

KIC 010752318

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})
010752318-01	OBS	No	2.240049	133.315063	11.4	15.094	7.5	4.0	3.15	6625	1.13	11264.41
010752318-02	OBS	No	38.221786	155.171294	227.6	16.227	18.6	9.2	3.15	6625	6.12	256.43
010752318-03	OBS	No	44.334657	150.368316	174.0	5.810	8.1	6.7	3.15	6625	4.36	210.41
010752318-04	OBS	No	42.154592	157.960311	192.7	2.353	7.8	8.2	3.15	6625	5.13	225.04
010752318-05	OBS	No	42.299590	159.602445	242.9	1.469	7.6	8.3	3.15	6625	5.74	224.01
010752318-06	OBS	No	42.002644	168.310914	268.8	7.795	7.5	7.8	3.15	6625	5.72	226.12

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010752318-01	OBS	FP	0.00	1	0	0	0	LPP_DV
010752318-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
010752318-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS—HALO_GHOST
010752318-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
010752318-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS
010752318-06	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.

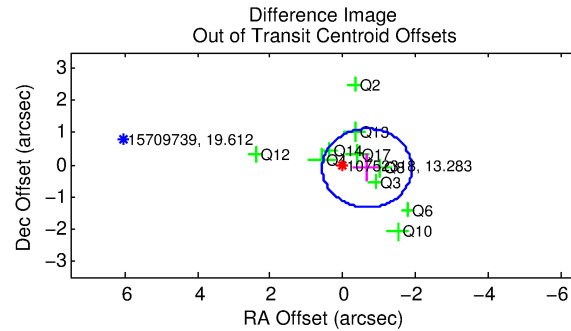
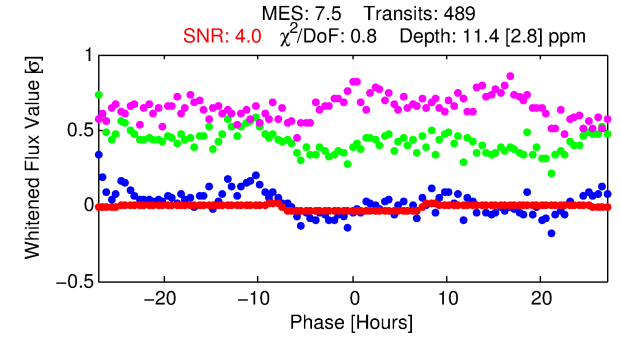
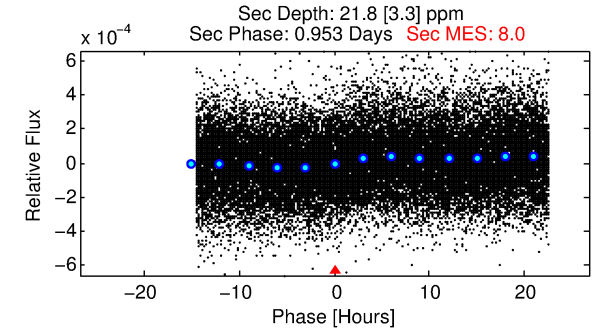
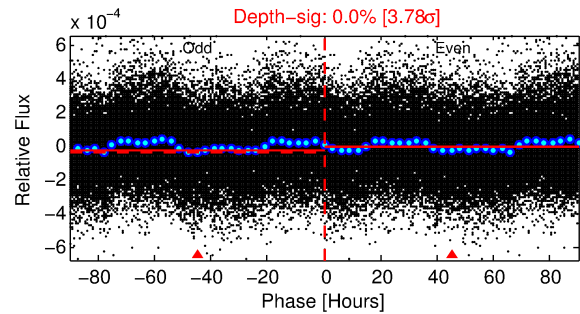
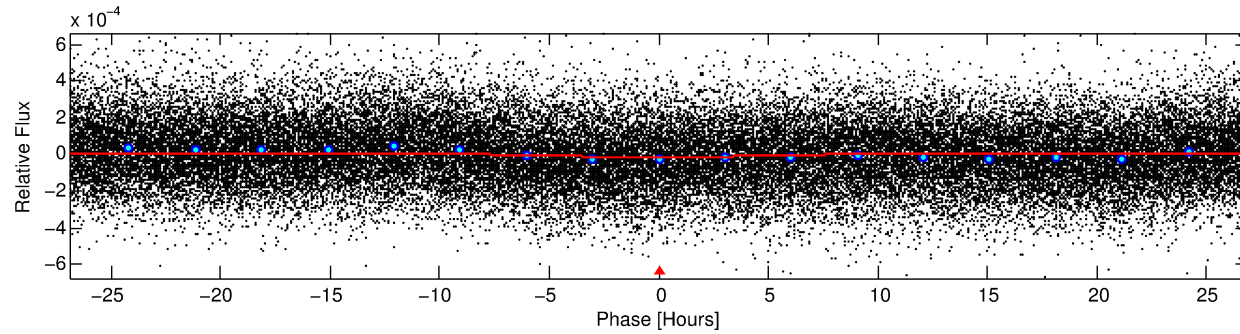
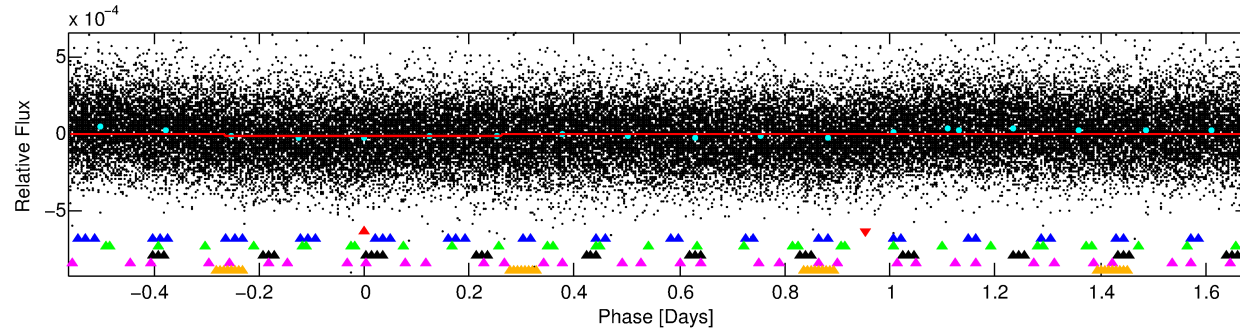
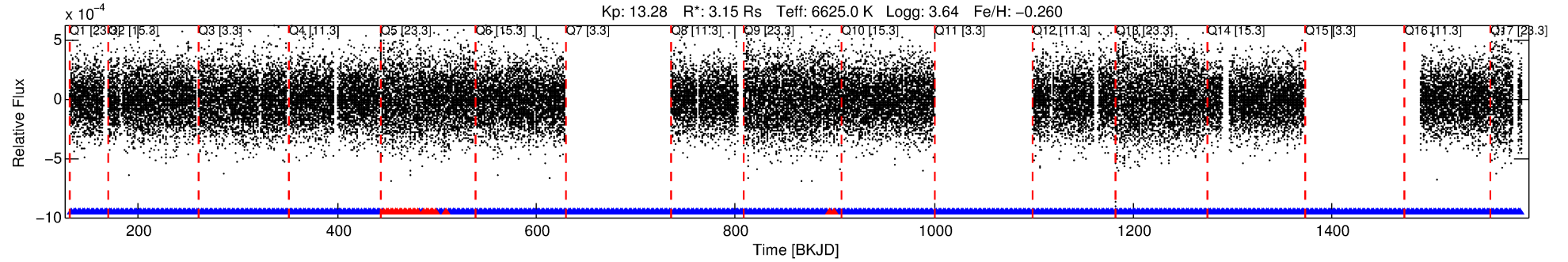
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010752318-01

No Significant Match Found

DV One-Page Summary

KIC: 10752318 Candidate: 1 of 6 Period: 2.240 d



DV Fit Results:

Period = 2.24005 [0.00008] d
Epoch = 133.3151 [0.0176] BKJD
Rp/R* = 0.0033 [0.0030]
a/R* = 1.18 [1.73]
b = 0.65 [4.53]
Seff = 11264.41 [6493.34]
Teq = 2627 [379] K
Rp = 1.13 [1.10] Re
a = 0.0389 [0.0139] AU
Ag = 14.37 [27.30] [0.49 σ]
Teffp = 7908 [3593] K [1.46 σ]

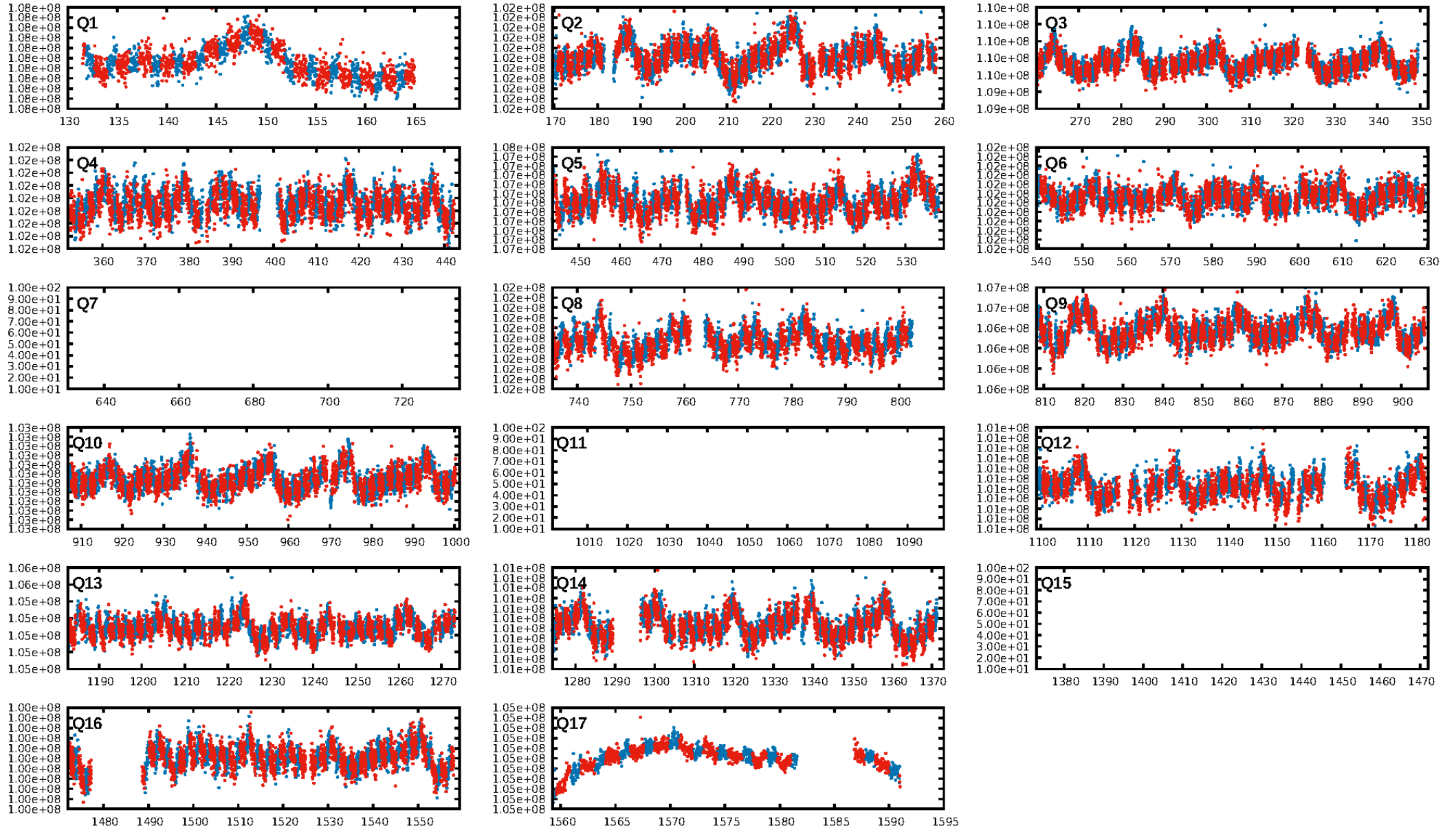
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [38.97 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.42e-10
RollingBand-fgt: 0.95 [437/462]
GhostDiagnostic-chr: 1.629
Centroid-sig: 4.0%
Centroid-so: 2.229 arcsec [1.14 σ]
OotOffset-rm: 0.672 arcsec [1.64 σ]
OotOffset-st: 4/1/3/2 [10]
KicOffset-rm: 0.563 arcsec [1.32 σ]
KicOffset-st: 4/1/3/2 [10]
DiffImageQuality-fgm: 0.80 [8/10]
DiffImageOverlap-fno: 1.00 [14/14]

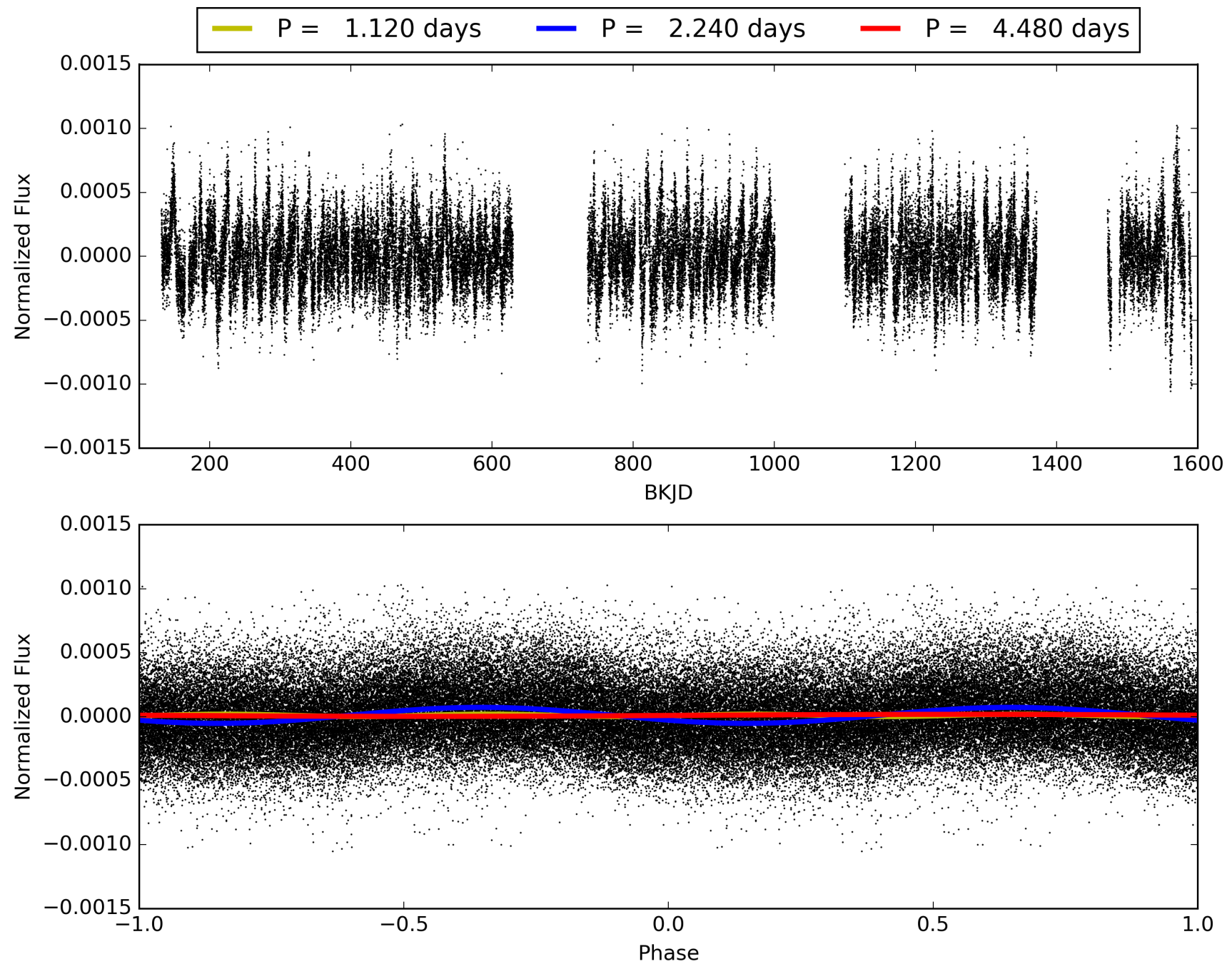
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 20:08:31 Z

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

TCE 010752318-01, PDC Light Curves

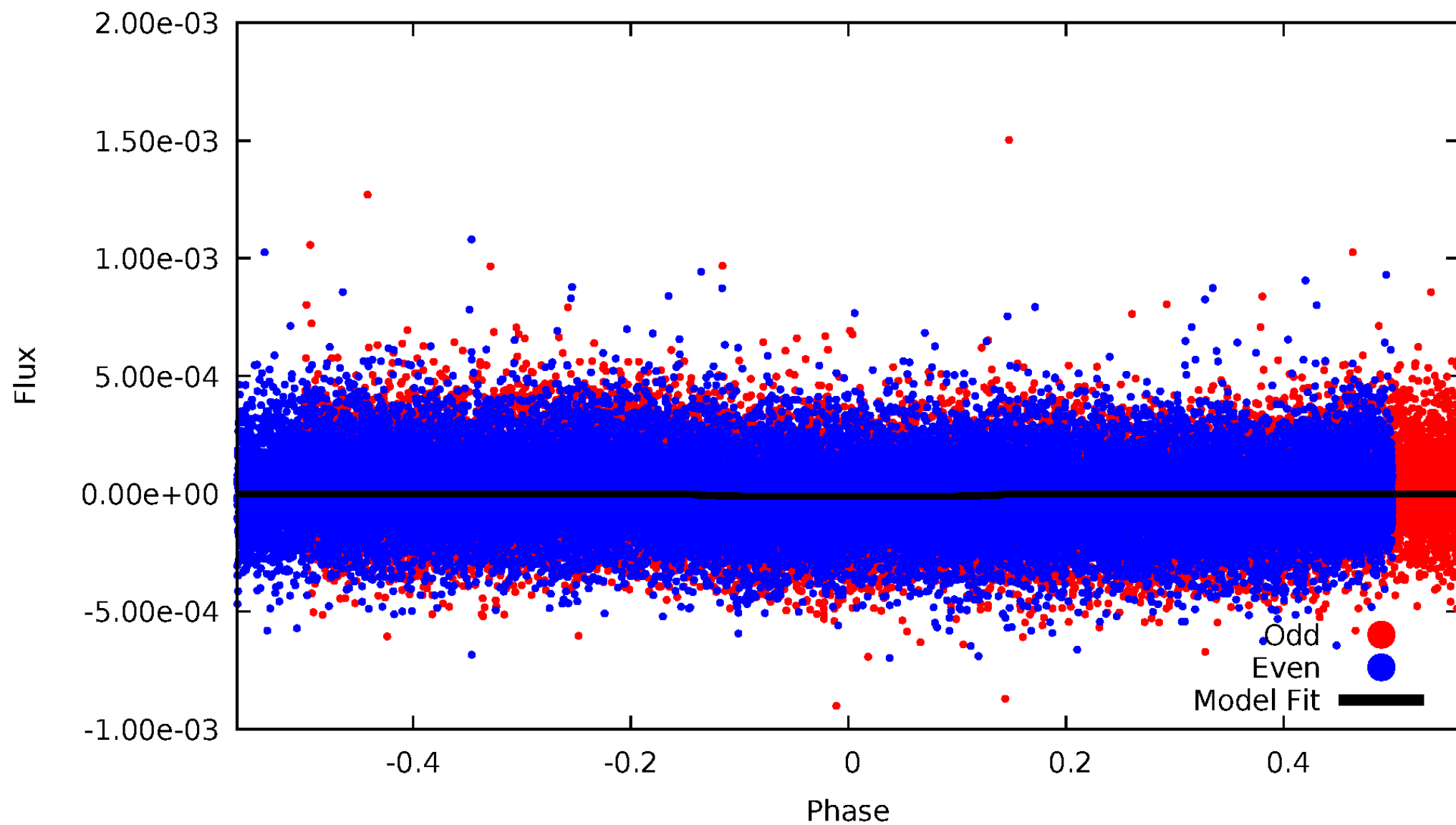


TCE 010752318-01



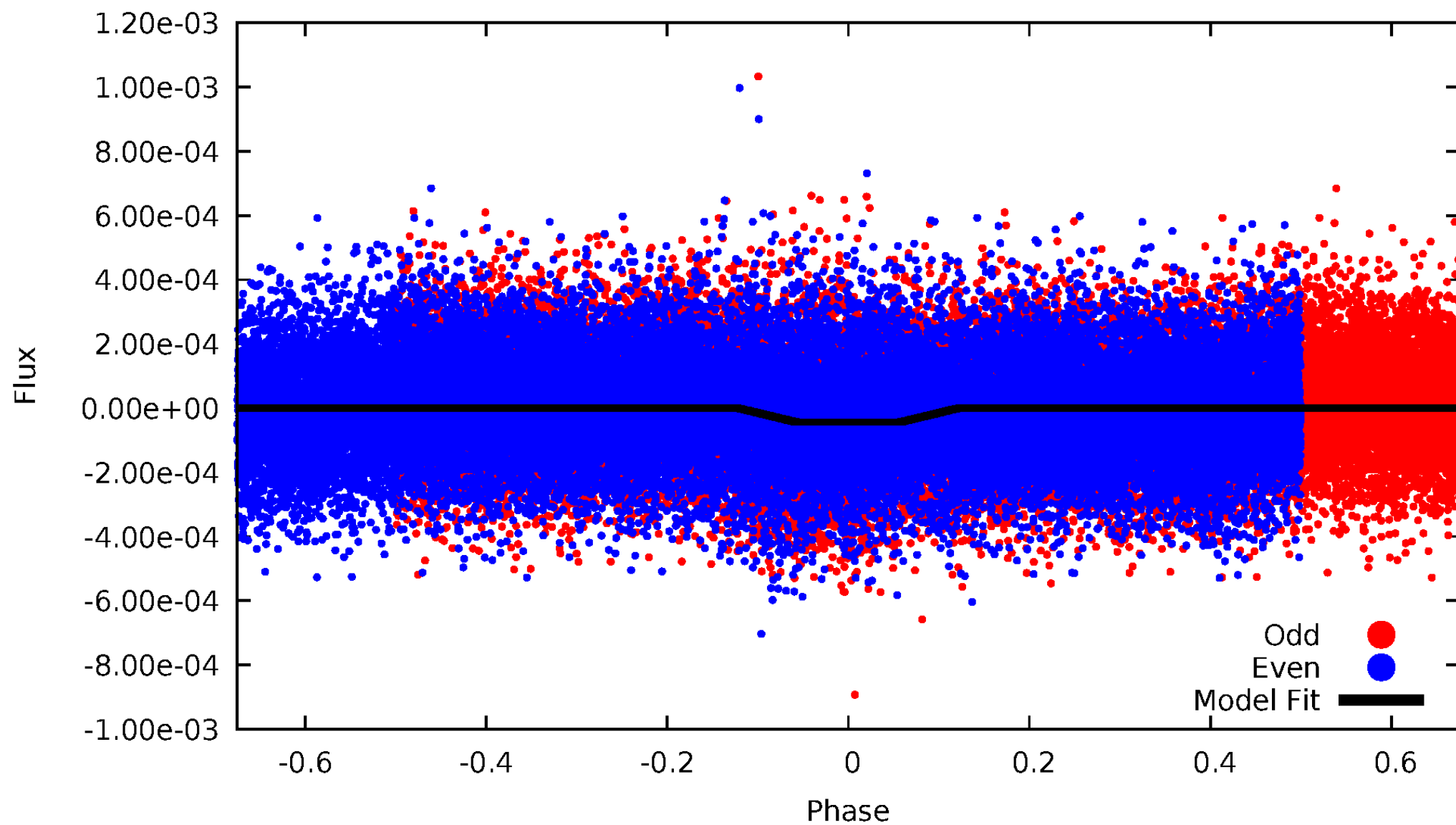
DV Odd/Even

TCE 010752318-01

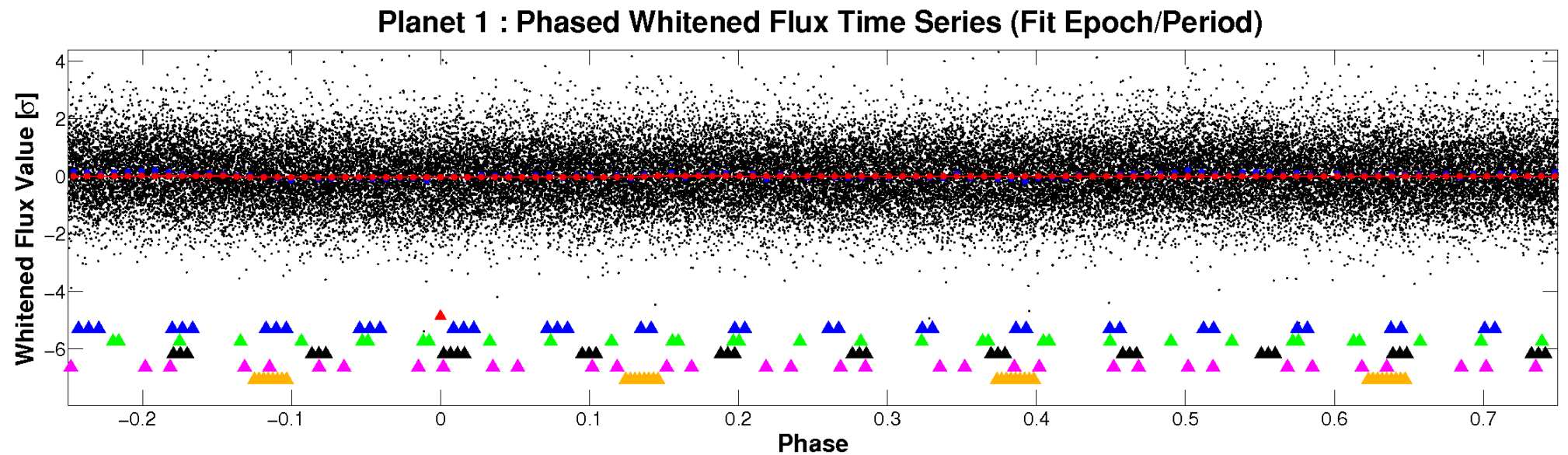
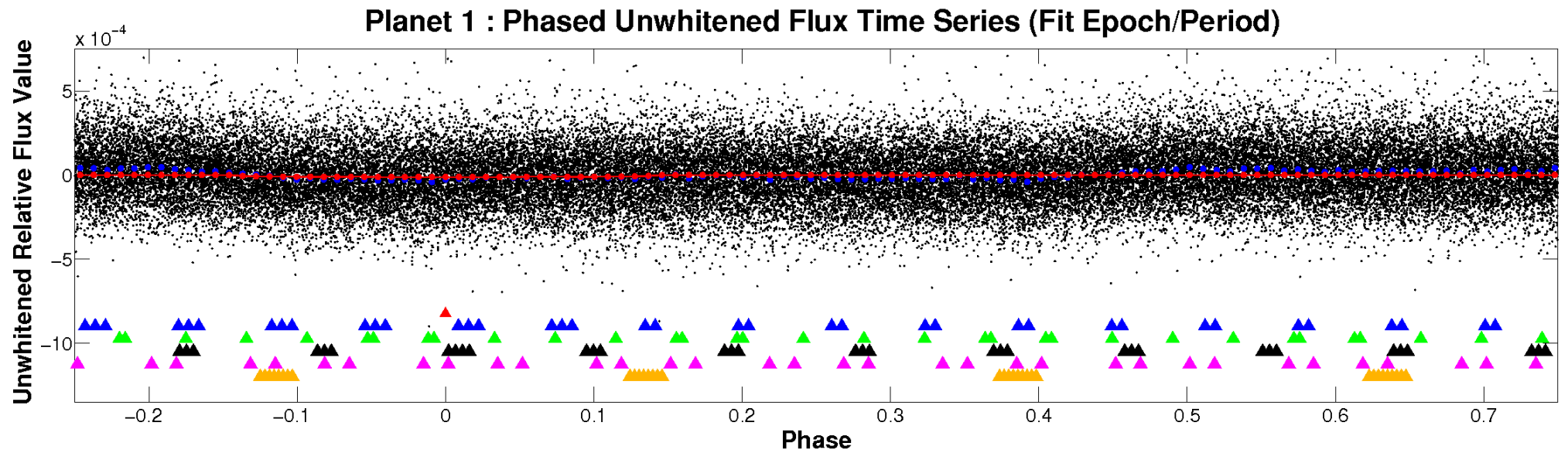


ALT Odd/Even

TCE 010752318-01

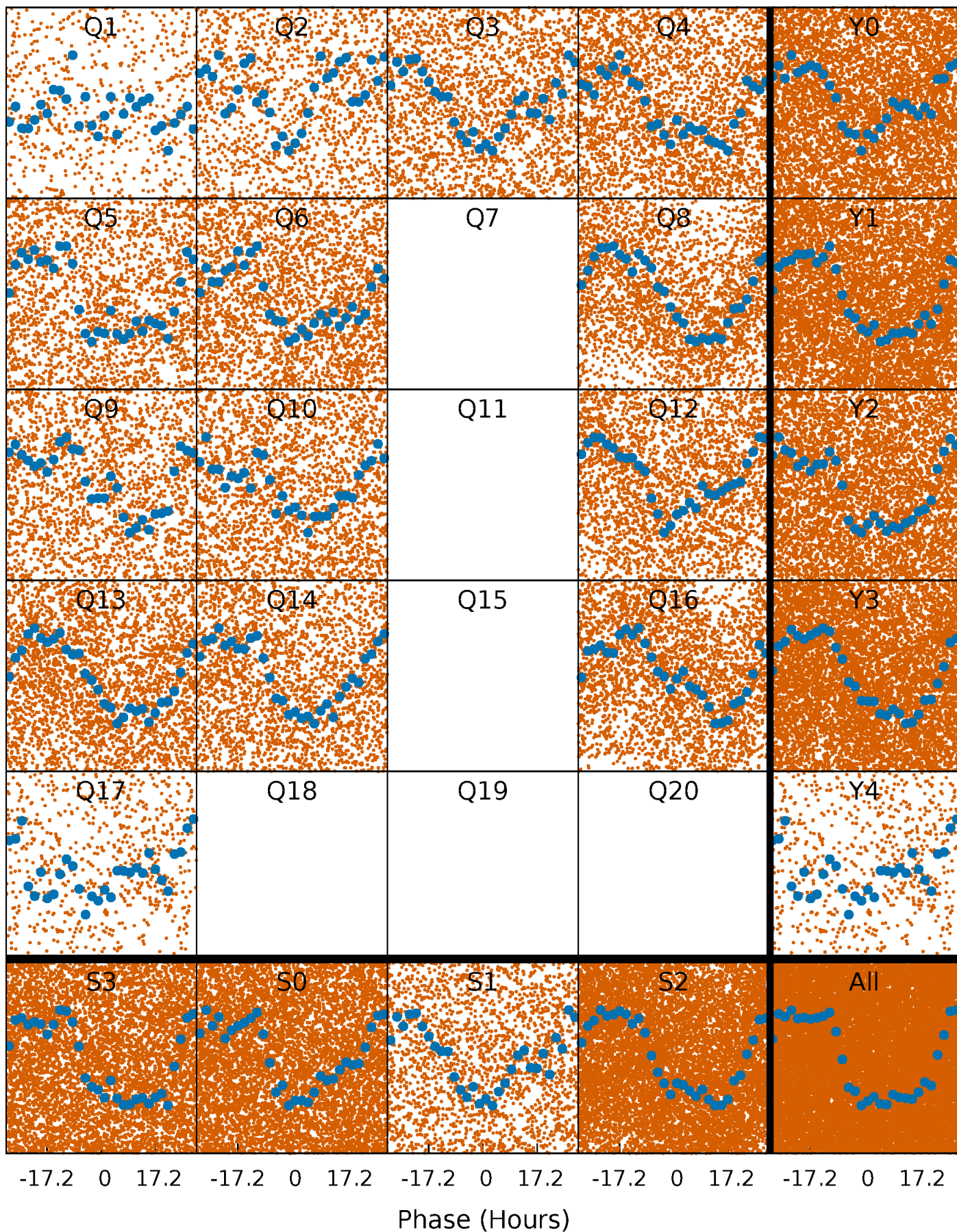


Non-Whitened Vs. Whitened Light Curve



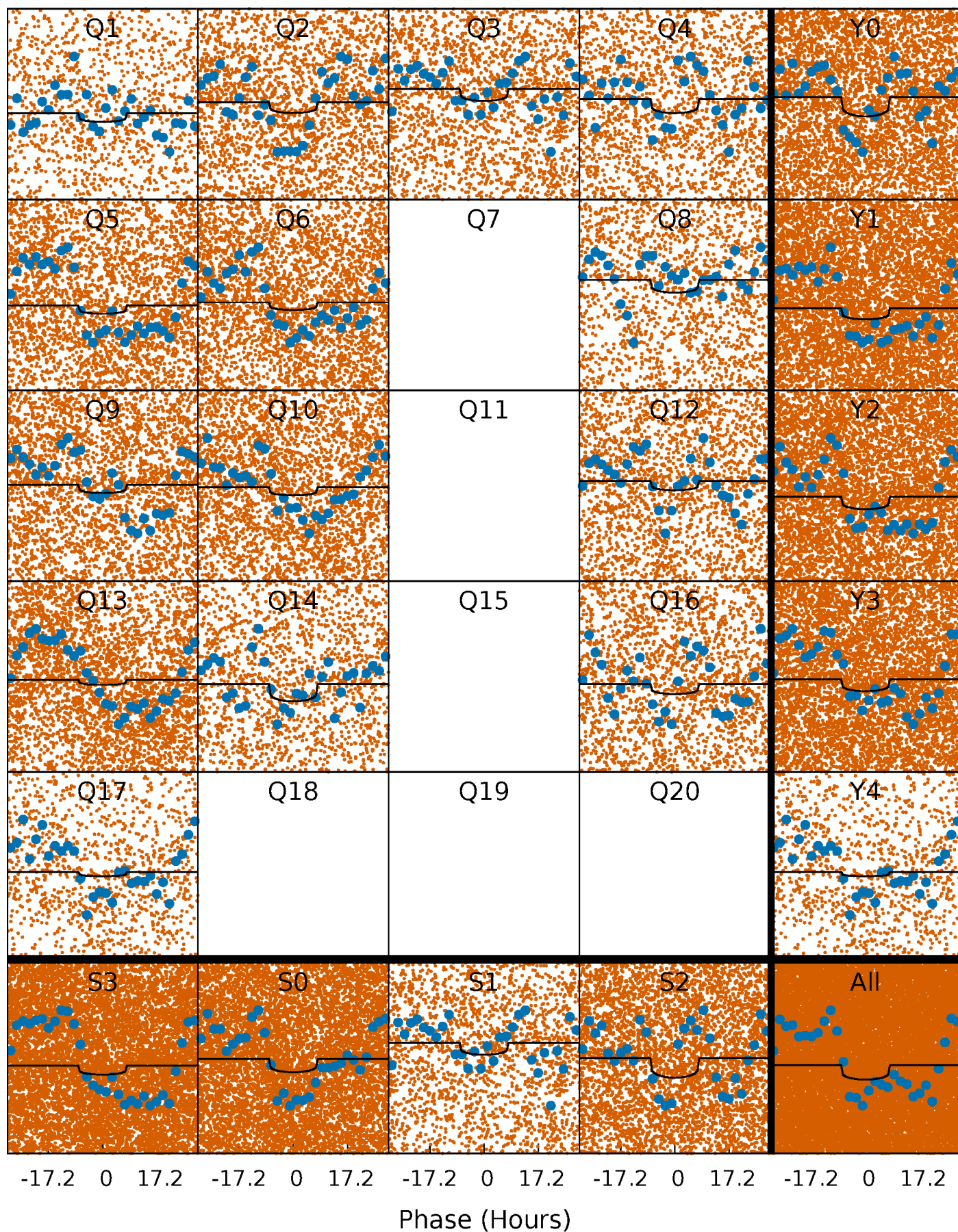
PDC Quarter-Phased Transit Curves

TCE 010752318-01 P= 2.240049 Days $T_0=133.315063$ (BKJD)



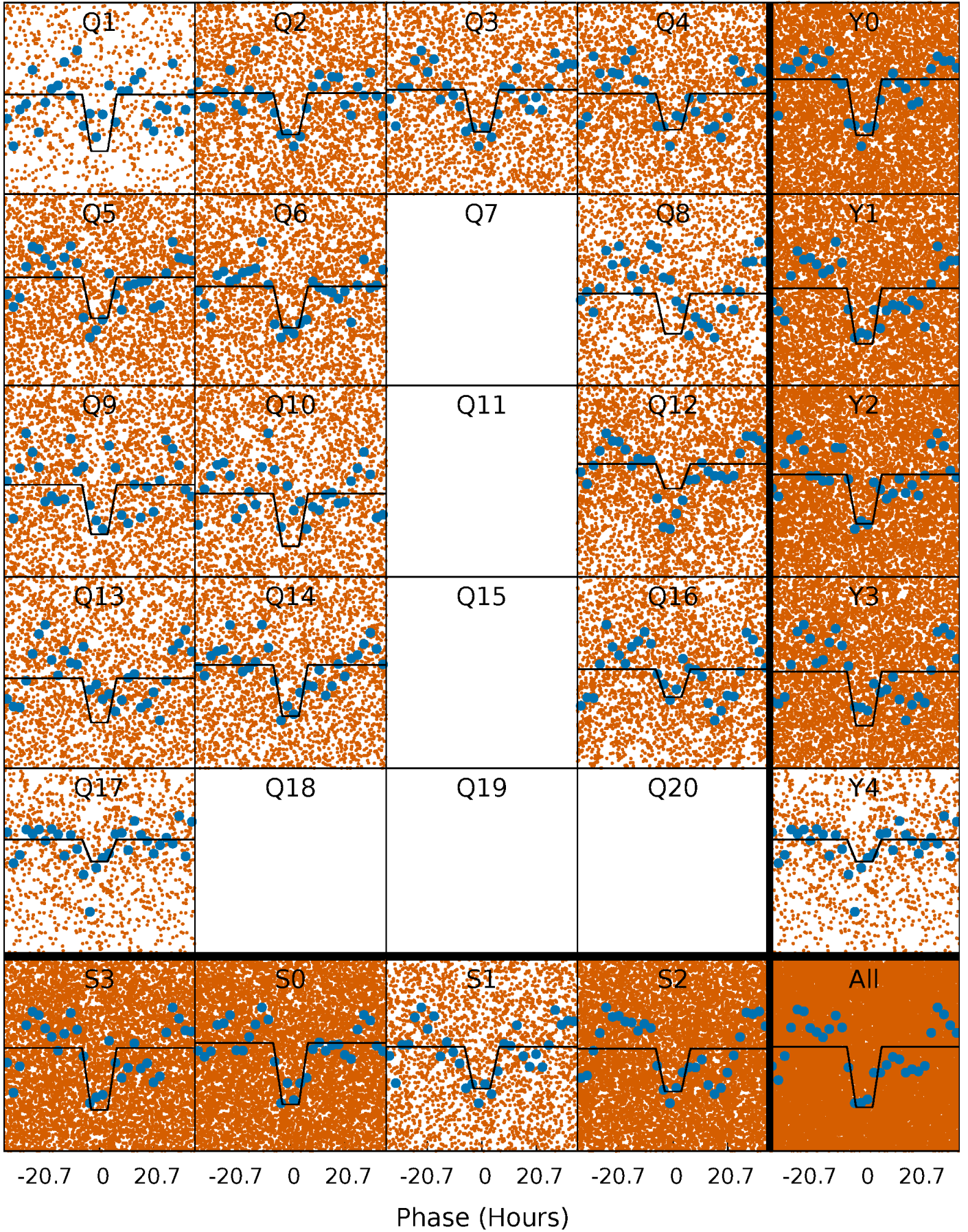
DV Quarter-Phased Transit Curves

TCE 010752318-01 P= 2.240049 Days $T_0=133.315063$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

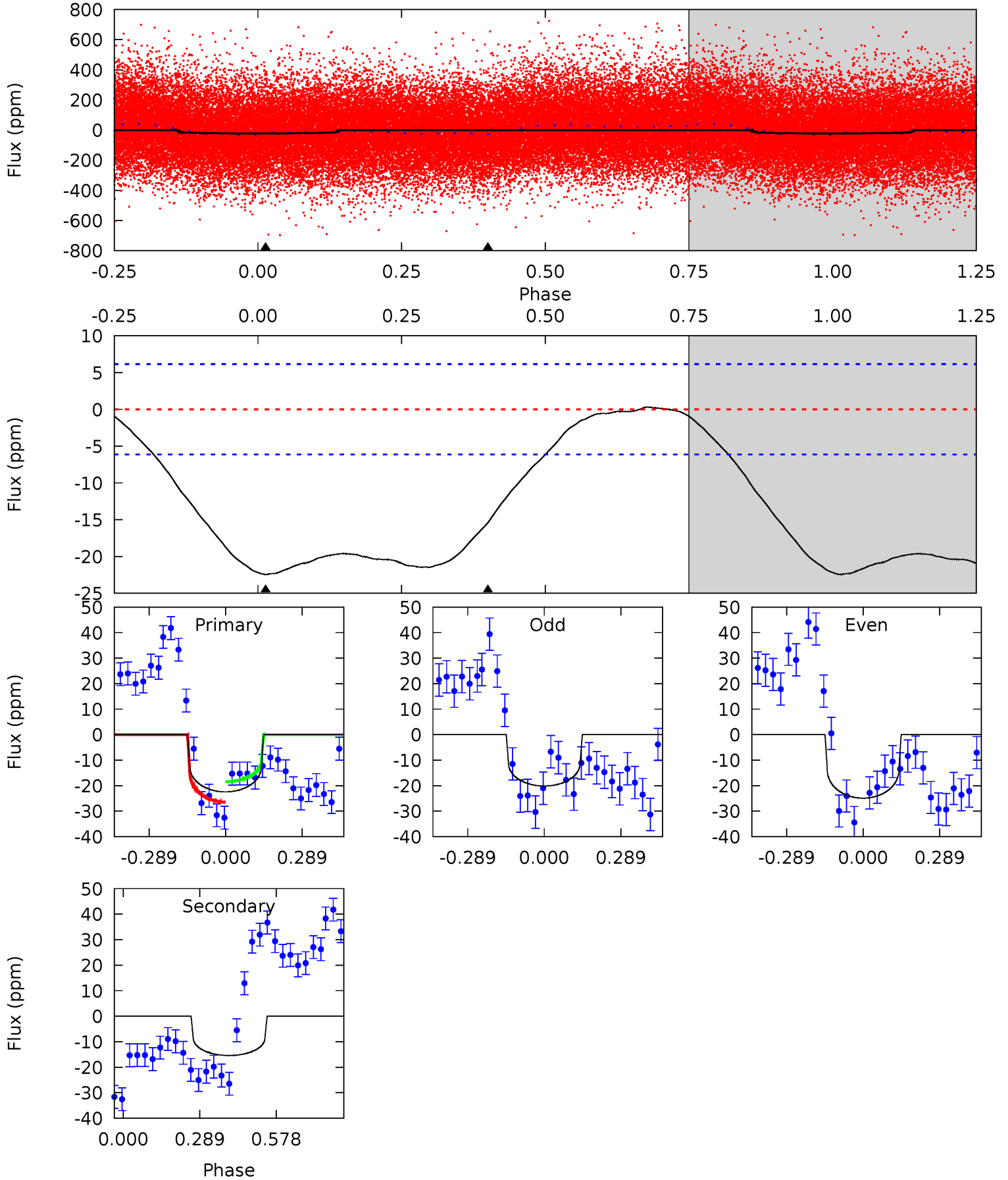
TCE 010752318-01 P= 2.240032 Days $T_0=133.281692$ (BKJD)



DV Model-Shift Uniqueness Test

010752318-01, P = 2.240049 Days, E = 131.075014 Days

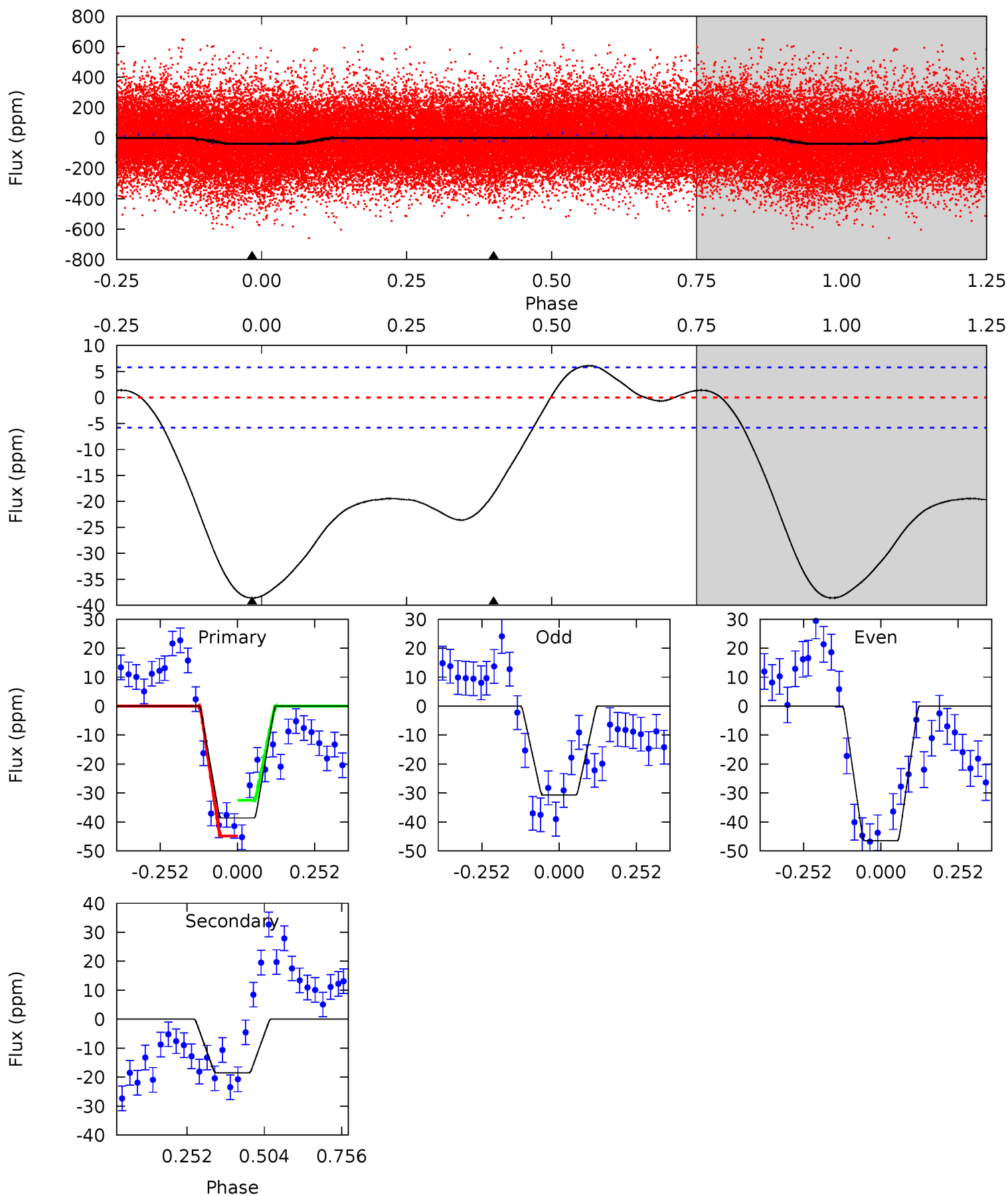
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.8	10.9	0	0	4.34	1.06	0.29	15.8	15.8	10.9	10.9	1.69	1.05	0.01	2.89



Alt Model-Shift Uniqueness Test

010752318-01, P = 2.240032 Days, E = 131.041660 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.0	13.9	0	0	4.37	1.15	0.44	29.0	29.0	13.9	13.9	5.92	0.74	0.14	4.60



Stellar Parameters For KIC 010752318

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6625^{+178}_{-198}	$3.638^{+0.328}_{-0.082}$	$-0.260^{+0.300}_{-0.250}$	$3.145^{+0.399}_{-1.198}$	$1.566^{+0.225}_{-0.338}$	$0.071^{+0.164}_{-0.018}$
	+3%/-3%	+9%/-2%	+115%/-96%	+13%/-38%	+14%/-22%	+231%/-26%
Source	PHO1	FLK73	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 010752318-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-15 ± 1	$1.20^{+0.99}_{-0.72}$	3597^{+204}_{-329}	6700^{+5528}_{-1671}	$9.223^{+47.306}_{-6.481}$
Alt.	-19 ± 1	$2.12^{+1.10}_{-0.97}$	3583^{+208}_{-349}	5218^{+1929}_{-847}	$3.489^{+8.076}_{-1.979}$

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 $A_{obs} \gg 1.0$

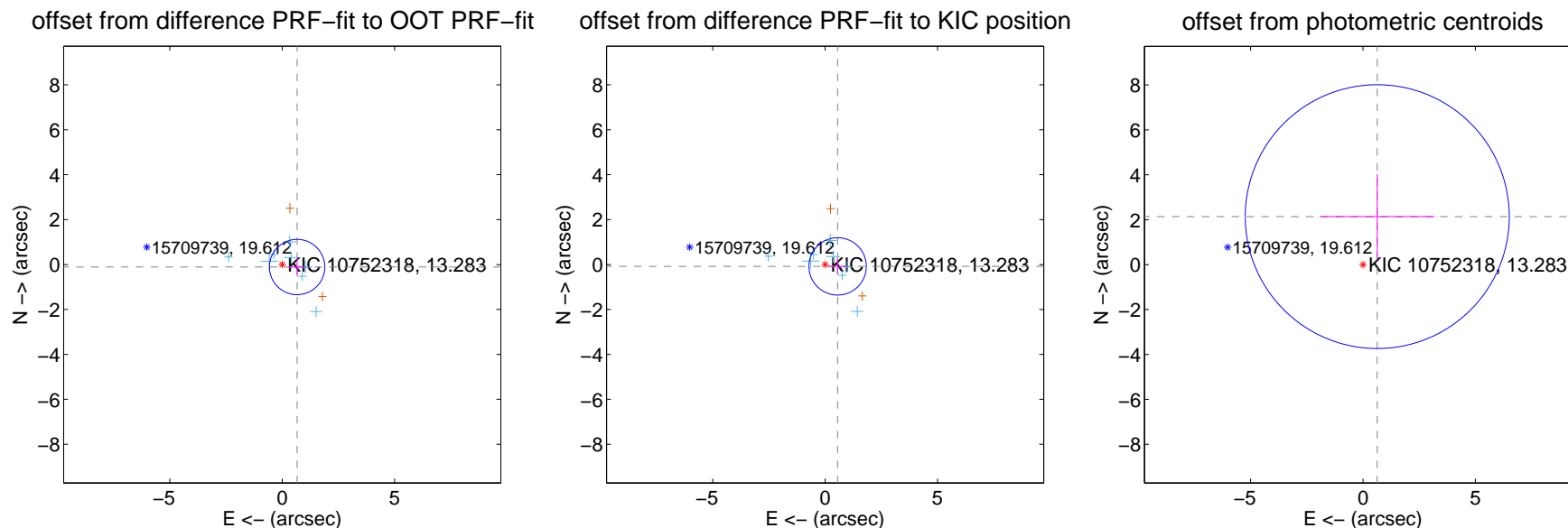
DV Centroid Data

Supplemental centroid analysis for 010752318-01. Kepler magnitude: 13.28. Transit SNR 4.05

There are 8 quarters with good PRF difference image offsets

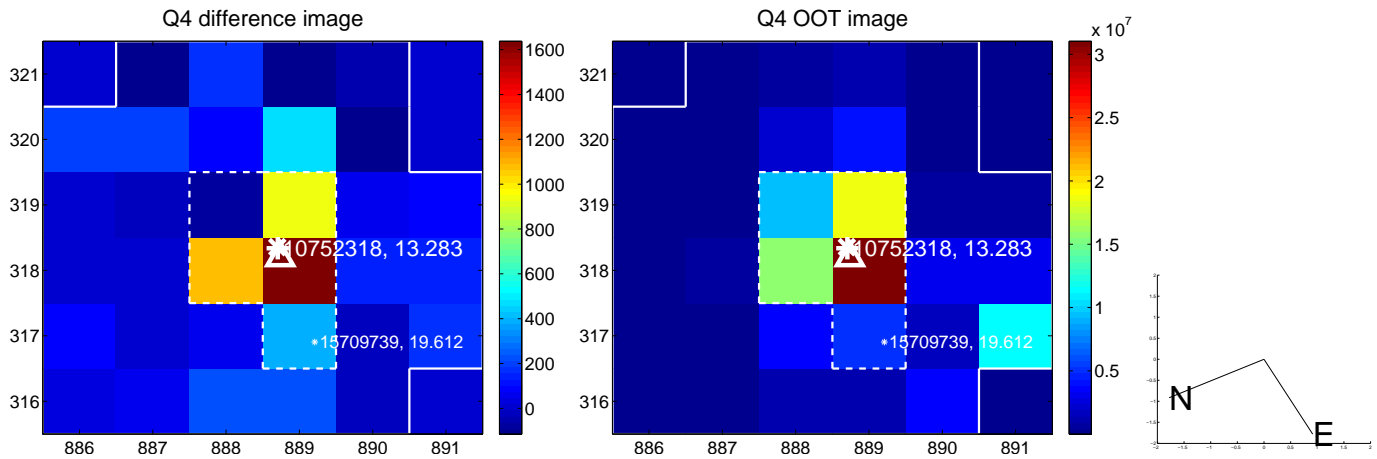
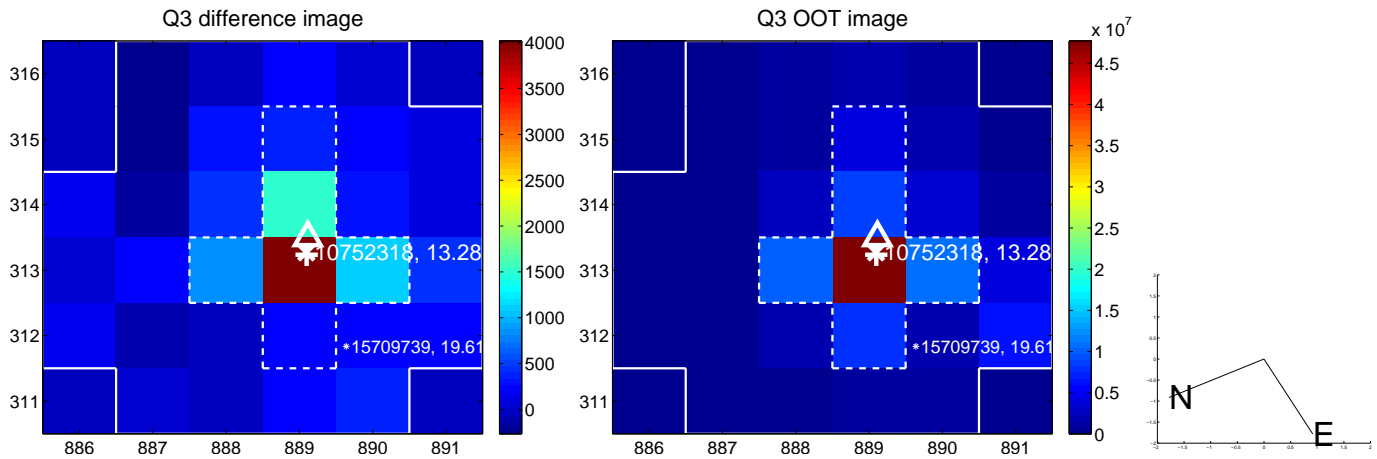
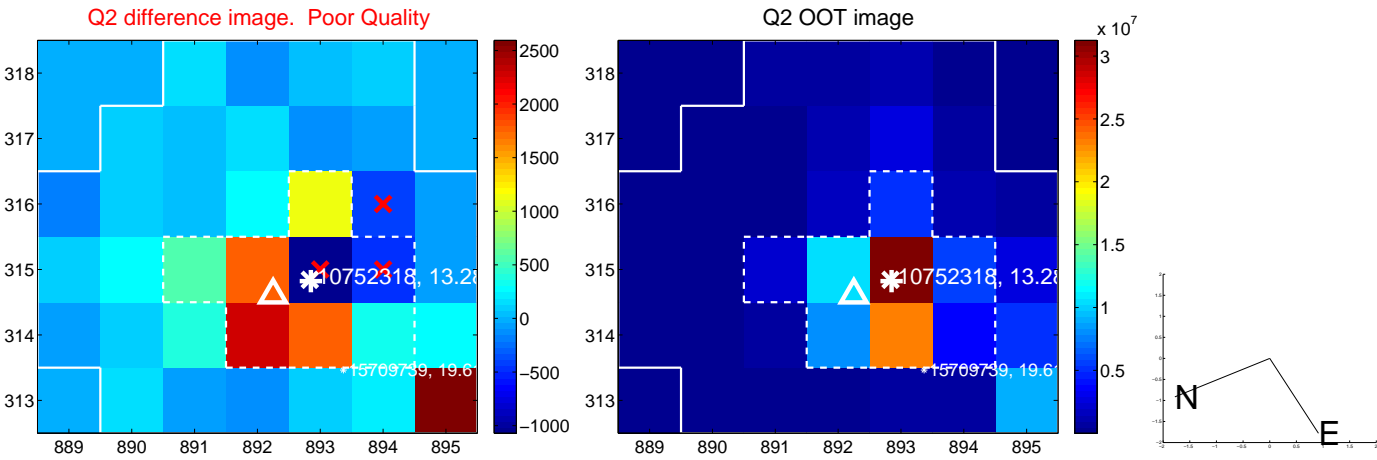
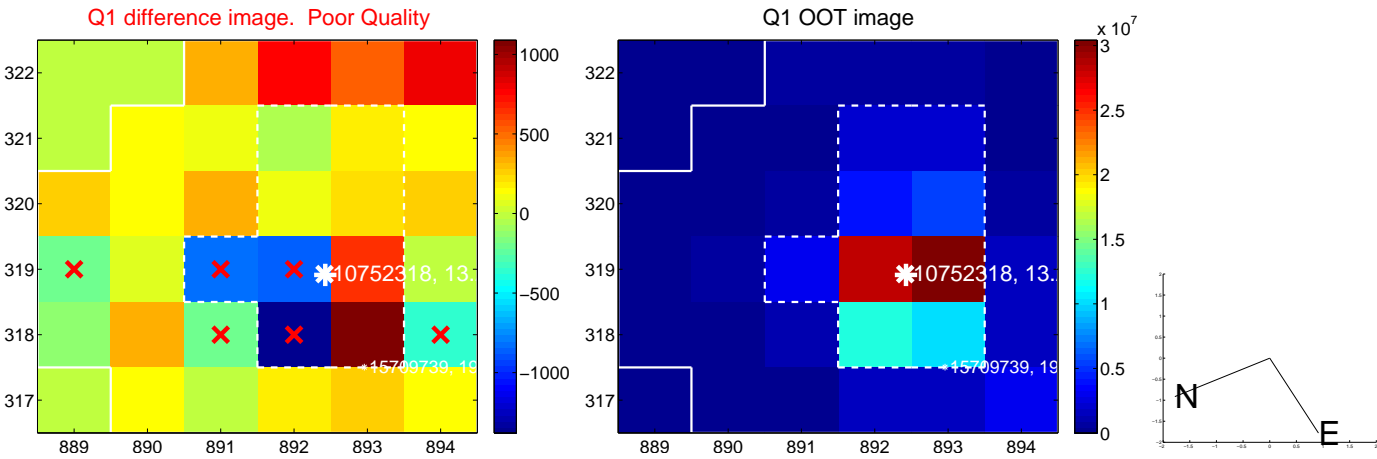
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.672 ± 0.410	1.64	-0.663 ± 0.377	-0.110 ± 0.406
PRF-fit source offset from KIC position	0.563 ± 0.425	1.32	-0.557 ± 0.406	-0.082 ± 0.350
photometric centroid source offset	2.23 ± 1.96	1.14	-0.63 ± 2.55	2.14 ± 1.90

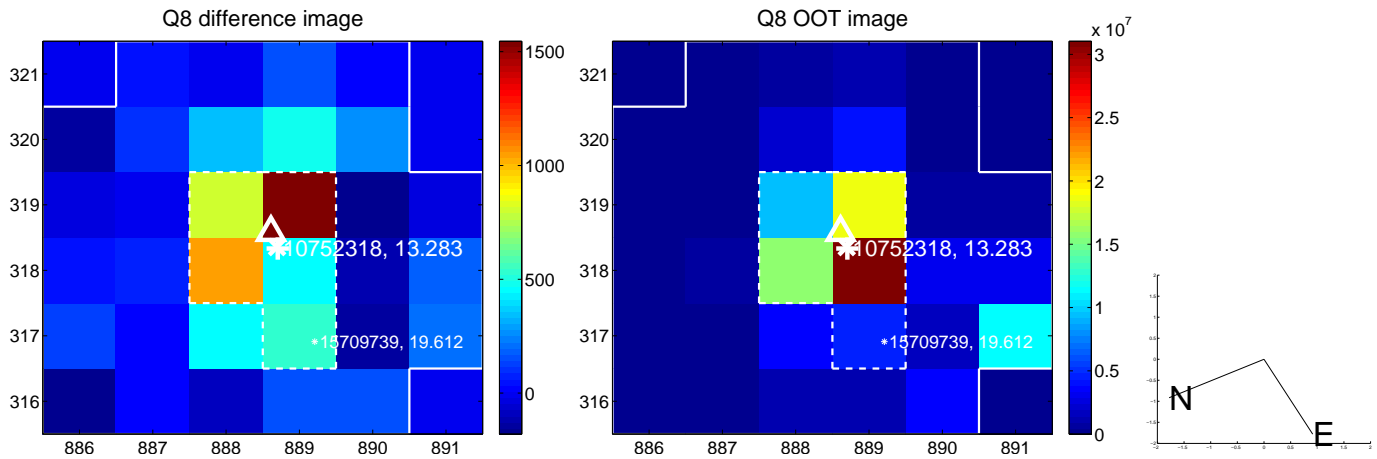
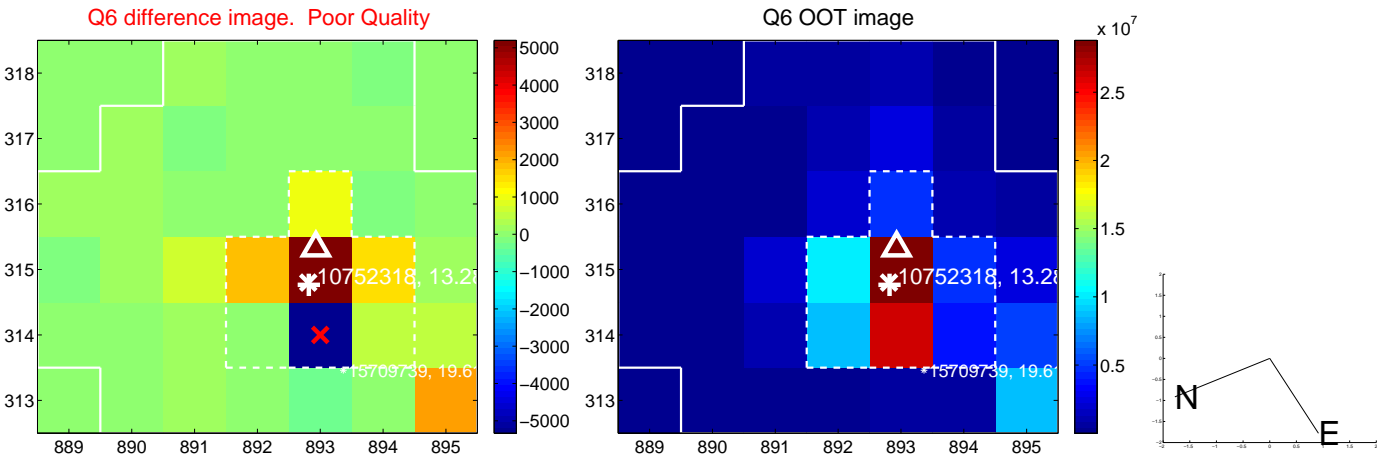
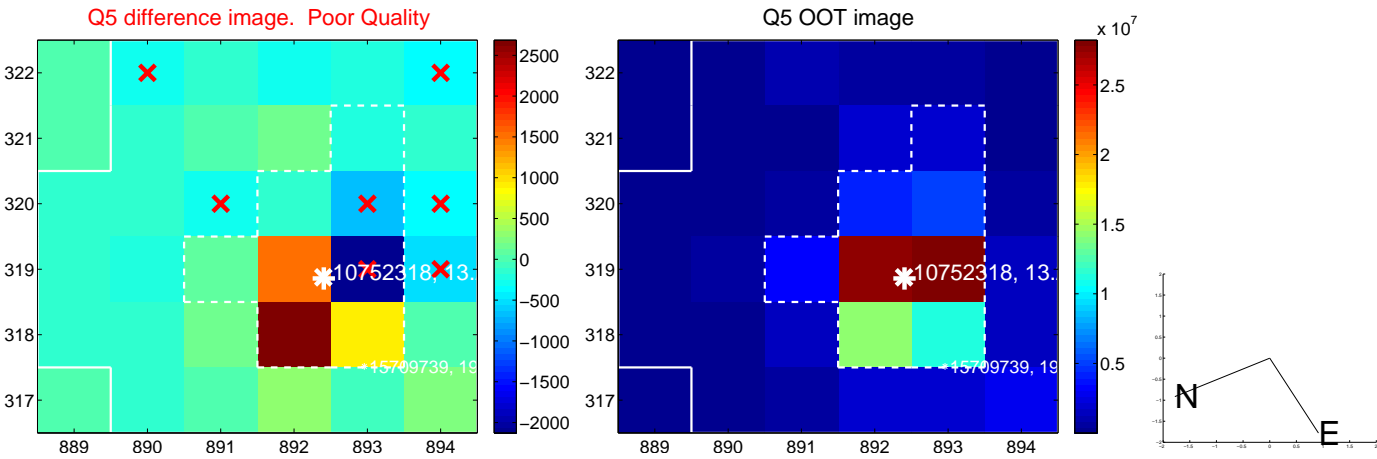


