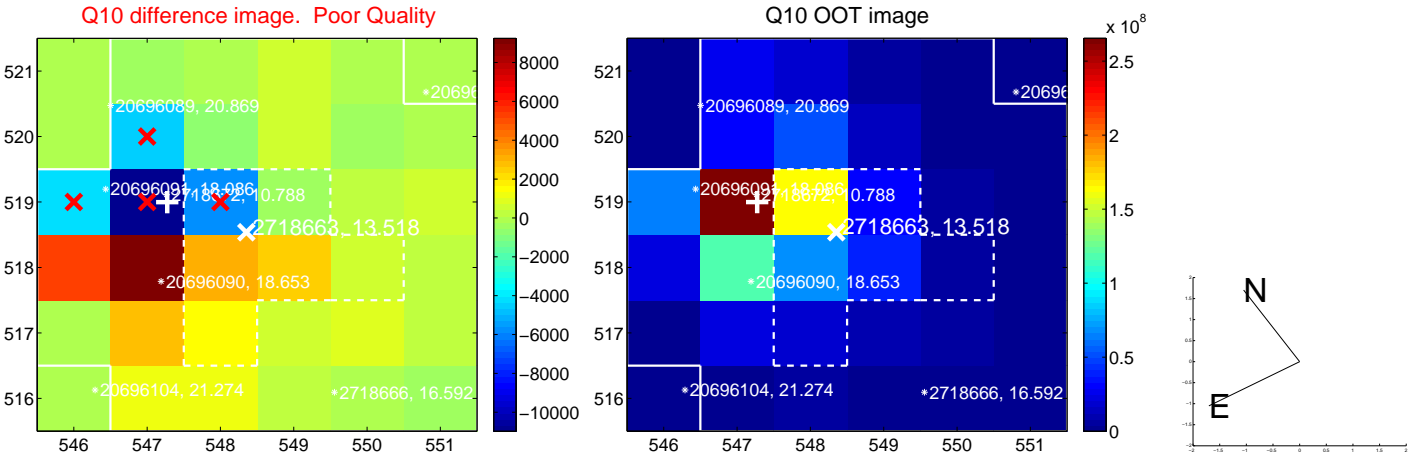
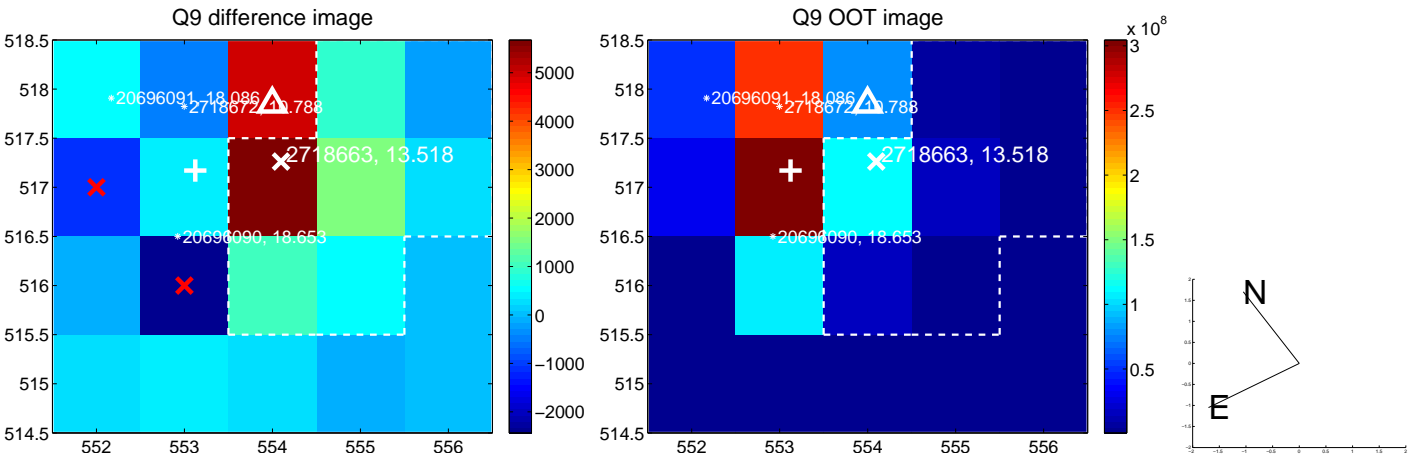
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



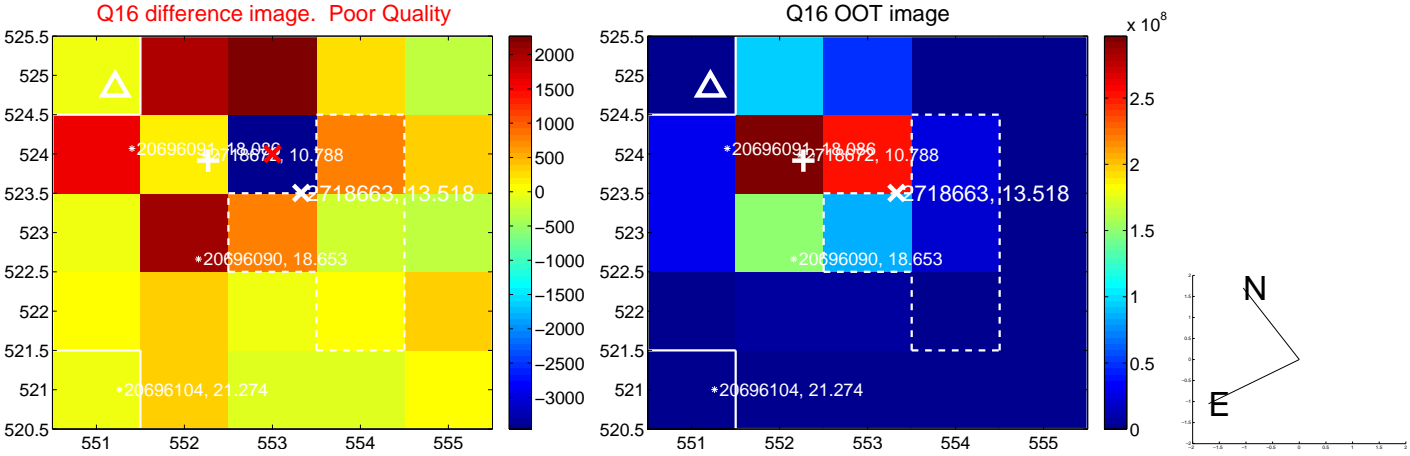
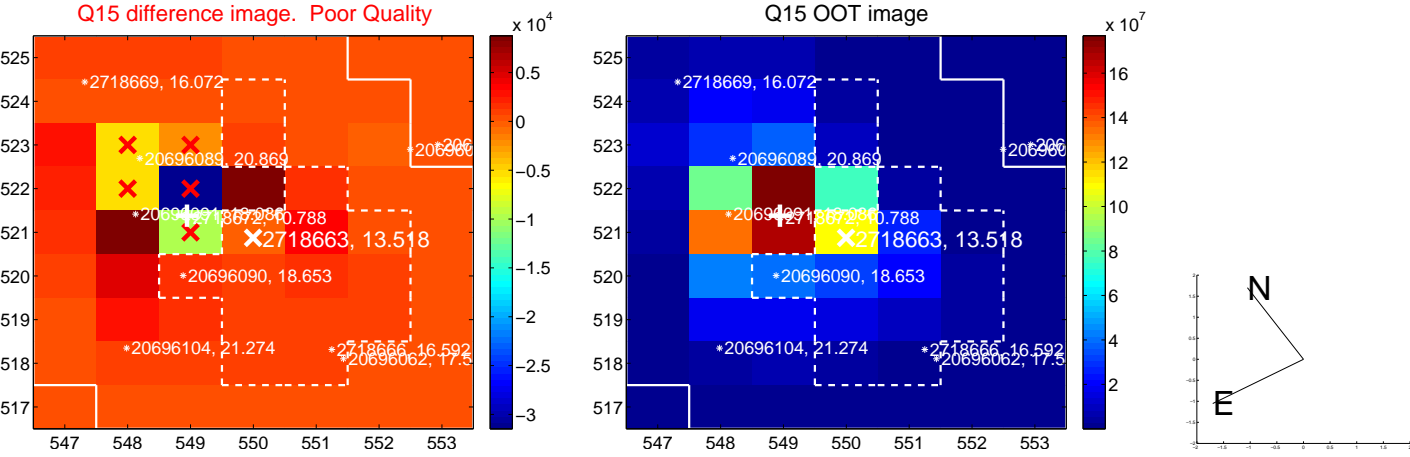
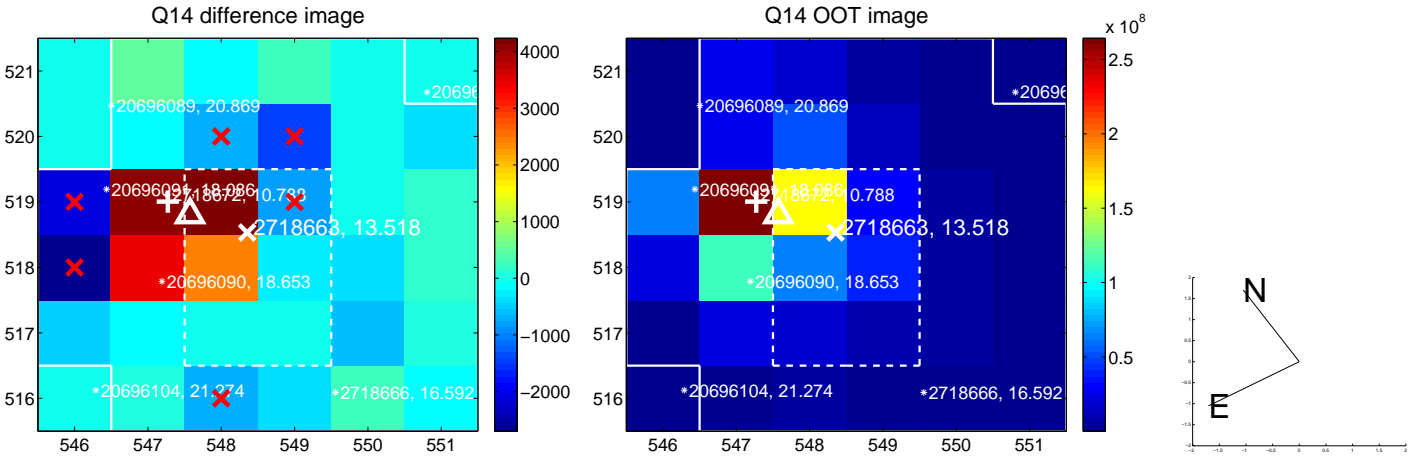
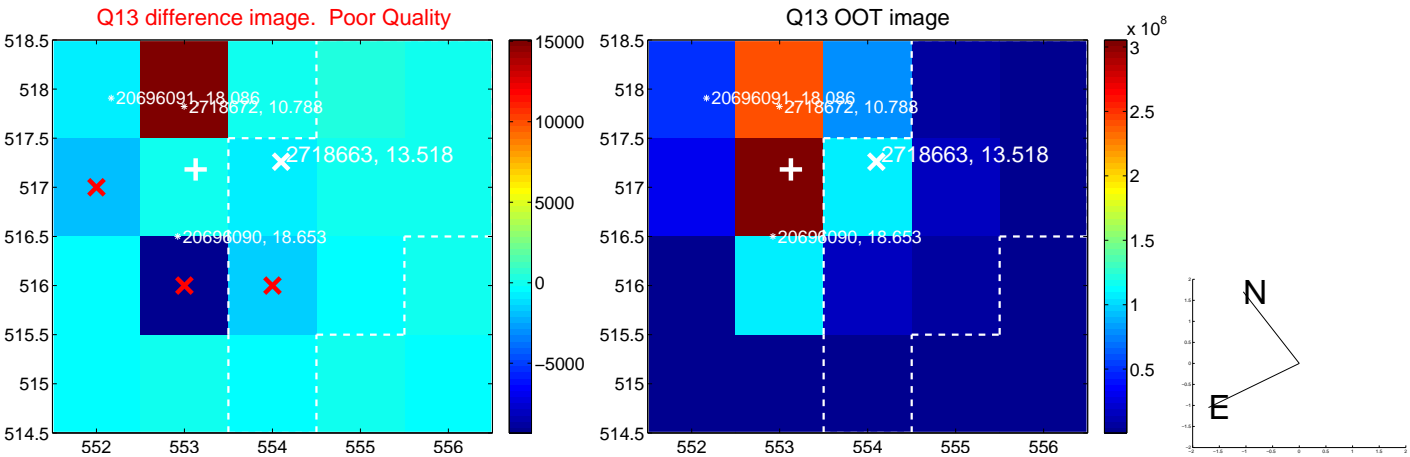
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



