

KIC 004663148

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})
004663148-01	OBS	No	1.148791	131.996568	22.3	6.772	9.9	12.5	1.78	7744	0.86	15880.96
004663148-02	OBS	No	41.425390	170.864427	401.9	1.687	8.8	8.3	1.78	7744	4.11	133.30
004663148-03	OBS	No	92.867318	209.595838	176.7	8.827	7.9	7.8	1.78	7744	2.55	45.43

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004663148-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
004663148-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
004663148-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—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.

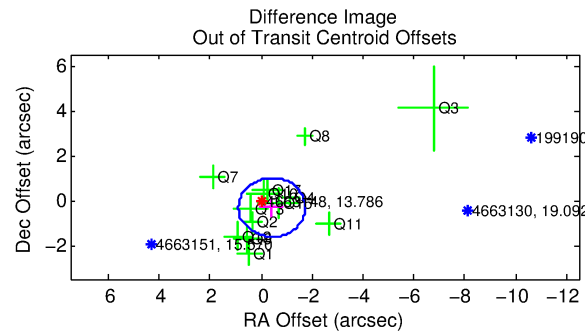
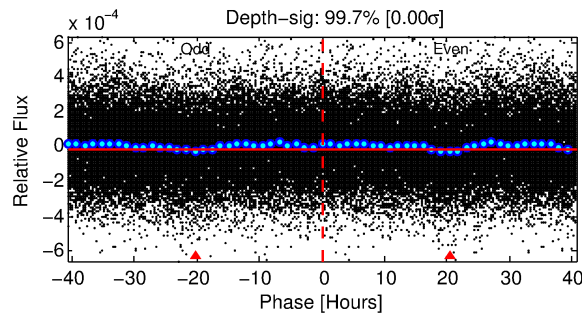
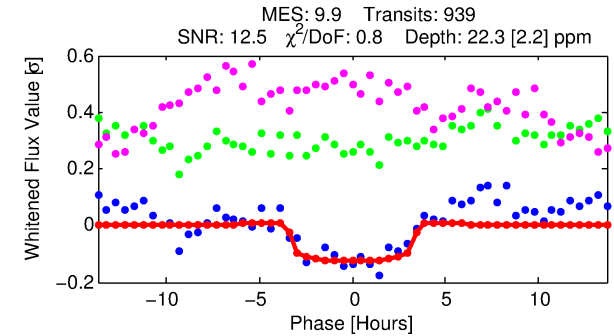
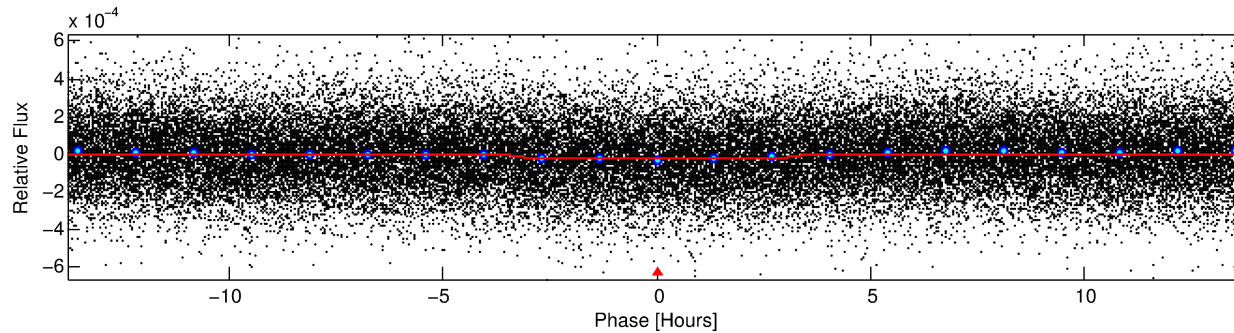
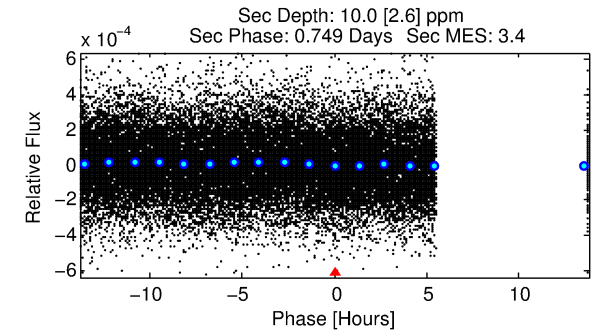
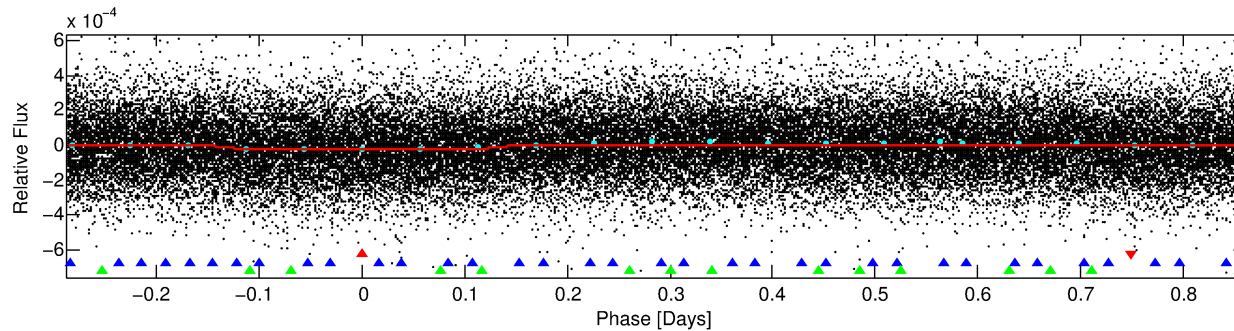
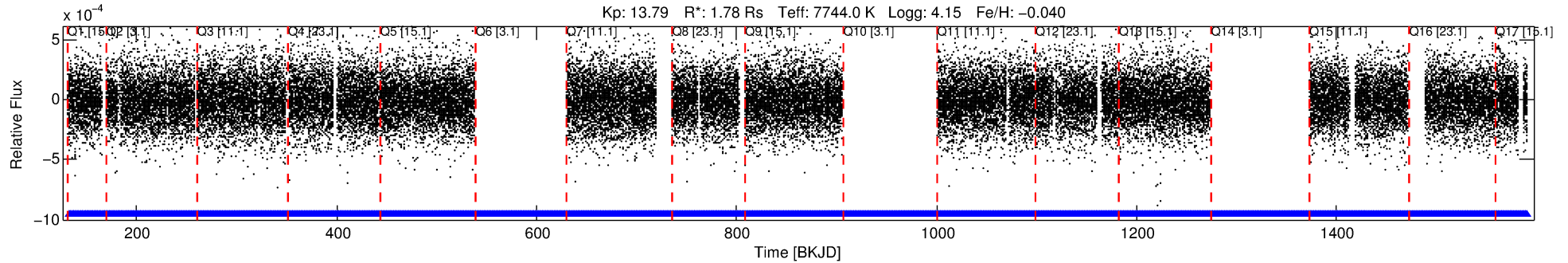
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004663148-01

No Significant Match Found

DV One-Page Summary

KIC: 4663148 Candidate: 1 of 3 Period: 1.149 d



DV Fit Results:

Period = 1.14879 [0.00001] d
Epoch = 131.9966 [0.0054] BKJD
Rp/R* = 0.0044 [0.0034]
a/R* = 1.42 [3.41]
b = 0.23 [20.06]
Seff = 15880.96 [5912.08]
Teq = 2862 [266] K
Rp = 0.86 [0.71] Re
a = 0.0254 [0.0058] AU
Ag = 4.84 [7.77] [0.49σ]
Teffp = 6564 [2599] K [1.42σ]

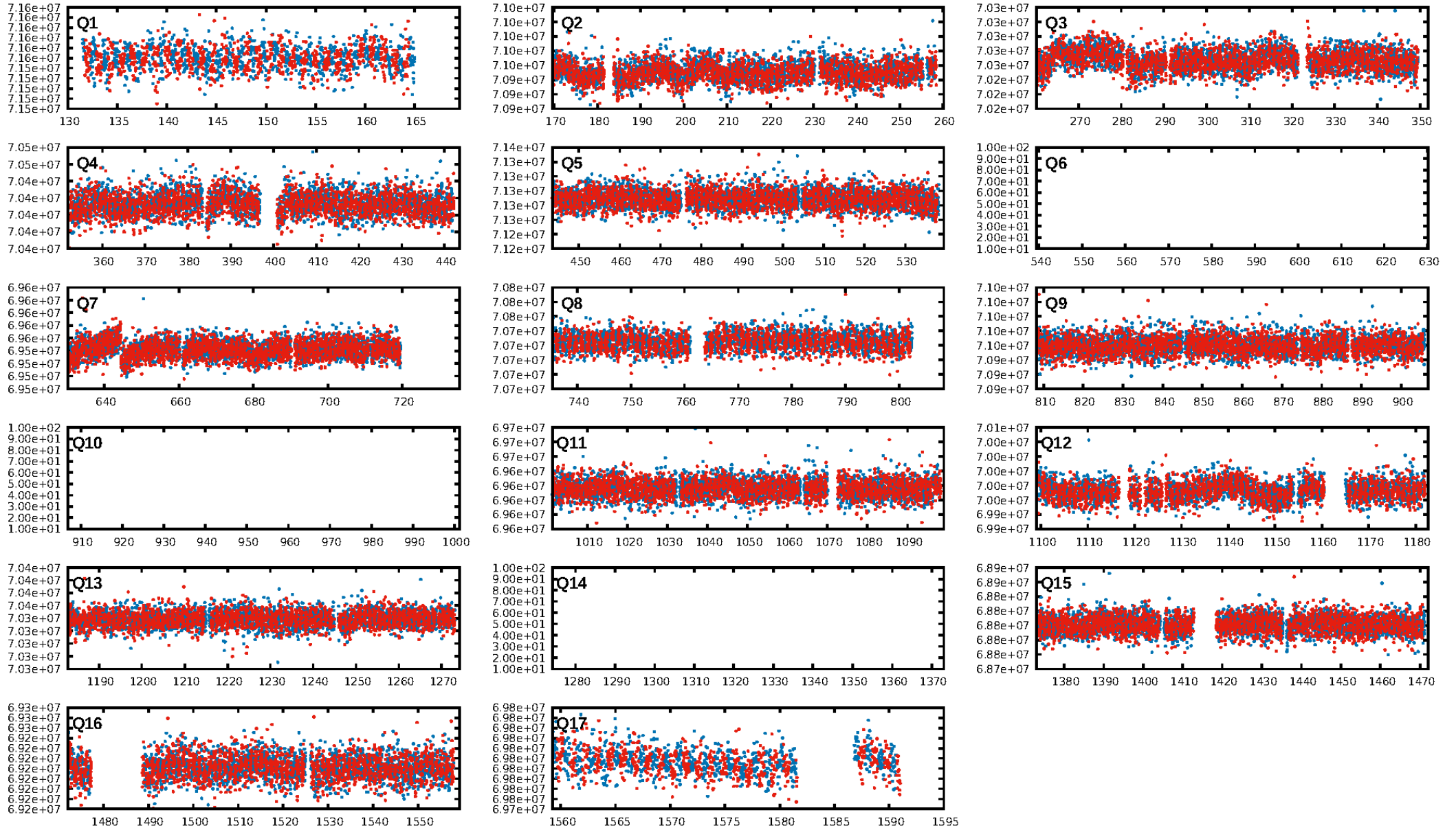
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [138.51σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: 5.11e-21
RollingBand-fgt: 1.00 [887/887]
GhostDiagnostic-chr: 5.004
Centroid-sig: 52.0%
Centroid-so: 0.679 arcsec [0.66σ]
OotOffset-rm: 0.527 arcsec [1.21σ]
KicOffset-rm: 0.508 arcsec [1.14σ]
OotOffset-st: 1/4/4/4 [13]
KicOffset-st: 1/4/4/4 [13]
DiffImageQuality-fgm: 0.92 [12/13]
DiffImageOverlap-fno: 1.00 [14/14]

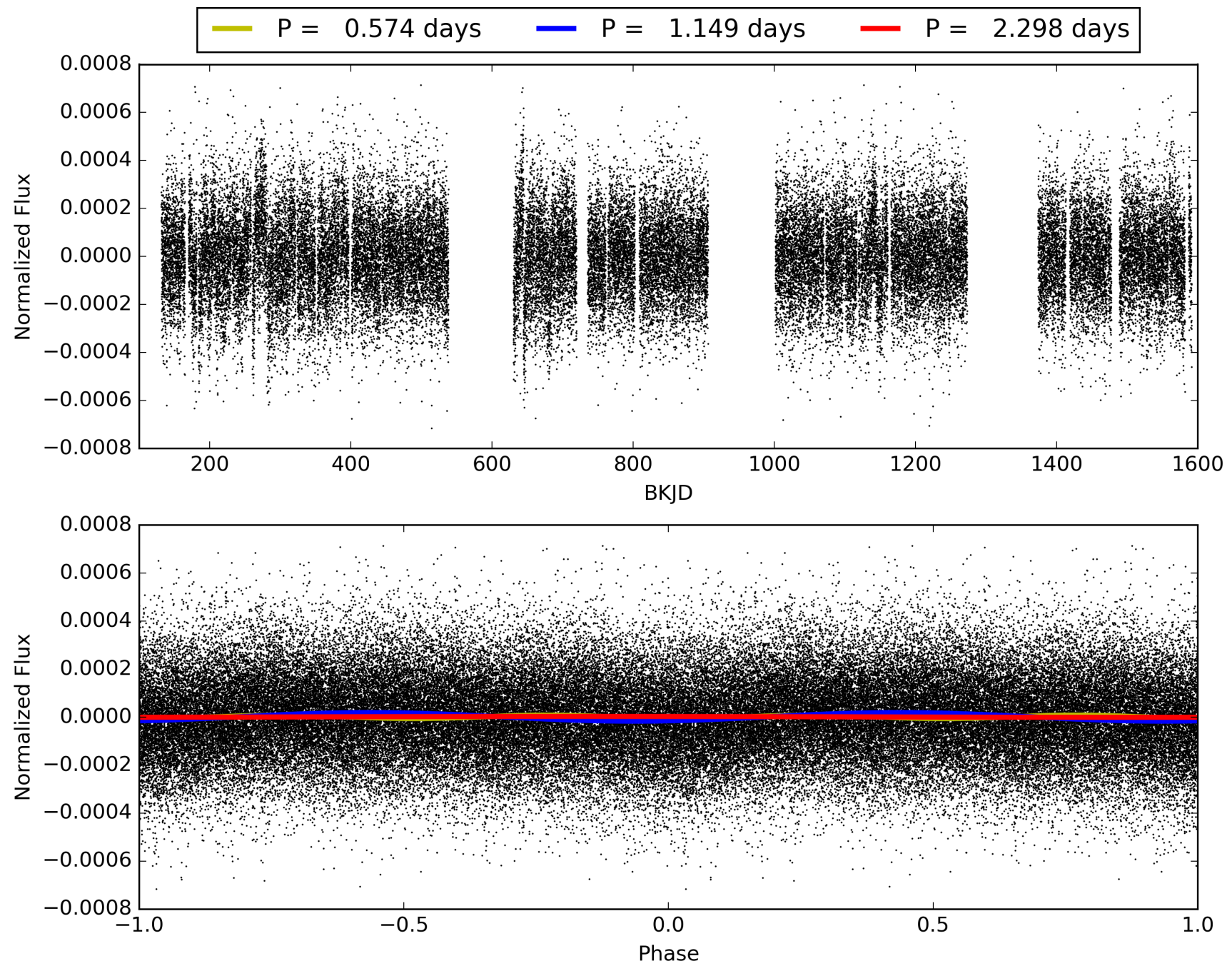
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 004663148-01, PDC Light Curves

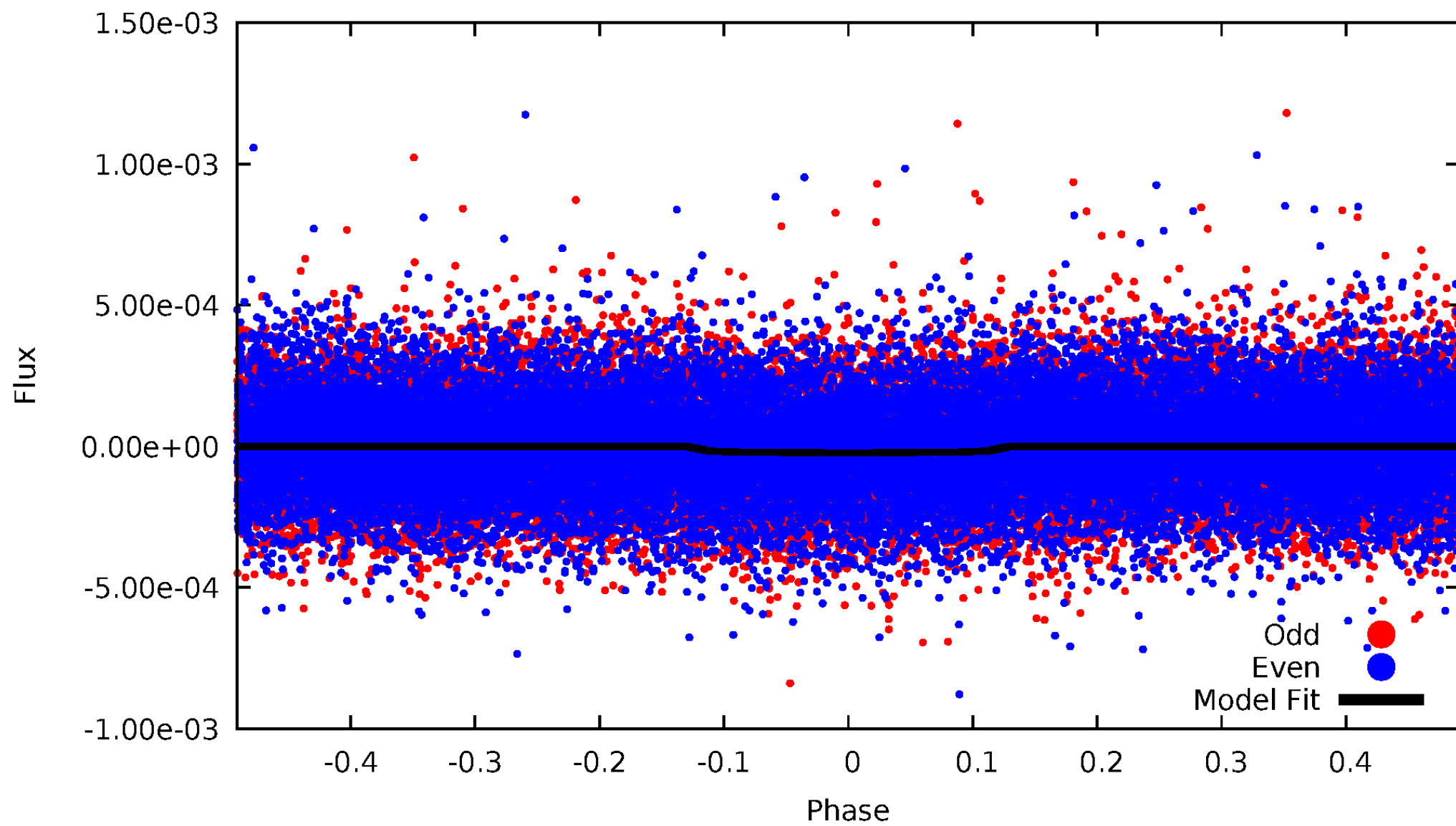


TCE 004663148-01



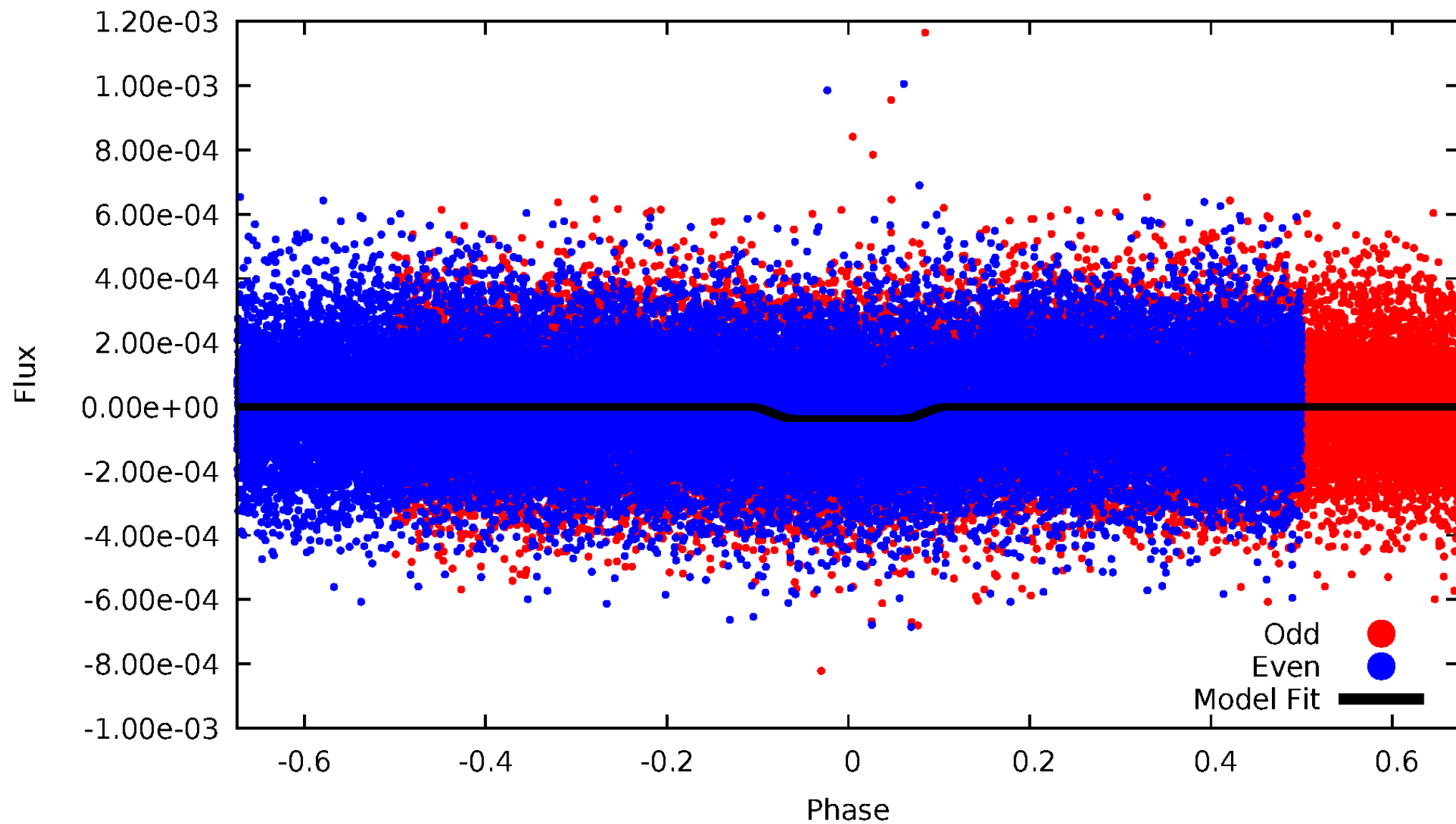
DV Odd/Even

TCE 004663148-01

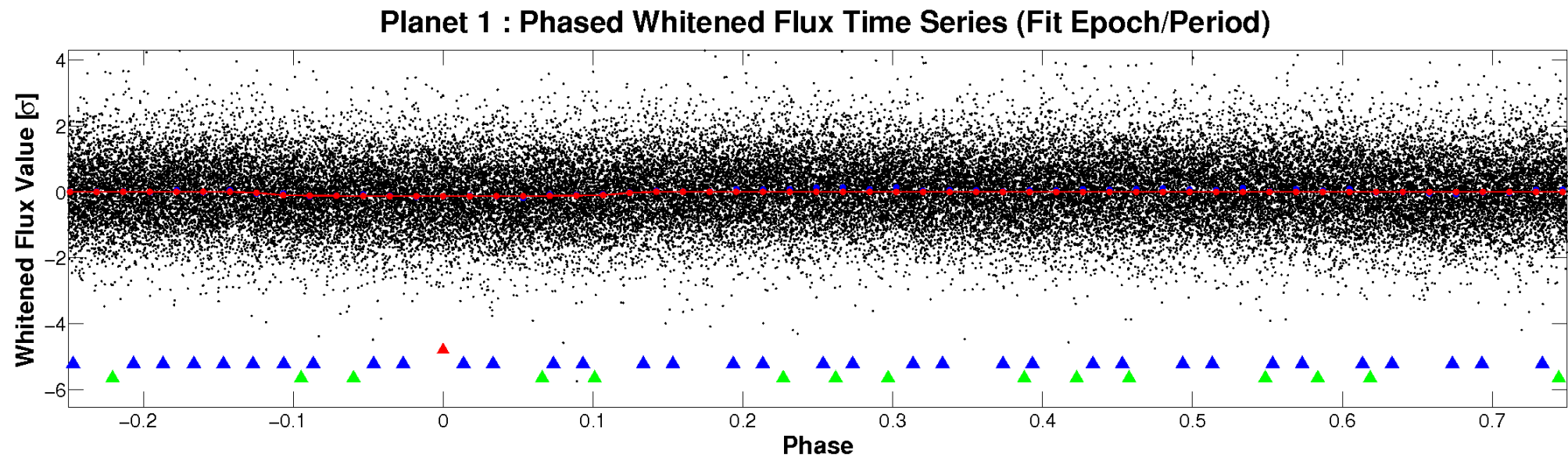
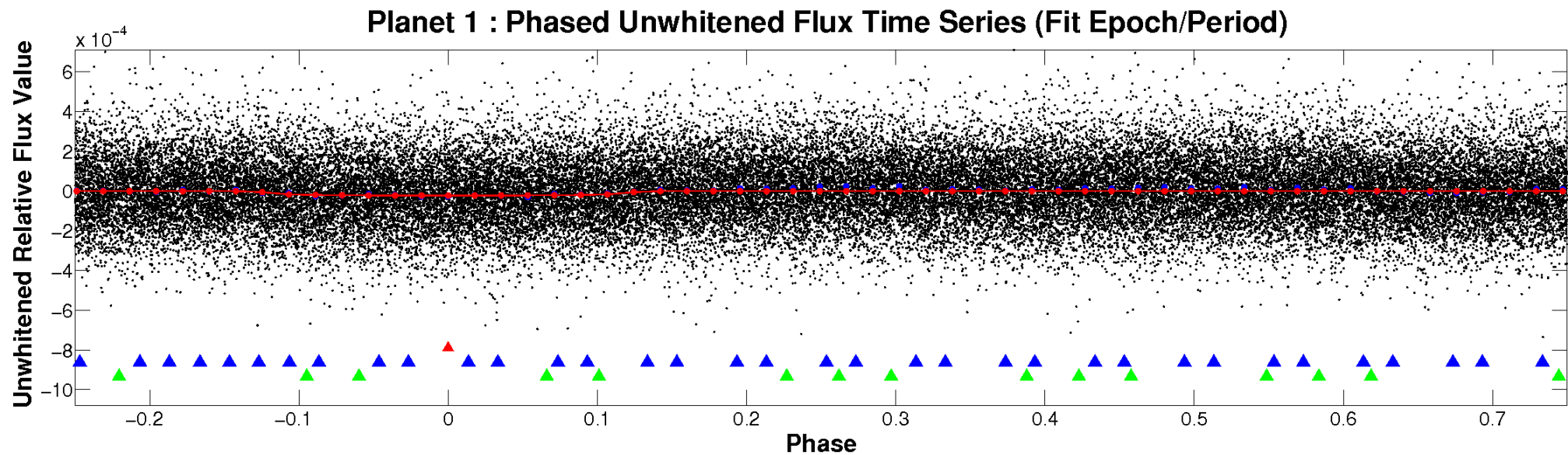


