

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})
011569443-01	OBS	No	2.344129	132.983449	25.4	15.857	8.1	8.4	1.56	6685	0.92	2961.54
011569443-02	OBS	No	412.469578	146.020096	168.6	8.779	10.2	8.4	1.56	6685	2.21	3.00
011569443-03	OBS	No	72.987289	157.607486	270.7	2.219	9.4	10.5	1.56	6685	3.28	30.23
011569443-04	OBS	No	32.077750	145.382778	159.8	4.570	9.1	9.2	1.56	6685	2.15	90.48
011569443-05	OBS	No	40.558747	133.378934	266.8	1.247	8.6	9.0	1.56	6685	2.59	66.18
011569443-06	OBS	No	74.686409	184.106204	190.2	6.743	8.7	9.4	1.56	6685	2.36	29.32
011569443-07	OBS	No	41.646178	159.524234	203.5	2.180	8.0	8.8	1.56	6685	2.64	63.88
011569443-08	OBS	No	104.678723	217.862789	306.0	1.405	8.2	7.6	1.56	6685	3.19	18.69
011569443-09	OBS	No	44.318975	149.204173	184.9	2.422	7.8	8.1	1.56	6685	2.45	58.80
011569443-10	OBS	No	281.444595	187.802605	249.5	12.521	9.4	11.2	1.56	6685	2.77	5.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011569443-01	OBS	FP	0.00	1	0	0	0	LPP_DV
011569443-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
011569443-03	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
011569443-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011569443-05	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_FEW_DIFFS—HALO_GHOST
011569443-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
011569443-07	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011569443-08	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_MEAS
011569443-09	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011569443-10	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS—HALO_GHOST

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

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

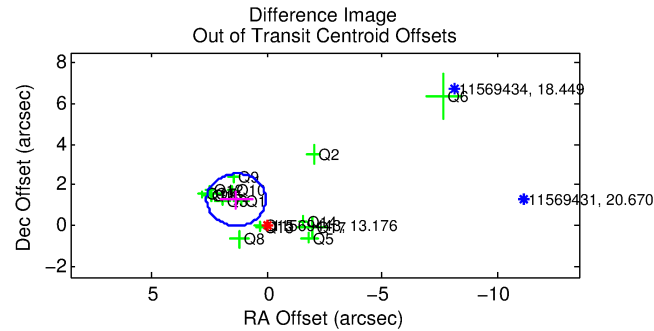
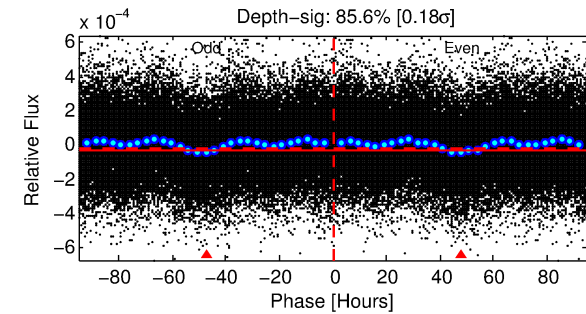
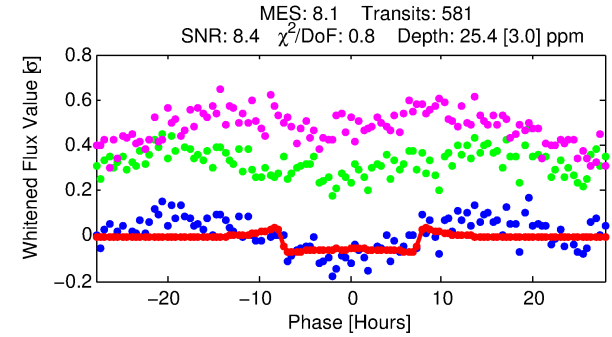
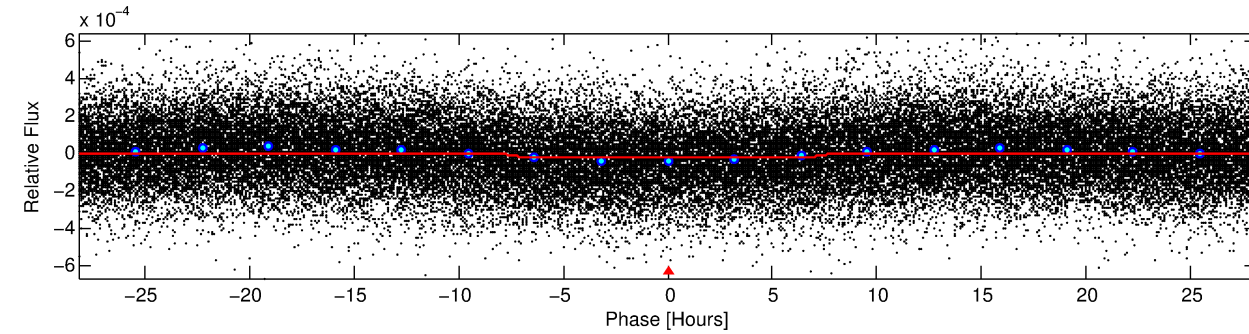
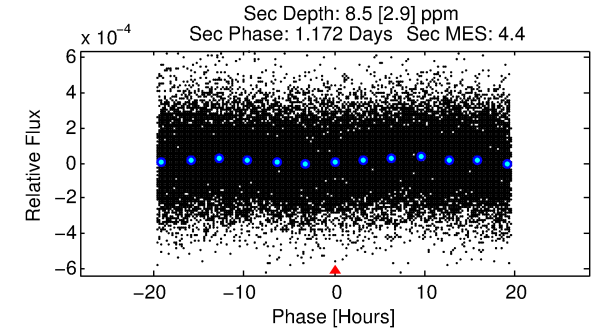
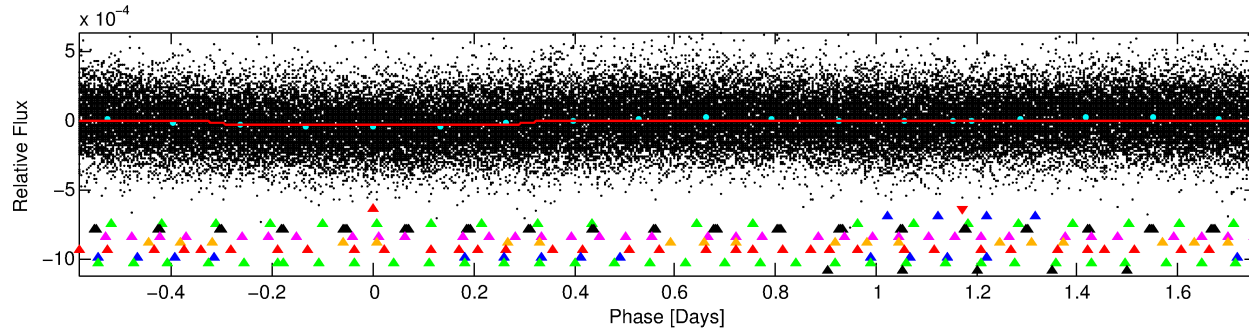
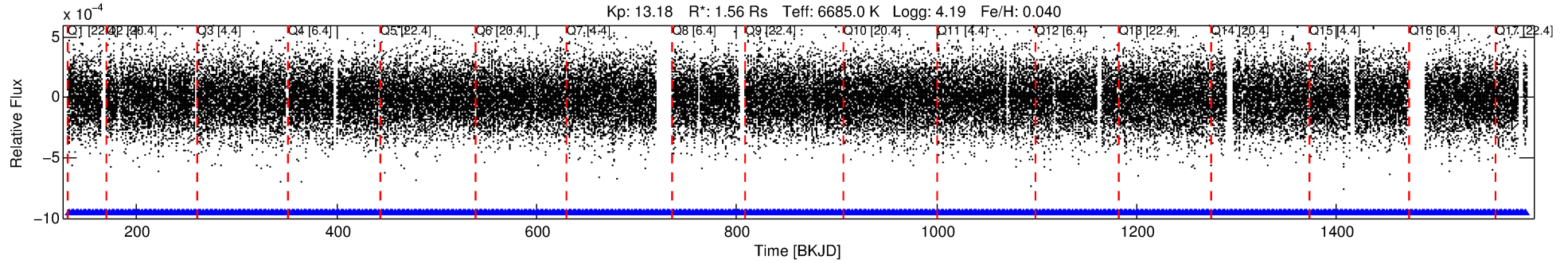
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011569443-01

No Significant Match Found

DV One-Page Summary

KIC: 11569443 Candidate: 1 of 10 Period: 2.344 d



DV Fit Results:

Period = 2.34413 [0.00003] d
Epoch = 132.9834 [0.0080] BKJD
Rp/R* = 0.0054 [0.0007]
a/R* = 1.06 [0.08]
b = 0.91 [0.13]
Seff = 2961.54 [1224.92]
Teff = 1881 [195] K
Rp = 0.92 [0.32] Re
a = 0.0383 [0.0101] AU
Ag = 8.01 [4.59] [1.53σ]
Teffp = 4893 [566] K [5.03σ]

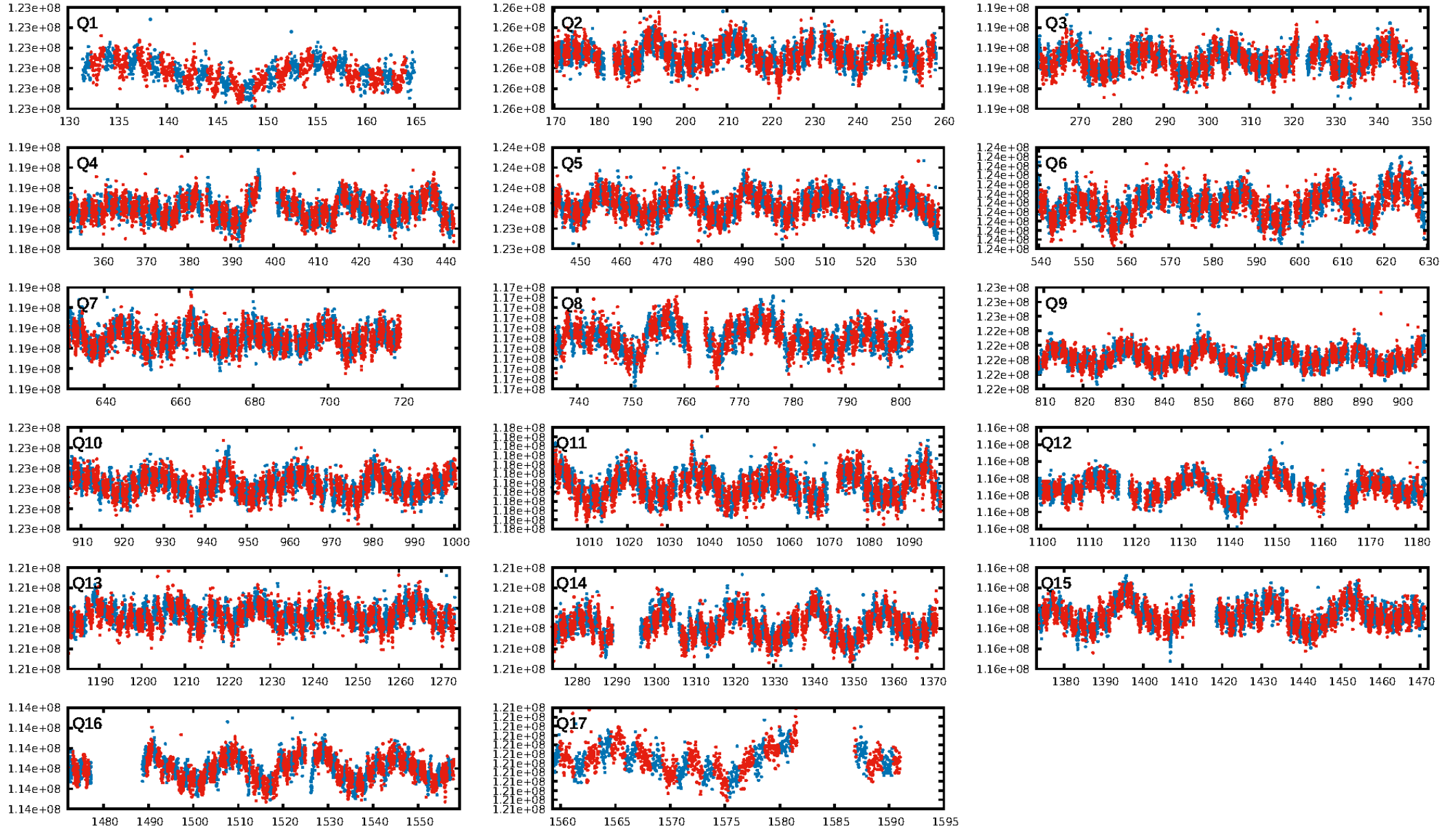
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [43.24σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [555/555]
GhostDiagnostic-chr: 1.442
Centroid-sig: 29.5%
Centroid-so: 0.777 arcsec [1.22σ]
OotOffset-rm: 1.846 arcsec [4.34σ]
KicOffset-rm: 1.796 arcsec [4.09σ]
OotOffset-st: 4/4/3/5 [16]
KicOffset-st: 4/4/3/5 [16]
DiffImageQuality-fgm: 0.75 [12/16]
DiffImageOverlap-fno: 1.00 [17/17]

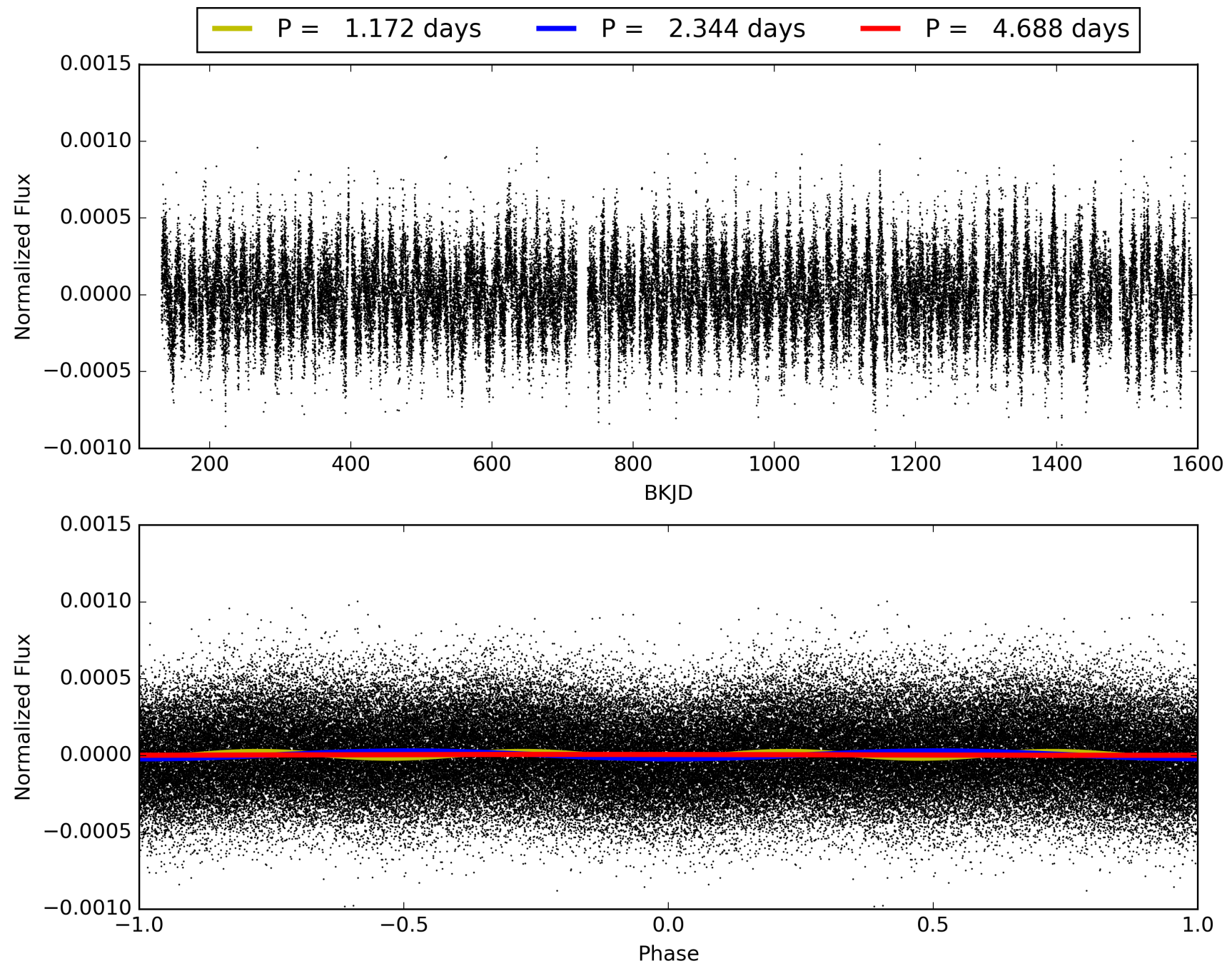
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:25:21 Z

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

TCE 011569443-01, PDC Light Curves

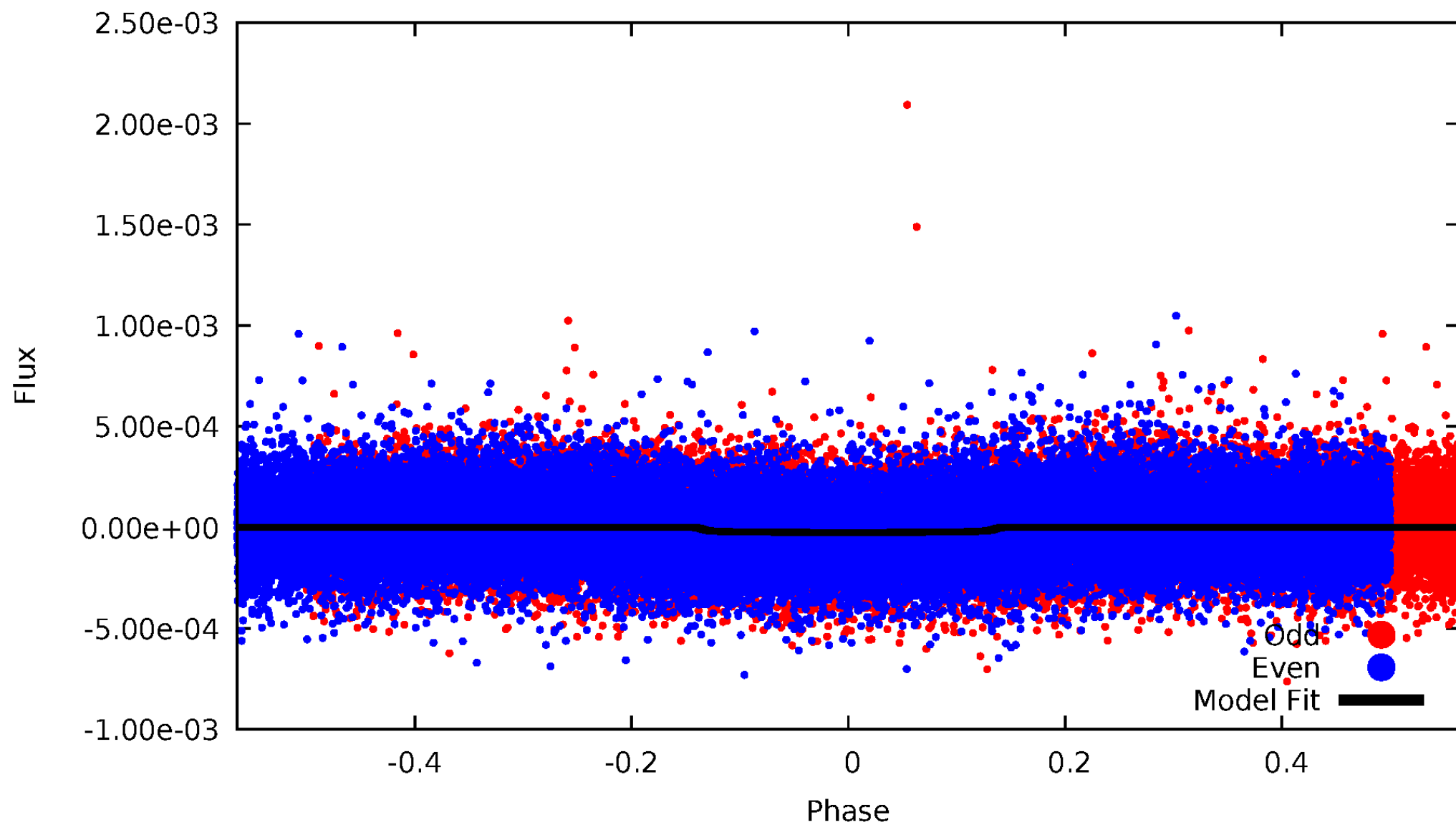


TCE 011569443-01



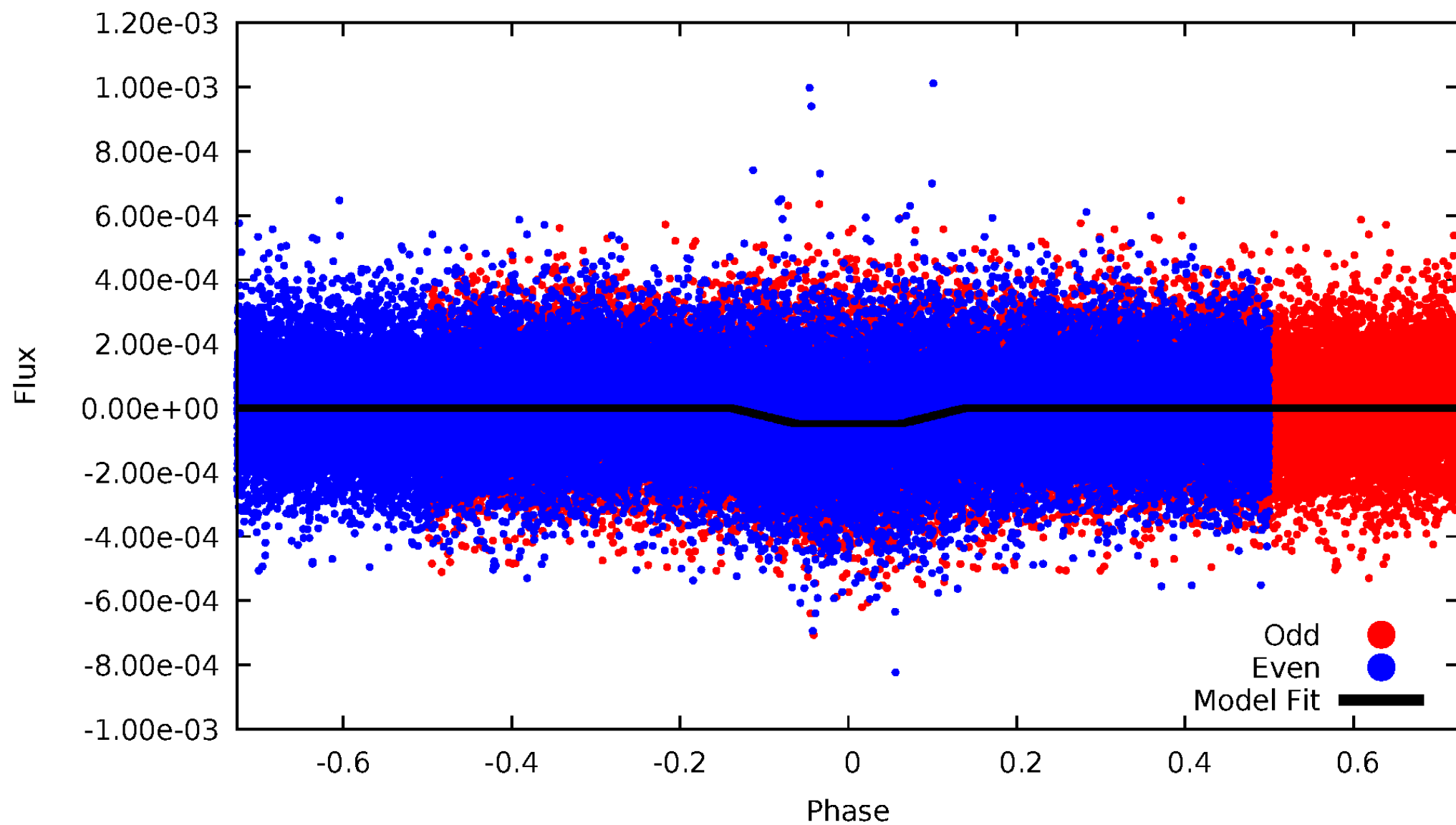
DV Odd/Even

TCE 011569443-01



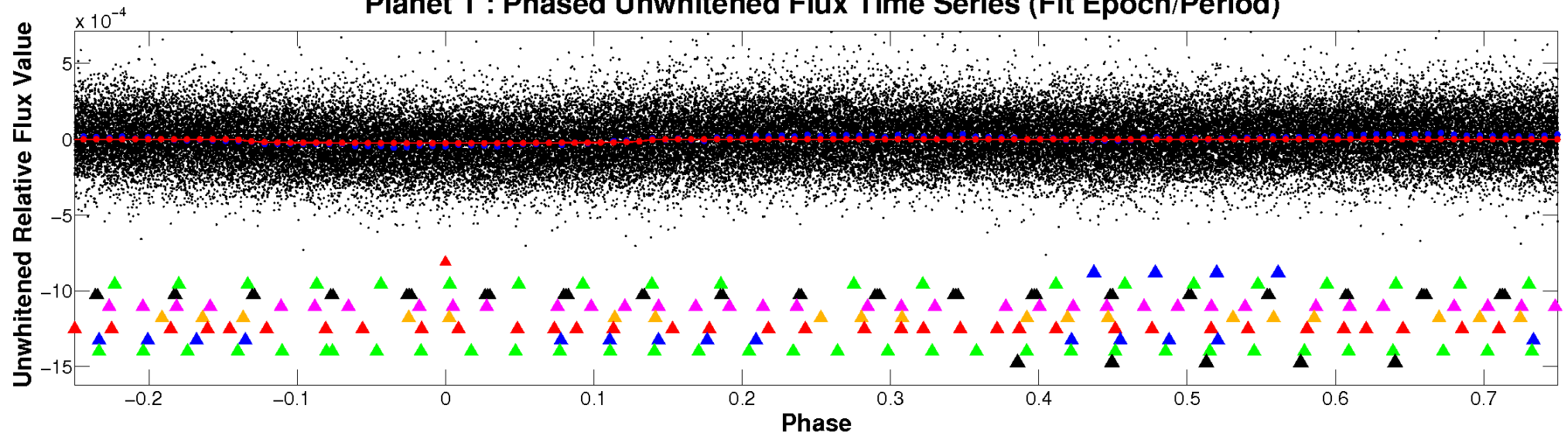
ALT Odd/Even

TCE 011569443-01

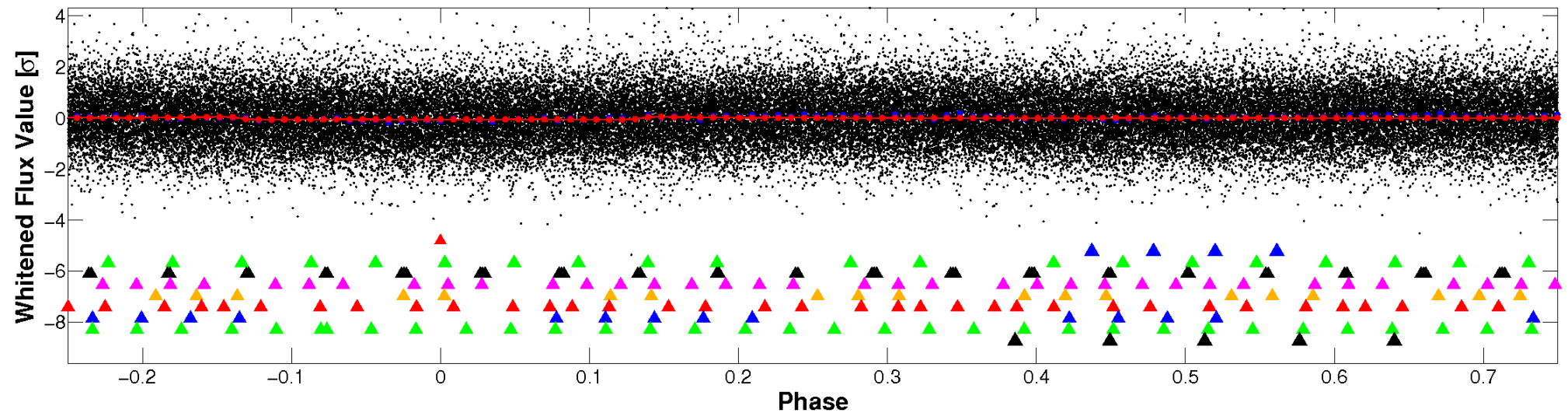


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

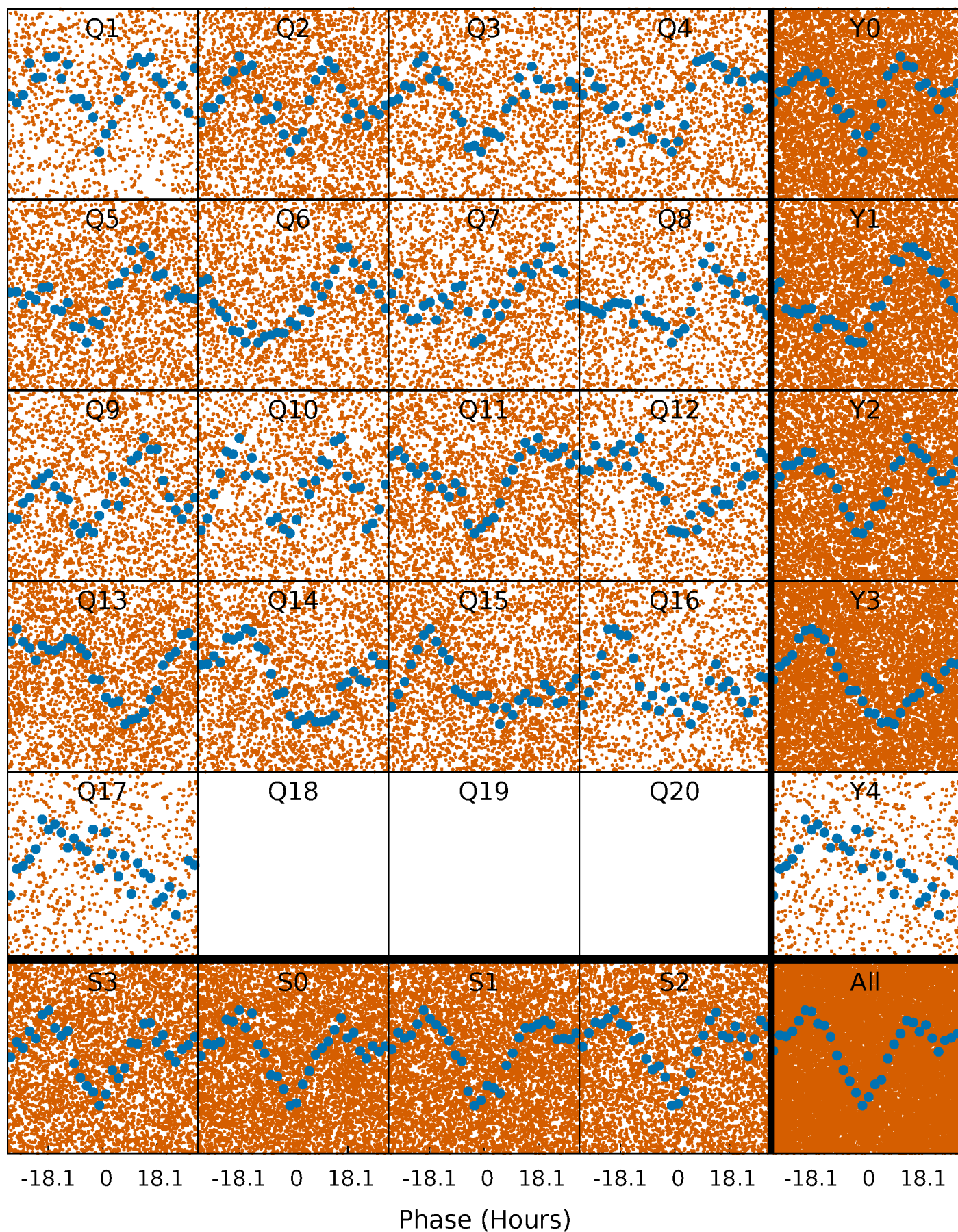


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



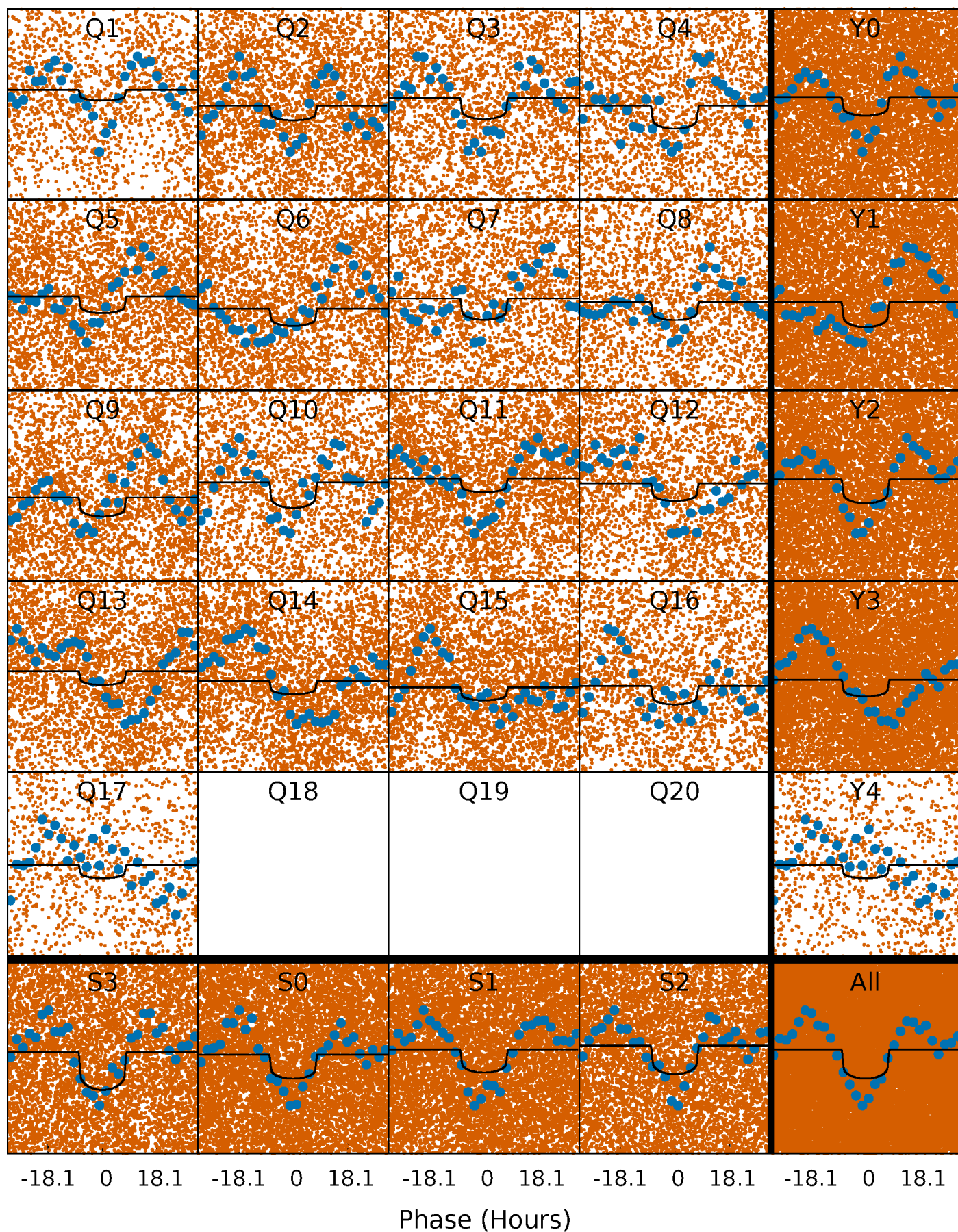
PDC Quarter-Phased Transit Curves

TCE 011569443-01 P= 2.344129 Days $T_0=132.983449$ (BKJD)



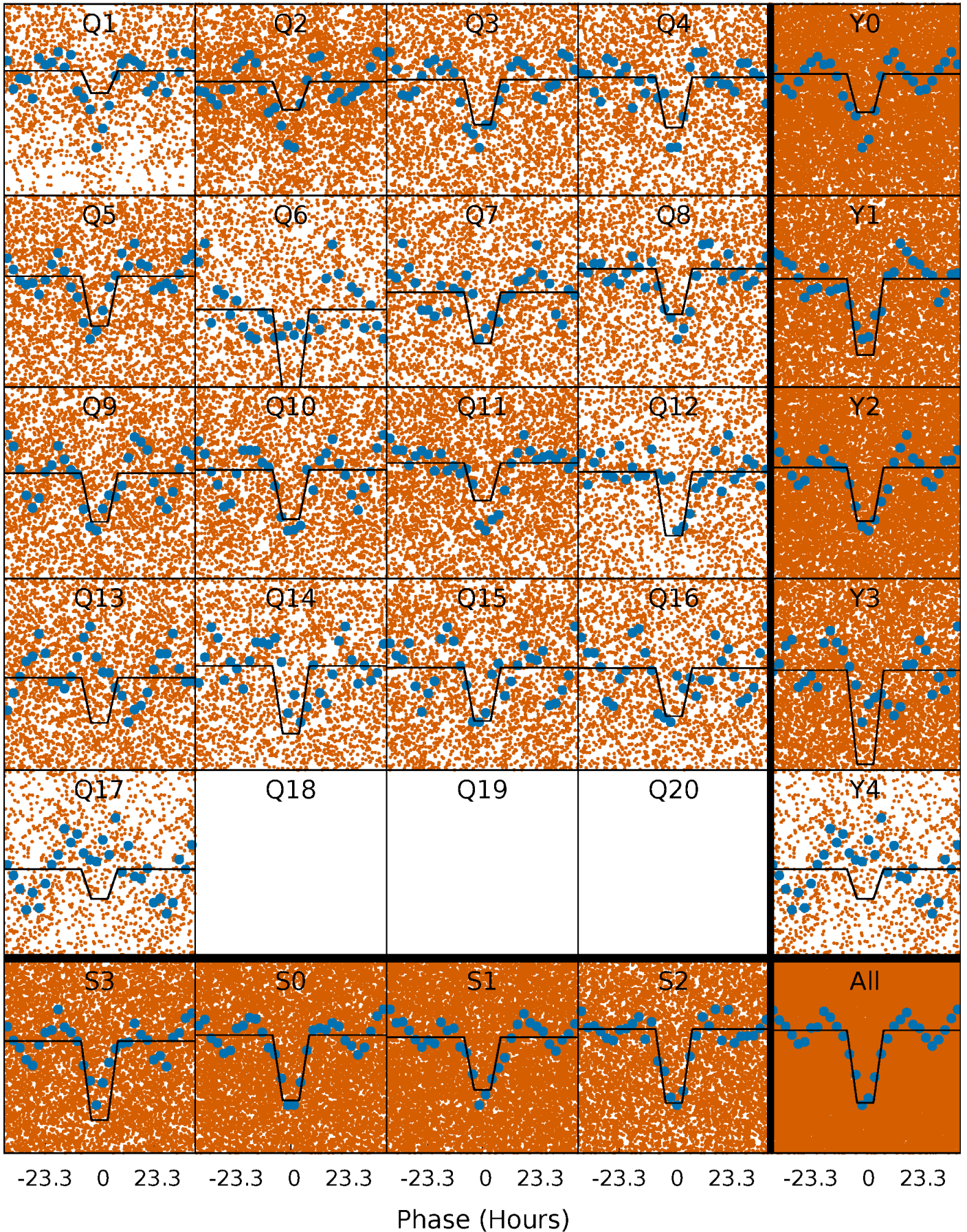
DV Quarter-Phased Transit Curves

TCE 011569443-01 P= 2.344129 Days $T_0=132.983449$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

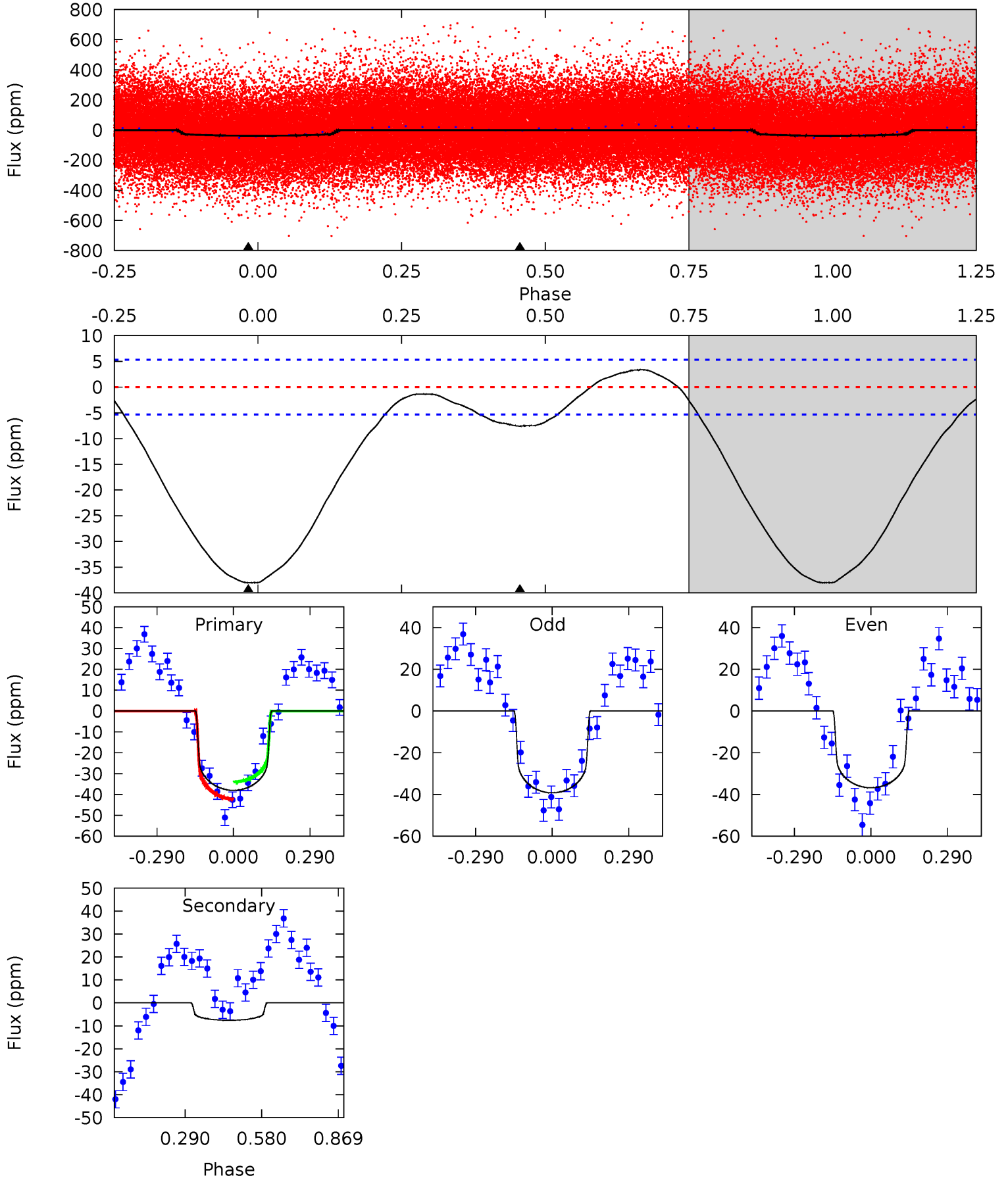
TCE 011569443-01 P= 2.343750 Days $T_0=133.012831$ (BKJD)



DV Model-Shift Uniqueness Test

011569443-01, P = 2.344129 Days, E = 130.639320 Days

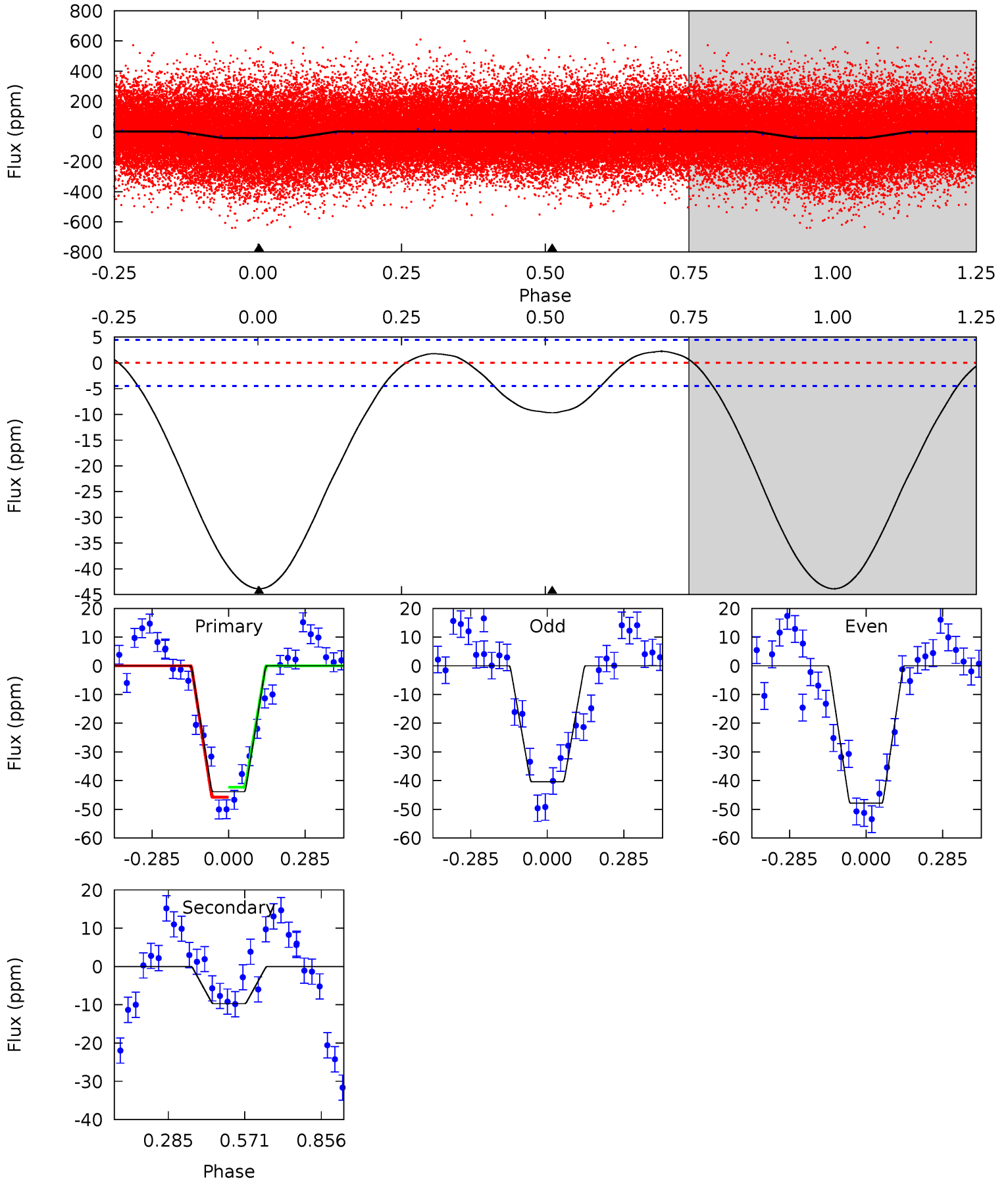
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.0	6.20	0	0	4.34	1.06	2.58	31.0	31.0	6.20	6.20	0.99	1.04	0.08	3.41



Alt Model-Shift Uniqueness Test

011569443-01, P = 2.343750 Days, E = 130.669081 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
42.4	9.37	0	0	4.34	1.07	1.24	42.4	42.4	9.37	9.37	3.61	1.06	0.05	1.67



Stellar Parameters For KIC 011569443

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6685^{+187}_{-281}	$4.187^{+0.136}_{-0.204}$	$0.040^{+0.250}_{-0.350}$	$1.557^{+0.494}_{-0.329}$	$1.358^{+0.214}_{-0.235}$	$0.507^{+0.389}_{-0.251}$
	+3%/-4%	+3%/-5%	+625%/-875%	+32%/-21%	+16%/-17%	+77%/-50%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 011569443-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-8 ± 1	$0.94^{+0.19}_{-0.17}$	2645^{+228}_{-187}	4777^{+372}_{-313}	$6.790^{+3.104}_{-2.305}$
Alt.	-10 ± 1	$1.21^{+0.25}_{-0.19}$	2643^{+213}_{-172}	4542^{+244}_{-242}	$5.292^{+2.064}_{-1.636}$

