

KIC 006441258

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})
006441258-01	OBS	No	0.830766	131.946682	96.9	5.417	13.5	7.7	1.34	6773	1.42	9734.49
006441258-02	OBS	No	1.008777	131.960386	449.5	3.208	15.3	15.9	1.34	6773	3.33	7514.35
006441258-03	OBS	No	21.215440	137.408309	1649.0	3.279	13.7	11.6	1.34	6773	5.65	129.44
006441258-04	OBS	No	43.018464	145.944718	1945.8	2.747	9.9	9.8	1.34	6773	6.43	50.44
006441258-05	OBS	No	26.441720	140.535961	1783.0	2.111	9.9	9.9	1.34	6773	5.93	96.51
006441258-06	OBS	No	211.033834	273.500397	143.8	5.000	8.4	-1.0	1.34	6773	1.63	6.05

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006441258-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
006441258-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006441258-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
006441258-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
006441258-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006441258-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

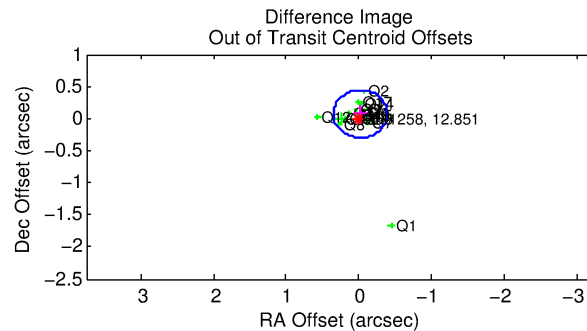
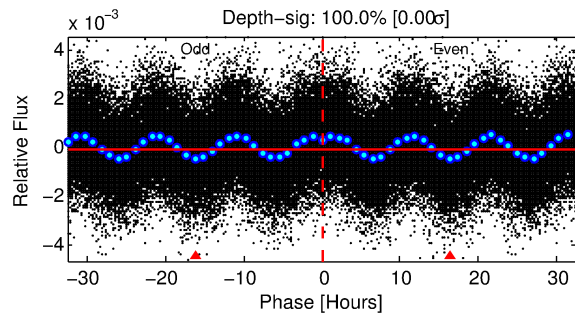
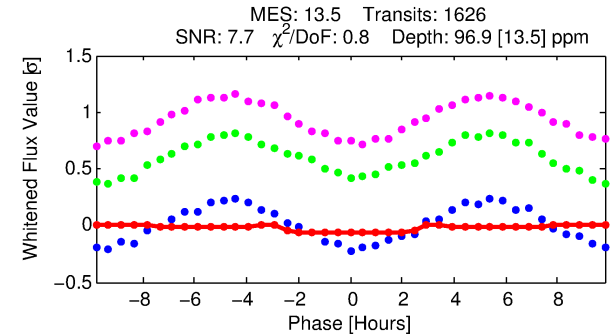
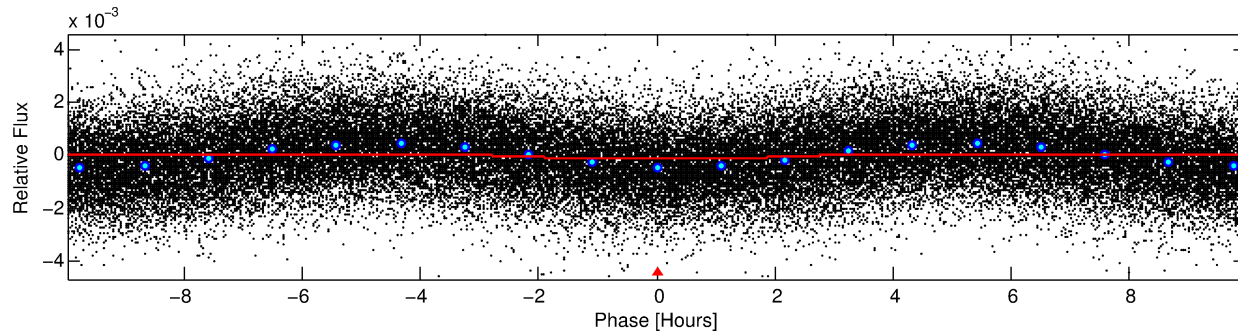
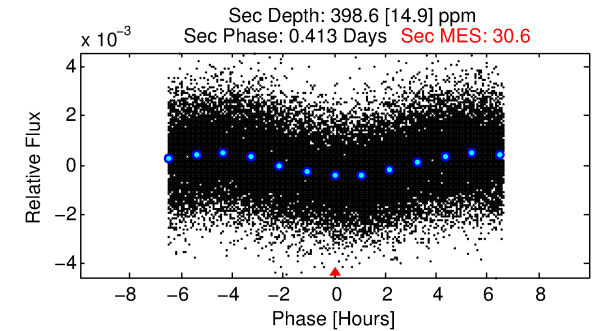
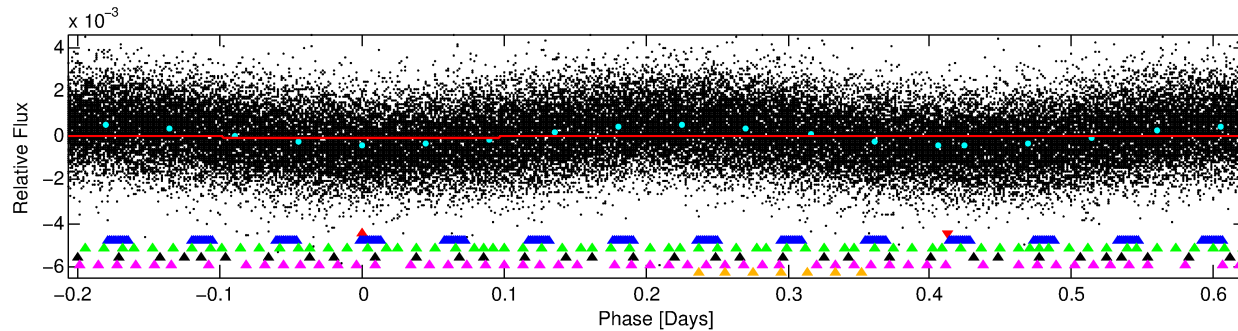
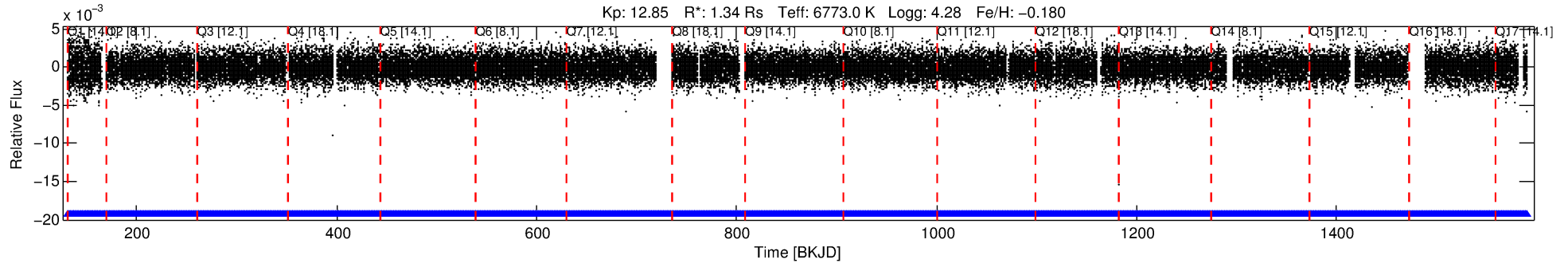
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006441258-01

No Significant Match Found

DV One-Page Summary

KIC: 6441258 Candidate: 1 of 6 Period: 0.831 d



DV Fit Results:

Period = 0.83077 [0.00002] d
Epoch = 131.9467 [0.0055] BKJD
Rp/R* = 0.0097 [0.0091]
a/R* = 1.19 [1.92]
b = 0.70 [3.99]
Seff = 9734.49 [3951.26]
Teq = 2533 [257] K
Rp = 1.42 [1.41] Re
a = 0.0187 [0.0049] AU
Ag = 38.24 [73.19] [0.51σ]
Teffp = 9738 [4590] K [1.57σ]

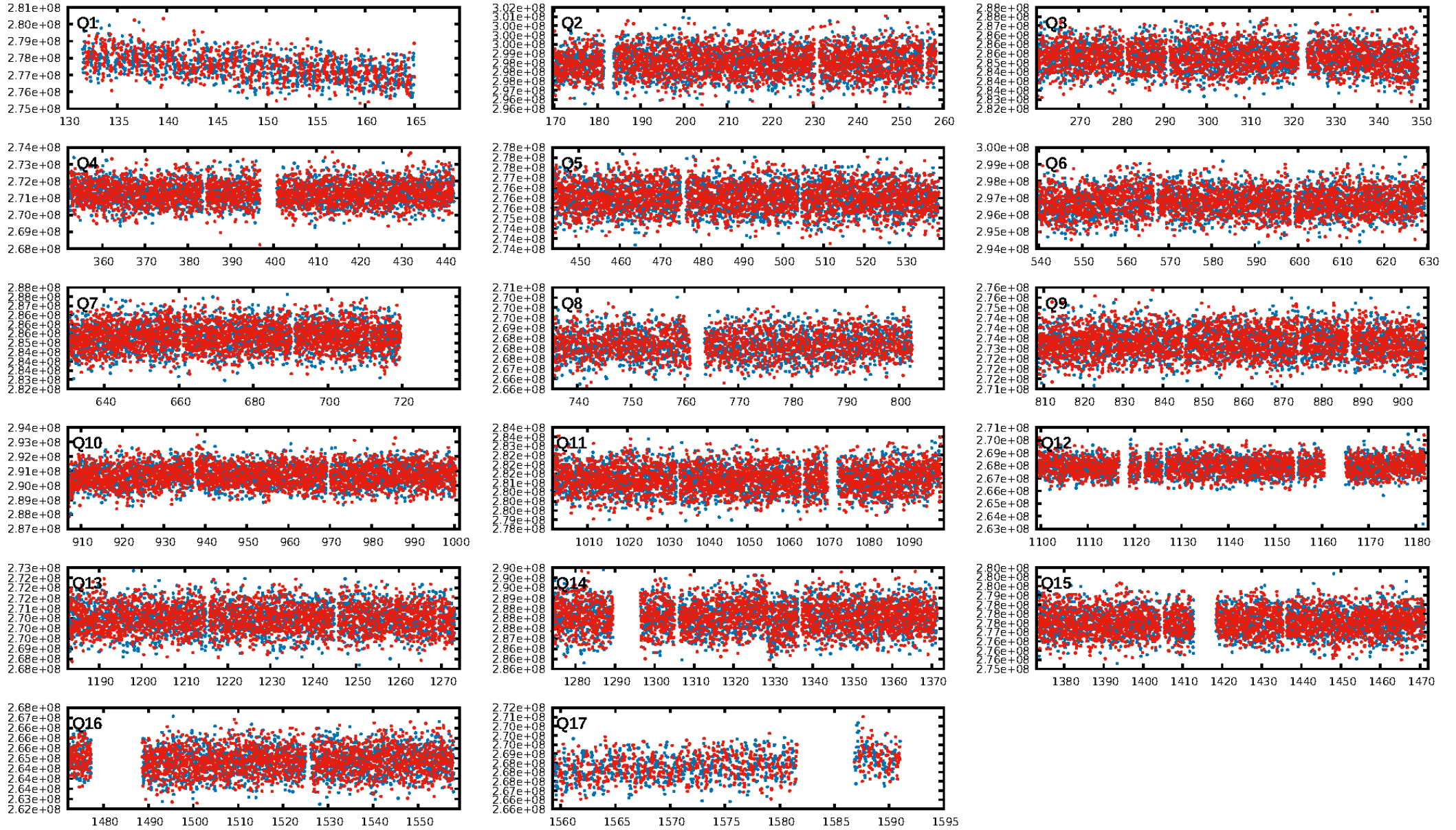
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 50.3% [0.68σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1553/1553]
GhostDiagnostic-chr: 1.305
Centroid-sig: N/A
Centroid-so: 0.519 arcsec [5.29σ]
OotOffset-rm: 0.076 arcsec [0.61σ]
KicOffset-rm: 0.224 arcsec [1.86σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

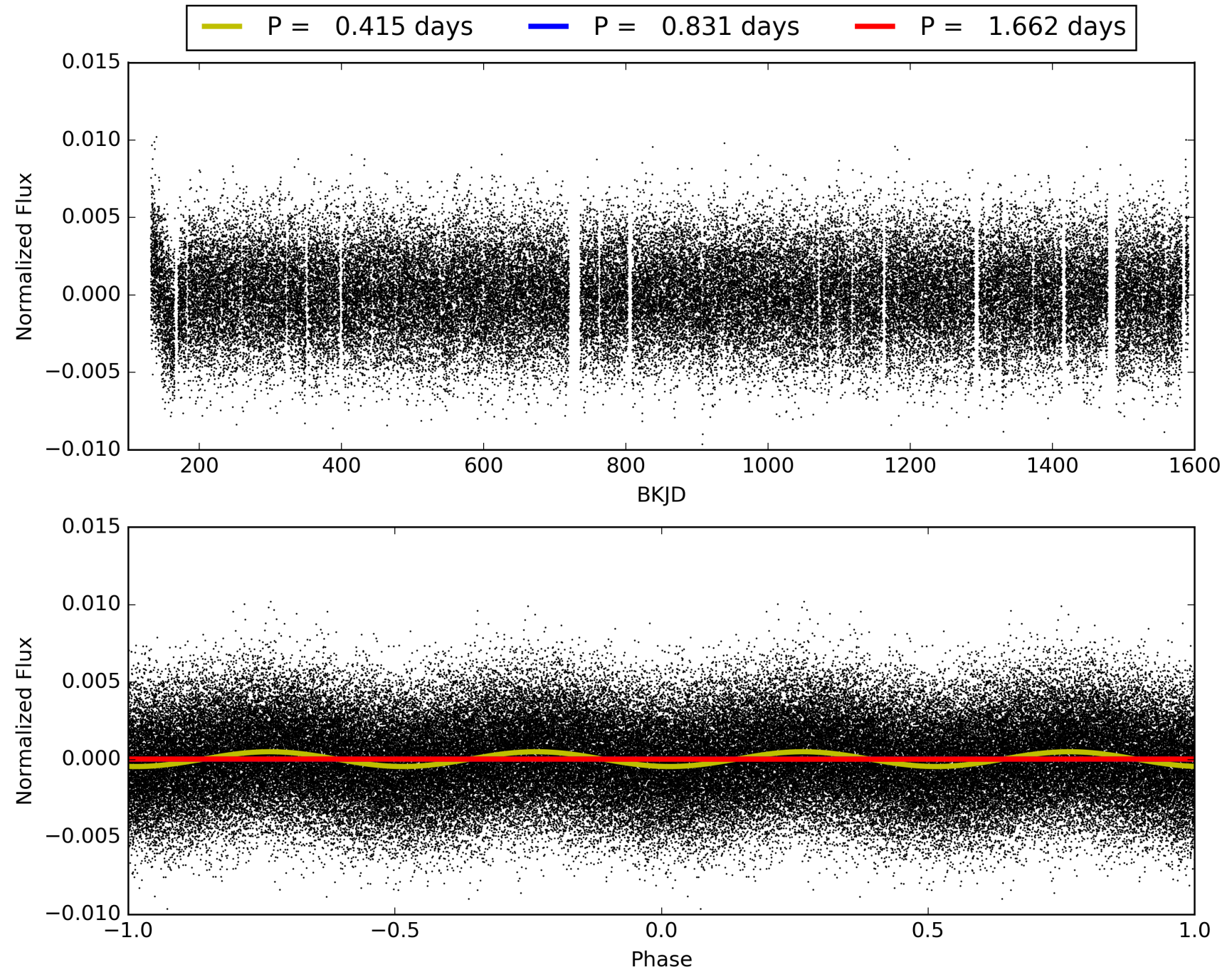
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:30:50 Z

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

TCE 006441258-01, PDC Light Curves

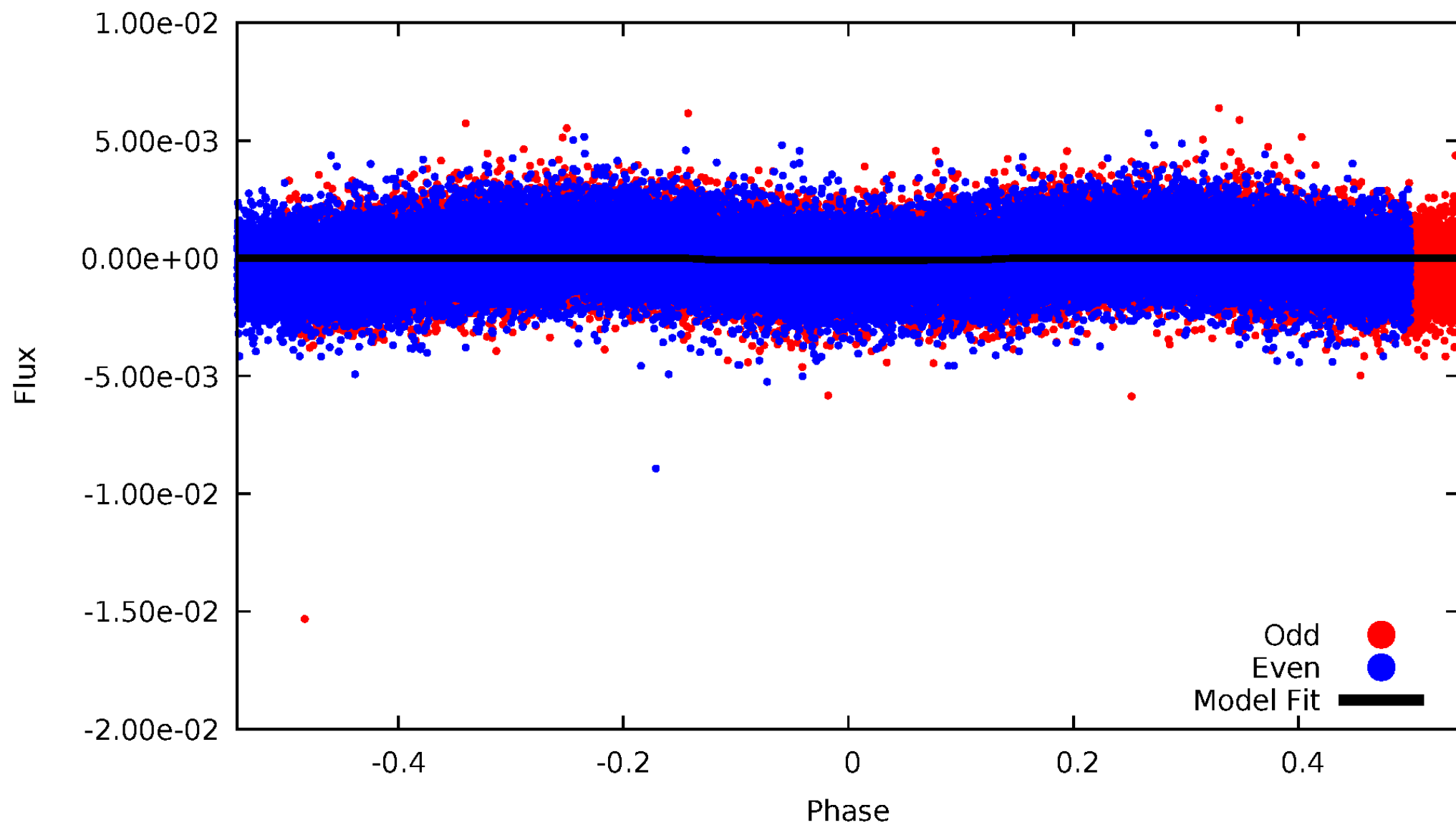


TCE 006441258-01



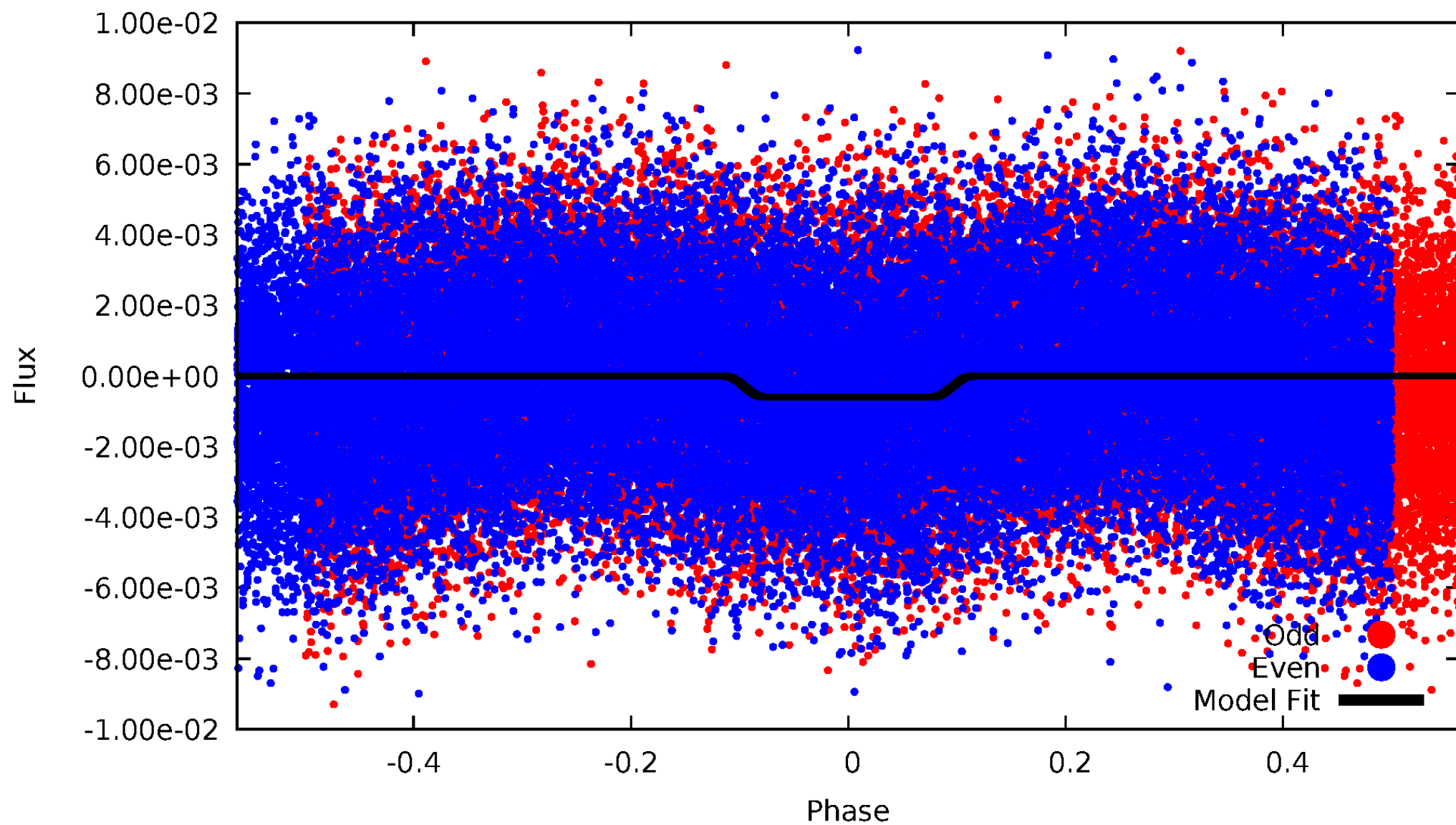
DV Odd/Even

TCE 006441258-01

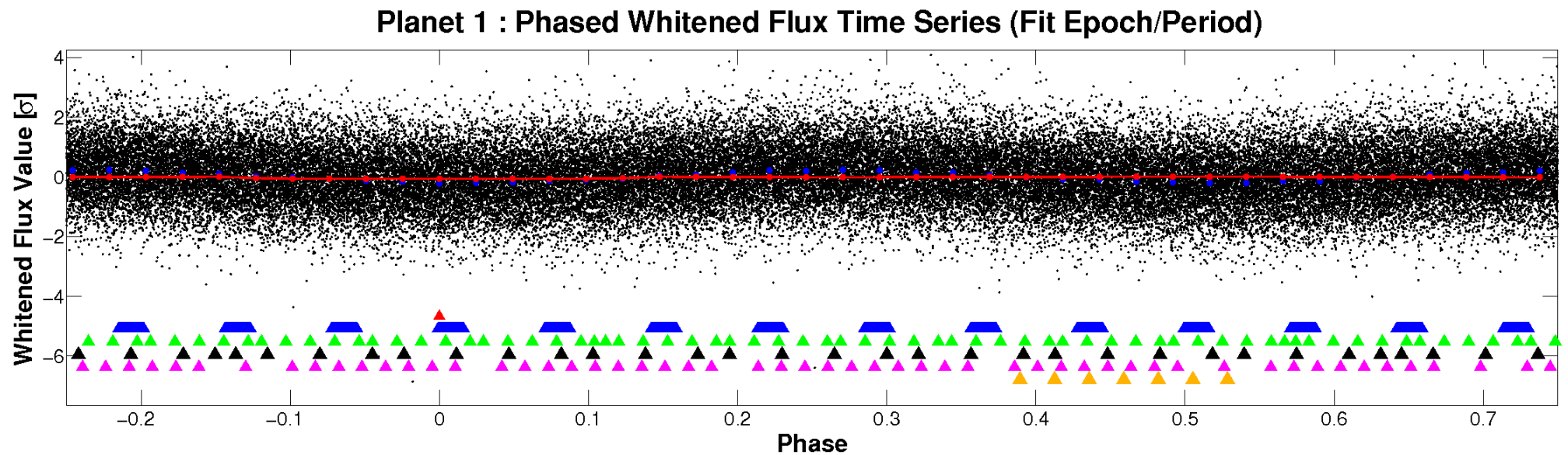
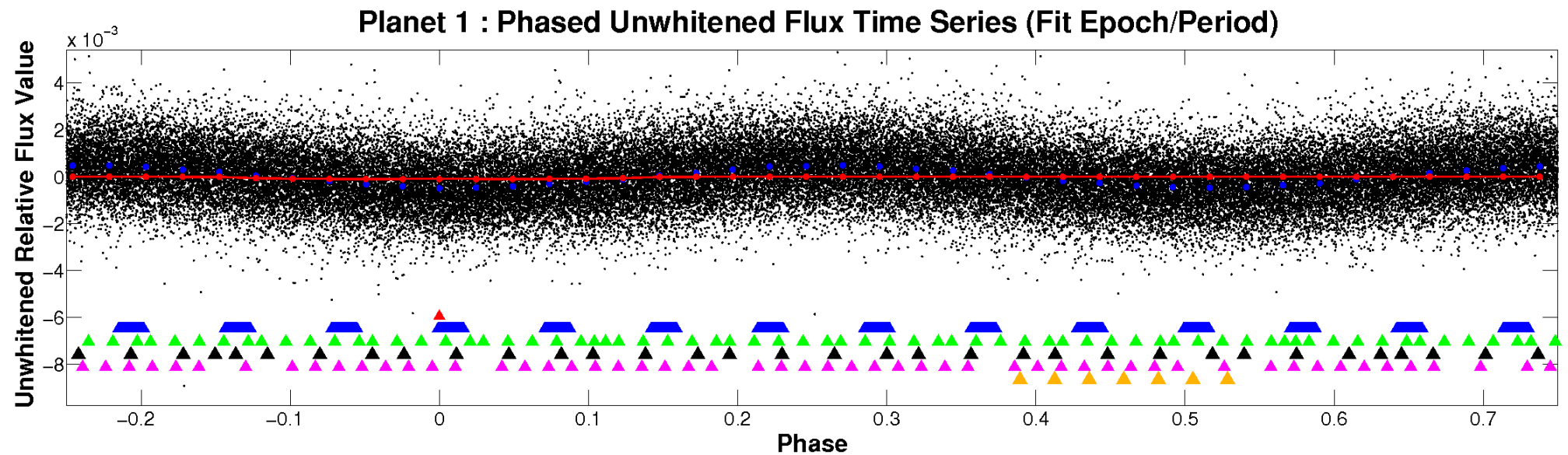


ALT Odd/Even

TCE 006441258-01

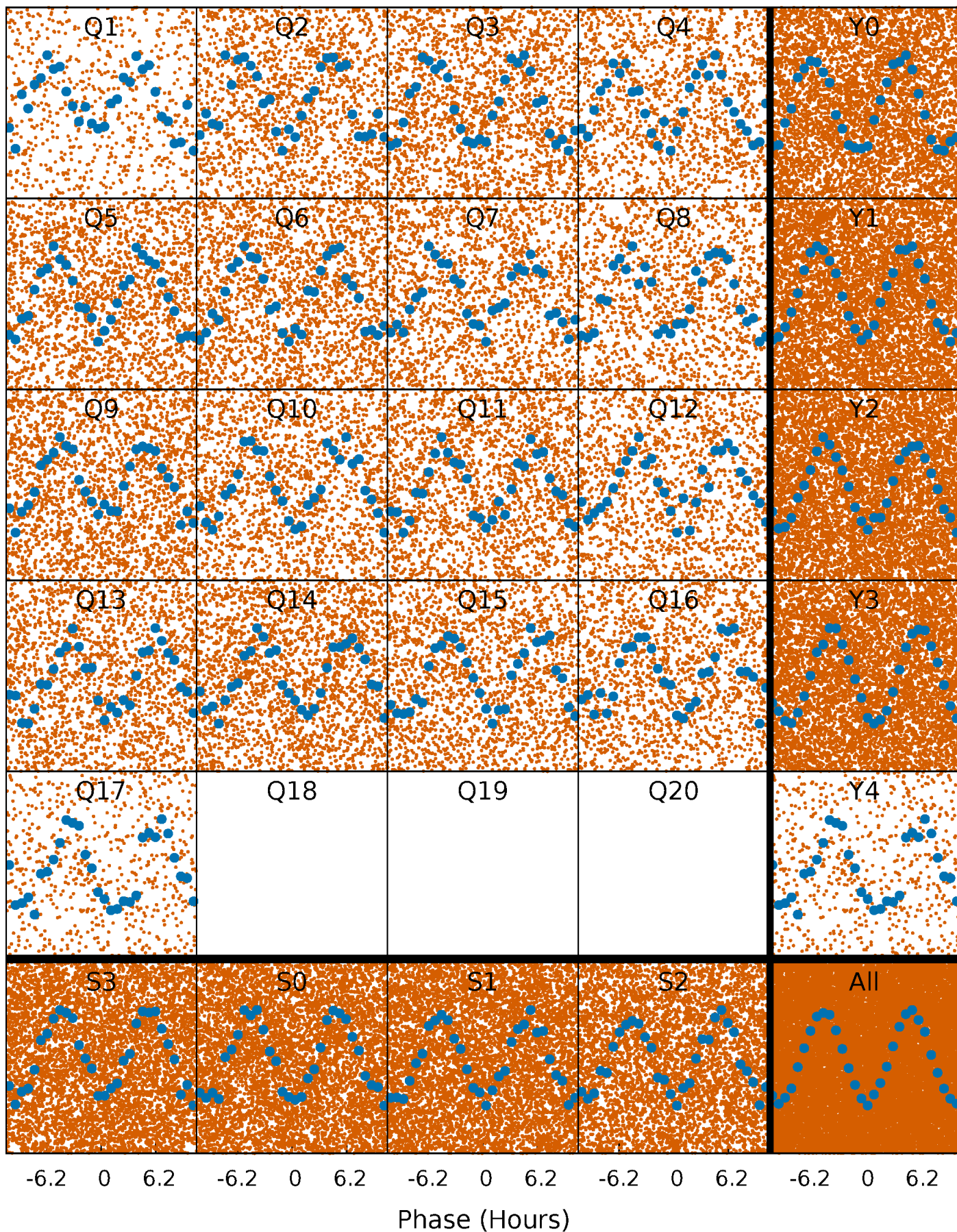


Non-Whitened Vs. Whitened Light Curve



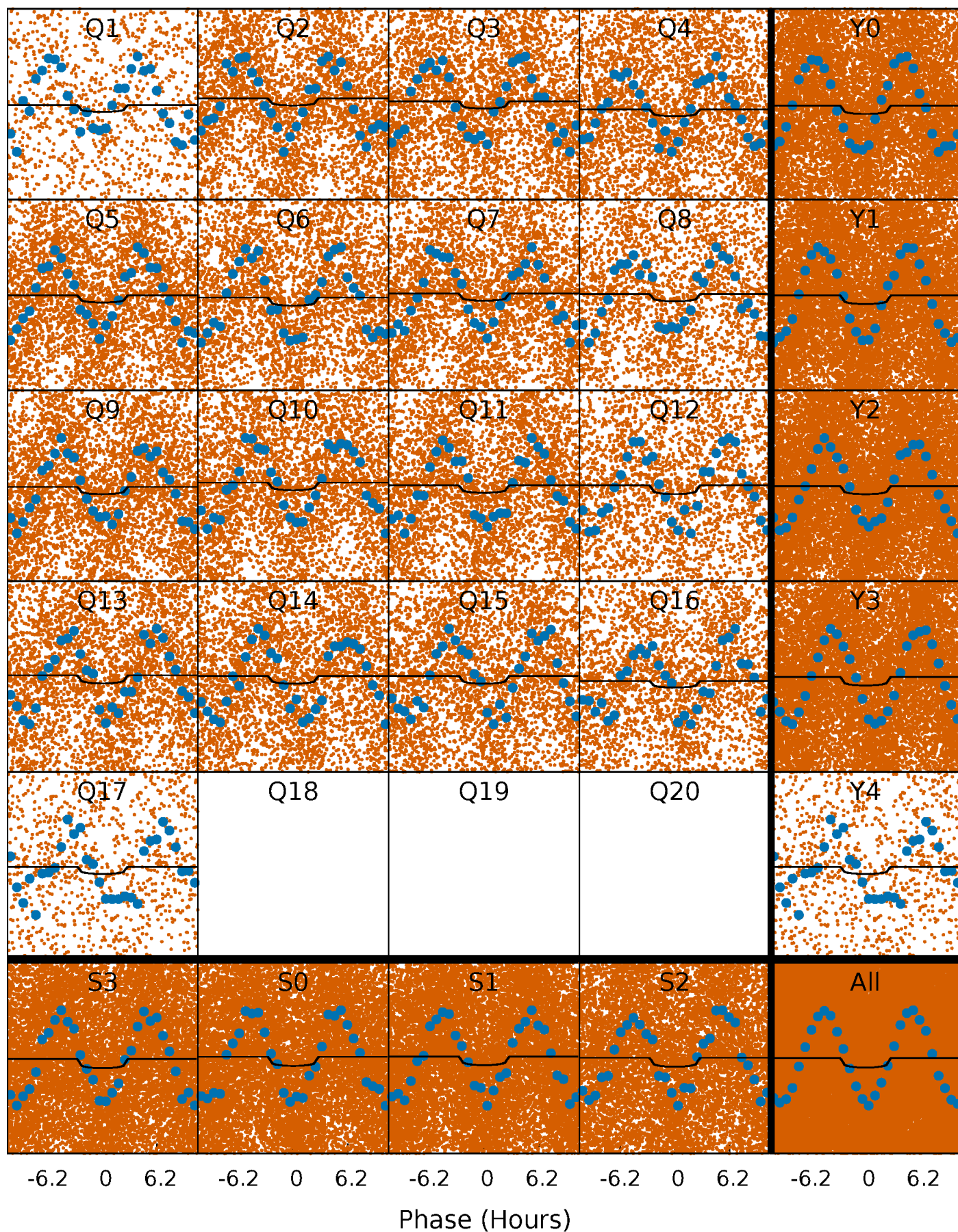
PDC Quarter-Phased Transit Curves

TCE 006441258-01 P= 0.830766 Days $T_0=131.946682$ (BKJD)



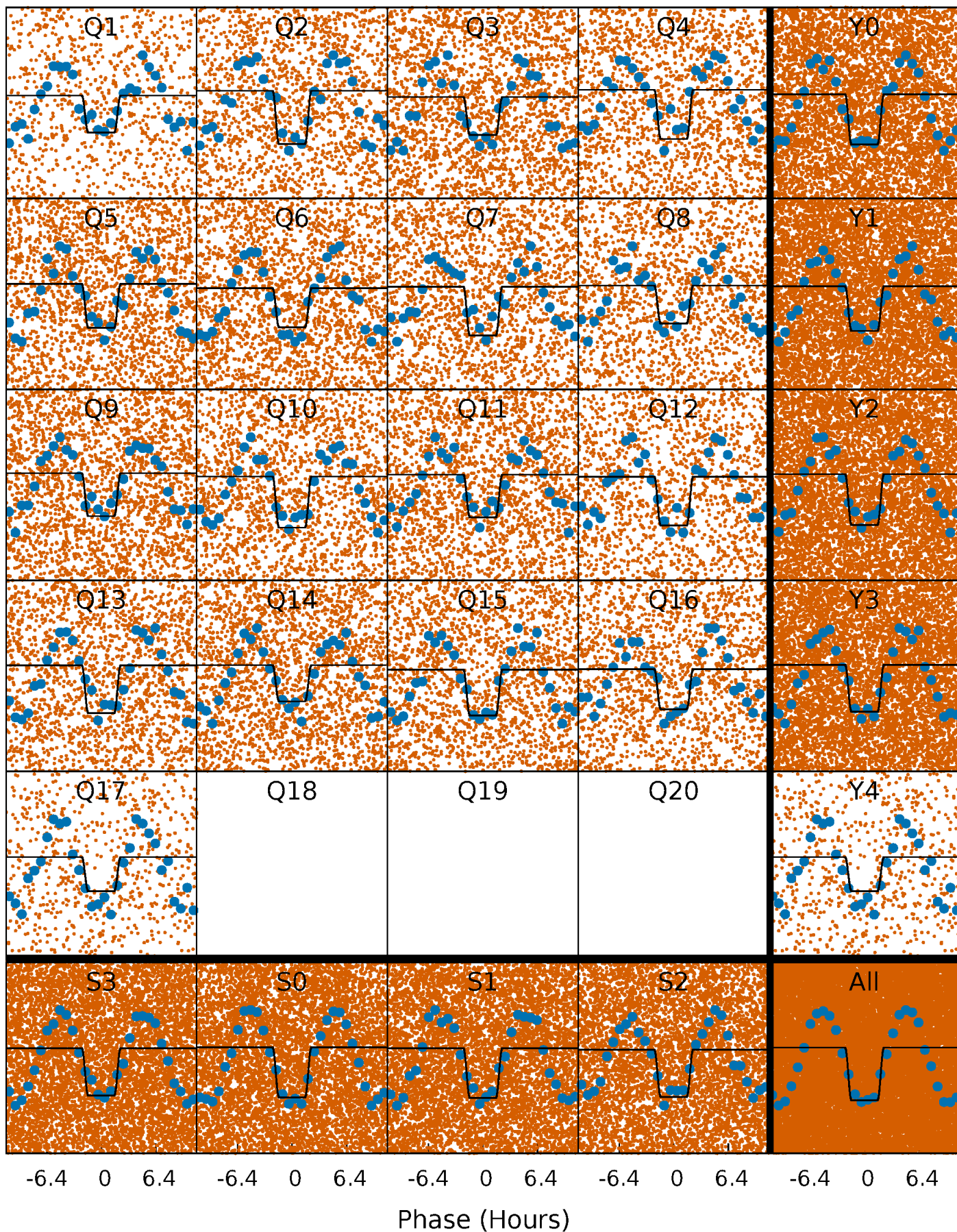
DV Quarter-Phased Transit Curves

TCE 006441258-01 P= 0.830766 Days $T_0=131.946682$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

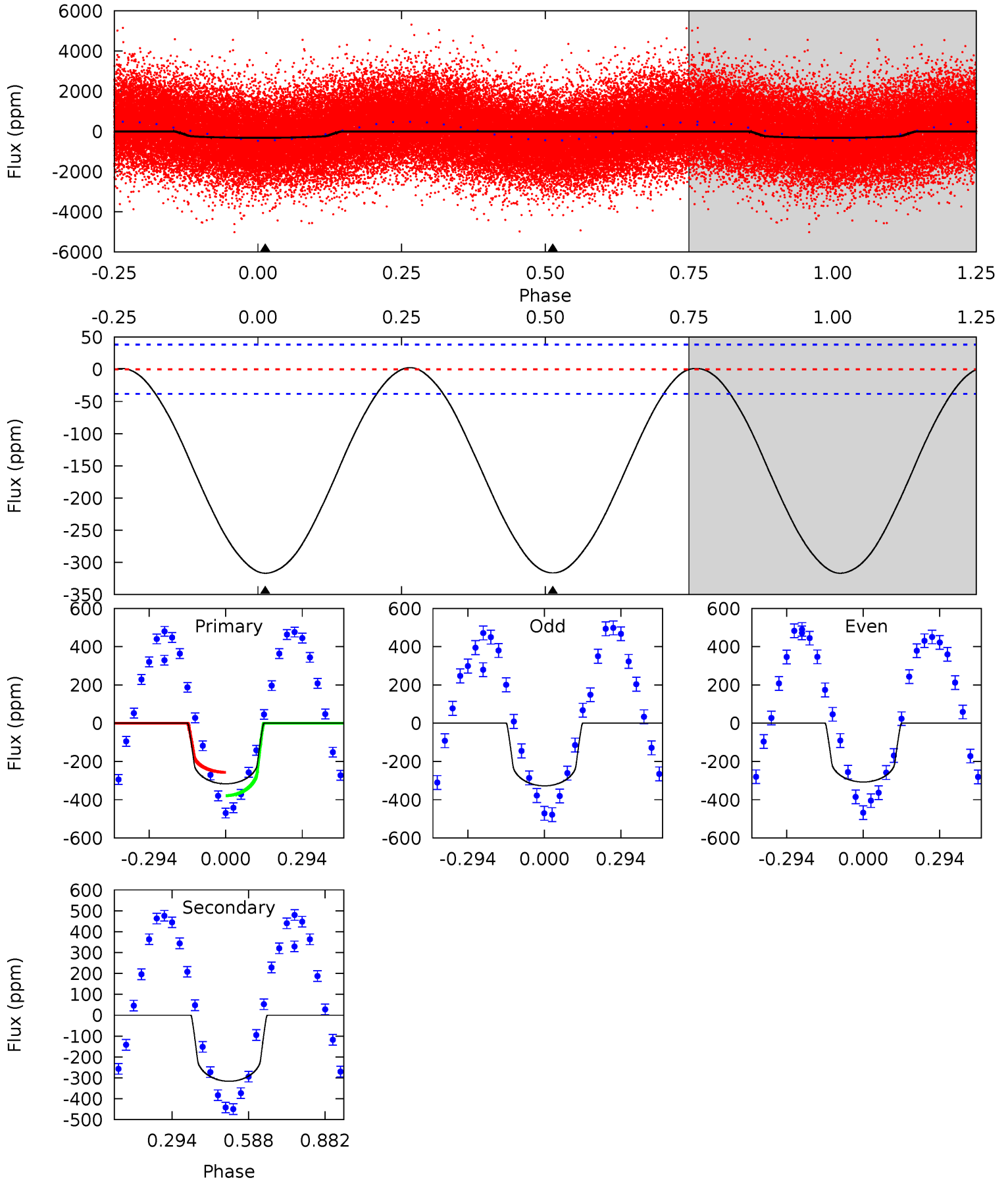
TCE 006441258-01 P= 0.830828 Days $T_0=131.905269$ (BKJD)



DV Model-Shift Uniqueness Test

006441258-01, P = 0.830766 Days, E = 131.115916 Days

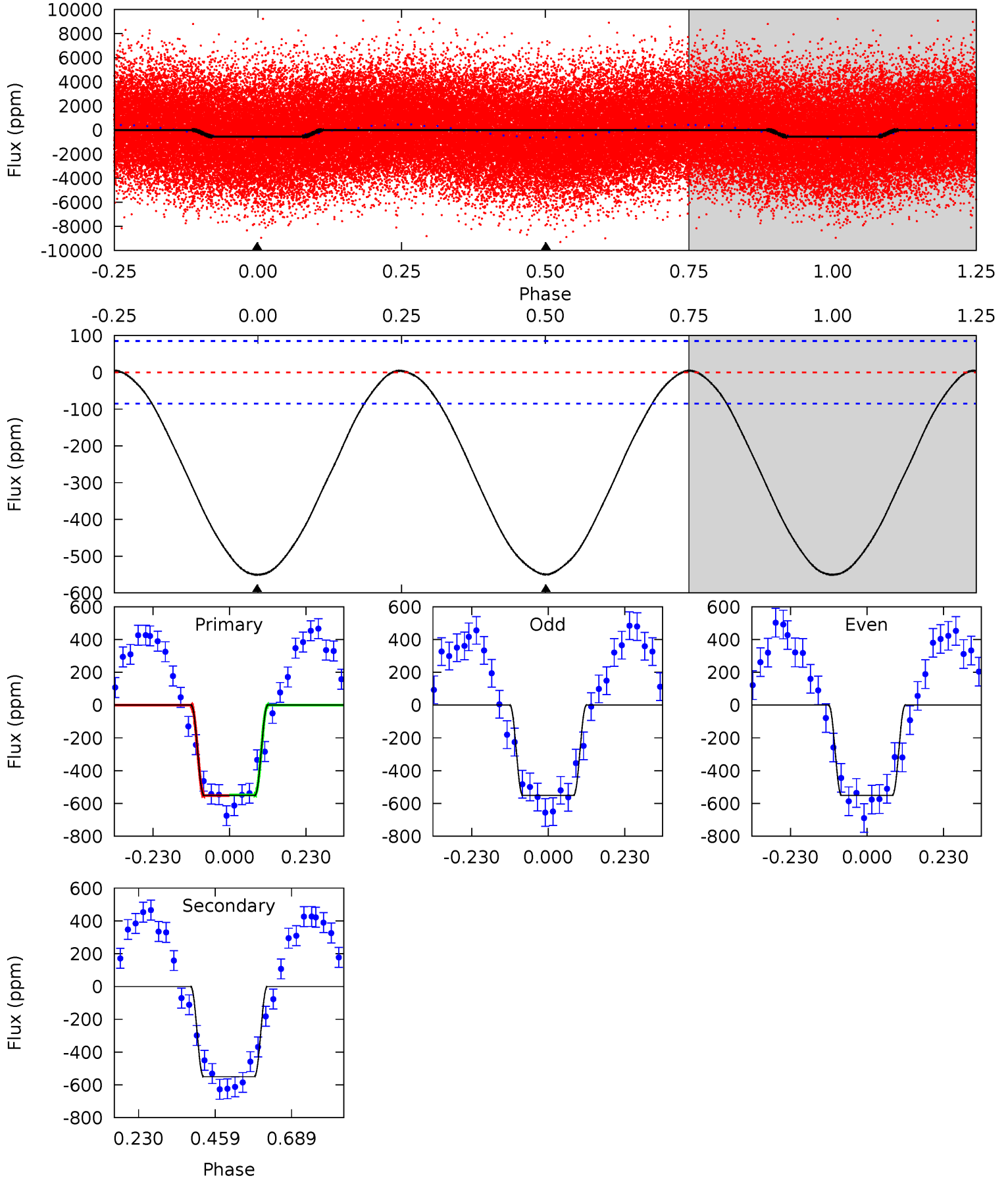
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
35.8	35.8	0	0	4.33	1.05	0.27	35.8	35.8	35.8	35.8	1.16	1.02	0.01	7.37



Alt Model-Shift Uniqueness Test

006441258-01, P = 0.830828 Days, E = 131.074441 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.4	28.4	0	0	4.39	1.20	0.26	28.4	28.4	28.4	28.4	0.01	1.07	0.01	0.10



Stellar Parameters For KIC 006441258

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6773^{+188}_{-282}	$4.283^{+0.090}_{-0.195}$	$-0.180^{+0.250}_{-0.300}$	$1.344^{+0.439}_{-0.219}$	$1.273^{+0.195}_{-0.195}$	$0.739^{+0.355}_{-0.381}$
	+3%/-4%	+2%/-5%	+139%/-167%	+33%/-16%	+15%/-15%	+48%/-52%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 006441258-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-316 ± 9	$1.66^{+1.27}_{-1.00}$	3590^{+243}_{-214}	8954^{+11512}_{-2526}	22^{+118}_{-15}
Alt.	-550 ± 19	$3.70^{+1.68}_{-1.33}$	3584^{+275}_{-217}	6457^{+2032}_{-998}	$7.516^{+10.453}_{-3.821}$

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 $A_{obs} \gg 1.0$

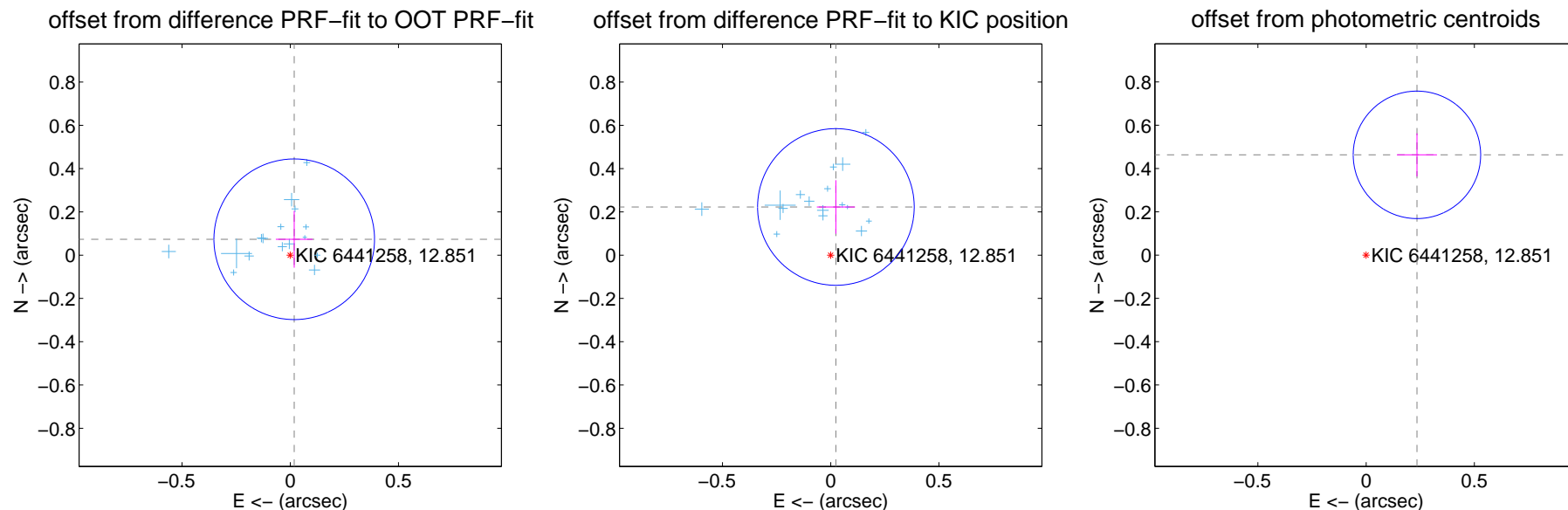
DV Centroid Data

Supplemental centroid analysis for 006441258-01. Kepler magnitude: 12.85. Transit SNR 7.72

There are 17 quarters with good PRF difference image offsets

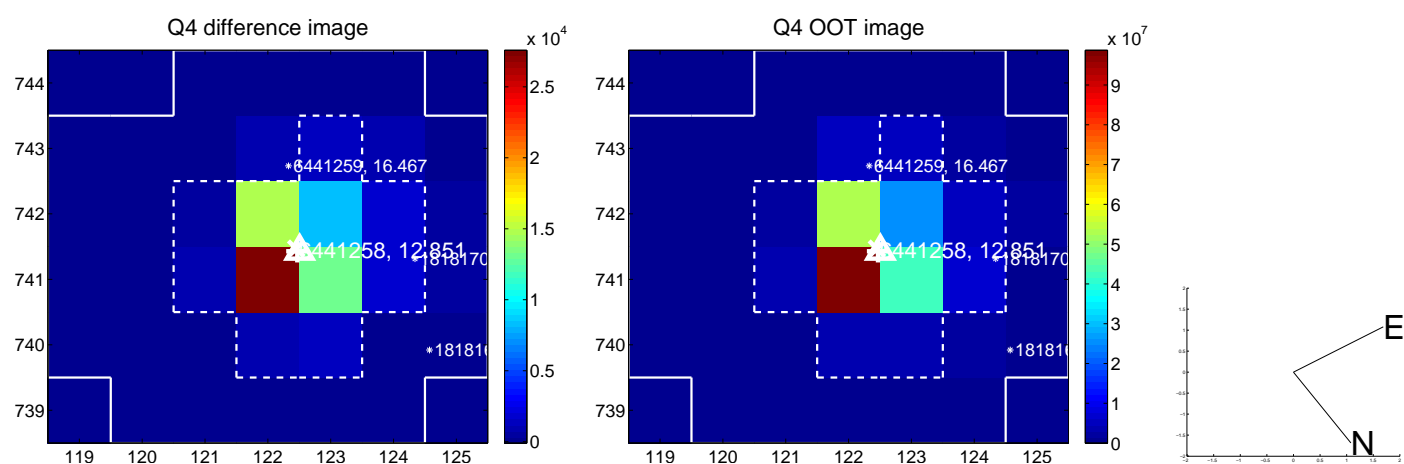
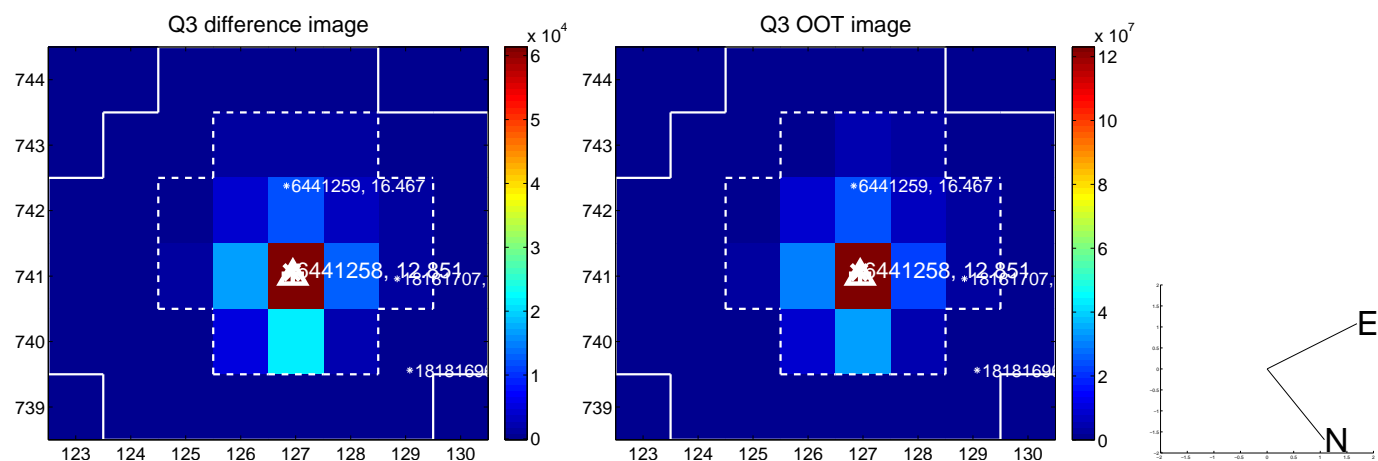
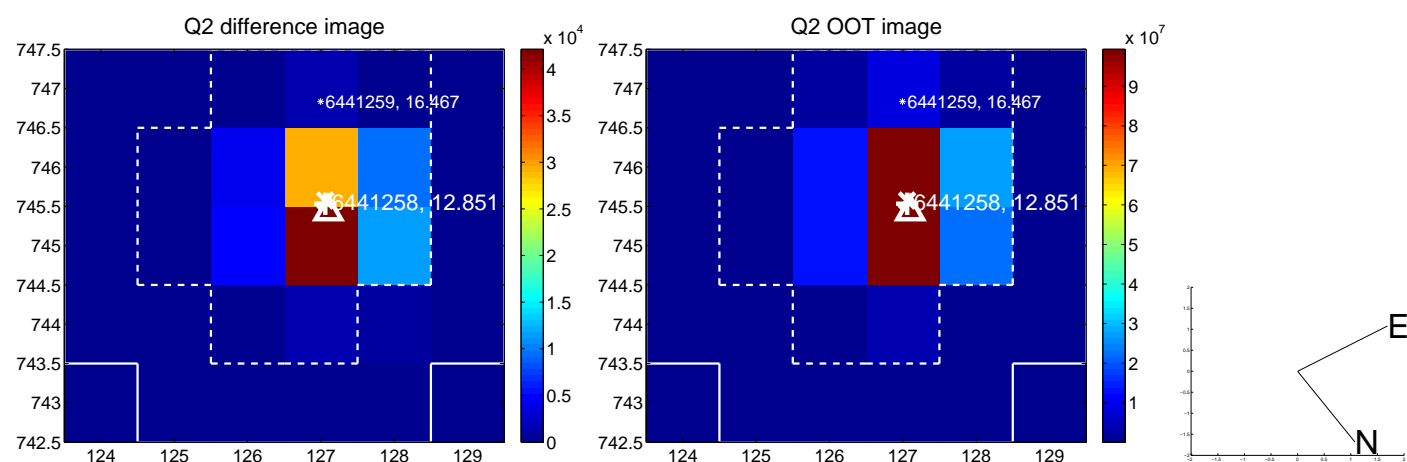
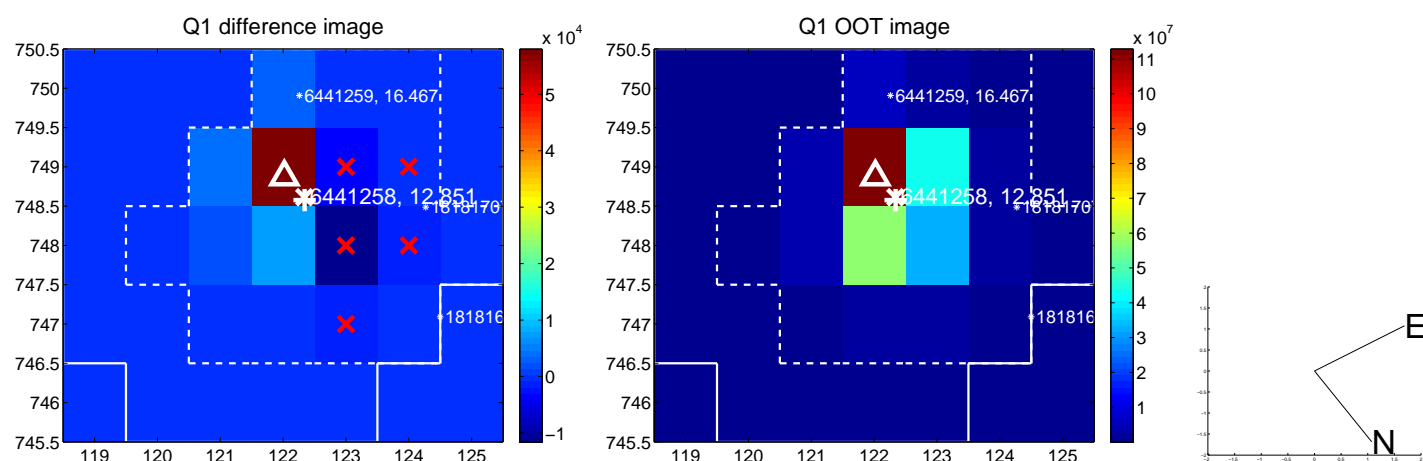
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.076 ± 0.124	0.61	-0.018 ± 0.085	0.073 ± 0.131
PRF-fit source offset from KIC position	0.224 ± 0.121	1.86	-0.024 ± 0.088	0.223 ± 0.124
photometric centroid source offset	0.52 ± 0.10	5.29	-0.23 ± 0.09	0.46 ± 0.10

