

KIC 005642620

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})
005642620-01	OBS	2882.02	0.986784	131.581179	261.1	0.971	12.0	15.2	0.61	4474	1.07	482.50
005642620-02	OBS	No	0.986789	132.063170	257.6	0.994	11.4	14.9	0.61	4474	1.27	482.49
005642620-03	OBS	2882.01	75.857508	165.552296	1036.1	6.507	8.4	9.6	0.61	4474	2.46	1.48

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005642620-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE—CENT_KIC_POS
005642620-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_KIC_POS
005642620-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—CENT_RESOLVED_OFFSET

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 005642620-01

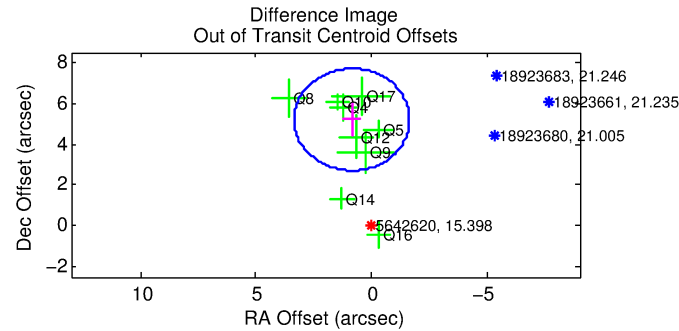
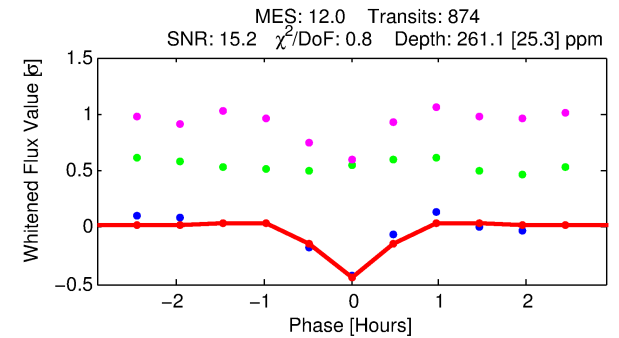
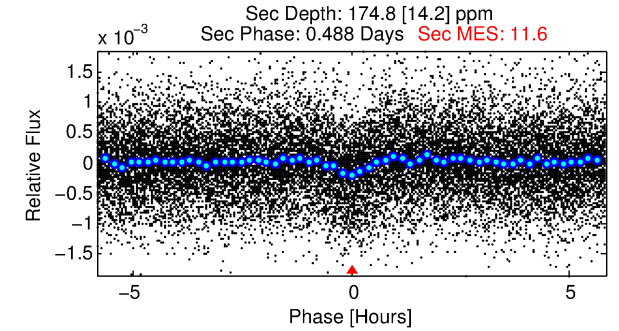
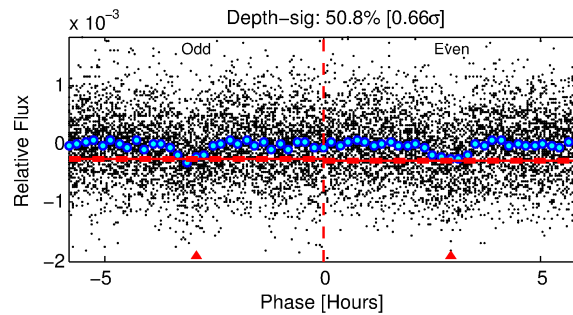
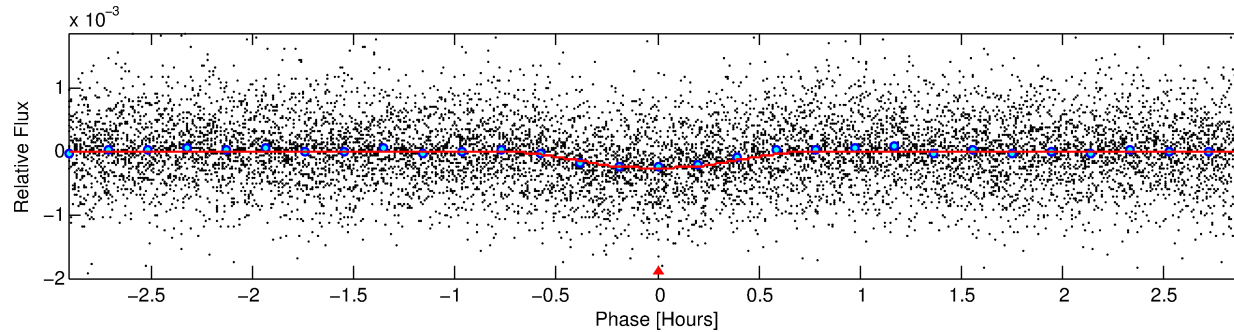
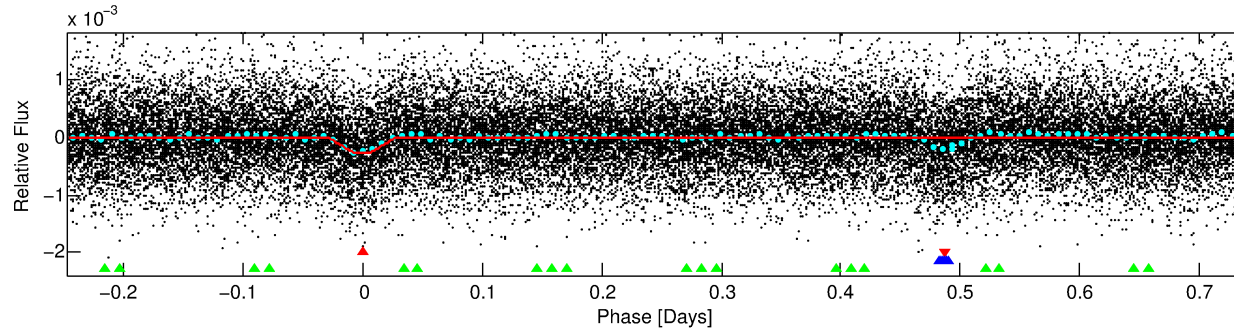
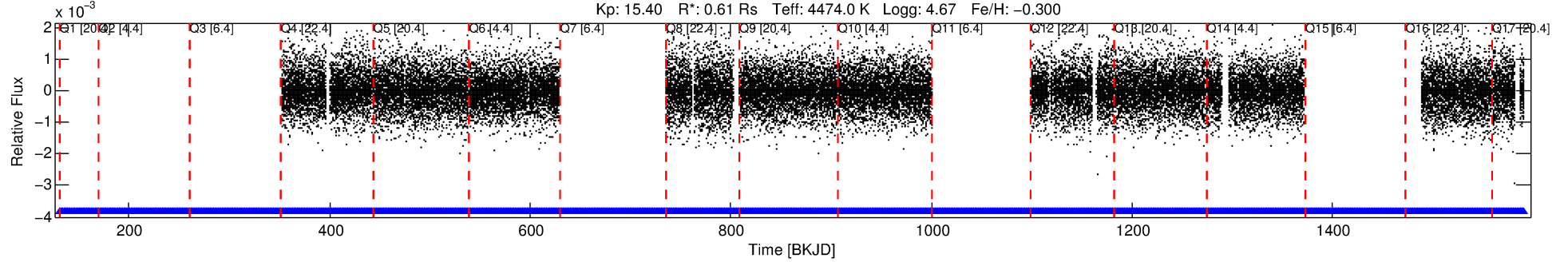
No Significant Match Found

DV One-Page Summary

KIC: 5642620 Candidate: 1 of 3 Period: 0.987 d

KOI: K02882 Corr: No Ephemeris Match

Kp: 15.40 R*: 0.61 Rs Teff: 4474.0 K Logg: 4.67 Fe/H: -0.300



DV Fit Results:

Period = 0.98678 [0.00001] d
Epoch = 131.5812 [0.0010] BKJD
Rp/R* = 0.0160 [0.0086]
a/R* = 5.82 [9.93]
b = 0.69 [1.36]
Seff = 482.50 [86.94]
Teff = 1195 [54] K
Rp = 1.07 [0.59] Re
a = 0.0167 [0.0013] AU
Ag = 23.54 [25.56] [0.88σ]
Teffp = 4070 [1112] K [2.58σ]

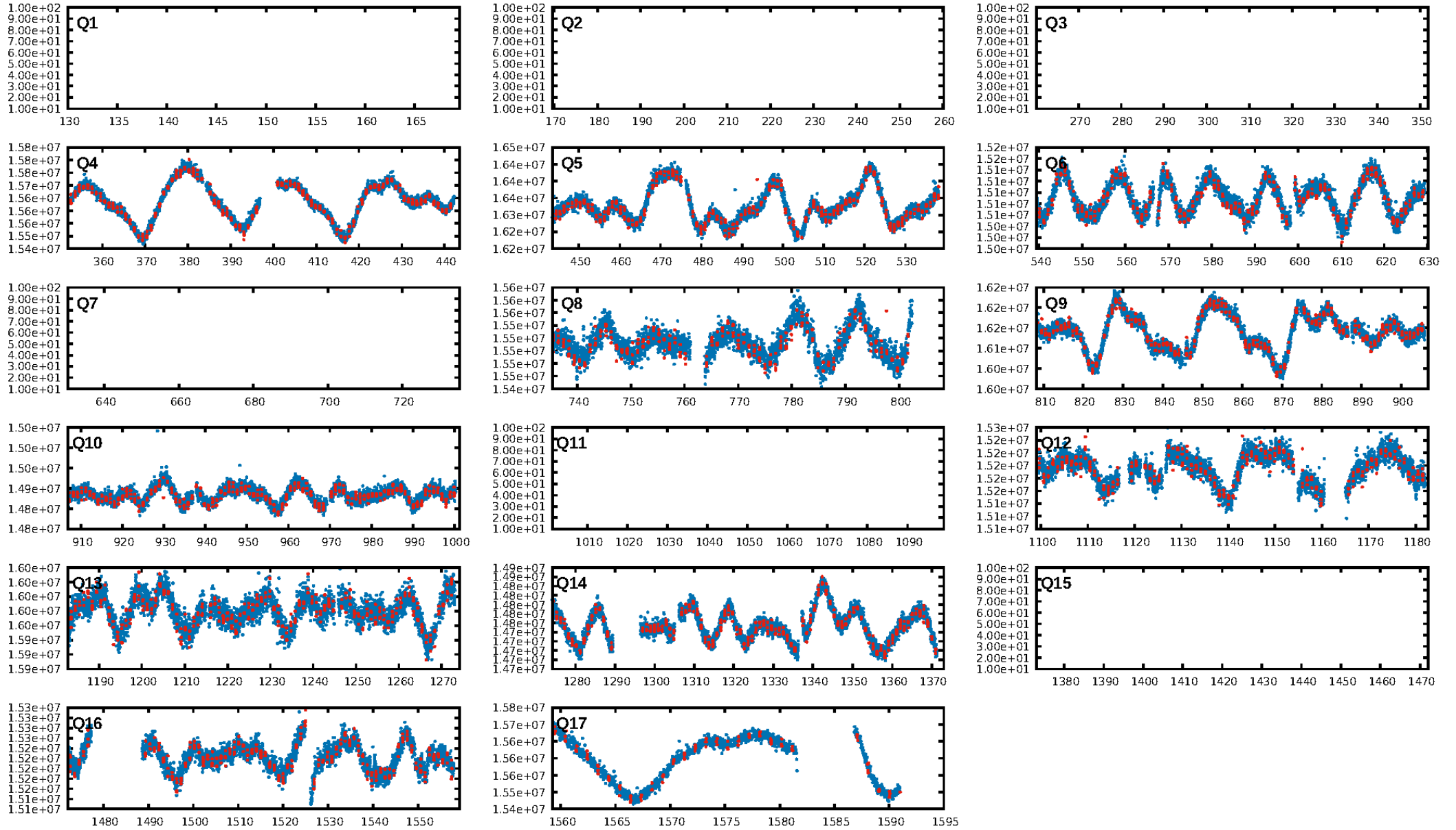
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.27e-33
RollingBand-fgt: 1.00 [846/846]
GhostDiagnostic-chr: 4.951
Centroid-sig: 0.0%
Centroid-so: 2.385 arcsec [6.07σ]
OotOffset-rm: 5.277 arcsec [6.34σ]
KicOffset-rm: 0.655 arcsec [1.52σ]
OotOffset-st: 2/0/4/3 [9]
KicOffset-st: 2/0/4/3 [9]
DiffImageQuality-fgm: 0.44 [4/9]
DiffImageOverlap-fno: 1.00 [11/11]

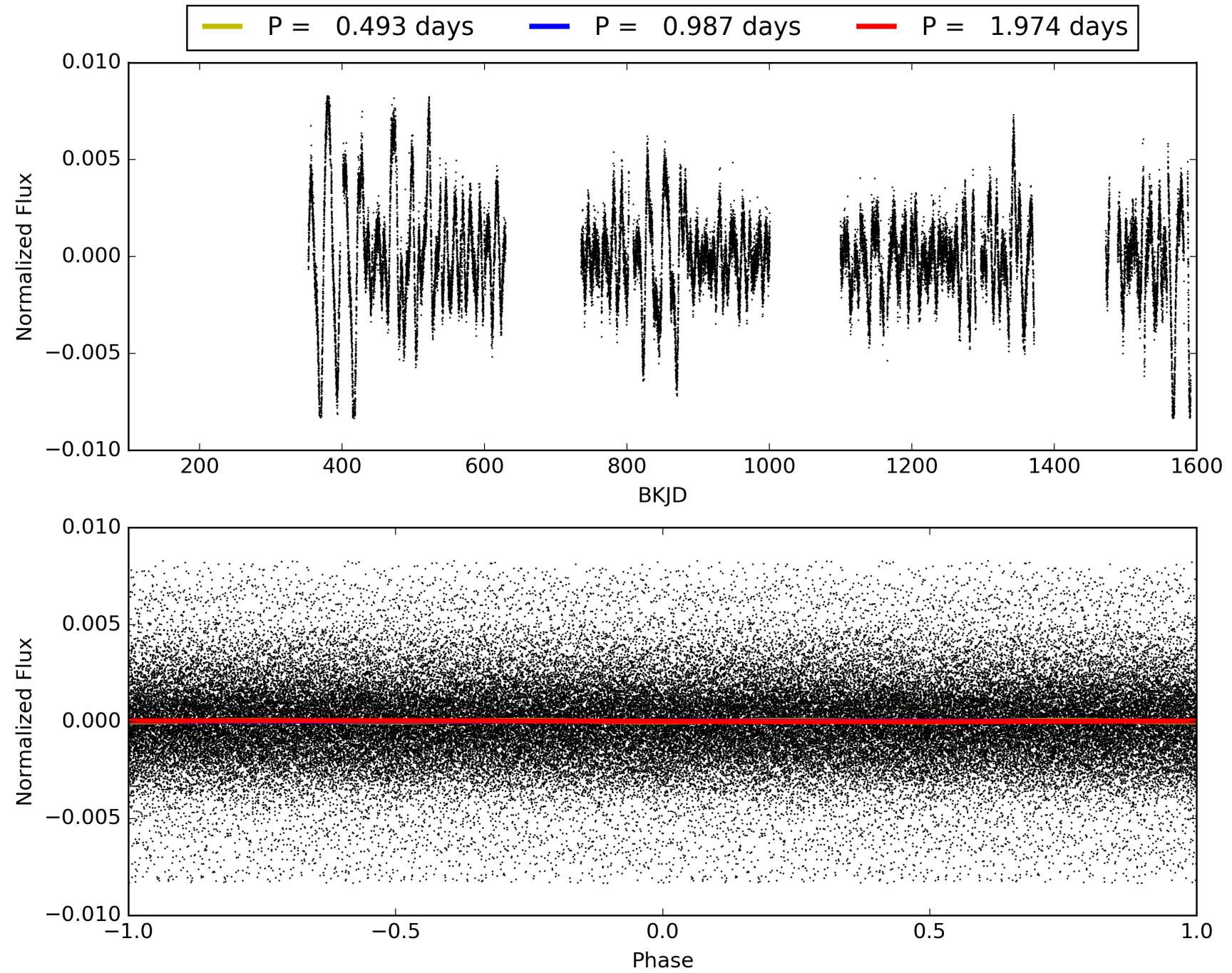
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 005642620-01, PDC Light Curves

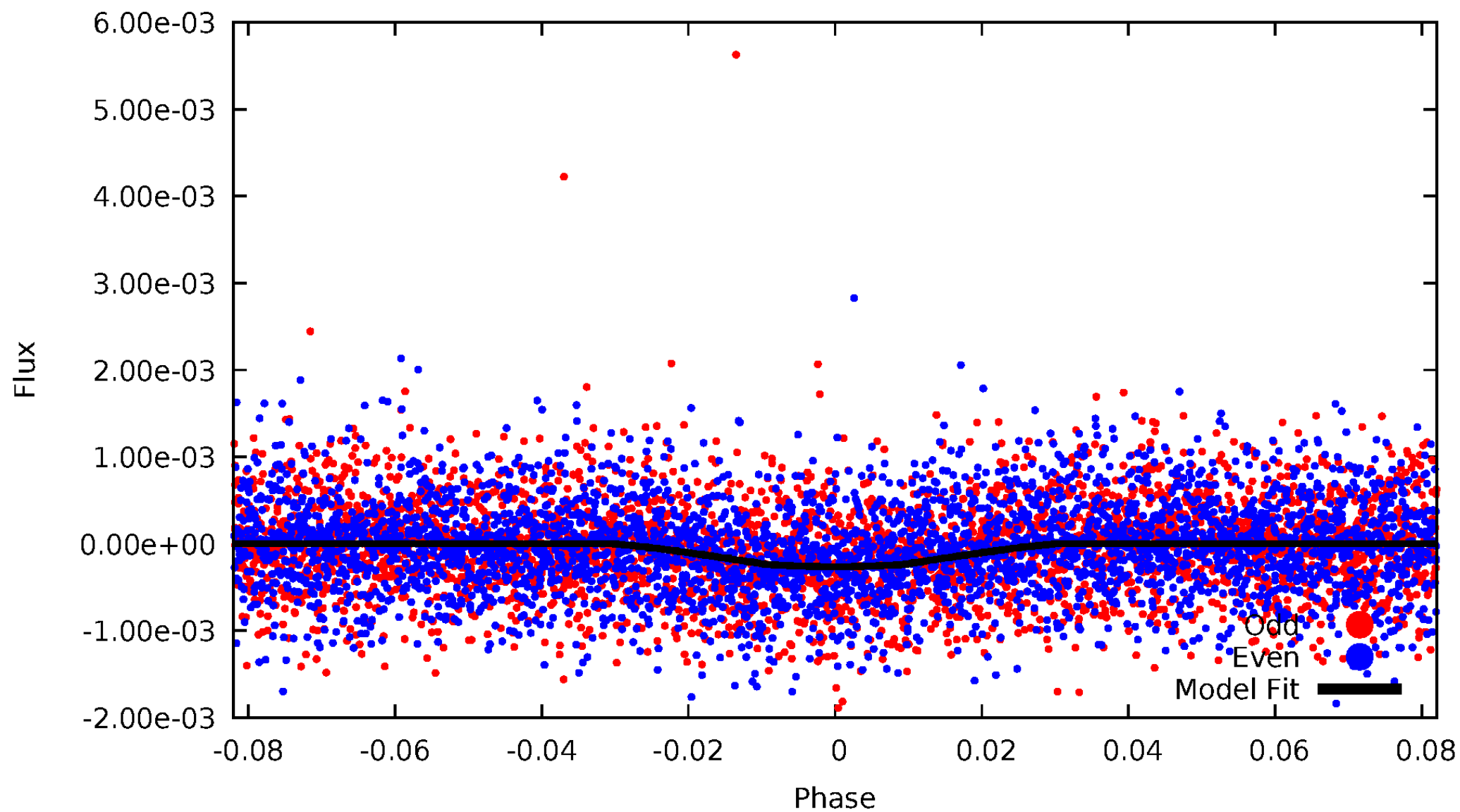


TCE 005642620-01



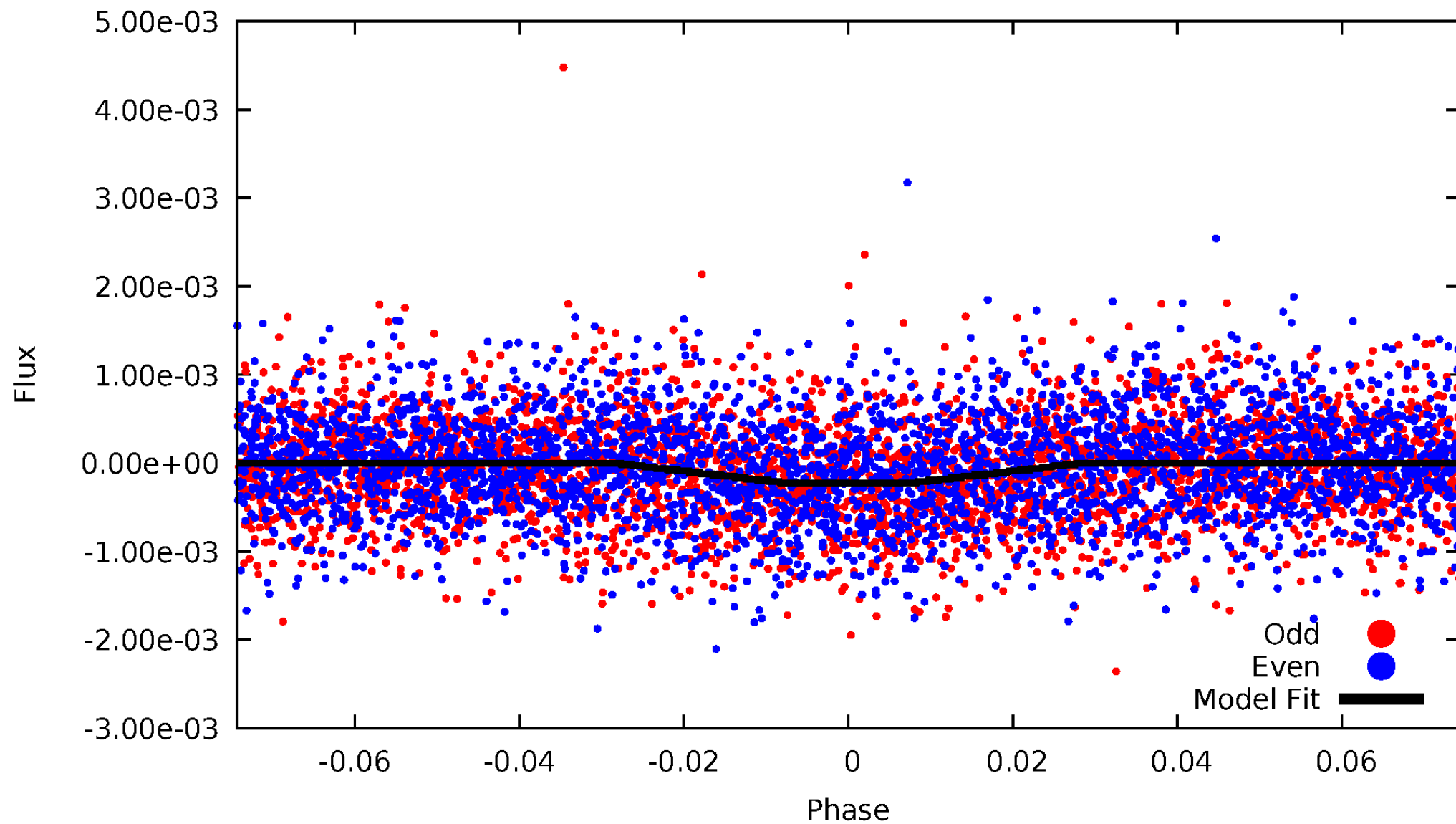
DV Odd/Even

TCE 005642620-01

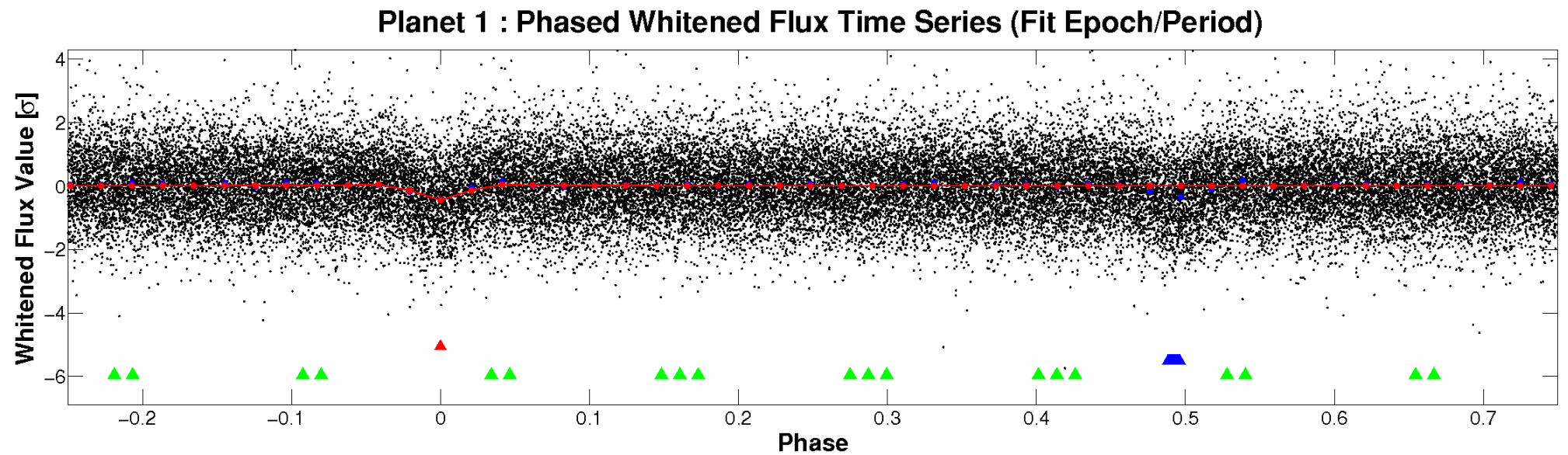
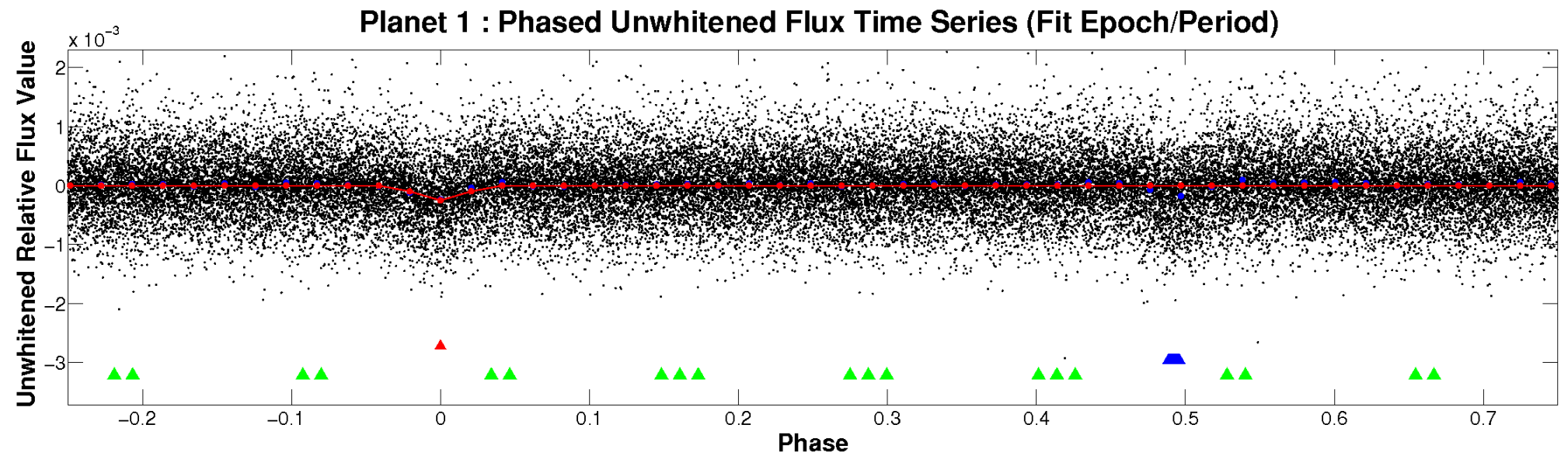


