

KIC 004952226

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})
004952226-01	OBS	No	1.827545	131.744715	34.9	6.129	7.7	7.7	1.00	5780	0.70	1168.02
004952226-02	OBS	No	238.025164	141.661358	311.7	10.262	8.2	5.8	1.00	5780	1.85	1.77
004952226-03	OBS	No	256.084867	213.909540	425.3	12.506	7.4	7.4	1.00	5780	2.22	1.60

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004952226-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004952226-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004952226-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—HALO_GHOST

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

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

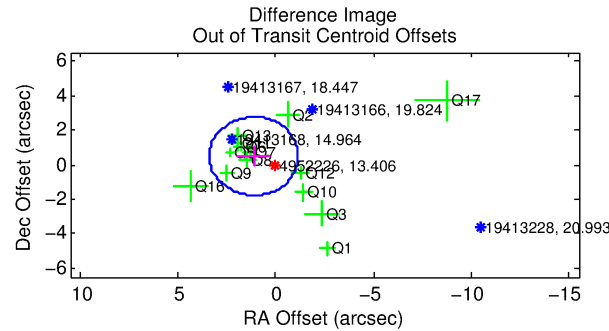
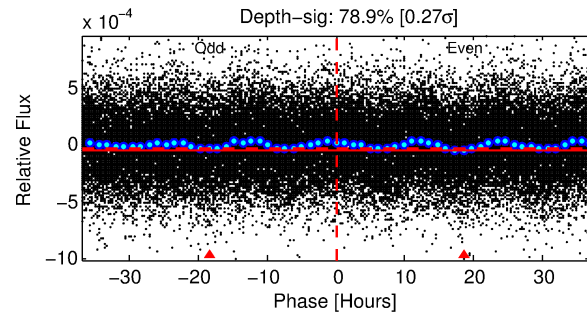
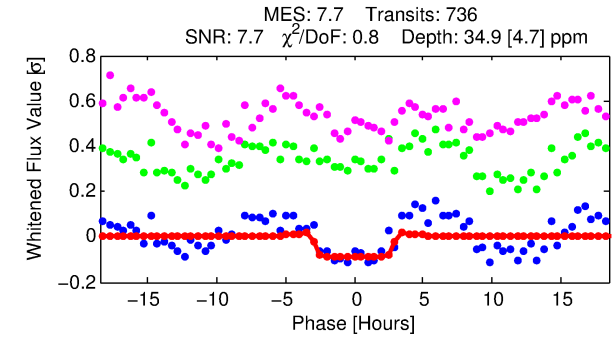
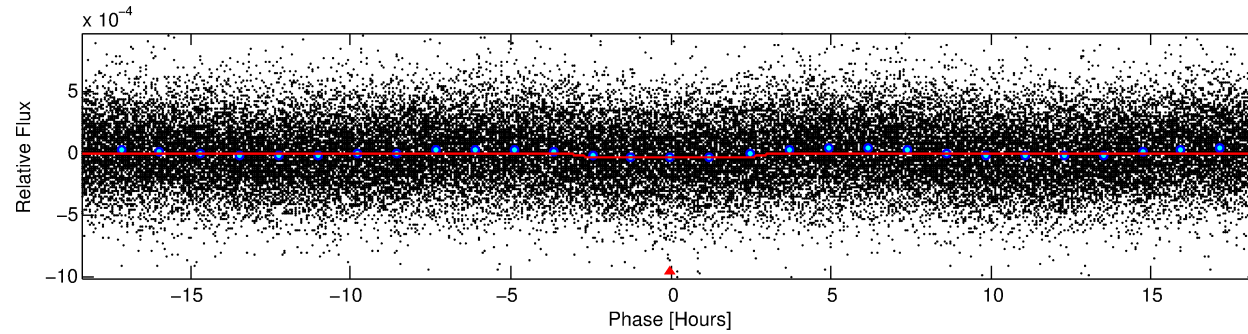
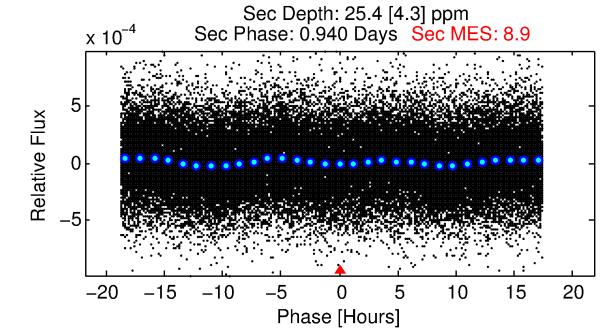
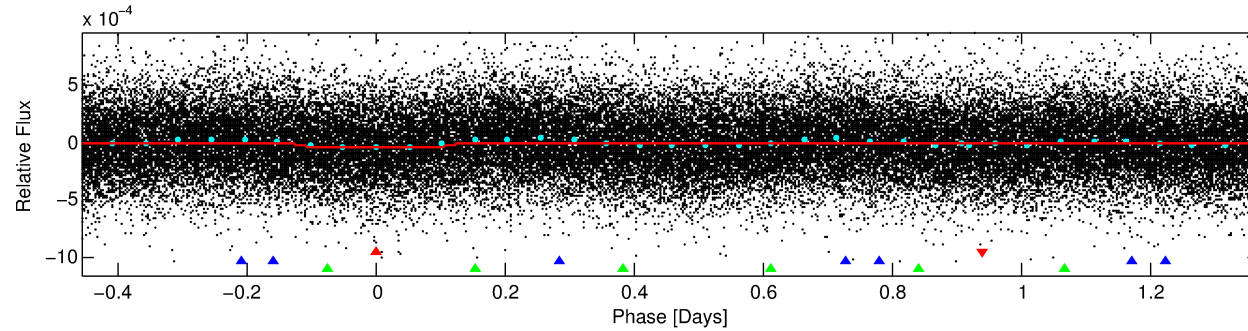
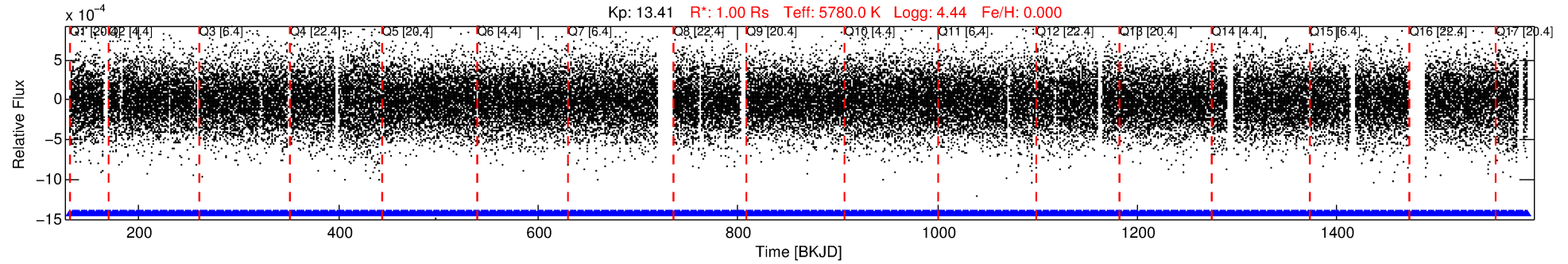
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004952226-01

No Significant Match Found

DV One-Page Summary

KIC: 4952226 Candidate: 1 of 3 Period: 1.828 d



DV Fit Results:

Period = 1.82754 [0.00002] d
Epoch = 131.7447 [0.0064] BKJD
Rp/R* = 0.0064 [0.0029]
a/R* = 1.41 [1.53]
b = 0.89 [0.50]
Seff = 1168.01 [0.02]
Teq = 1491 [0] K
Rp = 0.70 [0.31] Re
a = 0.0293 [0.0000] AU
Ag = 24.62 [22.63] [1.04σ]
Teffp = 5134 [1180] K [3.09σ]

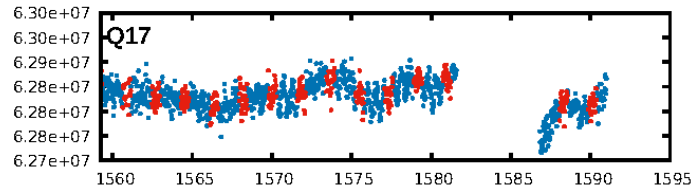
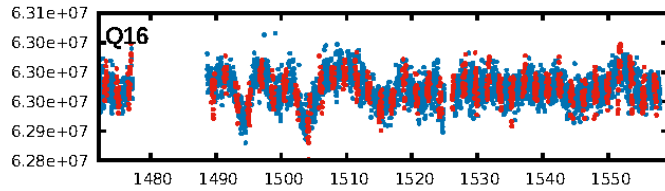
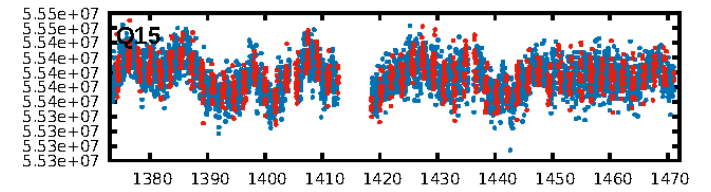
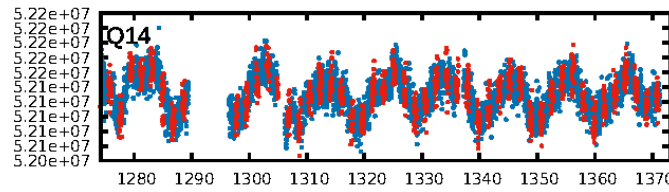
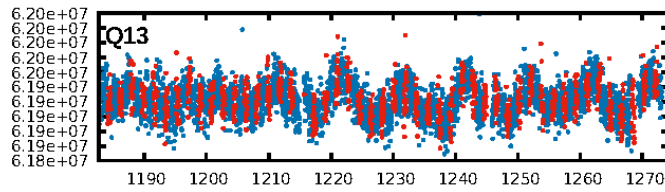
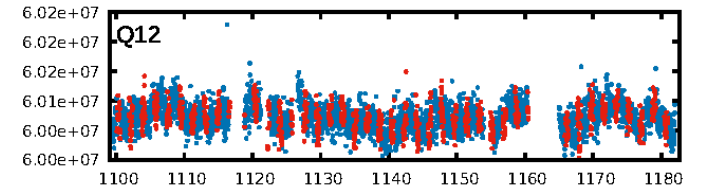
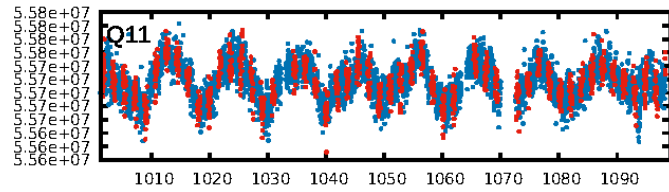
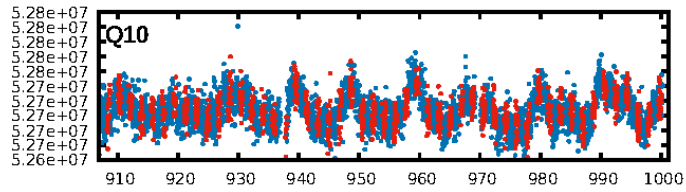
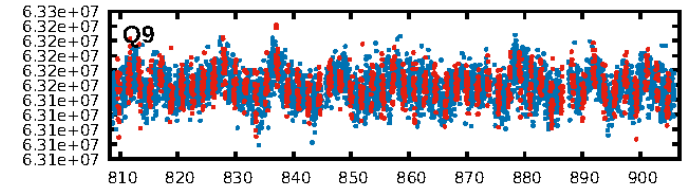
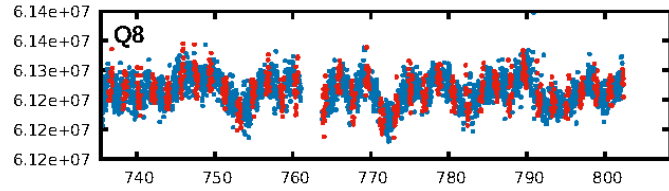
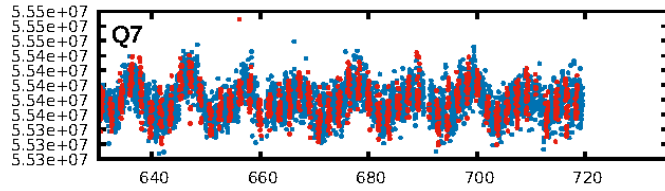
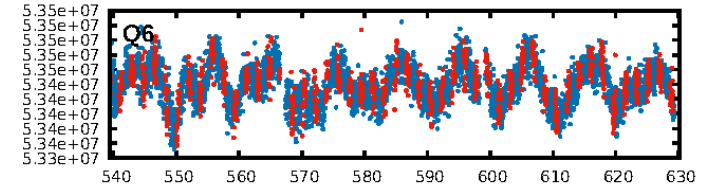
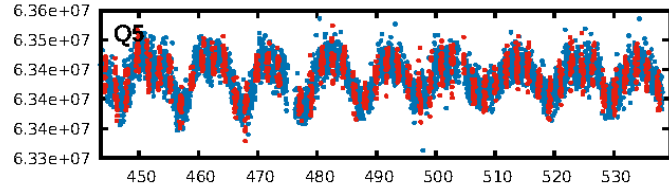
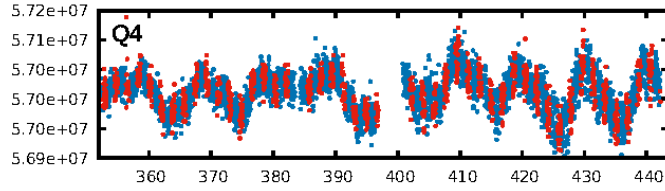
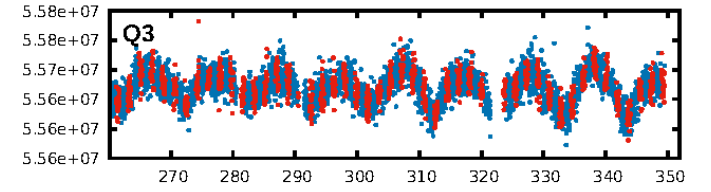
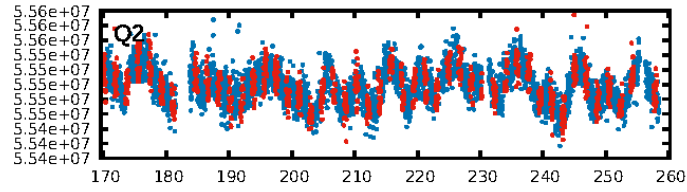
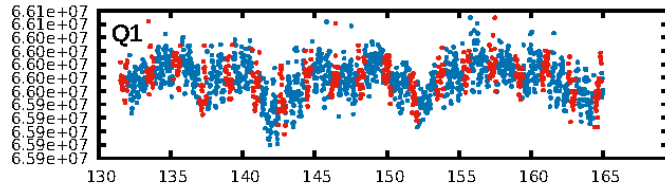
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [474.25σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.47e-12
RollingBand-fgt: 1.00 [703/703]
GhostDiagnostic-chr: 1.12
Centroid-sig: 56.2%
Centroid-so: 1.697 arcsec [1.55σ]
OotOffset-rm: 1.224 arcsec [1.62σ]
OotOffset-st: 3/3/3/5 [14]
KicOffset-rm: 1.874 arcsec [2.34σ]
KicOffset-st: 3/3/3/5 [14]
DiffImageQuality-fgm: 0.64 [9/14]
DiffImageOverlap-fno: 1.00 [17/17]

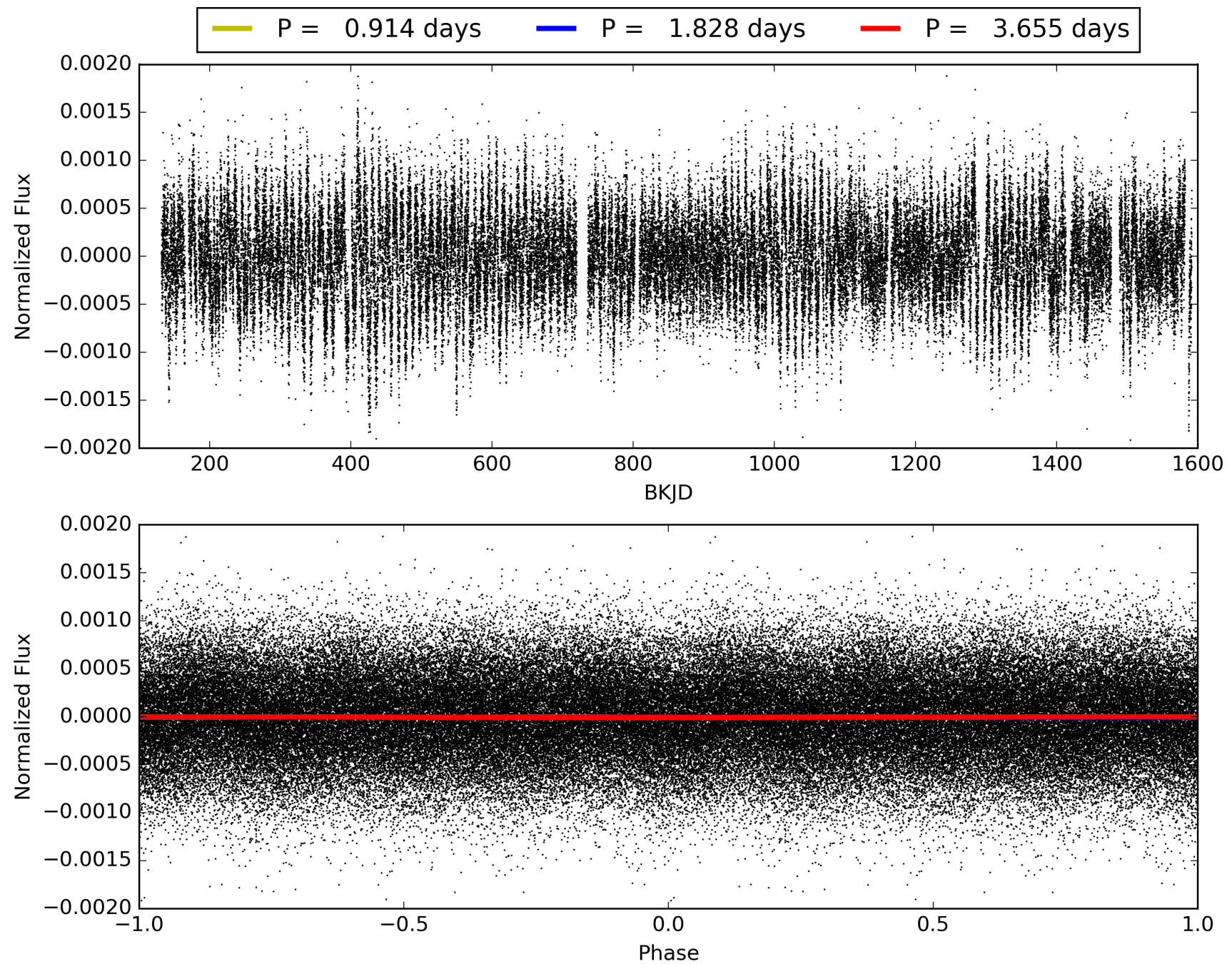
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 18:58:30 Z

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

TCE 004952226-01, PDC Light Curves

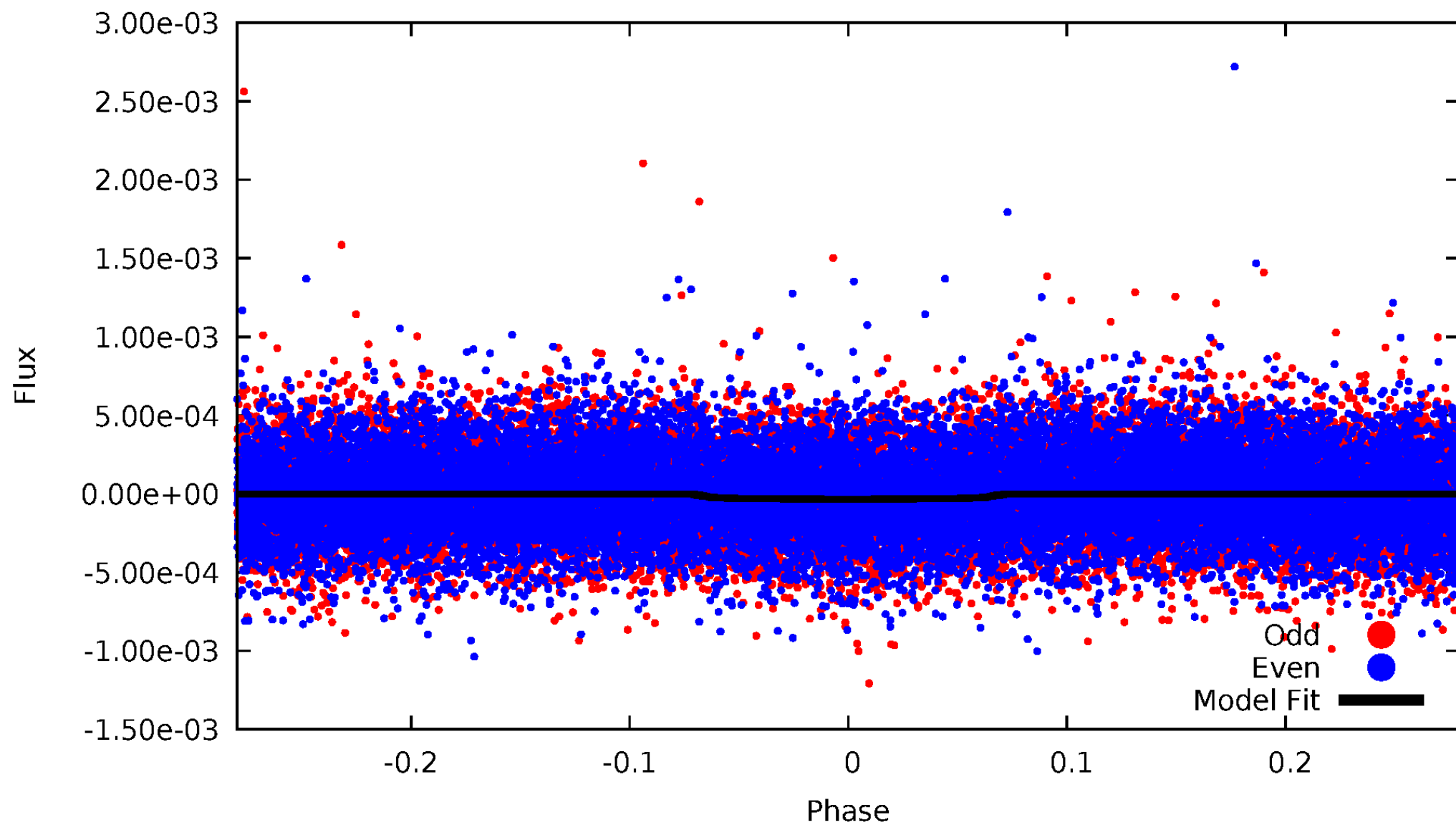


TCE 004952226-01



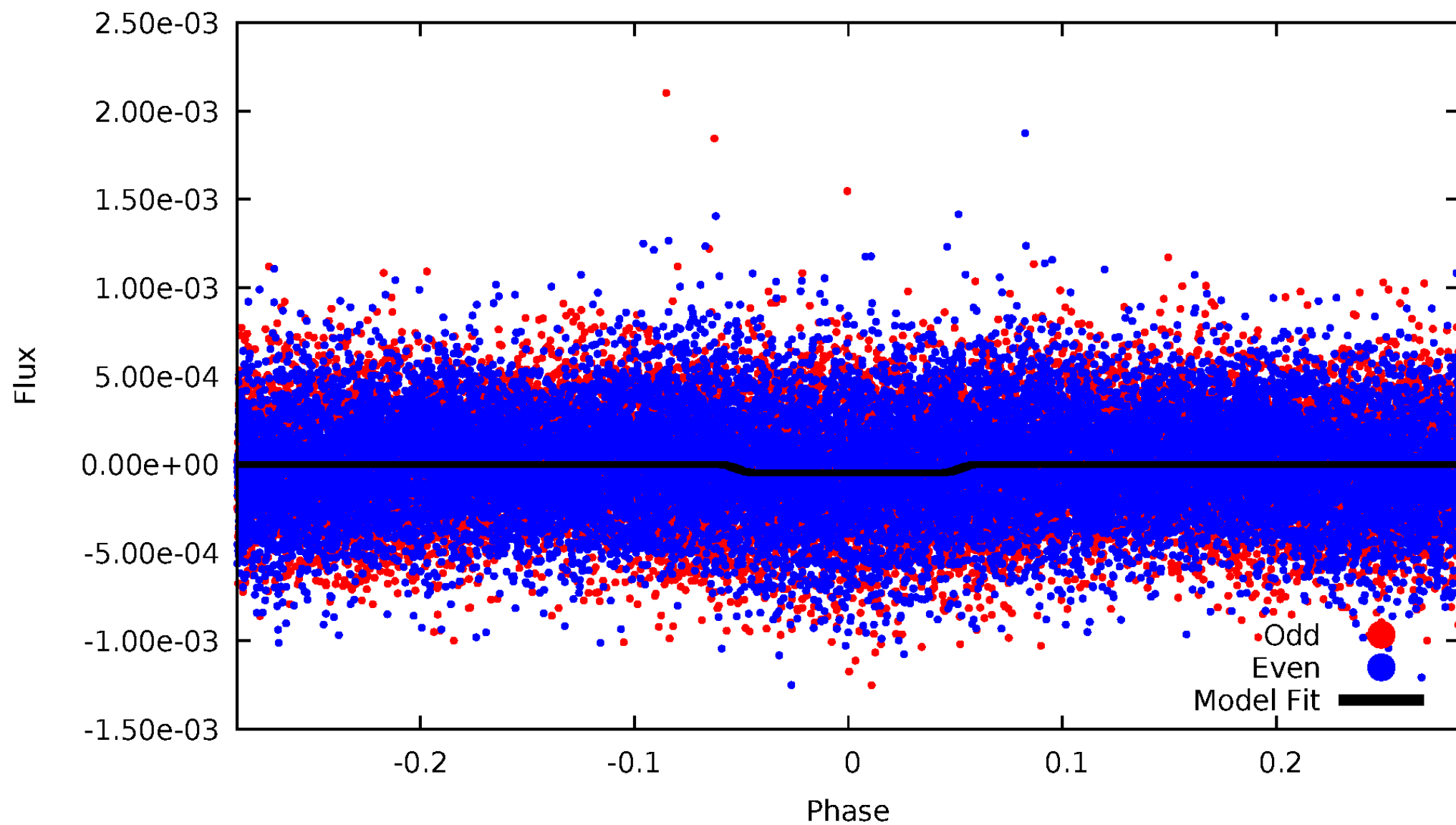
DV Odd/Even

TCE 004952226-01

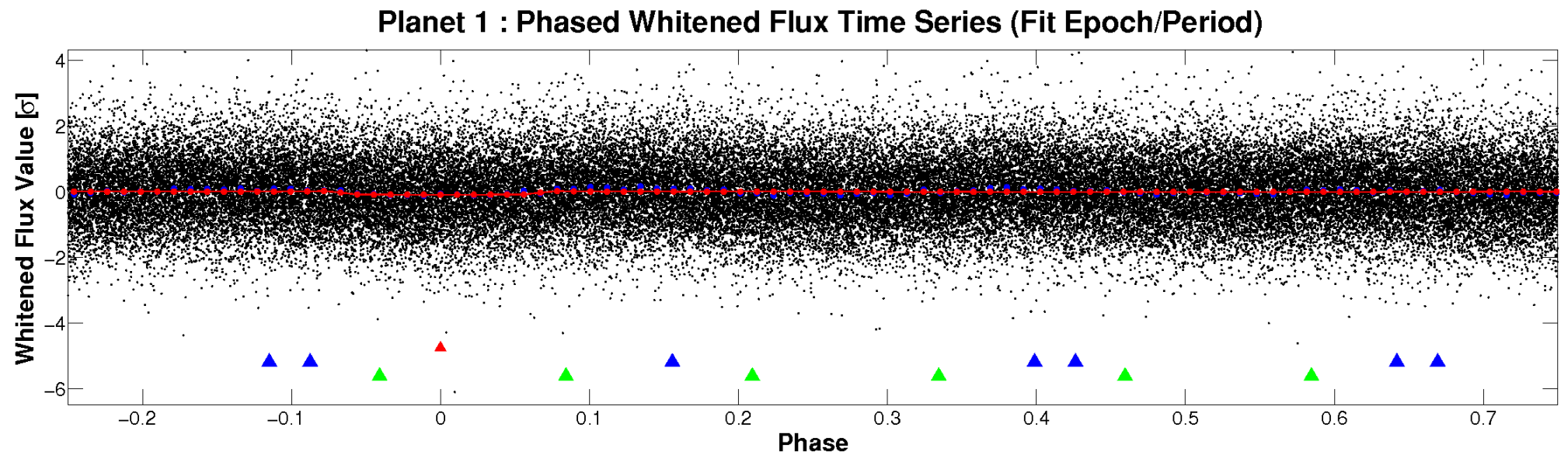
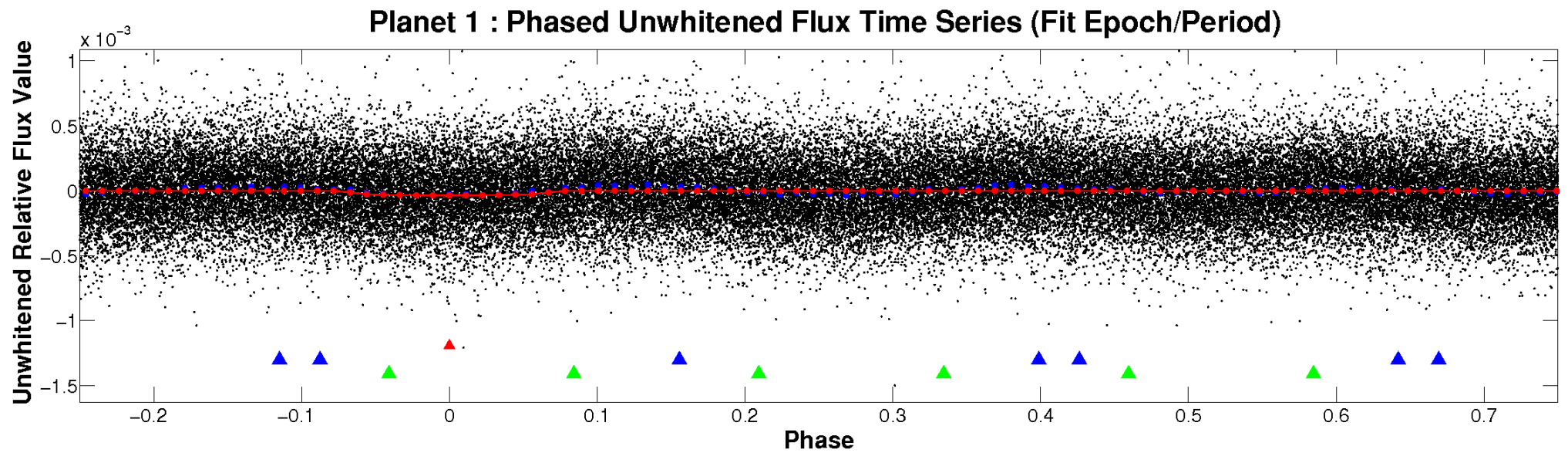