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

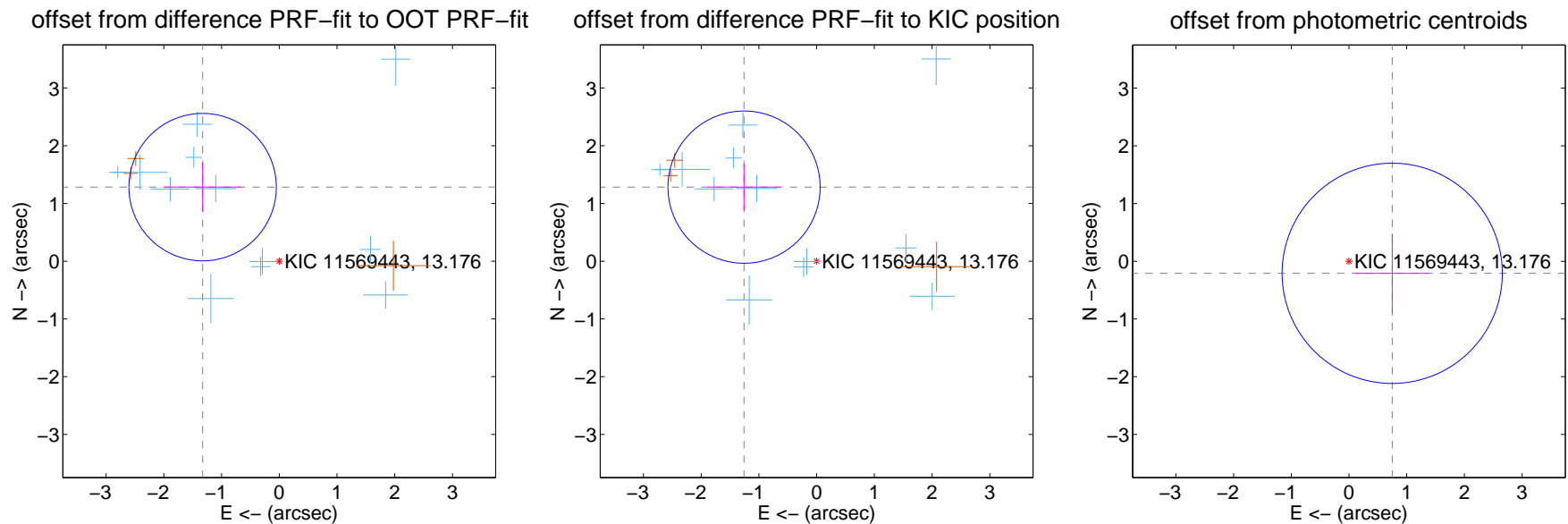
DV Centroid Data

Supplemental centroid analysis for 011569443-01. Kepler magnitude: 13.18. Transit SNR 8.44

There are 12 quarters with good PRF difference image offsets

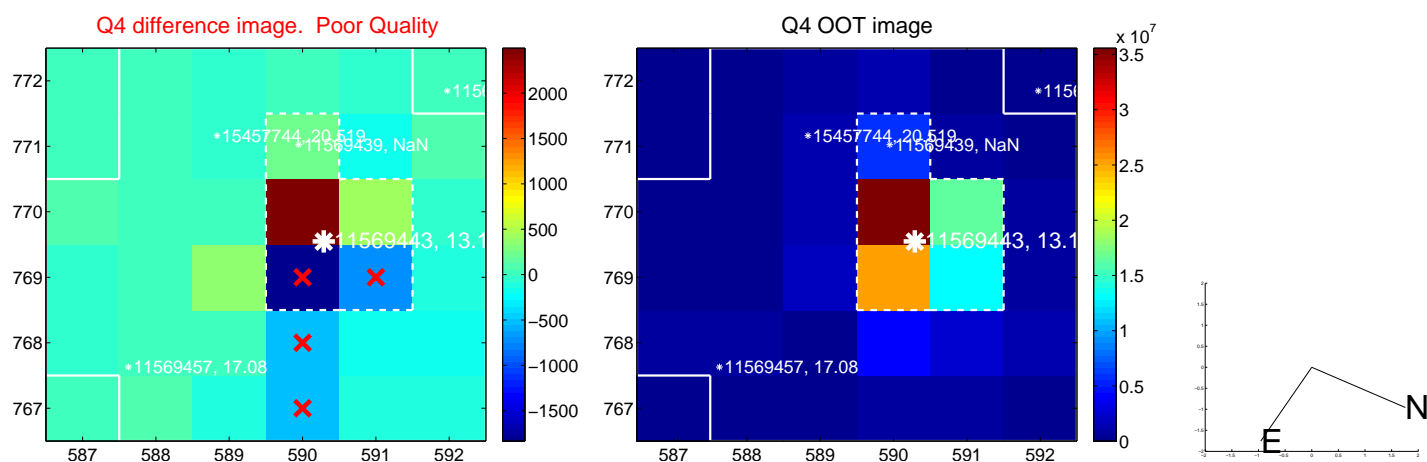
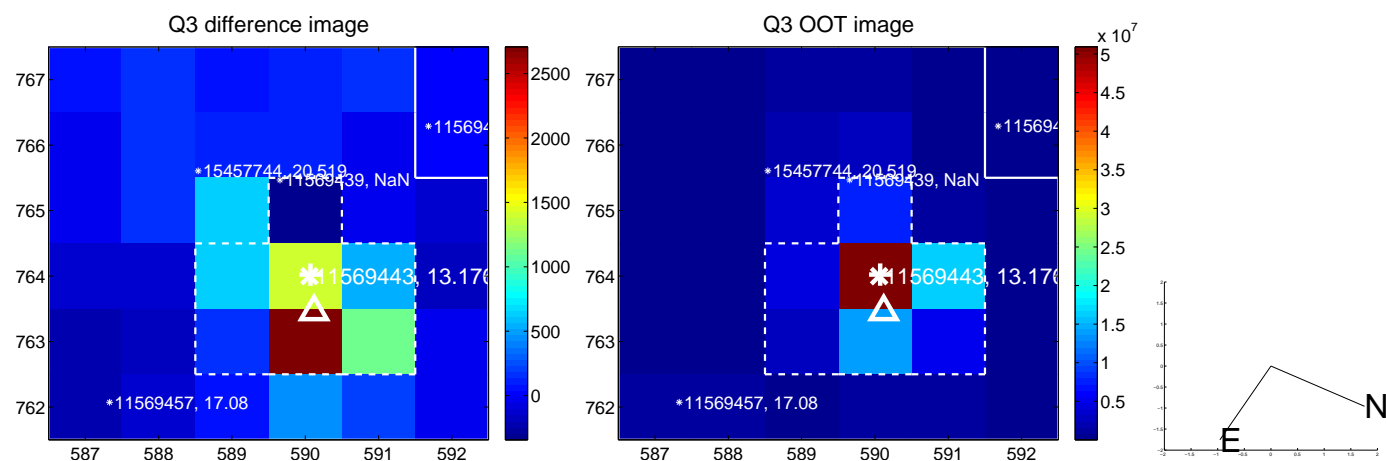
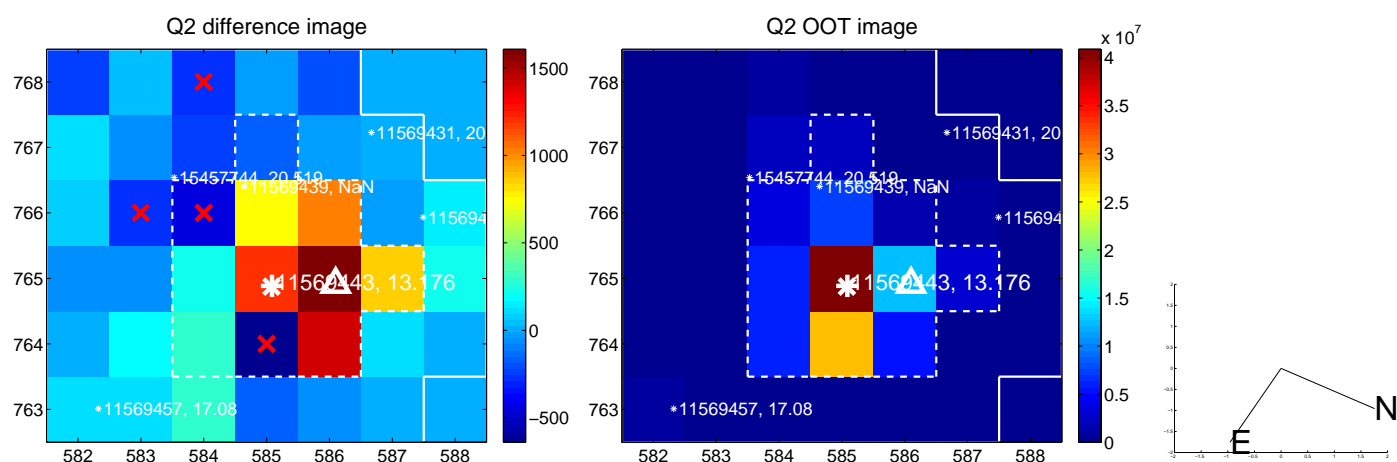
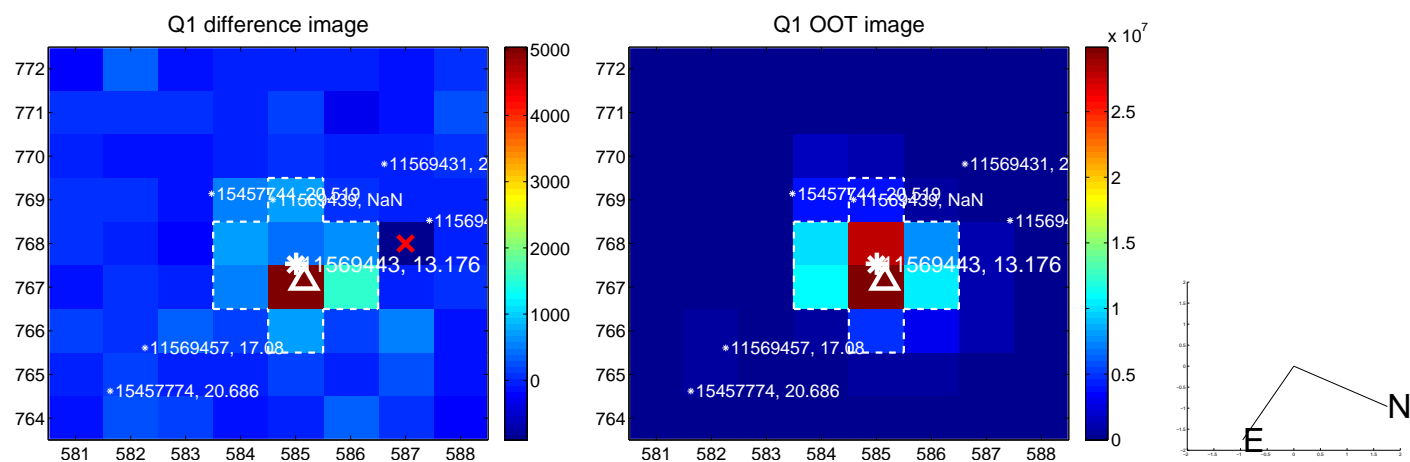
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.846 ± 0.425	4.34	1.328 ± 0.674	1.282 ± 0.426
PRF-fit source offset from KIC position	1.796 ± 0.439	4.09	1.257 ± 0.627	1.282 ± 0.402
photometric centroid source offset	0.78 ± 0.64	1.22	-0.75 ± 0.63	-0.21 ± 0.68

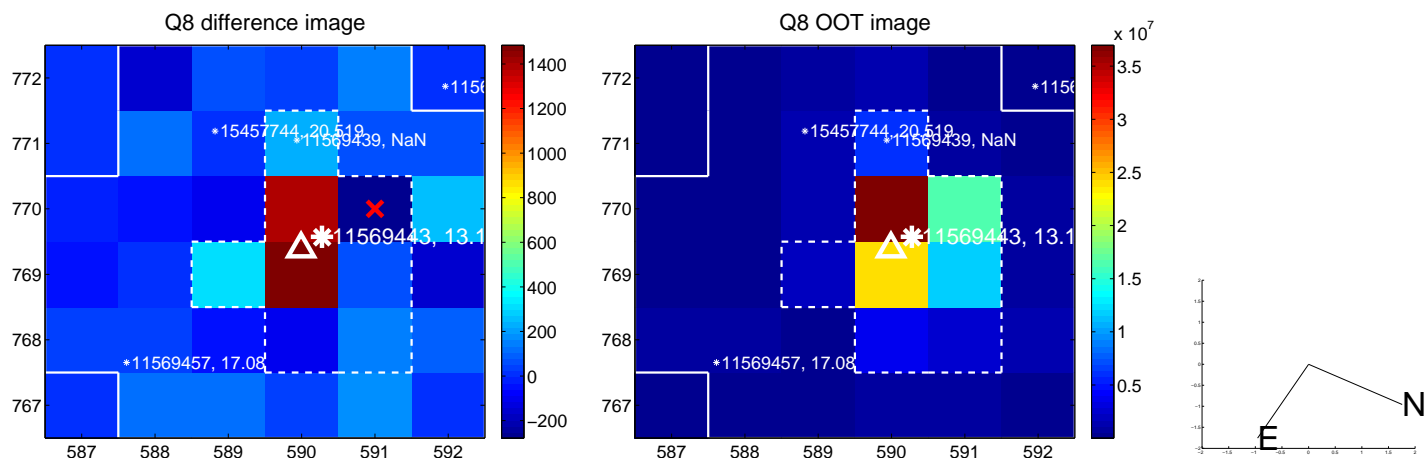
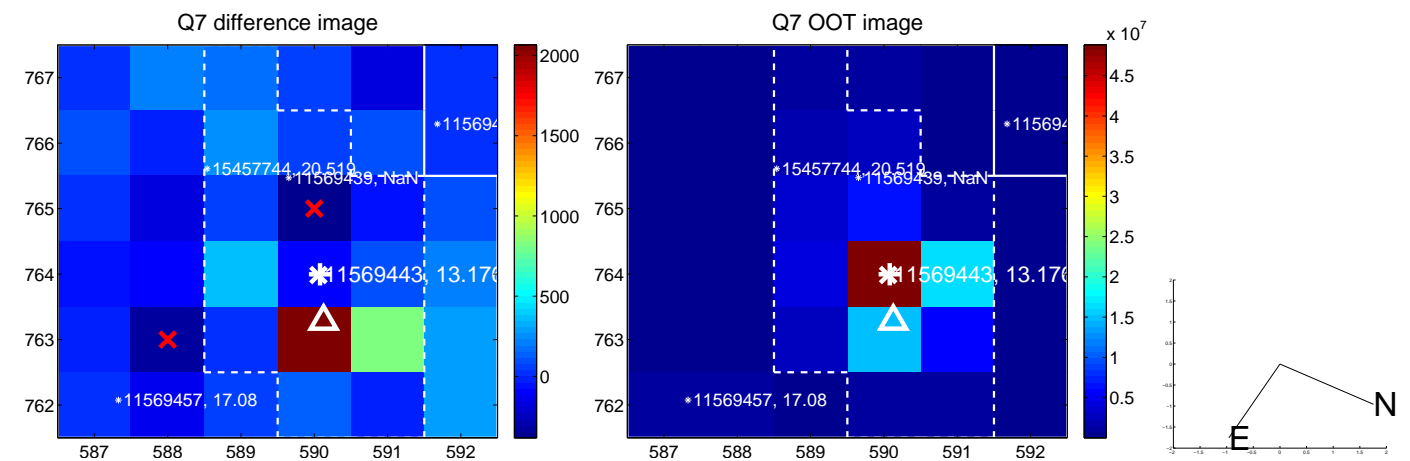
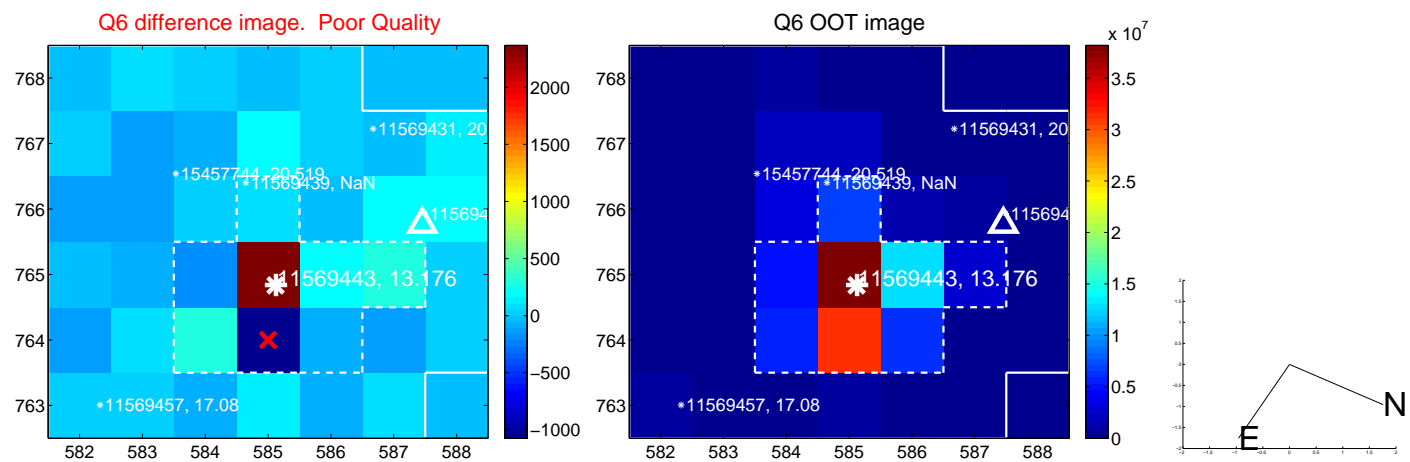
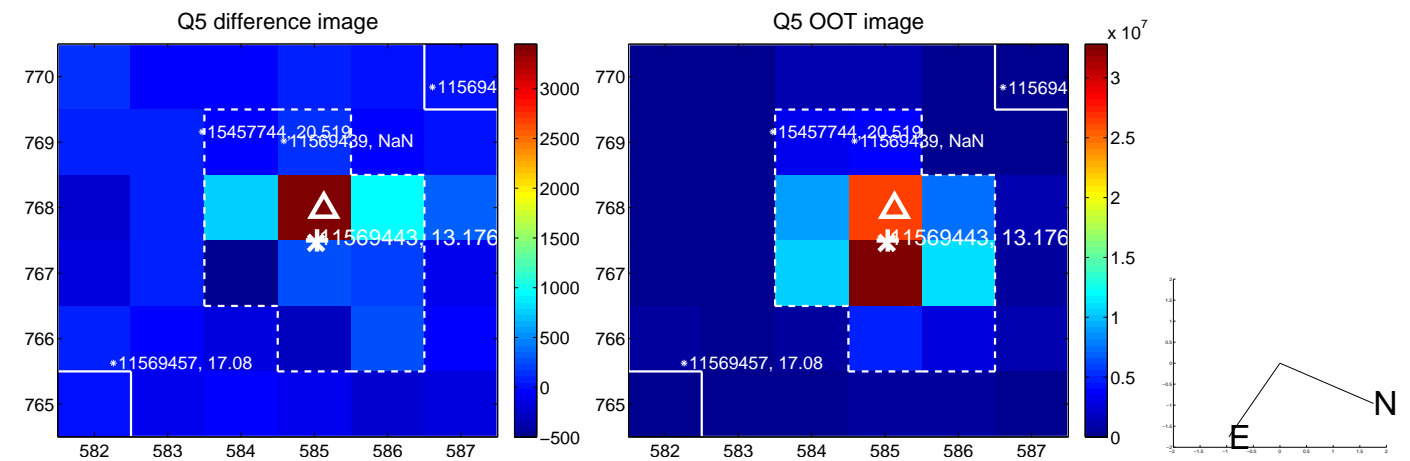


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

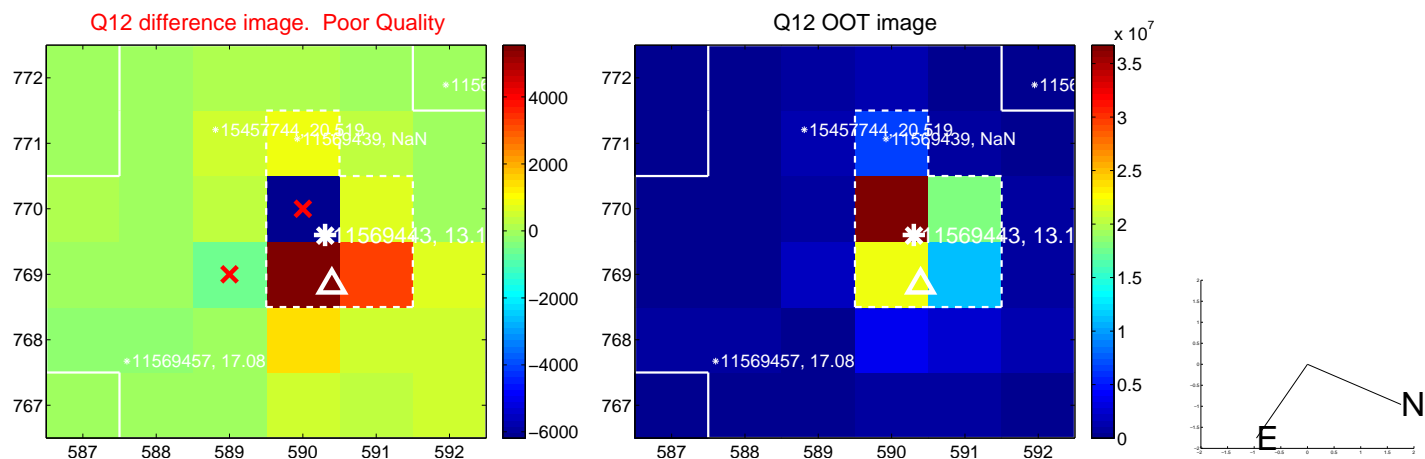
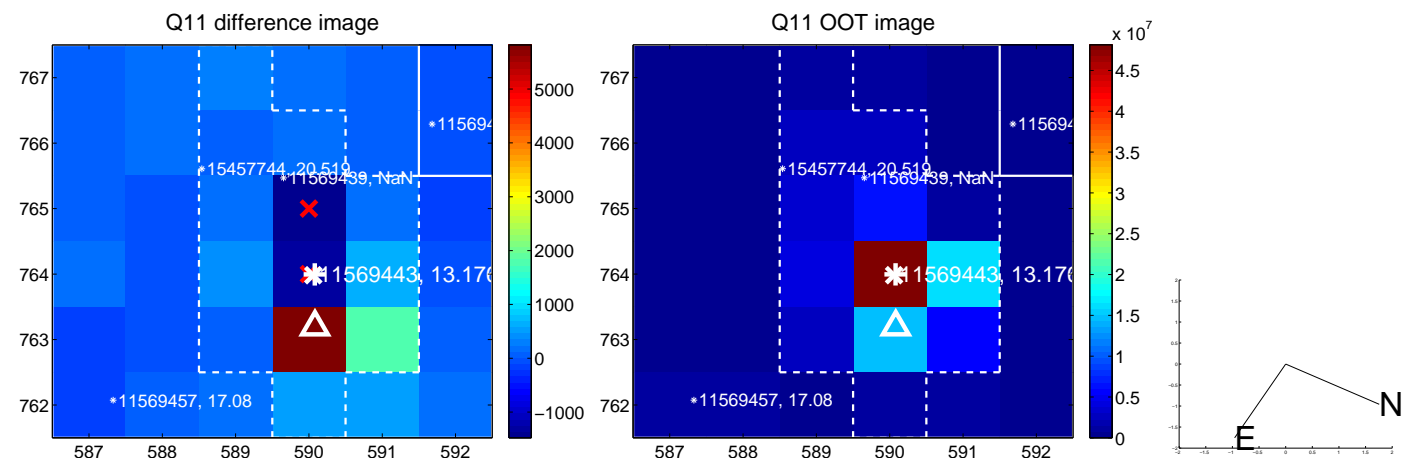
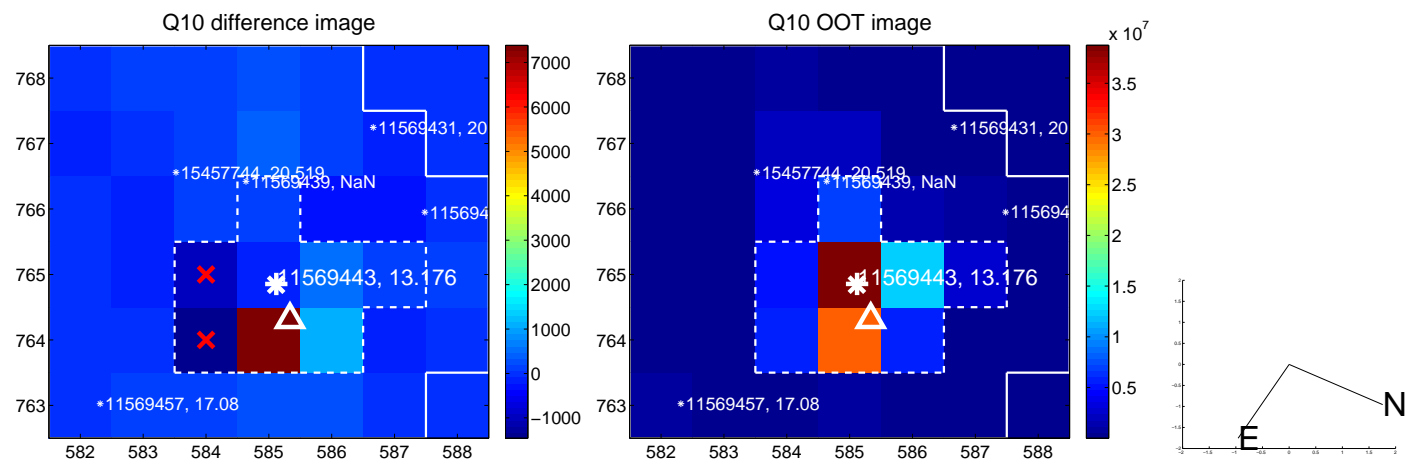
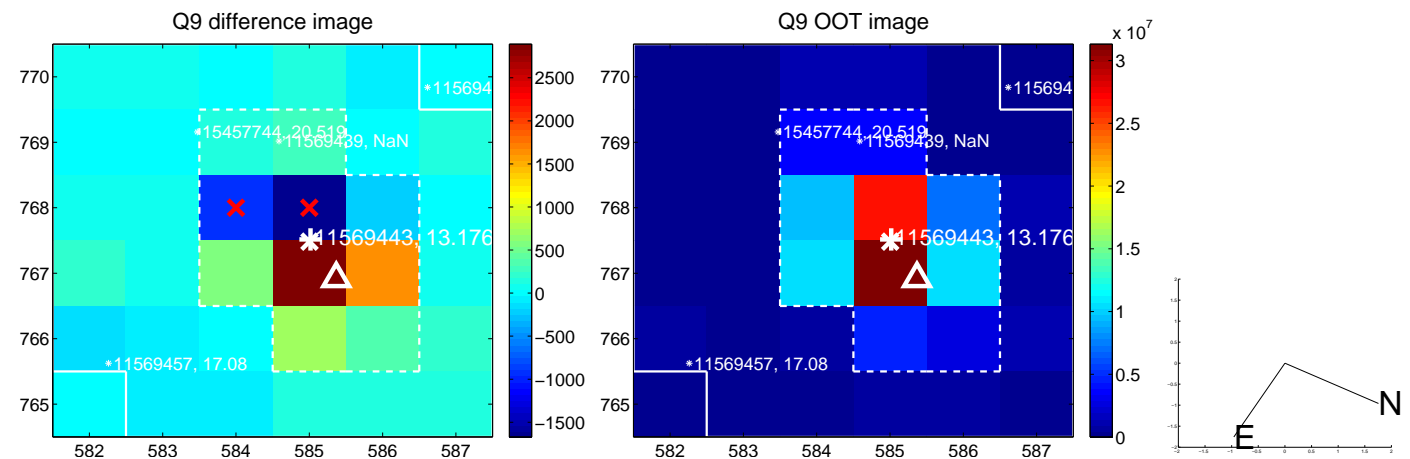
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



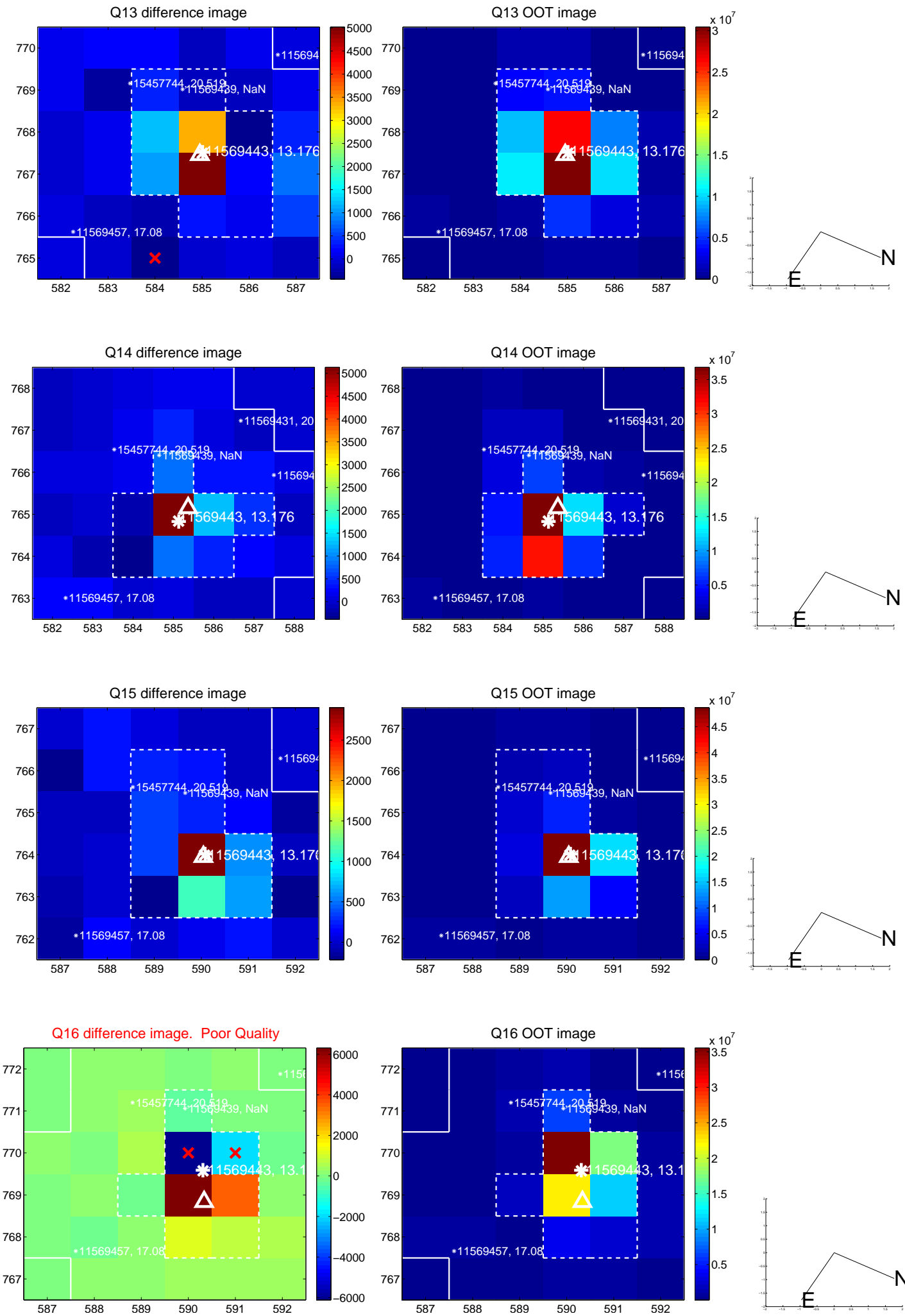
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



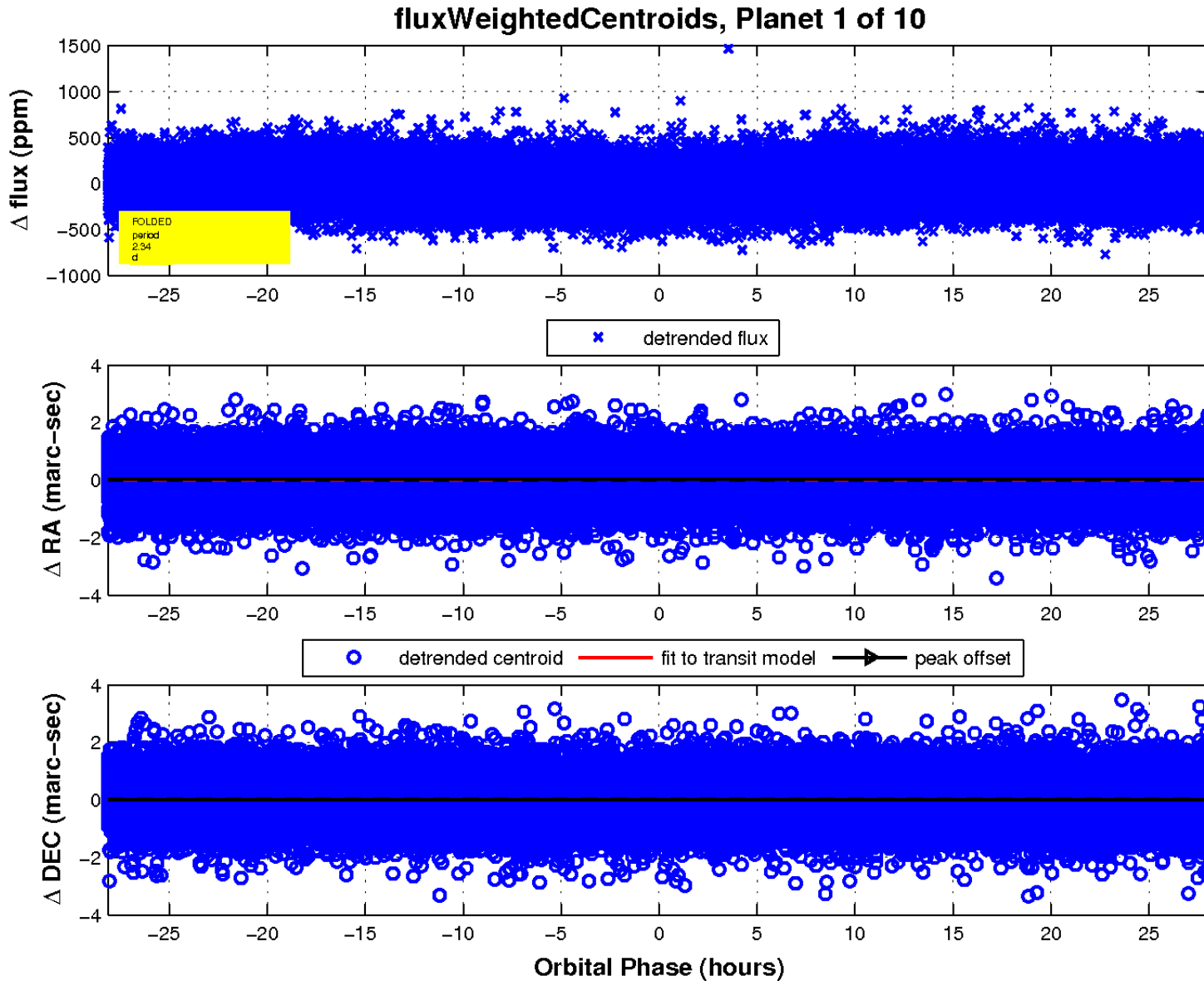
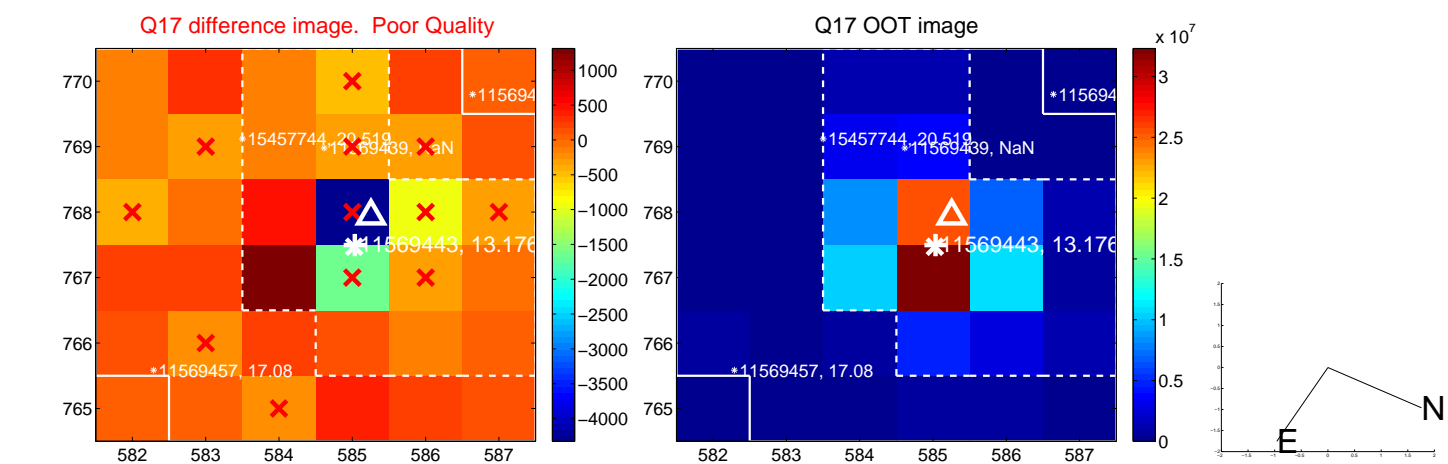
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

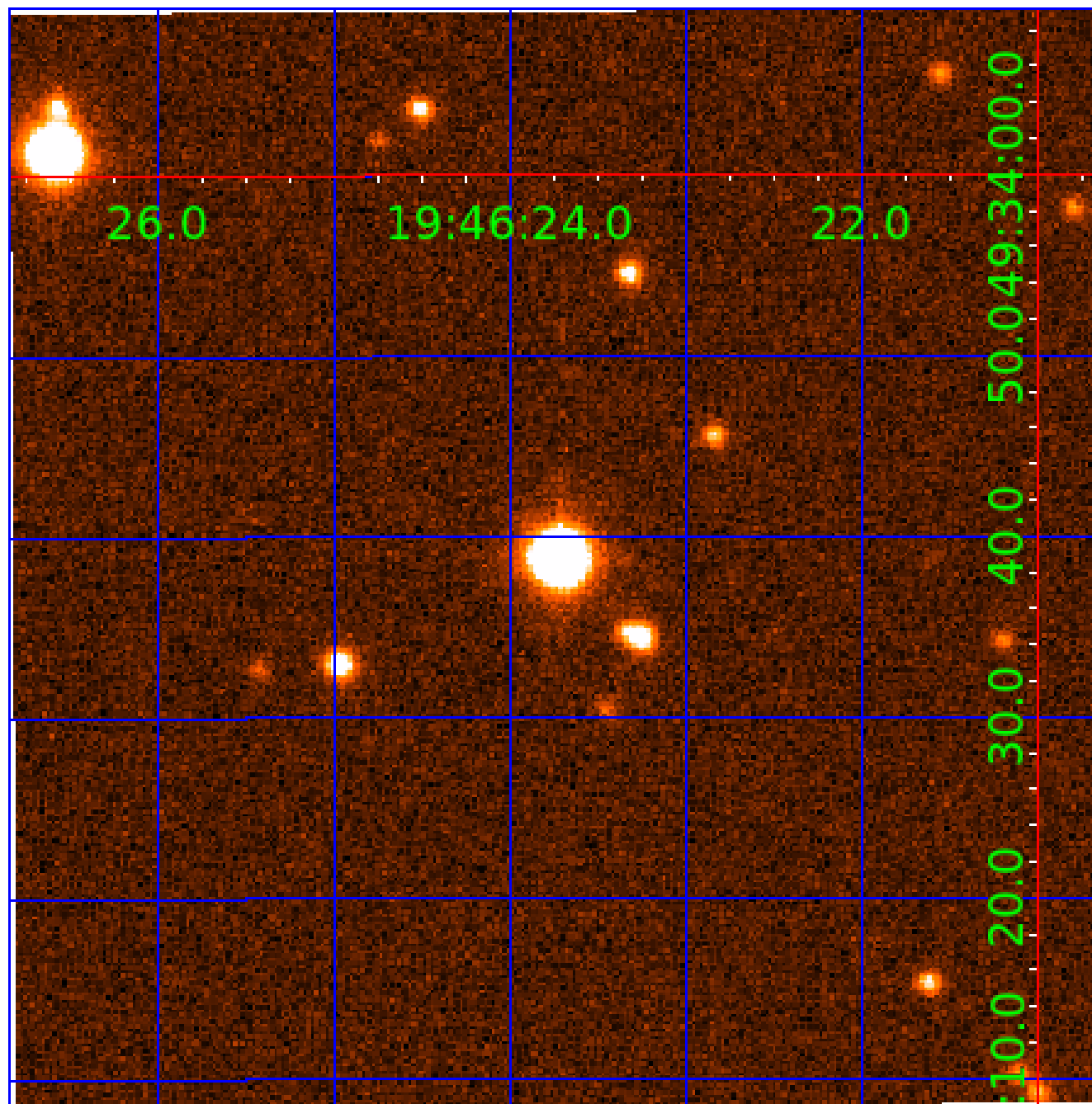


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



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})
011569443-01	OBS	No	2.344129	132.983449	25.4	15.857	8.1	8.4	1.56	6685	0.92	2961.54
011569443-02	OBS	No	412.469578	146.020096	168.6	8.779	10.2	8.4	1.56	6685	2.21	3.00
011569443-03	OBS	No	72.987289	157.607486	270.7	2.219	9.4	10.5	1.56	6685	3.28	30.23
011569443-04	OBS	No	32.077750	145.382778	159.8	4.570	9.1	9.2	1.56	6685	2.15	90.48
011569443-05	OBS	No	40.558747	133.378934	266.8	1.247	8.6	9.0	1.56	6685	2.59	66.18
011569443-06	OBS	No	74.686409	184.106204	190.2	6.743	8.7	9.4	1.56	6685	2.36	29.32
011569443-07	OBS	No	41.646178	159.524234	203.5	2.180	8.0	8.8	1.56	6685	2.64	63.88
011569443-08	OBS	No	104.678723	217.862789	306.0	1.405	8.2	7.6	1.56	6685	3.19	18.69
011569443-09	OBS	No	44.318975	149.204173	184.9	2.422	7.8	8.1	1.56	6685	2.45	58.80
011569443-10	OBS	No	281.444595	187.802605	249.5	12.521	9.4	11.2	1.56	6685	2.77	5.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011569443-01	OBS	FP	0.00	1	0	0	0	LPP_DV
011569443-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
011569443-03	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
011569443-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011569443-05	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_FEW_DIFFS—HALO_GHOST
011569443-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
011569443-07	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011569443-08	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_MEAS
011569443-09	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011569443-10	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS—HALO_GHOST

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

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

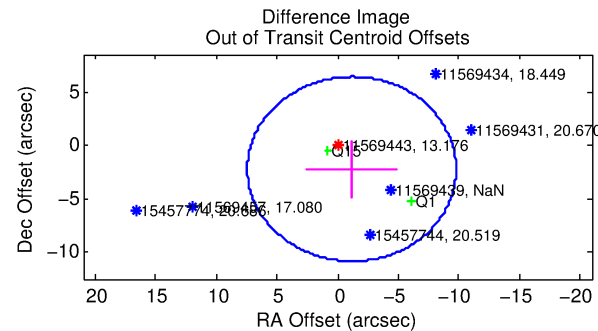
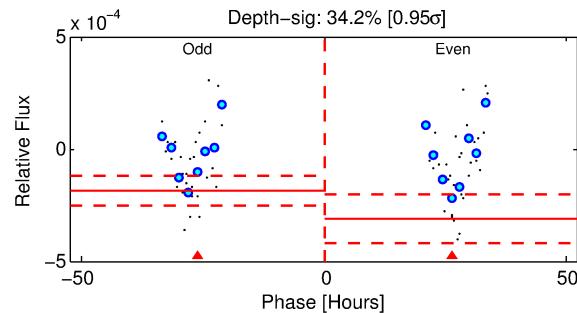
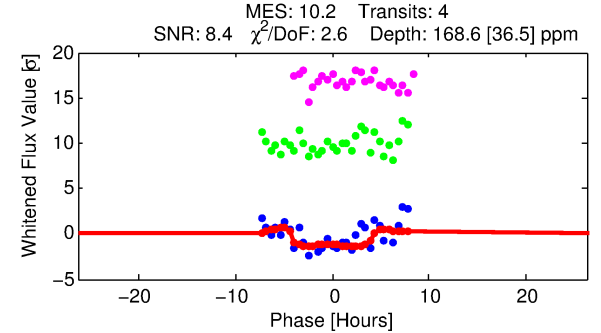
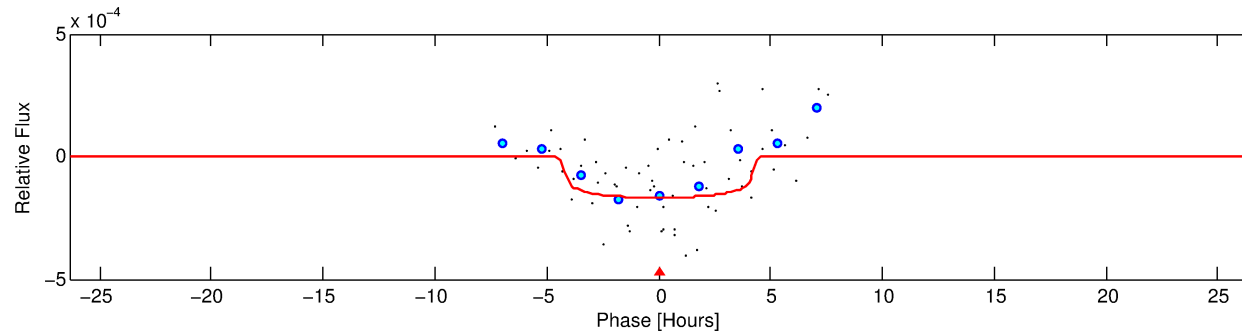
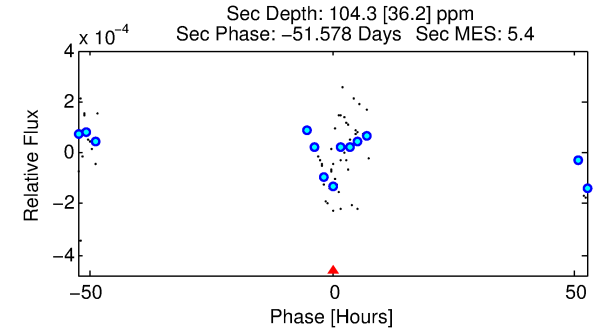
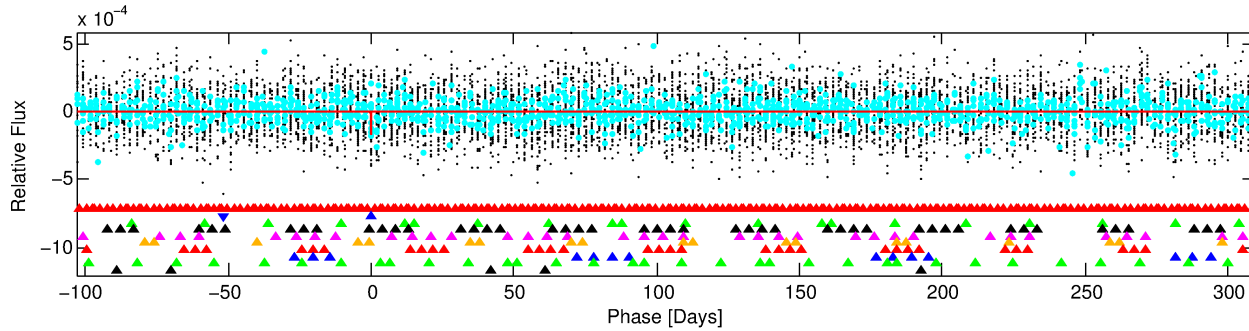
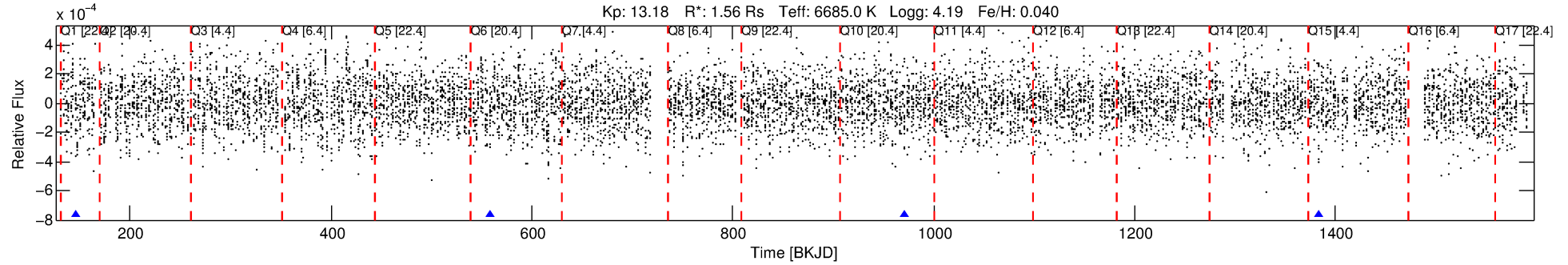
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011569443-02

No Significant Match Found

DV One-Page Summary

KIC: 11569443 Candidate: 2 of 10 Period: 412.470 d



DV Fit Results:

Period = 412.46958 [0.02479] d
Epoch = 146.0201 [0.0402] BKJD
Rp/R* = 0.0130 [0.0120]
a/R* = 233.84 [1197.51]
b = 0.78 [2.65]
Seff = 3.00 [1.24]
Teq = 336 [35] K
Rp = 2.21 [2.15] Re
a = 1.2018 [0.3163] AU
Ag = 16933.09 [32277.25] [0.52σ]
Teffp = 5921 [2777] K [2.01σ]

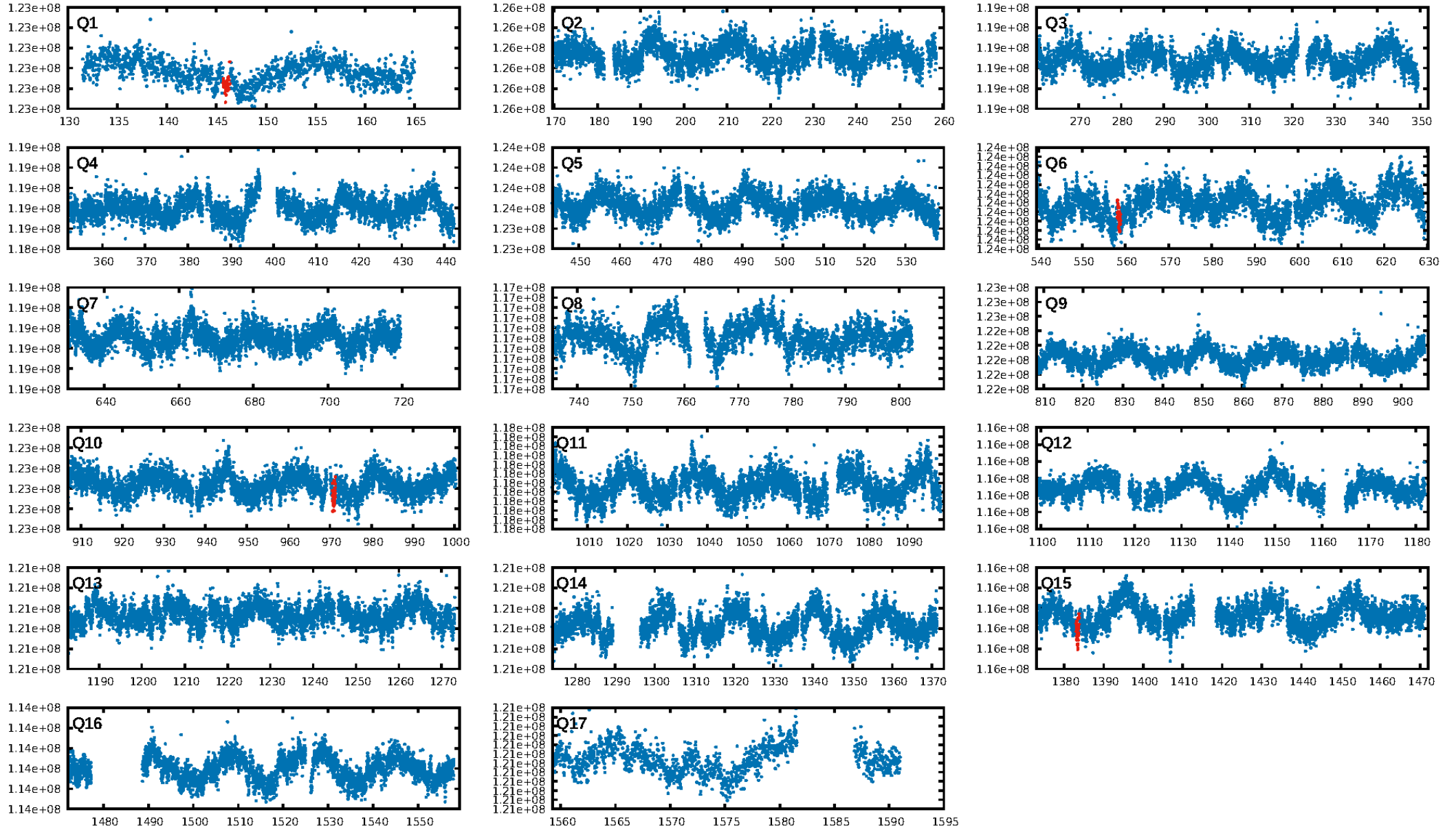
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [205.63σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 14.2%
ModelChiSquareGof-sig: 3.4%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.979
Centroid-sig: 52.2%
Centroid-so: 1.333 arcsec [0.93σ]
OotOffset-rm: 2.506 arcsec [0.87σ]
OotOffset-st: 0/1/0/1 [2]
KicOffset-rm: 2.548 arcsec [0.87σ]
KicOffset-st: 0/1/0/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 0.67 [2/3]

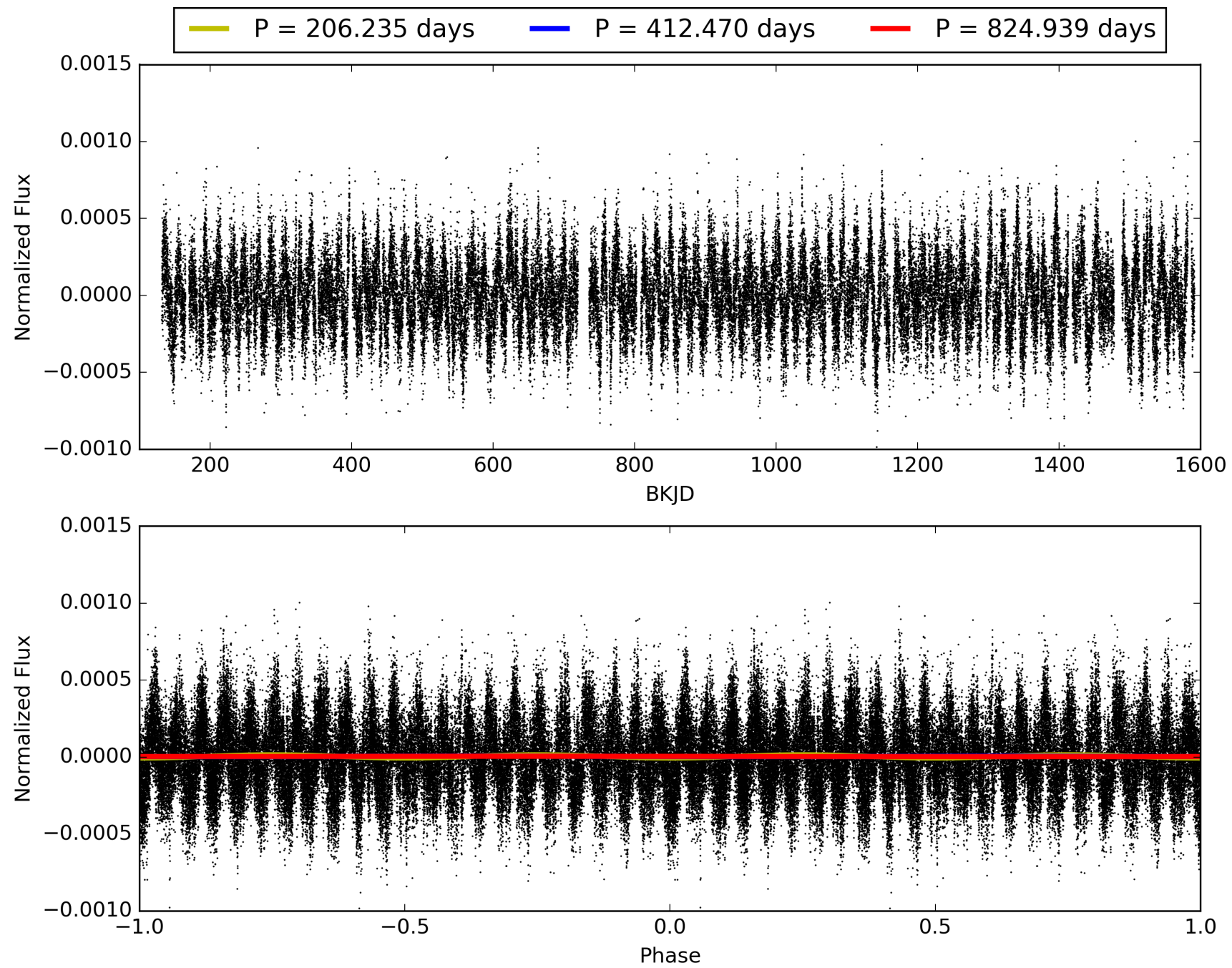
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:25:32 Z

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

TCE 011569443-02, PDC Light Curves

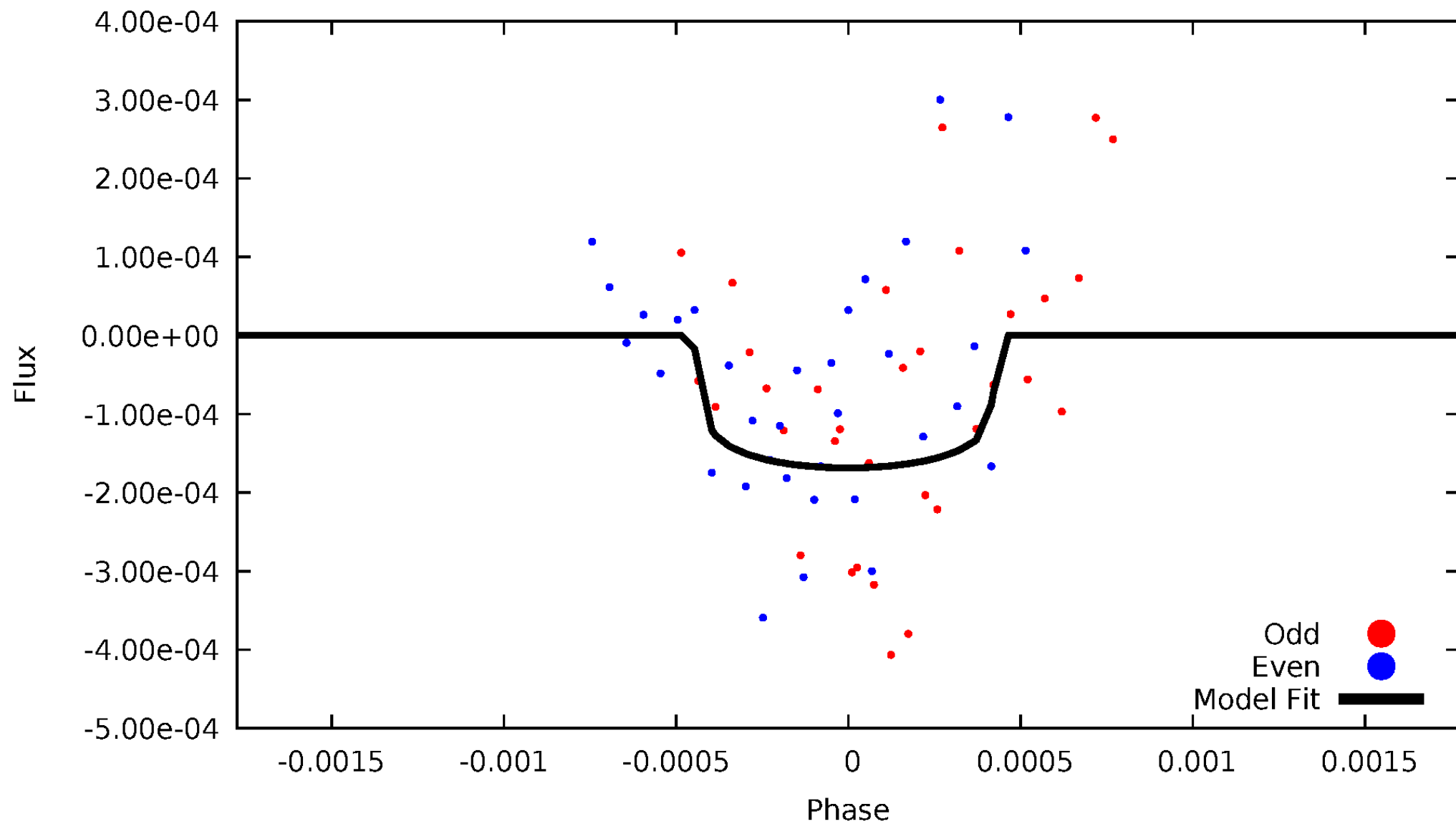


TCE 011569443-02



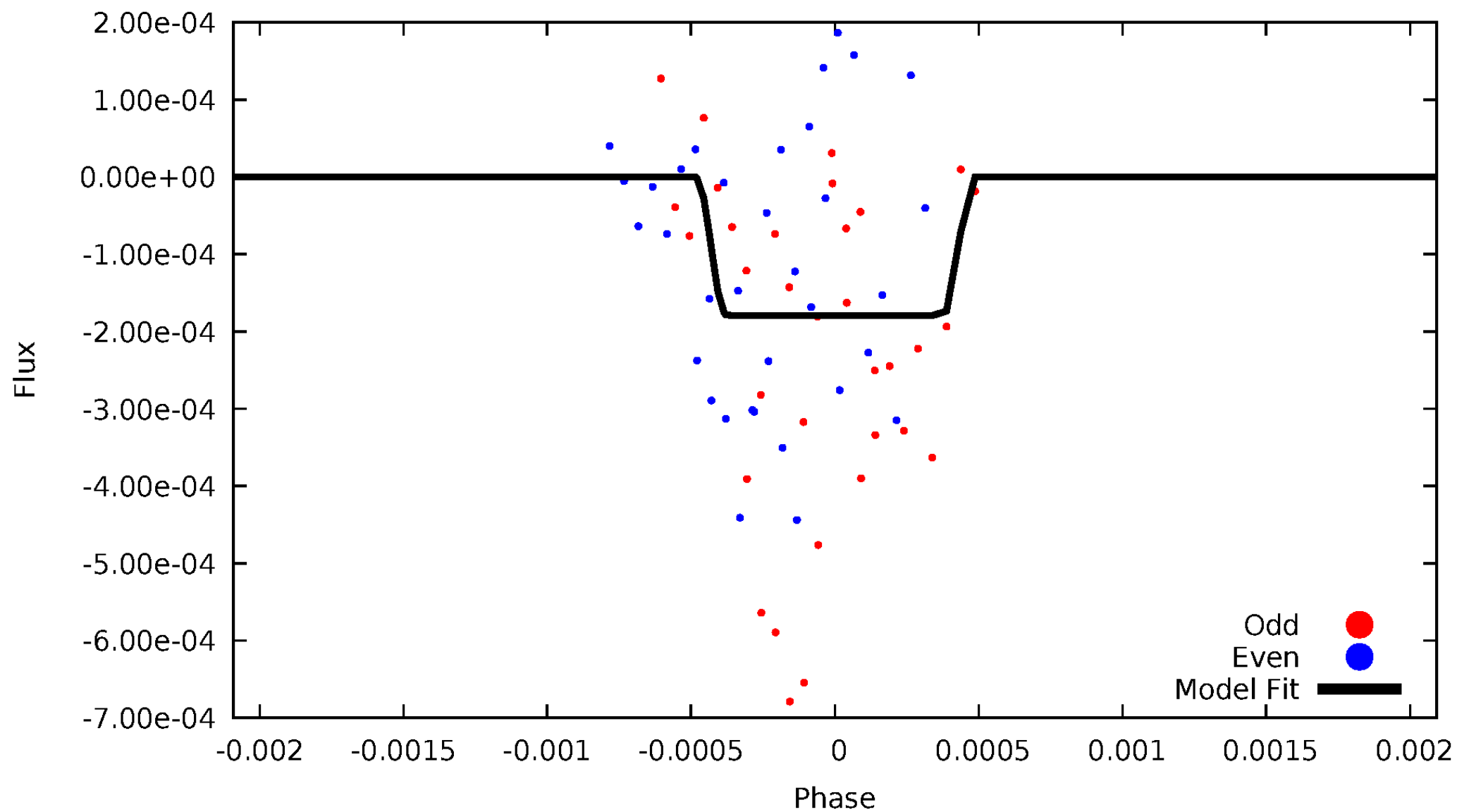
DV Odd/Even

TCE 011569443-02



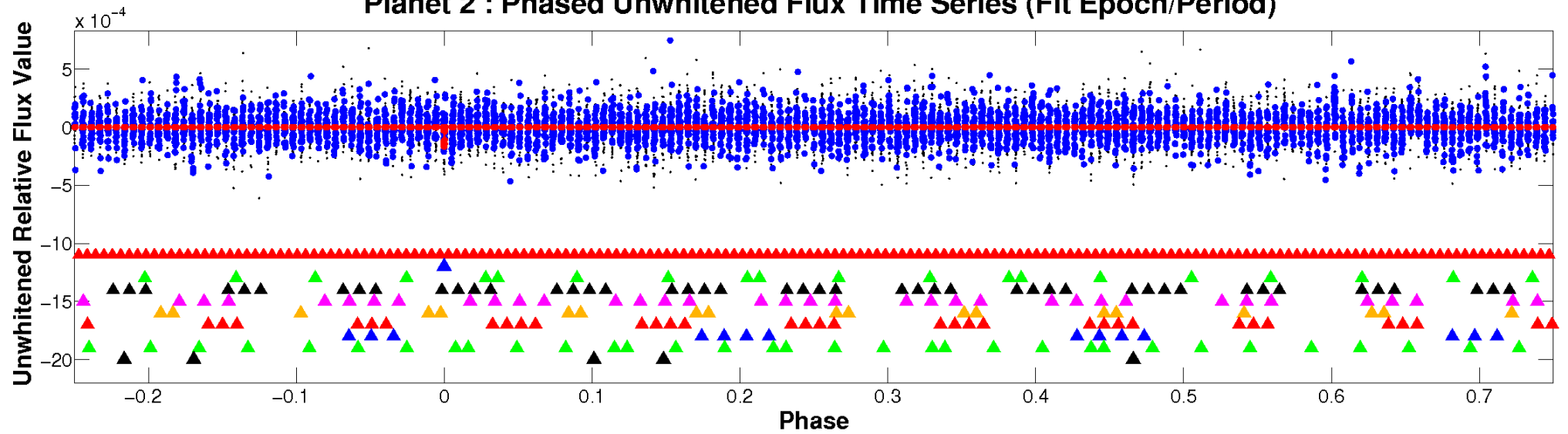
ALT Odd/Even

TCE 011569443-02

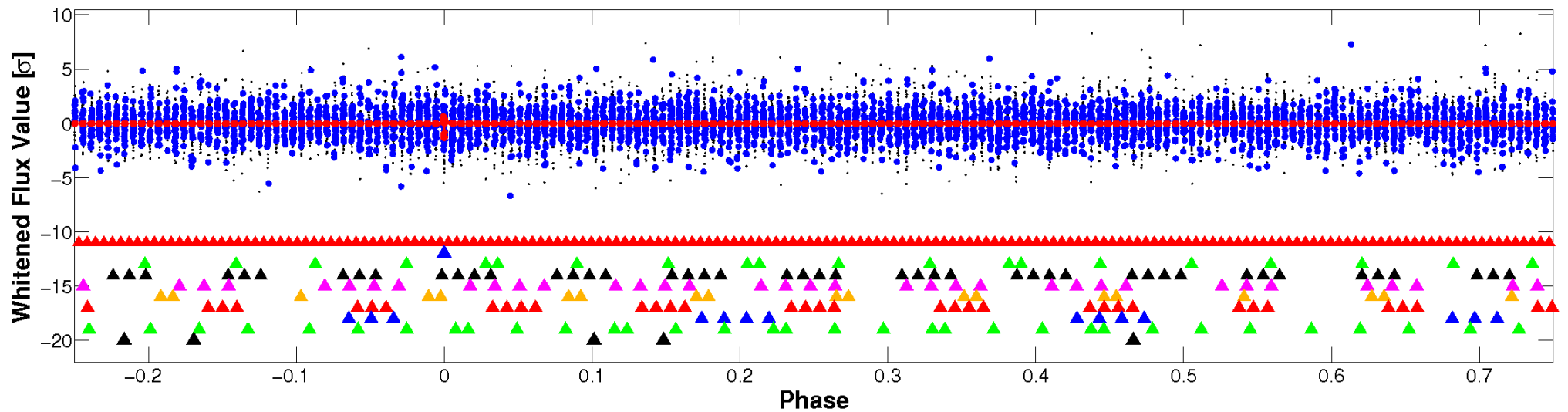


Non-Whitened Vs. Whitened Light Curve

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

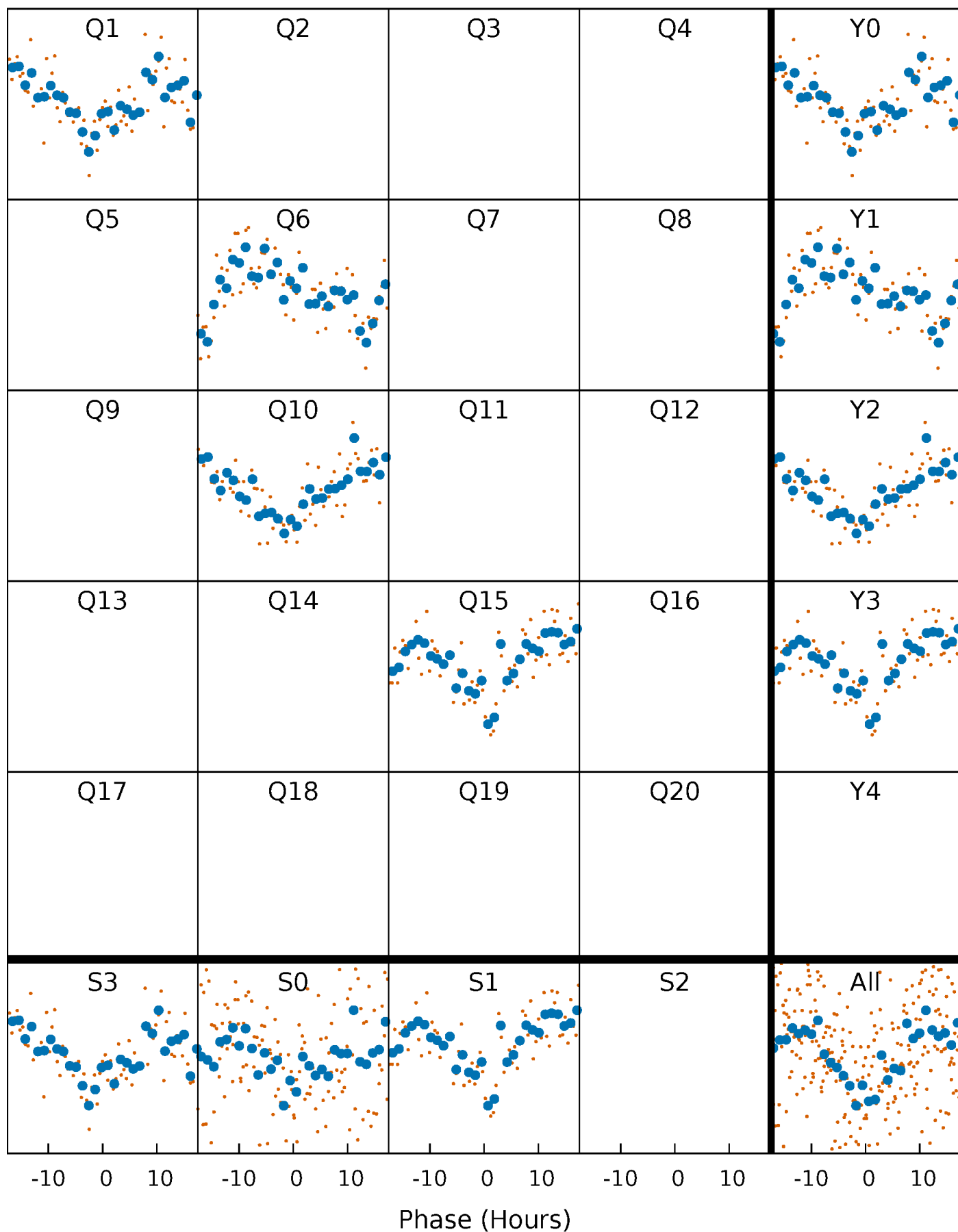


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



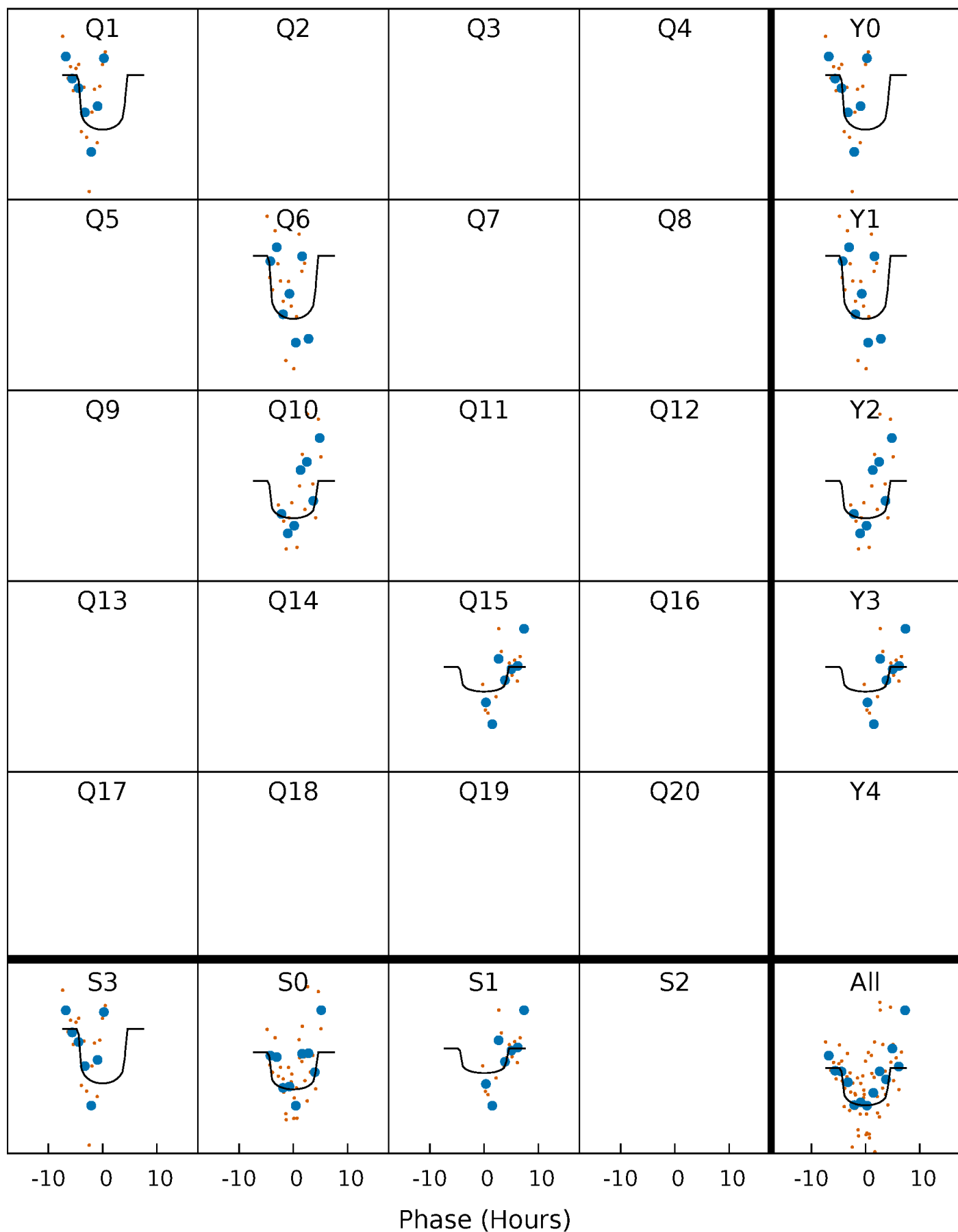
PDC Quarter-Phased Transit Curves

TCE 011569443-02 P=412.469578 Days $T_0=146.020096$ (BKJD)



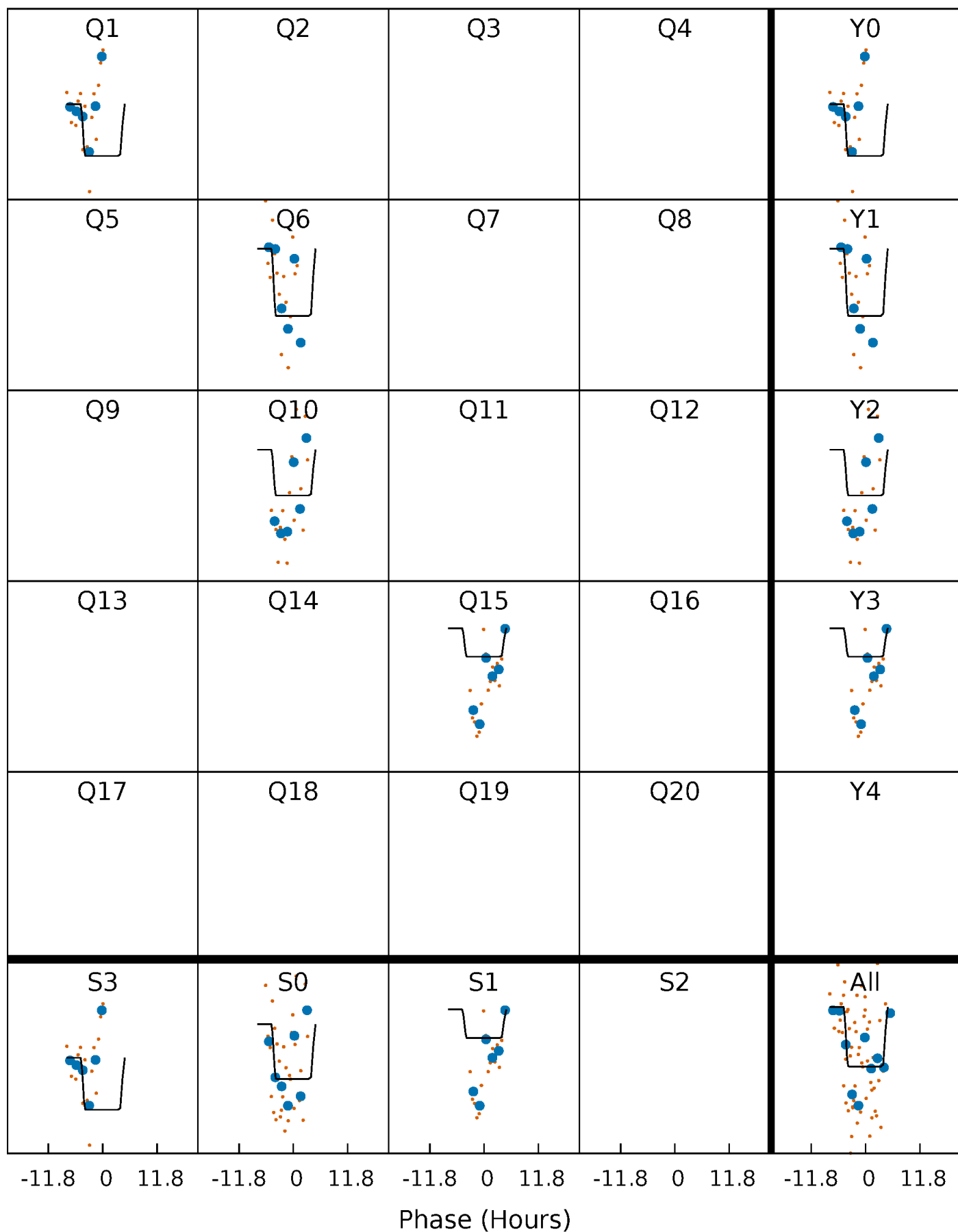
DV Quarter-Phased Transit Curves

TCE 011569443-02 P=412.469578 Days $T_0=146.020096$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

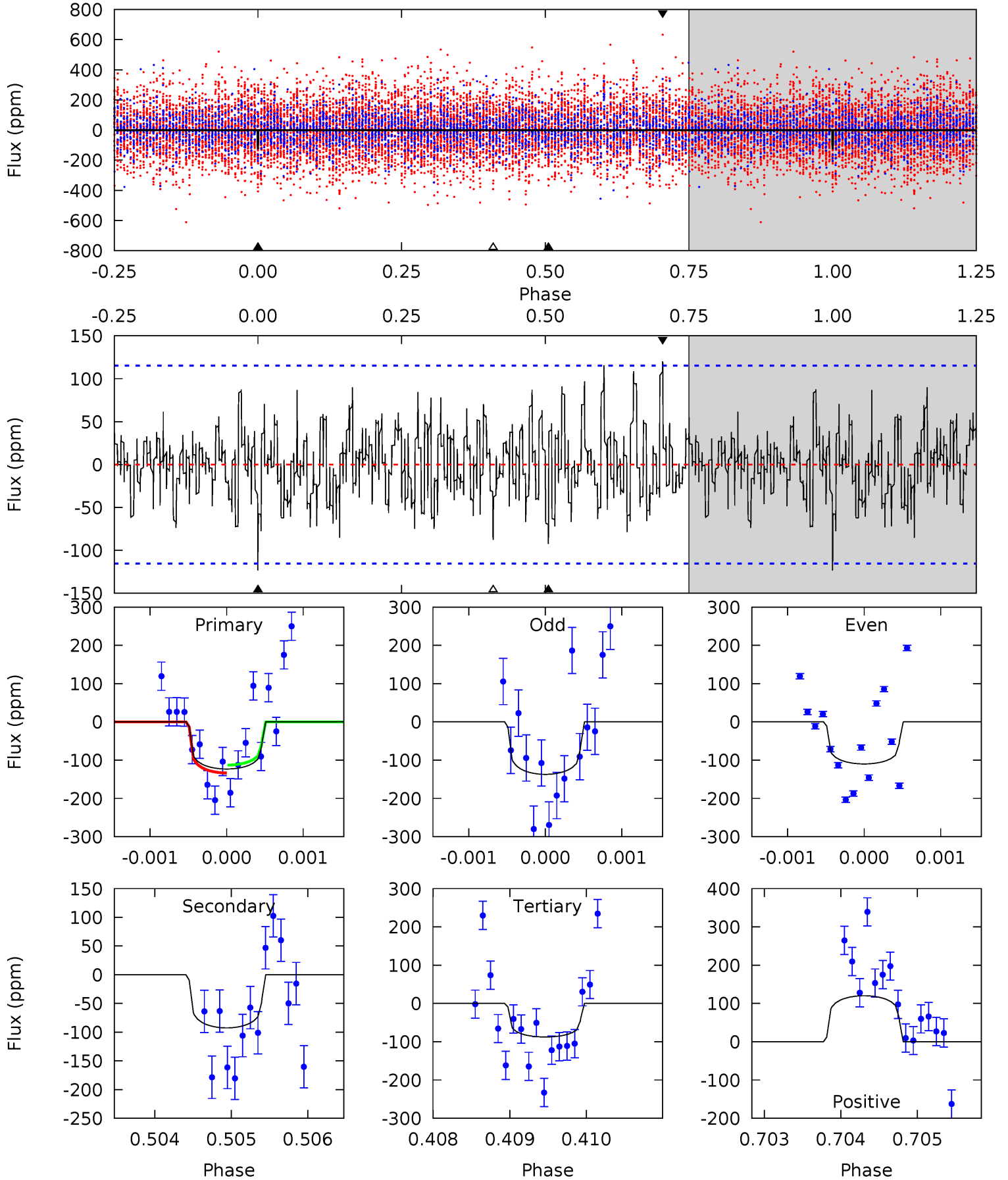
TCE 011569443-02 P=412.502811 Days $T_0=146.036382$ (BKJD)



DV Model-Shift Uniqueness Test

011569443-02, P = 412.469578 Days, E = 146.020096 Days

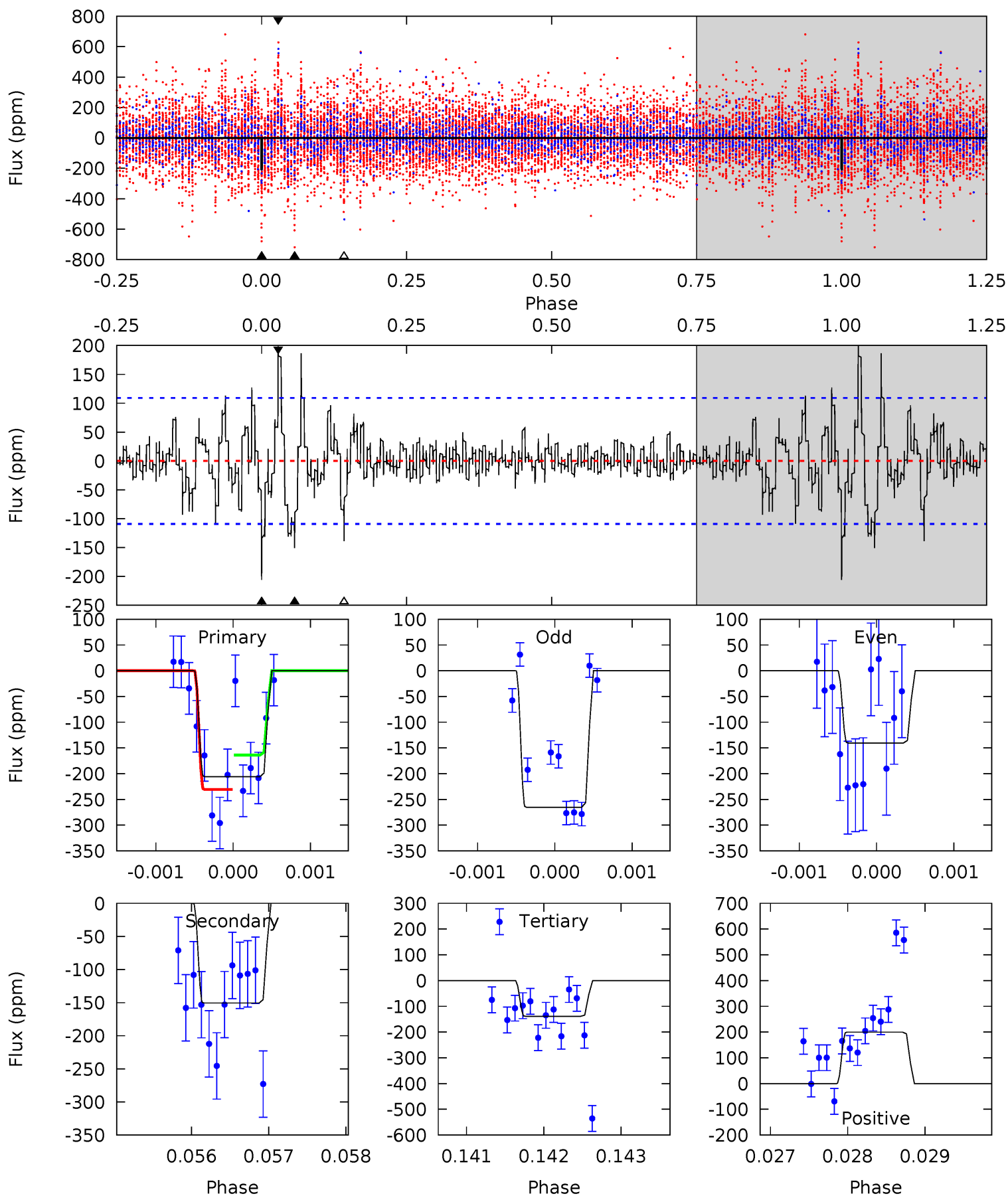
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.84	4.39	4.16	5.69	5.47	3.32	1.63	1.69	0.15	0.23	-1.31	0.65	1.16	0.49	0.49



Alt Model-Shift Uniqueness Test

011569443-02, P = 412.502811 Days, E = 146.036382 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	7.52	6.93	9.97	5.46	3.30	1.88	3.34	0.30	0.59	-2.46	3.12	1.09	0.49	1.60



Stellar Parameters For KIC 011569443

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6685^{+187}_{-281}	$4.187^{+0.136}_{-0.204}$	$0.040^{+0.250}_{-0.350}$	$1.557^{+0.494}_{-0.329}$	$1.358^{+0.214}_{-0.235}$	$0.507^{+0.389}_{-0.251}$
	+3%/-4%	+3%/-5%	+625%/-875%	+32%/-21%	+16%/-17%	+77%/-50%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 011569443-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-93 ± 21	$2.64^{+1.96}_{-1.62}$	474^{+35}_{-31}	5295^{+3455}_{-1086}	10205^{+55895}_{-6962}
Alt.	-151 ± 20	$2.50^{+2.17}_{-1.50}$	473^{+33}_{-33}	6025^{+4737}_{-1367}	18309^{+99624}_{-13039}

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

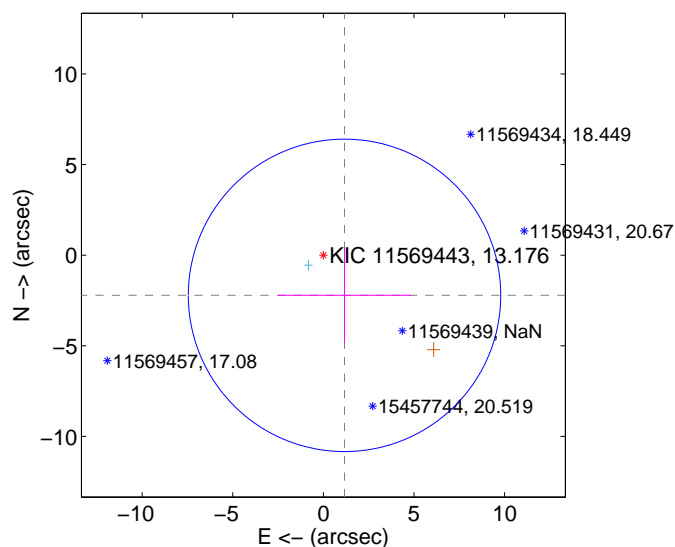
Supplemental centroid analysis for 011569443-02. Kepler magnitude: 13.18. Transit SNR 8.40

There are 1 quarters with good PRF difference image offsets

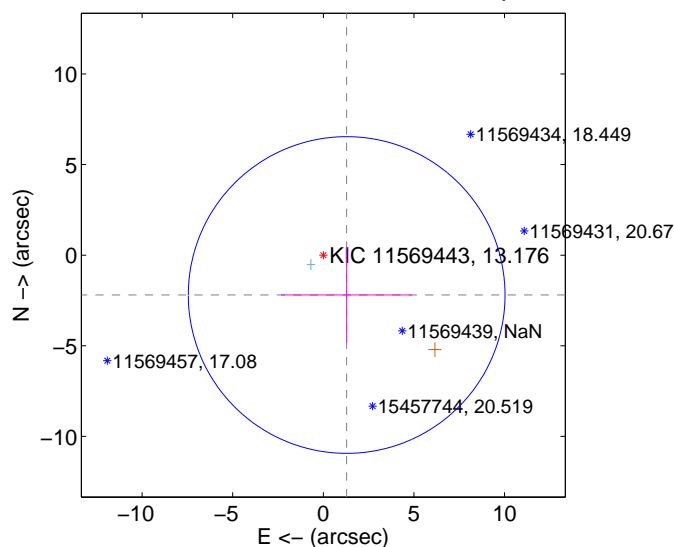
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.506 ± 2.873	0.87	-1.168 ± 3.662	-2.218 ± 2.613
PRF-fit source offset from KIC position	2.548 ± 2.913	0.87	-1.288 ± 3.621	-2.199 ± 2.626
photometric centroid source offset	1.33 ± 1.44	0.93	1.33 ± 1.44	0.09 ± 1.56

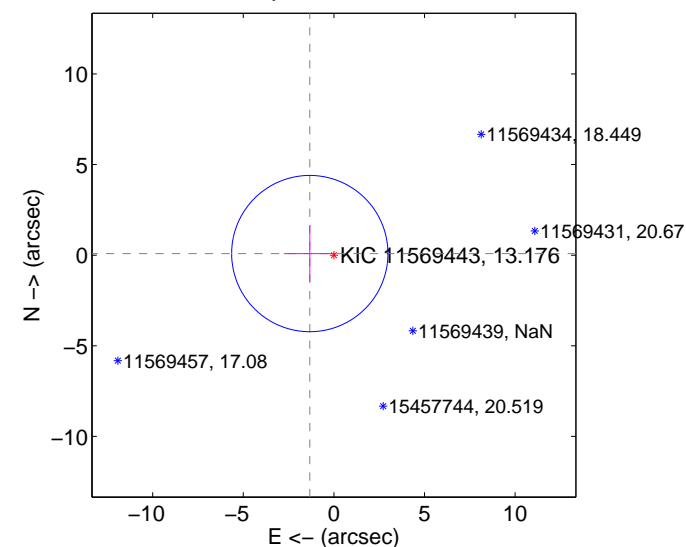
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

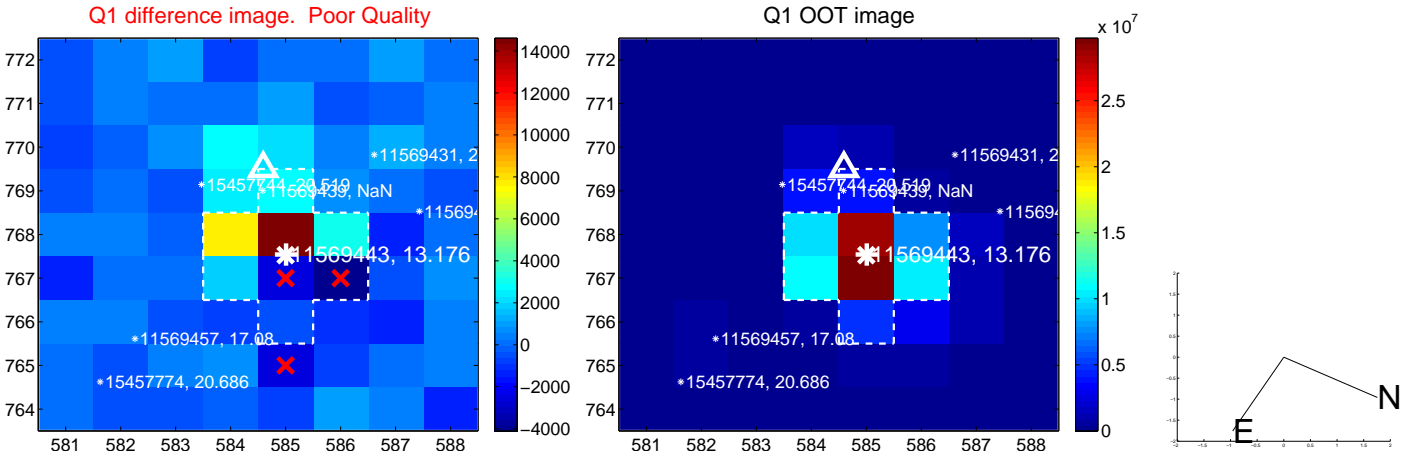


offset from photometric centroids

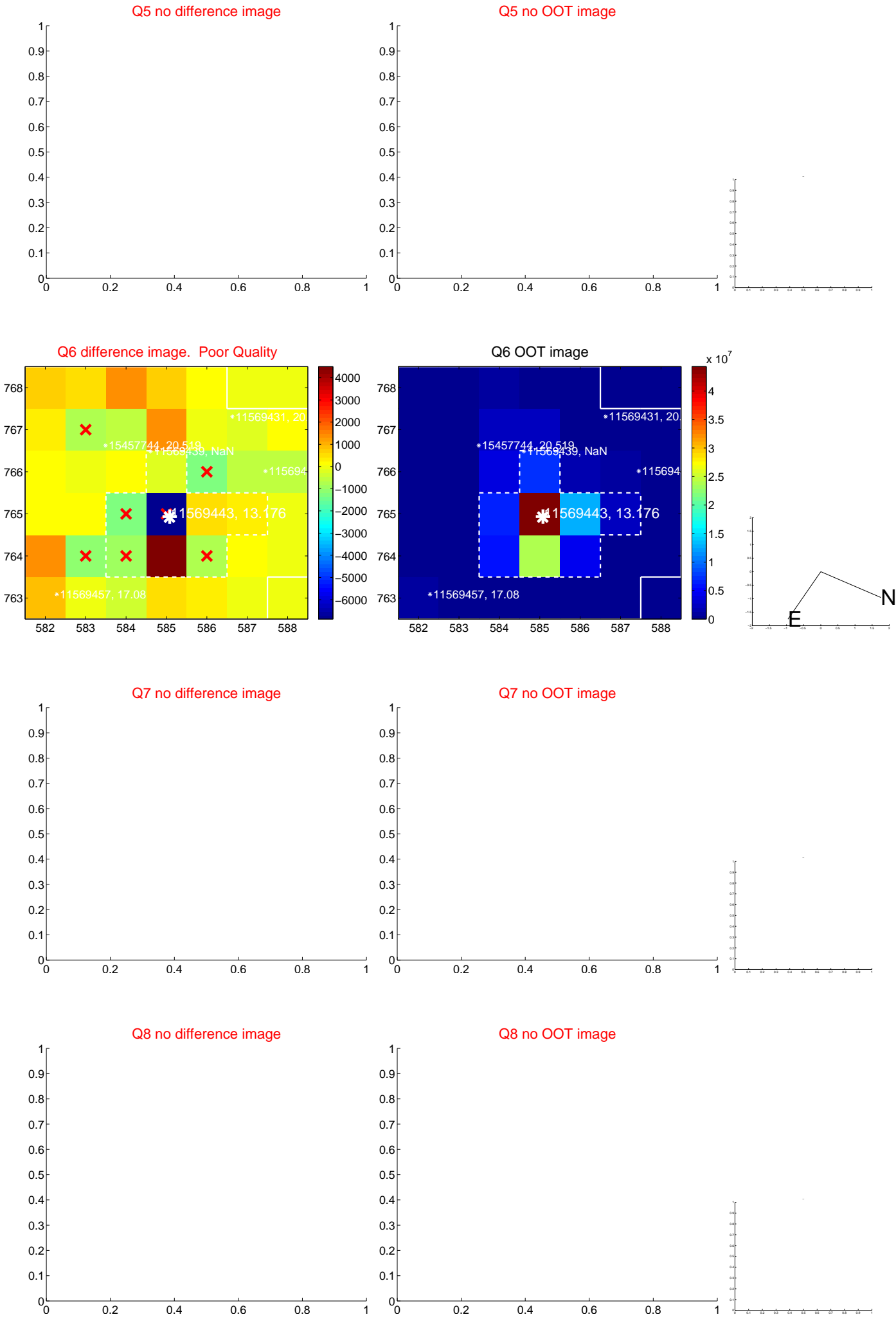


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

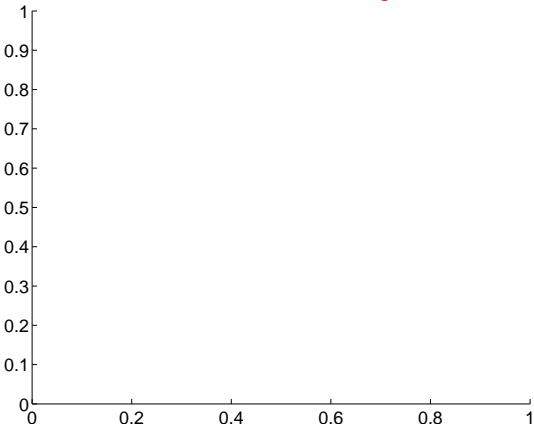


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

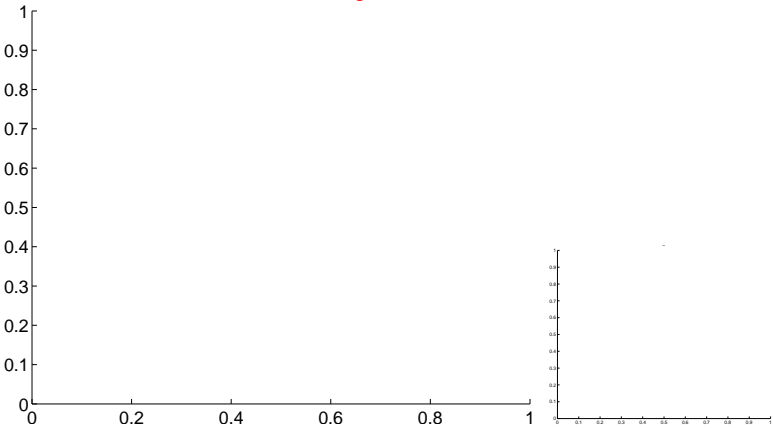


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

Q13 no difference image



Q13 no OOT image



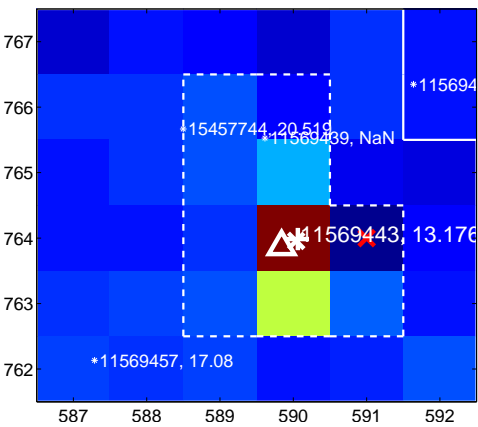
Q14 no difference image



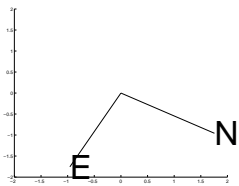
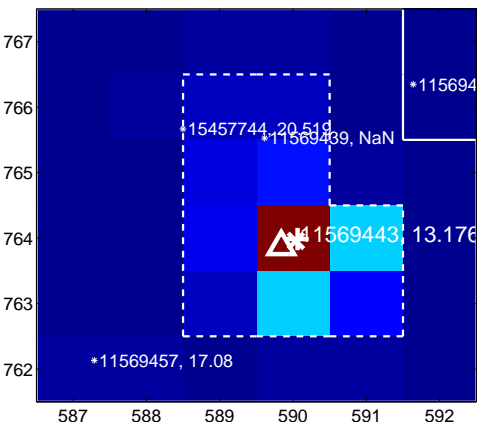
Q14 no OOT image