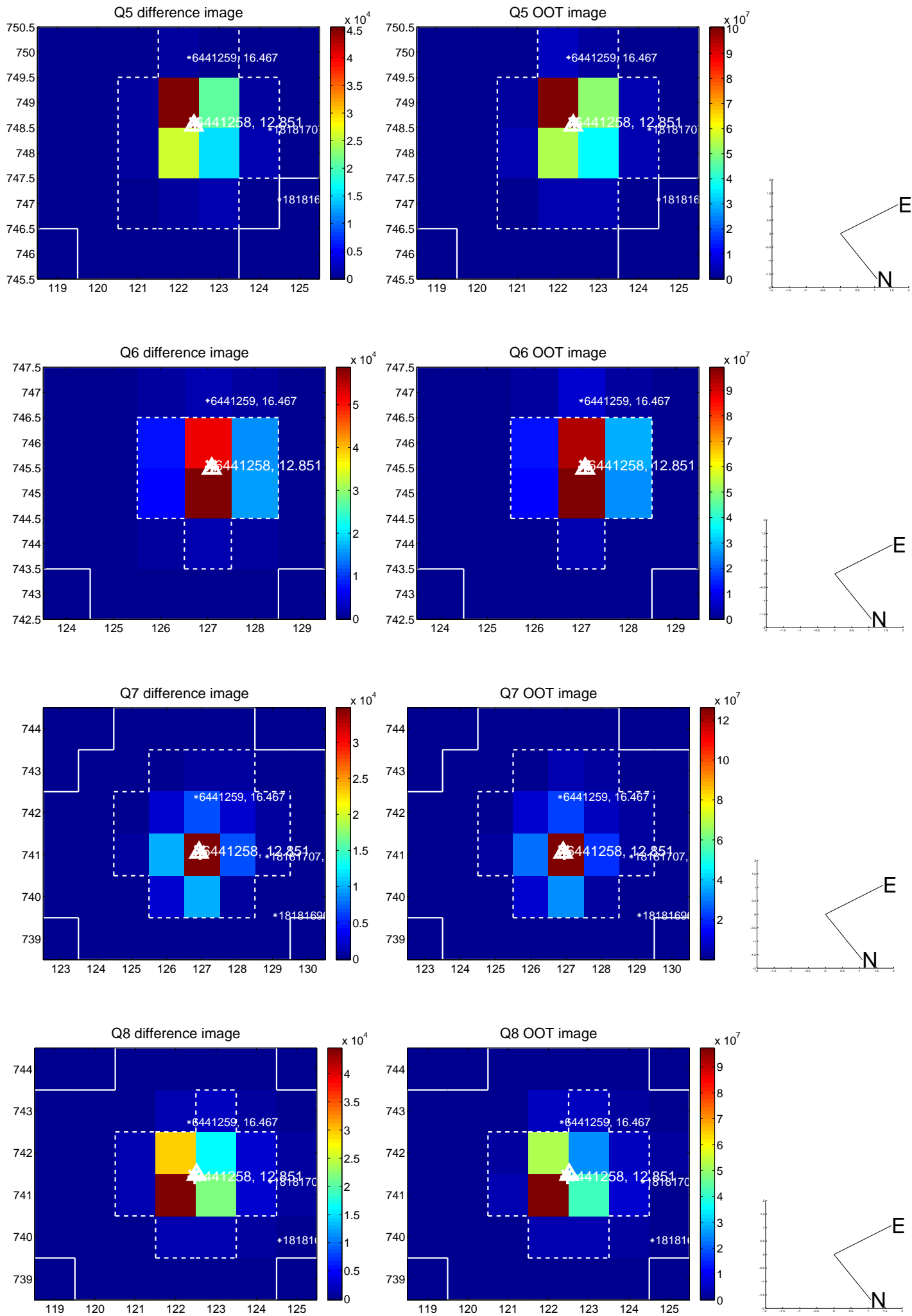


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

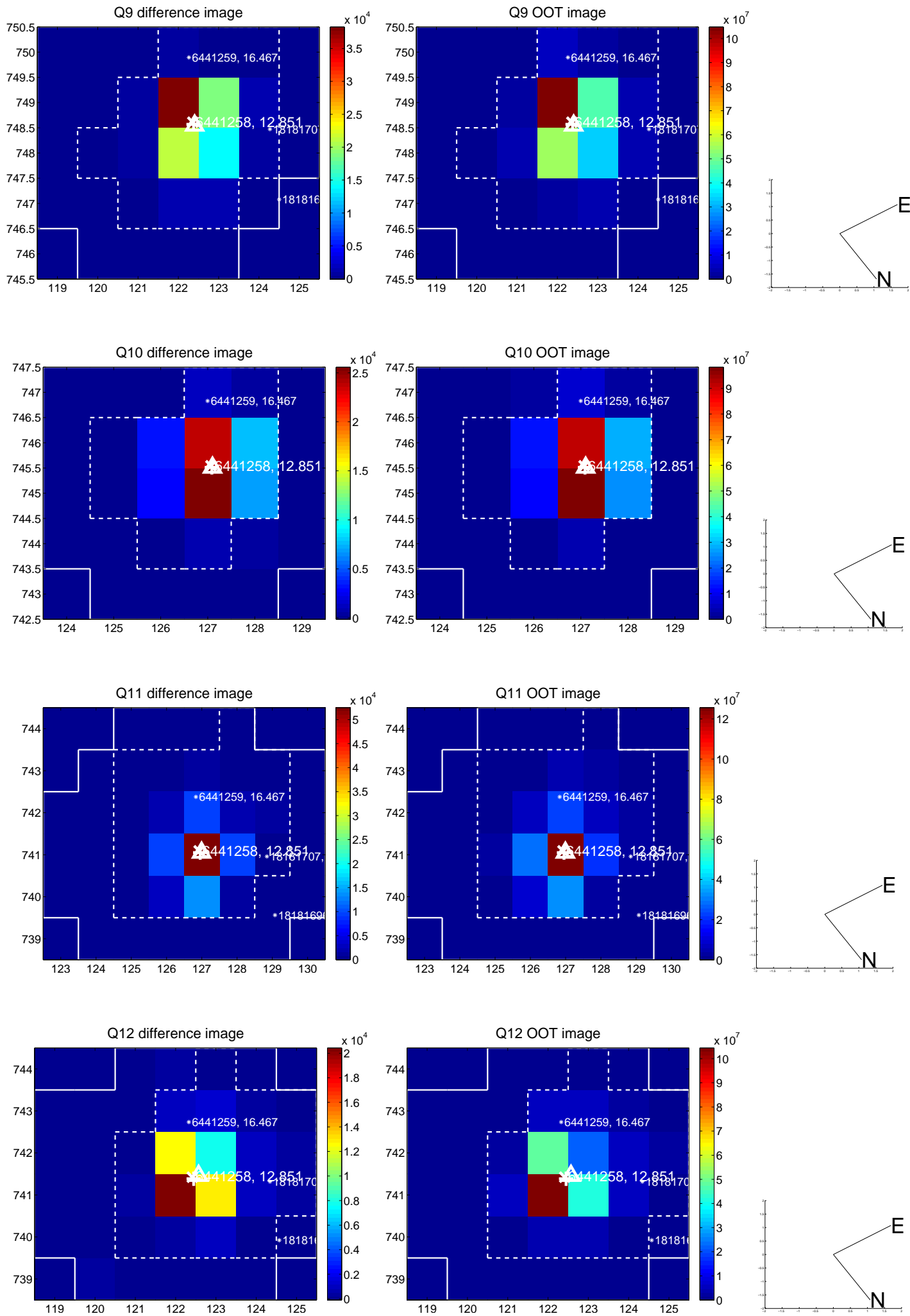
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



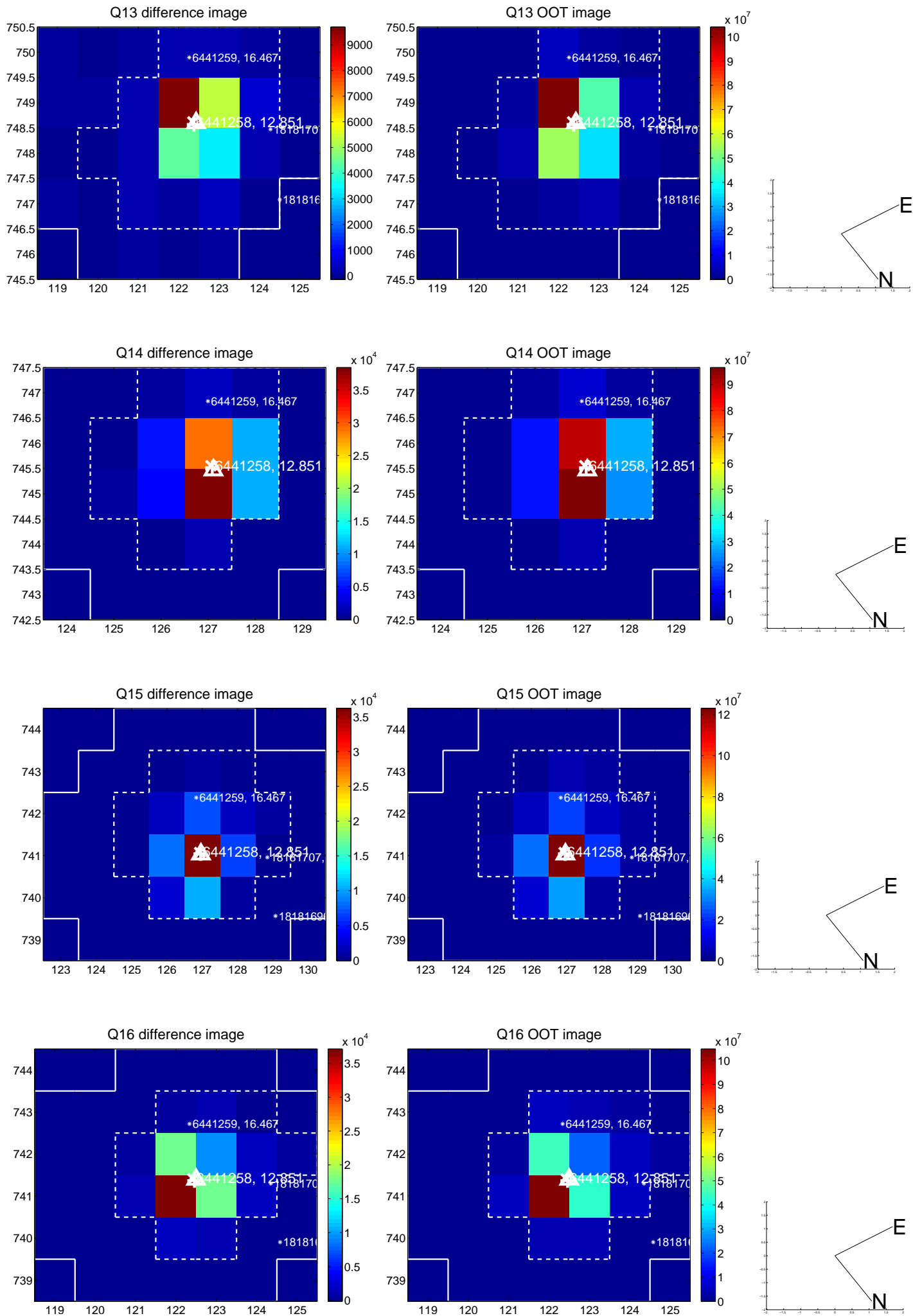
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



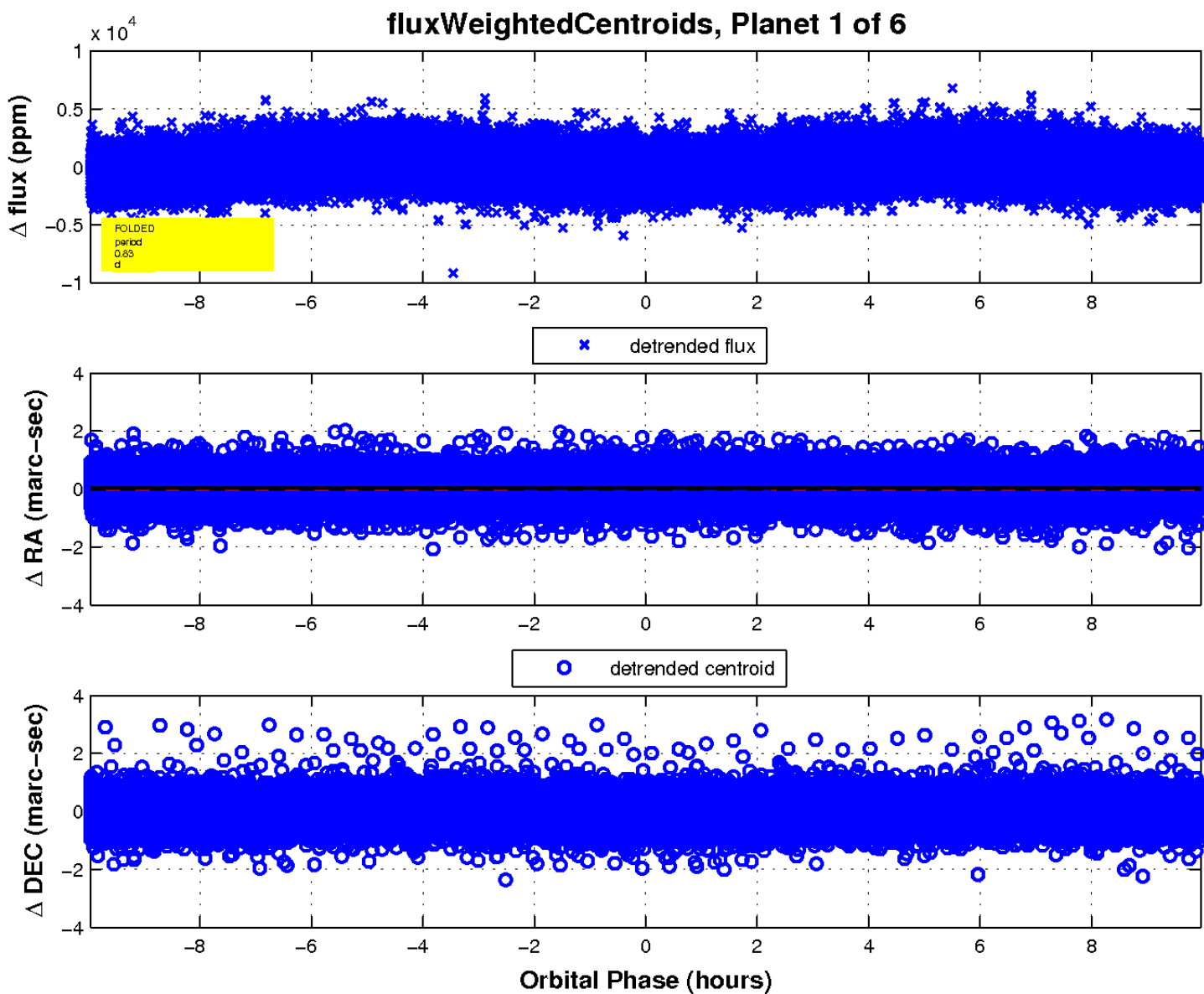
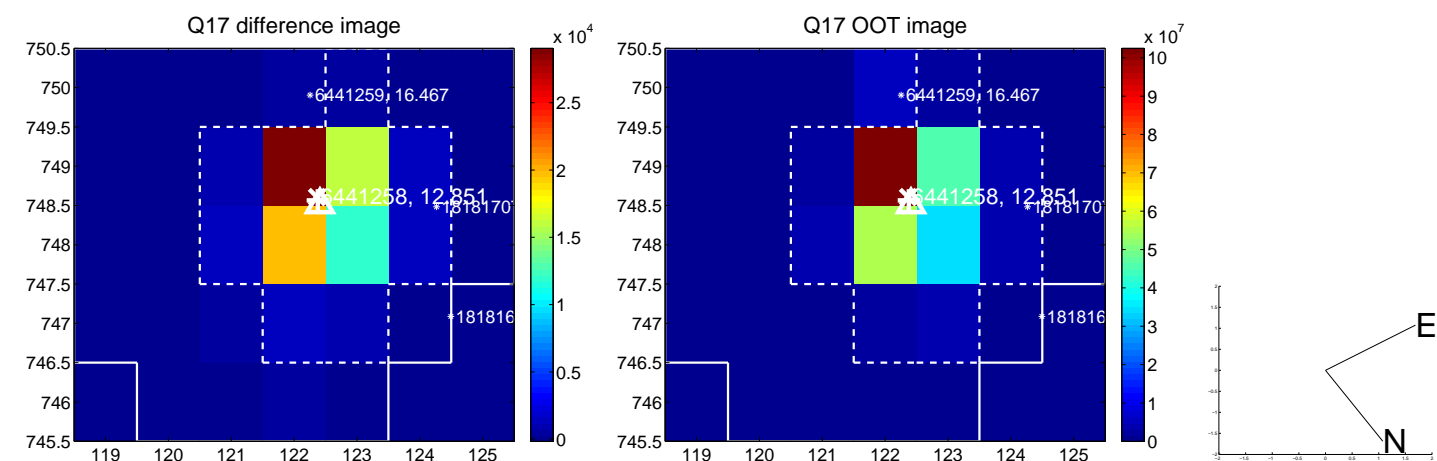
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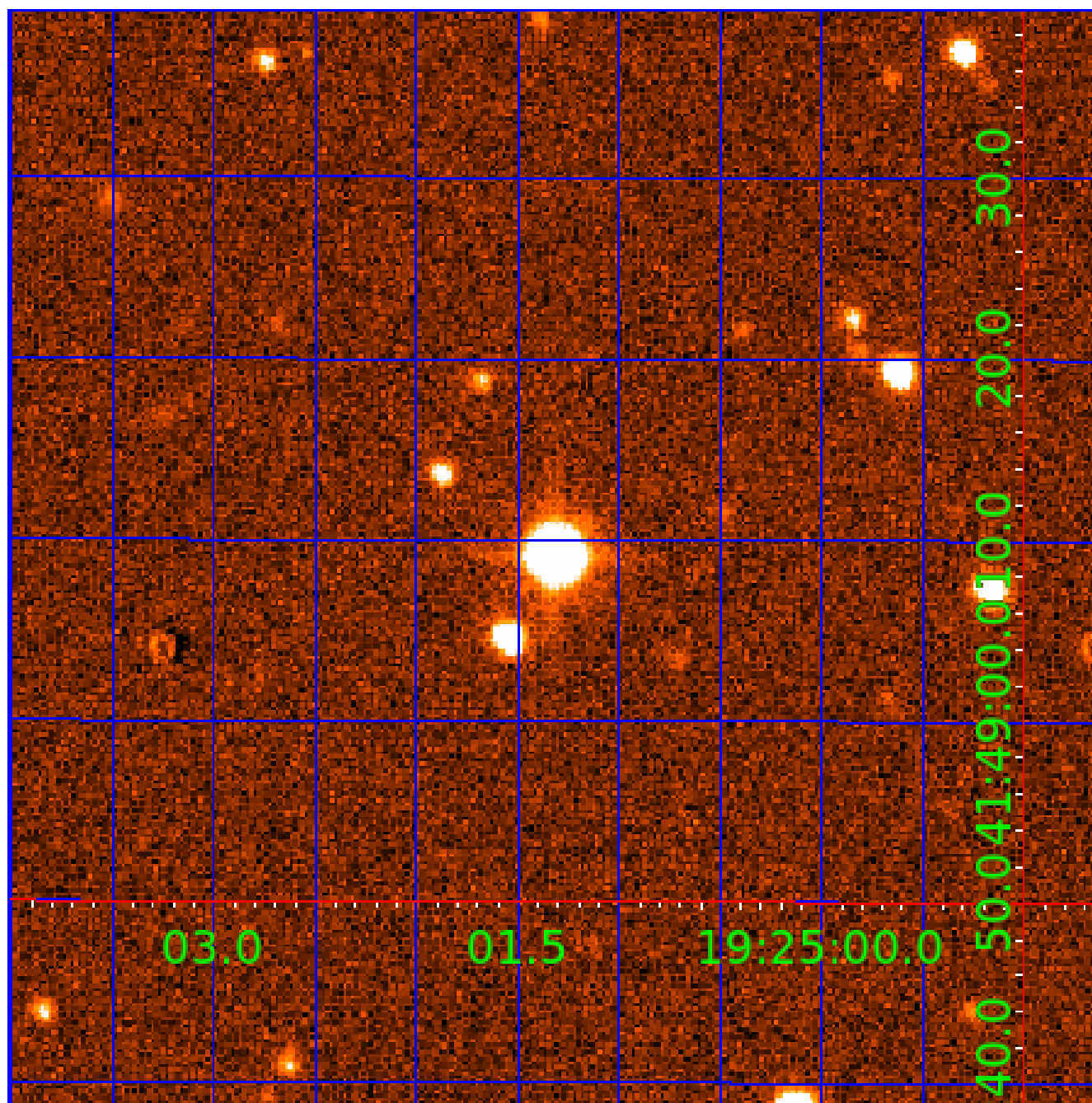


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006441258

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})
006441258-01	OBS	No	0.830766	131.946682	96.9	5.417	13.5	7.7	1.34	6773	1.42	9734.49
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
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006441258-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006441258-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
006441258-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
006441258-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006441258-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

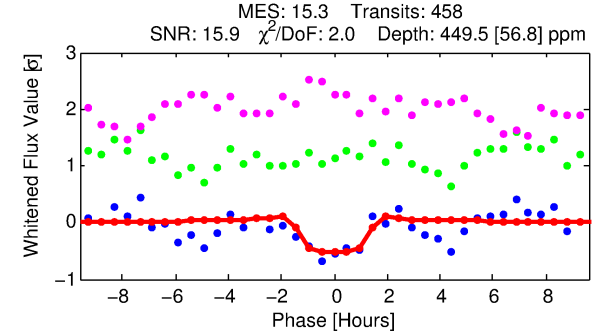
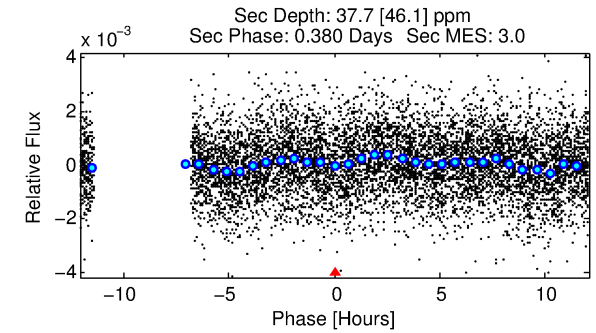
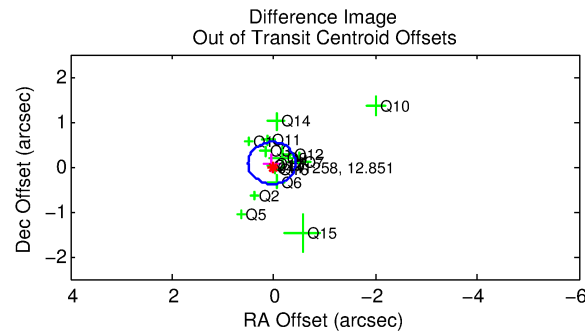
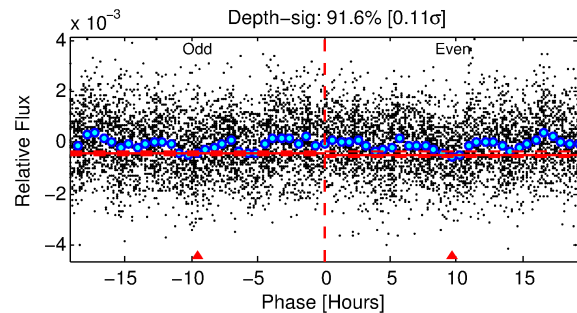
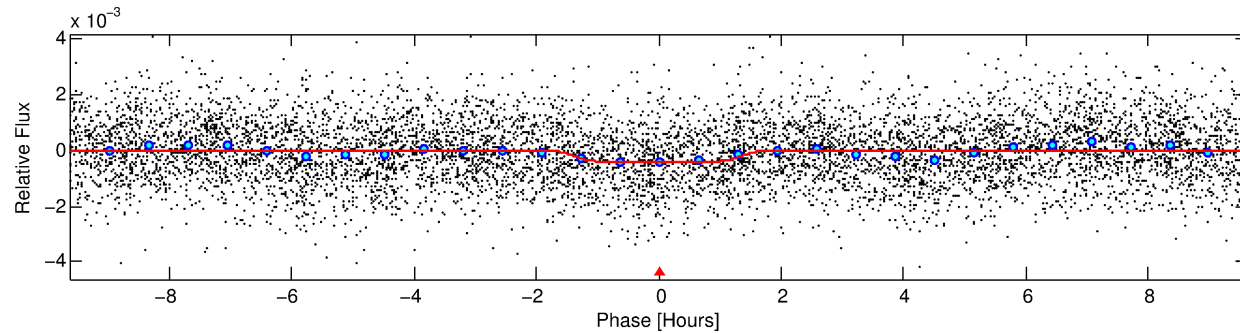
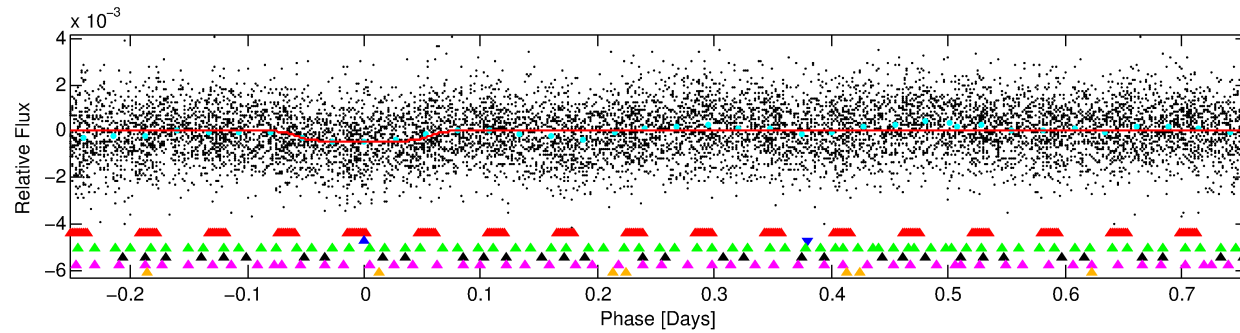
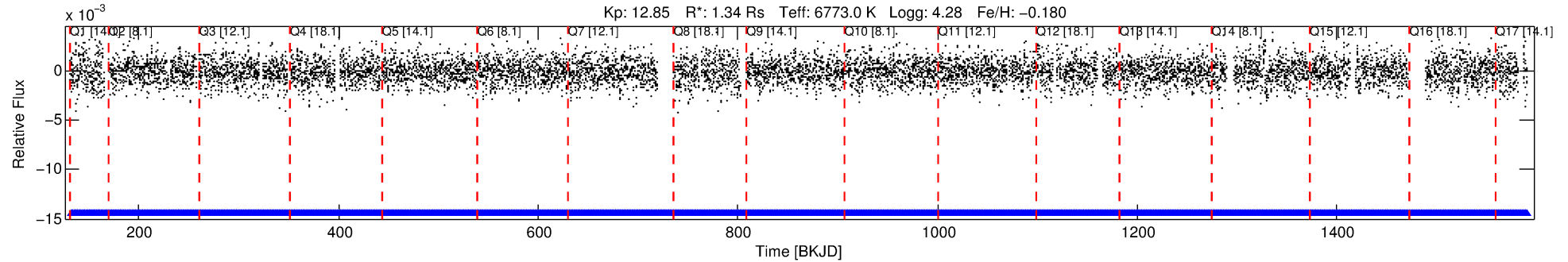
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006441258-02

No Significant Match Found

DV One-Page Summary

KIC: 6441258 Candidate: 2 of 6 Period: 1.009 d



DV Fit Results:

Period = 1.00878 [0.00001] d
Epoch = 131.9604 [0.0031] BKJD
Rp/R* = 0.0227 [0.0041]
a/R* = 1.49 [0.78]
b = 0.90 [0.20]
Seff = 7514.35 [3050.10]
Teq = 2374 [241] K
Rp = 3.33 [1.24] Re
a = 0.0213 [0.0056] AU
Ag = 0.85 [1.13] [-0.13 σ]
Teffp = 3524 [1131] K [0.99 σ]

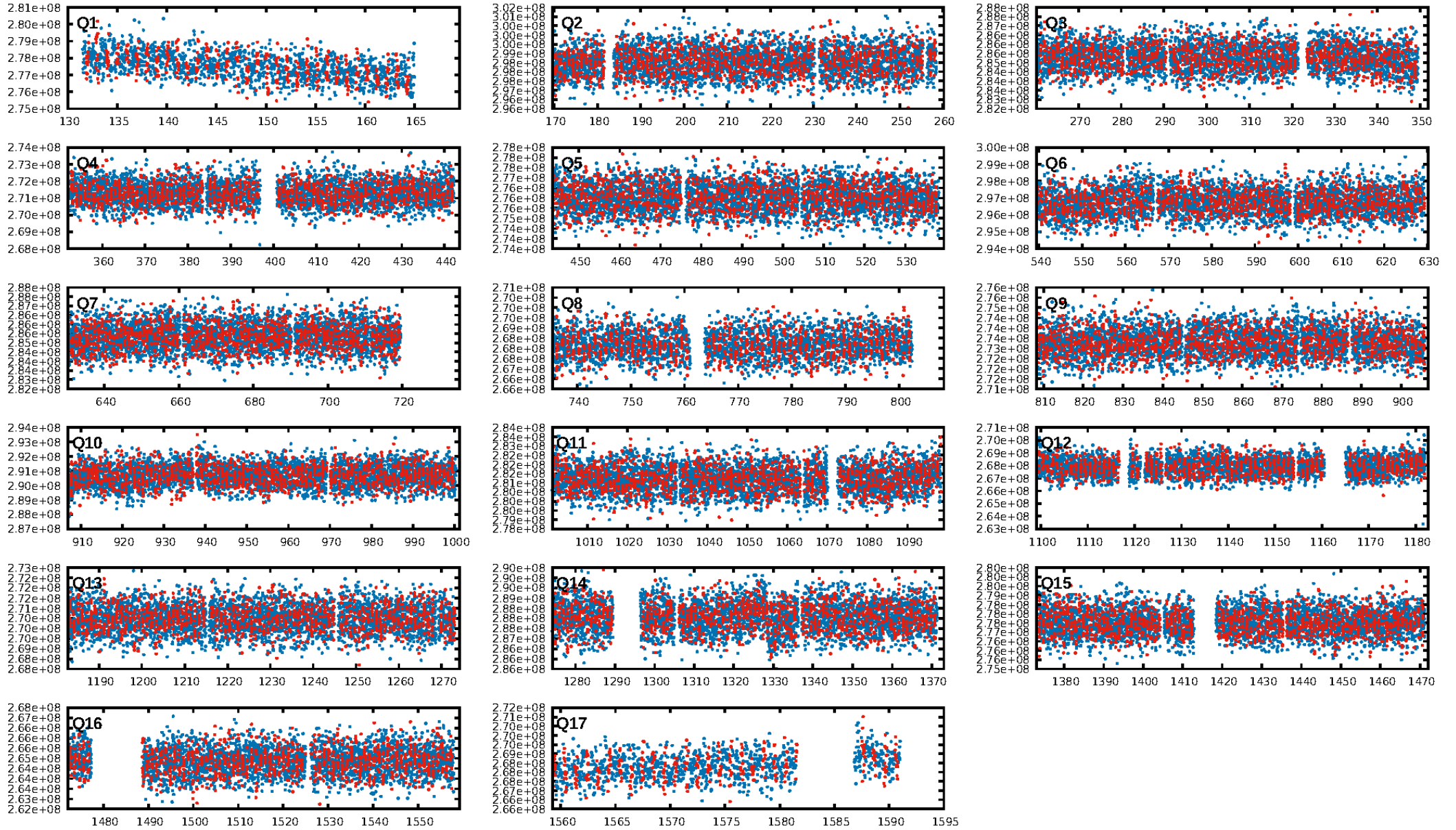
DV Diagnostic Results:

ShortPeriod-sig: 50.3% [0.68 σ]
LongPeriod-sig: 100.0% [105.72 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [438/438]
GhostDiagnostic-chr: 7.317
Centroid-sig: N/A
Centroid-so: 0.159 arcsec [5.08 σ]
OotOffset-rm: 0.091 arcsec [0.58 σ]
KicOffset-rm: 0.271 arcsec [1.44 σ]
OotOffset-st: 4/4/2/5 [15]
KicOffset-st: 4/4/2/5 [15]
DiffImageQuality-fgm: 0.60 [9/15]
DiffImageOverlap-fno: 0.00 [0/17]

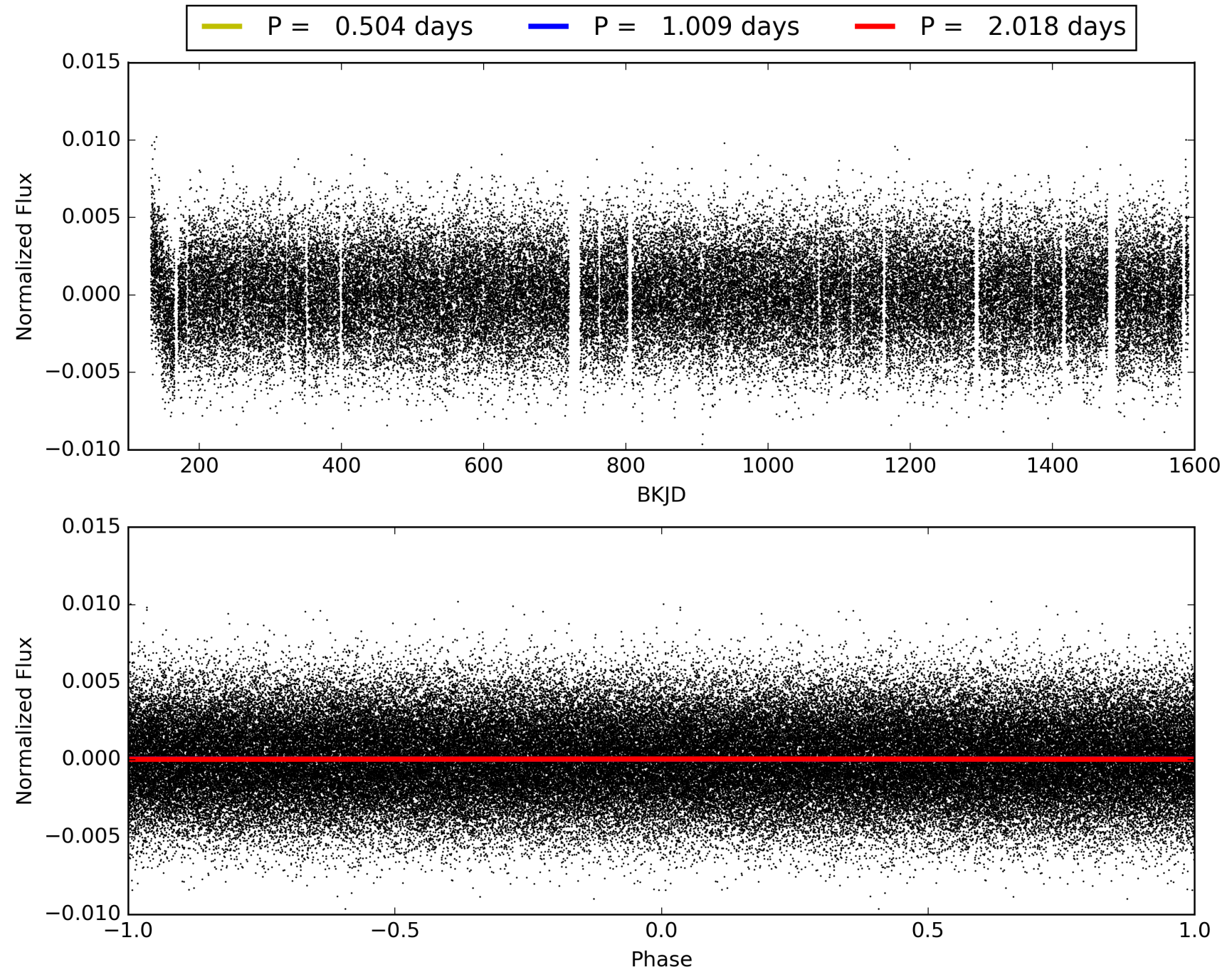
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:31:03 Z

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

TCE 006441258-02, PDC Light Curves

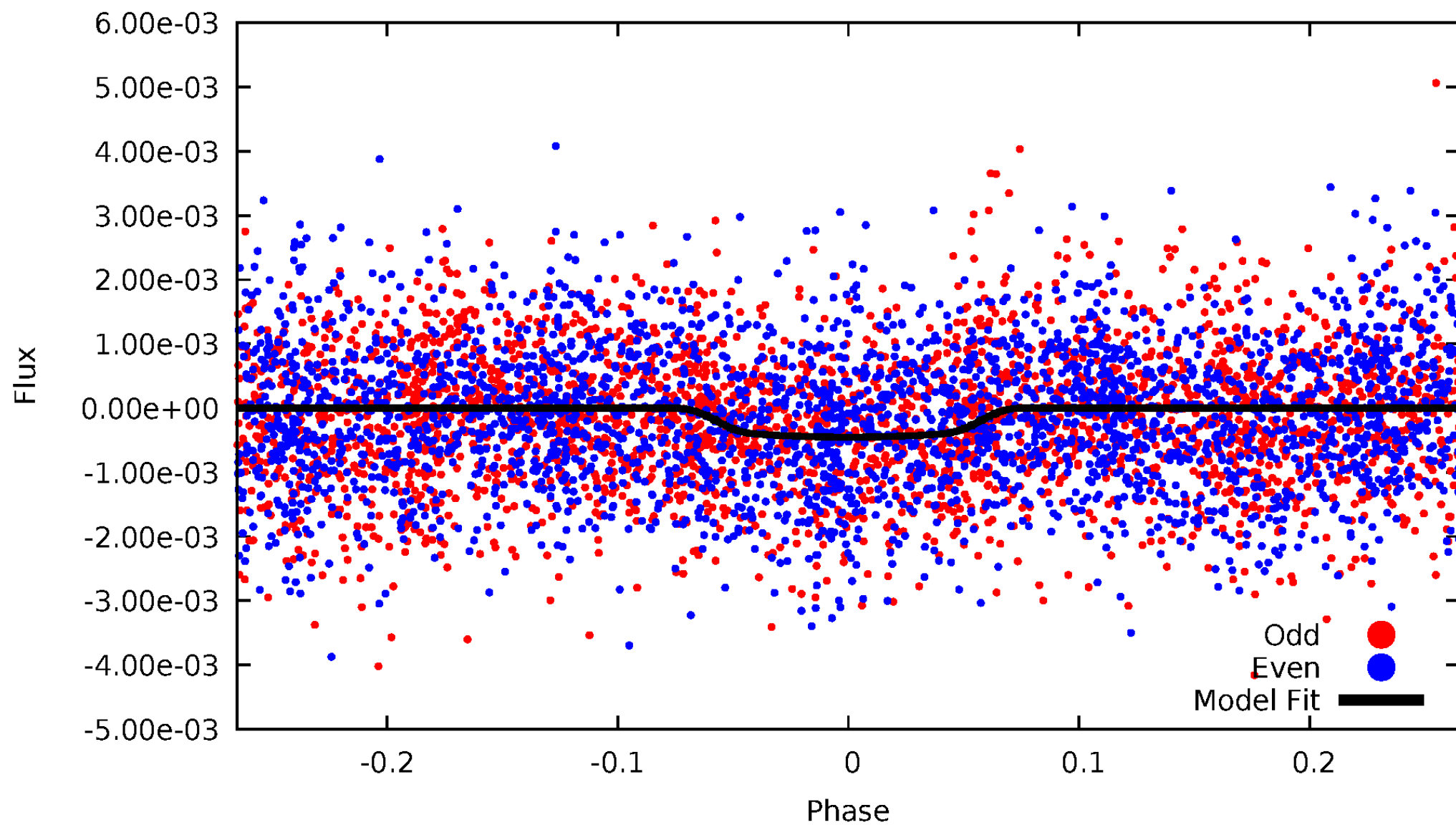


TCE 006441258-02



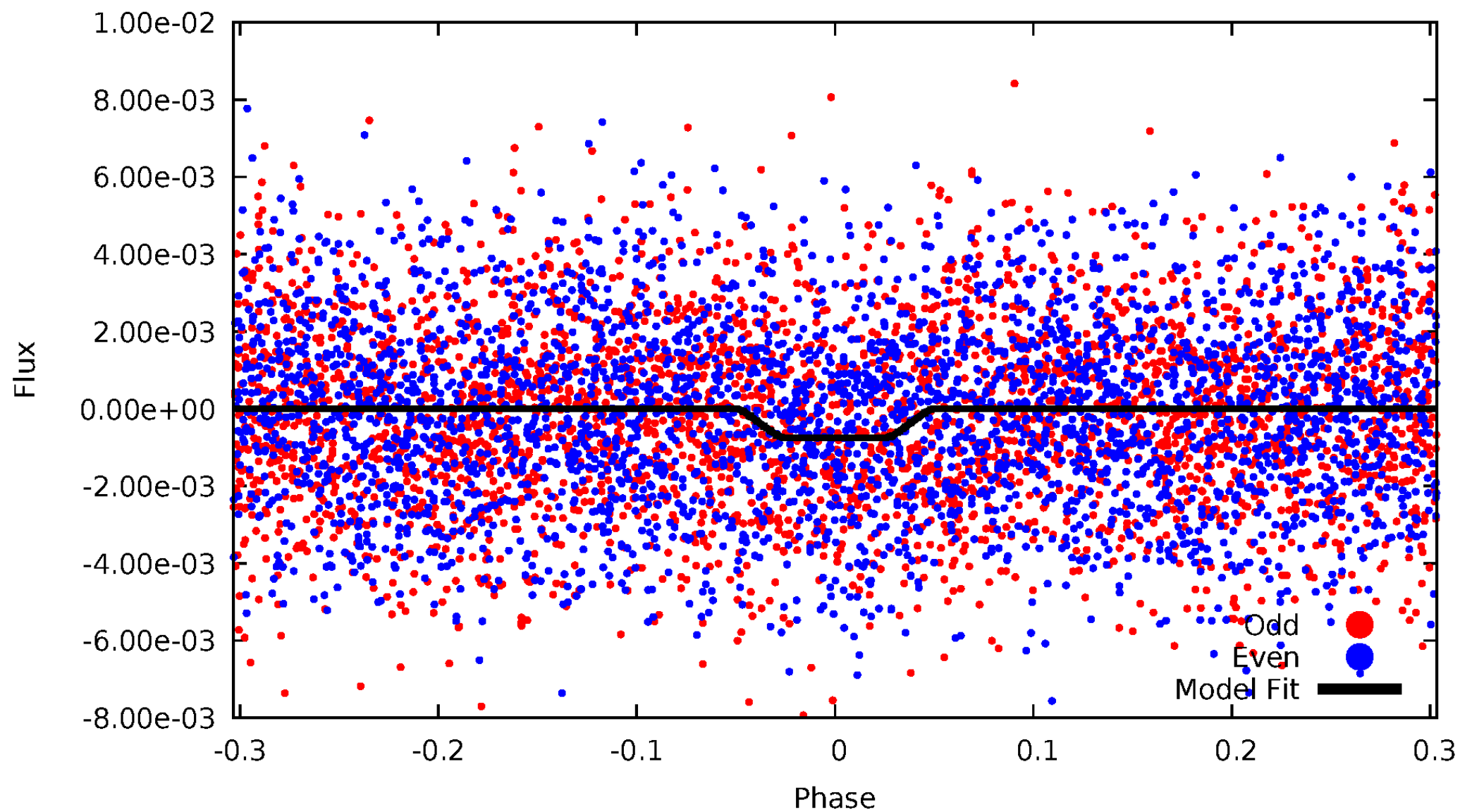
DV Odd/Even

TCE 006441258-02



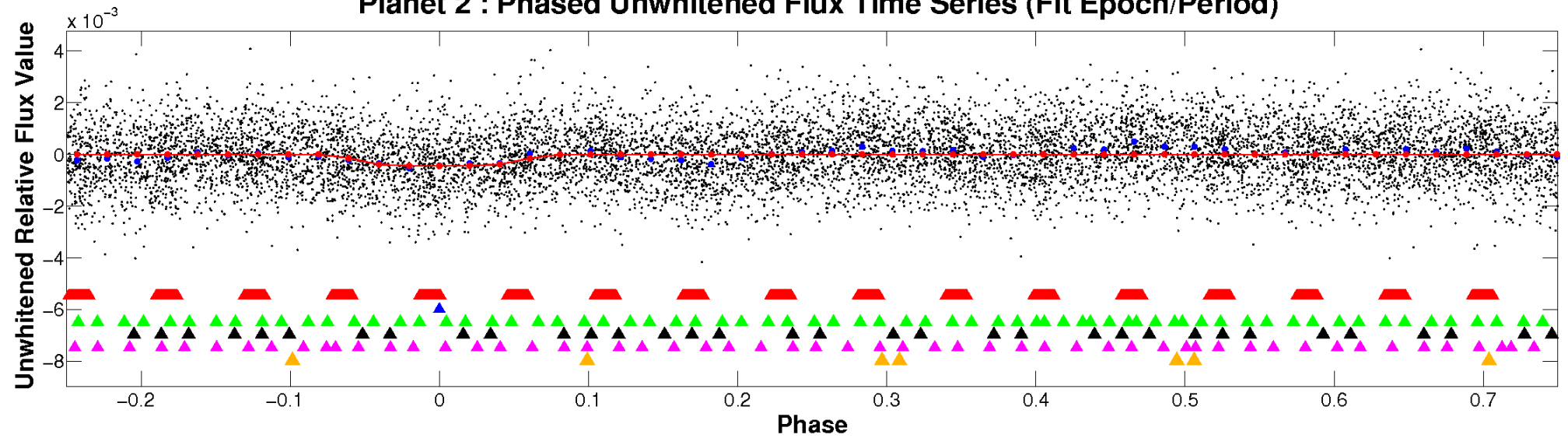
ALT Odd/Even

TCE 006441258-02

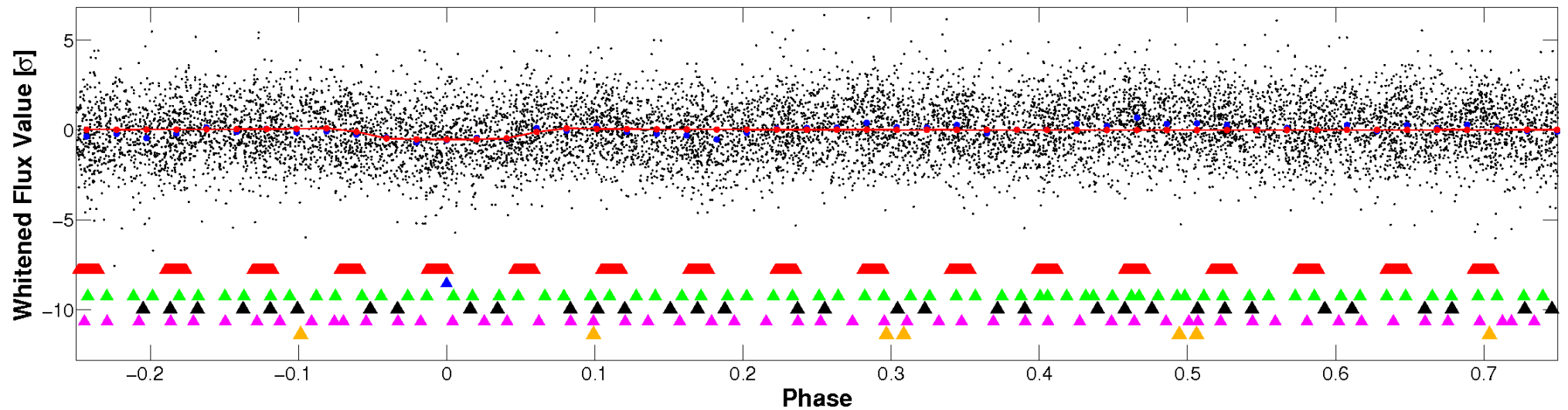


Non-Whitened Vs. Whitened Light Curve

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

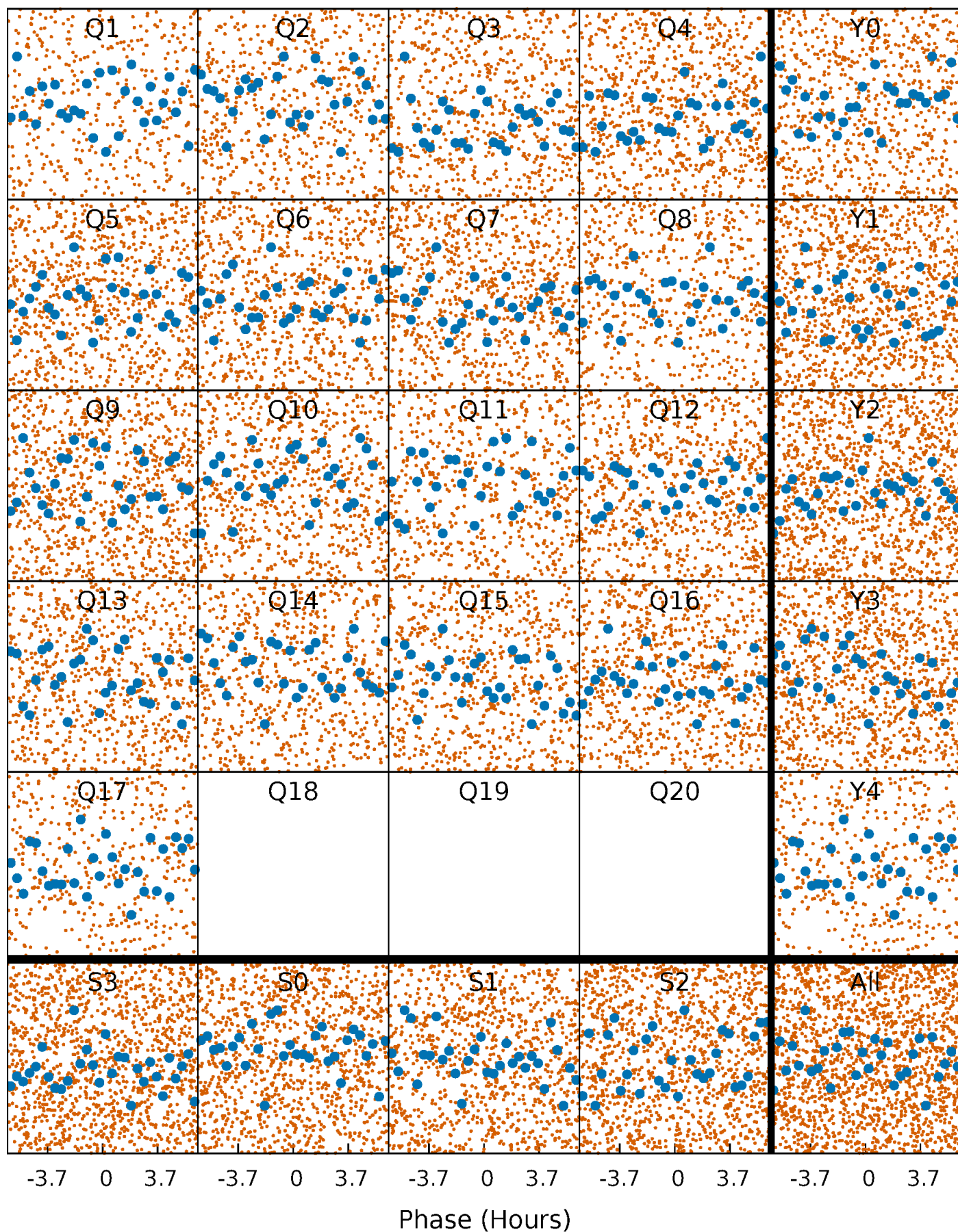


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



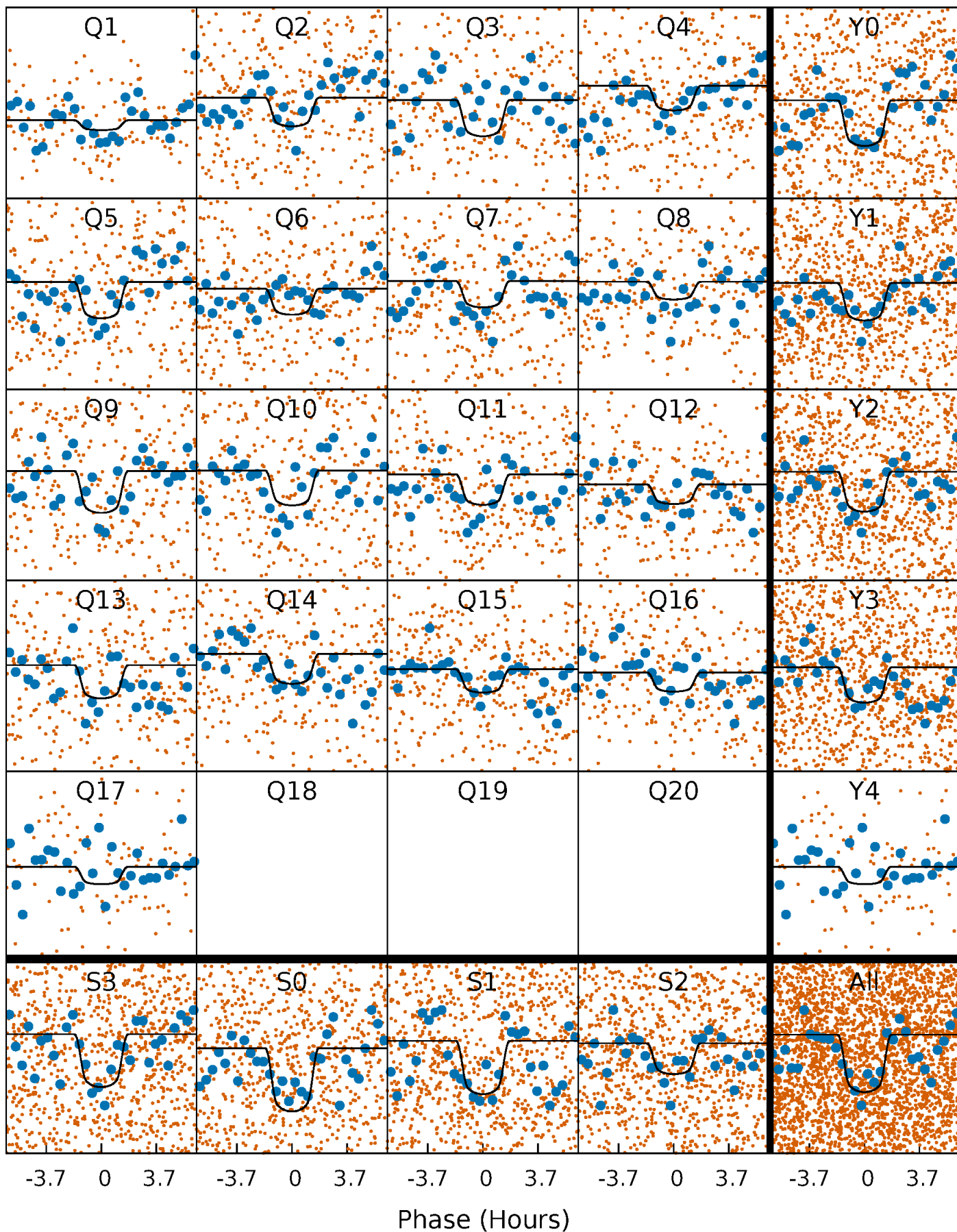
PDC Quarter-Phased Transit Curves

TCE 006441258-02 P= 1.008777 Days $T_0=131.960386$ (BKJD)



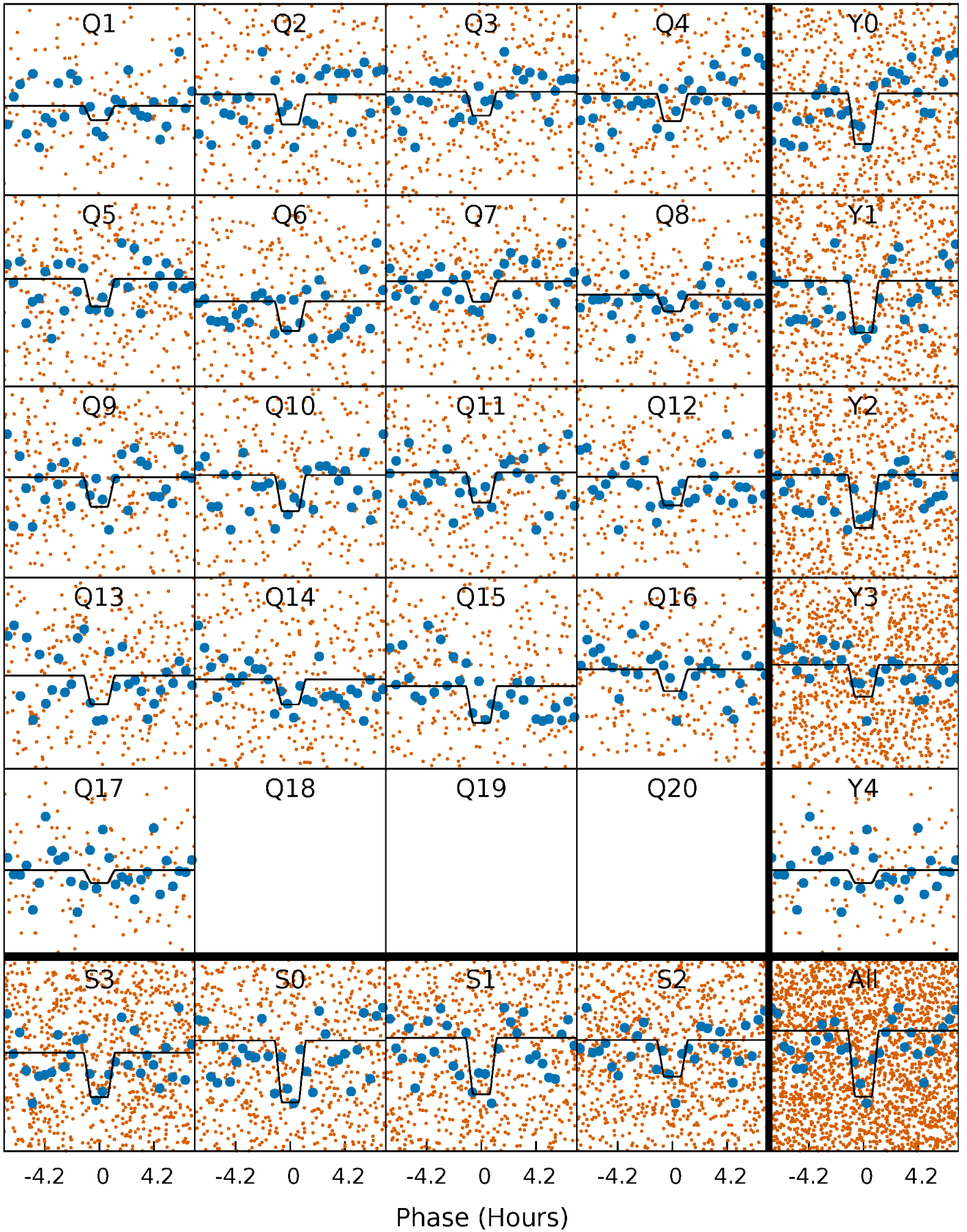
DV Quarter-Phased Transit Curves

TCE 006441258-02 P= 1.008777 Days $T_0=131.960386$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

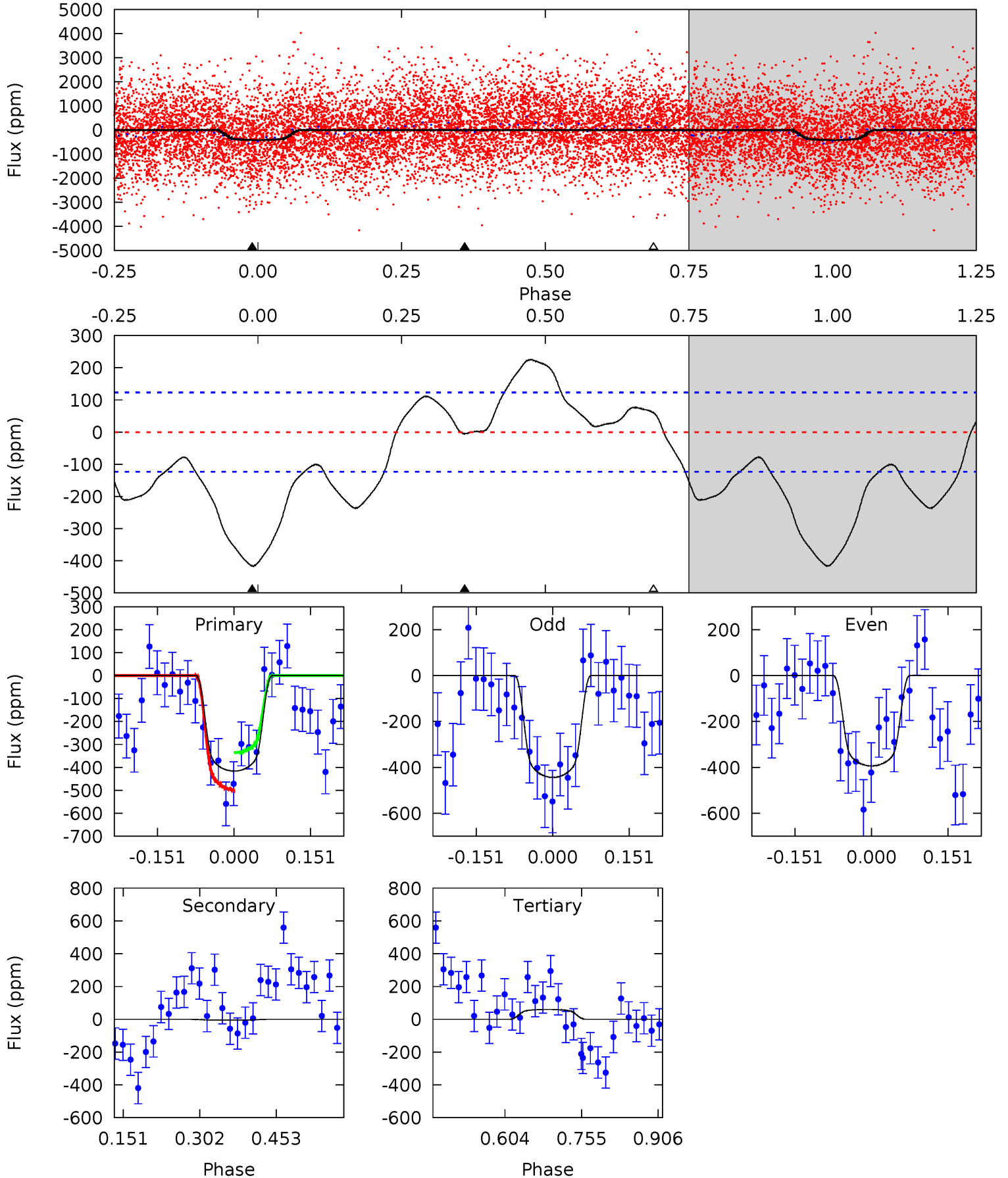
TCE 006441258-02 P= 1.008750 Days $T_0=131.965348$ (BKJD)



DV Model-Shift Uniqueness Test

006441258-02, P = 1.008777 Days, E = 130.951609 Days

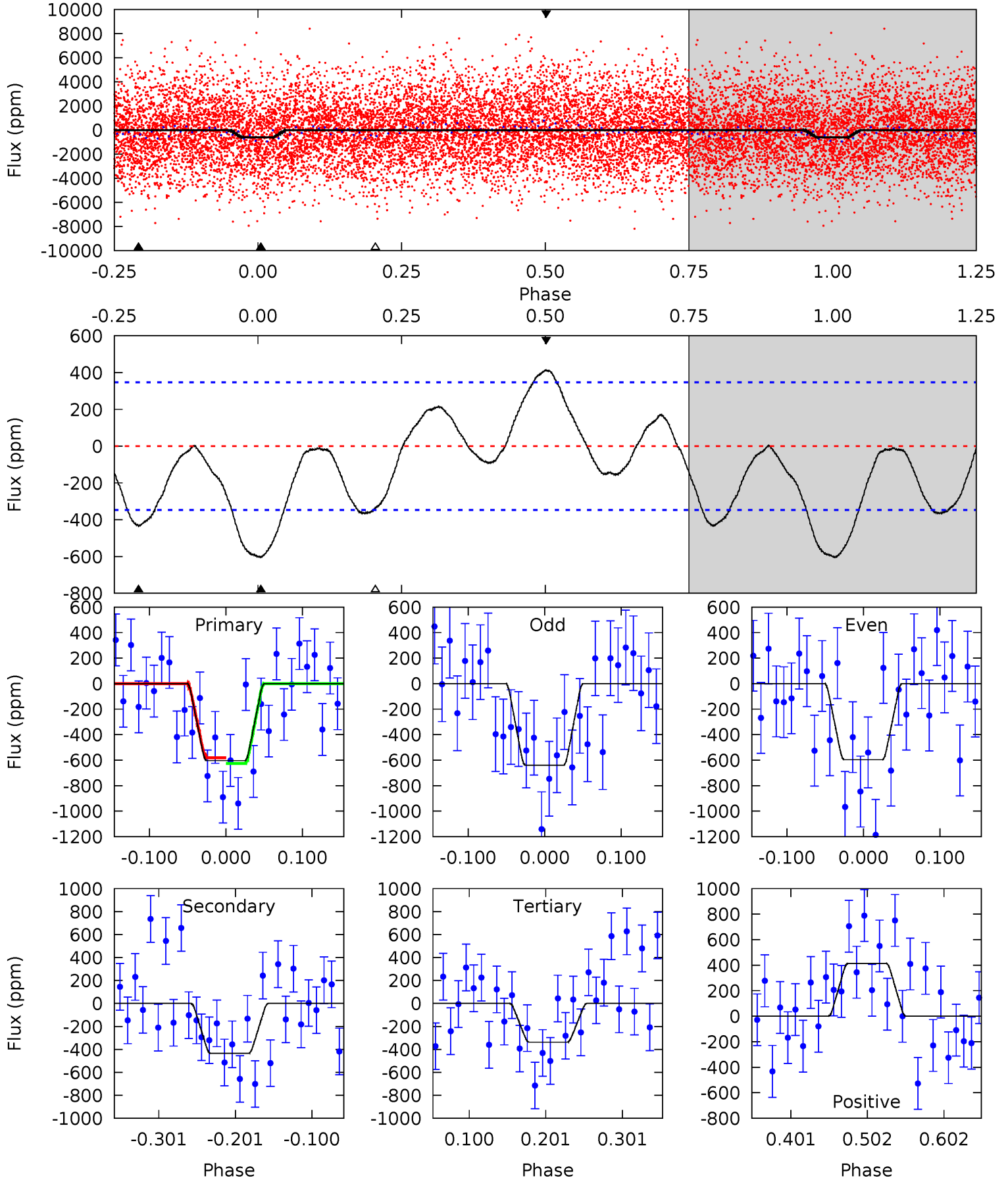
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.1	0.17	-2.17	0	4.48	1.44	4.58	17.3	15.1	2.34	0.17	0.90	1.03	0.35	2.90