ALT Odd/Even

TCE 005642620-01

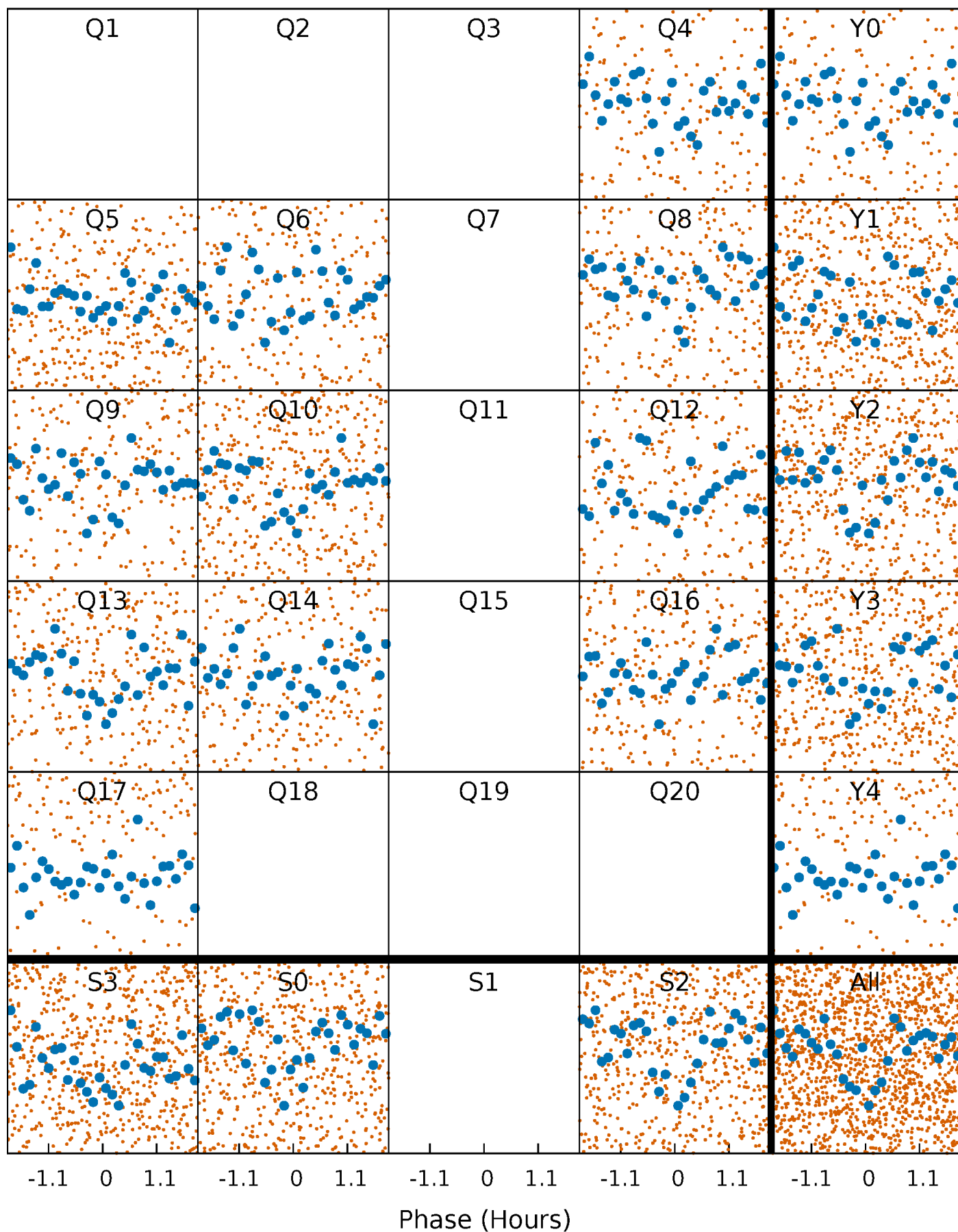


Non-Whitened Vs. Whitened Light Curve



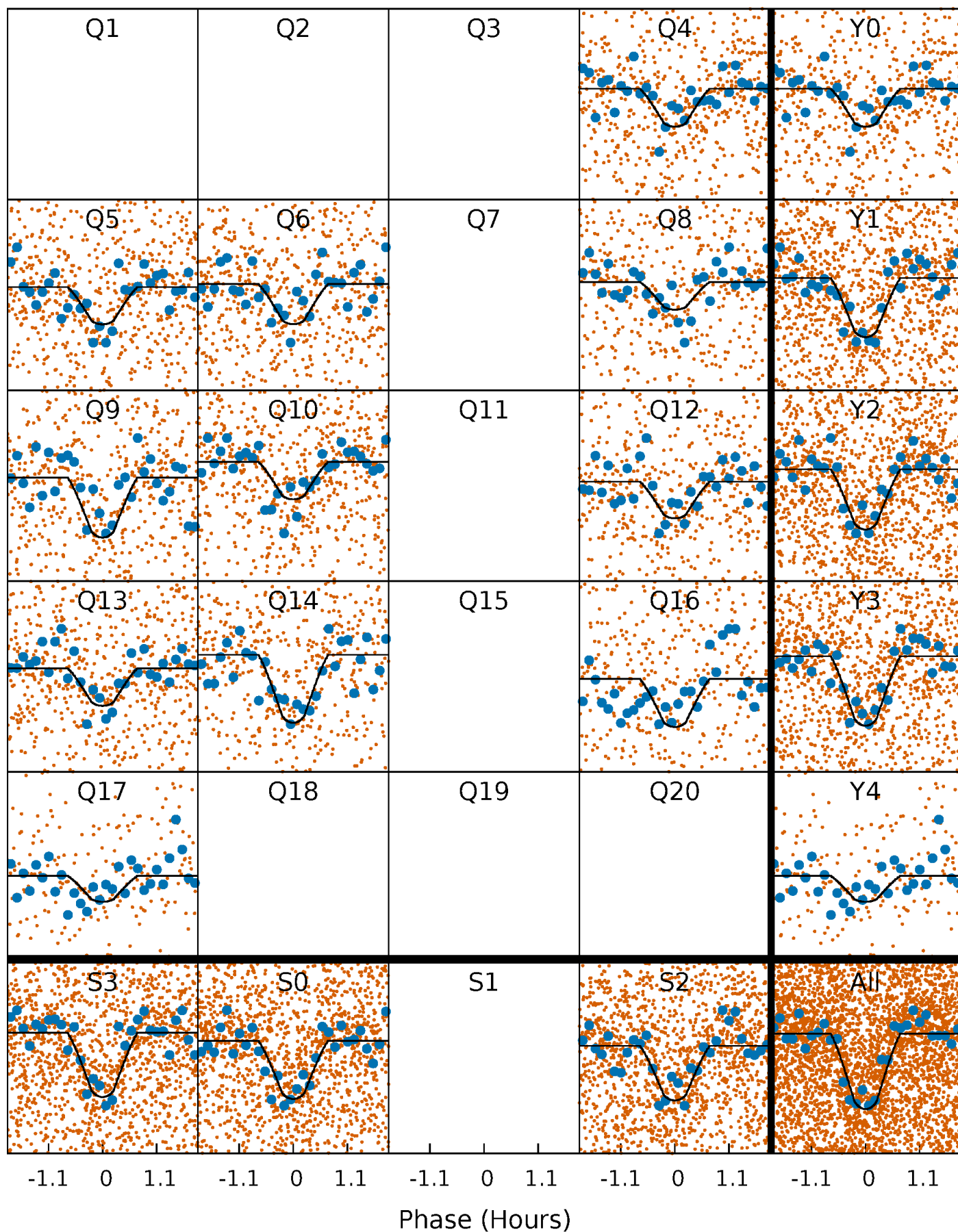
PDC Quarter-Phased Transit Curves

TCE 005642620-01 P= 0.986784 Days $T_0=131.581179$ (BKJD)



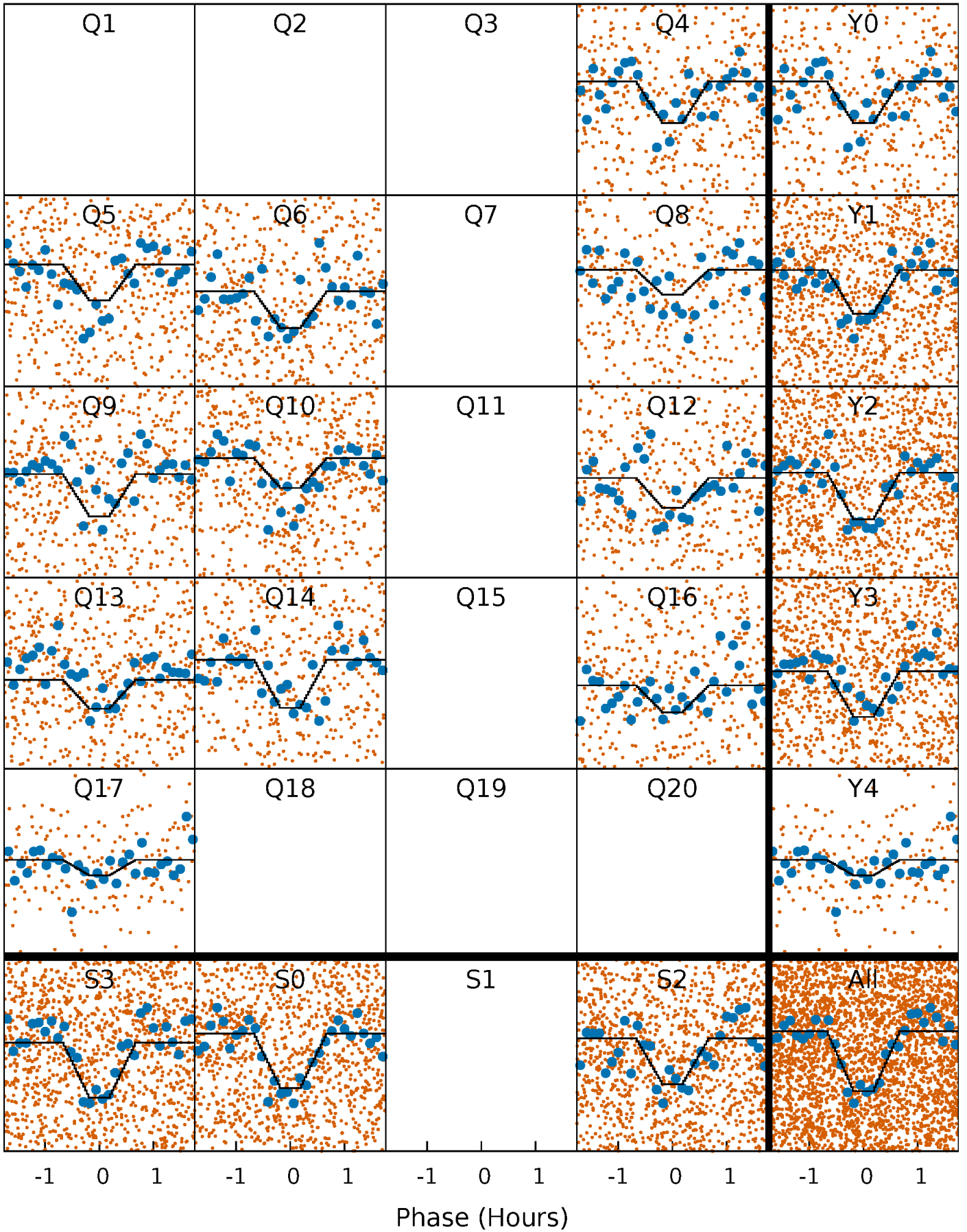
DV Quarter-Phased Transit Curves

TCE 005642620-01 P= 0.986784 Days $T_0=131.581179$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

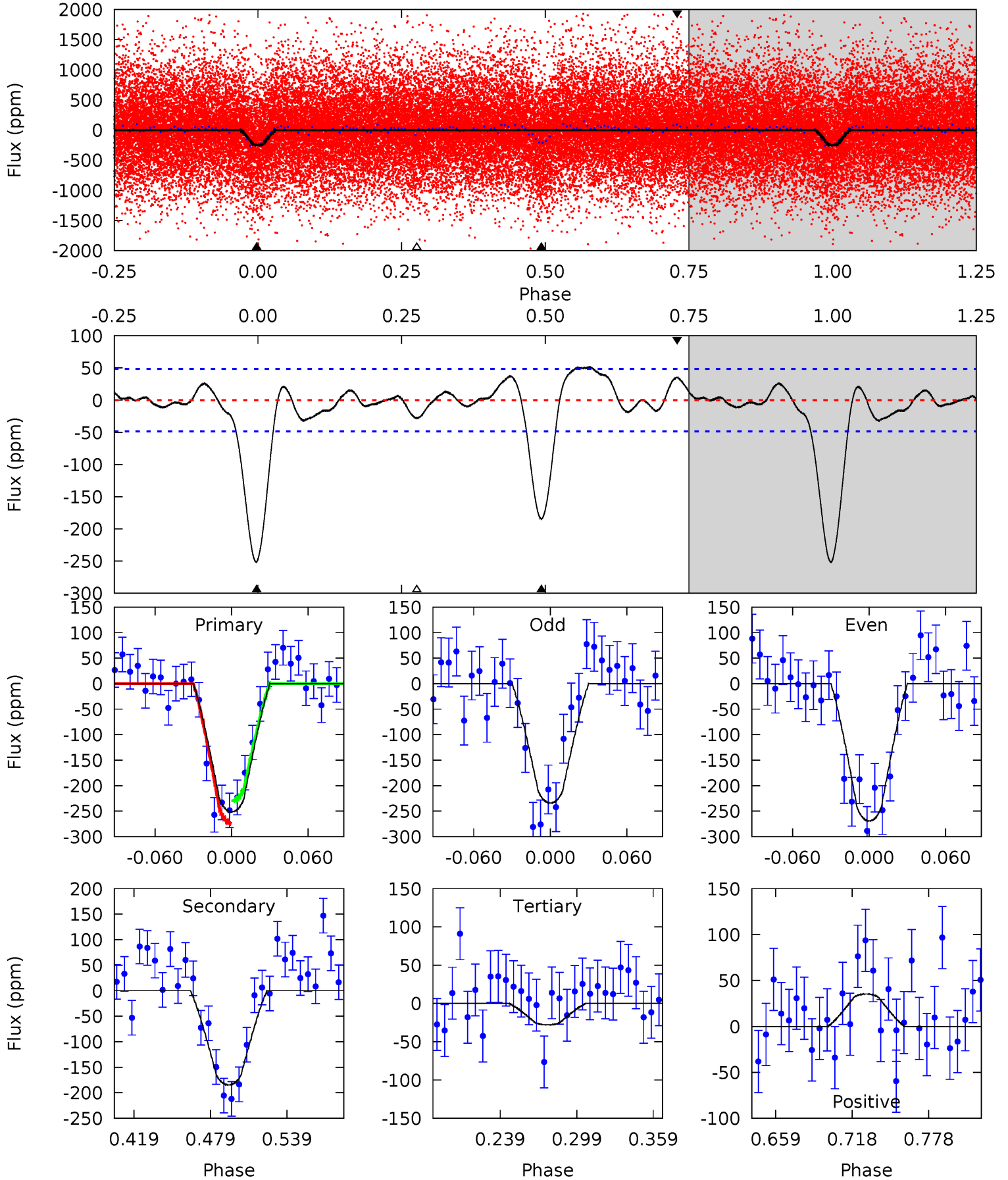
TCE 005642620-01 P= 0.986778 Days $T_0=131.582906$ (BKJD)



DV Model-Shift Uniqueness Test

005642620-01, P = 0.986784 Days, E = 131.581179 Days

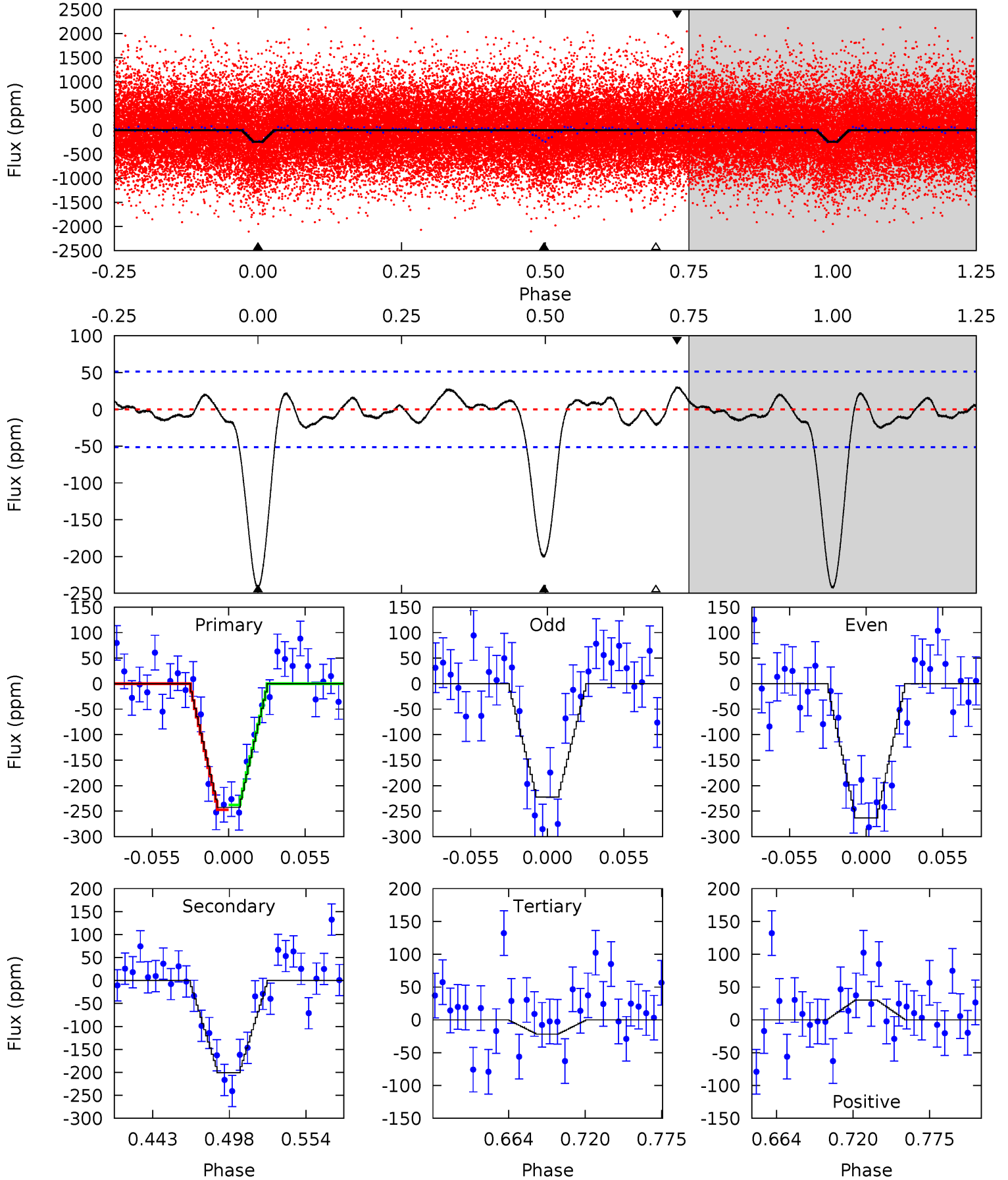
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.2	17.8	2.69	3.40	4.67	1.88	1.78	21.5	20.8	15.1	14.4	1.70	1.01	0.17	2.12



Alt Model-Shift Uniqueness Test

005642620-01, P = 0.986778 Days, E = 131.582906 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.1	18.3	1.98	2.76	4.69	1.92	1.13	20.1	19.4	16.3	15.6	1.85	1.01	0.11	0.43



Stellar Parameters For KIC 005642620

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4474^{+156}_{-171}	$4.670^{+0.032}_{-0.044}$	$-0.300^{+0.300}_{-0.300}$	$0.614^{+0.062}_{-0.050}$	$0.645^{+0.062}_{-0.062}$	$3.927^{+0.622}_{-0.718}$
	+3%/-4%	+1%/-1%	+100%/-100%	+10%/-8%	+10%/-10%	+16%/-18%
Source	PHO16	PHO16	PHO16	DSEP		

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

Secondary Eclipse Parameters for KIC 005642620-01 / KOI 2882.02

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-185 ± 10	$1.09^{+0.57}_{-0.53}$	1673^{+69}_{-66}	4157^{+1343}_{-556}	24^{+66}_{-13}
Alt.	-201 ± 11	$1.03^{+0.58}_{-0.51}$	1678^{+69}_{-69}	4353^{+1528}_{-683}	30^{+90}_{-18}

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 $A_{obs} \gg 1.0$

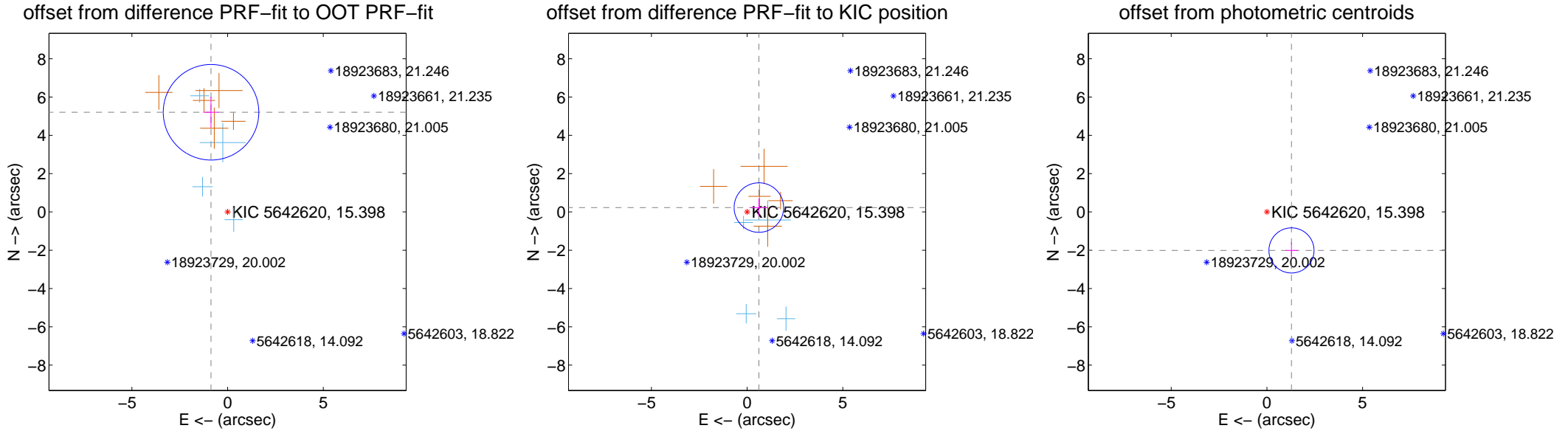
DV Centroid Data

Supplemental centroid analysis for 005642620-01. Kepler magnitude: 15.40. Transit SNR 15.17

There are 4 quarters with good PRF difference image offsets

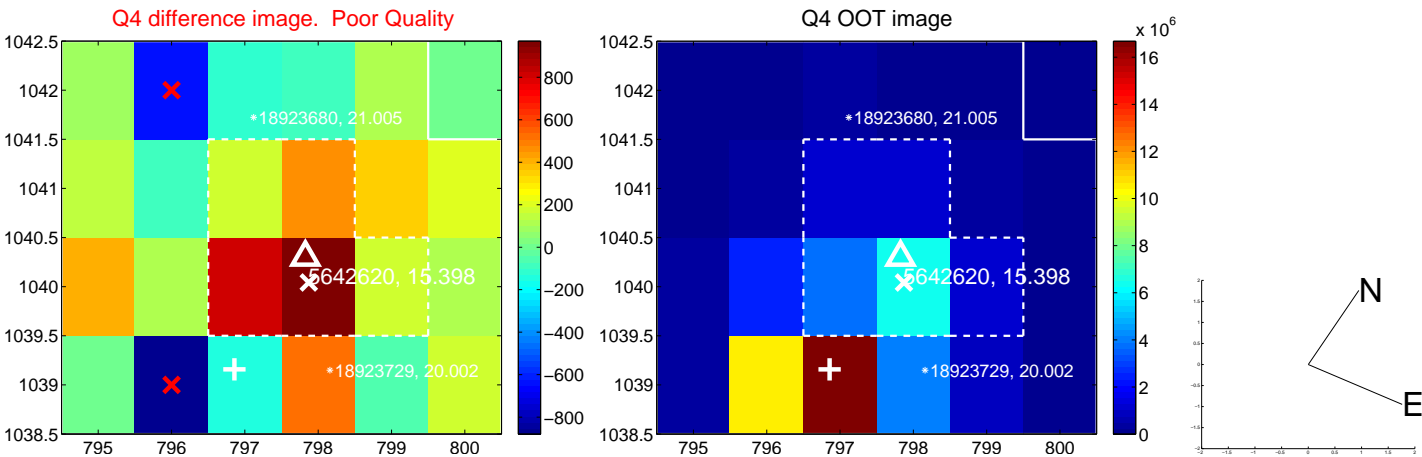
The OOT PRF centroid is offset from the target star catalog position by about 4.18 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.277 ± 0.832	6.34	0.865 ± 0.400	5.206 ± 0.810
PRF-fit source offset from KIC position	0.655 ± 0.431	1.52	-0.614 ± 0.425	0.228 ± 0.472
photometric centroid source offset	2.39 ± 0.39	6.07	-1.28 ± 0.31	-2.01 ± 0.42

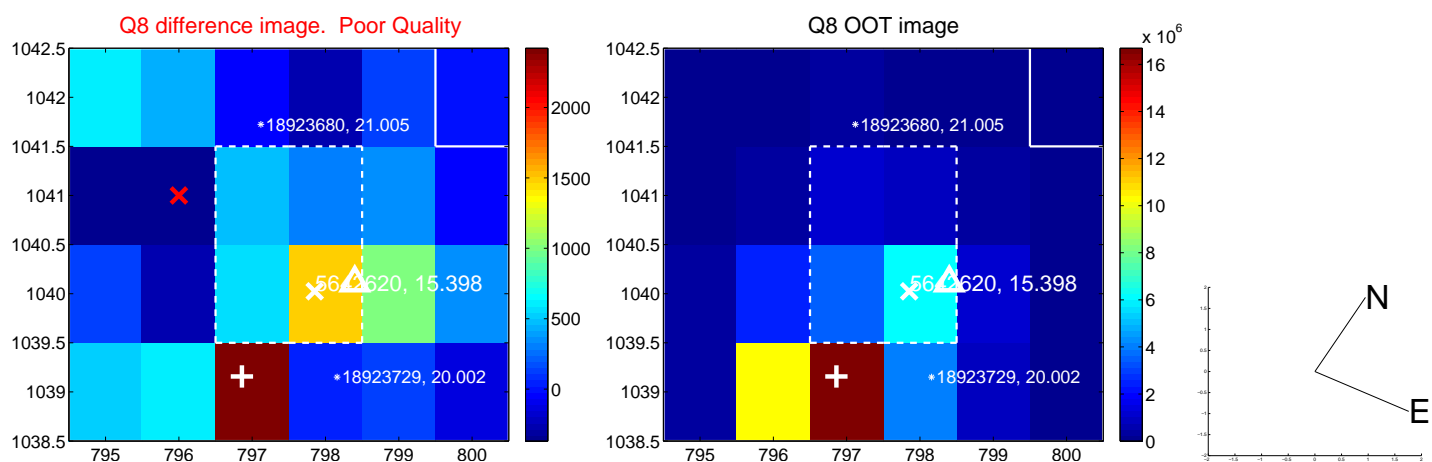
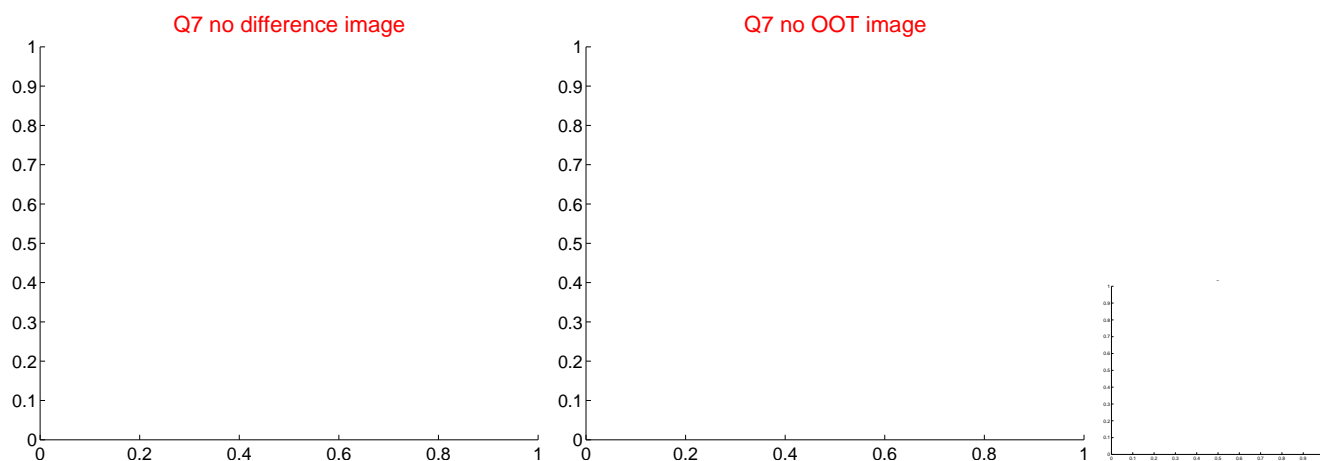
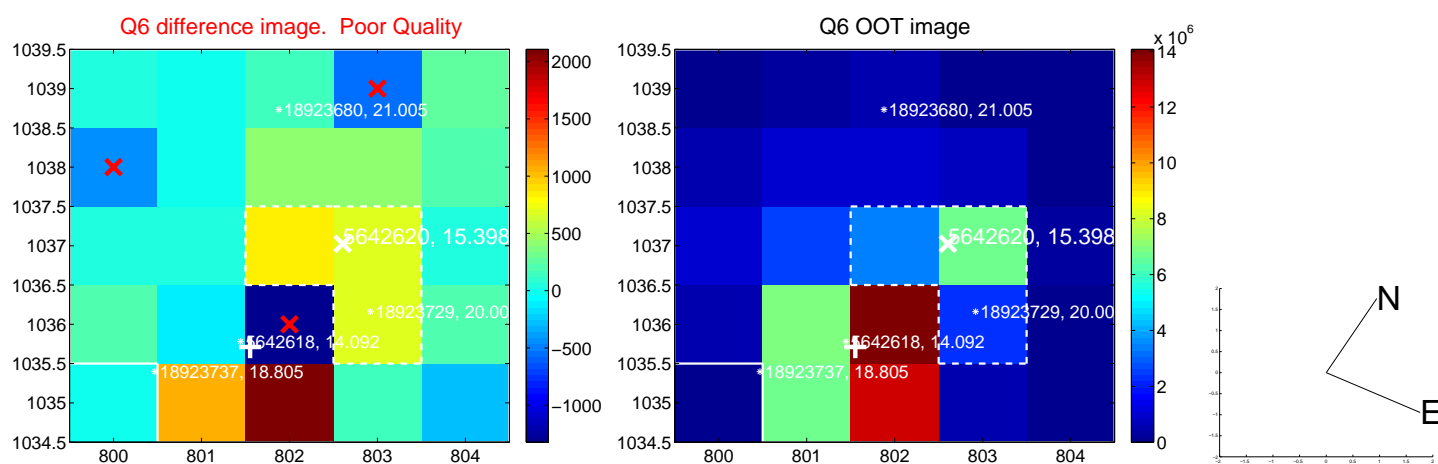
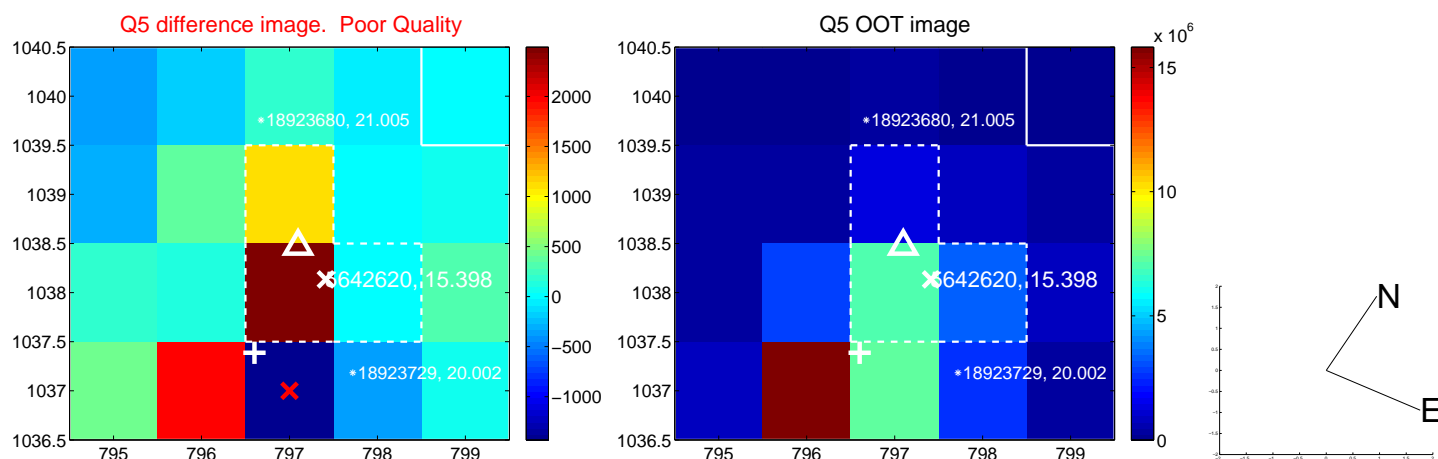


