

KIC 003759974

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})
003759974-01	OBS	No	1.379524	132.771306	88.3	10.271	9.5	9.3	1.00	5780	0.93	1699.42
003759974-02	OBS	No	24.921223	137.869185	1899.1	1.669	13.7	12.9	1.00	5780	4.50	35.85
003759974-03	OBS	No	13.906773	143.069618	1012.5	2.038	11.0	9.9	1.00	5780	3.39	78.04
003759974-04	OBS	No	11.295735	138.553900	881.3	2.396	11.2	9.9	1.00	5780	3.53	102.97
003759974-05	OBS	No	20.653045	132.158498	1192.0	2.655	11.5	10.8	1.00	5780	3.75	46.06

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003759974-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET
003759974-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET
003759974-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS—HALO_GHOST
003759974-04	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_DIFFS
003759974-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS—HALO_GHOST

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

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

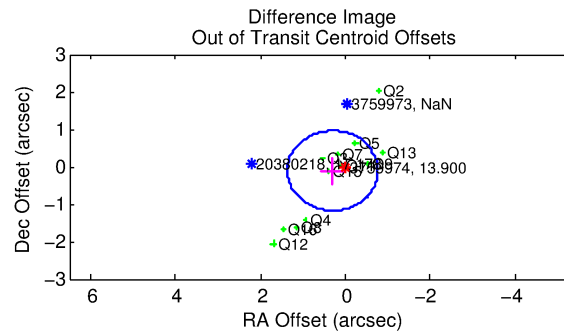
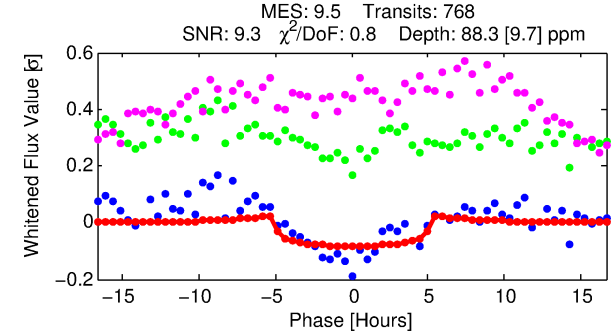
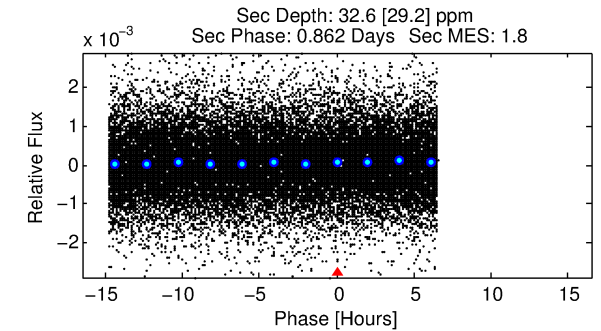
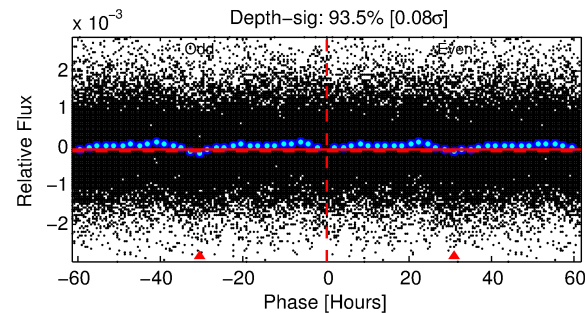
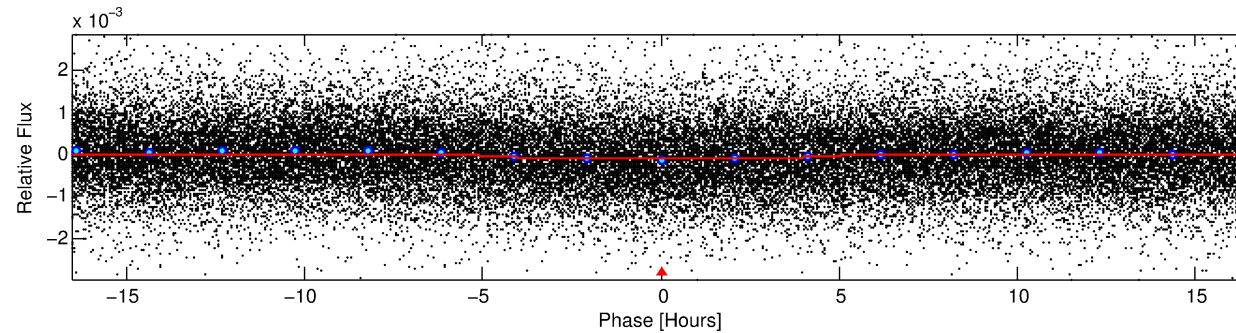
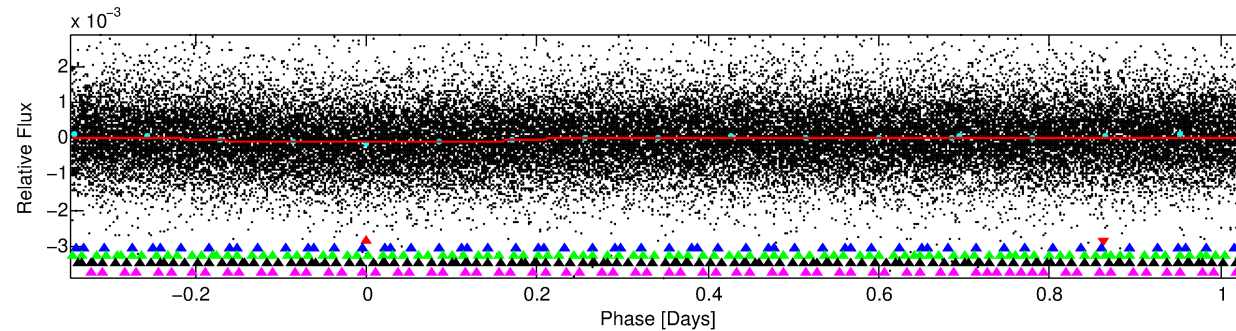
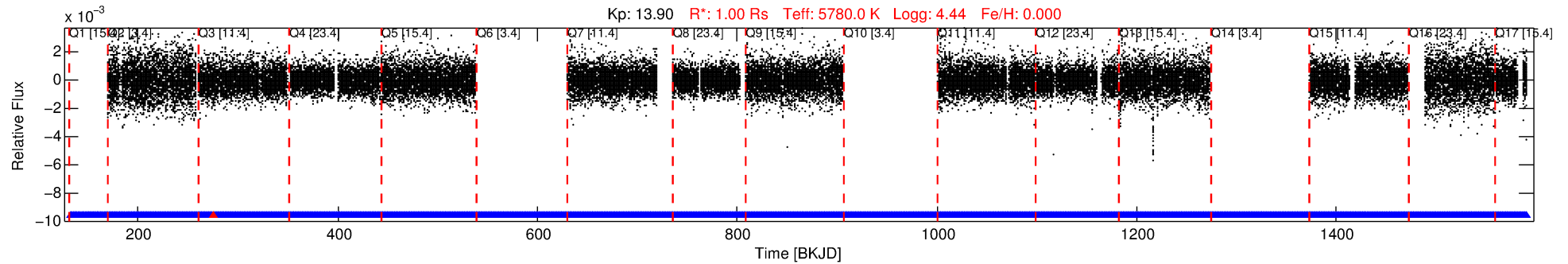
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003759974-01

No Significant Match Found

DV One-Page Summary

KIC: 3759974 Candidate: 1 of 5 Period: 1.380 d



DV Fit Results:

Period = 1.37952 [0.00003] d
Epoch = 132.7713 [0.0087] BKJD
Rp/R* = 0.0085 [0.0116]
a/R* = 1.22 [2.37]
b = 0.02 [357.26]
Seff = 1699.42 [0.04]
Teq = 1637 [0] K
Rp = 0.93 [1.27] Re
a = 0.0243 [0.0000] AU
Ag = 12.24 [35.08] [0.32 σ]
Teffp = 4734 [3393] K [0.91 σ]

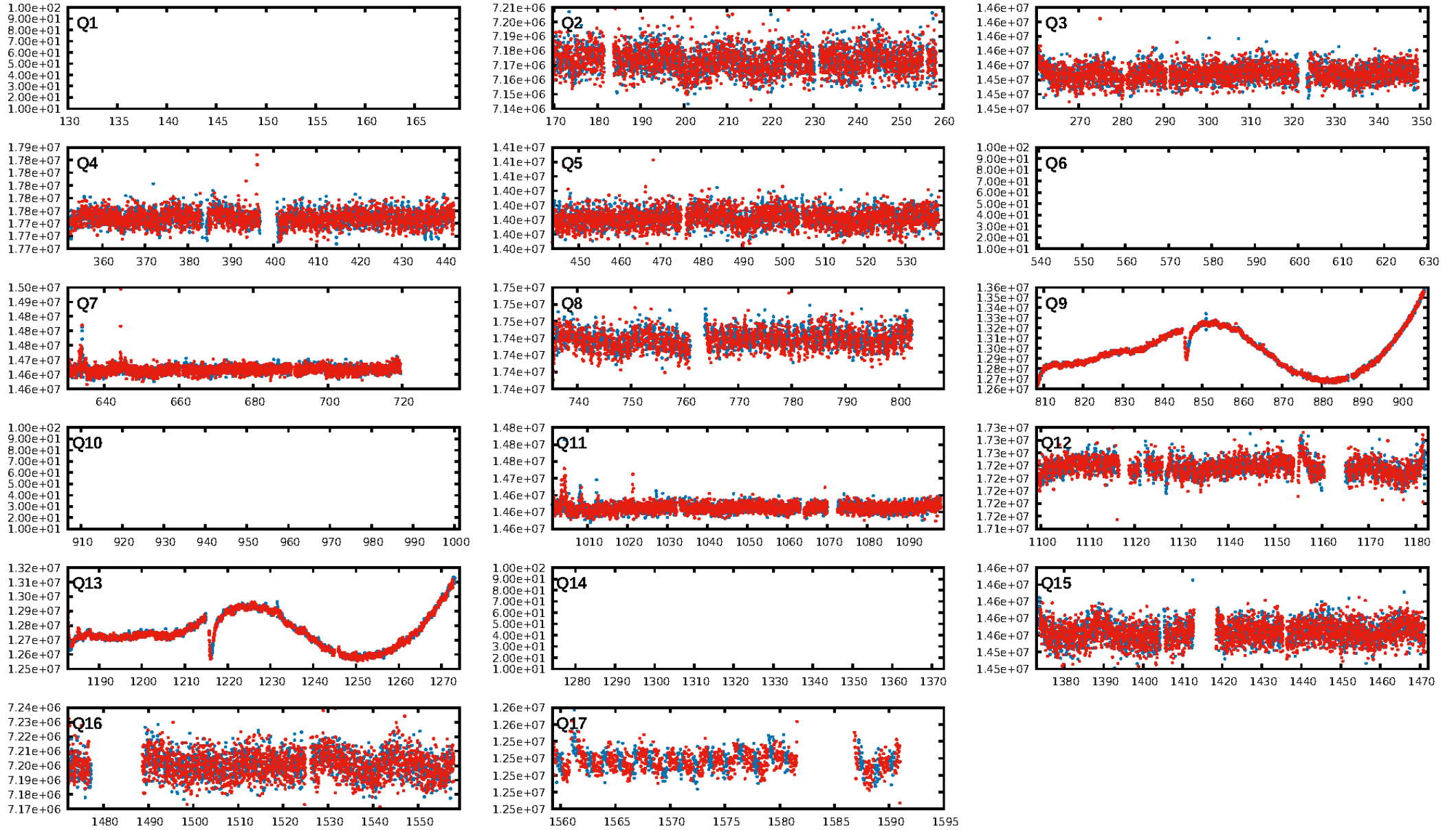
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [22.57 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.82e-60
RollingBand-fgt: 1.00 [746/747]
GhostDiagnostic-chr: -1.62
Centroid-sig: 0.3%
Centroid-so: 6.495 arcsec [26.48 σ]
OotOffset-rm: 0.310 arcsec [0.87 σ]
KicOffset-rm: 7.923 arcsec [23.31 σ]
OotOffset-st: 1/4/4/3 [12]
KicOffset-st: 1/4/4/3 [12]
DiffImageQuality-fgm: 1.00 [12/12]
DiffImageOverlap-fno: 1.00 [13/13]

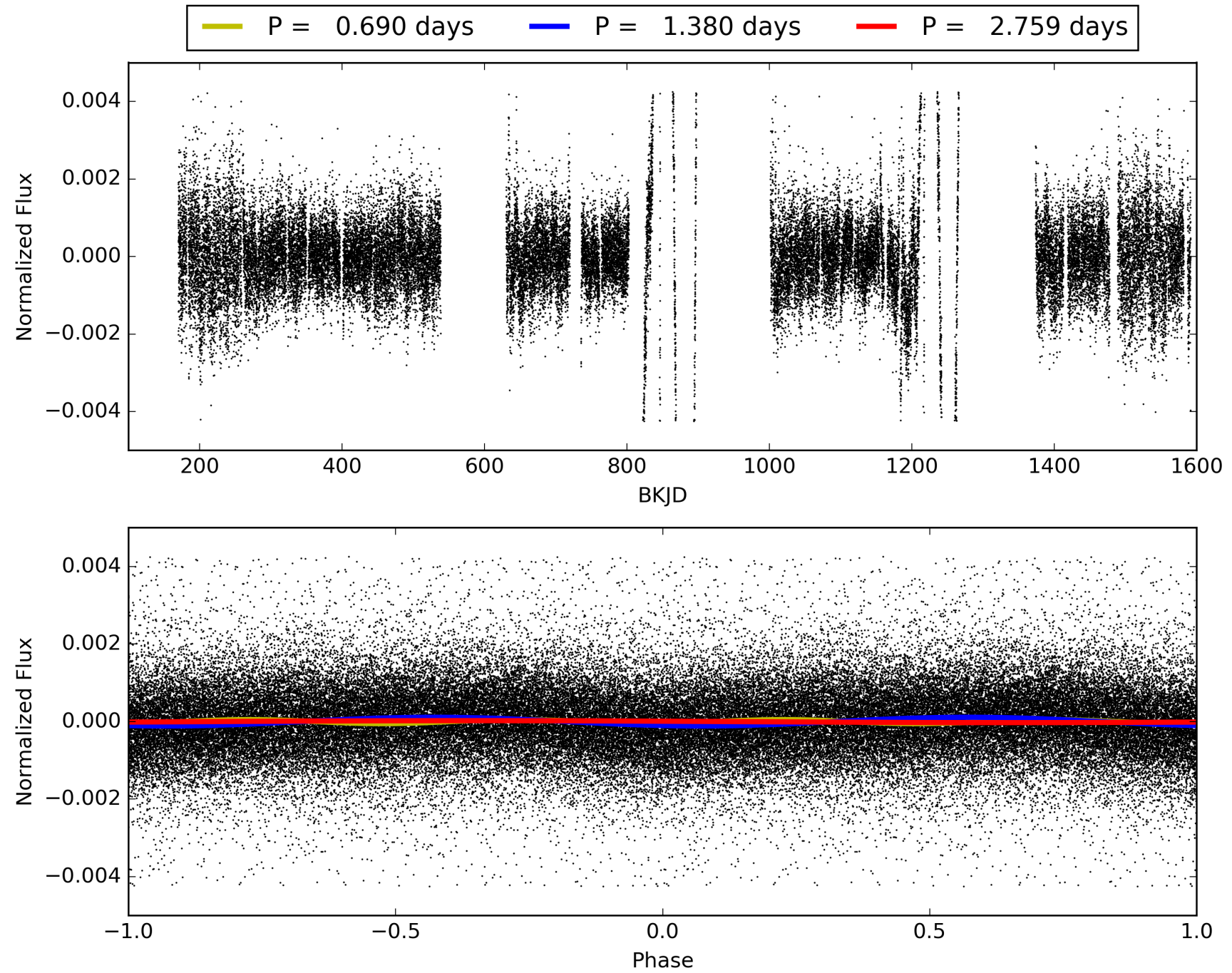
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 003759974-01, PDC Light Curves

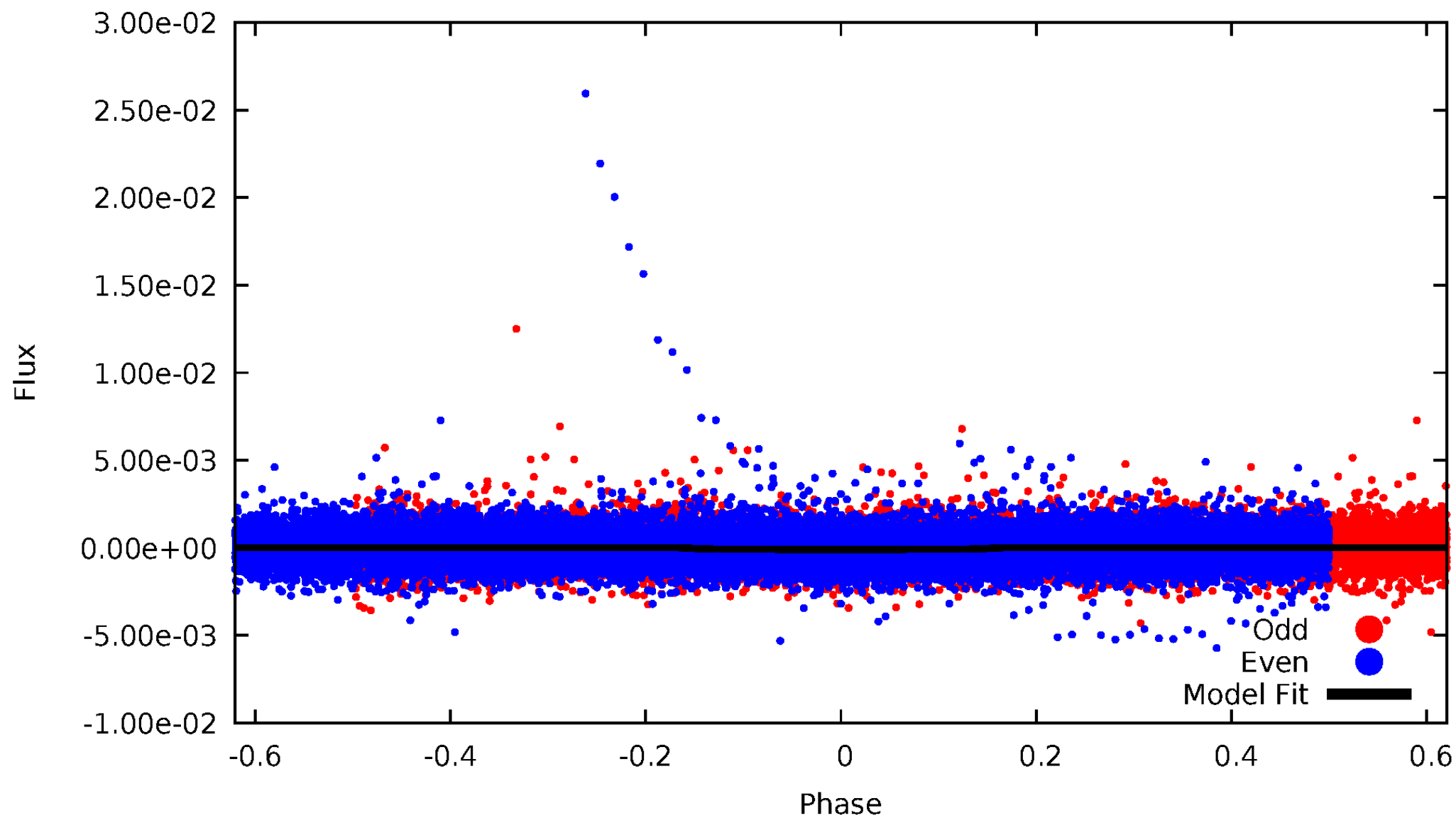


TCE 003759974-01



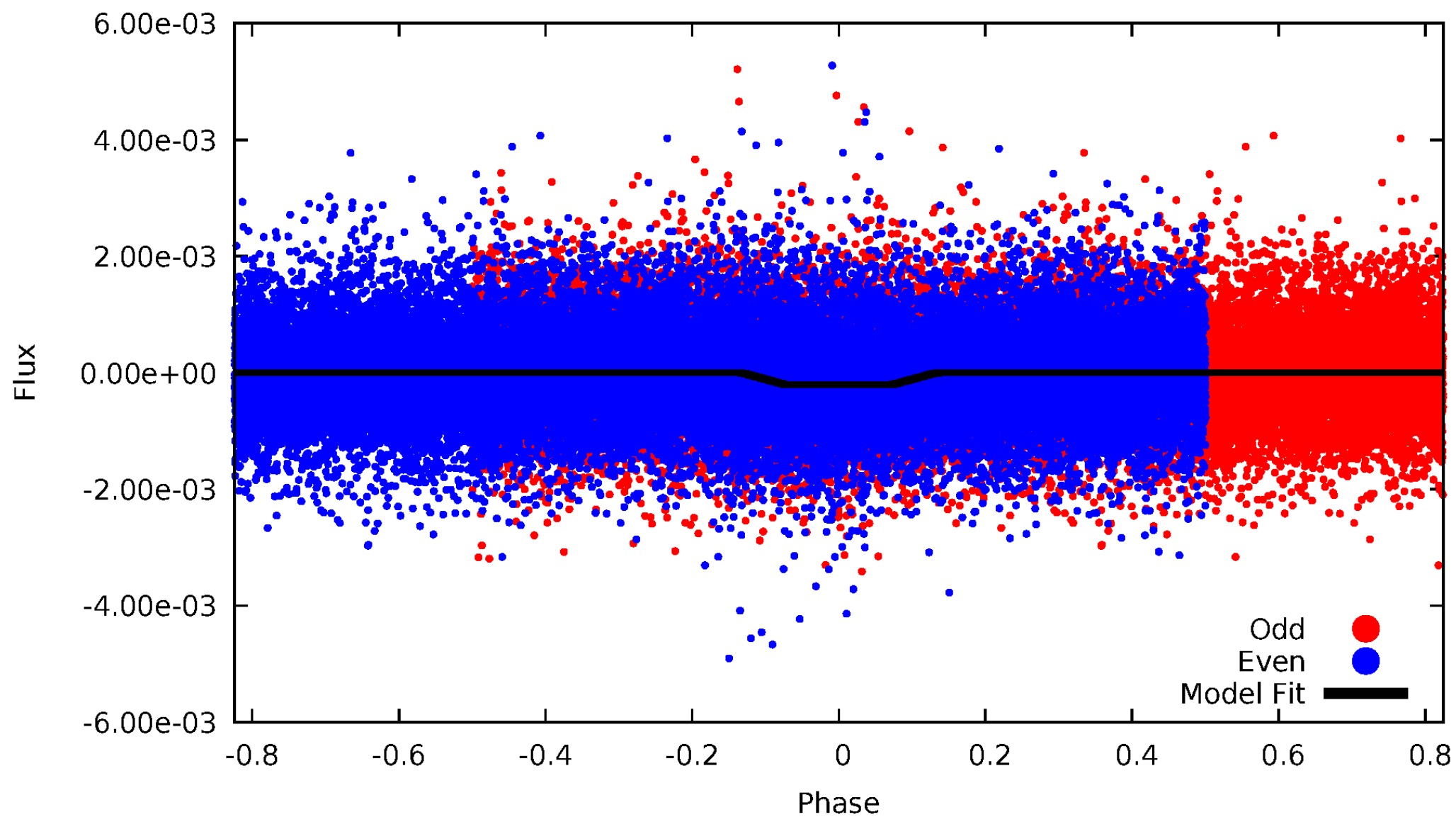
DV Odd/Even

TCE 003759974-01

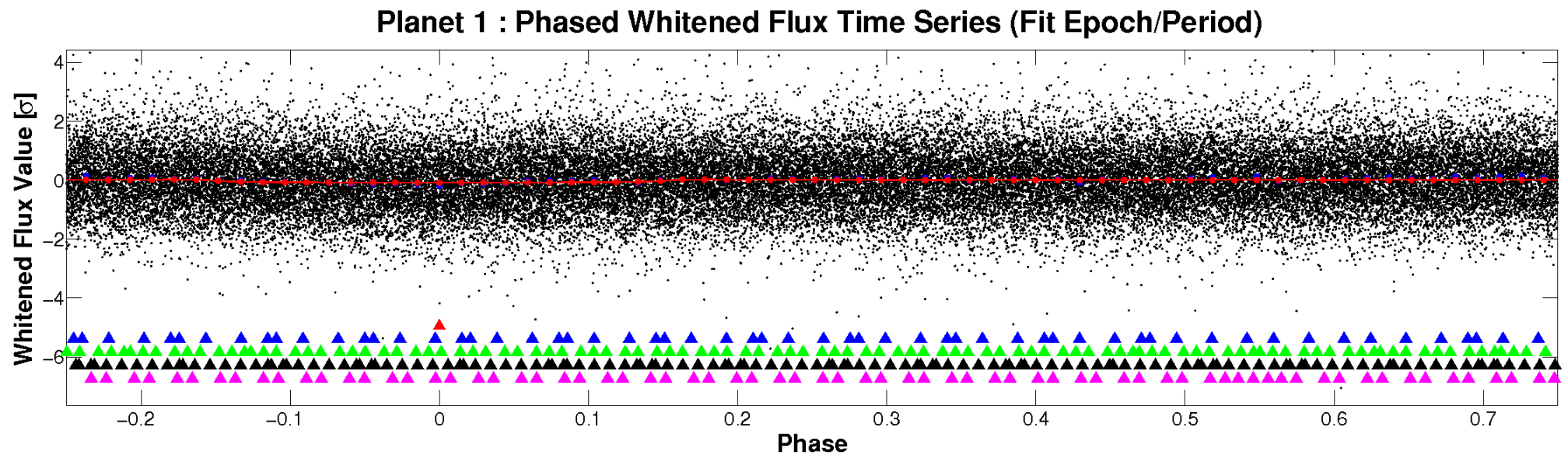
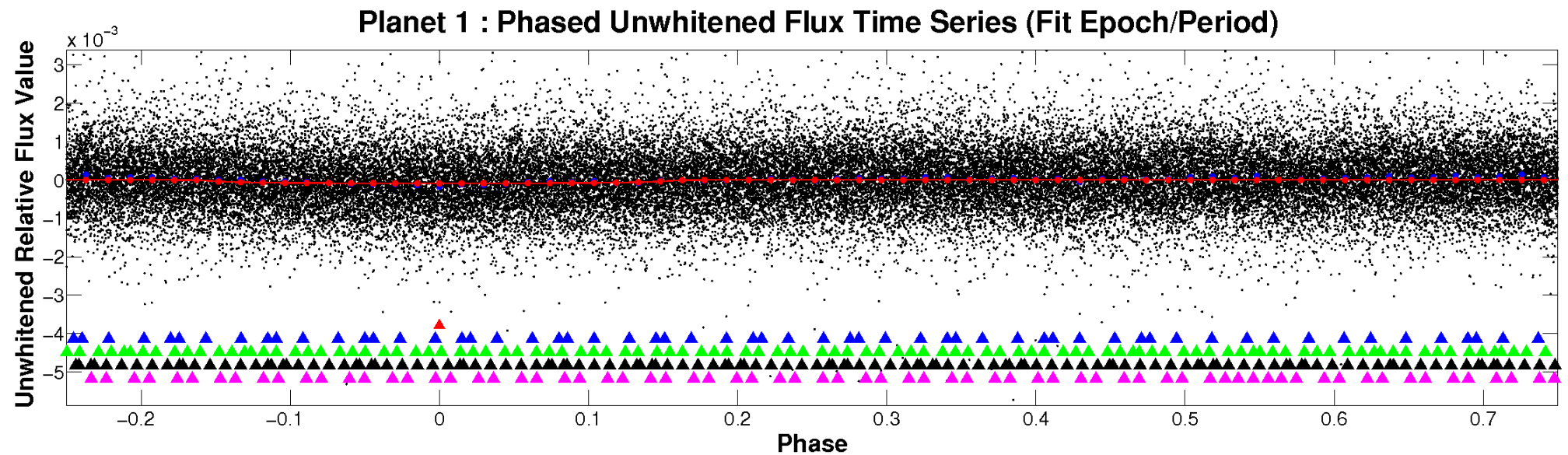


ALT Odd/Even

TCE 003759974-01

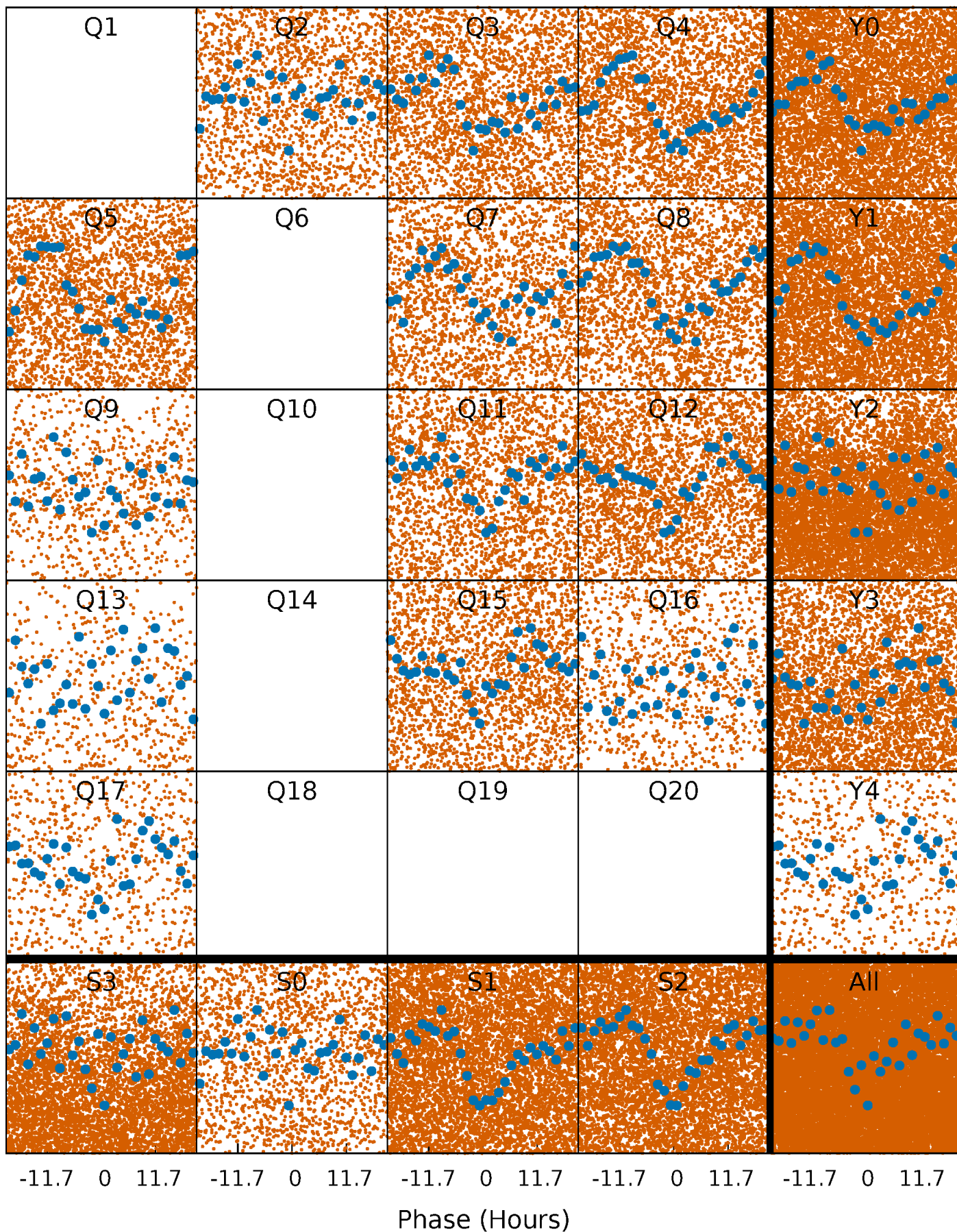


Non-Whitened Vs. Whitened Light Curve



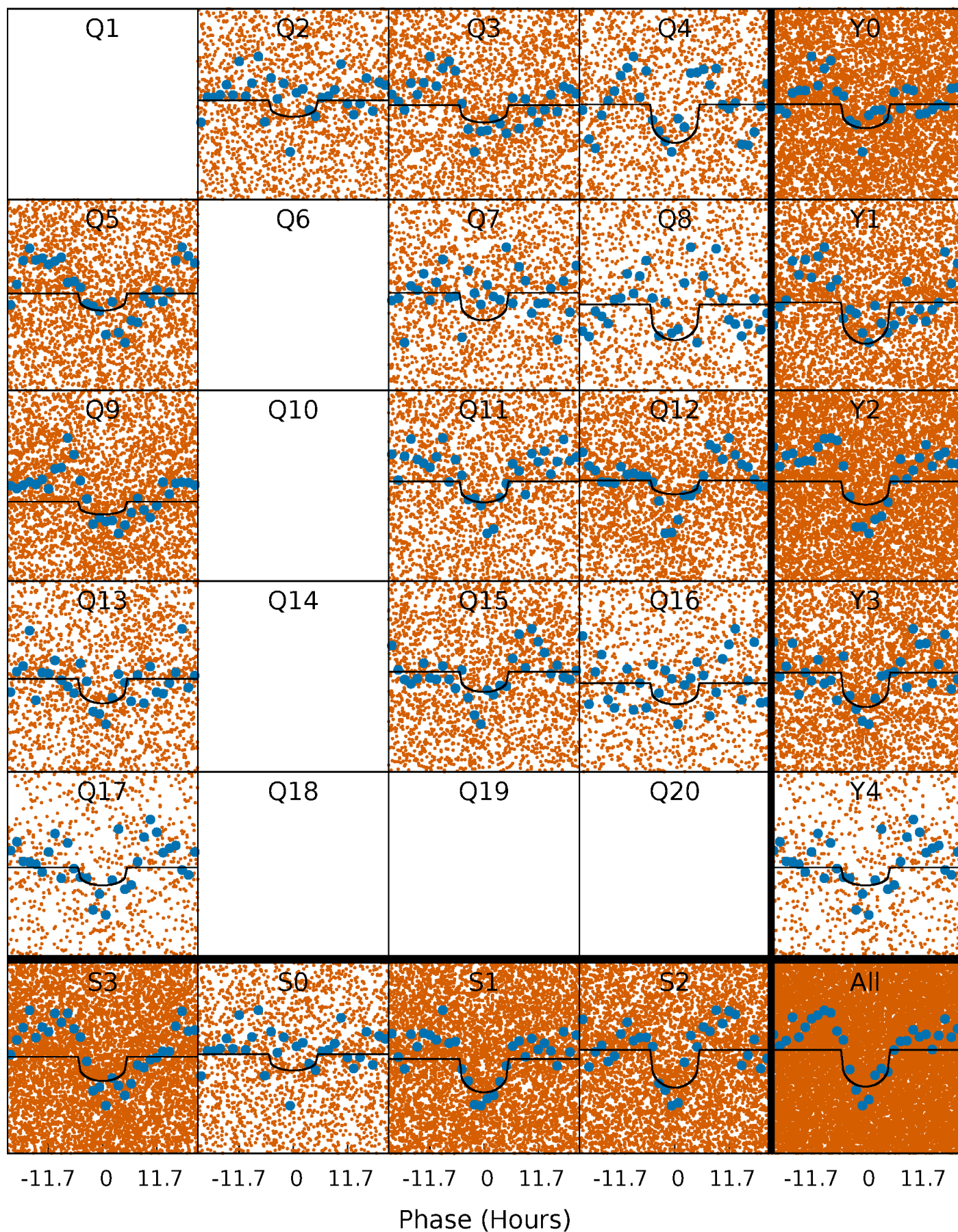
PDC Quarter-Phased Transit Curves

TCE 003759974-01 P= 1.379524 Days $T_0=132.771306$ (BKJD)



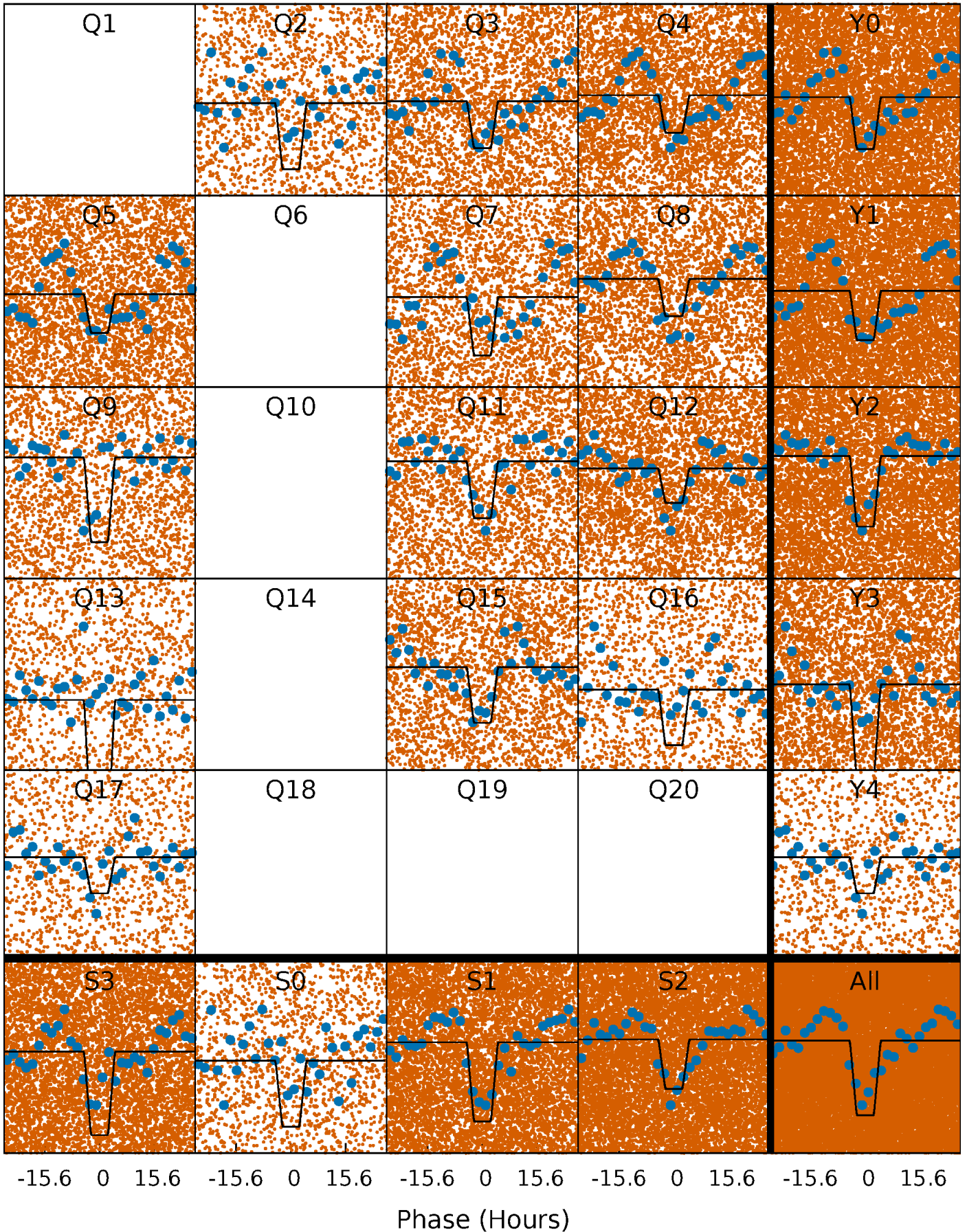
DV Quarter-Phased Transit Curves

TCE 003759974-01 P= 1.379524 Days $T_0=132.771306$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

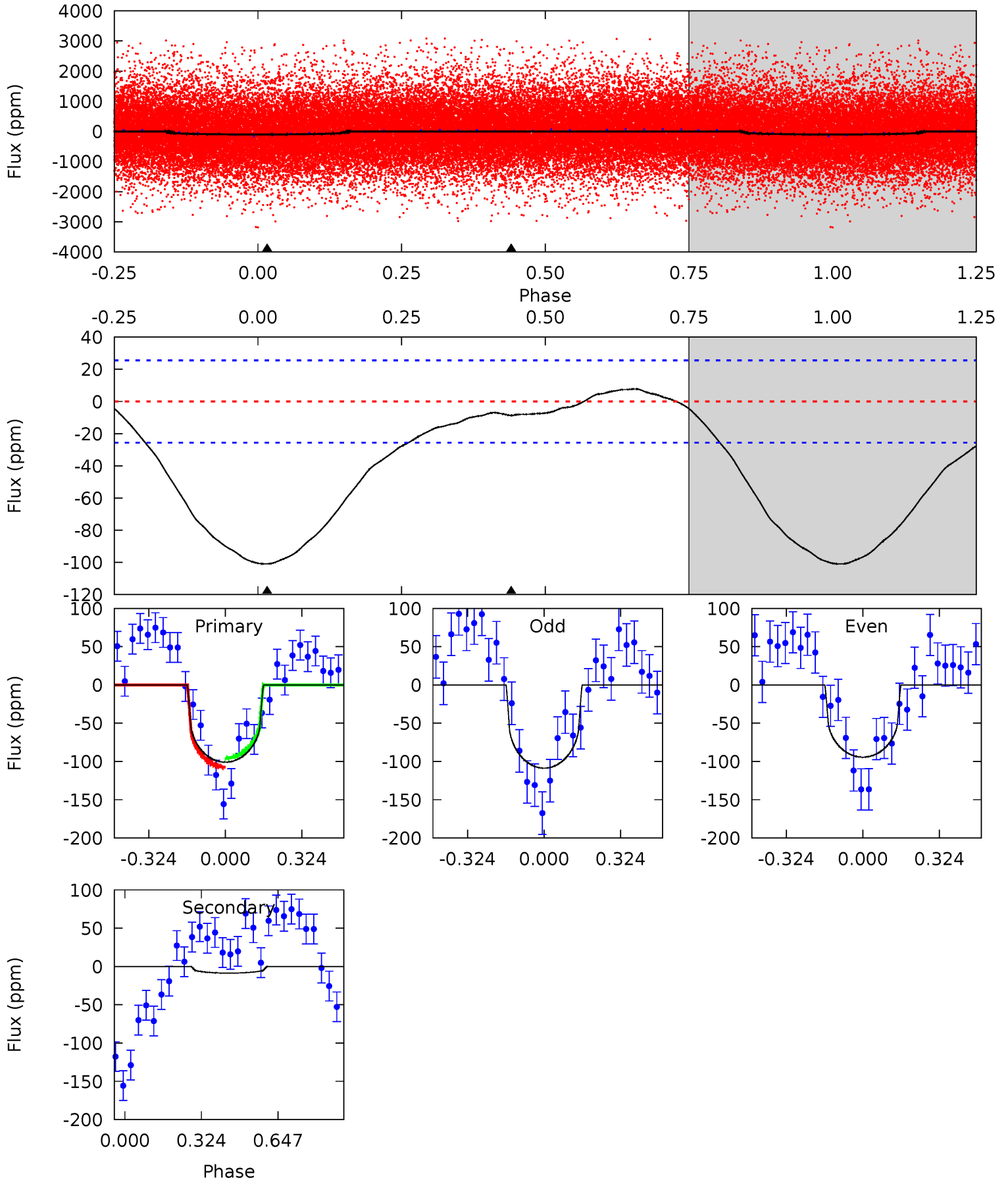
TCE 003759974-01 P= 1.379578 Days $T_0=132.752608$ (BKJD)



DV Model-Shift Uniqueness Test

003759974-01, P = 1.379524 Days, E = 132.771306 Days

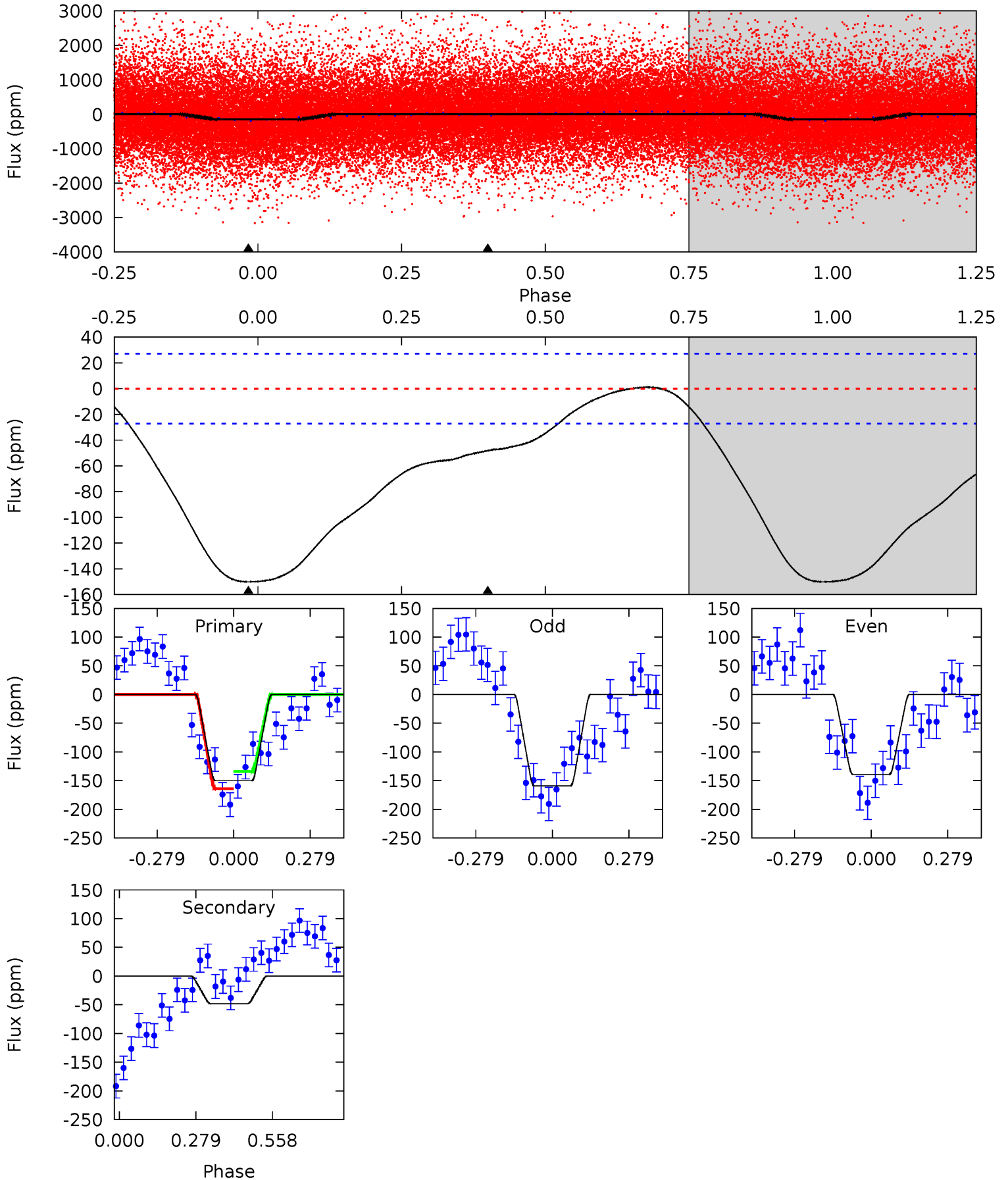
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.0	1.46	0	0	4.31	0.99	0.98	17.0	17.0	1.46	1.46	1.22	0.82	0.07	1.02



Alt Model-Shift Uniqueness Test

003759974-01, P = 1.379578 Days, E = 132.752608 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.0	7.71	0	0	4.34	1.08	0.51	24.0	24.0	7.71	7.71	1.60	0.91	0.01	2.39



Stellar Parameters For KIC 003759974

	$T_{\text{eff}}(K)$	$\log(g)$	[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 003759974-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-9 ± 6	$1.23^{+1.20}_{-0.78}$	2282^{+117}_{-104}	3226^{+1692}_{-5423}	$1.443^{+13.160}_{-1.207}$
Alt.	-48 ± 6	$1.74^{+1.18}_{-1.01}$	2293^{+107}_{-112}	4053^{+1852}_{-711}	$5.268^{+24.921}_{-3.489}$

T_{max} = Theoretical Maximum Planetary Temperature
 T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)
 A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

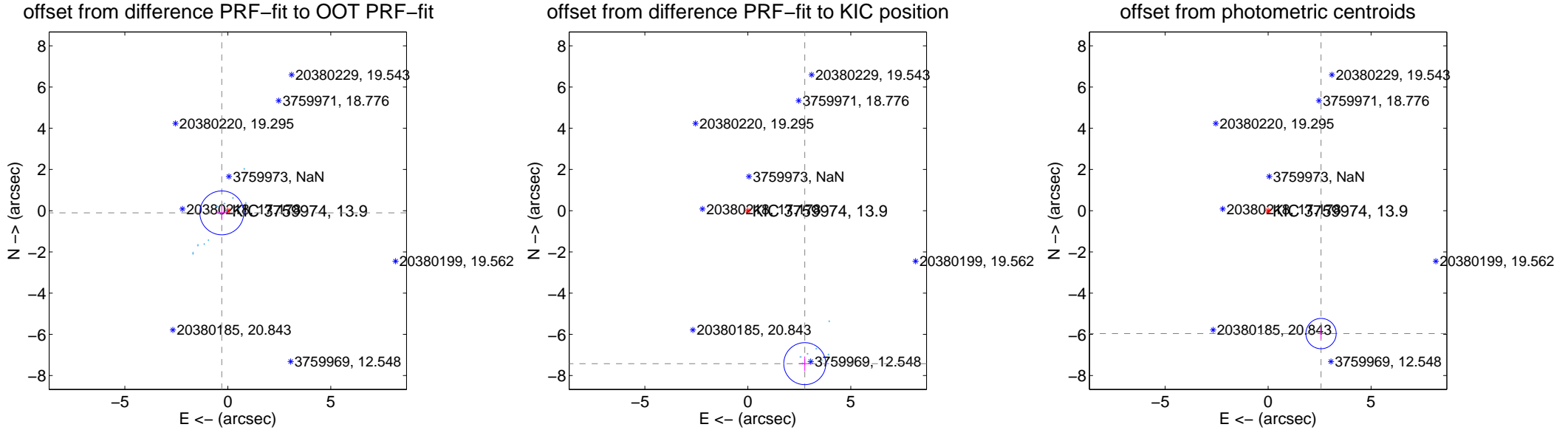
DV Centroid Data

Supplemental centroid analysis for 003759974-01. Kepler magnitude: 13.90. Transit SNR 9.33

There are 12 quarters with good PRF difference image offsets

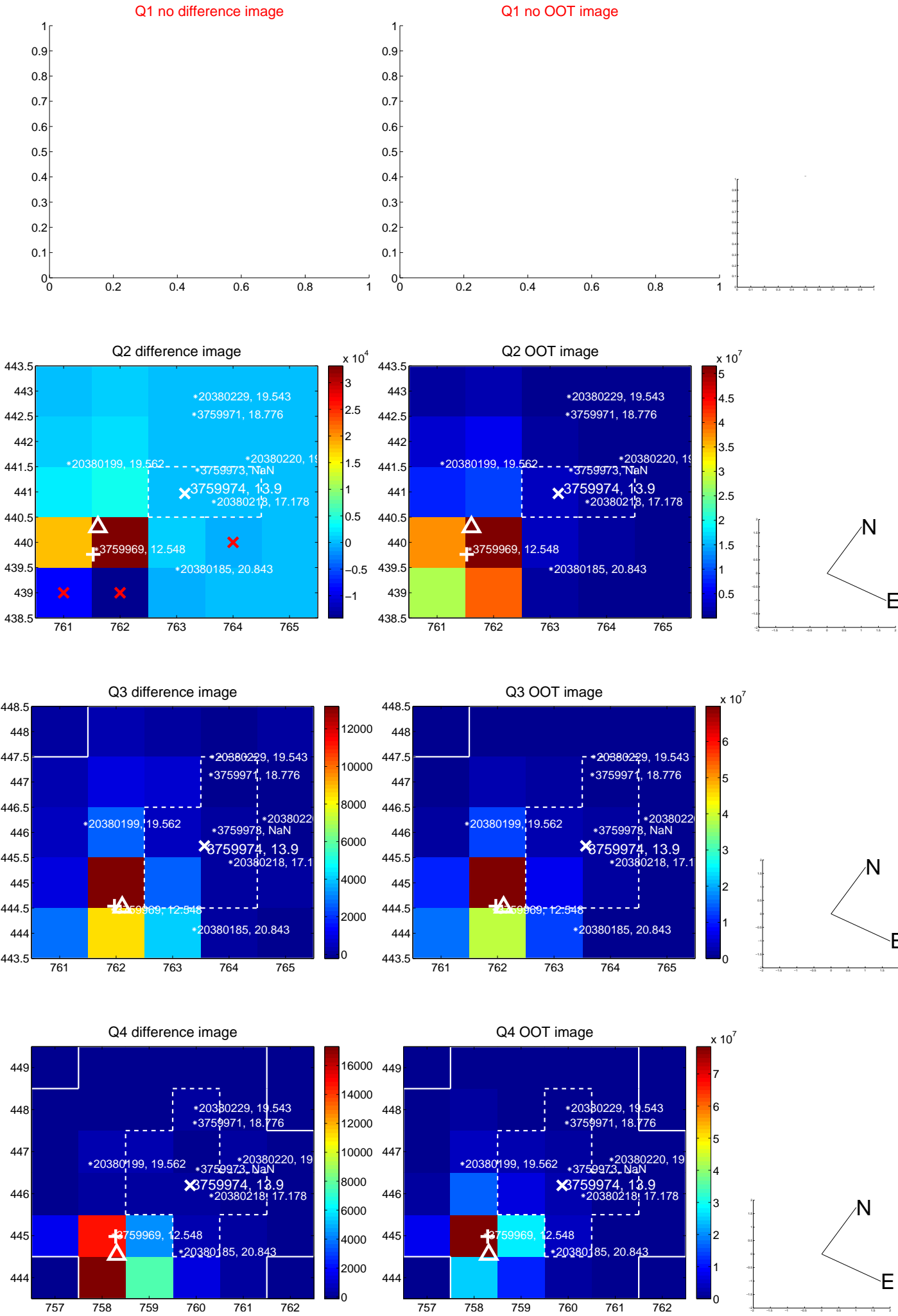
The OOT PRF centroid is offset from the target star catalog position by about 7.90 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.310 ± 0.355	0.87	0.292 ± 0.264	-0.106 ± 0.347
PRF-fit source offset from KIC position	7.923 ± 0.340	23.31	-2.765 ± 0.288	-7.425 ± 0.346
photometric centroid source offset	6.49 ± 0.25	26.48	-2.57 ± 0.18	-5.96 ± 0.26