Alt Model-Shift Uniqueness Test

006441258-02, P = 1.008750 Days, E = 130.956598 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.94	5.71	4.43	5.44	4.56	1.64	2.50	3.50	2.49	1.27	0.26	0.28	1.03	0.41	0.29



Stellar Parameters For KIC 006441258

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6773^{+188}_{-282}	$4.283^{+0.090}_{-0.195}$	$-0.180^{+0.250}_{-0.300}$	$1.344^{+0.439}_{-0.219}$	$1.273^{+0.195}_{-0.195}$	$0.739^{+0.355}_{-0.381}$
	+3%/-4%	+2%/-5%	+139%/-167%	+33%/-16%	+15%/-15%	+48%/-52%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 006441258-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-5 ± 28	$3.42^{+0.82}_{-0.74}$	3356^{+256}_{-196}	-3075^{+6526}_{-784}	$0.119^{+0.575}_{-0.591}$
Alt.	-434 ± 76	$4.13^{+0.98}_{-0.74}$	3359^{+256}_{-208}	5773^{+597}_{-487}	$6.129^{+3.385}_{-2.103}$

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

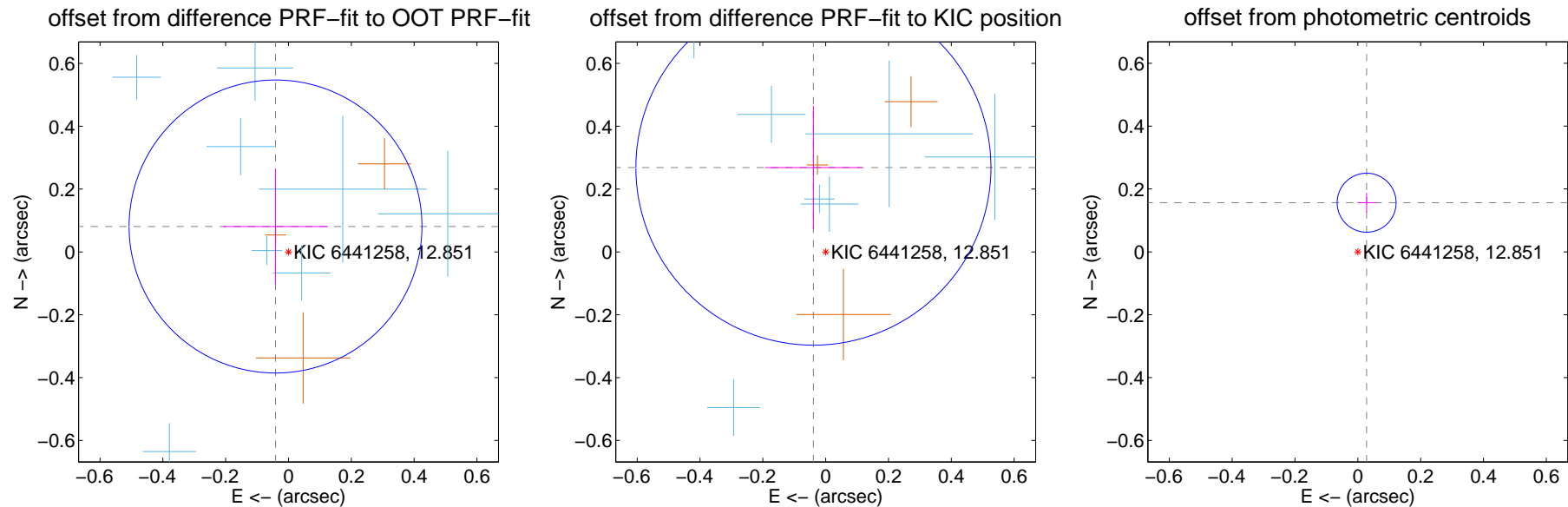
DV Centroid Data

Supplemental centroid analysis for 006441258-02. Kepler magnitude: 12.85. Transit SNR 15.93

There are 9 quarters with good PRF difference image offsets

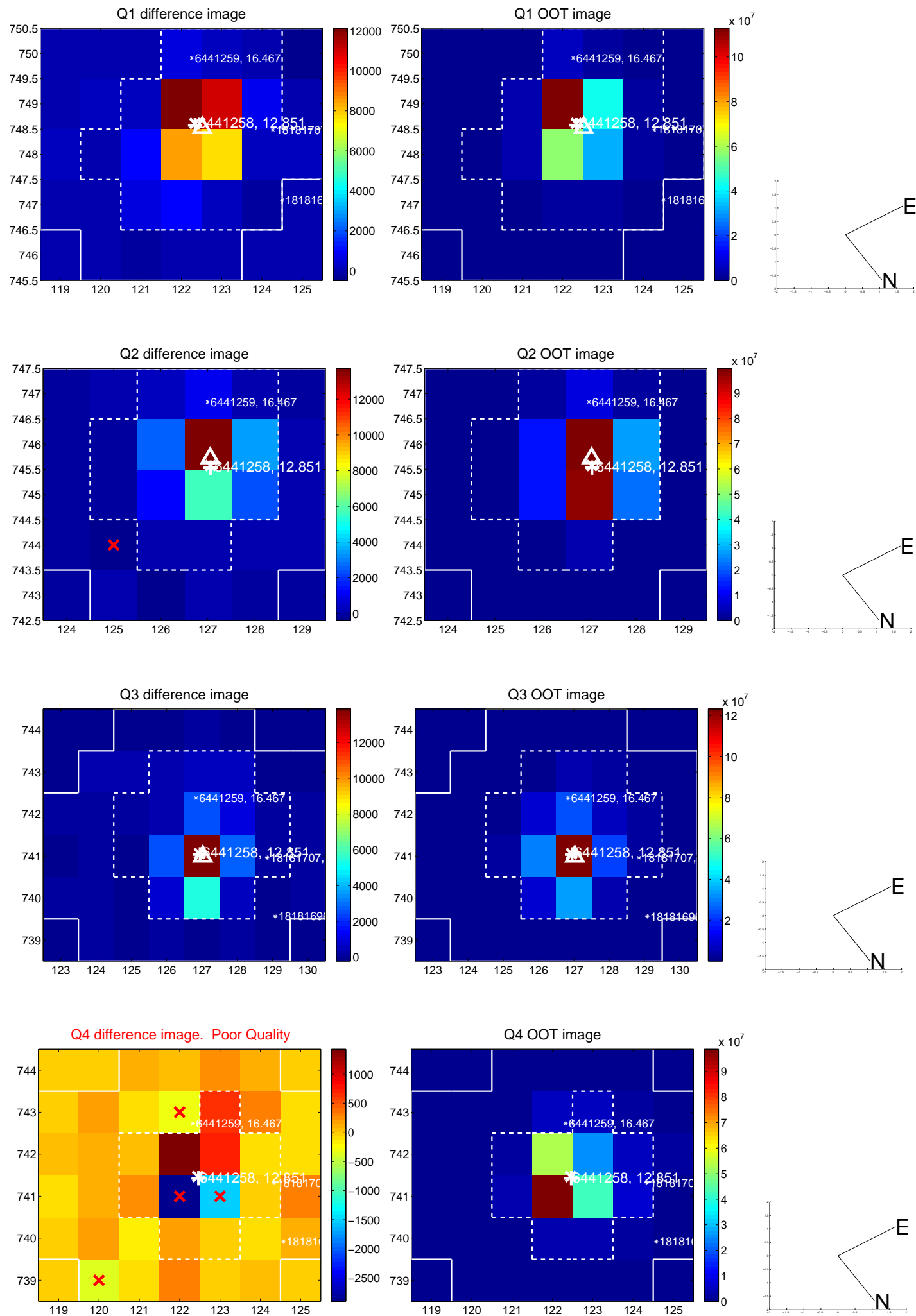
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.091 ± 0.155	0.58	0.041 ± 0.167	0.081 ± 0.183
PRF-fit source offset from KIC position	0.271 ± 0.188	1.44	0.039 ± 0.154	0.269 ± 0.196
photometric centroid source offset	0.16 ± 0.03	5.08	-0.03 ± 0.03	0.16 ± 0.03

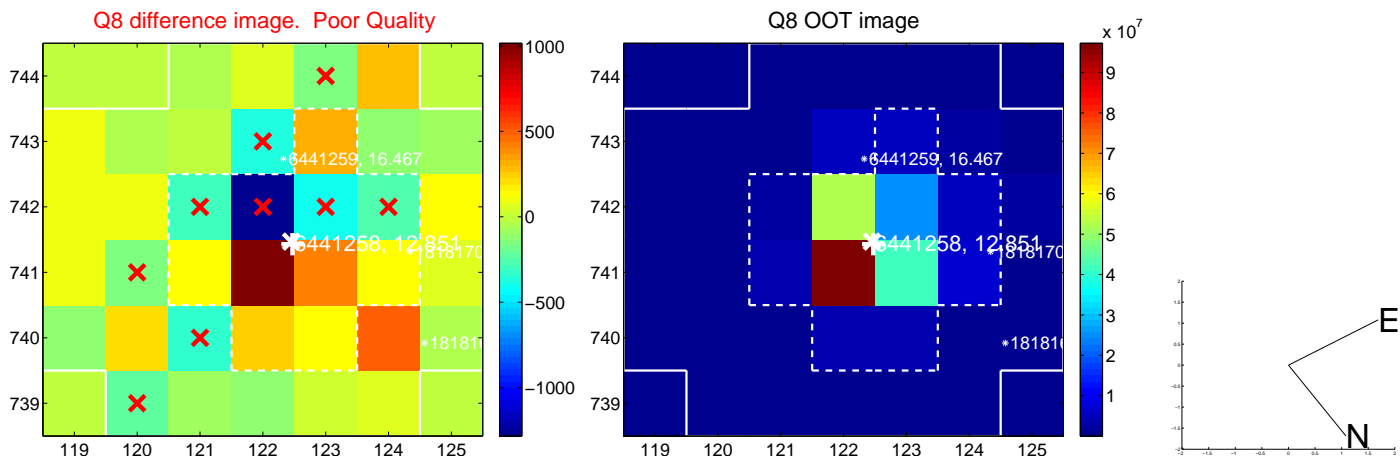
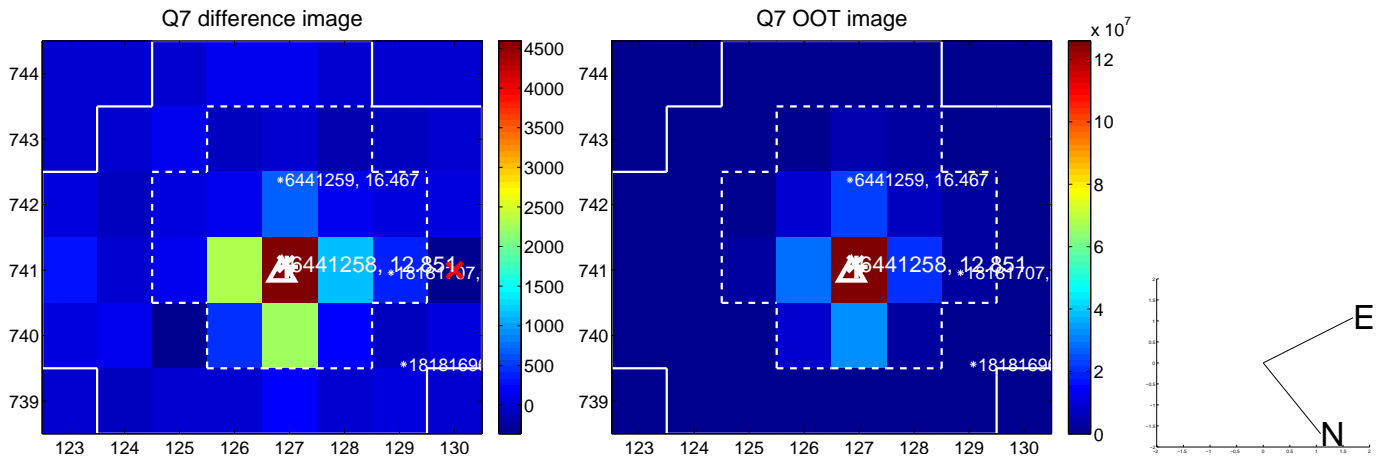
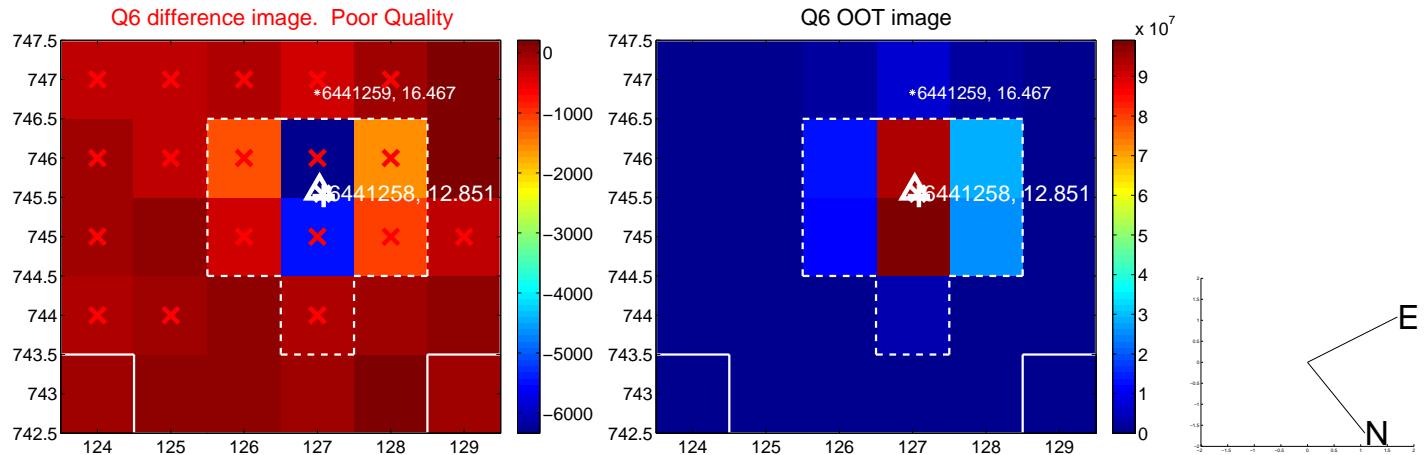
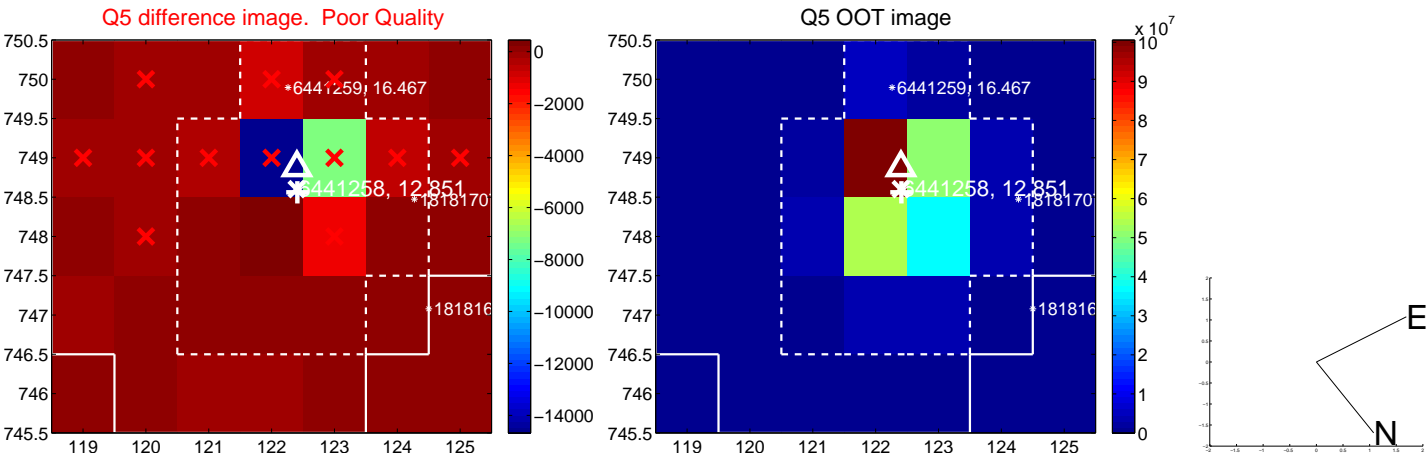


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

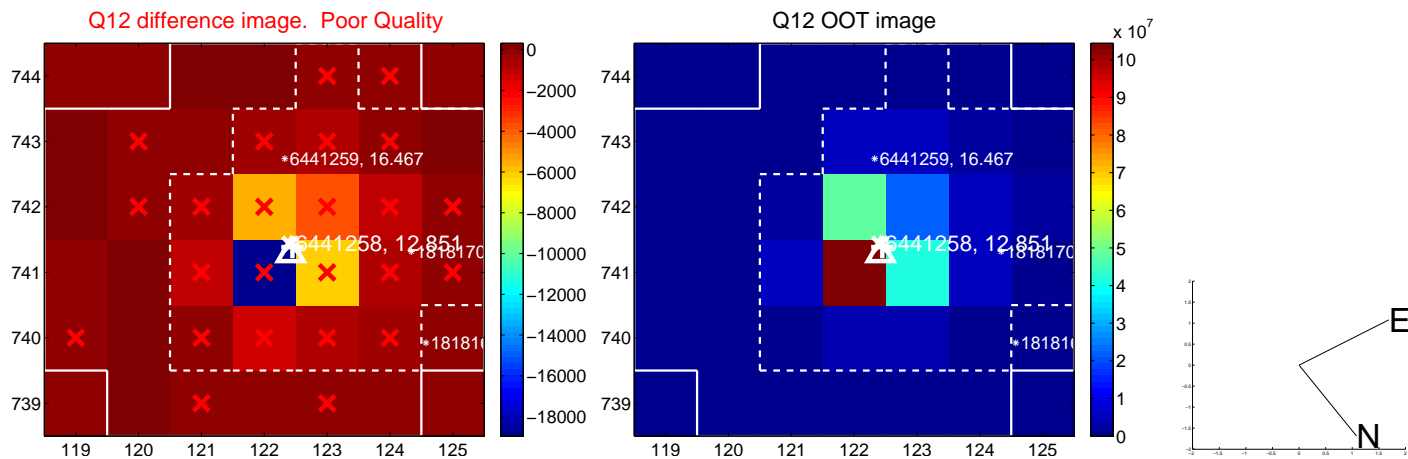
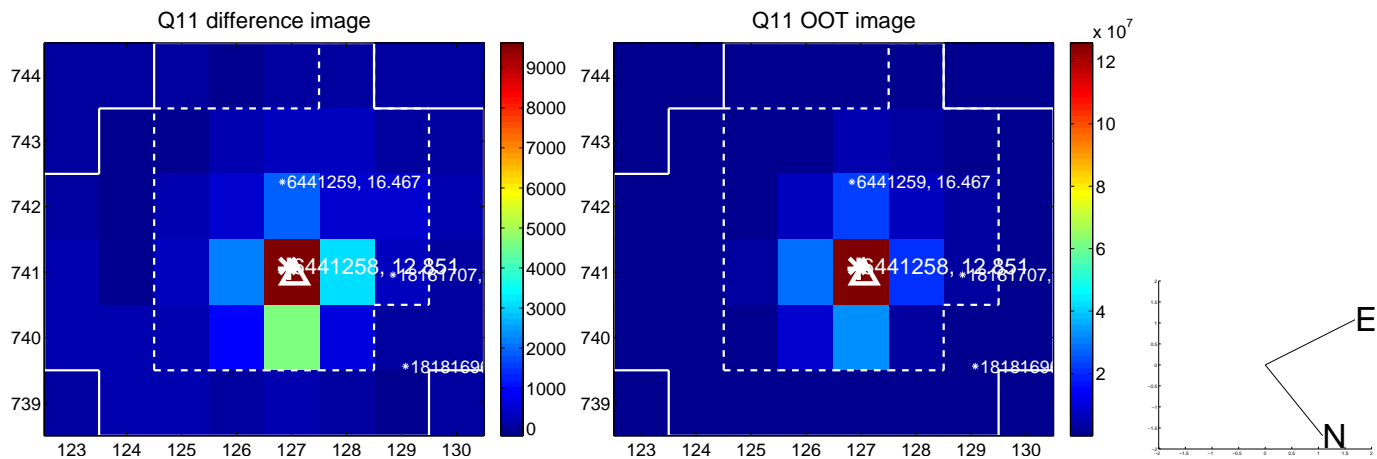
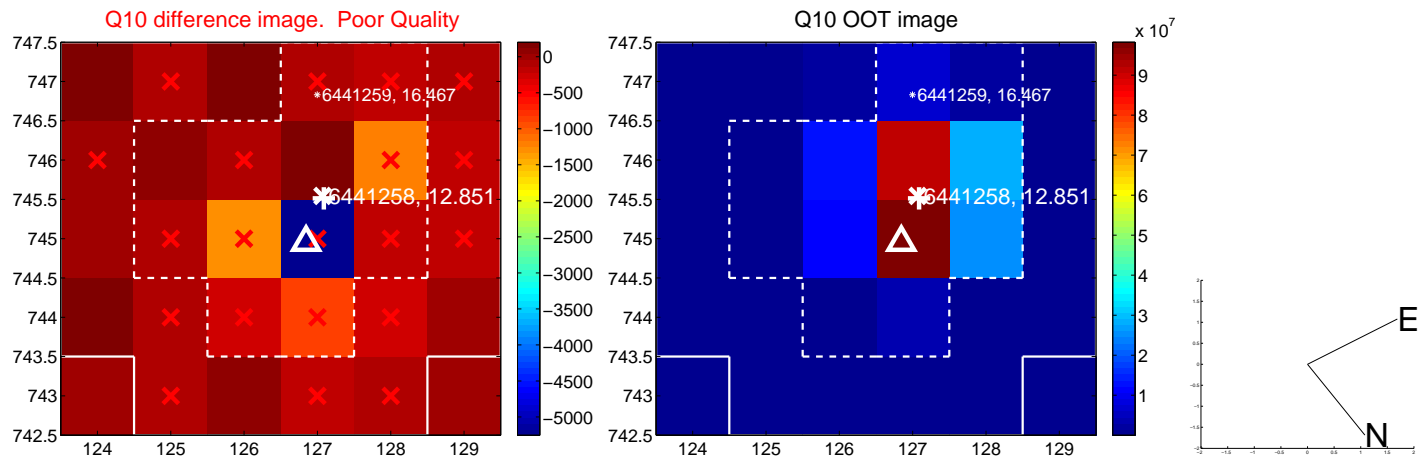
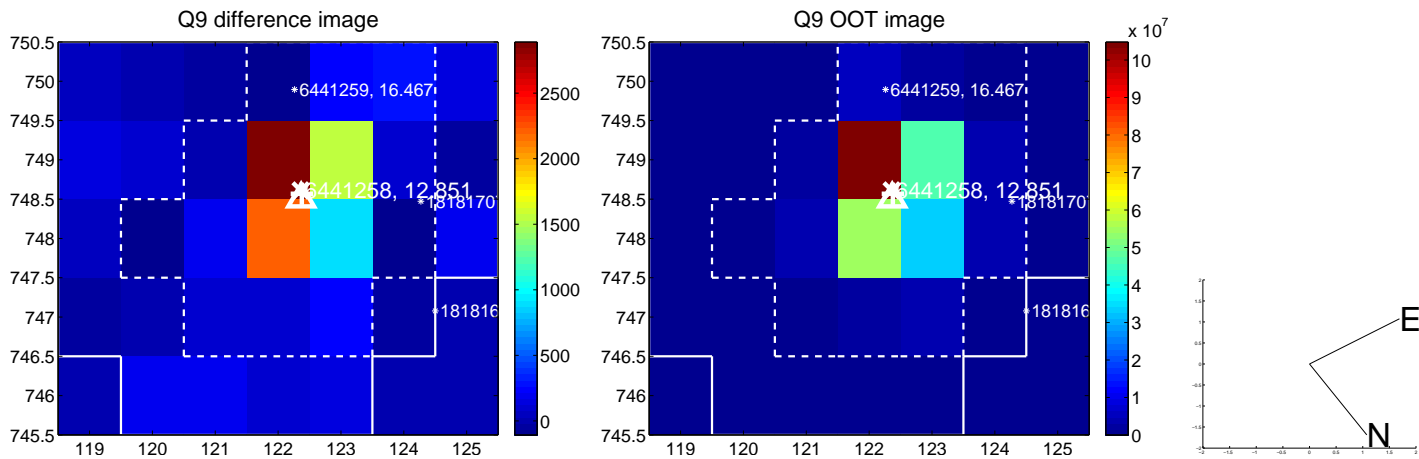
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



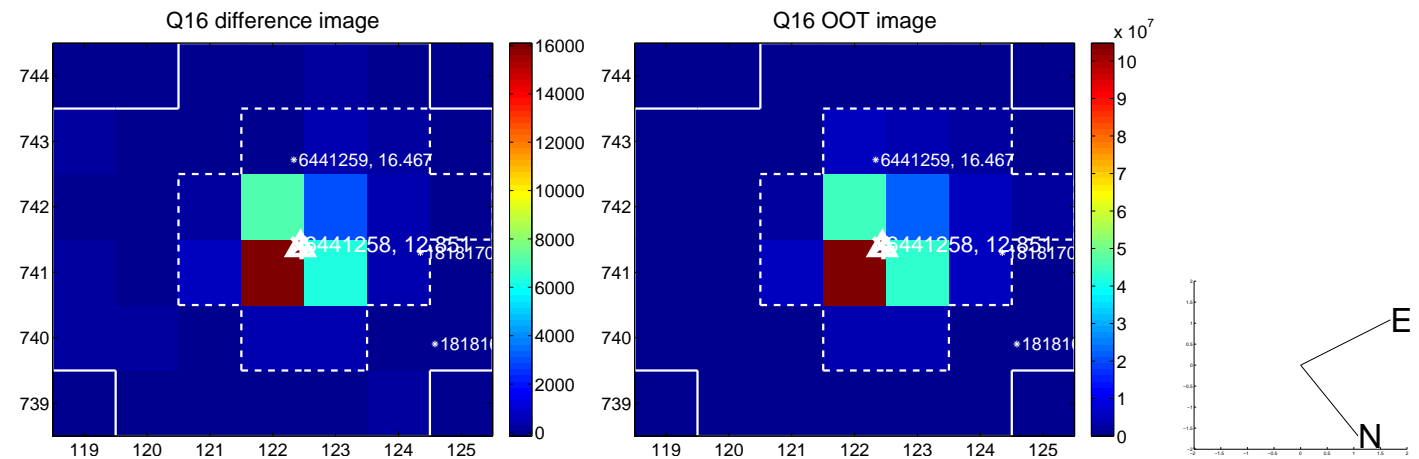
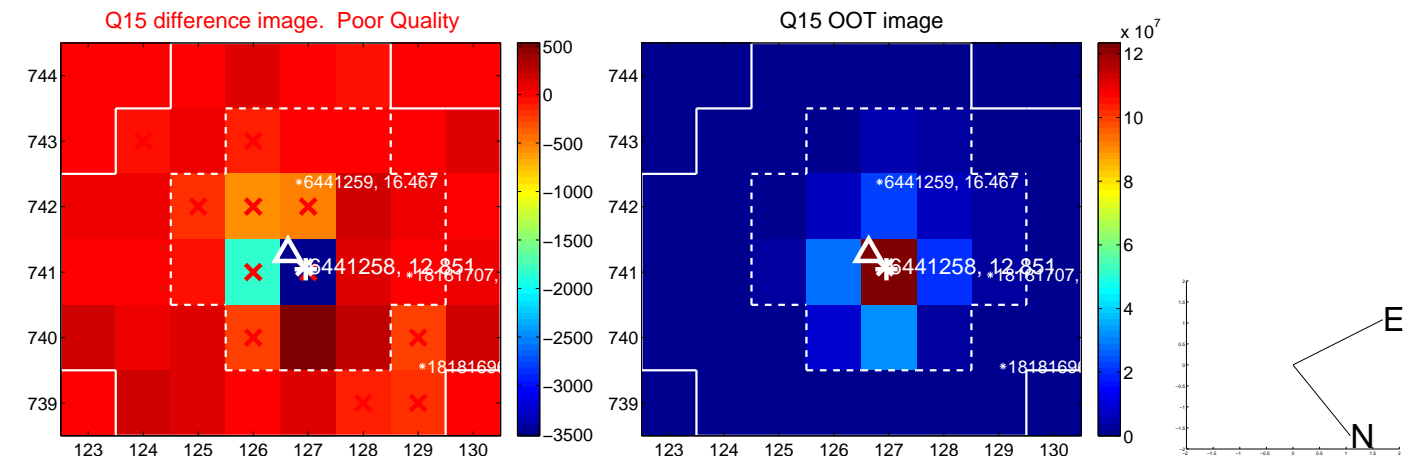
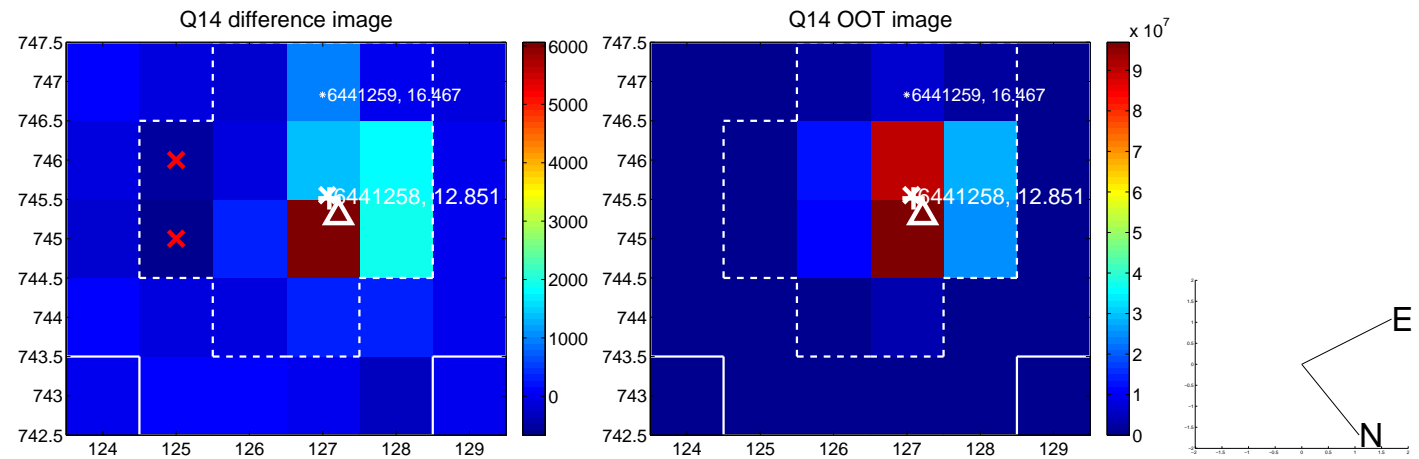
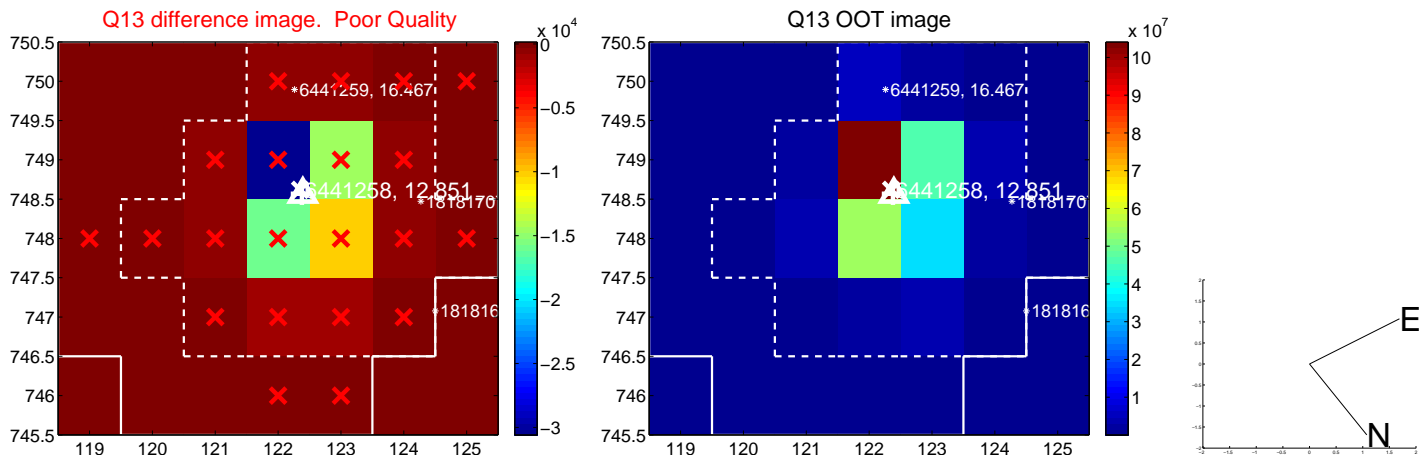
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



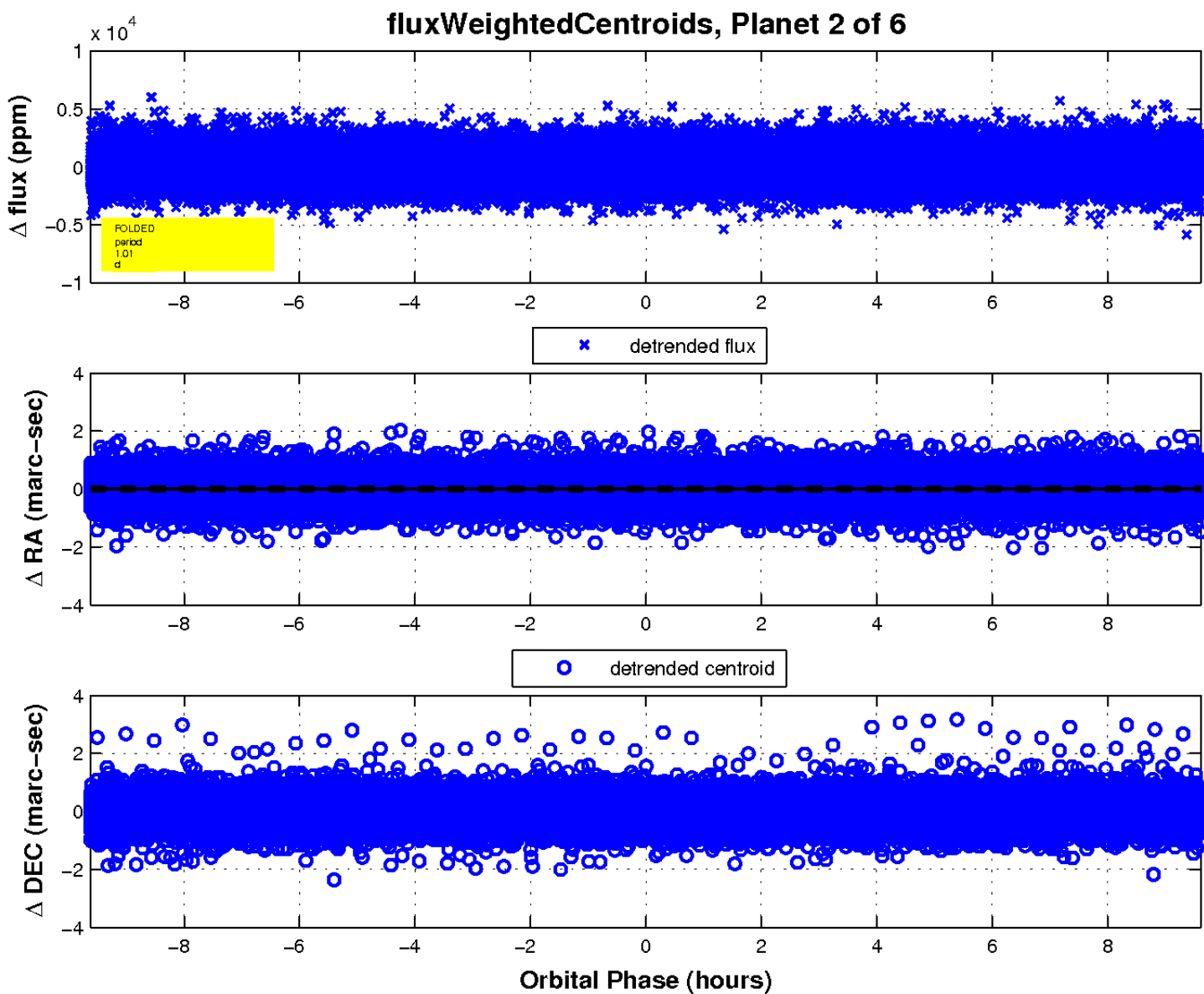
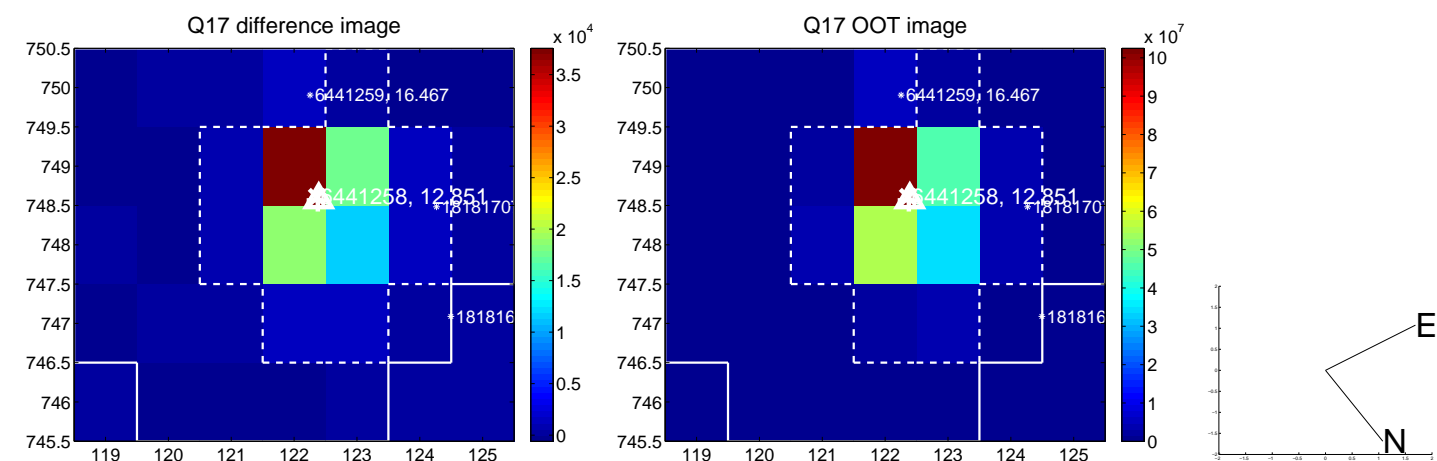
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

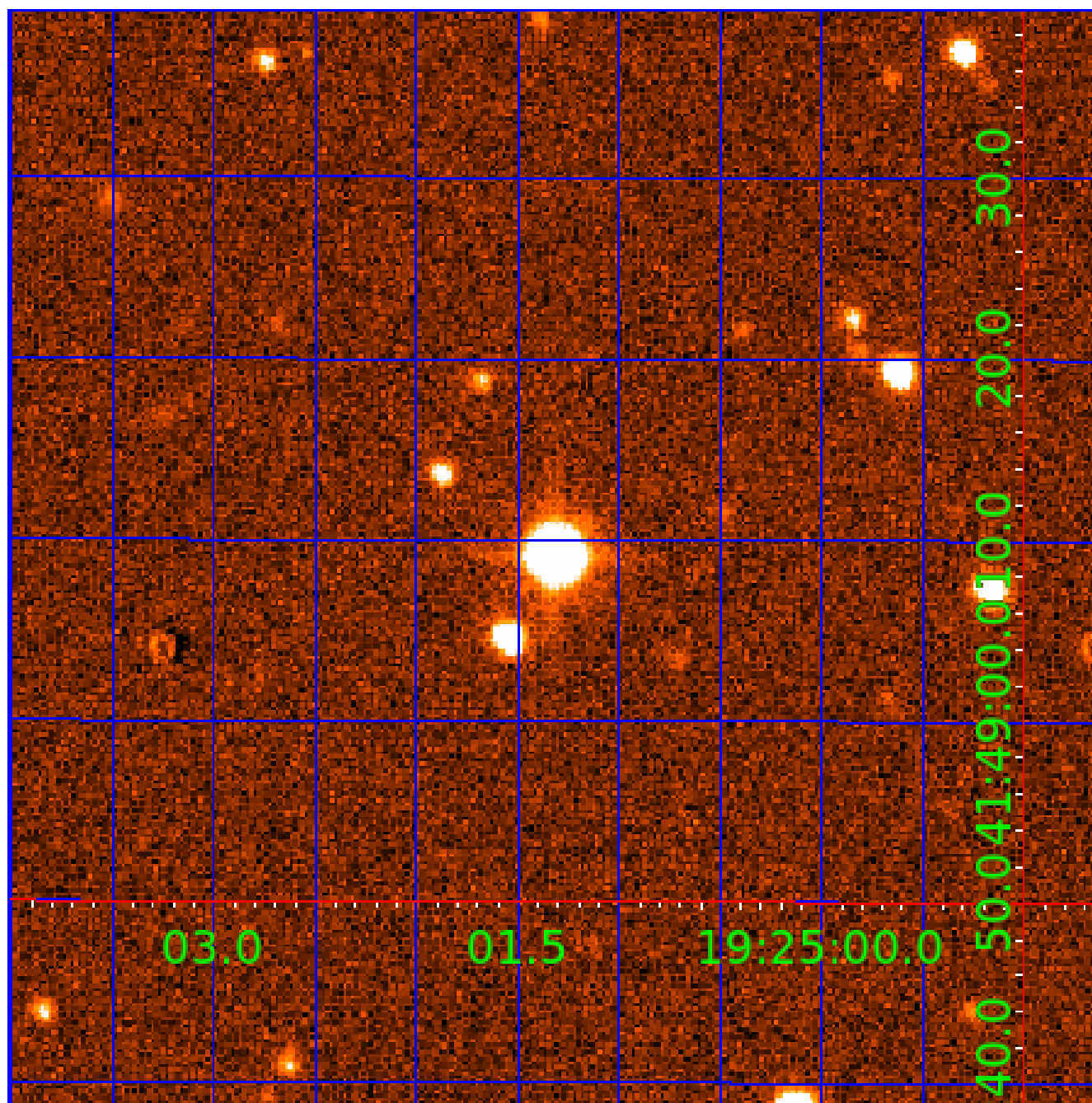


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006441258

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})
006441258-01	OBS	No	0.830766	131.946682	96.9	5.417	13.5	7.7	1.34	6773	1.42	9734.49
006441258-02	OBS	No	1.008777	131.960386	449.5	3.208	15.3	15.9	1.34	6773	3.33	7514.35
006441258-03	OBS	No	21.215440	137.408309	1649.0	3.279	13.7	11.6	1.34	6773	5.65	129.44
006441258-04	OBS	No	43.018464	145.944718	1945.8	2.747	9.9	9.8	1.34	6773	6.43	50.44
006441258-05	OBS	No	26.441720	140.535961	1783.0	2.111	9.9	9.9	1.34	6773	5.93	96.51
006441258-06	OBS	No	211.033834	273.500397	143.8	5.000	8.4	-1.0	1.34	6773	1.63	6.05

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006441258-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
006441258-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006441258-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
006441258-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
006441258-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006441258-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

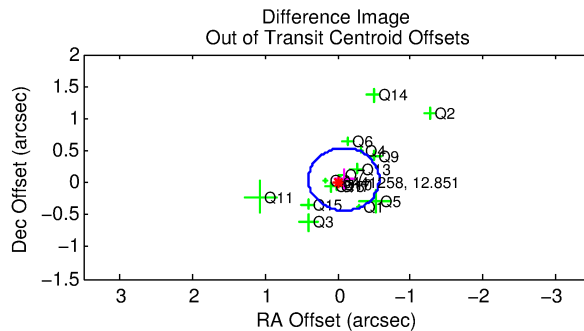
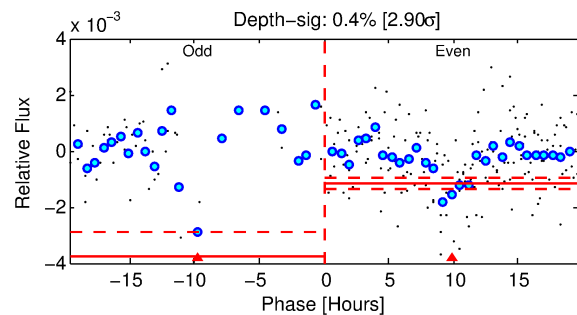
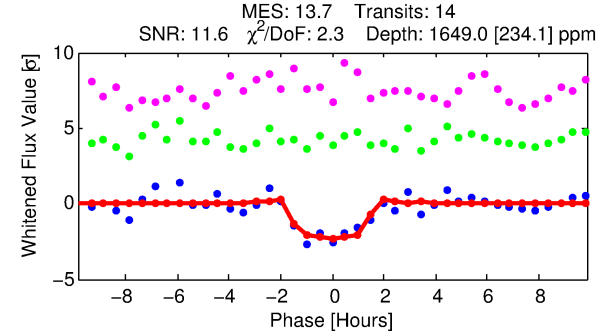
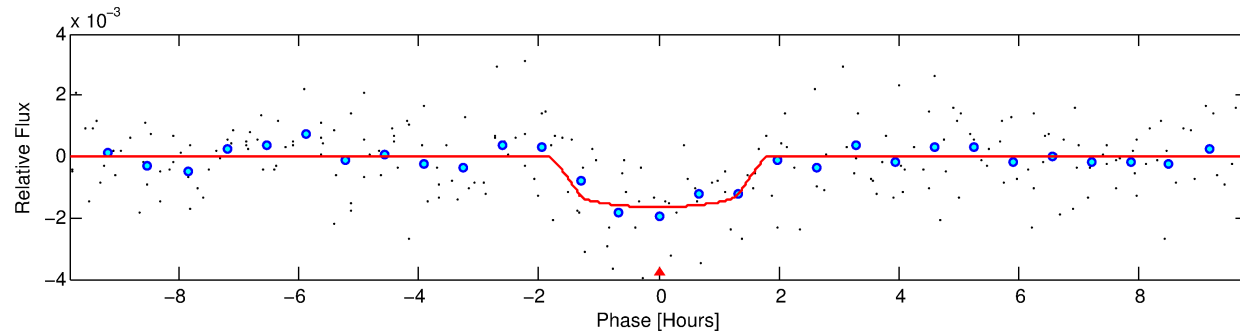
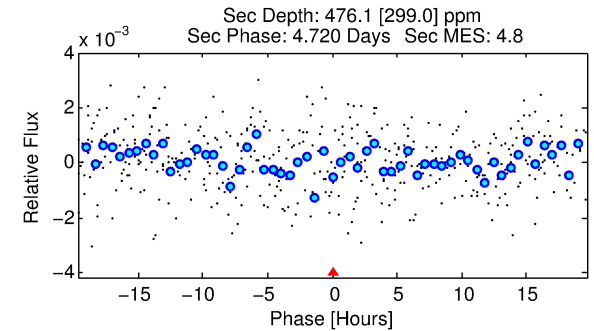
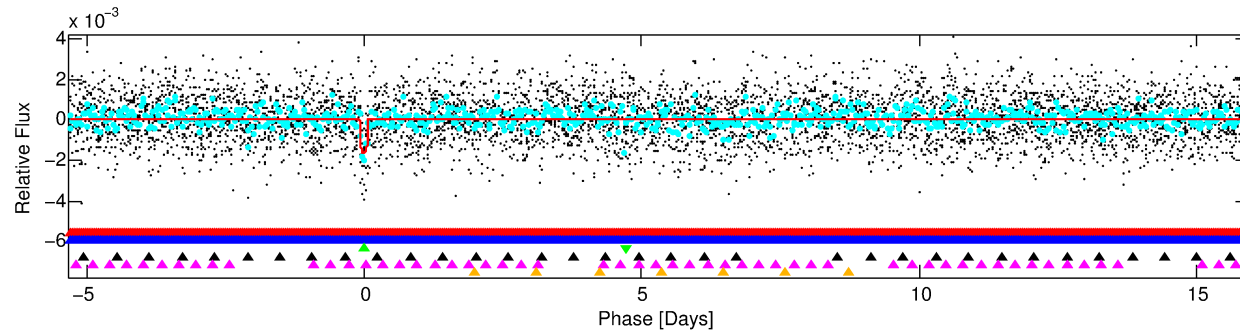
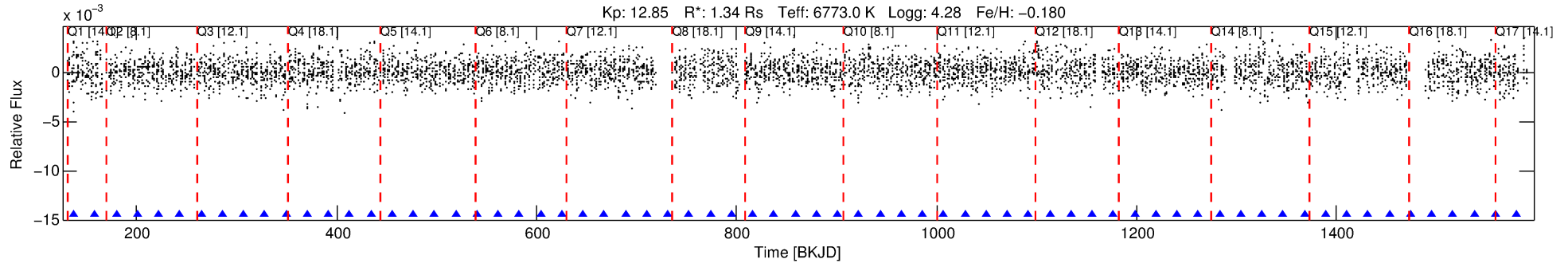
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006441258-03

No Significant Match Found

DV One-Page Summary

KIC: 6441258 Candidate: 3 of 6 Period: 21.215 d



DV Fit Results:

Period = 21.21544 [0.00020] d
Epoch = 137.4083 [0.0081] BKJD
Rp/R* = 0.0385 [0.0356]
a/R* = 45.19 [229.33]
b = 0.49 [7.88]
Seff = 129.44 [52.54]
Teq = 860 [87] K
Rp = 5.65 [5.54] Re
a = 0.1622 [0.0429] AU
Ag = 216.16 [429.60] [0.50σ]
Teffp = 5099 [2498] K [1.70σ]

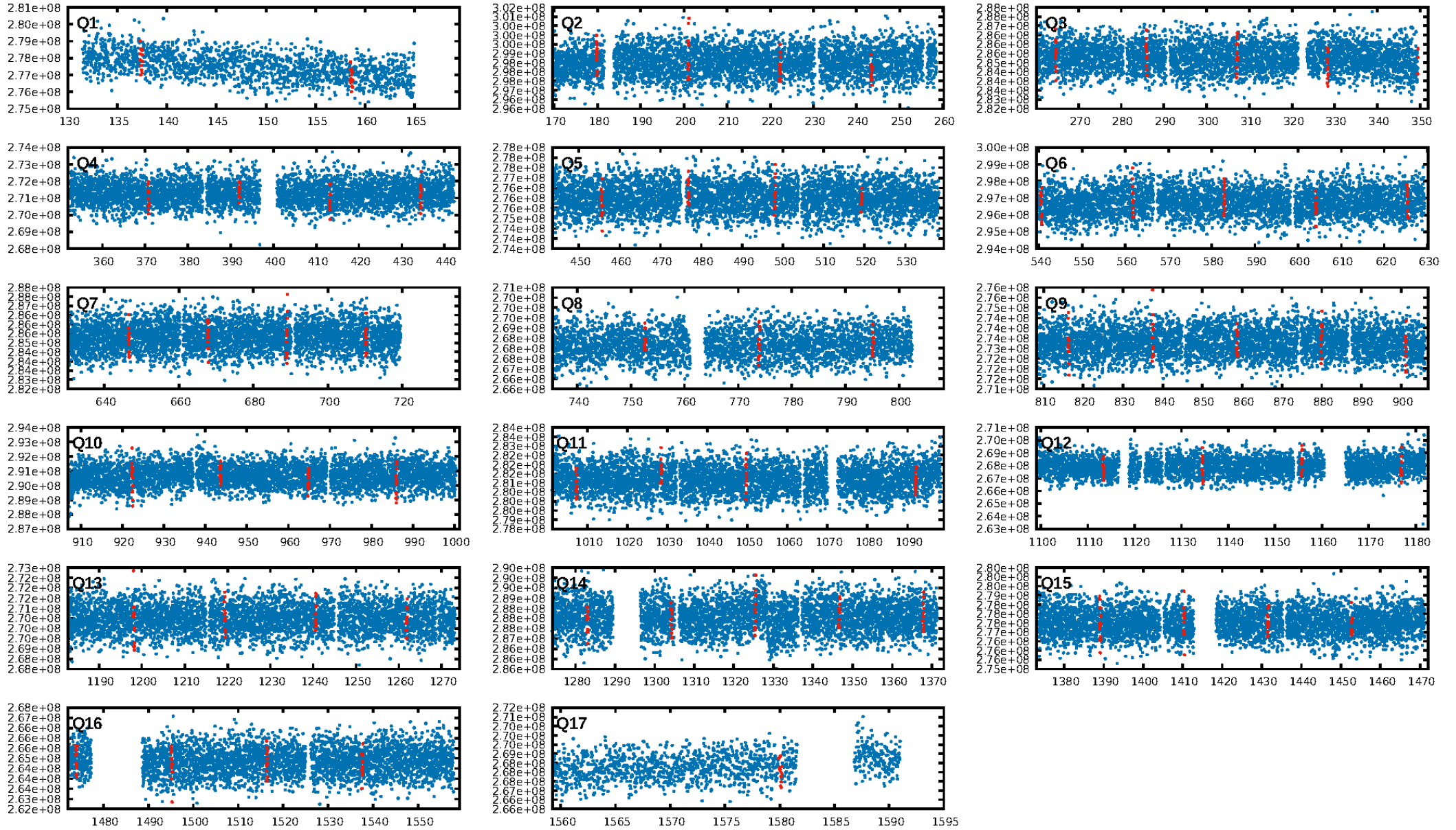
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [105.72σ]
LongPeriod-sig: 100.0% [32.16σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 98.5%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [13/13]
GhostDiagnostic-chr: 1.295
Centroid-sig: N/A
Centroid-so: 0.212 arcsec [5.57σ]
OotOffset-rm: 0.099 arcsec [0.61σ]
KicOffset-rm: 0.249 arcsec [1.47σ]
OotOffset-st: 4/4/3/5 [16]
KicOffset-st: 4/4/3/5 [16]
DiffImageQuality-fgm: 0.56 [9/16]
DiffImageOverlap-fno: 0.00 [0/17]

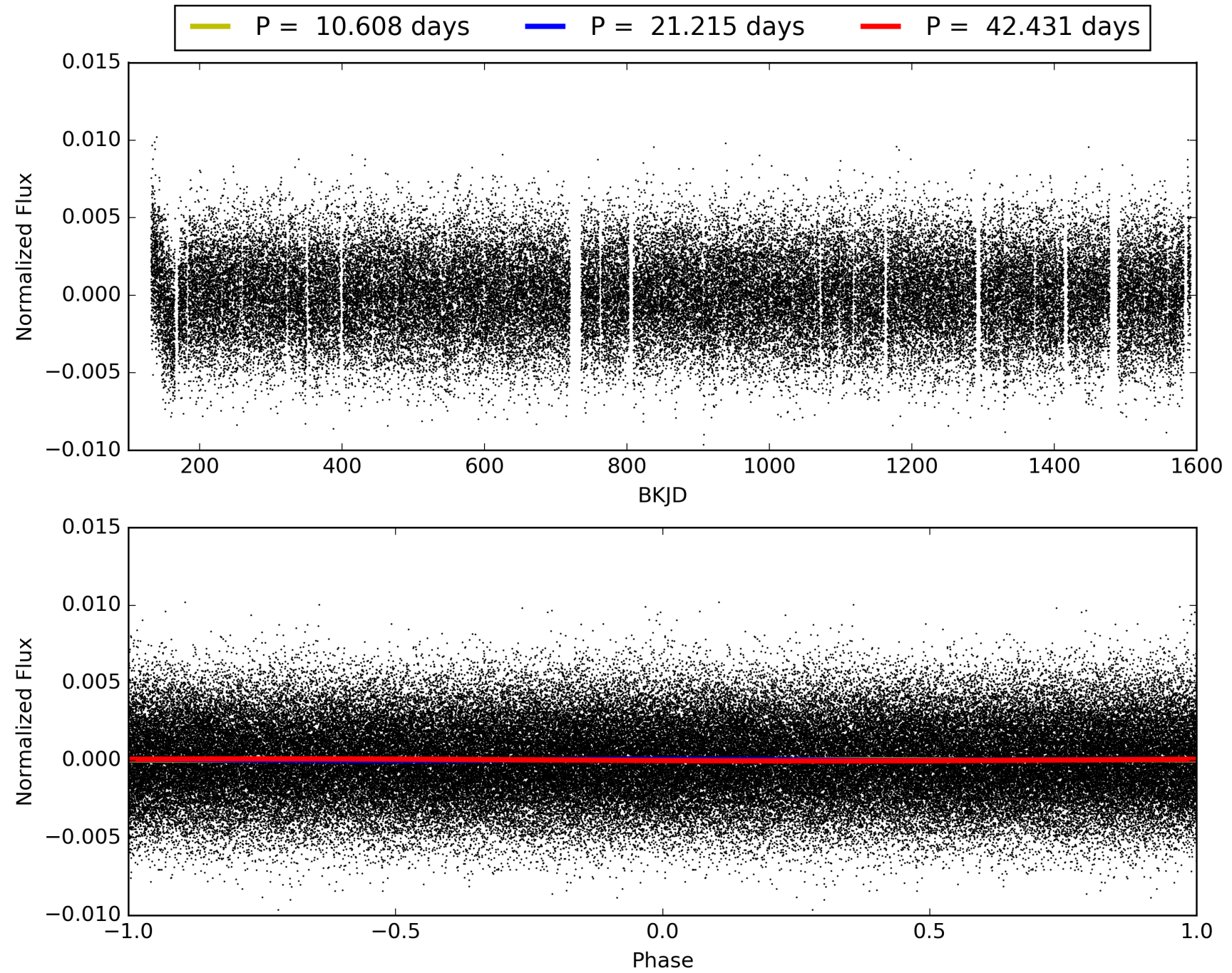
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:31:07 Z

