

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})
006535143-01	OBS	No	1.655275	131.668348	13.1	9.574	8.6	7.7	1.99	6875	0.72	7918.91
006535143-02	OBS	No	256.515171	289.836364	112.5	5.531	10.2	6.4	1.99	6875	2.16	9.51
006535143-03	OBS	No	99.682988	208.377736	257.3	2.340	10.1	10.6	1.99	6875	3.64	33.55
006535143-04	OBS	No	105.729358	169.919884	224.0	4.991	9.9	10.7	1.99	6875	3.22	31.01
006535143-05	OBS	No	99.802727	154.724213	181.5	4.161	9.5	8.9	1.99	6875	3.11	33.49
006535143-06	OBS	No	83.476567	209.923159	177.7	4.474	9.1	9.2	1.99	6875	2.99	42.50
006535143-07	OBS	No	162.818577	271.955355	65.4	20.114	8.9	4.1	1.99	6875	1.84	17.44
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006535143-09	OBS	No	89.732378	186.618285	139.3	6.675	8.6	5.9	1.99	6875	2.66	38.60
006535143-10	OBS	No	32.503334	158.465697	196.5	0.978	8.3	7.9	1.99	6875	3.26	149.48

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006535143-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_SATURATED
006535143-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
006535143-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
006535143-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006535143-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006535143-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_SATURATED
006535143-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006535143-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
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006535143-10	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—CENT_SATURATED

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

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

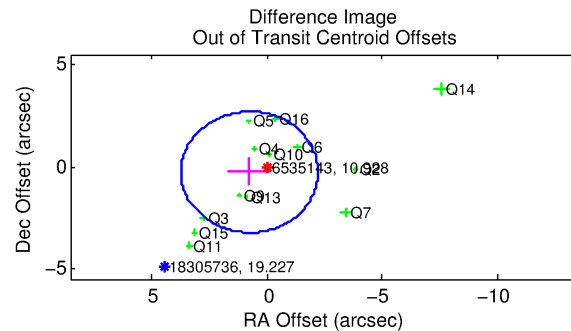
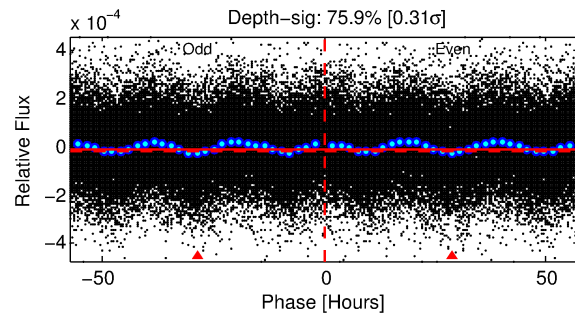
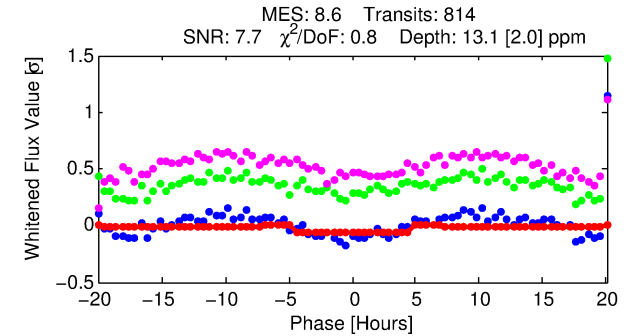
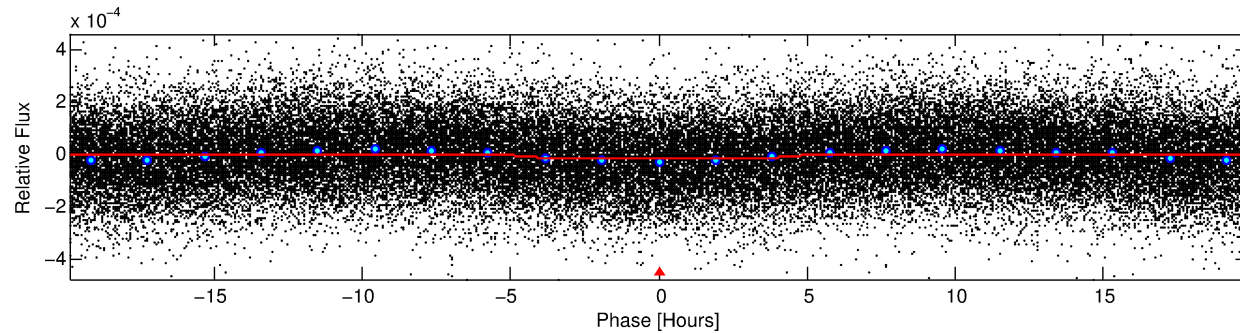
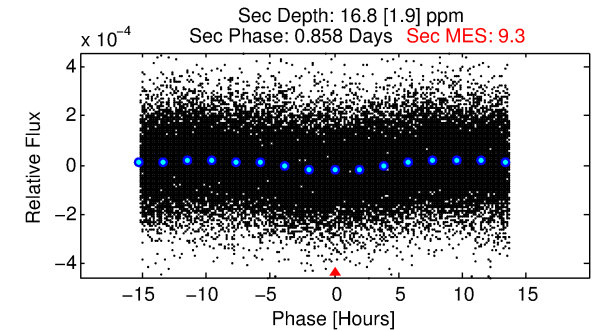
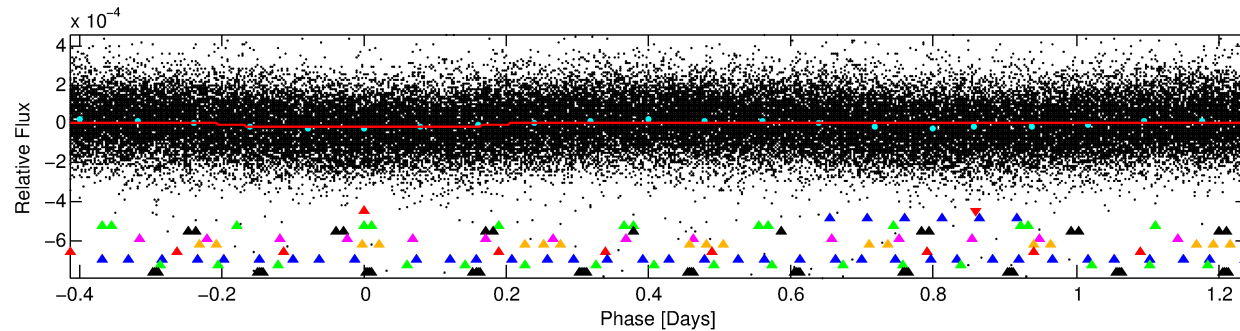
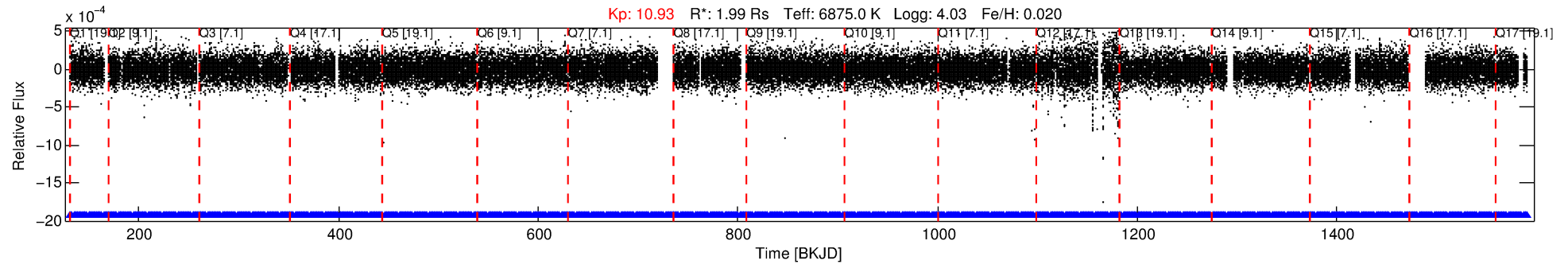
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006535143-01

No Significant Match Found

DV One-Page Summary

KIC: 6535143 Candidate: 1 of 10 Period: 1.655 d



DV Fit Results:

Period = 1.65527 [0.00003] d
Epoch = 131.6683 [0.0068] BKJD
Rp/R* = 0.0033 [0.0033]
a/R* = 1.45 [4.26]
b = 0.17 [32.80]
Seff = 7918.91 [2119.83]
Teff = 2405 [161] K
Rp = 0.73 [0.74] Re
a = 0.0316 [0.0055] AU
Ag = 17.46 [35.13] [0.47σ]
Teffp = 7602 [3792] K [1.37σ]

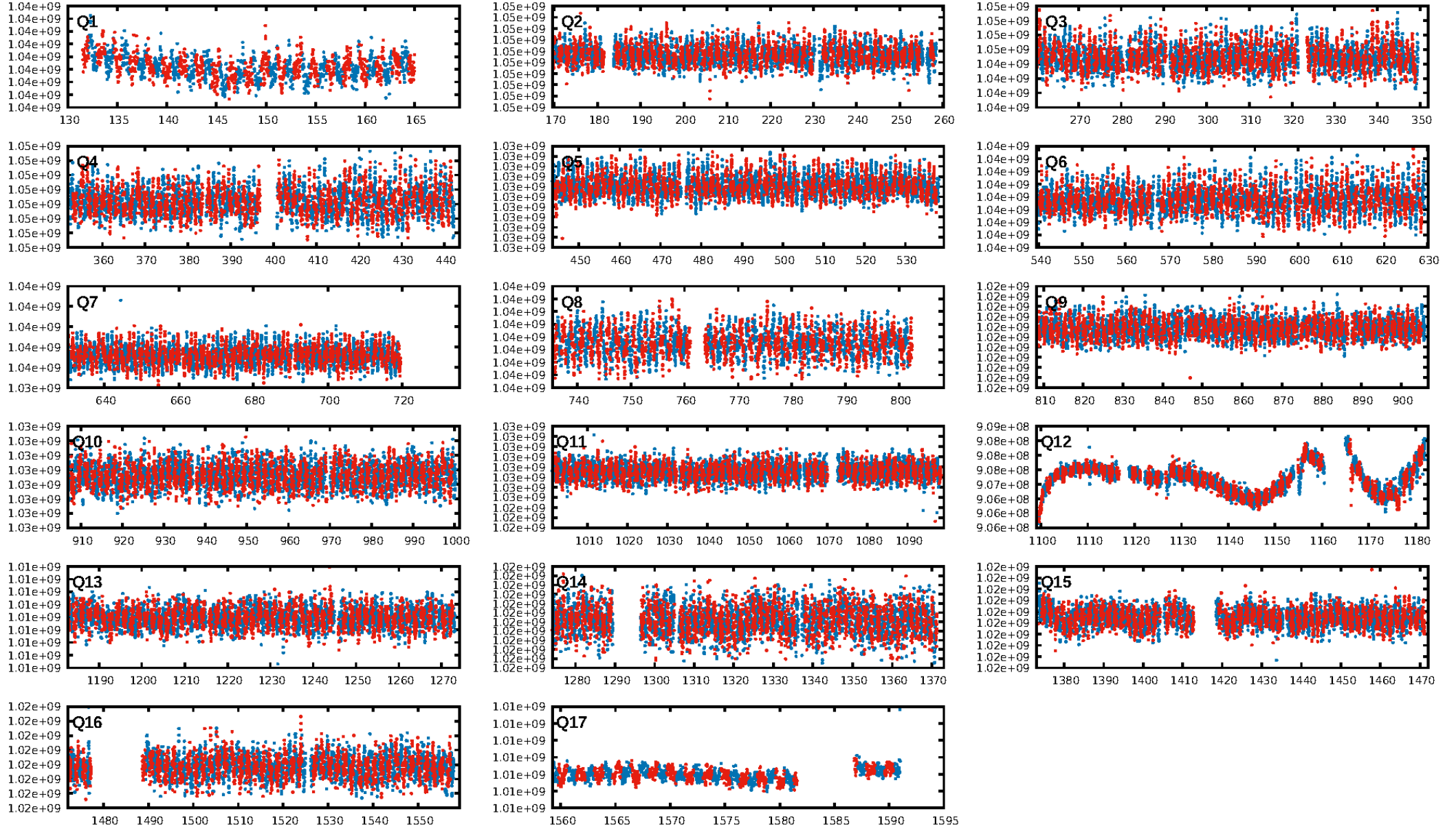
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [76.93σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [776/776]
GhostDiagnostic-chr: 2.2
Centroid-sig: 2.1%
Centroid-so: 1.647 arcsec [1.52σ]
OotOffset-rm: 0.797 arcsec [0.81σ]
KicOffset-rm: 1.149 arcsec [1.17σ]
OotOffset-st: 4/4/2/3 [13]
KicOffset-st: 4/4/2/3 [13]
DiffImageQuality-fgm: 0.38 [5/13]
DiffImageOverlap-fno: 1.00 [17/17]

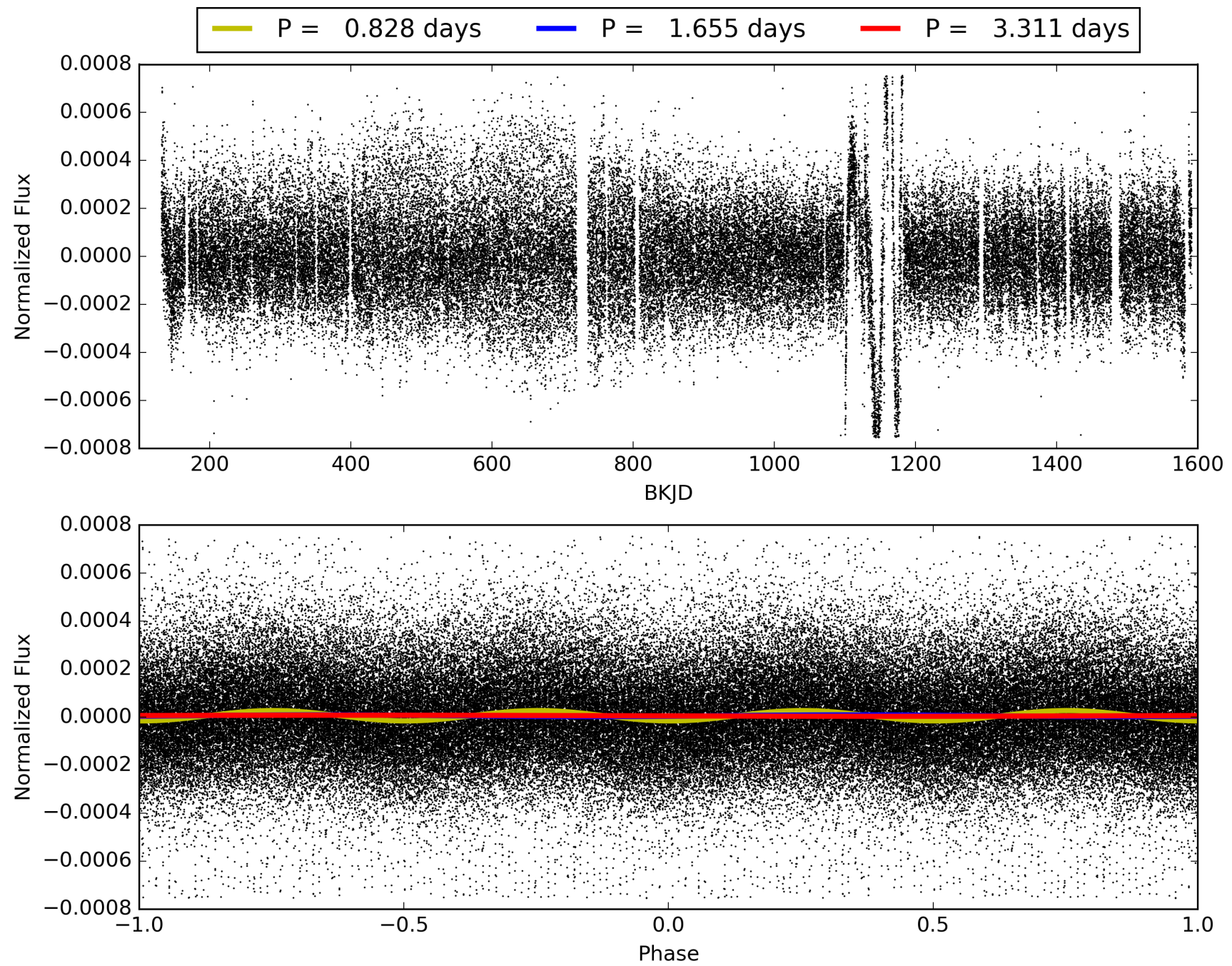
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 03:15:12 Z

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

TCE 006535143-01, PDC Light Curves

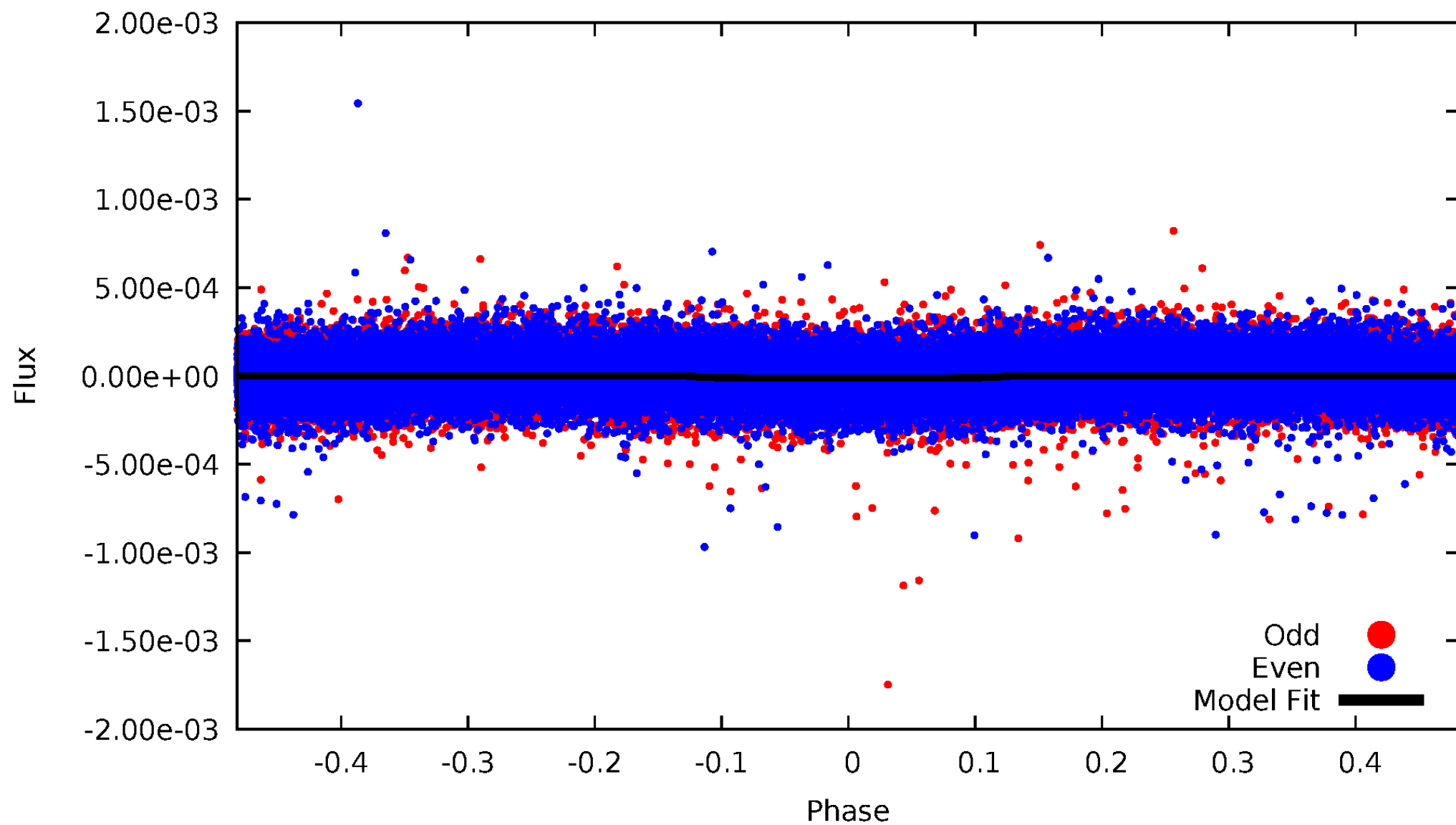


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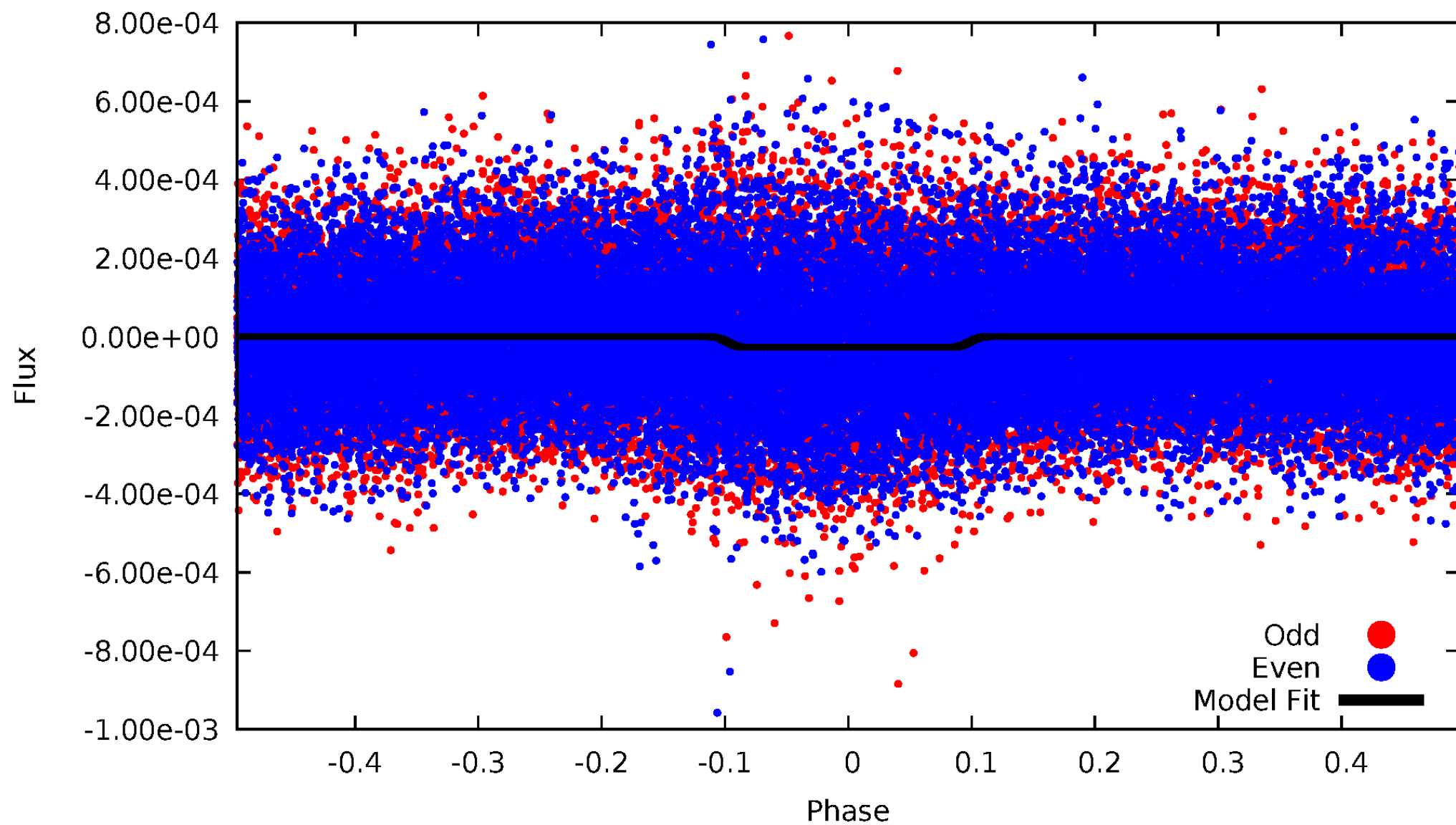
DV Odd/Even

TCE 006535143-01

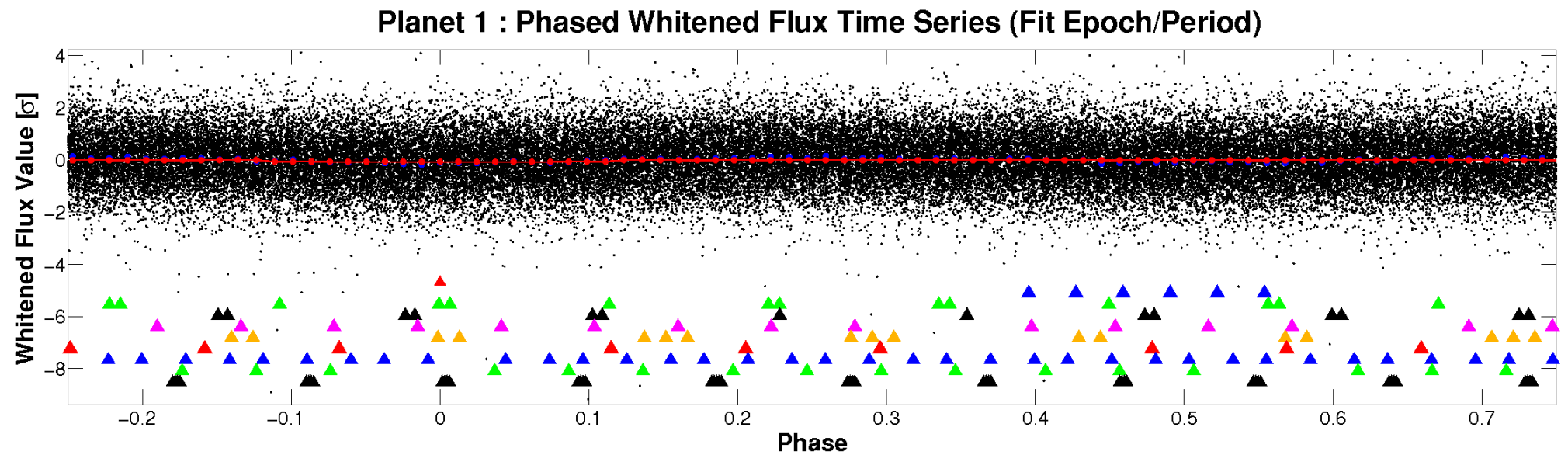
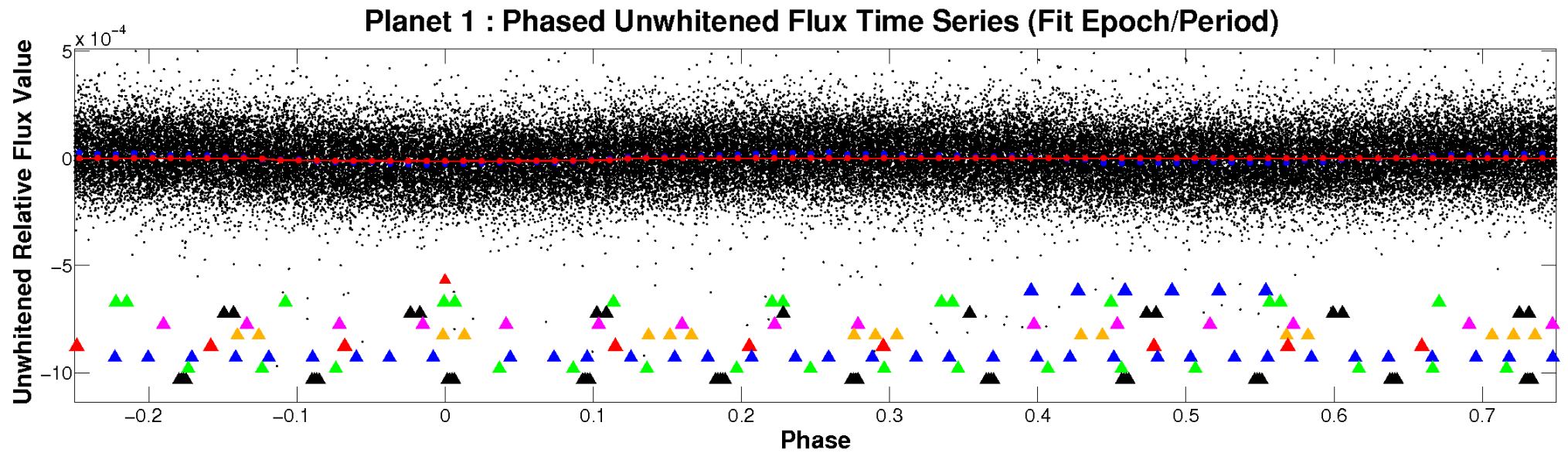


ALT Odd/Even

TCE 006535143-01

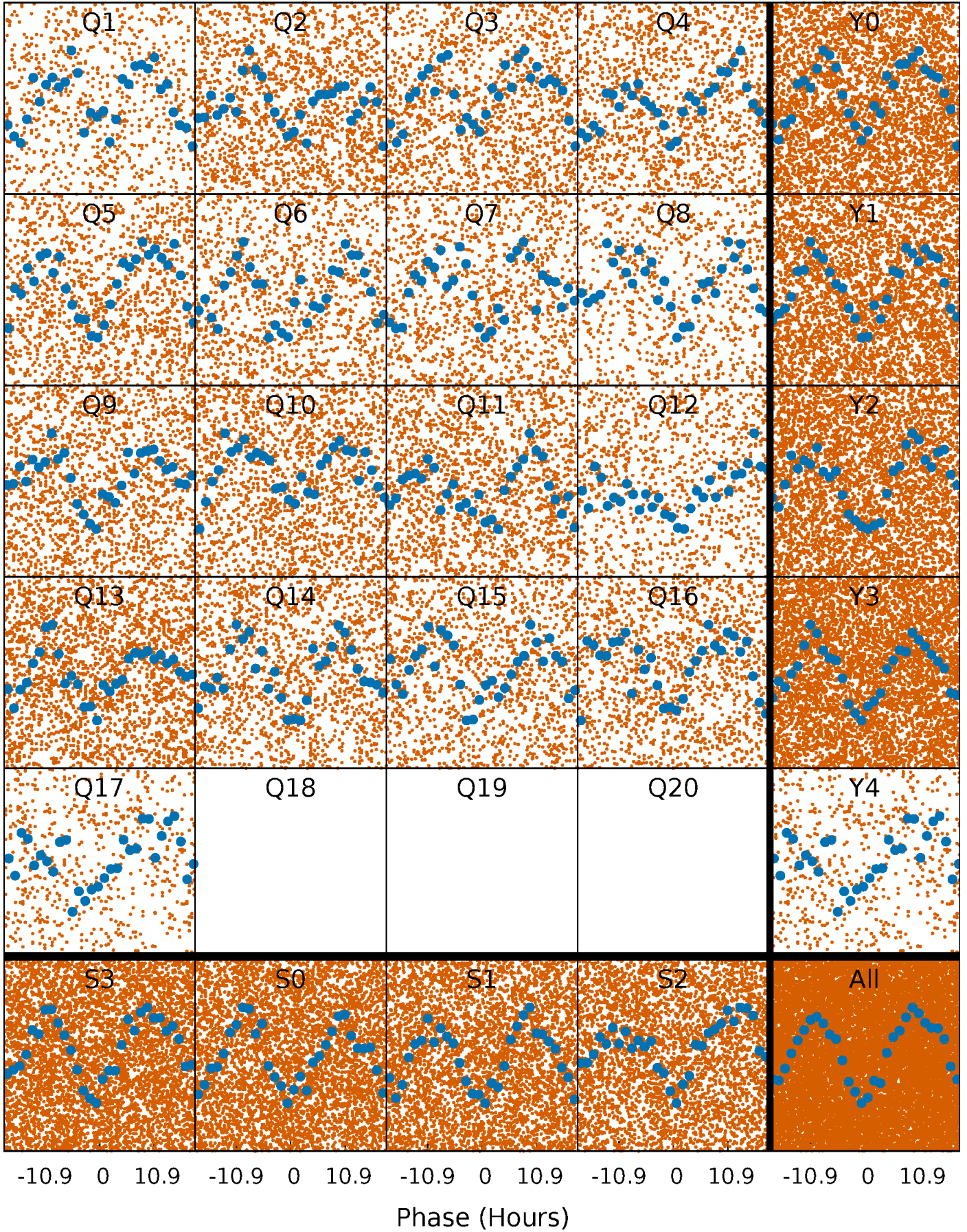


Non-Whitened Vs. Whitened Light Curve



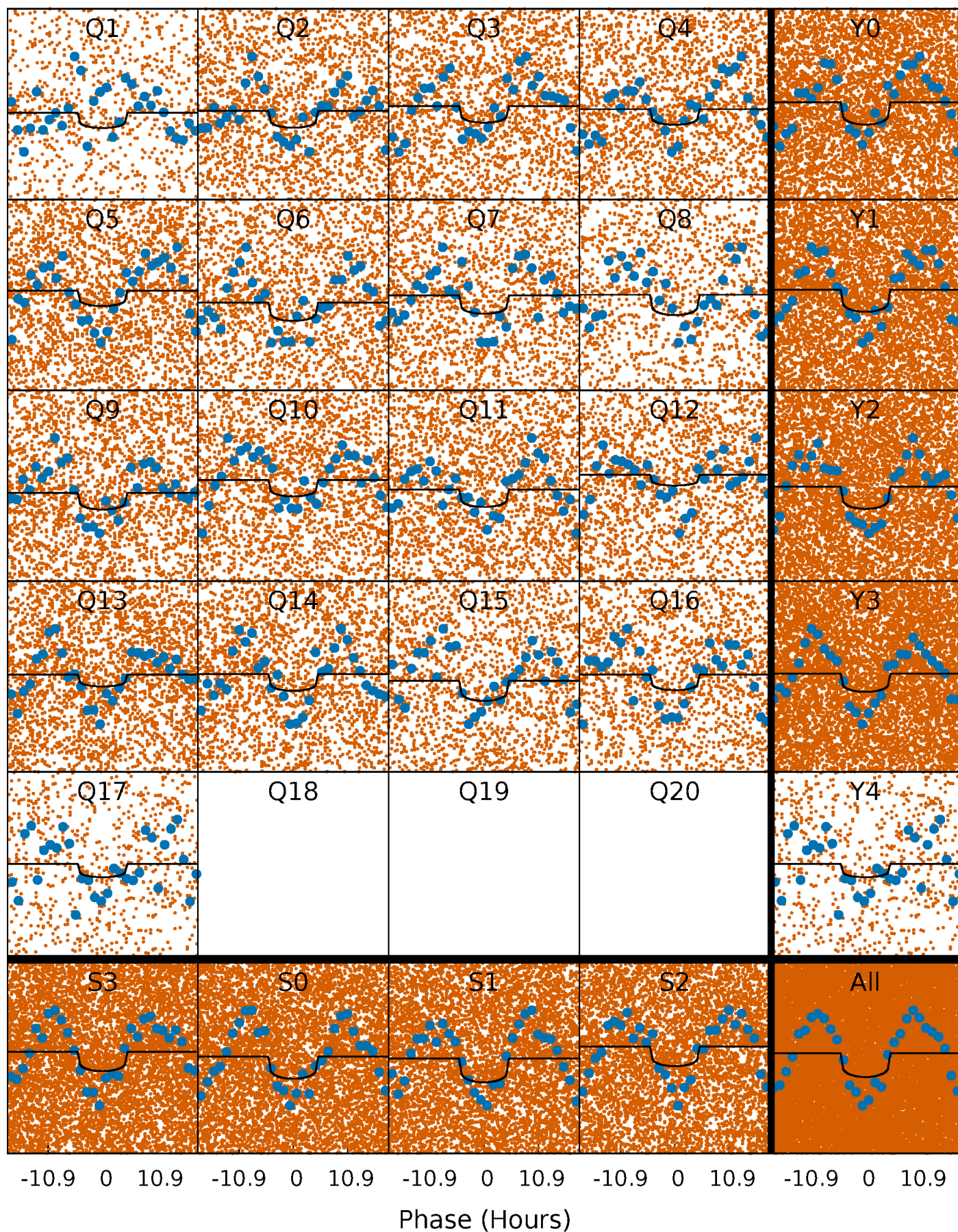
PDC Quarter-Phased Transit Curves

TCE 006535143-01 P= 1.655275 Days $T_0=131.668348$ (BKJD)



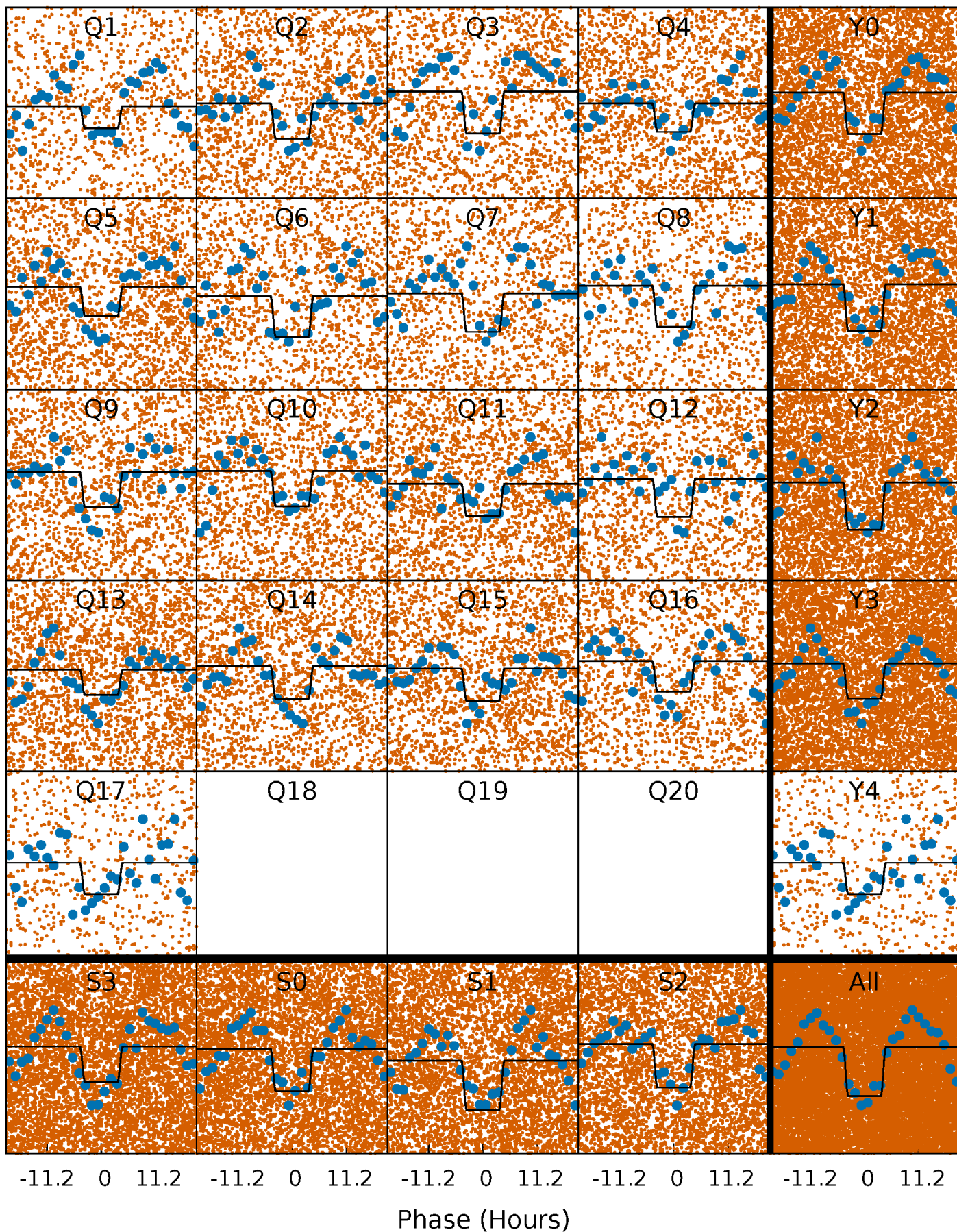
DV Quarter-Phased Transit Curves

TCE 006535143-01 P= 1.655275 Days $T_0=131.668348$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

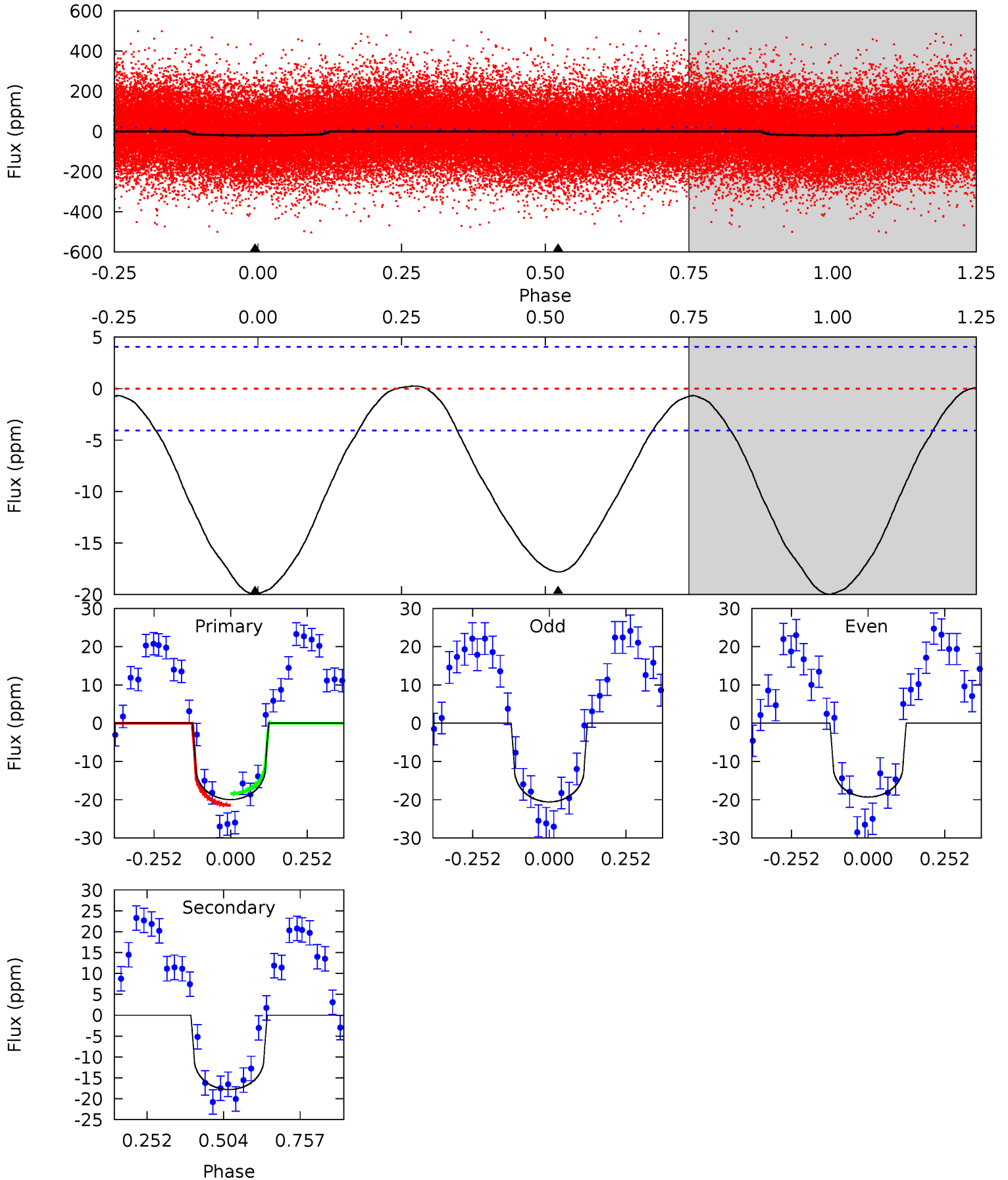
TCE 006535143-01 P= 1.655314 Days $T_0=131.649031$ (BKJD)



DV Model-Shift Uniqueness Test

006535143-01, P = 1.655275 Days, E = 130.013073 Days

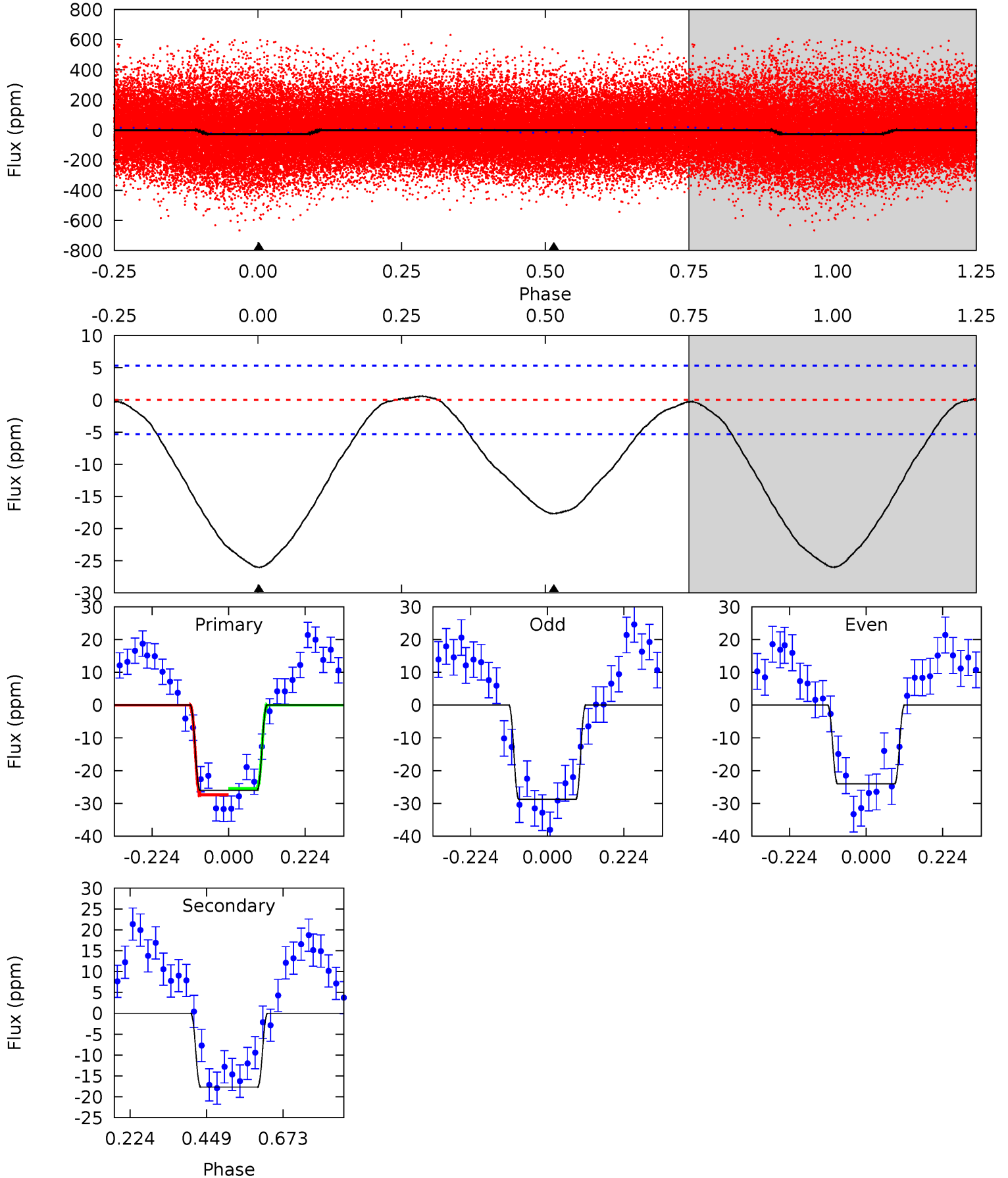
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.5	19.1	0	0	4.37	1.15	0.41	21.5	21.5	19.1	19.1	0.68	1.01	0.01	1.65



Alt Model-Shift Uniqueness Test

006535143-01, P = 1.655314 Days, E = 129.993717 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.5	14.6	0	0	4.39	1.22	0.35	21.5	21.5	14.6	14.6	1.93	0.76	0.02	0.79



Stellar Parameters For KIC 006535143

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6875^{+71}_{-82}	$4.027^{+0.149}_{-0.122}$	$0.020^{+0.150}_{-0.150}$	$1.985^{+0.389}_{-0.389}$	$1.530^{+0.146}_{-0.133}$	$0.276^{+0.202}_{-0.099}$
	+1%/-1%	+4%/-3%	+750%/-750%	+20%/-20%	+10%/-9%	+73%/-36%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 006535143-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-18 ± 1	$0.87^{+0.64}_{-0.57}$	3362^{+156}_{-173}	7027^{+8282}_{-1780}	13^{+94}_{-9}
Alt.	-18 ± 1	$1.13^{+0.72}_{-0.63}$	3349^{+160}_{-186}	6029^{+3740}_{-1275}	$7.526^{+32.233}_{-4.732}$

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 $A_{obs} \gg 1.0$

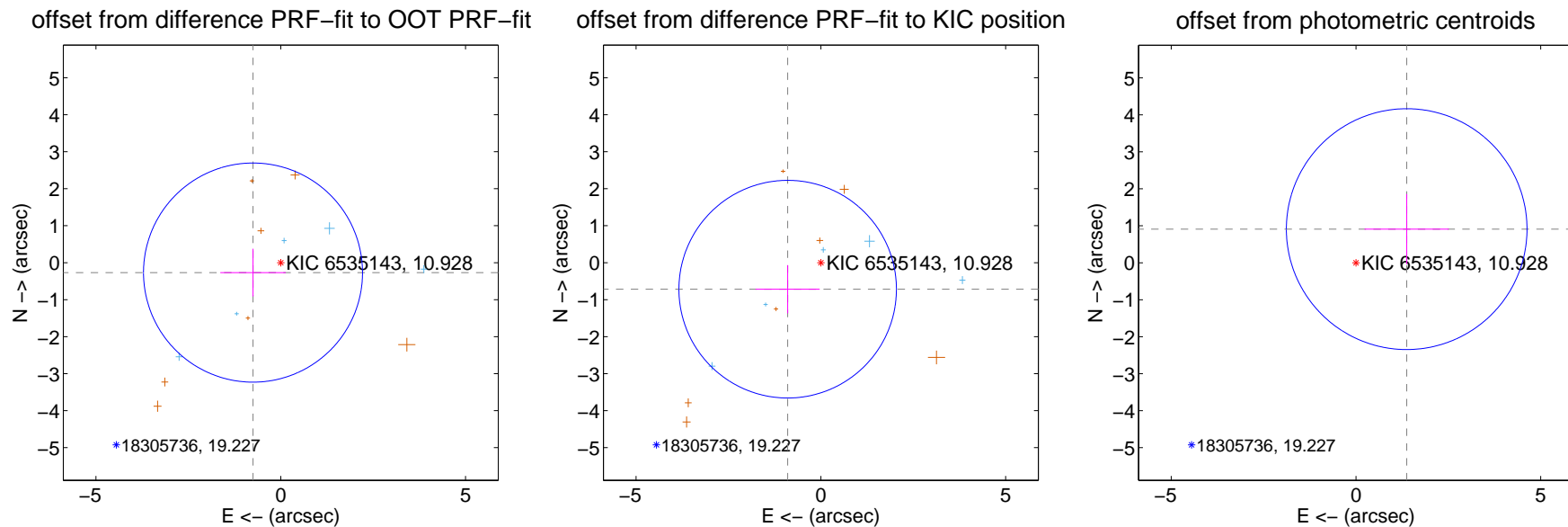
DV Centroid Data

Supplemental centroid analysis for 006535143-01. **Kepler magnitude: 10.93.** Transit SNR 7.74

There are 5 quarters with good PRF difference image offsets

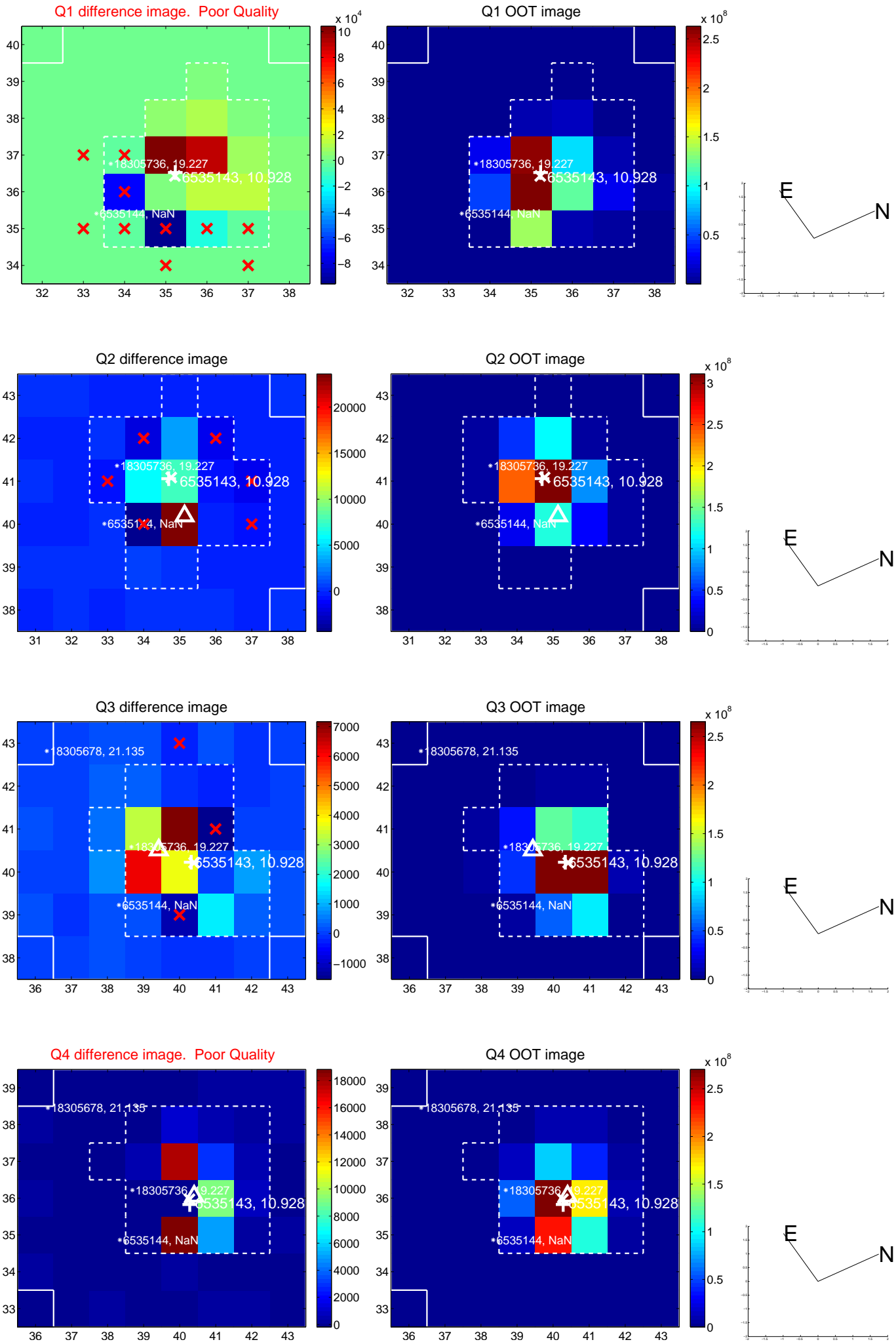
The direct PRF centroid is offset from the target star catalog position by about 0.46 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.797 ± 0.988	0.81	0.750 ± 0.887	-0.268 ± 0.646
PRF-fit source offset from KIC position	1.149 ± 0.981	1.17	0.898 ± 0.865	-0.716 ± 0.651
photometric centroid source offset	1.65 ± 1.09	1.52	-1.37 ± 1.14	0.91 ± 0.95

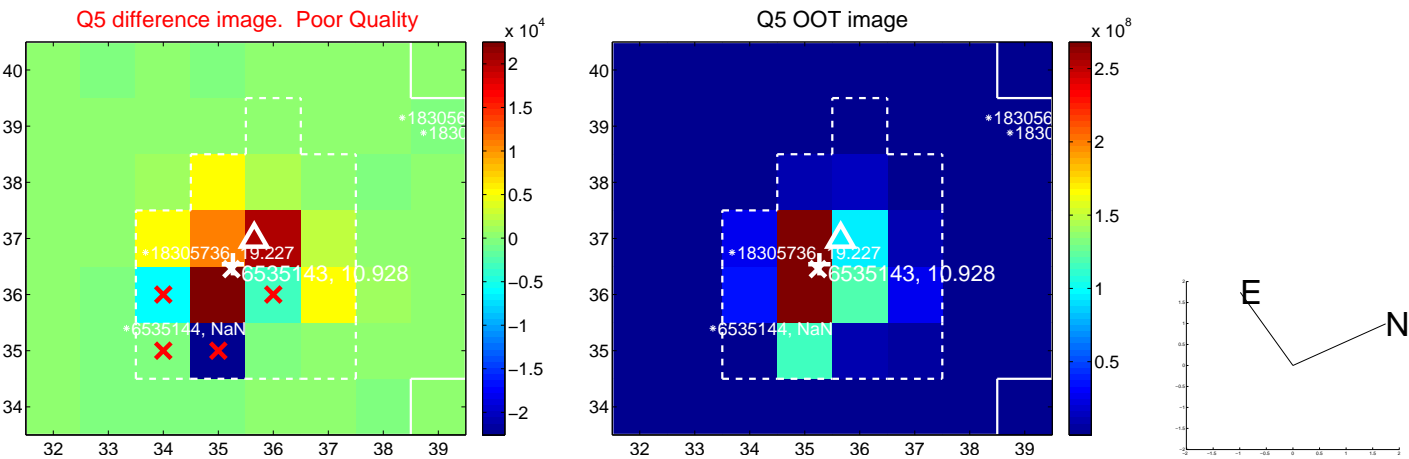


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

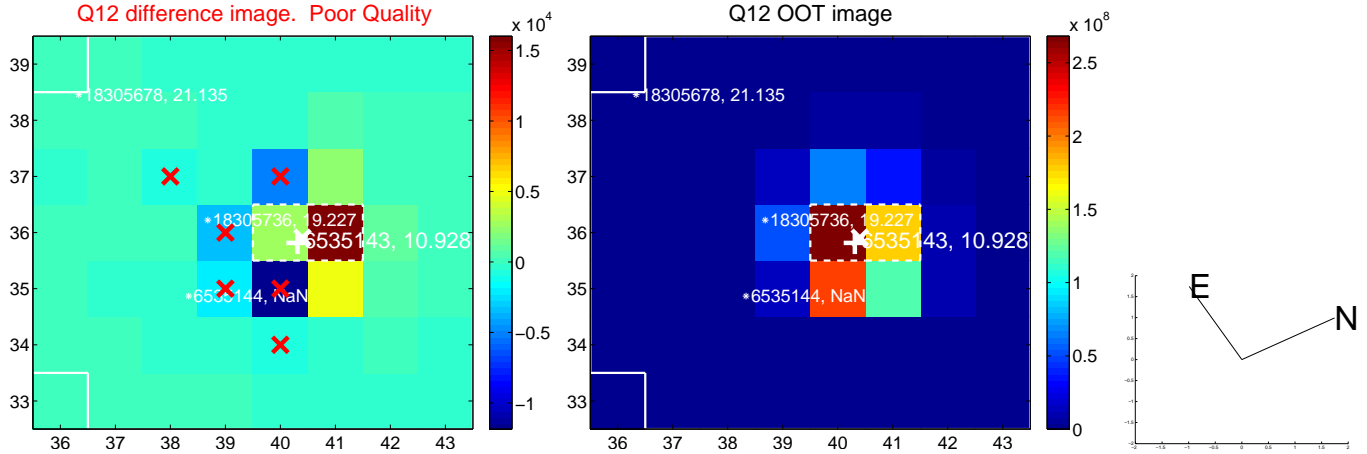
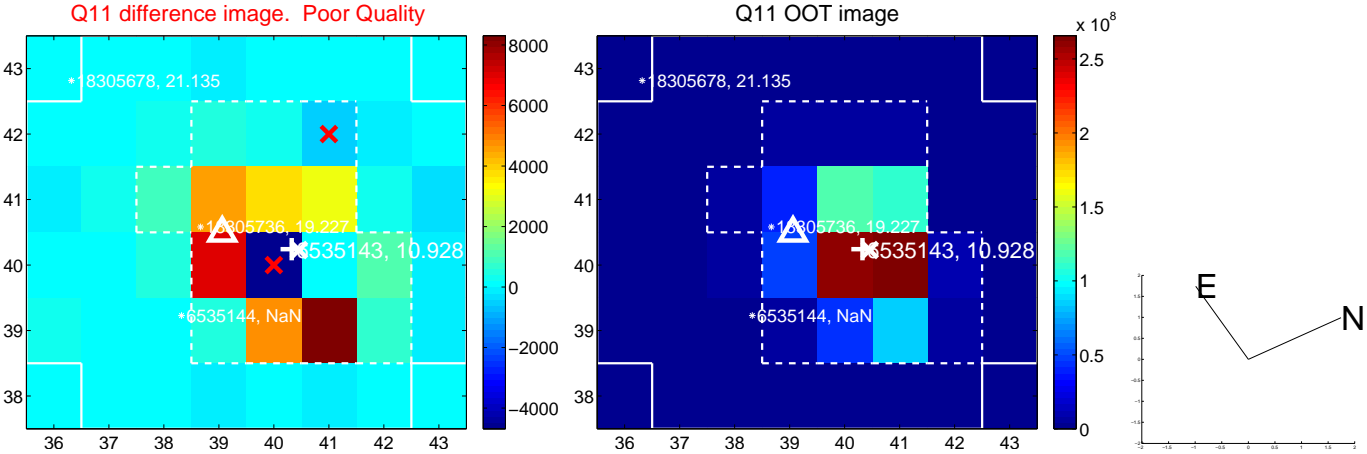
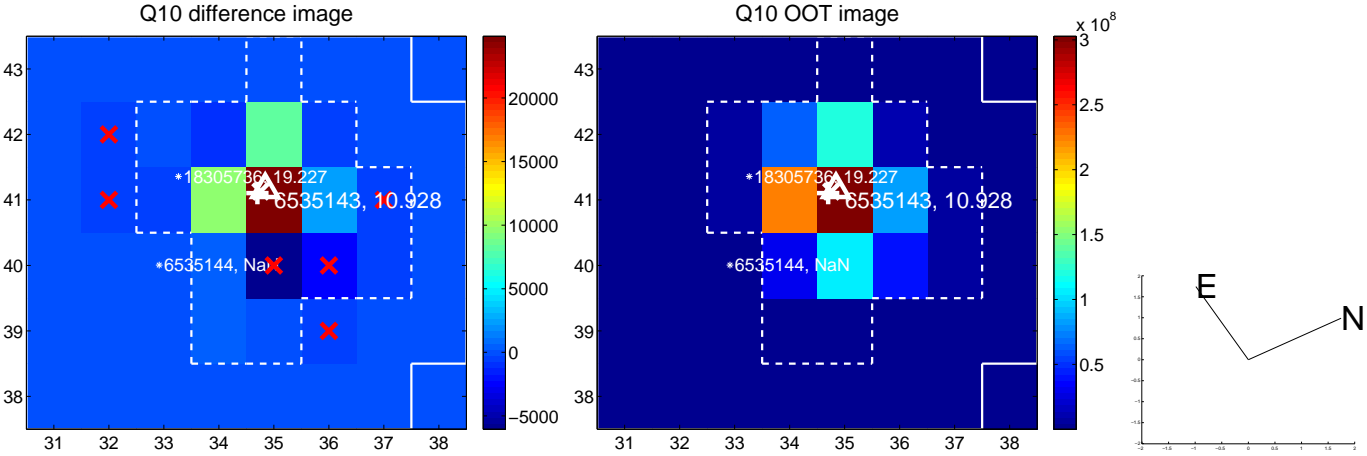
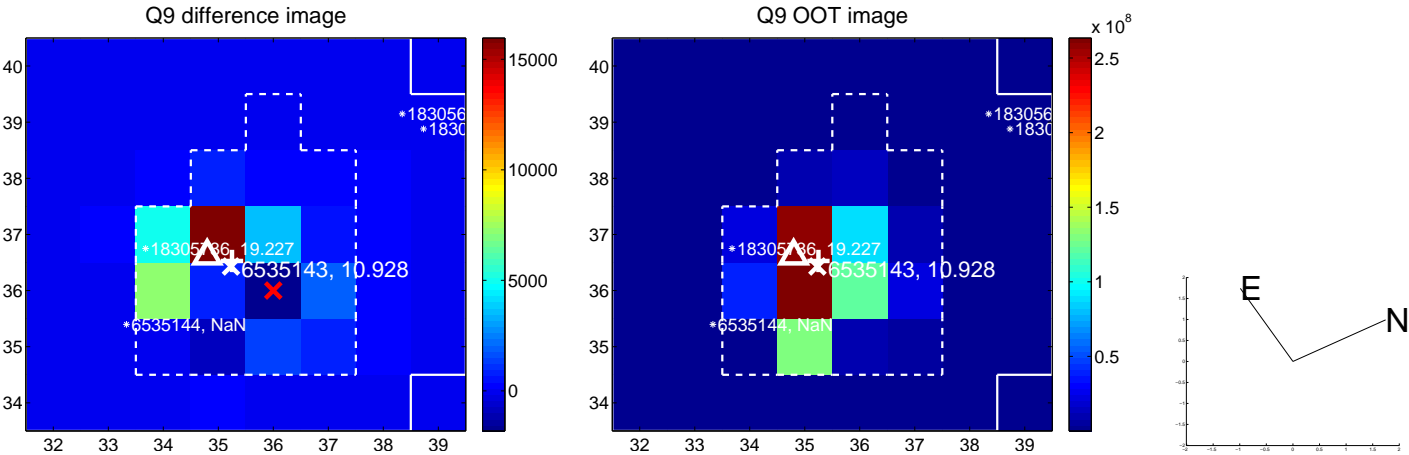
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



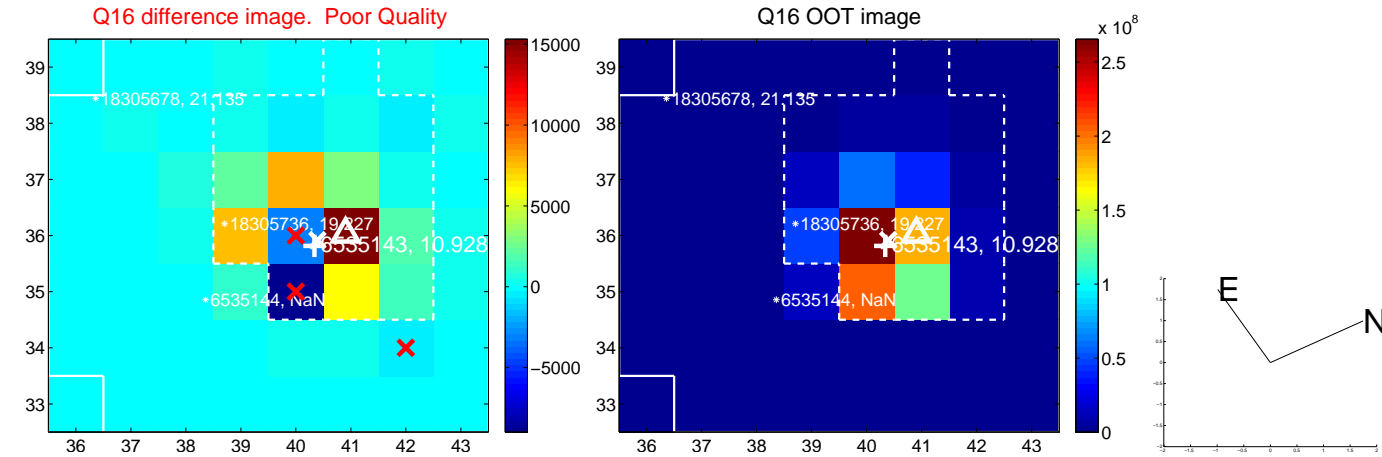
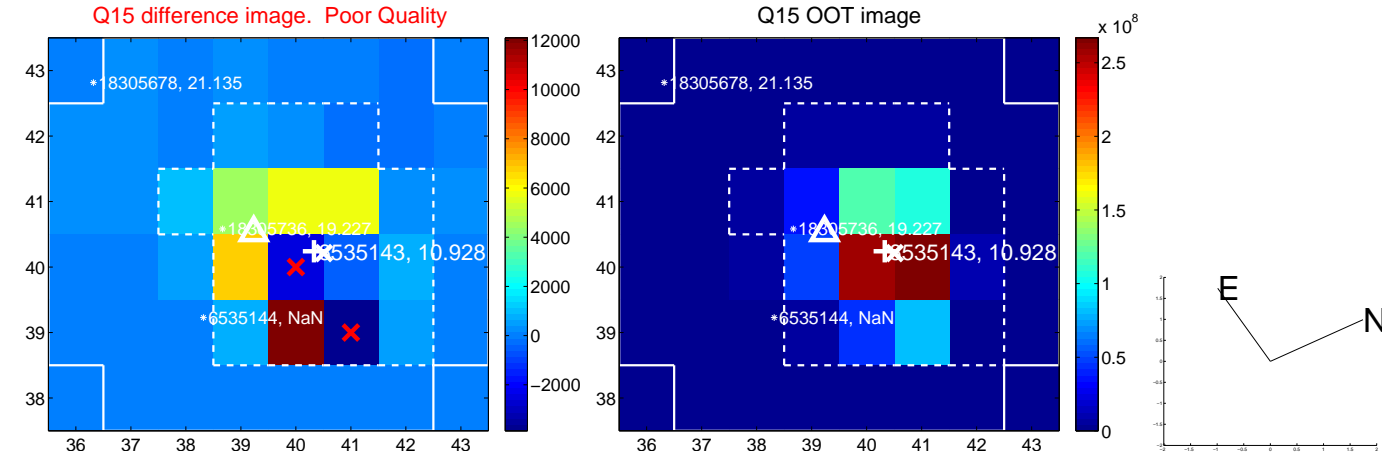
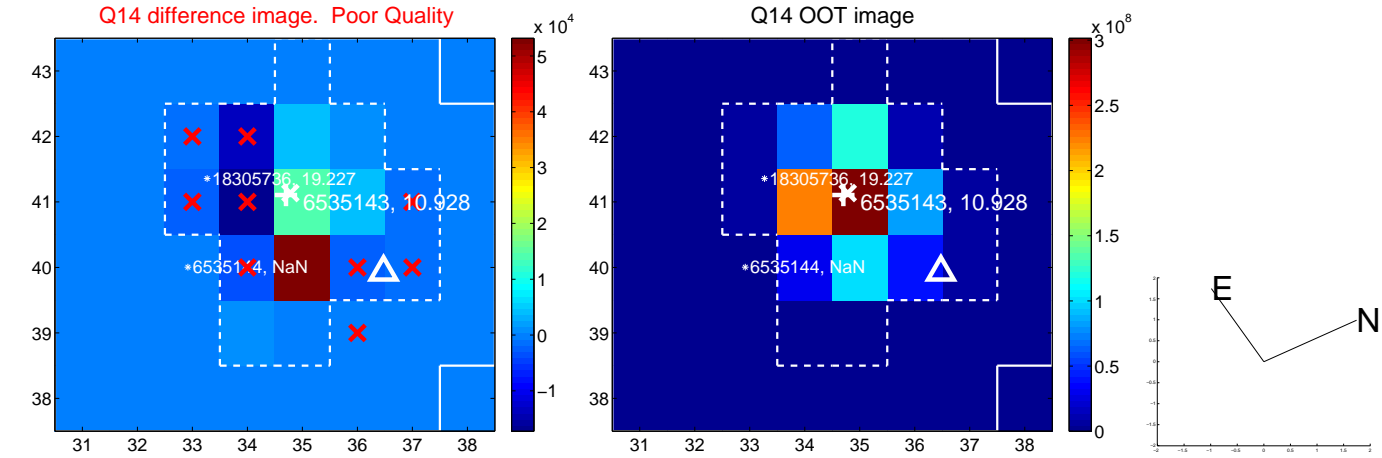
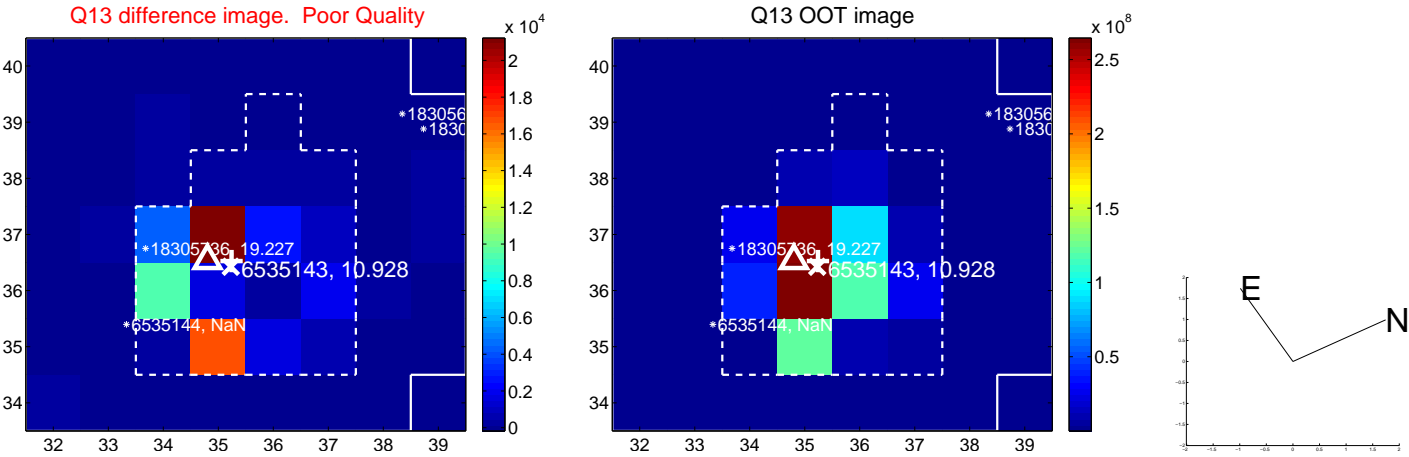
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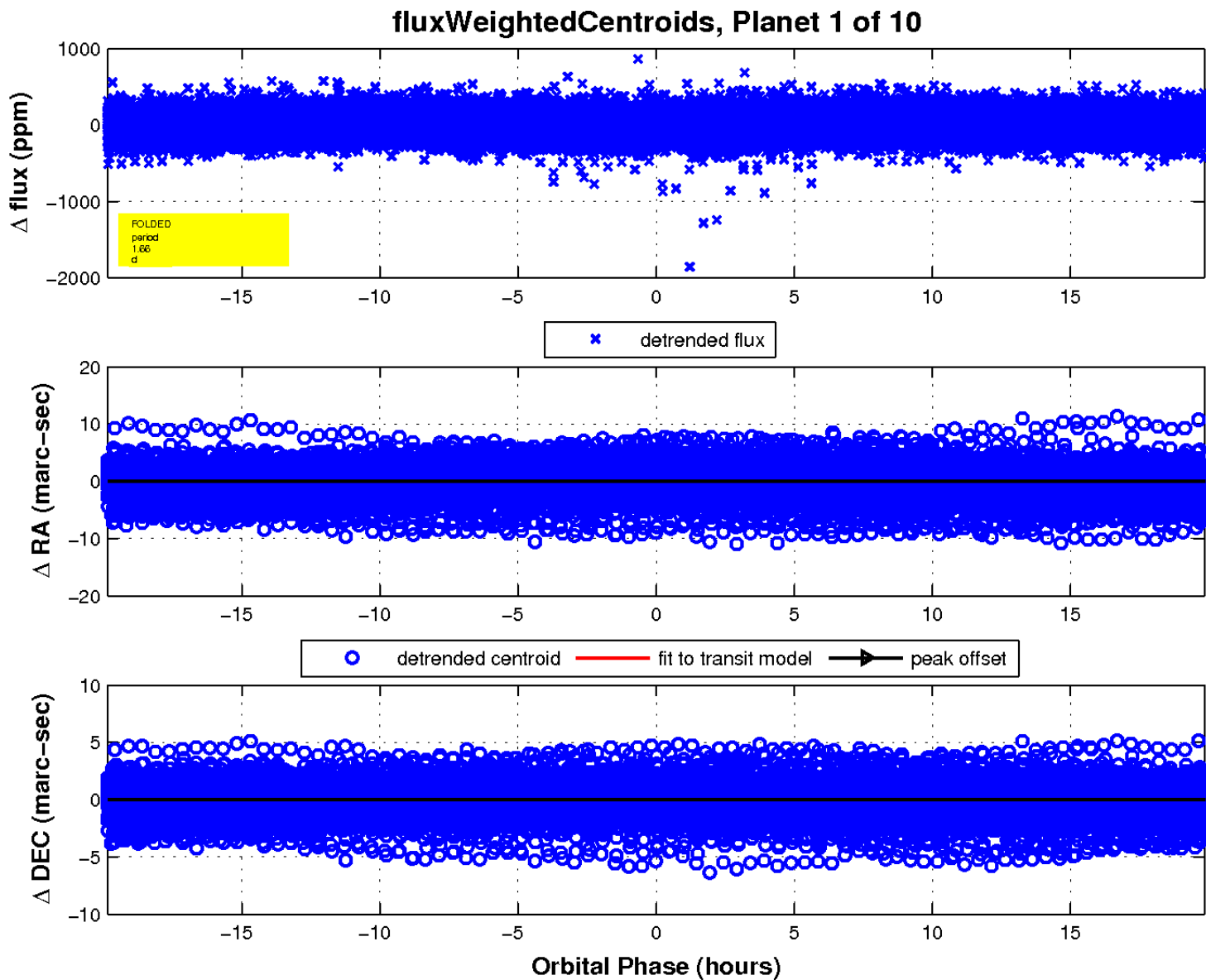
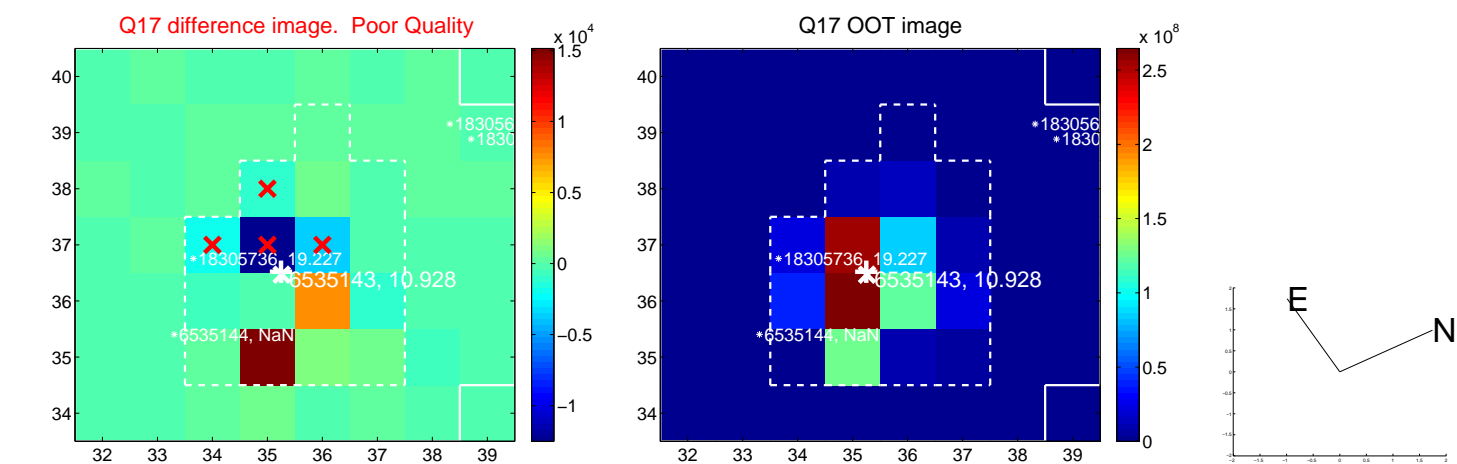
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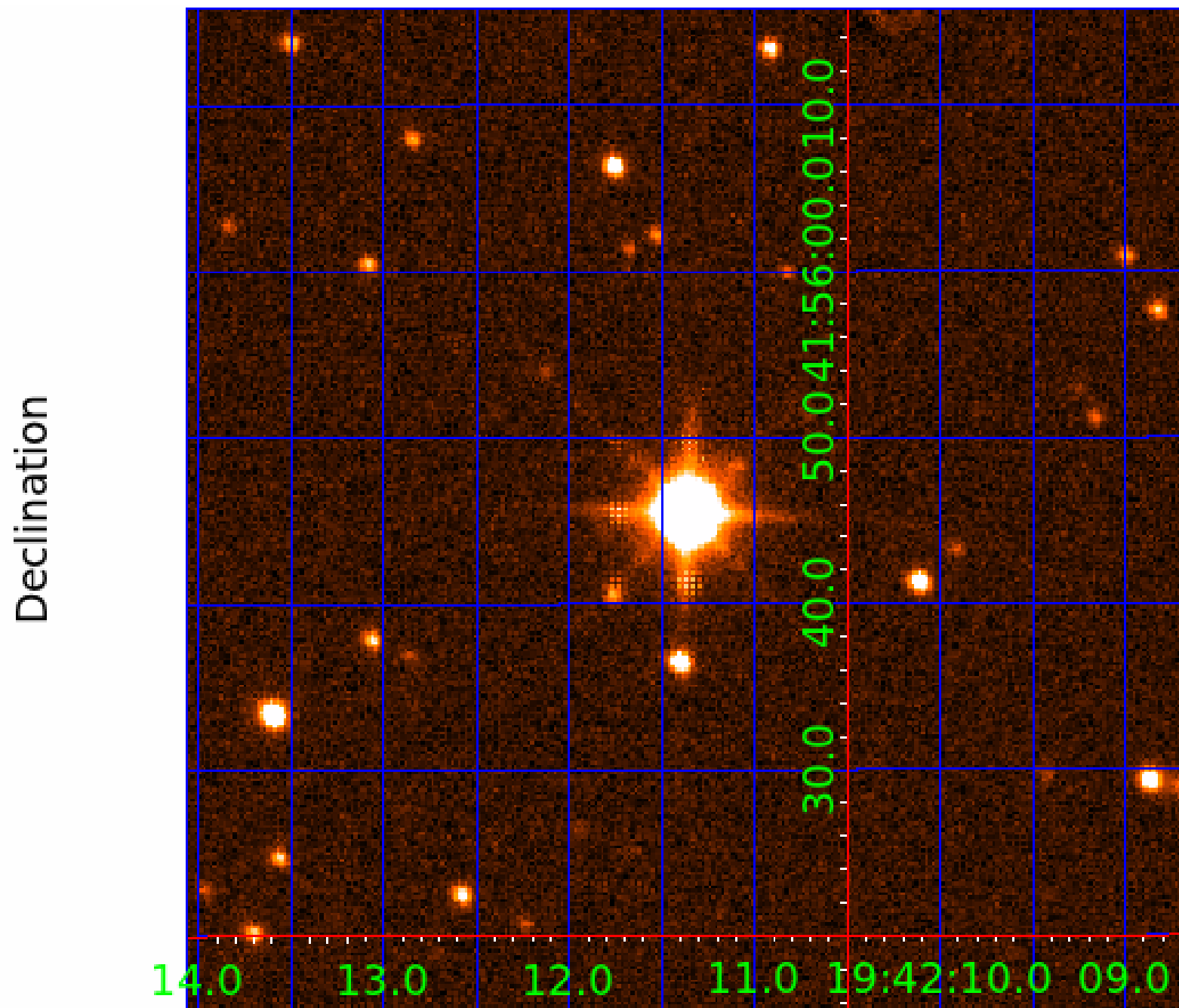
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UKIRT Image



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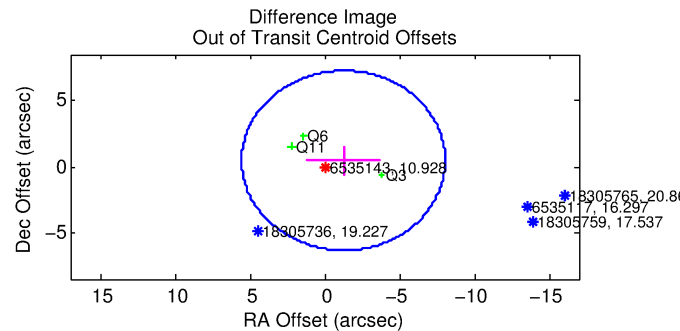
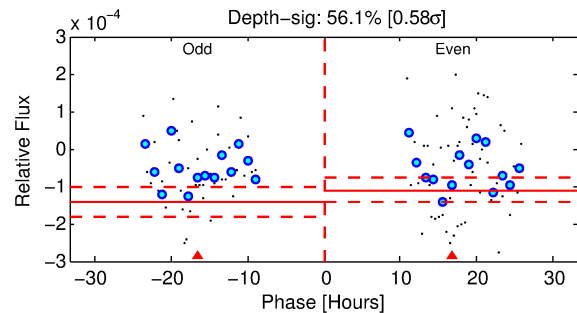
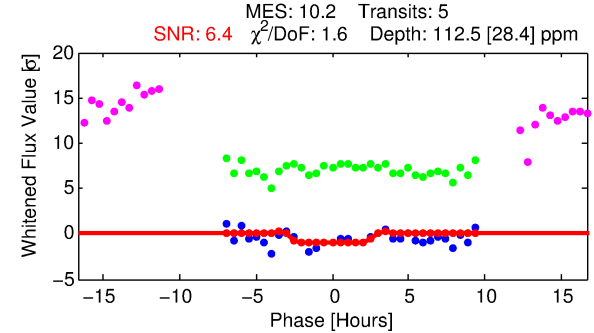
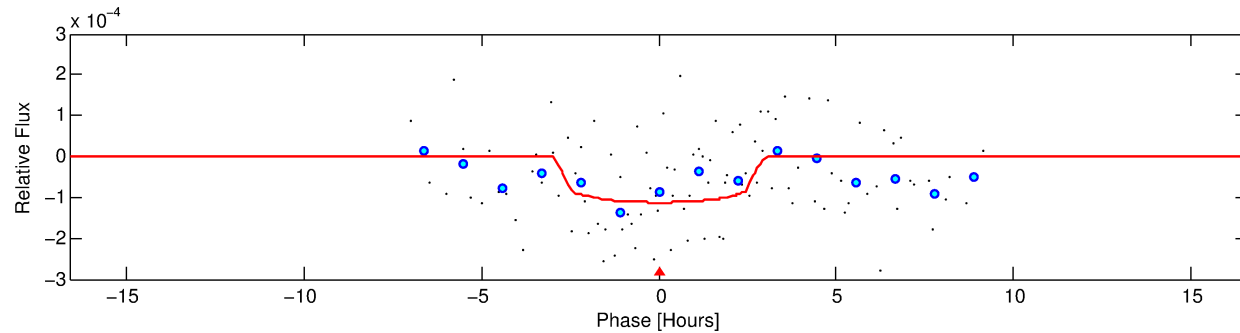
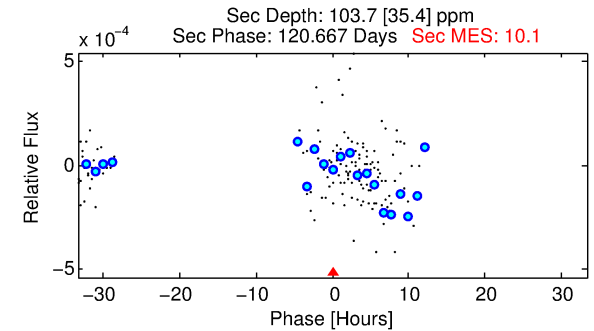
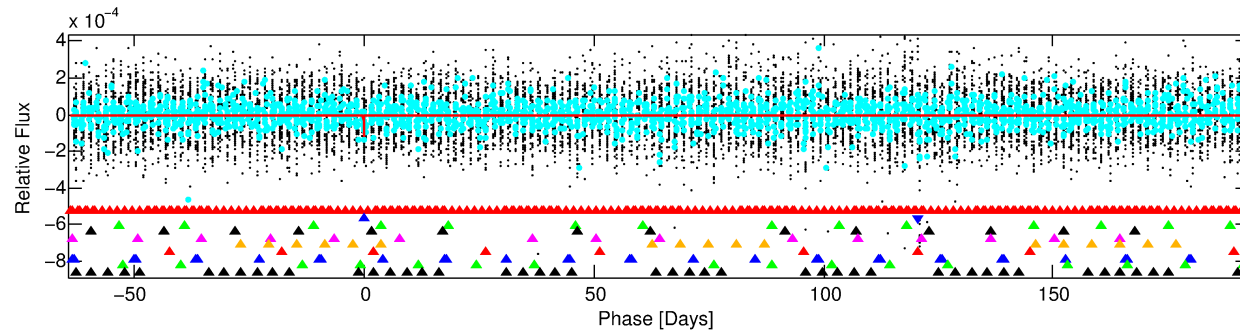
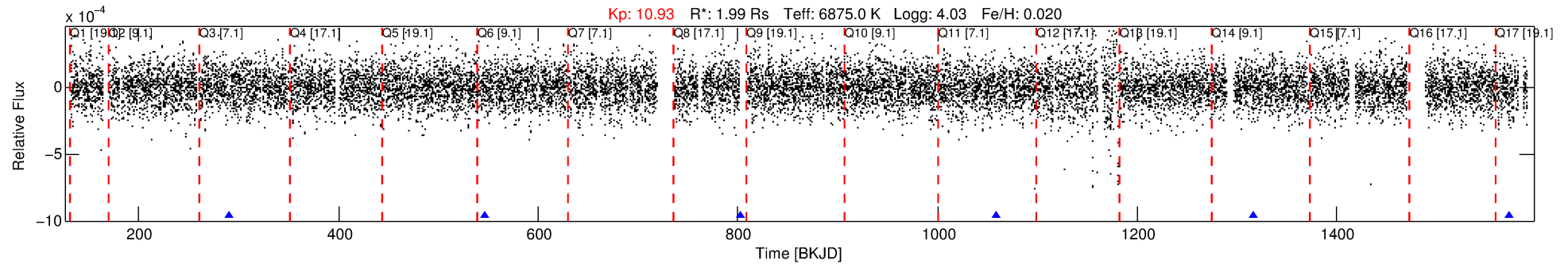
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006535143-02

No Significant Match Found

DV One-Page Summary

KIC: 6535143 Candidate: 2 of 10 Period: 256.515 d



DV Fit Results:

Period = 256.51517 [0.00633] d
Epoch = 289.8364 [0.0156] BKJD
Rp/R* = 0.0100 [0.0300]
a/R* = 329.92 [5590.66]
b = 0.39 [36.92]
Self = 9.51 [2.55]
Teq = 448 [30] K
Rp = 2.16 [6.51] Re
a = 0.9105 [0.1581] AU
Ag = 10171.23 [61445.90] [0.17σ]
Teffp = 6953 [10492] K [0.62σ]

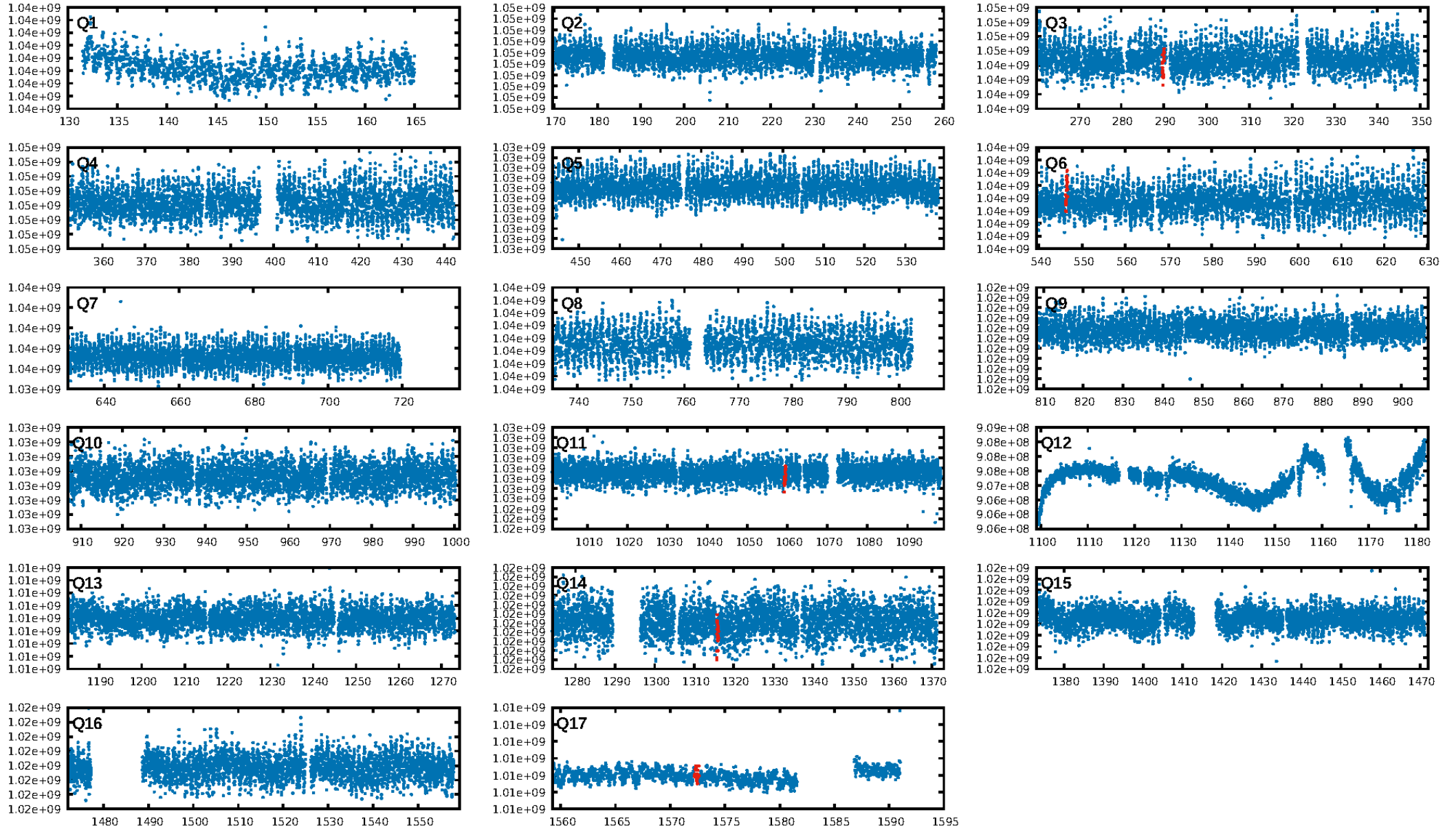
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [107.80σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 19.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 3.287
Centroid-sig: 8.1%
Centroid-so: 1.490 arcsec [0.95σ]
OotOffset-rm: 1.340 arcsec [0.59σ]
KicOffset-rm: 1.040 arcsec [0.44σ]
OotOffset-st: 1/2/0/0 [3]
KicOffset-st: 1/2/0/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 0.80 [4/5]

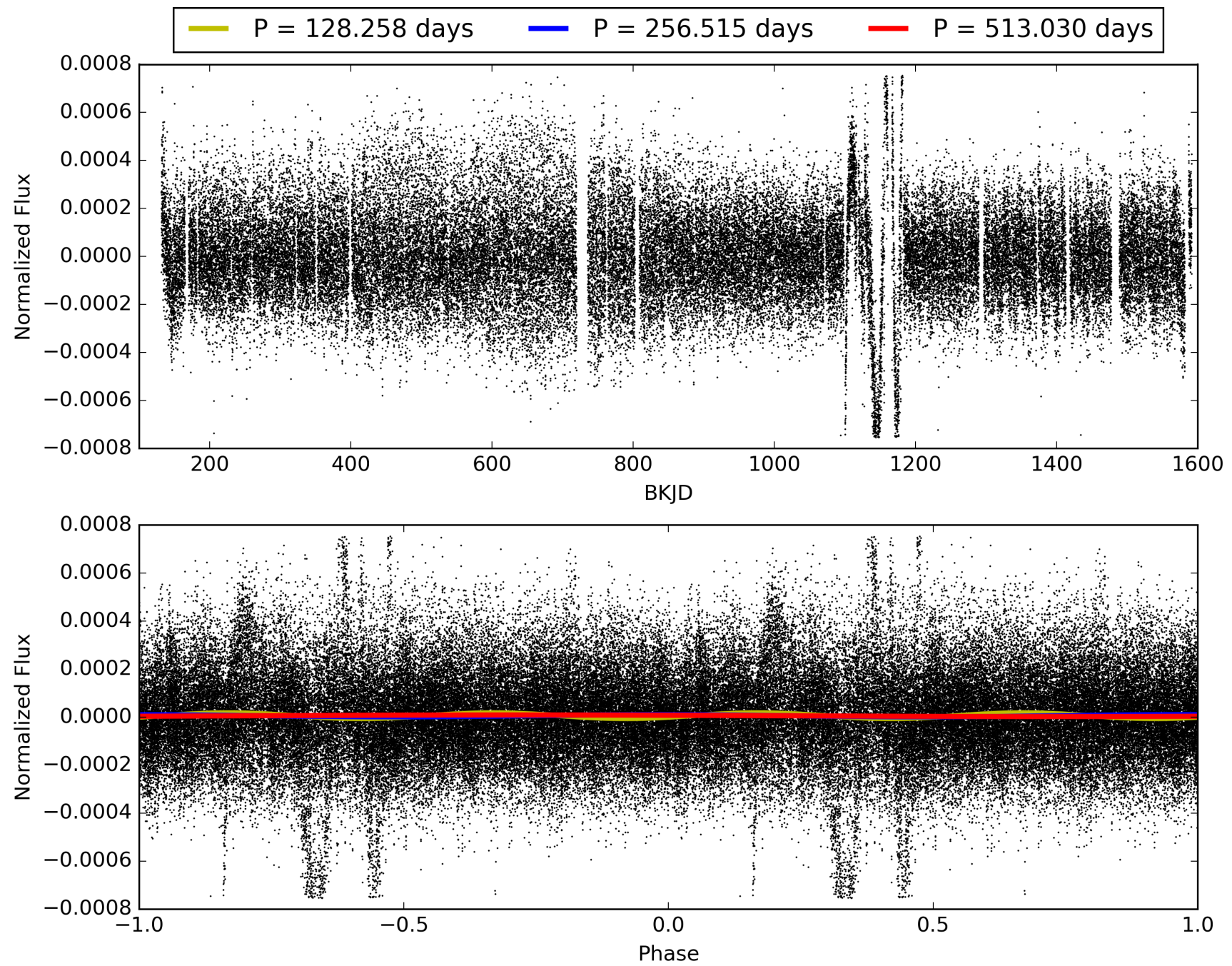
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 03:15:24 Z