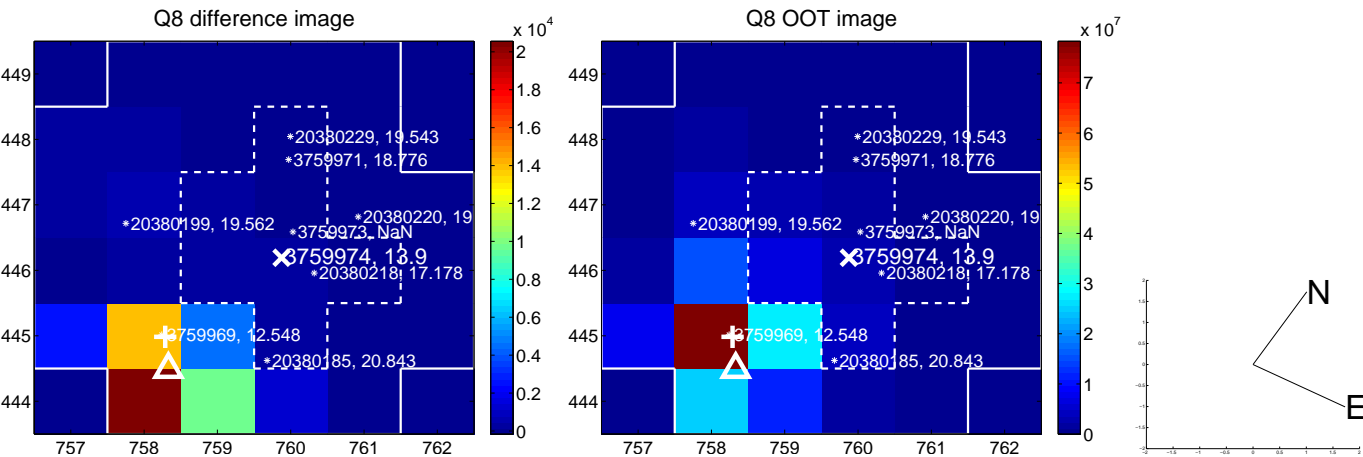
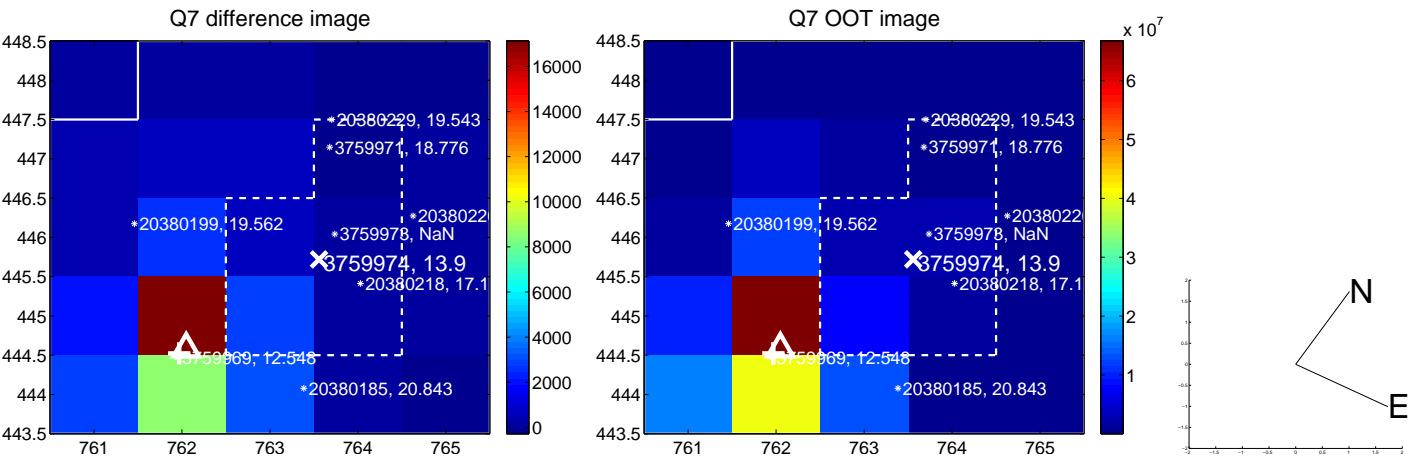
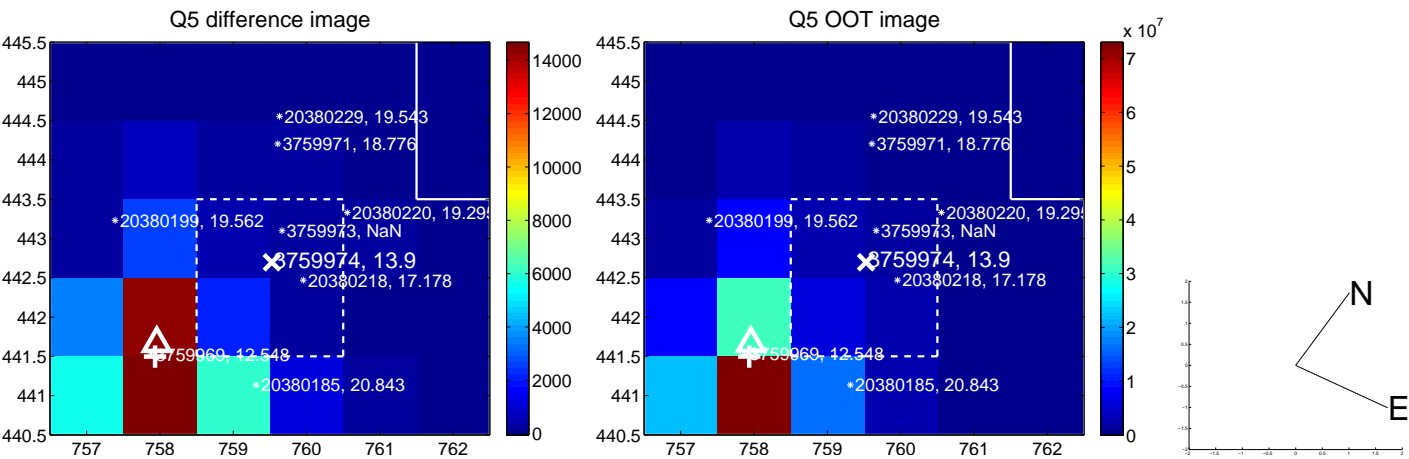


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

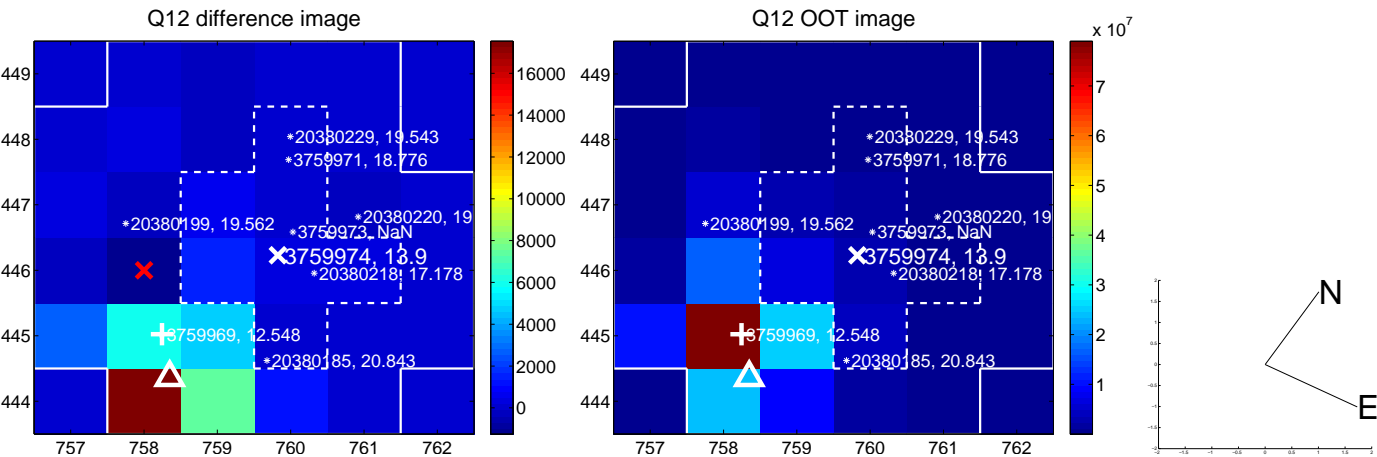
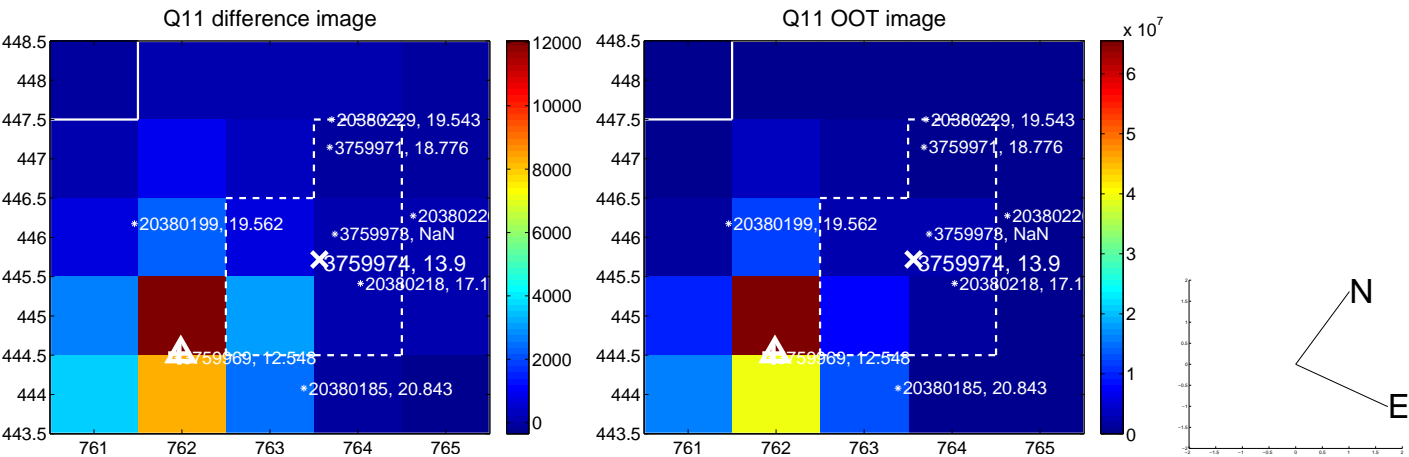
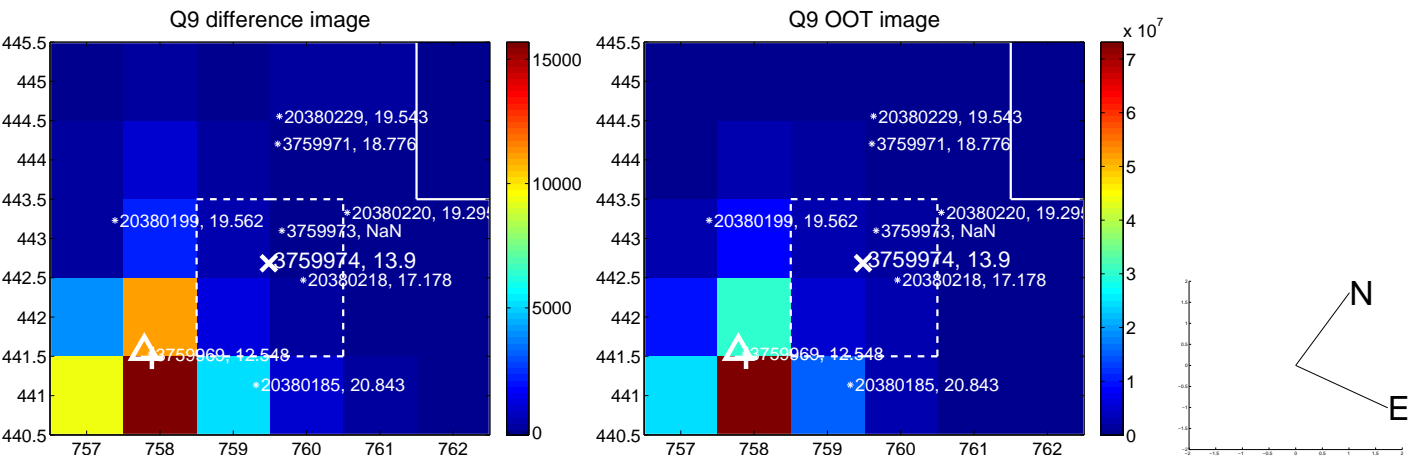
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



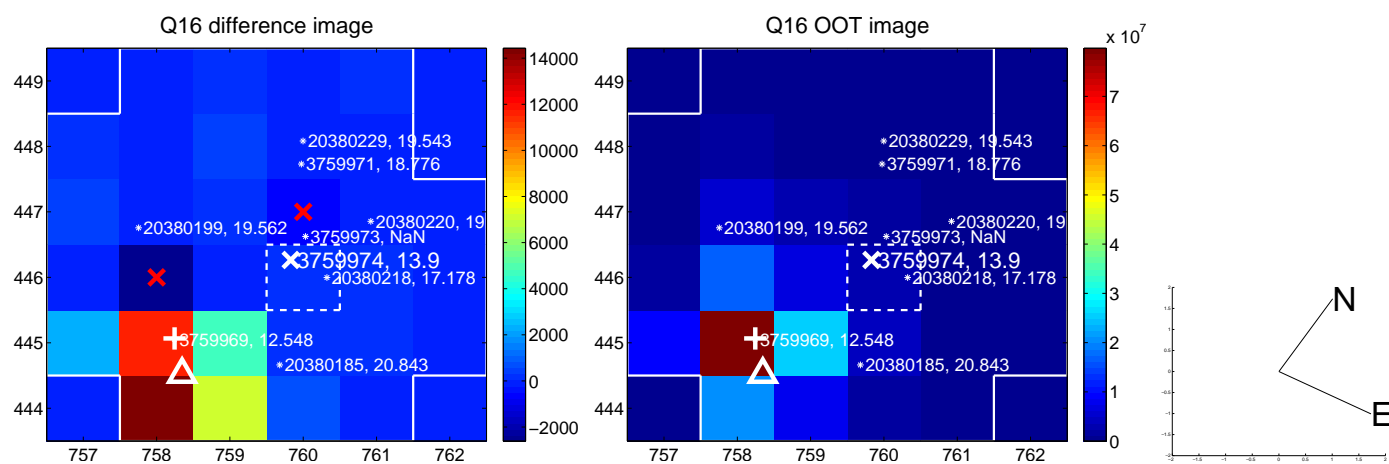
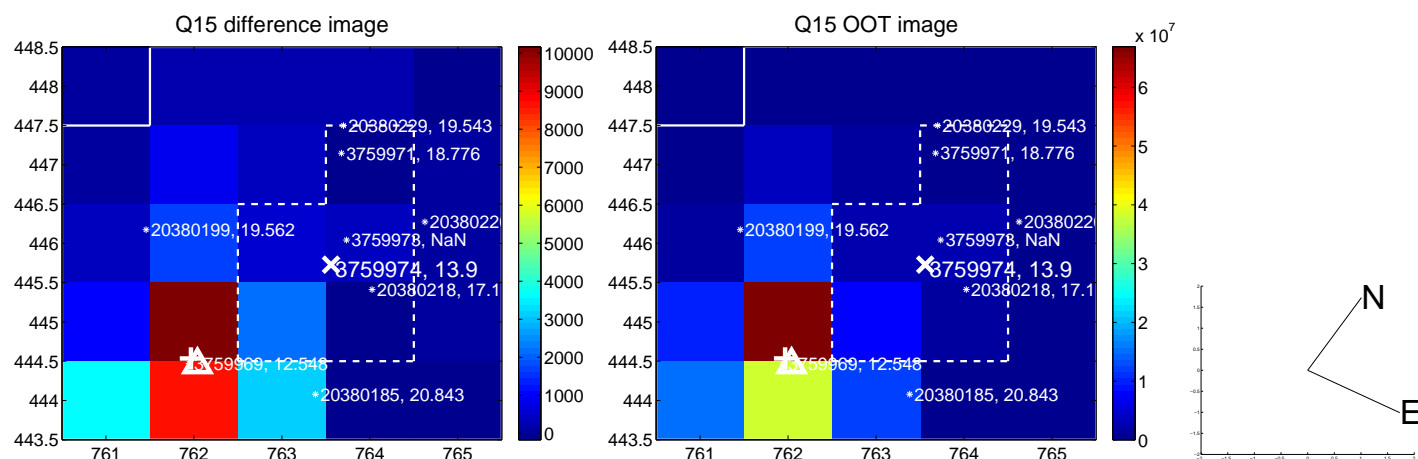
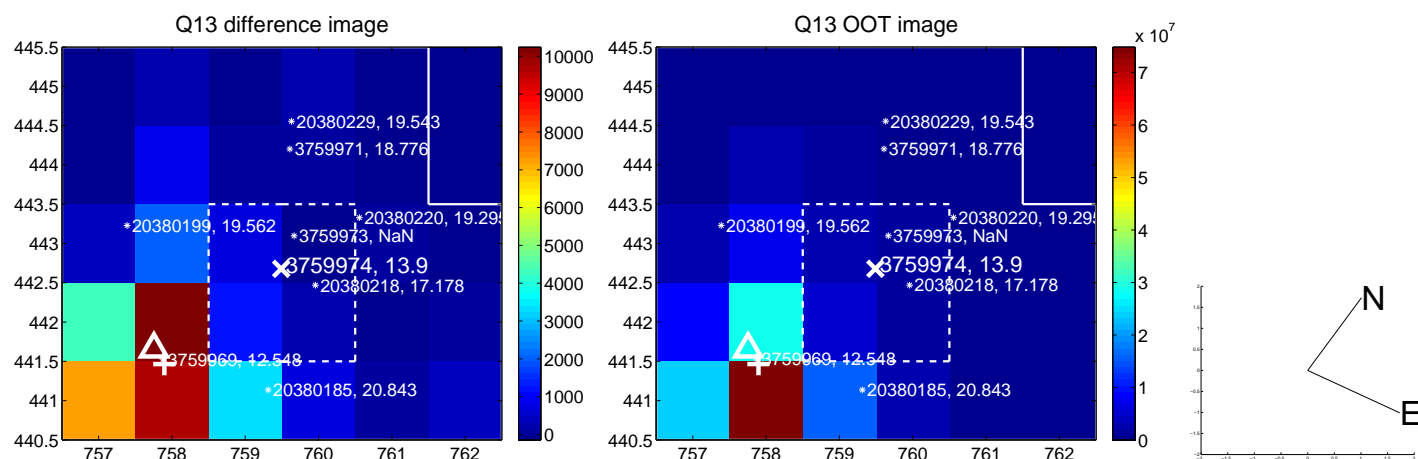
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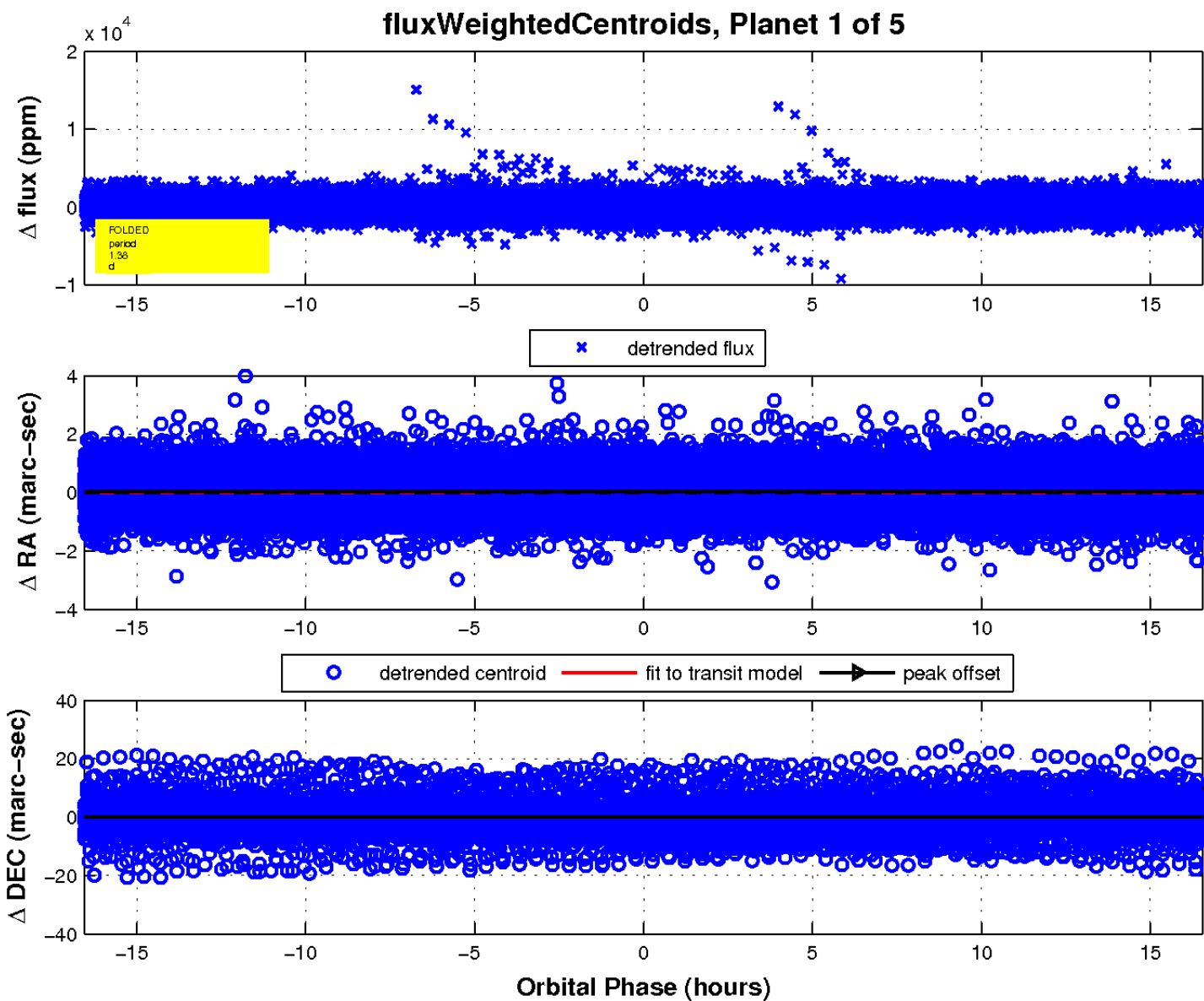
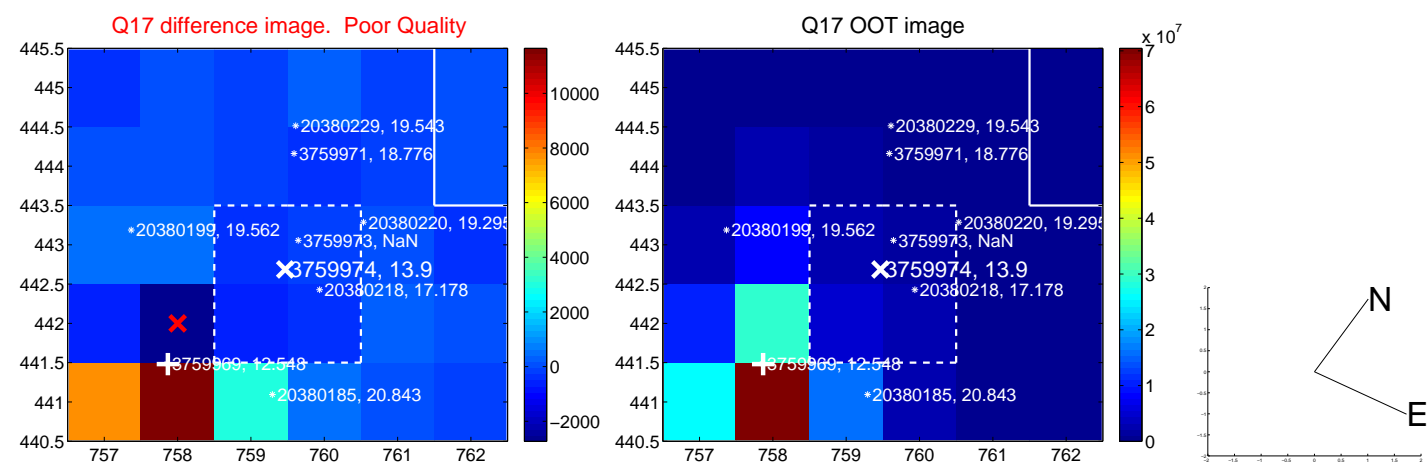
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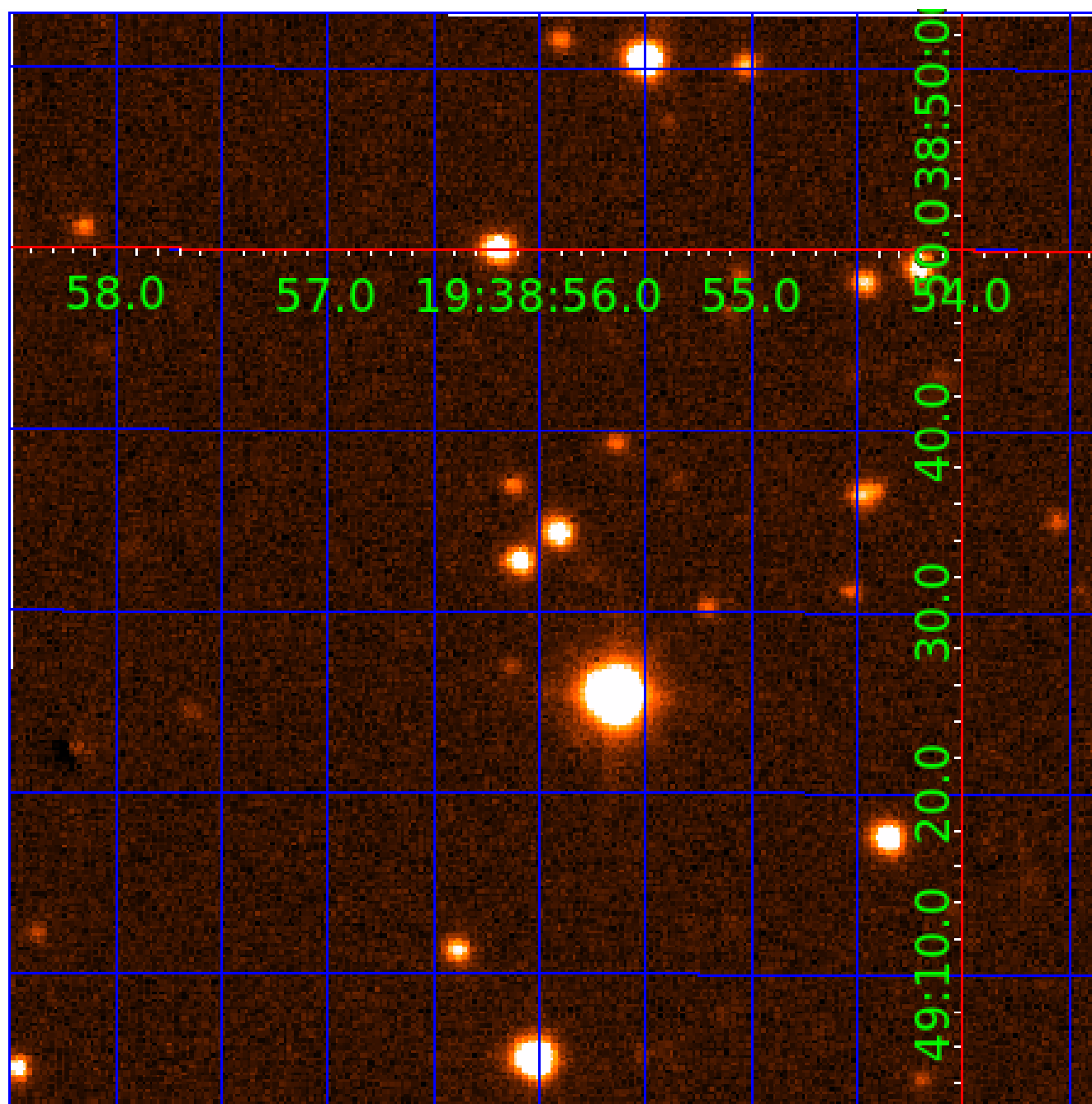


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003759974

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})
003759974-01	OBS	No	1.379524	132.771306	88.3	10.271	9.5	9.3	1.00	5780	0.93	1699.42
003759974-02	OBS	No	24.921223	137.869185	1899.1	1.669	13.7	12.9	1.00	5780	4.50	35.85
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003759974-04	OBS	No	11.295735	138.553900	881.3	2.396	11.2	9.9	1.00	5780	3.53	102.97
003759974-05	OBS	No	20.653045	132.158498	1192.0	2.655	11.5	10.8	1.00	5780	3.75	46.06

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003759974-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET
003759974-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET
003759974-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS—HALO_GHOST
003759974-04	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_DIFFS
003759974-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS—HALO_GHOST

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

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

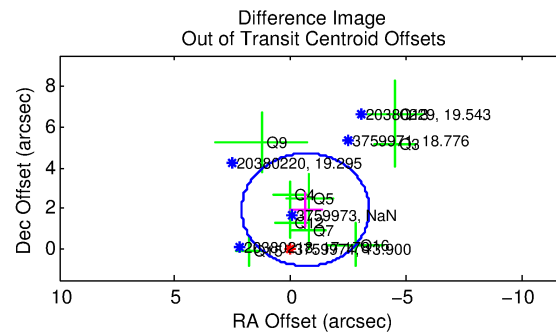
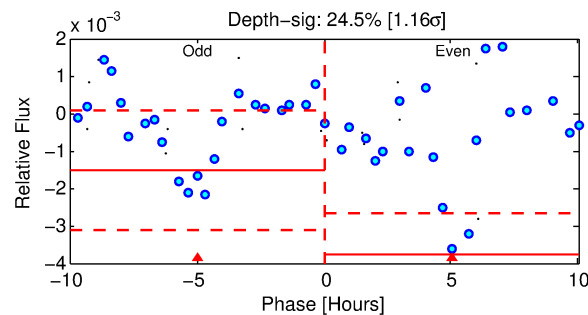
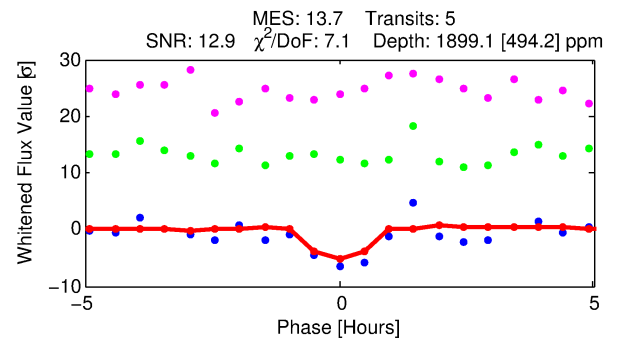
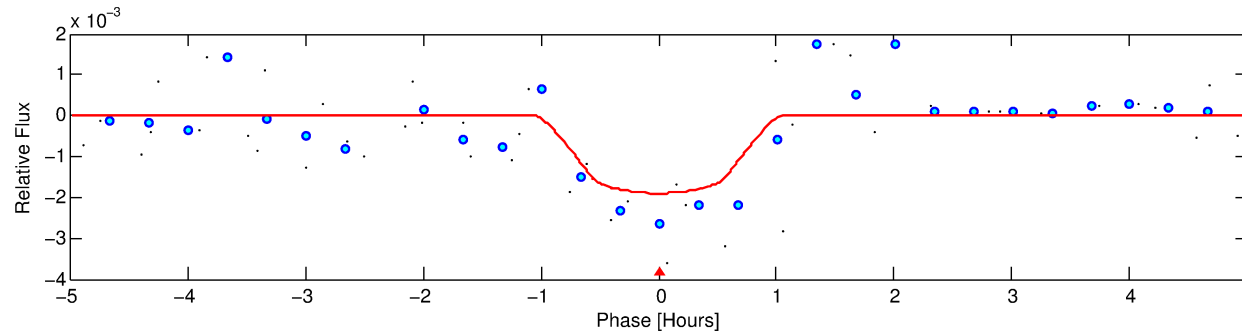
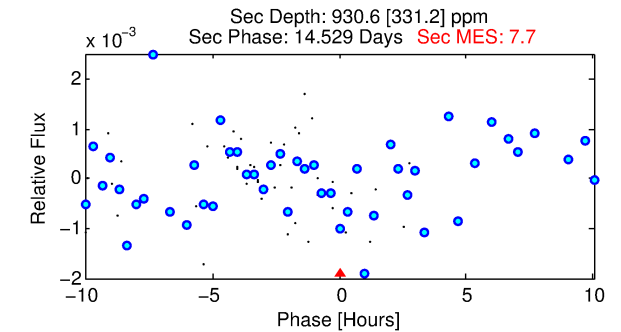
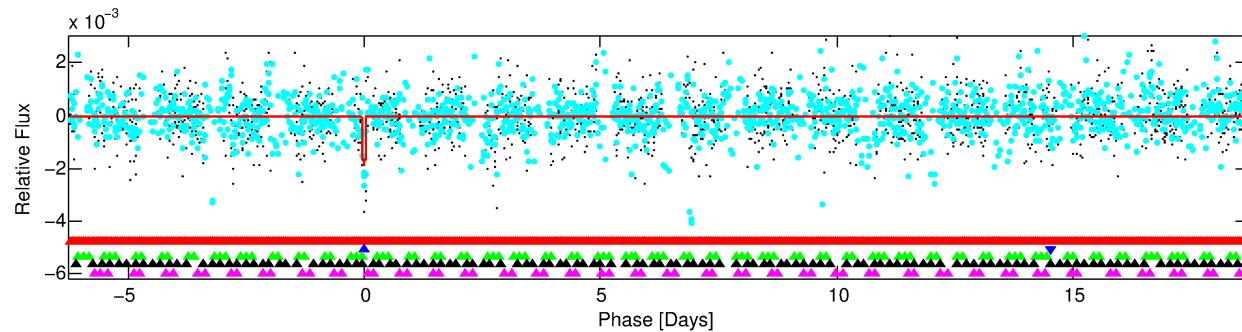
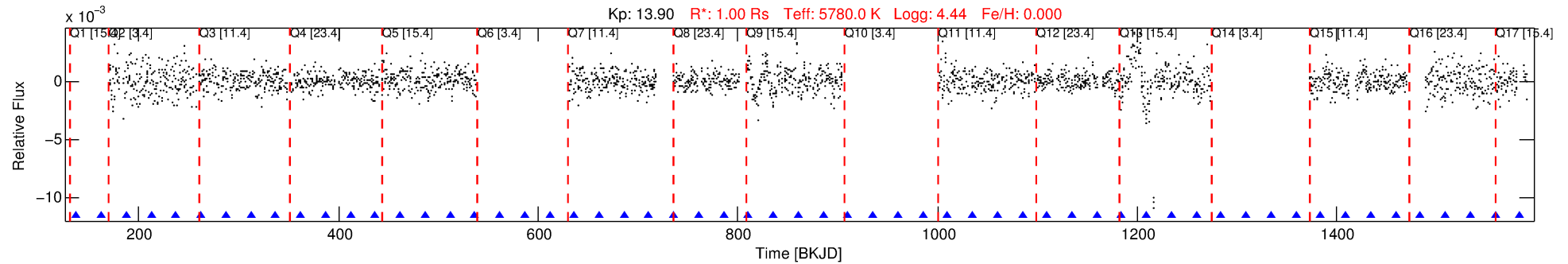
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003759974-02

No Significant Match Found

DV One-Page Summary

KIC: 3759974 Candidate: 2 of 5 Period: 24.921 d



DV Fit Results:

Period = 24.92122 [0.00105] d
Epoch = 137.8692 [0.0317] BKJD
Rp/R* = 0.0413 [0.3688]
a/R* = 101.22 [3922.82]
b = 0.55 [50.49]
Seff = 35.85 [0.00]
Teq = 624 [0] K
Rp = 4.50 [40.24] Re
a = 0.1670 [0.0000] AU
Ag = 704.41 [12595.03] [0.06%]
Teffp = 4970 [22216] K [0.20%]

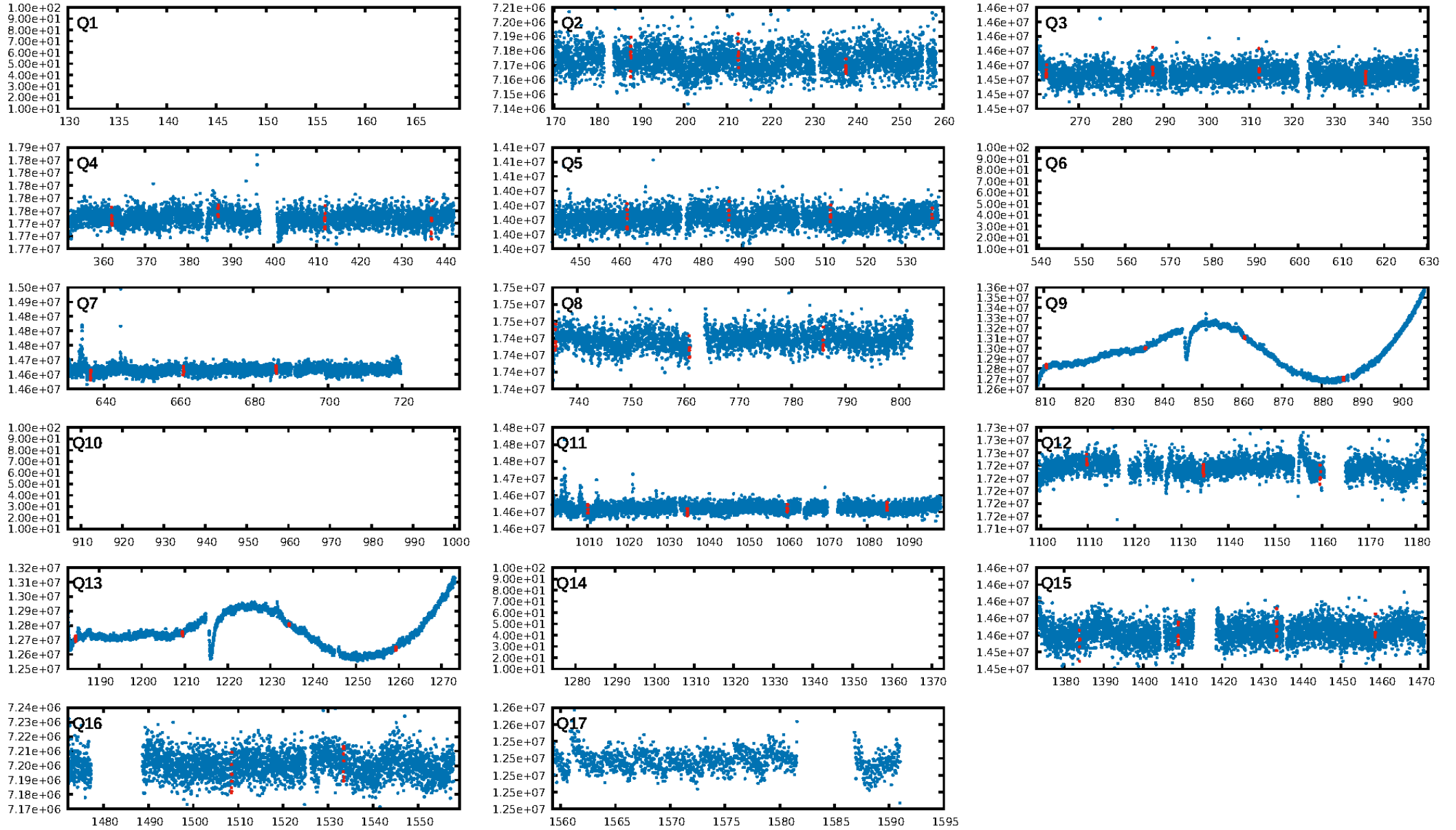
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [32.67%]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 1.9%
Bootstrap-pfa: 2.71e-17
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: -0.3522
Centroid-sig: 32.6%
Centroid-so: 6.198 arcsec [56.15%]
OotOffset-rm: 2.045 arcsec [2.23%]
KicOffset-rm: 6.501 arcsec [8.21%]
OotOffset-st: 0/3/3/3 [9]
KicOffset-st: 0/3/3/3 [9]
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DiffImageOverlap-fno: 0.58 [7/12]

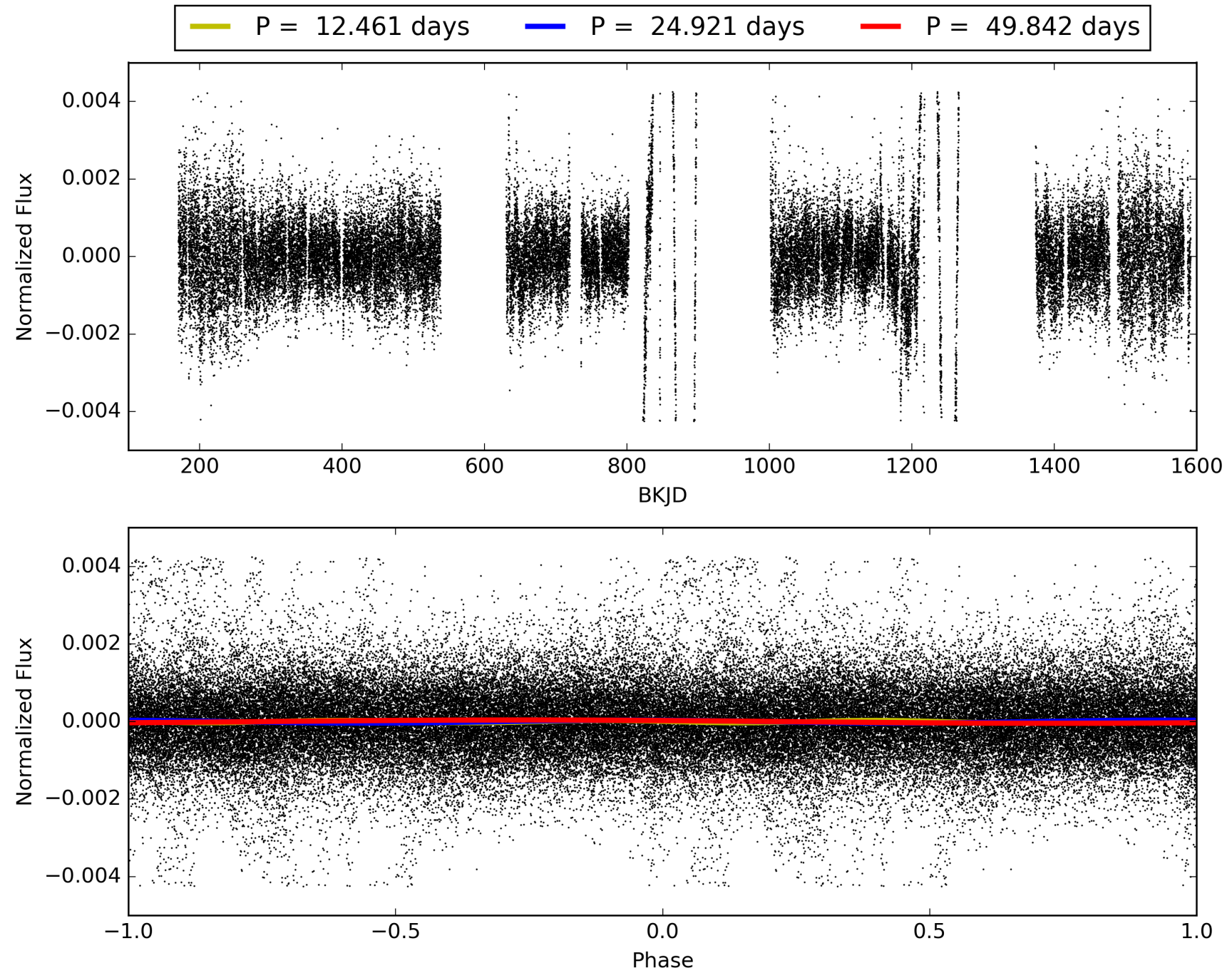
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 003759974-02, PDC Light Curves

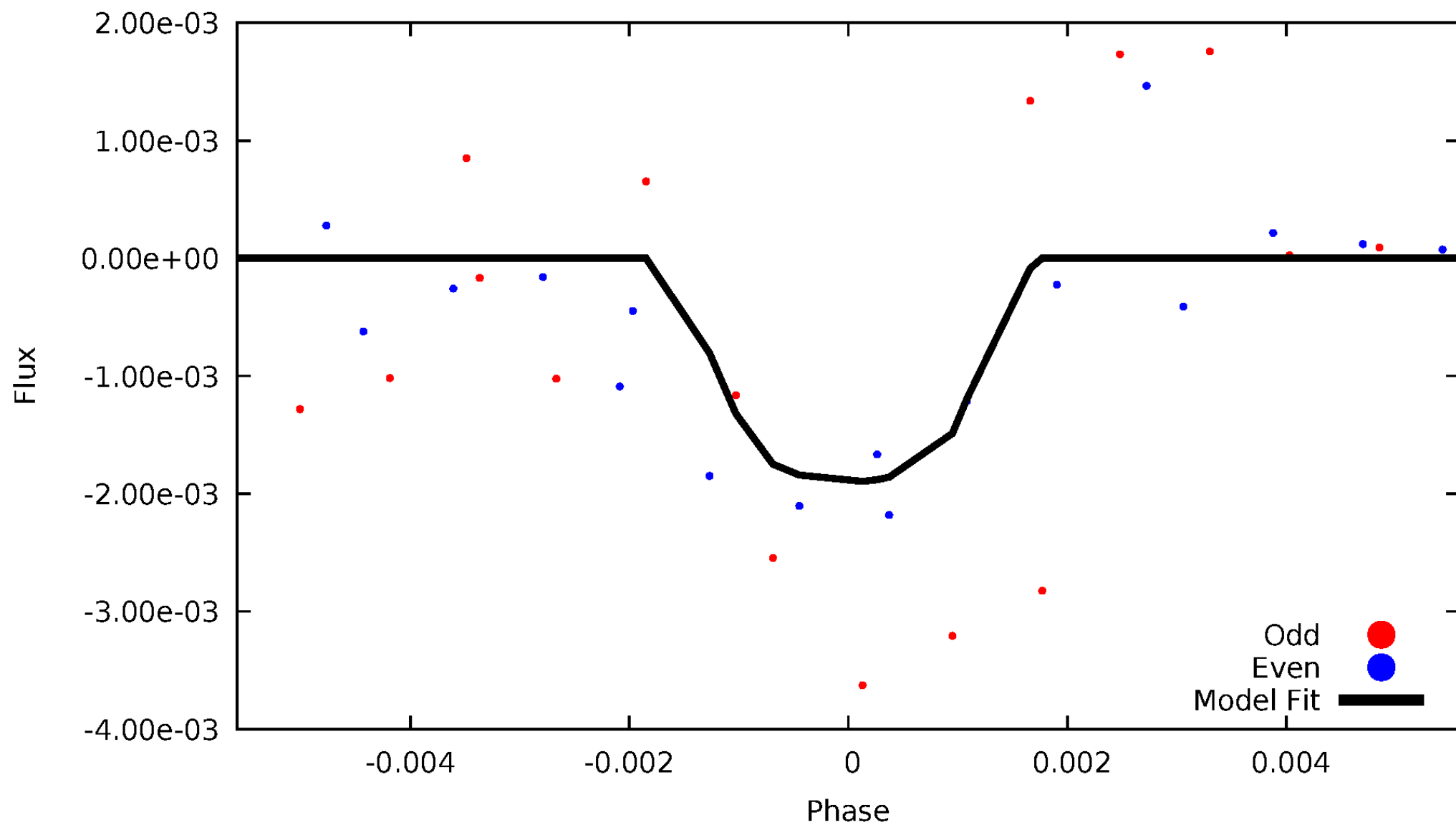


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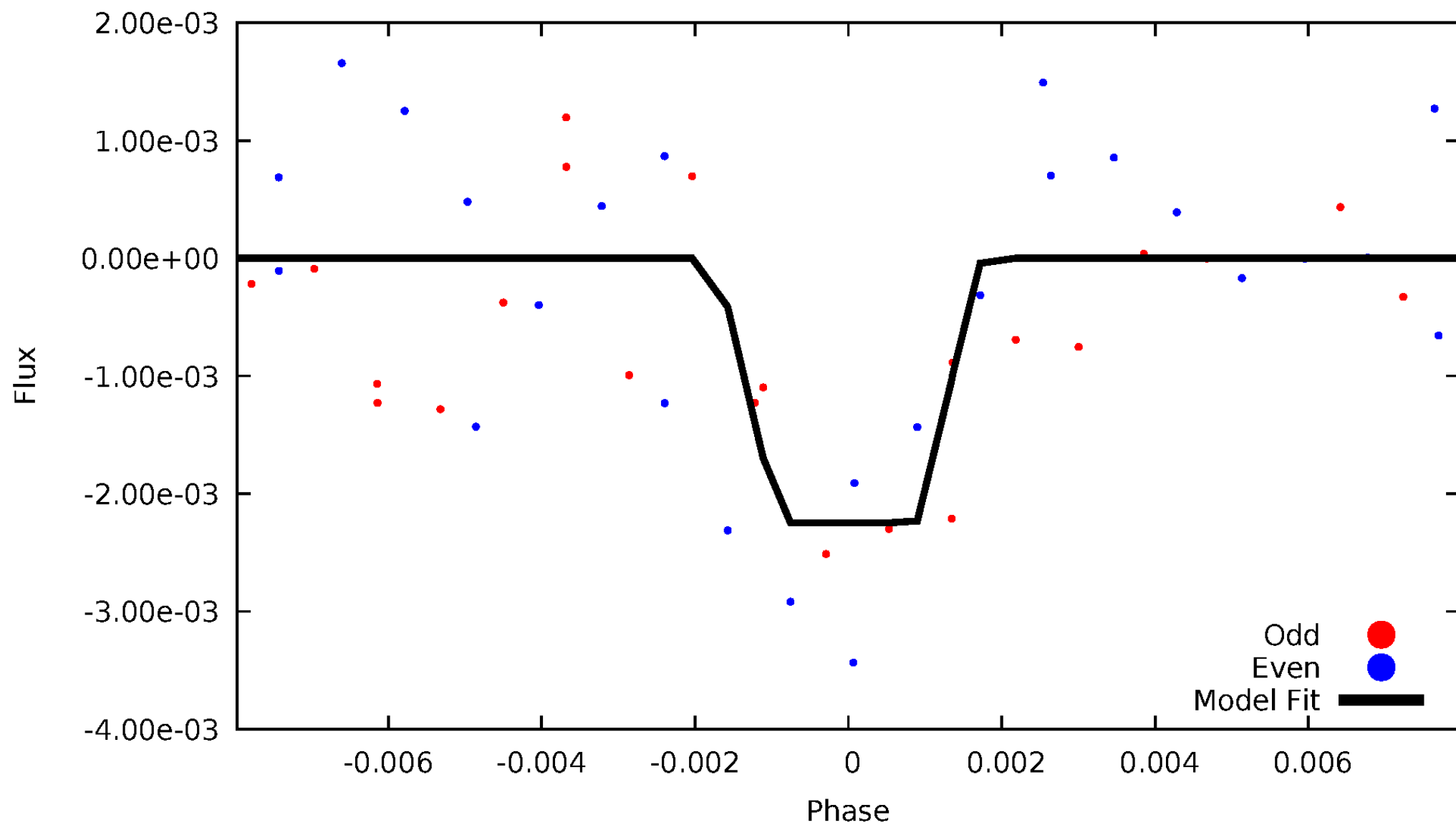
DV Odd/Even