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

TCE 006441258-03, PDC Light Curves

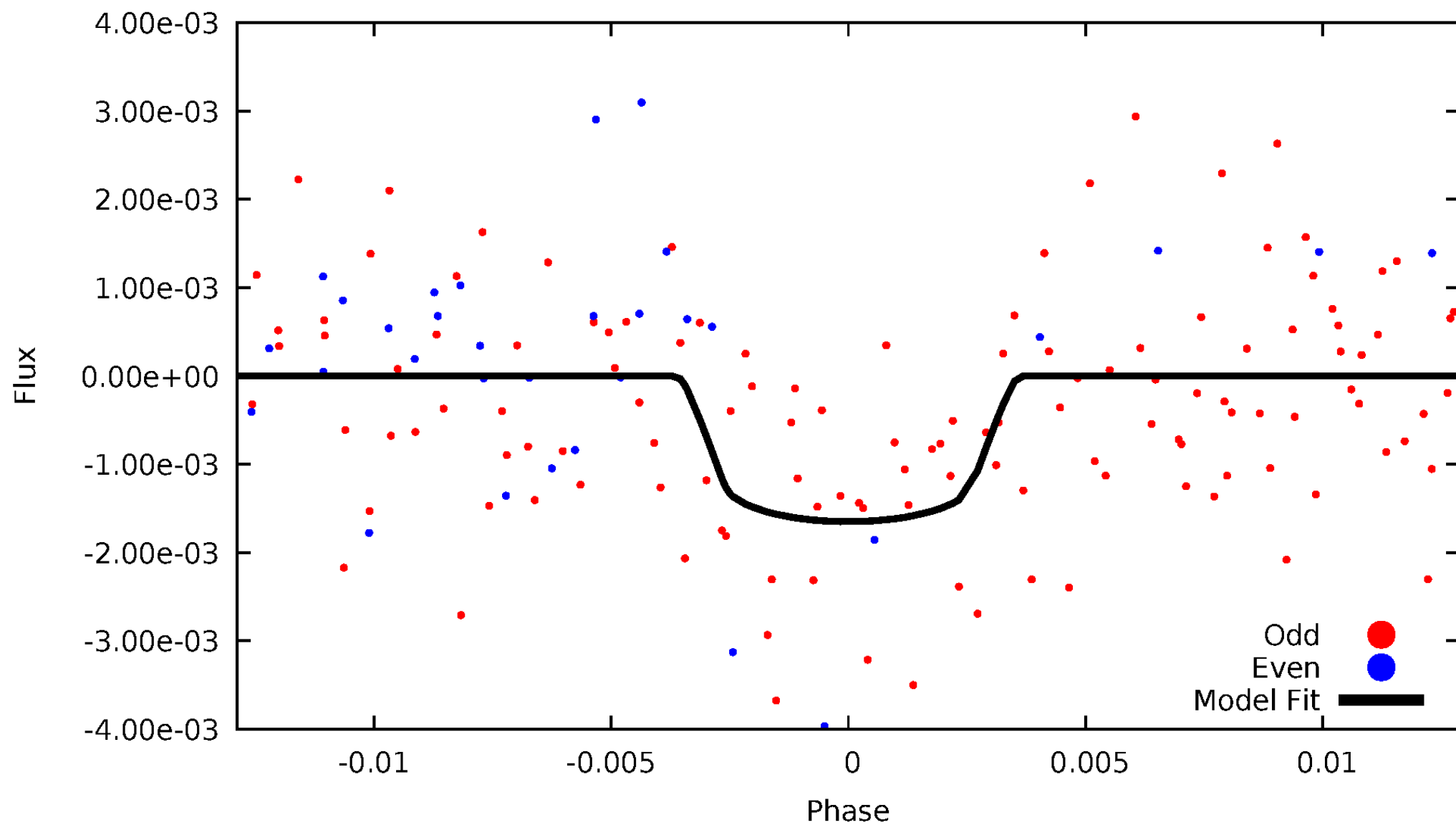


TCE 006441258-03



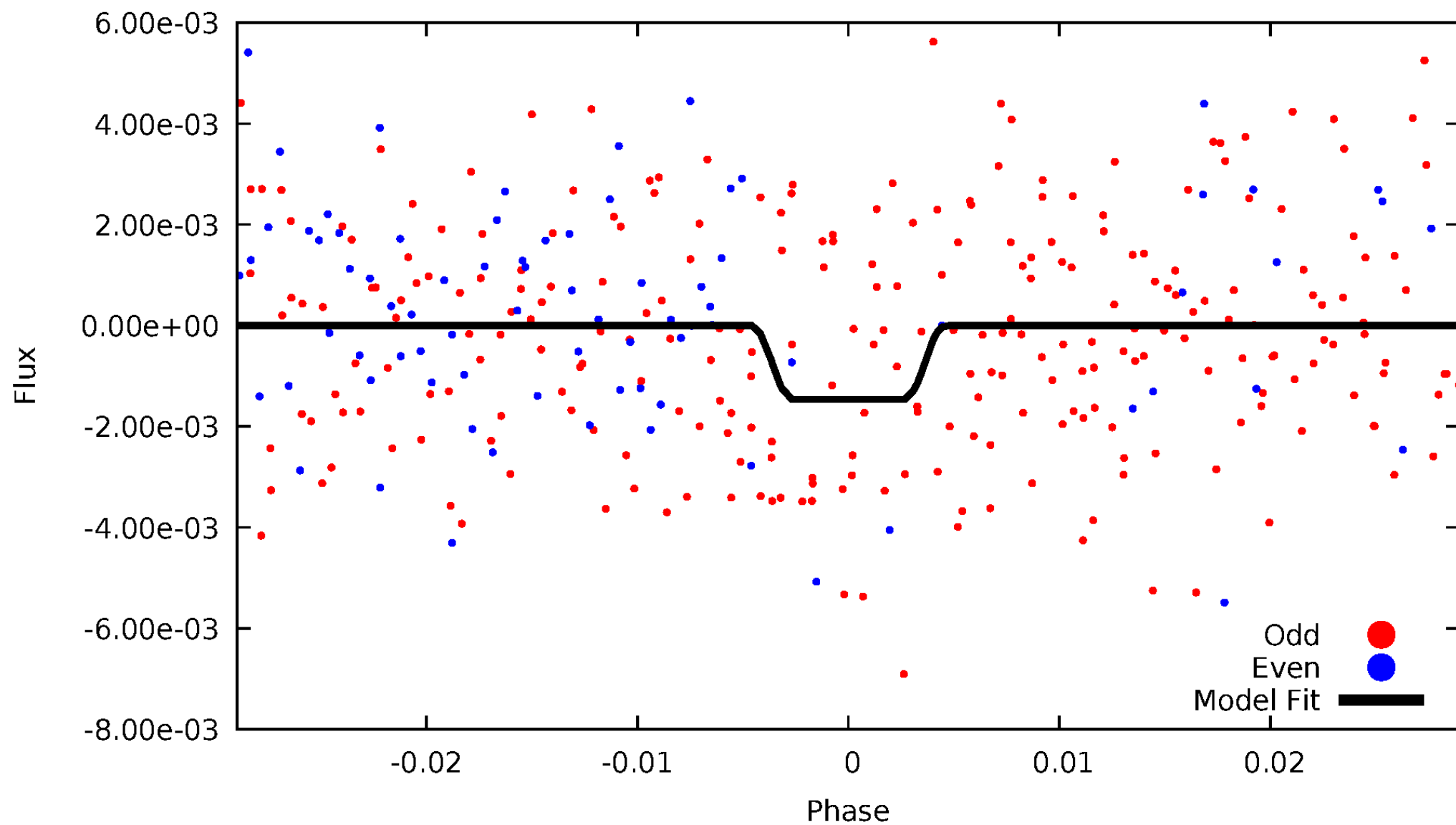
DV Odd/Even

TCE 006441258-03



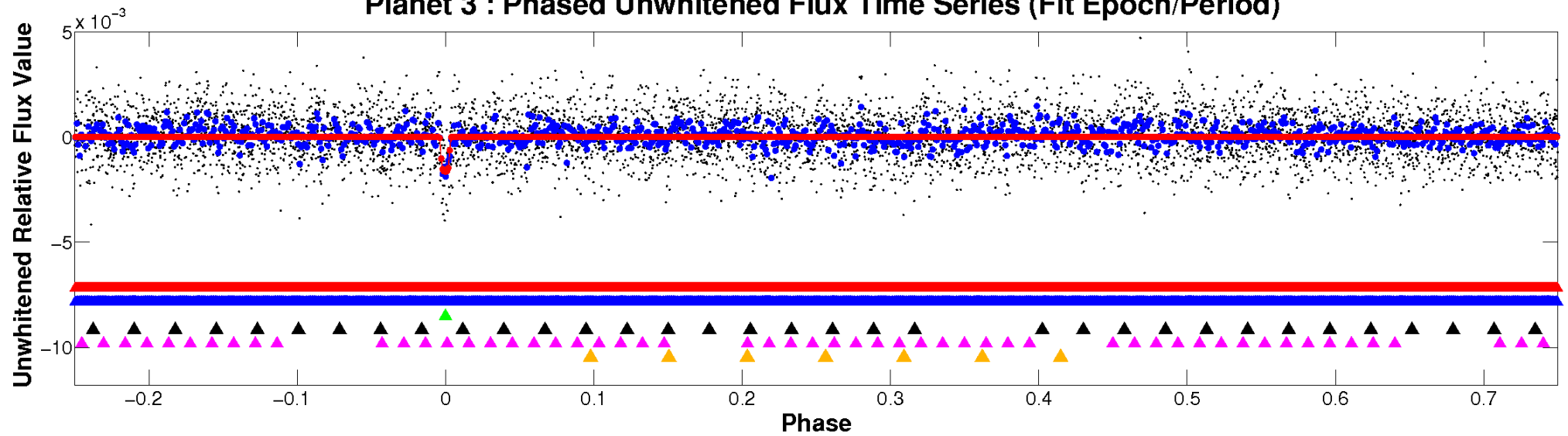
ALT Odd/Even

TCE 006441258-03

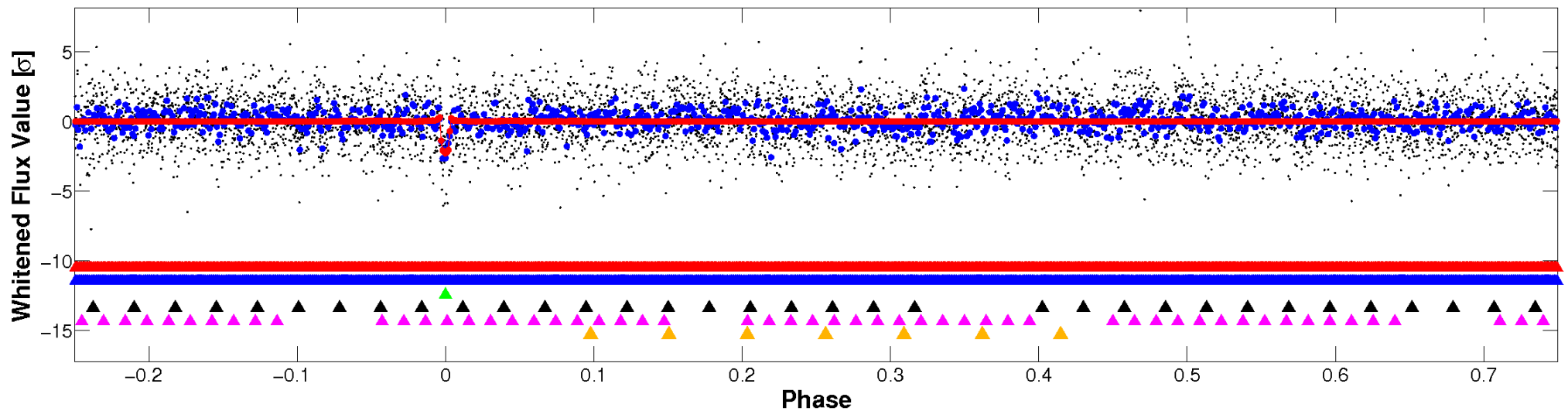


Non-Whitened Vs. Whitened Light Curve

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

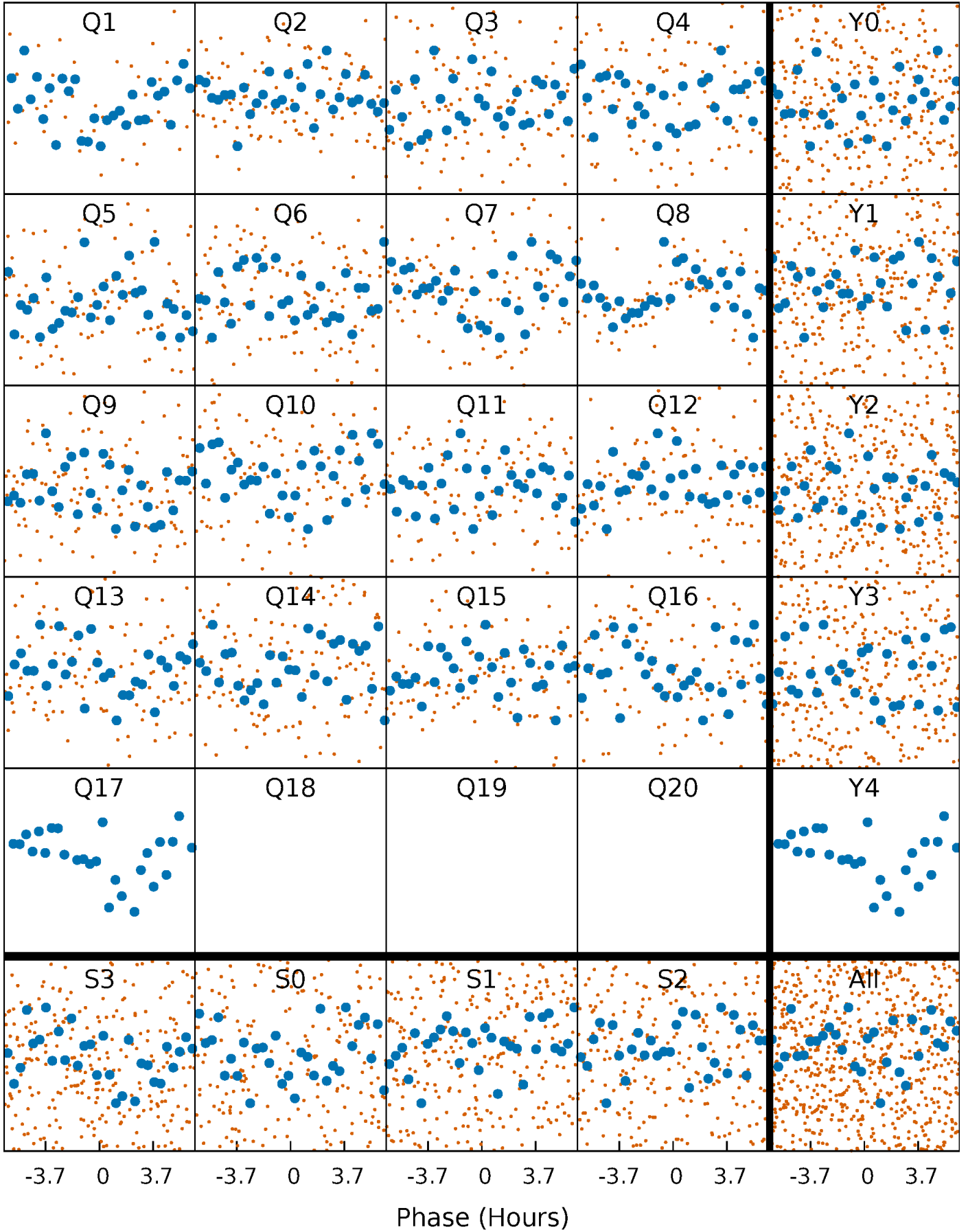


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



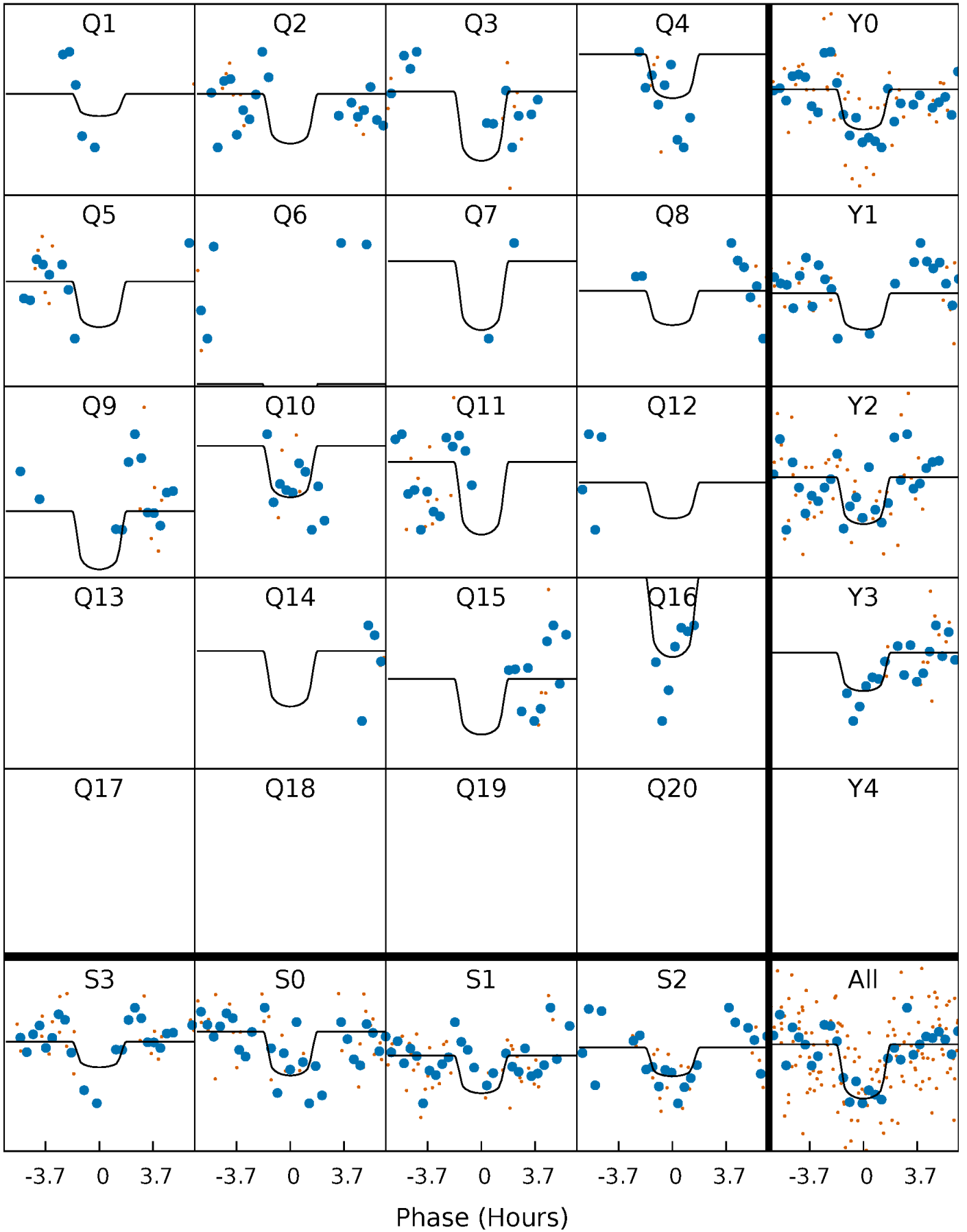
PDC Quarter-Phased Transit Curves

TCE 006441258-03 P= 21.215440 Days $T_0=137.408309$ (BKJD)



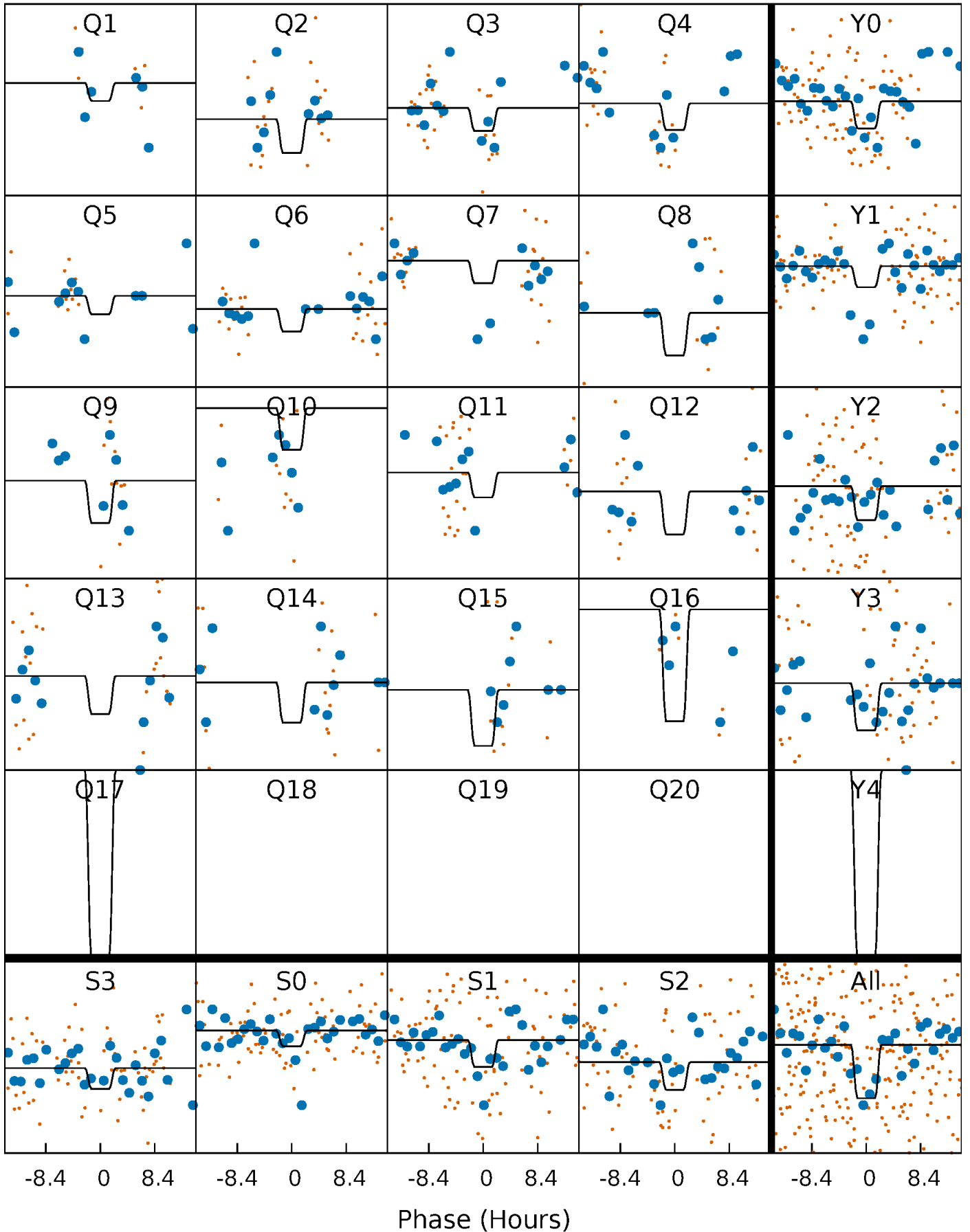
DV Quarter-Phased Transit Curves

TCE 006441258-03 P= 21.215440 Days $T_0=137.408309$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

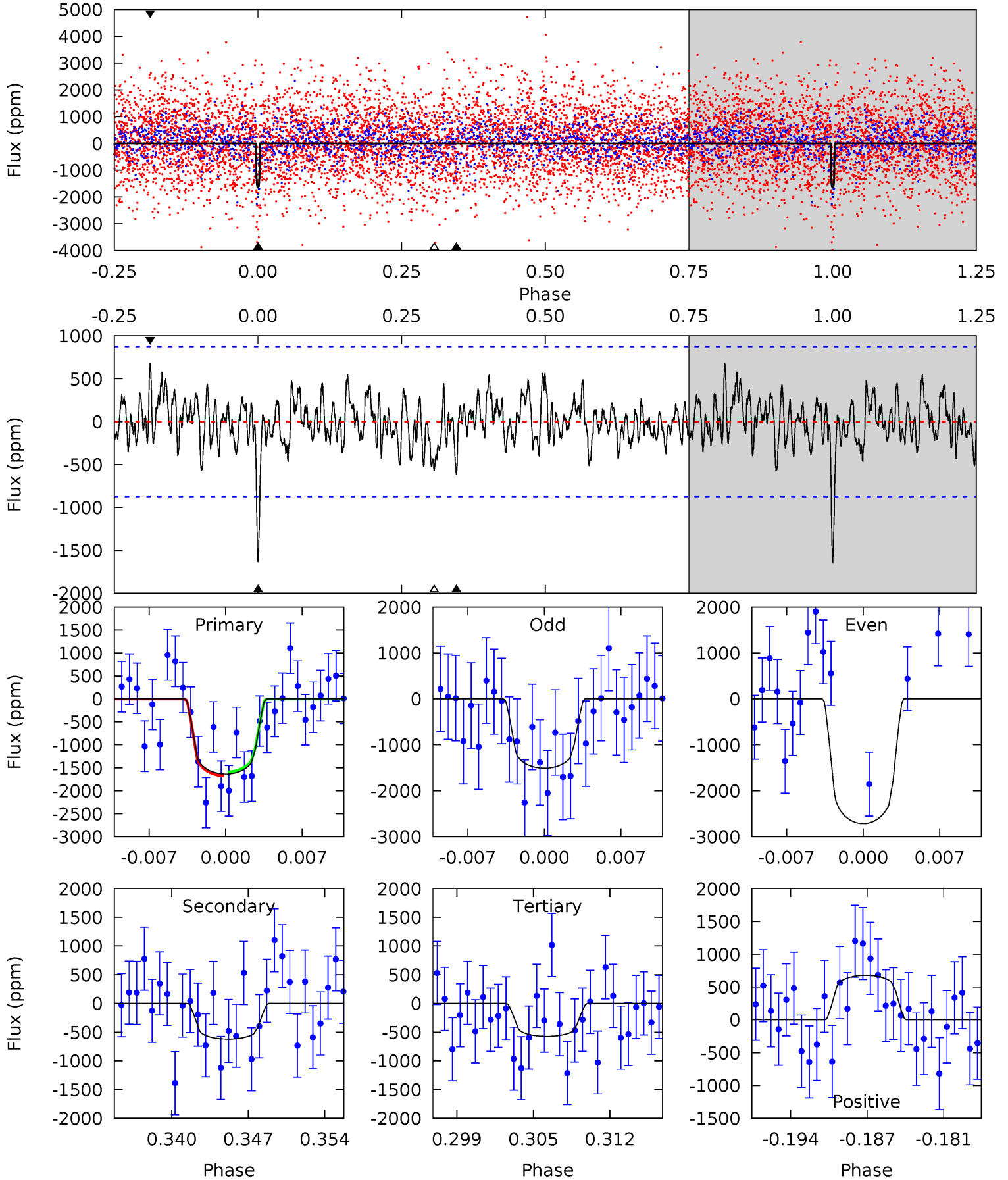
TCE 006441258-03 P= 21.215350 Days $T_0=137.454562$ (BKJD)



DV Model-Shift Uniqueness Test

006441258-03, P = 21.215440 Days, E = 116.192869 Days

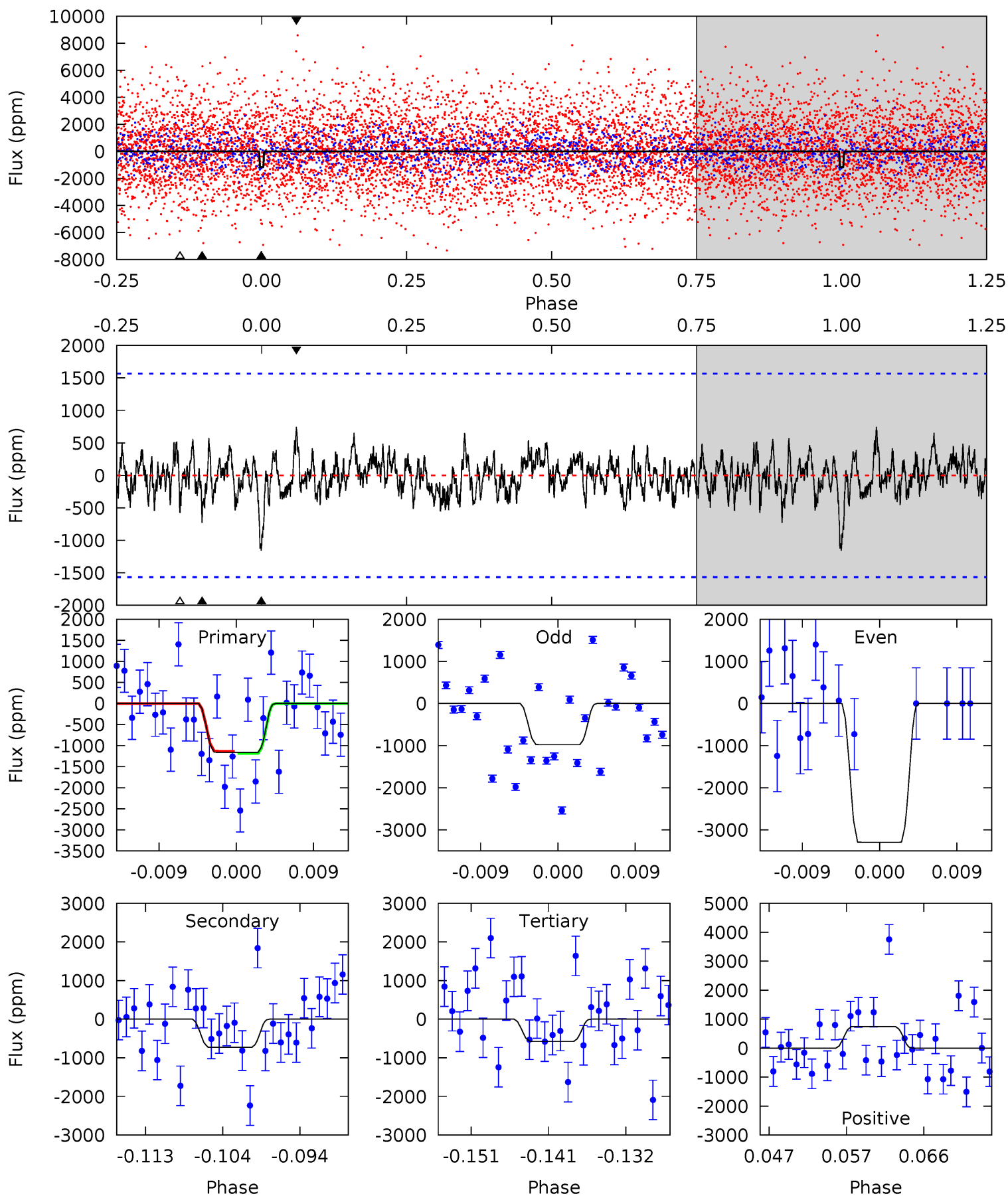
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.55	3.62	3.34	3.97	5.10	2.70	1.29	6.21	5.59	0.28	-0.35	2.37	1.67	0.29	0.24



Alt Model-Shift Uniqueness Test

006441258-03, P = 21.215350 Days, E = 116.239212 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.73	2.34	1.86	2.41	5.04	2.60	0.74	1.87	1.32	0.49	-0.06	2.00	1.57	0.39	0.08



Stellar Parameters For KIC 006441258

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6773^{+188}_{-282}	$4.283^{+0.090}_{-0.195}$	$-0.180^{+0.250}_{-0.300}$	$1.344^{+0.439}_{-0.219}$	$1.273^{+0.195}_{-0.195}$	$0.739^{+0.355}_{-0.381}$
	+3%/-4%	+2%/-5%	+139%/-167%	+33%/-16%	+15%/-15%	+48%/-52%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 006441258-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-620 ± 171	$6.93^{+4.91}_{-4.02}$	1213^{+90}_{-71}	4981^{+2552}_{-928}	179^{+759}_{-120}
Alt.	-729 ± 311	$6.86^{+5.45}_{-4.03}$	1214^{+90}_{-66}	5194^{+3272}_{-1117}	222^{+1149}_{-159}

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 $A_{obs} \gg 1.0$

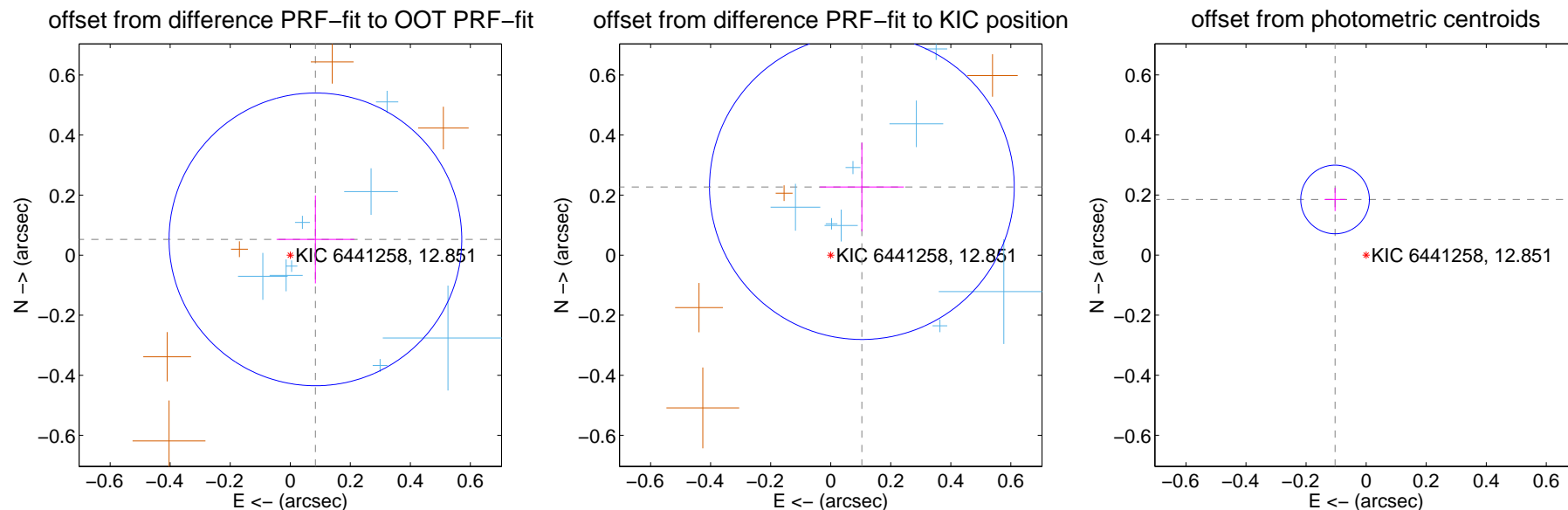
DV Centroid Data

Supplemental centroid analysis for 006441258-03. Kepler magnitude: 12.85. Transit SNR 11.60

There are 9 quarters with good PRF difference image offsets

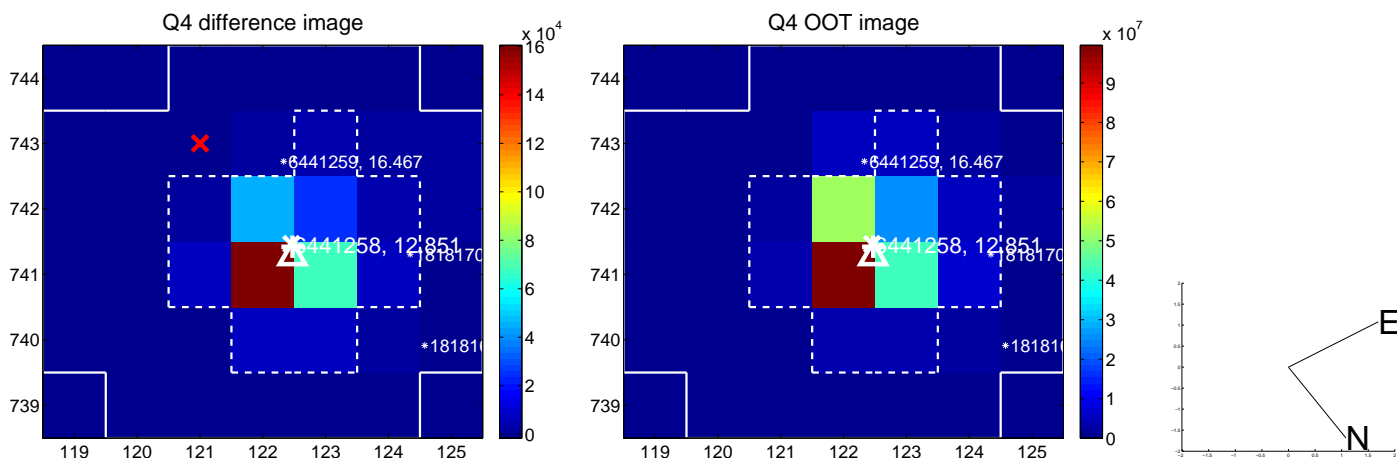
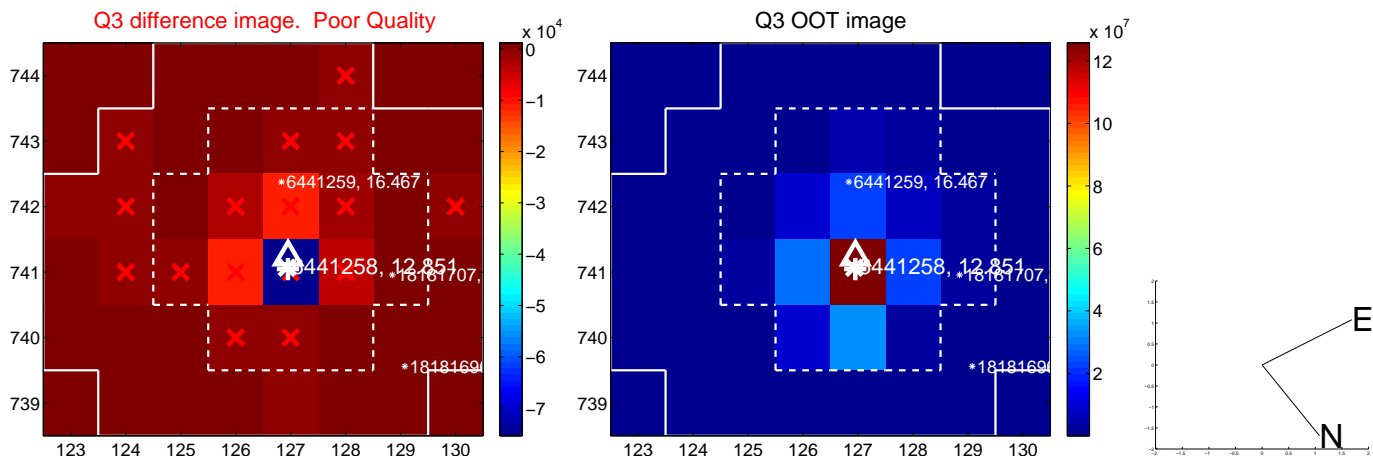
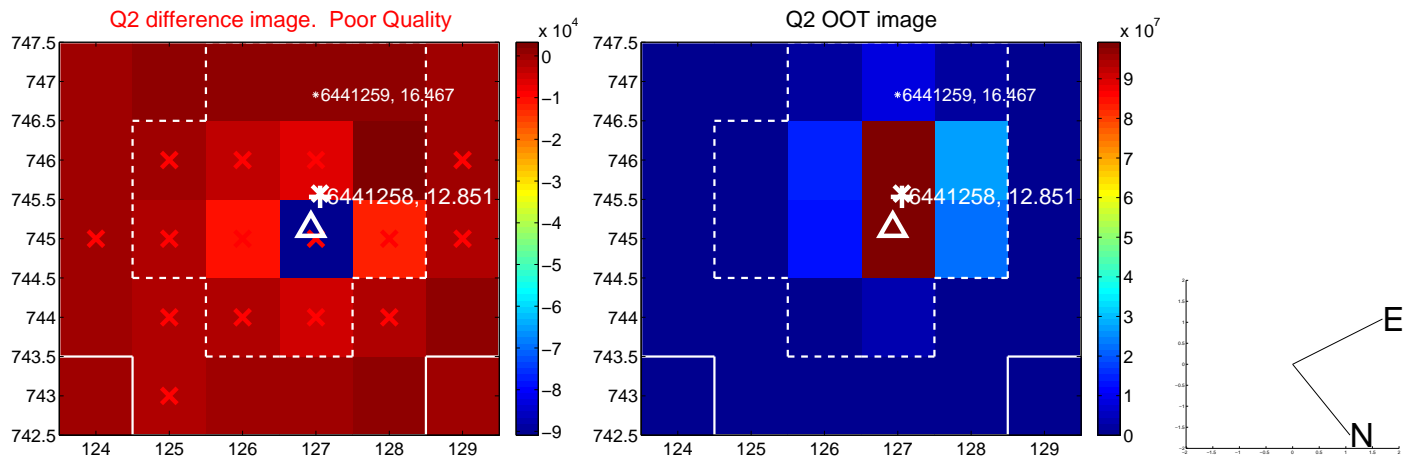
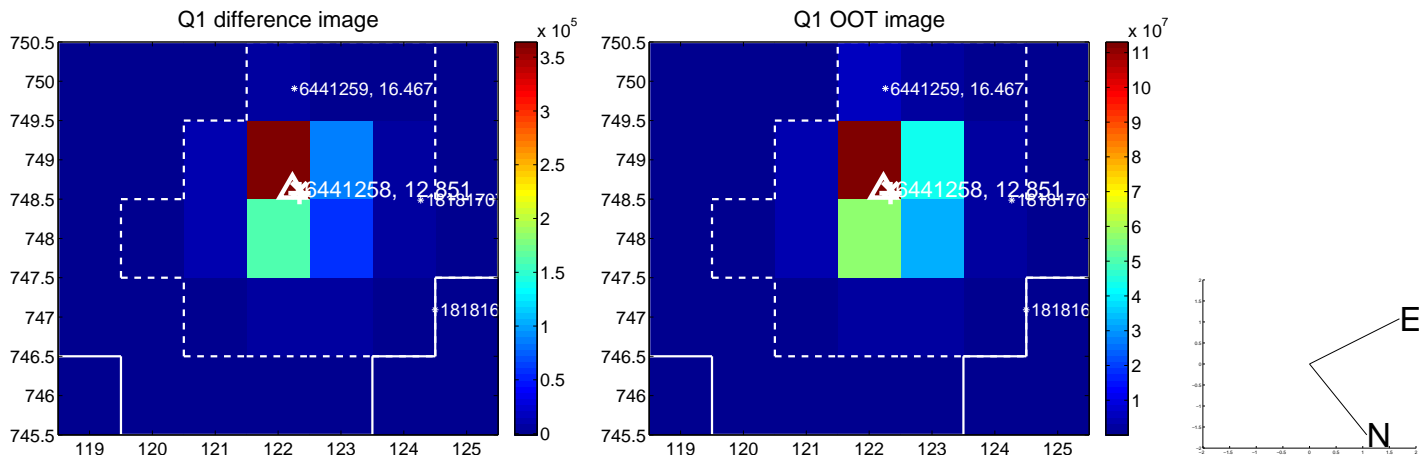
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.099 ± 0.163	0.61	-0.084 ± 0.129	0.053 ± 0.147
PRF-fit source offset from KIC position	0.249 ± 0.169	1.47	-0.104 ± 0.140	0.227 ± 0.148
photometric centroid source offset	0.21 ± 0.04	5.57	0.10 ± 0.04	0.19 ± 0.04

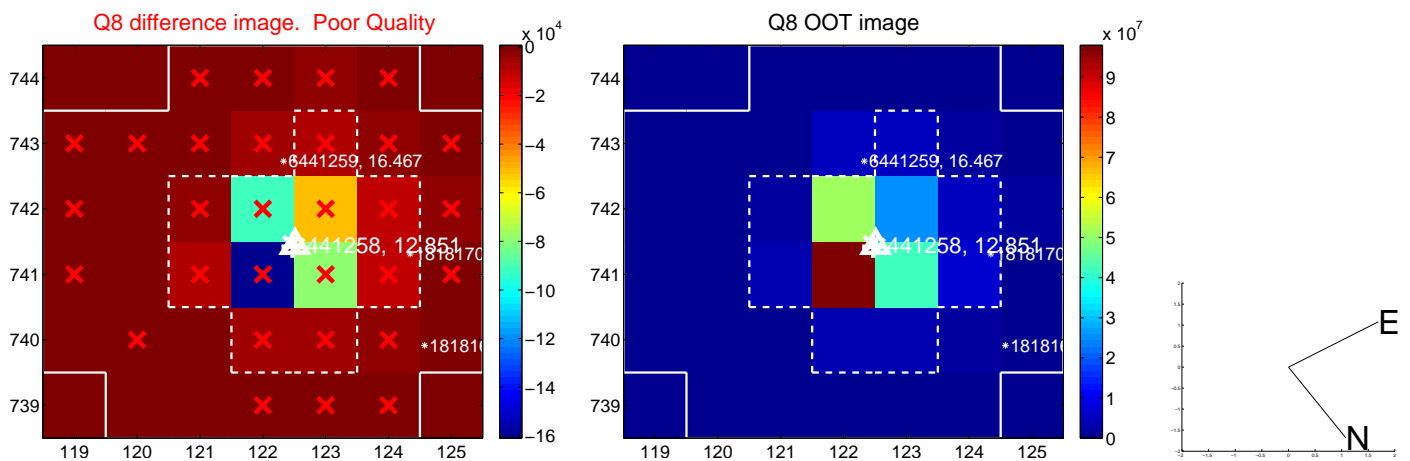
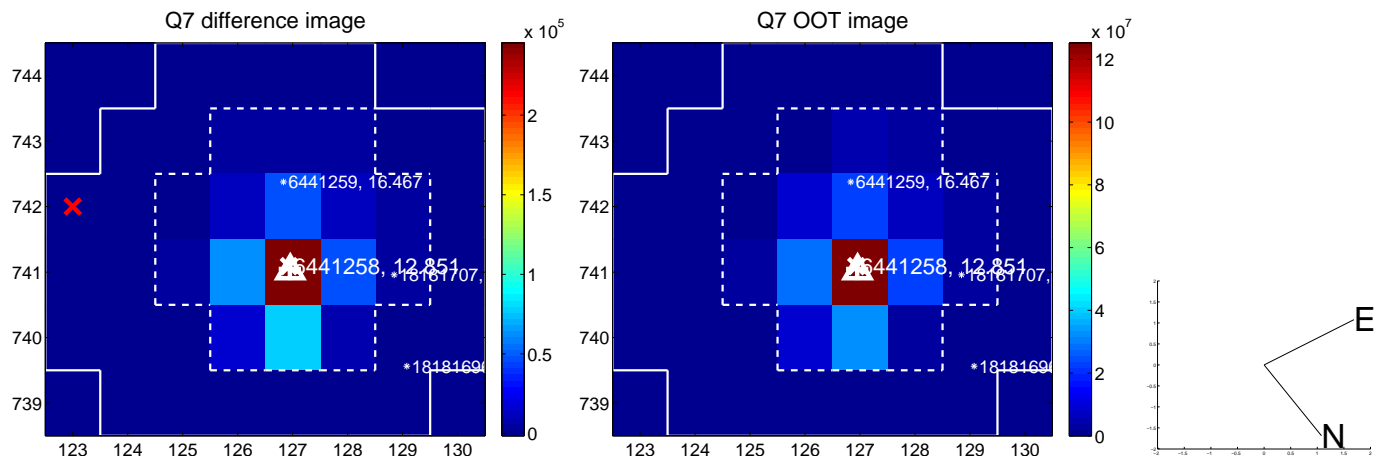
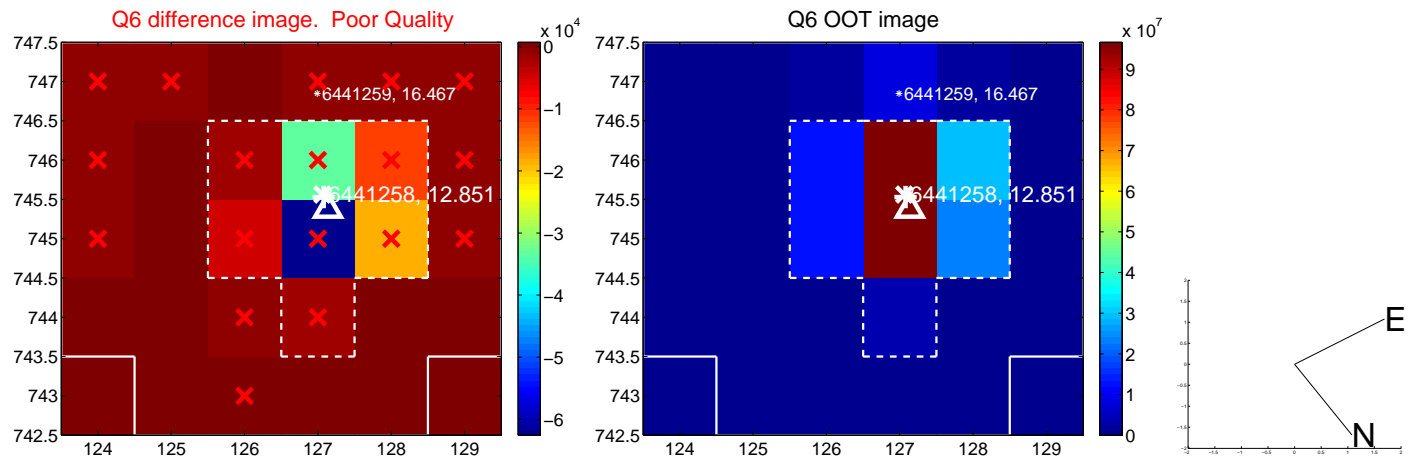
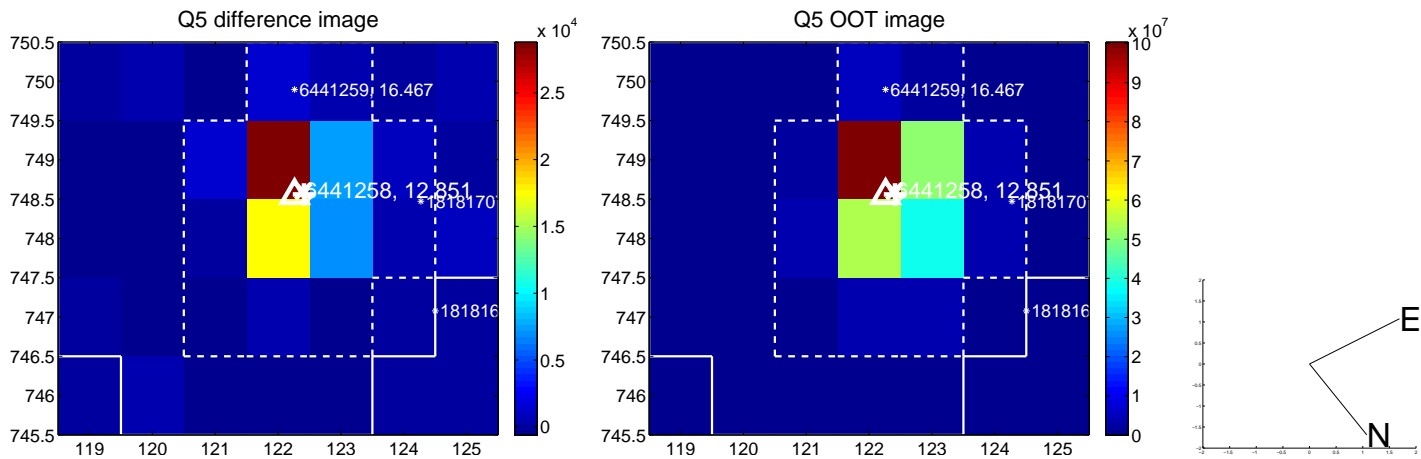


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

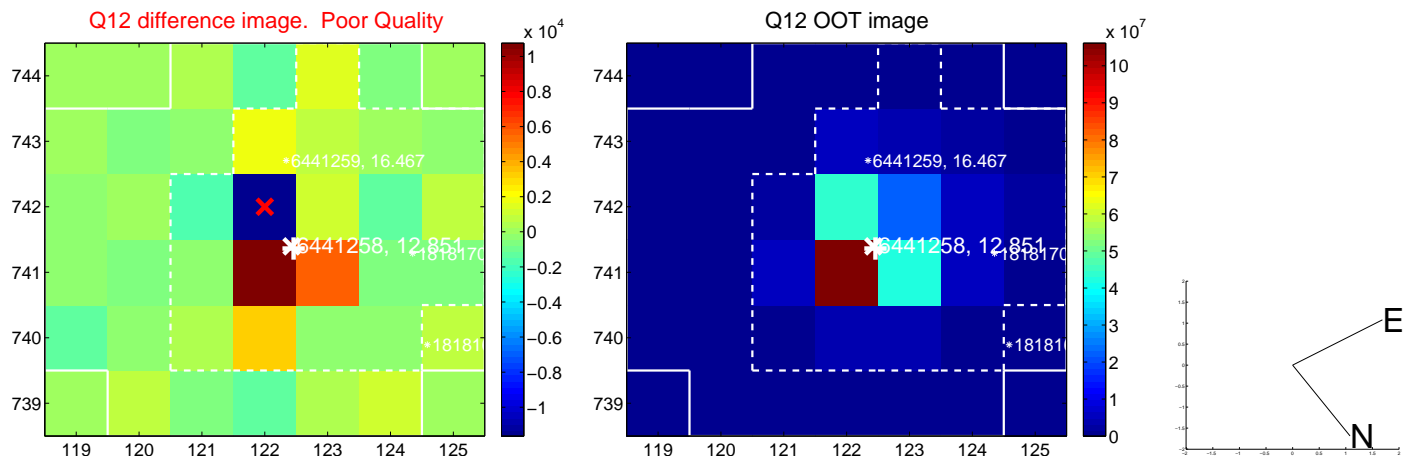
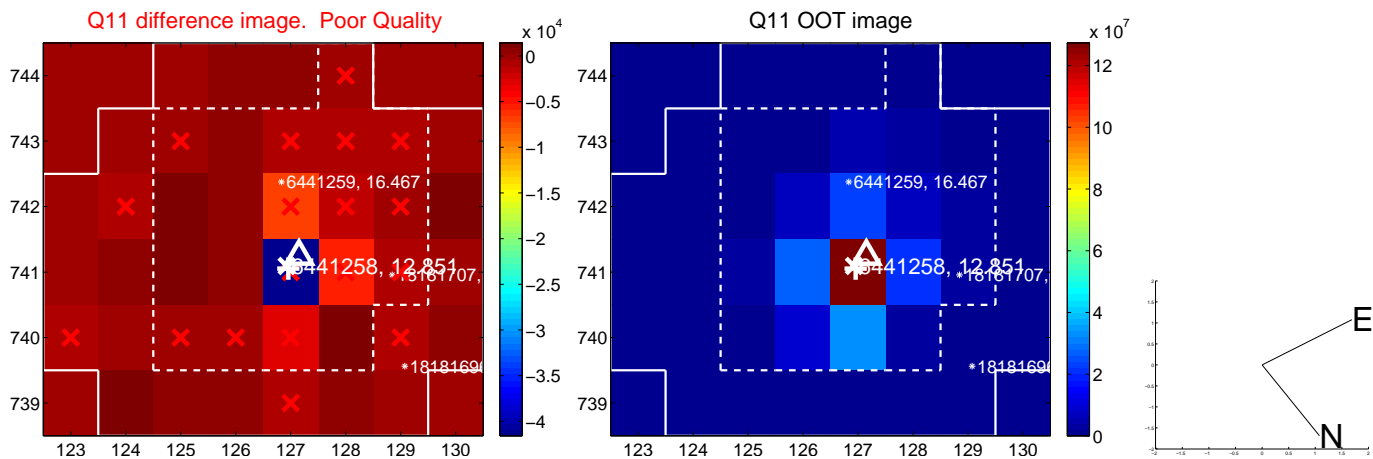
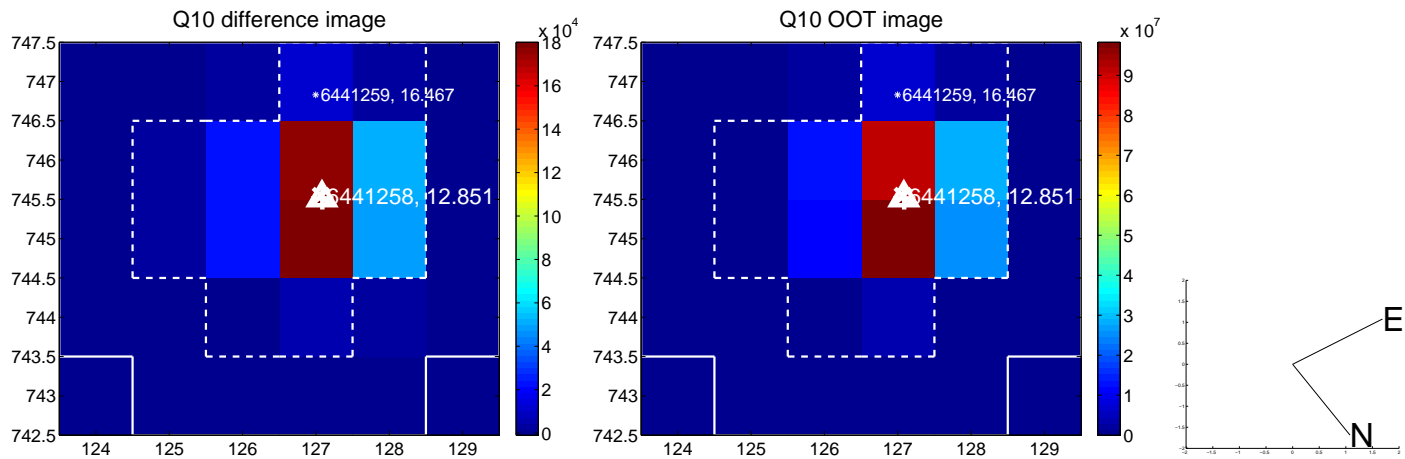
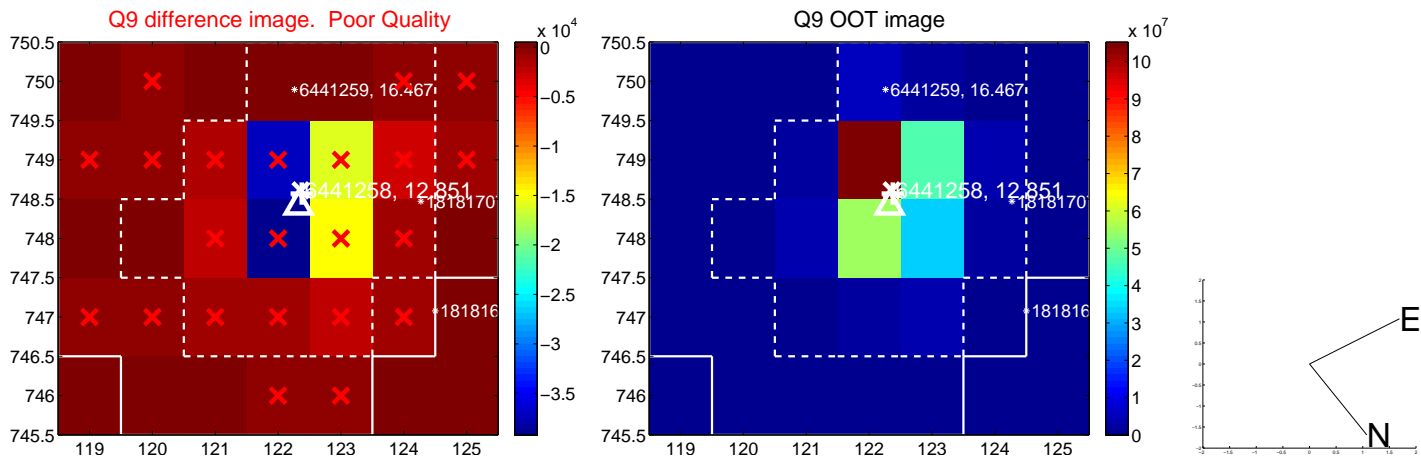
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



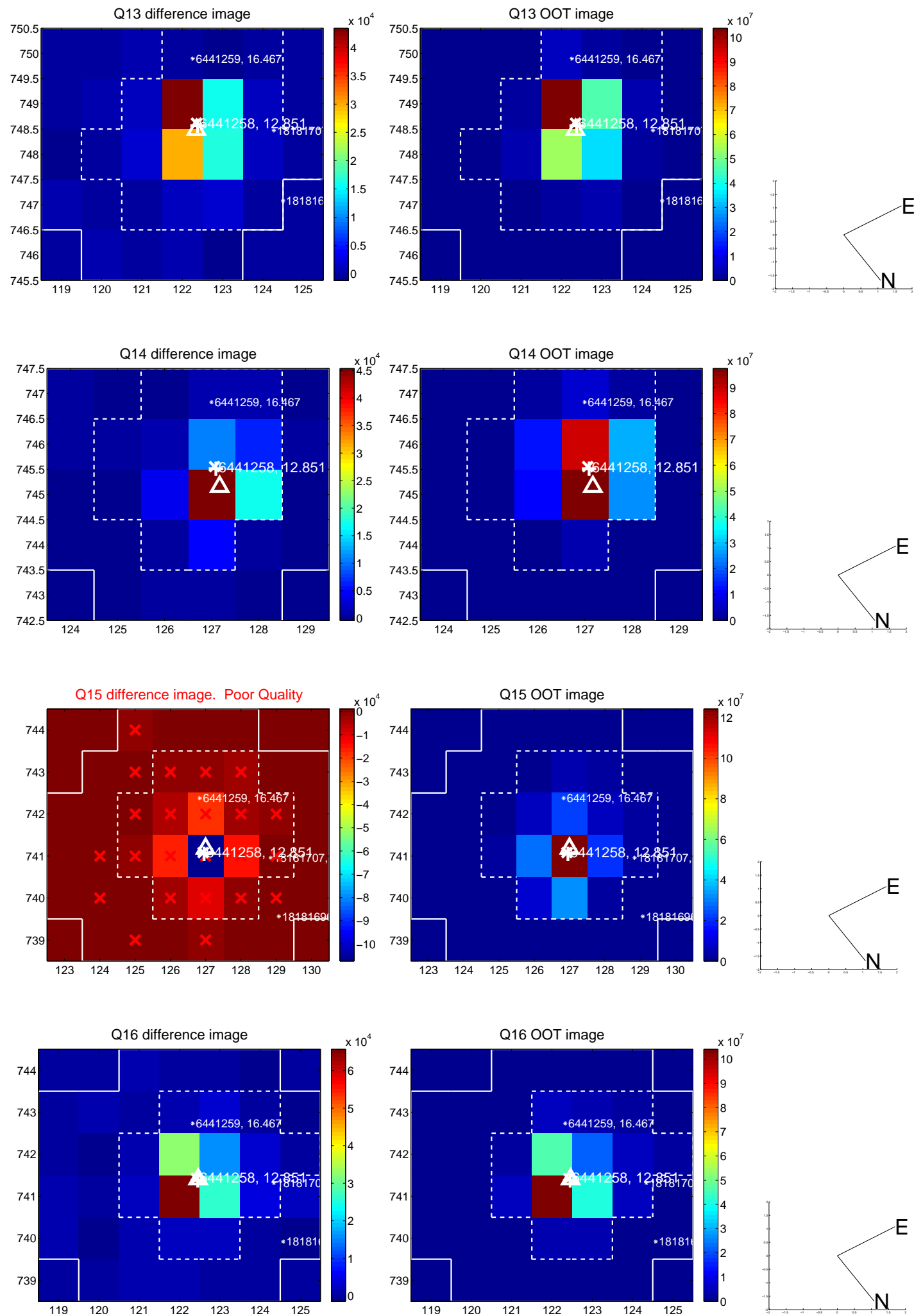
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



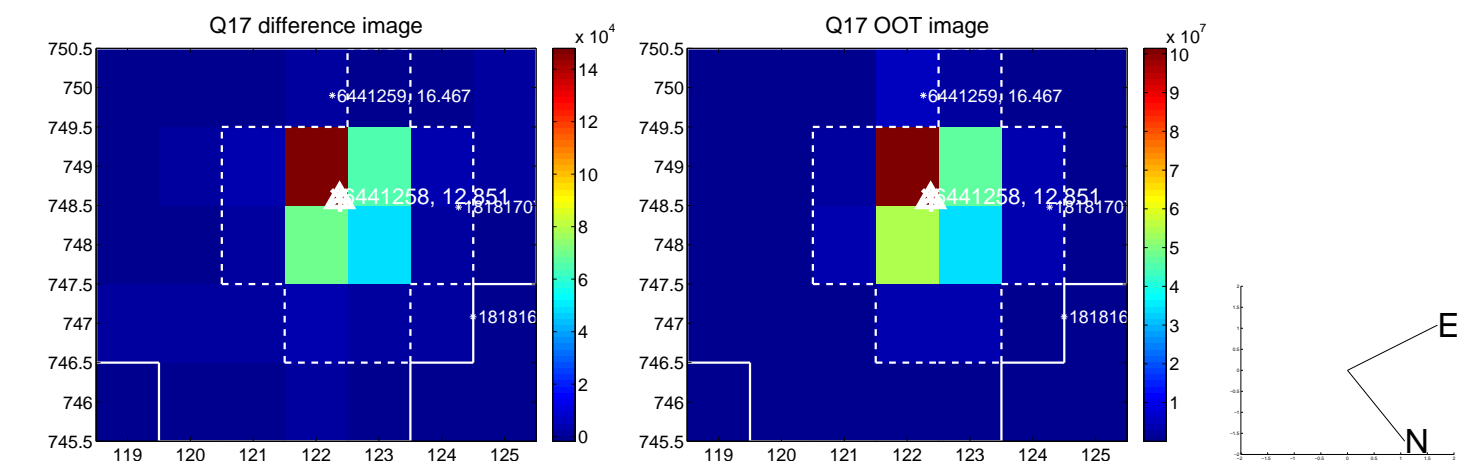
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