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

TCE 006535143-02, PDC Light Curves

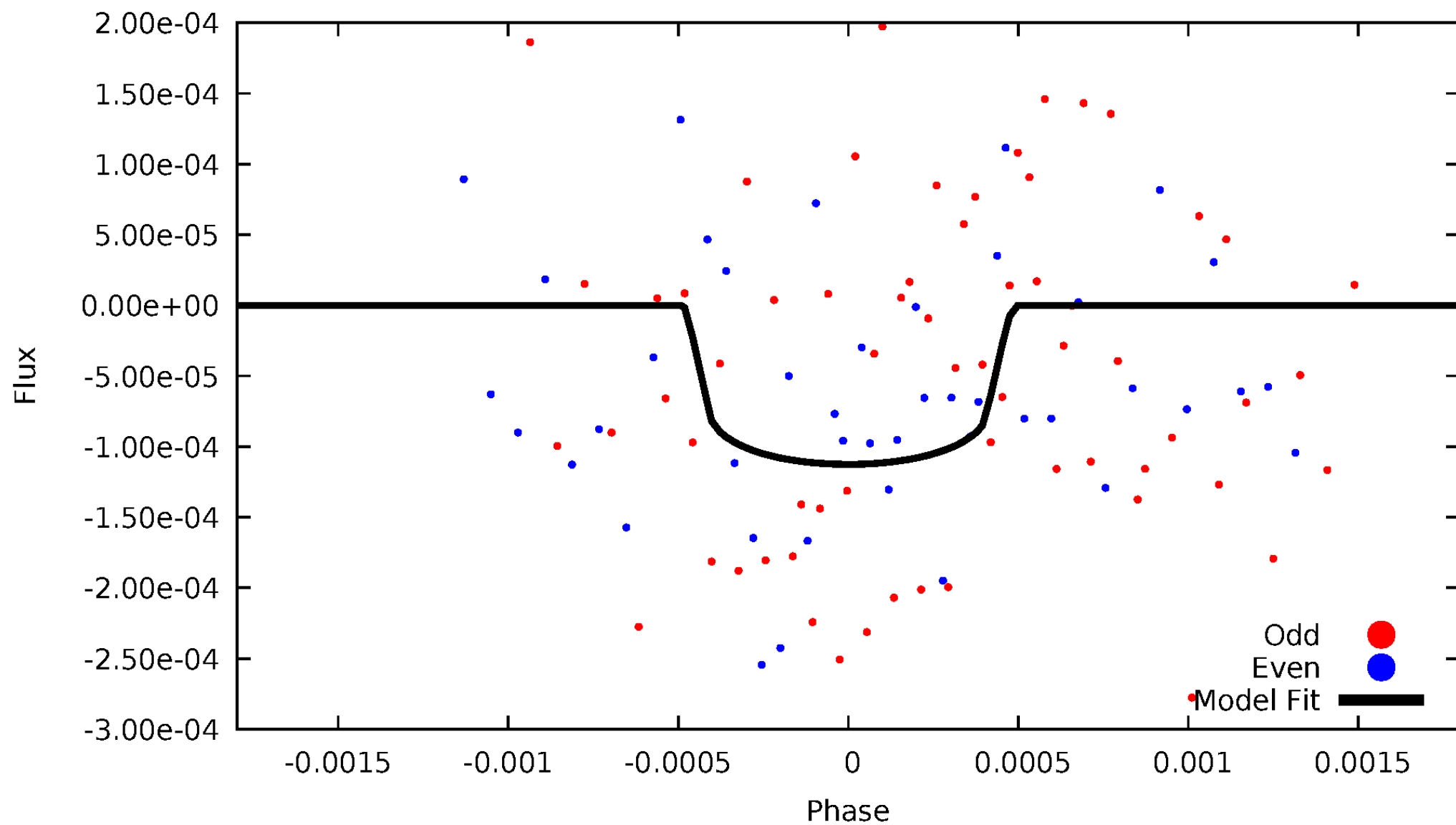


TCE 006535143-02



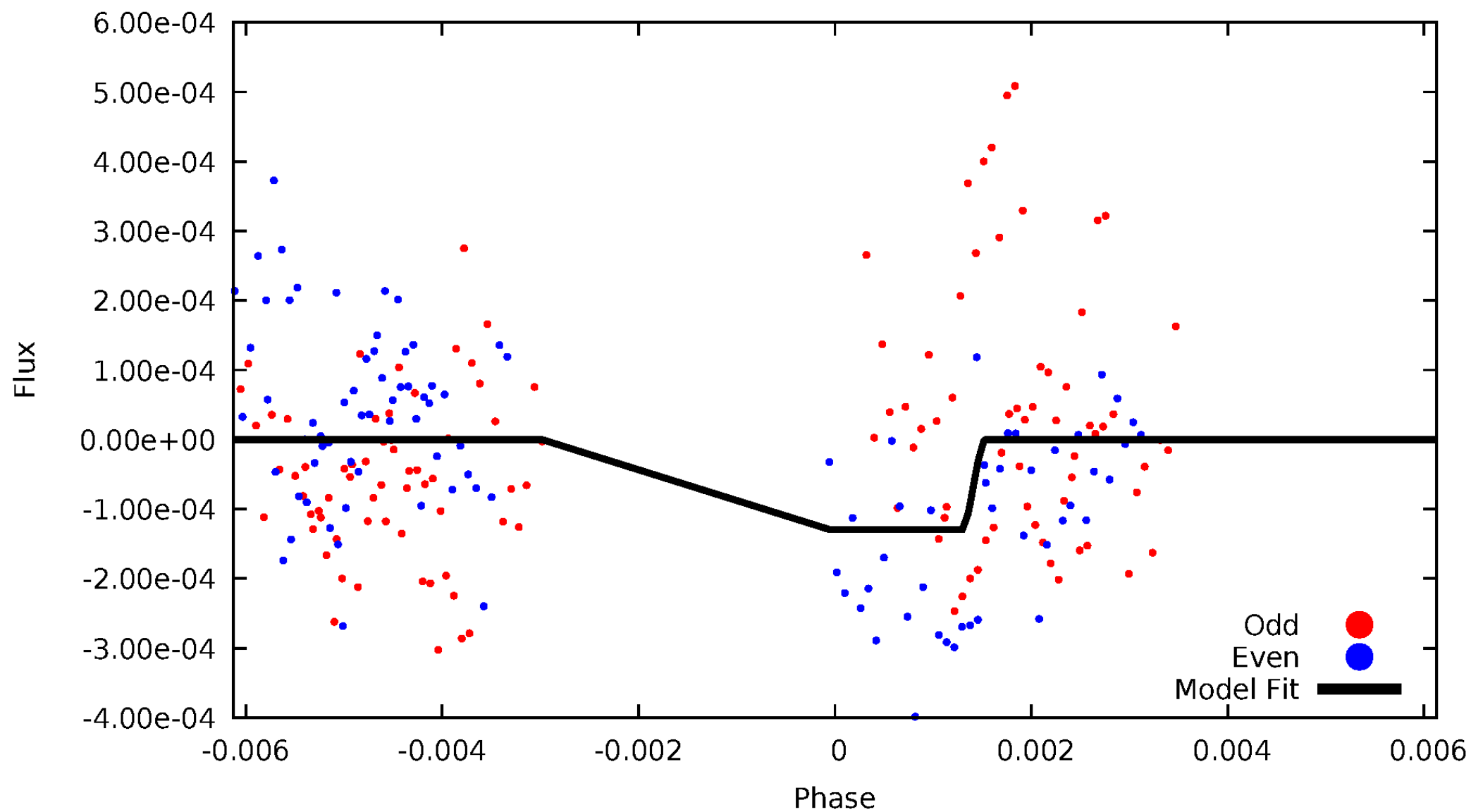
DV Odd/Even

TCE 006535143-02



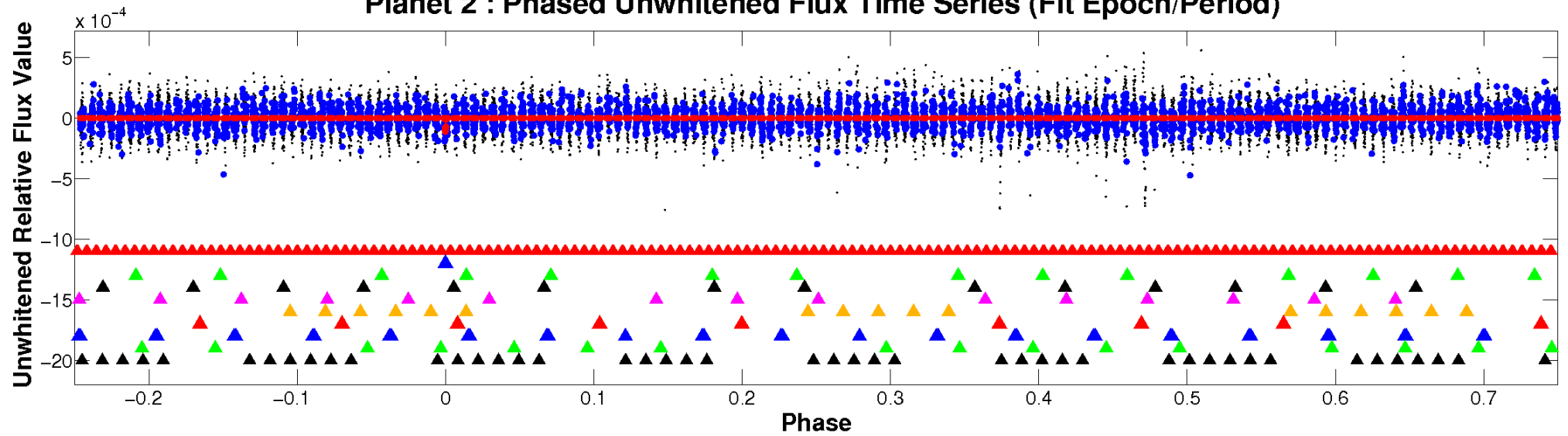
ALT Odd/Even

TCE 006535143-02

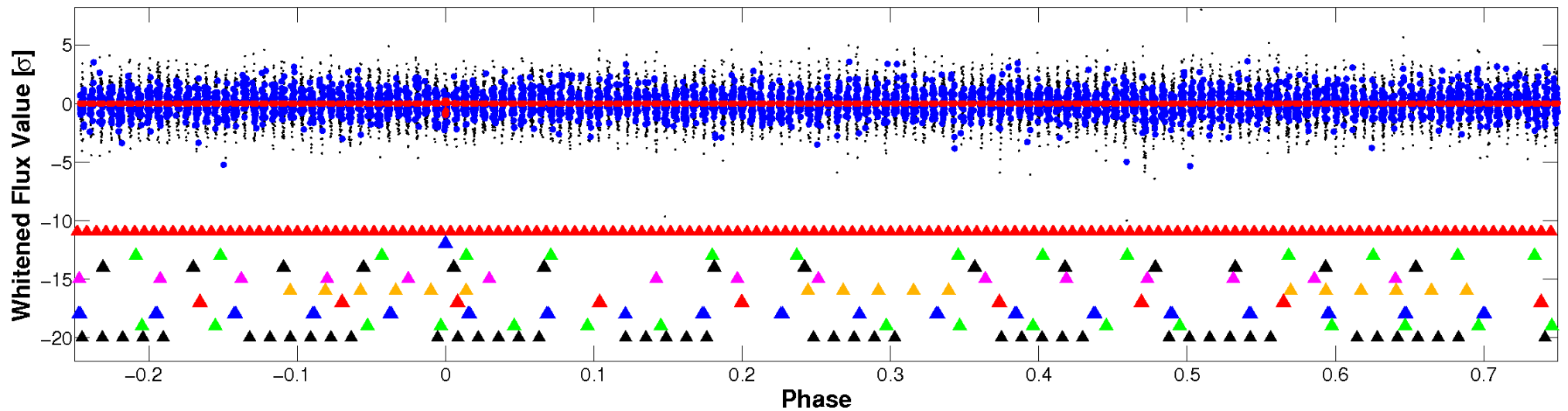


Non-Whitened Vs. Whitened Light Curve

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

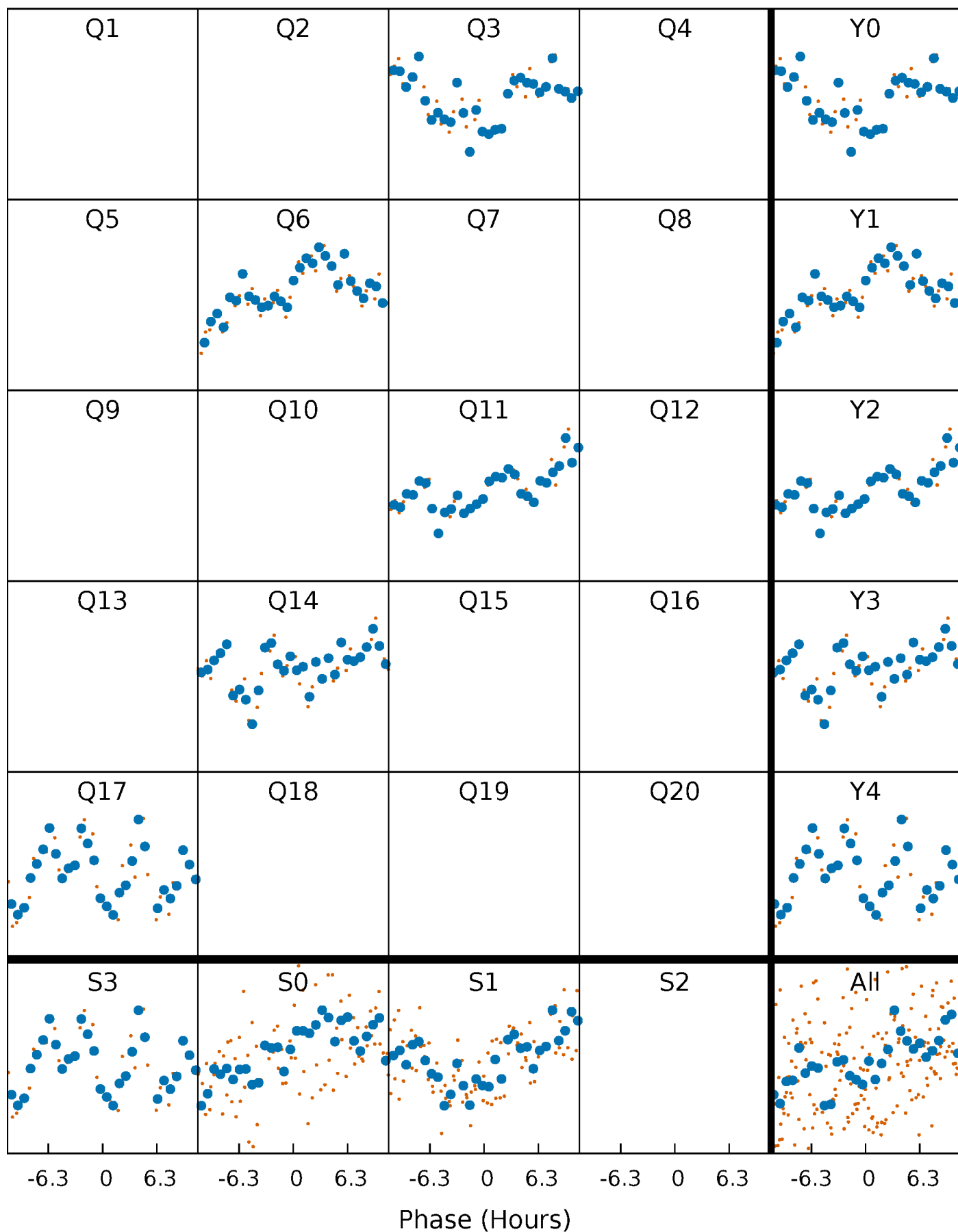


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



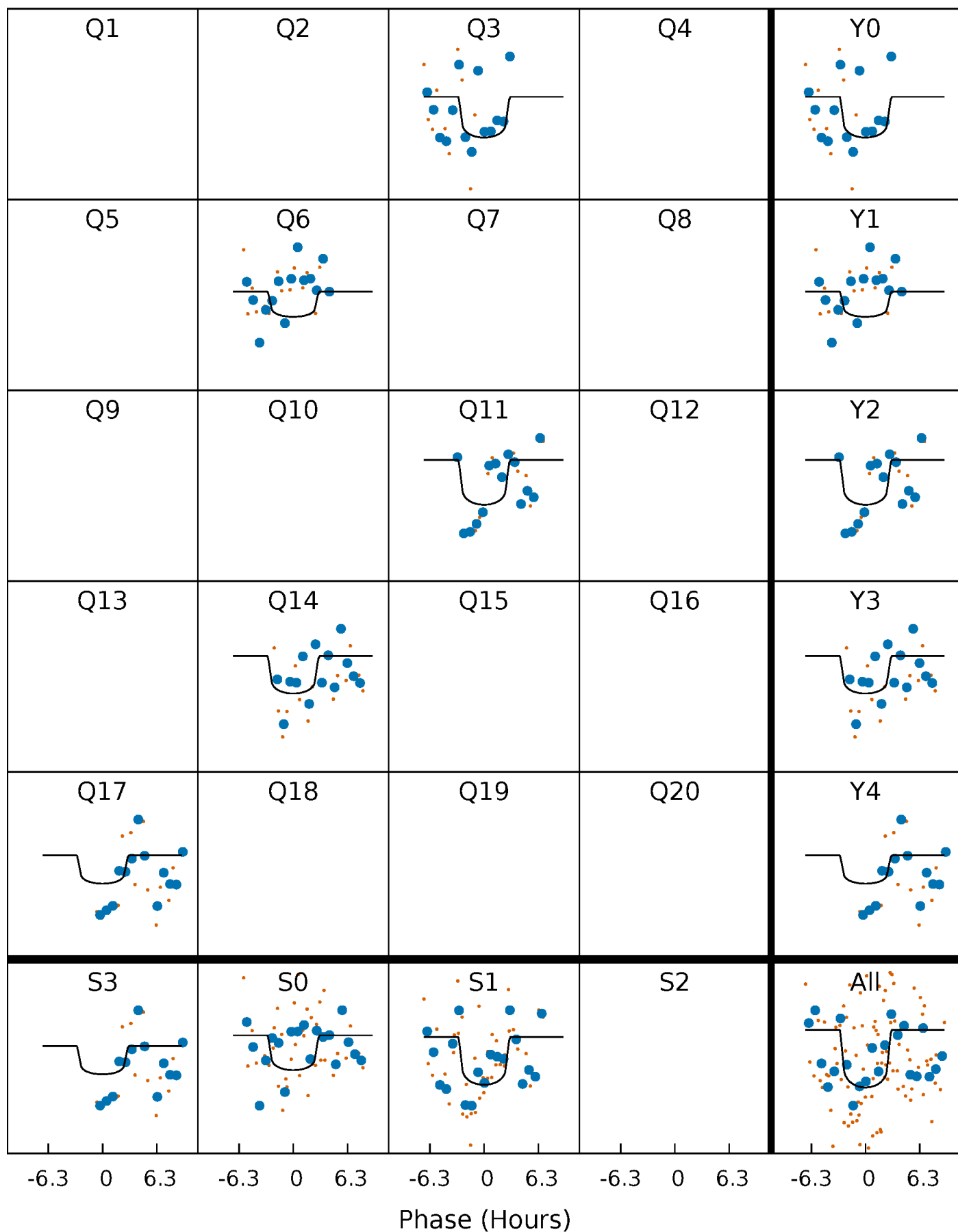
PDC Quarter-Phased Transit Curves

TCE 006535143-02 $P=256.515172$ Days $T_0=289.836364$ (BKJD)



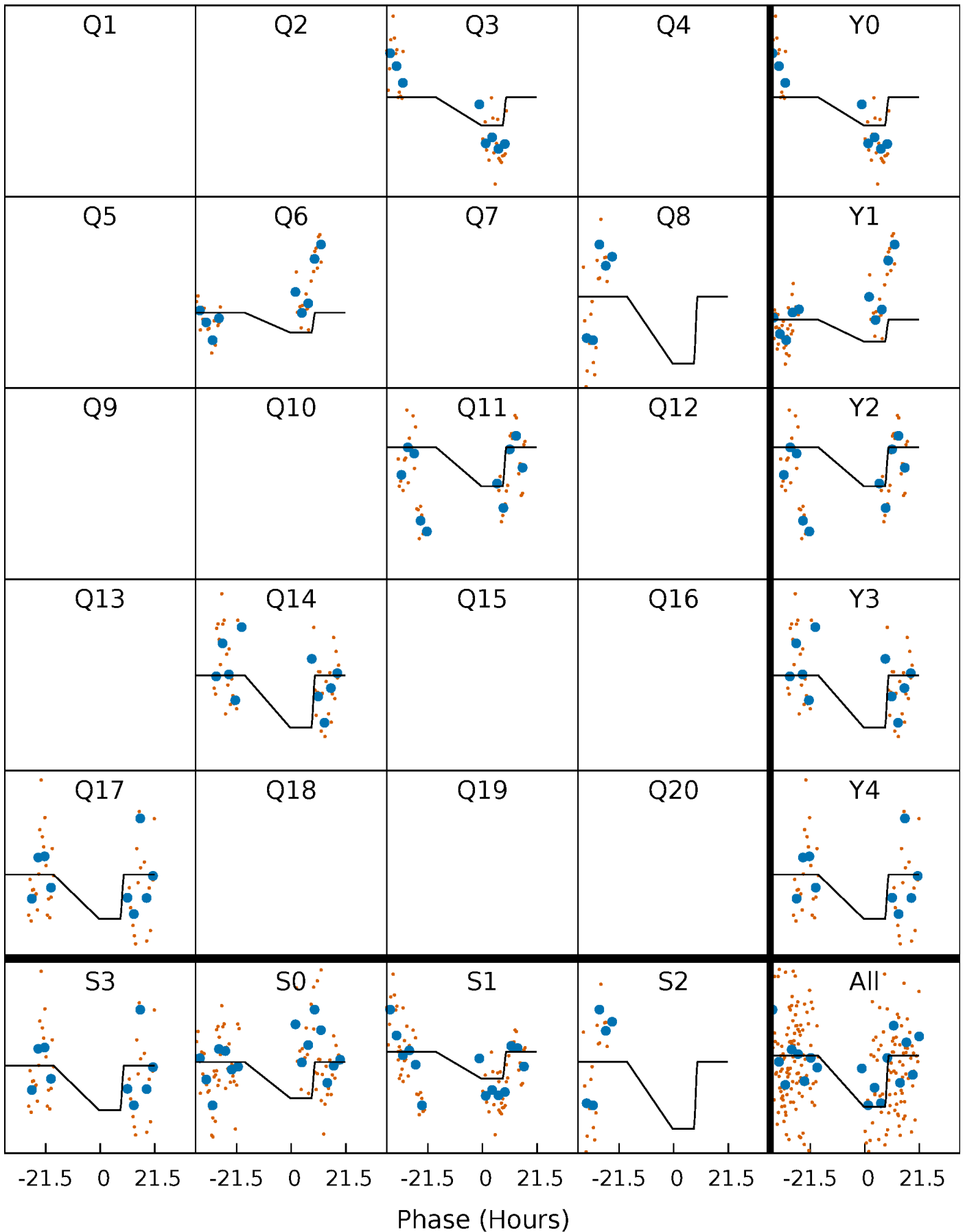
DV Quarter-Phased Transit Curves

TCE 006535143-02 P=256.515172 Days $T_0=289.836364$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

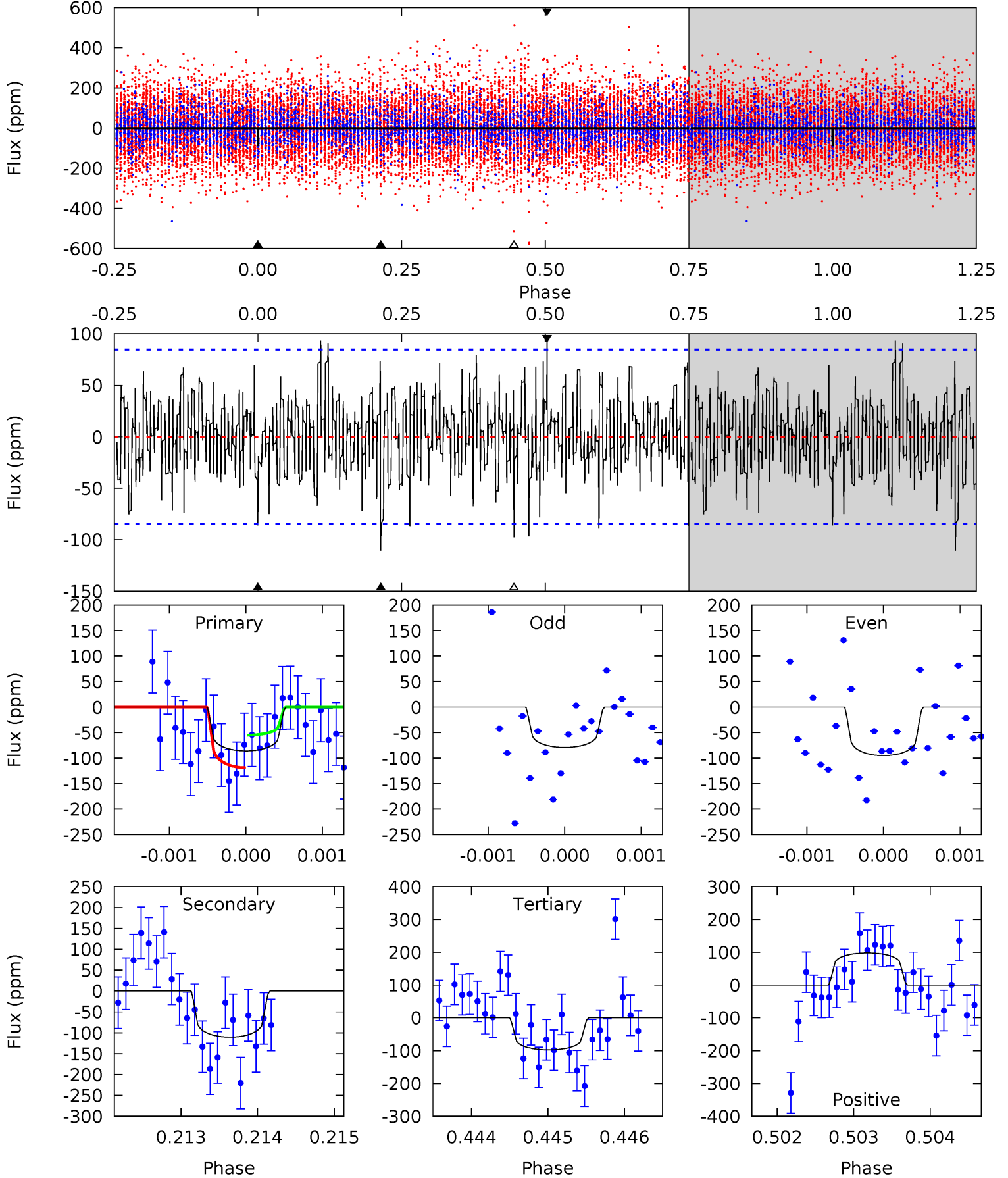
TCE 006535143-02 P=256.468423 Days $T_0=289.561052$ (BKJD)



DV Model-Shift Uniqueness Test

006535143-02, $P = 256.515172$ Days, $E = 33.321192$ Days

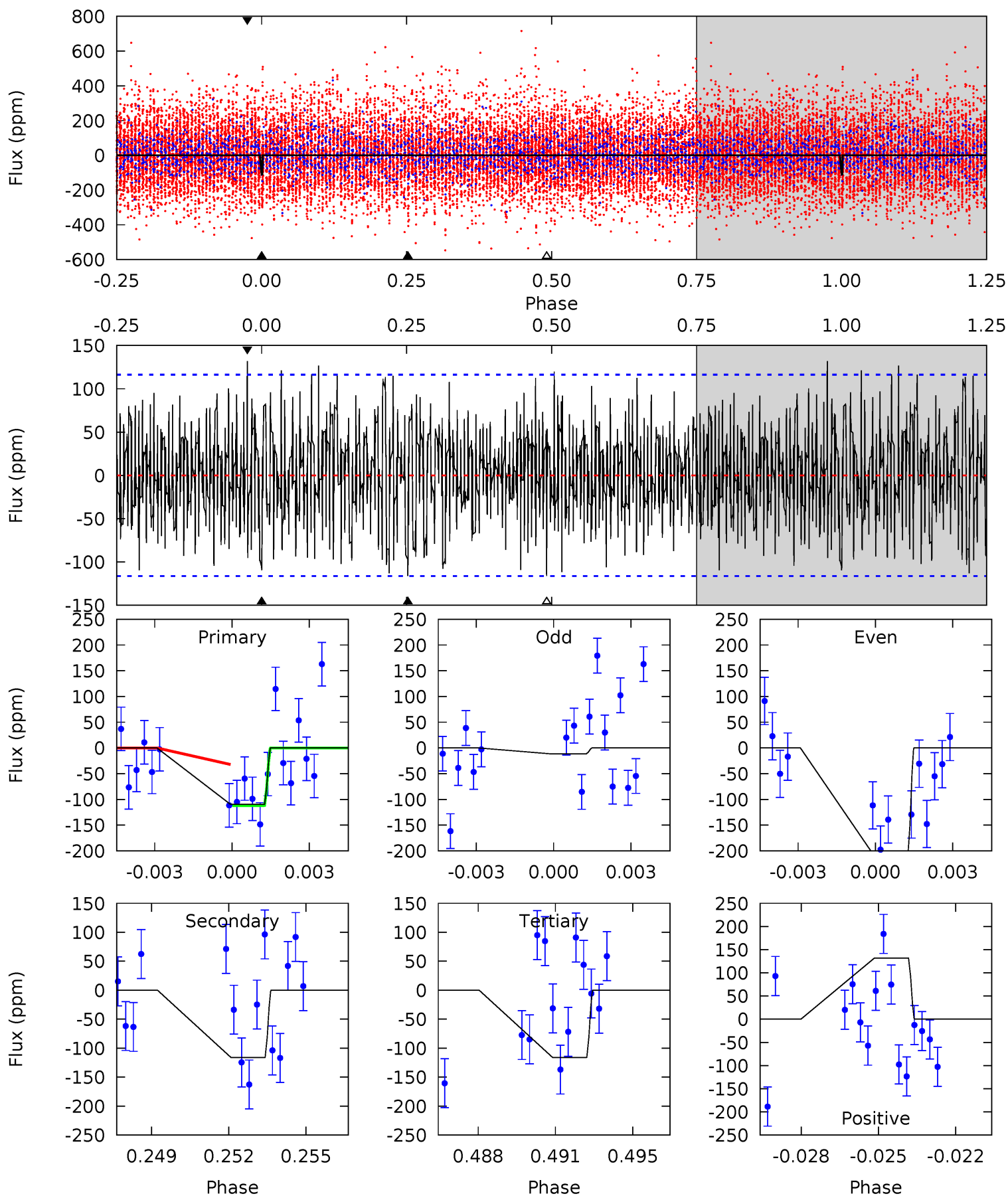
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.53	7.13	6.29	6.32	5.46	3.30	1.86	-0.75	-0.79	0.84	0.80	0.51	0.84	0.47	2.06



Alt Model-Shift Uniqueness Test

006535143-02, P = 256.468423 Days, E = 33.092629 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.95	5.25	5.25	5.96	5.25	2.96	1.89	-0.30	-1.01	0.00	-0.71	4.49	-0.15	0.53	0.55



Stellar Parameters For KIC 006535143

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6875^{+71}_{-82}	$4.027^{+0.149}_{-0.122}$	$0.020^{+0.150}_{-0.150}$	$1.985^{+0.389}_{-0.389}$	$1.530^{+0.146}_{-0.133}$	$0.276^{+0.202}_{-0.099}$
	+1%/-1%	+4%/-3%	+750%/-750%	+20%/-20%	+10%/-9%	+73%/-36%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 006535143-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-110 ± 16	$5.18^{+5.28}_{-3.40}$	625^{+31}_{-32}	4622^{+3179}_{-1004}	1807^{+13800}_{-1364}
Alt.	-116 ± 22	$5.49^{+5.02}_{-3.84}$	626^{+34}_{-32}	4581^{+3880}_{-917}	1731^{+18378}_{-1256}

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 $A_{obs} \gg 1.0$

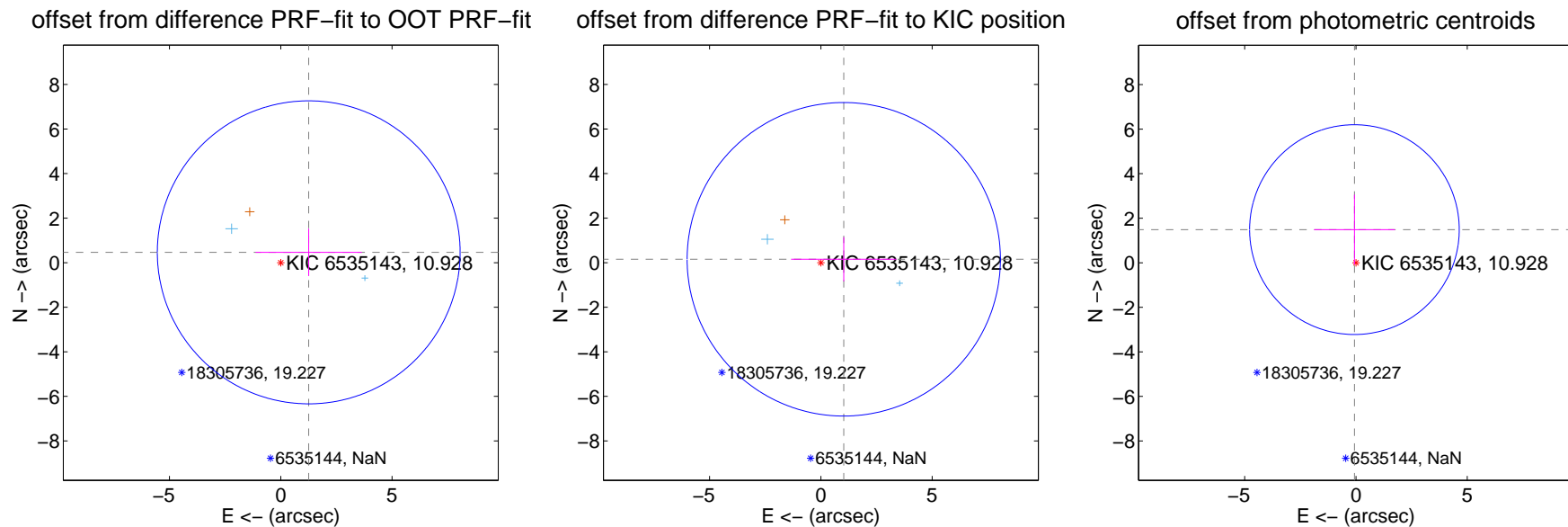
DV Centroid Data

Supplemental centroid analysis for 006535143-02. **Kepler magnitude: 10.93.** Transit SNR 6.36

There are 2 quarters with good PRF difference image offsets

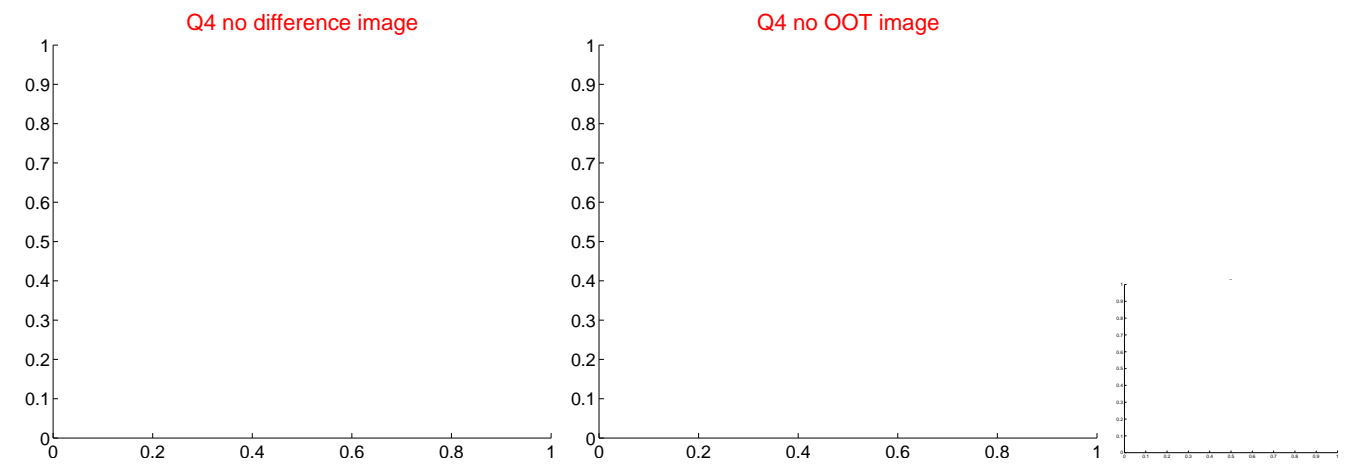
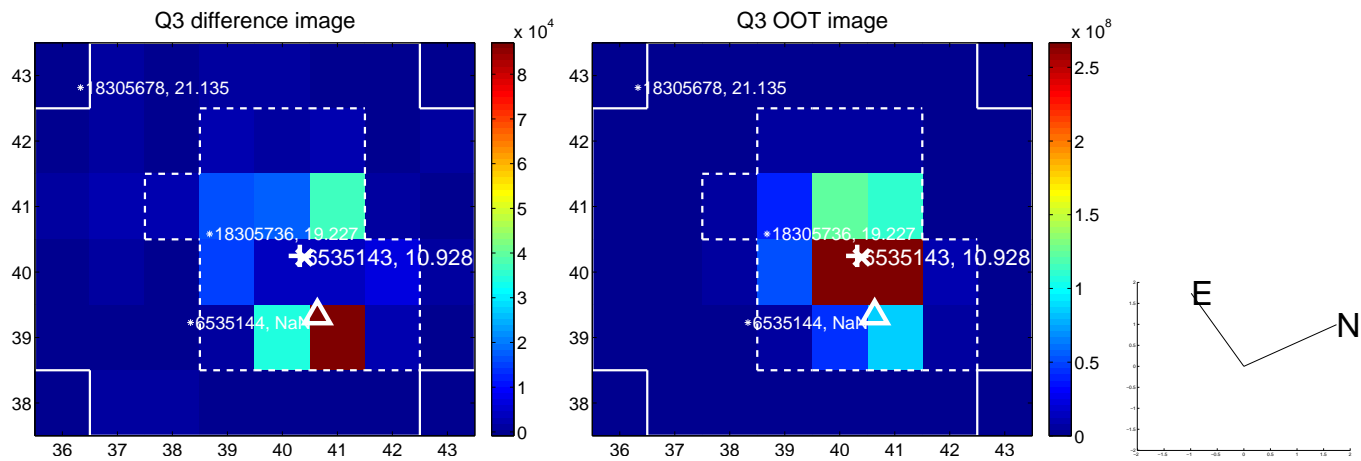
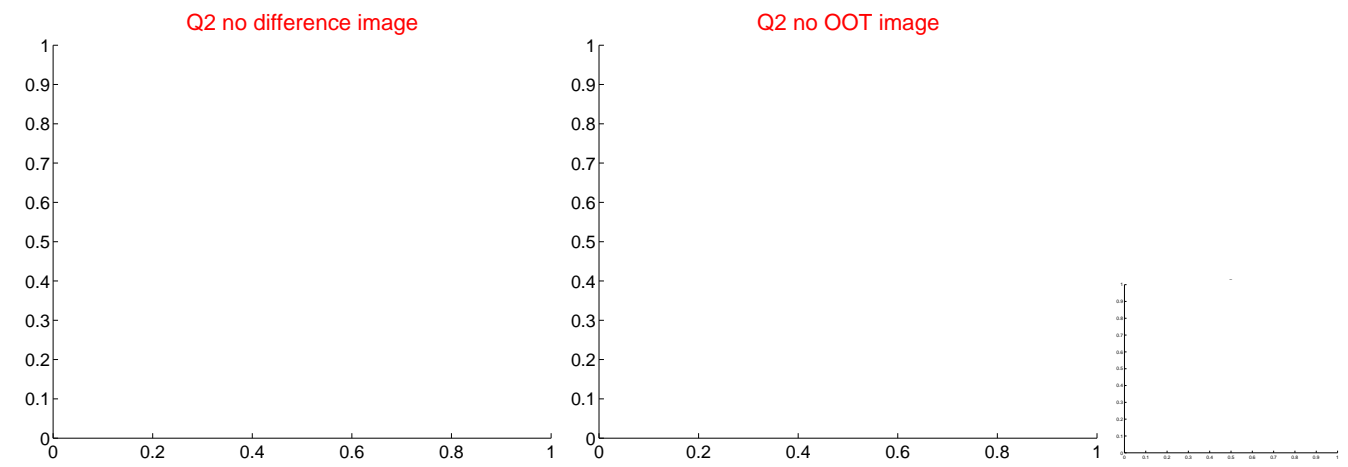
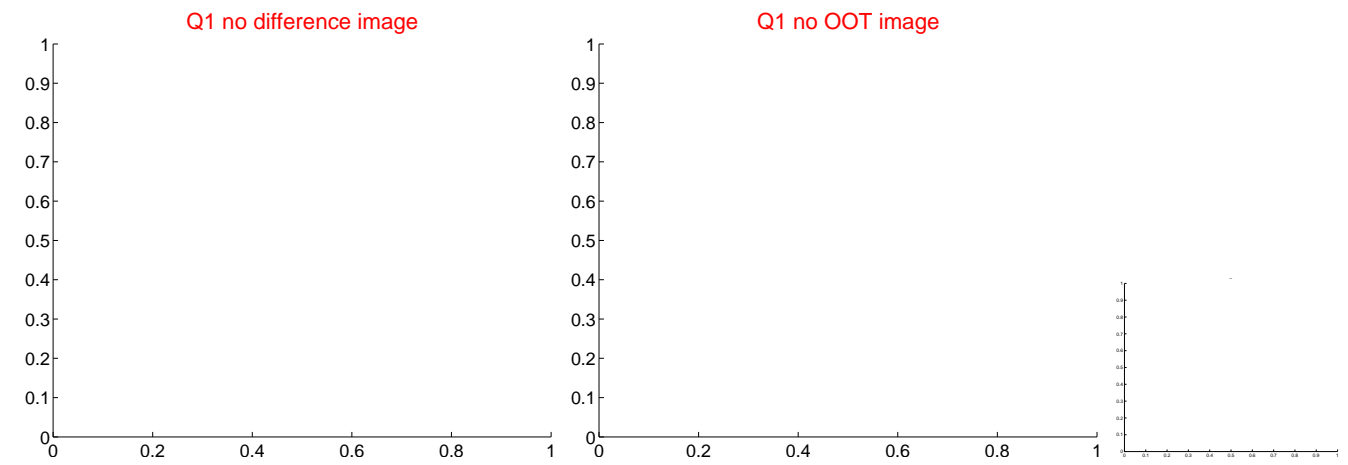
The direct PRF centroid is offset from the target star catalog position by about 0.51 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.340 ± 2.267	0.59	-1.257 ± 2.385	0.465 ± 1.066
PRF-fit source offset from KIC position	1.040 ± 2.345	0.44	-1.029 ± 2.366	0.153 ± 0.993
photometric centroid source offset	1.49 ± 1.57	0.95	0.07 ± 1.81	1.49 ± 1.57

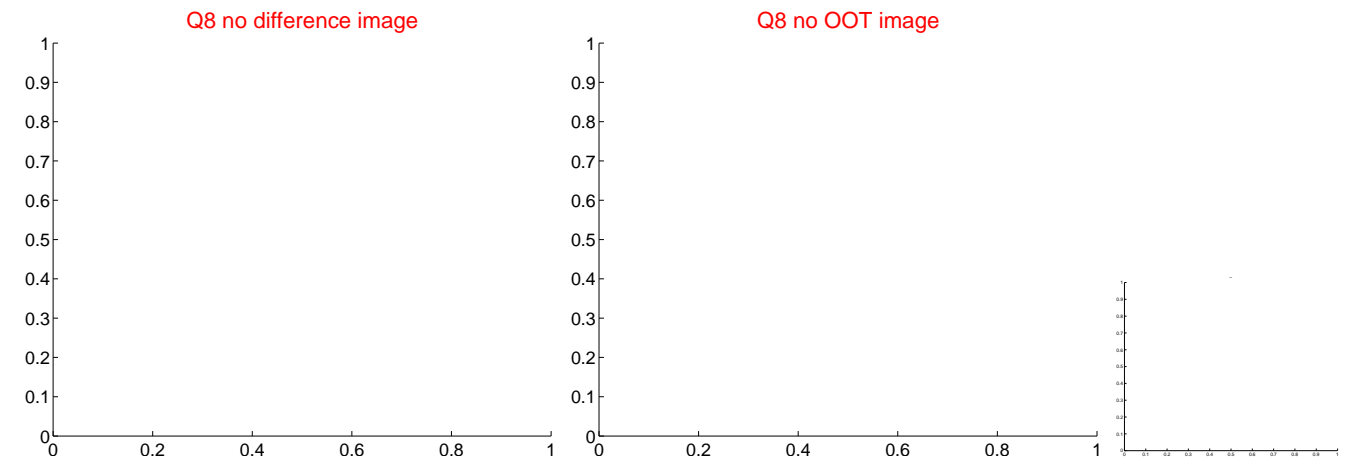
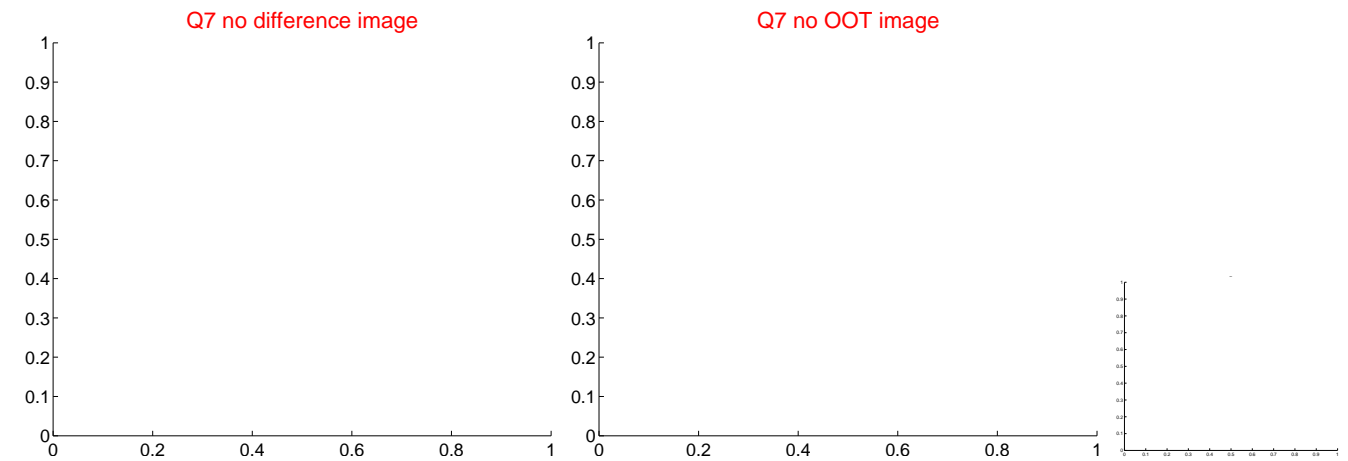
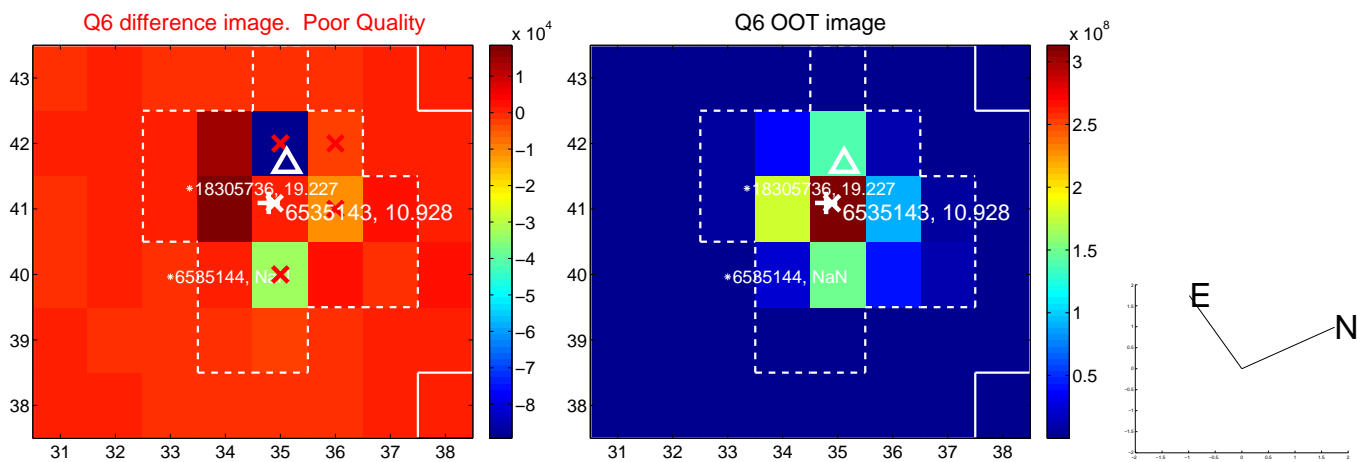
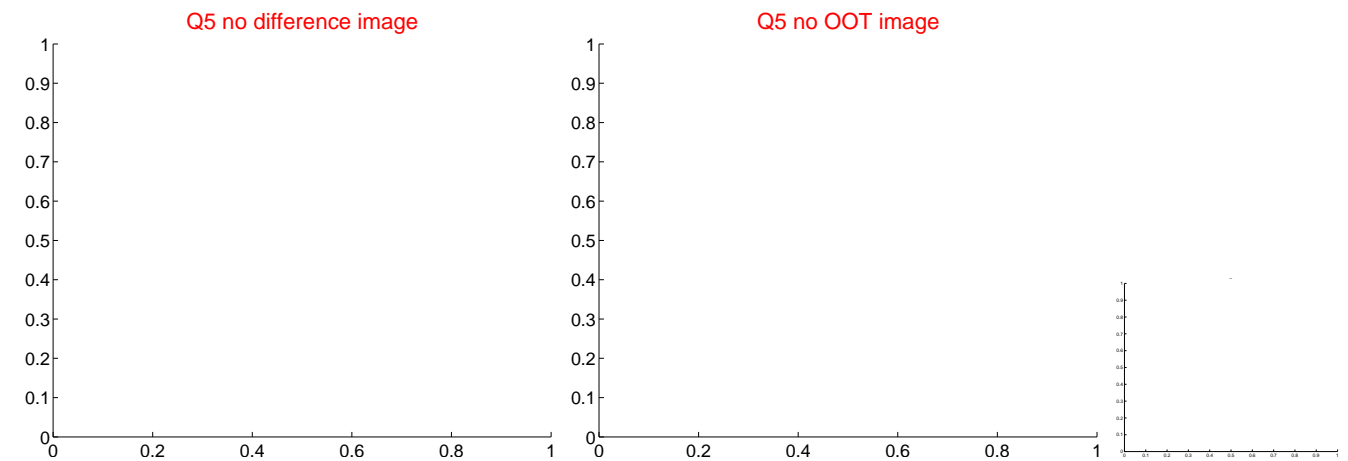


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

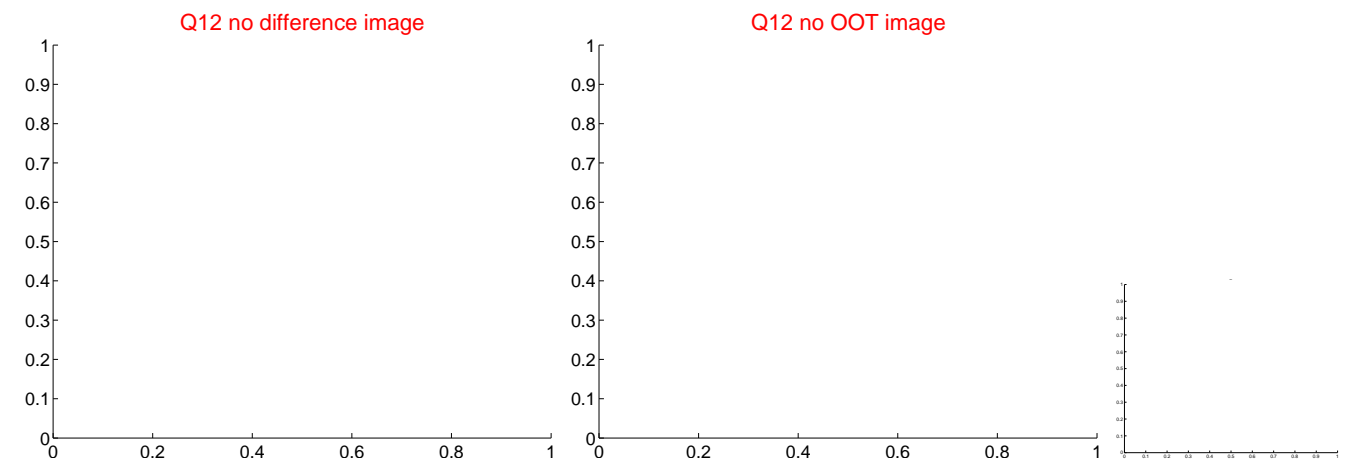
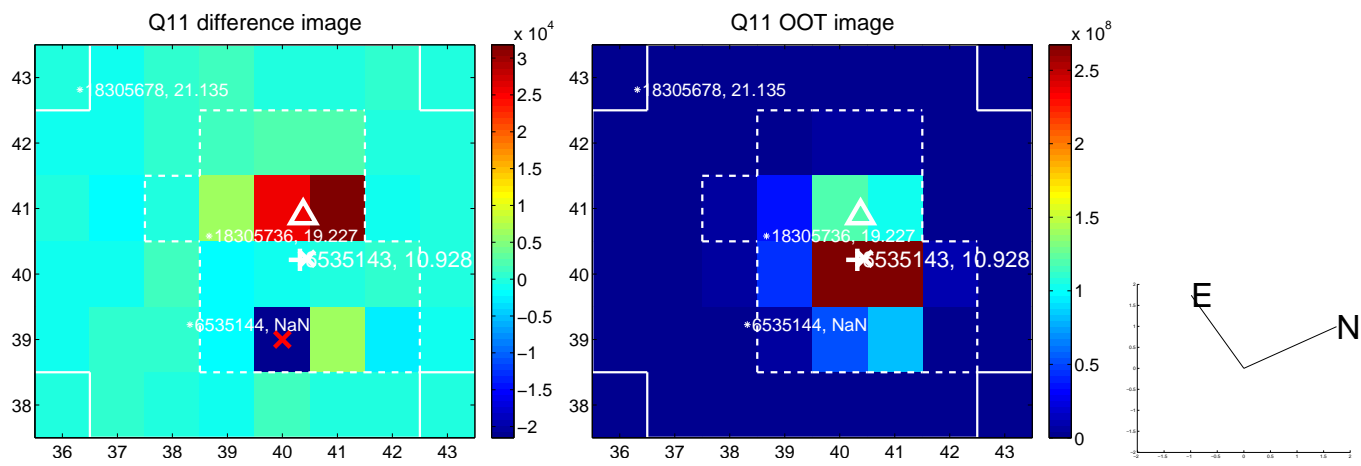
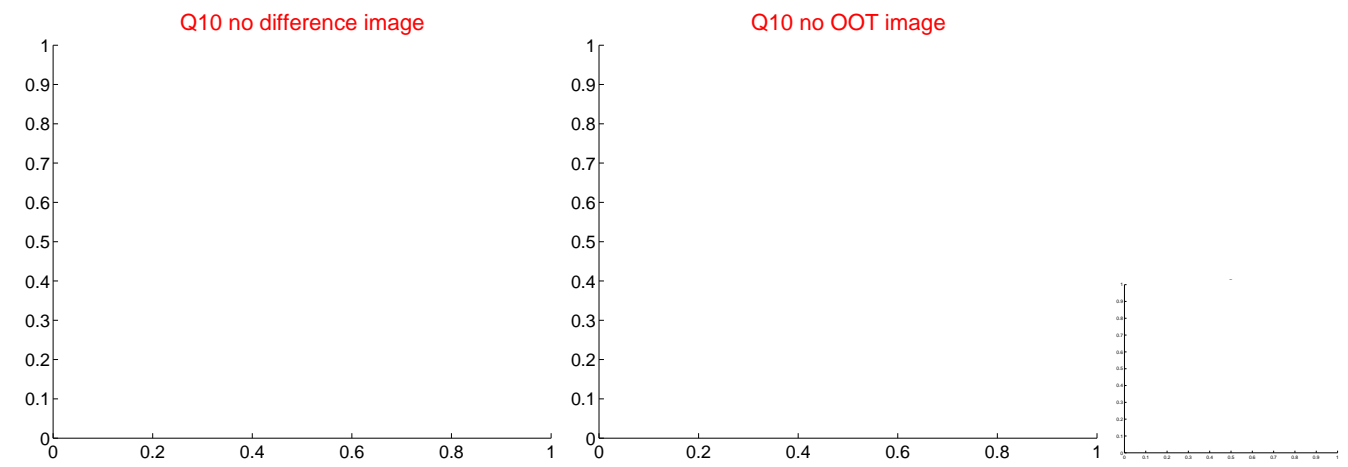
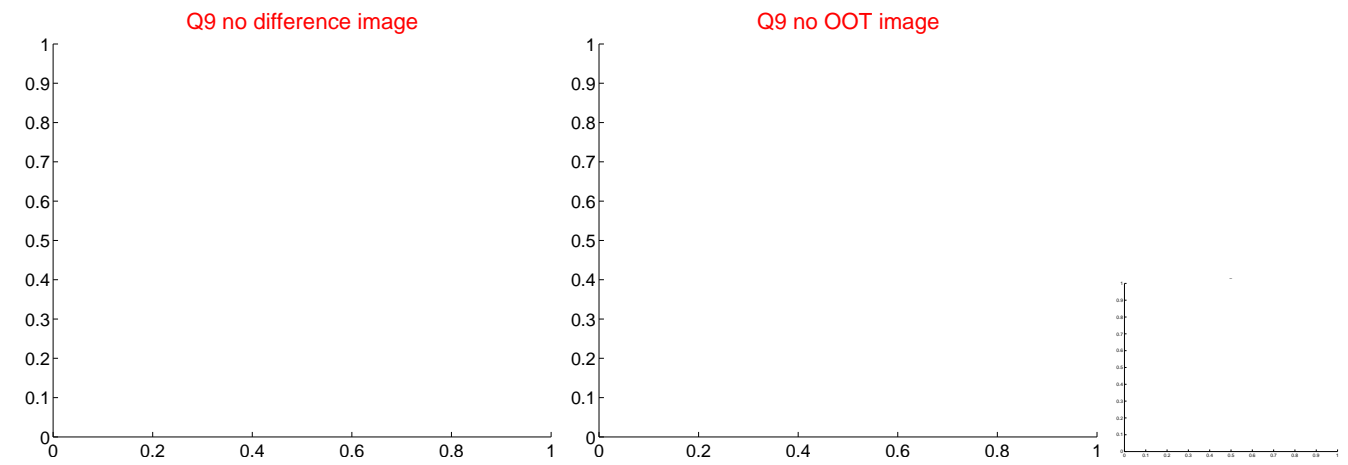
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



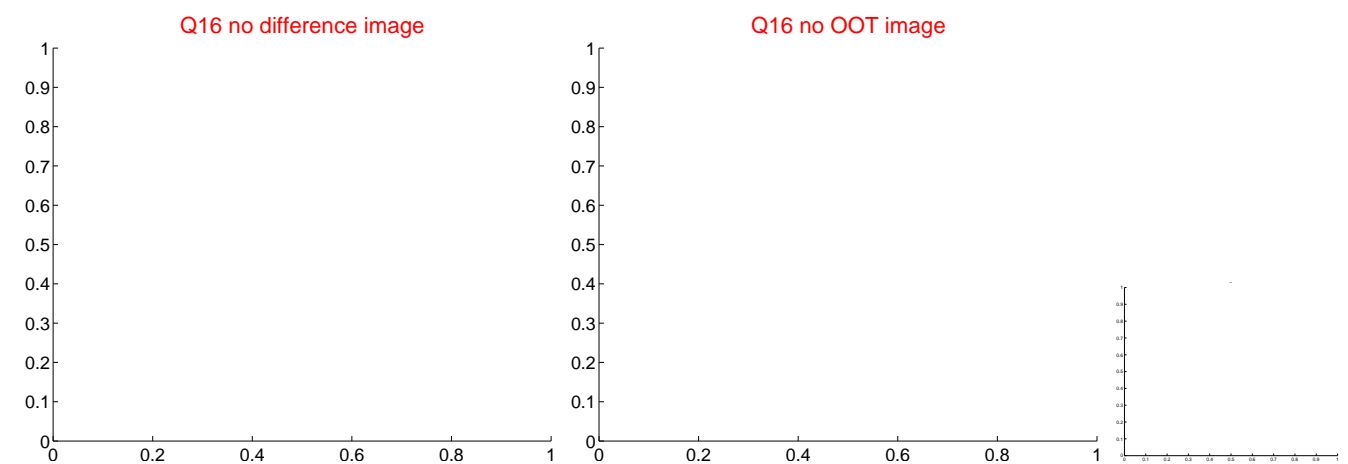
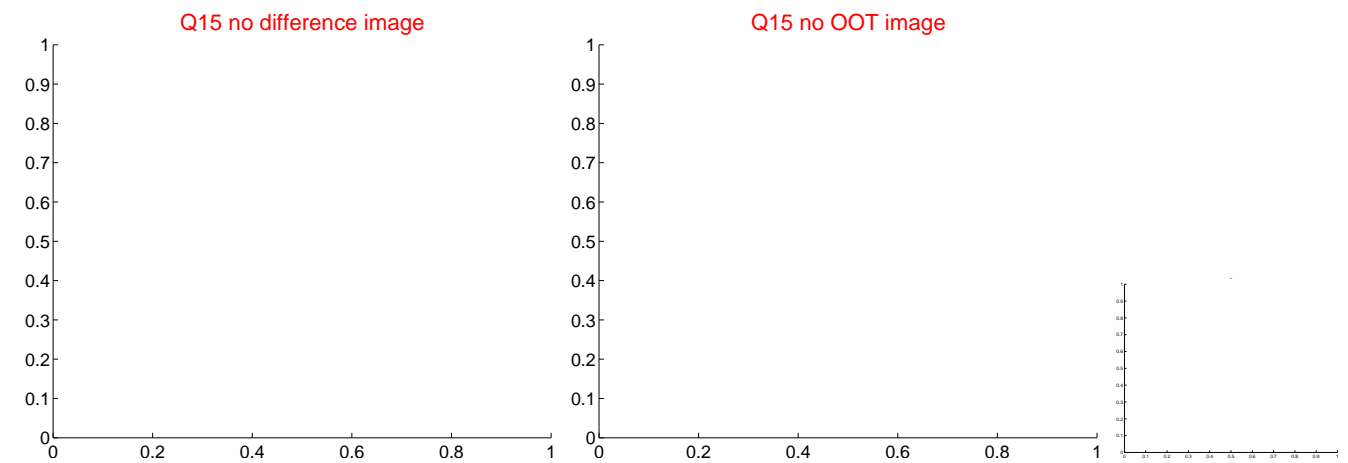
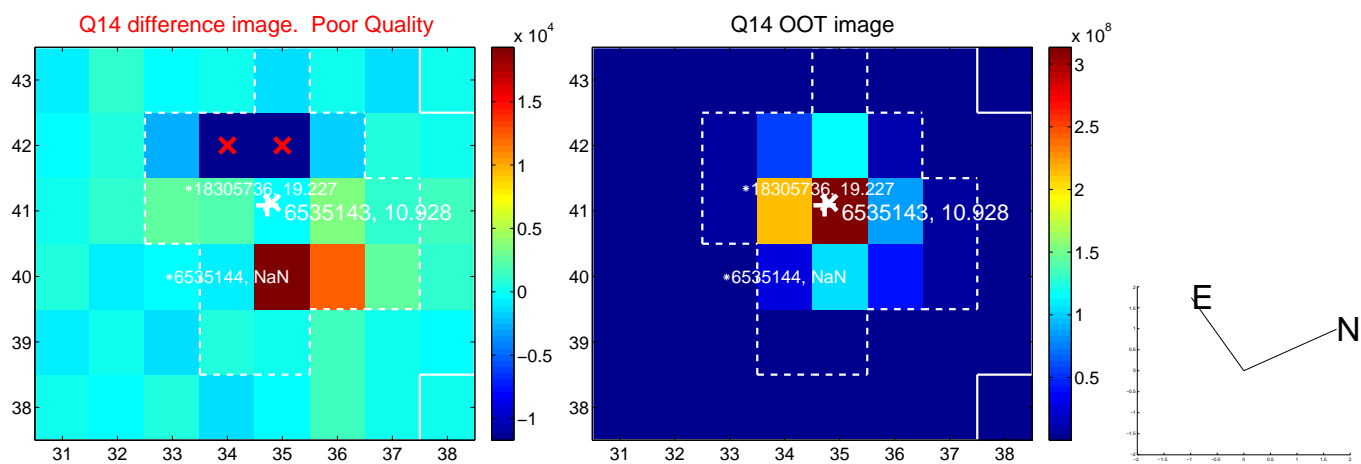
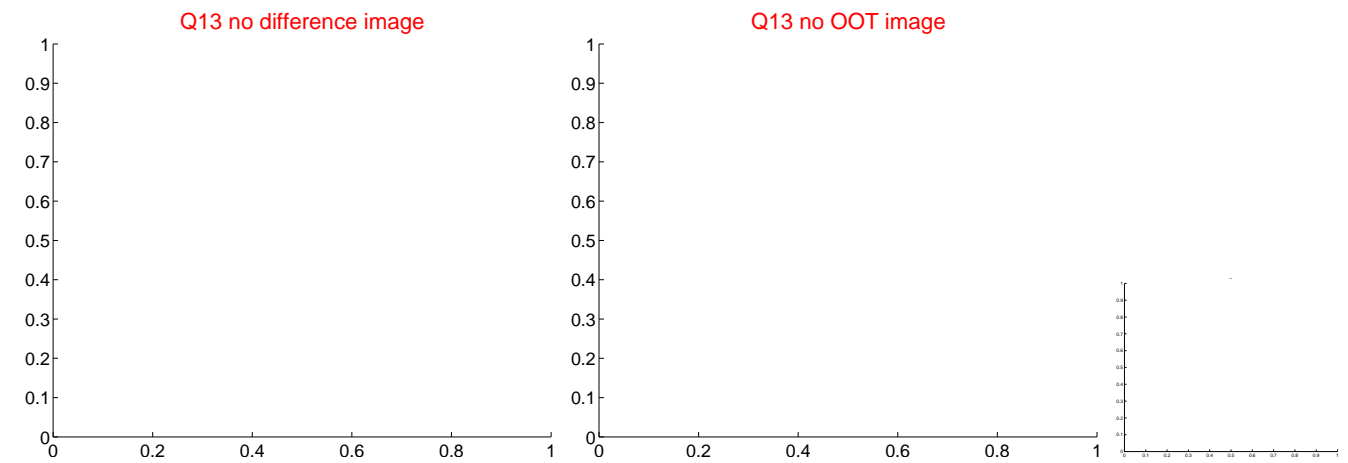
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



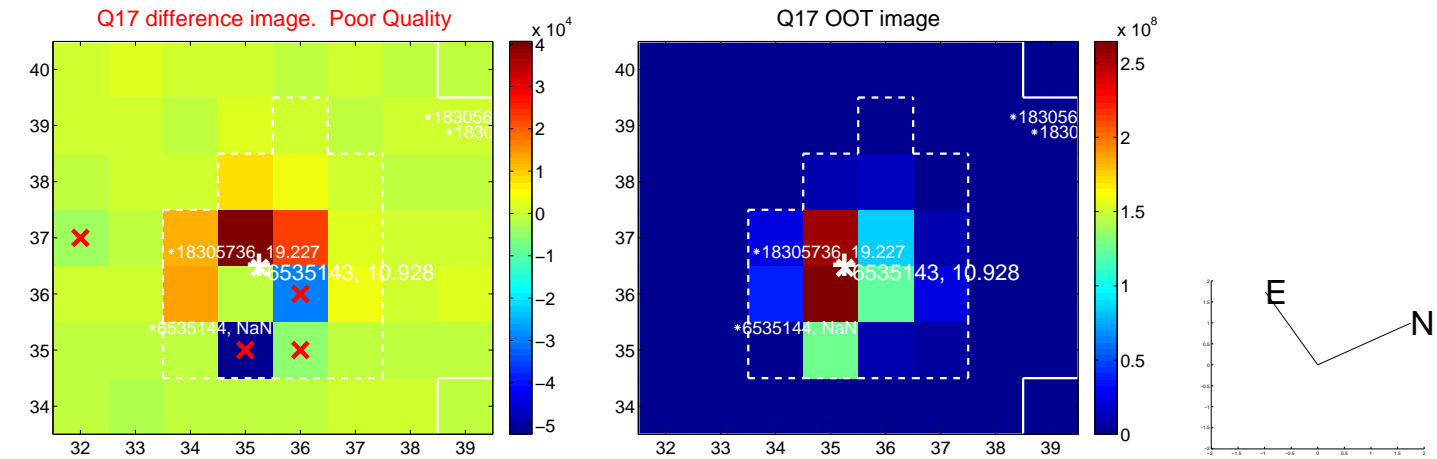
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



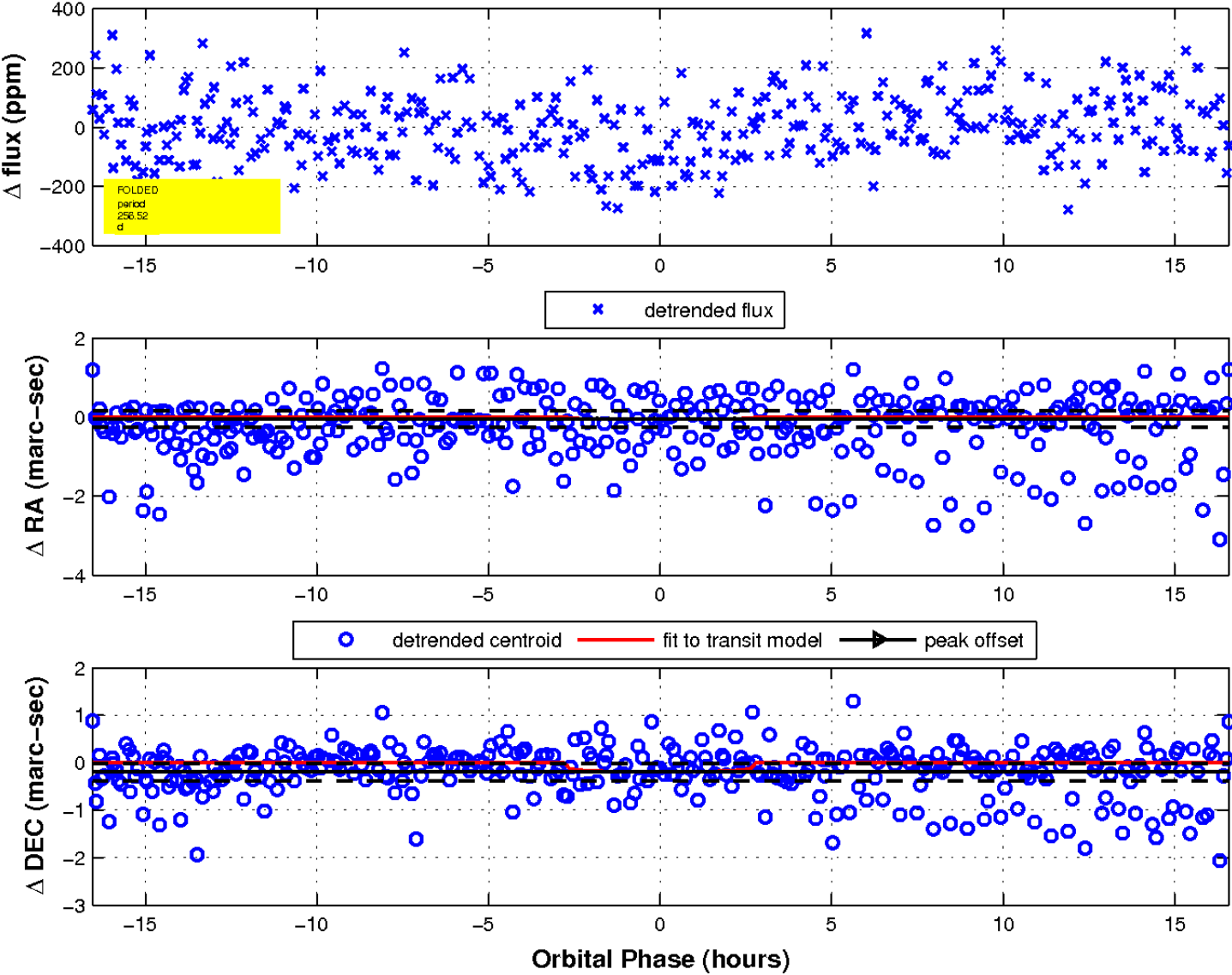
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



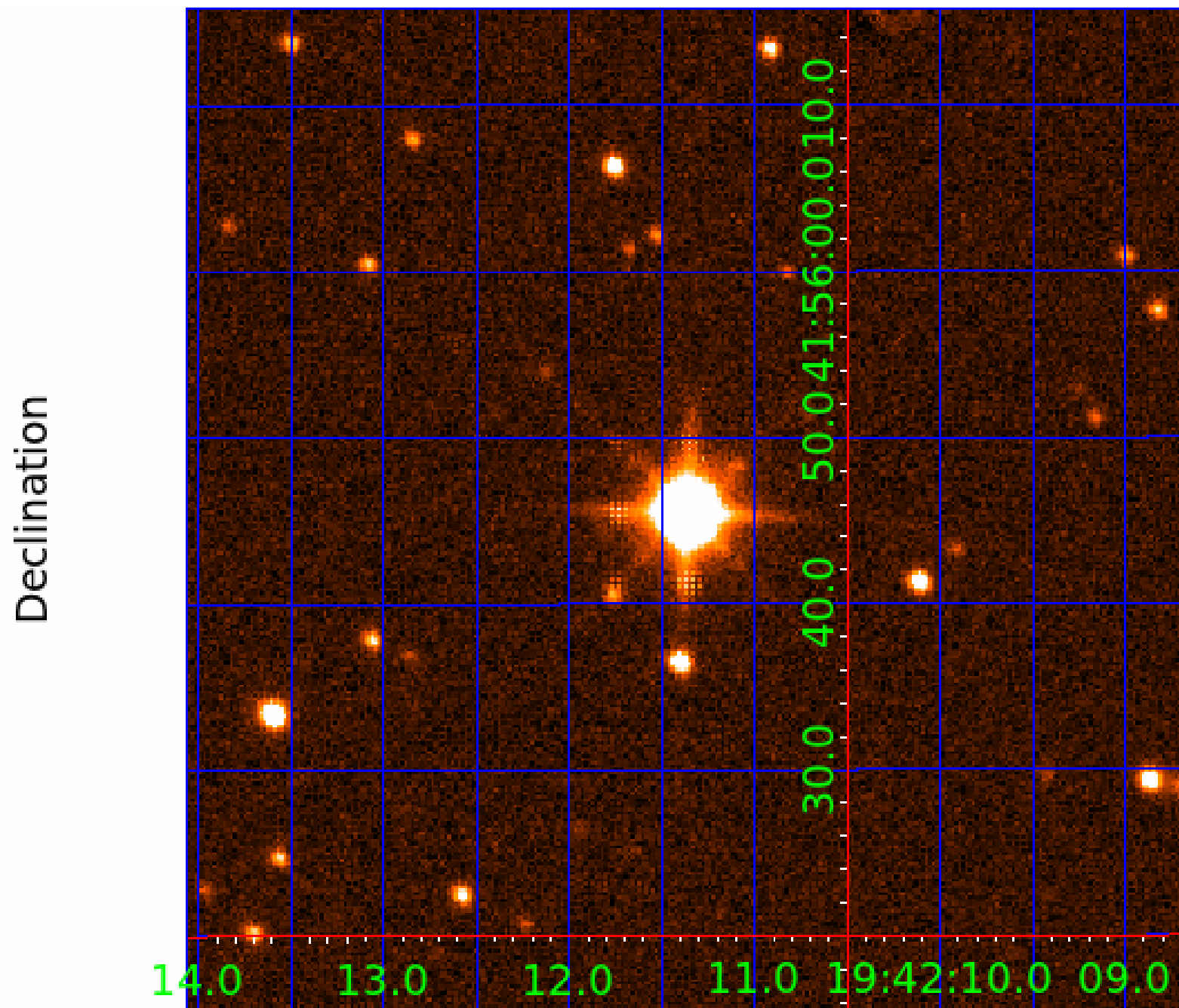
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 2 of 10



UKIRT Image



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})
006535143-01	OBS	No	1.655275	131.668348	13.1	9.574	8.6	7.7	1.99	6875	0.72	7918.91
006535143-02	OBS	No	256.515171	289.836364	112.5	5.531	10.2	6.4	1.99	6875	2.16	9.51
006535143-03	OBS	No	99.682988	208.377736	257.3	2.340	10.1	10.6	1.99	6875	3.64	33.55
006535143-04	OBS	No	105.729358	169.919884	224.0	4.991	9.9	10.7	1.99	6875	3.22	31.01
006535143-05	OBS	No	99.802727	154.724213	181.5	4.161	9.5	8.9	1.99	6875	3.11	33.49
006535143-06	OBS	No	83.476567	209.923159	177.7	4.474	9.1	9.2	1.99	6875	2.99	42.50
006535143-07	OBS	No	162.818577	271.955355	65.4	20.114	8.9	4.1	1.99	6875	1.84	17.44
006535143-08	OBS	No	40.486809	145.706523	94.9	7.051	8.6	7.6	1.99	6875	2.17	111.53
006535143-09	OBS	No	89.732378	186.618285	139.3	6.675	8.6	5.9	1.99	6875	2.66	38.60
006535143-10	OBS	No	32.503334	158.465697	196.5	0.978	8.3	7.9	1.99	6875	3.26	149.48

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006535143-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_SATURATED
006535143-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
006535143-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
006535143-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006535143-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006535143-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_SATURATED
006535143-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006535143-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
006535143-09	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
006535143-10	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—CENT_SATURATED

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

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

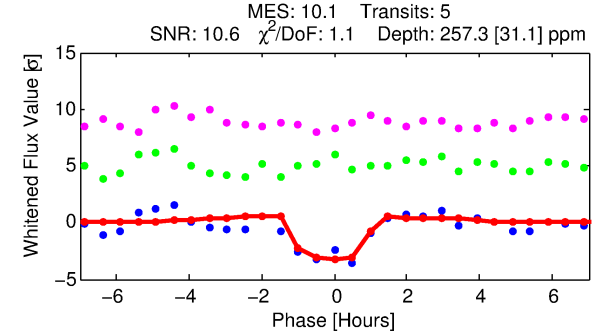
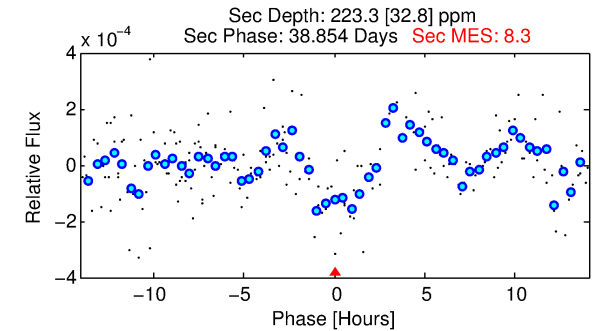
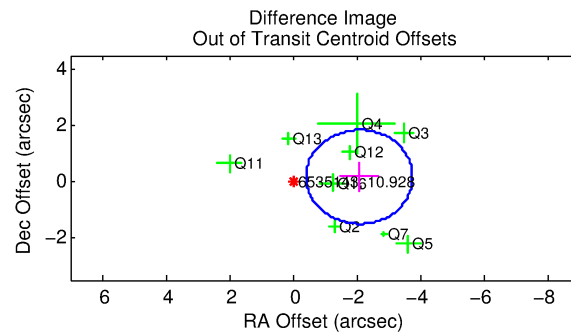
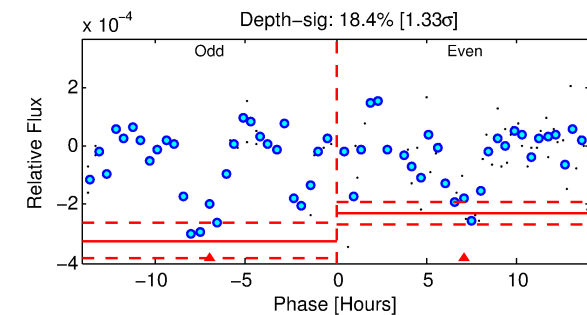
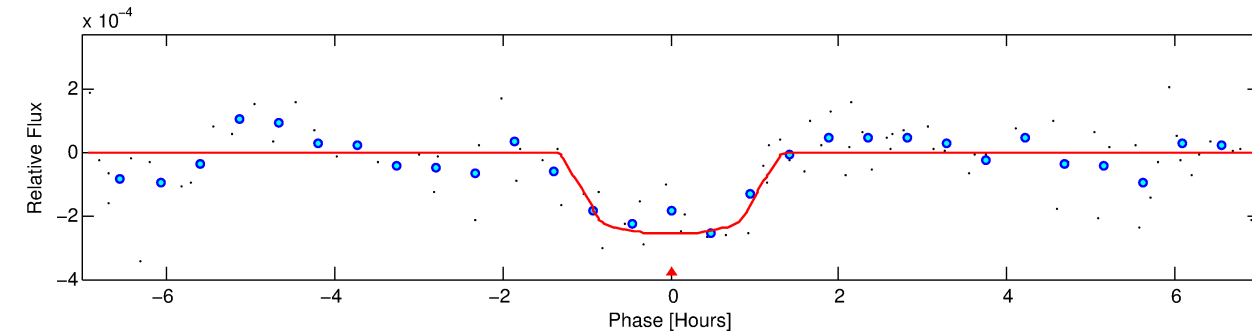
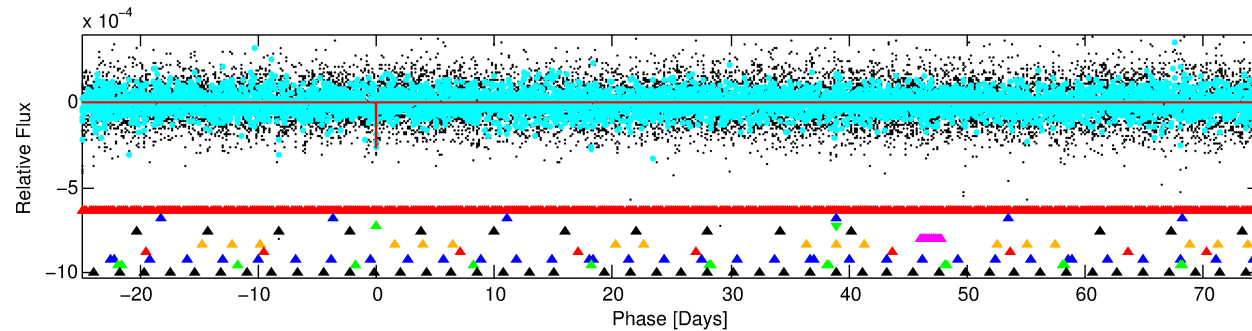
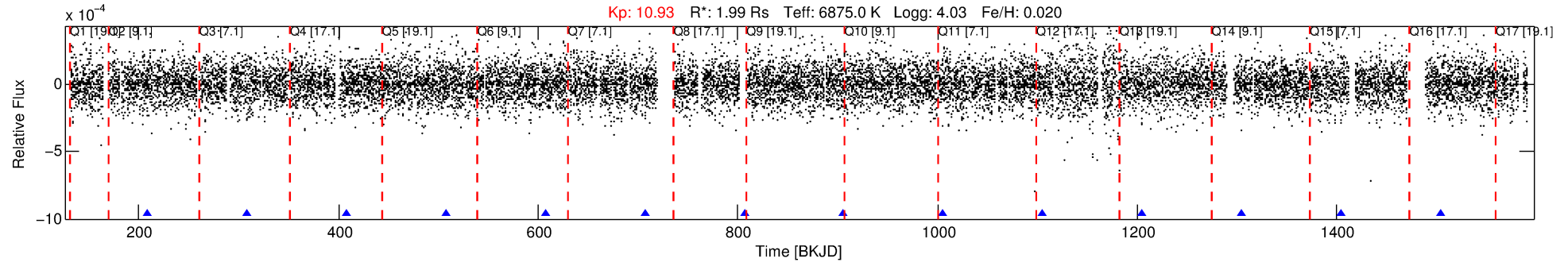
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006535143-03

No Significant Match Found

DV One-Page Summary

KIC: 6535143 Candidate: 3 of 10 Period: 99.683 d



DV Fit Results:

Period = 99.68299 [0.00069] d
Epoch = 208.3777 [0.0051] BKJD
Rp/R* = 0.0168 [0.0082]
a/R* = 170.59 [483.52]
b = 0.87 [0.79]
Seff = 33.55 [8.98]
Teff = 614 [41] K
Rp = 3.64 [1.91] Re
a = 0.4849 [0.0842] AU
Ag = 2181.58 [2220.86] [0.98 σ]
Teffp = 6484 [1596] K [3.68 σ]

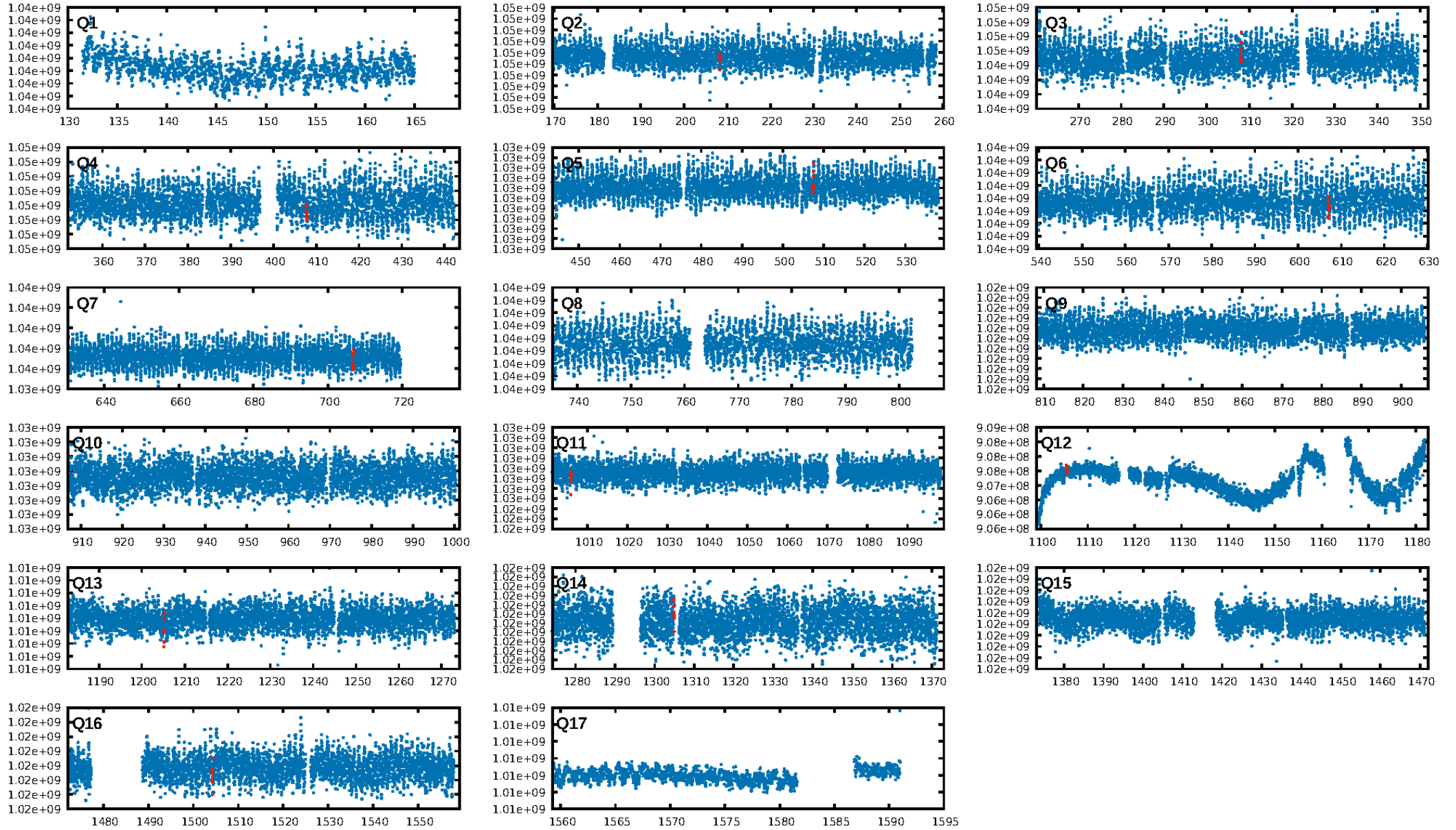
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [33.76 σ]
LongPeriod-sig: 45.3% [0.60 σ]
ModelChiSquare2-sig: 66.2%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: -0.7622
Centroid-sig: 11.1%
Centroid-so: 1.158 arcsec [1.77 σ]
OotOffset-rm: 2.097 arcsec [3.76 σ]
KicOffset-rm: 2.030 arcsec [3.35 σ]
OotOffset-st: 1/3/3/2 [9]
KicOffset-st: 1/3/3/2 [9]
DiffImageQuality-fgm: 0.56 [5/9]
DiffImageOverlap-fno: 0.40 [4/10]

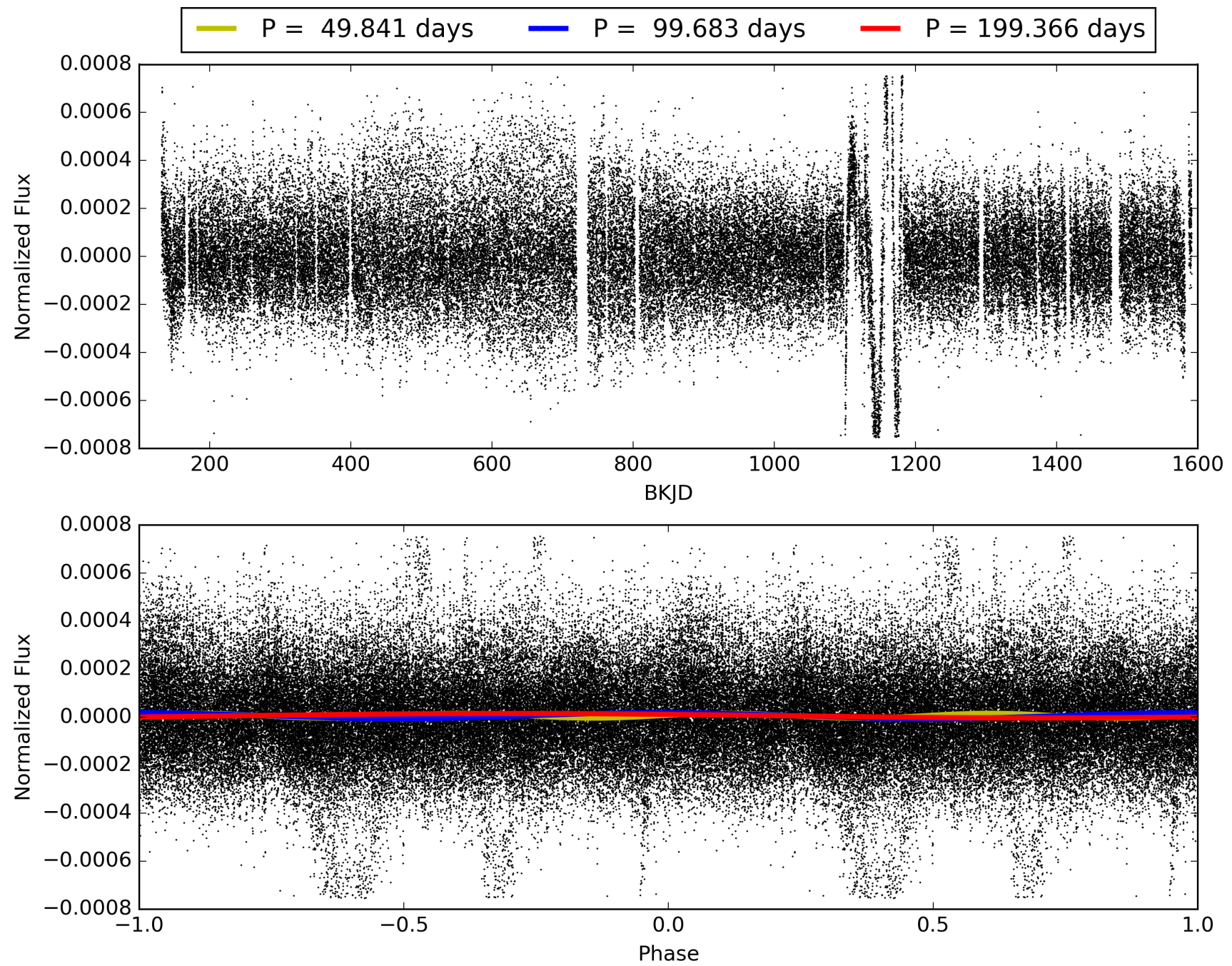
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 03:15:29 Z

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

TCE 006535143-03, PDC Light Curves

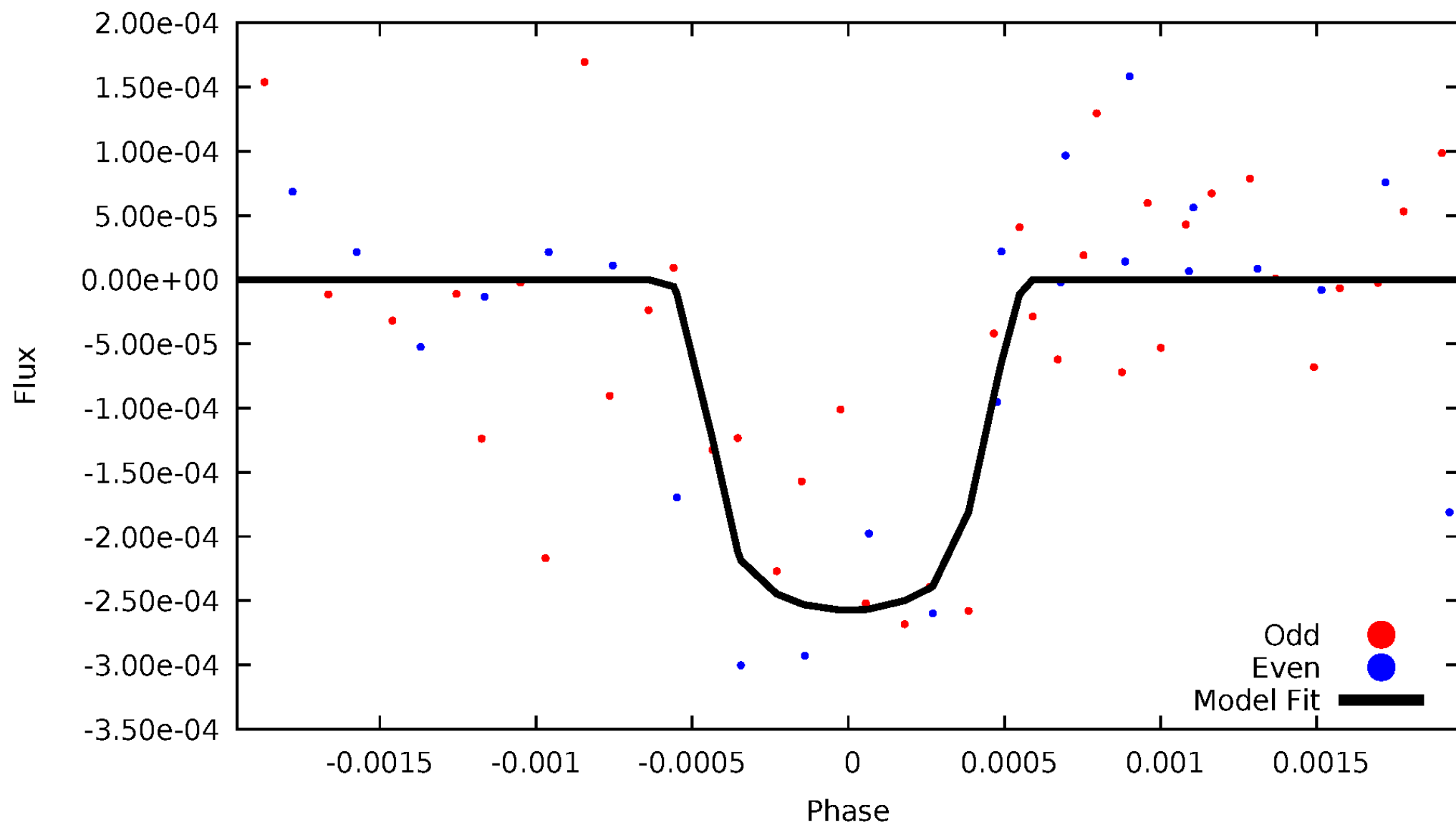


TCE 006535143-03



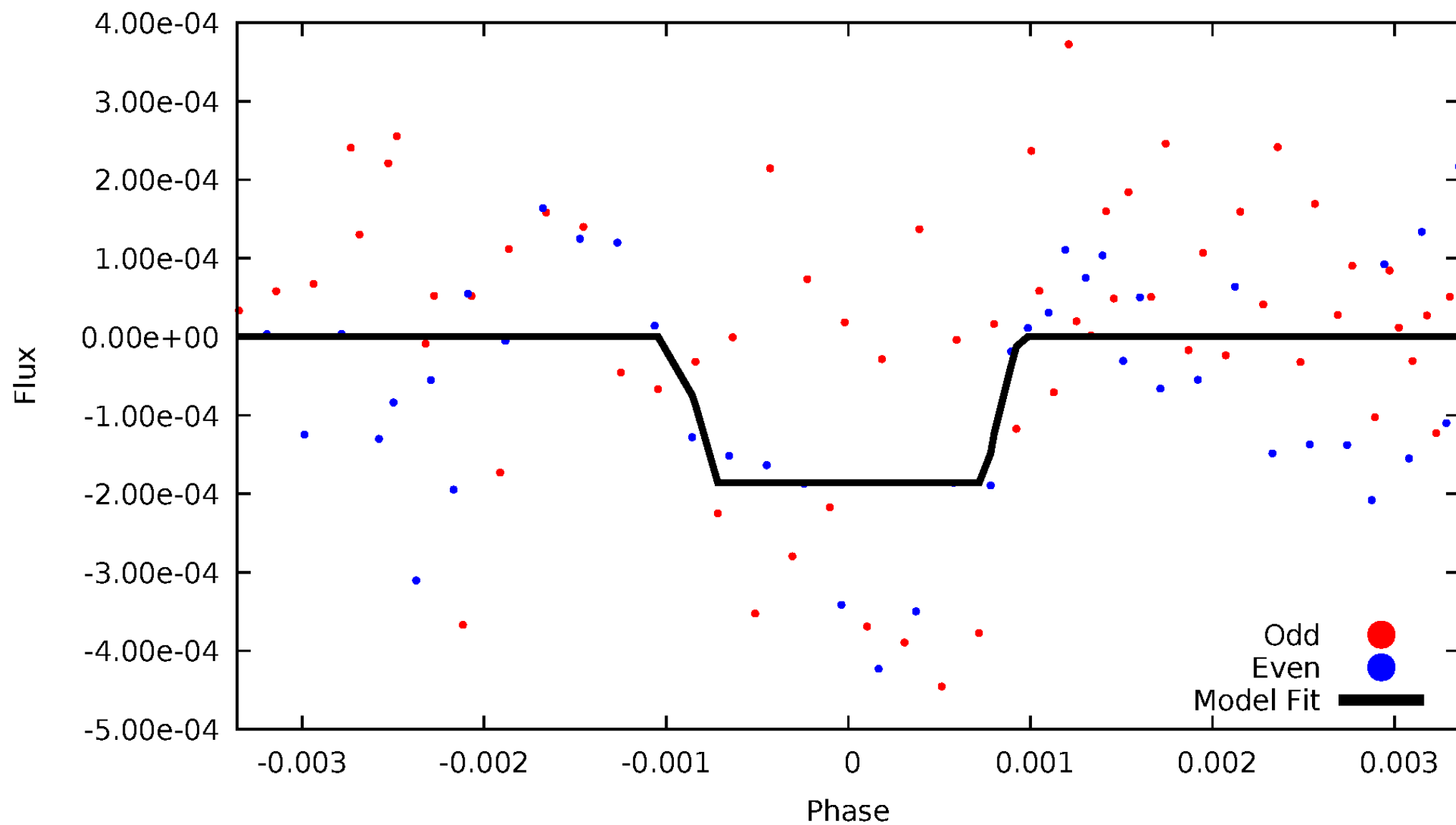
DV Odd/Even

TCE 006535143-03

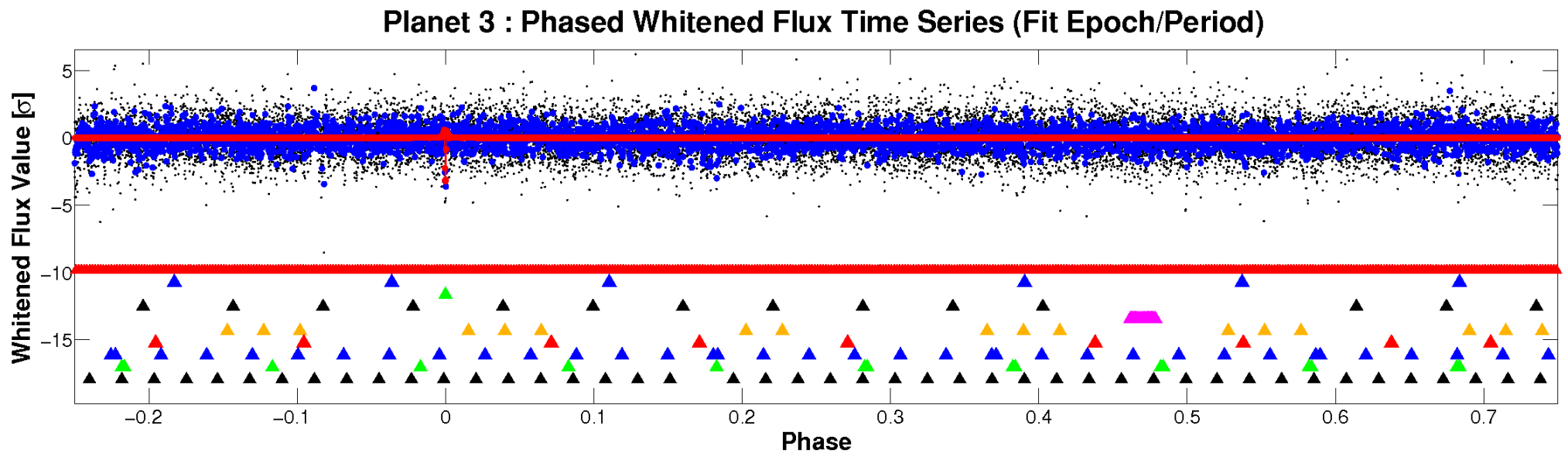
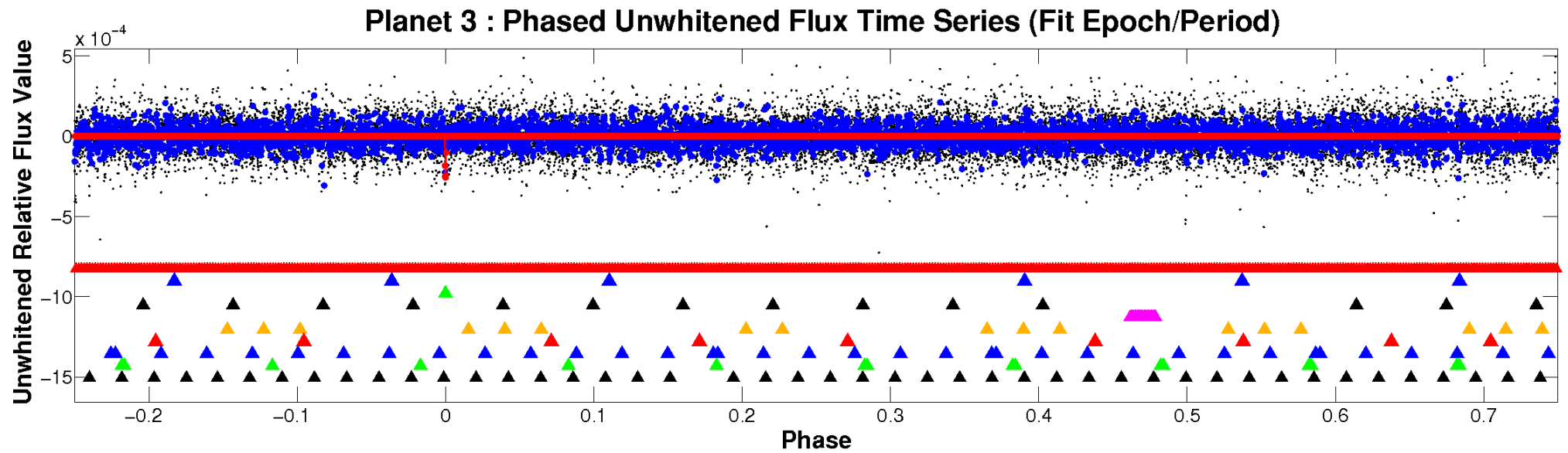