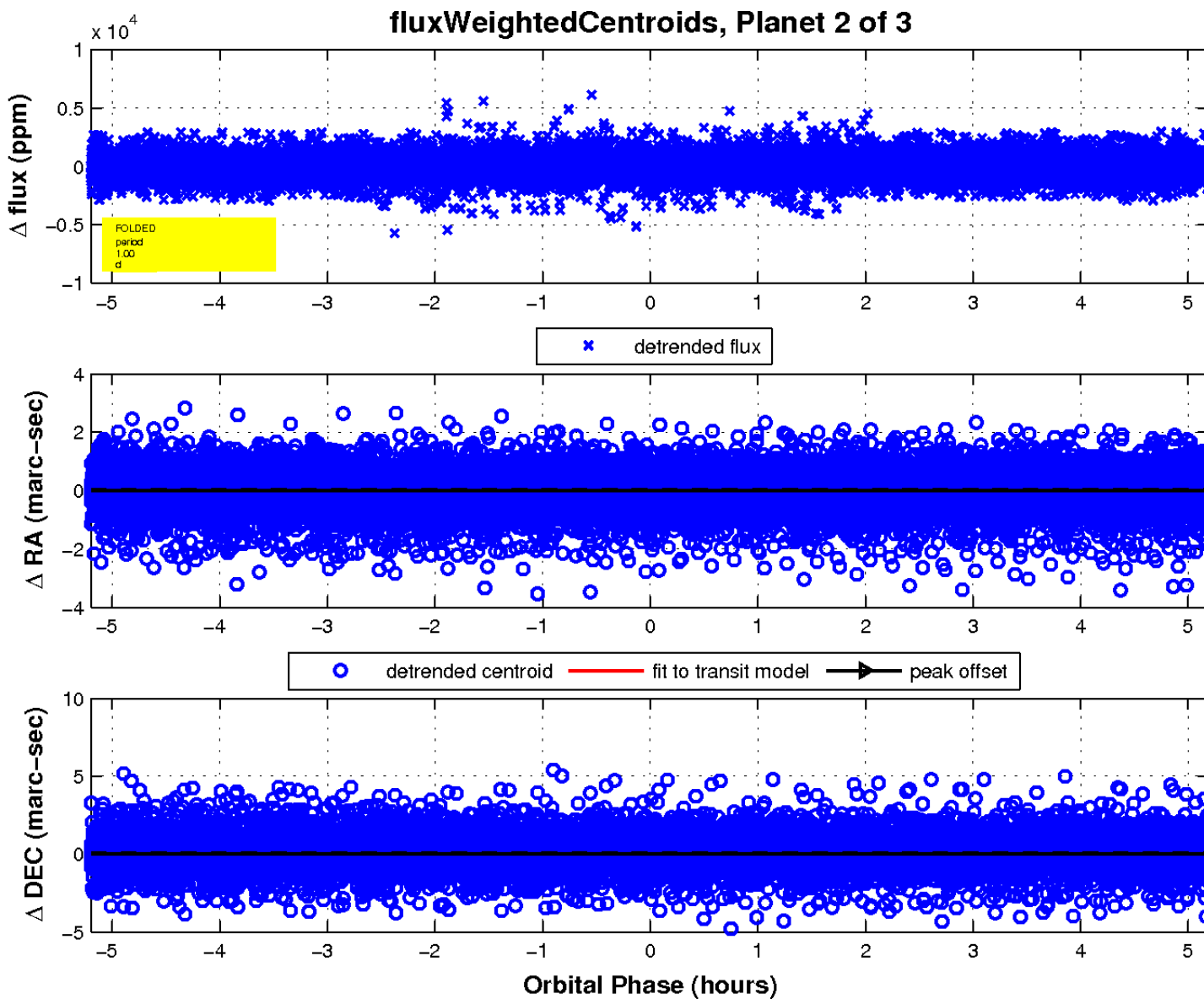
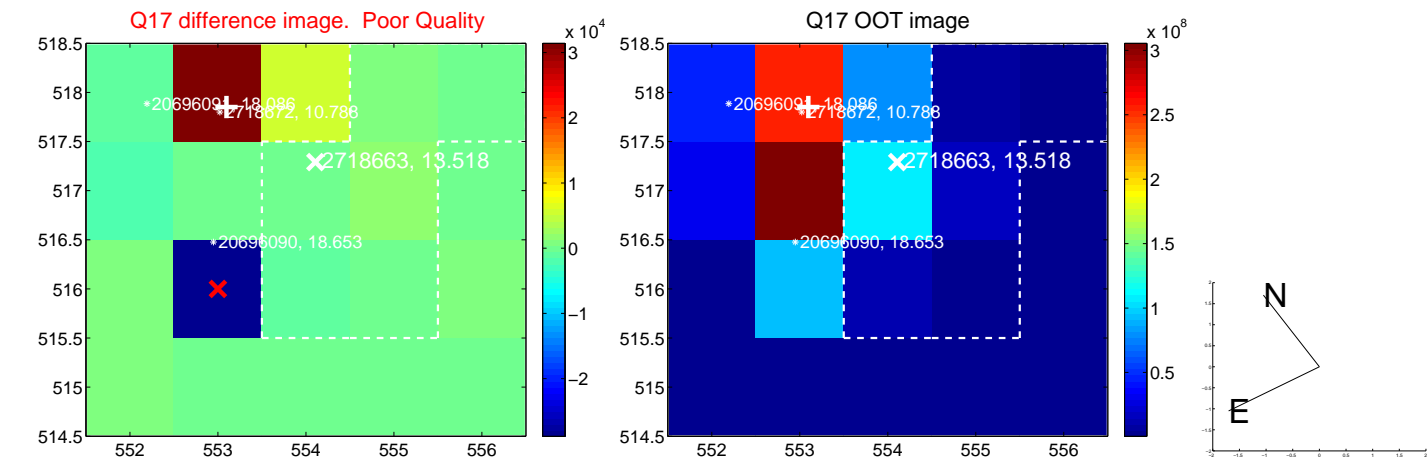
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

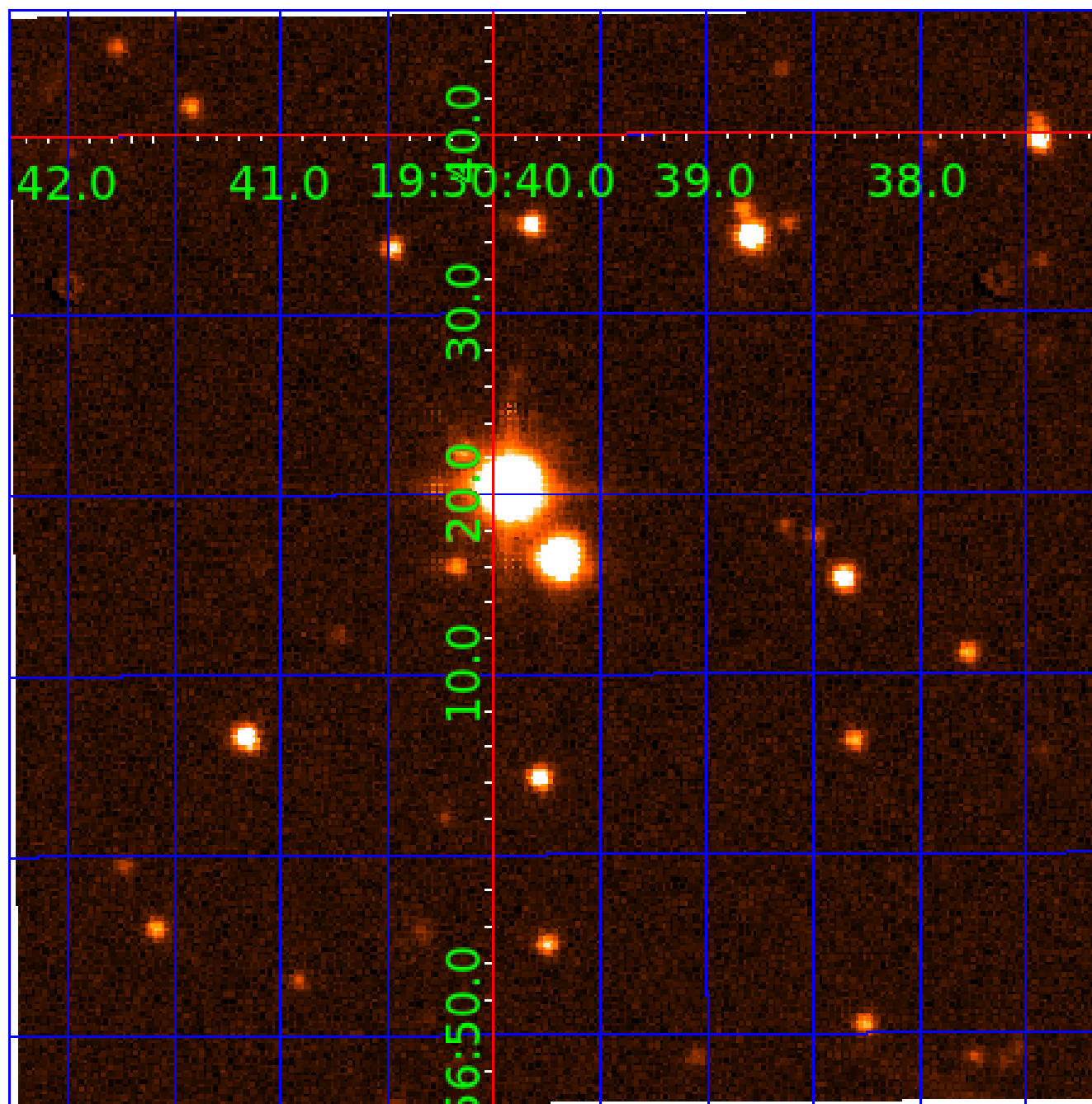


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 002718663

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})
002718663-01	OBS	No	0.996222	131.676991	76.1	2.887	8.2	7.9	1.52	7031	1.55	10591.43
002718663-02	OBS	No	0.996239	132.164959	94.7	1.732	8.3	9.2	1.52	7031	1.76	10591.18
002718663-03	OBS	No	178.694229	211.152516	2295.3	1.808	7.6	9.4	1.52	7031	7.41	10.47

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002718663-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_KIC_POS
002718663-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_KIC_POS
002718663-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—TRANS_GAPPED—MOD_NONUNIQ_ALT—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.