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

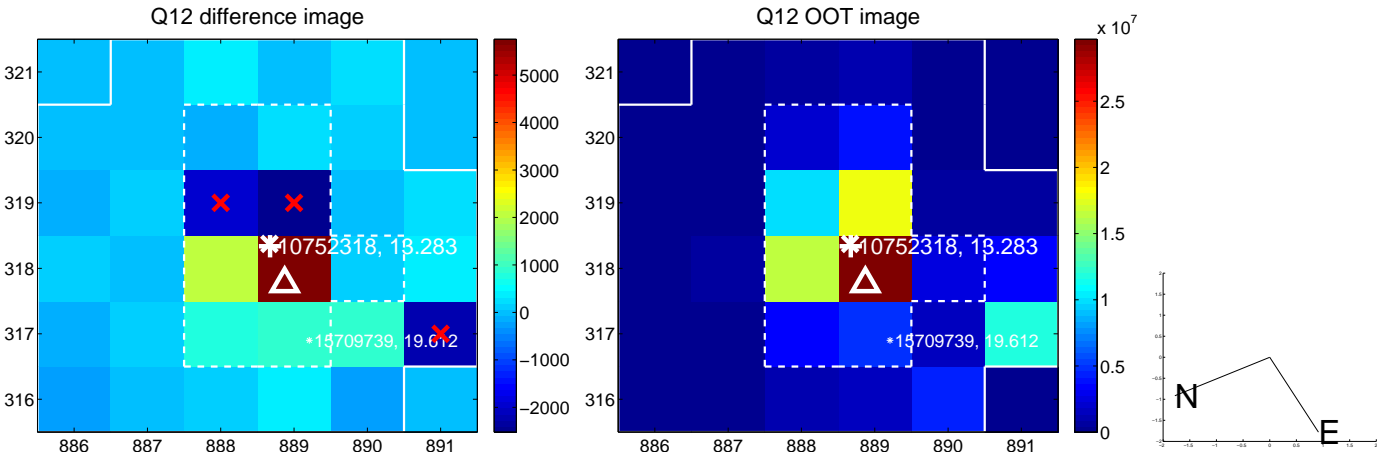
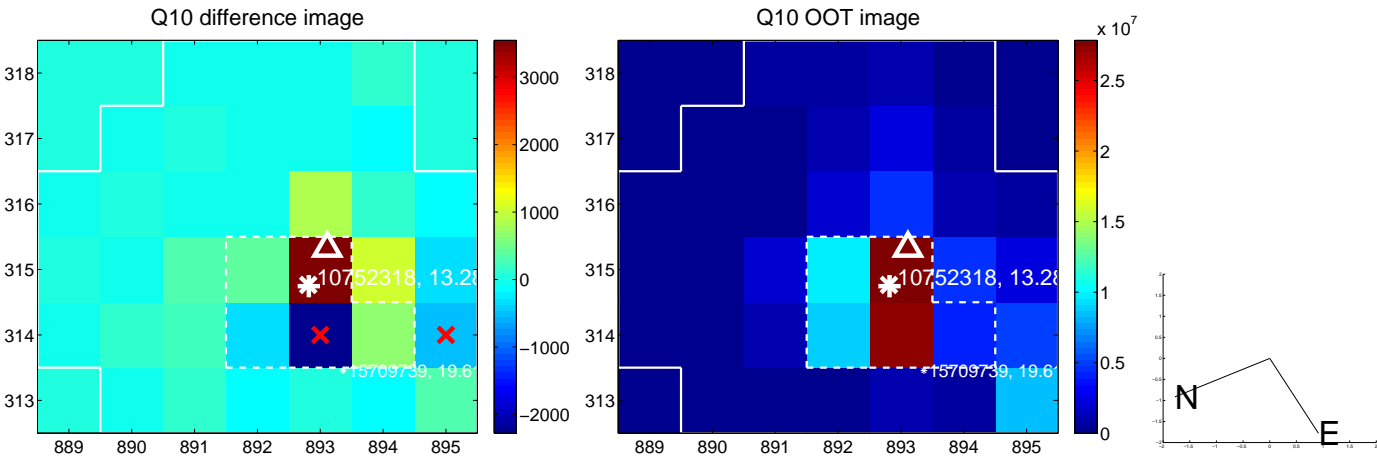
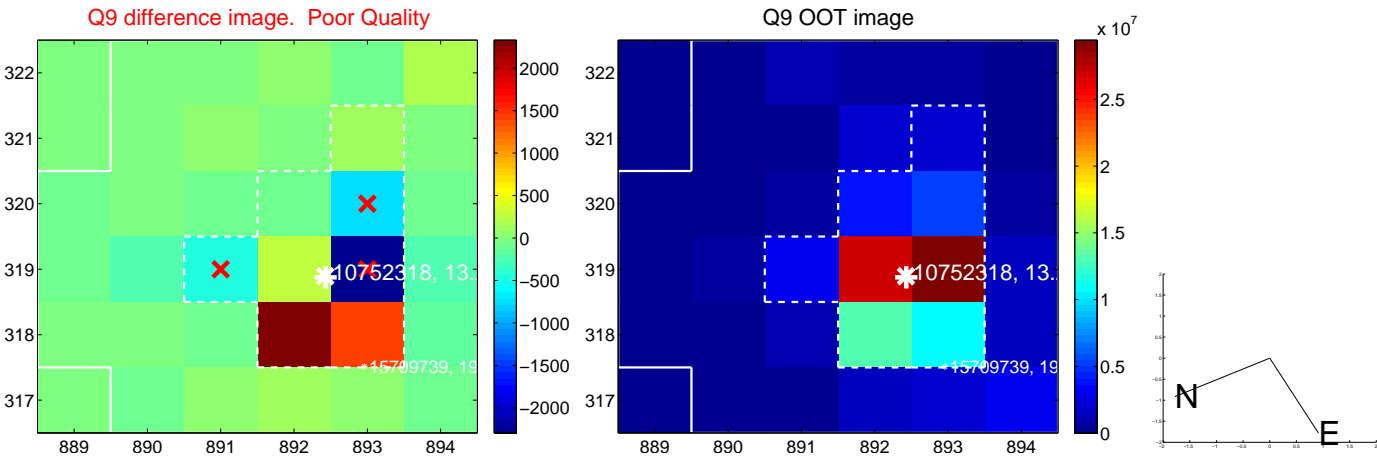
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



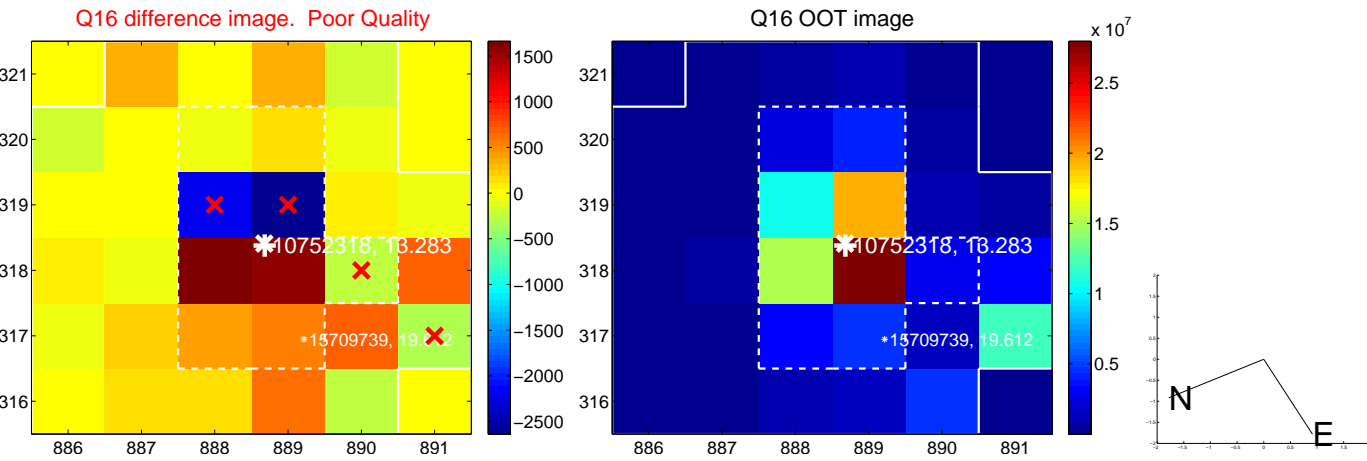
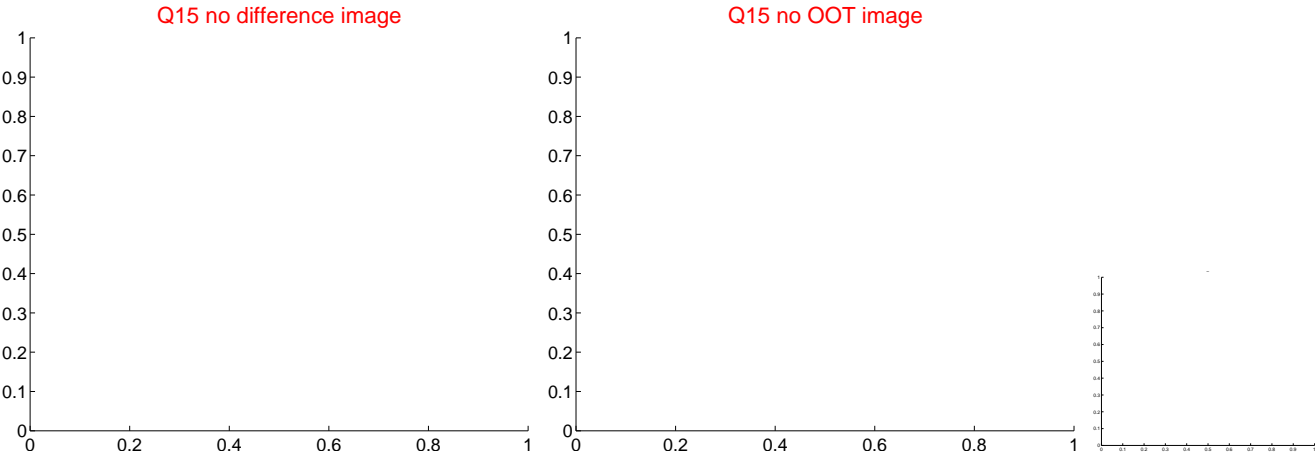
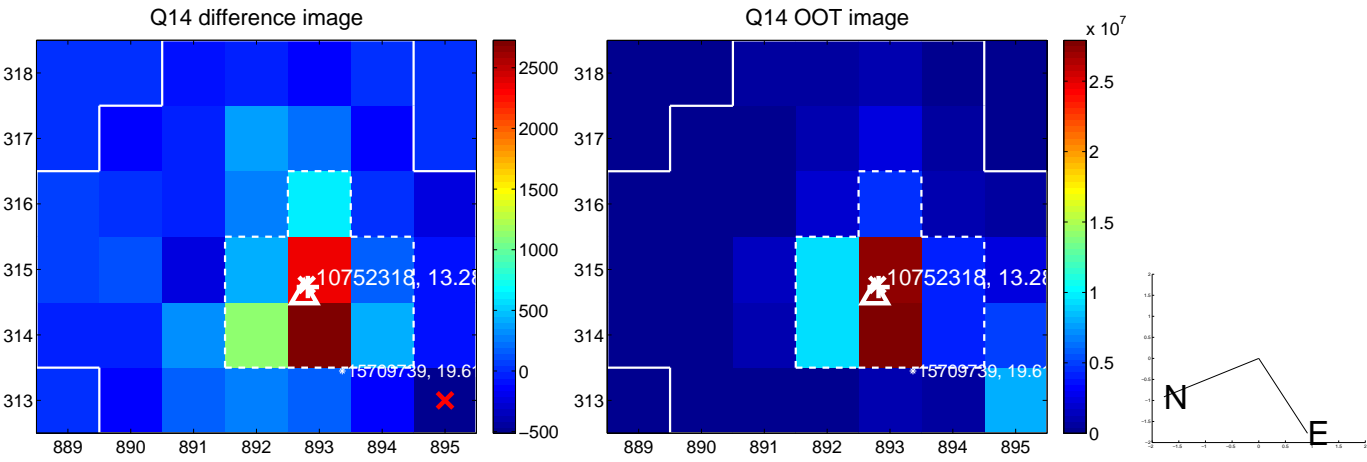
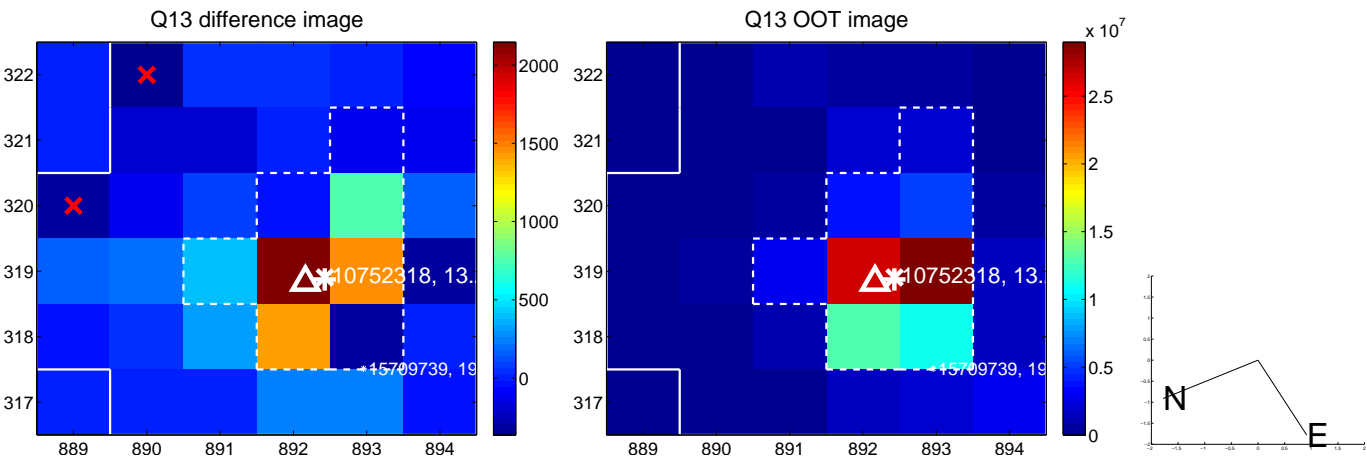
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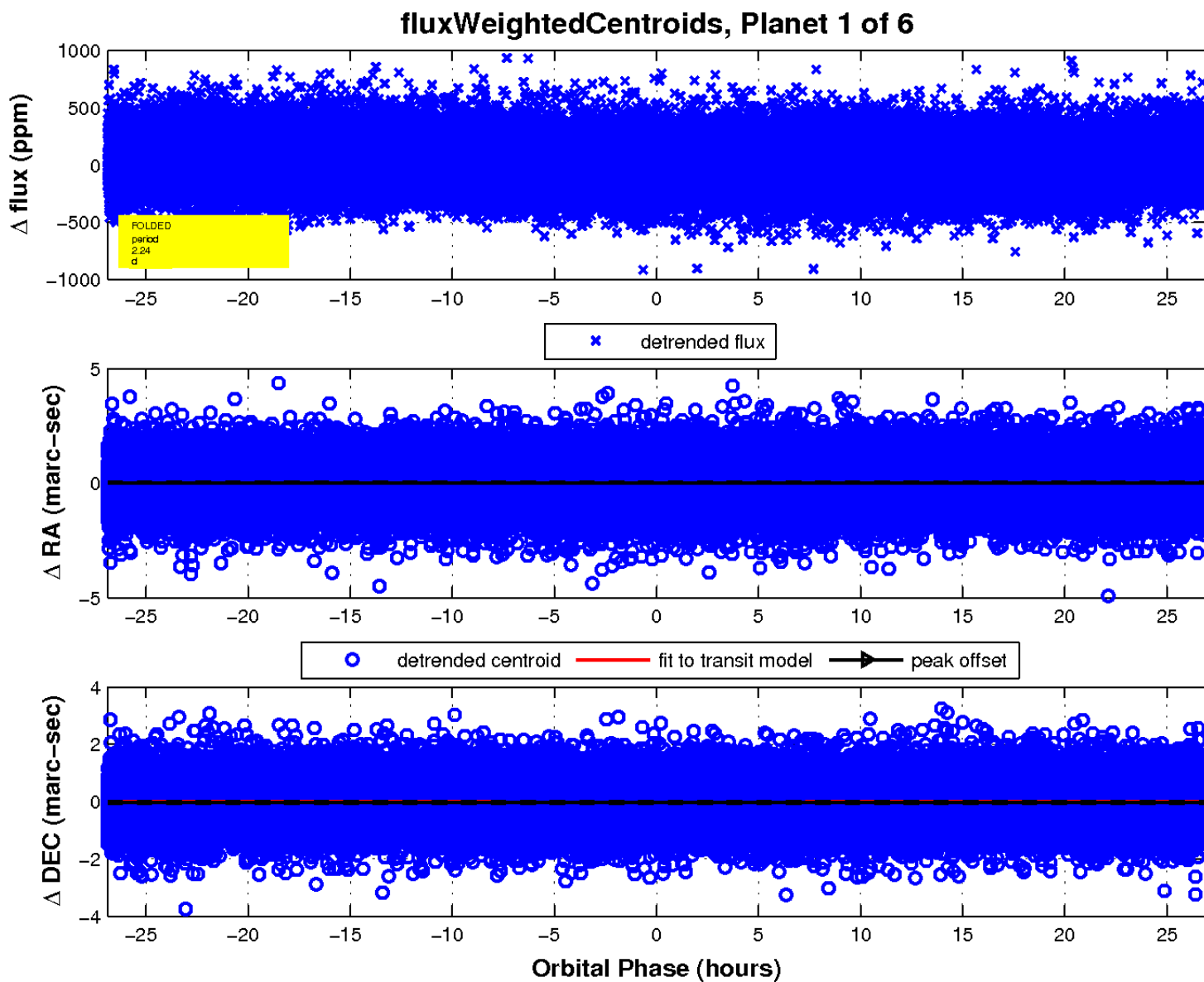
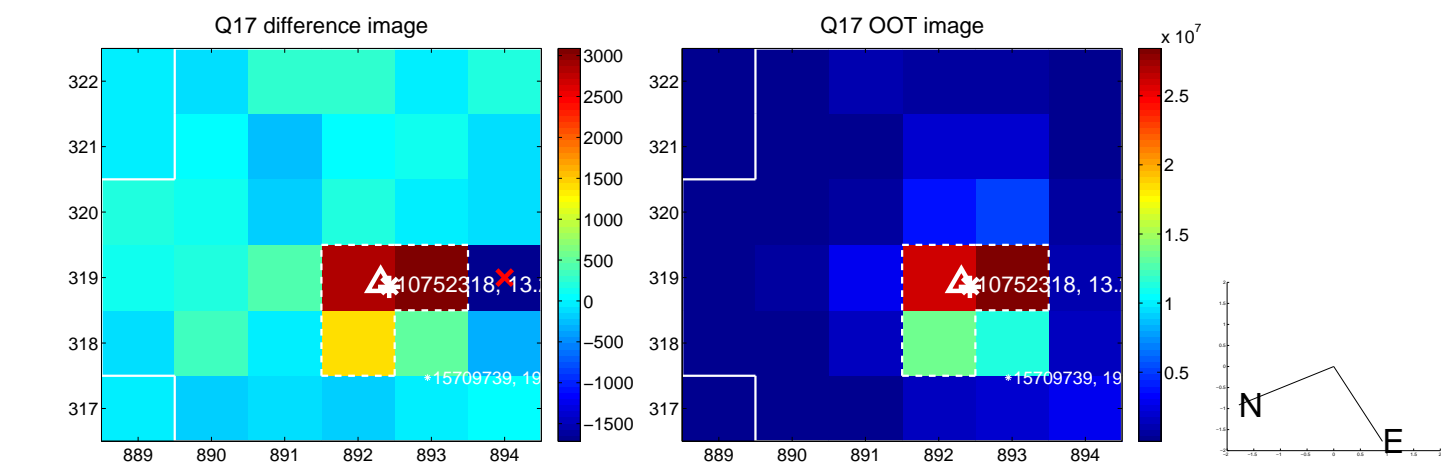
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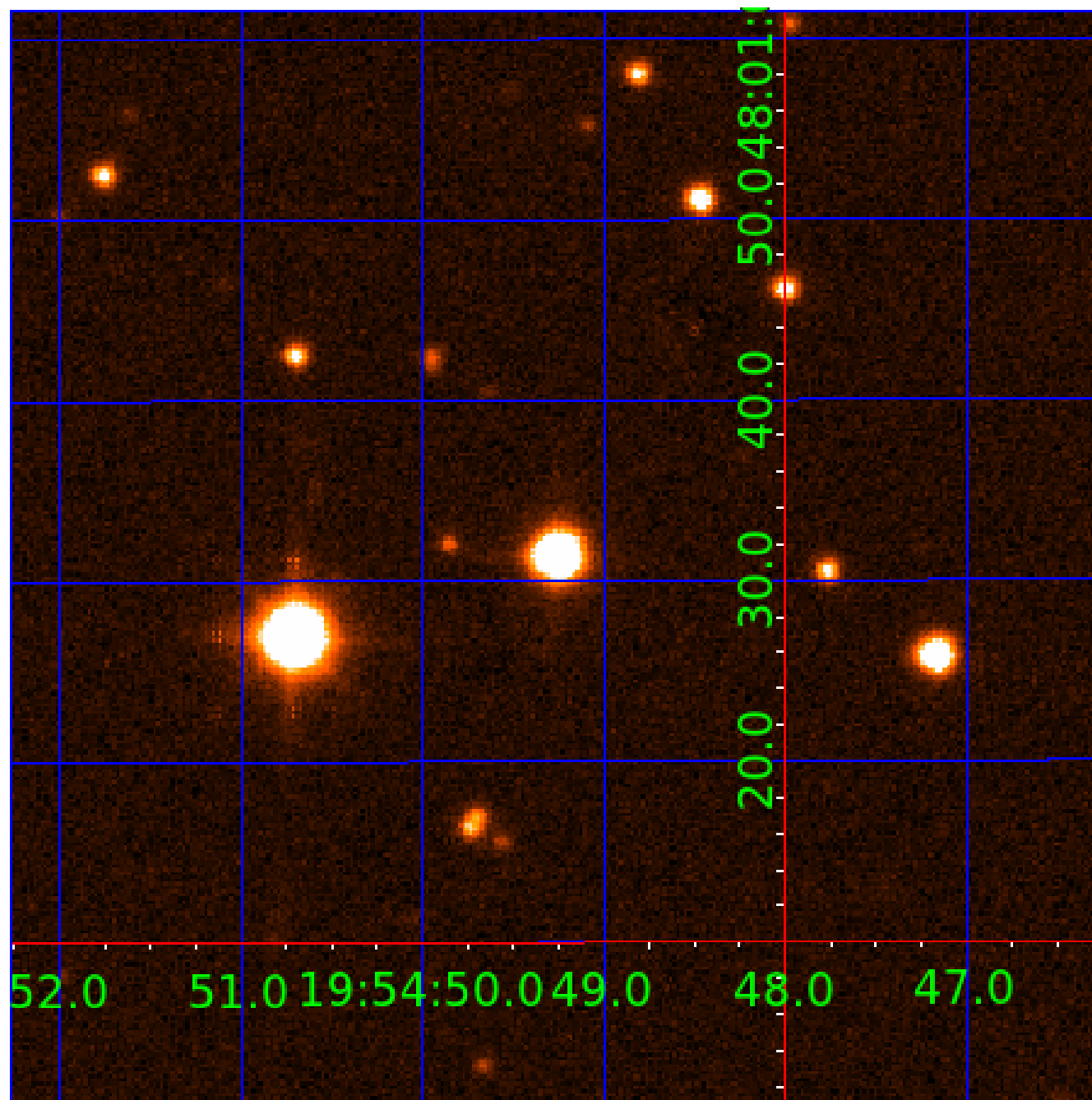


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010752318

Q1-17 DR25 TCE Parameters

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Robovetter Results

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010752318-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS—HALO_GHOST
010752318-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
010752318-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS
010752318-06	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.

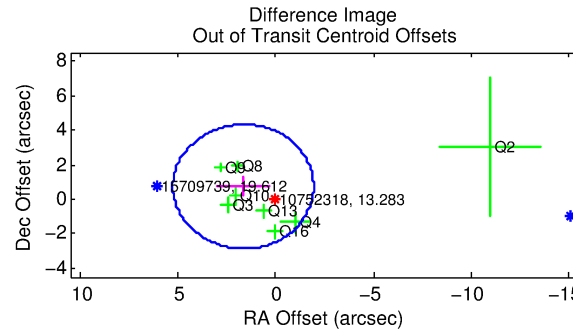
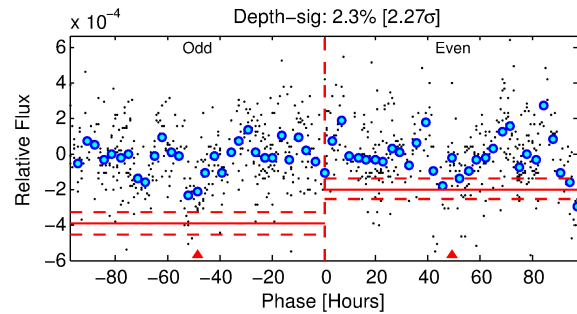
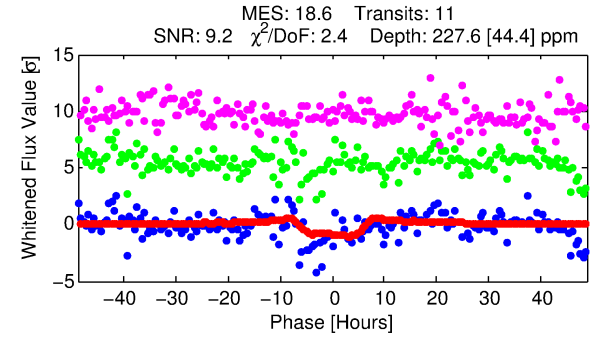
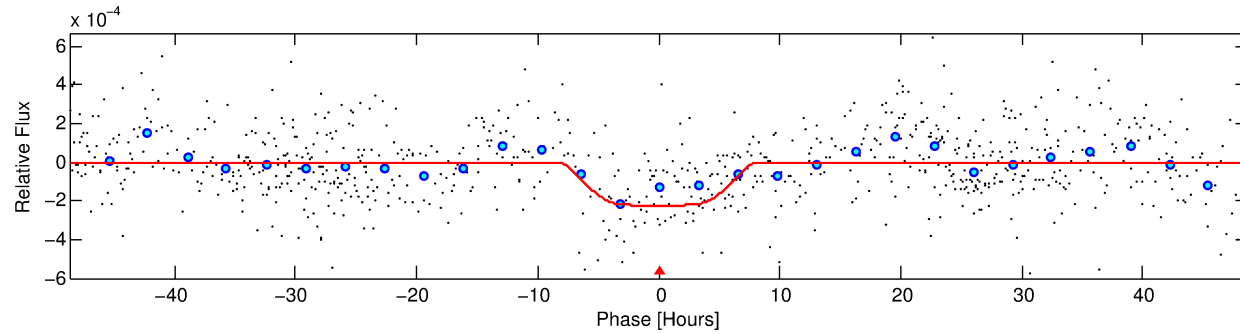
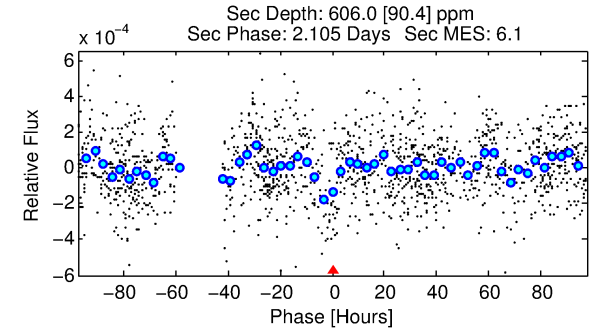
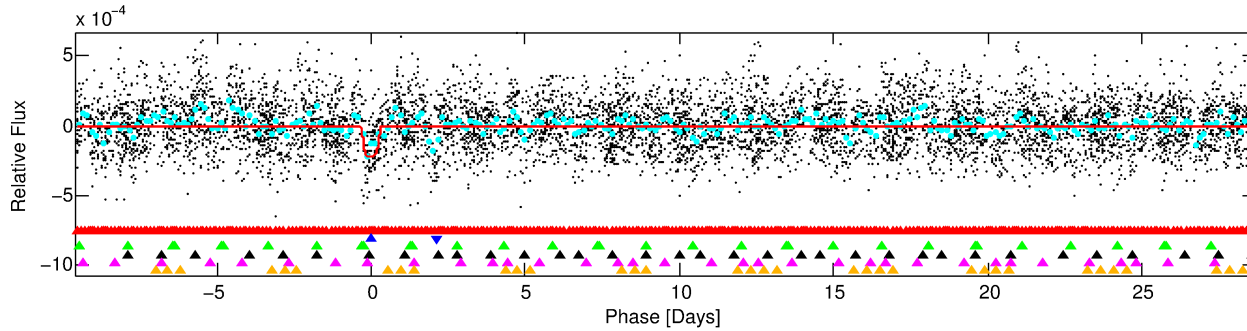
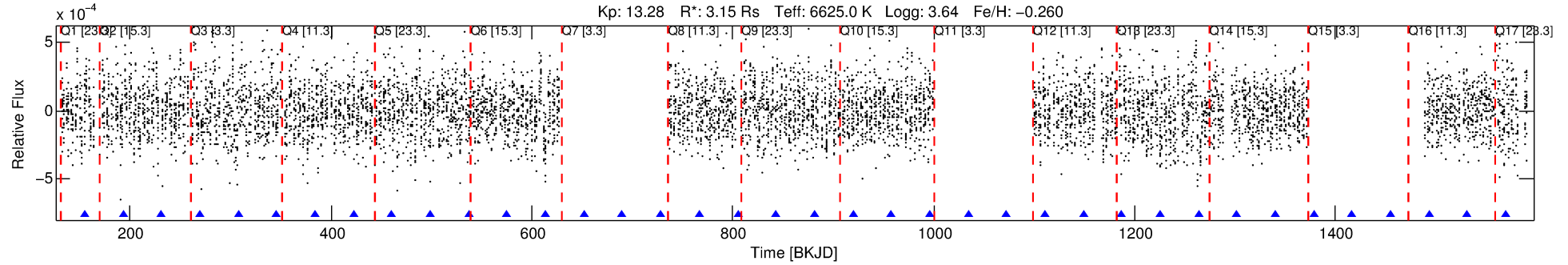
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010752318-02

No Significant Match Found

DV One-Page Summary

KIC: 10752318 Candidate: 2 of 6 Period: 38.222 d



DV Fit Results:

Period = 38.22179 [0.00304] d
Epoch = 155.1713 [0.0741] BKJD
Rp/R* = 0.0178 [0.0021]
a/R* = 5.49 [1.38]
b = 0.97 [0.01]
Seff = 256.43 [147.82]
Teq = 1020 [147] K
Rp = 6.12 [2.44] Re
a = 0.2580 [0.0923] AU
Ag = 592.50 [371.71] [1.59σ]
Teffp = 7784 [583] K [11.24σ]

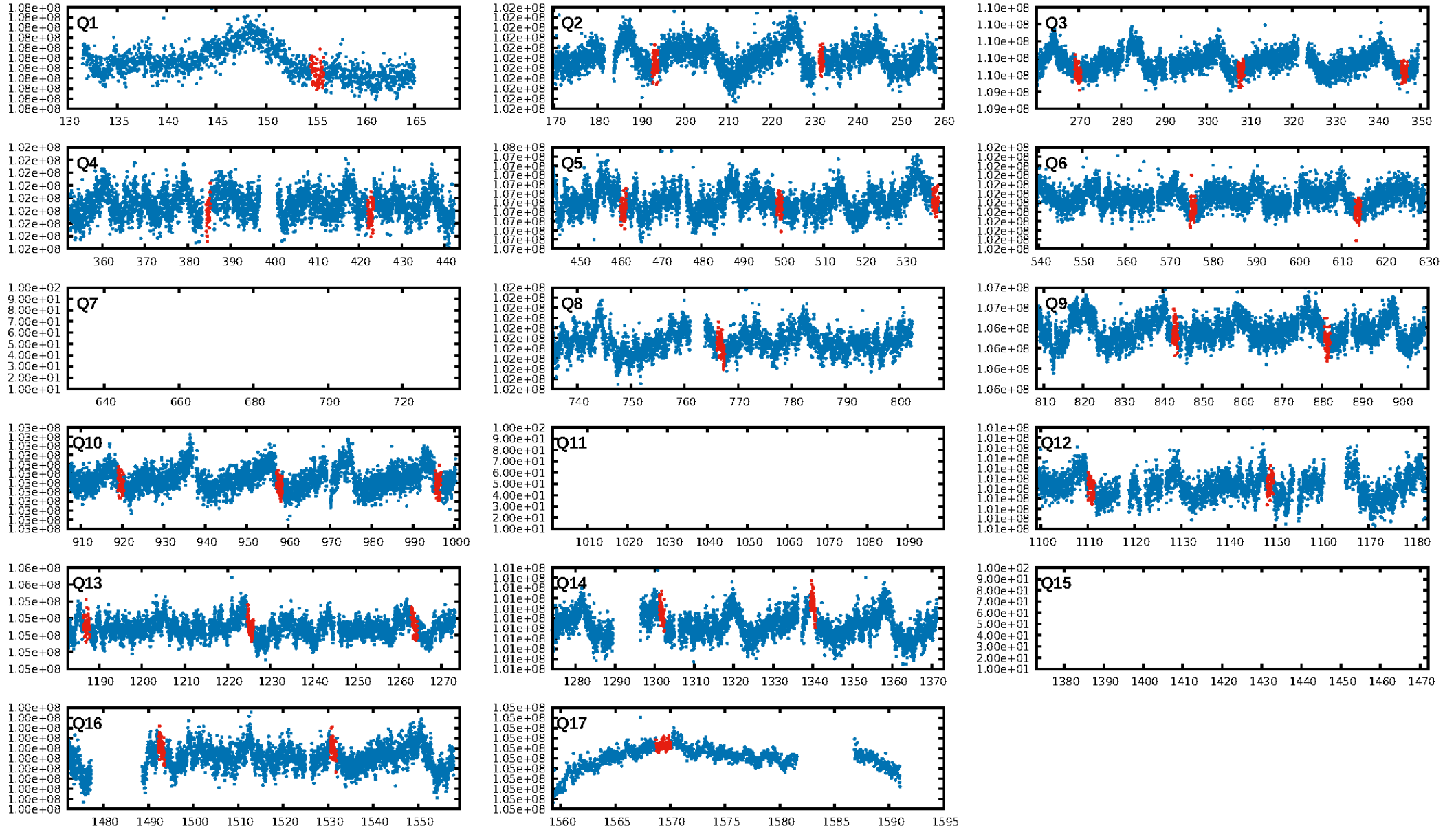
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [38.97σ]
LongPeriod-sig: 100.0% [5.04σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.49e-46
RollingBand-fgt: 1.00 [11/11]
GhostDiagnostic-chr: 2.775
Centroid-sig: 6.5%
Centroid-so: 1.843 arcsec [3.18σ]
OotOffset-rm: 1.813 arcsec [1.51σ]
OotOffset-st: 2/1/3/2 [8]
KicOffset-rm: 1.921 arcsec [1.32σ]
KicOffset-st: 2/1/3/2 [8]
DiffImageQuality-fgm: 0.38 [3/8]
DiffImageOverlap-fno: 0.00 [0/14]

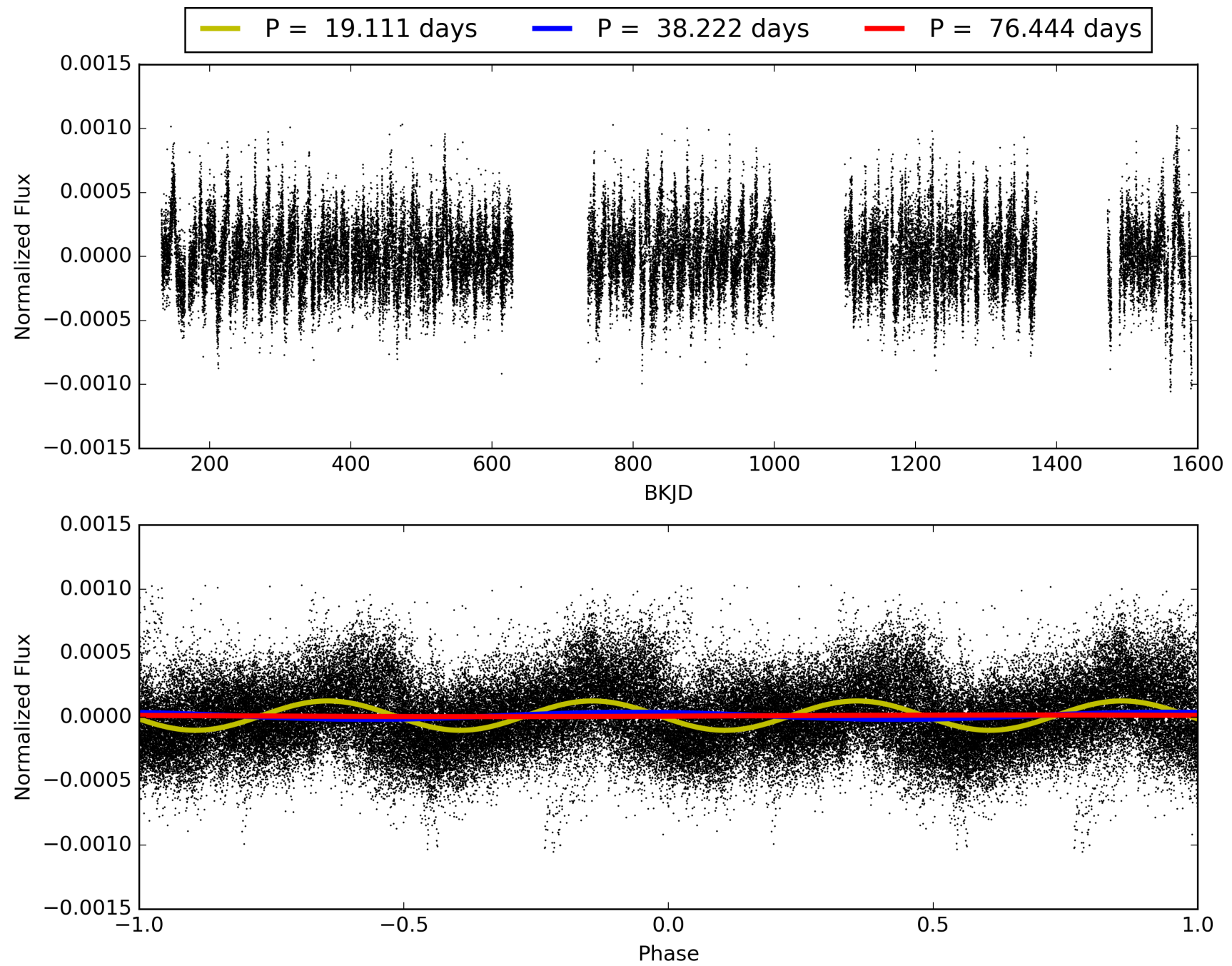
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 20:08:42 Z

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

TCE 010752318-02, PDC Light Curves

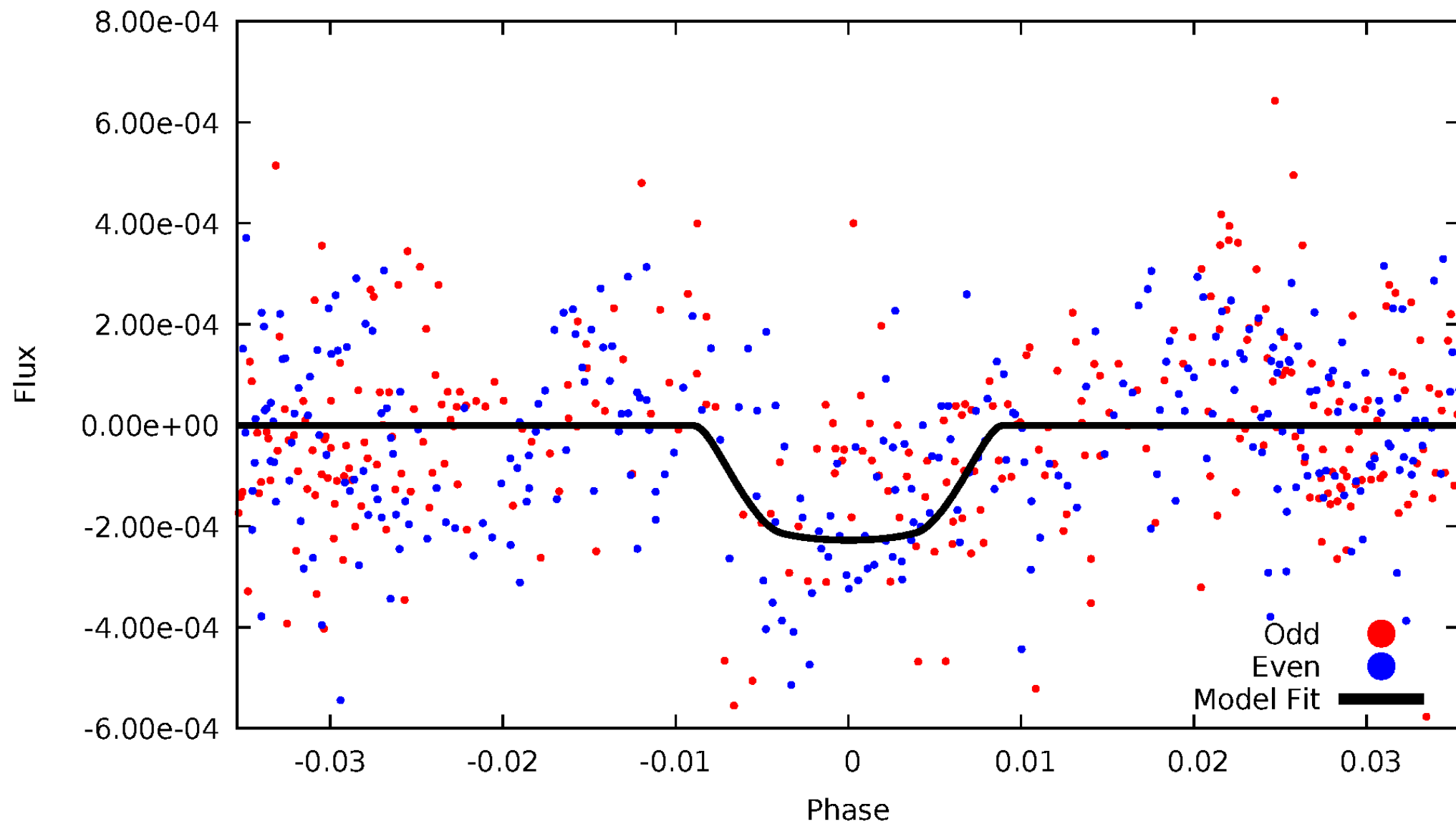


TCE 010752318-02



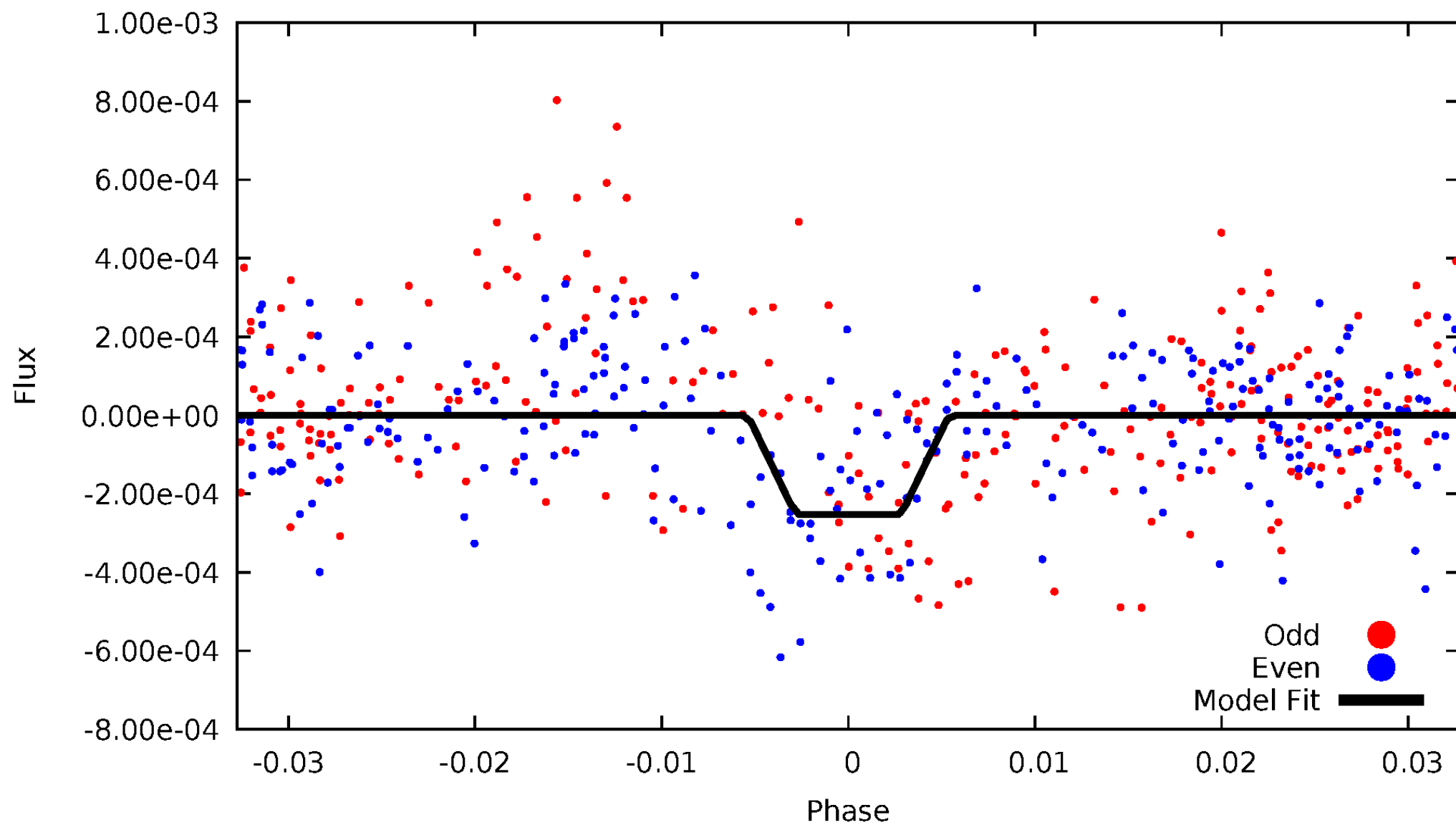
DV Odd/Even

TCE 010752318-02



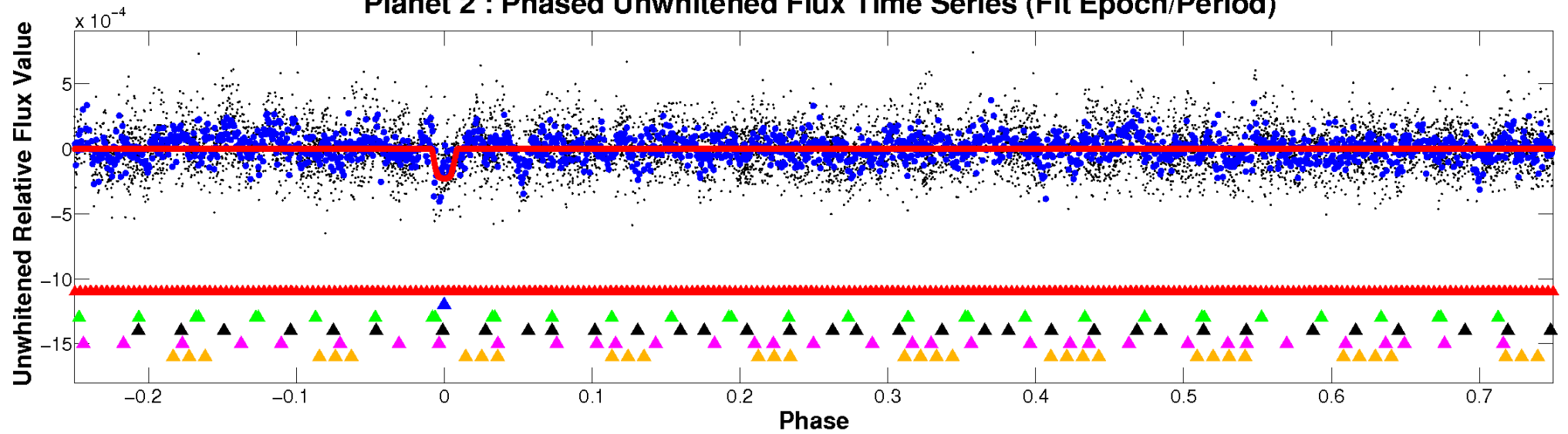
ALT Odd/Even

TCE 010752318-02

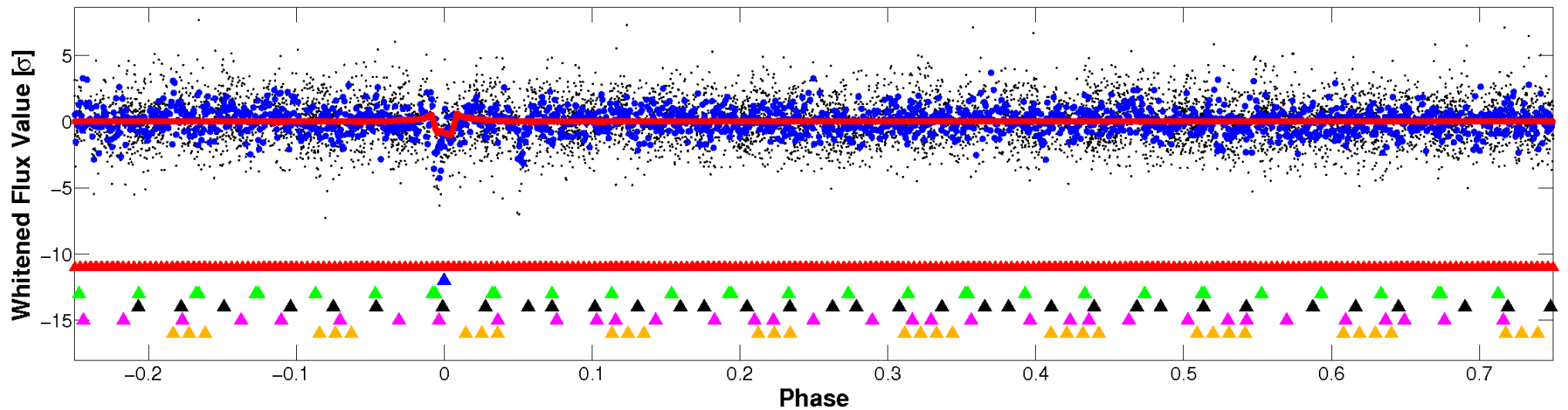


Non-Whitened Vs. Whitened Light Curve

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

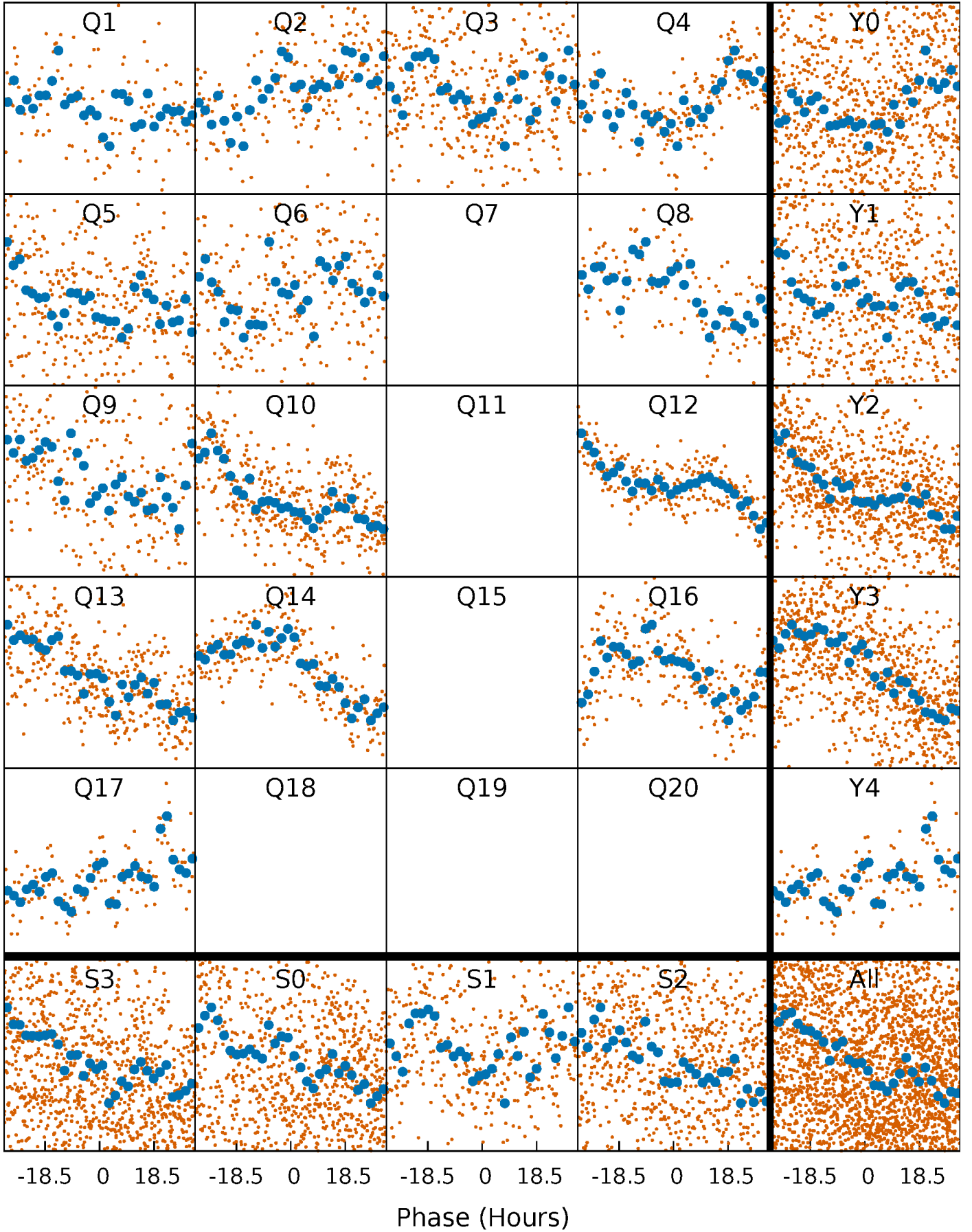


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



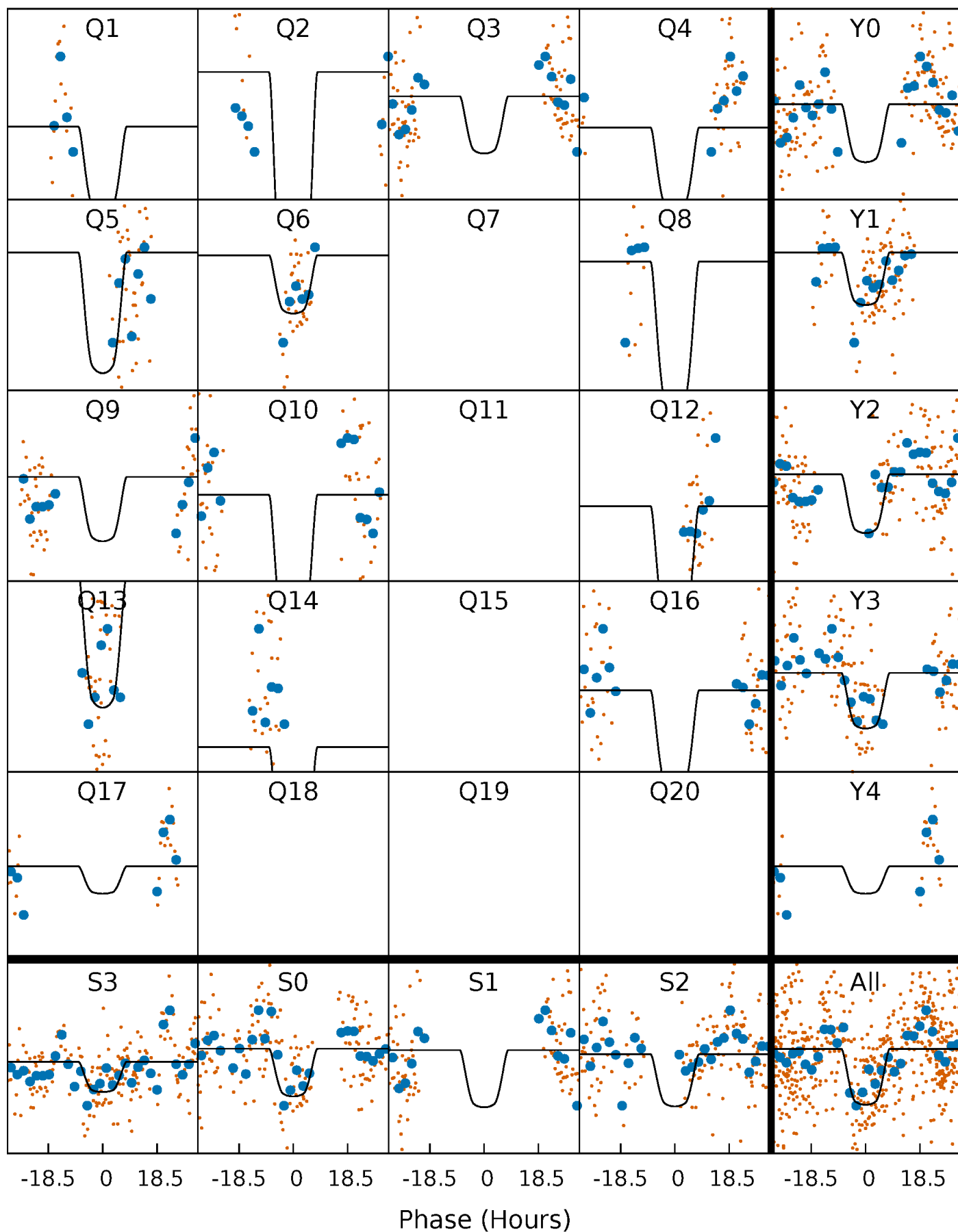
PDC Quarter-Phased Transit Curves

TCE 010752318-02 $P = 38.221786$ Days $T_0 = 155.171294$ (BKJD)



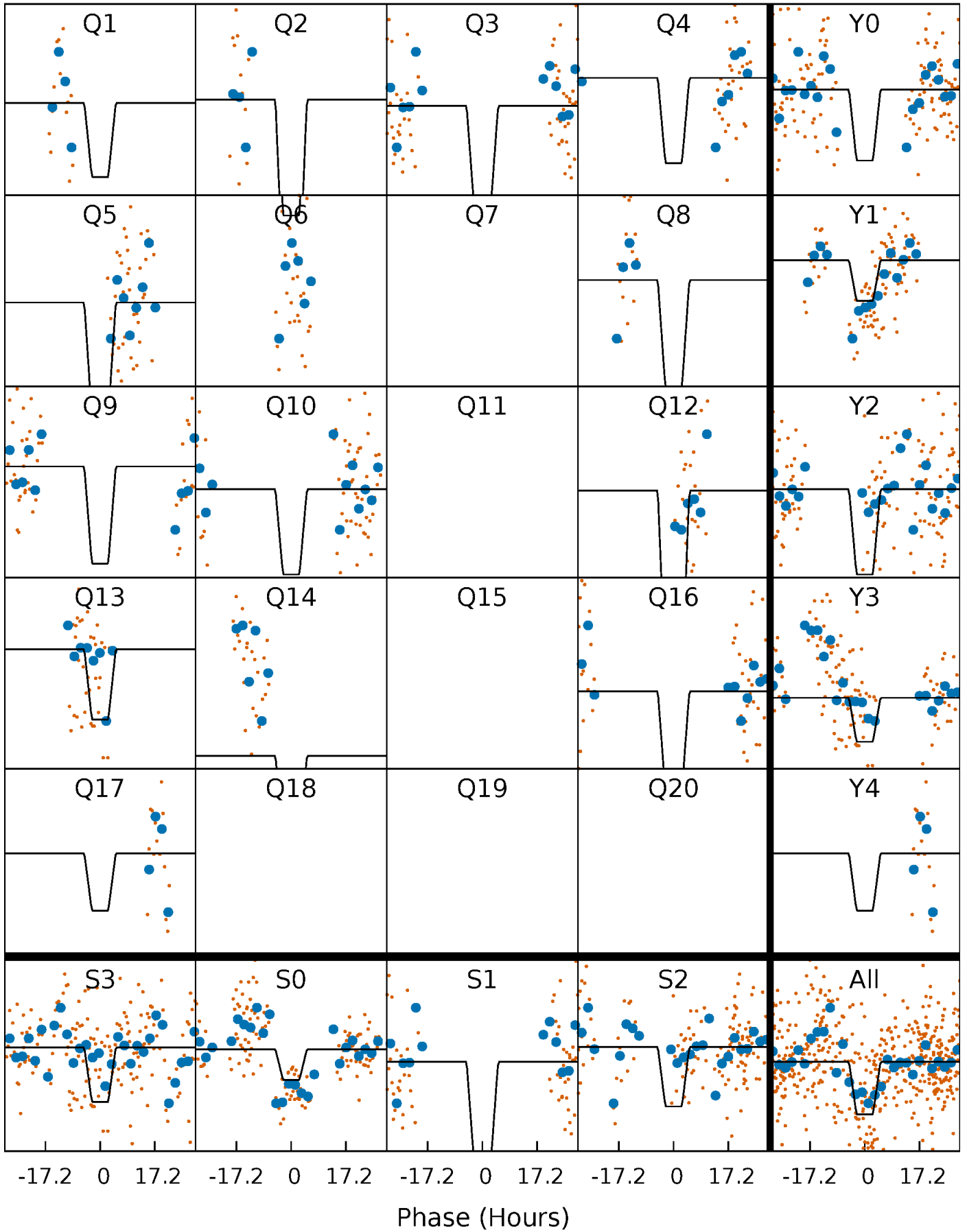
DV Quarter-Phased Transit Curves

TCE 010752318-02 P= 38.221786 Days $T_0=155.171294$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

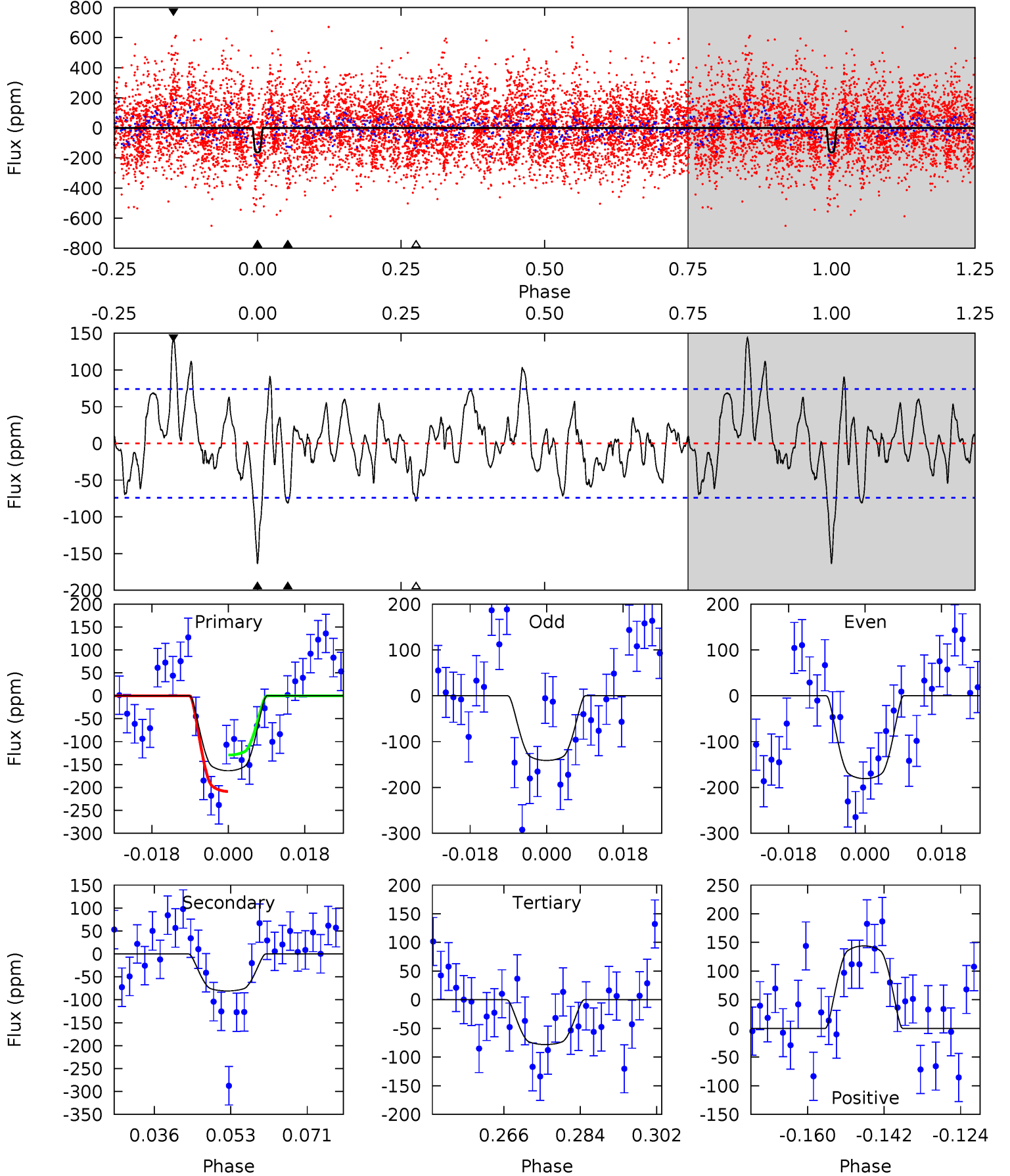
TCE 010752318-02 P= 38.228475 Days $T_0=155.103632$ (BKJD)