ALT Odd/Even

TCE 004952226-01

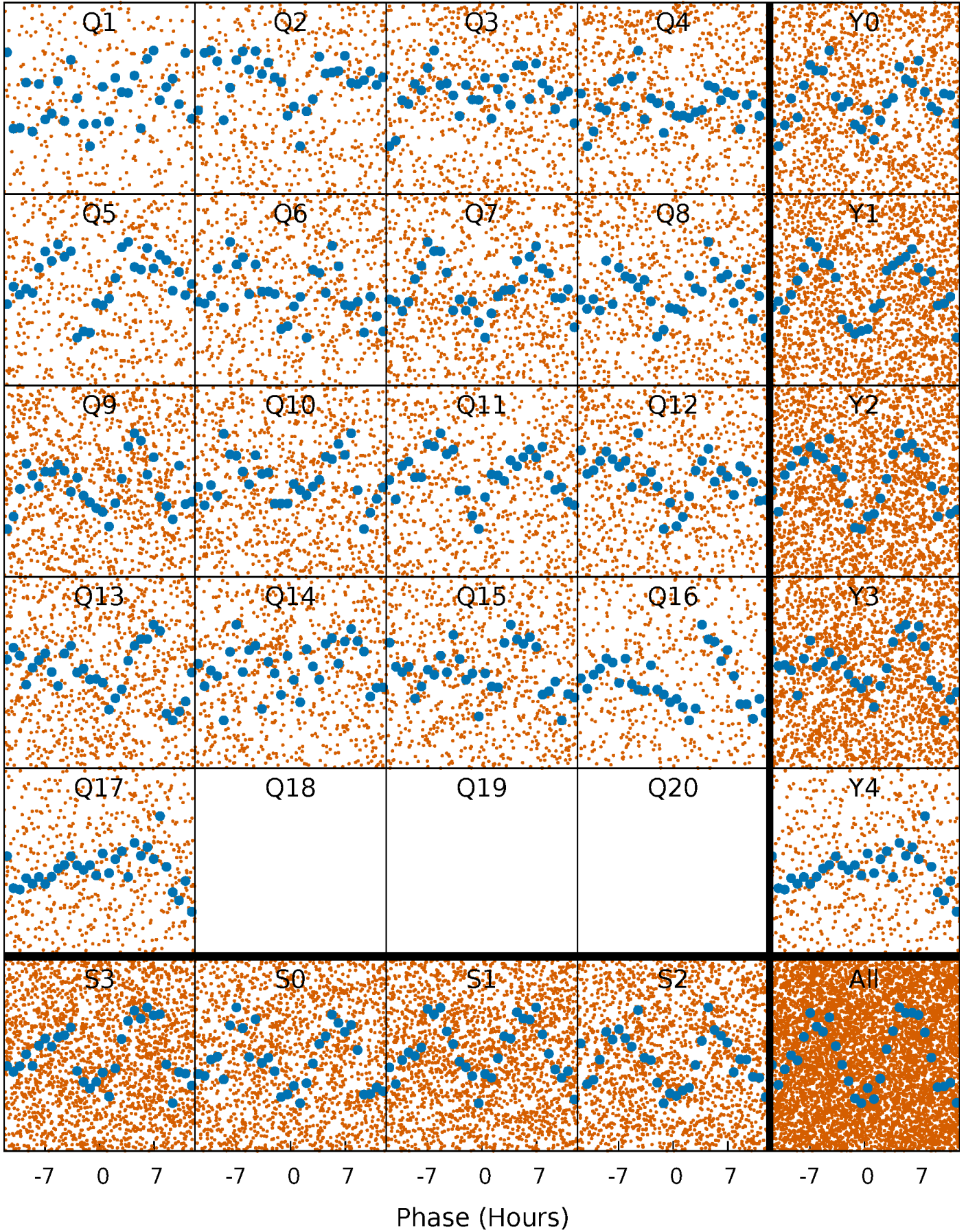


Non-Whitened Vs. Whitened Light Curve



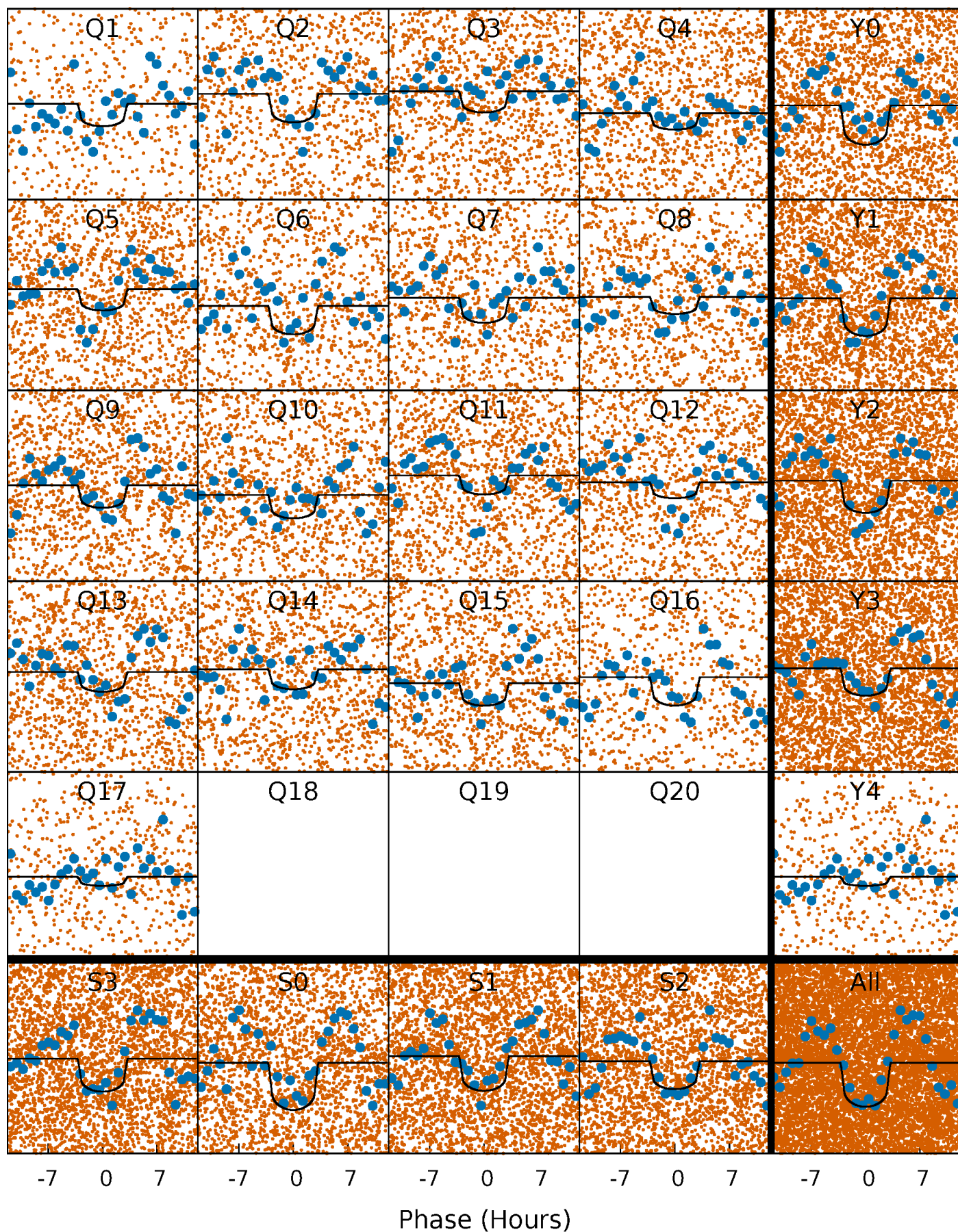
PDC Quarter-Phased Transit Curves

TCE 004952226-01 P= 1.827545 Days $T_0=131.744715$ (BKJD)



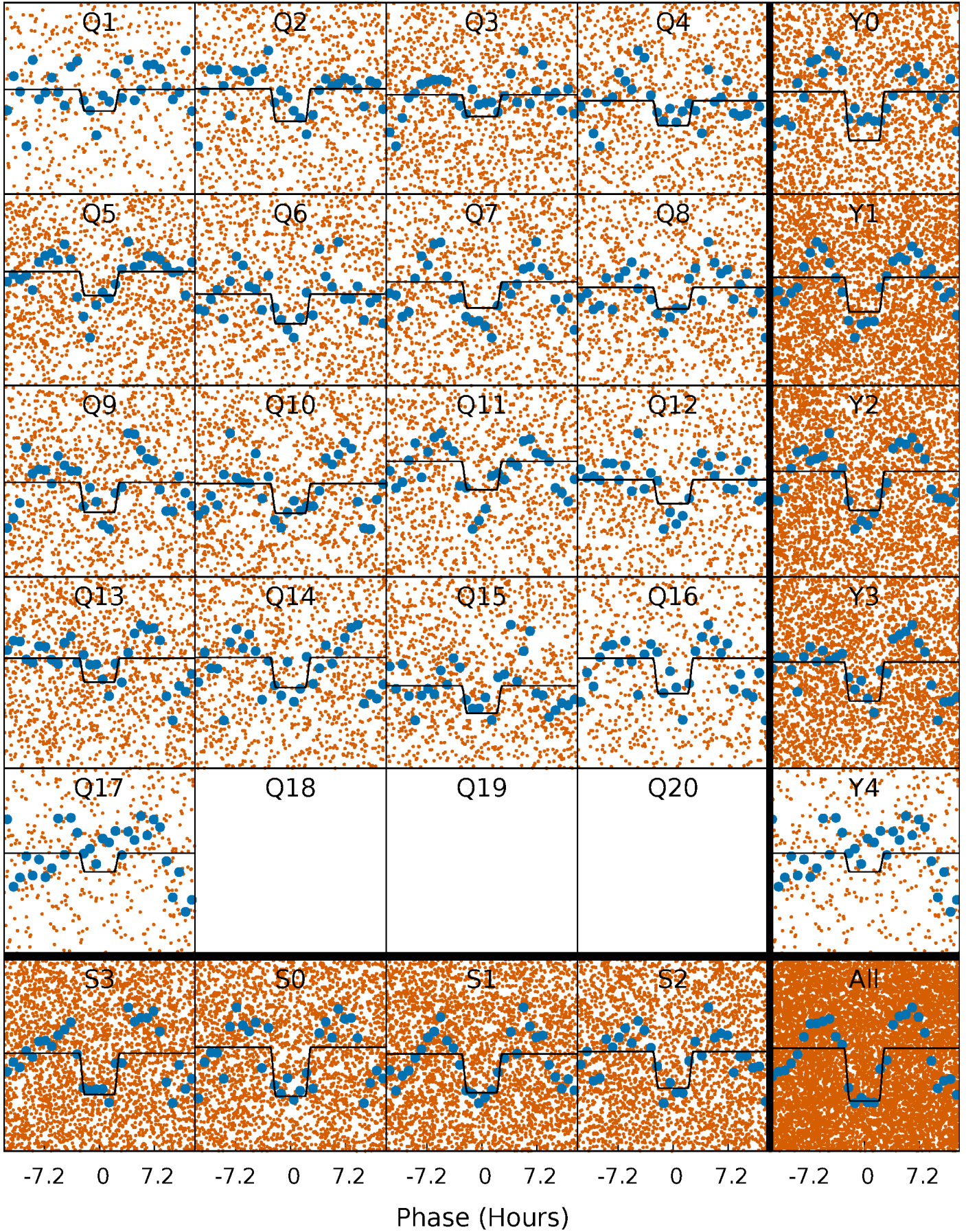
DV Quarter-Phased Transit Curves

TCE 004952226-01 P= 1.827545 Days $T_0=131.744715$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

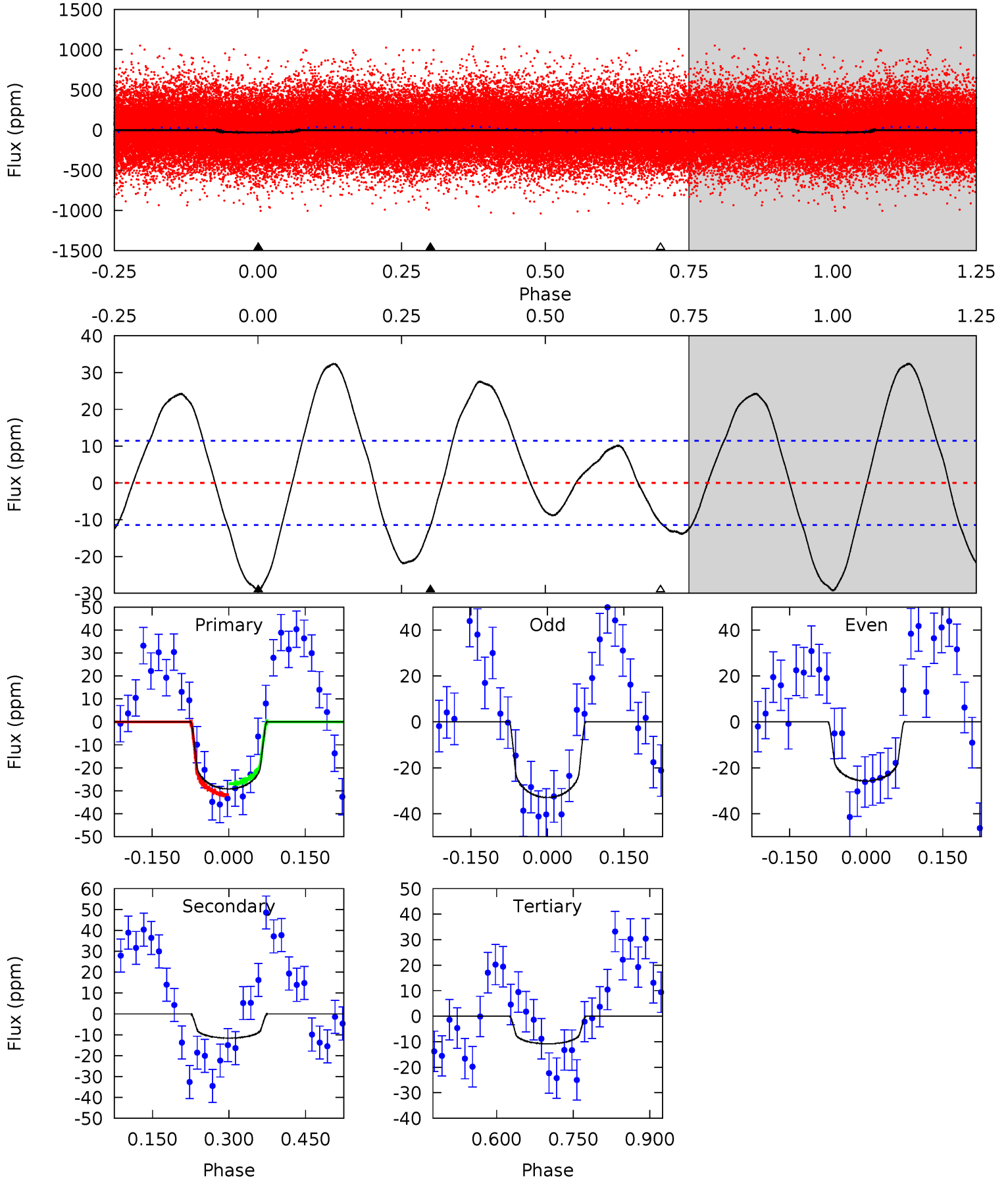
TCE 004952226-01 P= 1.827581 Days $T_0=131.724160$ (BKJD)



DV Model-Shift Uniqueness Test

004952226-01, P = 1.827545 Days, E = 129.917170 Days

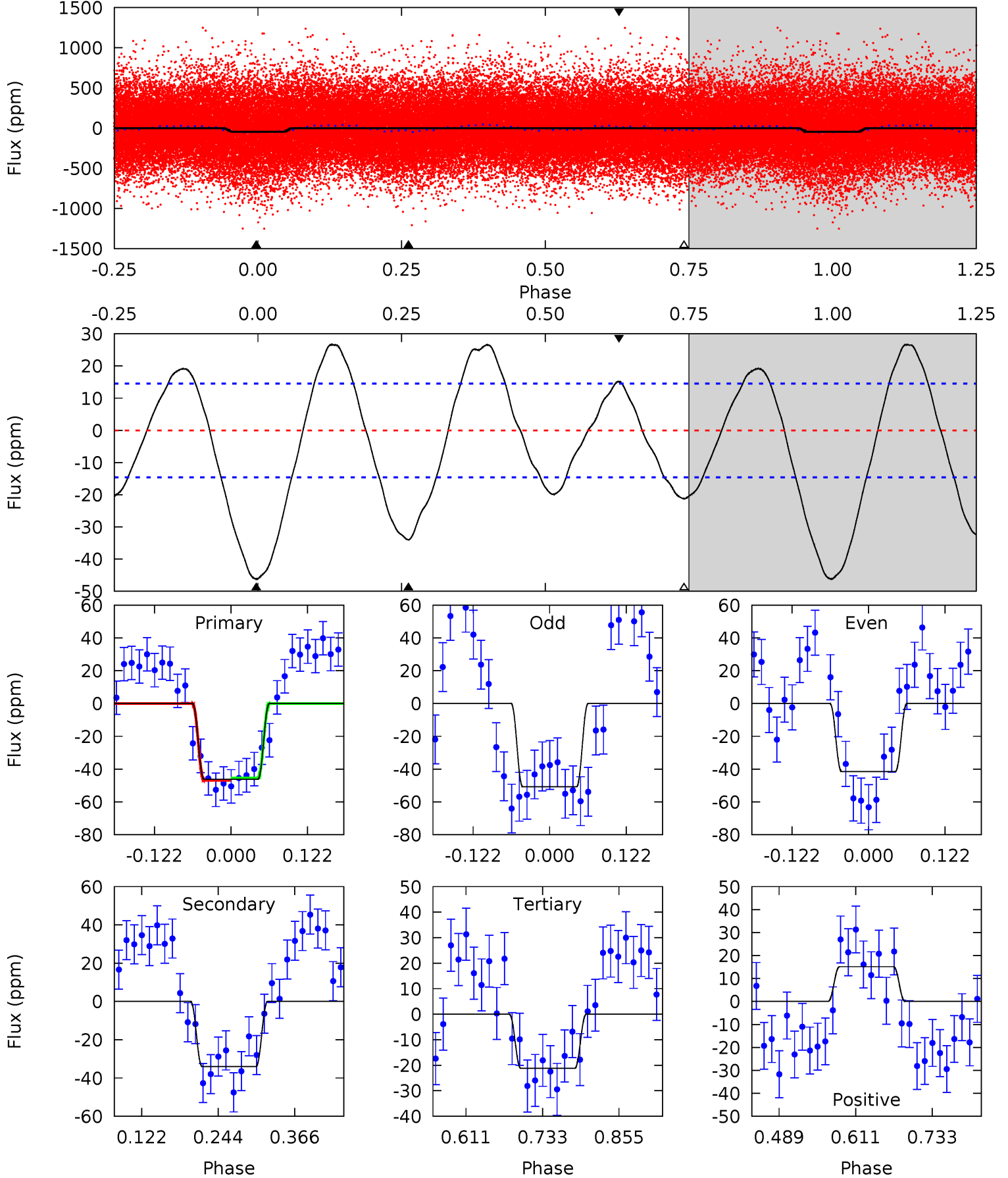
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.4	4.54	4.23	0	4.48	1.44	3.70	7.20	11.4	0.30	4.54	1.41	1.03	0.53	0.94



Alt Model-Shift Uniqueness Test

004952226-01, P = 1.827581 Days, E = 129.896579 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.3	10.6	6.59	4.70	4.52	1.55	4.58	7.75	9.64	3.97	5.86	1.44	1.18	0.37	0.21



Stellar Parameters For KIC 004952226

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5780^{+1}_{-1}	$4.438^{+1.000}_{-1.000}$	$0.000^{+1.000}_{-1.000}$	$1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$
	+0%/-0%	+23%/-23%	+inf%/-inf%	+100%/-100%	+100%/-100%	+100%/-100%
Source	Solar	Solar	Solar	Solar		

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

Secondary Eclipse Parameters for KIC 004952226-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-12 ± 3	$0.72^{+0.33}_{-0.32}$	2091^{+95}_{-95}	4333^{+1221}_{-578}	11^{+23}_{-6}
Alt.	-34 ± 3	$0.77^{+0.32}_{-0.30}$	2088^{+93}_{-98}	5297^{+1528}_{-744}	27^{+47}_{-14}

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

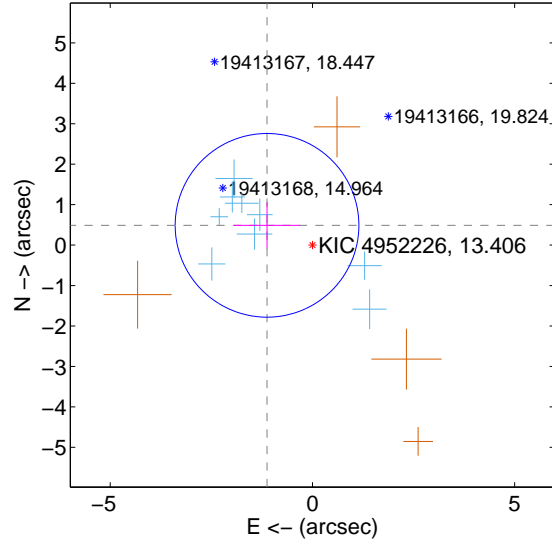
Supplemental centroid analysis for 004952226-01. Kepler magnitude: 13.41. Transit SNR 7.73

There are 9 quarters with good PRF difference image offsets

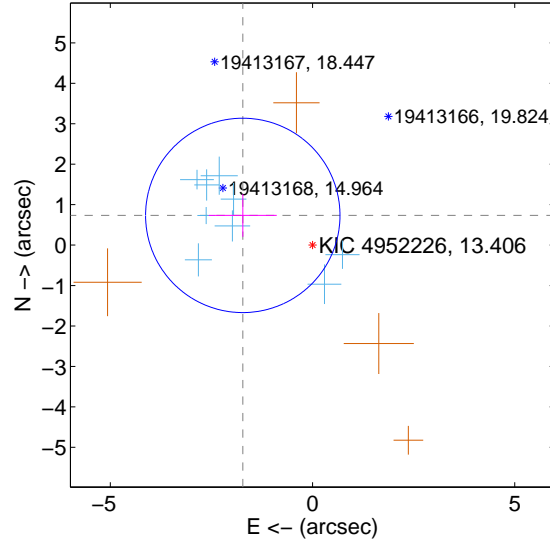
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.224 ± 0.757	1.62	1.123 ± 0.817	0.488 ± 0.570
PRF-fit source offset from KIC position	1.874 ± 0.801	2.34	1.724 ± 0.841	0.734 ± 0.528
photometric centroid source offset	1.70 ± 1.10	1.55	1.68 ± 1.10	-0.24 ± 1.13

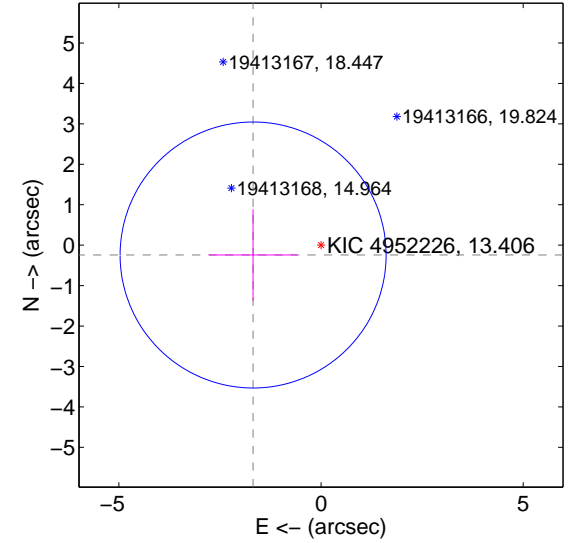
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