TCE 003759974-02



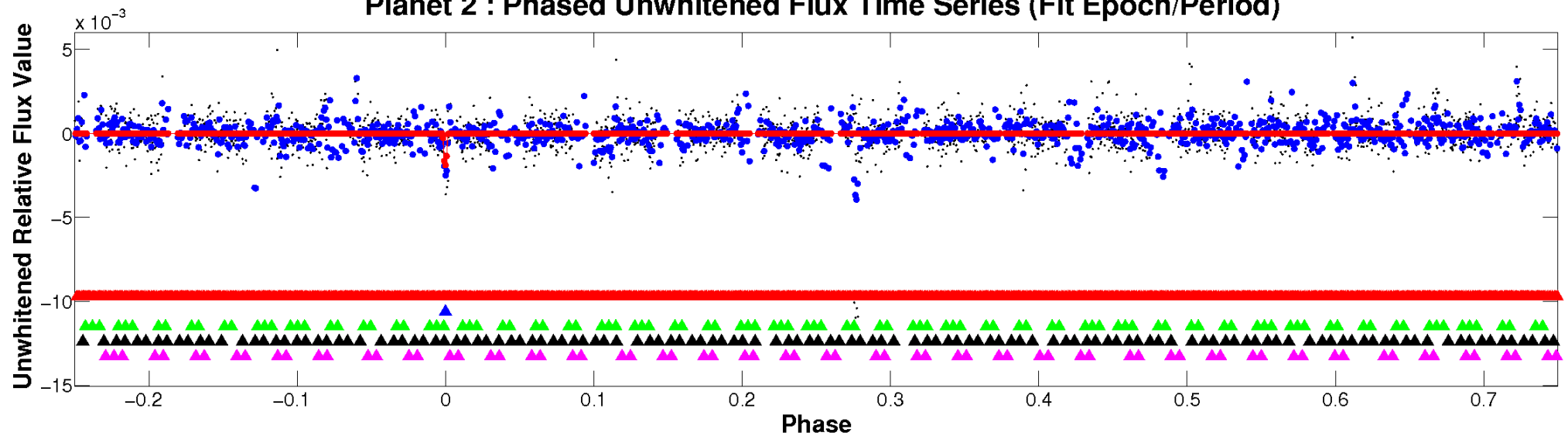
ALT Odd/Even

TCE 003759974-02

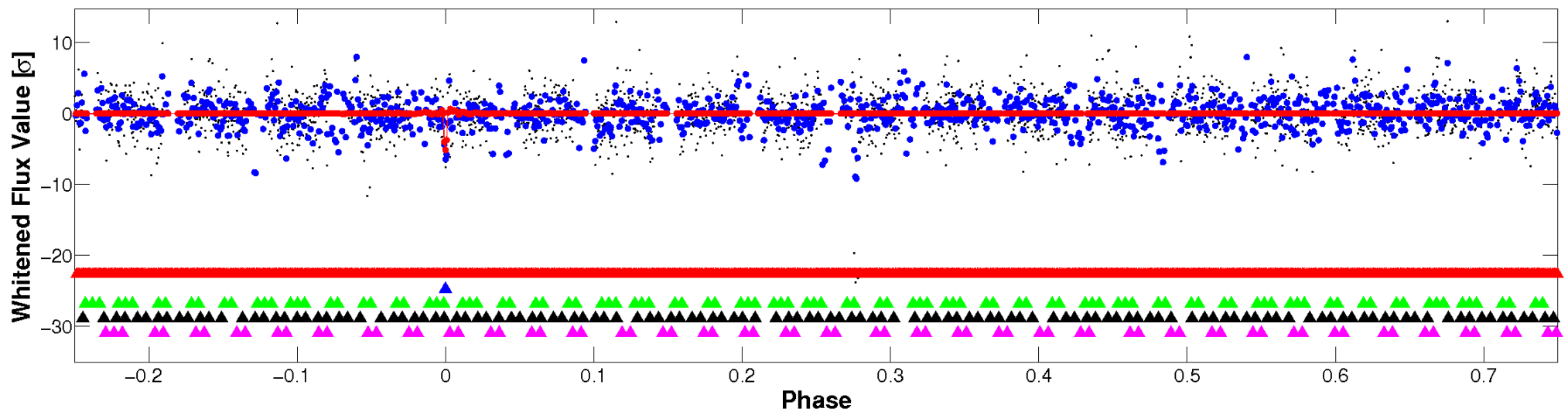


Non-Whitened Vs. Whitened Light Curve

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

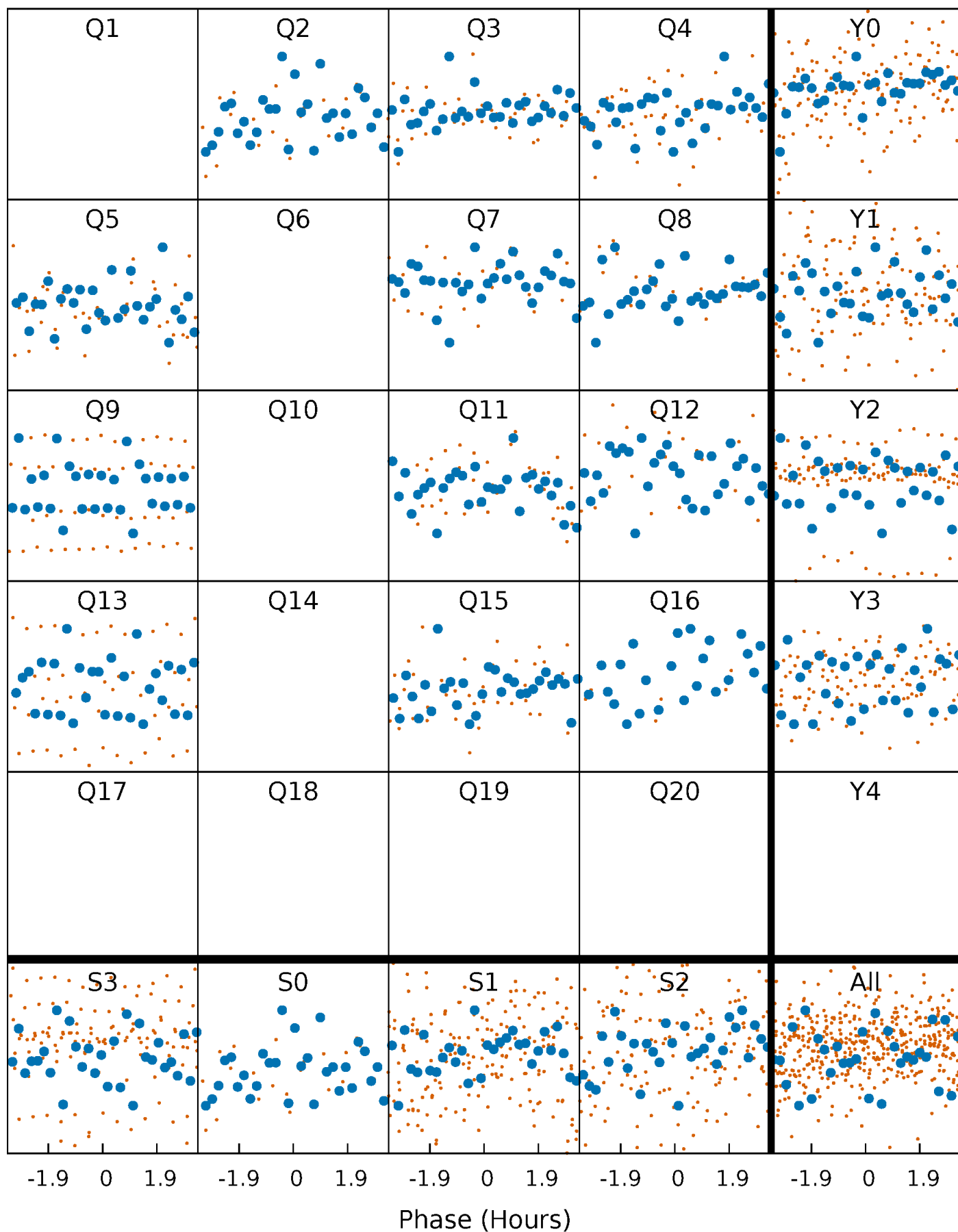


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



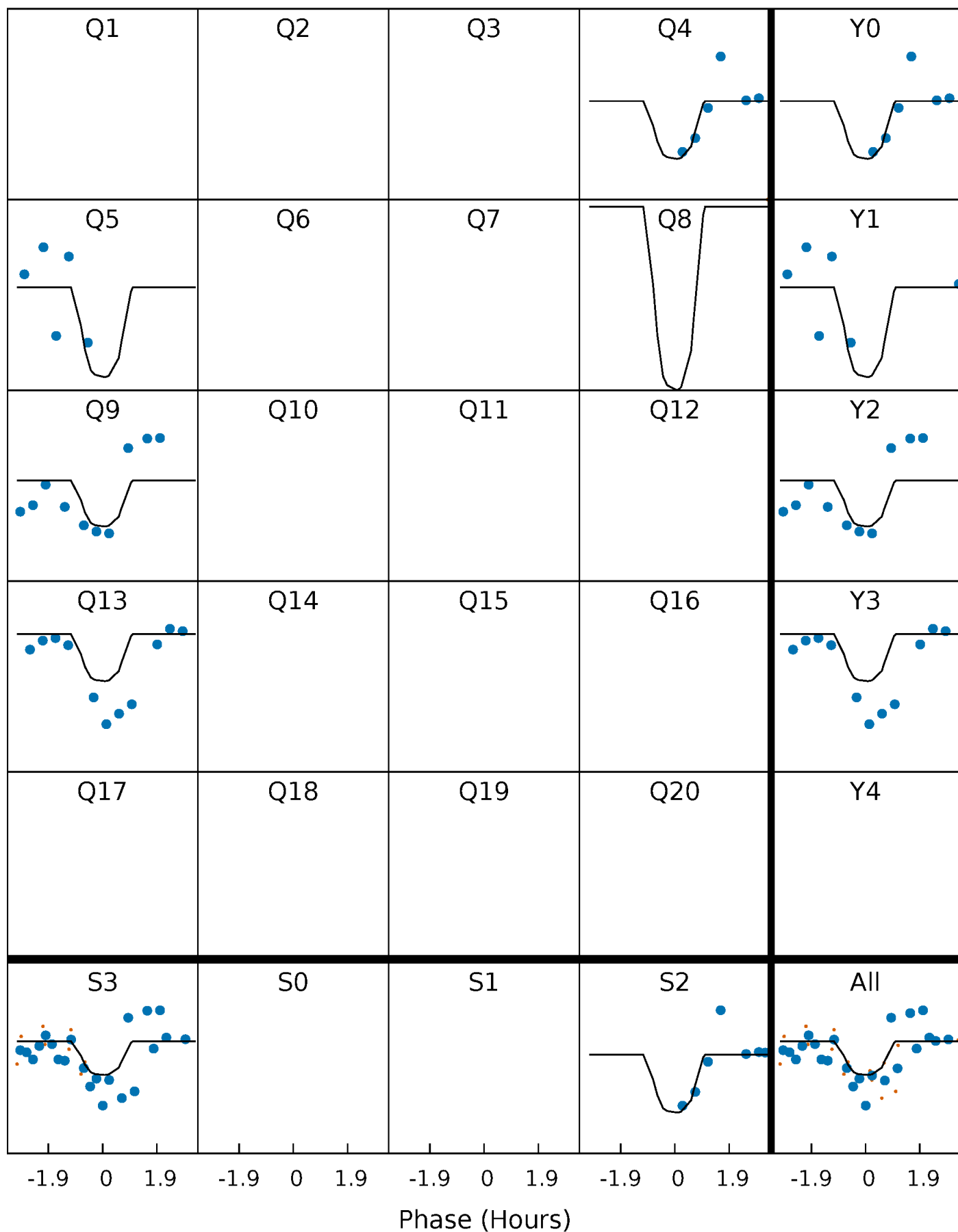
PDC Quarter-Phased Transit Curves

TCE 003759974-02 P= 24.921223 Days $T_0=137.869185$ (BKJD)



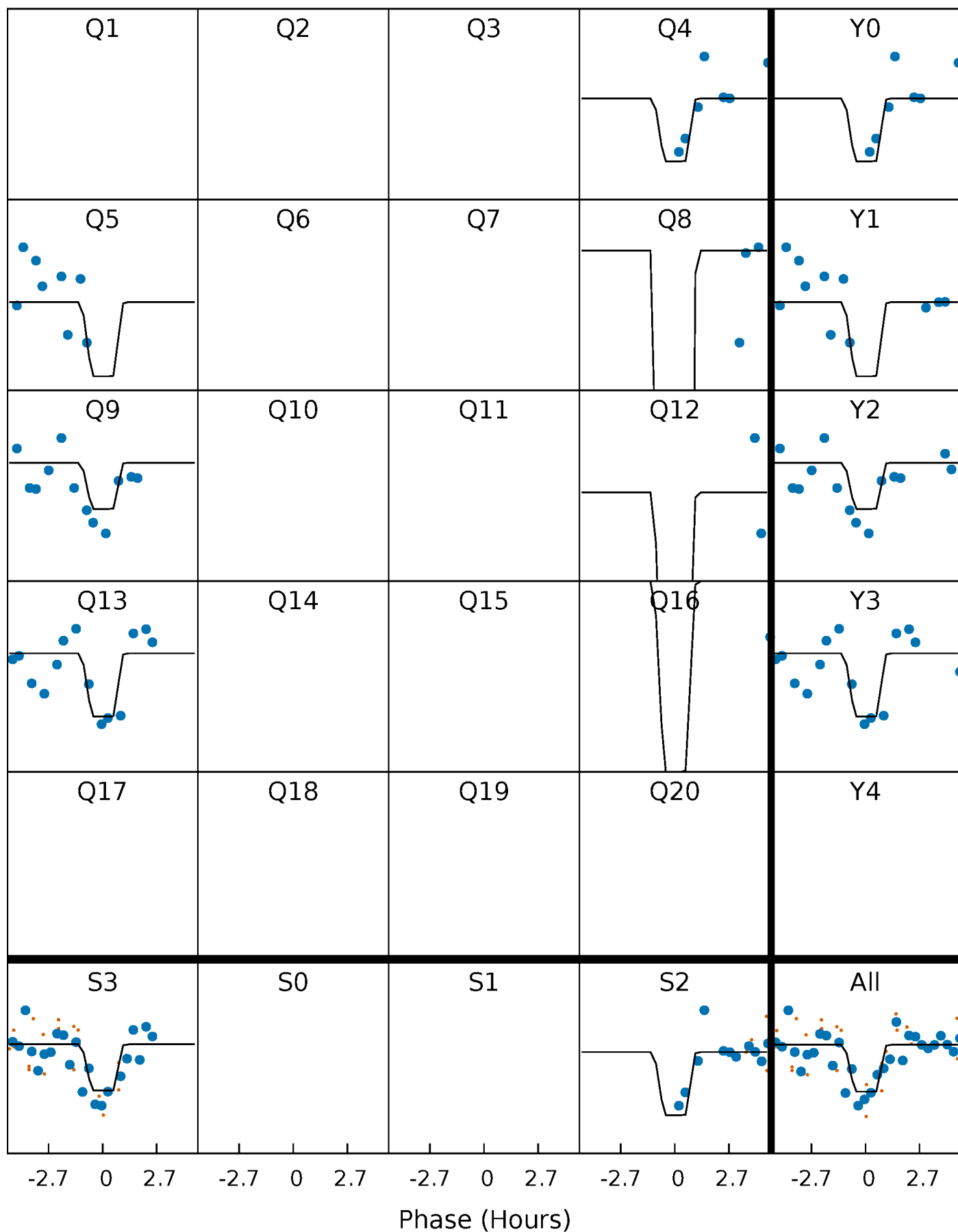
DV Quarter-Phased Transit Curves

TCE 003759974-02 P= 24.921223 Days $T_0=137.869185$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

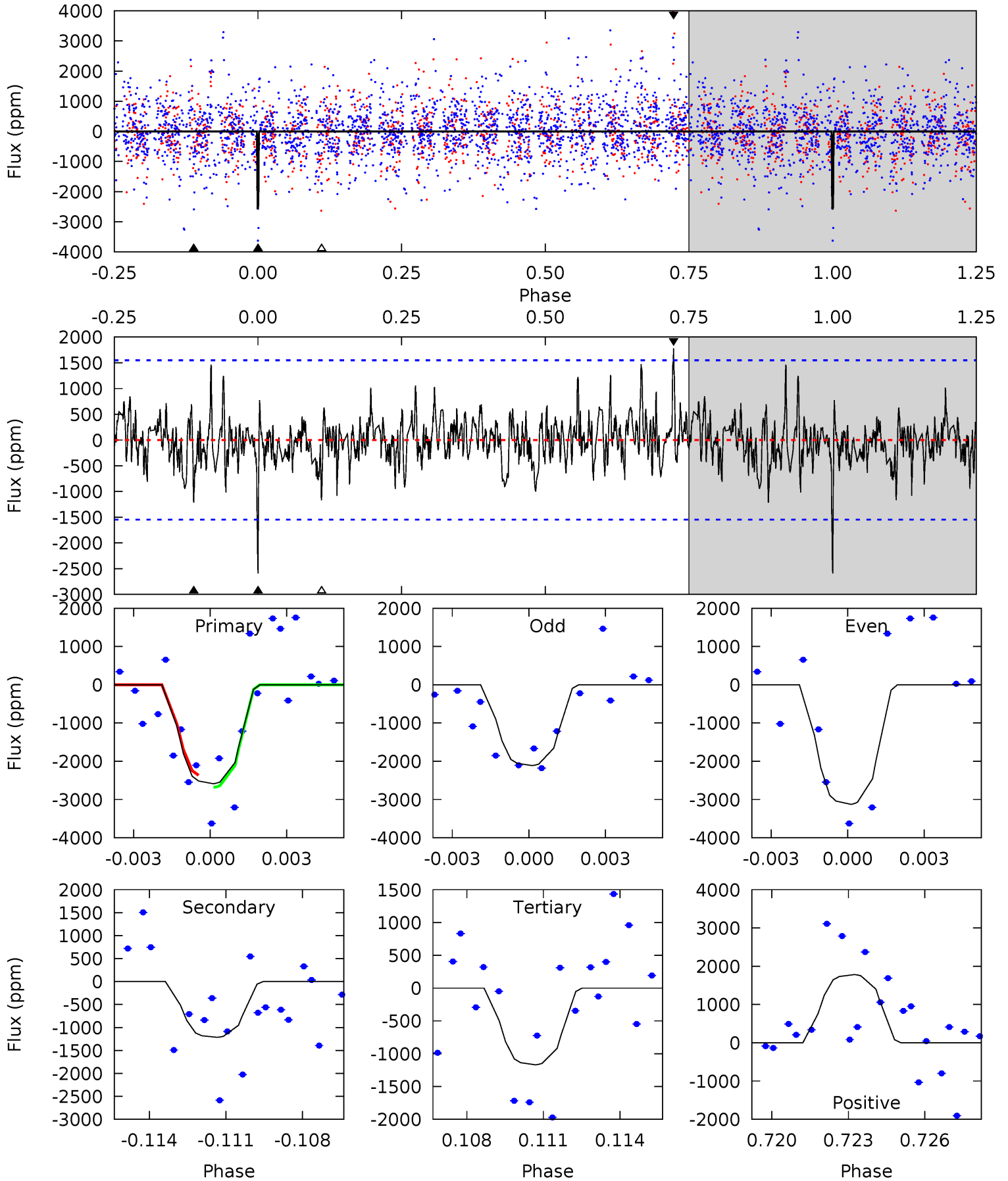
TCE 003759974-02 P= 24.921414 Days $T_0=137.871495$ (BKJD)



DV Model-Shift Uniqueness Test

003759974-02, P = 24.921223 Days, E = 137.869185 Days

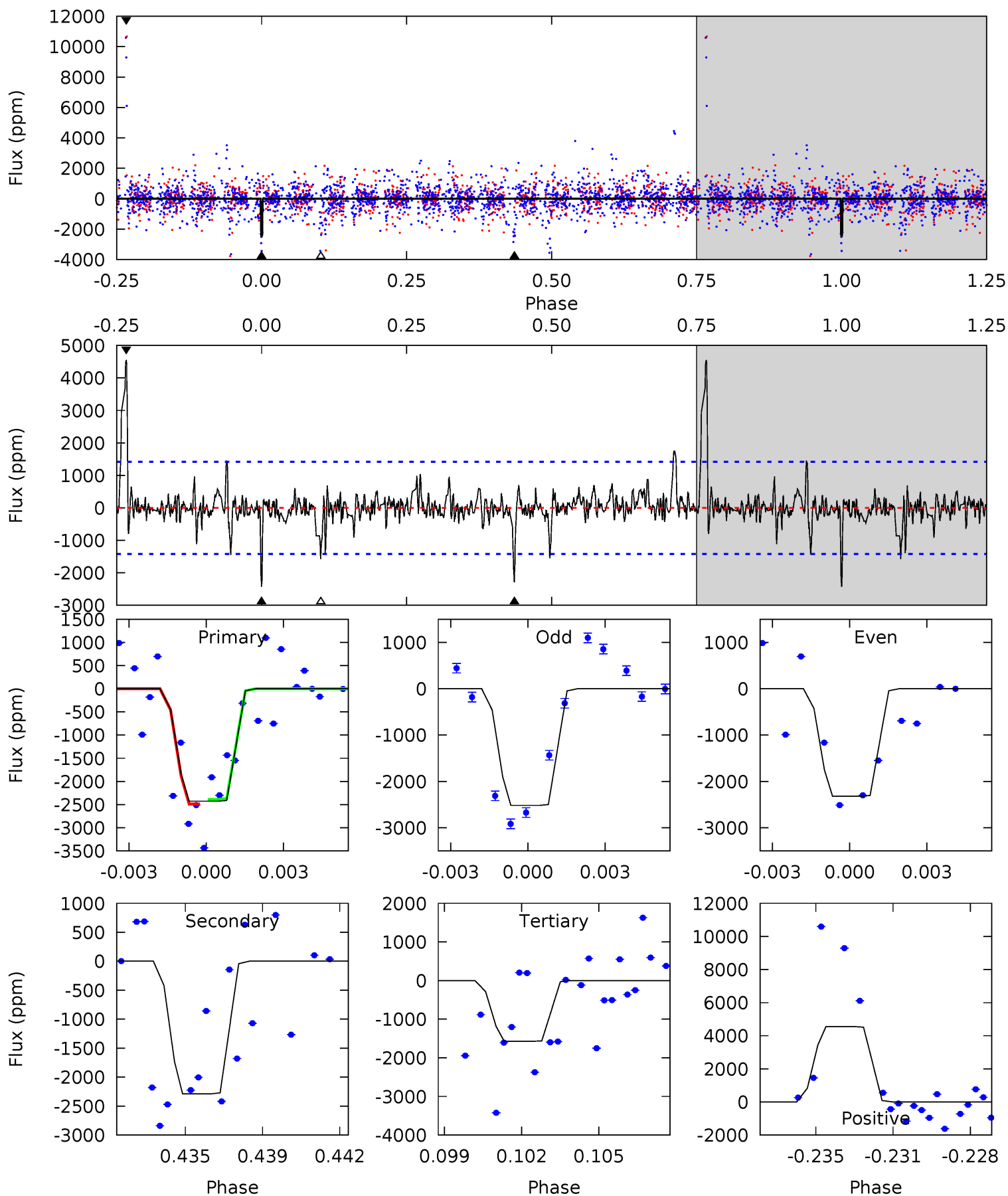
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.79	4.13	3.97	6.05	5.26	2.98	1.26	4.82	2.74	0.16	-1.92	1.68	1.06	0.41	0.52



Alt Model-Shift Uniqueness Test

003759974-02, P = 24.921414 Days, E = 137.871495 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.93	8.42	5.79	16.7	5.23	2.93	1.43	3.15	-7.81	2.63	-8.33	0.37	1.03	0.65	0.17



Stellar Parameters For KIC 003759974

	$T_{\text{eff}}(K)$	$\log(g)$	[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 003759974-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1215 ± 294	$29.48^{+31.65}_{-20.35}$	872^{+43}_{-42}	2798^{+1288}_{-491}	21^{+221}_{-16}
Alt.	-2287 ± 272	$29.22^{+27.46}_{-19.67}$	873^{+40}_{-42}	3084^{+1308}_{-528}	41^{+332}_{-31}

T_{max} = Theoretical Maximum Planetary Temperature
 T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
 A_{obs} = Observed Albedo (Assuming T=0)

If a secondary eclipse is present, the system is likely an EB if $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

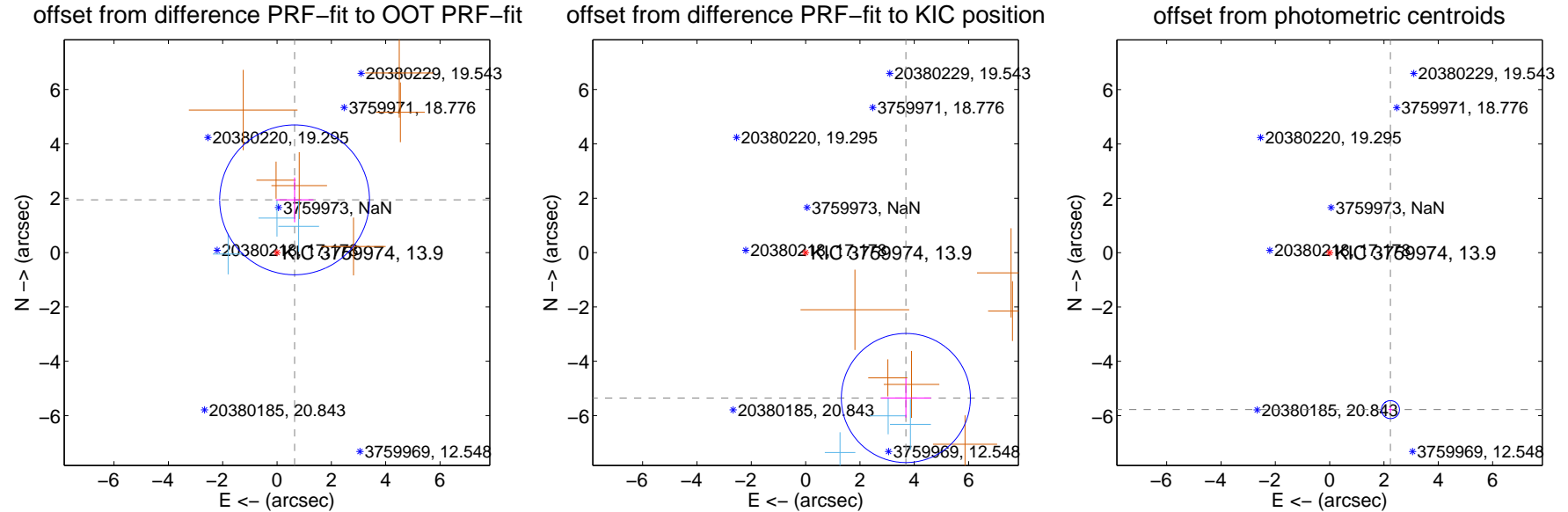
DV Centroid Data

Supplemental centroid analysis for 003759974-02. Kepler magnitude: 13.90. Transit SNR 12.94

There are 3 quarters with good PRF difference image offsets

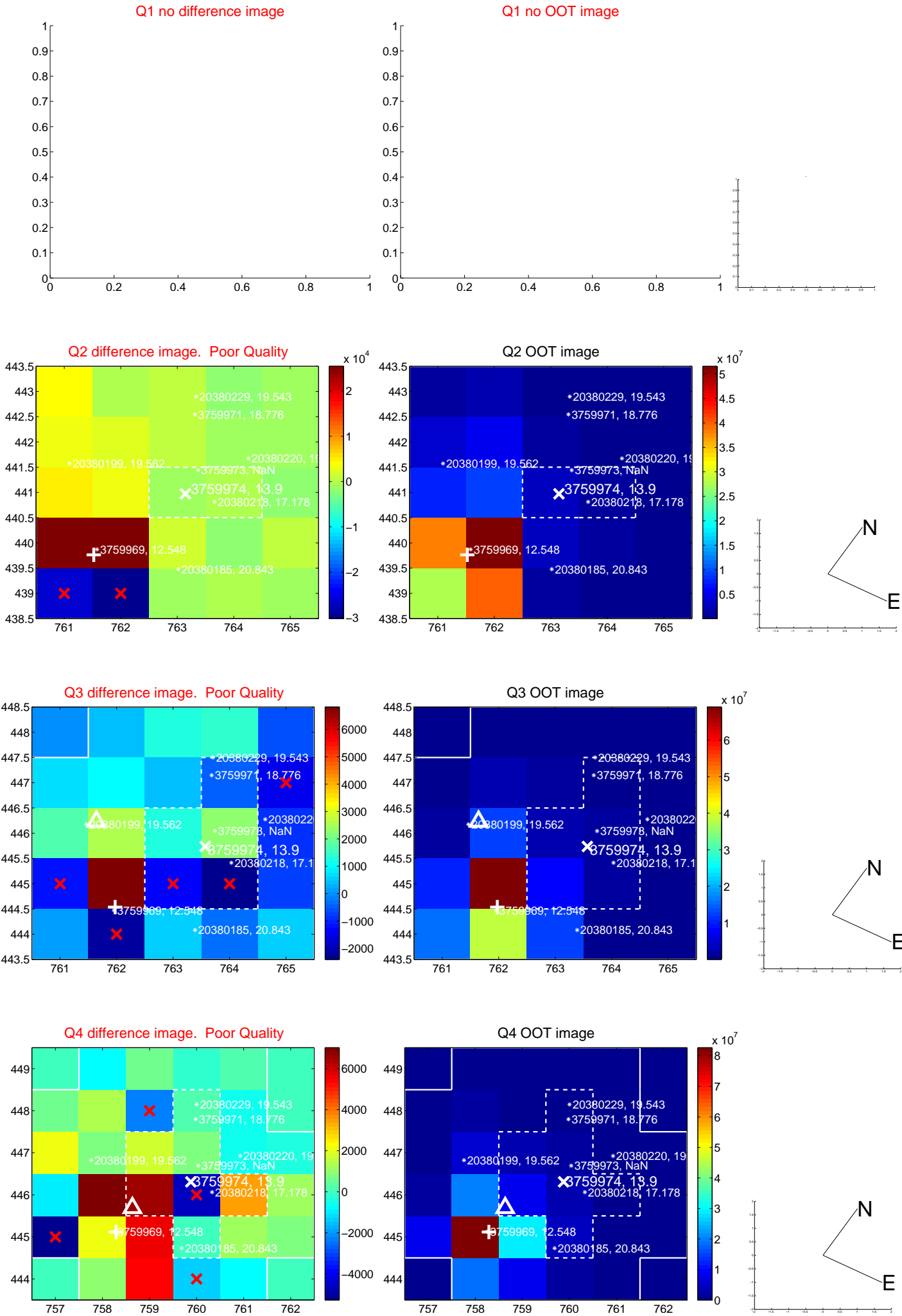
The OOT PRF centroid is offset from the target star catalog position by about 7.89 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.045 ± 0.919	2.23	-0.647 ± 0.694	1.940 ± 0.825
PRF-fit source offset from KIC position	6.501 ± 0.792	8.21	-3.690 ± 0.920	-5.352 ± 0.723
photometric centroid source offset	6.20 ± 0.11	56.15	-2.24 ± 0.08	-5.78 ± 0.11

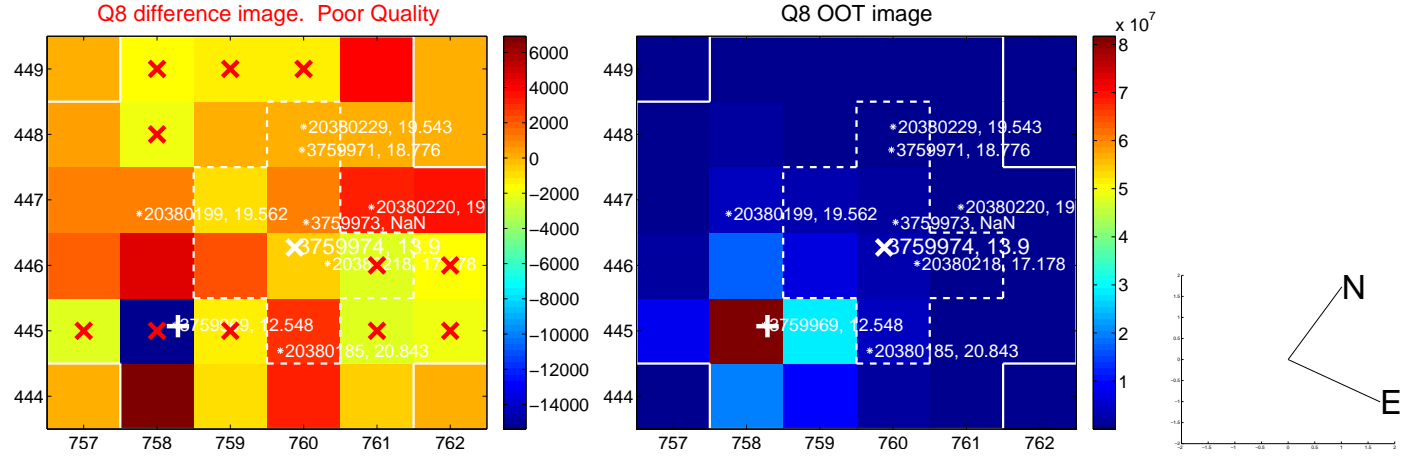
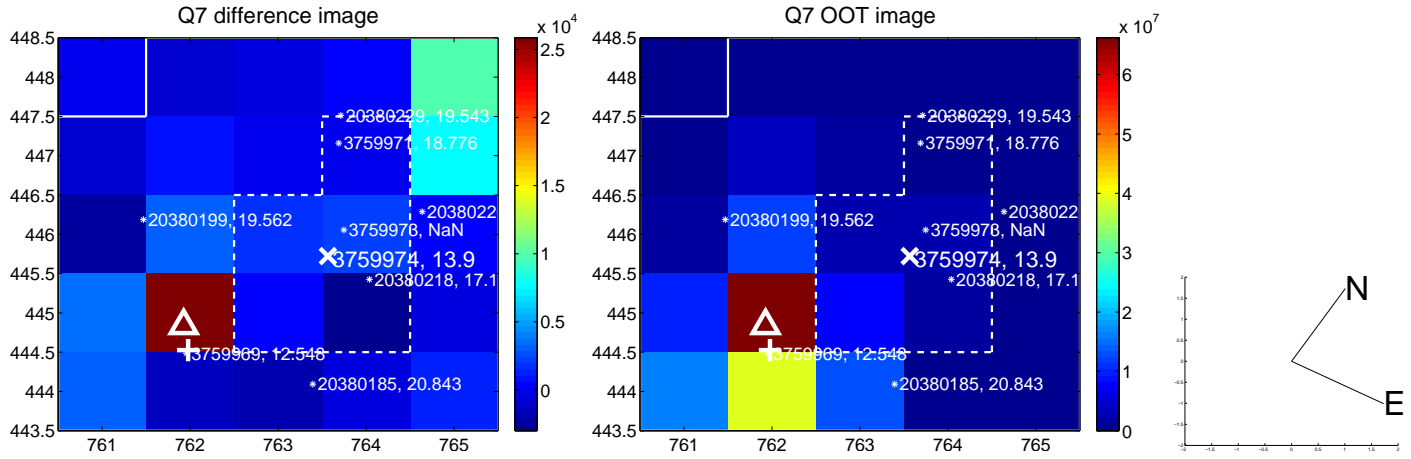
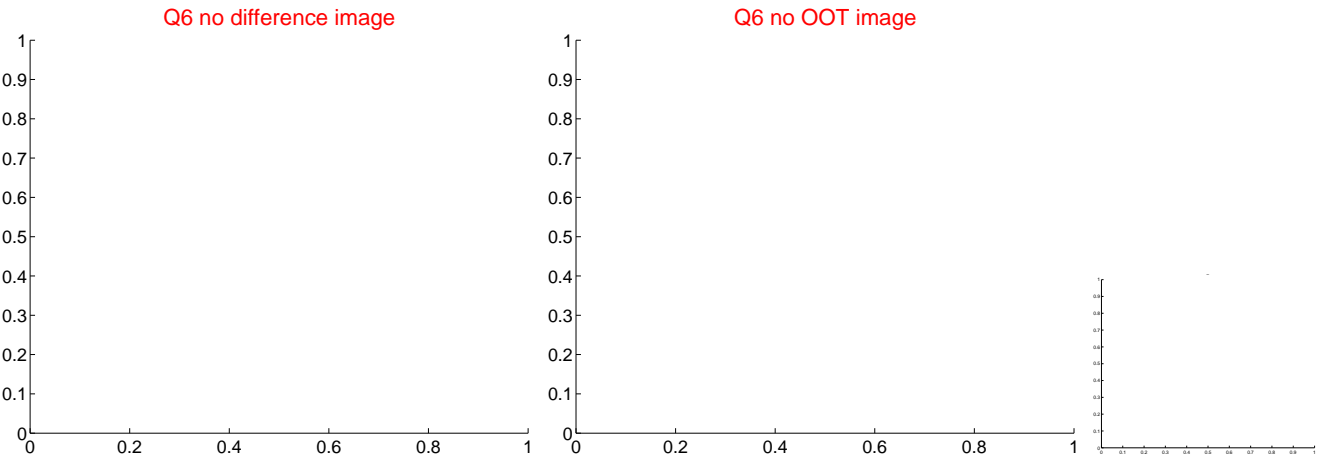
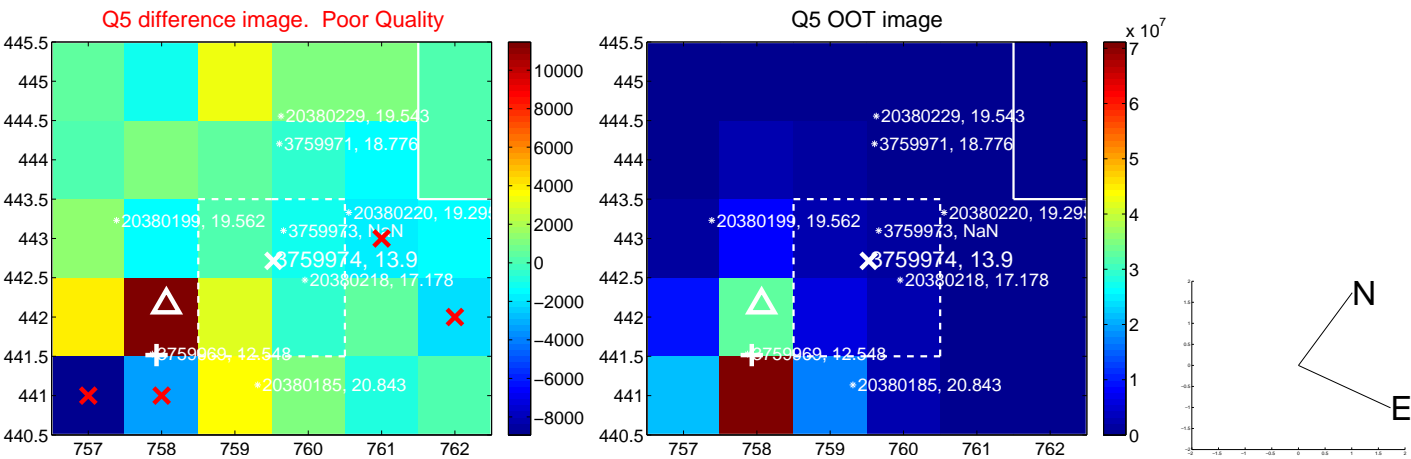


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

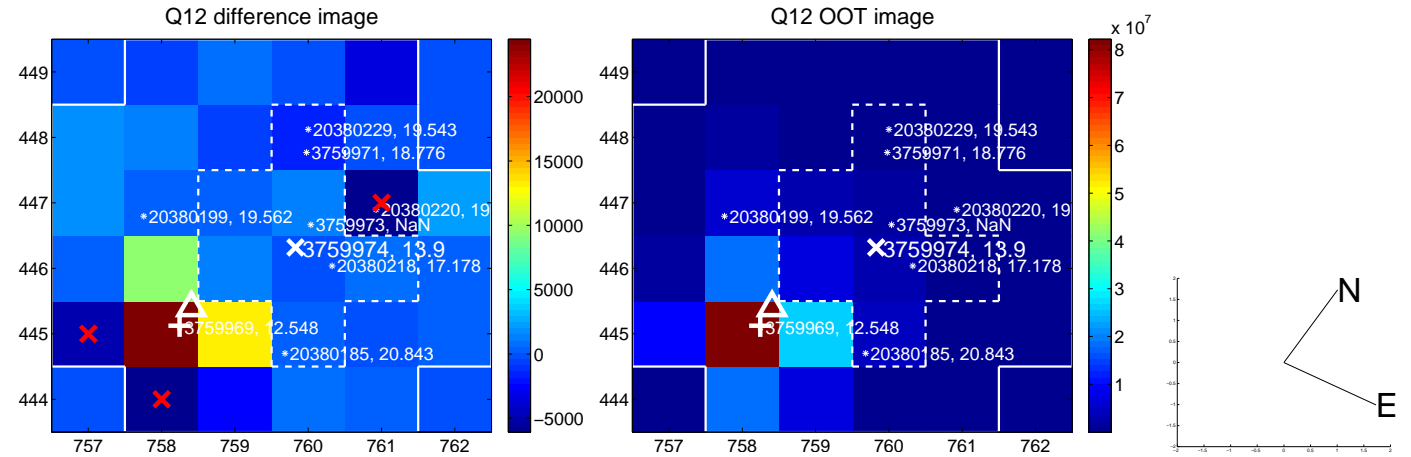
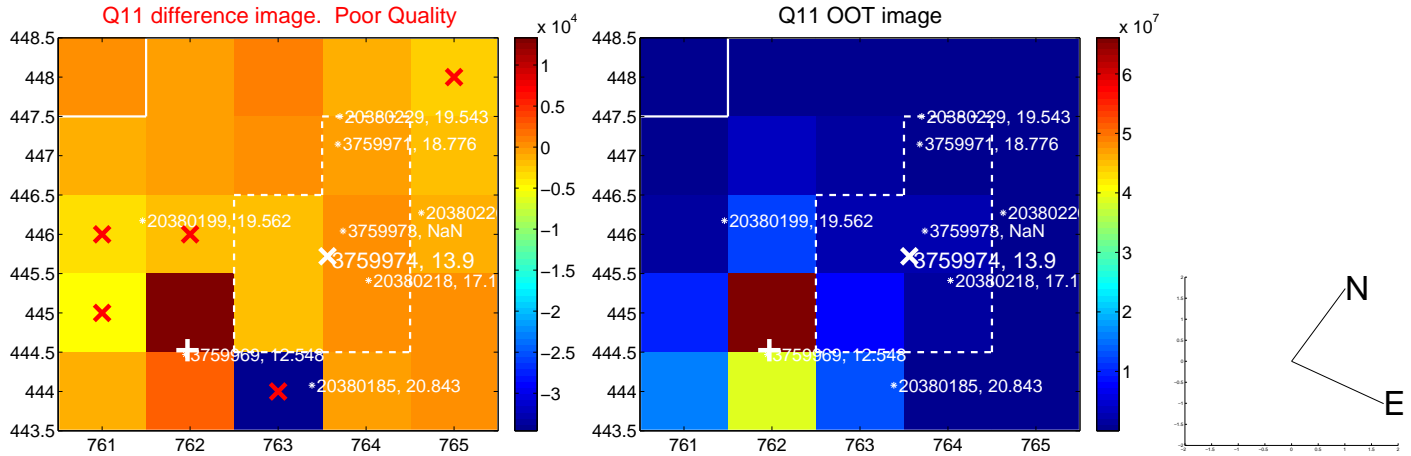
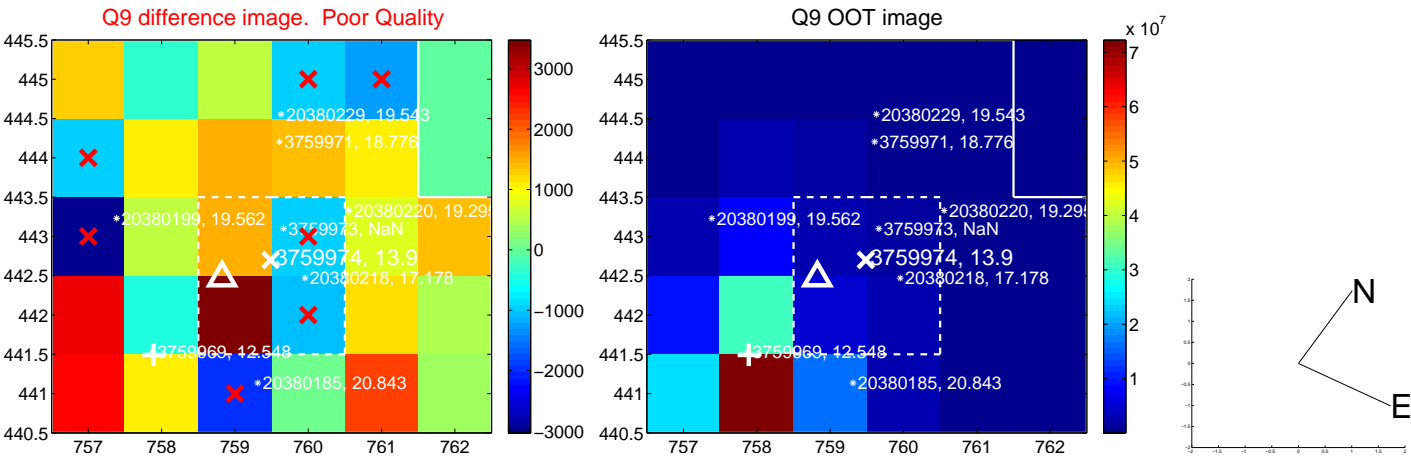
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



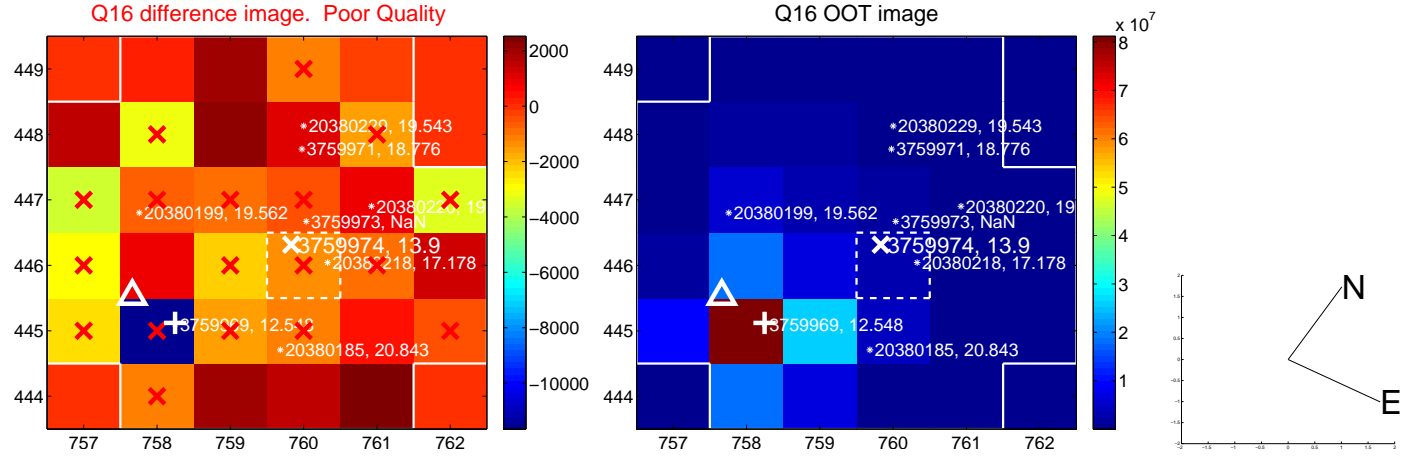
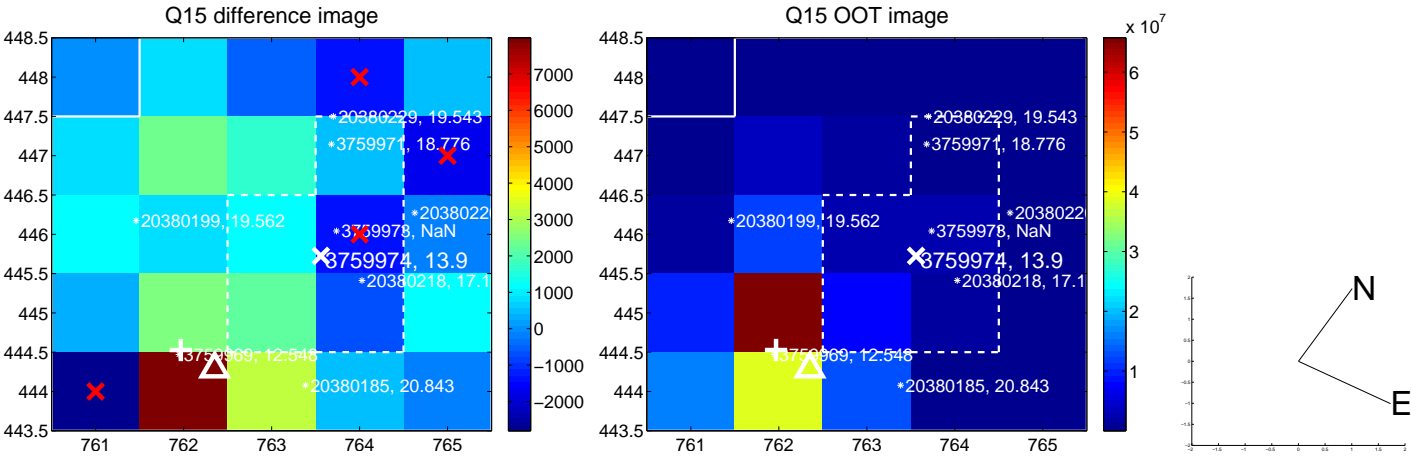
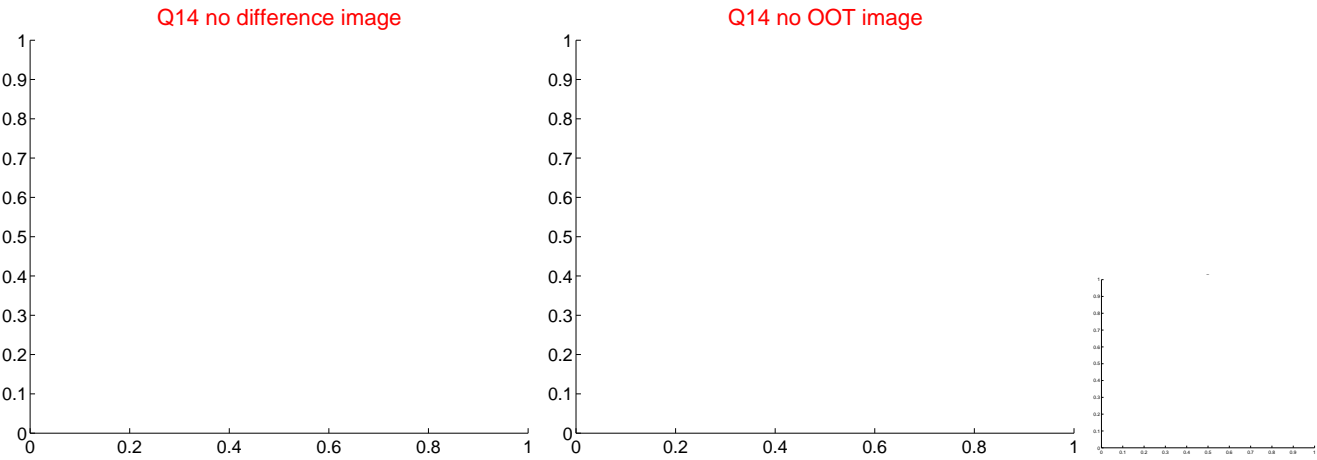
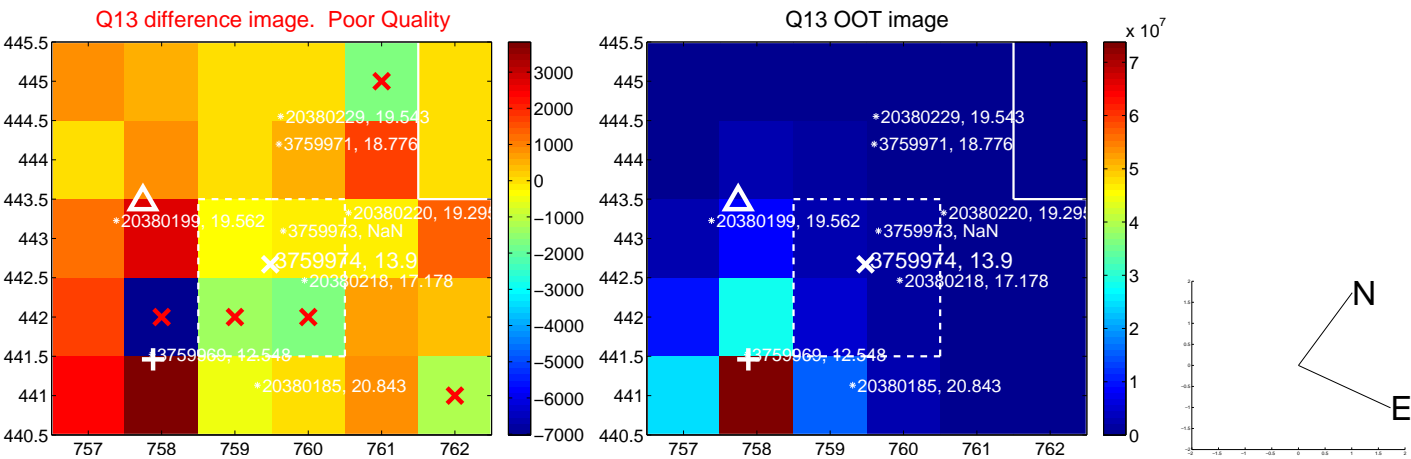
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