DV Model-Shift Uniqueness Test

010752318-02, P = 38.221786 Days, E = 116.949508 Days

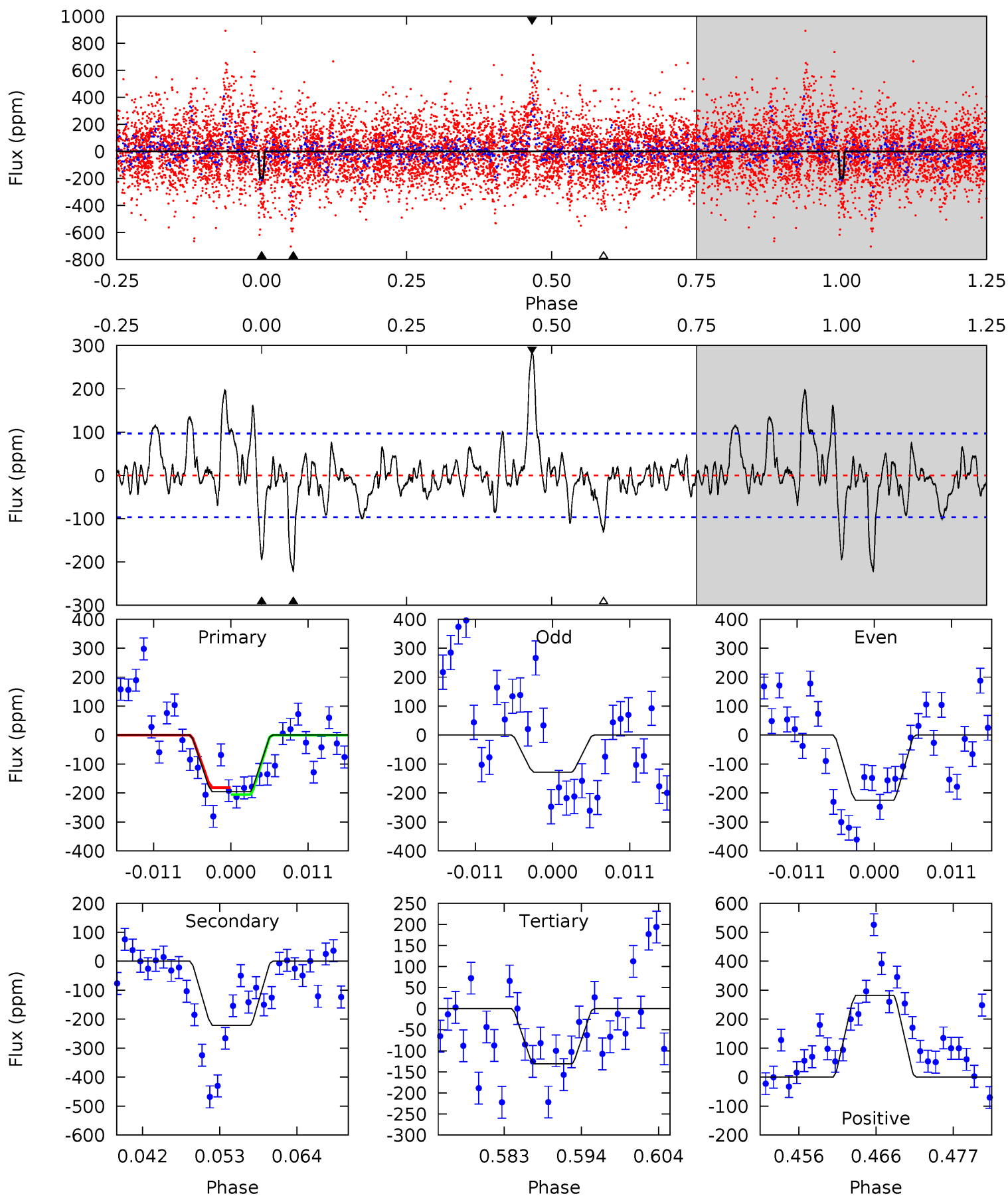
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.9	5.36	5.19	9.56	4.91	2.37	2.43	5.67	1.30	0.17	-4.20	1.32	-1.44	0.47	2.58



Alt Model-Shift Uniqueness Test

010752318-02, P = 38.228475 Days, E = 116.875157 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.2	11.5	6.81	14.7	5.02	2.56	2.55	3.34	-4.53	4.68	-3.19	2.51	0.98	0.56	0.61



Stellar Parameters For KIC 010752318

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6625^{+178}_{-198}	$3.638^{+0.328}_{-0.082}$	$-0.260^{+0.300}_{-0.250}$	$3.145^{+0.399}_{-1.198}$	$1.566^{+0.225}_{-0.338}$	$0.071^{+0.164}_{-0.018}$
	+3%/-3%	+9%/-2%	+115%/-96%	+13%/-38%	+14%/-22%	+231%/-26%
Source	PHO1	FLK73	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 010752318-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-81 ± 15	$5.87^{+1.09}_{-1.19}$	1399^{+80}_{-116}	4797^{+361}_{-283}	87^{+51}_{-28}
Alt.	-221 ± 19	$5.22^{+0.99}_{-1.15}$	1401^{+69}_{-125}	6377^{+563}_{-427}	298^{+183}_{-84}

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

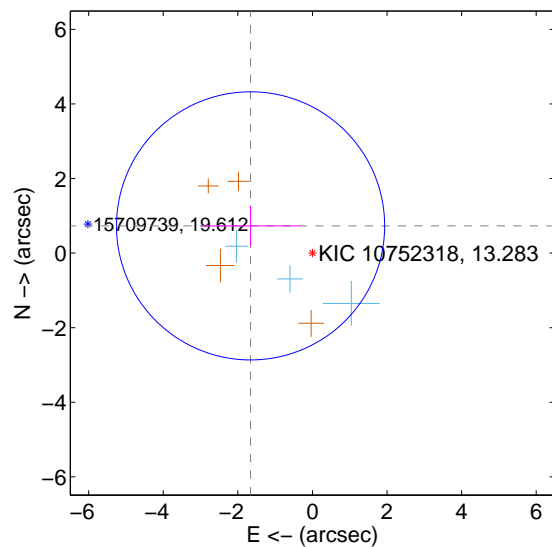
Supplemental centroid analysis for 010752318-02. Kepler magnitude: 13.28. Transit SNR 9.20

There are 3 quarters with good PRF difference image offsets

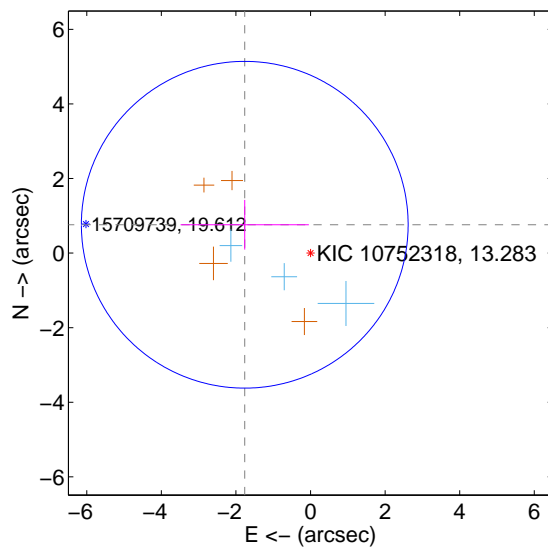
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.813 ± 1.199	1.51	1.659 ± 1.331	0.730 ± 0.540
PRF-fit source offset from KIC position	1.921 ± 1.461	1.32	1.764 ± 1.720	0.760 ± 0.666
photometric centroid source offset	1.84 ± 0.58	3.18	1.63 ± 0.60	-0.86 ± 0.48

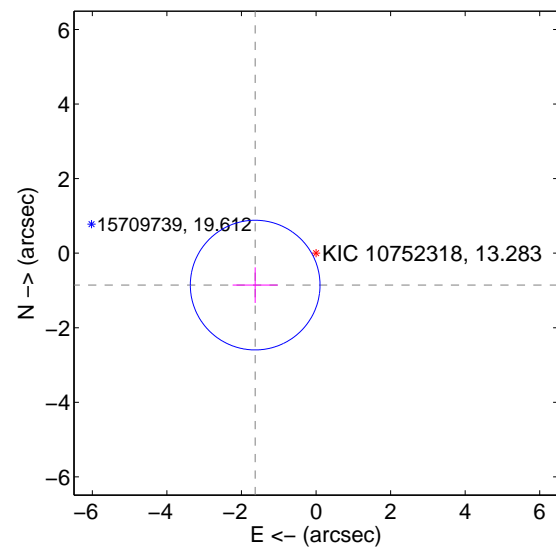
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

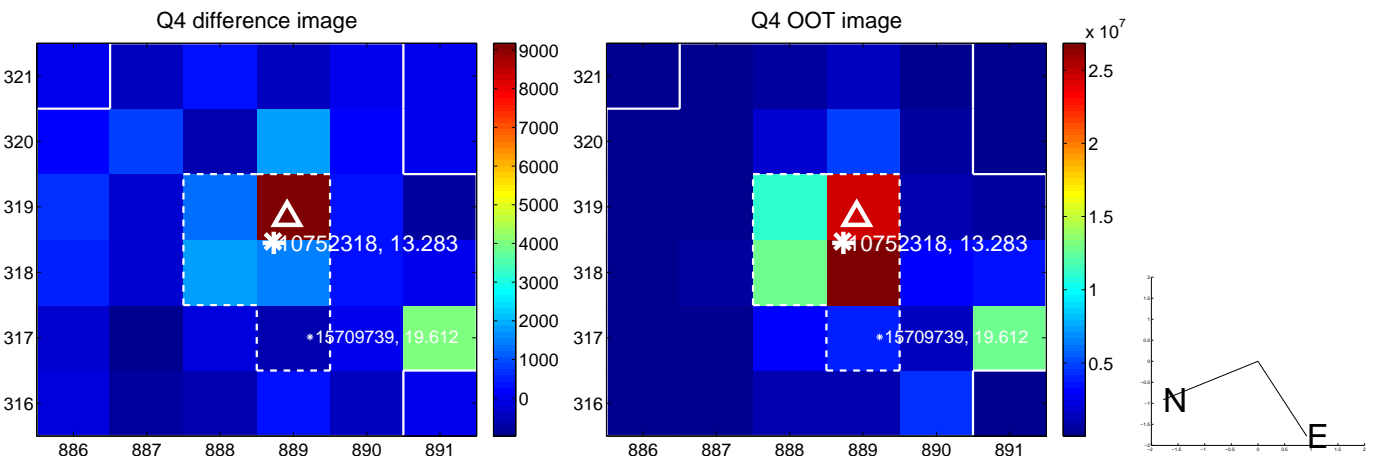
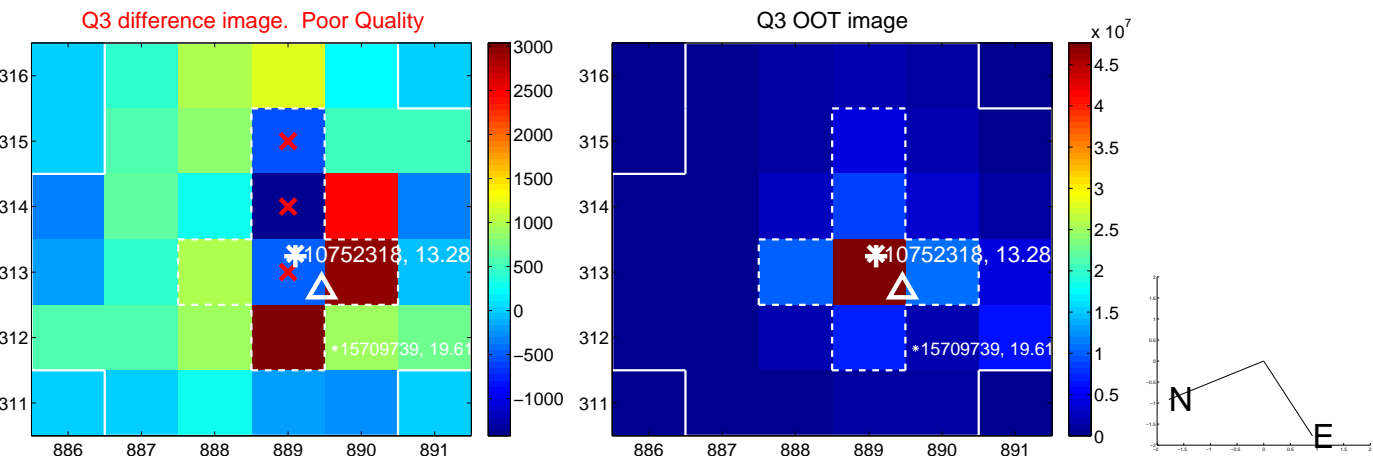
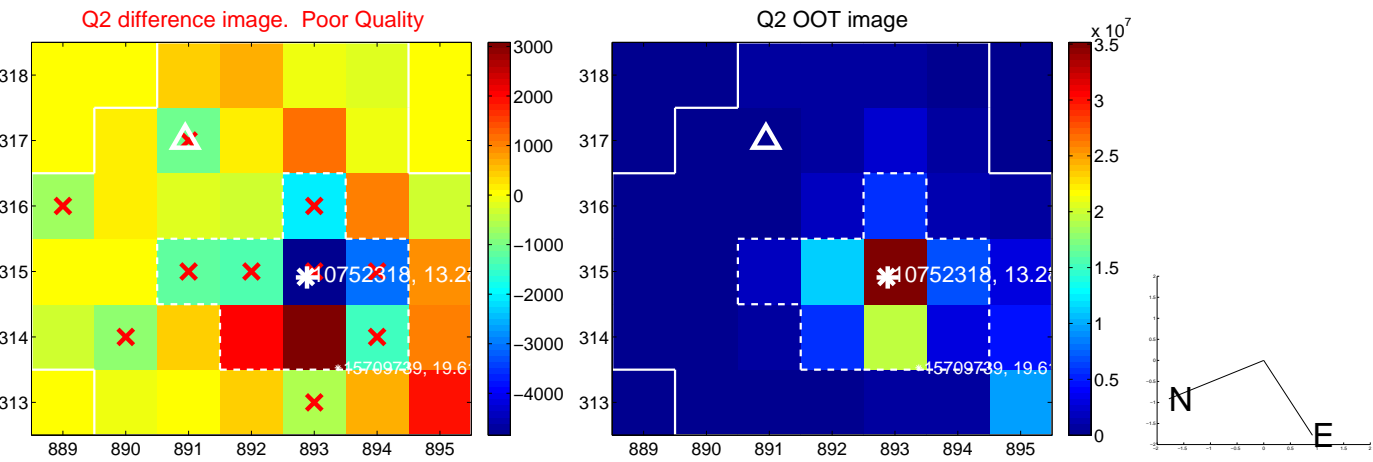
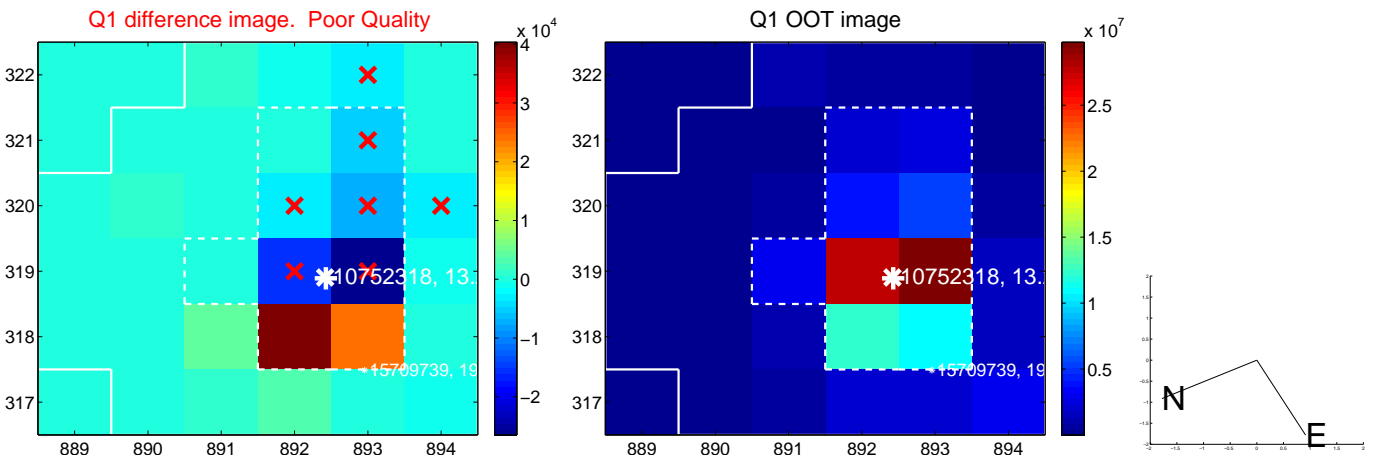


offset from photometric centroids

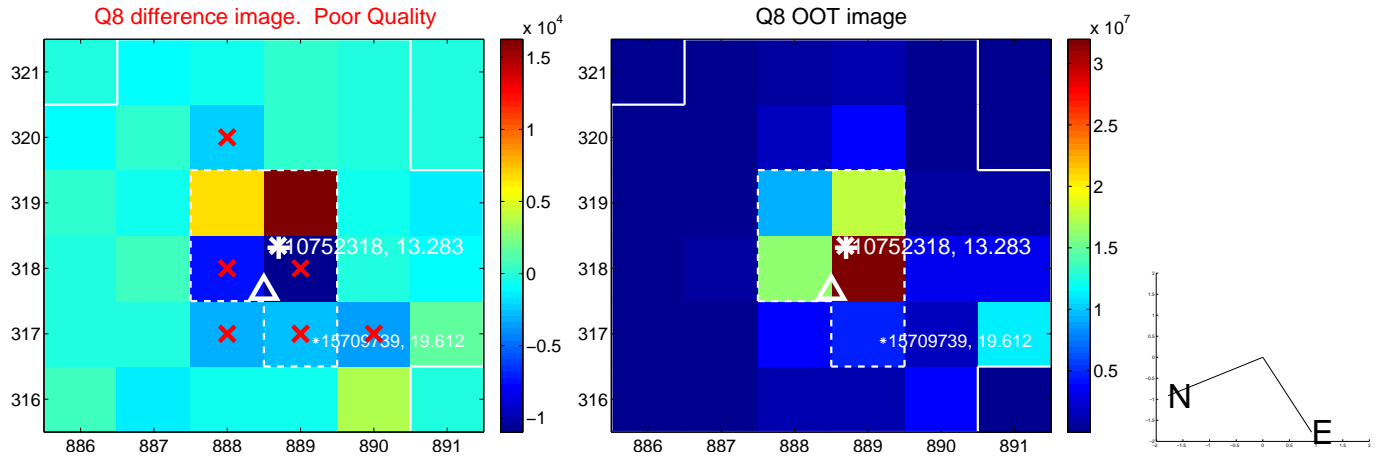
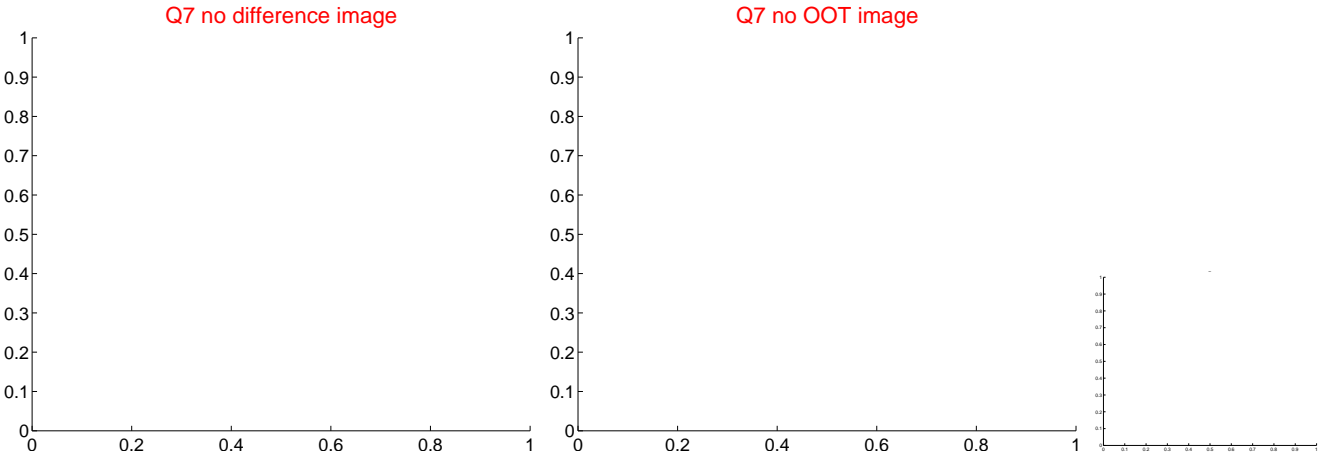
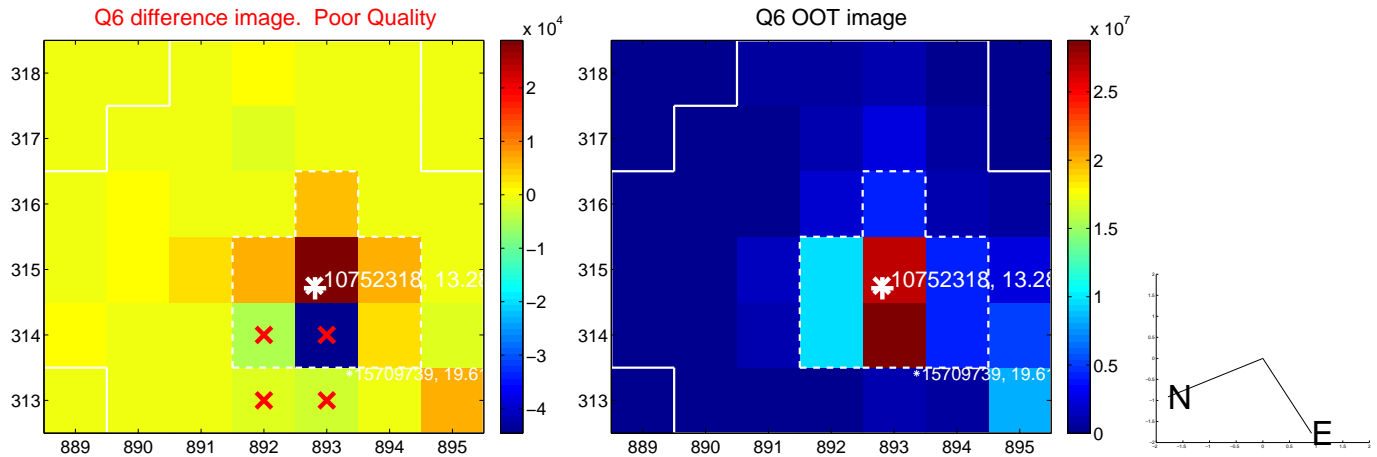
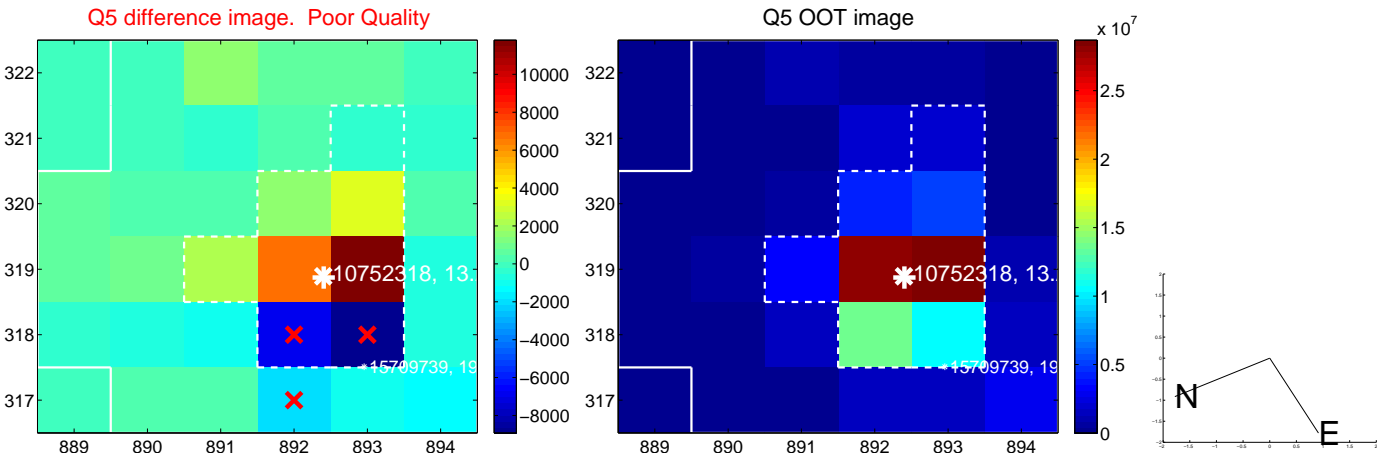


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

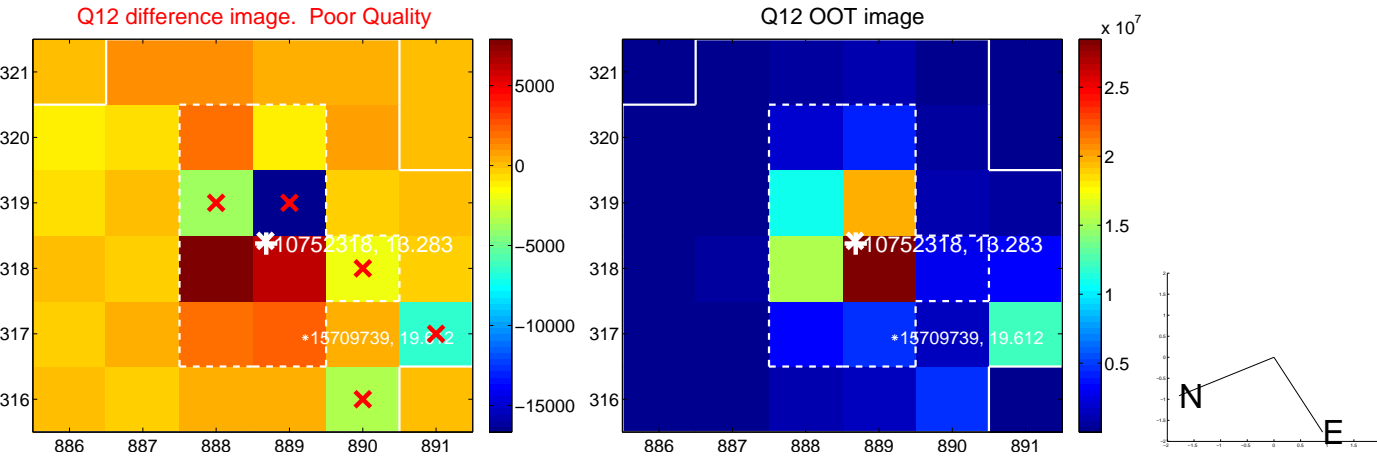
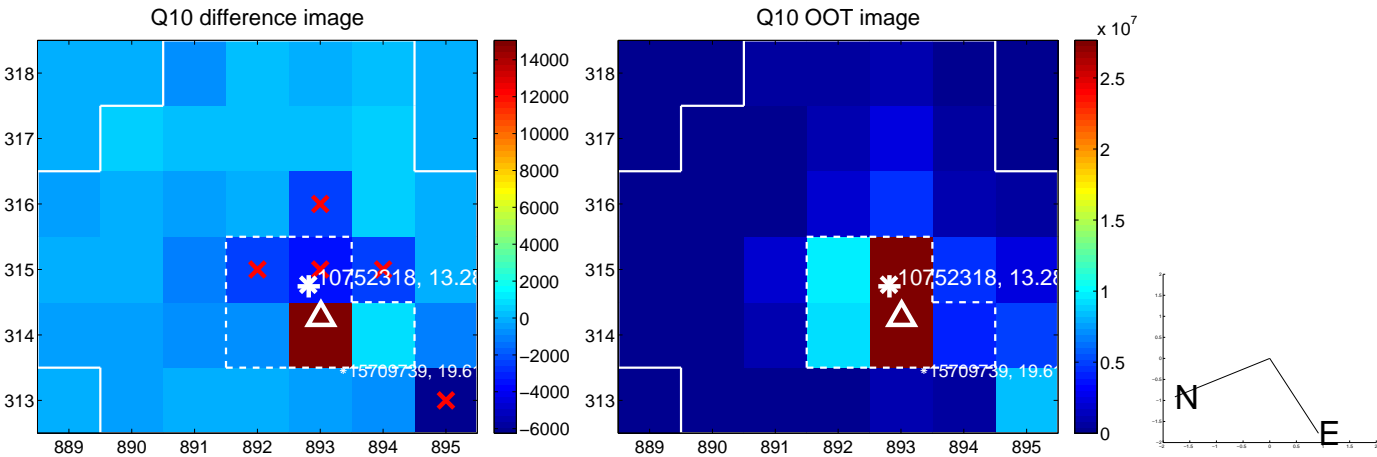
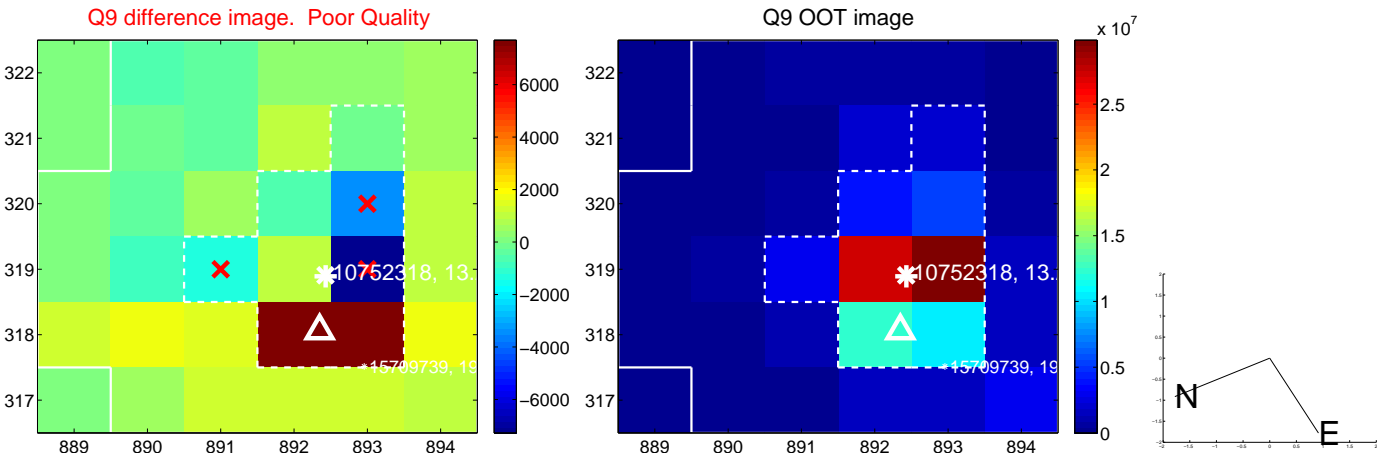
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



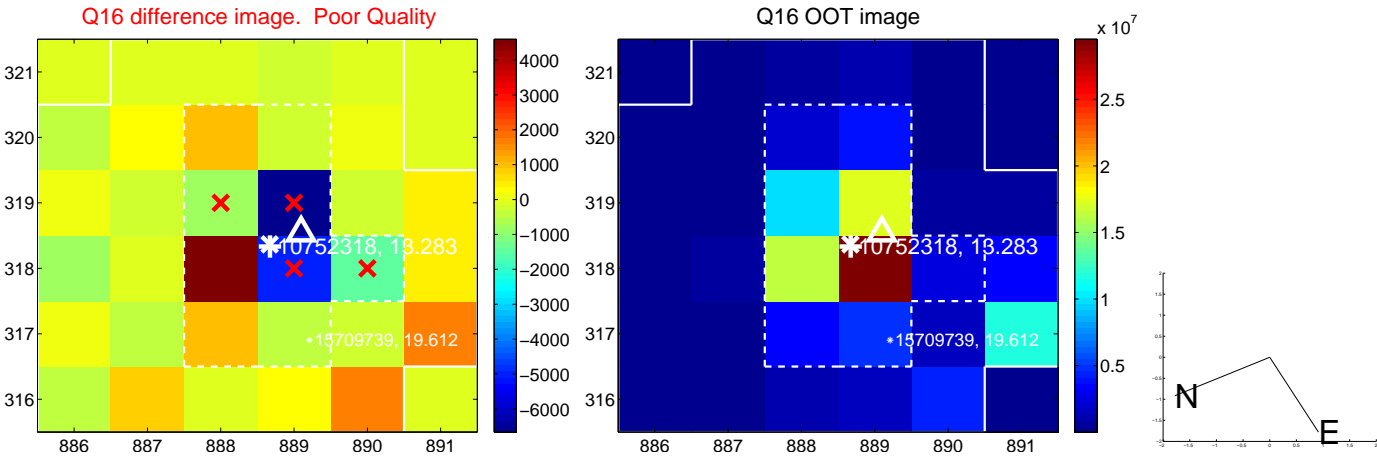
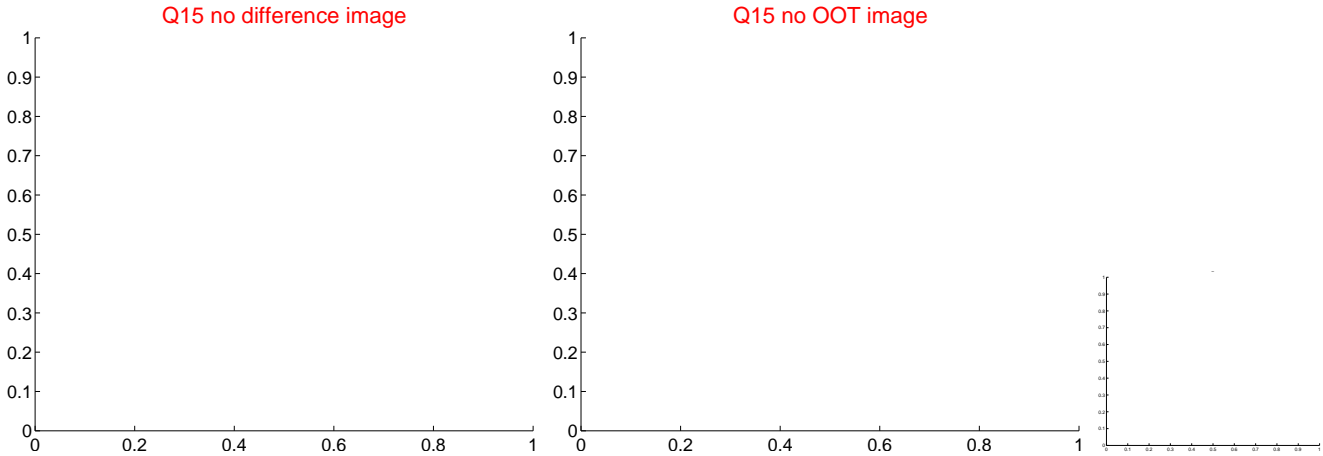
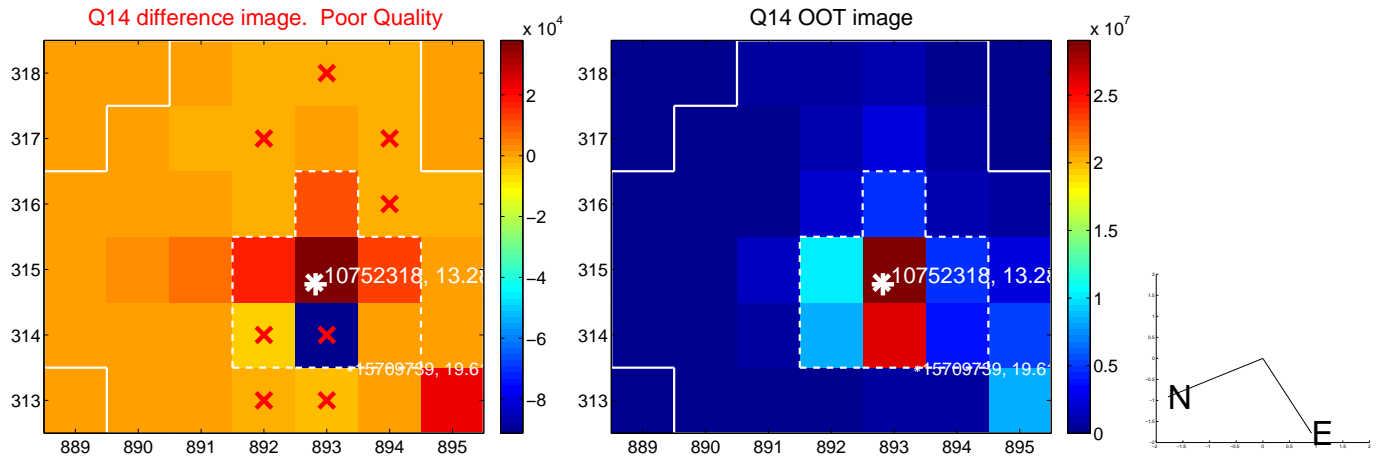
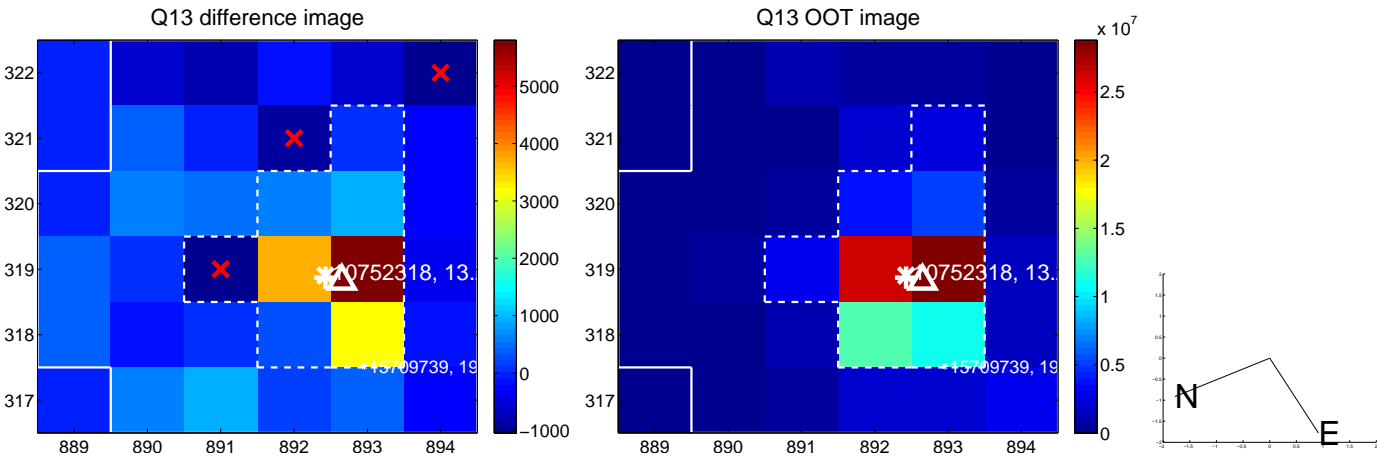
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



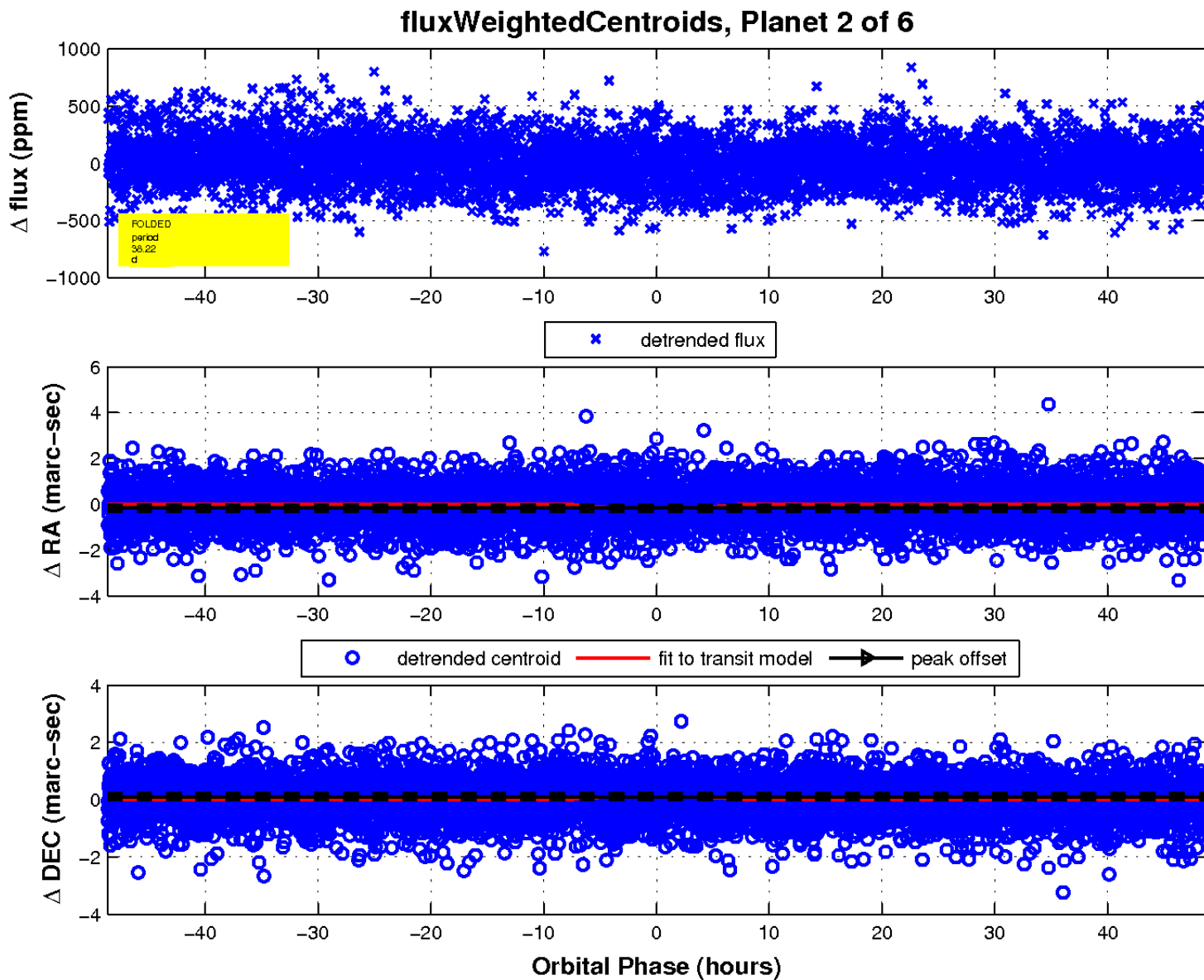
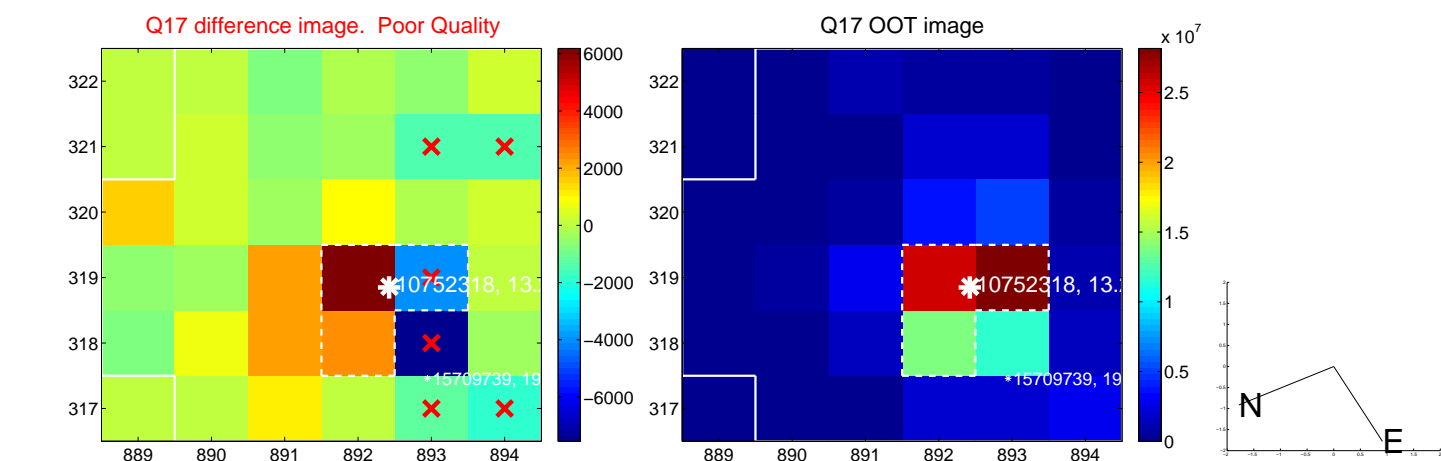
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

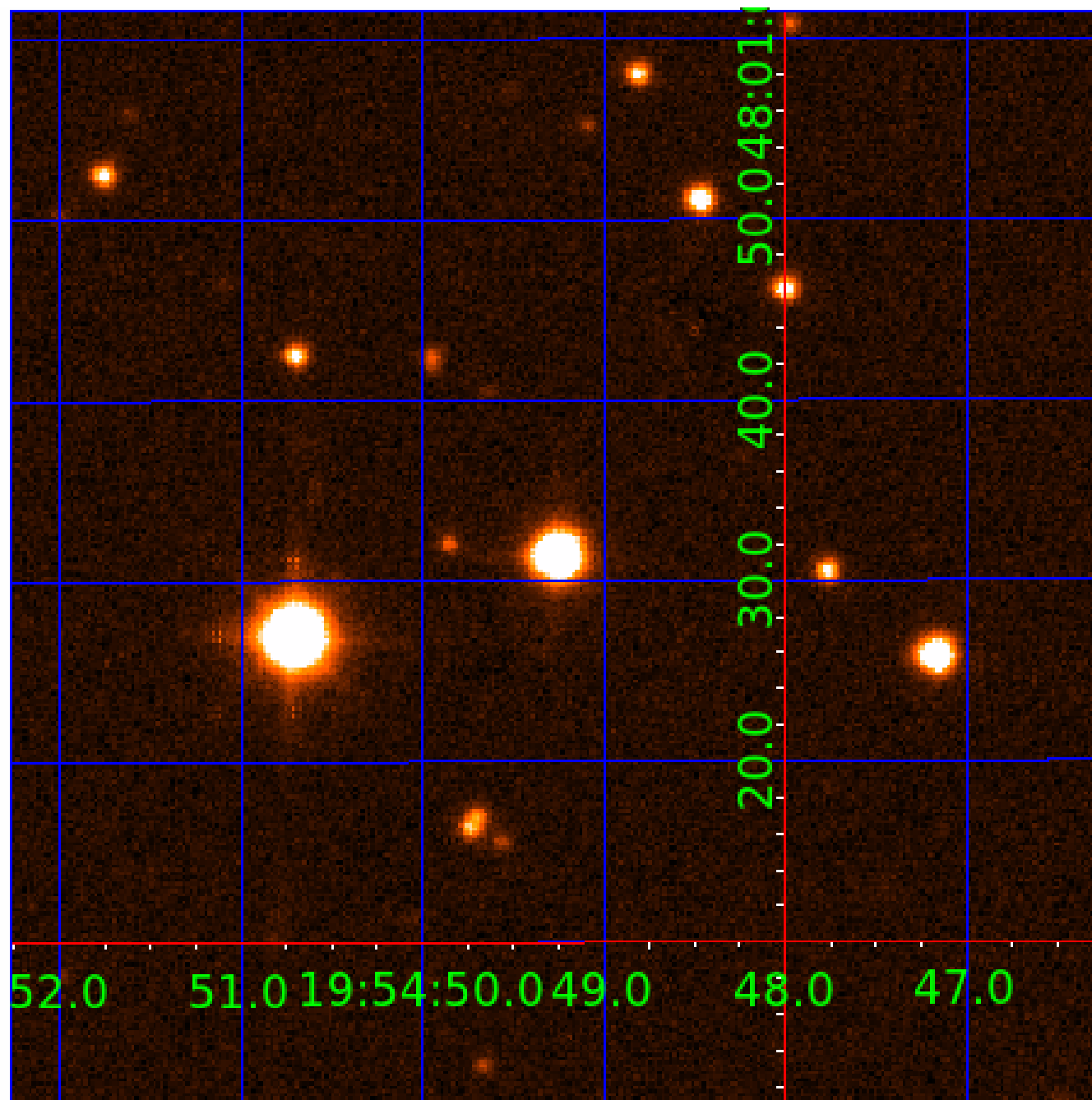


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010752318

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})
010752318-01	OBS	No	2.240049	133.315063	11.4	15.094	7.5	4.0	3.15	6625	1.13	11264.41
010752318-02	OBS	No	38.221786	155.171294	227.6	16.227	18.6	9.2	3.15	6625	6.12	256.43
010752318-03	OBS	No	44.334657	150.368316	174.0	5.810	8.1	6.7	3.15	6625	4.36	210.41
010752318-04	OBS	No	42.154592	157.960311	192.7	2.353	7.8	8.2	3.15	6625	5.13	225.04
010752318-05	OBS	No	42.299590	159.602445	242.9	1.469	7.6	8.3	3.15	6625	5.74	224.01
010752318-06	OBS	No	42.002644	168.310914	268.8	7.795	7.5	7.8	3.15	6625	5.72	226.12

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010752318-01	OBS	FP	0.00	1	0	0	0	LPP_DV
010752318-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
010752318-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS—HALO_GHOST
010752318-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
010752318-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS
010752318-06	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.

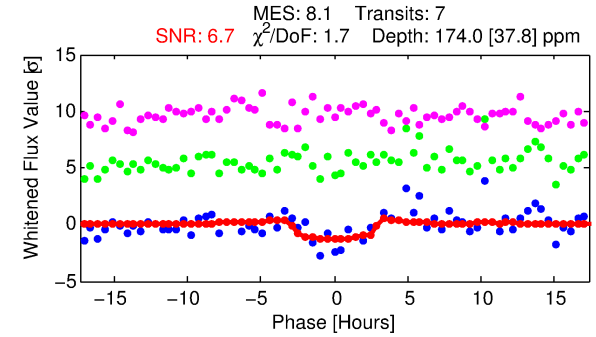
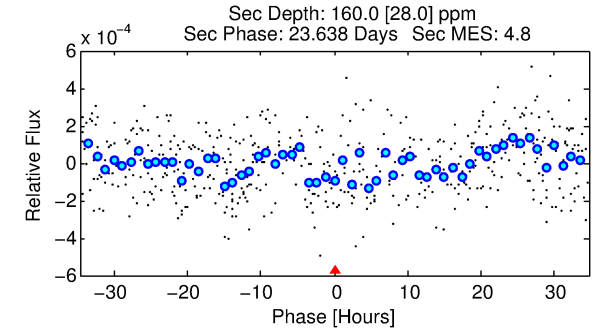
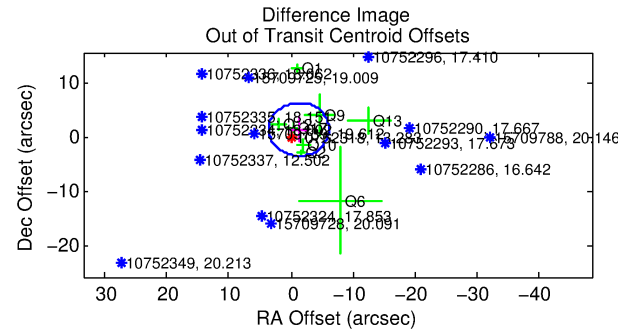
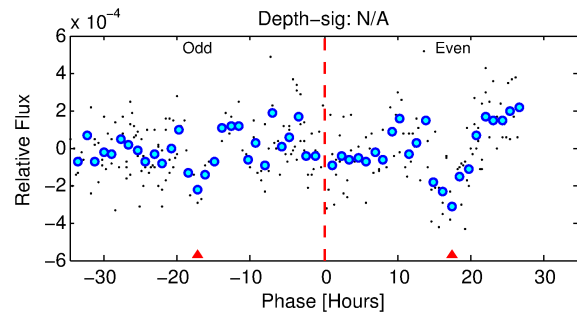
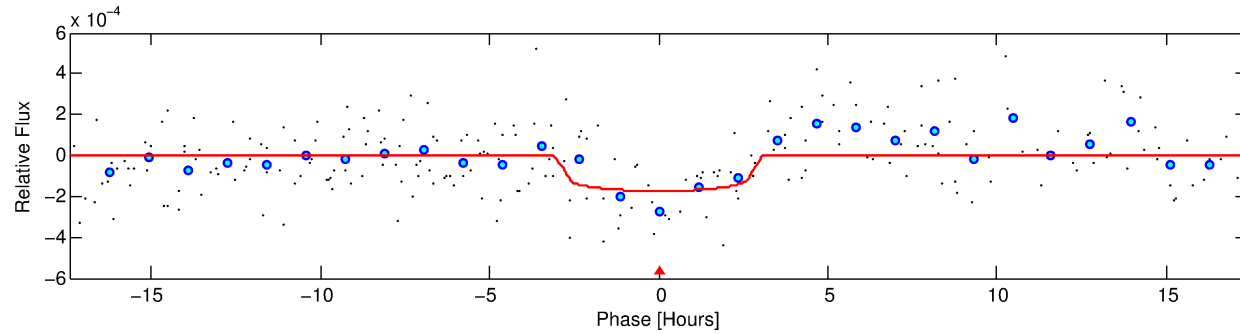
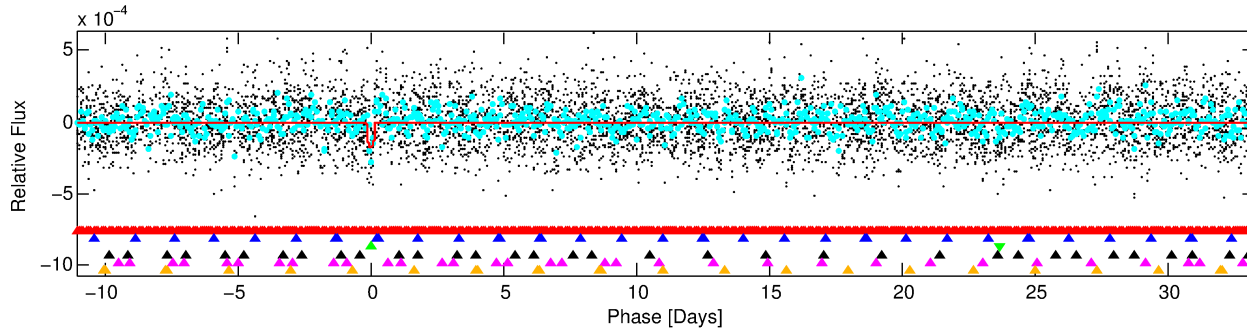
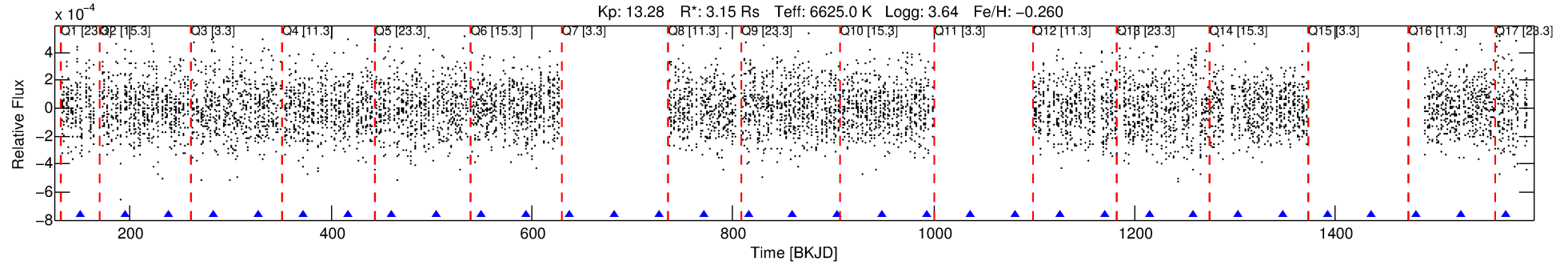
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010752318-03

No Significant Match Found

DV One-Page Summary

KIC: 10752318 Candidate: 3 of 6 Period: 44.335 d



DV Fit Results:

Period = 44.33466 [0.00087] d
Epoch = 150.3683 [0.0120] BKJD
Rp/R* = 0.0127 [0.0190]
a/R* = 47.00 [392.20]
b = 0.61 [8.57]
Seff = 210.41 [121.29]
Teq = 971 [140] K
Rp = 4.36 [6.74] Re
a = 0.2848 [0.1019] AU
Ag = 375.26 [1144.78] [0.33σ]
Teffp = 6609 [4957] K [1.14σ]

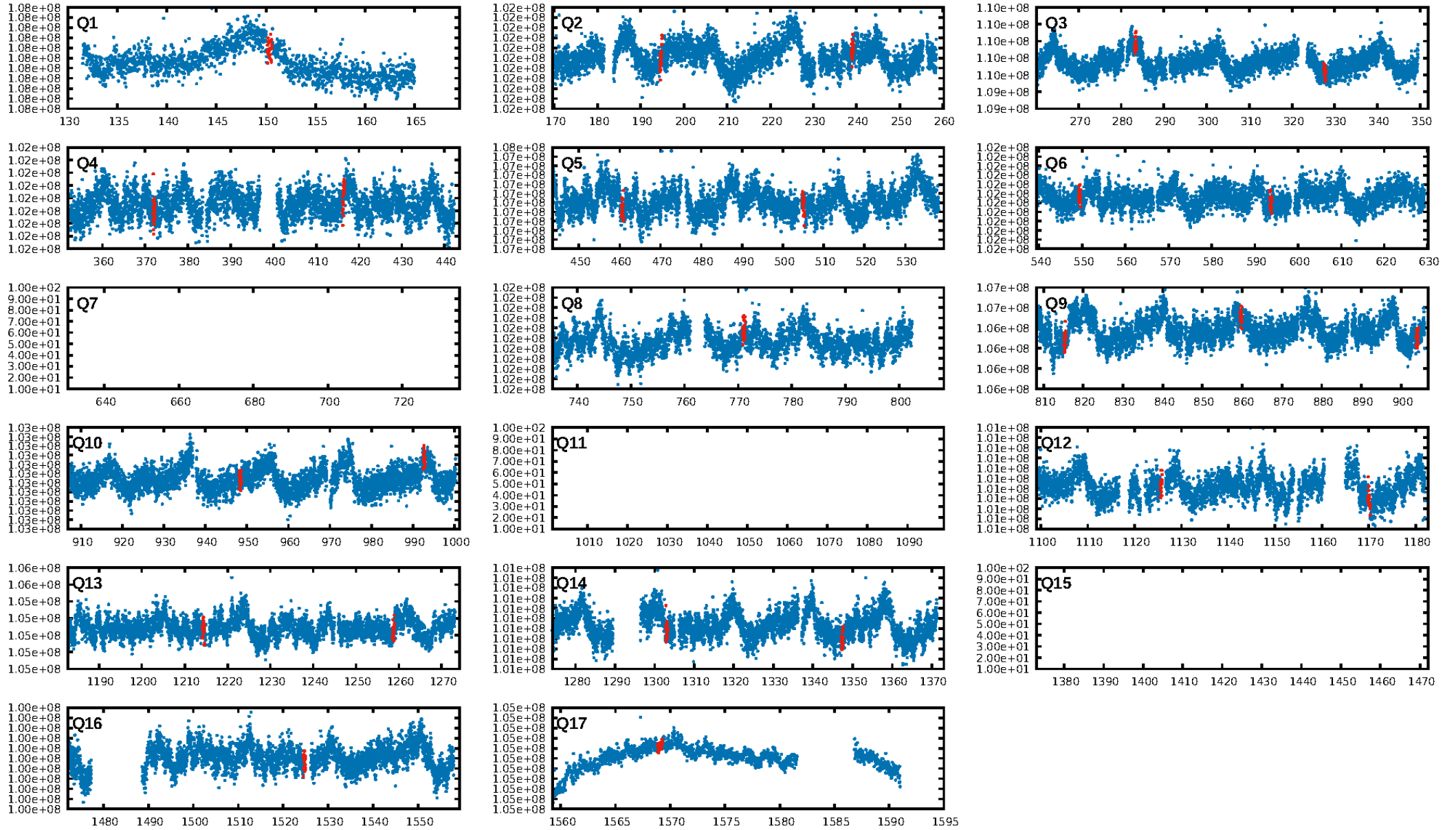
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [8.15σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 1.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.91e-07
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: -0.2445
Centroid-sig: 0.0%
Centroid-so: 2.366 arcsec [2.75σ]
OotOffset-rm: 1.883 arcsec [1.17σ]
KicOffset-rm: 1.867 arcsec [0.90σ]
OotOffset-st: 3/0/1/4 [8]
KicOffset-st: 3/0/1/4 [8]
DiffImageQuality-fgm: 0.12 [1/8]
DiffImageOverlap-fno: 0.46 [6/13]

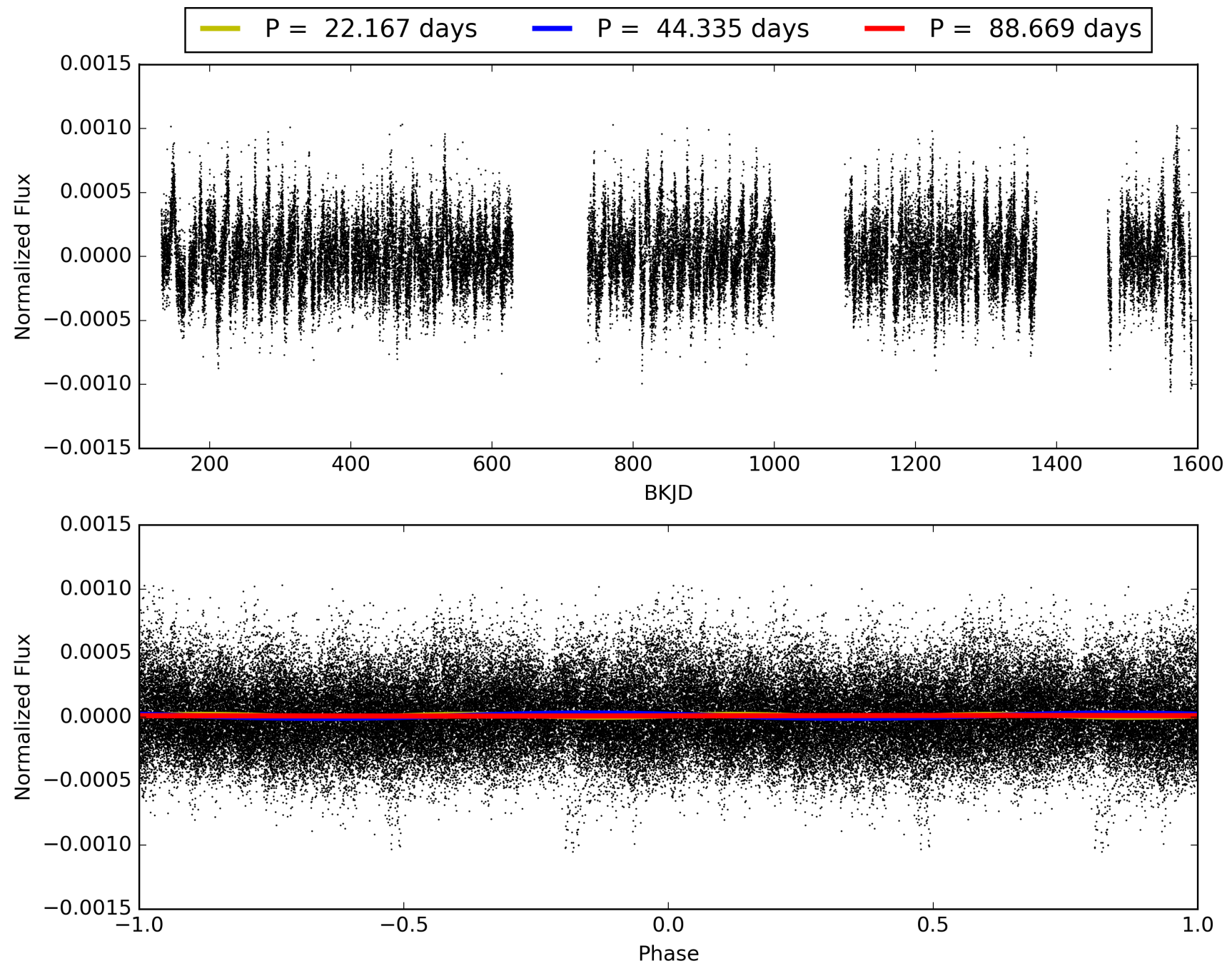
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 20:08:45 Z