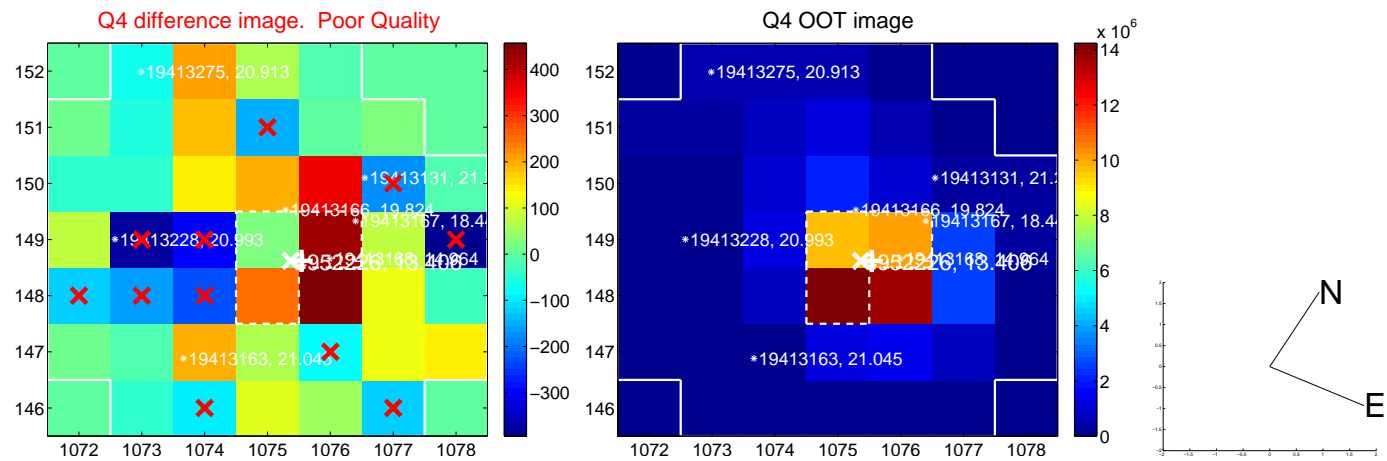
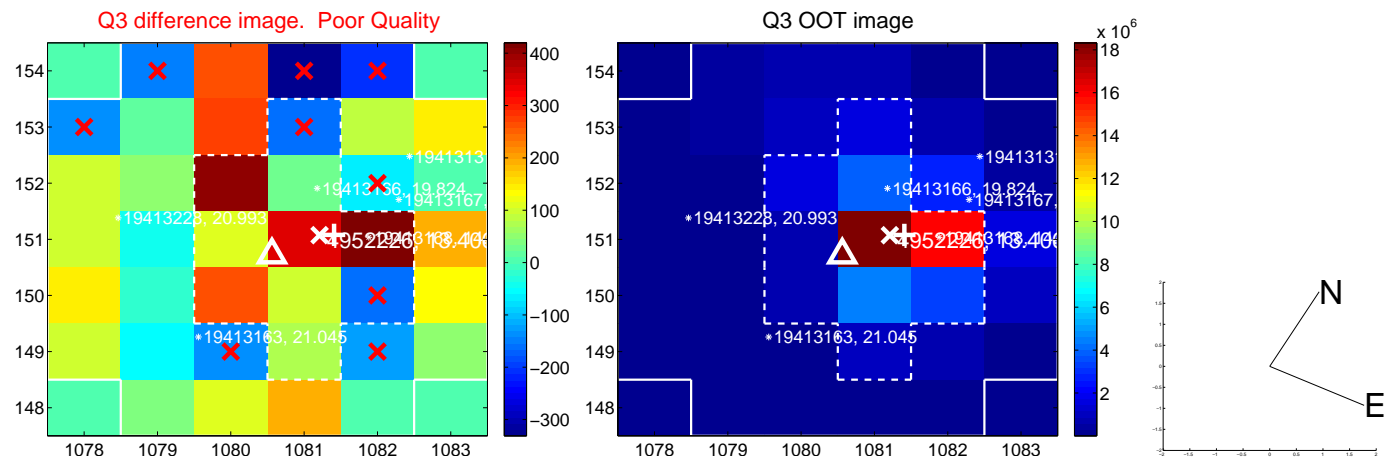
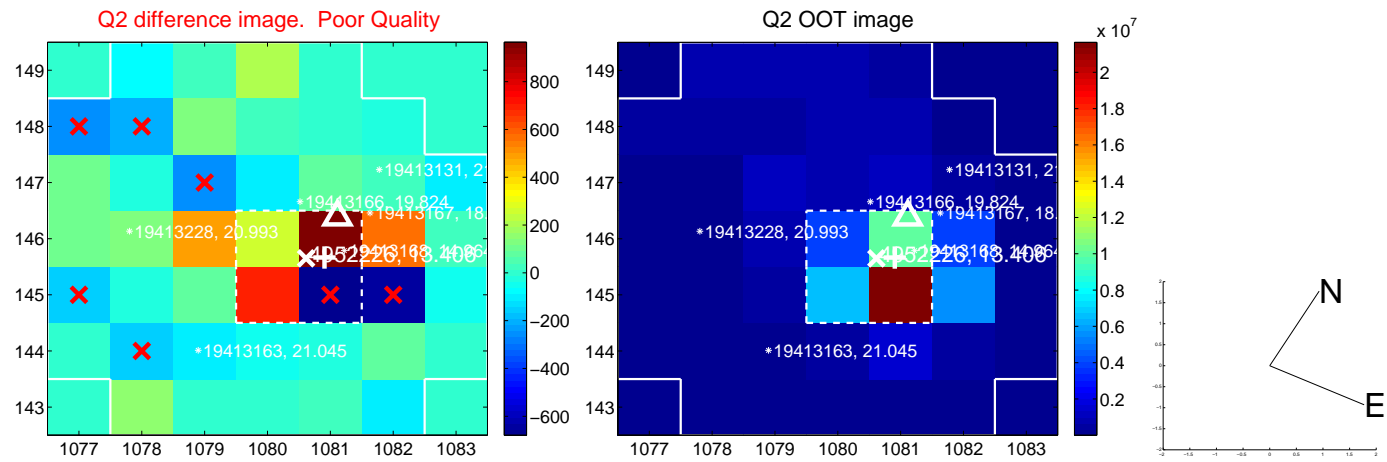
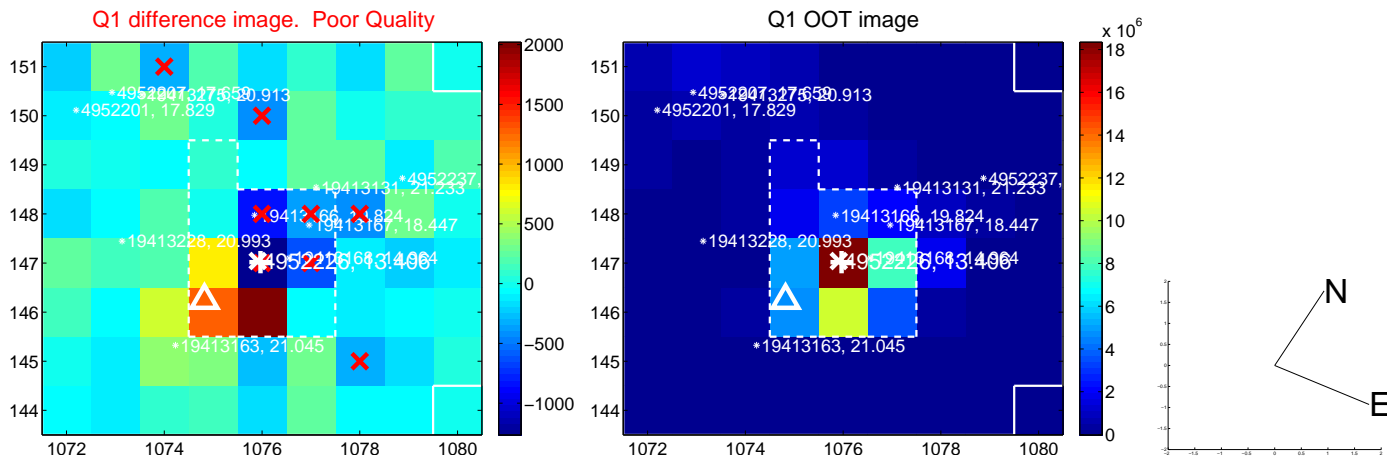


offset from photometric centroids

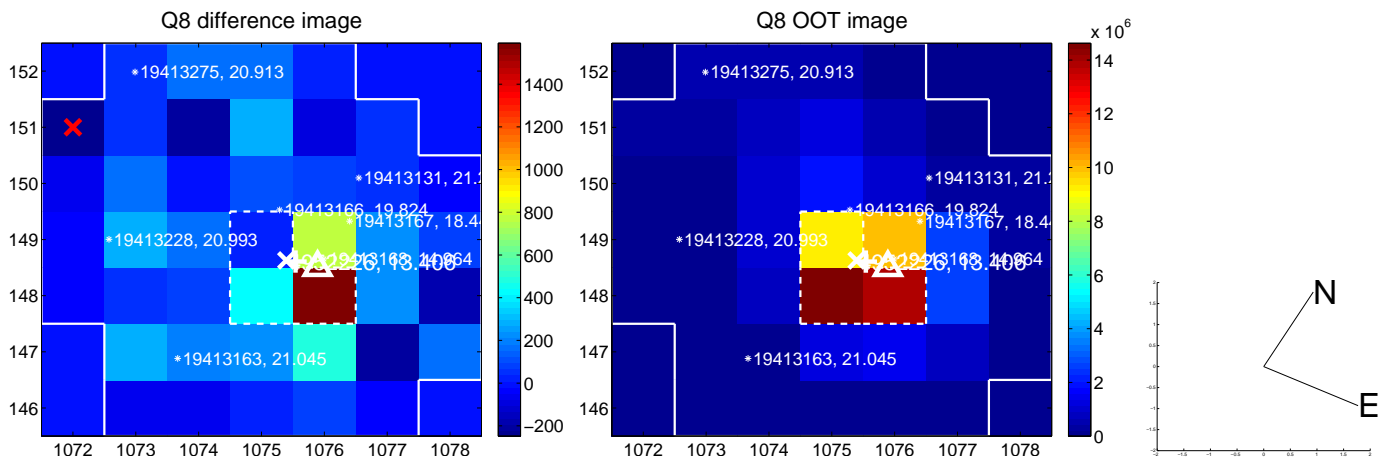
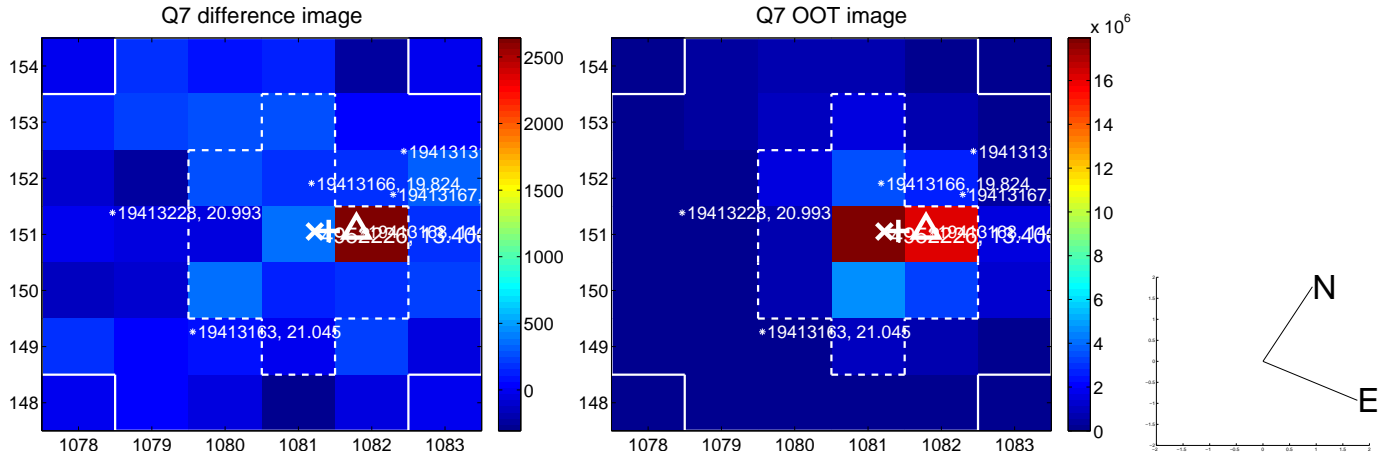
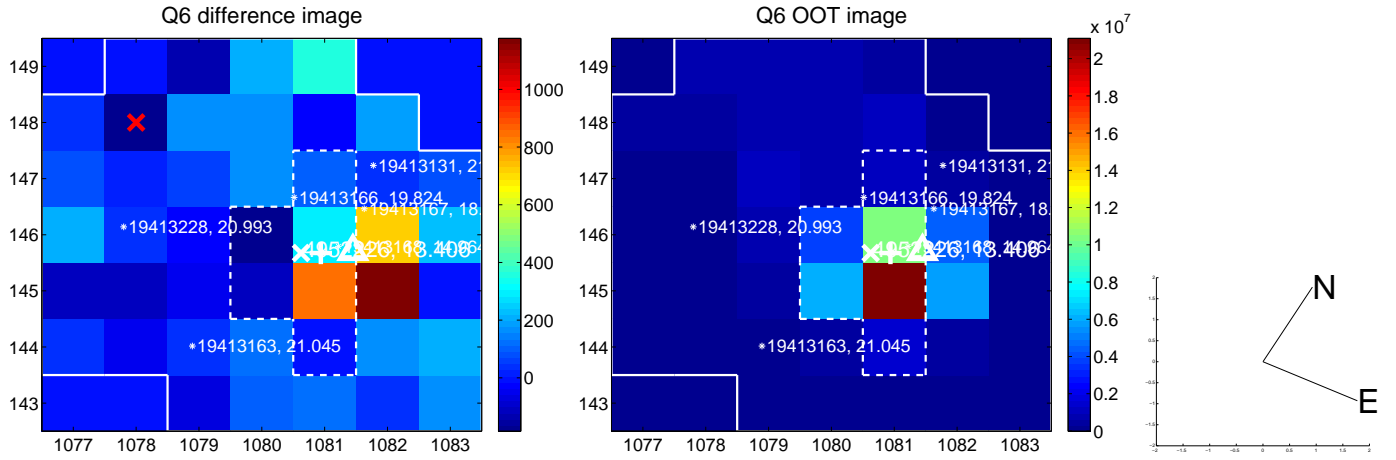
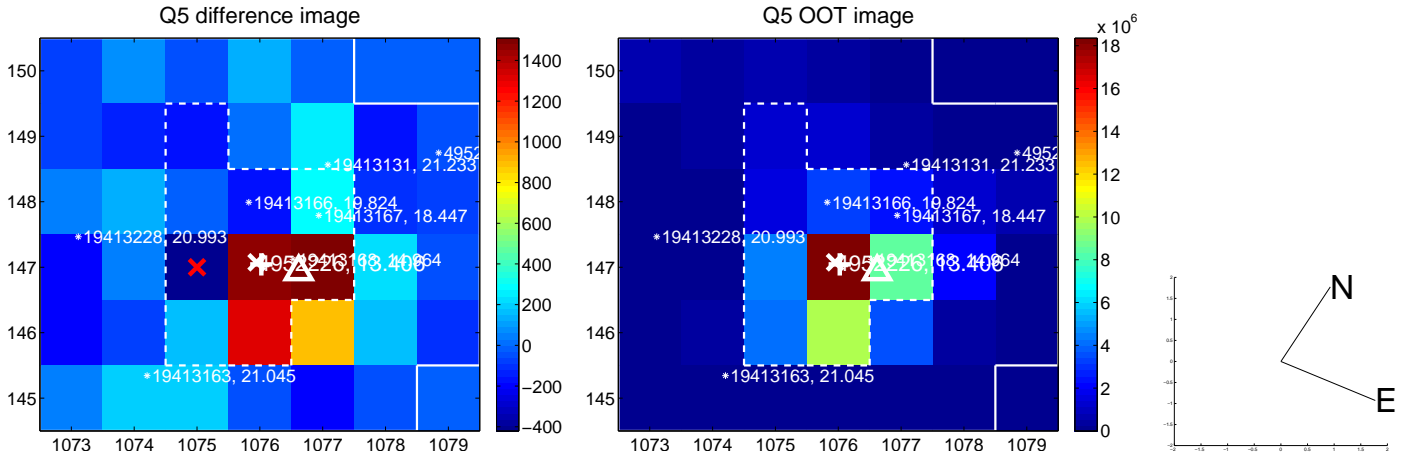


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

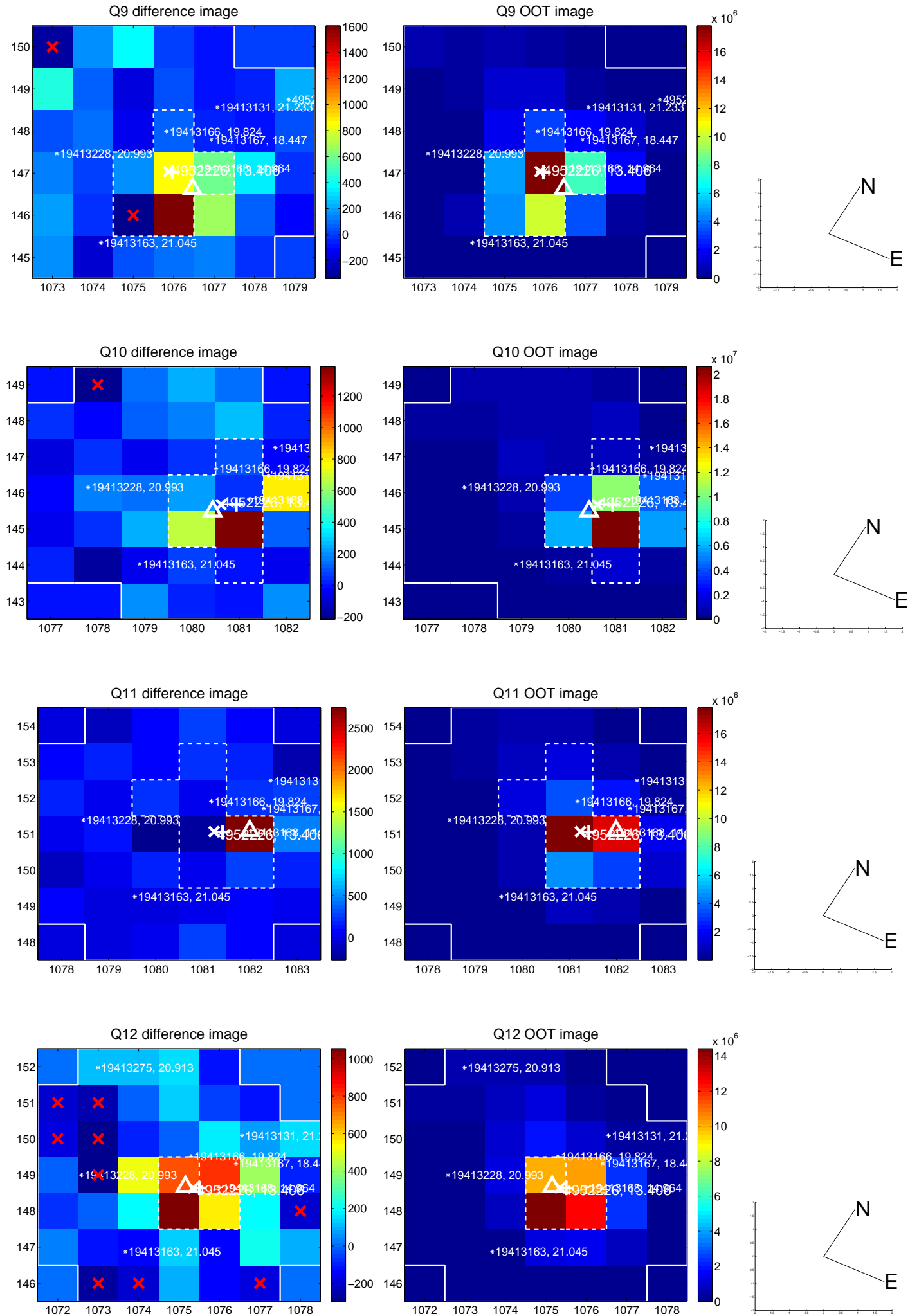
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



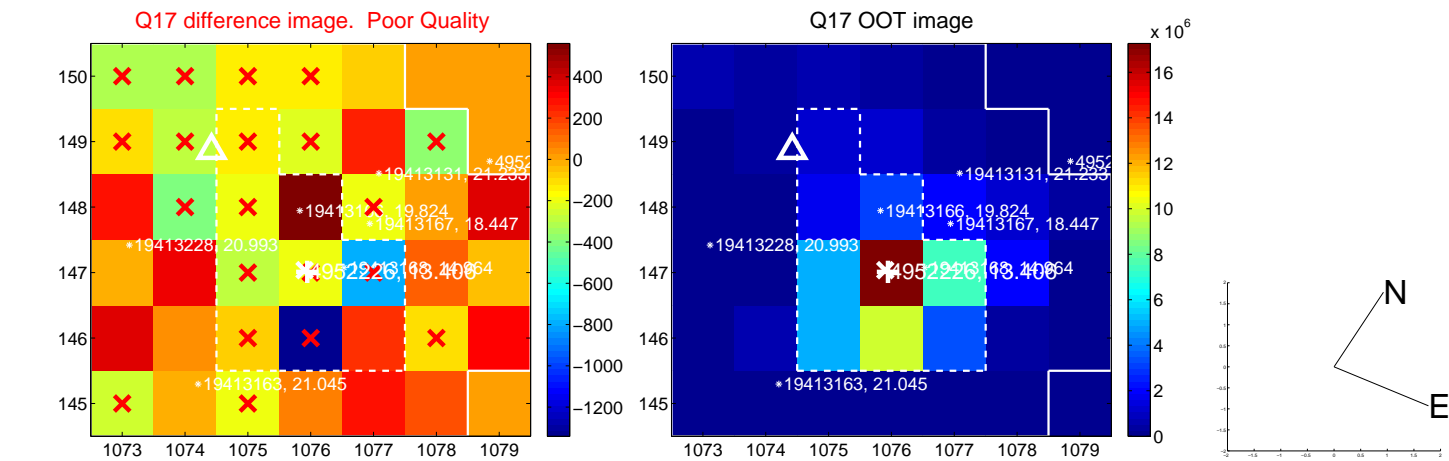
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



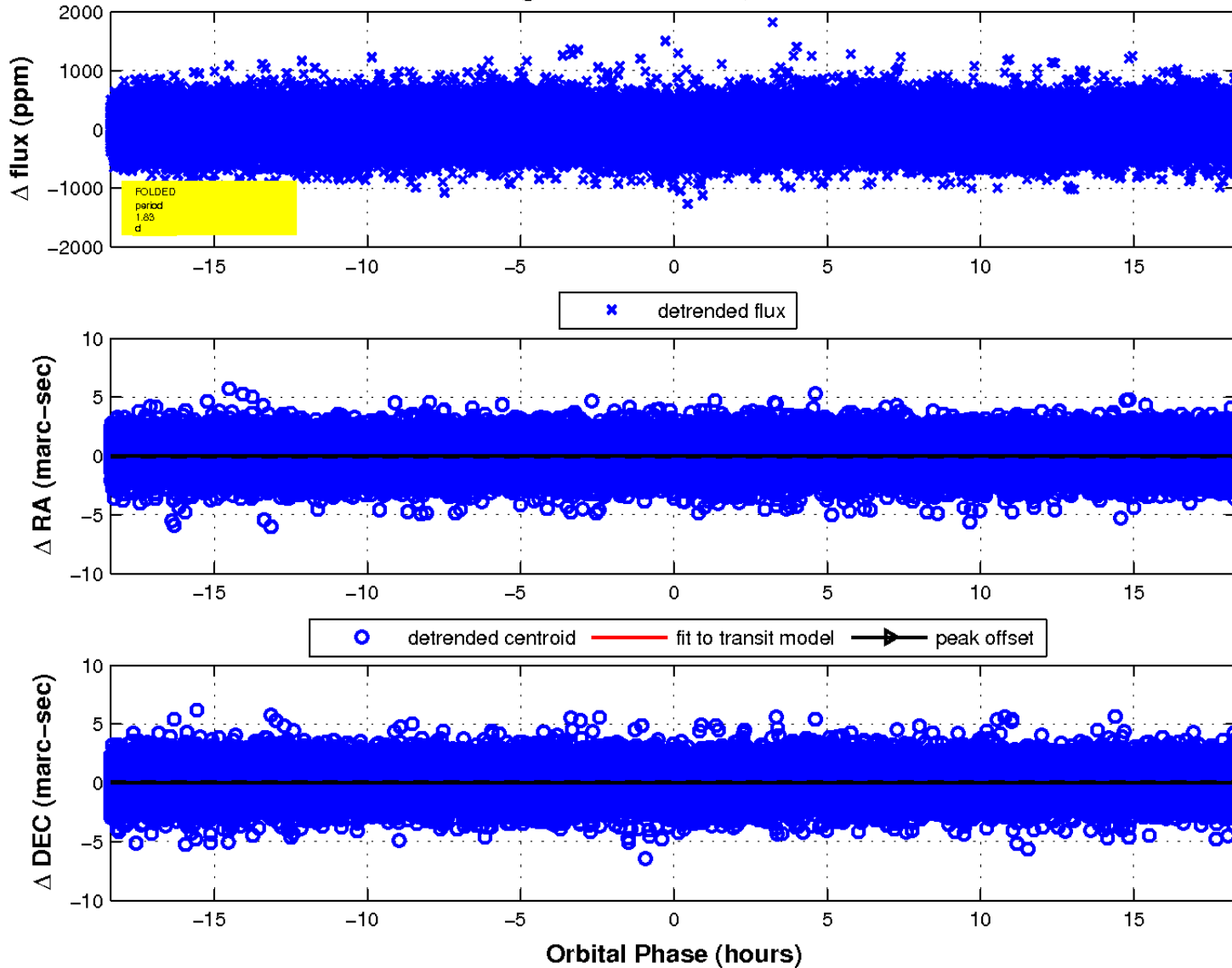
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

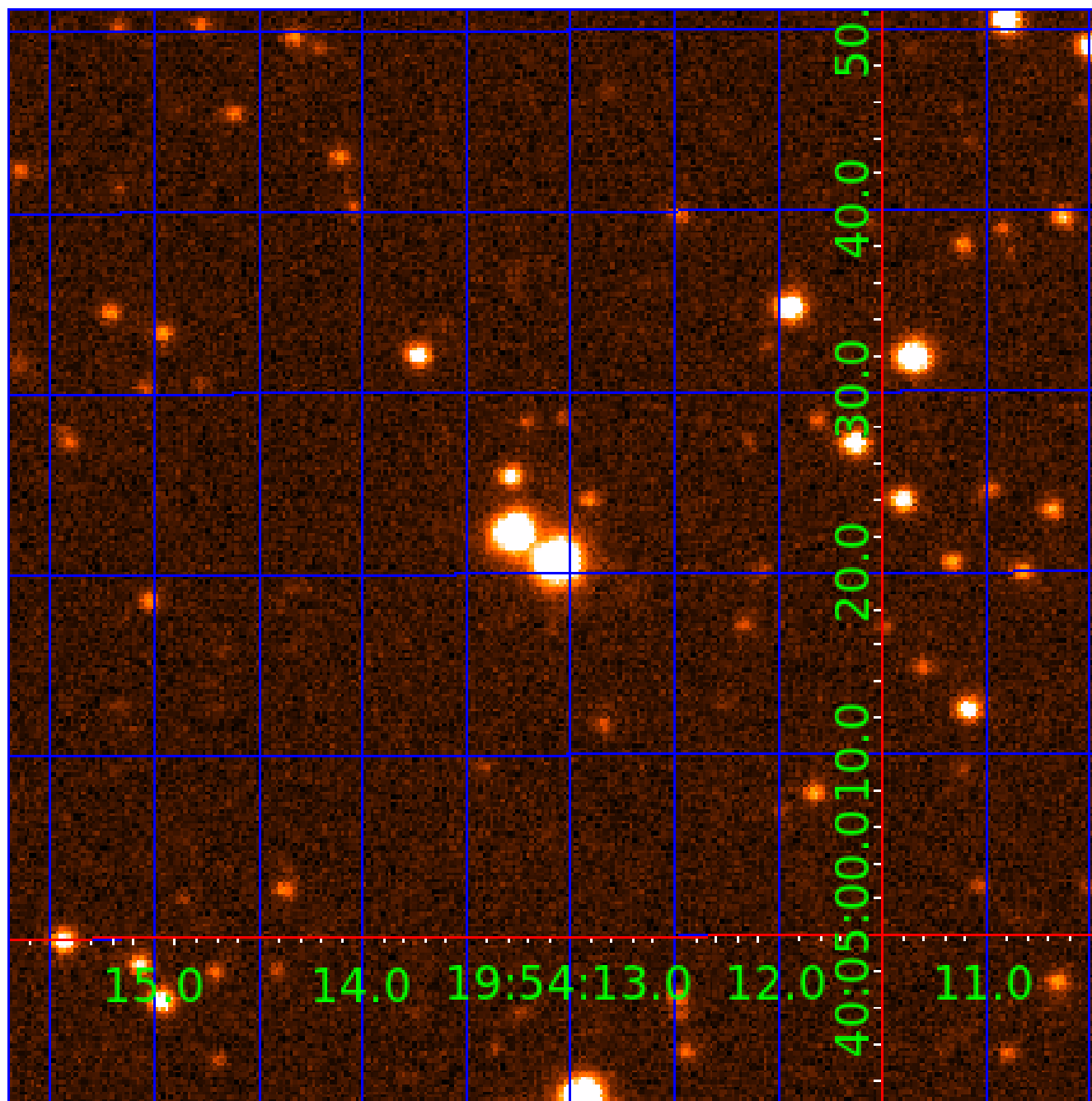


fluxWeightedCentroids, Planet 1 of 3



UKIRT Image

Declination



KIC 004952226

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})
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004952226-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004952226-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004952226-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—HALO_GHOST