ALT Odd/Even

TCE 004663148-01

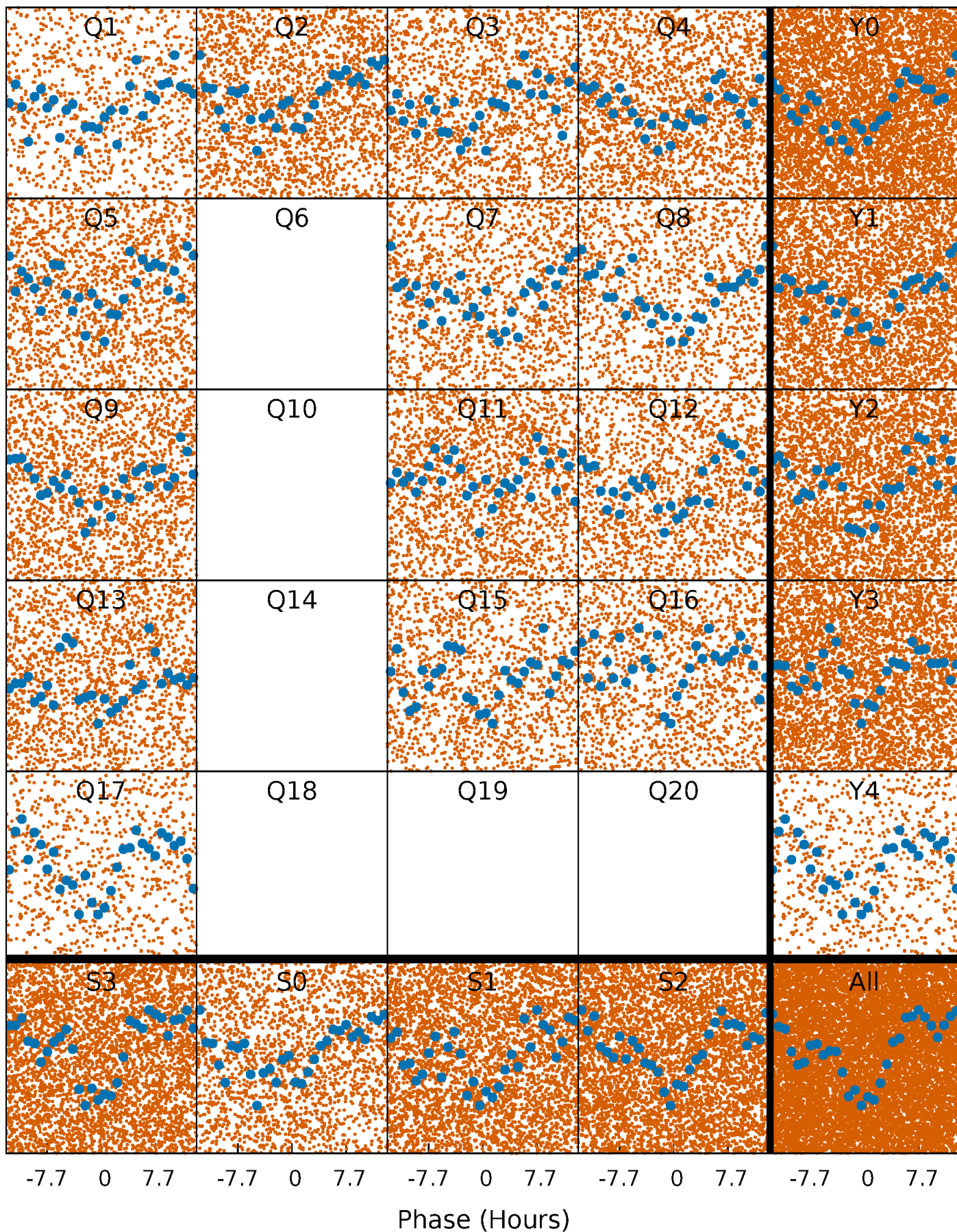


Non-Whitened Vs. Whitened Light Curve



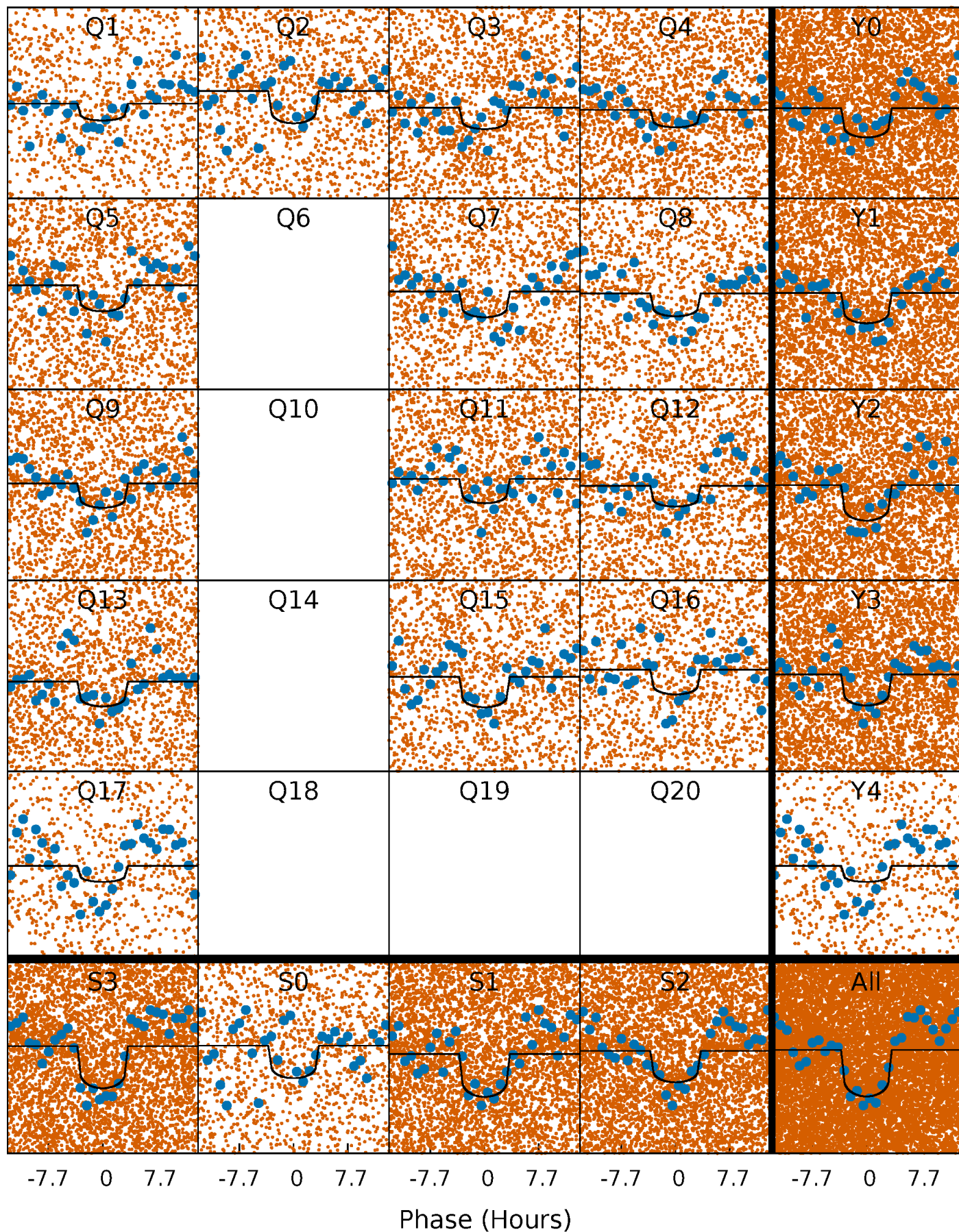
PDC Quarter-Phased Transit Curves

TCE 004663148-01 P= 1.148791 Days $T_0=131.996567$ (BKJD)



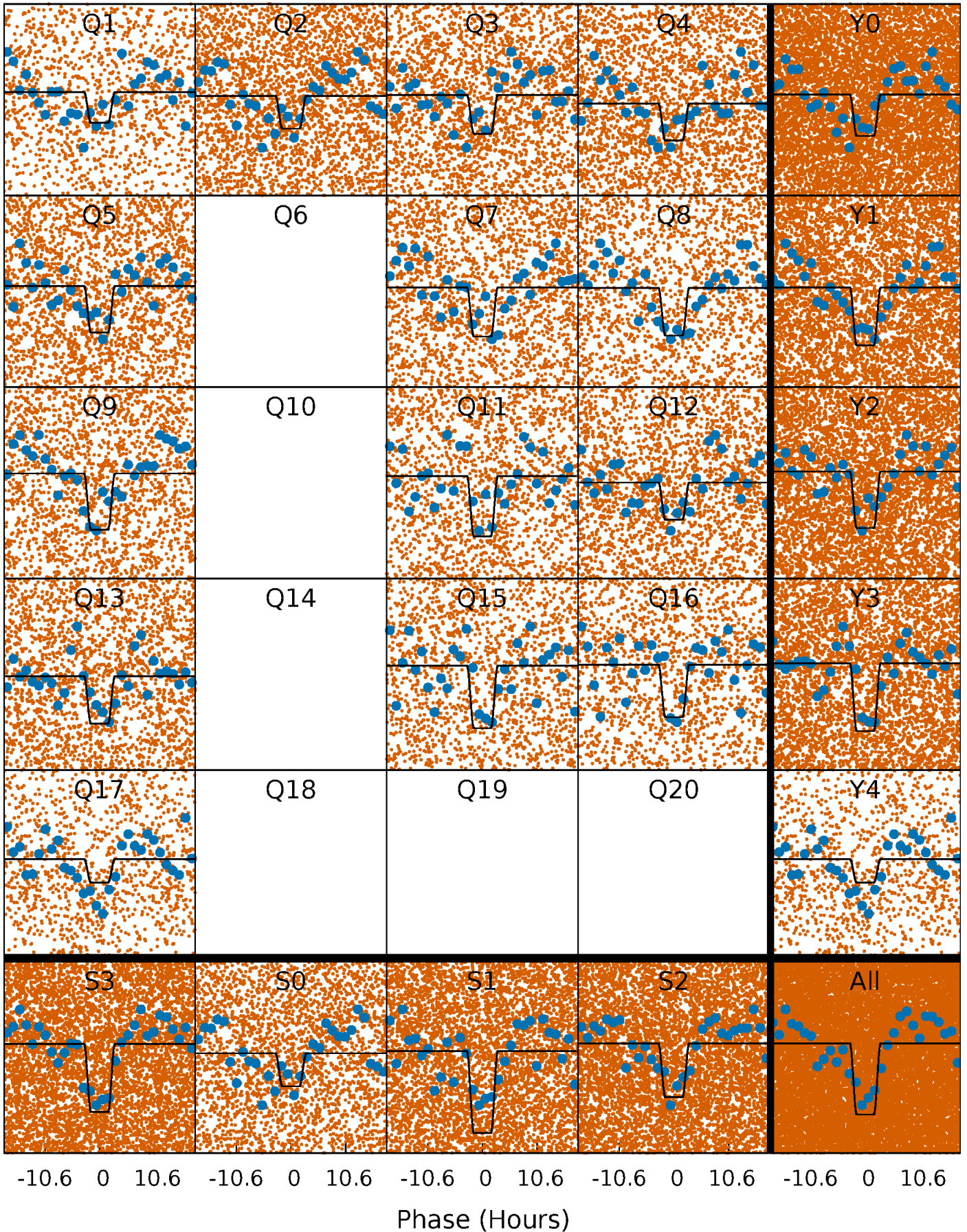
DV Quarter-Phased Transit Curves

TCE 004663148-01 P= 1.148791 Days $T_0=131.996567$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

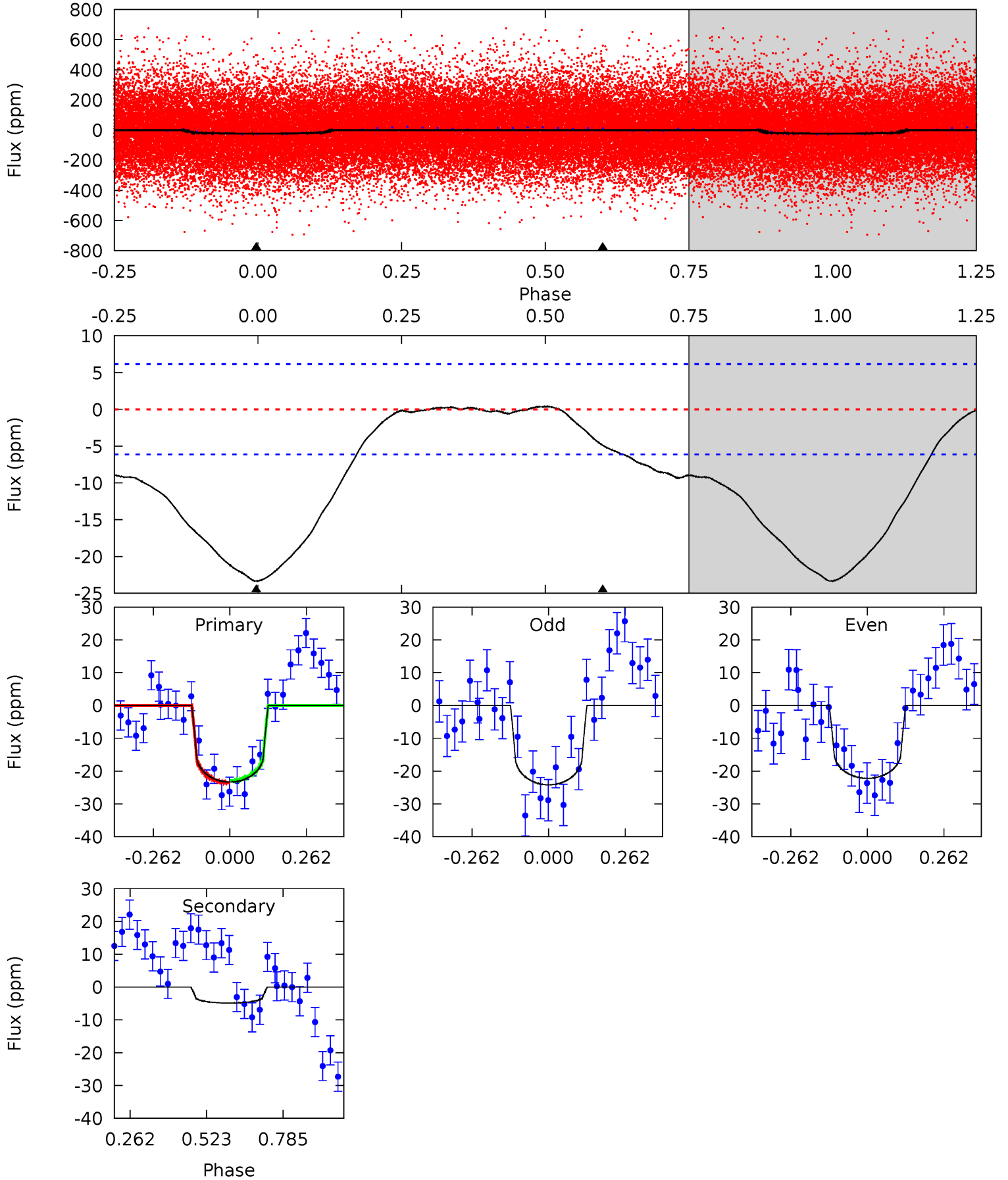
TCE 004663148-01 P= 1.148747 Days $T_0=132.019380$ (BKJD)



DV Model-Shift Uniqueness Test

004663148-01, P = 1.148791 Days, E = 130.847776 Days

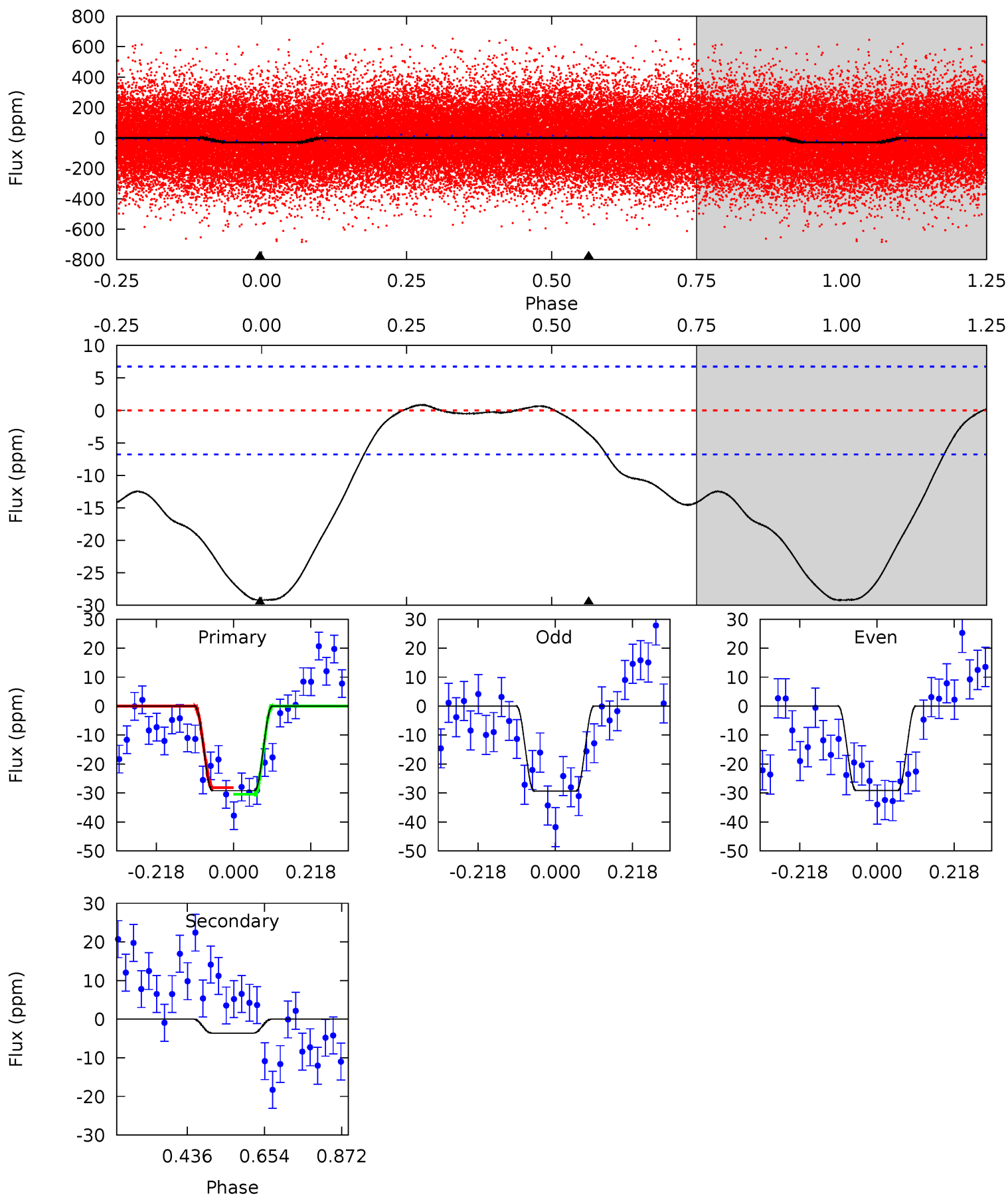
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.6	3.47	0	0	4.36	1.12	0.16	16.6	16.6	3.47	3.47	0.71	1.05	0.02	0.22



Alt Model-Shift Uniqueness Test

004663148-01, P = 1.148747 Days, E = 130.870633 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.0	2.34	0	0	4.40	1.23	0.39	19.0	19.0	2.34	2.34	0.06	0.91	0.03	0.75



Stellar Parameters For KIC 004663148

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7744^{+214}_{-349}	$4.154^{+0.116}_{-0.174}$	$-0.040^{+0.200}_{-0.350}$	$1.781^{+0.498}_{-0.332}$	$1.647^{+0.204}_{-0.249}$	$0.411^{+0.224}_{-0.196}$
	+3%/-5%	+3%/-4%	+500%/-875%	+28%/-19%	+12%/-15%	+55%/-48%
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 004663148-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-5 ± 1	$0.97^{+0.64}_{-0.54}$	4013^{+300}_{-264}	4983^{+2656}_{-1304}	$1.804^{+7.198}_{-1.212}$
Alt.	-4 ± 2	$1.22^{+0.73}_{-0.64}$	4012^{+293}_{-263}	3926^{+1946}_{-6613}	$0.783^{+3.049}_{-0.518}$

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 $A_{obs} \gg 1.0$

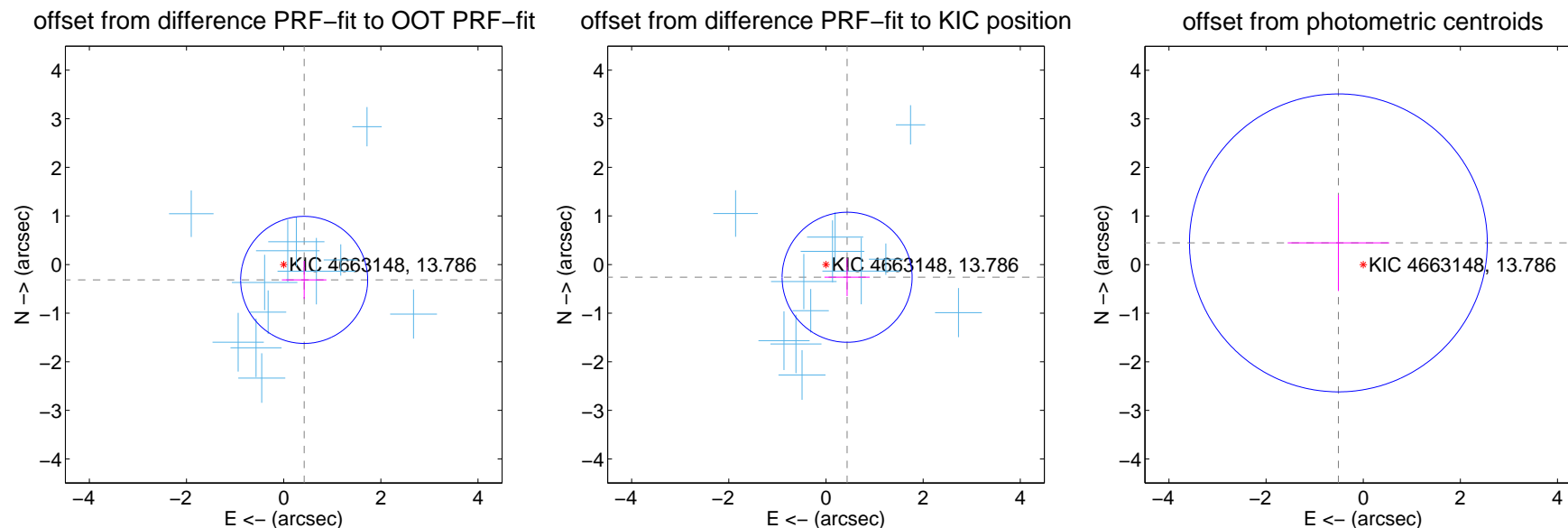
DV Centroid Data

Supplemental centroid analysis for 004663148-01. Kepler magnitude: 13.79. Transit SNR 12.47

There are 12 quarters with good PRF difference image offsets

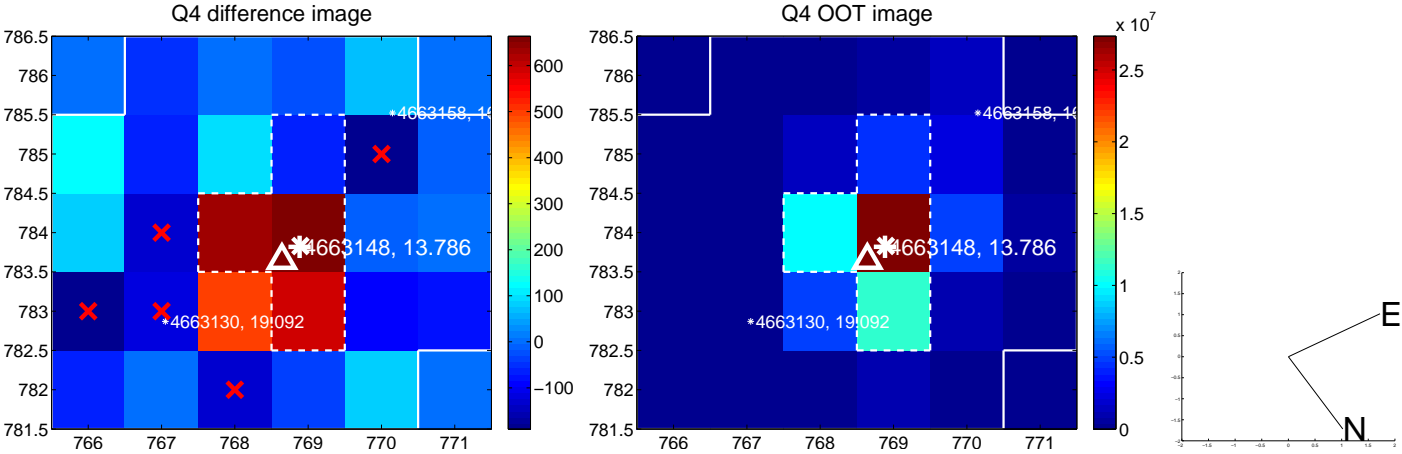
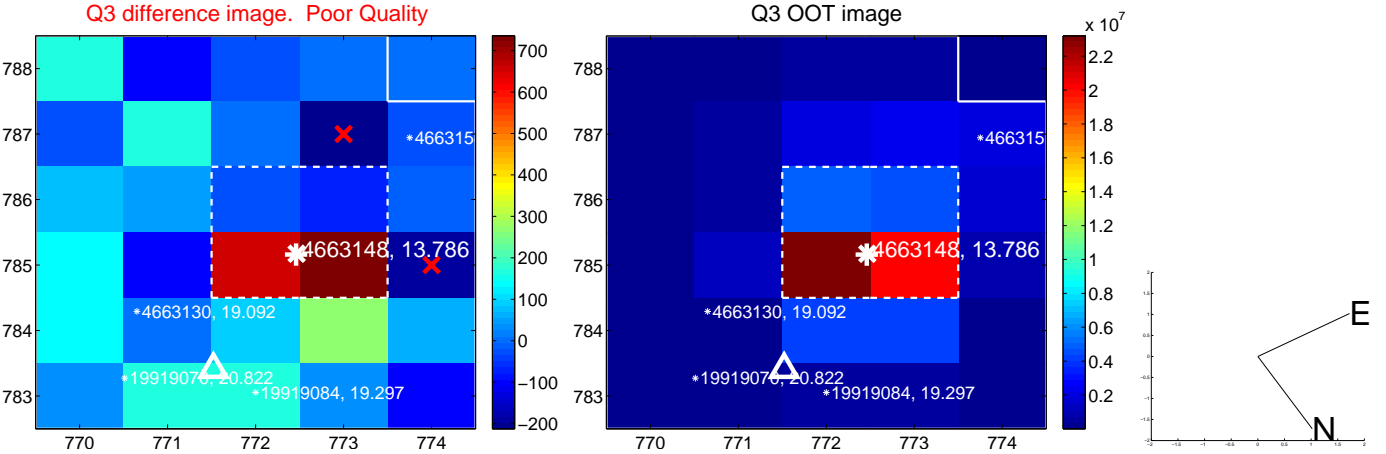
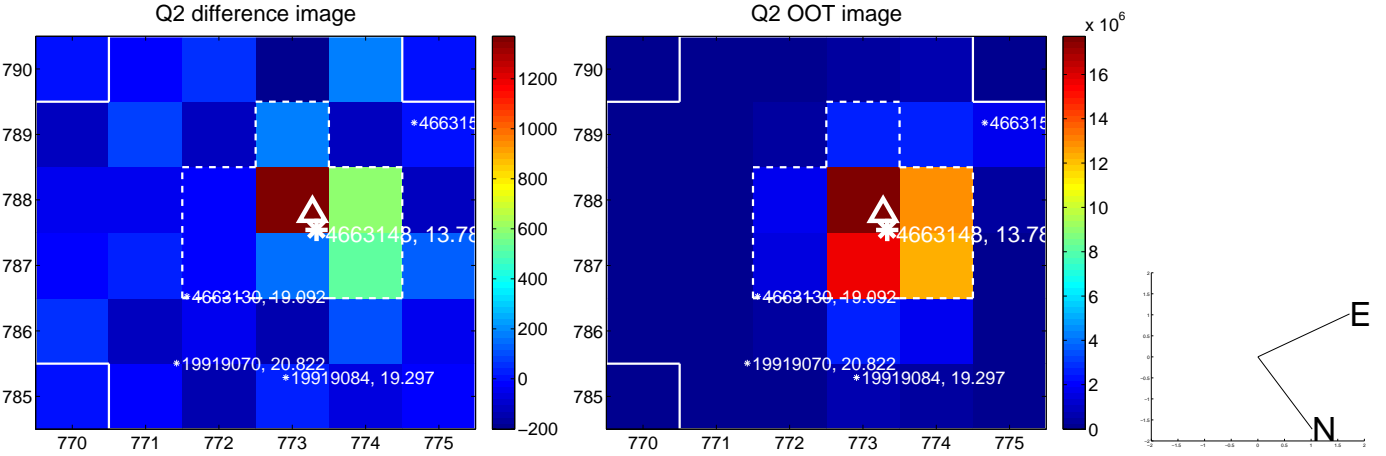
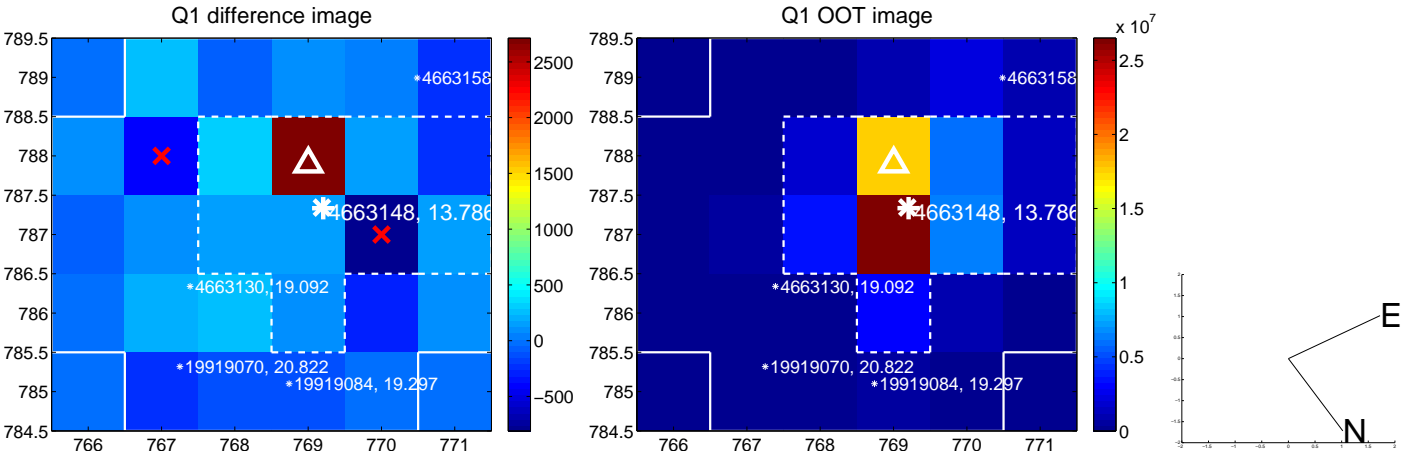
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.527 ± 0.436	1.21	-0.422 ± 0.459	-0.316 ± 0.392
PRF-fit source offset from KIC position	0.508 ± 0.446	1.14	-0.435 ± 0.465	-0.262 ± 0.389
photometric centroid source offset	0.68 ± 1.02	0.66	0.51 ± 1.05	0.45 ± 0.99