ALT Odd/Even

TCE 006535143-03

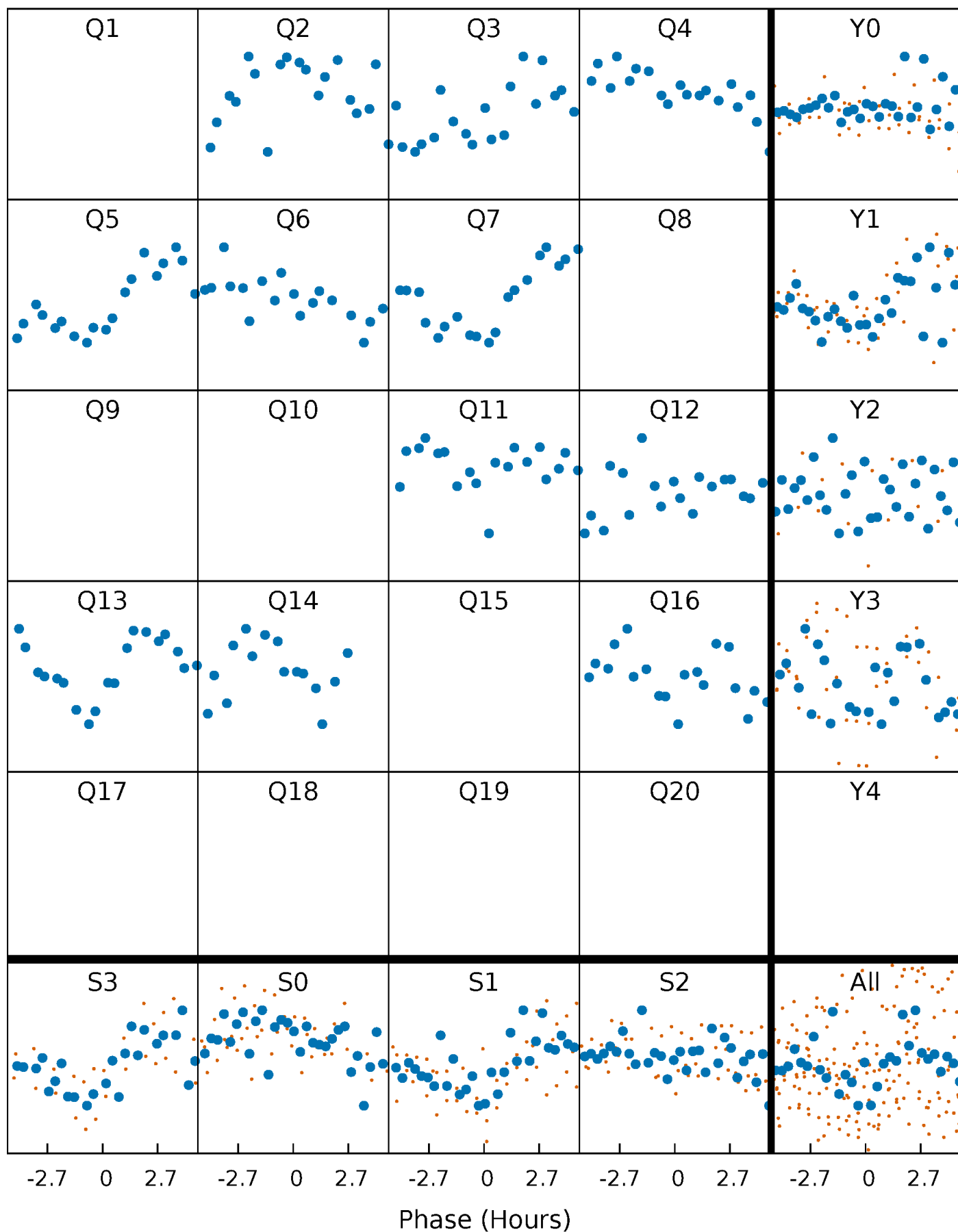


Non-Whitened Vs. Whitened Light Curve



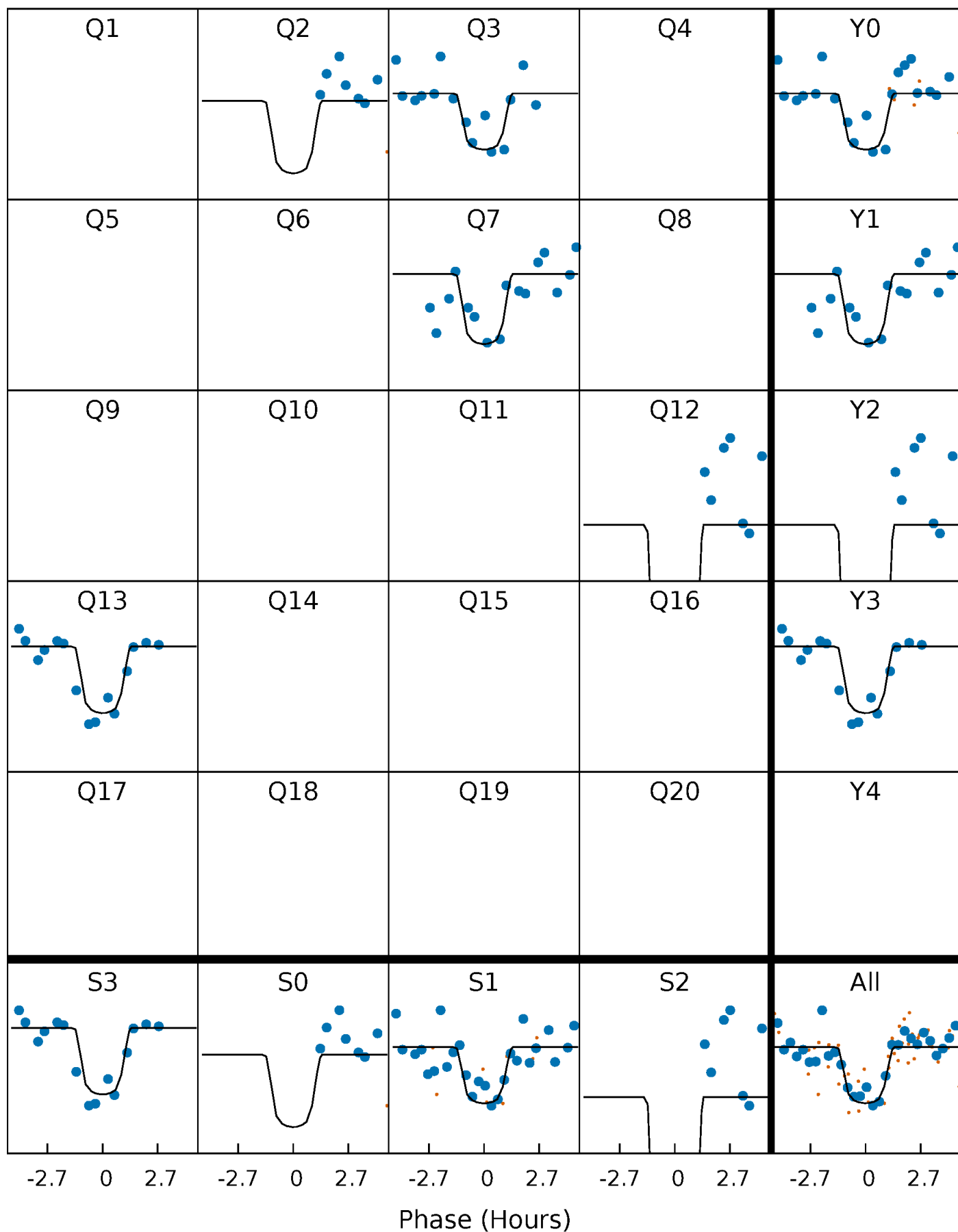
PDC Quarter-Phased Transit Curves

TCE 006535143-03 P= 99.682988 Days $T_0=208.377736$ (BKJD)



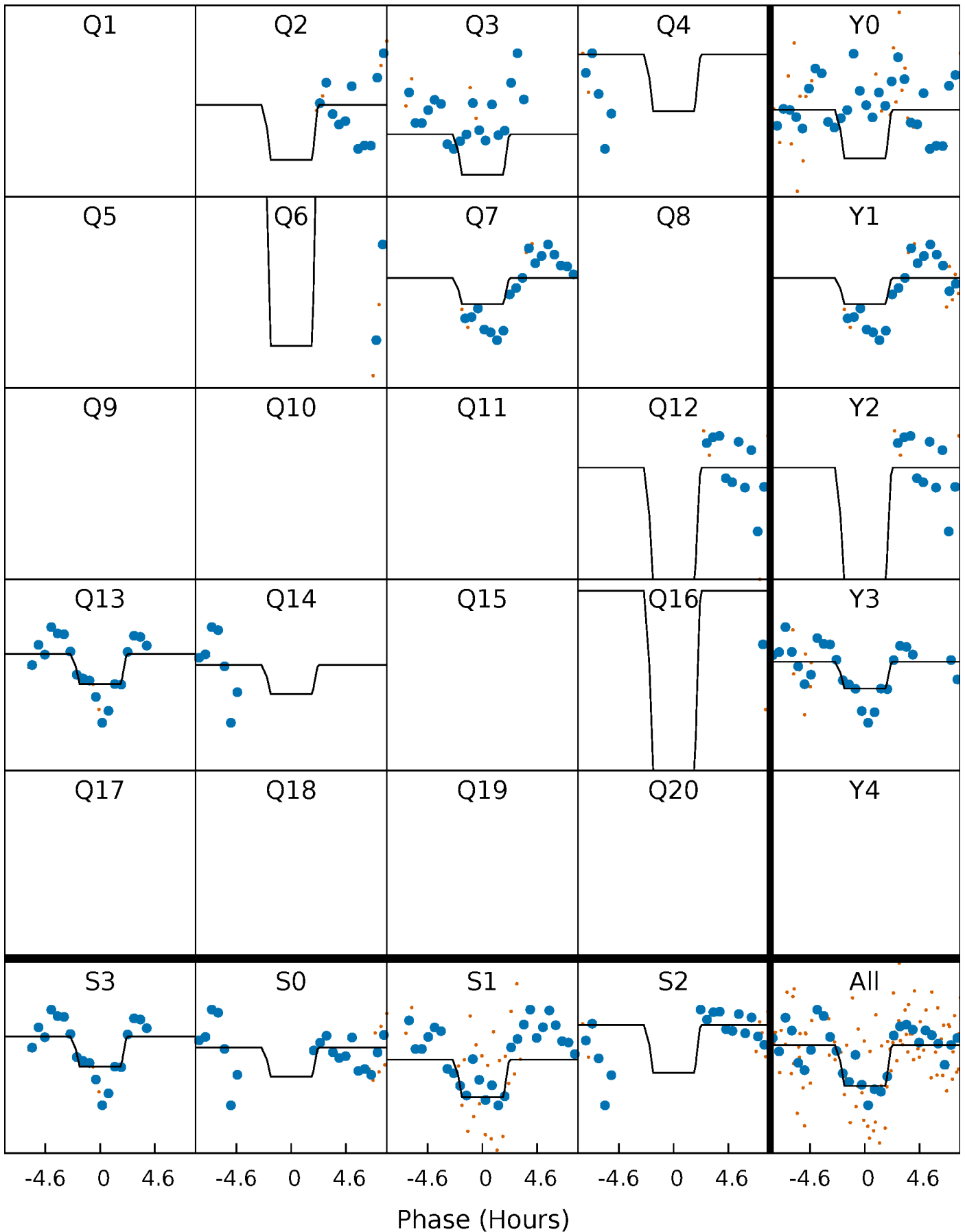
DV Quarter-Phased Transit Curves

TCE 006535143-03 P= 99.682988 Days $T_0=208.377736$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

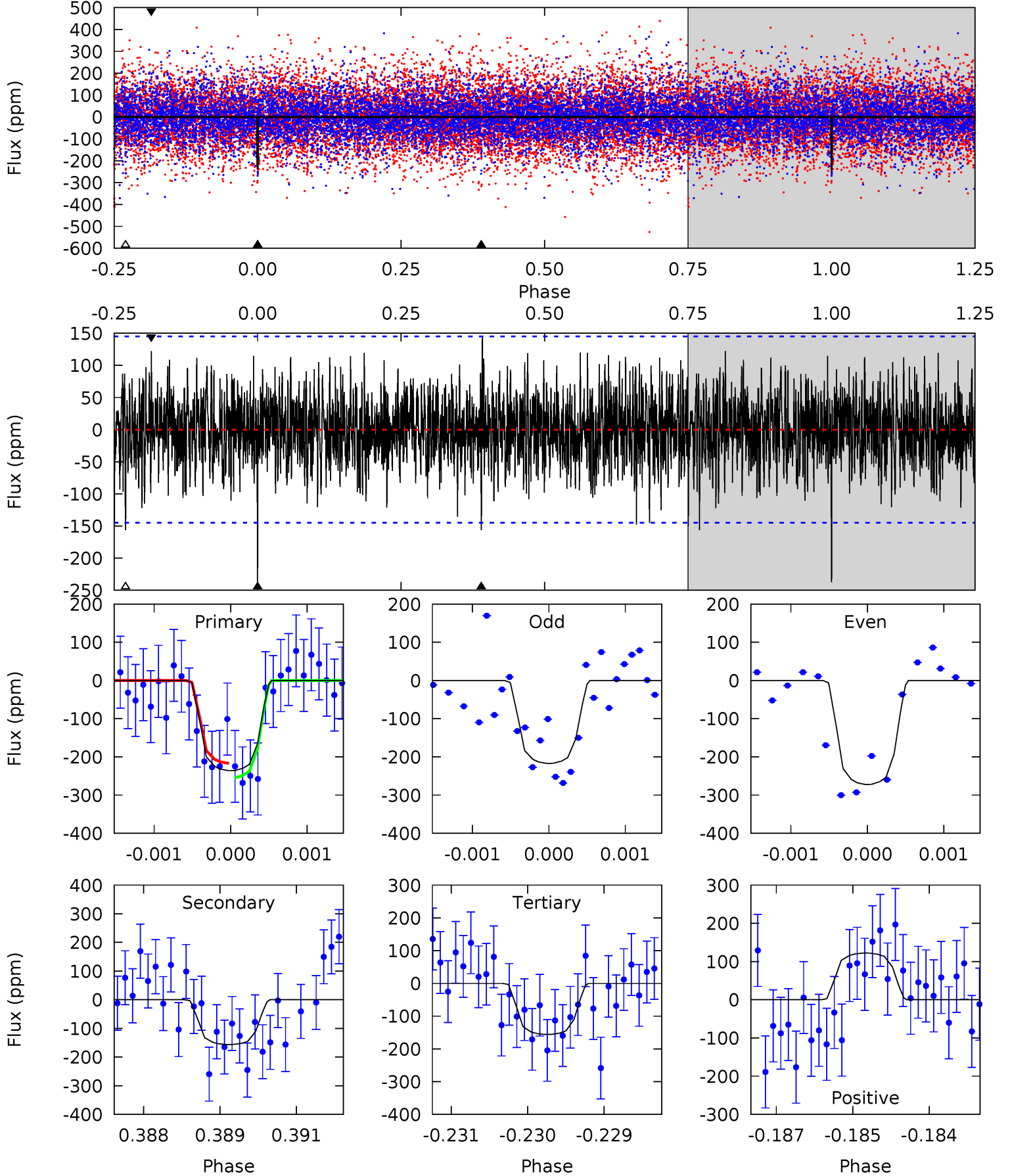
TCE 006535143-03 P= 99.681926 Days $T_0=208.337449$ (BKJD)



DV Model-Shift Uniqueness Test

006535143-03, P = 99.682988 Days, E = 108.694748 Days

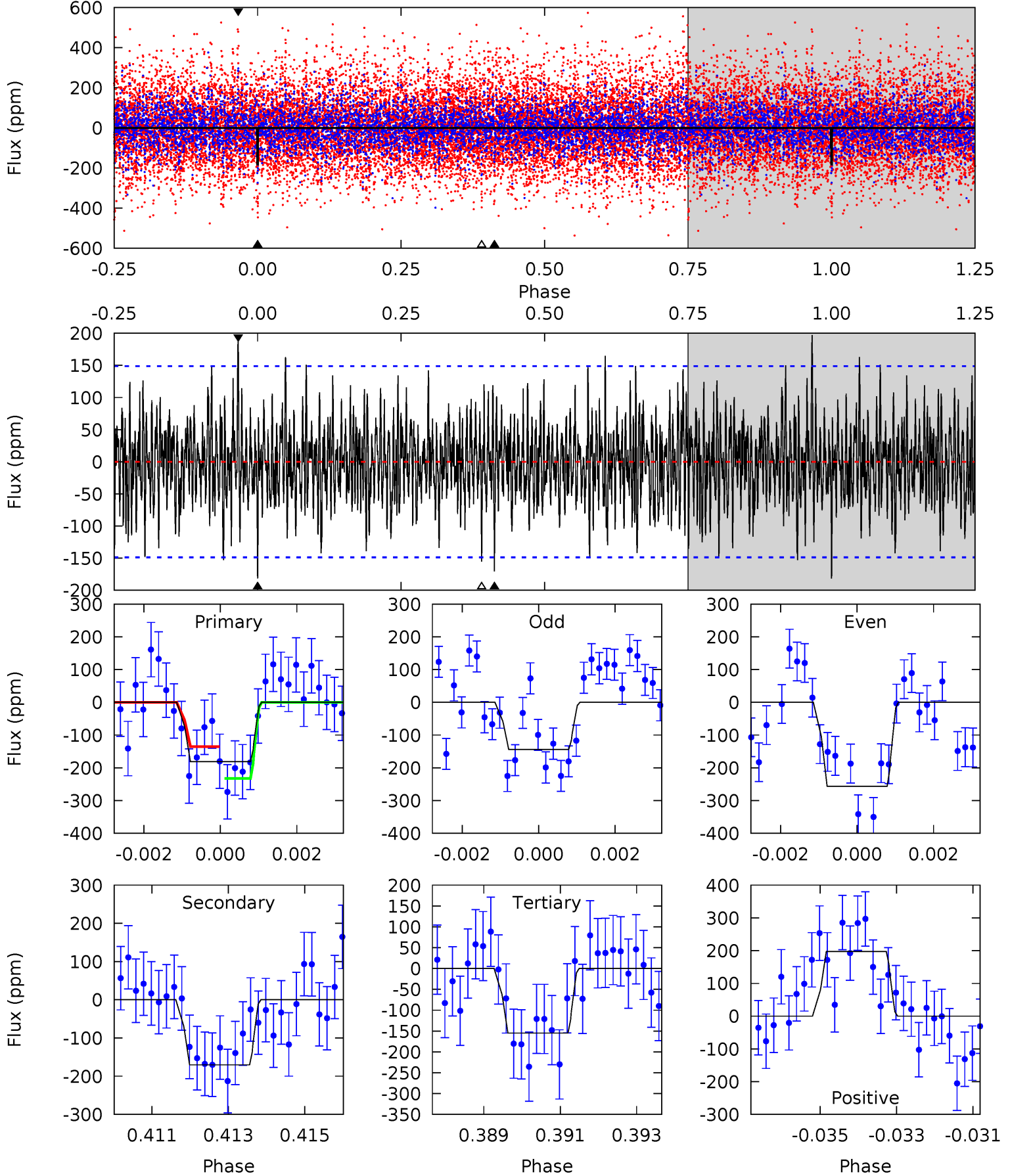
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.86	5.86	5.85	4.58	5.43	3.26	1.58	3.00	4.28	0.01	1.28	1.00	1.04	0.38	0.71



Alt Model-Shift Uniqueness Test

006535143-03, P = 99.681926 Days, E = 108.655523 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.52	6.12	5.57	7.08	5.34	3.12	1.83	0.95	-0.56	0.55	-0.96	1.92	0.70	0.52	1.74



Stellar Parameters For KIC 006535143

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6875^{+71}_{-82}	$4.027^{+0.149}_{-0.122}$	$0.020^{+0.150}_{-0.150}$	$1.985^{+0.389}_{-0.389}$	$1.530^{+0.146}_{-0.133}$	$0.276^{+0.202}_{-0.099}$
	+1%/-1%	+4%/-3%	+750%/-750%	+20%/-20%	+10%/-9%	+73%/-36%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 006535143-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-156 ± 27	$3.59^{+1.77}_{-1.65}$	856^{+40}_{-44}	5917^{+2359}_{-998}	1618^{+3799}_{-944}
Alt.	-170 ± 28	$3.10^{+1.64}_{-1.58}$	856^{+42}_{-46}	6529^{+3519}_{-1232}	2321^{+7542}_{-1383}

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

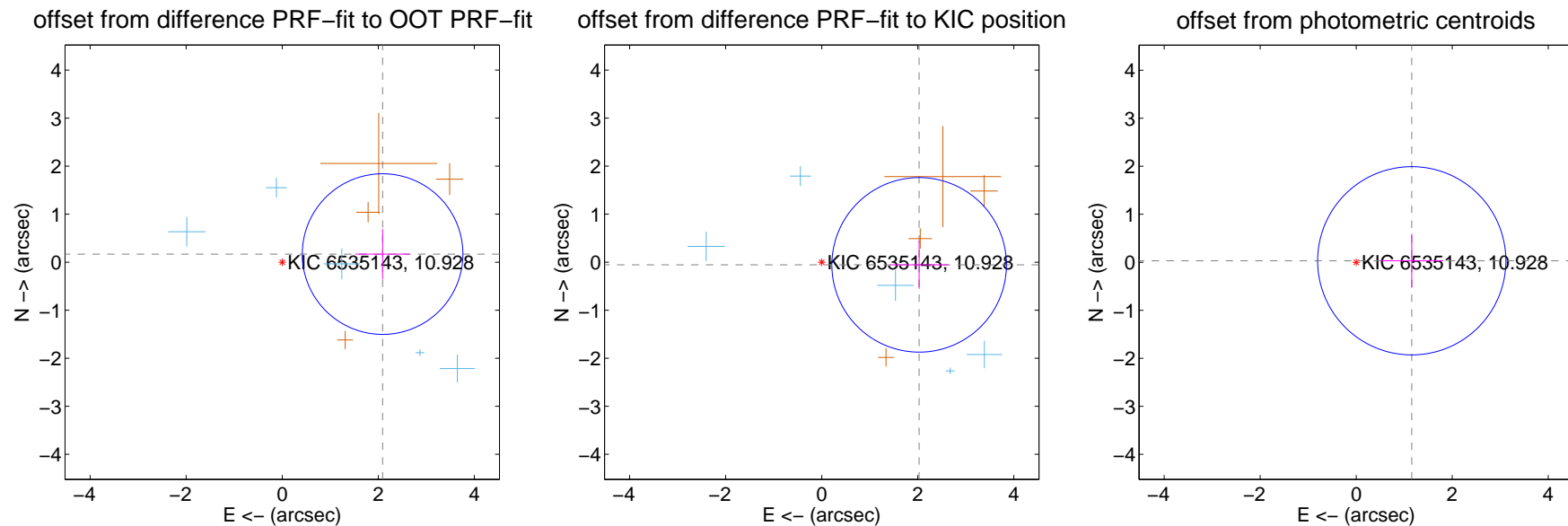
DV Centroid Data

Supplemental centroid analysis for 006535143-03. **Kepler magnitude: 10.93.** Transit SNR 10.63

There are 5 quarters with good PRF difference image offsets

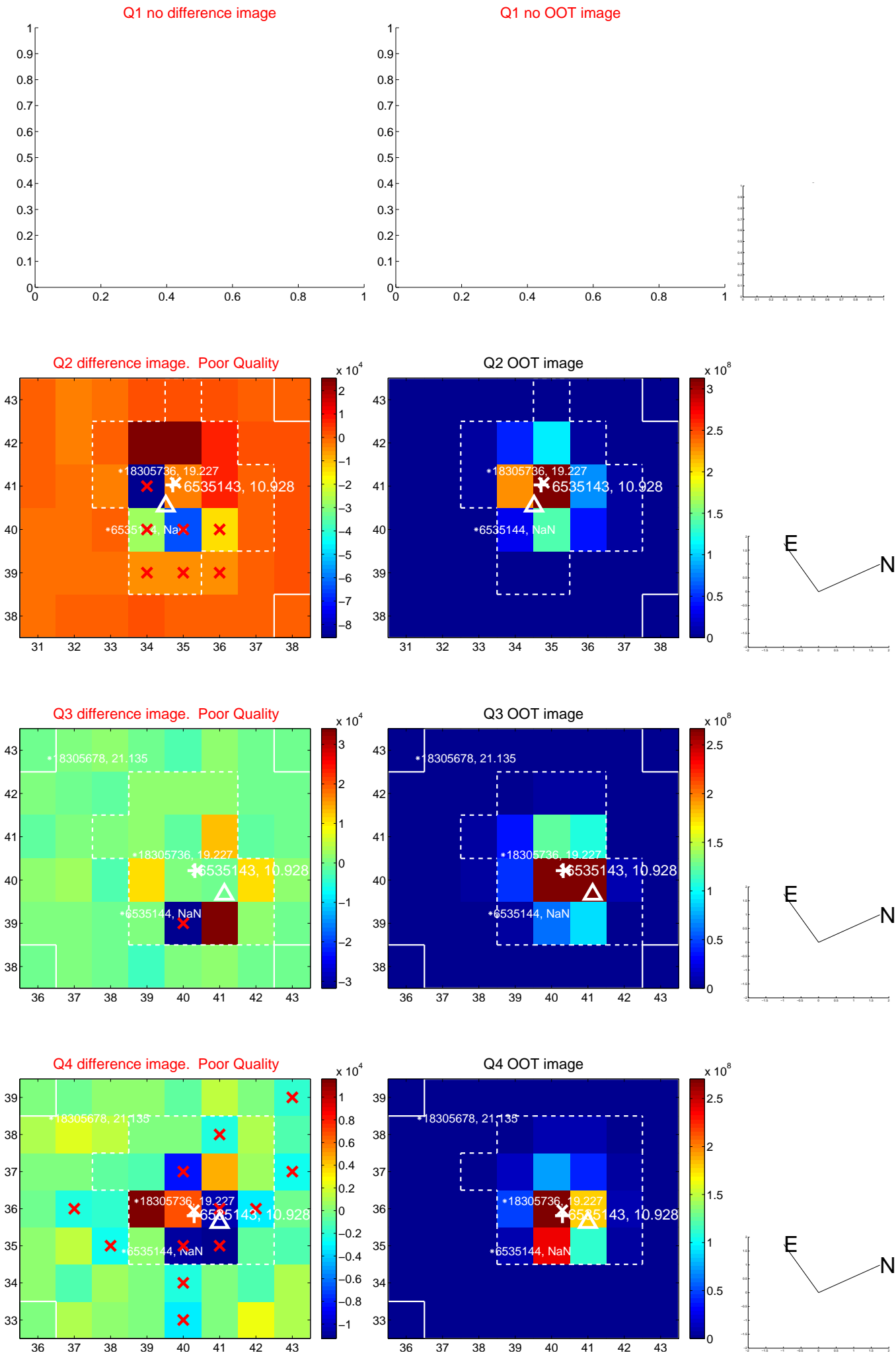
The direct PRF centroid is offset from the target star catalog position by about 0.54 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.097 ± 0.557	3.76	-2.090 ± 0.567	0.169 ± 0.523
PRF-fit source offset from KIC position	2.030 ± 0.606	3.35	-2.029 ± 0.603	-0.055 ± 0.498
photometric centroid source offset	1.16 ± 0.65	1.77	-1.16 ± 0.65	0.03 ± 0.56

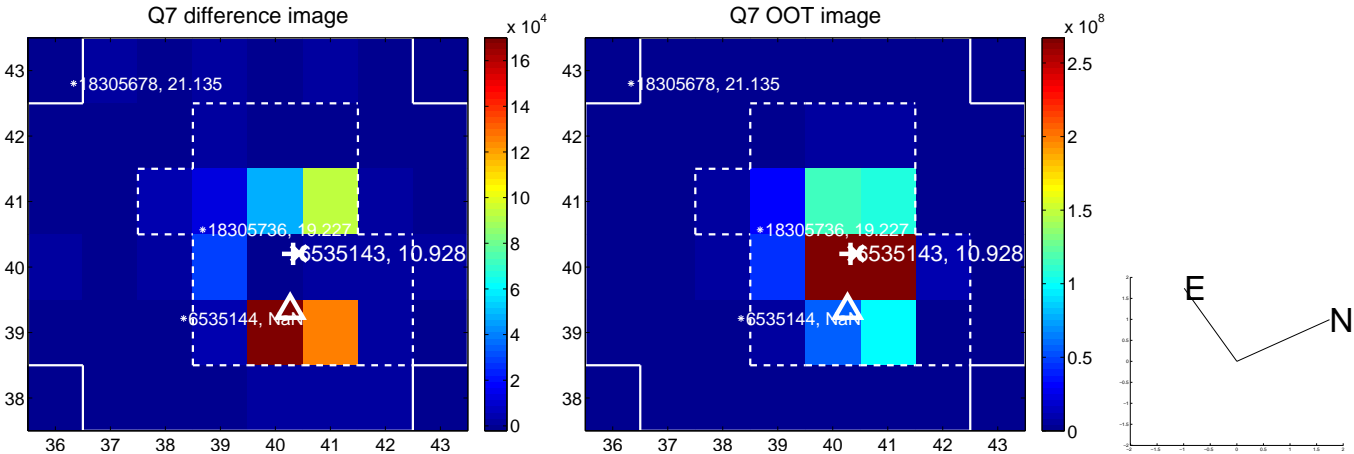
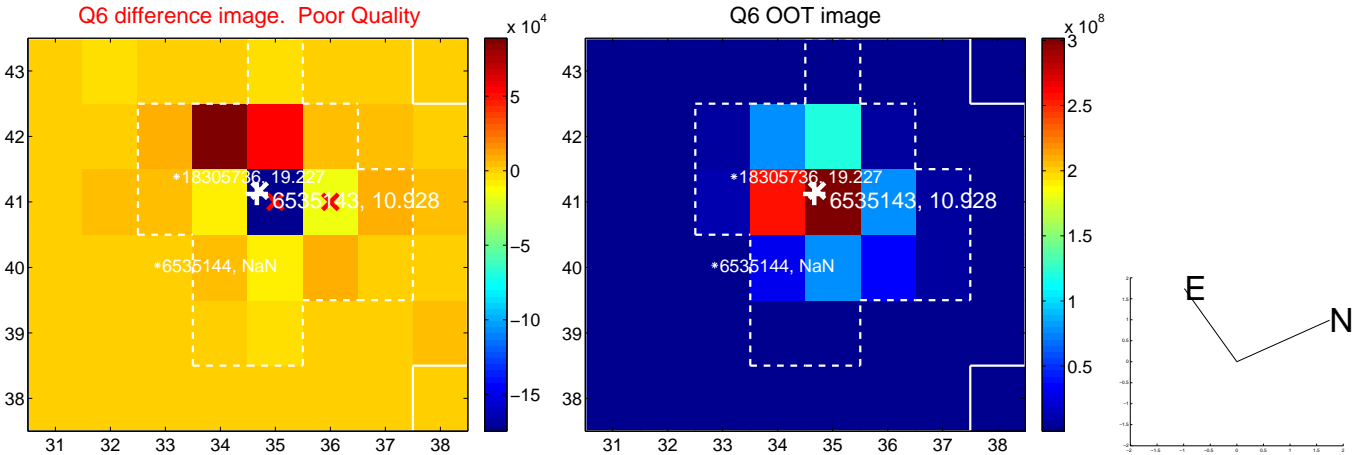
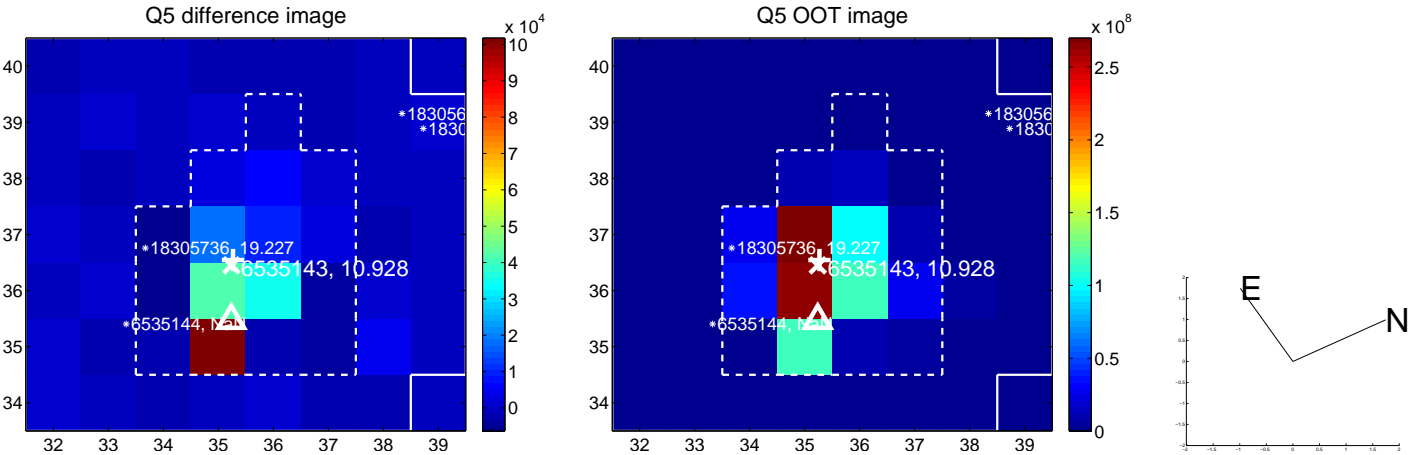


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

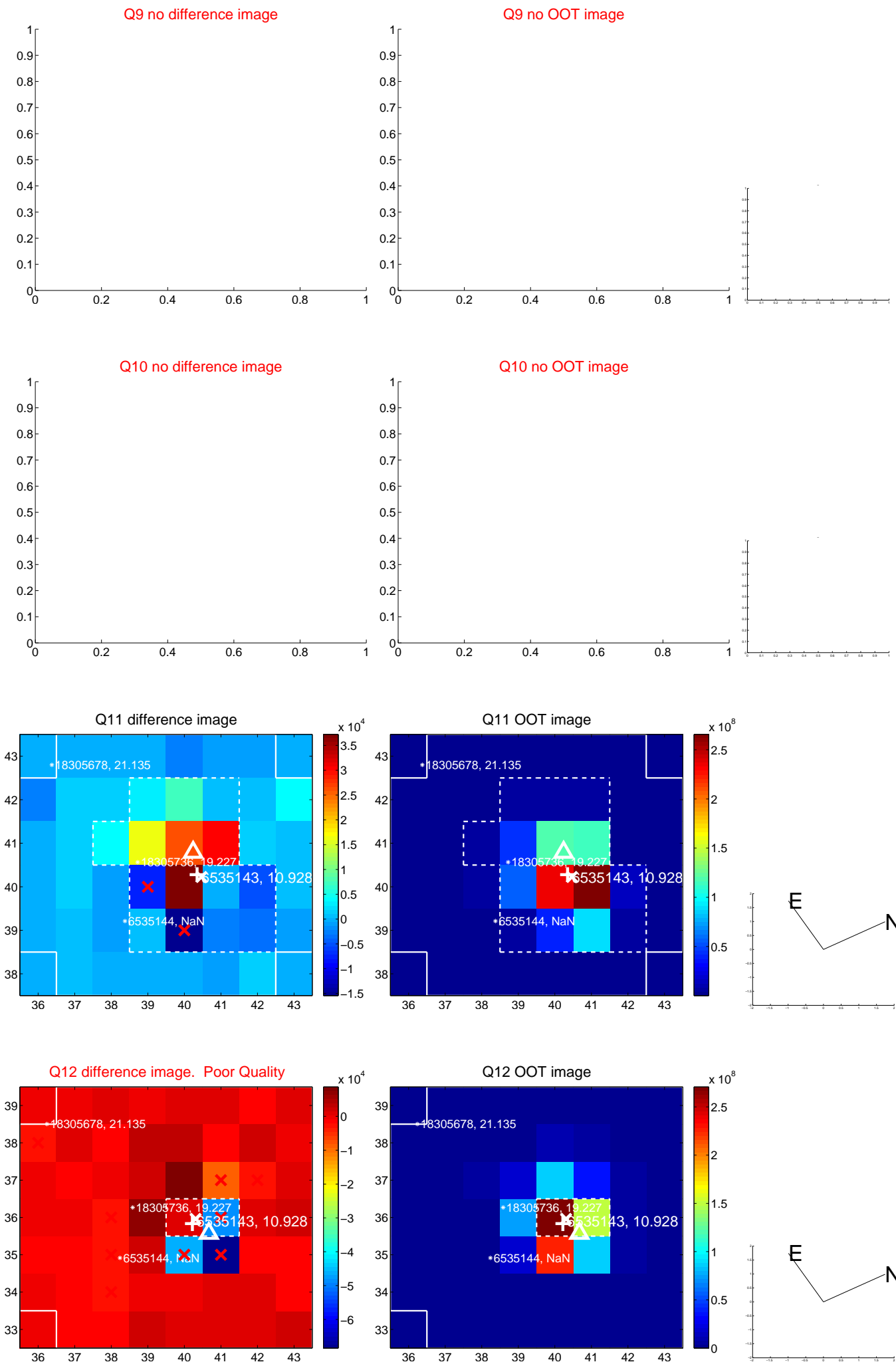
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



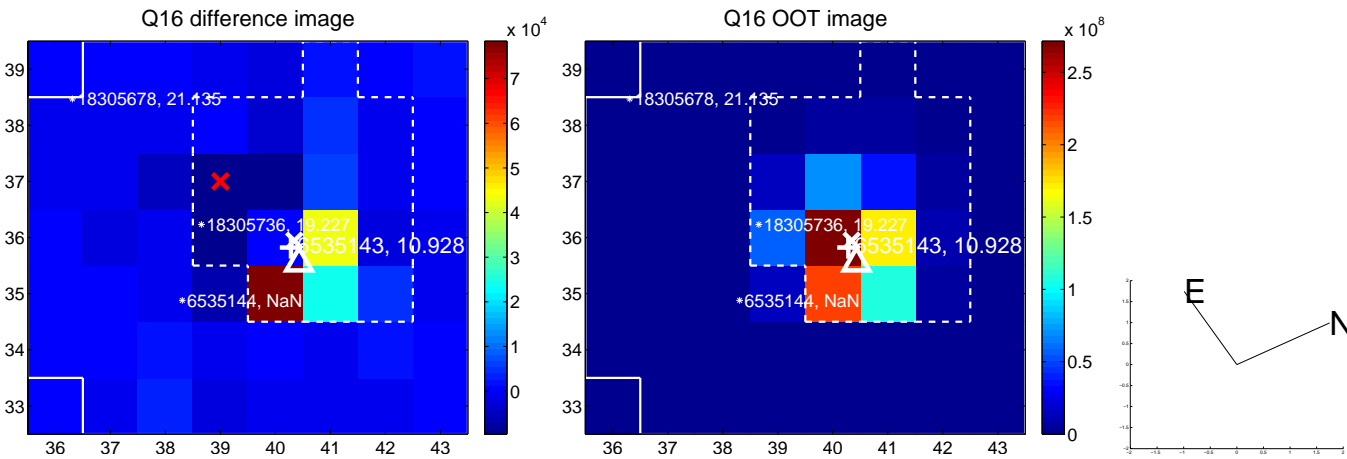
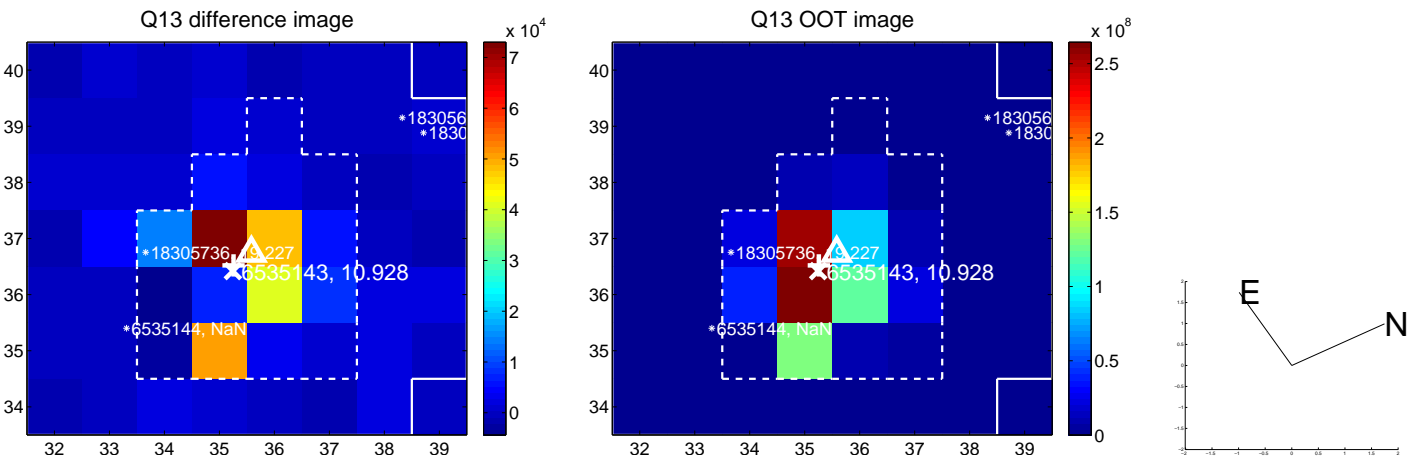
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



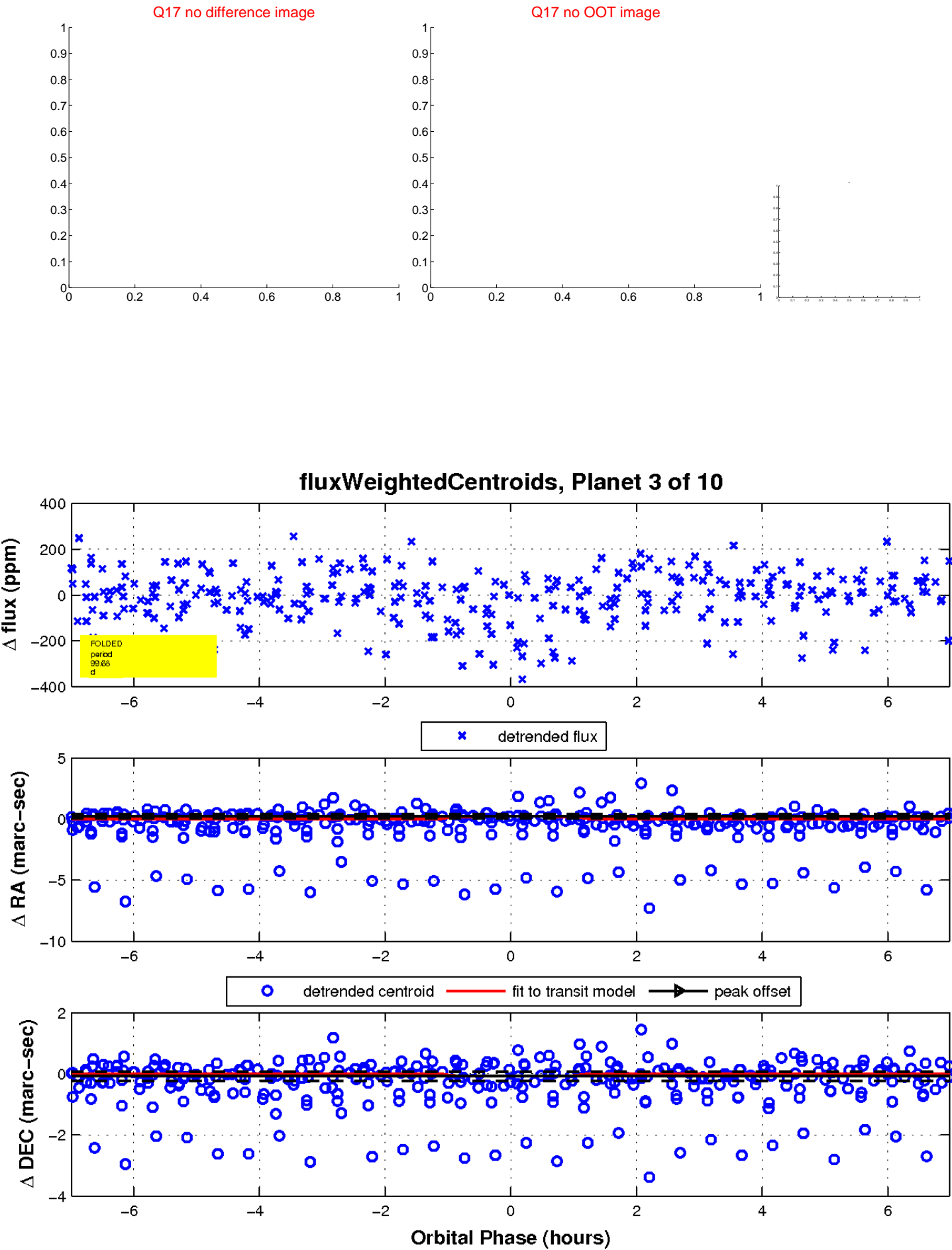
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



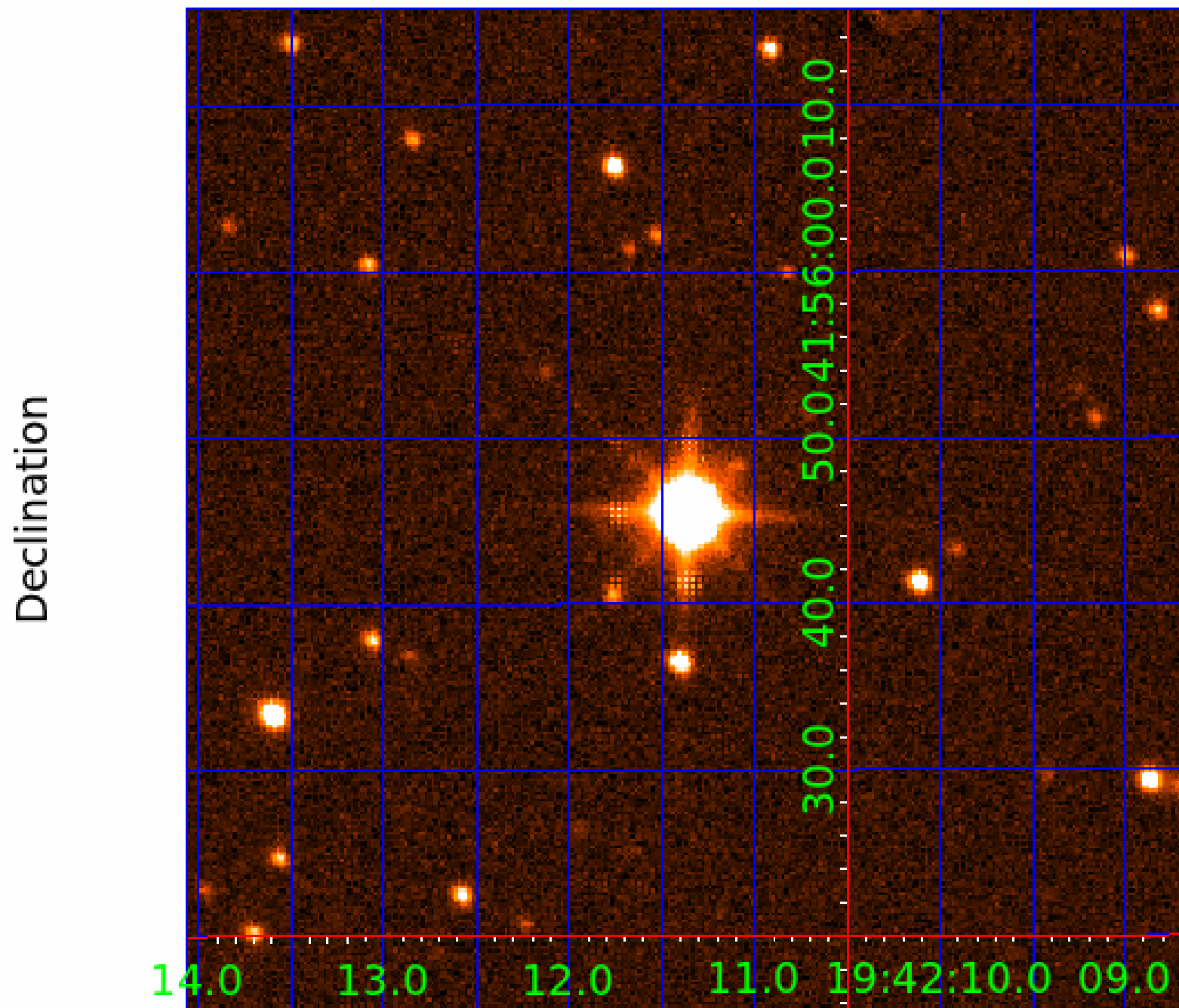
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



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})
006535143-01	OBS	No	1.655275	131.668348	13.1	9.574	8.6	7.7	1.99	6875	0.72	7918.91
006535143-02	OBS	No	256.515171	289.836364	112.5	5.531	10.2	6.4	1.99	6875	2.16	9.51
006535143-03	OBS	No	99.682988	208.377736	257.3	2.340	10.1	10.6	1.99	6875	3.64	33.55
006535143-04	OBS	No	105.729358	169.919884	224.0	4.991	9.9	10.7	1.99	6875	3.22	31.01
006535143-05	OBS	No	99.802727	154.724213	181.5	4.161	9.5	8.9	1.99	6875	3.11	33.49
006535143-06	OBS	No	83.476567	209.923159	177.7	4.474	9.1	9.2	1.99	6875	2.99	42.50
006535143-07	OBS	No	162.818577	271.955355	65.4	20.114	8.9	4.1	1.99	6875	1.84	17.44
006535143-08	OBS	No	40.486809	145.706523	94.9	7.051	8.6	7.6	1.99	6875	2.17	111.53
006535143-09	OBS	No	89.732378	186.618285	139.3	6.675	8.6	5.9	1.99	6875	2.66	38.60
006535143-10	OBS	No	32.503334	158.465697	196.5	0.978	8.3	7.9	1.99	6875	3.26	149.48

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006535143-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_SATURATED
006535143-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
006535143-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
006535143-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006535143-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006535143-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_SATURATED
006535143-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006535143-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
006535143-09	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
006535143-10	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—CENT_SATURATED

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

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

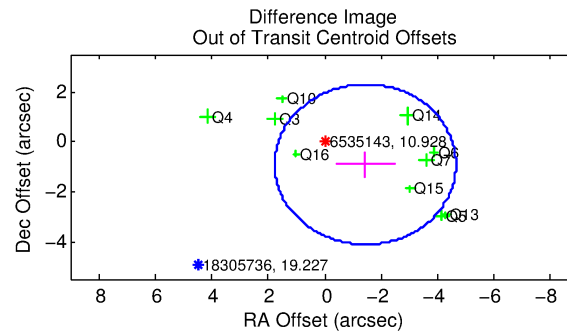
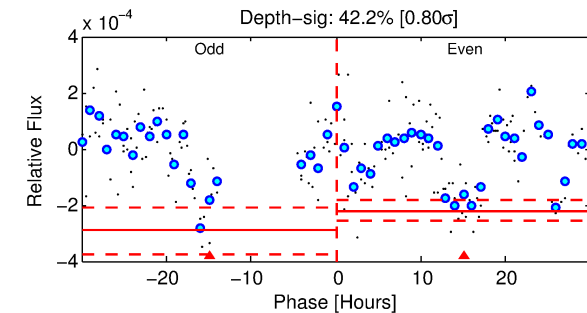
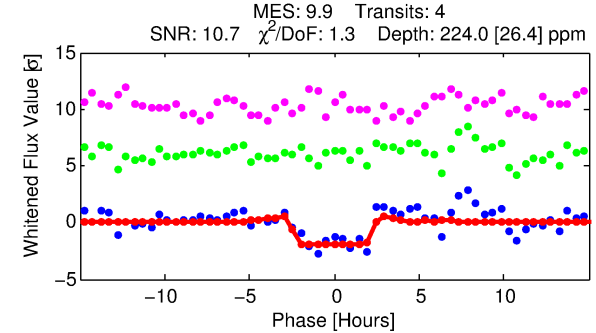
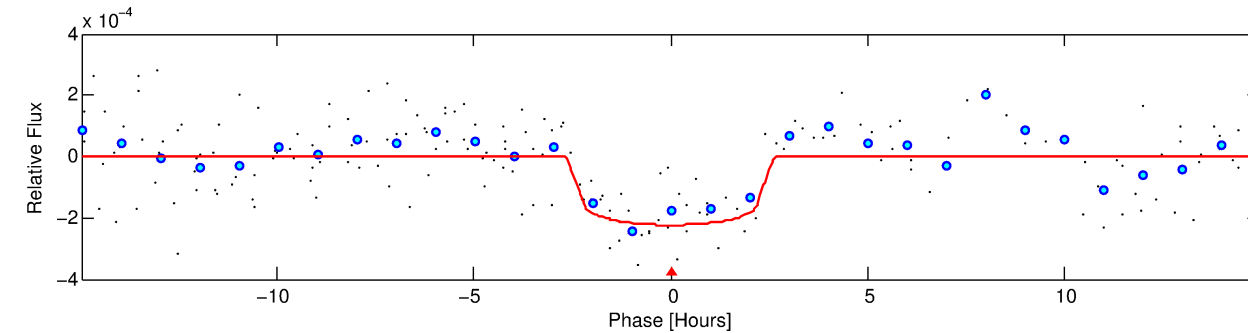
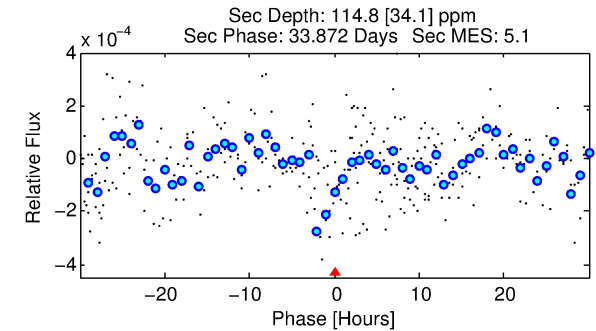
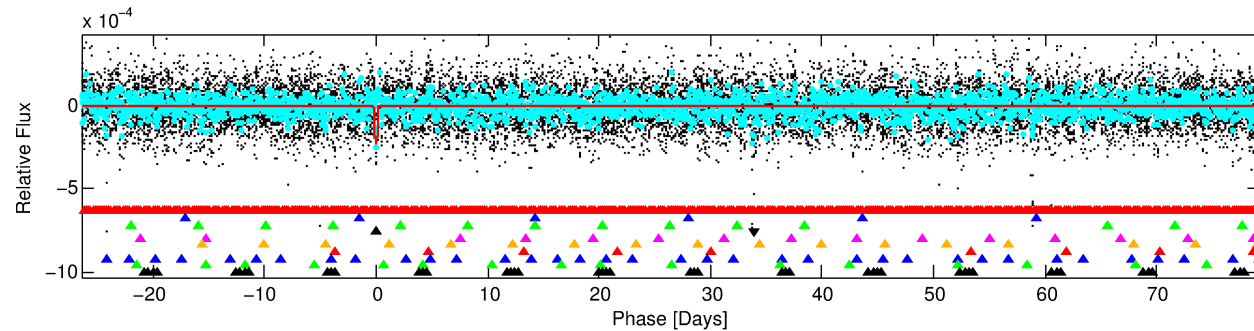
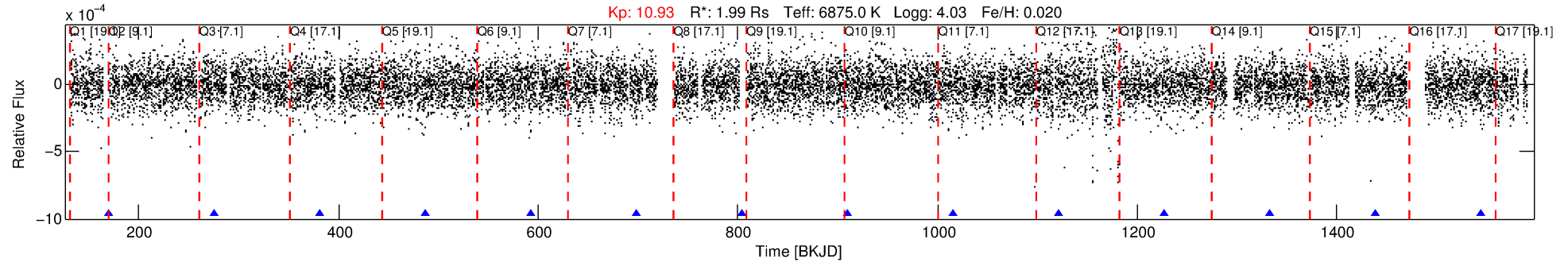
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006535143-04

No Significant Match Found

DV One-Page Summary

KIC: 6535143 Candidate: 4 of 10 Period: 105.729 d



DV Fit Results:

Period = 105.72936 [0.00108] d
Epoch = 169.9199 [0.0113] BKJD
Rp/R* = 0.0149 [0.0101]
a/R* = 111.11 [439.86]
b = 0.75 [2.34]
Seff = 31.01 [8.30]
Teff = 602 [40] K
Rp = 3.22 [2.29] Re
a = 0.5043 [0.0876] AU
Ag = 1548.14 [2199.29] [0.70σ]
Teffp = 5836 [2038] K [2.57σ]

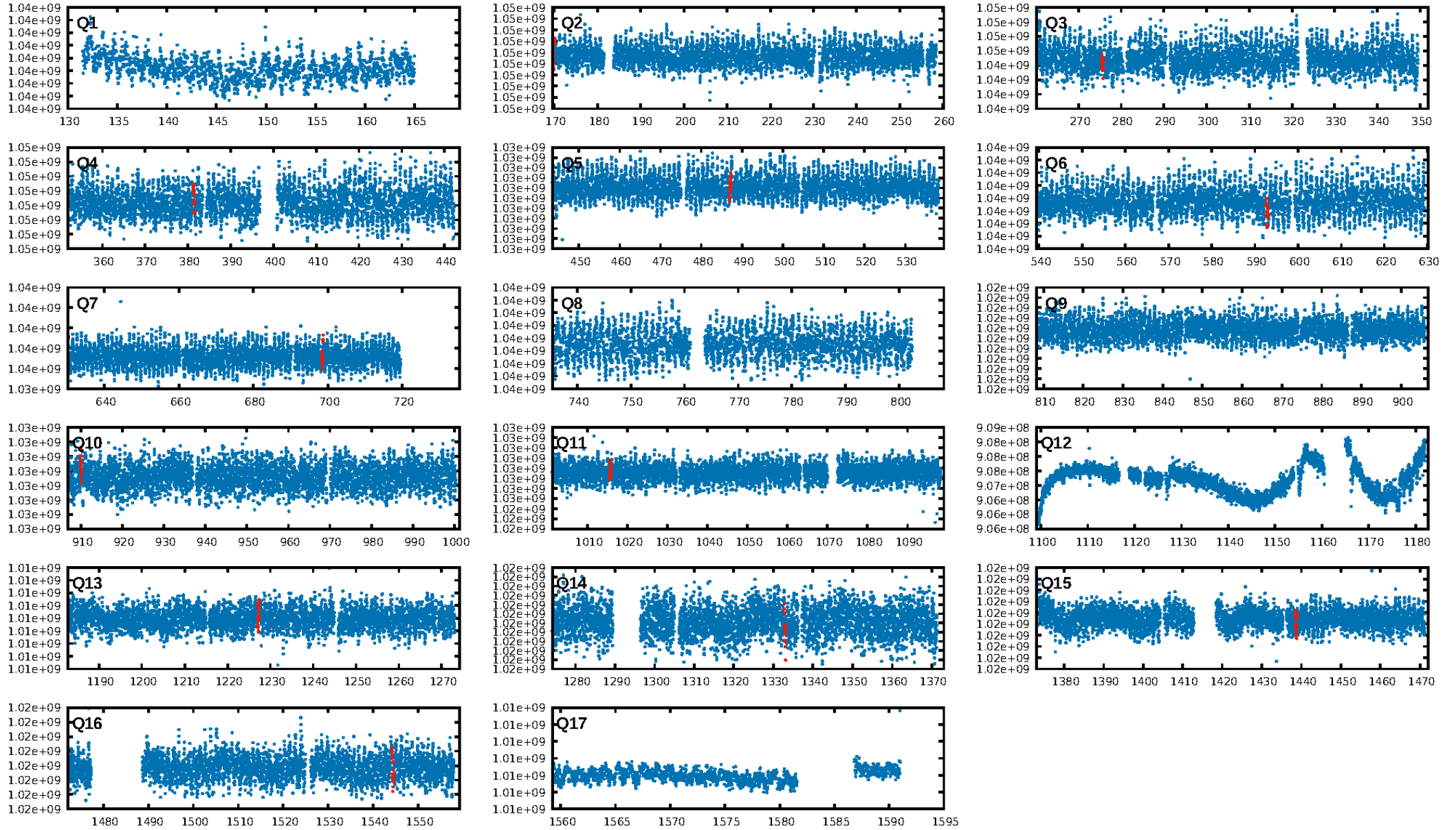
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [21.89σ]
LongPeriod-sig: 100.0% [66.11σ]
ModelChiSquare2-sig: 79.7%
ModelChiSquareGof-sig: 94.9%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 3.324
Centroid-sig: 4.0%
Centroid-so: 1.521 arcsec [2.41σ]
OotOffset-rm: 1.702 arcsec [1.59σ]
KicOffset-rm: 1.775 arcsec [1.79σ]
OotOffset-st: 3/3/2/2 [10]
KicOffset-st: 3/3/2/2 [10]
DiffImageQuality-fgm: 0.80 [8/10]
DiffImageOverlap-fno: 0.36 [4/11]

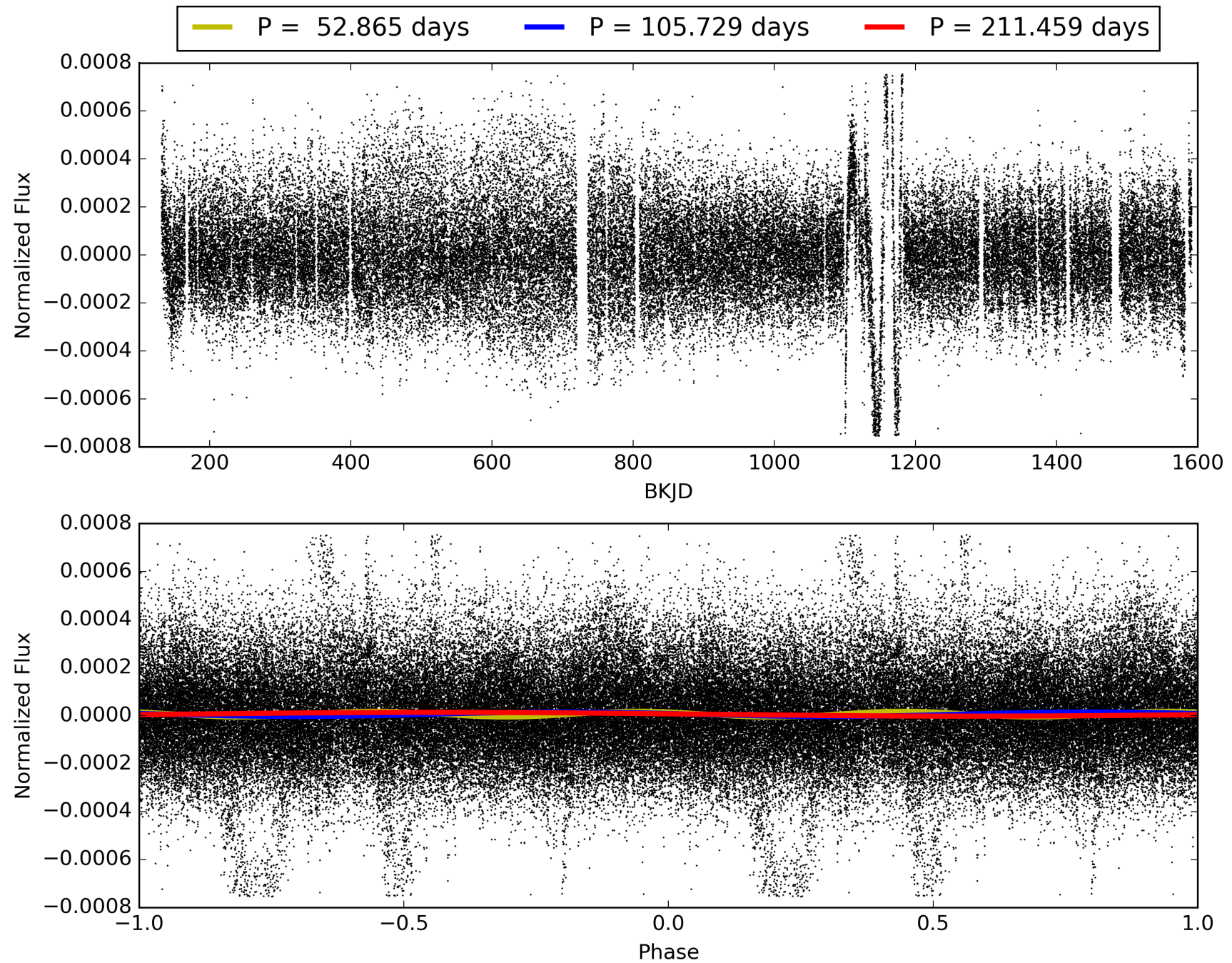
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 03:15:33 Z

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

TCE 006535143-04, PDC Light Curves

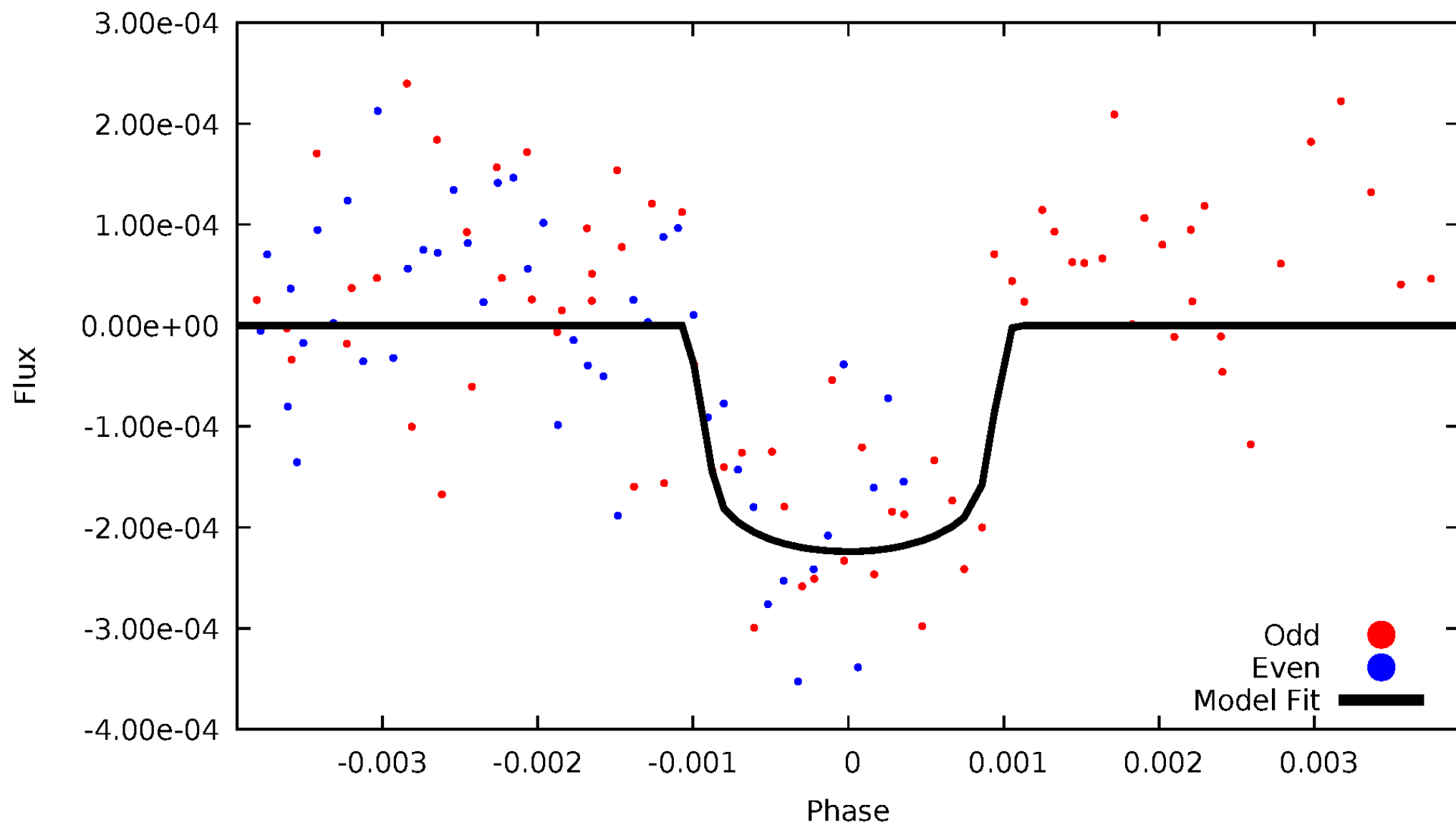


TCE 006535143-04



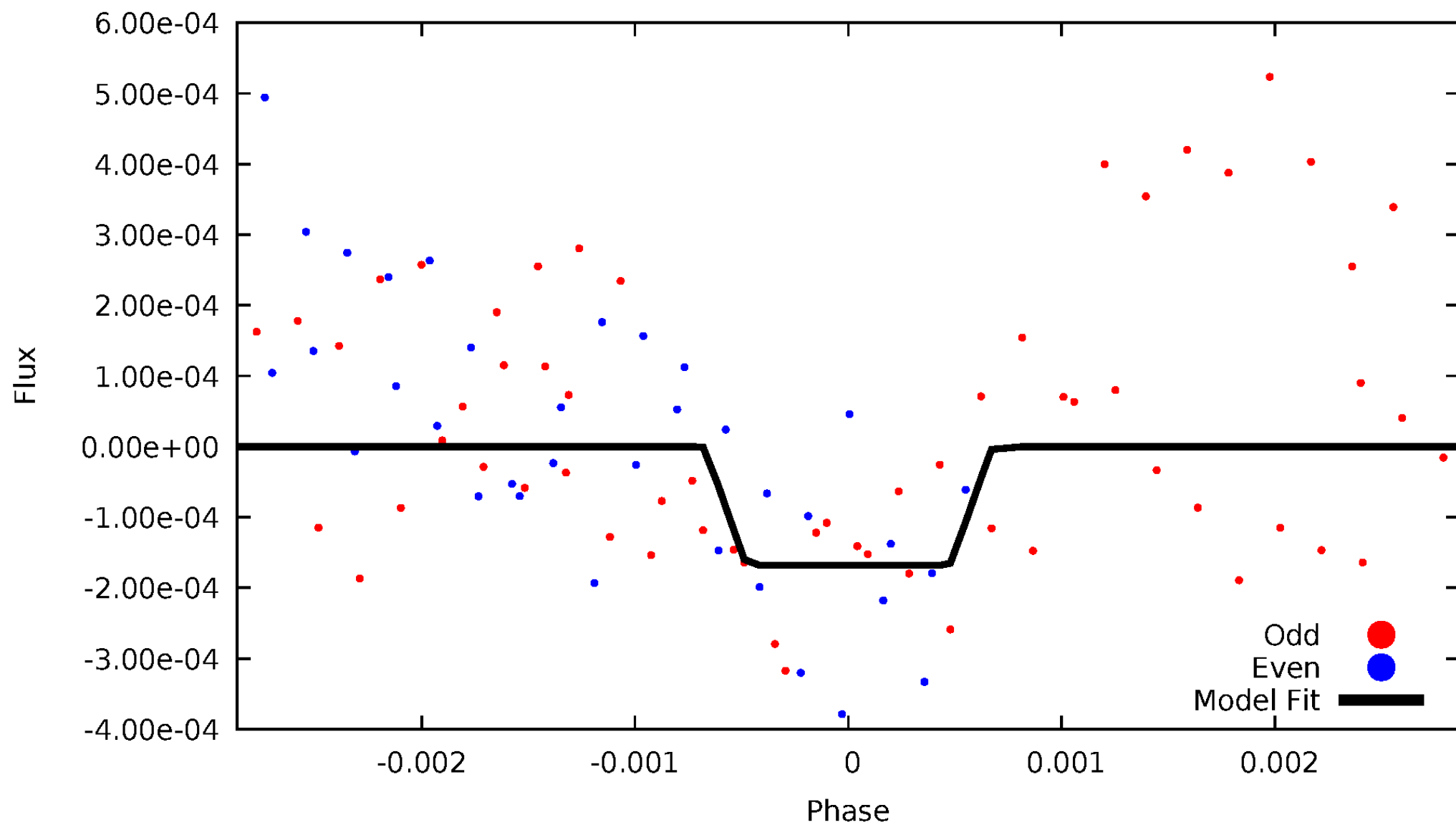
DV Odd/Even

TCE 006535143-04



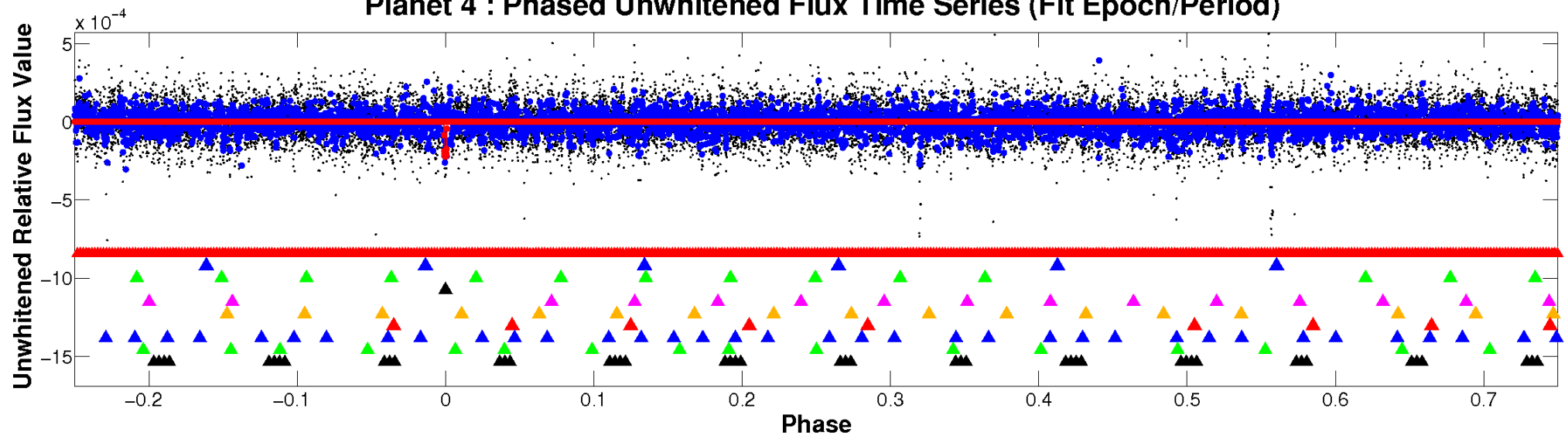
ALT Odd/Even

TCE 006535143-04

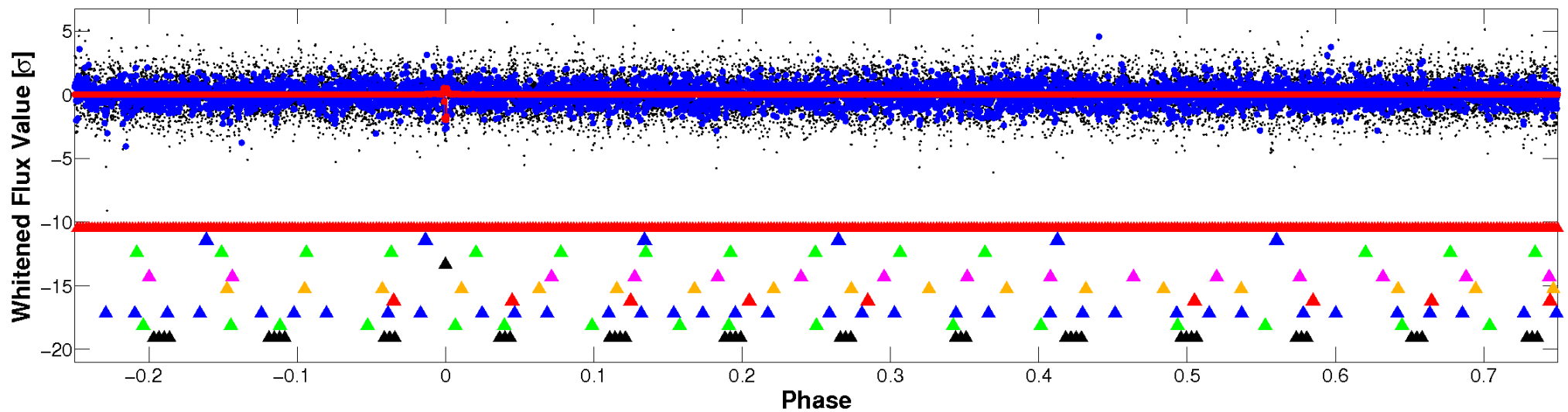


Non-Whitened Vs. Whitened Light Curve

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

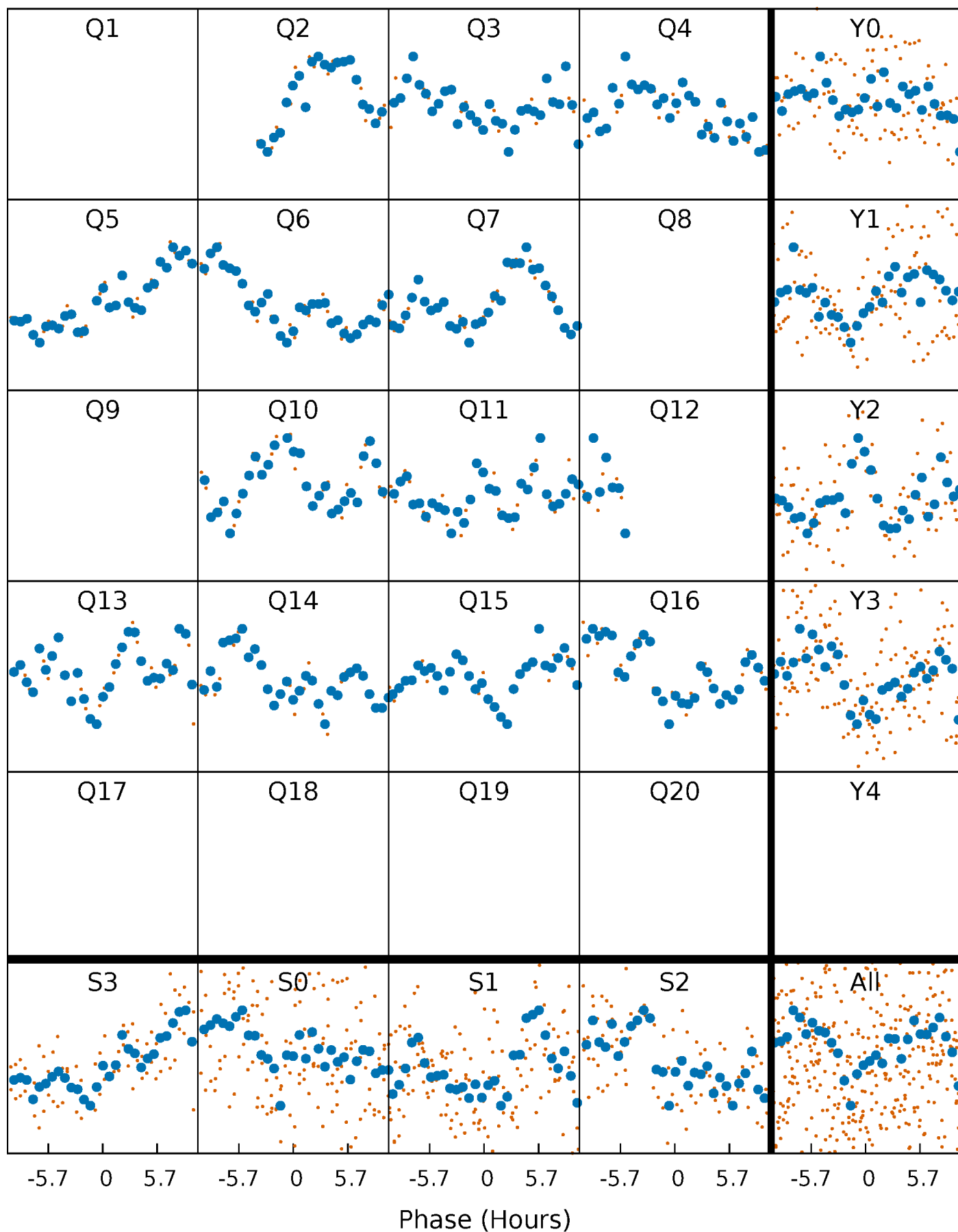


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



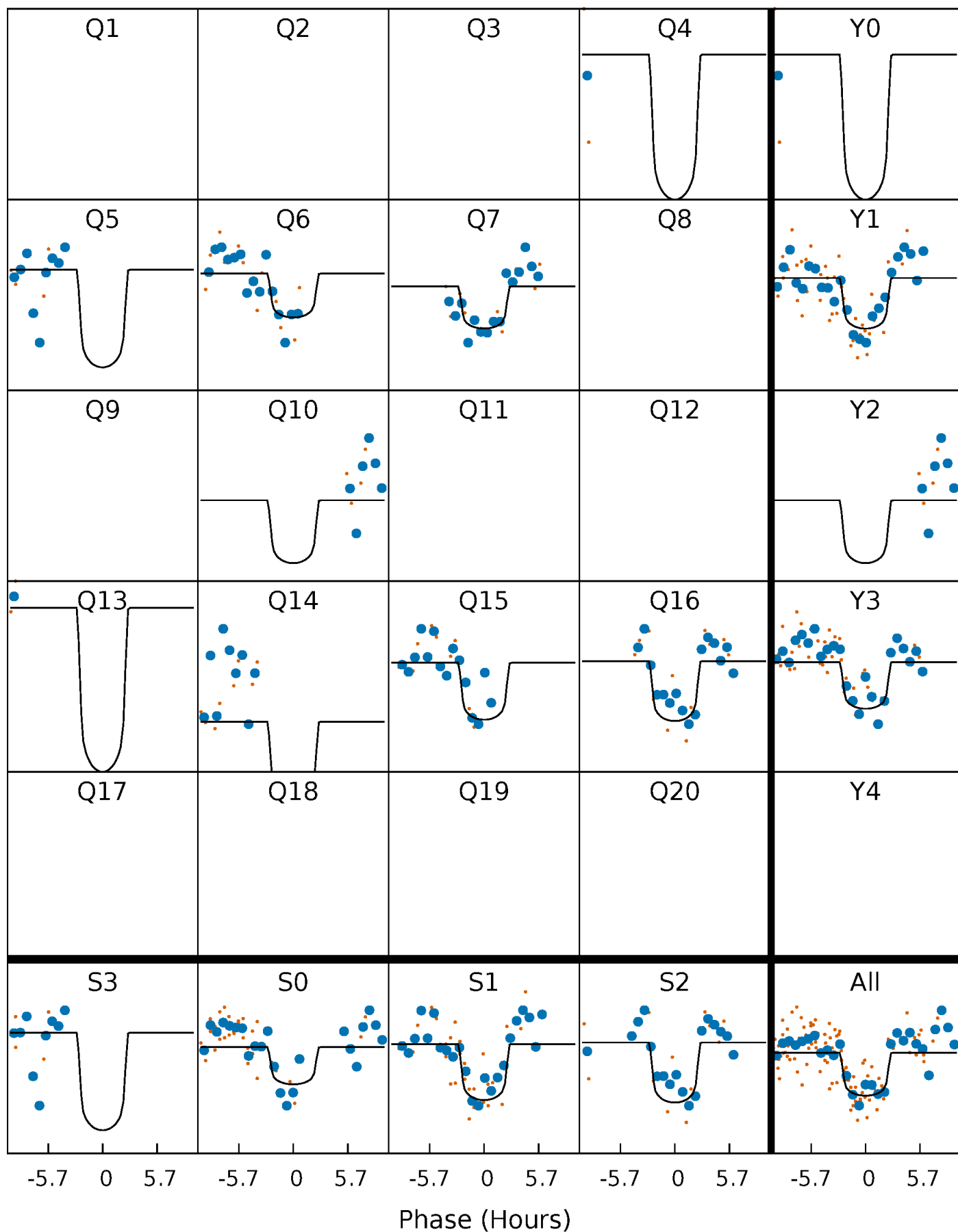
PDC Quarter-Phased Transit Curves

TCE 006535143-04 P=105.729358 Days $T_0=169.919884$ (BKJD)



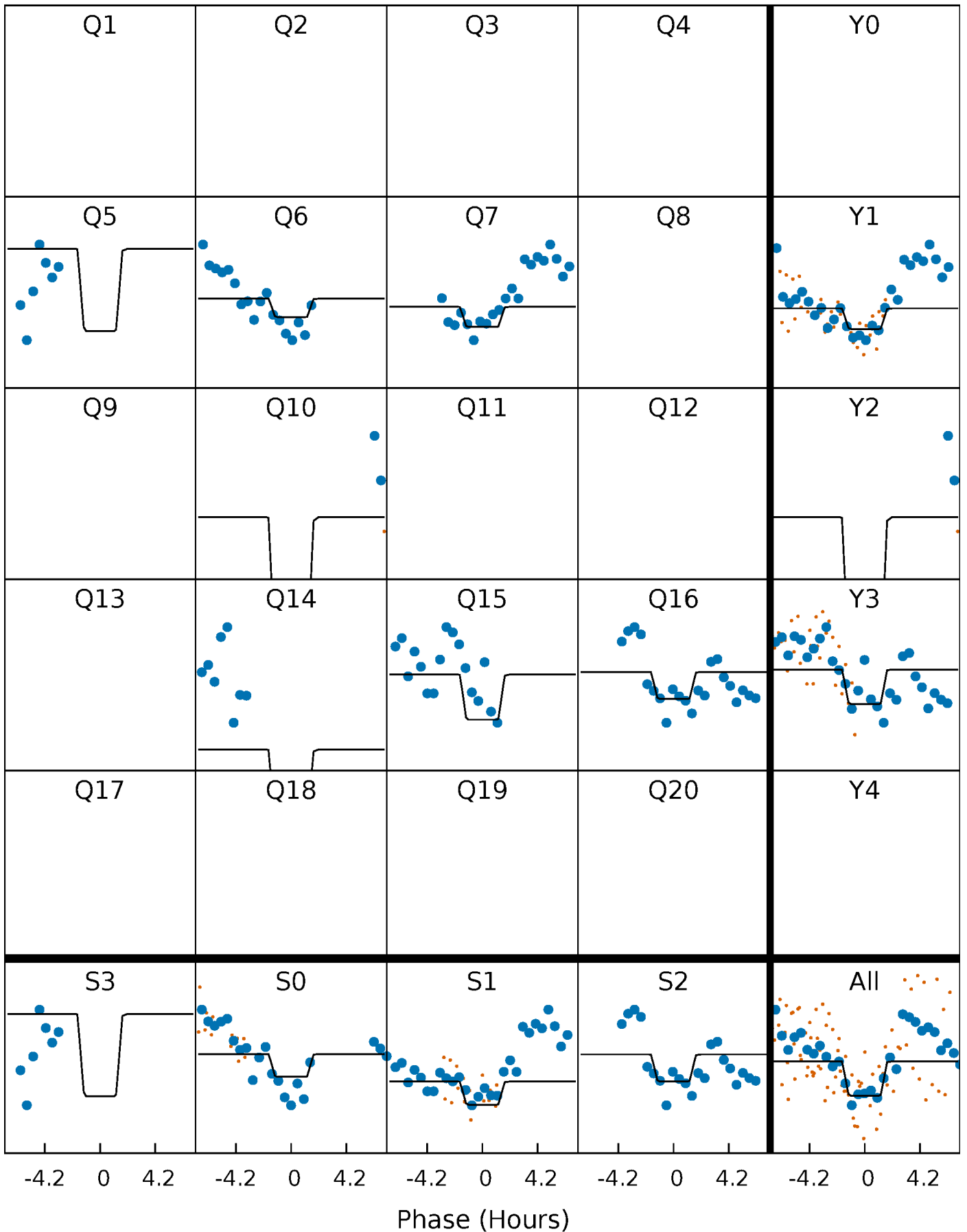
DV Quarter-Phased Transit Curves

TCE 006535143-04 P=105.729358 Days $T_0=169.919884$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

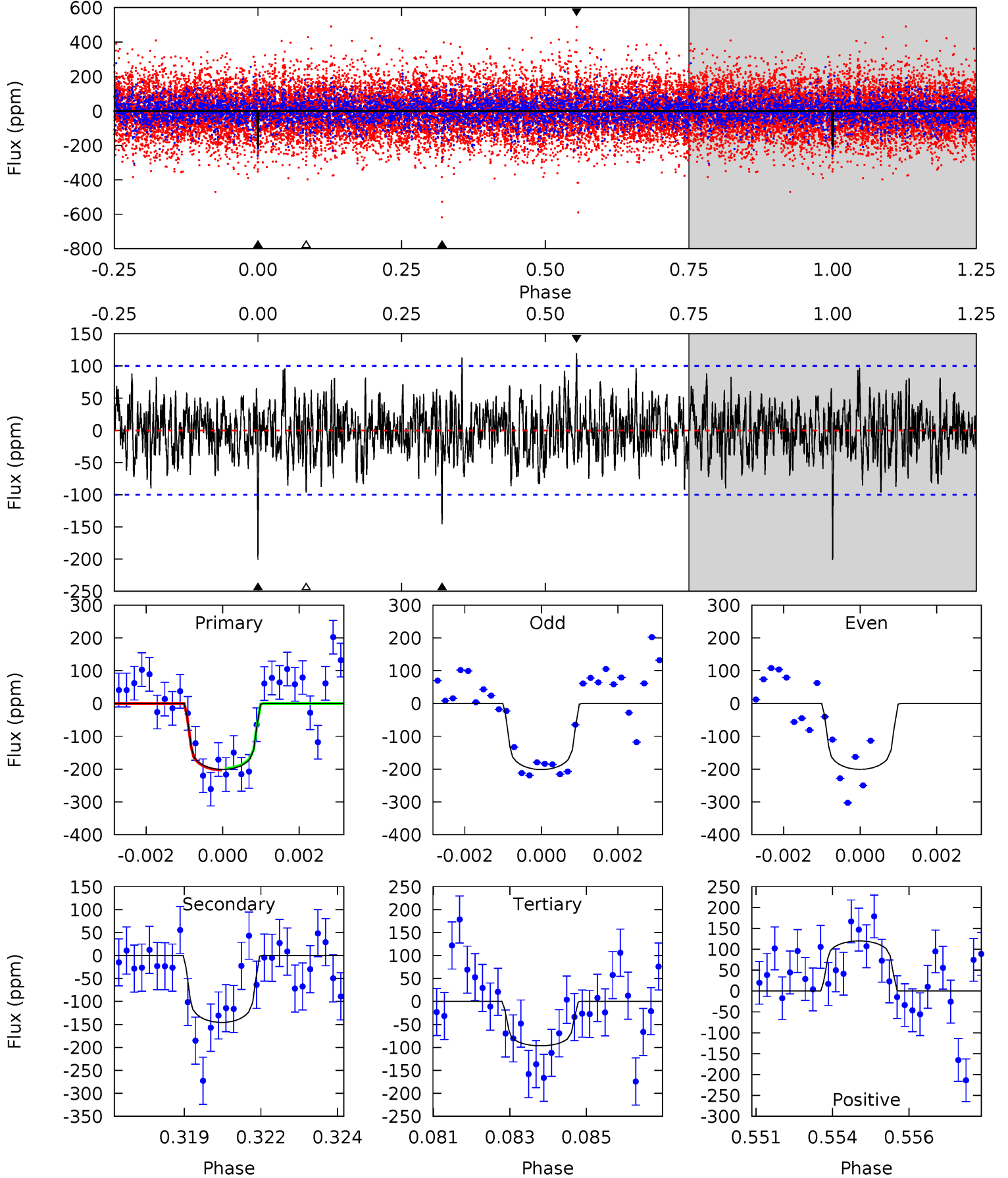
TCE 006535143-04 P=105.732777 Days $T_0=169.875084$ (BKJD)



DV Model-Shift Uniqueness Test

006535143-04, P = 105.729358 Days, E = 64.190526 Days

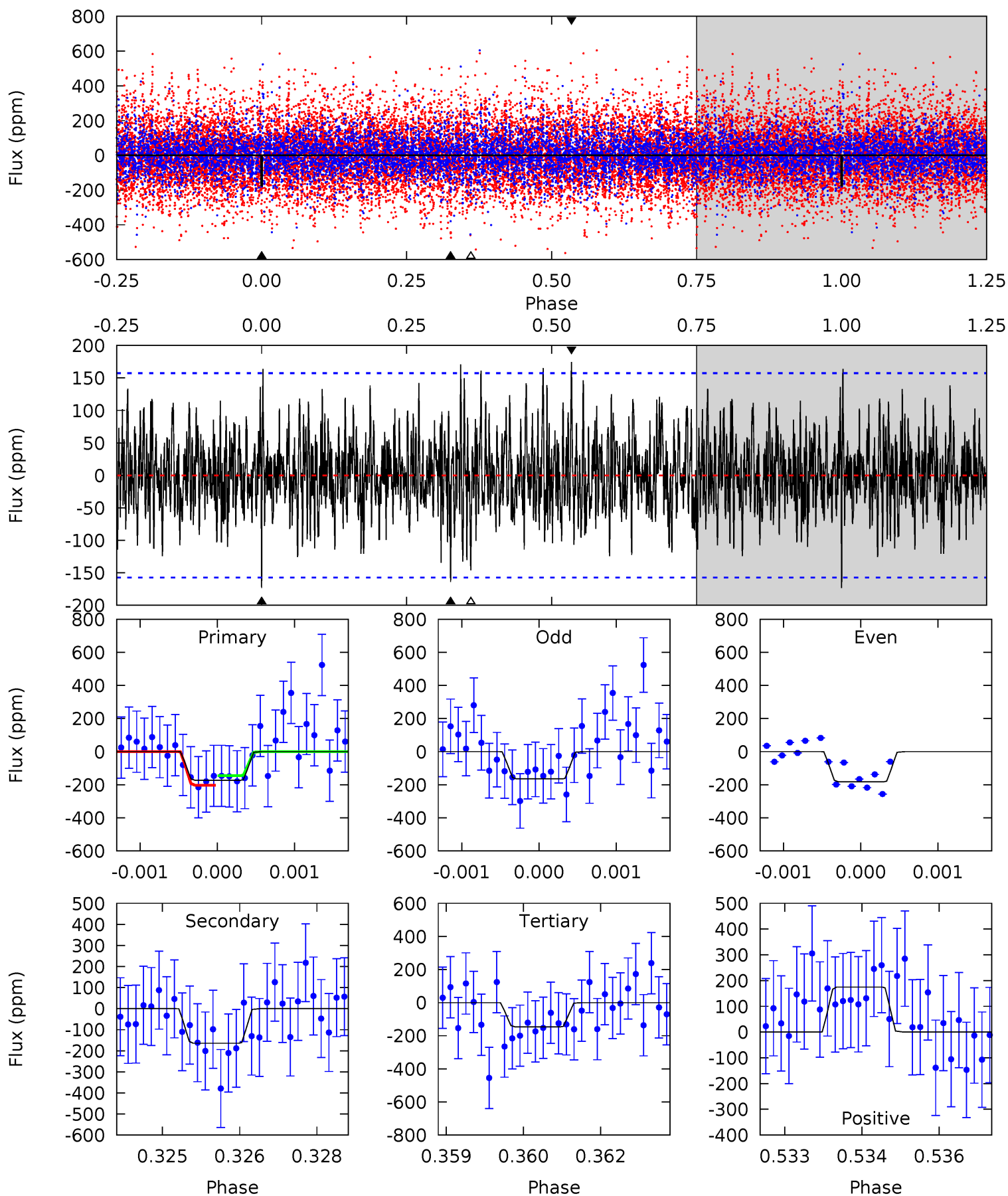
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.7	7.74	5.13	6.37	5.32	3.07	1.71	5.56	4.32	2.61	1.37	0.02	1.00	0.37	0.13



Alt Model-Shift Uniqueness Test

006535143-04, P = 105.732777 Days, E = 64.142307 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.93	5.61	5.00	5.98	5.39	3.19	1.65	0.93	-0.05	0.61	-0.37	0.29	1.05	0.50	0.99



Stellar Parameters For KIC 006535143

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6875^{+71}_{-82}	$4.027^{+0.149}_{-0.122}$	$0.020^{+0.150}_{-0.150}$	$1.985^{+0.389}_{-0.389}$	$1.530^{+0.146}_{-0.133}$	$0.276^{+0.202}_{-0.099}$
	+1%/-1%	+4%/-3%	+750%/-750%	+20%/-20%	+10%/-9%	+73%/-36%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 006535143-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-146 ± 19	$3.53^{+2.18}_{-1.92}$	839^{+42}_{-44}	5932^{+3295}_{-1225}	1678^{+6281}_{-1067}
Alt.	-164 ± 29	$2.90^{+2.13}_{-1.74}$	837^{+40}_{-42}	6707^{+5725}_{-1564}	2783^{+14796}_{-1879}

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 $A_{obs} \gg 1.0$

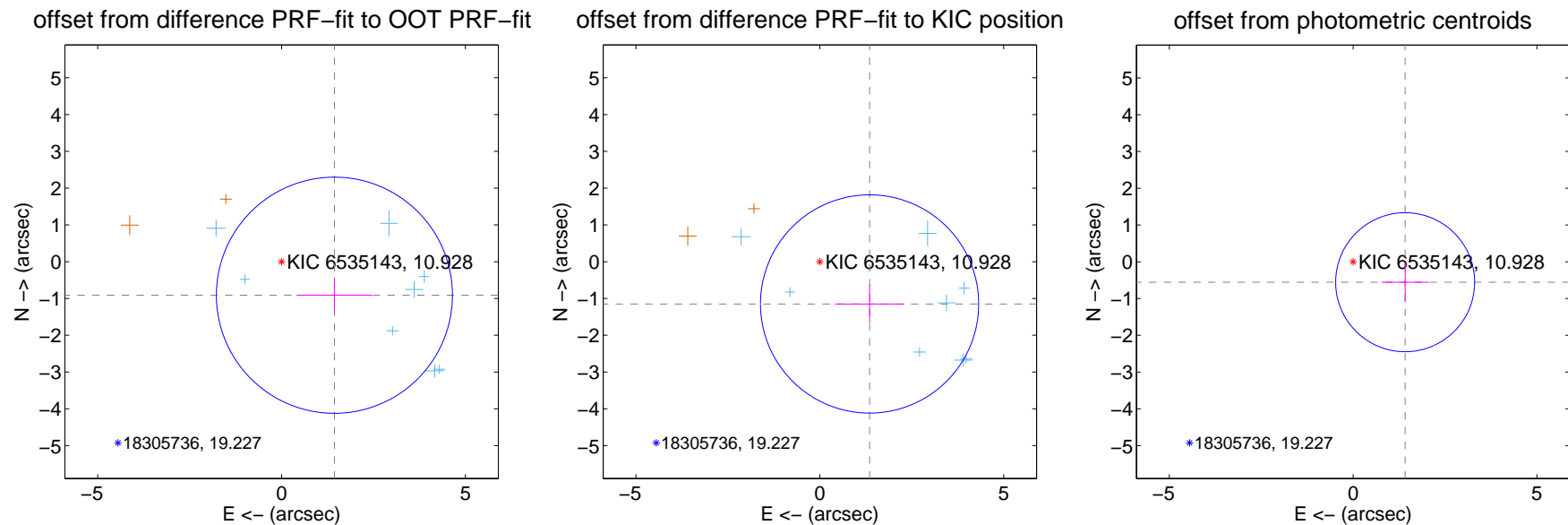
DV Centroid Data

Supplemental centroid analysis for 006535143-04. **Kepler magnitude: 10.93.** Transit SNR 10.70

There are 8 quarters with good PRF difference image offsets

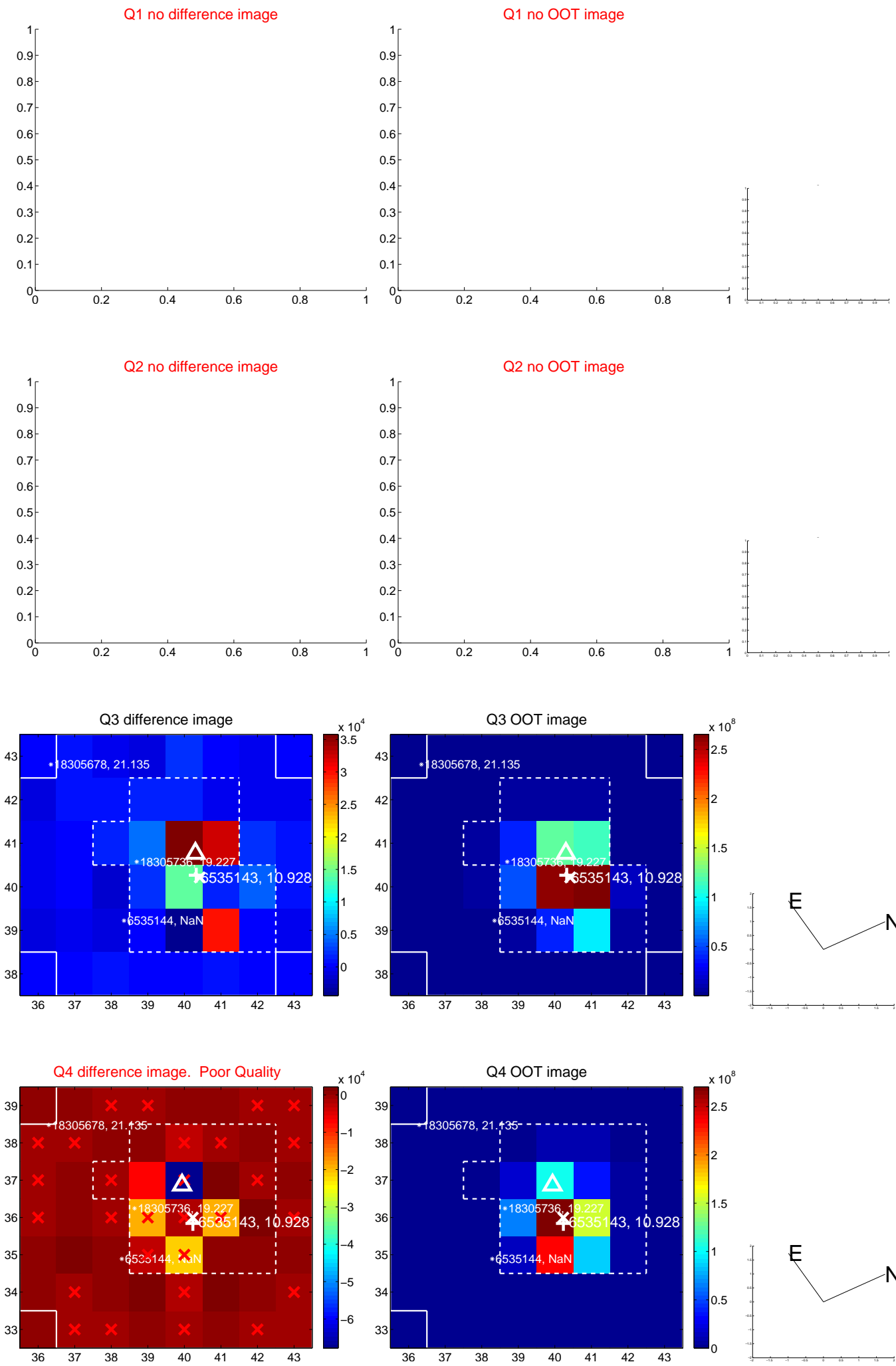
The direct PRF centroid is offset from the target star catalog position by about 0.39 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.702 ± 1.070	1.59	-1.437 ± 1.028	-0.912 ± 0.473
PRF-fit source offset from KIC position	1.775 ± 0.989	1.79	-1.353 ± 0.936	-1.149 ± 0.517
photometric centroid source offset	1.52 ± 0.63	2.41	-1.42 ± 0.64	-0.56 ± 0.54