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

TCE 010752318-03, PDC Light Curves

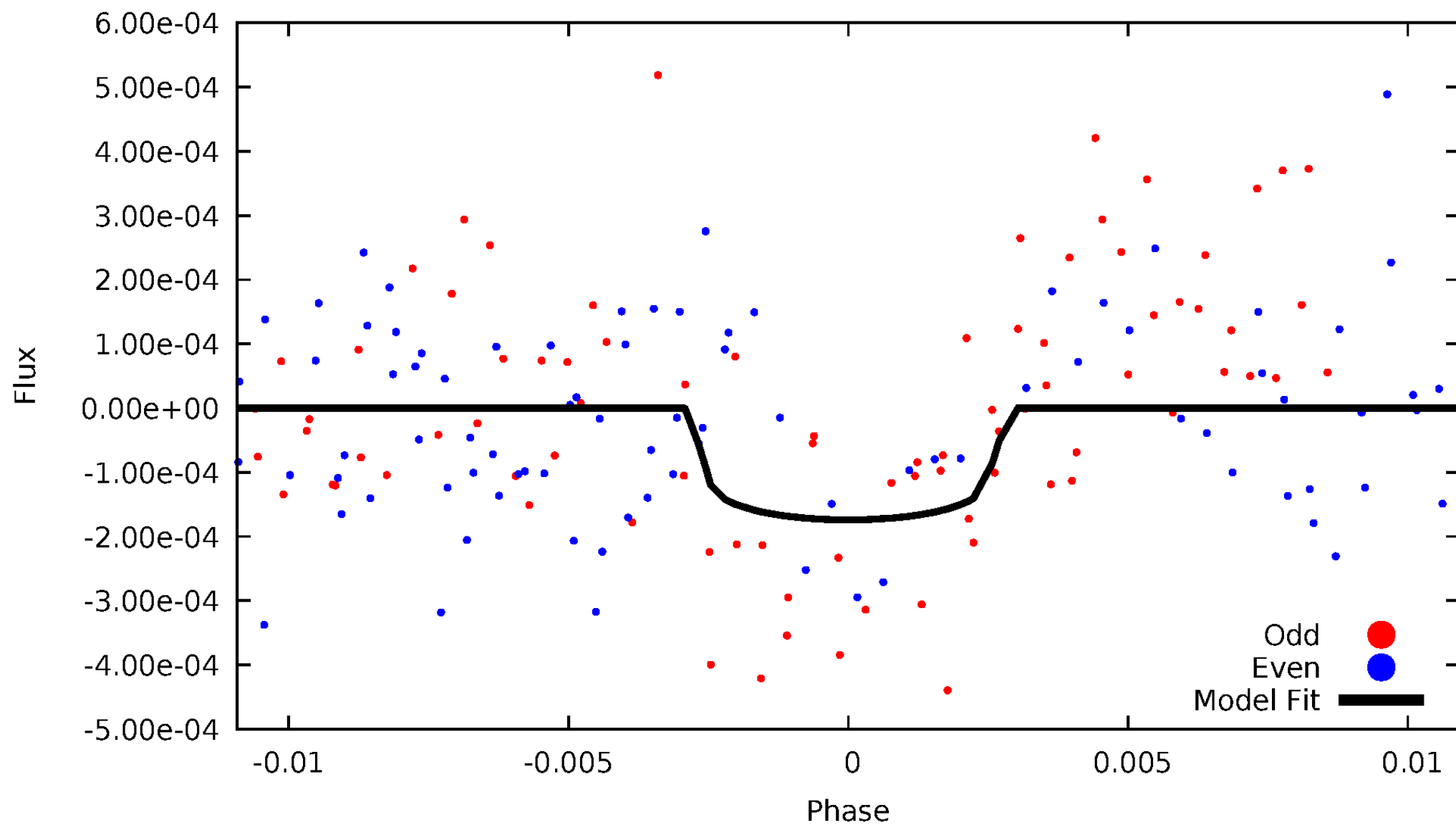


TCE 010752318-03



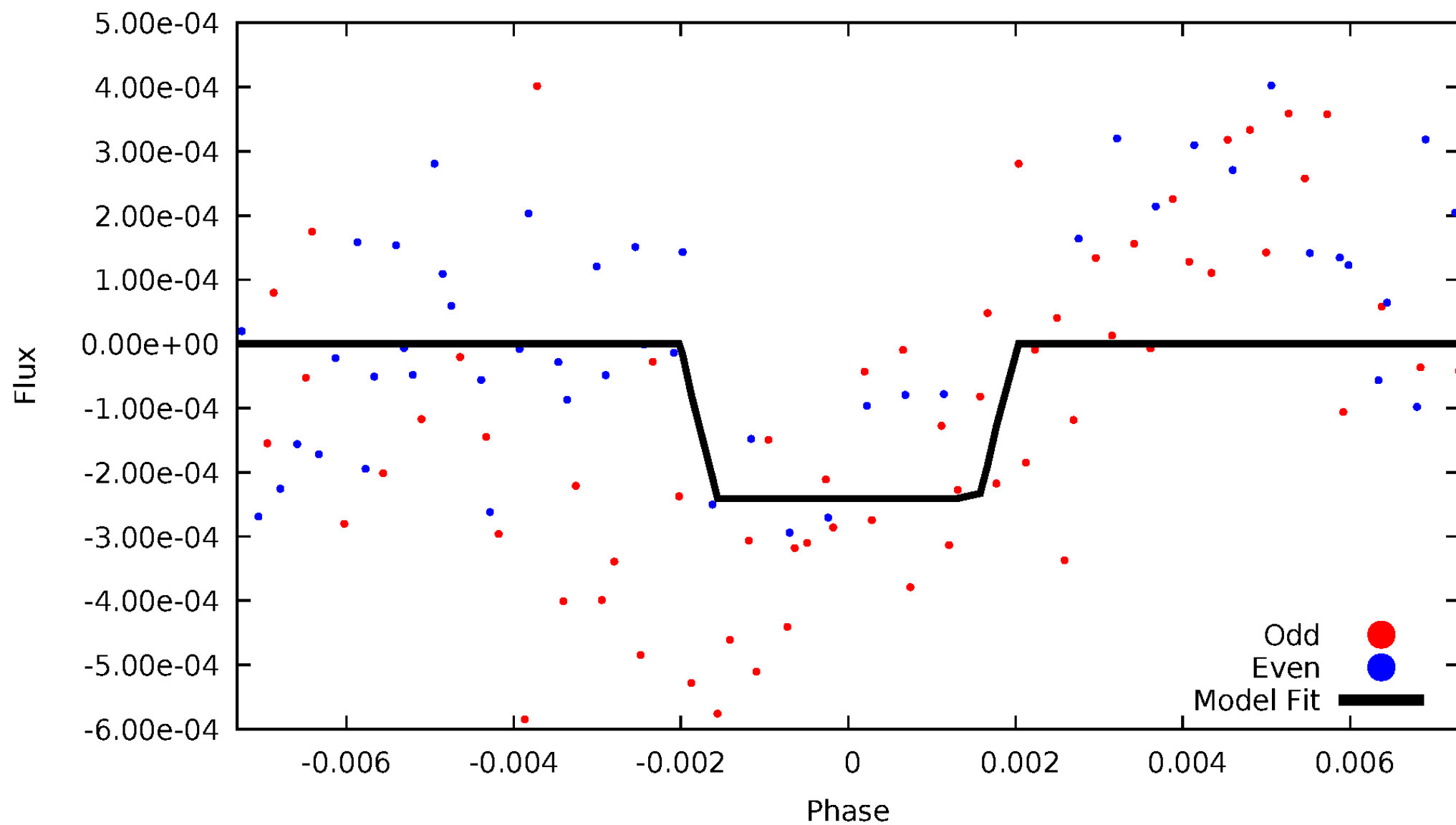
DV Odd/Even

TCE 010752318-03



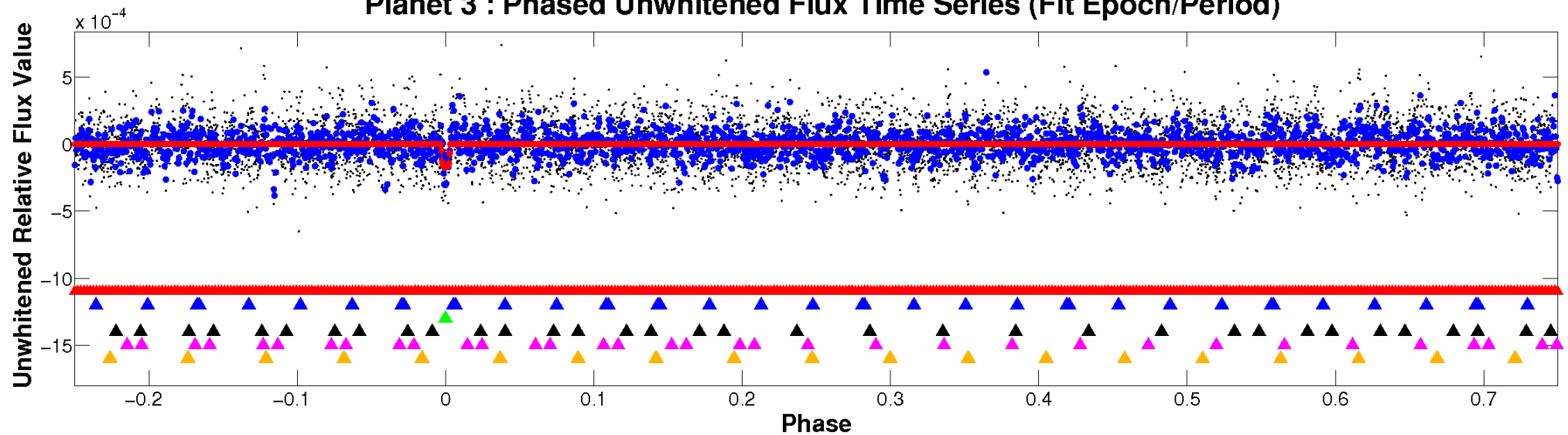
ALT Odd/Even

TCE 010752318-03

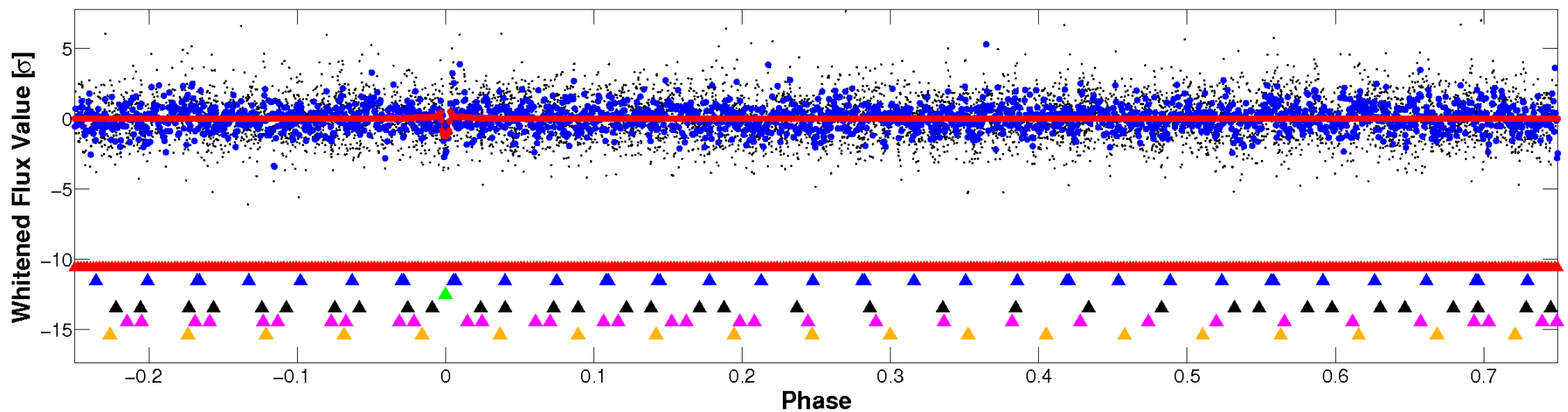


Non-Whitened Vs. Whitened Light Curve

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

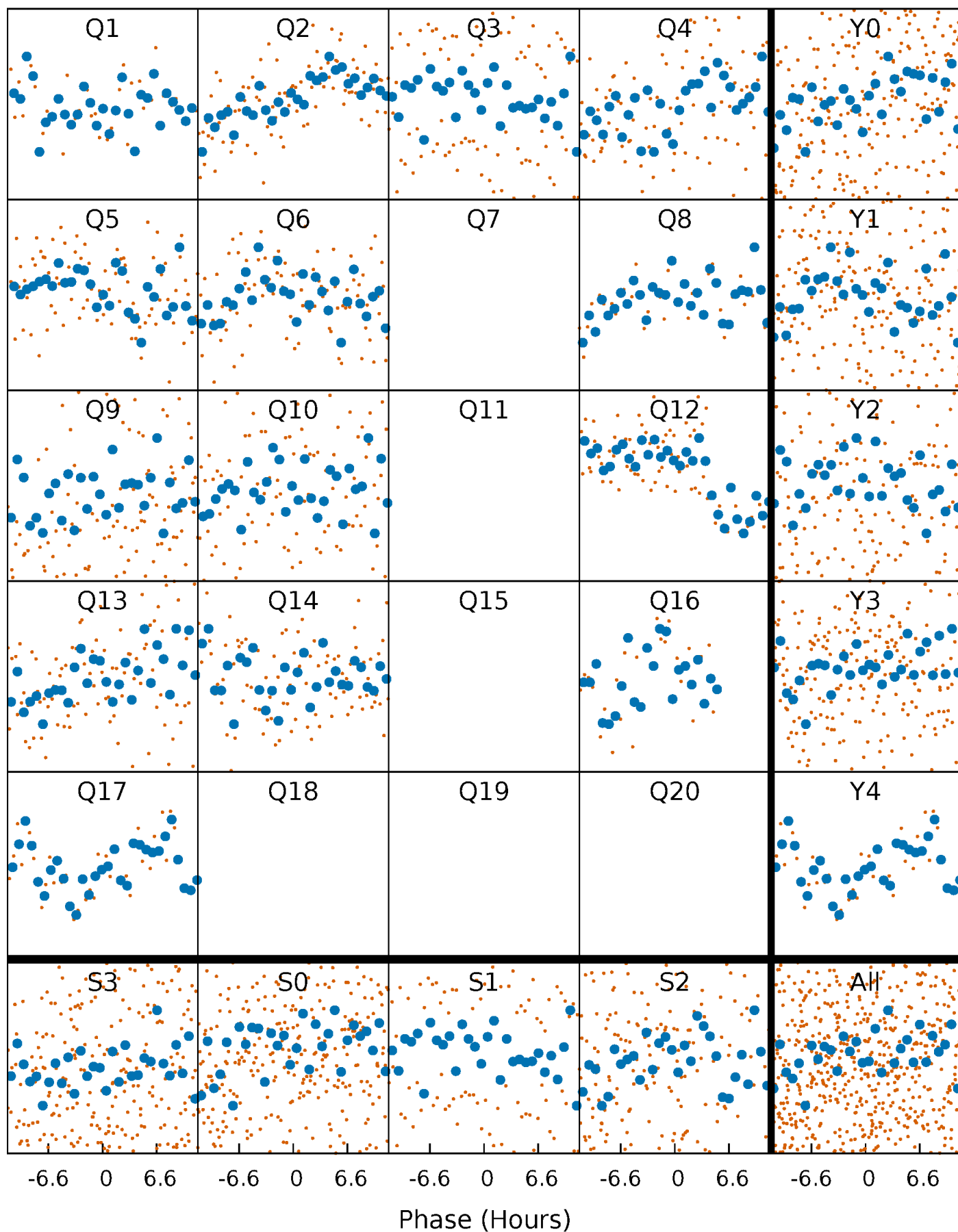


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



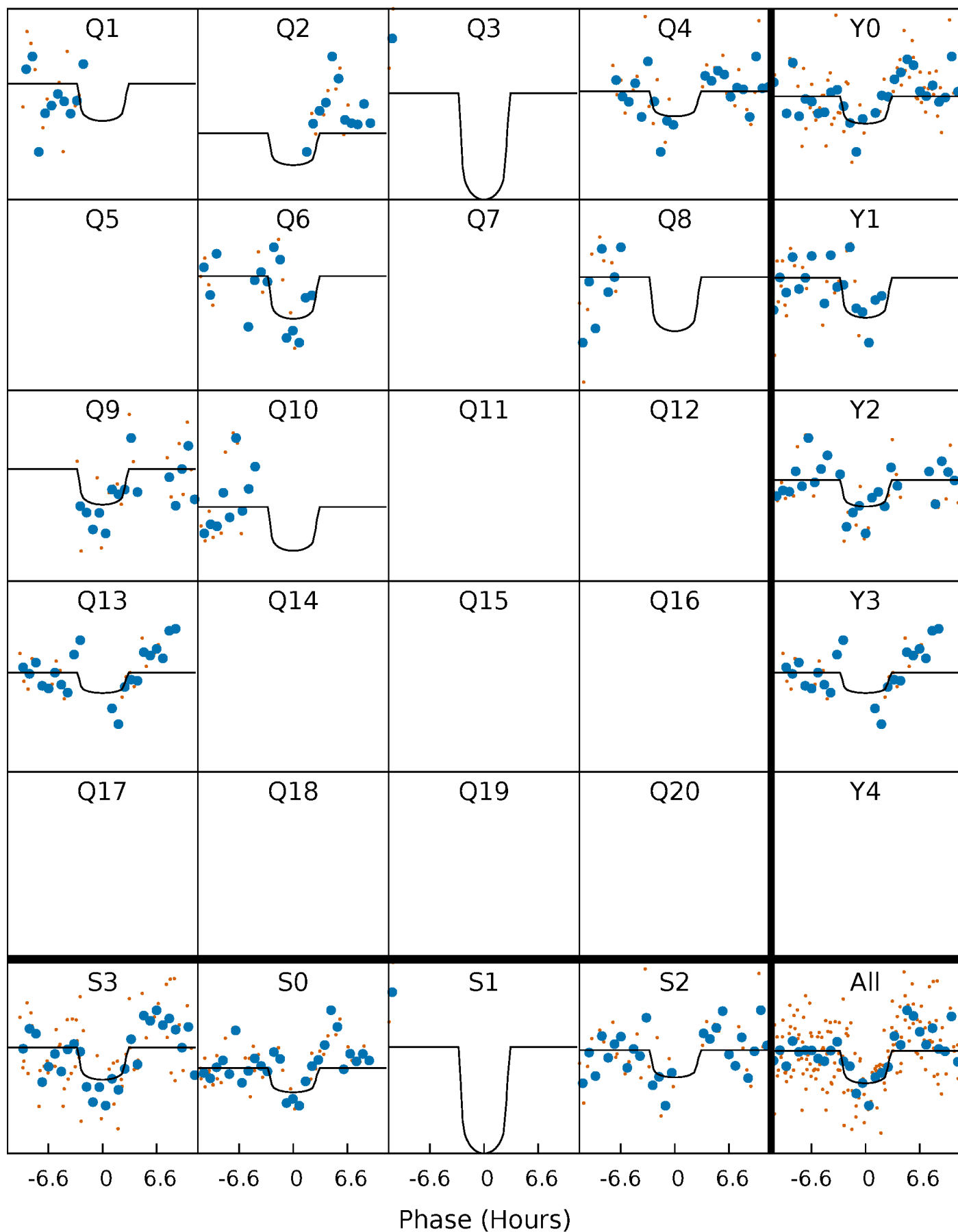
PDC Quarter-Phased Transit Curves

TCE 010752318-03 P= 44.334657 Days $T_0=150.368316$ (BKJD)



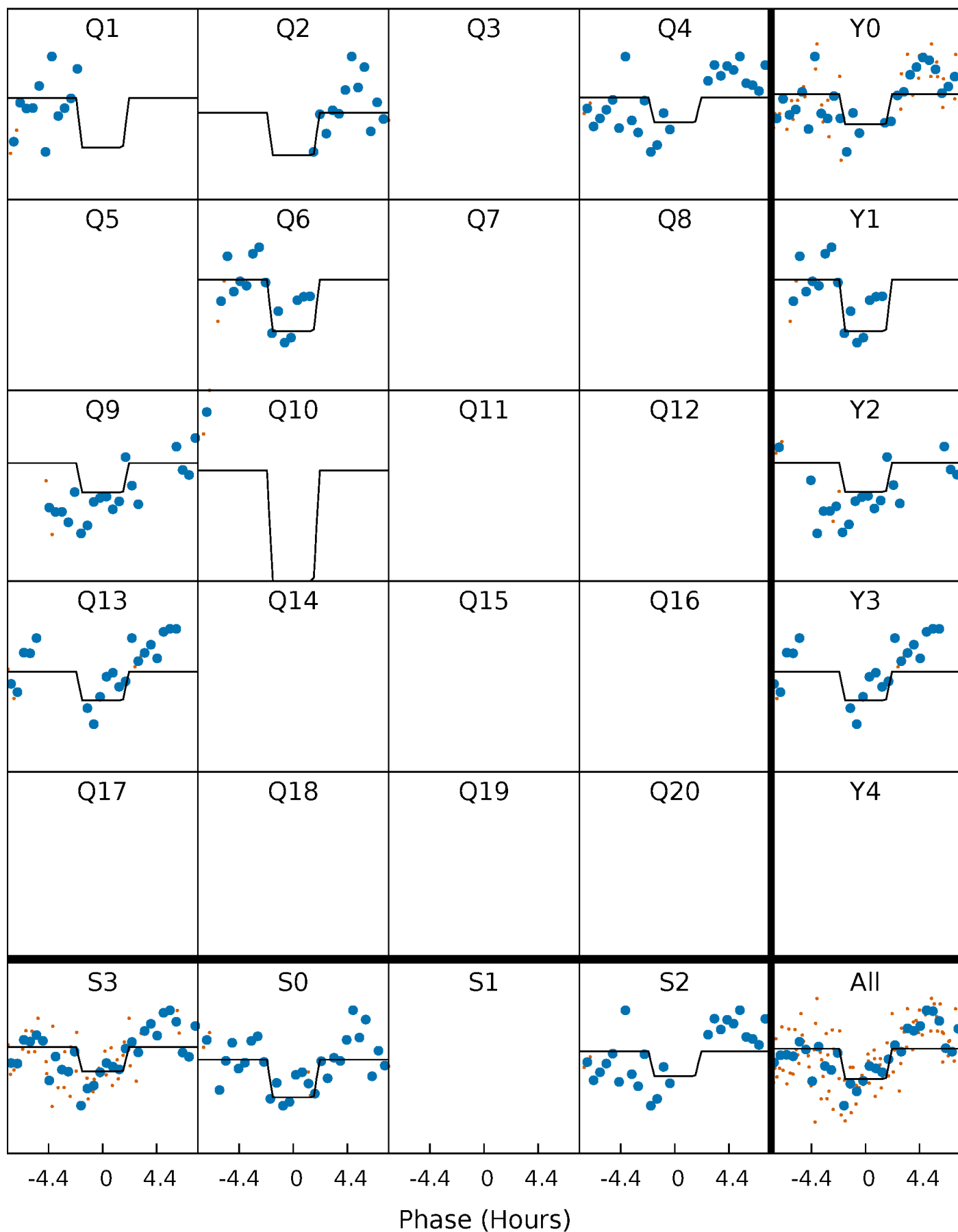
DV Quarter-Phased Transit Curves

TCE 010752318-03 P= 44.334657 Days $T_0=150.368316$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

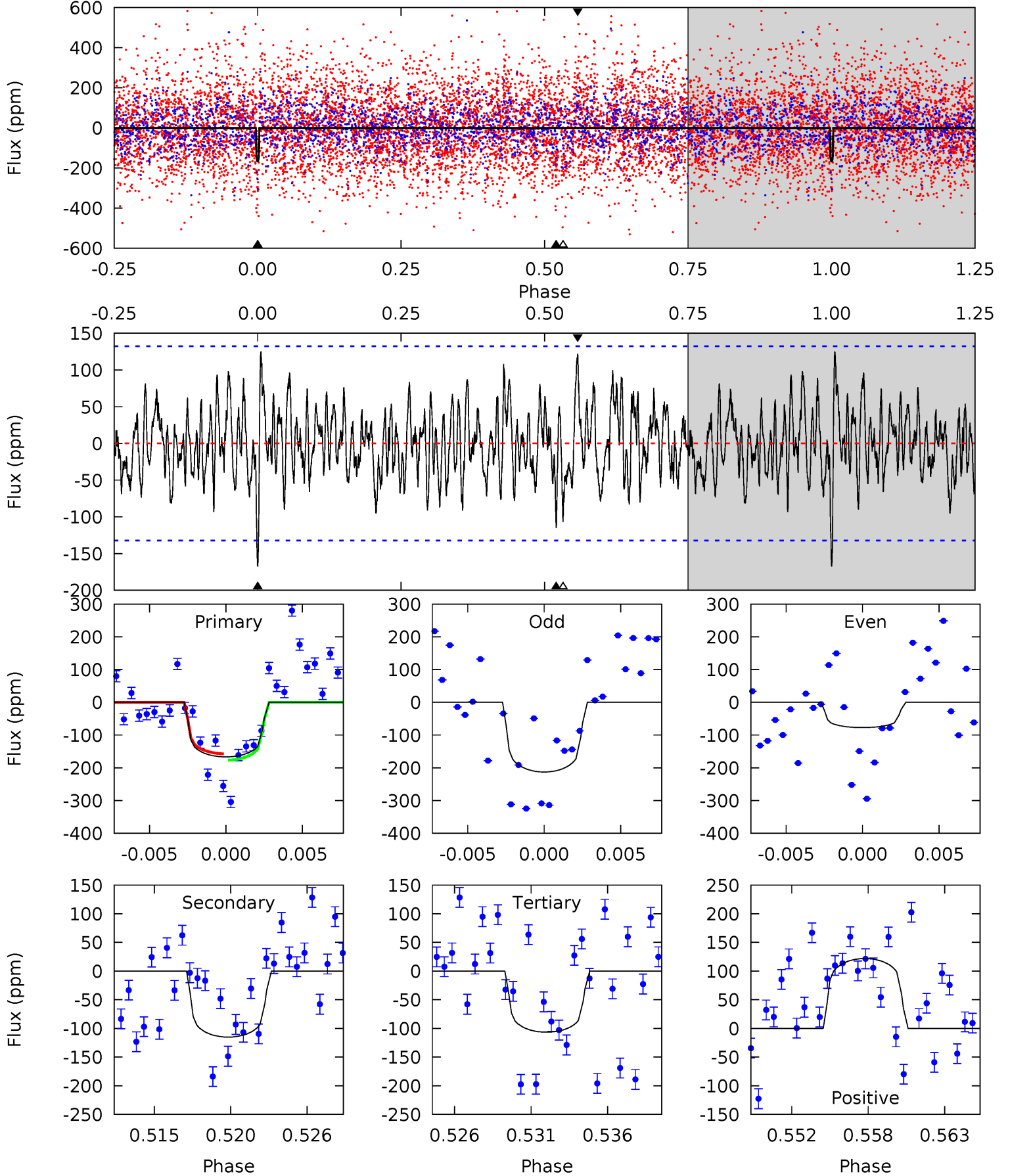
TCE 010752318-03 P= 44.339500 Days $T_0=150.358213$ (BKJD)



DV Model-Shift Uniqueness Test

010752318-03, P = 44.334657 Days, E = 106.033659 Days

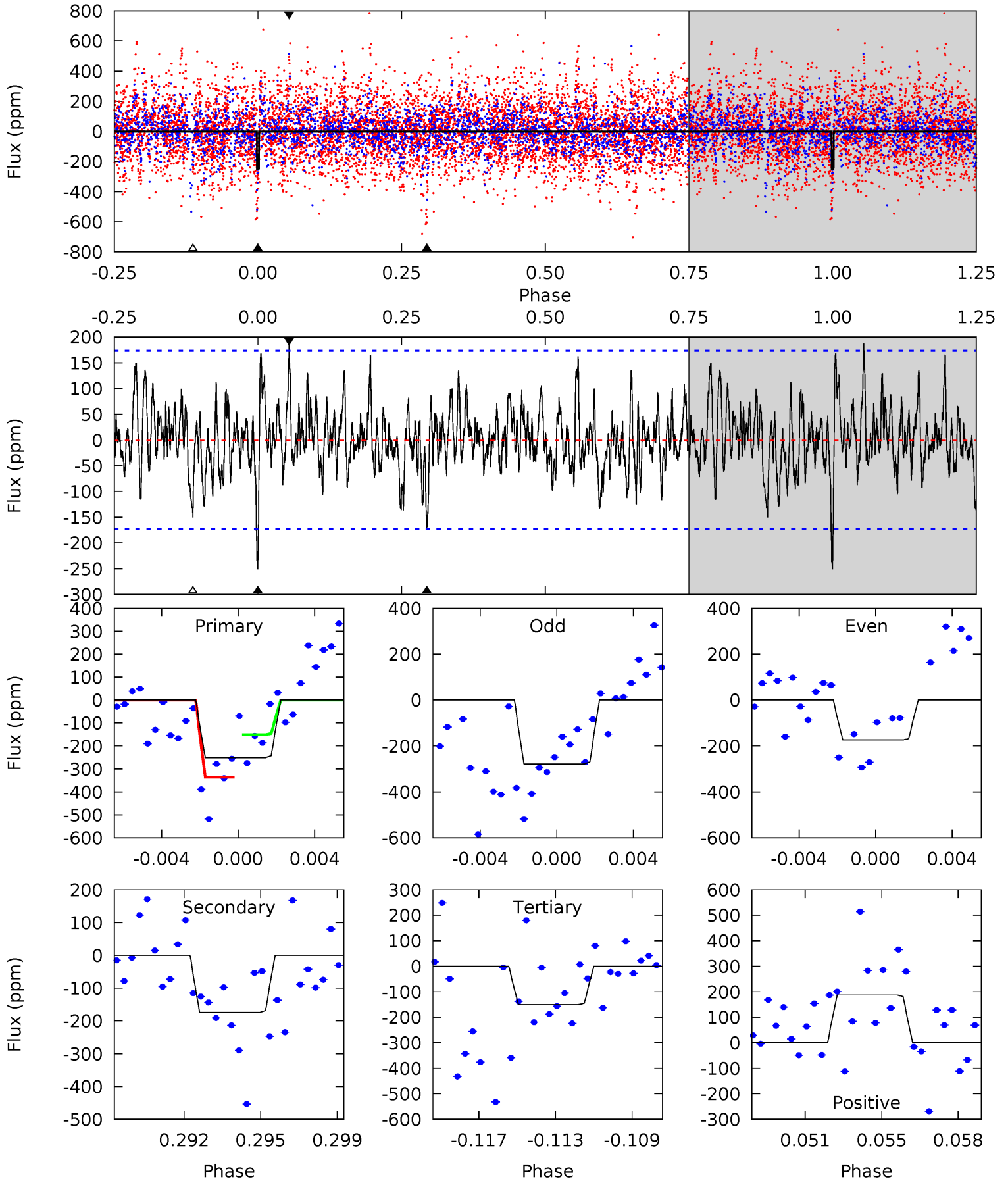
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.47	4.47	4.14	4.74	5.14	2.78	1.59	2.33	1.74	0.33	-0.26	2.50	0.88	0.43	0.38



Alt Model-Shift Uniqueness Test

010752318-03, P = 44.339500 Days, E = 106.018713 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.55	5.24	4.53	5.64	5.22	2.91	1.55	3.02	1.92	0.72	-0.39	1.41	0.98	0.43	2.79



Stellar Parameters For KIC 010752318

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6625^{+178}_{-198}	$3.638^{+0.328}_{-0.082}$	$-0.260^{+0.300}_{-0.250}$	$3.145^{+0.399}_{-1.198}$	$1.566^{+0.225}_{-0.338}$	$0.071^{+0.164}_{-0.018}$
	+3%/-3%	+9%/-2%	+115%/-96%	+13%/-38%	+14%/-22%	+231%/-26%
Source	PHO1	FLK73	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 010752318-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-115 ± 26	$6.05^{+5.36}_{-4.17}$	1326^{+79}_{-130}	5065^{+4176}_{-1146}	148^{+1180}_{-111}
Alt.	-174 ± 33	$6.65^{+5.32}_{-4.44}$	1333^{+71}_{-122}	5357^{+4329}_{-1140}	183^{+1429}_{-131}

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 $A_{obs} \gg 1.0$

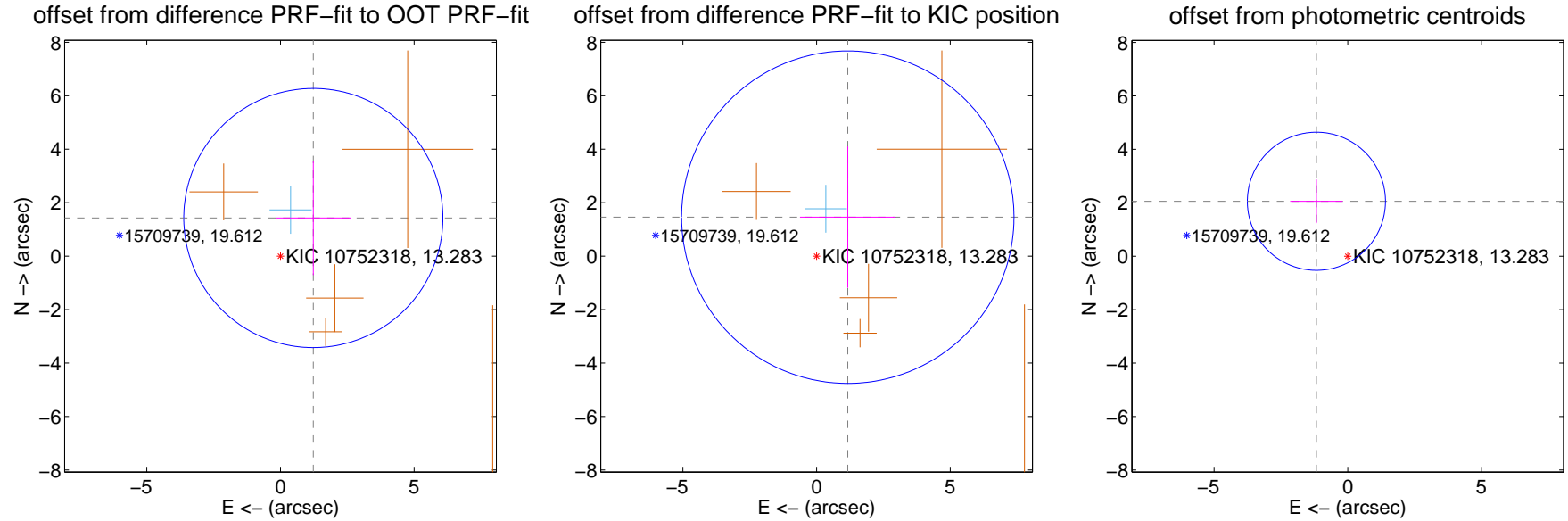
DV Centroid Data

Supplemental centroid analysis for 010752318-03. Kepler magnitude: 13.28. Transit SNR 6.69

There are 1 quarters with good PRF difference image offsets

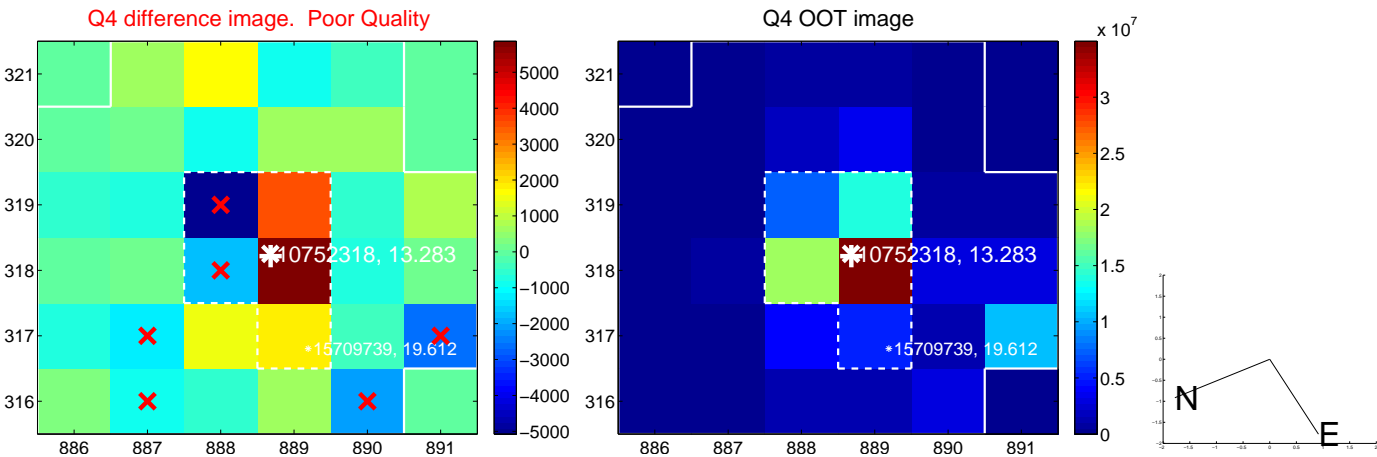
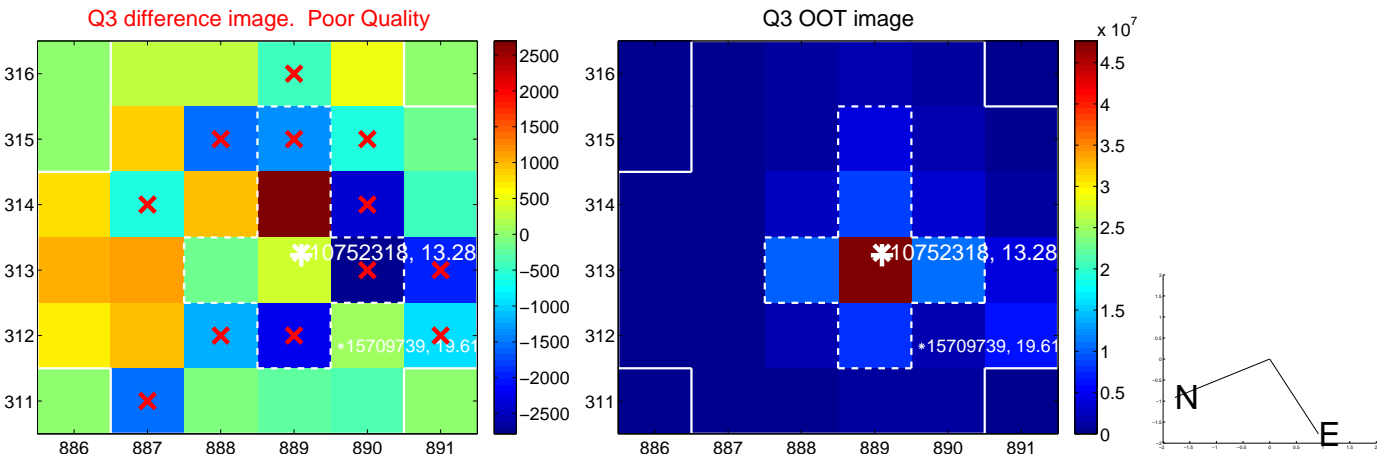
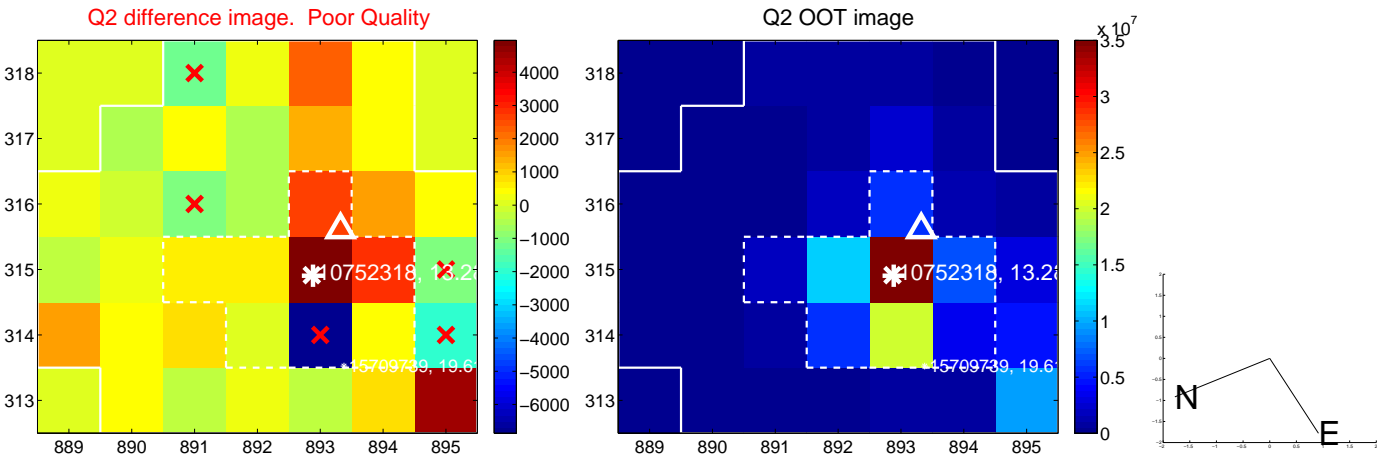
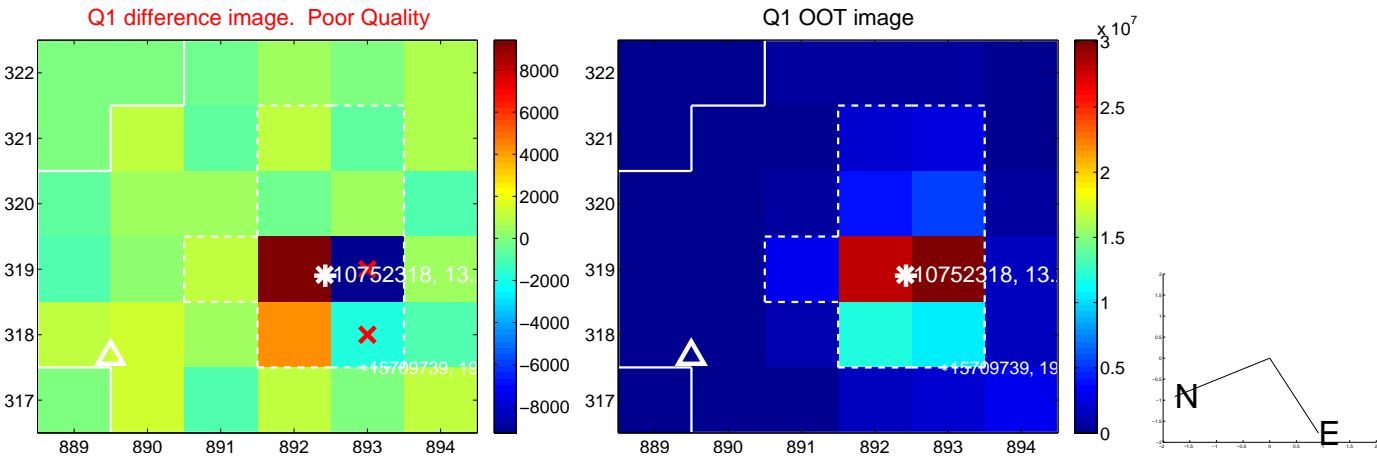
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.883 ± 1.616	1.17	-1.230 ± 1.401	1.426 ± 2.136
PRF-fit source offset from KIC position	1.867 ± 2.073	0.90	-1.168 ± 1.787	1.457 ± 2.645
photometric centroid source offset	2.37 ± 0.86	2.75	1.17 ± 0.98	2.06 ± 0.82

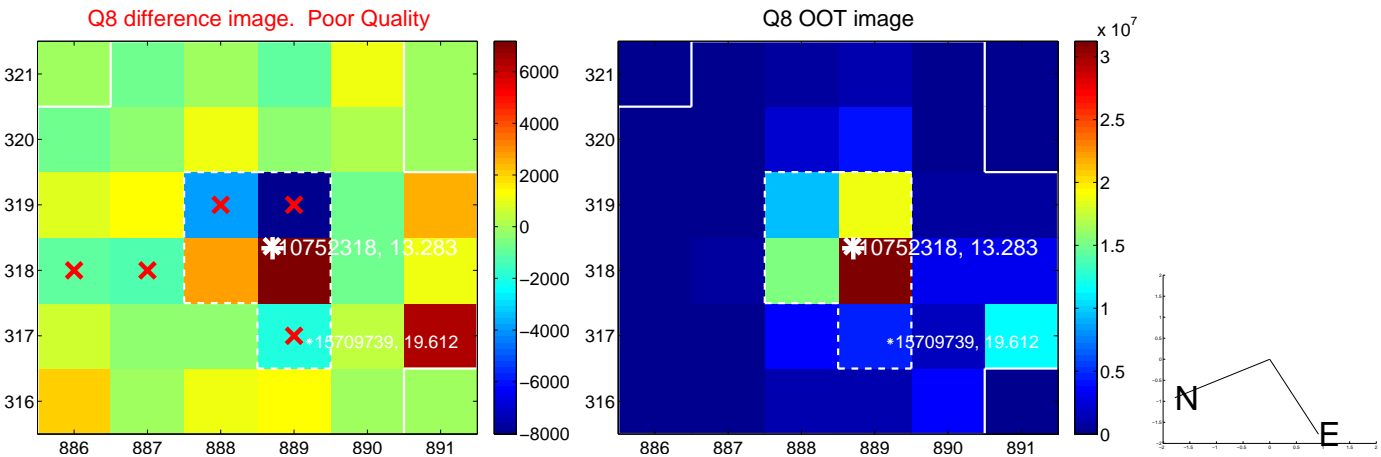
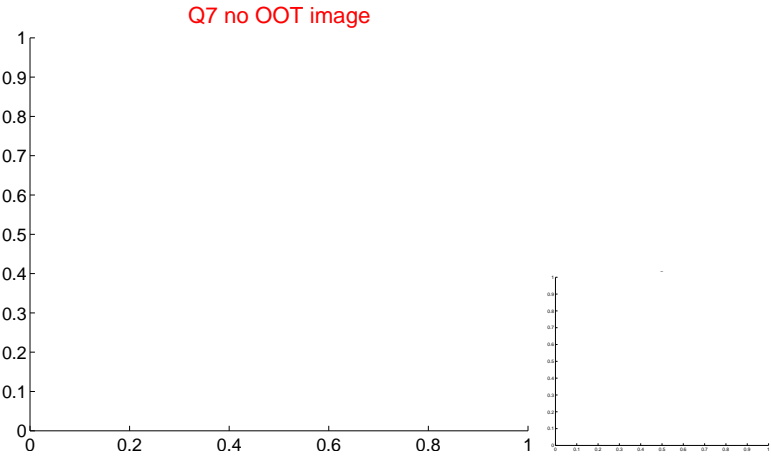
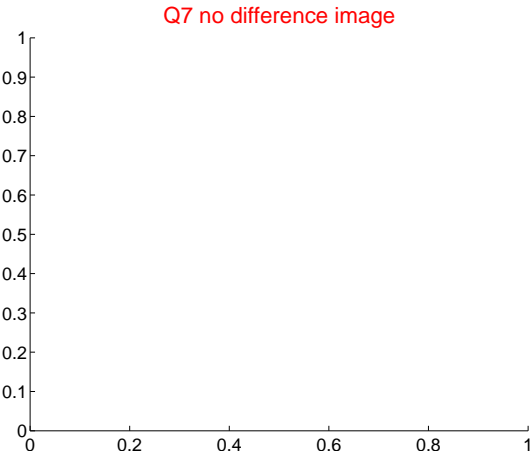
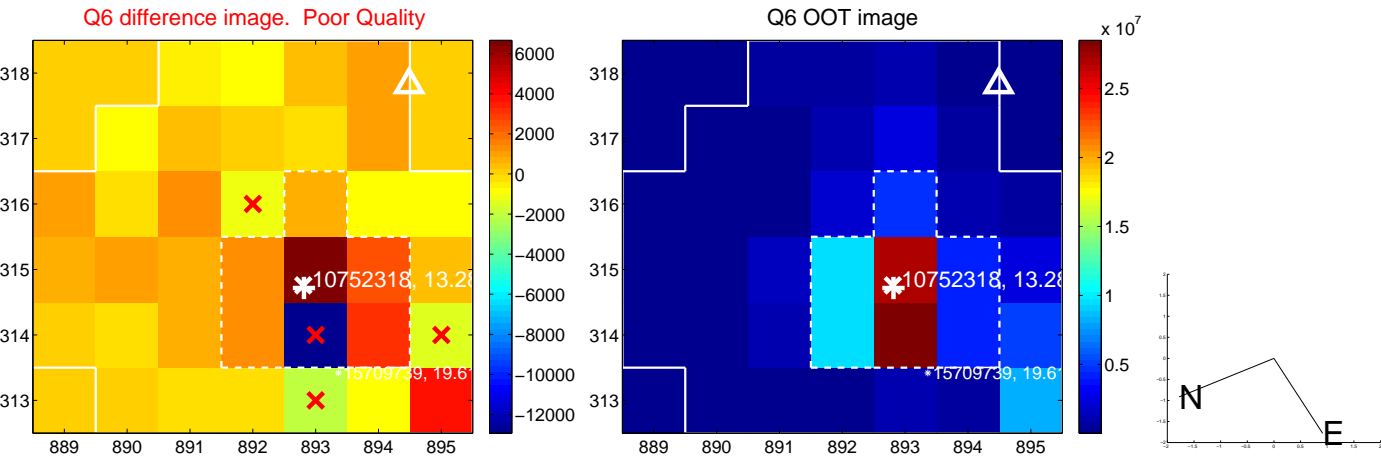
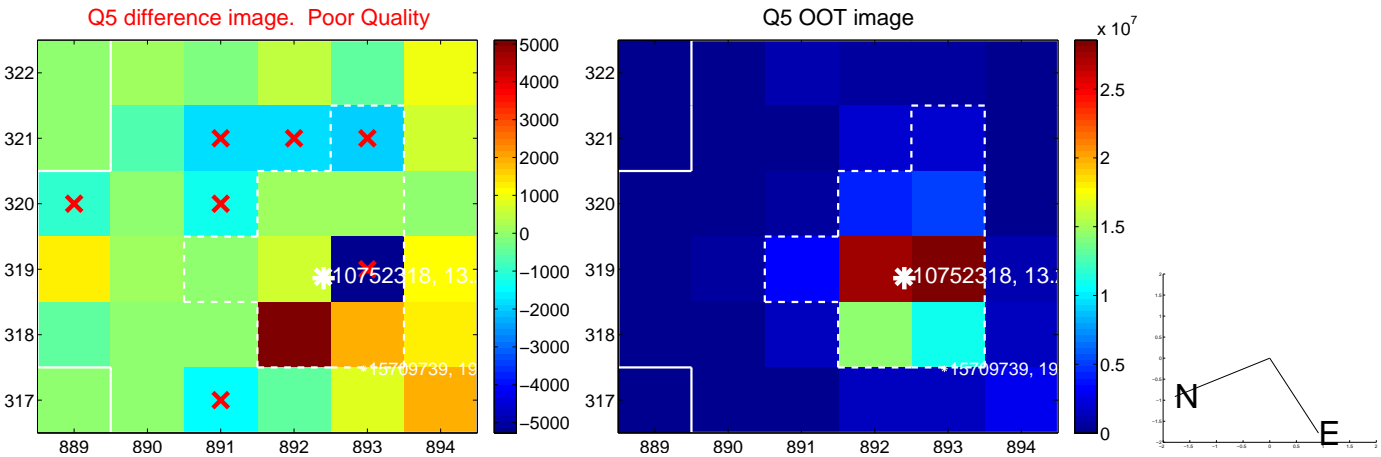


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

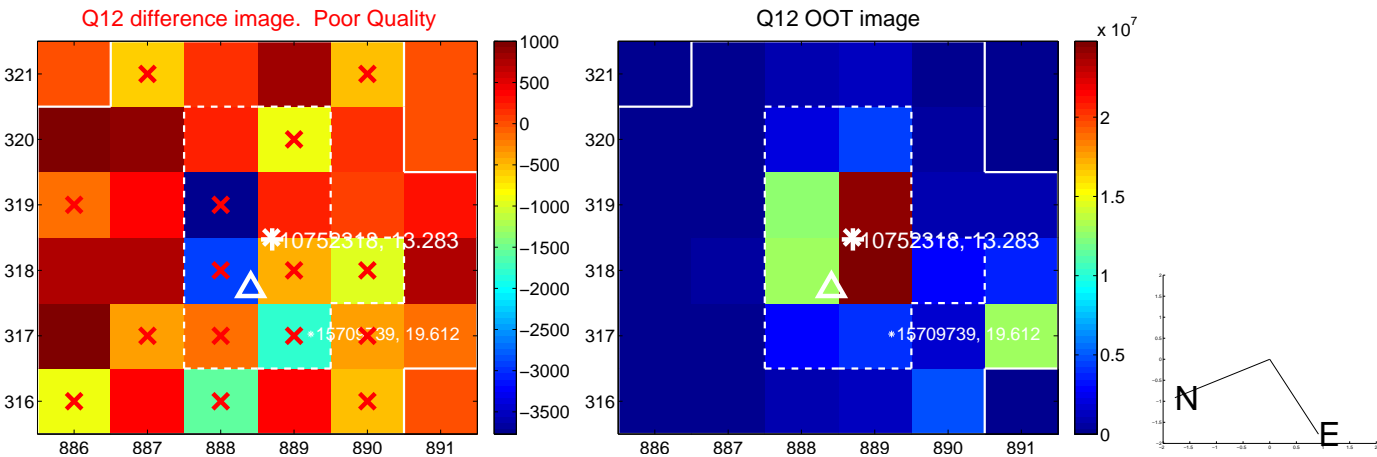
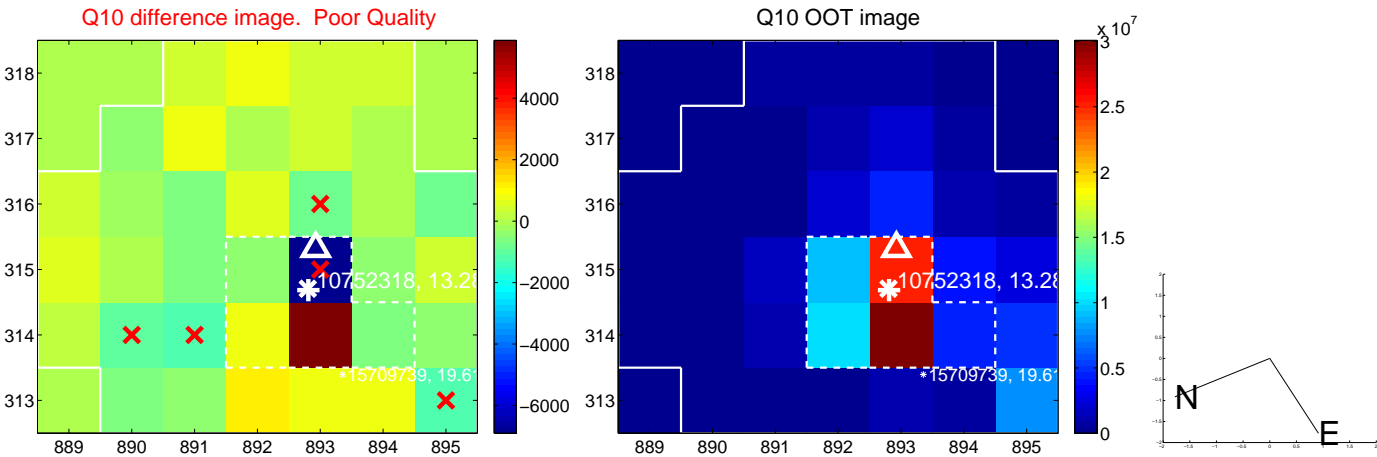
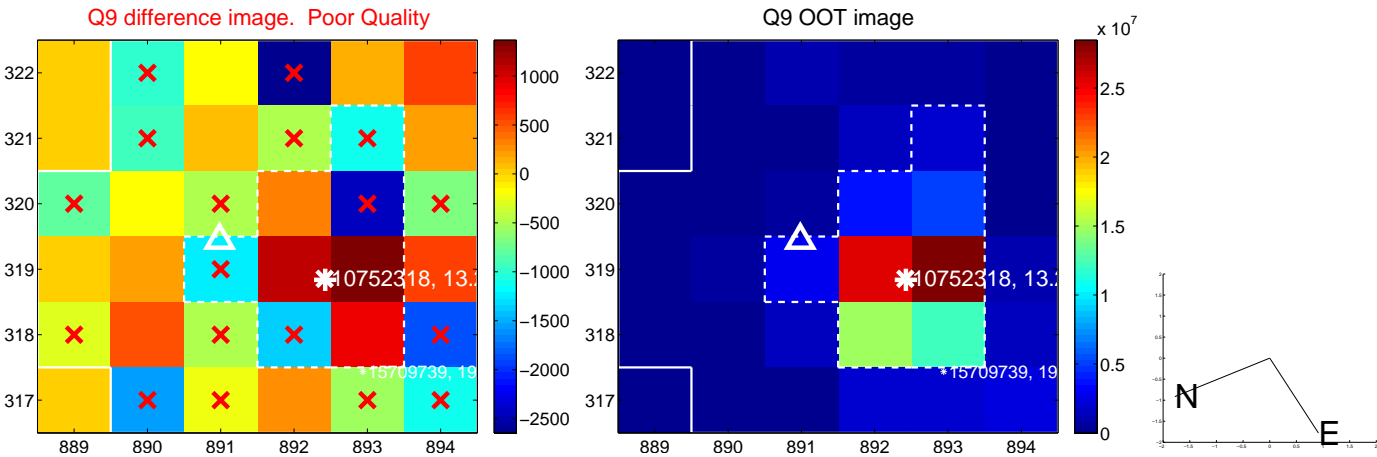
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



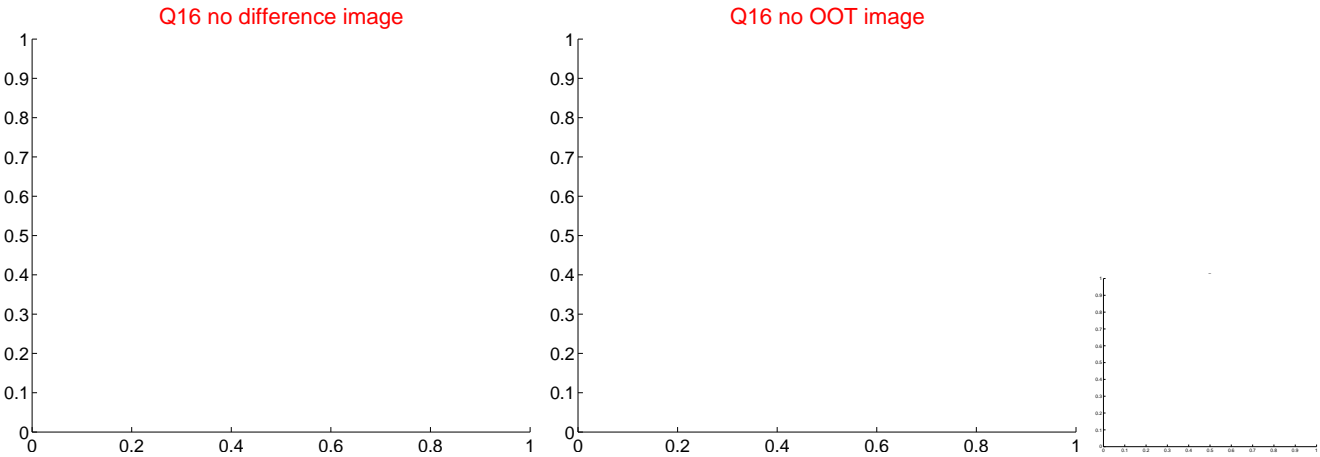
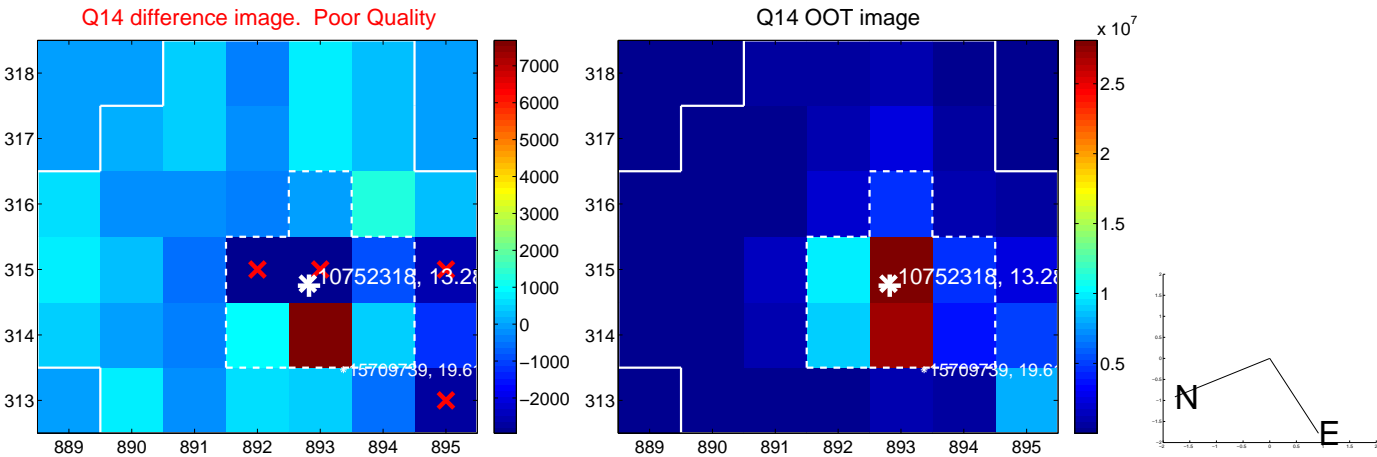
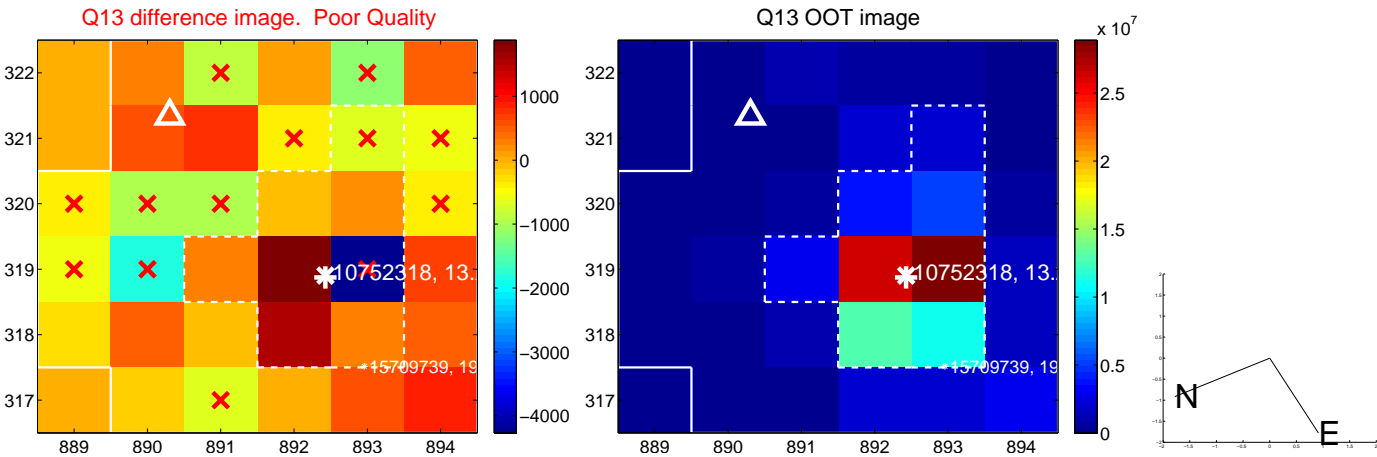
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



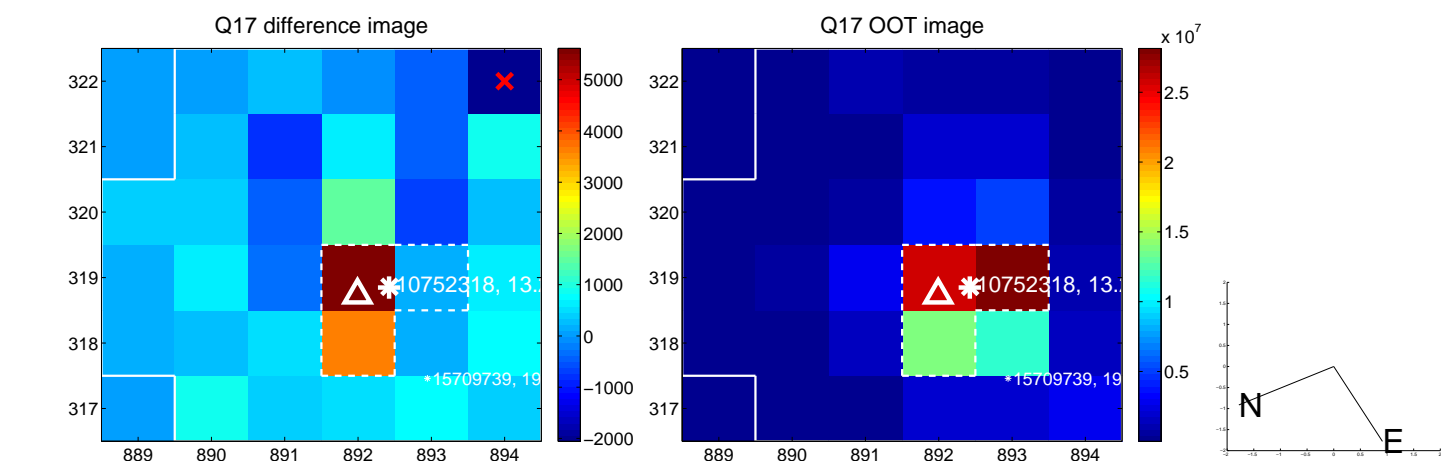
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



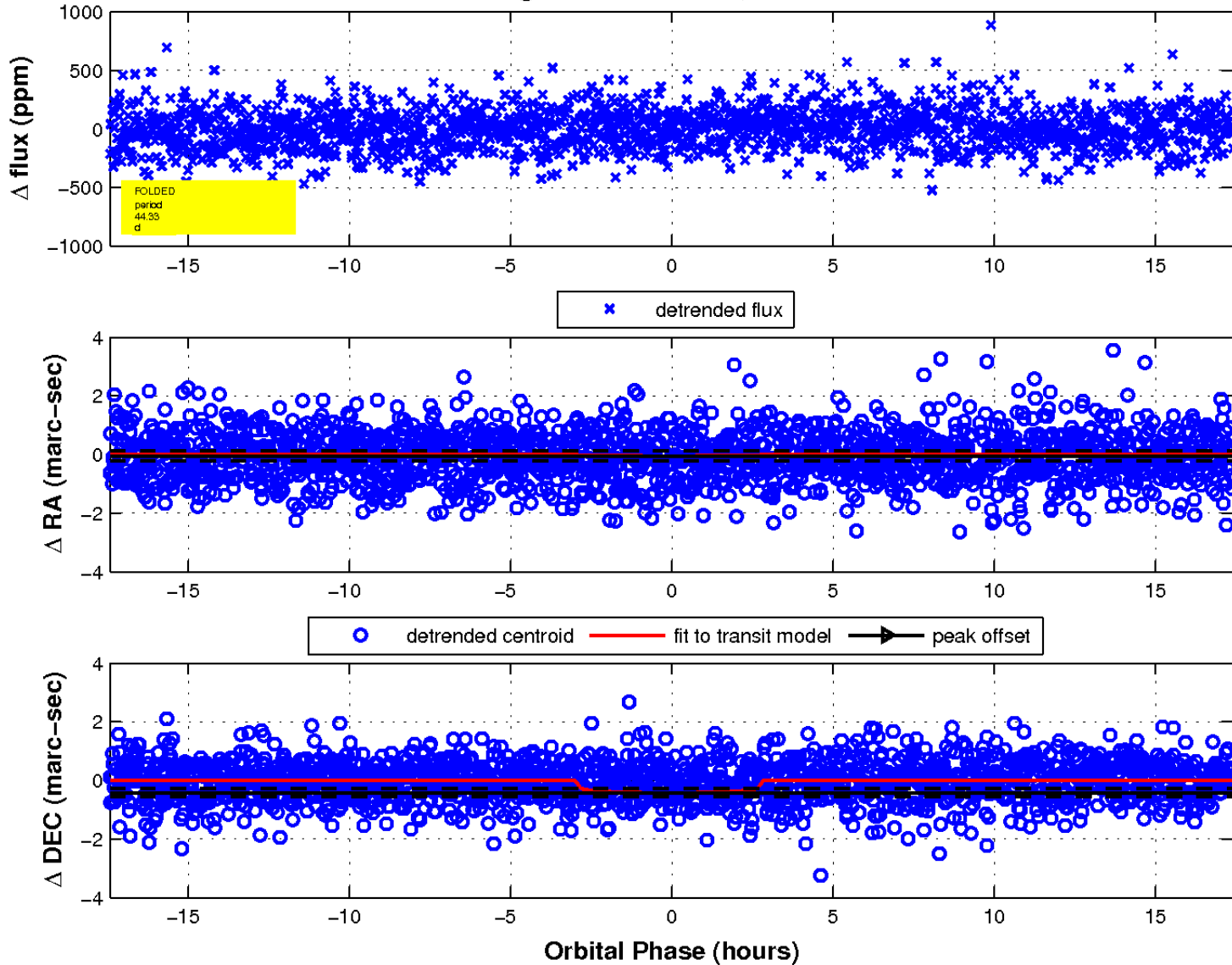
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

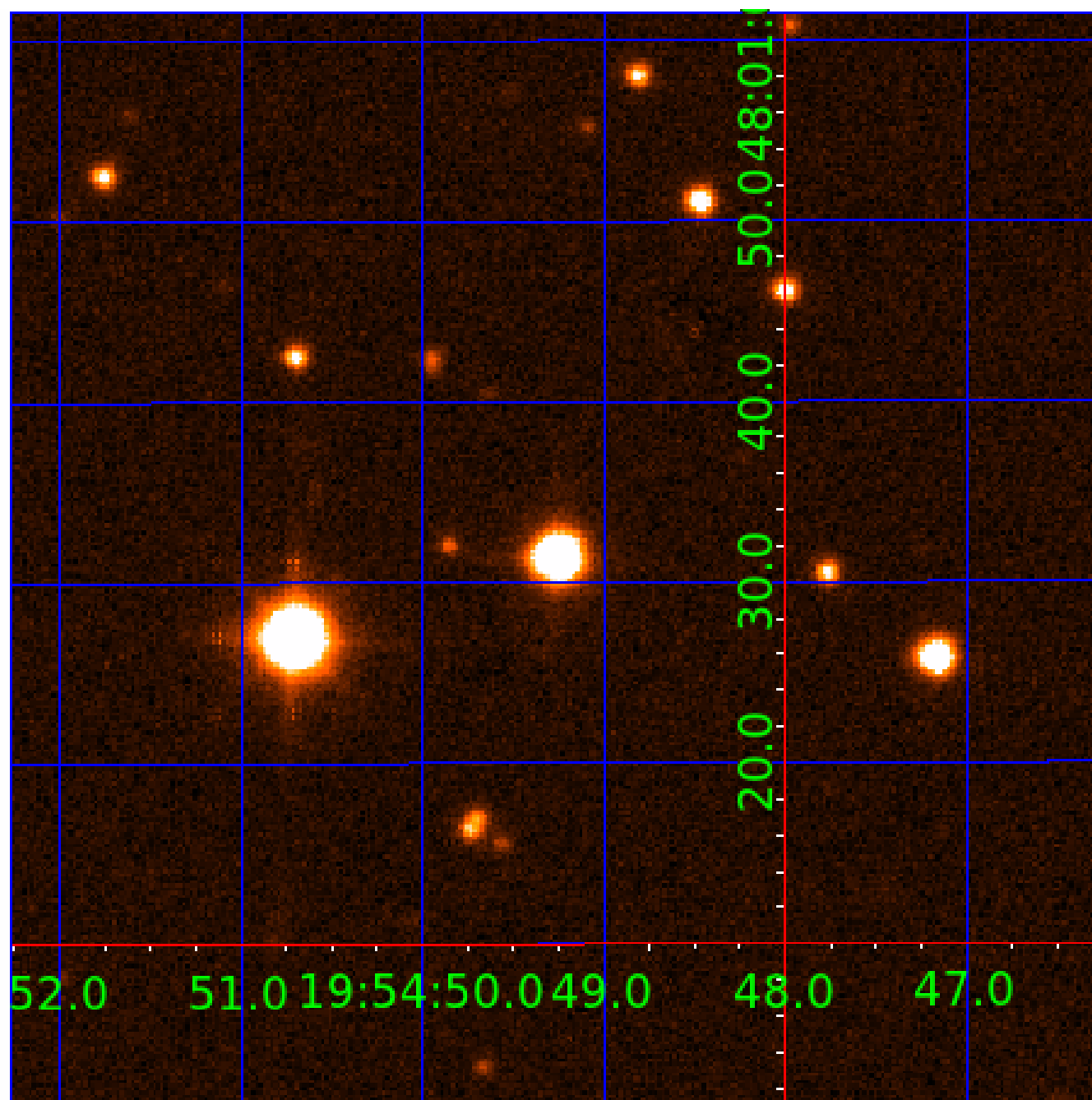


fluxWeightedCentroids, Planet 3 of 6



UKIRT Image

Declination



KIC 010752318

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})
010752318-01	OBS	No	2.240049	133.315063	11.4	15.094	7.5	4.0	3.15	6625	1.13	11264.41
010752318-02	OBS	No	38.221786	155.171294	227.6	16.227	18.6	9.2	3.15	6625	6.12	256.43
010752318-03	OBS	No	44.334657	150.368316	174.0	5.810	8.1	6.7	3.15	6625	4.36	210.41
010752318-04	OBS	No	42.154592	157.960311	192.7	2.353	7.8	8.2	3.15	6625	5.13	225.04
010752318-05	OBS	No	42.299590	159.602445	242.9	1.469	7.6	8.3	3.15	6625	5.74	224.01
010752318-06	OBS	No	42.002644	168.310914	268.8	7.795	7.5	7.8	3.15	6625	5.72	226.12

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010752318-01	OBS	FP	0.00	1	0	0	0	LPP_DV
010752318-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
010752318-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS—HALO_GHOST
010752318-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
010752318-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS
010752318-06	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.