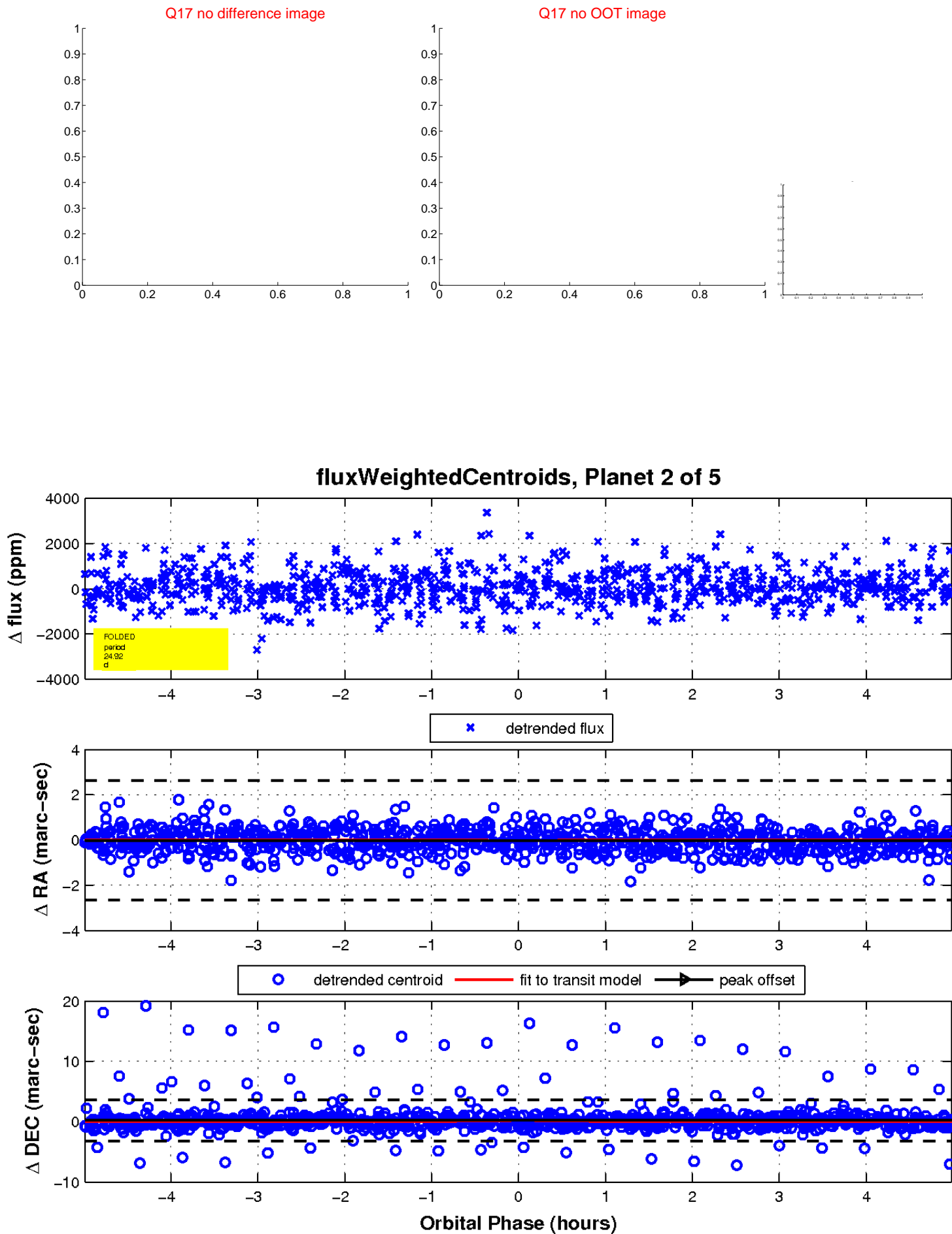
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

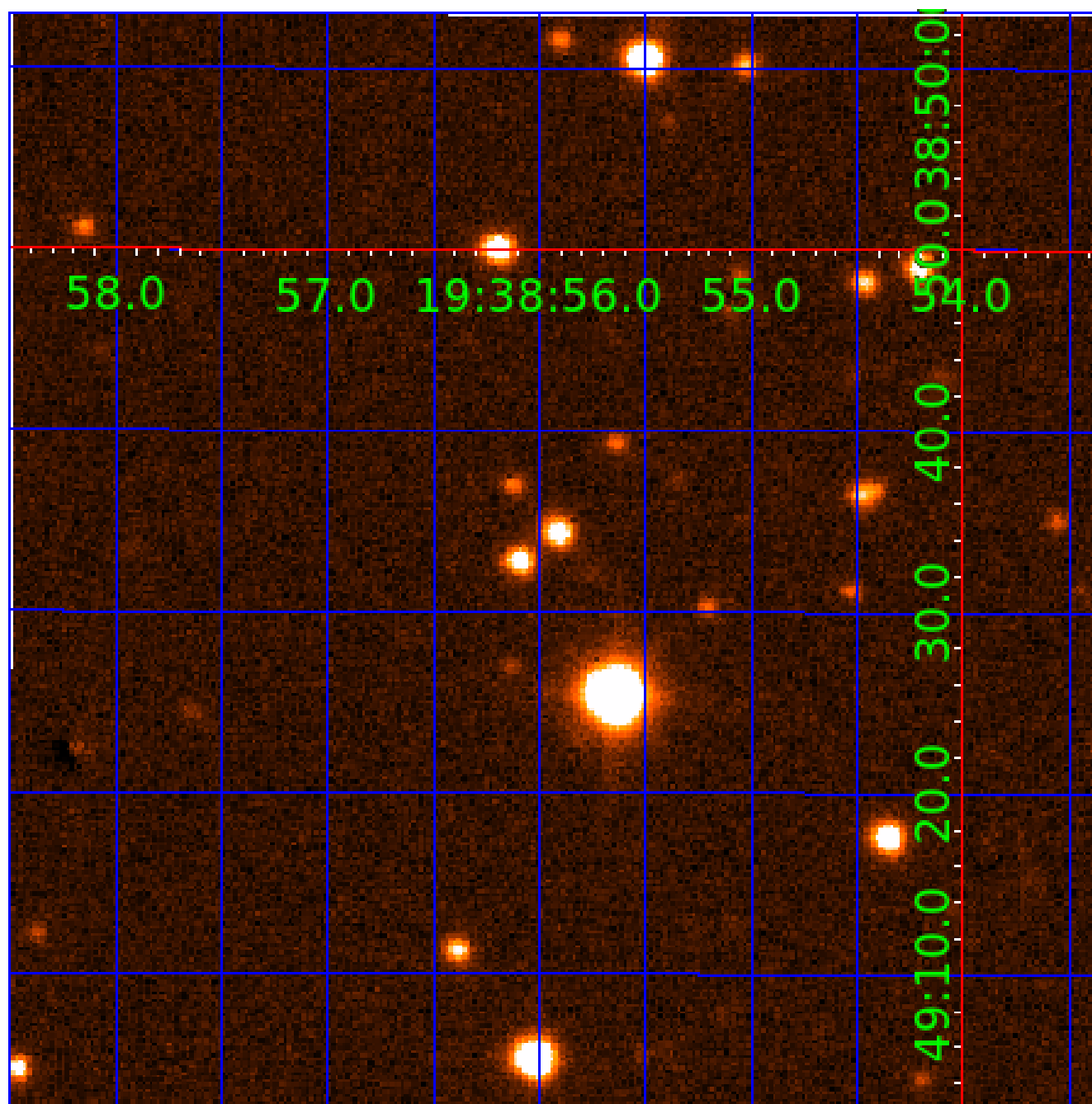


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003759974

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})
003759974-01	OBS	No	1.379524	132.771306	88.3	10.271	9.5	9.3	1.00	5780	0.93	1699.42
003759974-02	OBS	No	24.921223	137.869185	1899.1	1.669	13.7	12.9	1.00	5780	4.50	35.85
003759974-03	OBS	No	13.906773	143.069618	1012.5	2.038	11.0	9.9	1.00	5780	3.39	78.04
003759974-04	OBS	No	11.295735	138.553900	881.3	2.396	11.2	9.9	1.00	5780	3.53	102.97
003759974-05	OBS	No	20.653045	132.158498	1192.0	2.655	11.5	10.8	1.00	5780	3.75	46.06

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003759974-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET
003759974-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET
003759974-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS— HALO_GHOST
003759974-04	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_DIFFS
003759974-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— CENT_FEW_DIFFS—HALO_GHOST

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

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

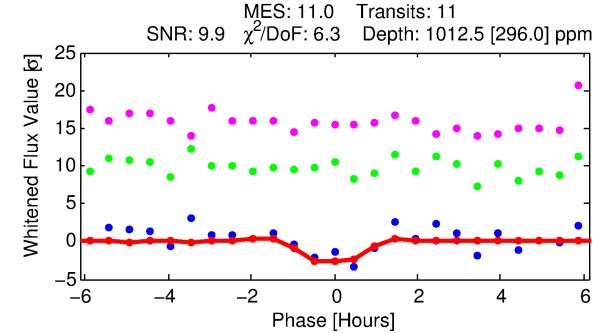
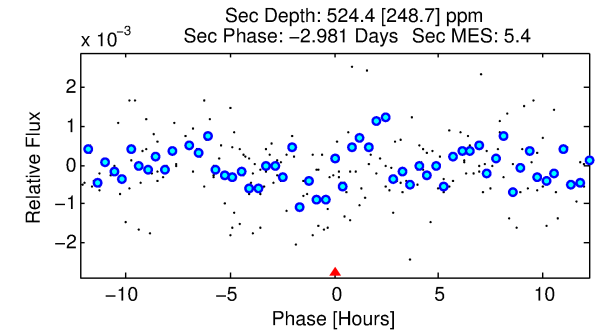
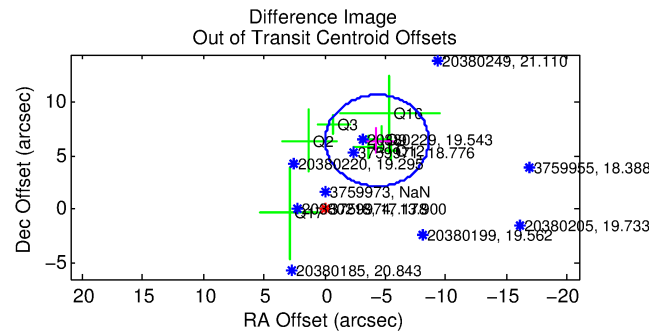
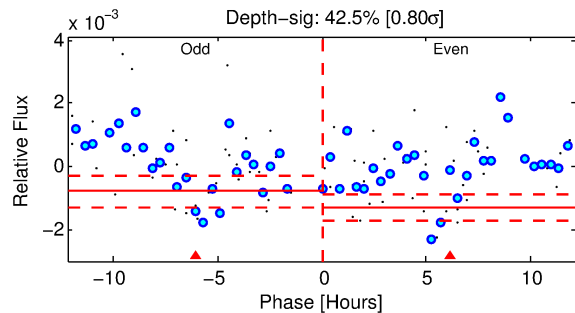
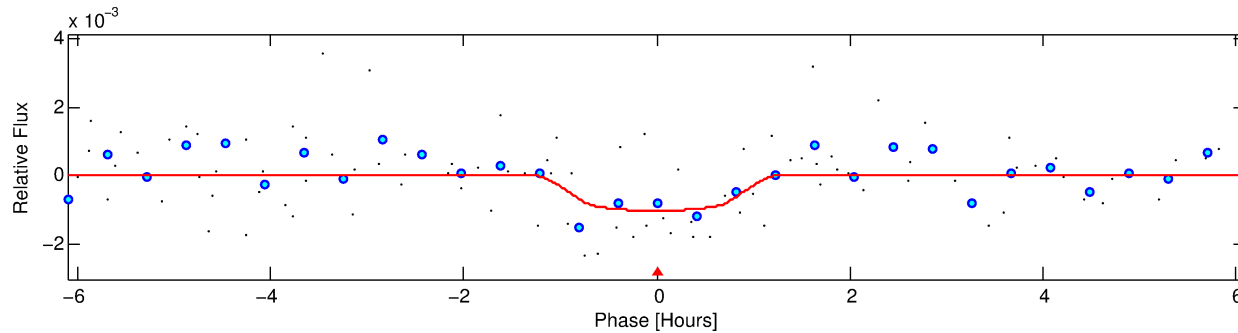
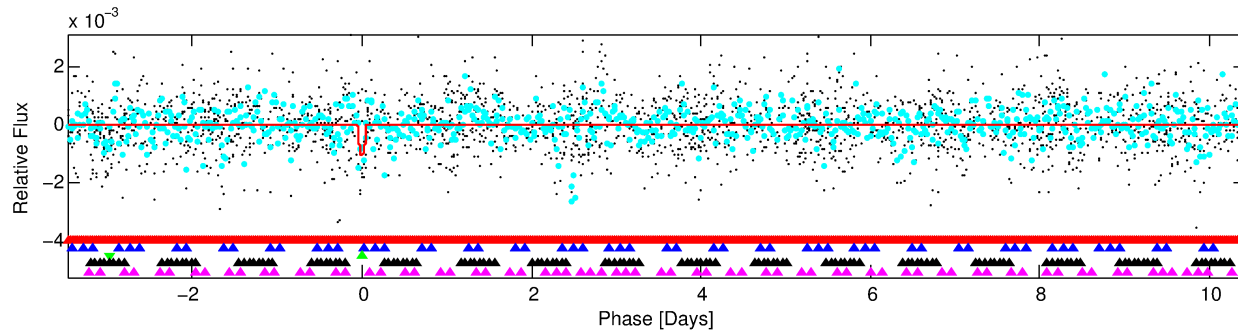
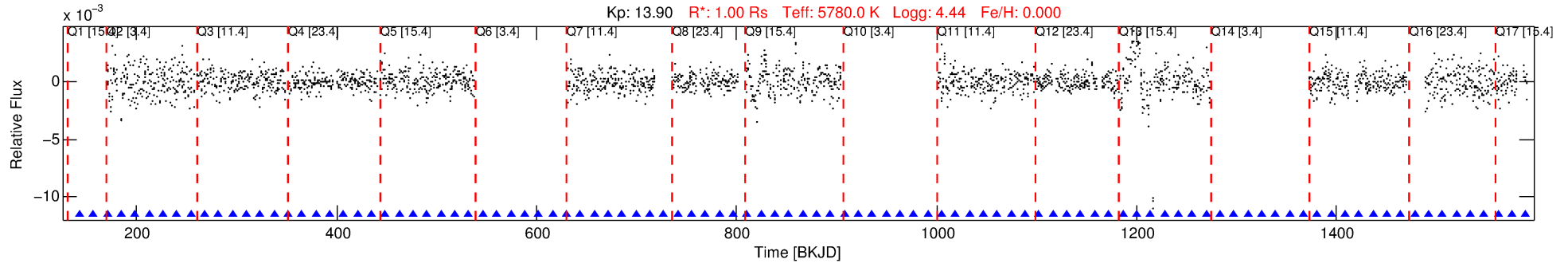
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003759974-03

No Significant Match Found

DV One-Page Summary

KIC: 3759974 Candidate: 3 of 5 Period: 13.907 d



DV Fit Results:

Period = 13.90677 [0.00031] d
Epoch = 143.0696 [0.0169] BKJD
Rp/R* = 0.0311 [0.1504]
a/R* = 40.17 [843.50]
b = 0.69 [16.51]
Seff = 78.04 [0.00]
Teq = 758 [0] K
Rp = 3.39 [16.41] Re
a = 0.1132 [0.0000] AU
Ag = 321.72 [3118.39] [0.10 σ]
Teffp = 4963 [12026] K [0.35 σ]

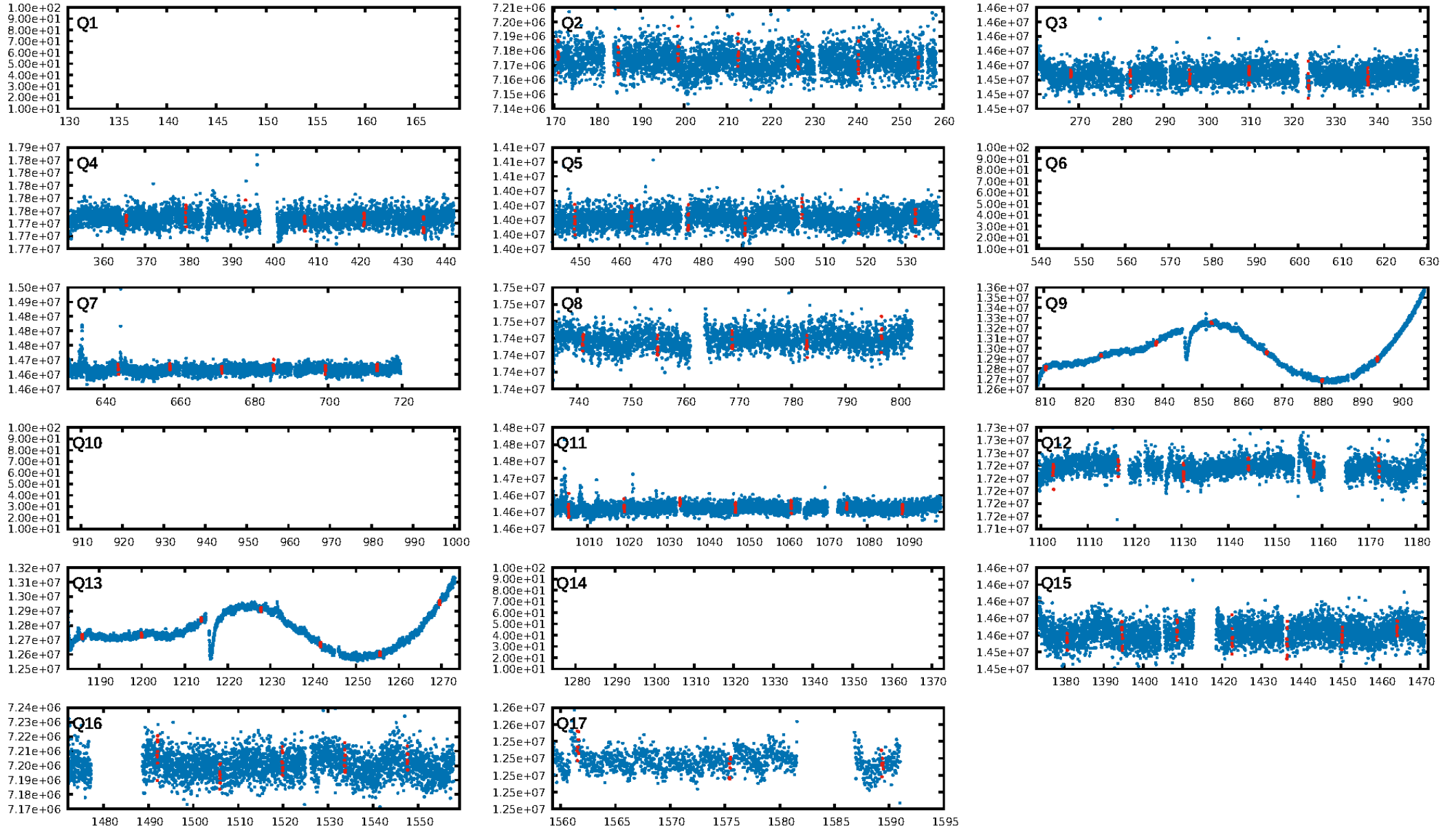
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [19.92 σ]
LongPeriod-sig: 100.0% [48.38 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: 1.05e-30
RollingBand-fgt: 1.00 [11/11]
GhostDiagnostic-chr: 0.1083
Centroid-sig: 16.6%
Centroid-so: 6.095 arcsec [44.16 σ]
OotOffset-rm: 7.750 arcsec [5.44 σ]
KicOffset-rm: 7.421 arcsec [5.95 σ]
OotOffset-st: 1/2/2/2 [7]
KicOffset-st: 1/2/2/2 [7]
DiffImageQuality-fgm: 0.00 [0/7]
DiffImageOverlap-fno: 0.69 [9/13]

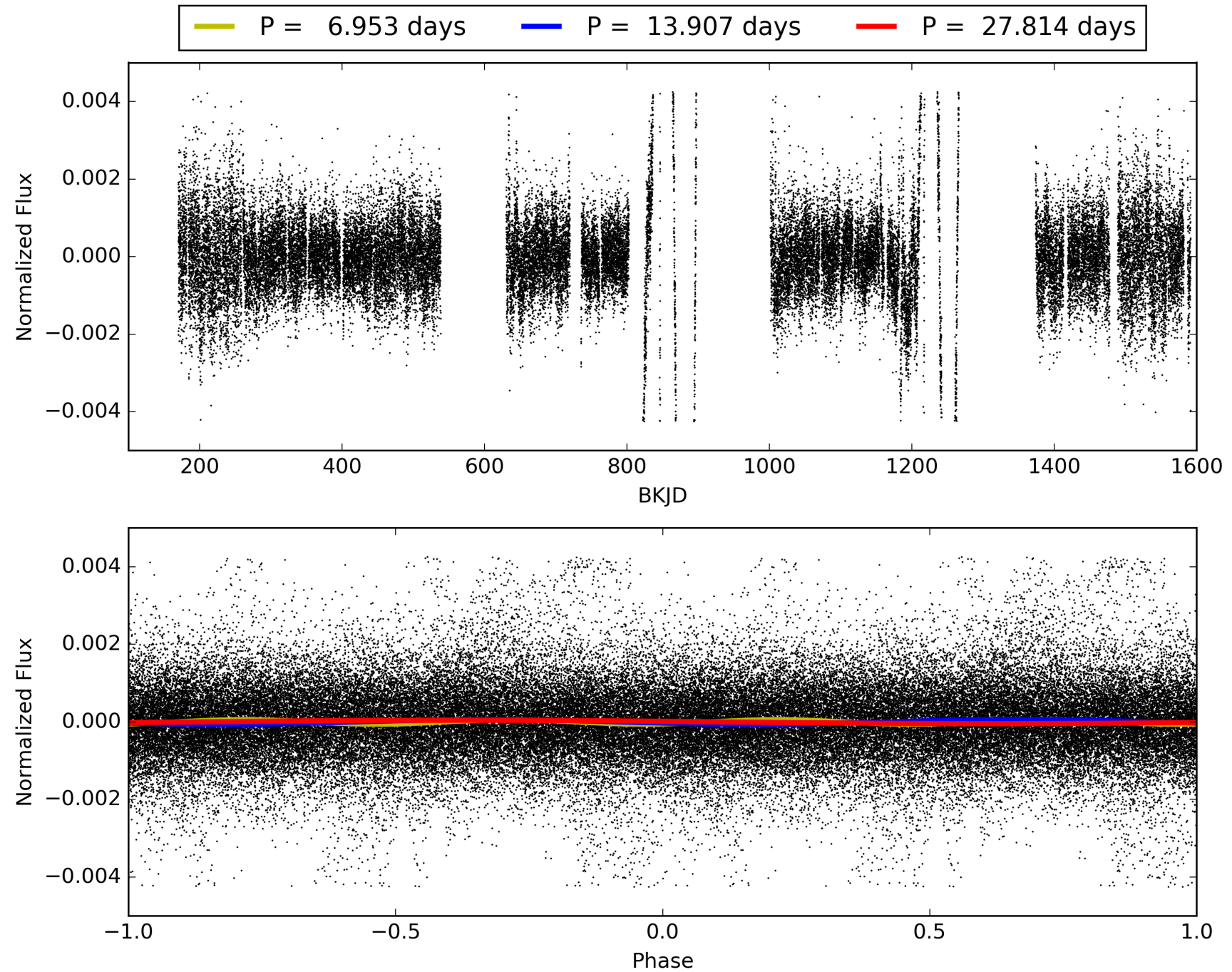
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 18:29:02 Z

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

TCE 003759974-03, PDC Light Curves

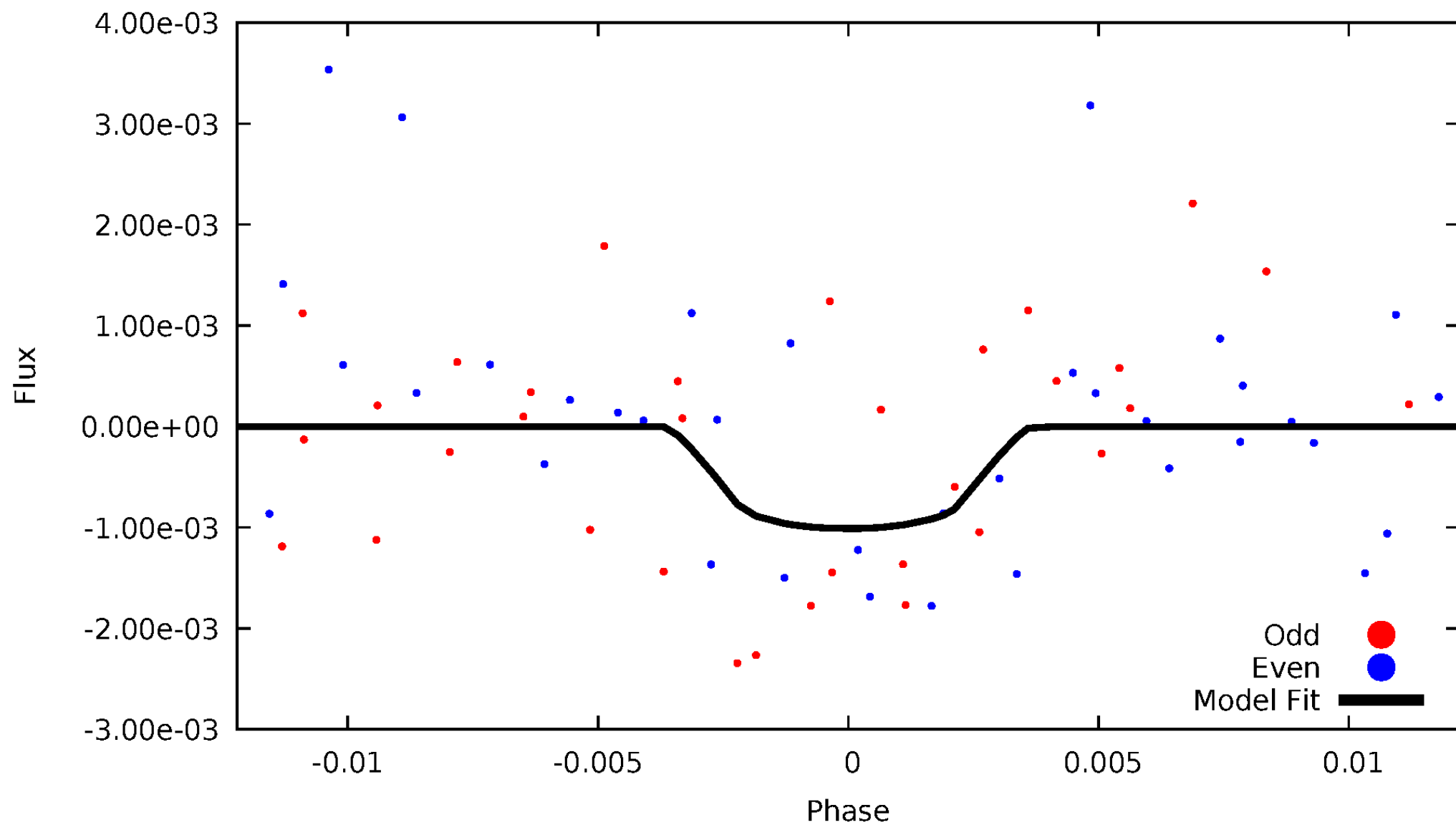


TCE 003759974-03



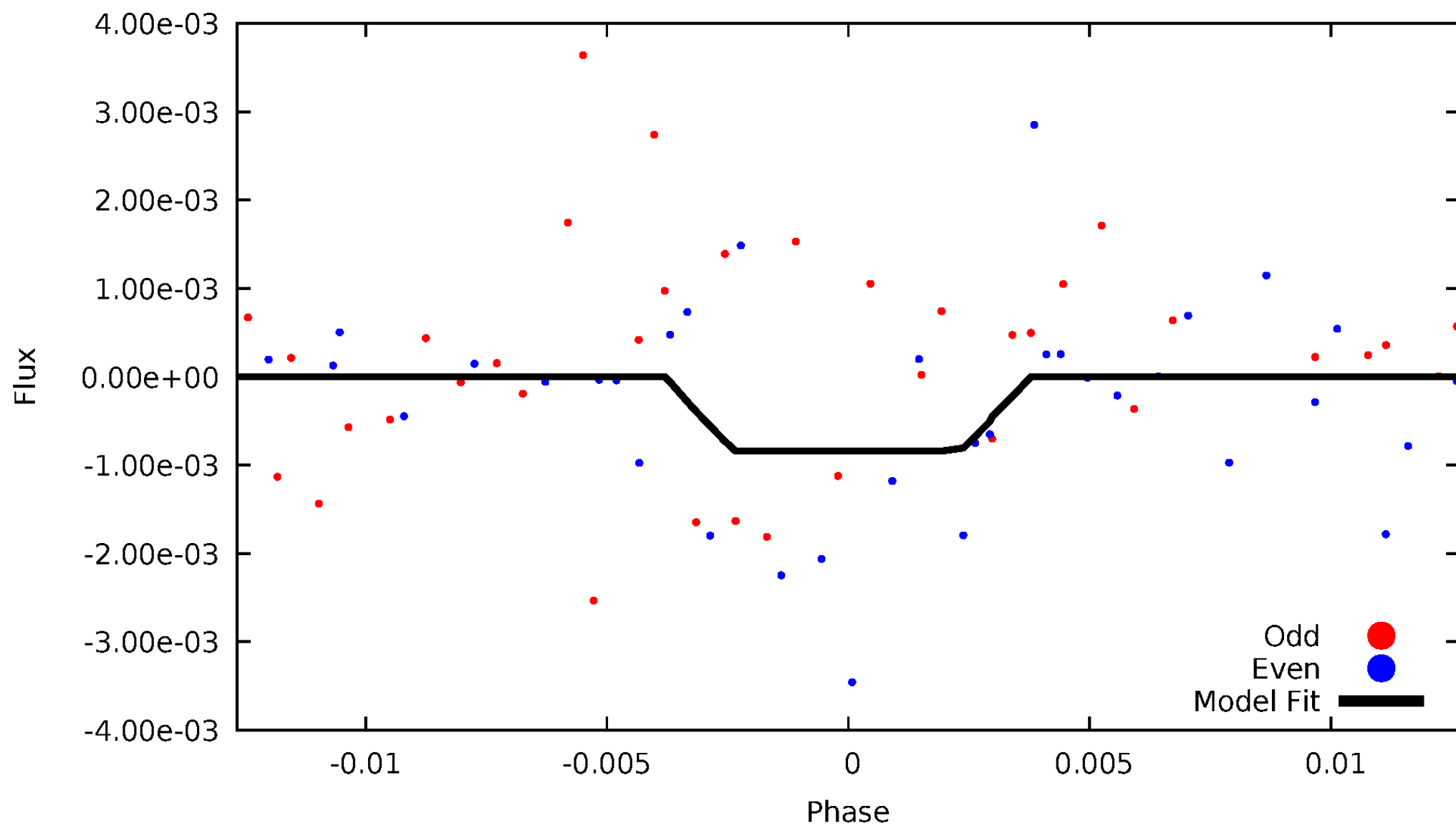
DV Odd/Even

TCE 003759974-03



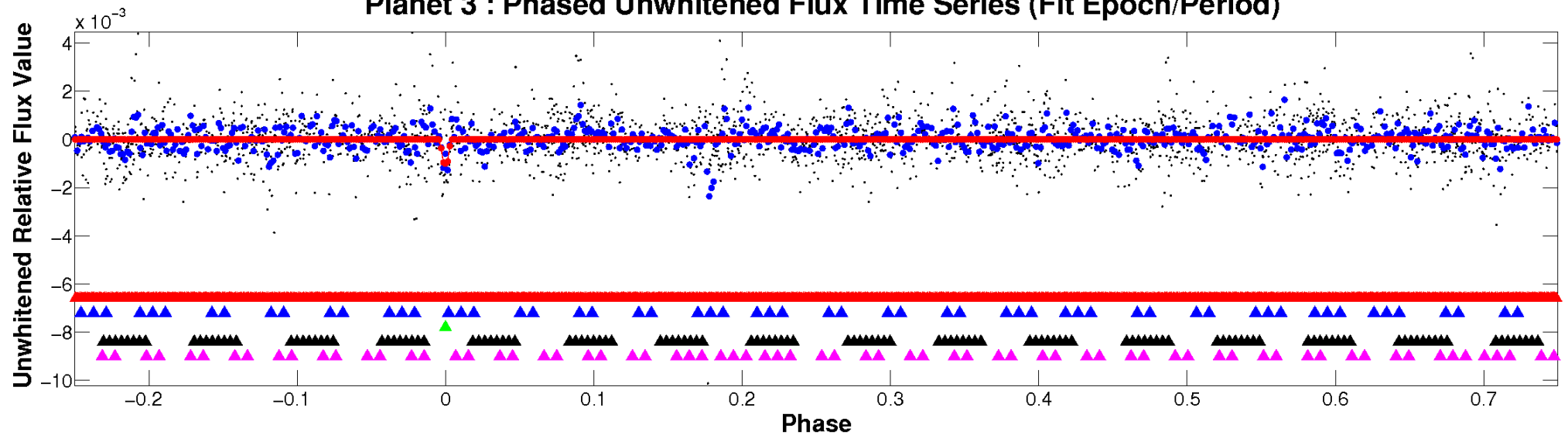
ALT Odd/Even

TCE 003759974-03

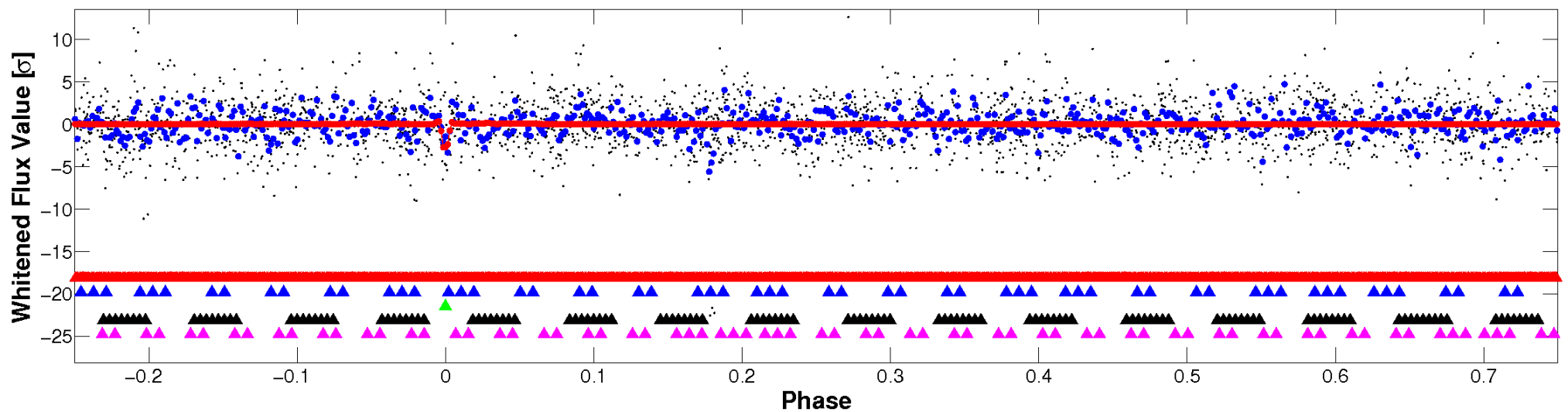


Non-Whitened Vs. Whitened Light Curve

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

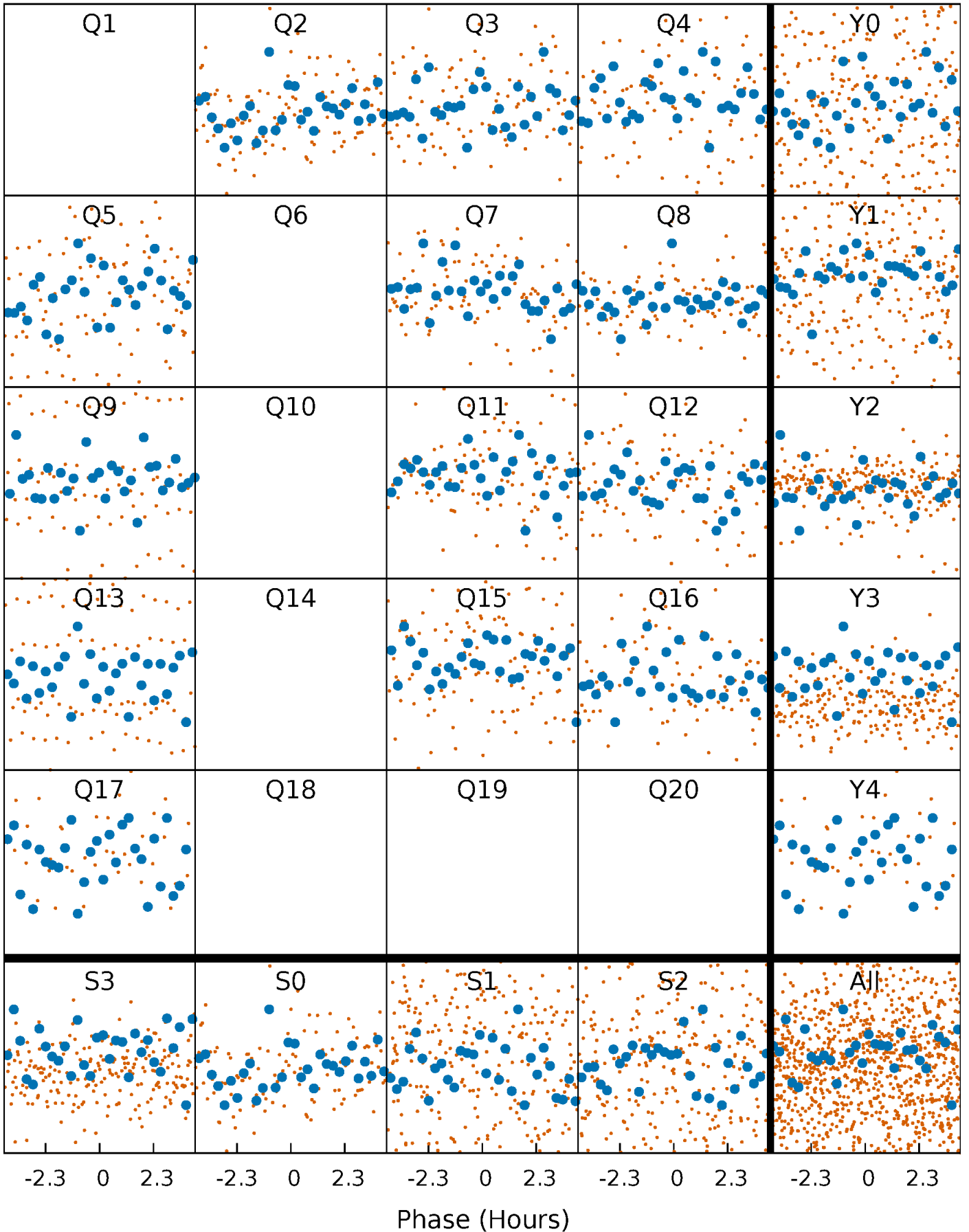


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



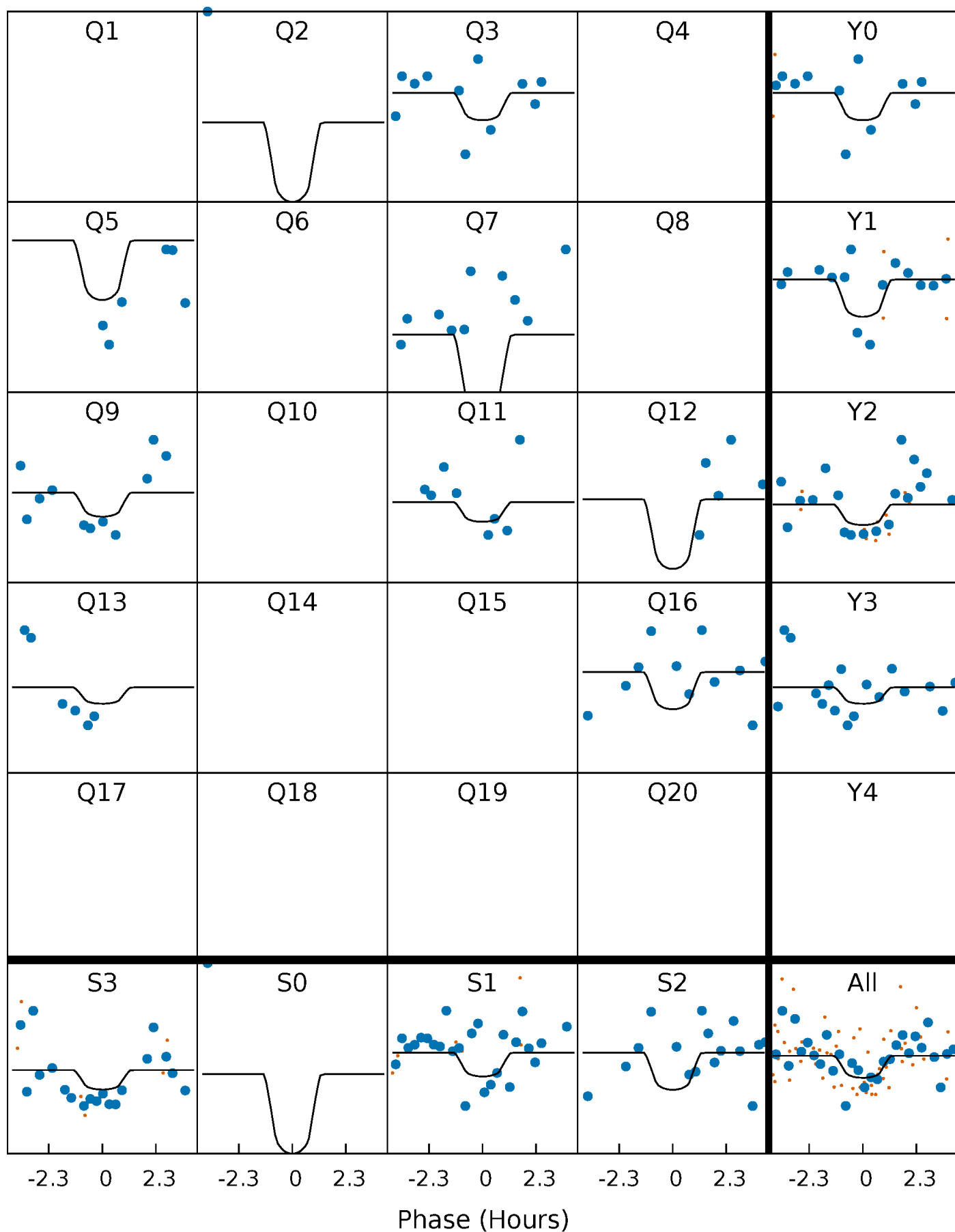
PDC Quarter-Phased Transit Curves

TCE 003759974-03 P= 13.906773 Days $T_0=143.069618$ (BKJD)



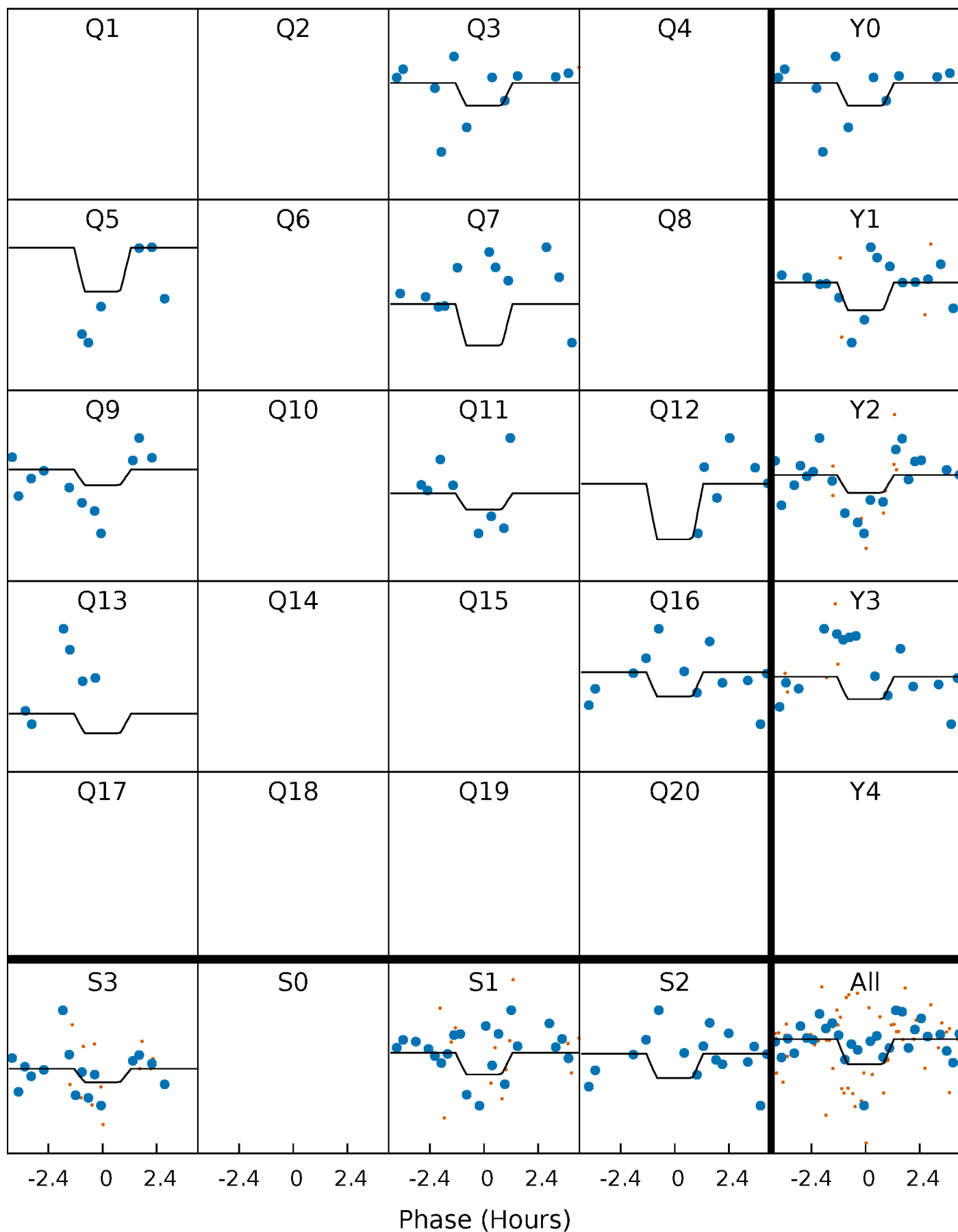
DV Quarter-Phased Transit Curves

TCE 003759974-03 P= 13.906773 Days $T_0=143.069618$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

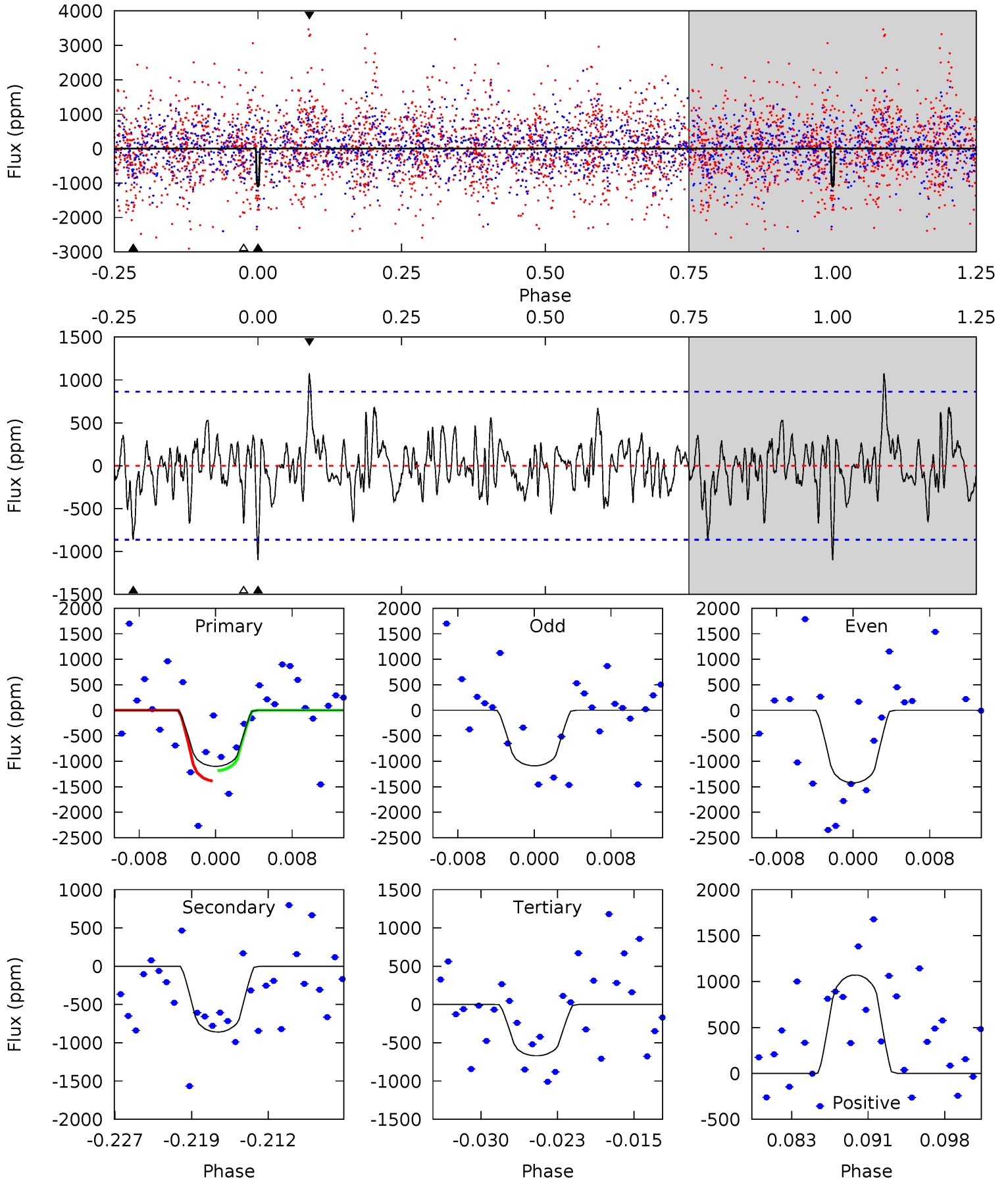
TCE 003759974-03 P= 13.906080 Days $T_0=143.126327$ (BKJD)



DV Model-Shift Uniqueness Test

003759974-03, P = 13.906773 Days, E = 143.069618 Days

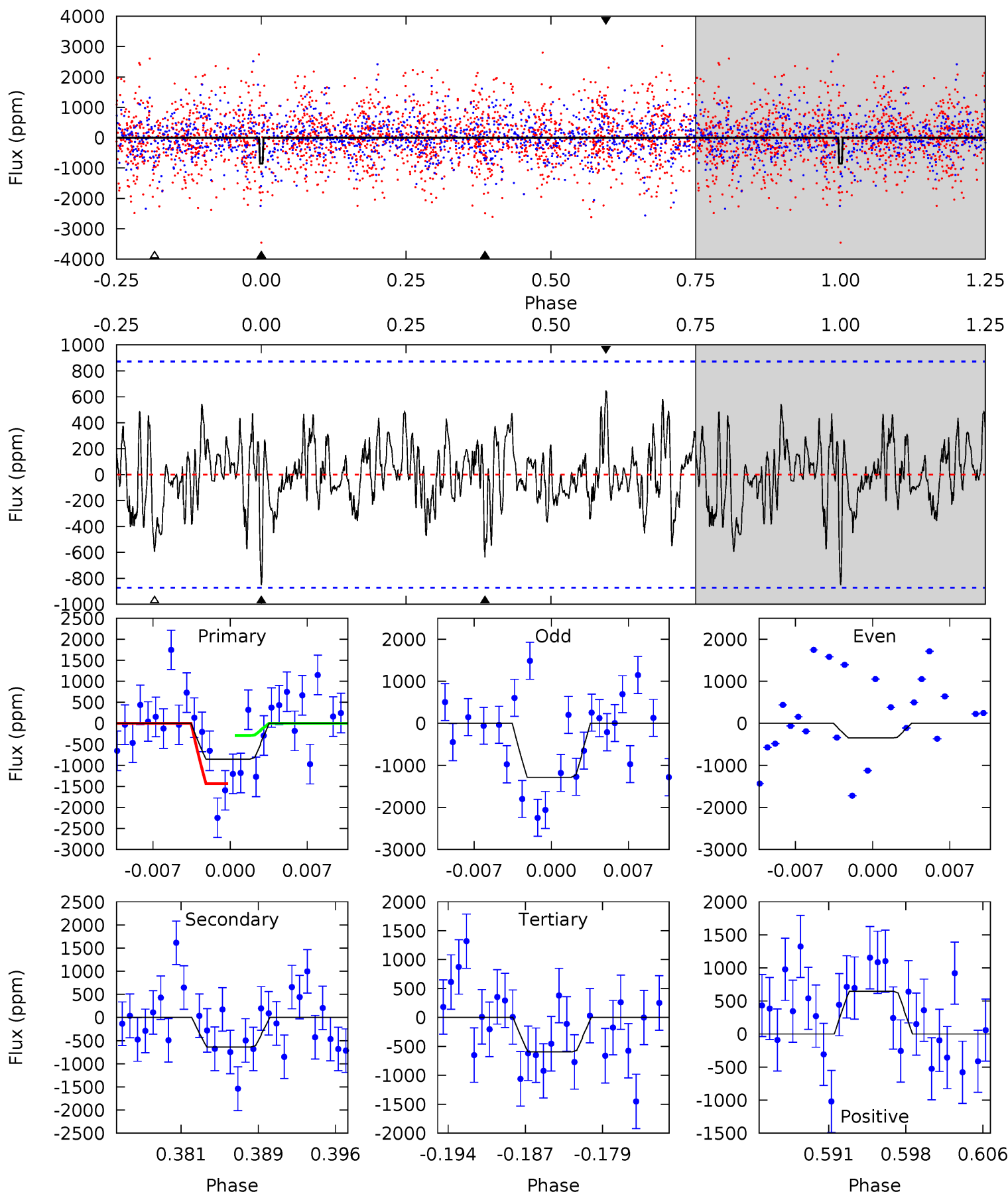
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.46	5.06	3.94	6.30	5.08	2.67	1.47	2.52	0.16	1.12	-1.24	0.96	0.72	0.49	0.58