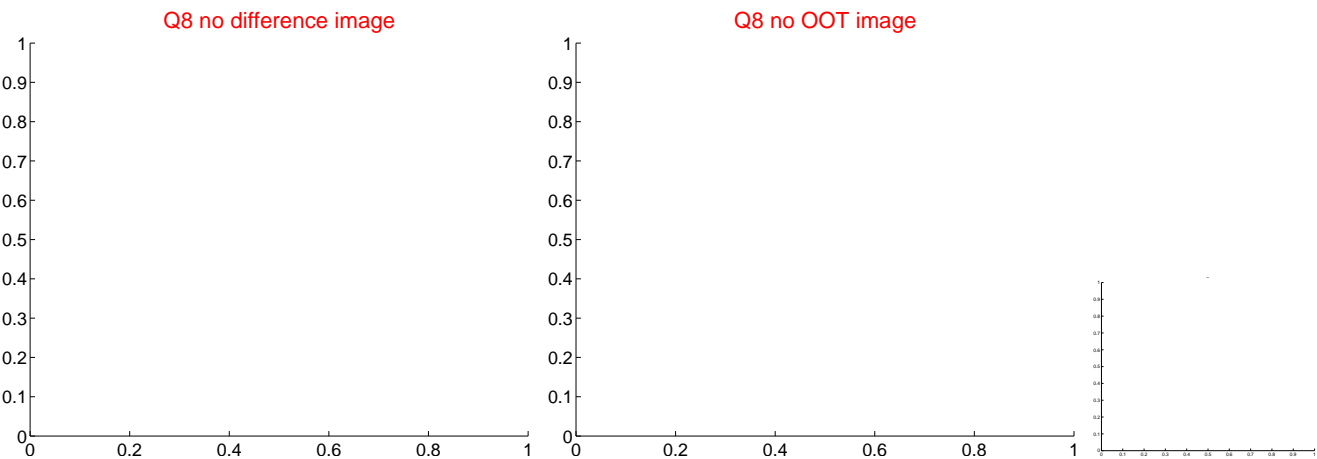
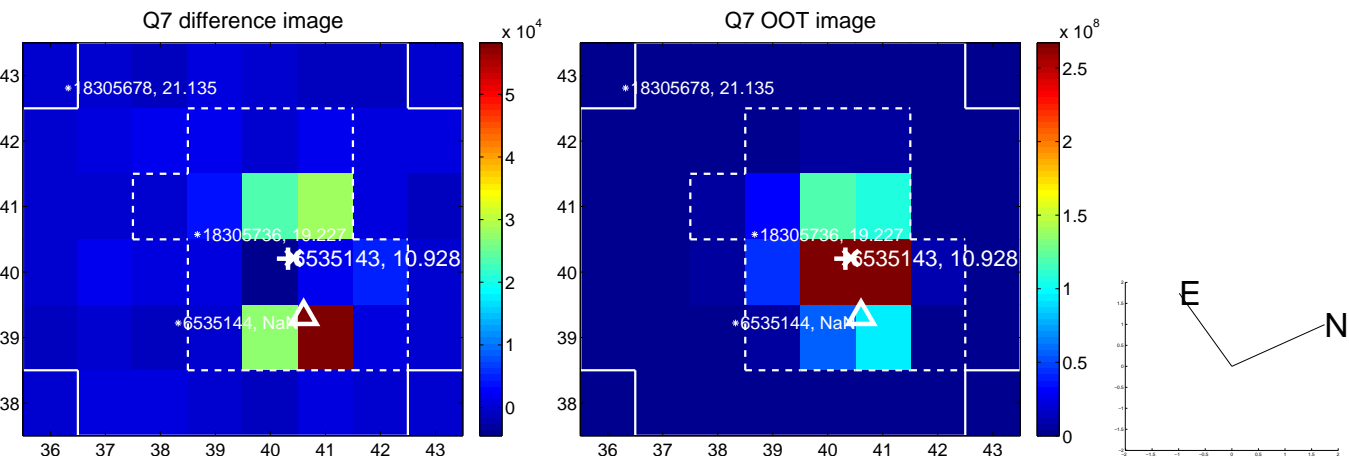
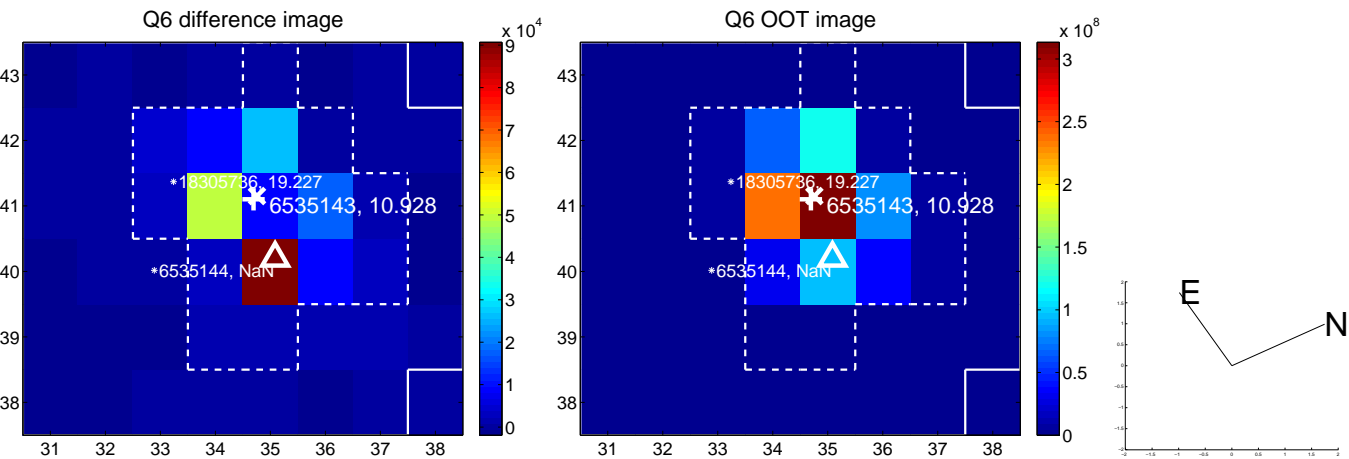
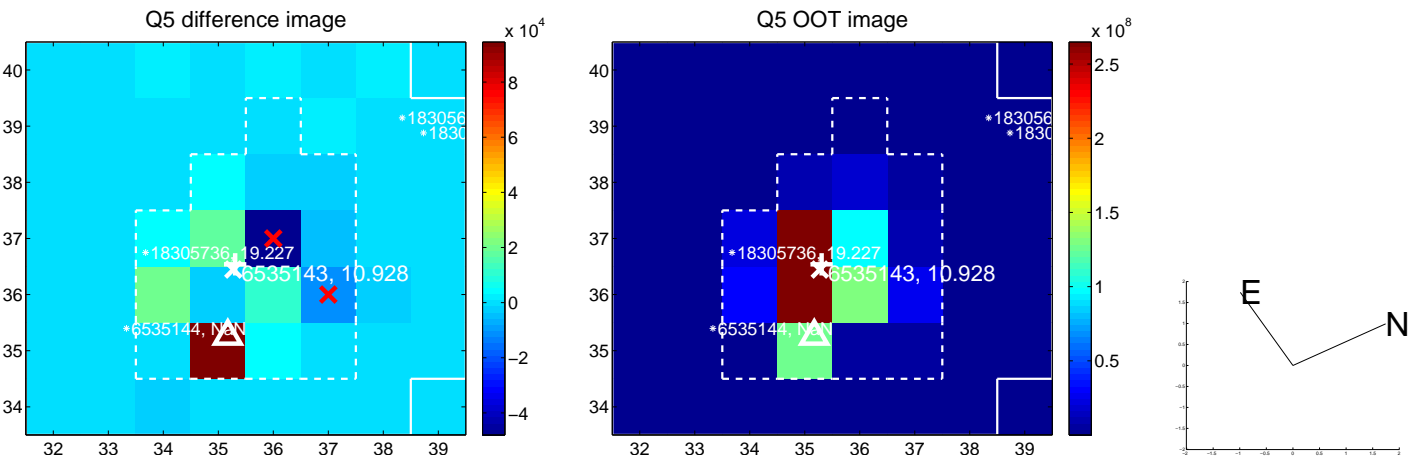


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

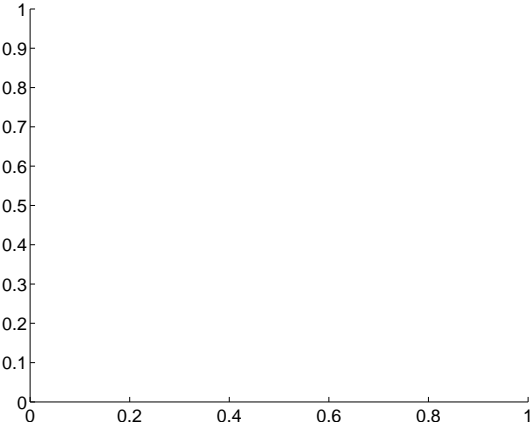


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

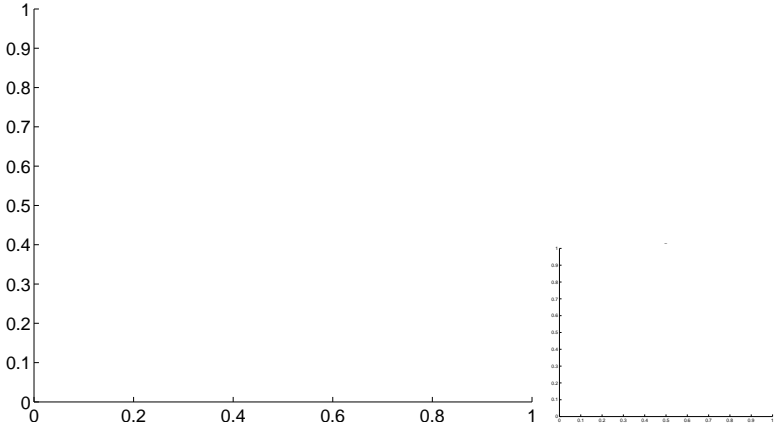


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

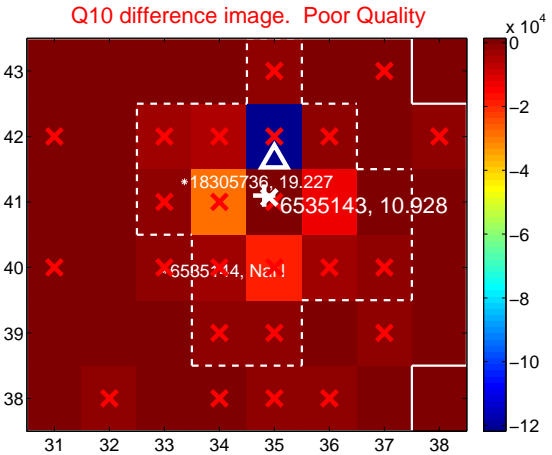
Q9 no difference image



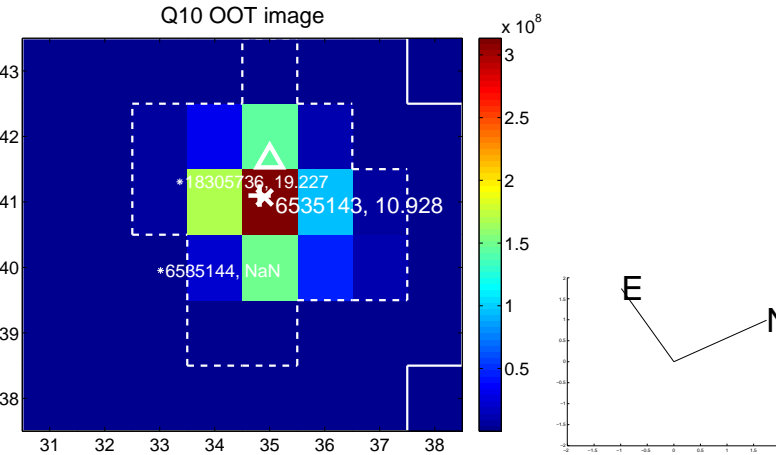
Q9 no OOT image



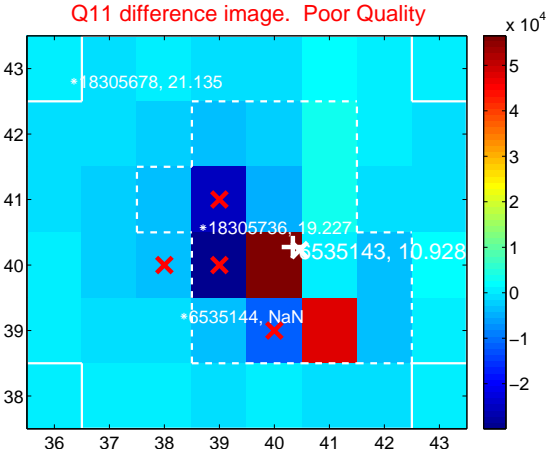
Q10 difference image. Poor Quality



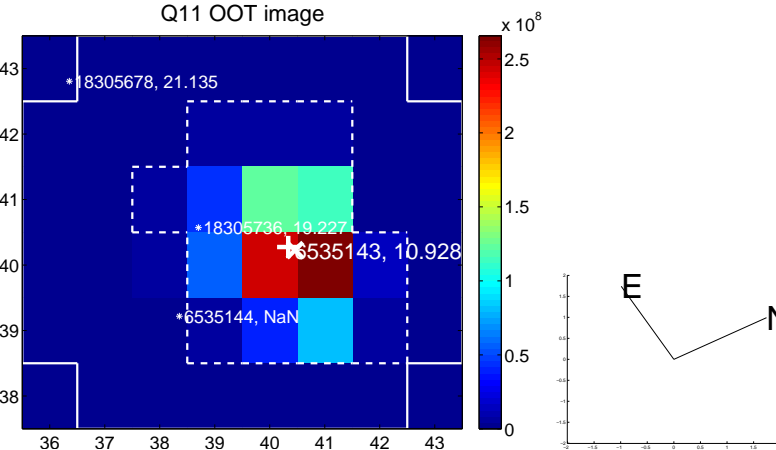
Q10 OOT image



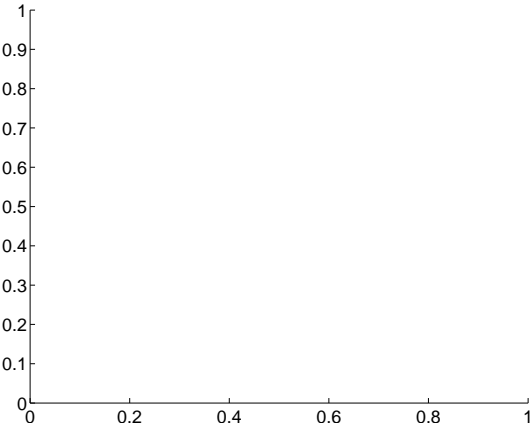
Q11 difference image. Poor Quality



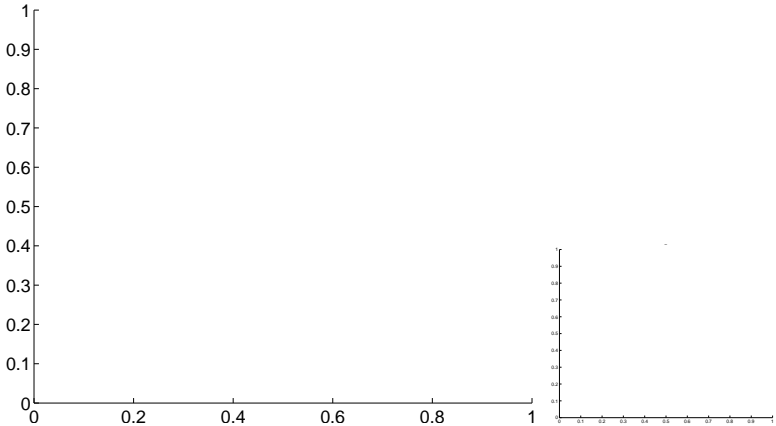
Q11 OOT image



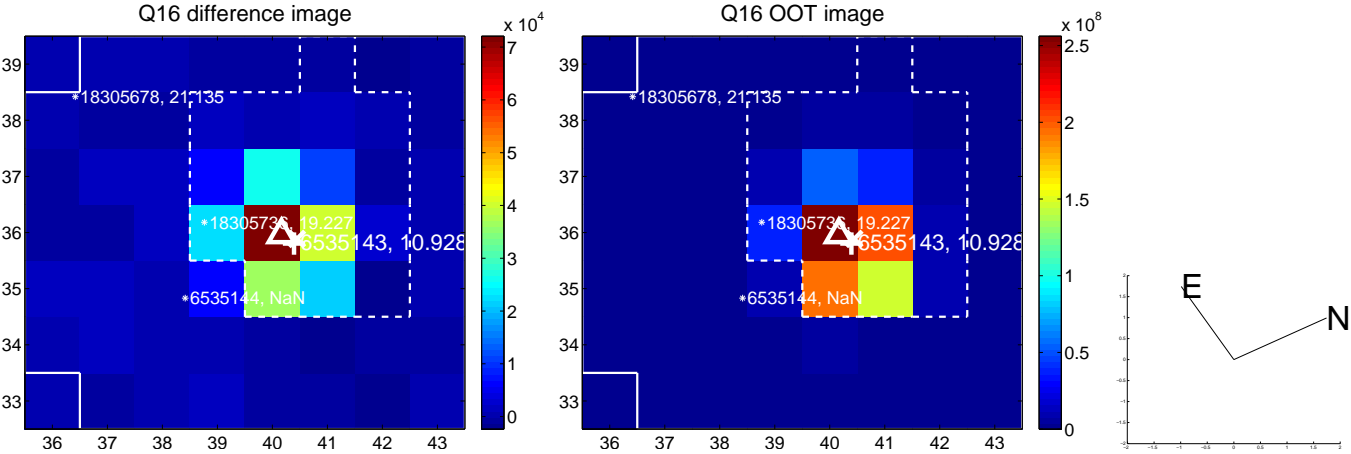
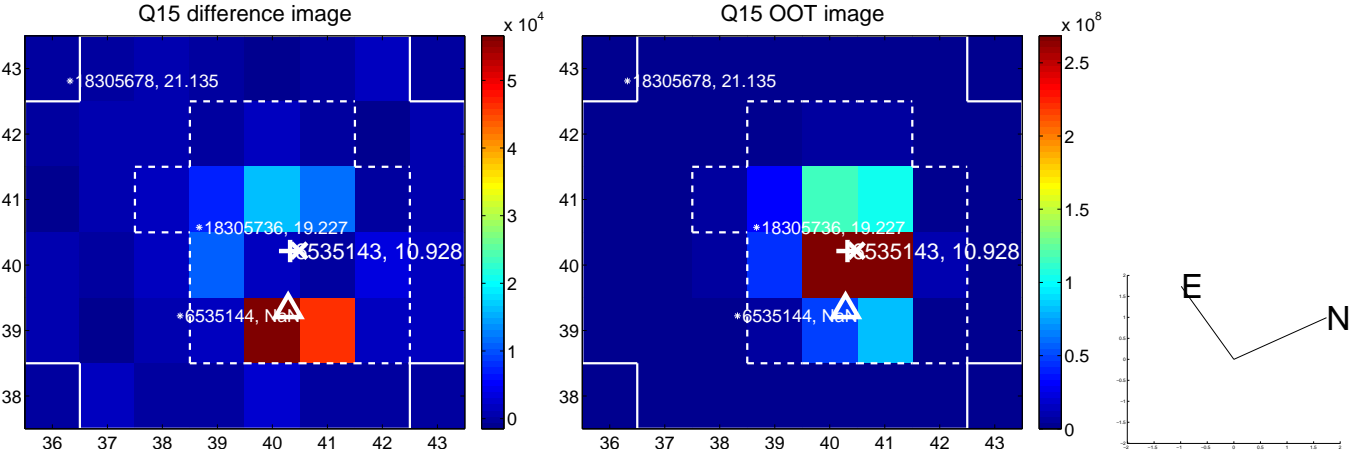
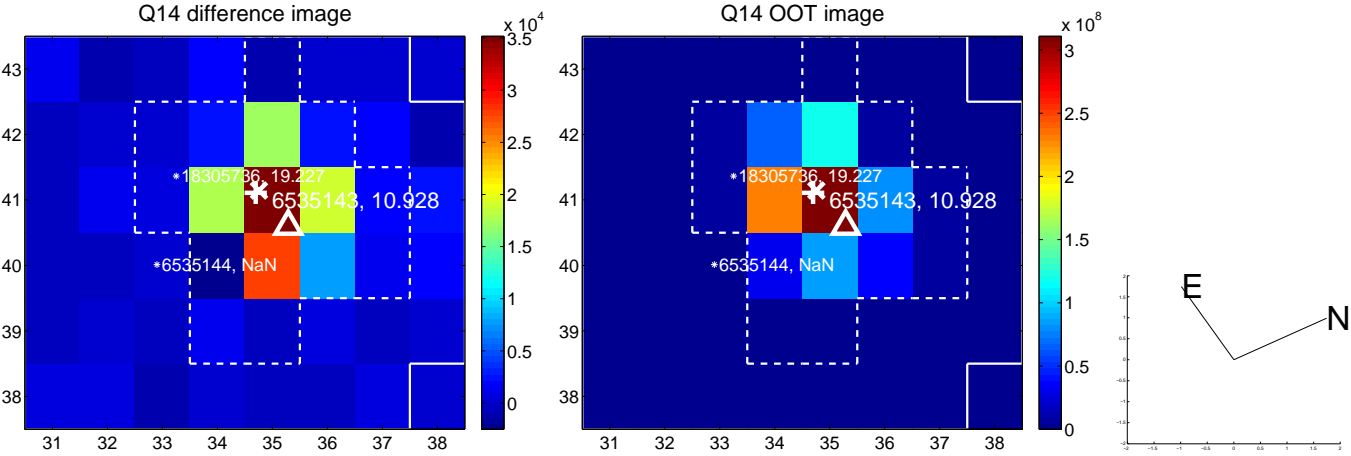
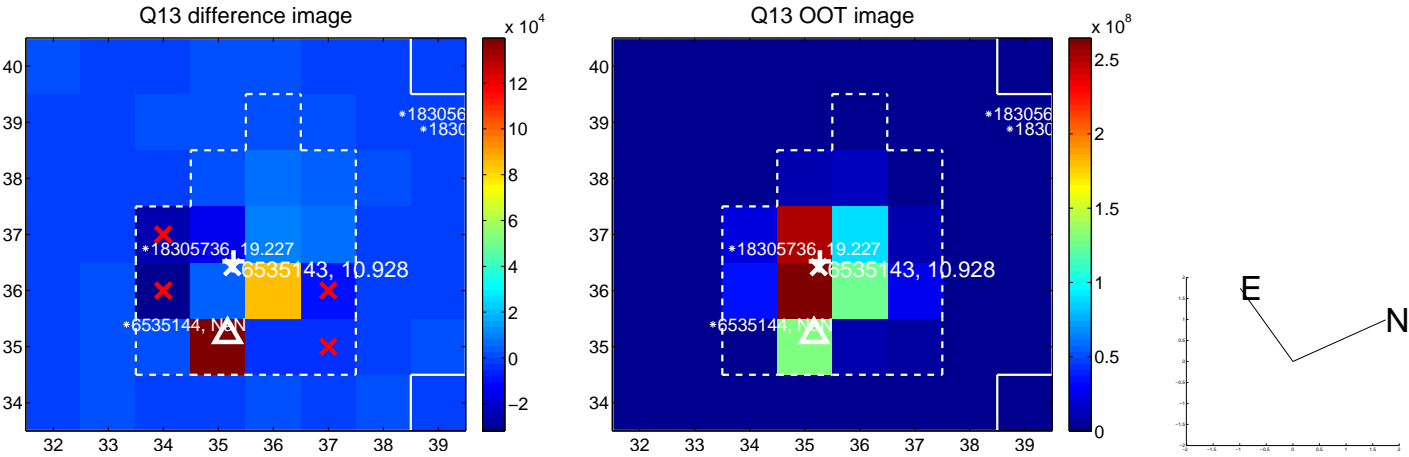
Q12 no difference image



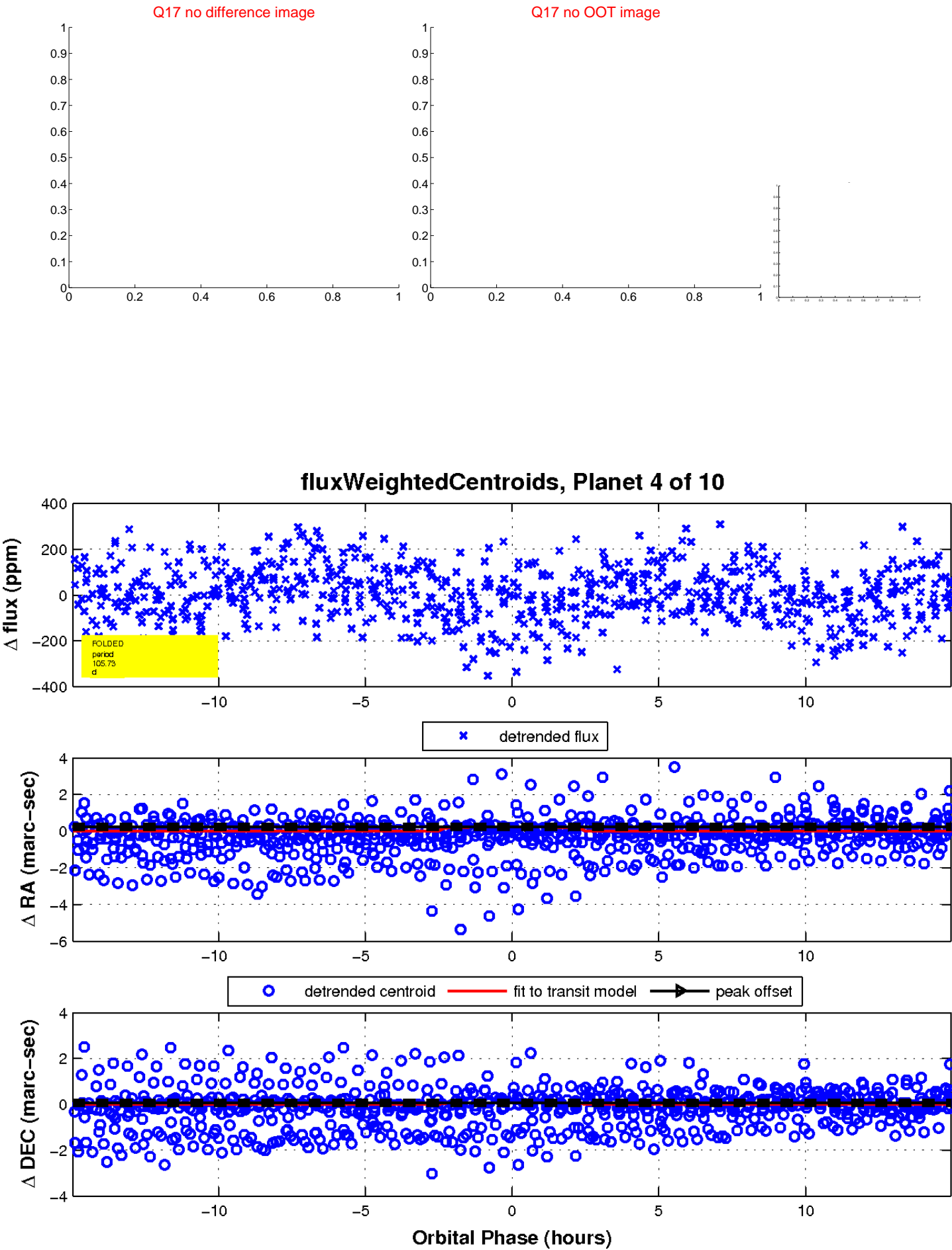
Q12 no OOT image



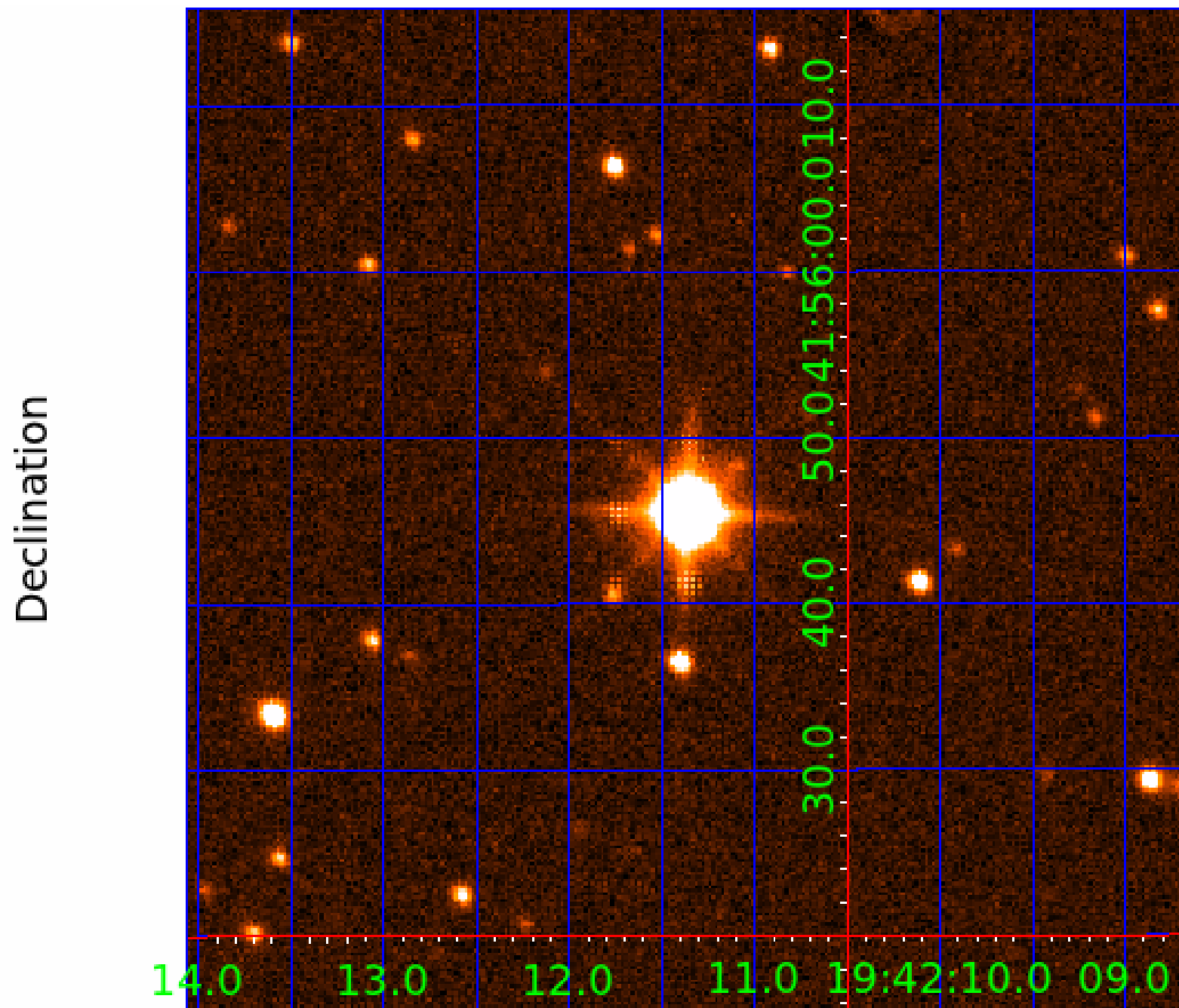
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



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})
006535143-01	OBS	No	1.655275	131.668348	13.1	9.574	8.6	7.7	1.99	6875	0.72	7918.91
006535143-02	OBS	No	256.515171	289.836364	112.5	5.531	10.2	6.4	1.99	6875	2.16	9.51
006535143-03	OBS	No	99.682988	208.377736	257.3	2.340	10.1	10.6	1.99	6875	3.64	33.55
006535143-04	OBS	No	105.729358	169.919884	224.0	4.991	9.9	10.7	1.99	6875	3.22	31.01
006535143-05	OBS	No	99.802727	154.724213	181.5	4.161	9.5	8.9	1.99	6875	3.11	33.49
006535143-06	OBS	No	83.476567	209.923159	177.7	4.474	9.1	9.2	1.99	6875	2.99	42.50
006535143-07	OBS	No	162.818577	271.955355	65.4	20.114	8.9	4.1	1.99	6875	1.84	17.44
006535143-08	OBS	No	40.486809	145.706523	94.9	7.051	8.6	7.6	1.99	6875	2.17	111.53
006535143-09	OBS	No	89.732378	186.618285	139.3	6.675	8.6	5.9	1.99	6875	2.66	38.60
006535143-10	OBS	No	32.503334	158.465697	196.5	0.978	8.3	7.9	1.99	6875	3.26	149.48

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006535143-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_SATURATED
006535143-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
006535143-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
006535143-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006535143-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006535143-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_SATURATED
006535143-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006535143-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
006535143-09	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
006535143-10	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—CENT_SATURATED

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

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

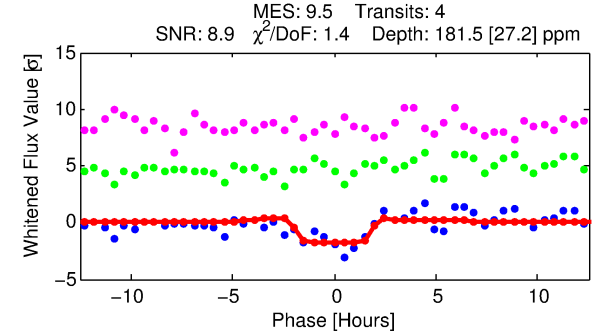
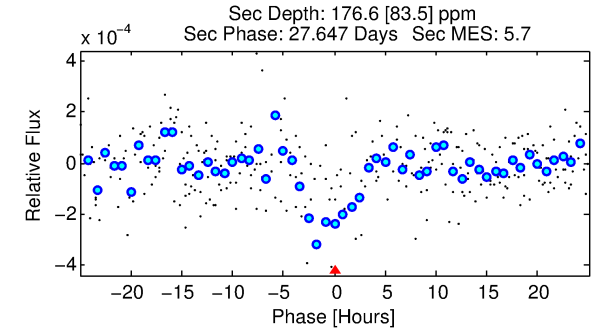
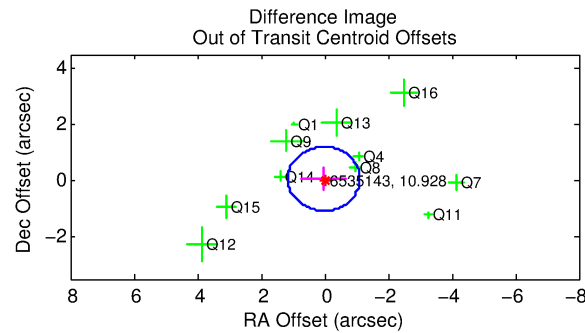
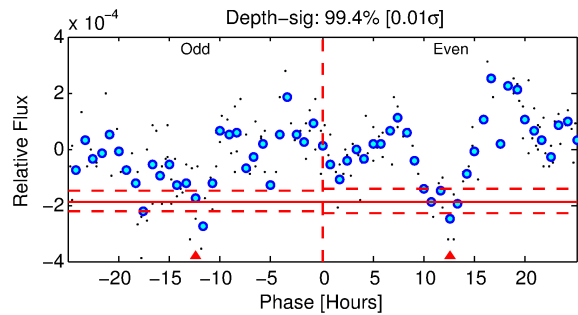
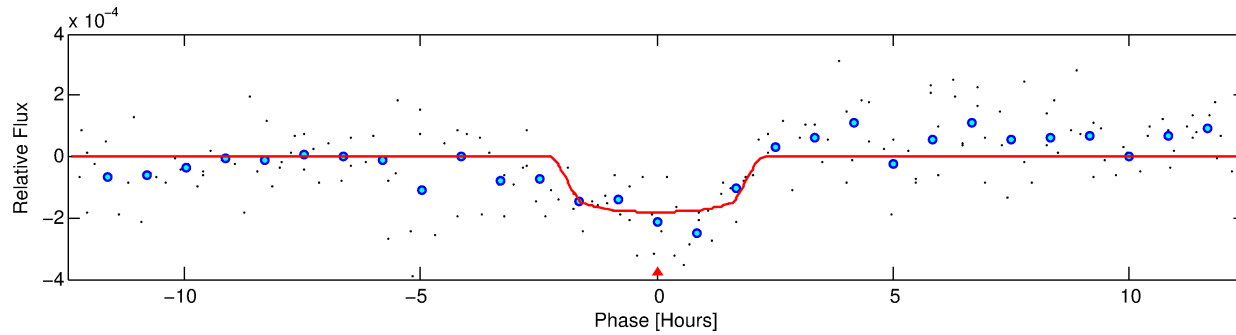
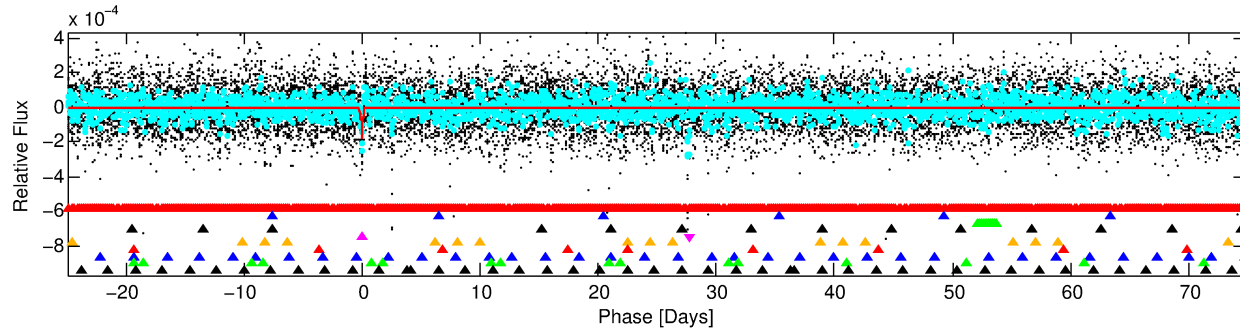
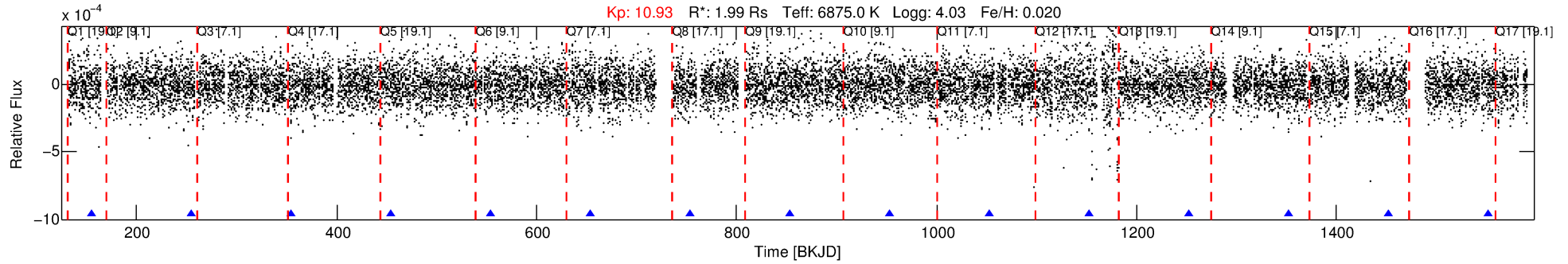
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006535143-05

No Significant Match Found

DV One-Page Summary

KIC: 6535143 Candidate: 5 of 10 Period: 99.803 d



DV Fit Results:

Period = 99.80273 [0.00155] d
Epoch = 154.7242 [0.0144] BKJD
Rp/R* = 0.0143 [0.0070]
a/R* = 86.37 [247.85]
b = 0.90 [0.62]
Seff = 33.49 [8.97]
Teq = 613 [41] K
Rp = 3.11 [1.63] Re
a = 0.4853 [0.0843] AU
Ag = 2368.08 [2636.68] [0.90 σ]
Teffp = 6616 [1791] K [3.35 σ]

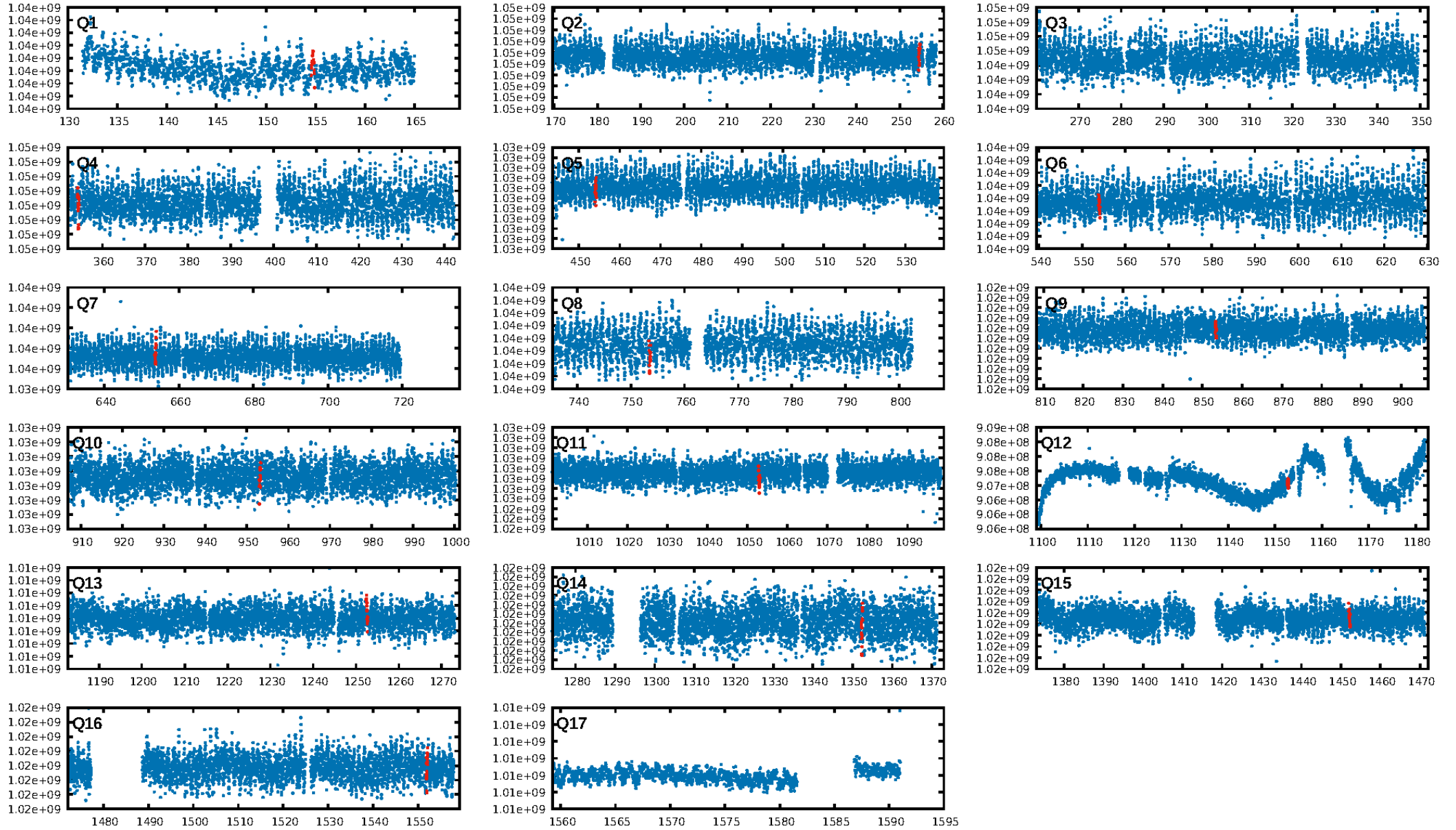
DV Diagnostic Results:

ShortPeriod-sig: 45.3% [0.60 σ]
LongPeriod-sig: 100.0% [21.8 σ]
ModelChiSquare2-sig: 94.7%
ModelChiSquareGof-sig: 68.1%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.4305
Centroid-sig: 26.5%
Centroid-so: 0.570 arcsec [0.97 σ]
OotOffset-rm: 0.077 arcsec [0.20 σ]
KicOffset-rm: 0.610 arcsec [1.07 σ]
OotOffset-st: 1/3/4/3 [11]
KicOffset-st: 1/3/4/3 [11]
DiffImageQuality-fgm: 0.18 [2/11]
DiffImageOverlap-fno: 0.27 [4/15]

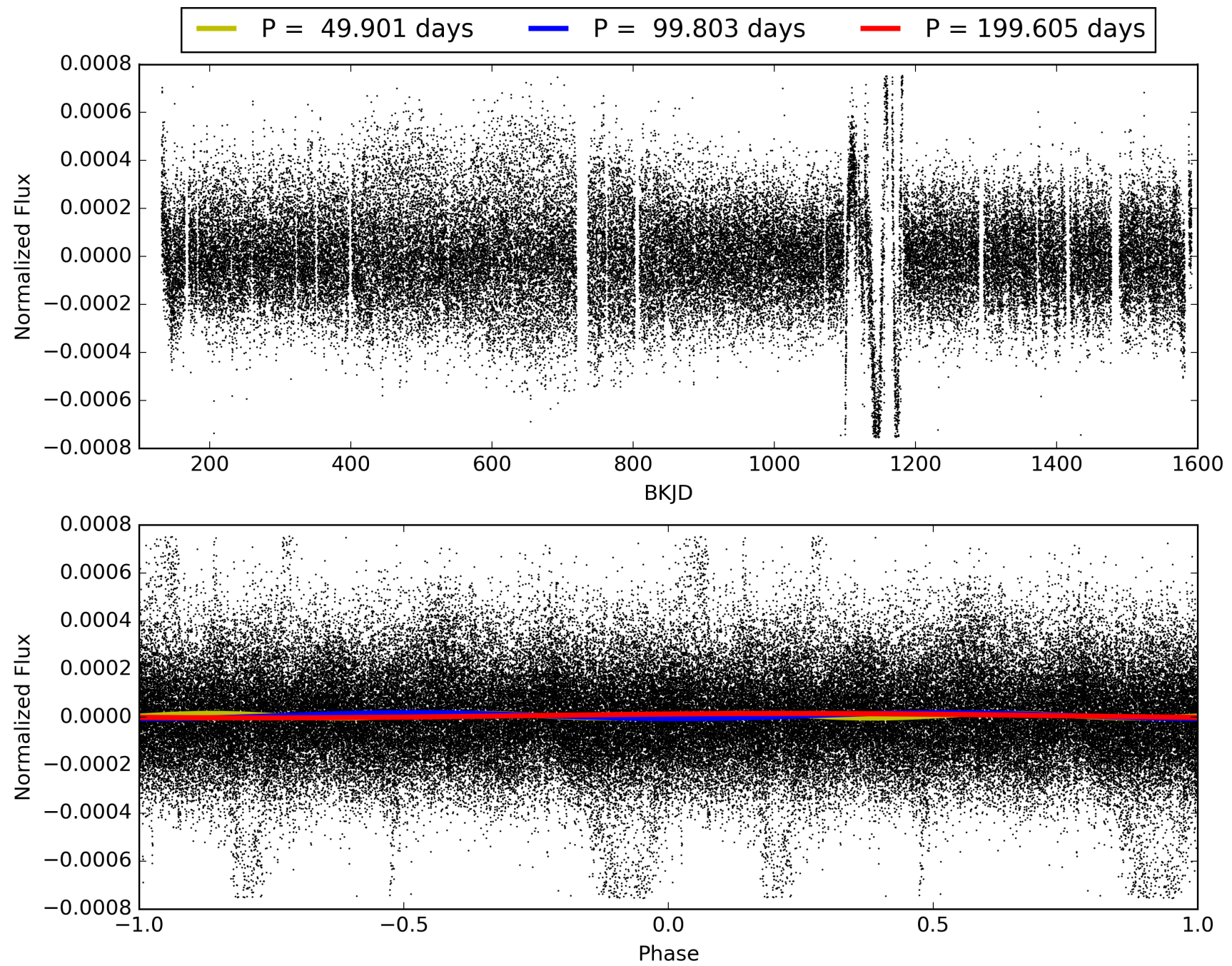
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 03:15:37 Z

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

TCE 006535143-05, PDC Light Curves

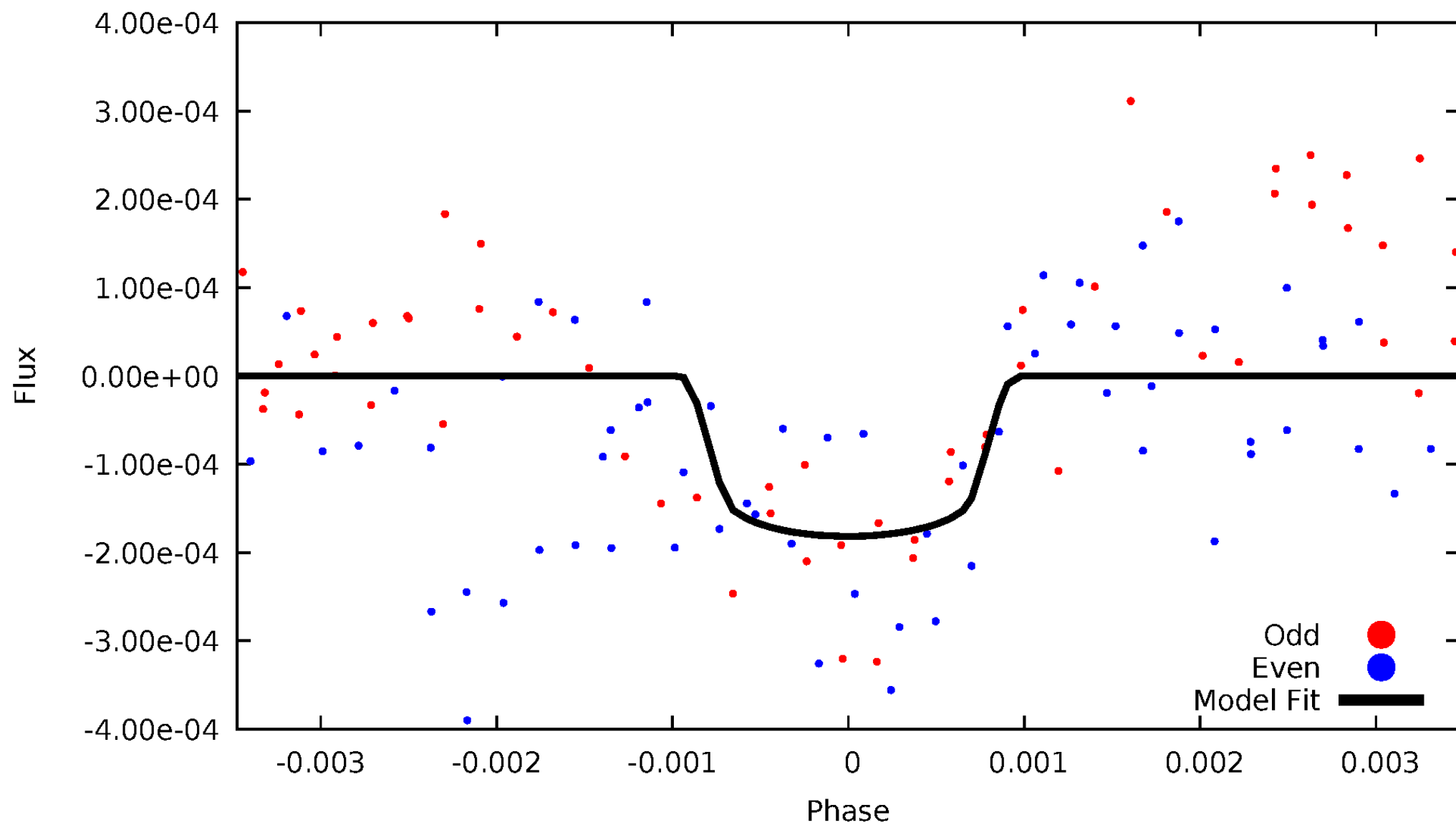


TCE 006535143-05



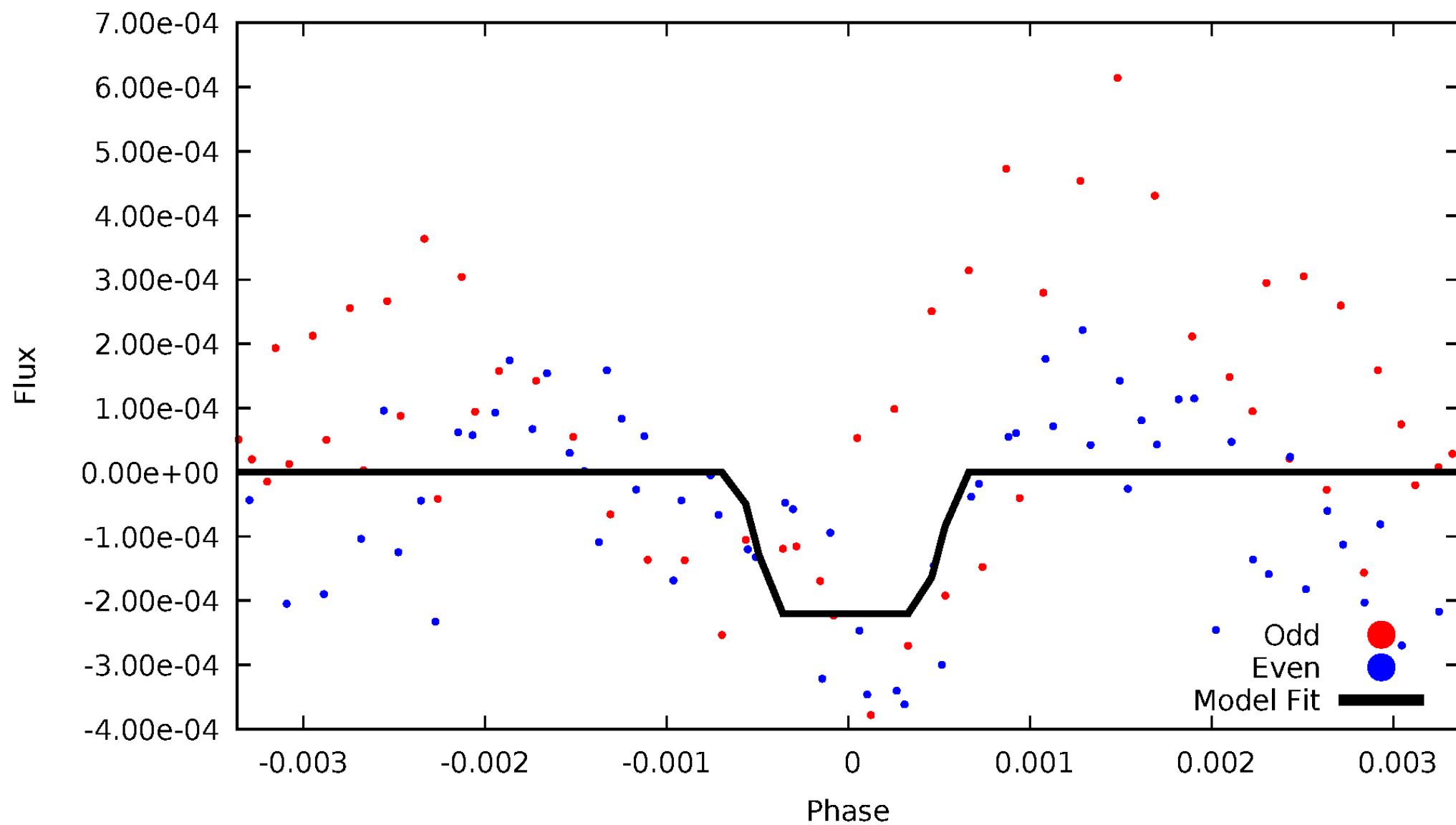
DV Odd/Even

TCE 006535143-05

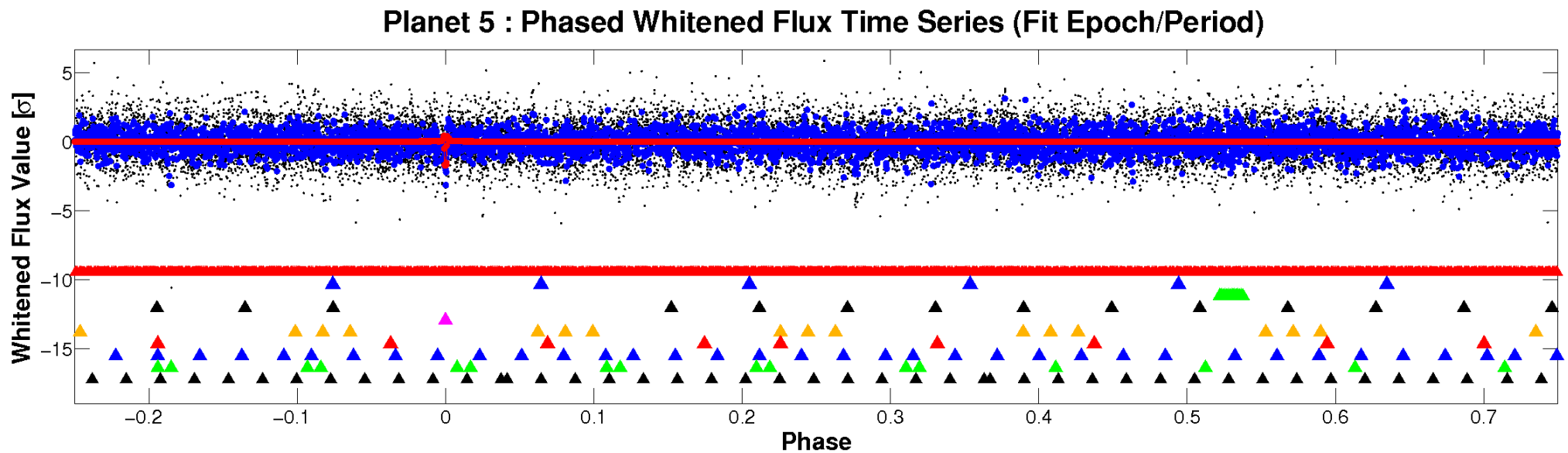
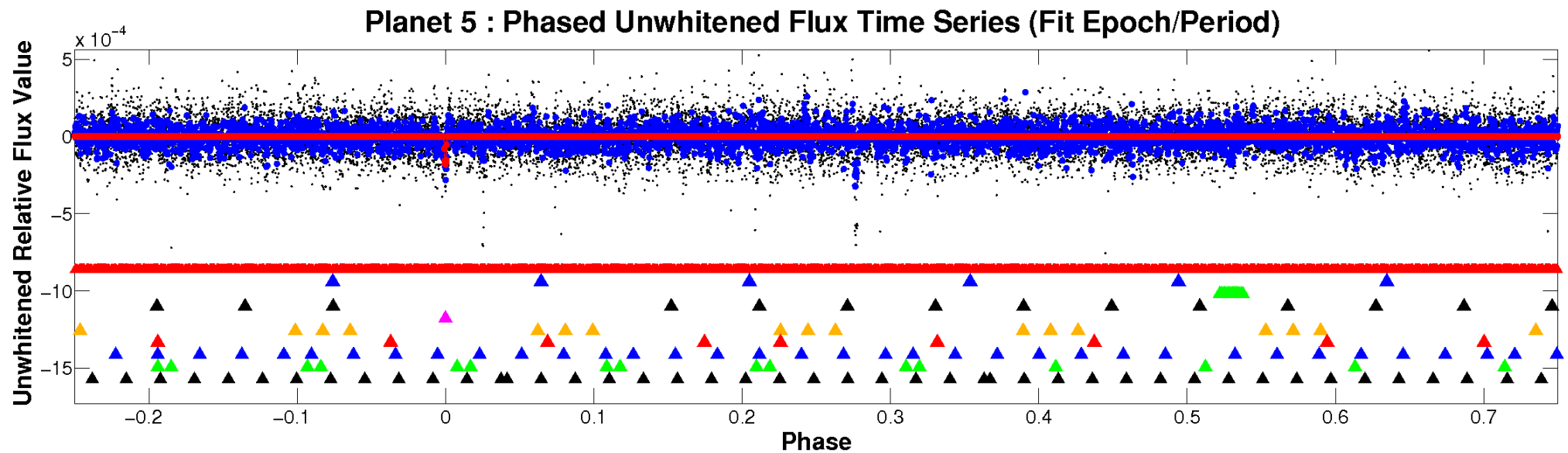


ALT Odd/Even

TCE 006535143-05

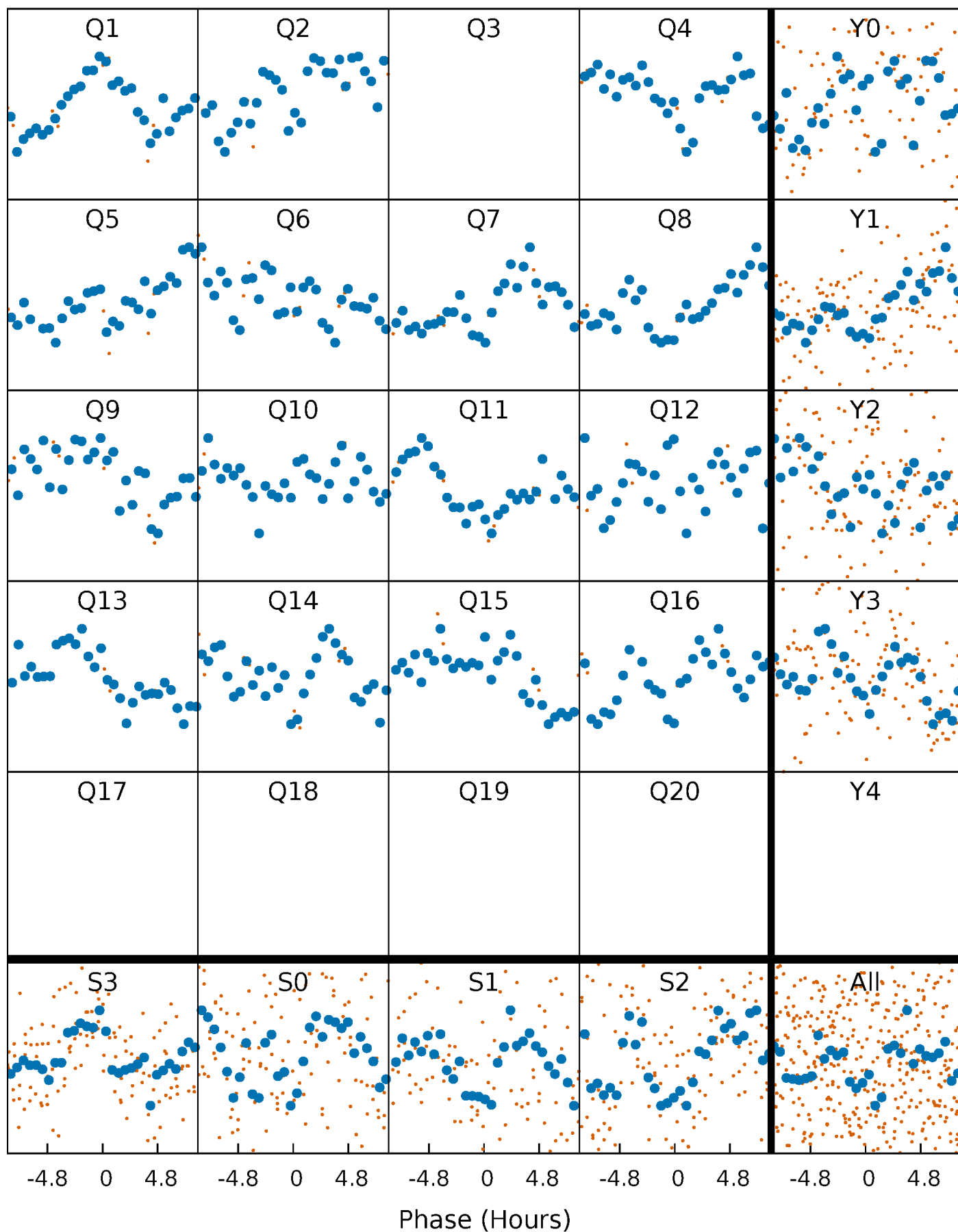


Non-Whitened Vs. Whitened Light Curve



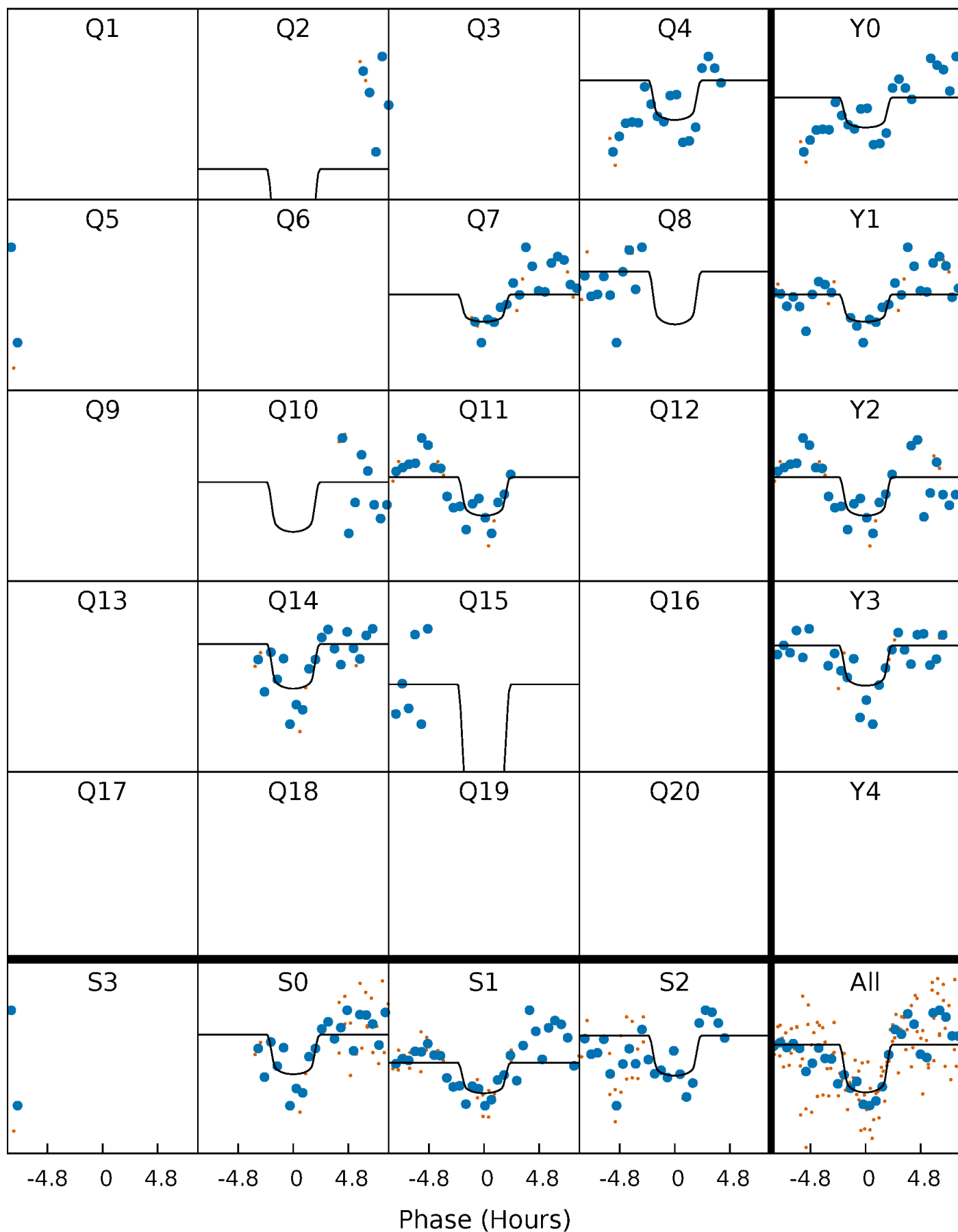
PDC Quarter-Phased Transit Curves

TCE 006535143-05 $P = 99.802727$ Days $T_0 = 154.724213$ (BKJD)



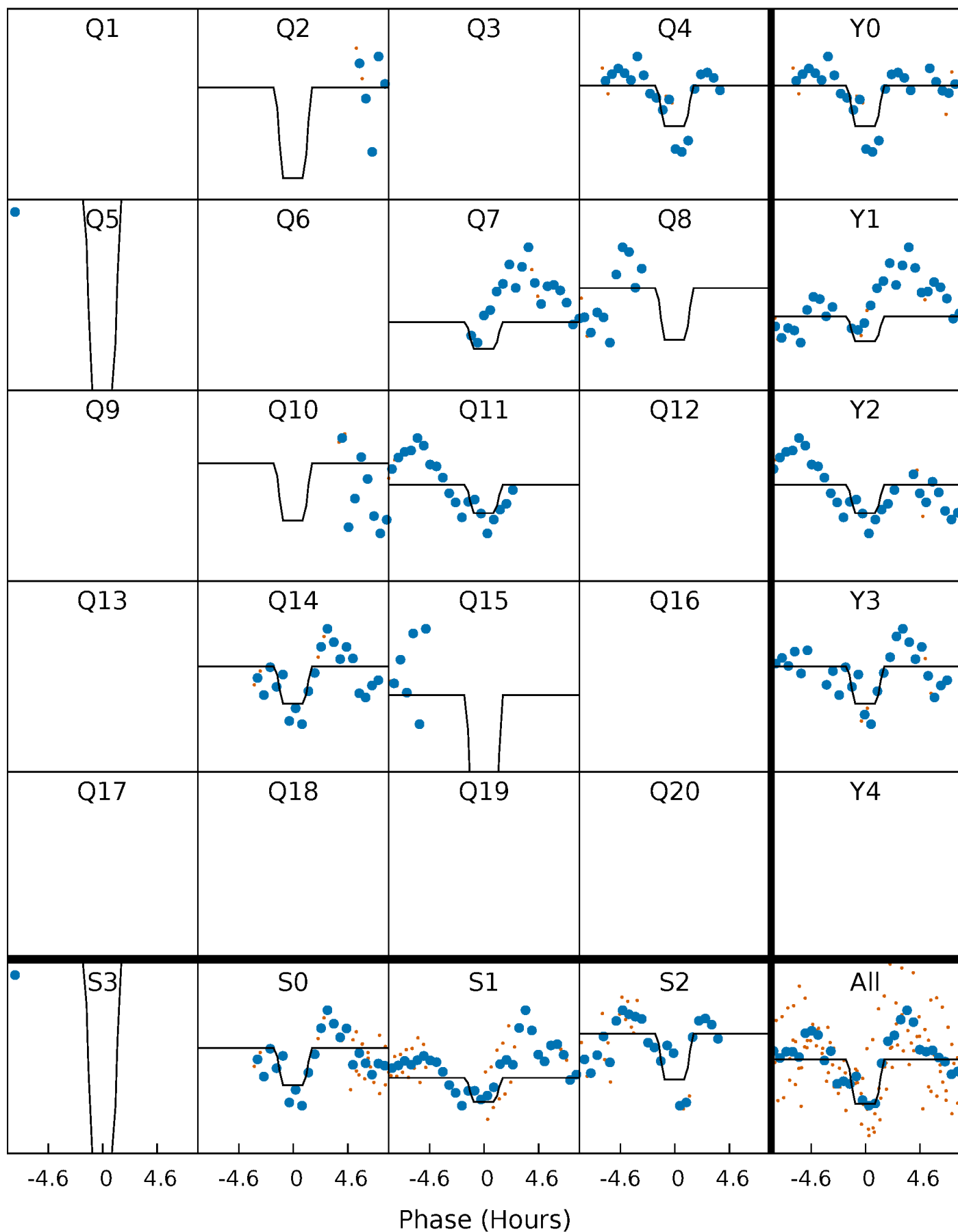
DV Quarter-Phased Transit Curves

TCE 006535143-05 P= 99.802727 Days $T_0=154.724213$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

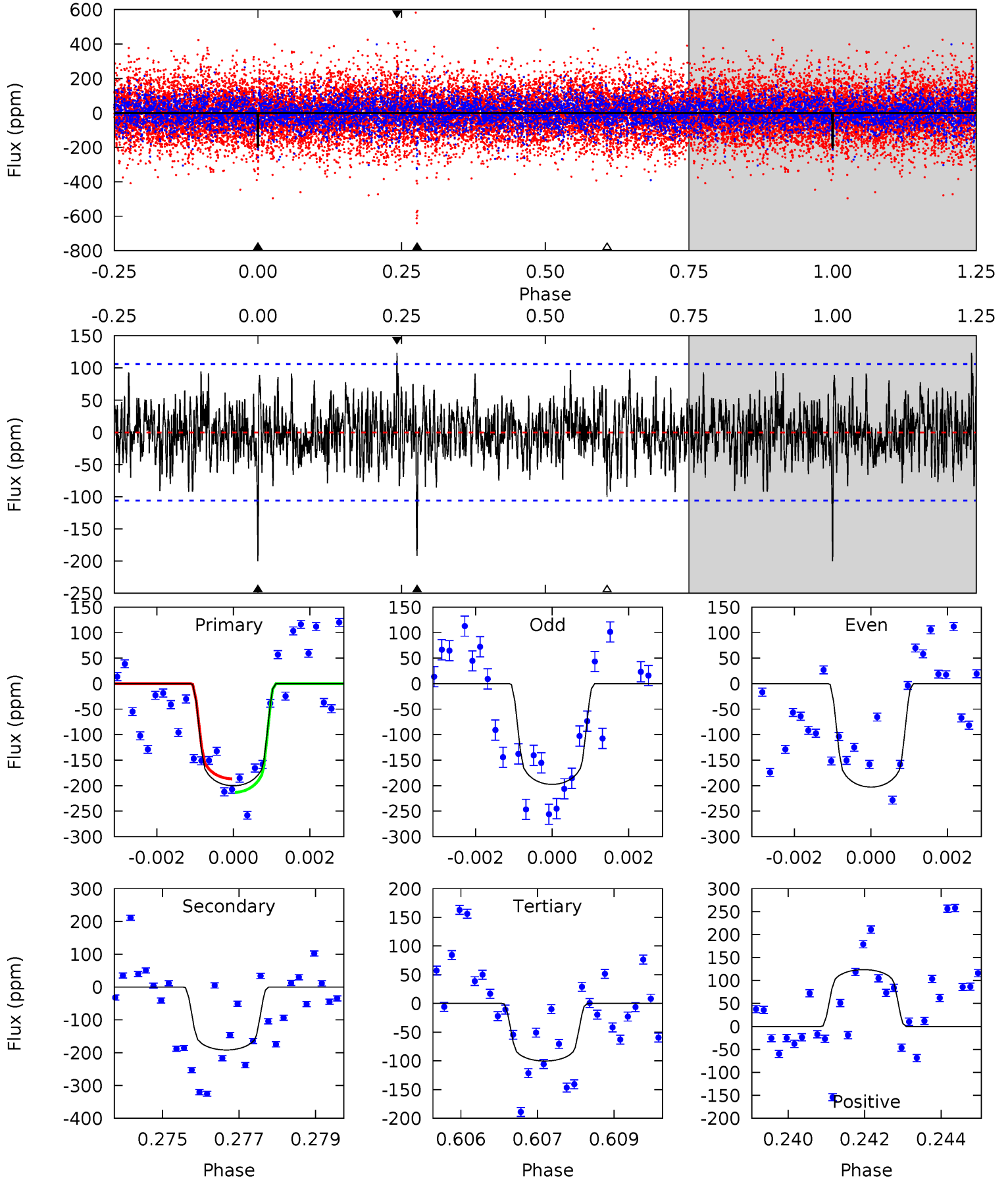
TCE 006535143-05 P= 99.800633 Days $T_0=154.746986$ (BKJD)



DV Model-Shift Uniqueness Test

006535143-05, P = 99.802727 Days, E = 54.921486 Days

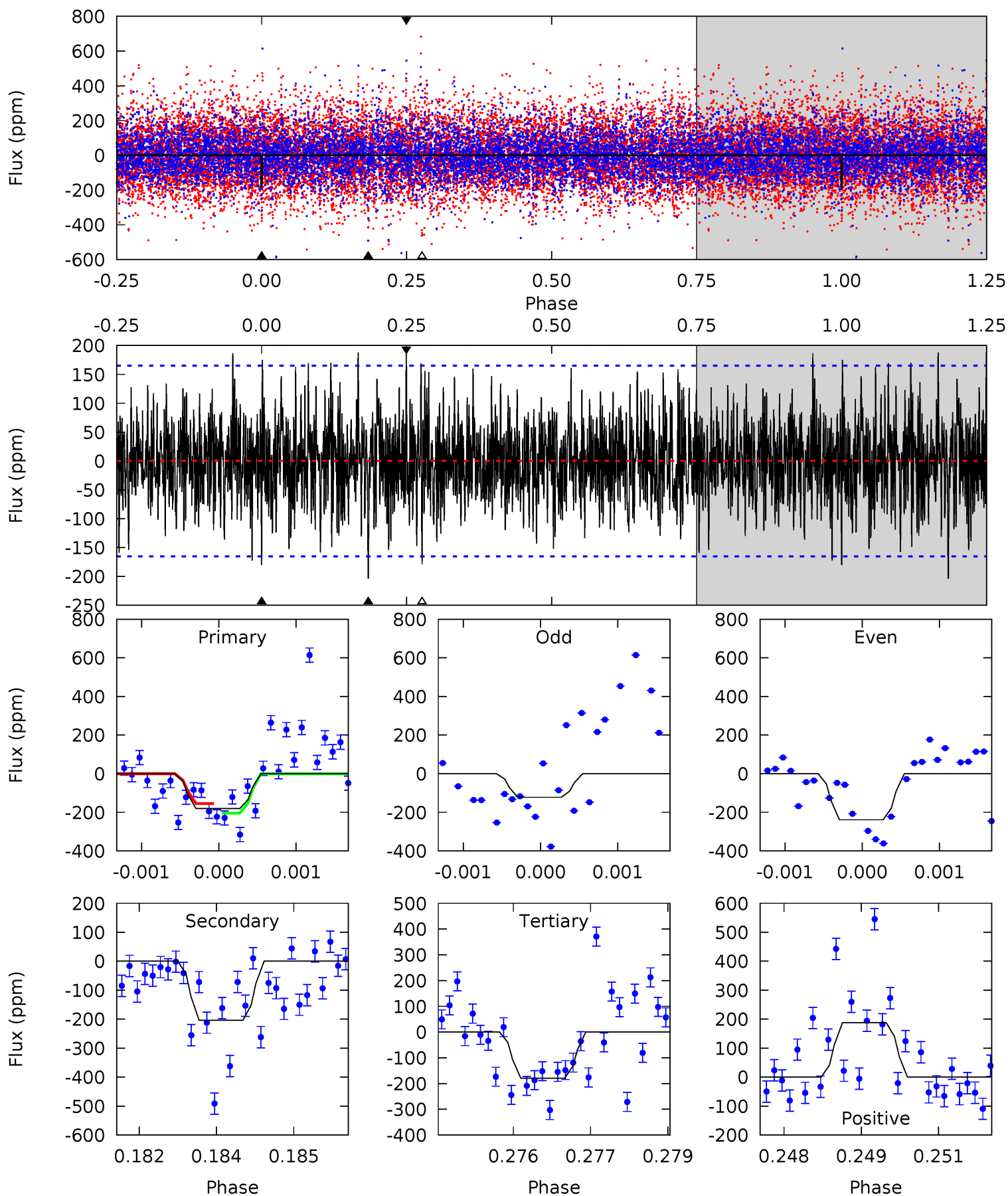
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.1	9.68	5.06	6.24	5.35	3.13	1.63	5.04	3.86	4.62	3.44	0.13	1.01	0.38	0.67



Alt Model-Shift Uniqueness Test

006535143-05, P = 99.800633 Days, E = 54.946353 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.91	6.68	5.87	6.16	5.42	3.24	1.90	0.04	-0.25	0.81	0.51	1.96	0.76	0.48	0.81



Stellar Parameters For KIC 006535143

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	6875^{+71}_{-82}	$4.027^{+0.149}_{-0.122}$	$0.020^{+0.150}_{-0.150}$	$1.985^{+0.389}_{-0.389}$	$1.530^{+0.146}_{-0.133}$	$0.276^{+0.202}_{-0.099}$
	+1%/-1%	+4%/-3%	+750%/-750%	+20%/-20%	+10%/-9%	+73%/-36%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 006535143-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-192 ± 20	$3.12^{+1.49}_{-1.56}$	856^{+43}_{-41}	6716^{+3480}_{-1221}	2566^{+7649}_{-1419}
Alt.	-204 ± 30	$3.22^{+1.55}_{-1.41}$	857^{+42}_{-43}	6687^{+2770}_{-1168}	2486^{+5567}_{-1322}

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 $A_{obs} \gg 1.0$

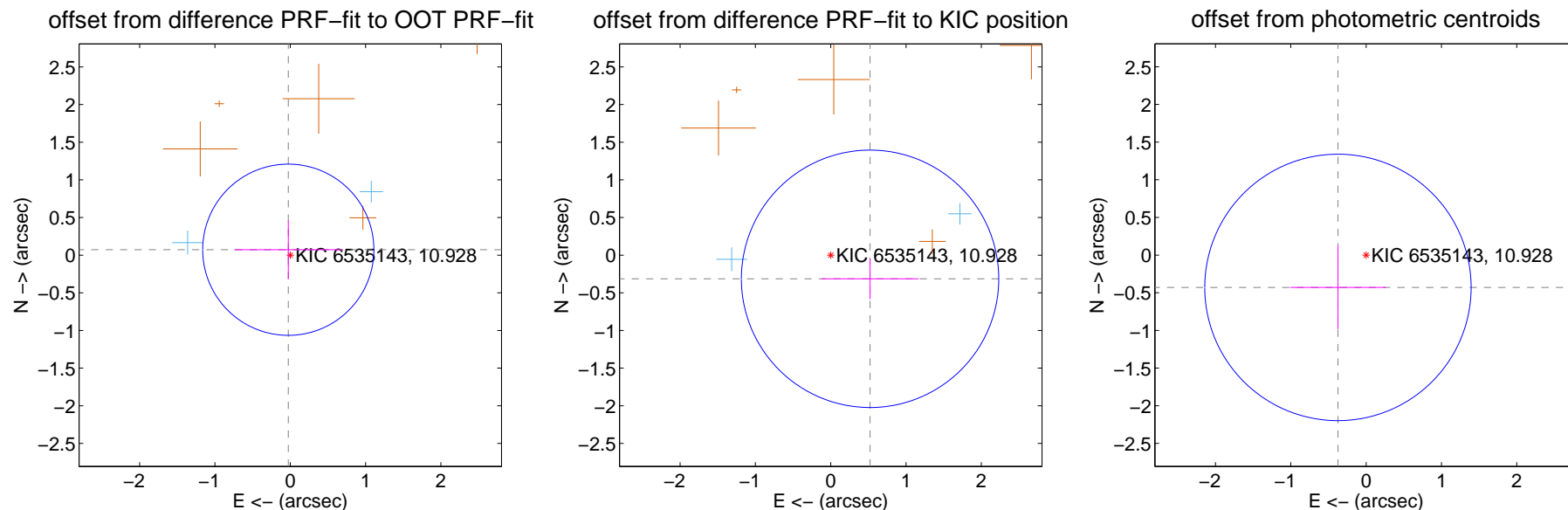
DV Centroid Data

Supplemental centroid analysis for 006535143-05. **Kepler magnitude: 10.93.** Transit SNR 8.87

There are 2 quarters with good PRF difference image offsets

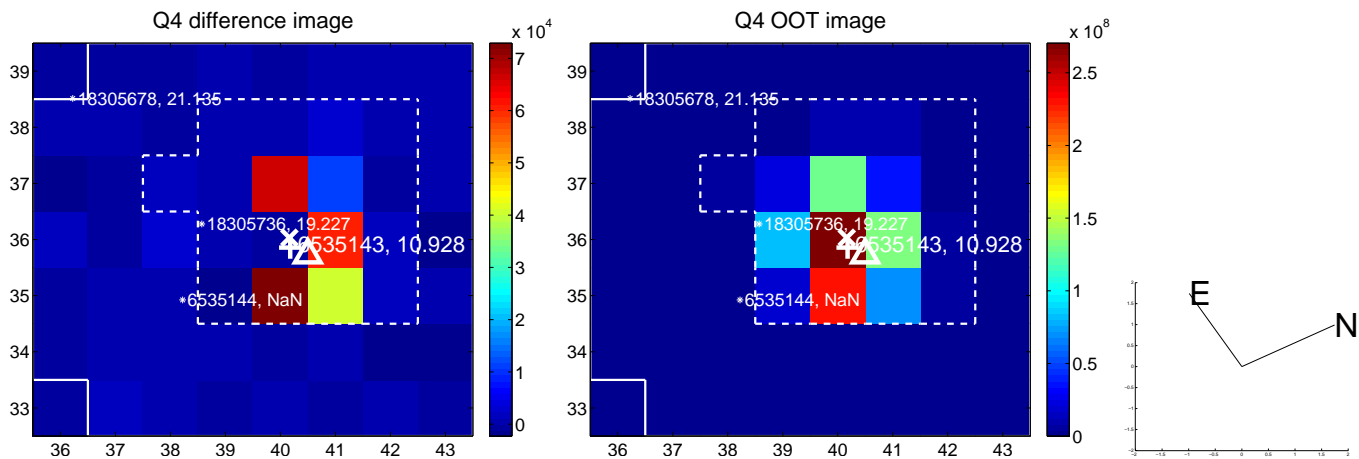
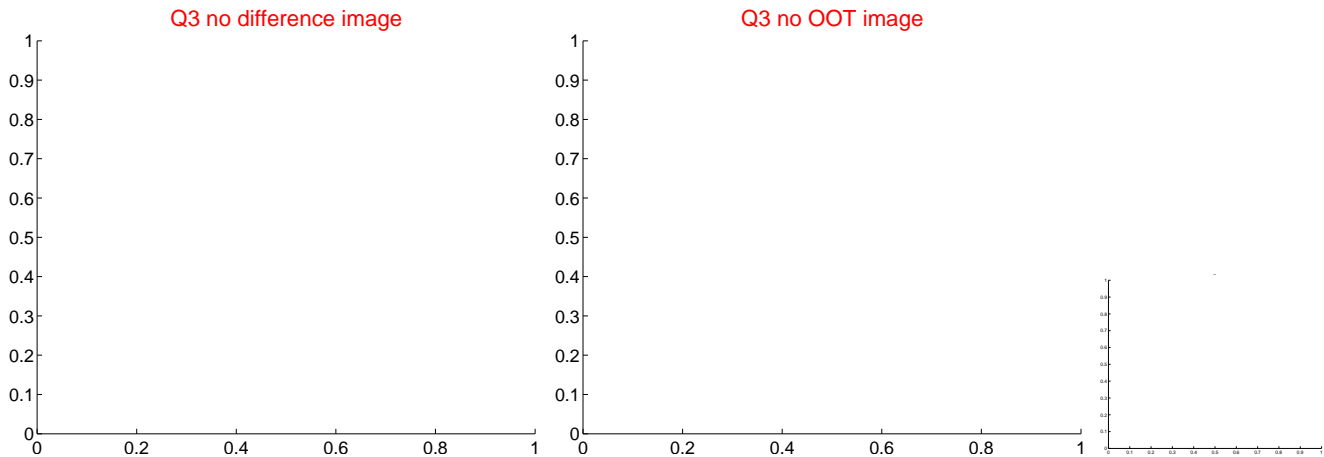
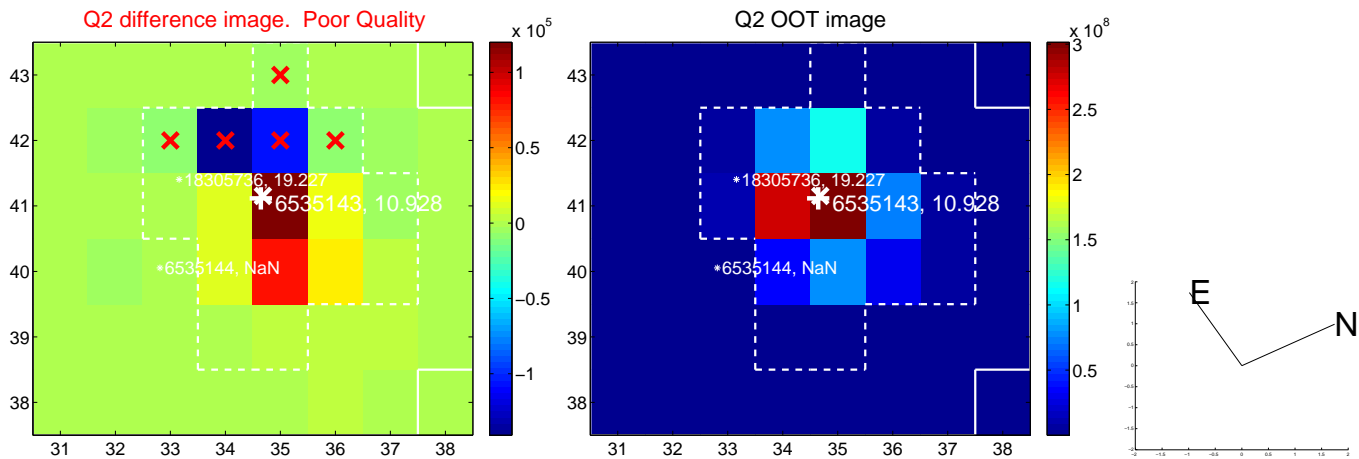
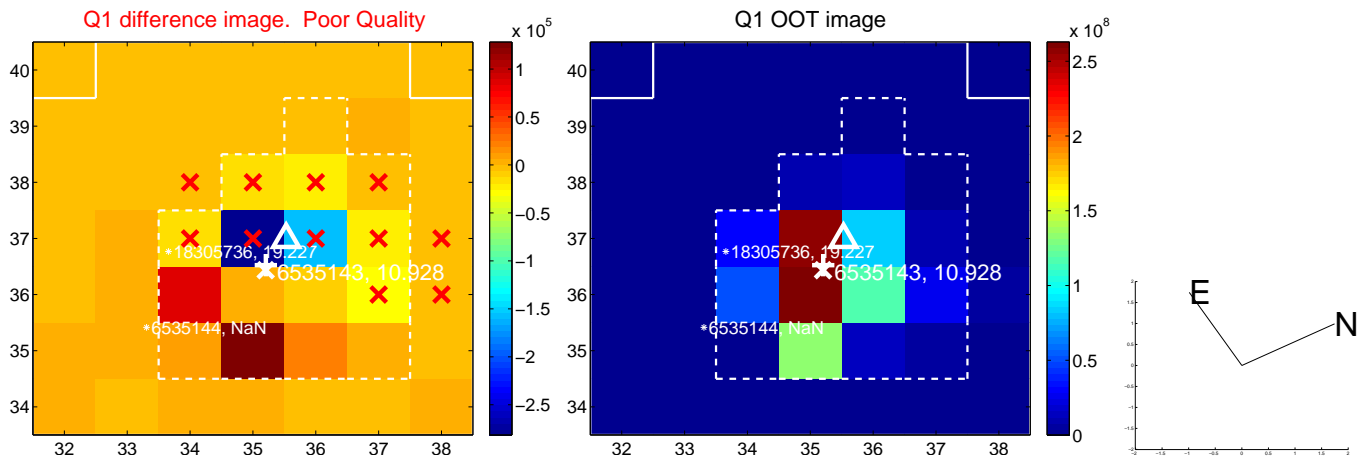
The direct PRF centroid is offset from the target star catalog position by about 0.38 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.077 ± 0.379	0.20	0.026 ± 0.717	0.072 ± 0.385
PRF-fit source offset from KIC position	0.610 ± 0.570	1.07	-0.523 ± 0.645	-0.314 ± 0.269
photometric centroid source offset	0.57 ± 0.59	0.97	0.37 ± 0.63	-0.43 ± 0.55

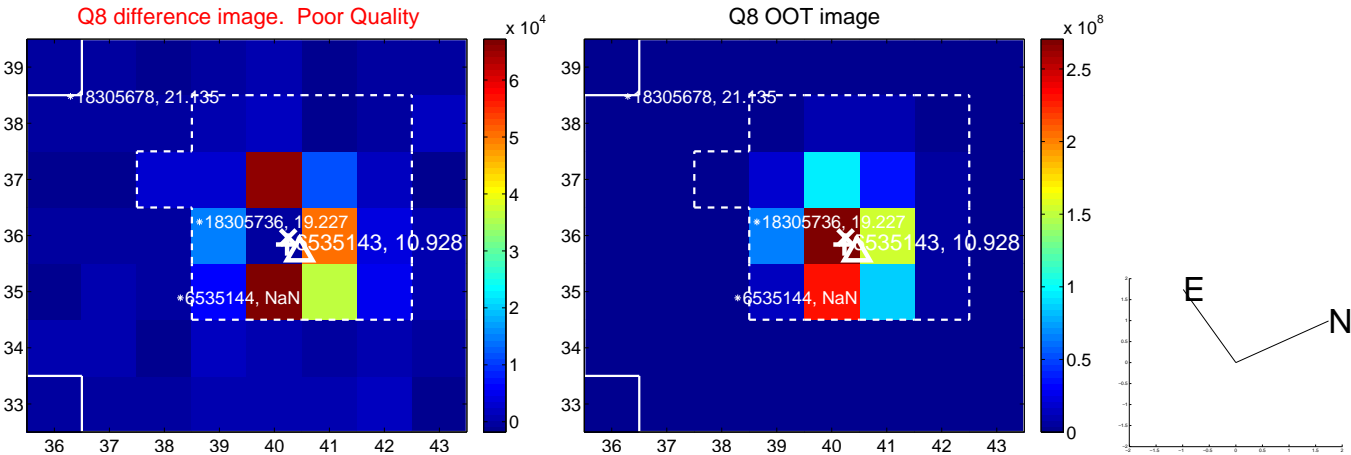
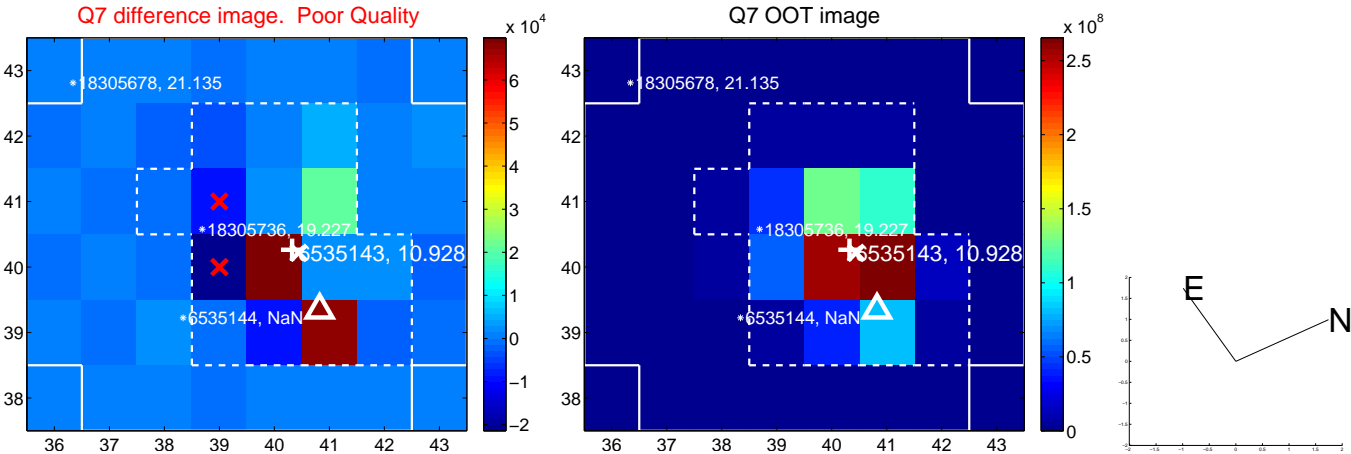
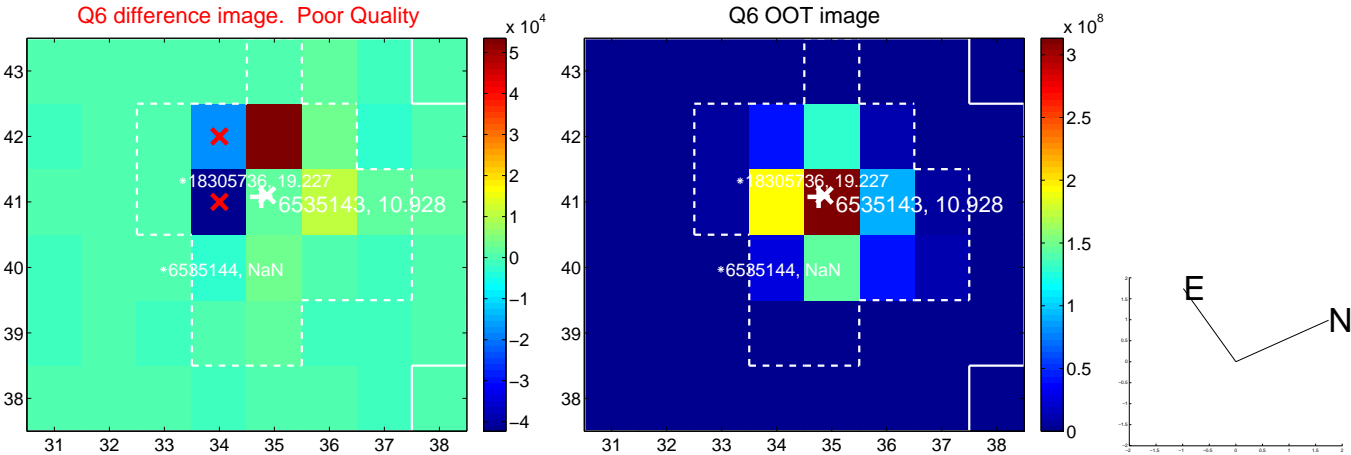
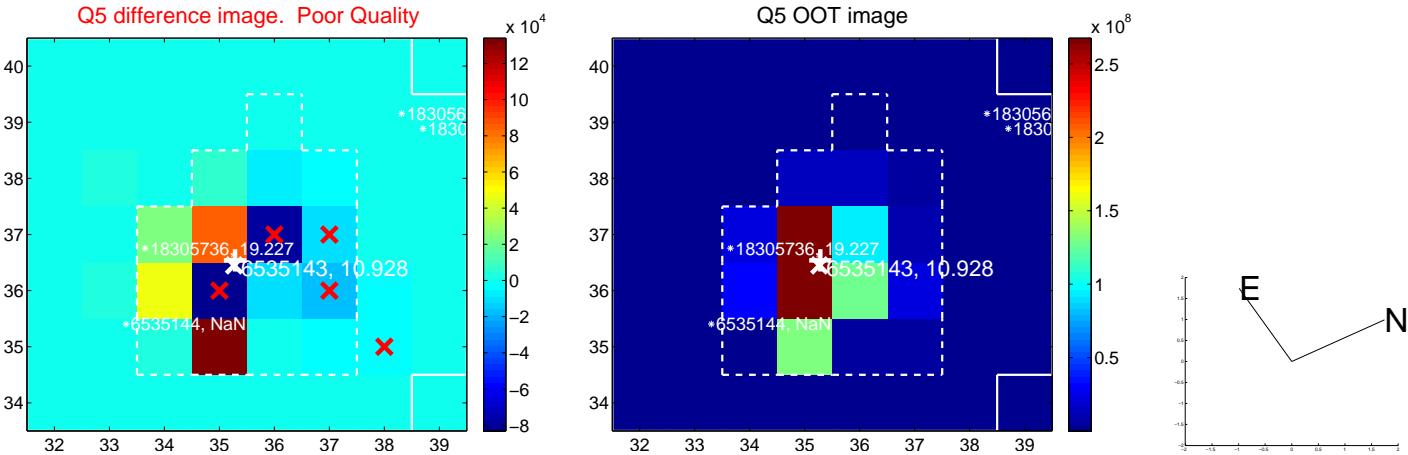


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

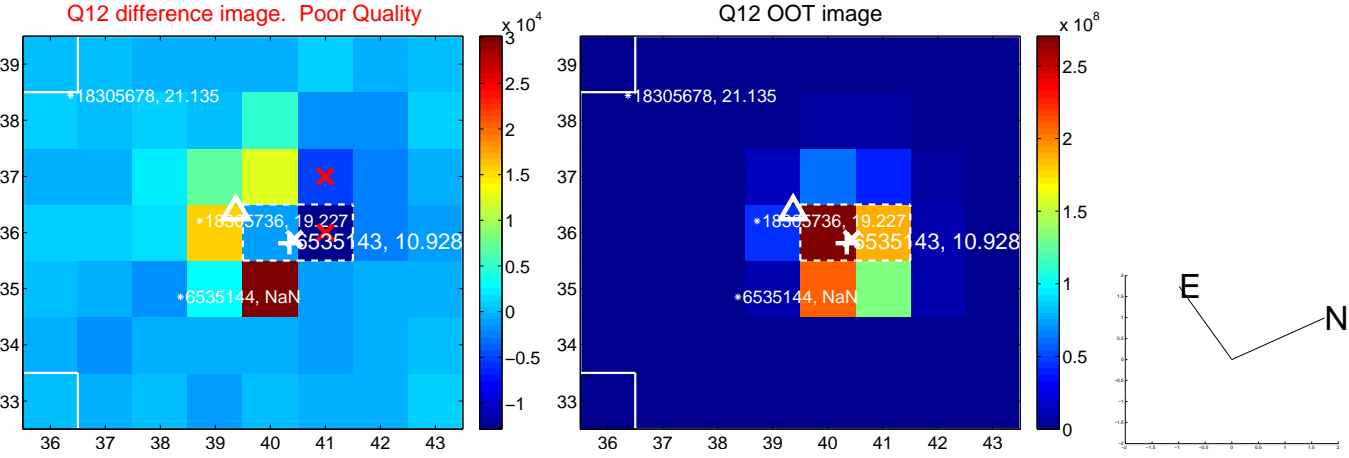
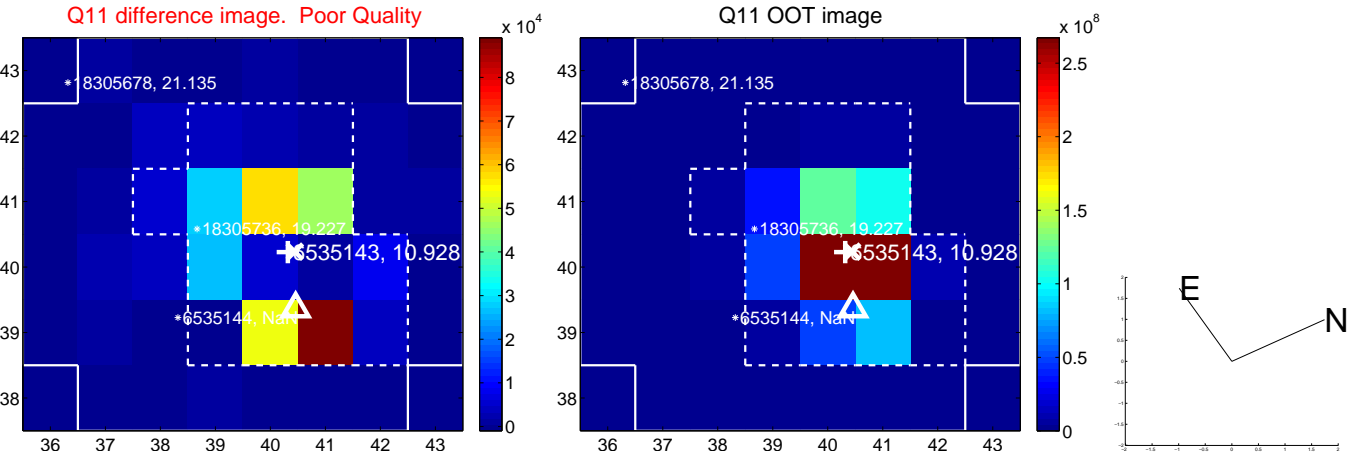
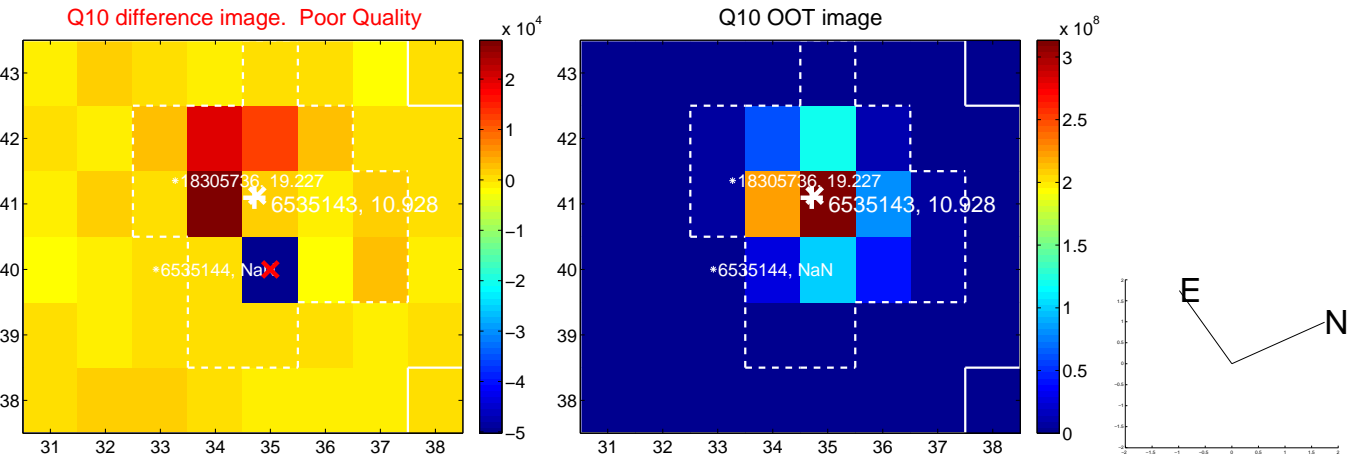
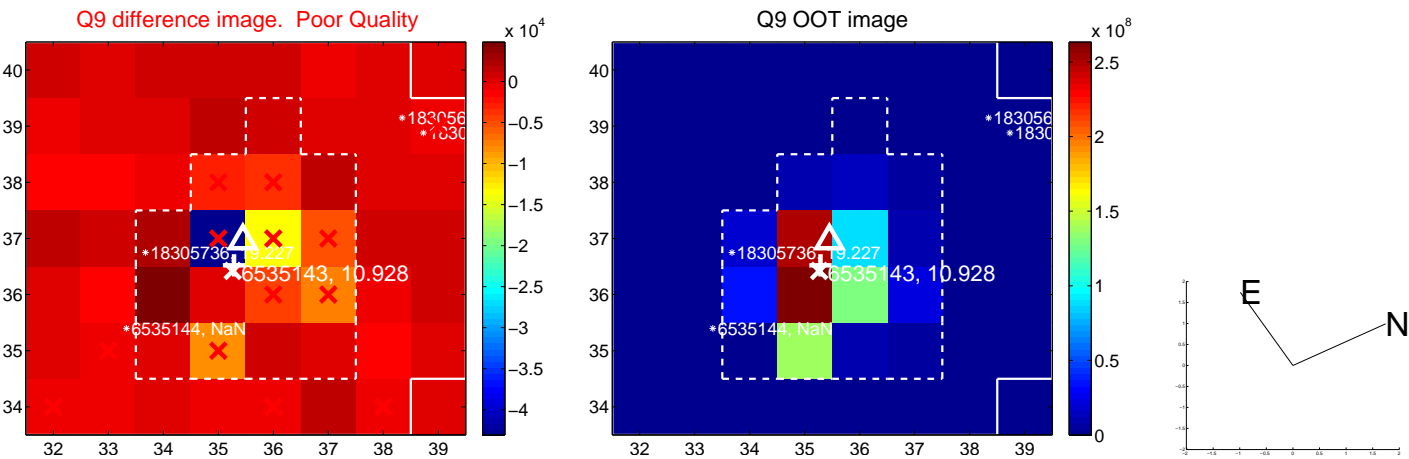
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