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

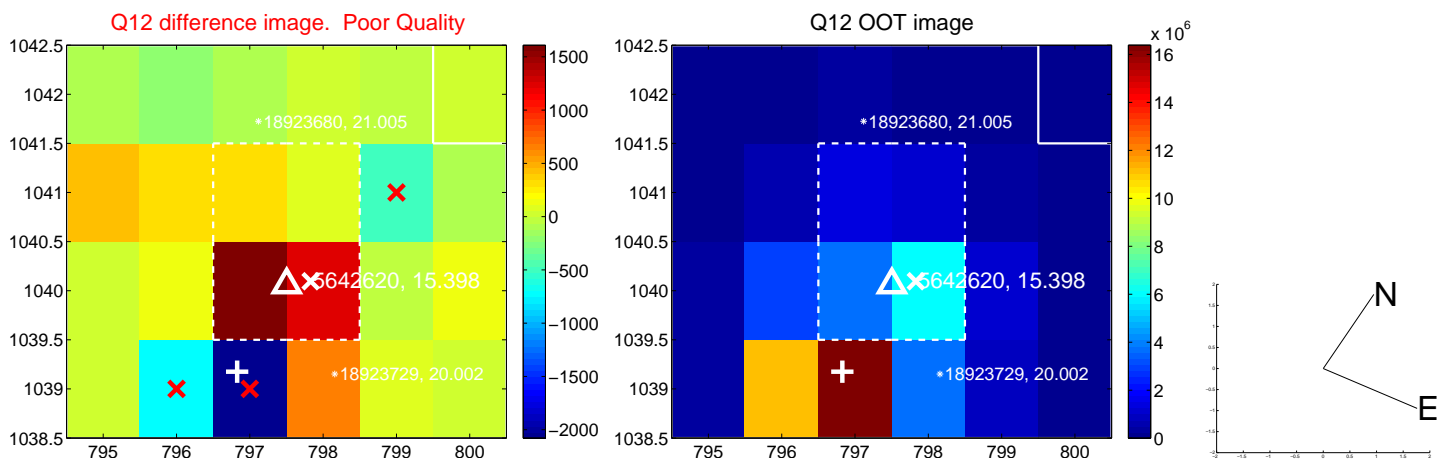
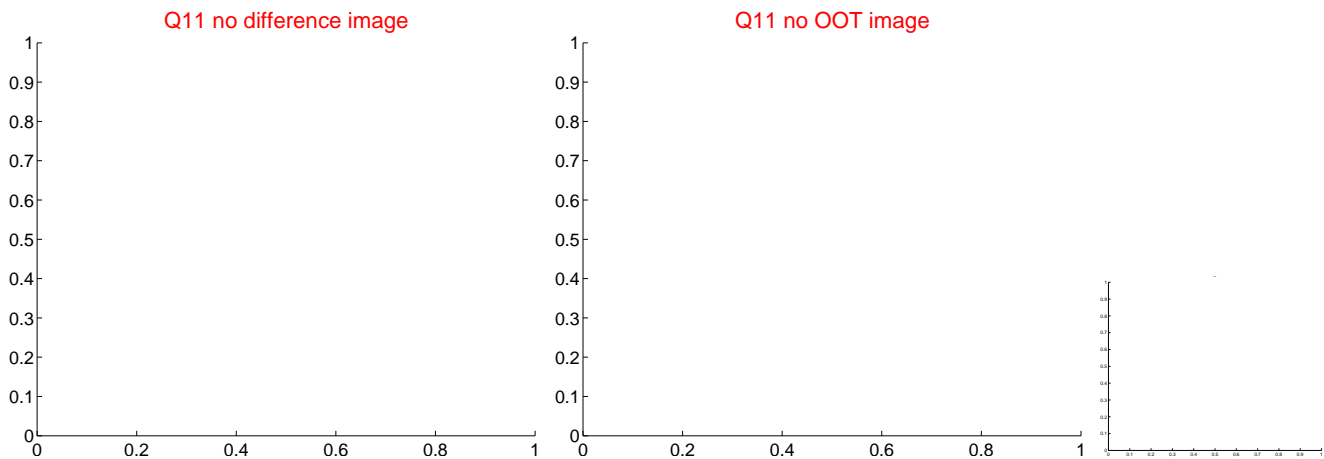
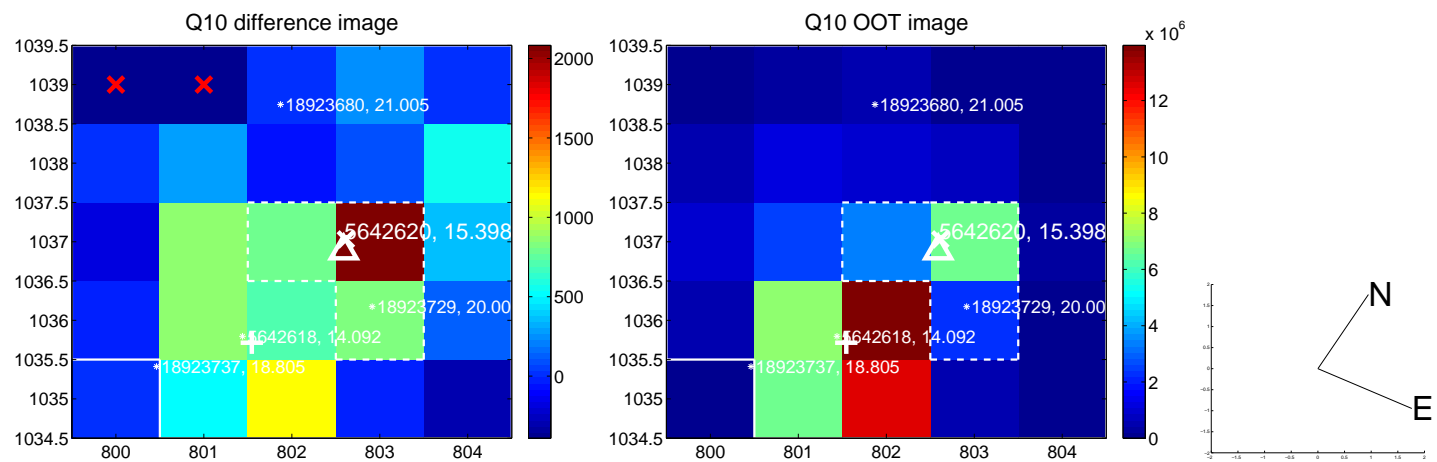
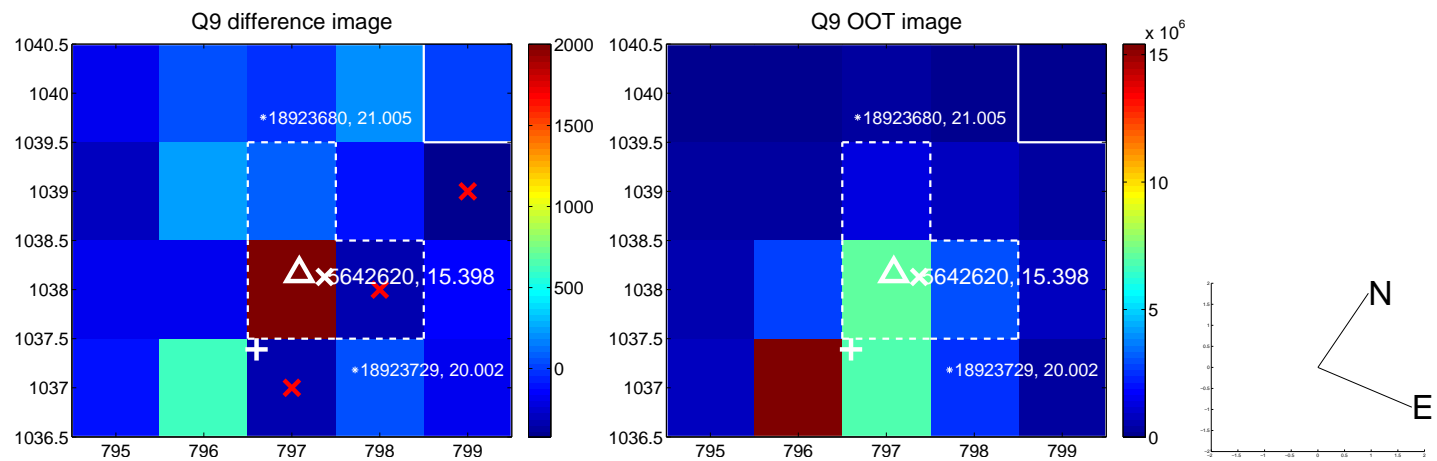
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



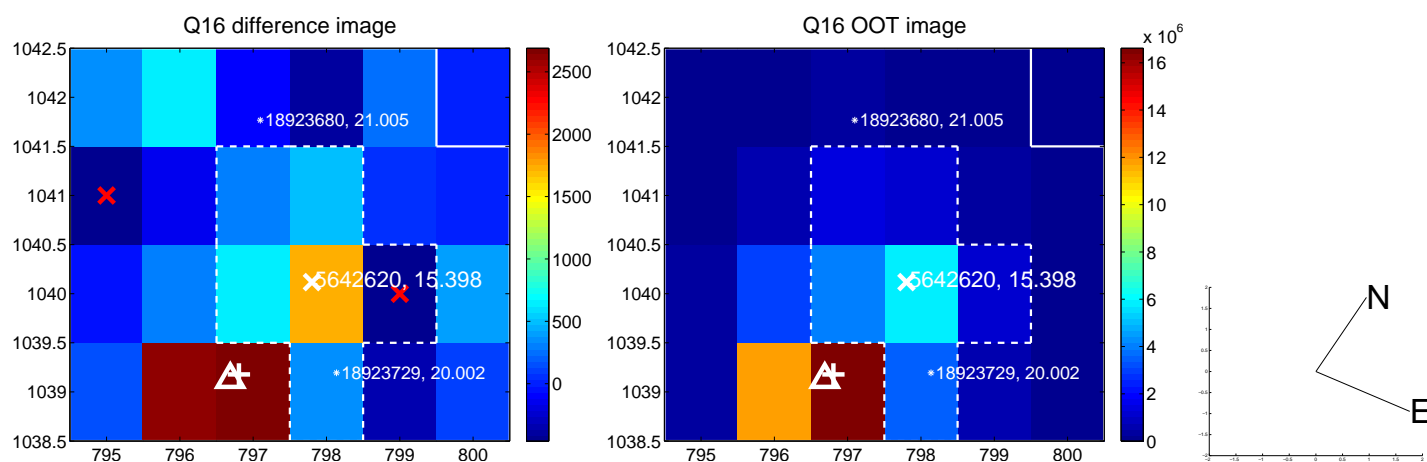
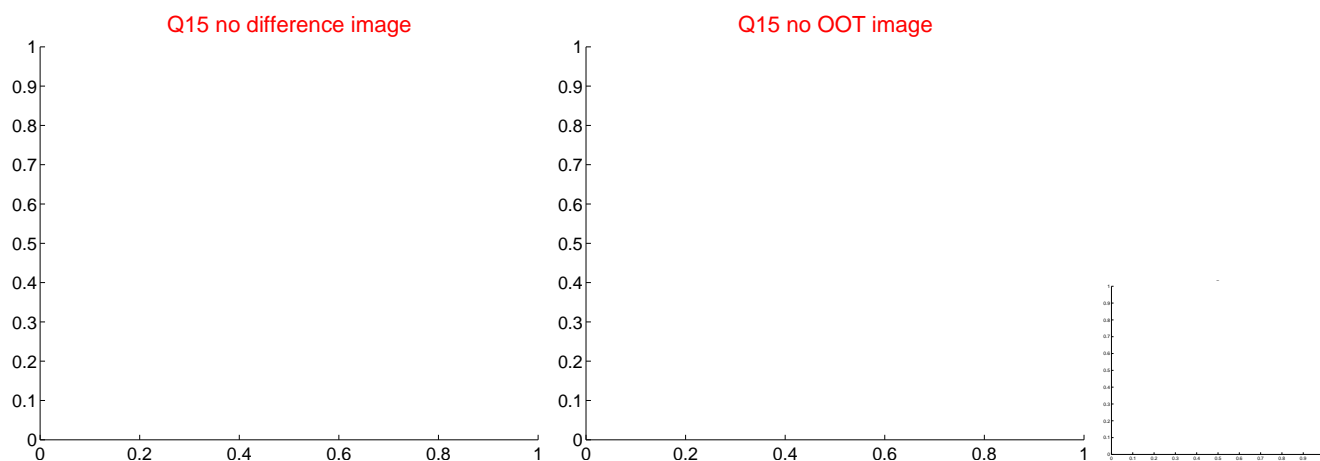
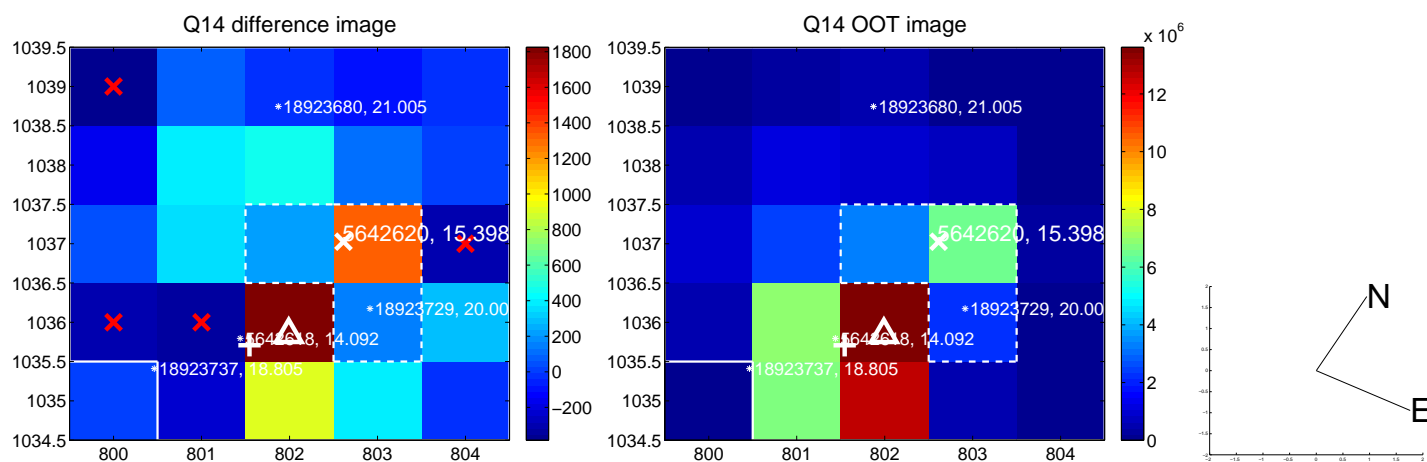
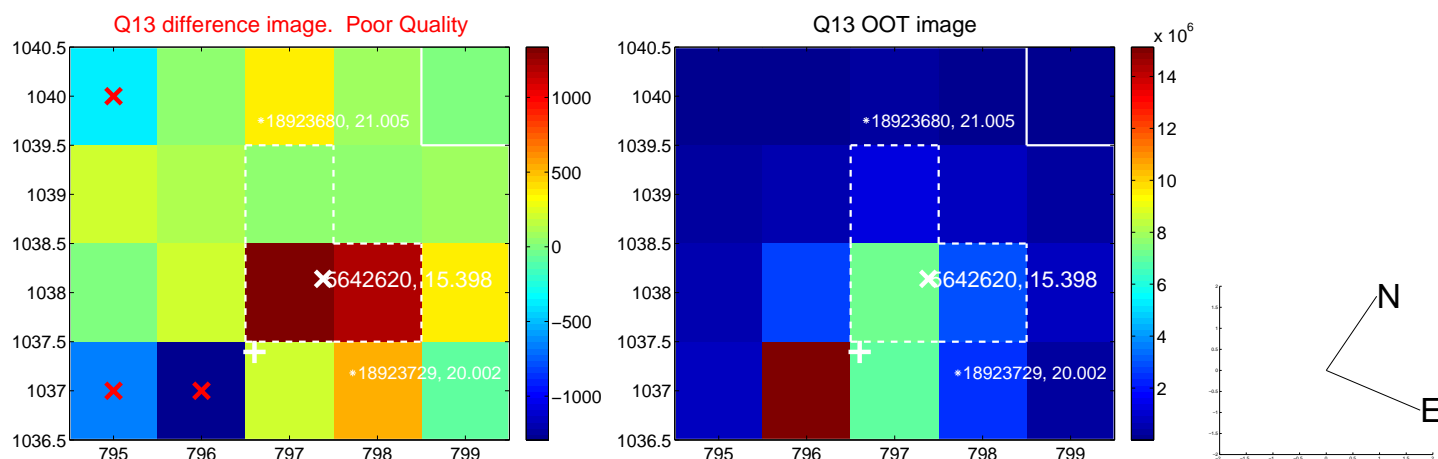
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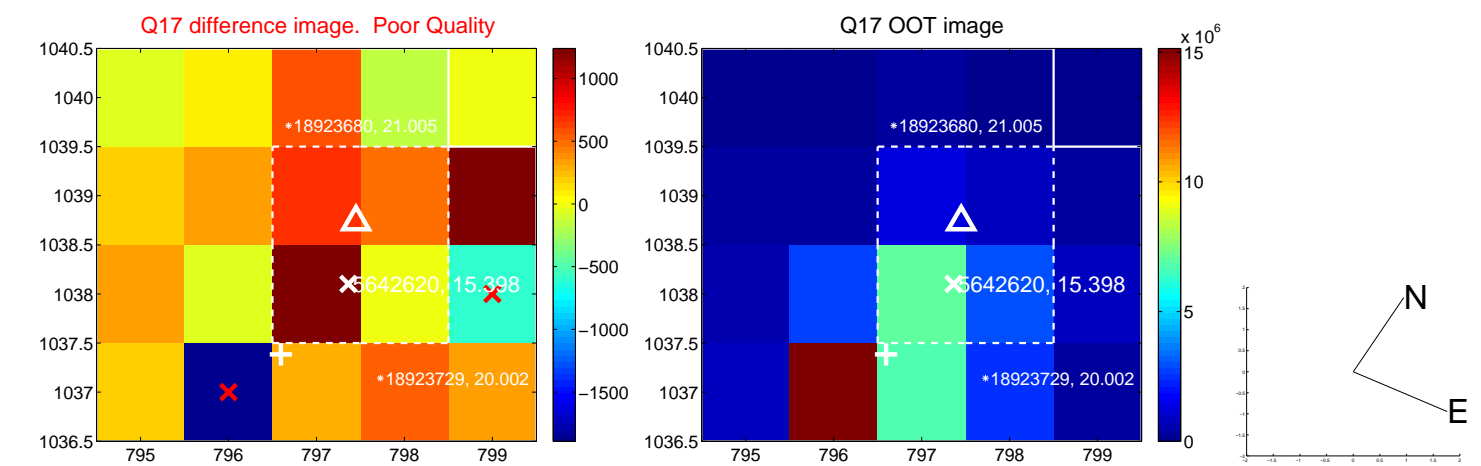
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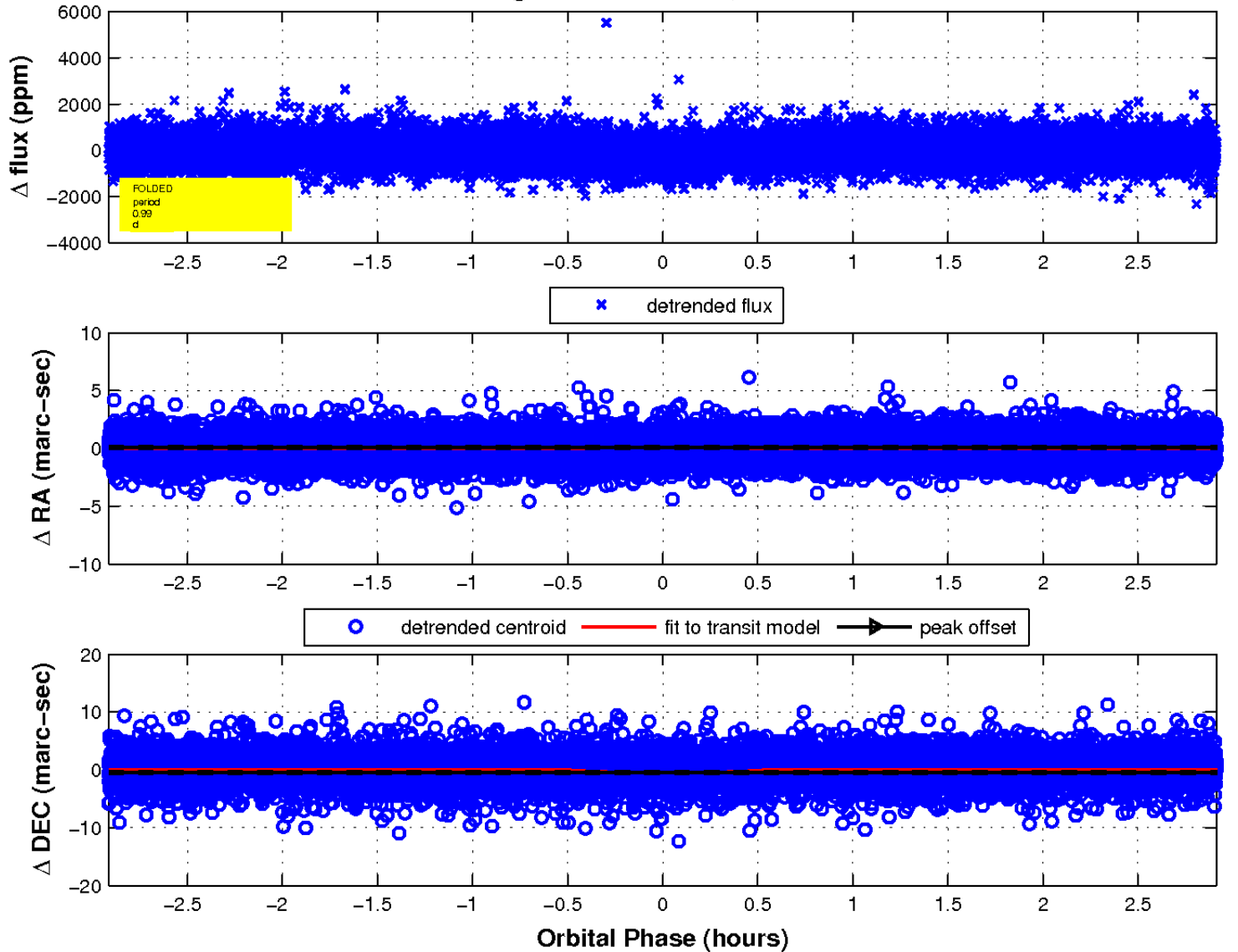
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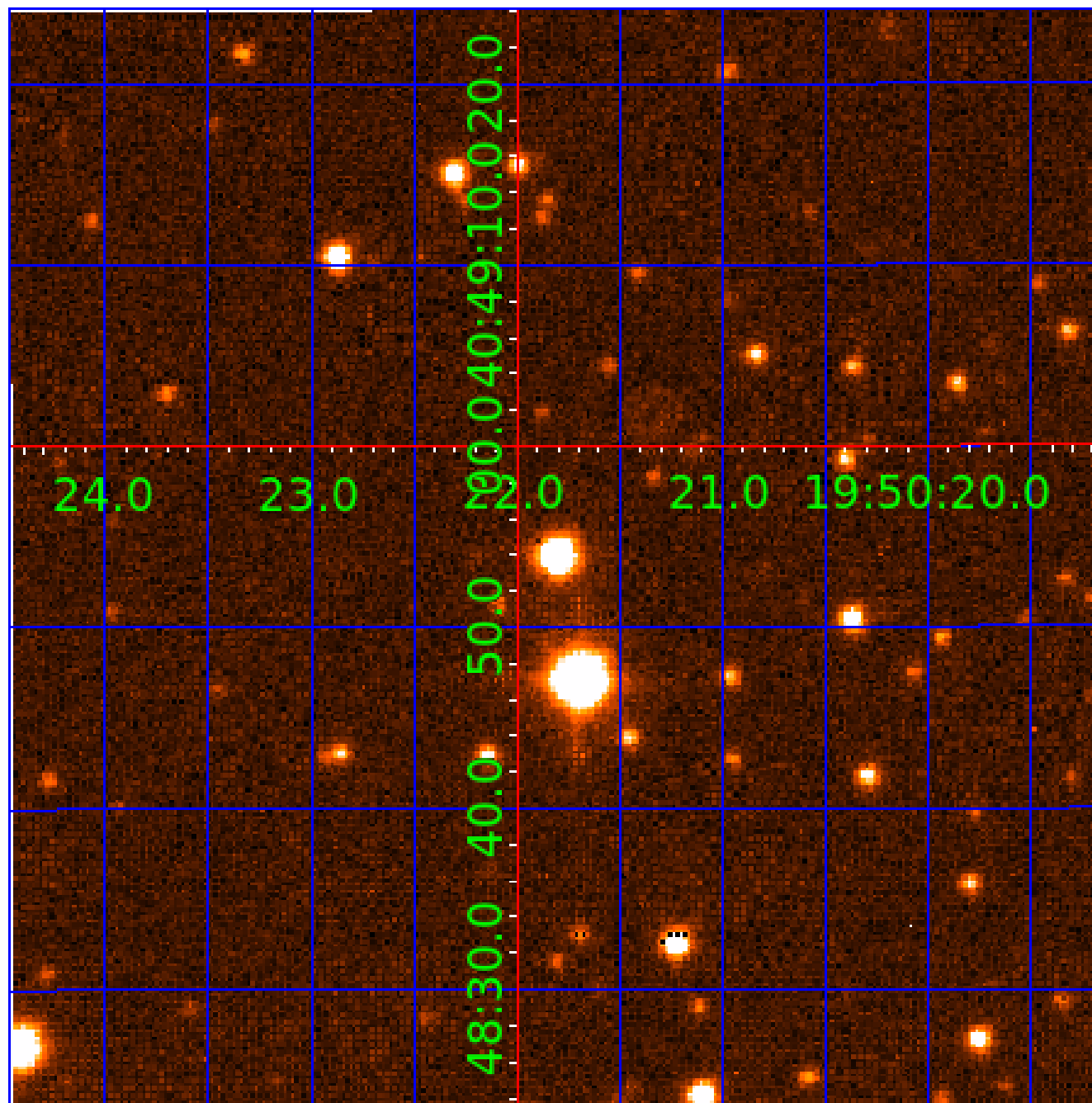


fluxWeightedCentroids, Planet 1 of 3



UKIRT Image

Declination



KIC 005642620

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005642620-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE—CENT_KIC_POS
005642620-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_KIC_POS
005642620-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—CENT_RESOLVED_OFFSET

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 005642620-02

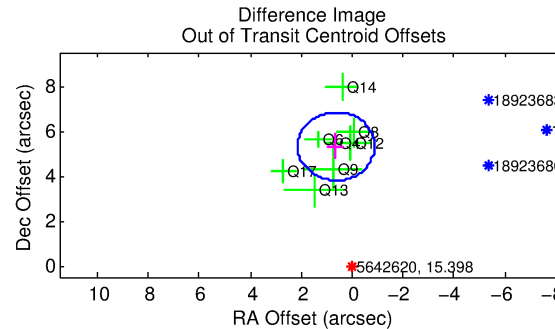
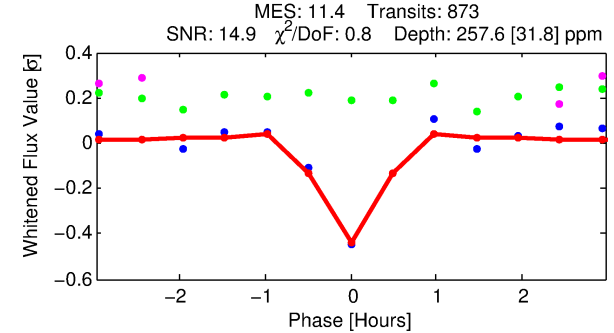
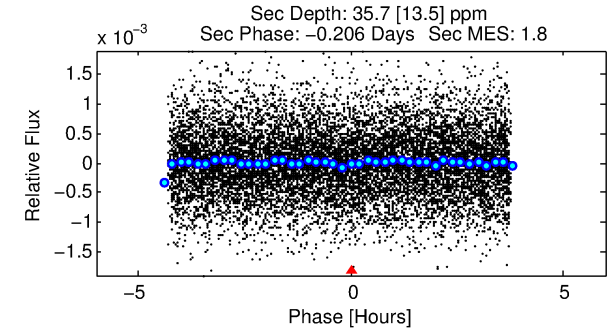
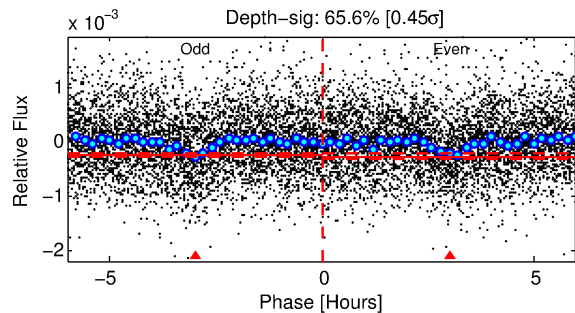
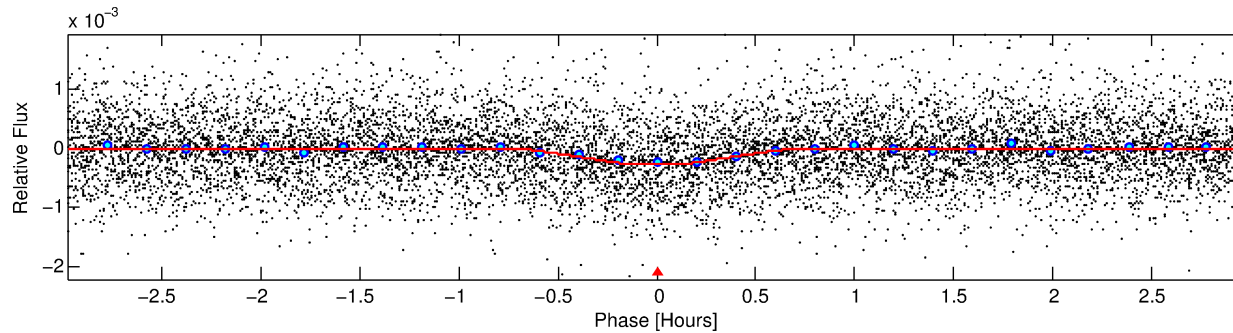
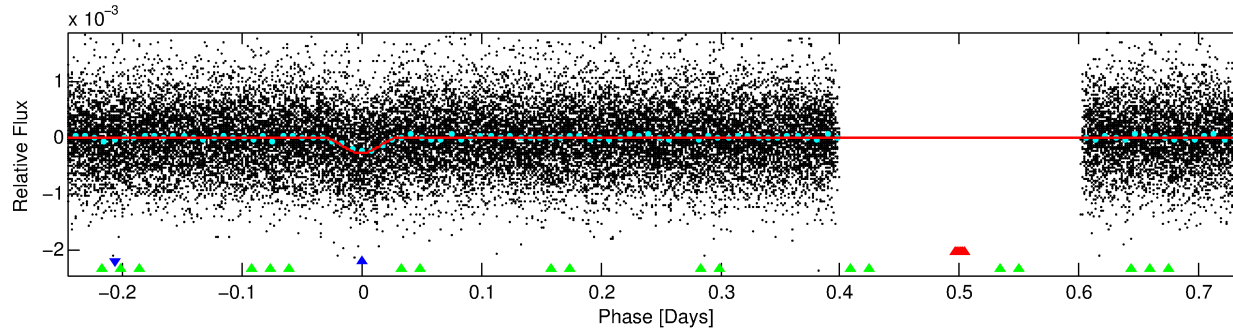
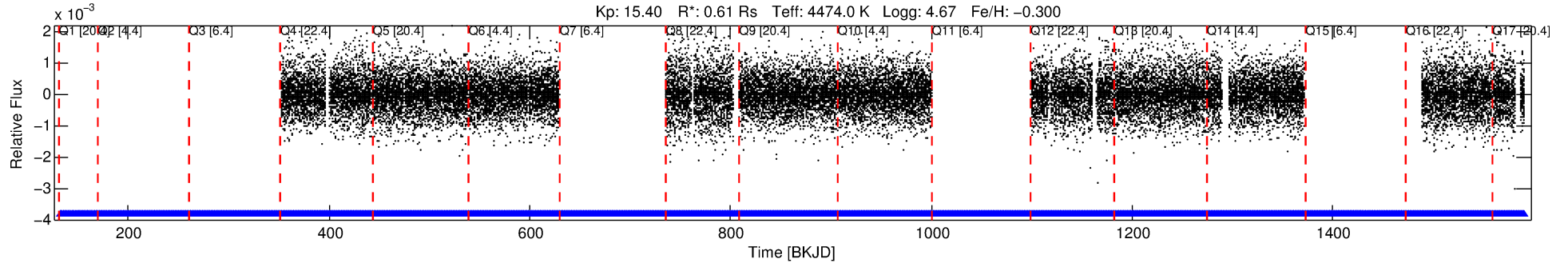
No Significant Match Found