Alt Model-Shift Uniqueness Test

003759974-03, P = 13.906080 Days, E = 143.126327 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.96	3.72	3.46	3.77	5.08	2.67	1.26	1.49	1.19	0.25	-0.05	2.72	1.58	0.43	3.19



Stellar Parameters For KIC 003759974

	$T_{\text{eff}}(K)$	$\log(g)$	[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 003759974-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-859 ± 170	$12.32^{+12.06}_{-8.81}$	1059^{+47}_{-51}	3459^{+2063}_{-666}	42^{+457}_{-32}
Alt.	-638 ± 172	$11.68^{+12.73}_{-8.53}$	1057^{+53}_{-47}	3309^{+1877}_{-621}	32^{+346}_{-25}

T_{max} = Theoretical Maximum Planetary Temperature
 T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
 A_{obs} = Observed Albedo (Assuming T=0)

If a secondary eclipse is present, the system is likely an EB if $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

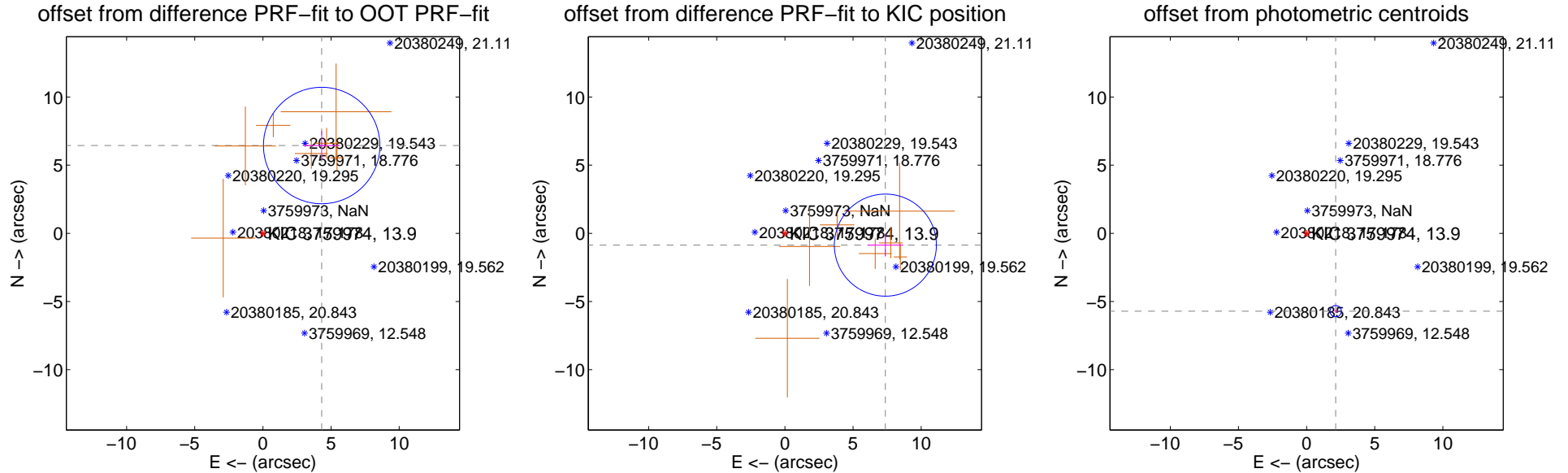
DV Centroid Data

Supplemental centroid analysis for 003759974-03. Kepler magnitude: 13.90. Transit SNR 9.89

There are 0 quarters with good PRF difference image offsets

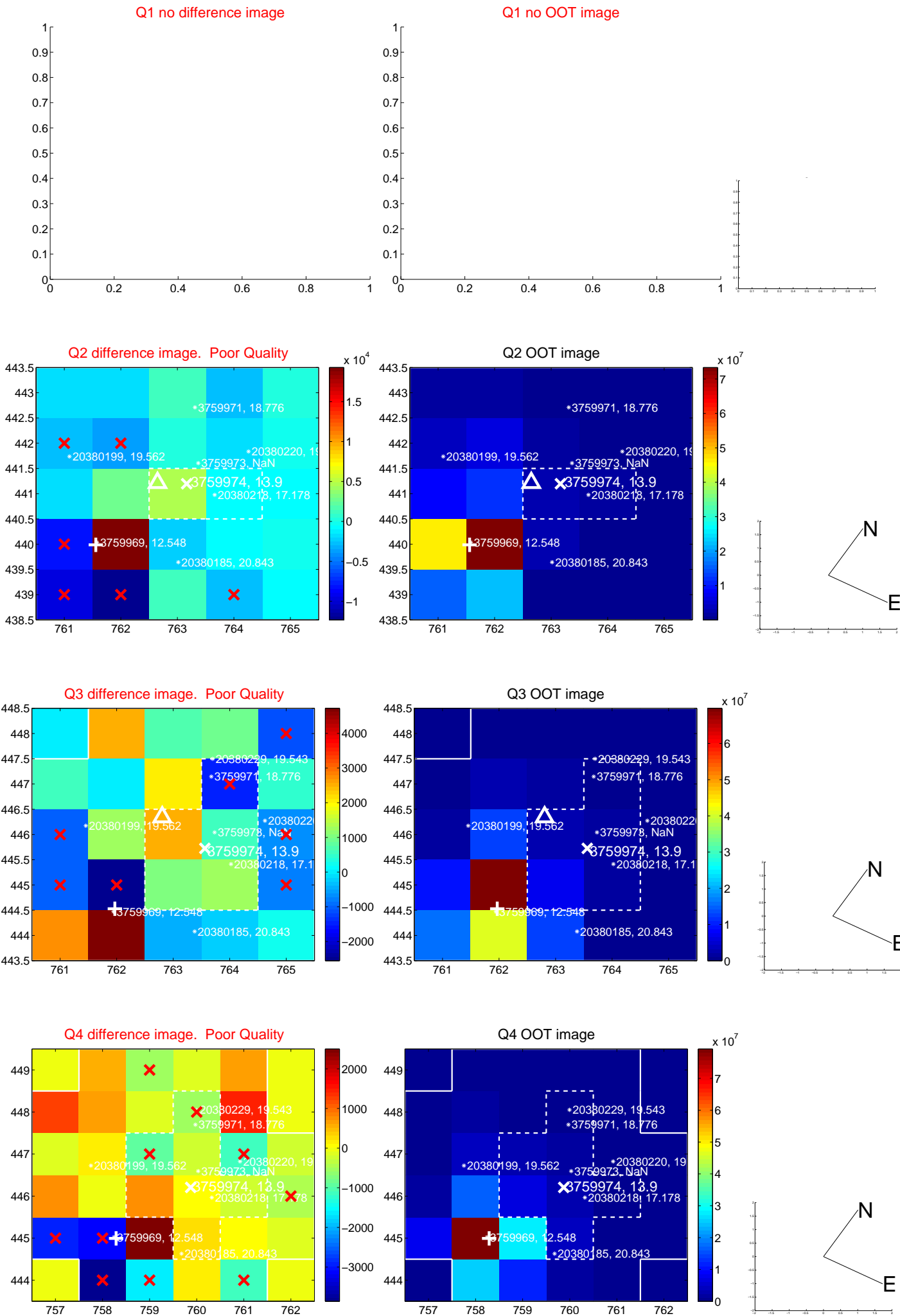
The OOT PRF centroid is offset from the target star catalog position by about 7.97 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.750 ± 1.424	5.44	-4.311 ± 1.313	6.441 ± 1.063
PRF-fit source offset from KIC position	7.421 ± 1.248	5.95	-7.370 ± 1.315	-0.866 ± 0.841
photometric centroid source offset	6.10 ± 0.14	44.16	-2.13 ± 0.10	-5.71 ± 0.14

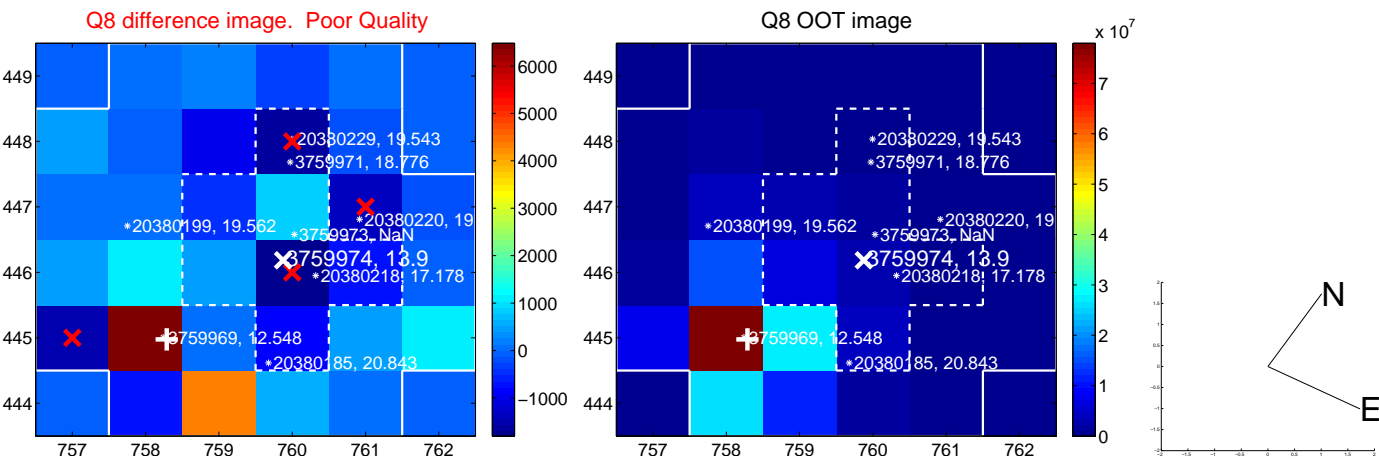
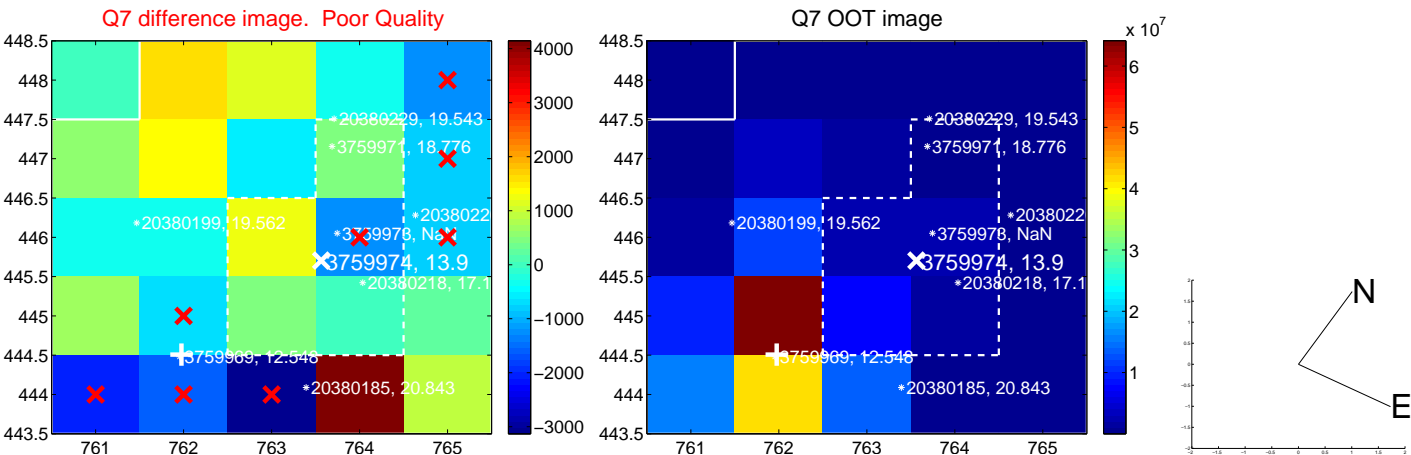
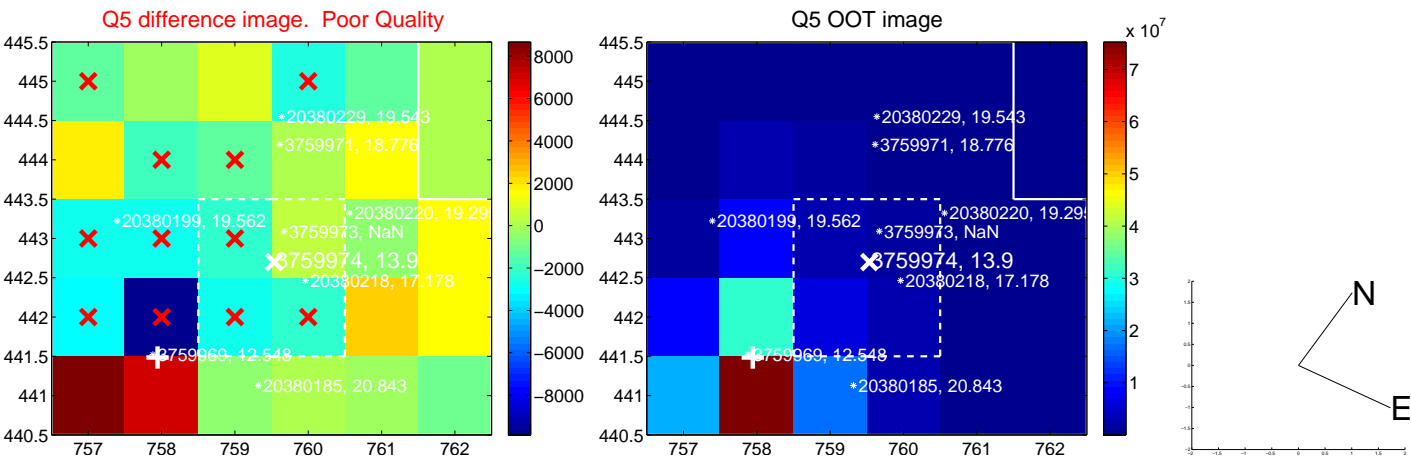


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

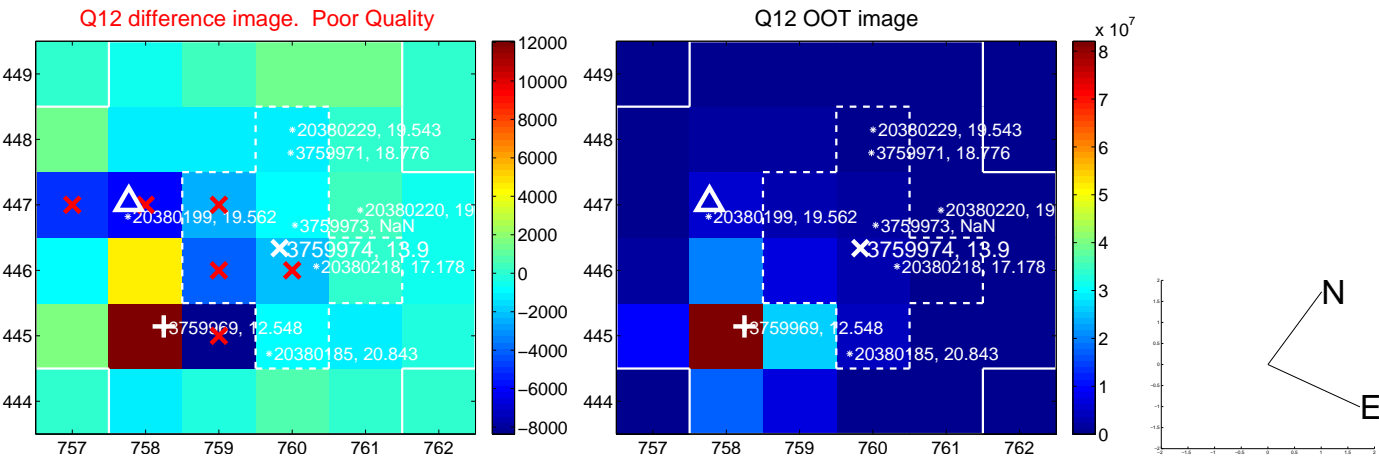
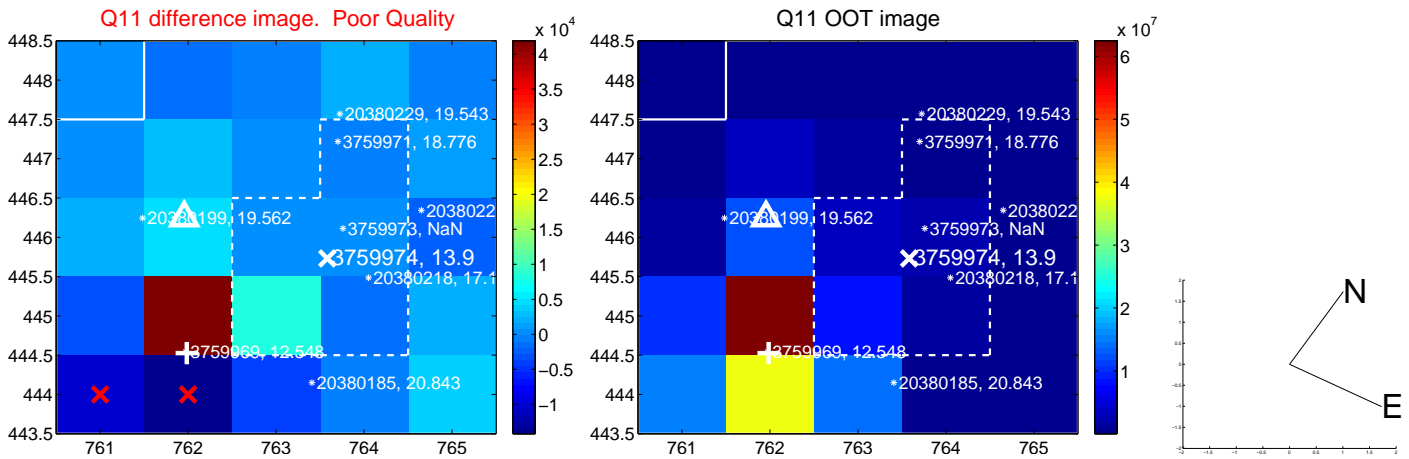
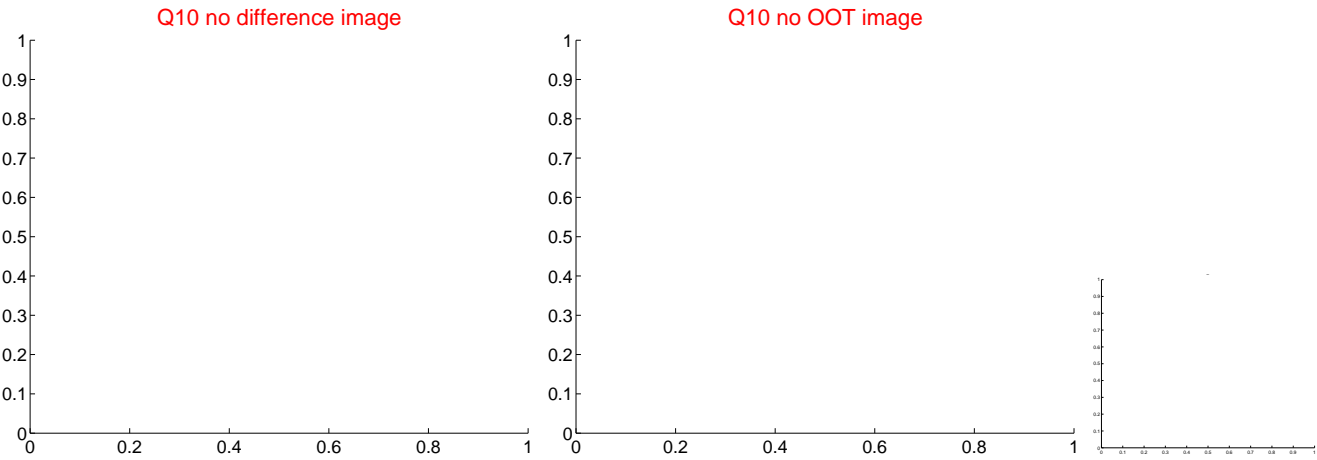
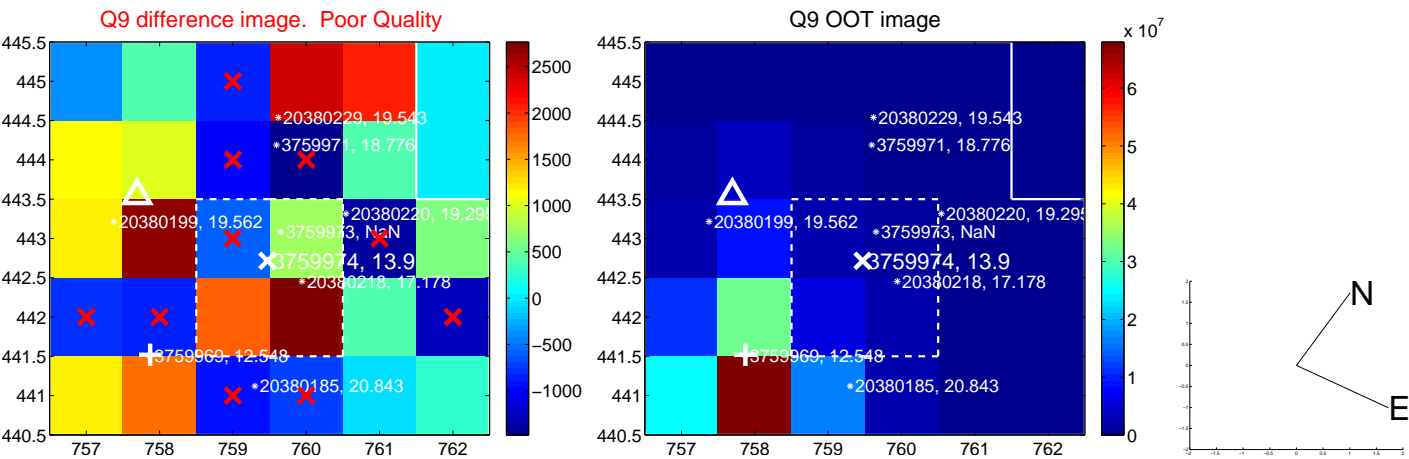
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



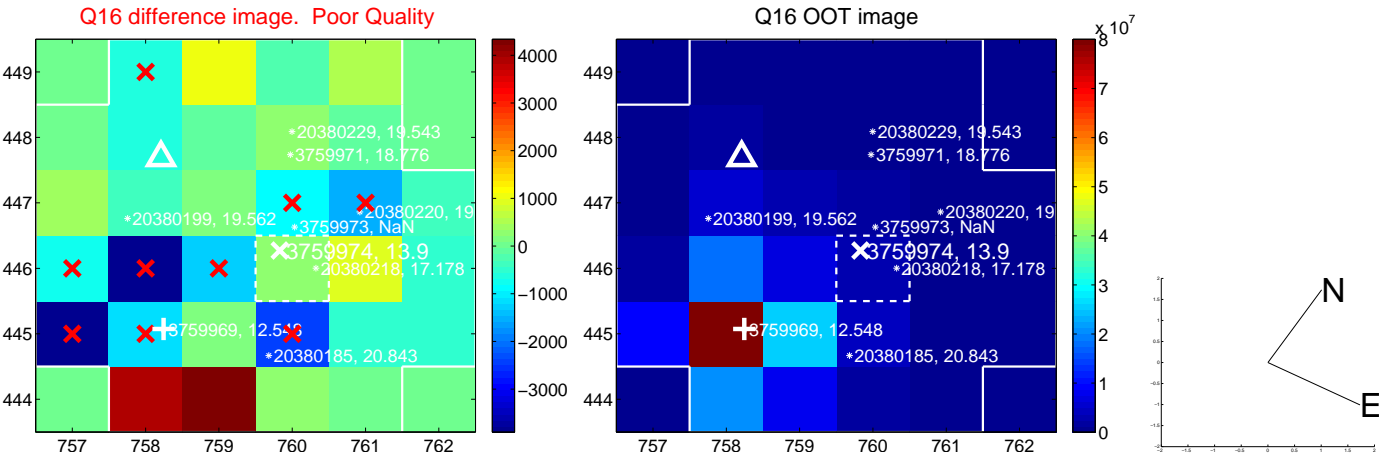
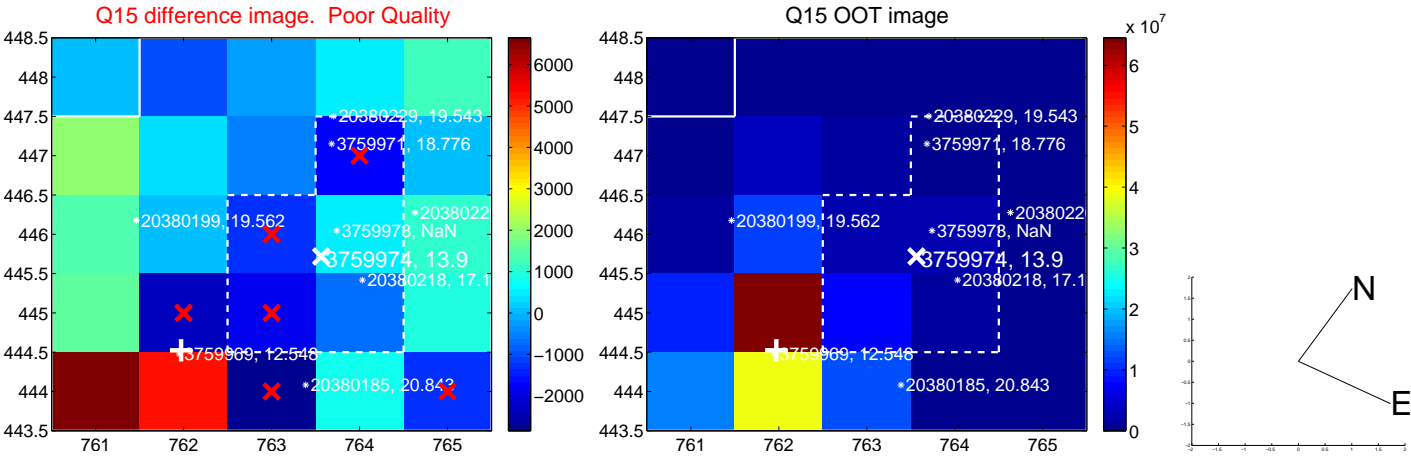
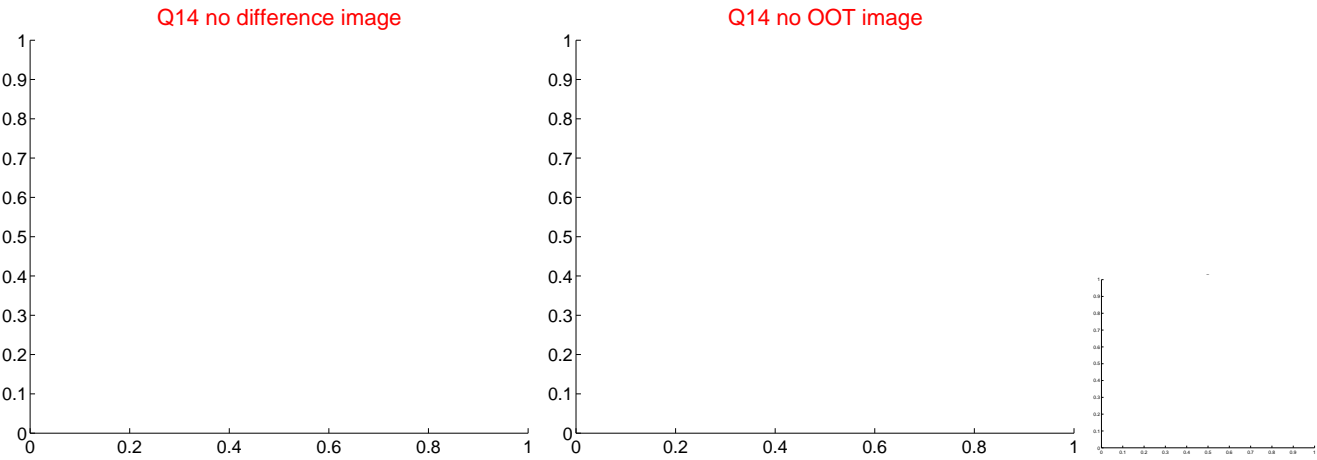
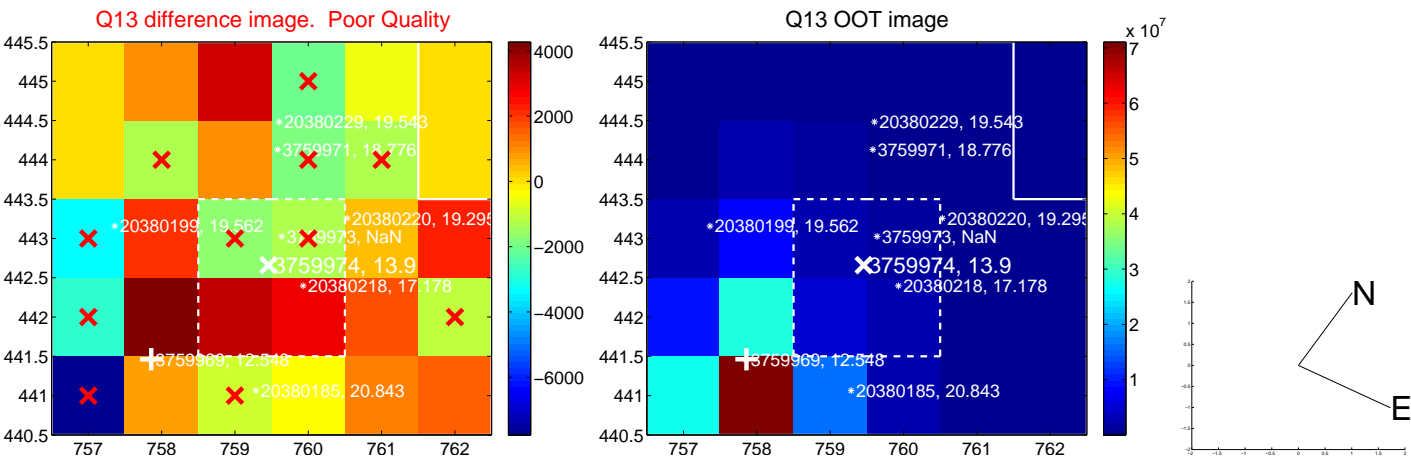
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



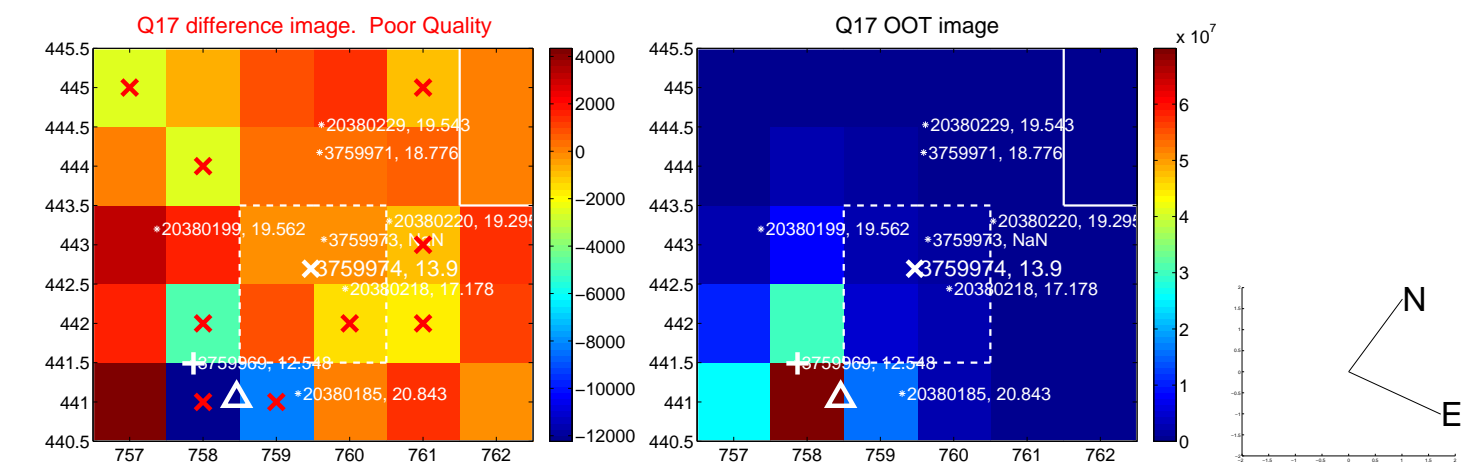
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



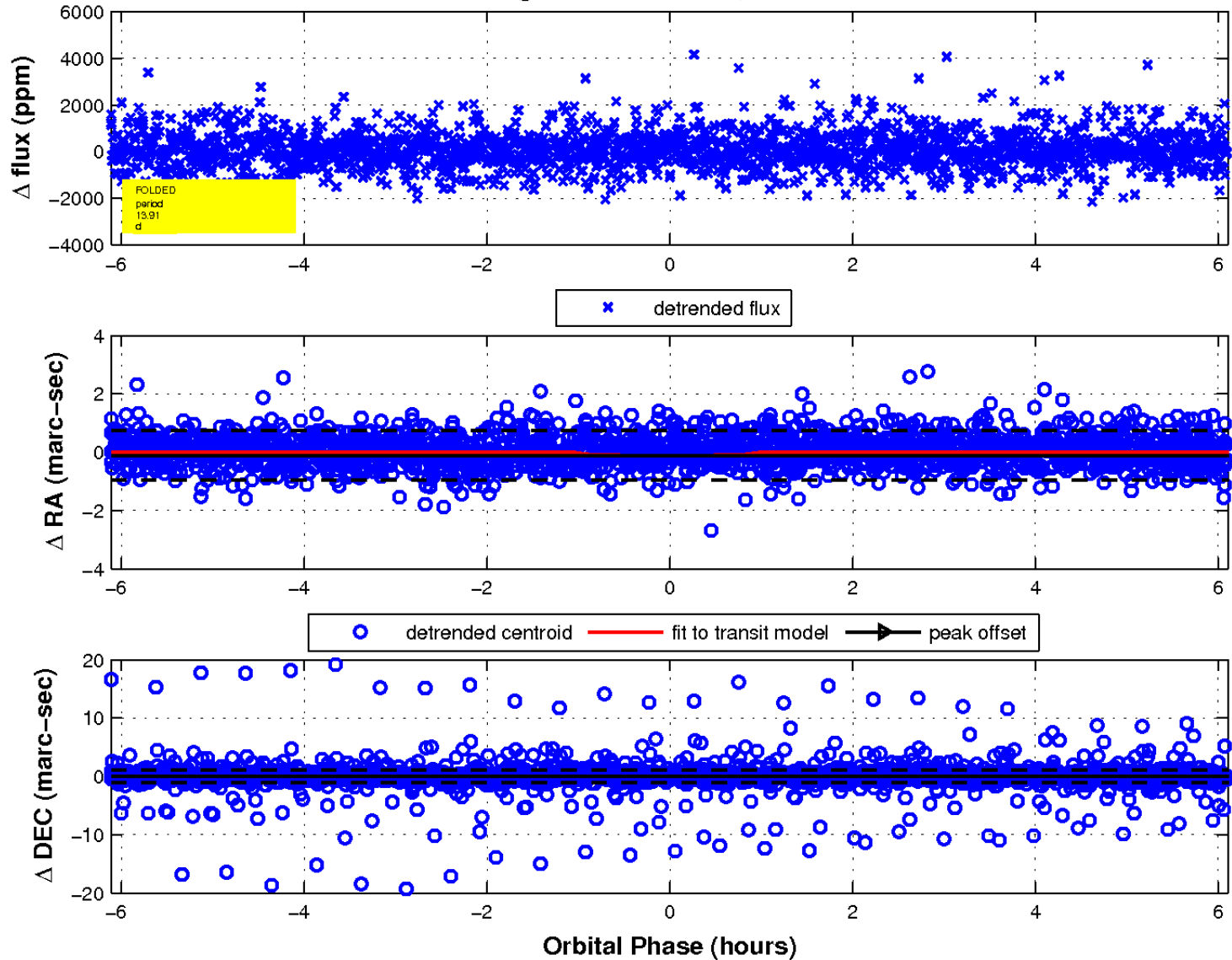
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

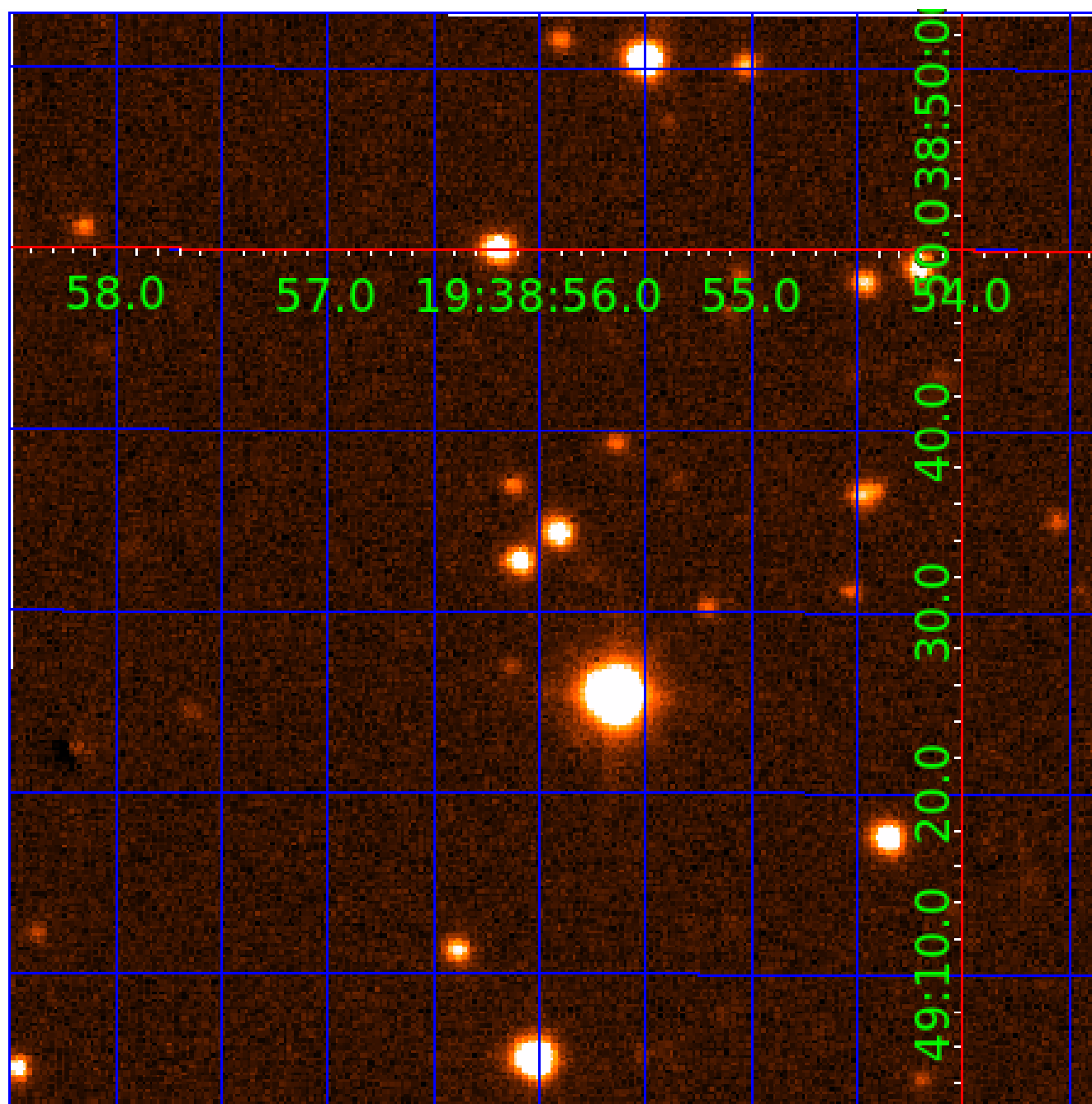


fluxWeightedCentroids, Planet 3 of 5



UKIRT Image

Declination



KIC 003759974

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})
003759974-01	OBS	No	1.379524	132.771306	88.3	10.271	9.5	9.3	1.00	5780	0.93	1699.42
003759974-02	OBS	No	24.921223	137.869185	1899.1	1.669	13.7	12.9	1.00	5780	4.50	35.85
003759974-03	OBS	No	13.906773	143.069618	1012.5	2.038	11.0	9.9	1.00	5780	3.39	78.04
003759974-04	OBS	No	11.295735	138.553900	881.3	2.396	11.2	9.9	1.00	5780	3.53	102.97
003759974-05	OBS	No	20.653045	132.158498	1192.0	2.655	11.5	10.8	1.00	5780	3.75	46.06

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003759974-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET
003759974-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET
003759974-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS—HALO_GHOST
003759974-04	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_DIFFS
003759974-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS—HALO_GHOST

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

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

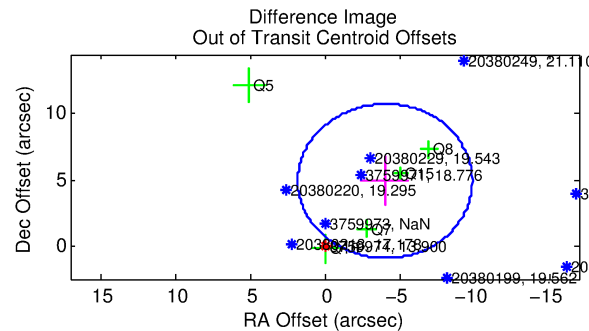
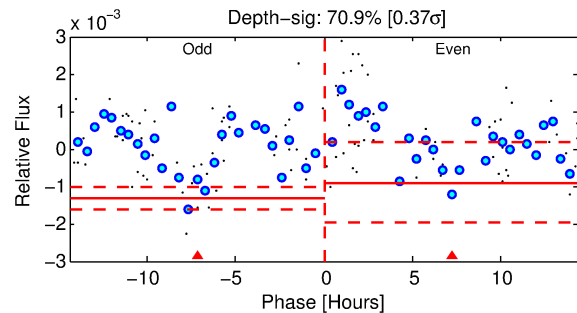
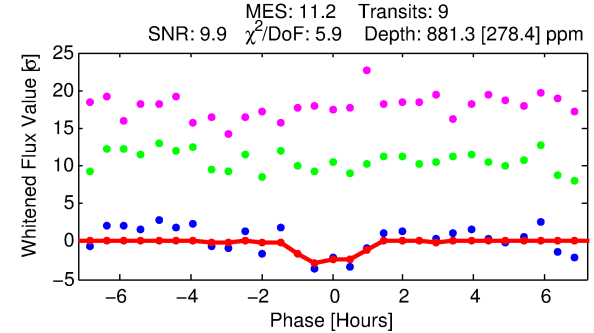
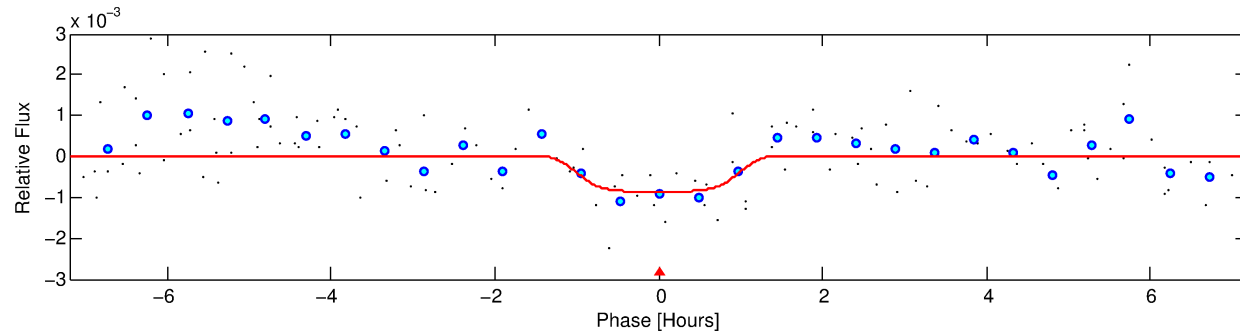
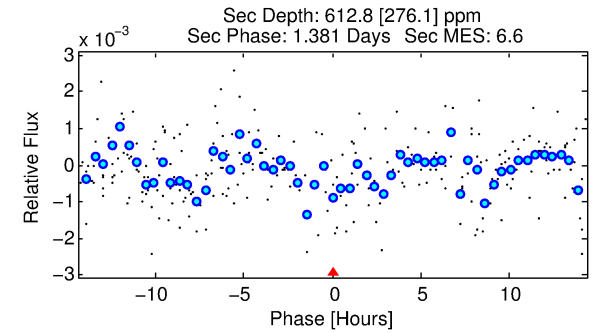
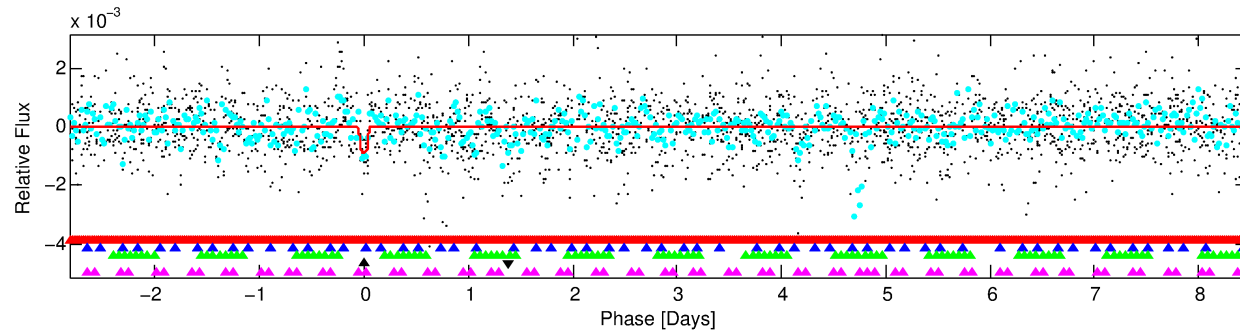
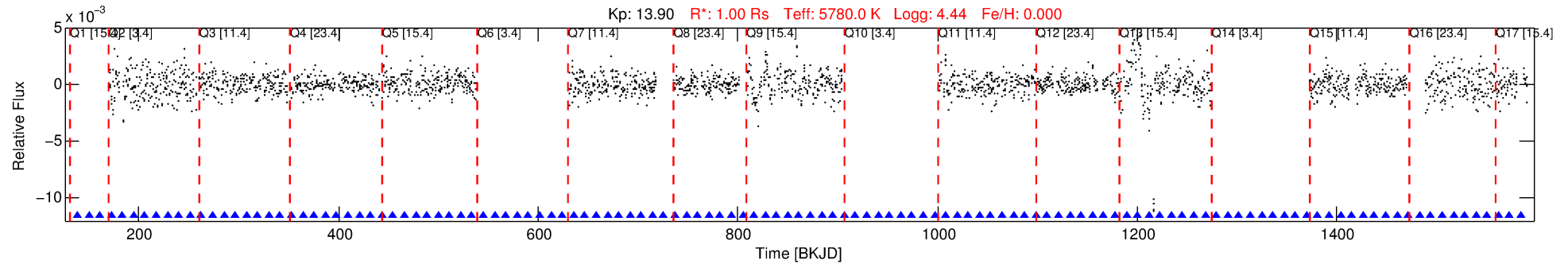
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003759974-04

No Significant Match Found

DV One-Page Summary

KIC: 3759974 Candidate: 4 of 5 Period: 11.296 d



DV Fit Results:

Period = 11.29573 [0.00025] d
Epoch = 138.5539 [0.0161] BKJD
Rp/R* = 0.0324 [0.0289]
a/R* = 18.31 [72.60]
b = 0.90 [0.86]
Self = 102.97 [0.00]
Teq = 812 [0] K
Rp = 3.53 [3.16] Re
a = 0.0985 [0.0000] AU
Ag = 262.25 [483.18] [0.54σ]
Teff = 5054 [2328] K [1.82σ]

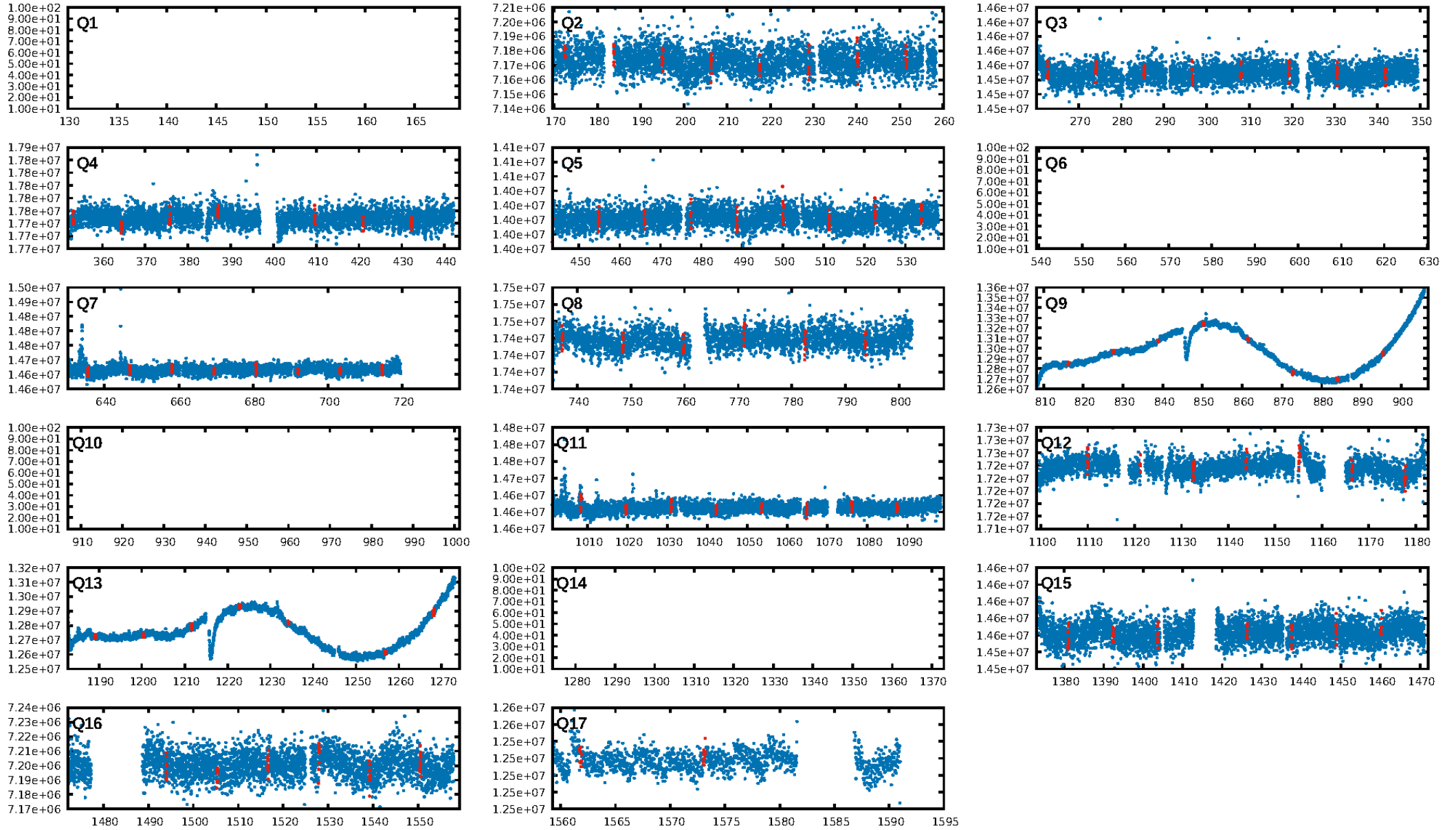
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [22.57σ]
LongPeriod-sig: 100.0% [19.92σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.4%
Bootstrap-pfa: 6.65e-32
RollingBand-fgt: 1.00 [9/9]
GhostDiagnostic-chr: -0.2688
Centroid-sig: 27.7%
Centroid-so: 5.980 arcsec [42.11σ]
OotOffset-rm: 6.358 arcsec [3.27σ]
KicOffset-rm: 7.492 arcsec [4.20σ]
OotOffset-st: 0/2/2/1 [5]
KicOffset-st: 0/2/2/1 [5]
DiffImageQuality-fgm: 0.20 [1/5]
DiffImageOverlap-fno: 0.77 [10/13]