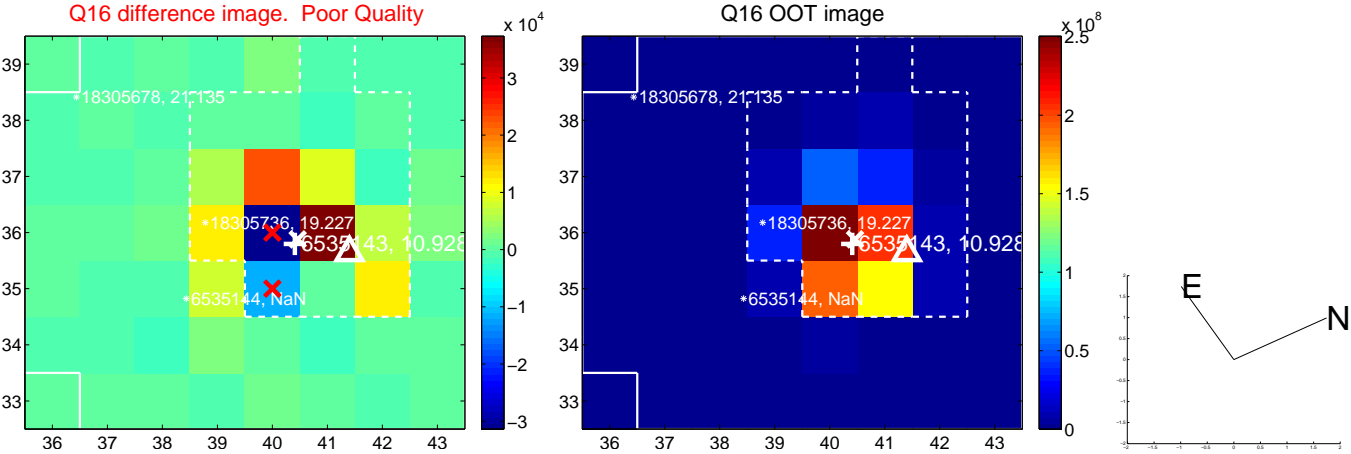
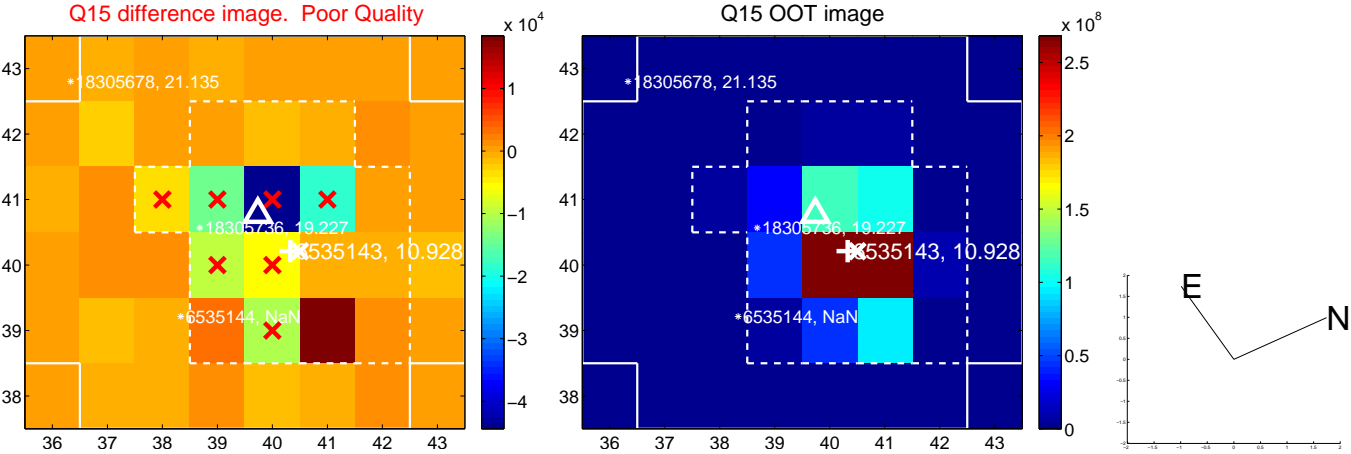
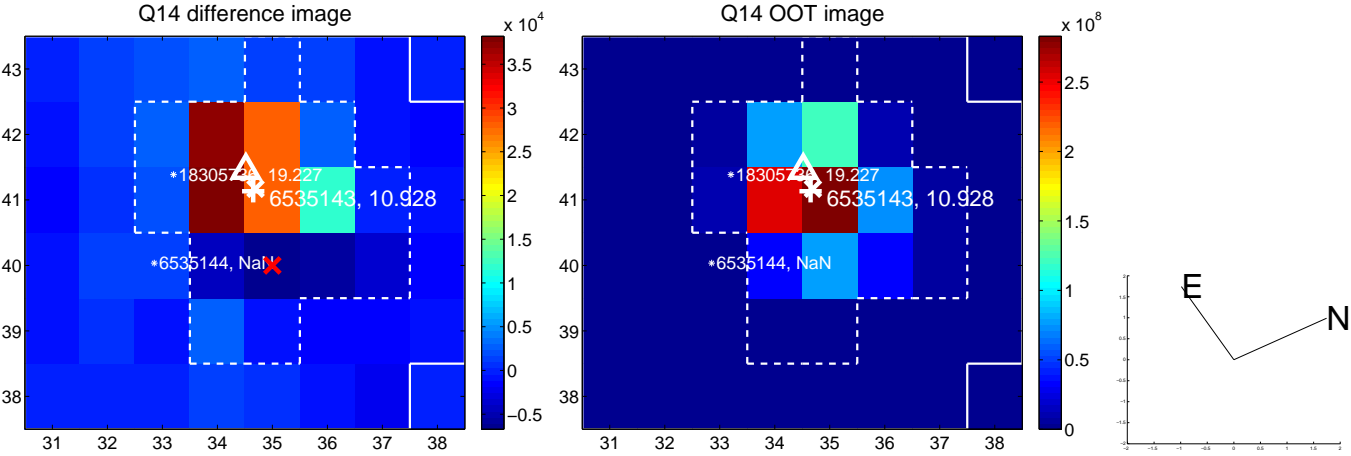
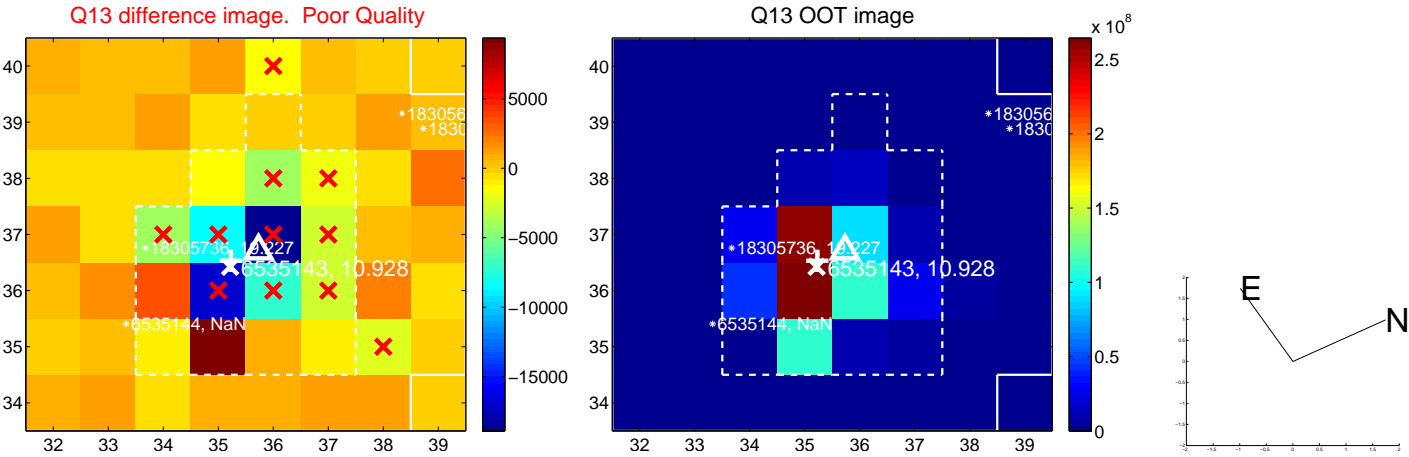
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



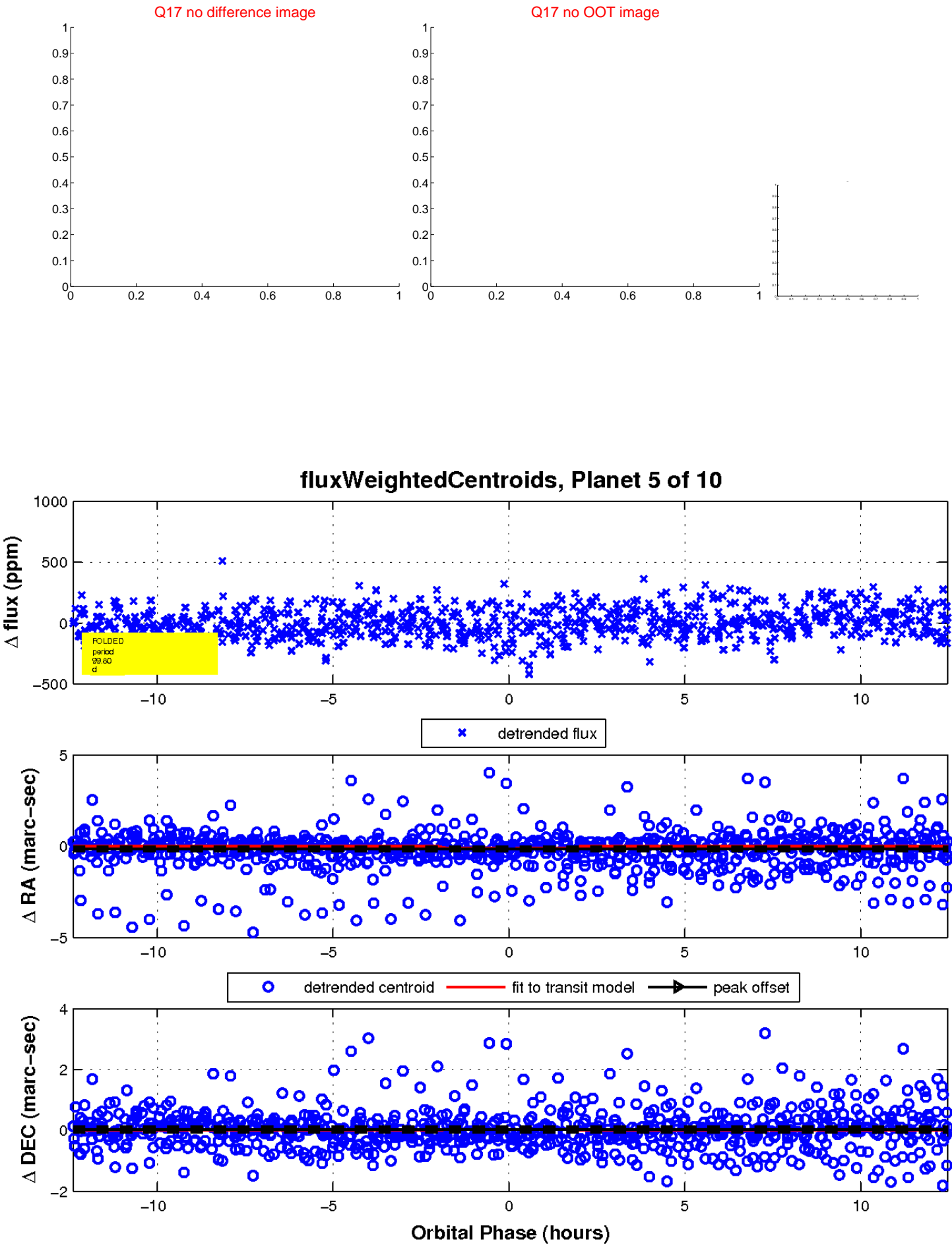
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



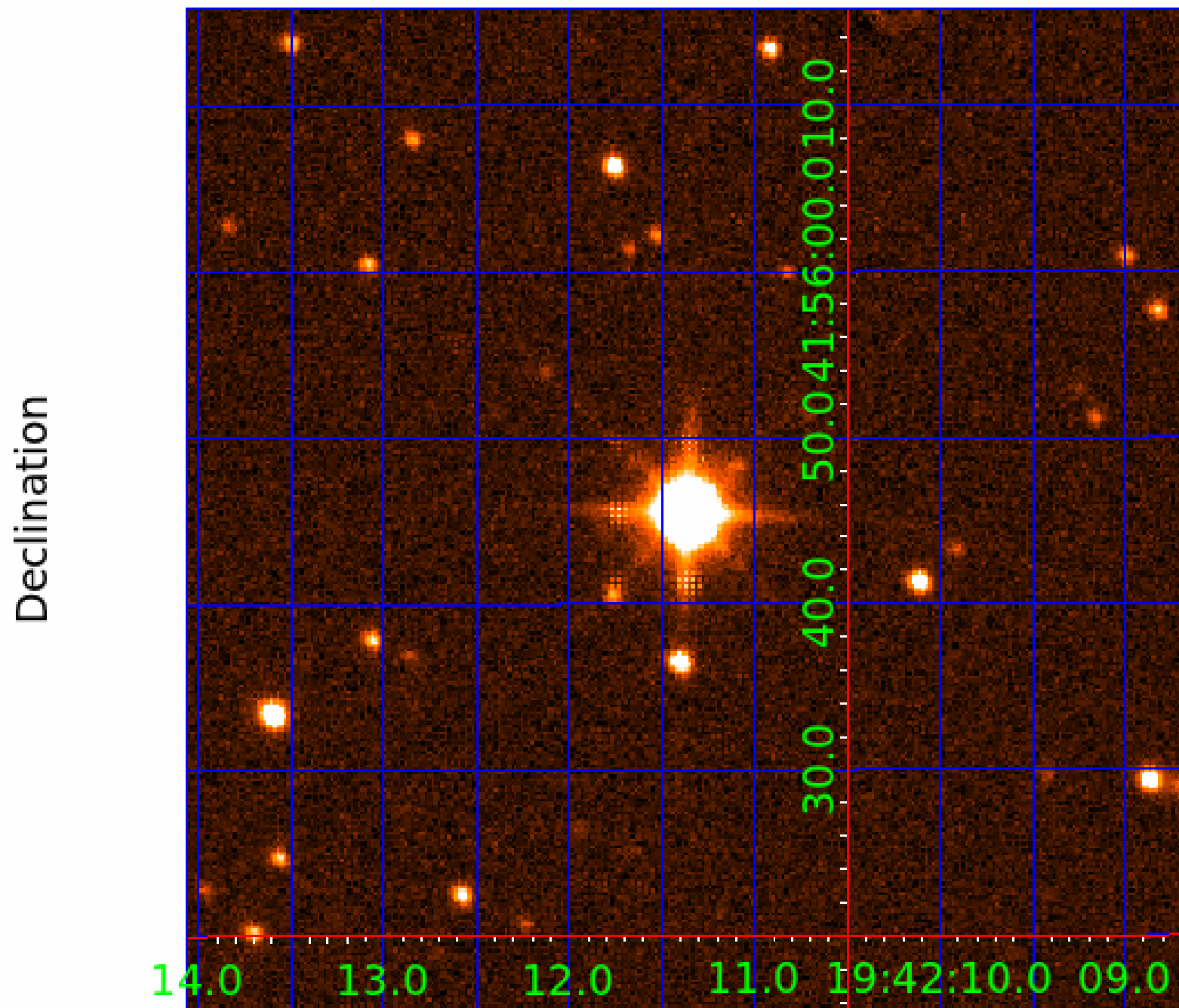
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



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})
006535143-01	OBS	No	1.655275	131.668348	13.1	9.574	8.6	7.7	1.99	6875	0.72	7918.91
006535143-02	OBS	No	256.515171	289.836364	112.5	5.531	10.2	6.4	1.99	6875	2.16	9.51
006535143-03	OBS	No	99.682988	208.377736	257.3	2.340	10.1	10.6	1.99	6875	3.64	33.55
006535143-04	OBS	No	105.729358	169.919884	224.0	4.991	9.9	10.7	1.99	6875	3.22	31.01
006535143-05	OBS	No	99.802727	154.724213	181.5	4.161	9.5	8.9	1.99	6875	3.11	33.49
006535143-06	OBS	No	83.476567	209.923159	177.7	4.474	9.1	9.2	1.99	6875	2.99	42.50
006535143-07	OBS	No	162.818577	271.955355	65.4	20.114	8.9	4.1	1.99	6875	1.84	17.44
006535143-08	OBS	No	40.486809	145.706523	94.9	7.051	8.6	7.6	1.99	6875	2.17	111.53
006535143-09	OBS	No	89.732378	186.618285	139.3	6.675	8.6	5.9	1.99	6875	2.66	38.60
006535143-10	OBS	No	32.503334	158.465697	196.5	0.978	8.3	7.9	1.99	6875	3.26	149.48

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006535143-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_SATURATED
006535143-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
006535143-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
006535143-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006535143-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006535143-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_SATURATED
006535143-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006535143-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
006535143-09	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
006535143-10	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—CENT_SATURATED

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

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

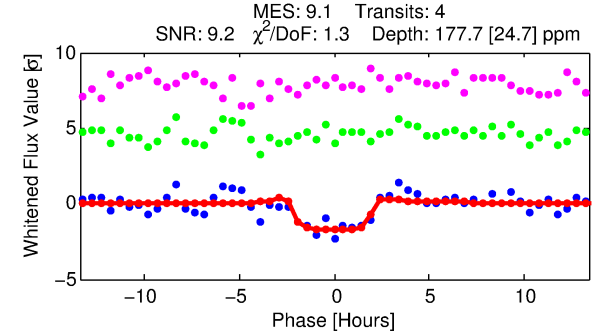
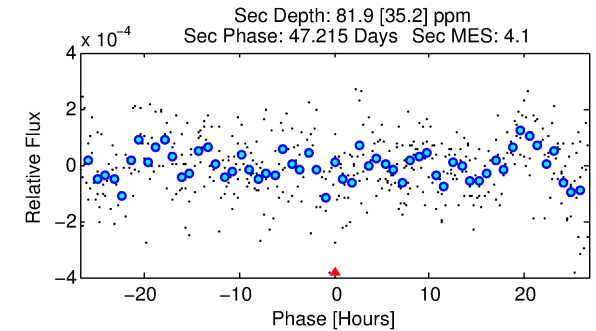
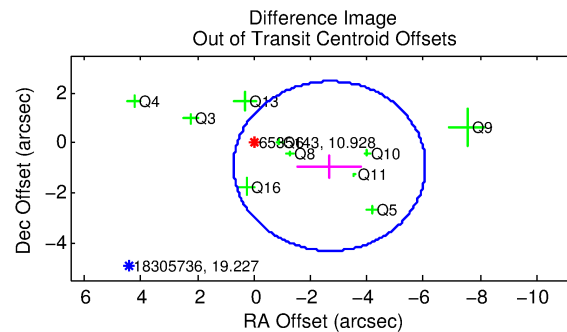
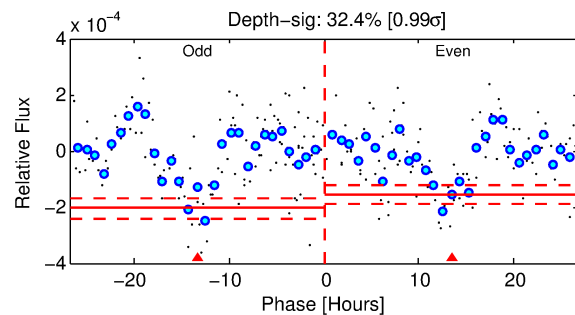
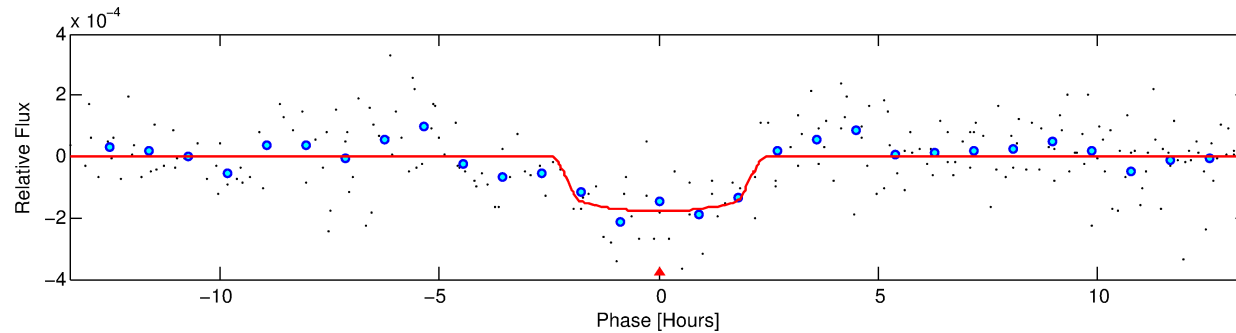
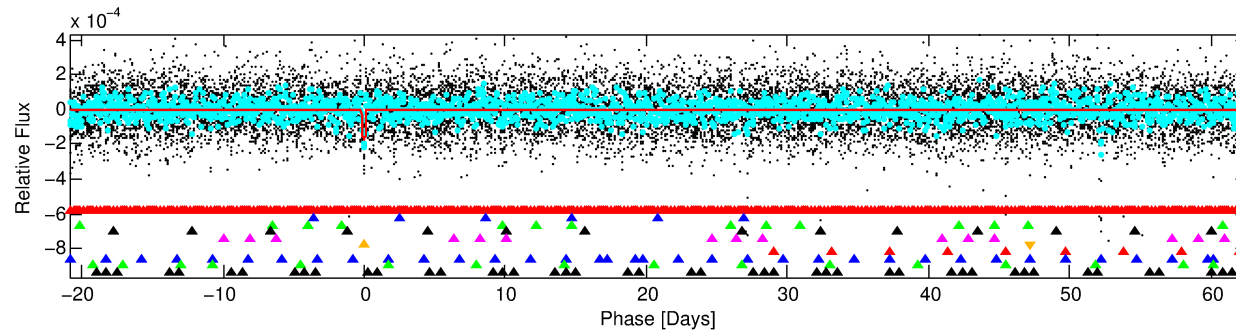
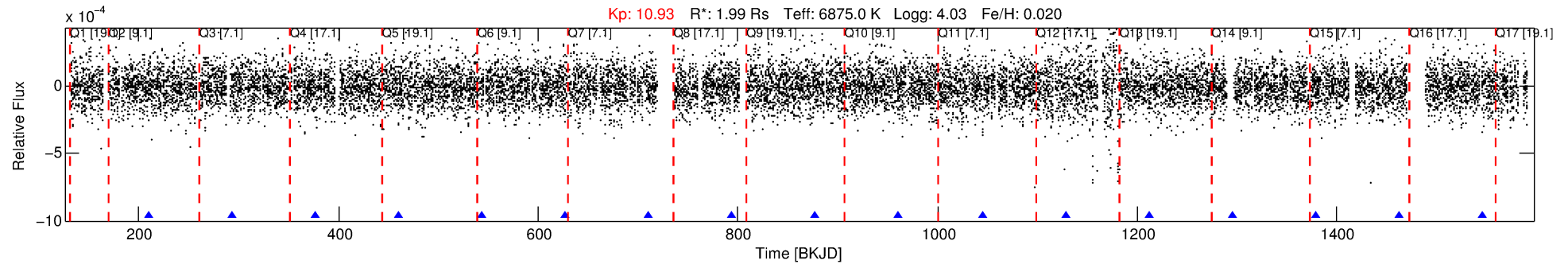
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006535143-06

No Significant Match Found

DV One-Page Summary

KIC: 6535143 Candidate: 6 of 10 Period: 83.477 d



DV Fit Results:

Period = 83.47657 [0.00143] d
Epoch = 209.9232 [0.0125] BKJD
Rp/R* = 0.0138 [0.0086]
a/R* = 78.05 [285.51]
b = 0.85 [1.18]
Seff = 42.50 [11.38]
Teq = 651 [44] K
Rp = 2.99 [1.95] Re
a = 0.4308 [0.0748] AU
Ag = 935.42 [1255.09] [0.74 σ]
Teffp = 5567 [1832] K [2.68 σ]

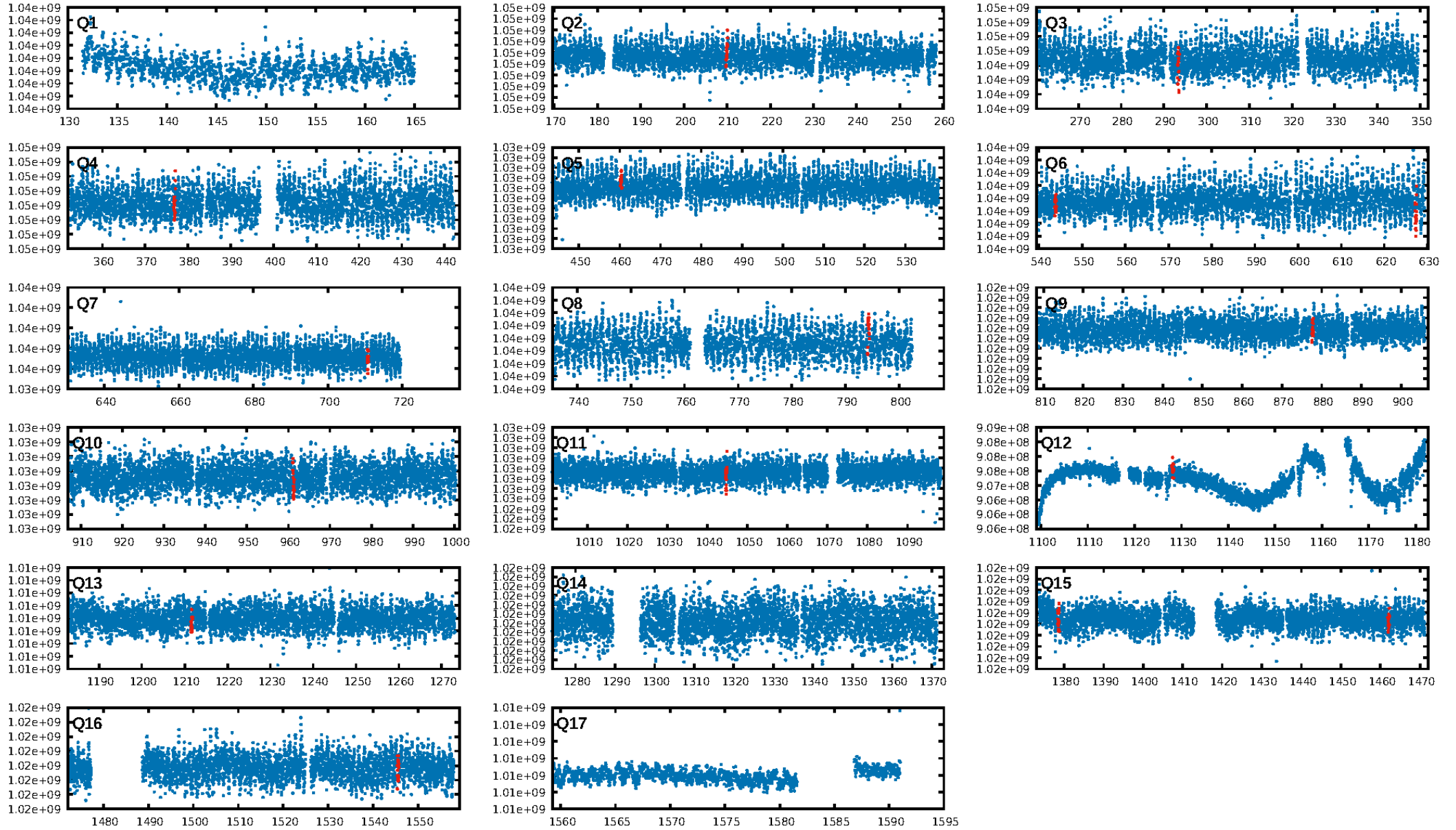
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [123.55 σ]
LongPeriod-sig: 100.0% [18.68 σ]
ModelChiSquare2-sig: 22.2%
ModelChiSquareGof-sig: 84.3%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -40.67
Centroid-sig: 36.3%
Centroid-so: 0.908 arcsec [1.49 σ]
OotOffset-rm: 2.835 arcsec [2.51 σ]
KicOffset-rm: 2.854 arcsec [2.90 σ]
OotOffset-st: 2/2/3/3 [10]
KicOffset-st: 2/2/3/3 [10]
DiffImageQuality-fgm: 0.50 [5/10]
DiffImageOverlap-fno: 0.31 [4/13]

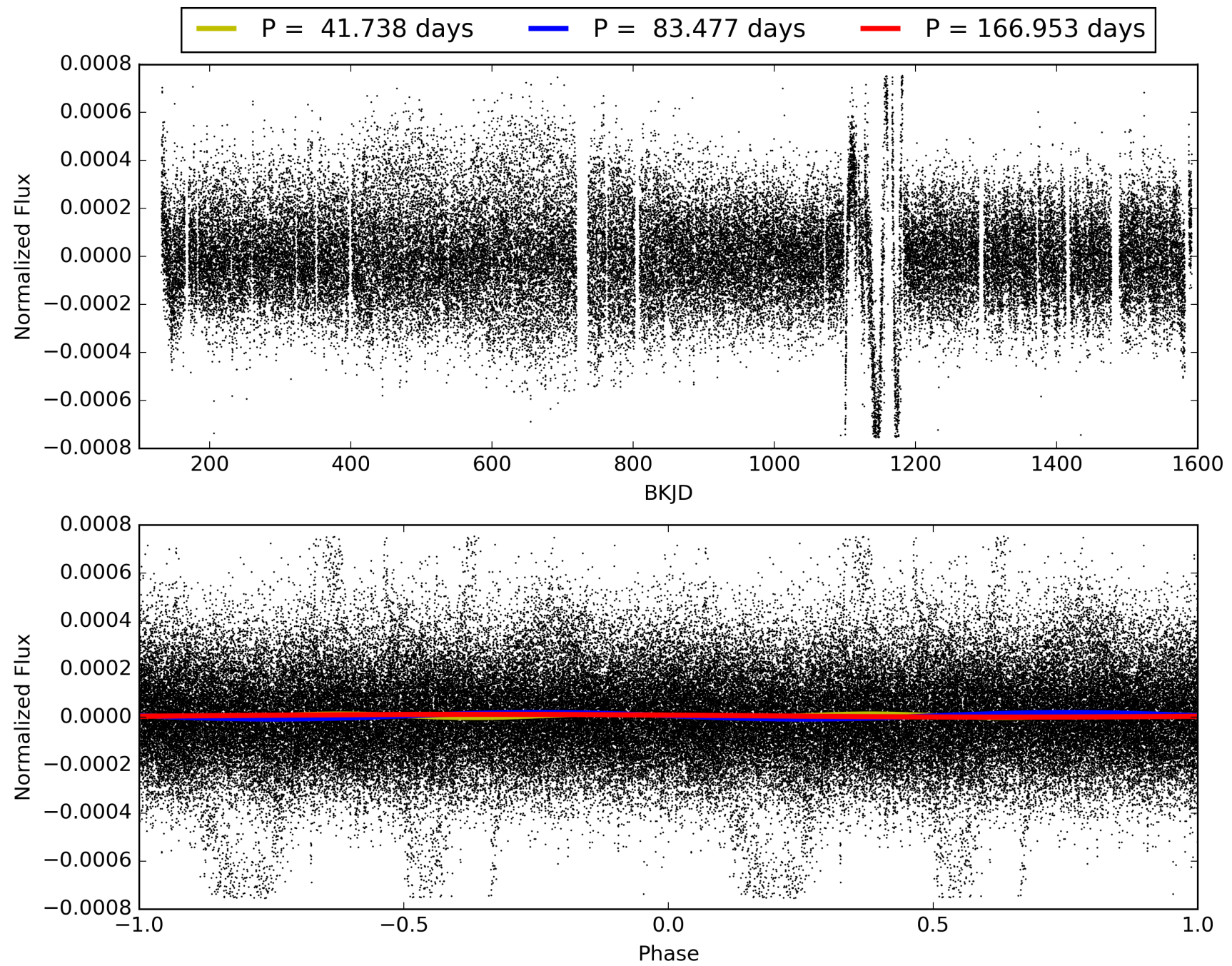
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 03:15:42 Z

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

TCE 006535143-06, PDC Light Curves

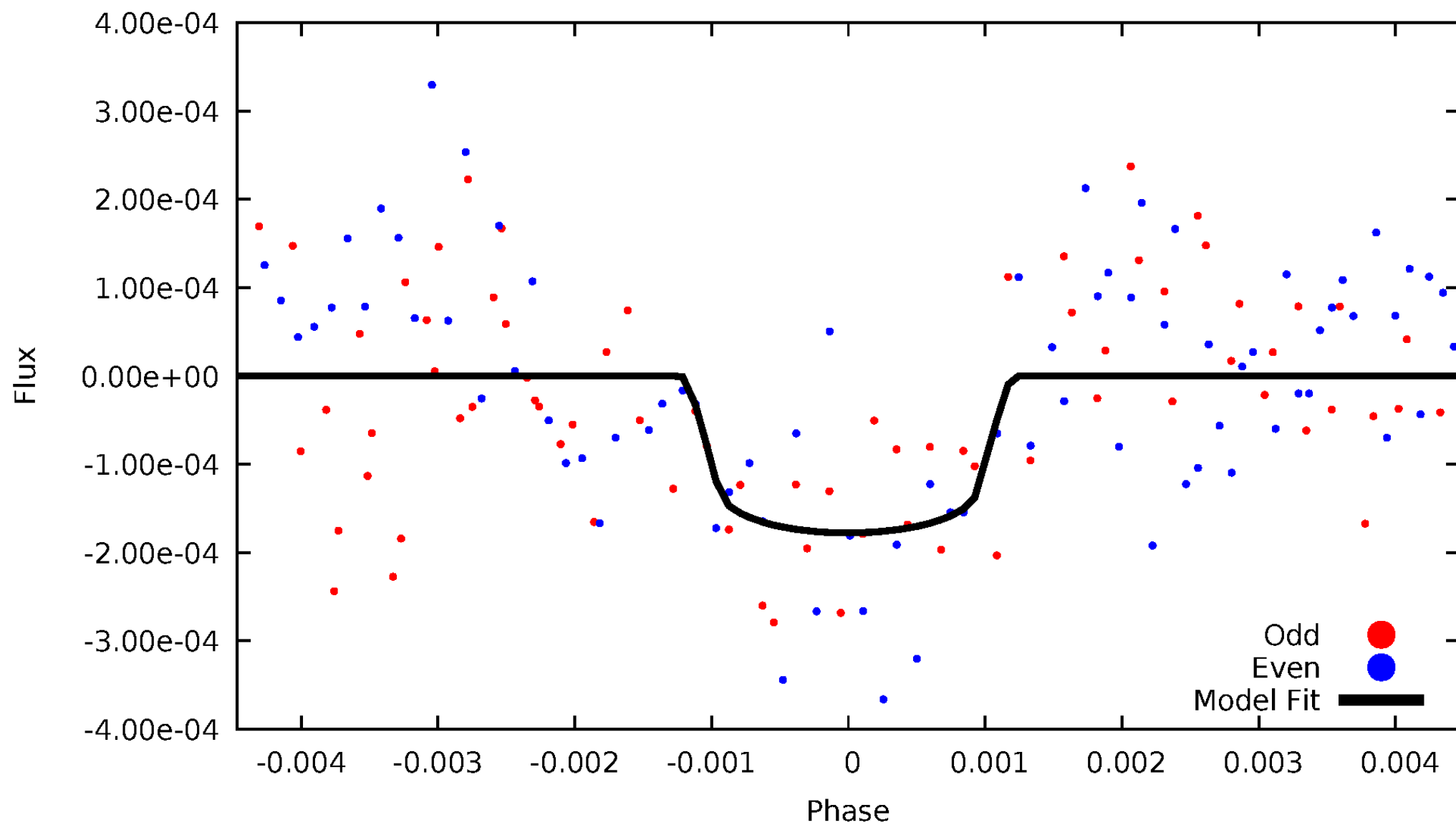


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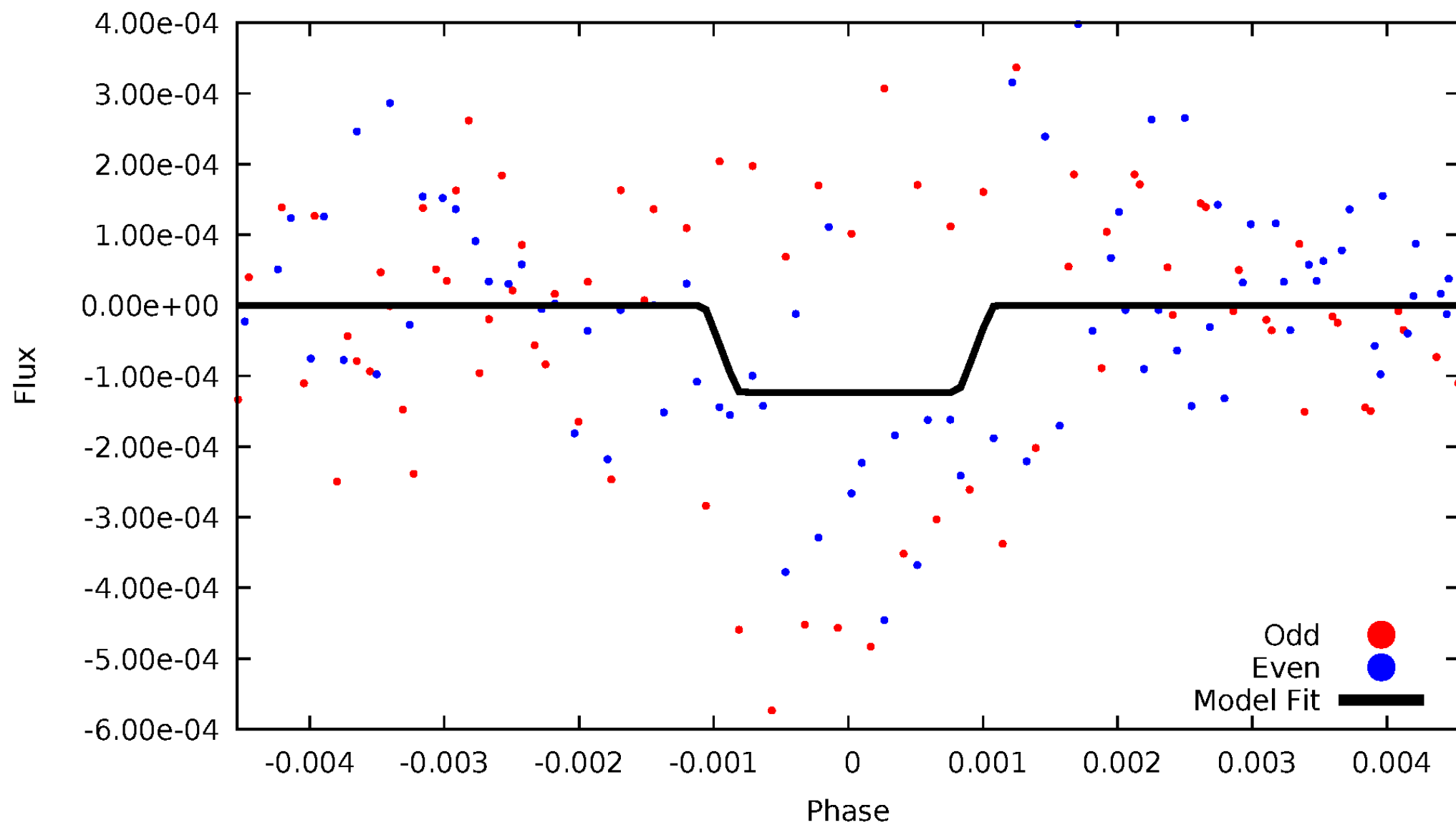
DV Odd/Even

TCE 006535143-06



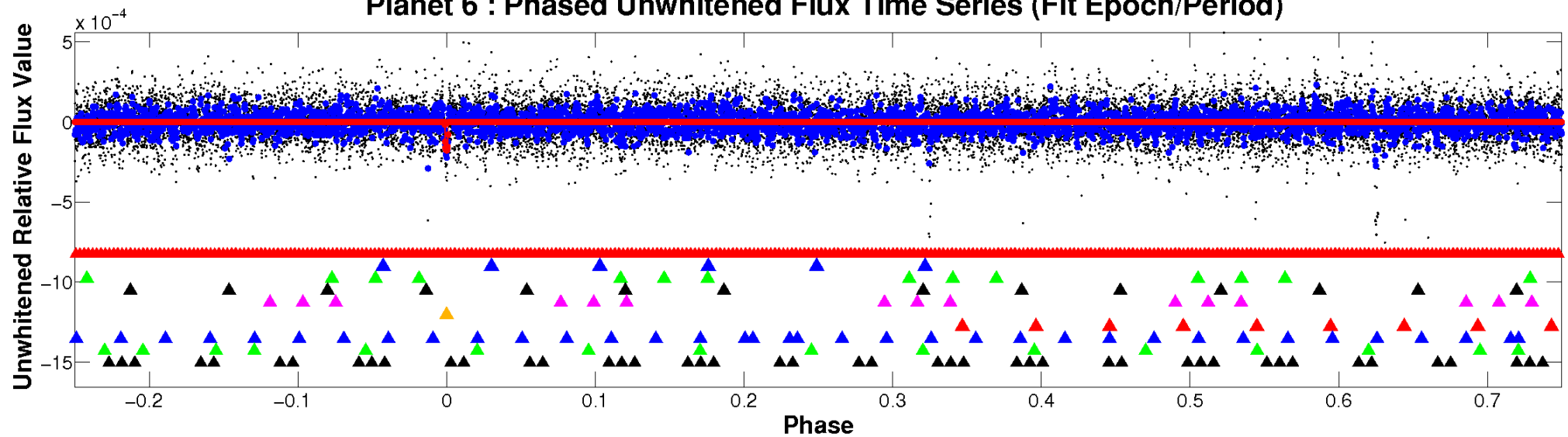
ALT Odd/Even

TCE 006535143-06

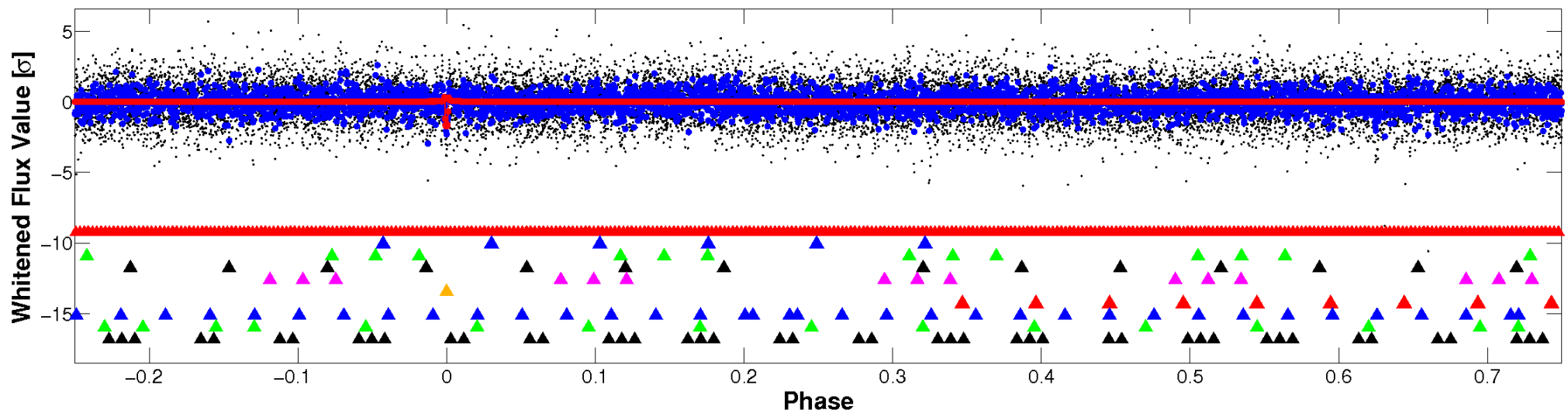


Non-Whitened Vs. Whitened Light Curve

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

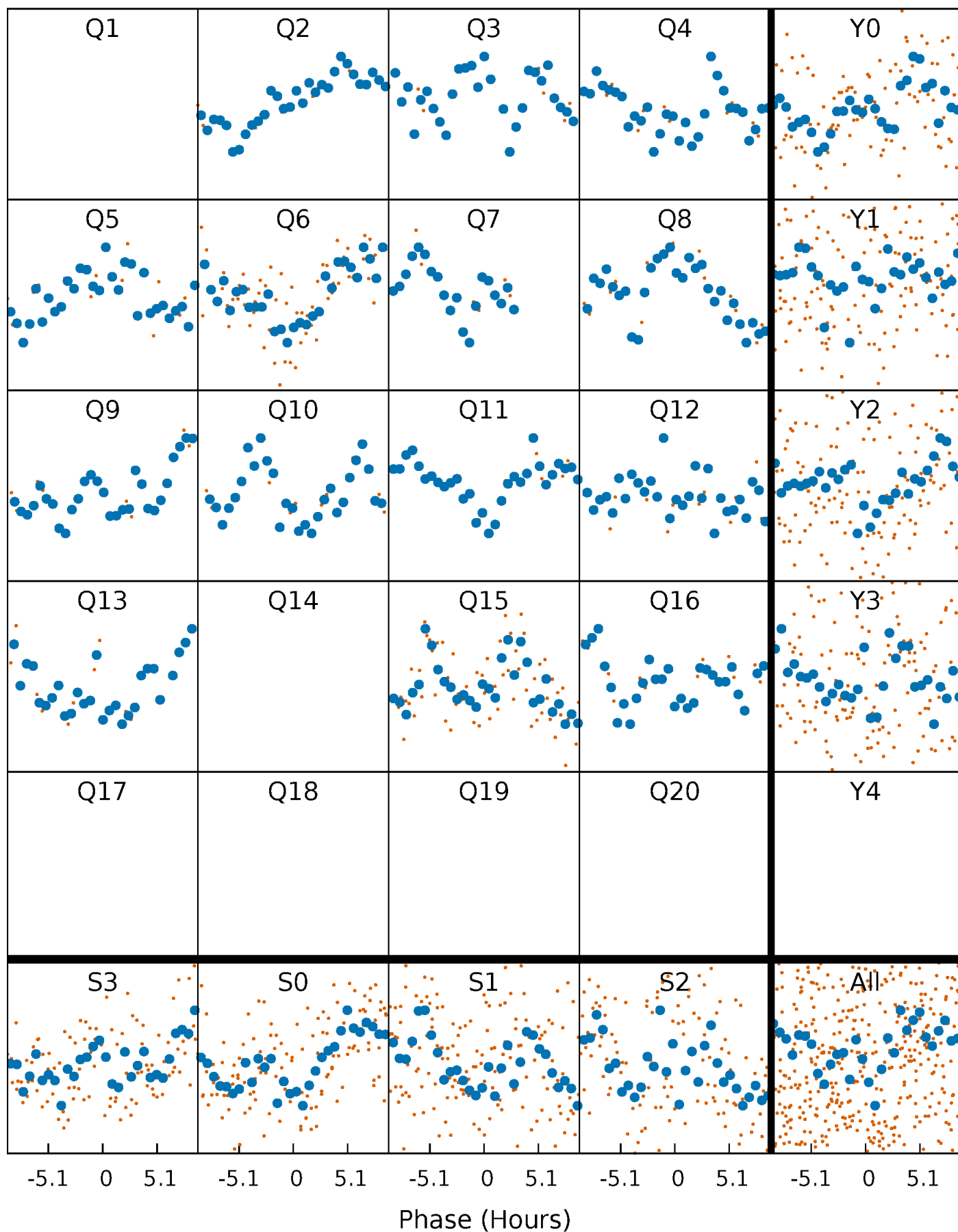


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



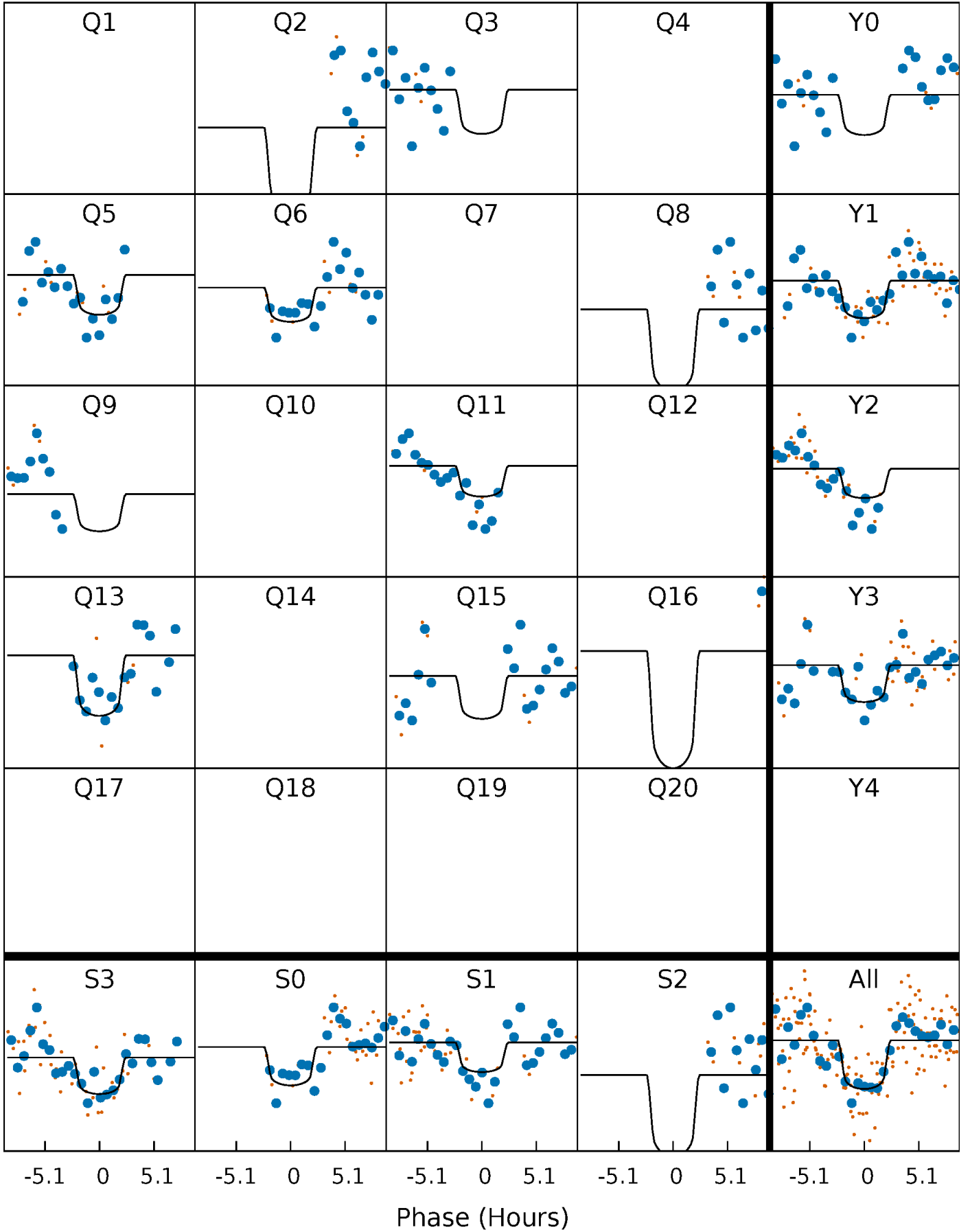
PDC Quarter-Phased Transit Curves

TCE 006535143-06 P= 83.476567 Days $T_0=209.923159$ (BKJD)



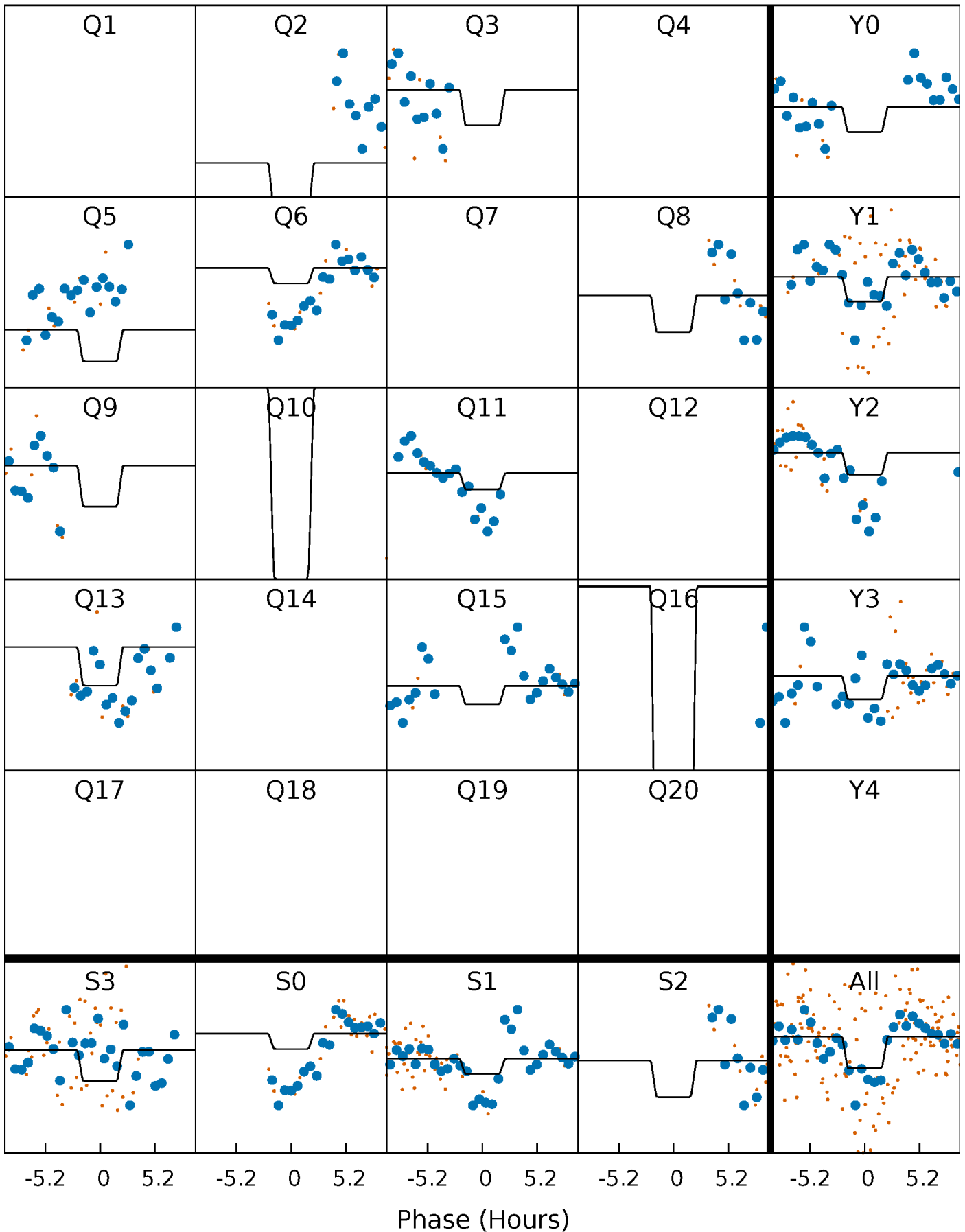
DV Quarter-Phased Transit Curves

TCE 006535143-06 P= 83.476567 Days $T_0=209.923159$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

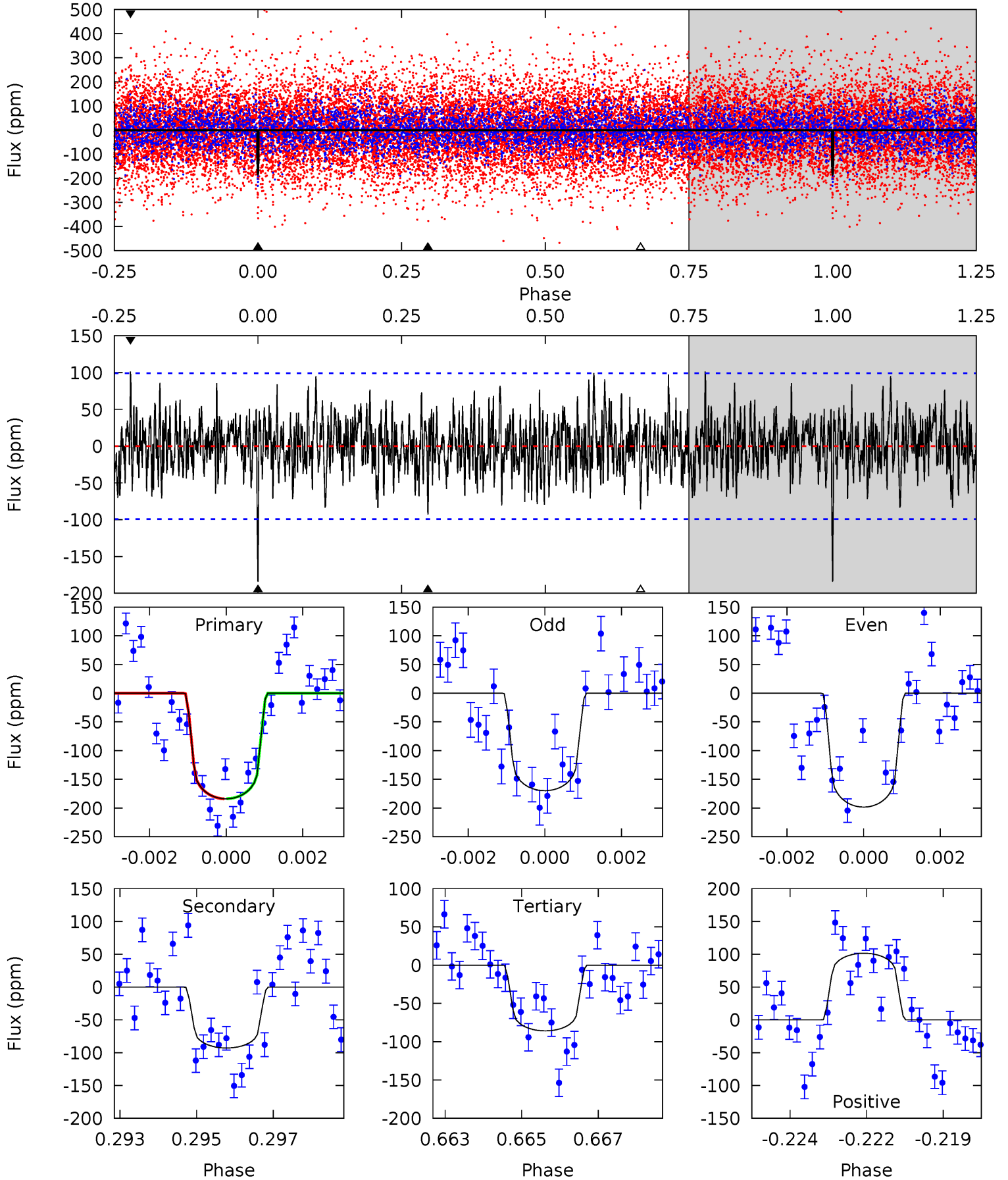
TCE 006535143-06 P= 83.477389 Days $T_0=209.914035$ (BKJD)



DV Model-Shift Uniqueness Test

006535143-06, P = 83.476567 Days, E = 126.446592 Days

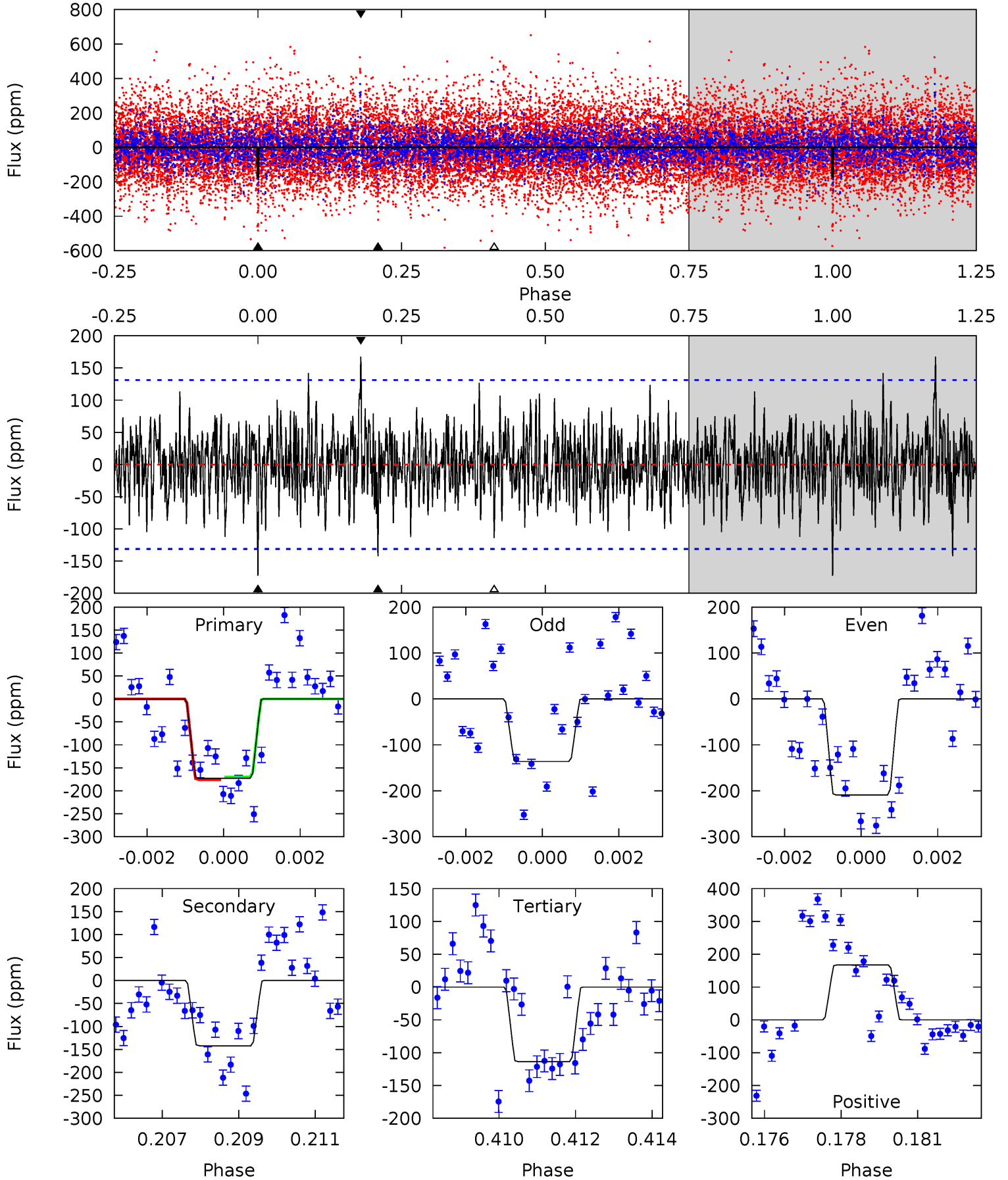
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.85	4.97	4.59	5.43	5.30	3.05	1.62	5.25	4.42	0.38	-0.46	0.77	1.09	0.36	0.01



Alt Model-Shift Uniqueness Test

006535143-06, P = 83.477389 Days, E = 126.436646 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.99	5.75	4.60	6.77	5.31	3.06	1.62	2.39	0.21	1.15	-1.03	1.48	0.82	0.49	0.11



Stellar Parameters For KIC 006535143

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6875^{+71}_{-82}	$4.027^{+0.149}_{-0.122}$	$0.020^{+0.150}_{-0.150}$	$1.985^{+0.389}_{-0.389}$	$1.530^{+0.146}_{-0.133}$	$0.276^{+0.202}_{-0.099}$
	+1%/-1%	+4%/-3%	+750%/-750%	+20%/-20%	+10%/-9%	+73%/-36%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 006535143-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-93 ± 19	$3.07^{+1.88}_{-1.67}$	908^{+43}_{-48}	5605^{+3108}_{-1019}	1006^{+3631}_{-610}
Alt.	-142 ± 25	$2.60^{+1.95}_{-1.43}$	909^{+43}_{-44}	6780^{+5053}_{-1536}	2157^{+9035}_{-1465}

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 $A_{obs} \gg 1.0$

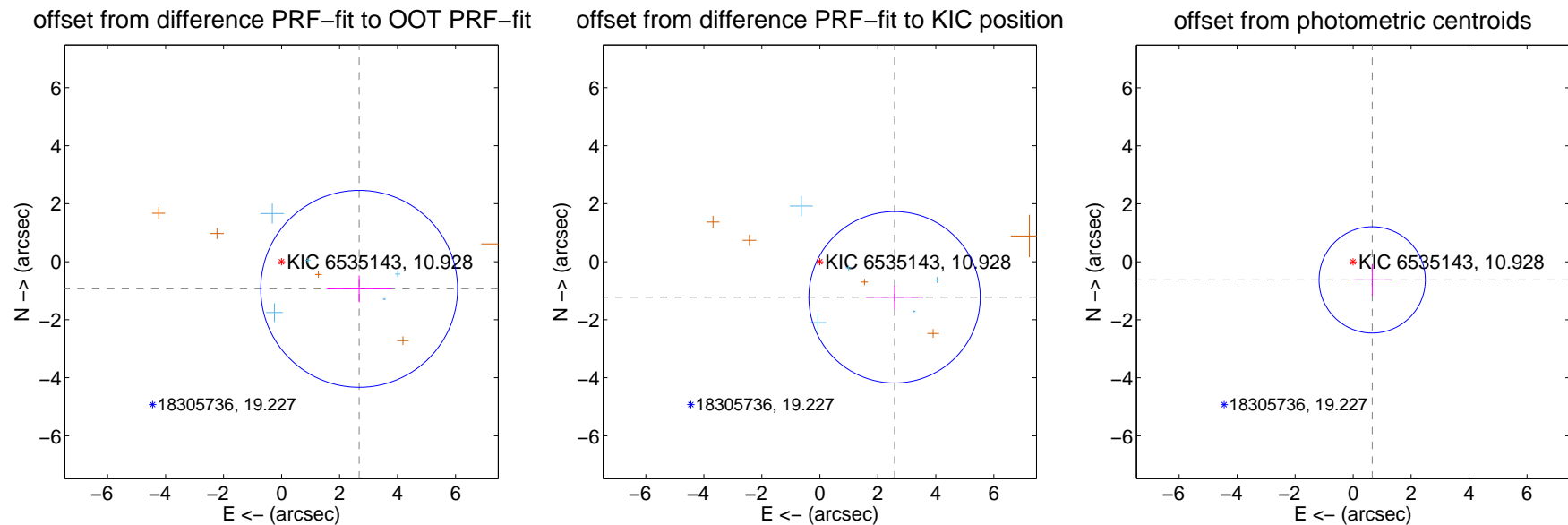
DV Centroid Data

Supplemental centroid analysis for 006535143-06. **Kepler magnitude: 10.93.** Transit SNR 9.20

There are 5 quarters with good PRF difference image offsets

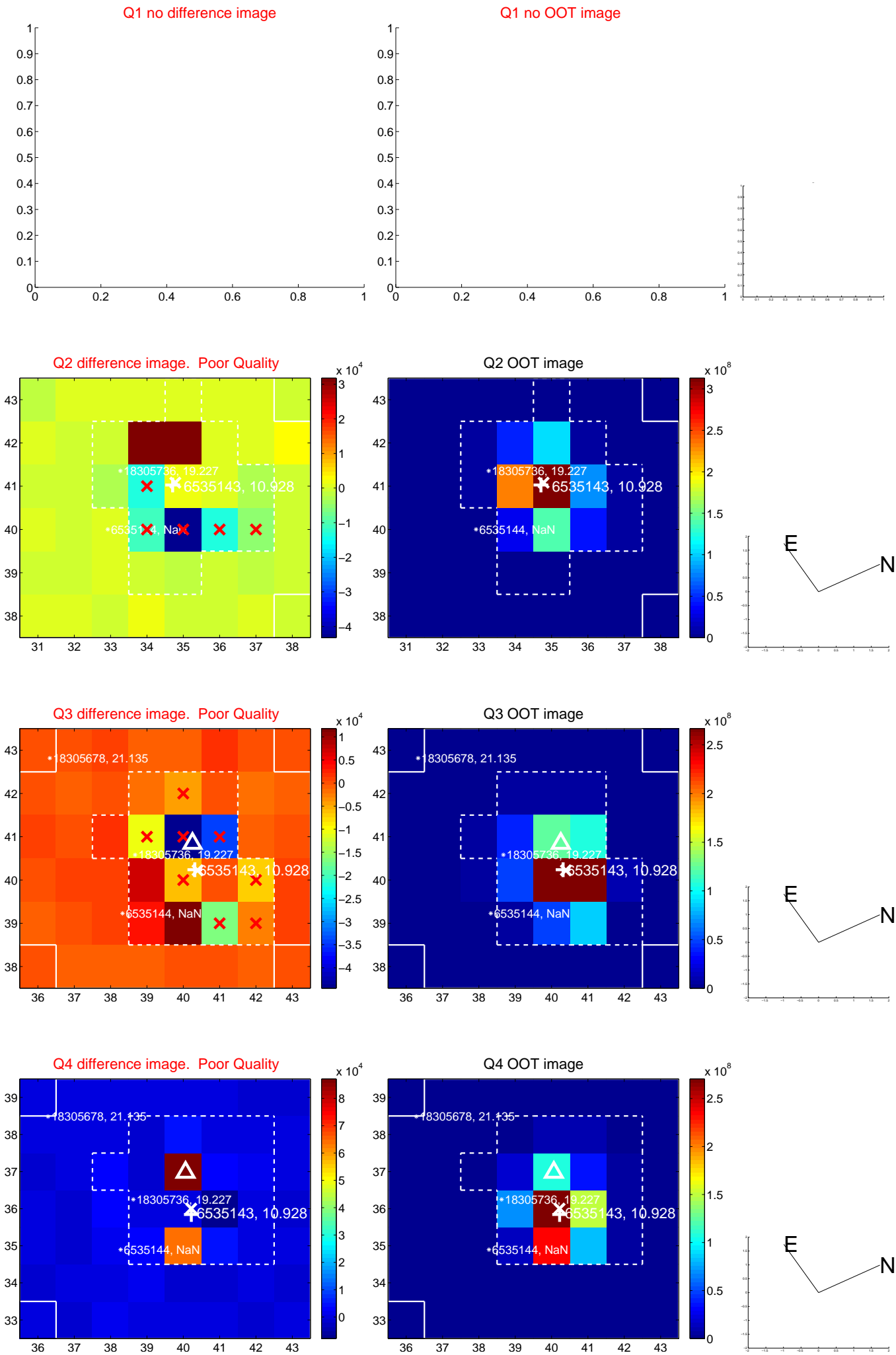
The direct PRF centroid is offset from the target star catalog position by about 0.39 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.835 ± 1.131	2.51	-2.676 ± 1.120	-0.936 ± 0.459
PRF-fit source offset from KIC position	2.854 ± 0.985	2.90	-2.577 ± 1.001	-1.226 ± 0.399
photometric centroid source offset	0.91 ± 0.61	1.49	-0.66 ± 0.66	-0.62 ± 0.55

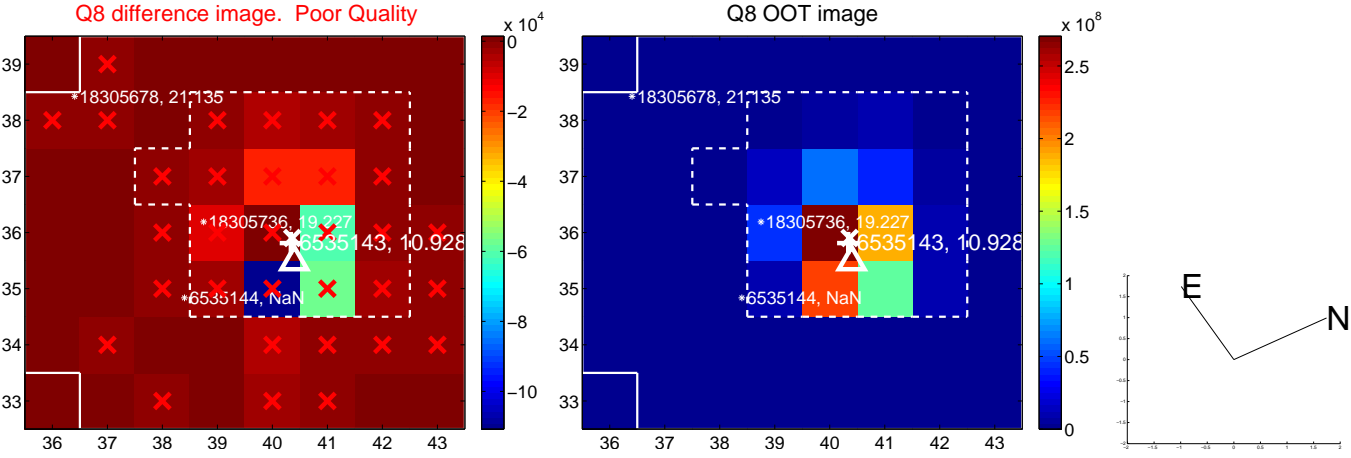
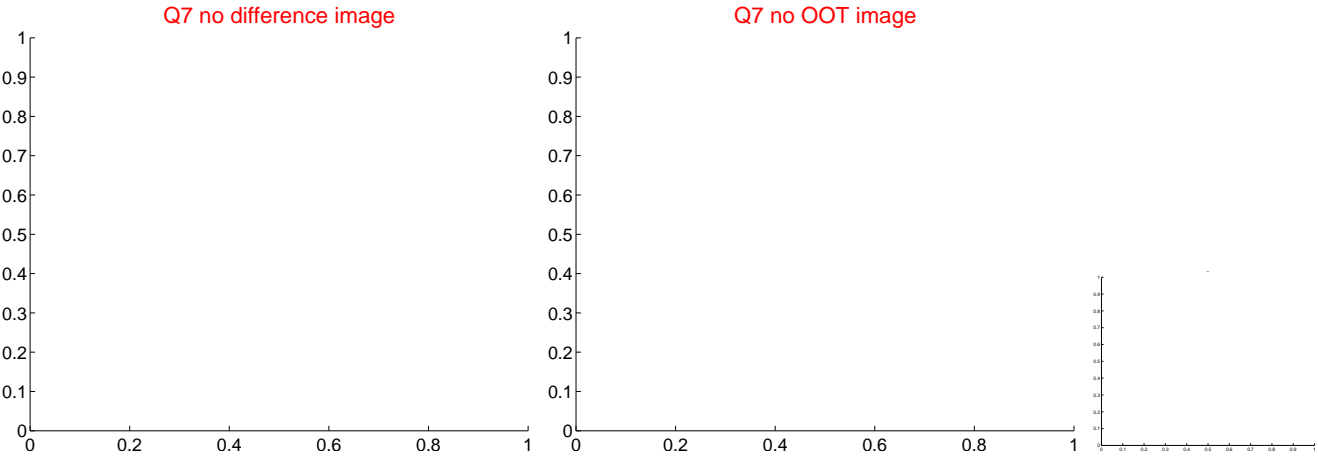
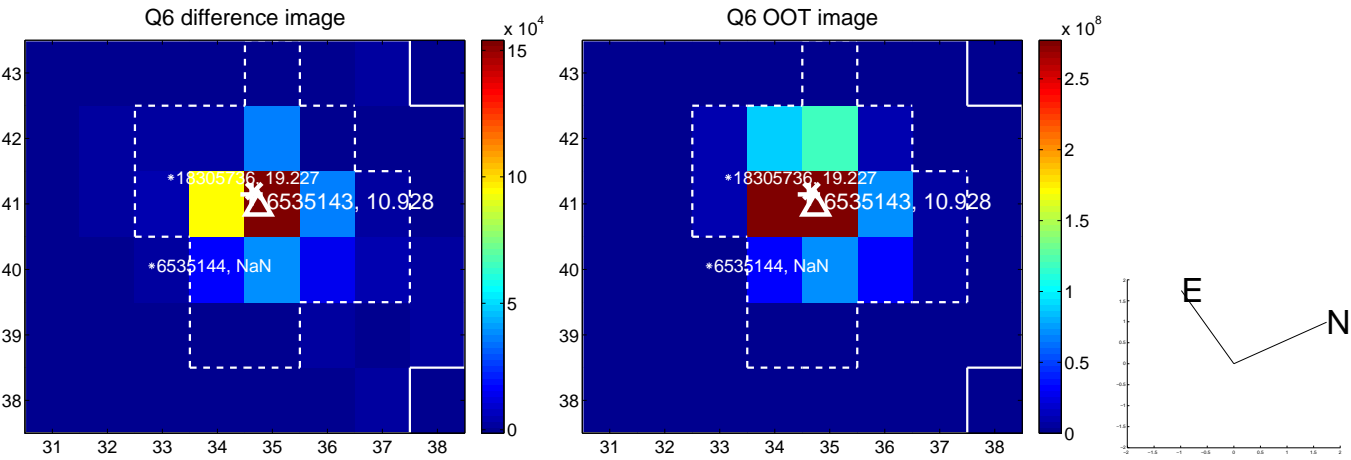
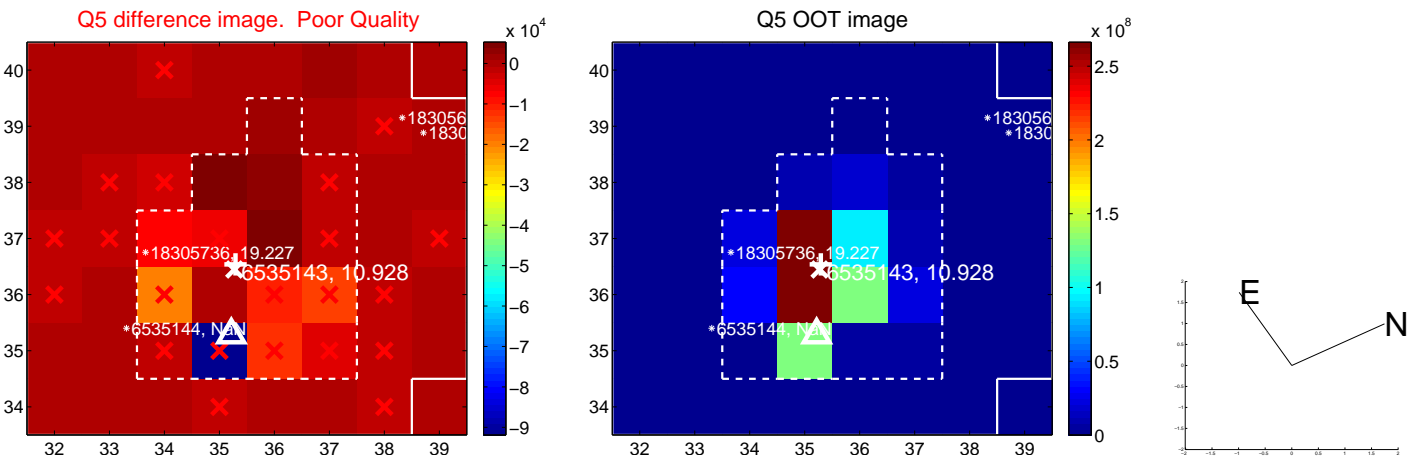


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

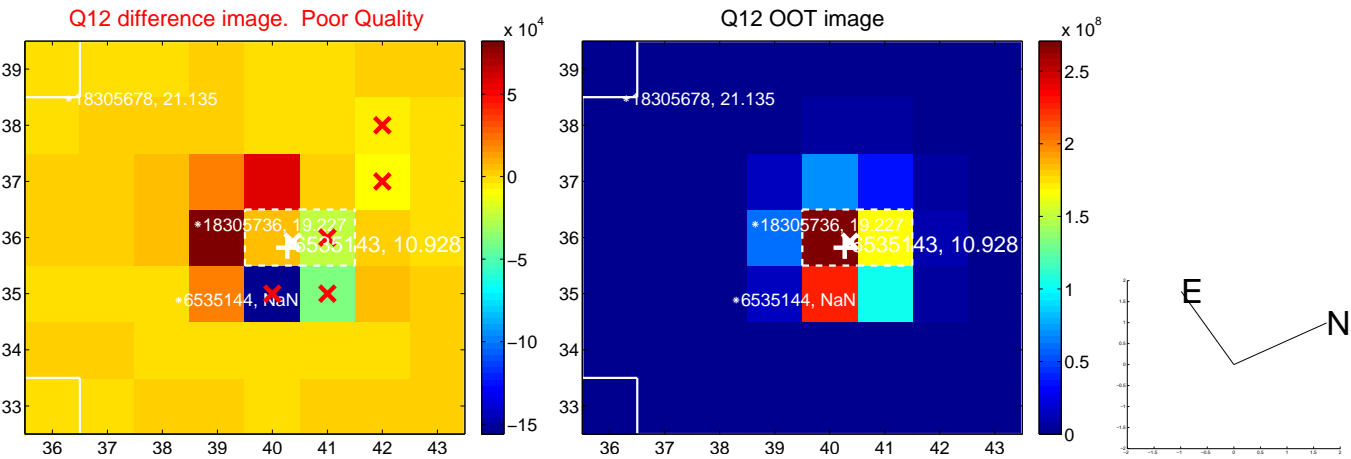
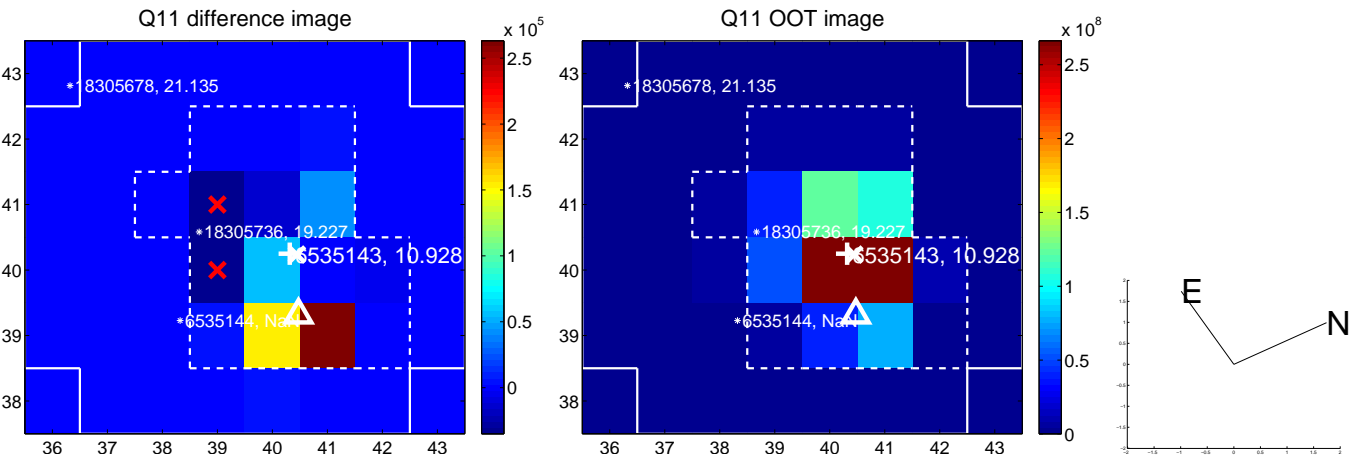
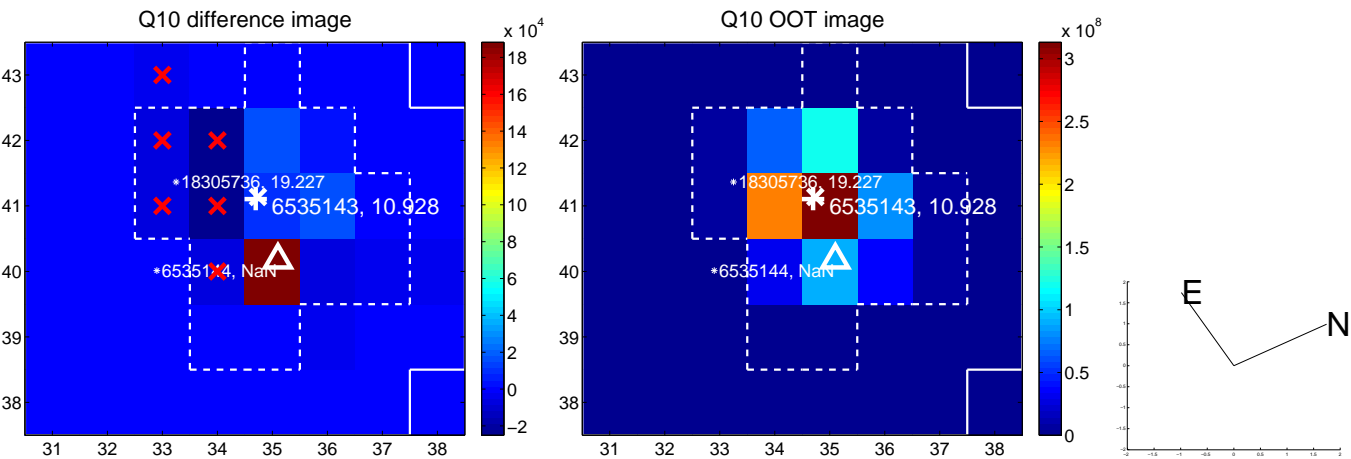
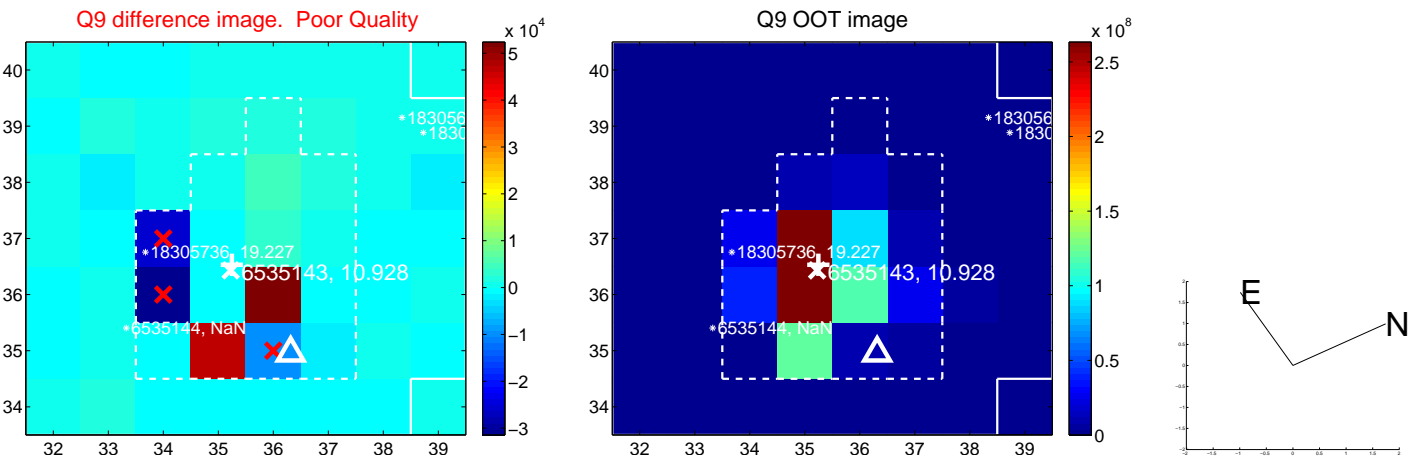
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



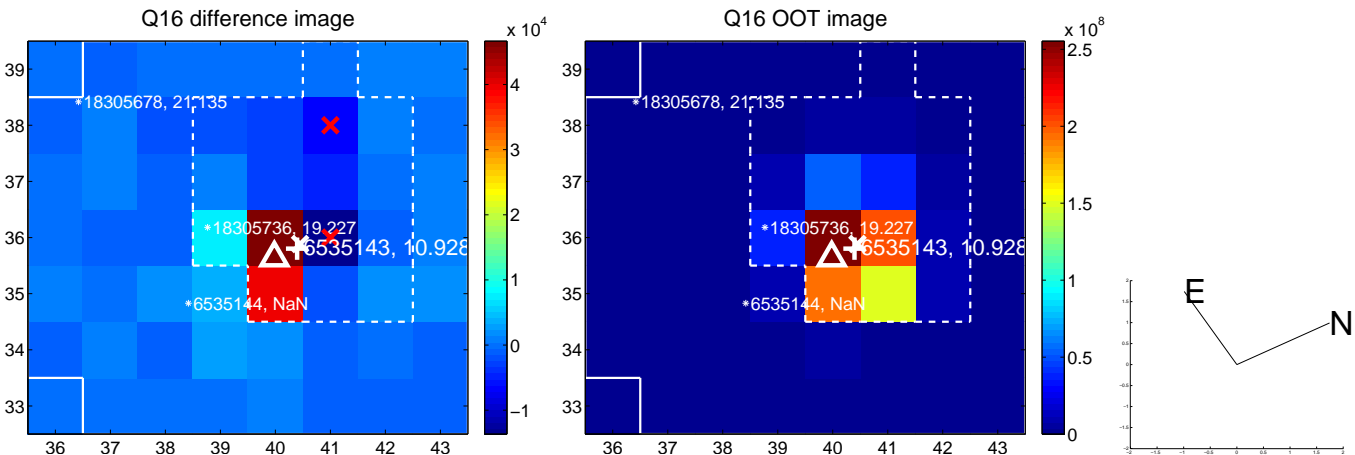
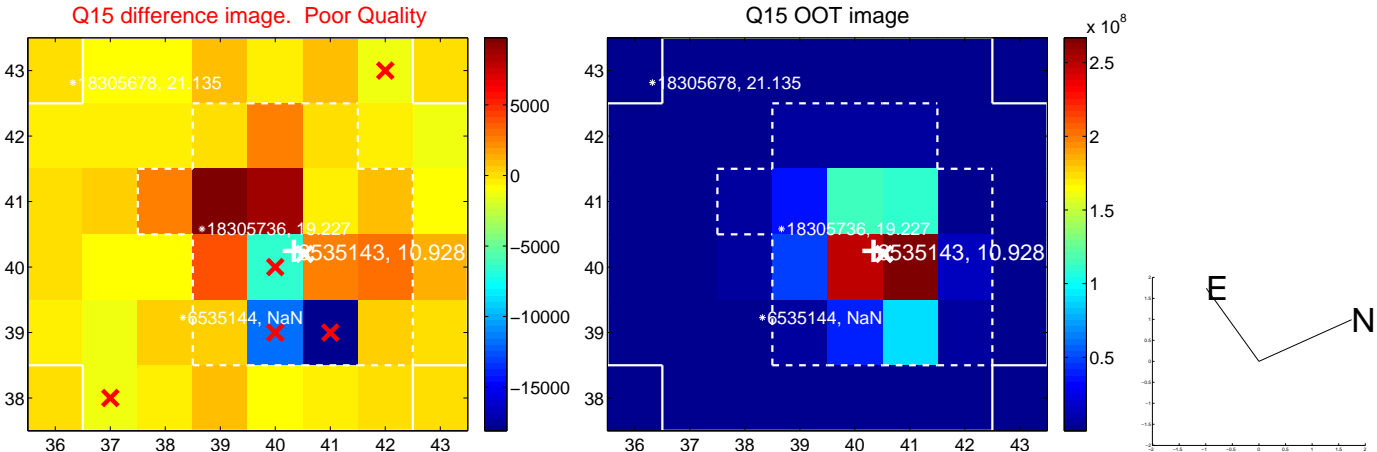
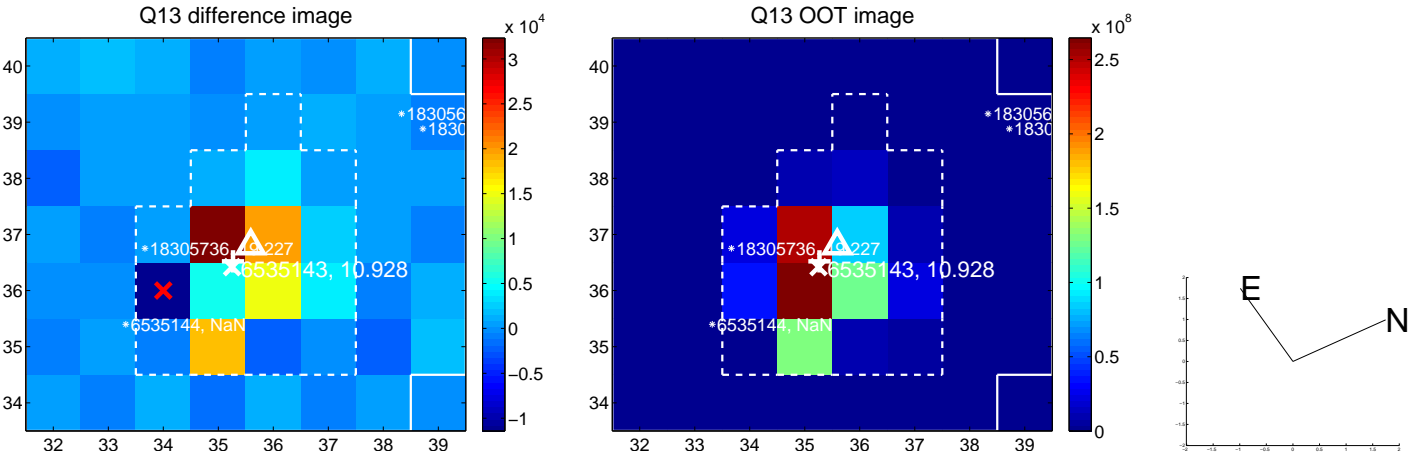
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



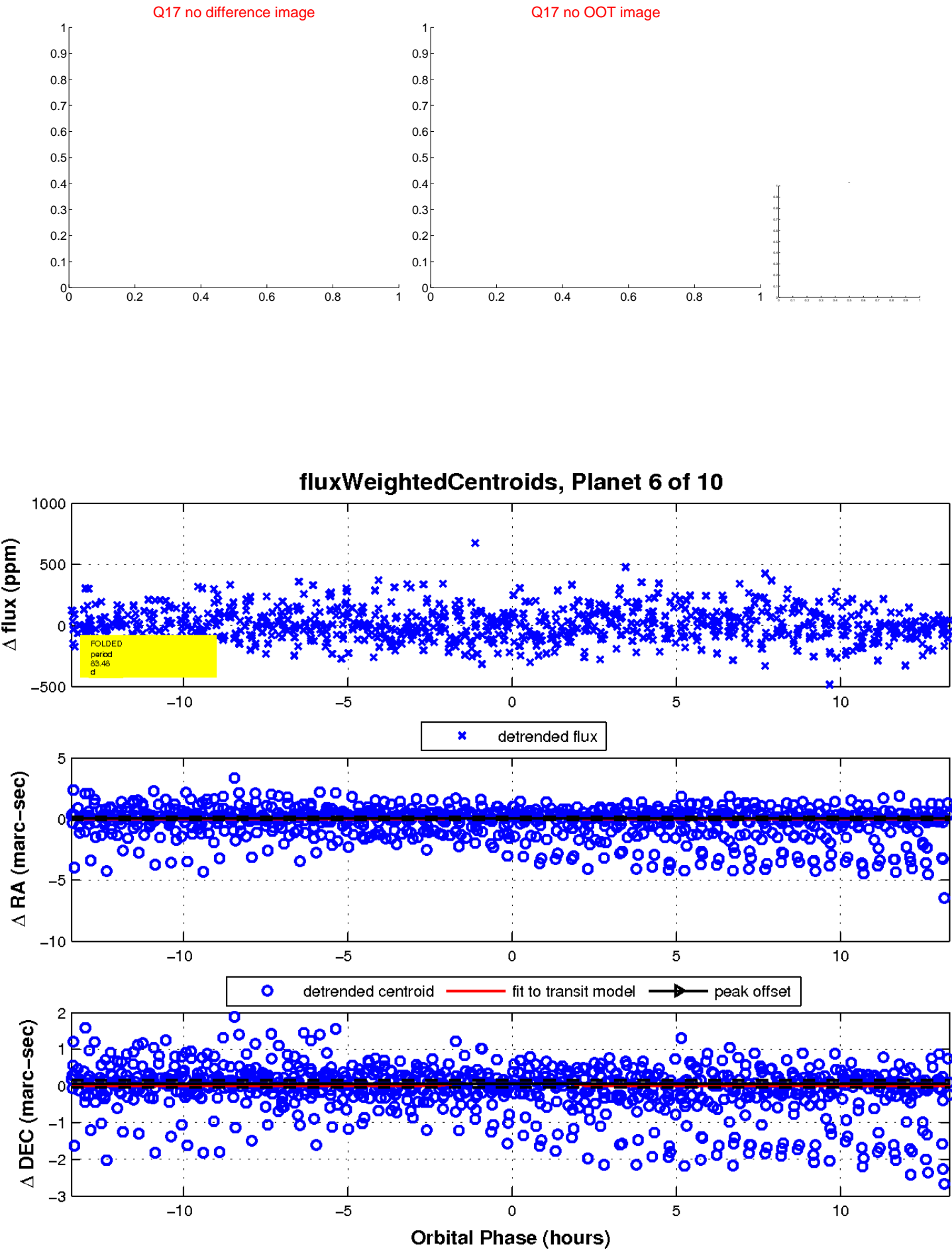
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



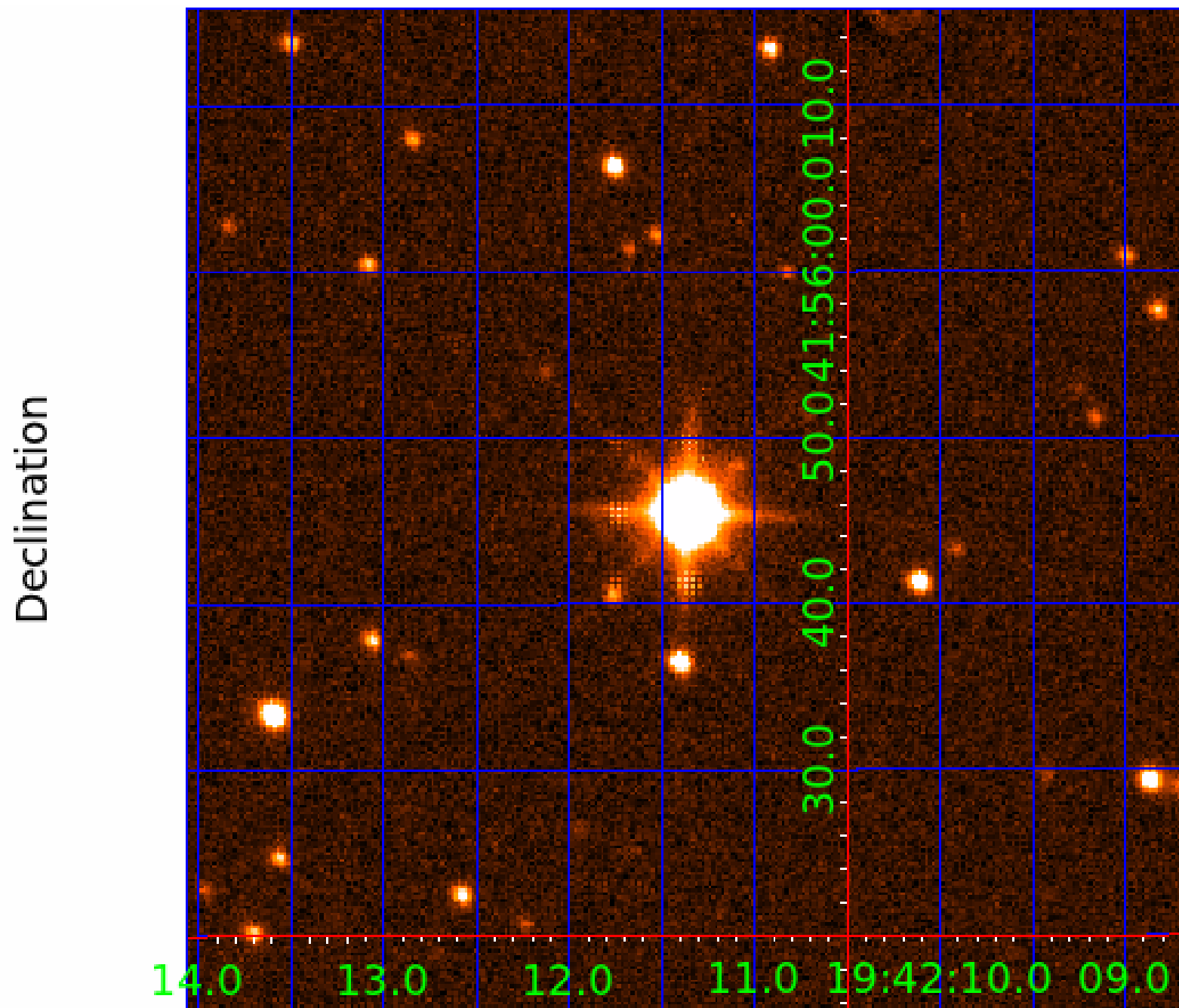
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



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})
006535143-01	OBS	No	1.655275	131.668348	13.1	9.574	8.6	7.7	1.99	6875	0.72	7918.91
006535143-02	OBS	No	256.515171	289.836364	112.5	5.531	10.2	6.4	1.99	6875	2.16	9.51
006535143-03	OBS	No	99.682988	208.377736	257.3	2.340	10.1	10.6	1.99	6875	3.64	33.55
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006535143-06	OBS	No	83.476567	209.923159	177.7	4.474	9.1	9.2	1.99	6875	2.99	42.50
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006535143-08	OBS	No	40.486809	145.706523	94.9	7.051	8.6	7.6	1.99	6875	2.17	111.53
006535143-09	OBS	No	89.732378	186.618285	139.3	6.675	8.6	5.9	1.99	6875	2.66	38.60
006535143-10	OBS	No	32.503334	158.465697	196.5	0.978	8.3	7.9	1.99	6875	3.26	149.48

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006535143-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_SATURATED
006535143-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
006535143-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
006535143-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006535143-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006535143-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_SATURATED
006535143-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006535143-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
006535143-09	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
006535143-10	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—CENT_SATURATED