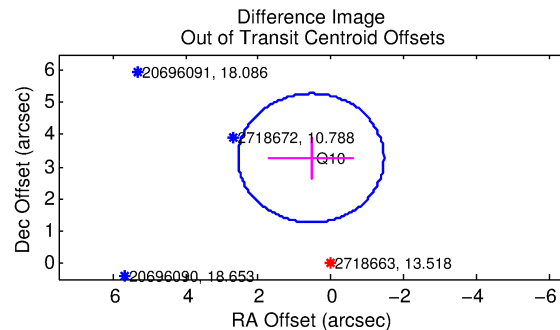
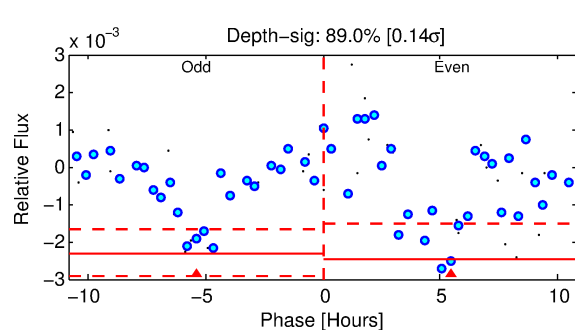
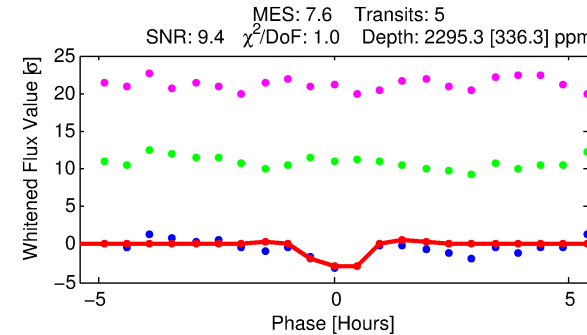
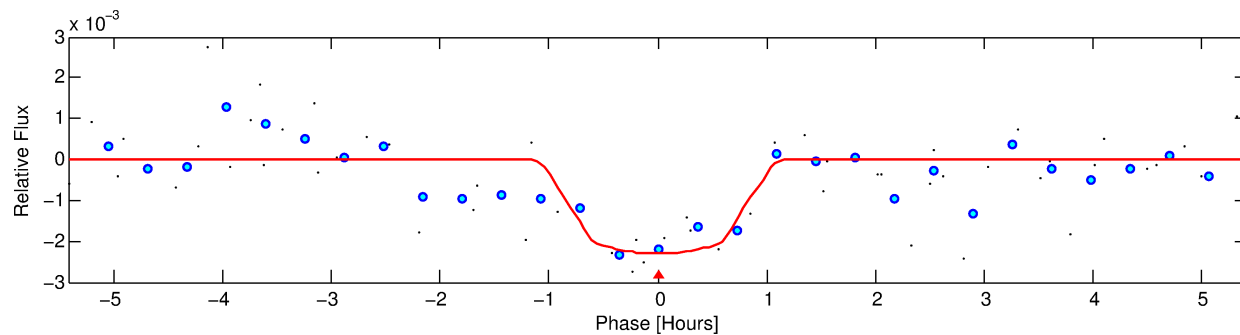
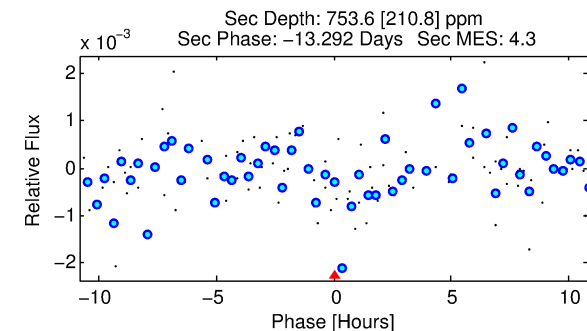
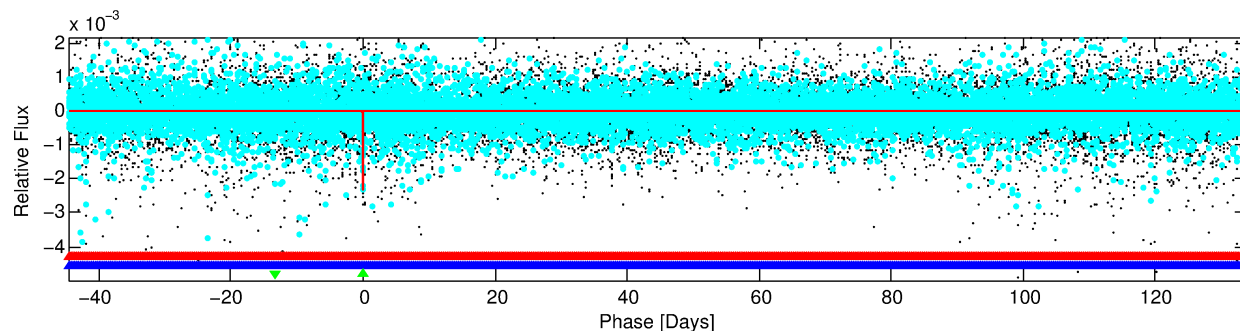
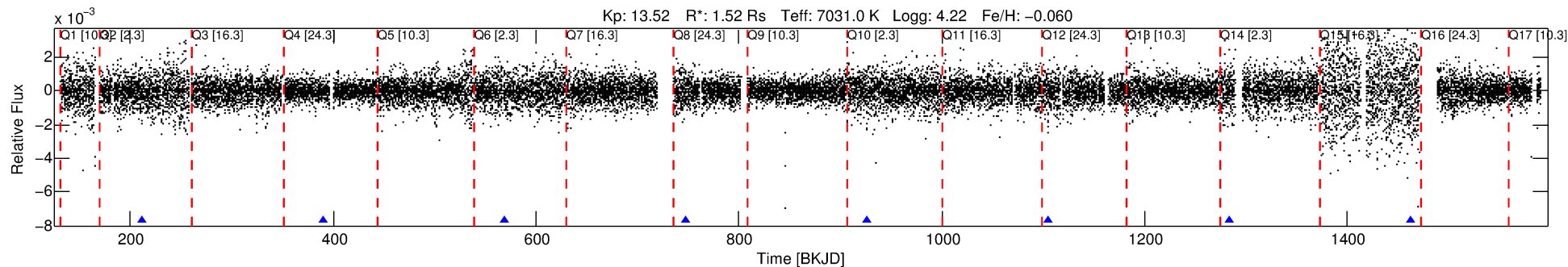
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002718663-03

No Significant Match Found

DV One-Page Summary

KIC: 2718663 Candidate: 3 of 3 Period: 178.694 d



DV Fit Results:

Period = 178.69423 [0.00149] d
Epoch = 211.1525 [0.0052] BKJD
Rp/R* = 0.0446 [0.1037]
a/R* = 776.39 [10111.84]
b = 0.18 [69.59]
Seff = 10.47 [4.67]
Teq = 459 [51] K
Rp = 7.41 [17.42] Re
a = 0.6965 [0.1913] AU
Ag = 3660.85 [17120.65] [0.21σ]
Teff = 5516 [6434] K [0.79σ]

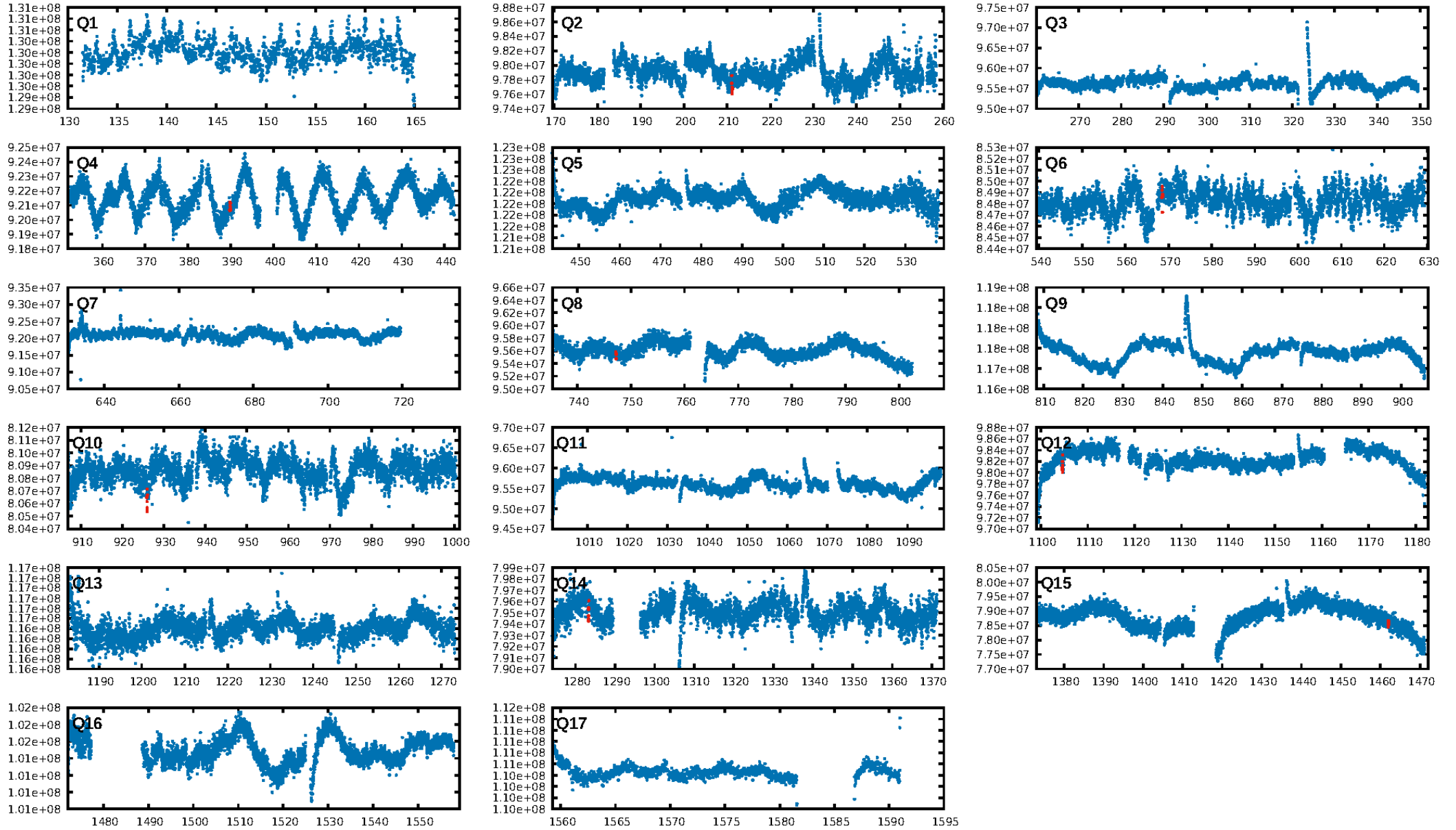
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [1703.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 91.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.56e-08
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 0.7219
Centroid-sig: 39.7%
Centroid-so: 2.940 arcsec [40.93σ]
OotOffset-rm: 3.316 arcsec [4.96σ]
KicOffset-rm: 7.716 arcsec [10.00σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 0.00 [0/6]