Q15 difference image



Q15 OOT image



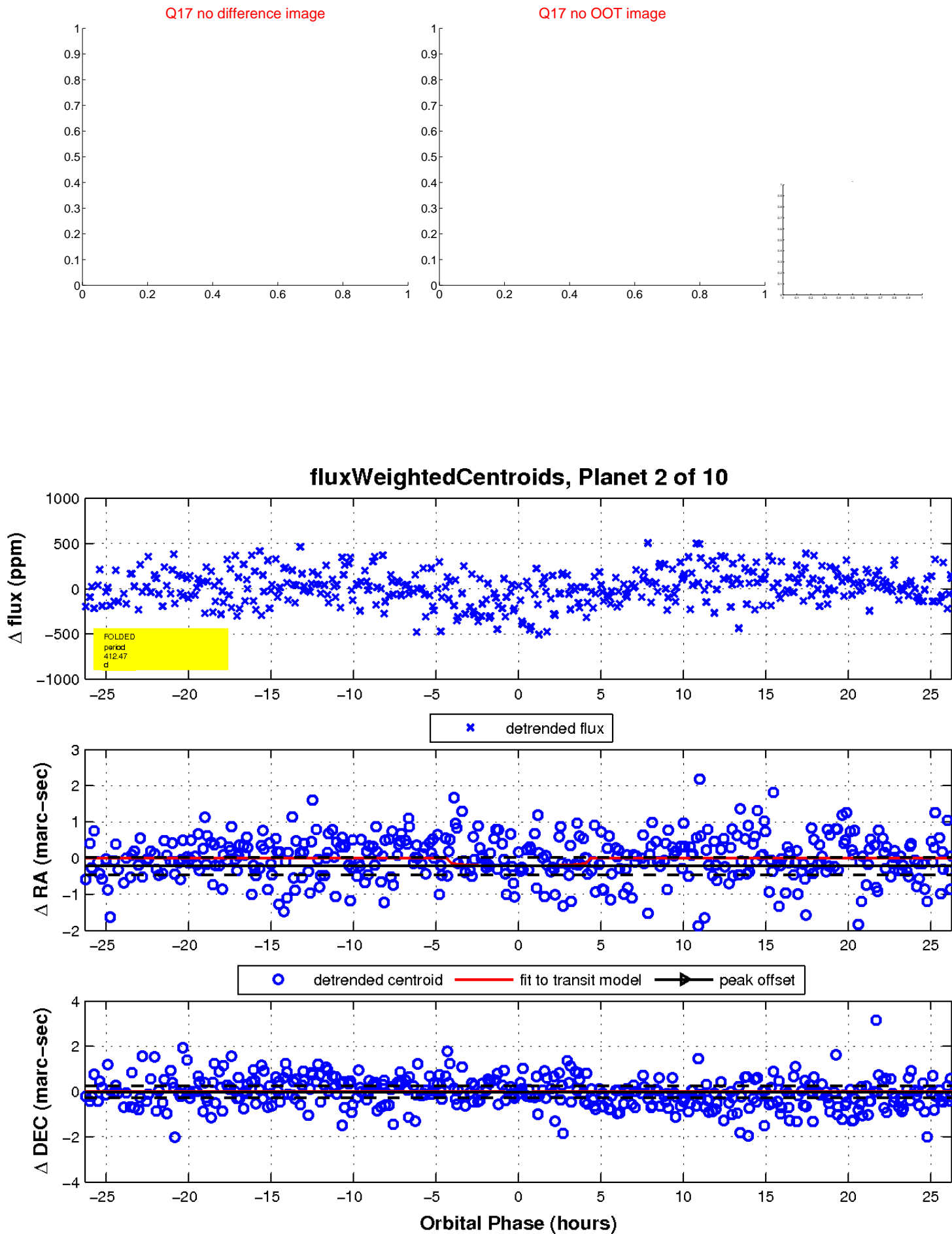
Q16 no difference image



Q16 no OOT image

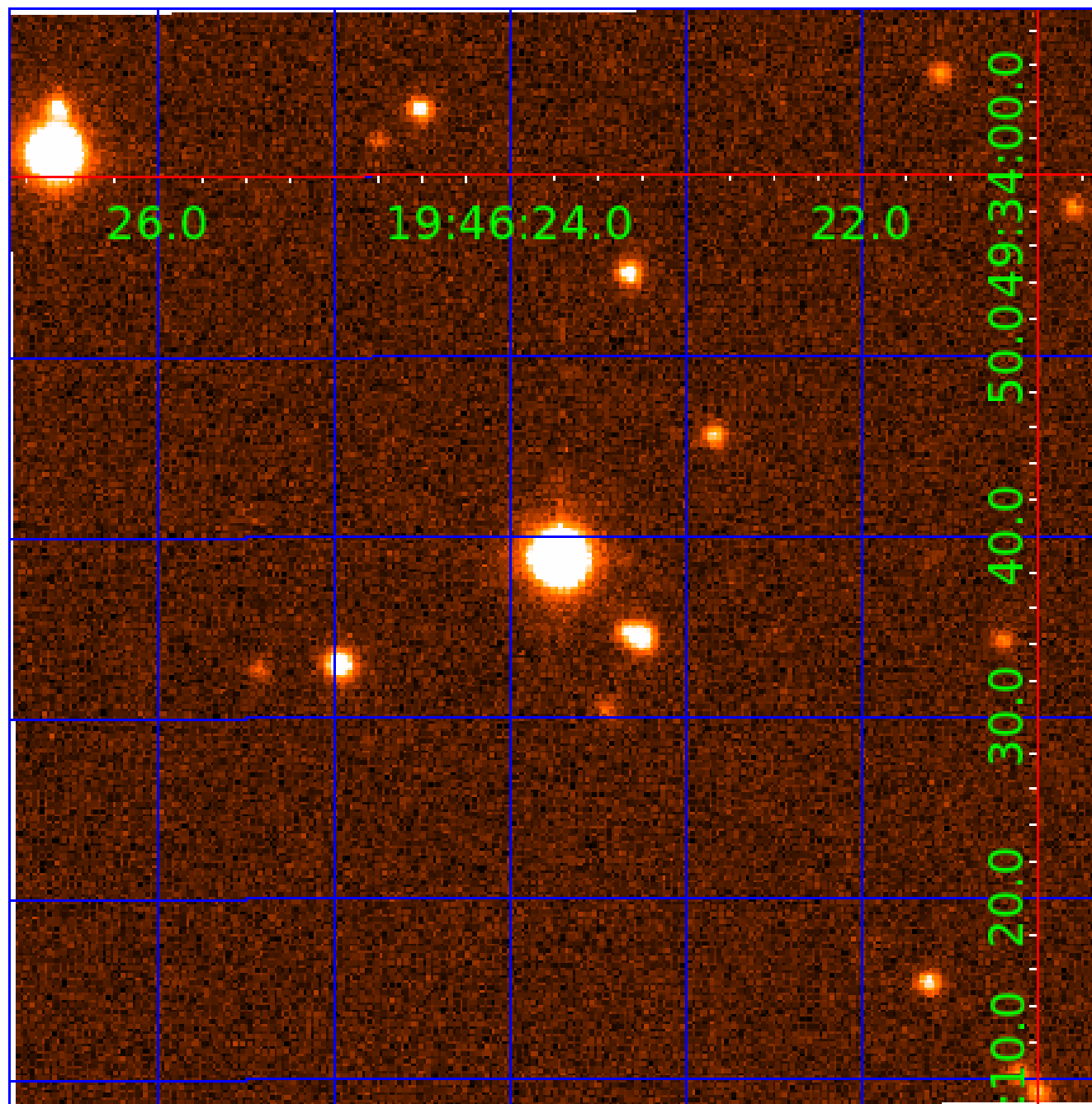


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



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})
011569443-01	OBS	No	2.344129	132.983449	25.4	15.857	8.1	8.4	1.56	6685	0.92	2961.54
011569443-02	OBS	No	412.469578	146.020096	168.6	8.779	10.2	8.4	1.56	6685	2.21	3.00
011569443-03	OBS	No	72.987289	157.607486	270.7	2.219	9.4	10.5	1.56	6685	3.28	30.23
011569443-04	OBS	No	32.077750	145.382778	159.8	4.570	9.1	9.2	1.56	6685	2.15	90.48
011569443-05	OBS	No	40.558747	133.378934	266.8	1.247	8.6	9.0	1.56	6685	2.59	66.18
011569443-06	OBS	No	74.686409	184.106204	190.2	6.743	8.7	9.4	1.56	6685	2.36	29.32
011569443-07	OBS	No	41.646178	159.524234	203.5	2.180	8.0	8.8	1.56	6685	2.64	63.88
011569443-08	OBS	No	104.678723	217.862789	306.0	1.405	8.2	7.6	1.56	6685	3.19	18.69
011569443-09	OBS	No	44.318975	149.204173	184.9	2.422	7.8	8.1	1.56	6685	2.45	58.80
011569443-10	OBS	No	281.444595	187.802605	249.5	12.521	9.4	11.2	1.56	6685	2.77	5.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011569443-01	OBS	FP	0.00	1	0	0	0	LPP_DV
011569443-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
011569443-03	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
011569443-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011569443-05	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_FEW_DIFFS—HALO_GHOST
011569443-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
011569443-07	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011569443-08	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_MEAS
011569443-09	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011569443-10	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS—HALO_GHOST

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

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

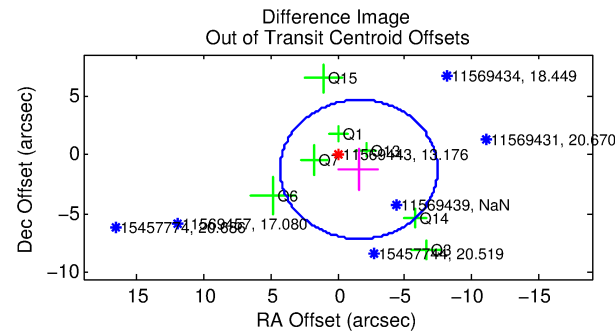
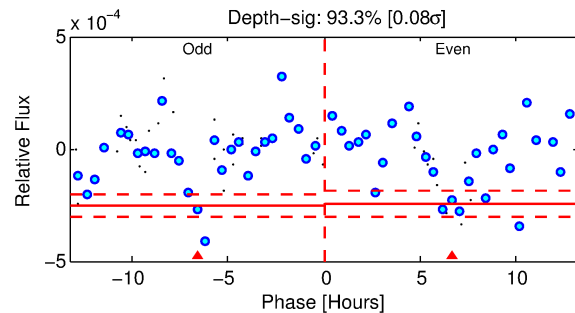
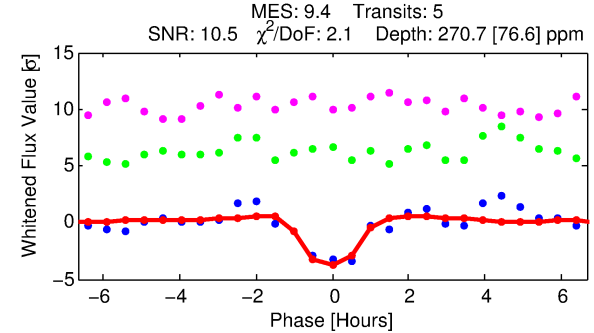
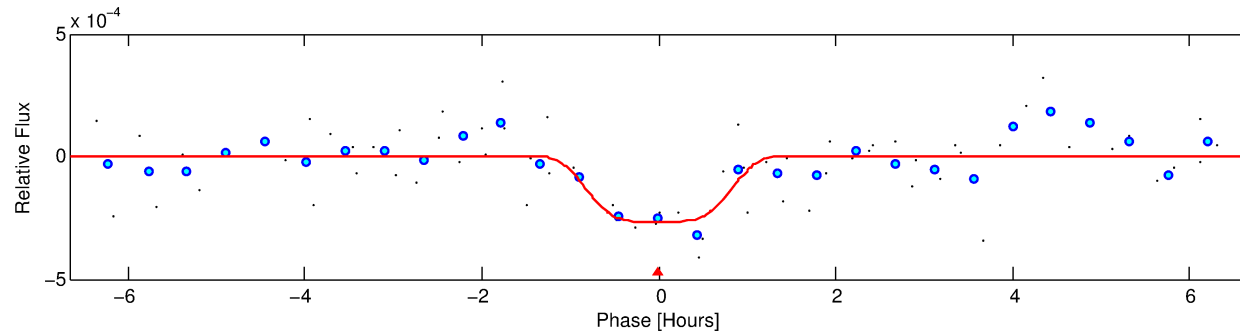
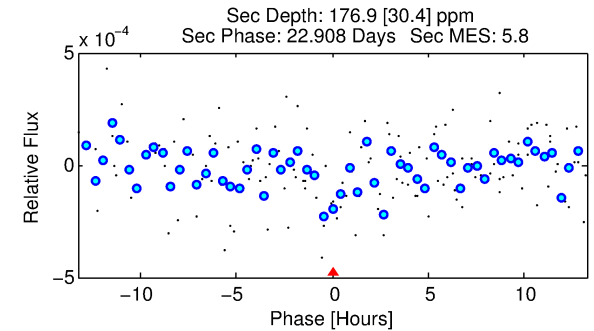
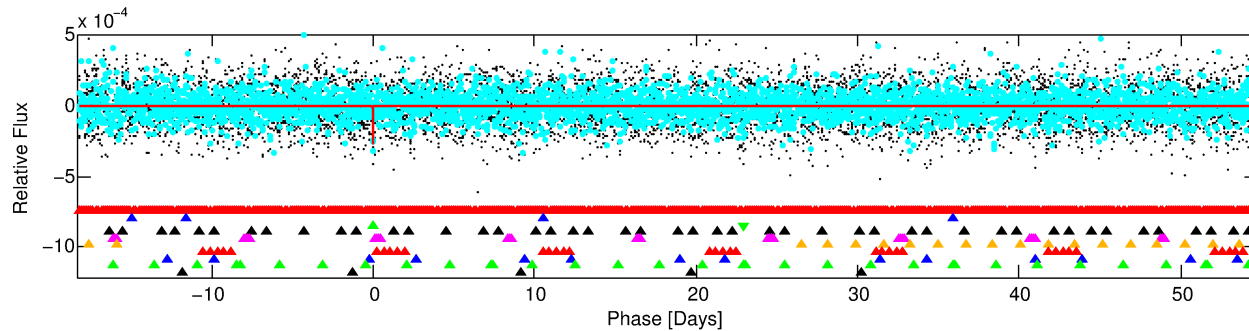
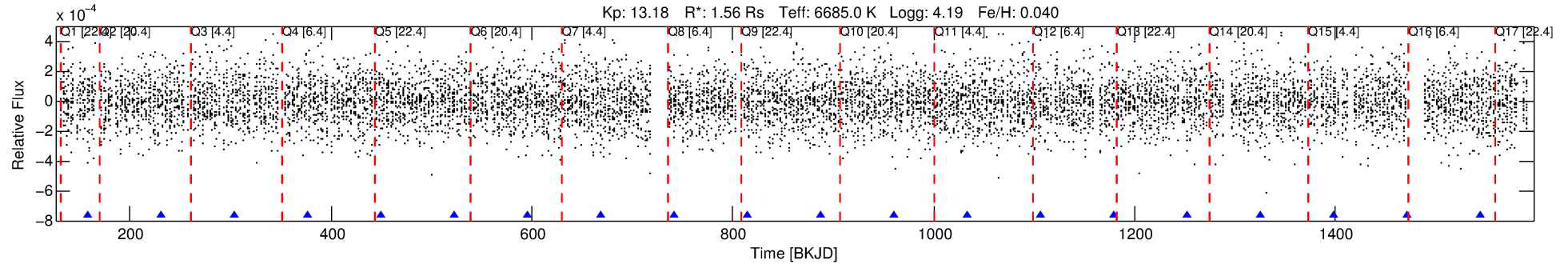
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011569443-03

No Significant Match Found

DV One-Page Summary

KIC: 11569443 Candidate: 3 of 10 Period: 72.987 d



DV Fit Results:

Period = 72.98729 [0.00062] d
Epoch = 157.6075 [0.0062] BKJD
Rp/R* = 0.0193 [0.0061]
a/R* = 80.08 [92.05]
b = 0.97 [0.08]
Seff = 30.23 [12.51]
Teq = 598 [62] K
Rp = 3.28 [1.46] Re
a = 0.3788 [0.0997] AU
Ag = 1297.45 [976.88] [1.33σ]
Teffp = 5548 [933] K [5.29σ]

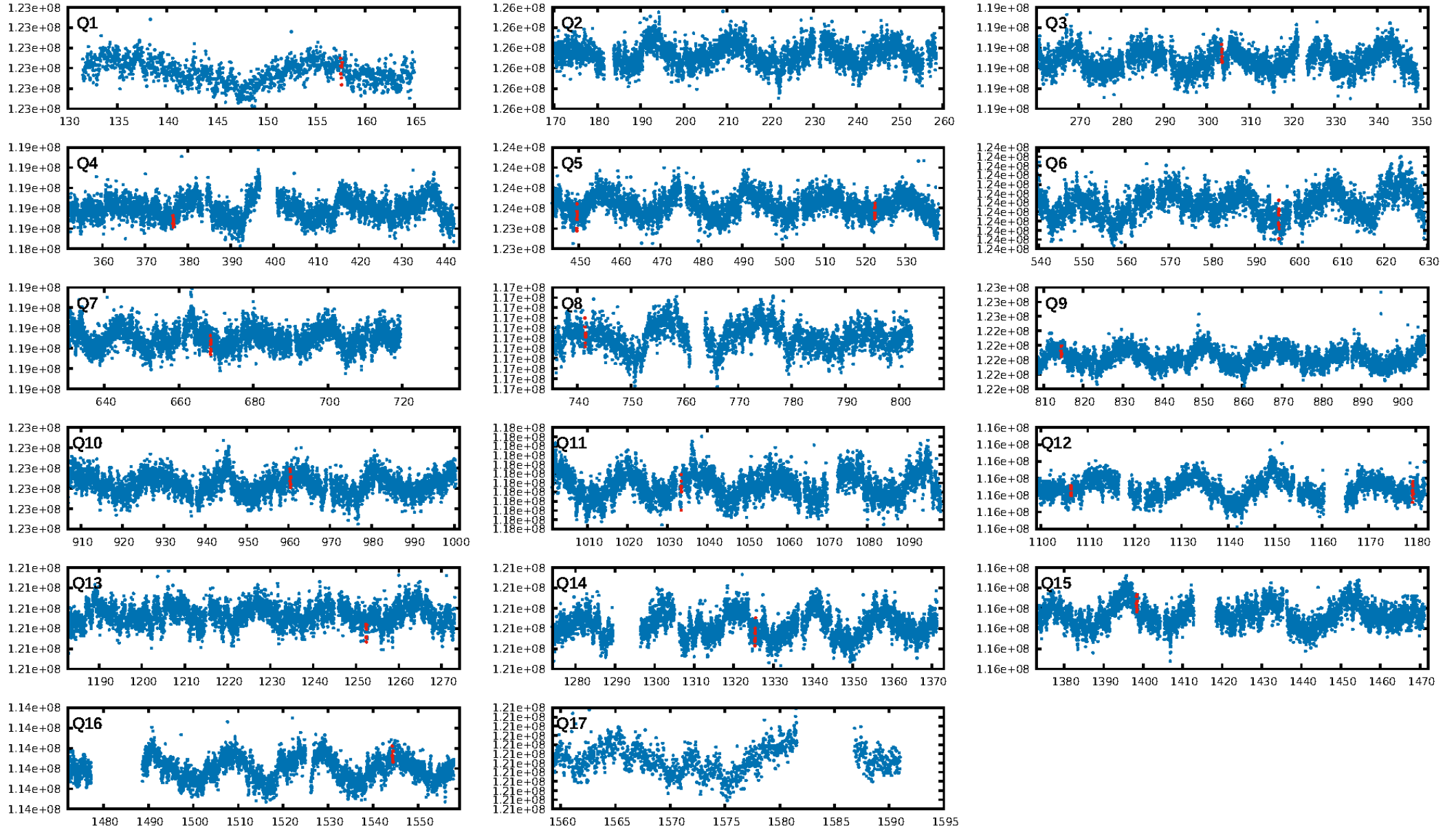
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [209.45σ]
LongPeriod-sig: 100.0% [5.74σ]
ModelChiSquare2-sig: 11.3%
ModelChiSquareGof-sig: 92.4%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.07612
Centroid-sig: 4.6%
Centroid-so: 1.991 arcsec [2.18σ]
OotOffset-rm: 2.007 arcsec [1.02σ]
KicOffset-rm: 2.058 arcsec [1.18σ]
OotOffset-st: 2/3/0/2 [7]
KicOffset-st: 2/3/0/2 [7]
DiffImageQuality-fgm: 0.29 [2/7]
DiffImageOverlap-fno: 0.43 [6/14]

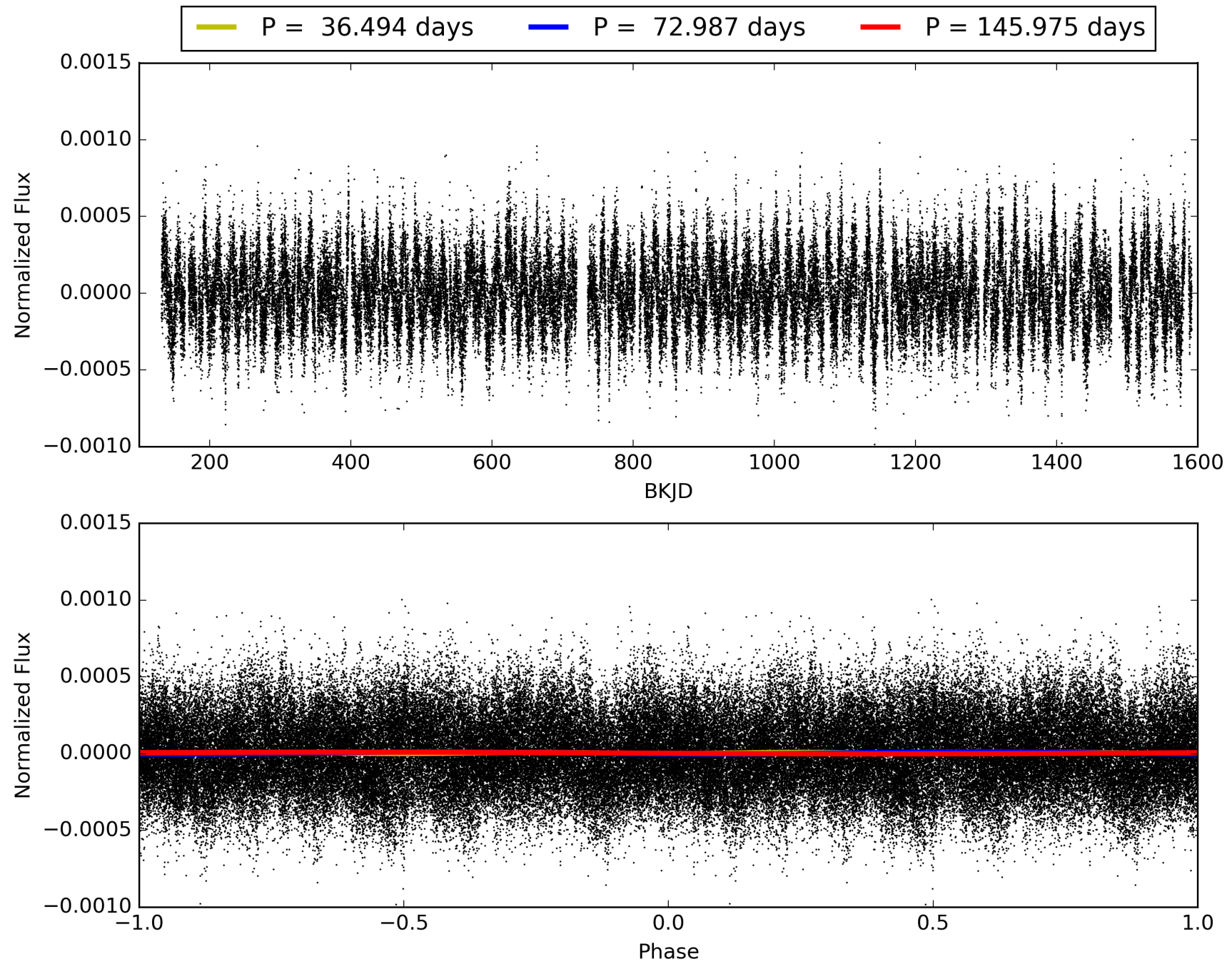
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:25:36 Z

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

TCE 011569443-03, PDC Light Curves

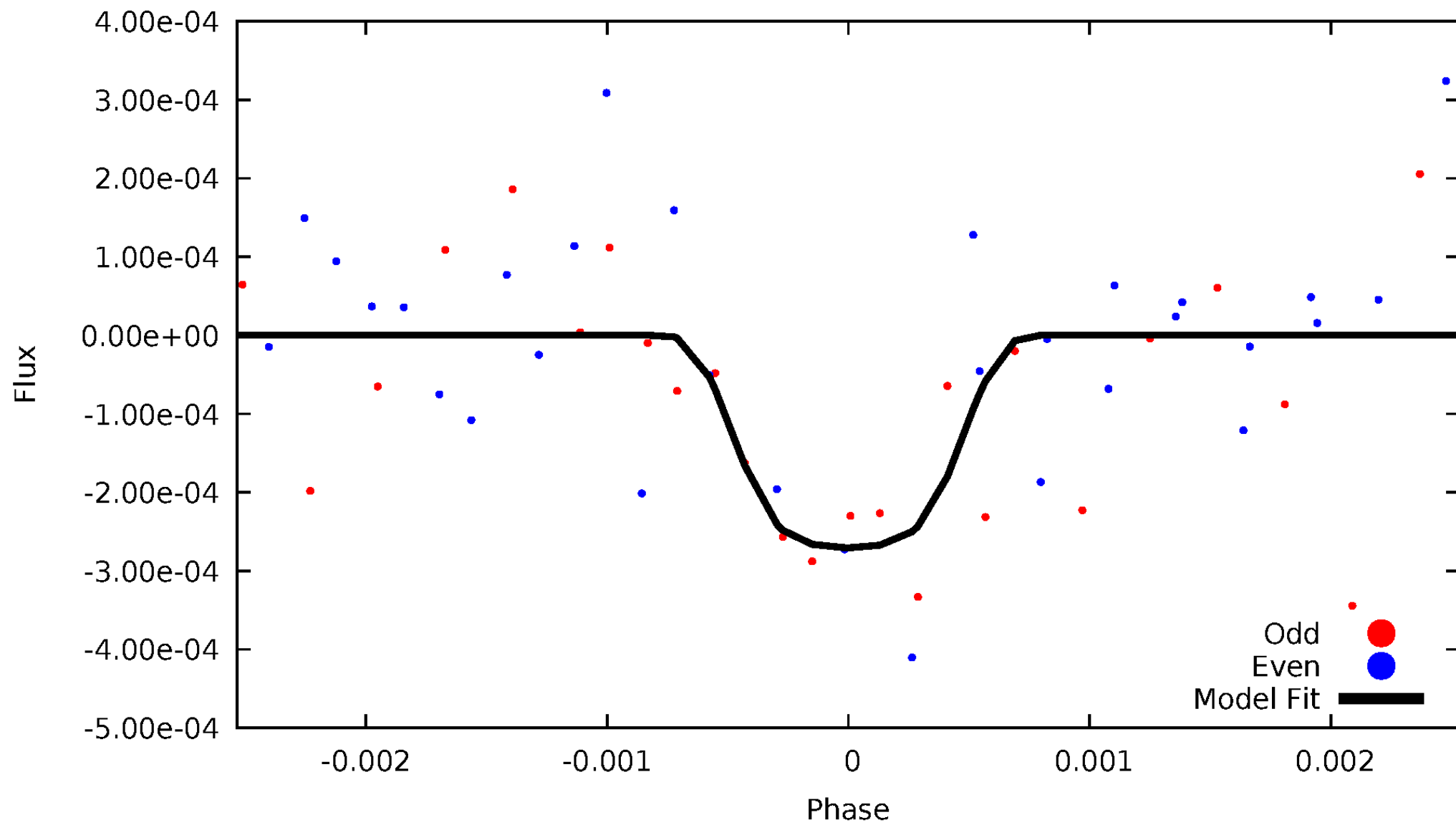


TCE 011569443-03



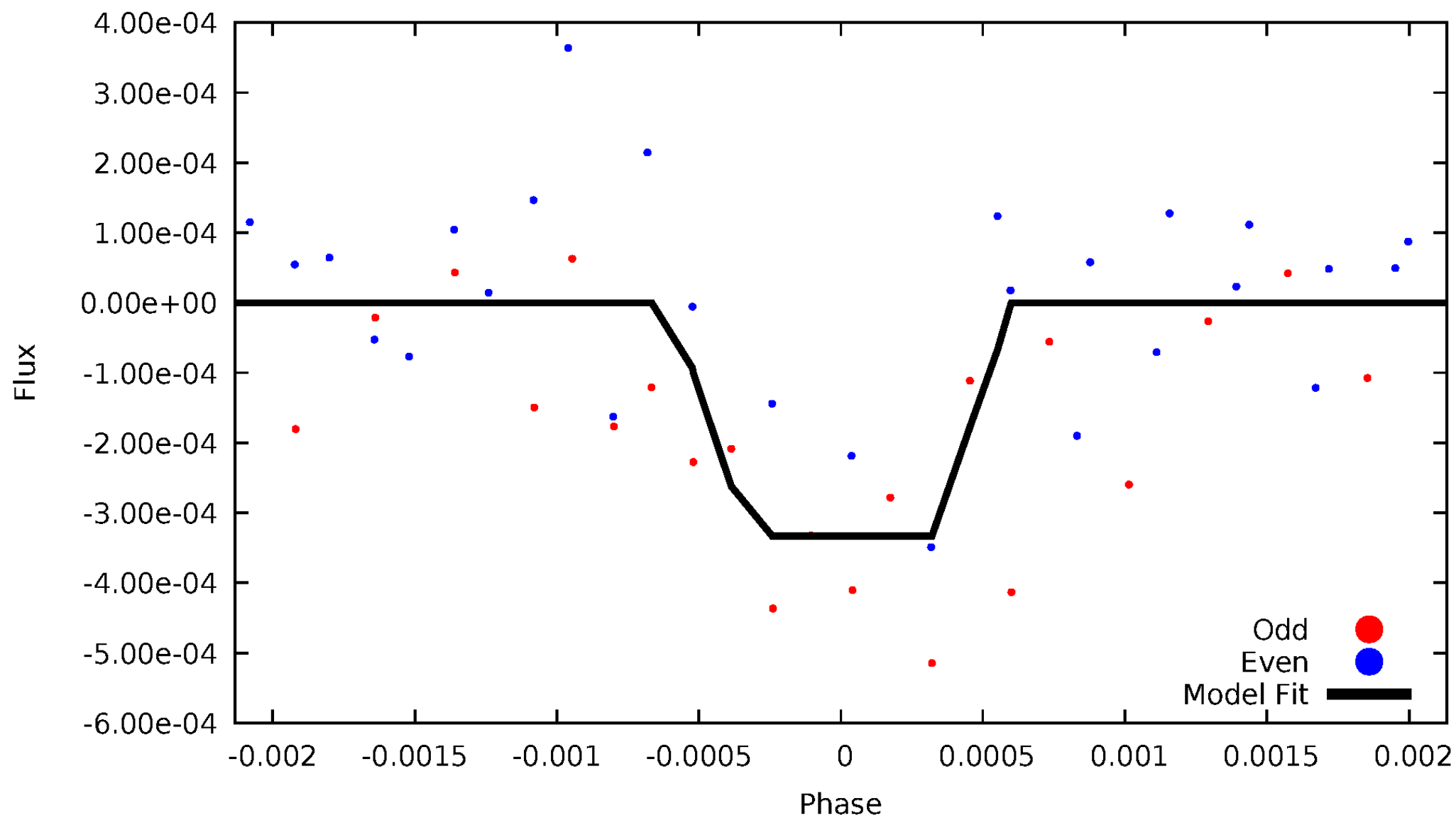
DV Odd/Even

TCE 011569443-03



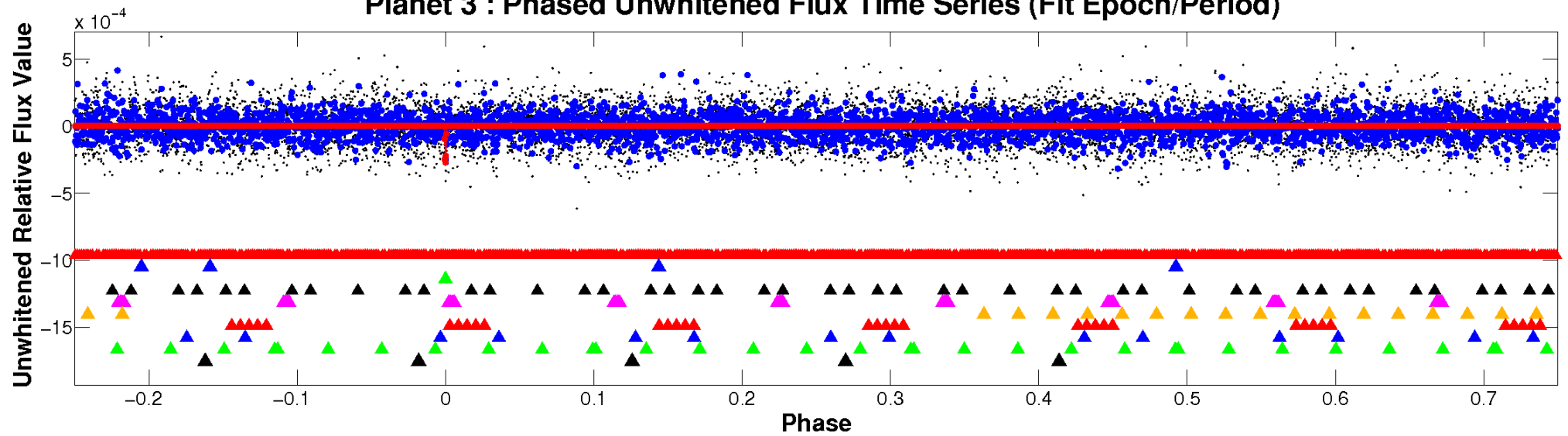
ALT Odd/Even

TCE 011569443-03

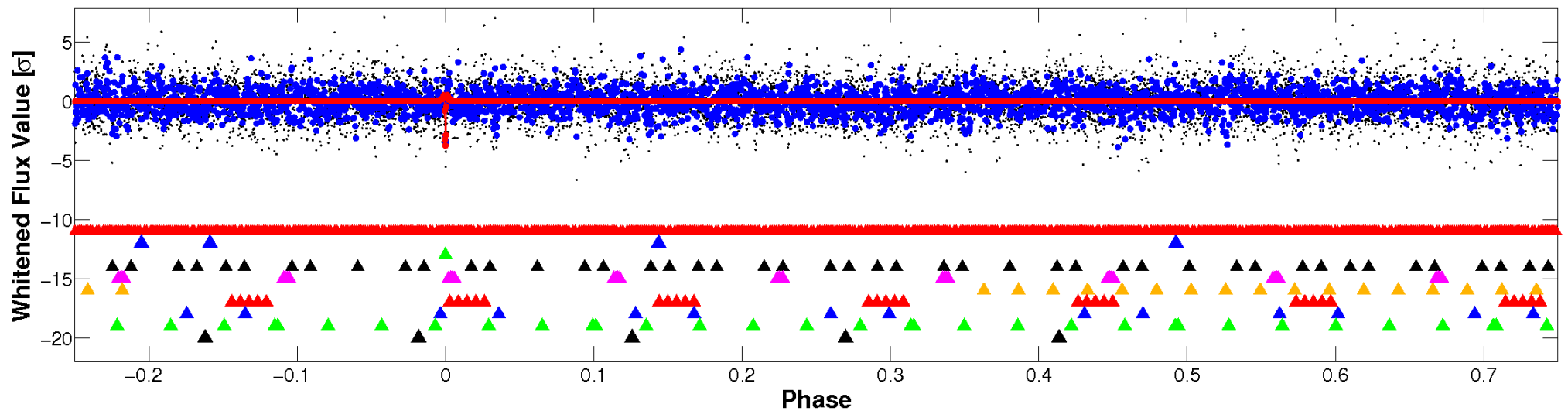


Non-Whitened Vs. Whitened Light Curve

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

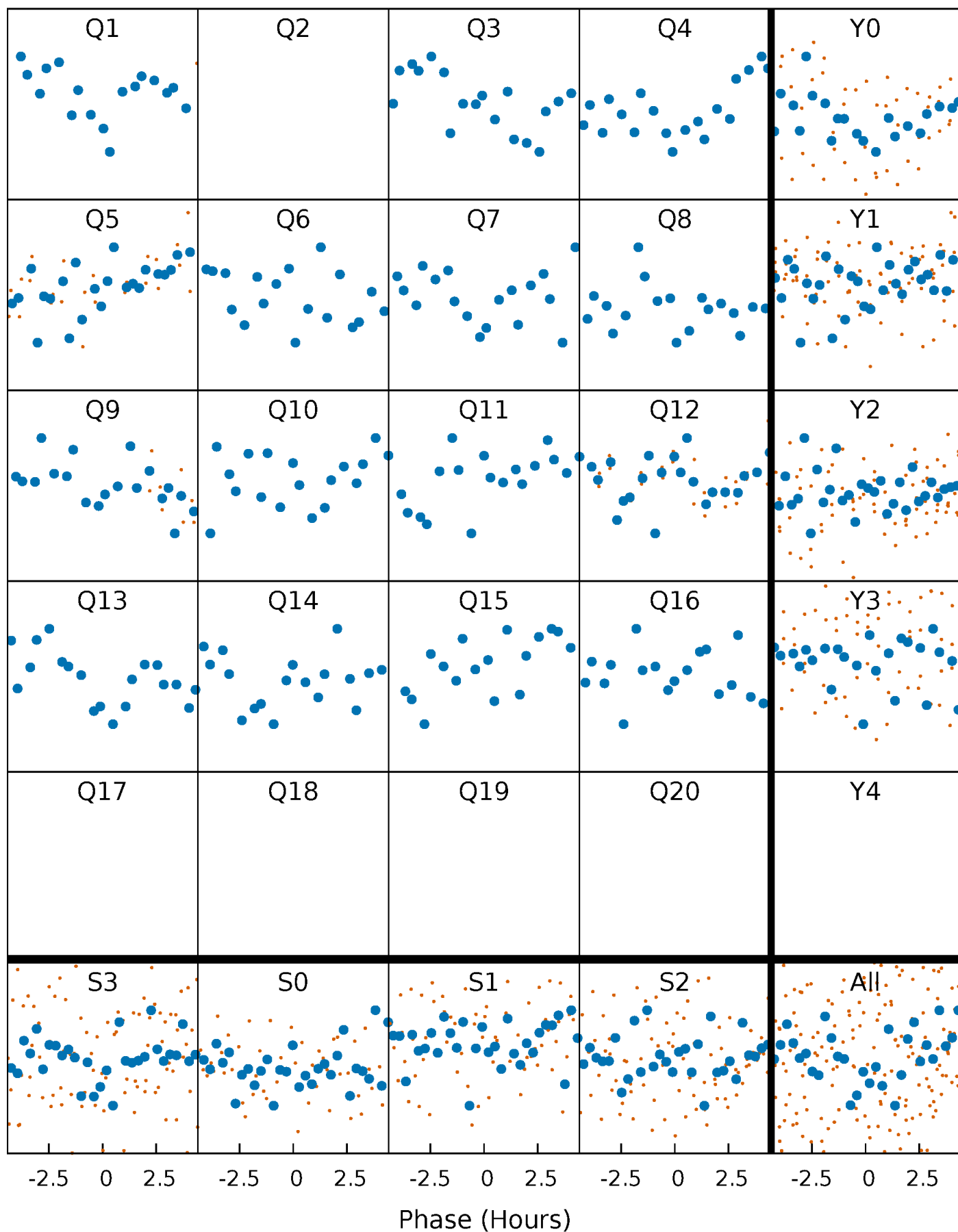


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



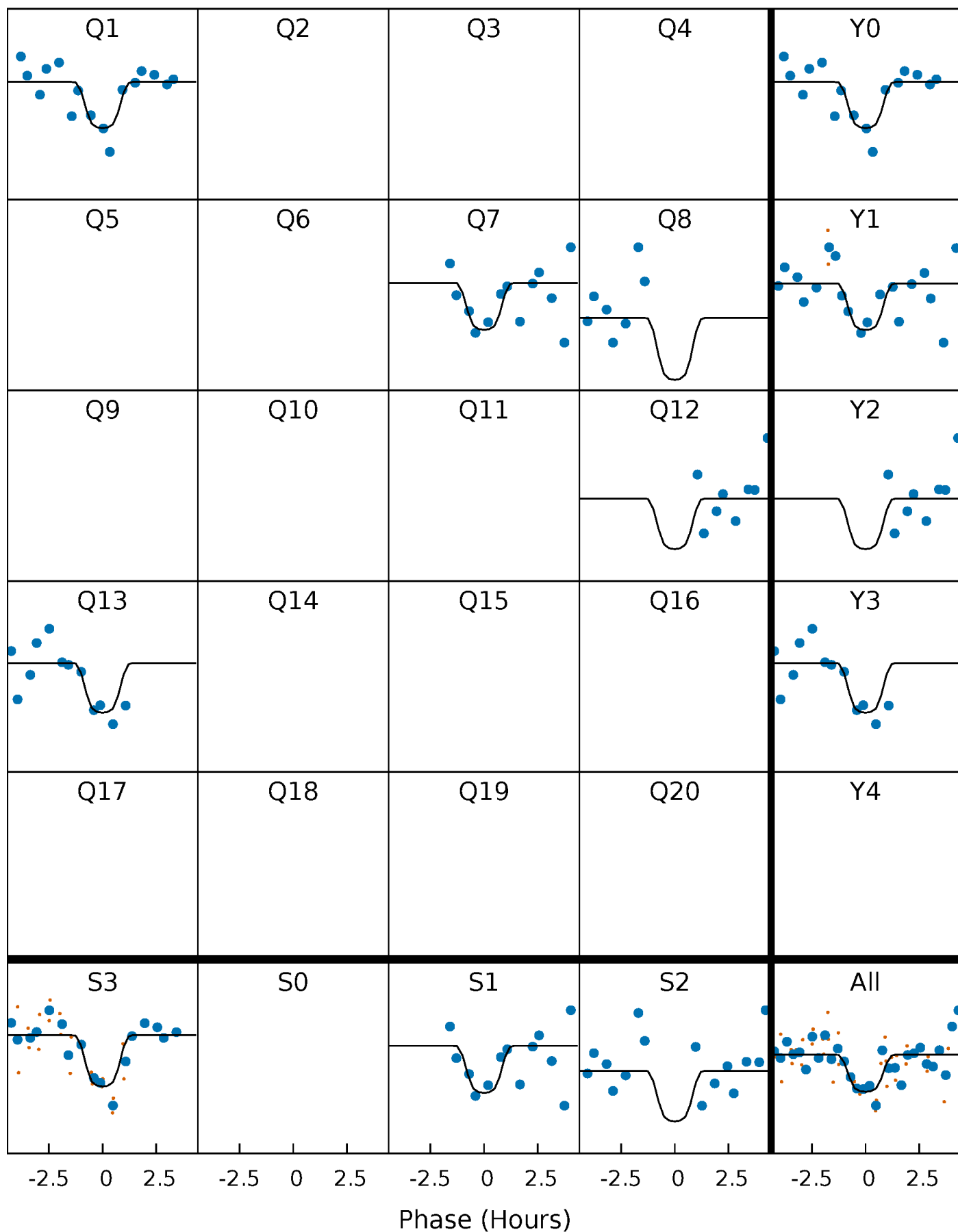
PDC Quarter-Phased Transit Curves

TCE 011569443-03 P= 72.987289 Days $T_0=157.607486$ (BKJD)