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

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

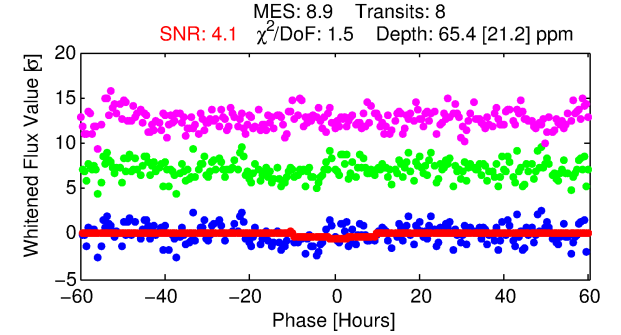
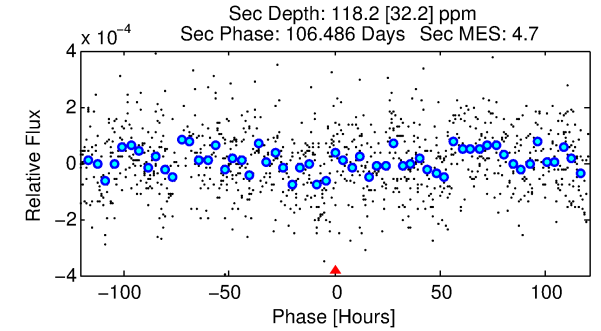
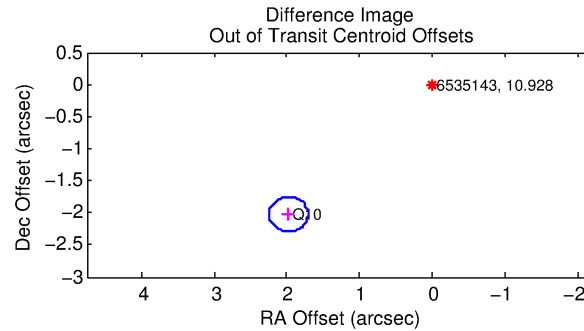
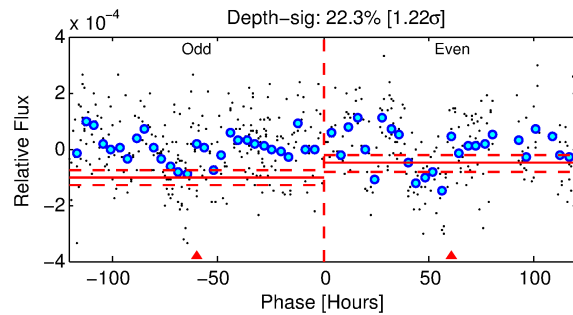
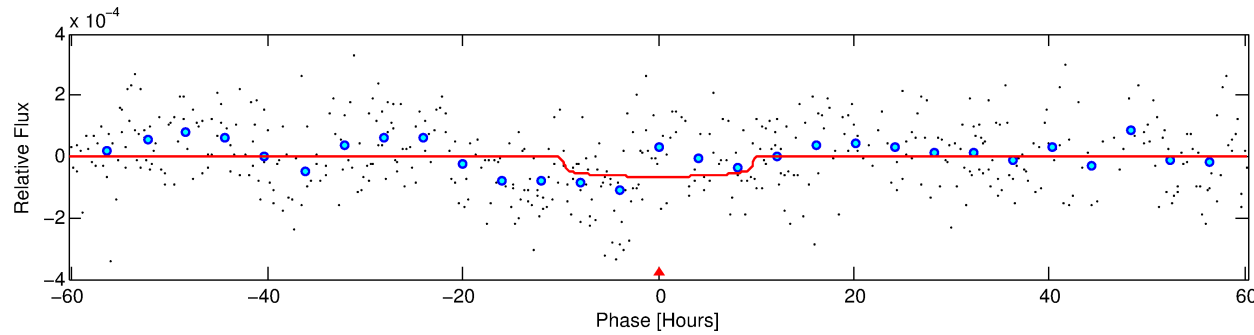
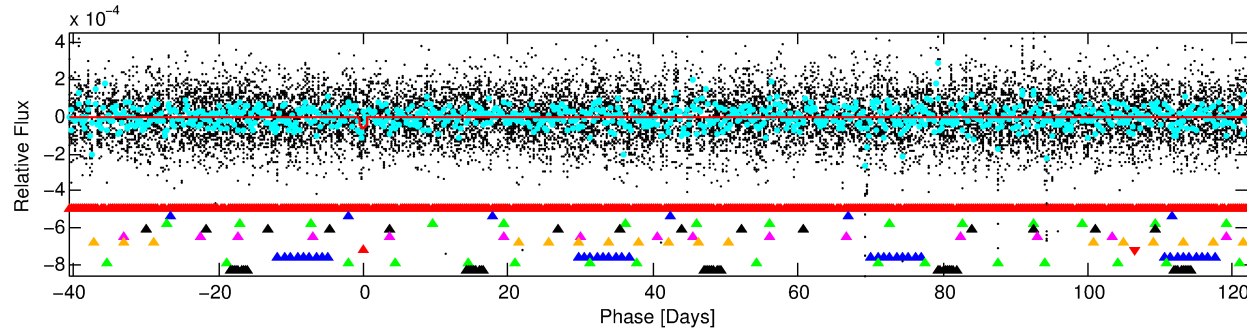
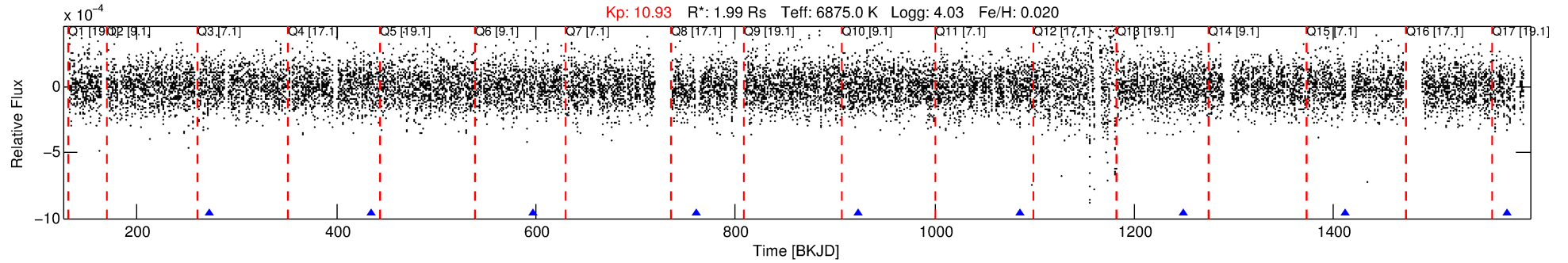
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006535143-07

No Significant Match Found

DV One-Page Summary

KIC: 6535143 Candidate: 7 of 10 Period: 162.819 d



DV Fit Results:

Period = 162.81858 [0.01320] d
Epoch = 271.9554 [0.0736] BKJD
Rp/R* = 0.0085 [0.0030]
a/R* = 30.58 [56.45]
b = 0.88 [0.48]
Seff = 17.44 [4.67]
Teq = 521 [35] K
Rp = 1.84 [0.75] Re
a = 0.6725 [0.1168] AU
Ag = 8686.29 [7010.26] [1.24 σ]
Teffp = 7778 [1486] K [4.88 σ]

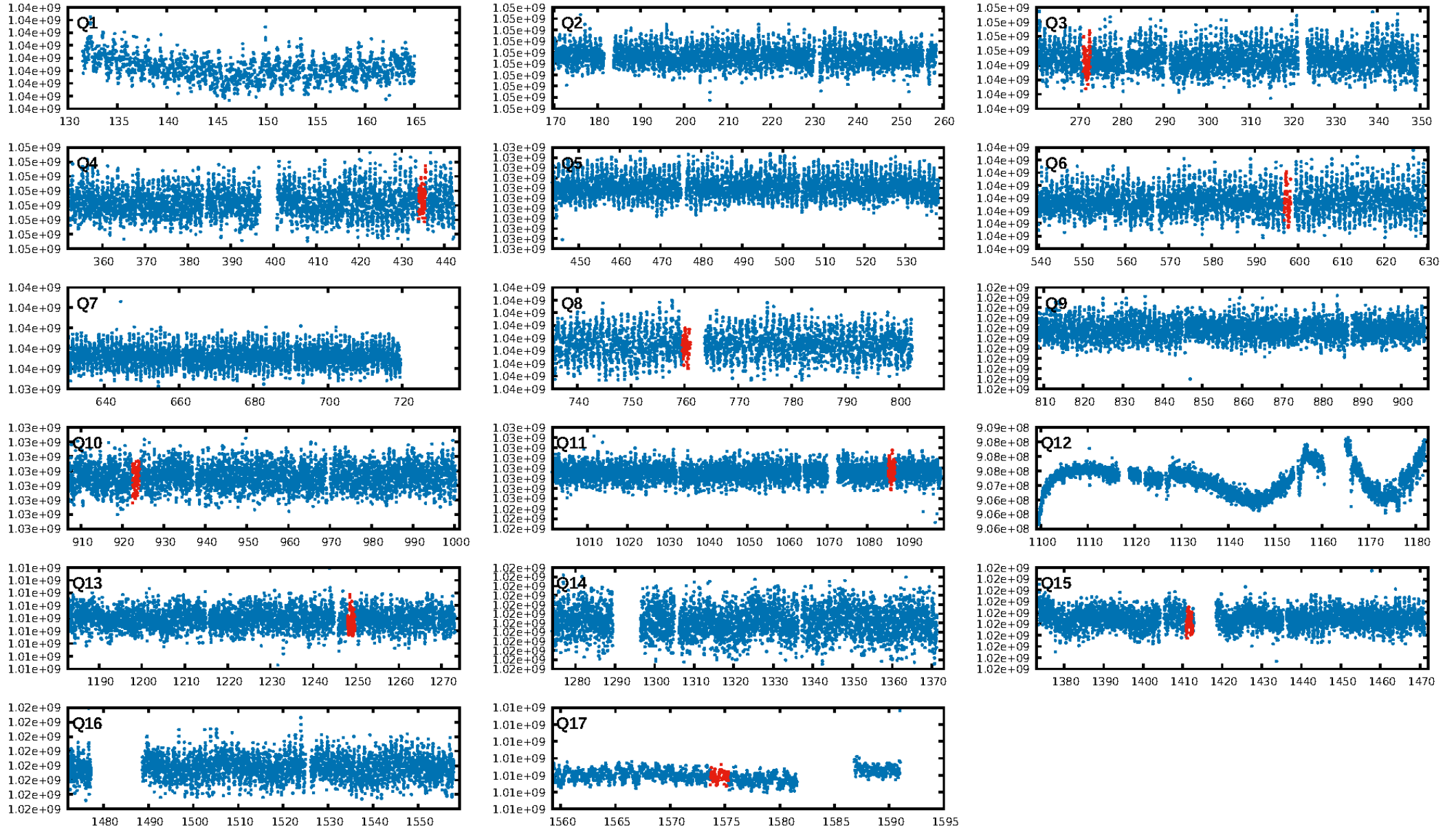
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [66.11 σ]
LongPeriod-sig: 100.0% [107.80 σ]
ModelChiSquare2-sig: 4.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: 1.357
Centroid-sig: 56.1%
Centroid-so: 0.577 arcsec [0.39 σ]
OotOffset-rm: 2.827 arcsec [31.60 σ]
KicOffset-rm: 3.164 arcsec [35.13 σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 0.00 [0/5]

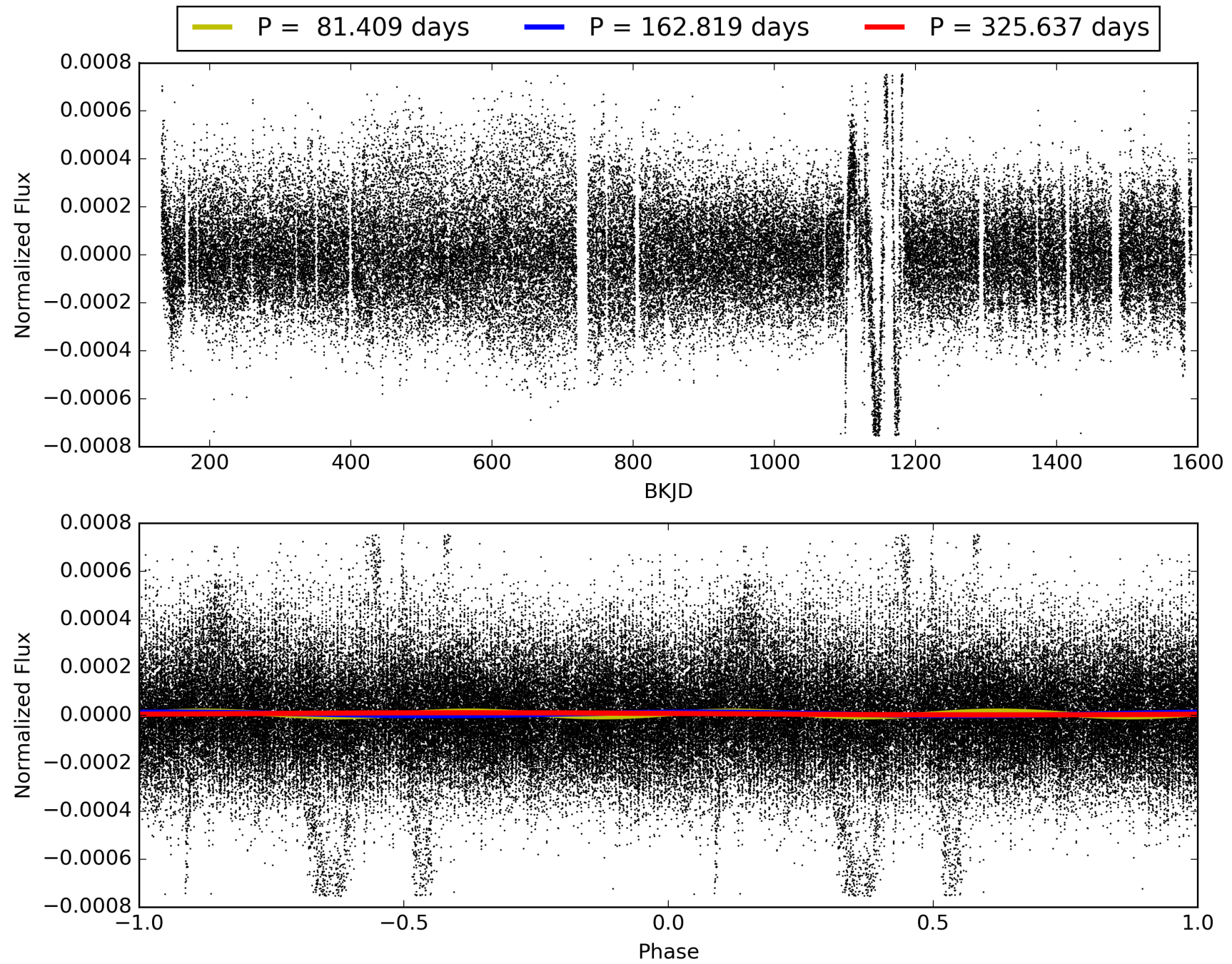
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 03:15:46 Z

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

TCE 006535143-07, PDC Light Curves

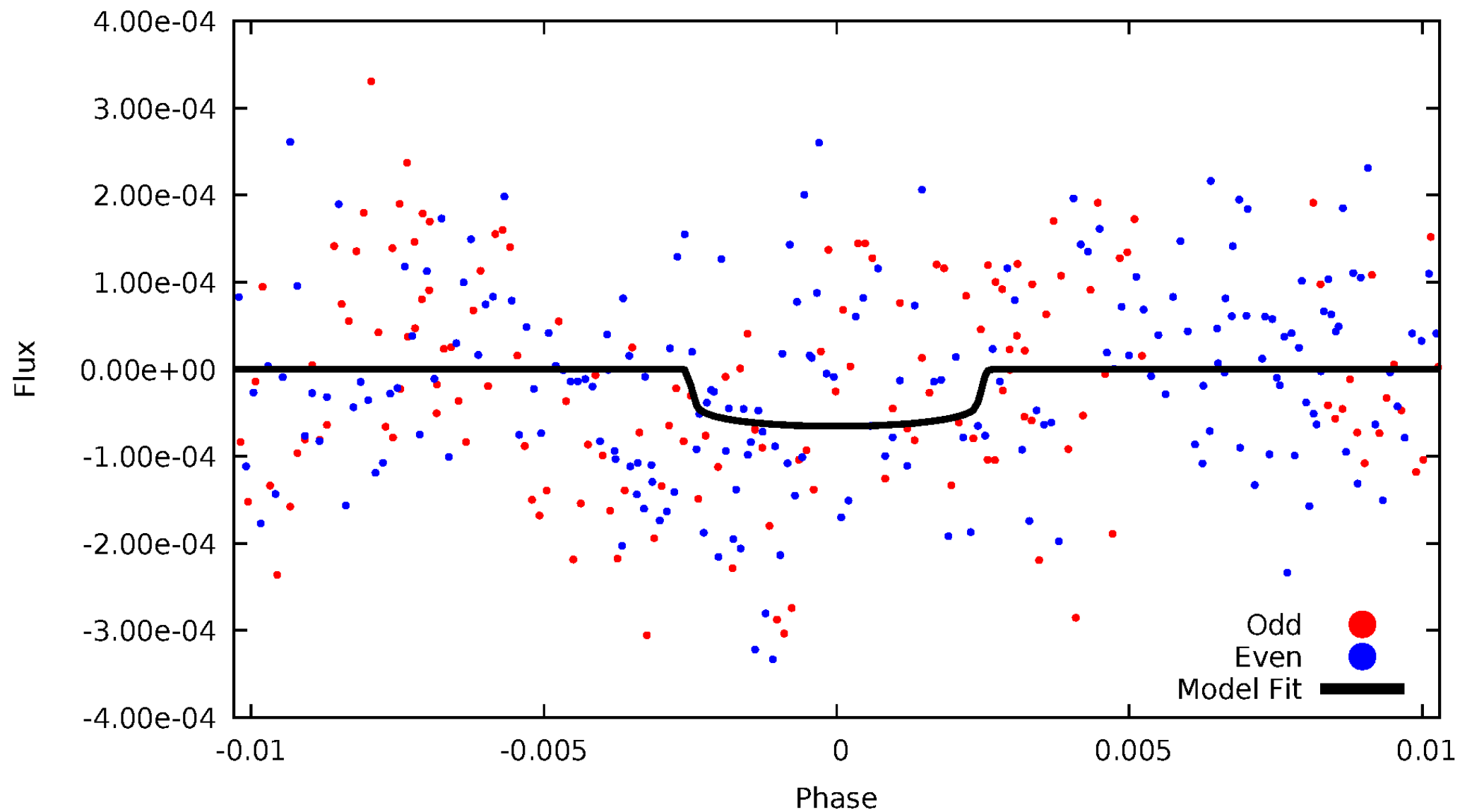


TCE 006535143-07



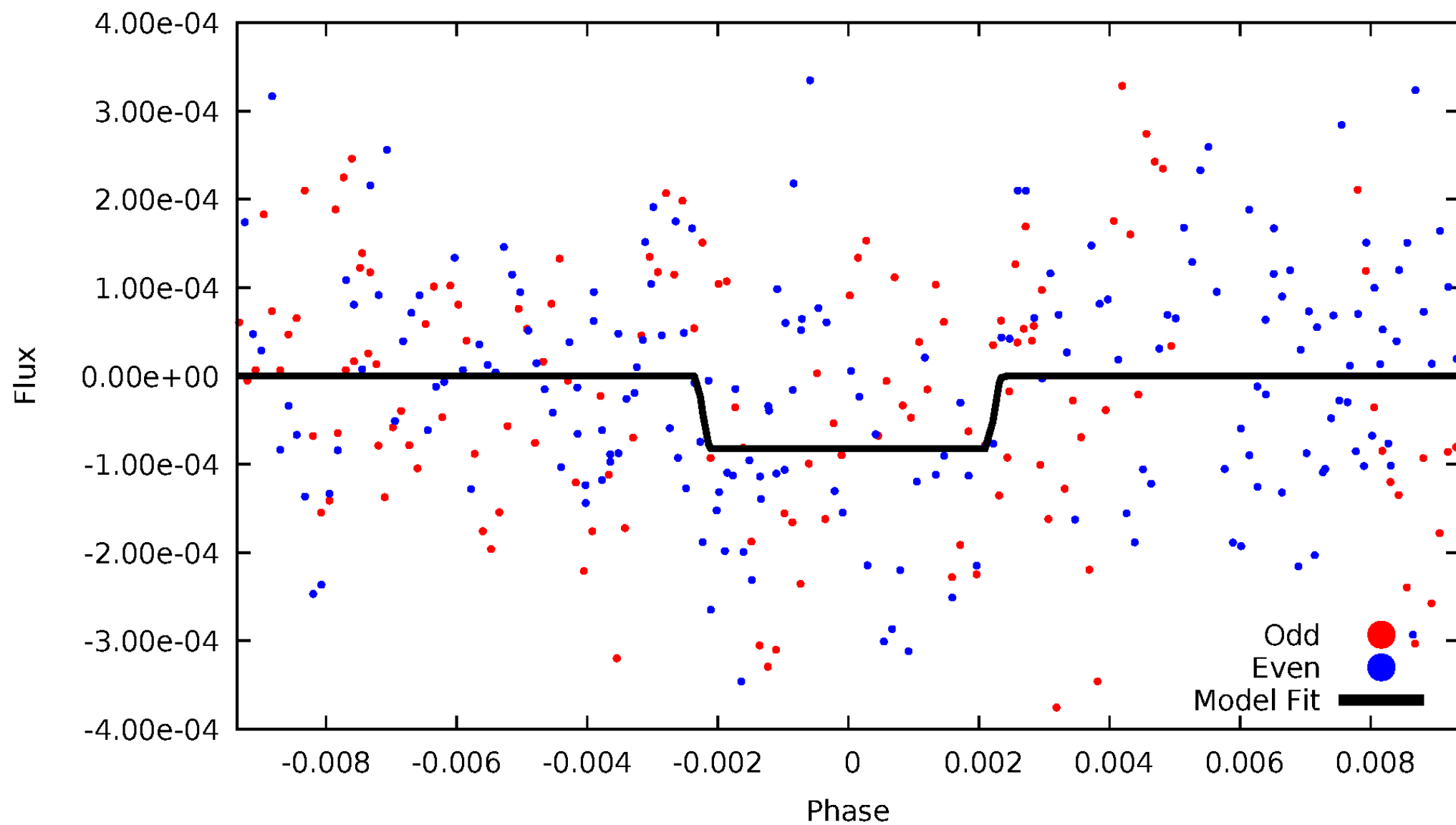
DV Odd/Even

TCE 006535143-07



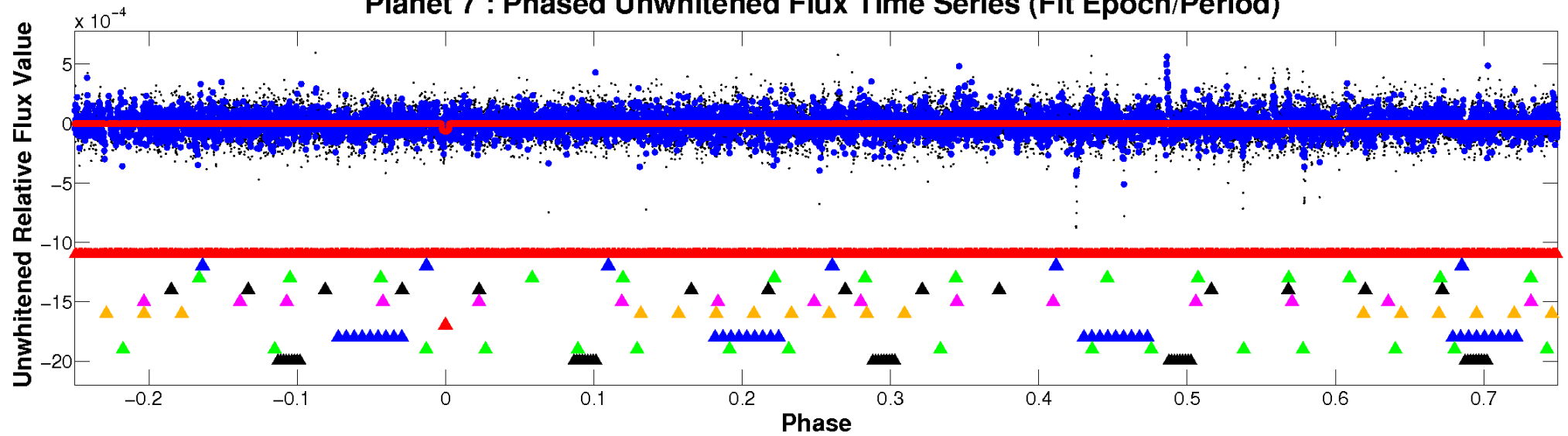
ALT Odd/Even

TCE 006535143-07

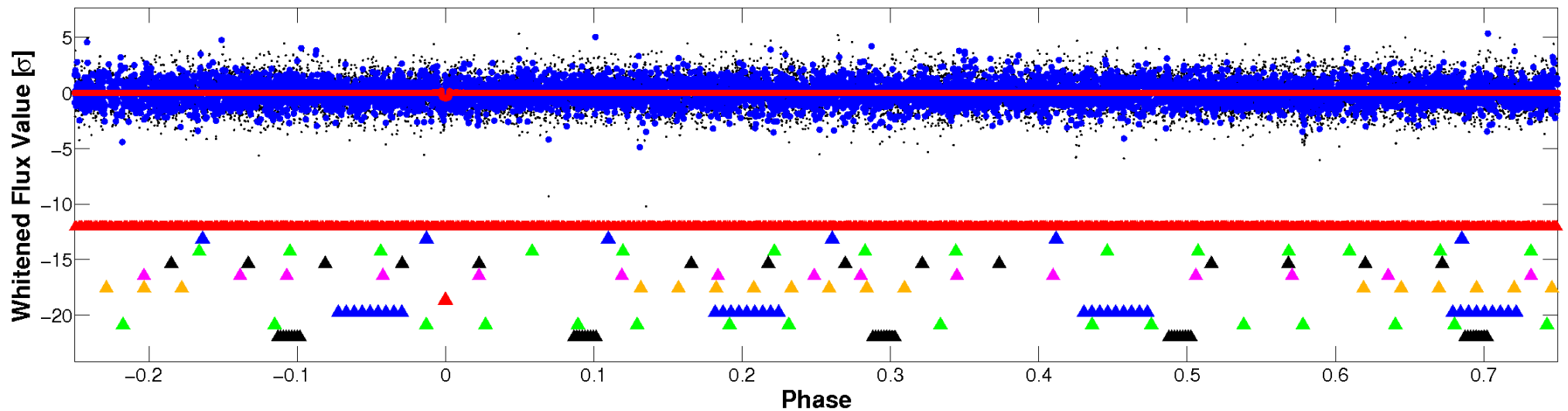


Non-Whitened Vs. Whitened Light Curve

Planet 7 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

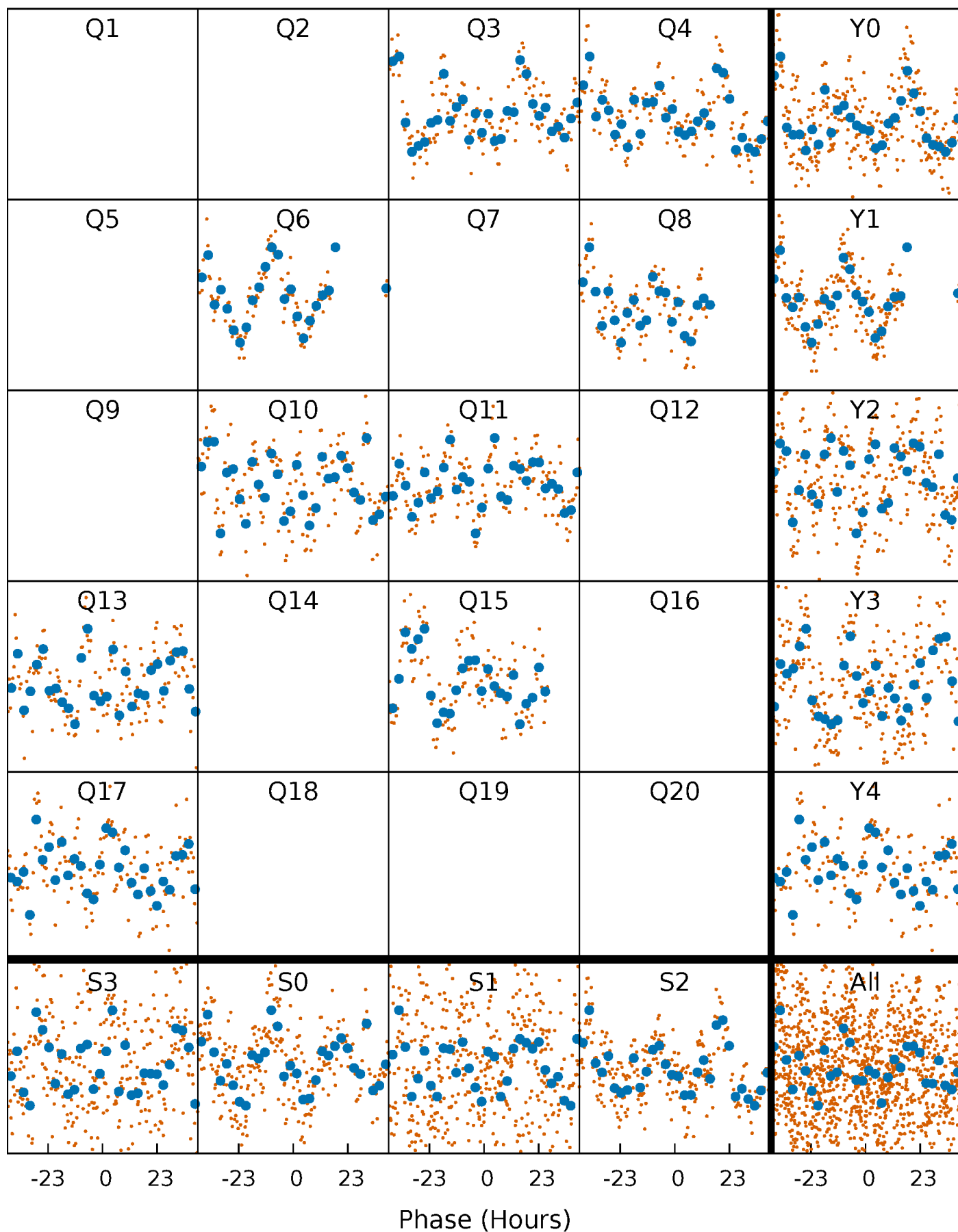


Planet 7 : Phased Whitened Flux Time Series (Fit Epoch/Period)



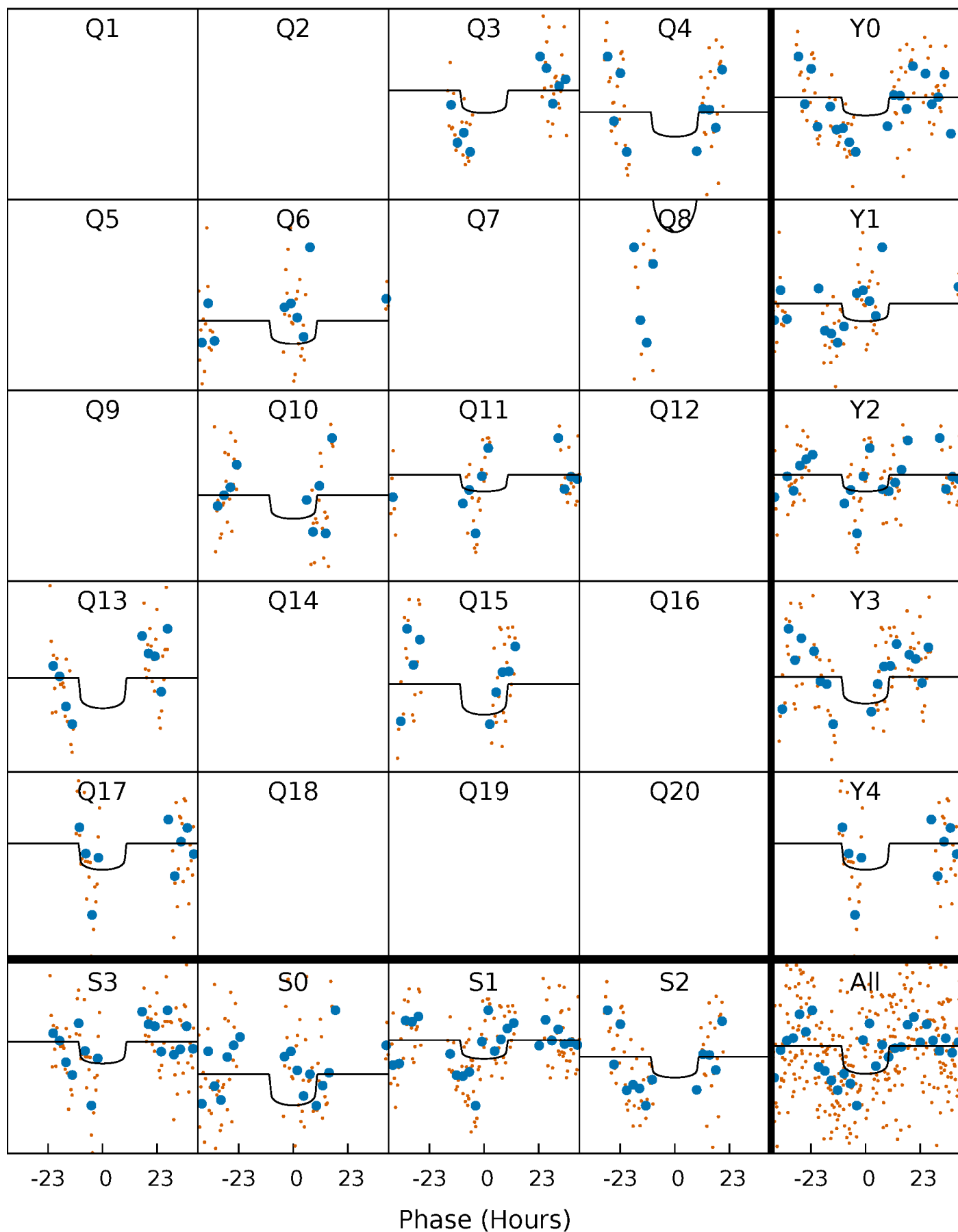
PDC Quarter-Phased Transit Curves

TCE 006535143-07 P=162.818577 Days $T_0=271.955355$ (BKJD)



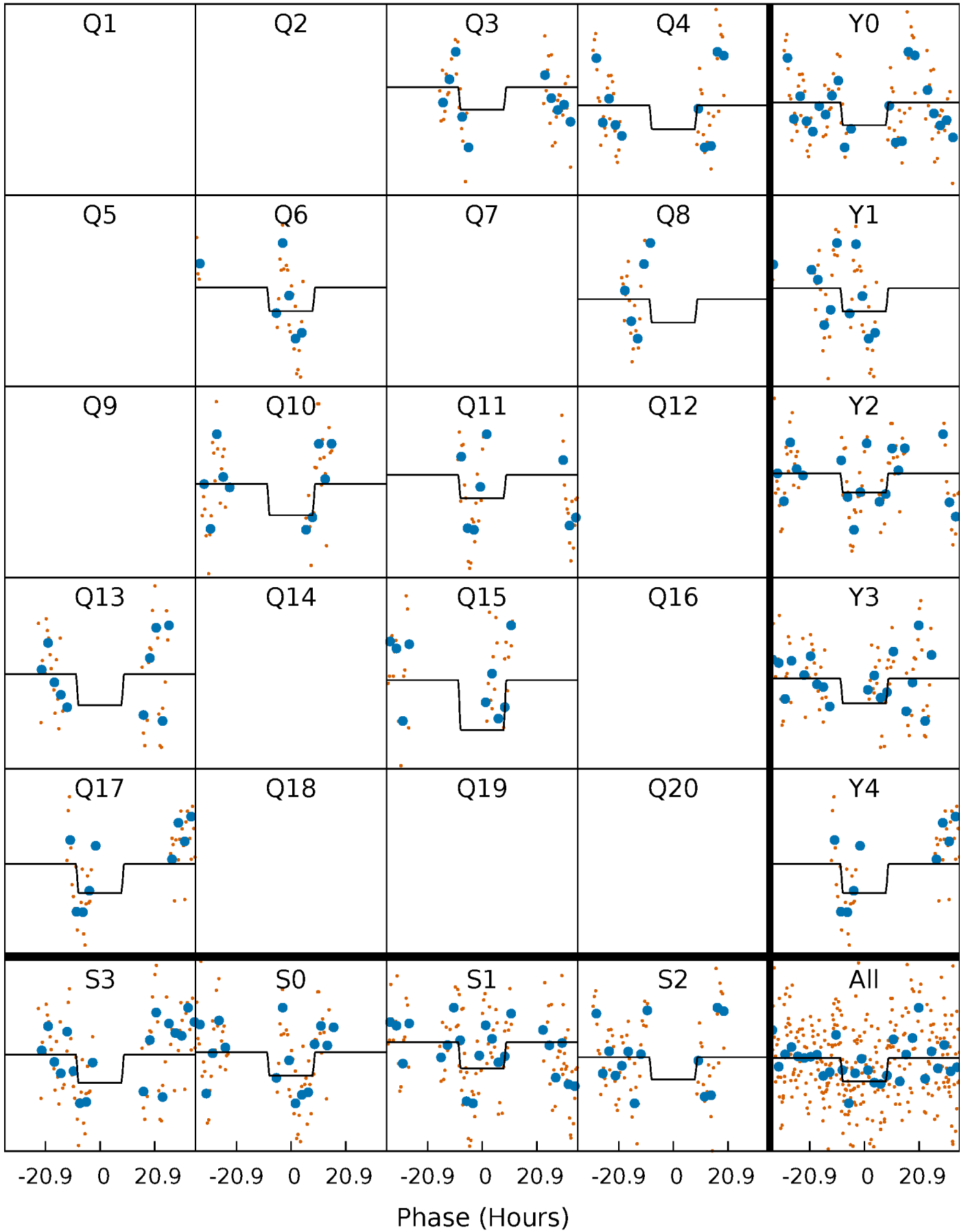
DV Quarter-Phased Transit Curves

TCE 006535143-07 P=162.818577 Days $T_0=271.955355$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

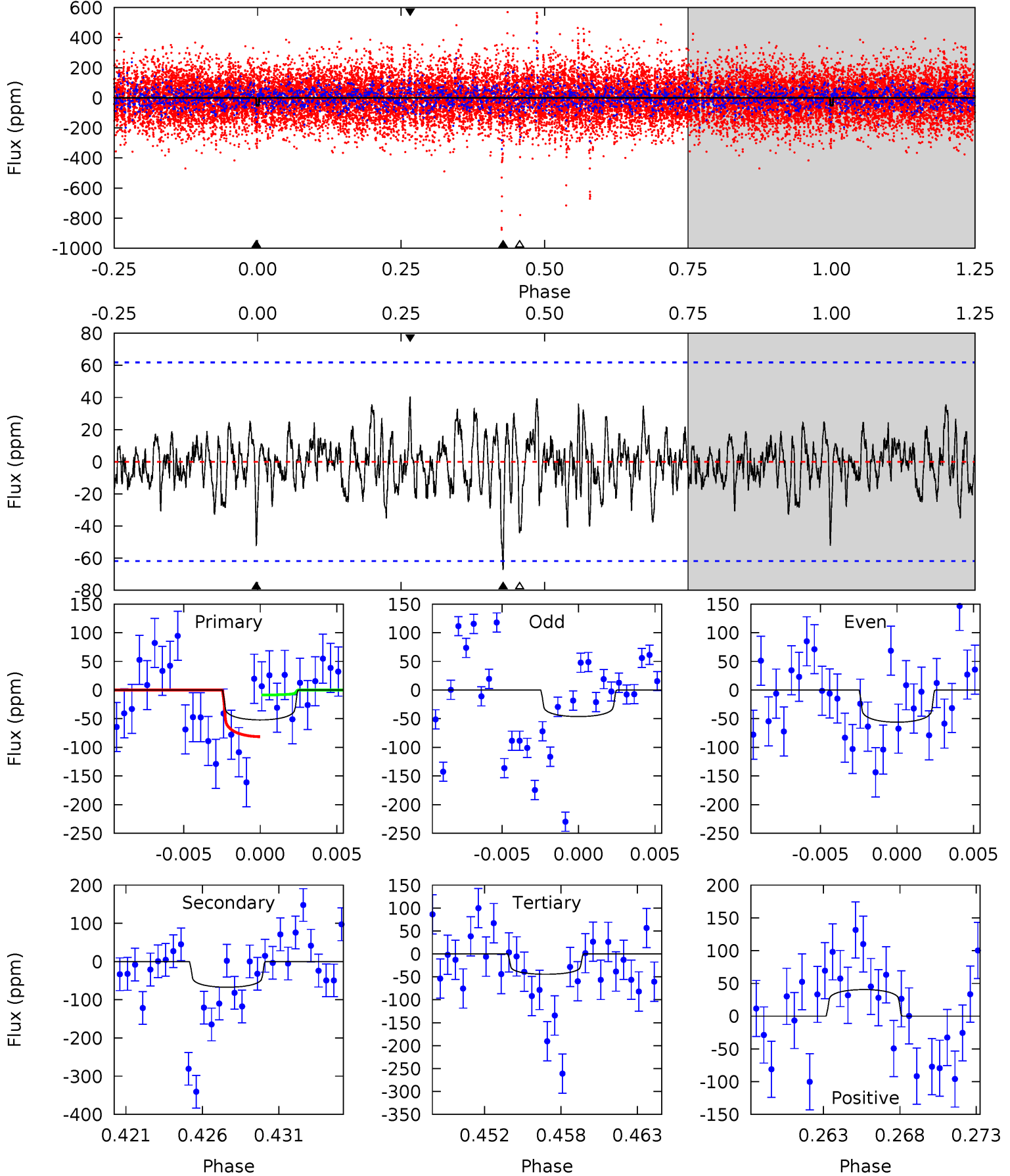
TCE 006535143-07 P=162.821417 Days $T_0=271.996099$ (BKJD)



DV Model-Shift Uniqueness Test

006535143-07, P = 162.818577 Days, E = 109.136778 Days

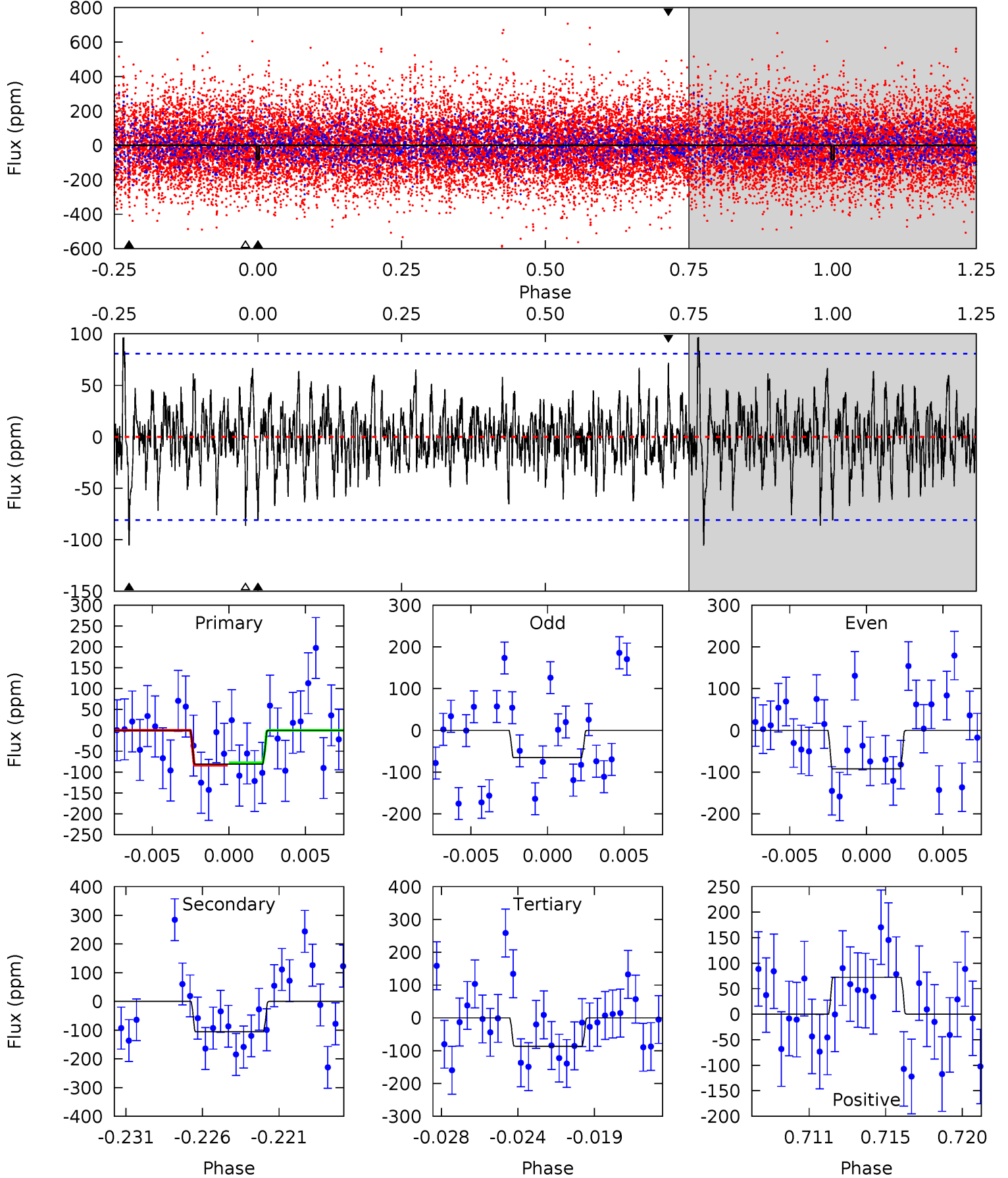
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.34	5.60	3.70	3.38	5.15	2.79	1.14	0.65	0.97	1.90	2.22	0.40	0.87	0.38	3.01



Alt Model-Shift Uniqueness Test

006535143-07, P = 162.821417 Days, E = 109.174682 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.18	6.75	5.52	4.61	5.17	2.83	1.52	-0.33	0.57	1.24	2.14	0.87	0.98	0.48	0.18



Stellar Parameters For KIC 006535143

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6875^{+71}_{-82}	$4.027^{+0.149}_{-0.122}$	$0.020^{+0.150}_{-0.150}$	$1.985^{+0.389}_{-0.389}$	$1.530^{+0.146}_{-0.133}$	$0.276^{+0.202}_{-0.099}$
	+1%/-1%	+4%/-3%	+750%/-750%	+20%/-20%	+10%/-9%	+73%/-36%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 006535143-07 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-67 ± 12	$1.83^{+0.70}_{-0.65}$	727^{+36}_{-36}	6672^{+2092}_{-978}	4834^{+7328}_{-2376}
Alt.	-106 ± 16	$1.96^{+0.66}_{-0.64}$	727^{+38}_{-37}	7349^{+2131}_{-1072}	6999^{+8687}_{-3275}

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 $A_{obs} \gg 1.0$

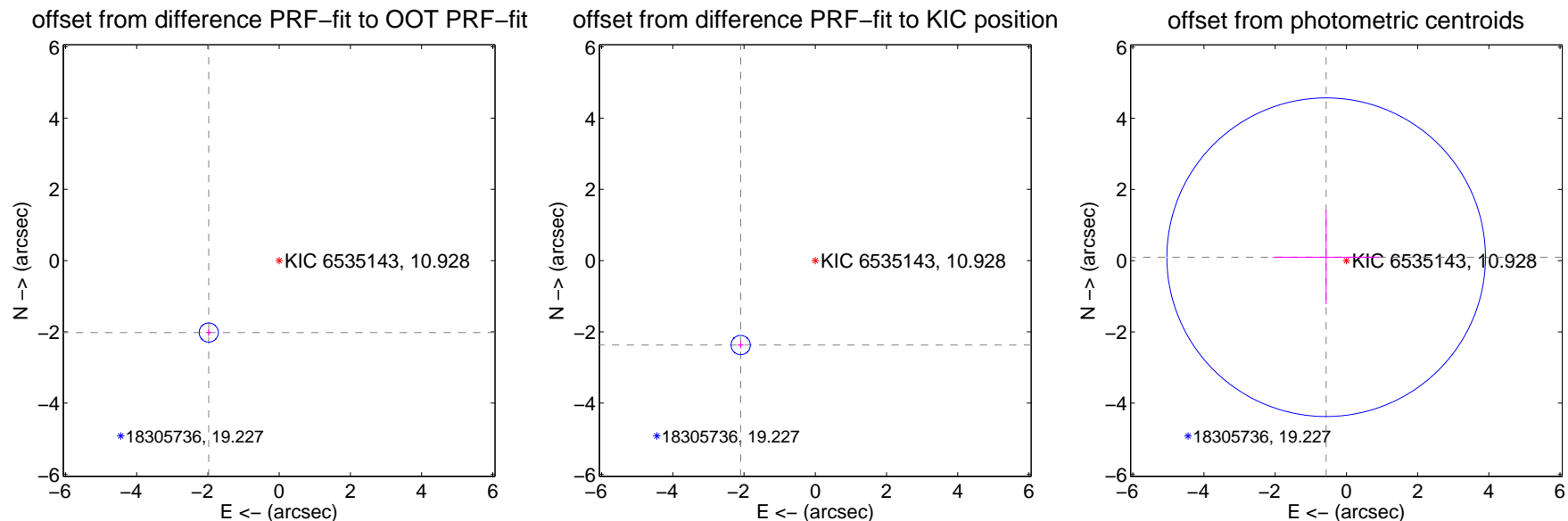
DV Centroid Data

Supplemental centroid analysis for 006535143-07. **Kepler magnitude: 10.93.** Transit SNR 4.05

There are 0 quarters with good PRF difference image offsets

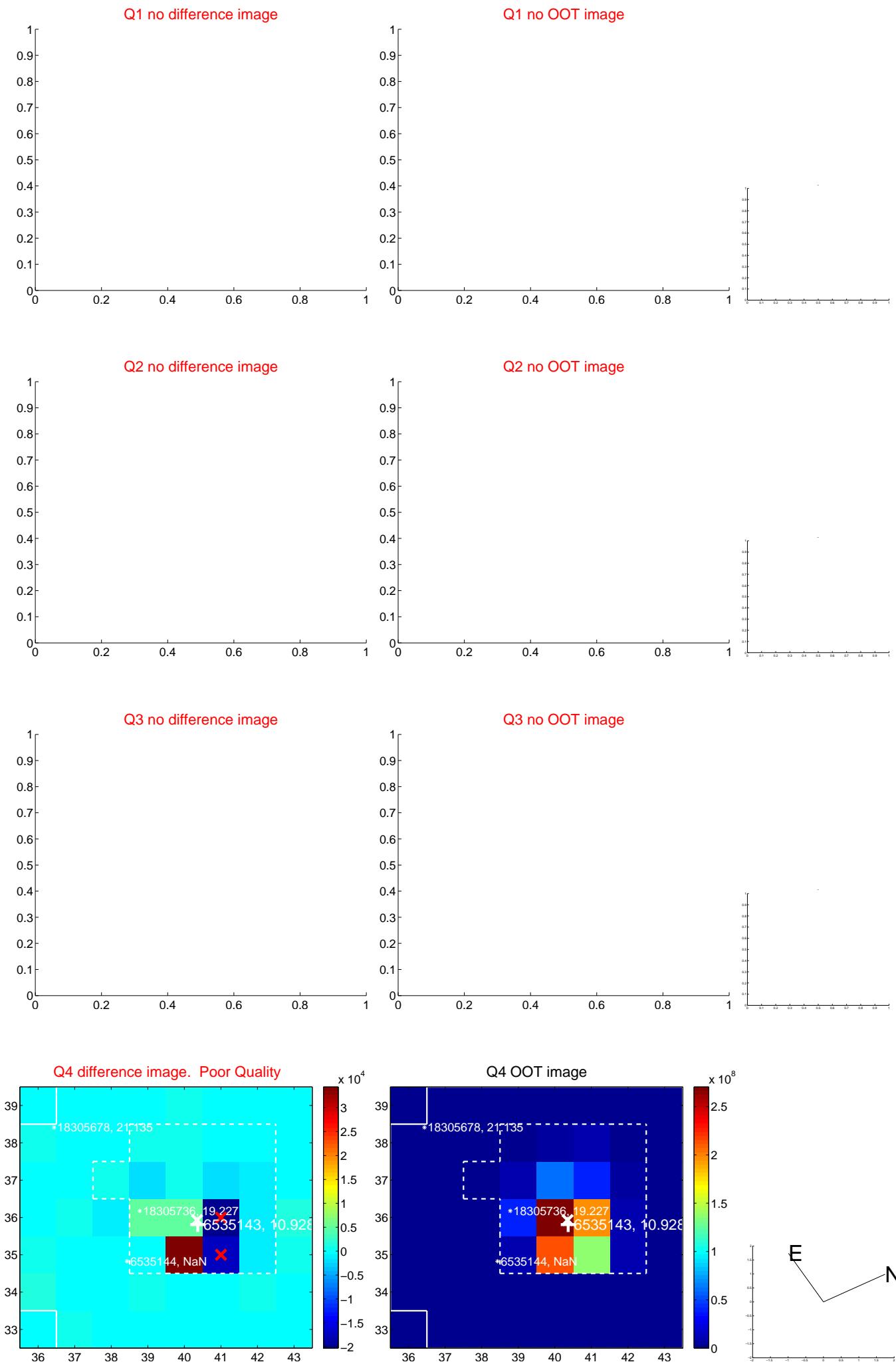
The direct PRF centroid is offset from the target star catalog position by about 0.37 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.827 ± 0.089	31.60	1.978 ± 0.084	-2.020 ± 0.095
PRF-fit source offset from KIC position	3.164 ± 0.090	35.13	2.094 ± 0.084	-2.372 ± 0.095
photometric centroid source offset	0.58 ± 1.49	0.39	0.57 ± 1.50	0.10 ± 1.32



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.

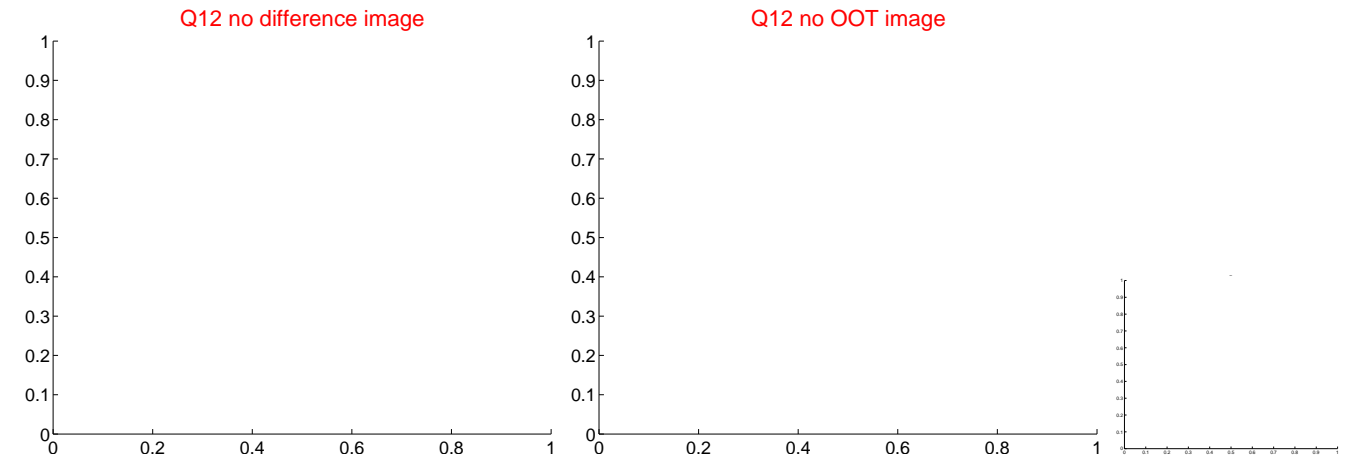
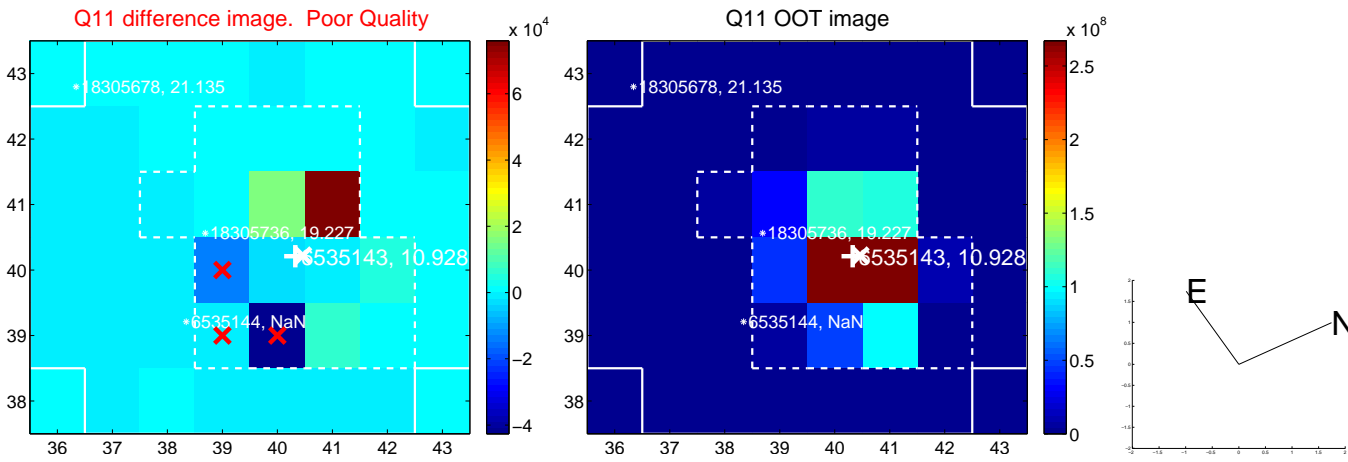
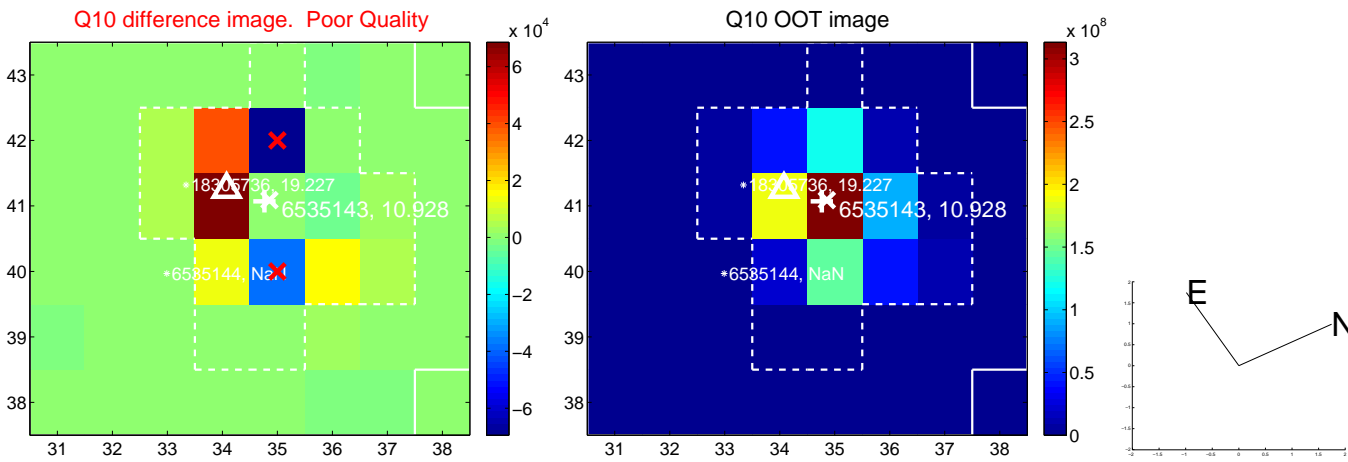
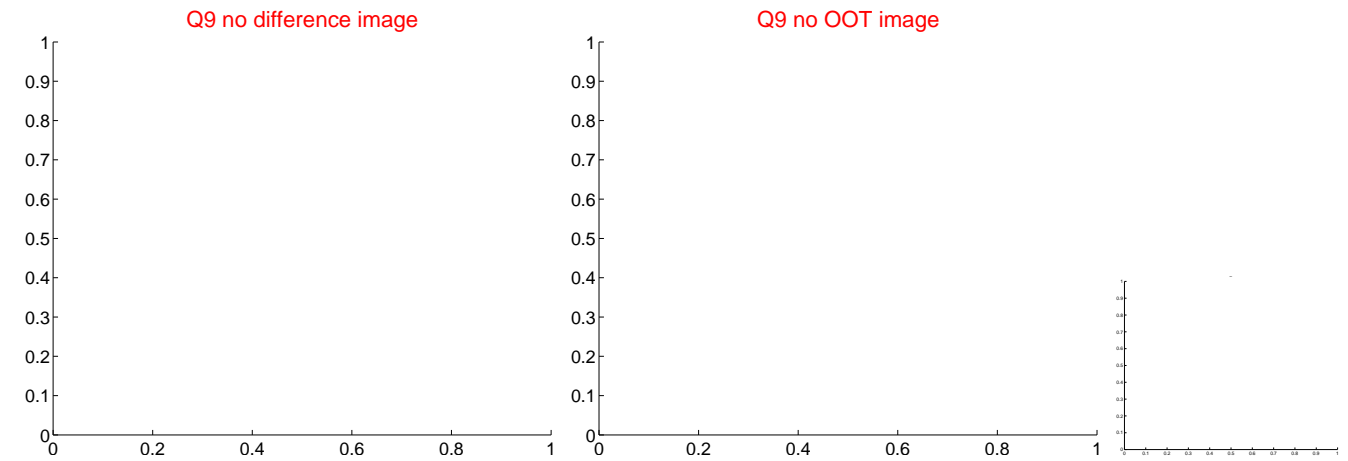
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



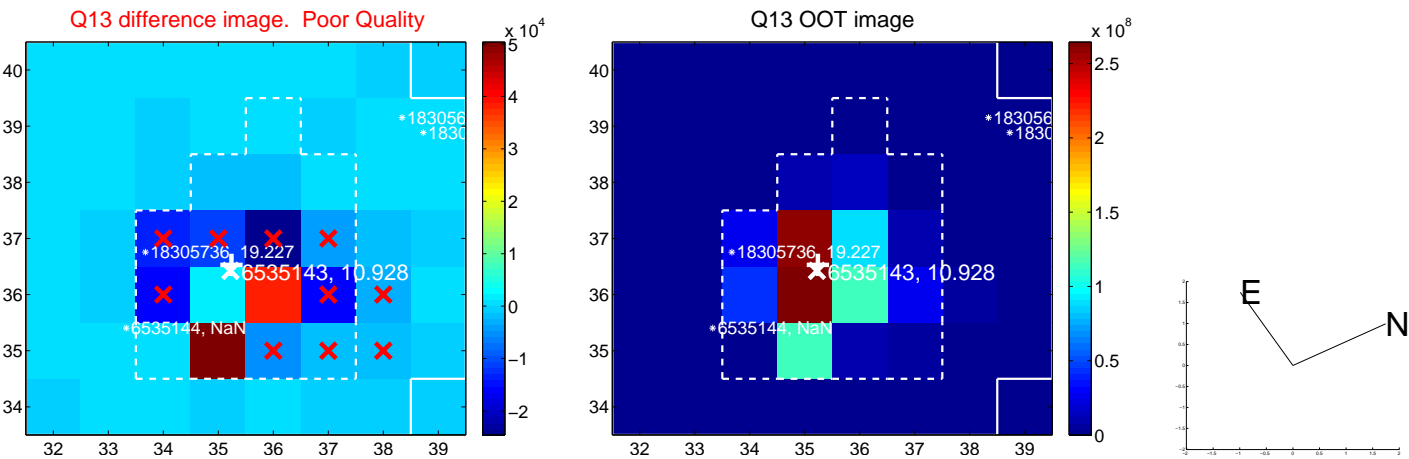
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



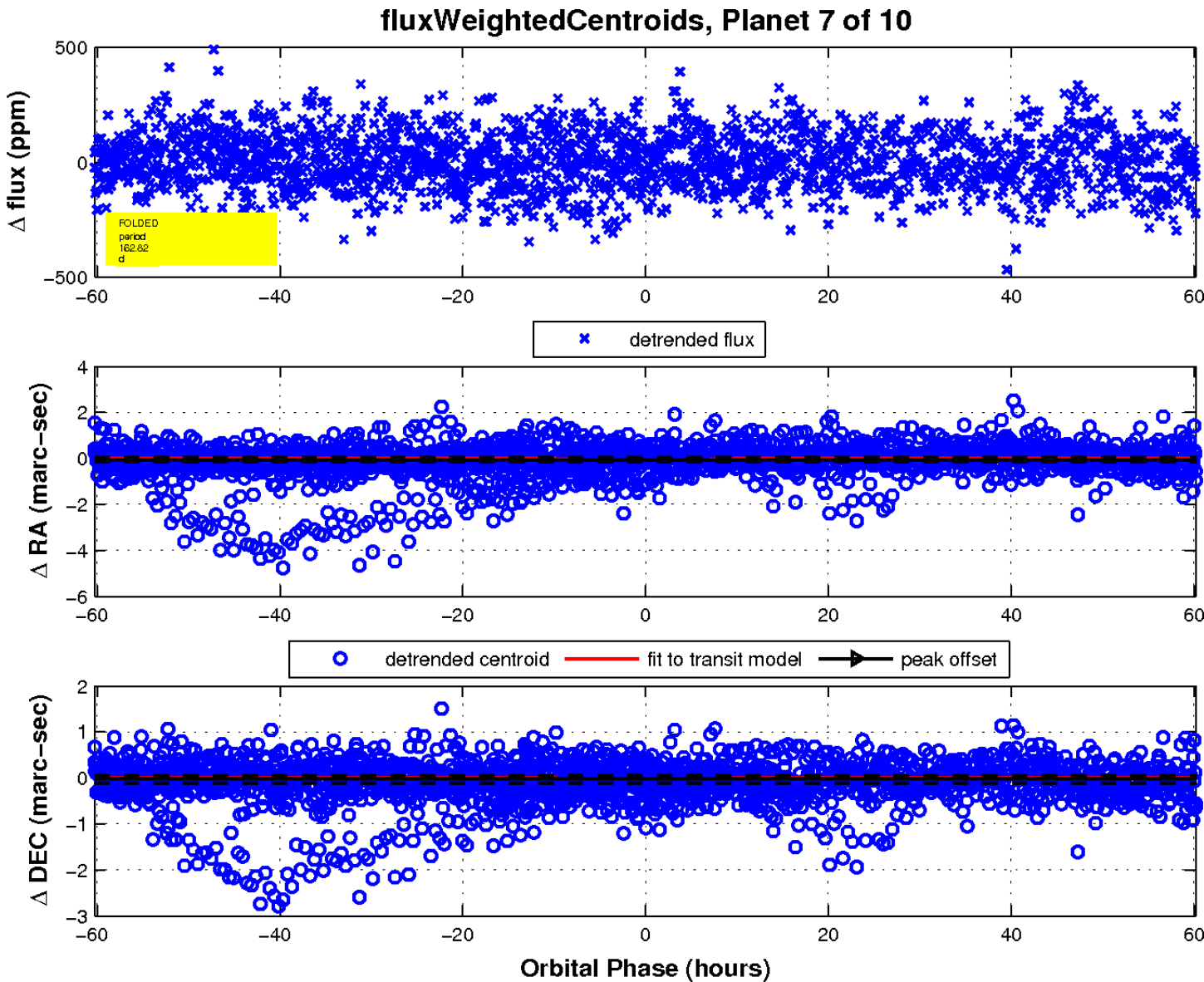
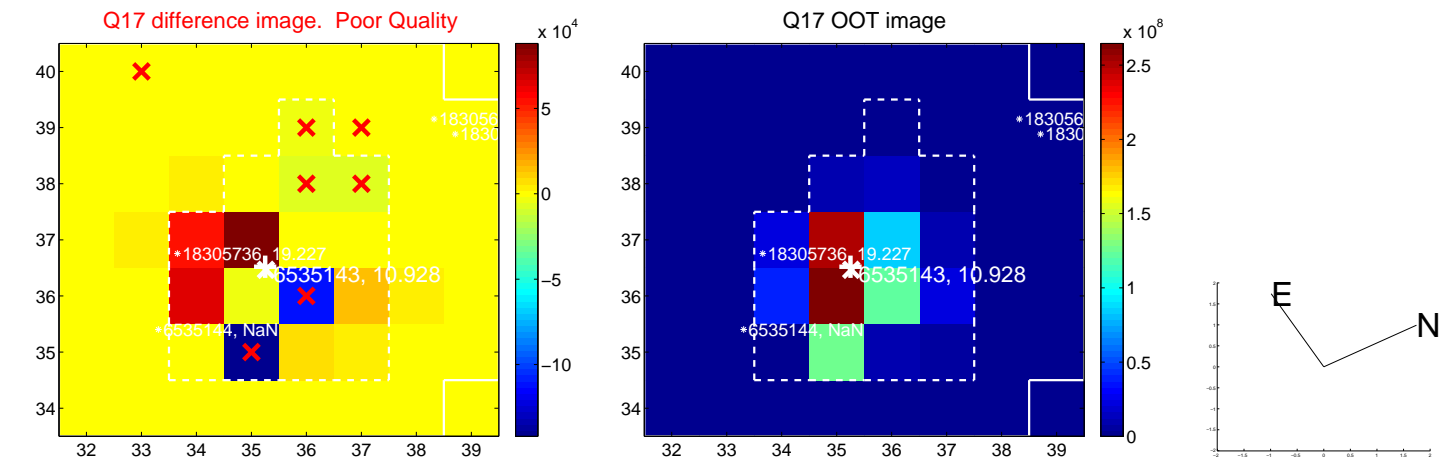
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



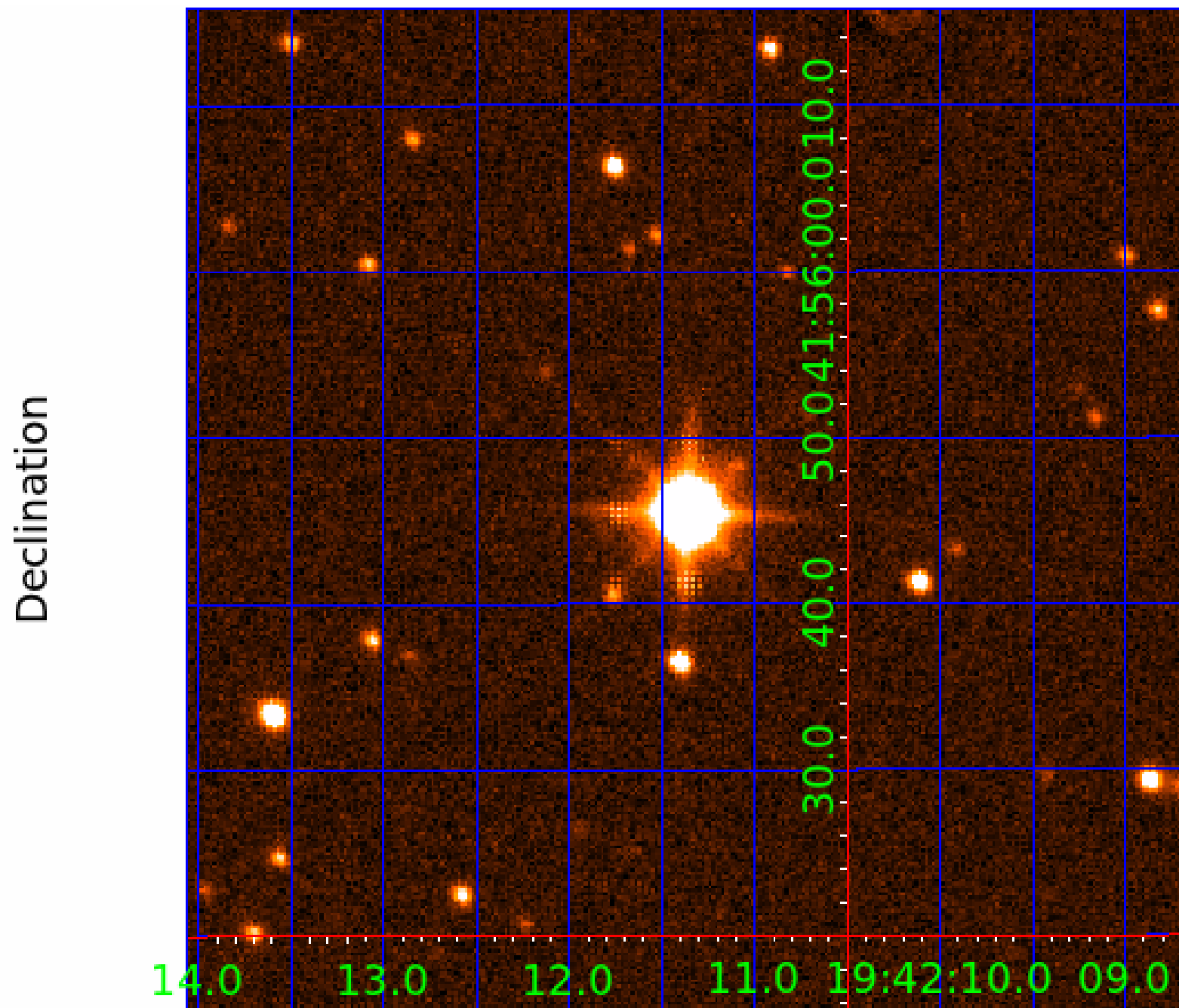
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



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})
006535143-01	OBS	No	1.655275	131.668348	13.1	9.574	8.6	7.7	1.99	6875	0.72	7918.91
006535143-02	OBS	No	256.515171	289.836364	112.5	5.531	10.2	6.4	1.99	6875	2.16	9.51
006535143-03	OBS	No	99.682988	208.377736	257.3	2.340	10.1	10.6	1.99	6875	3.64	33.55
006535143-04	OBS	No	105.729358	169.919884	224.0	4.991	9.9	10.7	1.99	6875	3.22	31.01
006535143-05	OBS	No	99.802727	154.724213	181.5	4.161	9.5	8.9	1.99	6875	3.11	33.49
006535143-06	OBS	No	83.476567	209.923159	177.7	4.474	9.1	9.2	1.99	6875	2.99	42.50
006535143-07	OBS	No	162.818577	271.955355	65.4	20.114	8.9	4.1	1.99	6875	1.84	17.44
006535143-08	OBS	No	40.486809	145.706523	94.9	7.051	8.6	7.6	1.99	6875	2.17	111.53
006535143-09	OBS	No	89.732378	186.618285	139.3	6.675	8.6	5.9	1.99	6875	2.66	38.60
006535143-10	OBS	No	32.503334	158.465697	196.5	0.978	8.3	7.9	1.99	6875	3.26	149.48

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006535143-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_SATURATED
006535143-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
006535143-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
006535143-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006535143-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006535143-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_SATURATED
006535143-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006535143-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
006535143-09	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
006535143-10	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—CENT_SATURATED

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

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

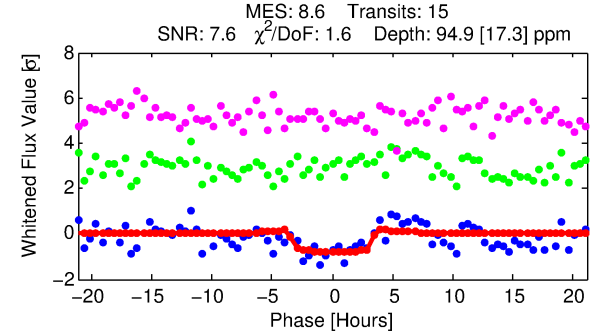
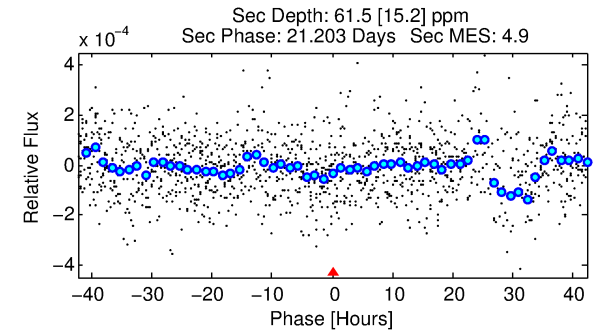
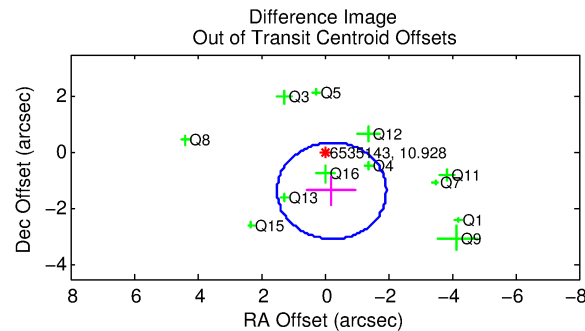
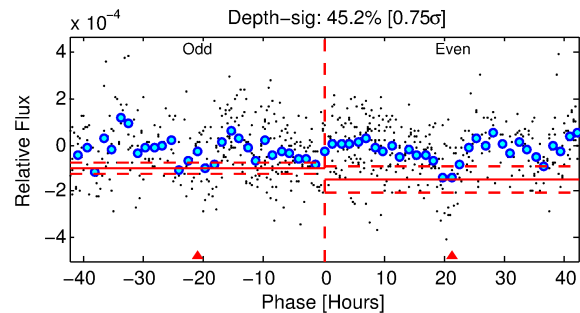
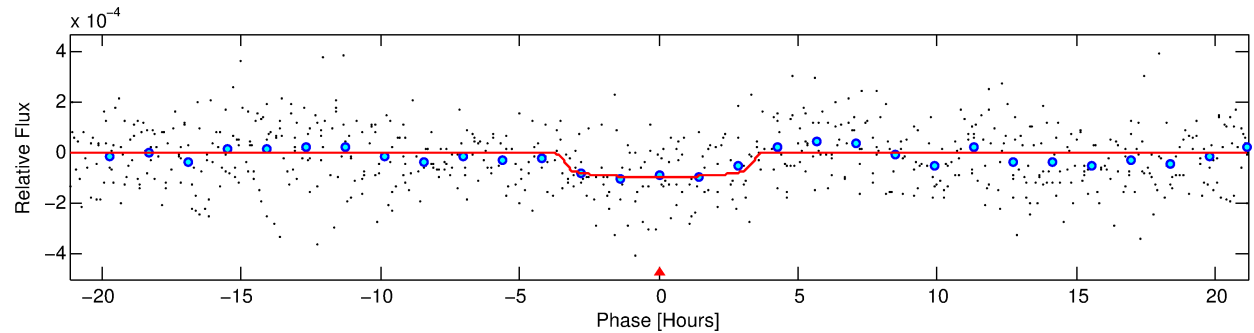
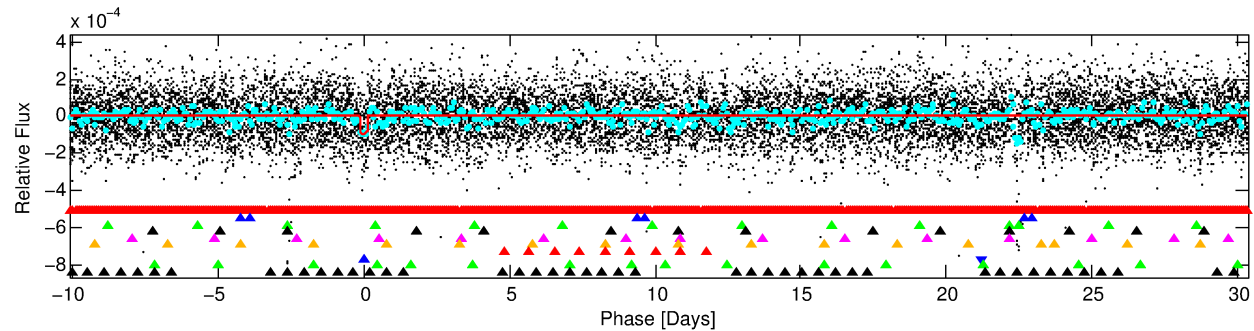
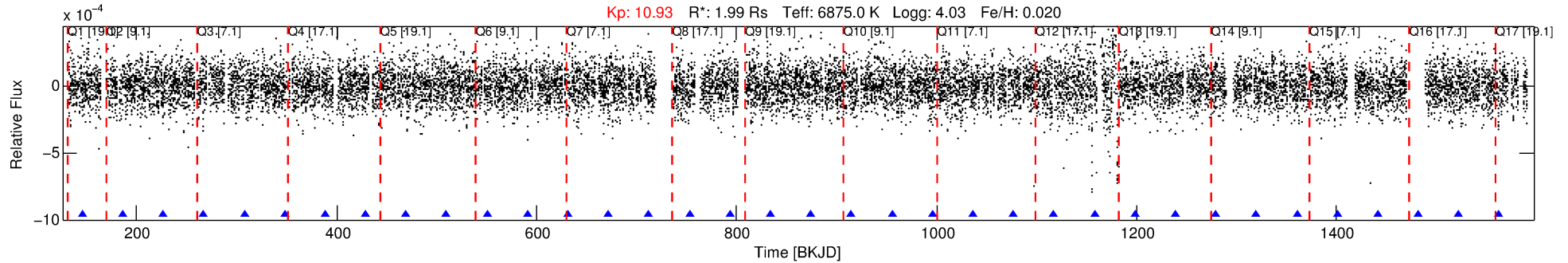
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006535143-08

No Significant Match Found

DV One-Page Summary

KIC: 6535143 Candidate: 8 of 10 Period: 40.487 d



DV Fit Results:

Period = 40.48681 [0.00089] d
Epoch = 145.7065 [0.0149] BKJD
Rp/R* = 0.0100 [0.0047]
a/R* = 24.39 [65.95]
b = 0.84 [0.93]
Seff = 111.53 [29.86]
Teq = 829 [55] K
Rp = 2.17 [1.11] Re
a = 0.2659 [0.0462] AU
Ag = 506.52 [509.73] [0.99 σ]
Teffp = 6078 [1478] K [3.55 σ]

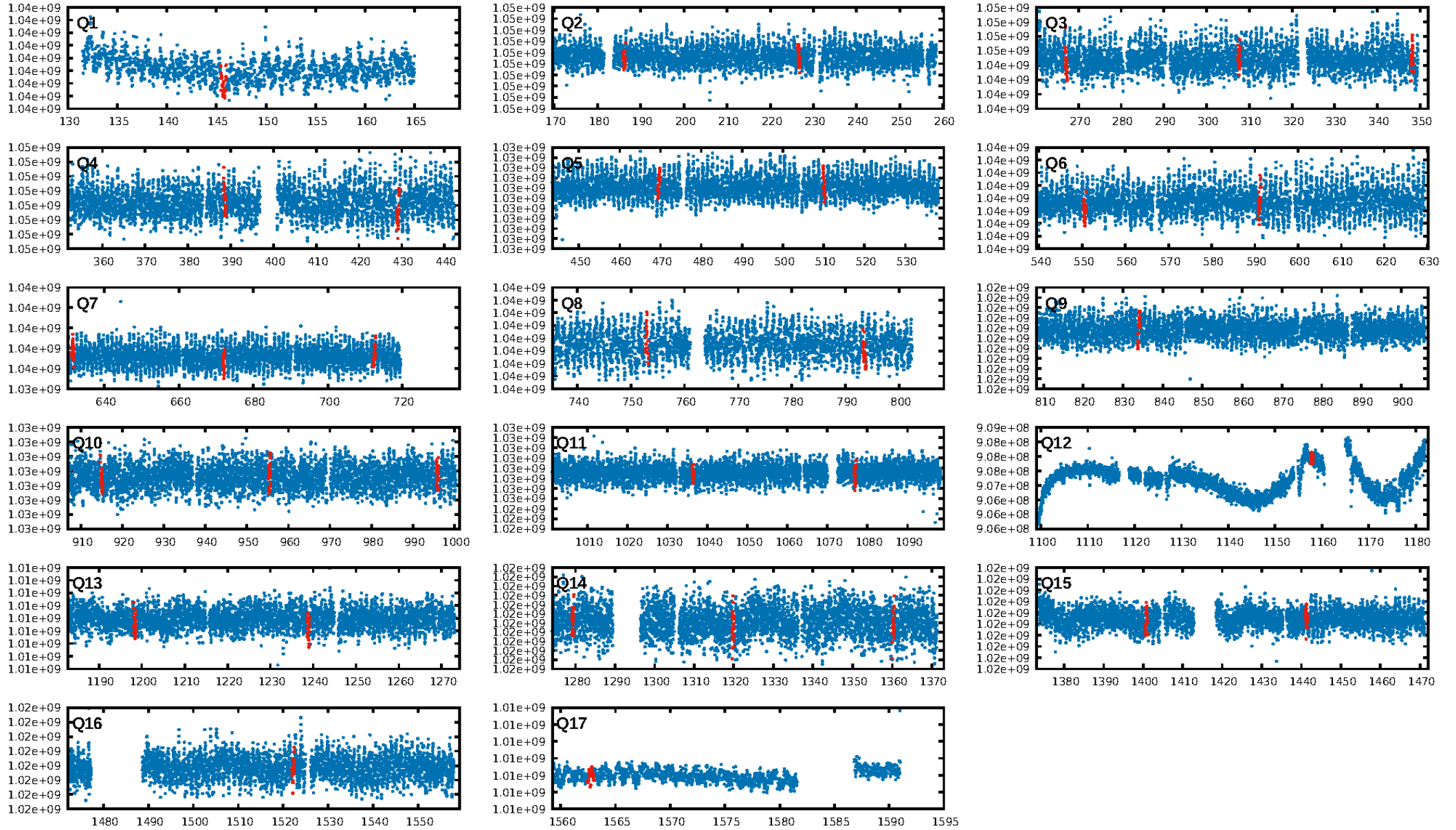
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [26.92 σ]
LongPeriod-sig: 100.0% [123.55 σ]
ModelChiSquare2-sig: 7.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [13/13]
GhostDiagnostic-chr: -107.1
Centroid-sig: 69.7%
Centroid-so: 0.593 arcsec [0.83 σ]
OotOffset-rm: 1.380 arcsec [2.41 σ]
OotOffset-st: 0/4/4/4 [12]
KicOffset-rm: 1.522 arcsec [3.35 σ]
KicOffset-st: 0/4/4/4 [12]
DiffImageQuality-fgm: 0.50 [6/12]
DiffImageOverlap-fno: 0.12 [2/17]

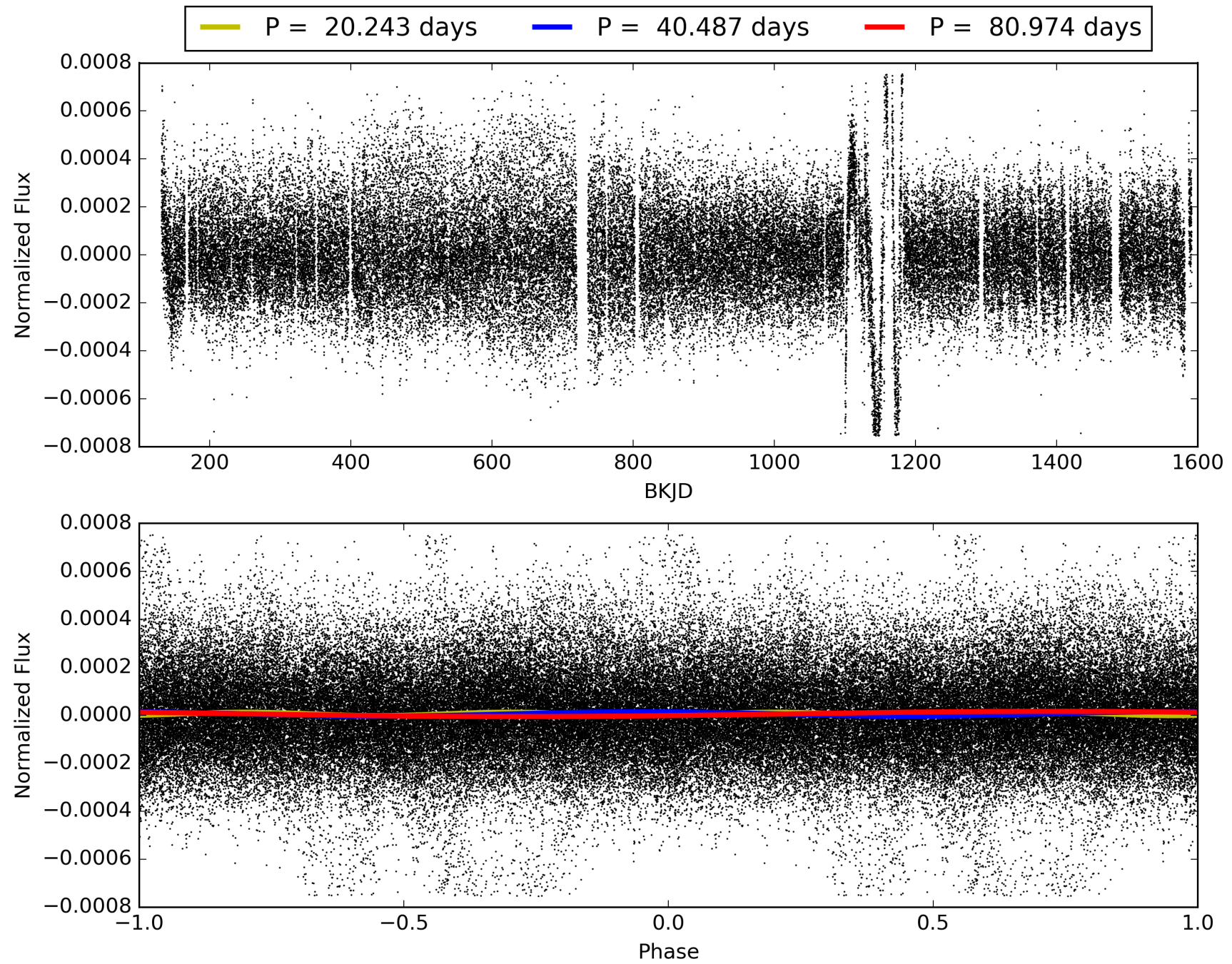
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 03:15:50 Z

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

TCE 006535143-08, PDC Light Curves

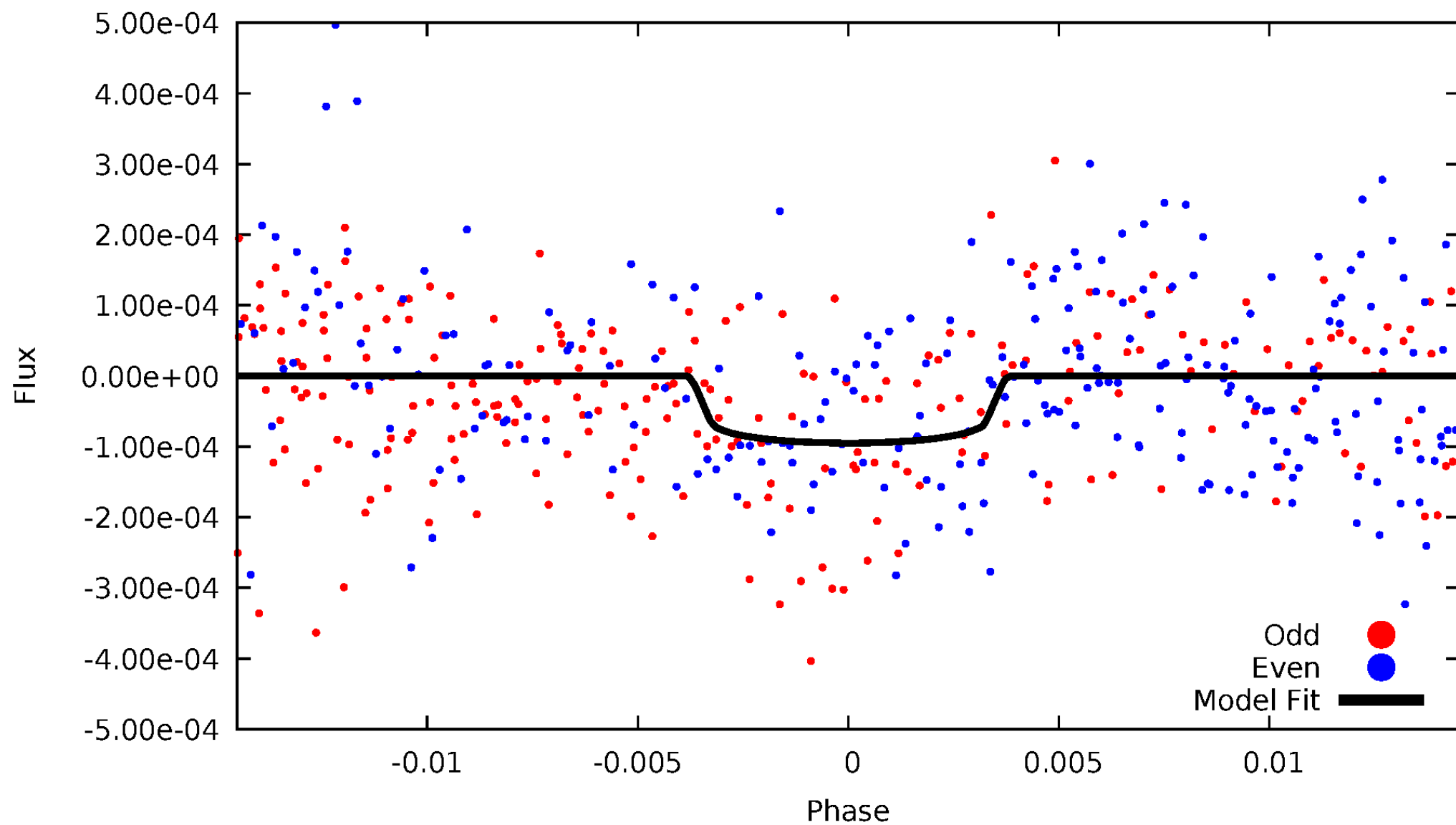


TCE 006535143-08



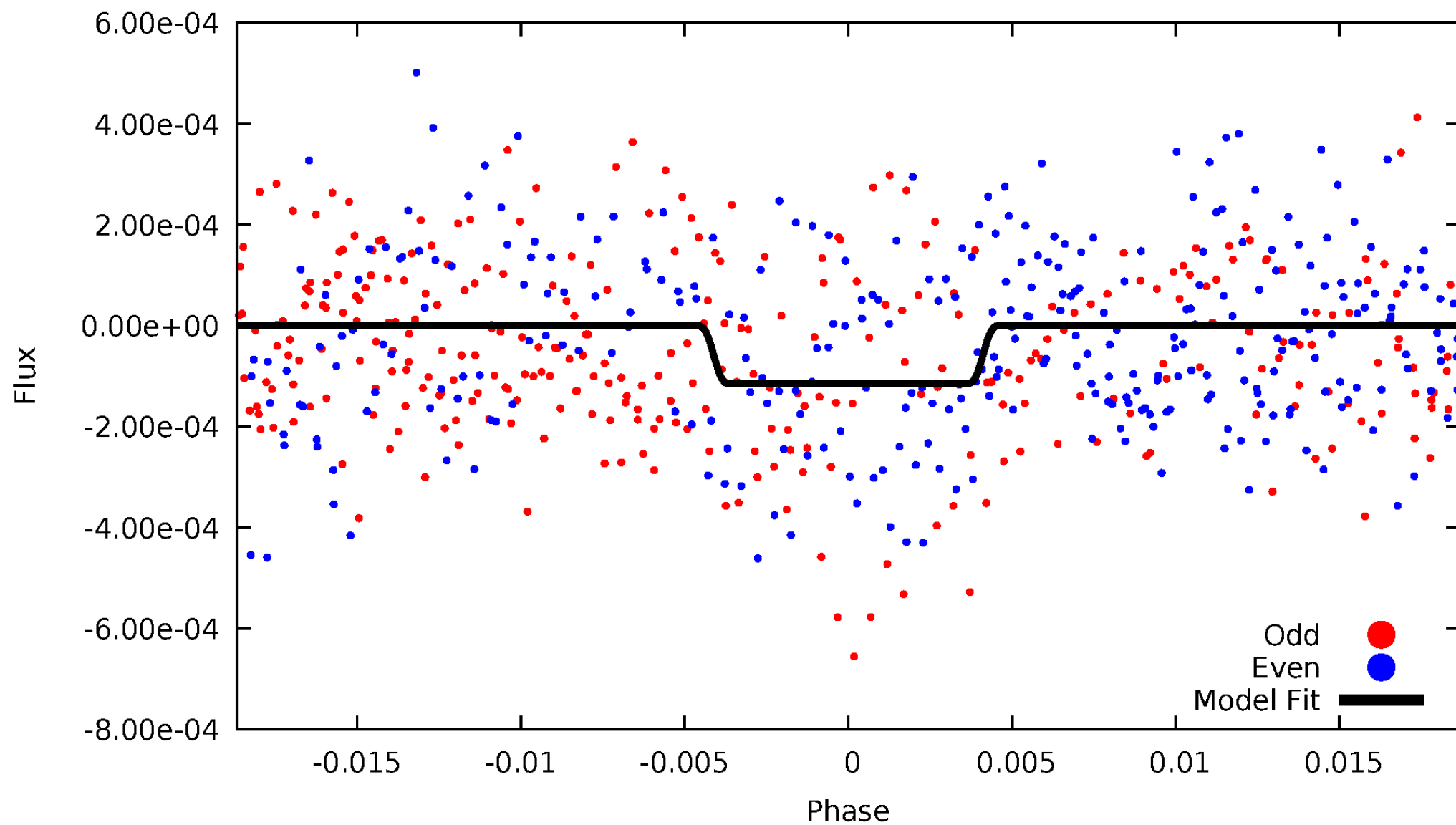
DV Odd/Even

TCE 006535143-08



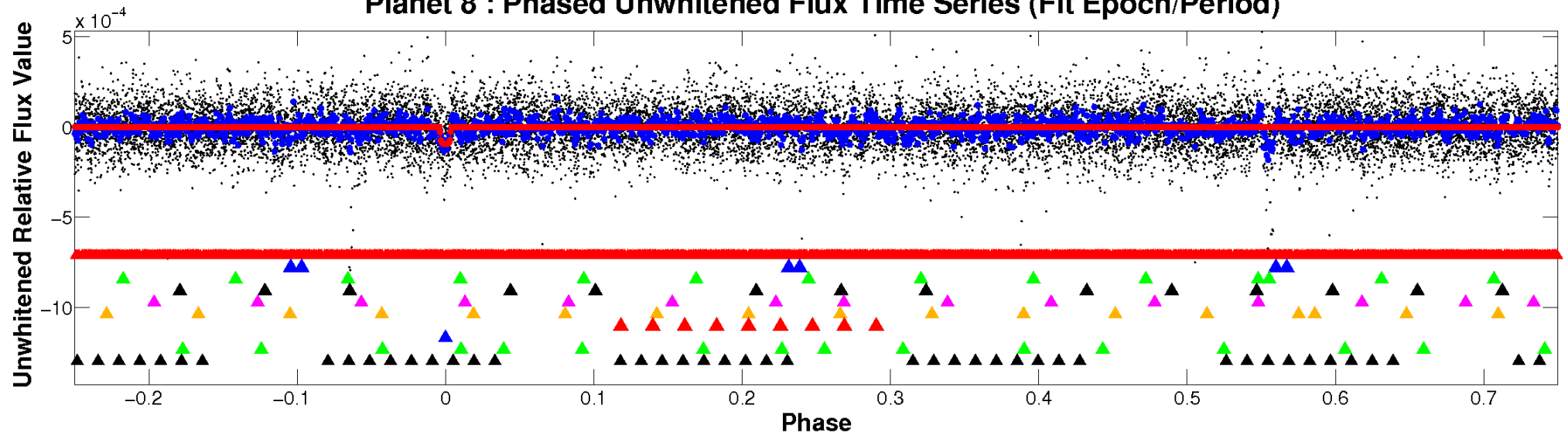
ALT Odd/Even

TCE 006535143-08

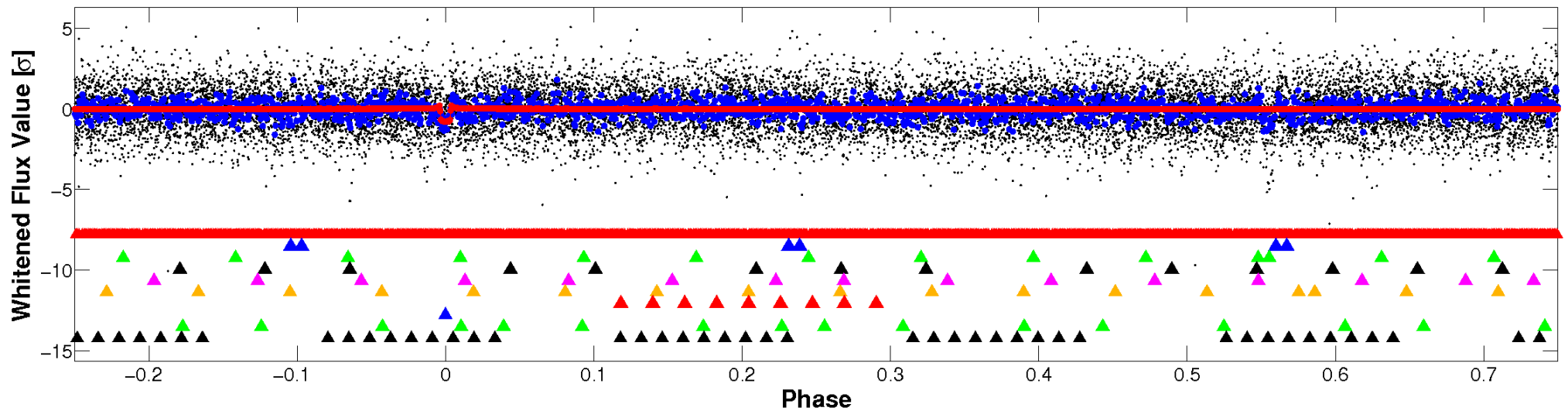


Non-Whitened Vs. Whitened Light Curve

Planet 8 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

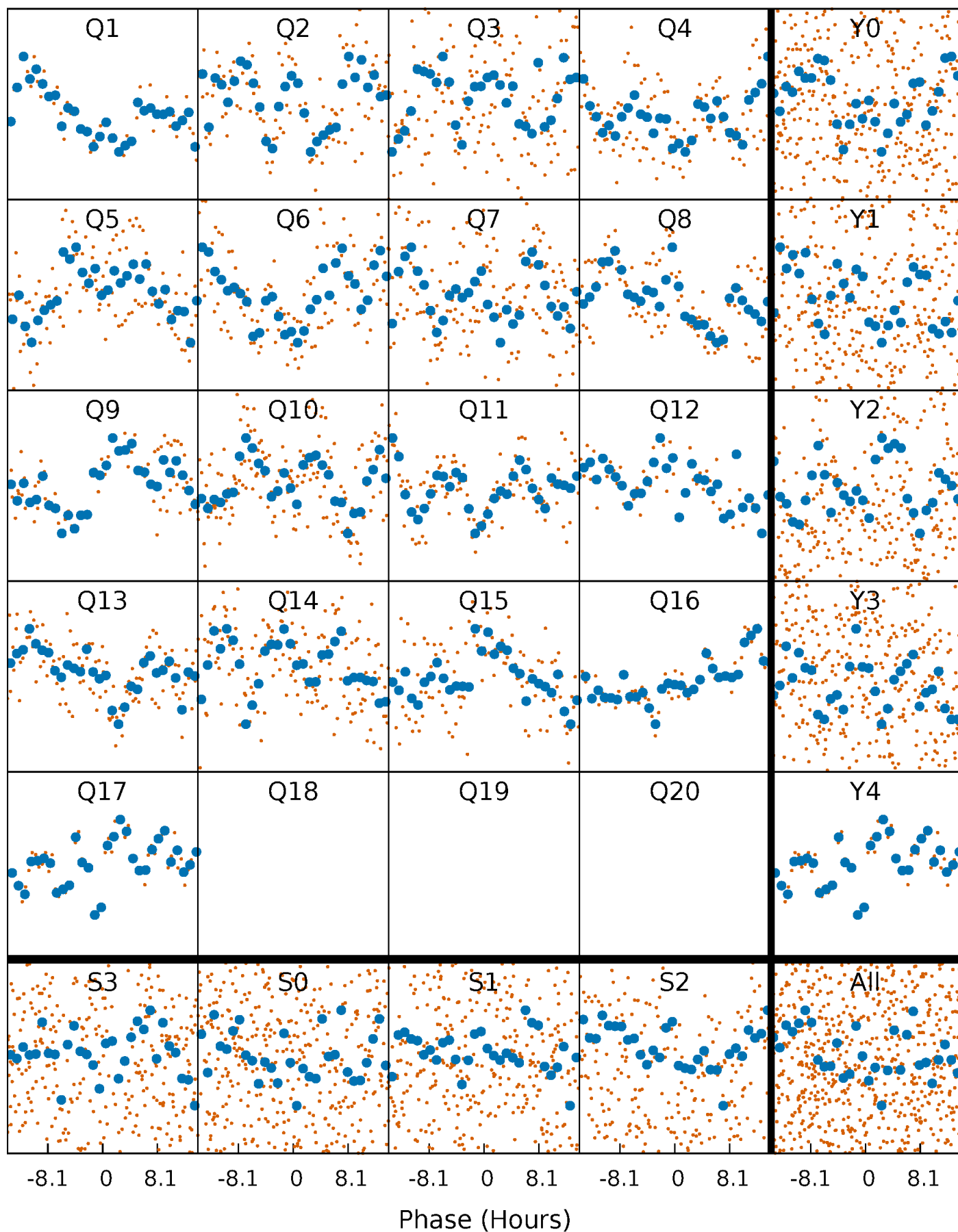


Planet 8 : Phased Whitened Flux Time Series (Fit Epoch/Period)