DV One-Page Summary

KIC: 5642620 Candidate: 2 of 3 Period: 0.987 d

KOI: K02882 Corr: No Ephemeris Match

Kp: 15.40 R*: 0.61 Rs Teff: 4474.0 K Logg: 4.67 Fe/H: -0.300



DV Fit Results:

Period = 0.98679 [0.00001] d
Epoch = 132.0632 [0.0011] BKJD
Rp/R* = 0.0190 [0.0110]
a/R* = 3.35 [6.94]
b = 0.93 [0.36]
Seff = 482.49 [86.94]
Teq = 1195 [54] K
Rp = 1.27 [0.75] Re
a = 0.0167 [0.0013] AU
Ag = 3.42 [4.18] [0.58σ]
Teff = 2513 [772] K [1.70σ]

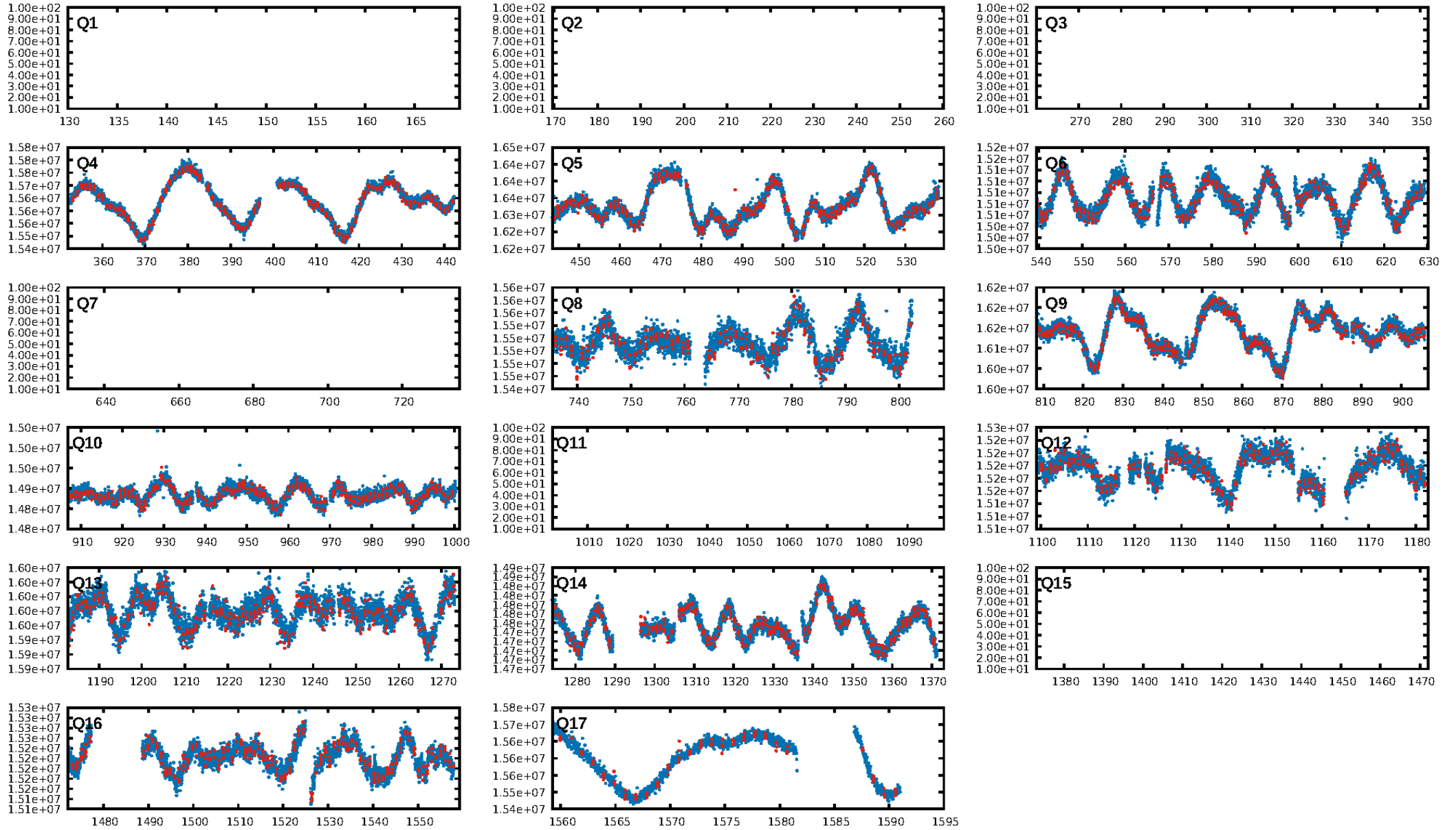
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 100.0% [272.96σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: 1.66e-30
RollingBand-fgt: 1.00 [847/847]
GhostDiagnostic-chr: 101.3
Centroid-sig: 41.6%
Centroid-so: 3.587 arcsec [8.39σ]
OotOffset-rm: 5.353 arcsec [10.60σ]
KicOffset-rm: 0.766 arcsec [2.05σ]
OotOffset-st: 2/0/3/3 [8]
KicOffset-st: 2/0/3/3 [8]
DiffImageQuality-fgm: 0.75 [6/8]
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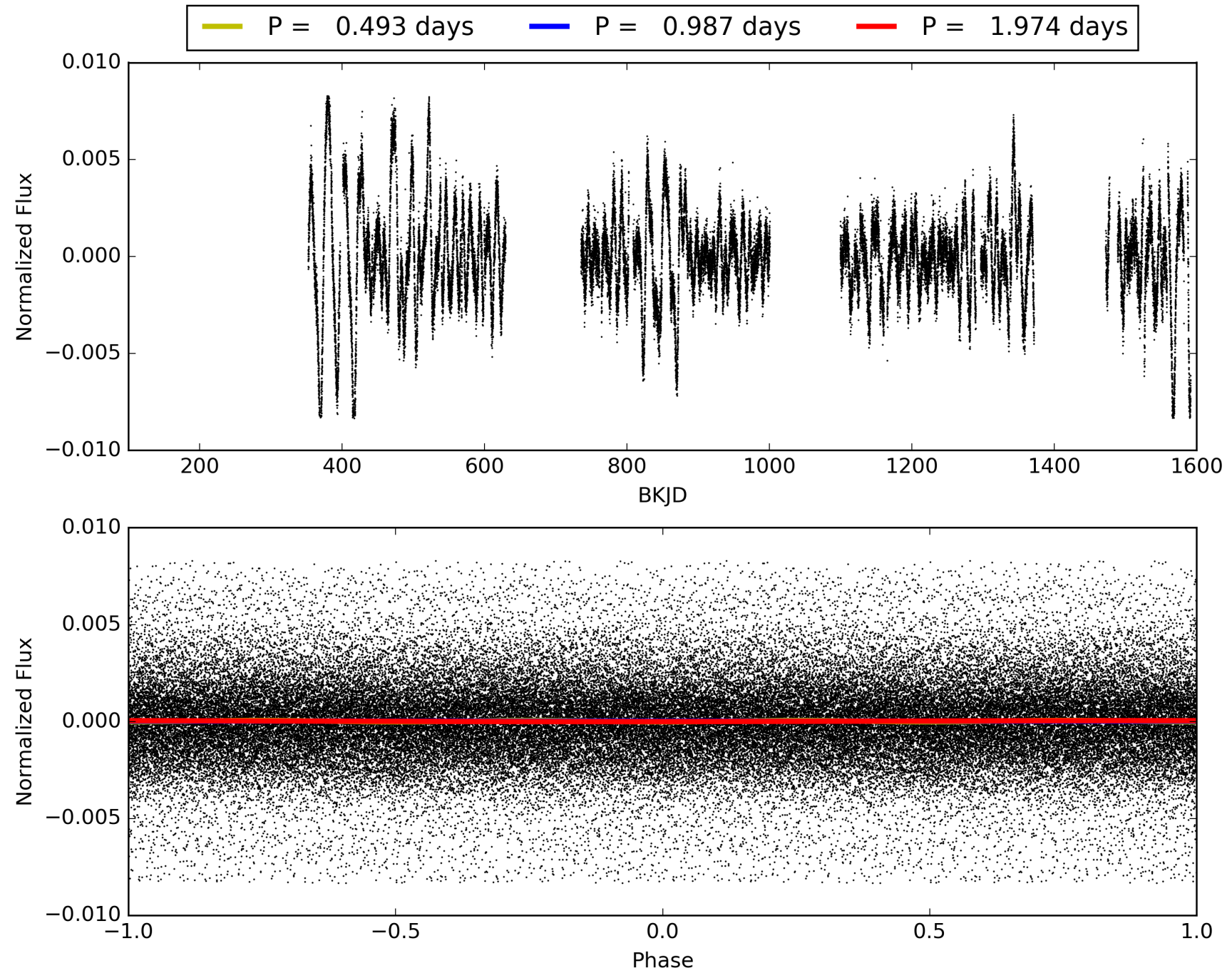
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 00:44:18 Z

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TCE 005642620-02, PDC Light Curves

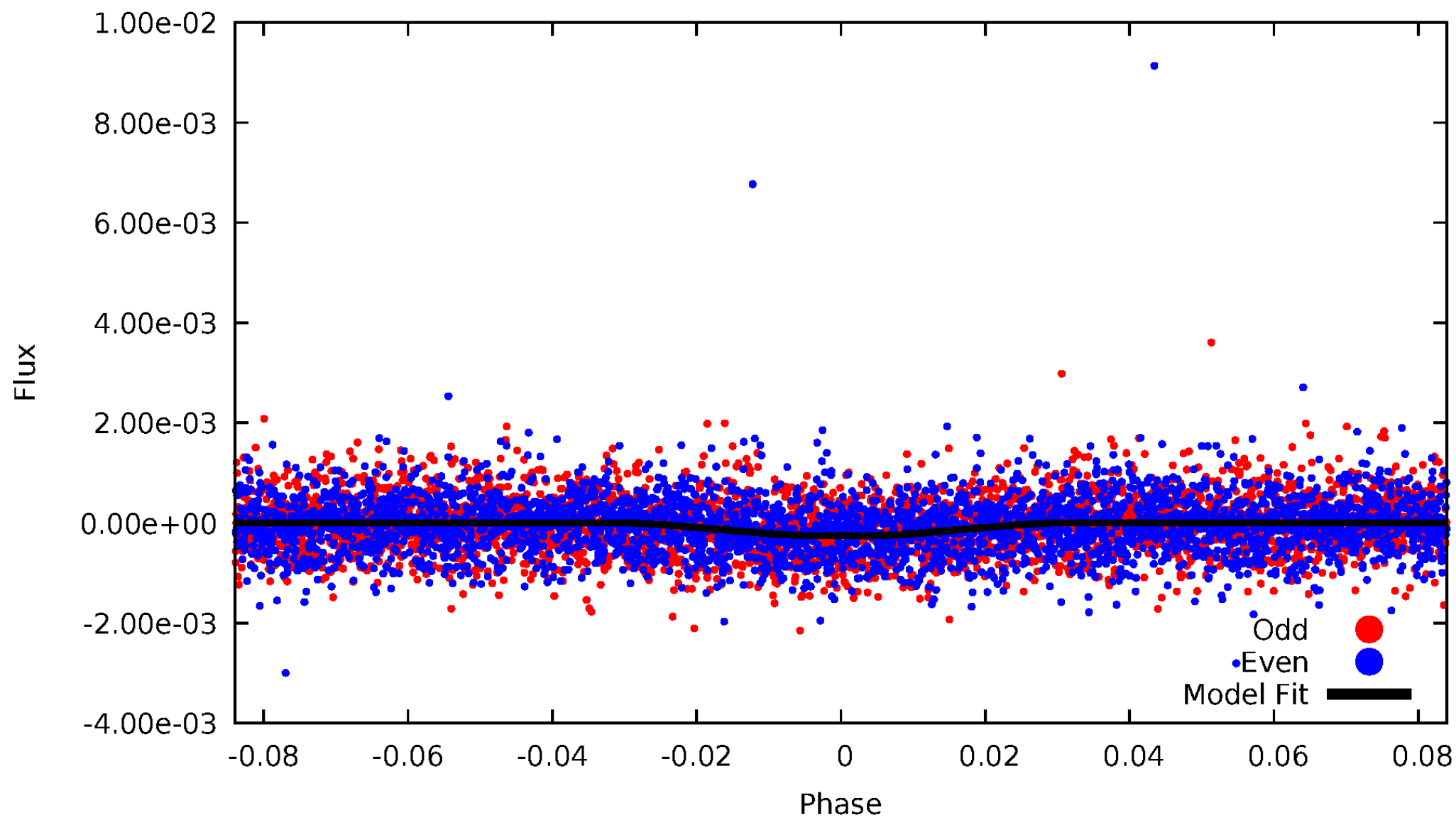


TCE 005642620-02



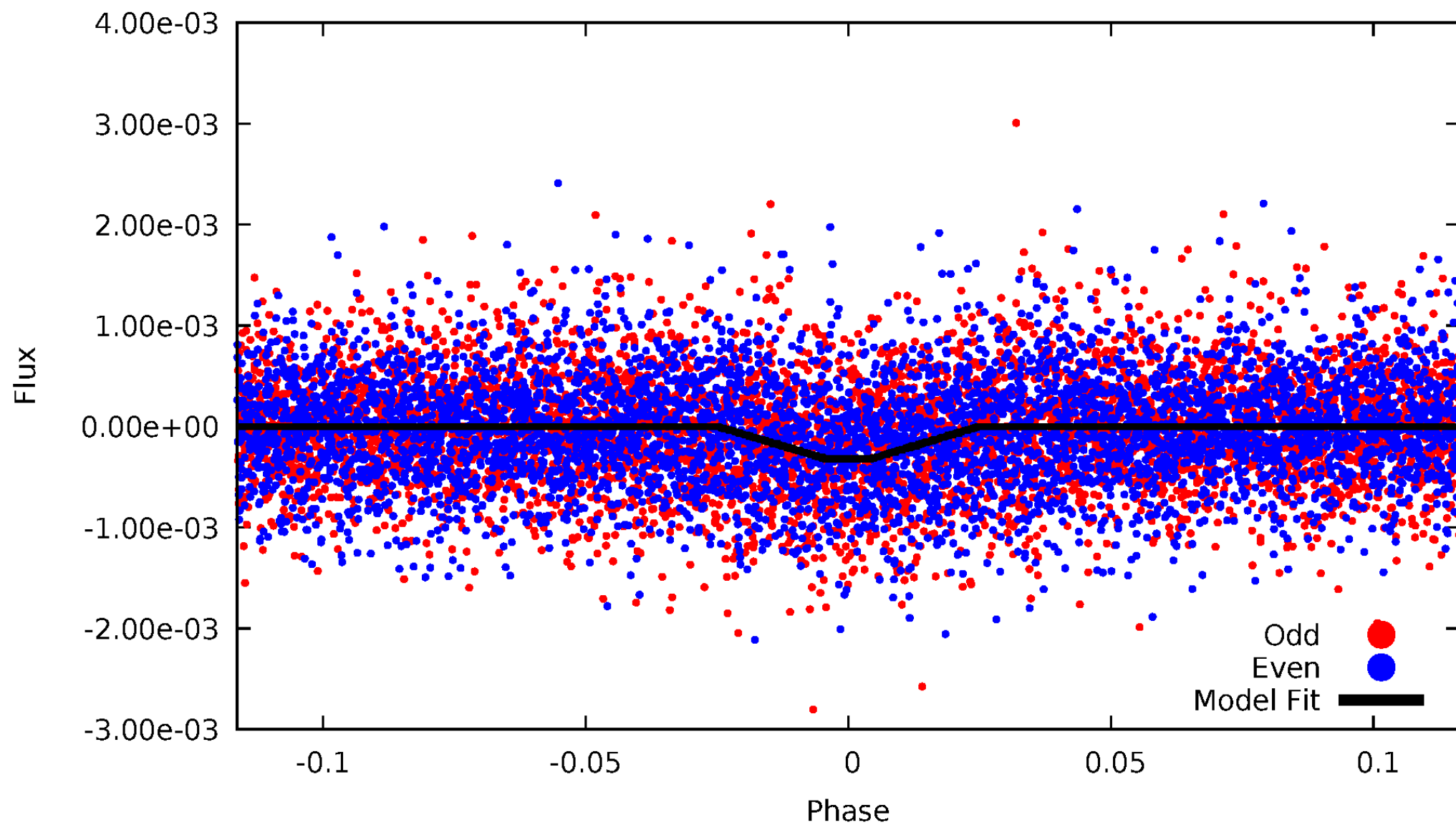
DV Odd/Even

TCE 005642620-02



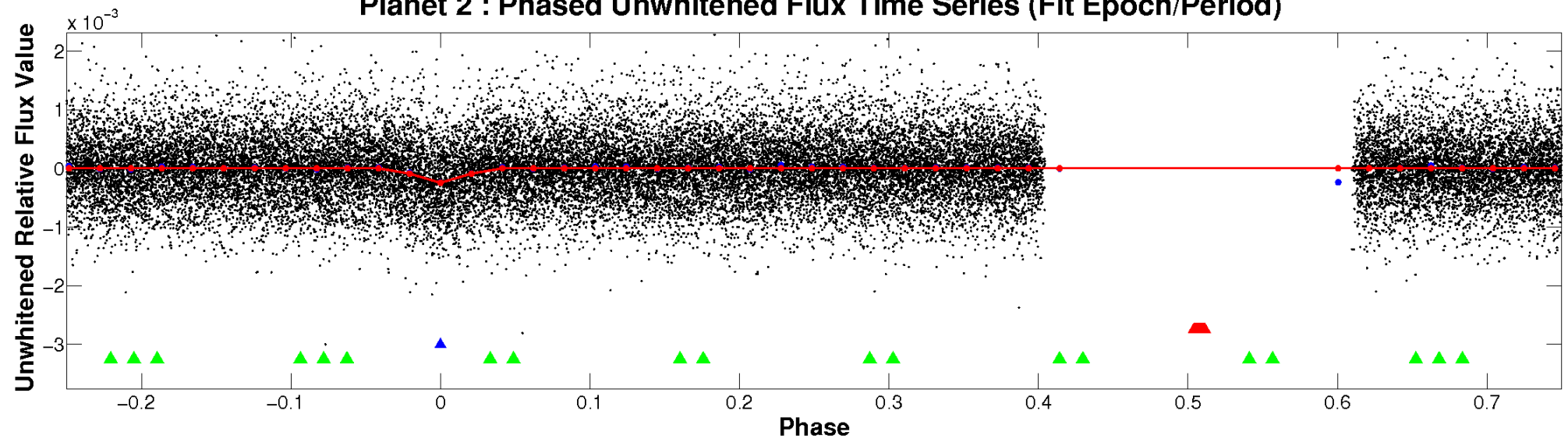
ALT Odd/Even

TCE 005642620-02

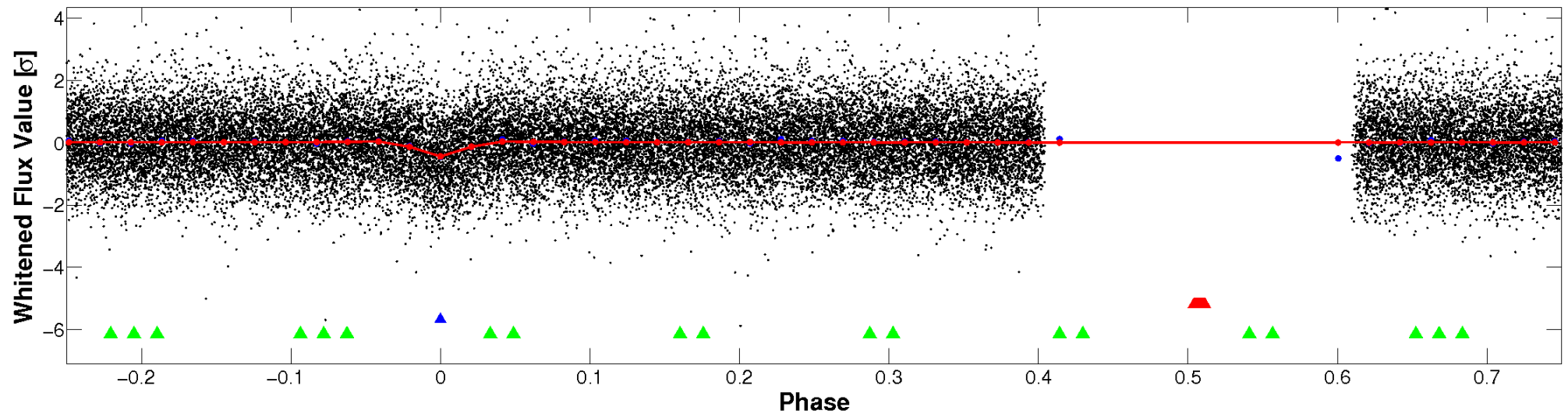


Non-Whitened Vs. Whitened Light Curve

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

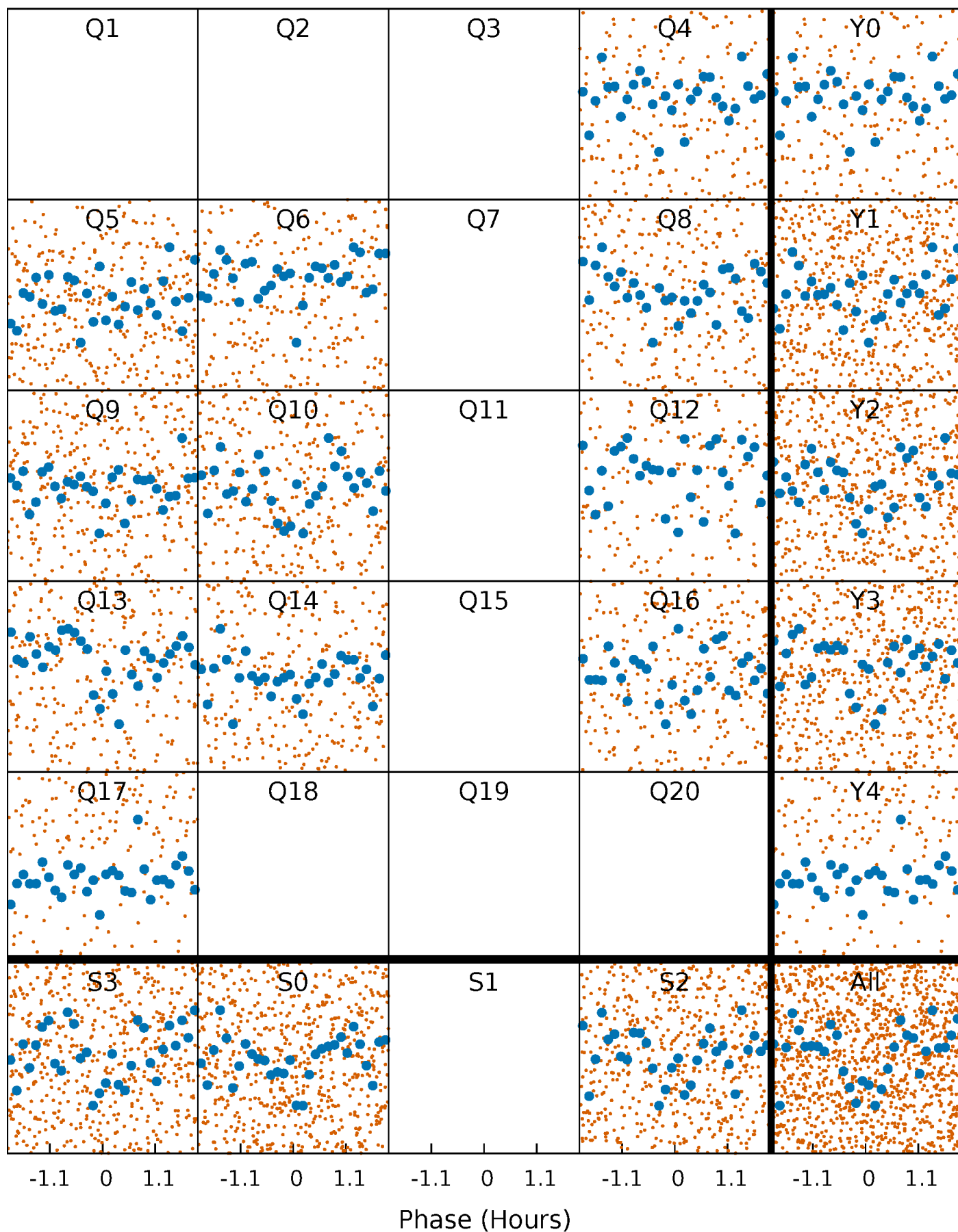


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



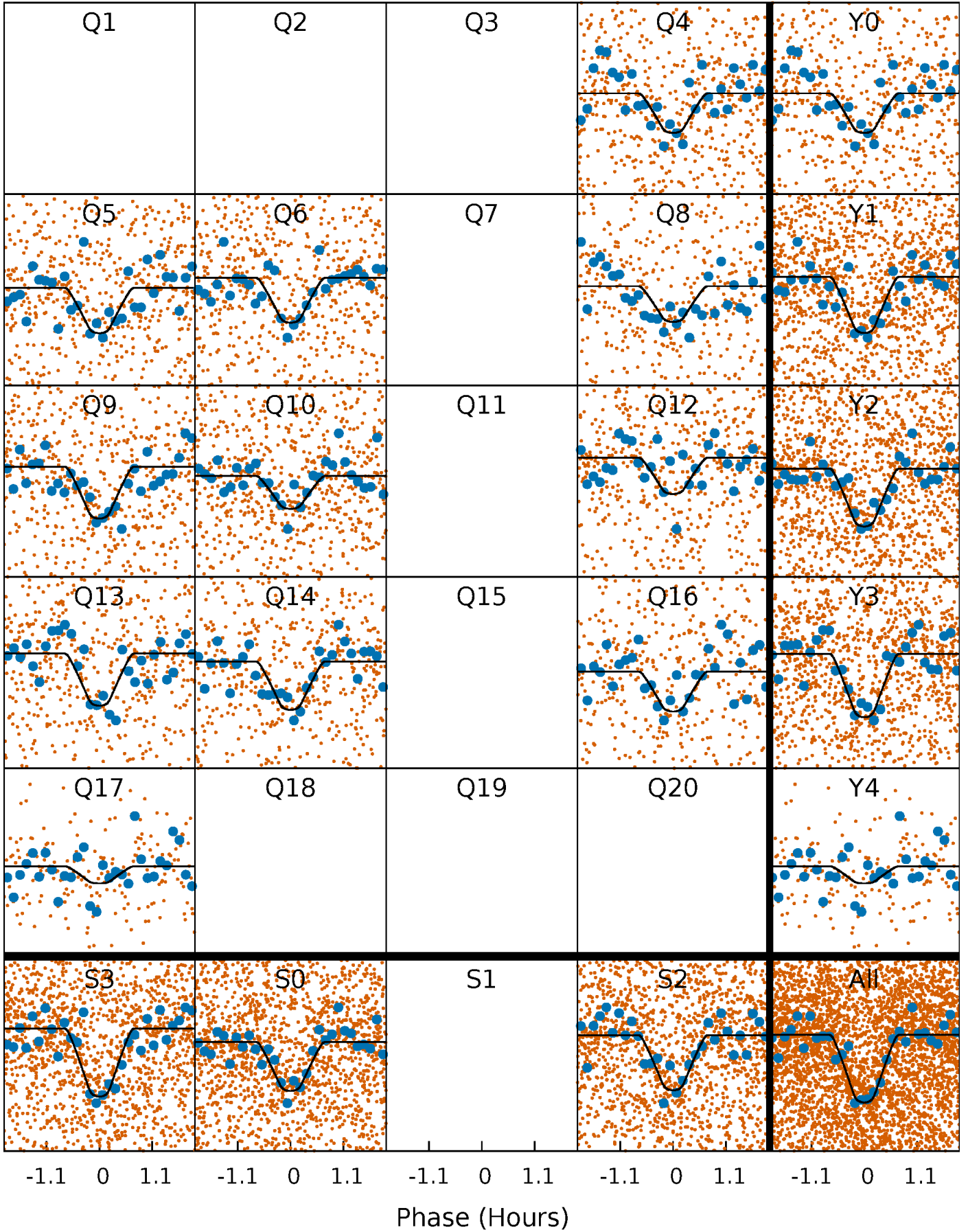
PDC Quarter-Phased Transit Curves

TCE 005642620-02 P= 0.986789 Days $T_0=132.063170$ (BKJD)



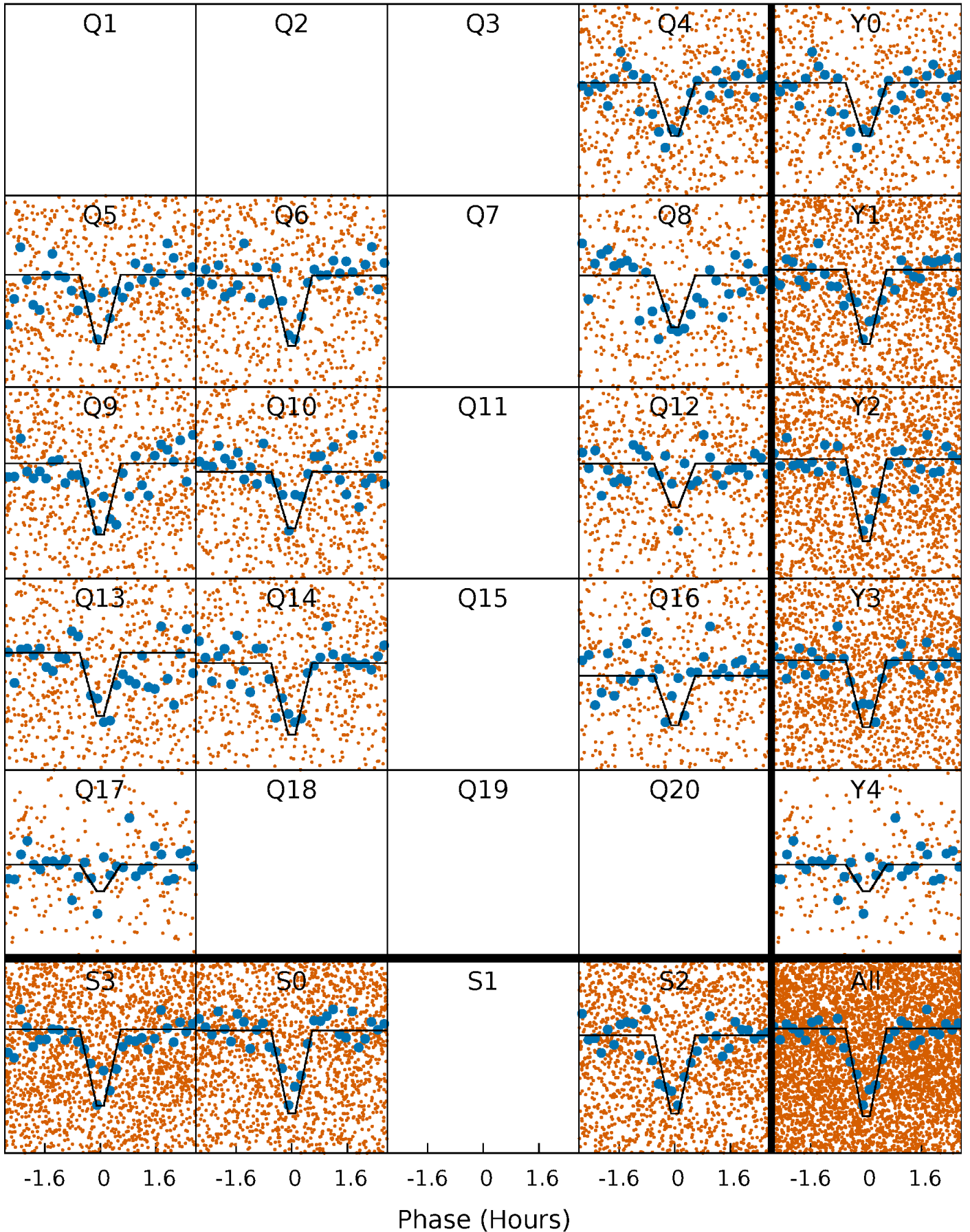
DV Quarter-Phased Transit Curves

TCE 005642620-02 P= 0.986789 Days $T_0=132.063170$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