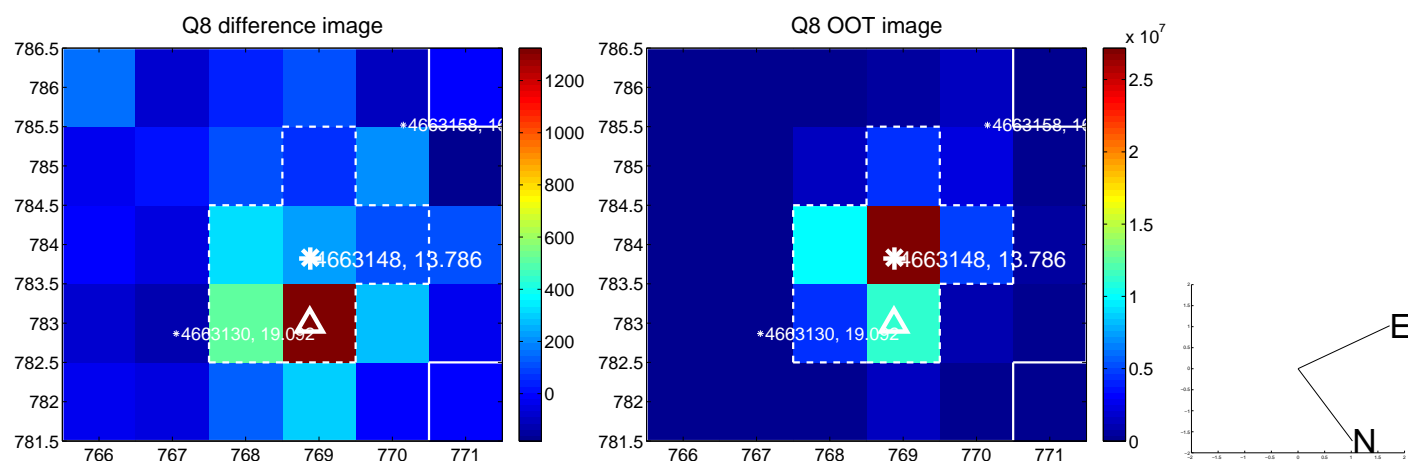
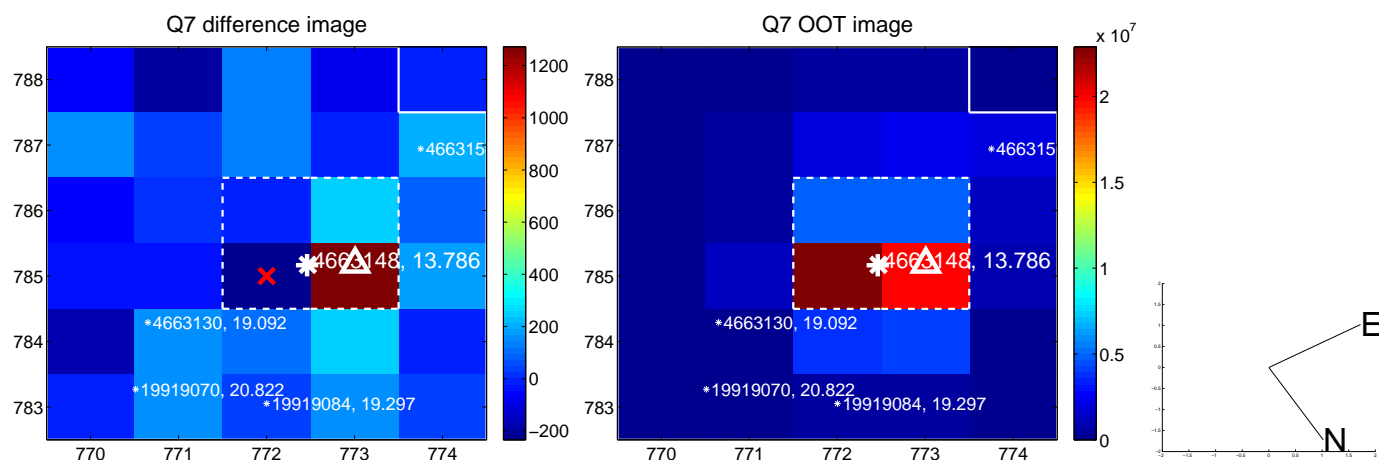
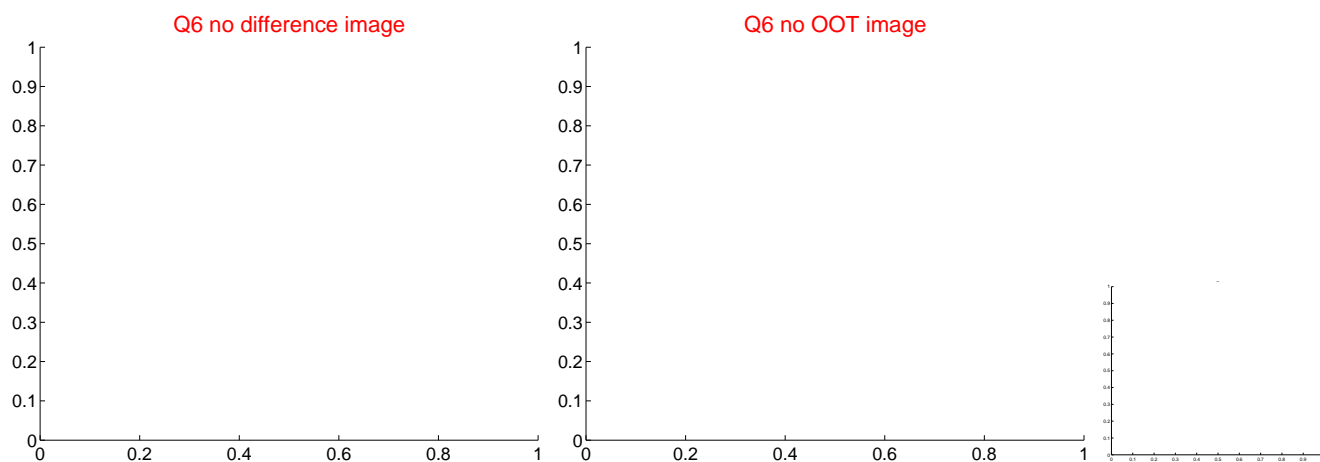
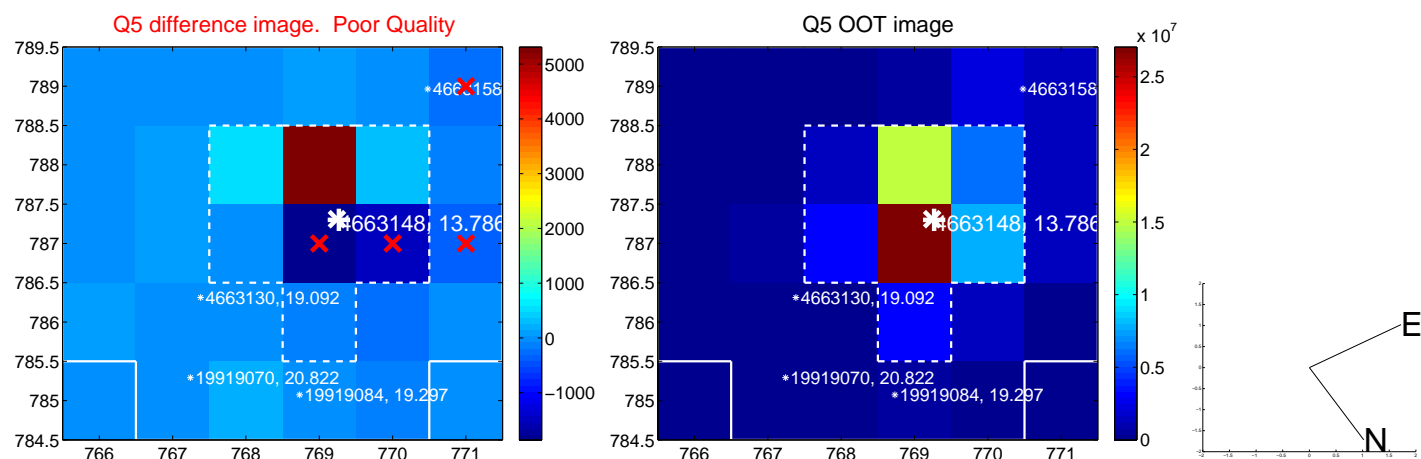


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

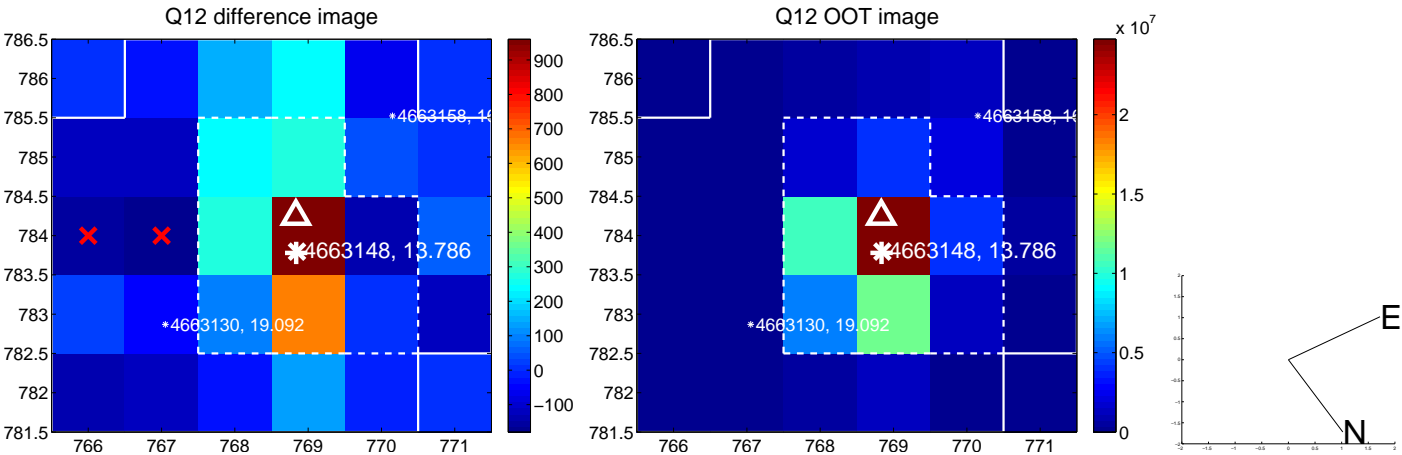
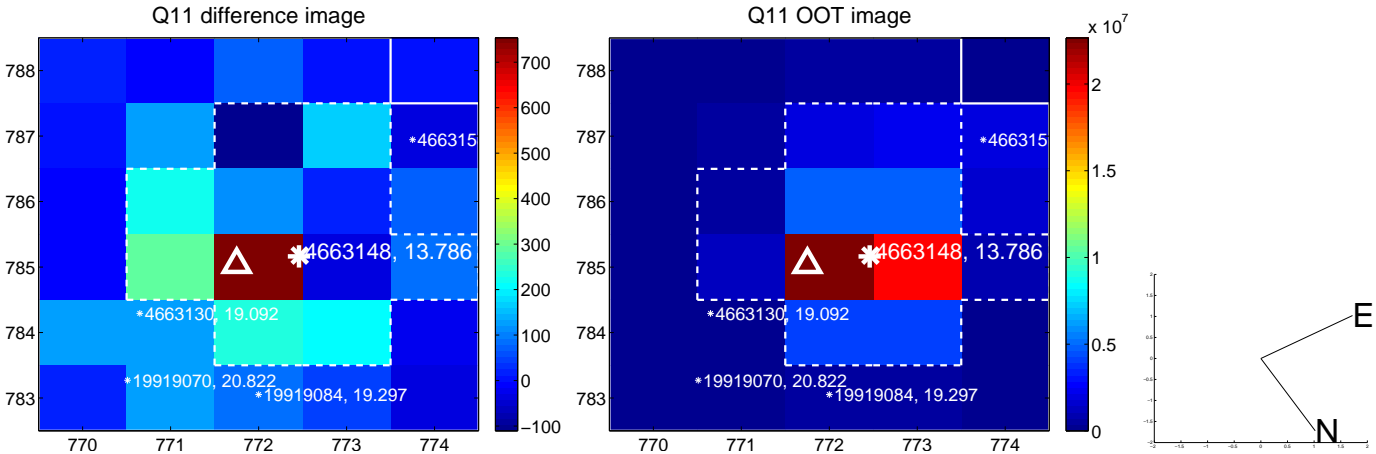
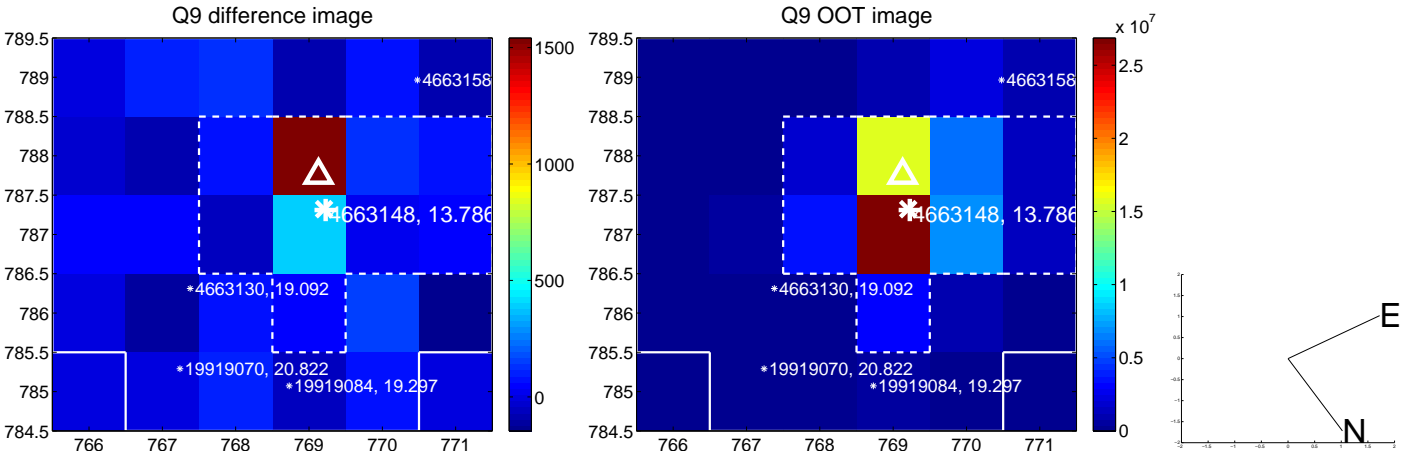
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



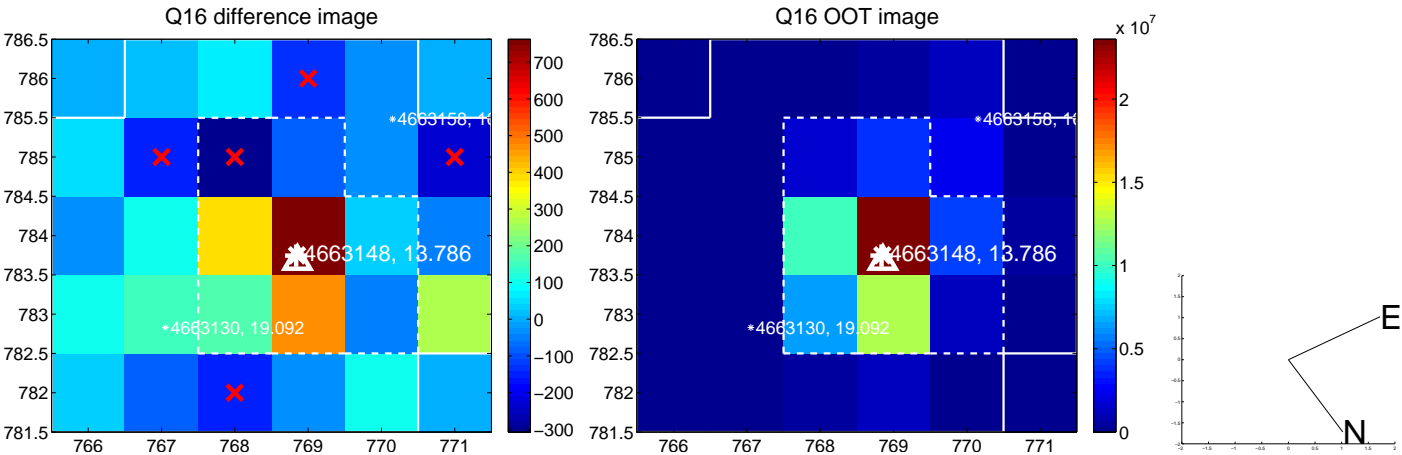
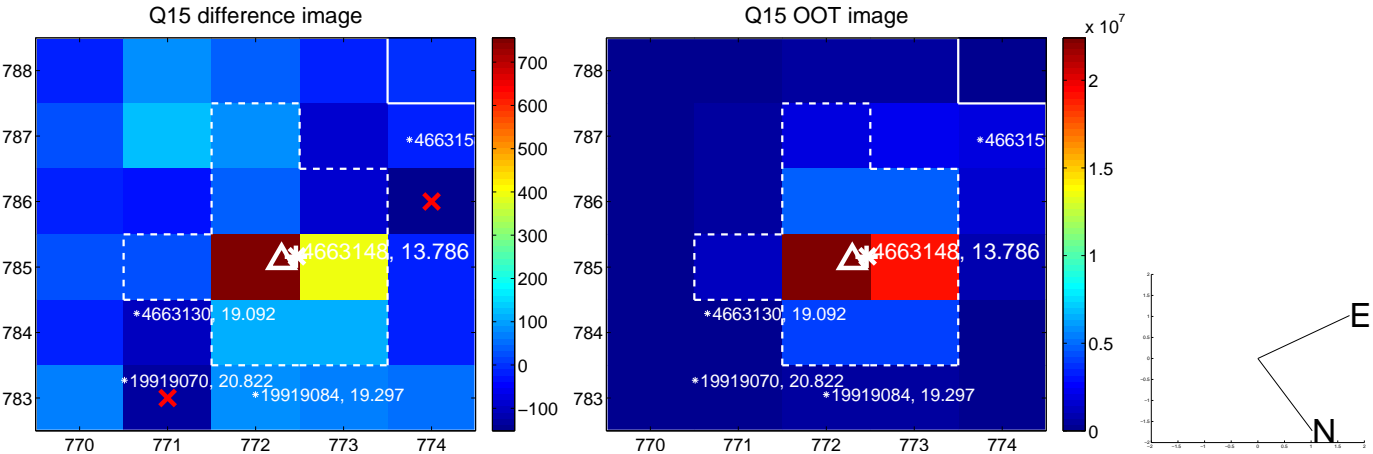
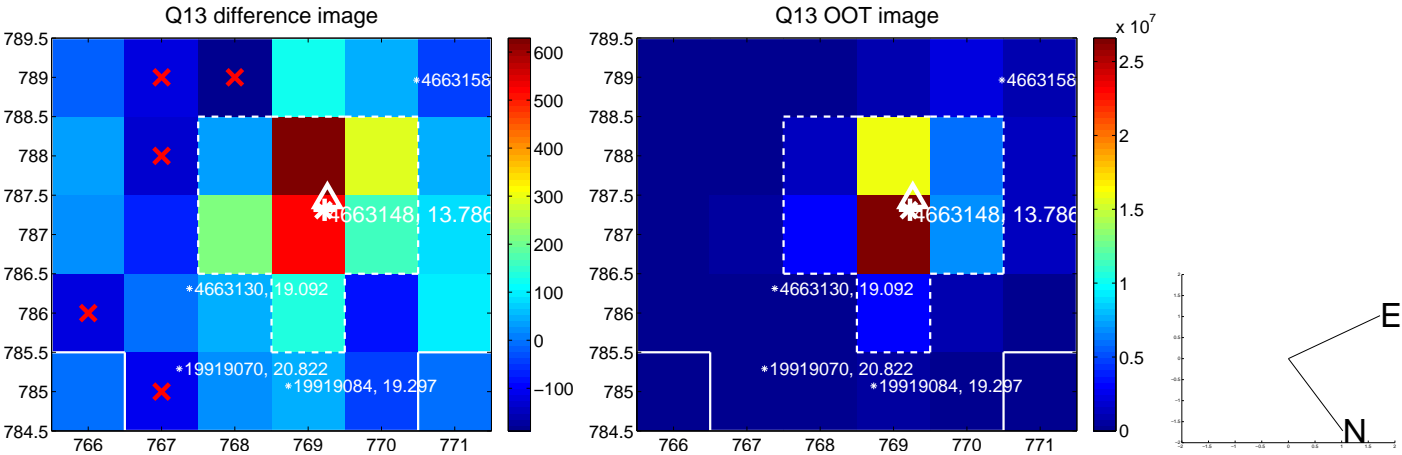
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



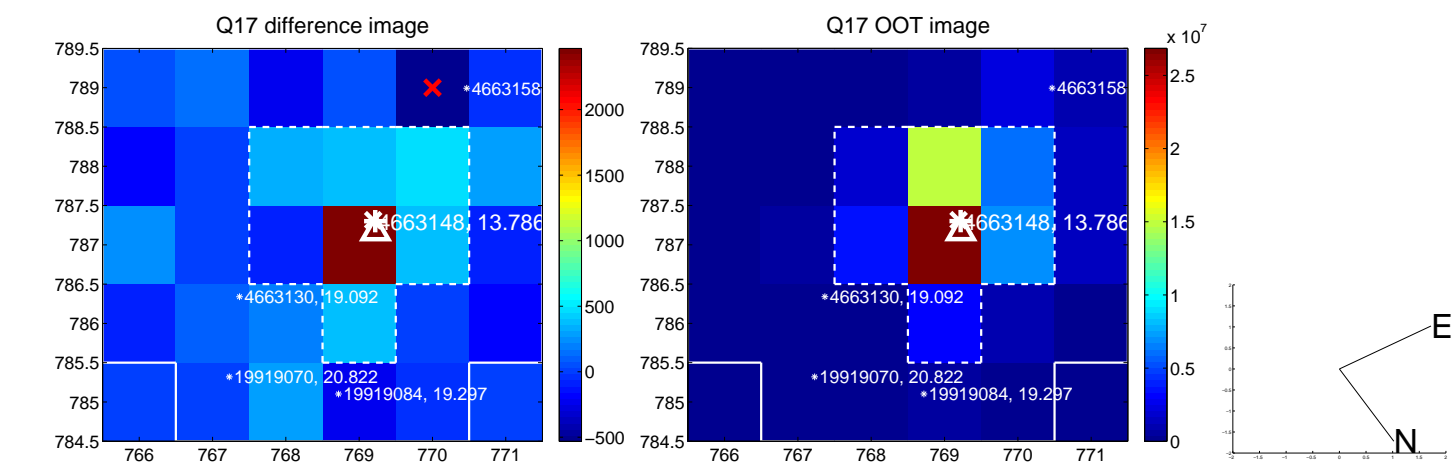
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



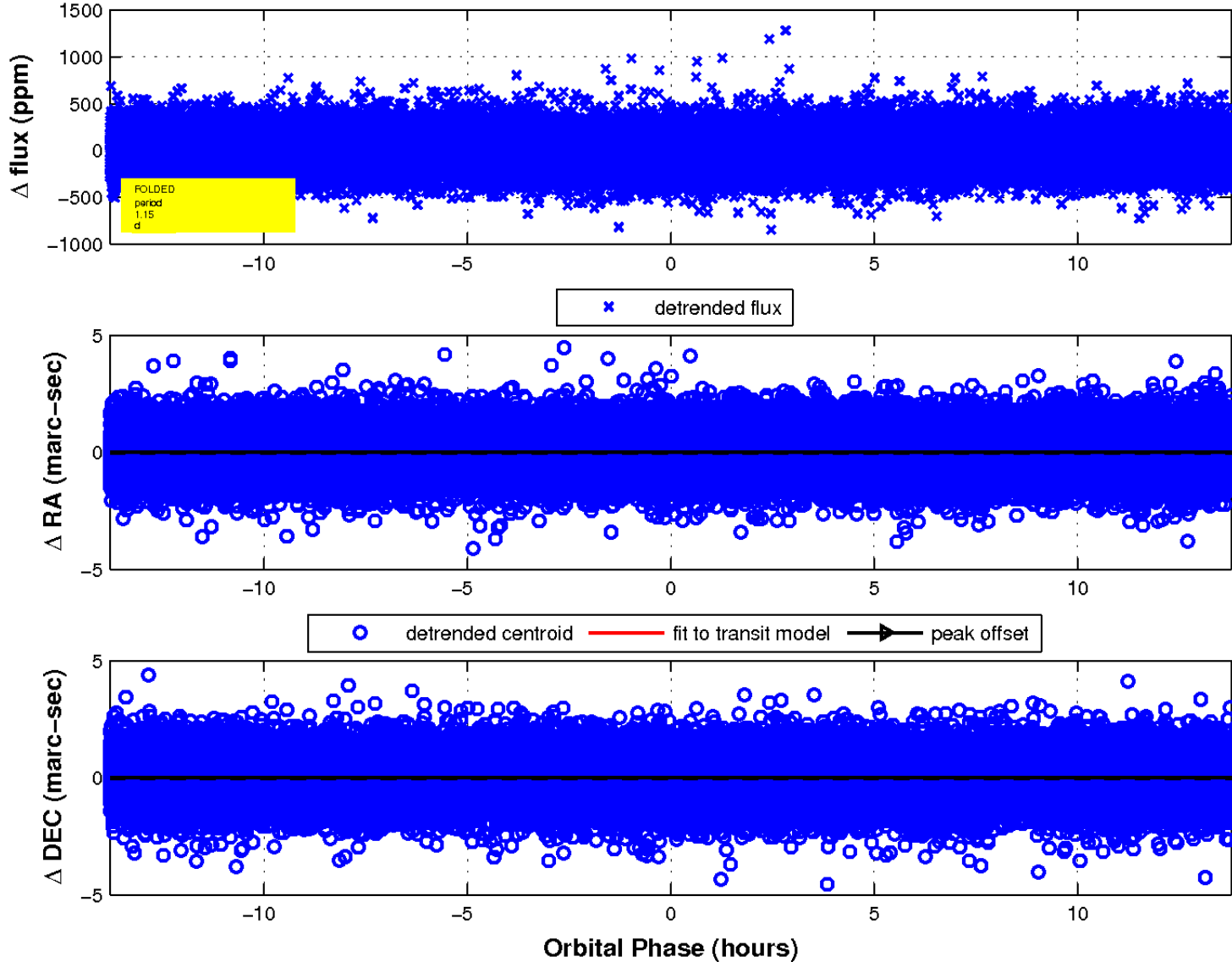
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



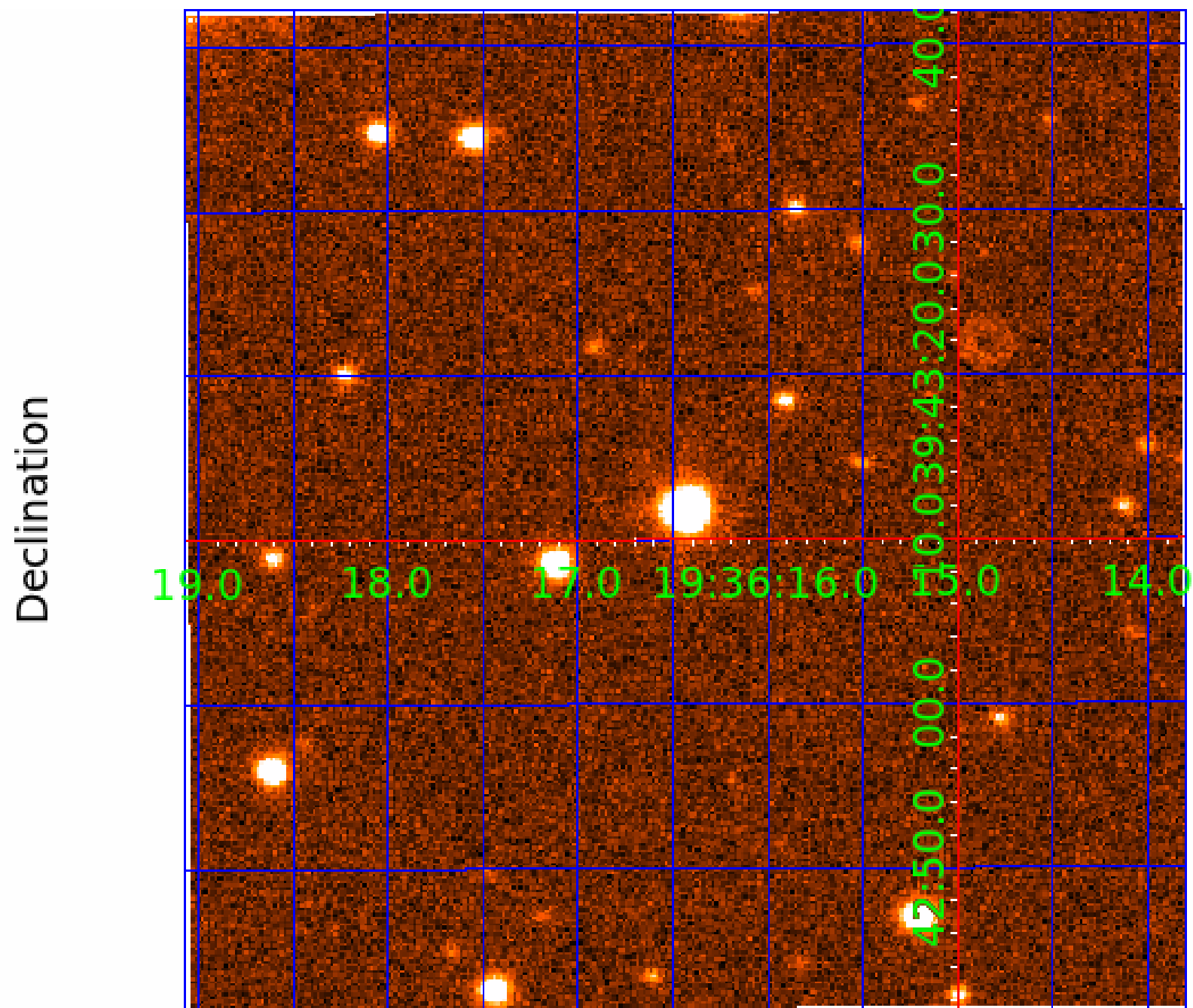
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 3



UKIRT Image



KIC 004663148

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})
004663148-01	OBS	No	1.148791	131.996568	22.3	6.772	9.9	12.5	1.78	7744	0.86	15880.96
004663148-02	OBS	No	41.425390	170.864427	401.9	1.687	8.8	8.3	1.78	7744	4.11	133.30
004663148-03	OBS	No	92.867318	209.595838	176.7	8.827	7.9	7.8	1.78	7744	2.55	45.43

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004663148-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
004663148-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
004663148-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—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.