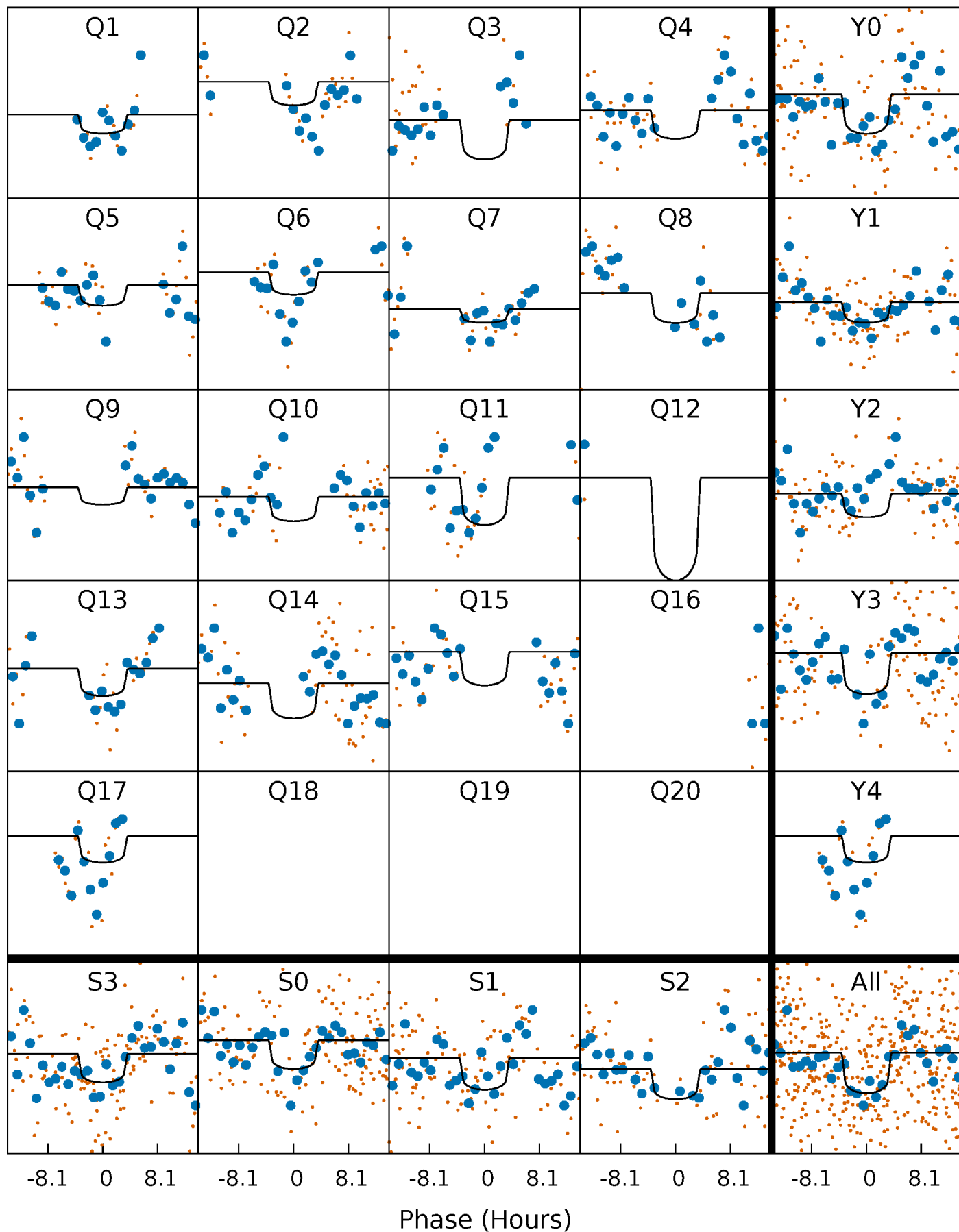
PDC Quarter-Phased Transit Curves

TCE 006535143-08 P= 40.486809 Days $T_0=145.706523$ (BKJD)



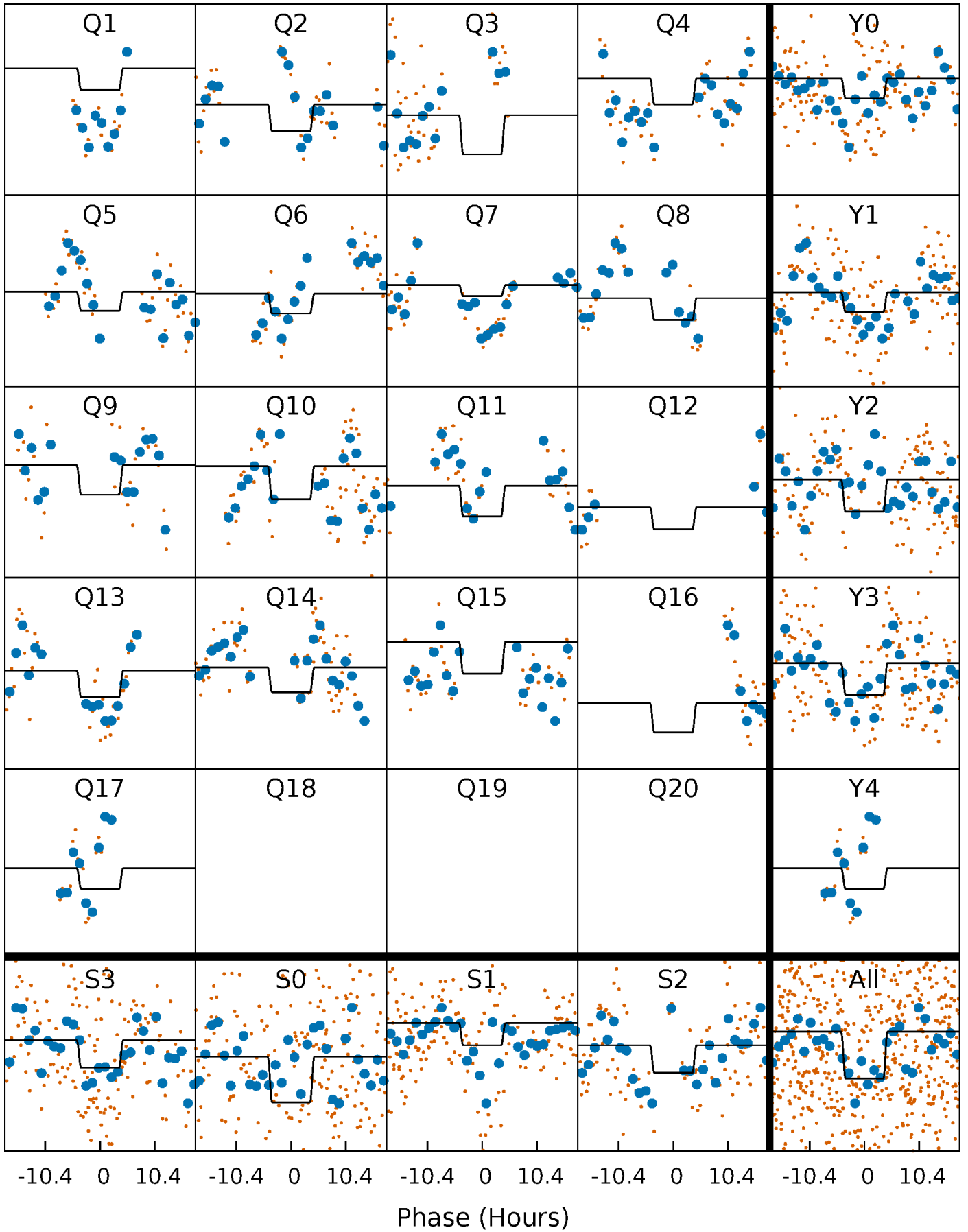
DV Quarter-Phased Transit Curves

TCE 006535143-08 P= 40.486809 Days $T_0=145.706523$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

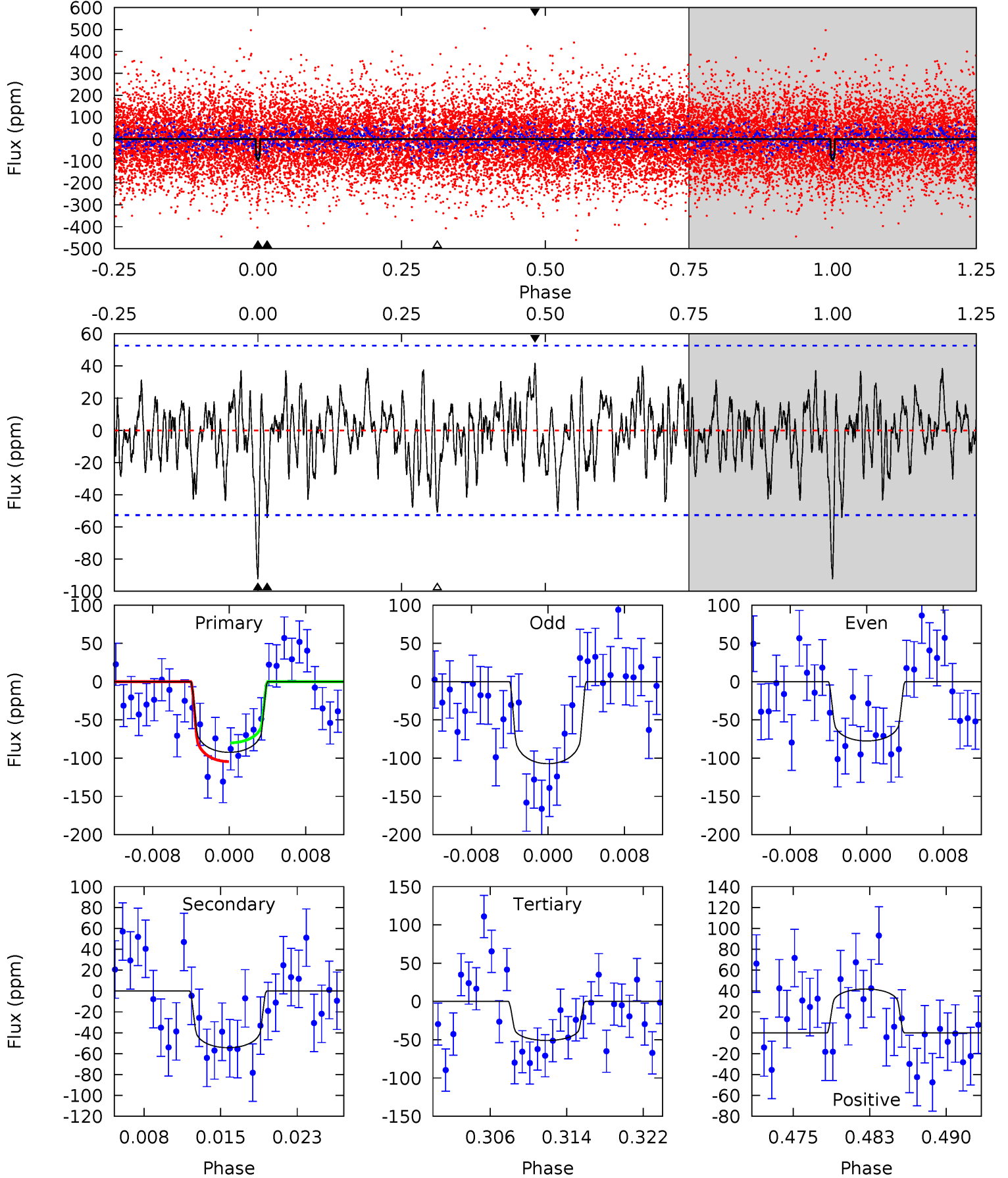
TCE 006535143-08 P= 40.487059 Days $T_0=145.744196$ (BKJD)



DV Model-Shift Uniqueness Test

006535143-08, P = 40.486809 Days, E = 105.219714 Days

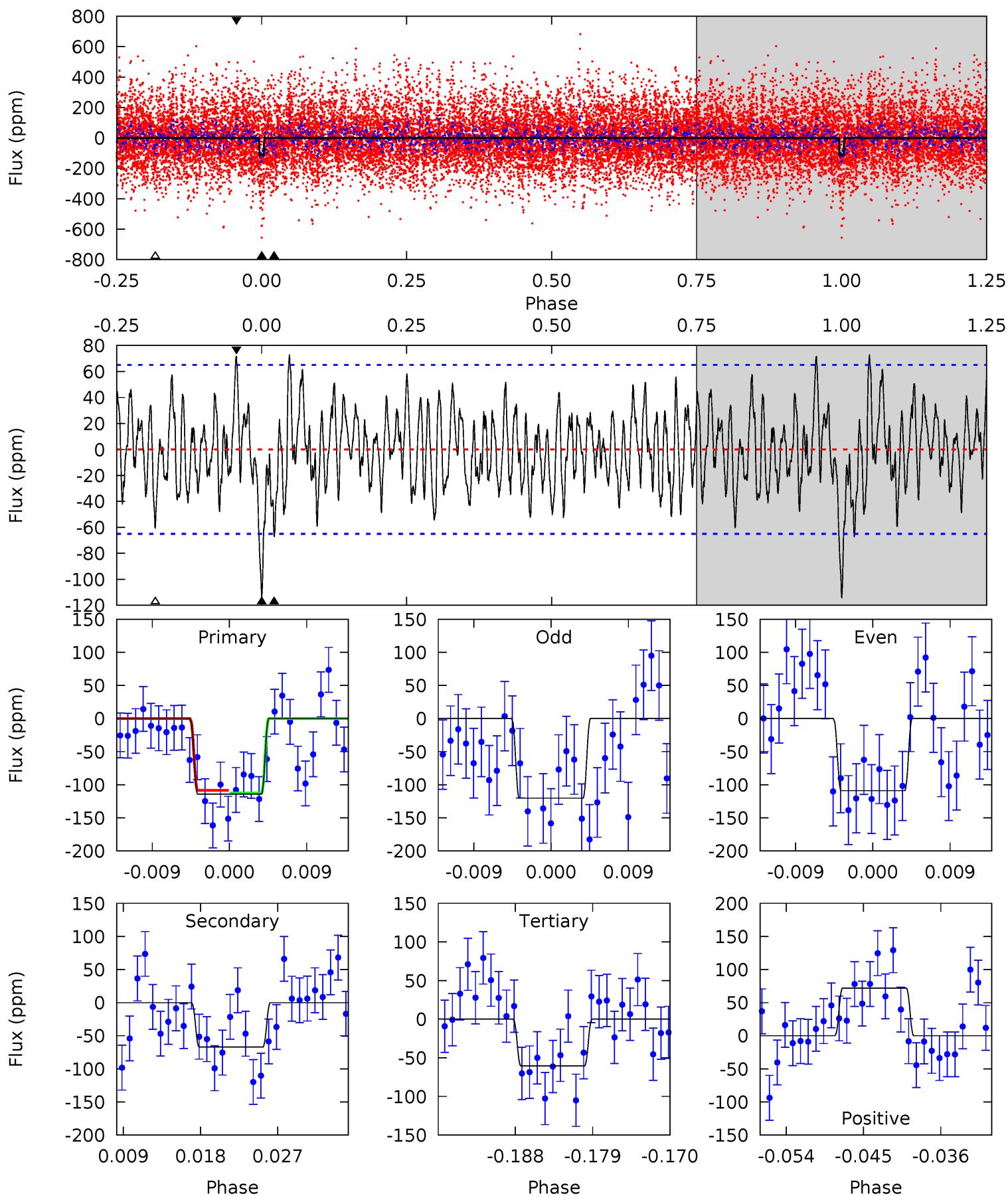
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.90	5.23	4.91	4.04	5.08	2.67	1.61	3.99	4.86	0.32	1.19	1.44	0.72	0.31	1.18



Alt Model-Shift Uniqueness Test

006535143-08, P = 40.487059 Days, E = 105.257137 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.88	5.21	4.69	5.57	5.05	2.61	1.97	4.19	3.30	0.52	-0.37	0.44	1.94	0.39	0.17



Stellar Parameters For KIC 006535143

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6875^{+71}_{-82}	$4.027^{+0.149}_{-0.122}$	$0.020^{+0.150}_{-0.150}$	$1.985^{+0.389}_{-0.389}$	$1.530^{+0.146}_{-0.133}$	$0.276^{+0.202}_{-0.099}$
	+1%/-1%	+4%/-3%	+750%/-750%	+20%/-20%	+10%/-9%	+73%/-36%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 006535143-08 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-54 ± 10	$2.17^{+1.04}_{-1.00}$	1158^{+55}_{-60}	5837^{+2372}_{-968}	448^{+993}_{-248}
Alt.	-67 ± 13	$2.30^{+1.01}_{-1.01}$	1152^{+62}_{-57}	5986^{+2172}_{-915}	504^{+1075}_{-262}

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 $A_{obs} \gg 1.0$

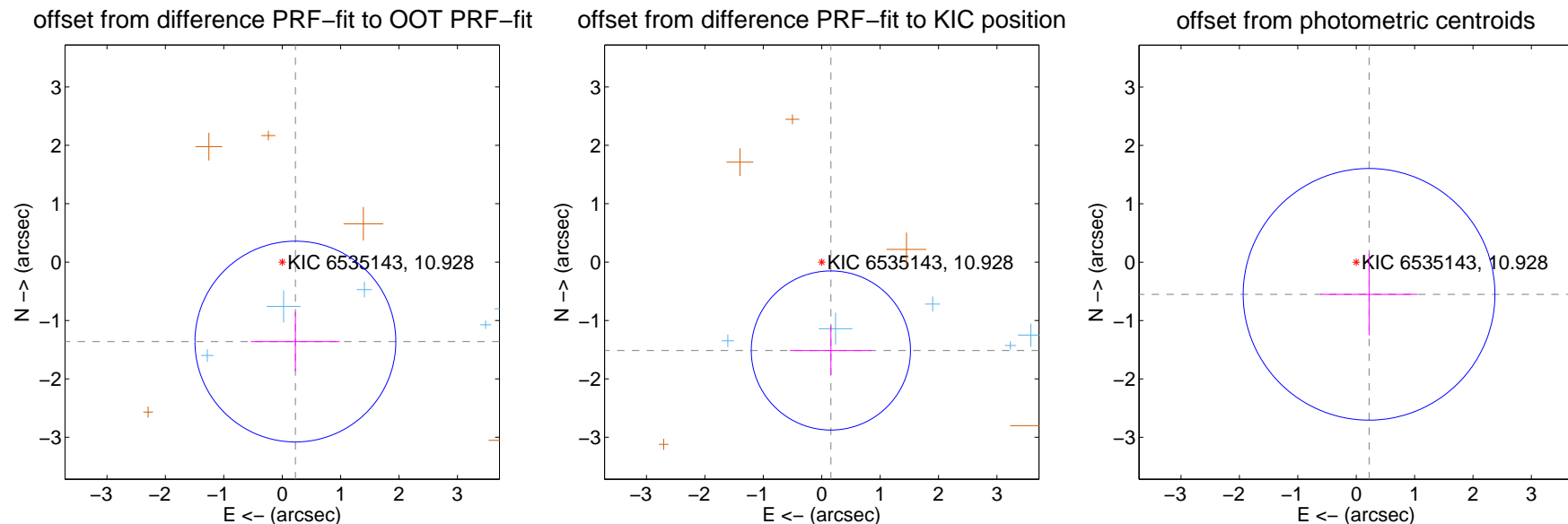
DV Centroid Data

Supplemental centroid analysis for 006535143-08. **Kepler magnitude: 10.93.** Transit SNR 7.57

There are 6 quarters with good PRF difference image offsets

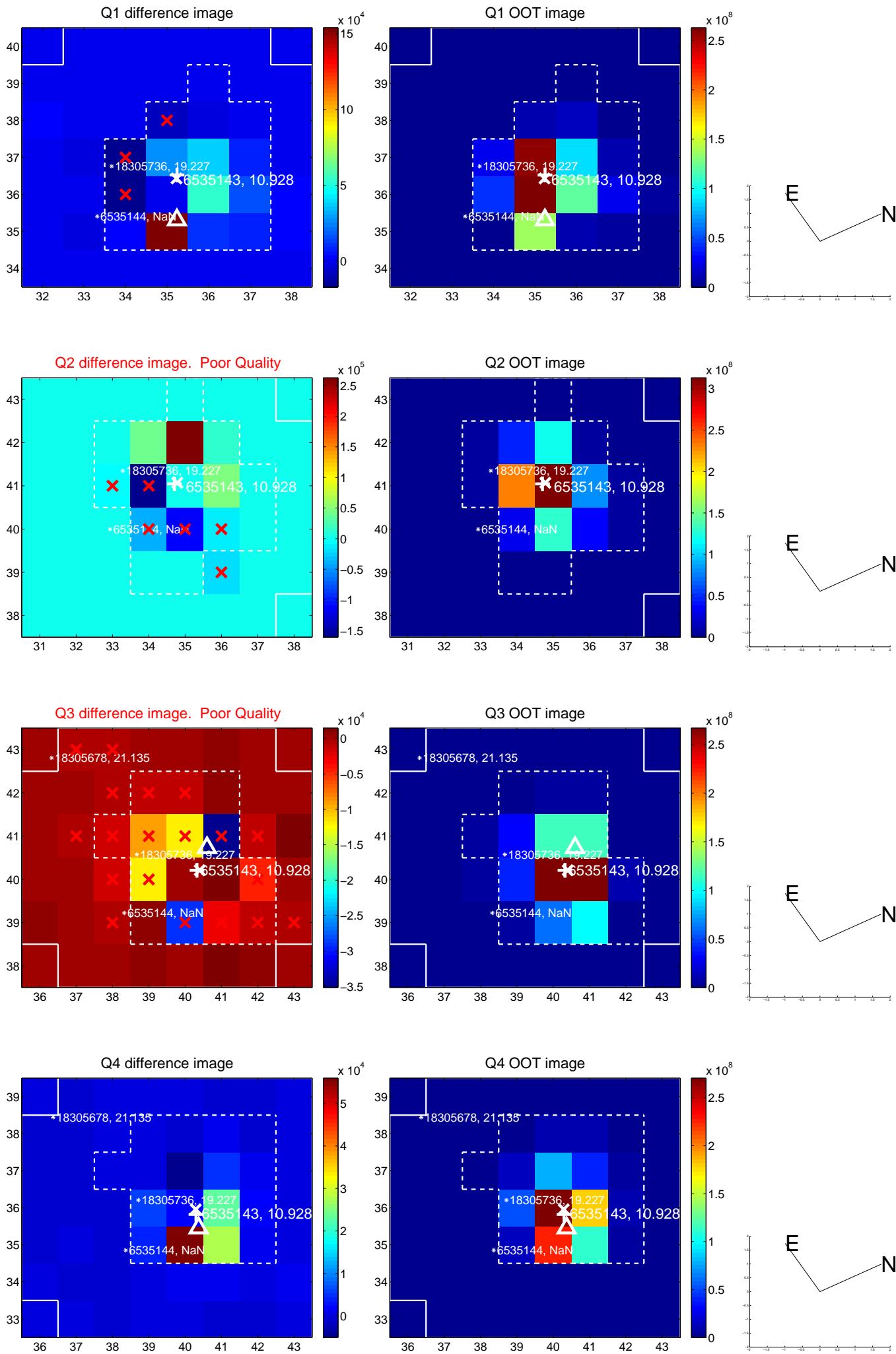
The direct PRF centroid is offset from the target star catalog position by about 0.44 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.380 ± 0.573	2.41	-0.225 ± 0.760	-1.361 ± 0.511
PRF-fit source offset from KIC position	1.522 ± 0.454	3.35	-0.157 ± 0.703	-1.514 ± 0.421
photometric centroid source offset	0.59 ± 0.72	0.83	-0.22 ± 0.83	-0.55 ± 0.70

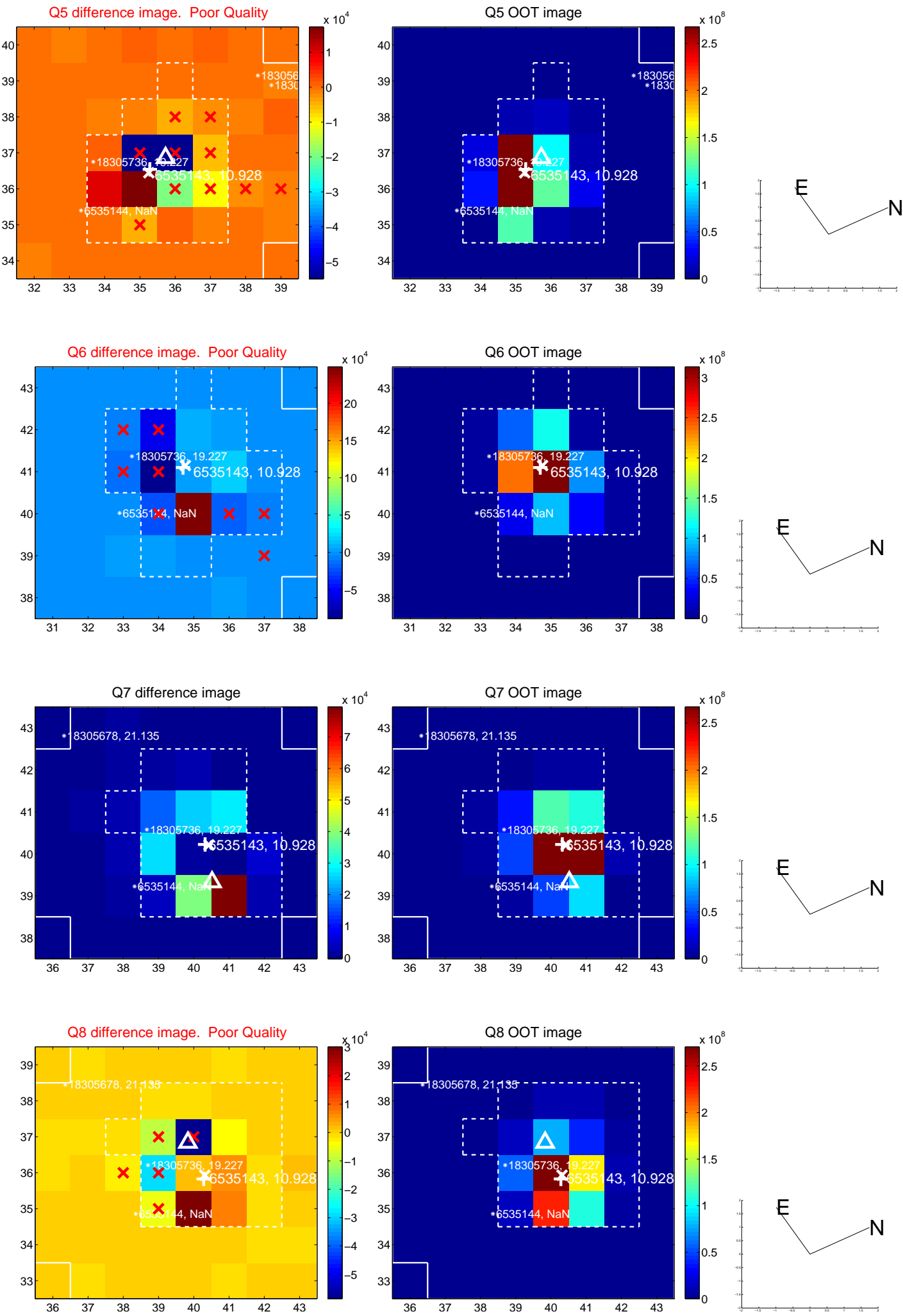


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

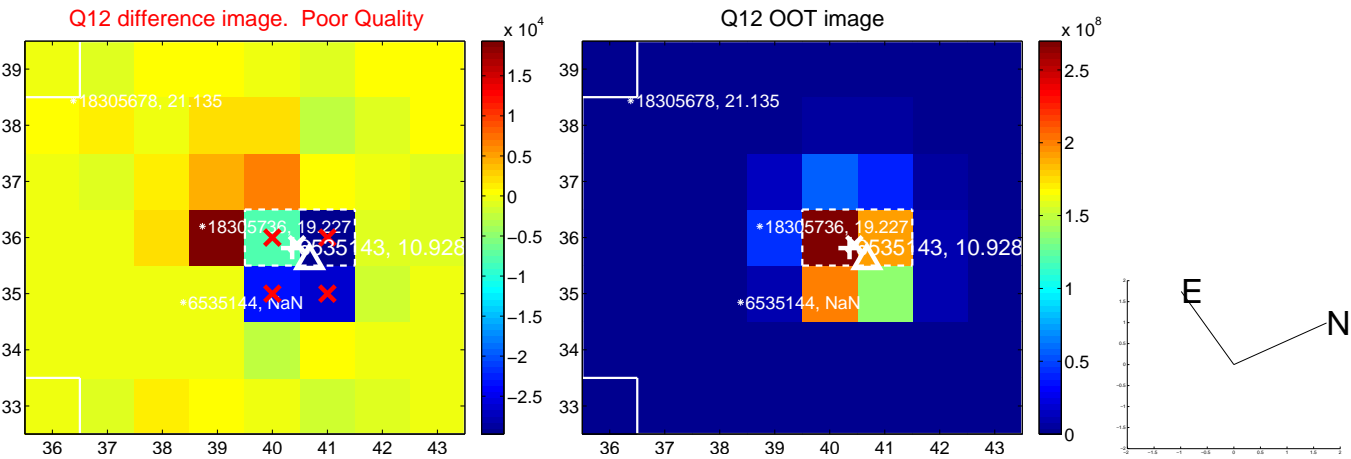
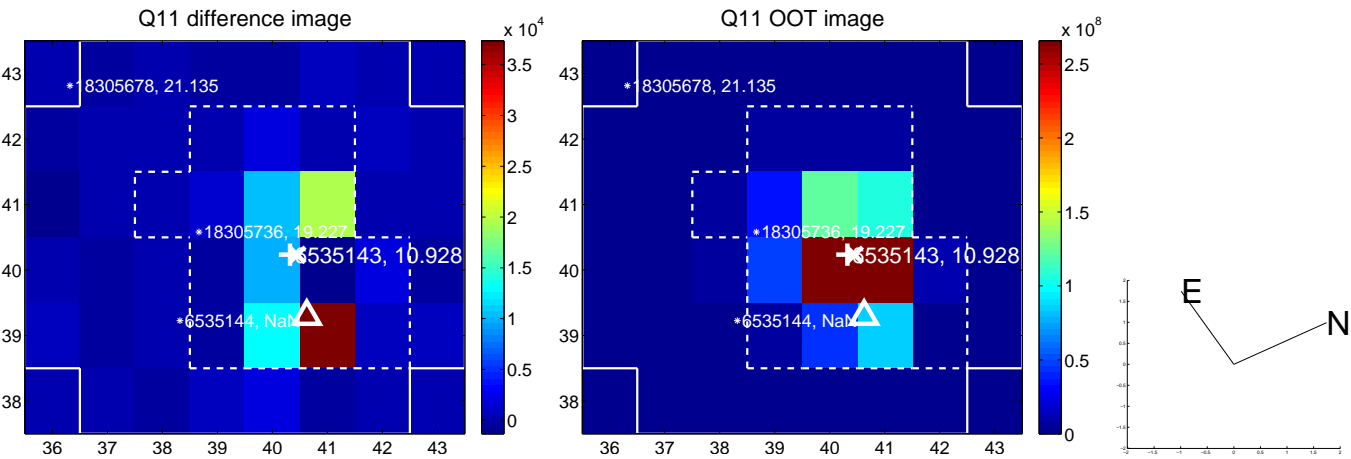
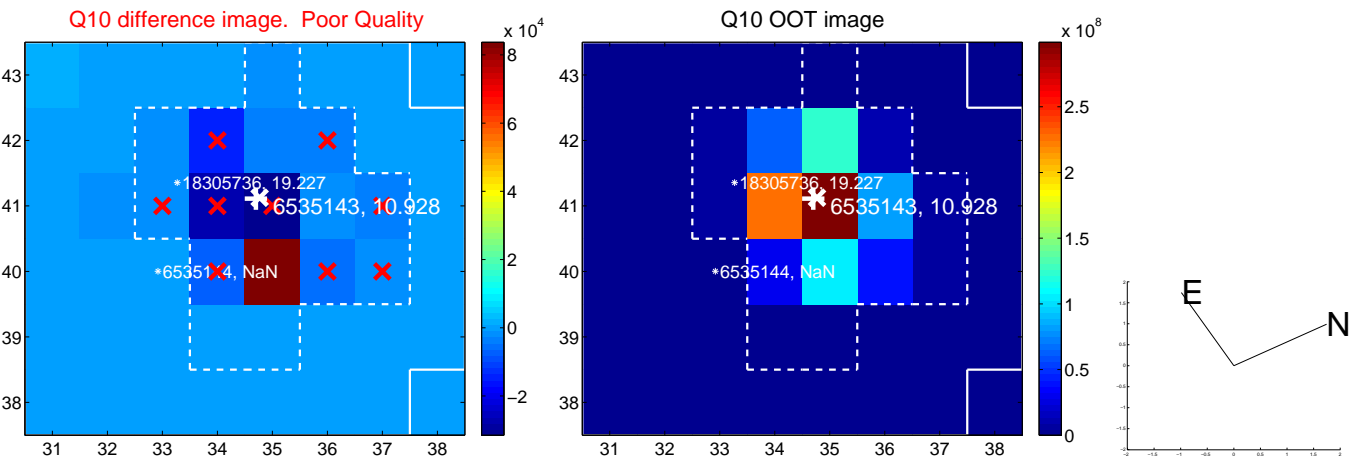
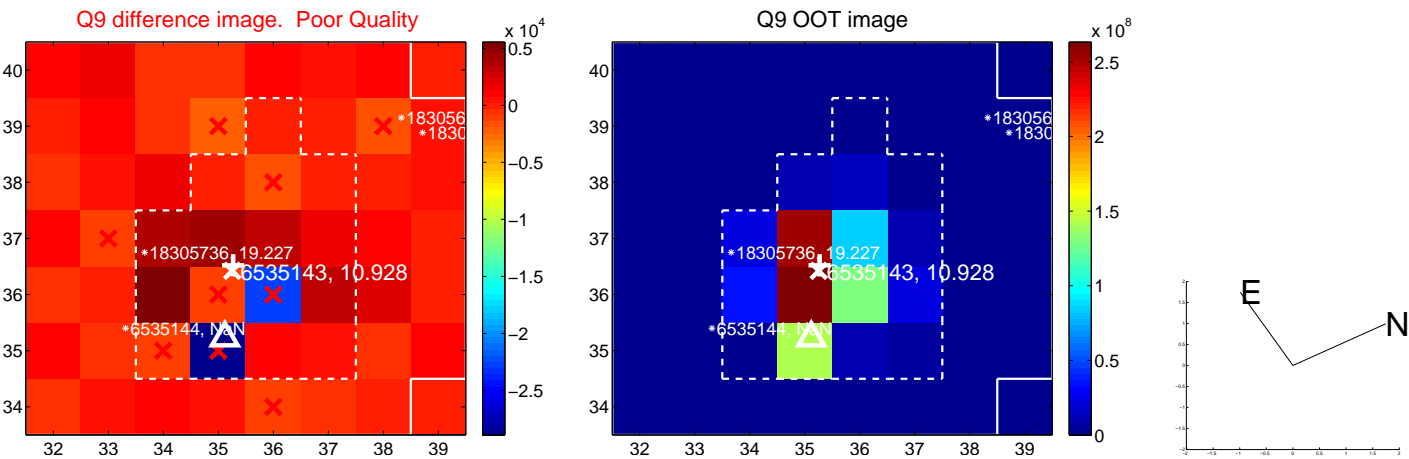
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



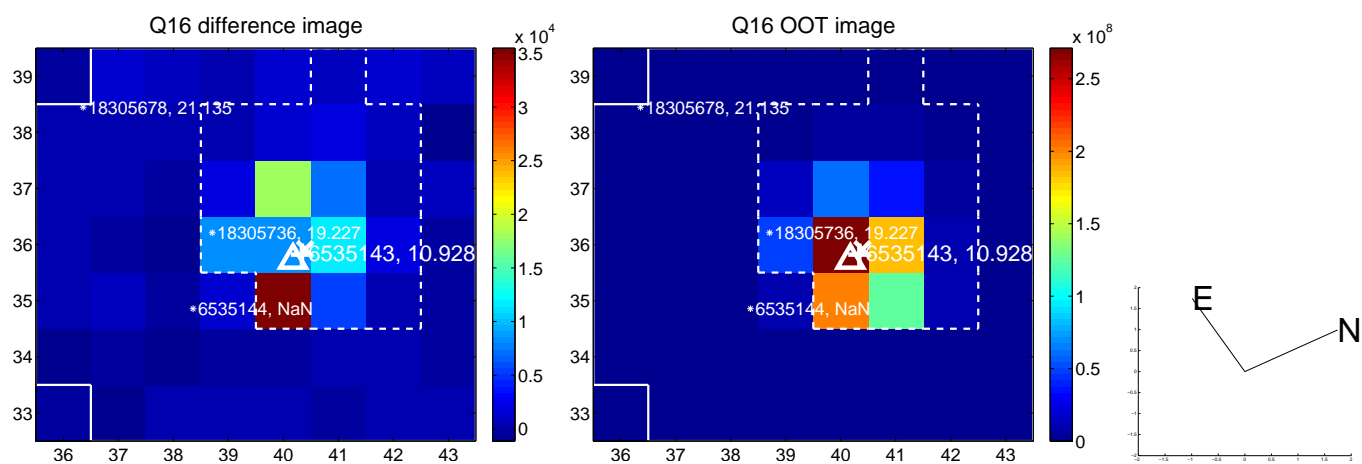
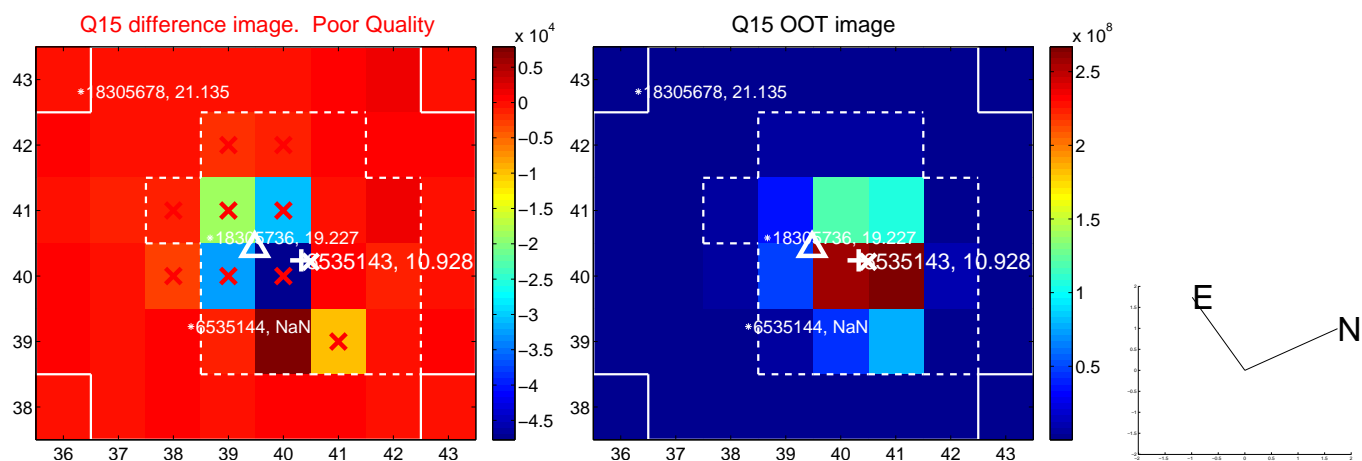
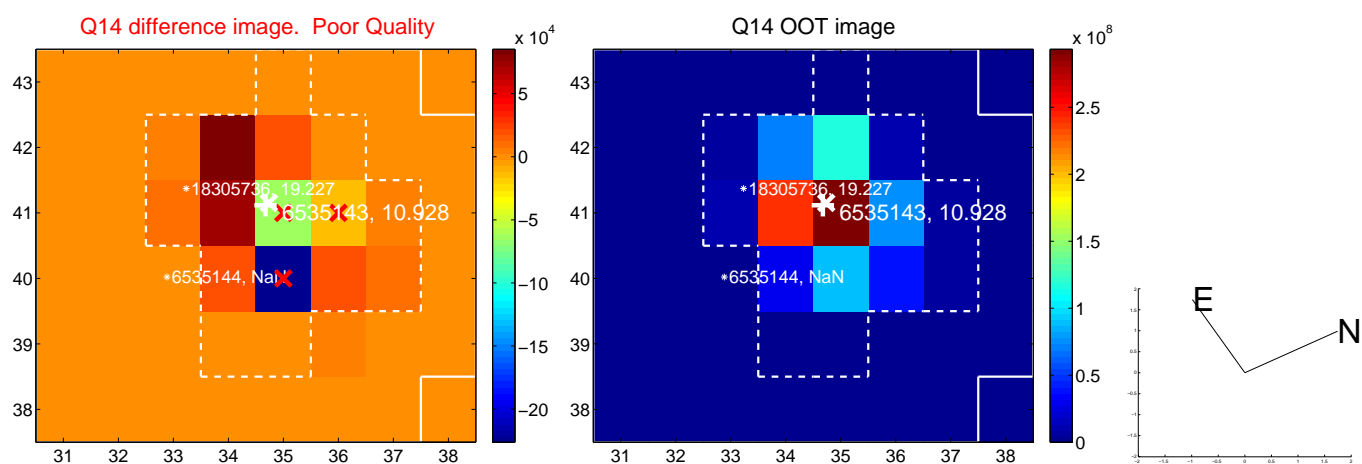
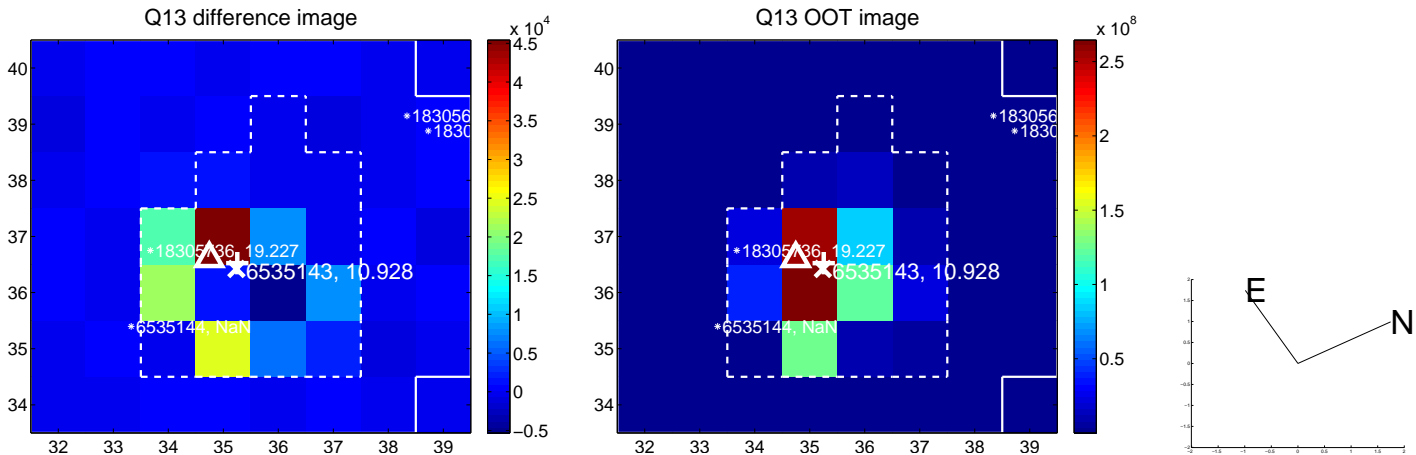
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



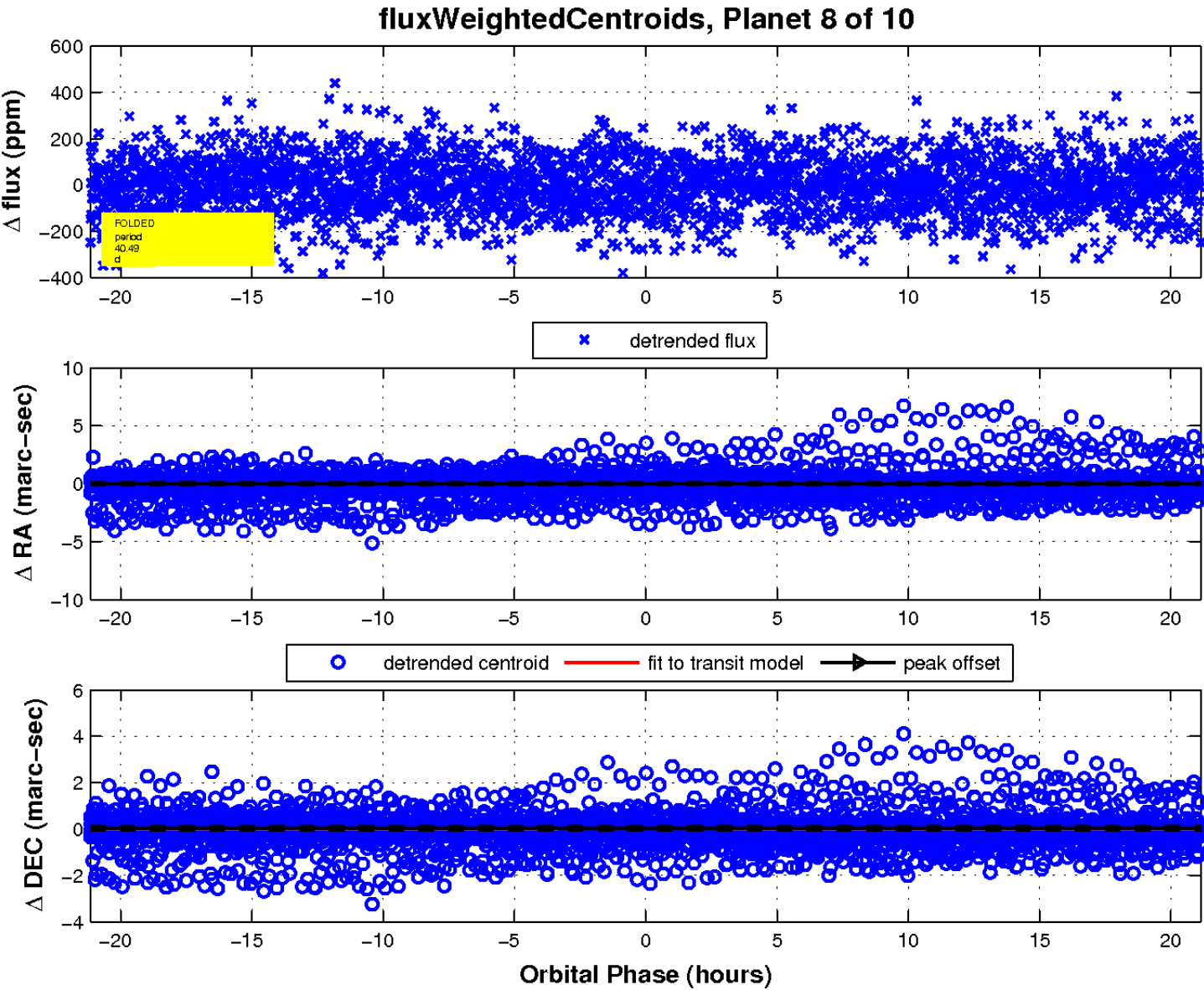
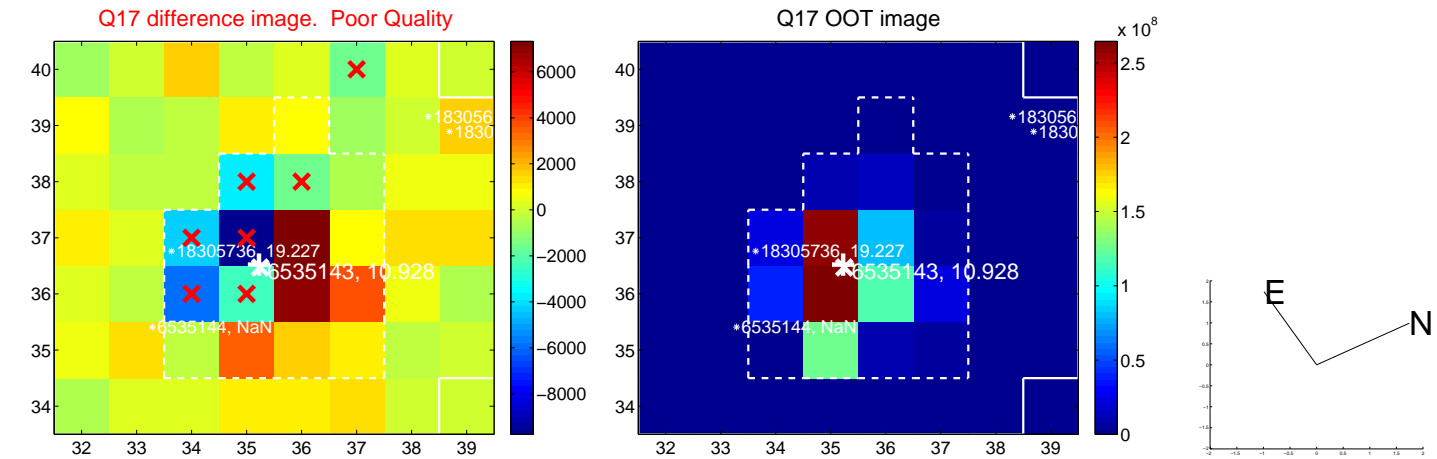
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



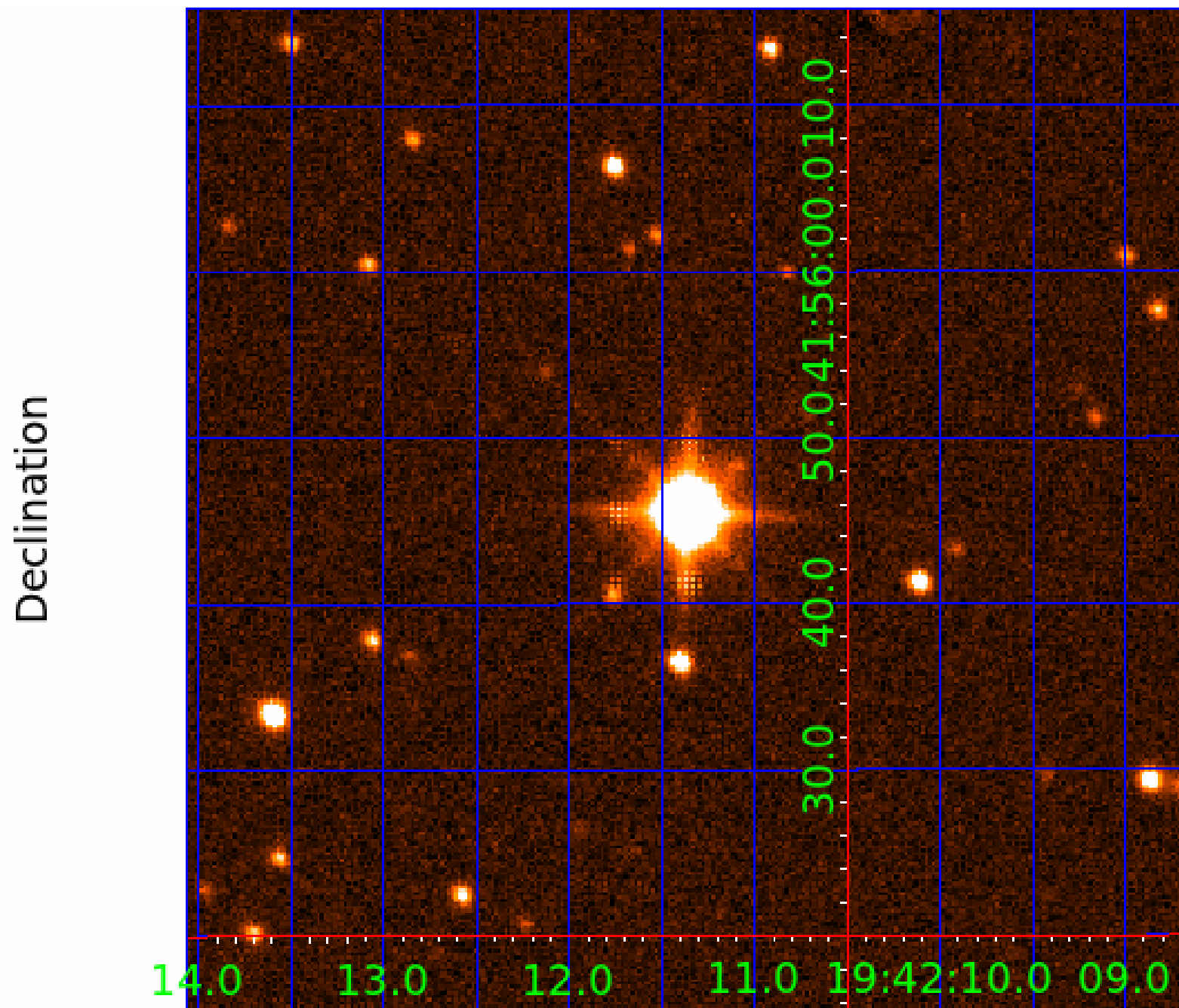
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



UKIRT Image



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})
006535143-01	OBS	No	1.655275	131.668348	13.1	9.574	8.6	7.7	1.99	6875	0.72	7918.91
006535143-02	OBS	No	256.515171	289.836364	112.5	5.531	10.2	6.4	1.99	6875	2.16	9.51
006535143-03	OBS	No	99.682988	208.377736	257.3	2.340	10.1	10.6	1.99	6875	3.64	33.55
006535143-04	OBS	No	105.729358	169.919884	224.0	4.991	9.9	10.7	1.99	6875	3.22	31.01
006535143-05	OBS	No	99.802727	154.724213	181.5	4.161	9.5	8.9	1.99	6875	3.11	33.49
006535143-06	OBS	No	83.476567	209.923159	177.7	4.474	9.1	9.2	1.99	6875	2.99	42.50
006535143-07	OBS	No	162.818577	271.955355	65.4	20.114	8.9	4.1	1.99	6875	1.84	17.44
006535143-08	OBS	No	40.486809	145.706523	94.9	7.051	8.6	7.6	1.99	6875	2.17	111.53
006535143-09	OBS	No	89.732378	186.618285	139.3	6.675	8.6	5.9	1.99	6875	2.66	38.60
006535143-10	OBS	No	32.503334	158.465697	196.5	0.978	8.3	7.9	1.99	6875	3.26	149.48

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006535143-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_SATURATED
006535143-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
006535143-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
006535143-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006535143-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006535143-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_SATURATED
006535143-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006535143-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
006535143-09	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
006535143-10	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—CENT_SATURATED

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

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

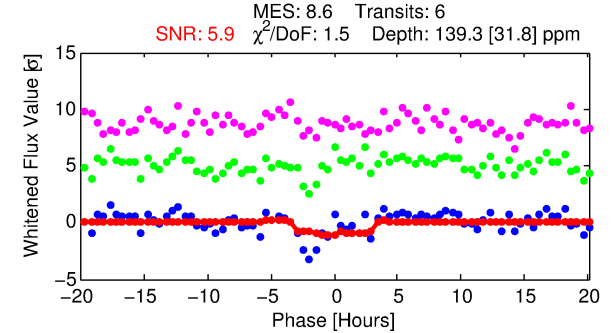
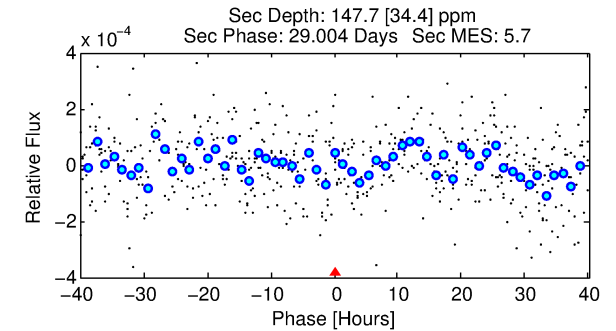
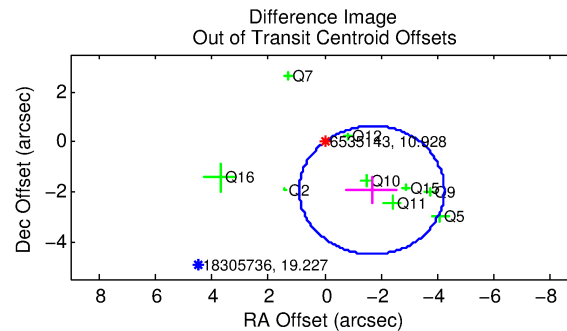
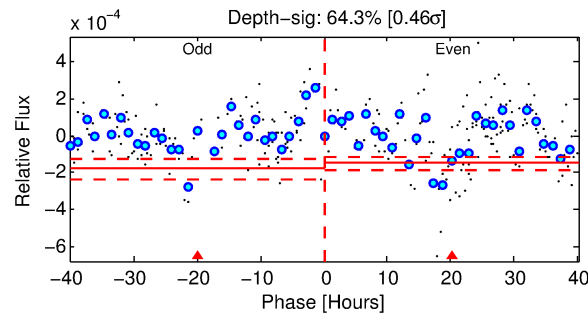
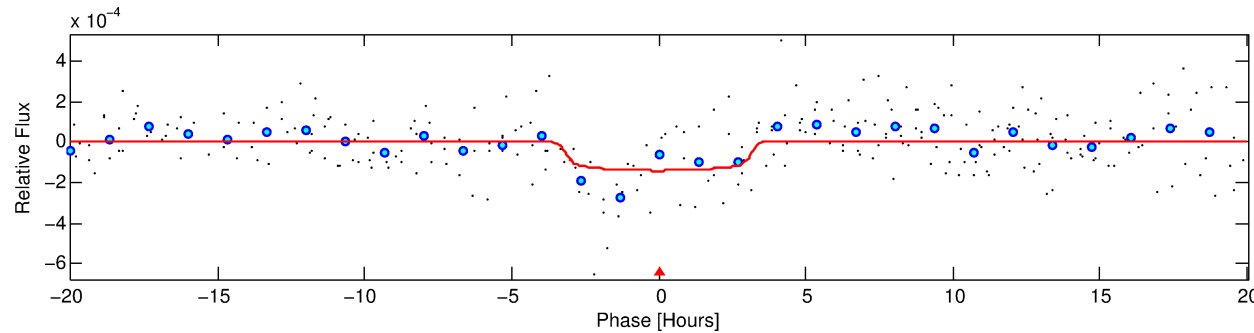
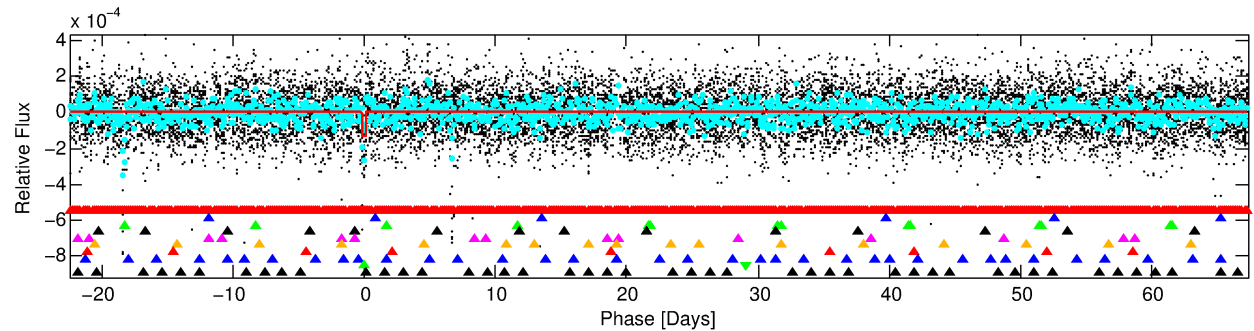
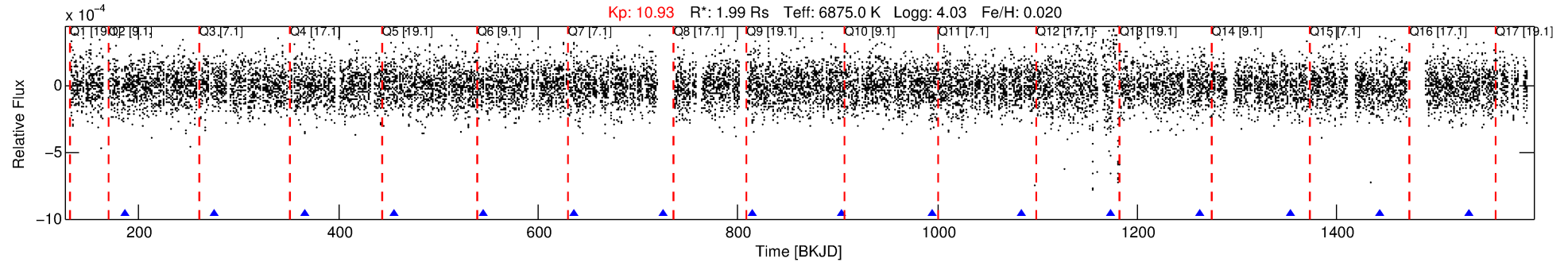
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006535143-09

No Significant Match Found

DV One-Page Summary

KIC: 6535143 Candidate: 9 of 10 Period: 89.732 d



DV Fit Results:

Period = 89.73238 [0.00218] d
Epoch = 186.6183 [0.0180] BKJD
Rp/R* = 0.0123 [0.0059]
a/R* = 54.73 [144.67]
b = 0.86 [0.81]
Seff = 38.60 [10.33]
Teff = 636 [43] K
Rp = 2.66 [1.39] Re
a = 0.4520 [0.0785] AU
Ag = 2352.50 [2427.08] [0.97 σ]
Teffp = 6844 [1709] K [3.63 σ]

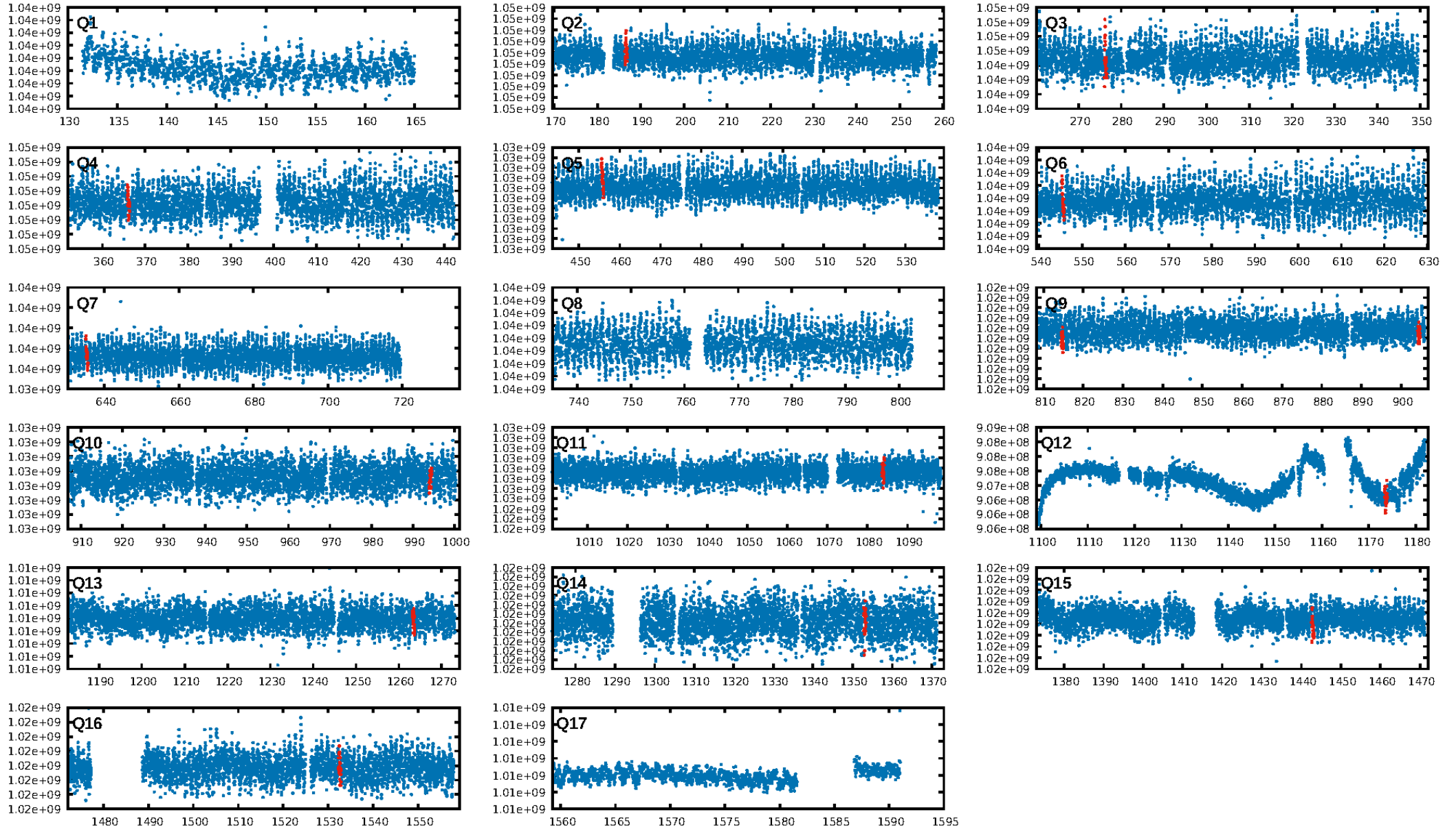
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [18.68 σ]
LongPeriod-sig: 100.0% [33.76 σ]
ModelChiSquare2-sig: 0.2%
ModelChiSquareGof-sig: 99.7%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: -0.04854
Centroid-sig: 4.4%
Centroid-so: 0.604 arcsec [0.86 σ]
OotOffset-rm: 2.563 arcsec [2.99 σ]
KicOffset-rm: 2.730 arcsec [3.87 σ]
OotOffset-st: 2/3/2/2 [9]
KicOffset-st: 2/3/2/2 [9]
DiffImageQuality-fgm: 0.56 [5/9]
DiffImageOverlap-fno: 0.07 [1/14]

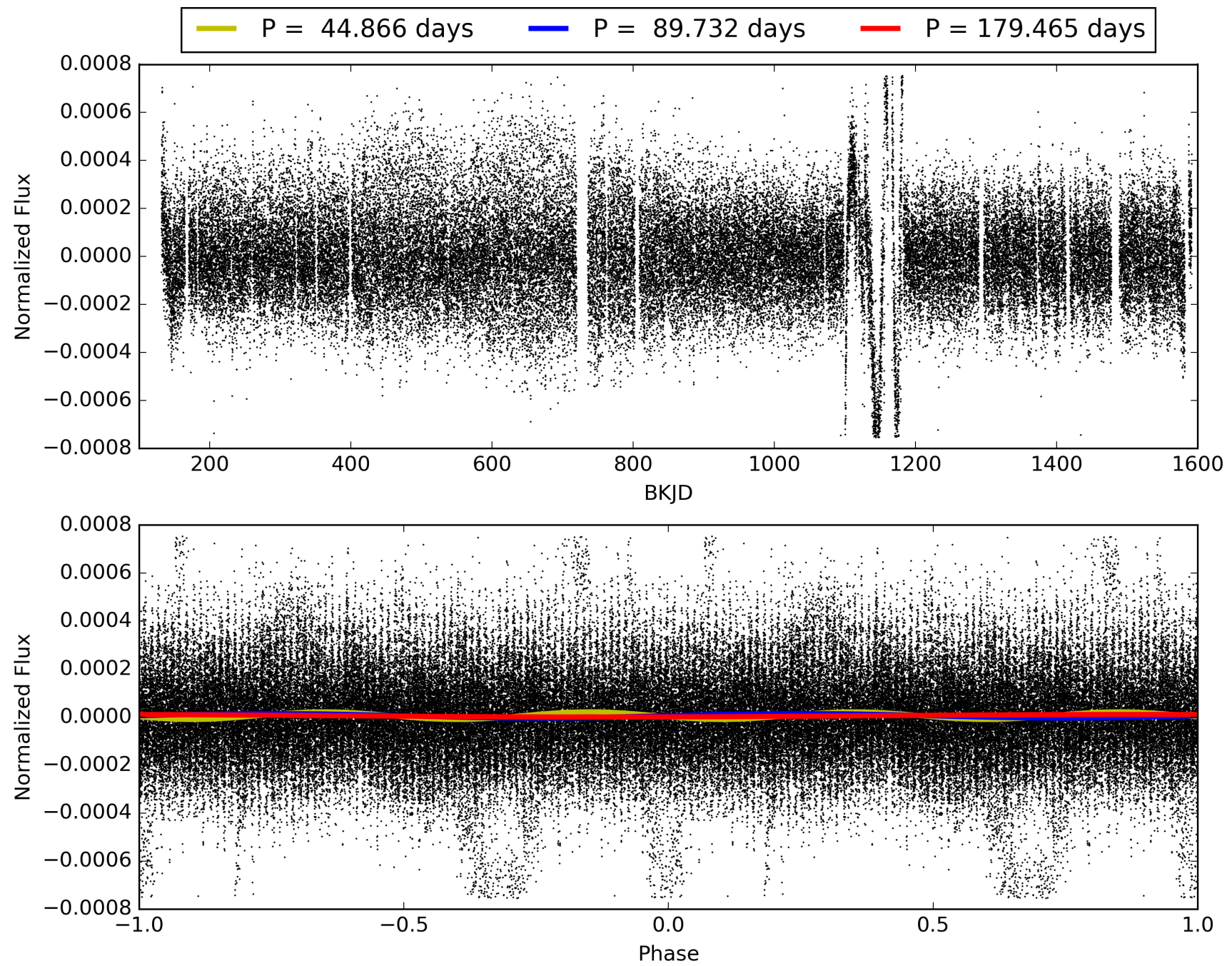
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 03:15:54 Z

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

TCE 006535143-09, PDC Light Curves

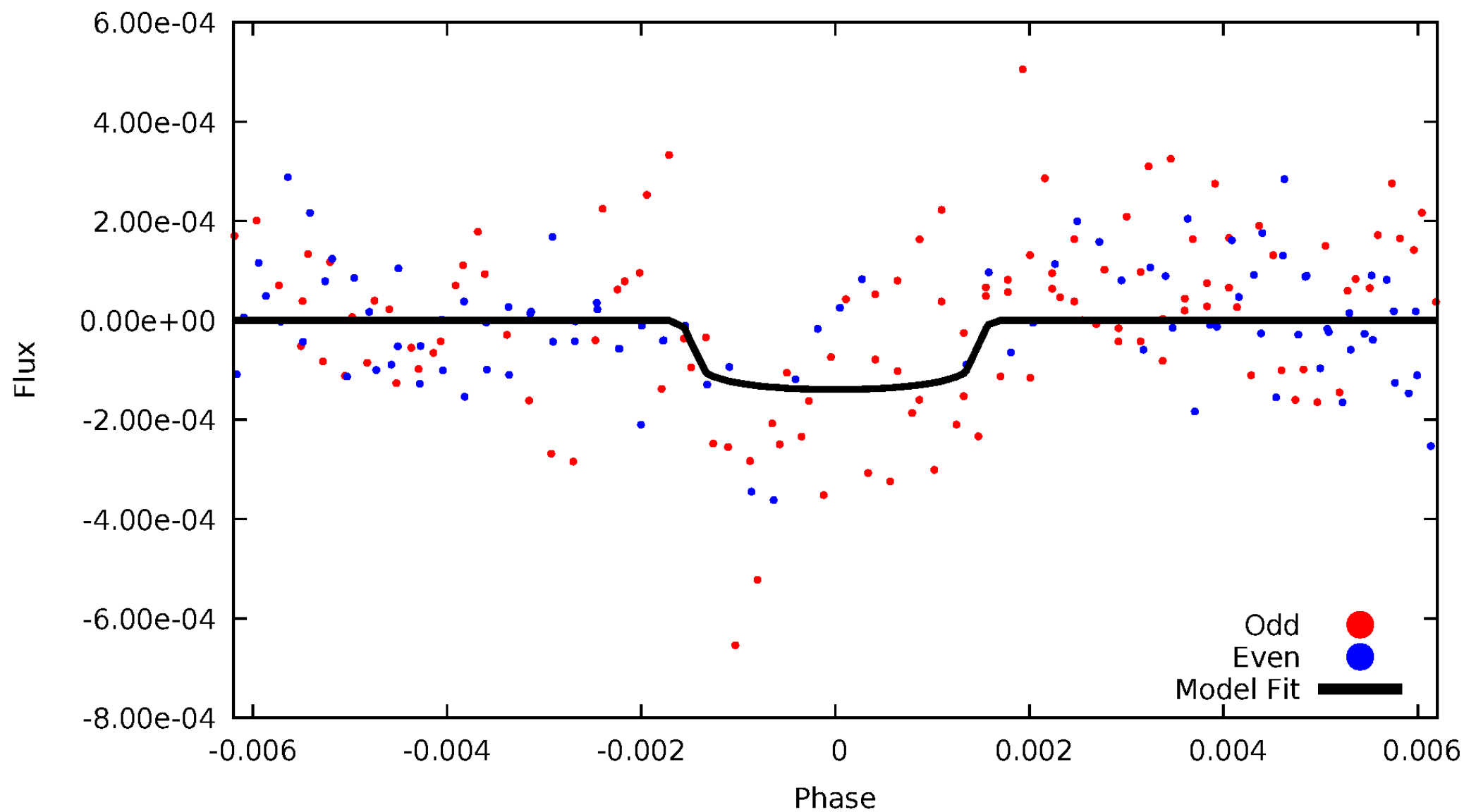


TCE 006535143-09



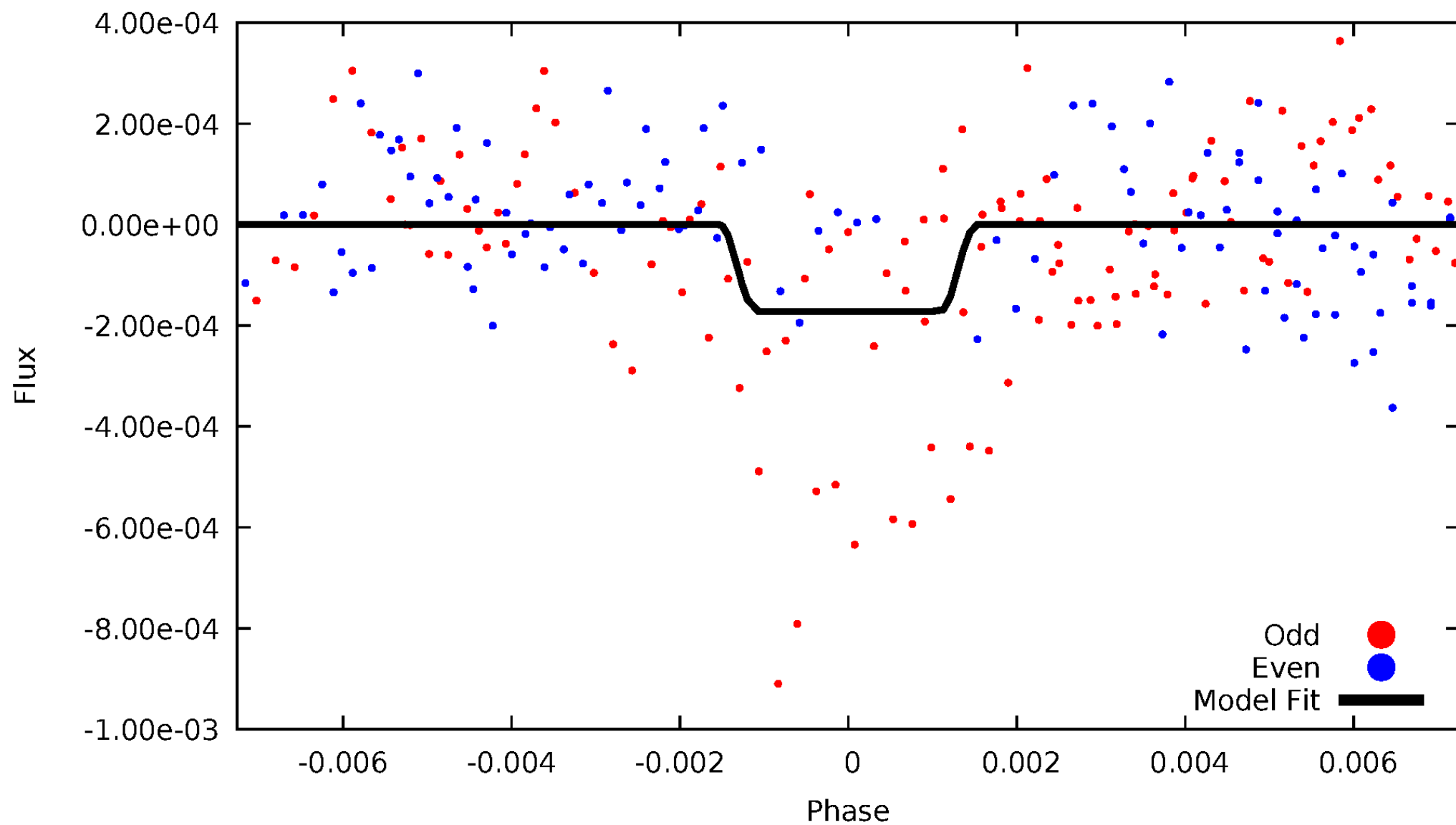
DV Odd/Even

TCE 006535143-09

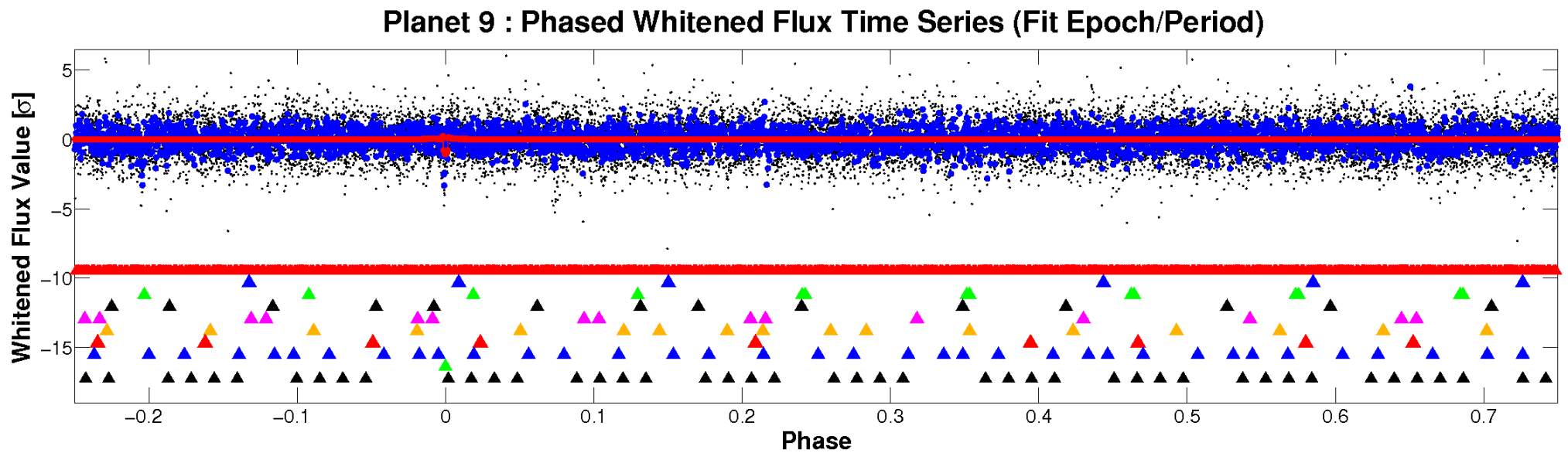
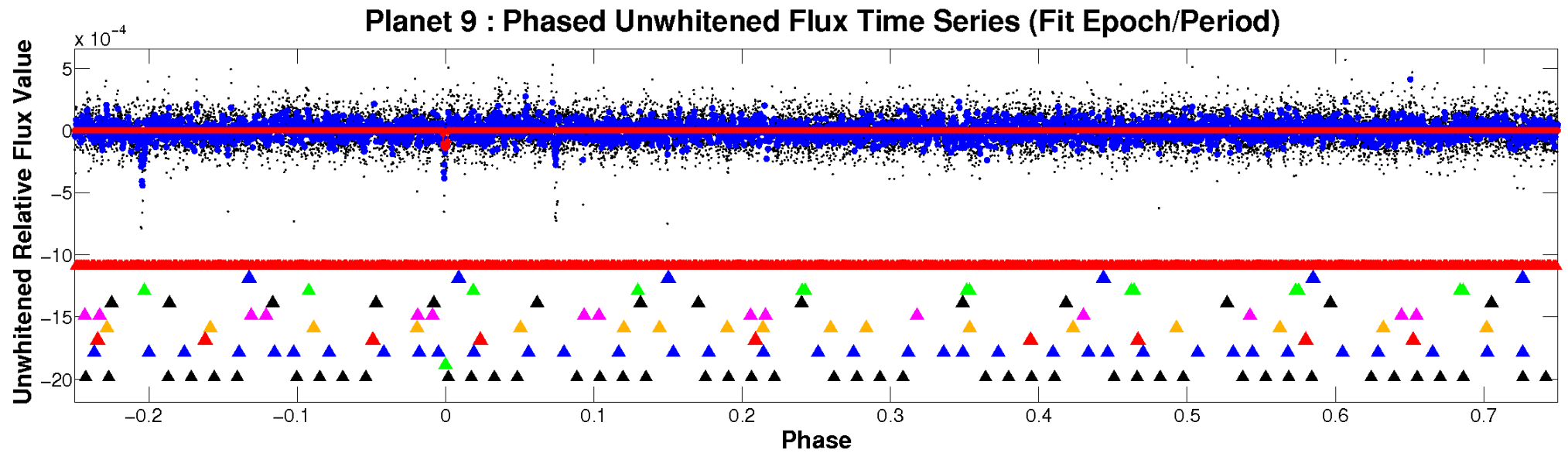


ALT Odd/Even

TCE 006535143-09

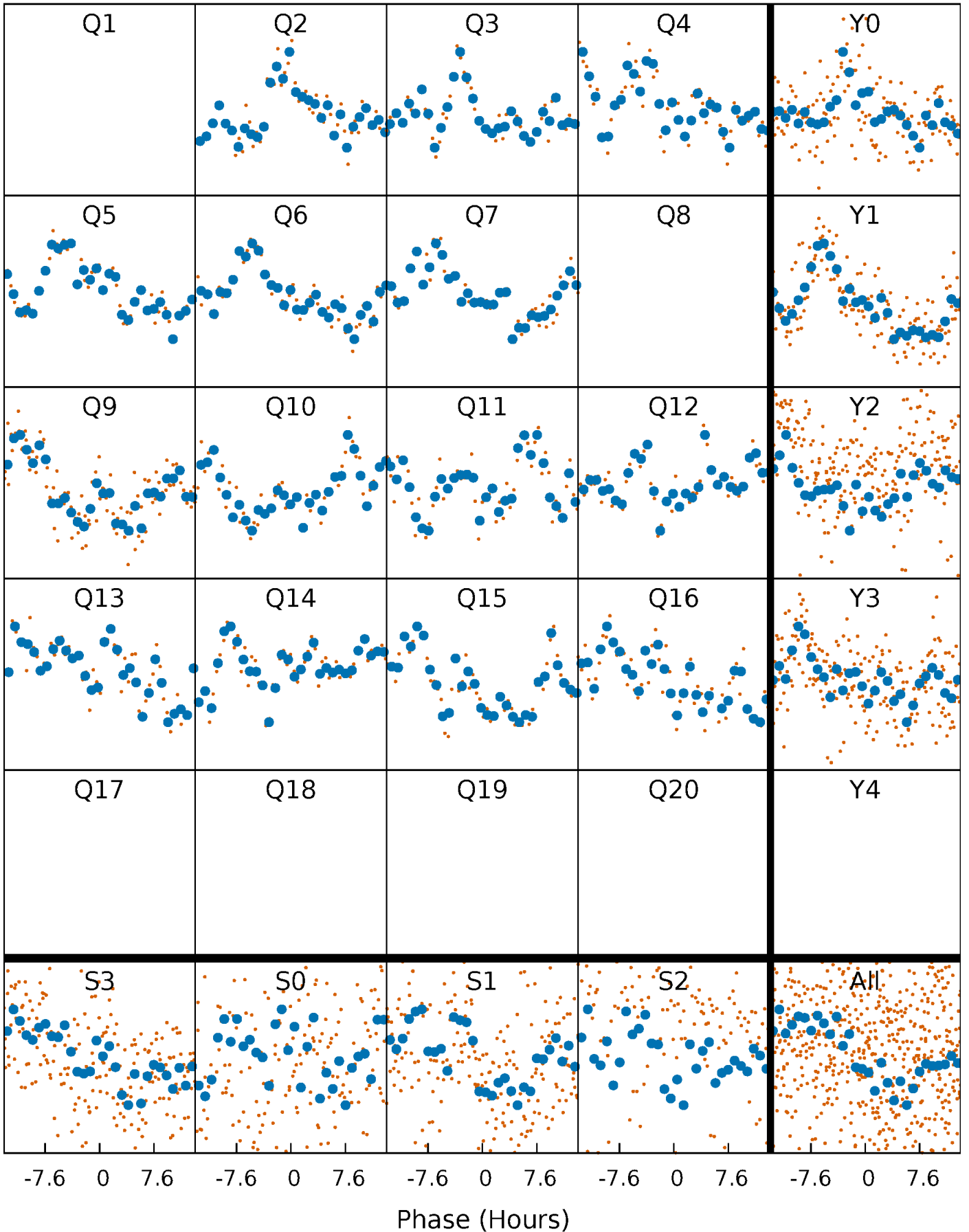


Non-Whitened Vs. Whitened Light Curve



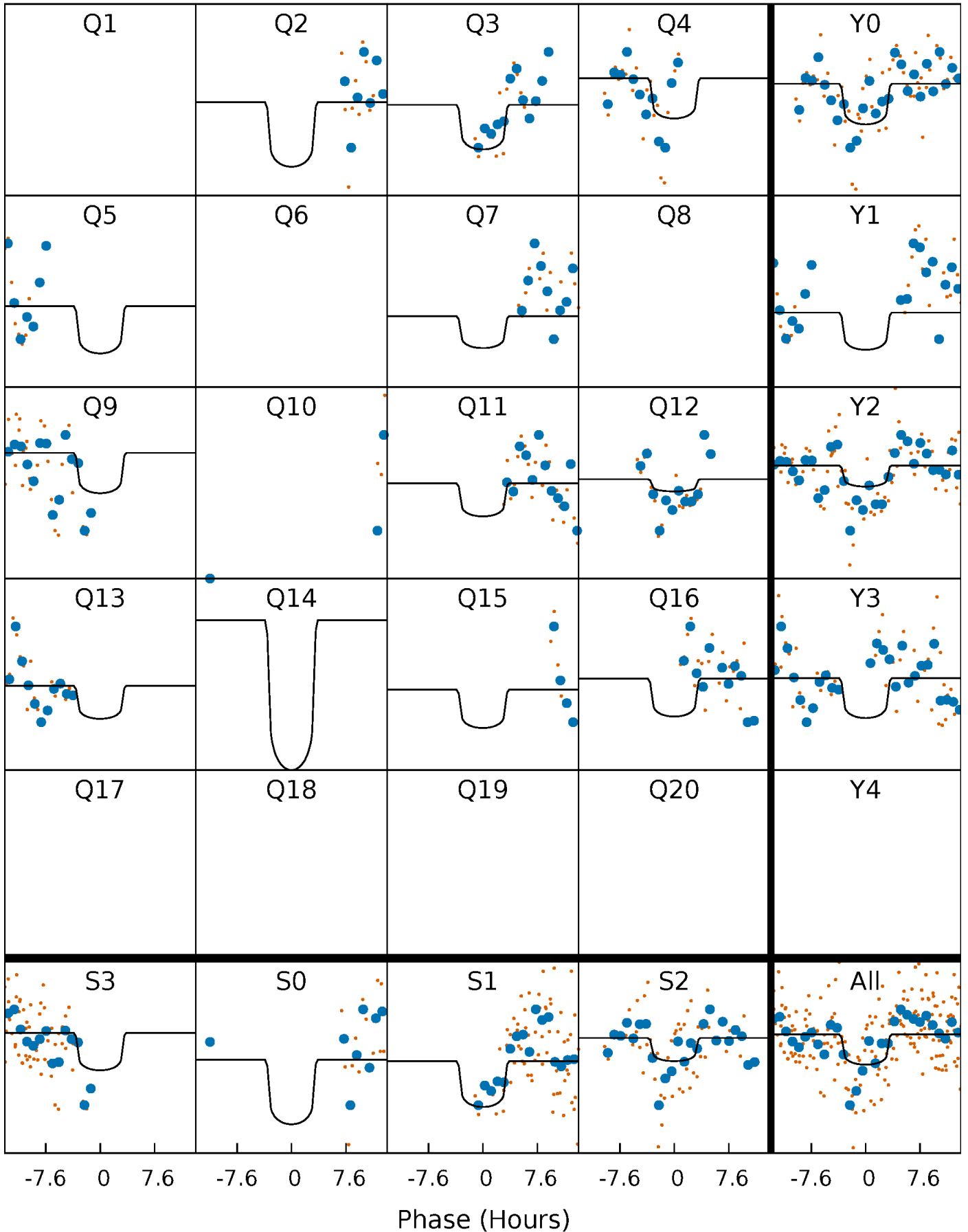
PDC Quarter-Phased Transit Curves

TCE 006535143-09 $P = 89.732378$ Days $T_0 = 186.618285$ (BKJD)



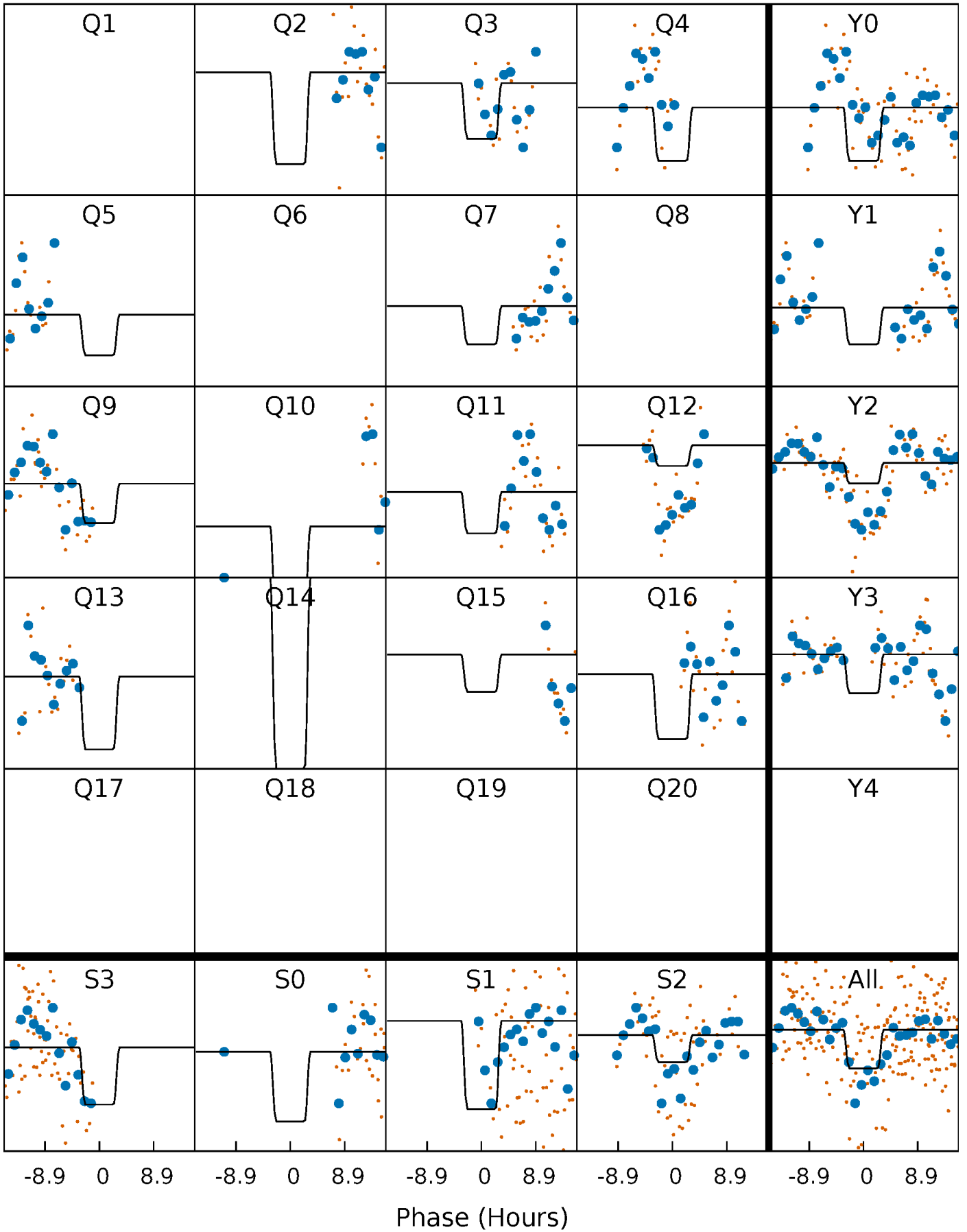
DV Quarter-Phased Transit Curves

TCE 006535143-09 P= 89.732378 Days $T_0=186.618285$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

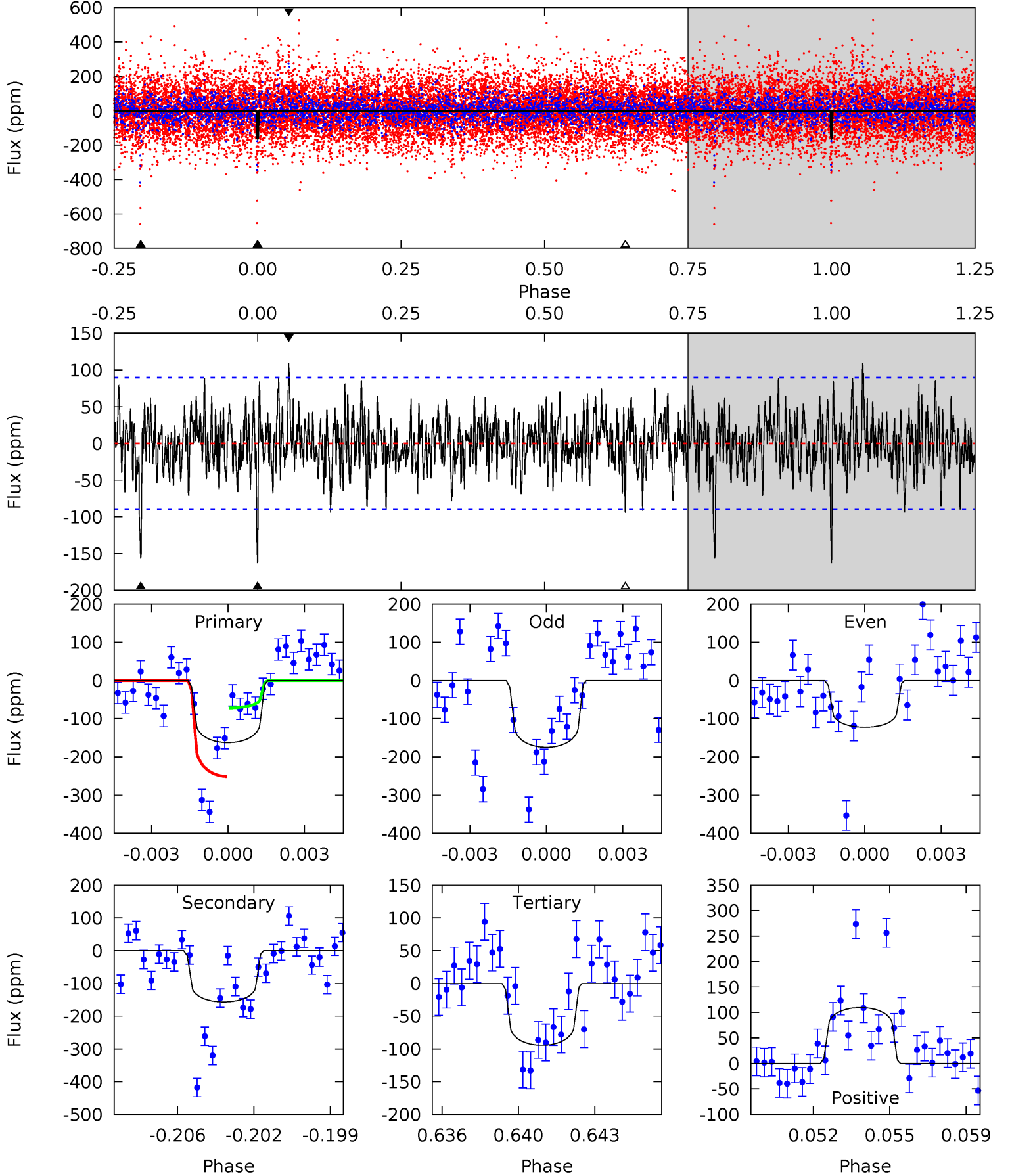
TCE 006535143-09 P= 89.731002 Days $T_0=186.615895$ (BKJD)



DV Model-Shift Uniqueness Test

006535143-09, P = 89.732378 Days, E = 96.885907 Days

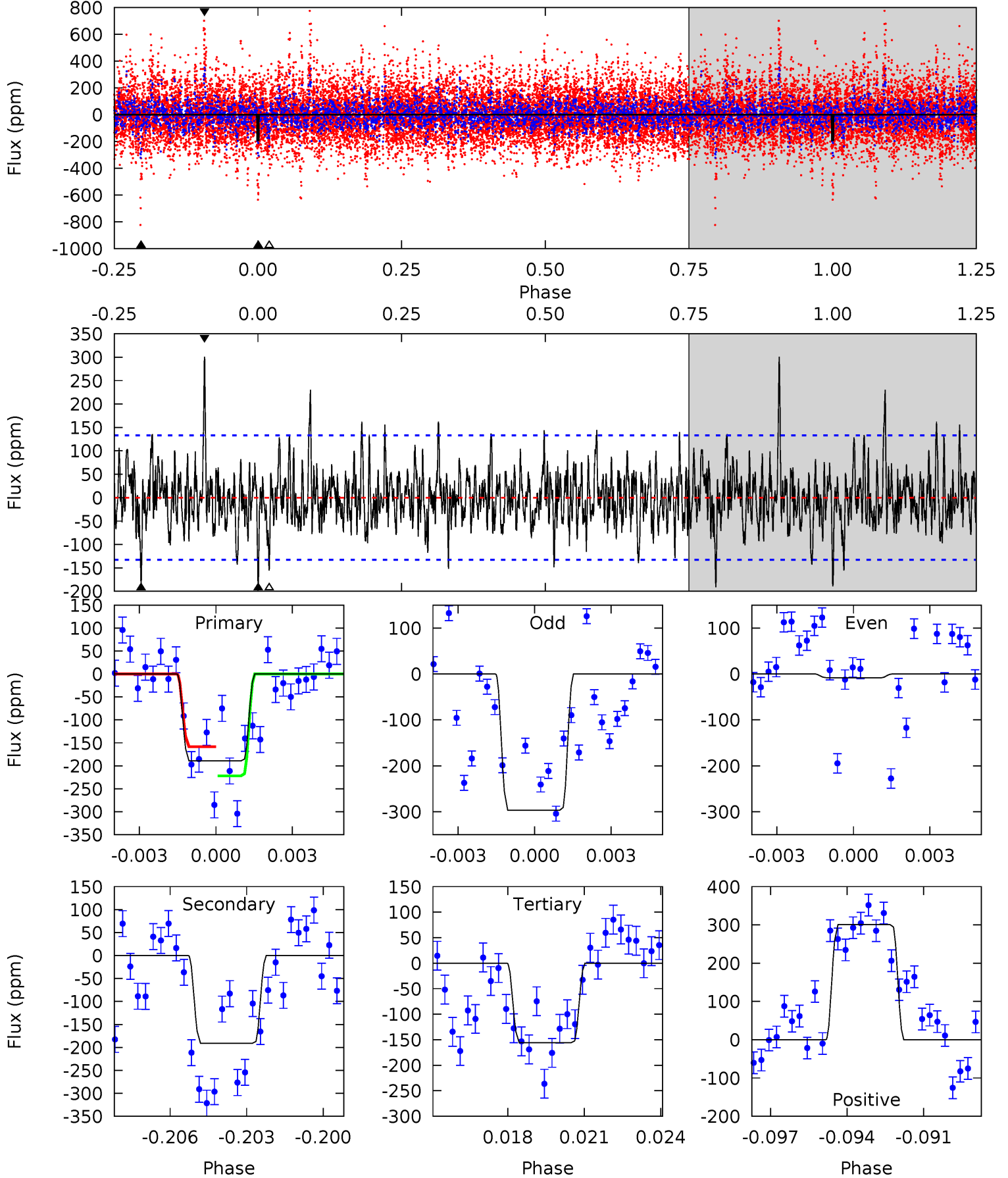
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.51	9.17	5.52	6.41	5.24	2.94	1.74	3.99	3.11	3.64	2.76	1.35	1.09	0.40	5.25



Alt Model-Shift Uniqueness Test

006535143-09, P = 89.731002 Days, E = 96.884893 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.48	7.55	6.16	11.9	5.25	2.97	1.97	1.33	-4.41	1.40	-4.34	4.93	2.38	0.61	1.26