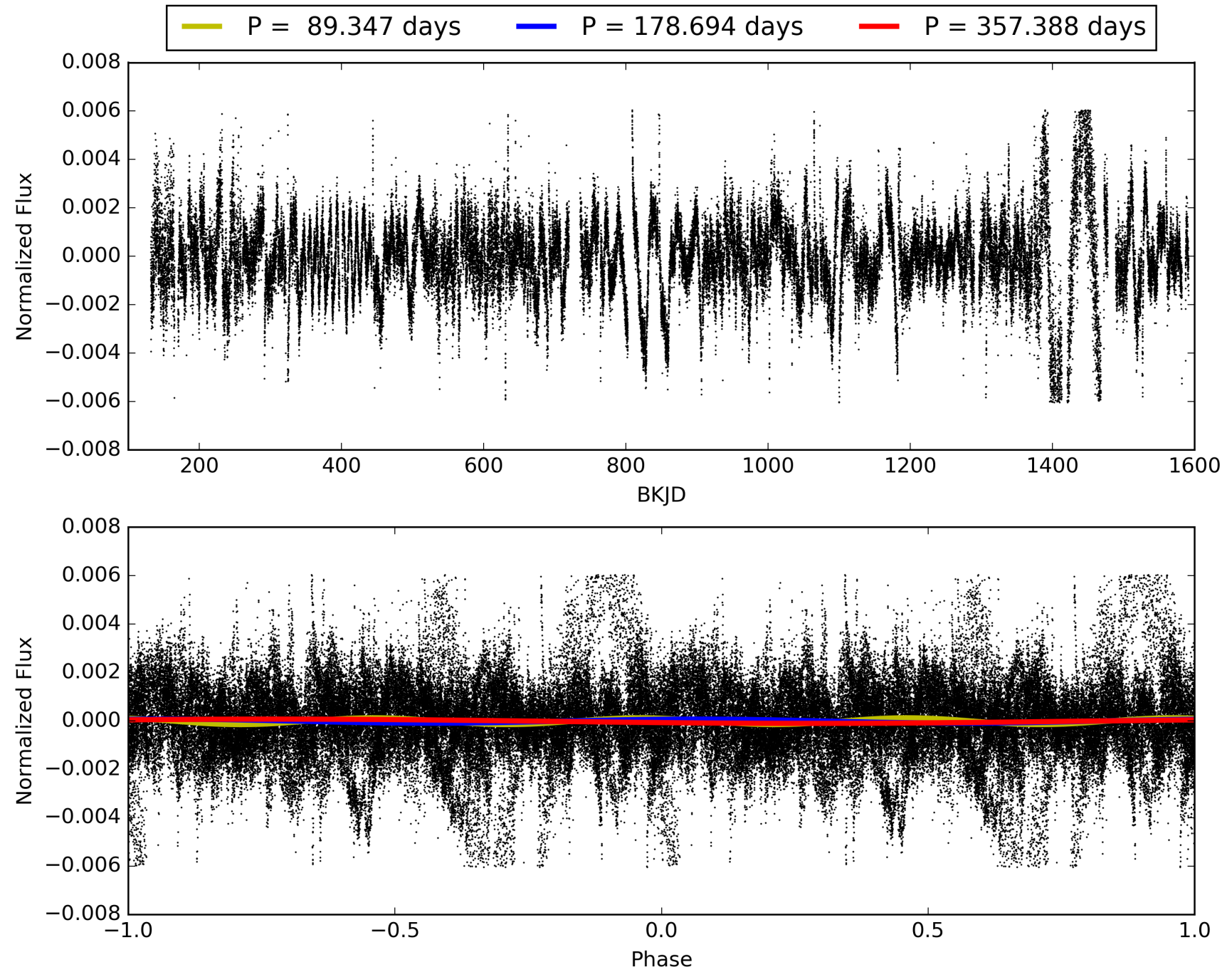
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:20:36 Z