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

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

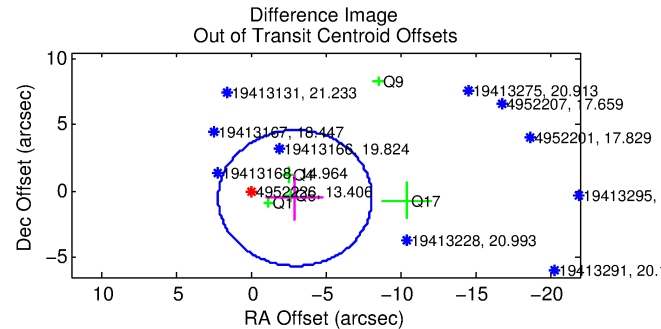
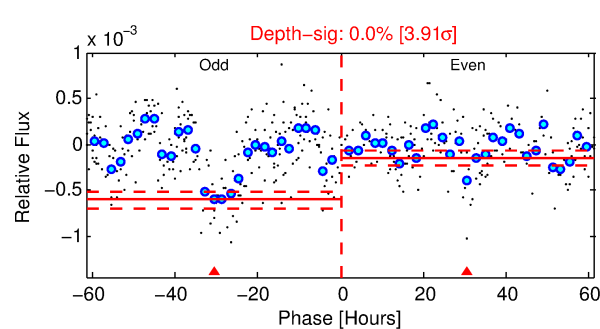
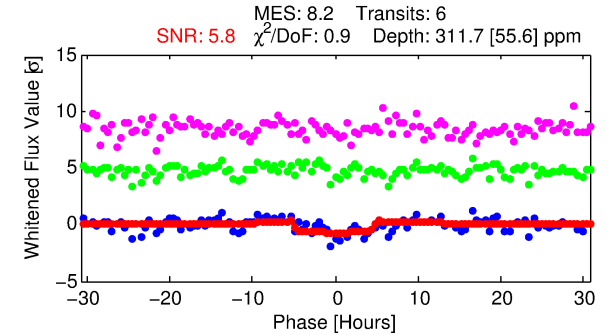
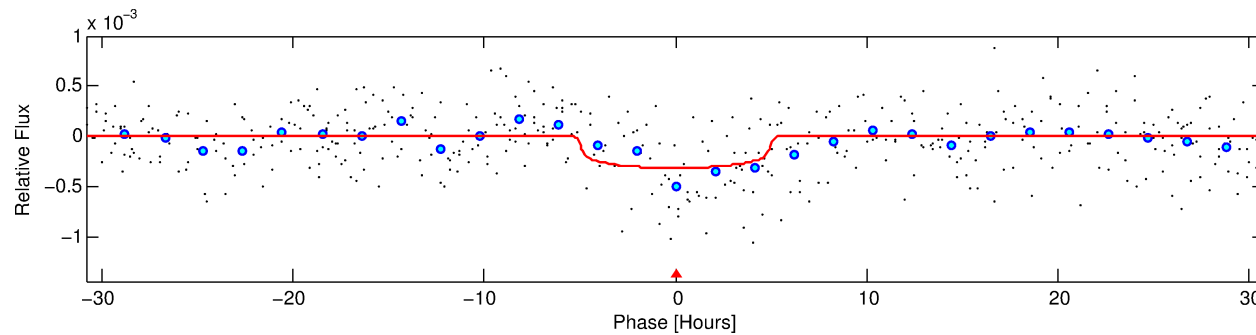
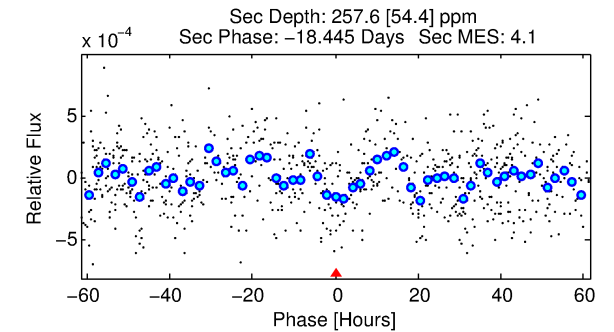
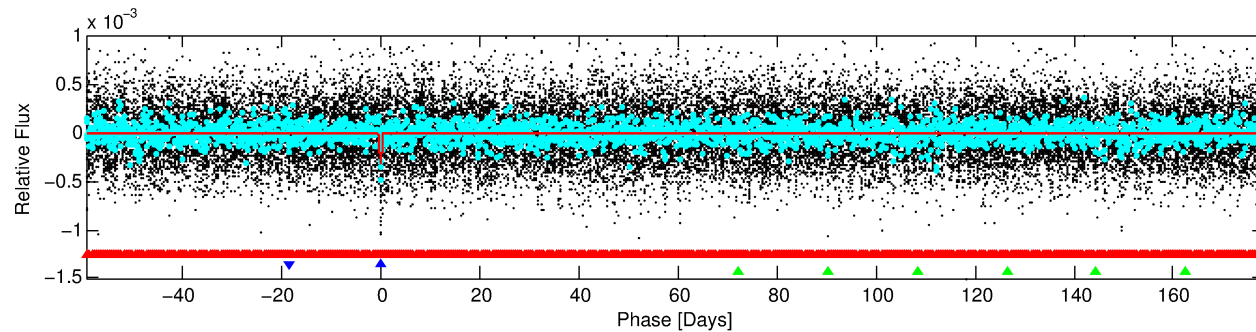
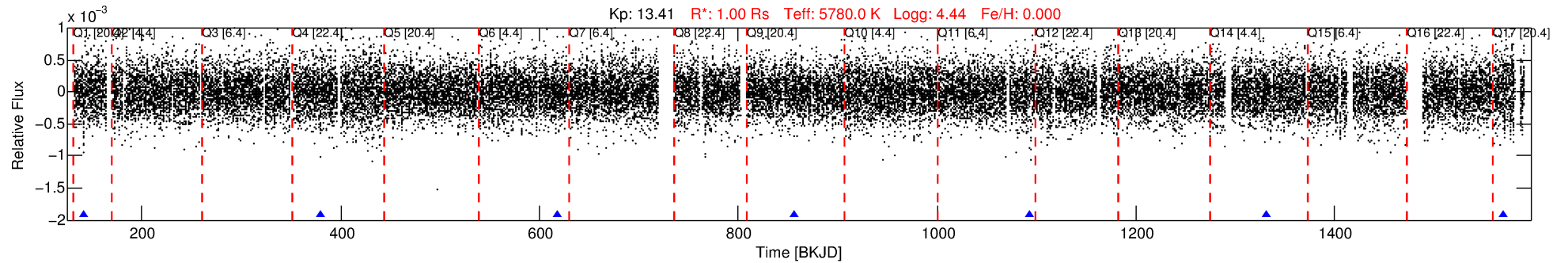
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004952226-02

No Significant Match Found

DV One-Page Summary

KIC: 4952226 Candidate: 2 of 3 Period: 238.025 d



DV Fit Results:

Period = 238.02516 [0.00480] d
Epoch = 141.6614 [0.0176] BKJD
Rp/R* = 0.0170 [0.0199]
a/R* = 140.39 [725.06]
b = 0.64 [4.85]
Seff = 1.77 [0.00]
Teff = 294 [0] K
Rp = 1.85 [2.17] Re
a = 0.7518 [0.0000] AU
Ag = 23353.96 [54929.90] [0.43 σ]
Teffp = 5621 [3305] K [1.61 σ]

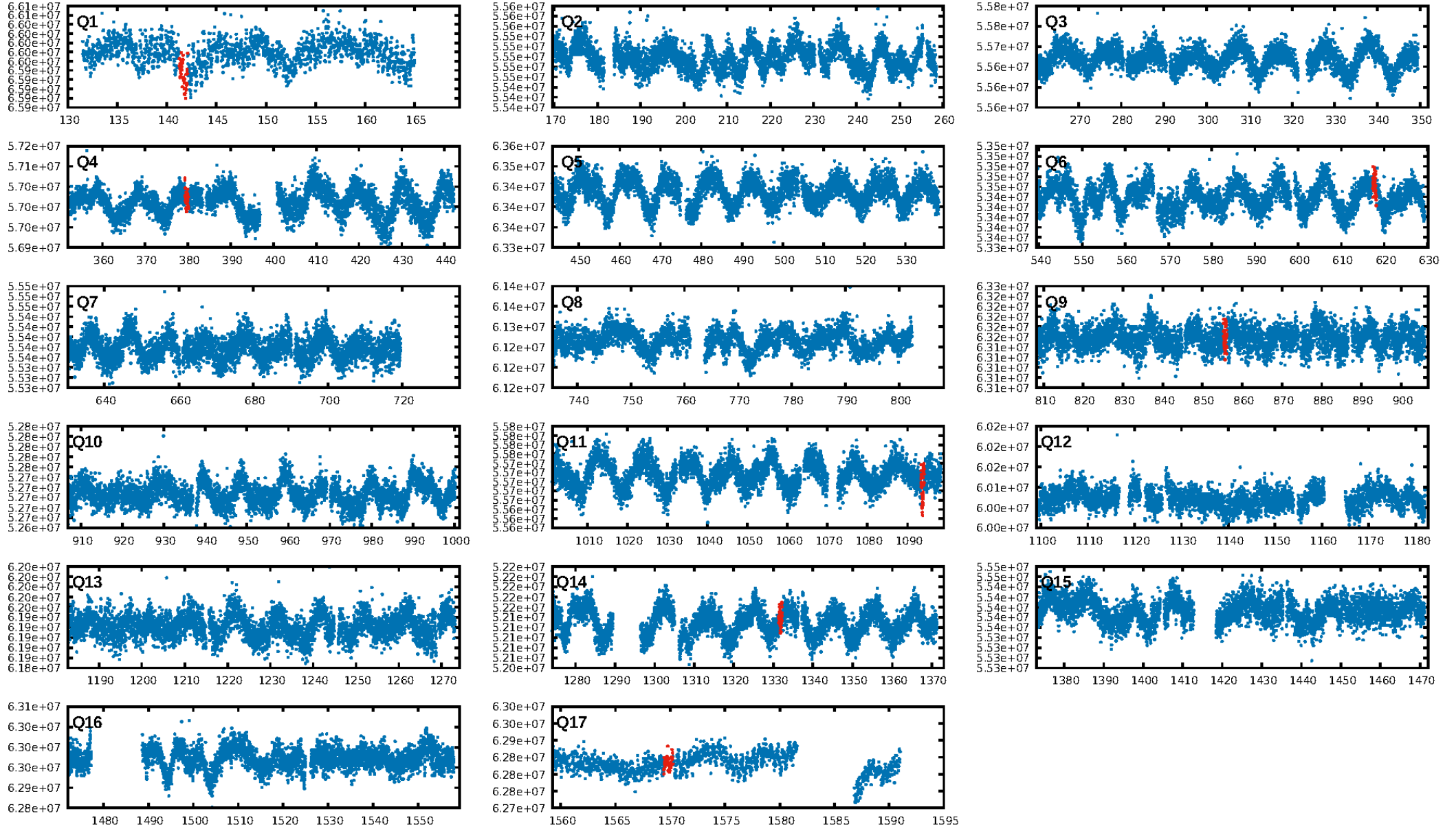
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [474.25 σ]
LongPeriod-sig: 100.0% [26.79 σ]
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.10e-12
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -0.9621
Centroid-sig: 29.0%
Centroid-so: 1.647 arcsec [1.51 σ]
OotOffset-rm: 3.022 arcsec [1.77 σ]
KicOffset-rm: 2.404 arcsec [1.27 σ]
OotOffset-st: 1/0/1/3 [5]
KicOffset-st: 1/0/1/3 [5]
DiffImageQuality-fgm: 0.40 [2/5]
DiffImageOverlap-fno: 0.00 [0/6]

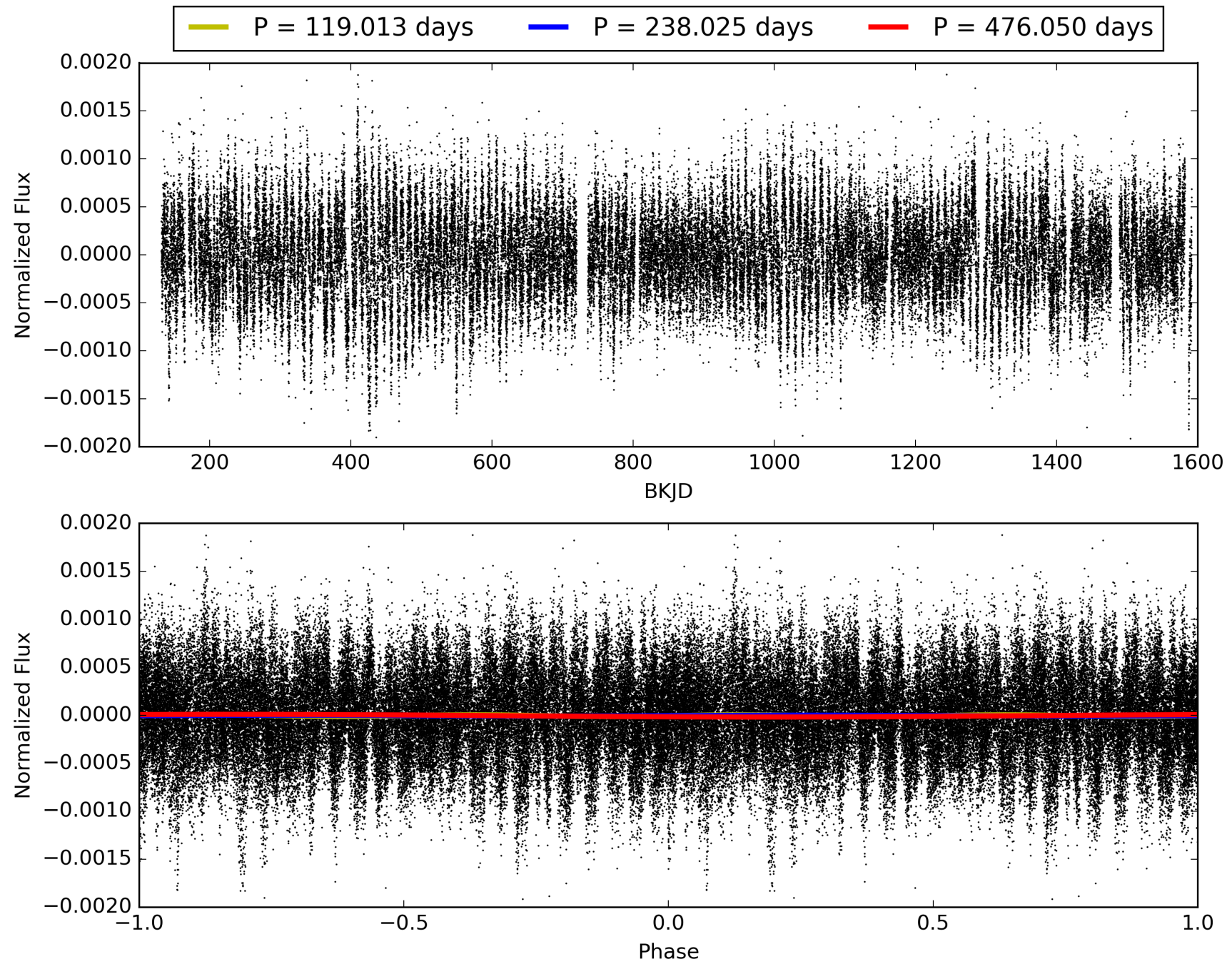
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 18:58:41 Z