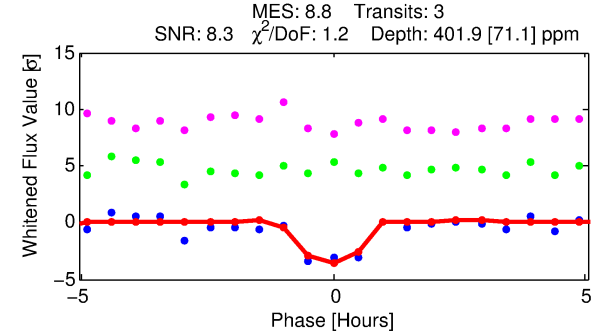
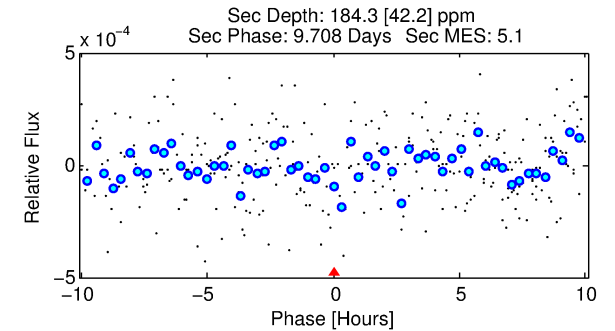
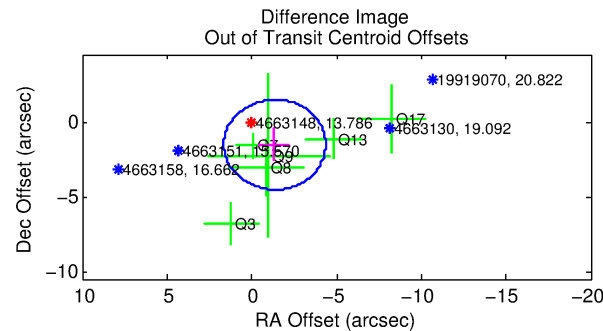
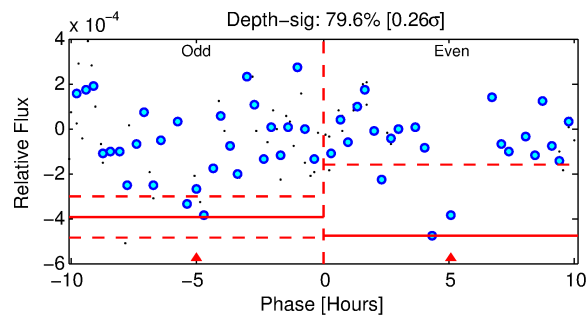
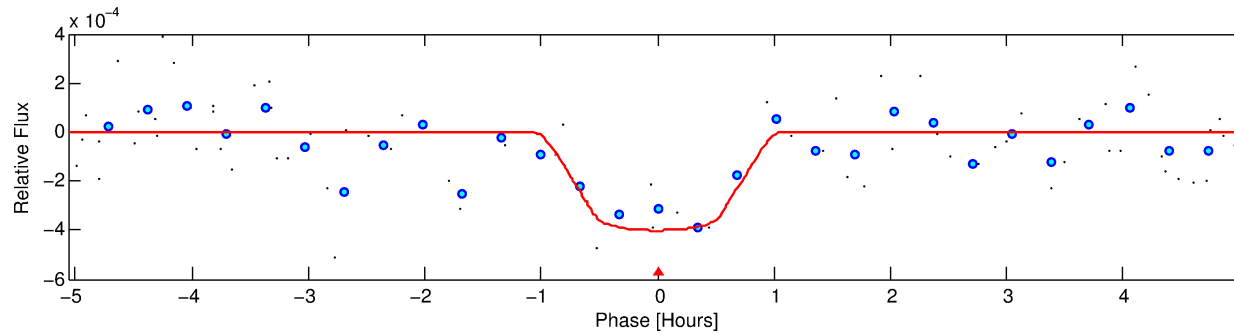
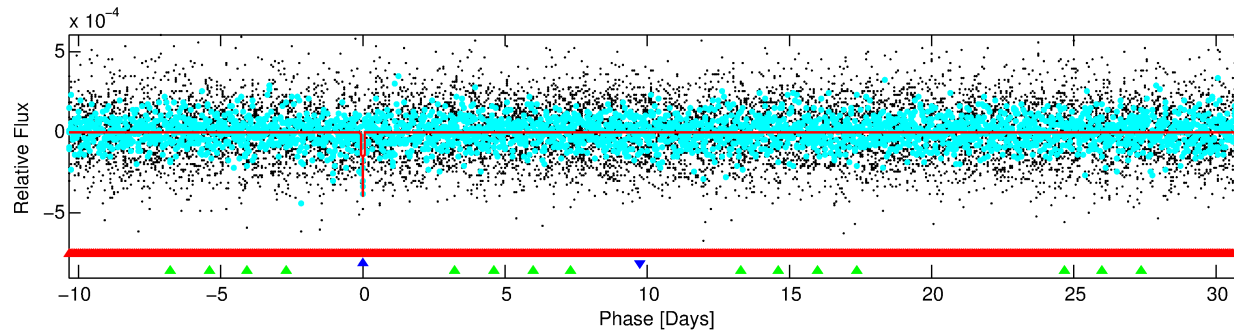
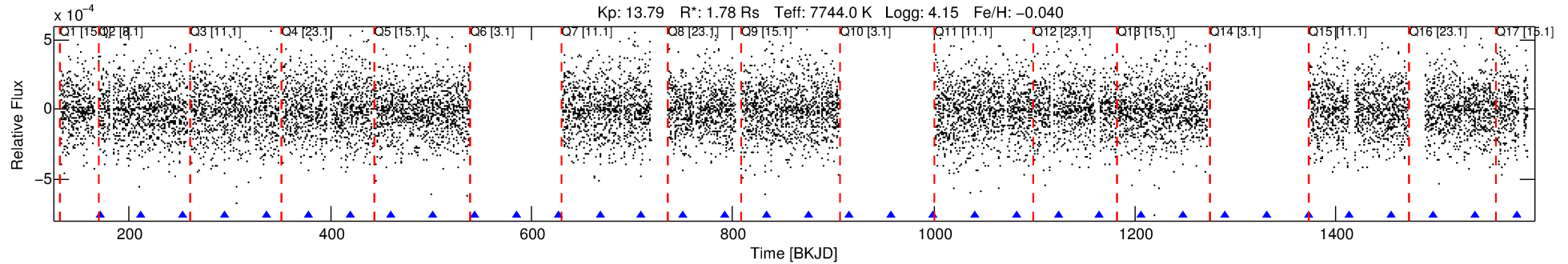
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004663148-02

No Significant Match Found

DV One-Page Summary

KIC: 4663148 Candidate: 2 of 3 Period: 41.425 d



DV Fit Results:

Period = 41.42539 [0.00072] d
Epoch = 170.8644 [0.0117] BKJD
Rp/R* = 0.0212 [0.0175]
a/R* = 93.59 [490.56]
b = 0.89 [1.23]
Seff = 133.30 [49.63]
Teq = 866 [81] K
Rp = 4.11 [3.58] Re
a = 0.2769 [0.0635] AU
Ag = 459.31 [779.40] [0.59σ]
Teffp = 6202 [2597] K [2.05σ]

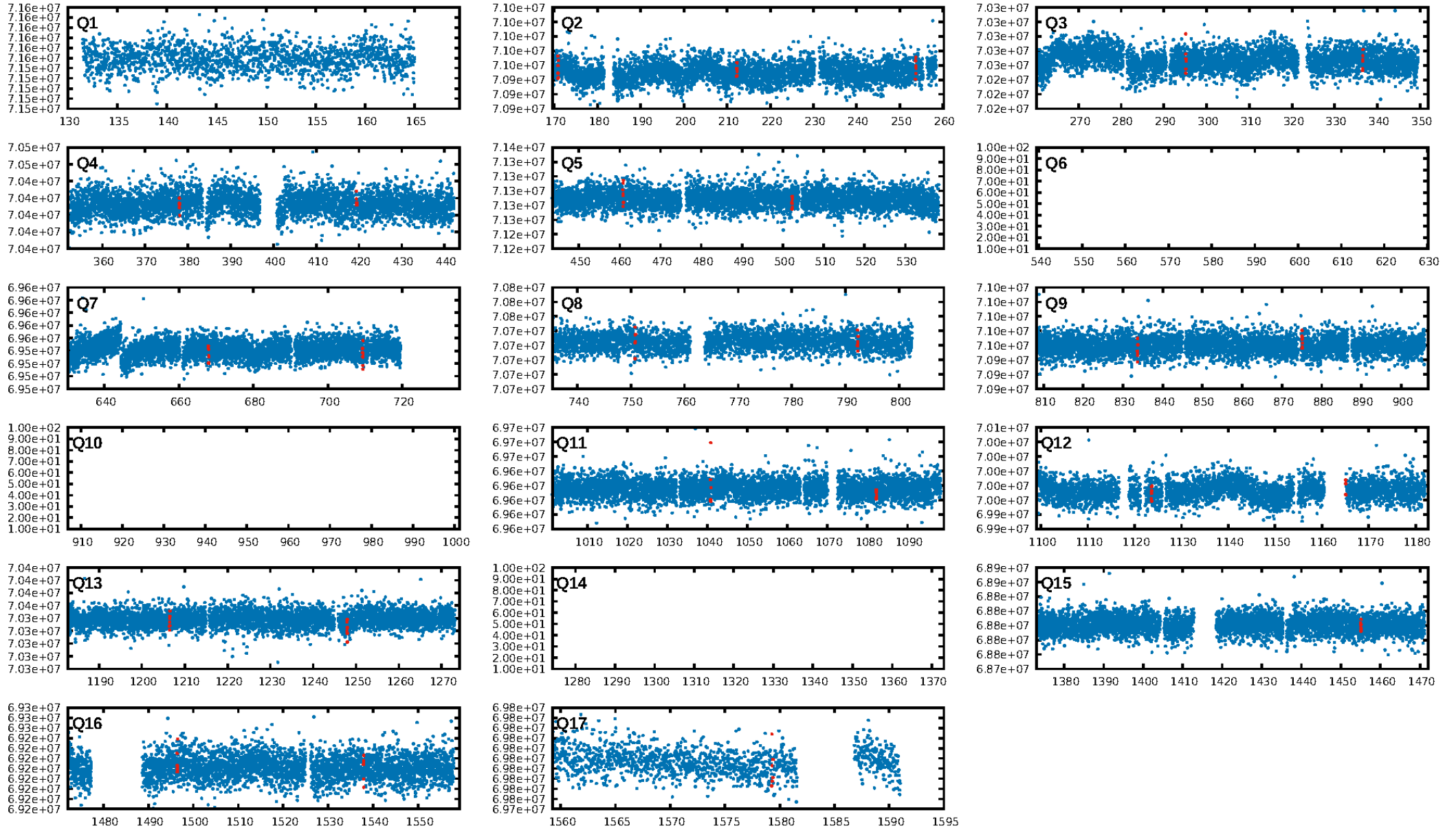
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [138.51σ]
LongPeriod-sig: 100.0% [137.38σ]
ModelChiSquare2-sig: 79.5%
ModelChiSquareGof-sig: 98.3%
Bootstrap-pfa: 8.61e-12
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.596
Centroid-sig: 31.3%
Centroid-so: 0.317 arcsec [0.45σ]
OotOffset-rm: 2.045 arcsec [2.04σ]
KicOffset-rm: 2.041 arcsec [2.04σ]
OotOffset-st: 0/2/1/3 [6]
KicOffset-st: 0/2/1/3 [6]
DiffImageQuality-fgm: 0.17 [1/6]
DiffImageOverlap-fno: 0.18 [2/11]

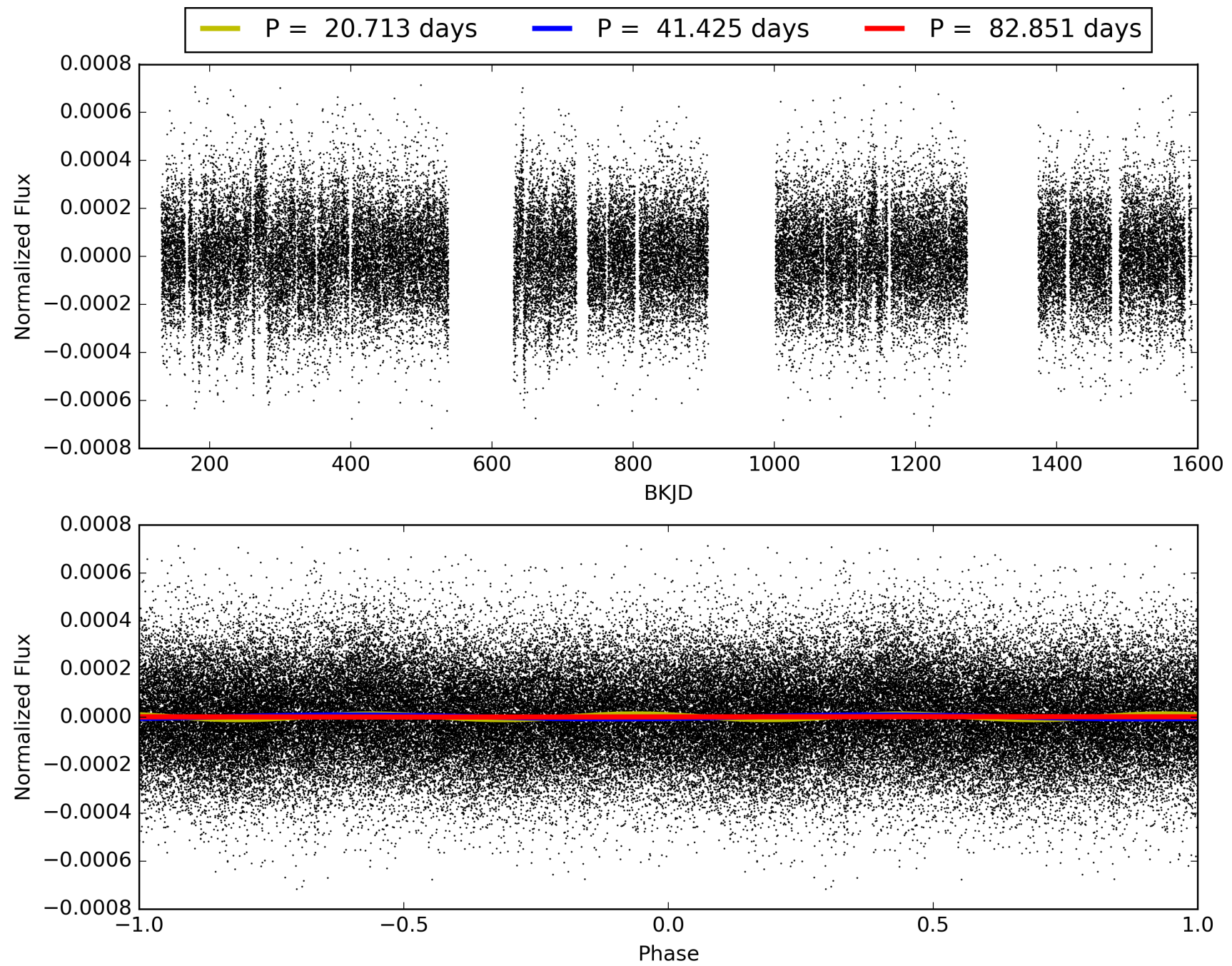
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 10:23:52 Z

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

TCE 004663148-02, PDC Light Curves

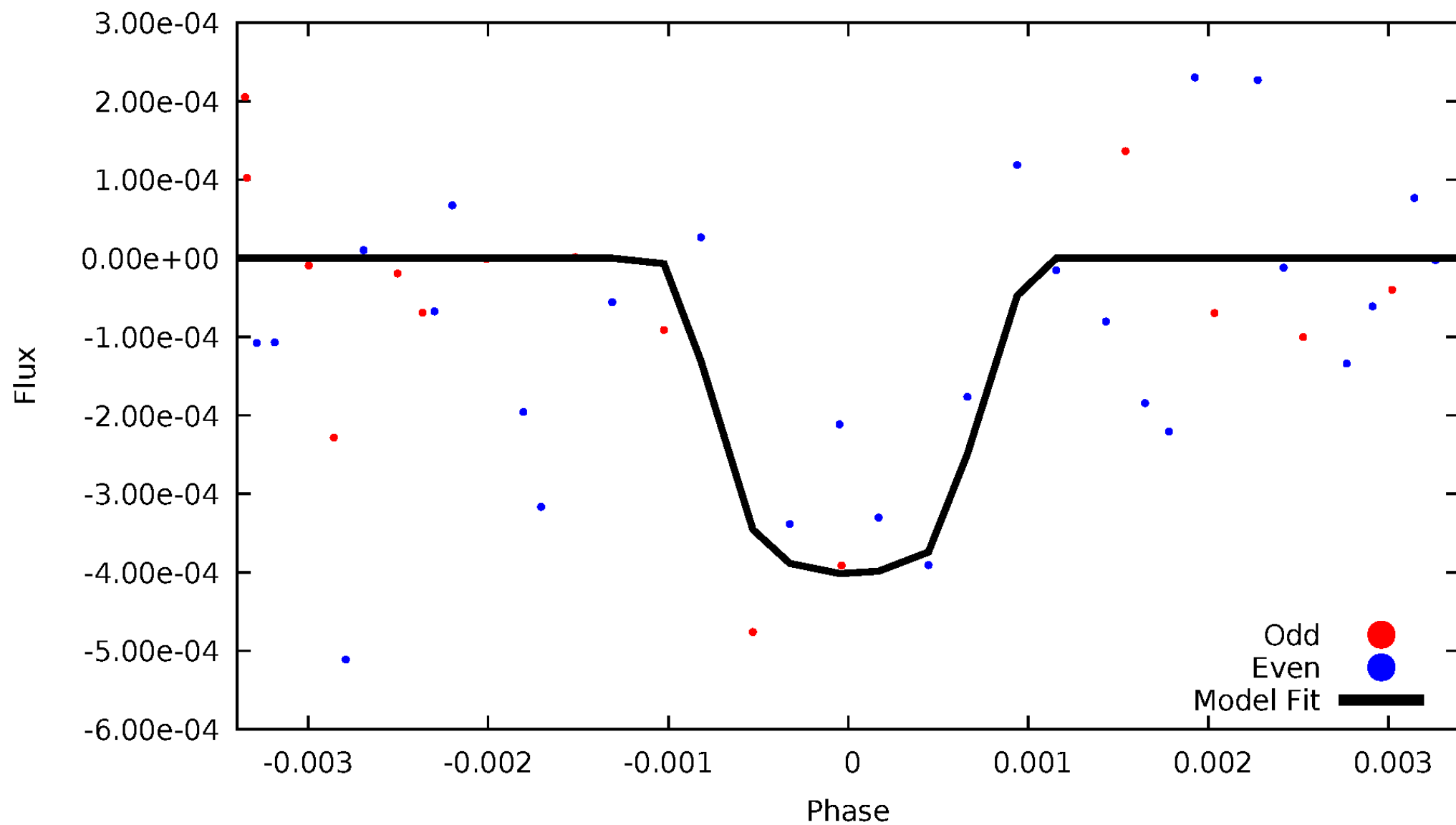


TCE 004663148-02



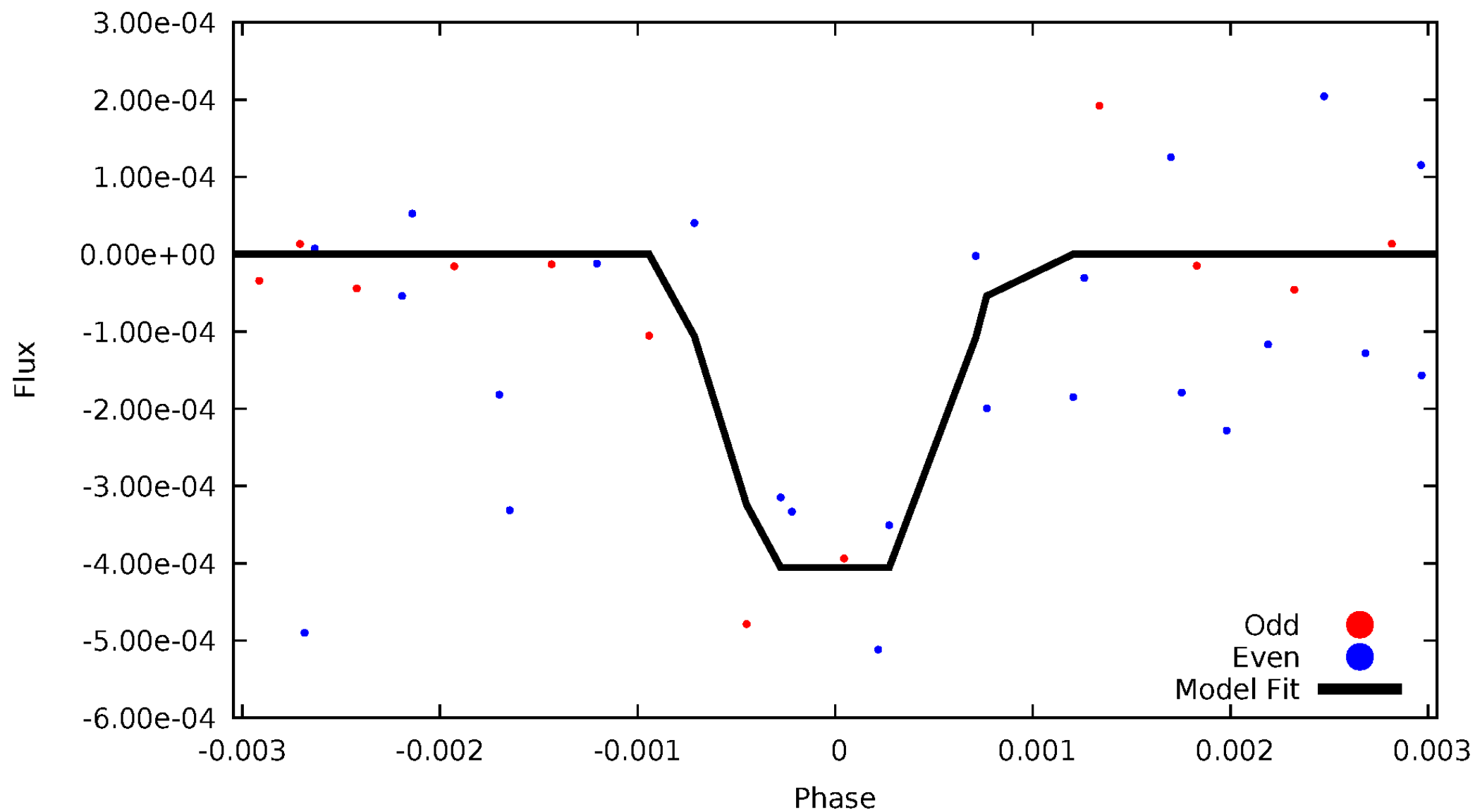
DV Odd/Even

TCE 004663148-02



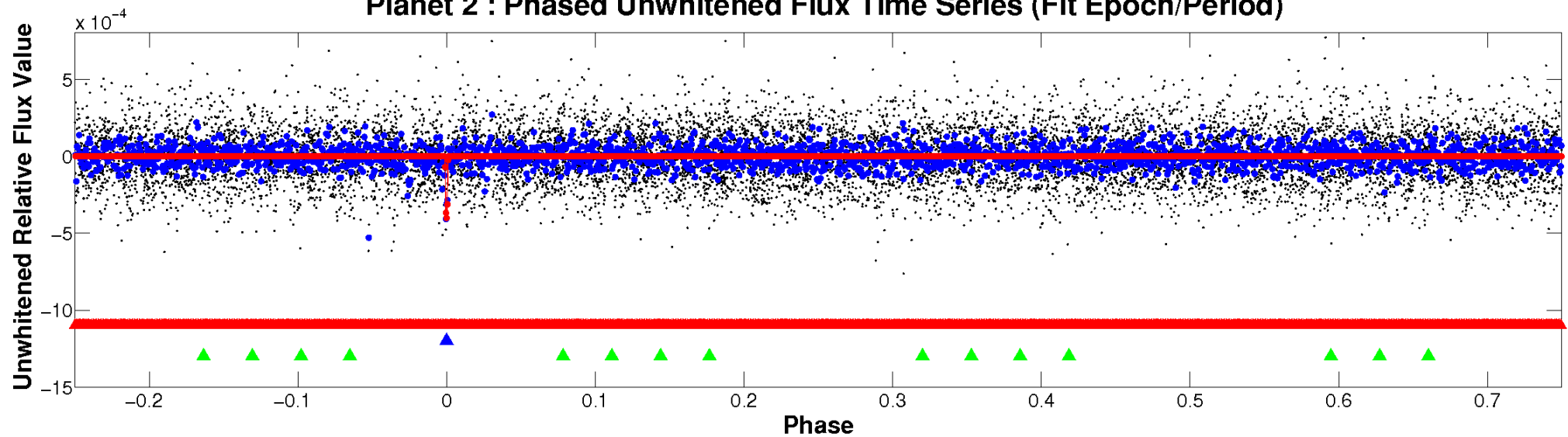
ALT Odd/Even

TCE 004663148-02

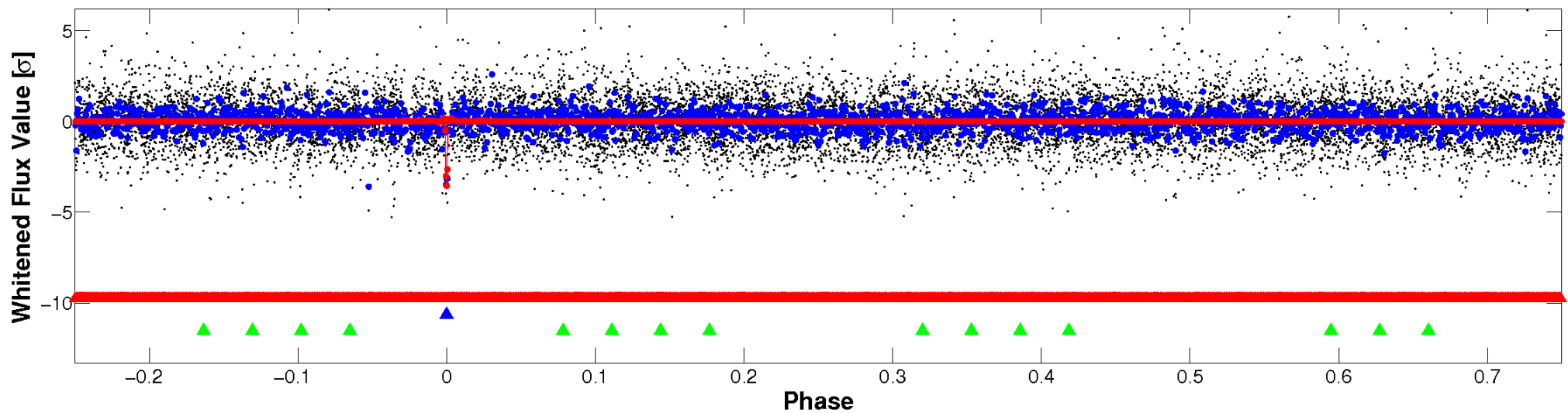


Non-Whitened Vs. Whitened Light Curve

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

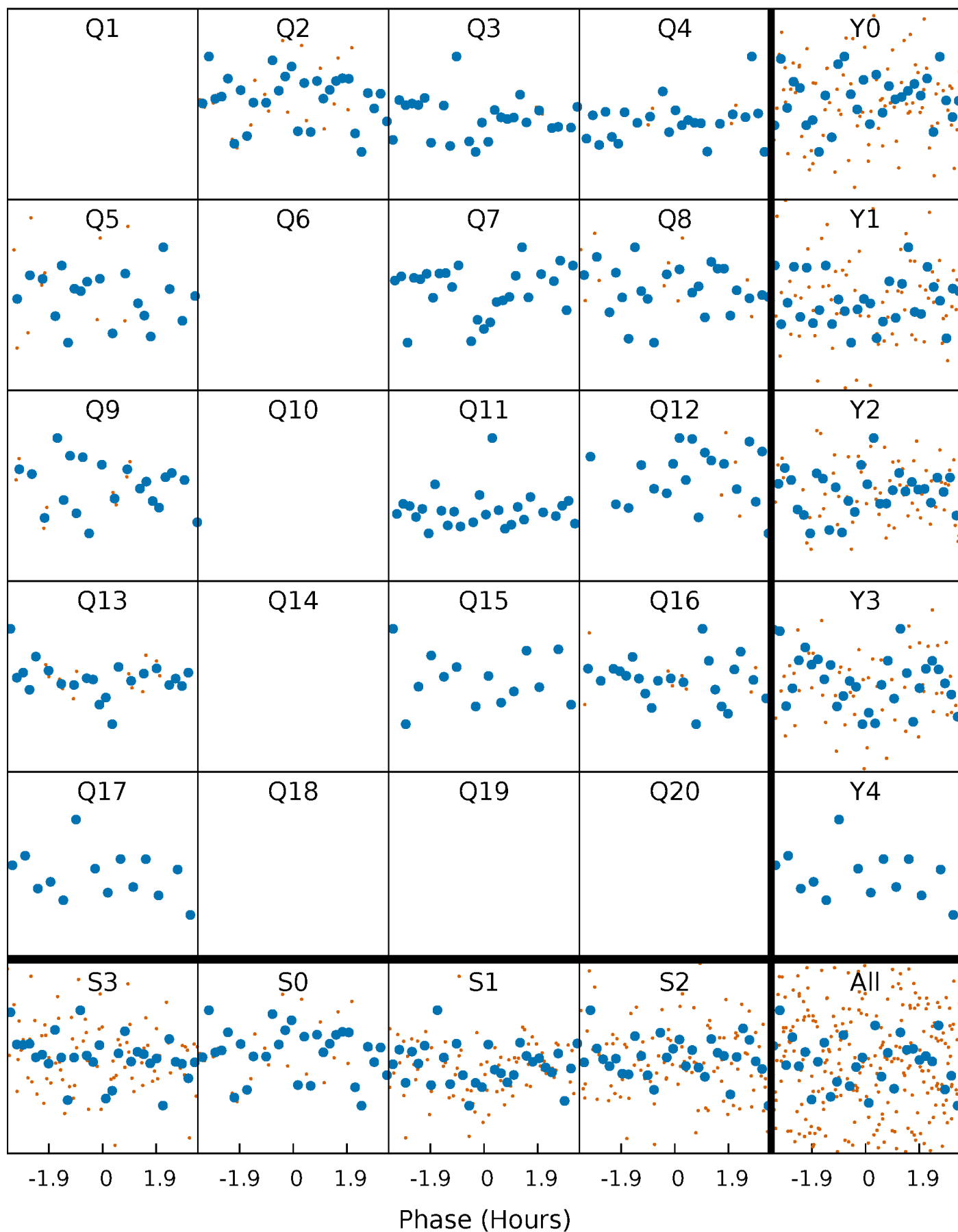


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



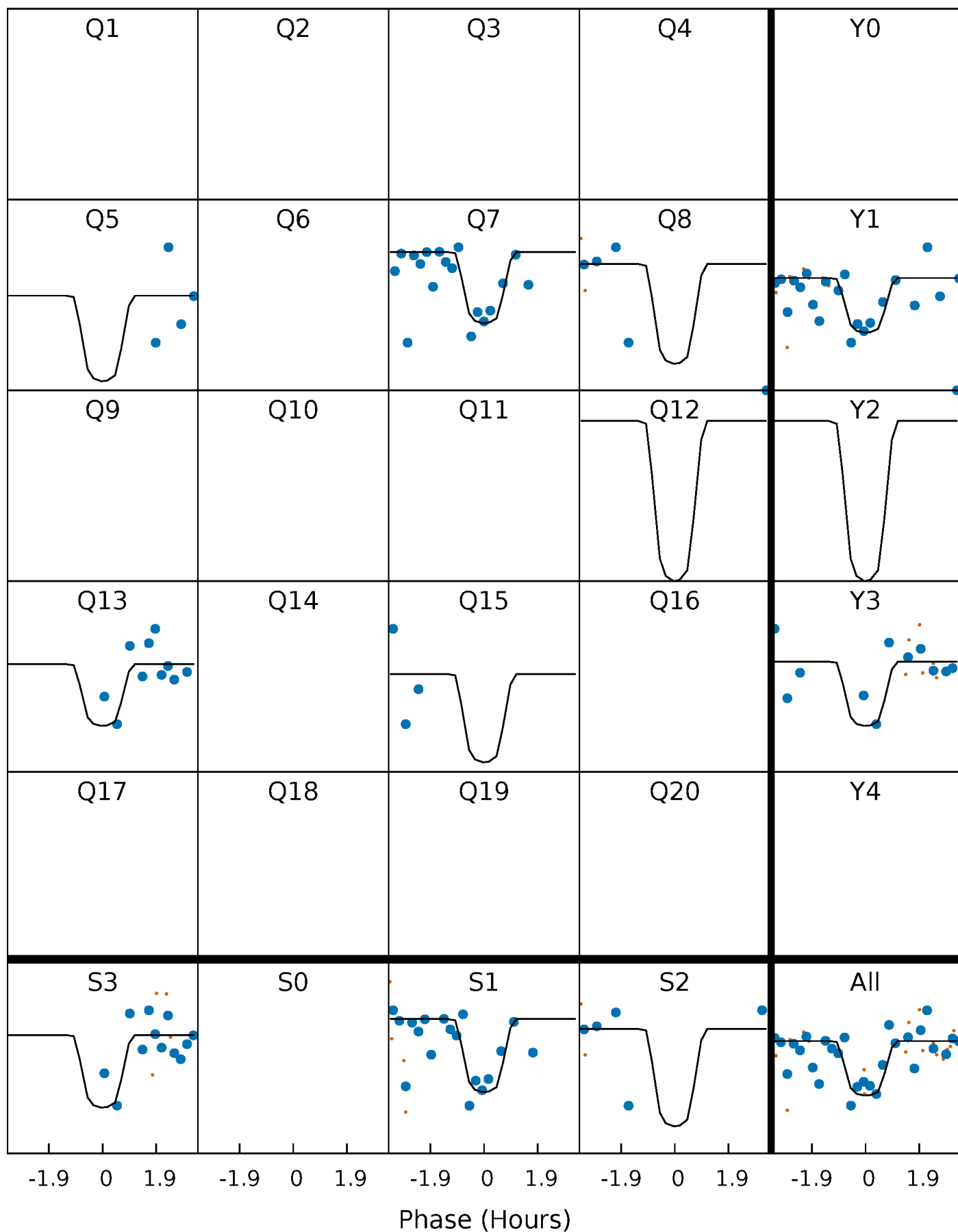
PDC Quarter-Phased Transit Curves

TCE 004663148-02 $P = 41.425390$ Days $T_0 = 170.864427$ (BKJD)