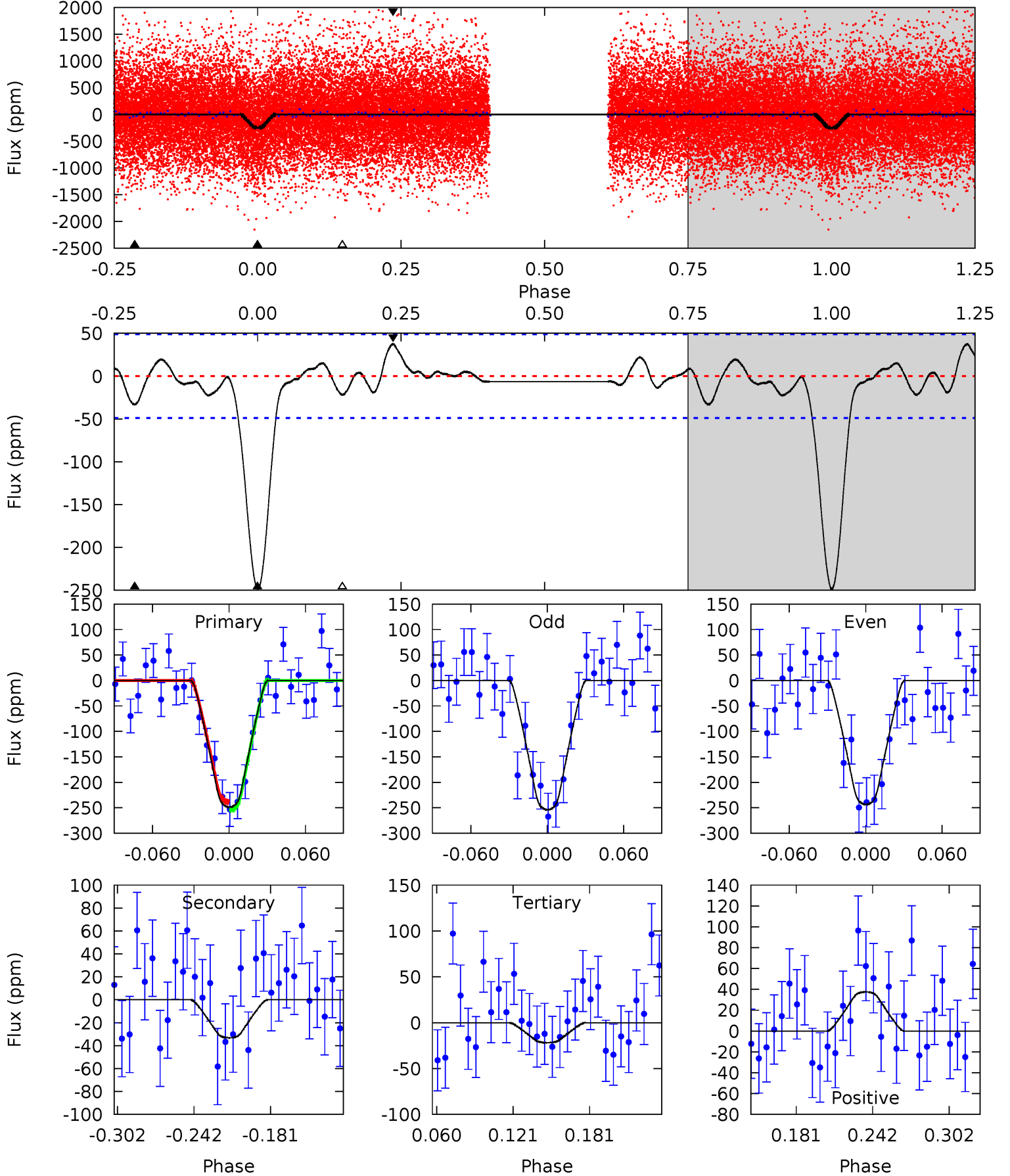
TCE 005642620-02 $P = 0.986787$ Days $T_0 = 132.065877$ (BKJD)



DV Model-Shift Uniqueness Test

005642620-02, P = 0.986789 Days, E = 132.063170 Days

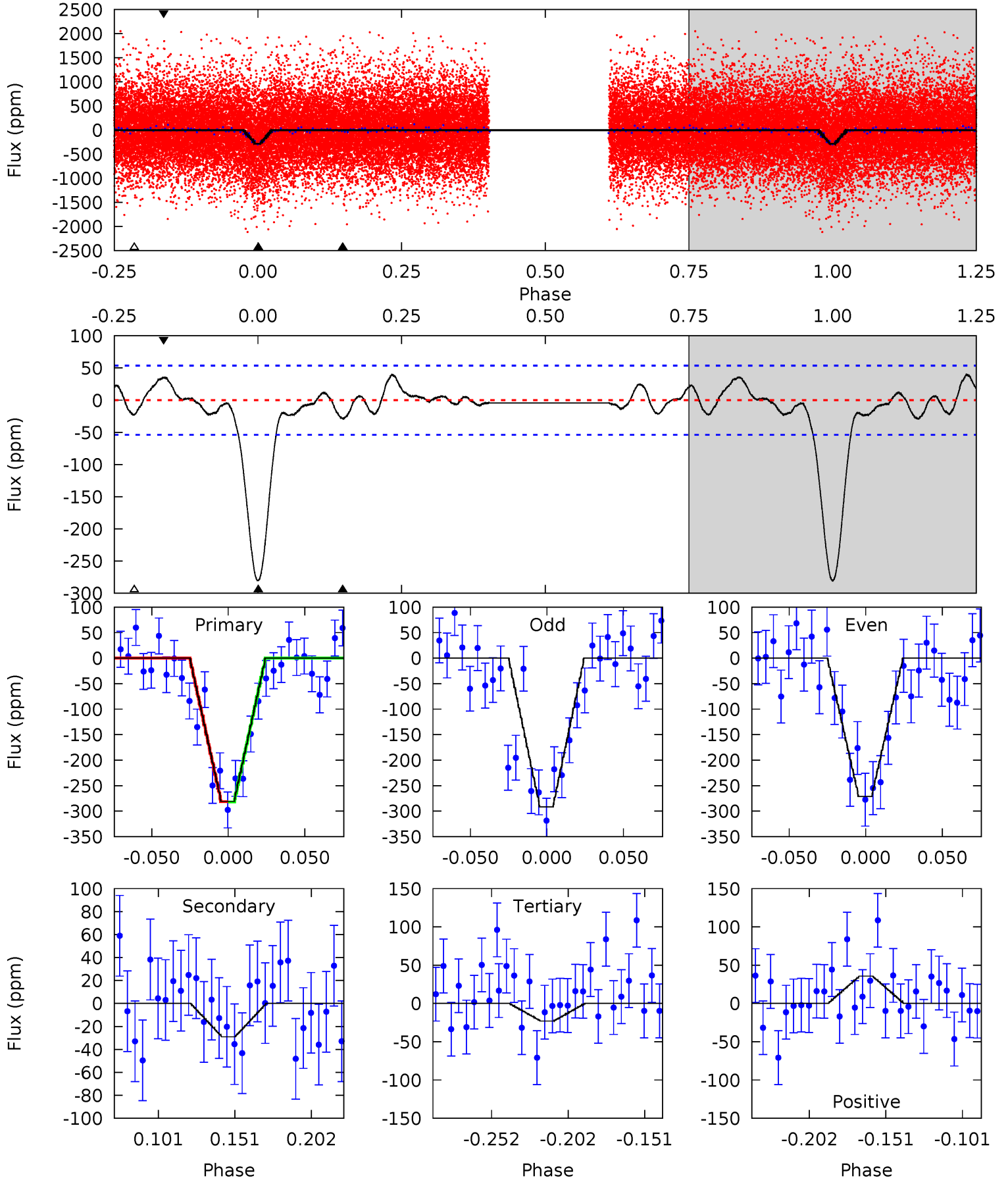
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.7	3.17	2.09	3.58	4.67	1.88	1.15	21.7	20.2	1.08	-0.41	0.50	0.99	0.13	0.74



Alt Model-Shift Uniqueness Test

005642620-02, P = 0.986787 Days, E = 132.065877 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.6	2.55	2.01	3.13	4.71	1.96	1.32	22.6	21.5	0.54	-0.58	0.90	1.07	0.13	0.02



Stellar Parameters For KIC 005642620

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4474^{+156}_{-171}	$4.670^{+0.032}_{-0.044}$	$-0.300^{+0.300}_{-0.300}$	$0.614^{+0.062}_{-0.050}$	$0.645^{+0.062}_{-0.062}$	$3.927^{+0.622}_{-0.718}$
	+3%/-4%	+1%/-1%	+100%/-100%	+10%/-8%	+10%/-10%	+16%/-18%
Source	PHO16	PHO16	PHO16	DSEP		

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

Secondary Eclipse Parameters for KIC 005642620-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-33 ± 10	$1.24^{+0.73}_{-0.65}$	1676^{+66}_{-70}	2993^{+895}_{-462}	$3.250^{+13.100}_{-2.118}$
Alt.	-29 ± 11	$1.26^{+0.80}_{-0.67}$	1679^{+62}_{-73}	2910^{+811}_{-506}	$2.628^{+10.323}_{-1.798}$

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 $A_{obs} \gg 1.0$

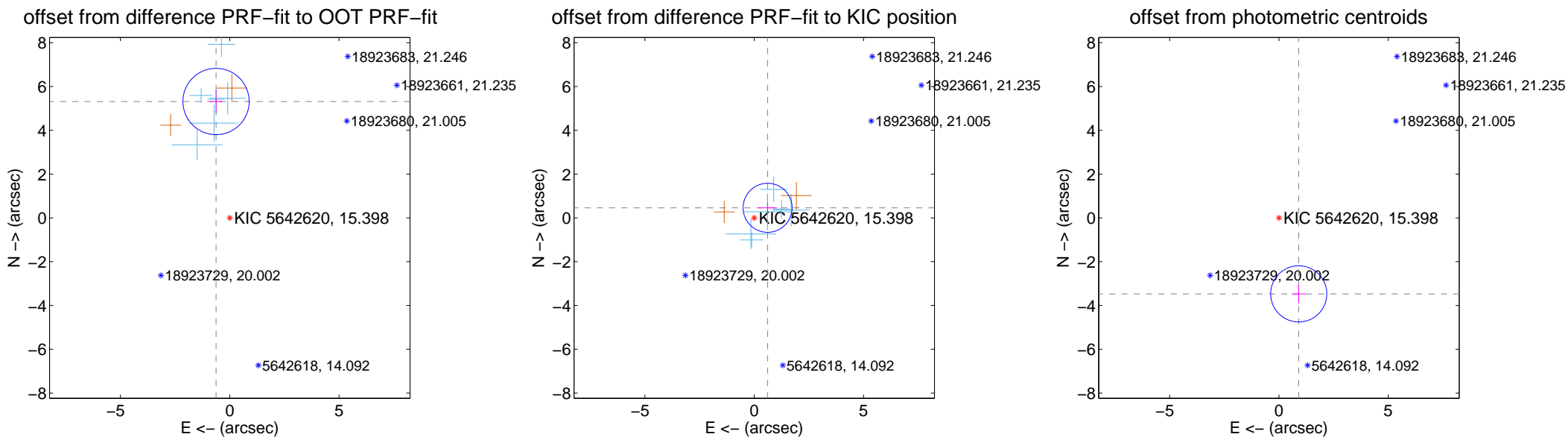
DV Centroid Data

Supplemental centroid analysis for 005642620-02. Kepler magnitude: 15.40. Transit SNR 14.93

There are 6 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 4.18 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	5.353 ± 0.505	10.60	0.628 ± 0.300	5.316 ± 0.525
PRF-fit source offset from KIC position	0.766 ± 0.373	2.05	-0.612 ± 0.431	0.460 ± 0.239
photometric centroid source offset	3.59 ± 0.43	8.39	-0.90 ± 0.32	-3.47 ± 0.43



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

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

Q1 no difference image



Q1 no OOT image



Q2 no difference image



Q2 no OOT image



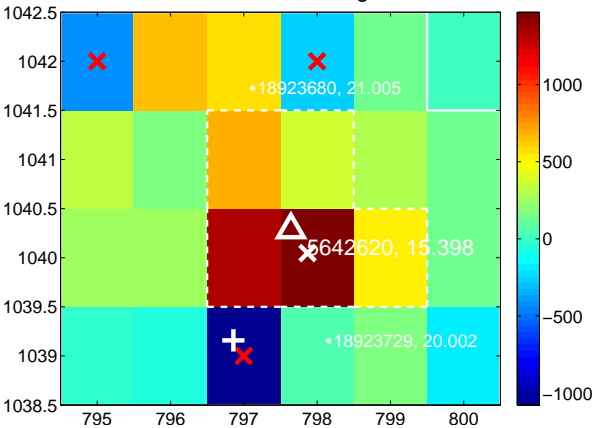
Q3 no difference image



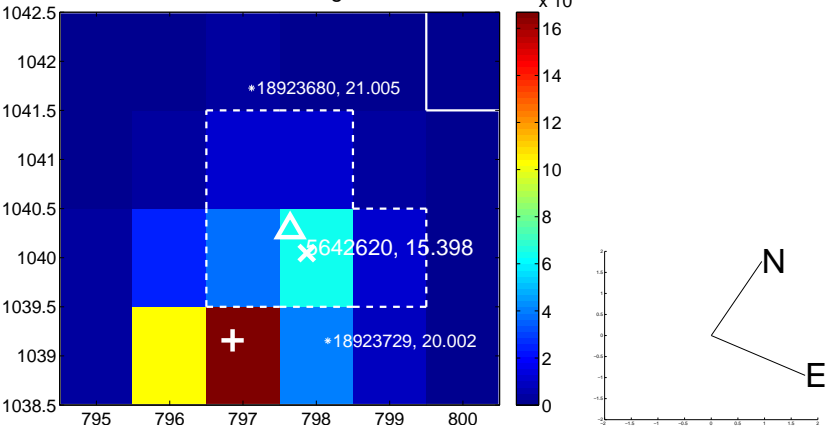
Q3 no OOT image



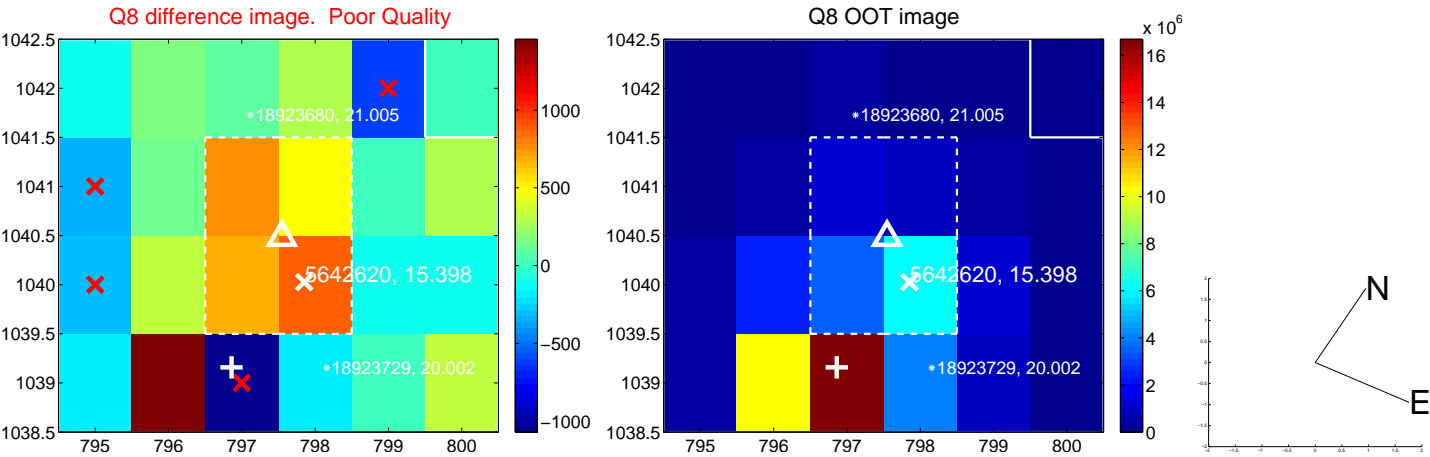
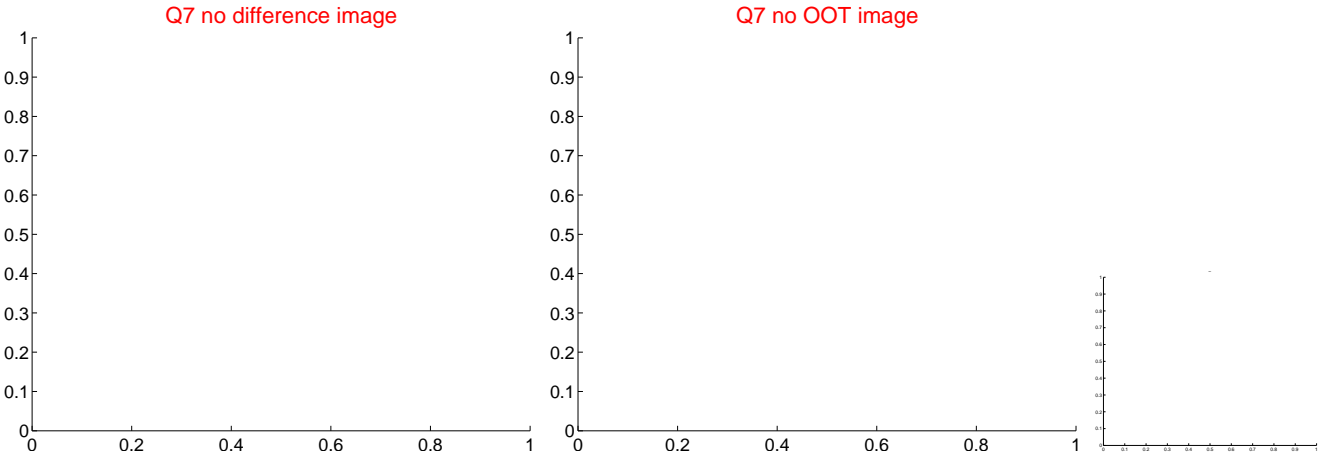
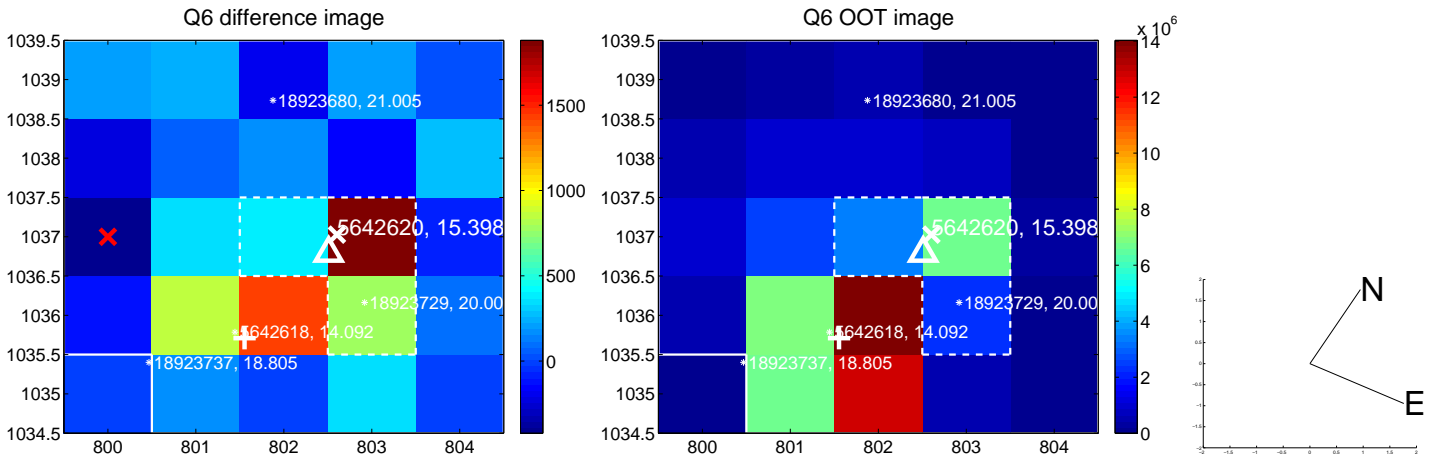
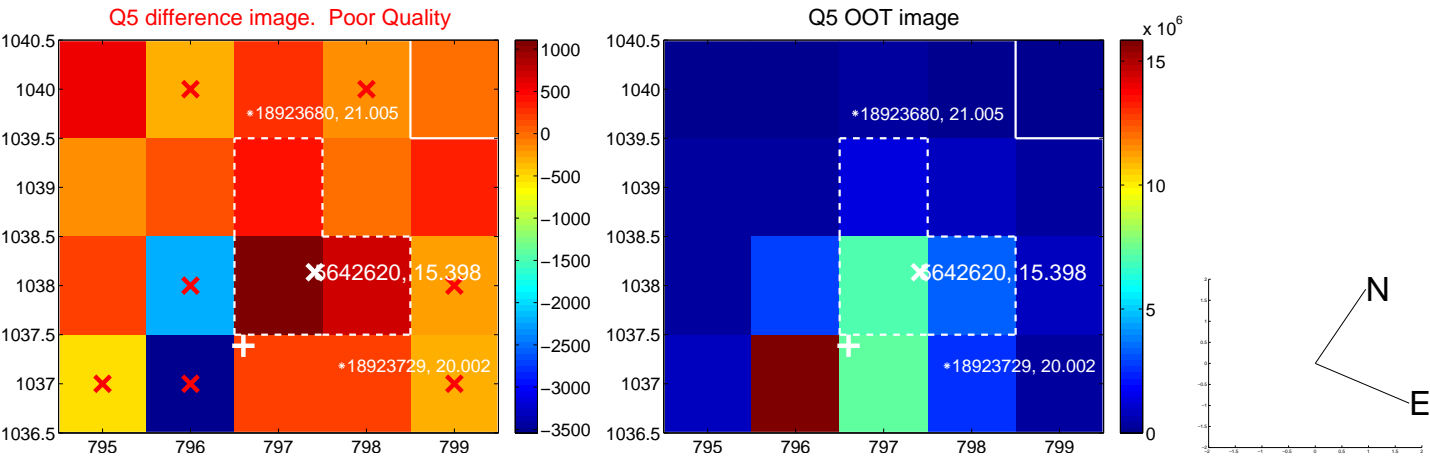
Q4 difference image



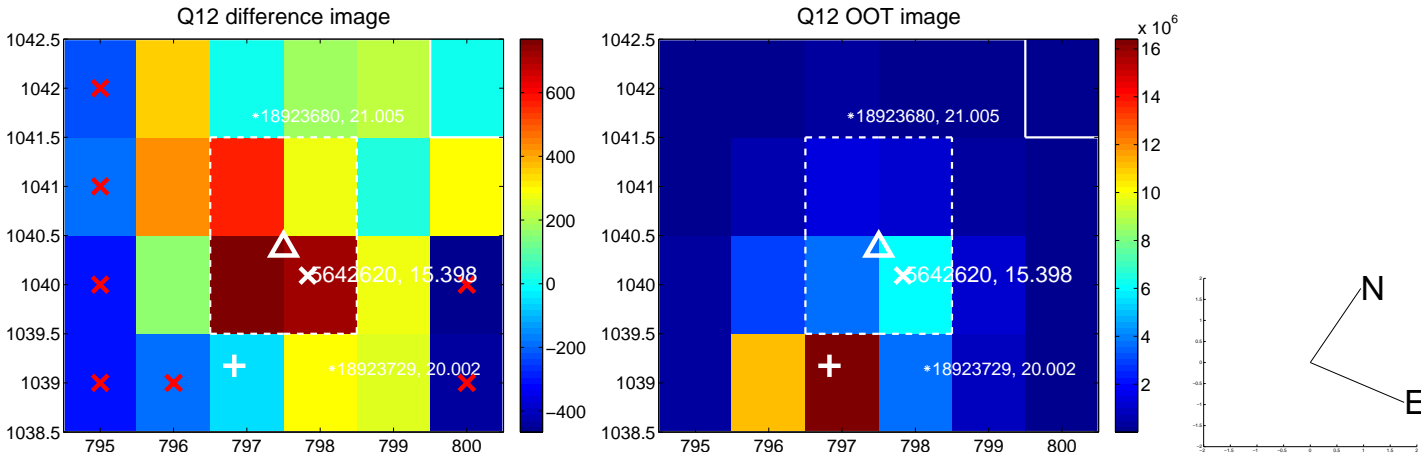
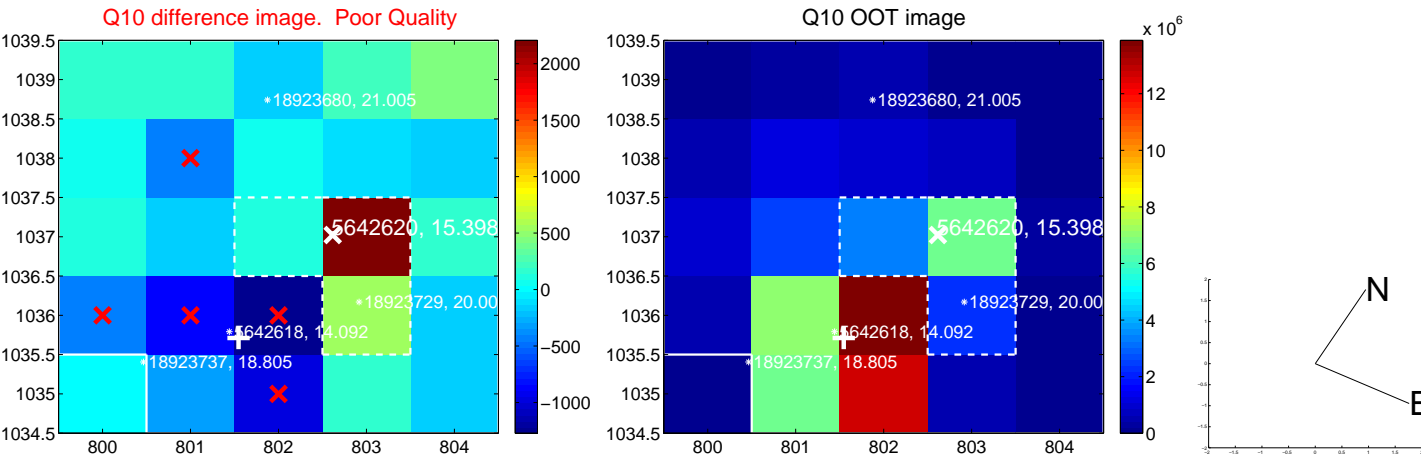
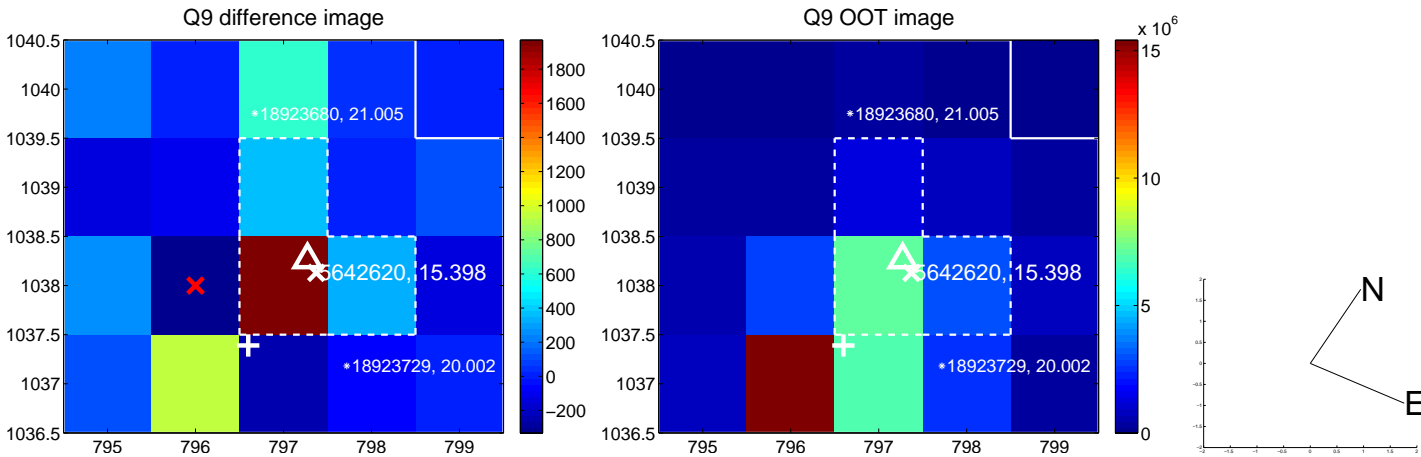
Q4 OOT image