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

TCE 004952226-02, PDC Light Curves

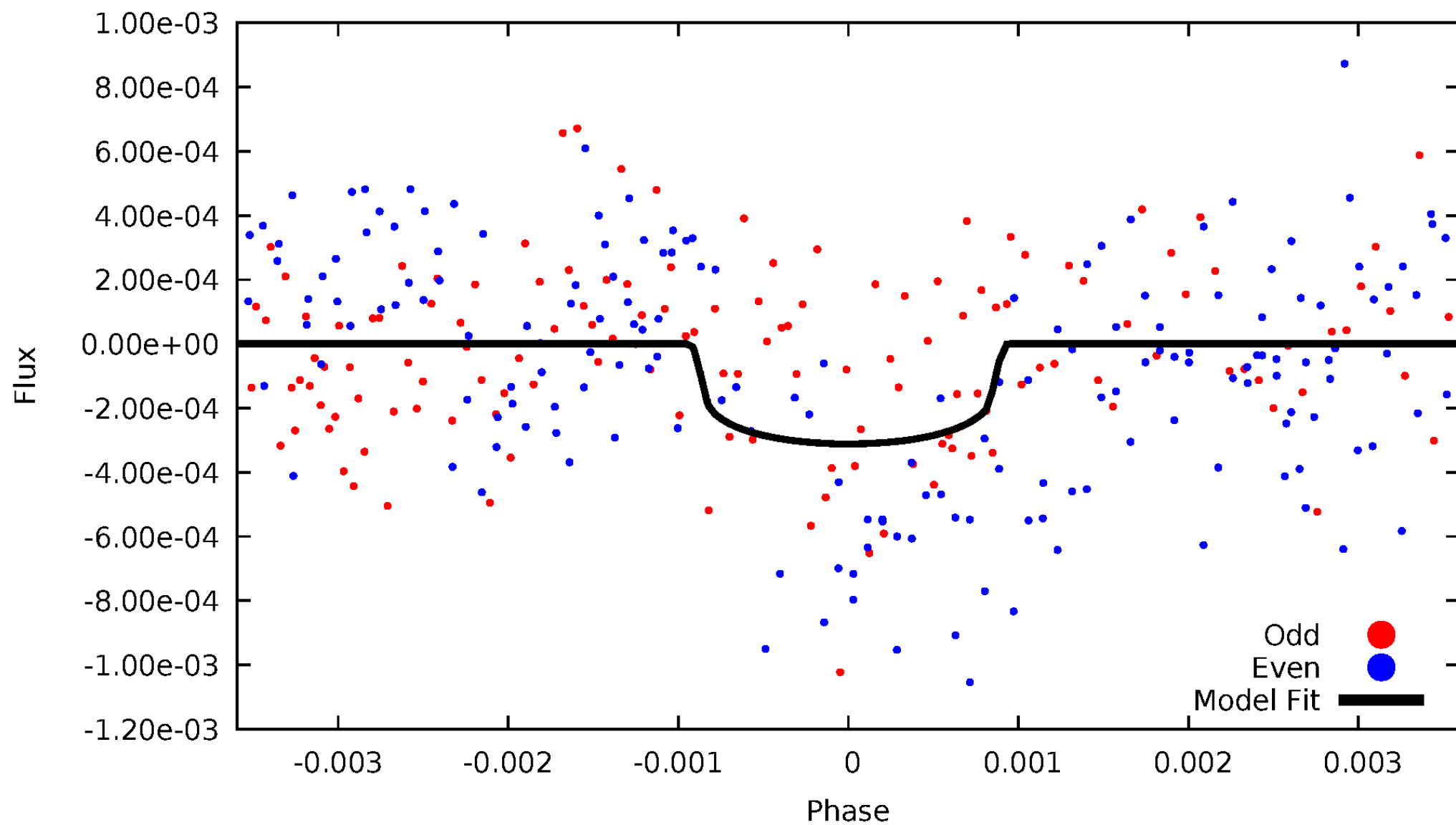


TCE 004952226-02



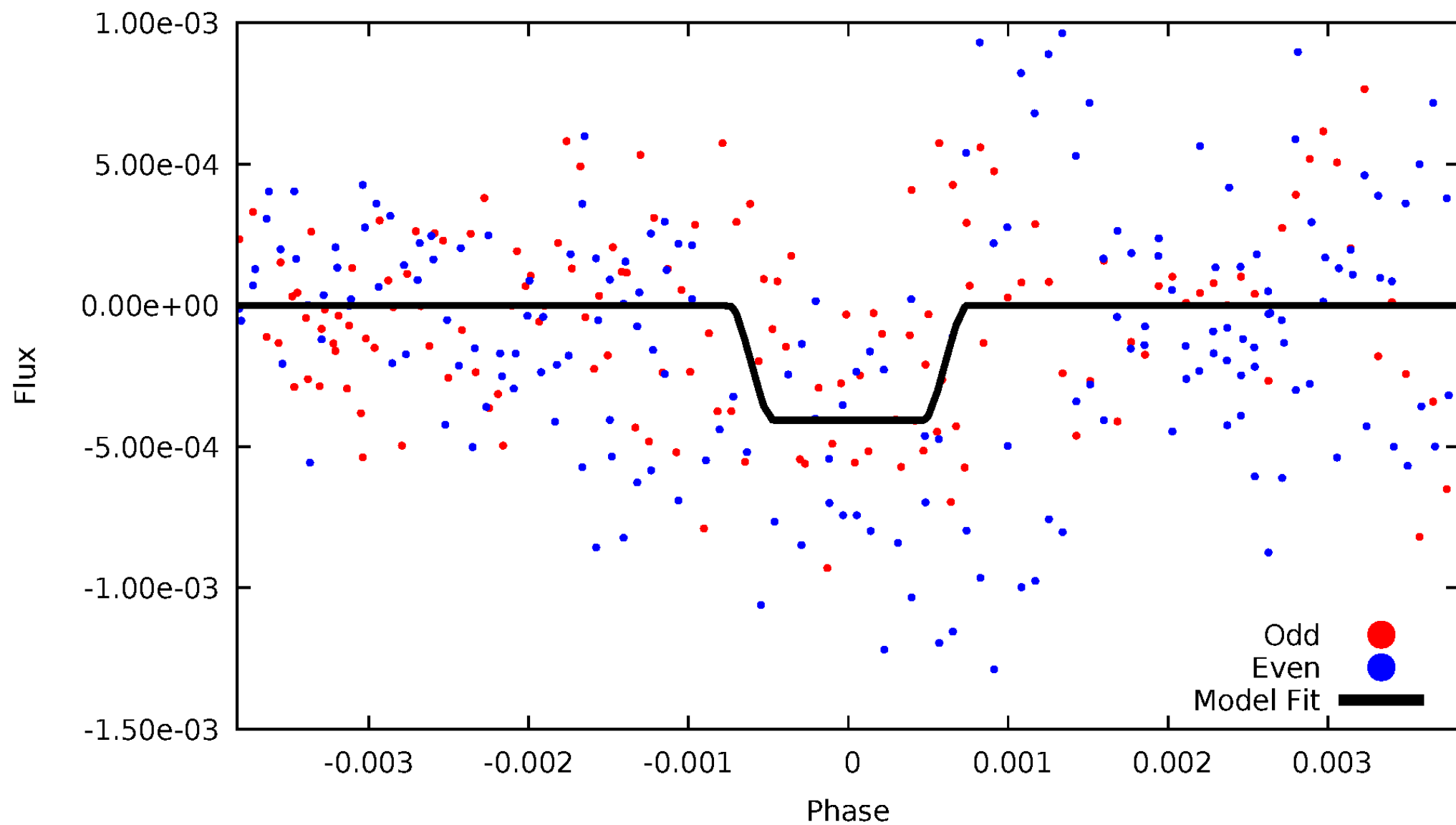
DV Odd/Even

TCE 004952226-02



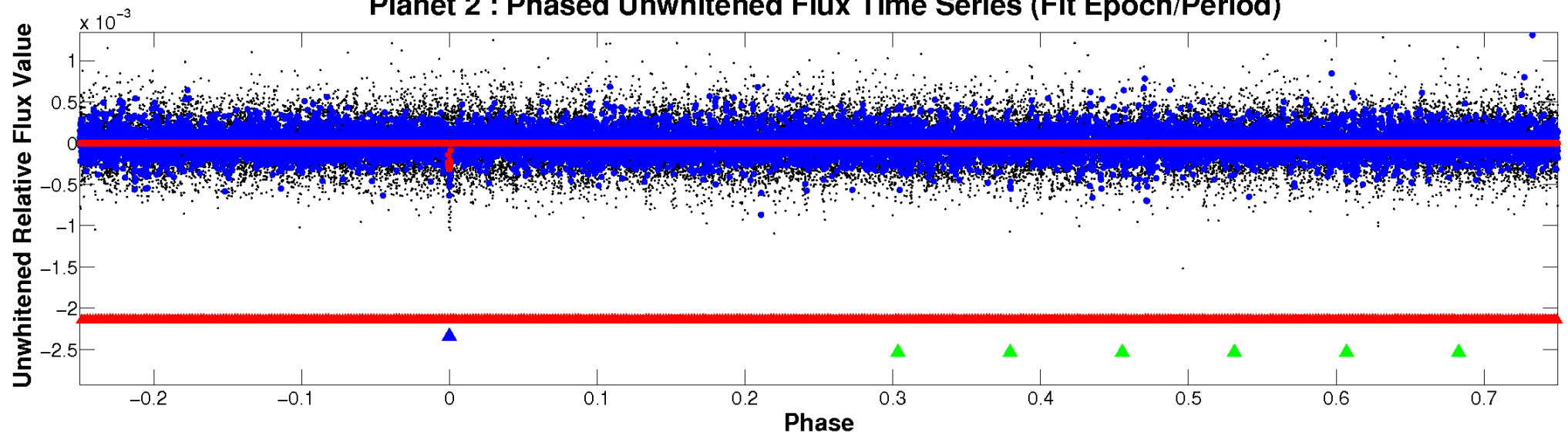
ALT Odd/Even

TCE 004952226-02

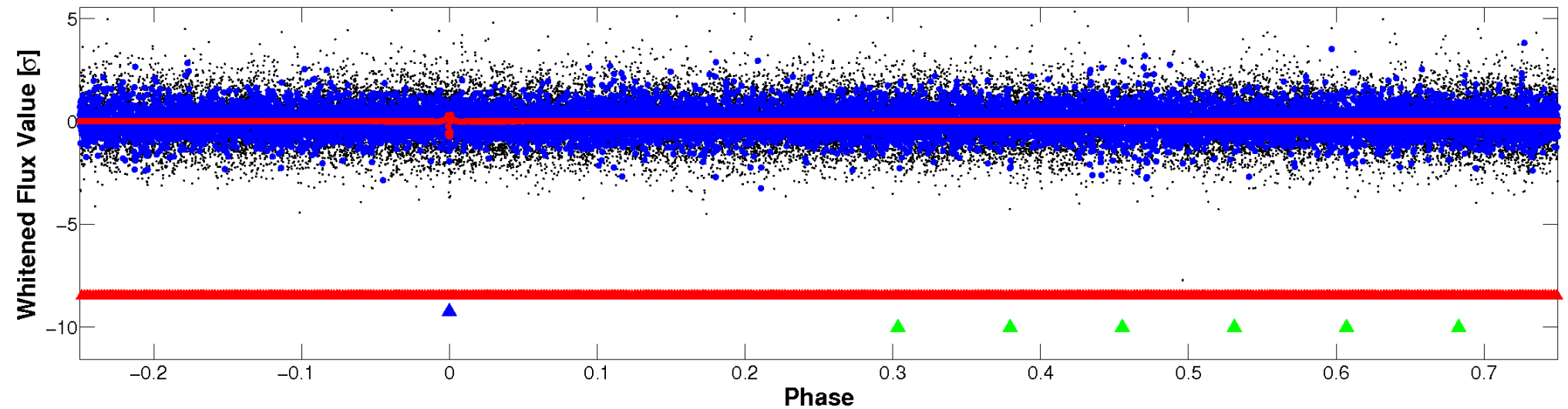


Non-Whitened Vs. Whitened Light Curve

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

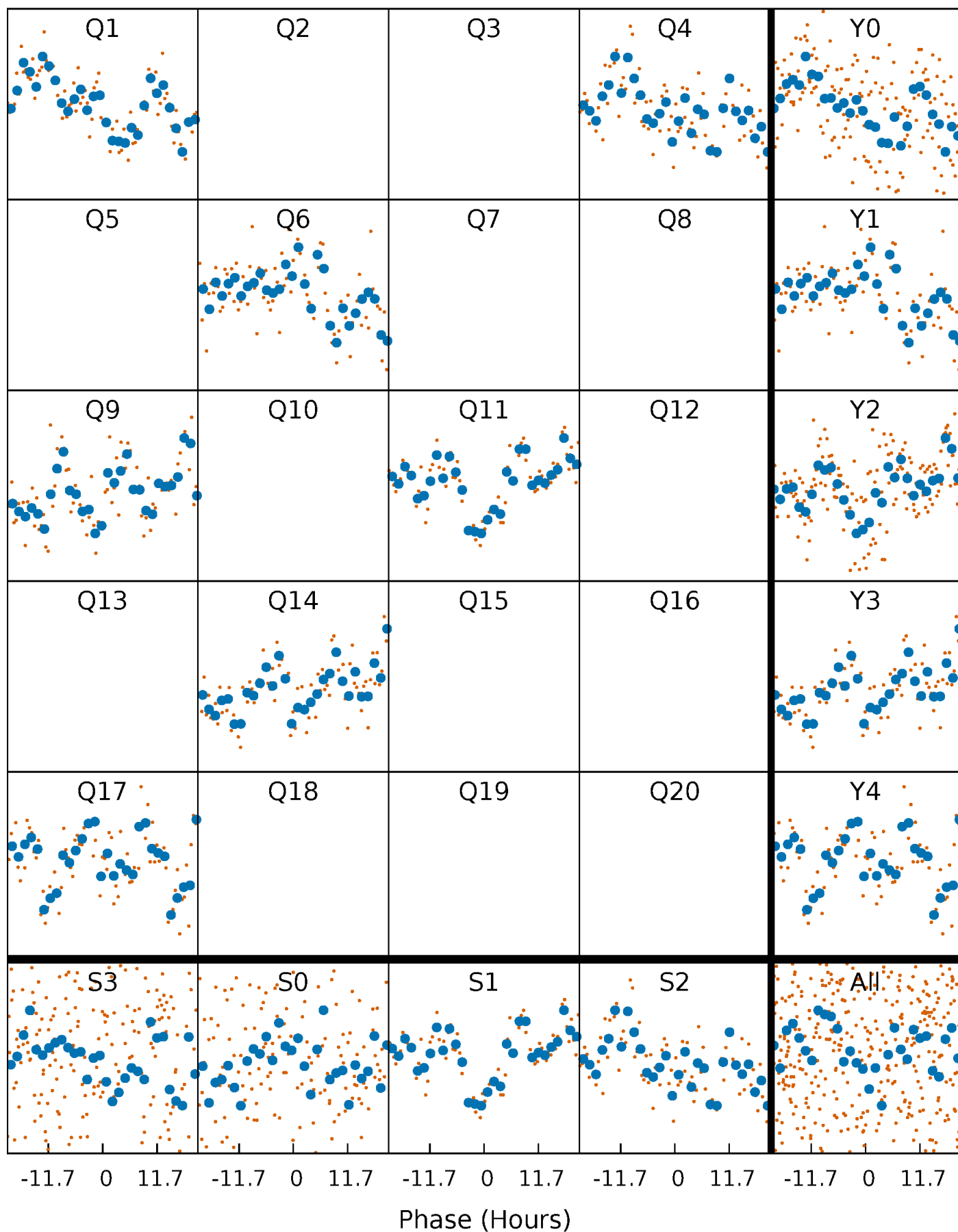


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



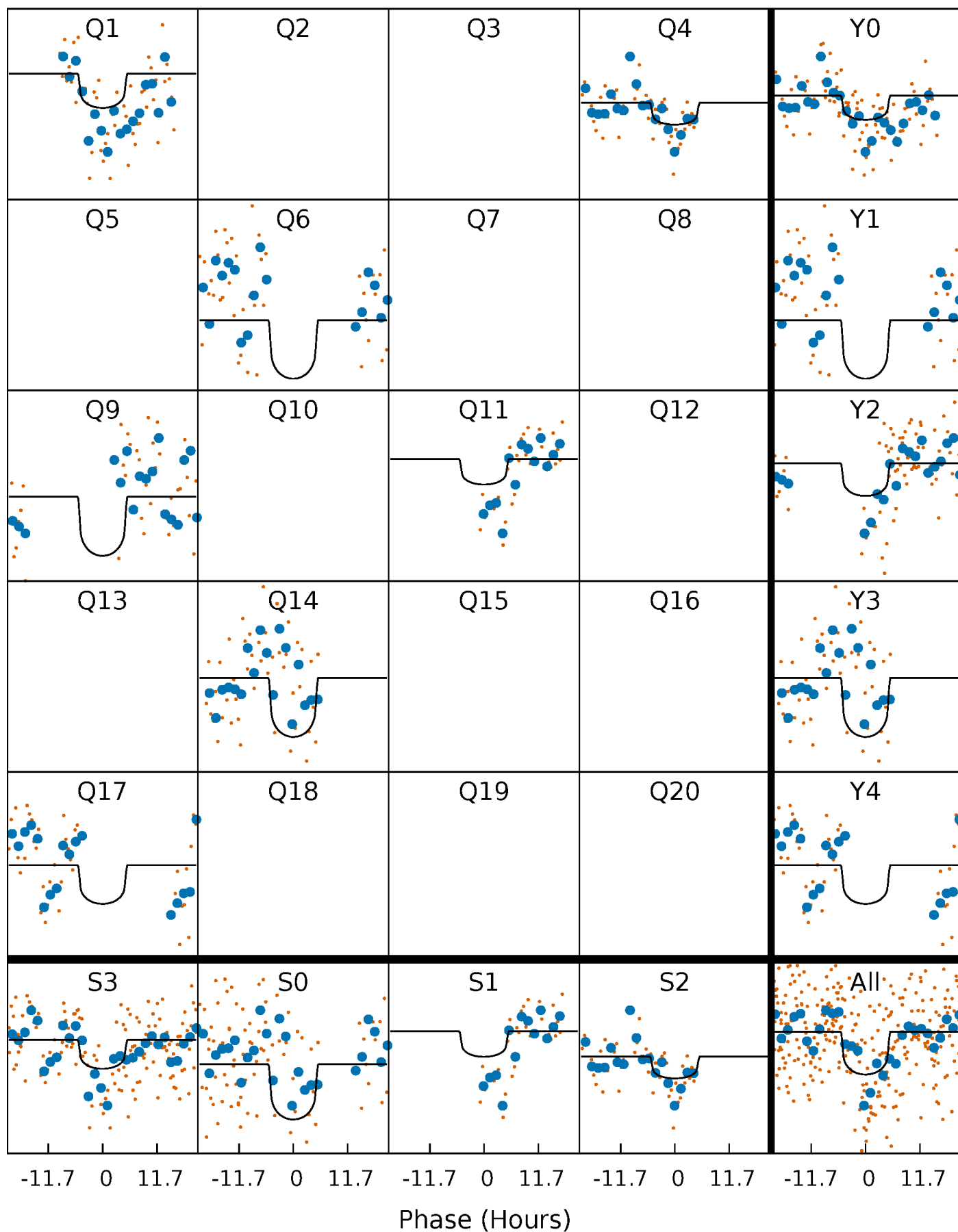
PDC Quarter-Phased Transit Curves

TCE 004952226-02 $P=238.025164$ Days $T_0=141.661358$ (BKJD)



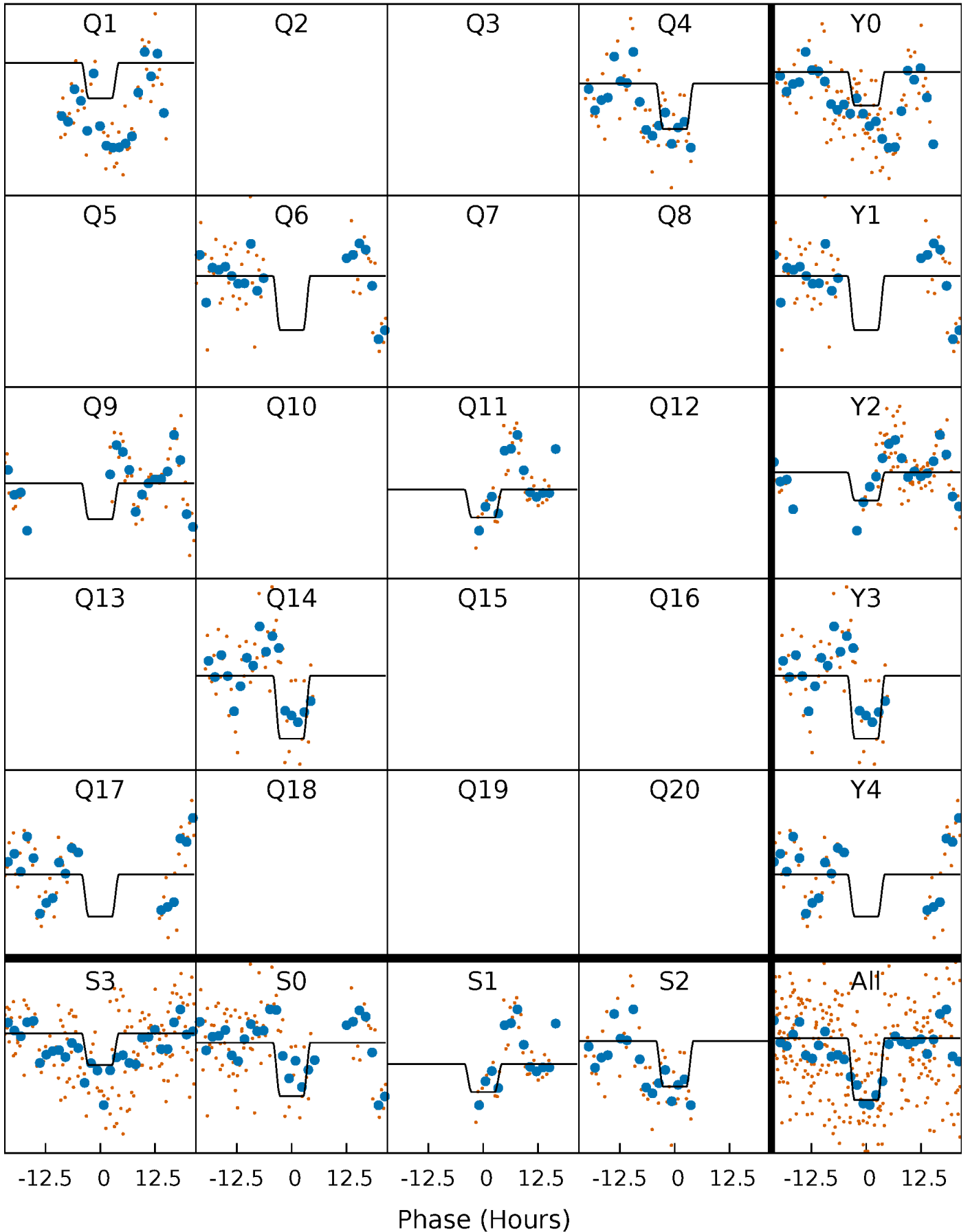
DV Quarter-Phased Transit Curves

TCE 004952226-02 $P=238.025164$ Days $T_0=141.661358$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

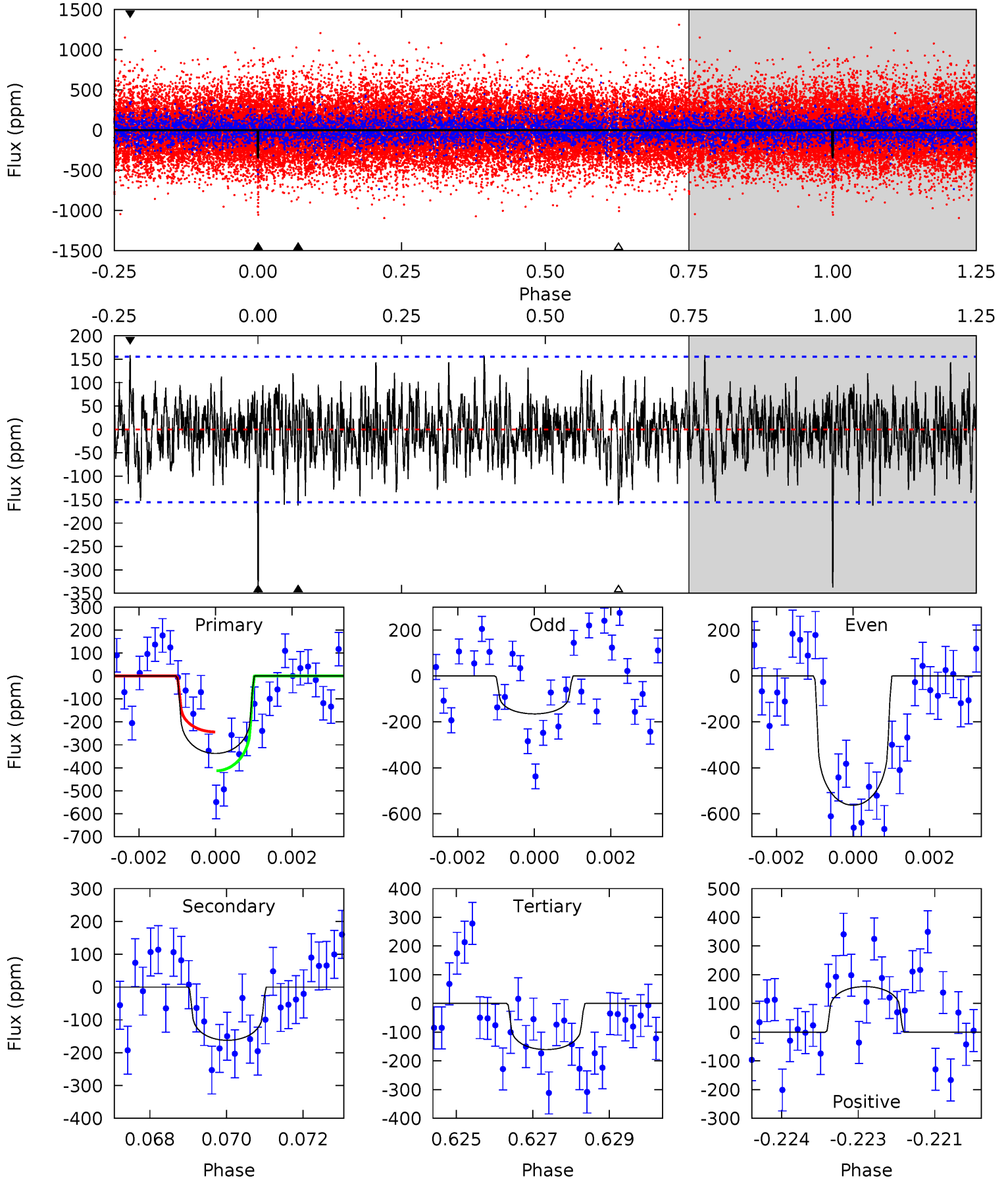
TCE 004952226-02 P=238.030540 Days $T_0=141.675799$ (BKJD)



DV Model-Shift Uniqueness Test

004952226-02, P = 238.025164 Days, E = 141.661358 Days

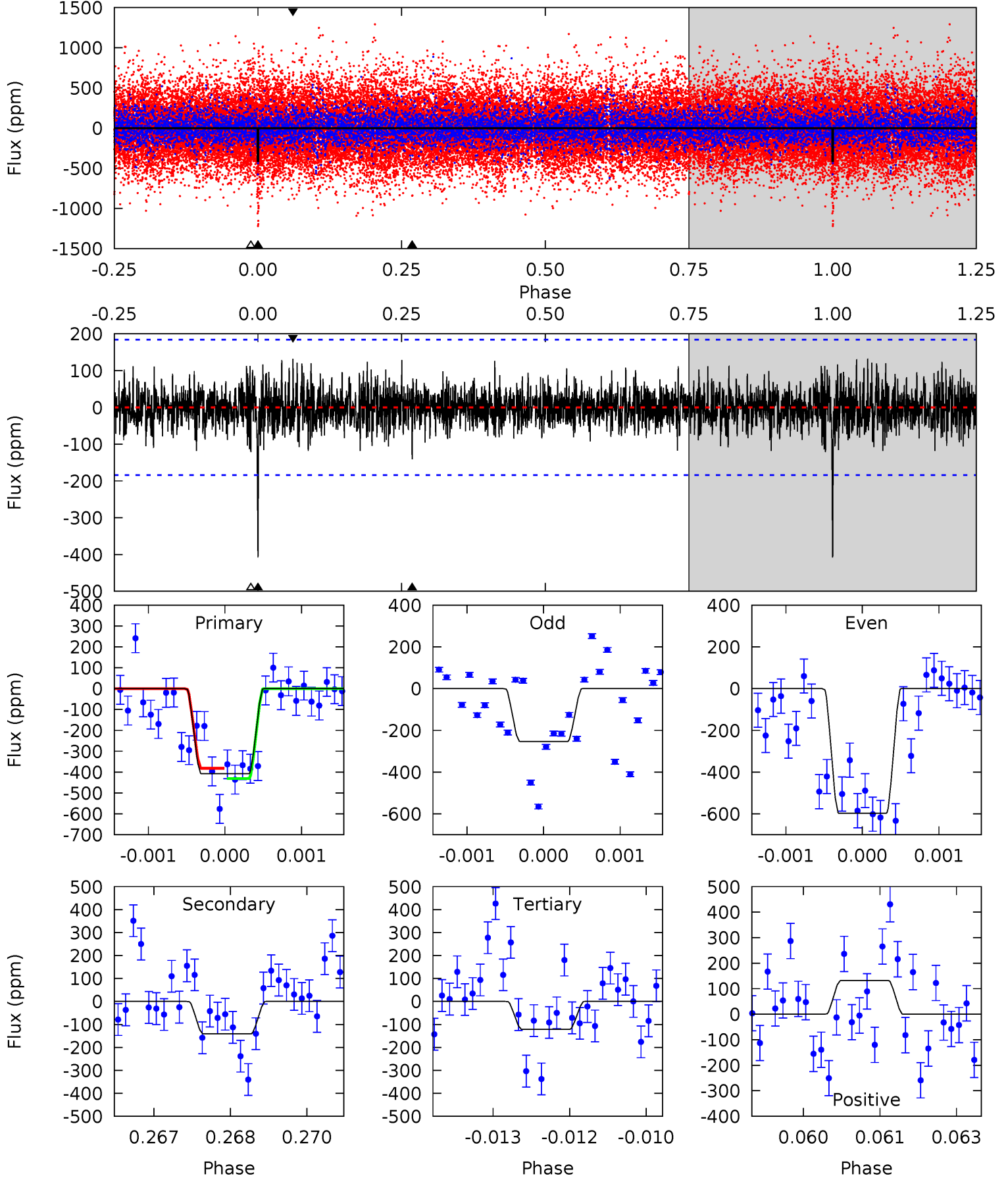
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.6	5.58	5.53	5.46	5.34	3.12	1.65	6.08	6.15	0.06	0.12	6.81	0.96	0.32	2.91



Alt Model-Shift Uniqueness Test

004952226-02, P = 238.030540 Days, E = 141.675799 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.9	4.13	3.56	3.86	5.38	3.18	1.11	8.36	8.06	0.57	0.27	5.00	0.78	0.24	0.71



Stellar Parameters For KIC 004952226

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5780^{+1}_{-1}	$4.438^{+1.000}_{-1.000}$	$0.000^{+1.000}_{-1.000}$	$1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$
	+0%/-0%	+23%/-23%	+inf%/-inf%	+100%/-100%	+100%/-100%	+100%/-100%
Source	Solar	Solar	Solar	Solar		

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

Secondary Eclipse Parameters for KIC 004952226-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-162 ± 29	$2.24^{+1.99}_{-1.48}$	411^{+19}_{-19}	4661^{+3407}_{-968}	9616^{+83642}_{-6943}
Alt.	-141 ± 34	$2.69^{+2.00}_{-1.73}$	410^{+20}_{-18}	4236^{+2542}_{-750}	5993^{+41811}_{-4048}

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 $A_{obs} \gg 1.0$

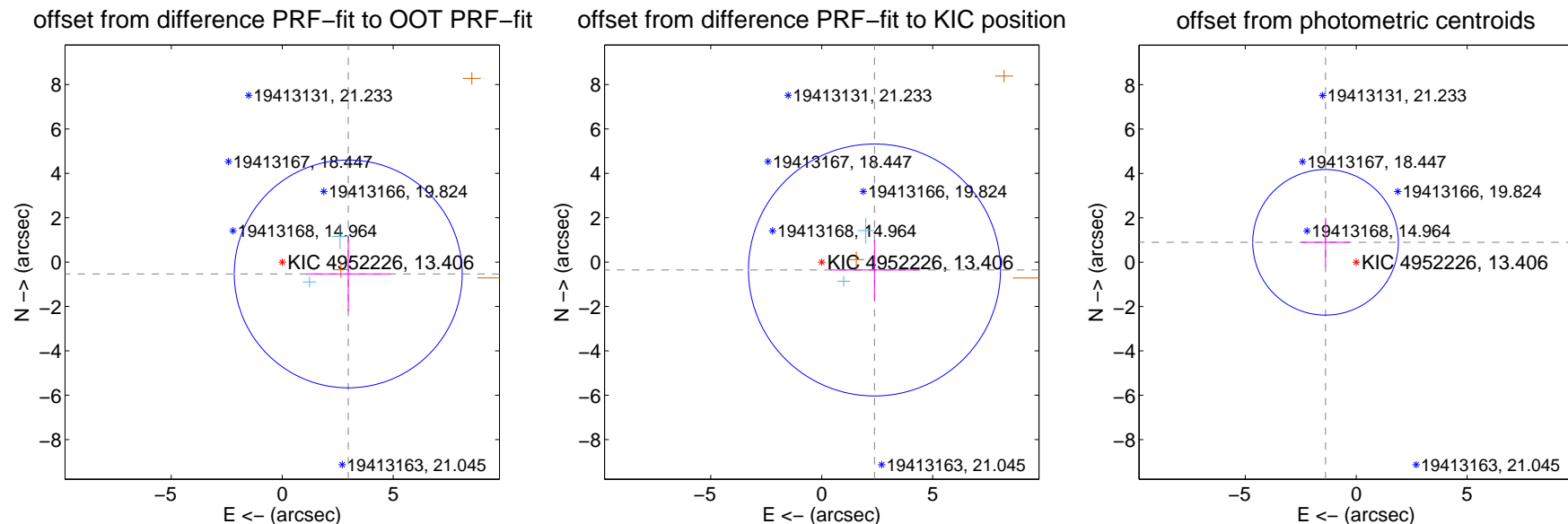
DV Centroid Data

Supplemental centroid analysis for 004952226-02. Kepler magnitude: 13.41. Transit SNR 5.78

There are 2 quarters with good PRF difference image offsets

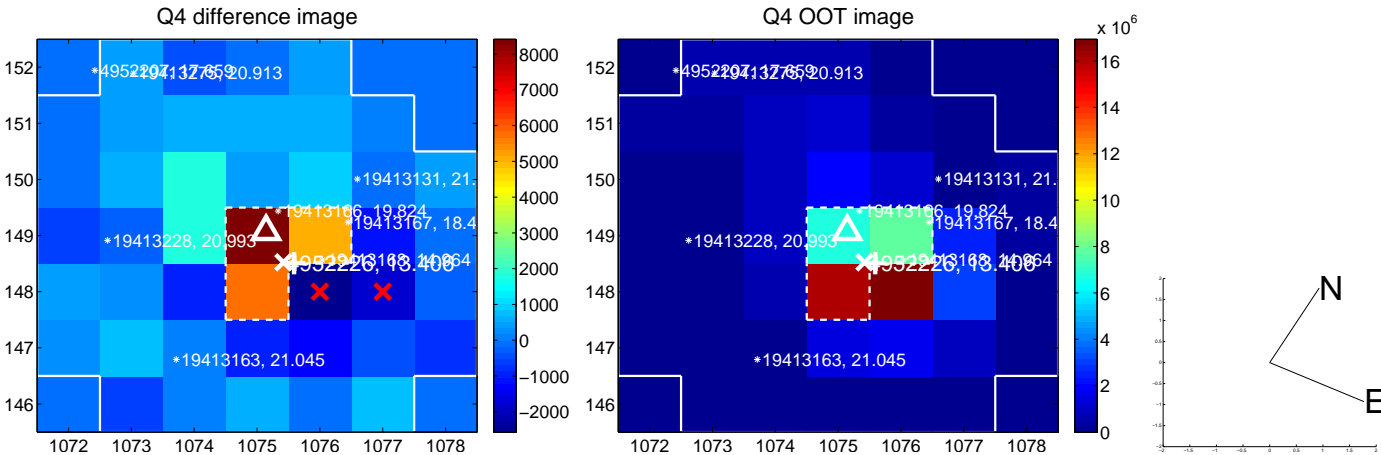
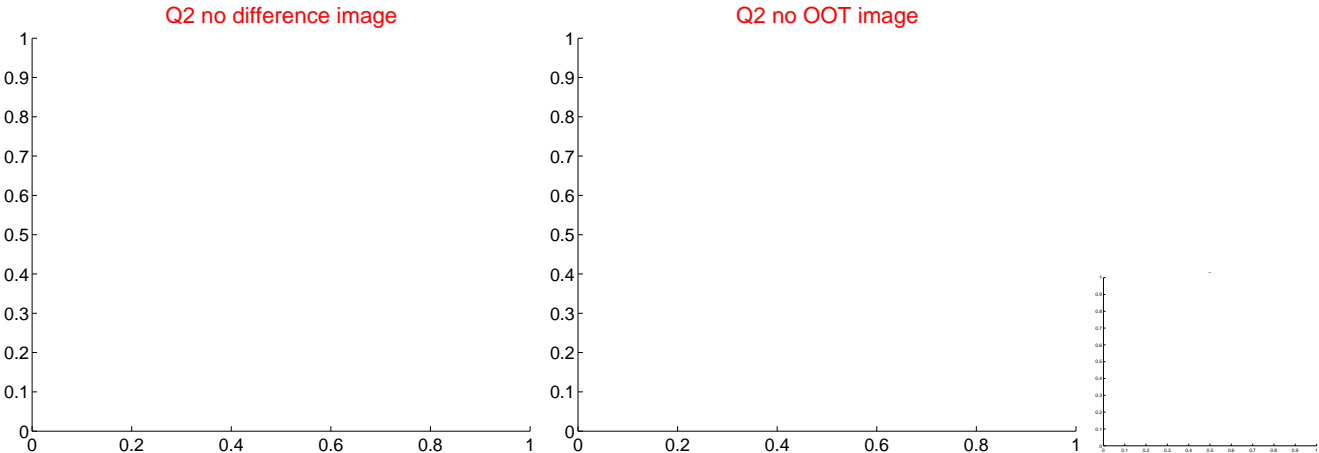
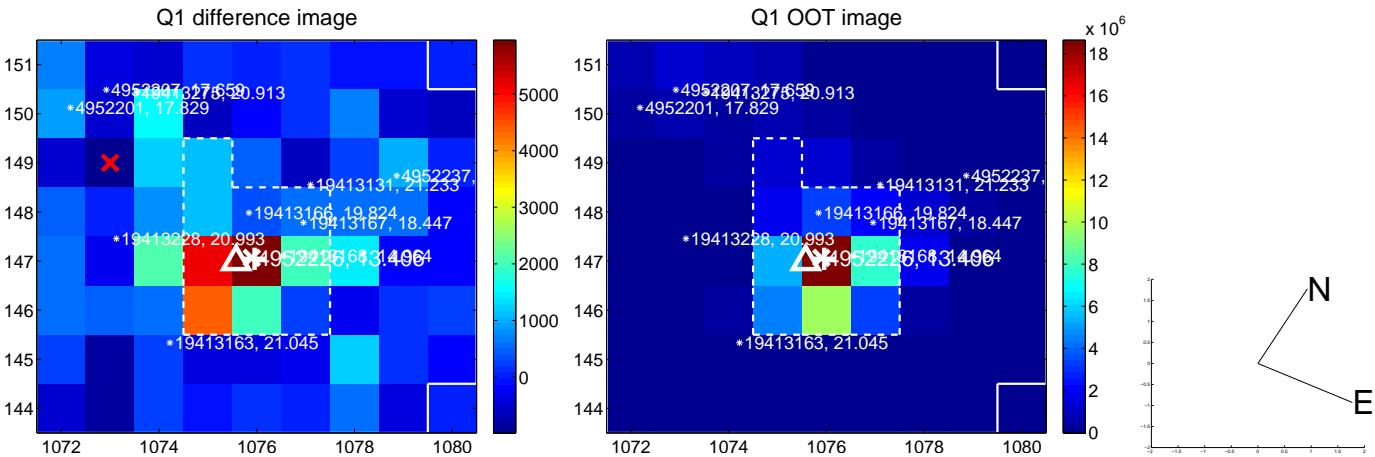
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.022 ± 1.711	1.77	-2.974 ± 1.889	-0.533 ± 1.685
PRF-fit source offset from KIC position	2.404 ± 1.893	1.27	-2.378 ± 2.004	-0.355 ± 1.362
photometric centroid source offset	1.65 ± 1.09	1.51	1.38 ± 1.09	0.89 ± 1.10



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.