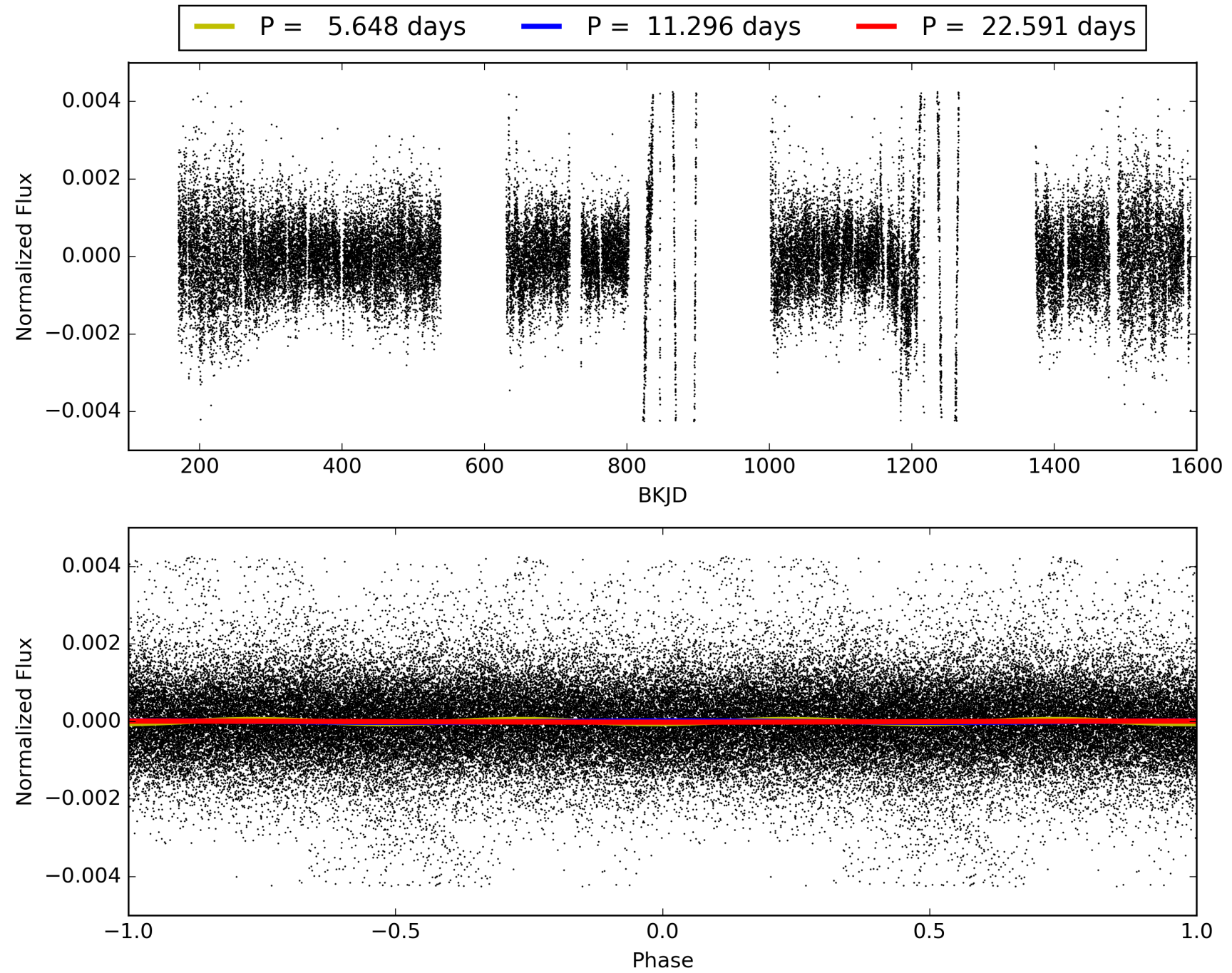
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 18:29:05 Z

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

TCE 003759974-04, PDC Light Curves

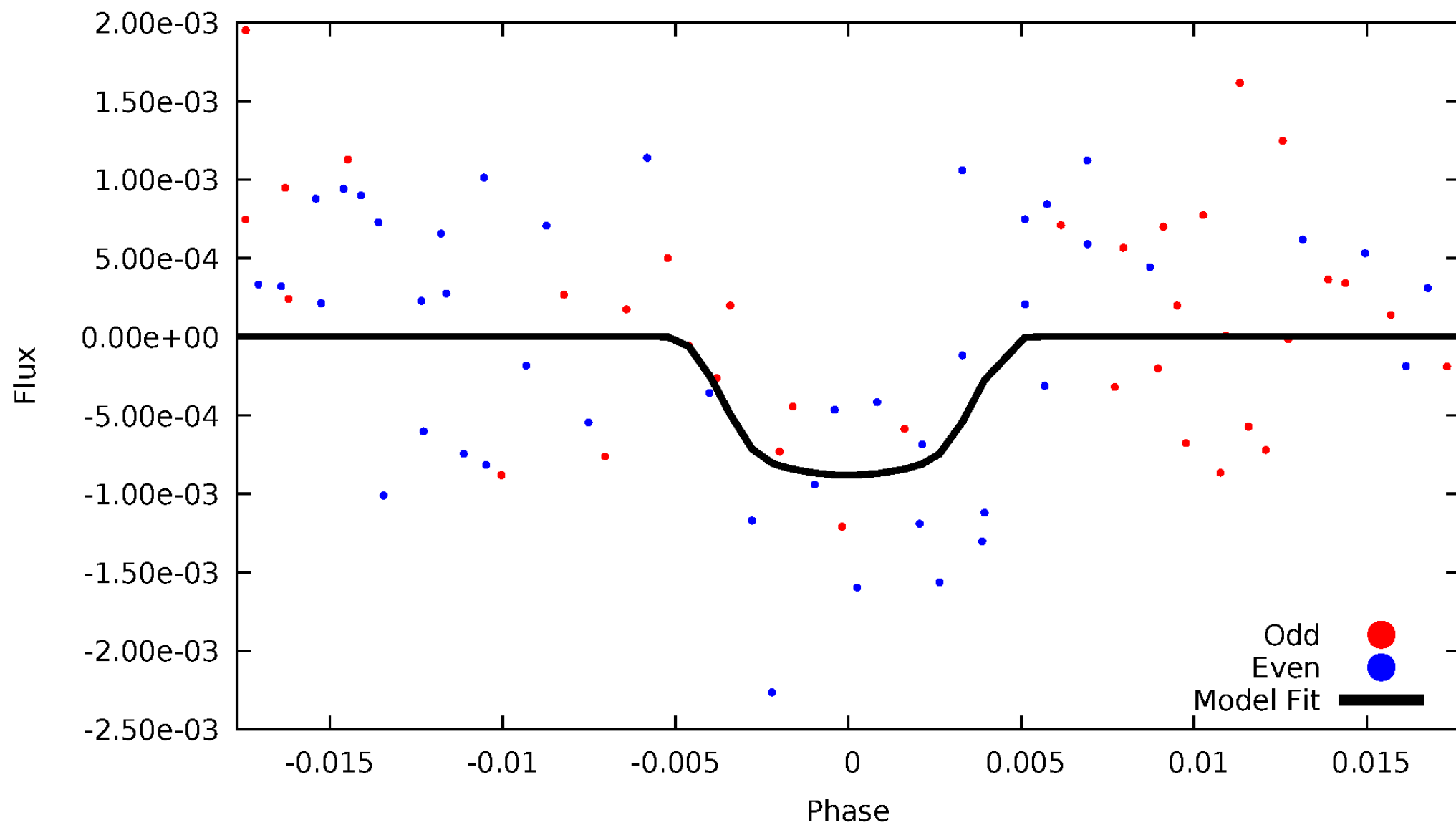


TCE 003759974-04



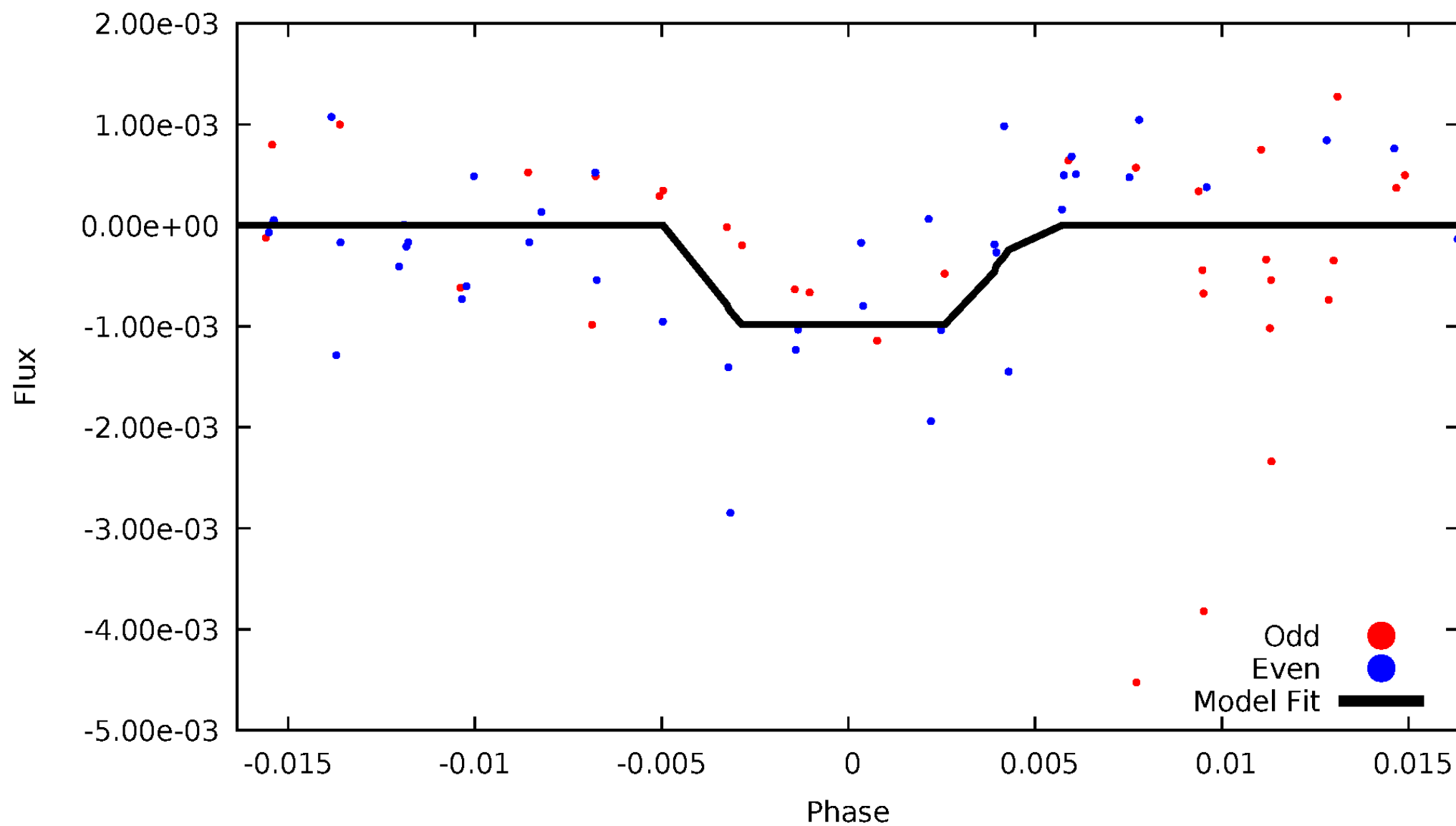
DV Odd/Even

TCE 003759974-04



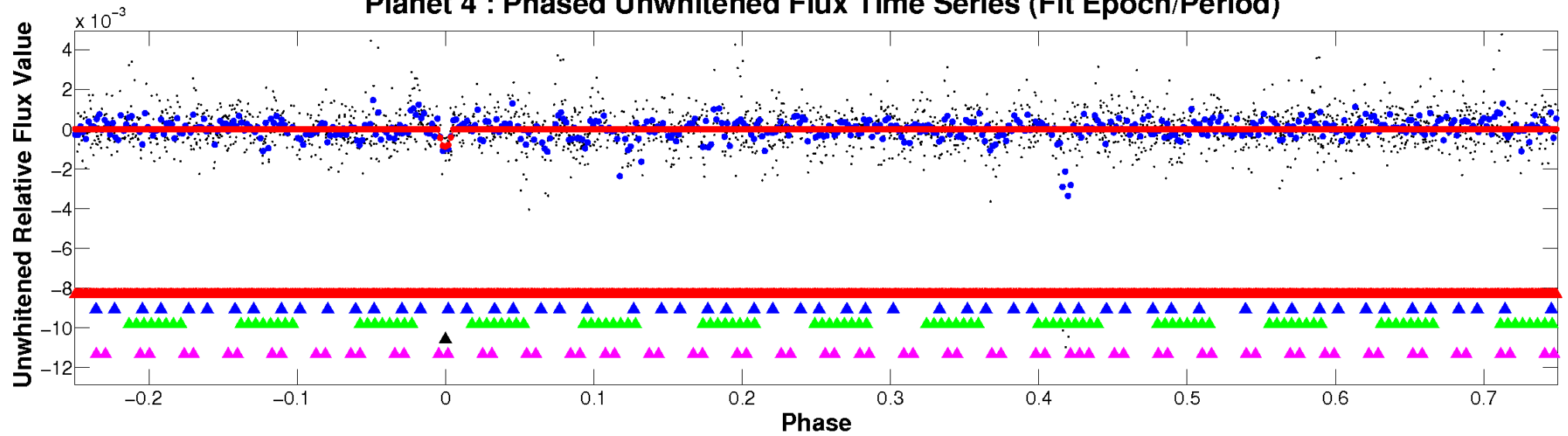
ALT Odd/Even

TCE 003759974-04

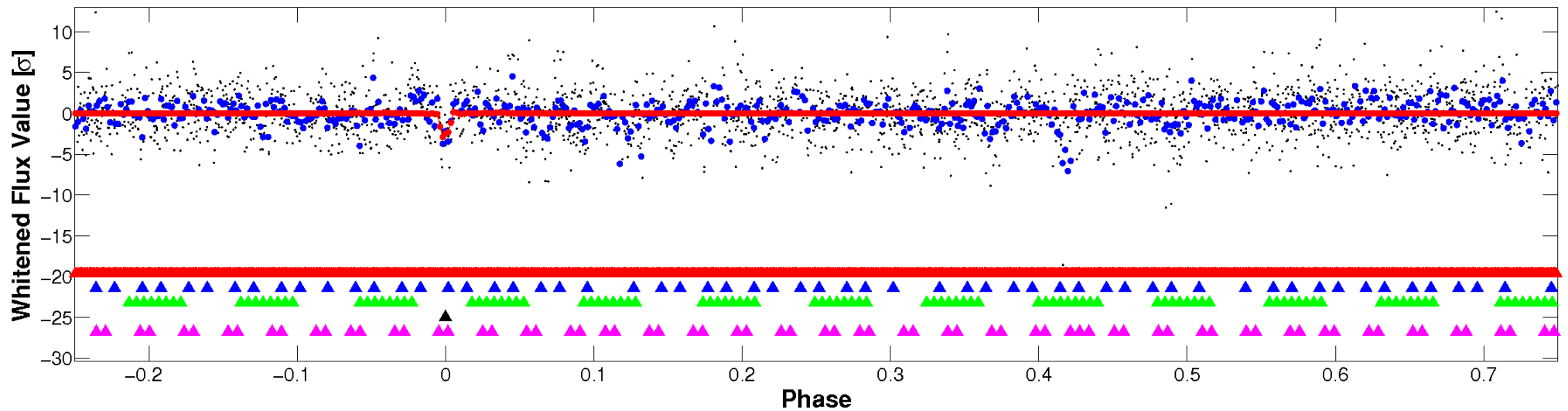


Non-Whitened Vs. Whitened Light Curve

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

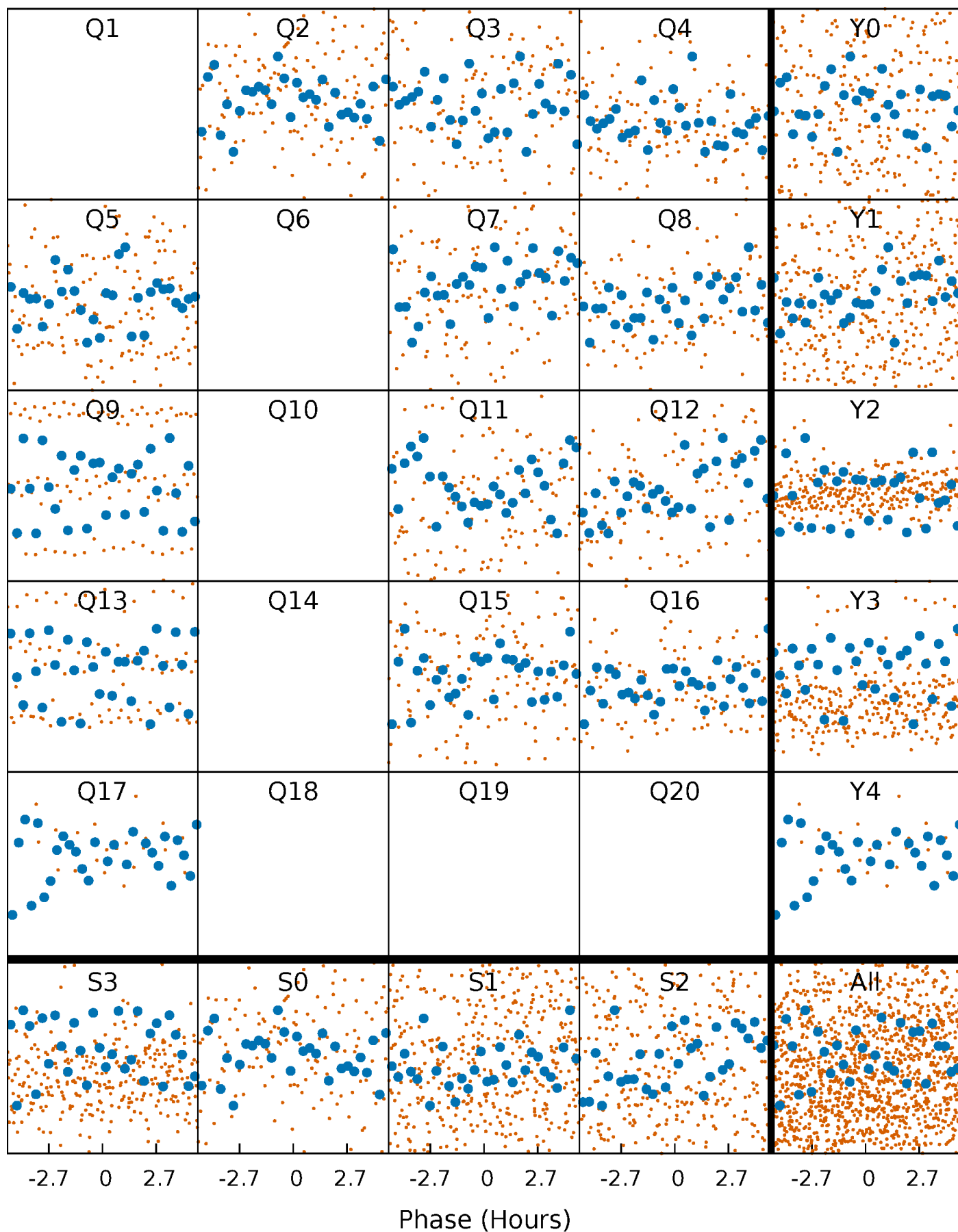


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



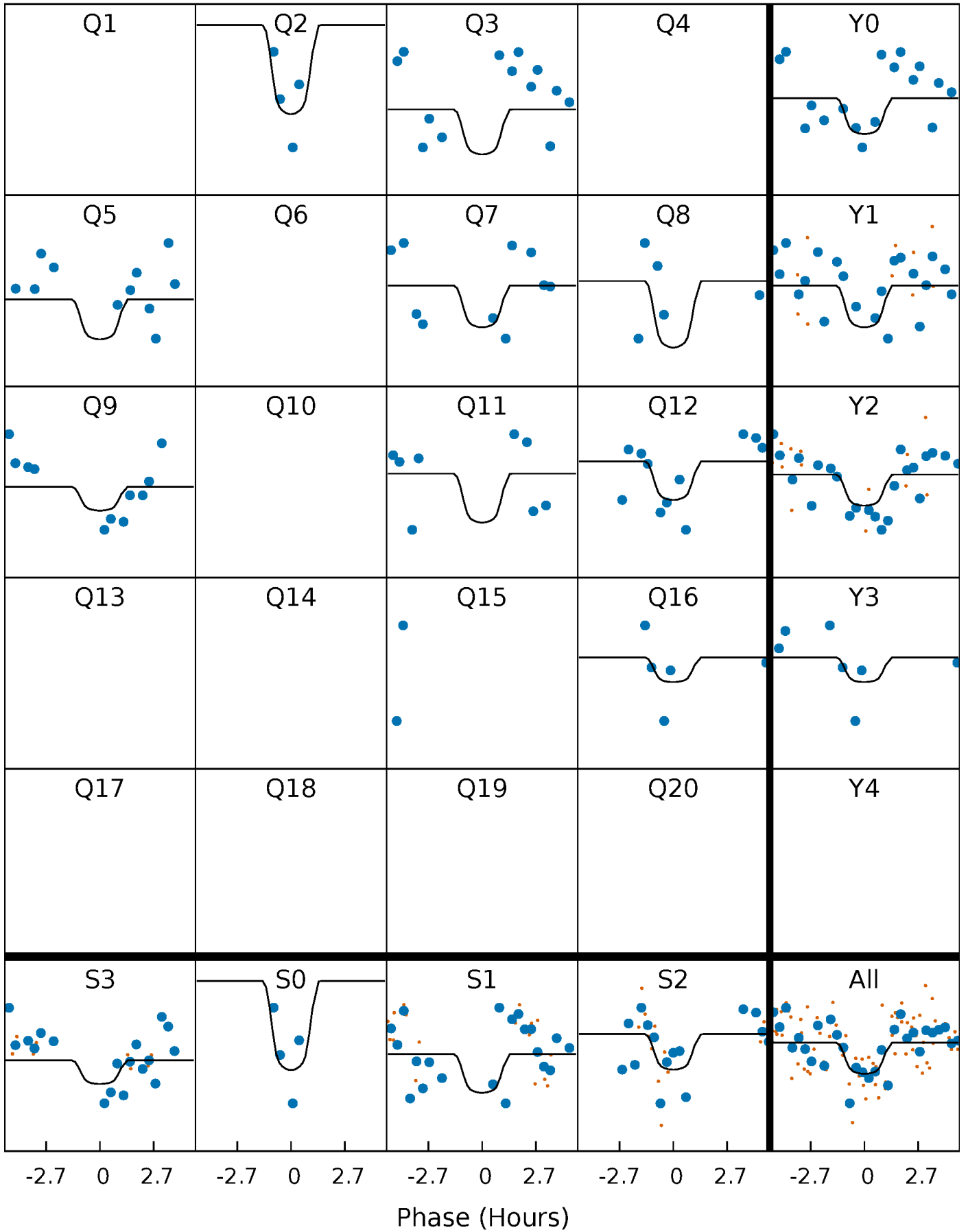
PDC Quarter-Phased Transit Curves

TCE 003759974-04 P= 11.295735 Days $T_0=138.553900$ (BKJD)



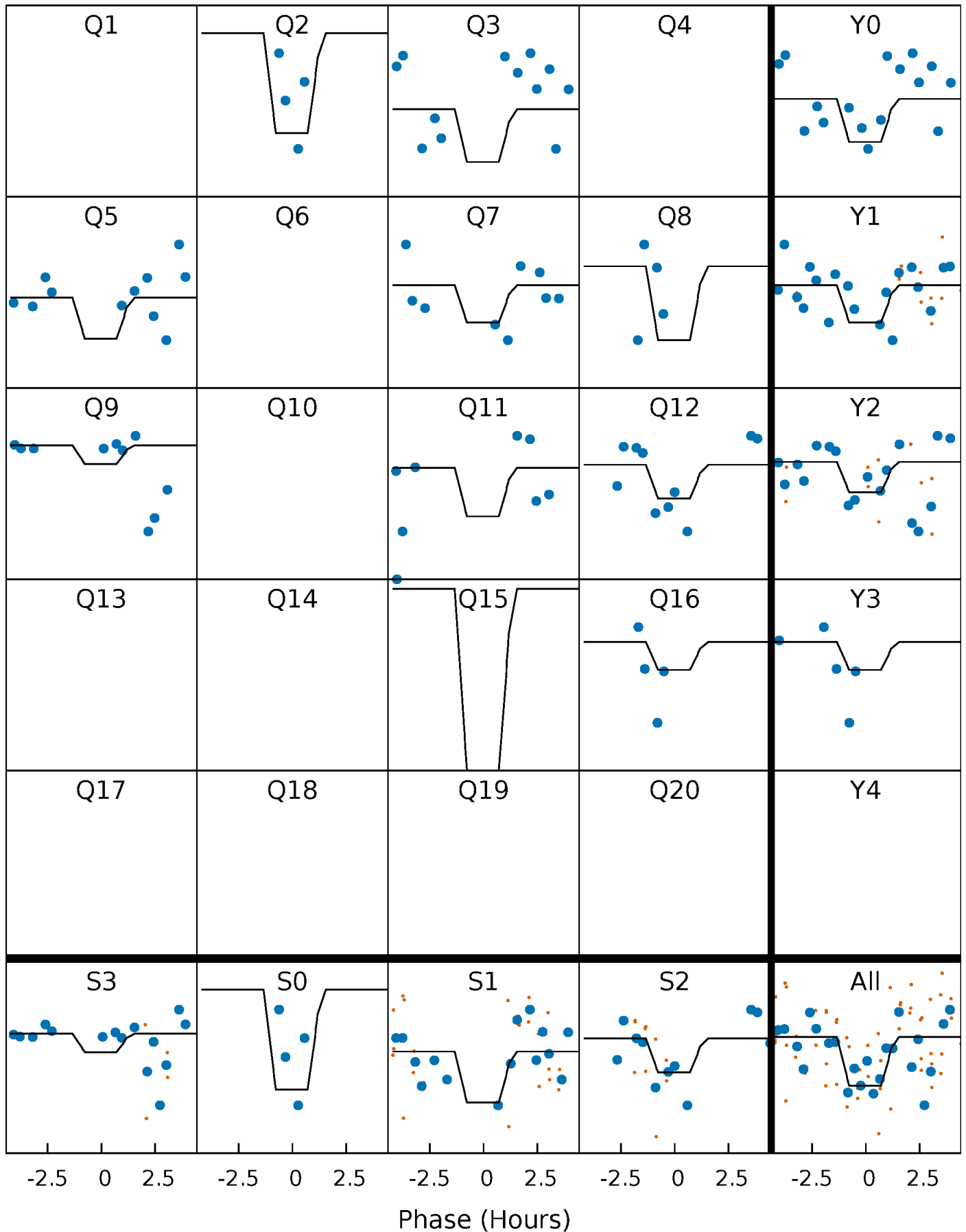
DV Quarter-Phased Transit Curves

TCE 003759974-04 P= 11.295735 Days $T_0=138.553900$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

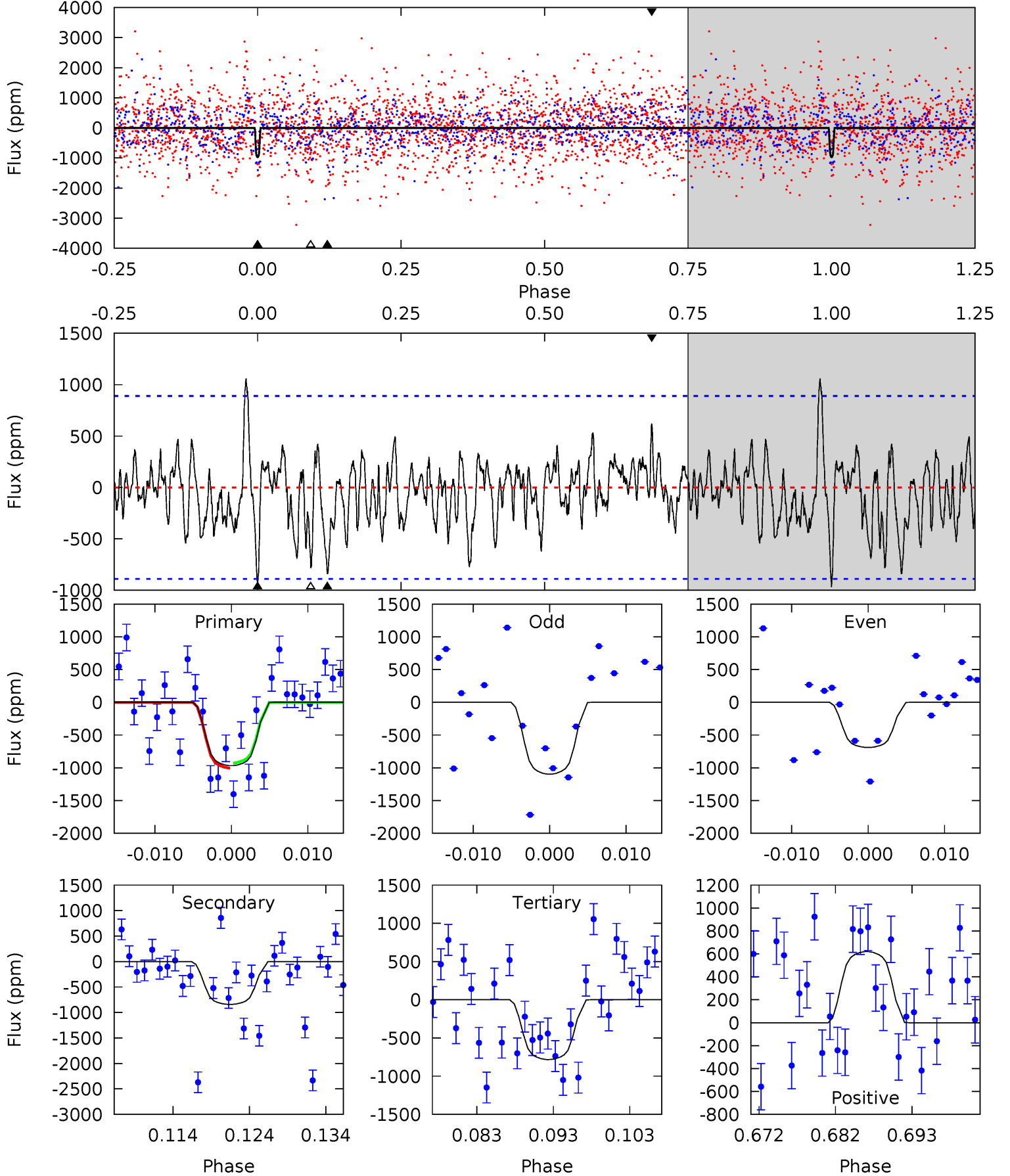
TCE 003759974-04 P= 11.295919 Days $T_0=138.541838$ (BKJD)



DV Model-Shift Uniqueness Test

003759974-04, P = 11.295735 Days, E = 138.553900 Days

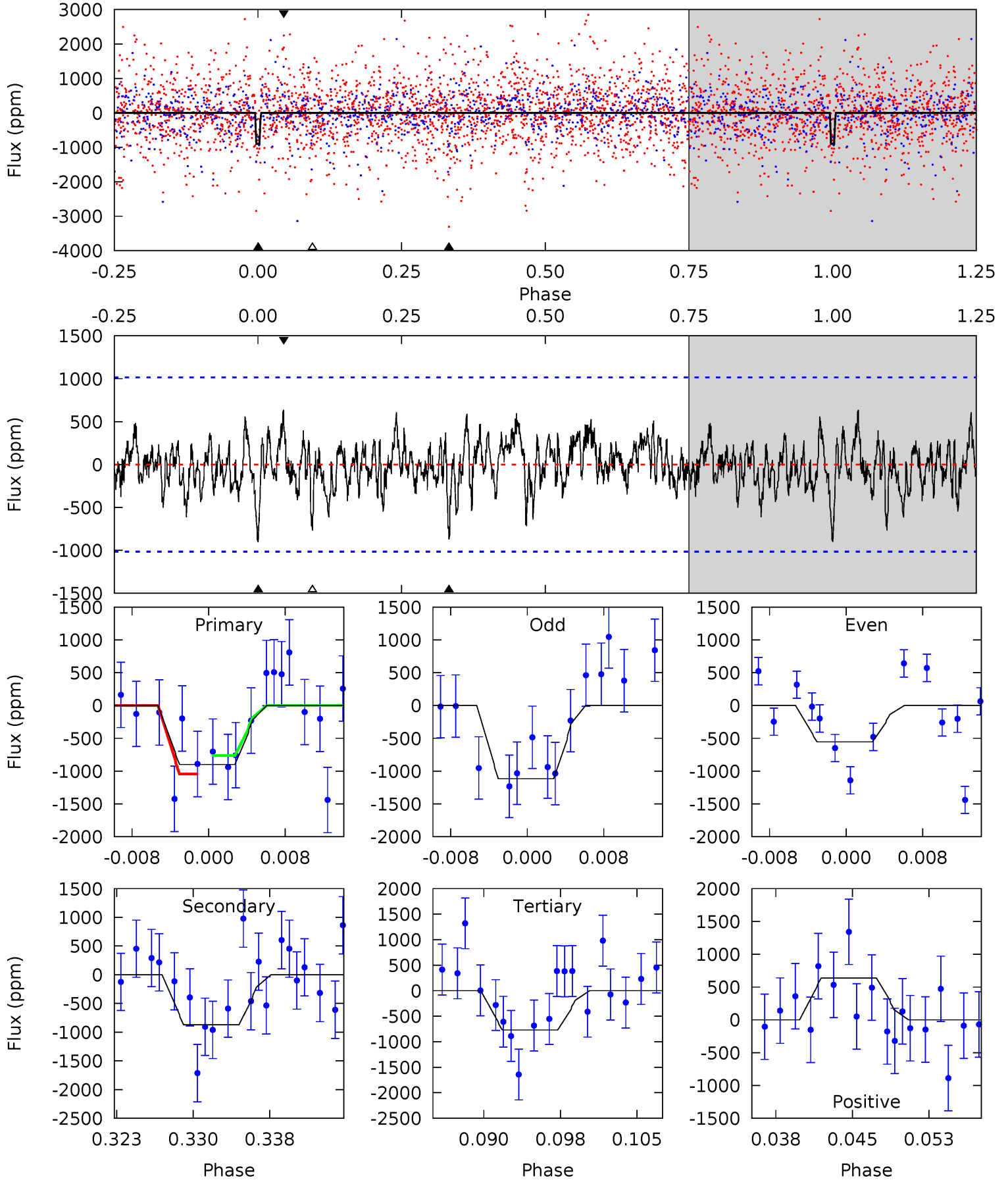
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.46	4.75	4.42	3.50	5.02	2.56	1.47	1.05	1.96	0.33	1.25	1.07	0.61	0.52	0.22



Alt Model-Shift Uniqueness Test

003759974-04, P = 11.295919 Days, E = 138.541838 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.50	4.36	3.85	3.18	5.08	2.67	1.12	0.65	1.33	0.51	1.18	1.32	1.00	0.41	0.70



Stellar Parameters For KIC 003759974

	$T_{\text{eff}}(K)$	$\log(g)$	[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 003759974-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-841 ± 177	$4.12^{+2.75}_{-2.51}$	1133^{+52}_{-51}	5095^{+3252}_{-994}	258^{+1455}_{-172}
Alt.	-871 ± 200	$3.96^{+3.16}_{-2.48}$	1135^{+49}_{-56}	5271^{+3720}_{-1194}	293^{+1838}_{-208}

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 $A_{obs} \gg 1.0$

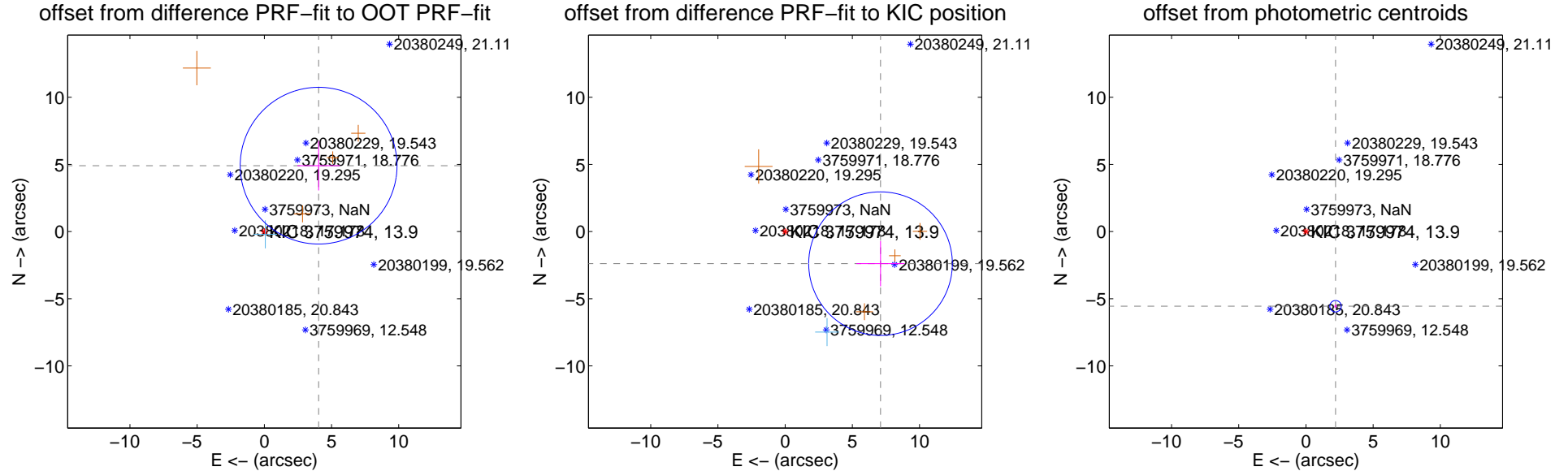
DV Centroid Data

Supplemental centroid analysis for 003759974-04. Kepler magnitude: 13.90. Transit SNR 9.86

There are 1 quarters with good PRF difference image offsets

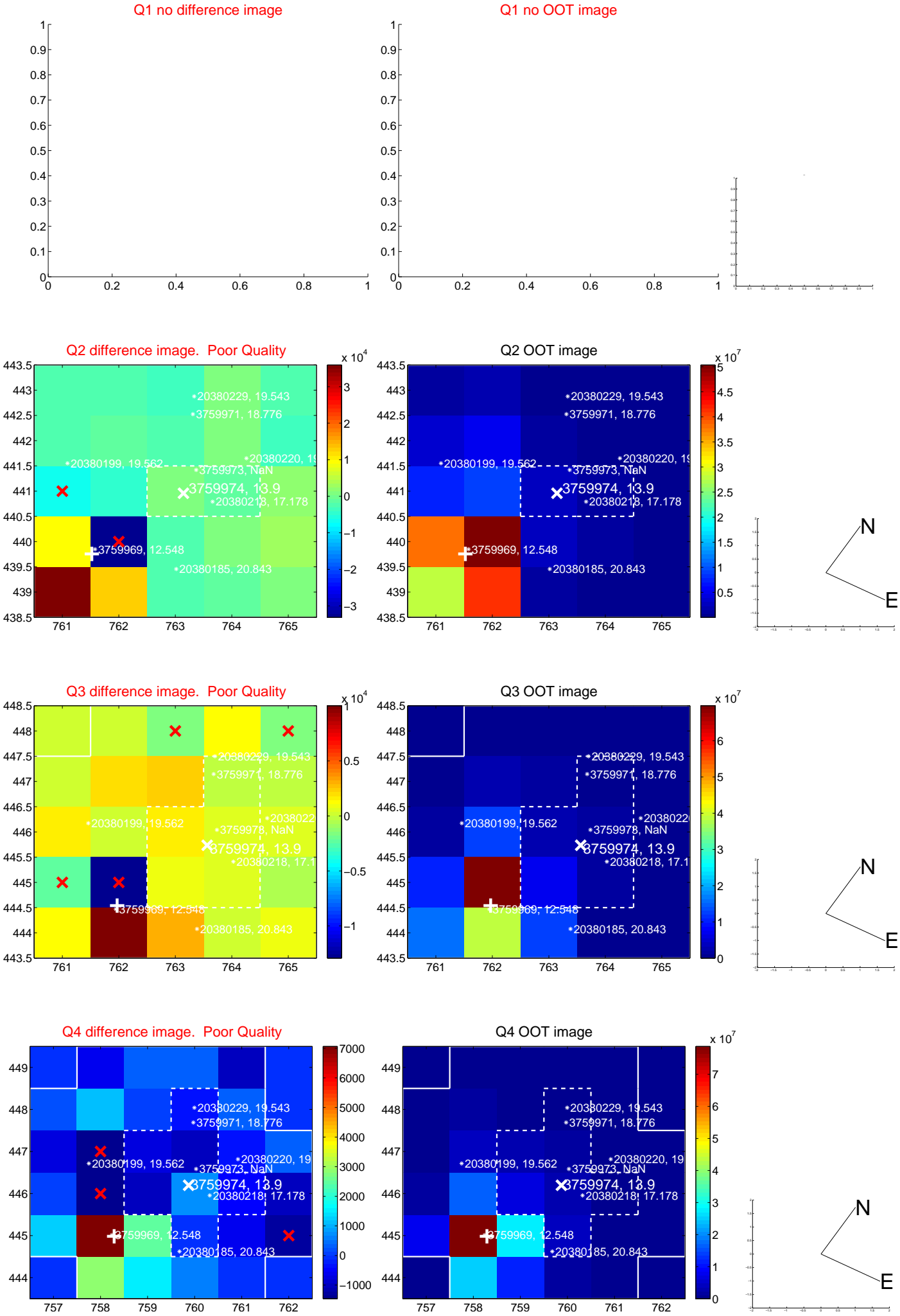
The OOT PRF centroid is offset from the target star catalog position by about 7.89 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.358 ± 1.945	3.27	-4.040 ± 1.578	4.909 ± 1.843
PRF-fit source offset from KIC position	7.492 ± 1.782	4.20	-7.100 ± 1.792	-2.389 ± 1.689
photometric centroid source offset	5.98 ± 0.14	42.11	-2.20 ± 0.10	-5.56 ± 0.15

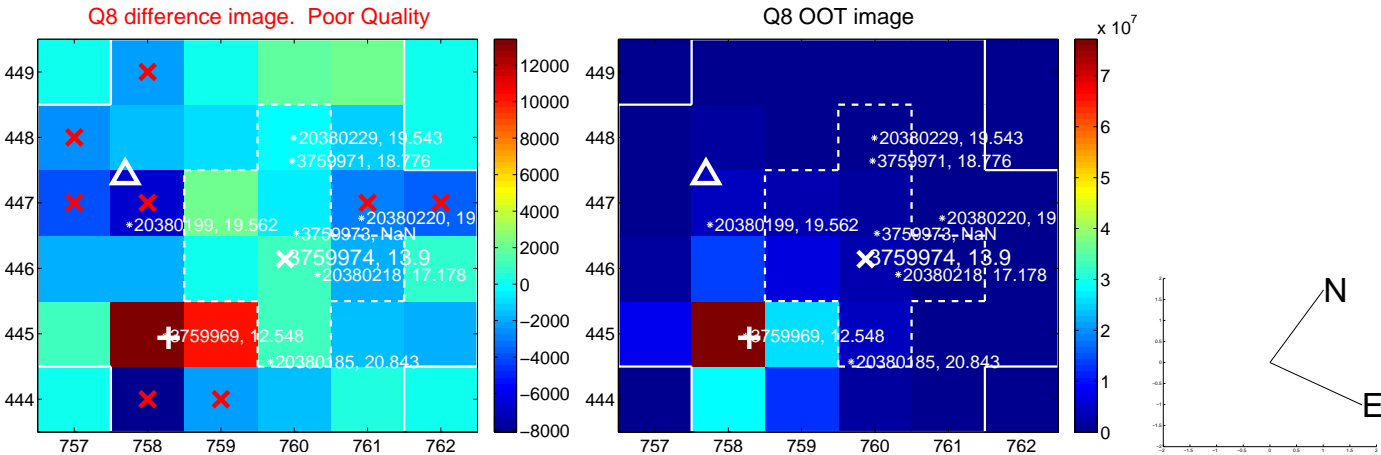
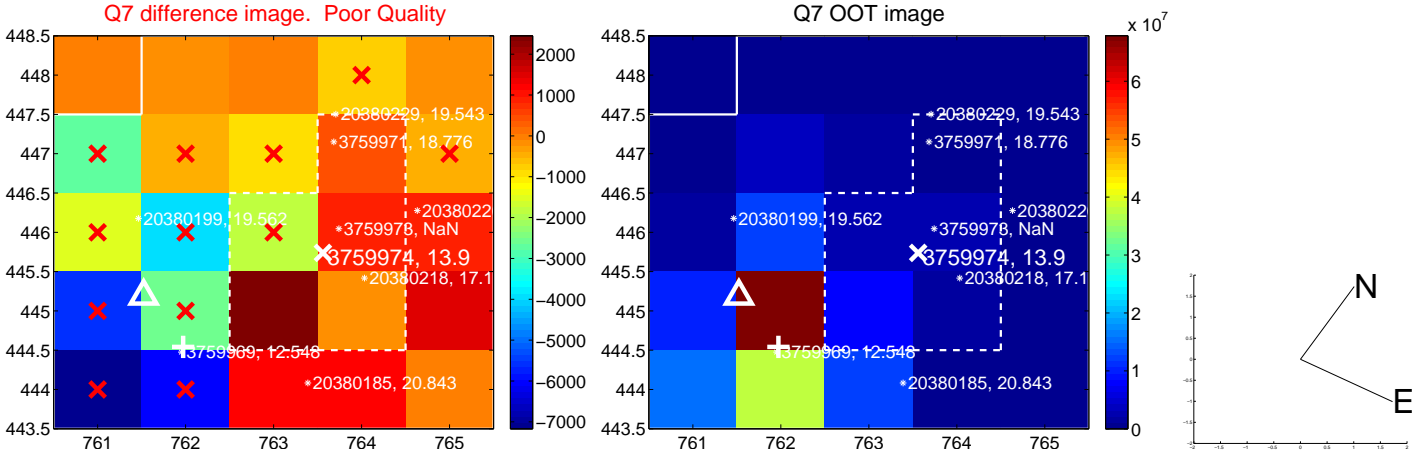
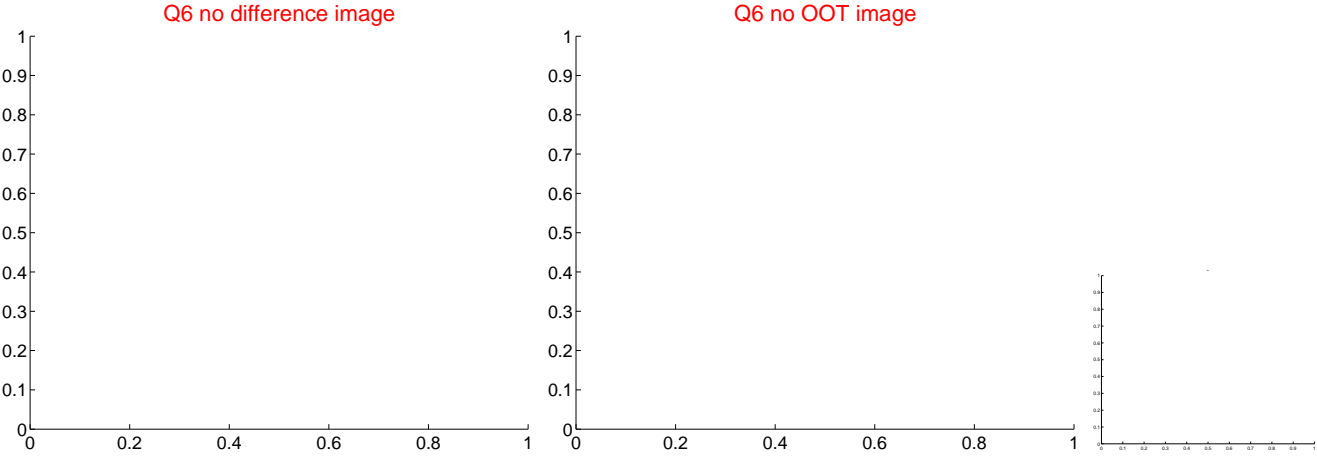
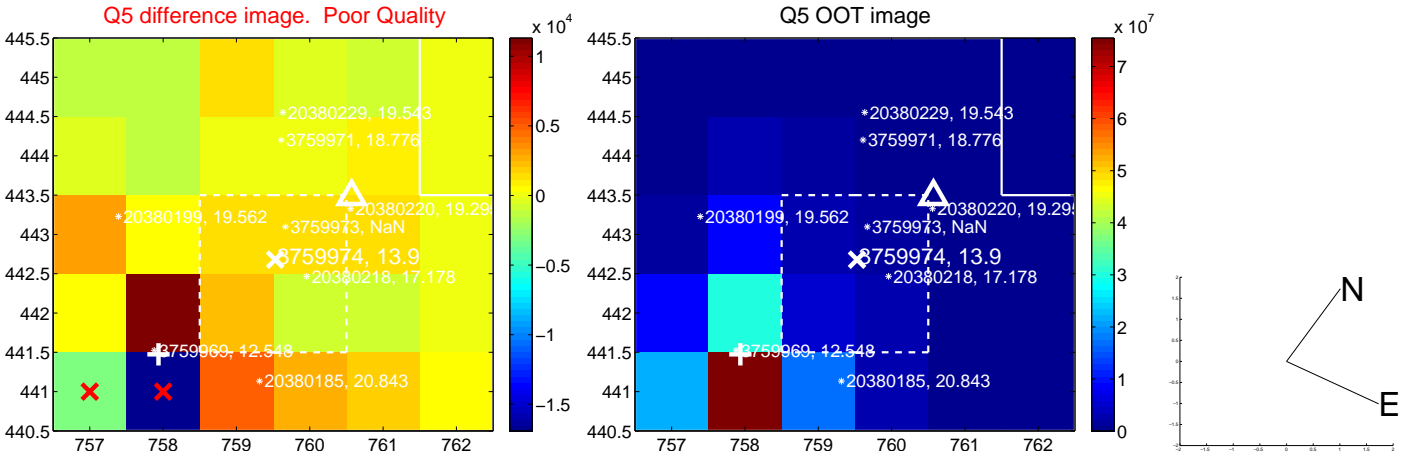


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

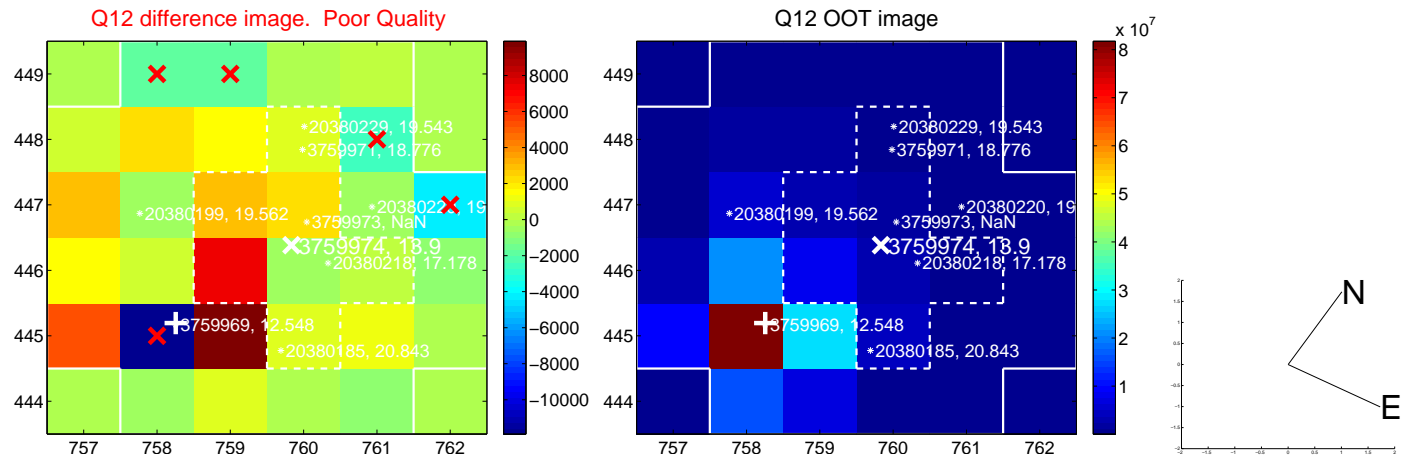
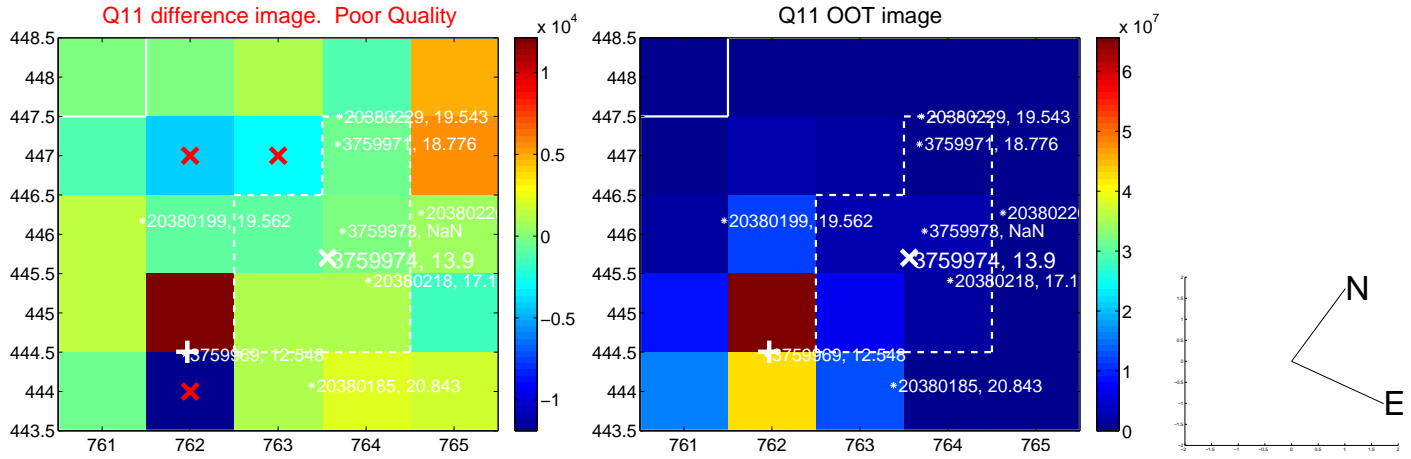
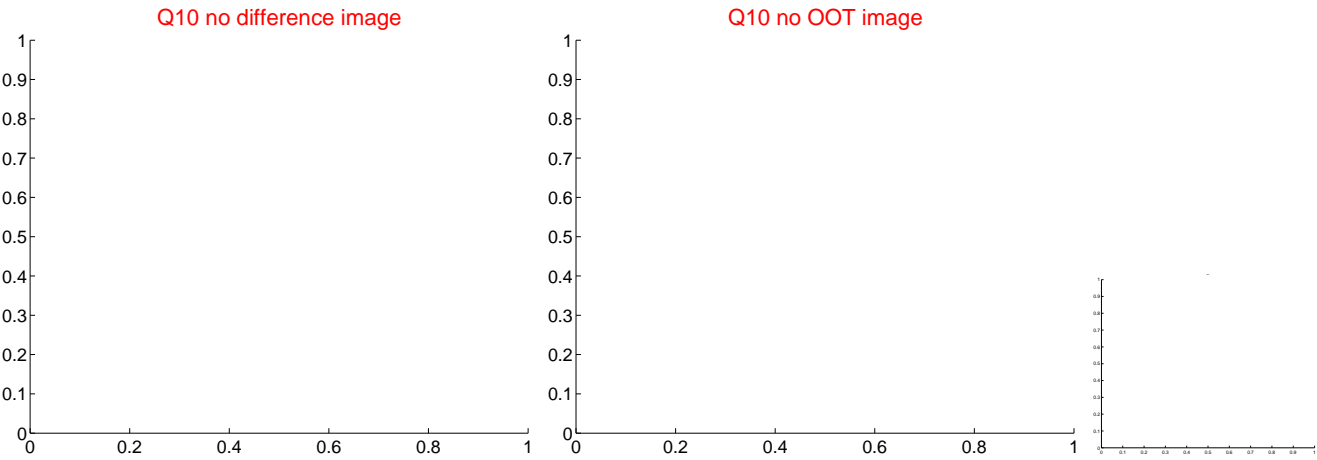
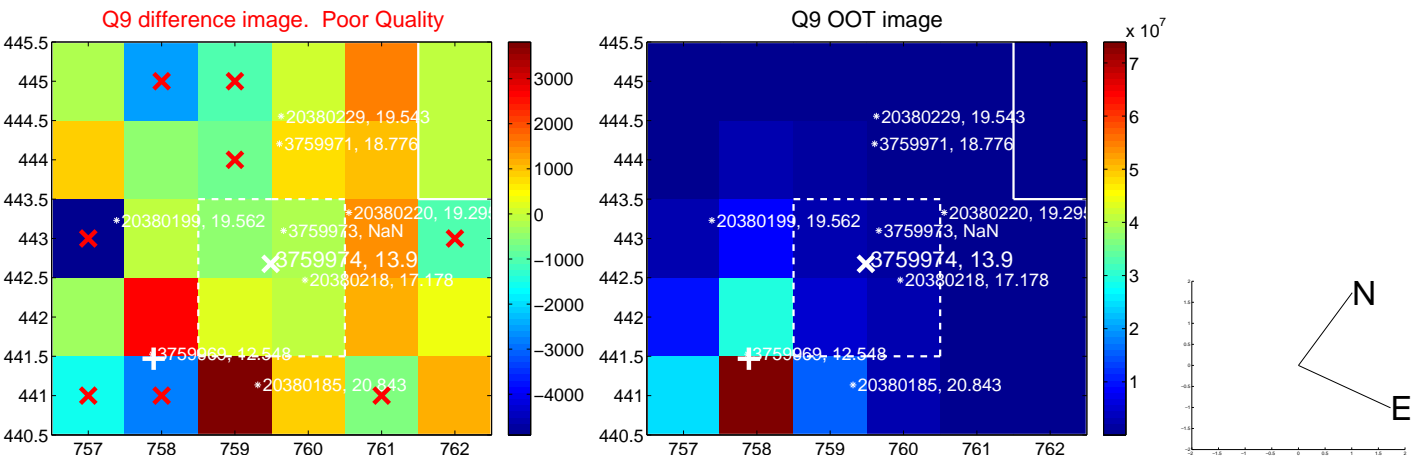
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