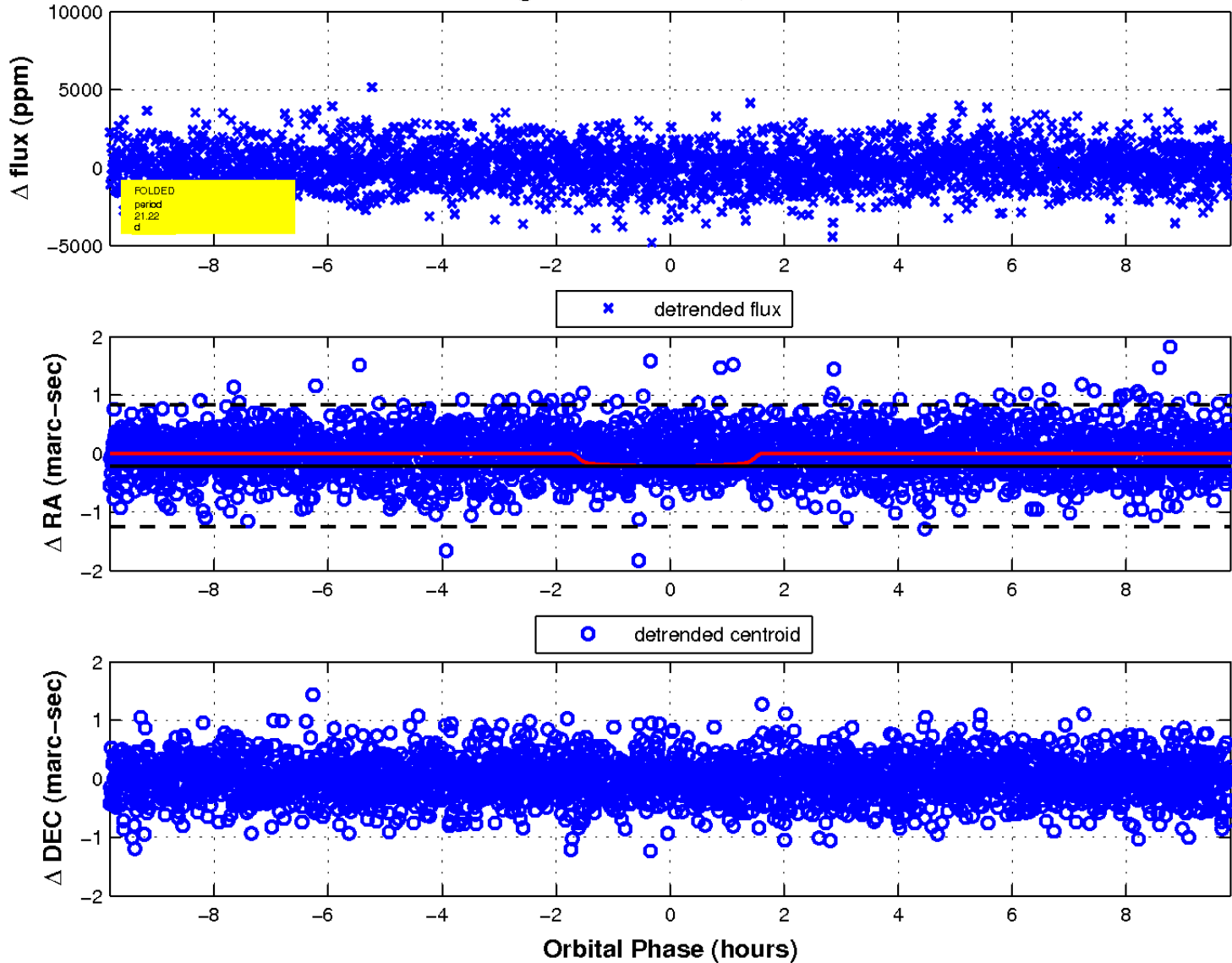
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

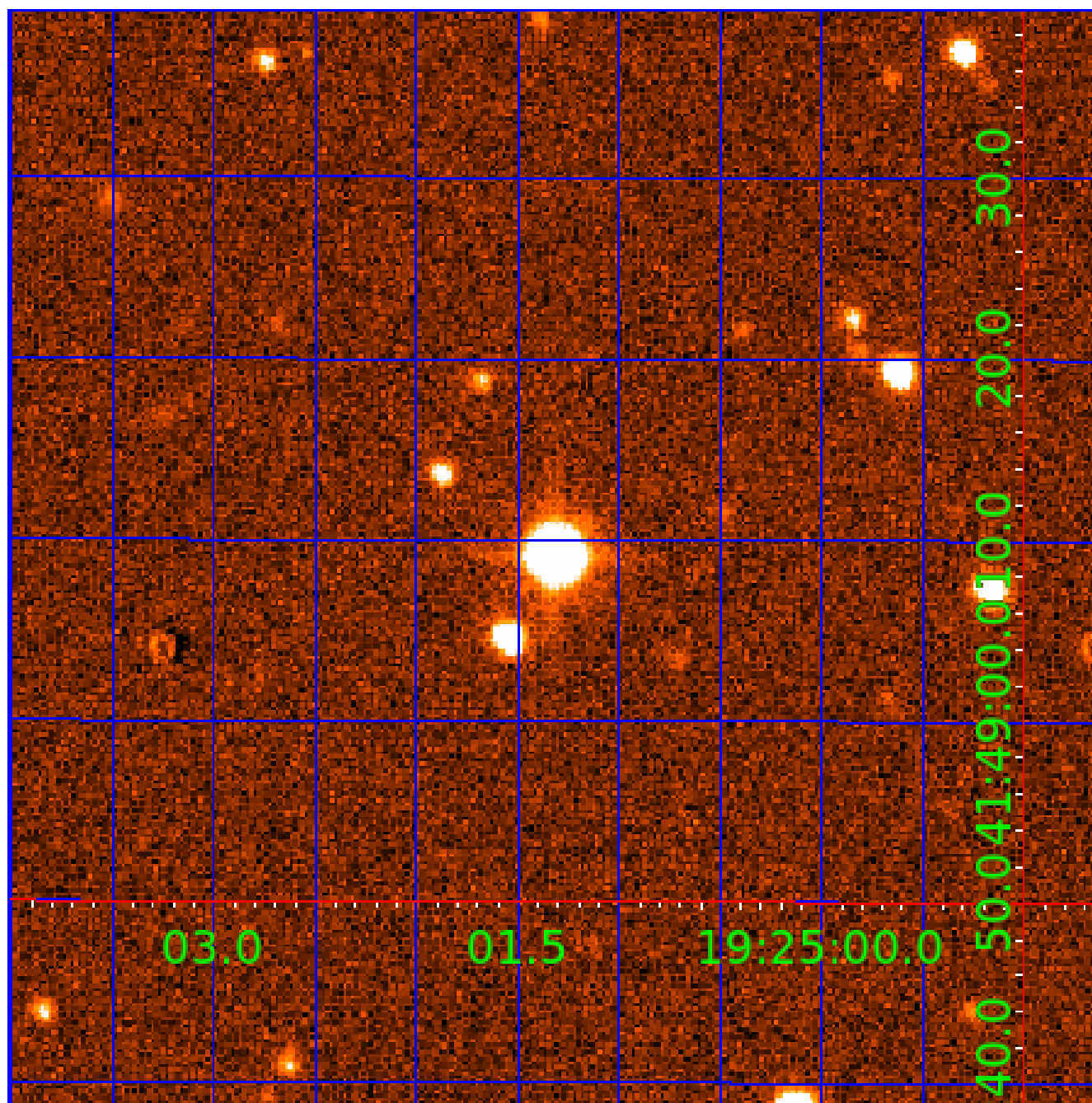


fluxWeightedCentroids, Planet 3 of 6



UKIRT Image

Declination



KIC 006441258

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})
006441258-01	OBS	No	0.830766	131.946682	96.9	5.417	13.5	7.7	1.34	6773	1.42	9734.49
006441258-02	OBS	No	1.008777	131.960386	449.5	3.208	15.3	15.9	1.34	6773	3.33	7514.35
006441258-03	OBS	No	21.215440	137.408309	1649.0	3.279	13.7	11.6	1.34	6773	5.65	129.44
006441258-04	OBS	No	43.018464	145.944718	1945.8	2.747	9.9	9.8	1.34	6773	6.43	50.44
006441258-05	OBS	No	26.441720	140.535961	1783.0	2.111	9.9	9.9	1.34	6773	5.93	96.51
006441258-06	OBS	No	211.033834	273.500397	143.8	5.000	8.4	-1.0	1.34	6773	1.63	6.05

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006441258-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
006441258-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006441258-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
006441258-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
006441258-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006441258-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

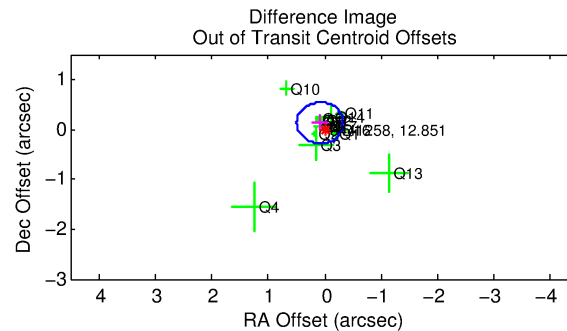
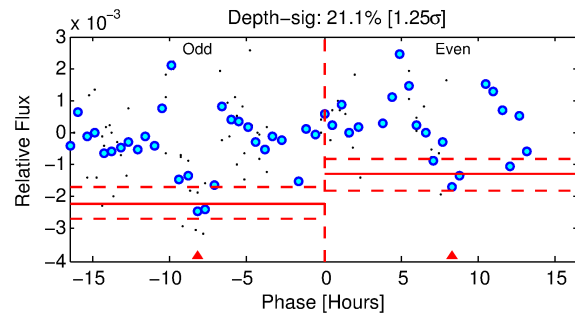
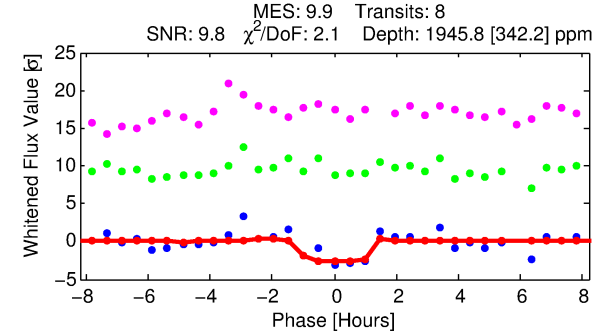
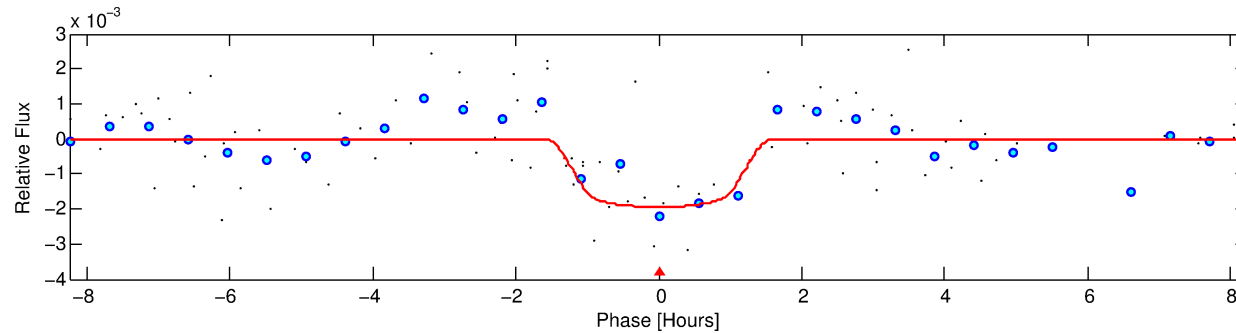
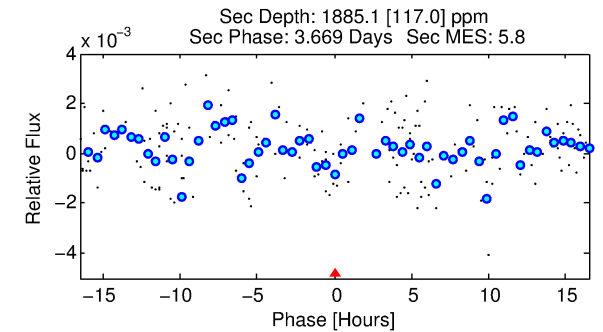
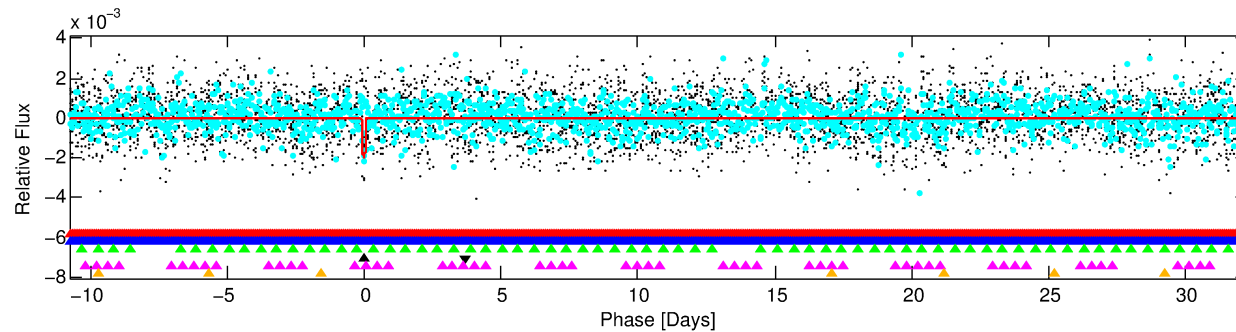
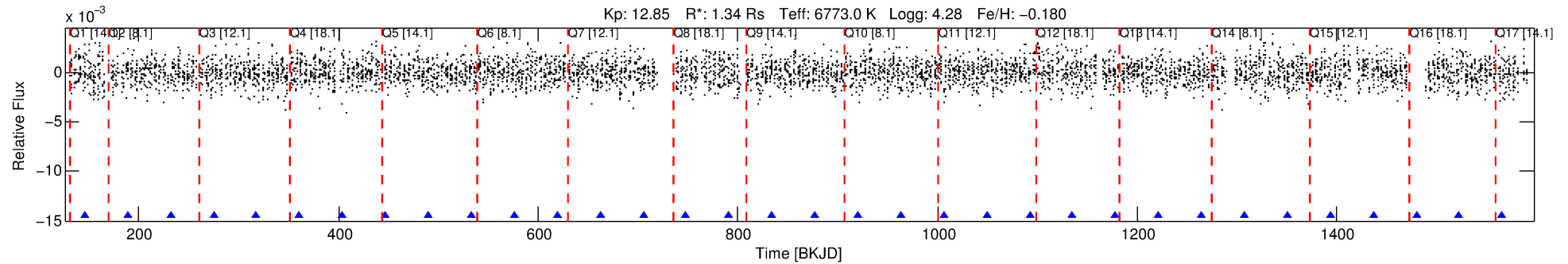
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006441258-04

No Significant Match Found

DV One-Page Summary

KIC: 6441258 Candidate: 4 of 6 Period: 43.018 d



DV Fit Results:

Period = 43.01846 [0.00057] d
Epoch = 145.9447 [0.0116] BKJD
Rp/R* = 0.0438 [0.0255]
a/R* = 87.56 [283.73]
b = 0.74 [1.93]
Seff = 50.44 [20.47]
Teq = 680 [69] K
Rp = 6.43 [4.29] Re
a = 0.2599 [0.0687] AU
Ag = 1693.46 [2070.86] [0.82σ]
Teffp = 6740 [1984] K [3.05σ]

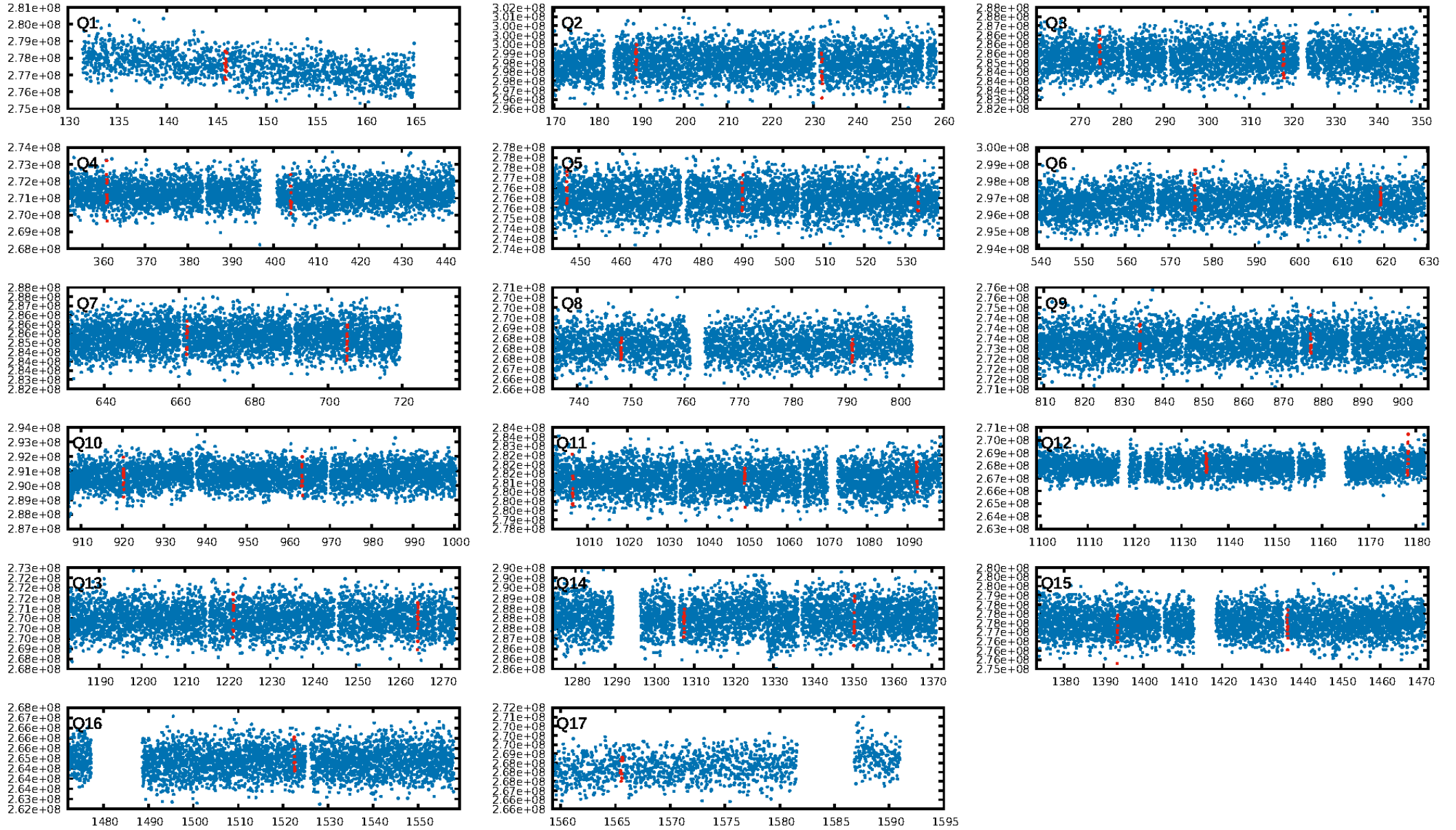
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [114.83σ]
LongPeriod-sig: 100.0% [706.82σ]
ModelChiSquare2-sig: 7.9%
ModelChiSquareGof-sig: 99.5%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [8/8]
GhostDiagnostic-chr: -3.462
Centroid-sig: N/A
Centroid-so: 0.226 arcsec [4.61σ]
OotOffset-rm: 0.151 arcsec [1.10σ]
KicOffset-rm: 0.293 arcsec [2.13σ]
OotOffset-st: 4/3/4/5 [16]
KicOffset-st: 4/3/4/5 [16]
DiffImageQuality-fgm: 0.50 [8/16]
DiffImageOverlap-fno: 0.00 [0/16]

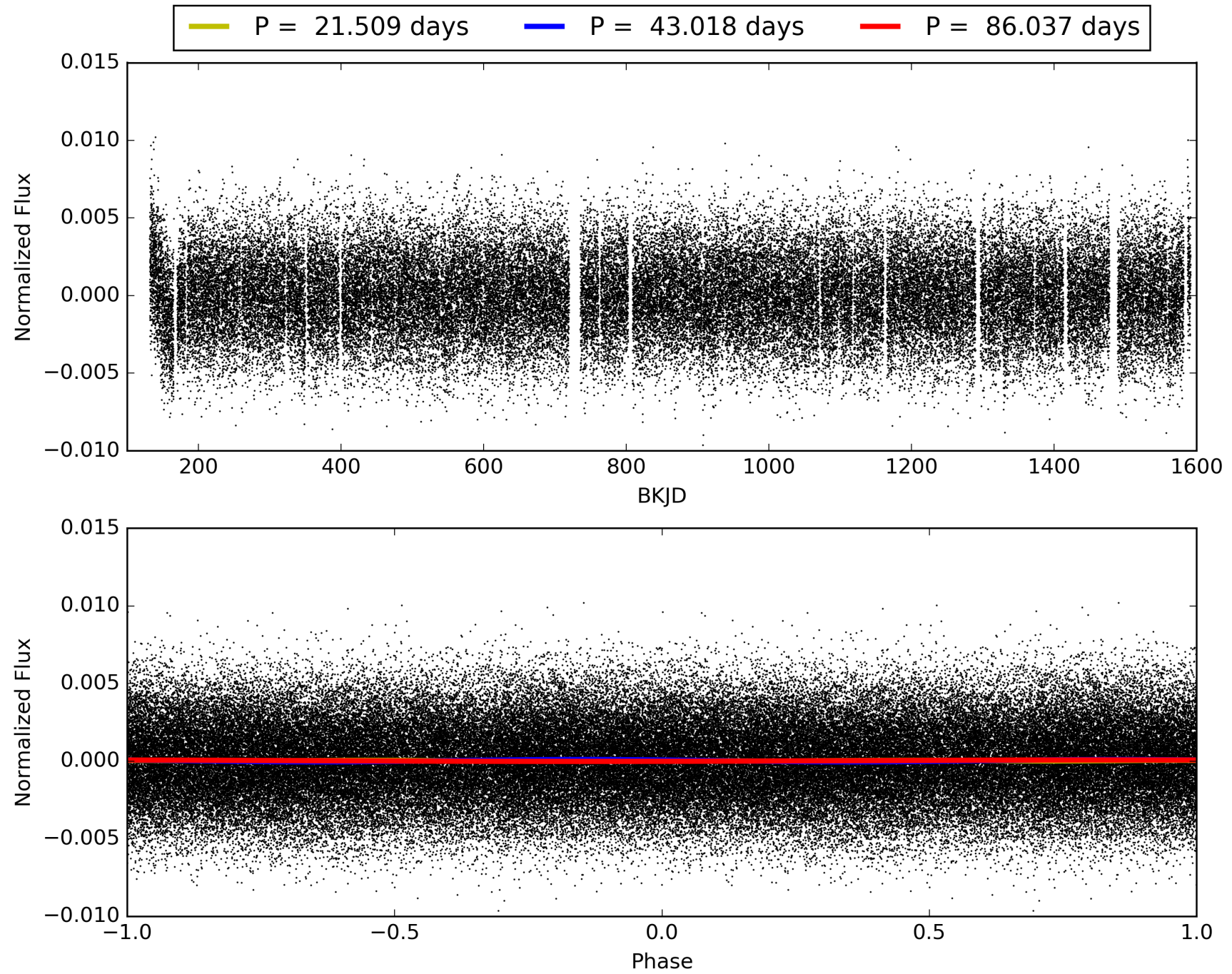
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:31:10 Z

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

TCE 006441258-04, PDC Light Curves

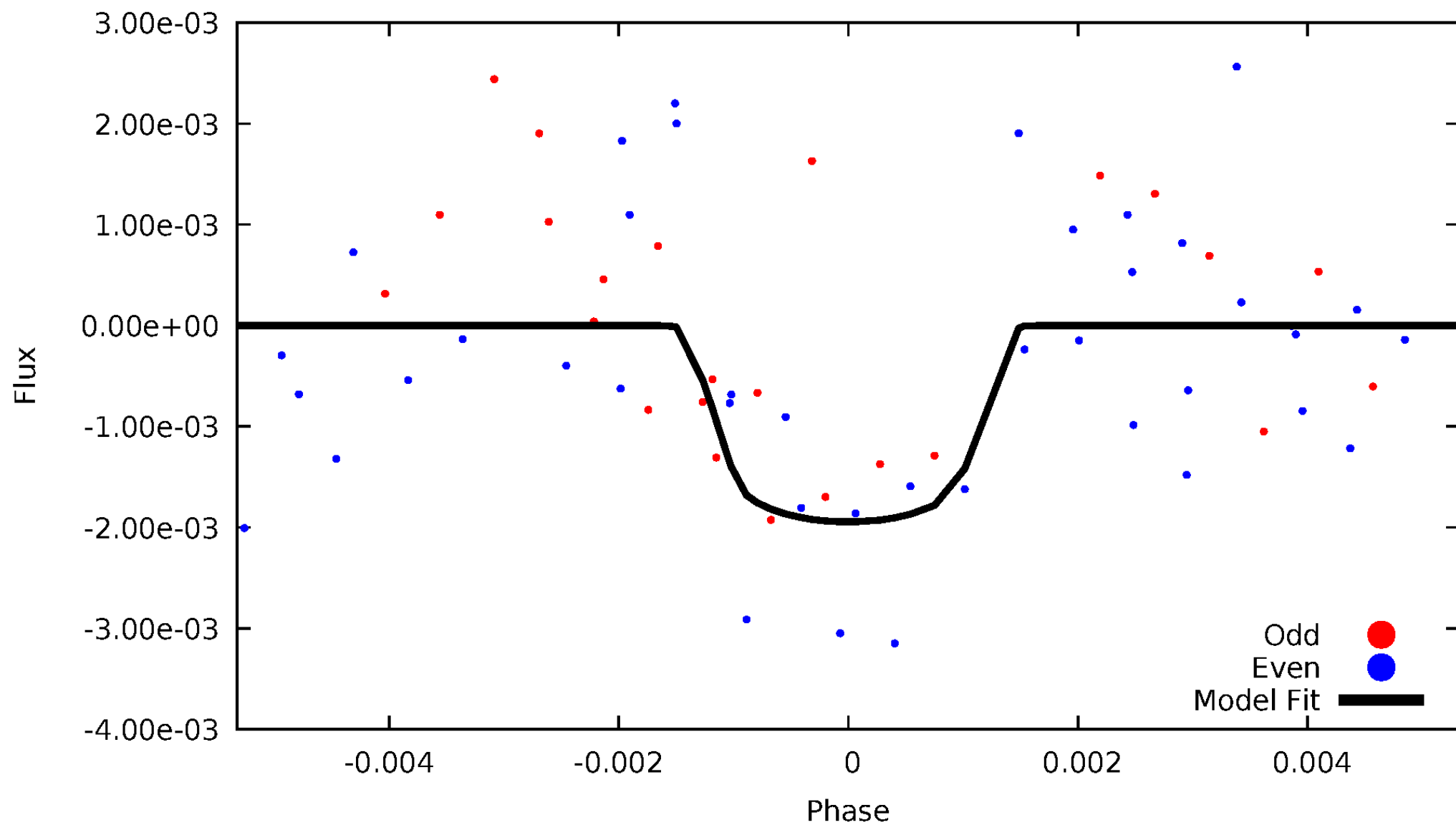


TCE 006441258-04



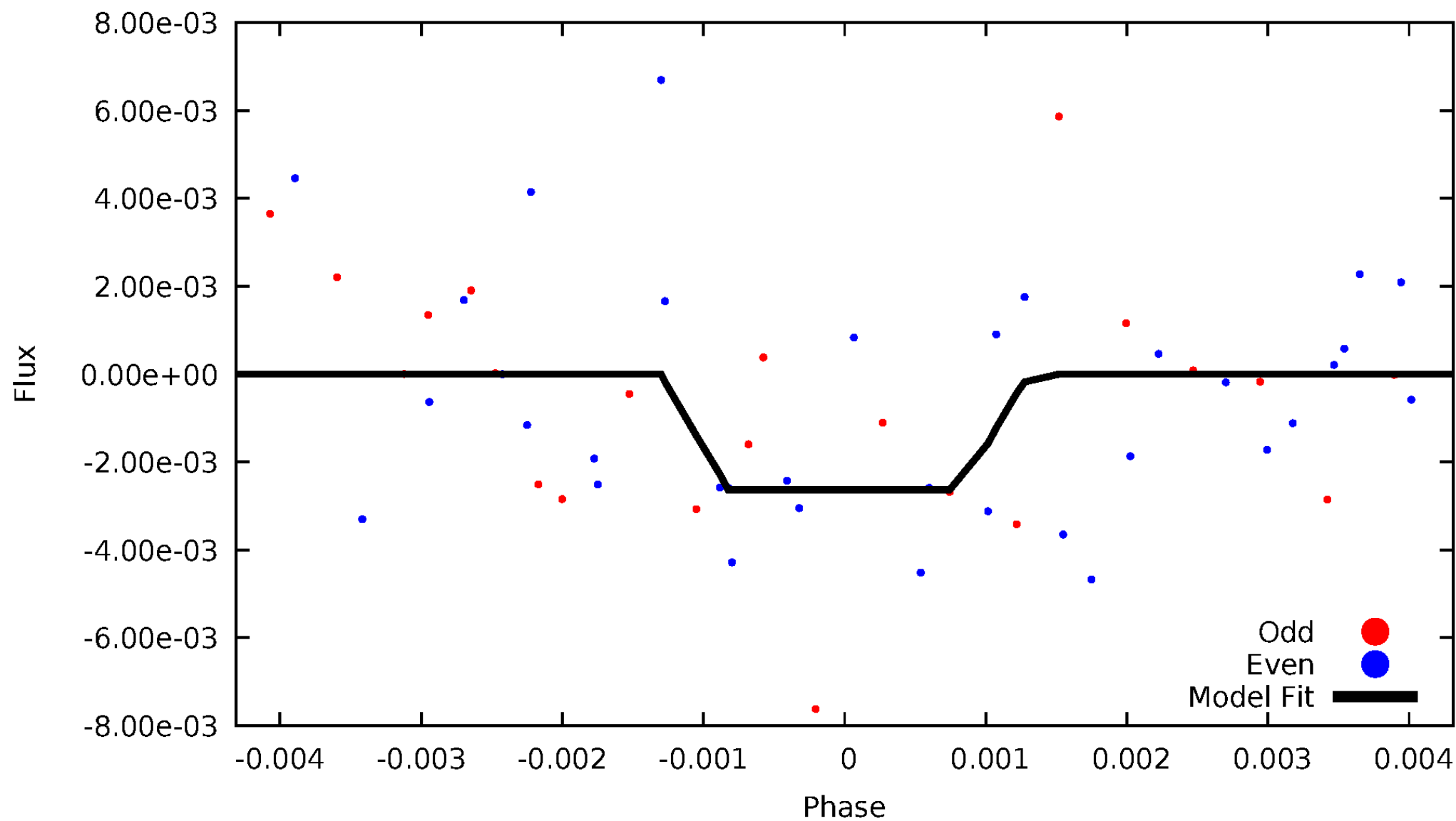
DV Odd/Even

TCE 006441258-04



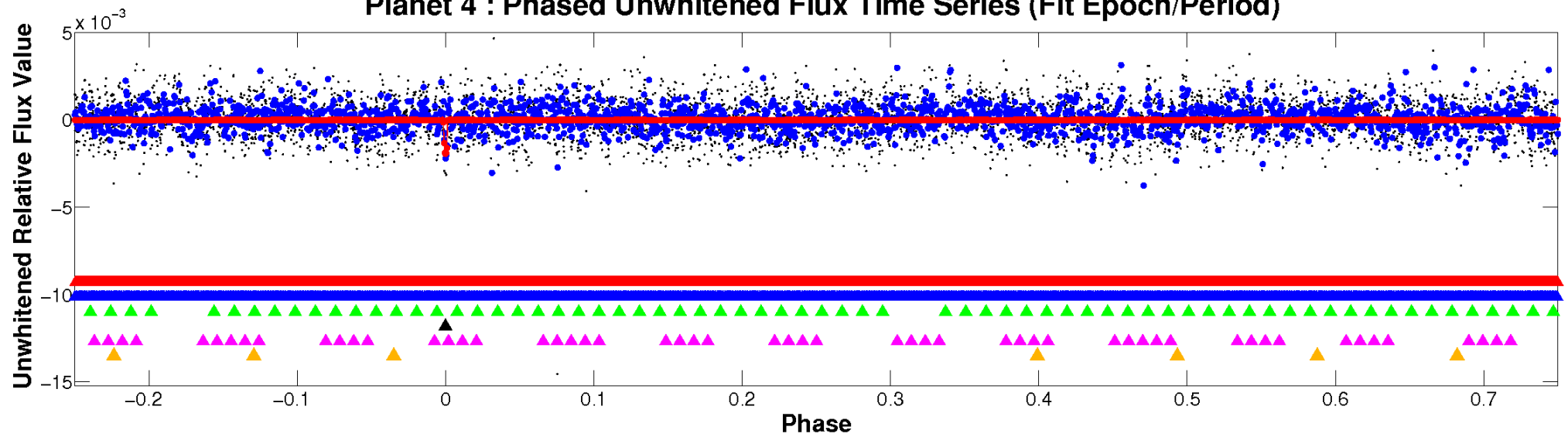
ALT Odd/Even

TCE 006441258-04

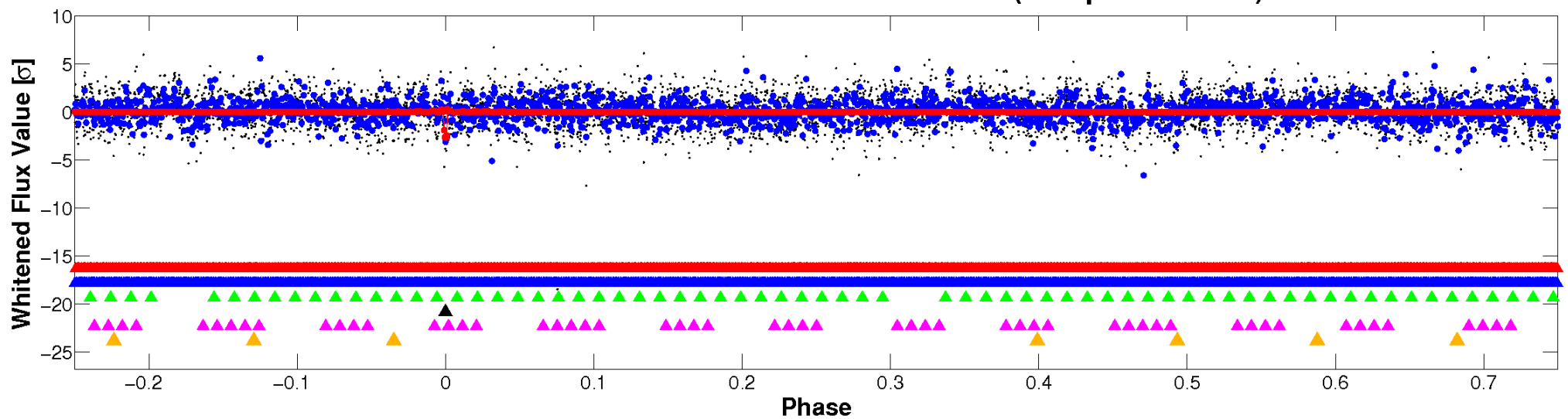


Non-Whitened Vs. Whitened Light Curve

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

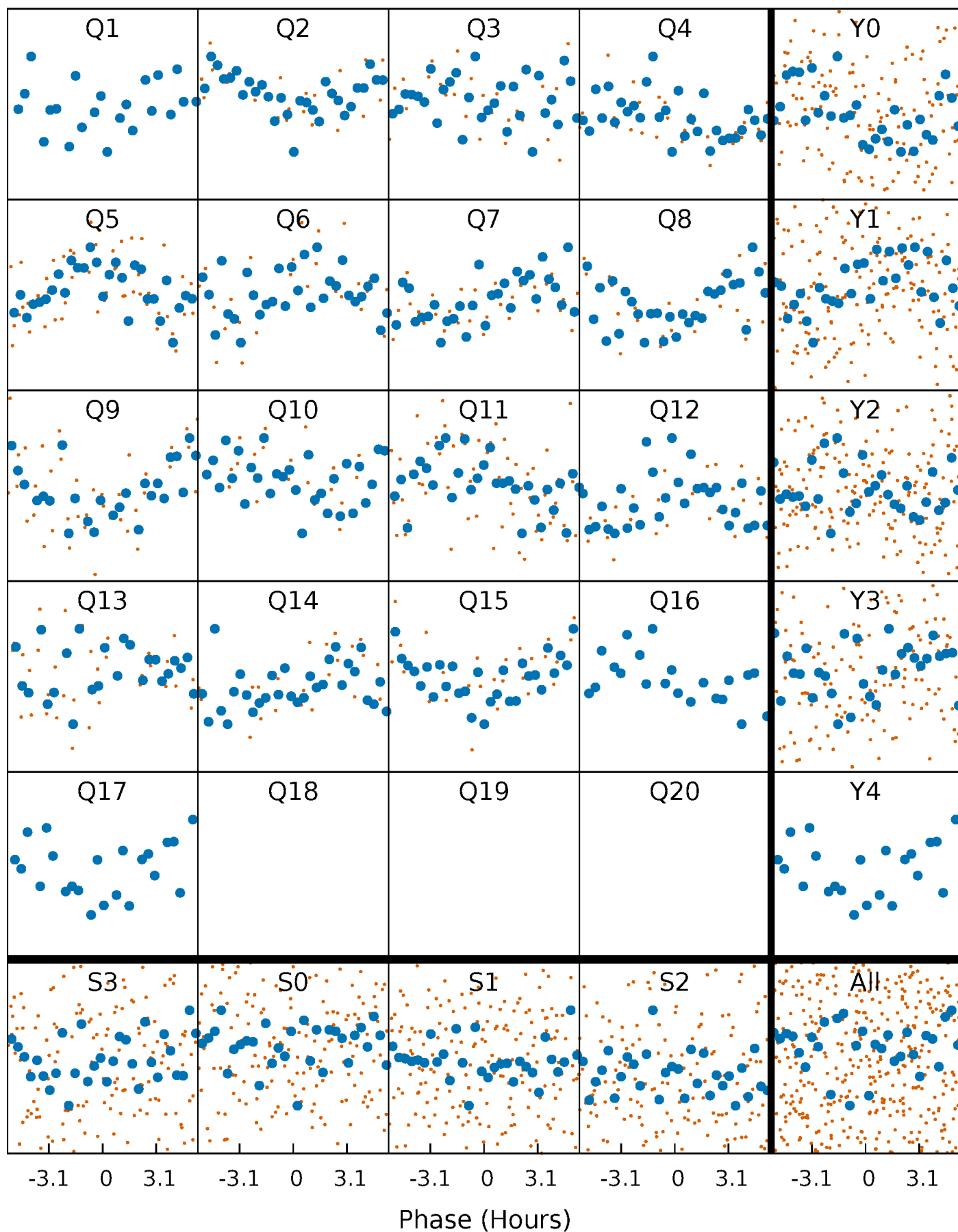


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



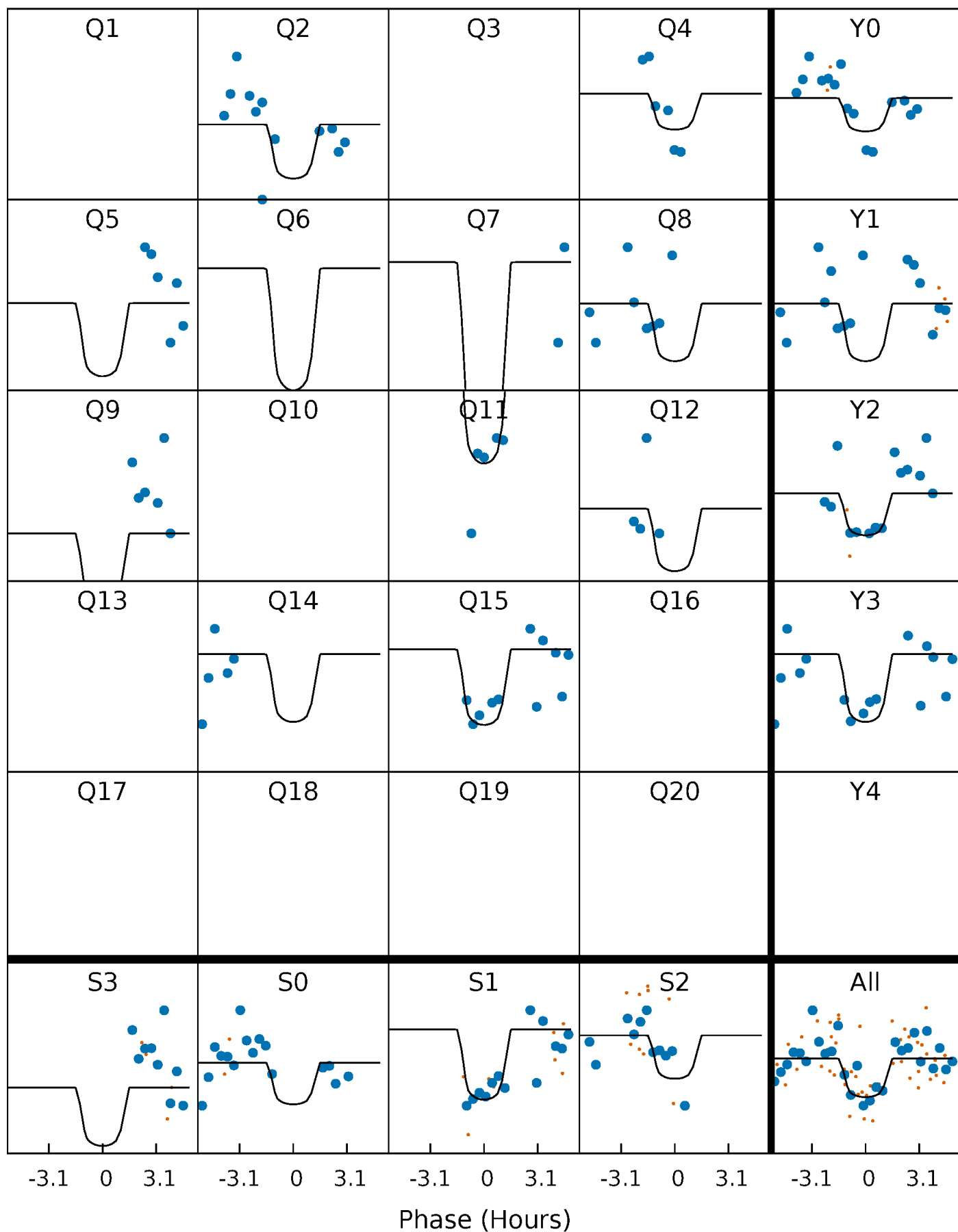
PDC Quarter-Phased Transit Curves

TCE 006441258-04 $P = 43.018464$ Days $T_0 = 145.944718$ (BKJD)



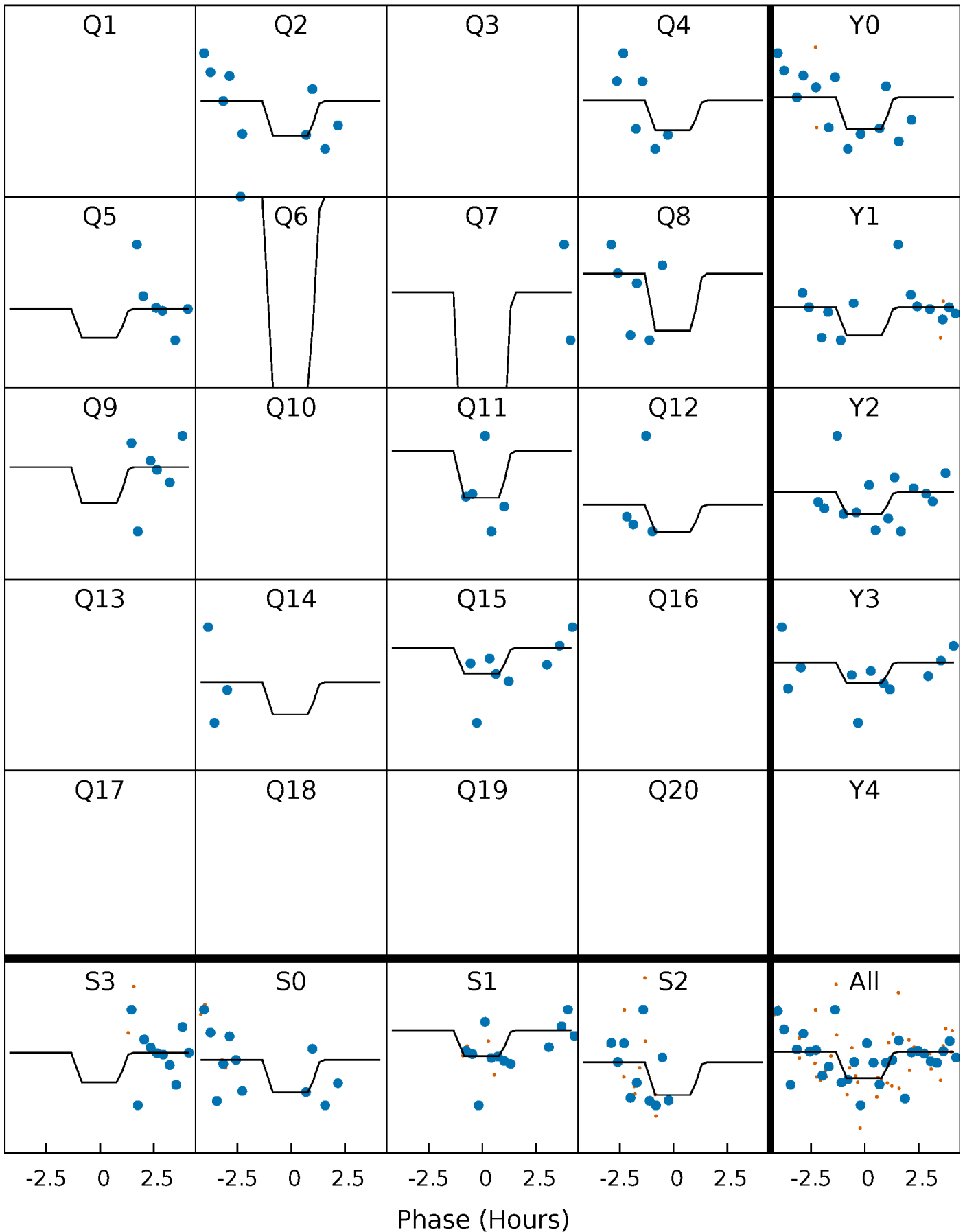
DV Quarter-Phased Transit Curves

TCE 006441258-04 P= 43.018464 Days $T_0=145.944718$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

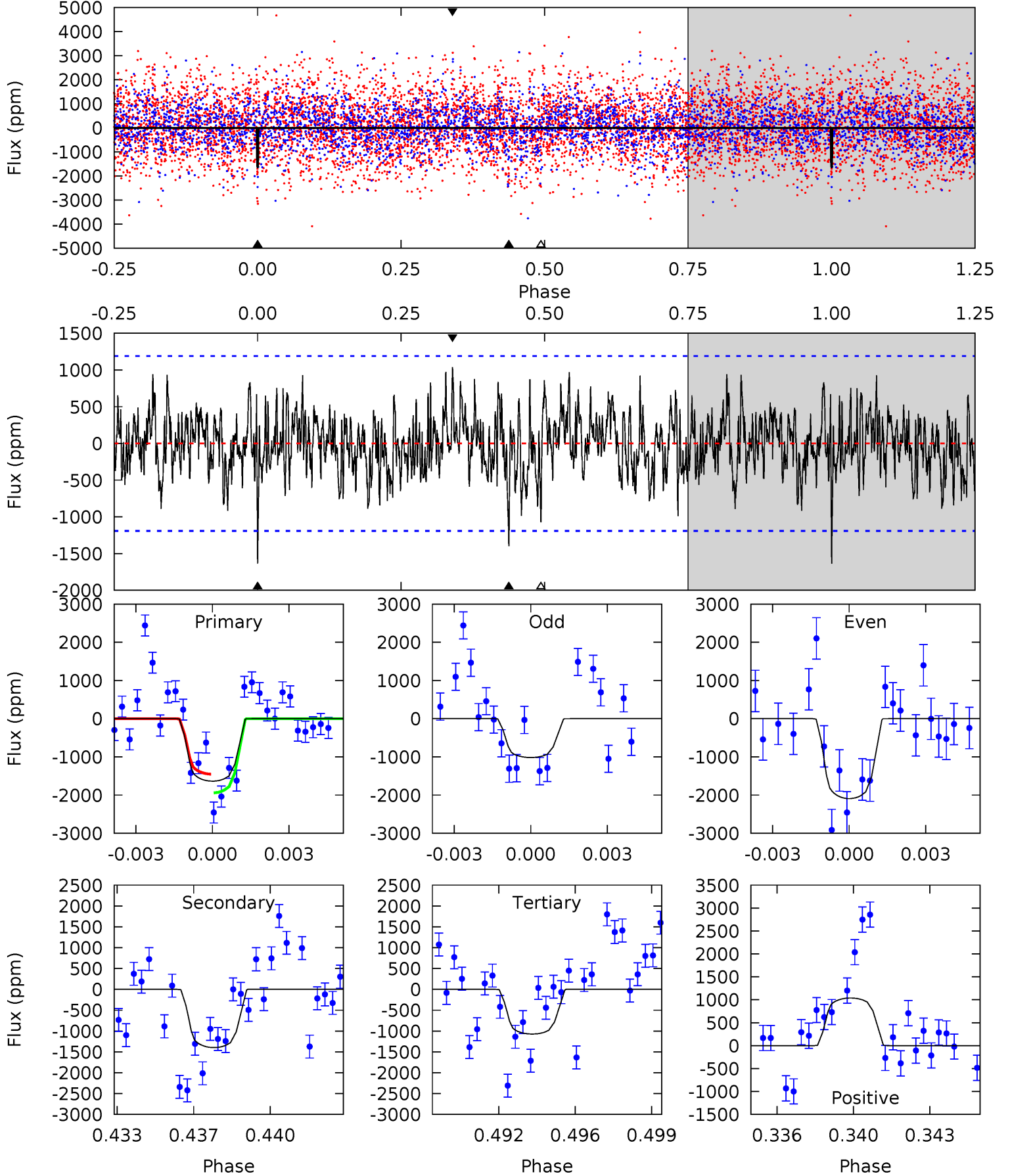
TCE 006441258-04 P= 43.016228 Days $T_0=145.989402$ (BKJD)



DV Model-Shift Uniqueness Test

006441258-04, P = 43.018464 Days, E = 102.926254 Days

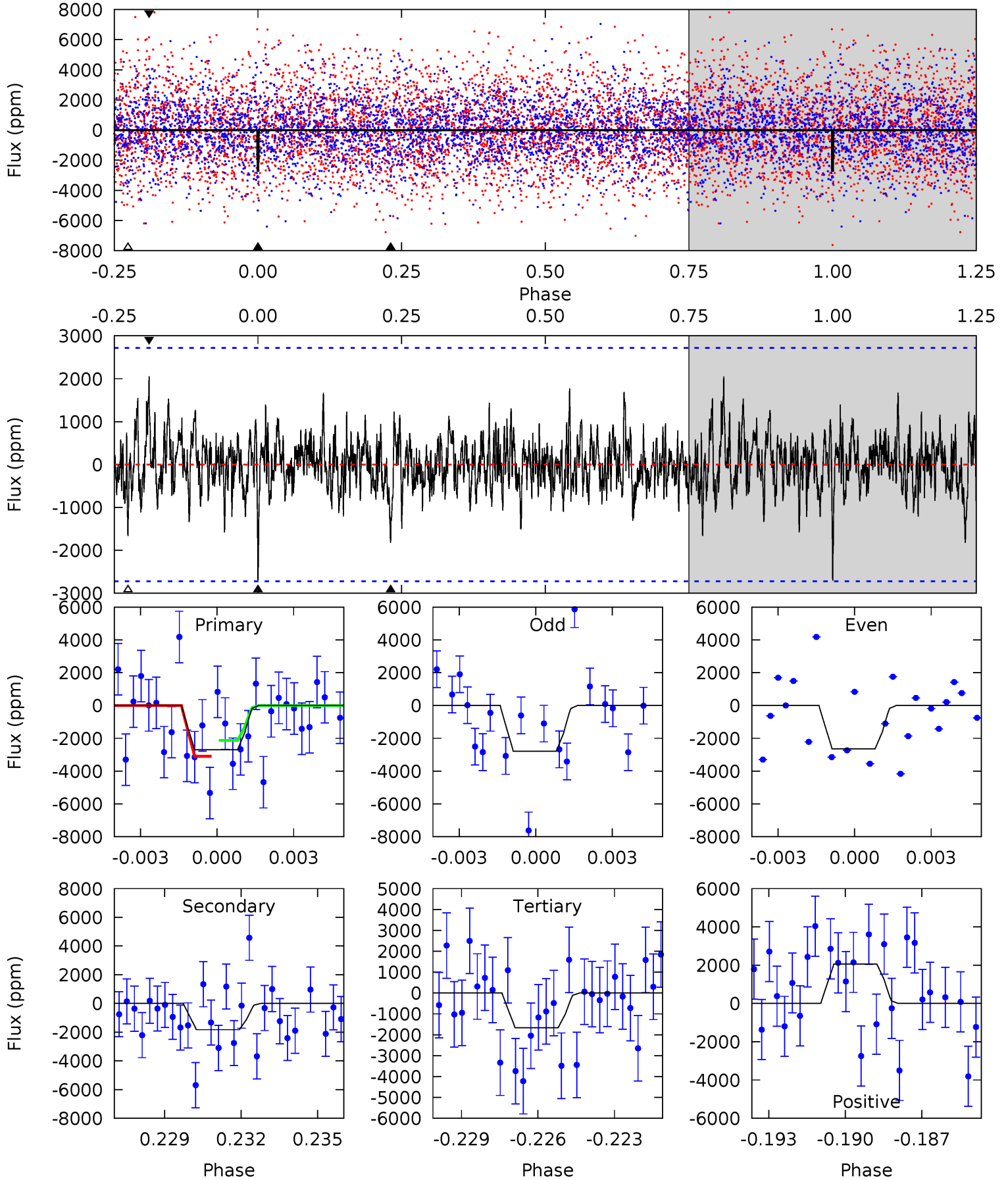
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.18	6.13	4.71	4.56	5.23	2.92	1.52	2.47	2.62	1.42	1.58	2.36	0.79	0.39	1.03



Alt Model-Shift Uniqueness Test

006441258-04, P = 43.016228 Days, E = 102.973174 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.23	3.53	3.22	3.98	5.27	2.99	0.97	2.01	1.25	0.31	-0.45	0.13	0.98	0.43	0.95



Stellar Parameters For KIC 006441258

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6773^{+188}_{-282}	$4.283^{+0.090}_{-0.195}$	$-0.180^{+0.250}_{-0.300}$	$1.344^{+0.439}_{-0.219}$	$1.273^{+0.195}_{-0.195}$	$0.739^{+0.355}_{-0.381}$
	+3%/-4%	+2%/-5%	+139%/-167%	+33%/-16%	+15%/-15%	+48%/-52%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 006441258-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1397 ± 228	$6.65^{+4.11}_{-3.40}$	959^{+69}_{-53}	6255^{+3465}_{-1288}	1144^{+3943}_{-705}
Alt.	-1824 ± 516	$7.96^{+4.09}_{-3.58}$	962^{+73}_{-59}	6057^{+2493}_{-1141}	1046^{+2444}_{-653}

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 $A_{obs} \gg 1.0$

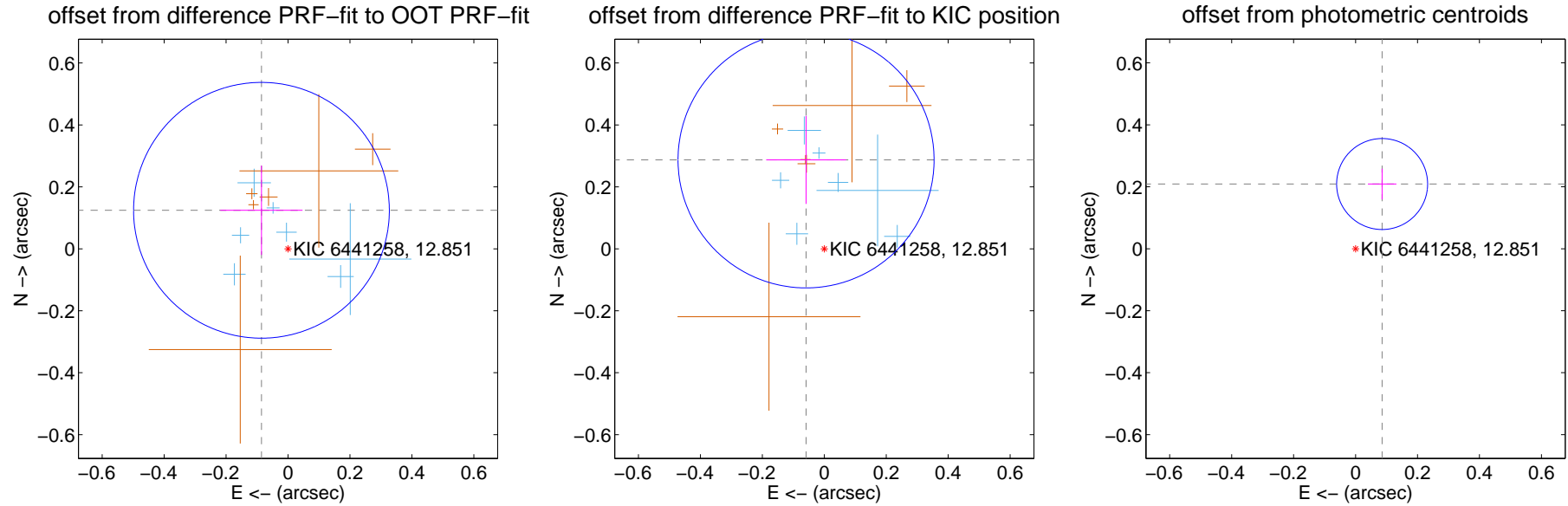
DV Centroid Data

Supplemental centroid analysis for 006441258-04. Kepler magnitude: 12.85. Transit SNR 9.83