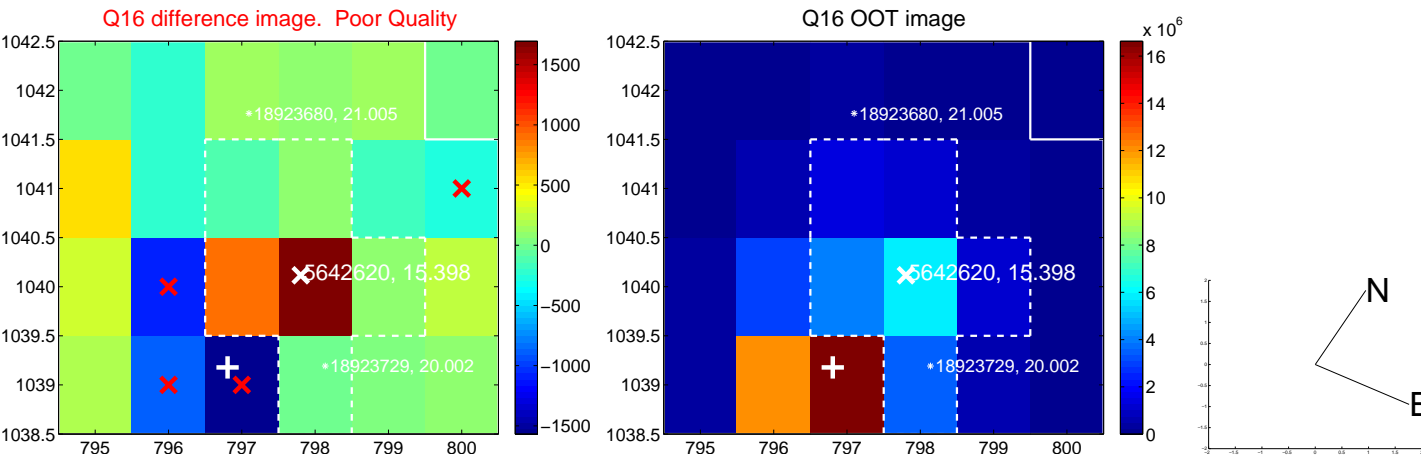
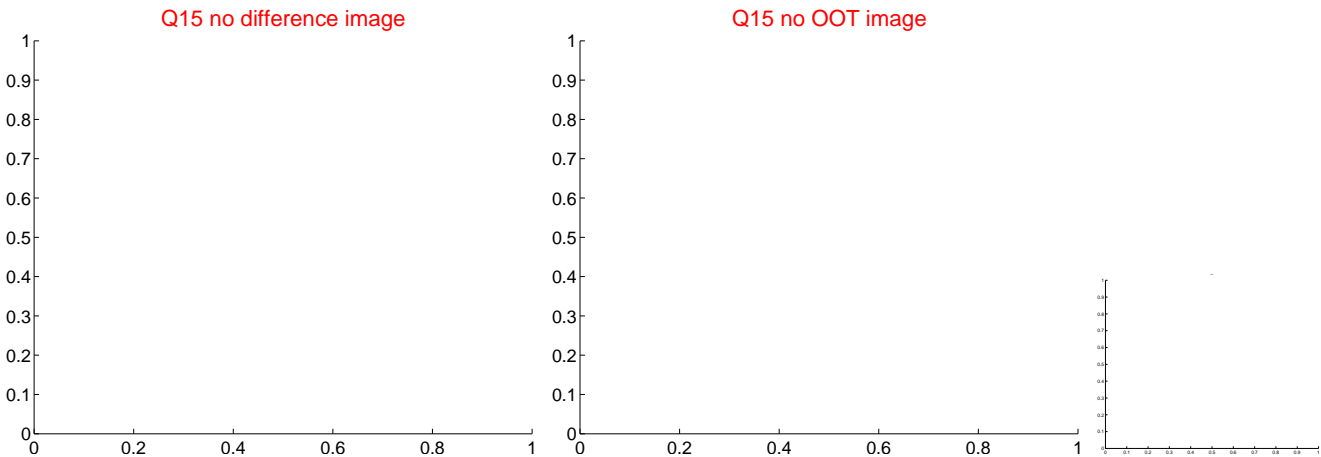
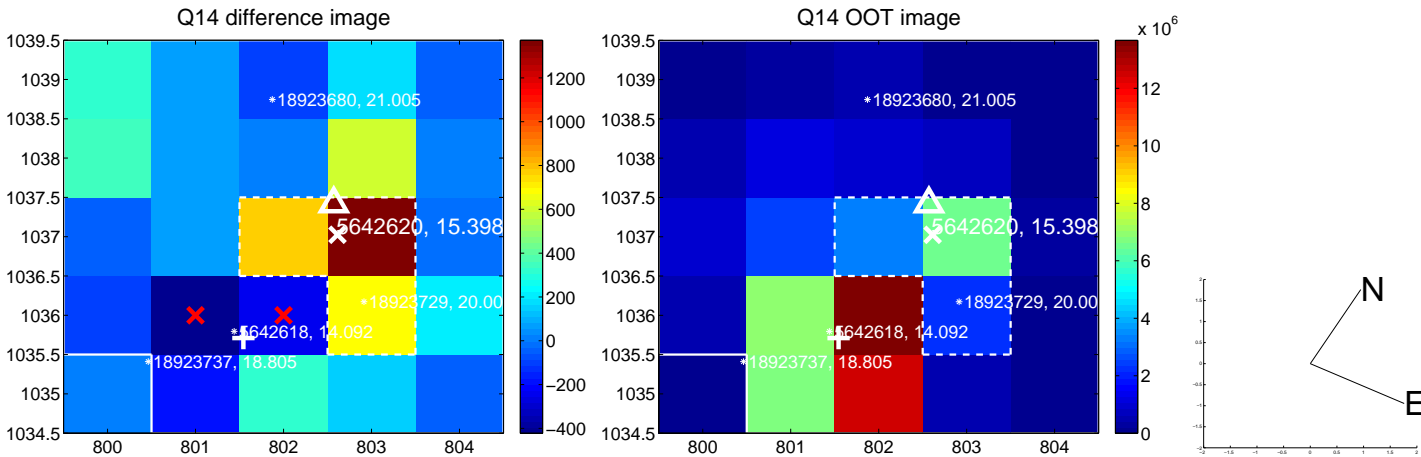
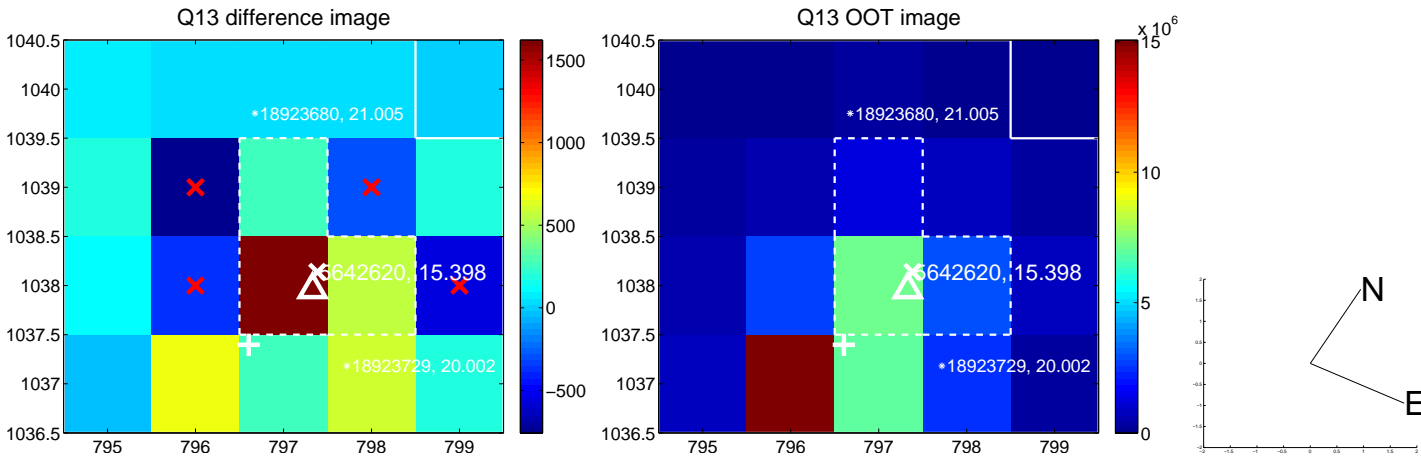
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



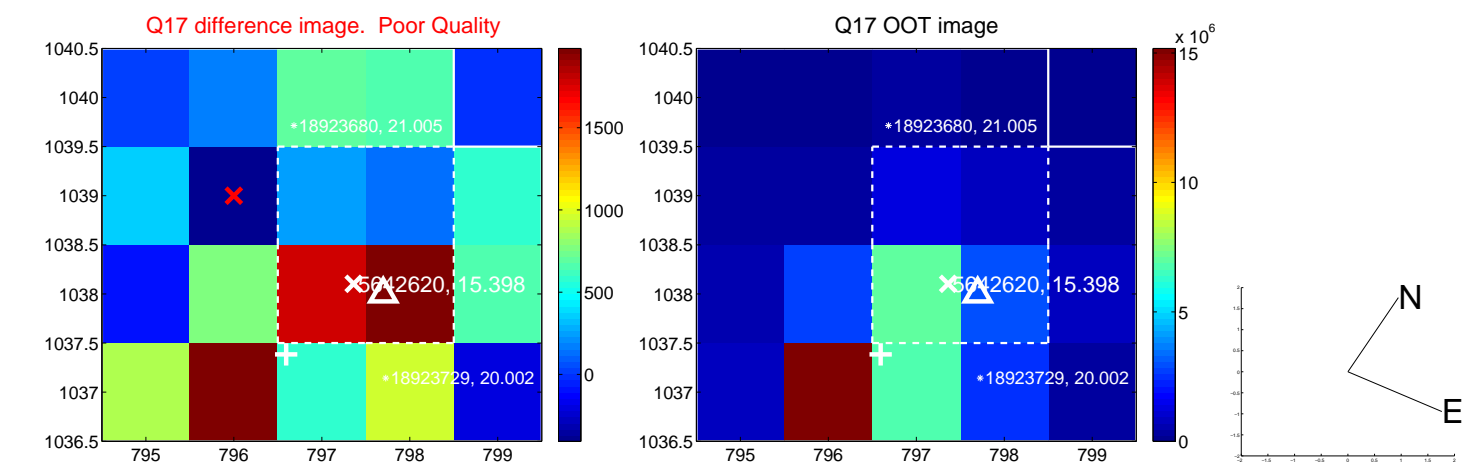
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



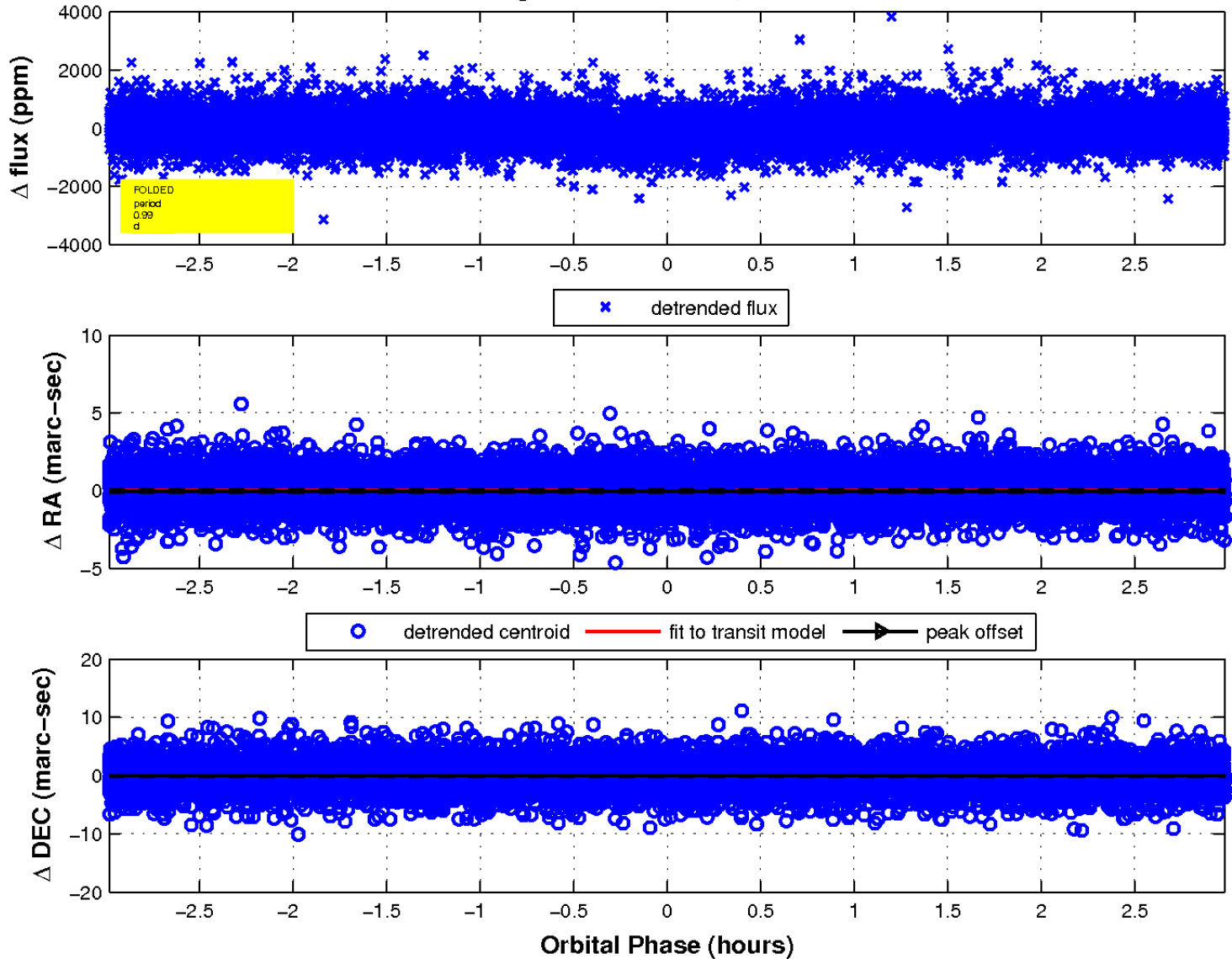
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

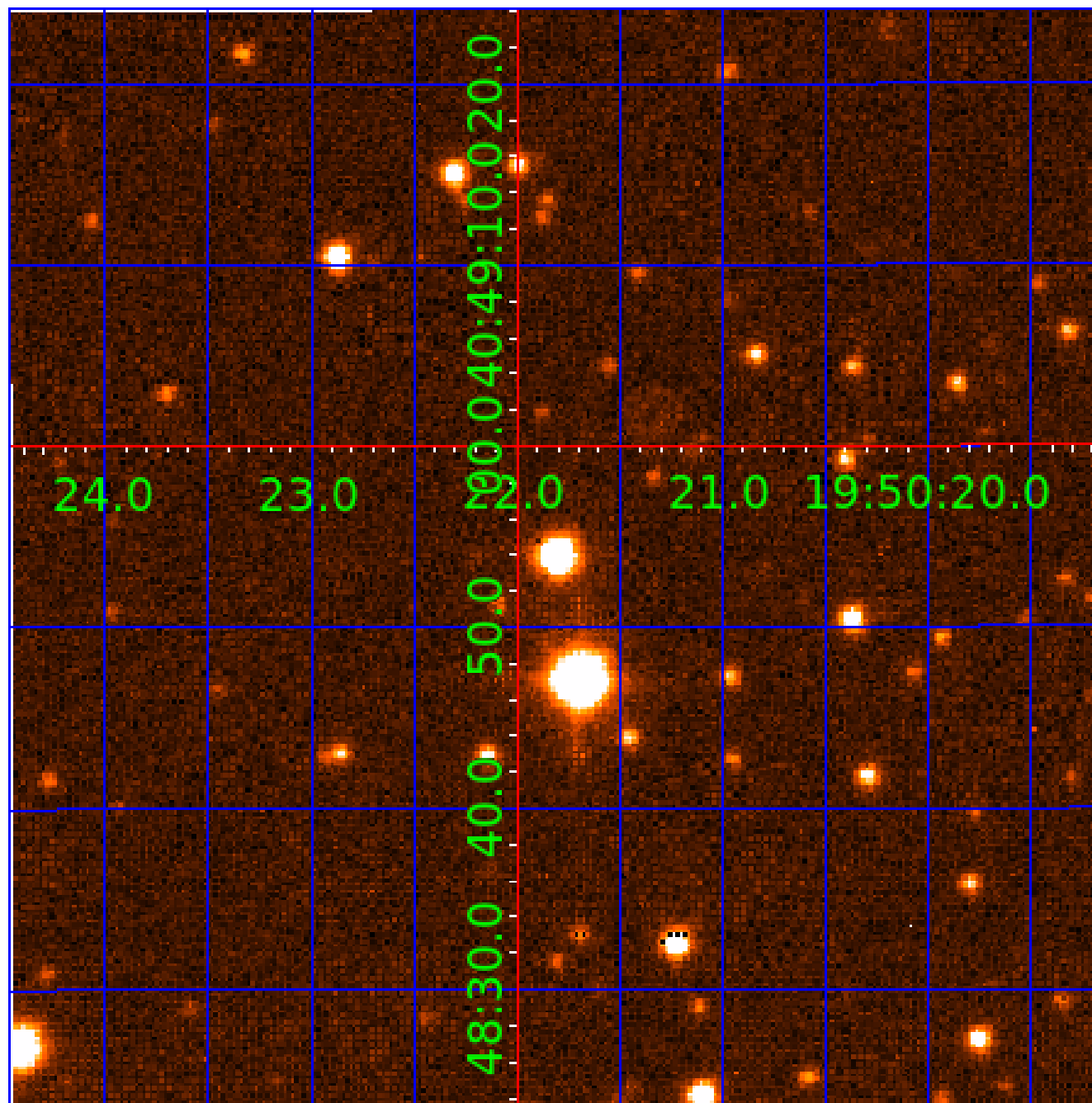


fluxWeightedCentroids, Planet 2 of 3



UKIRT Image

Declination



KIC 005642620

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})
005642620-01	OBS	2882.02	0.986784	131.581179	261.1	0.971	12.0	15.2	0.61	4474	1.07	482.50
005642620-02	OBS	No	0.986789	132.063170	257.6	0.994	11.4	14.9	0.61	4474	1.27	482.49
005642620-03	OBS	2882.01	75.857508	165.552296	1036.1	6.507	8.4	9.6	0.61	4474	2.46	1.48

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005642620-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE—CENT_KIC_POS
005642620-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_KIC_POS
005642620-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—CENT_RESOLVED_OFFSET

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 005642620-03

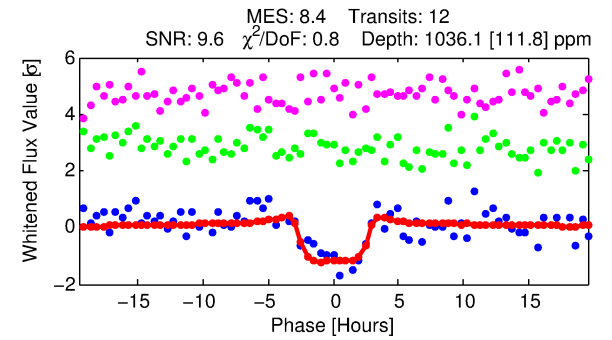
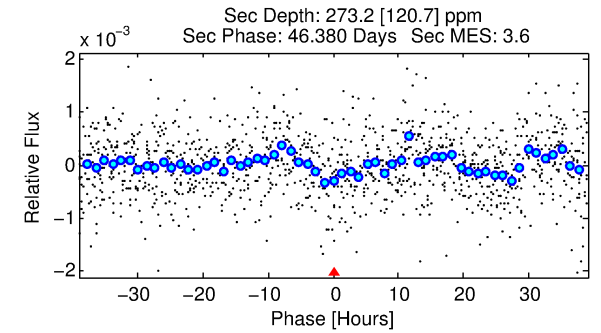
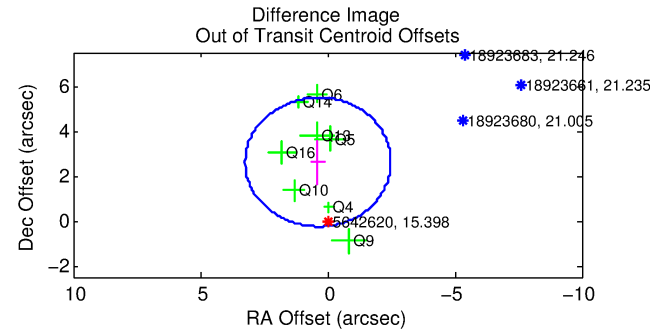
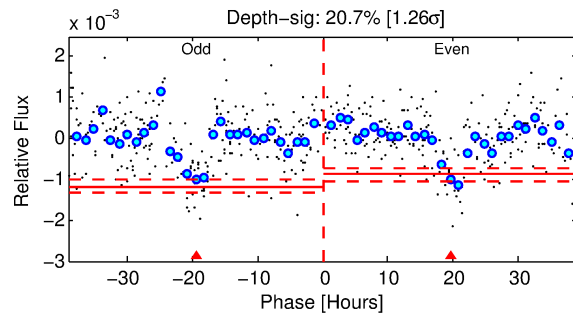
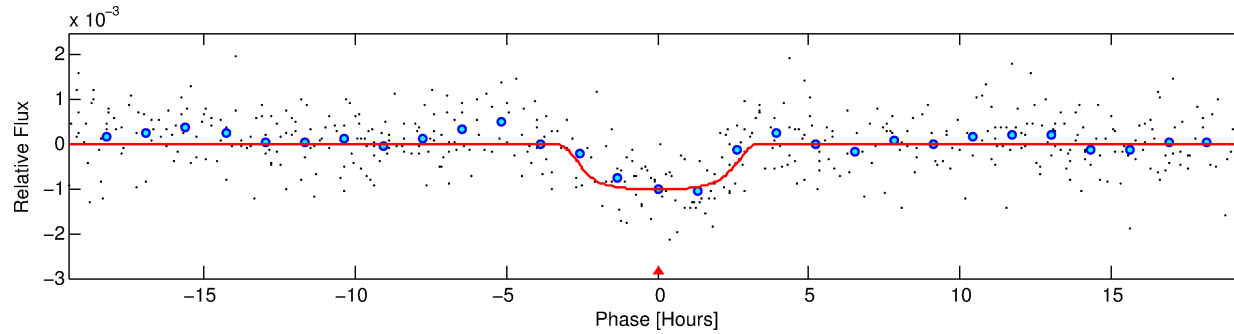
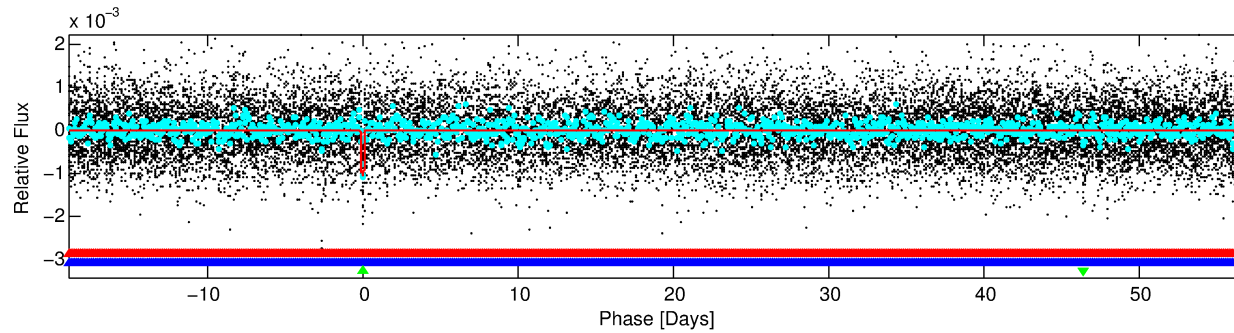
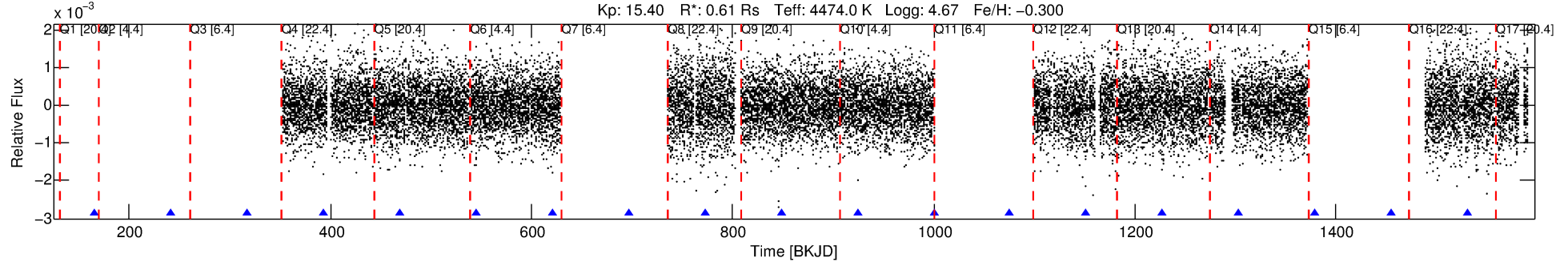
No Significant Match Found

DV One-Page Summary

KIC: 5642620 Candidate: 3 of 3 Period: 75.858 d

KOI: K02882.01 Corr: 0.881

Kp: 15.40 R*: 0.61 Rs Teff: 4474.0 K Logg: 4.67 Fe/H: -0.300



DV Fit Results:

Period = 75.85751 [0.00158] d
Epoch = 165.5523 [0.0158] BKJD
Rp/R* = 0.0367 [0.0043]
a/R* = 44.16 [15.60]
b = 0.91 [0.07]
Seff = 1.48 [0.27]
Teq = 281 [13] K
Rp = 2.46 [0.38] Re
a = 0.3028 [0.0228] AU
Ag = 2280.15 [1158.94] [1.97σ]
Teffp = 3003 [392] K [6.94σ]

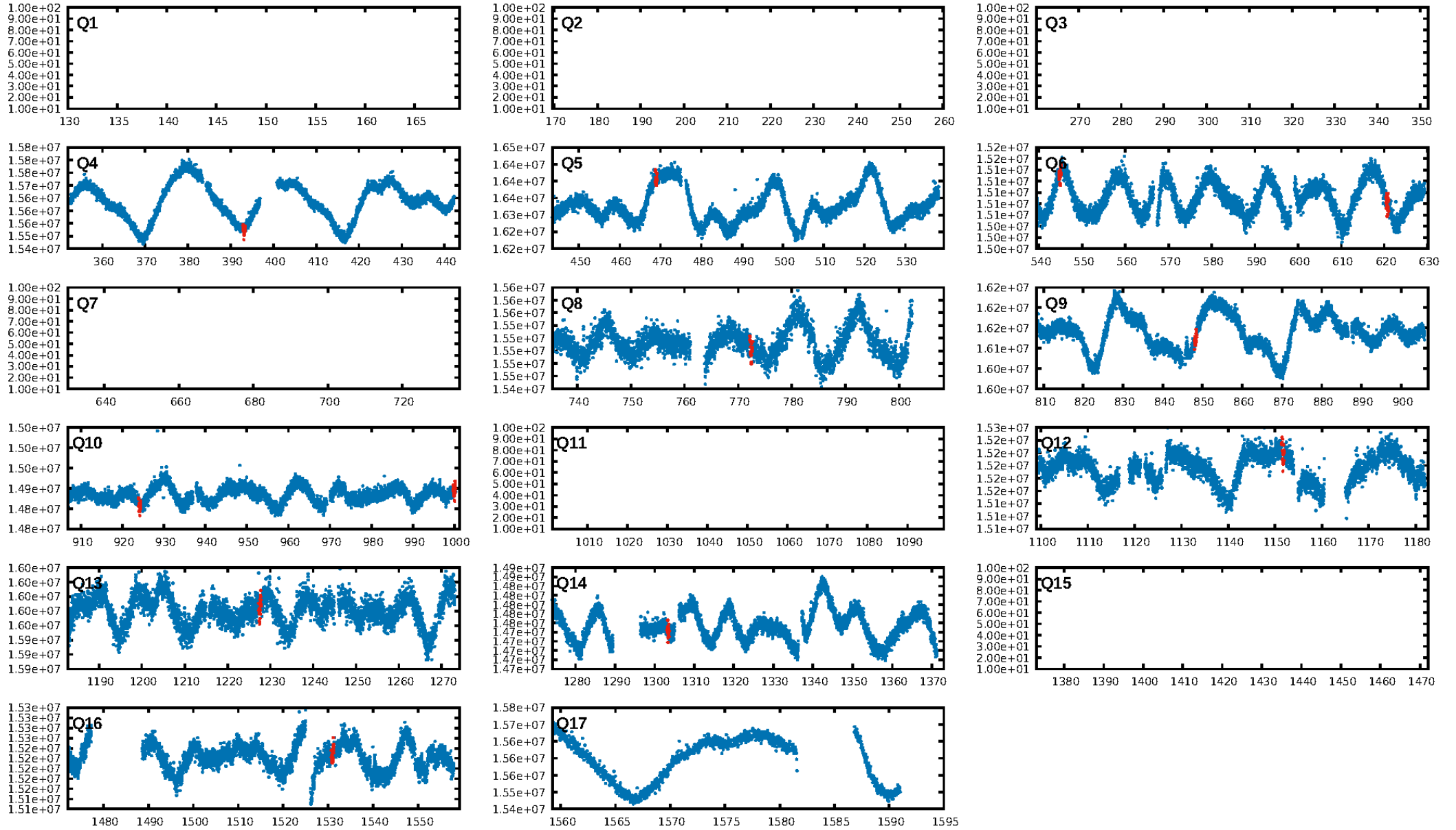
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [272.96σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 91.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.76e-14
RollingBand-fgt: 1.00 [12/12]
GhostDiagnostic-chr: -2.542
Centroid-sig: 0.1%
Centroid-so: 2.968 arcsec [5.27σ]
OotOffset-rm: 2.639 arcsec [2.76σ]
OotOffset-st: 3/0/2/3 [8]
KicOffset-rm: 3.115 arcsec [4.43σ]
KicOffset-st: 3/0/2/3 [8]
DiffImageQuality-fgm: 0.75 [6/8]
DiffImageOverlap-fno: 0.00 [0/10]

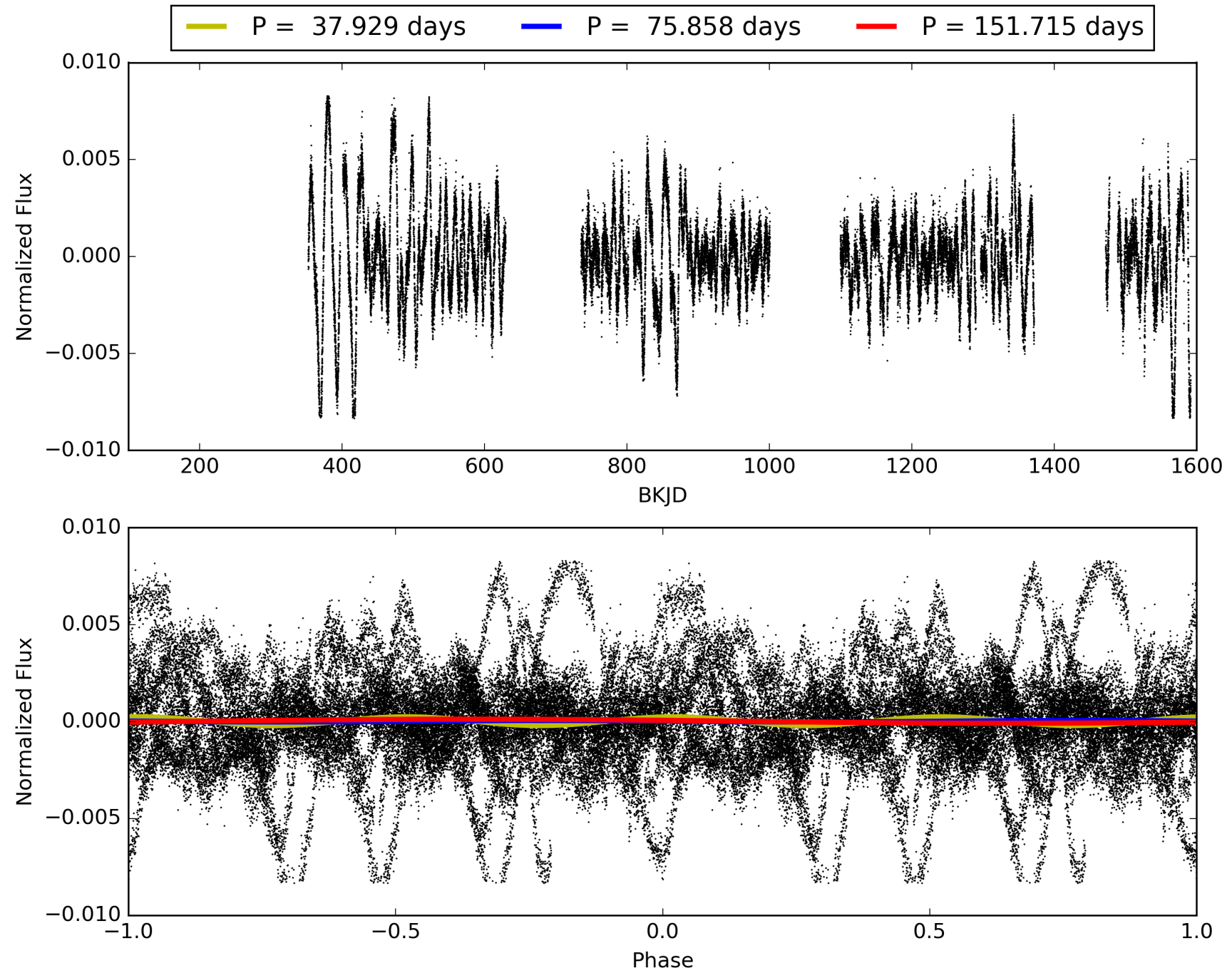
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 00:44:24 Z