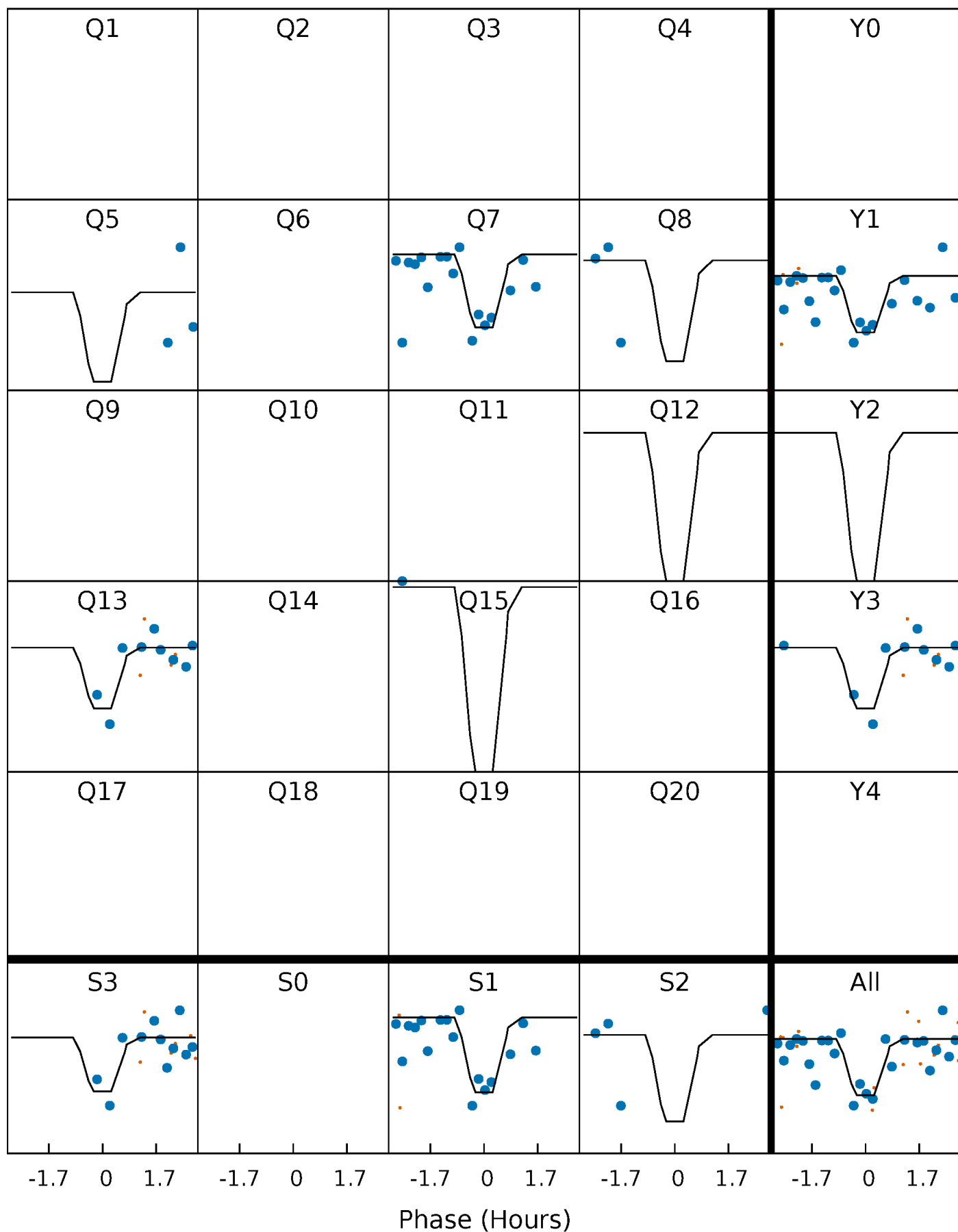
DV Quarter-Phased Transit Curves

TCE 004663148-02 P= 41.425390 Days $T_0=170.864427$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

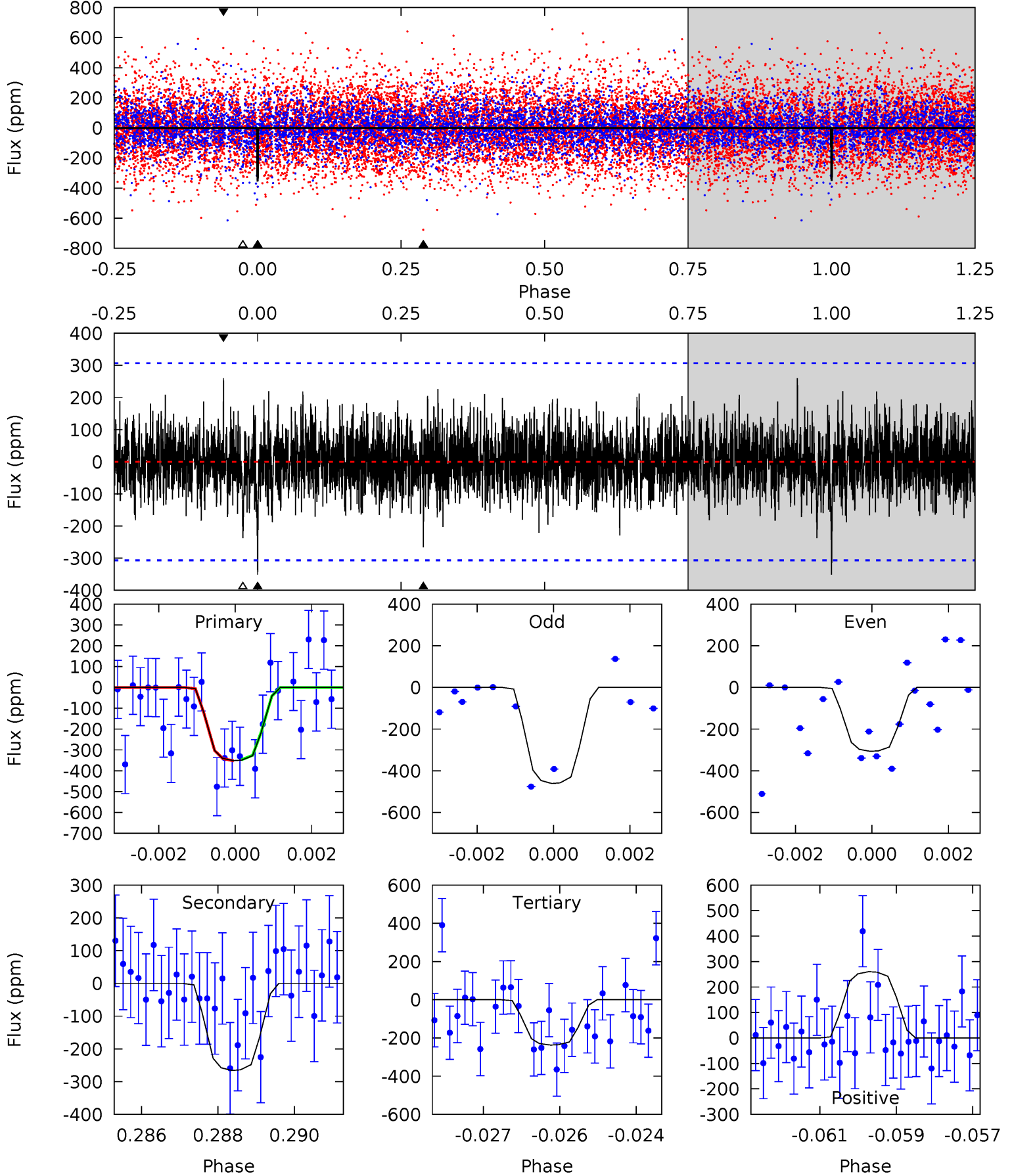
TCE 004663148-02 P= 41.426373 Days $T_0=170.848254$ (BKJD)



DV Model-Shift Uniqueness Test

004663148-02, P = 41.425390 Days, E = 129.439037 Days

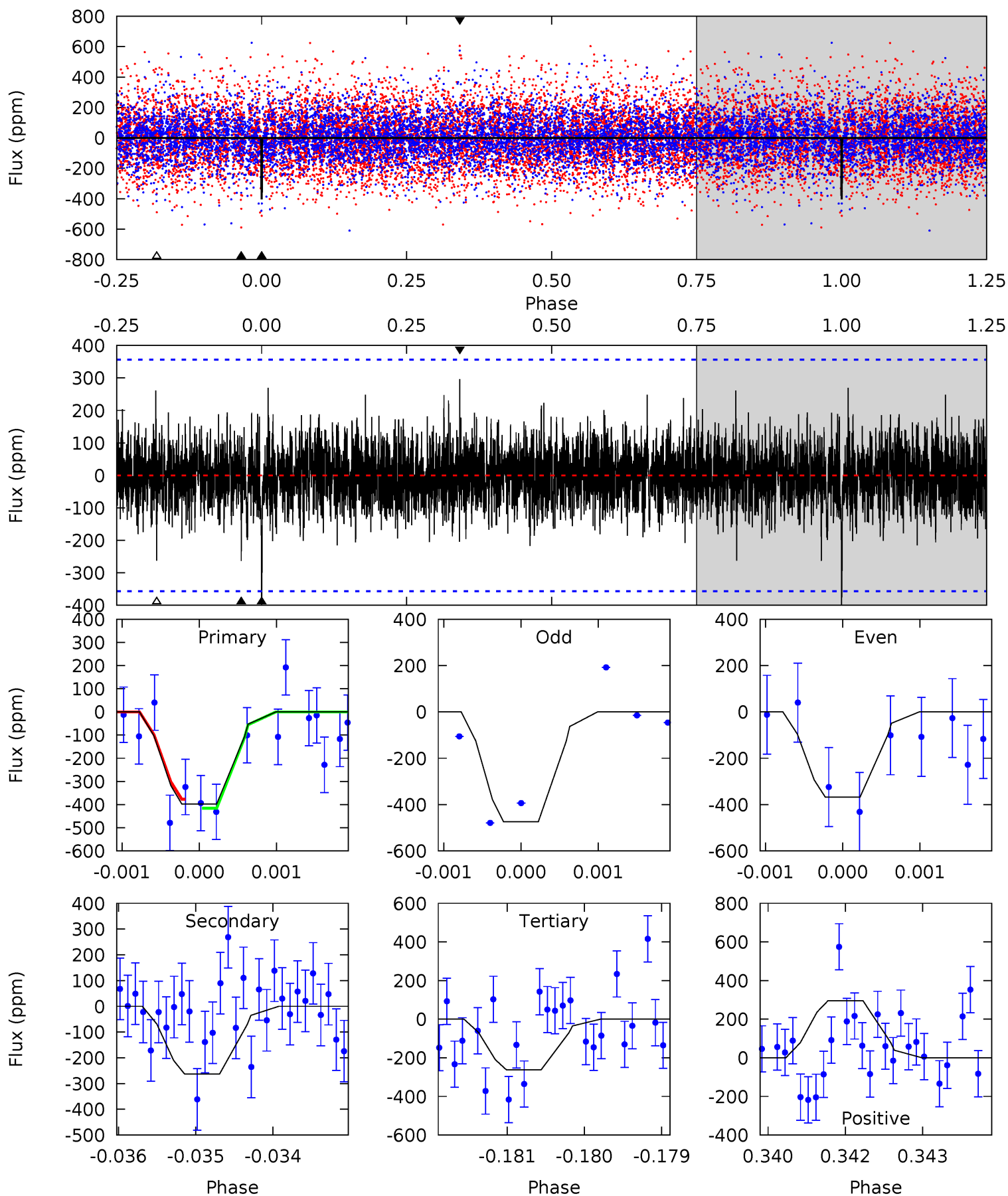
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.11	4.62	4.12	4.52	5.33	3.10	1.15	1.99	1.59	0.50	0.10	1.17	1.14	0.43	0.05



Alt Model-Shift Uniqueness Test

004663148-02, $P = 41.426373$ Days, $E = 129.421881$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.04	4.00	3.98	4.50	5.42	3.24	1.03	2.06	1.54	0.02	-0.50	0.61	1.01	0.43	0.28



Stellar Parameters For KIC 004663148

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7744^{+214}_{-349}	$4.154^{+0.116}_{-0.174}$	$-0.040^{+0.200}_{-0.350}$	$1.781^{+0.498}_{-0.332}$	$1.647^{+0.204}_{-0.249}$	$0.411^{+0.224}_{-0.196}$
	+3%/-5%	+3%/-4%	+500%/-875%	+28%/-19%	+12%/-15%	+55%/-48%
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 004663148-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-266 ± 58	$4.65^{+3.62}_{-2.87}$	1215^{+86}_{-77}	6252^{+5090}_{-1416}	506^{+3024}_{-343}
Alt.	-263 ± 66	$4.47^{+3.22}_{-2.82}$	1214^{+87}_{-75}	6391^{+5695}_{-1484}	556^{+3118}_{-386}

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 $A_{obs} \gg 1.0$

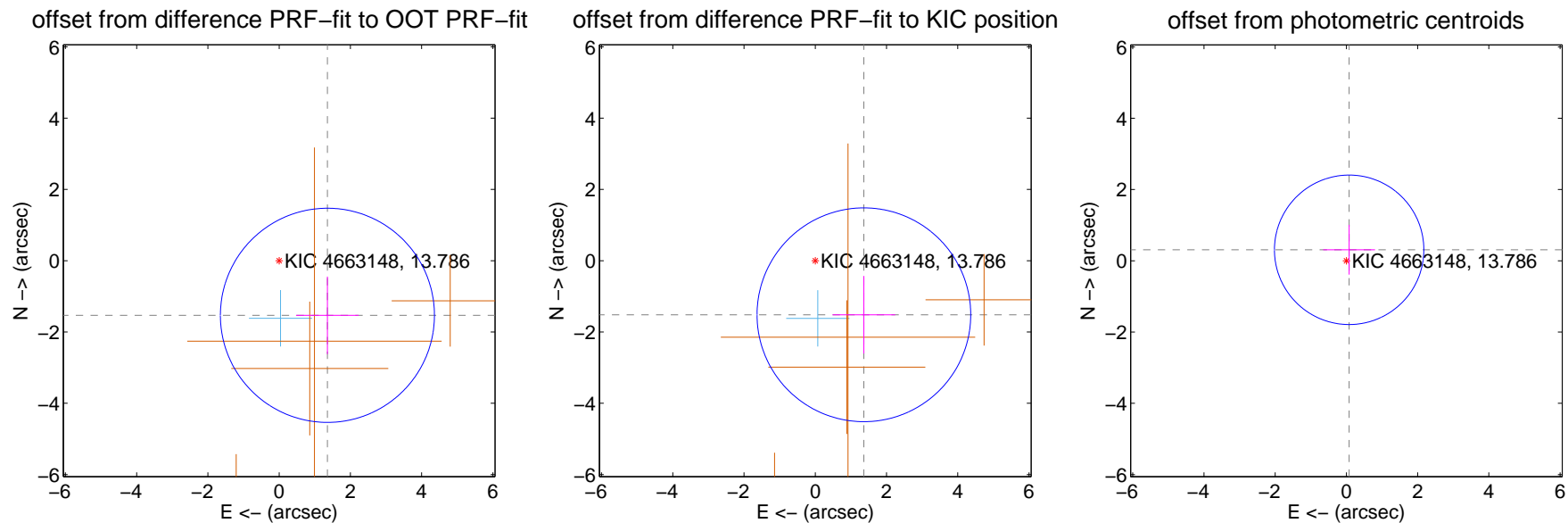
DV Centroid Data

Supplemental centroid analysis for 004663148-02. Kepler magnitude: 13.79. Transit SNR 8.29

There are 1 quarters with good PRF difference image offsets

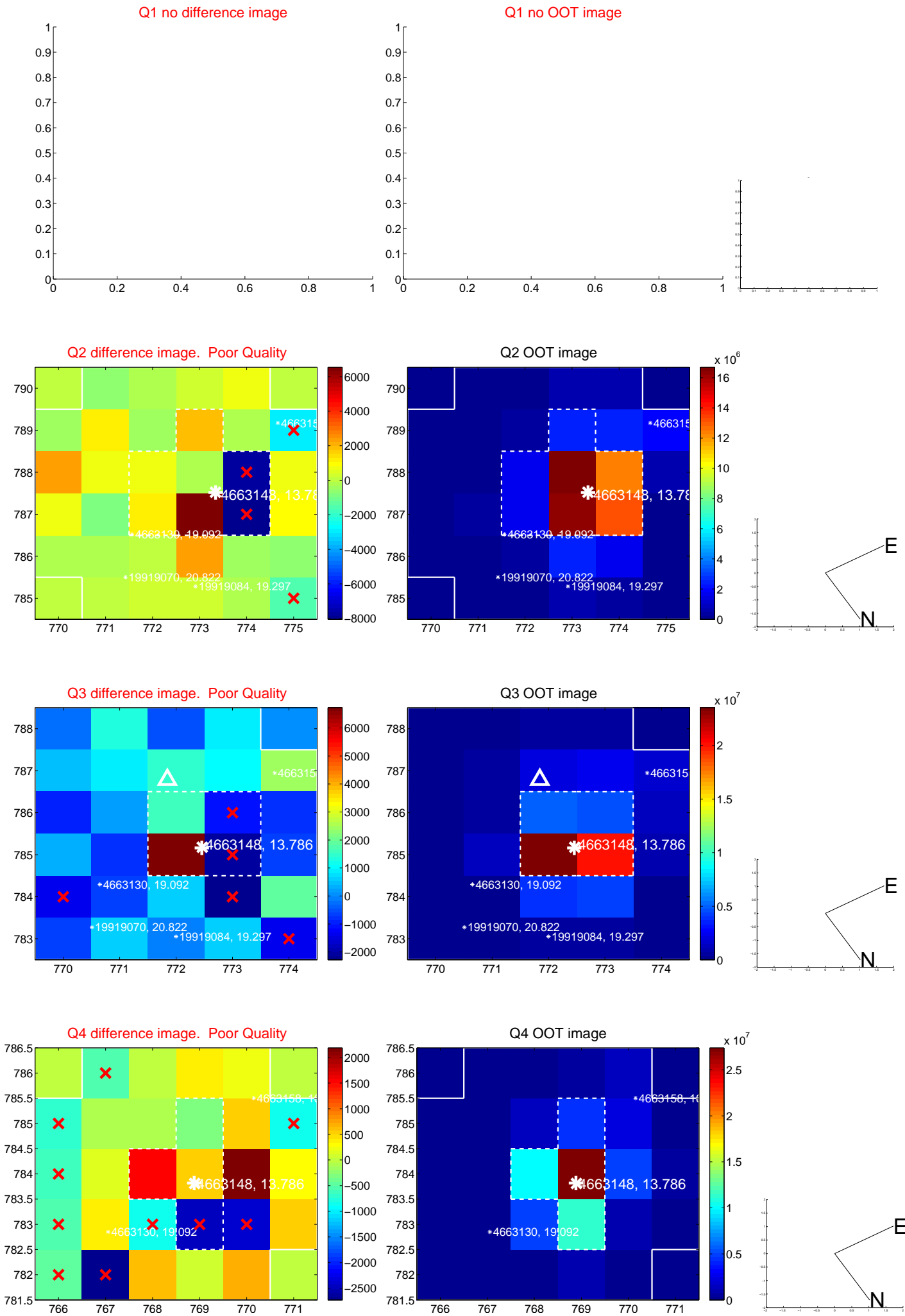
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.045 ± 1.001	2.04	-1.355 ± 0.879	-1.532 ± 1.087
PRF-fit source offset from KIC position	2.041 ± 1.000	2.04	-1.364 ± 0.879	-1.517 ± 1.087
photometric centroid source offset	0.32 ± 0.70	0.45	-0.08 ± 0.73	0.31 ± 0.70

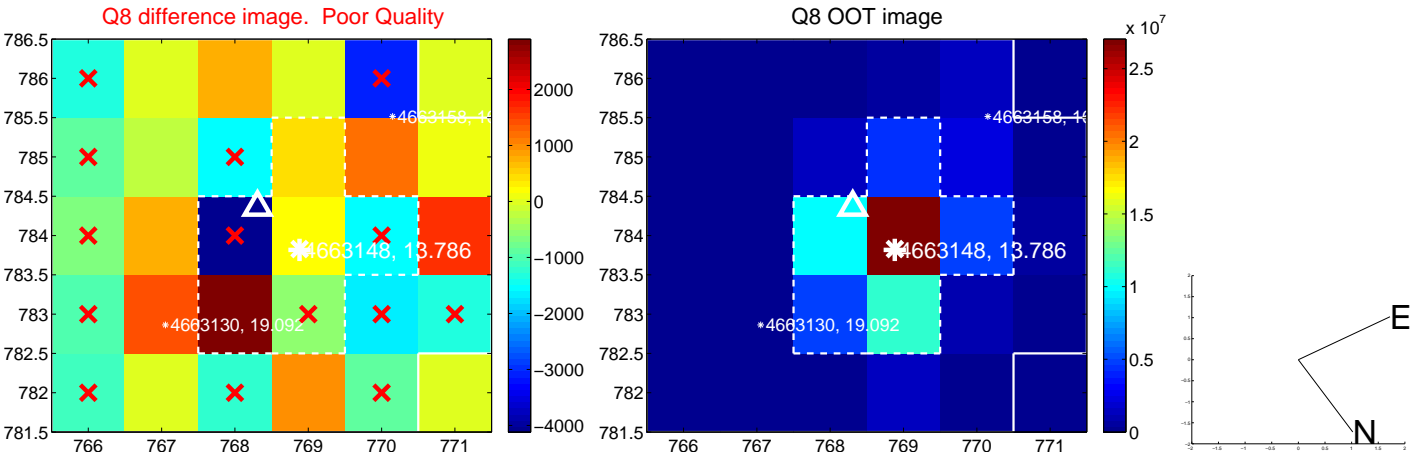
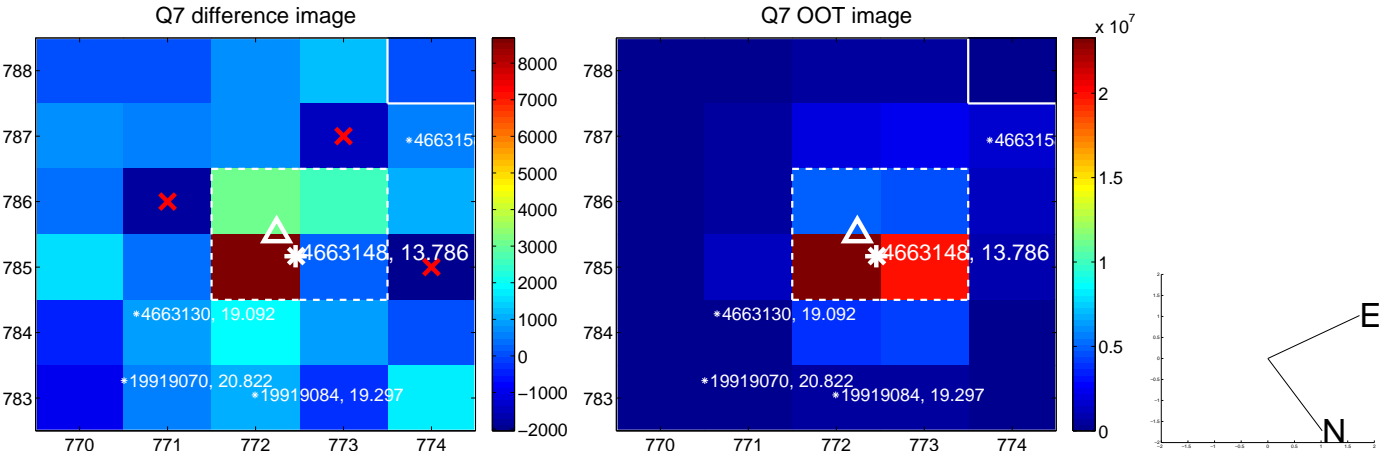
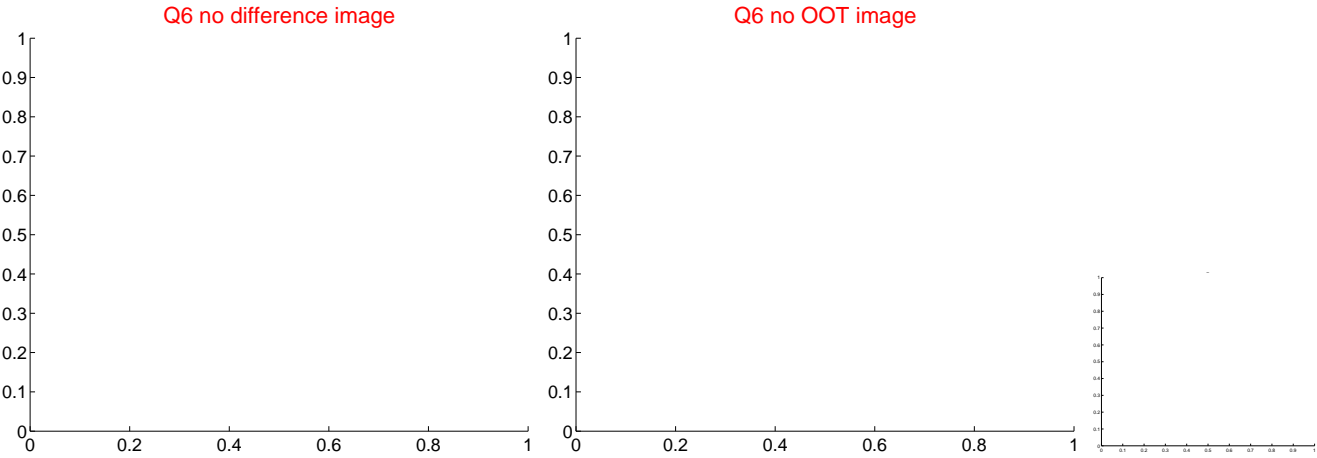
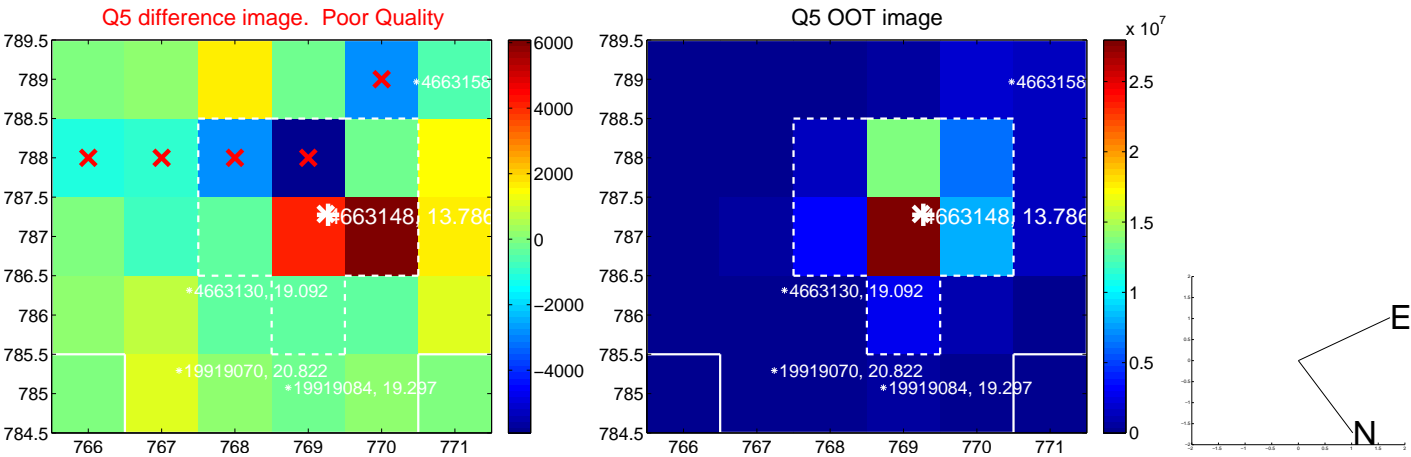