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

TCE 002718663-03, PDC Light Curves

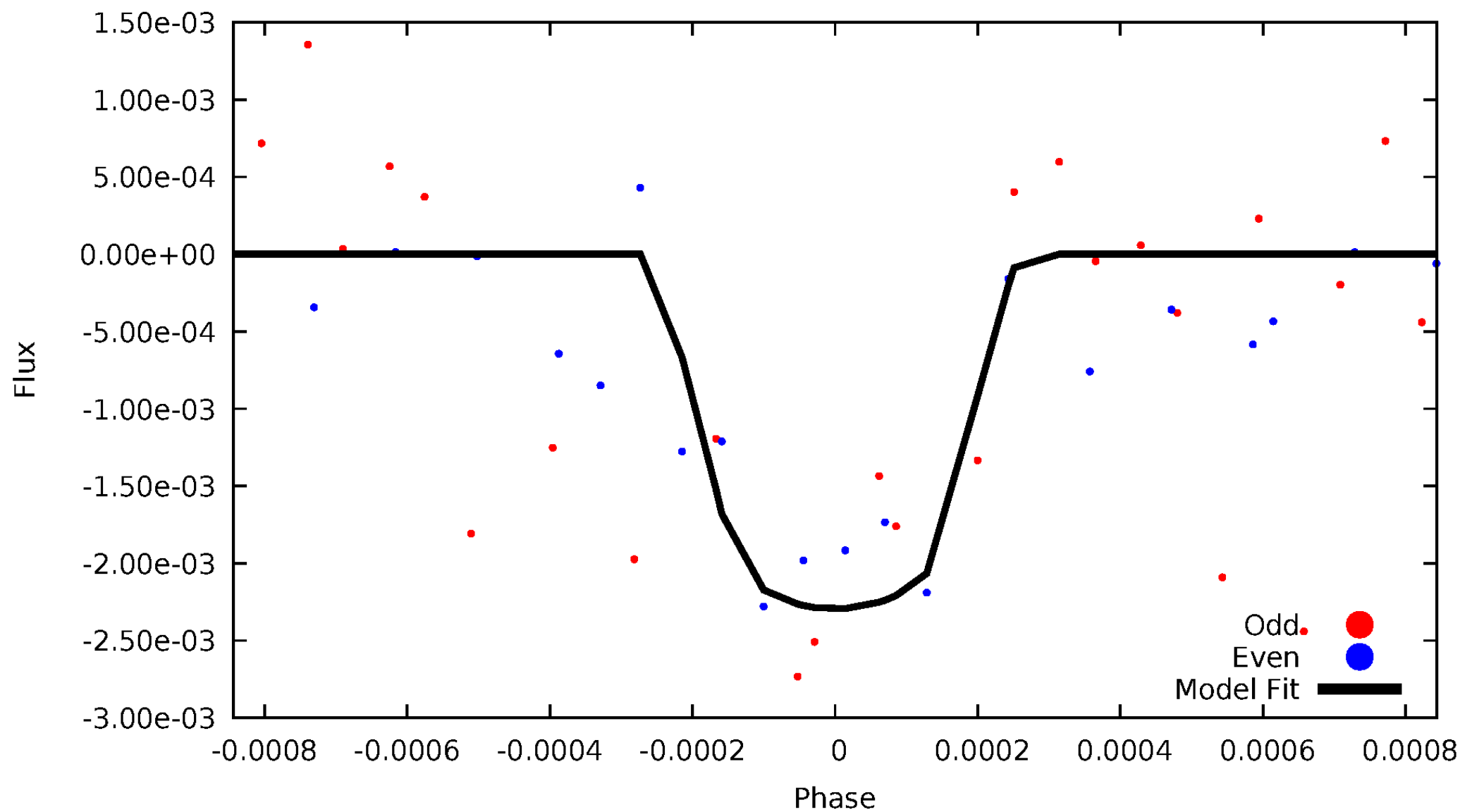


TCE 002718663-03



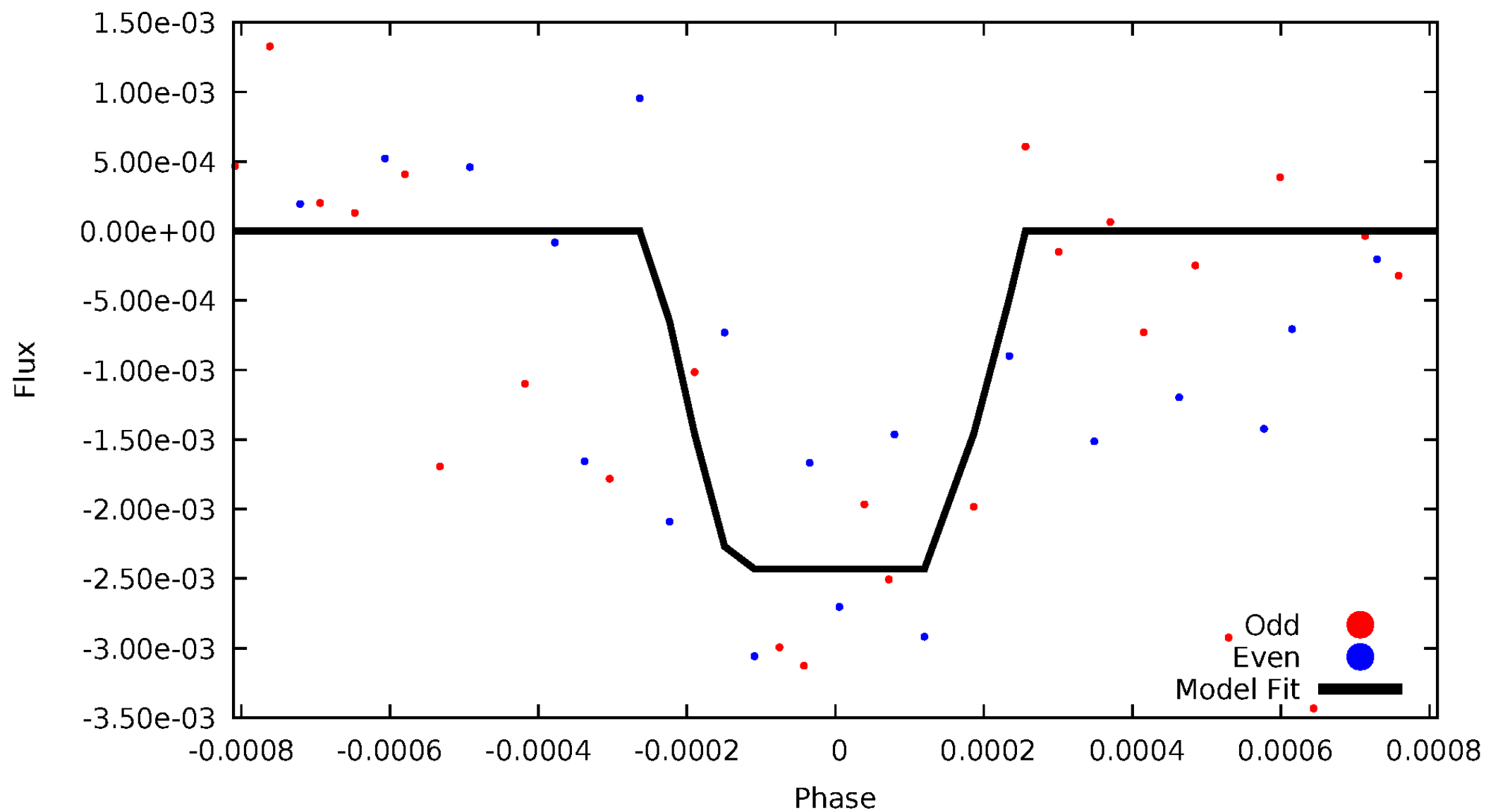
DV Odd/Even

TCE 002718663-03



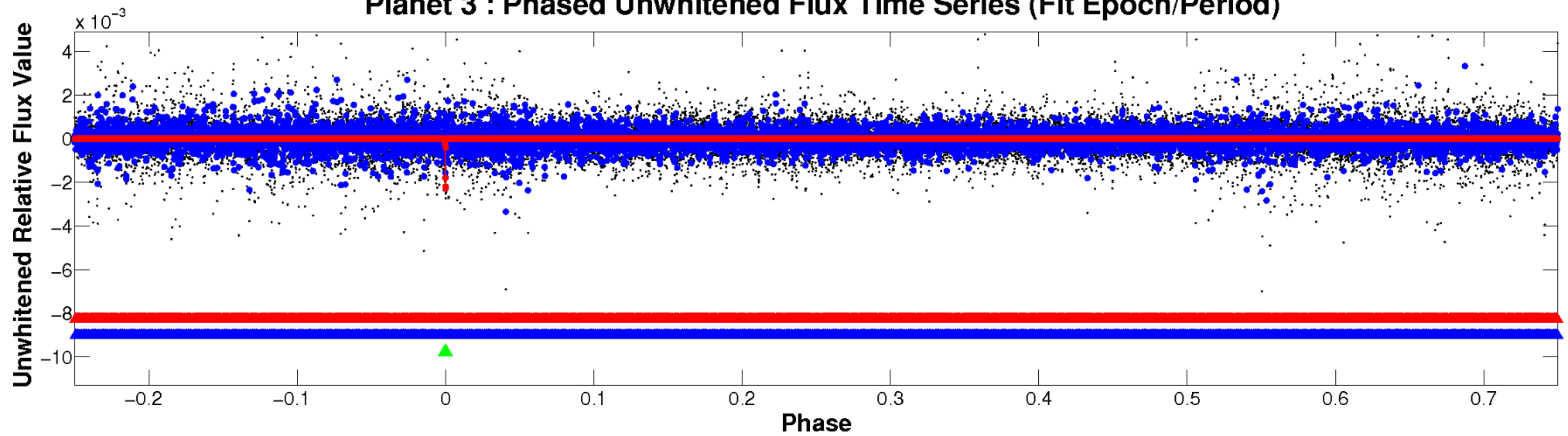
ALT Odd/Even

TCE 002718663-03

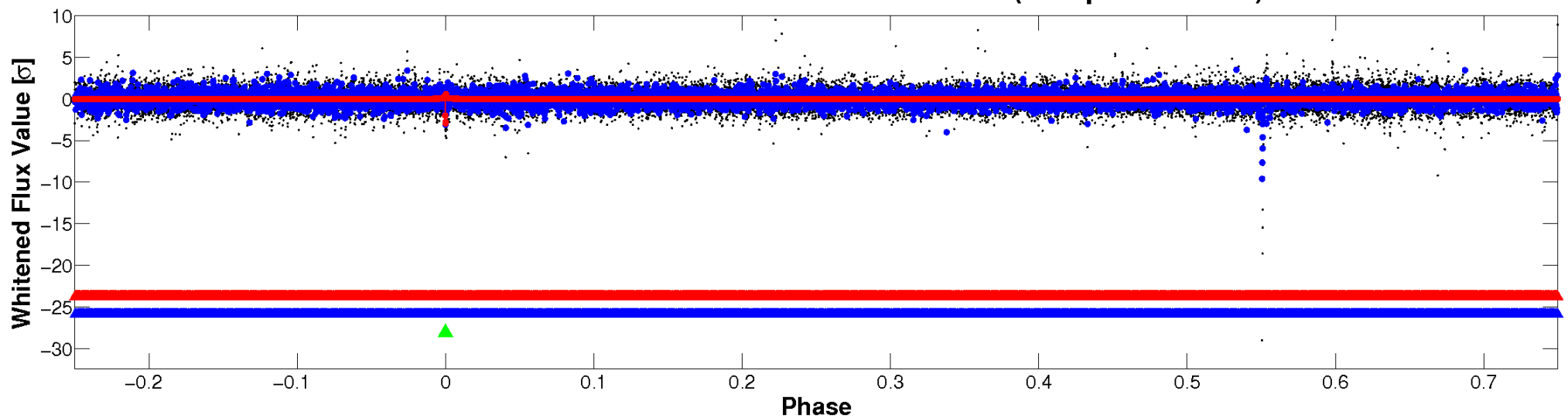


Non-Whitened Vs. Whitened Light Curve

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

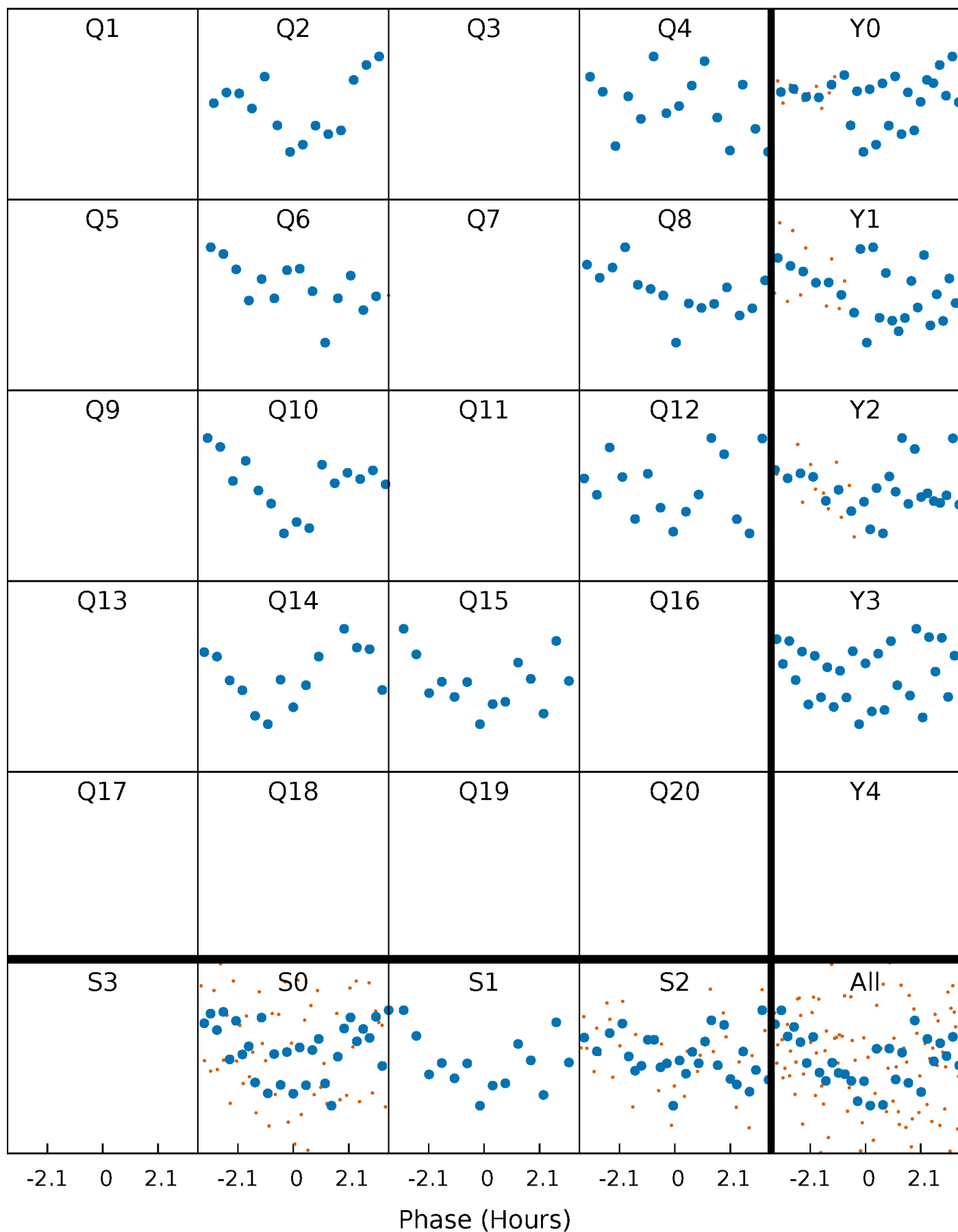