There are 8 quarters with good PRF difference image offsets

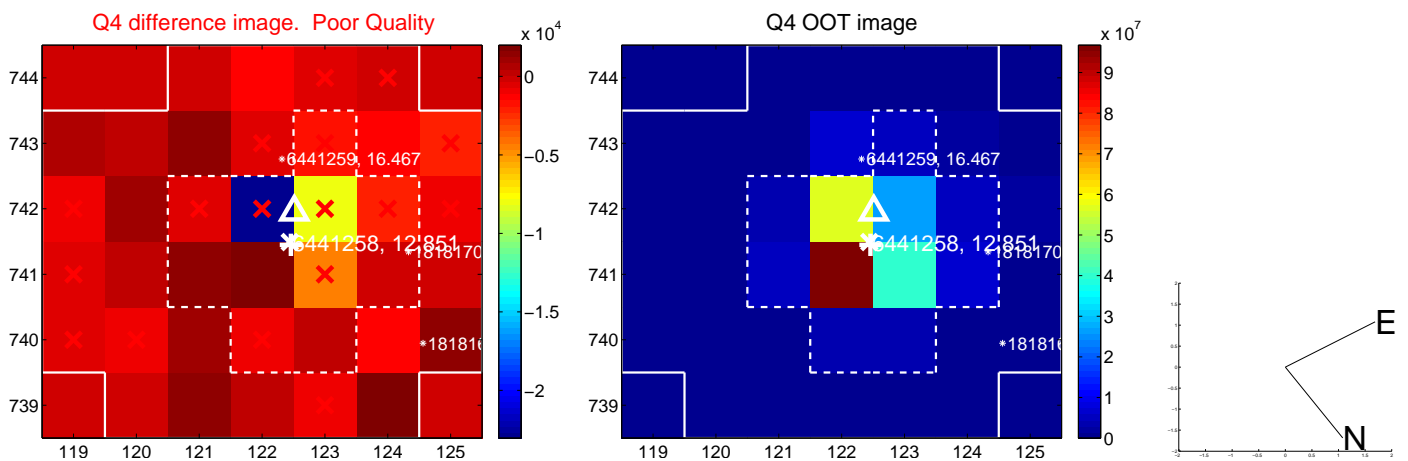
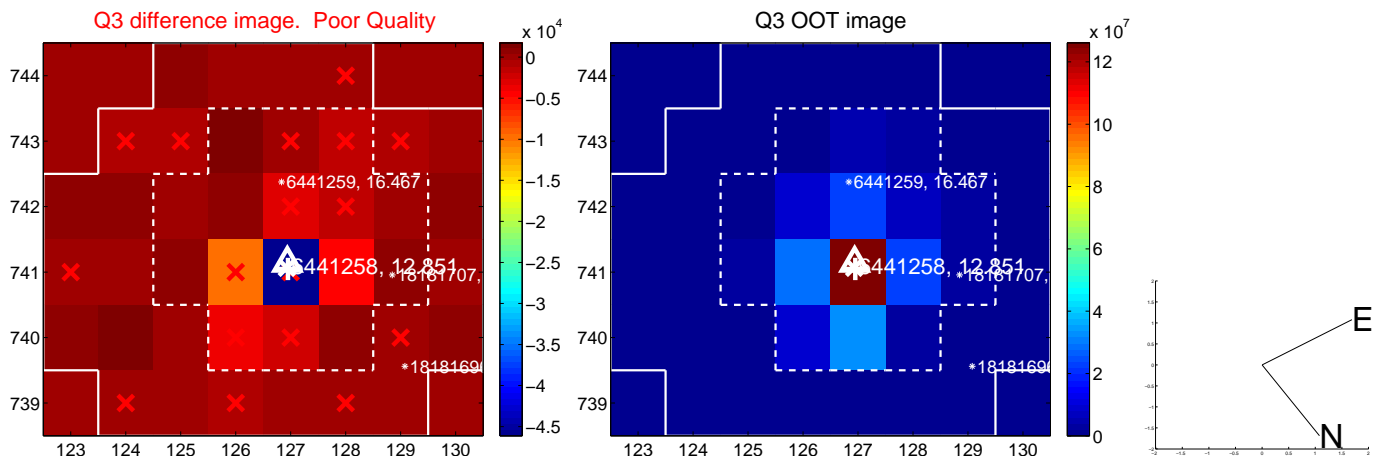
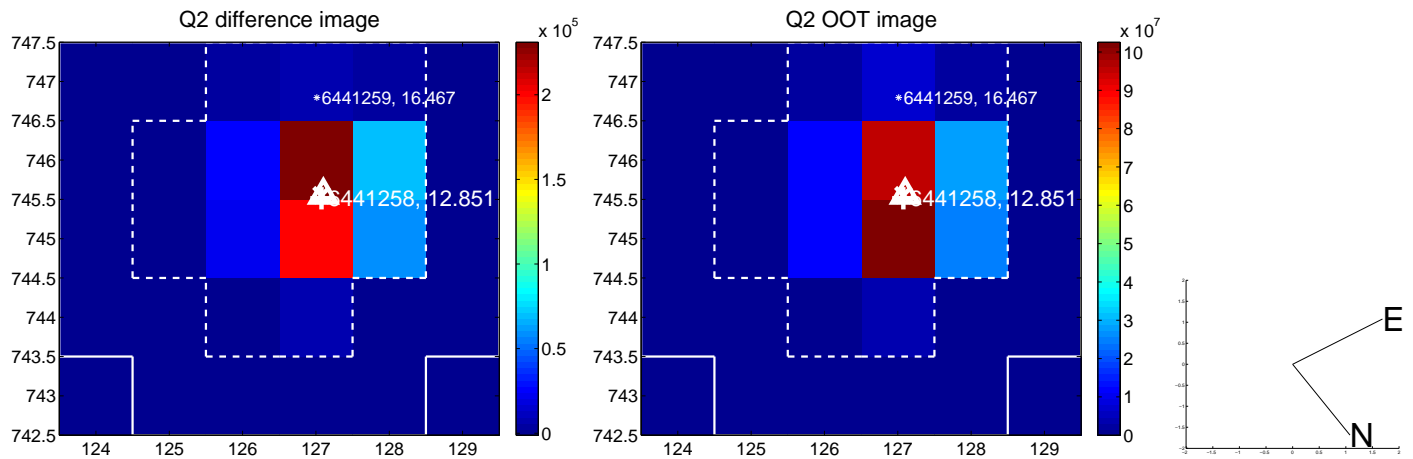
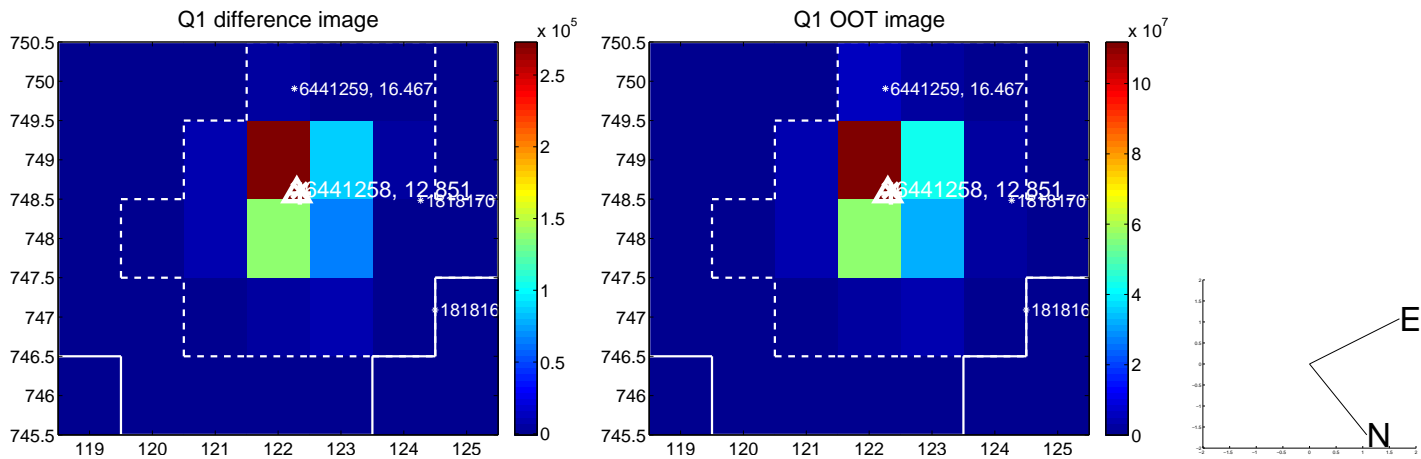
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.151 ± 0.138	1.10	0.086 ± 0.133	0.124 ± 0.144
PRF-fit source offset from KIC position	0.293 ± 0.138	2.13	0.059 ± 0.129	0.287 ± 0.142
photometric centroid source offset	0.23 ± 0.05	4.61	-0.09 ± 0.05	0.21 ± 0.05

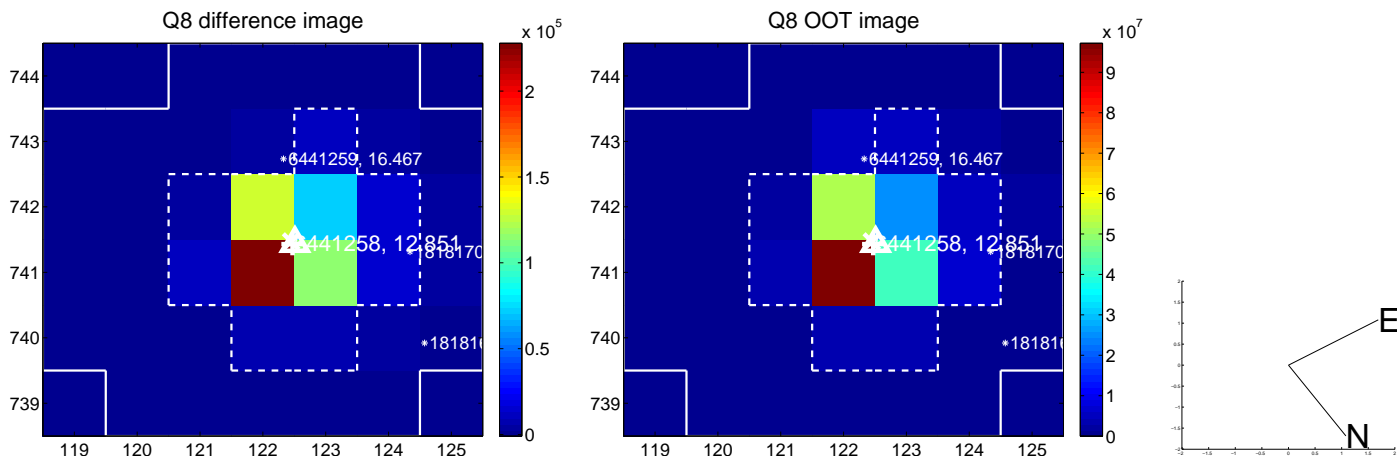
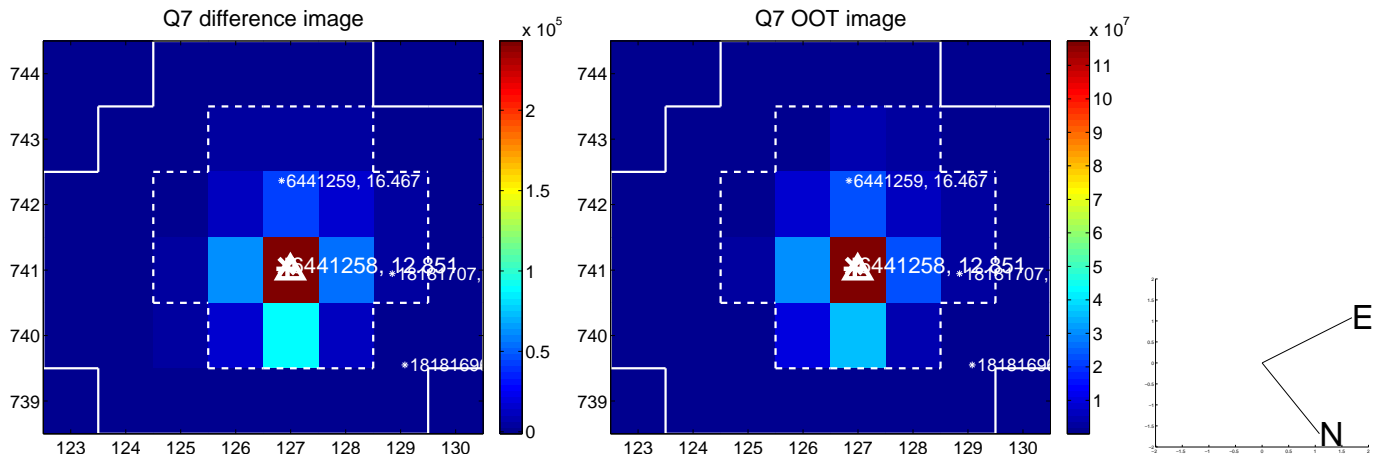
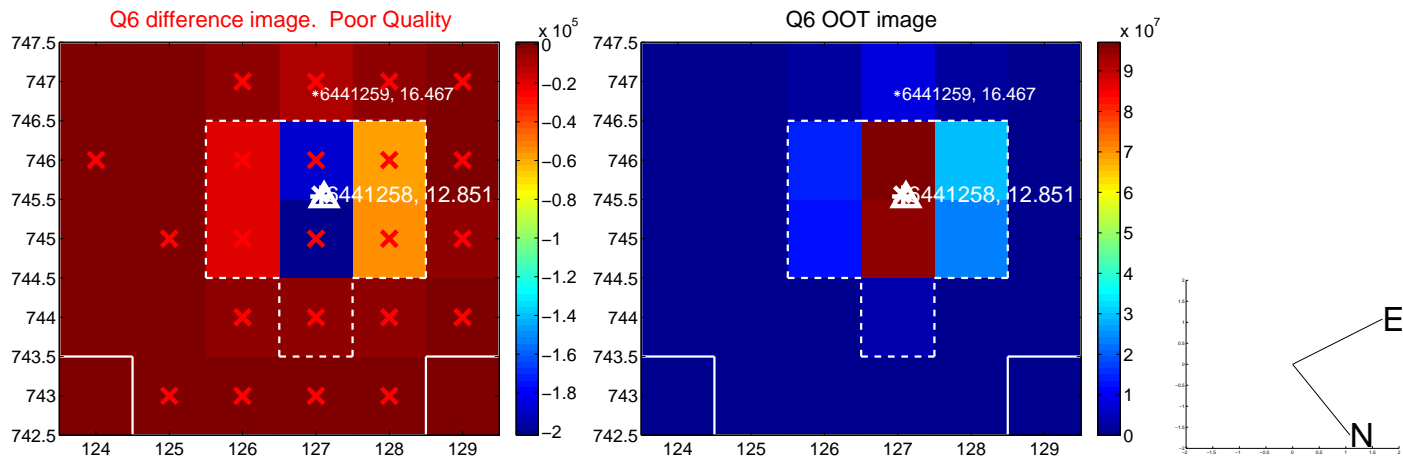
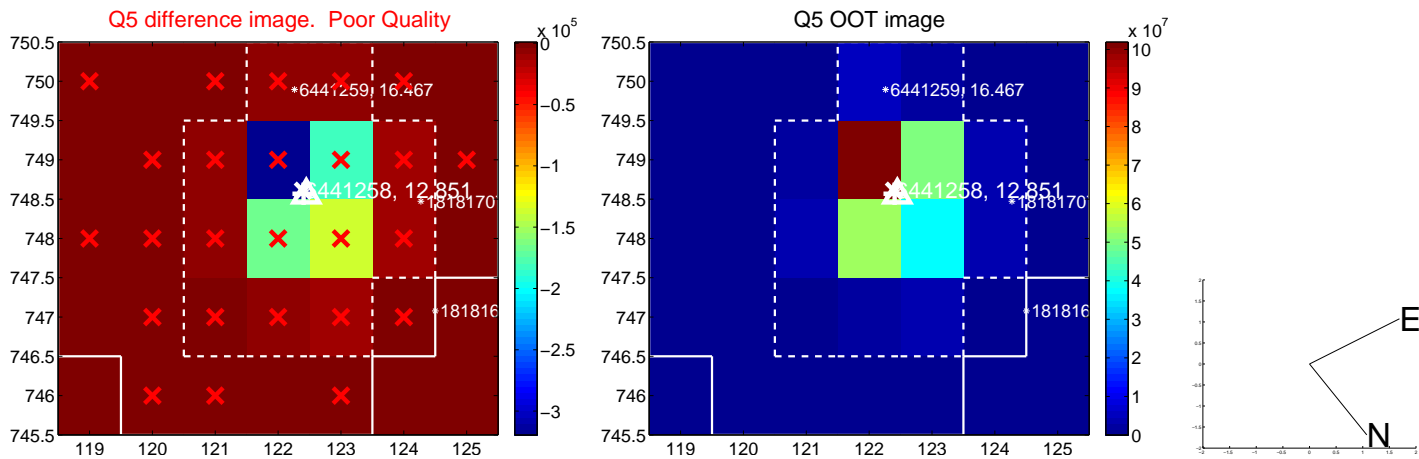


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

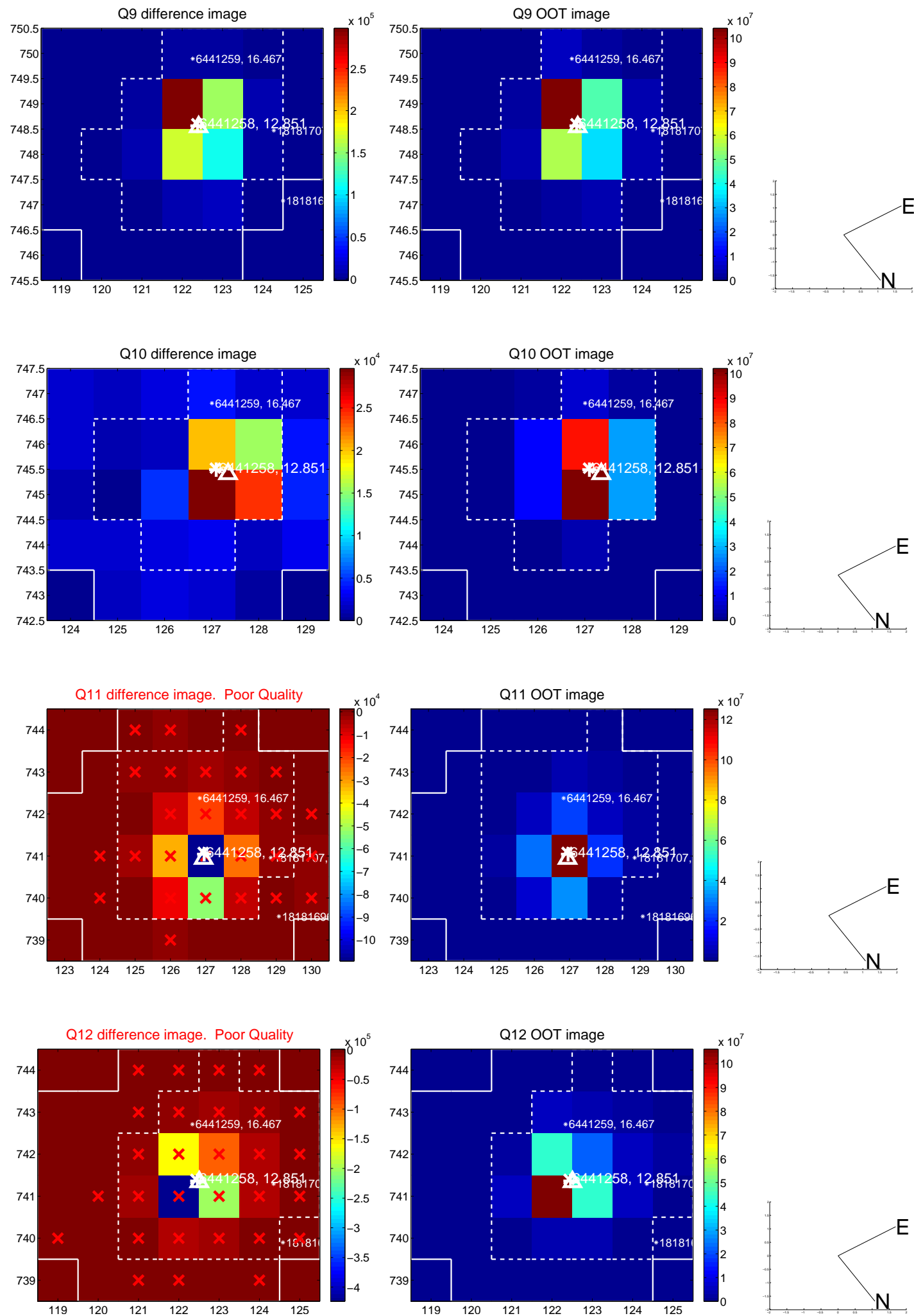
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



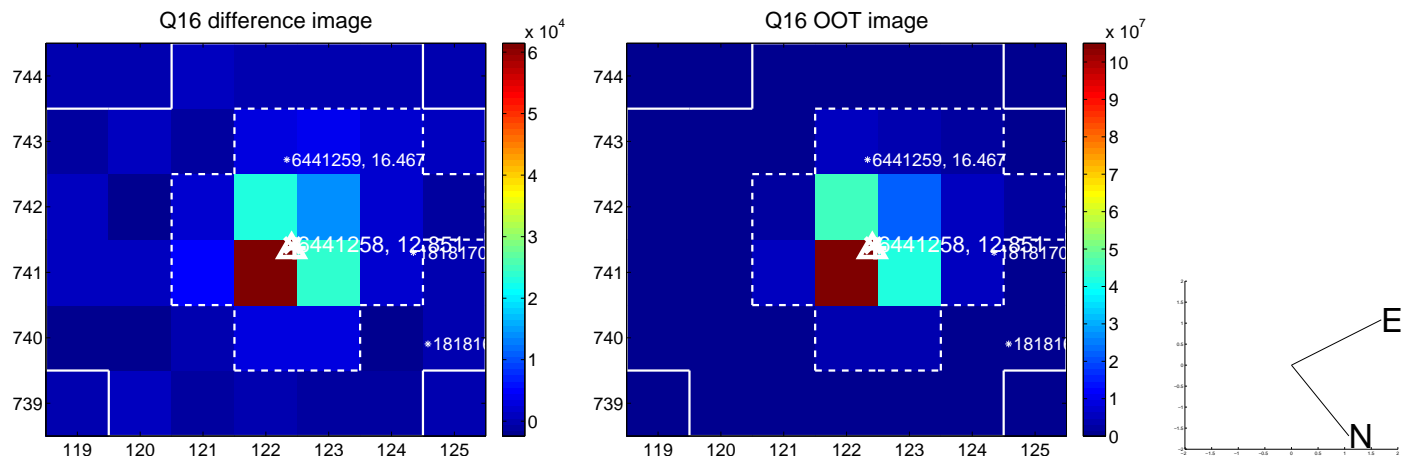
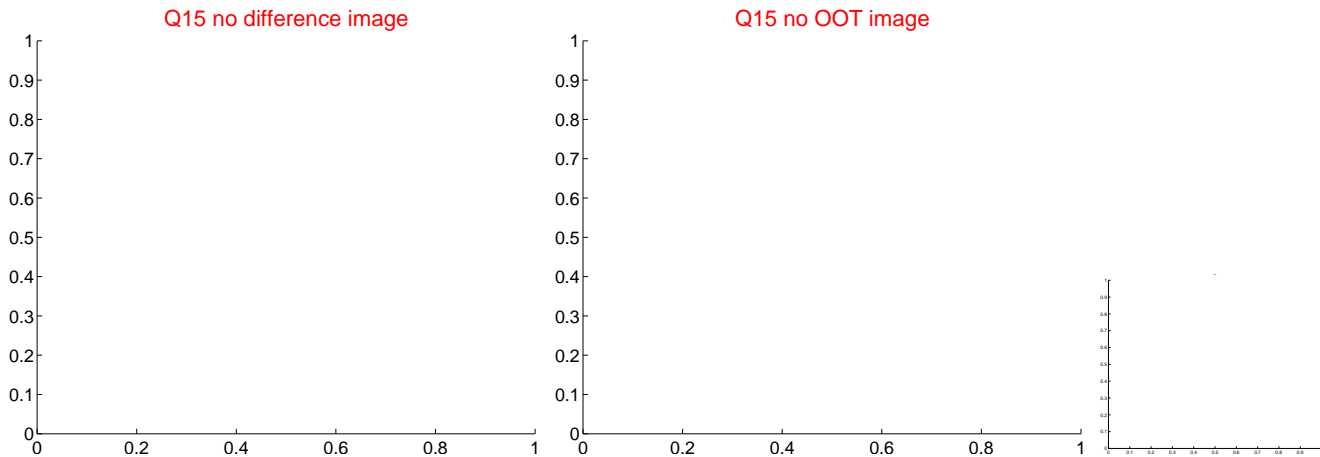
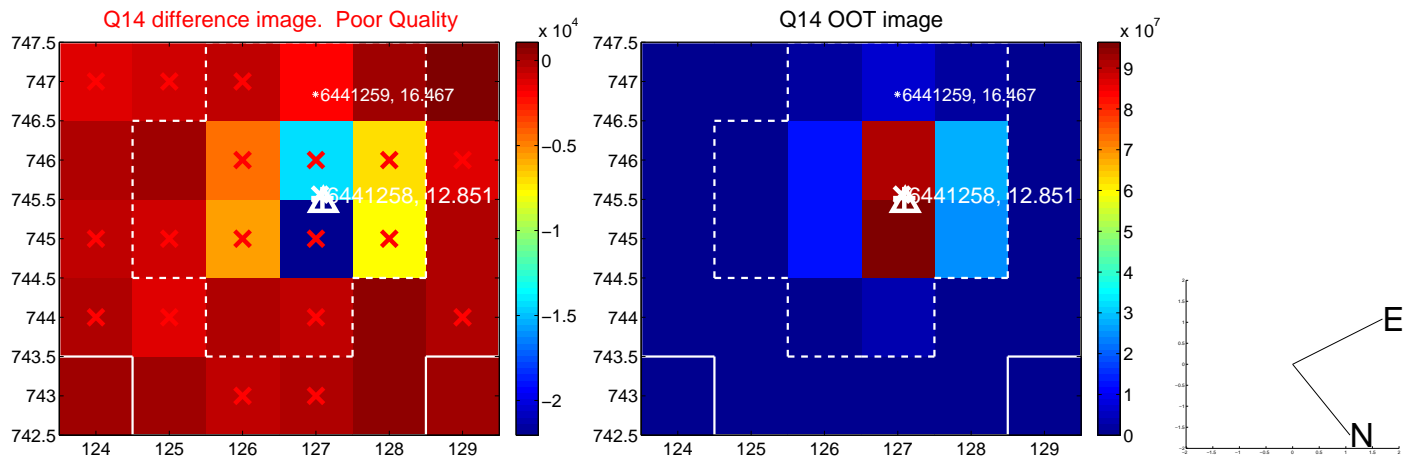
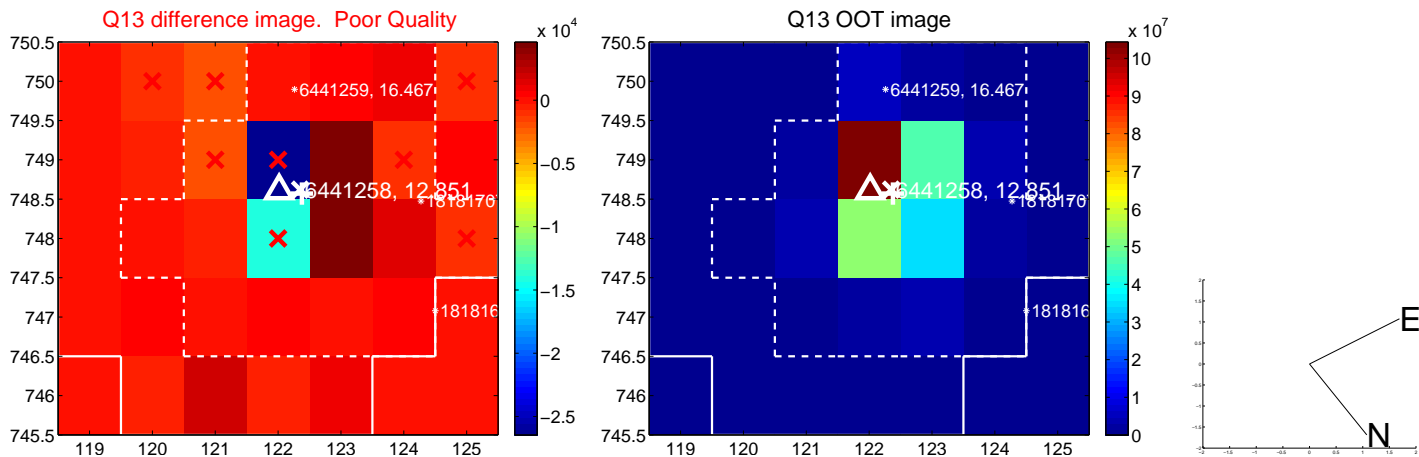
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



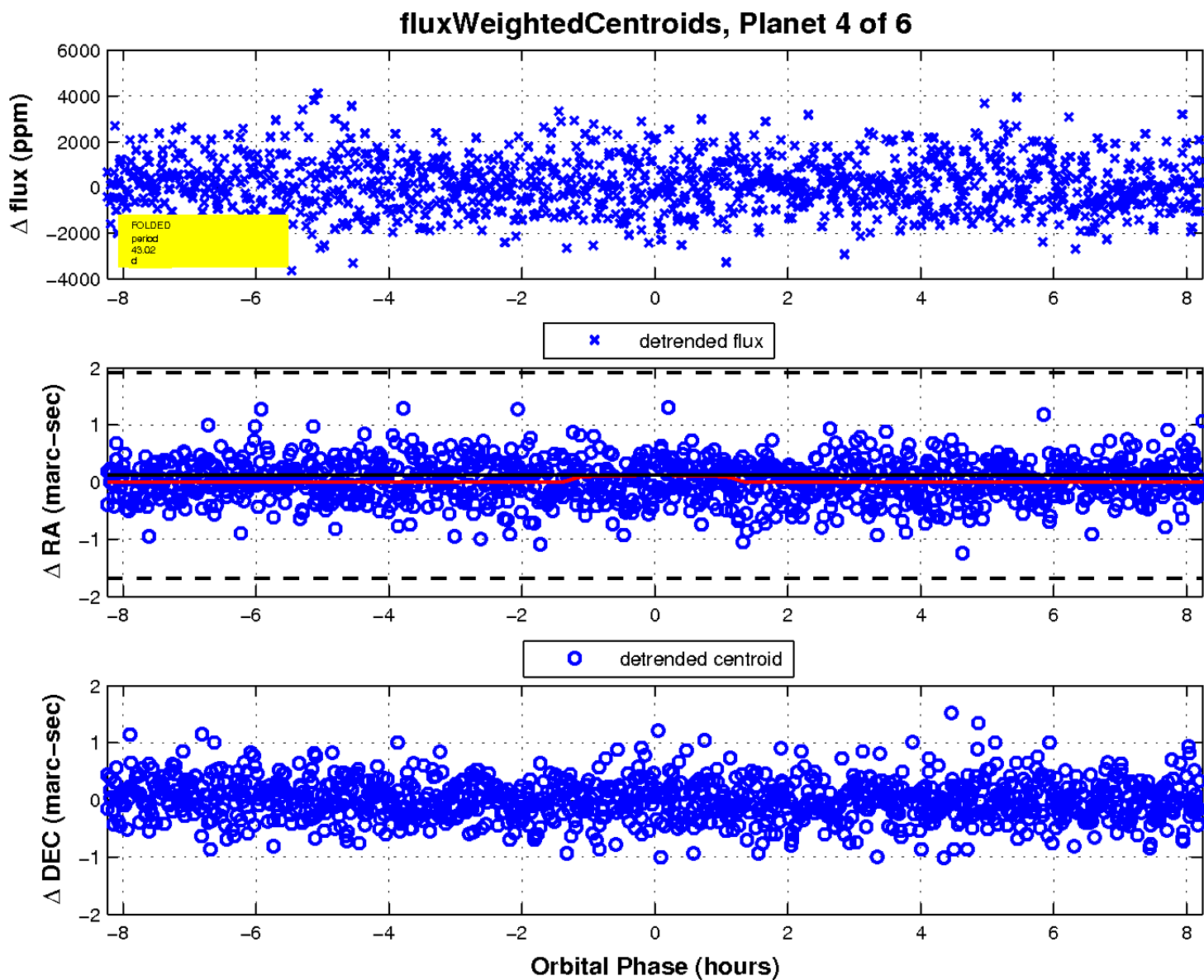
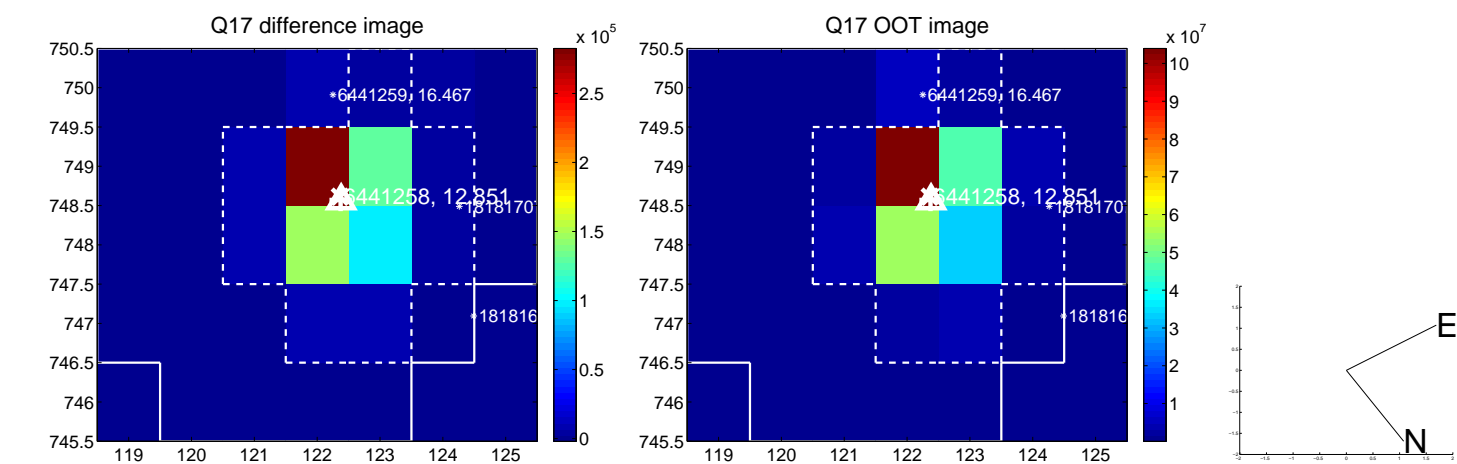
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

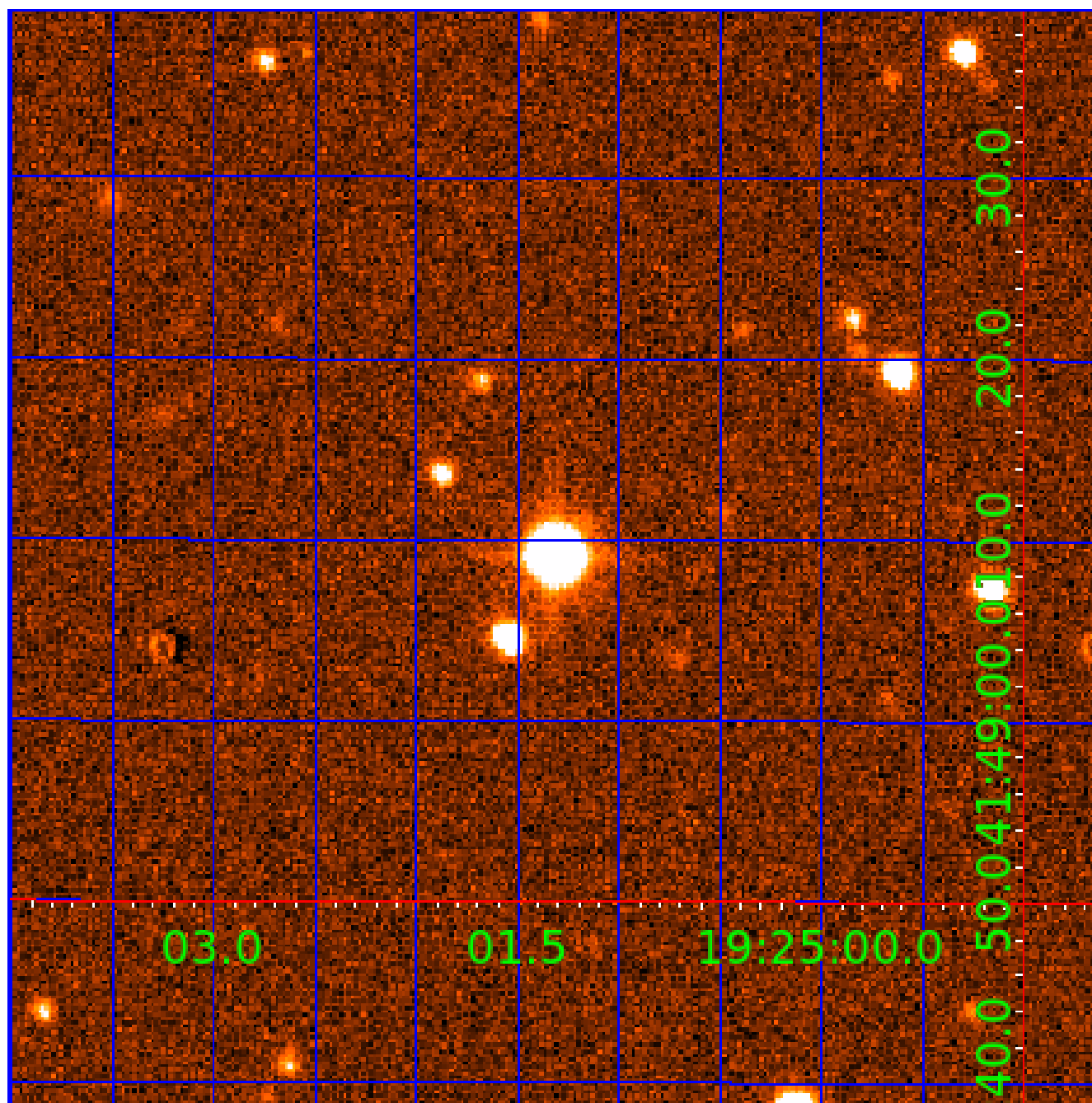


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006441258

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})
006441258-01	OBS	No	0.830766	131.946682	96.9	5.417	13.5	7.7	1.34	6773	1.42	9734.49
006441258-02	OBS	No	1.008777	131.960386	449.5	3.208	15.3	15.9	1.34	6773	3.33	7514.35
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006441258-05	OBS	No	26.441720	140.535961	1783.0	2.111	9.9	9.9	1.34	6773	5.93	96.51
006441258-06	OBS	No	211.033834	273.500397	143.8	5.000	8.4	-1.0	1.34	6773	1.63	6.05

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006441258-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
006441258-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006441258-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
006441258-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
006441258-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006441258-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

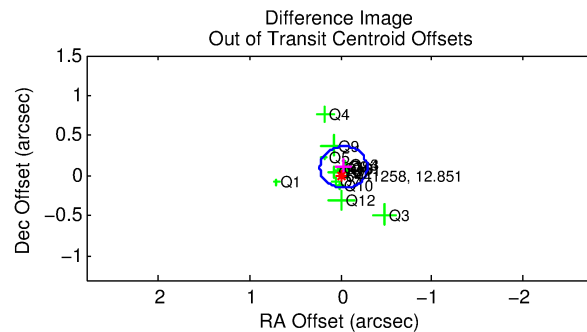
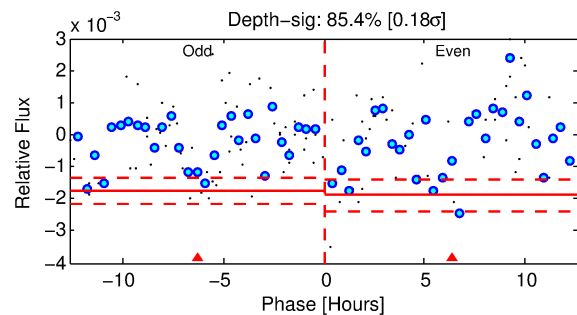
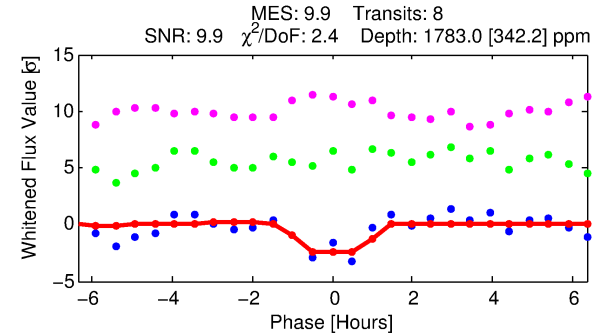
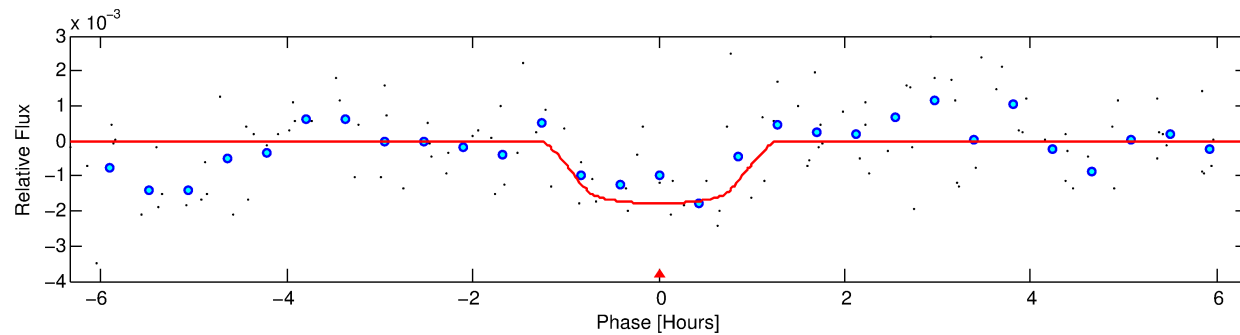
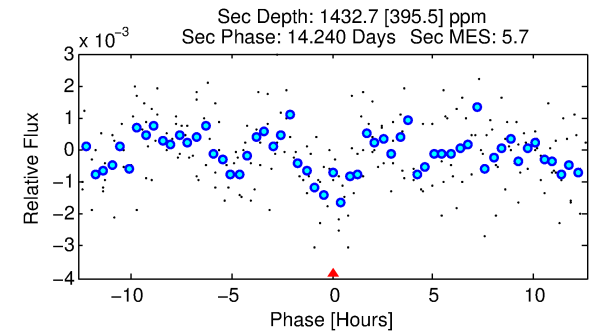
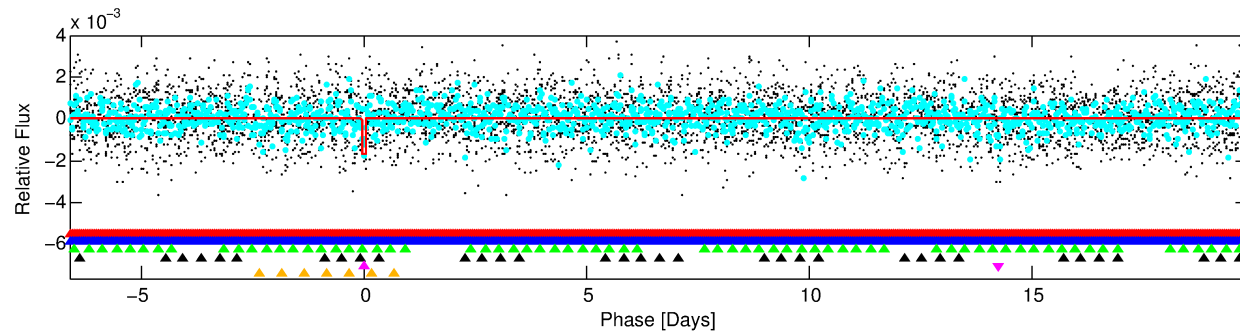
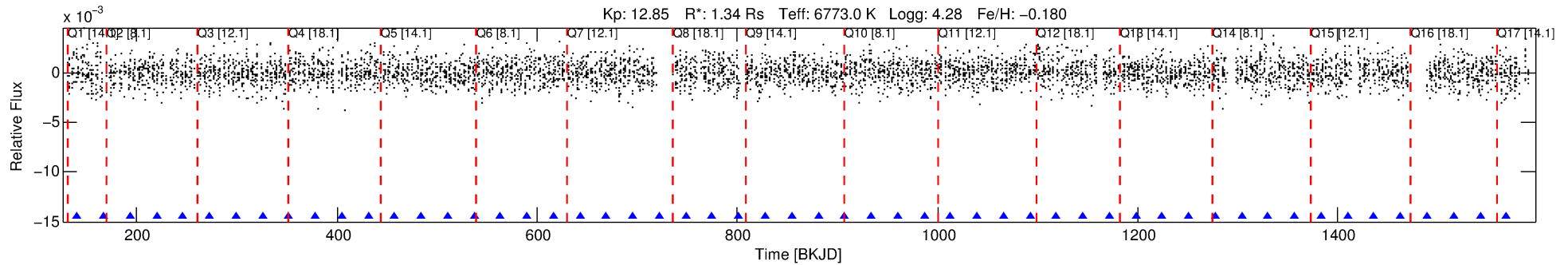
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006441258-05

No Significant Match Found

DV One-Page Summary

KIC: 6441258 Candidate: 5 of 6 Period: 26.442 d



DV Fit Results:

Period = 26.44172 [0.00032] d
Epoch = 140.5360 [0.0098] BKJD
Rp/R* = 0.0404 [0.0645]
a/R* = 84.06 [736.05]
b = 0.56 [10.91]
Seff = 96.51 [39.17]
Teq = 799 [81] K
Rp = 5.93 [9.66] Re
a = 0.1879 [0.0496] AU
Ag = 791.61 [2554.09] [0.31 σ]
Teffp = 6554 [5259] K [1.09 σ]

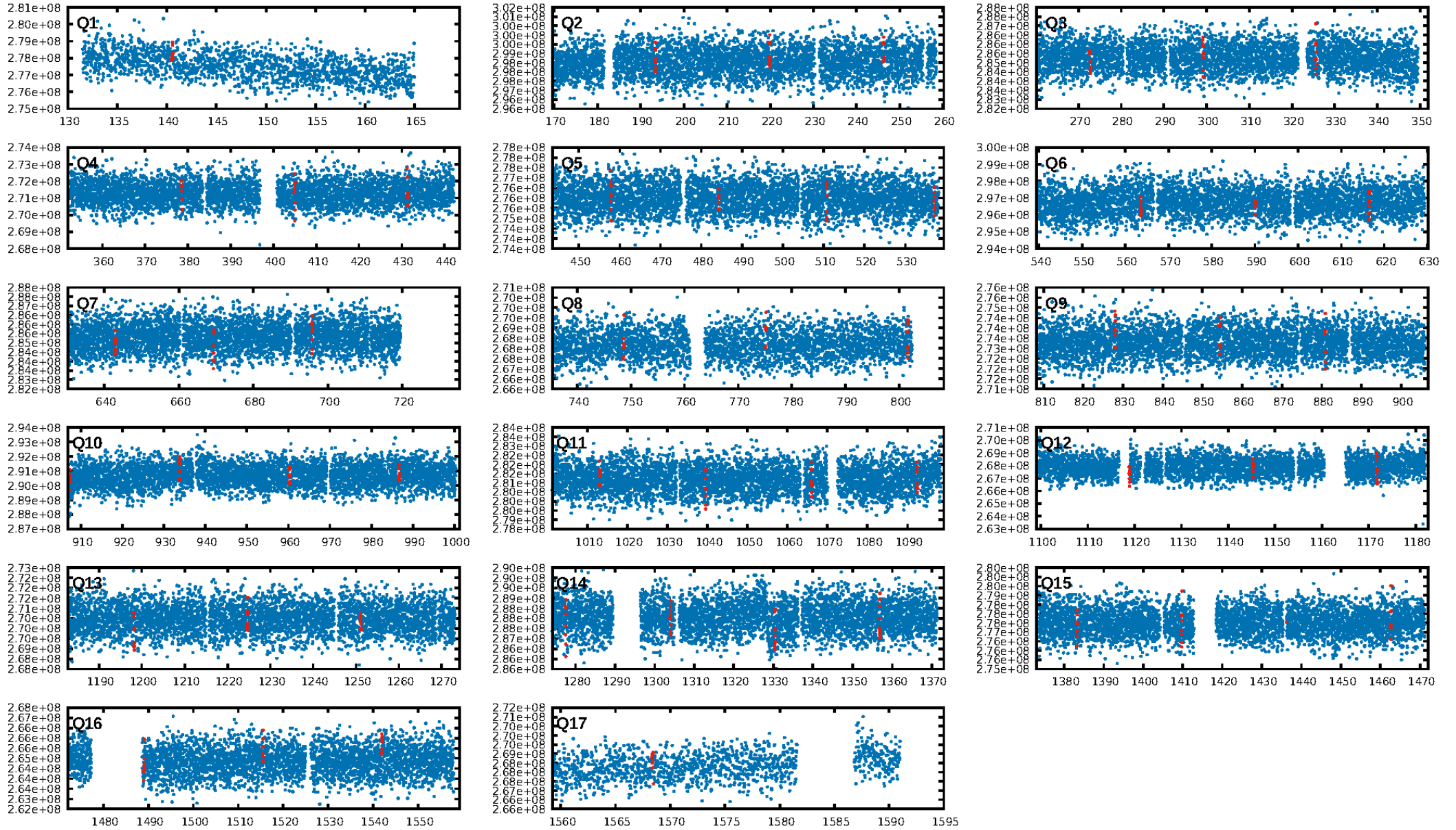
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [32.16 σ]
LongPeriod-sig: 100.0% [114.83 σ]
ModelChiSquare2-sig: 0.8%
ModelChiSquareGof-sig: 48.7%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [8/8]
GhostDiagnostic-chr: -0.91
Centroid-sig: N/A
Centroid-so: 0.121 arcsec [2.61 σ]
OotOffset-rm: 0.108 arcsec [1.25 σ]
OotOffset-st: 4/3/4/5 [16]
KicOffset-rm: **0.288 arcsec [3.10 σ]**
KicOffset-st: 4/3/4/5 [16]
DiffImageQuality-fgm: 0.62 [10/16]
DiffImageOverlap-fno: 0.12 [2/17]

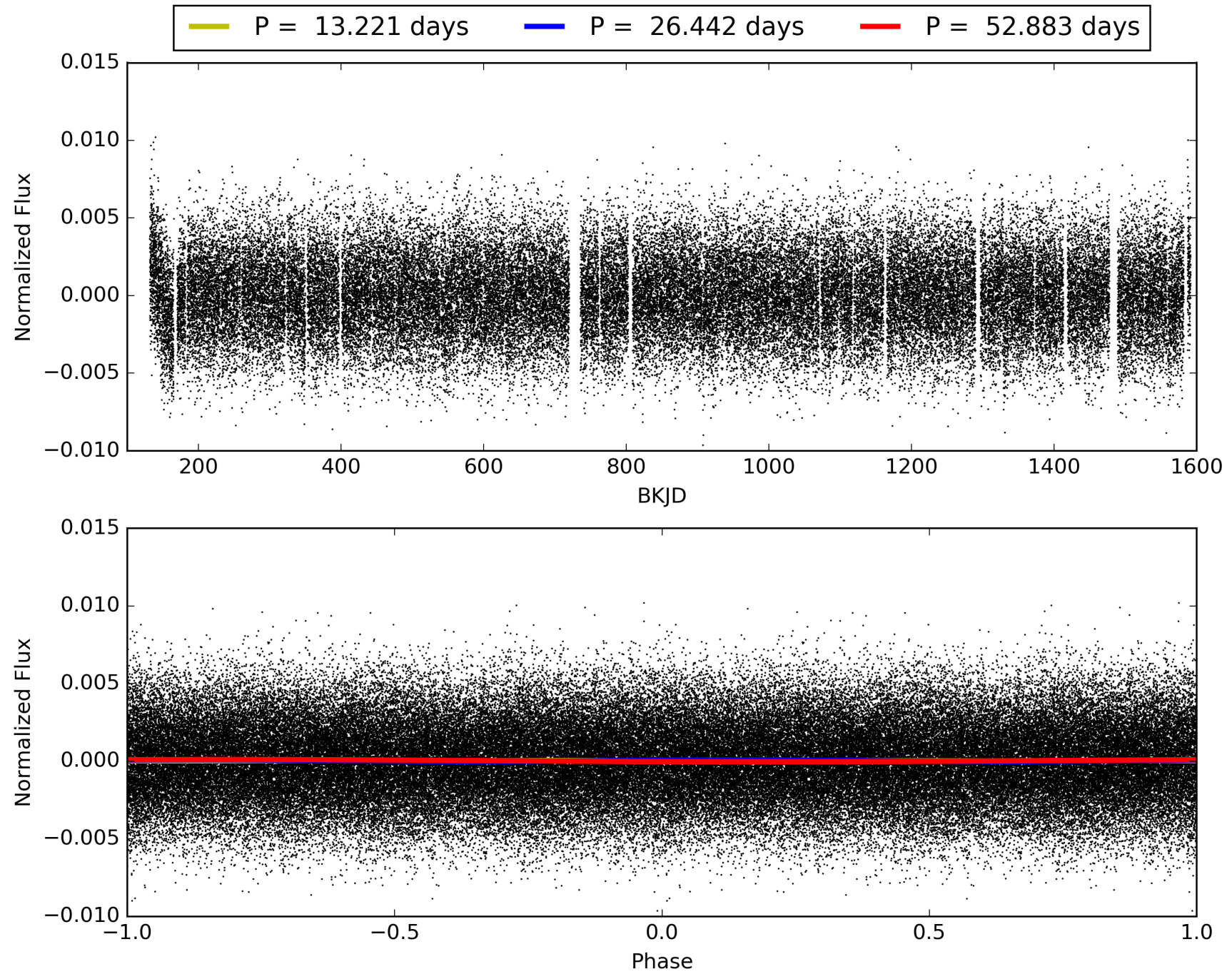
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:31:13 Z

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

TCE 006441258-05, PDC Light Curves

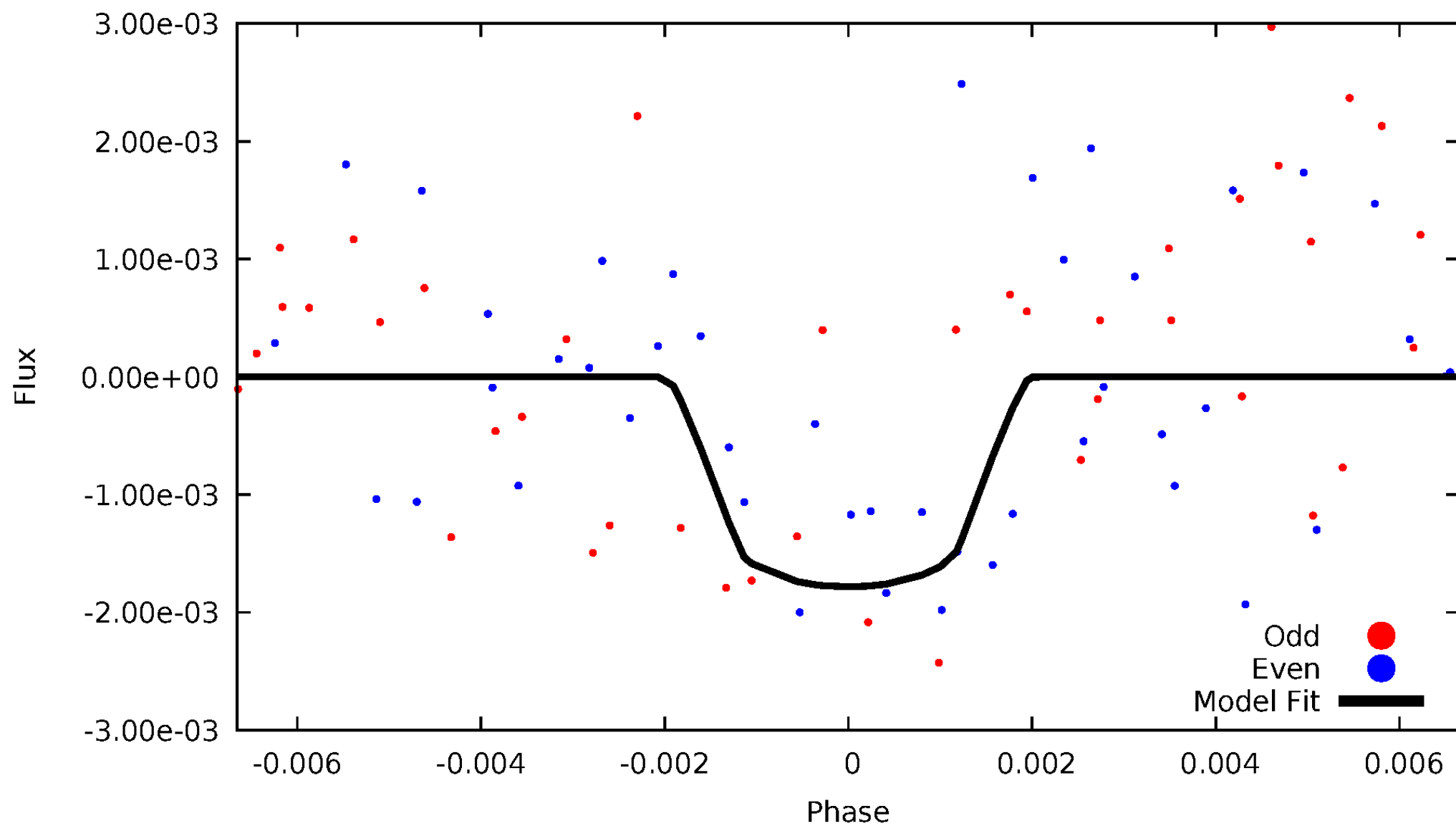


TCE 006441258-05



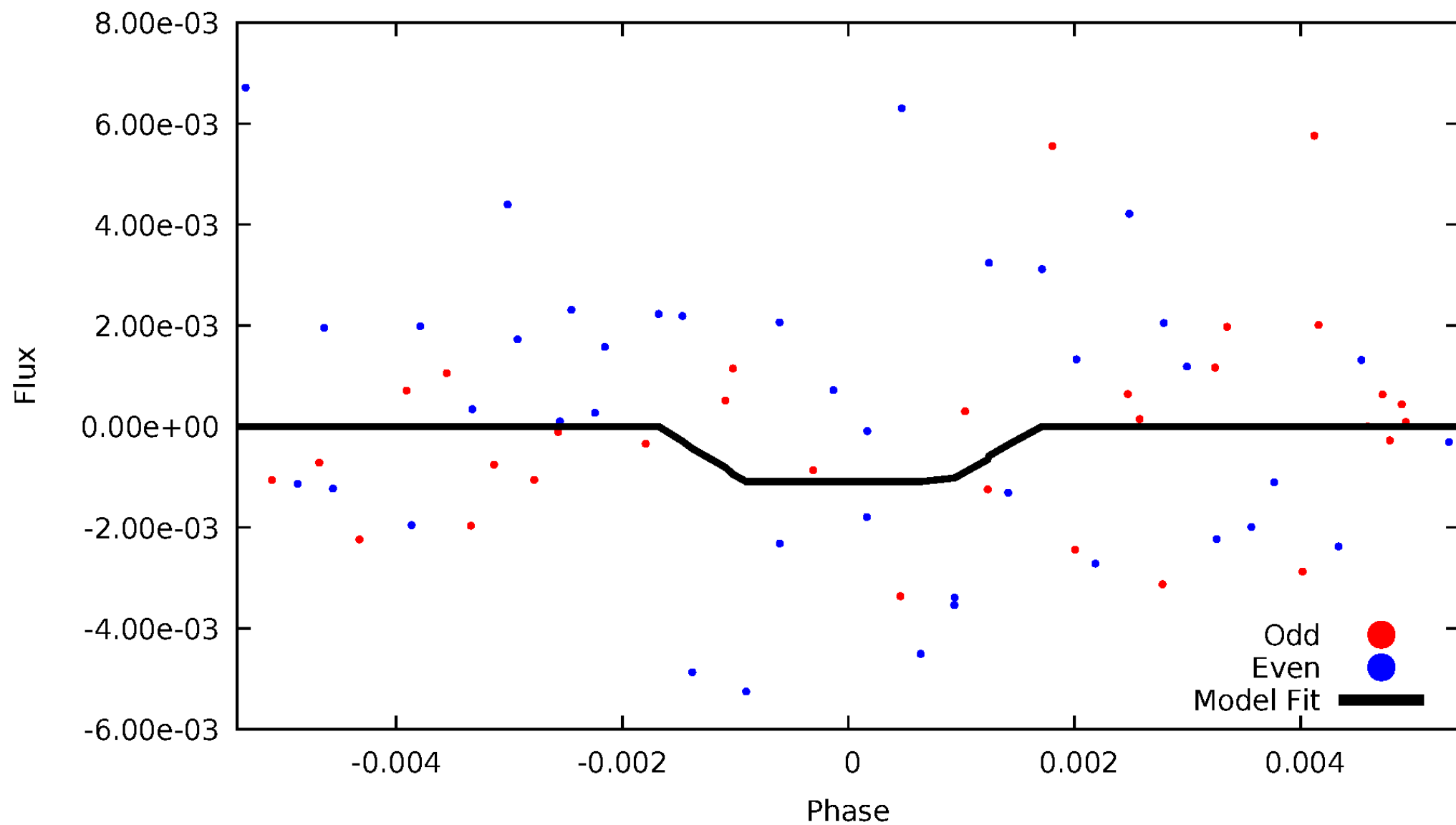
DV Odd/Even

TCE 006441258-05

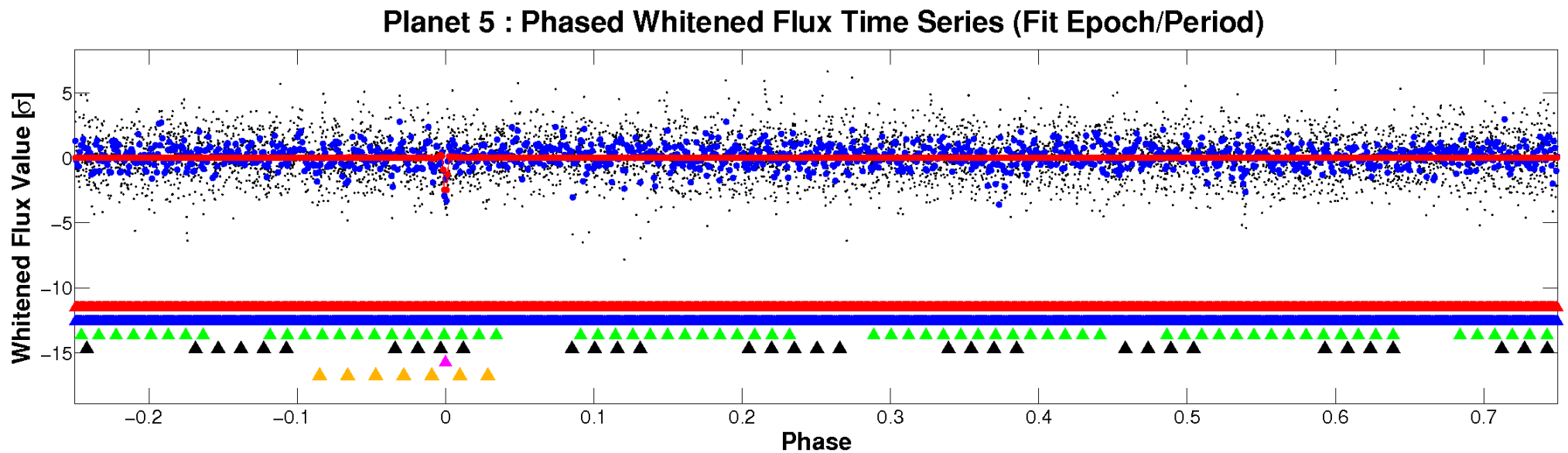
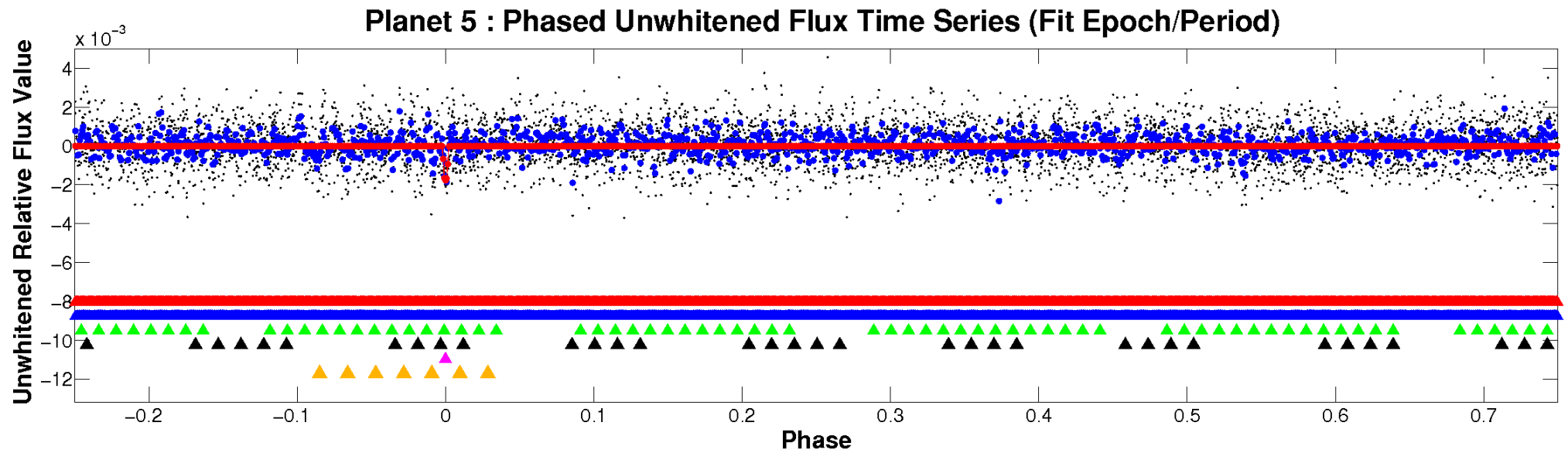