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

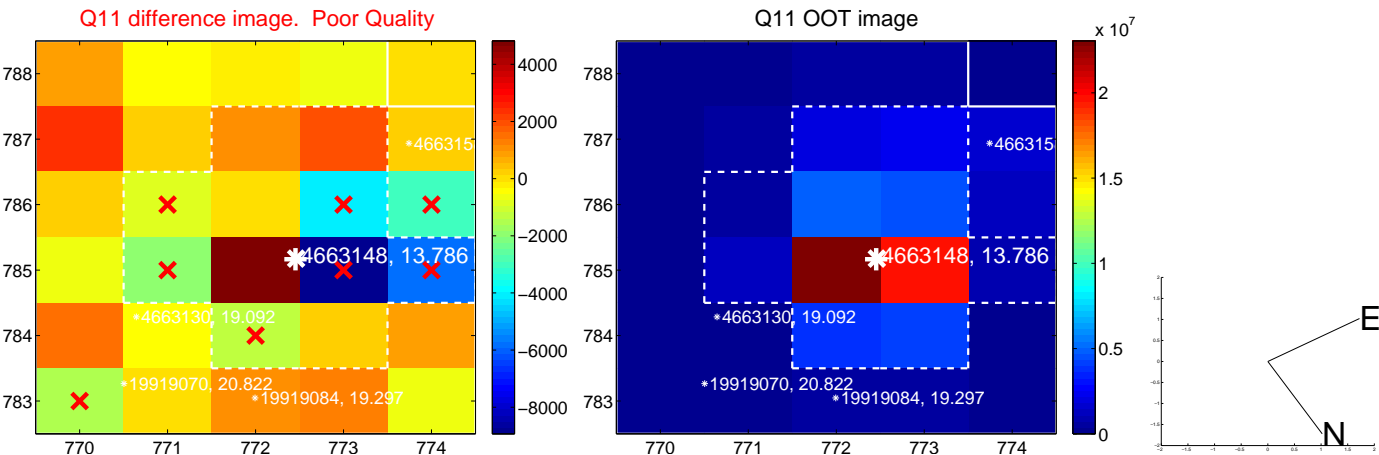
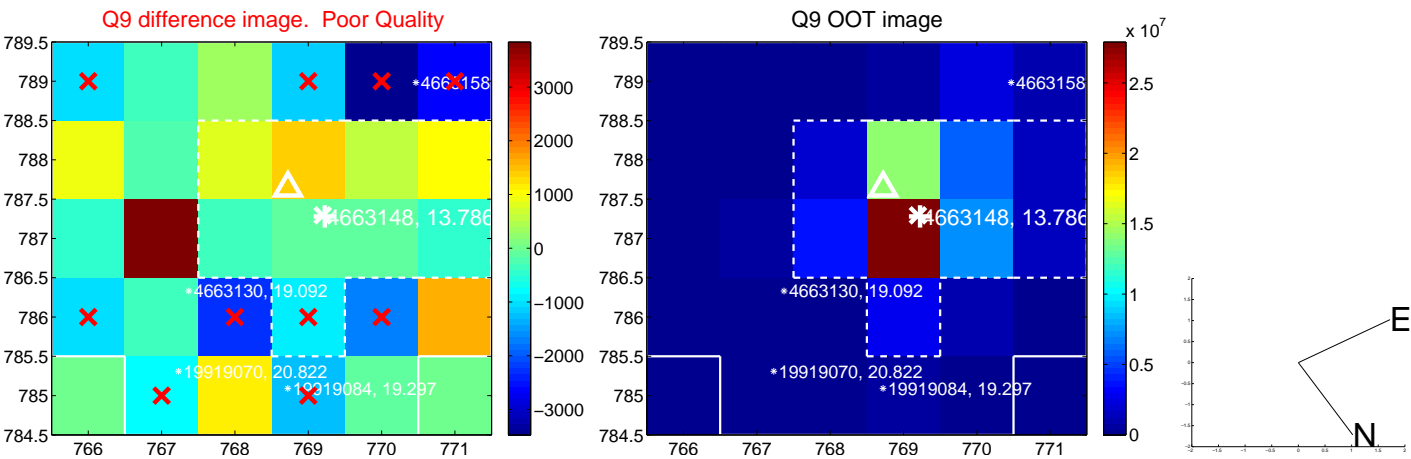
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



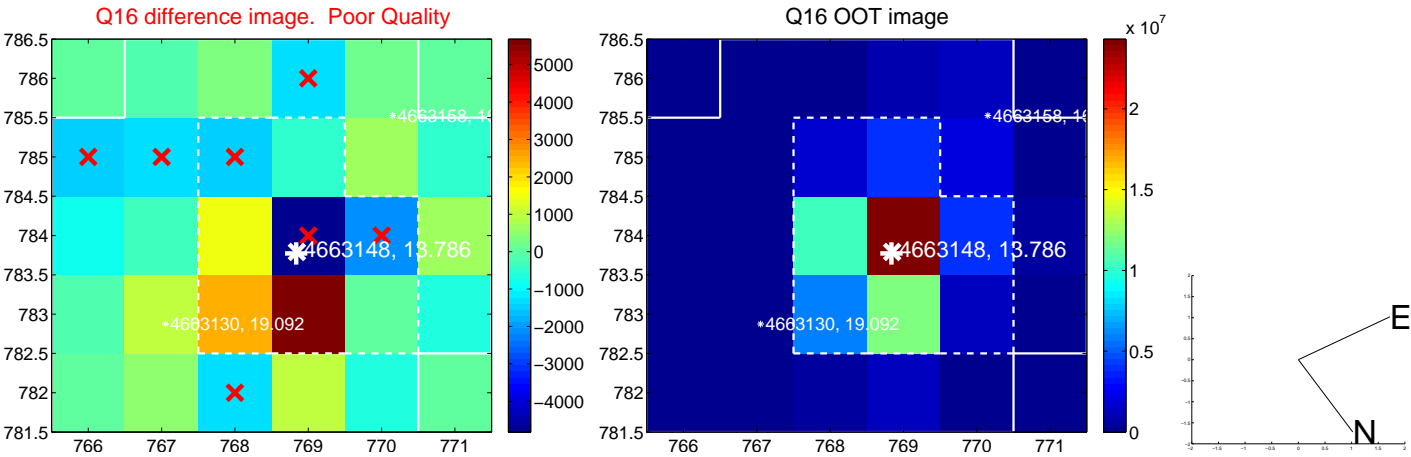
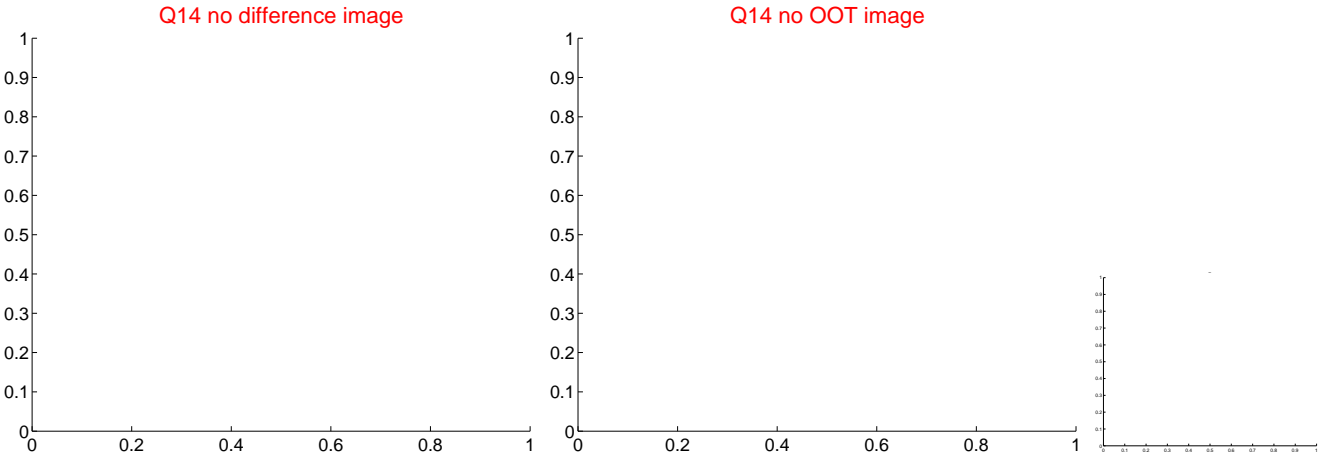
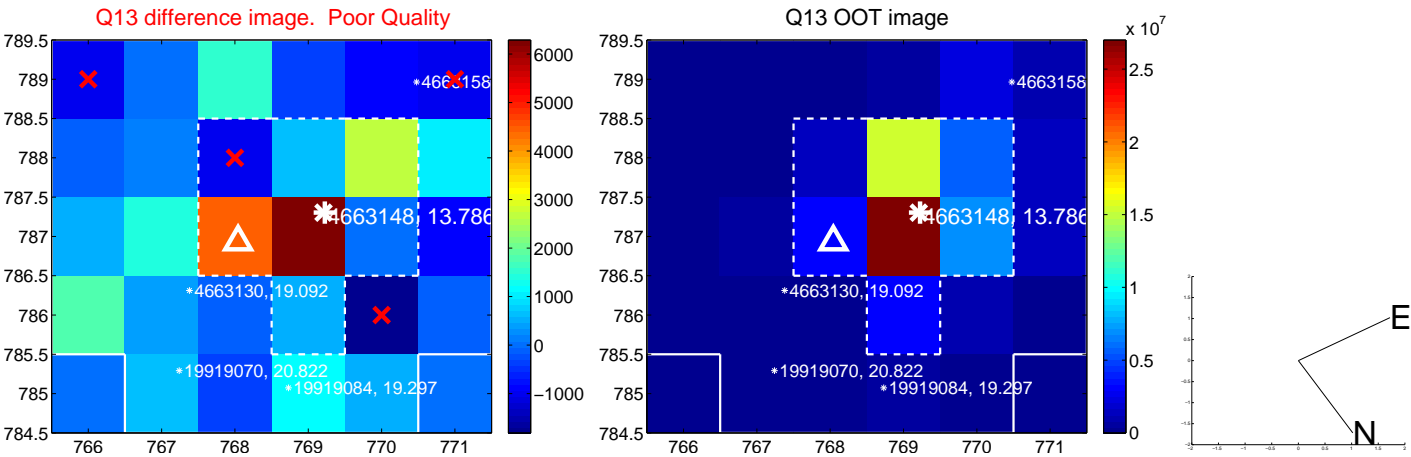
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



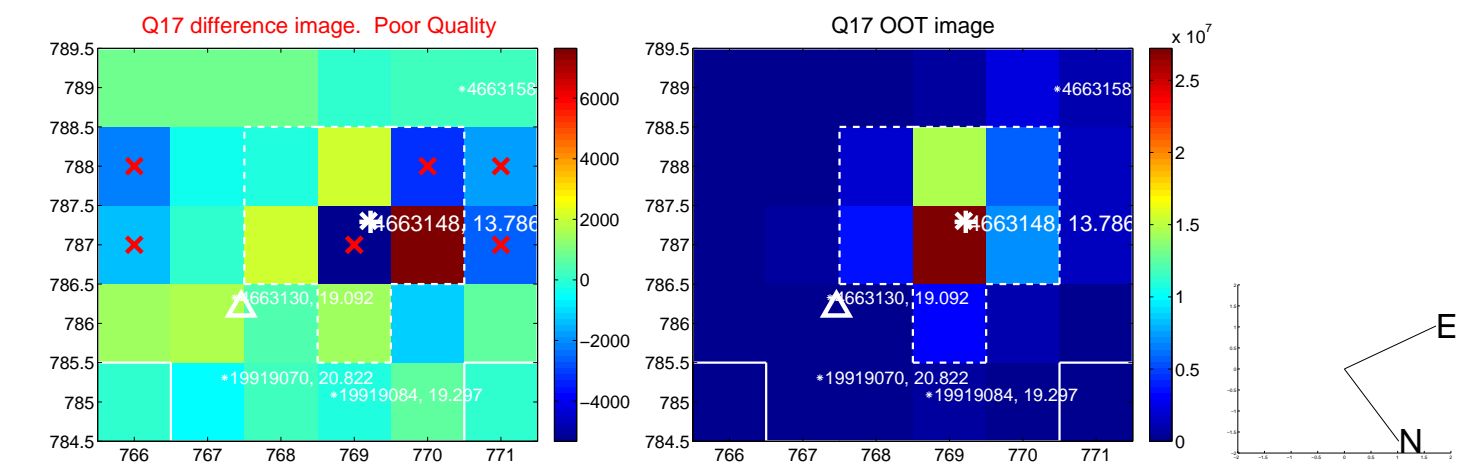
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



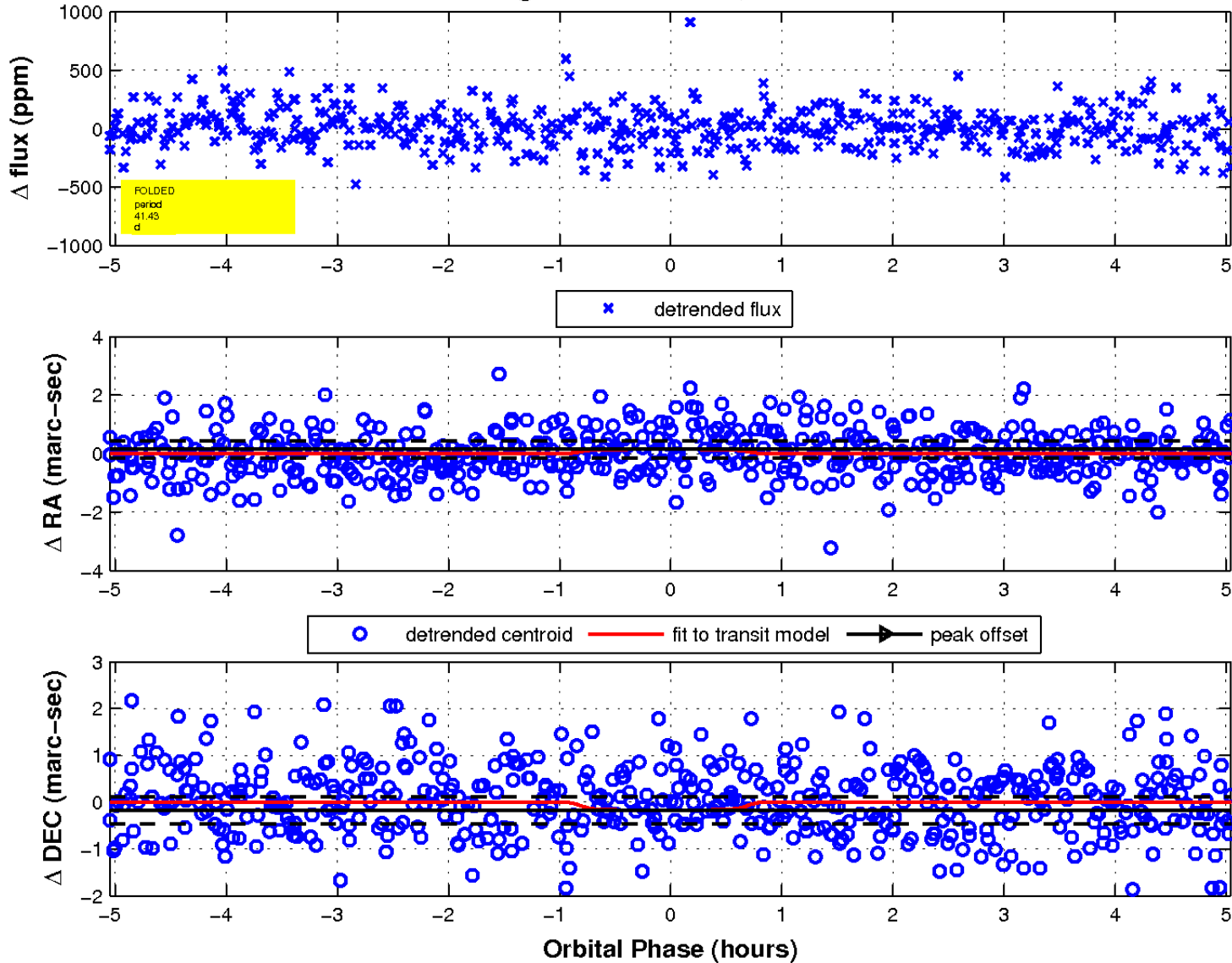
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



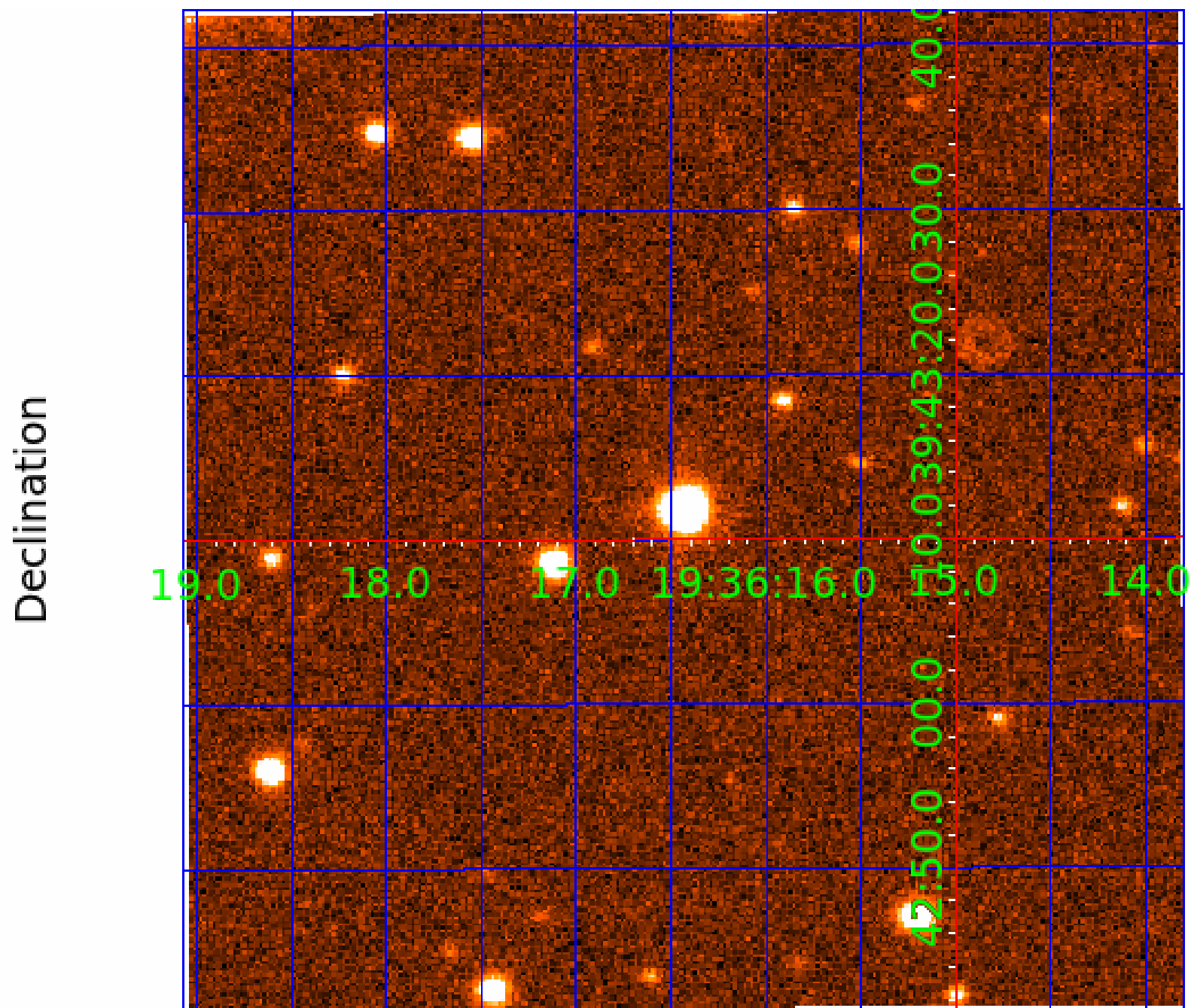
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 2 of 3



UKIRT Image



KIC 004663148

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})
004663148-01	OBS	No	1.148791	131.996568	22.3	6.772	9.9	12.5	1.78	7744	0.86	15880.96
004663148-02	OBS	No	41.425390	170.864427	401.9	1.687	8.8	8.3	1.78	7744	4.11	133.30
004663148-03	OBS	No	92.867318	209.595838	176.7	8.827	7.9	7.8	1.78	7744	2.55	45.43

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004663148-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
004663148-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
004663148-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS

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

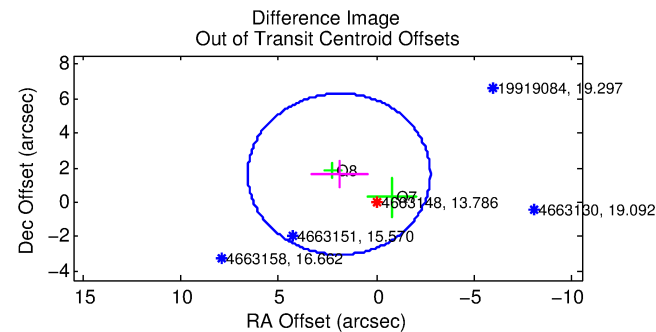
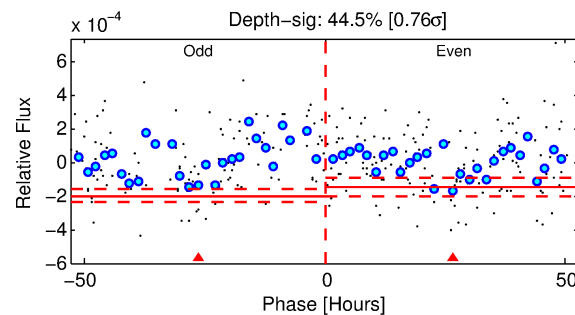
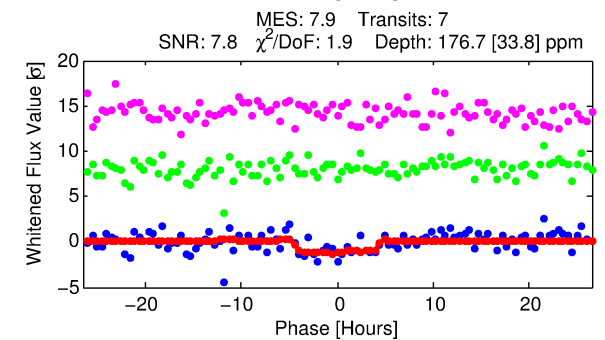
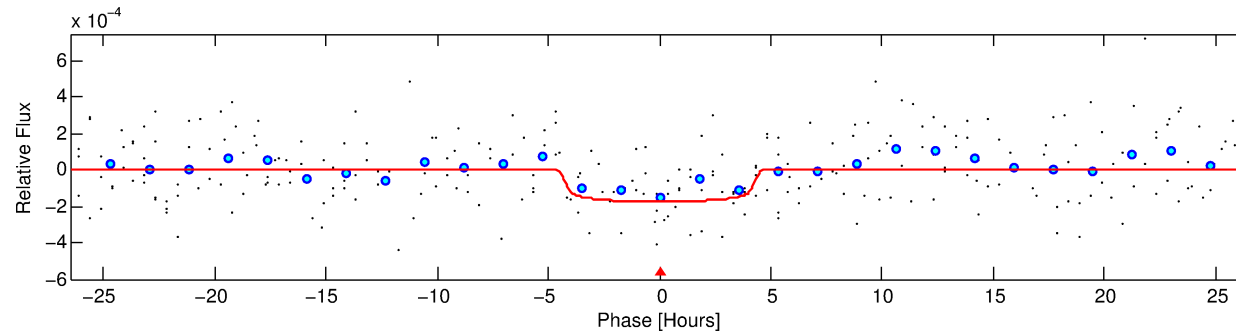
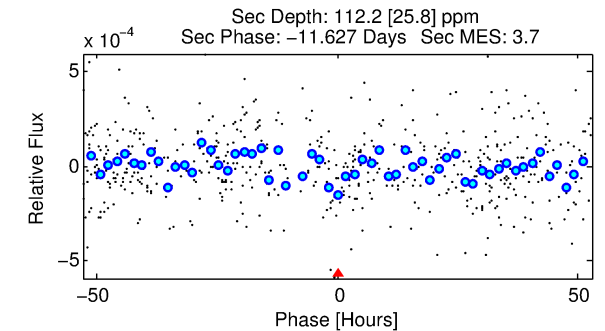
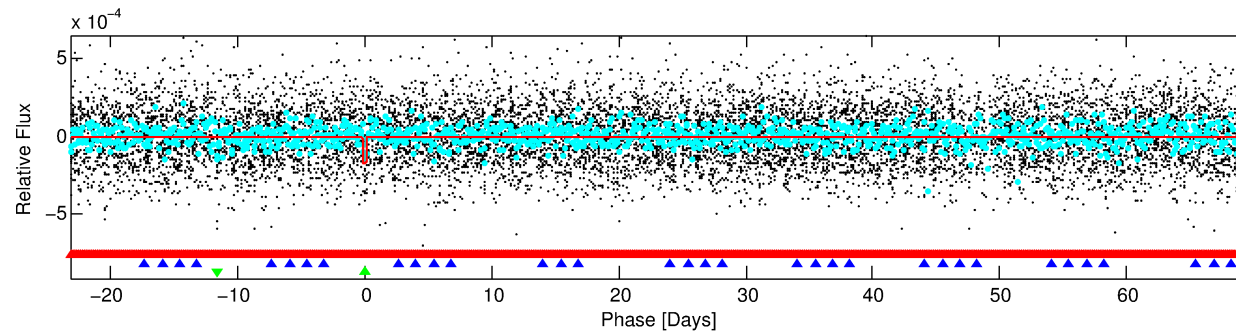
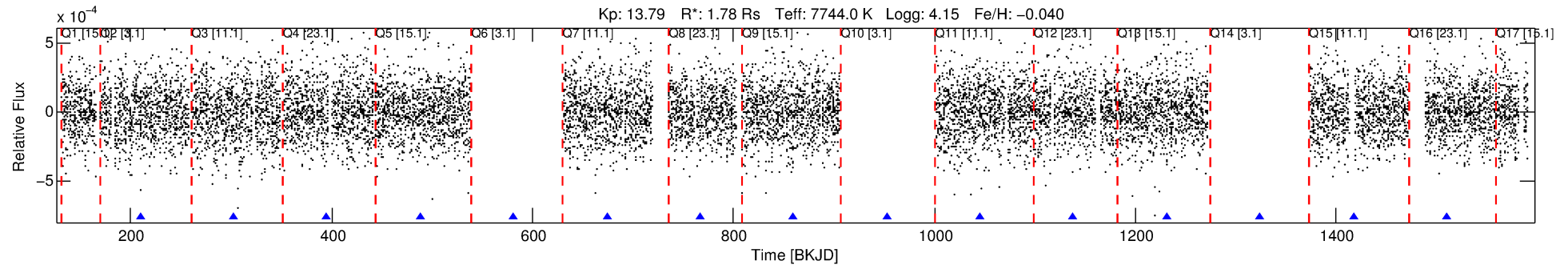
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

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

Ephemeris Match Information For 004663148-03

No Significant Match Found

KIC: 4663148 Candidate: 3 of 3 Period: 92.867 d



DV Fit Results:

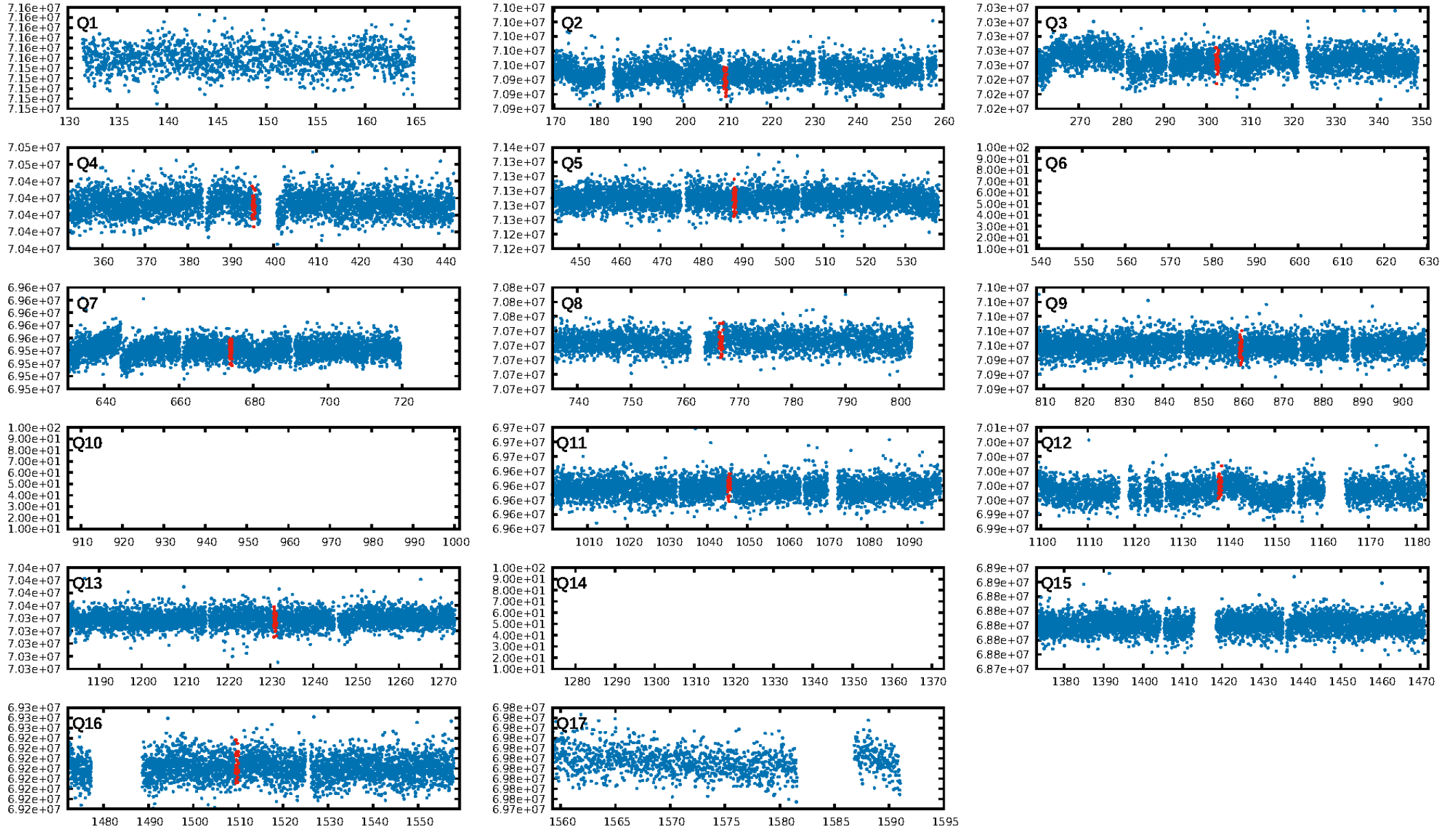
Period = 92.86732 [0.00273] d
 Epoch = 209.5958 [0.0179] BKJD
 Rp/R* = 0.0131 [0.0144]
 a/R* = 57.28 [399.06]
 b = 0.72 [4.69]
 Seff = 45.43 [16.91]
 Teq = 662 [62] K
 Rp = 2.55 [2.89] Re
 a = 0.4743 [0.1088] AU
 Ag = 2135.36 [4766.01] [0.45σ]
 Tefp = 6958 [3854] K [1.63σ]

DV Diagnostic Results:

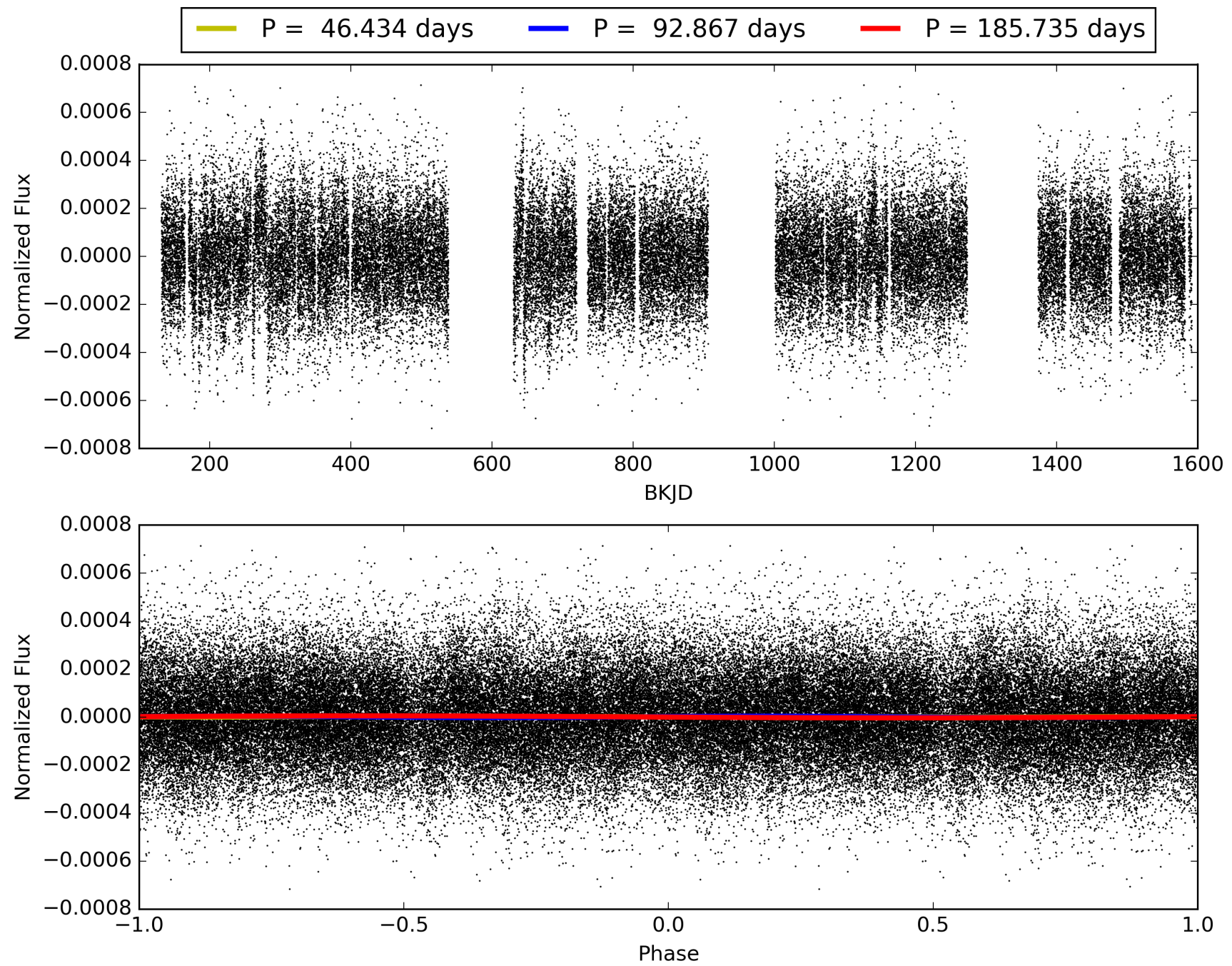
ShortPeriod-sig: 100.0% [137.38σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 60.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.95e-13
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: -3.949

Centroid-sig: 98.3%
Centroid-so: 0.304 arcsec [0.29σ]
OotOffset-rm: 2.500 arcsec [1.61σ]
KicOffset-rm: 2.502 arcsec [2.64σ]
OotOffset-st: 0/1/1/0 [2]
KicOffset-st: 0/1/1/0 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 0.00 [0/9]

TCE 004663148-03, PDC Light Curves

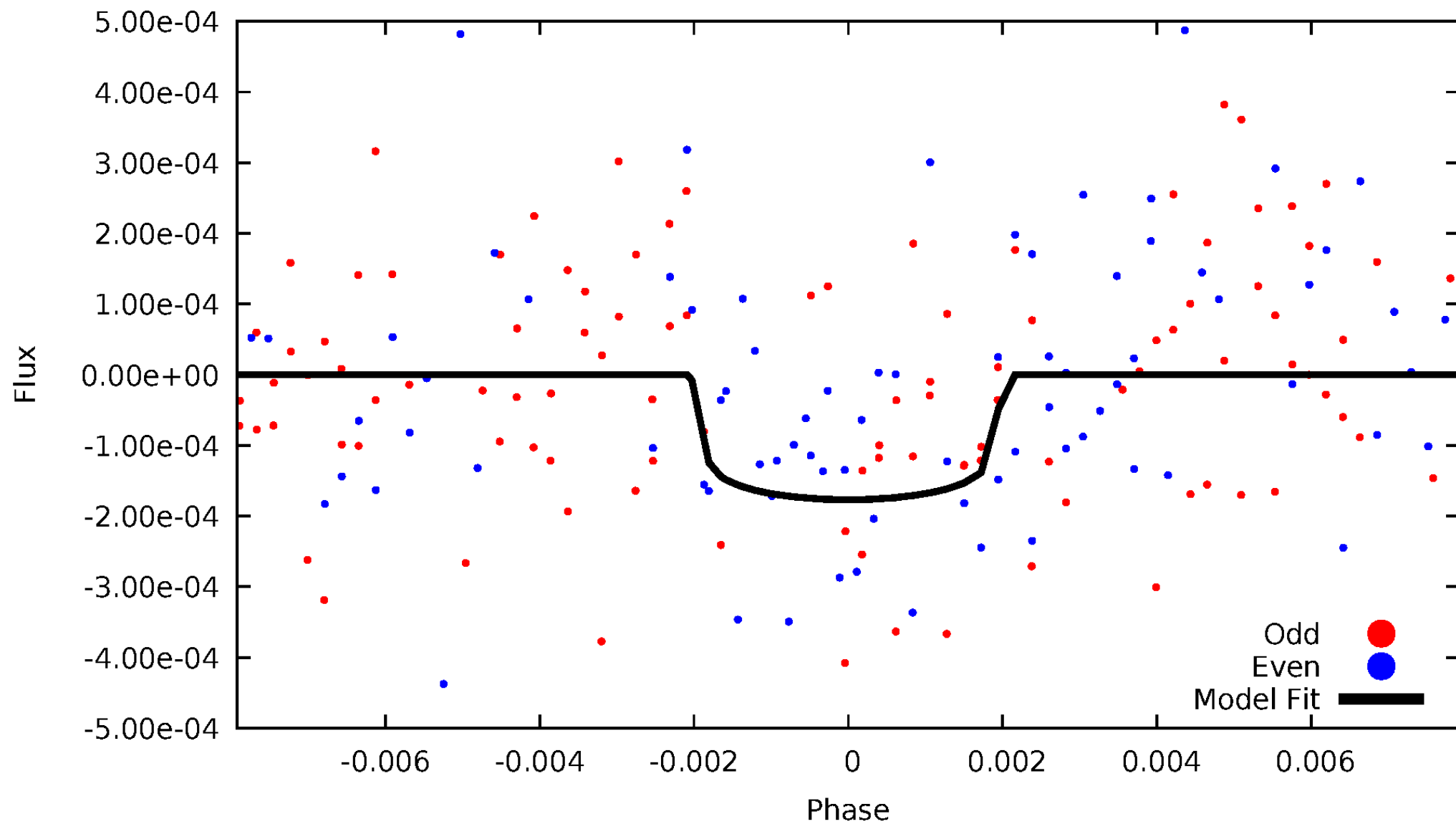


TCE 004663148-03



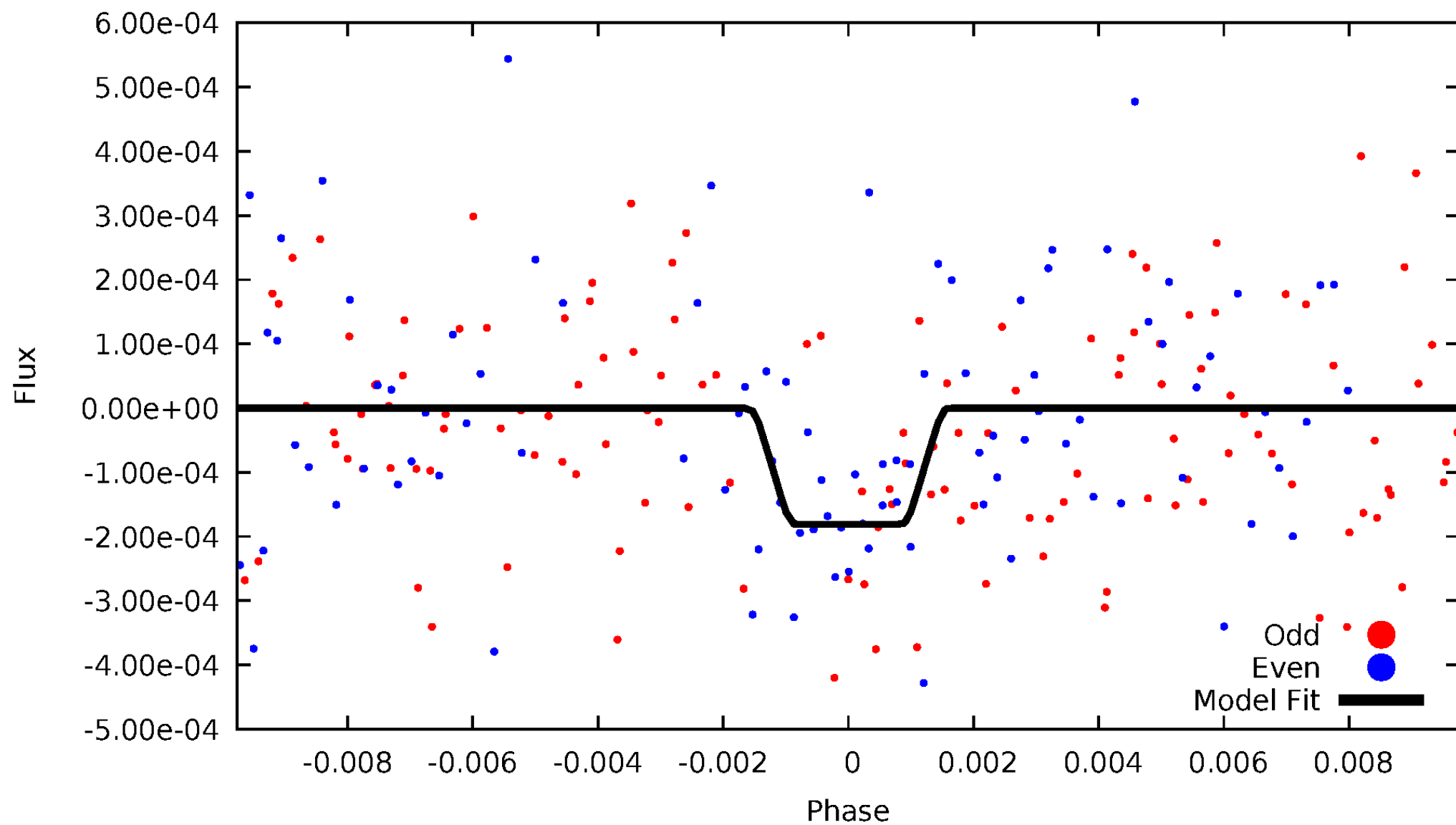
DV Odd/Even

TCE 004663148-03

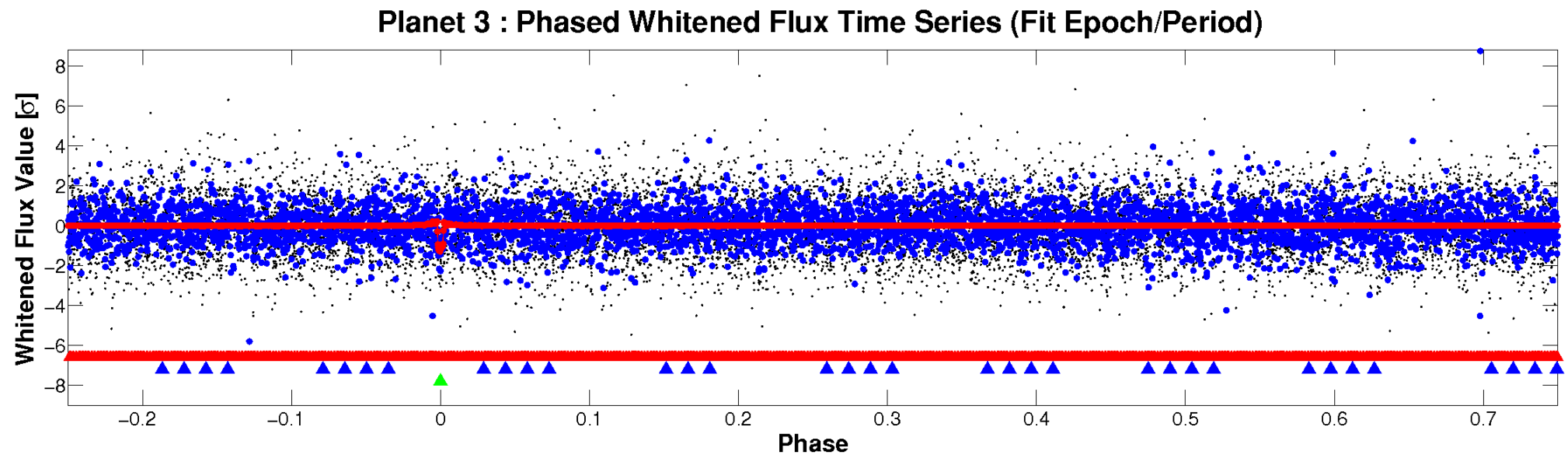
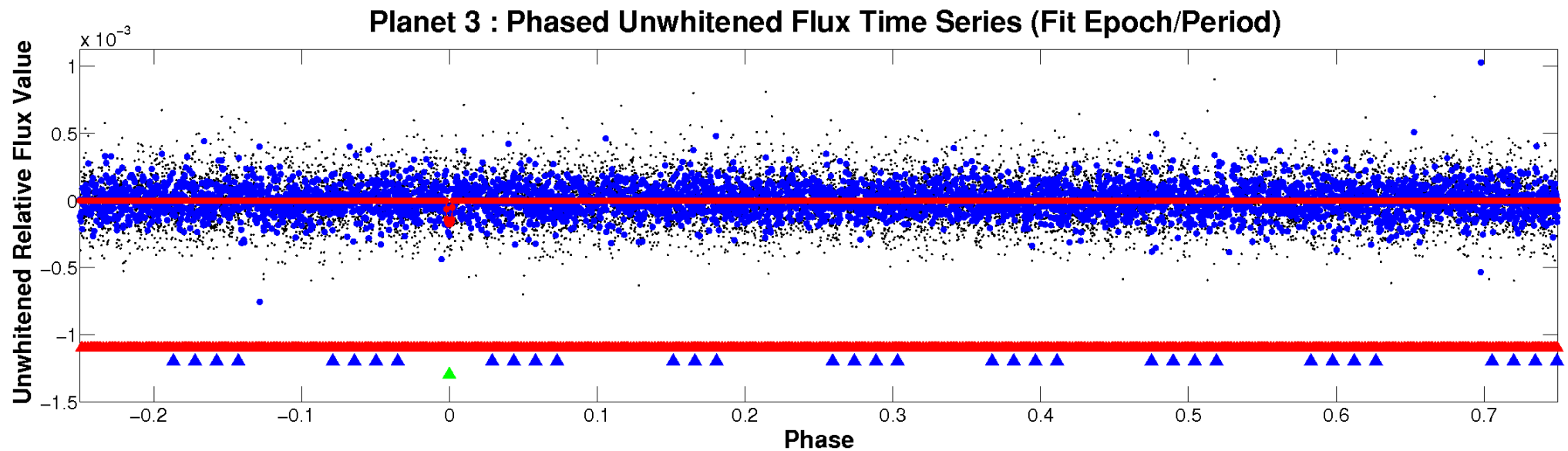


ALT Odd/Even

TCE 004663148-03

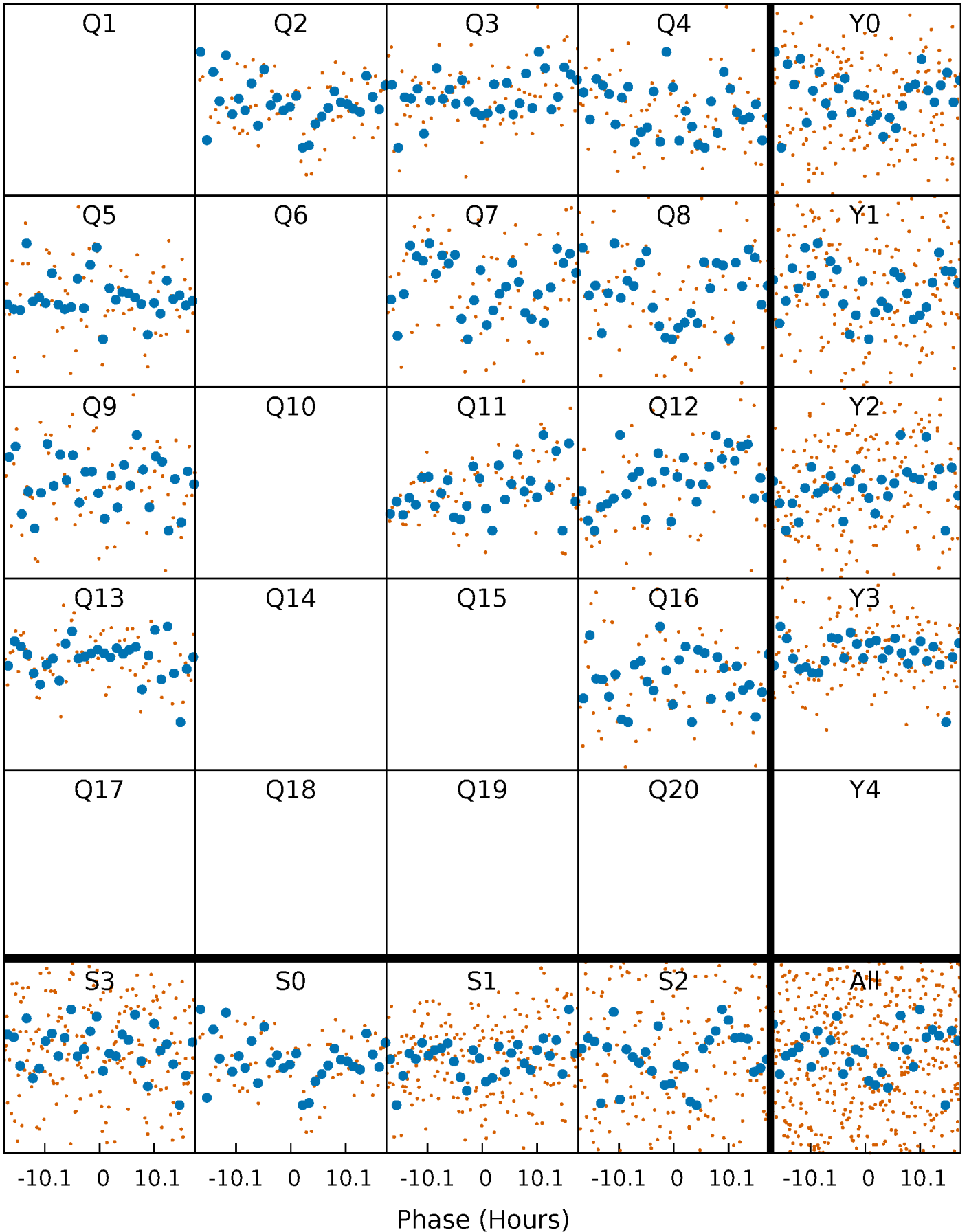


Non-Whitened Vs. Whitened Light Curve



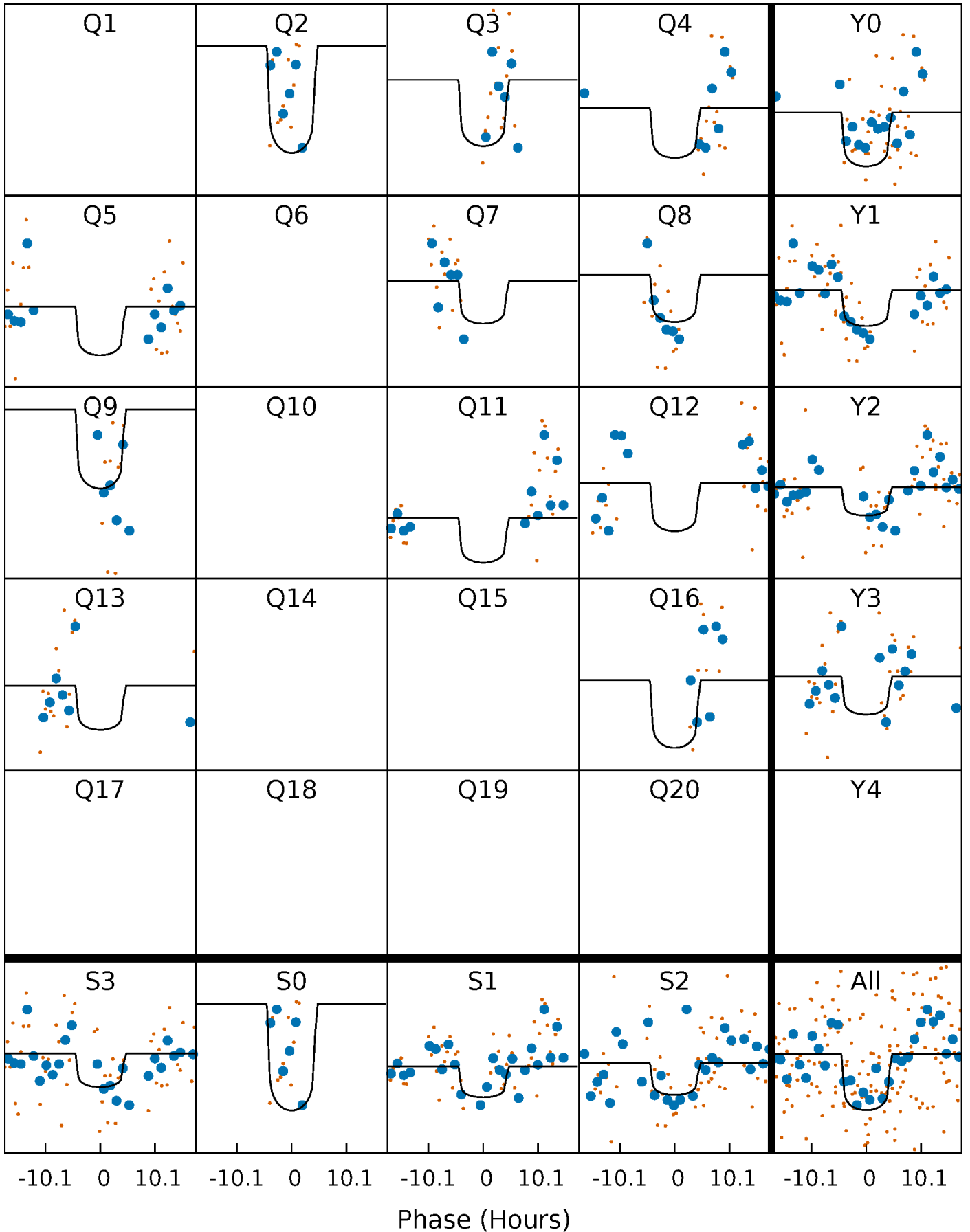
PDC Quarter-Phased Transit Curves

TCE 004663148-03 P= 92.867318 Days $T_0=209.595838$ (BKJD)



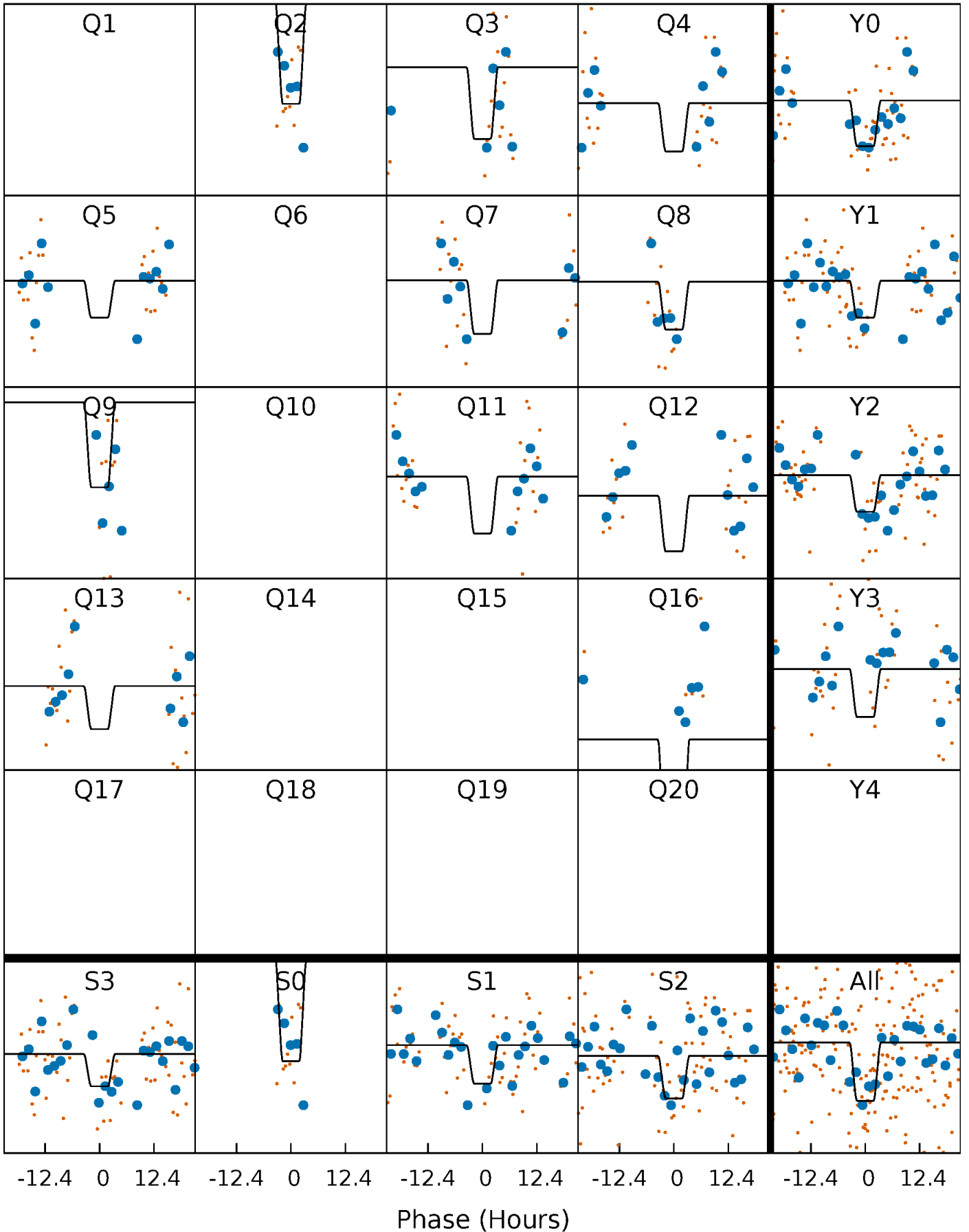
DV Quarter-Phased Transit Curves

TCE 004663148-03 $P = 92.867318$ Days $T_0 = 209.595838$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

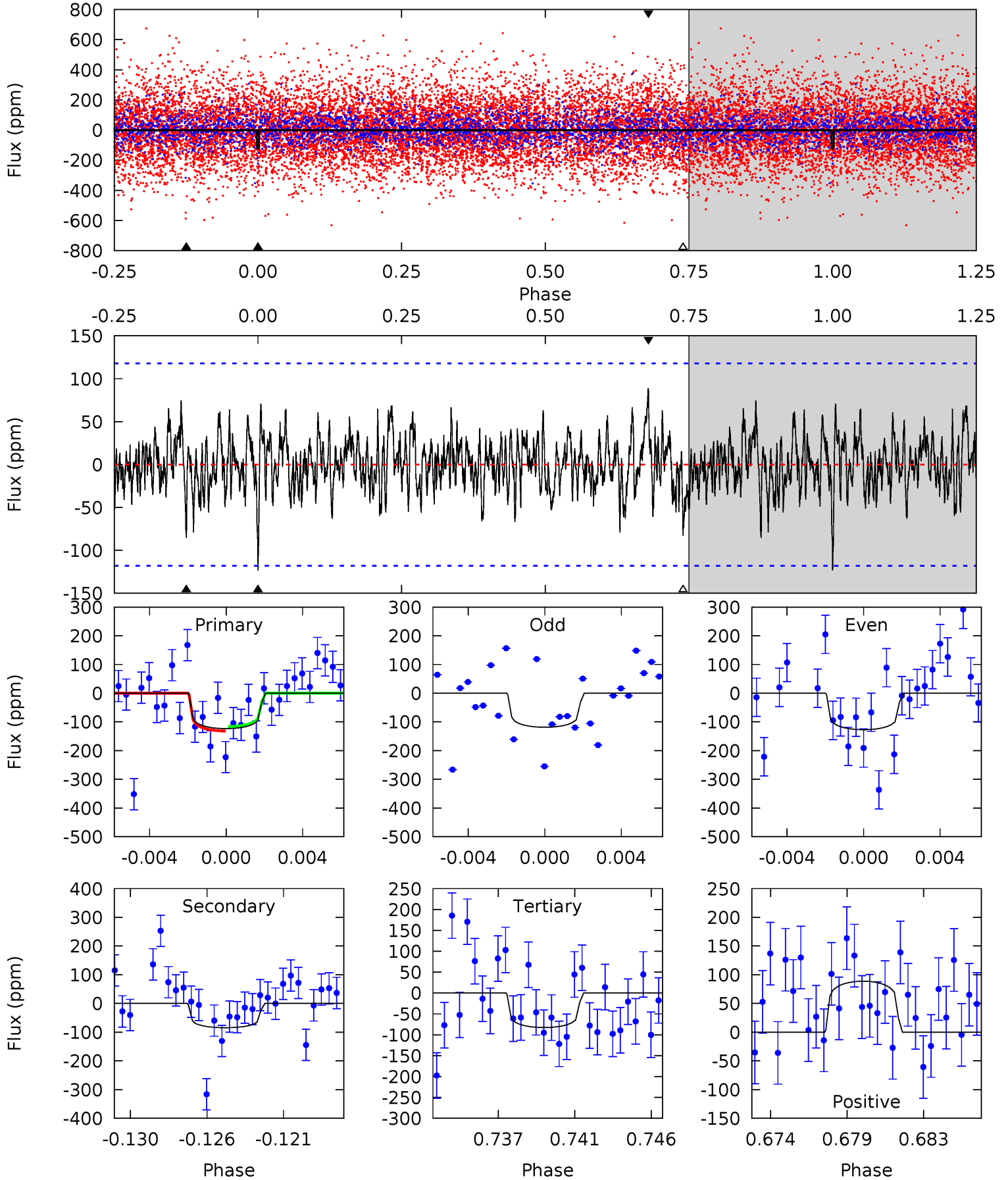
TCE 004663148-03 P= 92.874616 Days $T_0=209.561191$ (BKJD)