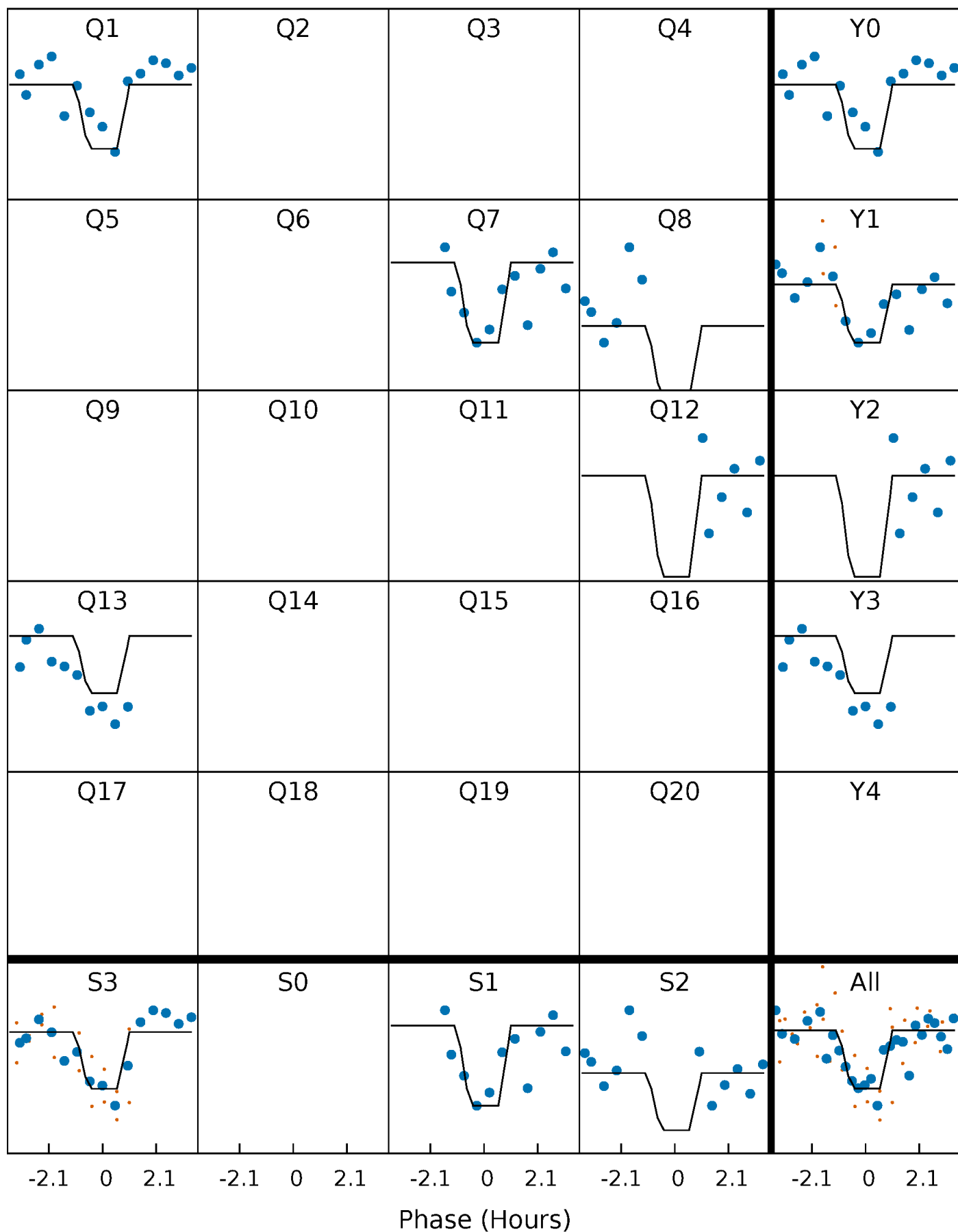
DV Quarter-Phased Transit Curves

TCE 011569443-03 $P = 72.987289$ Days $T_0 = 157.607486$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

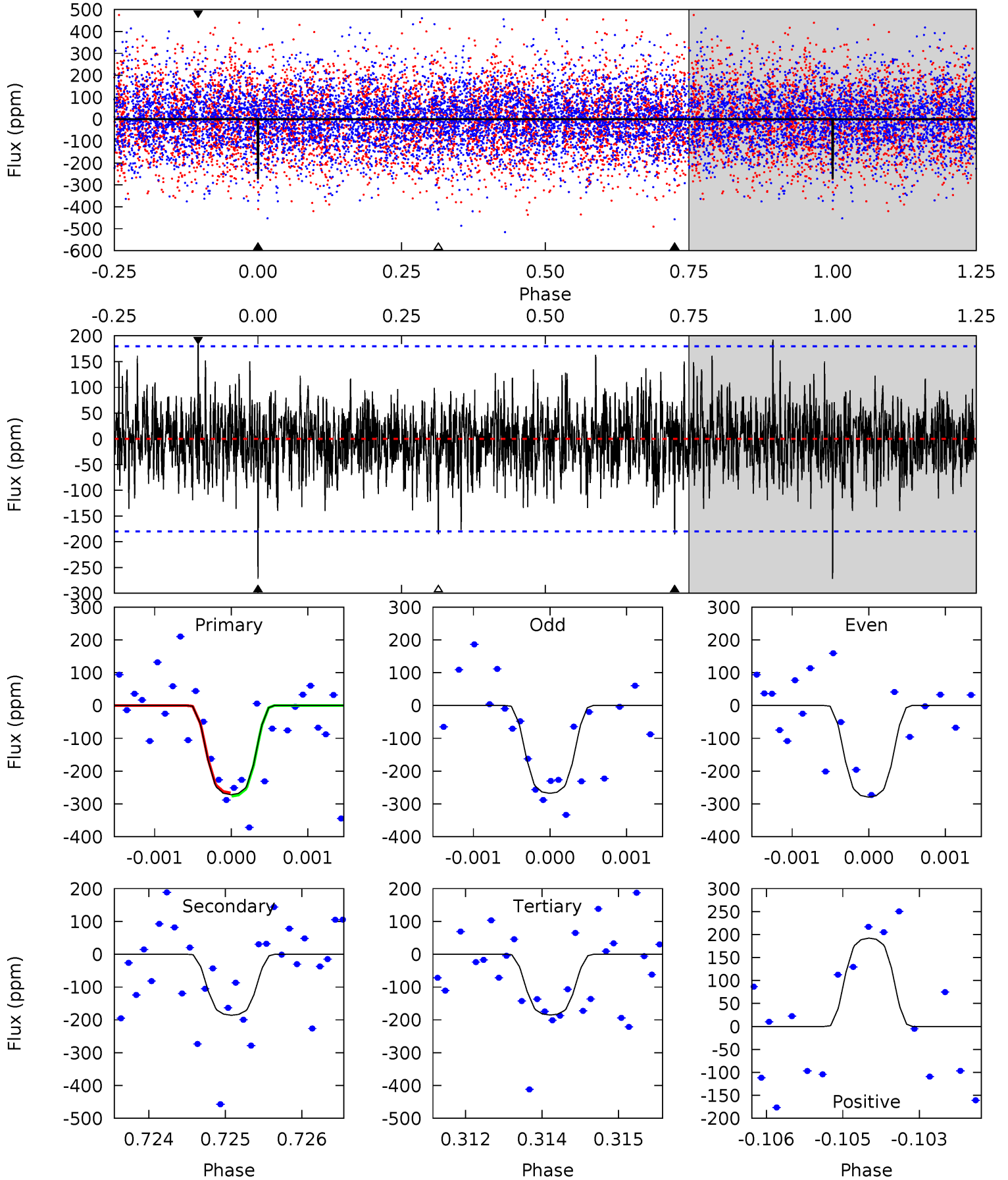
TCE 011569443-03 P= 72.987393 Days $T_0=157.603583$ (BKJD)



DV Model-Shift Uniqueness Test

011569443-03, P = 72.987289 Days, E = 84.620197 Days

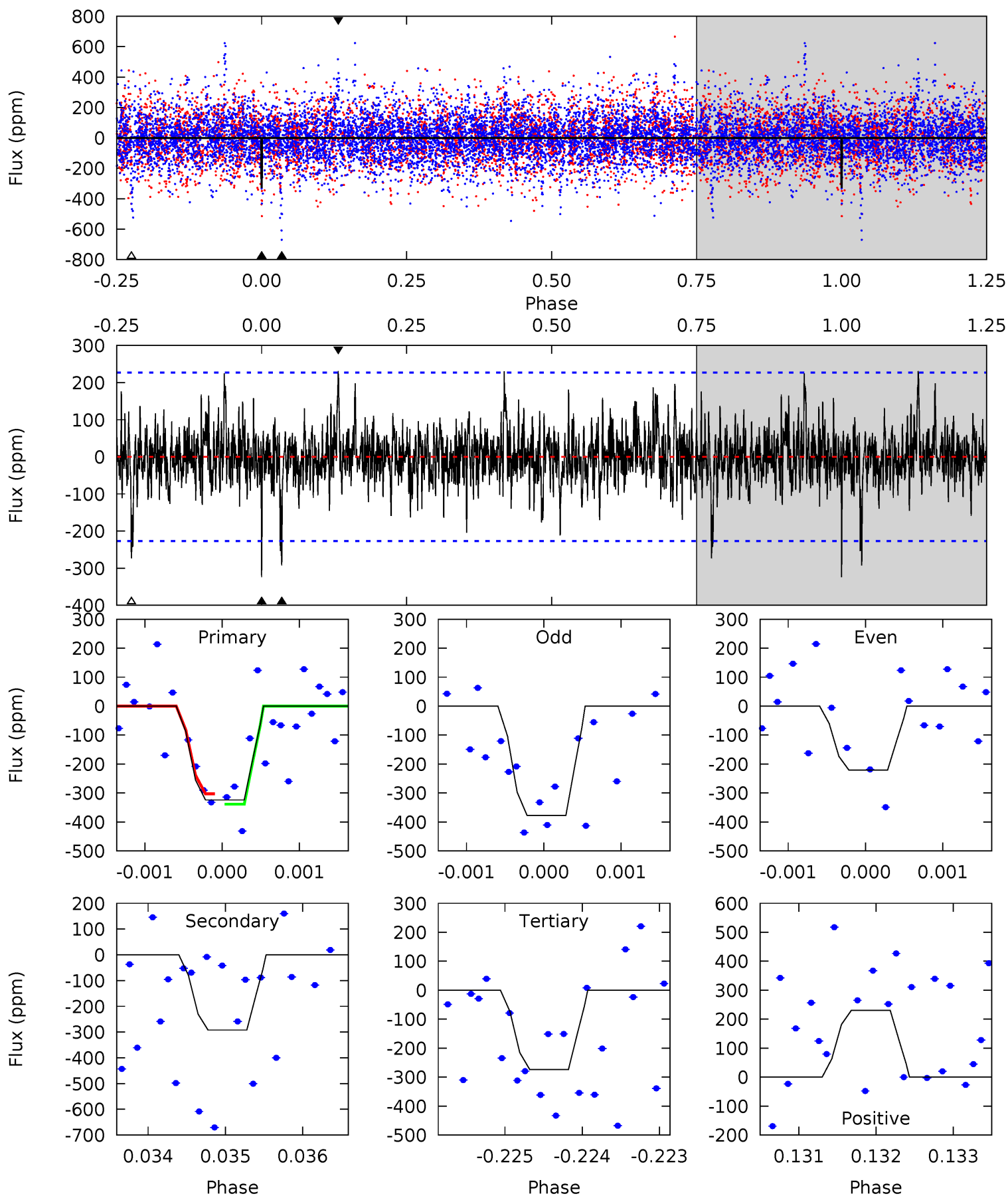
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.15	5.57	5.55	5.76	5.39	3.19	1.44	2.60	2.39	0.02	-0.19	0.16	0.94	0.41	0.15



Alt Model-Shift Uniqueness Test

011569443-03, P = 72.987393 Days, E = 84.616190 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.75	6.99	6.54	5.52	5.43	3.26	1.41	1.21	2.22	0.45	1.47	1.92	1.14	0.42	0.43



Stellar Parameters For KIC 011569443

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6685^{+187}_{-281}	$4.187^{+0.136}_{-0.204}$	$0.040^{+0.250}_{-0.350}$	$1.557^{+0.494}_{-0.329}$	$1.358^{+0.214}_{-0.235}$	$0.507^{+0.389}_{-0.251}$
	+3%/-4%	+3%/-5%	+625%/-875%	+32%/-21%	+16%/-17%	+77%/-50%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 011569443-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-186 ± 33	$3.35^{+1.23}_{-1.12}$	843^{+71}_{-58}	5576^{+1235}_{-681}	1286^{+1548}_{-613}
Alt.	-292 ± 42	$3.12^{+1.26}_{-1.03}$	841^{+71}_{-55}	6495^{+1580}_{-1001}	2345^{+2666}_{-1163}

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

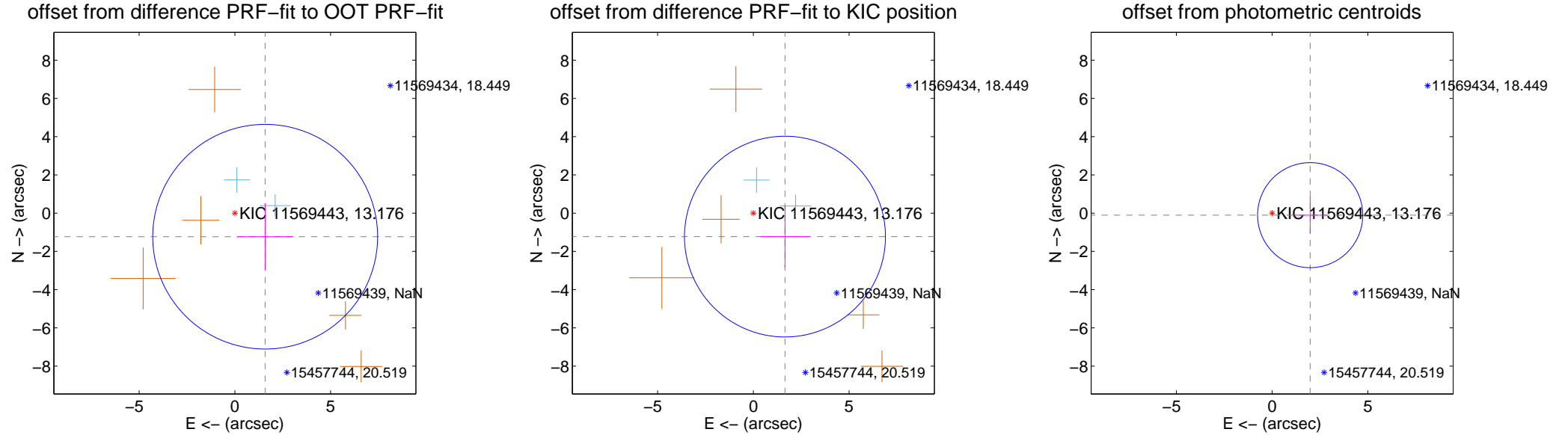
DV Centroid Data

Supplemental centroid analysis for 011569443-03. Kepler magnitude: 13.18. Transit SNR 10.51

There are 2 quarters with good PRF difference image offsets

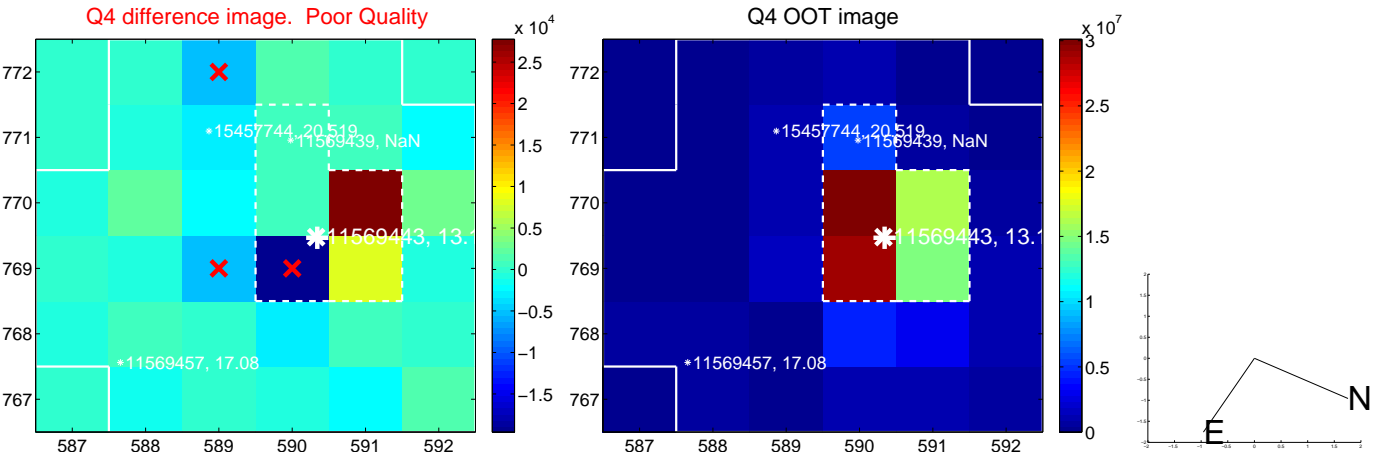
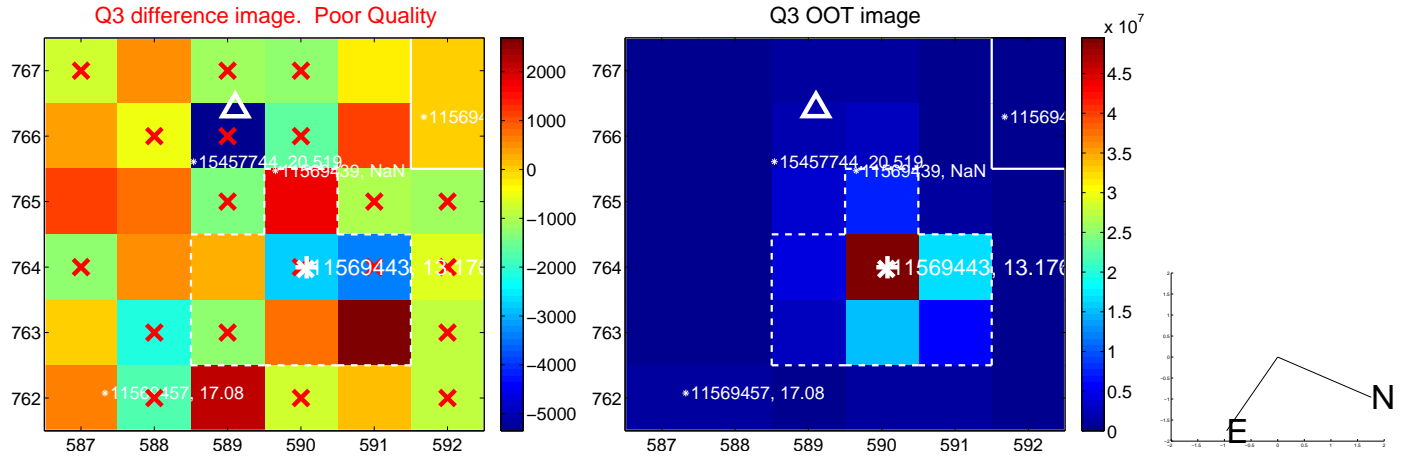
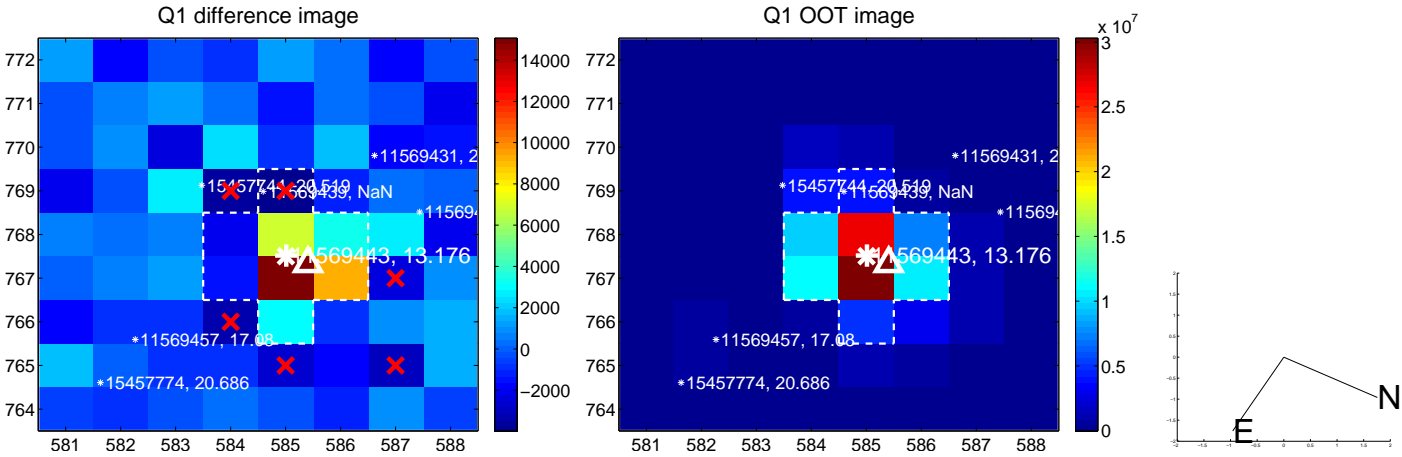
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.007 ± 1.958	1.02	-1.584 ± 1.478	-1.232 ± 1.731
PRF-fit source offset from KIC position	2.058 ± 1.750	1.18	-1.652 ± 1.299	-1.227 ± 1.624
photometric centroid source offset	1.99 ± 0.92	2.18	-1.99 ± 0.92	-0.10 ± 0.97

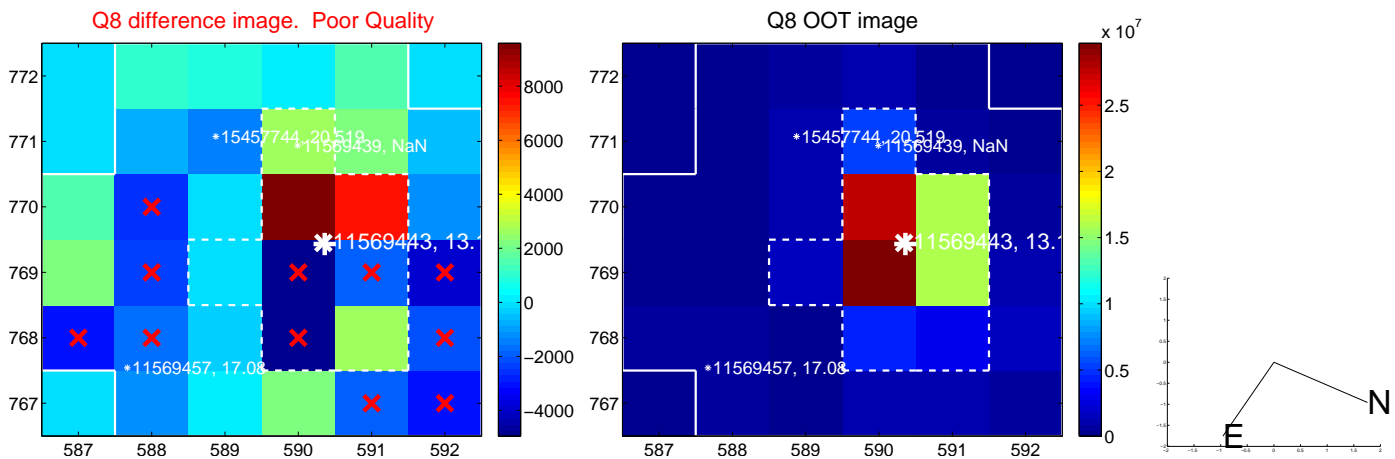
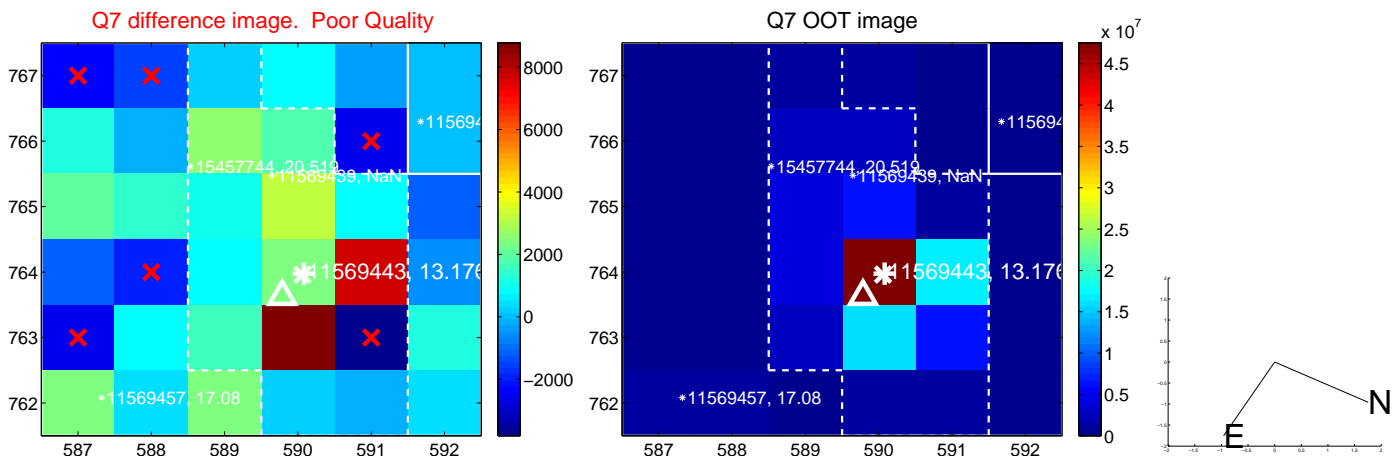
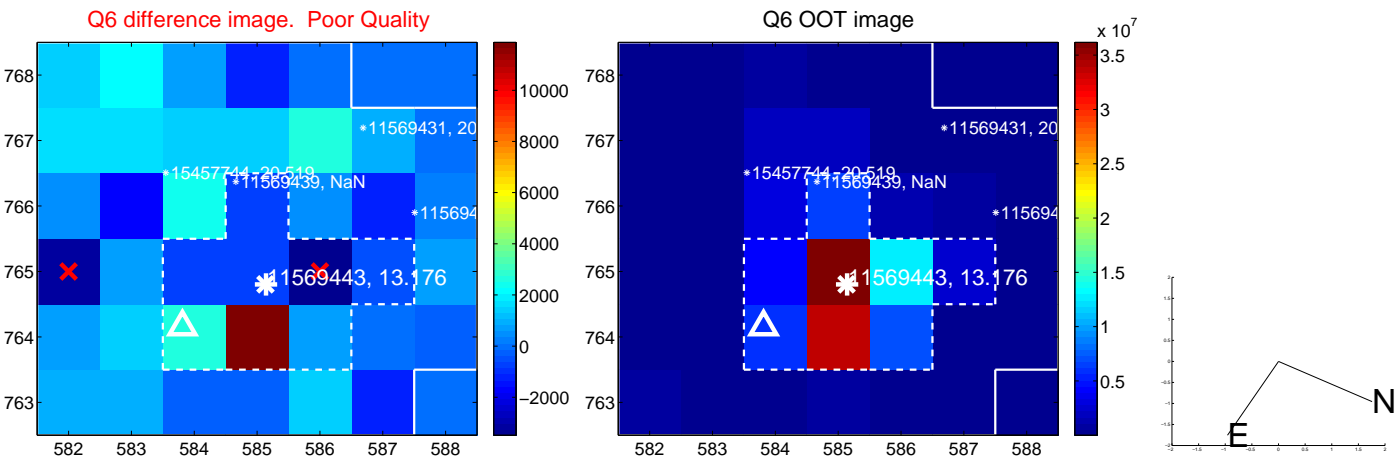
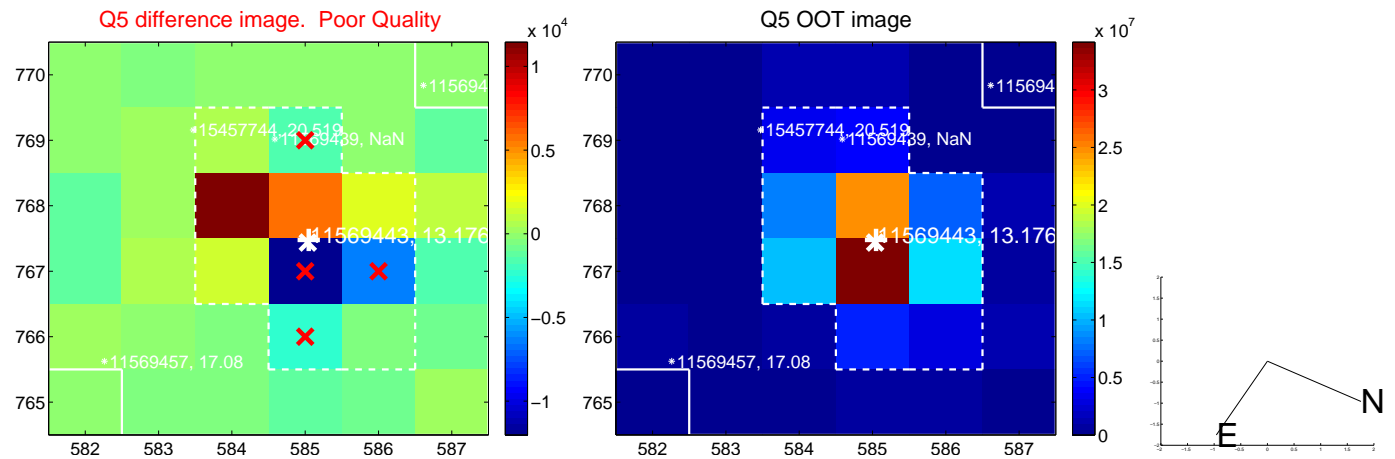


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

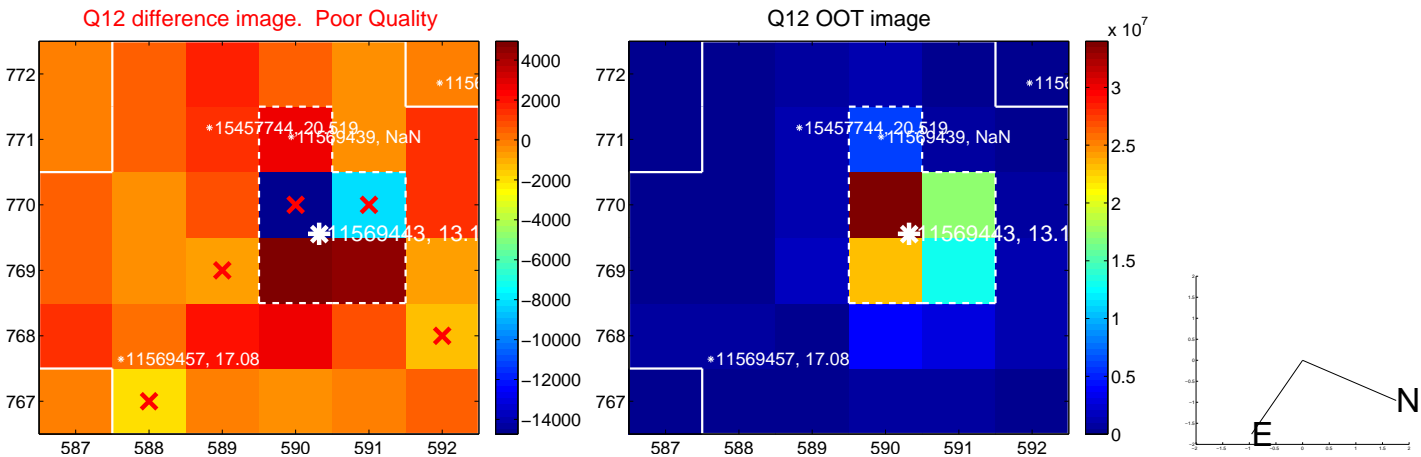
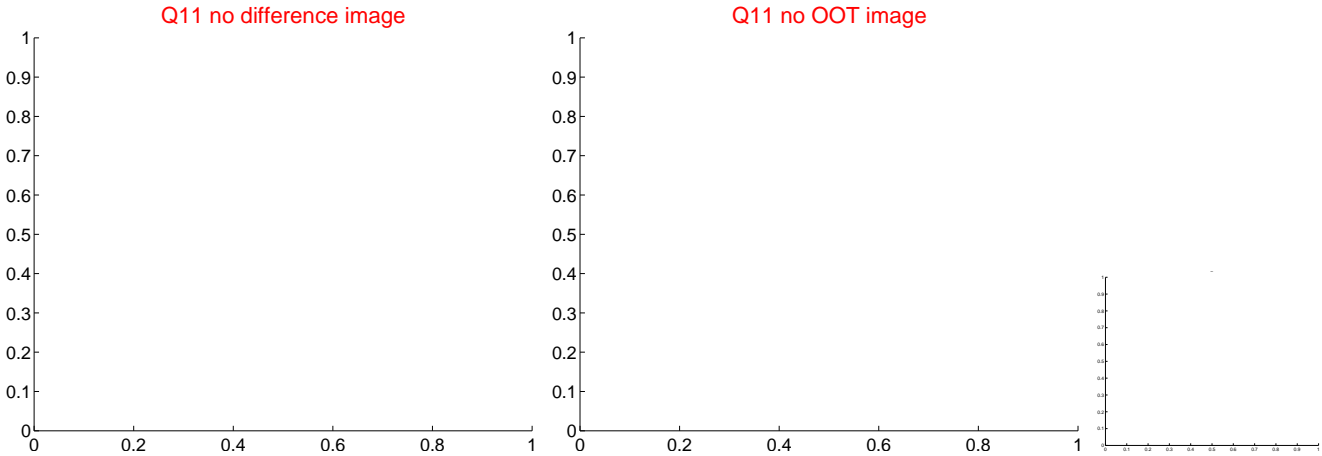
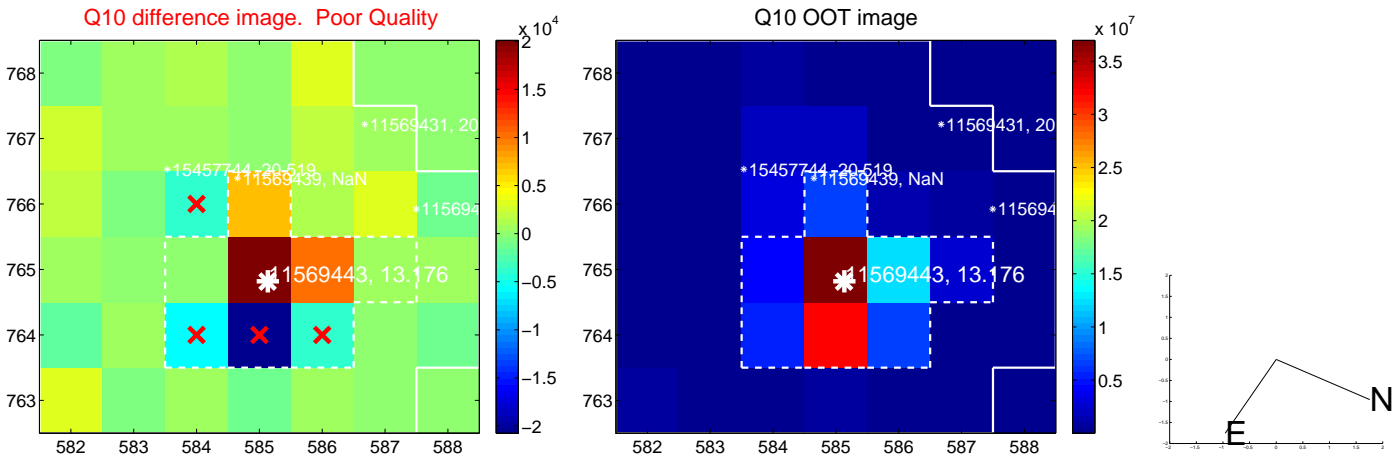
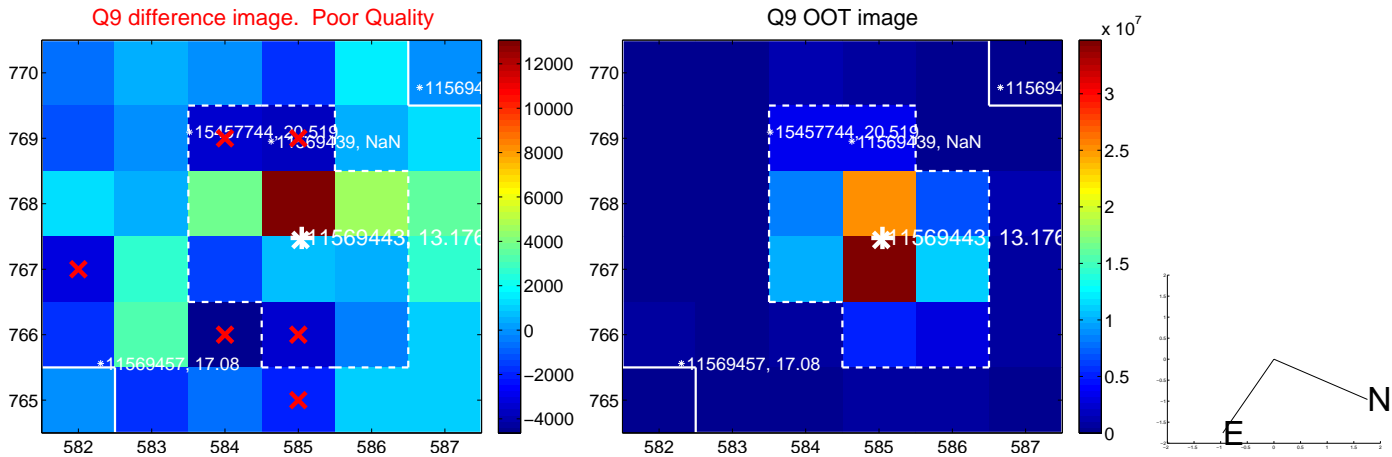
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



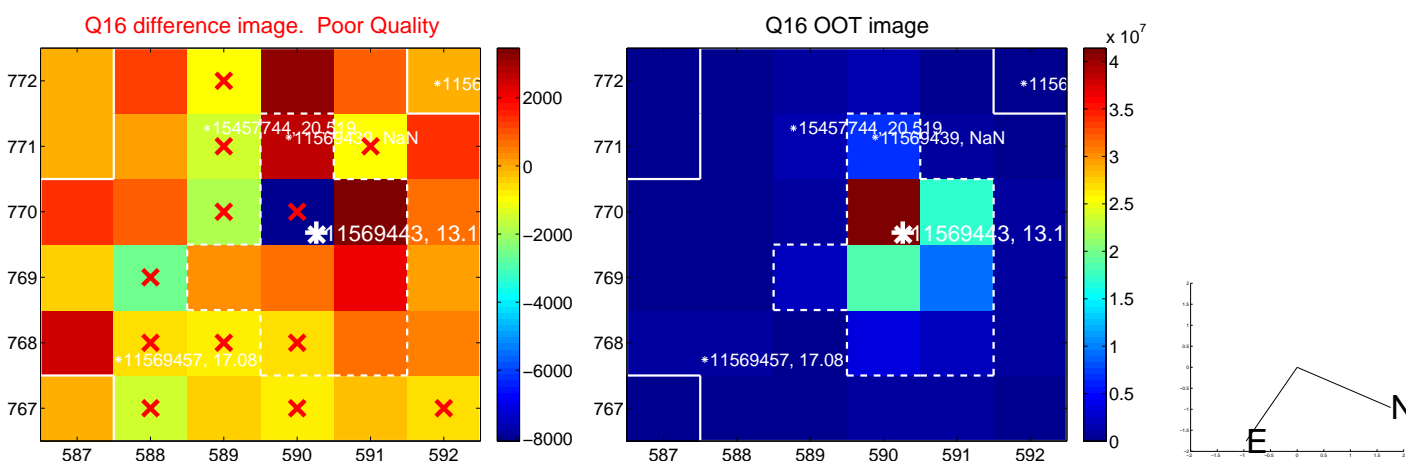
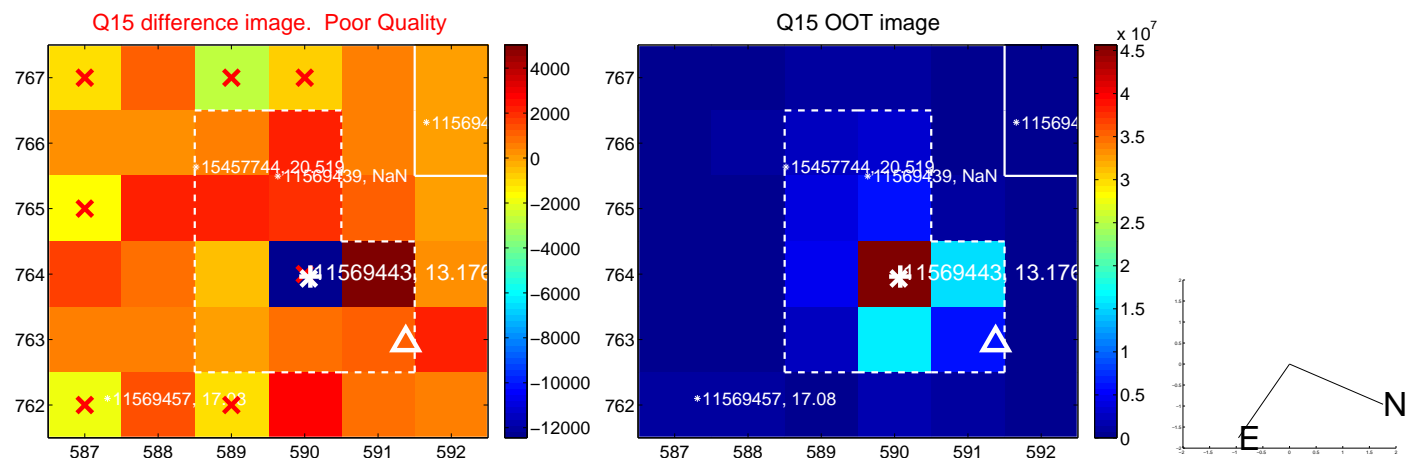
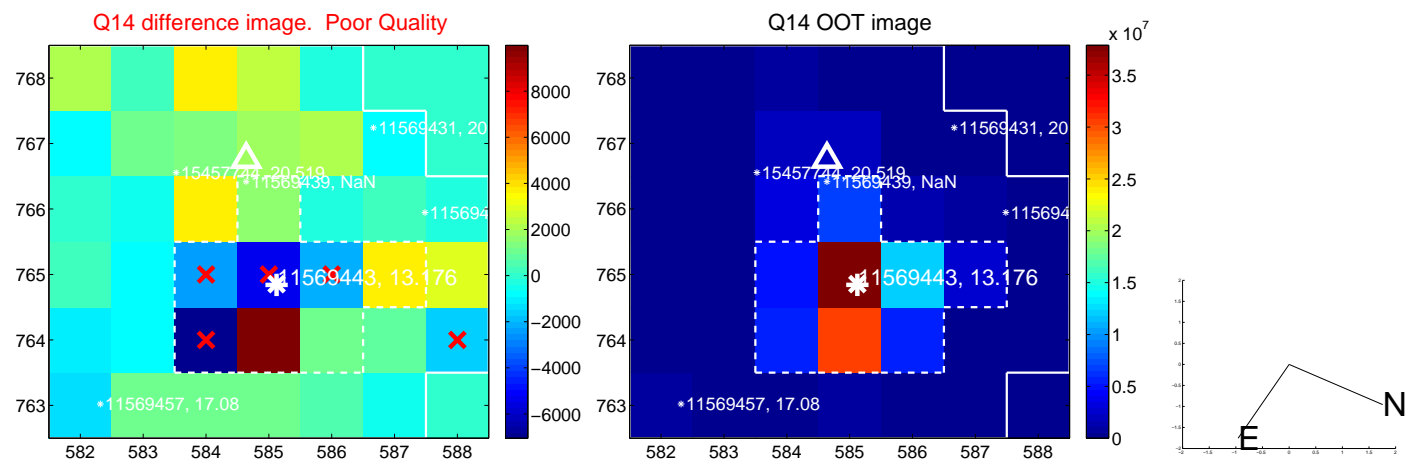
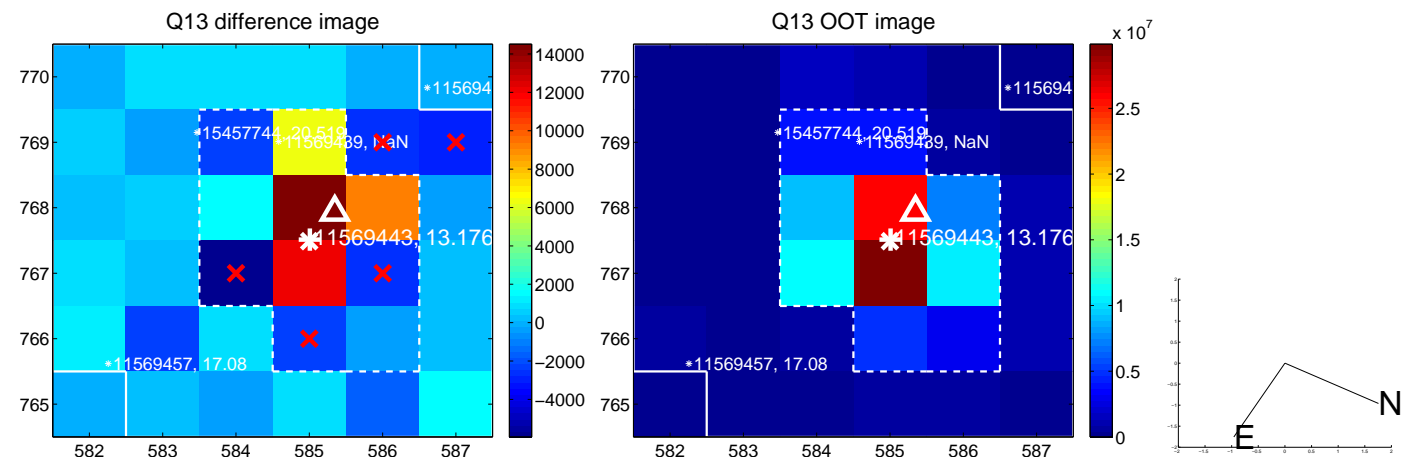
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



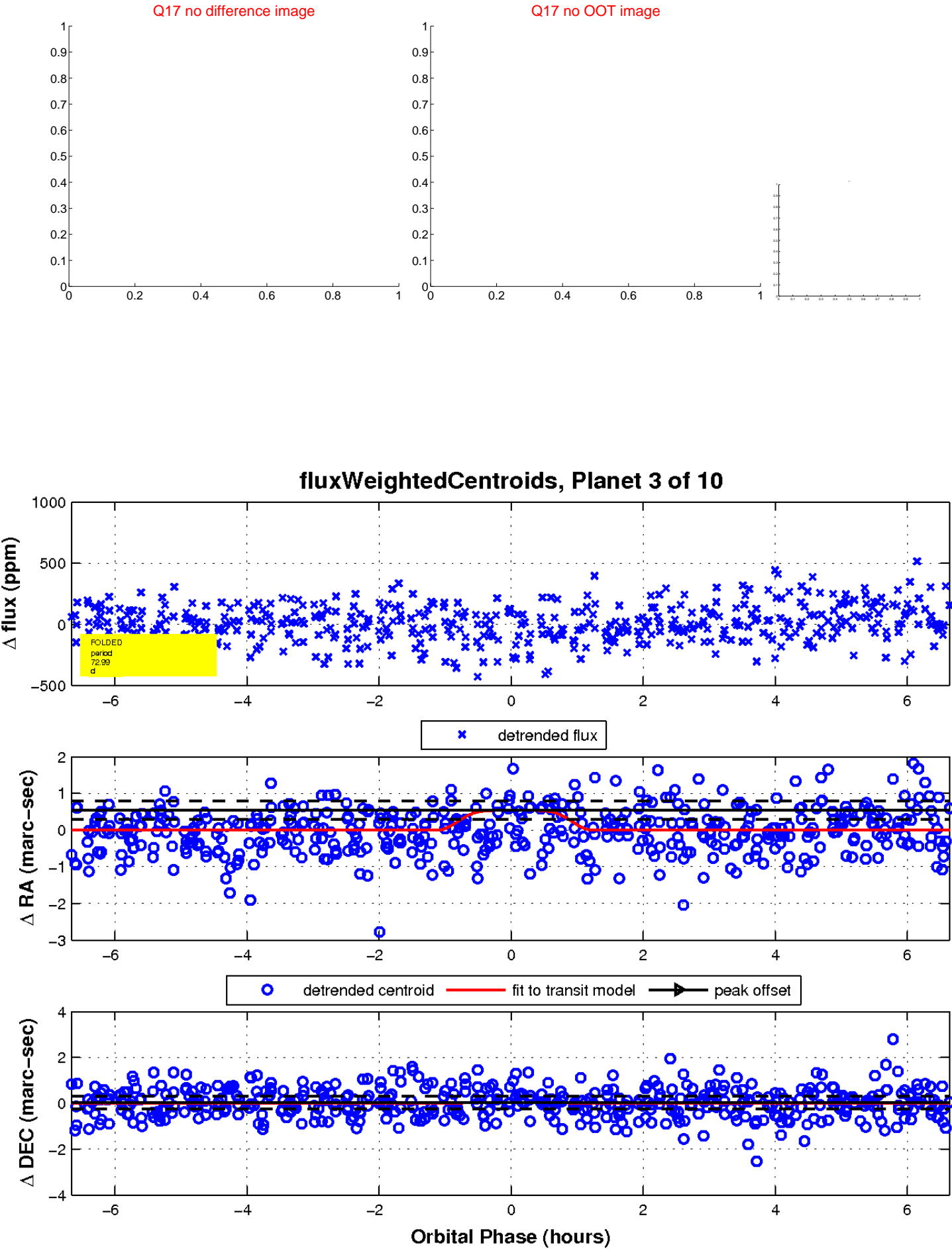
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