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



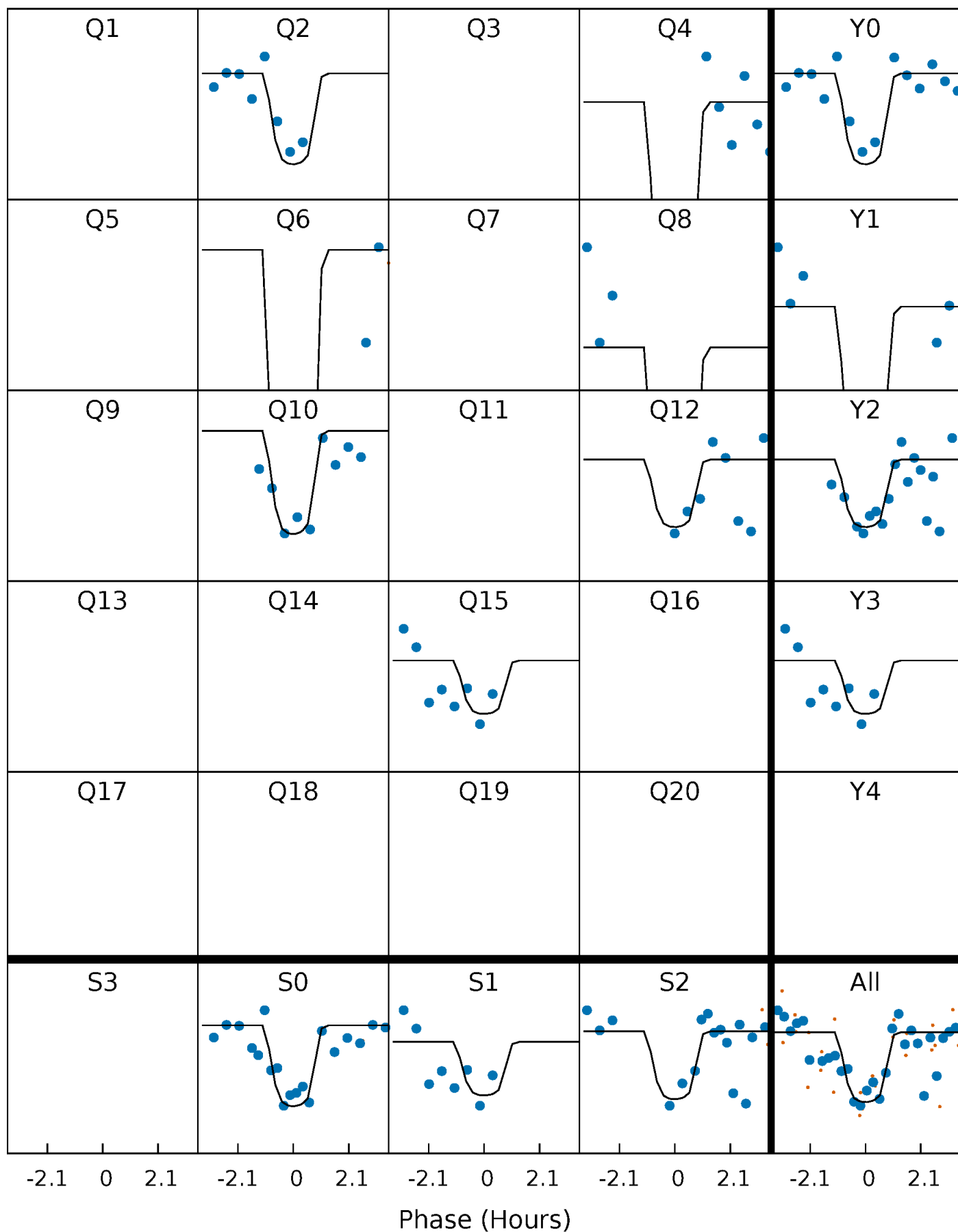
PDC Quarter-Phased Transit Curves

TCE 002718663-03 $P=178.694229$ Days $T_0=211.152516$ (BKJD)



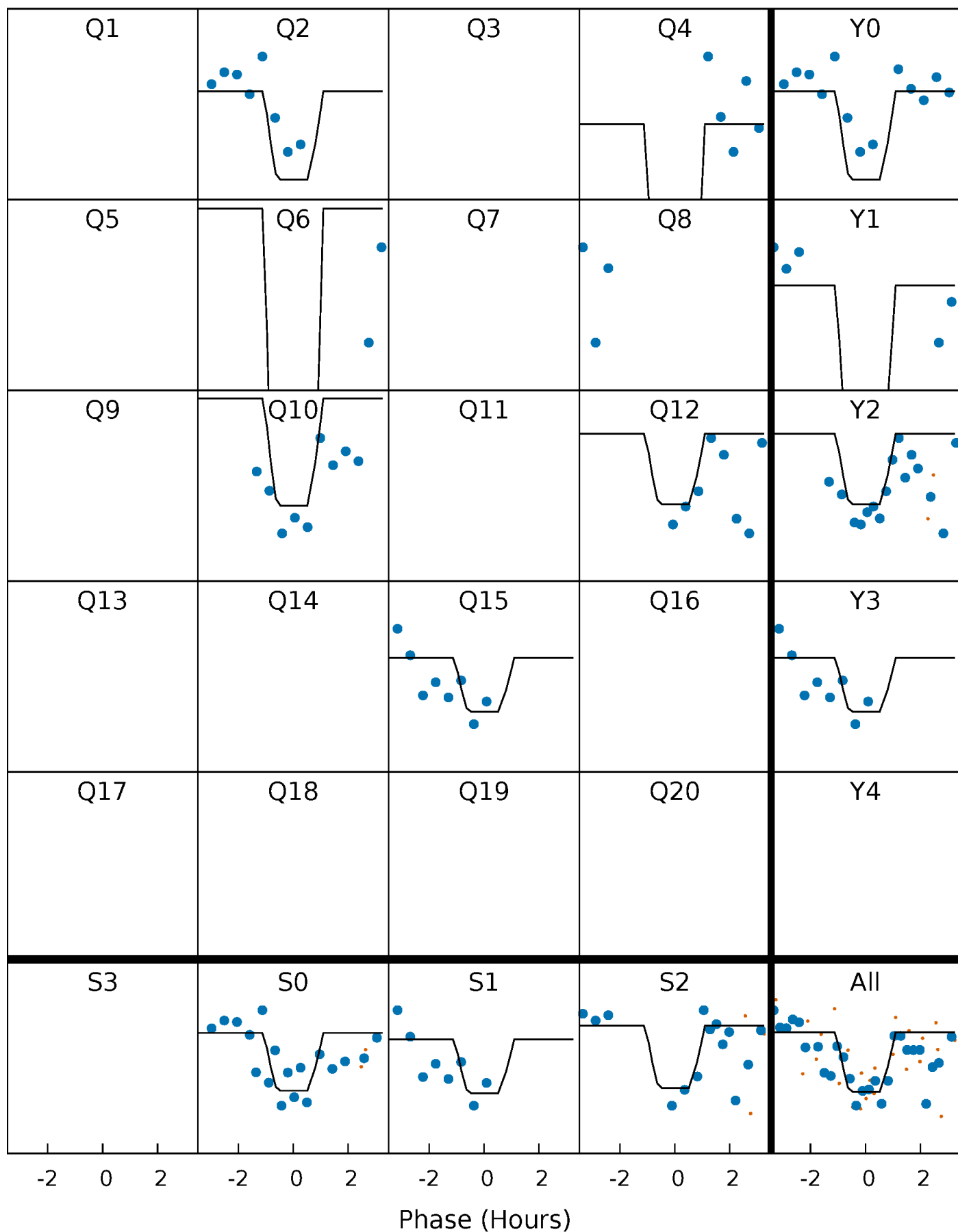
DV Quarter-Phased Transit Curves

TCE 002718663-03 P=178.694229 Days $T_0=211.152516$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

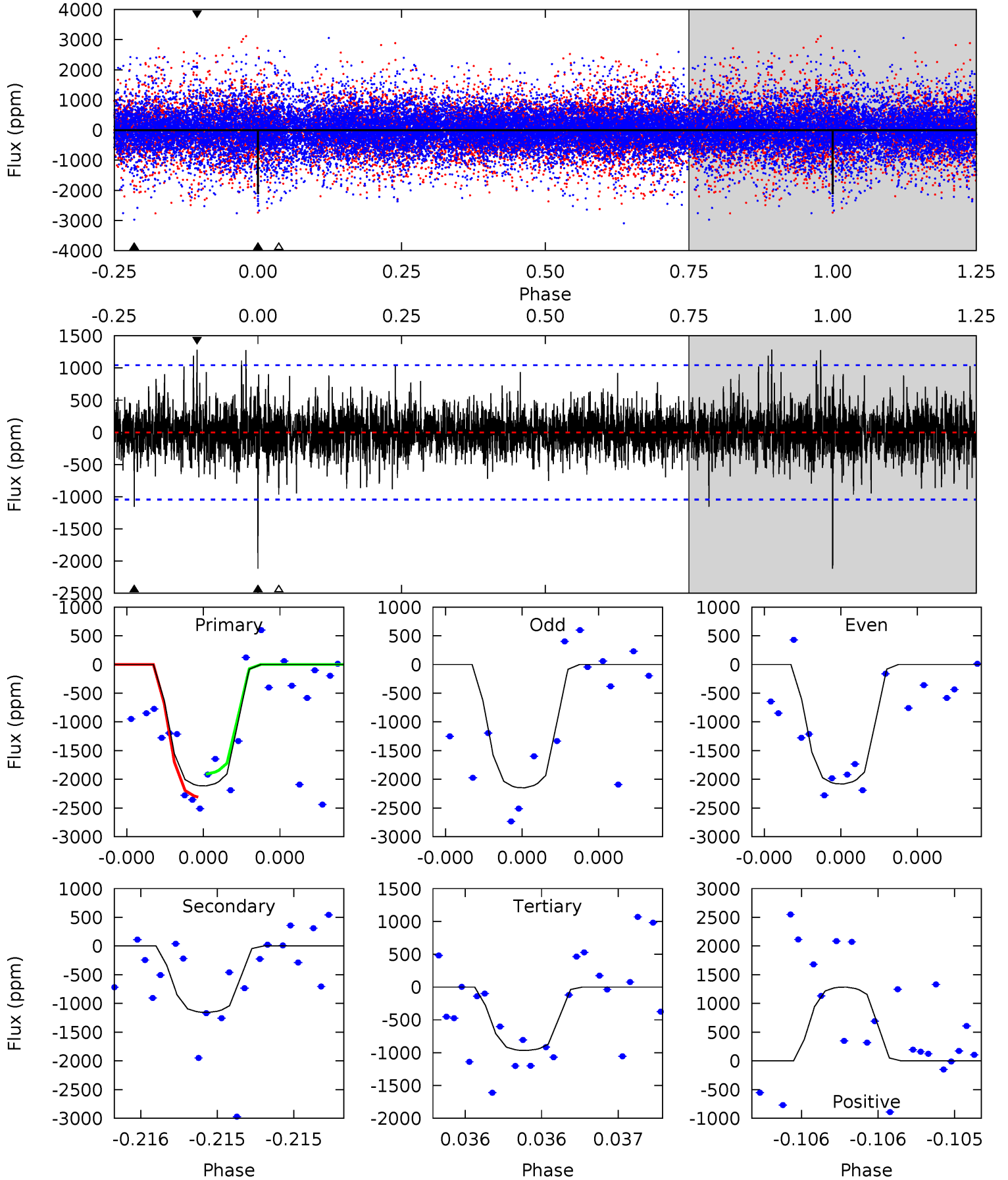
TCE 002718663-03 P=178.695054 Days $T_0=211.150801$ (BKJD)