DV Model-Shift Uniqueness Test

004663148-03, P = 92.867318 Days, E = 116.728520 Days

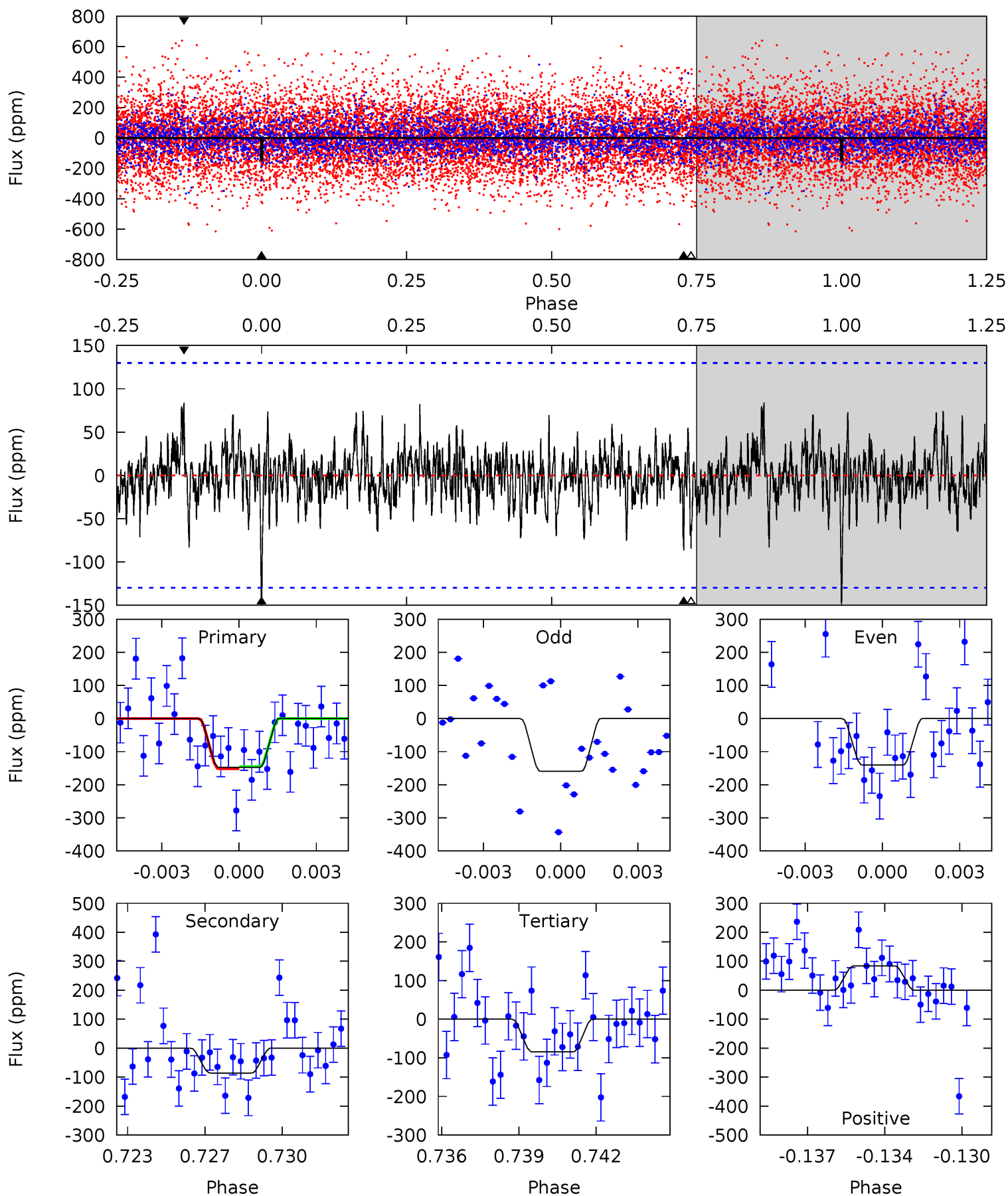
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.44	3.72	3.64	3.91	5.19	2.86	1.18	1.80	1.53	0.08	-0.19	0.19	1.09	0.42	0.34



Alt Model-Shift Uniqueness Test

004663148-03, P = 92.874616 Days, E = 116.686575 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.97	3.47	3.42	3.39	5.25	2.96	1.02	2.55	2.58	0.05	0.08	0.37	0.84	0.36	0.12



Stellar Parameters For KIC 004663148

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7744^{+214}_{-349}	$4.154^{+0.116}_{-0.174}$	$-0.040^{+0.200}_{-0.350}$	$1.781^{+0.498}_{-0.332}$	$1.647^{+0.204}_{-0.249}$	$0.411^{+0.224}_{-0.196}$
	+3%/-5%	+3%/-4%	+500%/-875%	+28%/-19%	+12%/-15%	+55%/-48%
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 004663148-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-84 ± 23	$3.18^{+2.86}_{-2.07}$	929^{+62}_{-63}	5698^{+5150}_{-1360}	960^{+8288}_{-687}
Alt.	-86 ± 25	$3.23^{+2.71}_{-2.06}$	929^{+63}_{-61}	5615^{+4393}_{-1277}	1003^{+6329}_{-729}

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

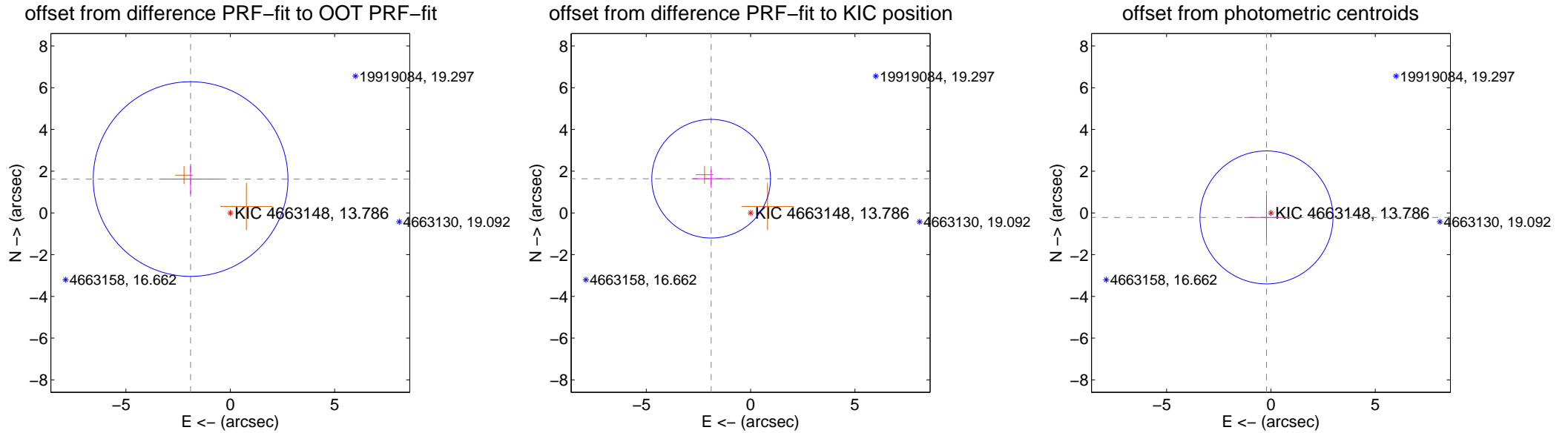
DV Centroid Data

Supplemental centroid analysis for 004663148-03. Kepler magnitude: 13.79. Transit SNR 7.81

There are 0 quarters with good PRF difference image offsets

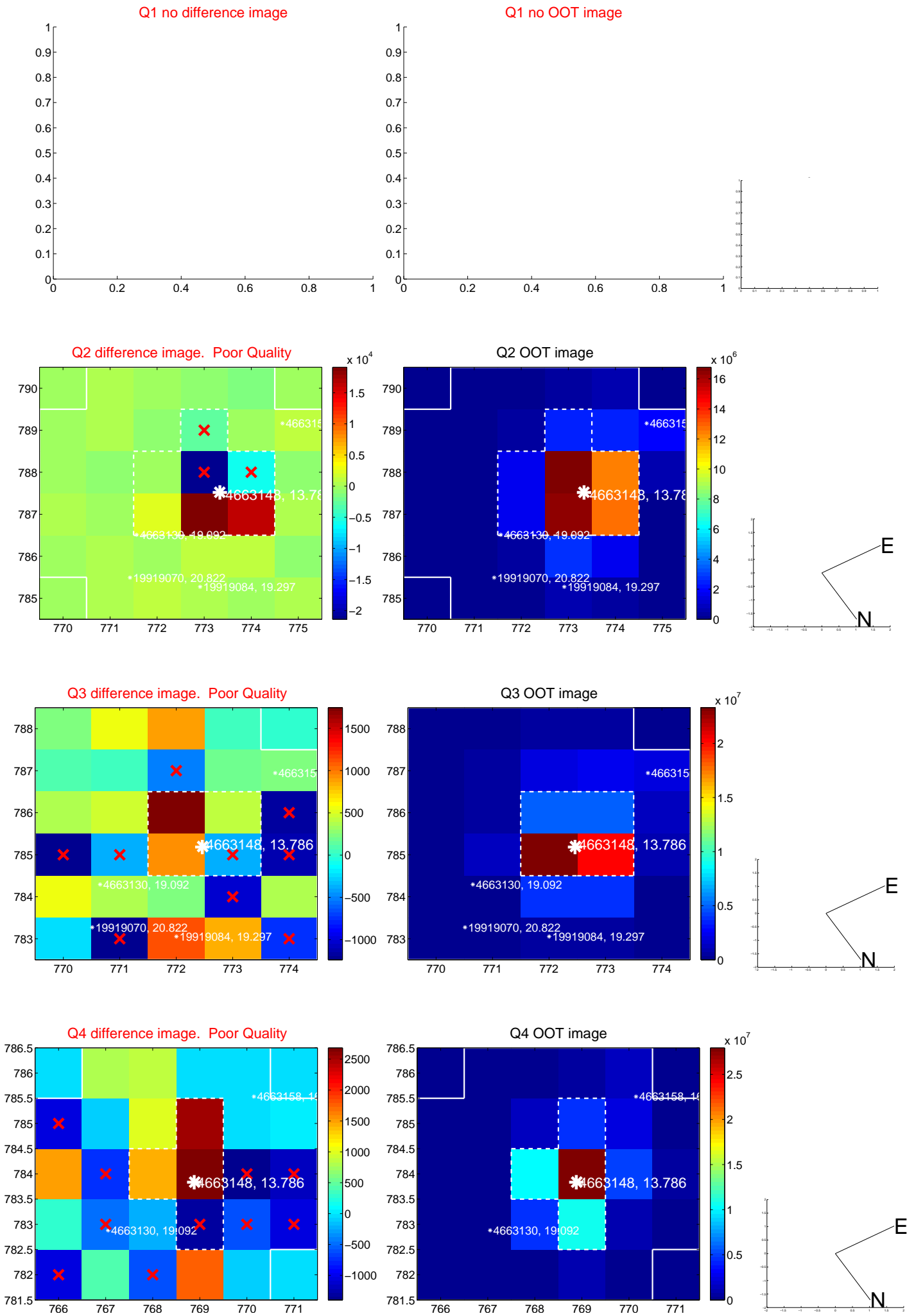
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.500 ± 1.555	1.61	1.902 ± 1.431	1.623 ± 0.721
PRF-fit source offset from KIC position	2.502 ± 0.948	2.64	1.890 ± 0.874	1.639 ± 0.443
photometric centroid source offset	0.30 ± 1.06	0.29	0.21 ± 1.06	-0.22 ± 1.06

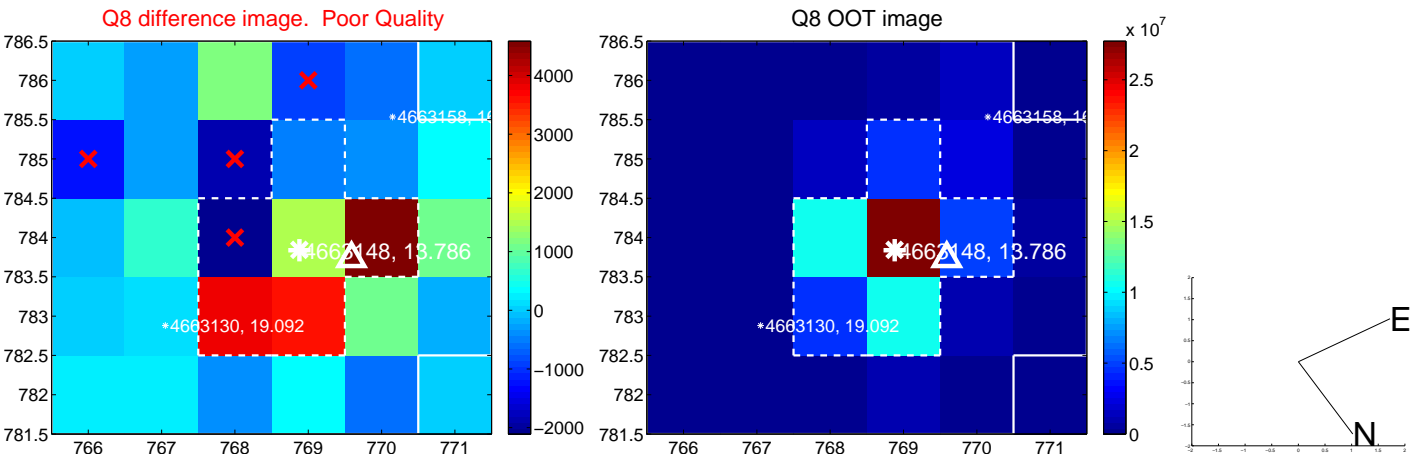
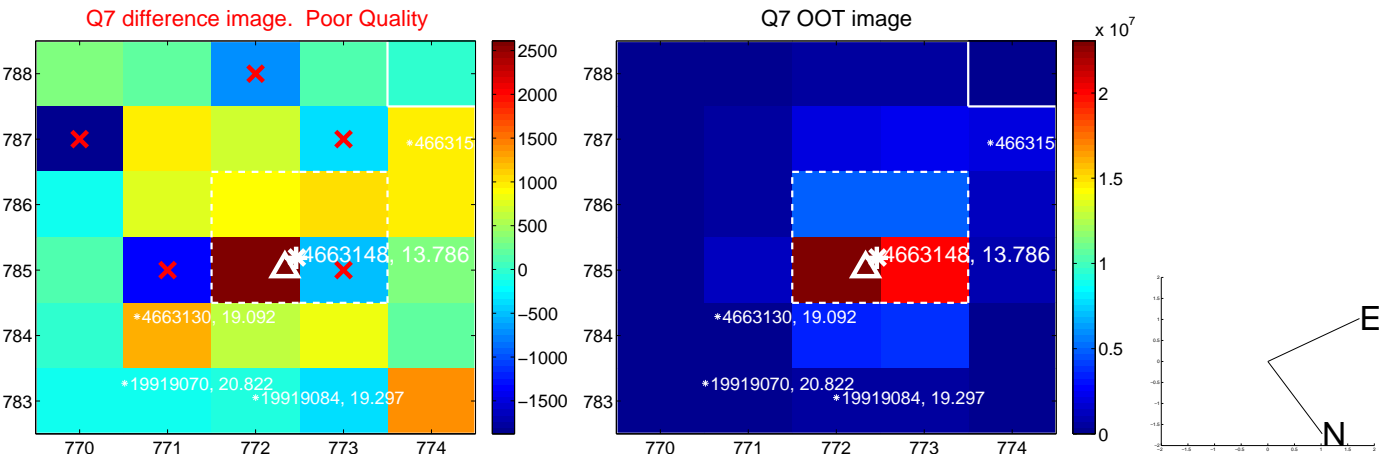
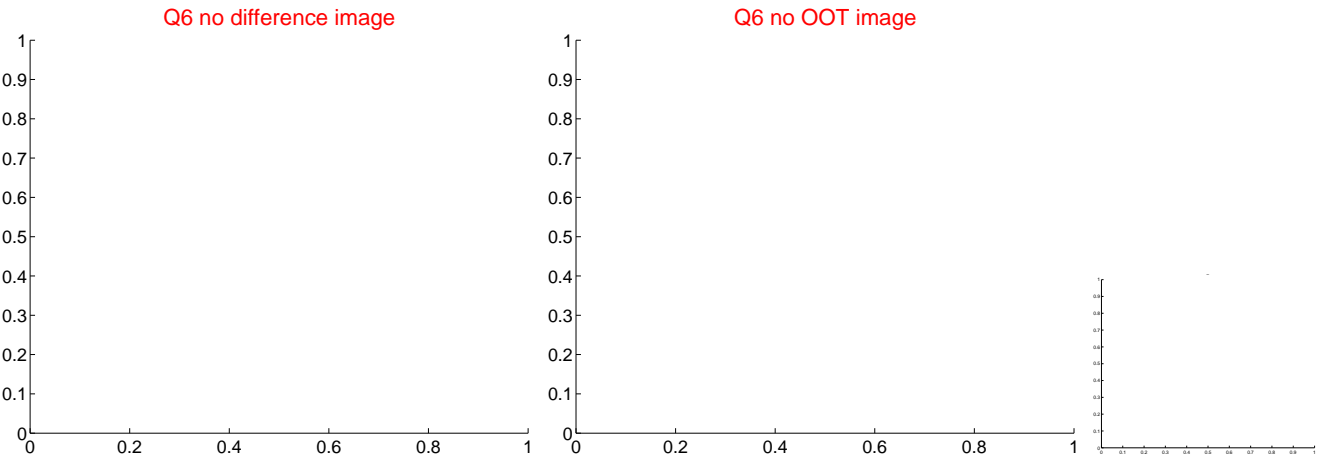
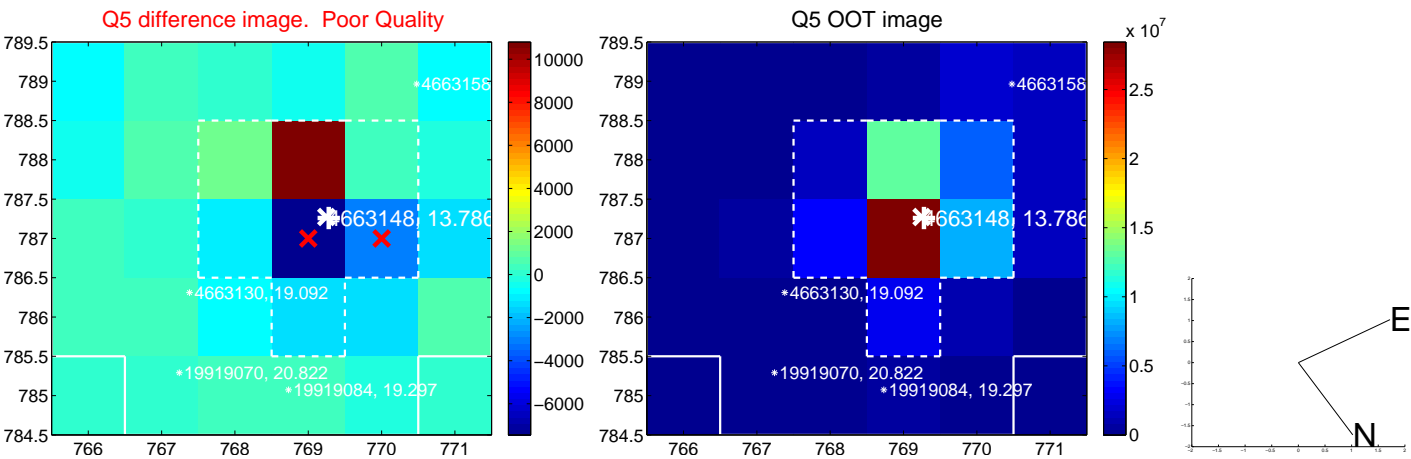


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

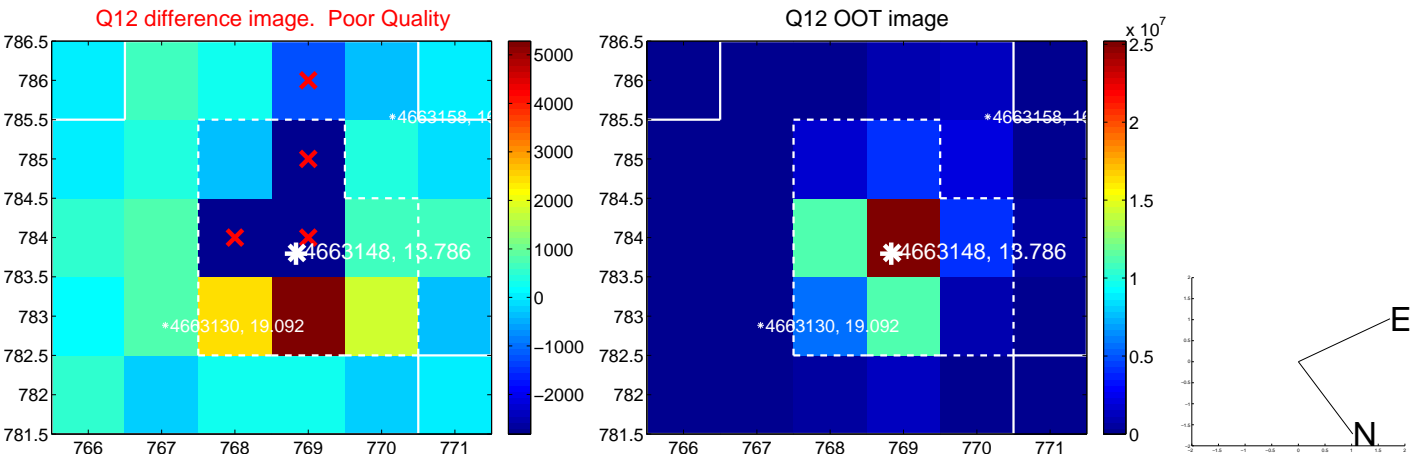
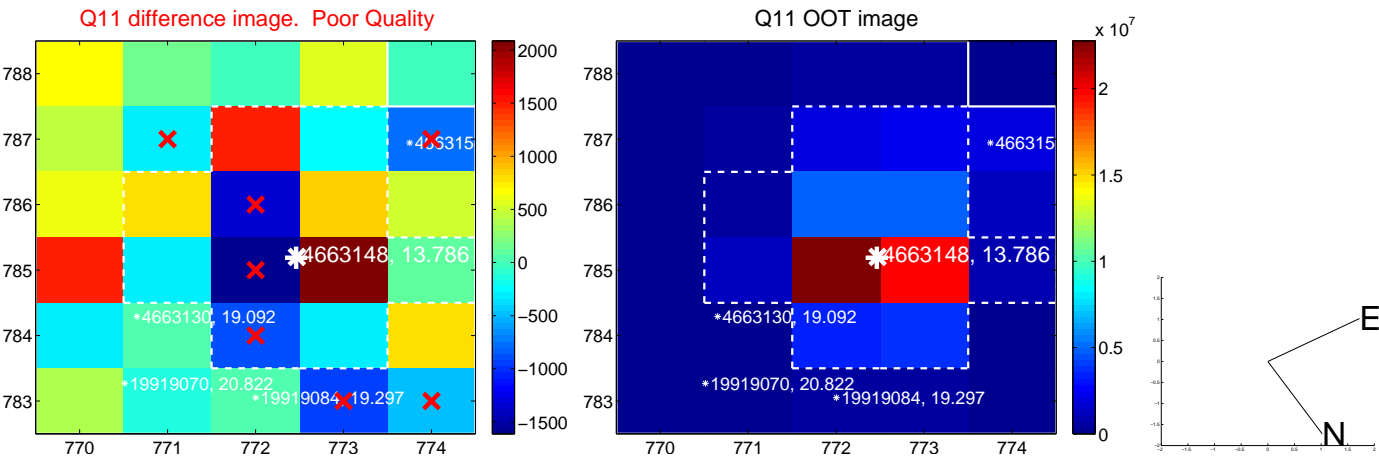
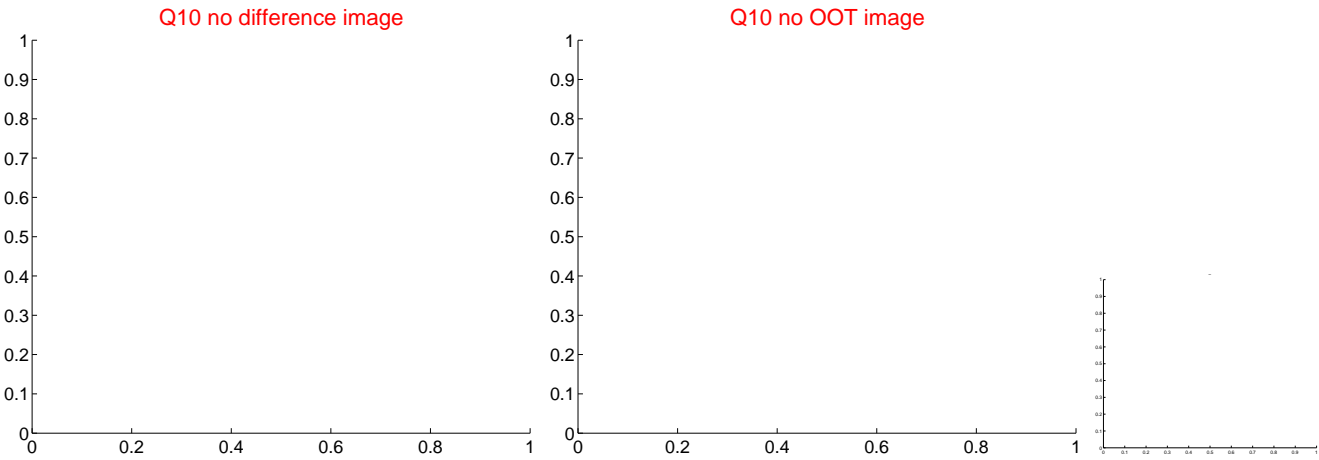
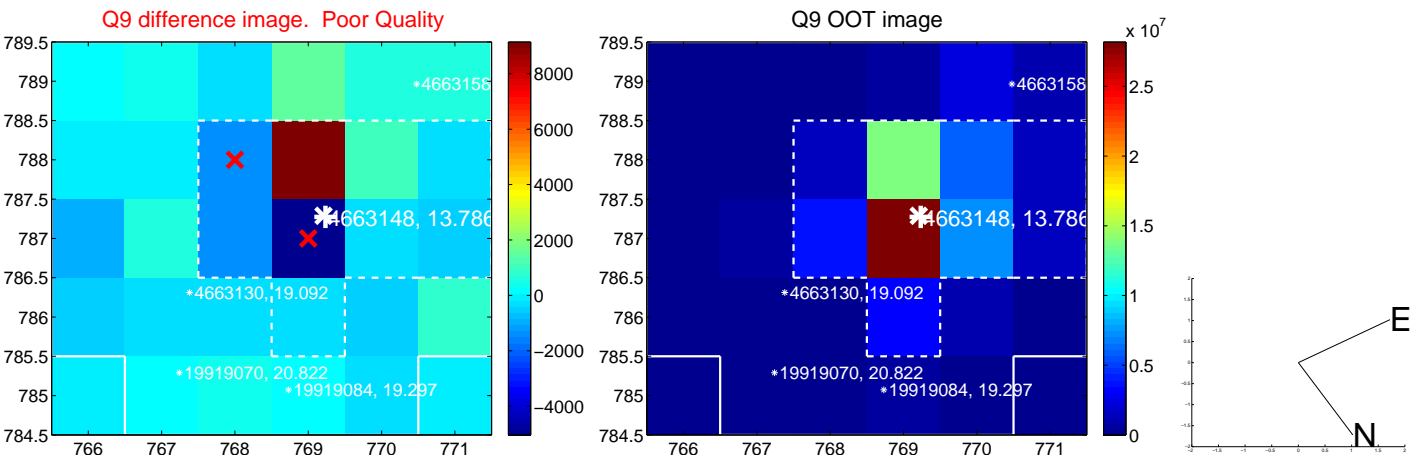
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



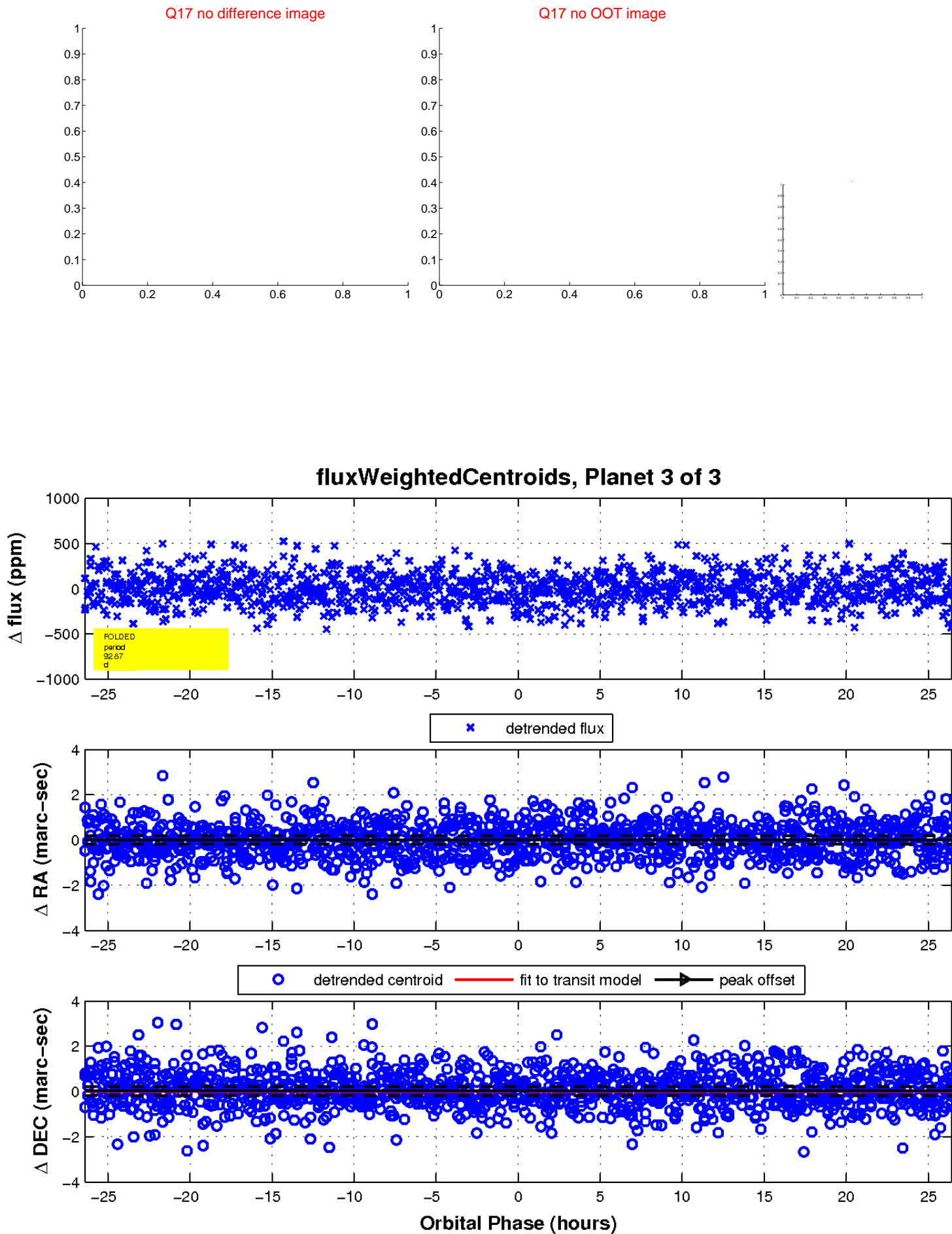
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