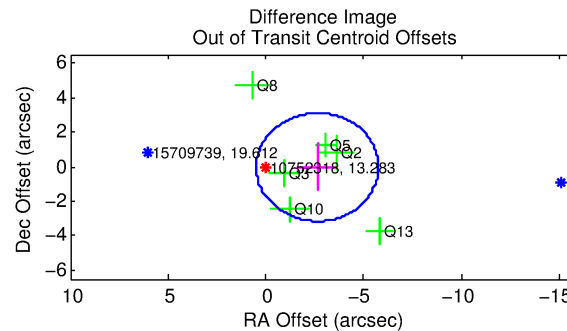
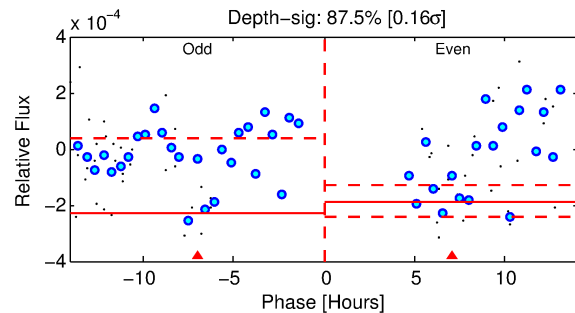
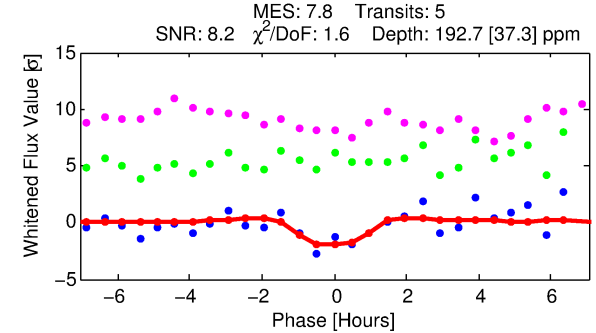
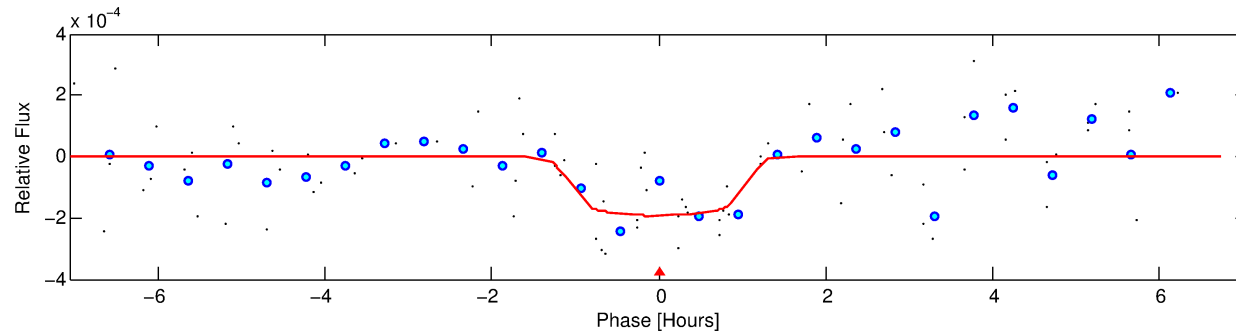
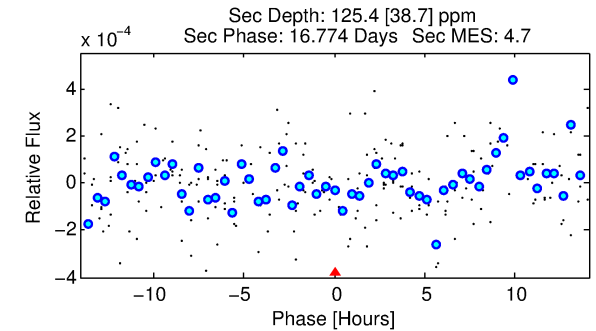
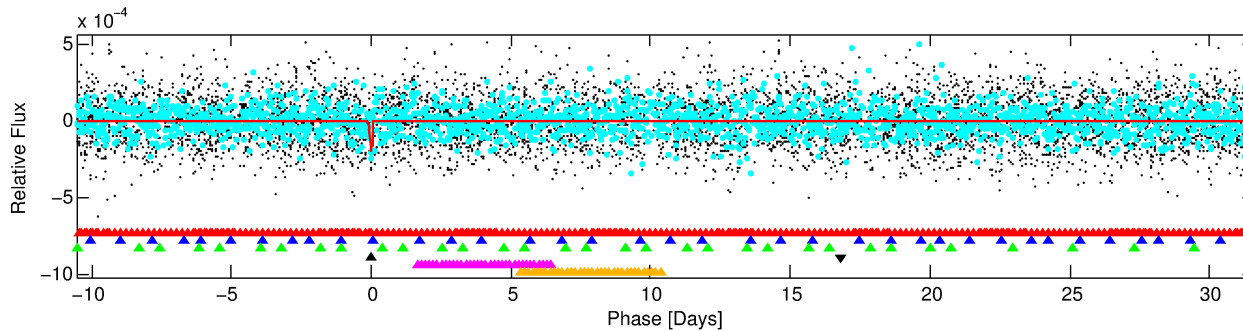
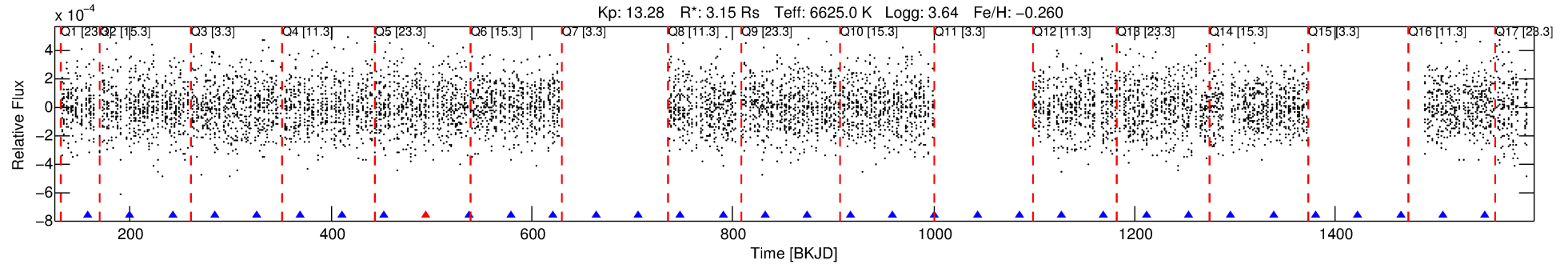
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010752318-04

No Significant Match Found

DV One-Page Summary

KIC: 10752318 Candidate: 4 of 6 Period: 42.155 d



DV Fit Results:

Period = 42.15459 [0.00078] d
Epoch = 157.9603 [0.0132] BKJD
Rp/R* = 0.0149 [0.0135]
a/R* = 62.58 [332.19]
b = 0.91 [1.05]
Seff = 225.04 [129.72]
Teff = 988 [142] K
Rp = 5.13 [5.02] Re
a = 0.2754 [0.0985] AU
Ag = 199.15 [381.34] [0.52σ]
Teffp = 5736 [2630] K [1.80σ]

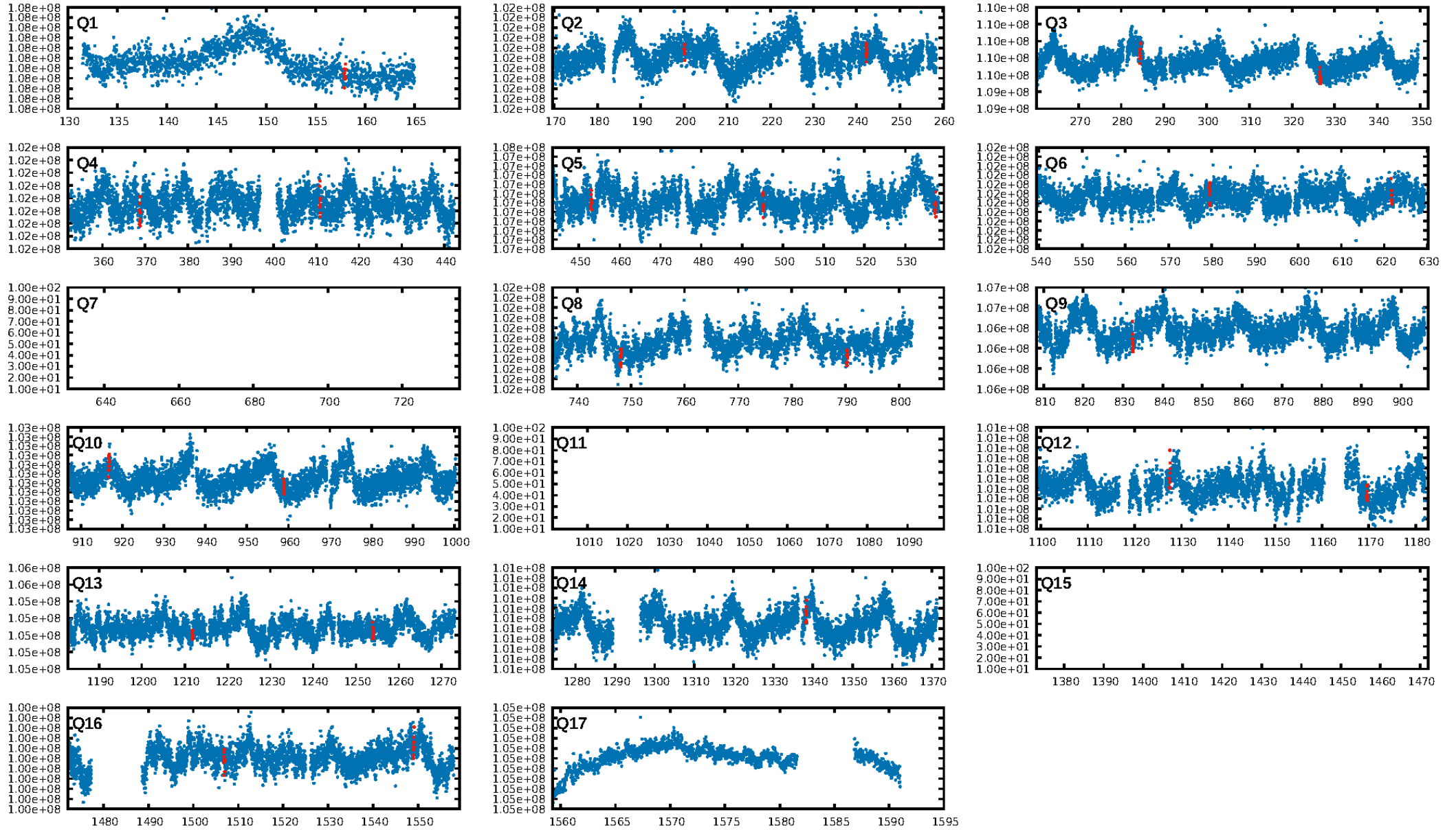
DV Diagnostic Results:

ShortPeriod-sig: 34.6% [0.45σ]
LongPeriod-sig: 79.0% [1.25σ]
ModelChiSquare2-sig: 42.3%
ModelChiSquareGof-sig: 90.6%
Bootstrap-pfa: 4.91e-07
RollingBand-fgt: 0.80 [4/5]
GhostDiagnostic-chr: 2.433
Centroid-sig: 7.0%
Centroid-so: 2.397 arcsec [1.99σ]
OotOffset-rm: 2.627 arcsec [2.52σ]
KicOffset-rm: 2.529 arcsec [2.43σ]
OotOffset-st: 2/1/1/2 [6]
KicOffset-st: 2/1/1/2 [6]
DiffImageQuality-fgm: 0.33 [2/6]
DiffImageOverlap-fno: 0.50 [6/12]

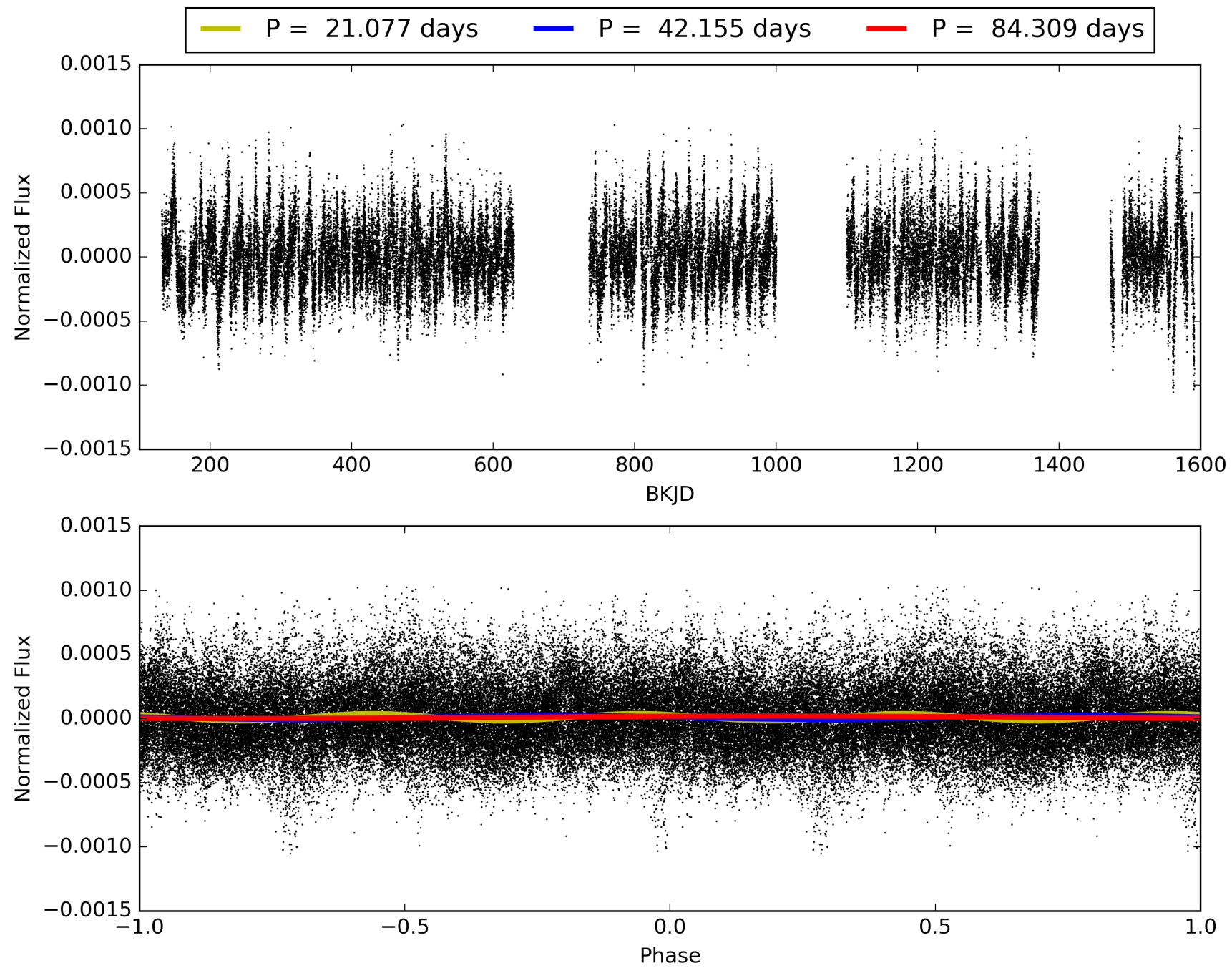
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 20:08:49 Z

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

TCE 010752318-04, PDC Light Curves

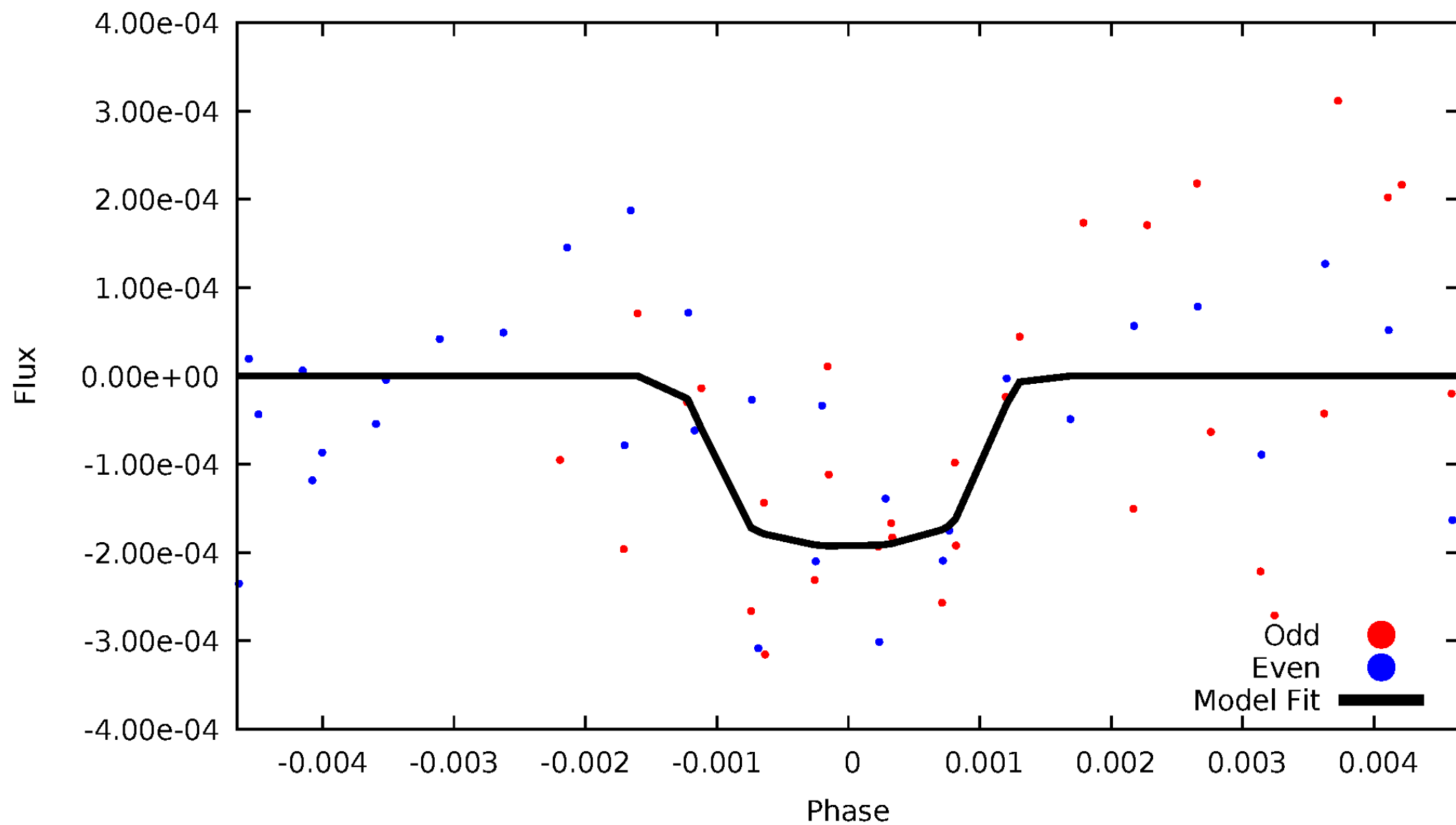


TCE 010752318-04



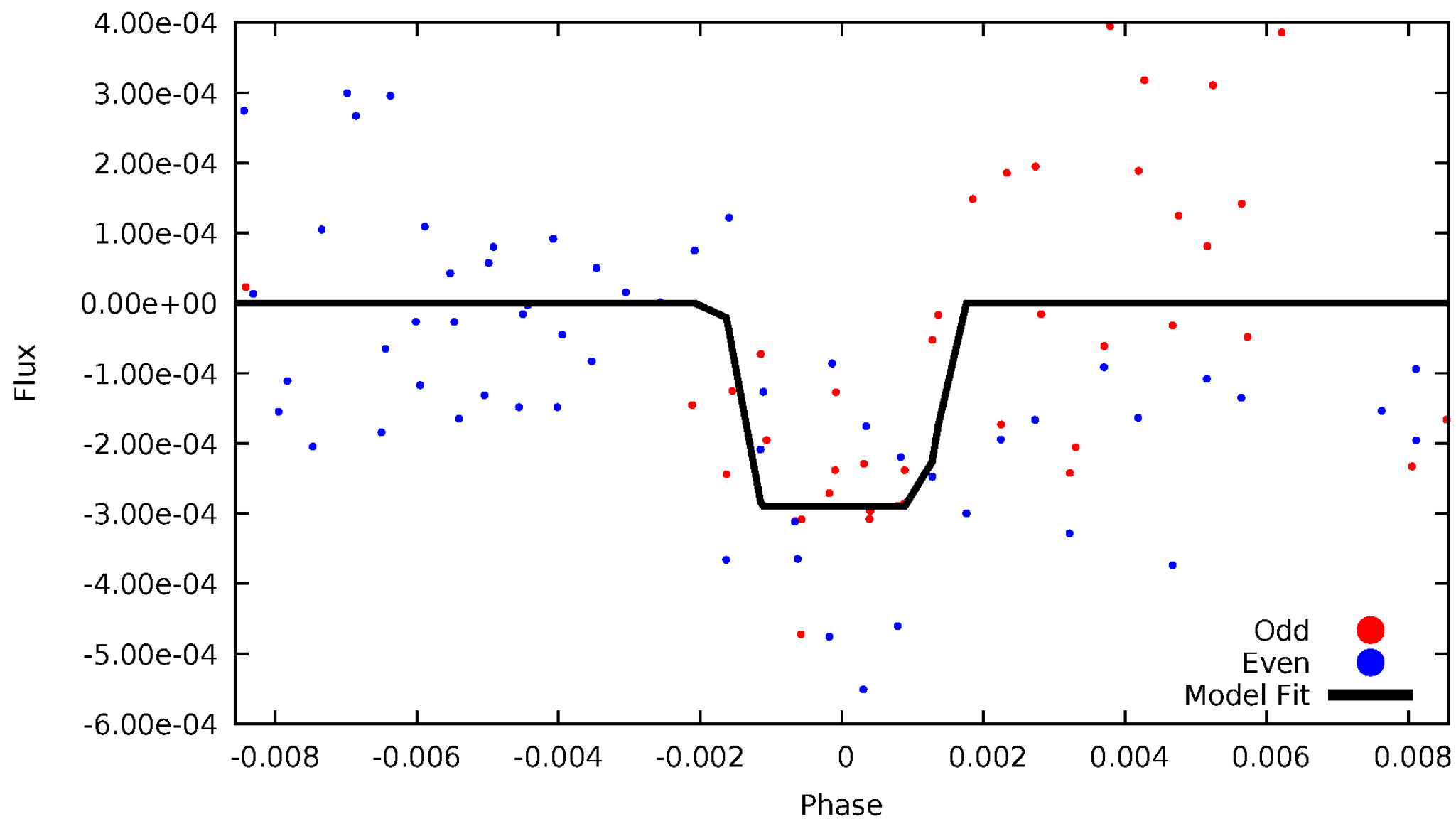
DV Odd/Even

TCE 010752318-04



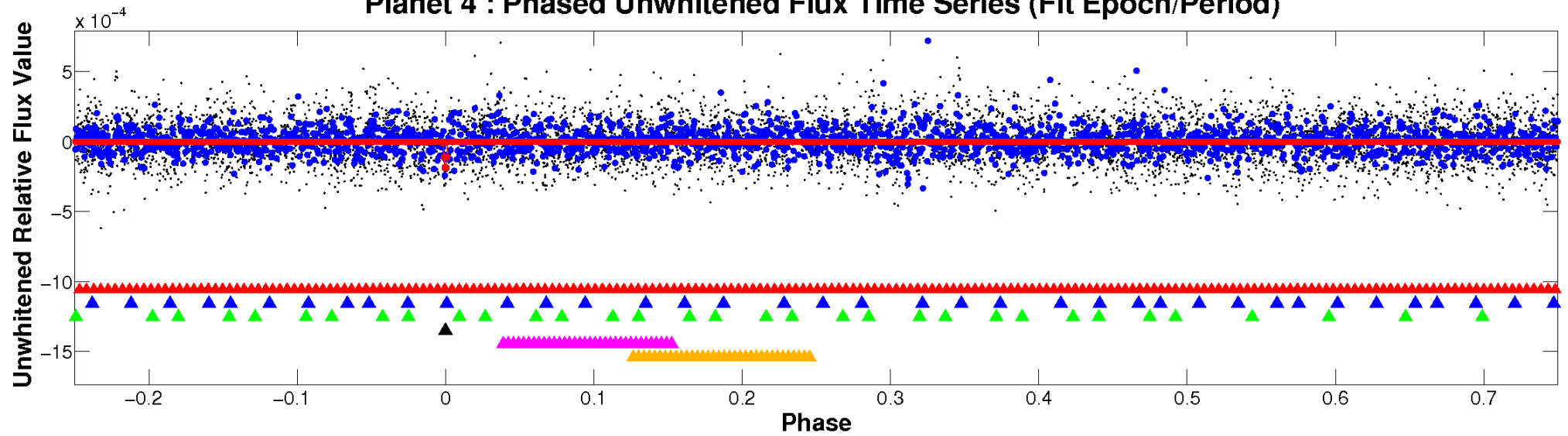
ALT Odd/Even

TCE 010752318-04

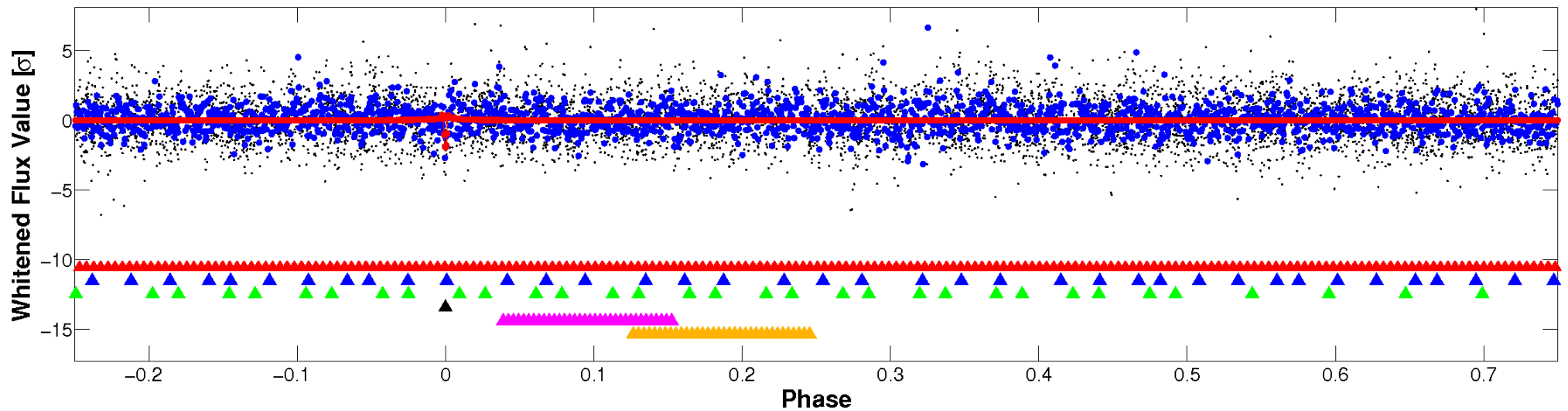


Non-Whitened Vs. Whitened Light Curve

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

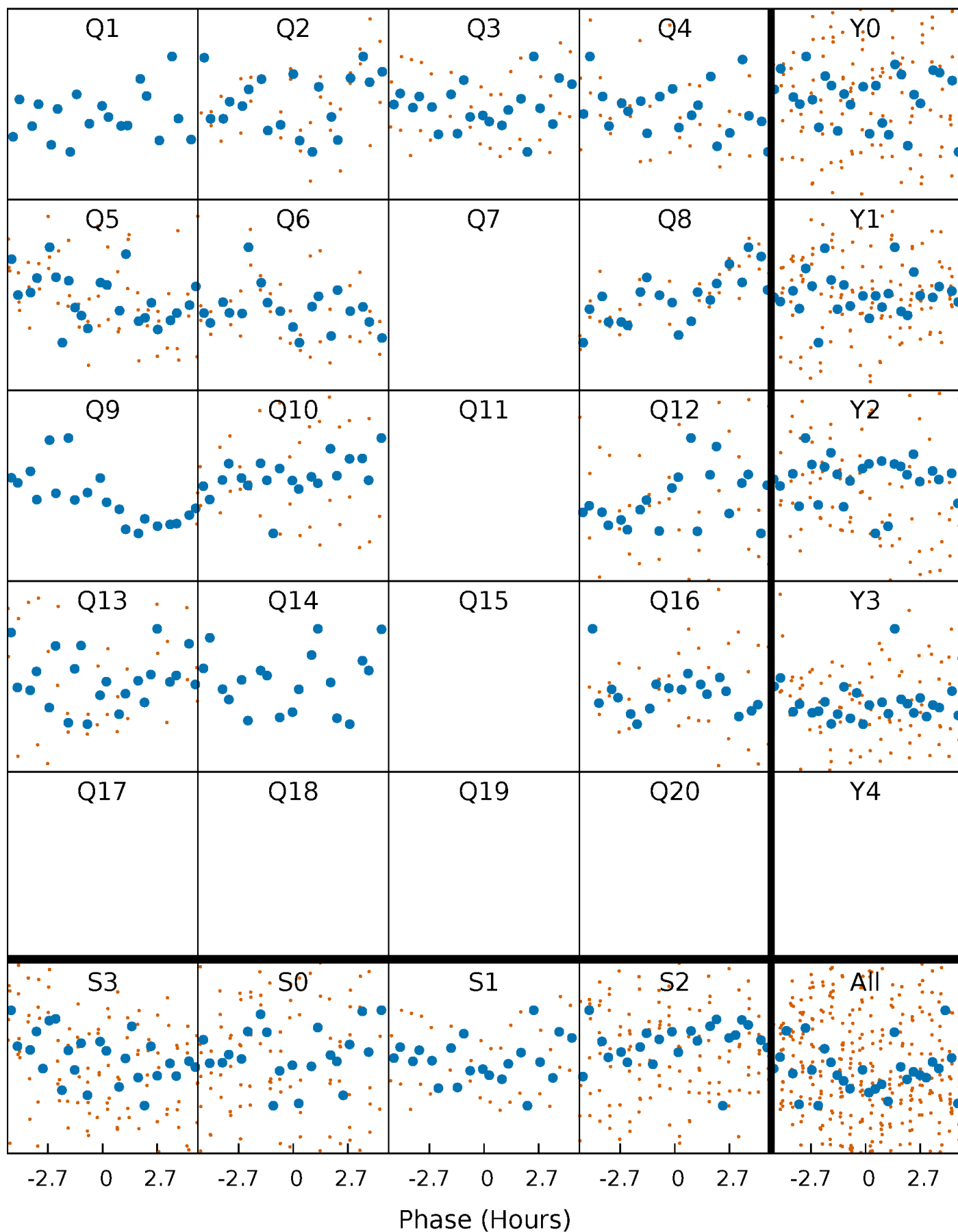


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



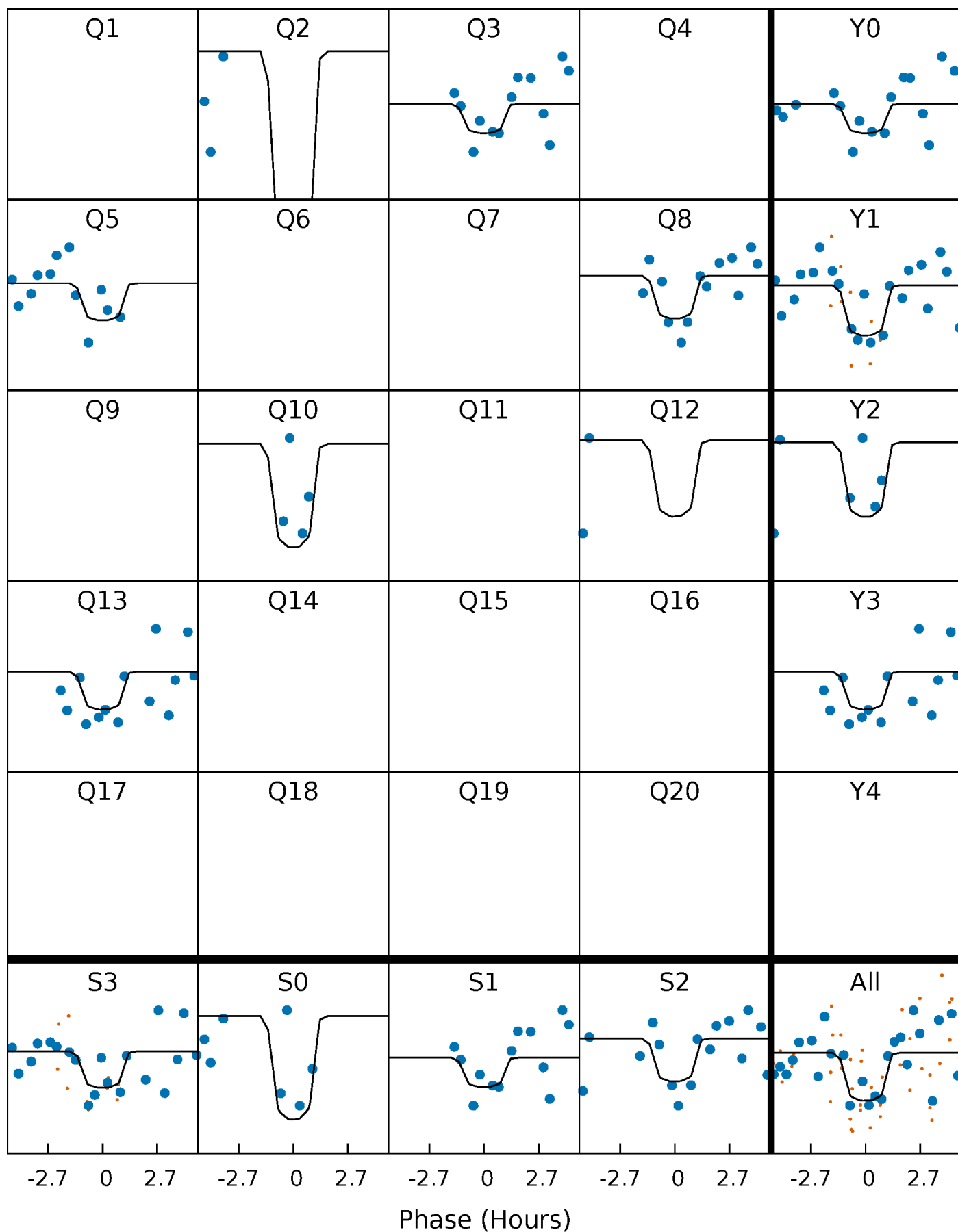
PDC Quarter-Phased Transit Curves

TCE 010752318-04 P= 42.154592 Days $T_0=157.960311$ (BKJD)



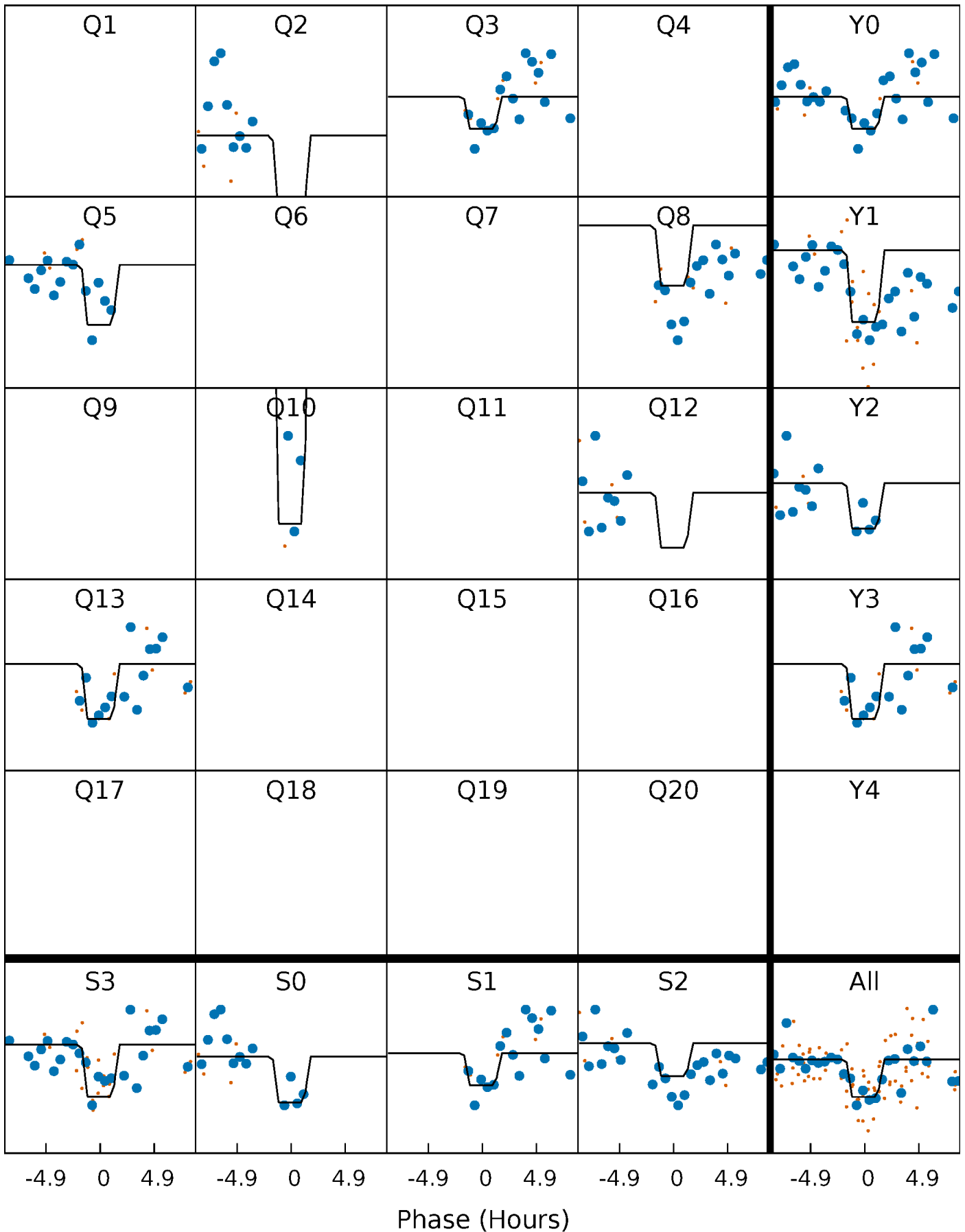
DV Quarter-Phased Transit Curves

TCE 010752318-04 P= 42.154592 Days $T_0=157.960311$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

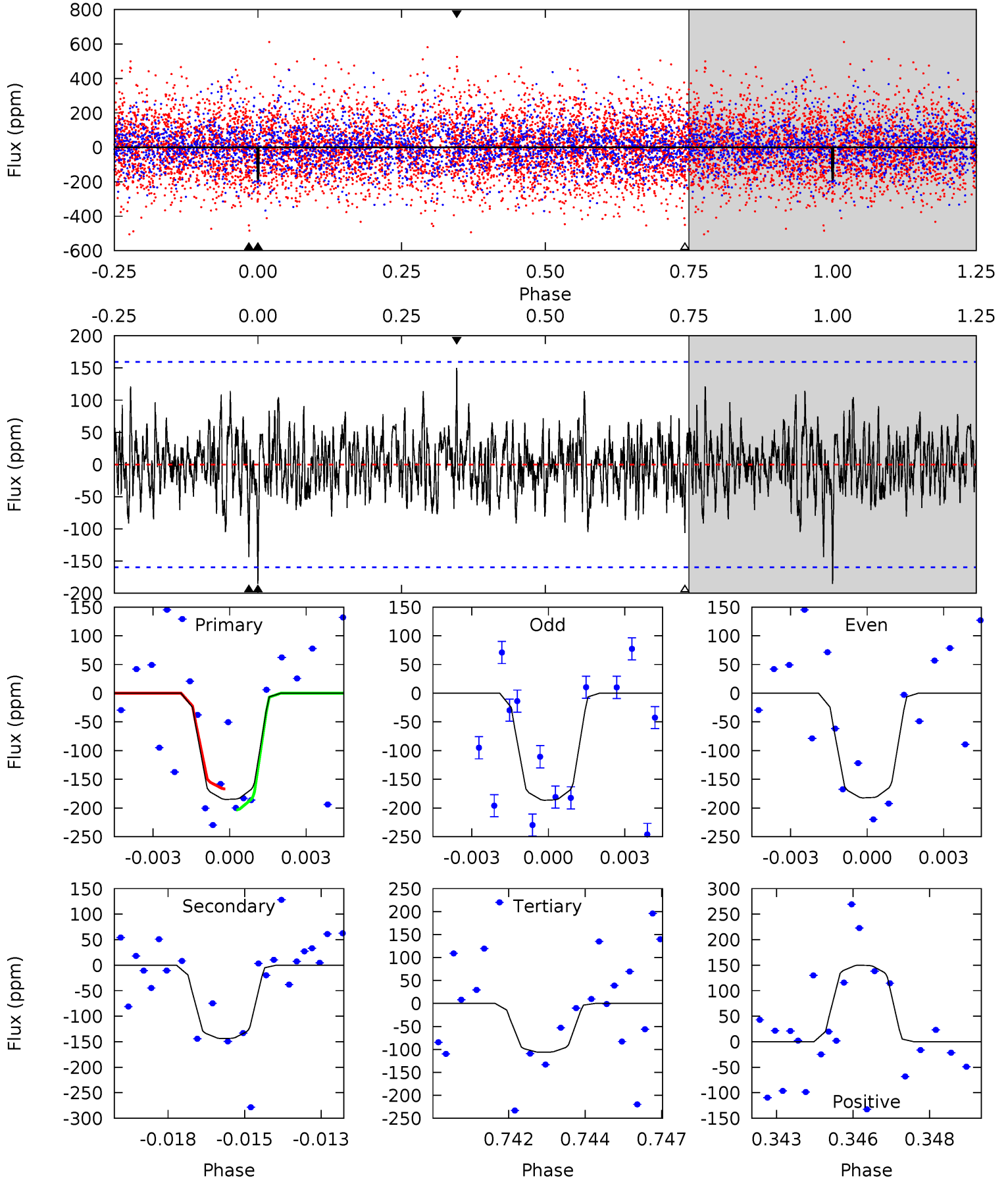
TCE 010752318-04 $P = 42.154547$ Days $T_0 = 157.957939$ (BKJD)



DV Model-Shift Uniqueness Test

010752318-04, P = 42.154592 Days, E = 115.805719 Days

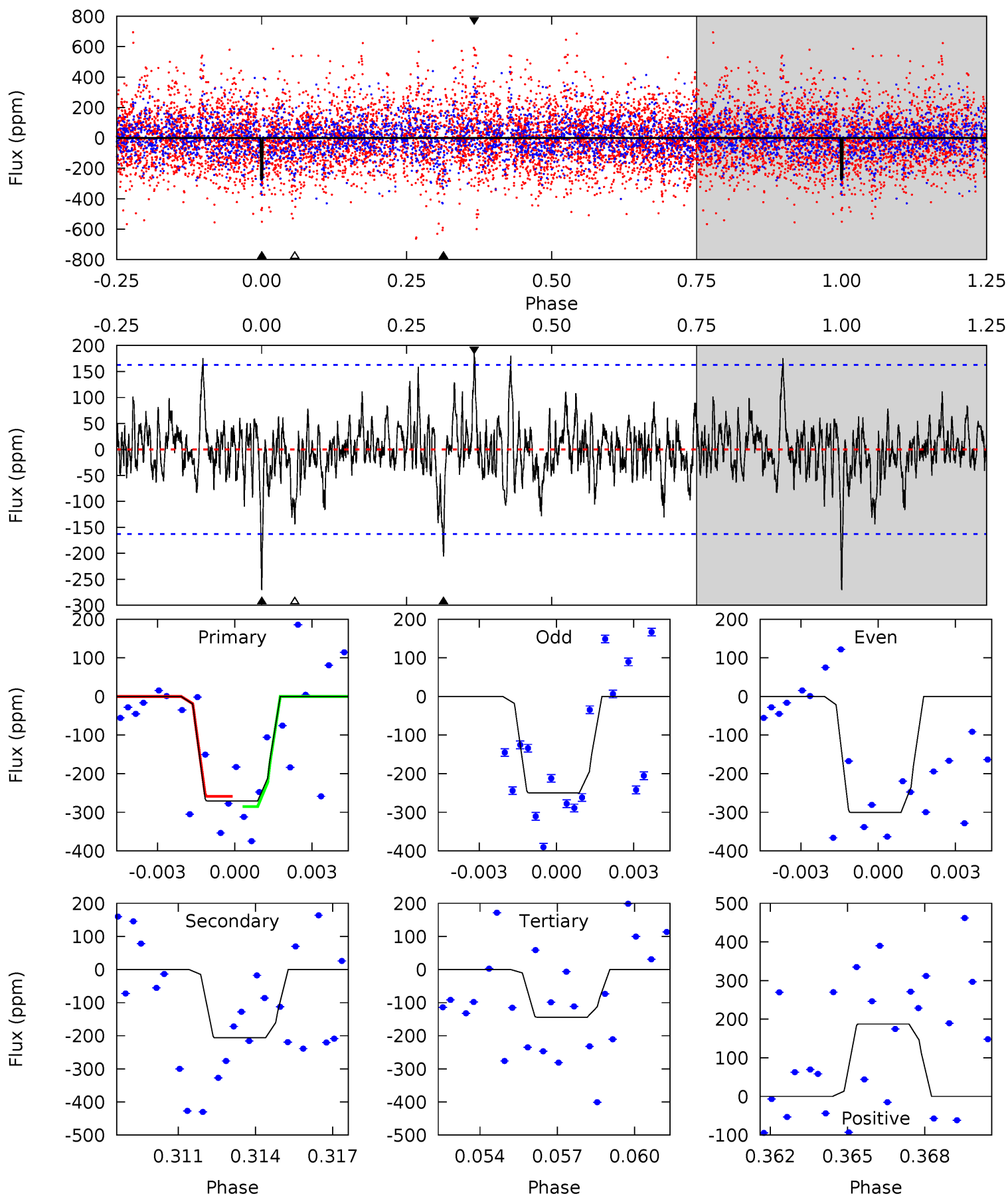
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.13	4.76	3.52	4.97	5.28	3.02	1.21	2.61	1.16	1.24	-0.21	0.07	0.95	0.45	0.61



Alt Model-Shift Uniqueness Test

010752318-04, P = 42.154547 Days, E = 115.803392 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.73	6.65	4.64	6.05	5.25	2.97	1.46	4.09	2.69	2.01	0.60	0.81	1.10	0.41	0.42



Stellar Parameters For KIC 010752318

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6625^{+178}_{-198}	$3.638^{+0.328}_{-0.082}$	$-0.260^{+0.300}_{-0.250}$	$3.145^{+0.399}_{-1.198}$	$1.566^{+0.225}_{-0.338}$	$0.071^{+0.164}_{-0.018}$
	+3%/-3%	+9%/-2%	+115%/-96%	+13%/-38%	+14%/-22%	+231%/-26%
Source	PHO1	FLK73	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 010752318-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-144 ± 30	$5.73^{+3.88}_{-3.34}$	1351^{+84}_{-115}	5407^{+3212}_{-1033}	185^{+857}_{-122}
Alt.	-206 ± 31	$5.86^{+4.82}_{-3.56}$	1348^{+81}_{-123}	5782^{+4033}_{-1253}	255^{+1246}_{-179}

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

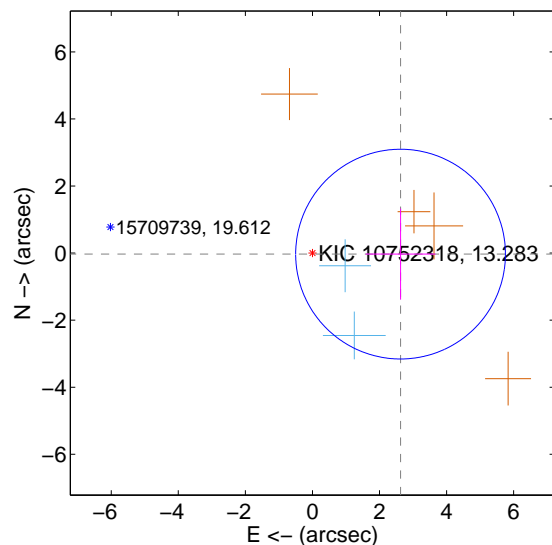
Supplemental centroid analysis for 010752318-04. Kepler magnitude: 13.28. Transit SNR 8.15

There are 2 quarters with good PRF difference image offsets

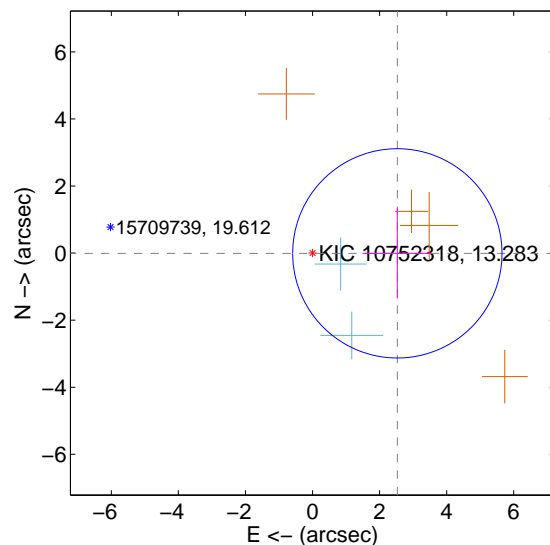
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.627 ± 1.042	2.52	-2.627 ± 1.042	-0.030 ± 1.359
PRF-fit source offset from KIC position	2.529 ± 1.040	2.43	-2.529 ± 1.040	-0.008 ± 1.351
photometric centroid source offset	2.40 ± 1.21	1.99	1.70 ± 1.32	-1.69 ± 1.07

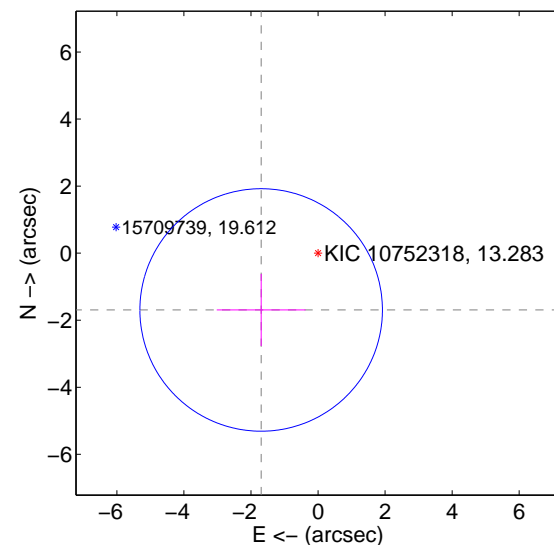
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

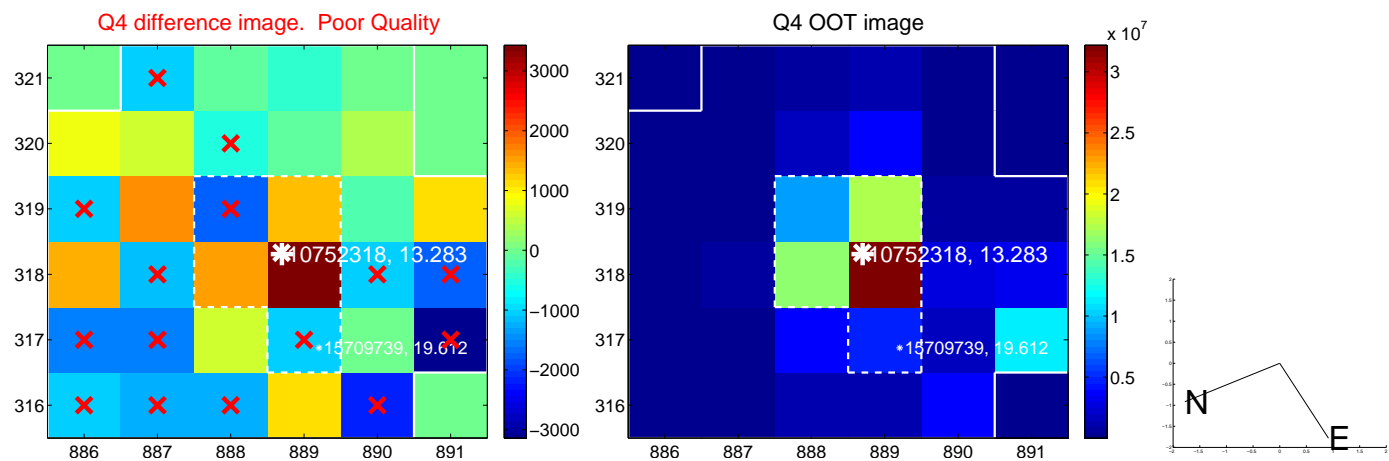
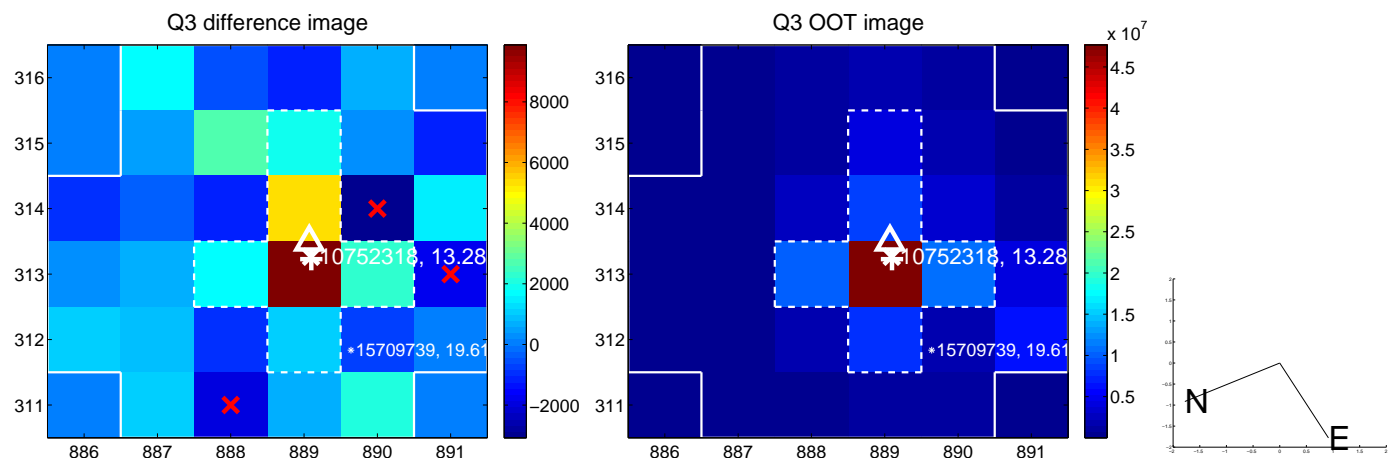
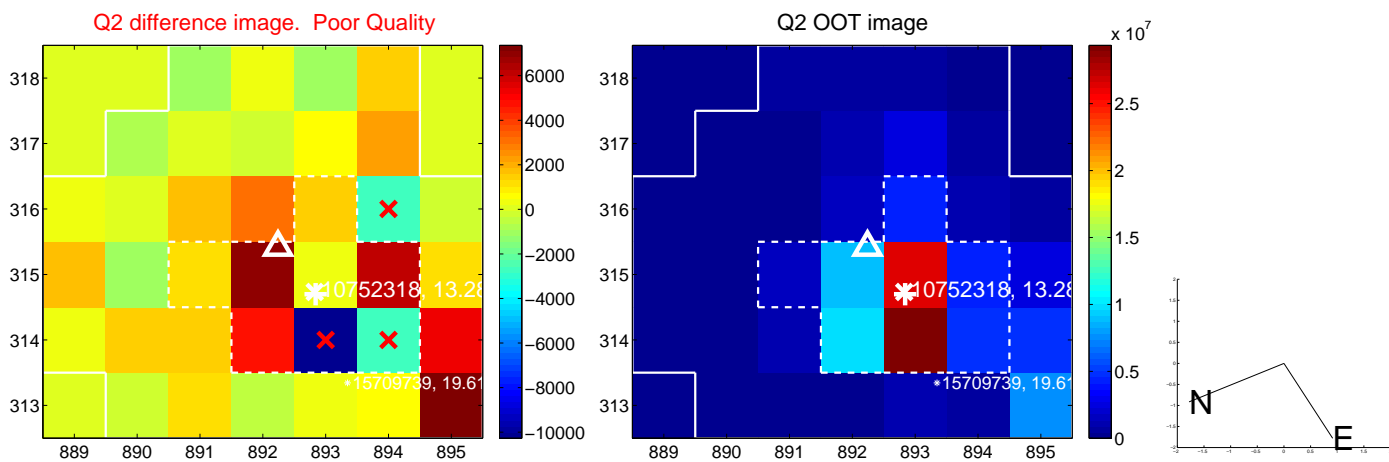
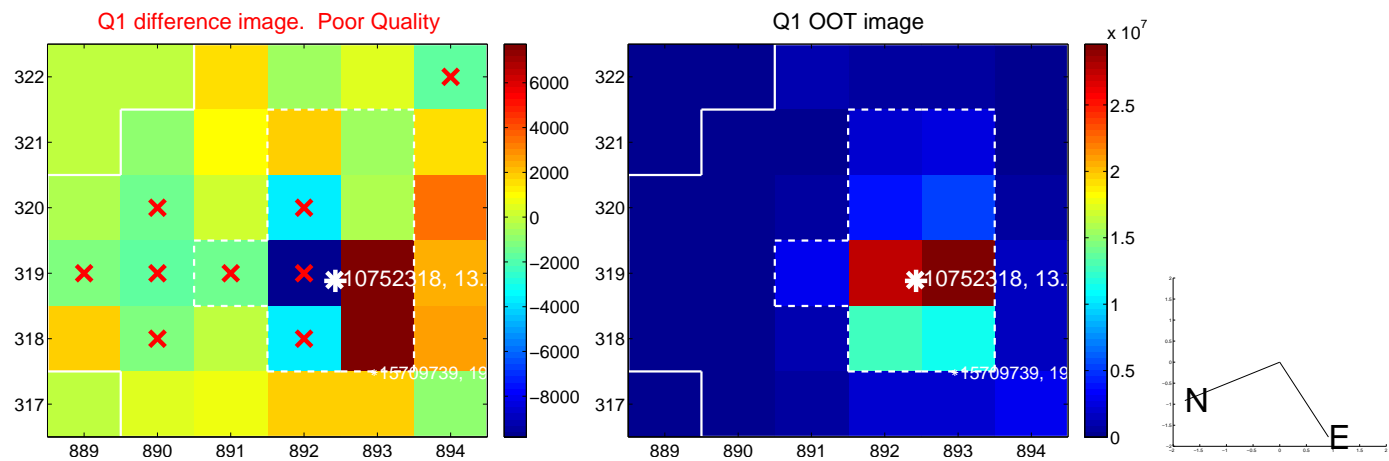


offset from photometric centroids

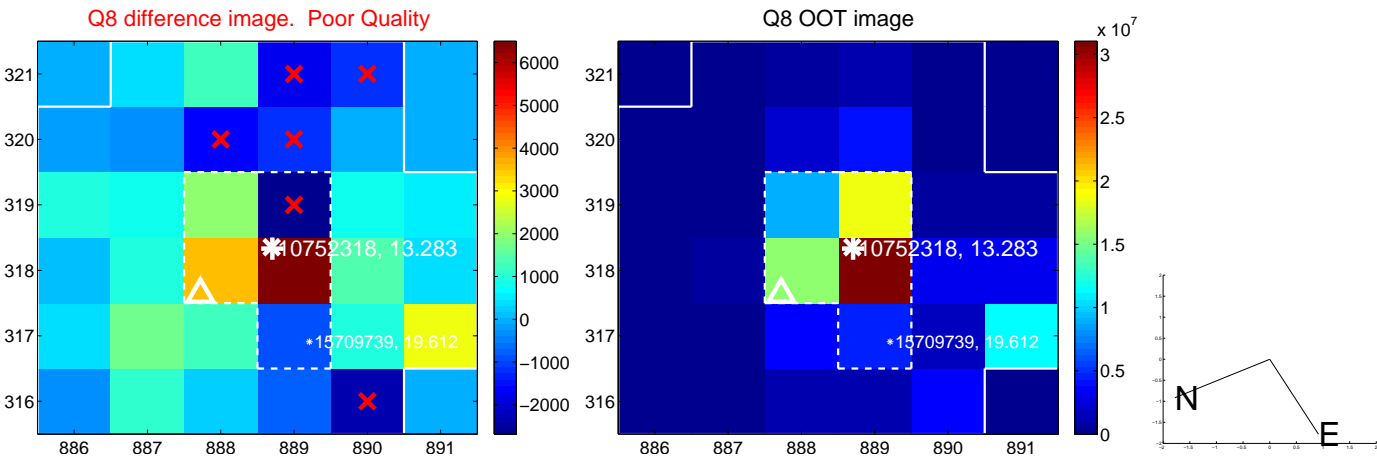
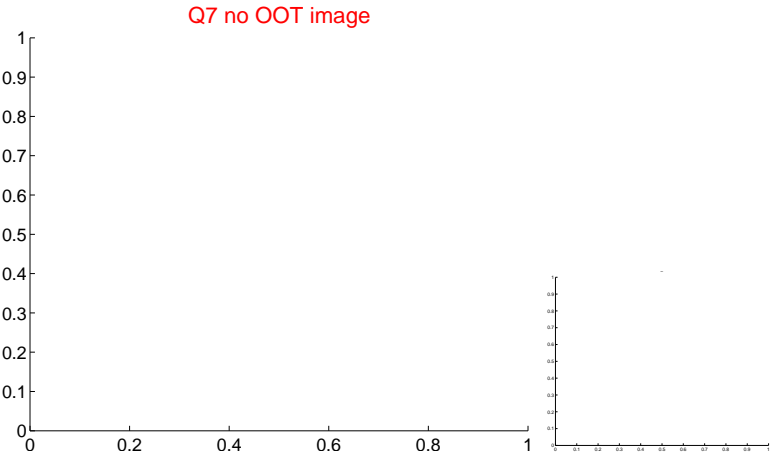
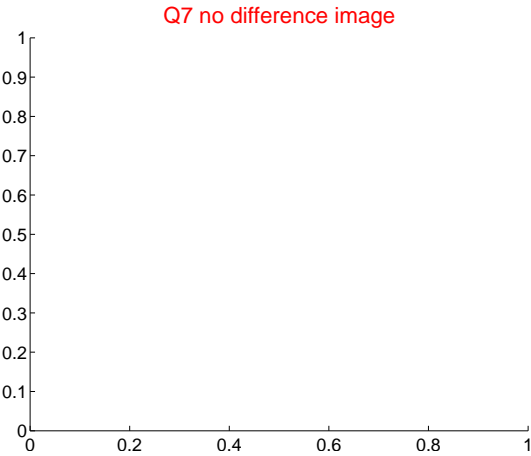
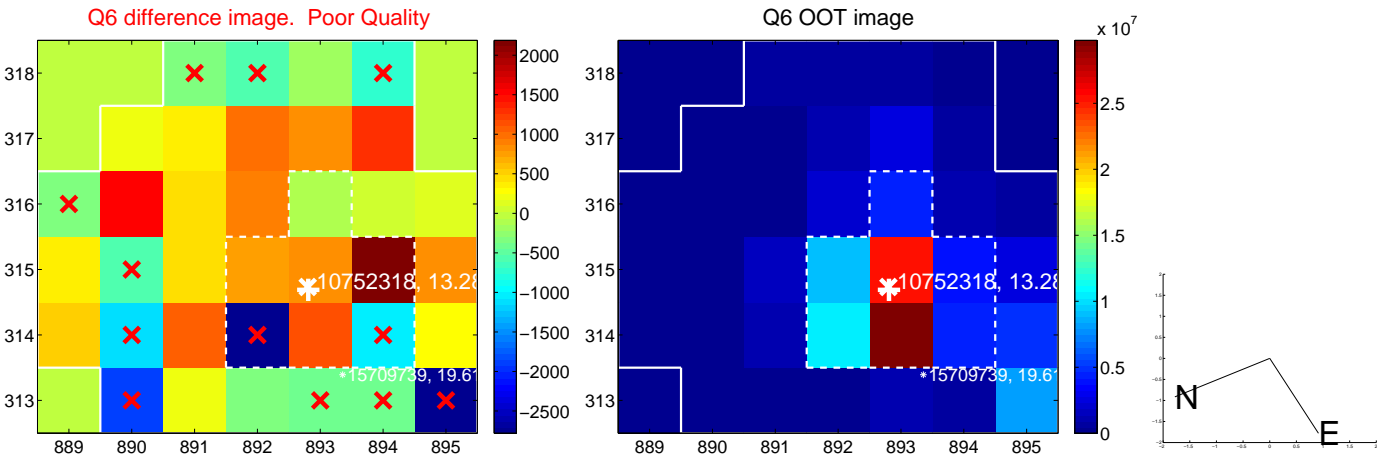
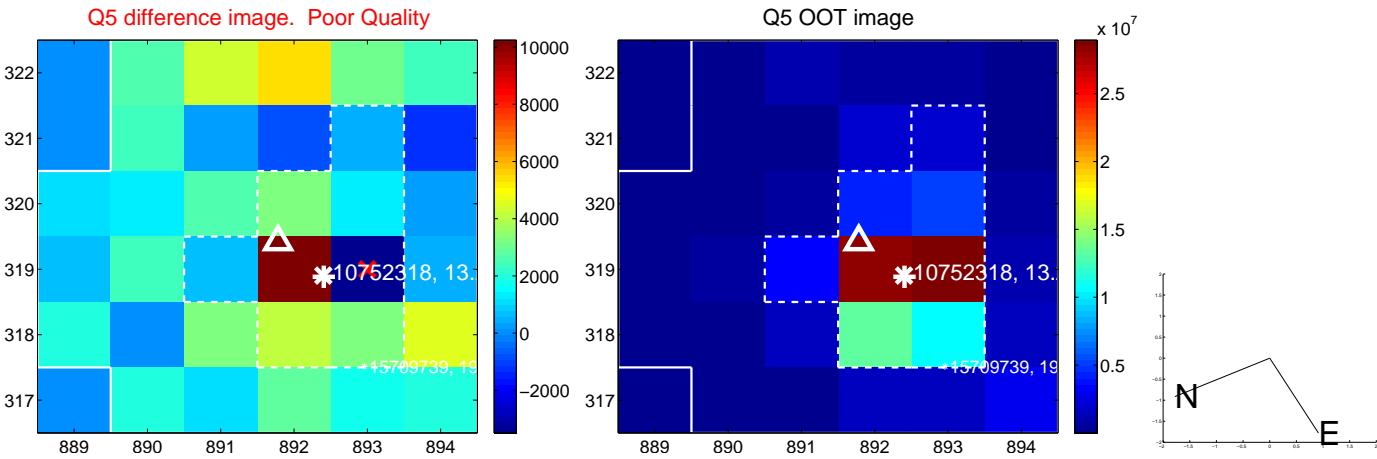