DV Model-Shift Uniqueness Test

002718663-03, P = 178.694229 Days, E = 32.458287 Days

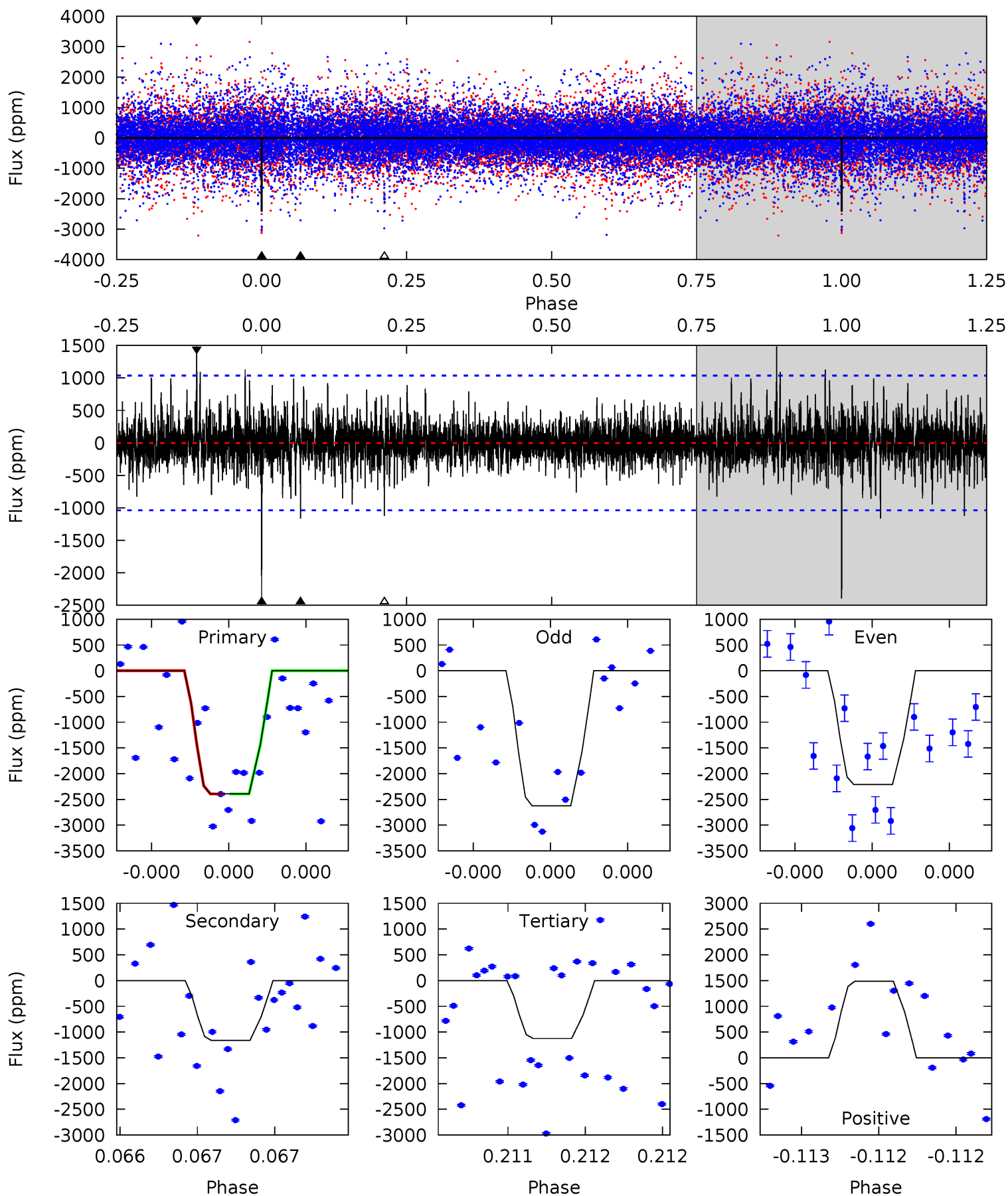
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.4	6.20	5.19	6.89	5.60	3.53	1.27	6.16	4.46	1.01	-0.69	0.17	0.98	0.38	1.06



Alt Model-Shift Uniqueness Test

002718663-03, P = 178.695054 Days, E = 32.455747 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.9	6.27	6.05	8.00	5.59	3.50	1.24	6.84	4.89	0.21	-1.74	1.08	0.91	0.38	0.00



Stellar Parameters For KIC 002718663

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7031^{+218}_{-374}	$4.222^{+0.105}_{-0.210}$	$-0.060^{+0.250}_{-0.350}$	$1.523^{+0.508}_{-0.274}$	$1.415^{+0.216}_{-0.238}$	$0.564^{+0.287}_{-0.298}$
	+3%/-5%	+2%/-5%	+417%/-583%	+33%/-18%	+15%/-17%	+51%/-53%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 002718663-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1156 ± 186	$15.41^{+16.18}_{-10.76}$	645^{+55}_{-45}	4494^{+3286}_{-1045}	1284^{+12568}_{-991}
Alt.	-1164 ± 186	$16.10^{+15.42}_{-11.04}$	648^{+53}_{-47}	4396^{+3014}_{-907}	1168^{+10538}_{-861}

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 $A_{obs} \gg 1.0$

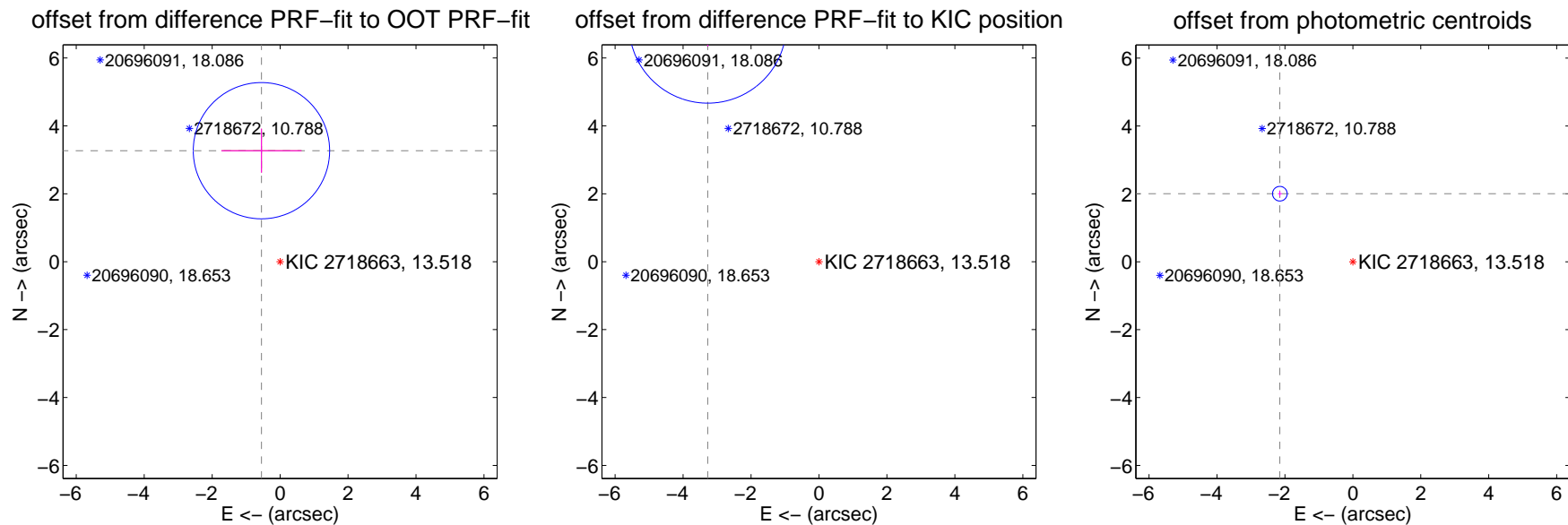
DV Centroid Data

Supplemental centroid analysis for 002718663-03. Kepler magnitude: 13.52. Transit SNR 9.35

There are 0 quarters with good PRF difference image offsets

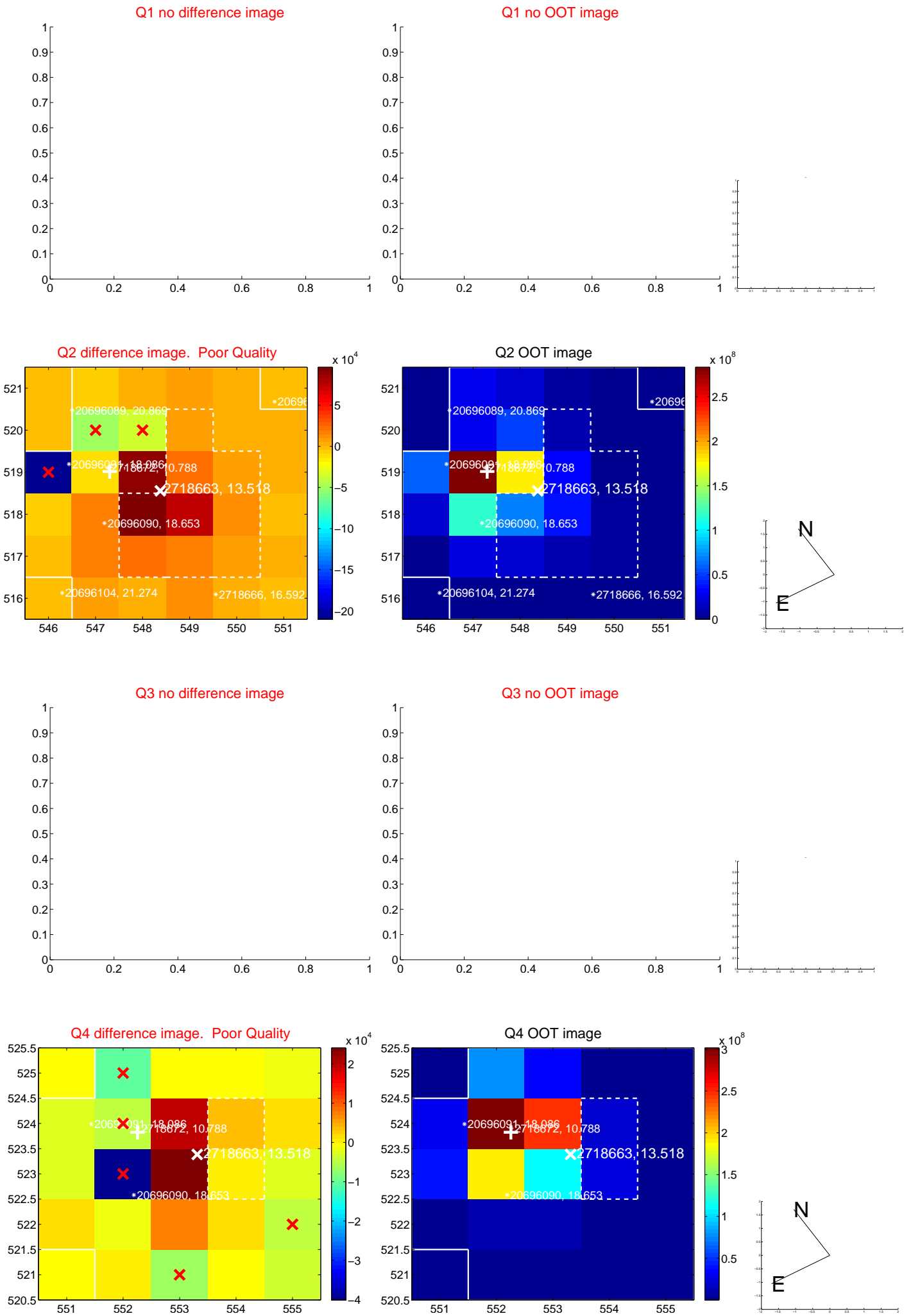
The OOT PRF centroid is offset from the target star catalog position by about 4.61 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.316 \pm 0.669	4.96	0.549 \pm 1.180	3.270 \pm 0.649
PRF-fit source offset from KIC position	7.716 \pm 0.772	10.00	3.275 \pm 1.180	6.986 \pm 0.649
photometric centroid source offset	2.94 \pm 0.07	40.93	2.15 \pm 0.06	2.01 \pm 0.08