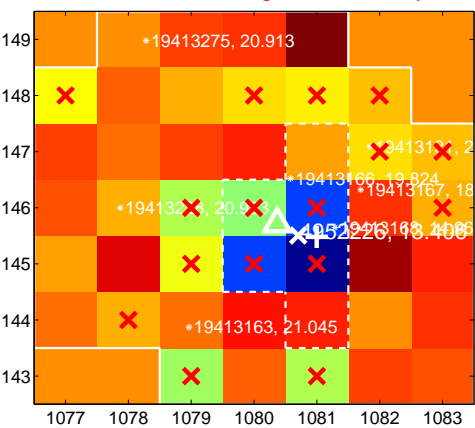
Q5 no difference image



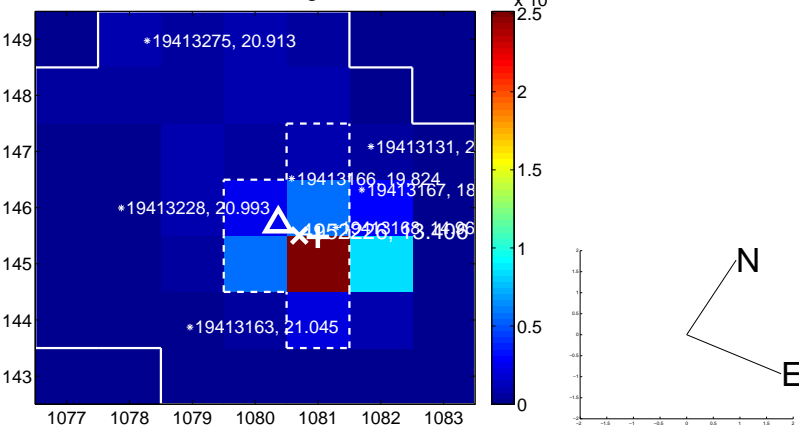
Q5 no OOT image



Q6 difference image. Poor Quality



Q6 OOT image



Q7 no difference image



Q7 no OOT image



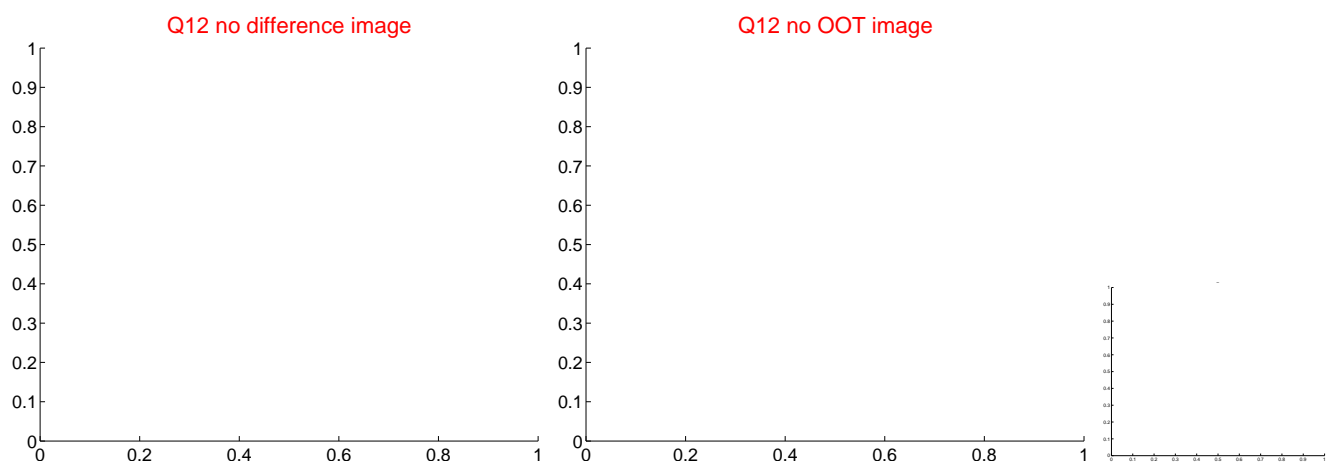
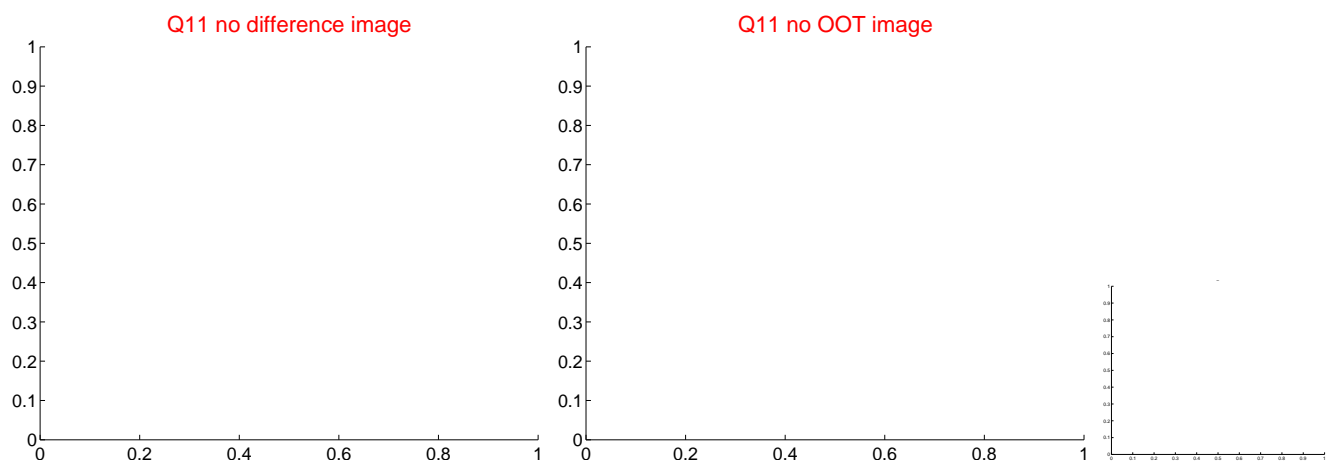
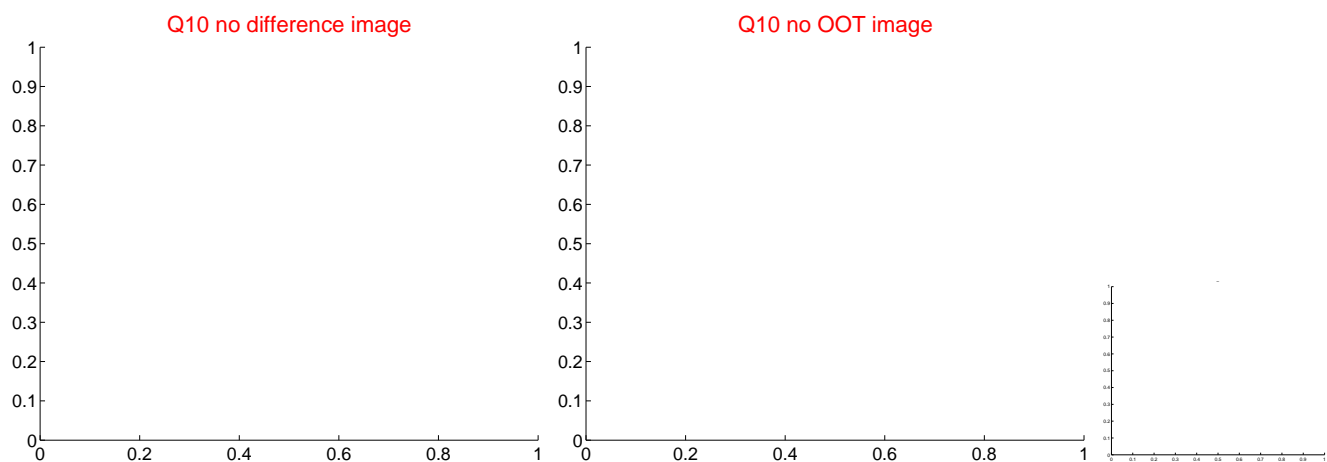
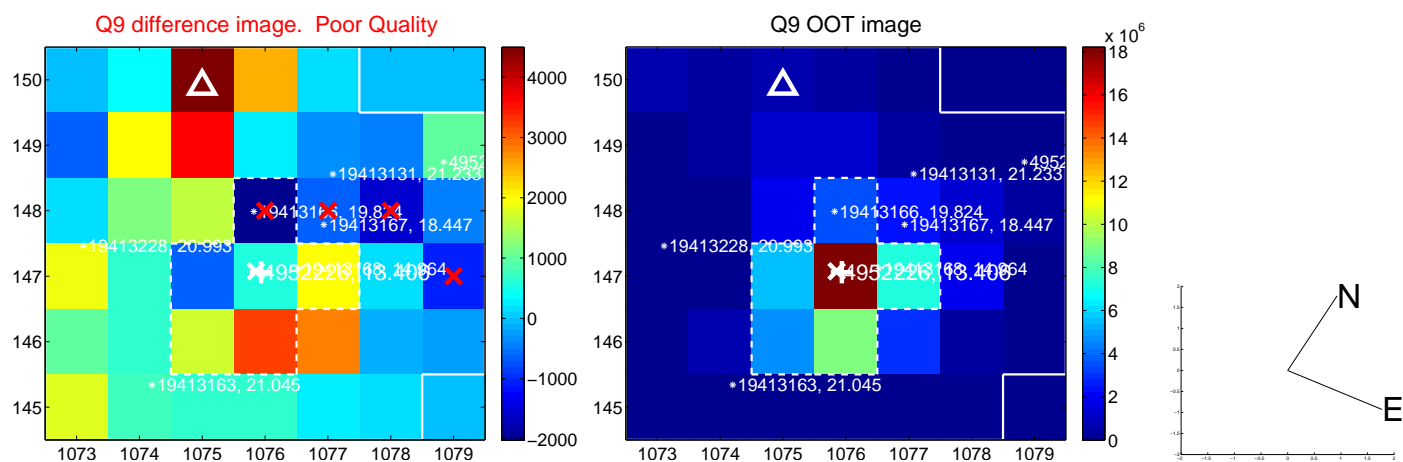
Q8 no difference image



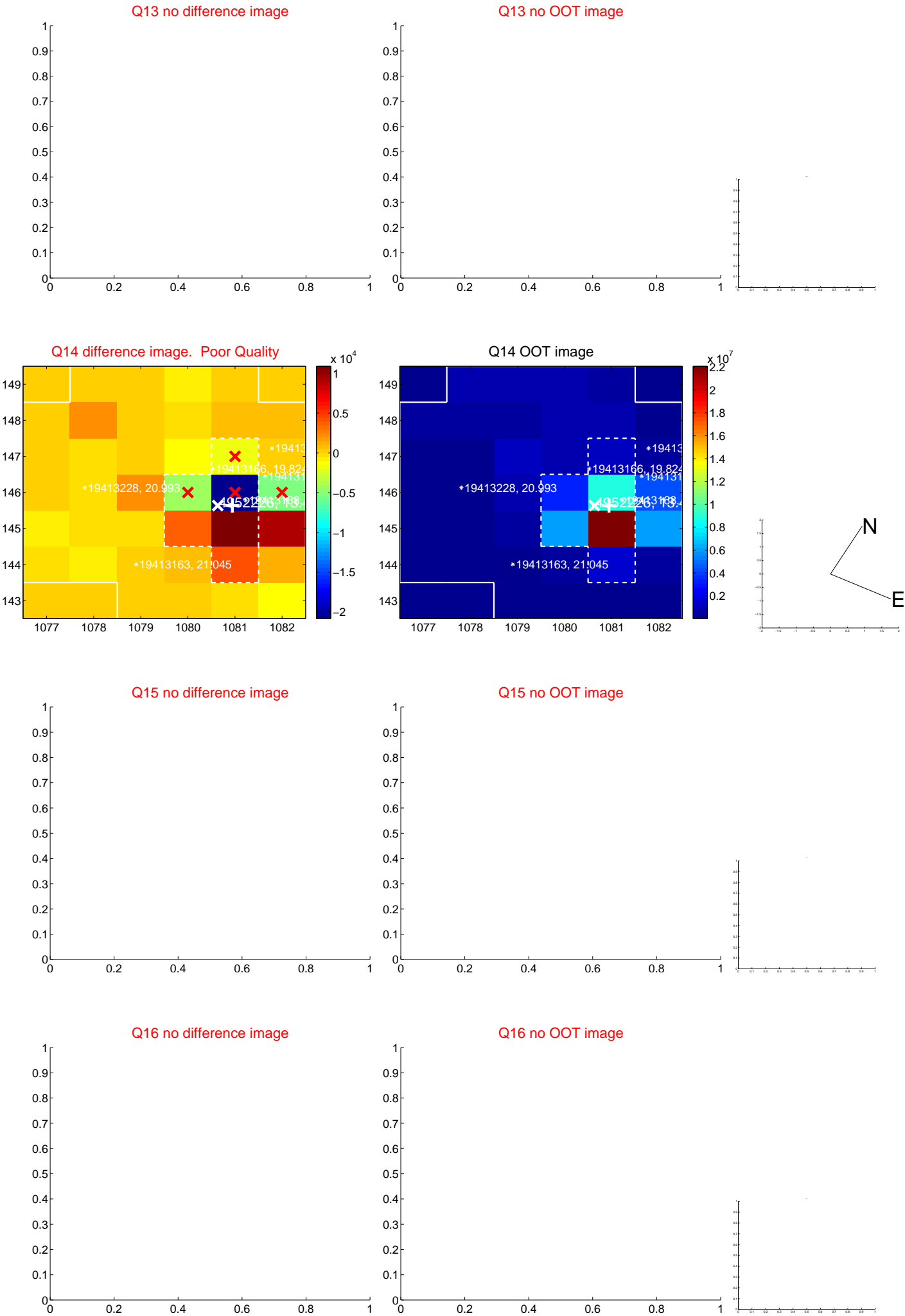
Q8 no OOT image



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

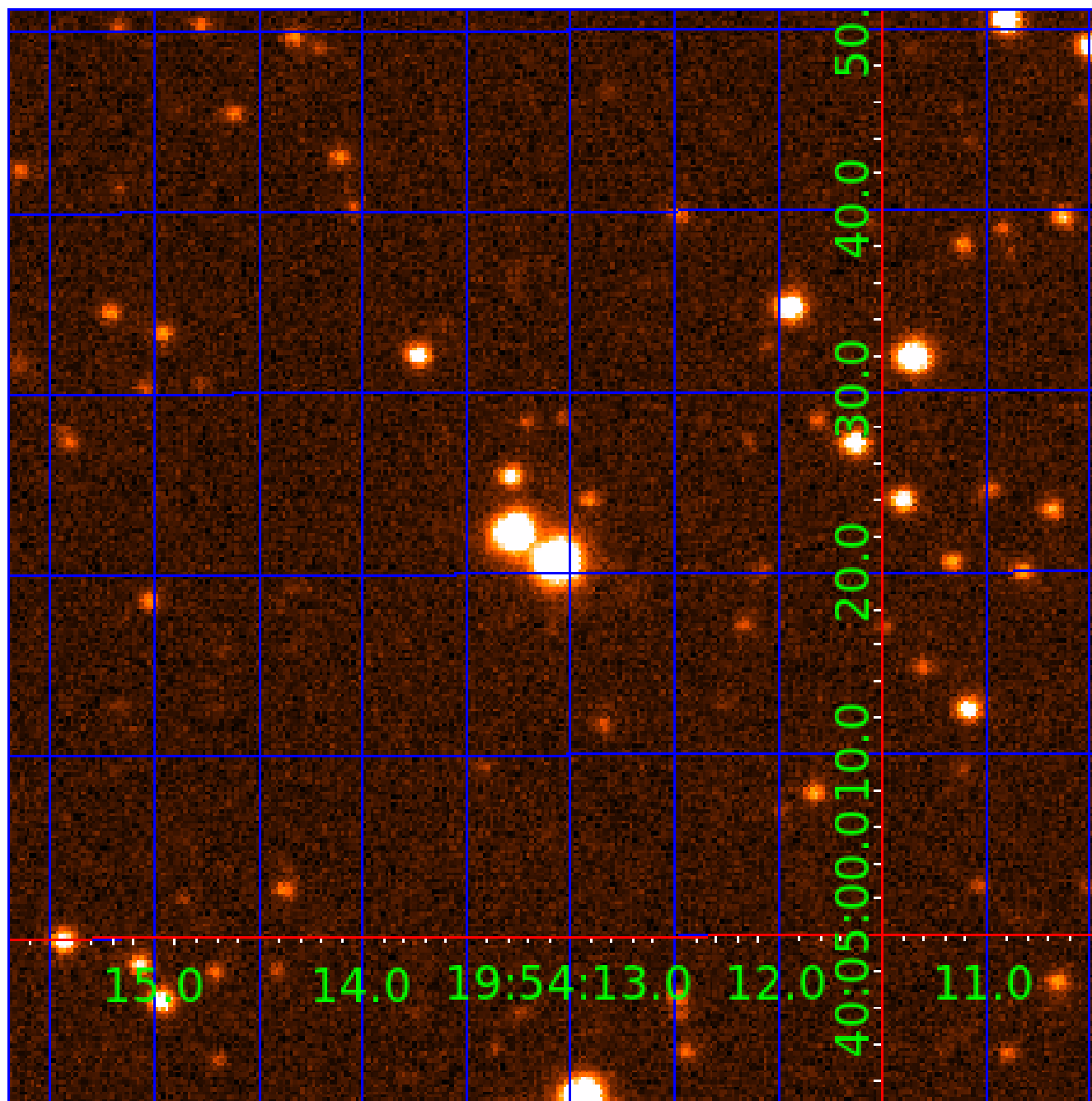


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 004952226

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})
004952226-01	OBS	No	1.827545	131.744715	34.9	6.129	7.7	7.7	1.00	5780	0.70	1168.02
004952226-02	OBS	No	238.025164	141.661358	311.7	10.262	8.2	5.8	1.00	5780	1.85	1.77
004952226-03	OBS	No	256.084867	213.909540	425.3	12.506	7.4	7.4	1.00	5780	2.22	1.60

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004952226-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004952226-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004952226-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—HALO_GHOST

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

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

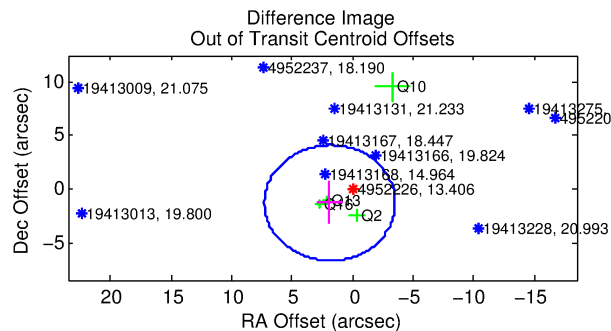
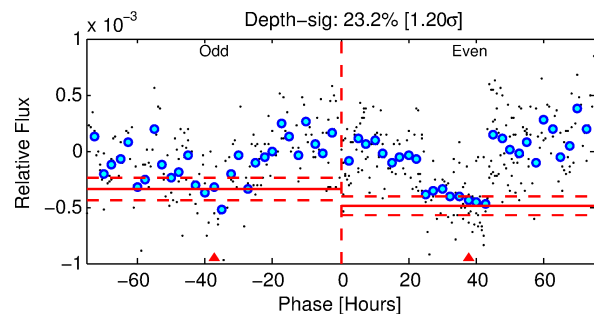
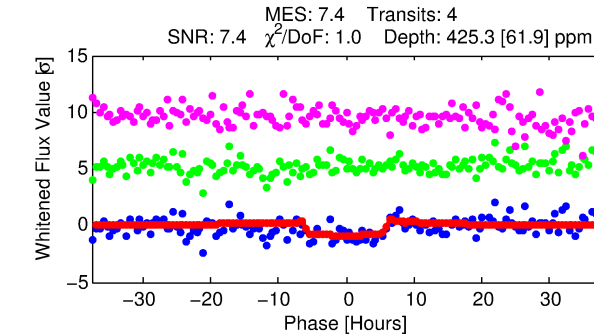
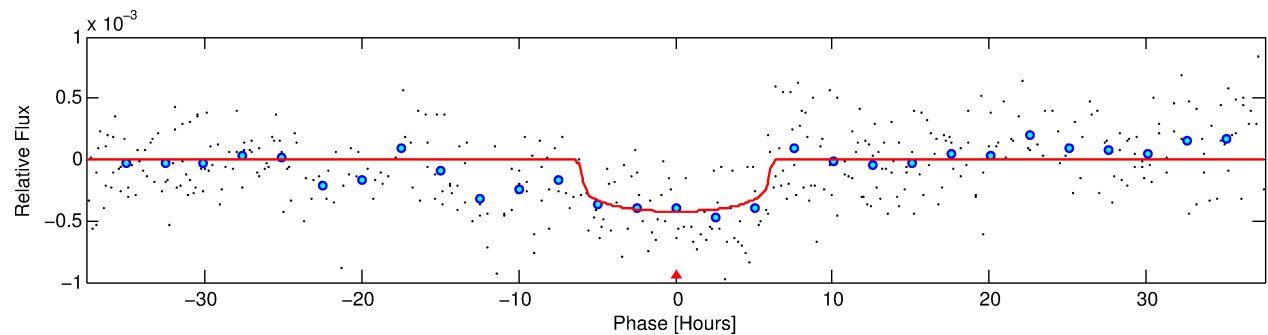
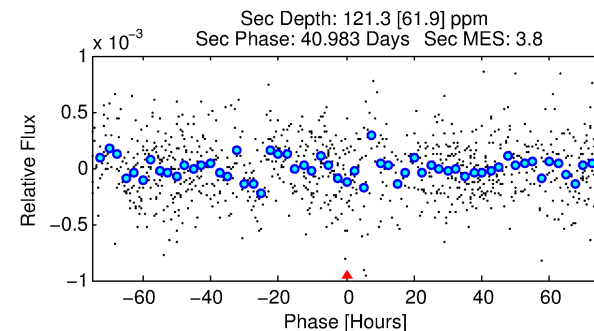
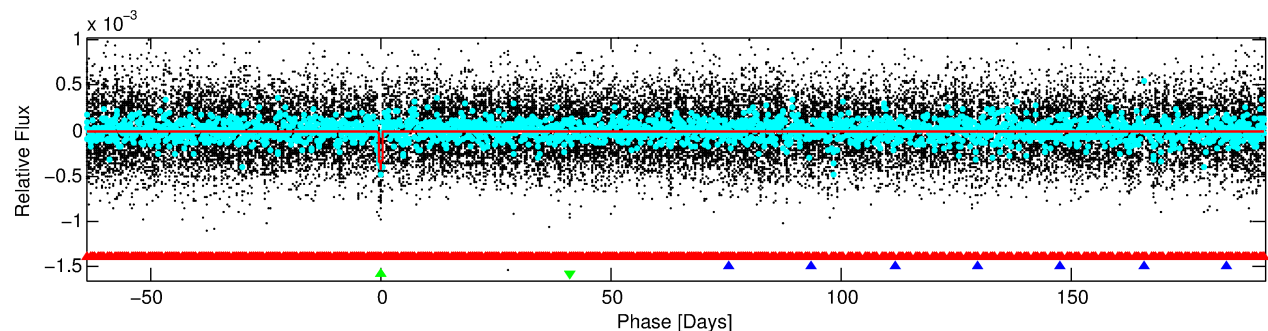
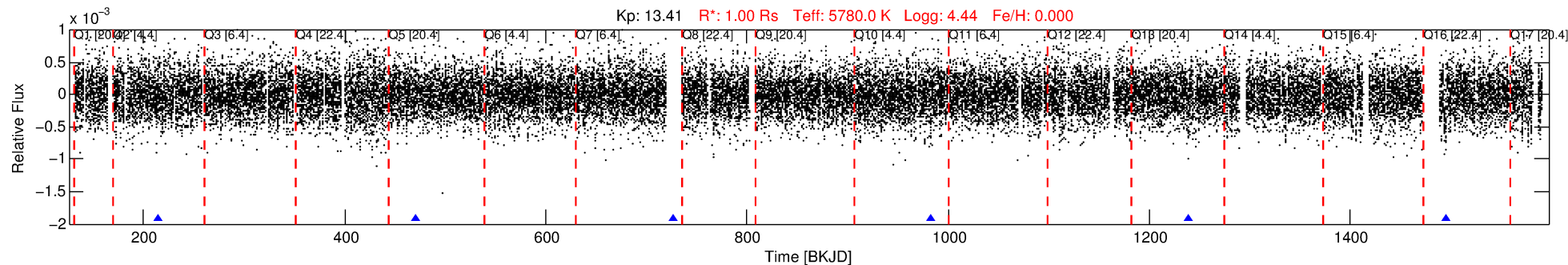
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004952226-03

No Significant Match Found

DV One-Page Summary

KIC: 4952226 Candidate: 3 of 3 Period: 256.085 d



DV Fit Results:

Period = 256.08487 [0.00753] d
Epoch = 213.9095 [0.0309] BKJD
Rp/R* = 0.0203 [0.0069]
a/R* = 112.50 [162.69]
b = 0.72 [0.96]
Seff = 1.60 [0.00]
Teq = 287 [0] K
Rp = 2.22 [0.75] Re
a = 0.7894 [0.0000] AU
Ag = 8450.17 [7152.04] [1.18 σ]
Teffp = 4254 [900] K [4.41 σ]

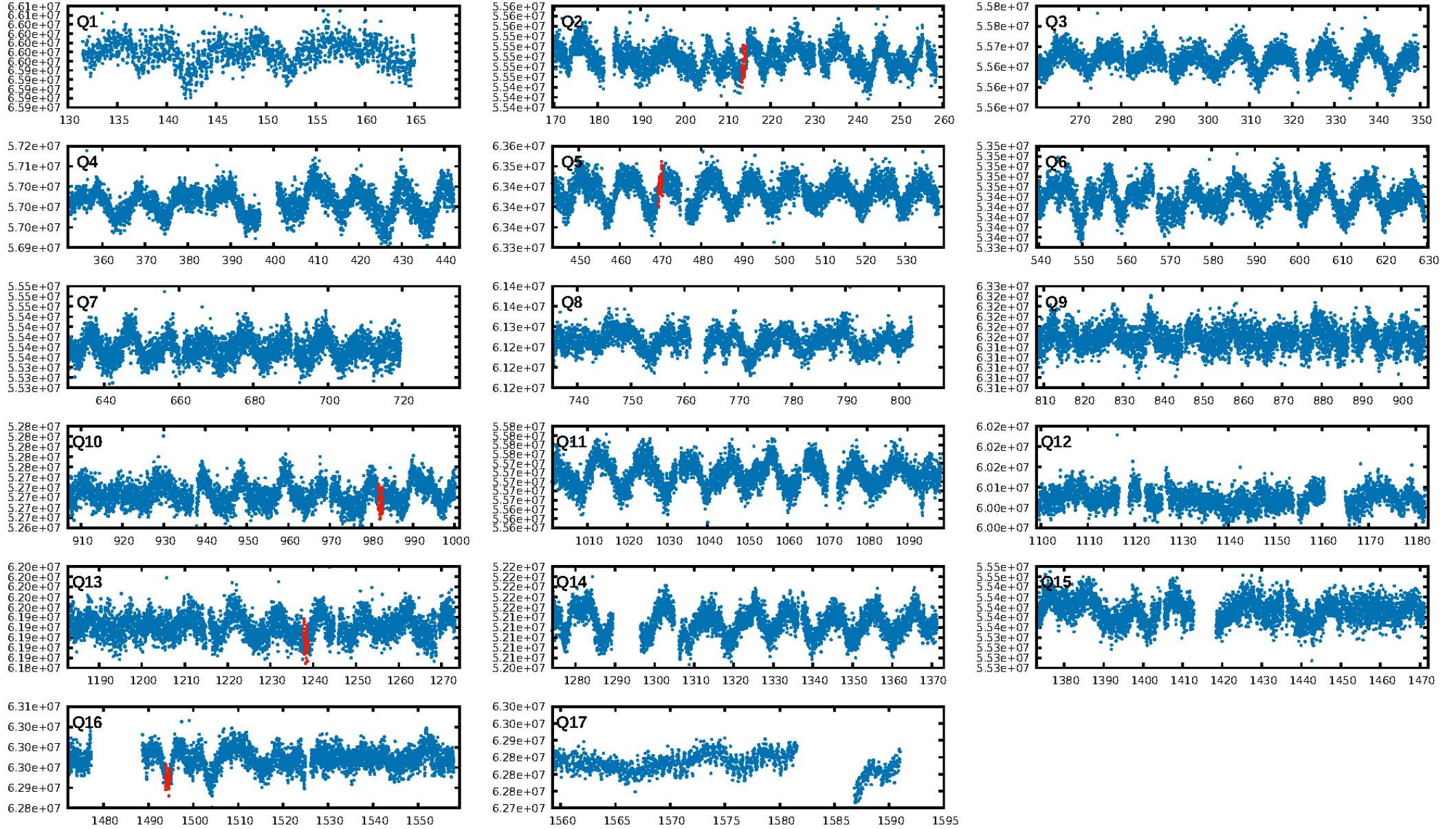
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [26.79 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 43.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.44e-10
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.1622
Centroid-sig: 17.8%
Centroid-so: 1.693 arcsec [1.96 σ]
OotOffset-rm: 2.292 arcsec [1.27 σ]
OotOffset-st: 2/0/1/1 [4]
KicOffset-rm: 2.766 arcsec [1.57 σ]
KicOffset-st: 2/0/1/1 [4]
DiffImageQuality-fgm: 0.50 [2/4]
DiffImageOverlap-fno: 0.00 [0/5]