ALT Odd/Even

TCE 006441258-05

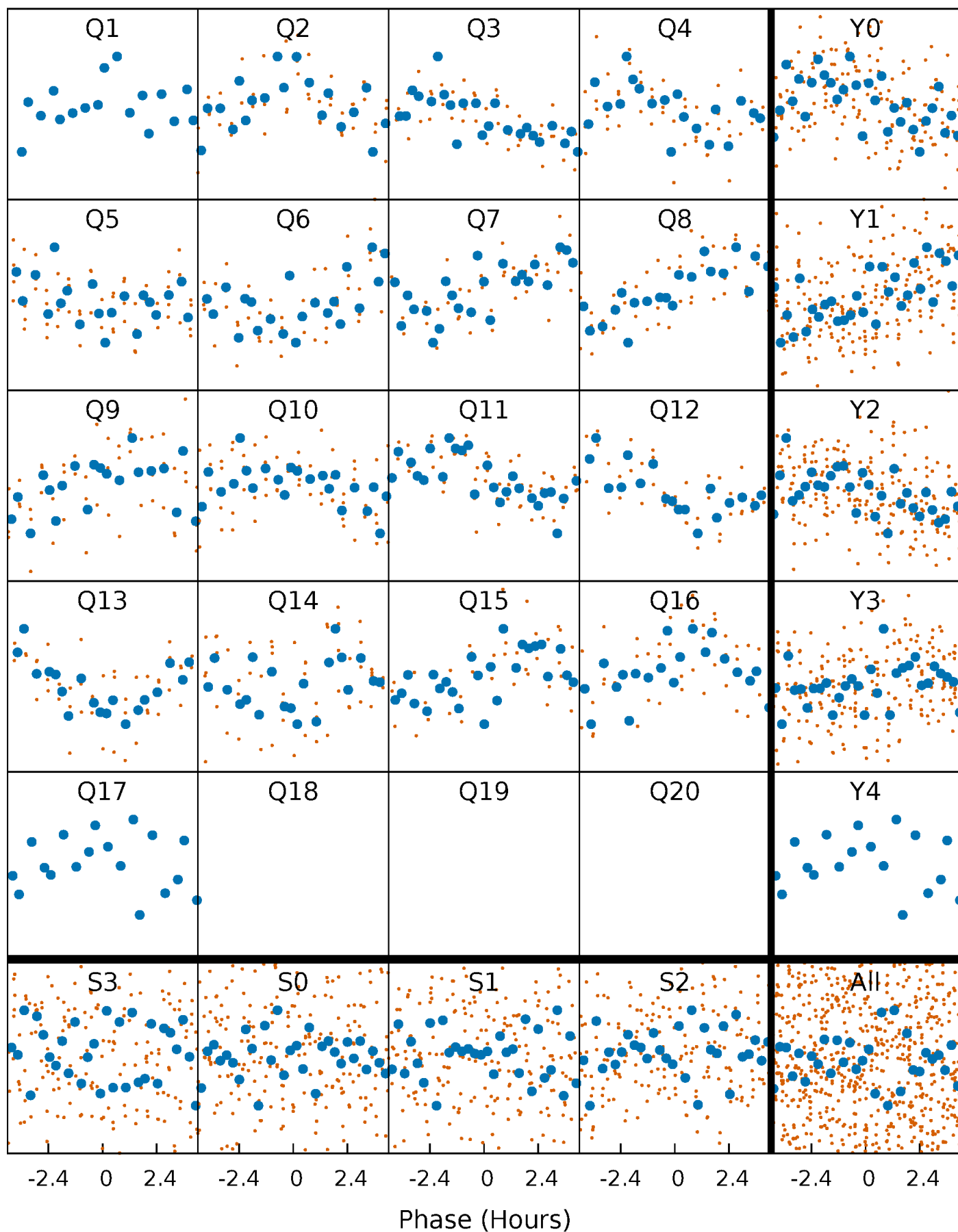


Non-Whitened Vs. Whitened Light Curve



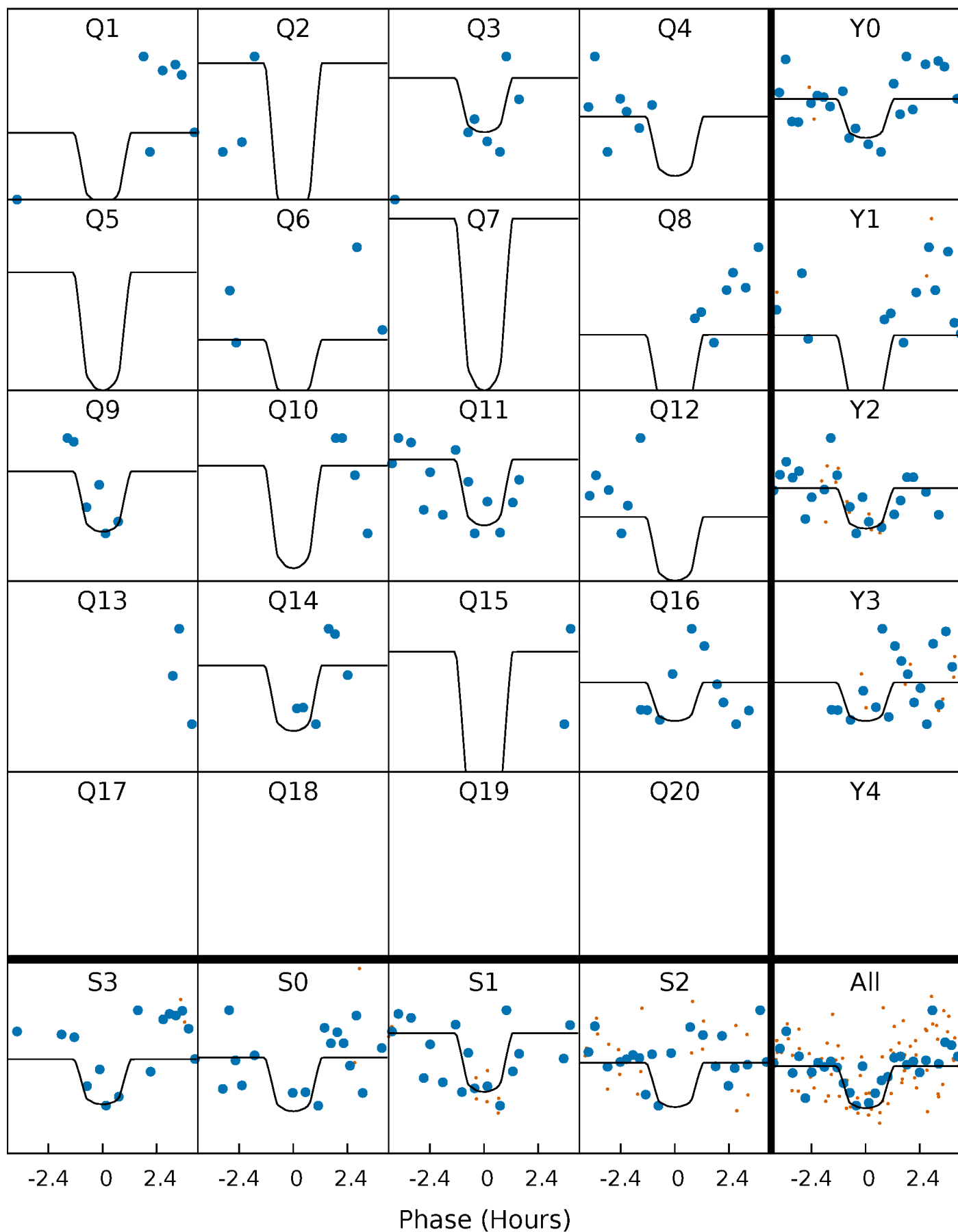
PDC Quarter-Phased Transit Curves

TCE 006441258-05 $P = 26.441720$ Days $T_0 = 140.535961$ (BKJD)



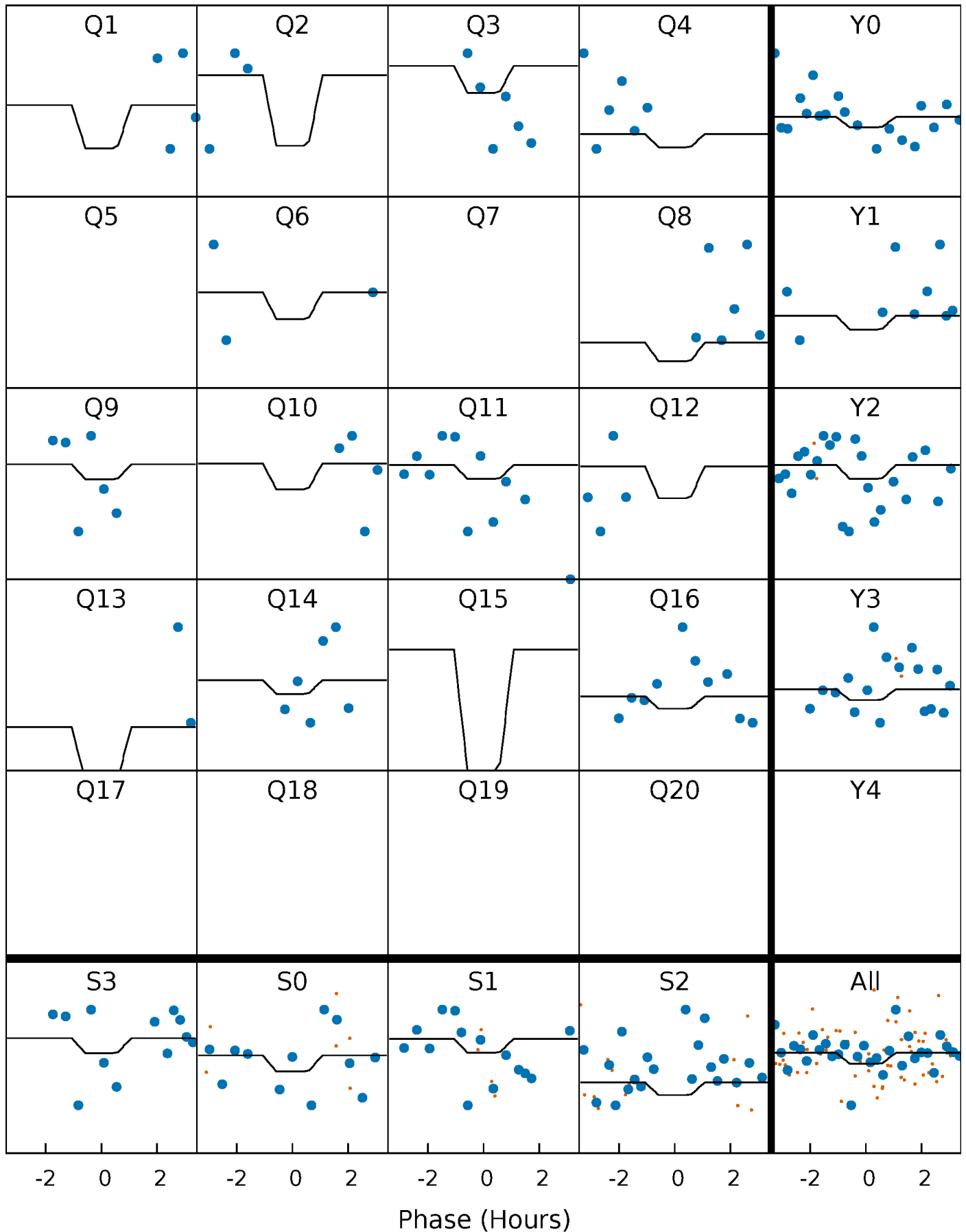
DV Quarter-Phased Transit Curves

TCE 006441258-05 P= 26.441720 Days $T_0=140.535961$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

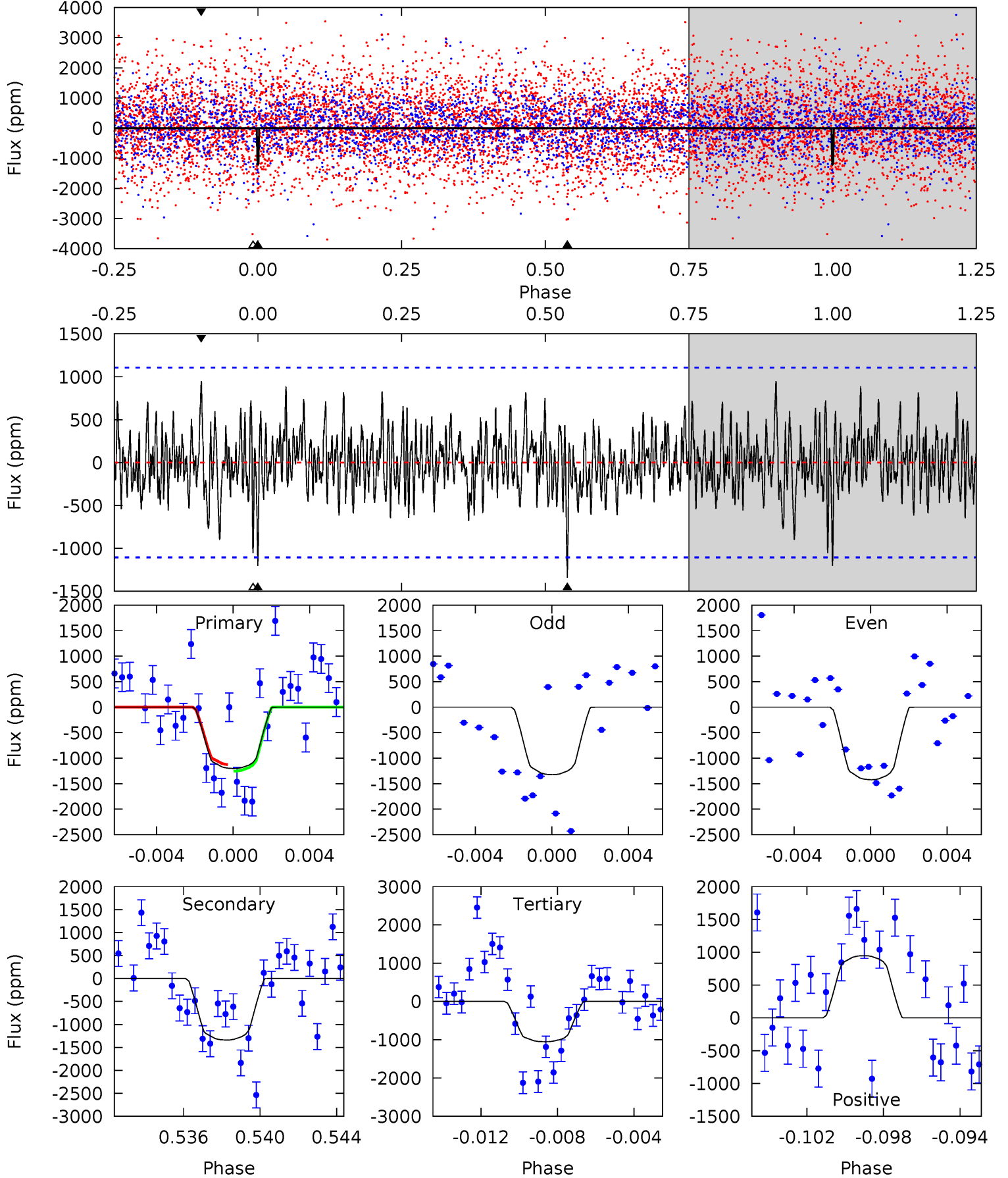
TCE 006441258-05 P= 26.442287 Days $T_0=140.526630$ (BKJD)



DV Model-Shift Uniqueness Test

006441258-05, P = 26.441720 Days, E = 114.094241 Days

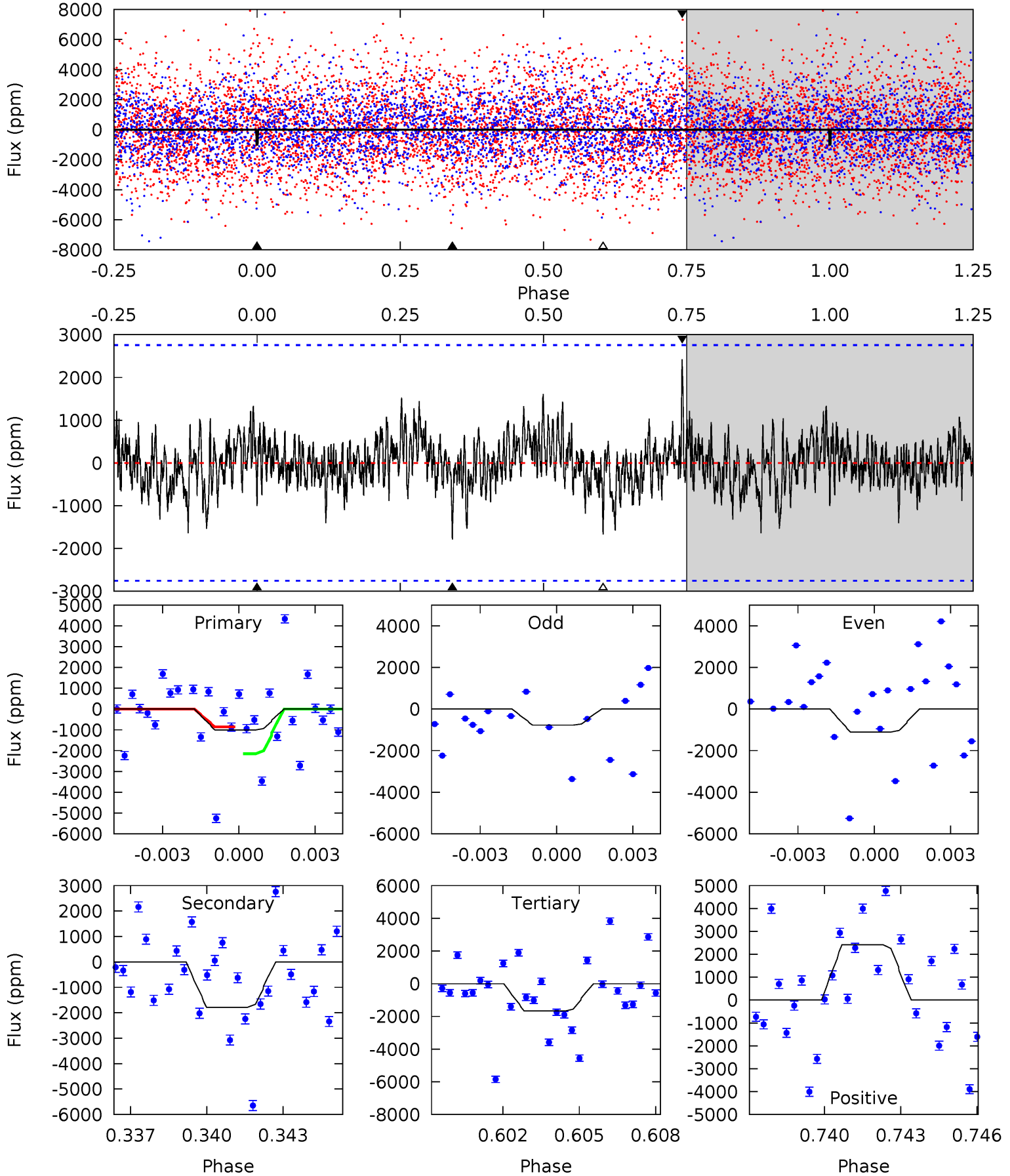
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.67	6.31	4.96	4.46	5.20	2.89	1.36	0.71	1.20	1.36	1.85	0.23	0.38	0.41	0.30



Alt Model-Shift Uniqueness Test

006441258-05, P = 26.442287 Days, E = 114.084343 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.92	3.41	3.19	4.62	5.26	2.98	0.97	-1.27	-2.70	0.22	-1.21	0.30	0.24	0.58	1.19



Stellar Parameters For KIC 006441258

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6773^{+188}_{-282}	$4.283^{+0.090}_{-0.195}$	$-0.180^{+0.250}_{-0.300}$	$1.344^{+0.439}_{-0.219}$	$1.273^{+0.195}_{-0.195}$	$0.739^{+0.355}_{-0.381}$
	+3%/-4%	+2%/-5%	+139%/-167%	+33%/-16%	+15%/-15%	+48%/-52%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 006441258-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1341 ± 212	$9.43^{+8.43}_{-6.49}$	1133^{+77}_{-69}	5207^{+5071}_{-1145}	287^{+2917}_{-207}
Alt.	-1786 ± 524	$9.27^{+8.07}_{-6.10}$	1135^{+88}_{-69}	5602^{+5189}_{-1318}	394^{+3295}_{-291}

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 $A_{obs} \gg 1.0$

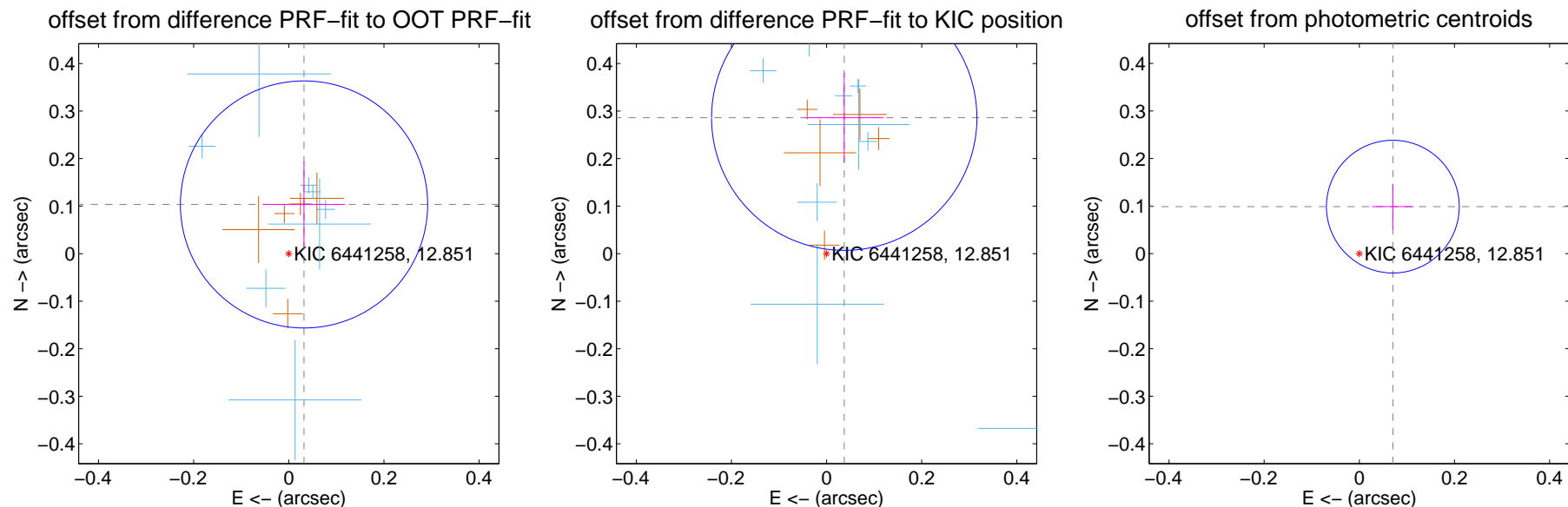
DV Centroid Data

Supplemental centroid analysis for 006441258-05. Kepler magnitude: 12.85. Transit SNR 9.86

There are 10 quarters with good PRF difference image offsets

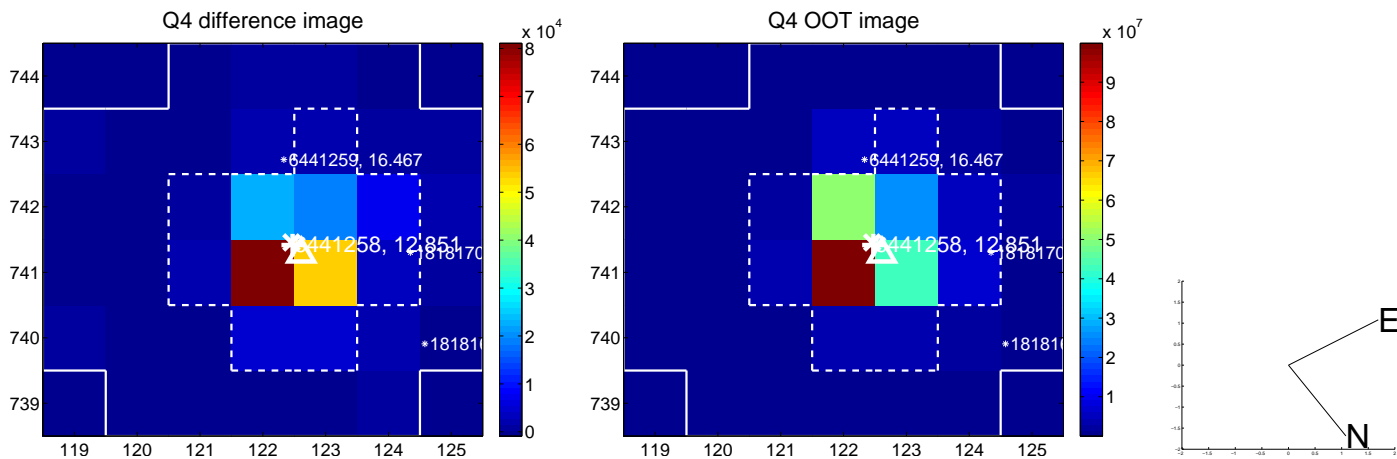
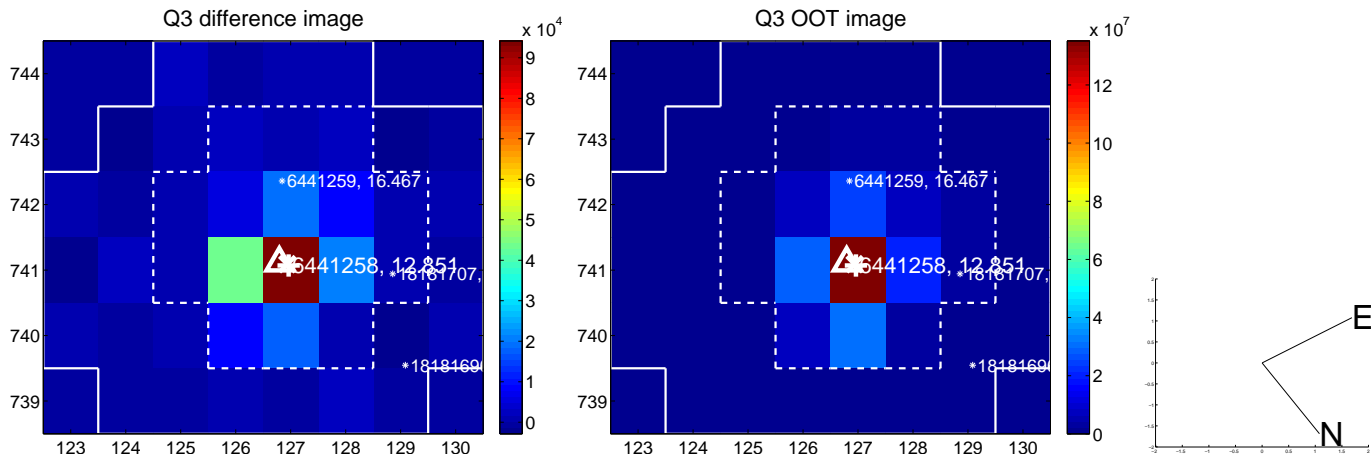
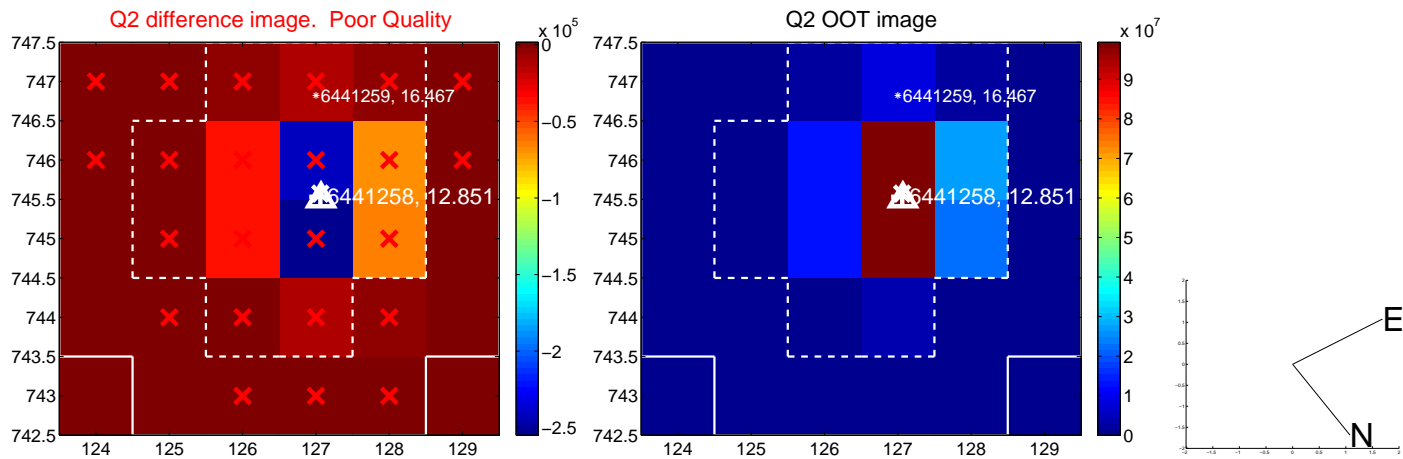
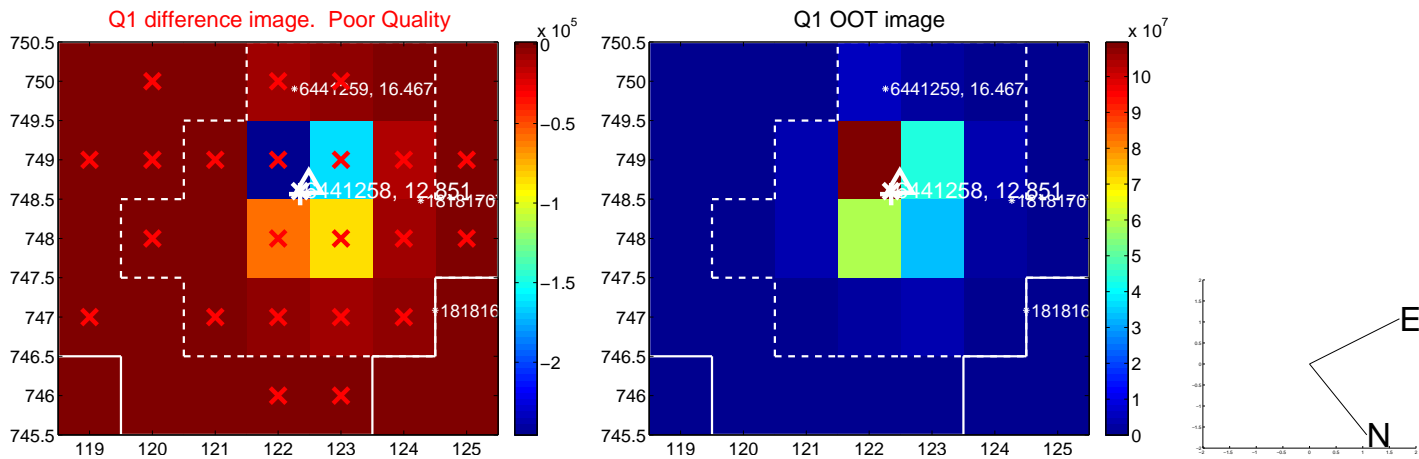
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.108 ± 0.087	1.25	-0.032 ± 0.086	0.104 ± 0.090
PRF-fit source offset from KIC position	0.288 ± 0.093	3.10	-0.037 ± 0.083	0.286 ± 0.094
photometric centroid source offset	0.12 ± 0.05	2.61	-0.07 ± 0.04	0.10 ± 0.05

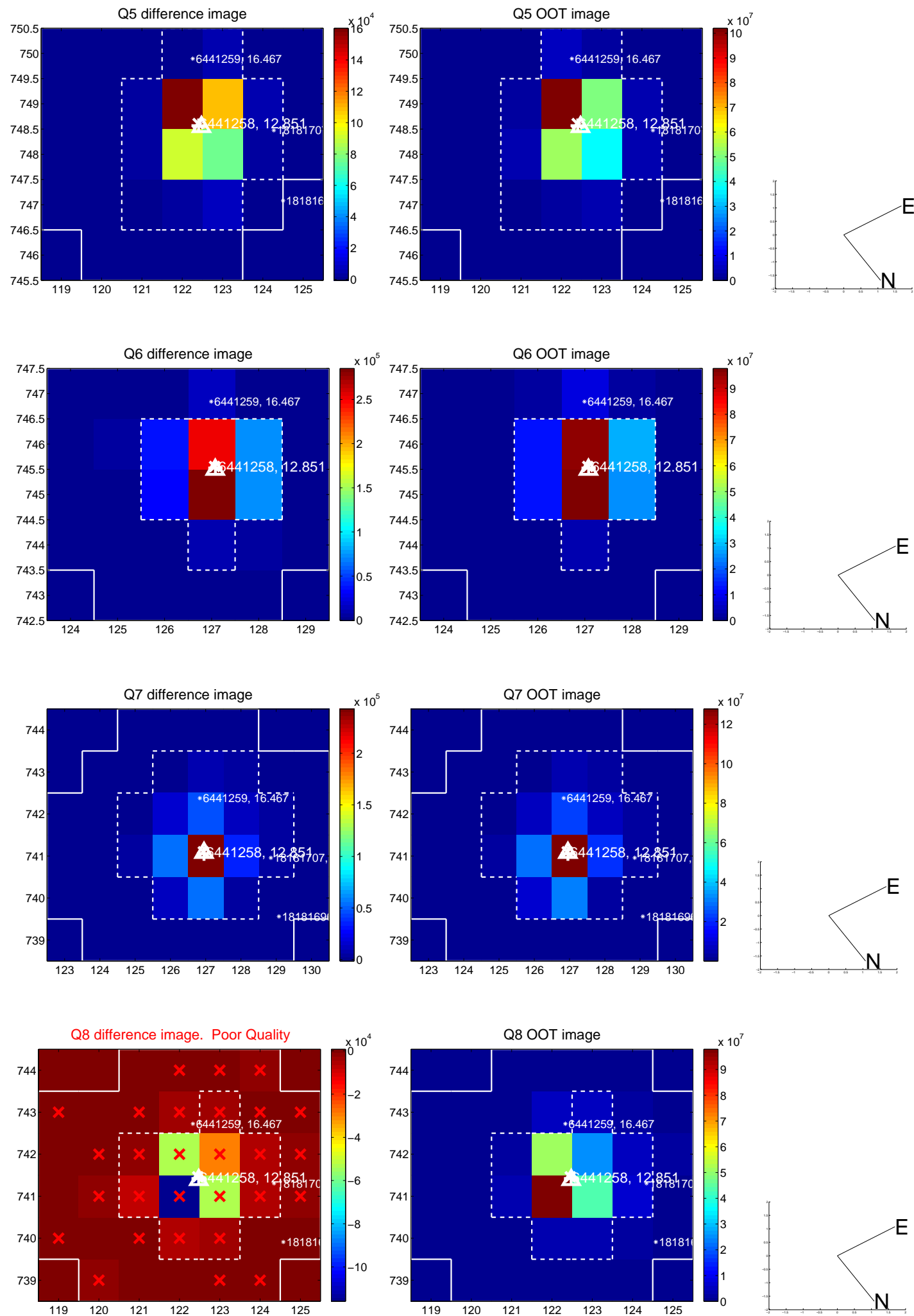


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

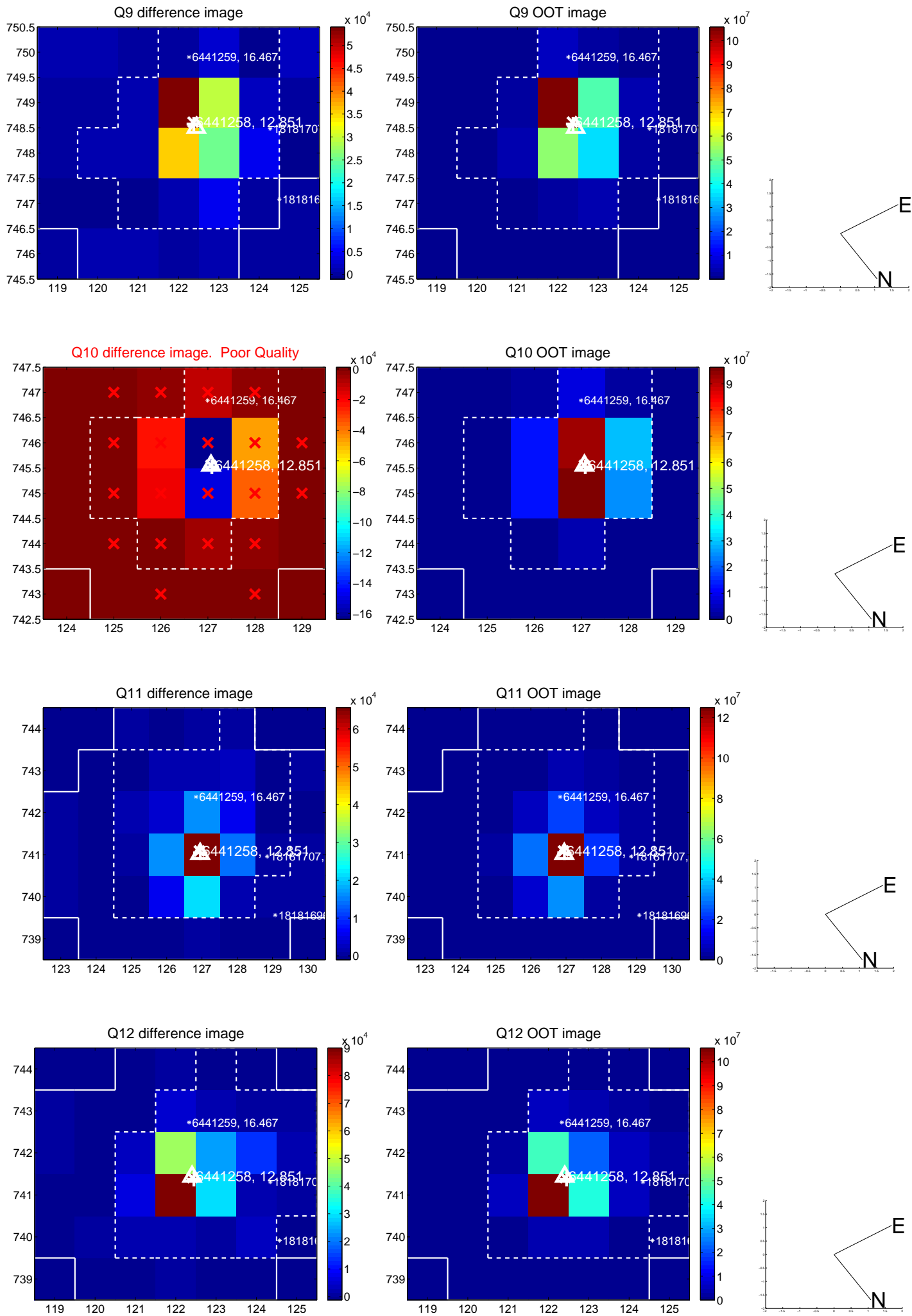
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



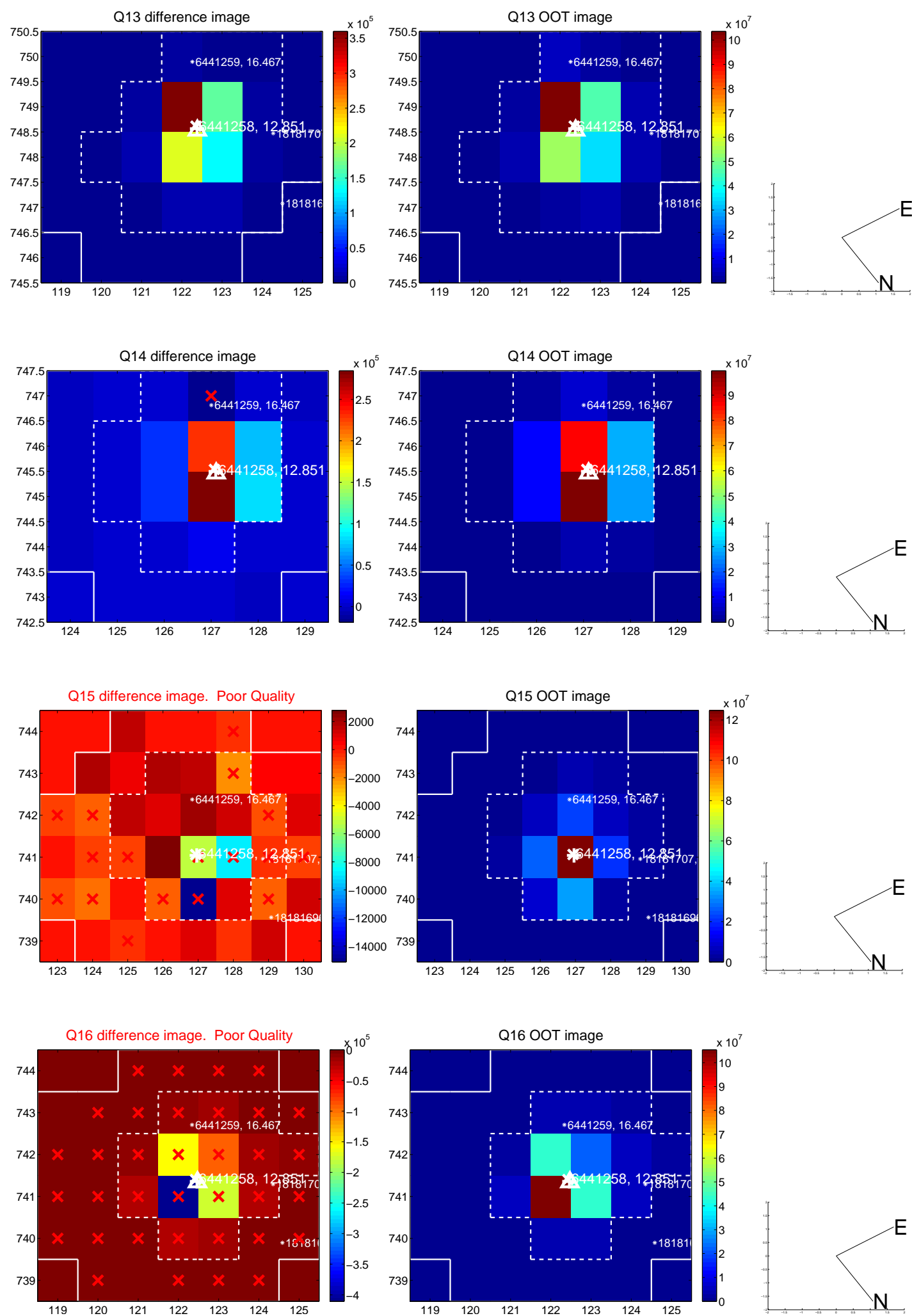
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



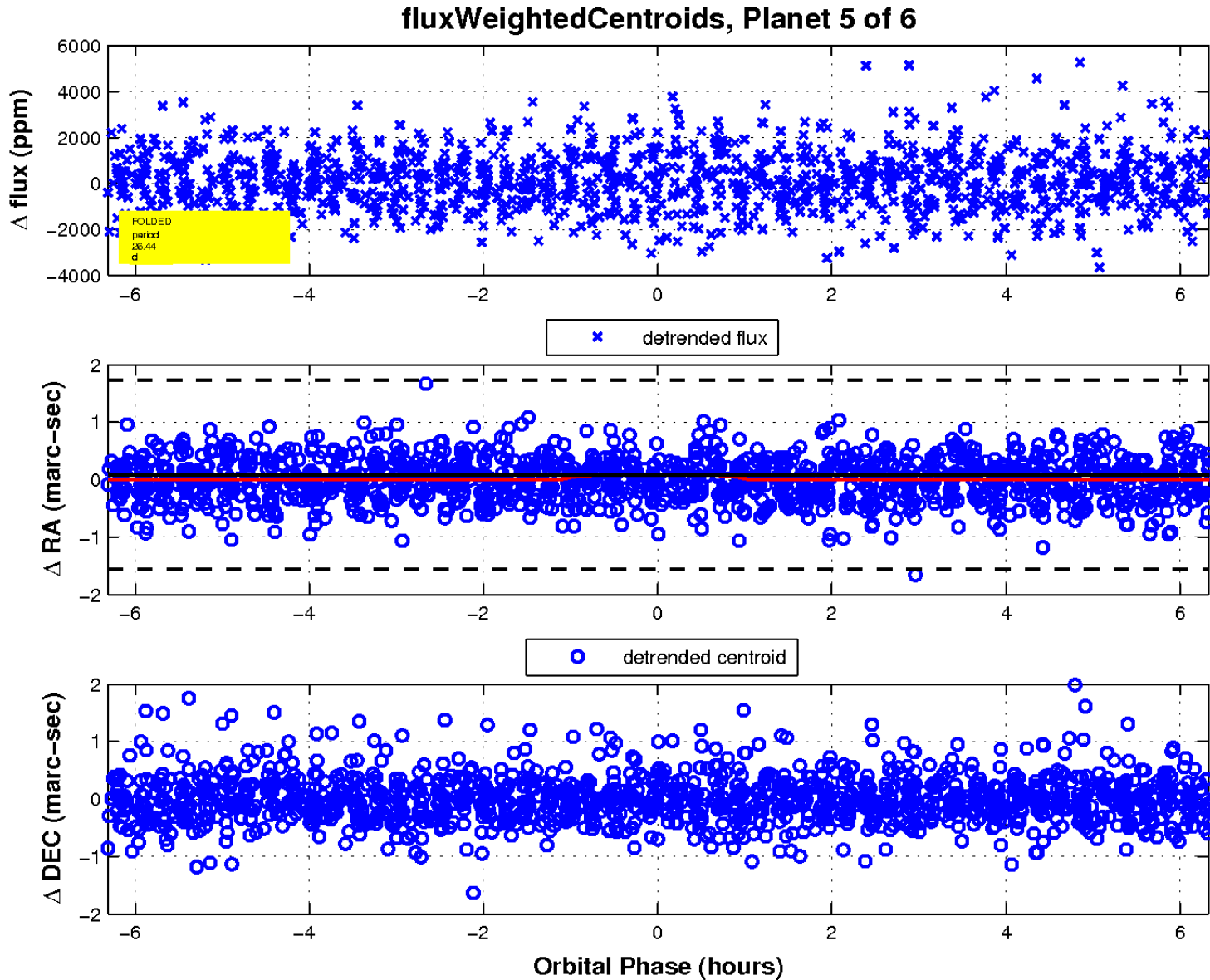
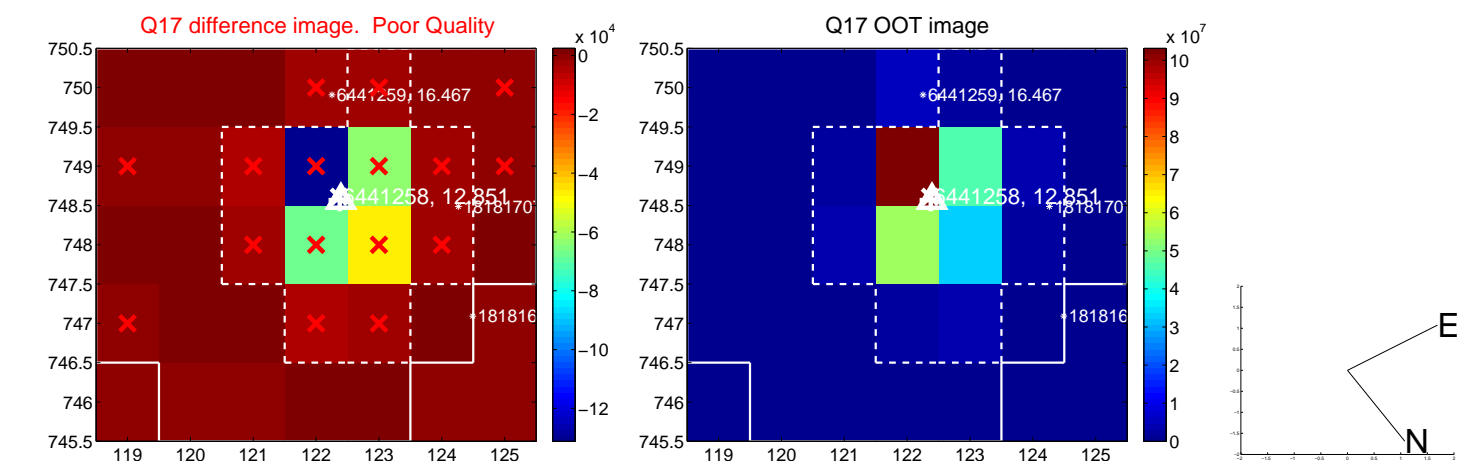
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

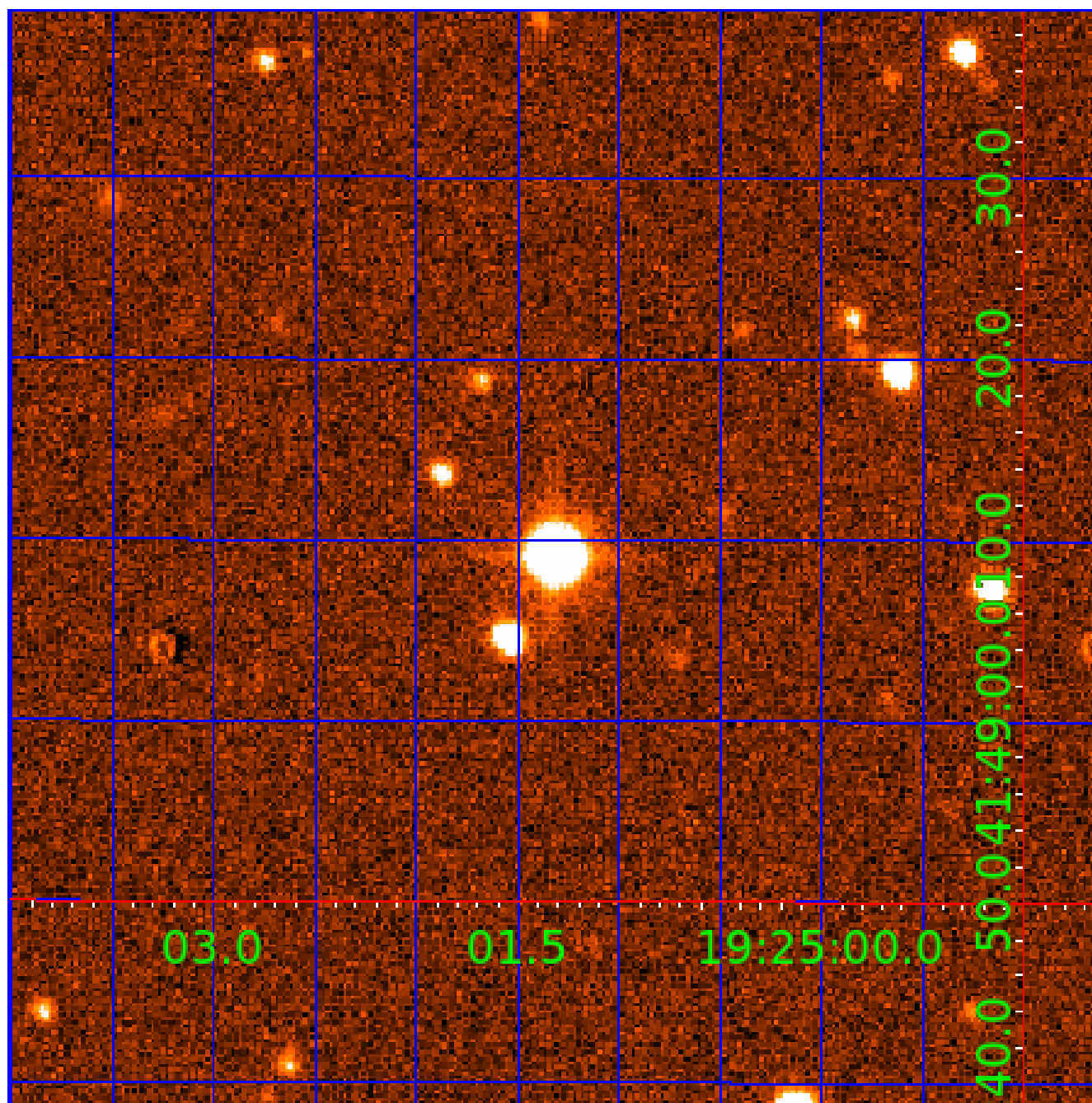


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006441258

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})
006441258-01	OBS	No	0.830766	131.946682	96.9	5.417	13.5	7.7	1.34	6773	1.42	9734.49
006441258-02	OBS	No	1.008777	131.960386	449.5	3.208	15.3	15.9	1.34	6773	3.33	7514.35
006441258-03	OBS	No	21.215440	137.408309	1649.0	3.279	13.7	11.6	1.34	6773	5.65	129.44
006441258-04	OBS	No	43.018464	145.944718	1945.8	2.747	9.9	9.8	1.34	6773	6.43	50.44
006441258-05	OBS	No	26.441720	140.535961	1783.0	2.111	9.9	9.9	1.34	6773	5.93	96.51
006441258-06	OBS	No	211.033834	273.500397	143.8	5.000	8.4	-1.0	1.34	6773	1.63	6.05

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006441258-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
006441258-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006441258-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
006441258-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
006441258-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006441258-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

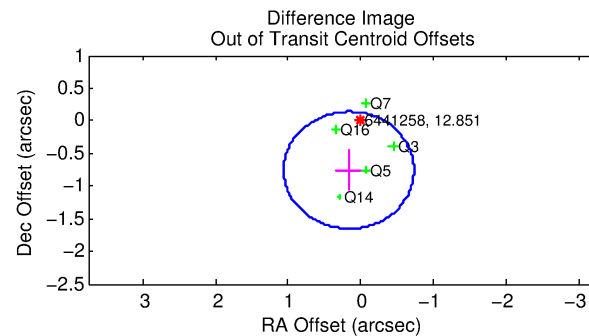
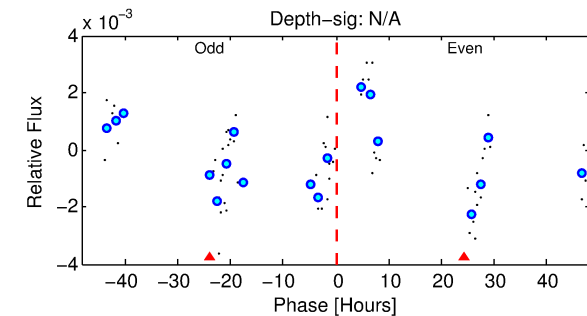
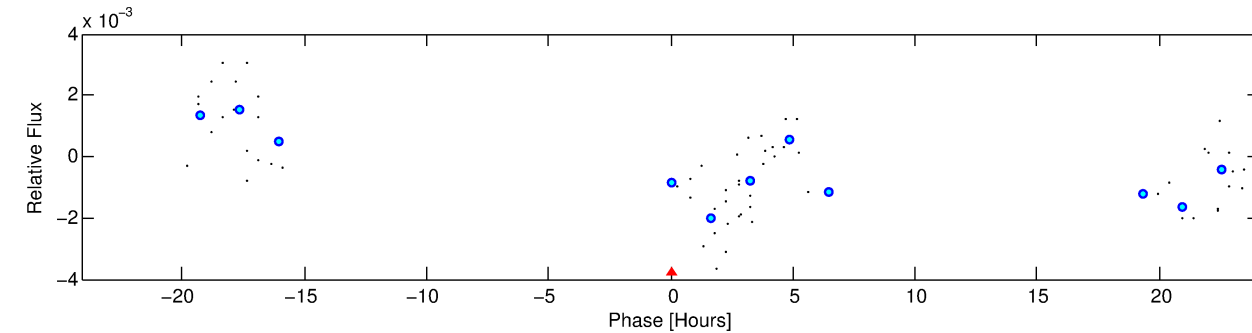
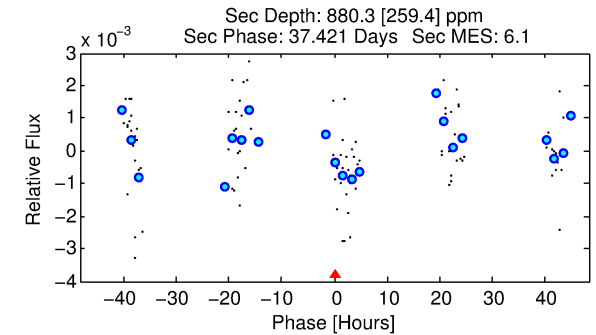
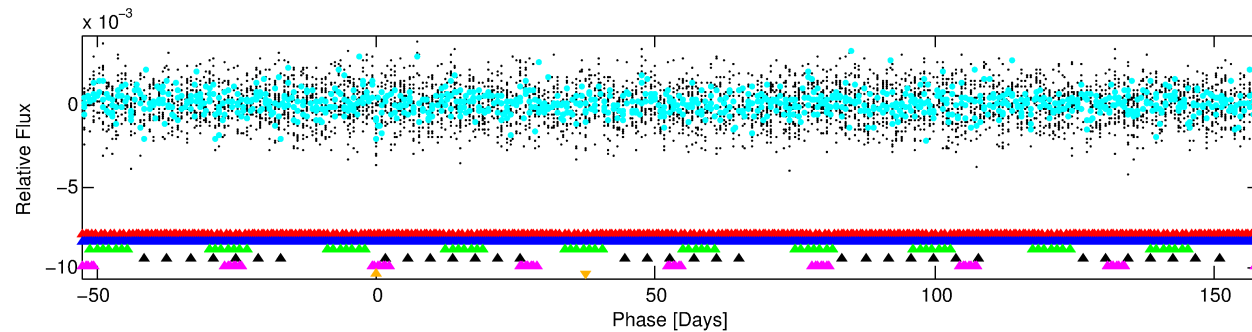
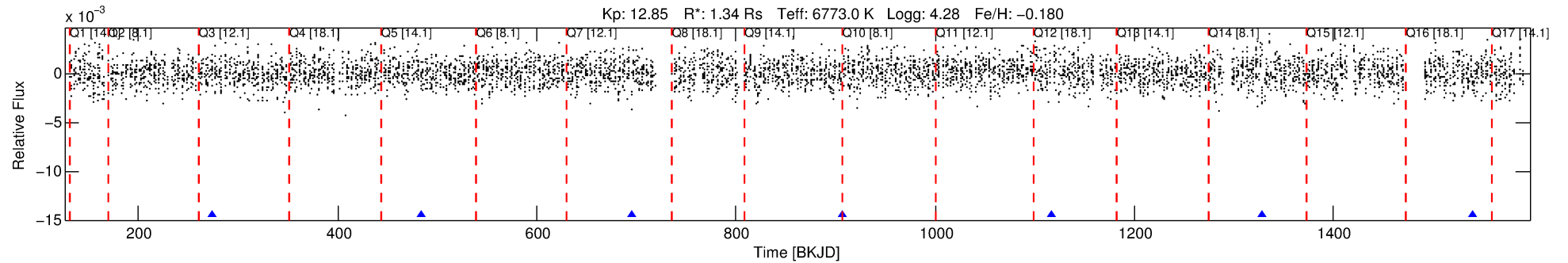
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006441258-06

No Significant Match Found

DV One-Page Summary

KIC: 6441258 Candidate: 6 of 6 Period: 211.034 d



TPS TCE Results:

Period = 211.03383 d
Epoch = 273.5004 BKJD

DV fit results are unavailable

DV Diagnostic Results:

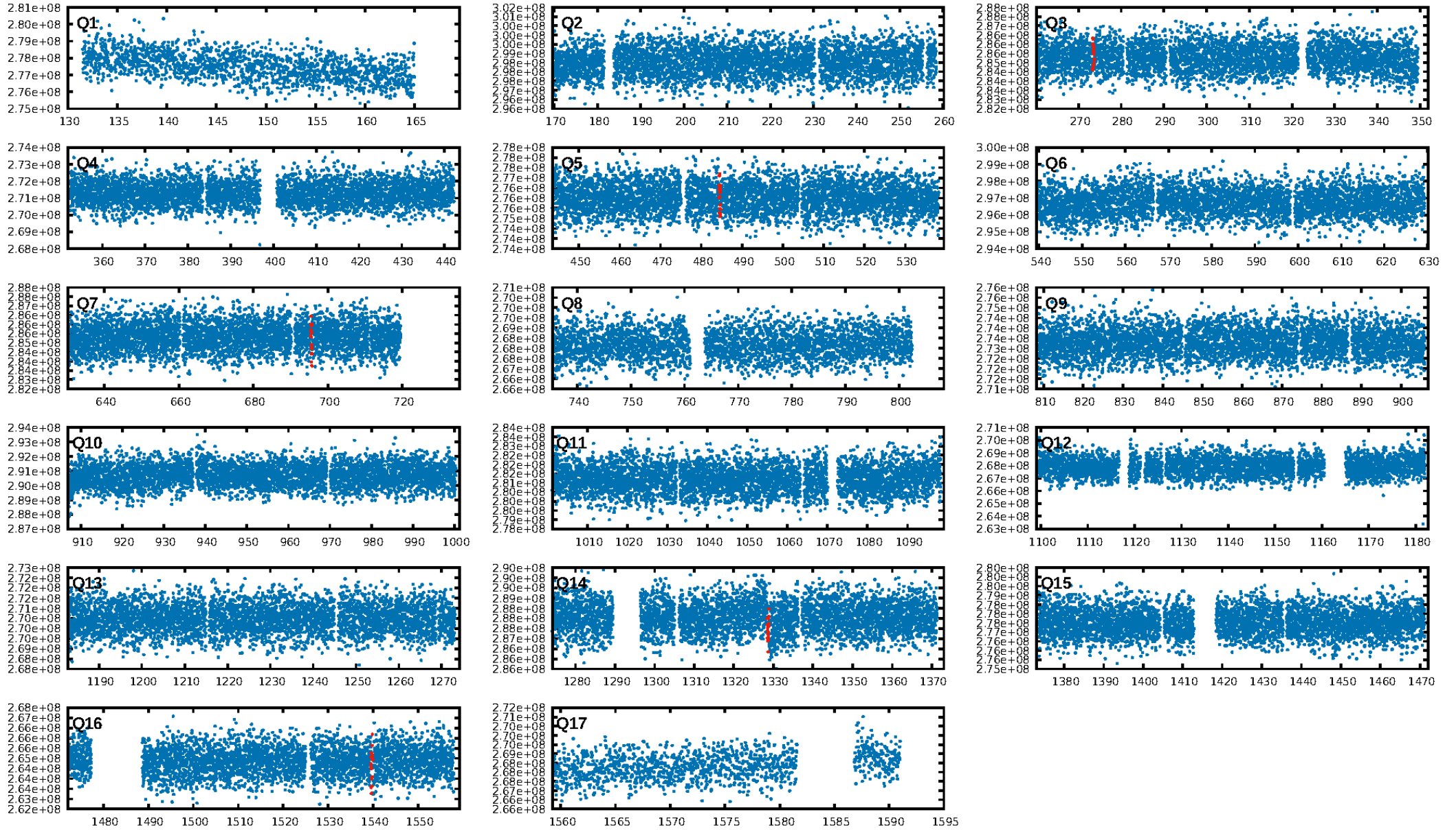
ShortPeriod-sig: 100.0% [706.82σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 0.6312