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

TCE 005642620-03, PDC Light Curves

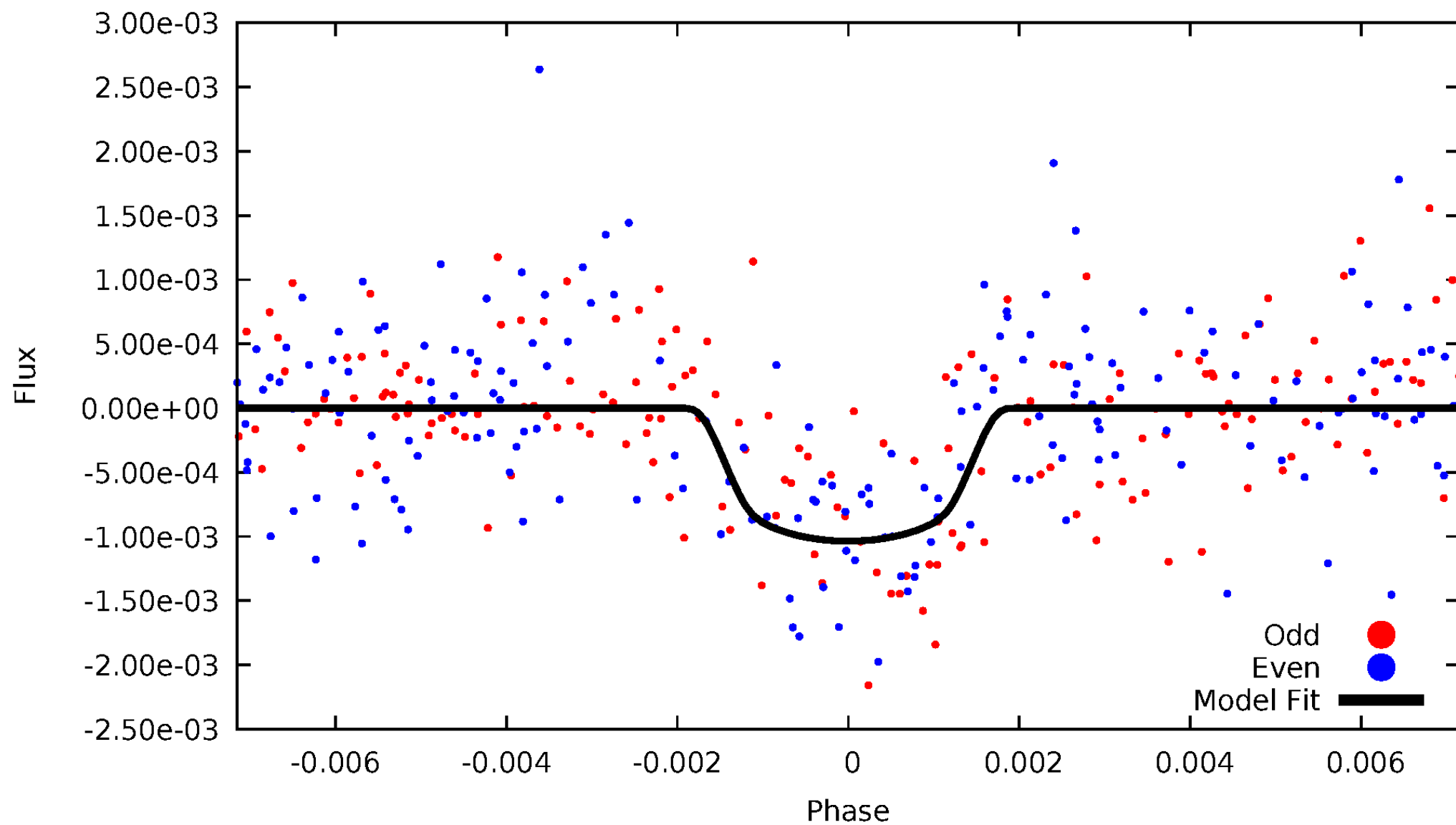


TCE 005642620-03



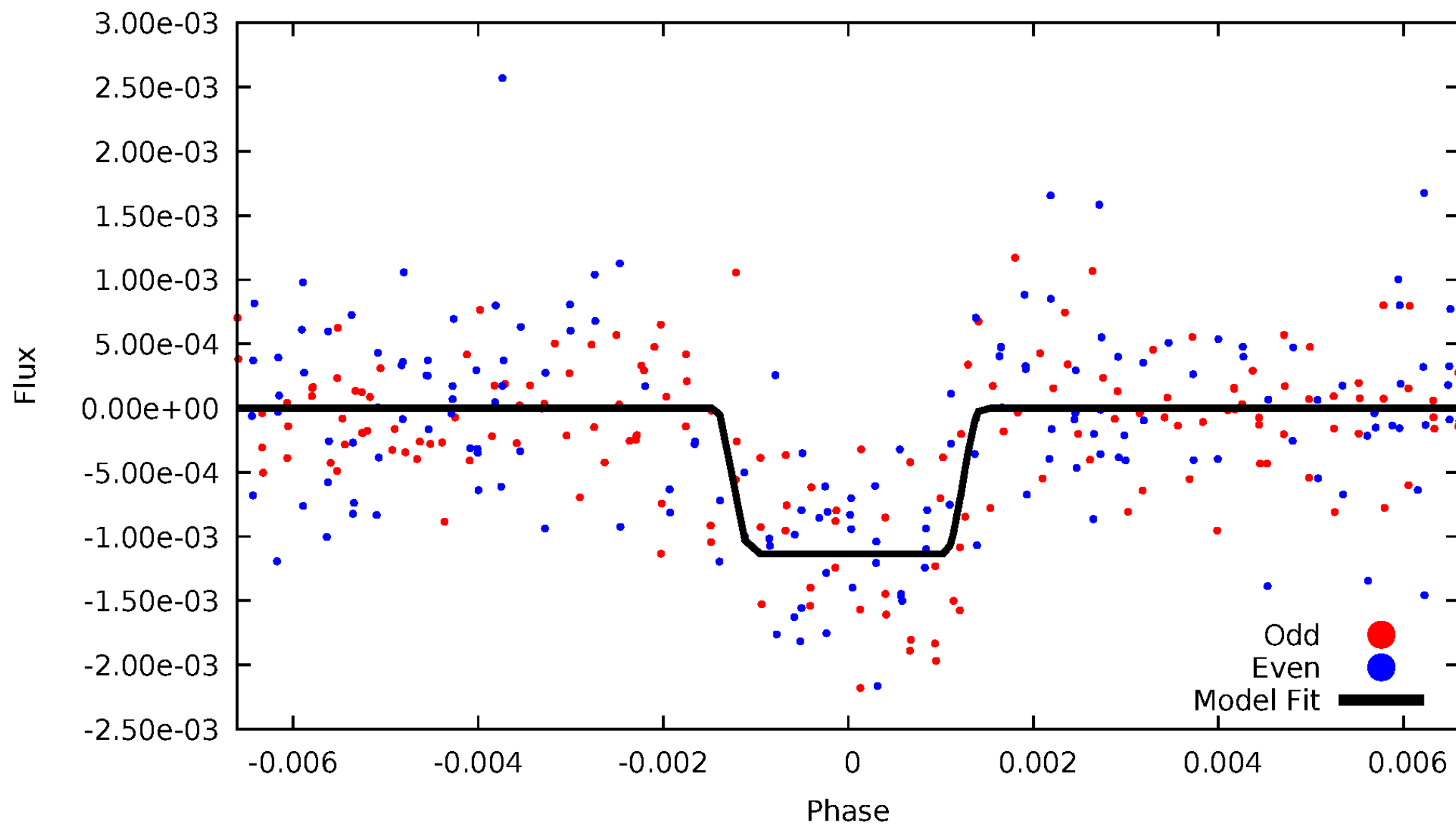
DV Odd/Even

TCE 005642620-03



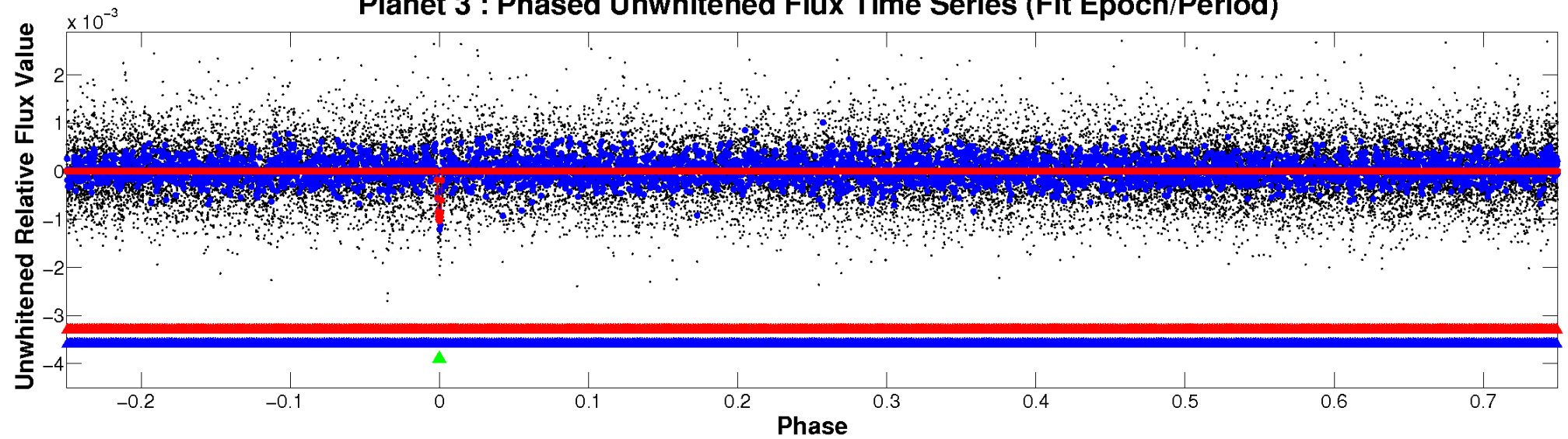
ALT Odd/Even

TCE 005642620-03

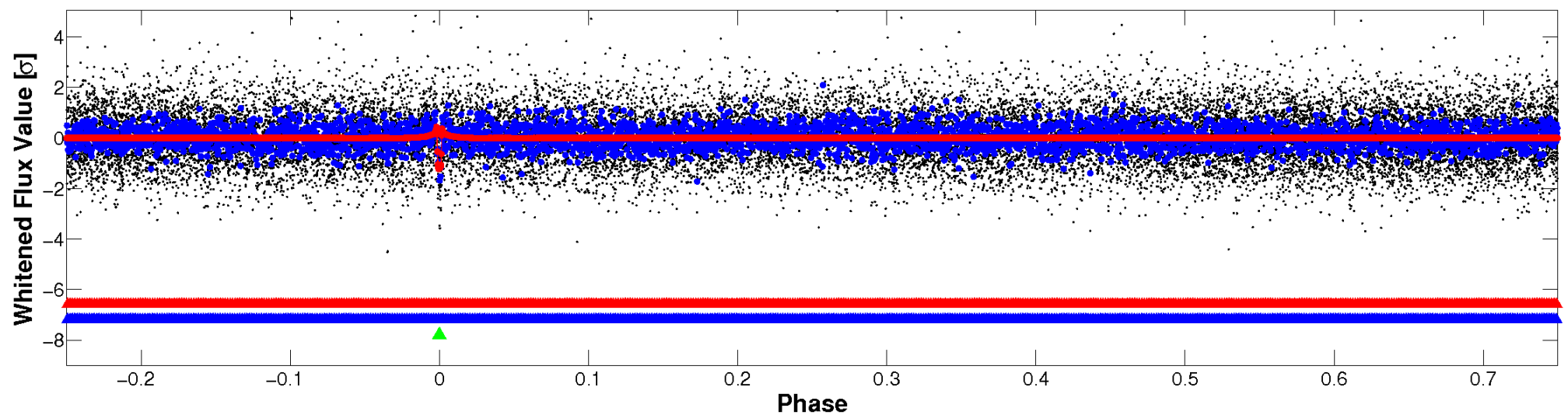


Non-Whitened Vs. Whitened Light Curve

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

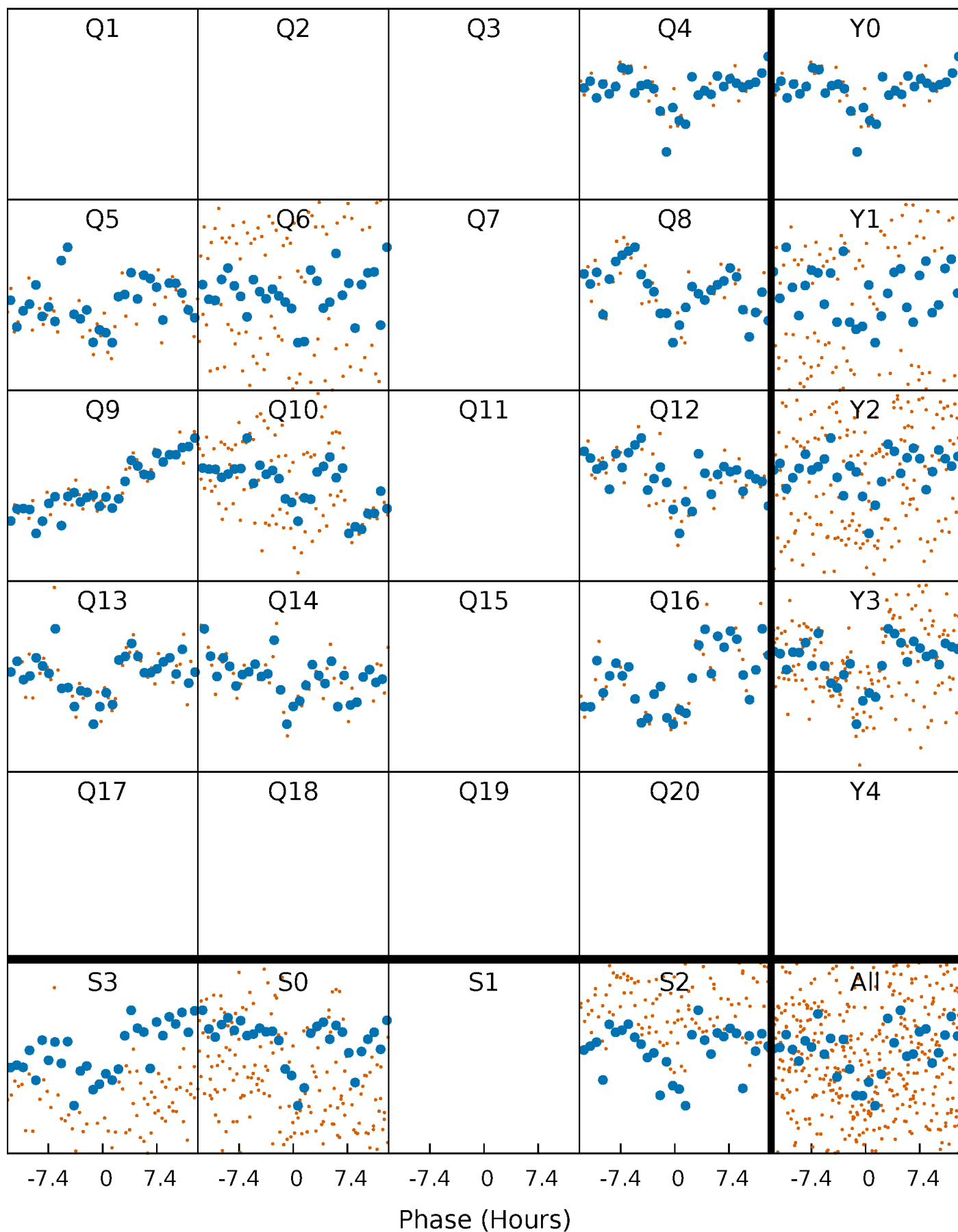


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



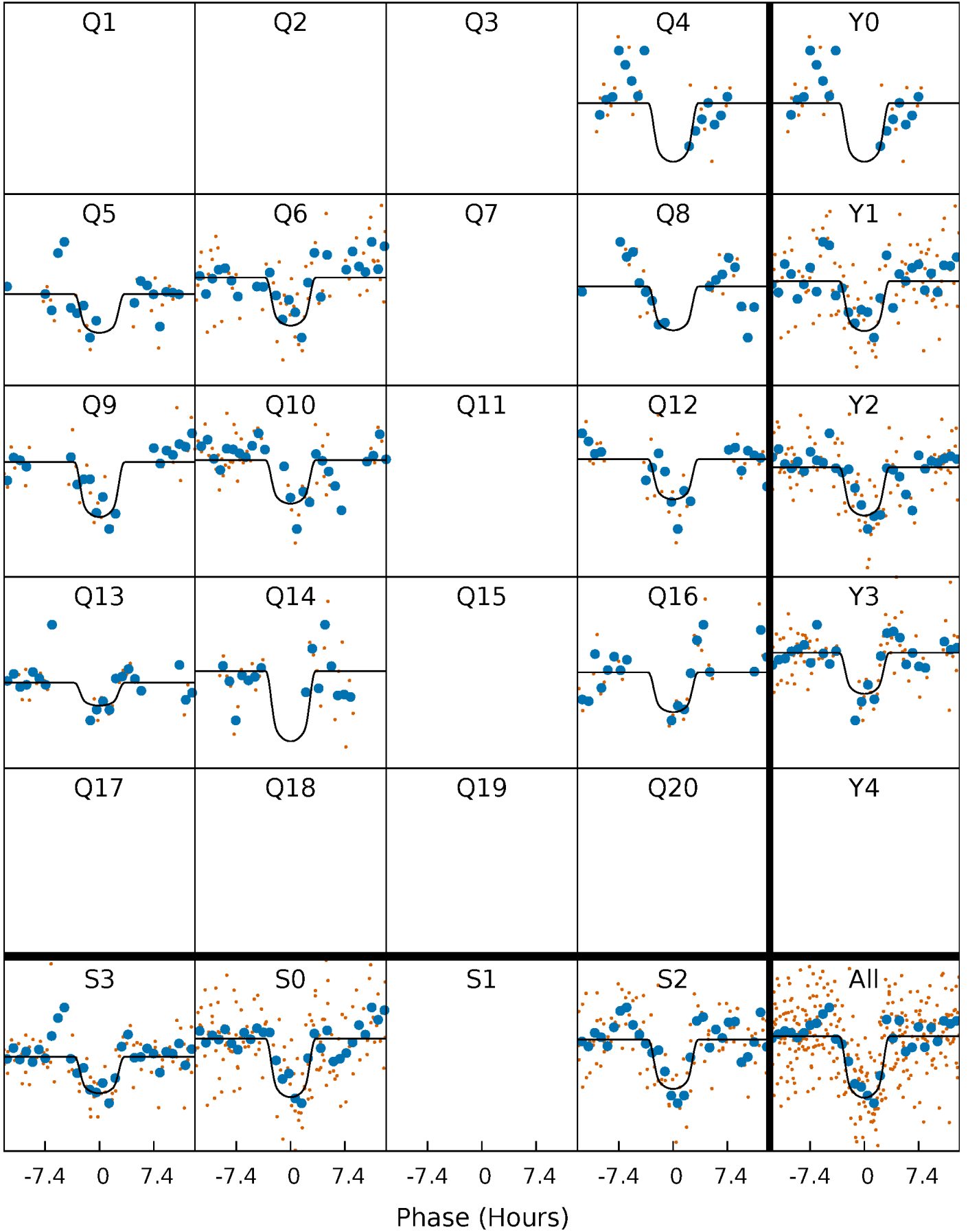
PDC Quarter-Phased Transit Curves

TCE 005642620-03 P= 75.857508 Days $T_0=165.552296$ (BKJD)



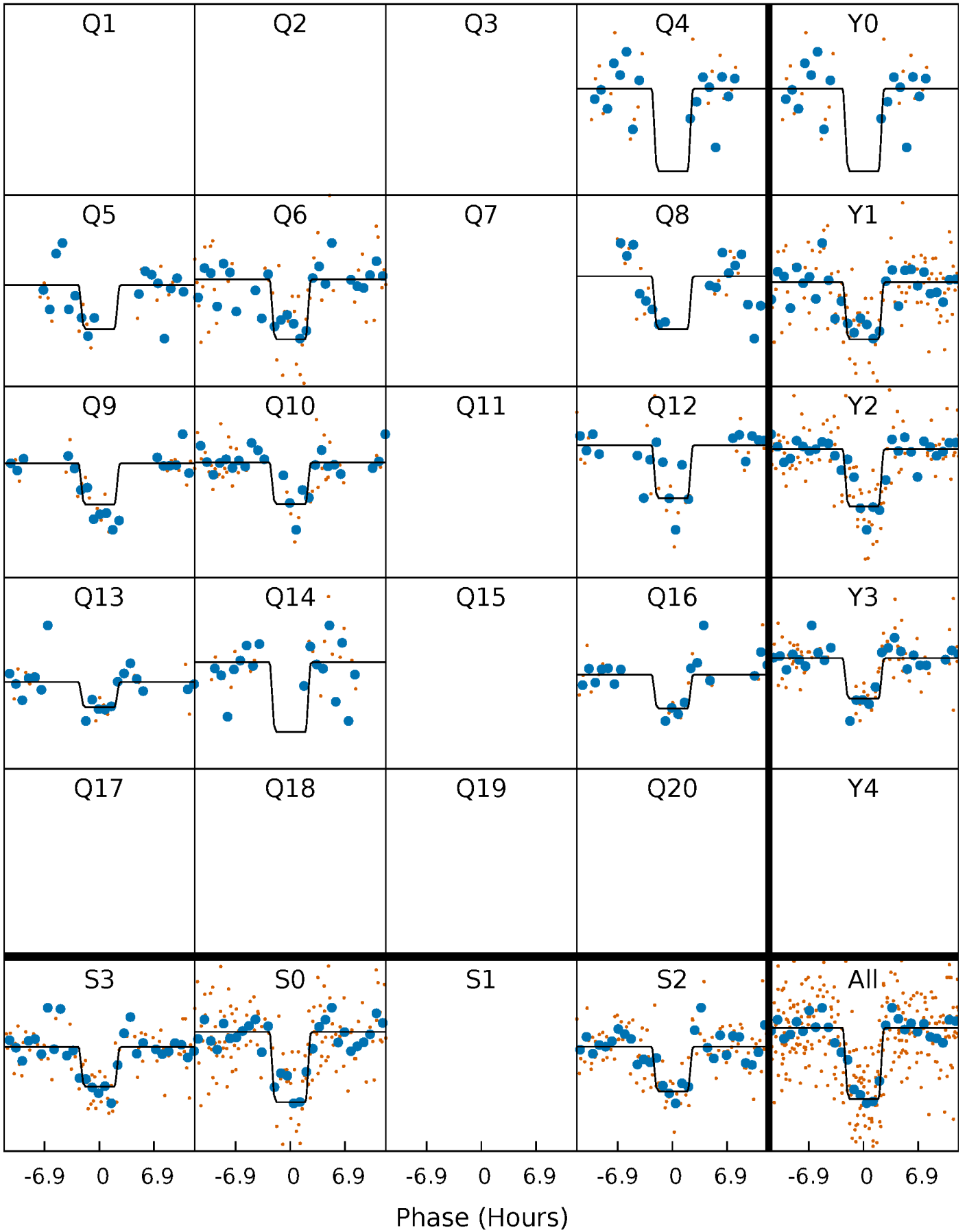
DV Quarter-Phased Transit Curves

TCE 005642620-03 $P = 75.857508$ Days $T_0 = 165.552296$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

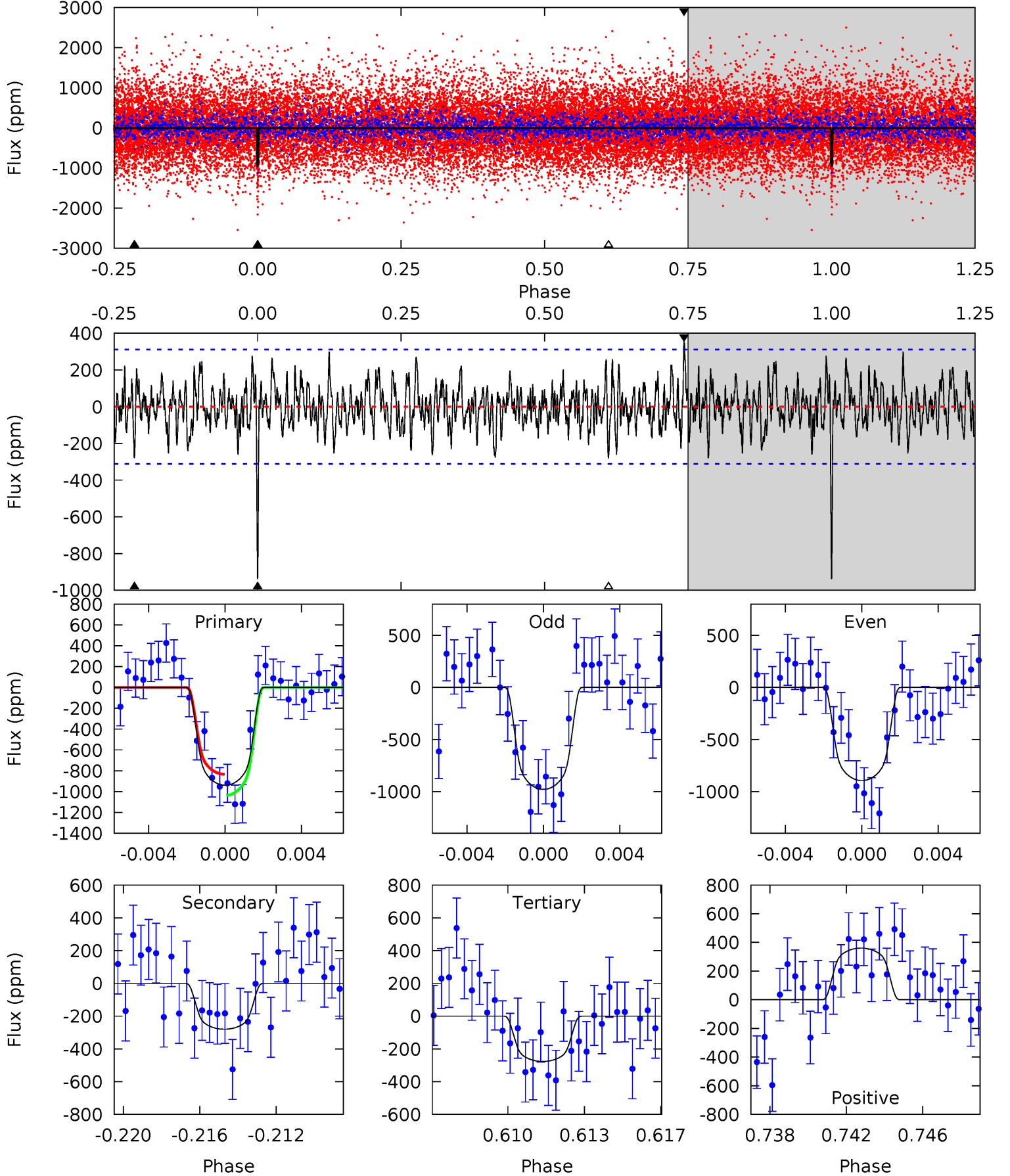
TCE 005642620-03 P= 75.859202 Days $T_0=165.538092$ (BKJD)



DV Model-Shift Uniqueness Test

005642620-03, P = 75.857508 Days, E = 165.552296 Days

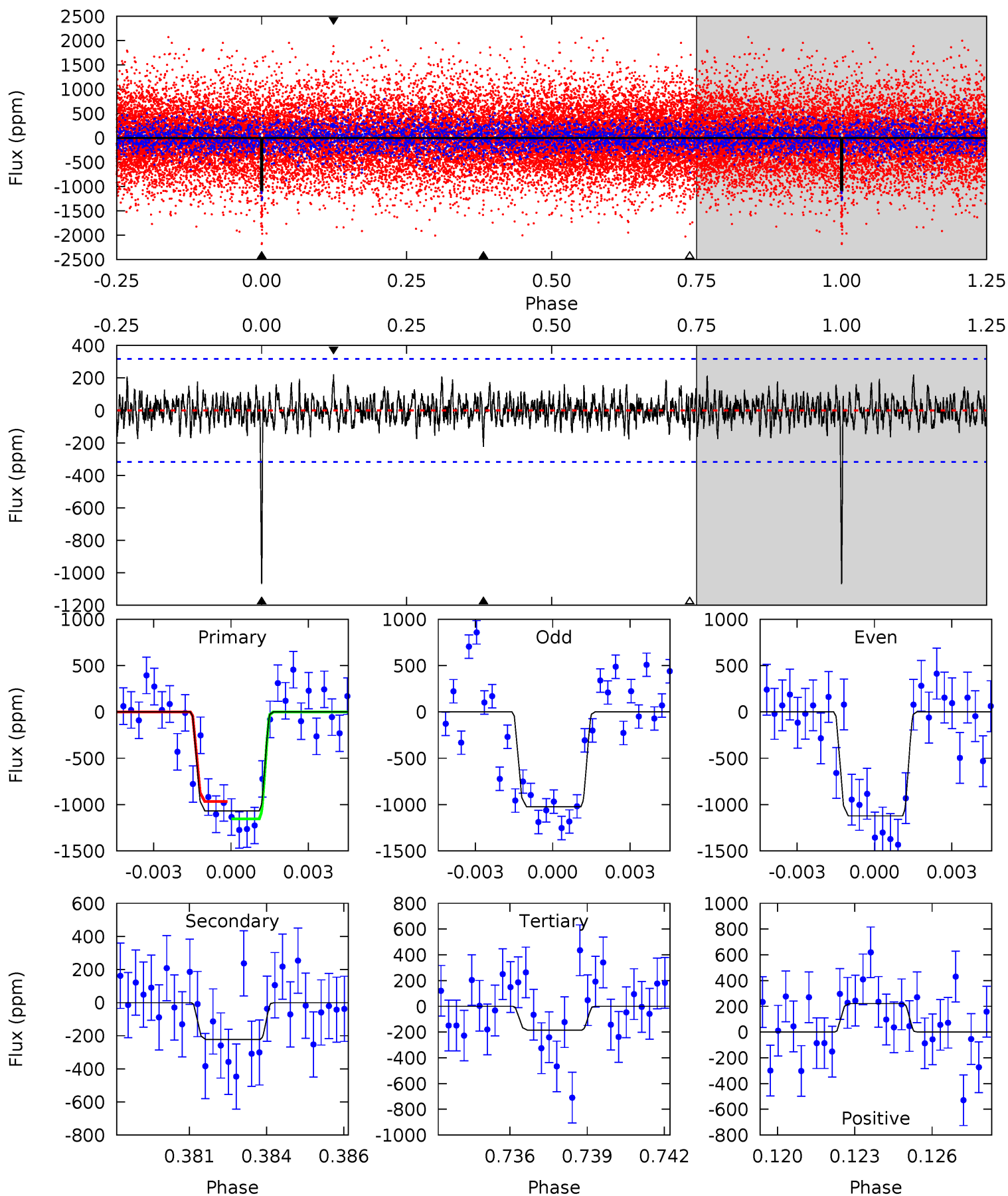
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.7	4.68	4.62	6.02	5.21	2.90	1.67	11.1	9.66	0.05	-1.35	0.71	0.95	0.28	1.68