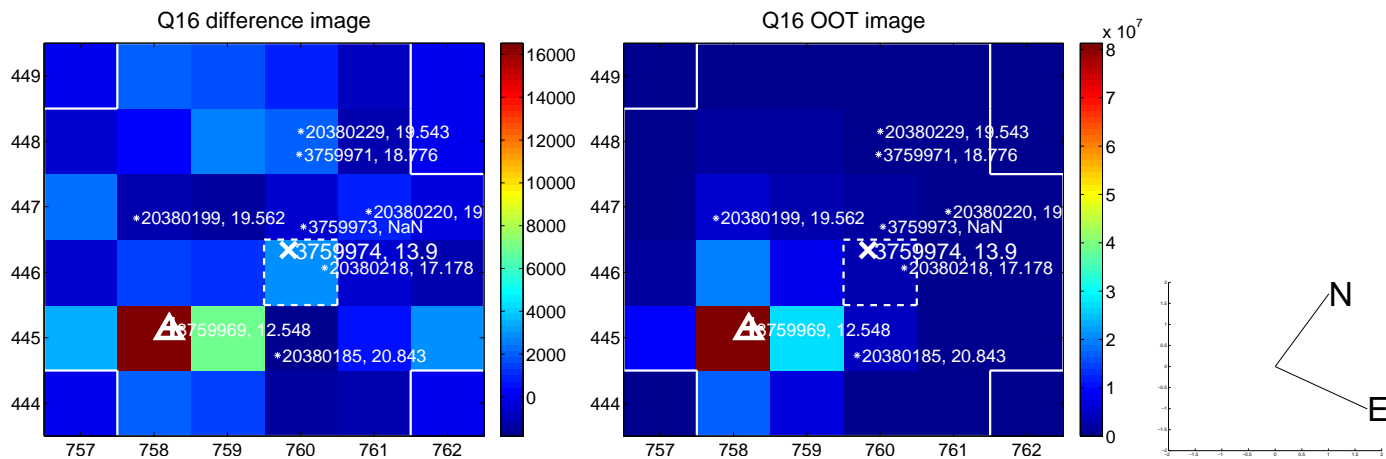
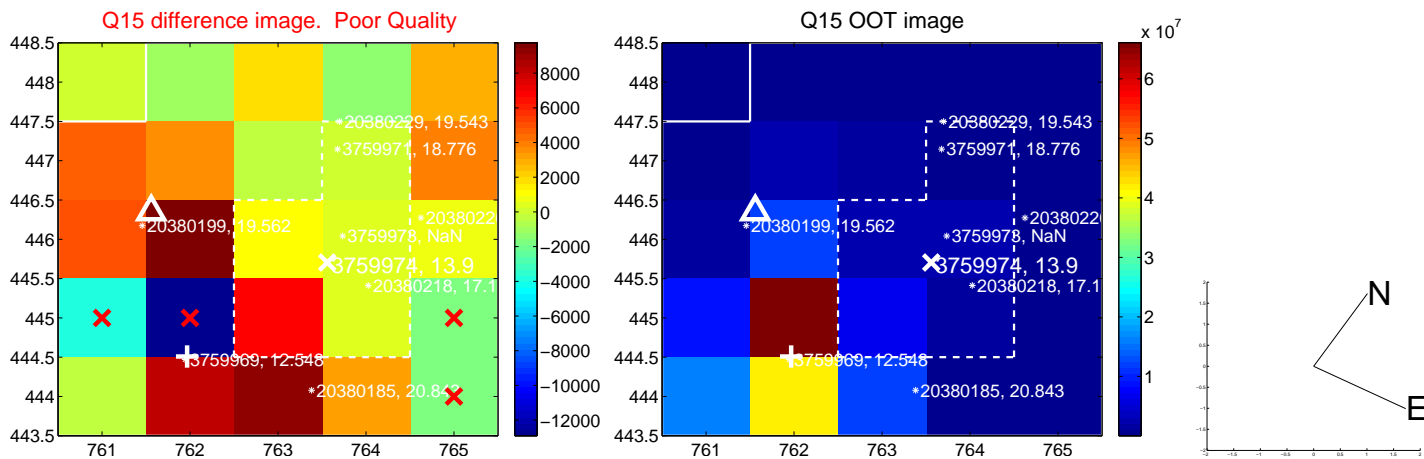
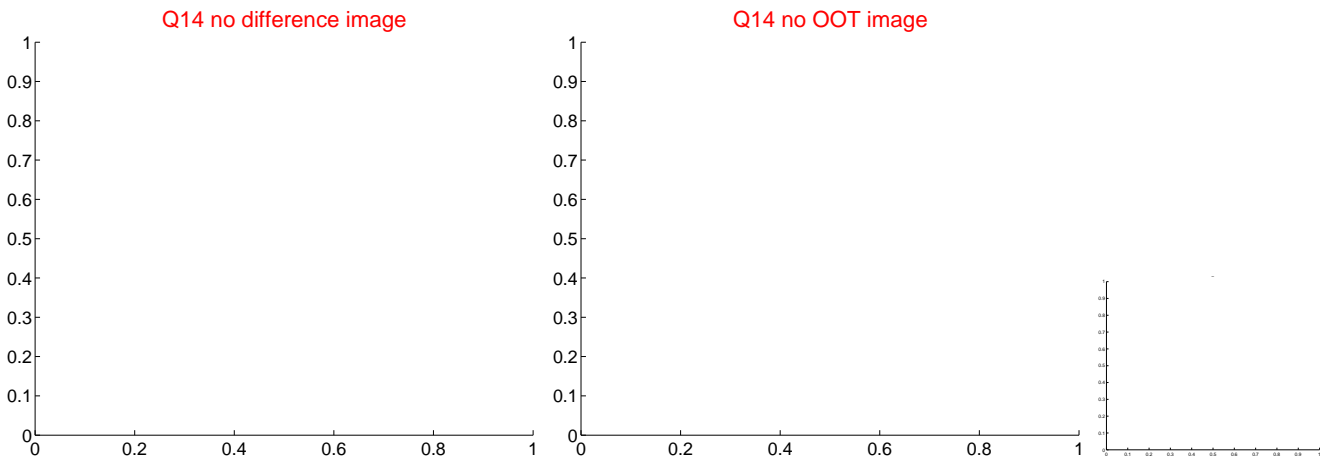
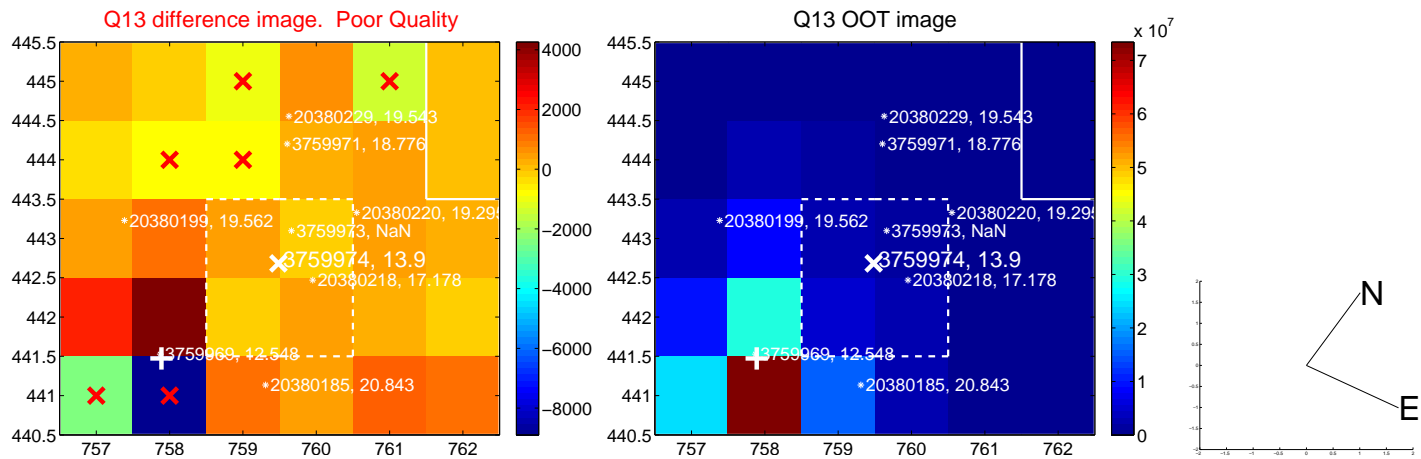
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



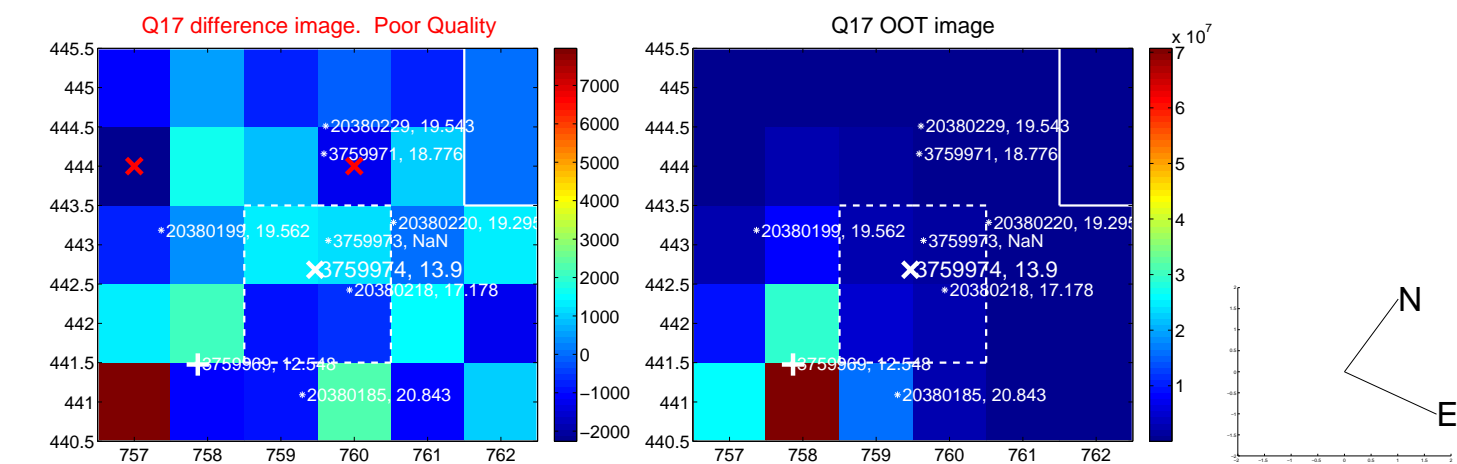
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



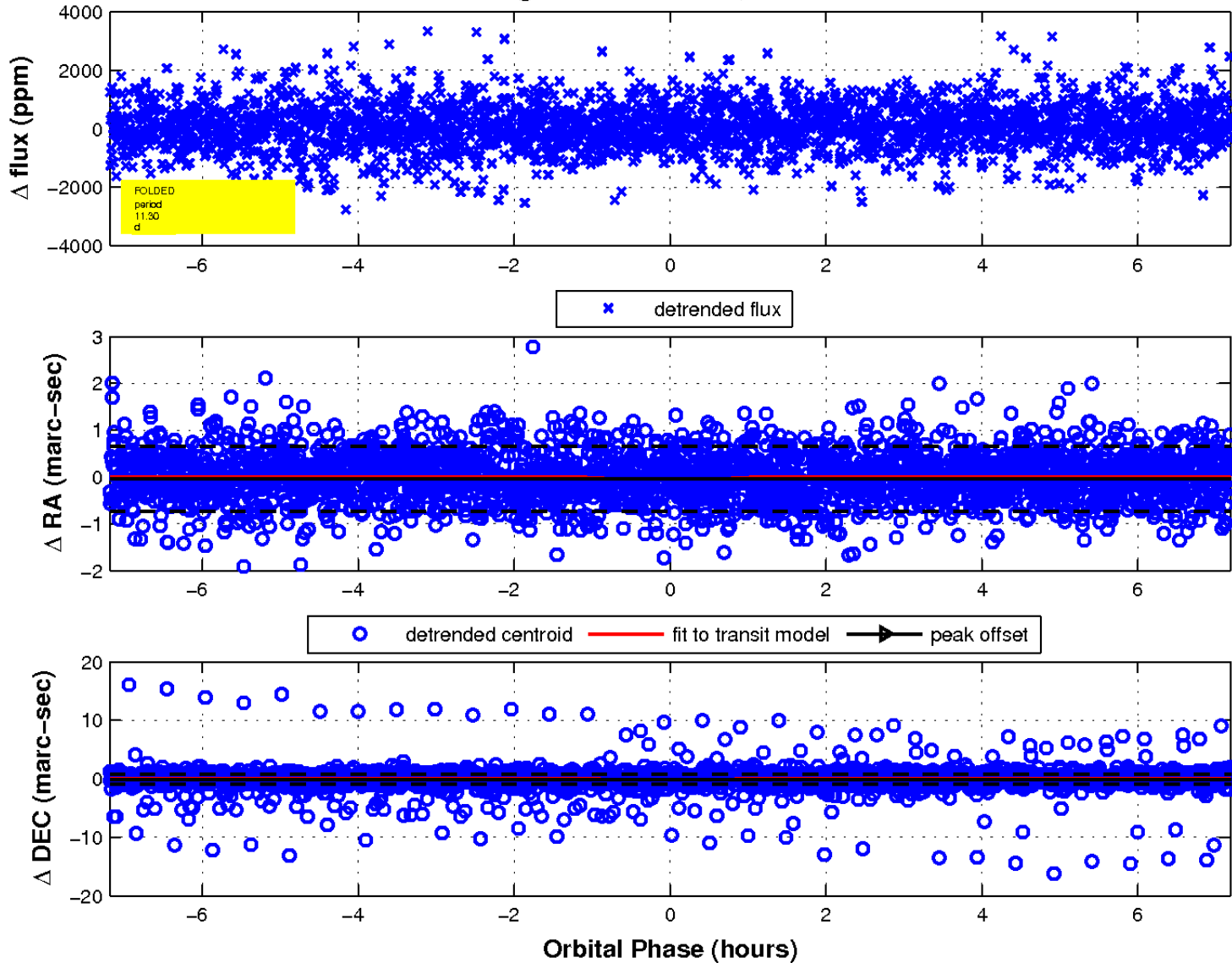
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

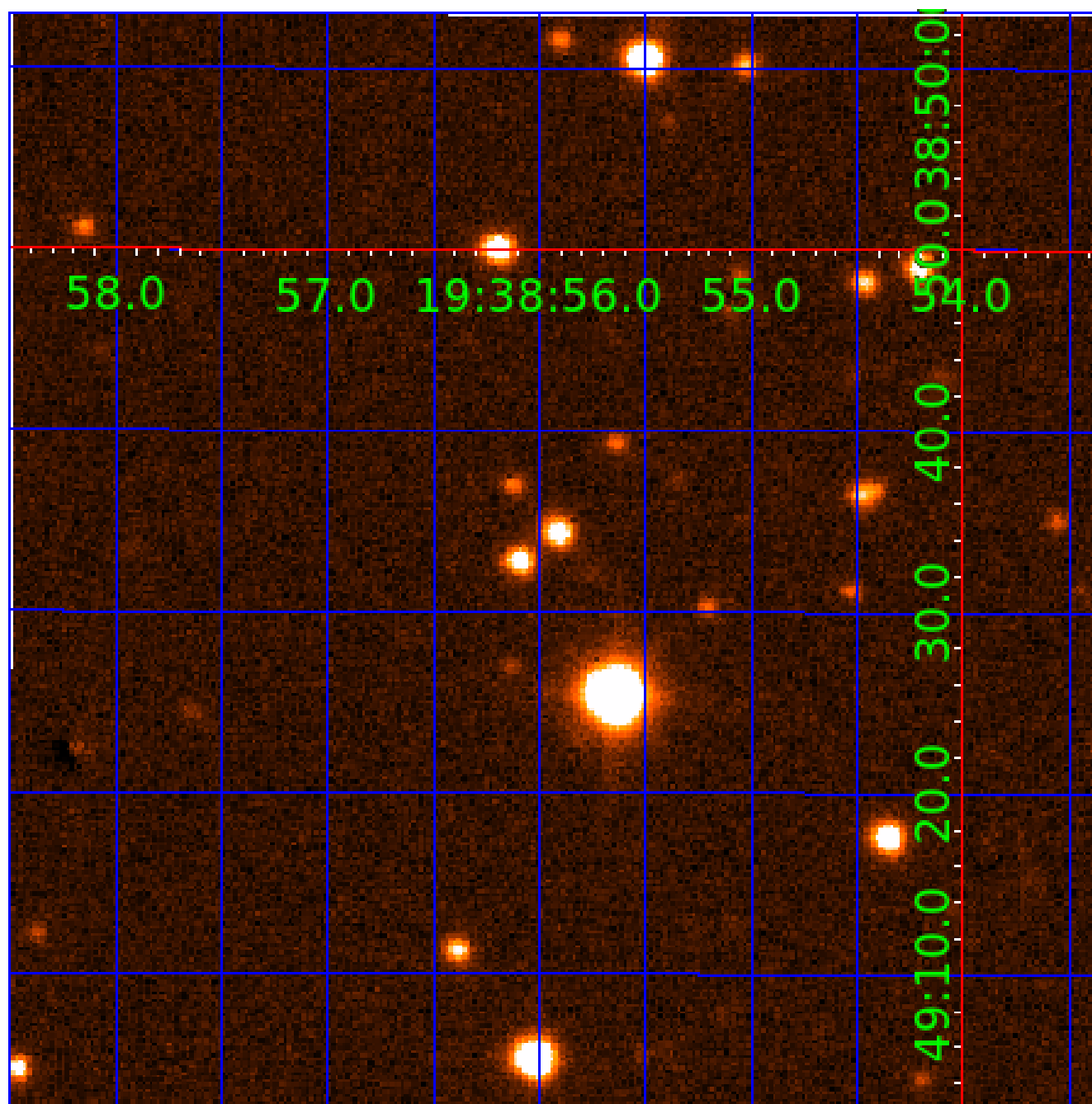


fluxWeightedCentroids, Planet 4 of 5



UKIRT Image

Declination



KIC 003759974

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})
003759974-01	OBS	No	1.379524	132.771306	88.3	10.271	9.5	9.3	1.00	5780	0.93	1699.42
003759974-02	OBS	No	24.921223	137.869185	1899.1	1.669	13.7	12.9	1.00	5780	4.50	35.85
003759974-03	OBS	No	13.906773	143.069618	1012.5	2.038	11.0	9.9	1.00	5780	3.39	78.04
003759974-04	OBS	No	11.295735	138.553900	881.3	2.396	11.2	9.9	1.00	5780	3.53	102.97
003759974-05	OBS	No	20.653045	132.158498	1192.0	2.655	11.5	10.8	1.00	5780	3.75	46.06

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003759974-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET
003759974-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET
003759974-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS—HALO_GHOST
003759974-04	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_DIFFS
003759974-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS—HALO_GHOST

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

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

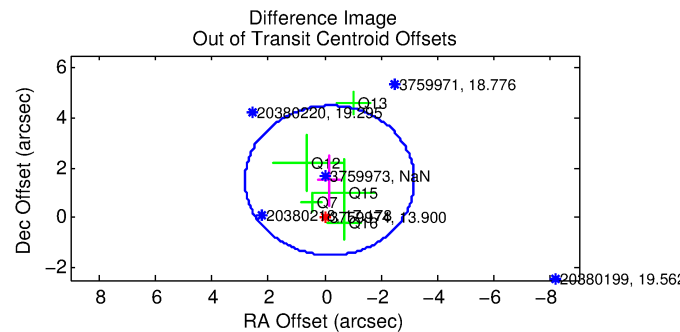
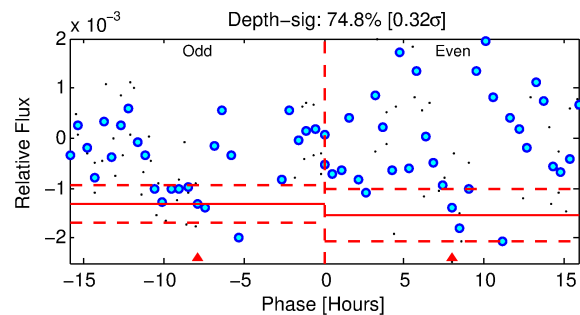
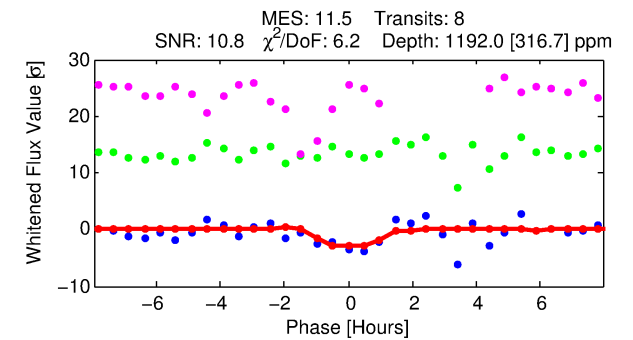
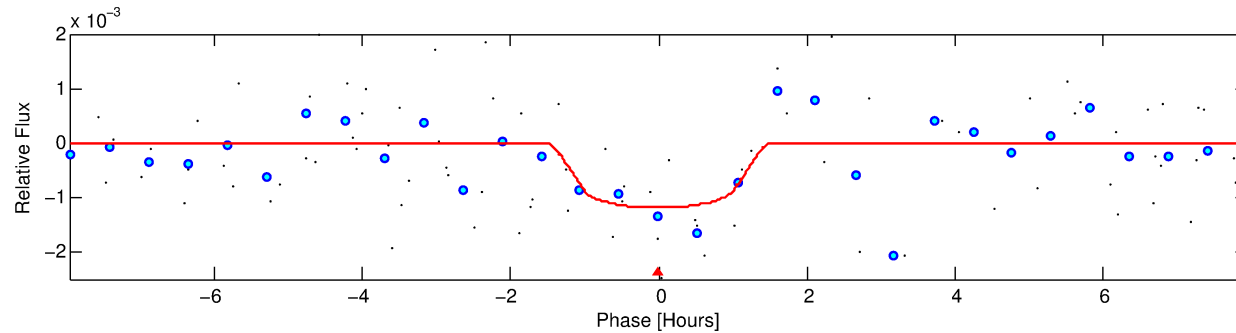
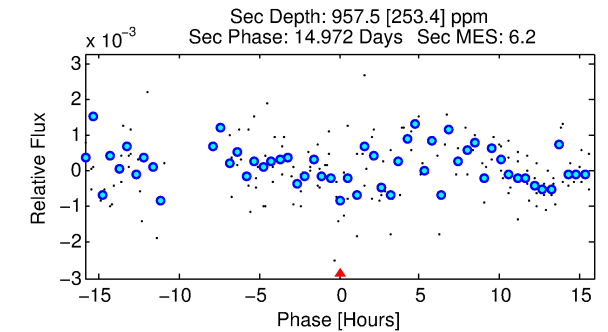
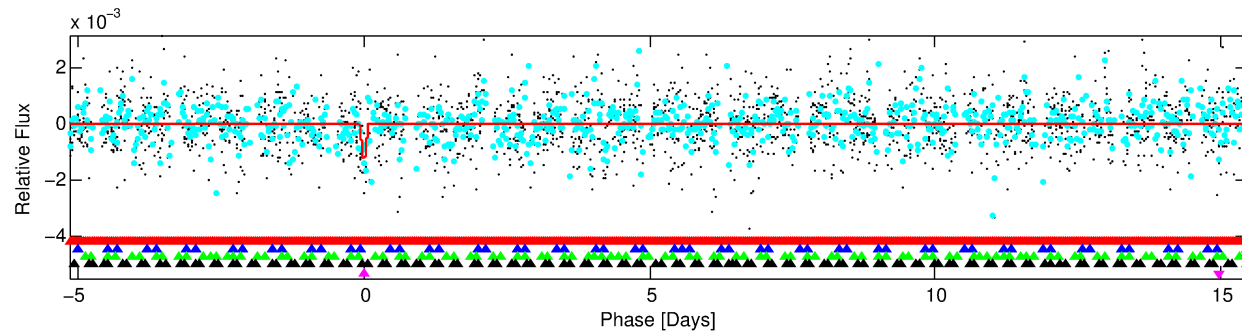
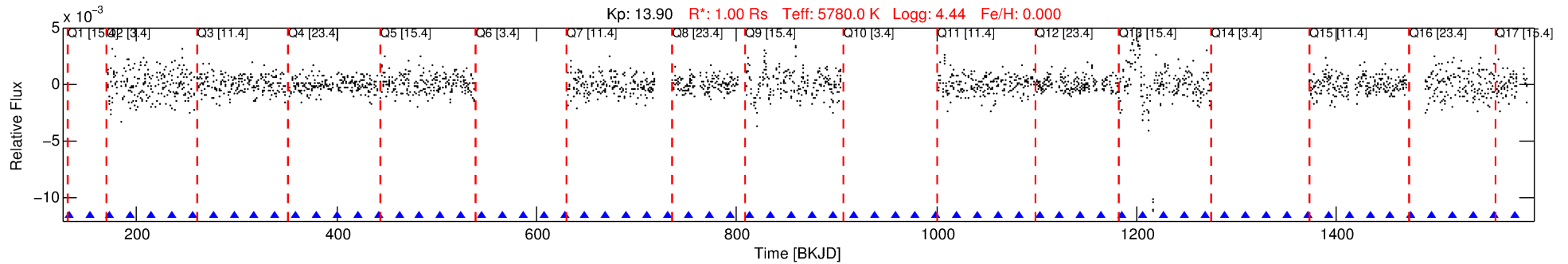
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003759974-05

No Significant Match Found

DV One-Page Summary

KIC: 3759974 Candidate: 5 of 5 Period: 20.653 d



DV Fit Results:

Period = 20.65304 [0.00076] d
Epoch = 132.1585 [0.0204] BKJD
Rp/R* = 0.0344 [0.2354]
a/R* = 42.61 [1294.88]
b = 0.75 [18.22]
Seff = 46.06 [0.00]
Teq = 664 [0] K
Rp = 3.75 [25.69] Re
a = 0.1474 [0.0000] AU
Ag = 813.74 [11152.83] [0.07 σ]
Teffp = 5485 [18795] K [0.26 σ]

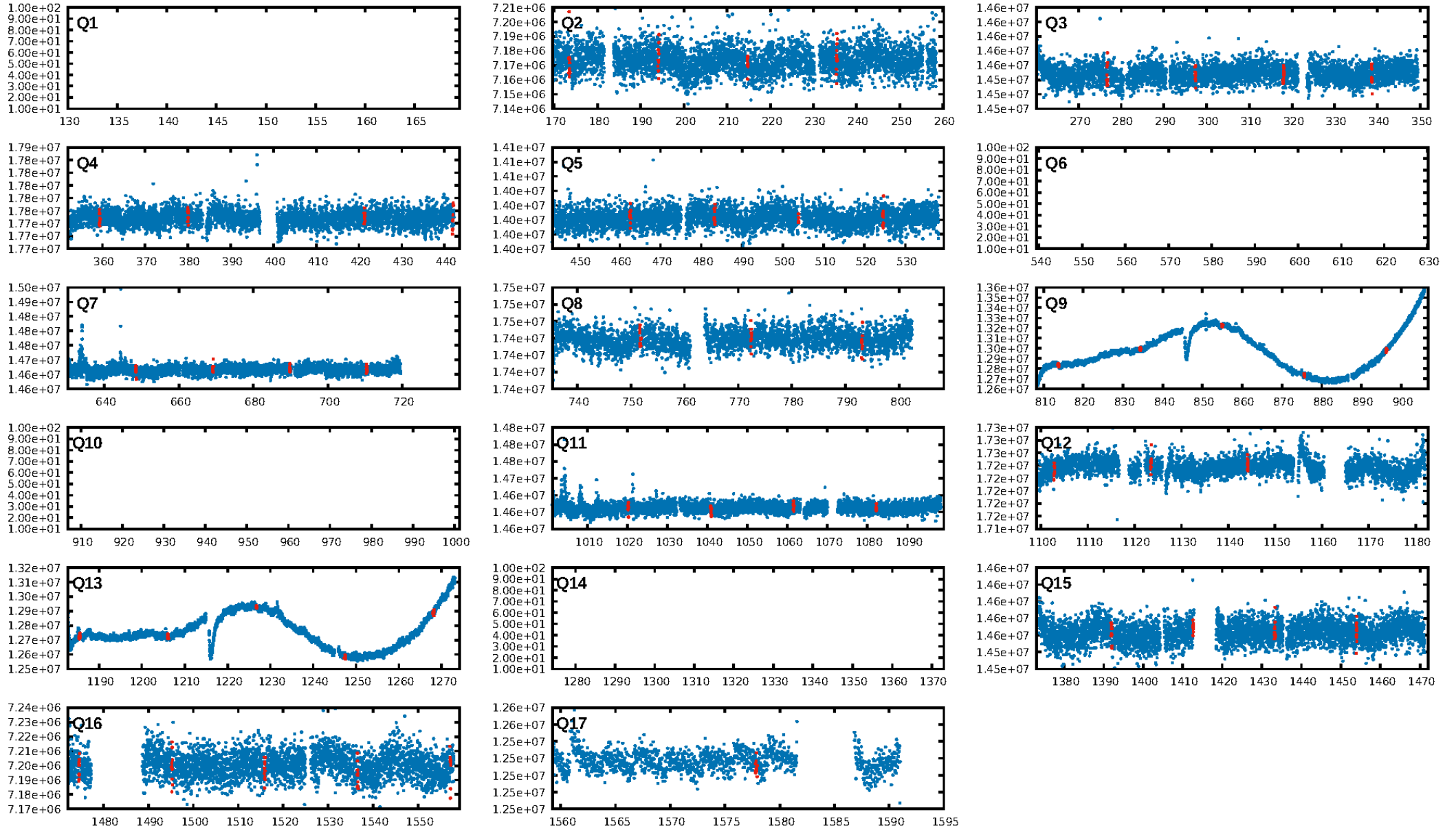
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [48.38 σ]
LongPeriod-sig: 100.0% [32.67 σ]
ModelChiSquare2-sig: 19.7%
ModelChiSquareGof-sig: 69.2%
Bootstrap-pfa: 1.75e-09
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: -0.1616
Centroid-sig: 33.7%
Centroid-so: 6.124 arcsec [45.62 σ]
OotOffset-rm: 1.498 arcsec [1.50 σ]
KicOffset-rm: 6.655 arcsec [7.56 σ]
OotOffset-st: 0/2/2/1 [5]
KicOffset-st: 0/2/2/1 [5]
DiffImageQuality-fgm: 0.60 [3/5]
DiffImageOverlap-fno: 0.31 [4/13]

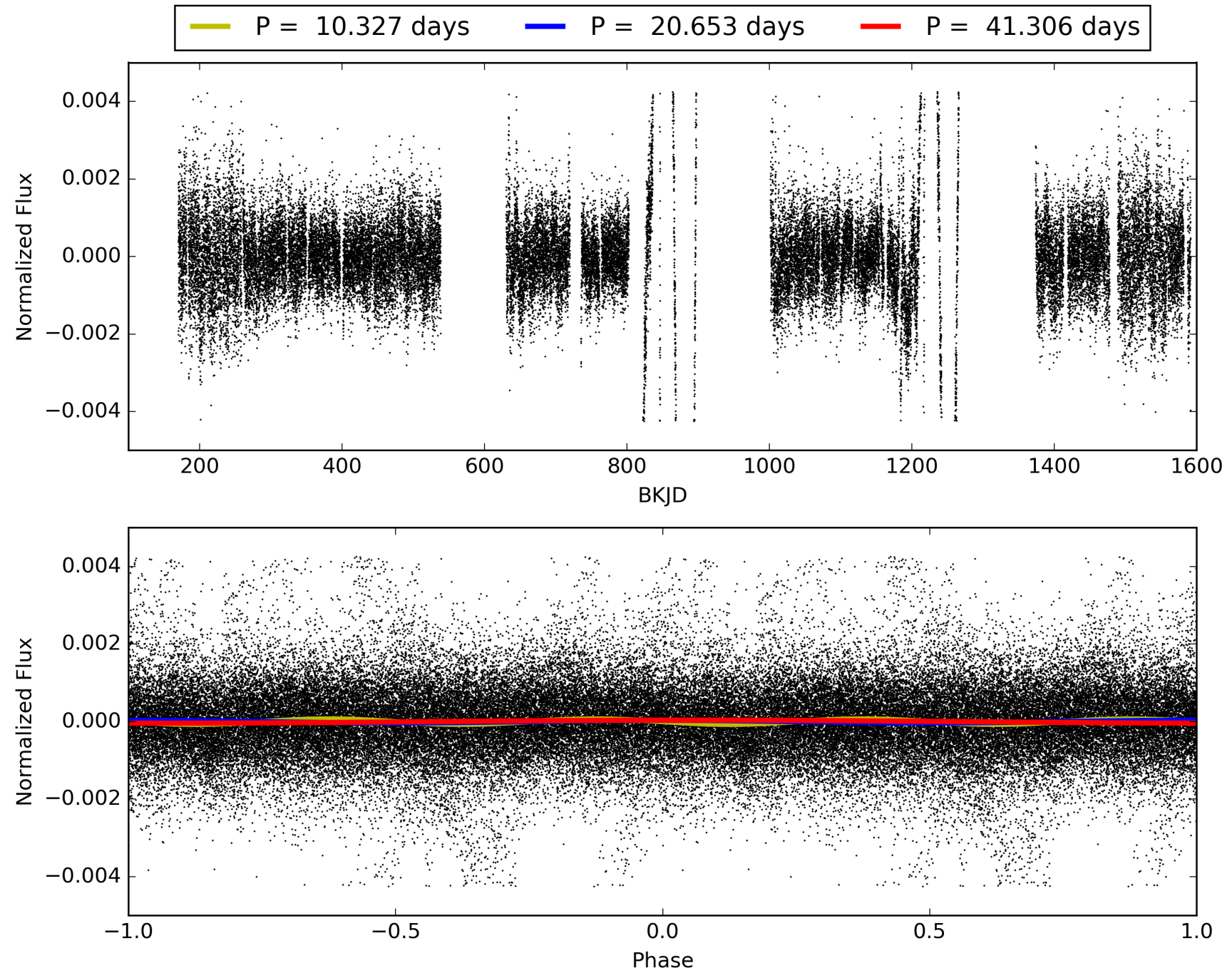
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 18:29:07 Z

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

TCE 003759974-05, PDC Light Curves

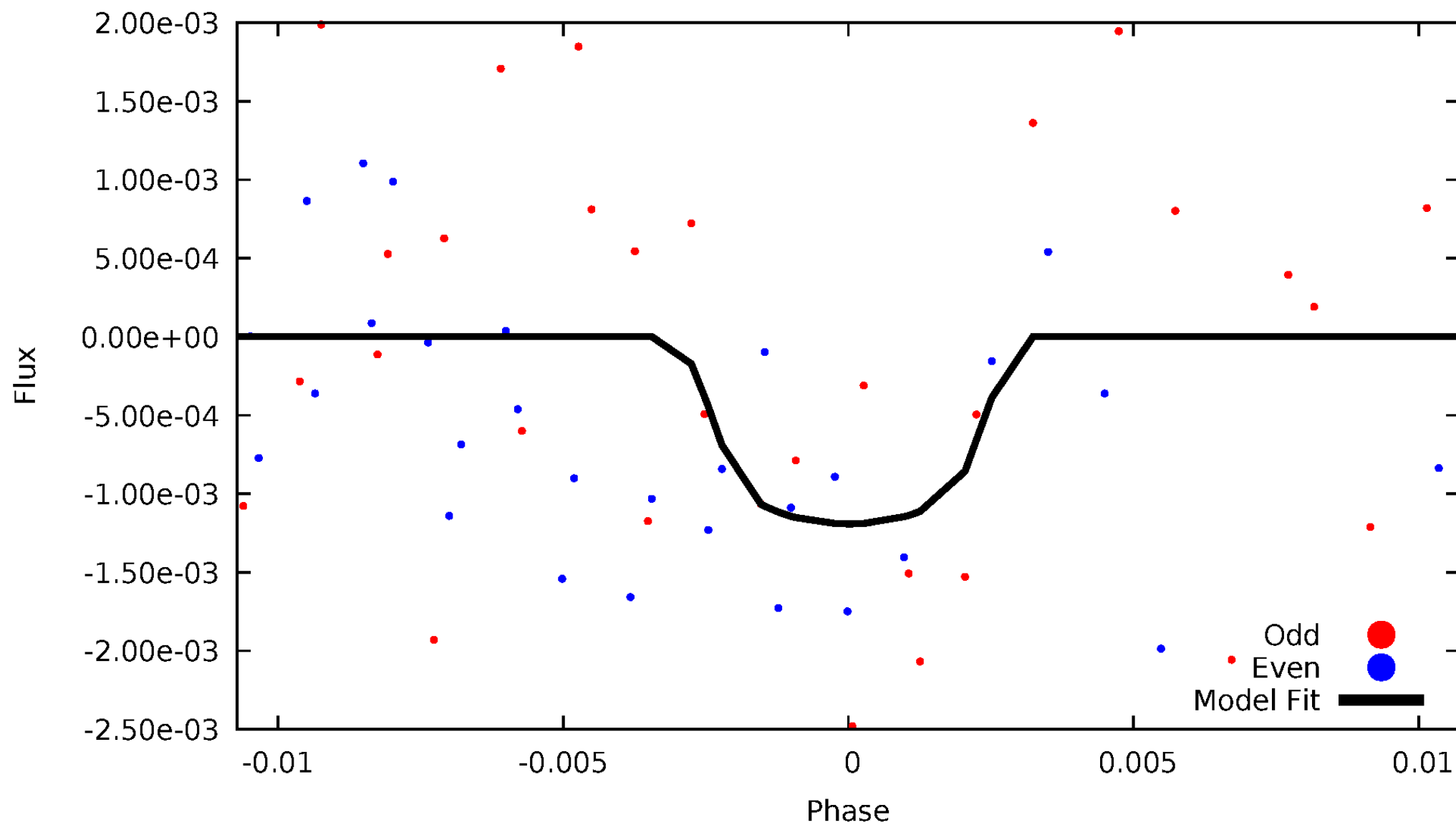


TCE 003759974-05



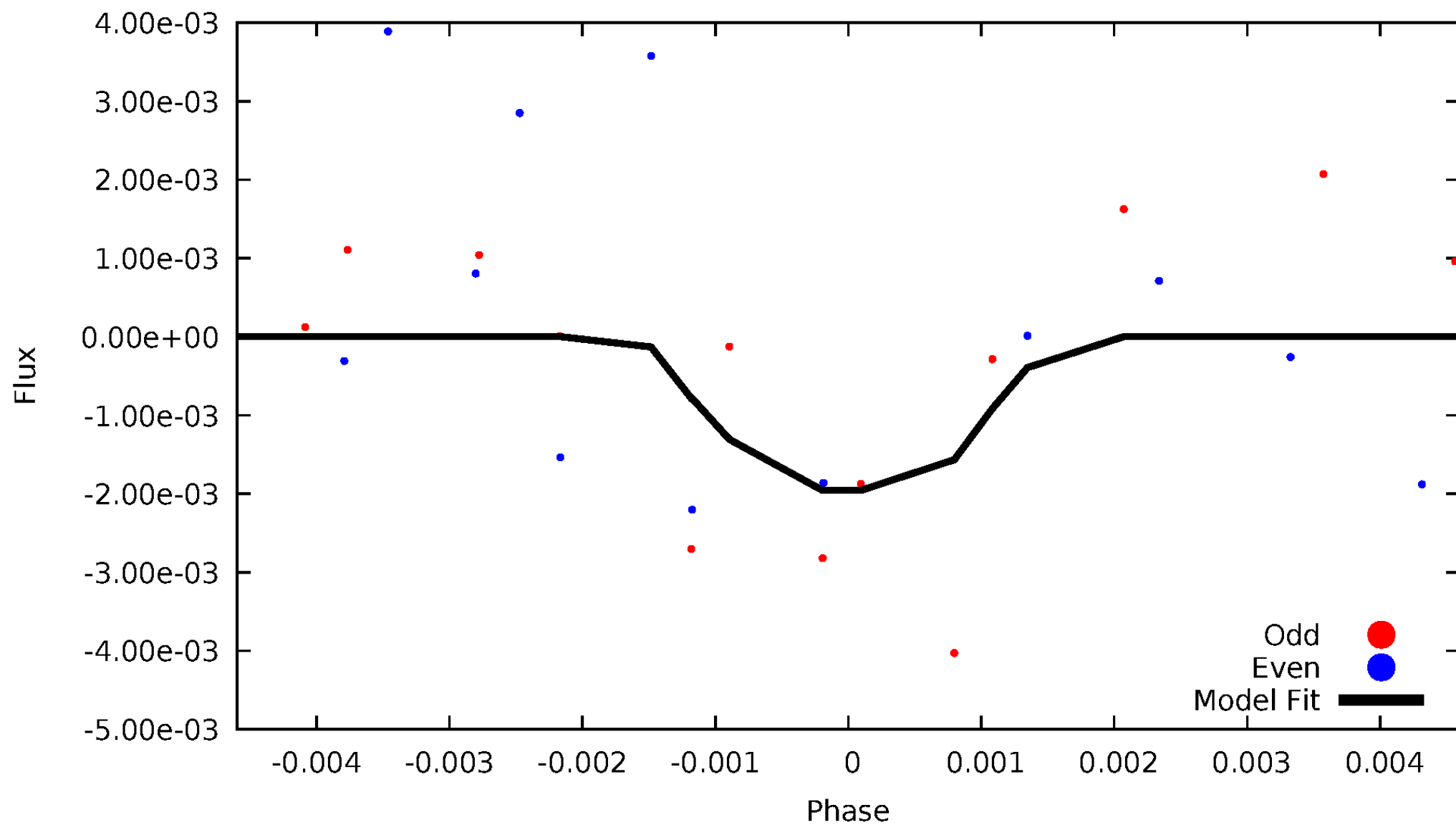
DV Odd/Even

TCE 003759974-05



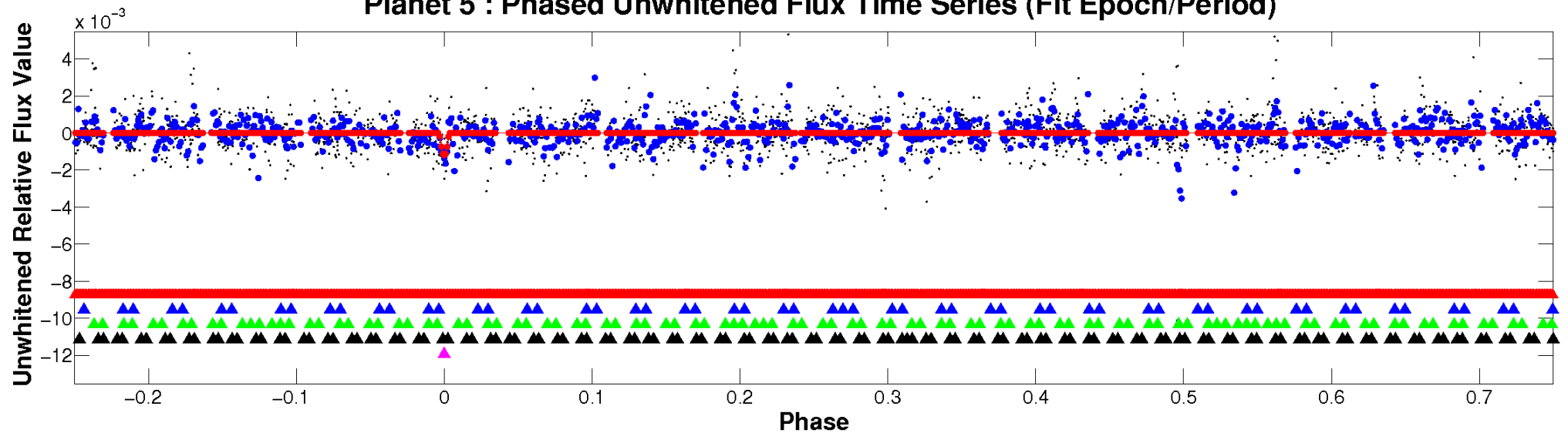
ALT Odd/Even

TCE 003759974-05

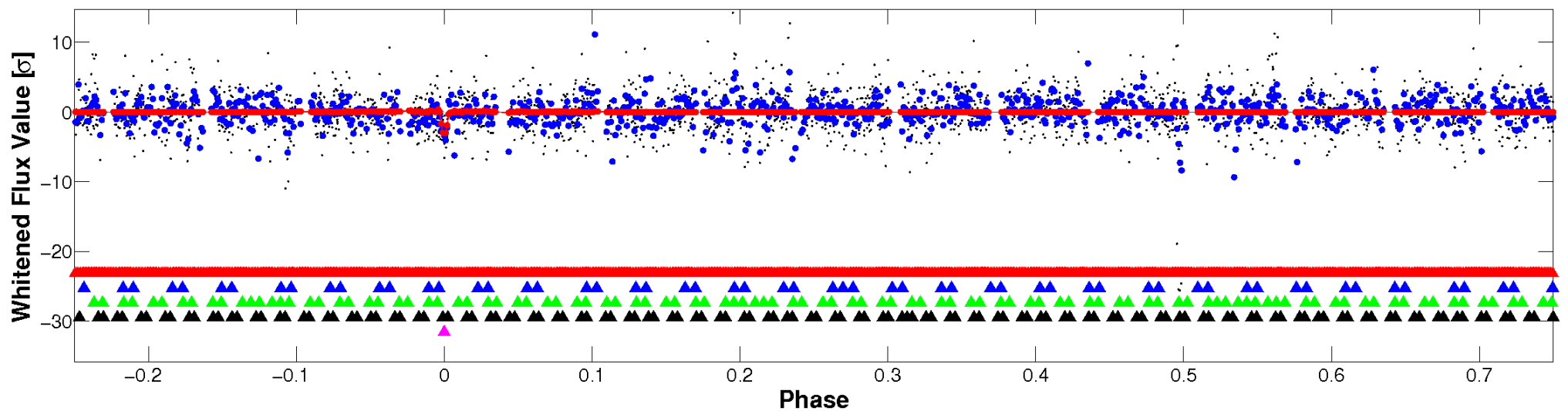


Non-Whitened Vs. Whitened Light Curve

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

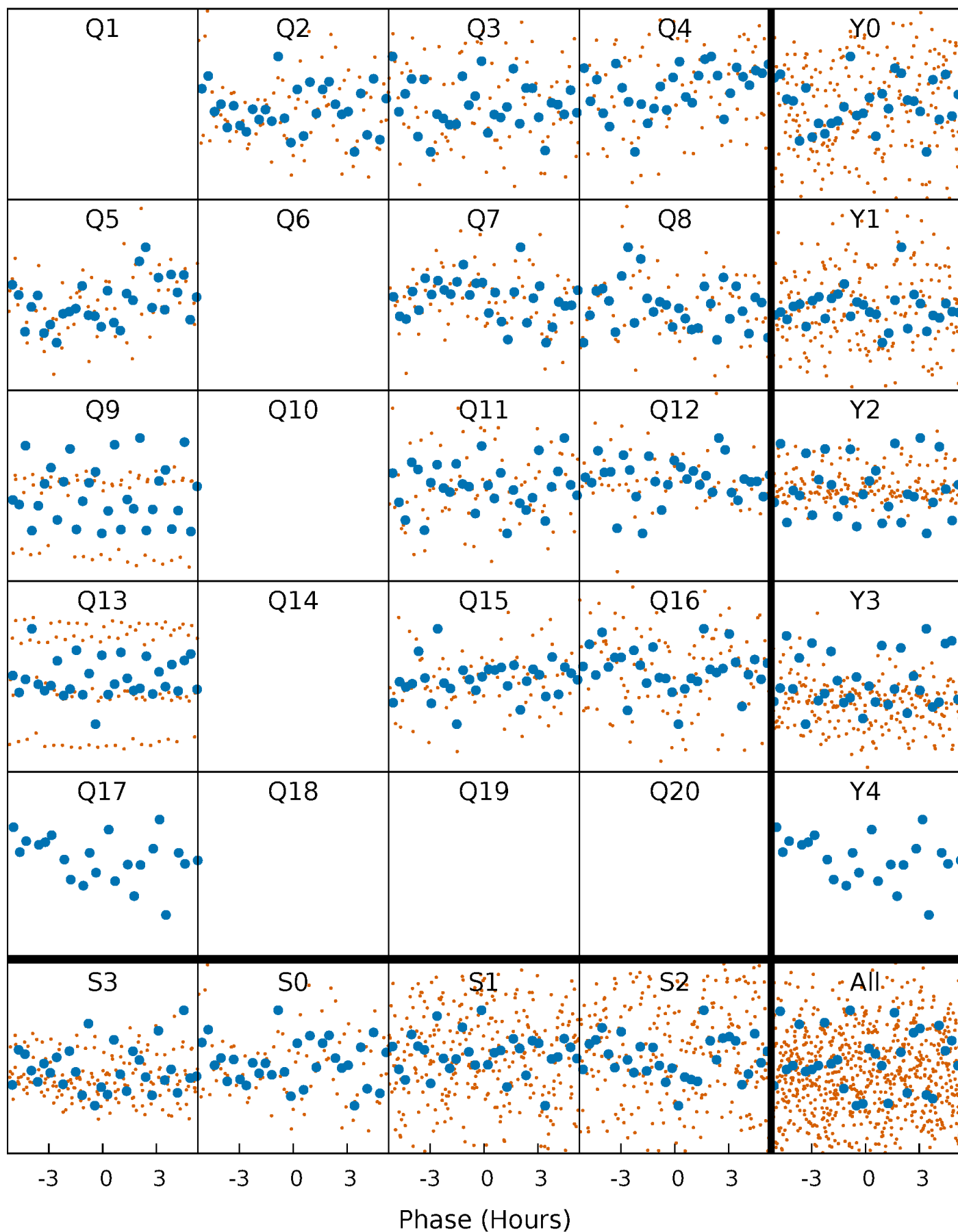


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



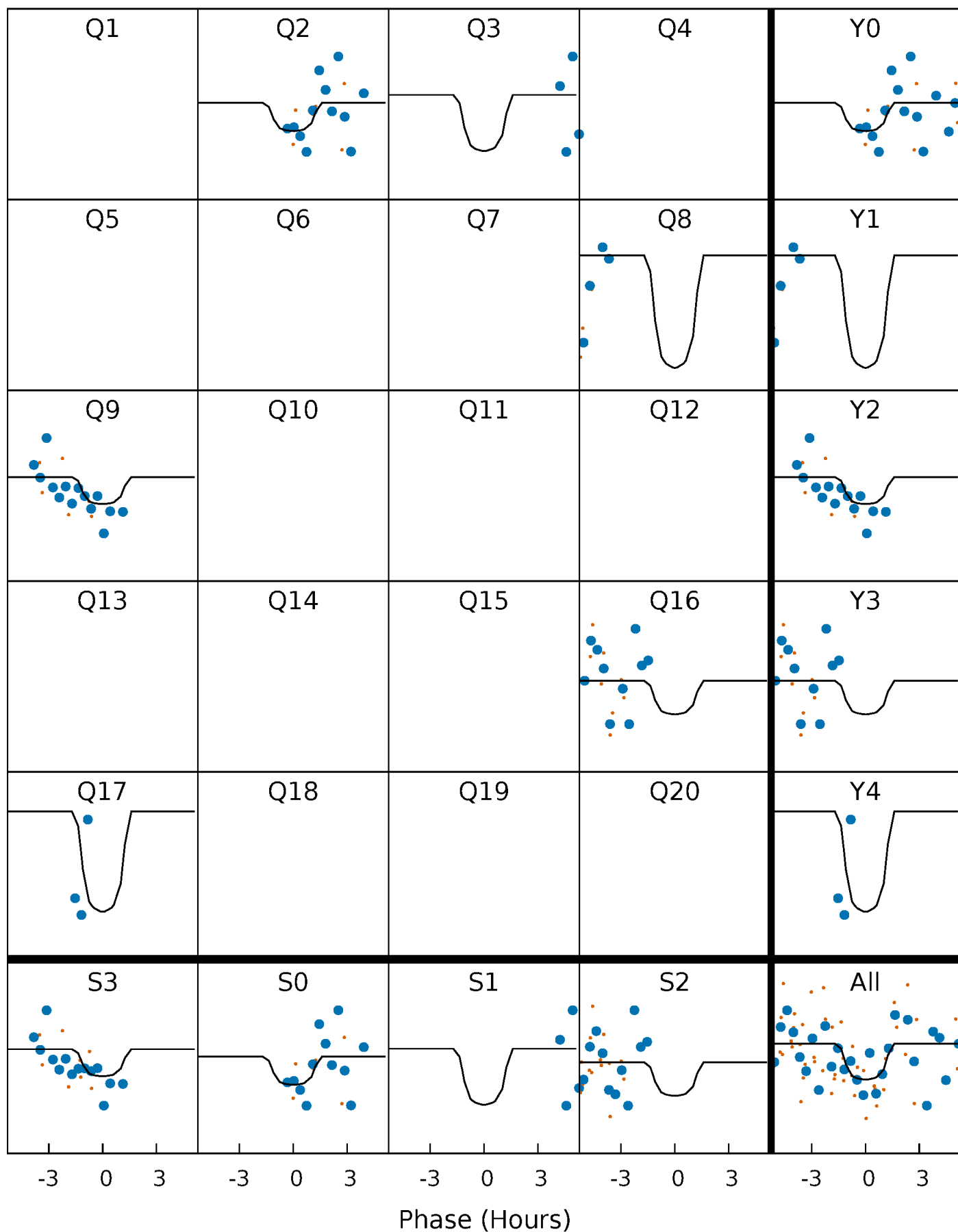
PDC Quarter-Phased Transit Curves

TCE 003759974-05 P= 20.653045 Days $T_0=132.158498$ (BKJD)