Centroid-sig: N/A
Centroid-so: 0.096 arcsec [1.96σ]
OotOffset-rm: 0.774 arcsec [2.59σ]
KicOffset-rm: 0.608 arcsec [2.13σ]
OotOffset-st: 1/2/1/1 [5]
KicOffset-st: 1/2/1/1 [5]
DiffImageQuality-fgm: 0.40 [2/5]
DiffImageOverlap-fno: 0.00 [0/5]

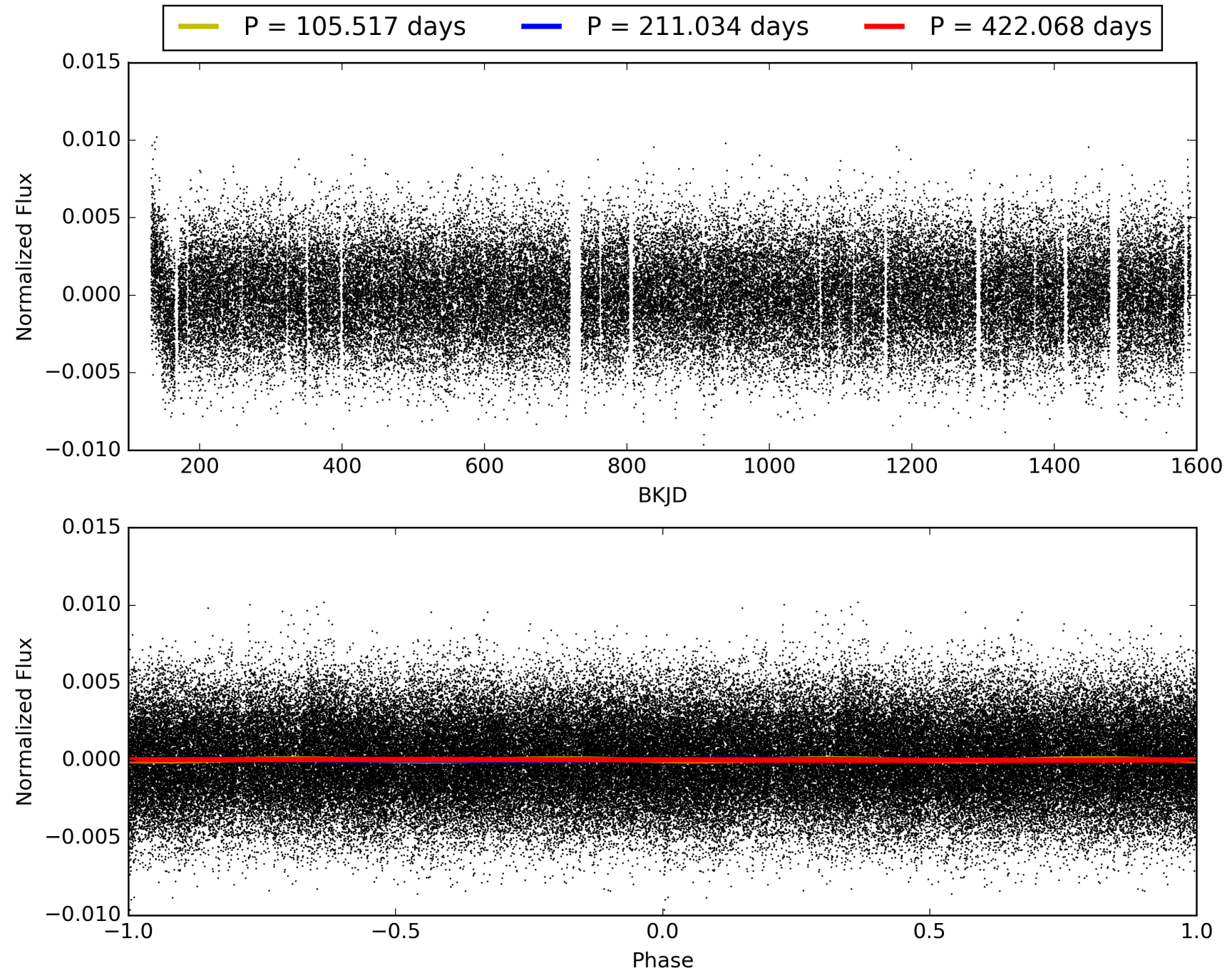
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:31:16 Z

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

TCE 006441258-06, PDC Light Curves

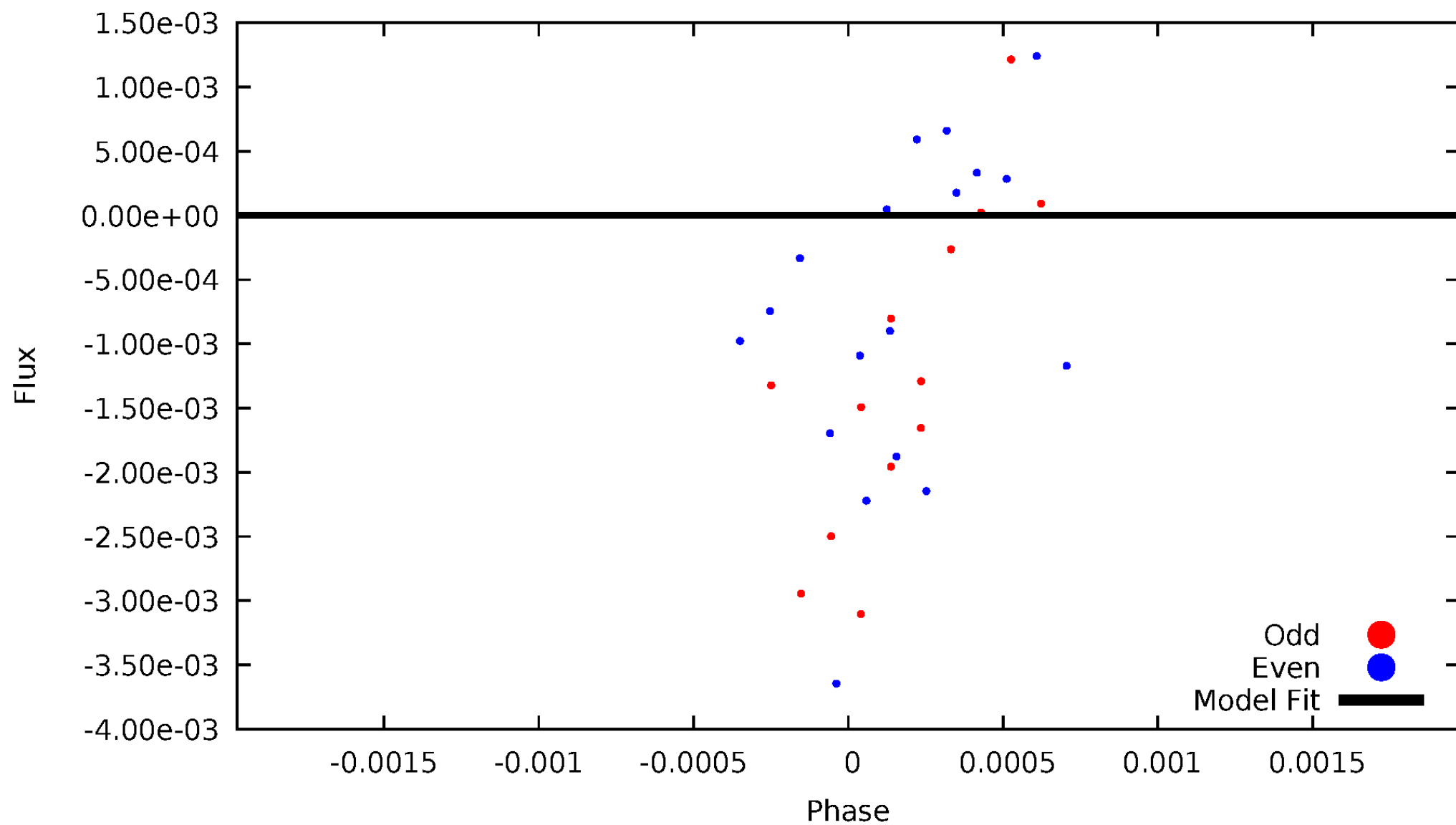


TCE 006441258-06



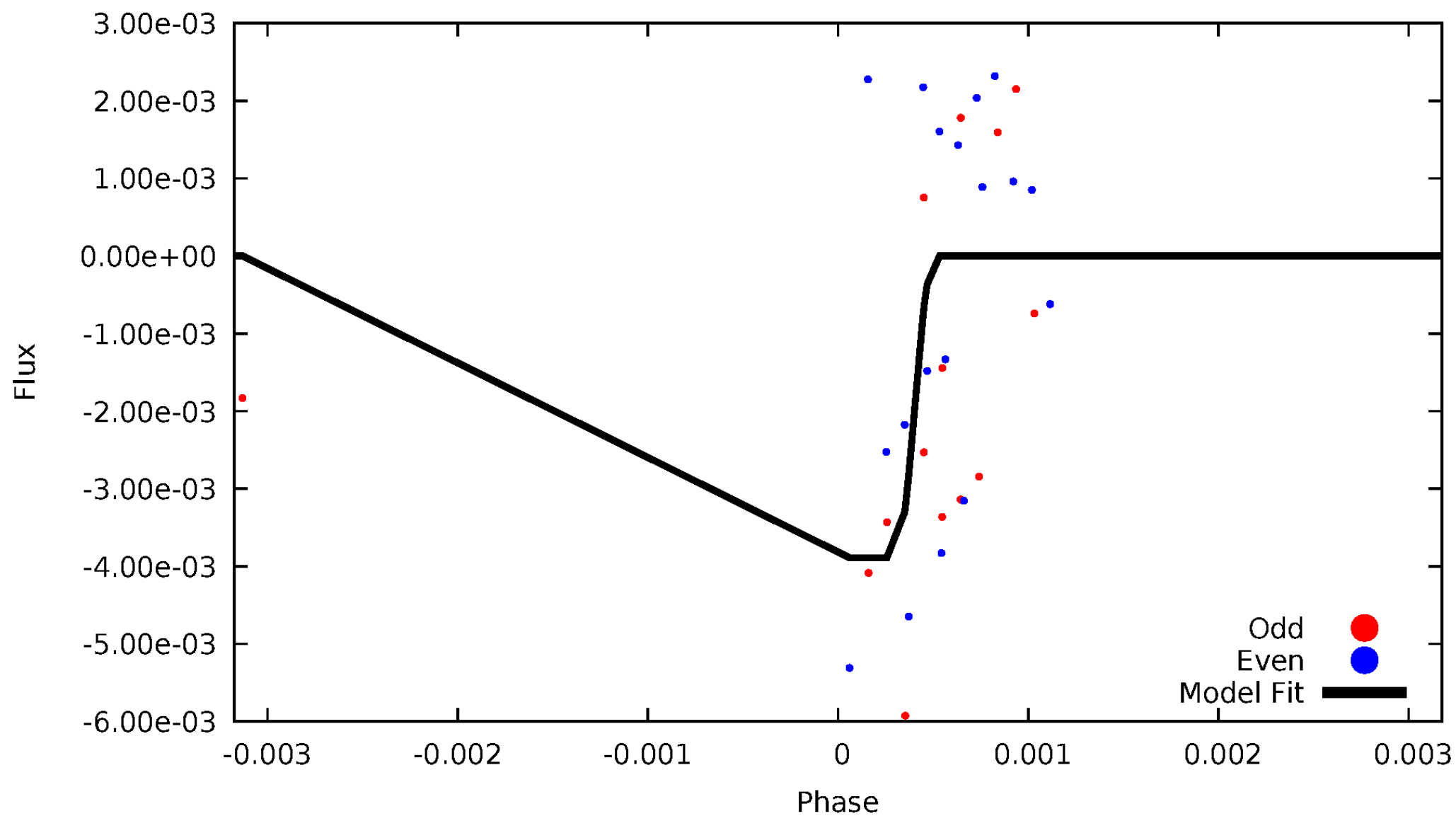
DV Odd/Even

TCE 006441258-06



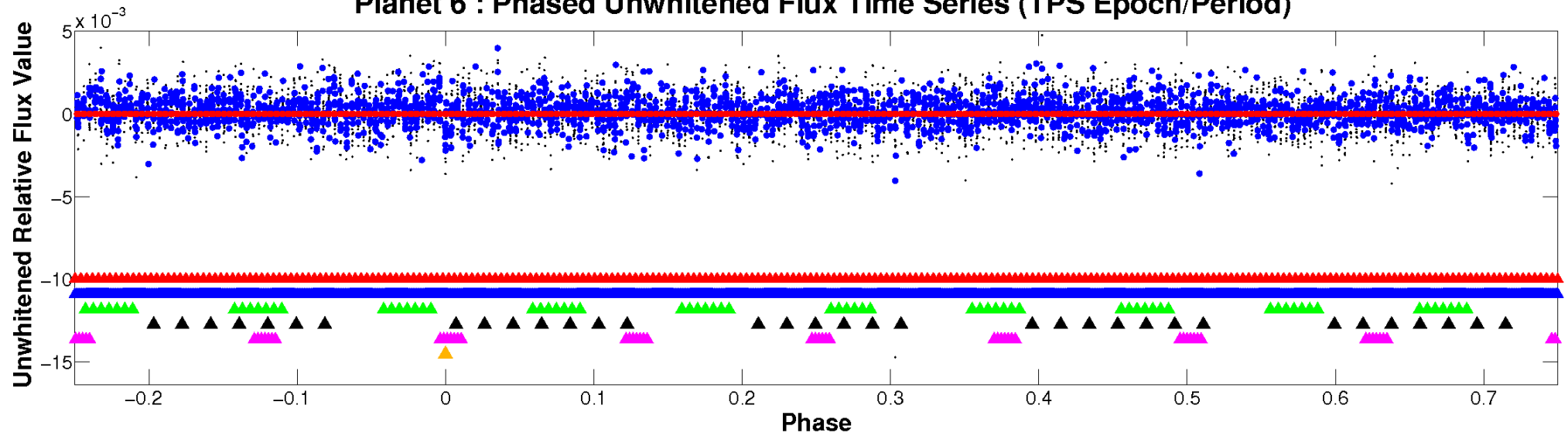
ALT Odd/Even

TCE 006441258-06

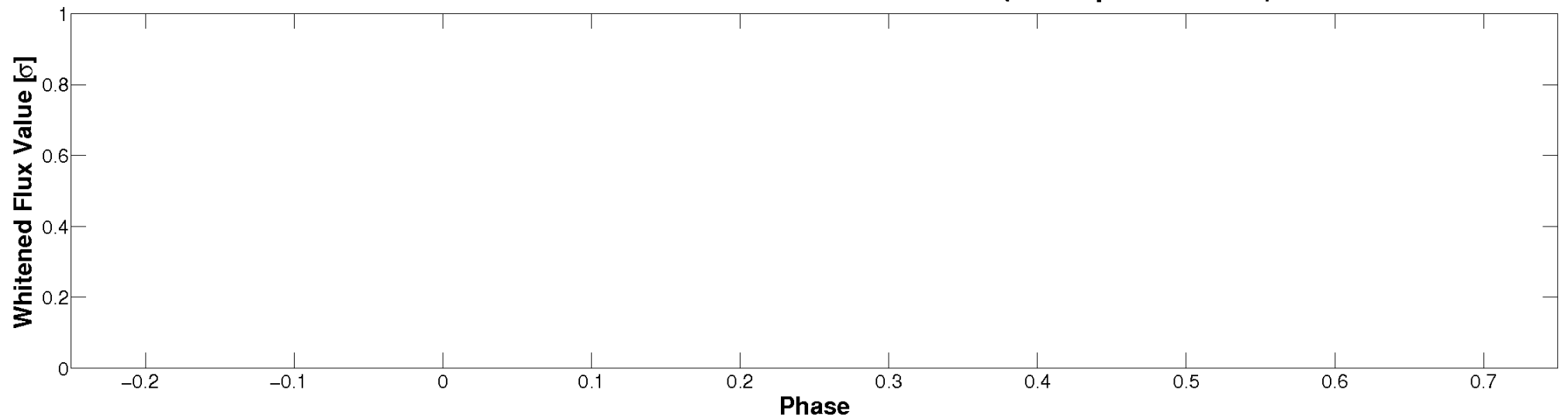


Non-Whitened Vs. Whitened Light Curve

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

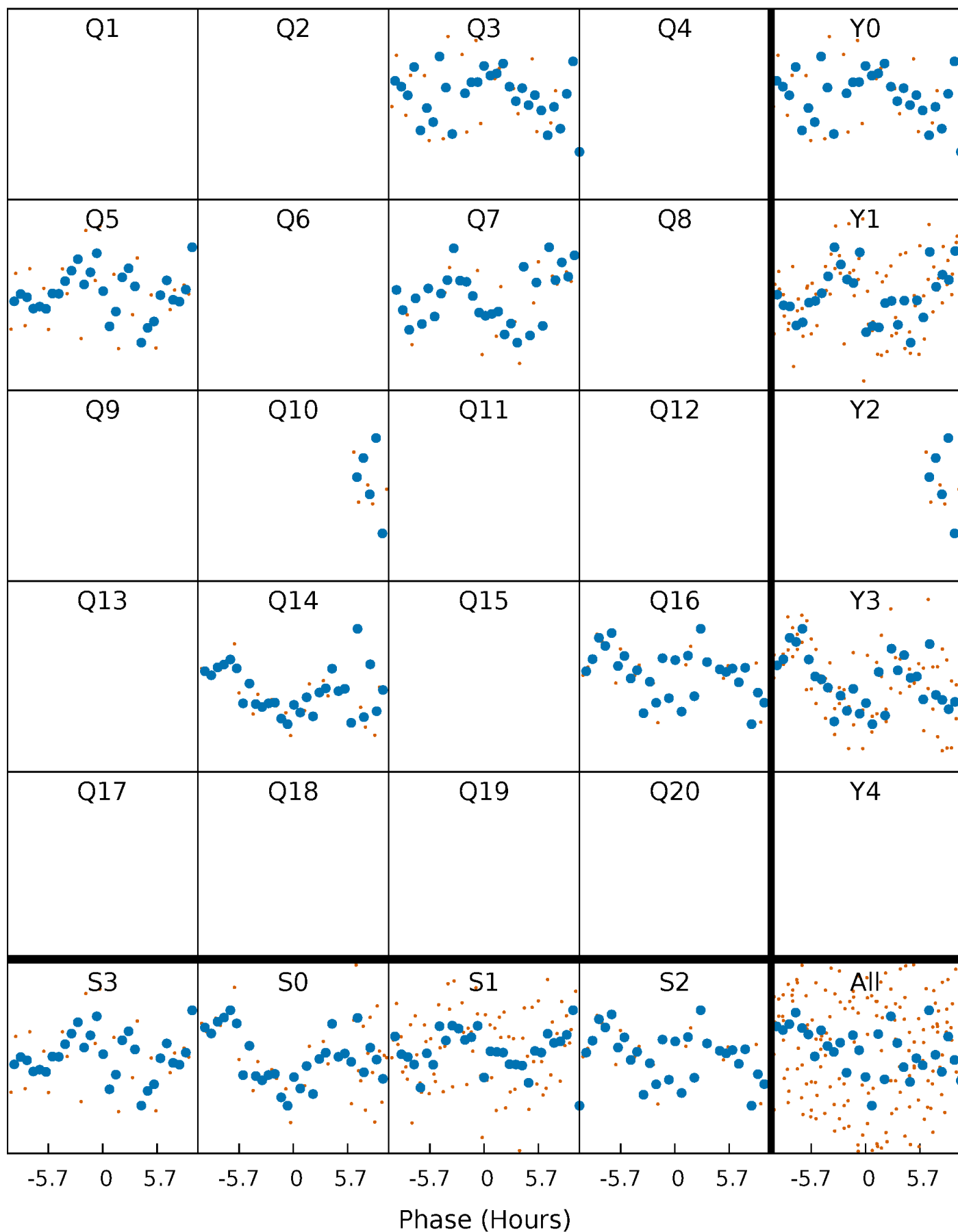


Planet 6 : Phased Whitened Flux Time Series (TPS Epoch/Period)



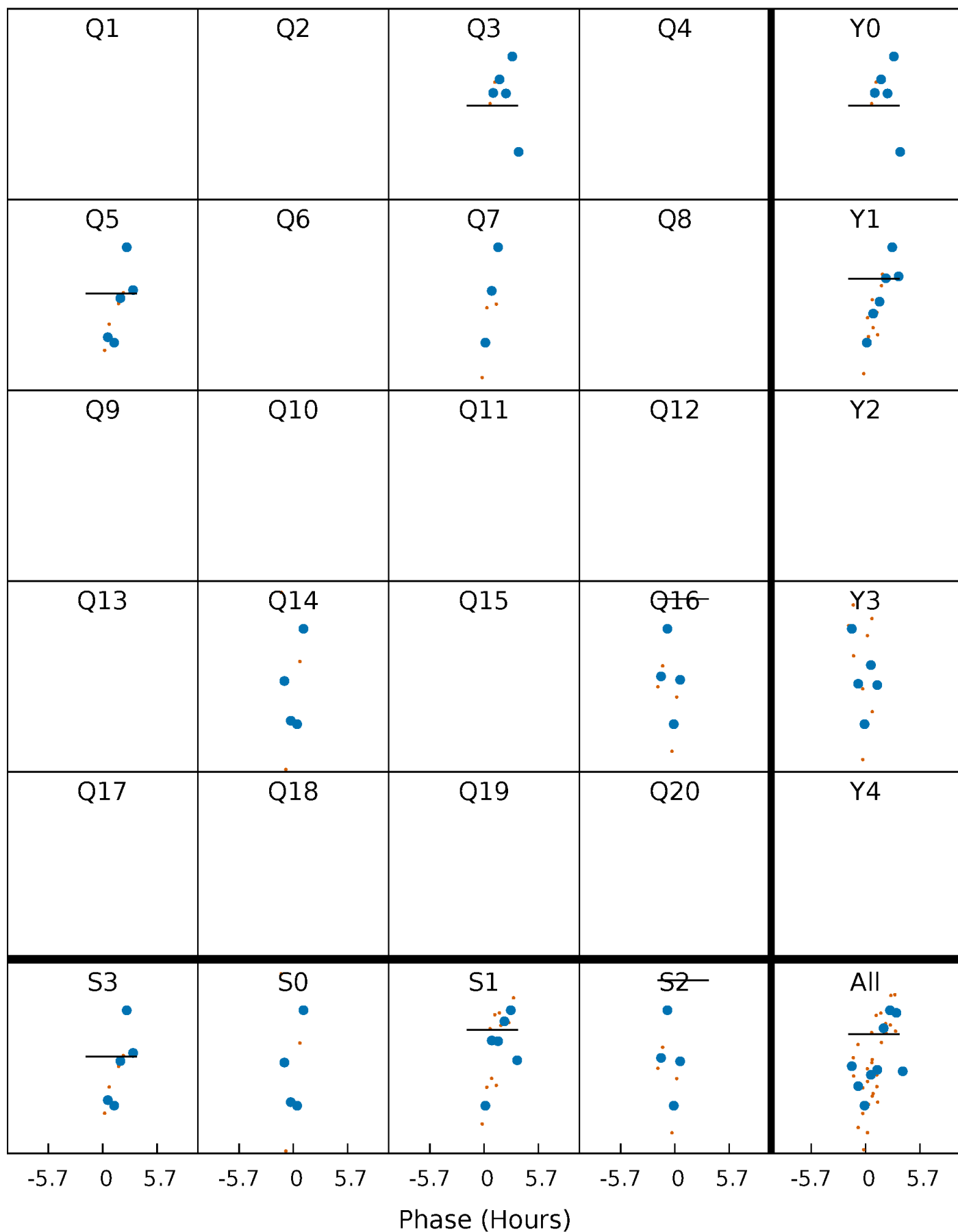
PDC Quarter-Phased Transit Curves

TCE 006441258-06 P=211.033834 Days $T_0=273.500397$ (BKJD)



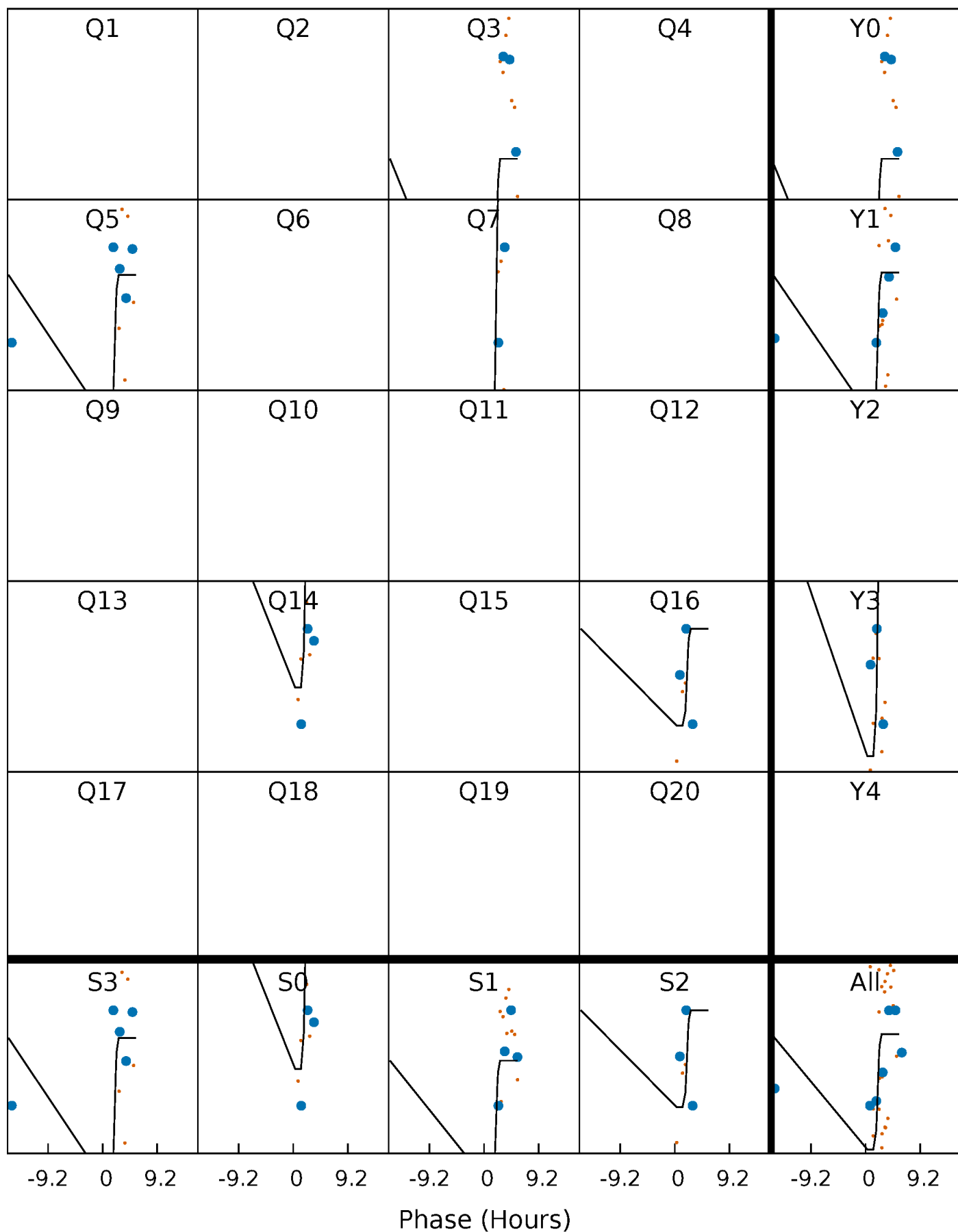
DV Quarter-Phased Transit Curves

TCE 006441258-06 P=211.033834 Days $T_0=273.500397$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

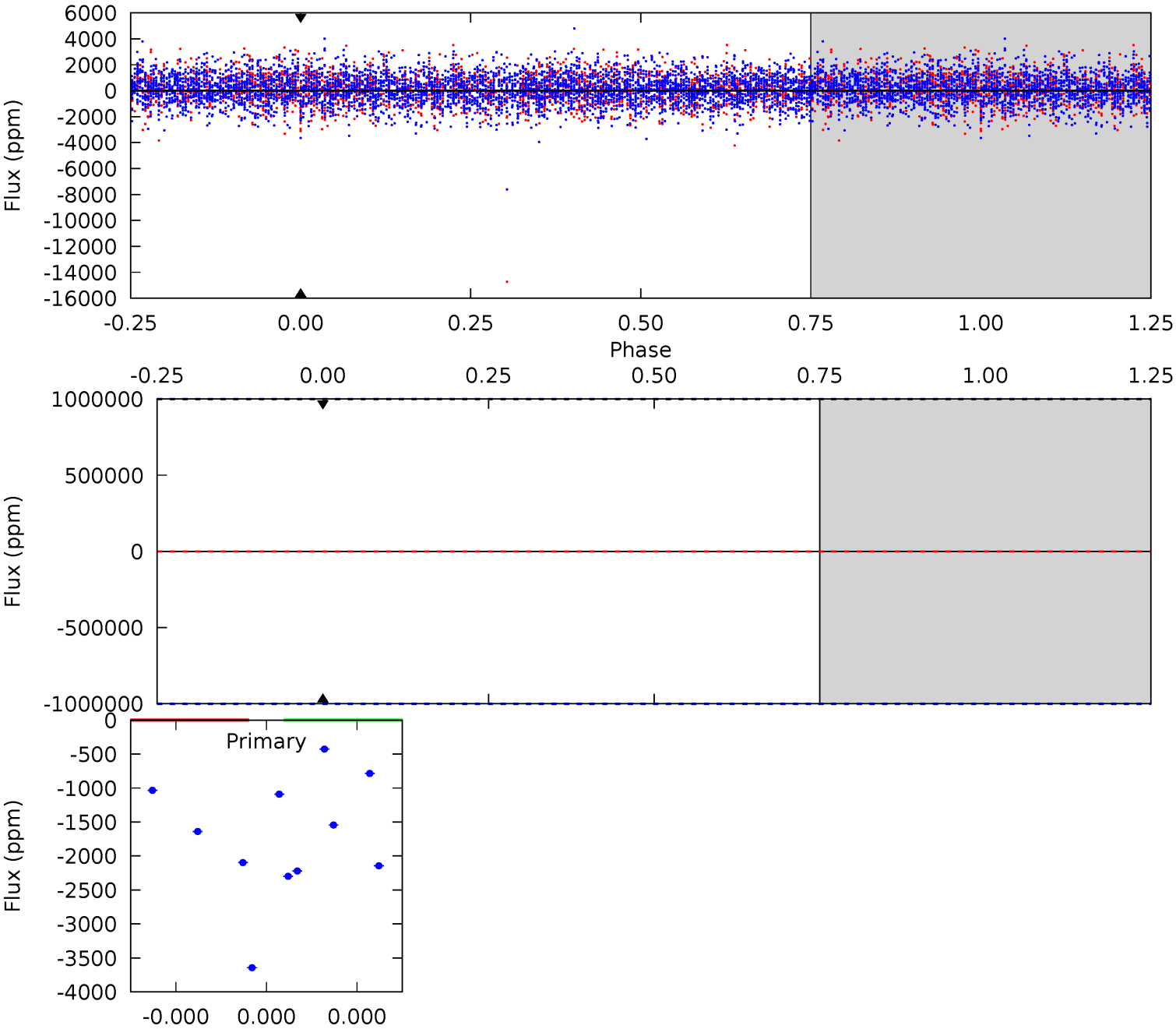
TCE 006441258-06 P=211.033834 Days $T_0=273.413895$ (BKJD)



DV Model-Shift Uniqueness Test

006441258-06, P = 211.033834 Days, E = 62.466563 Days

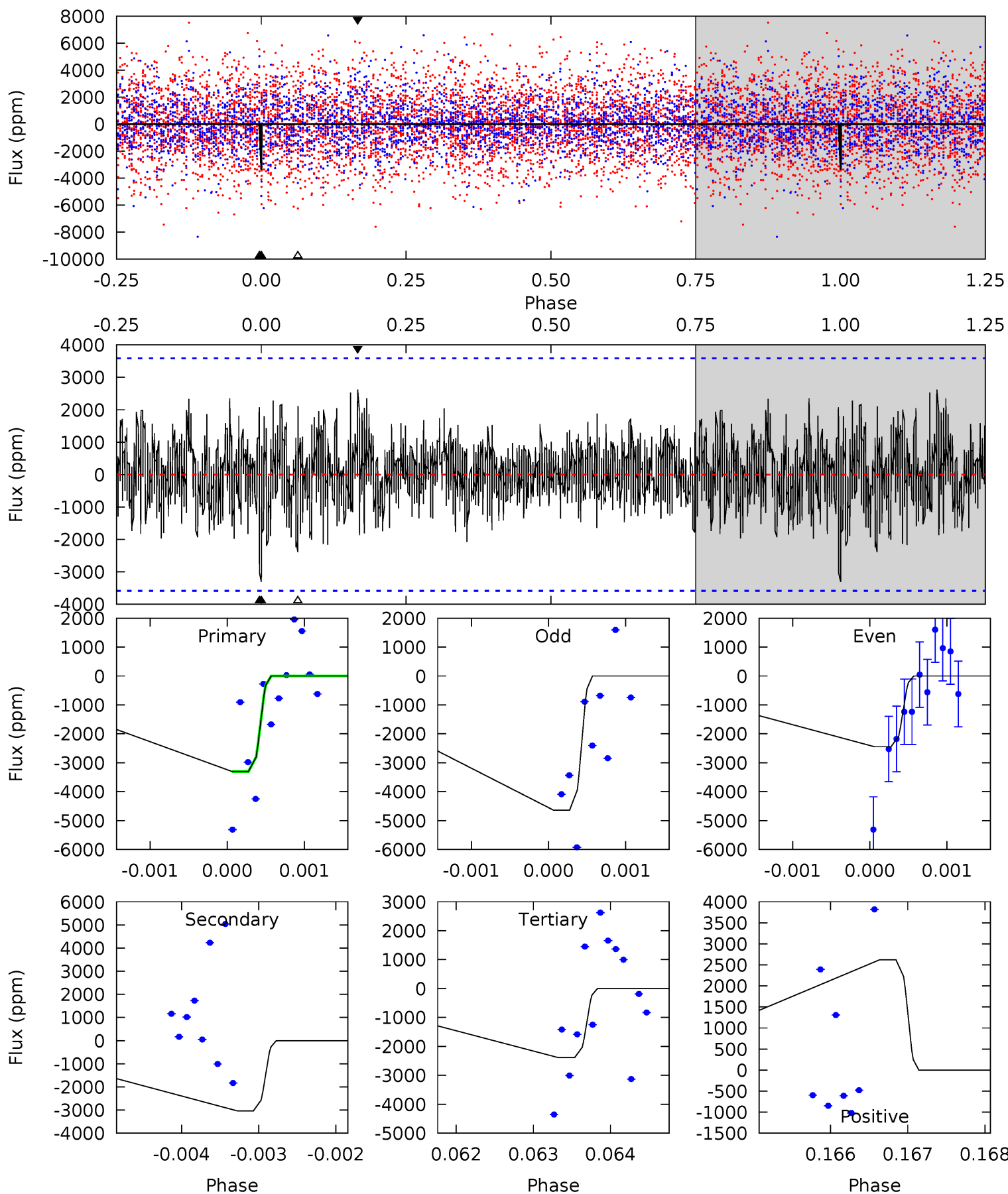
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

006441258-06, P = 211.033834 Days, E = 62.380061 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.03	4.62	3.64	3.99	5.46	3.31	1.11	1.40	1.04	0.99	0.63	1.67	0.92	0.44	0



Stellar Parameters For KIC 006441258

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6773^{+188}_{-282}	$4.283^{+0.090}_{-0.195}$	$-0.180^{+0.250}_{-0.300}$	$1.344^{+0.439}_{-0.219}$	$1.273^{+0.195}_{-0.195}$	$0.739^{+0.355}_{-0.381}$
	+3%/-4%	+2%/-5%	+139%/-167%	+33%/-16%	+15%/-15%	+48%/-52%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 006441258-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$10.55^{+12.55}_{-7.36}$	564^{+41}_{-32}	-5828^{+40992}_{-25489}	$-7315.352^{+512247.198}_{-459030.709}$
Alt.	-3036 ± 657	$14.86^{+14.74}_{-10.70}$	566^{+41}_{-32}	5094^{+5377}_{-1178}	4146^{+50064}_{-3079}

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 $A_{obs} \gg 1.0$

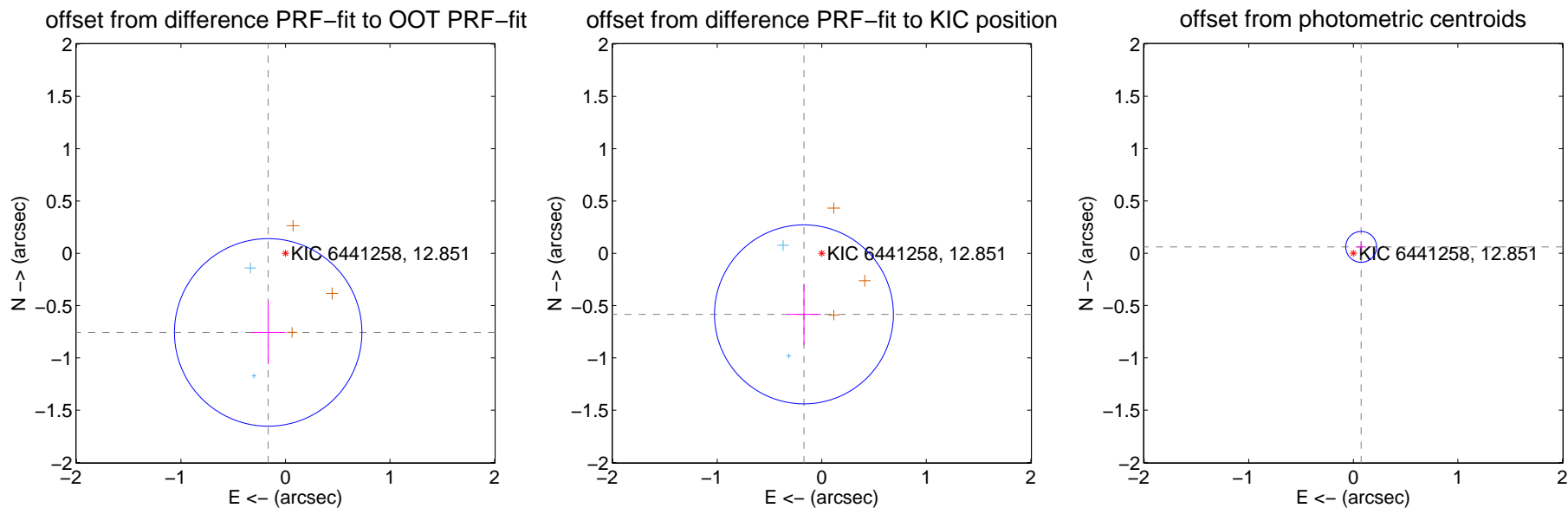
DV Centroid Data

Supplemental centroid analysis for 006441258-06. Kepler magnitude: 12.85. Transit SNR -1.00

There are 2 quarters with good PRF difference image offsets

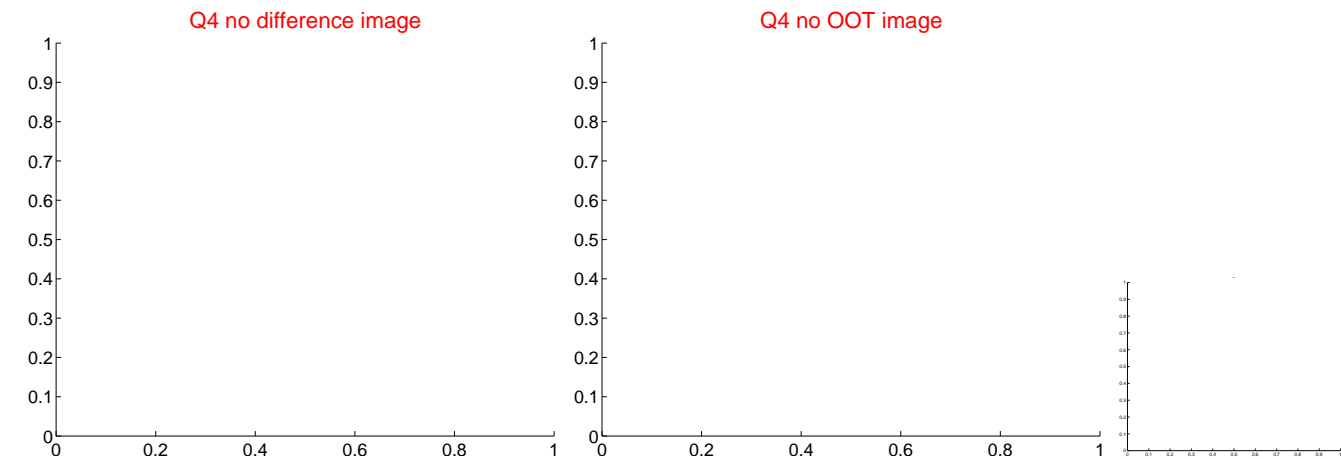
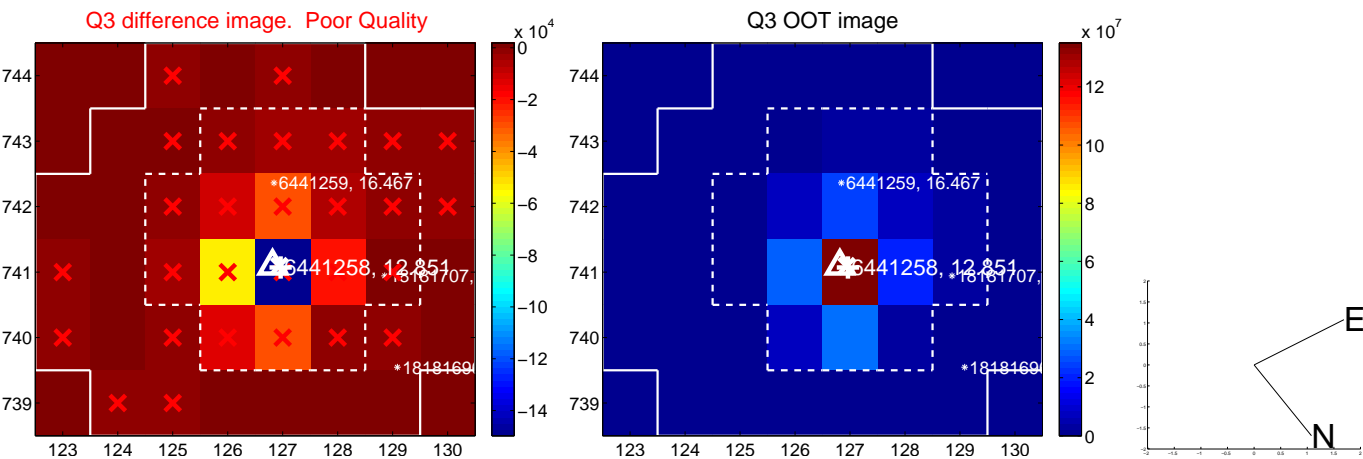
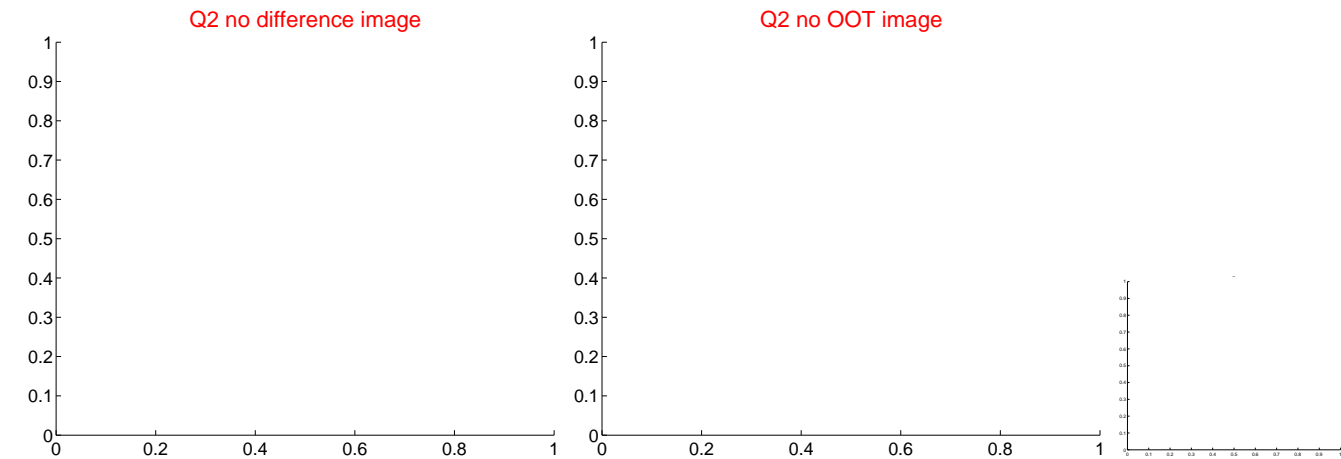
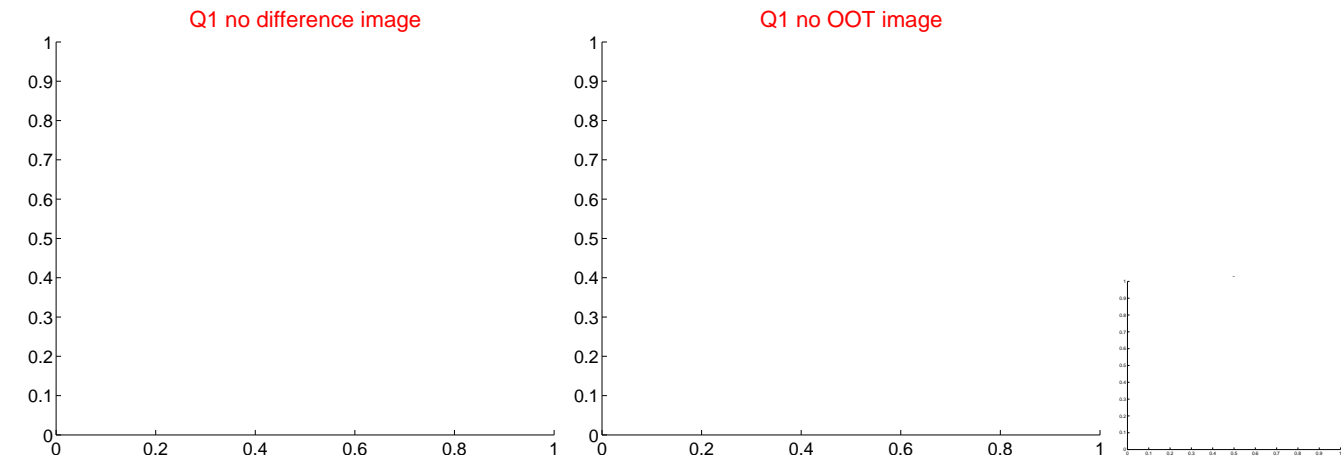
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.774 ± 0.299	2.59	0.166 ± 0.164	-0.756 ± 0.304
PRF-fit source offset from KIC position	0.608 ± 0.285	2.13	0.170 ± 0.163	-0.584 ± 0.293
photometric centroid source offset	0.10 ± 0.05	1.96	-0.07 ± 0.05	0.06 ± 0.05

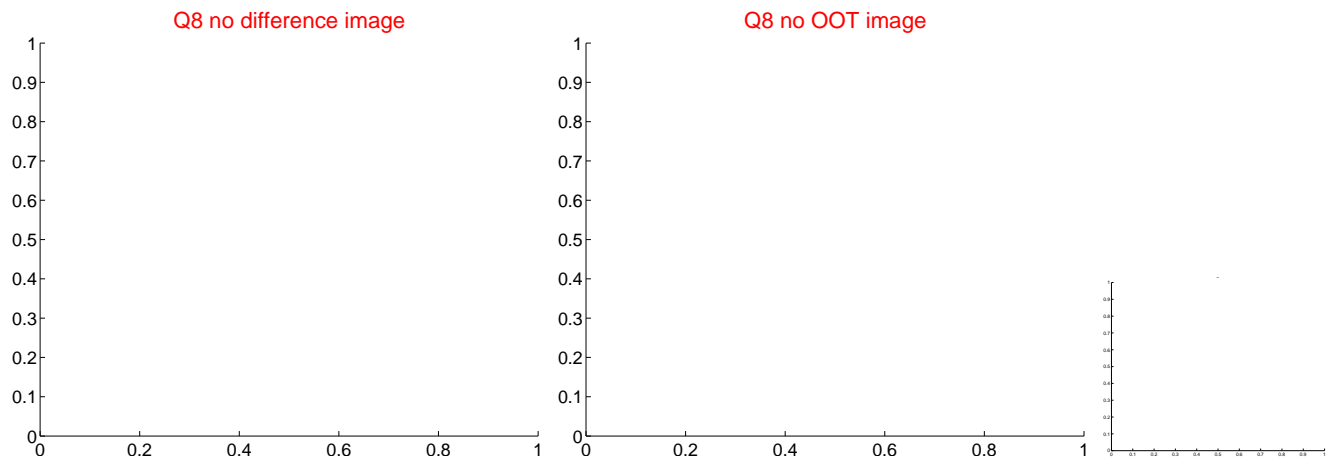
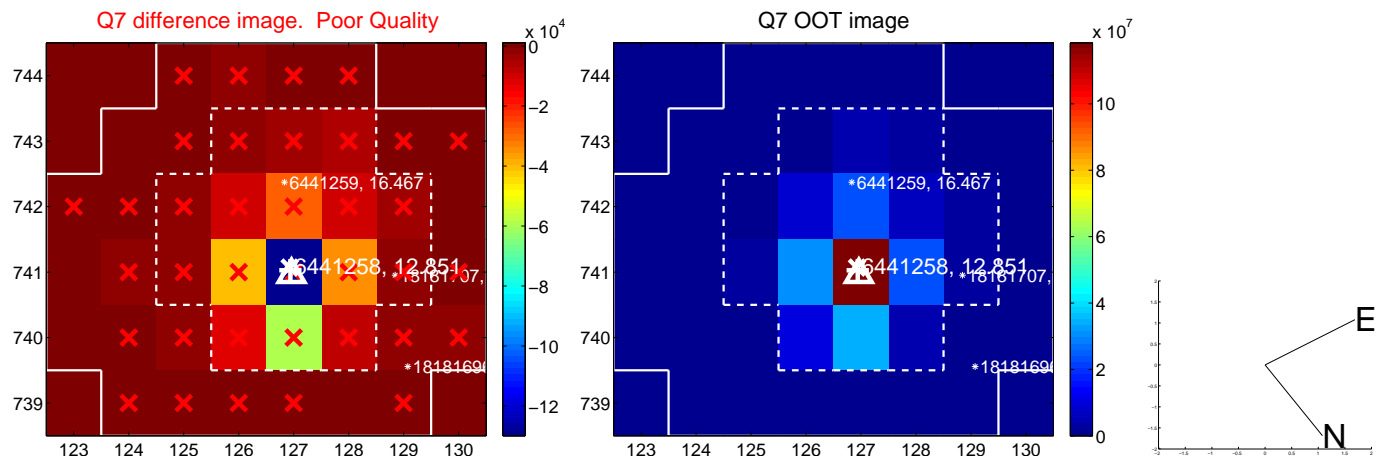
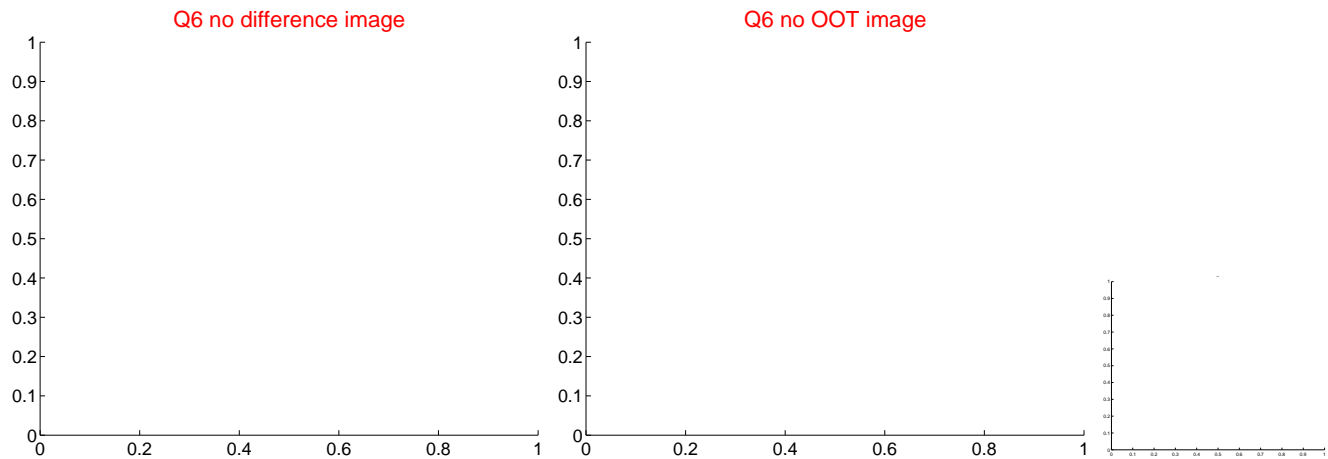
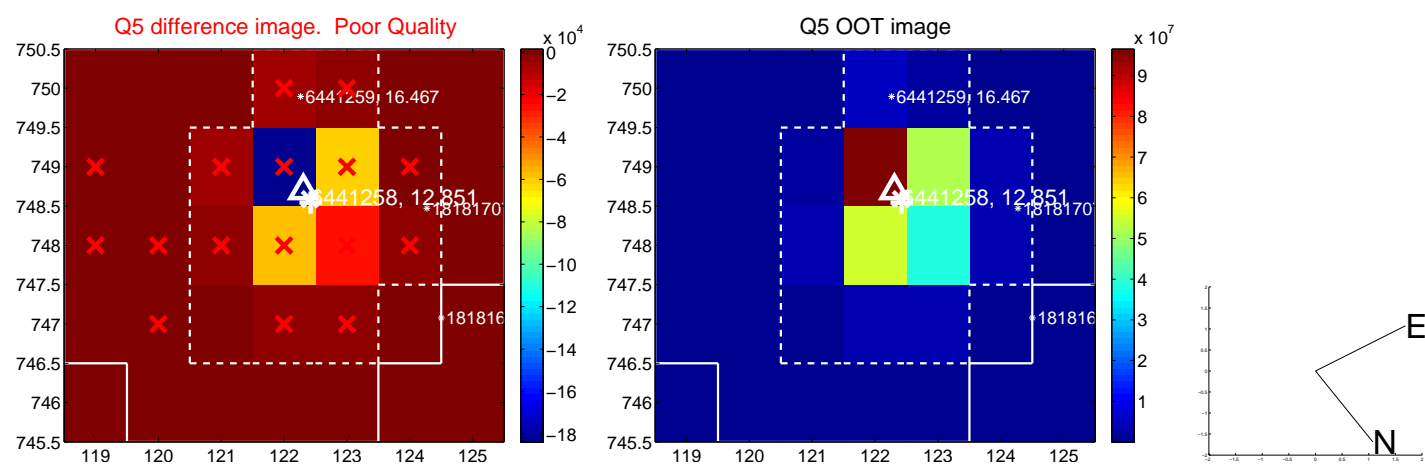


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

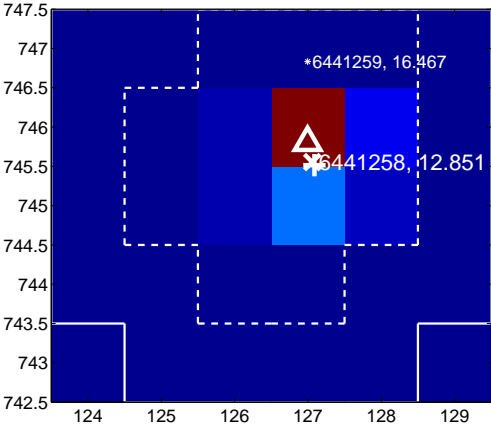
Q13 no difference image



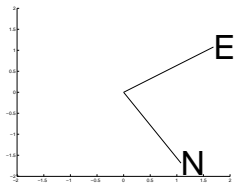
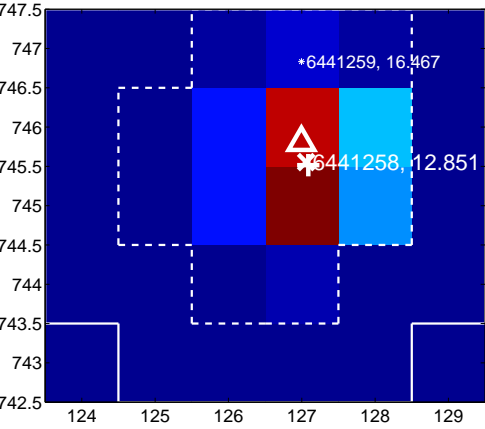
Q13 no OOT image



Q14 difference image



Q14 OOT image



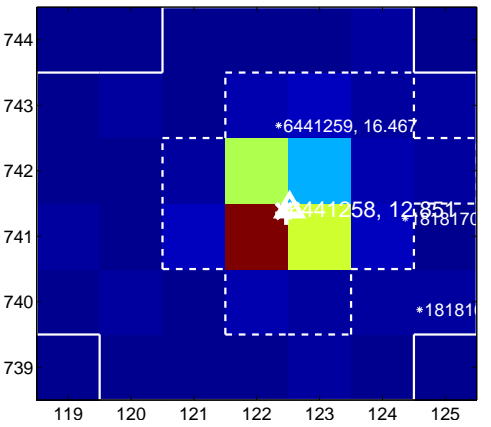
Q15 no difference image



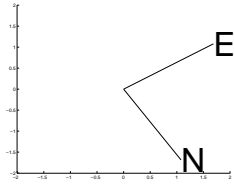
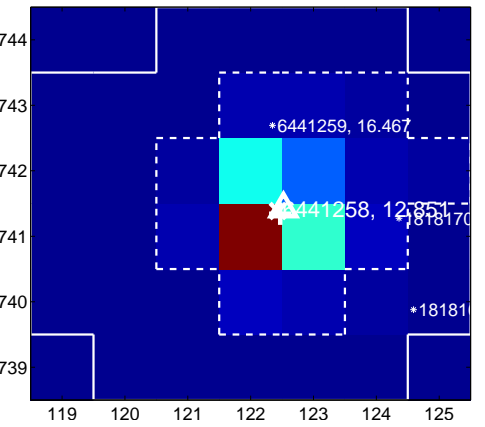
Q15 no OOT image



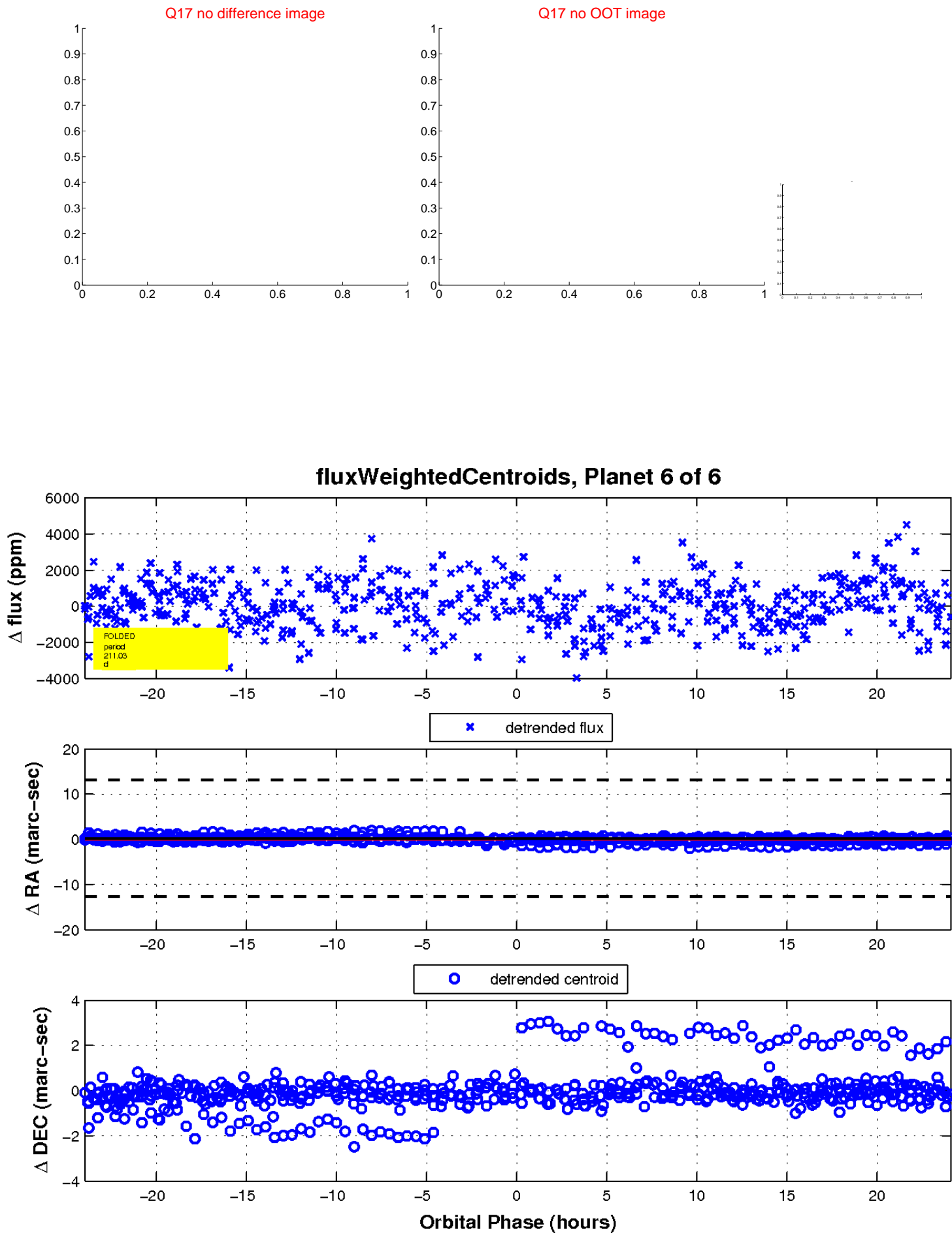
Q16 difference image



Q16 OOT image



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



UKIRT Image

Declination