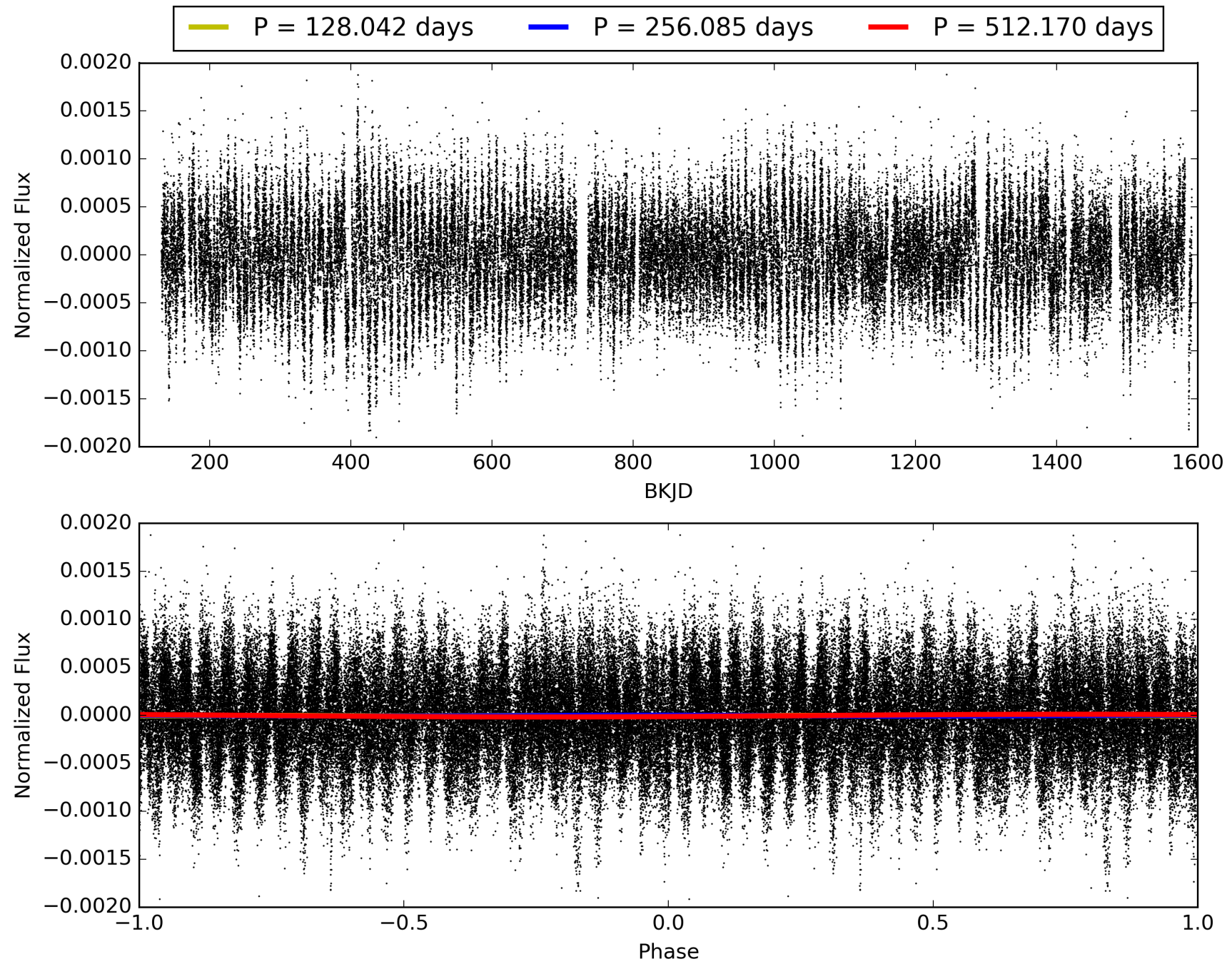
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 18:58:48 Z

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

TCE 004952226-03, PDC Light Curves

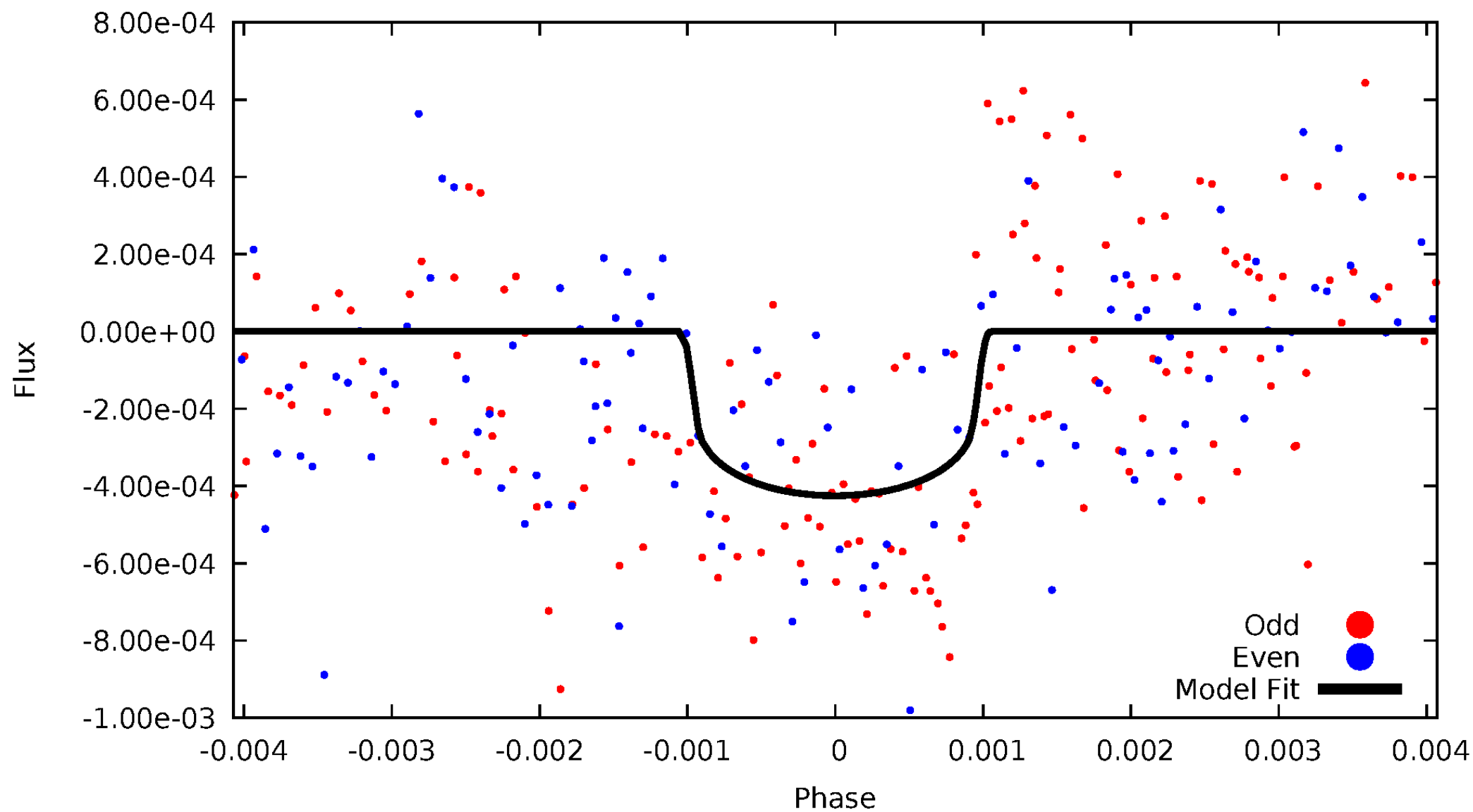


TCE 004952226-03



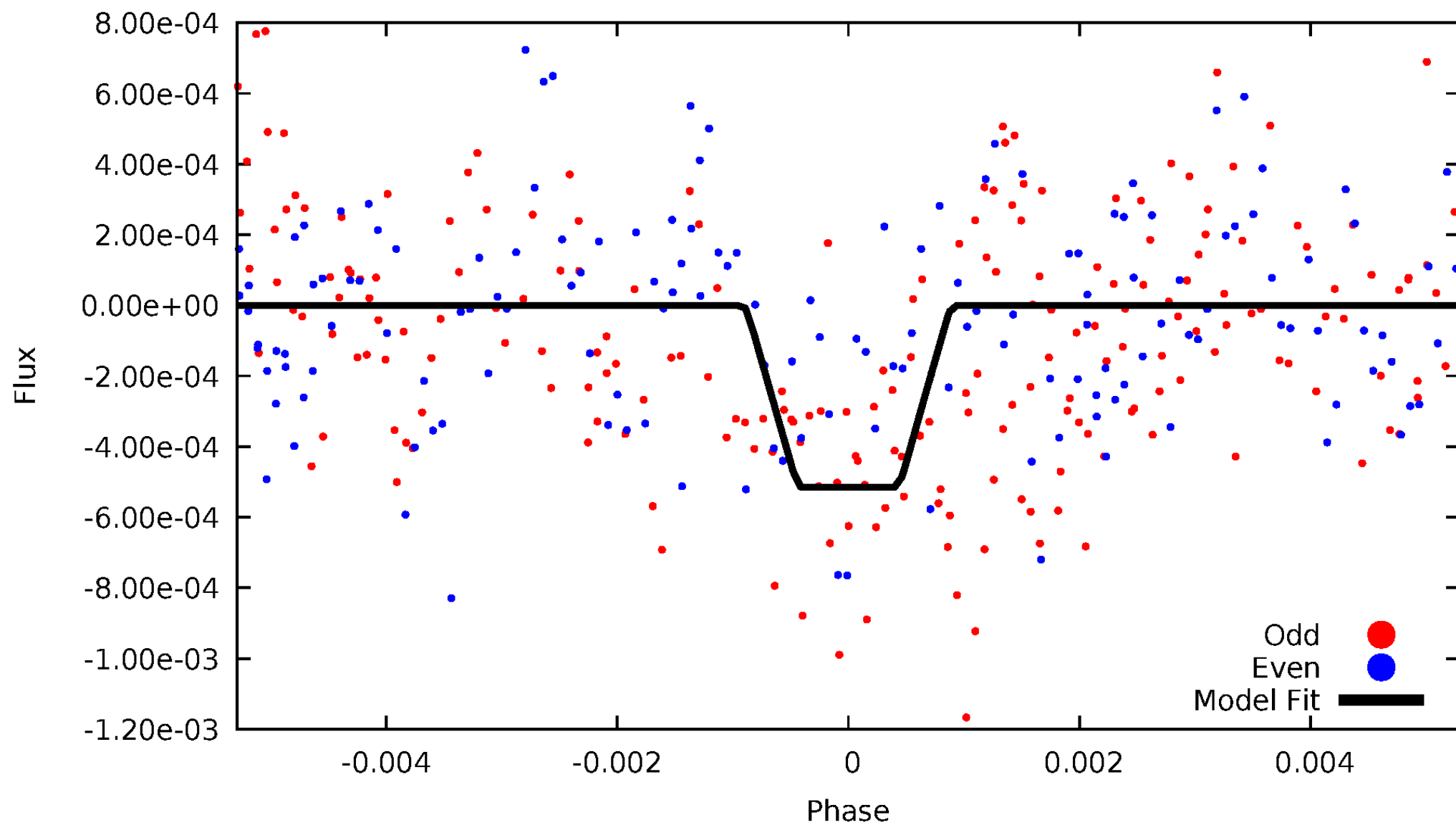
DV Odd/Even

TCE 004952226-03



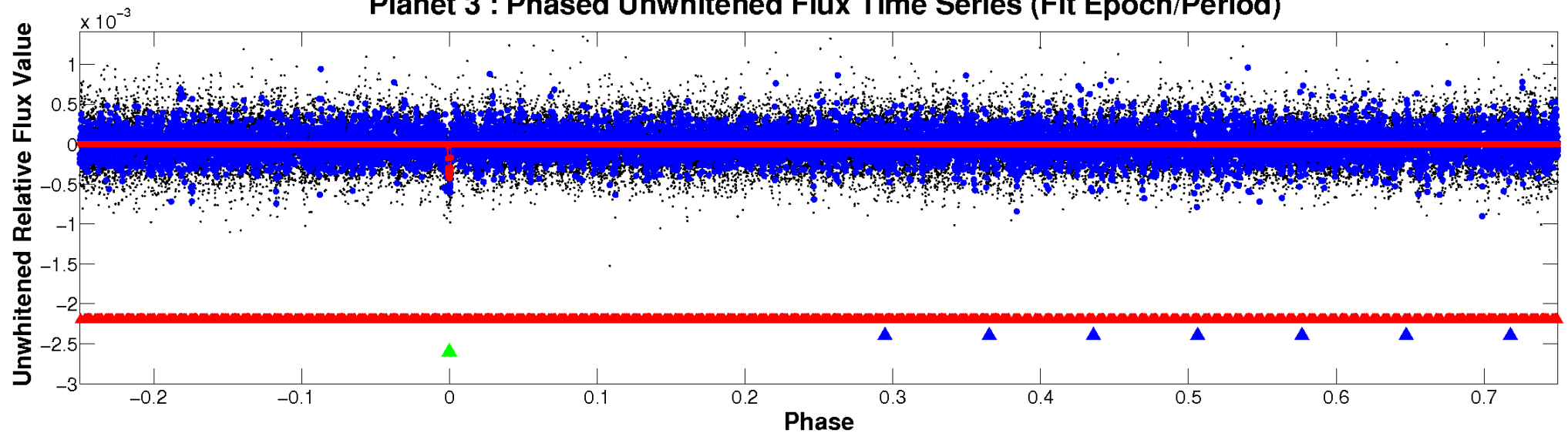
ALT Odd/Even

TCE 004952226-03

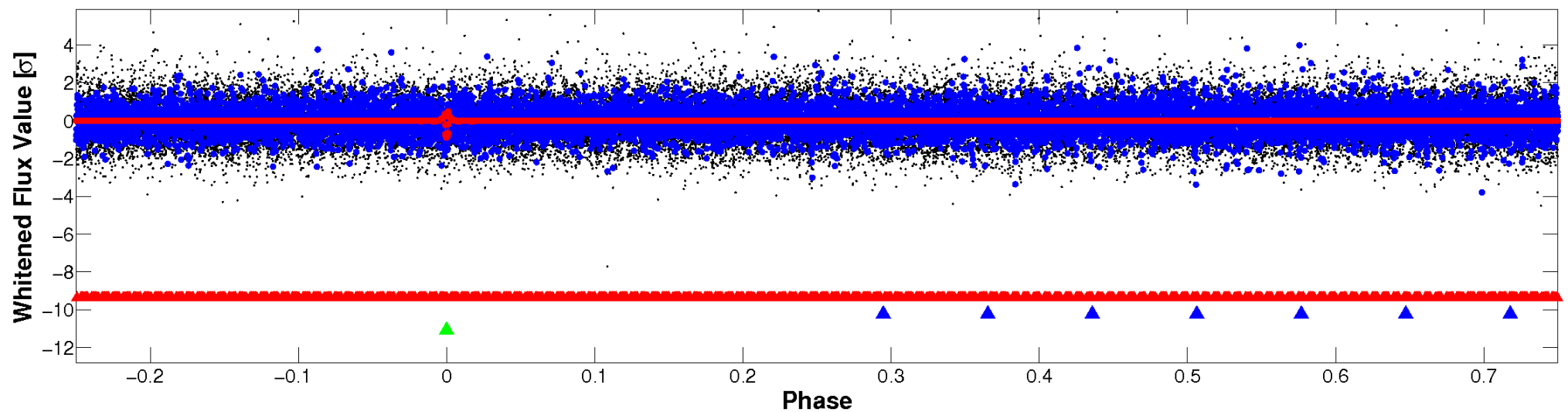


Non-Whitened Vs. Whitened Light Curve

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

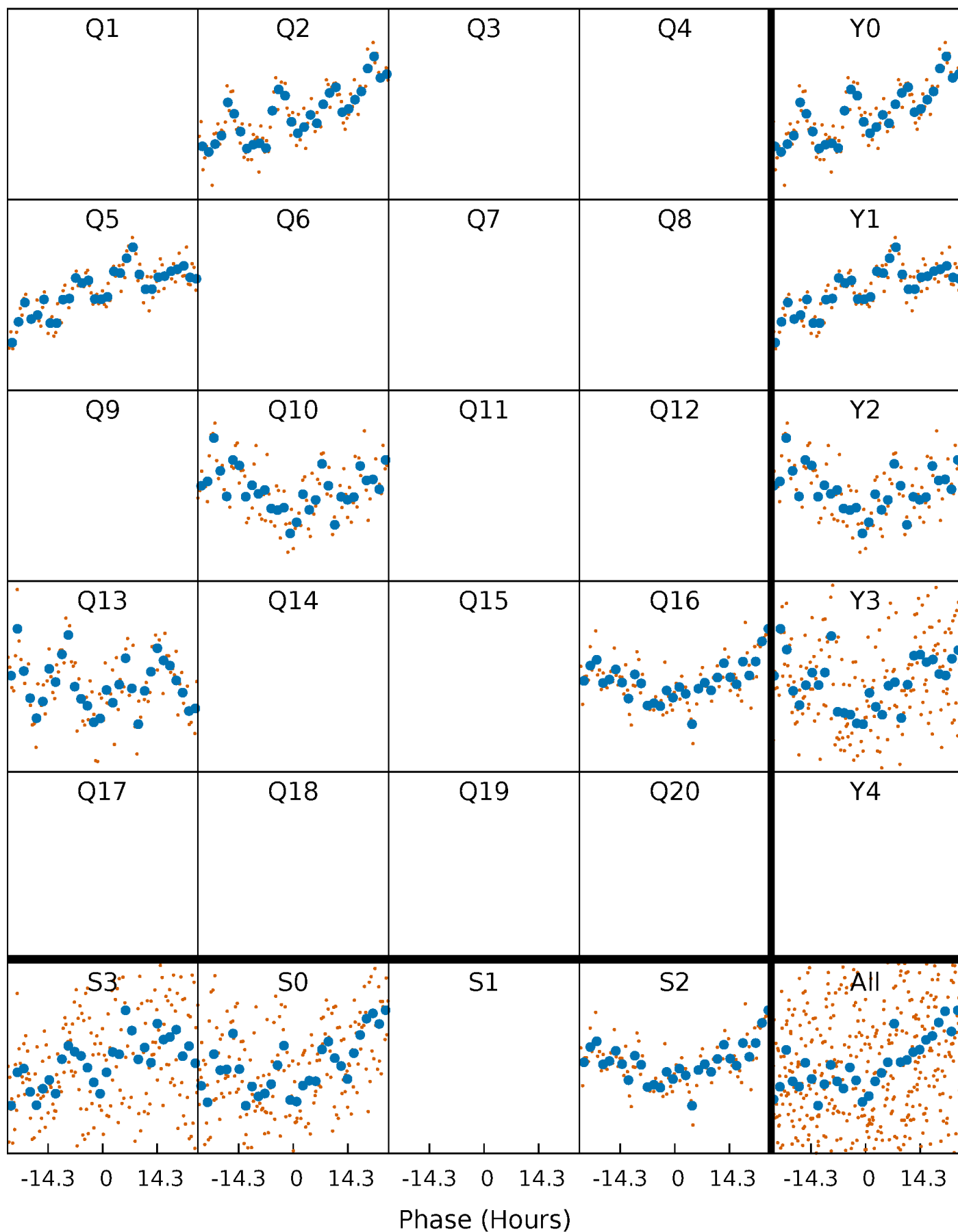


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



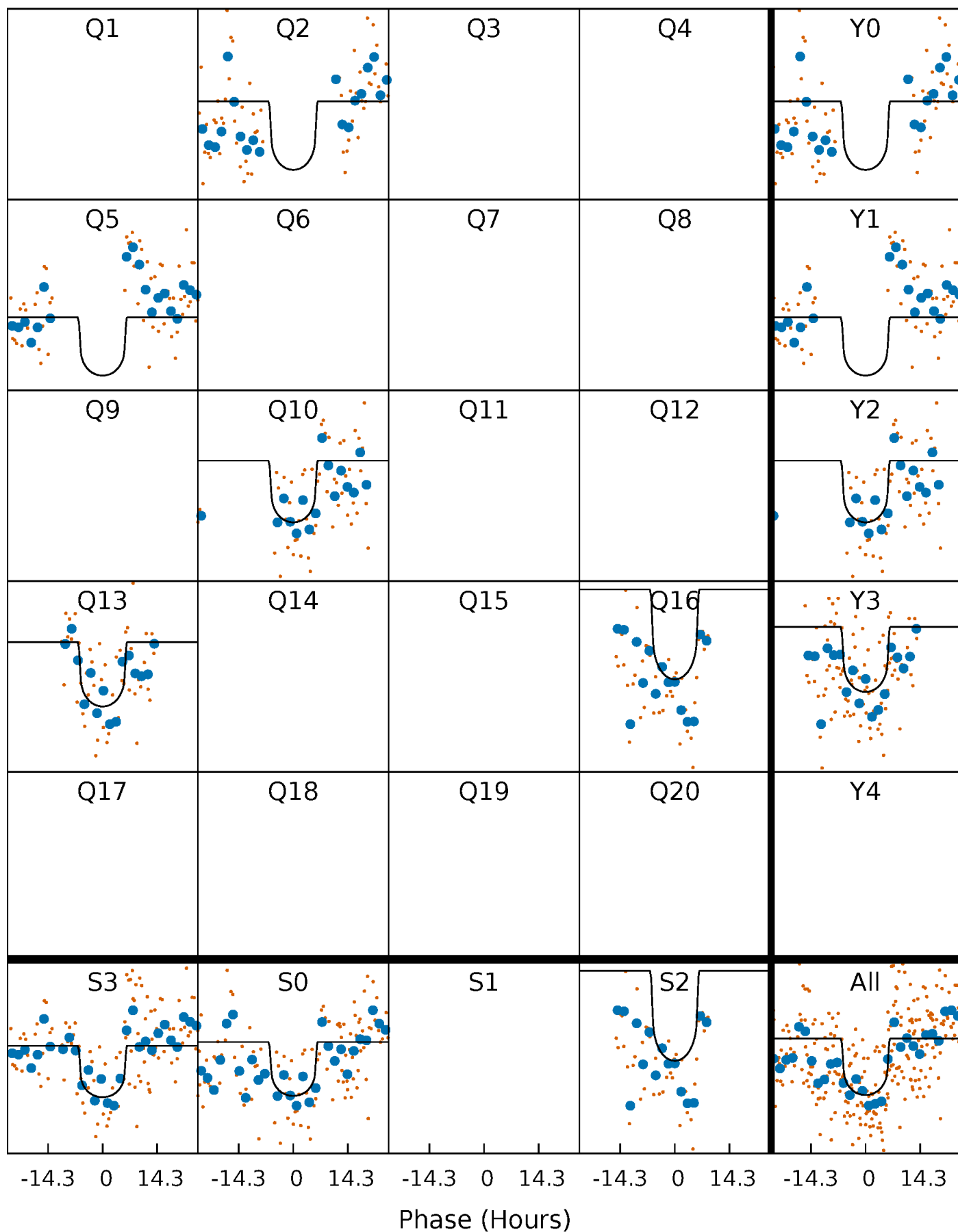
PDC Quarter-Phased Transit Curves

TCE 004952226-03 $P=256.084867$ Days $T_0=213.909540$ (BKJD)



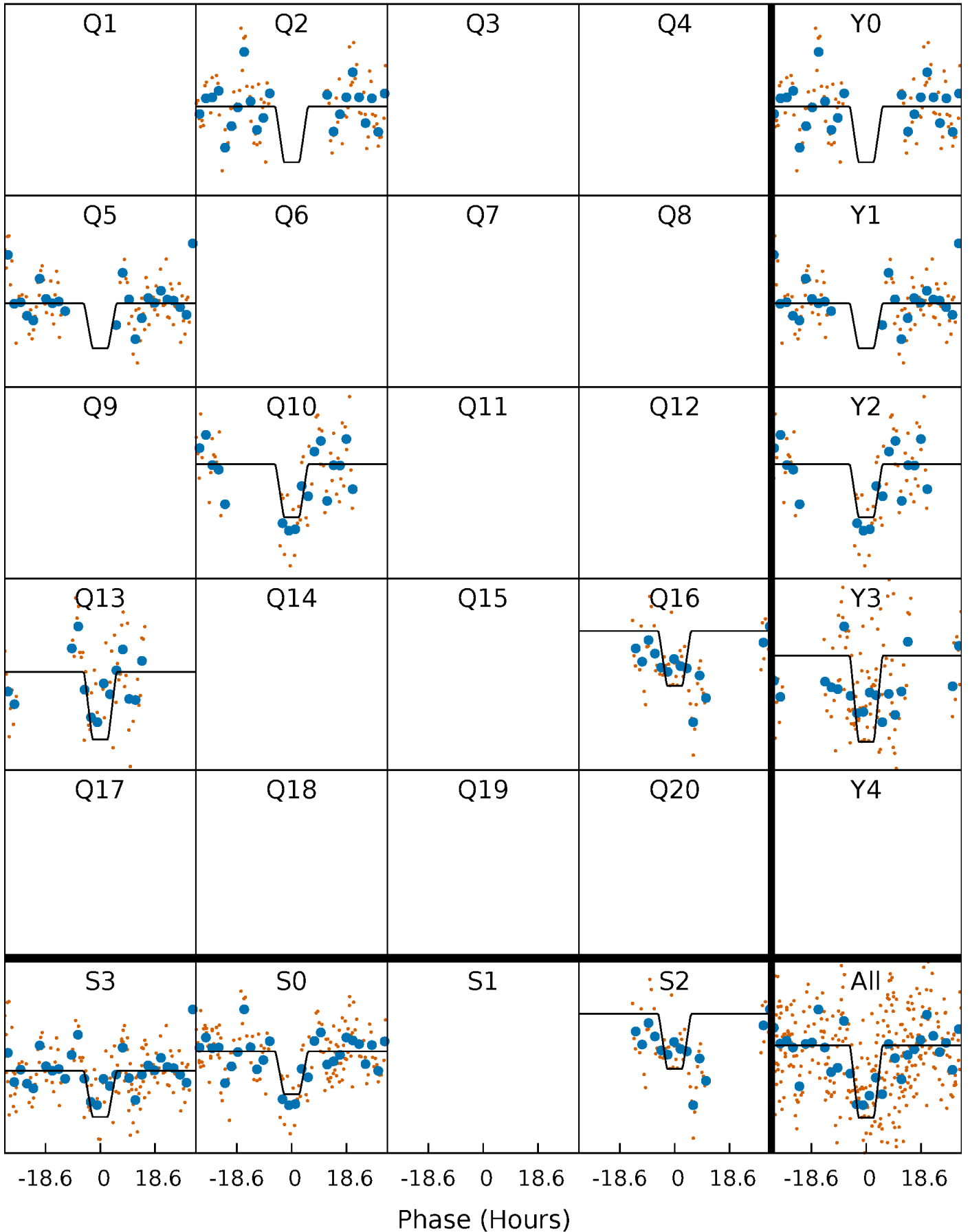
DV Quarter-Phased Transit Curves

TCE 004952226-03 P=256.084867 Days $T_0=213.909540$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

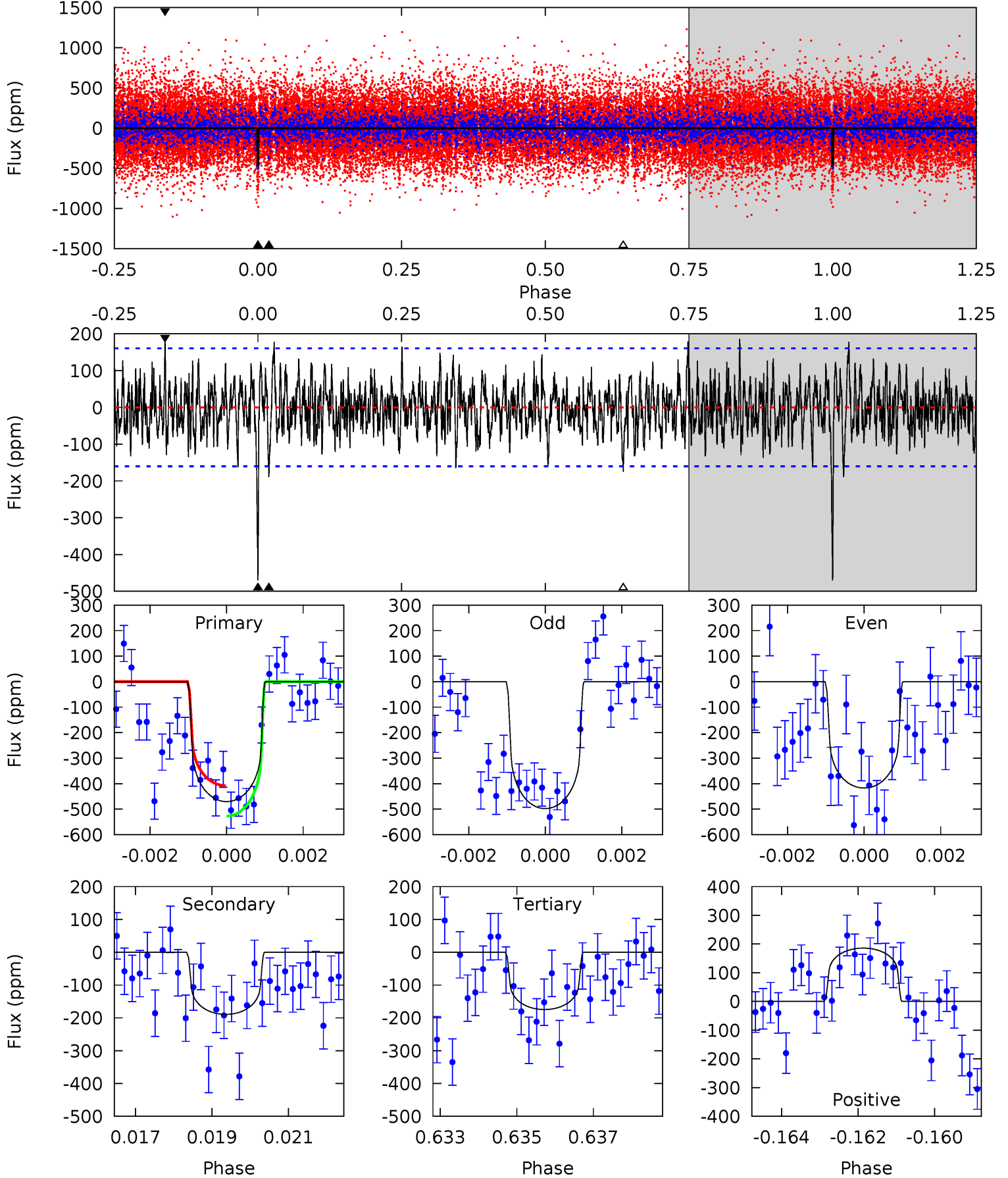
TCE 004952226-03 $P=256.073374$ Days $T_0=213.904044$ (BKJD)