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

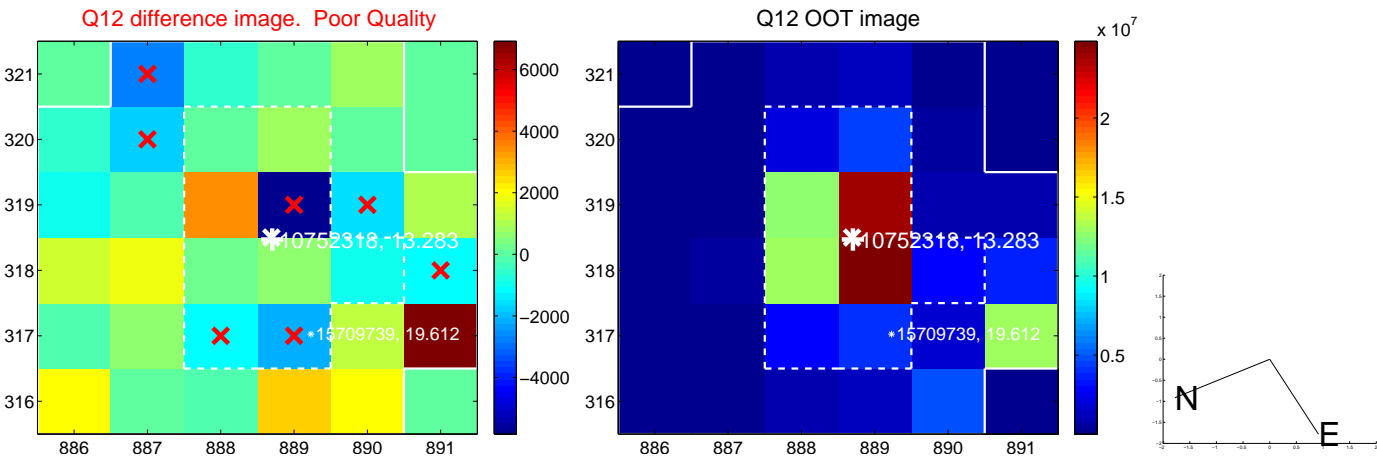
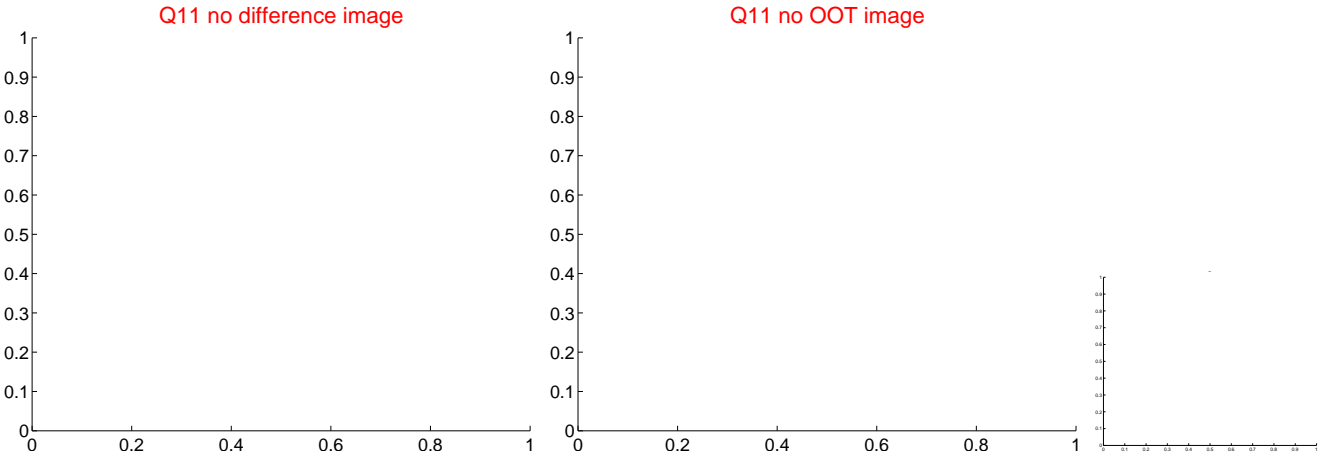
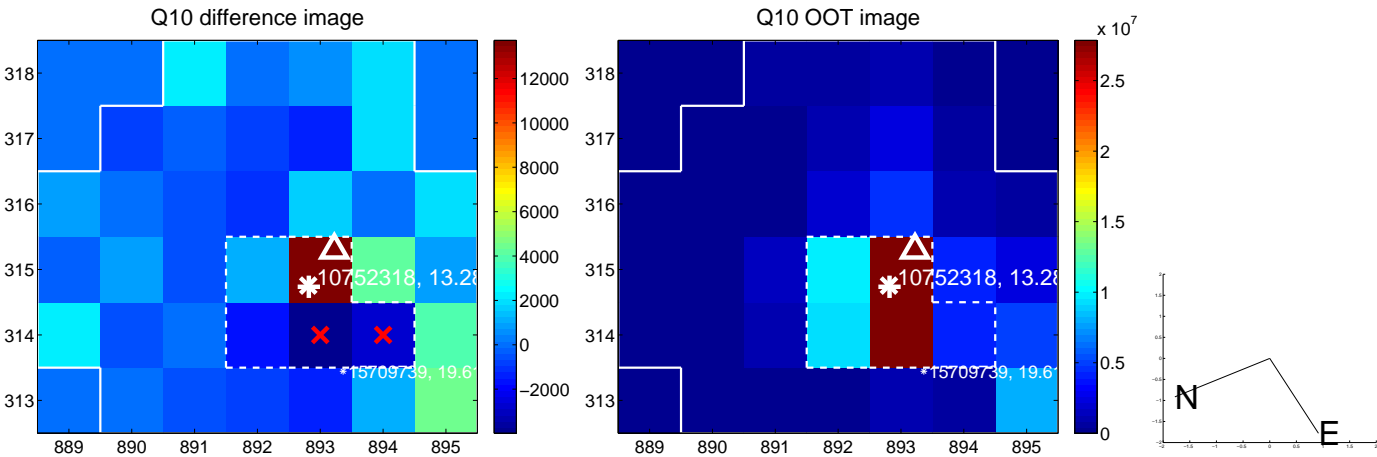
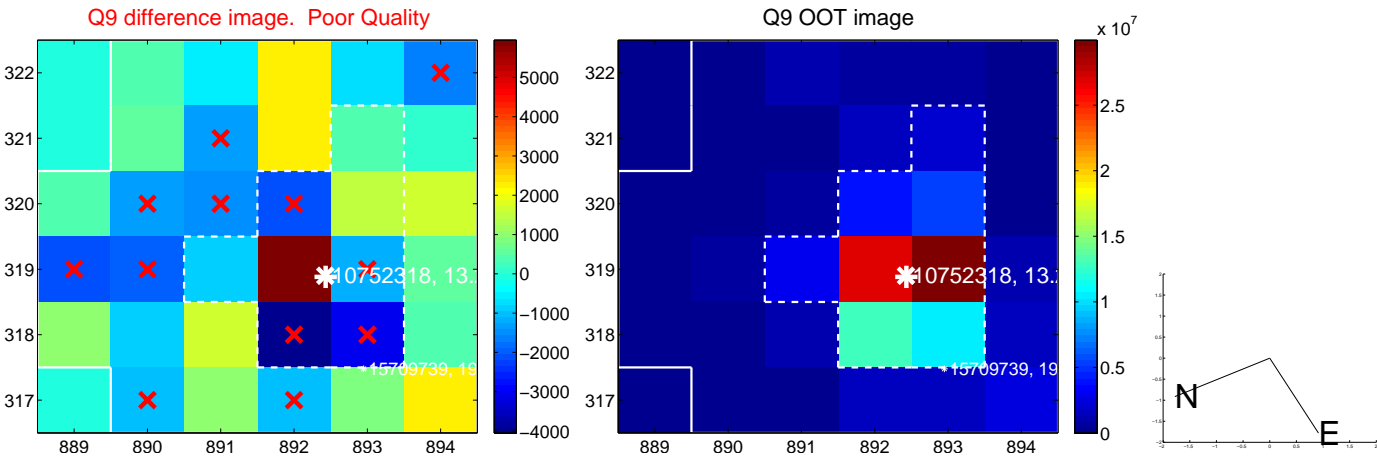
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



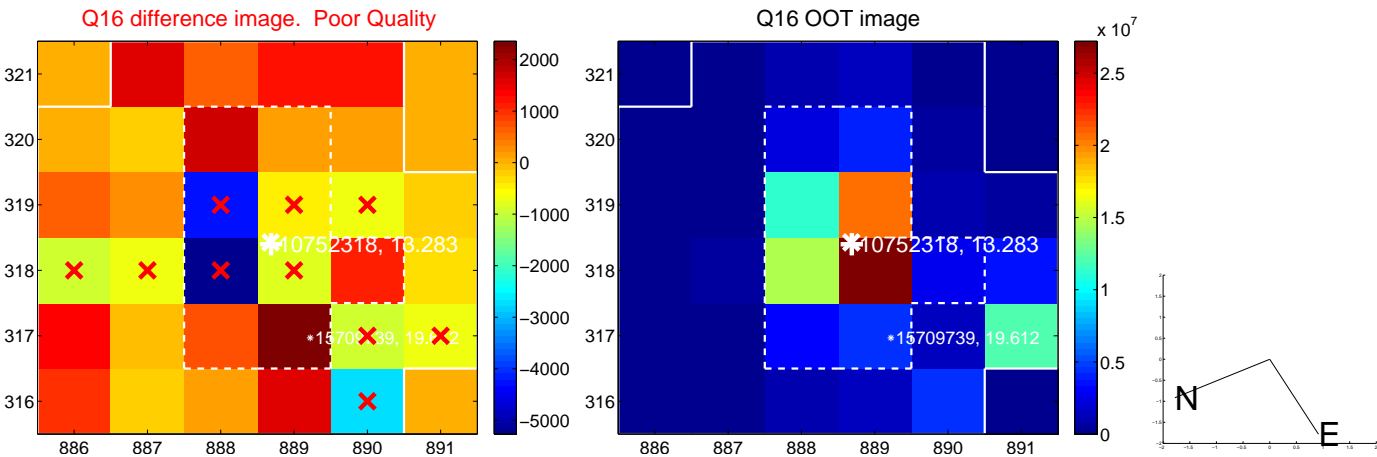
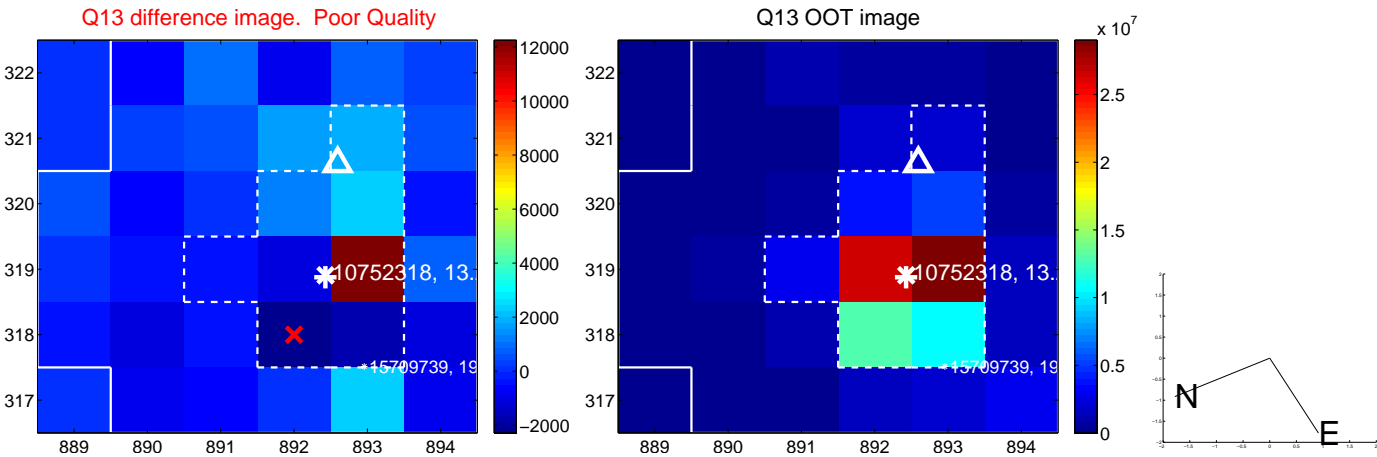
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



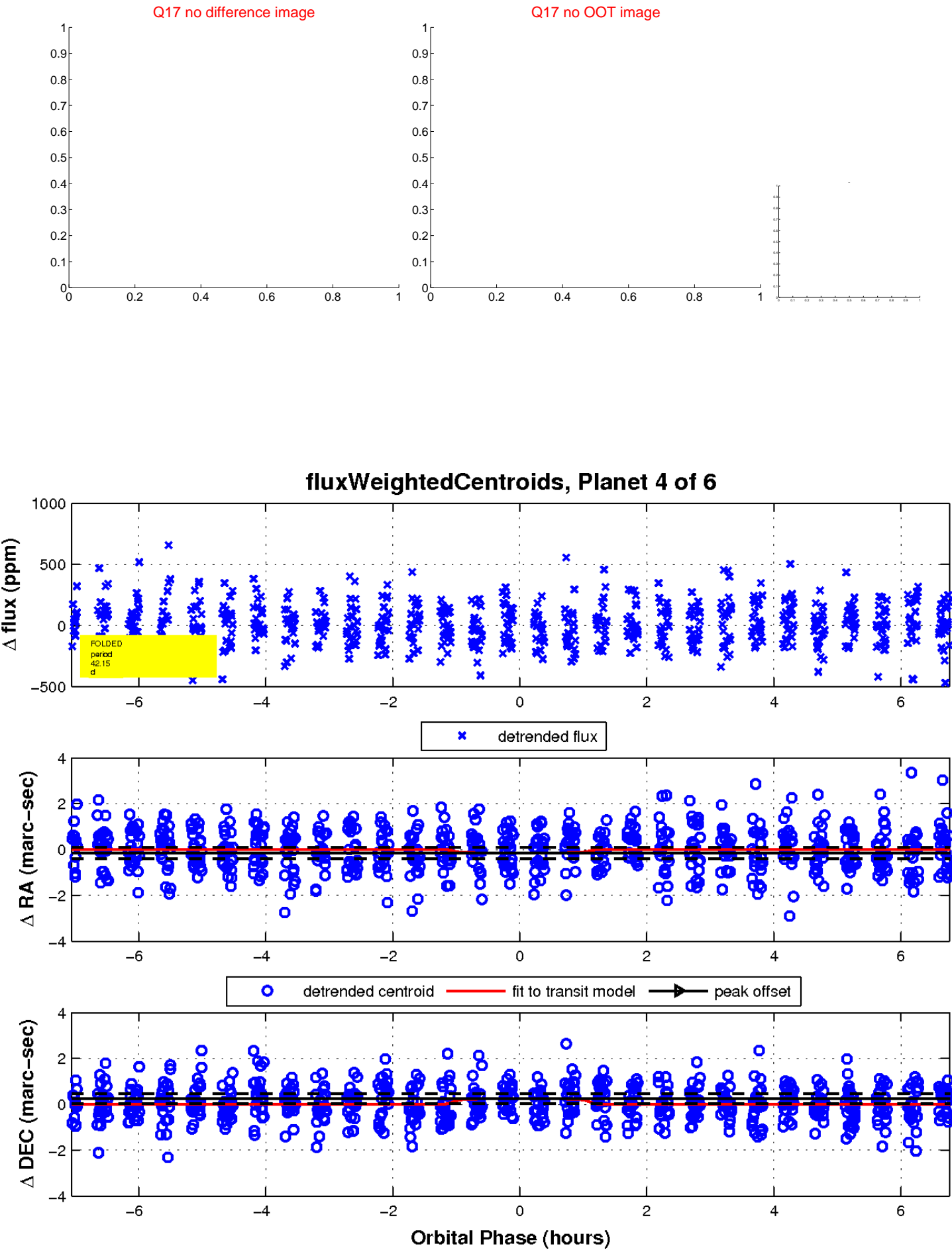
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

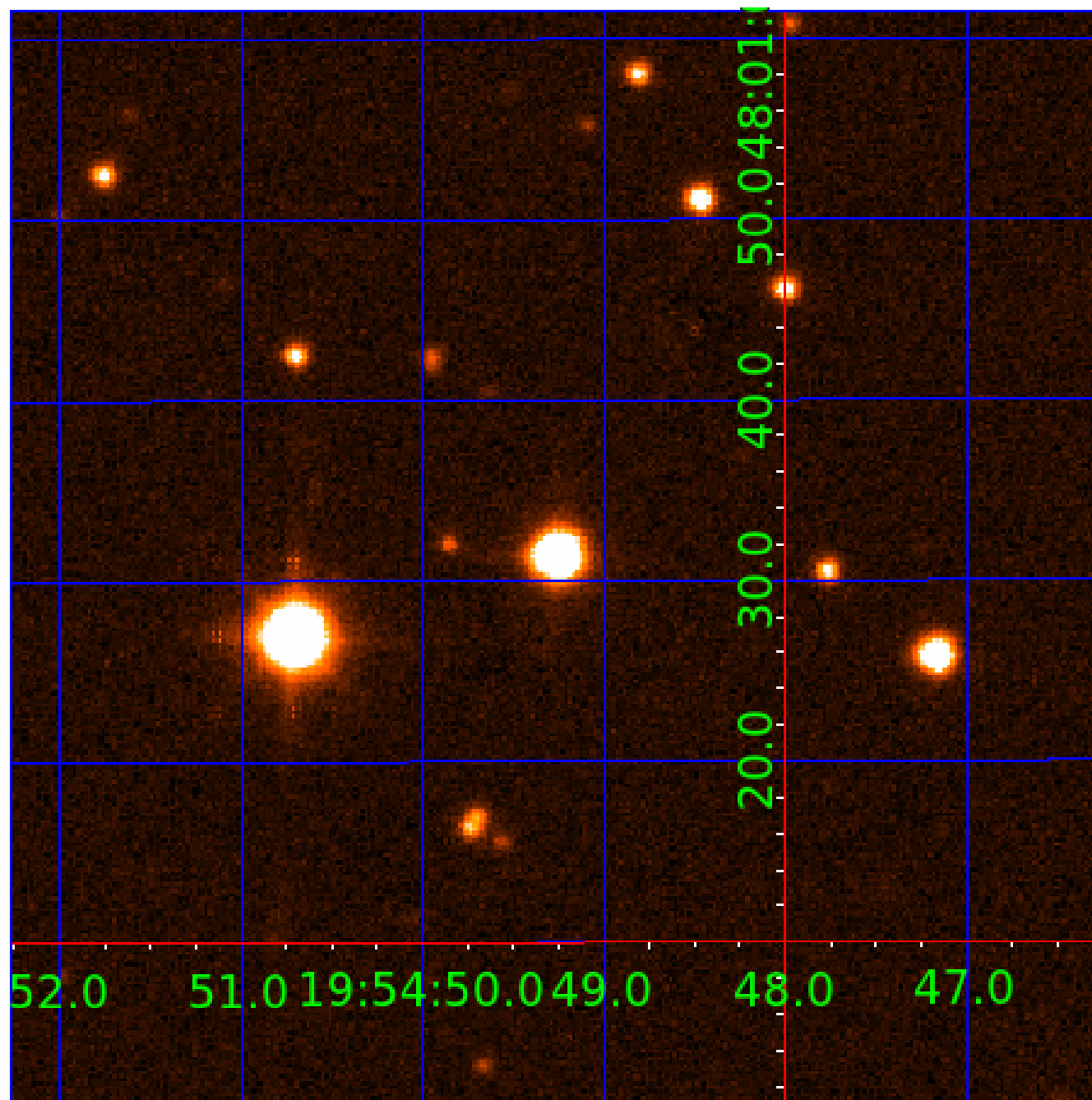


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010752318

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})
010752318-01	OBS	No	2.240049	133.315063	11.4	15.094	7.5	4.0	3.15	6625	1.13	11264.41
010752318-02	OBS	No	38.221786	155.171294	227.6	16.227	18.6	9.2	3.15	6625	6.12	256.43
010752318-03	OBS	No	44.334657	150.368316	174.0	5.810	8.1	6.7	3.15	6625	4.36	210.41
010752318-04	OBS	No	42.154592	157.960311	192.7	2.353	7.8	8.2	3.15	6625	5.13	225.04
010752318-05	OBS	No	42.299590	159.602445	242.9	1.469	7.6	8.3	3.15	6625	5.74	224.01
010752318-06	OBS	No	42.002644	168.310914	268.8	7.795	7.5	7.8	3.15	6625	5.72	226.12

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010752318-01	OBS	FP	0.00	1	0	0	0	LPP_DV
010752318-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
010752318-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS—HALO_GHOST
010752318-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
010752318-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS
010752318-06	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.

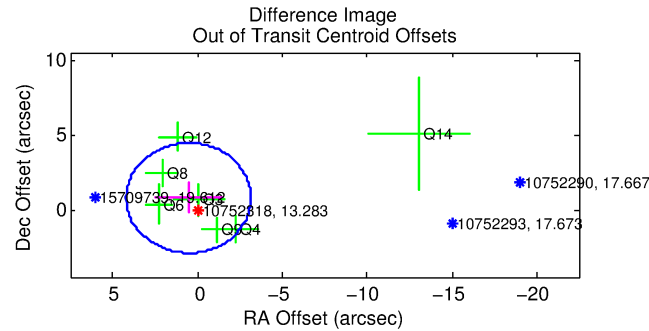
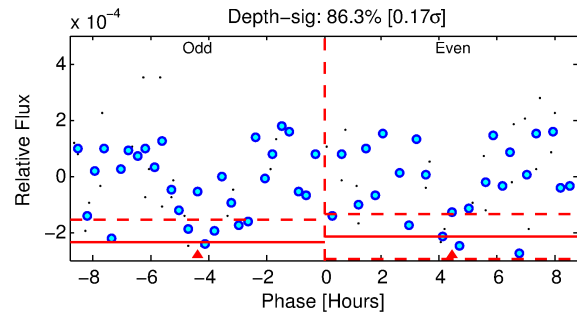
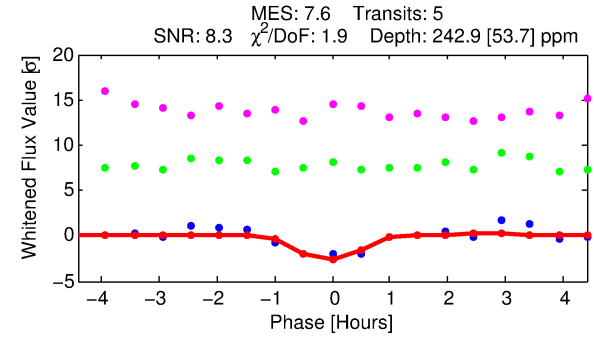
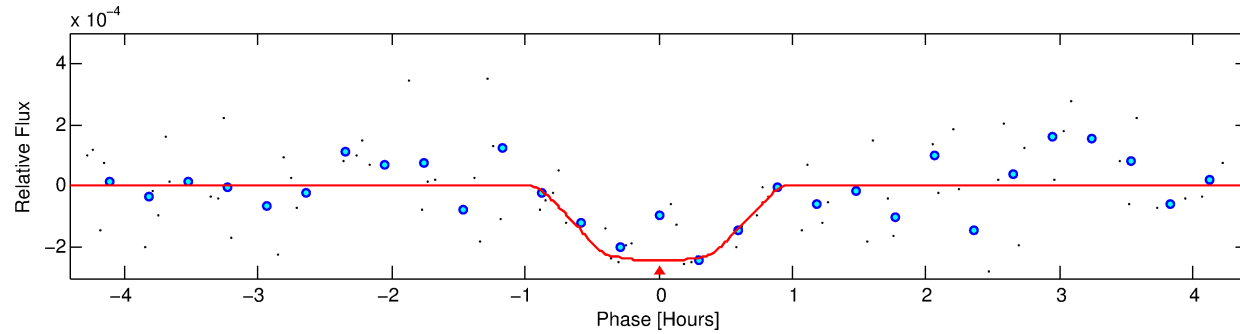
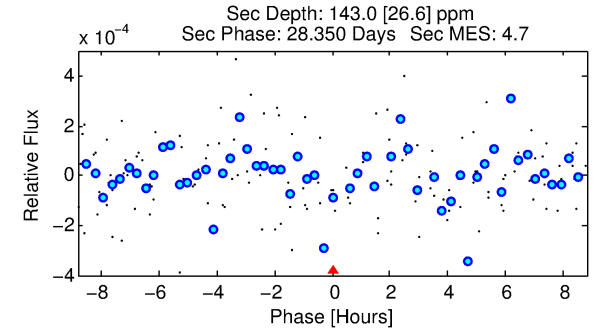
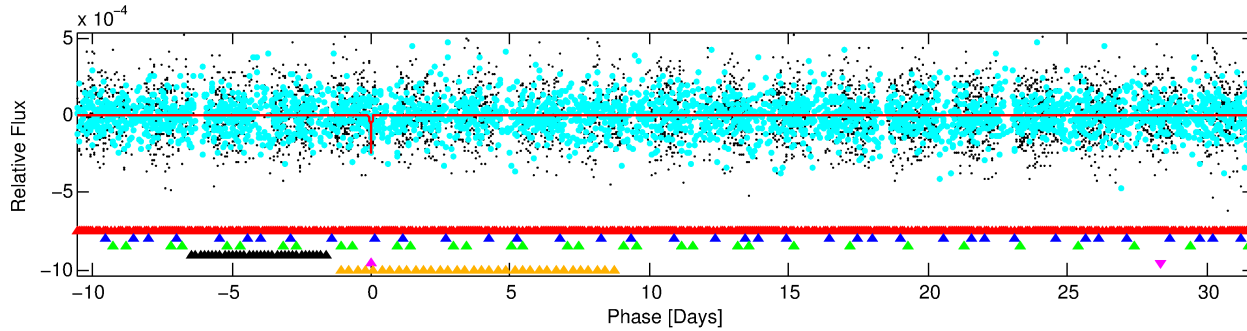
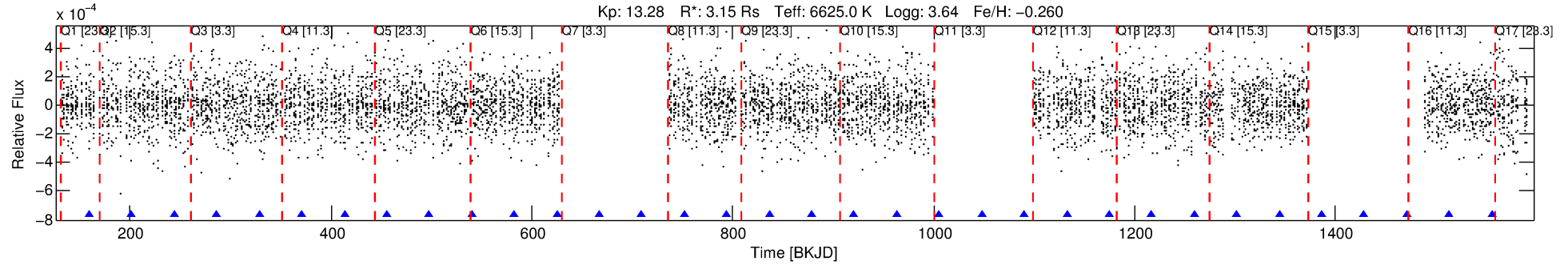
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010752318-05

No Significant Match Found

DV One-Page Summary

KIC: 10752318 Candidate: 5 of 6 Period: 42.300 d



DV Fit Results:

Period = 42.29959 [0.00048] d
Epoch = 159.6024 [0.0101] BKJD
Rp/R* = 0.0167 [0.0318]
a/R* = 103.84 [1184.00]
b = 0.90 [2.41]
Seff = 224.01 [129.13]
Teff = 986 [142] K
Rp = 5.74 [11.13] Re
a = 0.2761 [0.0987] AU
Ag = 182.28 [702.37] [0.26σ]
Teffp = 5604 [5343] K [0.86σ]

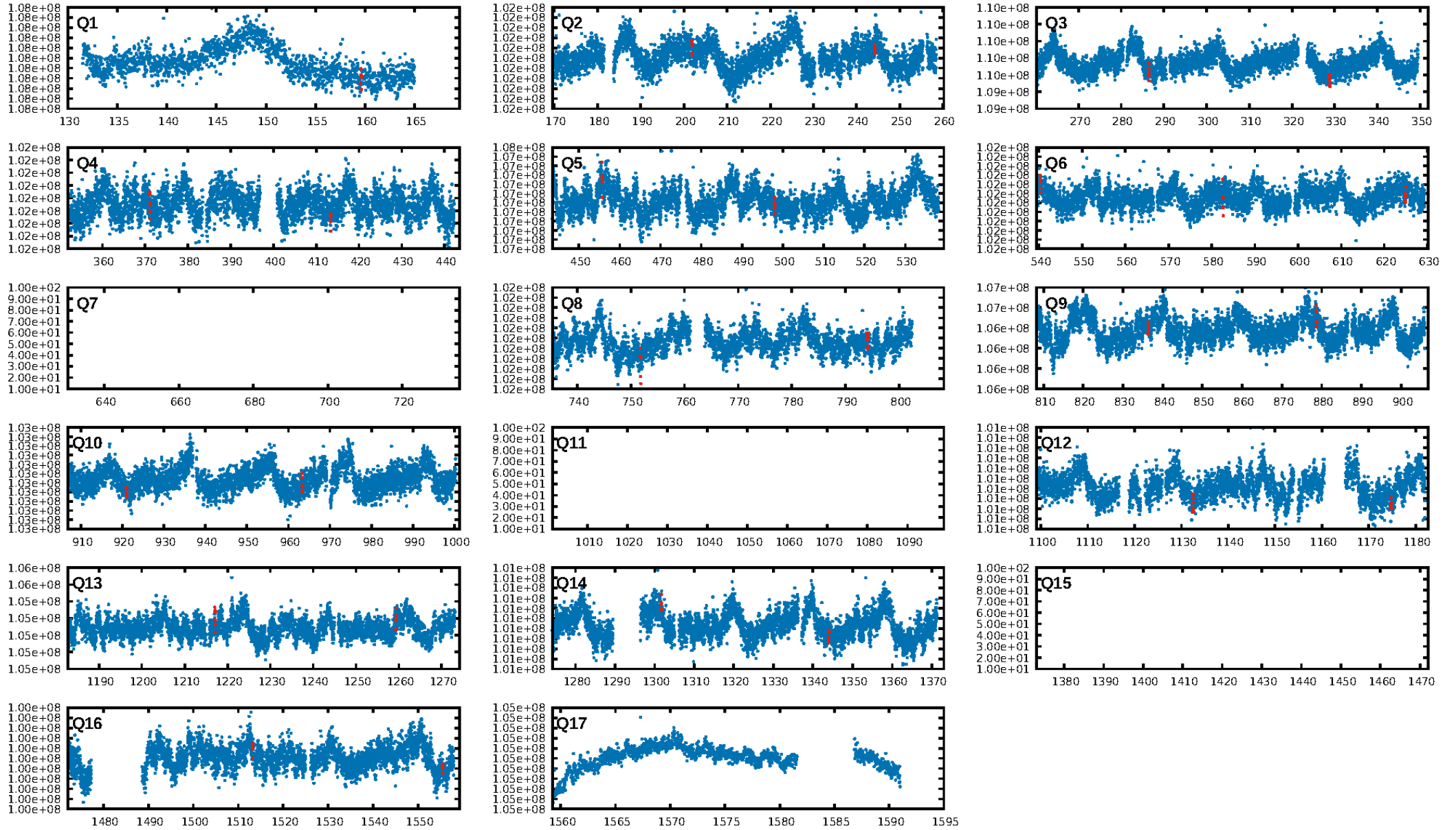
DV Diagnostic Results:

ShortPeriod-sig: 79.0% [1.25σ]
LongPeriod-sig: 100.0% [8.15σ]
ModelChiSquare2-sig: 81.1%
ModelChiSquareGof-sig: 97.9%
Bootstrap-pfa: 1.27e-06
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 1.628
Centroid-sig: 2.0%
Centroid-so: 2.131 arcsec [2.05σ]
OotOffset-rm: 0.934 arcsec [0.76σ]
KicOffset-rm: 1.025 arcsec [0.98σ]
OotOffset-st: 2/1/3/1 [7]
KicOffset-st: 2/1/3/1 [7]
DiffImageQuality-fgm: 0.43 [3/7]
DiffImageOverlap-fno: 0.62 [8/13]

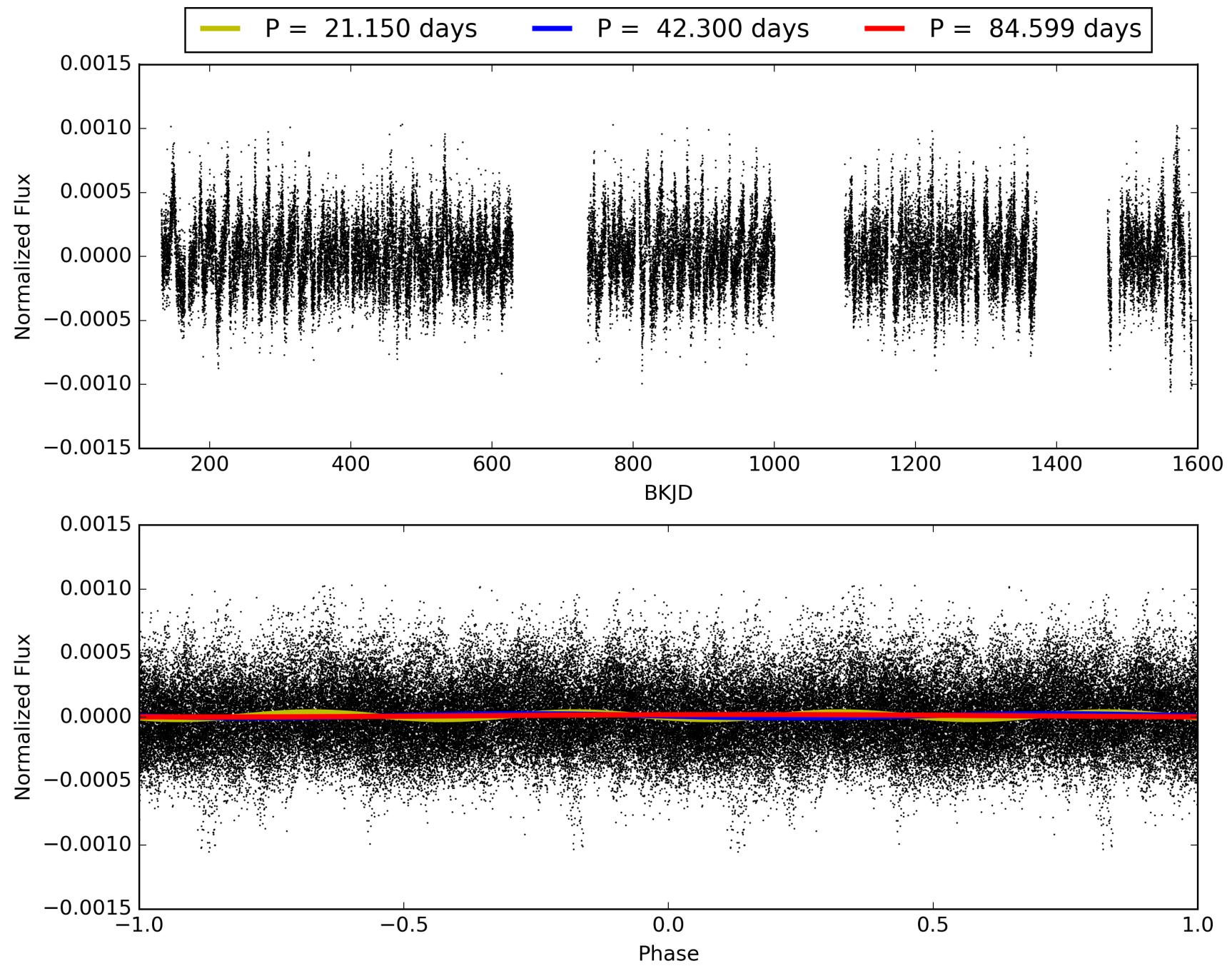
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 20:08:52 Z

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

TCE 010752318-05, PDC Light Curves

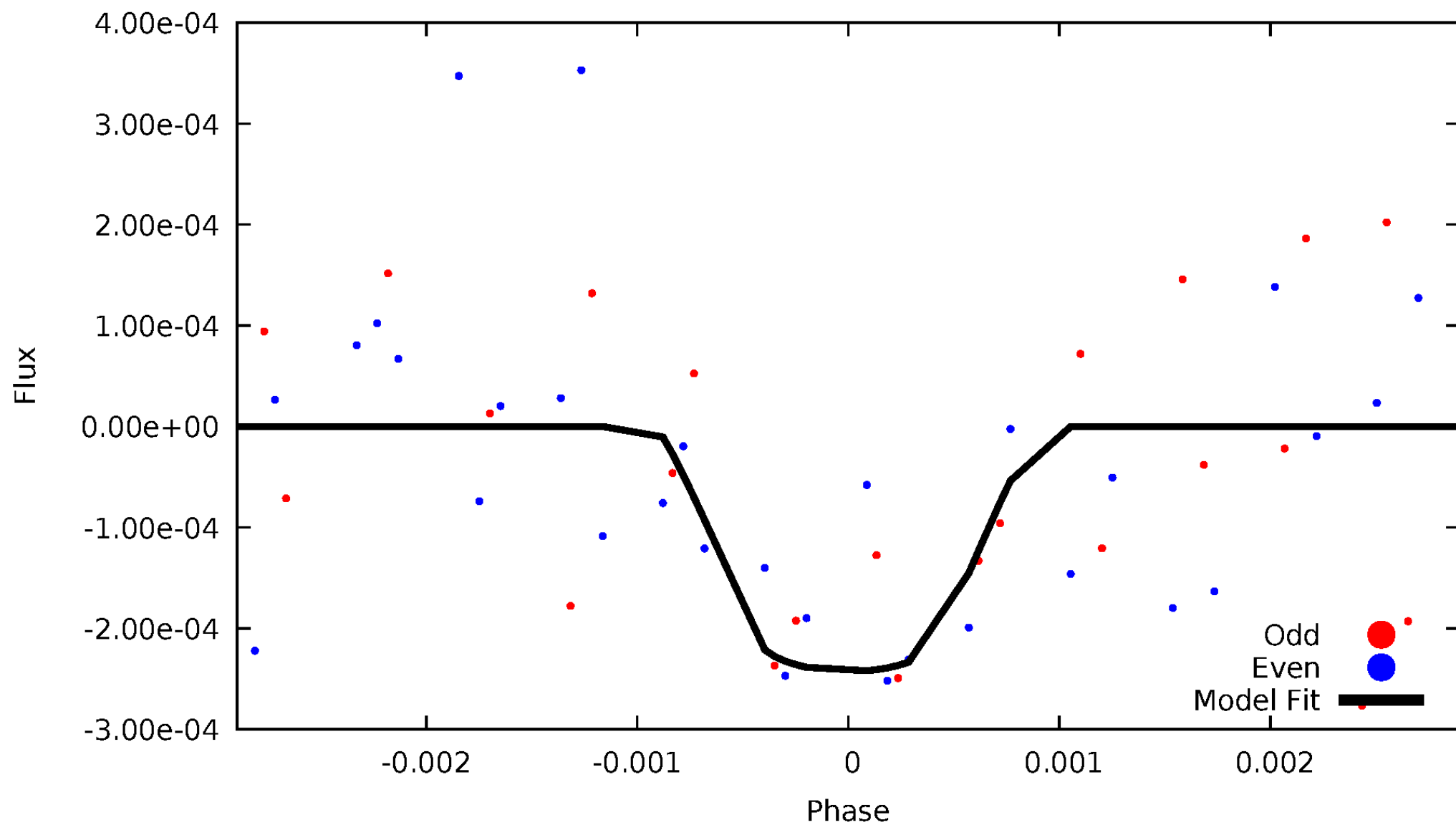


TCE 010752318-05



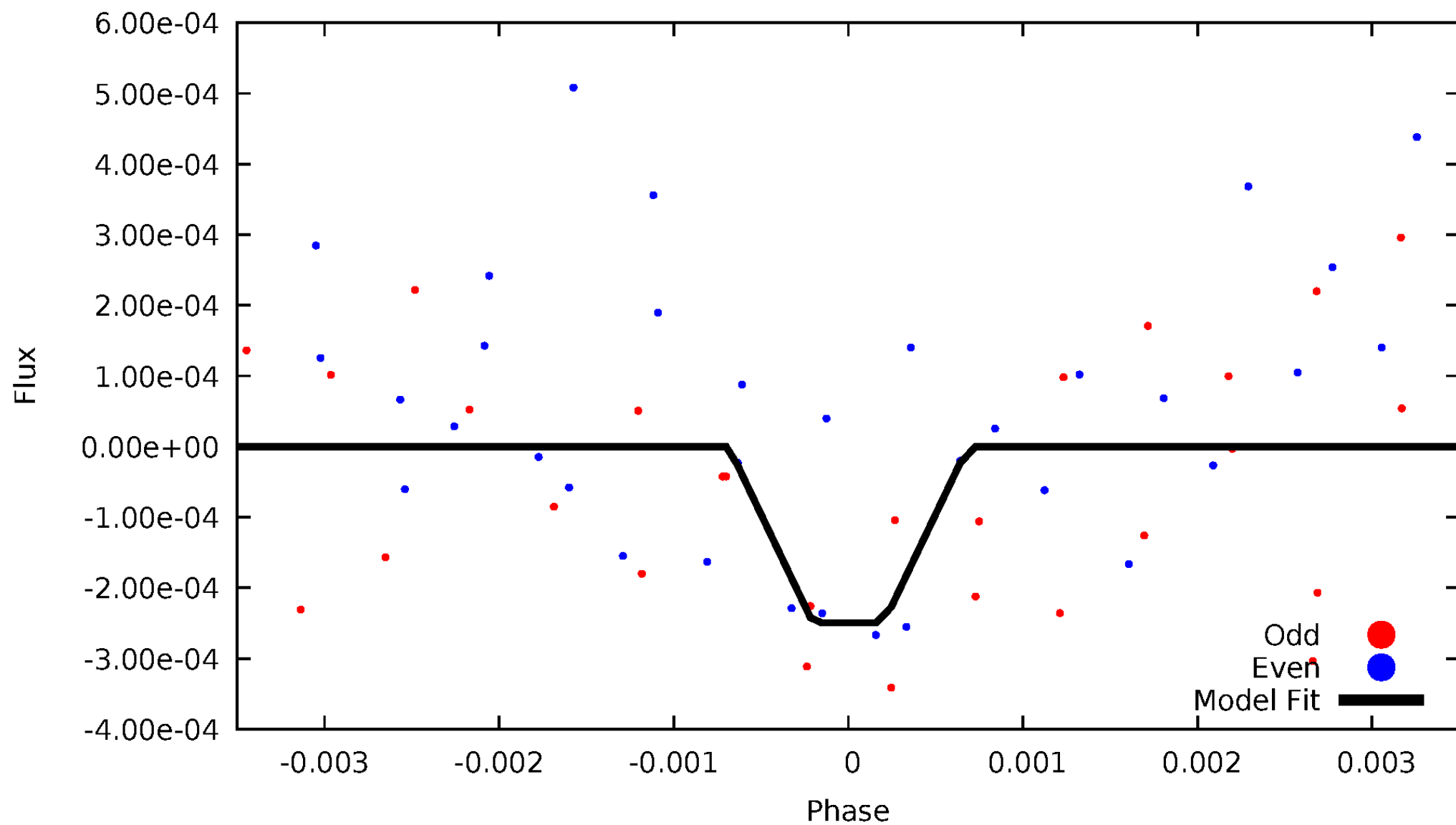
DV Odd/Even

TCE 010752318-05



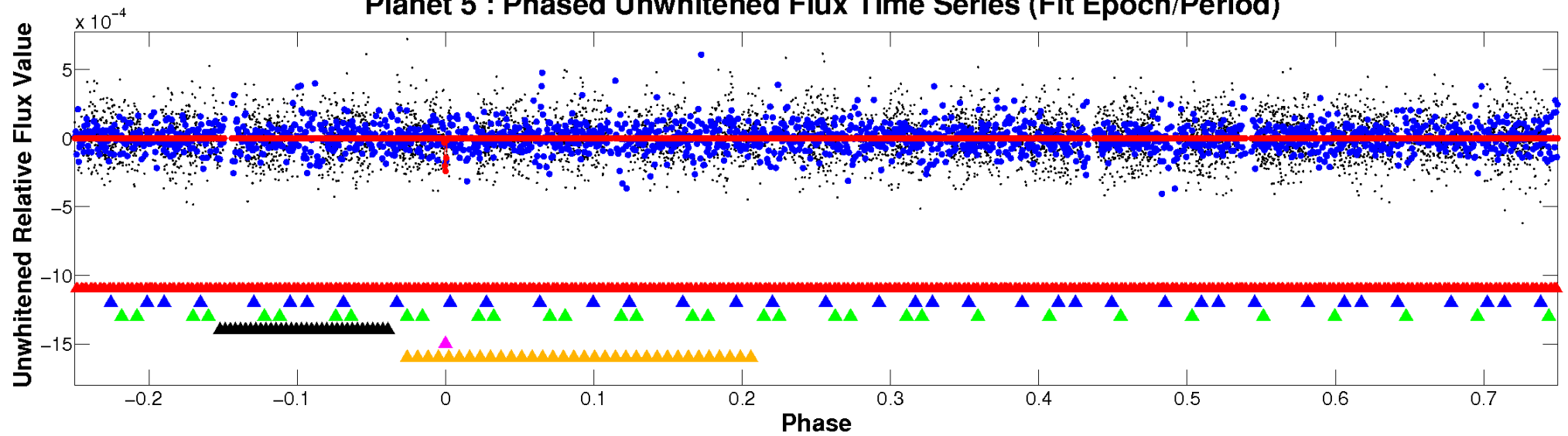
ALT Odd/Even

TCE 010752318-05

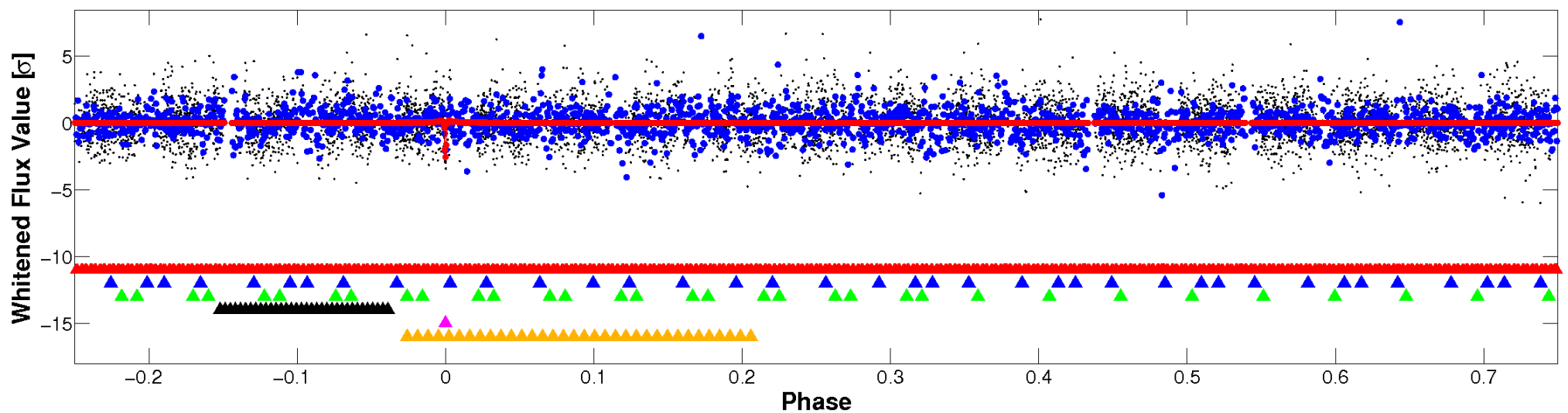


Non-Whitened Vs. Whitened Light Curve

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

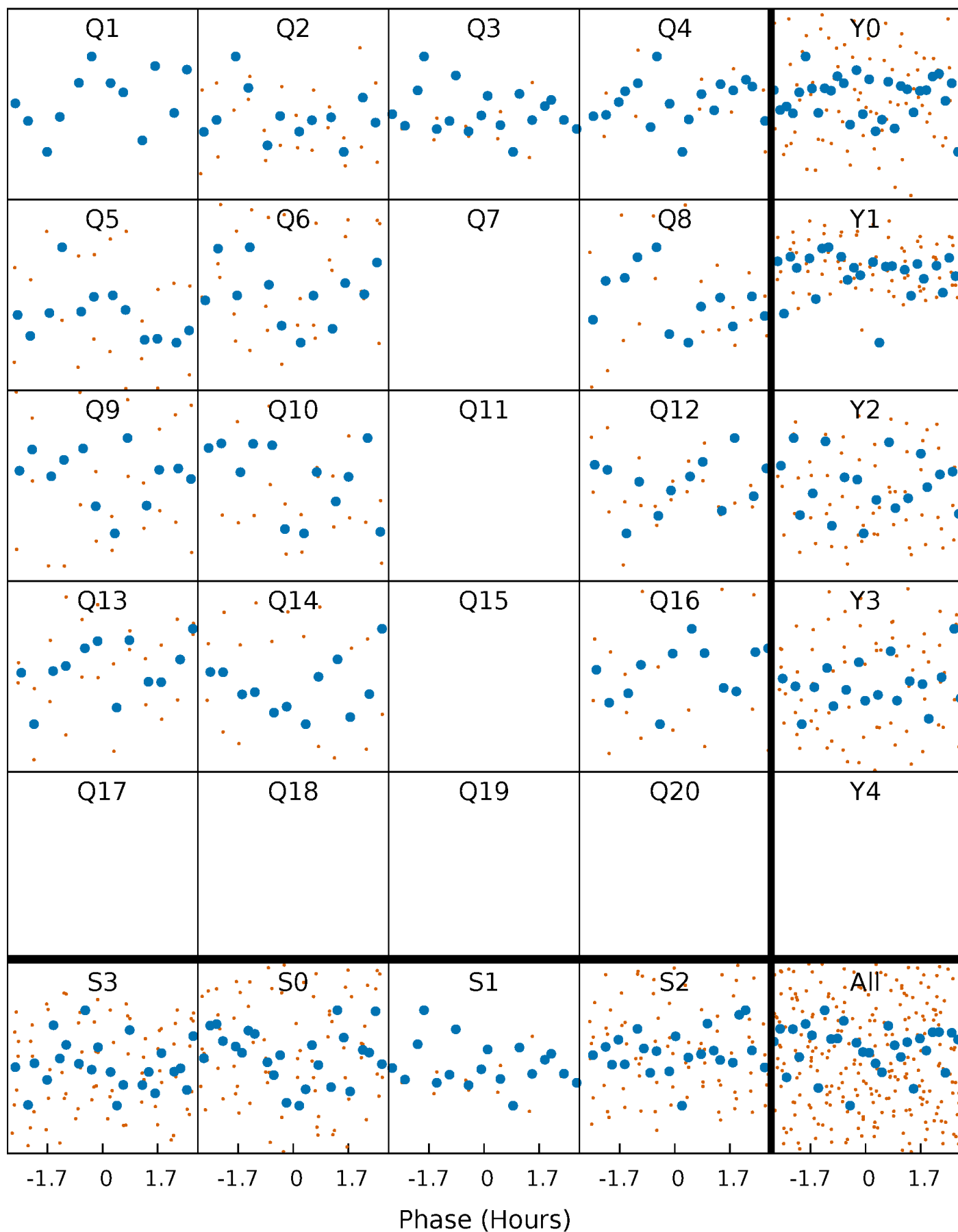


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



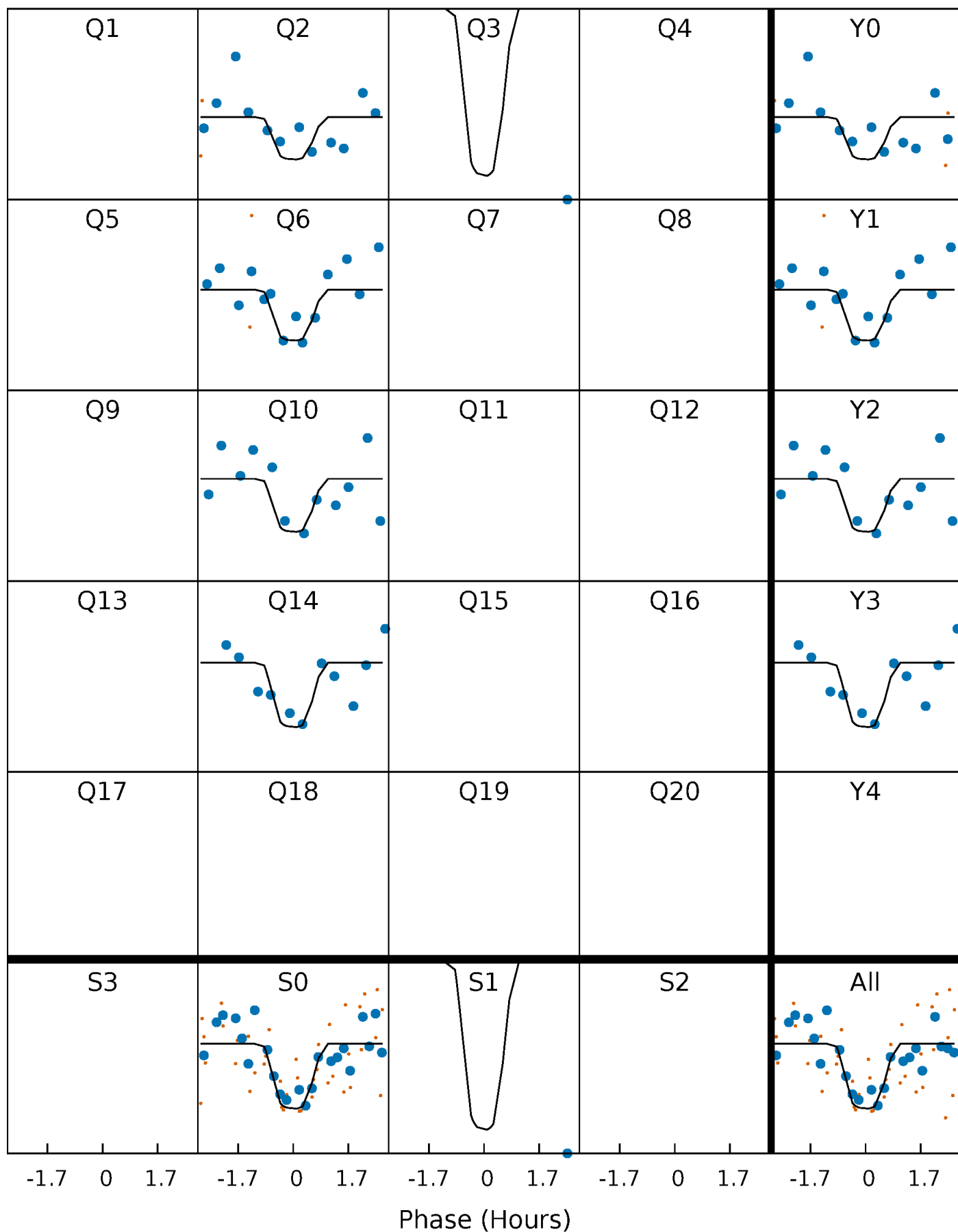
PDC Quarter-Phased Transit Curves

TCE 010752318-05 $P = 42.299590$ Days $T_0 = 159.602445$ (BKJD)



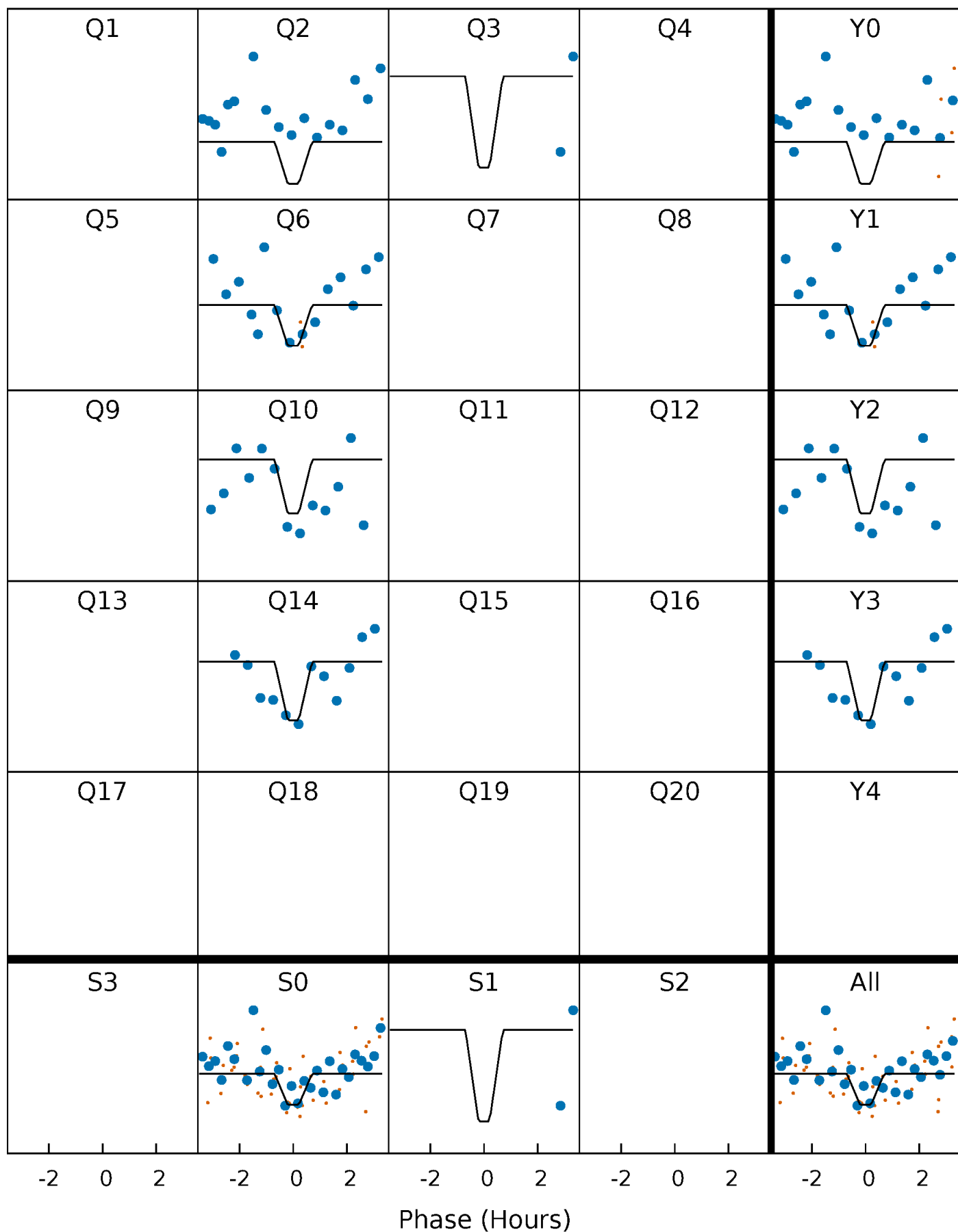
DV Quarter-Phased Transit Curves

TCE 010752318-05 P= 42.299590 Days $T_0=159.602445$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