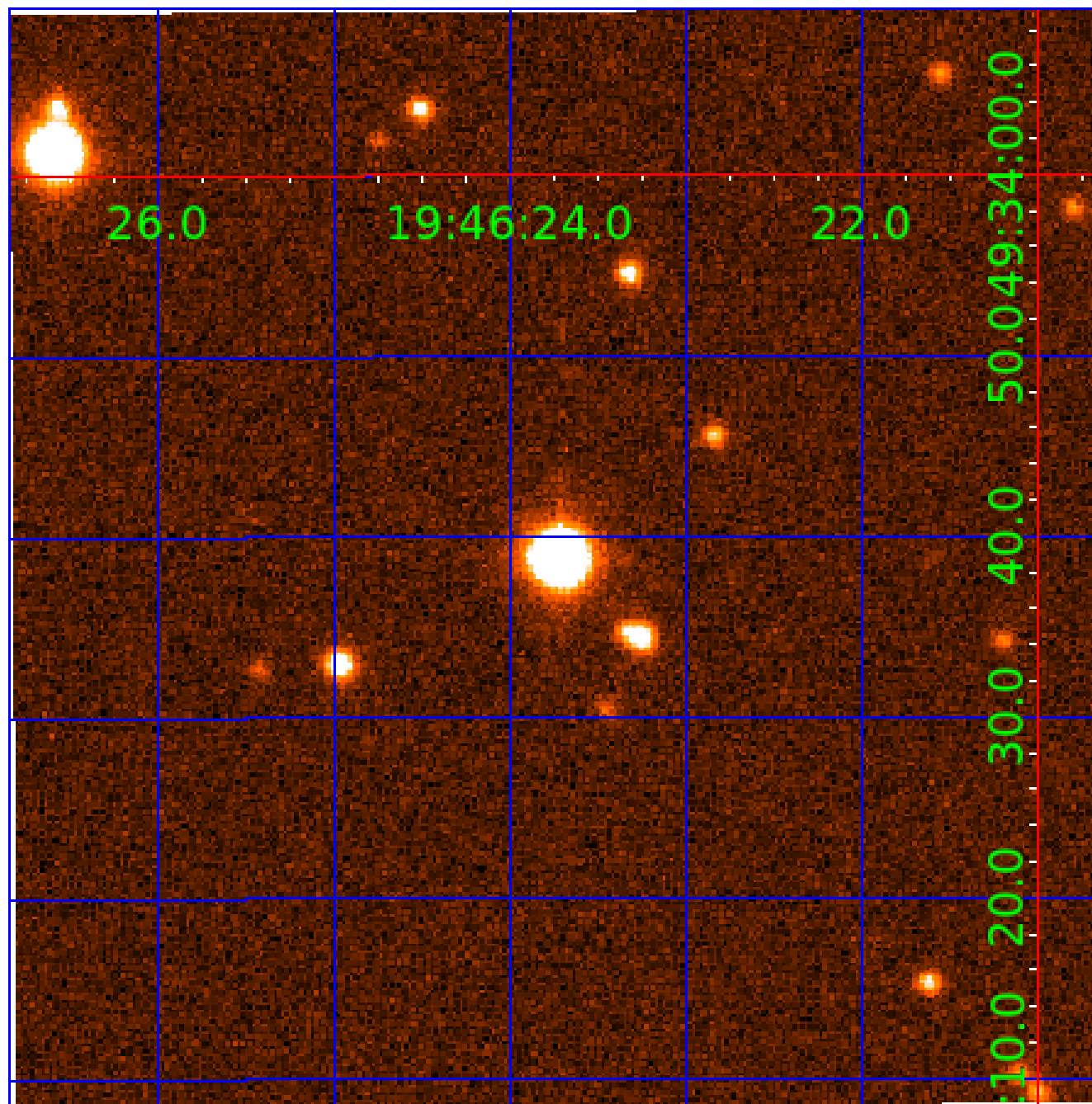


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011569443

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})
011569443-01	OBS	No	2.344129	132.983449	25.4	15.857	8.1	8.4	1.56	6685	0.92	2961.54
011569443-02	OBS	No	412.469578	146.020096	168.6	8.779	10.2	8.4	1.56	6685	2.21	3.00
011569443-03	OBS	No	72.987289	157.607486	270.7	2.219	9.4	10.5	1.56	6685	3.28	30.23
011569443-04	OBS	No	32.077750	145.382778	159.8	4.570	9.1	9.2	1.56	6685	2.15	90.48
011569443-05	OBS	No	40.558747	133.378934	266.8	1.247	8.6	9.0	1.56	6685	2.59	66.18
011569443-06	OBS	No	74.686409	184.106204	190.2	6.743	8.7	9.4	1.56	6685	2.36	29.32
011569443-07	OBS	No	41.646178	159.524234	203.5	2.180	8.0	8.8	1.56	6685	2.64	63.88
011569443-08	OBS	No	104.678723	217.862789	306.0	1.405	8.2	7.6	1.56	6685	3.19	18.69
011569443-09	OBS	No	44.318975	149.204173	184.9	2.422	7.8	8.1	1.56	6685	2.45	58.80
011569443-10	OBS	No	281.444595	187.802605	249.5	12.521	9.4	11.2	1.56	6685	2.77	5.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011569443-01	OBS	FP	0.00	1	0	0	0	LPP_DV
011569443-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
011569443-03	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
011569443-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011569443-05	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_FEW_DIFFS—HALO_GHOST
011569443-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
011569443-07	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011569443-08	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_MEAS
011569443-09	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011569443-10	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS—HALO_GHOST

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

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

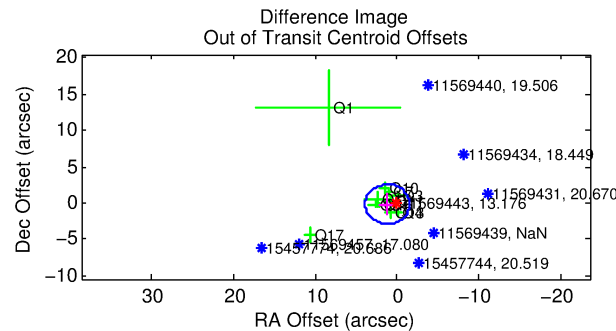
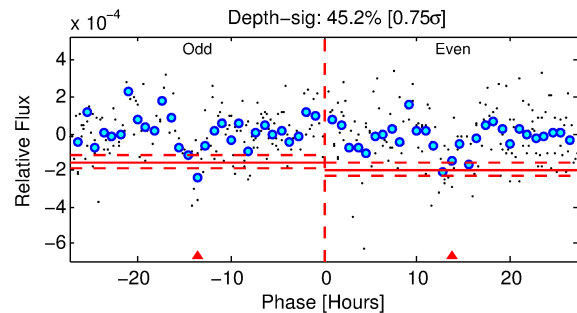
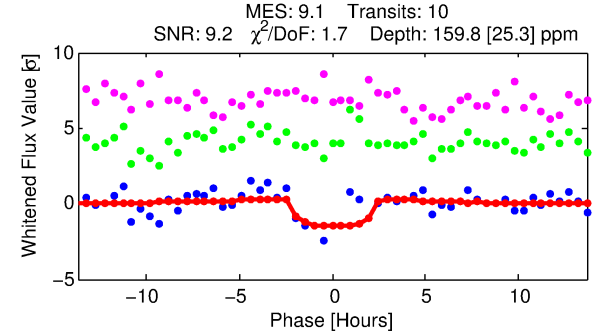
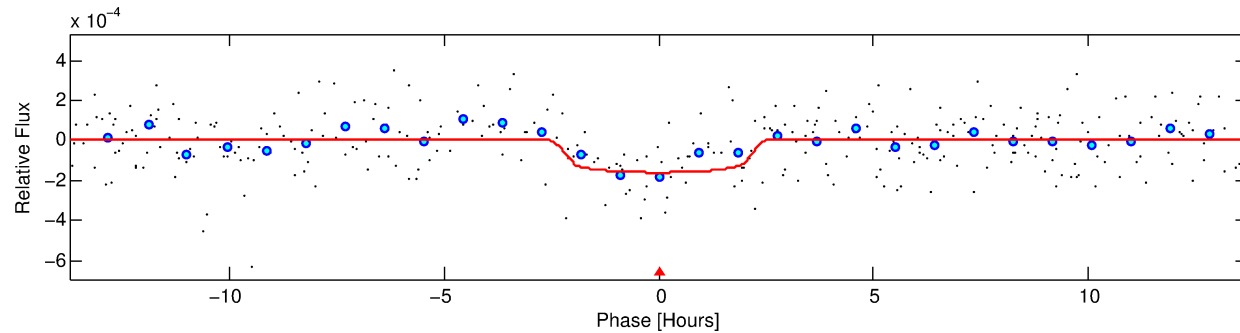
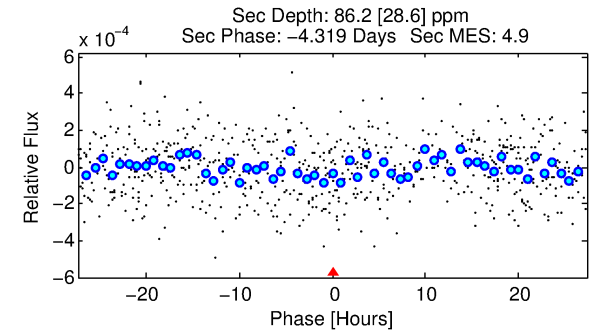
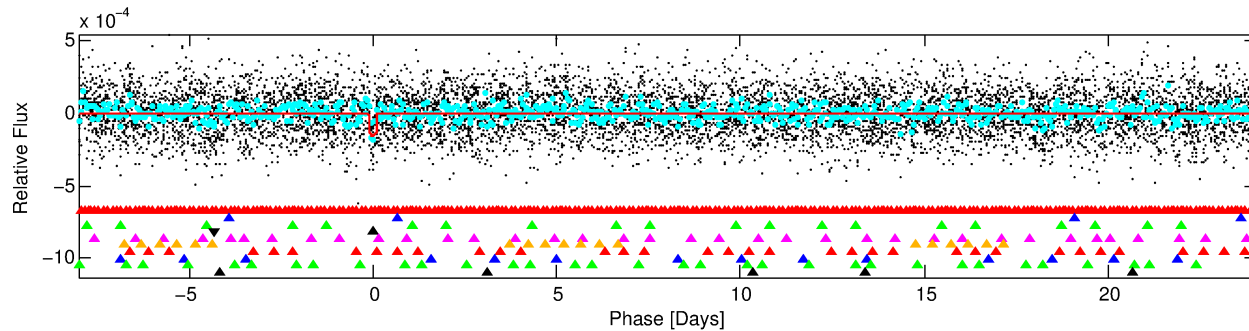
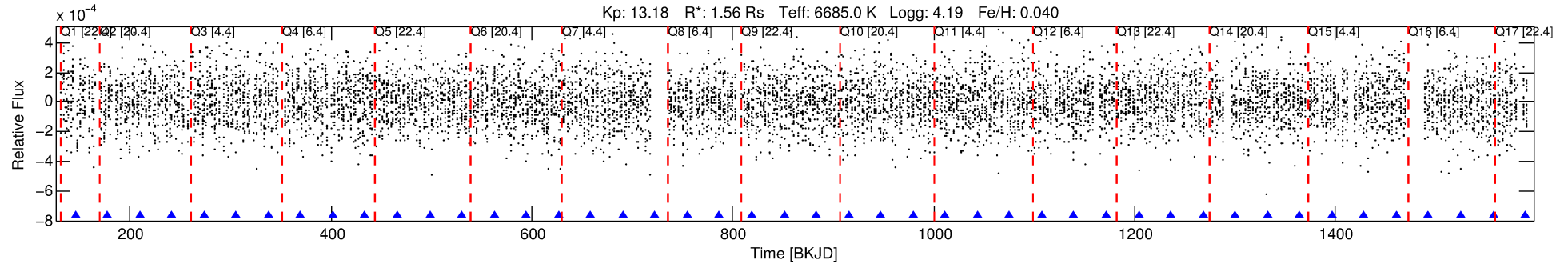
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011569443-04

No Significant Match Found

DV One-Page Summary

KIC: 11569443 Candidate: 4 of 10 Period: 32.078 d



DV Fit Results:

Period = 32.07775 [0.00051] d
Epoch = 145.3828 [0.0142] BKJD
Rp/R* = 0.0126 [0.0097]
a/R* = 35.62 [152.42]
b = 0.76 [2.33]
Seff = 90.48 [37.42]
Teq = 786 [81] K
Rp = 2.15 [1.78] Re
a = 0.2190 [0.0576] AU
Ag = 493.40 [797.92] [0.62σ]
Teffp = 5731 [2266] K [2.18σ]

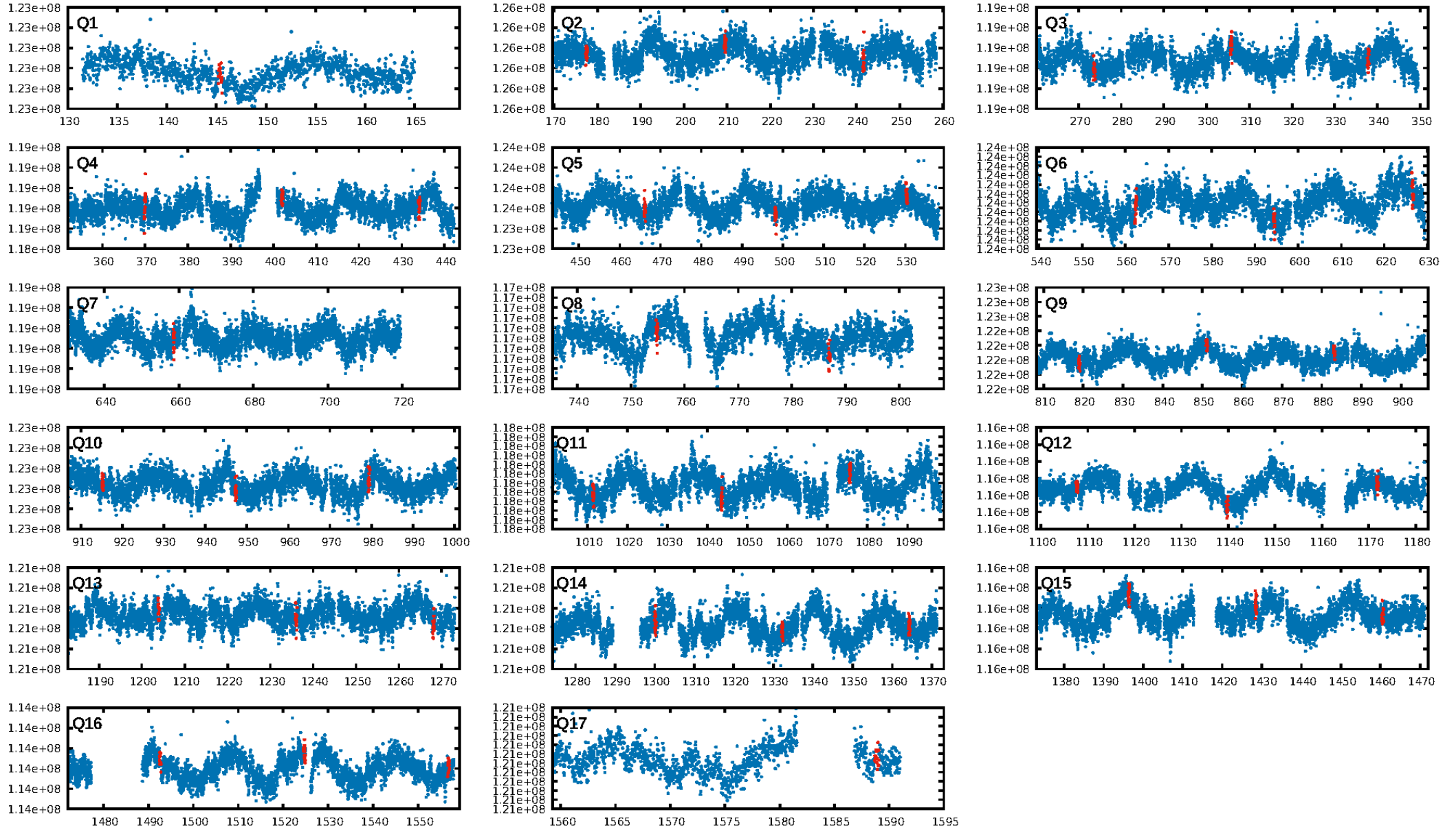
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [43.24σ]
LongPeriod-sig: 100.0% [42.97σ]
ModelChiSquare2-sig: 28.2%
ModelChiSquareGoF-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [10/10]
GhostDiagnostic-chr: 0.6287
Centroid-sig: 42.9%
Centroid-so: 0.708 arcsec [1.14σ]
OotOffset-rm: 1.233 arcsec [1.36σ]
KicOffset-rm: 1.186 arcsec [1.21σ]
OotOffset-st: 1/3/4/3 [11]
KicOffset-st: 1/3/4/3 [11]
DiffImageQuality-fgm: 0.55 [6/11]
DiffImageOverlap-fno: 0.71 [12/17]

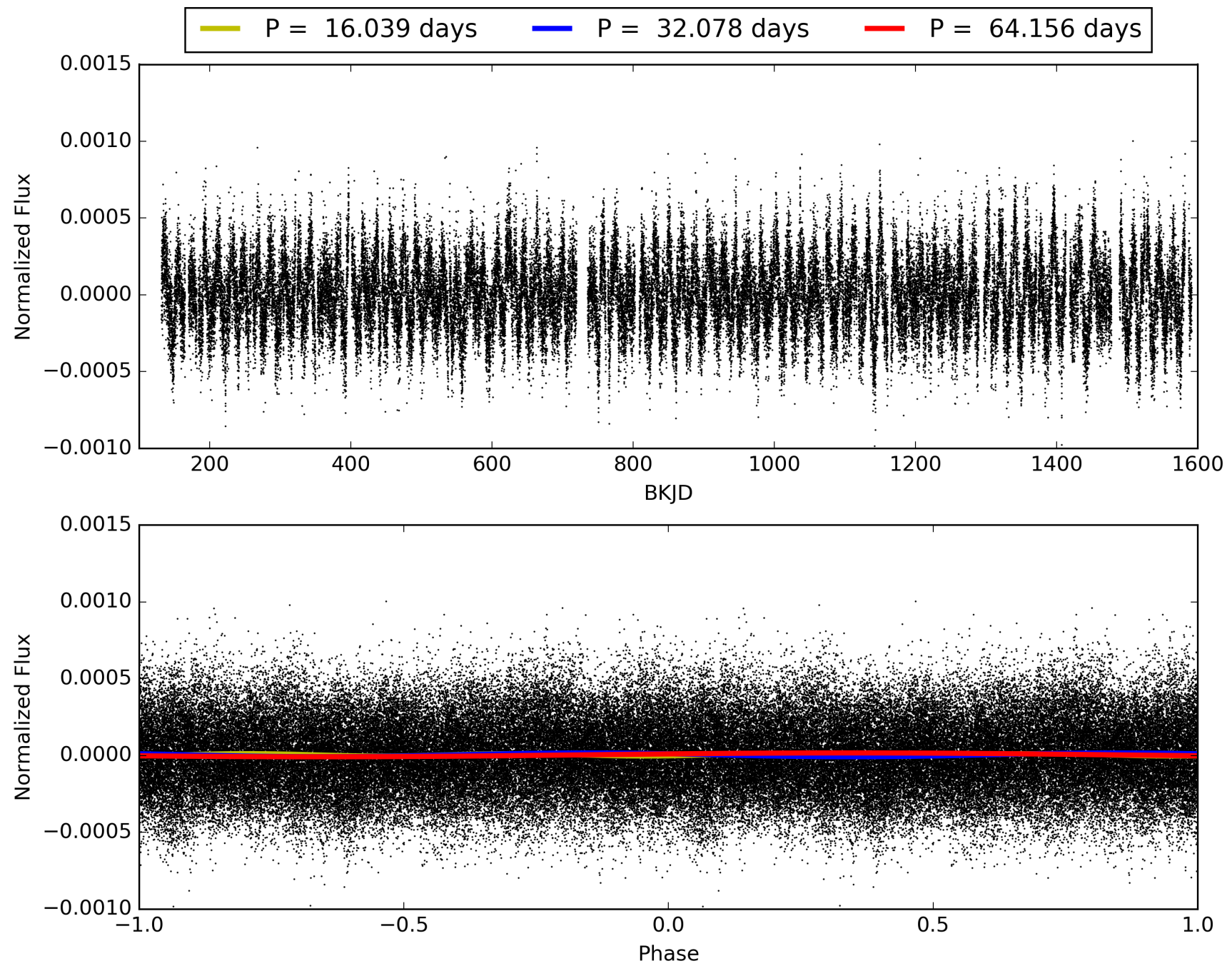
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:25:39 Z

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

TCE 011569443-04, PDC Light Curves

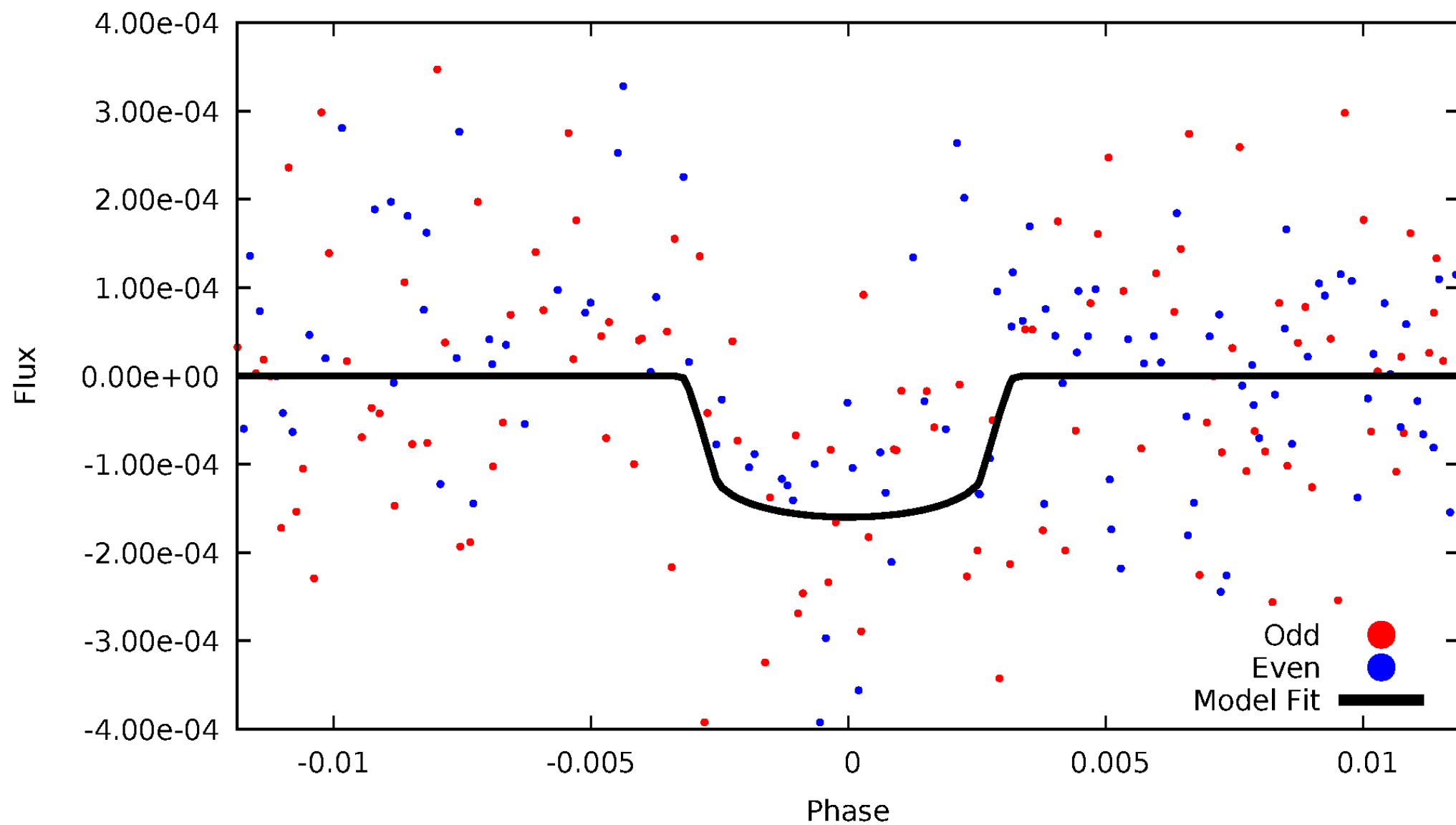


TCE 011569443-04



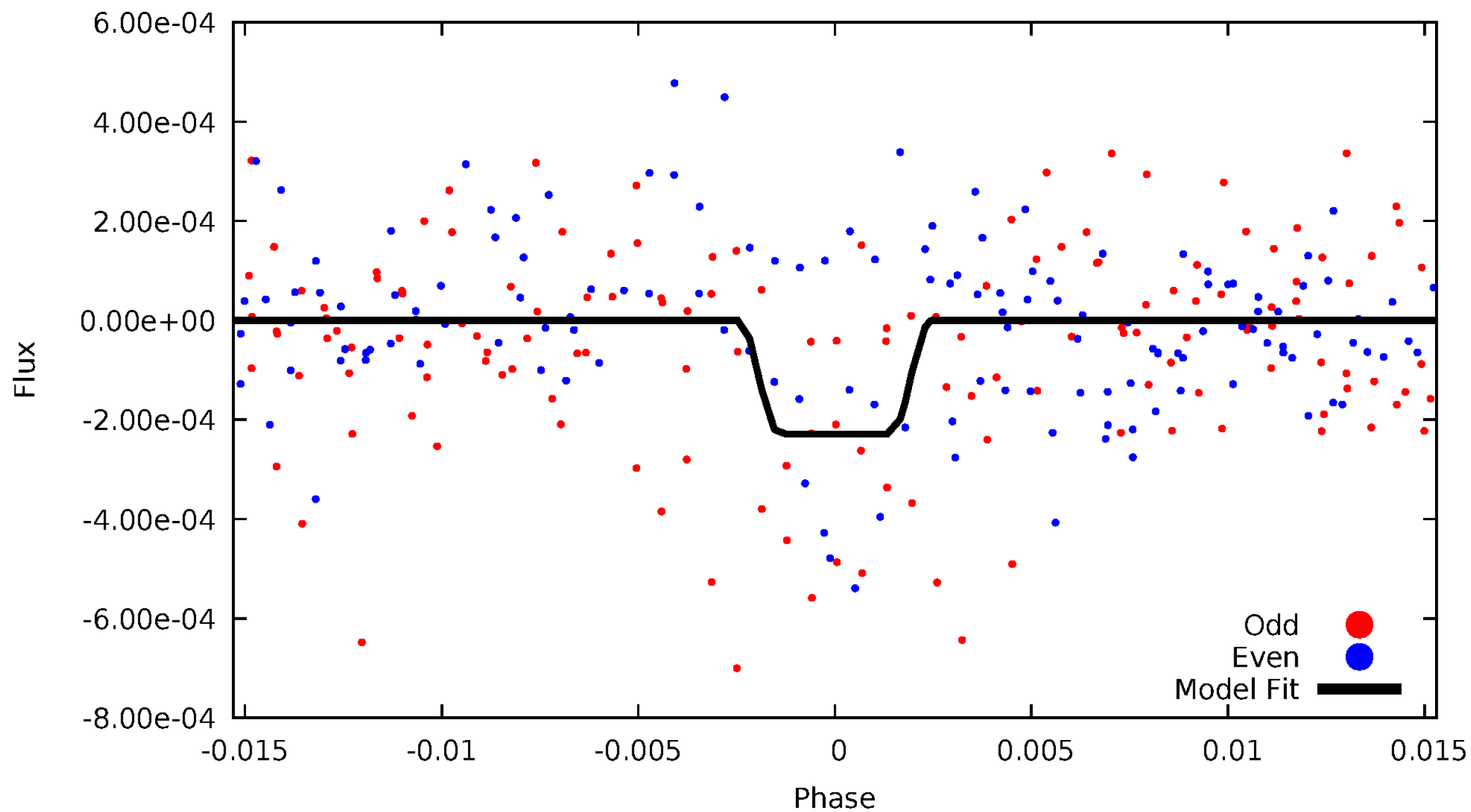
DV Odd/Even

TCE 011569443-04



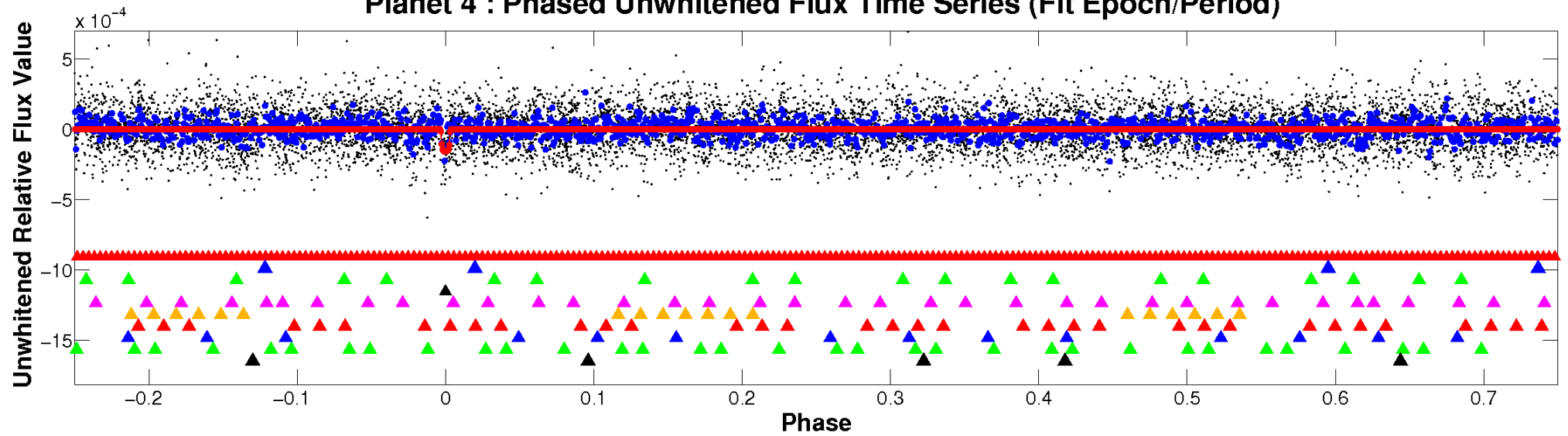
ALT Odd/Even

TCE 011569443-04

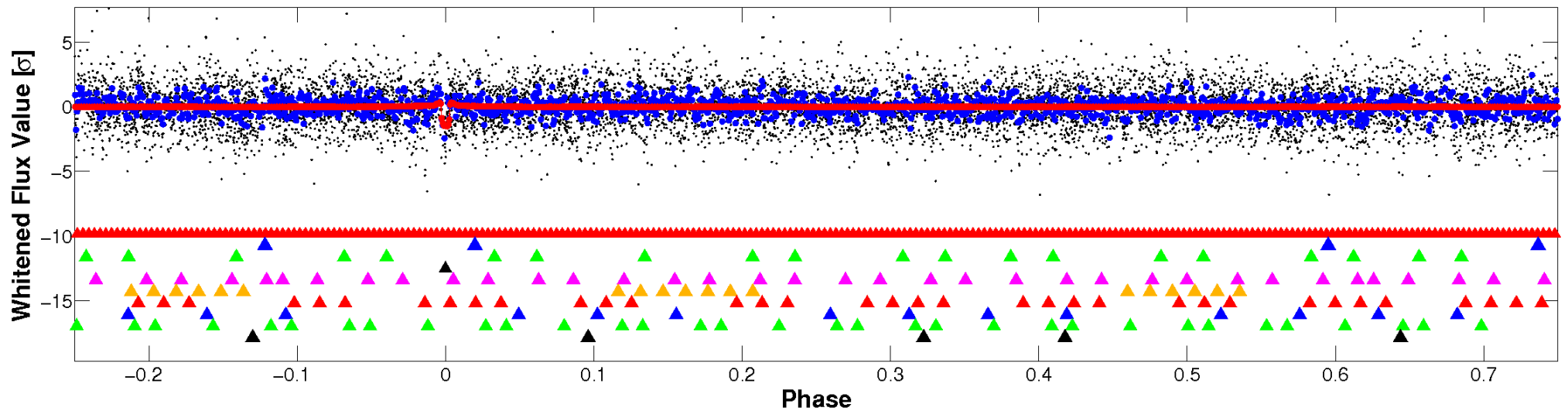


Non-Whitened Vs. Whitened Light Curve

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

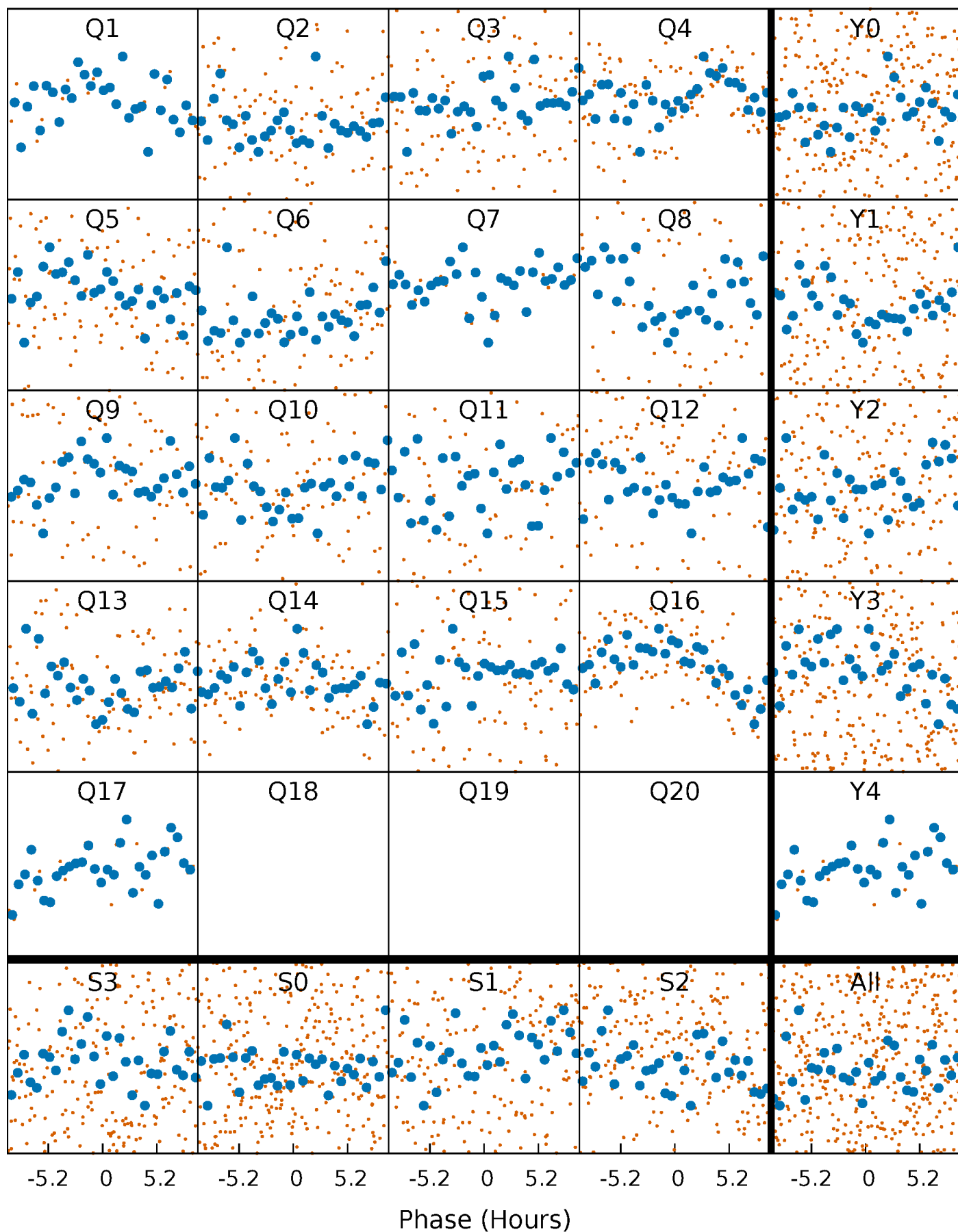


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



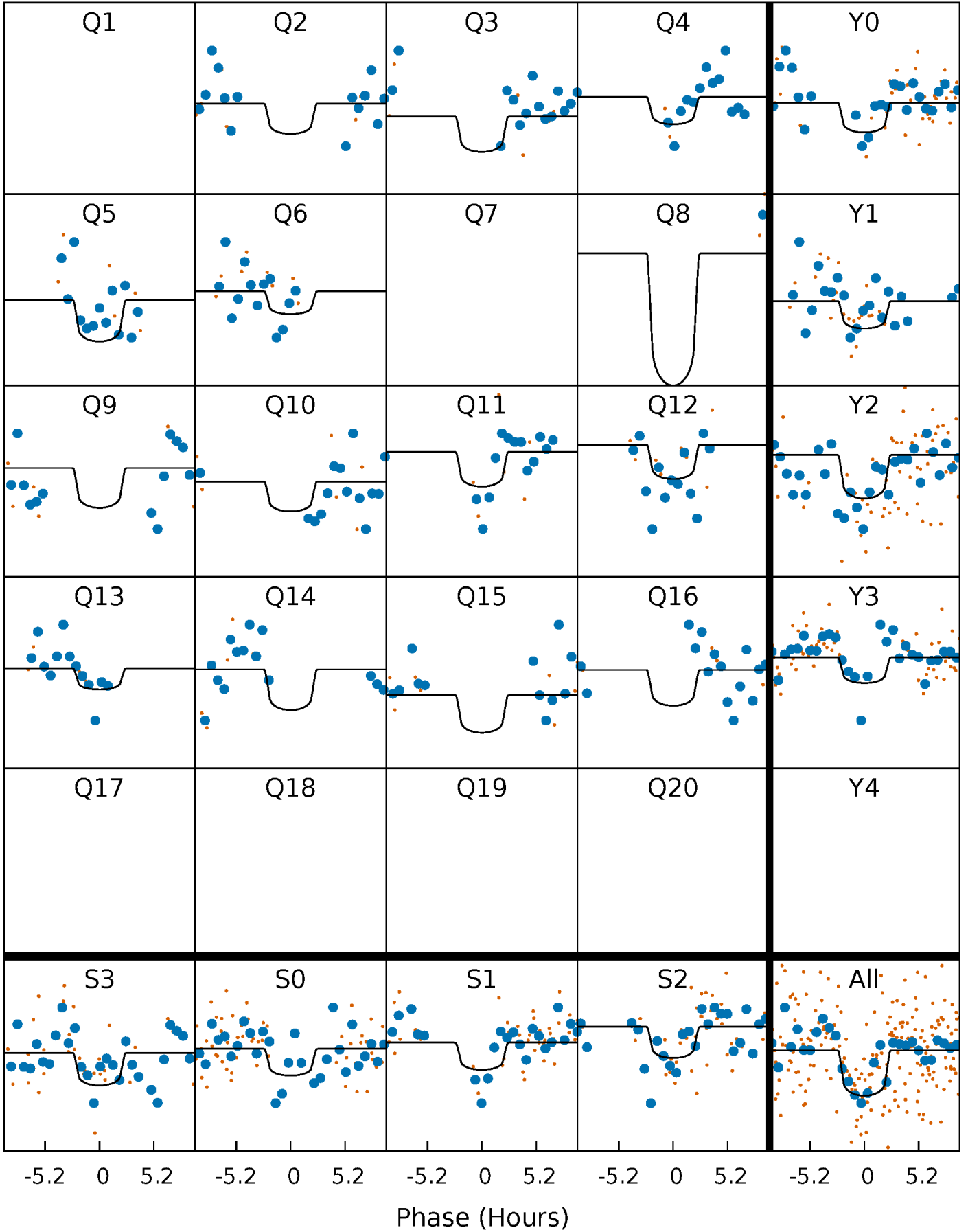
PDC Quarter-Phased Transit Curves

TCE 011569443-04 P= 32.077750 Days $T_0=145.382778$ (BKJD)



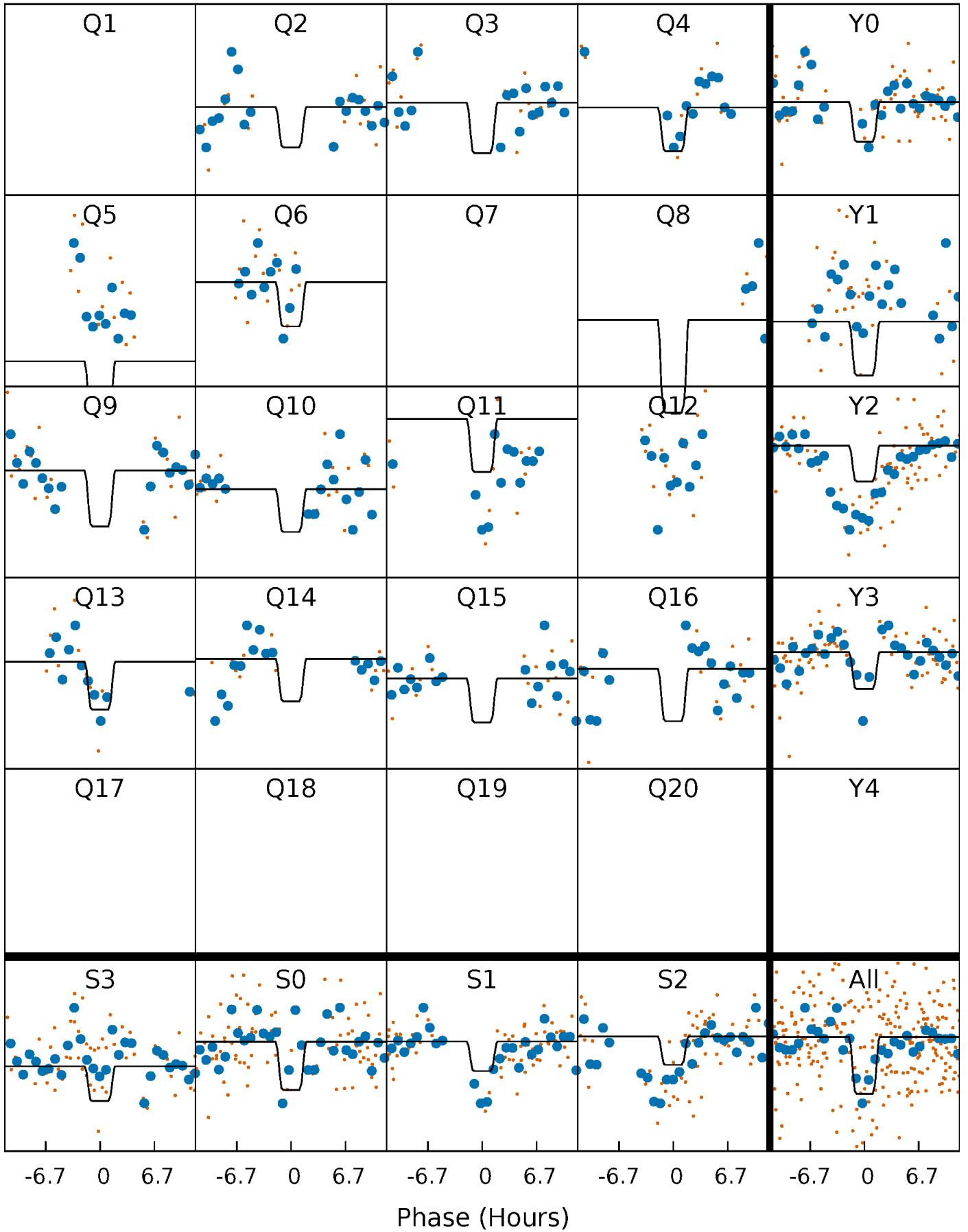
DV Quarter-Phased Transit Curves

TCE 011569443-04 P= 32.077750 Days $T_0=145.382778$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

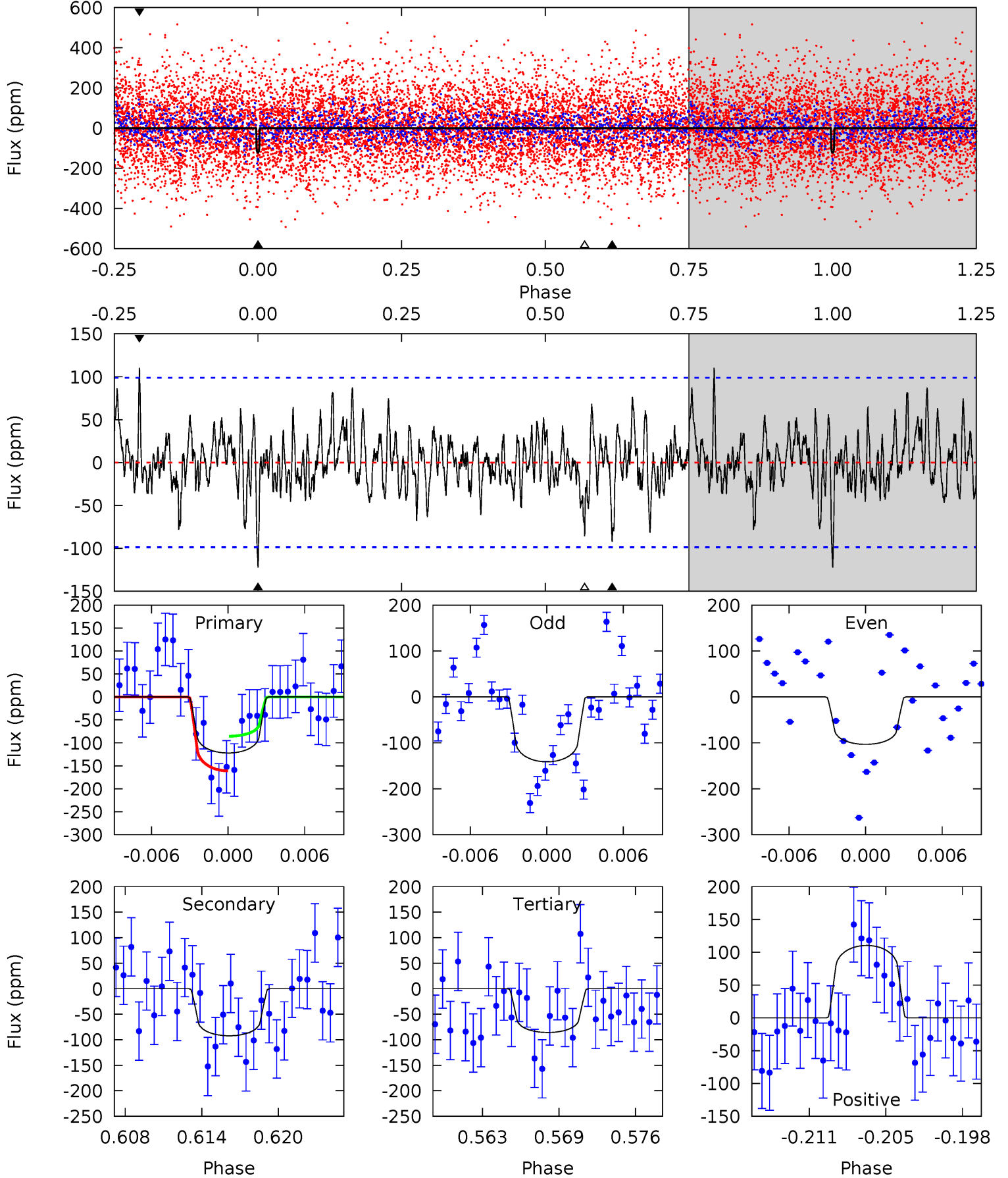
TCE 011569443-04 P= 32.077923 Days $T_0=145.367879$ (BKJD)