Alt Model-Shift Uniqueness Test

005642620-03, P = 75.859202 Days, E = 165.538092 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.7	3.70	3.07	3.67	5.27	2.99	1.03	14.7	14.1	0.63	0.03	0.82	0.98	0.17	1.54



Stellar Parameters For KIC 005642620

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4474^{+156}_{-171}	$4.670^{+0.032}_{-0.044}$	$-0.300^{+0.300}_{-0.300}$	$0.614^{+0.062}_{-0.050}$	$0.645^{+0.062}_{-0.062}$	$3.927^{+0.622}_{-0.718}$
	+3%/-4%	+1%/-1%	+100%/-100%	+10%/-8%	+10%/-10%	+16%/-18%
Source	PHO16	PHO16	PHO16	DSEP		

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

Secondary Eclipse Parameters for KIC 005642620-03 / KOI 2882.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-280 ± 60	$2.47^{+0.30}_{-0.28}$	394^{+15}_{-15}	3399^{+200}_{-189}	2273^{+880}_{-634}
Alt.	-223 ± 60	$2.27^{+0.33}_{-0.30}$	394^{+17}_{-16}	3360^{+234}_{-219}	2128^{+956}_{-685}

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 $A_{obs} \gg 1.0$

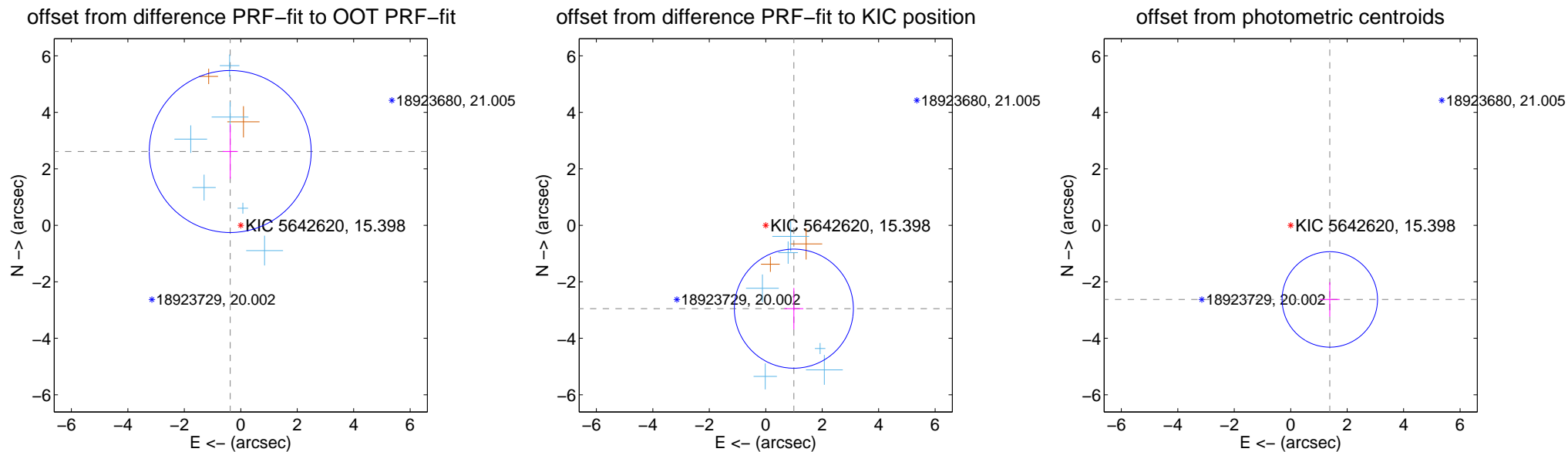
DV Centroid Data

Supplemental centroid analysis for 005642620-03. Kepler magnitude: 15.40. Transit SNR 9.61

There are 6 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 5.53 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	2.639 ± 0.956	2.76	0.374 ± 0.270	2.613 ± 0.965
PRF-fit source offset from KIC position	3.115 ± 0.703	4.43	-0.996 ± 0.335	-2.951 ± 0.733
photometric centroid source offset	2.97 ± 0.56	5.27	-1.39 ± 0.35	-2.62 ± 0.61



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

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

Q1 no difference image



Q1 no OOT image



Q2 no difference image



Q2 no OOT image



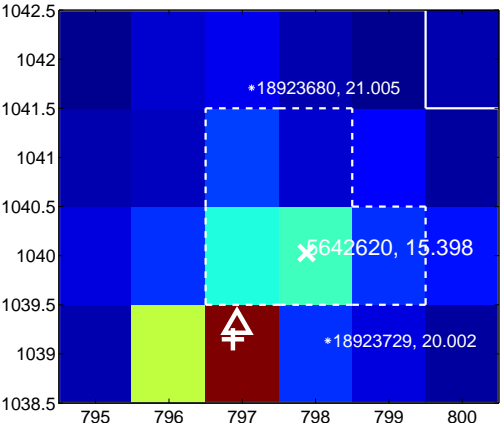
Q3 no difference image



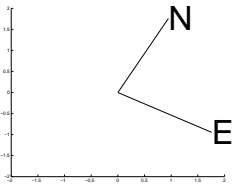
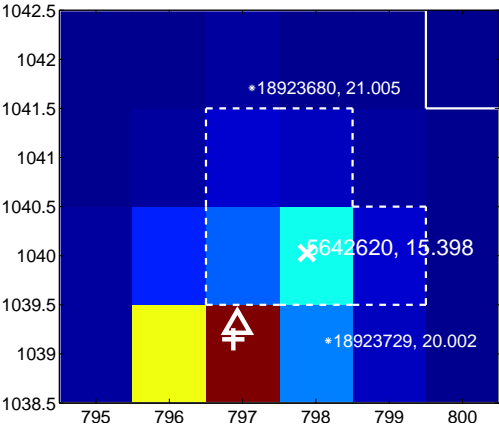
Q3 no OOT image



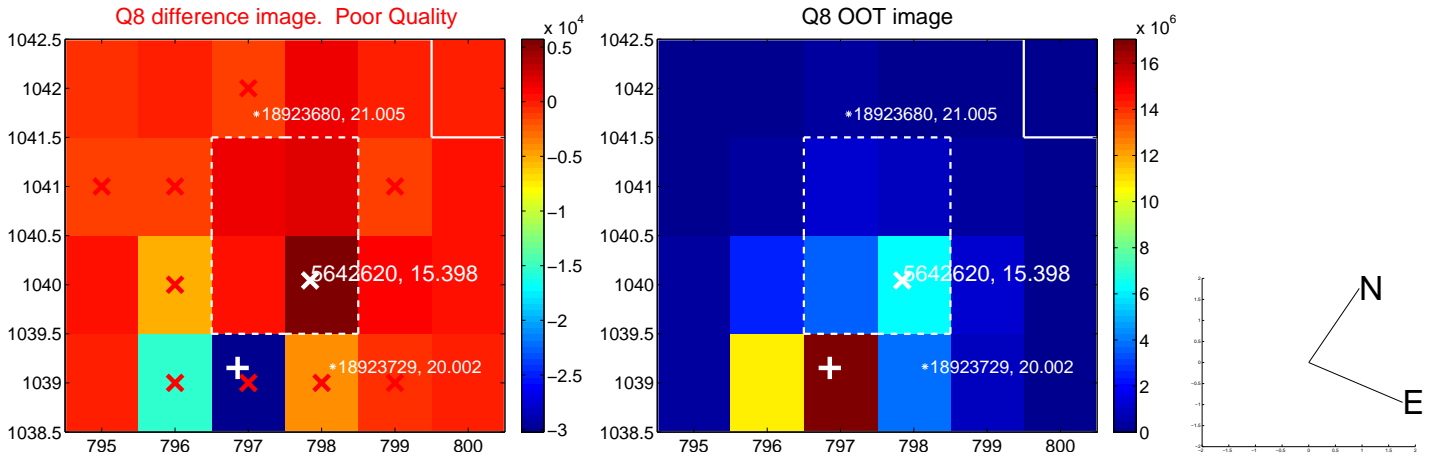
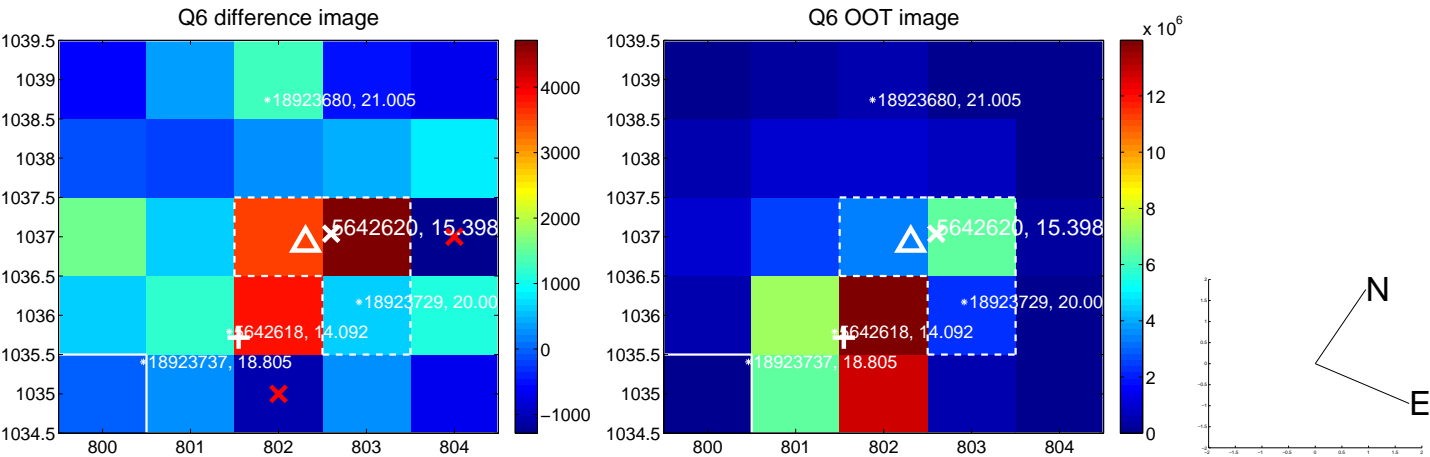
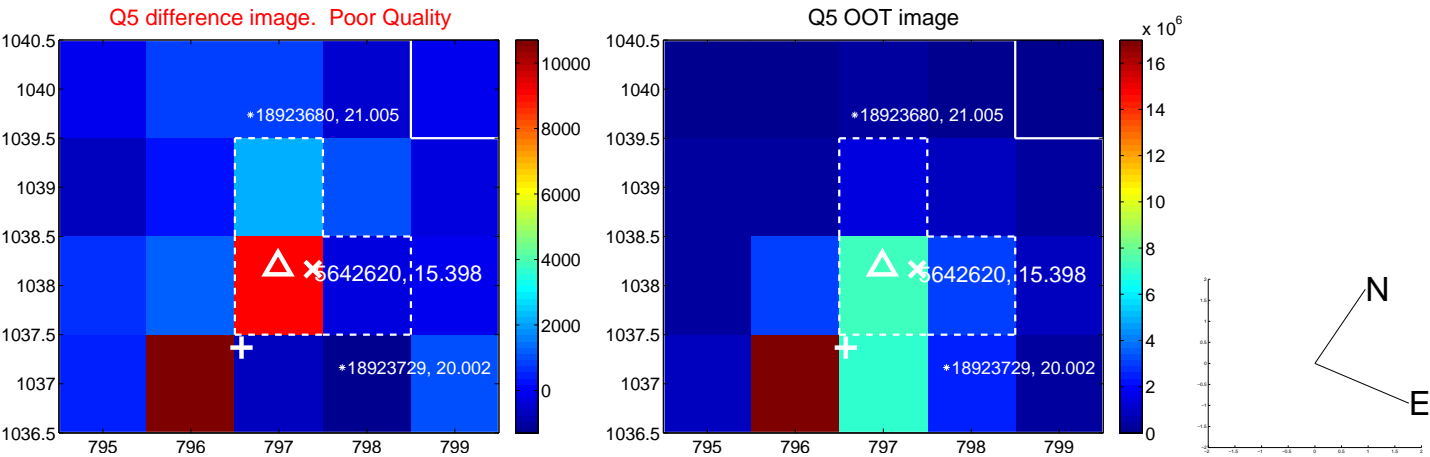
Q4 difference image



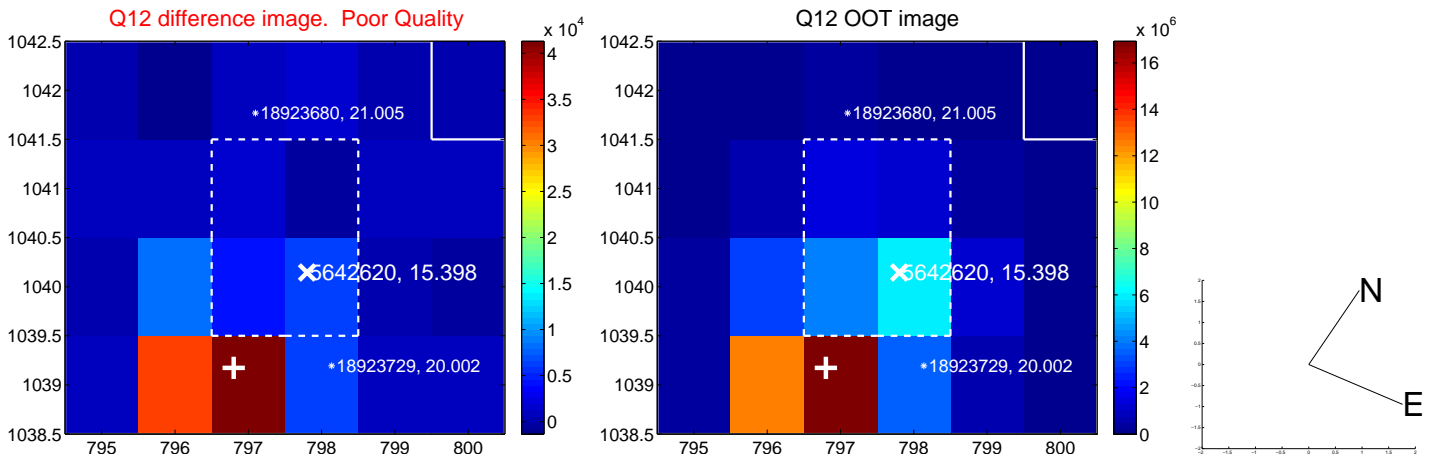
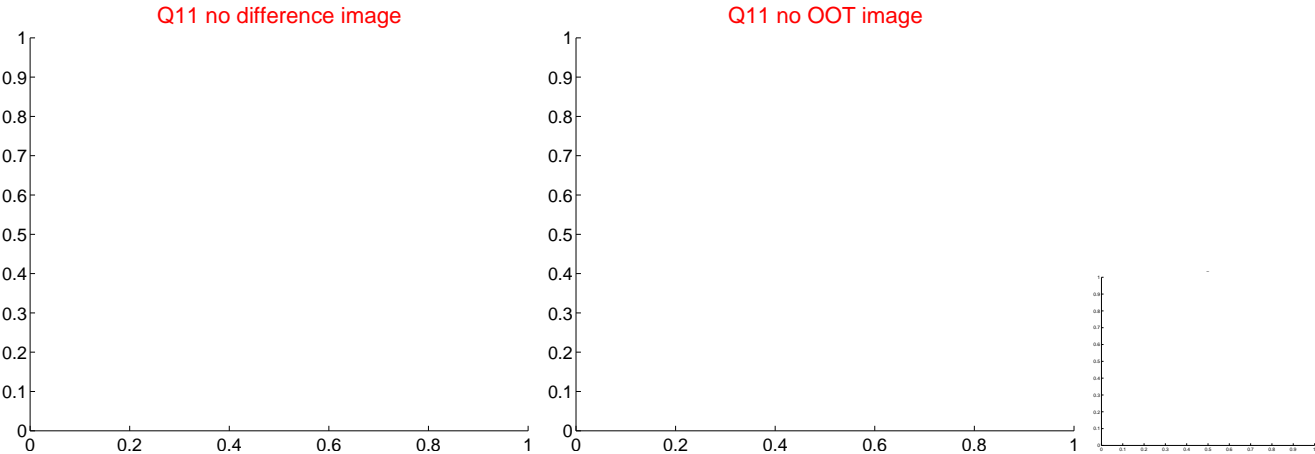
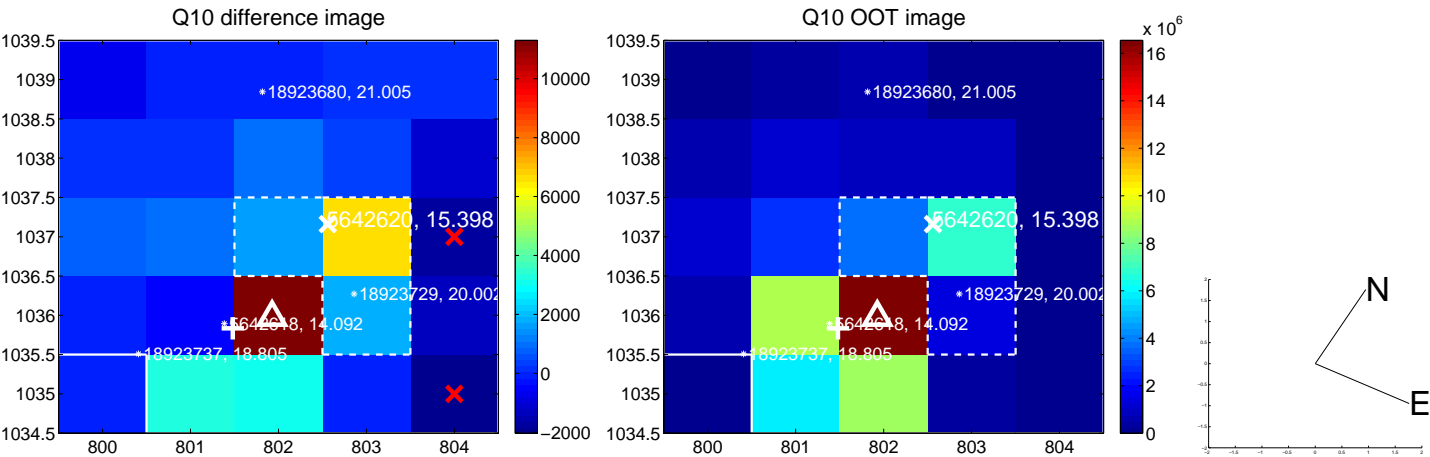
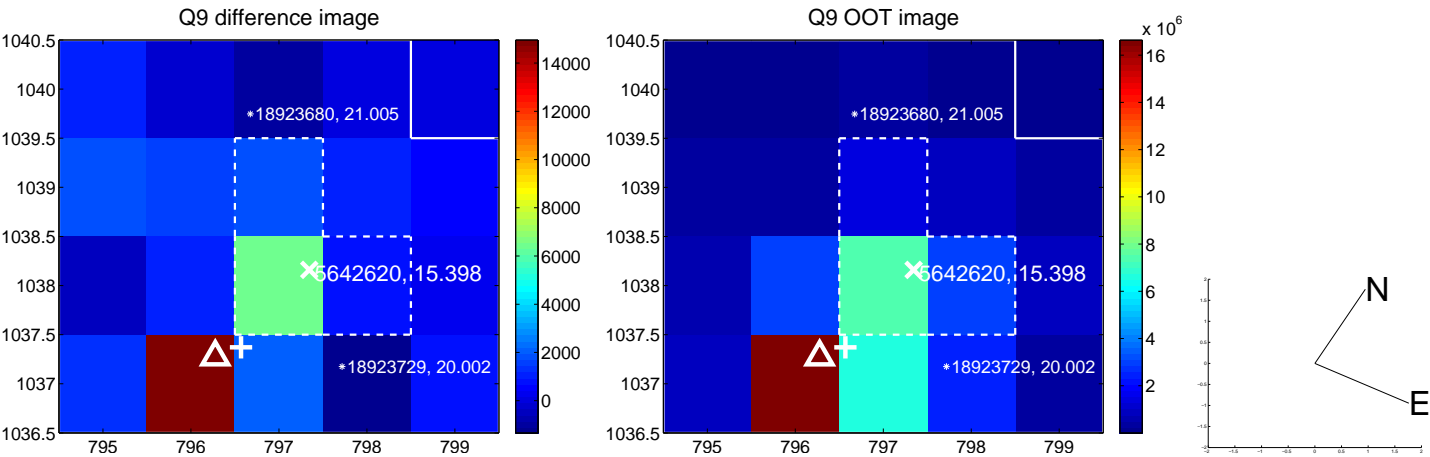
Q4 OOT image



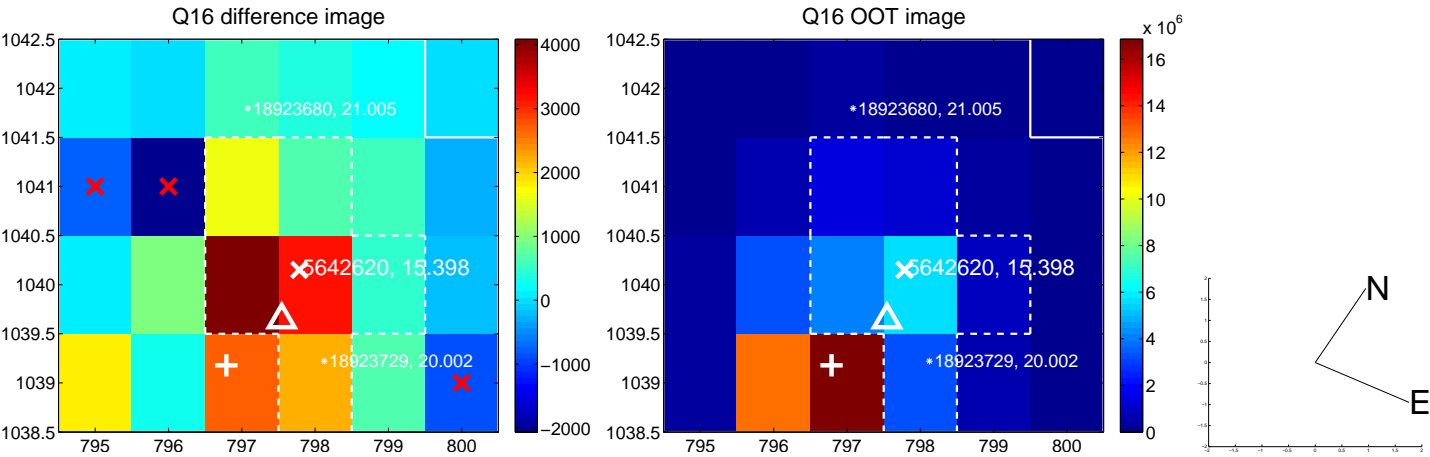
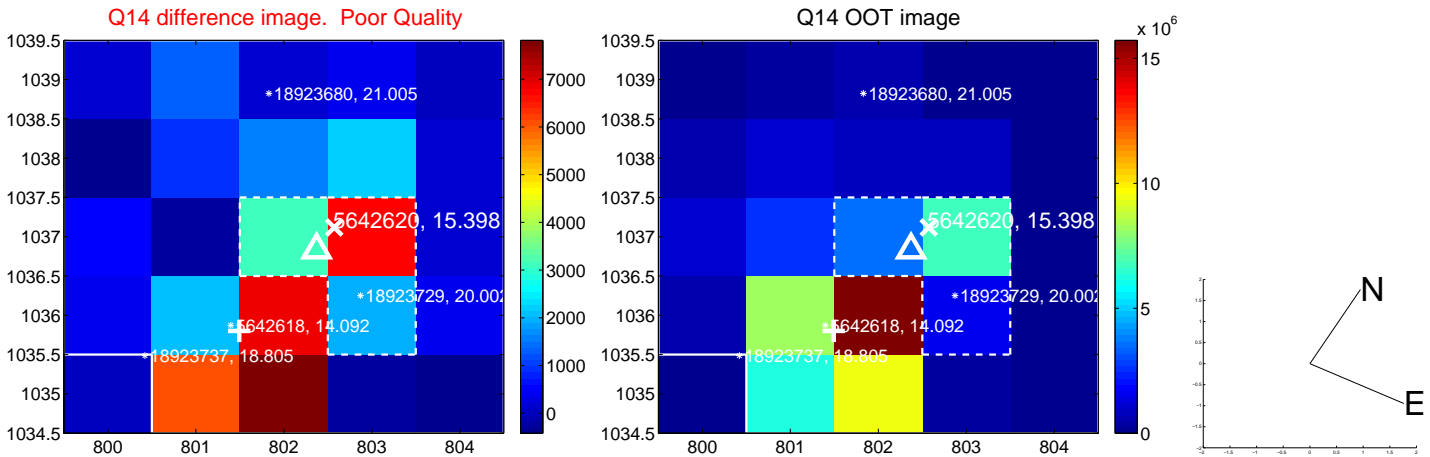
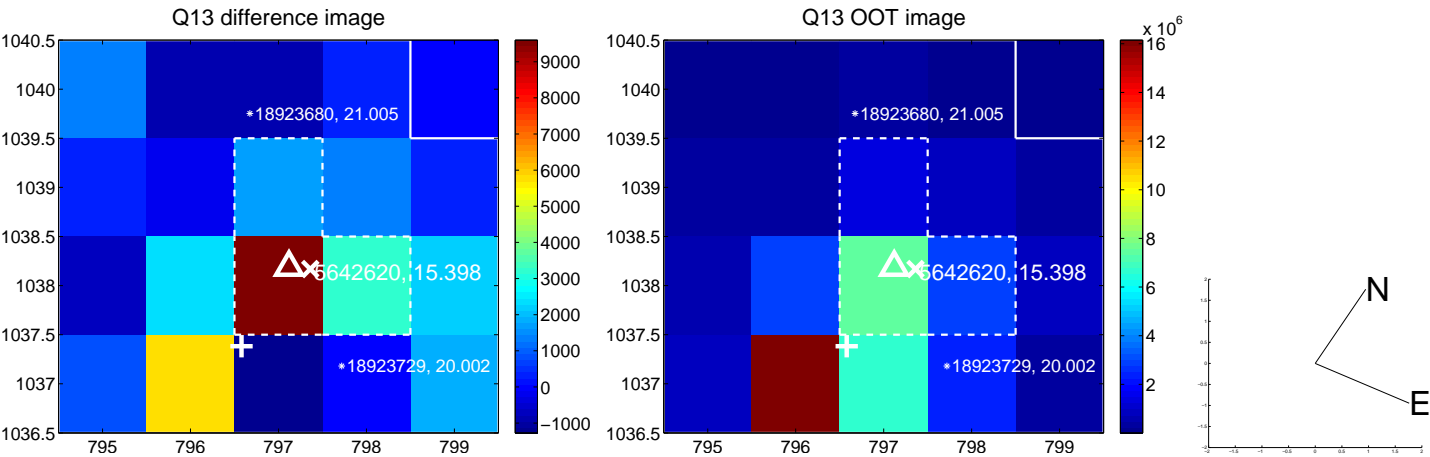
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



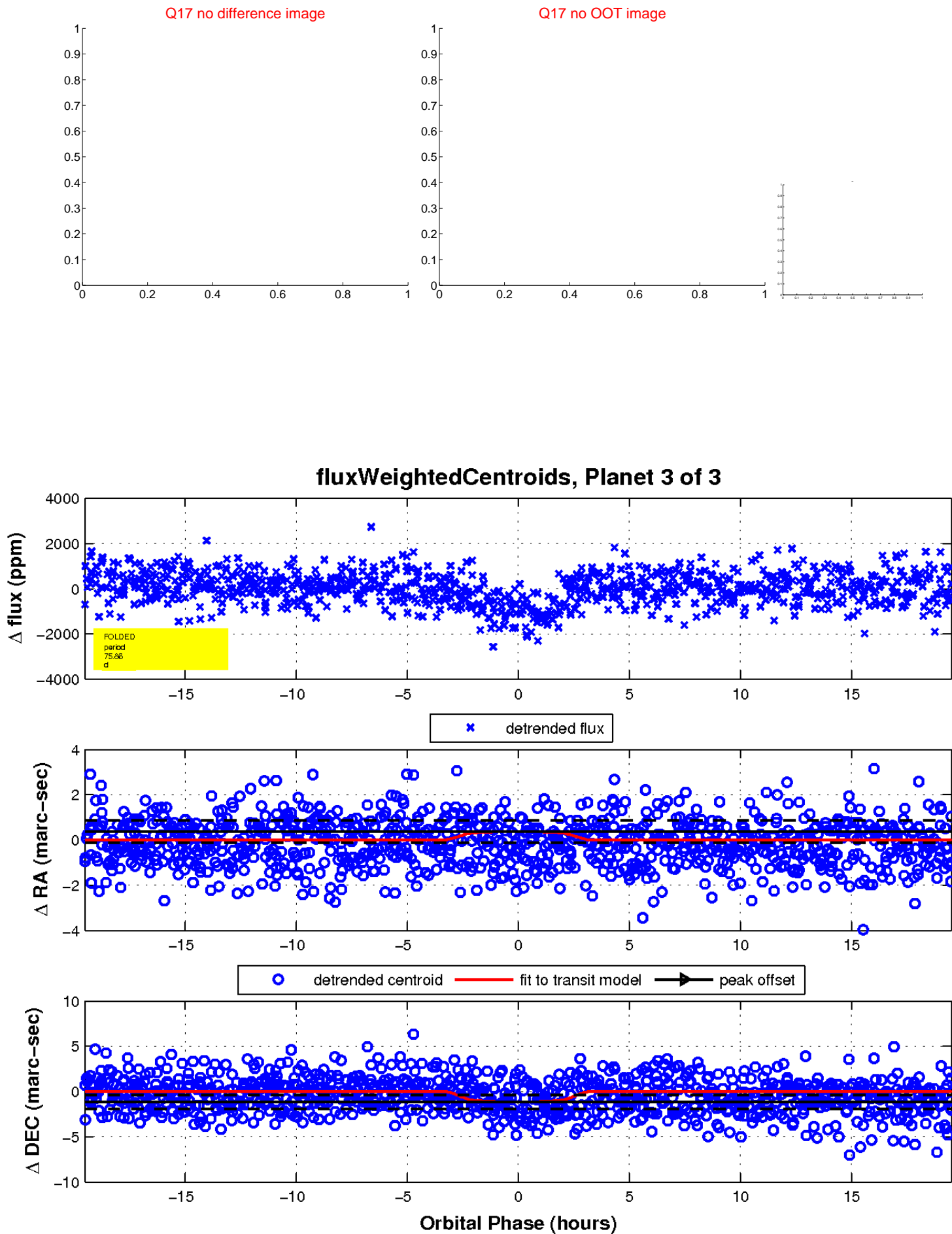
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