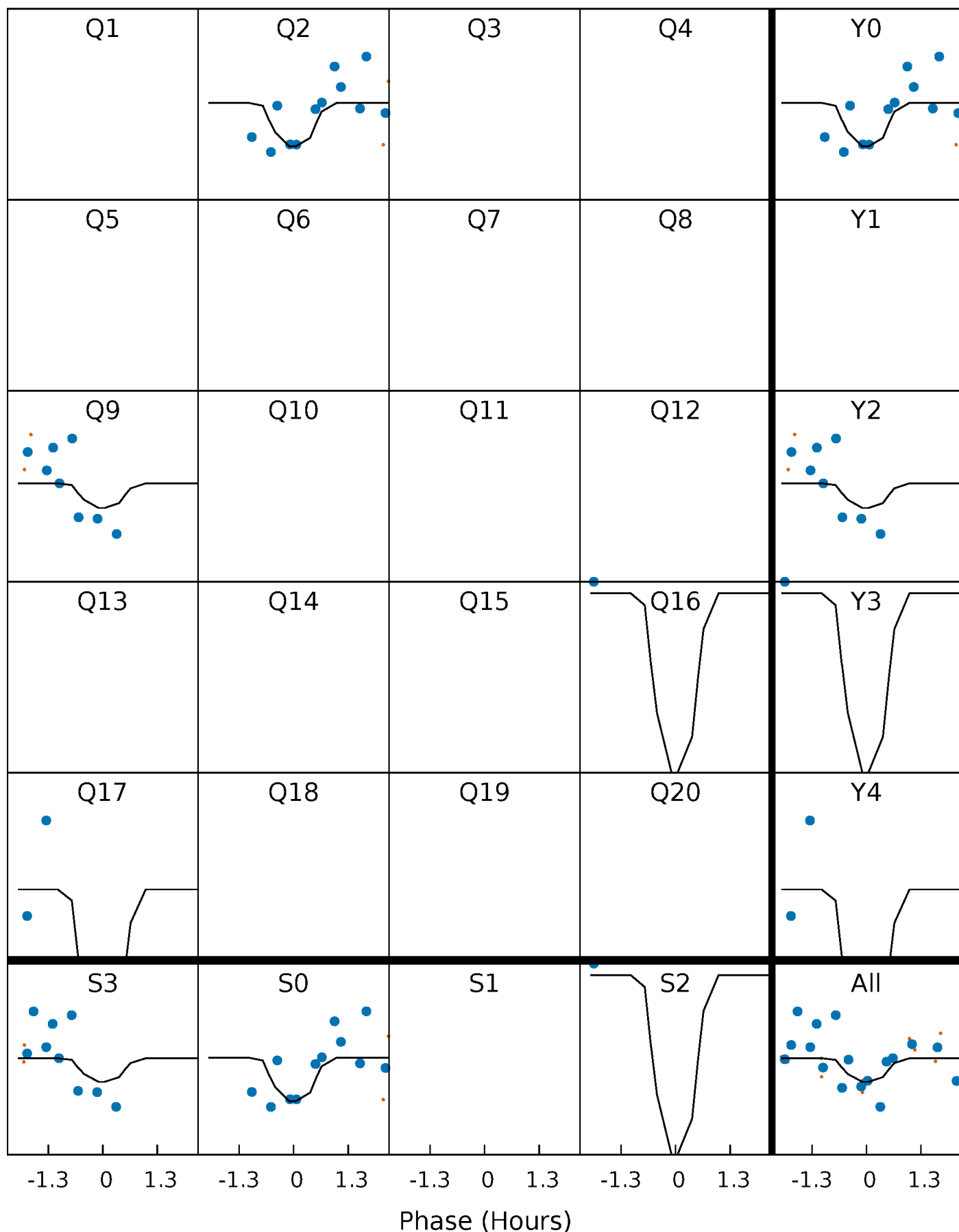
DV Quarter-Phased Transit Curves

TCE 003759974-05 $P = 20.653045$ Days $T_0 = 132.158498$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

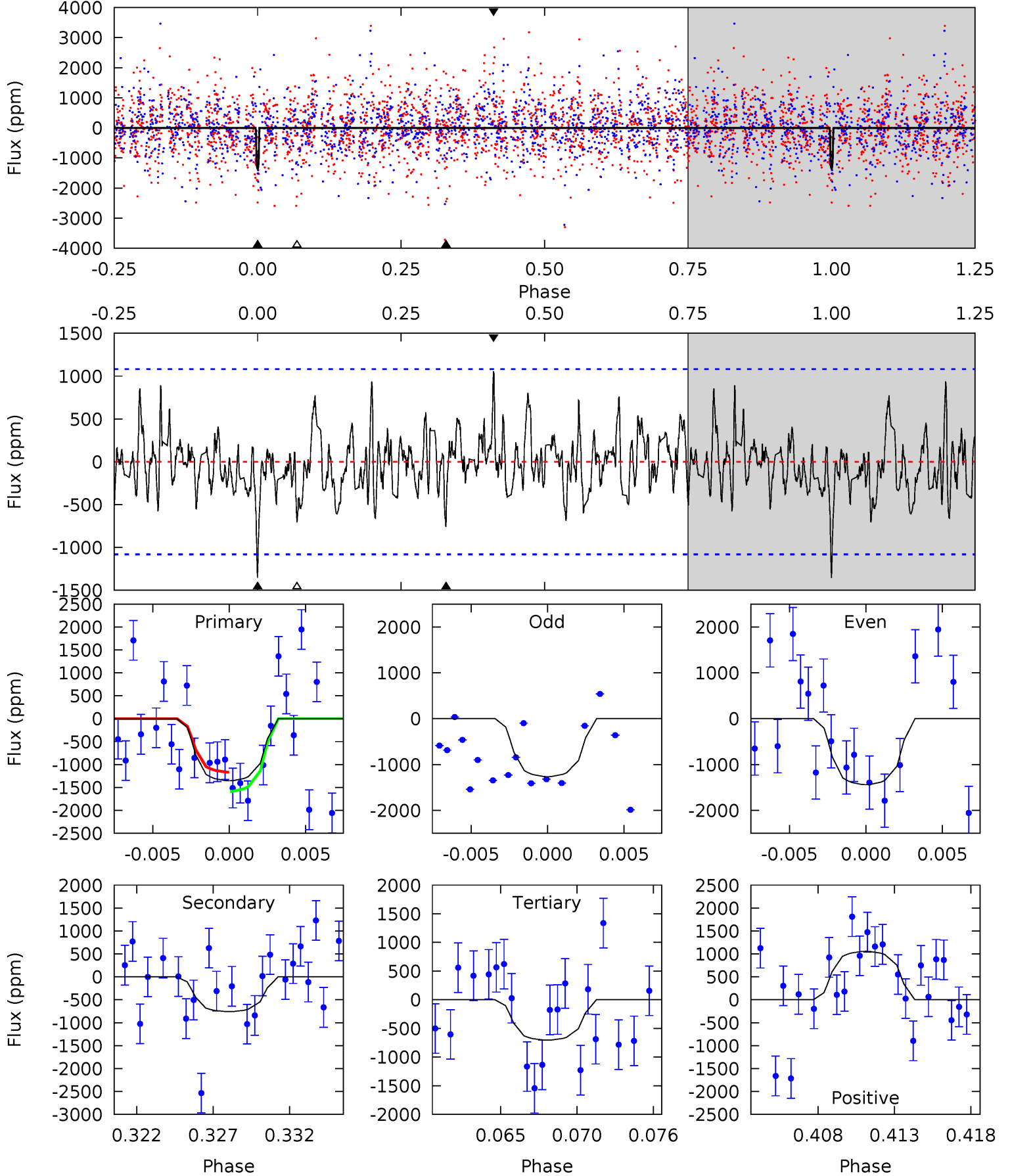
TCE 003759974-05 P= 20.653098 Days $T_0=132.182356$ (BKJD)



DV Model-Shift Uniqueness Test

003759974-05, P = 20.653045 Days, E = 132.158498 Days

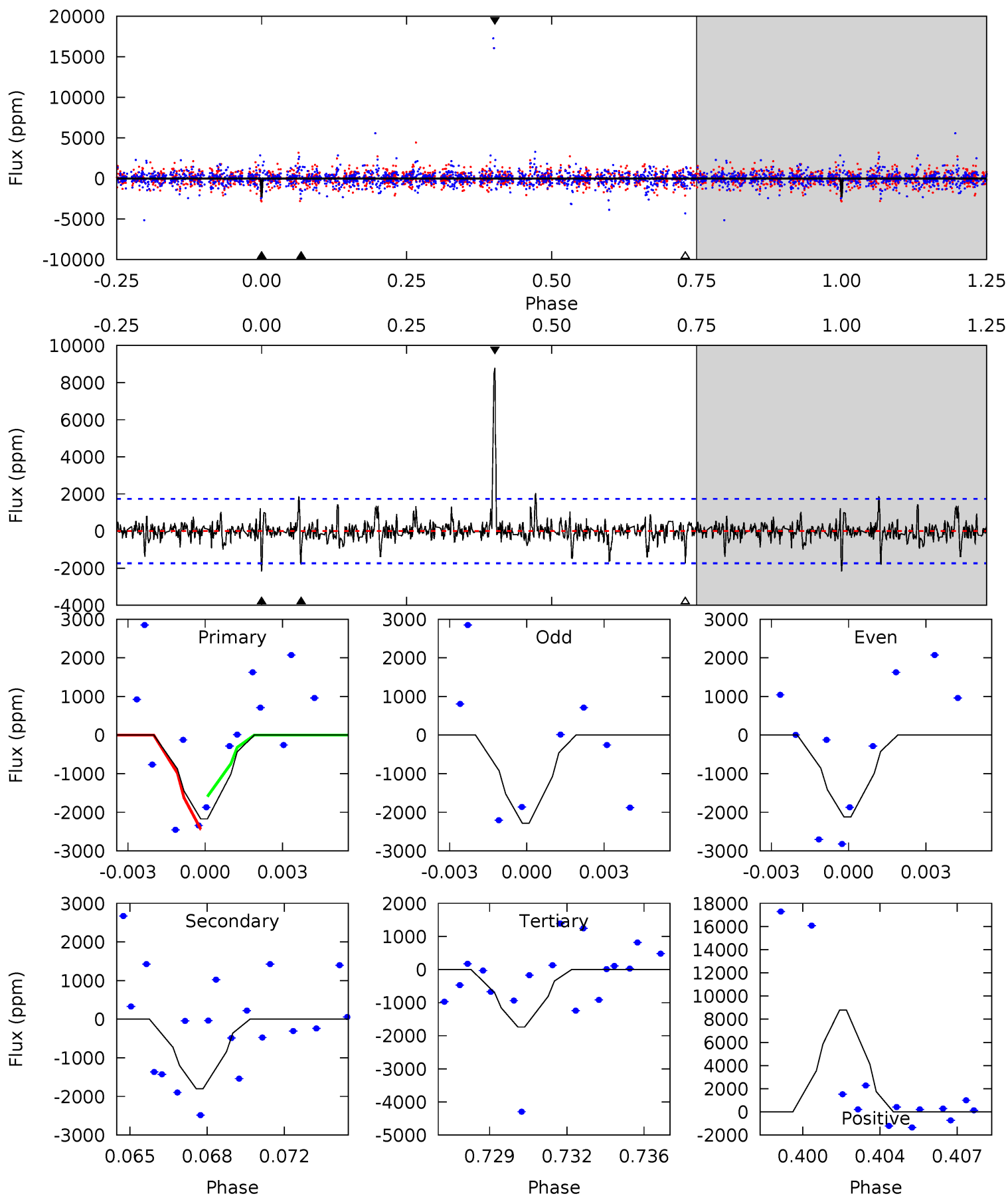
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.46	3.62	3.36	5.03	5.16	2.80	1.32	3.10	1.43	0.26	-1.41	0.41	0.97	0.44	1.01



Alt Model-Shift Uniqueness Test

003759974-05, P = 20.653098 Days, E = 132.182356 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.56	5.45	5.25	26.6	5.24	2.94	1.55	1.31	-20.0	0.20	-21.1	0.21	1.07	0.80	1.26



Stellar Parameters For KIC 003759974

	$T_{\text{eff}}(K)$	$\log(g)$	[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 003759974-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-759 ± 210	$18.61^{+19.61}_{-12.44}$	928^{+43}_{-42}	2972^{+1289}_{-508}	26^{+202}_{-20}
Alt.	-1802 ± 331	$20.25^{+20.79}_{-14.44}$	932^{+44}_{-41}	3330^{+1829}_{-607}	53^{+544}_{-41}

T_{max} = Theoretical Maximum Planetary Temperature
 T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
 A_{obs} = Observed Albedo (Assuming T=0)

If a secondary eclipse is present, the system is likely an EB if $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

DV Centroid Data

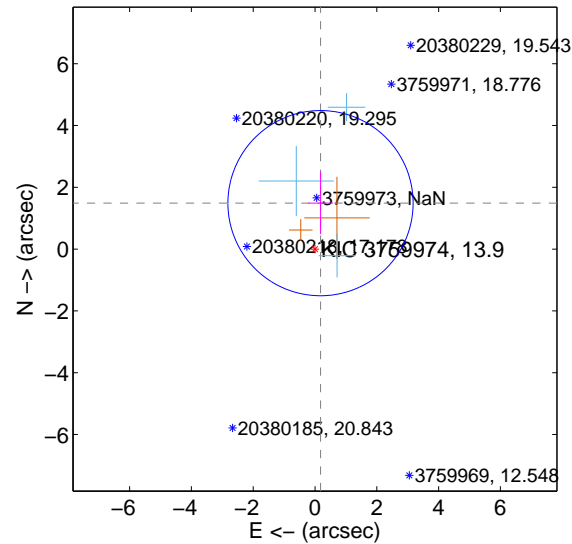
Supplemental centroid analysis for 003759974-05. Kepler magnitude: 13.90. Transit SNR 10.77

There are 3 quarters with good PRF difference image offsets

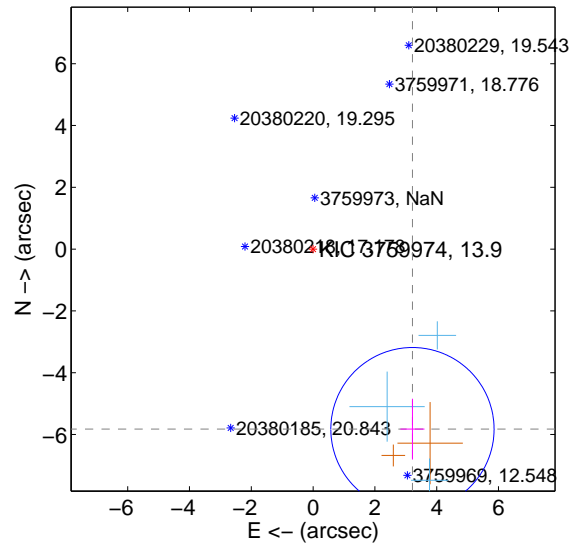
The OOT PRF centroid is offset from the target star catalog position by about 7.88 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.498 ± 0.999	1.50	-0.178 ± 0.401	1.487 ± 1.005
PRF-fit source offset from KIC position	6.655 ± 0.880	7.56	-3.215 ± 0.389	-5.827 ± 0.982
photometric centroid source offset	6.12 ± 0.13	45.62	-2.34 ± 0.09	-5.66 ± 0.14

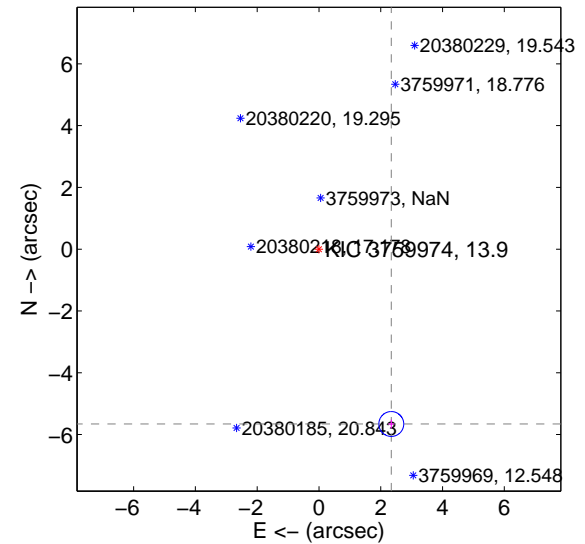
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

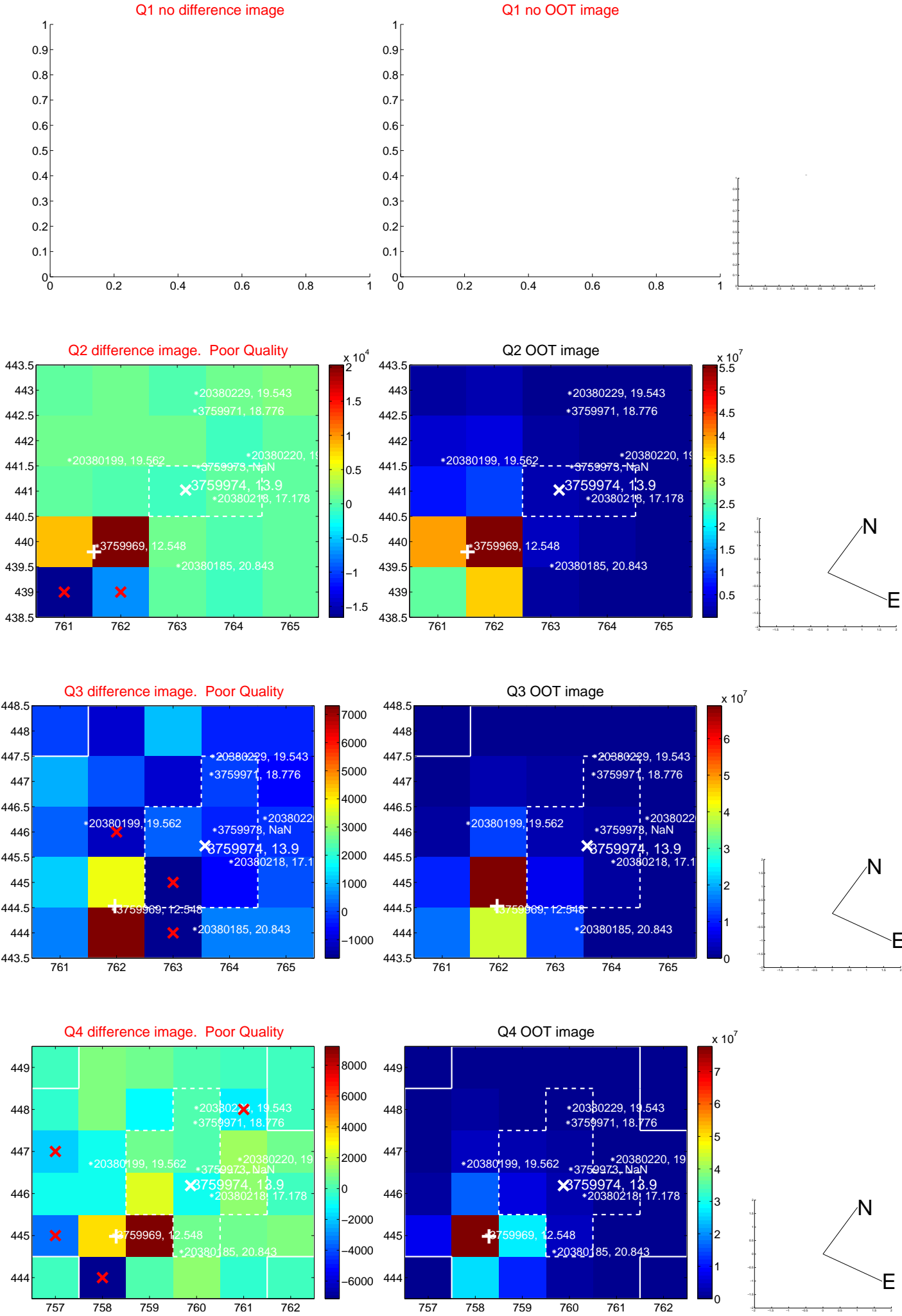


offset from photometric centroids

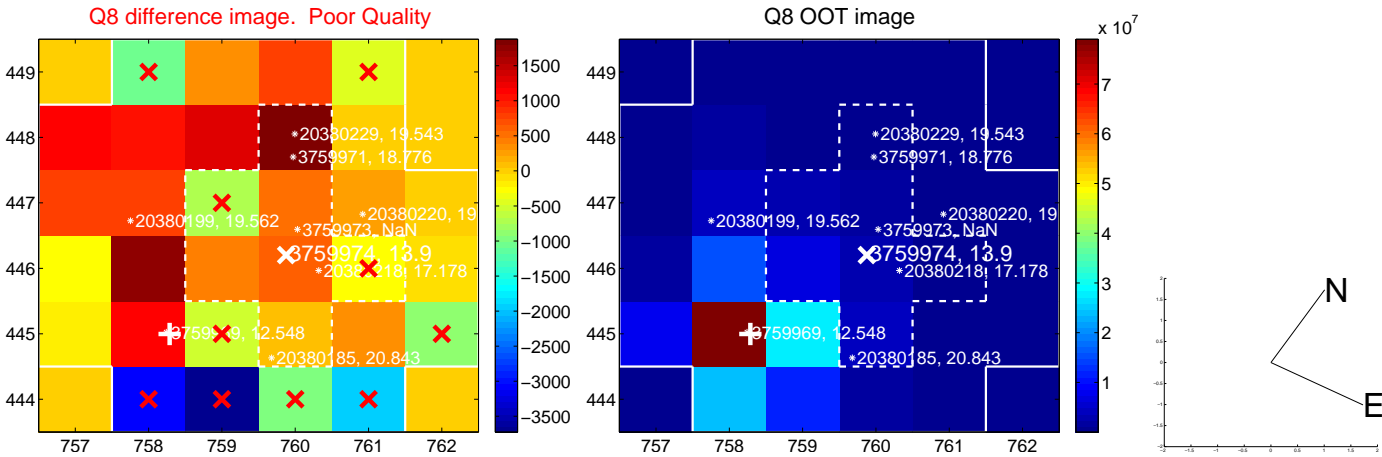
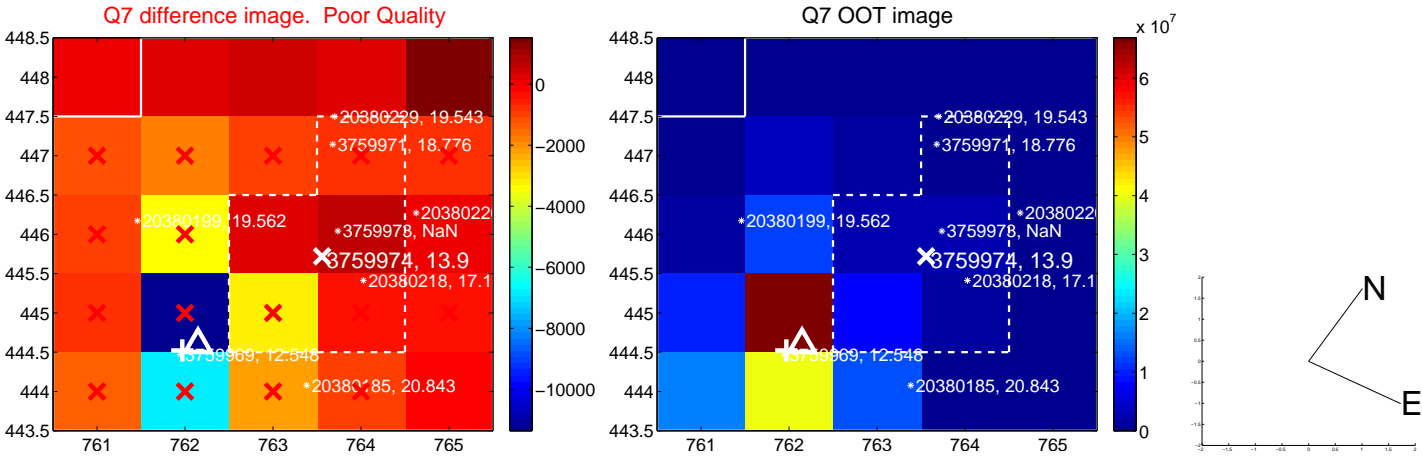
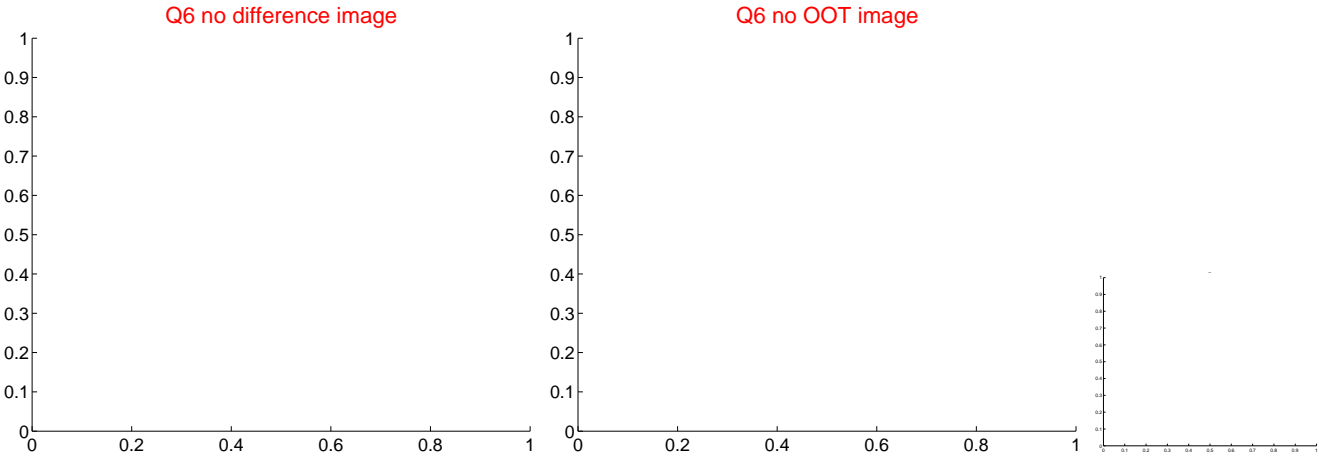
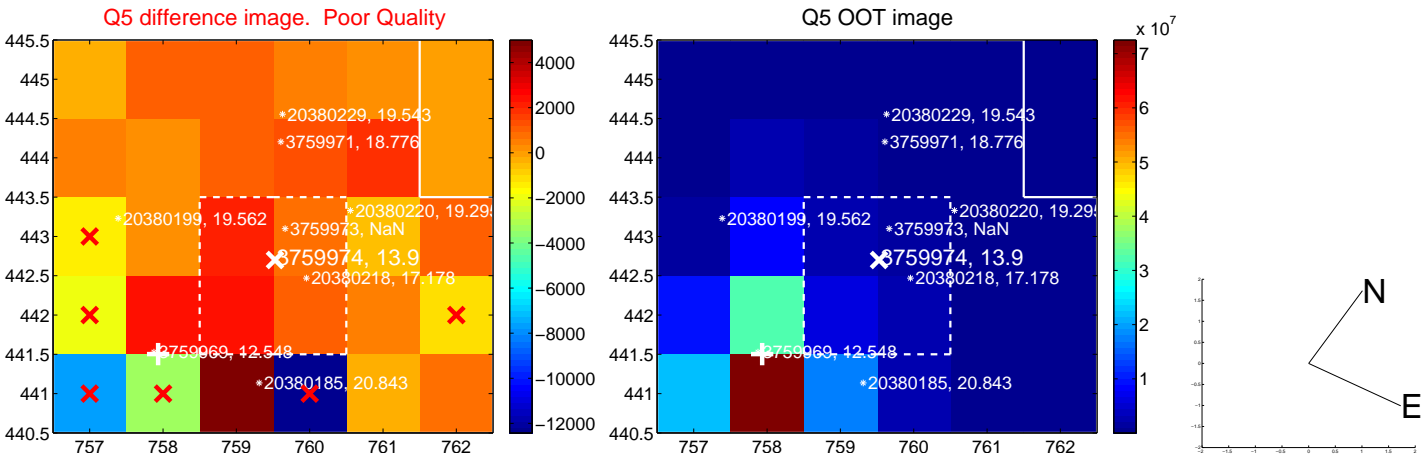


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

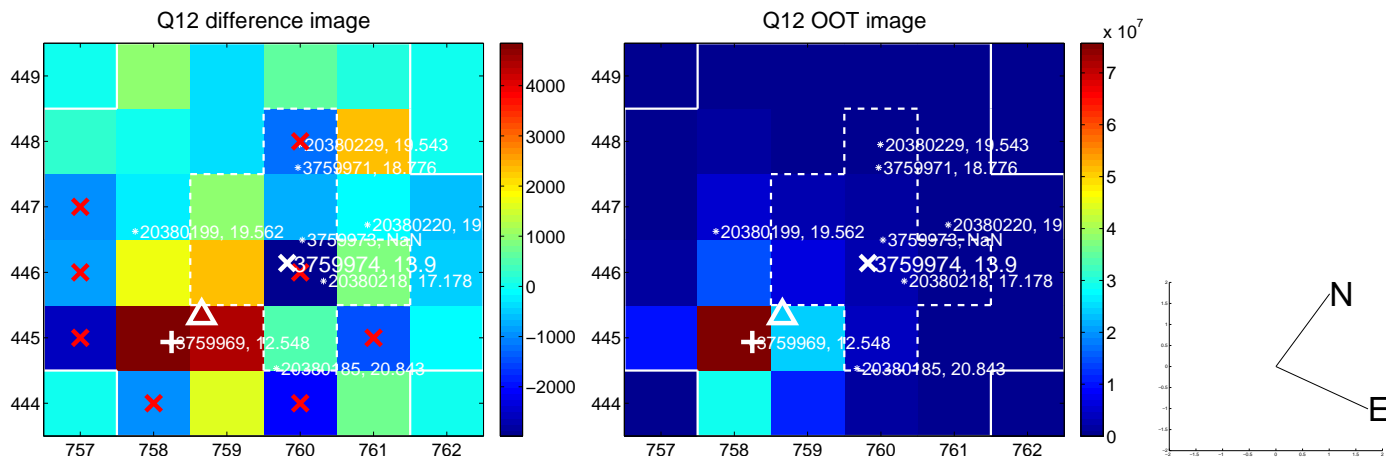
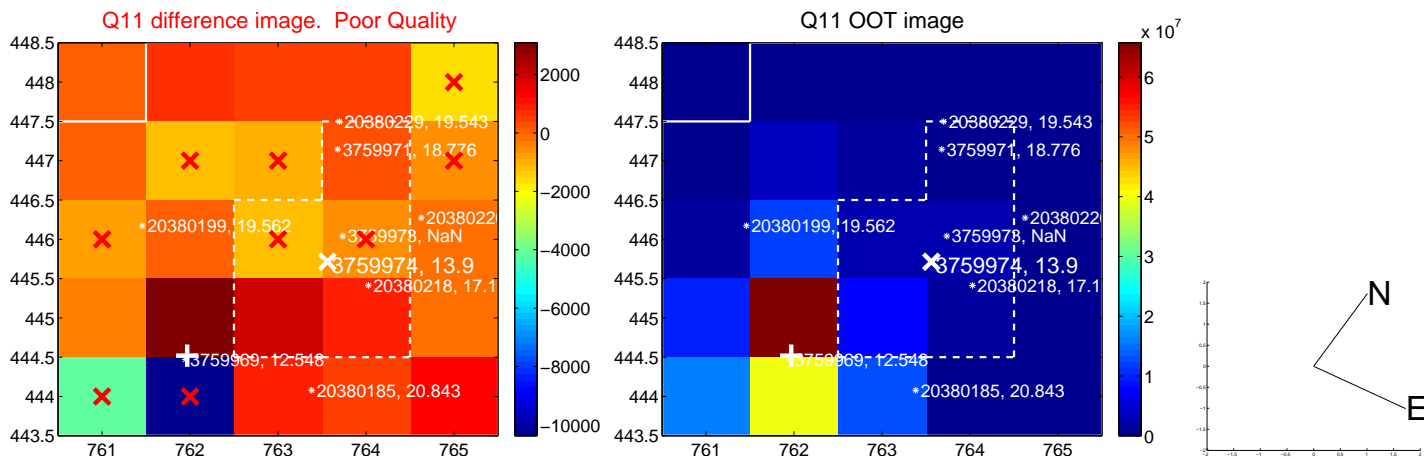
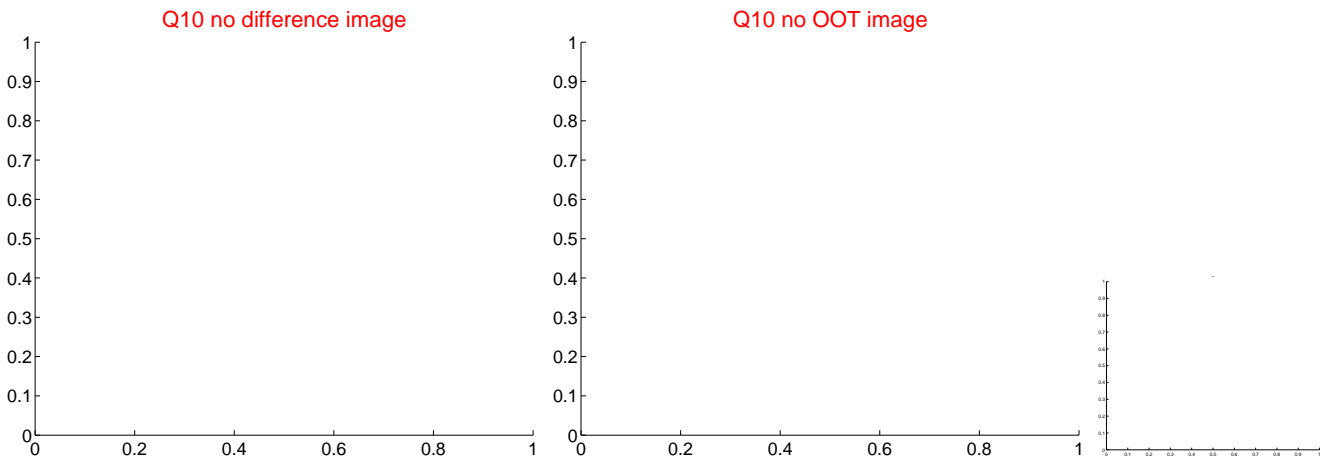
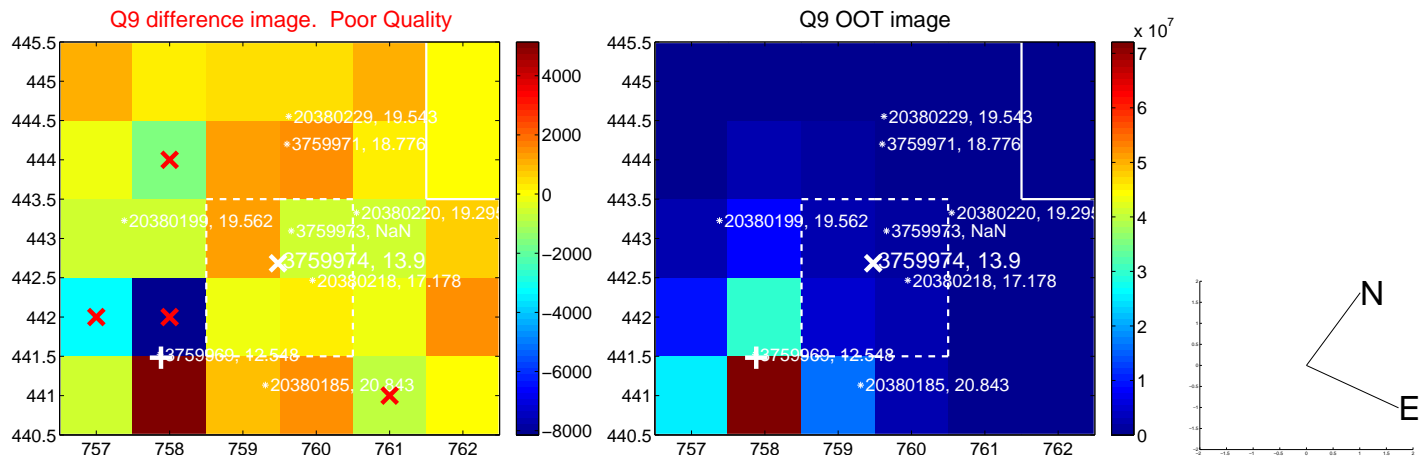
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



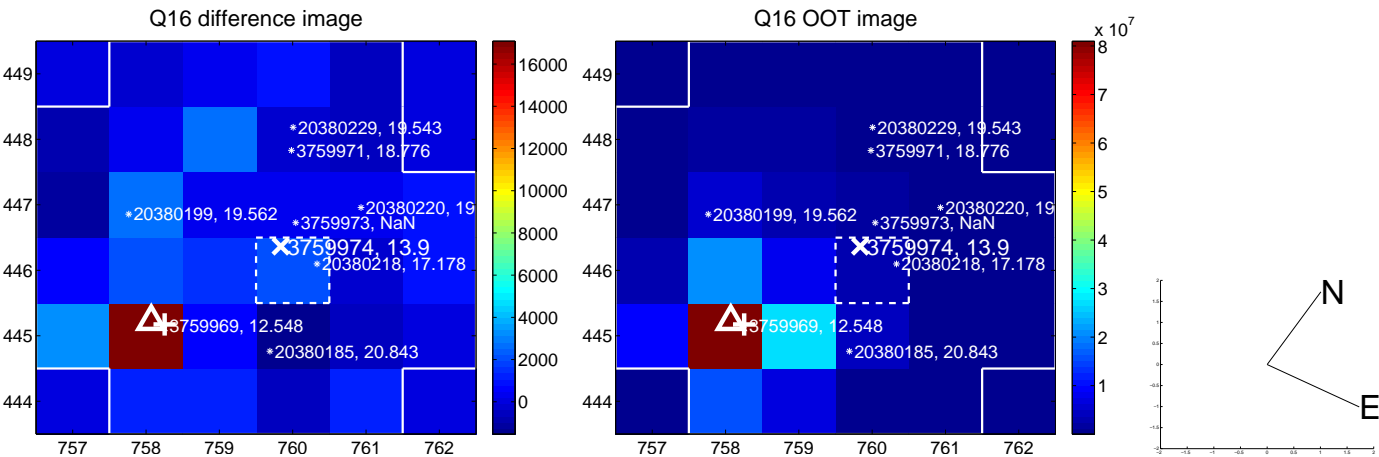
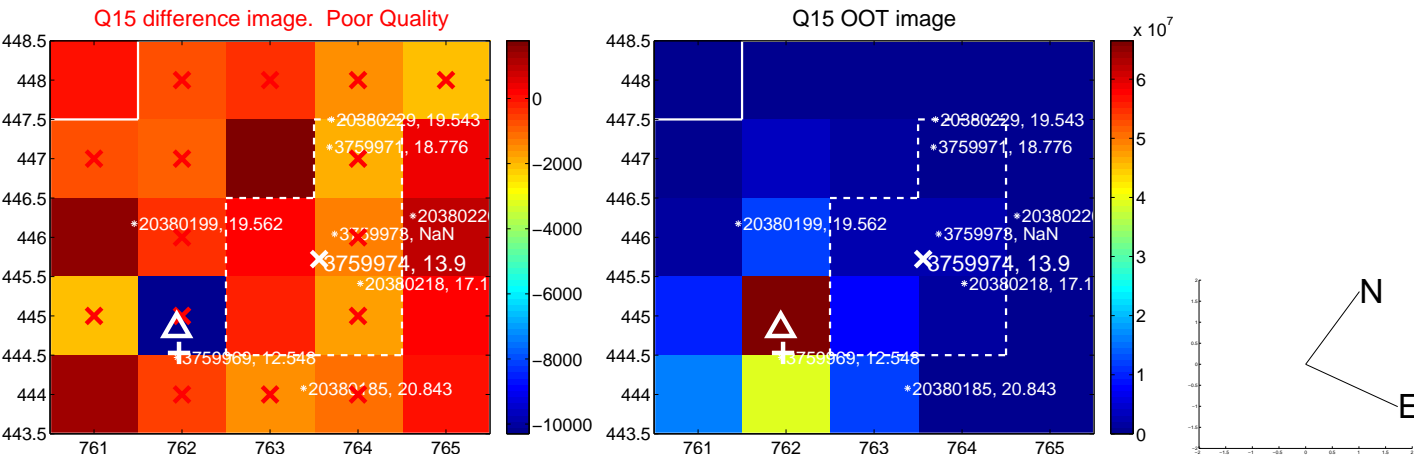
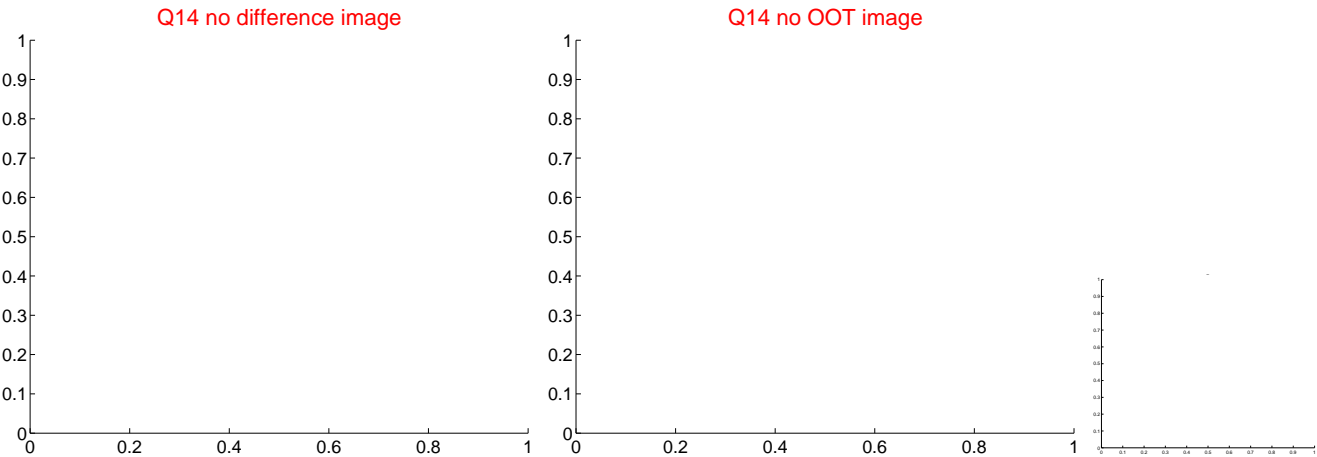
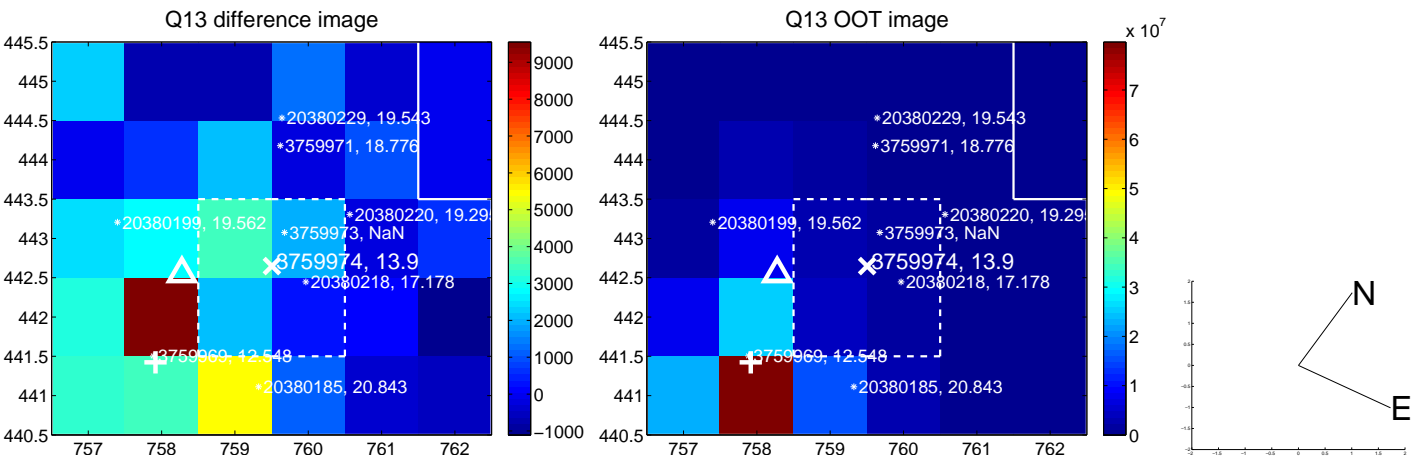
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



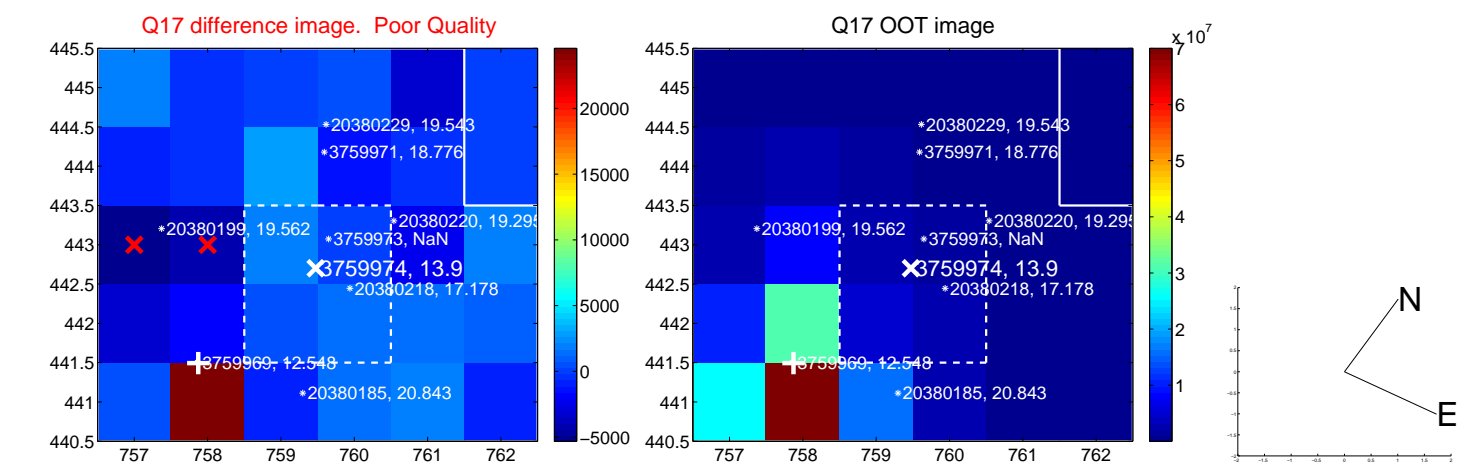
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



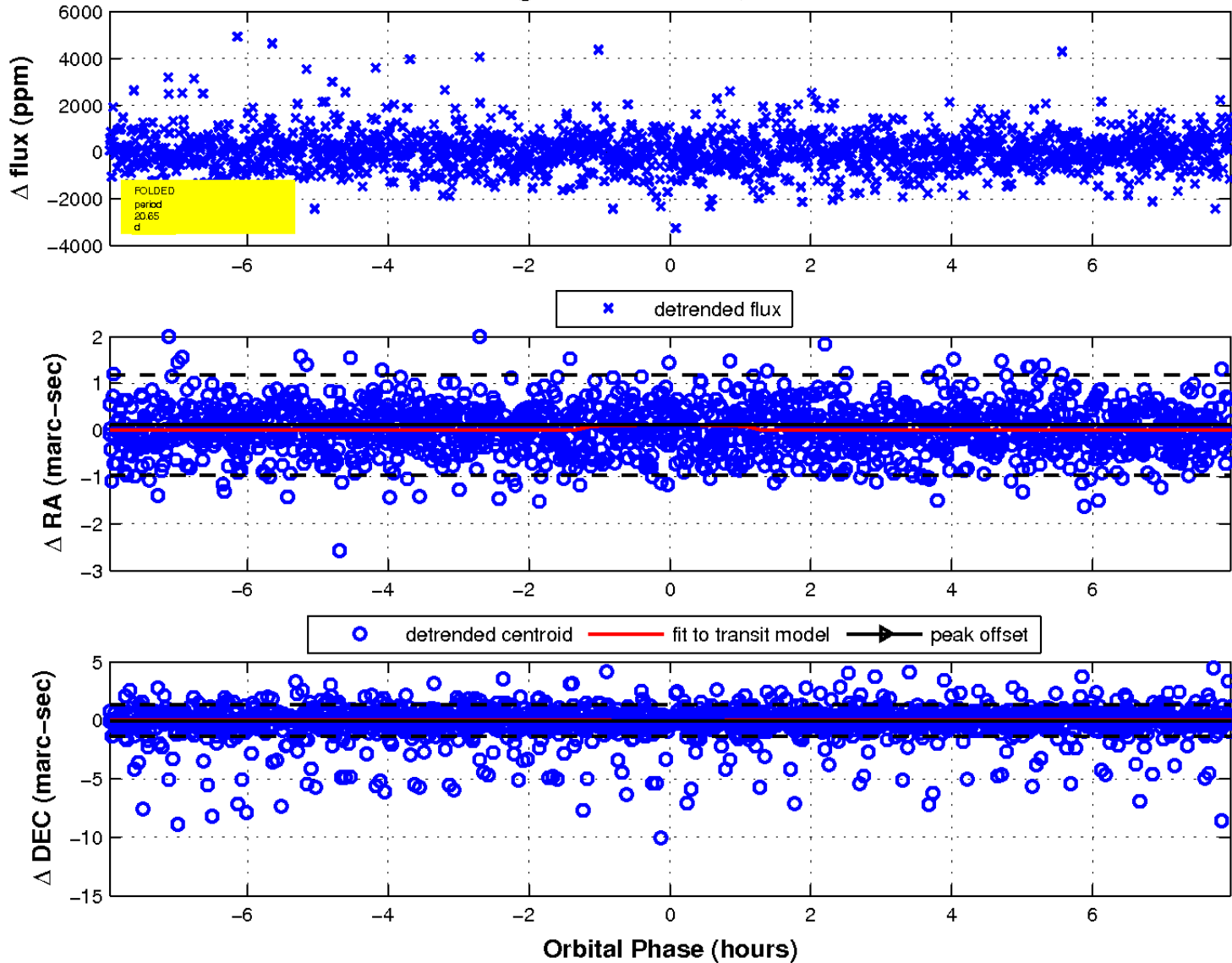
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 5 of 5



UKIRT Image

Declination