DV Model-Shift Uniqueness Test

011569443-04, P = 32.077750 Days, E = 113.305028 Days

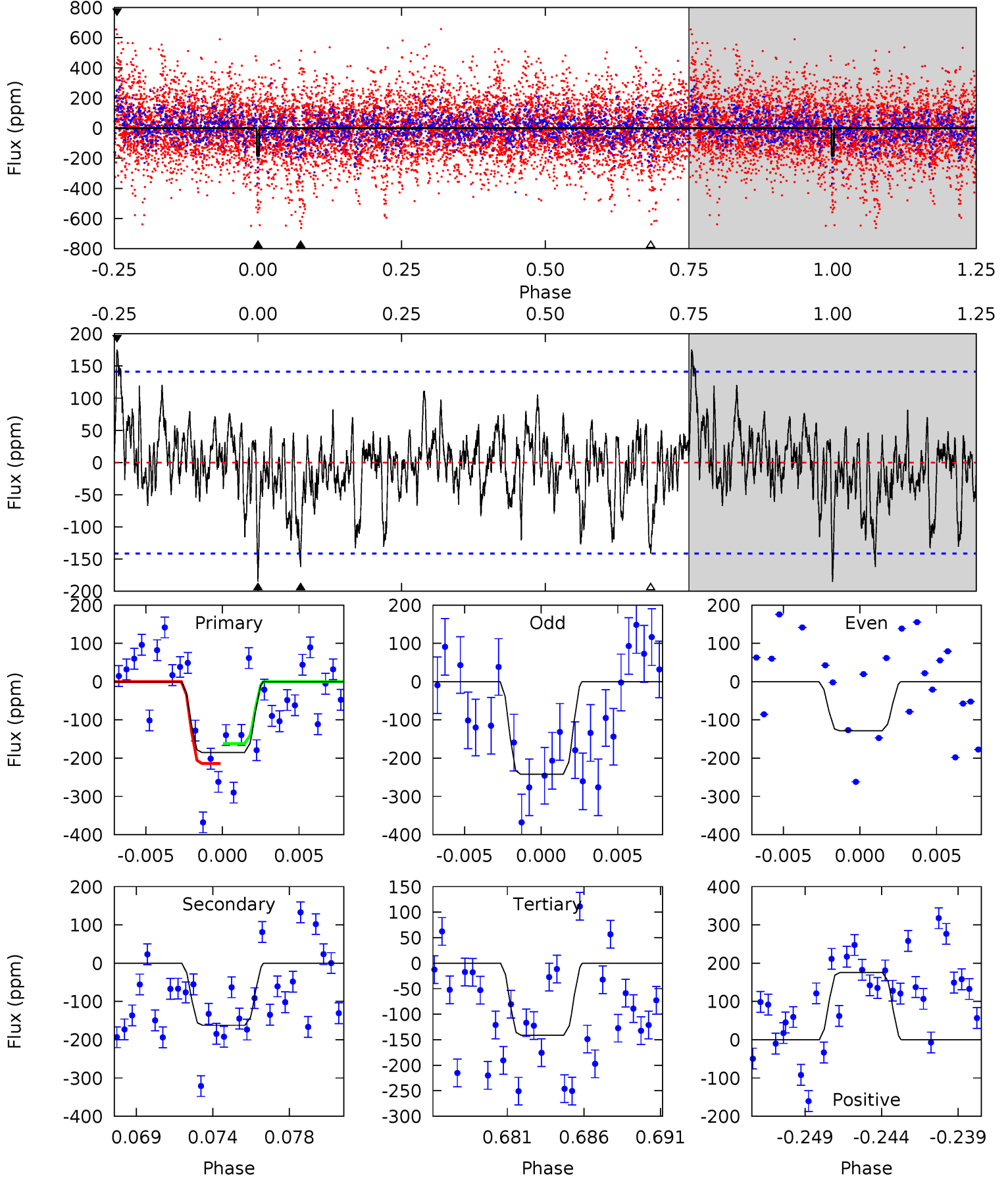
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.32	4.78	4.44	5.71	5.11	2.73	1.43	1.88	0.61	0.33	-0.93	1.00	0.75	0.47	1.95



Alt Model-Shift Uniqueness Test

011569443-04, P = 32.077923 Days, E = 113.289956 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.79	5.94	5.17	6.43	5.17	2.83	1.64	1.61	0.36	0.77	-0.49	2.07	1.14	0.49	0.95



Stellar Parameters For KIC 011569443

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6685^{+187}_{-281}	$4.187^{+0.136}_{-0.204}$	$0.040^{+0.250}_{-0.350}$	$1.557^{+0.494}_{-0.329}$	$1.358^{+0.214}_{-0.235}$	$0.507^{+0.389}_{-0.251}$
	+3%/-4%	+3%/-5%	+625%/-875%	+32%/-21%	+16%/-17%	+77%/-50%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 011569443-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-92 ± 19	$2.22^{+1.89}_{-1.39}$	1105^{+88}_{-71}	5667^{+4147}_{-1304}	474^{+2765}_{-341}
Alt.	-162 ± 27	$2.80^{+1.79}_{-1.56}$	1105^{+89}_{-73}	5844^{+3614}_{-1053}	534^{+2180}_{-340}

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

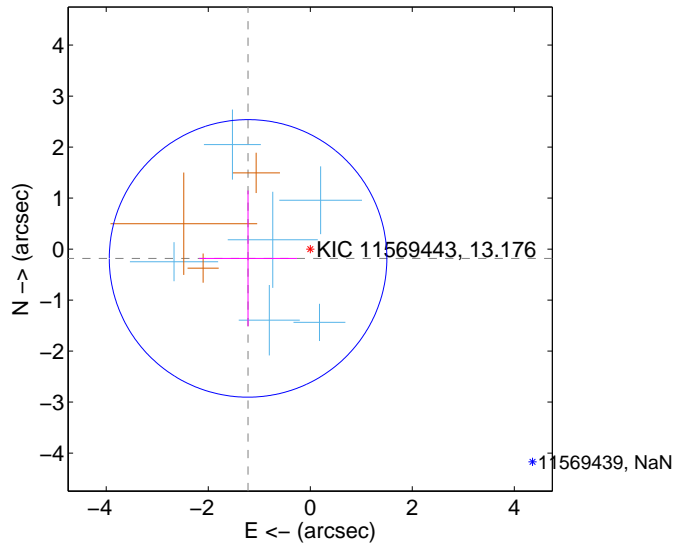
Supplemental centroid analysis for 011569443-04. Kepler magnitude: 13.18. Transit SNR 9.22

There are 6 quarters with good PRF difference image offsets

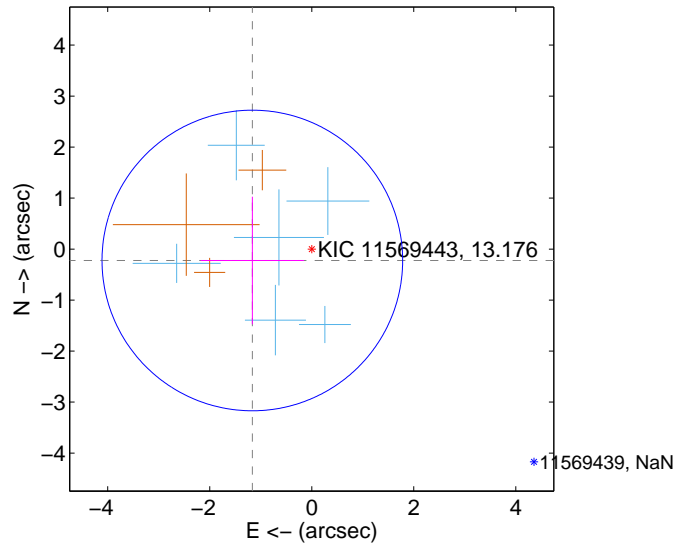
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.233 ± 0.907	1.36	1.220 ± 0.957	-0.182 ± 1.331
PRF-fit source offset from KIC position	1.186 ± 0.982	1.21	1.165 ± 1.011	-0.223 ± 1.251
photometric centroid source offset	0.71 ± 0.62	1.14	0.70 ± 0.62	-0.07 ± 0.66

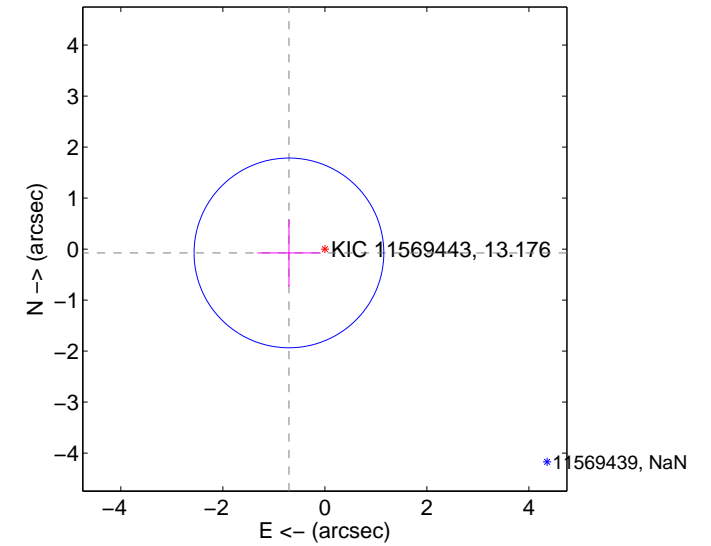
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

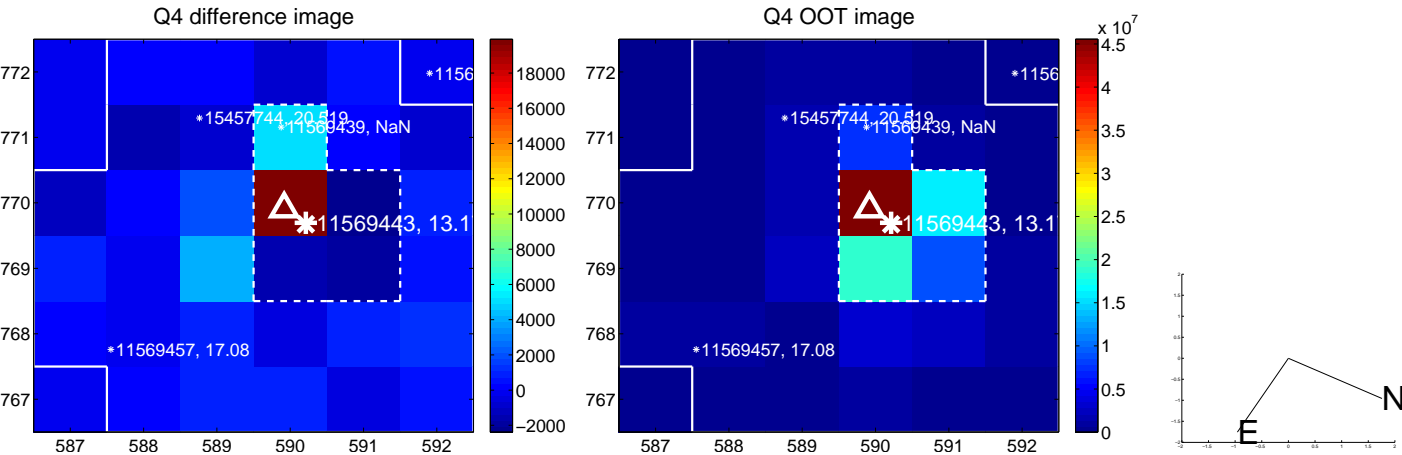
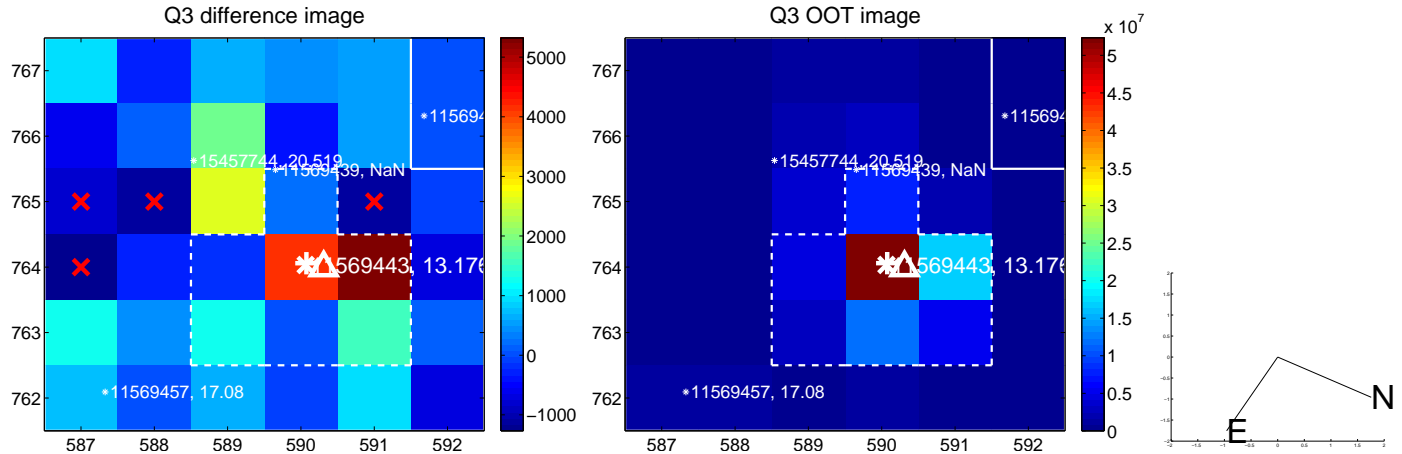
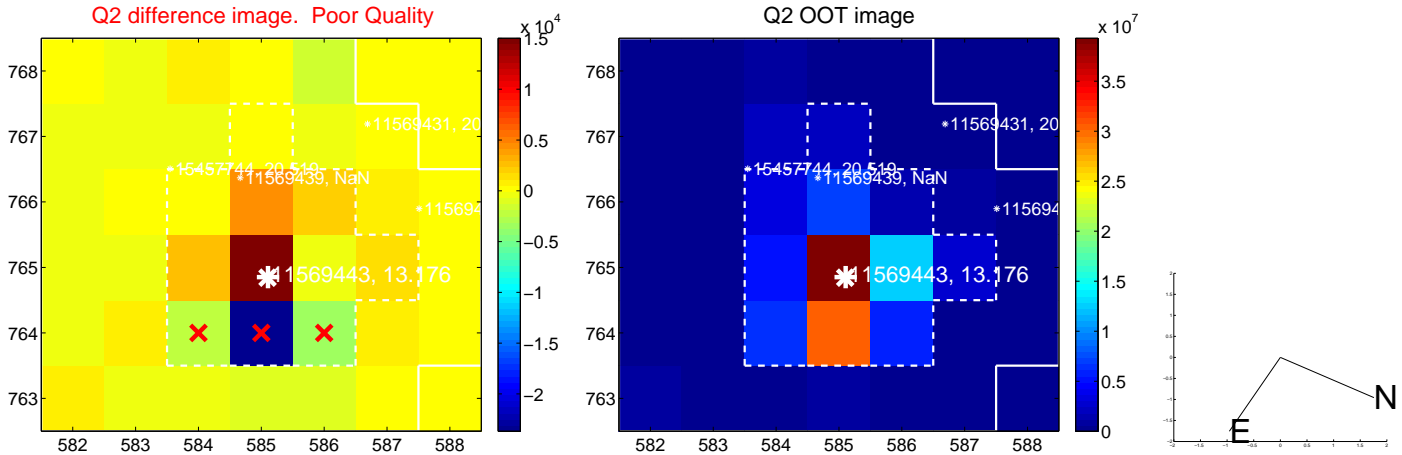
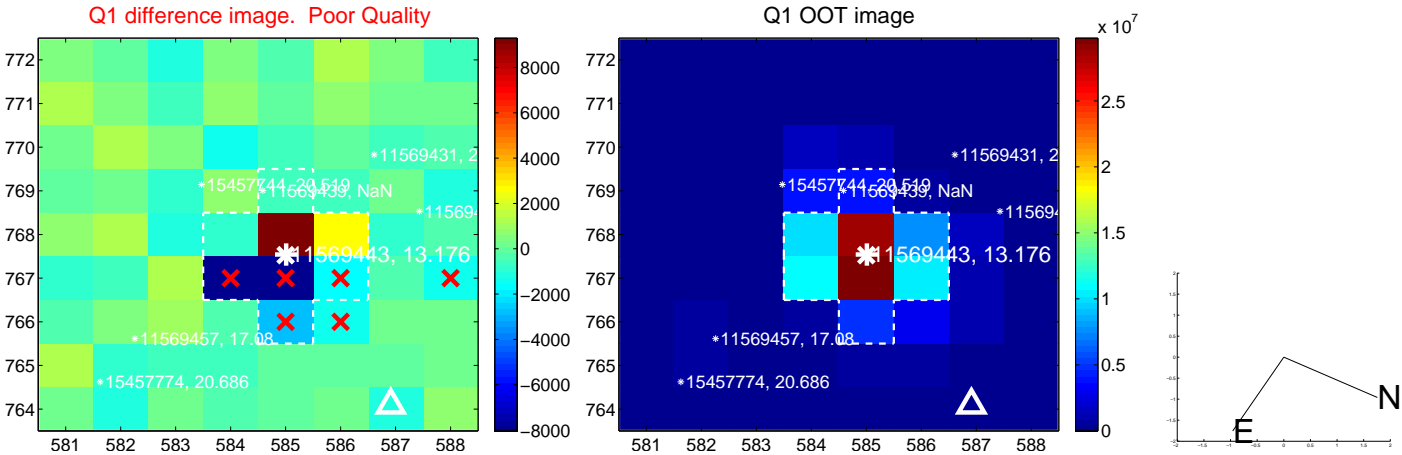


offset from photometric centroids

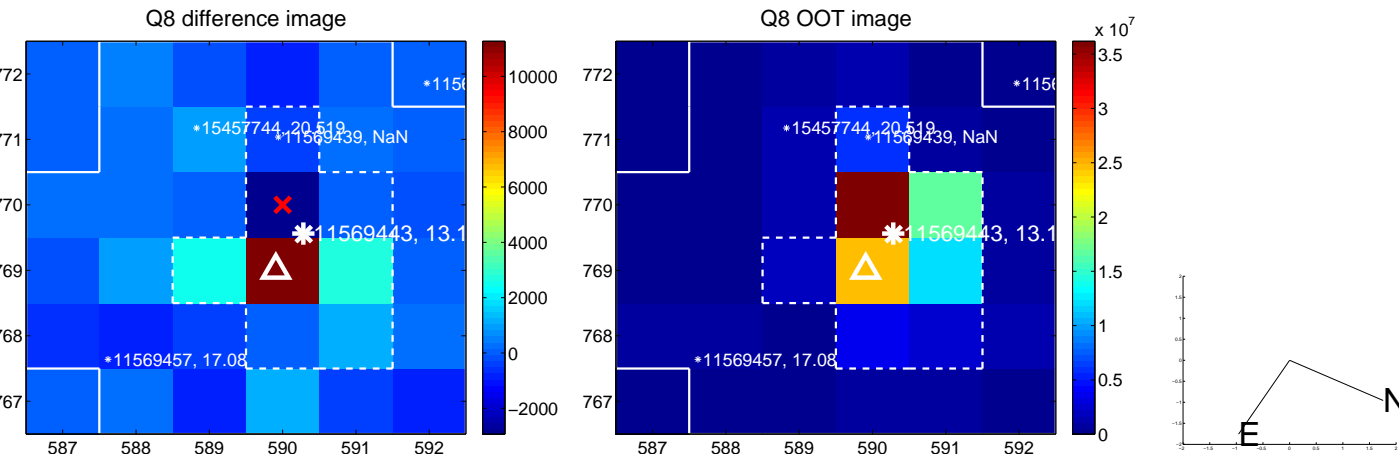
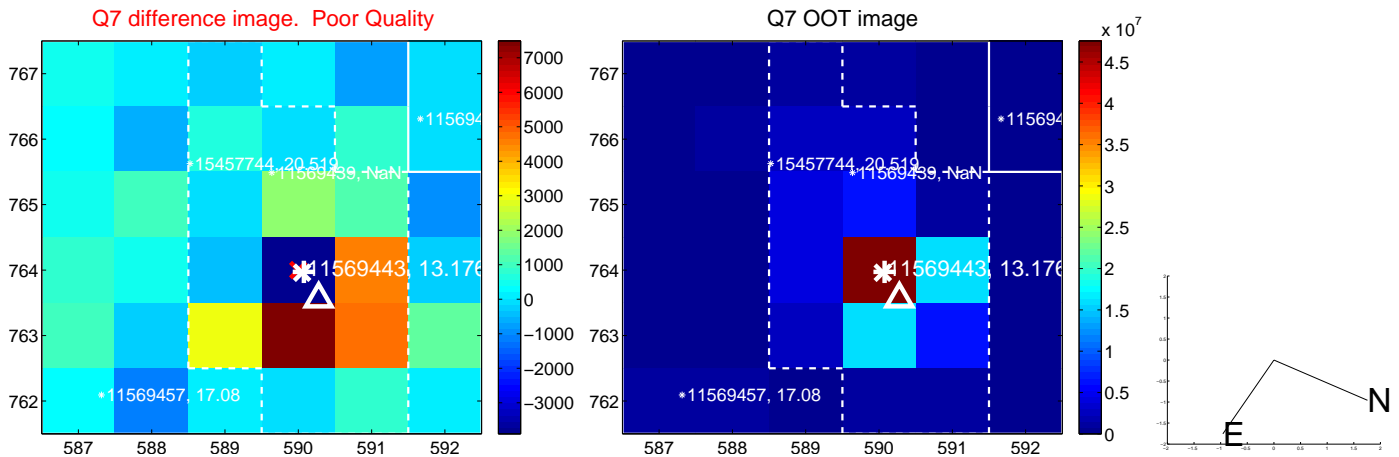
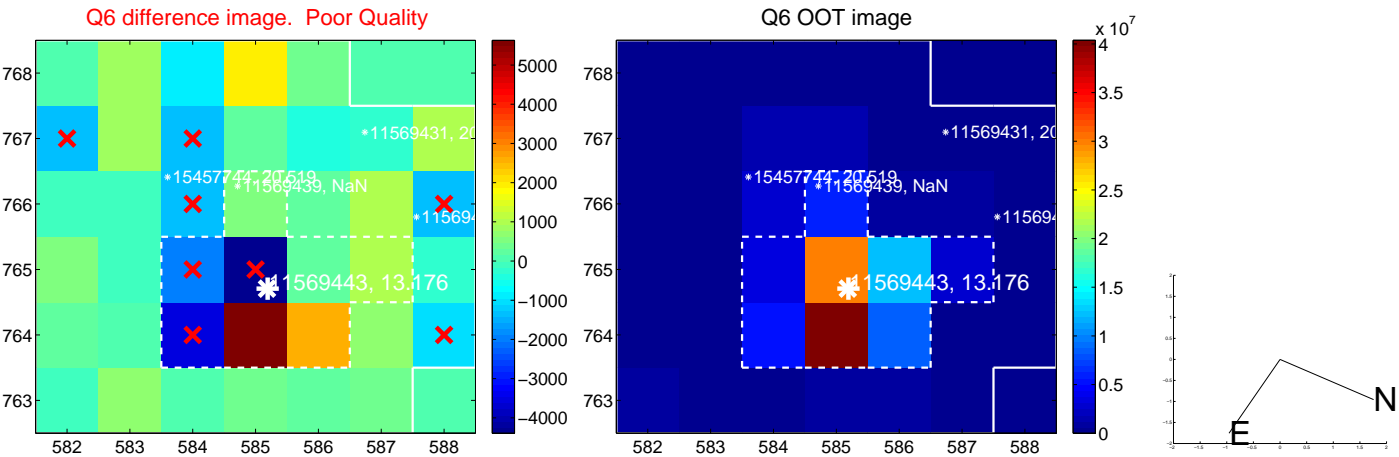
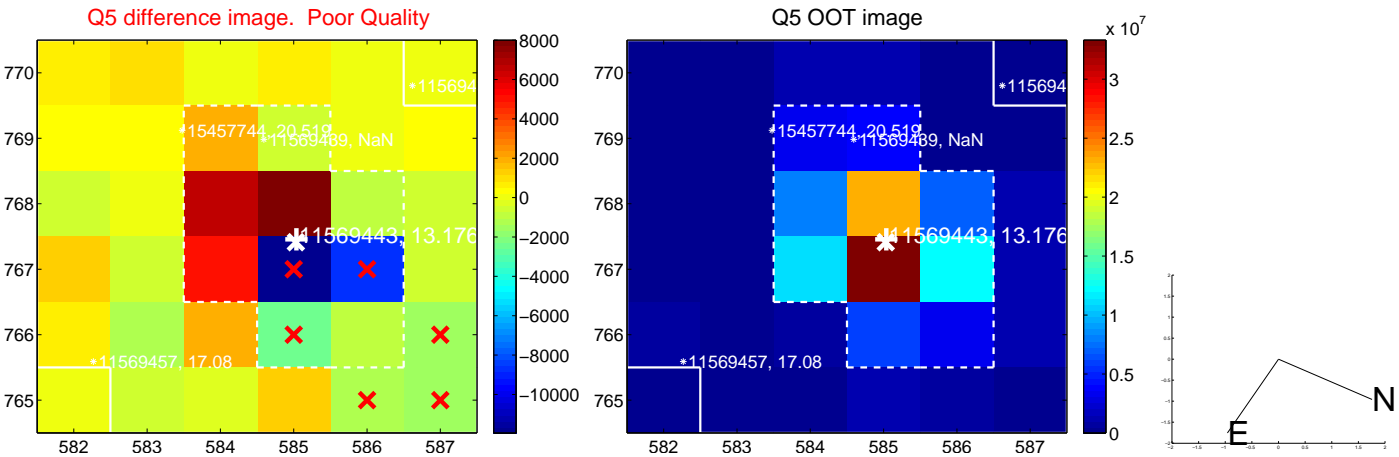


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

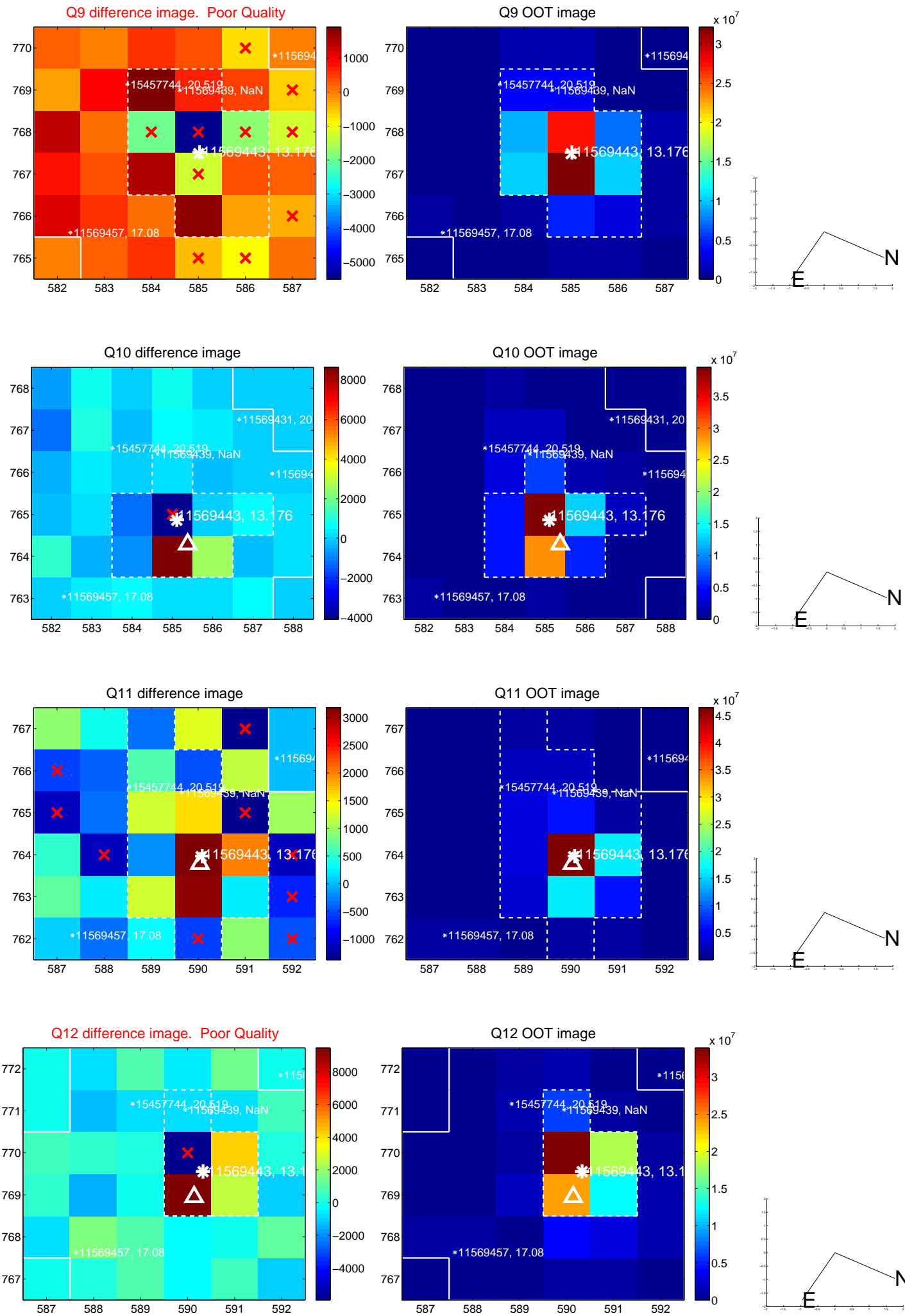
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



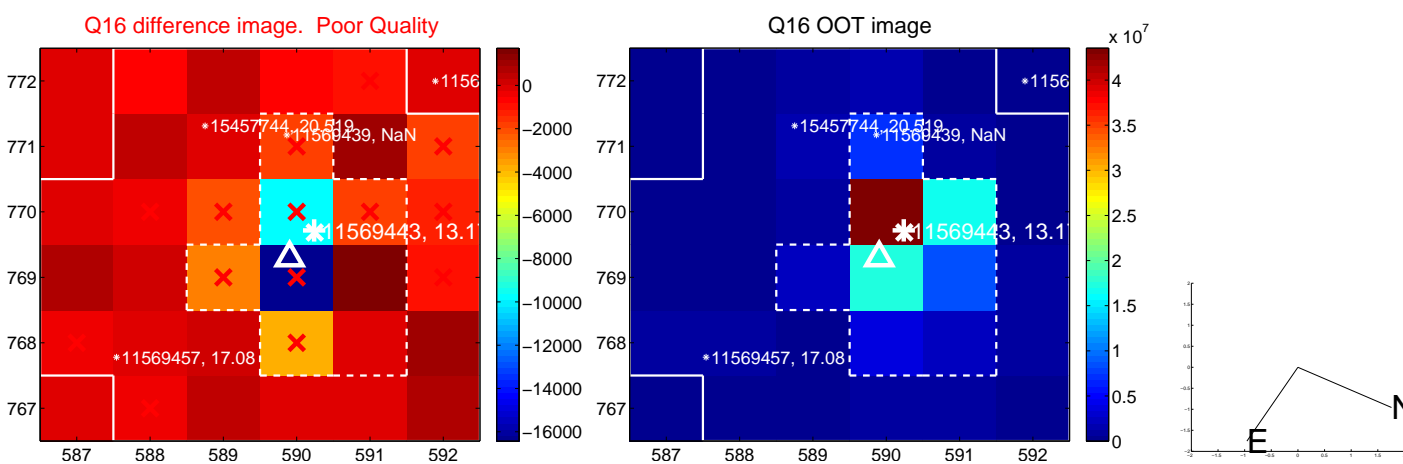
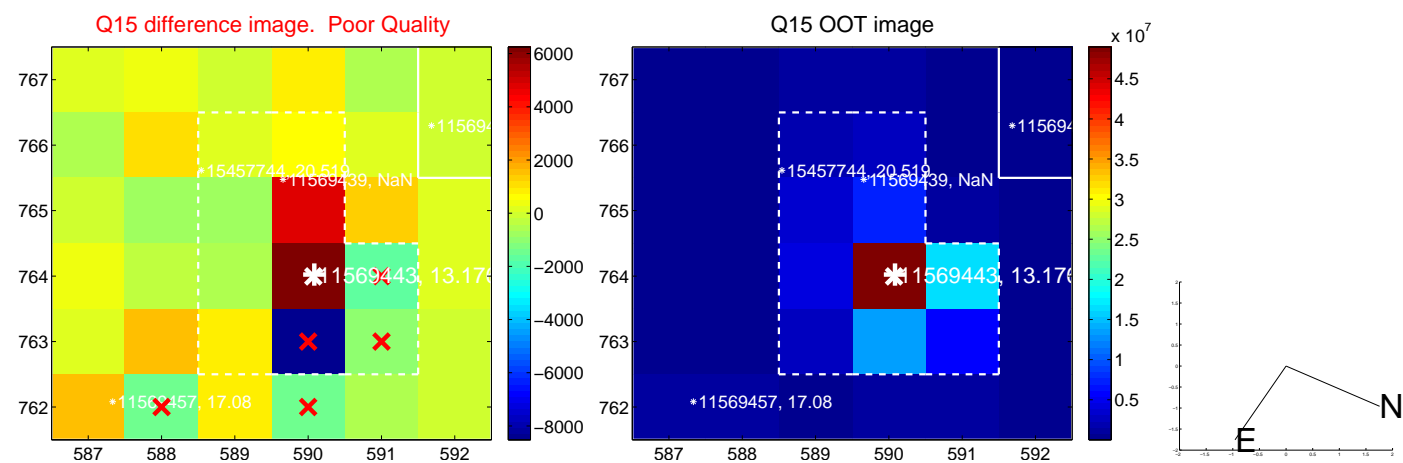
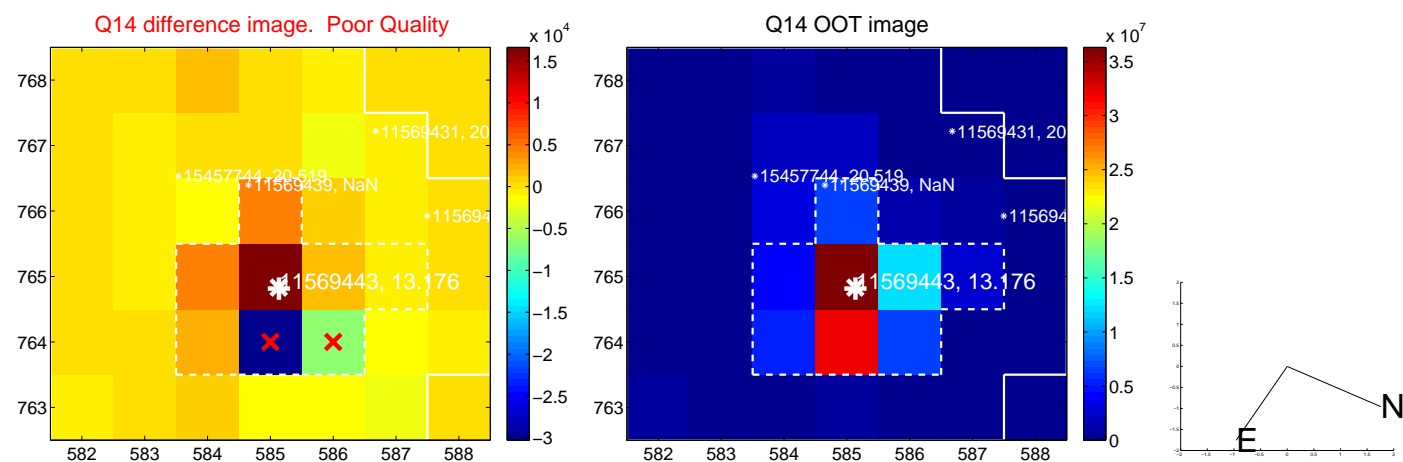
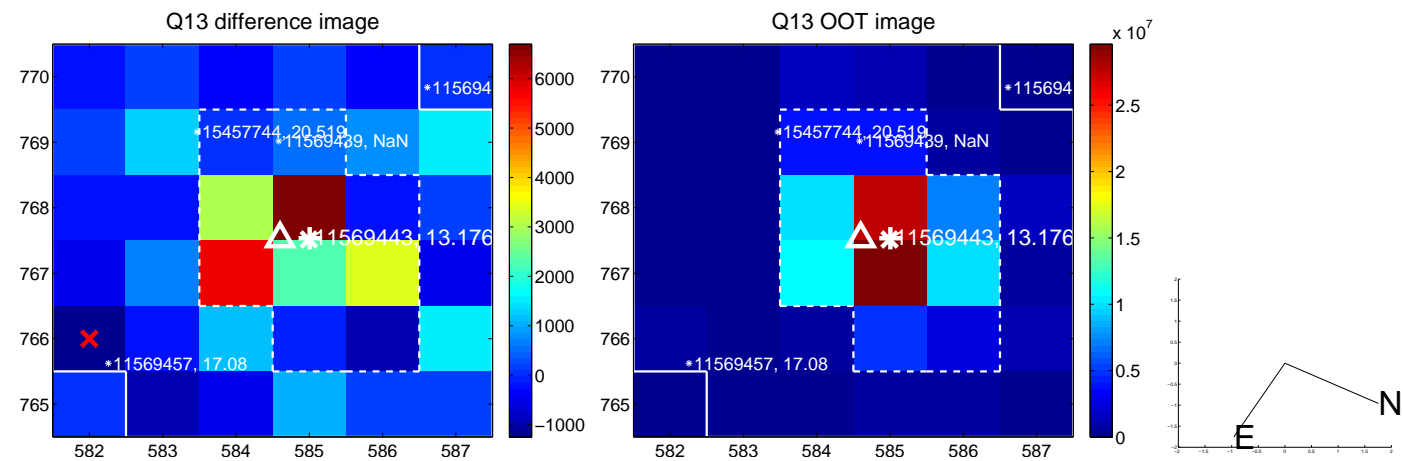
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



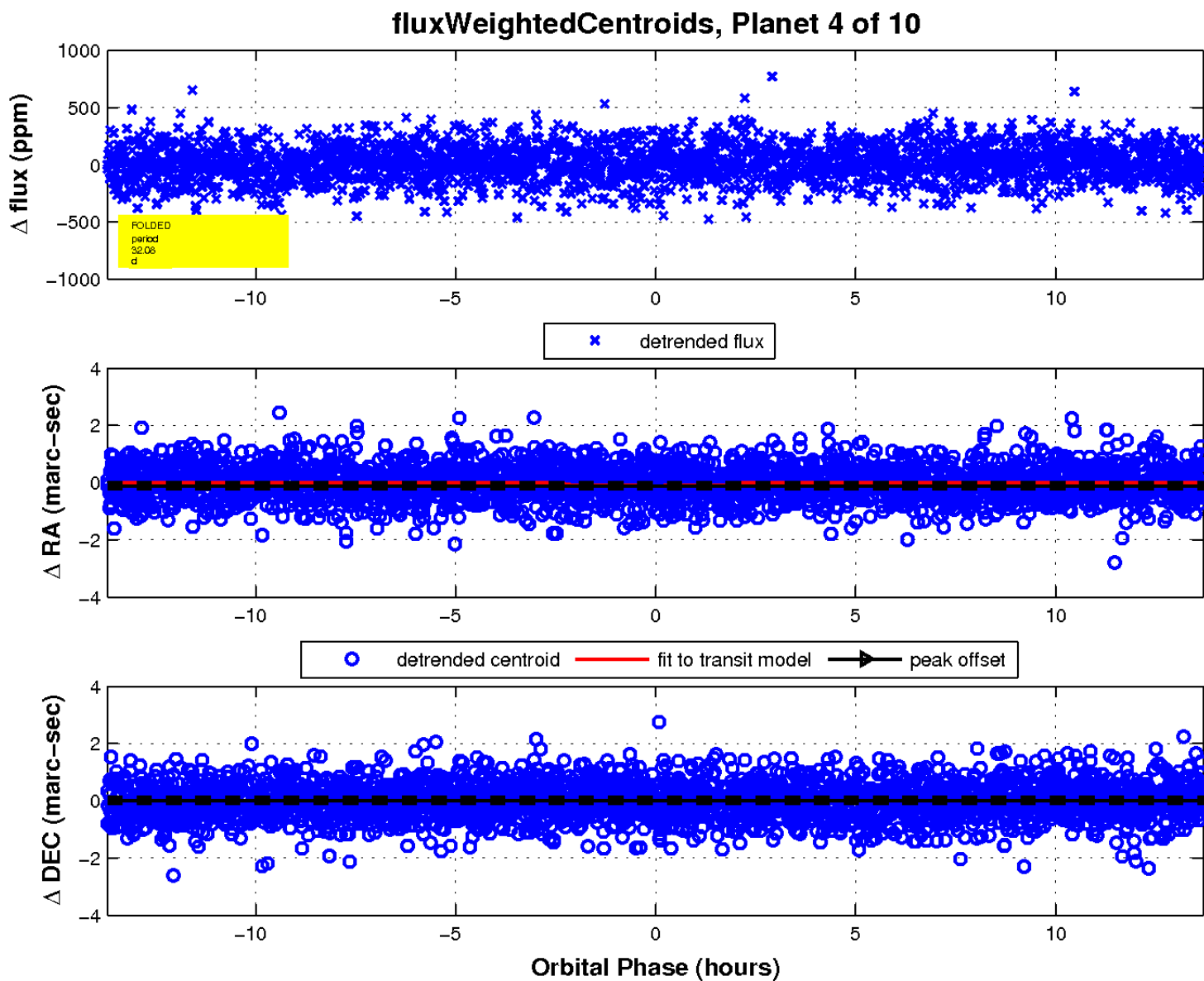
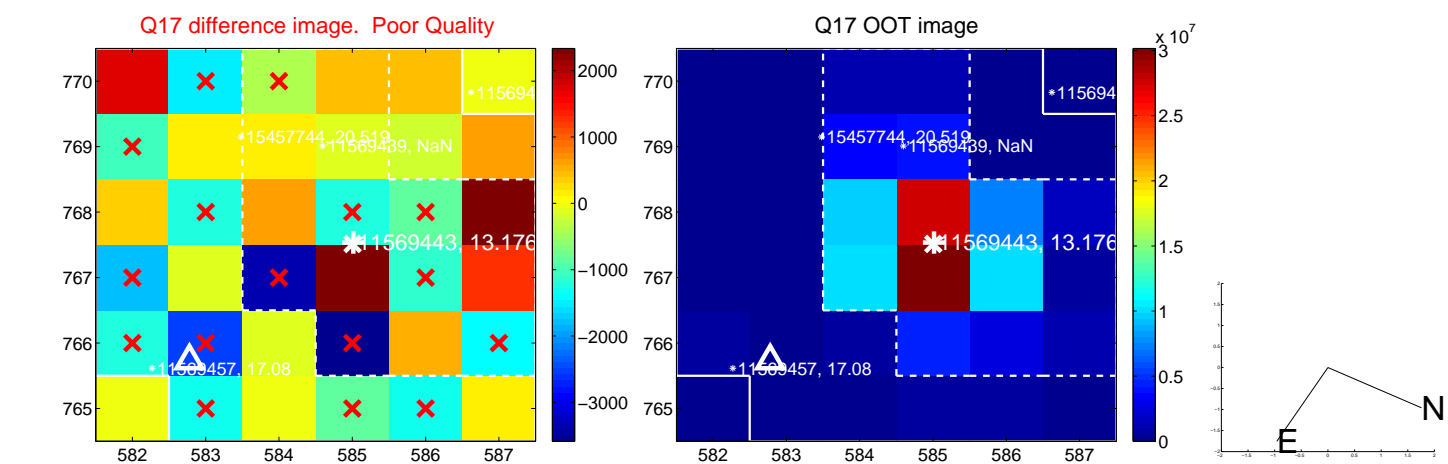
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

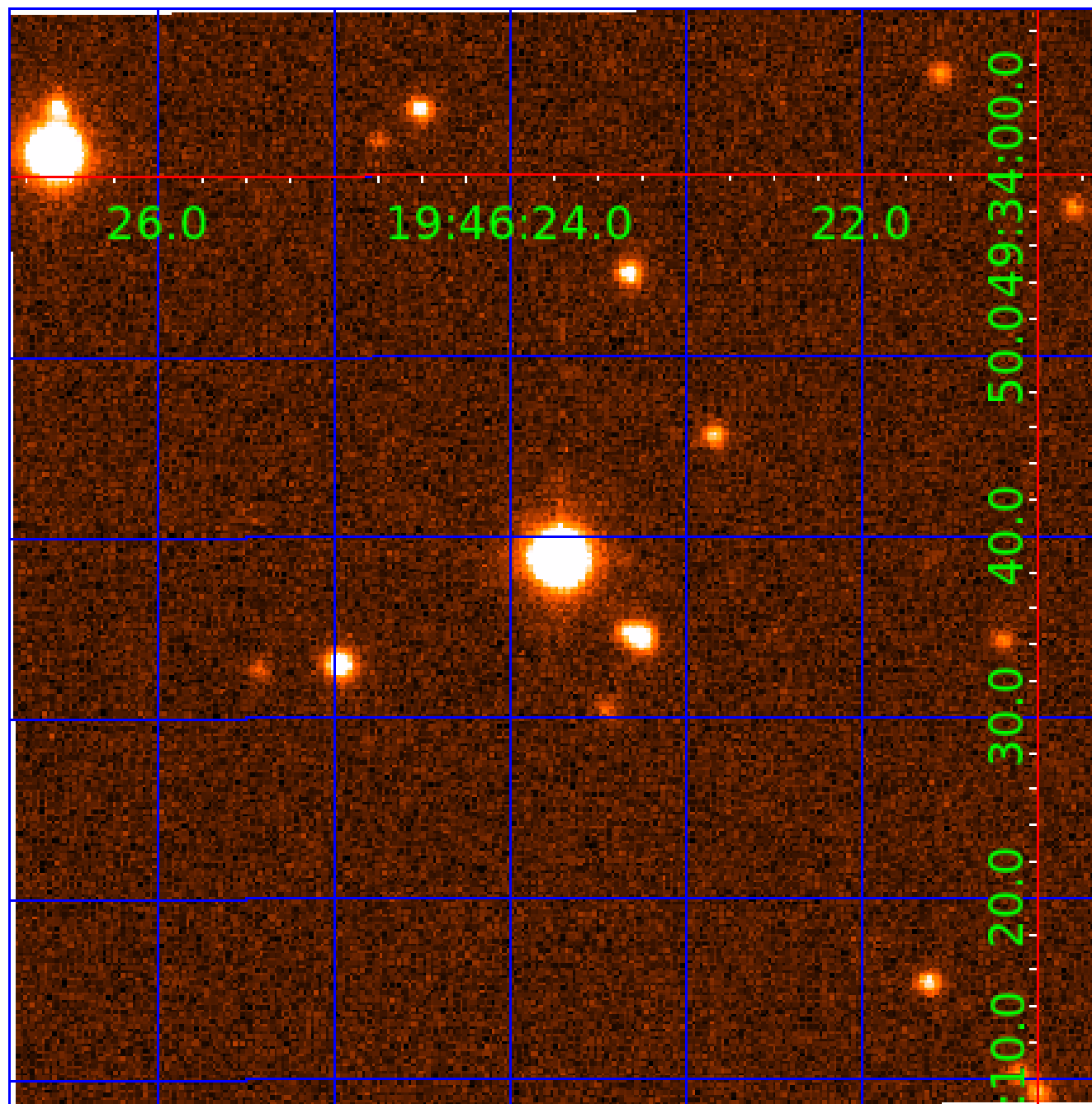


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



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})
011569443-01	OBS	No	2.344129	132.983449	25.4	15.857	8.1	8.4	1.56	6685	0.92	2961.54
011569443-02	OBS	No	412.469578	146.020096	168.6	8.779	10.2	8.4	1.56	6685	2.21	3.00
011569443-03	OBS	No	72.987289	157.607486	270.7	2.219	9.4	10.5	1.56	6685	3.28	30.23
011569443-04	OBS	No	32.077750	145.382778	159.8	4.570	9.1	9.2	1.56	6685	2.15	90.48
011569443-05	OBS	No	40.558747	133.378934	266.8	1.247	8.6	9.0	1.56	6685	2.59	66.18
011569443-06	OBS	No	74.686409	184.106204	190.2	6.743	8.7	9.4	1.56	6685	2.36	29.32
011569443-07	OBS	No	41.646178	159.524234	203.5	2.180	8.0	8.8	1.56	6685	2.64	63.88
011569443-08	OBS	No	104.678723	217.862789	306.0	1.405	8.2	7.6	1.56	6685	3.19	18.69
011569443-09	OBS	No	44.318975	149.204173	184.9	2.422	7.8	8.1	1.56	6685	2.45	58.80
011569443-10	OBS	No	281.444595	187.802605	249.5	12.521	9.4	11.2	1.56	6685	2.77	5.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011569443-01	OBS	FP	0.00	1	0	0	0	LPP_DV
011569443-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
011569443-03	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
011569443-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011569443-05	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_FEW_DIFFS—HALO_GHOST
011569443-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
011569443-07	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011569443-08	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_MEAS
011569443-09	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011569443-10	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS—HALO_GHOST