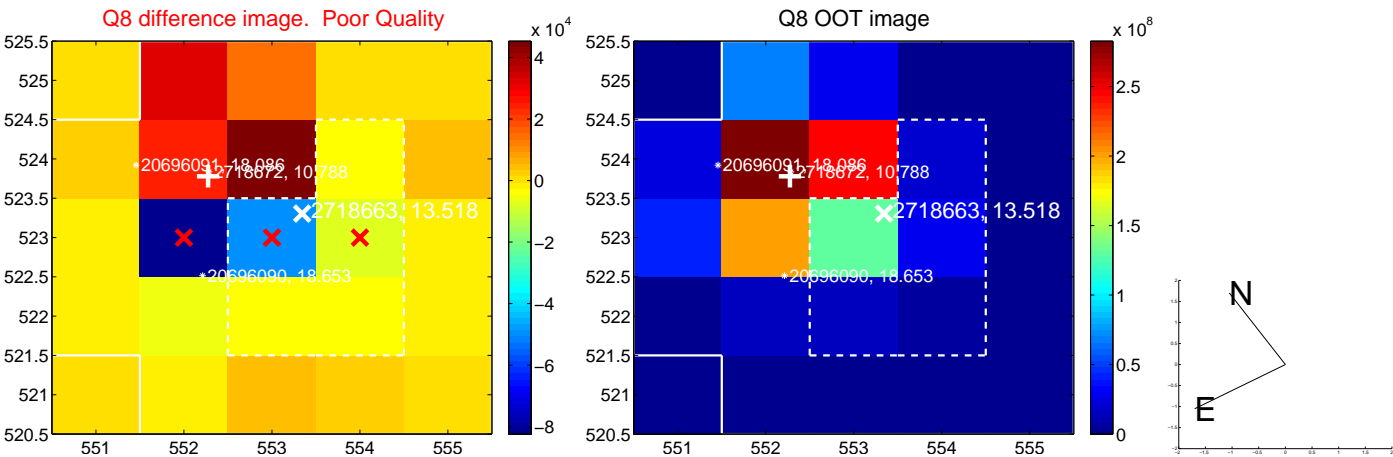


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

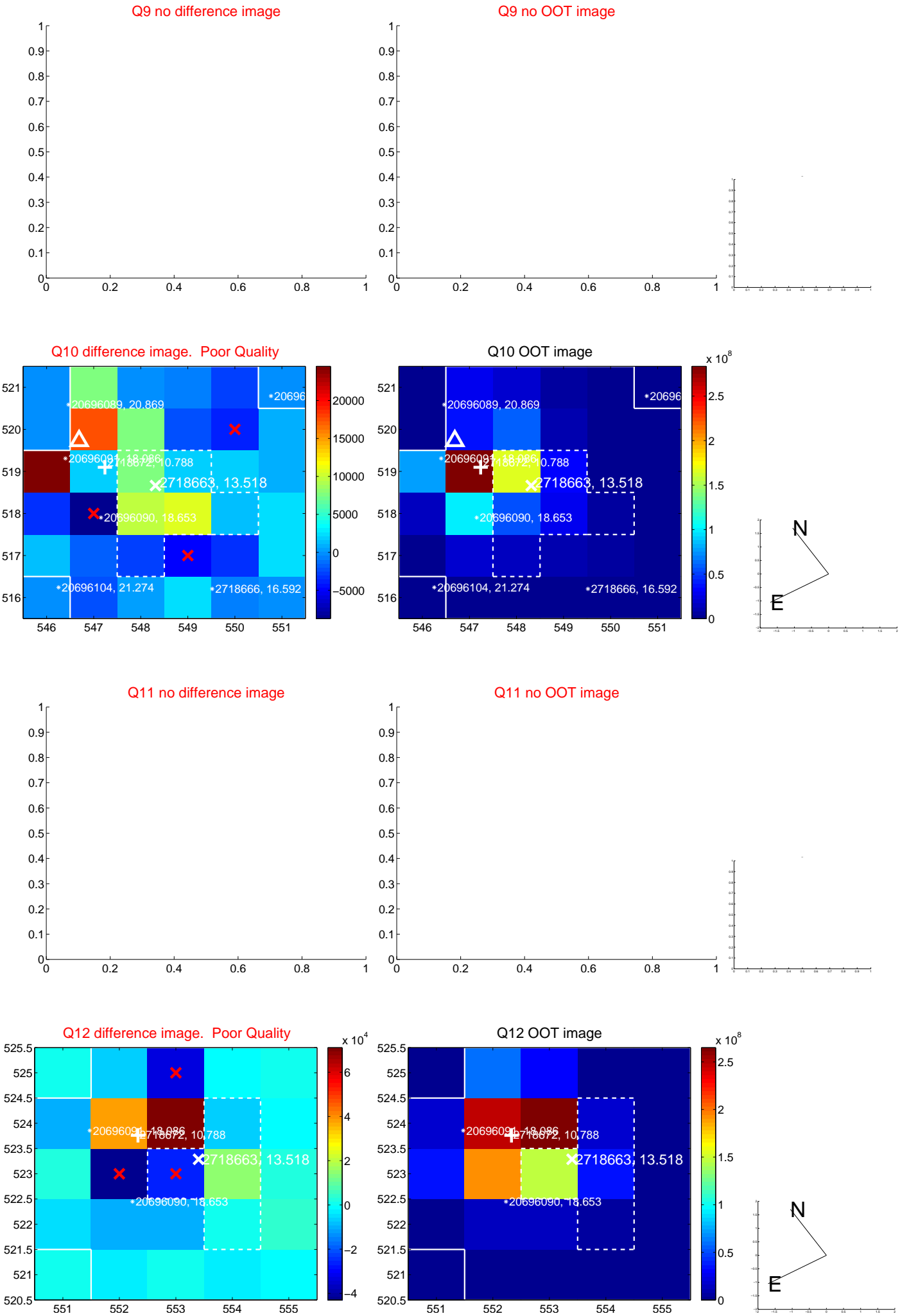
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



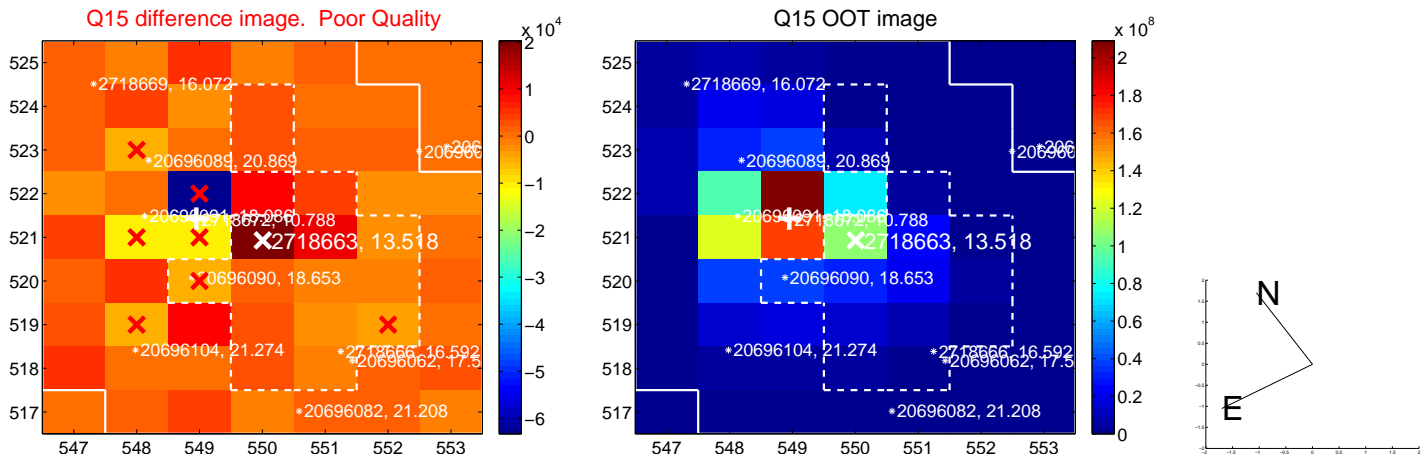
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



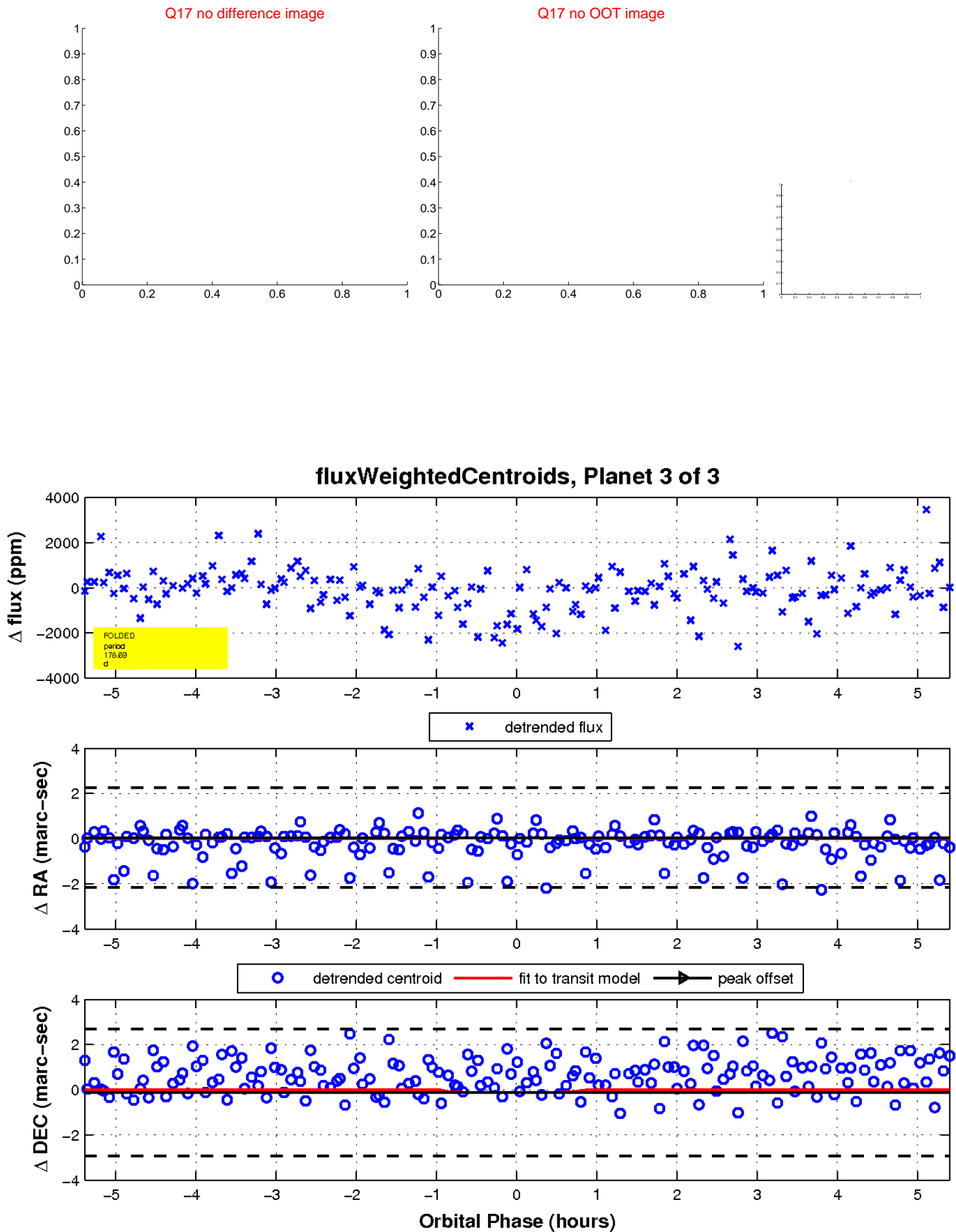
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