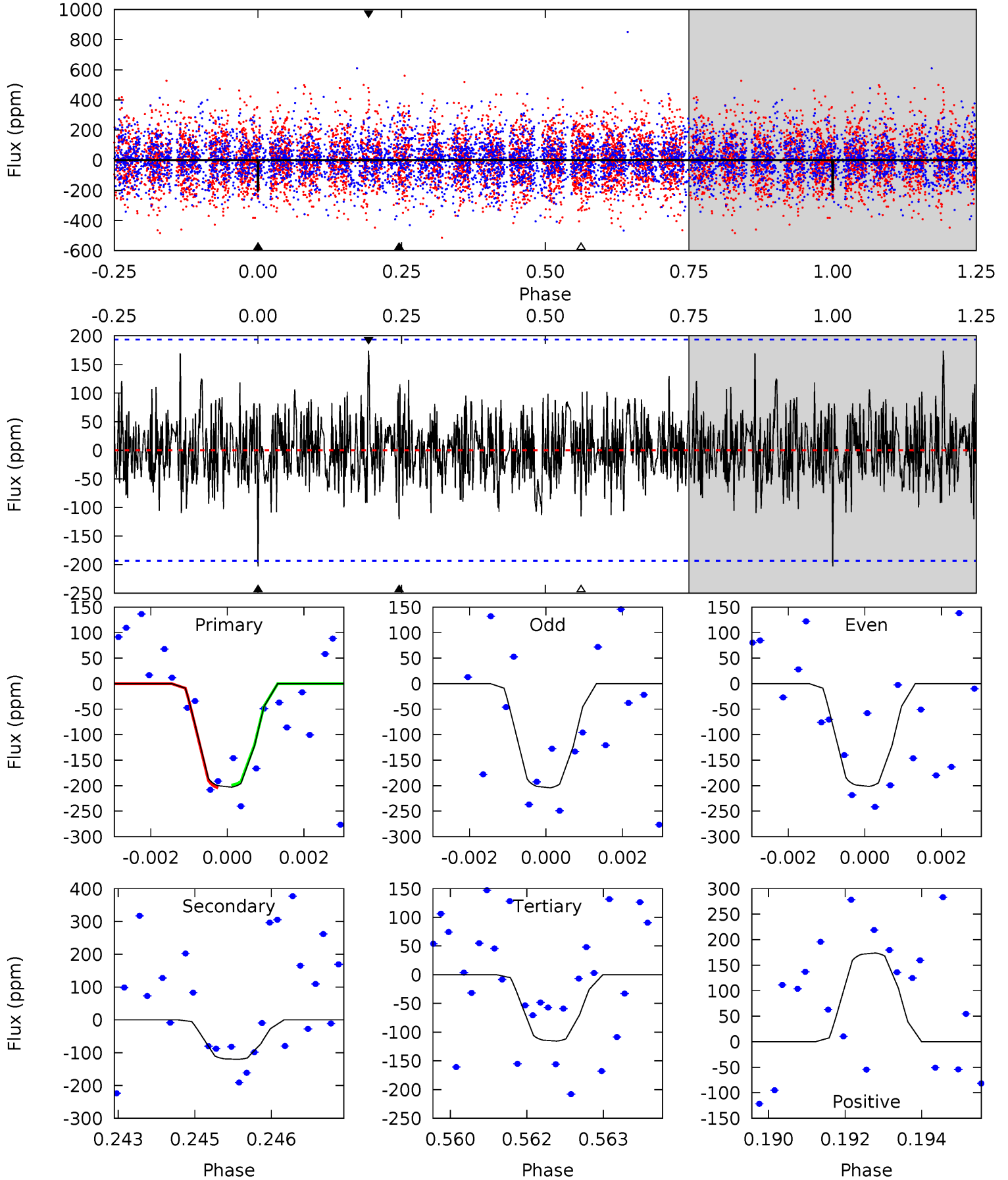
TCE 010752318-05 $P = 42.300236$ Days $T_0 = 159.589718$ (BKJD)



DV Model-Shift Uniqueness Test

010752318-05, P = 42.299590 Days, E = 117.302855 Days

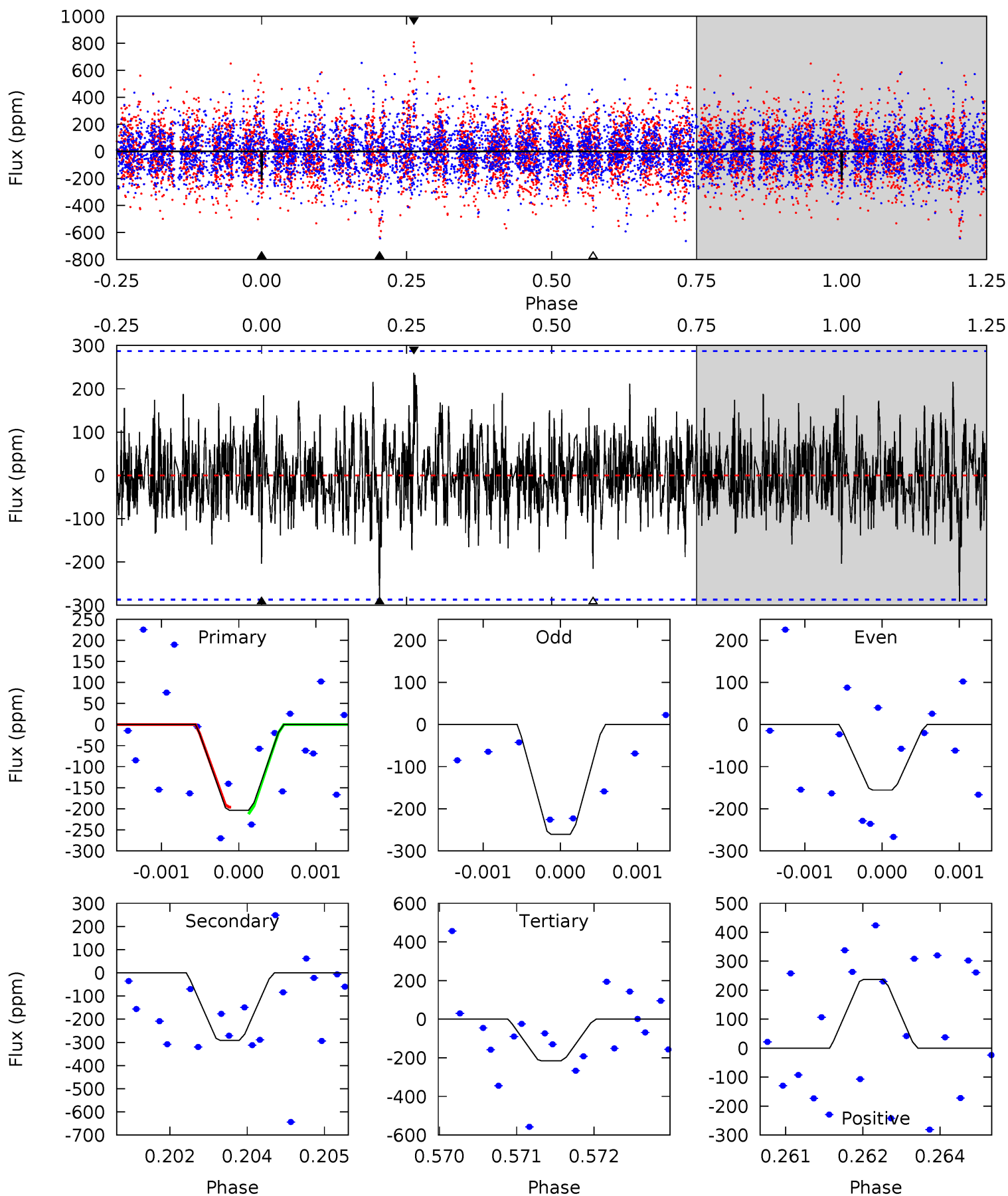
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.63	3.34	3.21	4.83	5.37	3.16	1.17	2.43	0.81	0.13	-1.48	0.04	0.96	0.46	0.08



Alt Model-Shift Uniqueness Test

010752318-05, P = 42.300236 Days, E = 117.289482 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.84	5.49	4.07	4.47	5.41	3.23	1.18	-0.23	-0.63	1.42	1.02	0.98	0.72	0.45	0.15



Stellar Parameters For KIC 010752318

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6625^{+178}_{-198}	$3.638^{+0.328}_{-0.082}$	$-0.260^{+0.300}_{-0.250}$	$3.145^{+0.399}_{-1.198}$	$1.566^{+0.225}_{-0.338}$	$0.071^{+0.164}_{-0.018}$
	+3%/-3%	+9%/-2%	+115%/-96%	+13%/-38%	+14%/-22%	+231%/-26%
Source	PHO1	FLK73	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 010752318-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-120 ± 36	$8.82^{+9.28}_{-6.03}$	1357^{+65}_{-124}	4373^{+3022}_{-968}	63^{+539}_{-49}
Alt.	-291 ± 53	$8.73^{+8.76}_{-5.99}$	1350^{+78}_{-114}	5275^{+4864}_{-1262}	164^{+1505}_{-125}

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 $A_{obs} \gg 1.0$

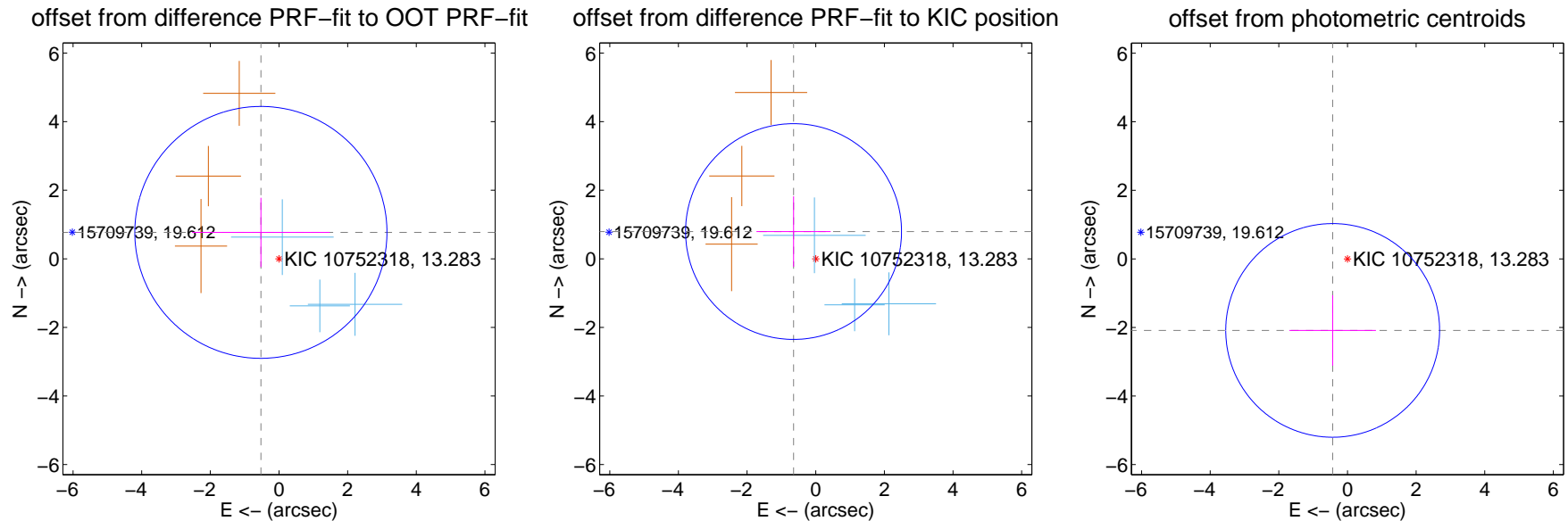
DV Centroid Data

Supplemental centroid analysis for 010752318-05. Kepler magnitude: 13.28. Transit SNR 8.35

There are 3 quarters with good PRF difference image offsets

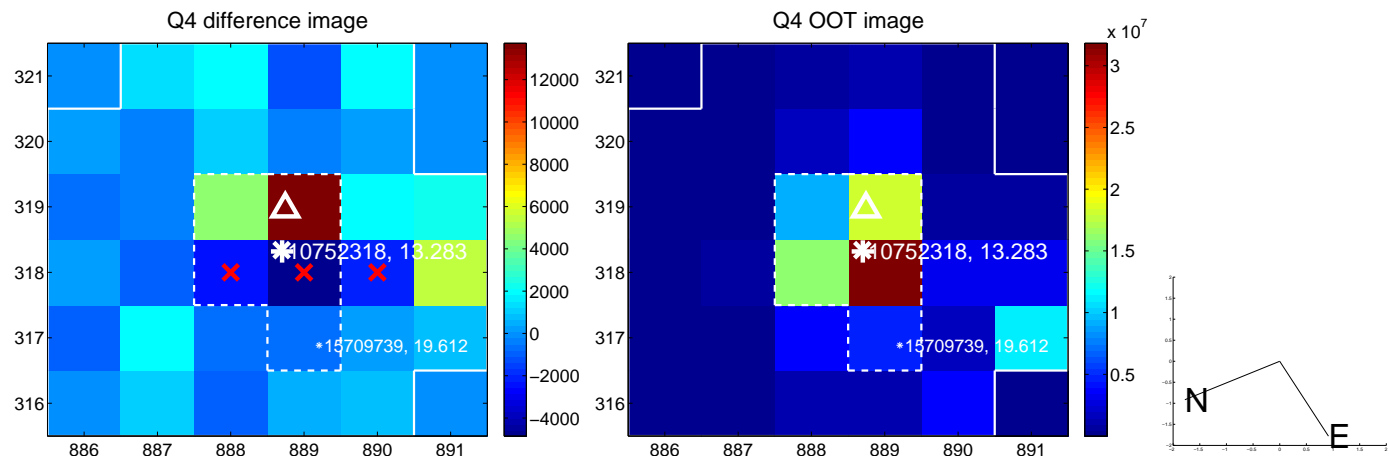
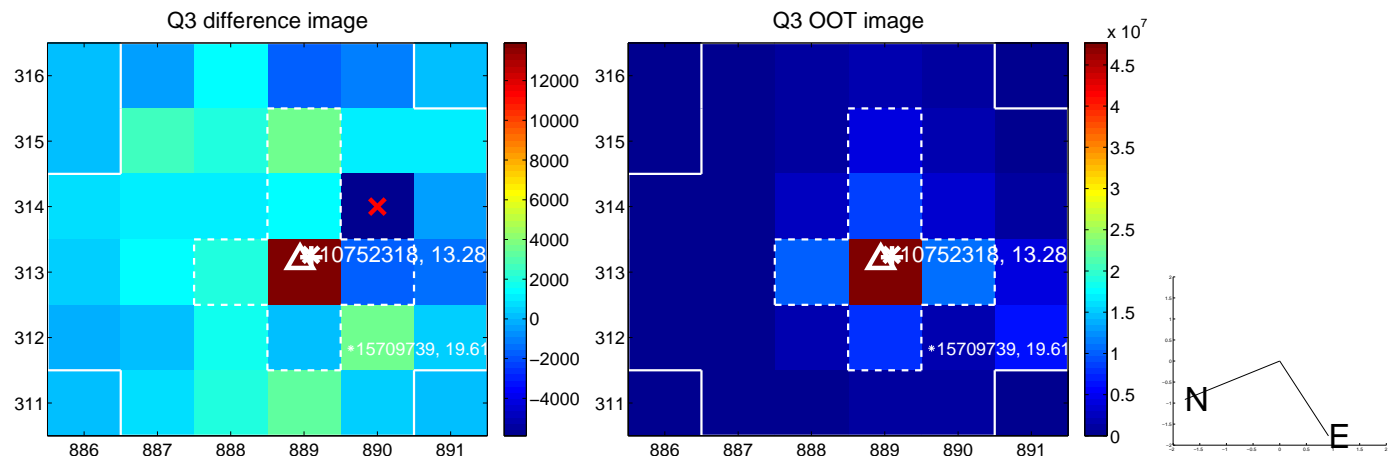
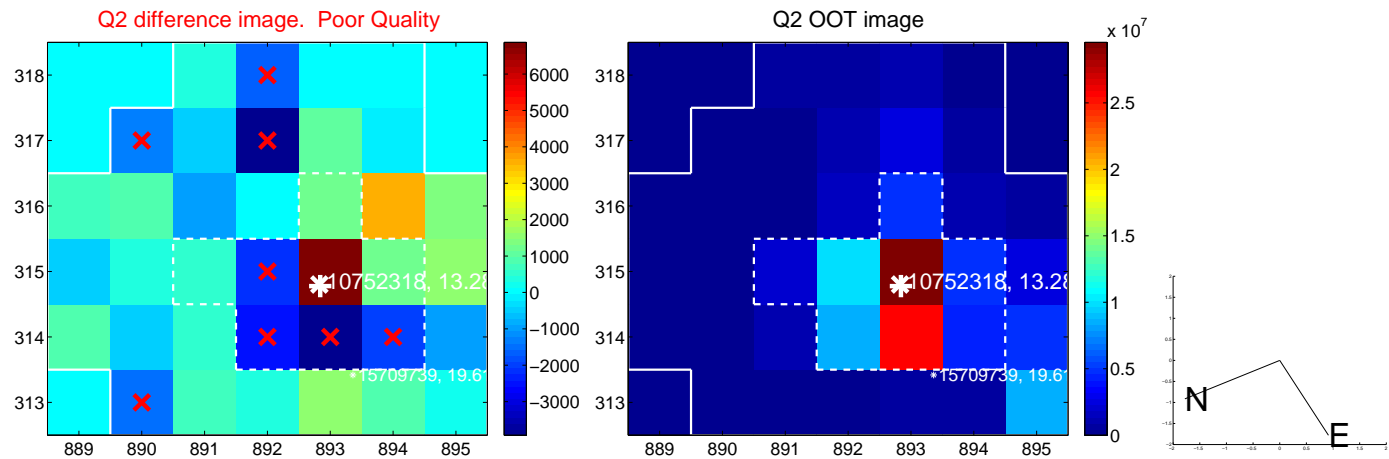
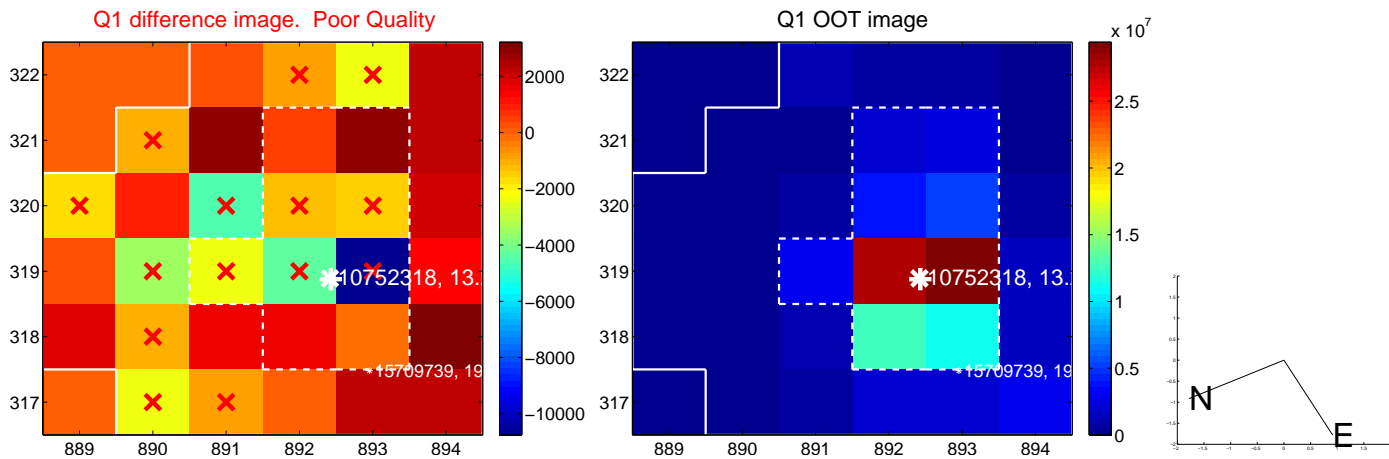
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.934 ± 1.224	0.76	0.527 ± 2.005	0.771 ± 1.011
PRF-fit source offset from KIC position	1.025 ± 1.049	0.98	0.646 ± 1.082	0.795 ± 1.026
photometric centroid source offset	2.13 ± 1.04	2.05	0.43 ± 1.26	-2.09 ± 1.03

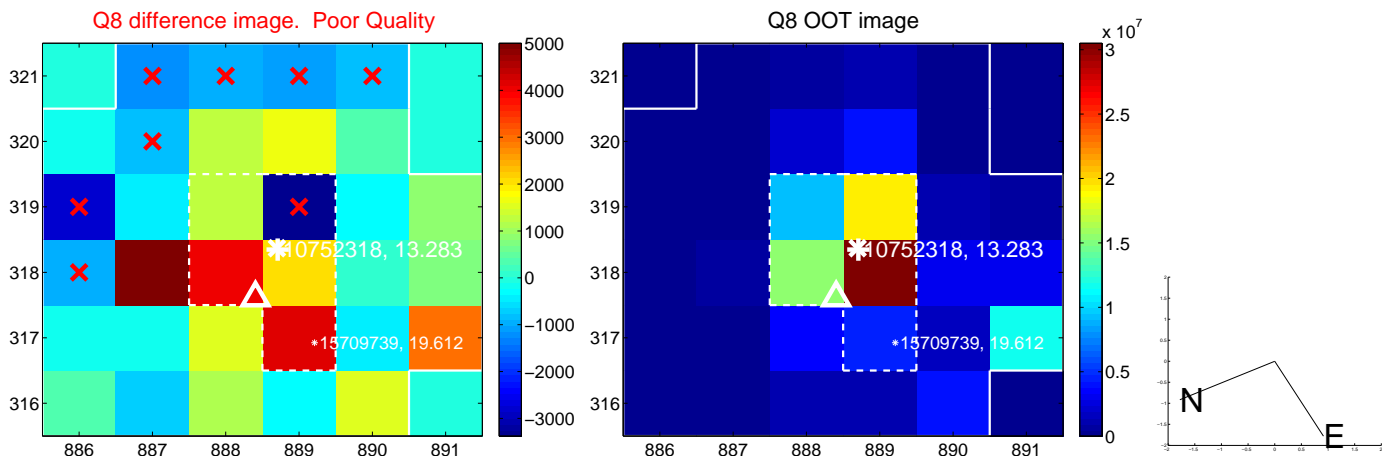
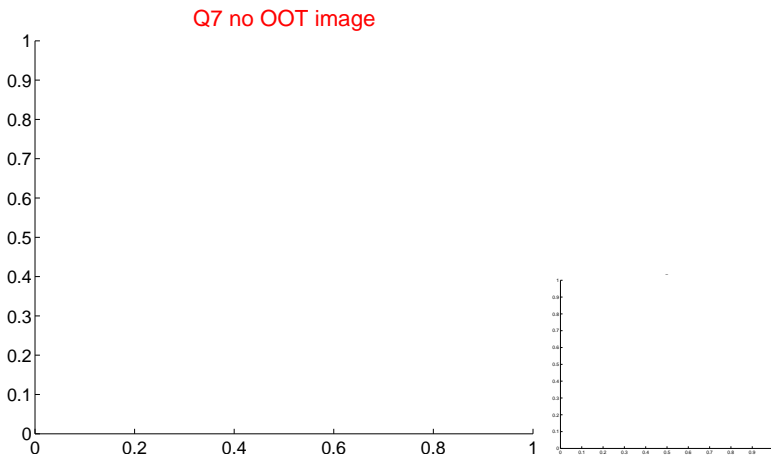
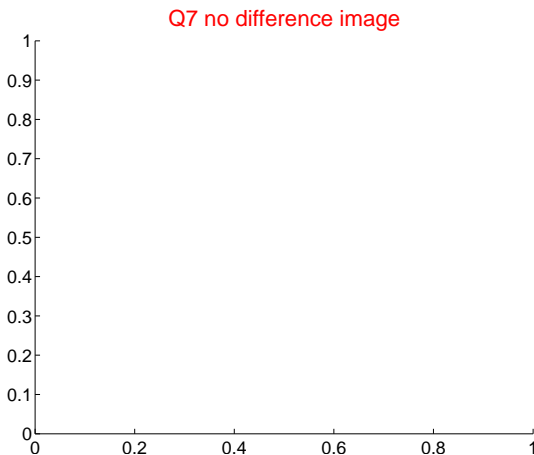
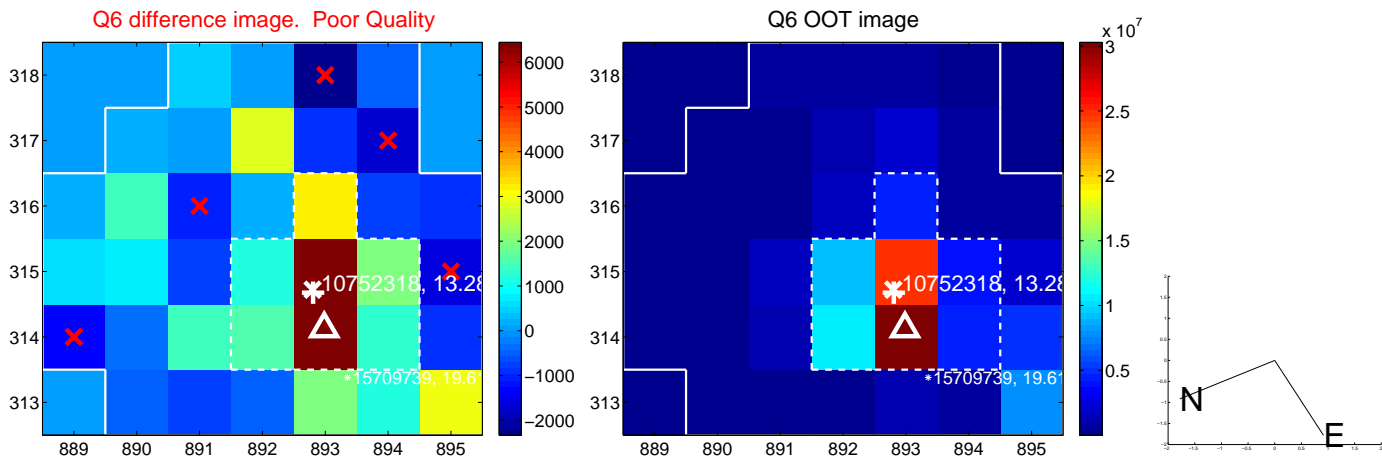
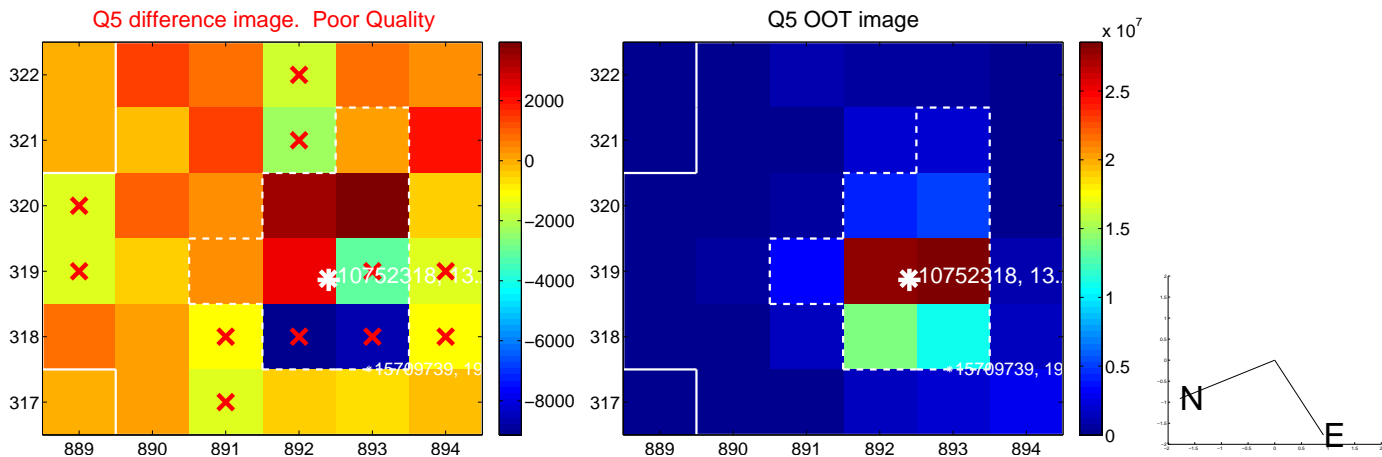


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

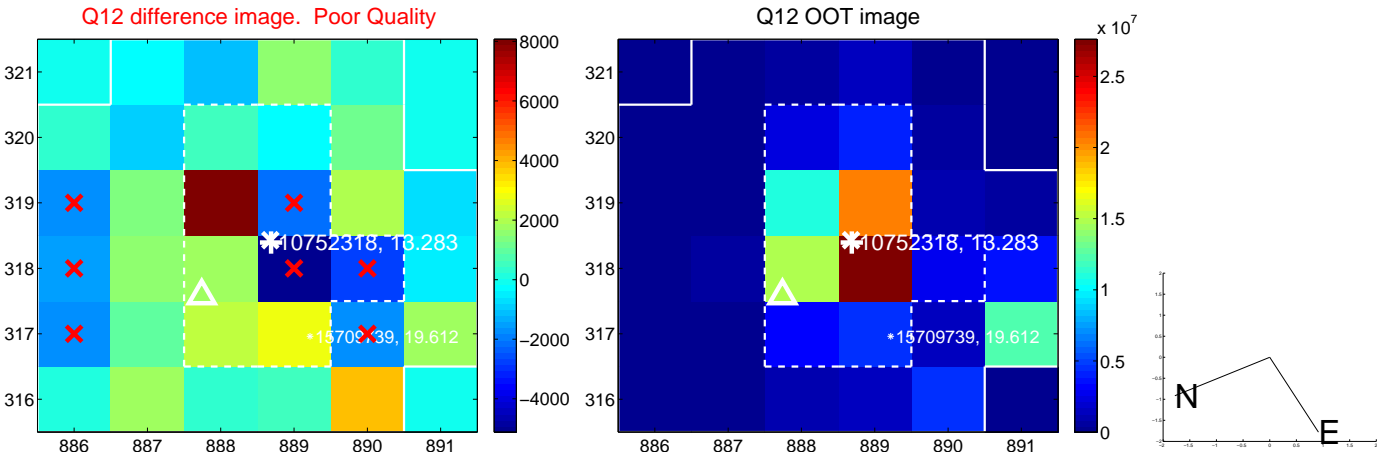
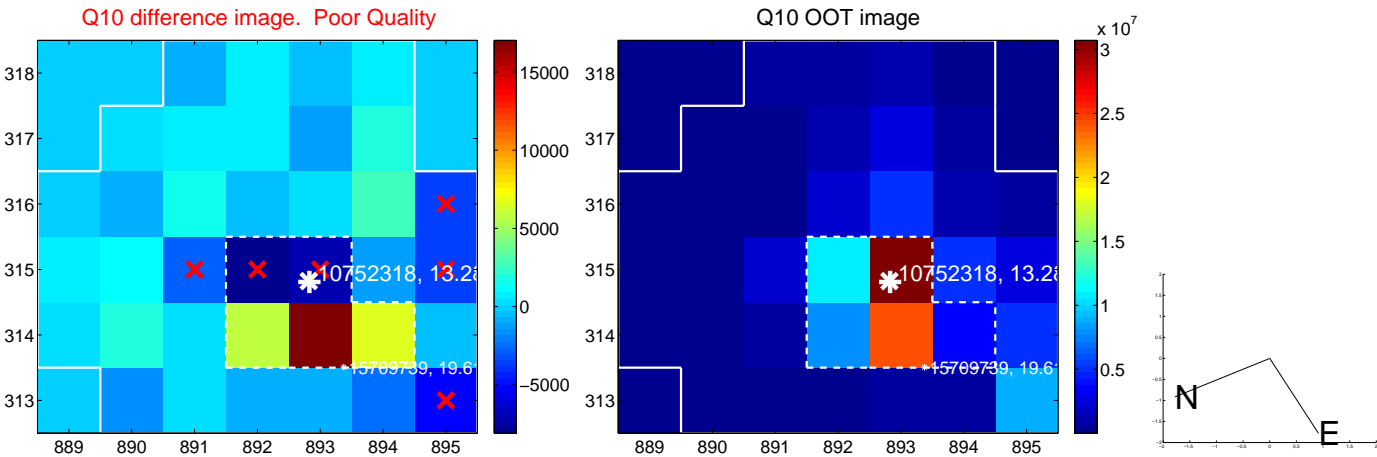
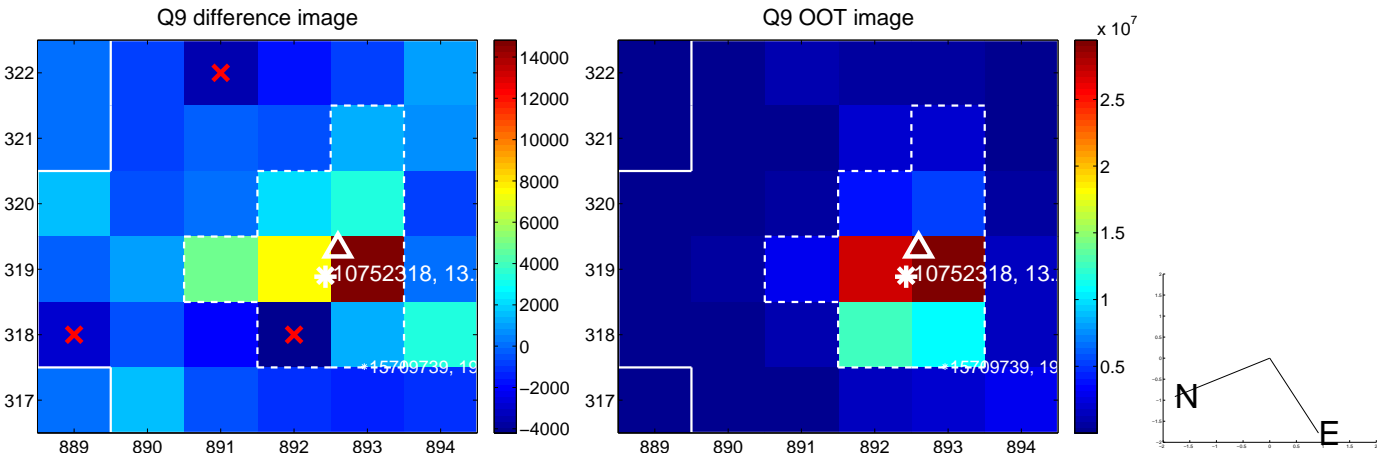
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



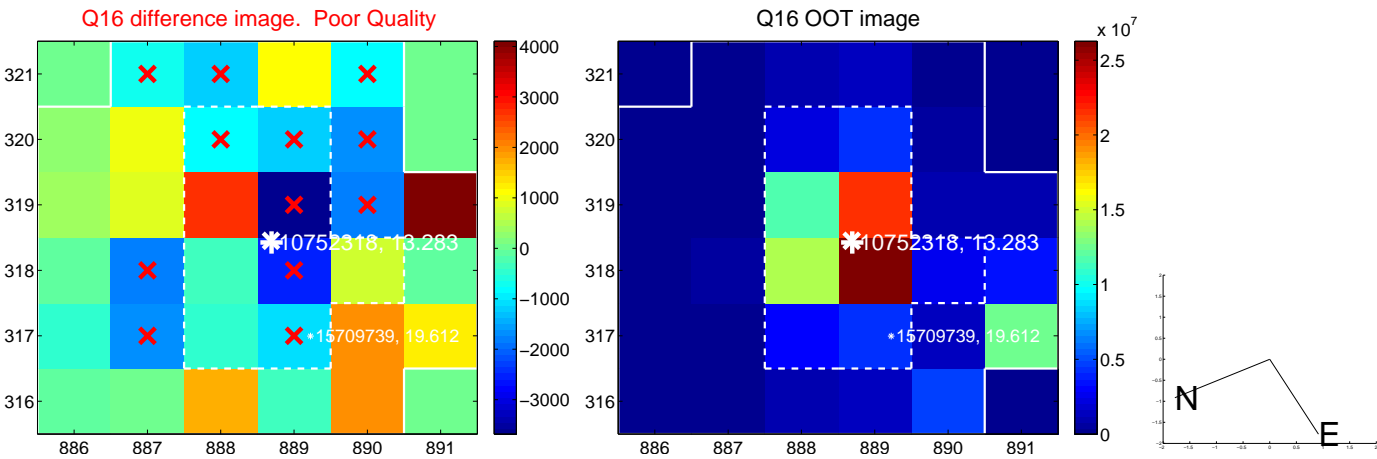
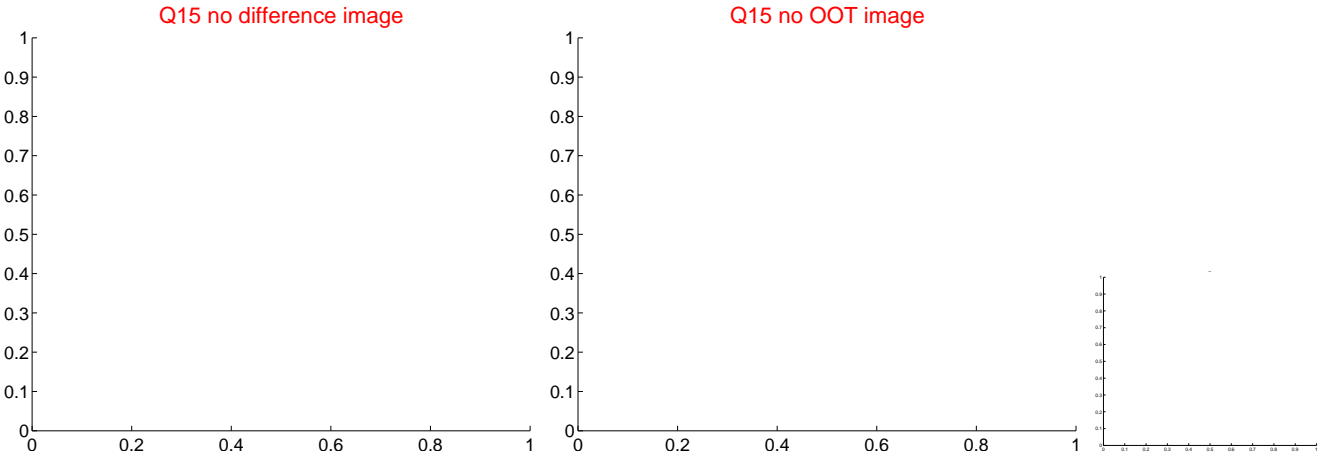
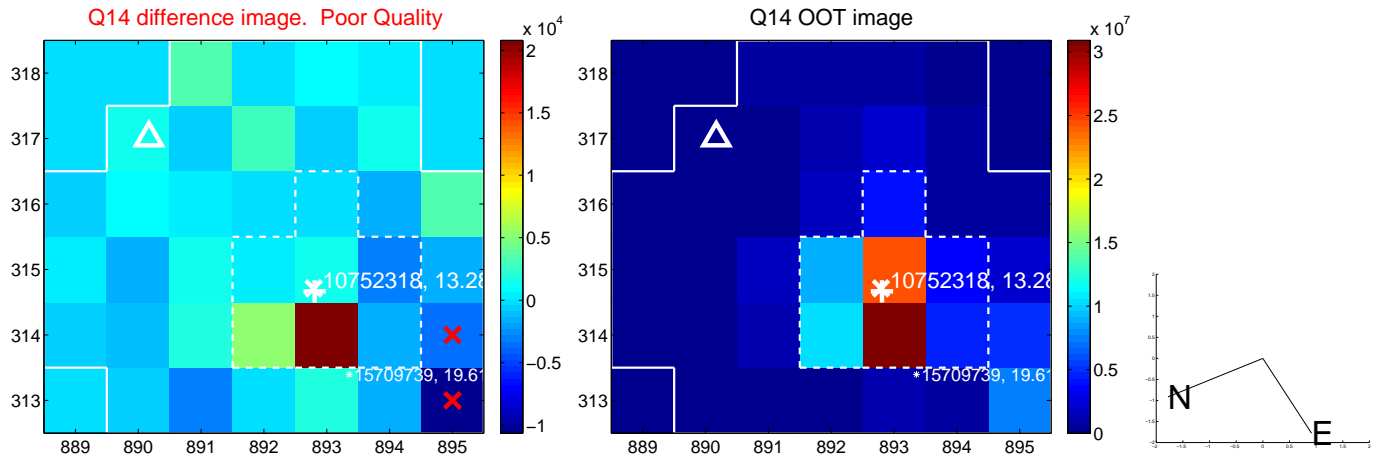
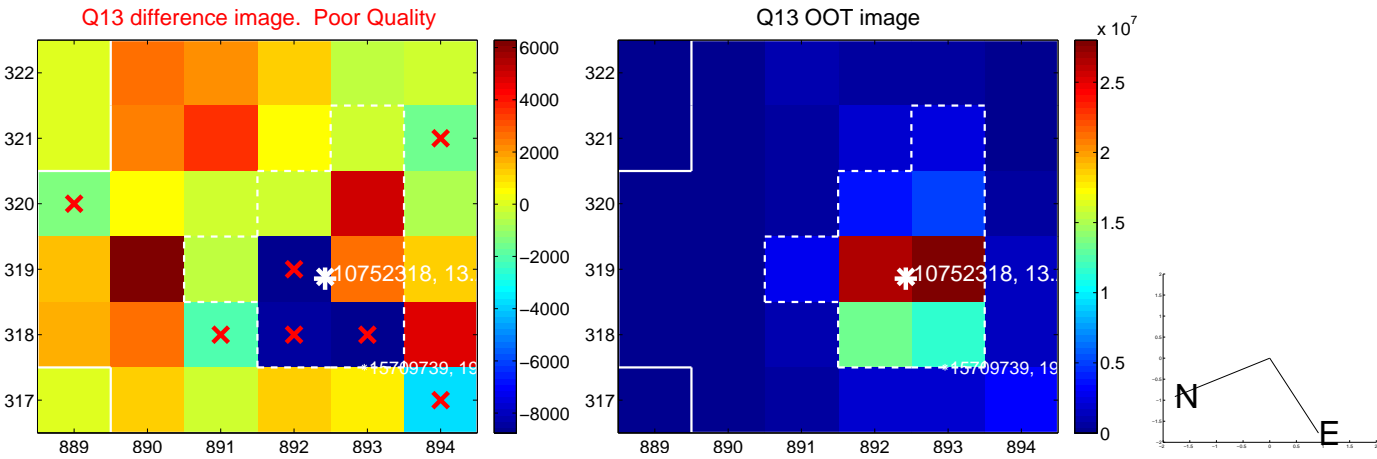
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



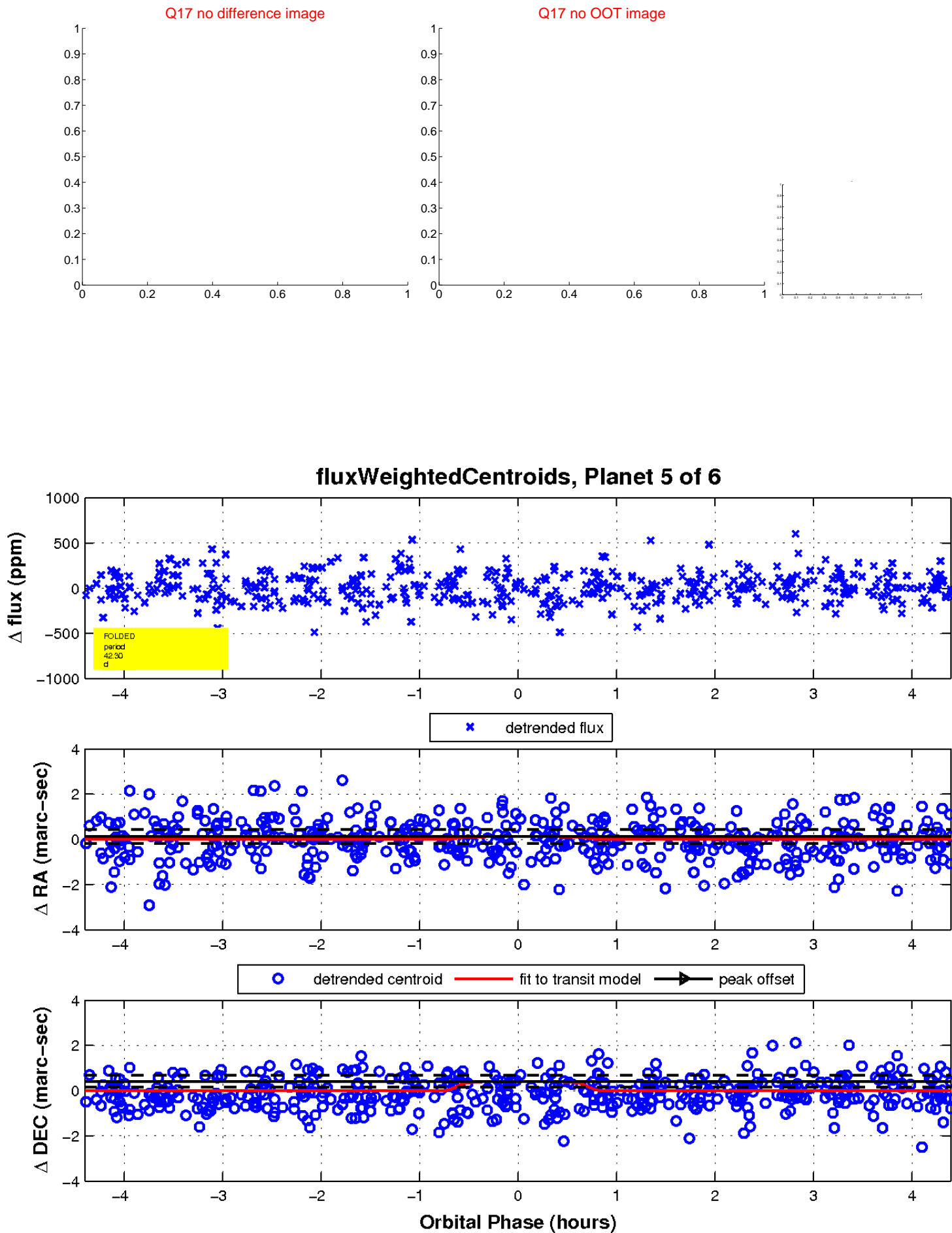
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

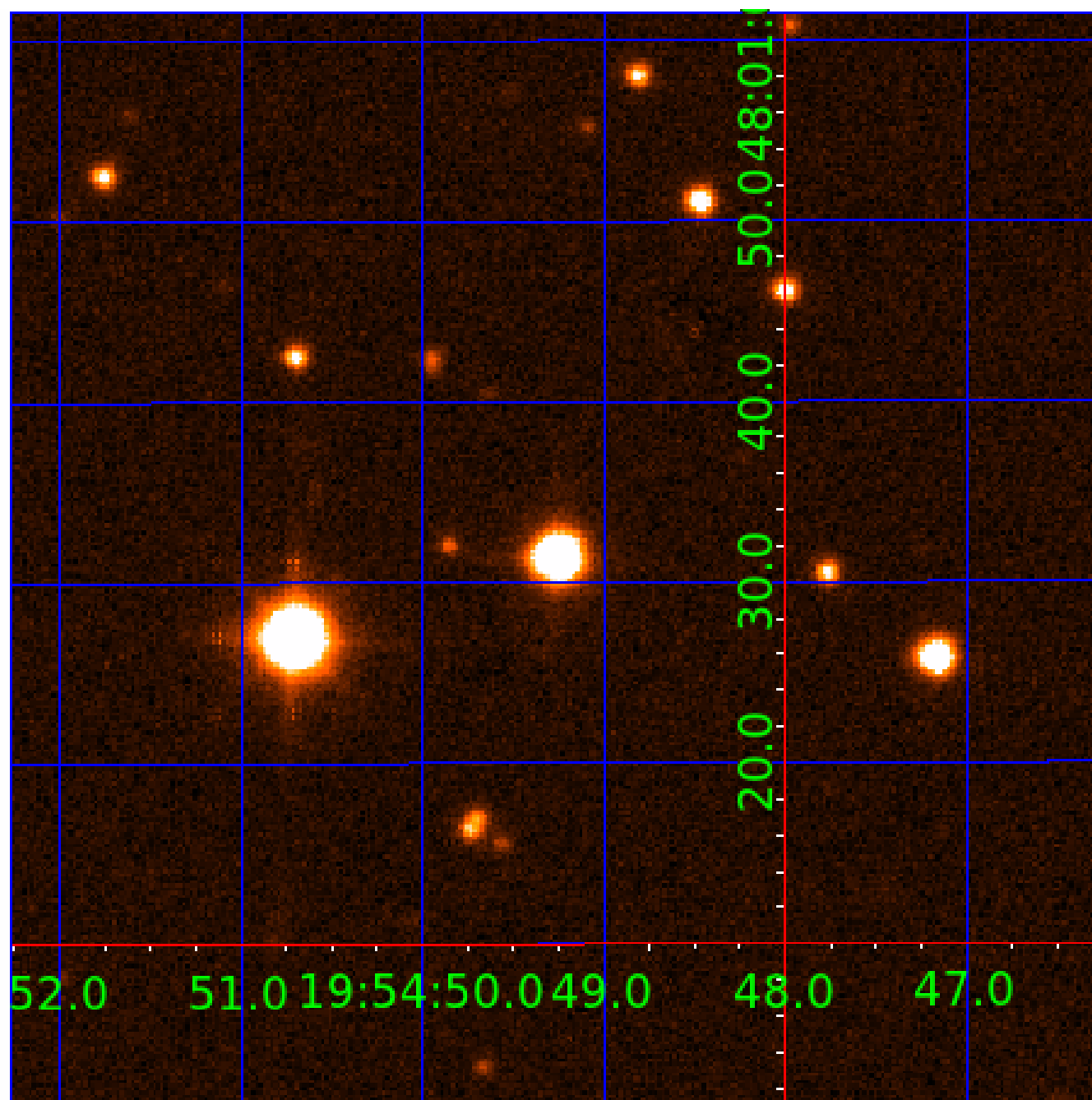


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010752318

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})
010752318-01	OBS	No	2.240049	133.315063	11.4	15.094	7.5	4.0	3.15	6625	1.13	11264.41
010752318-02	OBS	No	38.221786	155.171294	227.6	16.227	18.6	9.2	3.15	6625	6.12	256.43
010752318-03	OBS	No	44.334657	150.368316	174.0	5.810	8.1	6.7	3.15	6625	4.36	210.41
010752318-04	OBS	No	42.154592	157.960311	192.7	2.353	7.8	8.2	3.15	6625	5.13	225.04
010752318-05	OBS	No	42.299590	159.602445	242.9	1.469	7.6	8.3	3.15	6625	5.74	224.01
010752318-06	OBS	No	42.002644	168.310914	268.8	7.795	7.5	7.8	3.15	6625	5.72	226.12

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010752318-01	OBS	FP	0.00	1	0	0	0	LPP_DV
010752318-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
010752318-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS—HALO_GHOST
010752318-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
010752318-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS
010752318-06	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.

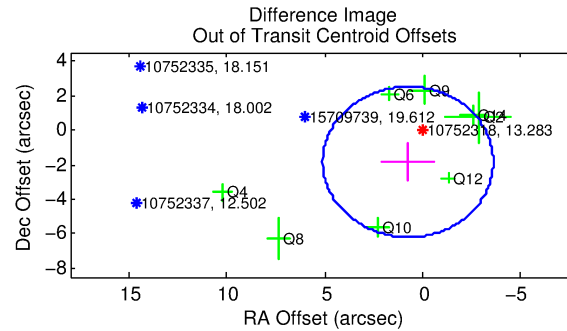
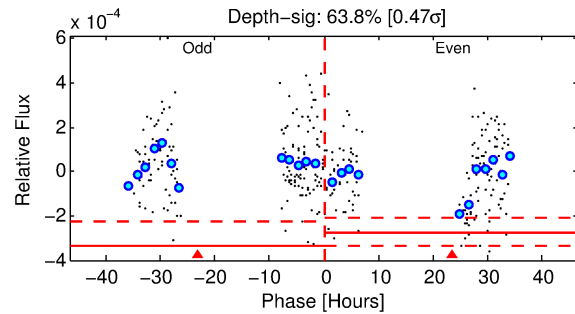
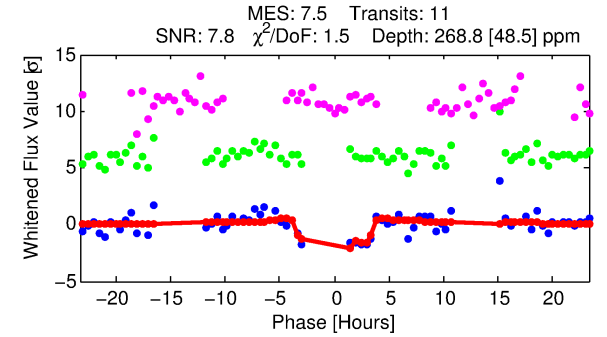
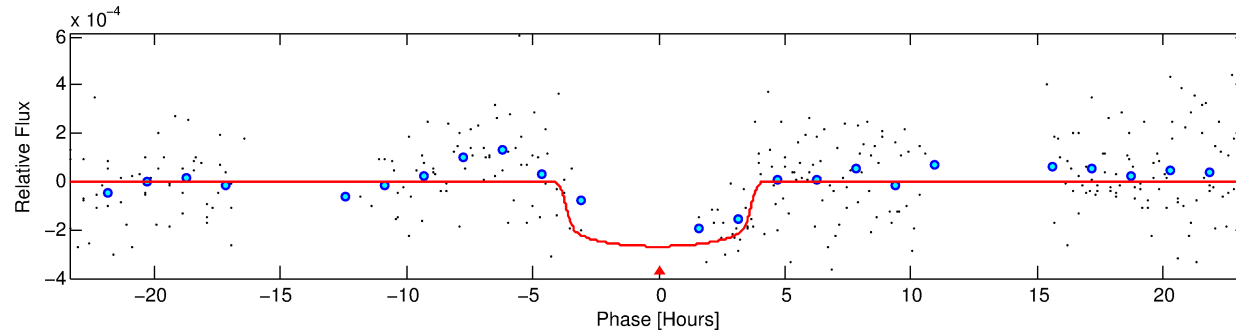
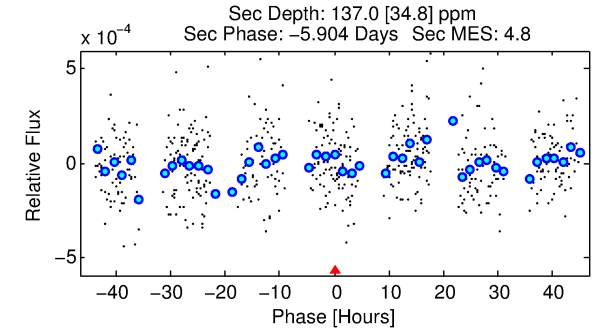
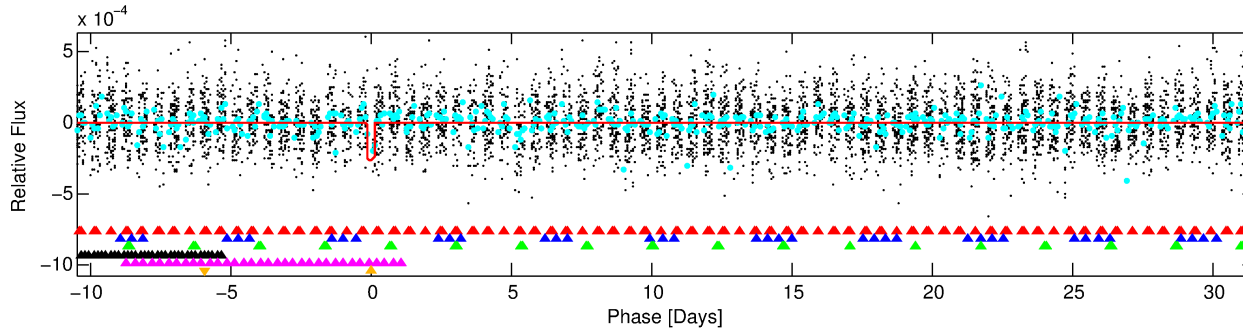
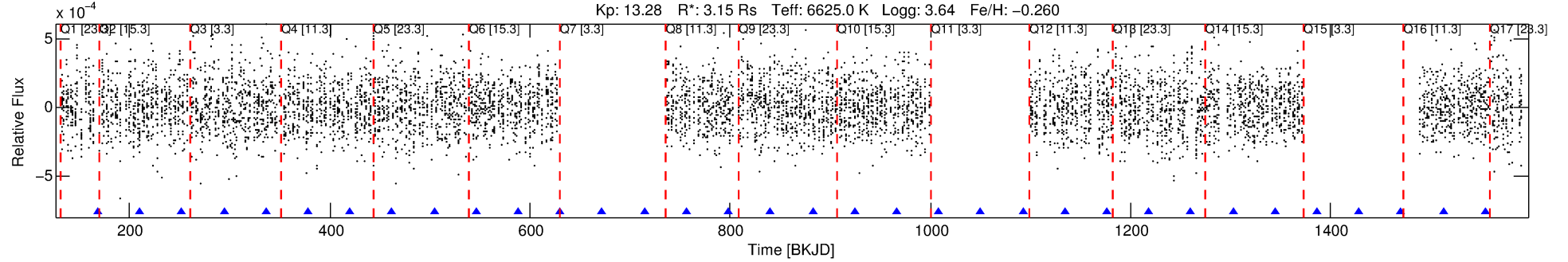
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010752318-06

No Significant Match Found

DV One-Page Summary

KIC: 10752318 Candidate: 6 of 6 Period: 42.003 d



DV Fit Results:

Period = 42.00264 [0.00050] d
Epoch = 168.3109 [0.0103] BKJD
Rp/R* = 0.0167 [0.0046]
a/R* = 25.07 [35.28]
b = 0.81 [0.59]
Seff = 226.13 [130.35]
Teq = 989 [142] K
Rp = 5.72 [2.70] Re
a = 0.2748 [0.0983] AU
Ag = 173.57 [144.14] [1.20σ]
Teffp = 5549 [862] K [5.22σ]

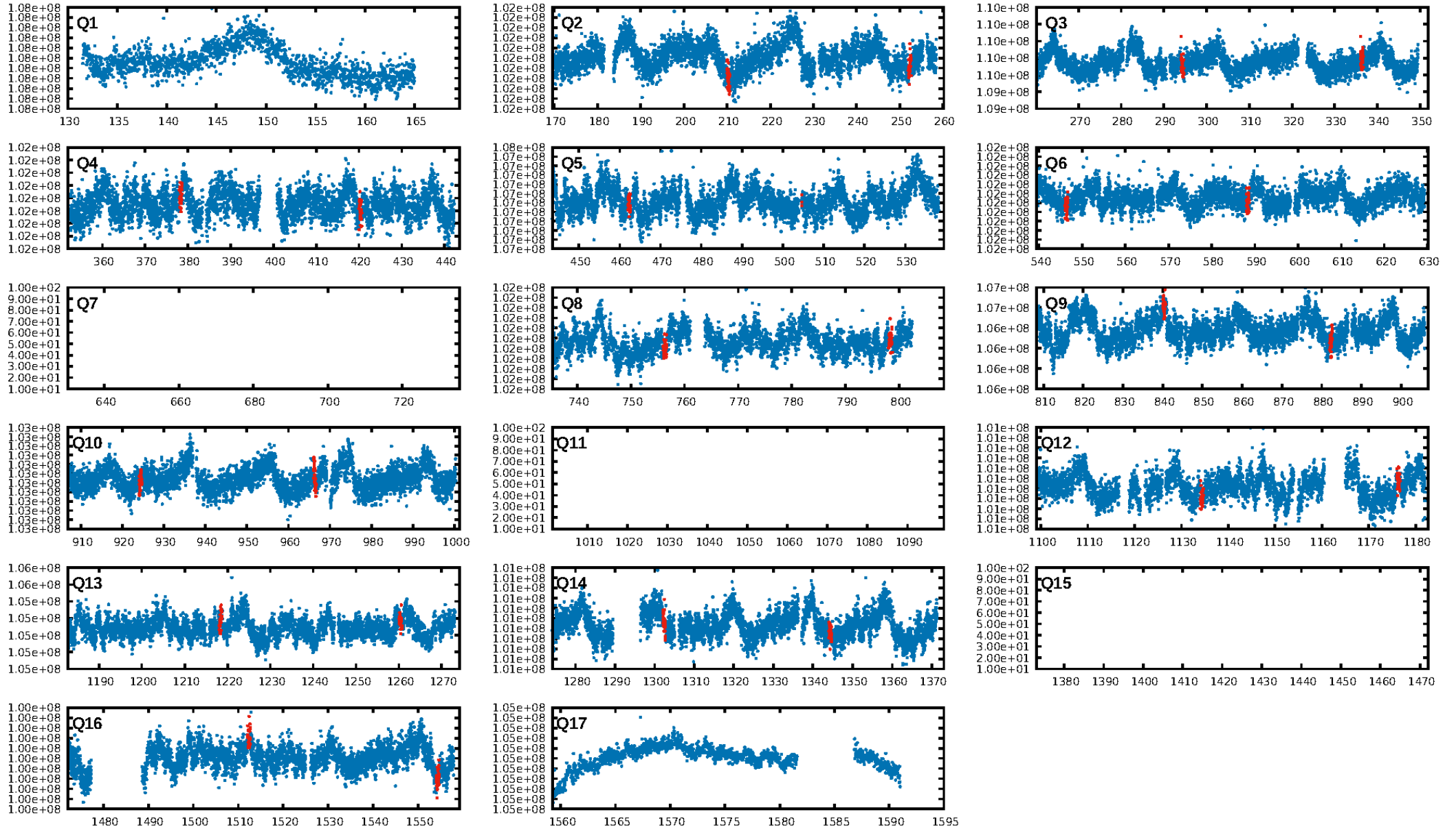
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [5.04σ]
LongPeriod-sig: 34.6% [0.45σ]
ModelChiSquare2-sig: 99.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.87e-06
RollingBand-fgt: 1.00 [11/11]
GhostDiagnostic-chr: -0.5079
Centroid-sig: 93.8%
Centroid-so: 1.096 arcsec [1.69σ]
OotOffset-rm: 1.986 arcsec [1.37σ]
OotOffset-st: 4/0/3/1 [8]
KicOffset-rm: 2.005 arcsec [1.47σ]
KicOffset-st: 4/0/3/1 [8]
DiffImageQuality-fgm: 0.25 [2/8]
DiffImageOverlap-fno: 0.00 [0/12]

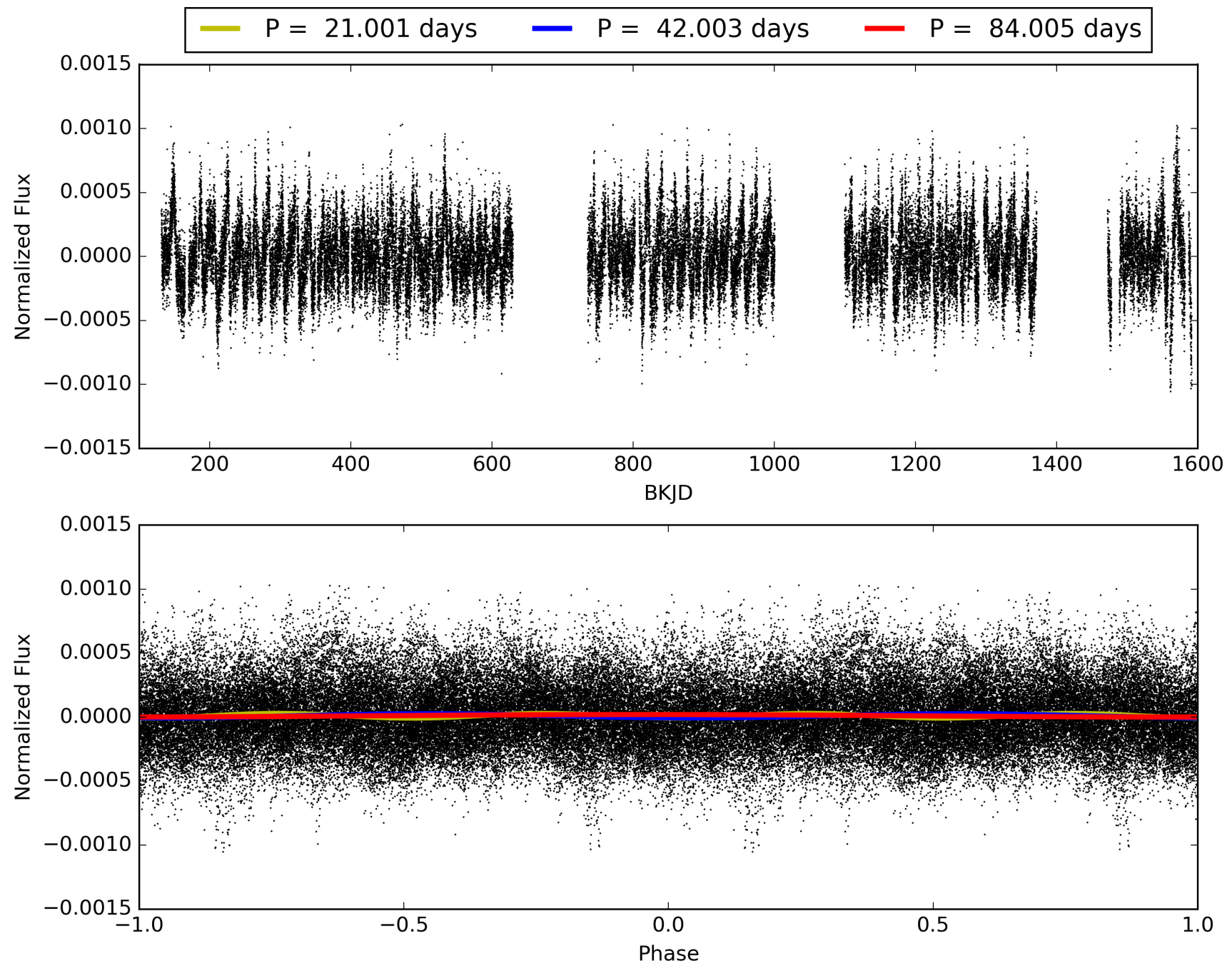
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 20:08:55 Z