DV Model-Shift Uniqueness Test

004952226-03, P = 256.084867 Days, E = 213.909540 Days

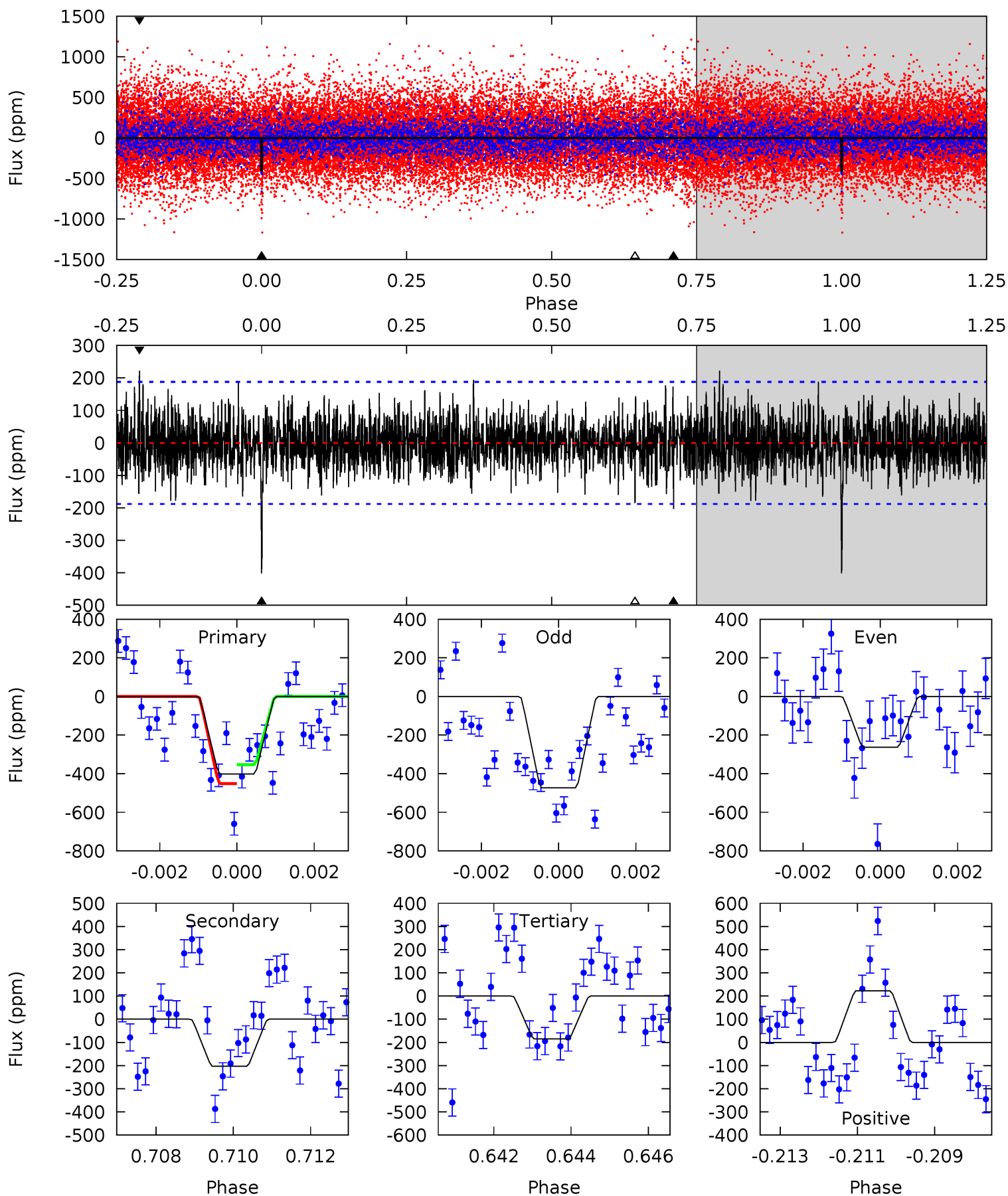
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.6	6.28	5.79	6.16	5.32	3.08	1.81	9.80	9.43	0.49	0.12	1.27	0.54	0.28	1.95



Alt Model-Shift Uniqueness Test

004952226-03, $P = 256.073374$ Days, $E = 213.904044$ 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	5.79	5.26	6.32	5.34	3.12	1.73	6.15	5.09	0.53	-0.53	2.89	1.11	0.36	1.39



Stellar Parameters For KIC 004952226

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5780^{+1}_{-1}	$4.438^{+1.000}_{-1.000}$	$0.000^{+1.000}_{-1.000}$	$1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$
	+0%/-0%	+23%/-23%	+inf%/-inf%	+100%/-100%	+100%/-100%	+100%/-100%
Source	Solar	Solar	Solar	Solar		

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

Secondary Eclipse Parameters for KIC 004952226-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-189 ± 30	$2.22^{+0.75}_{-0.75}$	400^{+19}_{-18}	4880^{+958}_{-577}	13901^{+16978}_{-6848}
Alt.	-204 ± 35	$2.47^{+0.78}_{-0.81}$	401^{+18}_{-18}	4721^{+828}_{-531}	11344^{+13244}_{-4890}

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

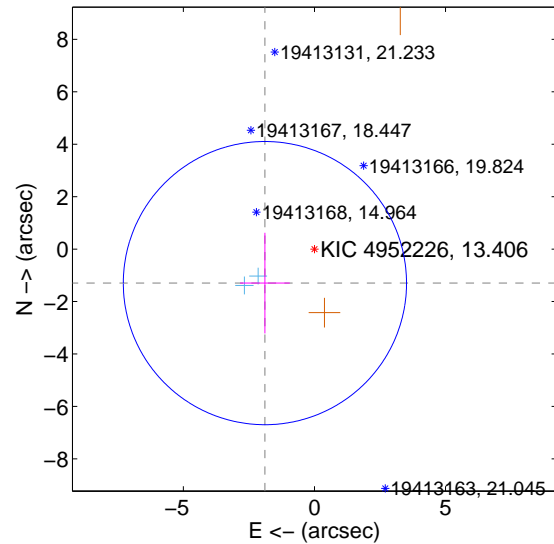
Supplemental centroid analysis for 004952226-03. Kepler magnitude: 13.41. Transit SNR 7.38

There are 2 quarters with good PRF difference image offsets

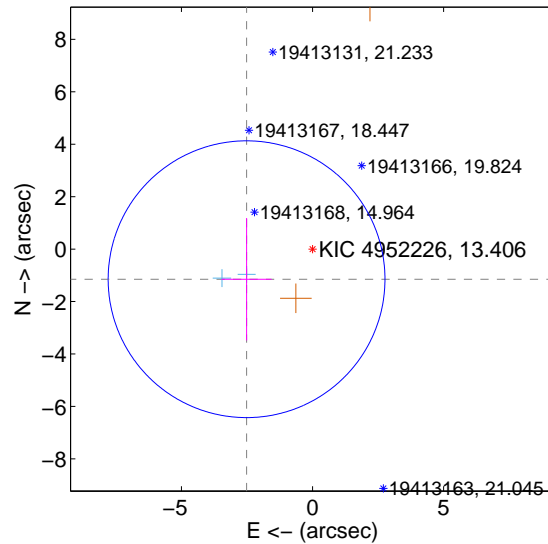
The direct PRF centroid is offset from the target star catalog position by about 0.83 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.292 ± 1.801	1.27	1.889 ± 0.949	-1.297 ± 1.920
PRF-fit source offset from KIC position	2.766 ± 1.760	1.57	2.516 ± 0.955	-1.149 ± 2.334
photometric centroid source offset	1.69 ± 0.86	1.96	1.50 ± 0.86	0.78 ± 0.89

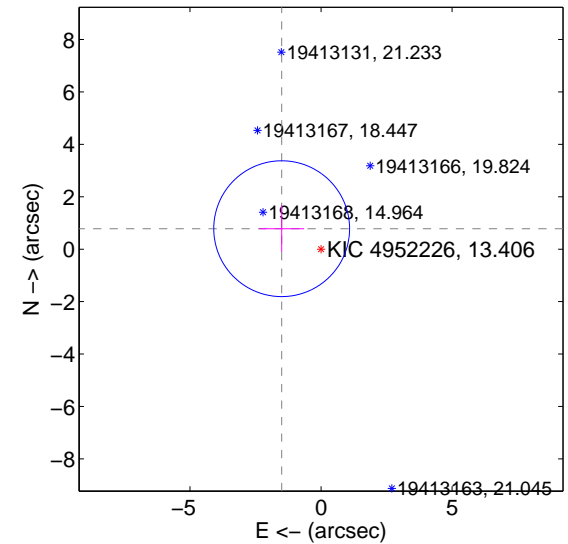
offset from difference PRF-fit to OOT PRF-fit



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.

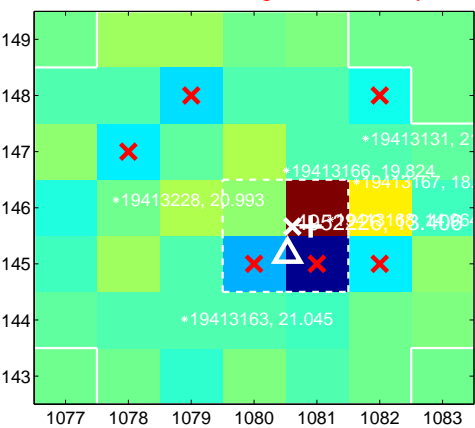
Q1 no difference image



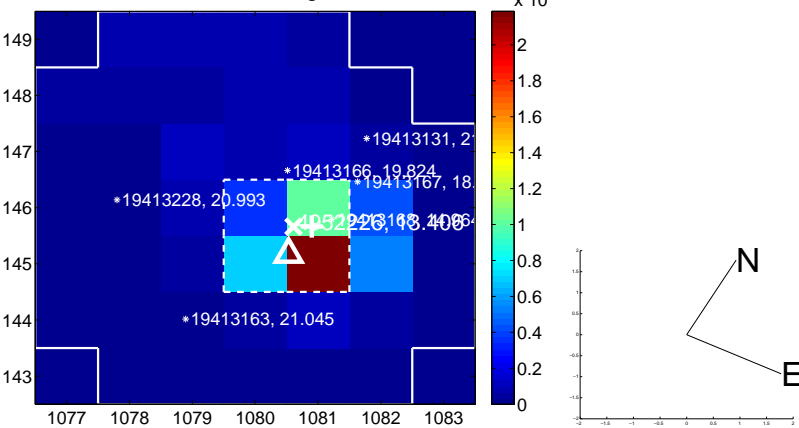
Q1 no OOT image



Q2 difference image. Poor Quality



Q2 OOT image



Q3 no difference image



Q3 no OOT image



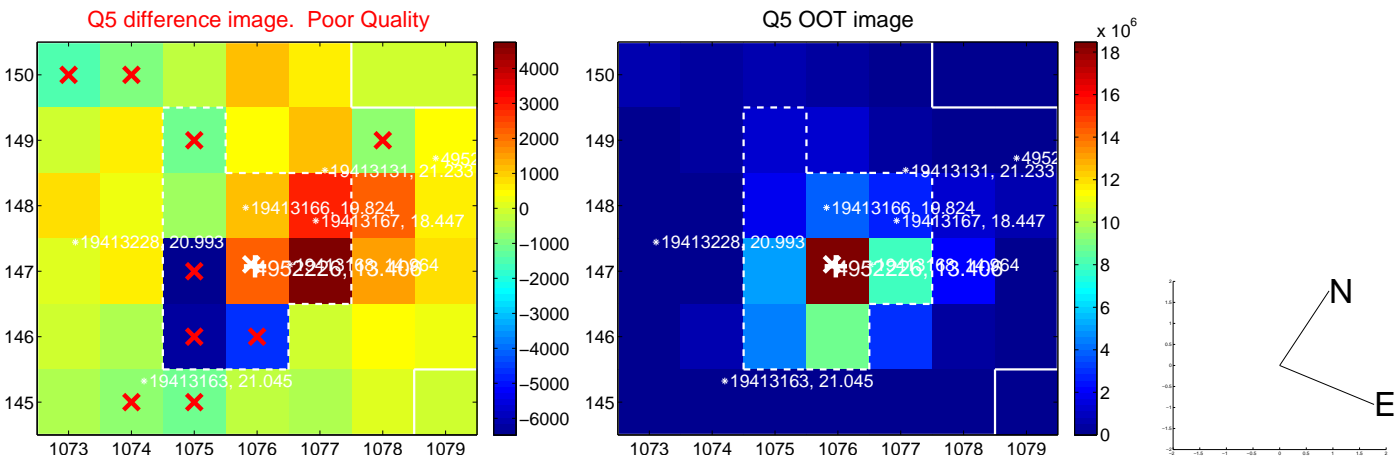
Q4 no difference image



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.

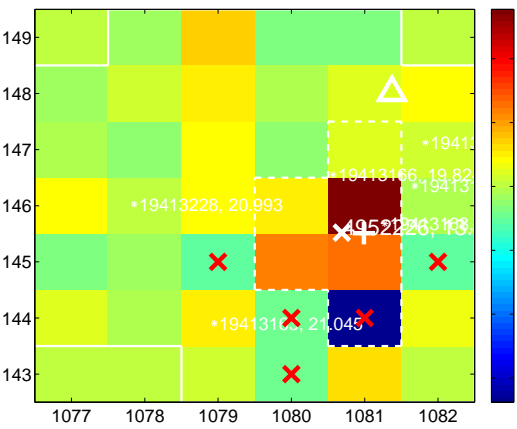
Q9 no difference image



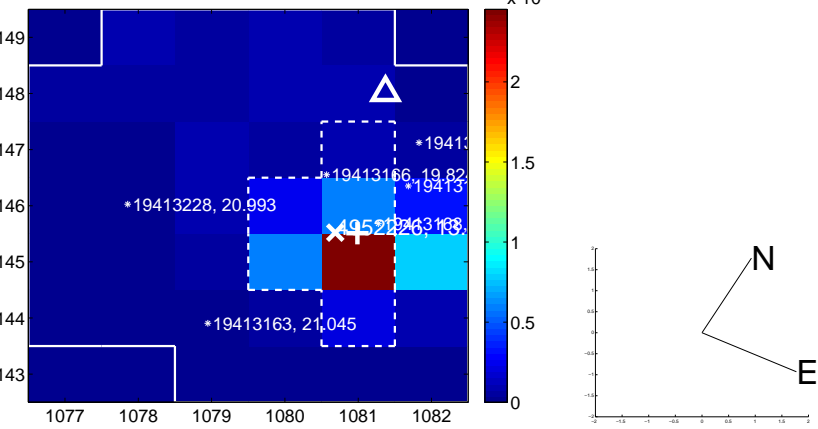
Q9 no OOT image



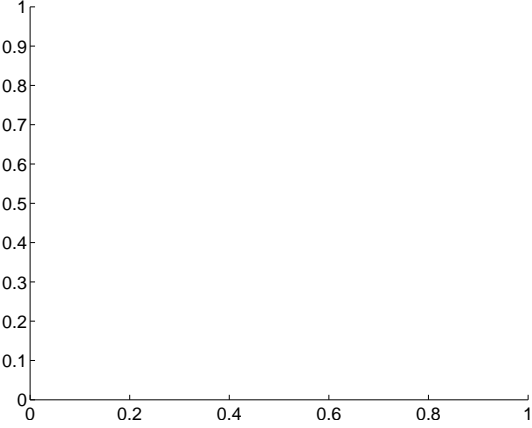
Q10 difference image. Poor Quality



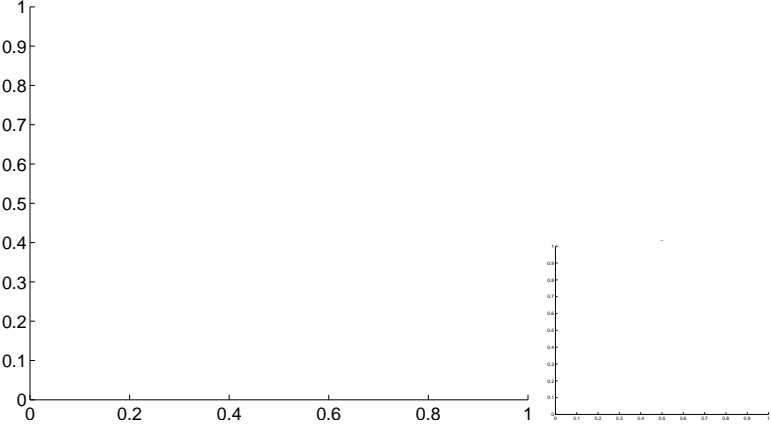
Q10 OOT image



Q11 no difference image



Q11 no OOT image



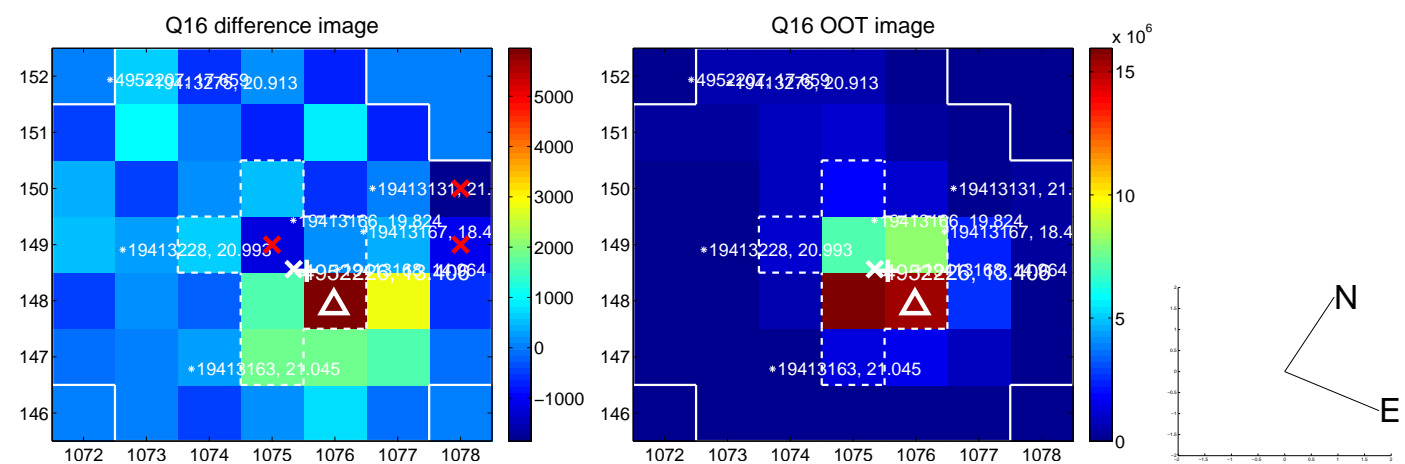
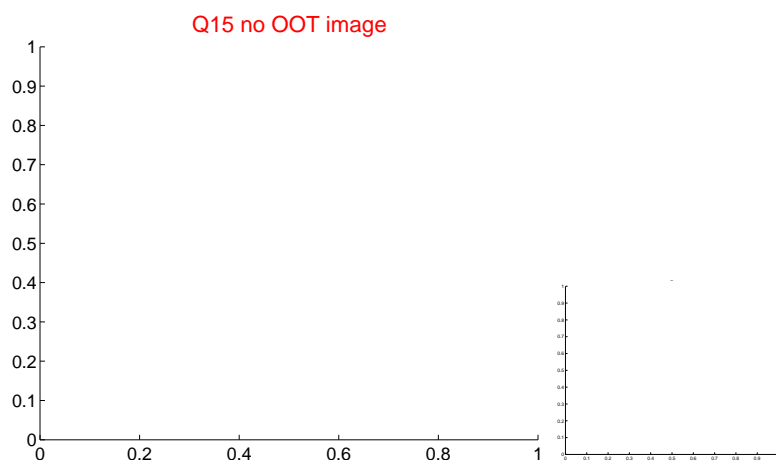
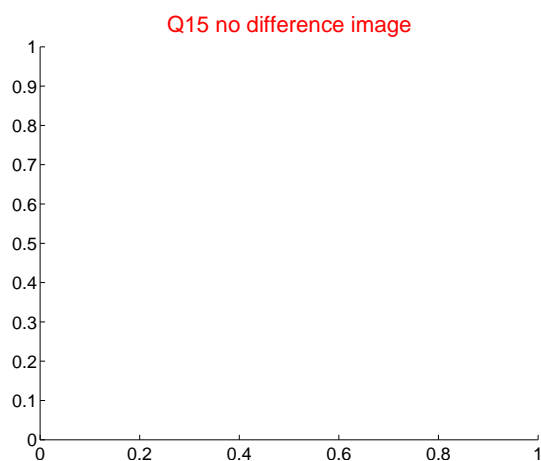
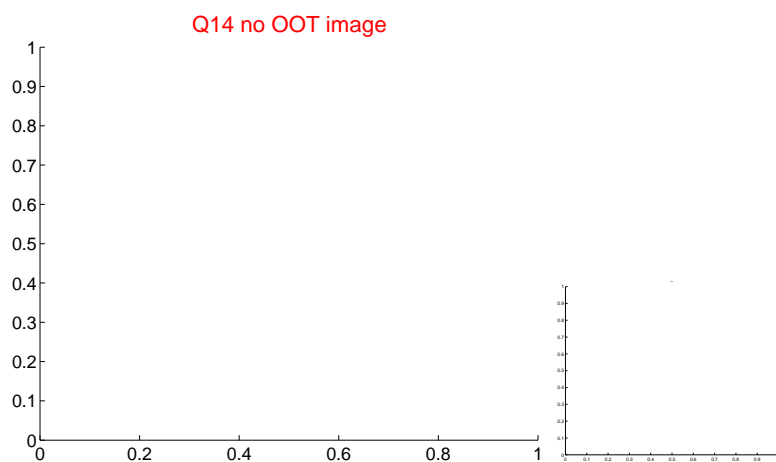
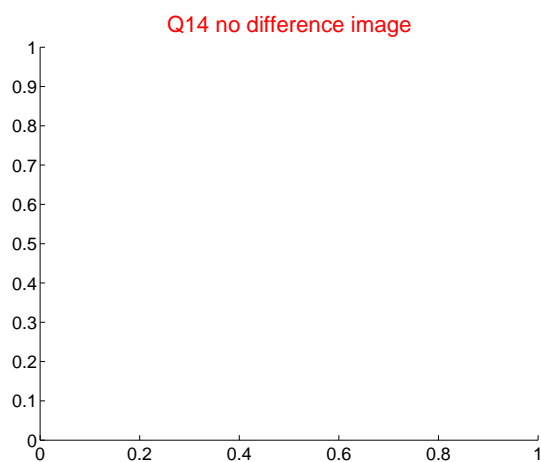
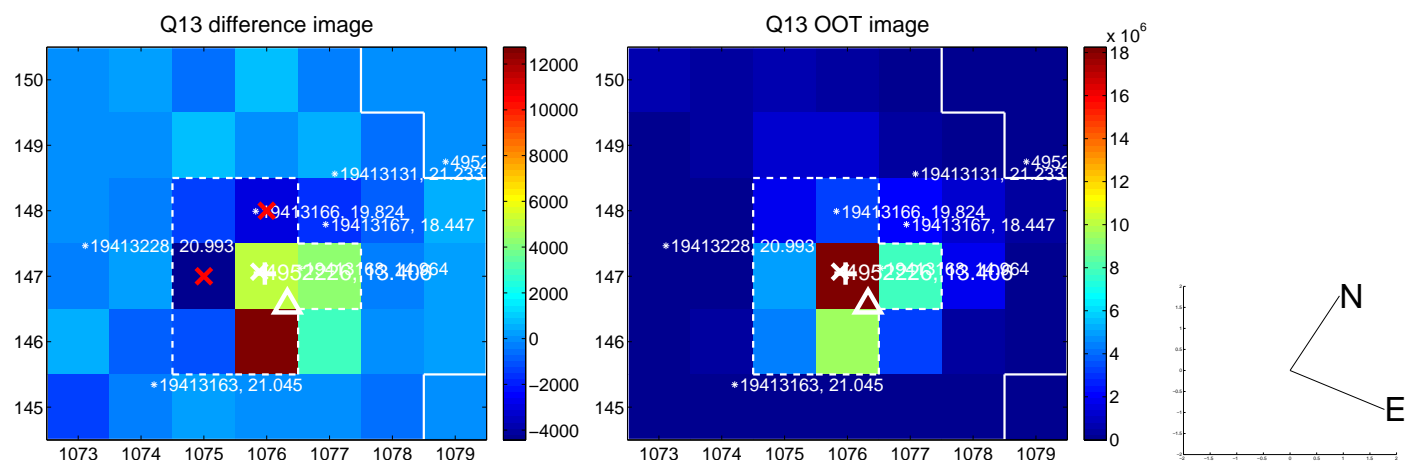
Q12 no difference image



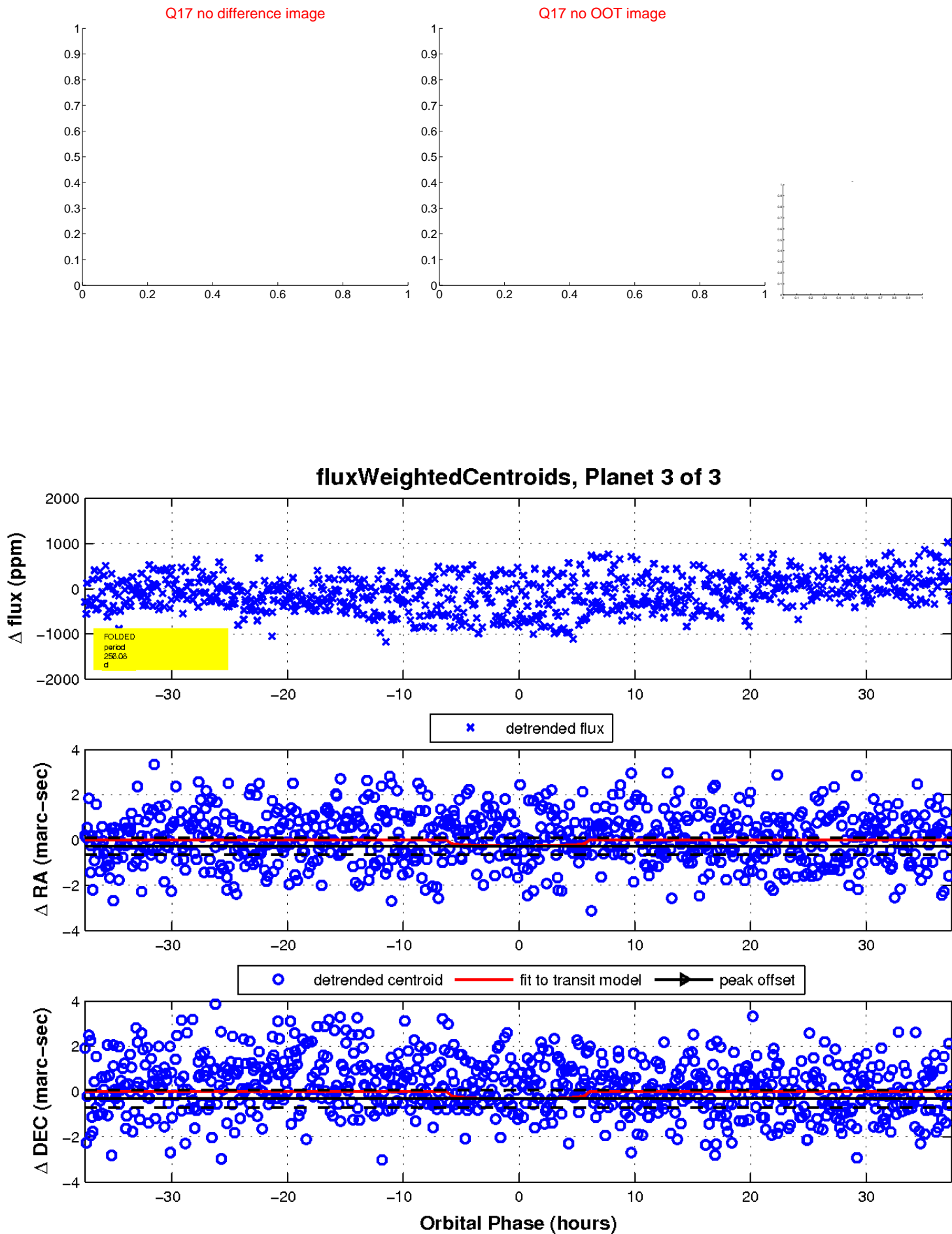
Q12 no OOT image



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.



UKIRT Image

Declination