Stellar Parameters For KIC 006535143

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6875^{+71}_{-82}	$4.027^{+0.149}_{-0.122}$	$0.020^{+0.150}_{-0.150}$	$1.985^{+0.389}_{-0.389}$	$1.530^{+0.146}_{-0.133}$	$0.276^{+0.202}_{-0.099}$
	+1%/-1%	+4%/-3%	+750%/-750%	+20%/-20%	+10%/-9%	+73%/-36%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 006535143-09 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-157 ± 17	$2.62^{+1.28}_{-1.27}$	887^{+44}_{-47}	6918^{+3697}_{-1211}	2519^{+7463}_{-1381}
Alt.	-191 ± 25	$2.77^{+1.39}_{-1.19}$	885^{+45}_{-45}	7108^{+3208}_{-1312}	2719^{+5887}_{-1516}

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

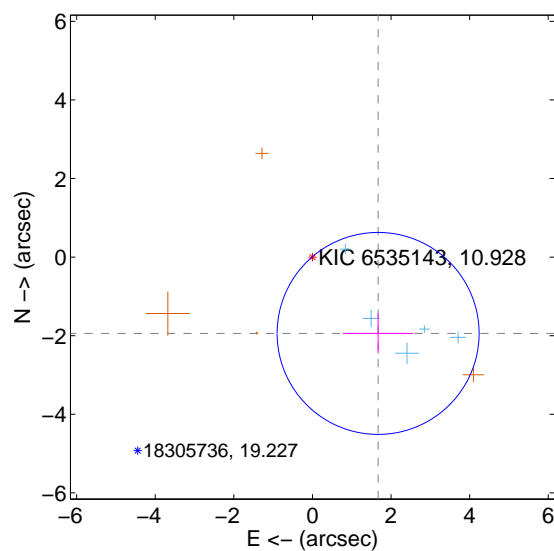
Supplemental centroid analysis for 006535143-09. **Kepler magnitude: 10.93.** Transit SNR 5.95

There are 5 quarters with good PRF difference image offsets

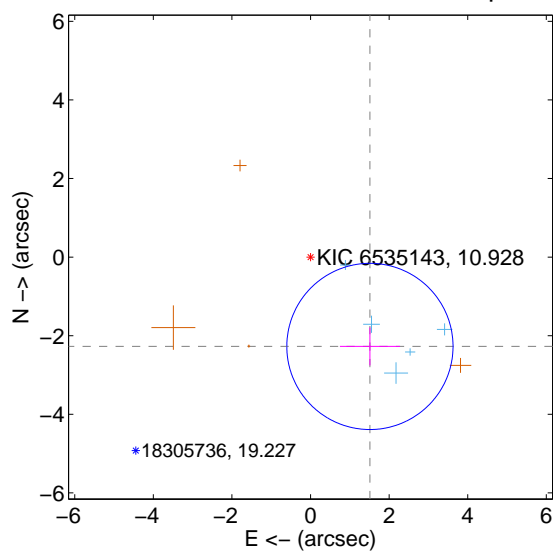
The direct PRF centroid is offset from the target star catalog position by about 0.40 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.563 ± 0.857	2.99	-1.671 ± 0.895	-1.943 ± 0.507
PRF-fit source offset from KIC position	2.730 ± 0.705	3.87	-1.512 ± 0.765	-2.274 ± 0.481
photometric centroid source offset	0.60 ± 0.70	0.86	-0.10 ± 0.80	0.60 ± 0.70

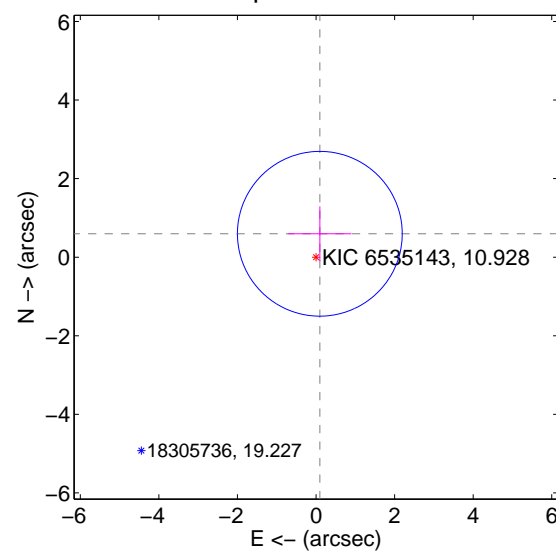
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

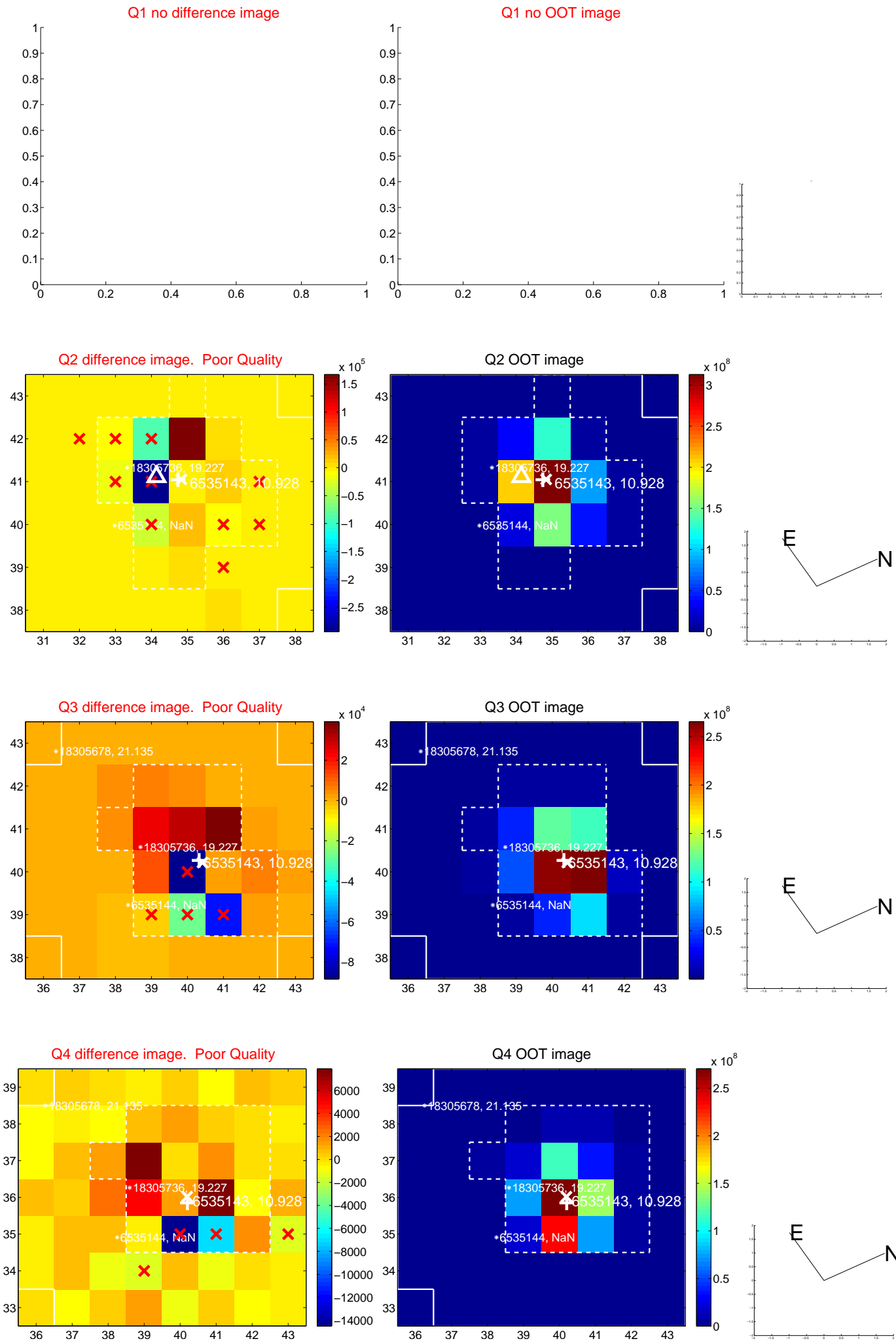


offset from photometric centroids

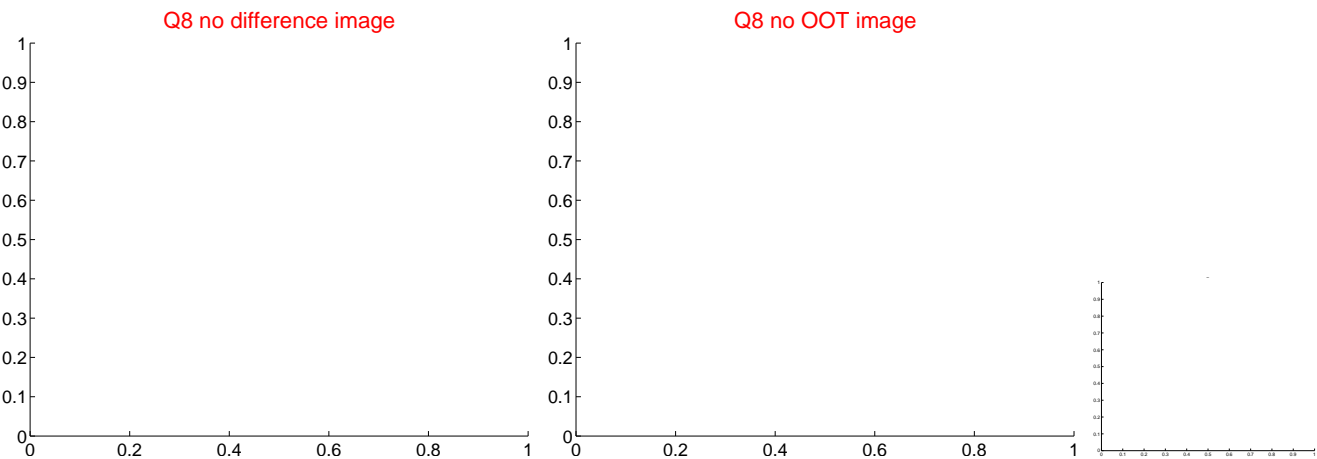
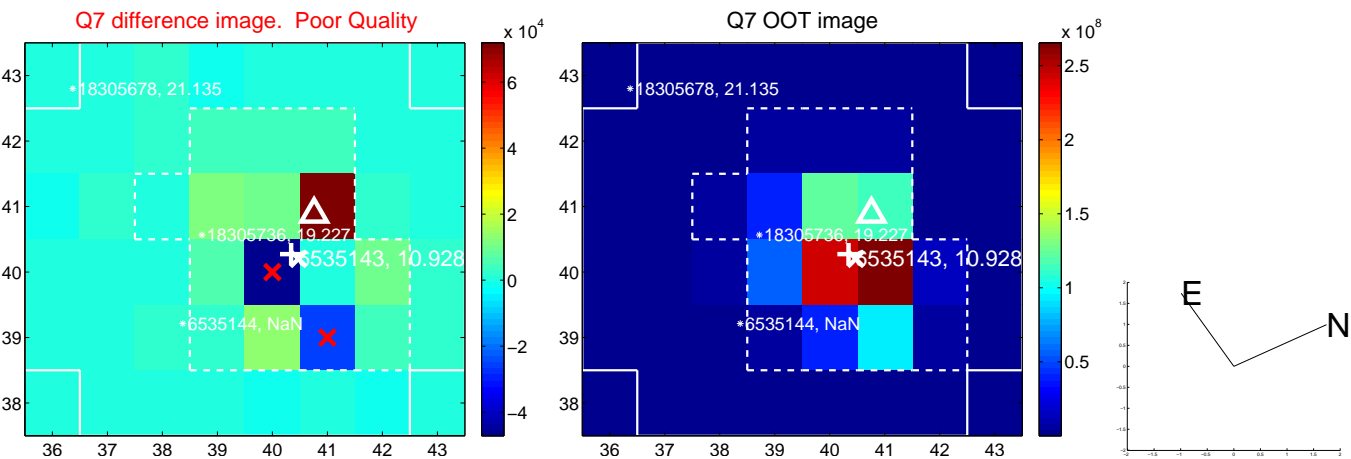
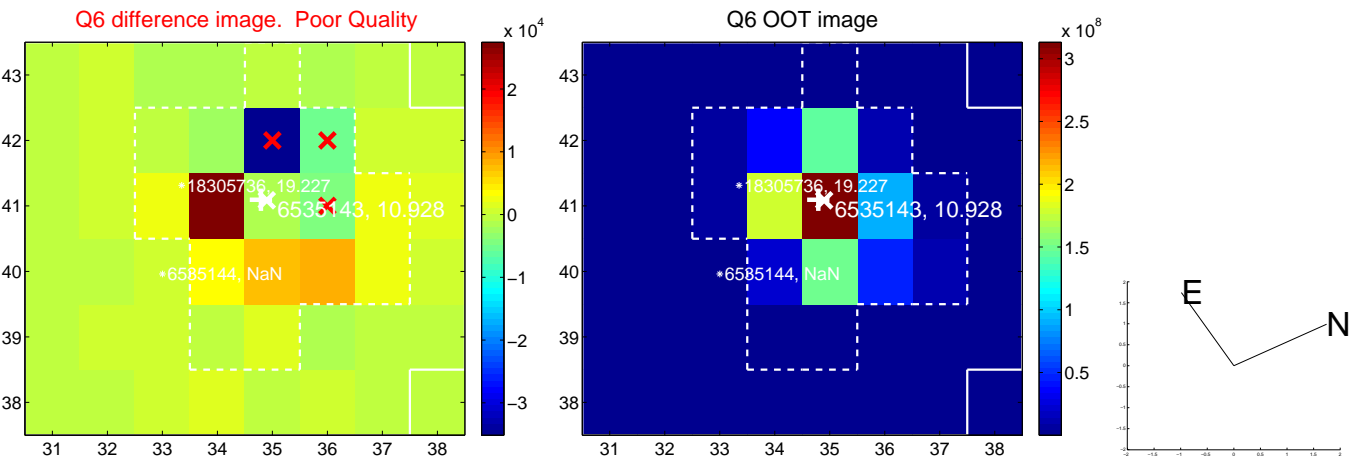
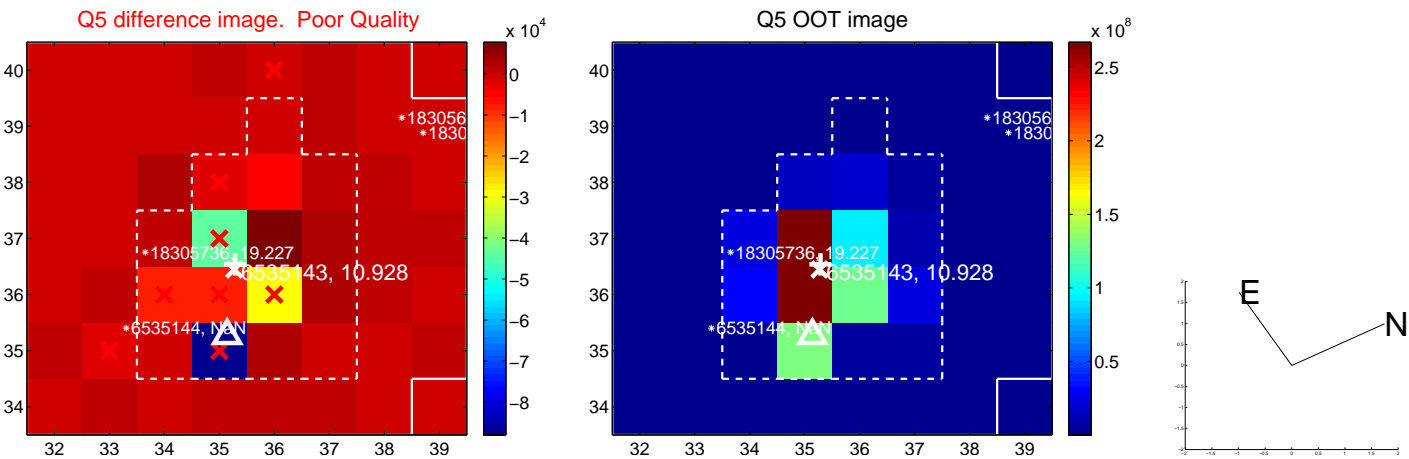


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

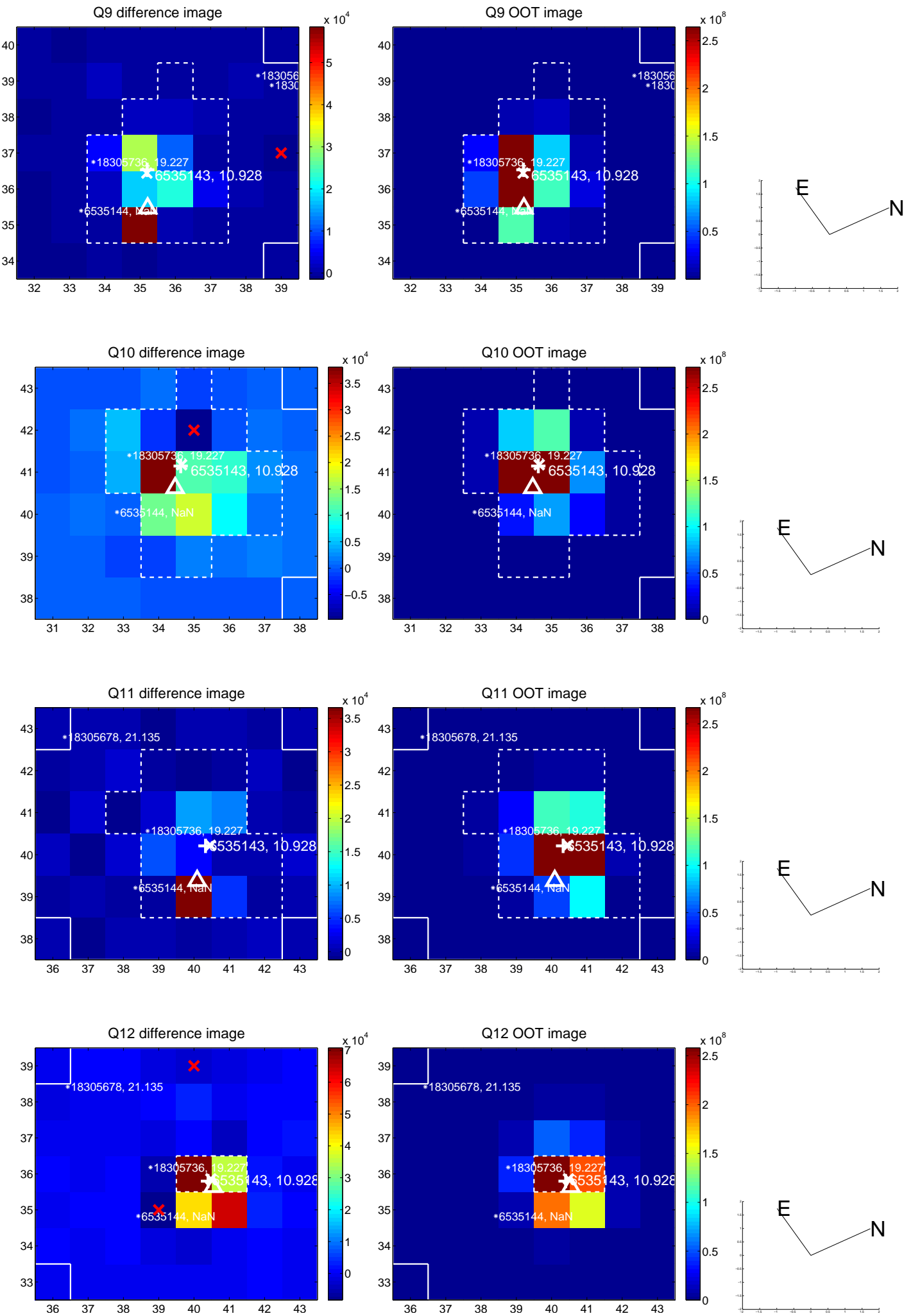
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



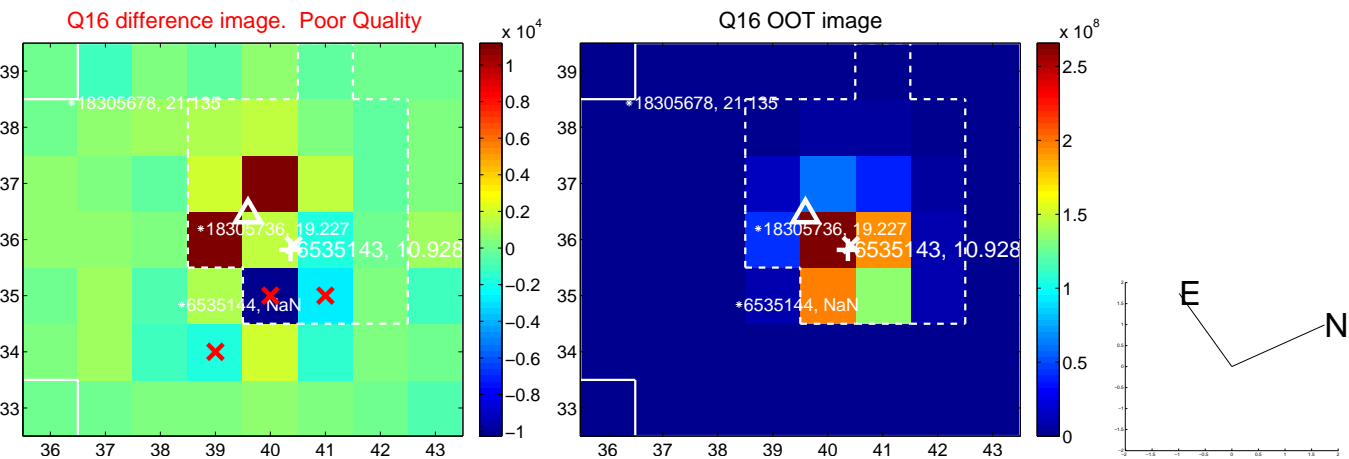
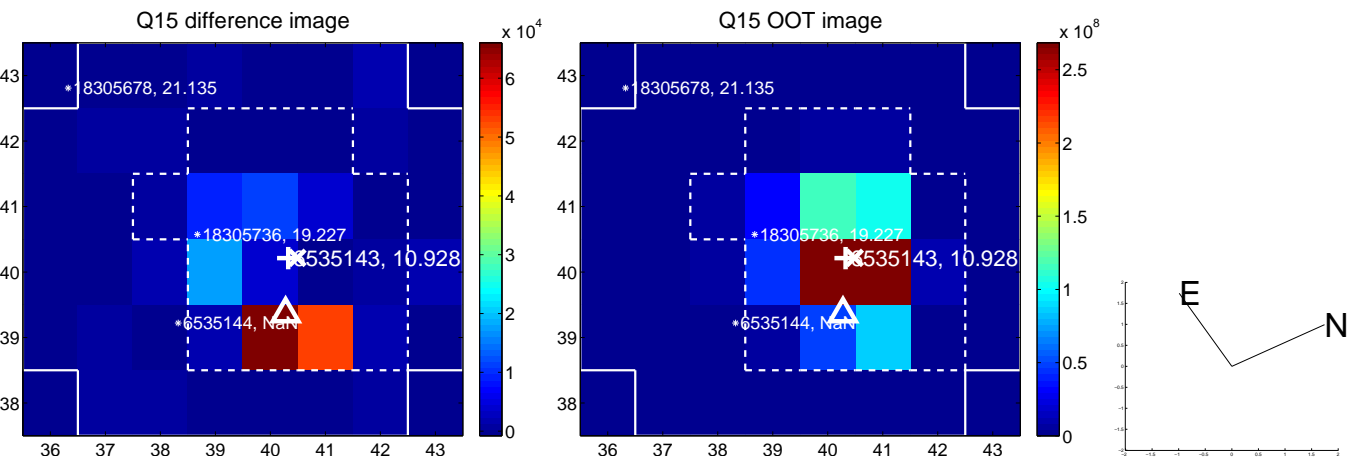
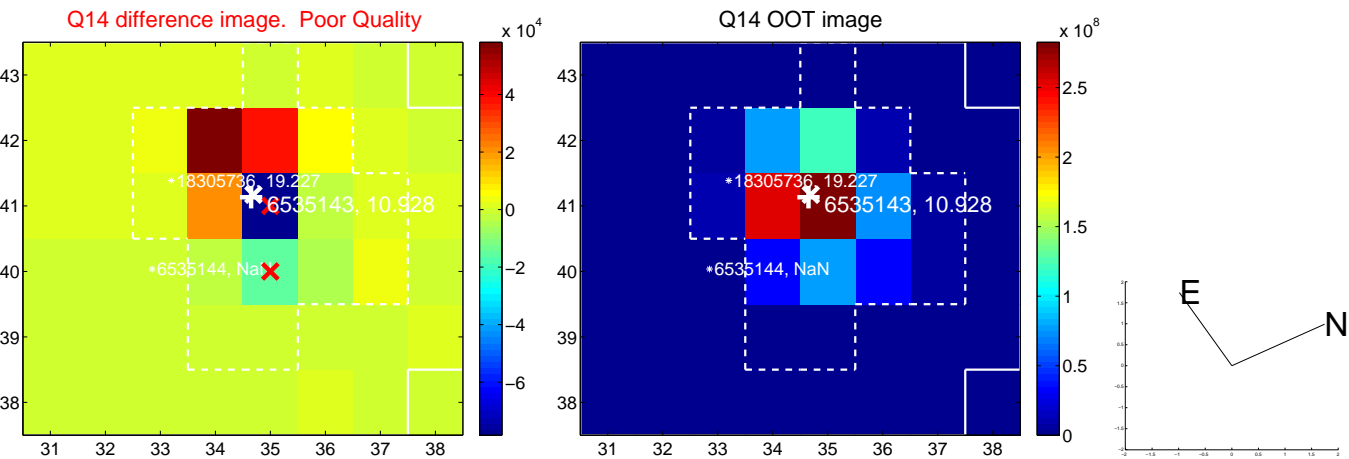
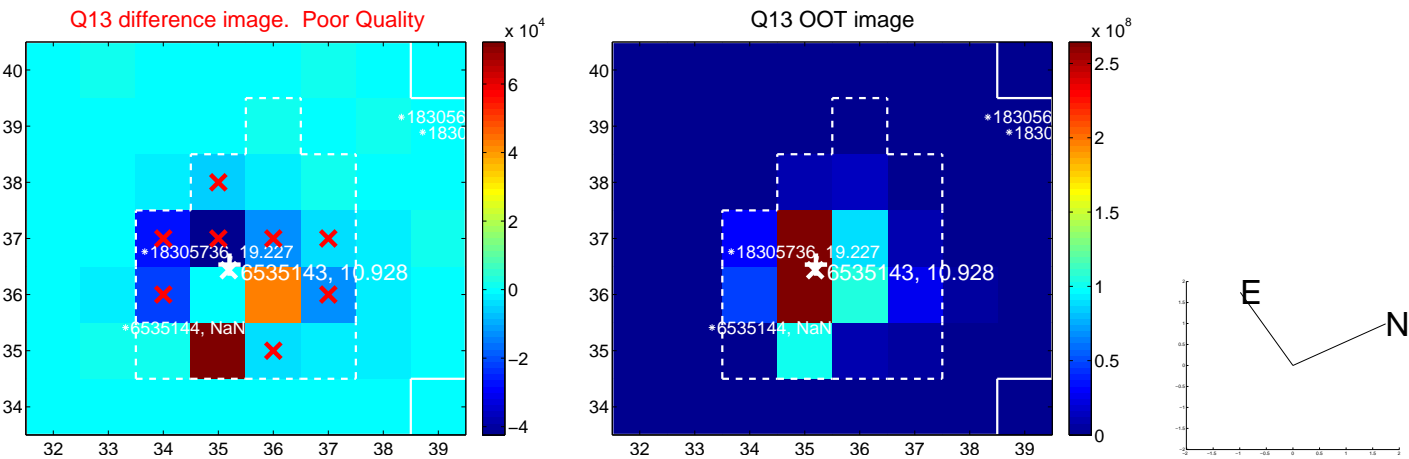
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



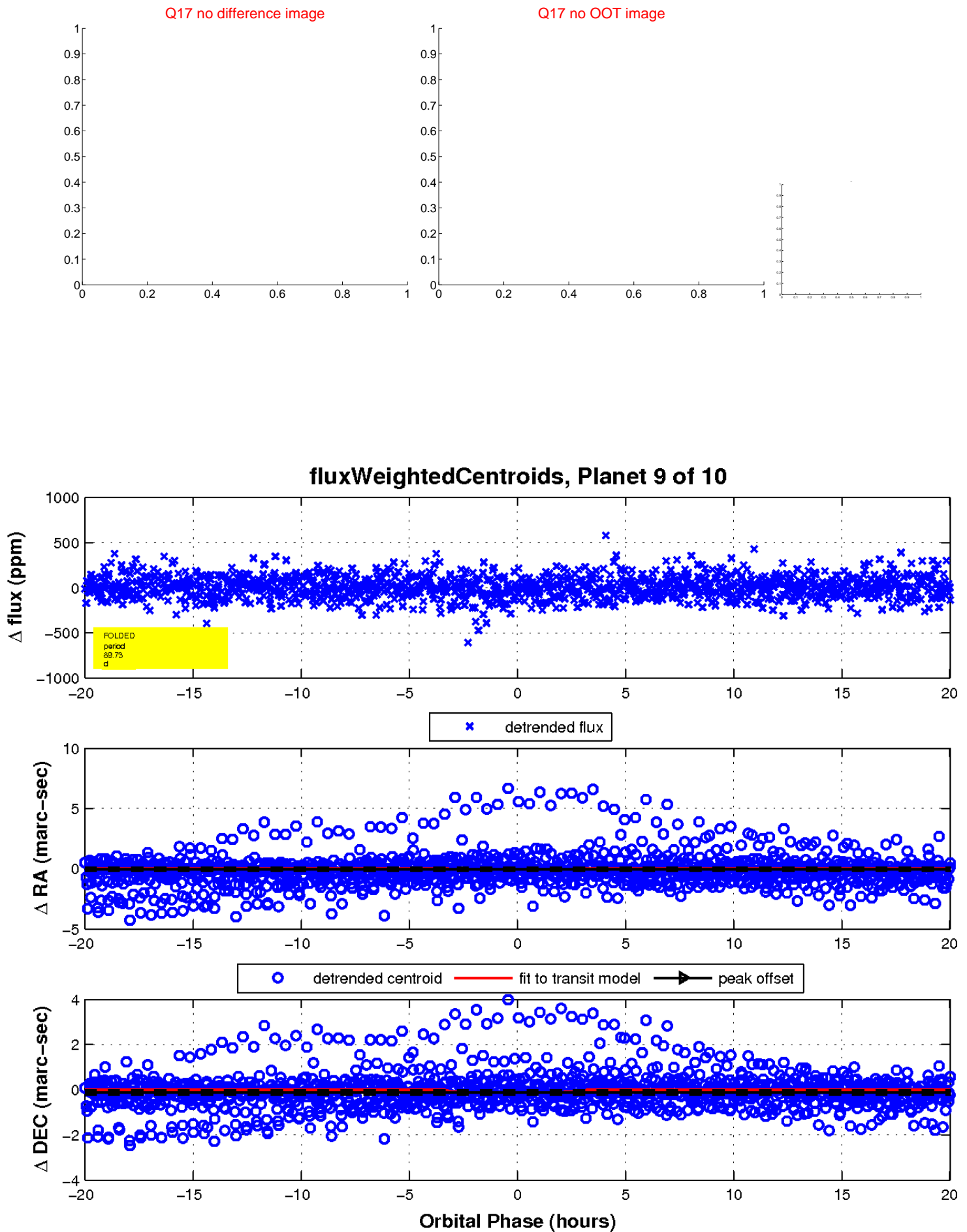
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



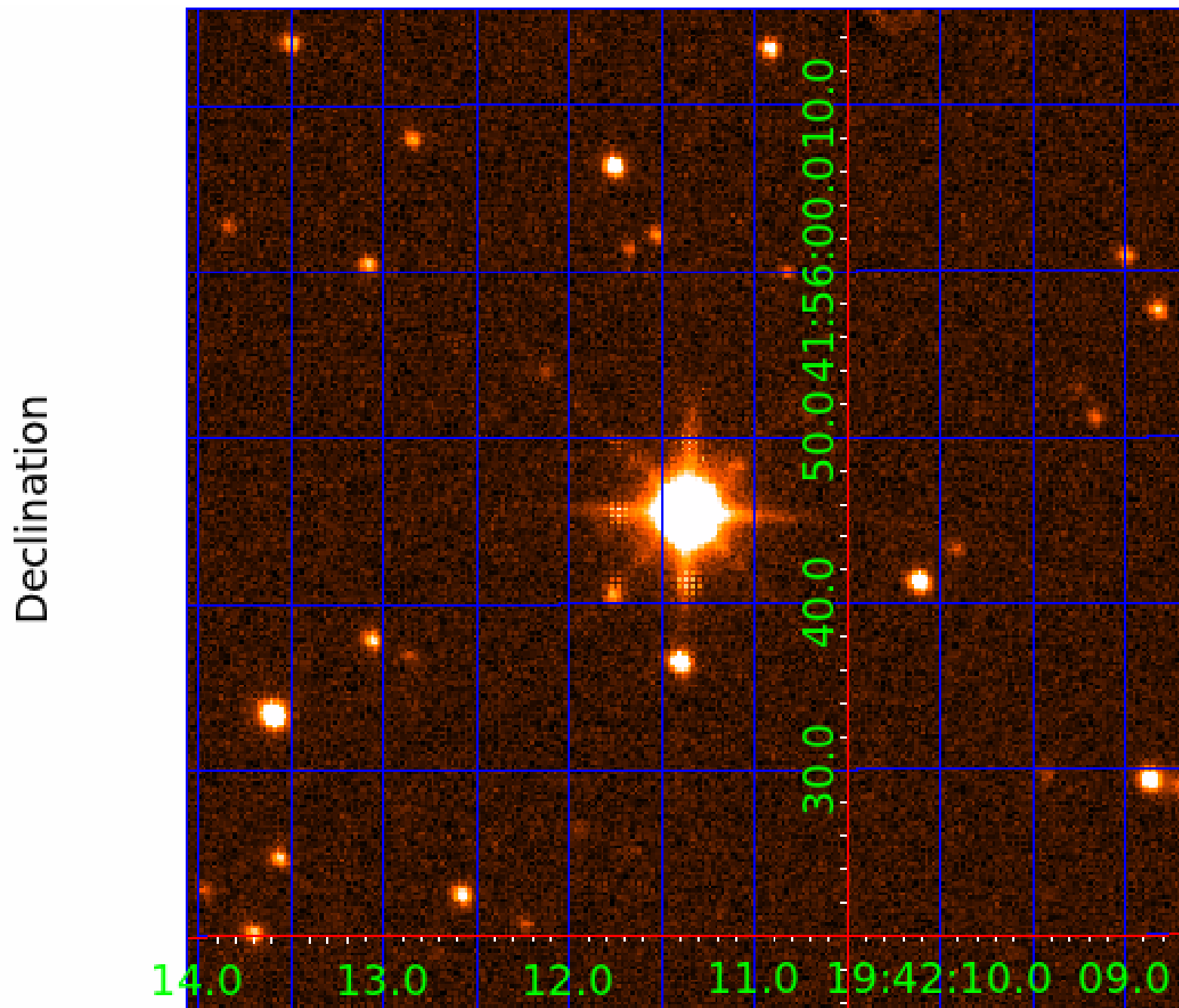
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



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})
006535143-01	OBS	No	1.655275	131.668348	13.1	9.574	8.6	7.7	1.99	6875	0.72	7918.91
006535143-02	OBS	No	256.515171	289.836364	112.5	5.531	10.2	6.4	1.99	6875	2.16	9.51
006535143-03	OBS	No	99.682988	208.377736	257.3	2.340	10.1	10.6	1.99	6875	3.64	33.55
006535143-04	OBS	No	105.729358	169.919884	224.0	4.991	9.9	10.7	1.99	6875	3.22	31.01
006535143-05	OBS	No	99.802727	154.724213	181.5	4.161	9.5	8.9	1.99	6875	3.11	33.49
006535143-06	OBS	No	83.476567	209.923159	177.7	4.474	9.1	9.2	1.99	6875	2.99	42.50
006535143-07	OBS	No	162.818577	271.955355	65.4	20.114	8.9	4.1	1.99	6875	1.84	17.44
006535143-08	OBS	No	40.486809	145.706523	94.9	7.051	8.6	7.6	1.99	6875	2.17	111.53
006535143-09	OBS	No	89.732378	186.618285	139.3	6.675	8.6	5.9	1.99	6875	2.66	38.60
006535143-10	OBS	No	32.503334	158.465697	196.5	0.978	8.3	7.9	1.99	6875	3.26	149.48

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006535143-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_SATURATED
006535143-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
006535143-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
006535143-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006535143-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006535143-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_SATURATED
006535143-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006535143-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
006535143-09	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
006535143-10	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—CENT_SATURATED

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

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

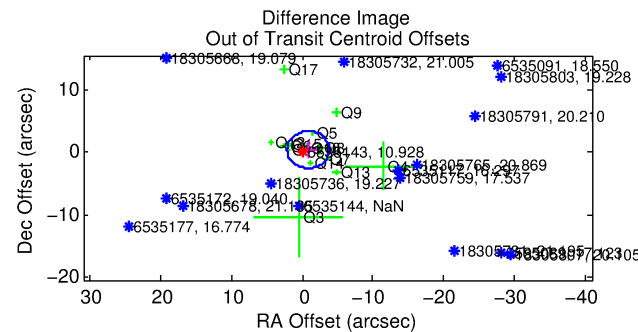
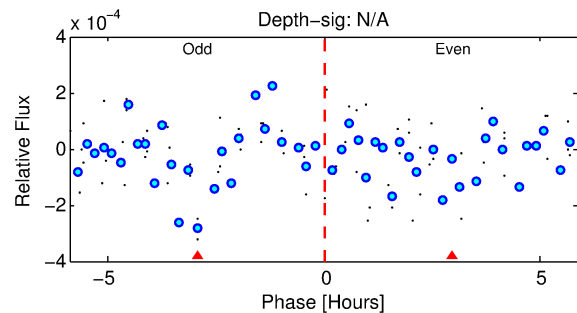
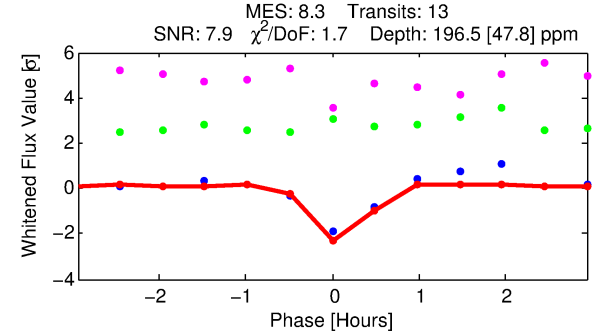
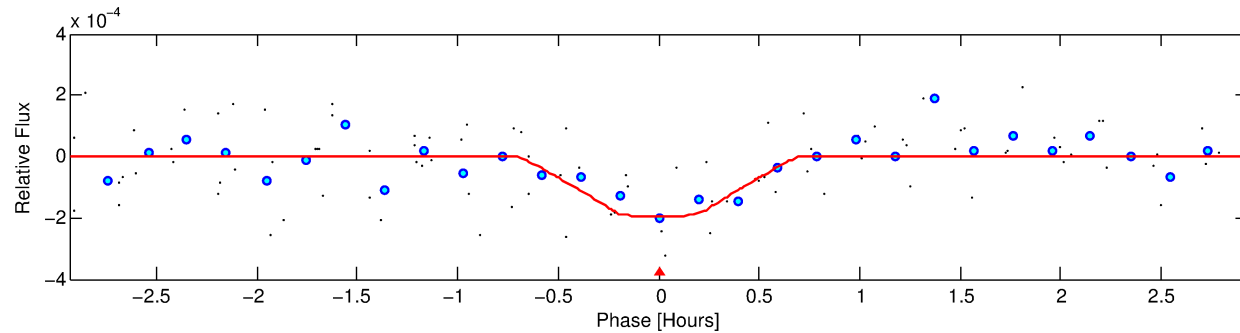
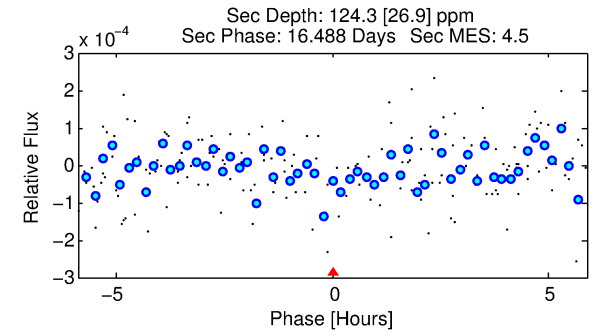
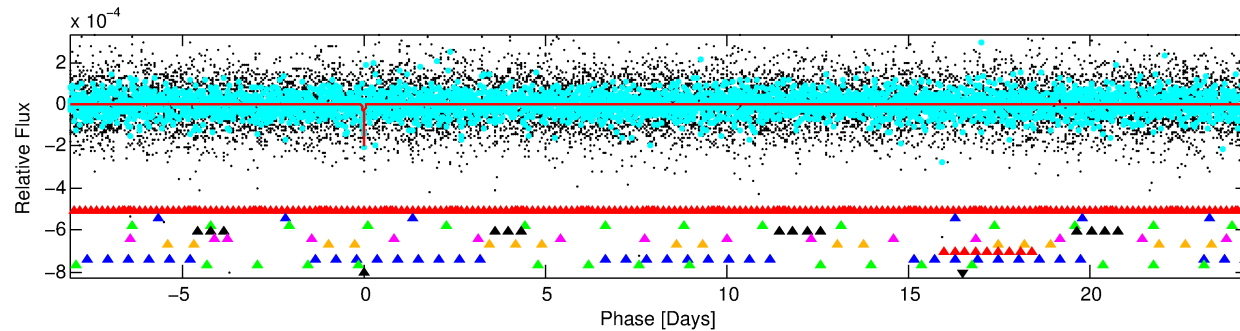
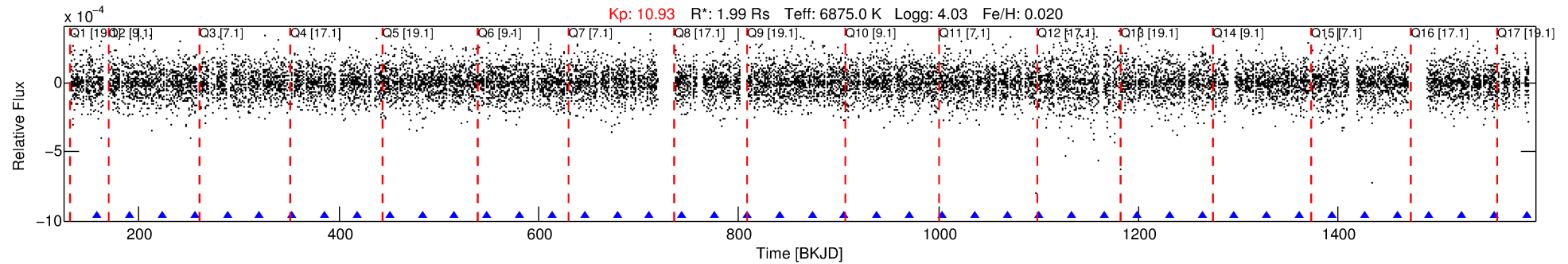
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006535143-10

No Significant Match Found

DV One-Page Summary

KIC: 6535143 Candidate: 10 of 10 Period: 32.503 d



DV Fit Results:

Period = 32.50333 [0.00025] d
Epoch = 158.4657 [0.0060] BKJD
Rp/R* = 0.0151 [0.0135]
a/R* = 119.54 [625.18]
b = 0.90 [1.13]
Seff = 149.48 [40.02]
Teq = 892 [60] K
Rp = 3.26 [3.00] Re
a = 0.2297 [0.0399] AU
Ag = 338.85 [619.66] [0.55σ]
Teff = 5914 [2677] K [1.88σ]

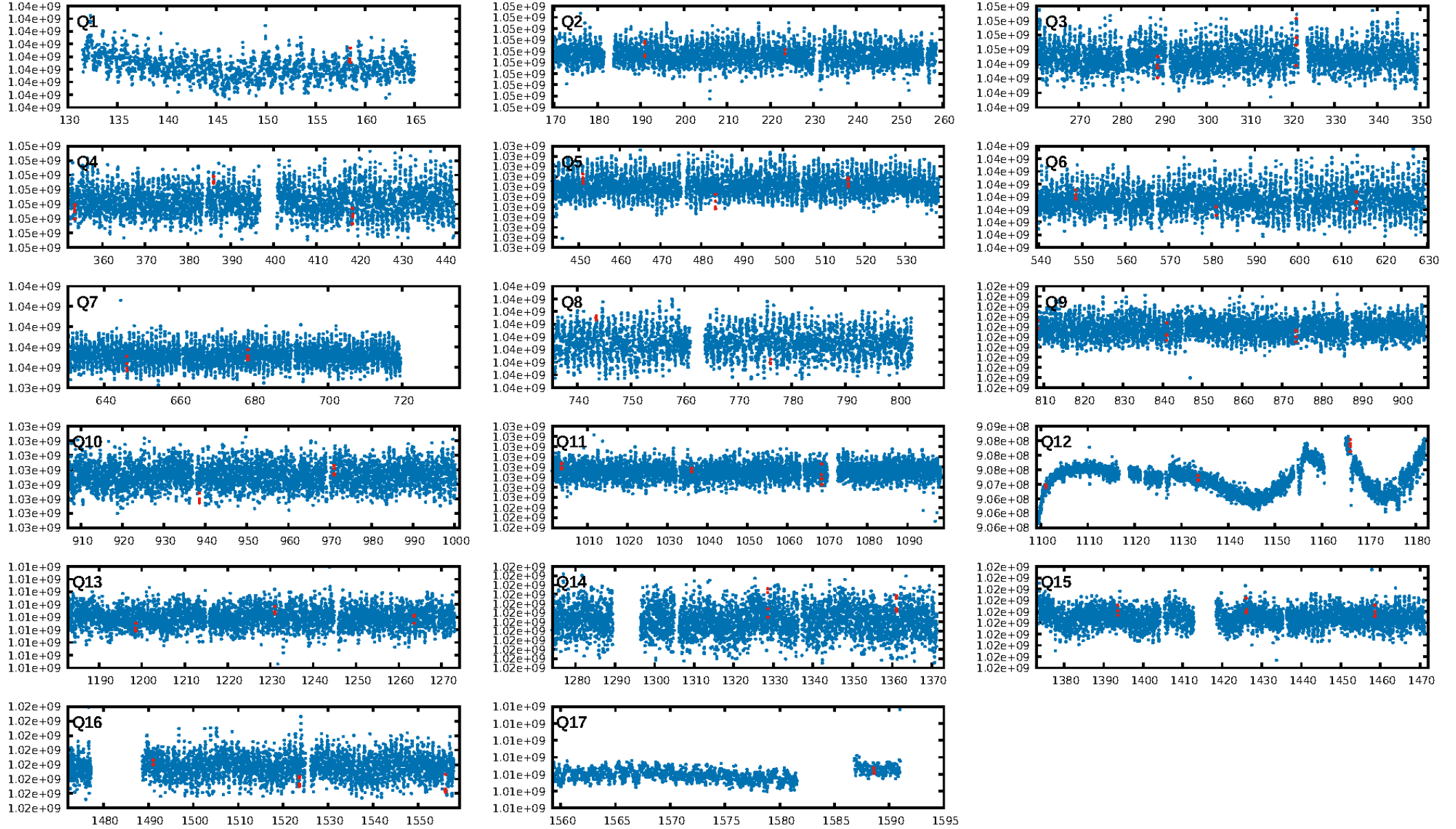
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [76.93σ]
LongPeriod-sig: 100.0% [26.92σ]
ModelChiSquare2-sig: 1.3%
ModelChiSquareGof-sig: 84.4%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [13/13]
GhostDiagnostic-chr: -4.195
Centroid-sig: 60.6%
Centroid-so: 0.831 arcsec [1.53σ]
OotOffset-rm: 0.896 arcsec [0.91σ]
OotOffset-st: 2/4/4/4 [14]
KicOffset-rm: 0.701 arcsec [0.62σ]
KicOffset-st: 2/4/4/4 [14]
DiffImageQuality-fgm: 0.14 [2/14]
DiffImageOverlap-fno: 0.75 [12/16]

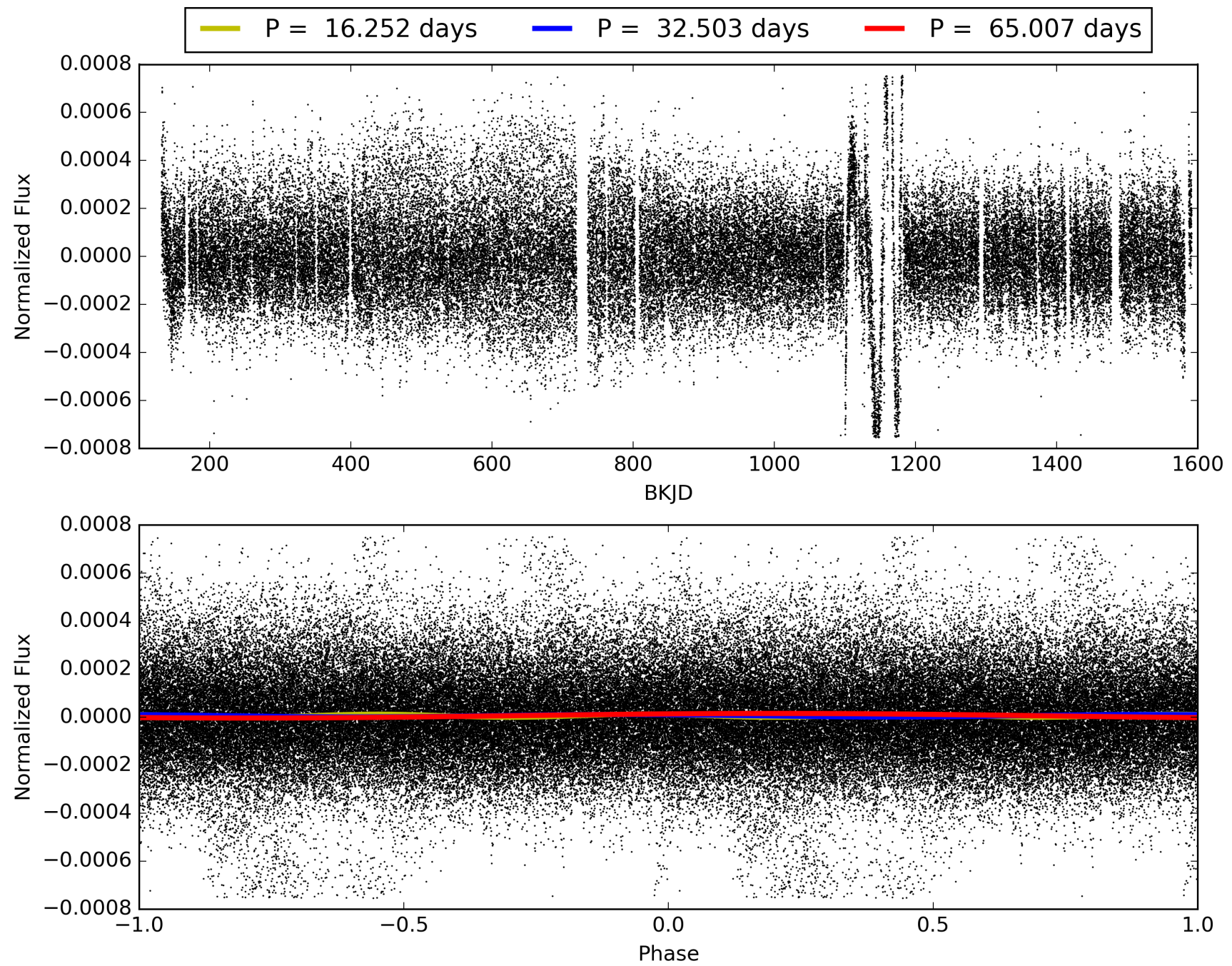
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 03:15:59 Z

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

TCE 006535143-10, PDC Light Curves

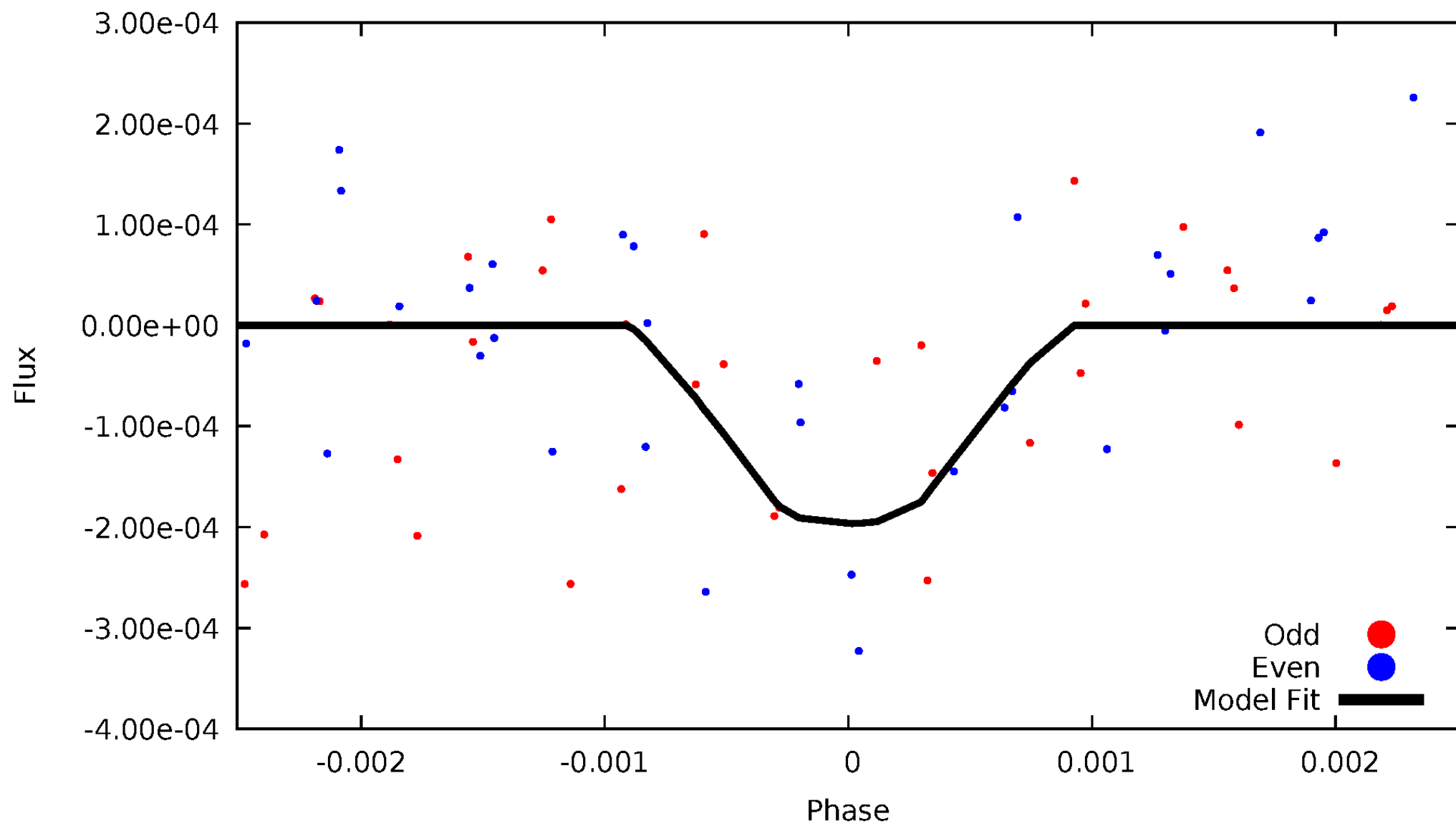


TCE 006535143-10



DV Odd/Even

TCE 006535143-10

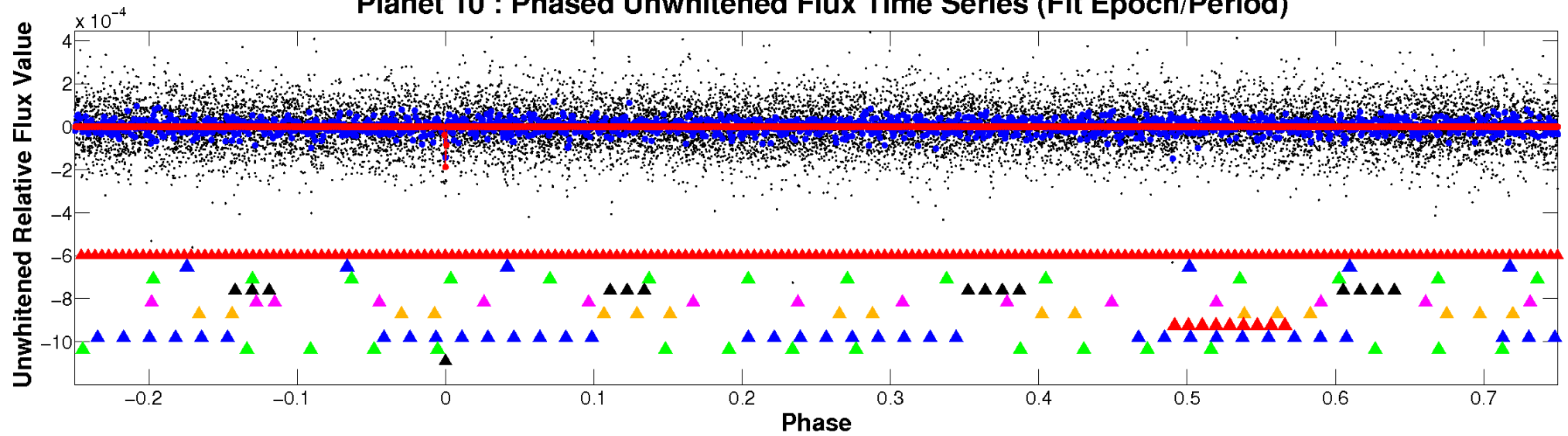


ALT Odd/Even

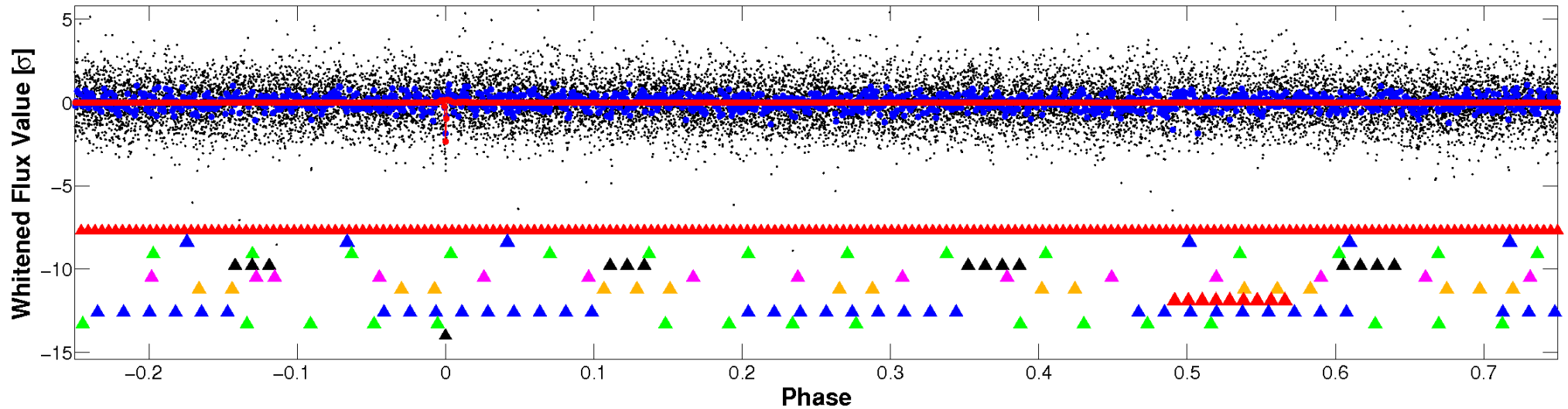
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

Planet 10 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

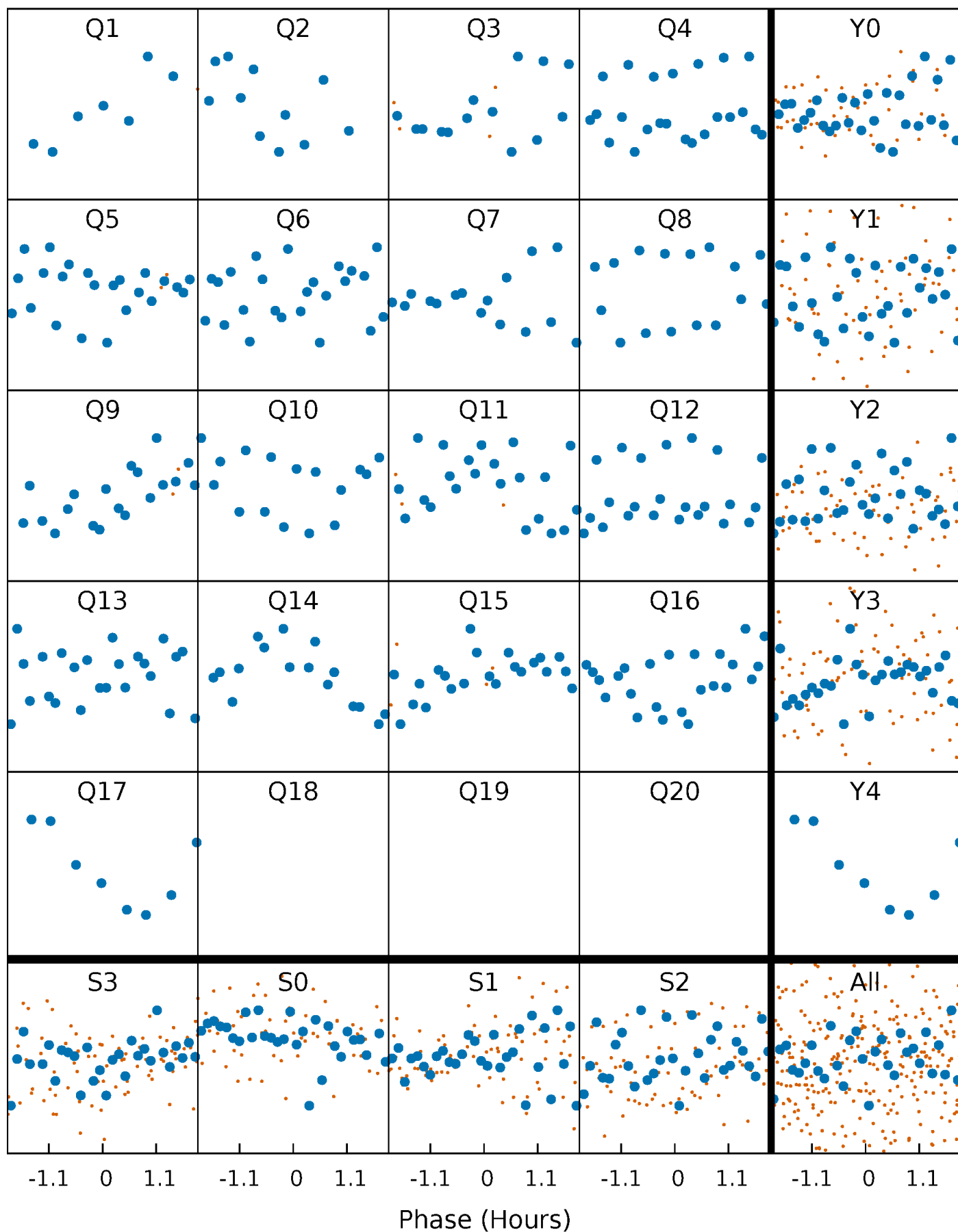


Planet 10 : Phased Whitened Flux Time Series (Fit Epoch/Period)



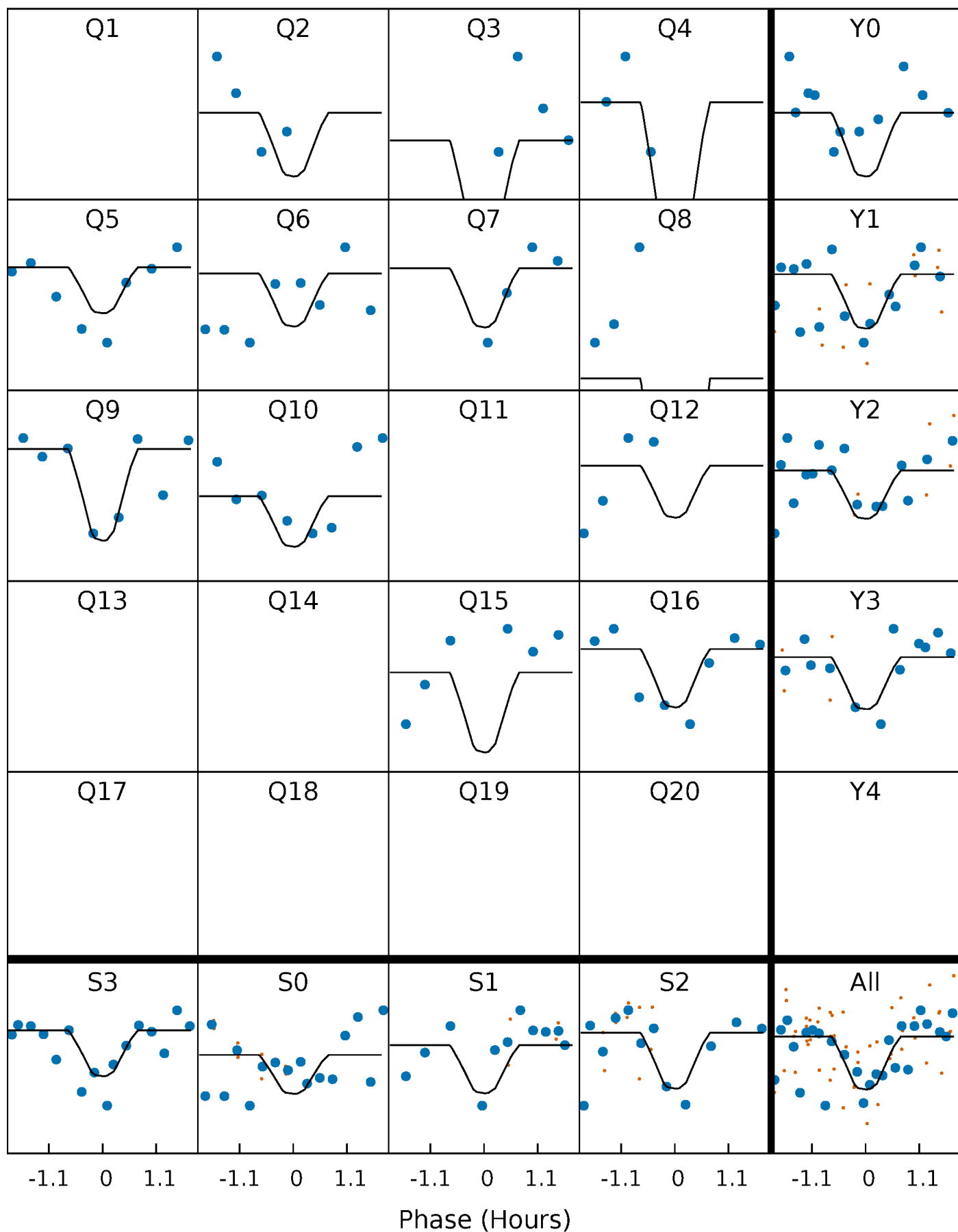
PDC Quarter-Phased Transit Curves

TCE 006535143-10 P= 32.503334 Days $T_0=158.465697$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 006535143-10 P= 32.503334 Days $T_0=158.465697$ (BKJD)

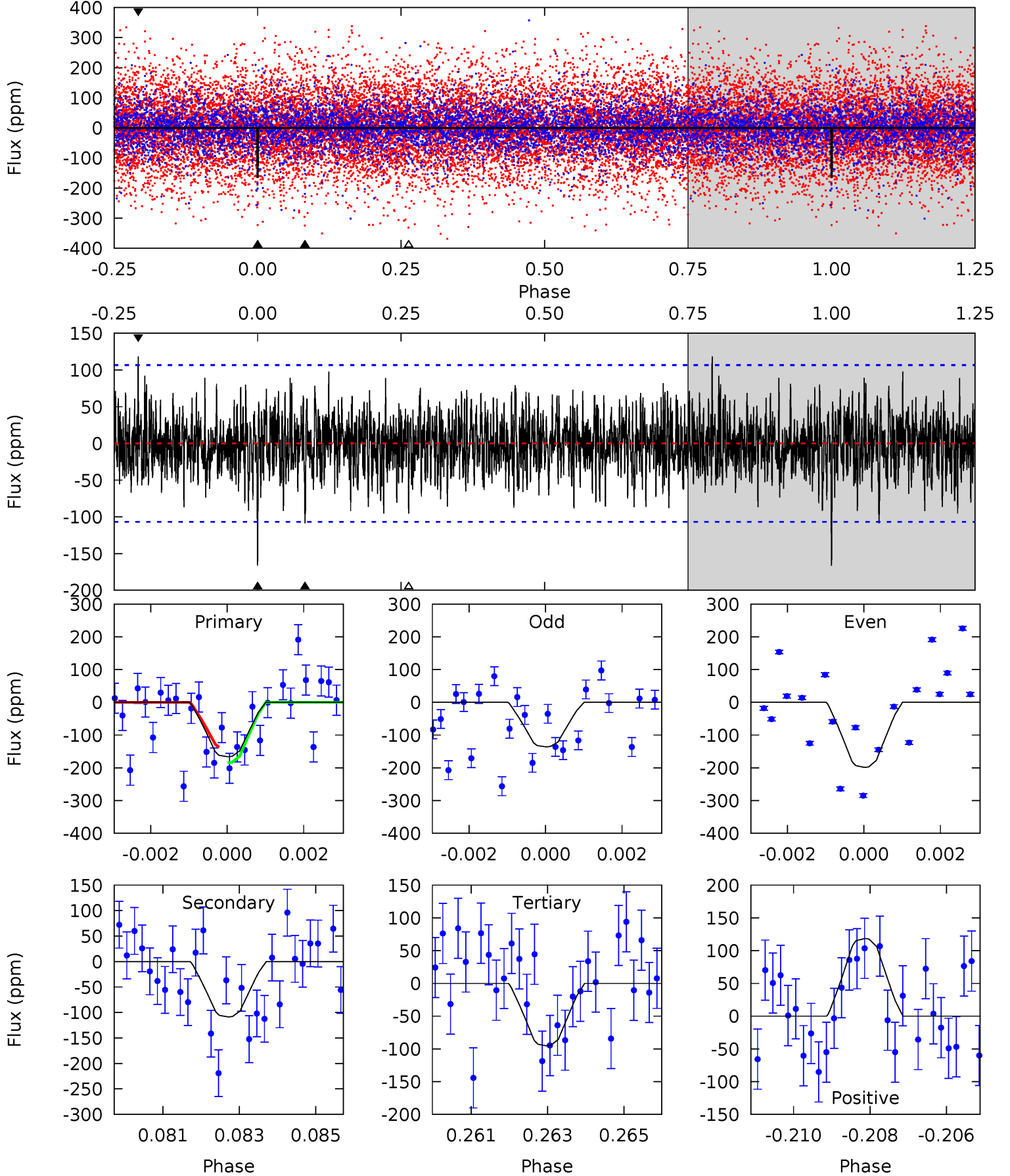


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

006535143-10, P = 32.503334 Days, E = 125.962363 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.32	5.44	4.78	5.93	5.34	3.11	1.52	3.54	2.39	0.66	-0.49	1.57	0.99	0.42	1.20



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 006535143

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6875^{+71}_{-82}	$4.027^{+0.149}_{-0.122}$	$0.020^{+0.150}_{-0.150}$	$1.985^{+0.389}_{-0.389}$	$1.530^{+0.146}_{-0.133}$	$0.276^{+0.202}_{-0.099}$
	+1%/-1%	+4%/-3%	+750%/-750%	+20%/-20%	+10%/-9%	+73%/-36%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 006535143-10 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-109 ± 20	$3.74^{+2.75}_{-2.29}$	1247^{+65}_{-66}	5300^{+3497}_{-1037}	218^{+1260}_{-145}
Alt.	N/A	N/A	N/A	N/A	N/A

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 $A_{obs} \gg 1.0$

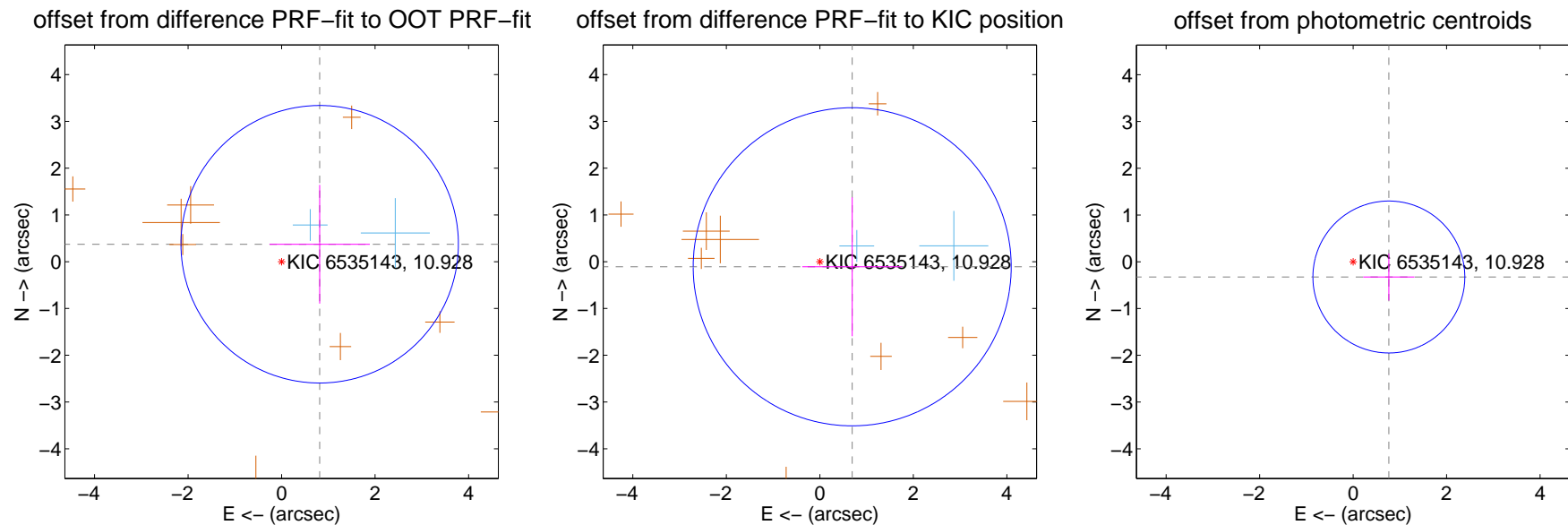
DV Centroid Data

Supplemental centroid analysis for 006535143-10. **Kepler magnitude: 10.93.** Transit SNR 7.88

There are 2 quarters with good PRF difference image offsets

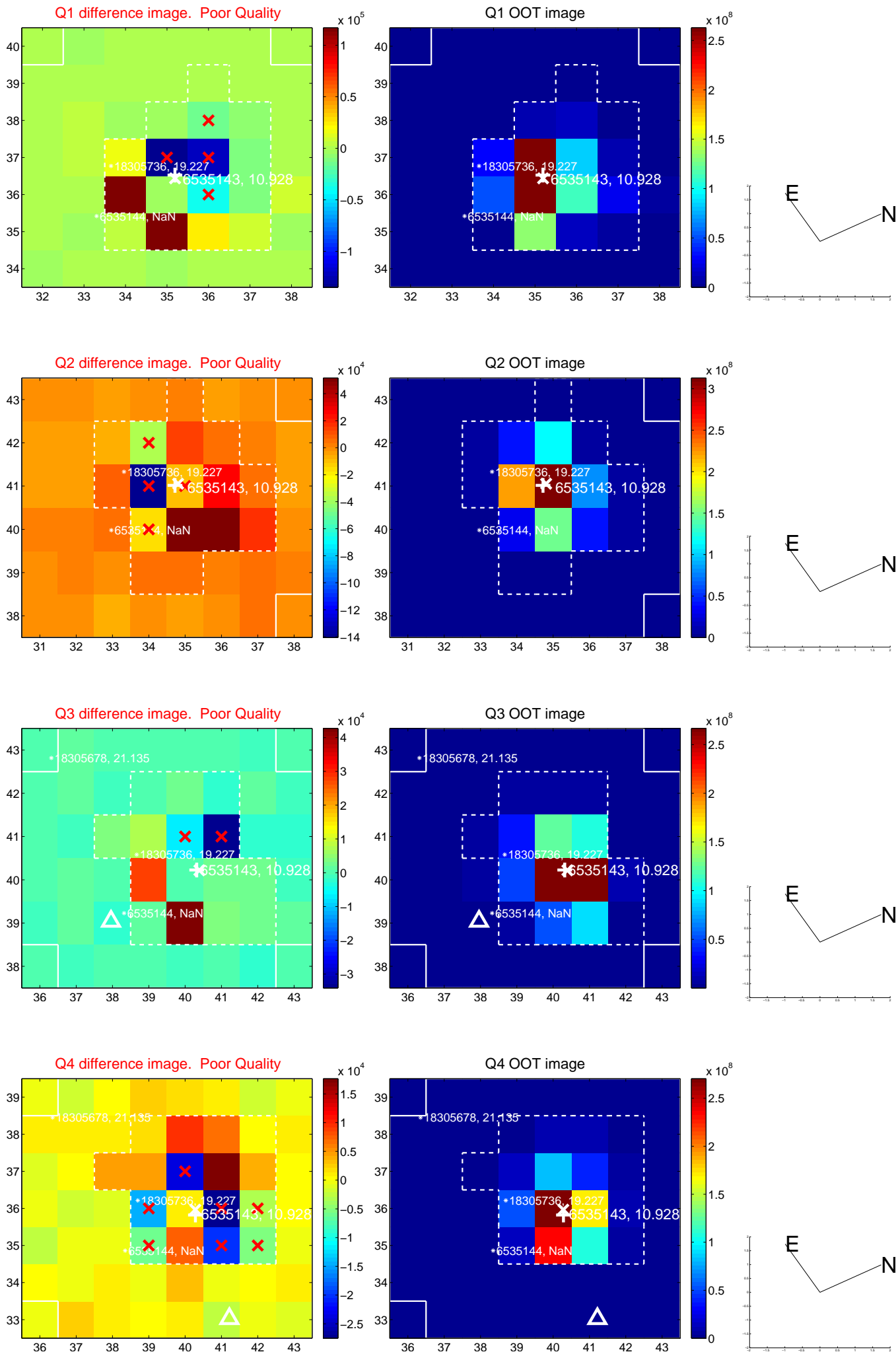
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.896 ± 0.989	0.91	-0.815 ± 1.072	0.373 ± 1.269
PRF-fit source offset from KIC position	0.701 ± 1.134	0.62	-0.692 ± 1.069	-0.108 ± 1.485
photometric centroid source offset	0.83 ± 0.54	1.53	-0.76 ± 0.55	-0.33 ± 0.50

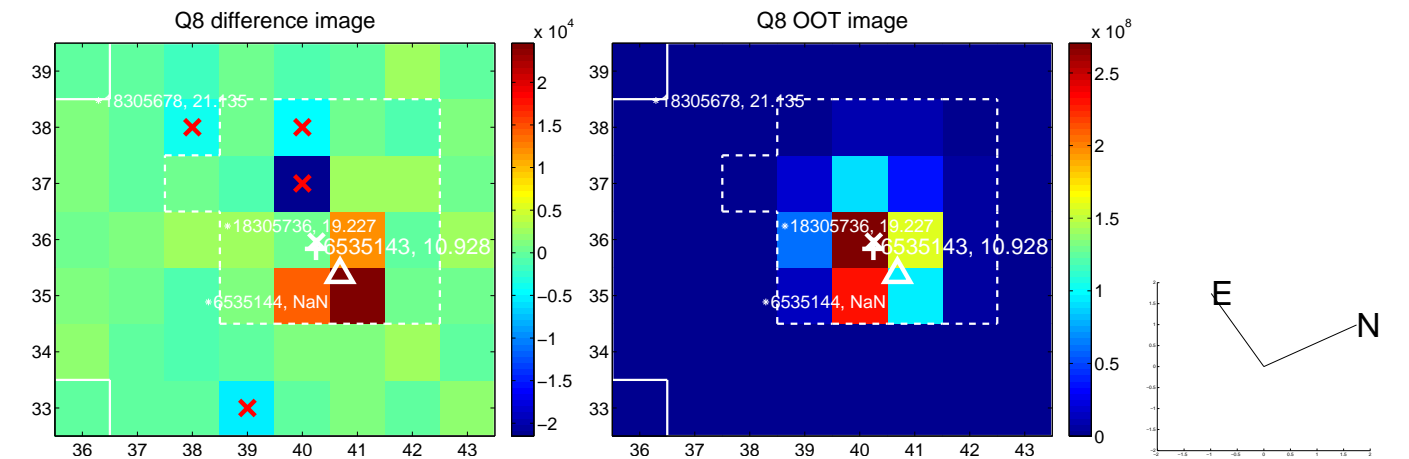
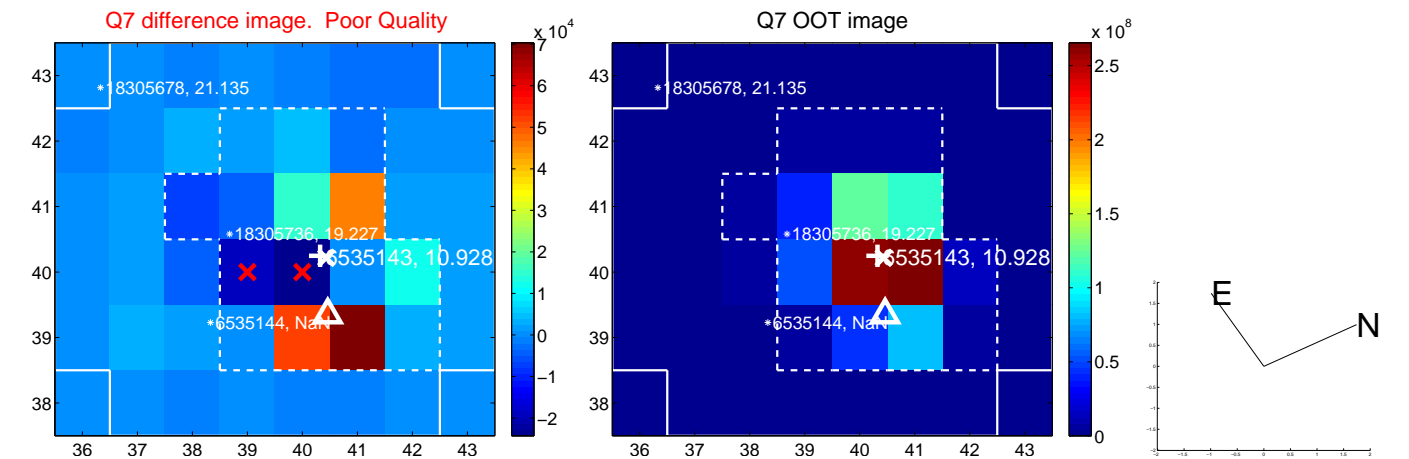
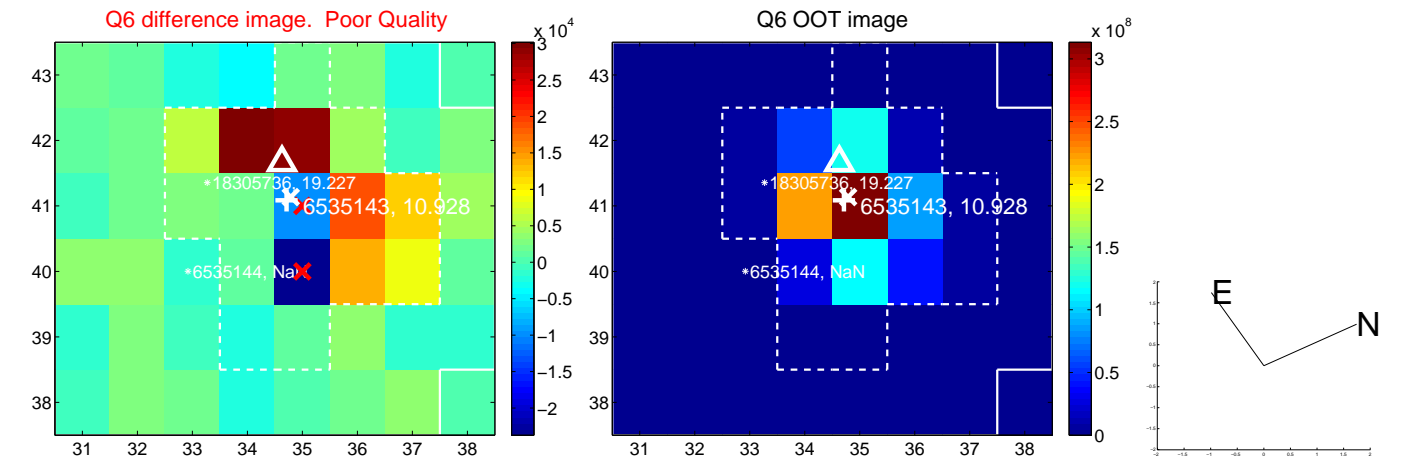
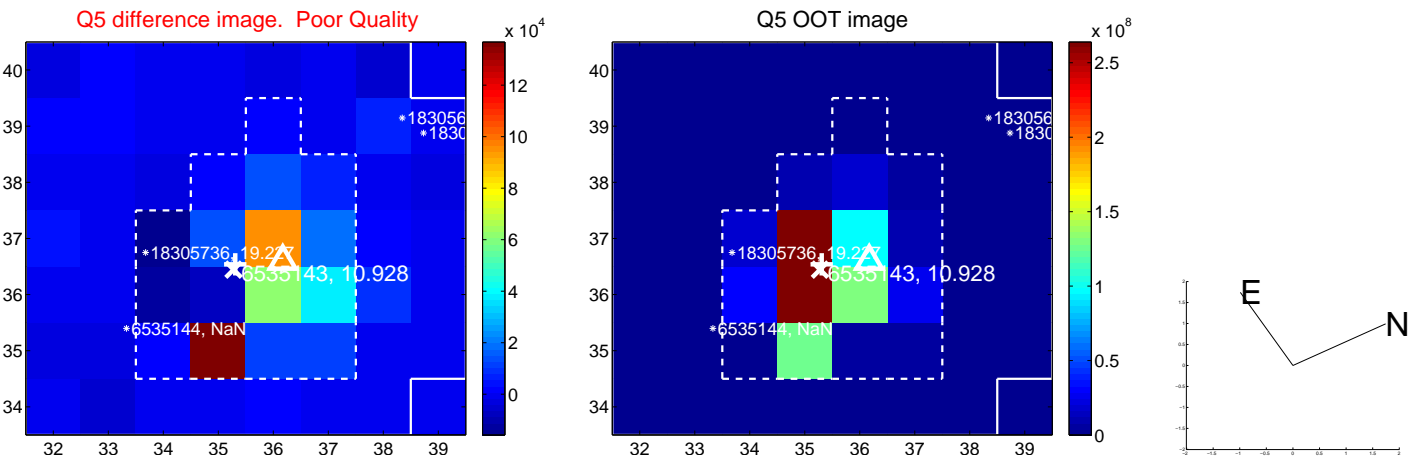


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

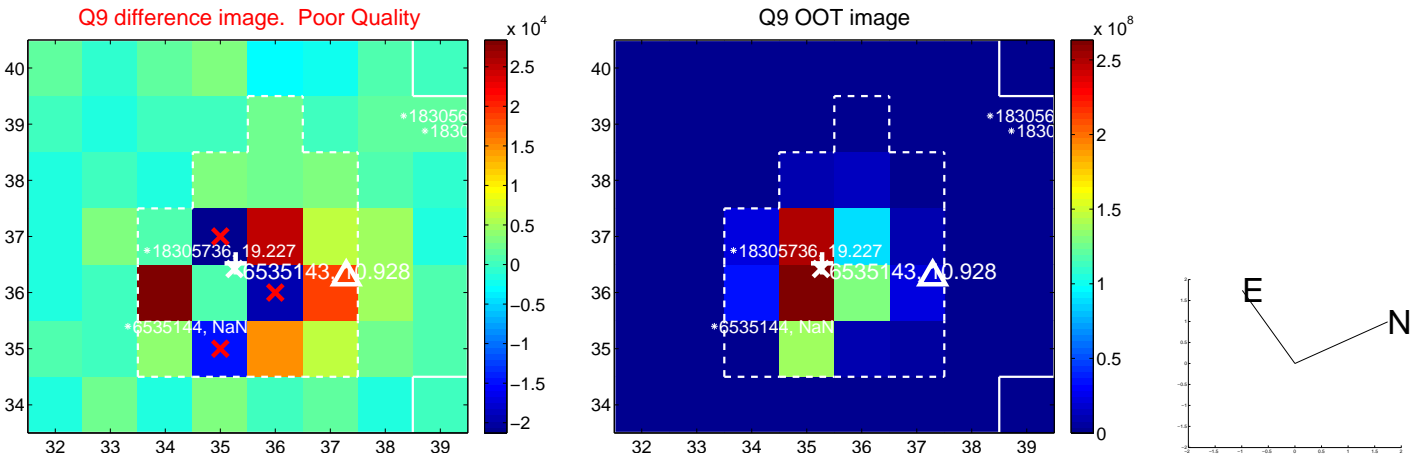
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



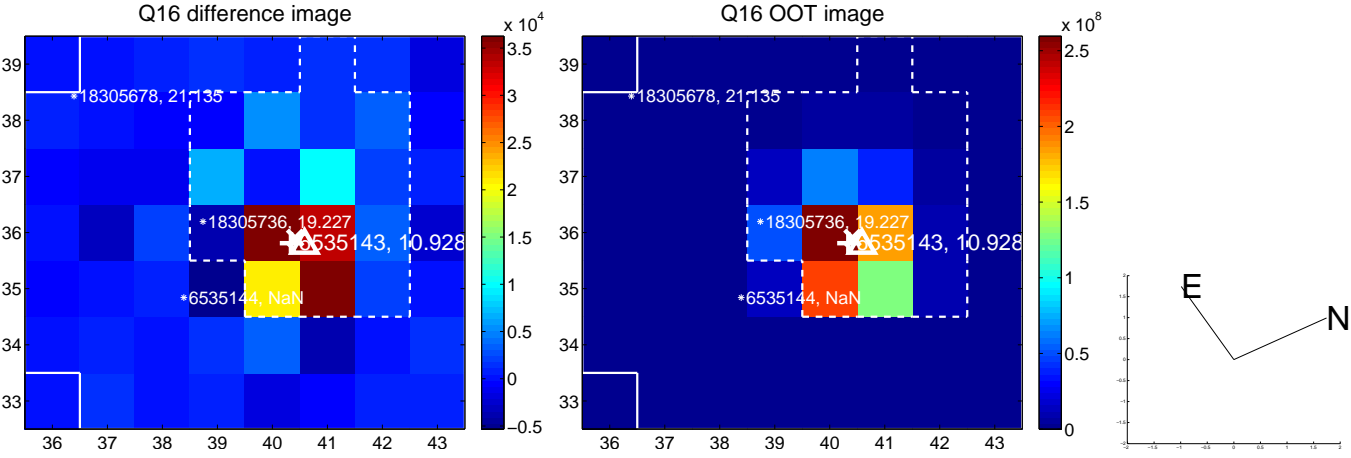
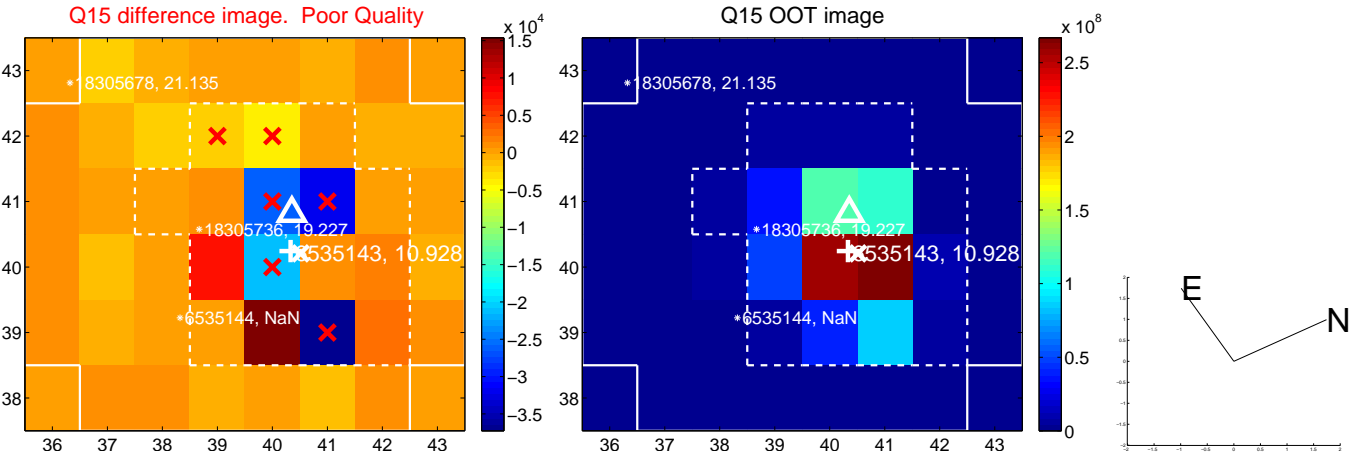
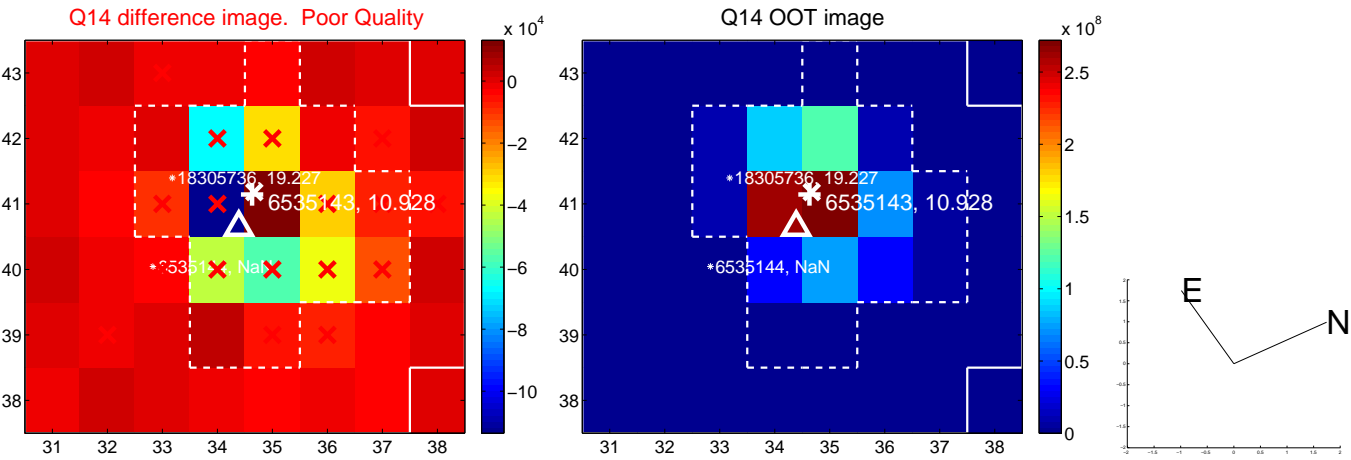
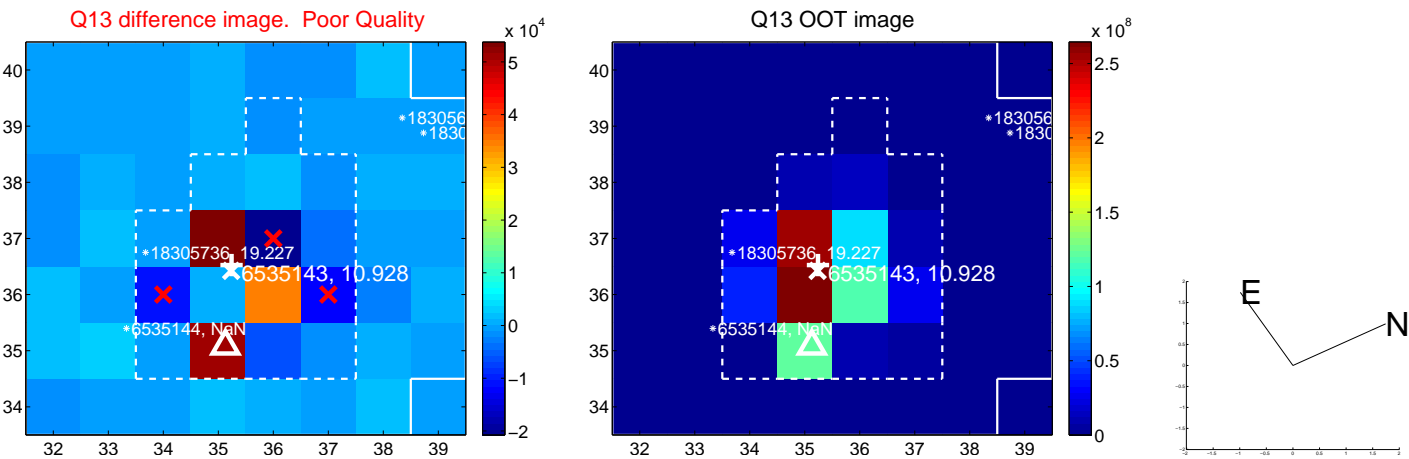
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



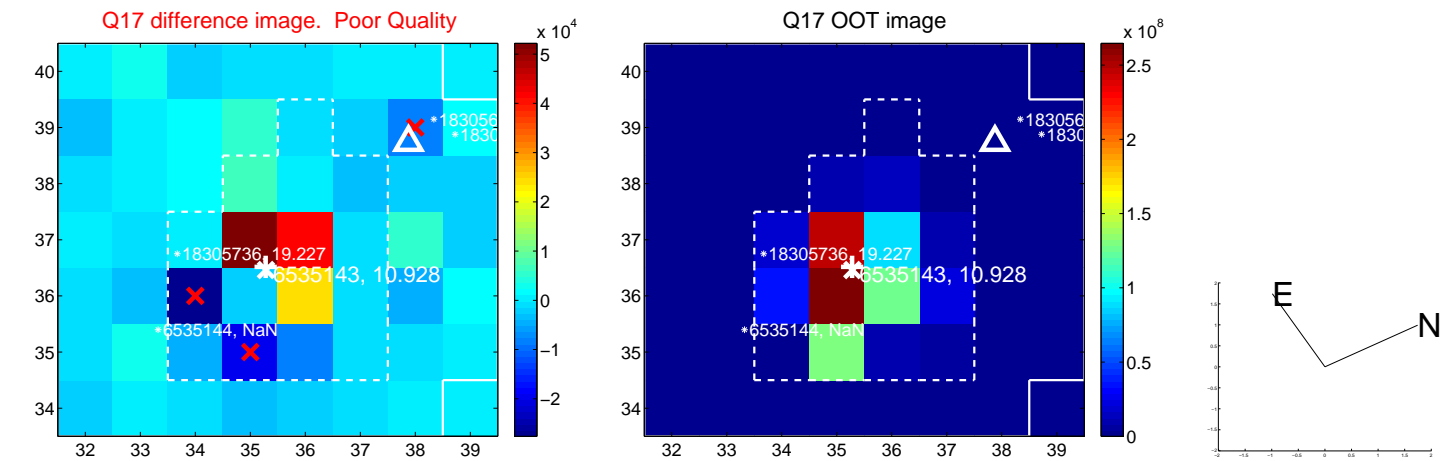
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



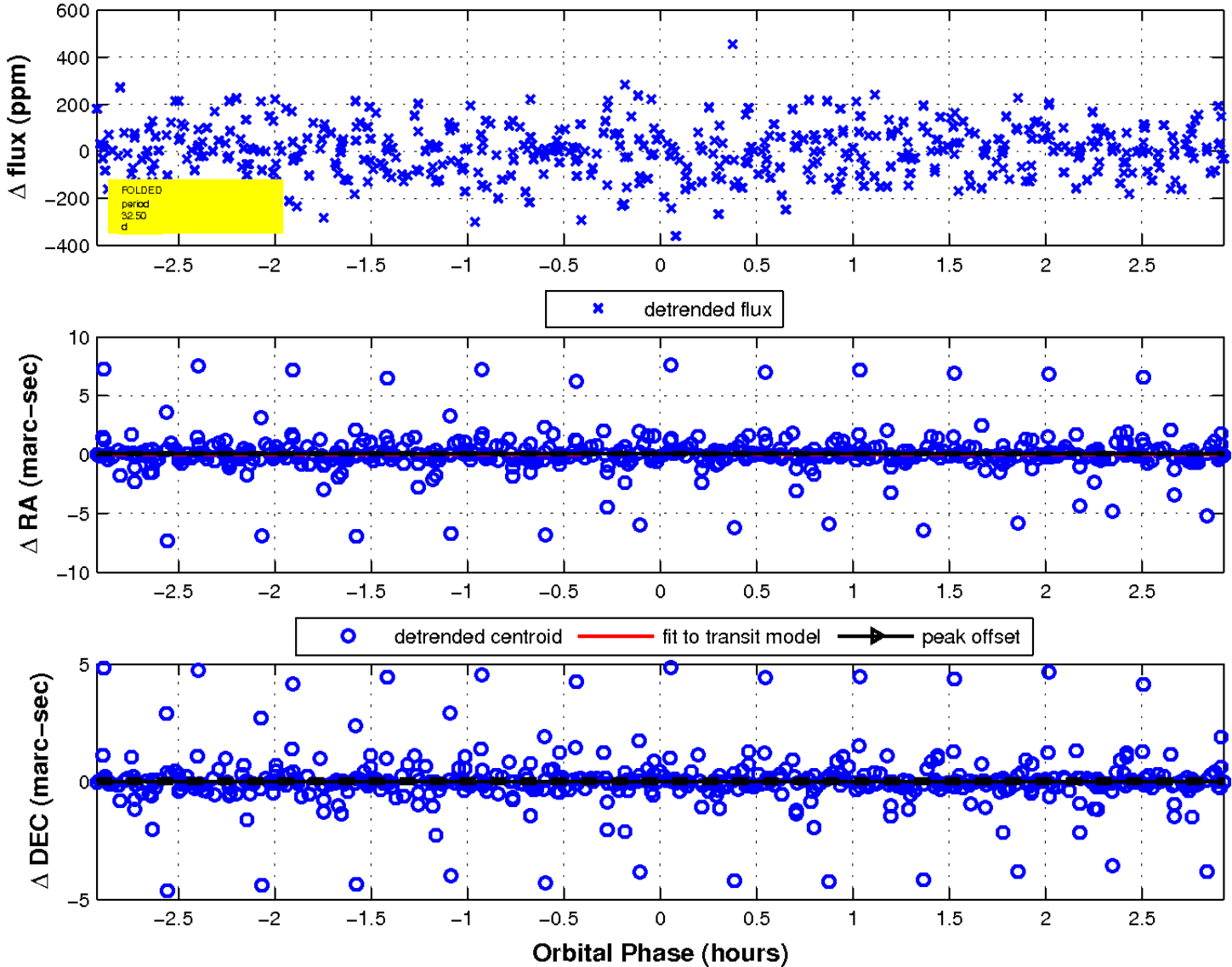
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 10 of 10



UKIRT Image