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

TCE 010752318-06, PDC Light Curves

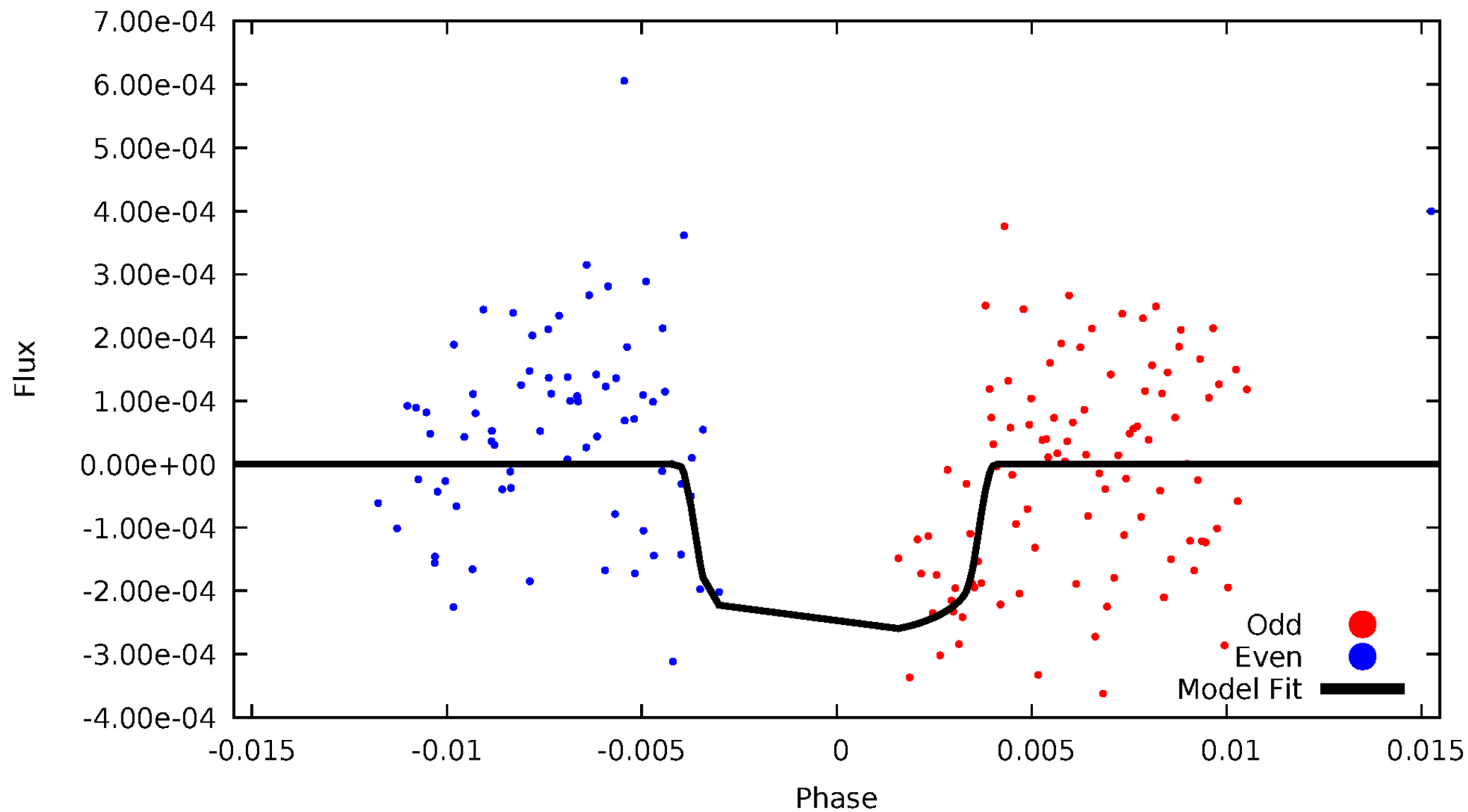


TCE 010752318-06



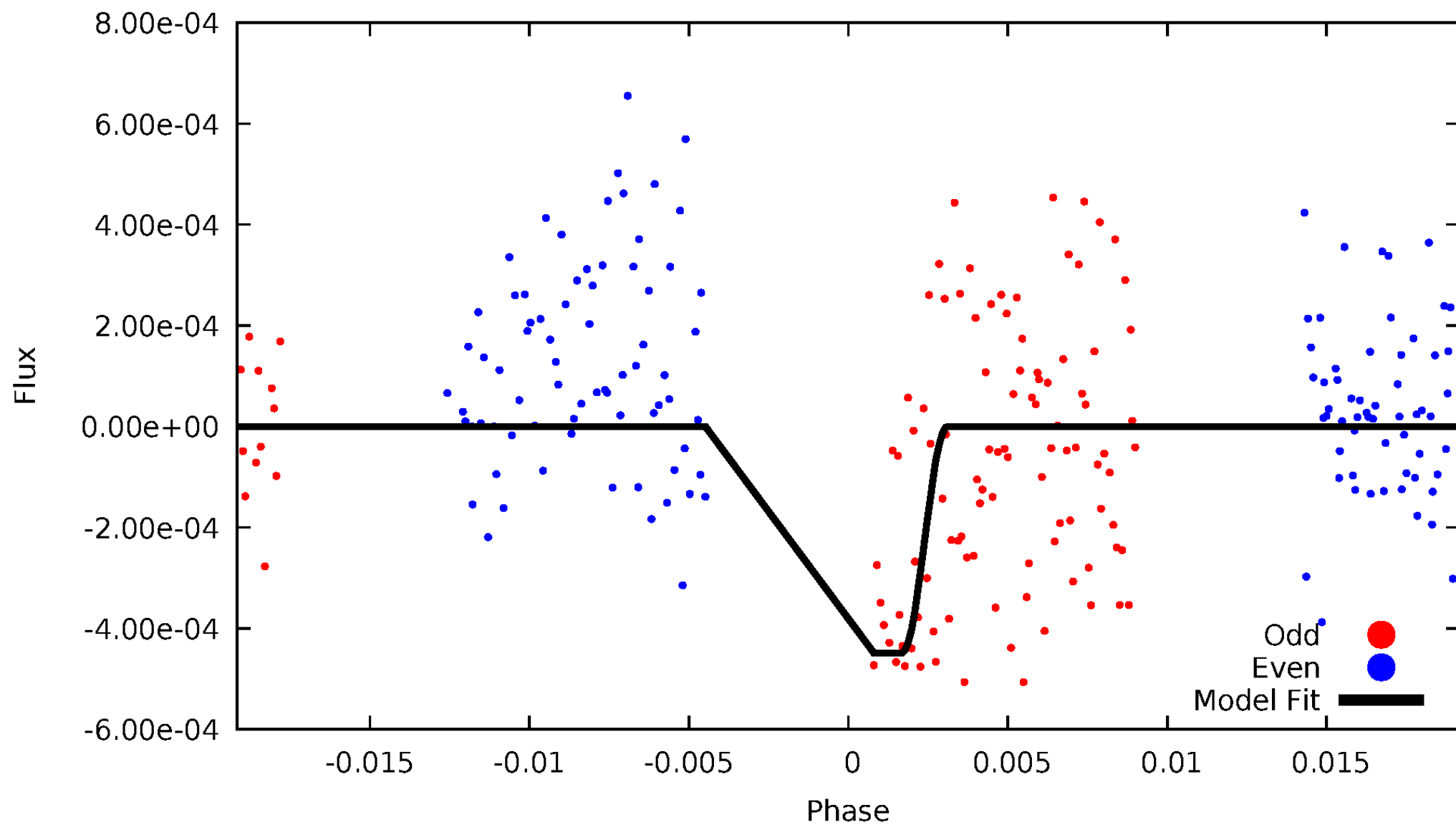
DV Odd/Even

TCE 010752318-06



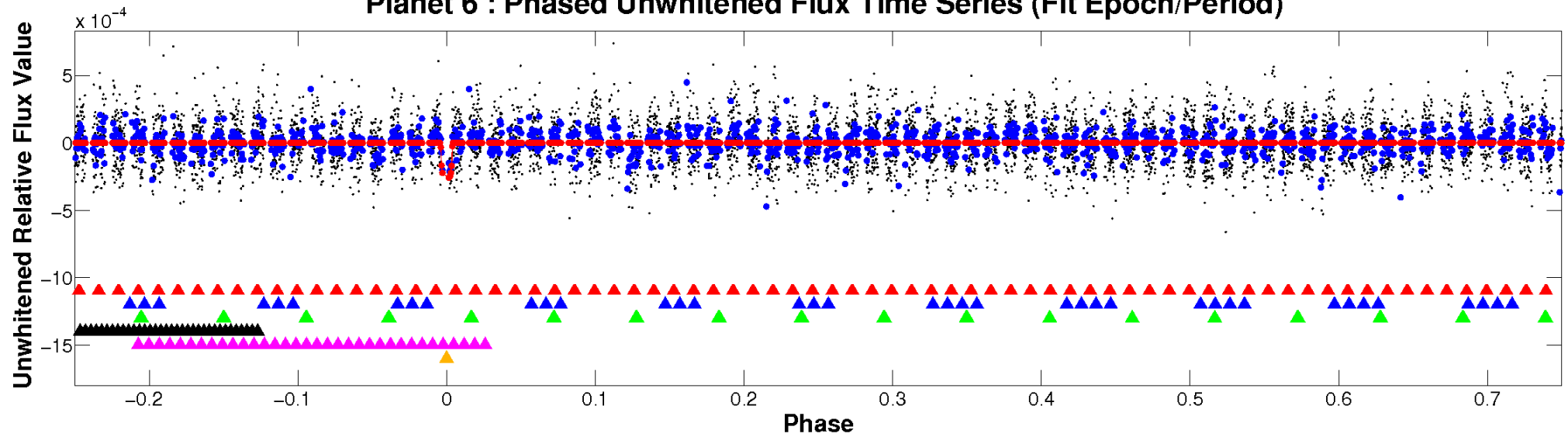
ALT Odd/Even

TCE 010752318-06

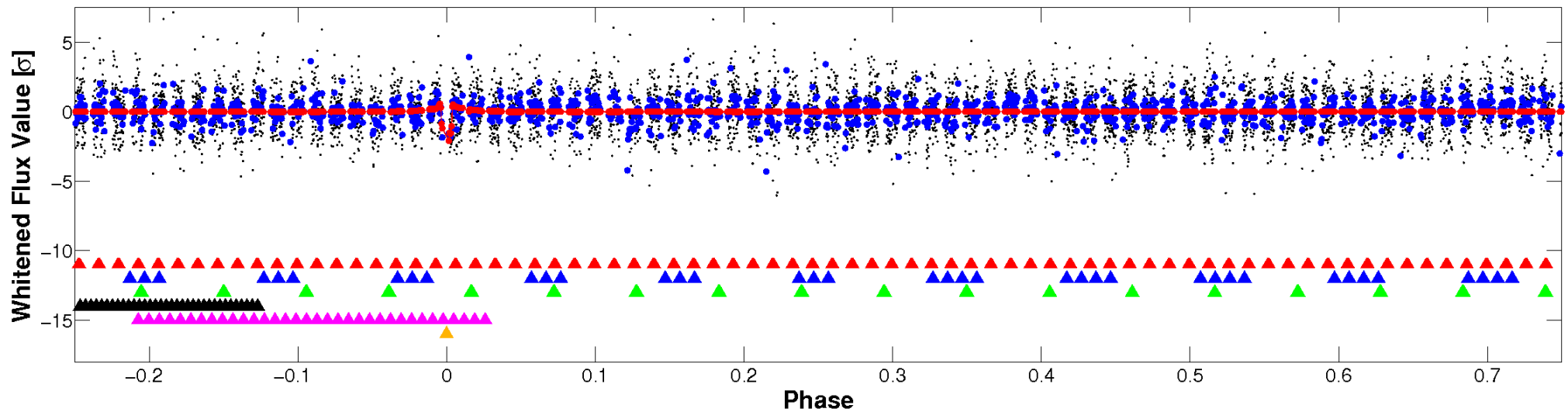


Non-Whitened Vs. Whitened Light Curve

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

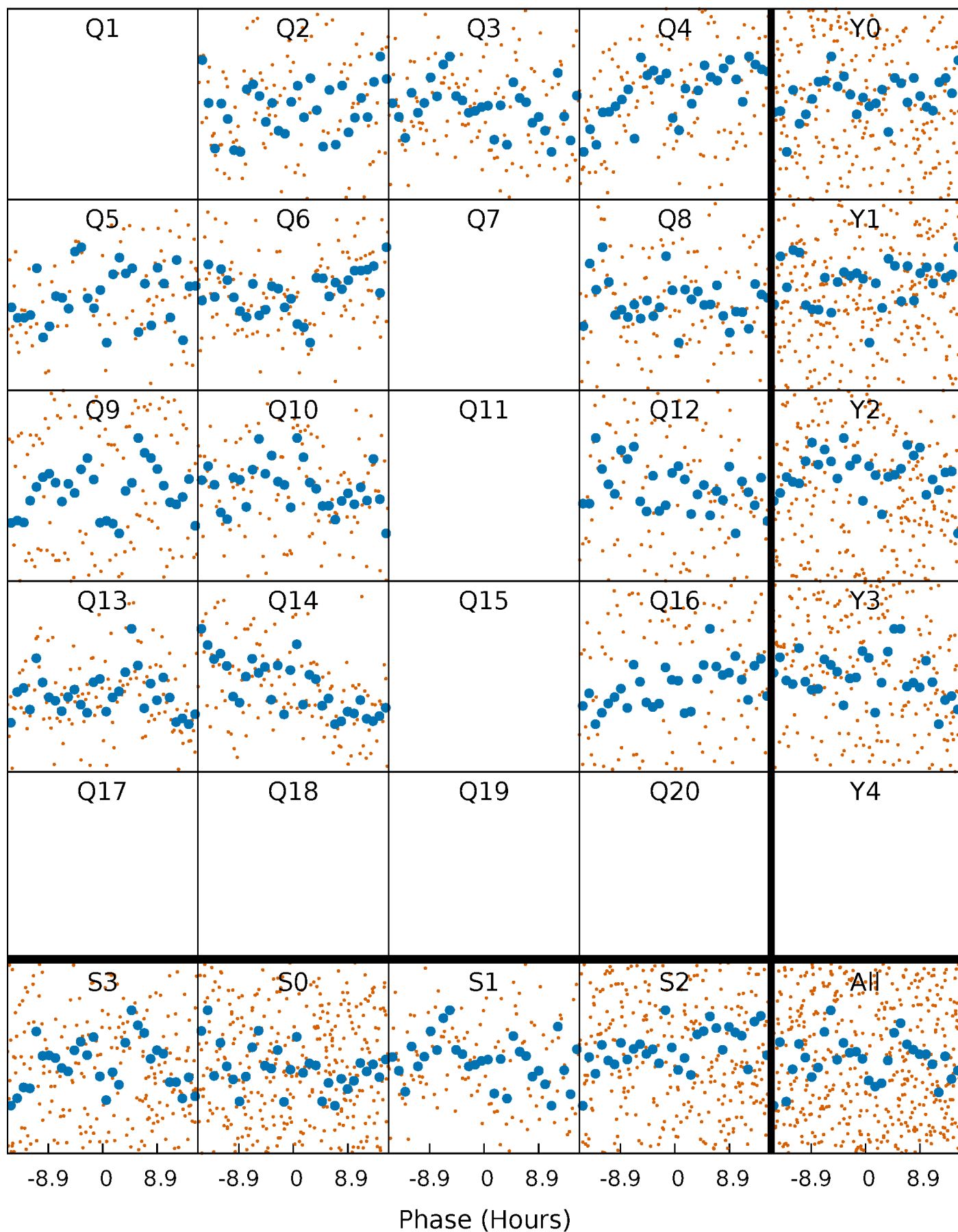


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



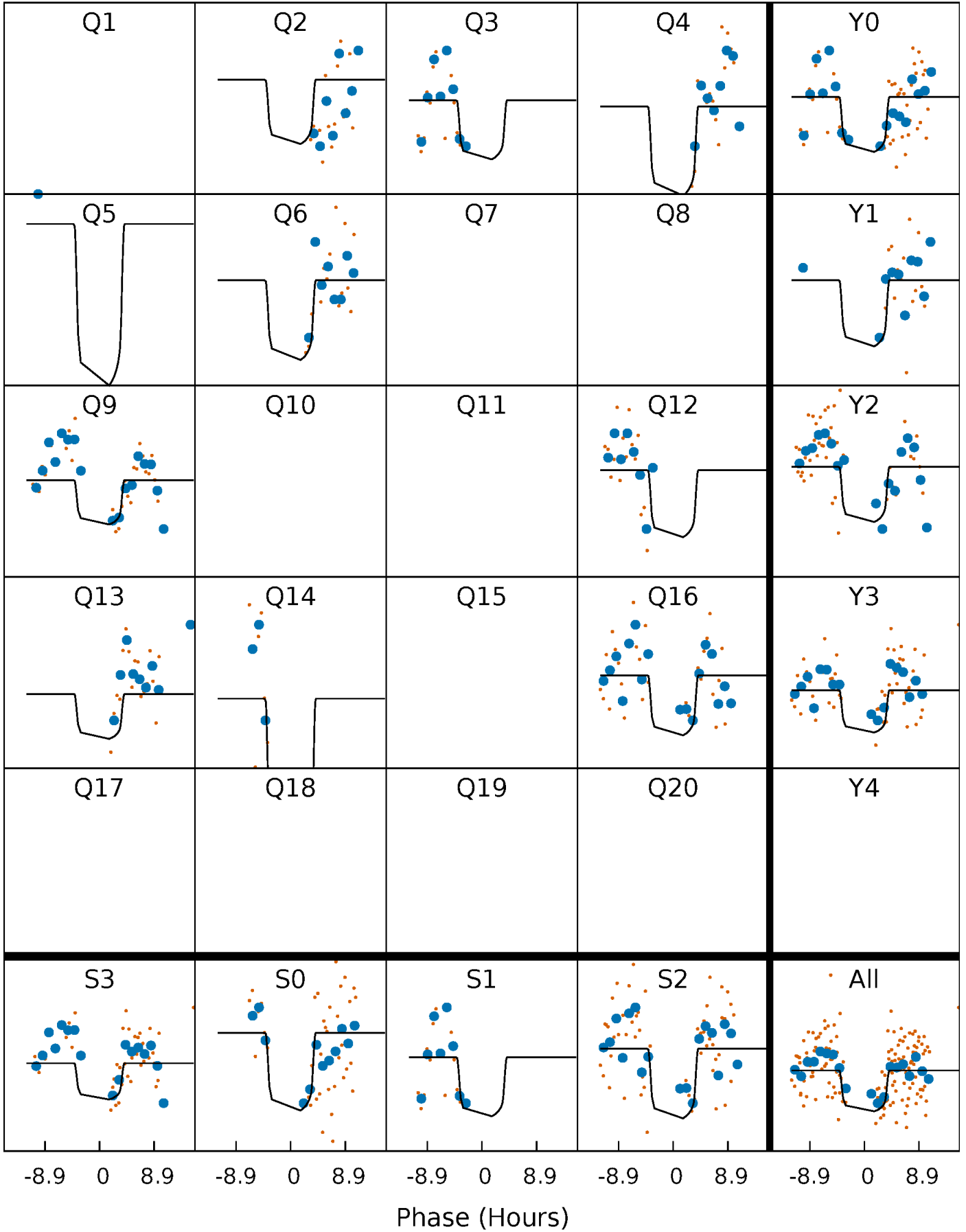
PDC Quarter-Phased Transit Curves

TCE 010752318-06 P= 42.002644 Days $T_0=168.310914$ (BKJD)



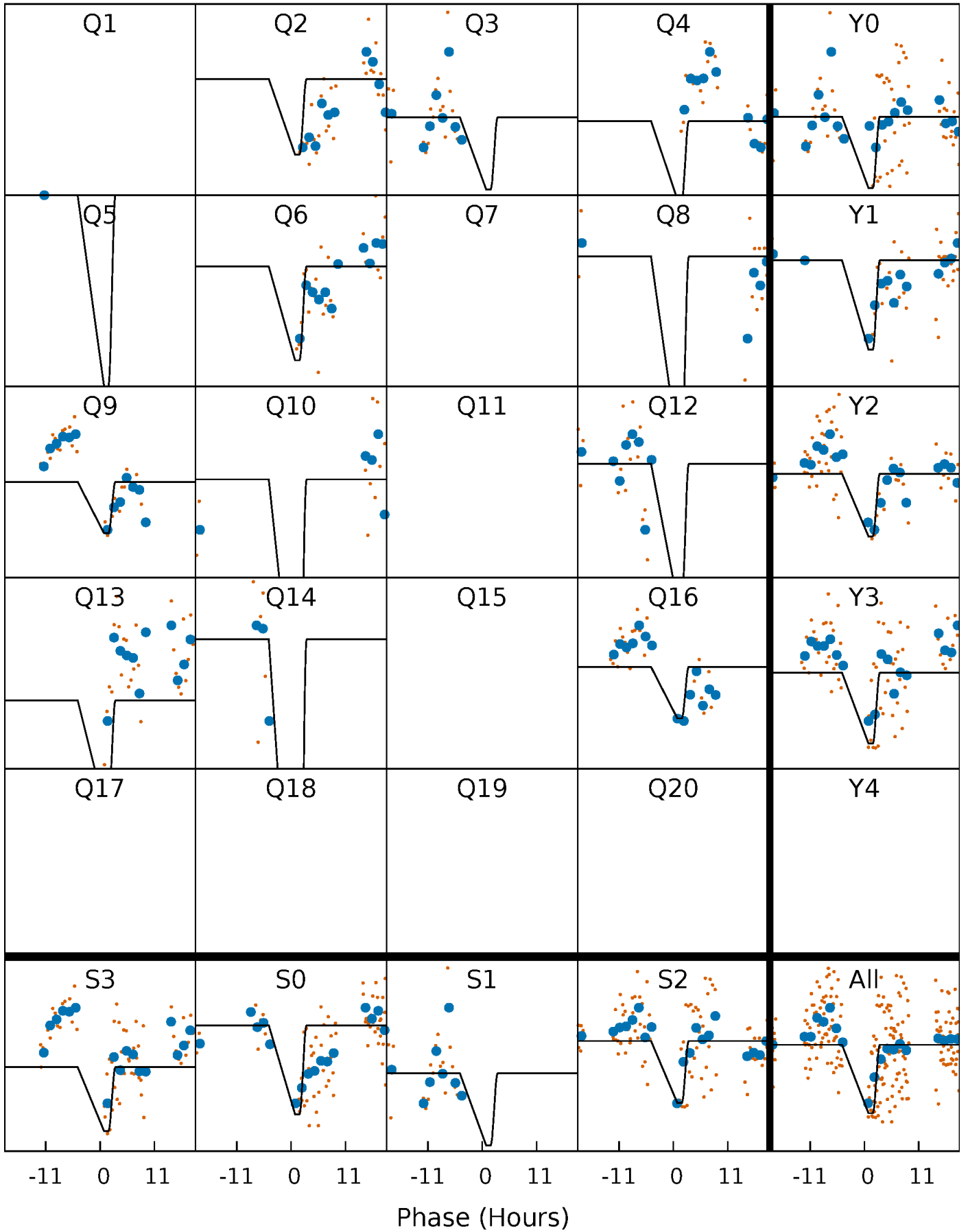
DV Quarter-Phased Transit Curves

TCE 010752318-06 P= 42.002644 Days $T_0=168.310914$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

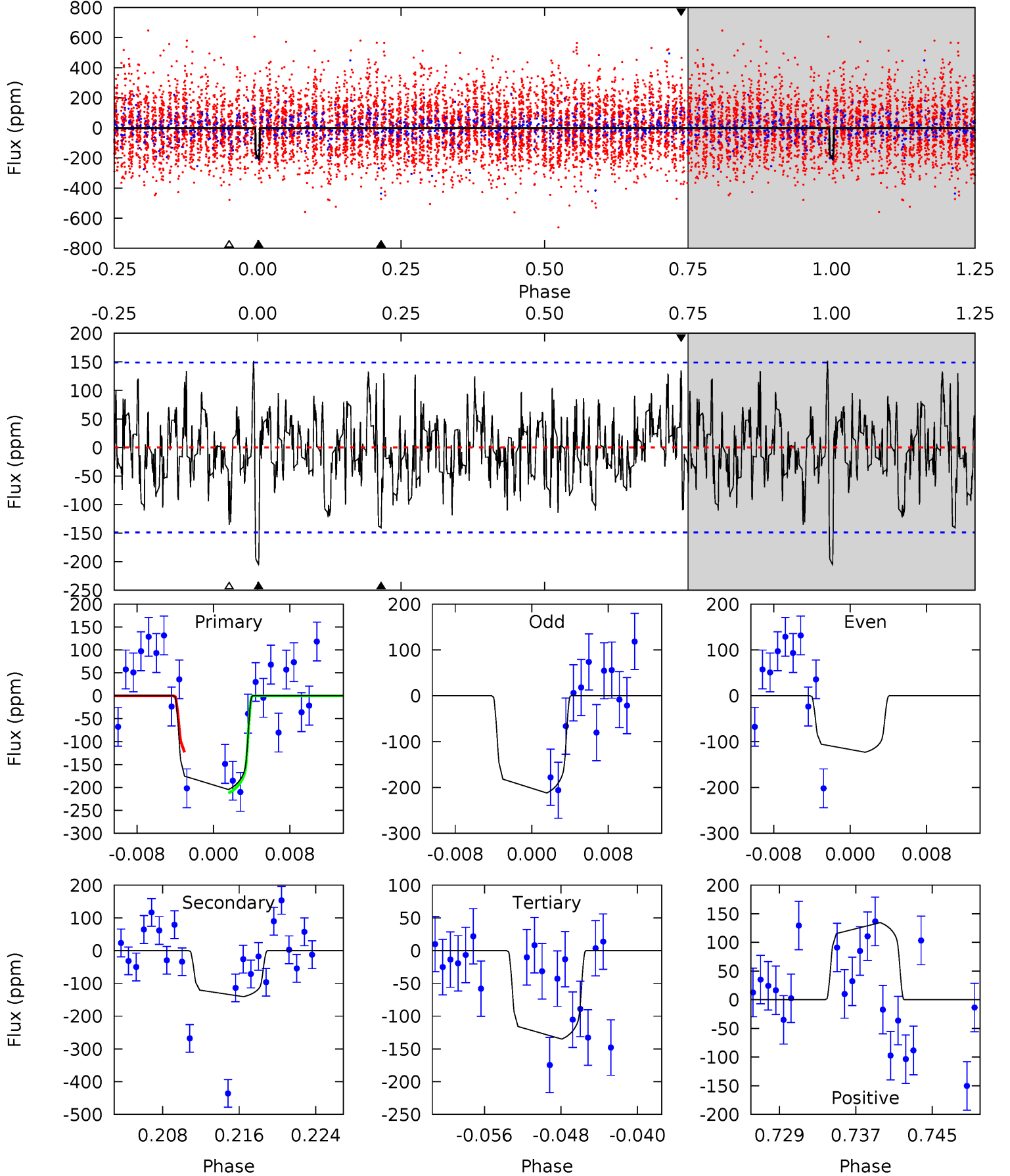
TCE 010752318-06 P= 42.001665 Days $T_0=168.376075$ (BKJD)



DV Model-Shift Uniqueness Test

010752318-06, P = 42.002644 Days, E = 126.308270 Days

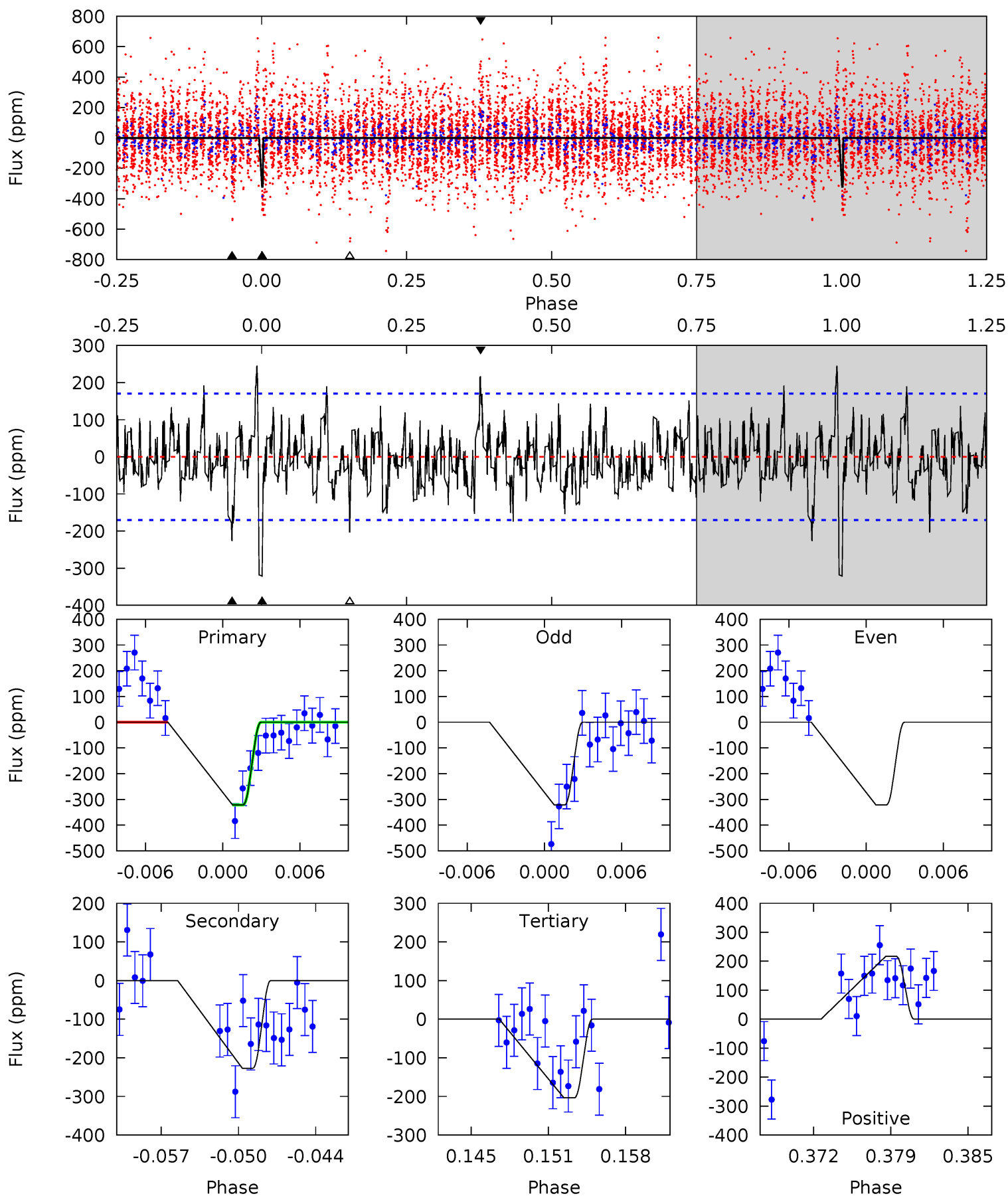
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.98	4.79	4.61	4.59	5.07	2.65	1.67	2.37	2.39	0.18	0.20	1.35	0.80	0.43	1.28



Alt Model-Shift Uniqueness Test

010752318-06, P = 42.001665 Days, E = 126.374410 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.64	6.81	6.11	6.50	5.11	2.73	1.78	3.53	3.13	0.70	0.30	0	0.77	0.43	0



Stellar Parameters For KIC 010752318

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6625^{+178}_{-198}	$3.638^{+0.328}_{-0.082}$	$-0.260^{+0.300}_{-0.250}$	$3.145^{+0.399}_{-1.198}$	$1.566^{+0.225}_{-0.338}$	$0.071^{+0.164}_{-0.018}$
	+3%/-3%	+9%/-2%	+115%/-96%	+13%/-38%	+14%/-22%	+231%/-26%
Source	PHO1	FLK73	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 010752318-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-141 ± 29	$5.33^{+1.78}_{-1.65}$	1355^{+72}_{-128}	5551^{+1002}_{-612}	203^{+217}_{-92}
Alt.	-227 ± 33	$6.92^{+1.73}_{-1.91}$	1356^{+80}_{-123}	5564^{+740}_{-513}	200^{+169}_{-76}

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 $A_{obs} \gg 1.0$

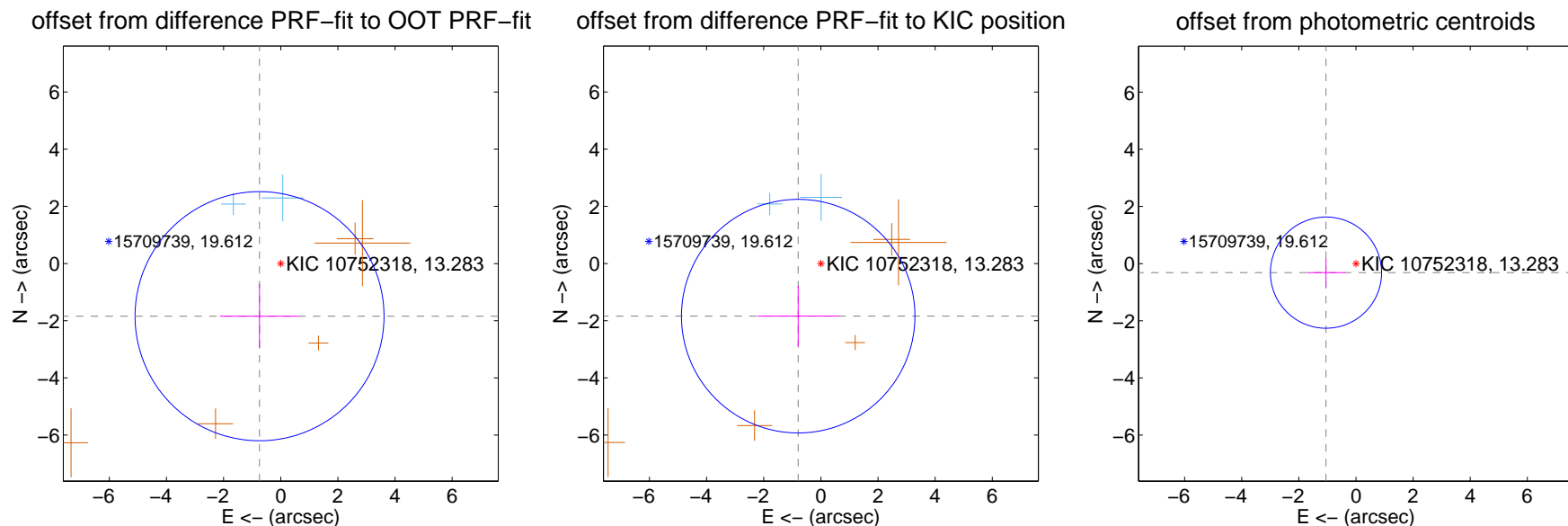
DV Centroid Data

Supplemental centroid analysis for 010752318-06. Kepler magnitude: 13.28. Transit SNR 7.77

There are 2 quarters with good PRF difference image offsets

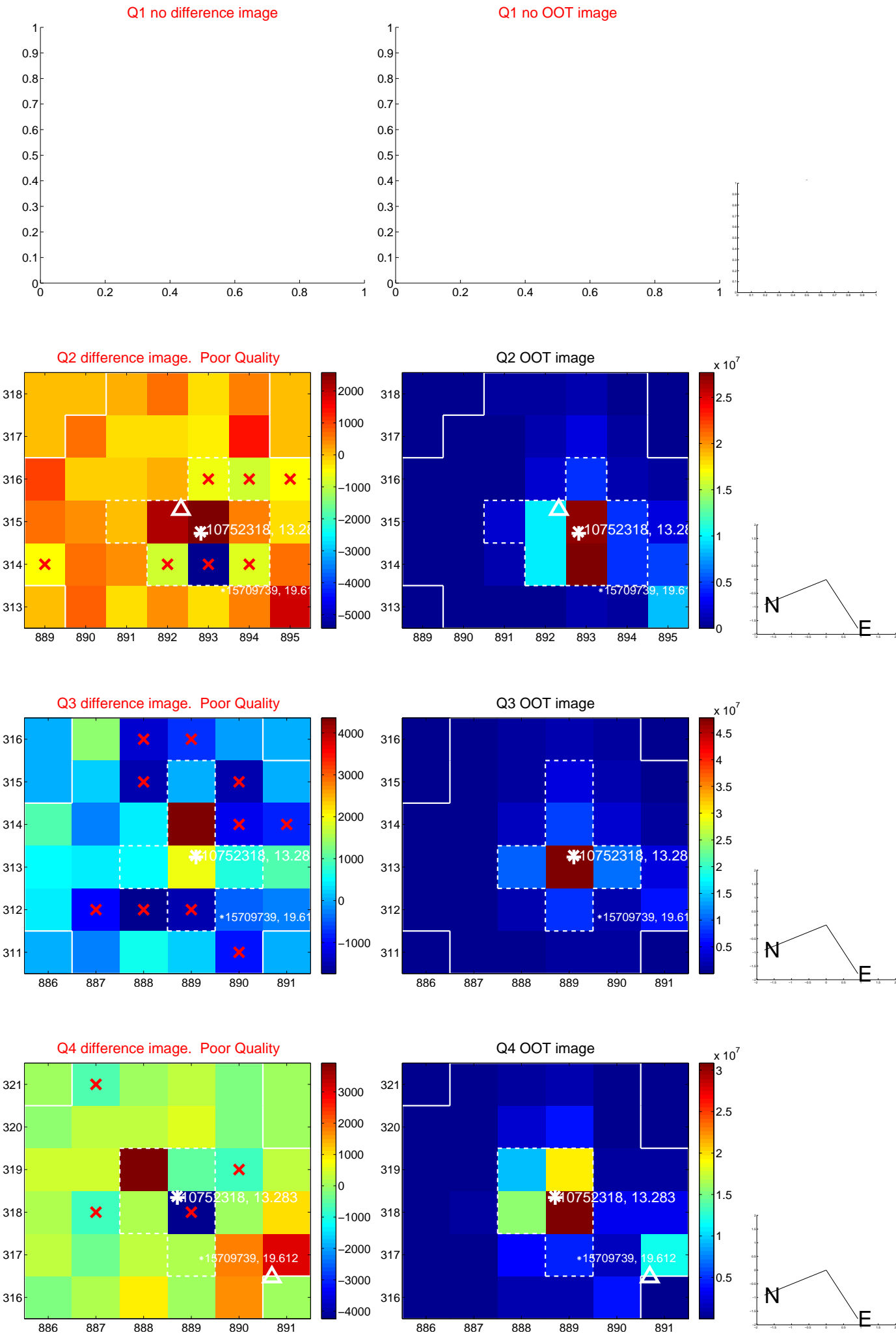
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.986 ± 1.453	1.37	0.742 ± 1.380	-1.842 ± 1.127
PRF-fit source offset from KIC position	2.005 ± 1.362	1.47	0.794 ± 1.419	-1.841 ± 1.058
photometric centroid source offset	1.10 ± 0.65	1.69	1.05 ± 0.66	-0.32 ± 0.50

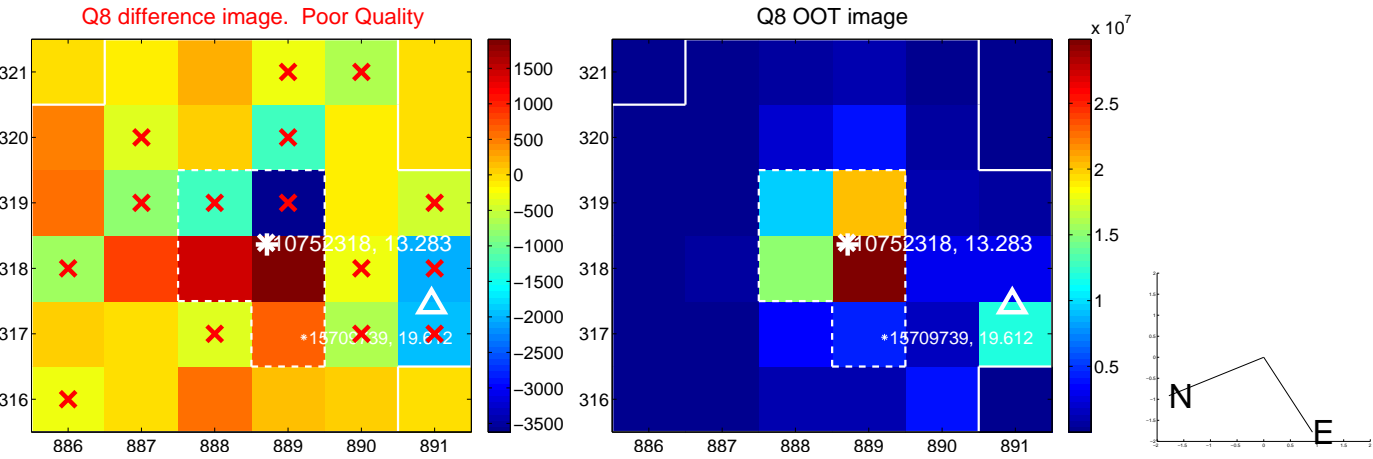
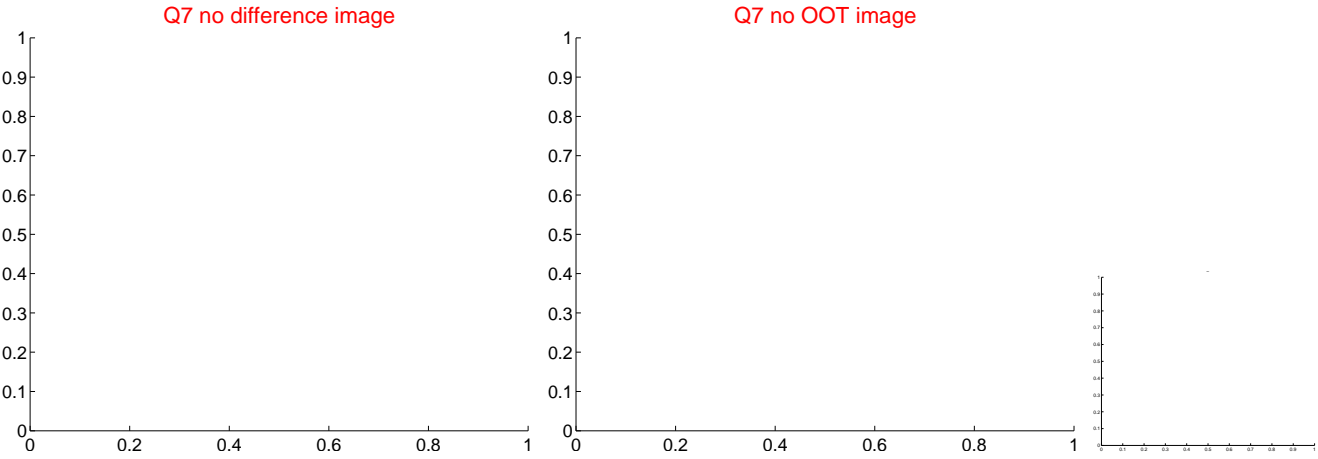
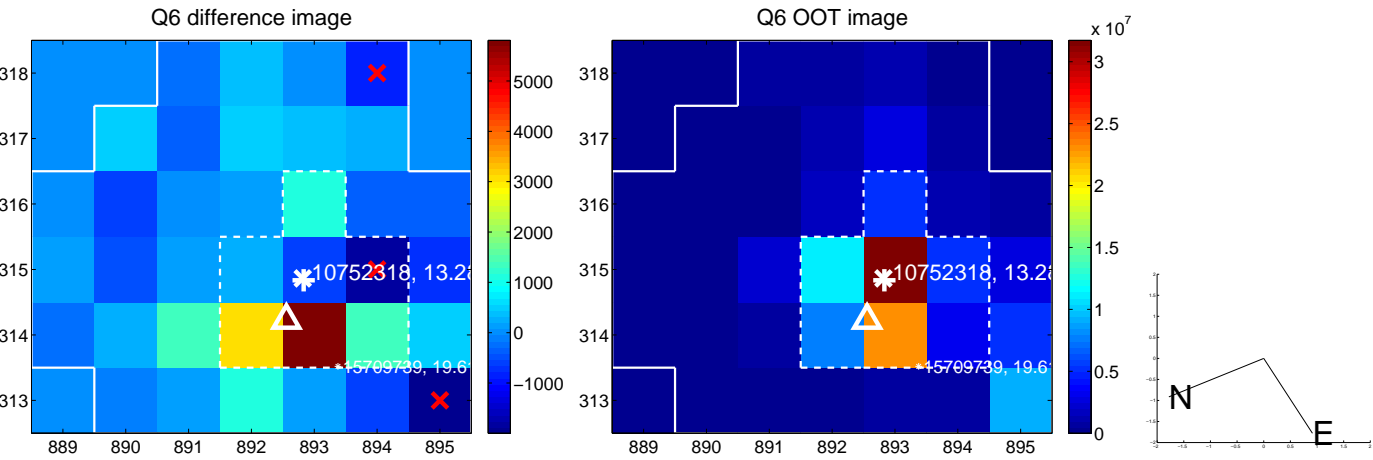
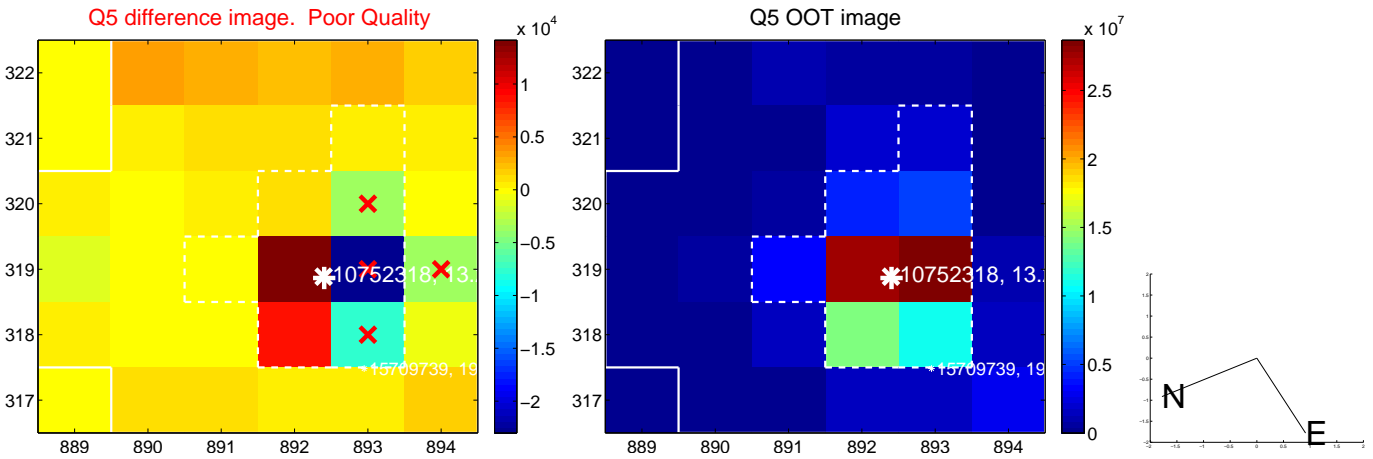


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

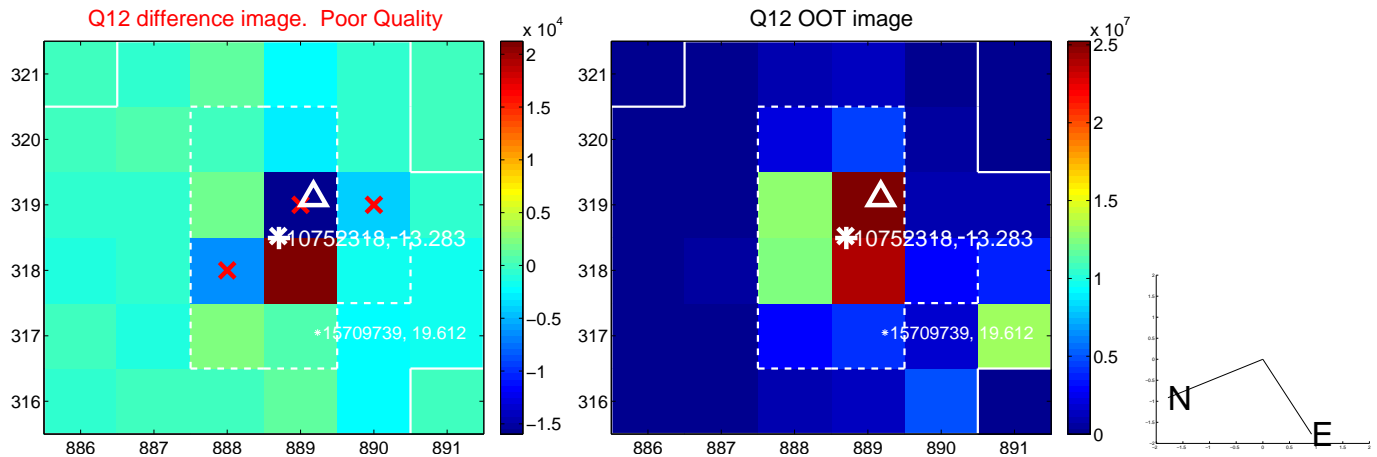
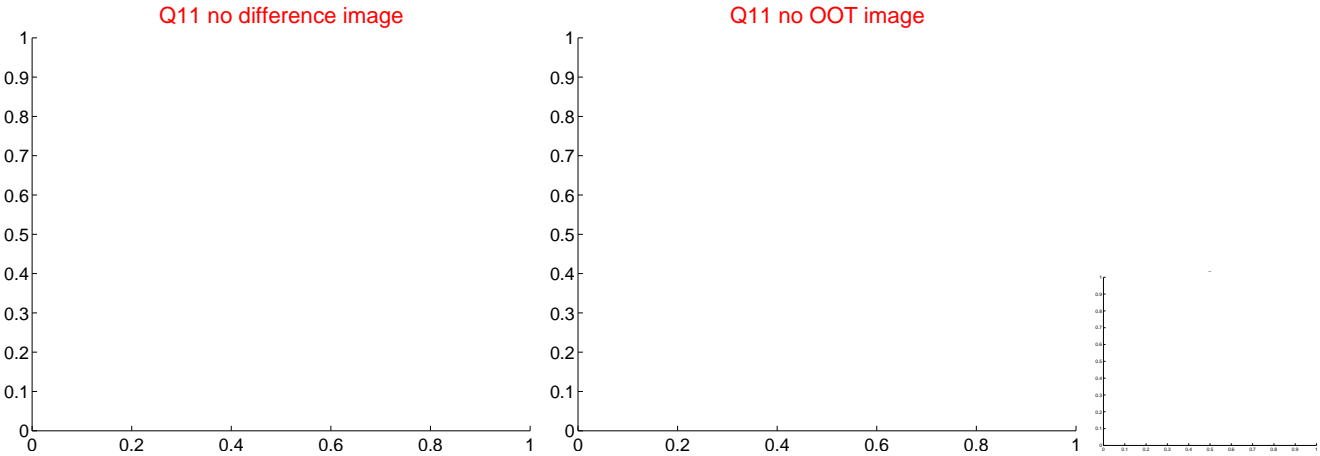
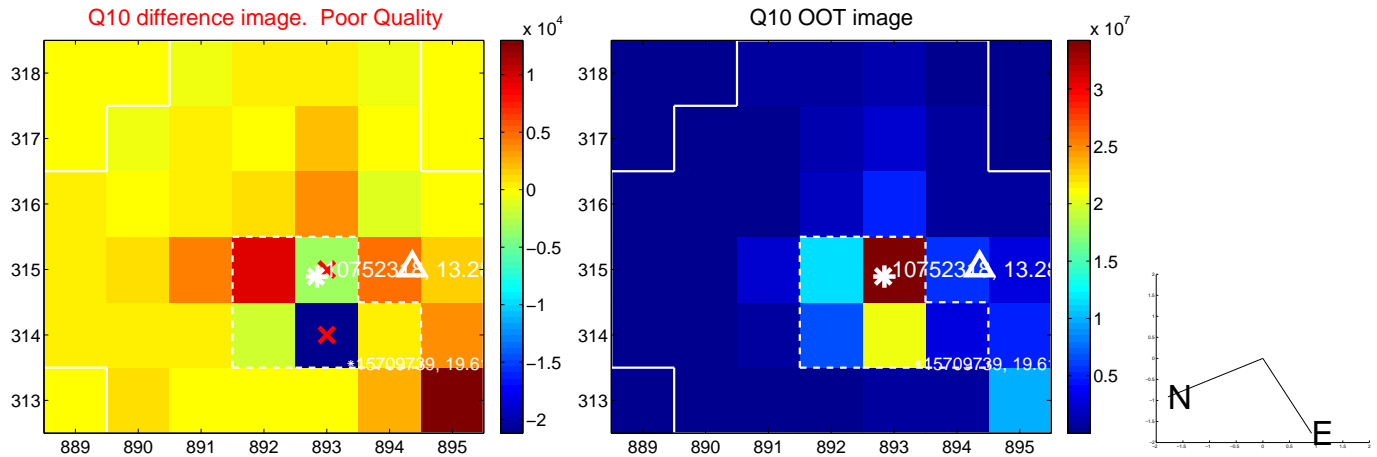
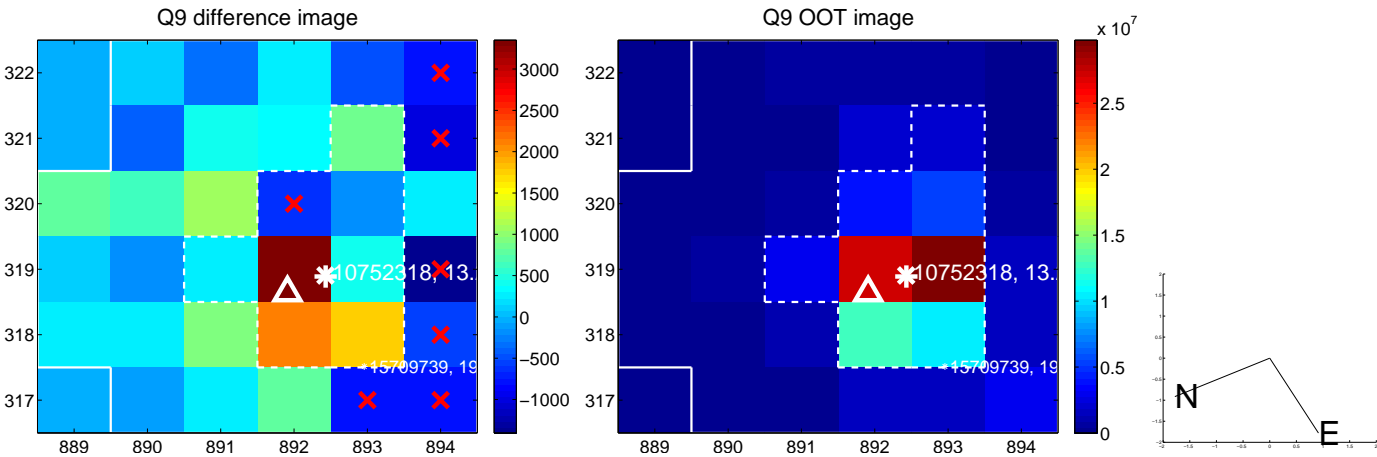
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



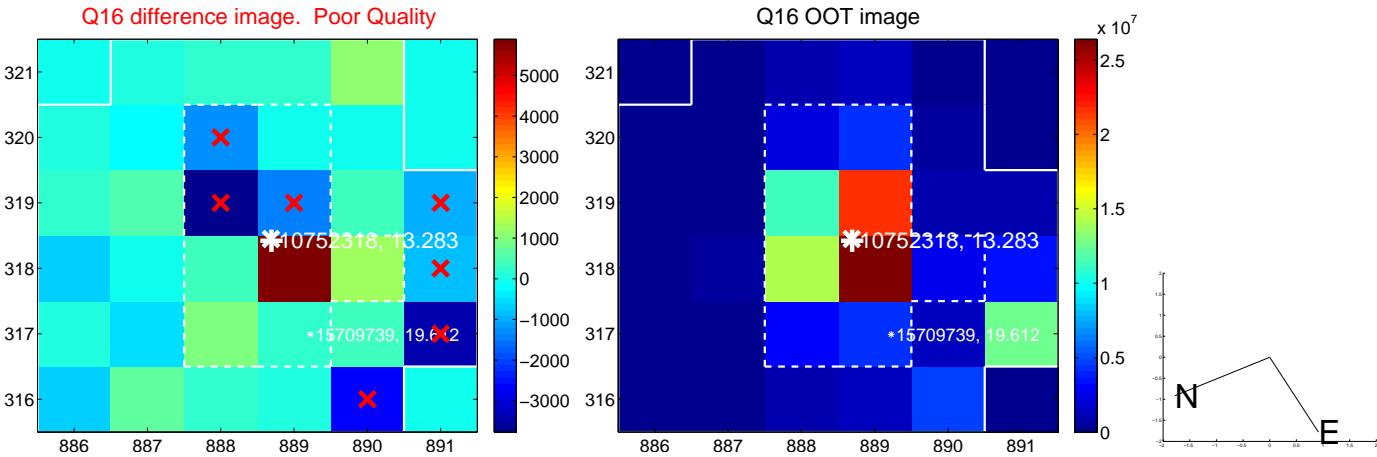
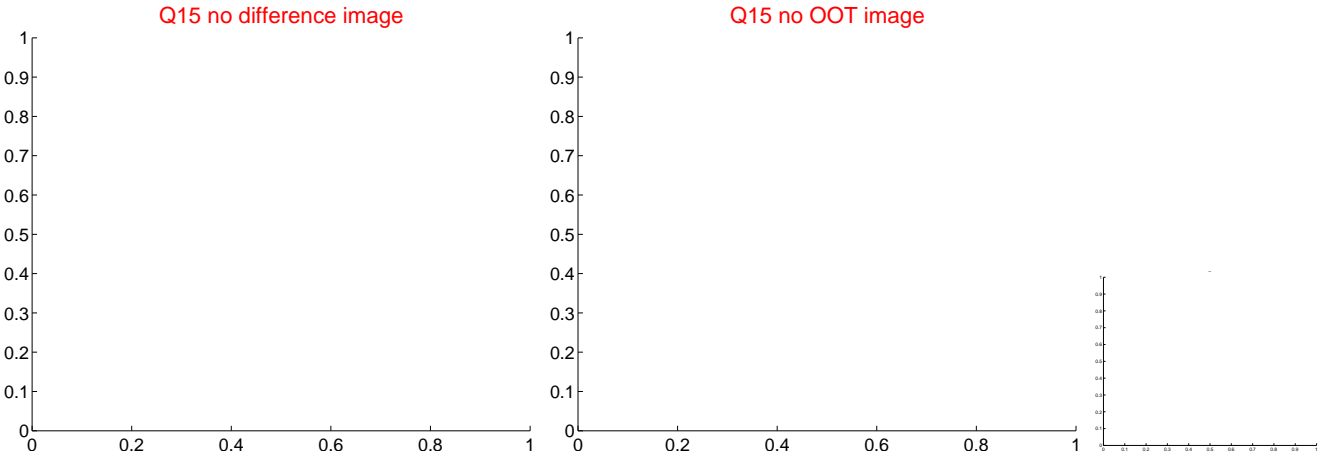
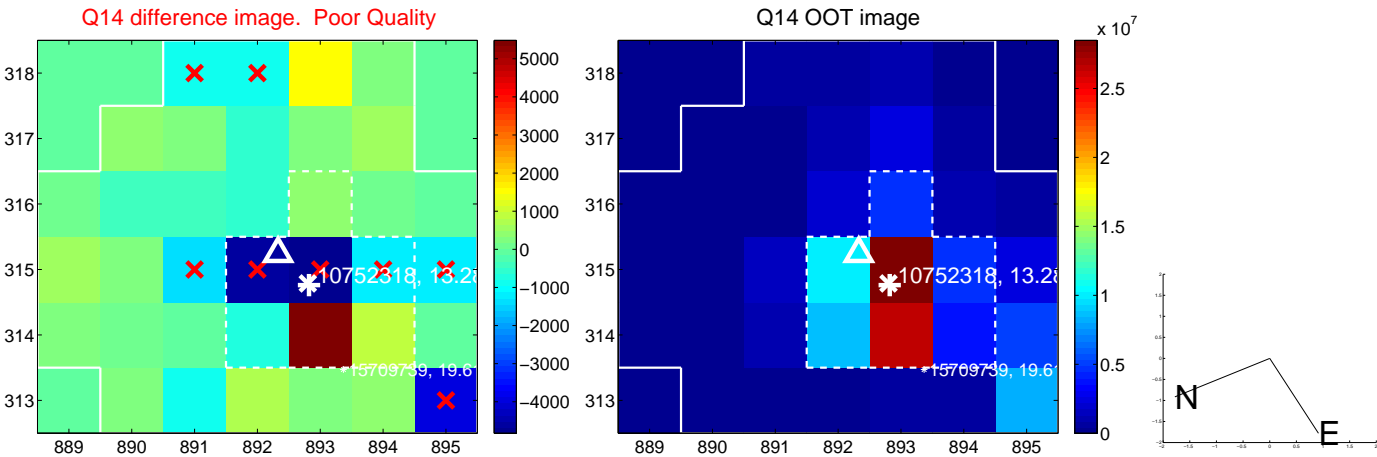
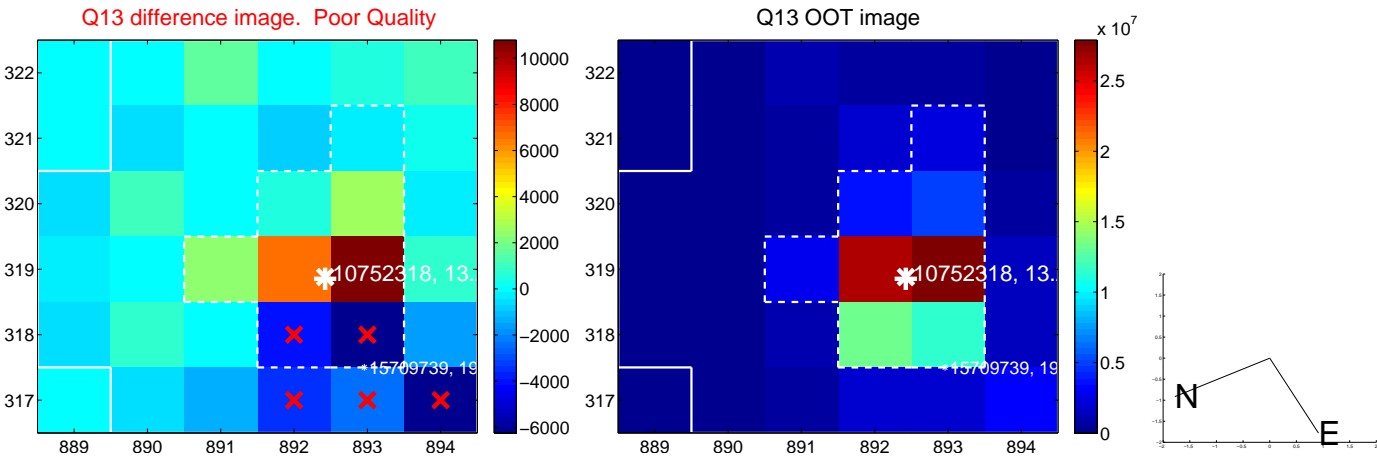
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



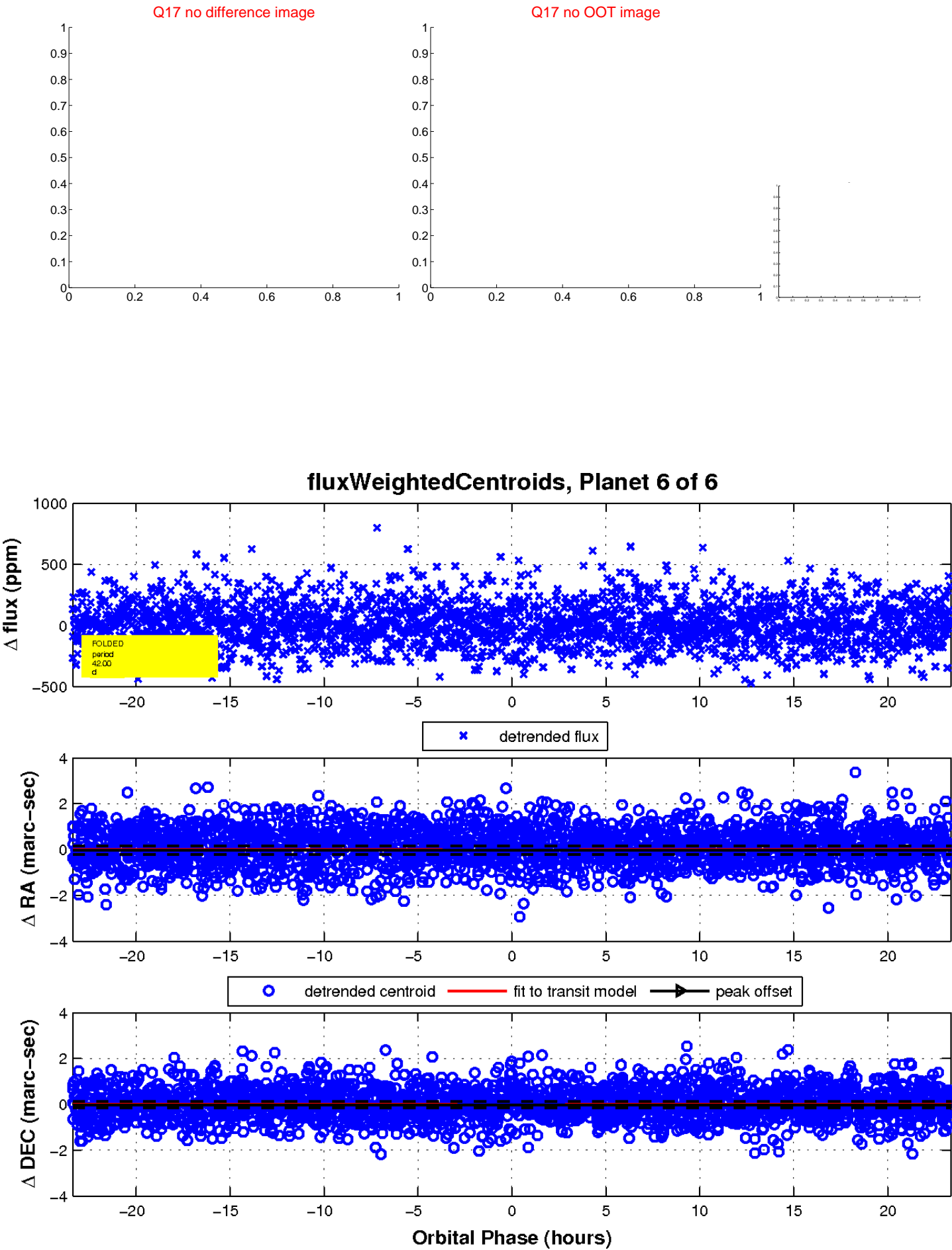
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