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

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

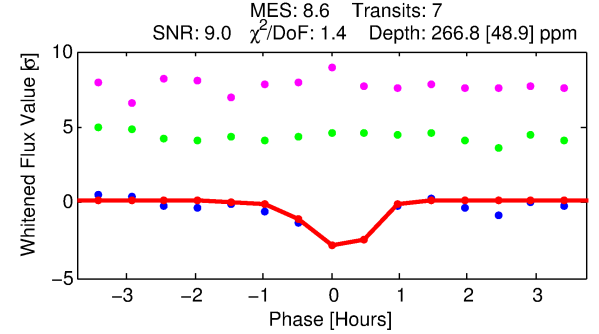
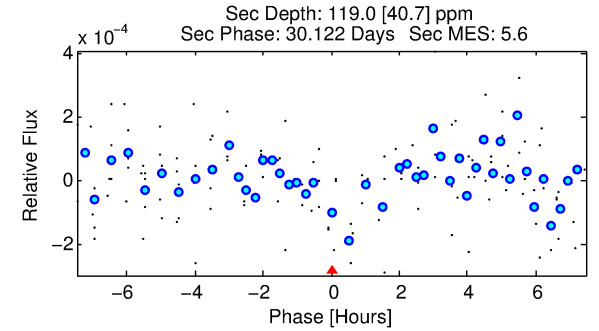
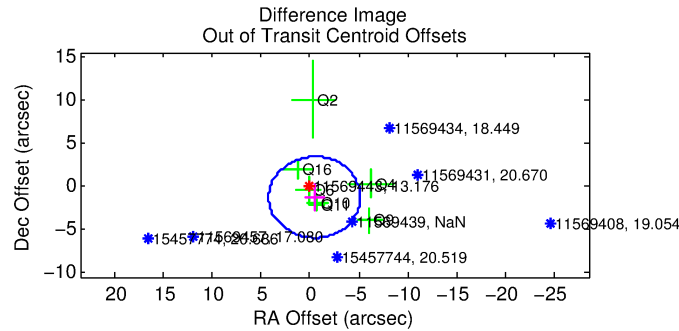
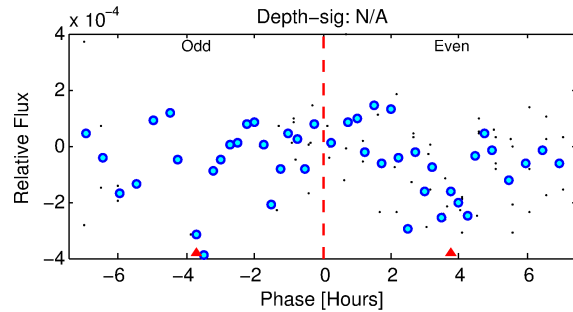
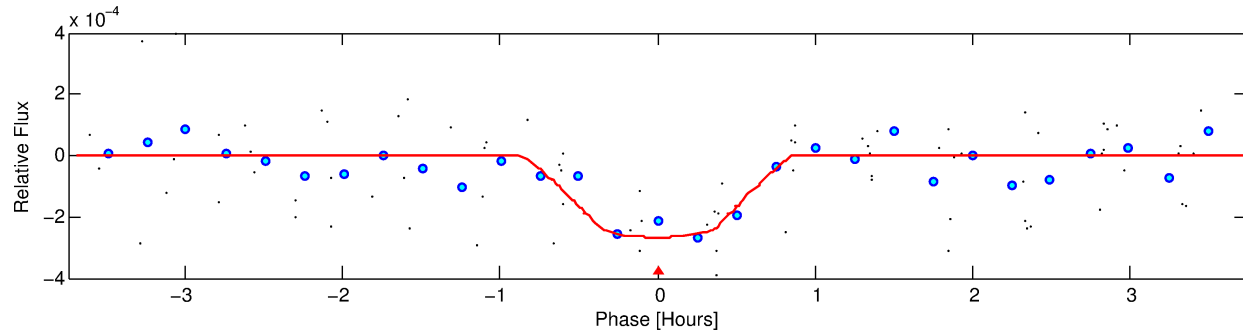
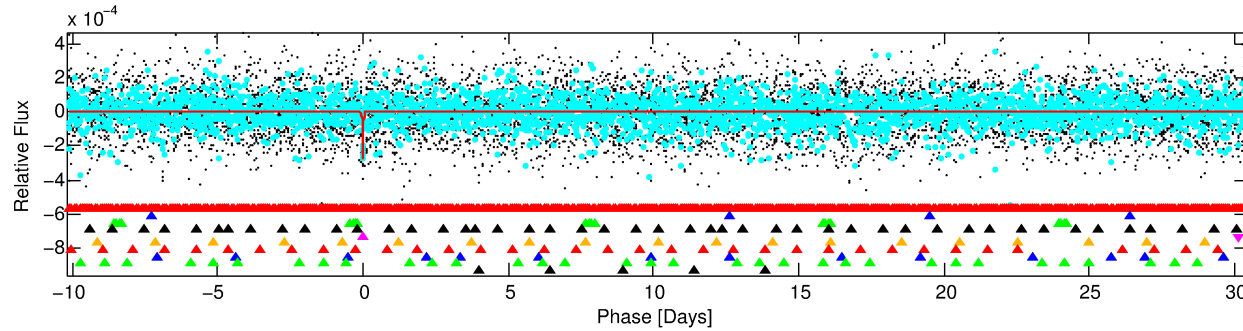
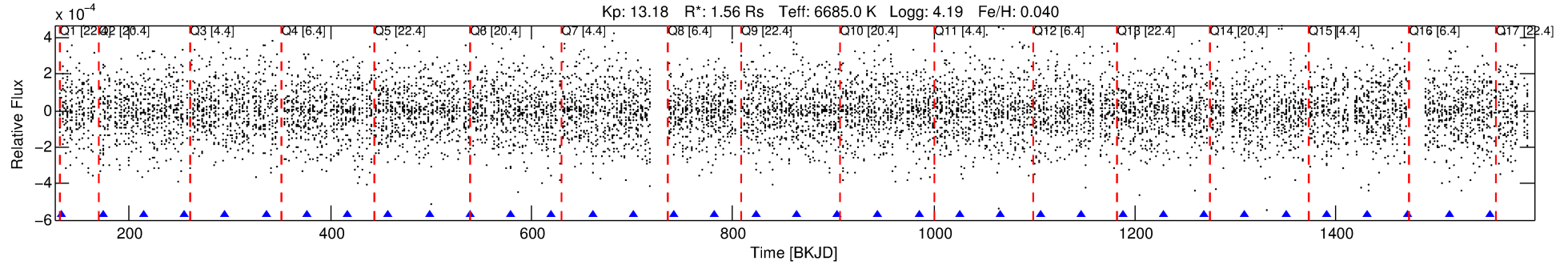
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011569443-05

No Significant Match Found

DV One-Page Summary

KIC: 11569443 Candidate: 5 of 10 Period: 40.559 d



DV Fit Results:

Period = 40.55875 [0.00031] d
Epoch = 133.3789 [0.0070] BKJD
Rp/R* = 0.0153 [0.0278]
a/R* = 240.93 [2390.37]
b = 0.30 [30.02]
Seff = 66.18 [27.37]
Teq = 727 [75] K
Rp = 2.59 [4.79] Re
a = 0.2560 [0.0674] AU
Ag = 637.57 [2340.89] [0.27σ]
Teffp = 5650 [5164] K [0.95σ]

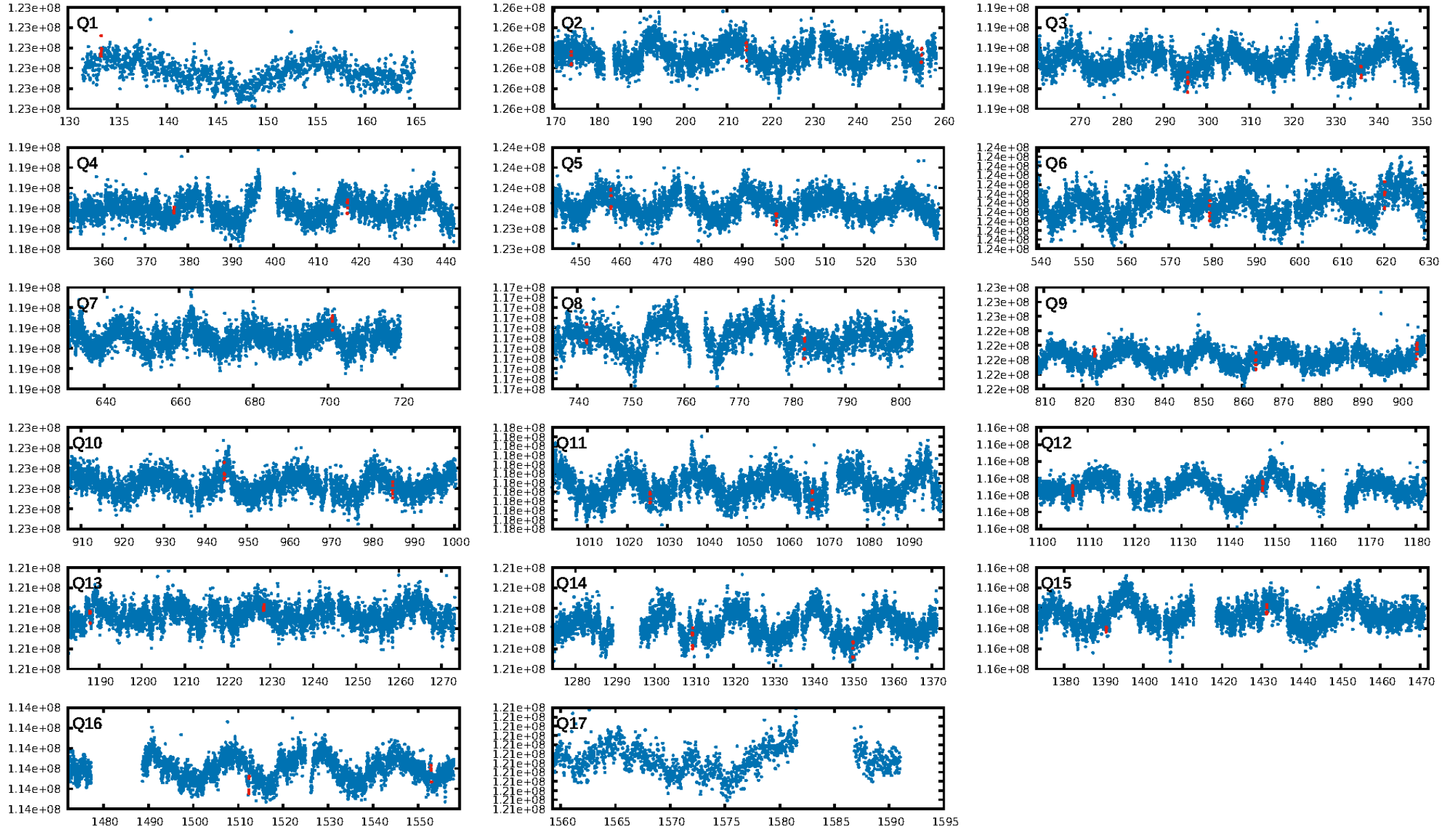
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [42.97σ]
LongPeriod-sig: 100.0% [10.39σ]
ModelChiSquare2-sig: 18.8%
ModelChiSquareGof-sig: 90.2%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: -0.22
Centroid-sig: 62.4%
Centroid-so: 0.550 arcsec [0.66σ]
OotOffset-rm: 1.350 arcsec [0.86σ]
KicOffset-rm: 1.371 arcsec [0.74σ]
OotOffset-st: 3/1/2/1 [7]
KicOffset-st: 3/1/2/1 [7]
DiffImageQuality-fgm: 0.00 [0/7]
DiffImageOverlap-fno: 0.73 [11/15]

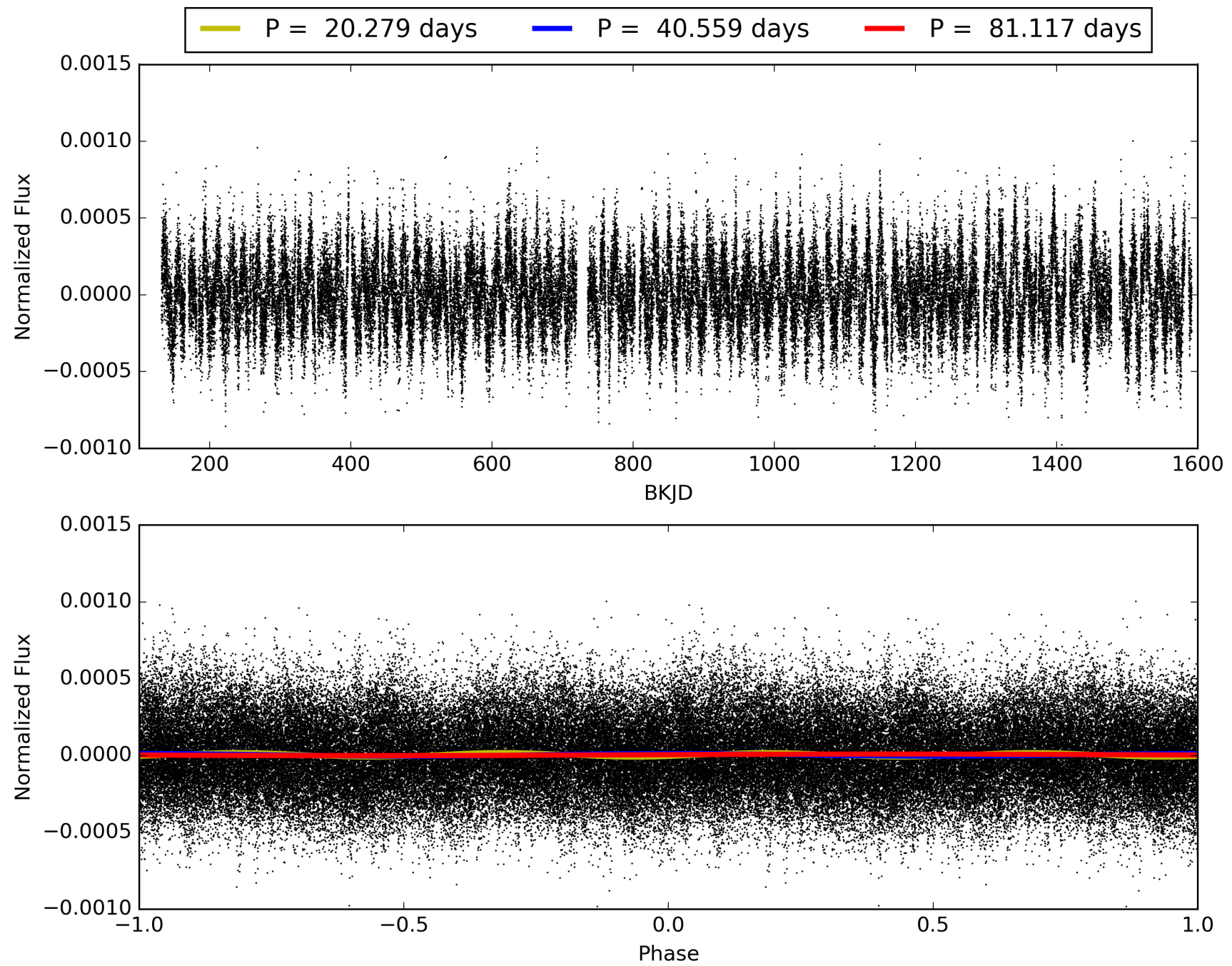
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:25:43 Z

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

TCE 011569443-05, PDC Light Curves

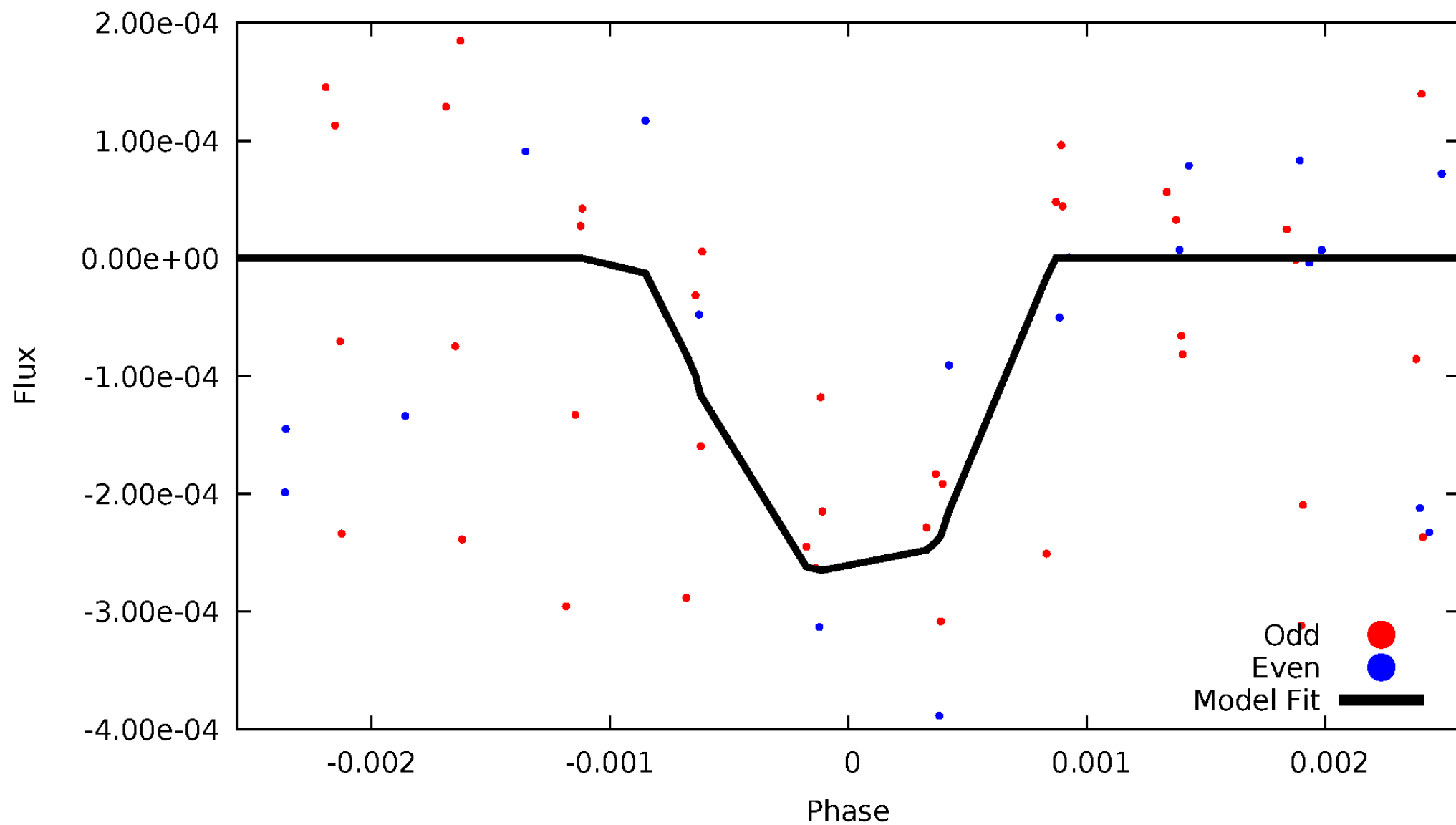


TCE 011569443-05



DV Odd/Even

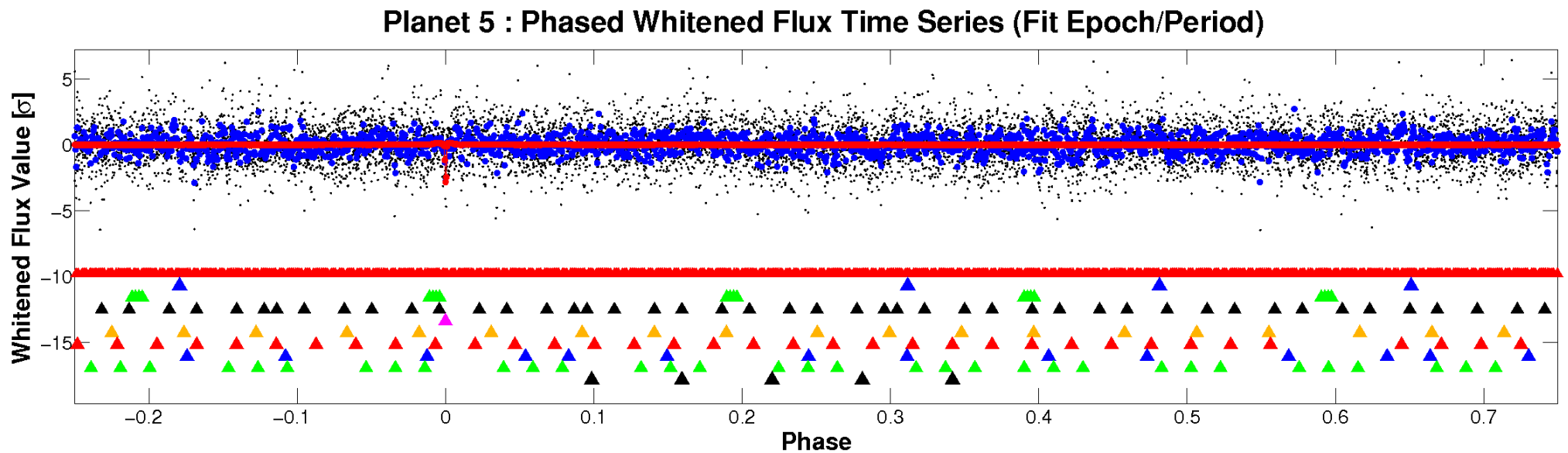
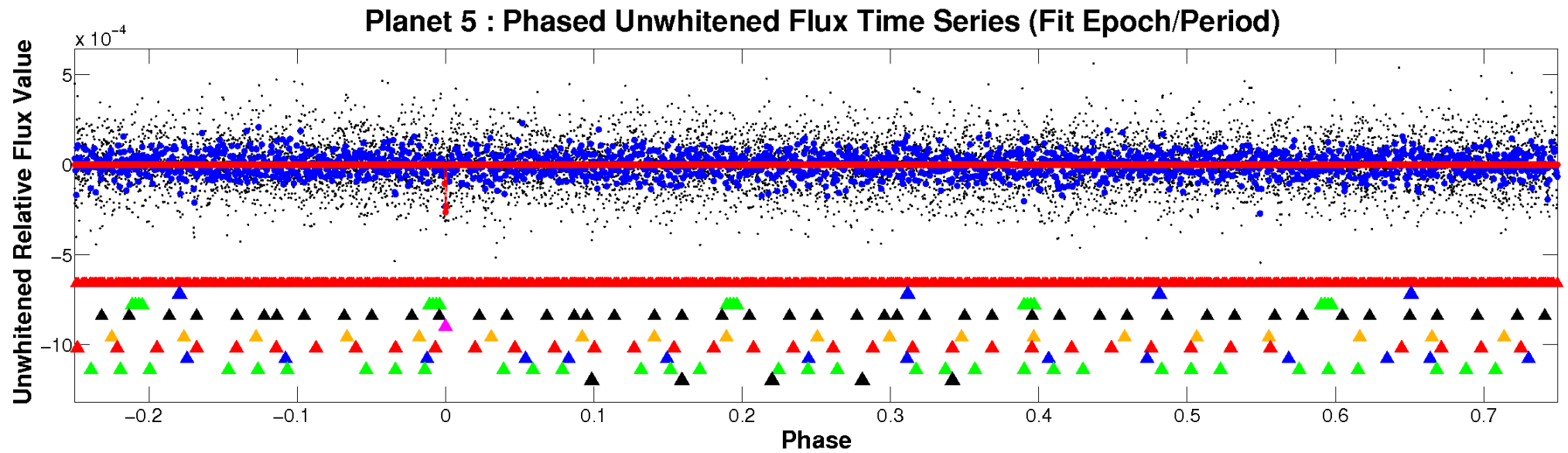
TCE 011569443-05



ALT Odd/Even

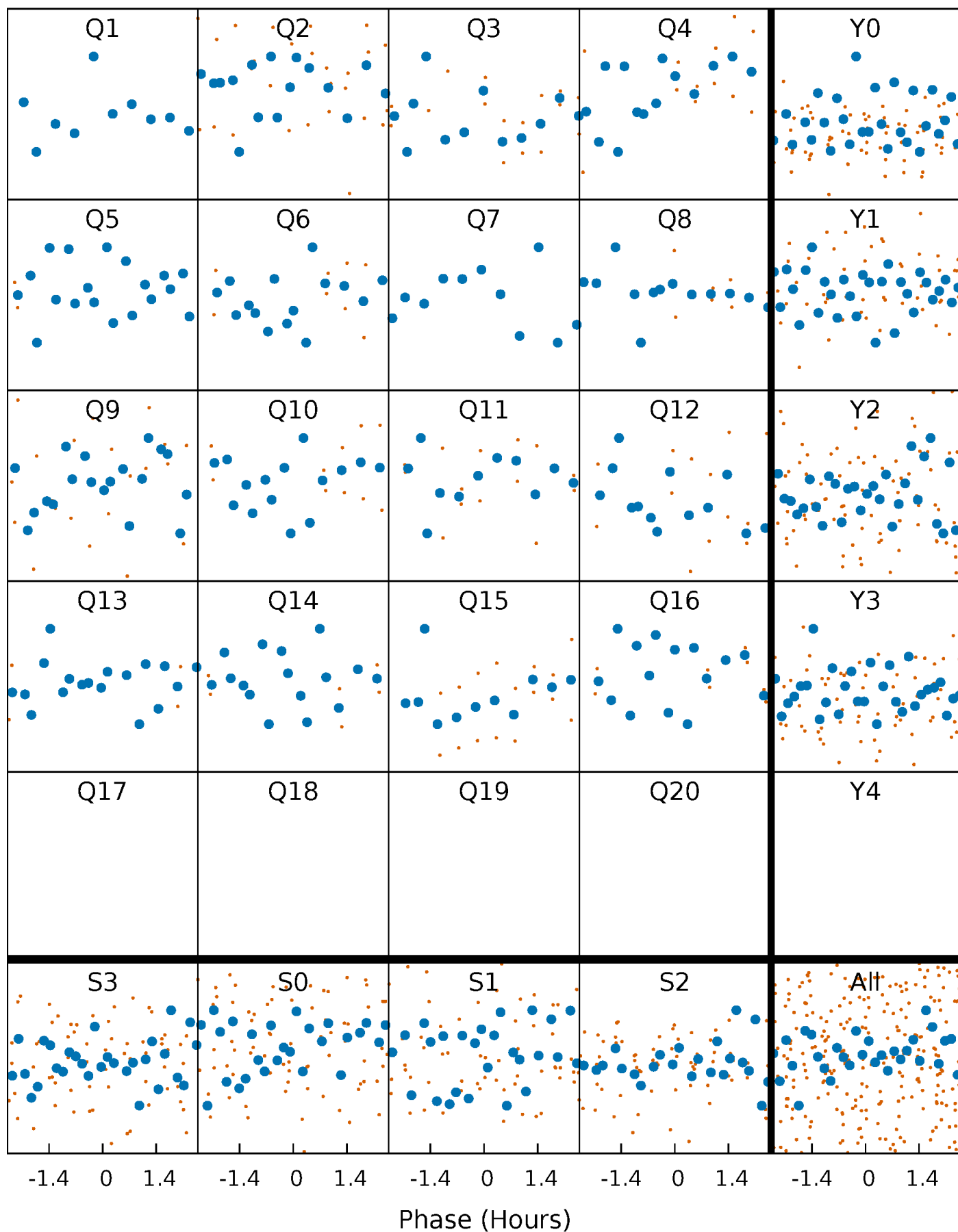
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve



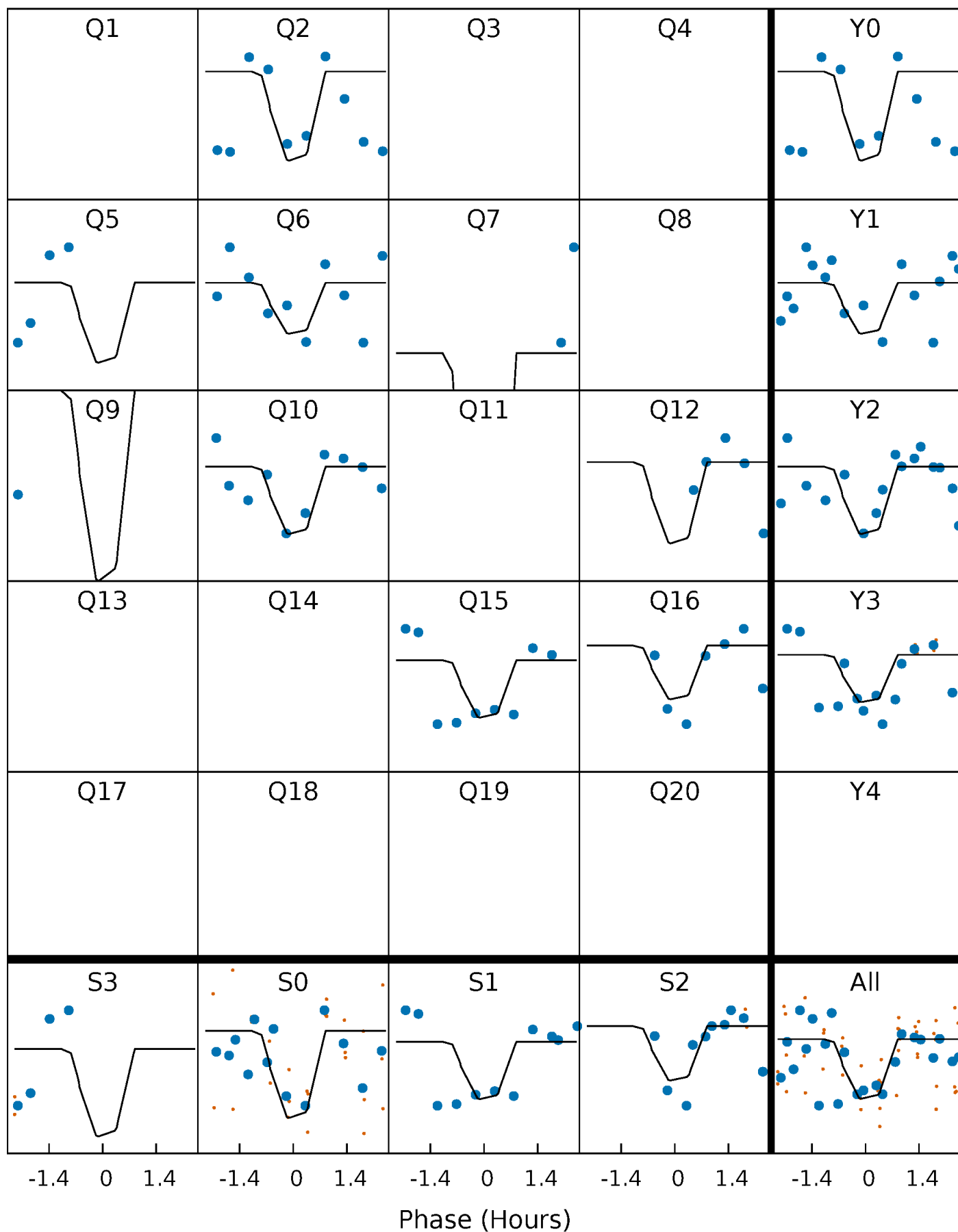
PDC Quarter-Phased Transit Curves

TCE 011569443-05 $P = 40.558747$ Days $T_0 = 133.378934$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 011569443-05 P= 40.558747 Days $T_0=133.378934$ (BKJD)

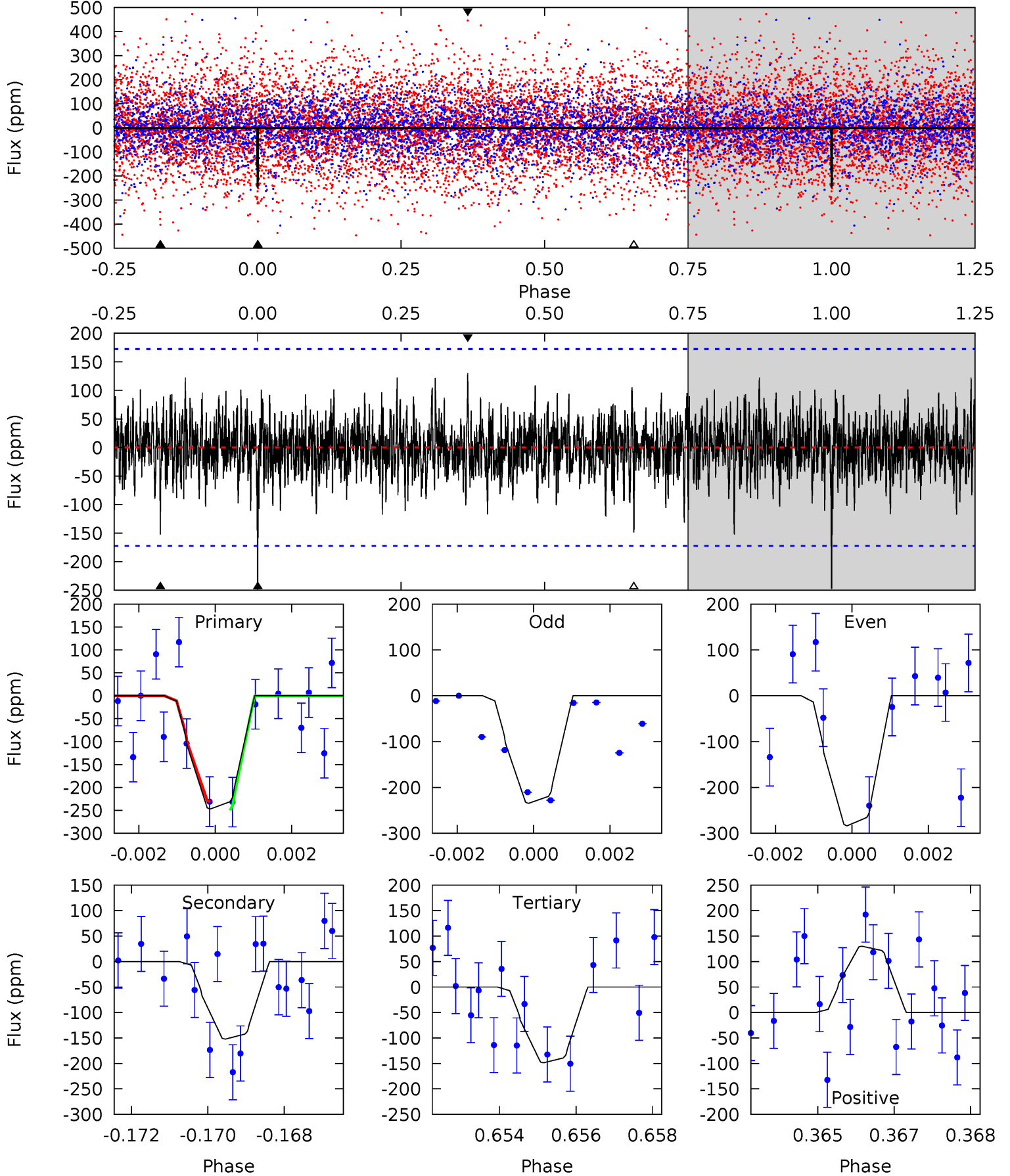


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

011569443-05, P = 40.558747 Days, E = 92.820187 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.68	4.73	4.63	4.04	5.36	3.14	1.18	3.05	3.64	0.11	0.69	0.67	1.10	0.34	0.28



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 011569443

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6685^{+187}_{-281}	$4.187^{+0.136}_{-0.204}$	$0.040^{+0.250}_{-0.350}$	$1.557^{+0.494}_{-0.329}$	$1.358^{+0.214}_{-0.235}$	$0.507^{+0.389}_{-0.251}$
	+3%/-4%	+3%/-5%	+625%/-875%	+32%/-21%	+16%/-17%	+77%/-50%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 011569443-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-152 ± 32	$4.33^{+4.26}_{-2.89}$	1023^{+82}_{-73}	4766^{+3418}_{-1074}	283^{+2169}_{-212}
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 $A_{obs} \gg 1.0$

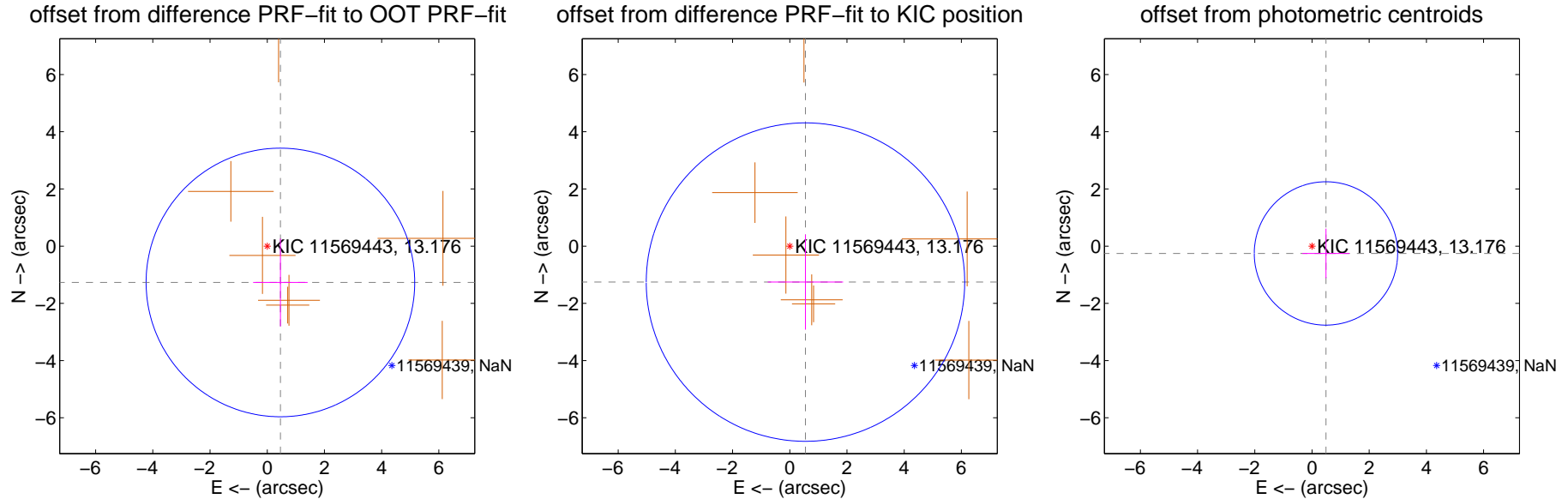
DV Centroid Data

Supplemental centroid analysis for 011569443-05. Kepler magnitude: 13.18. Transit SNR 9.01

There are 0 quarters with good PRF difference image offsets

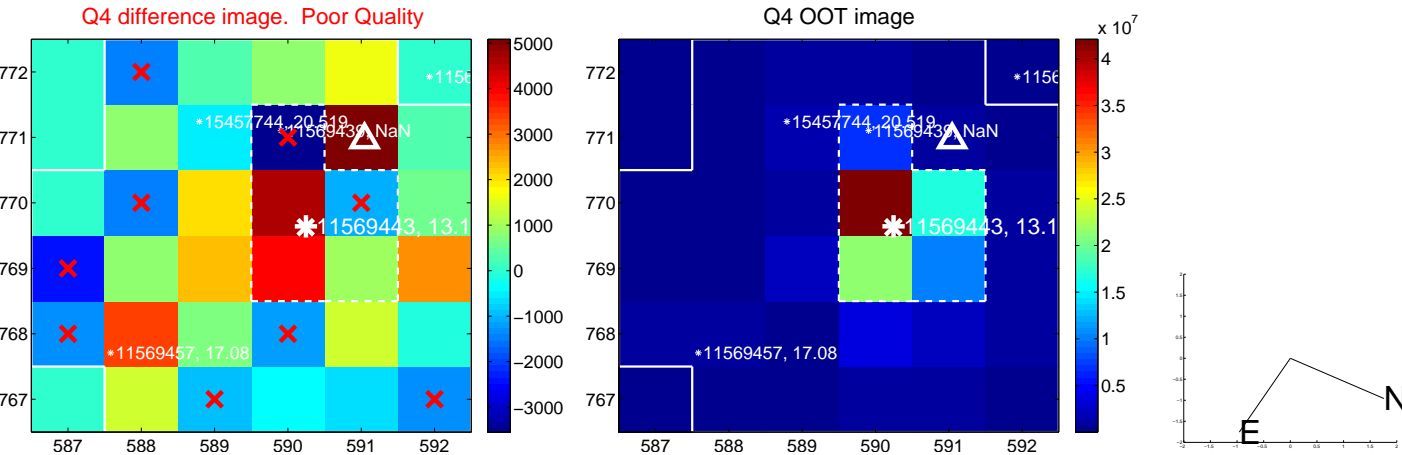
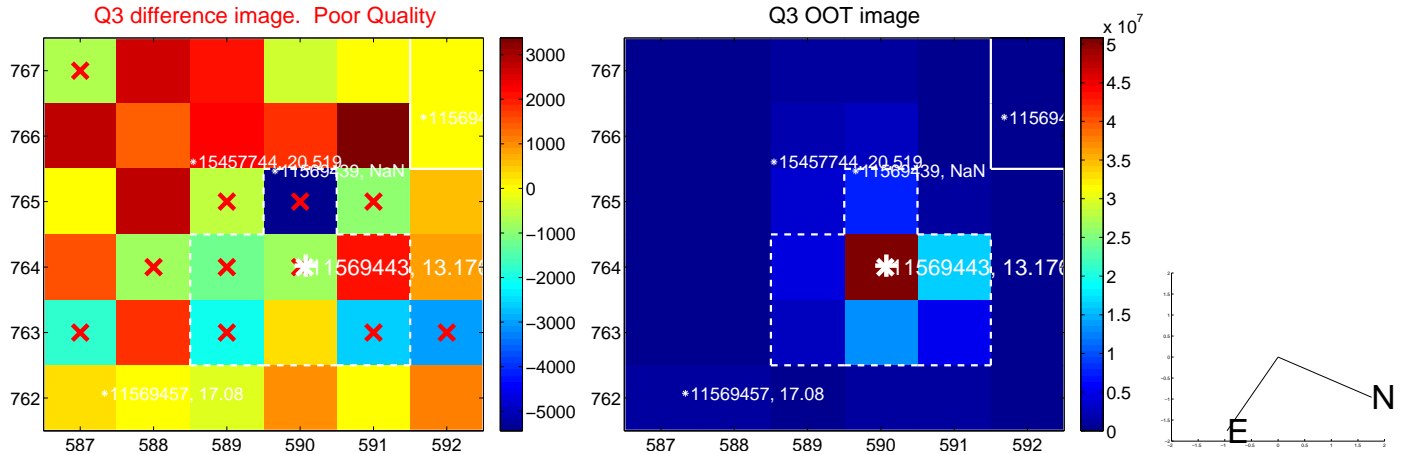
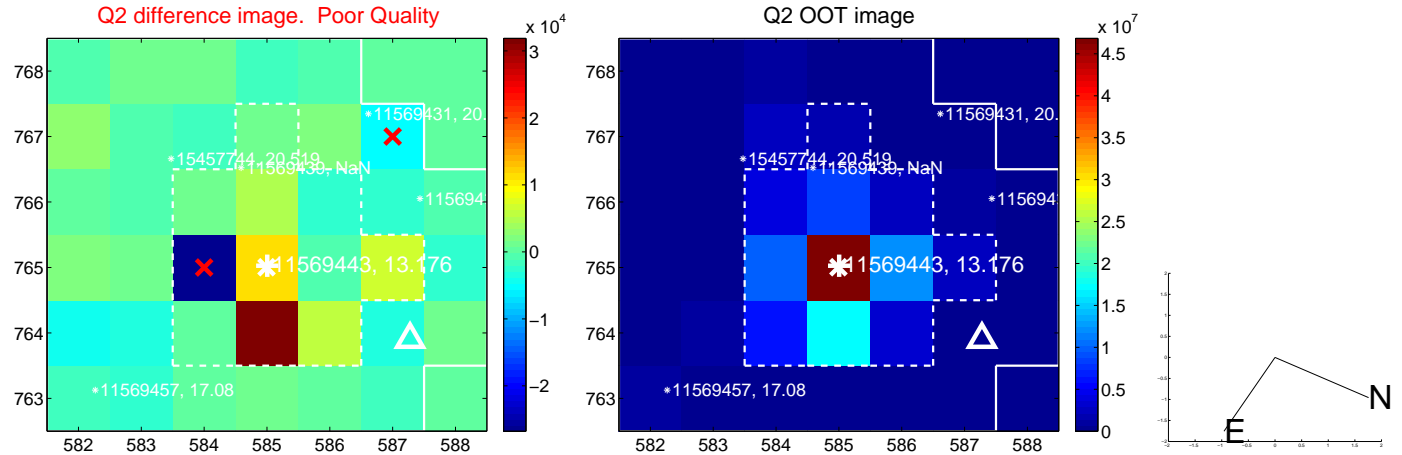
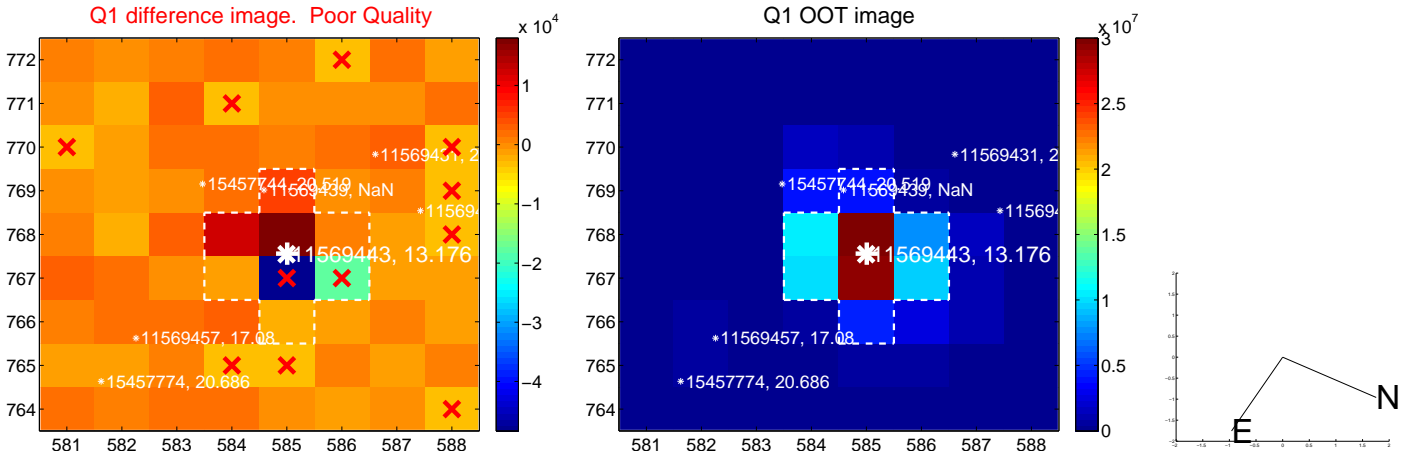
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.350 ± 1.565	0.86	-0.460 ± 0.952	-1.269 ± 1.535
PRF-fit source offset from KIC position	1.371 ± 1.855	0.74	-0.548 ± 1.319	-1.256 ± 1.662
photometric centroid source offset	0.55 ± 0.84	0.66	-0.49 ± 0.83	-0.25 ± 0.87

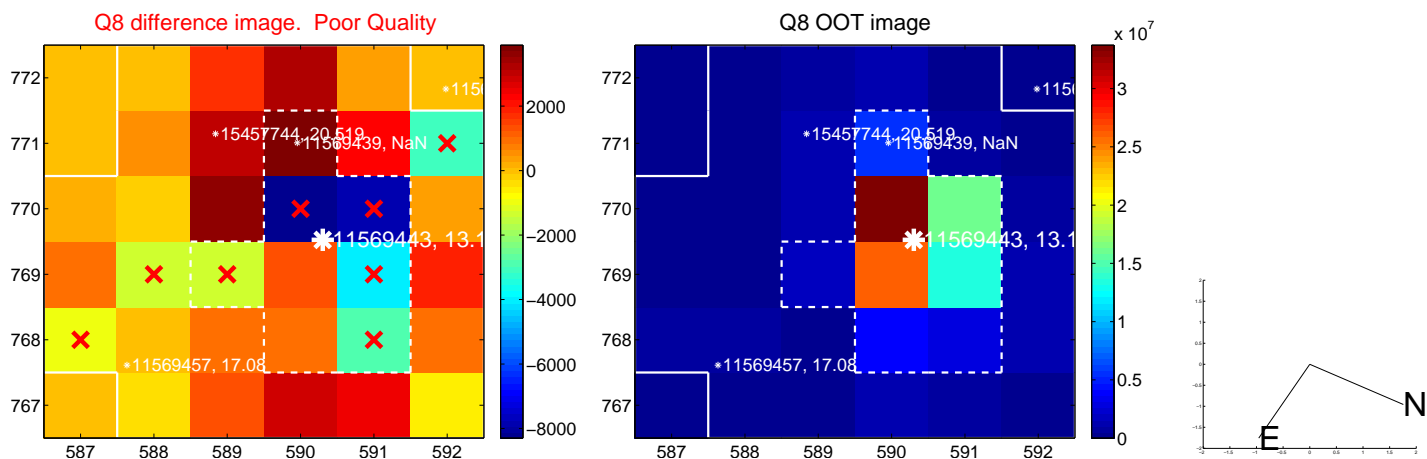
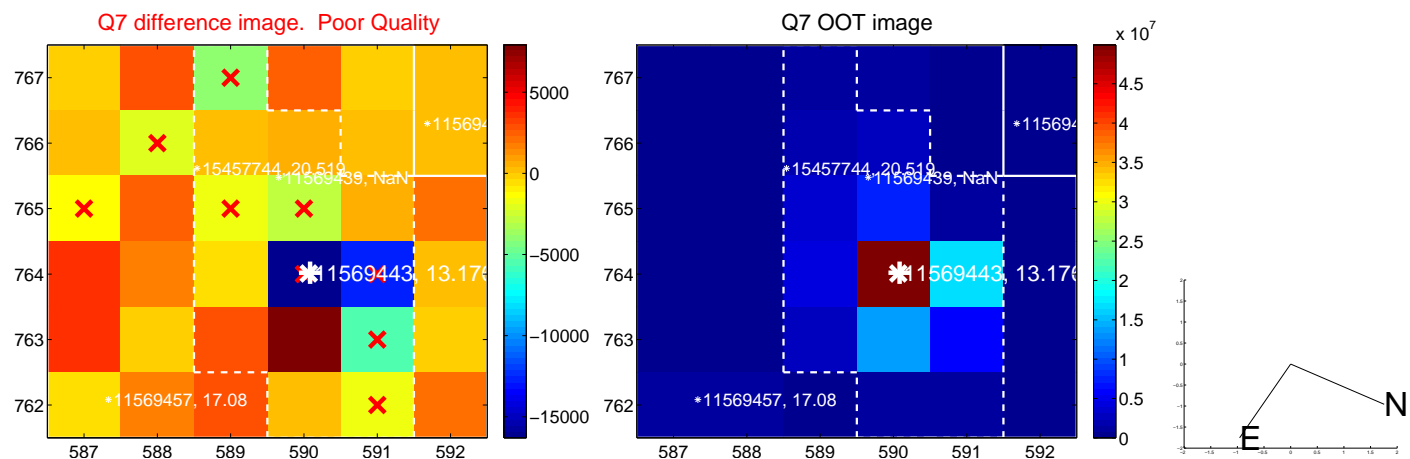
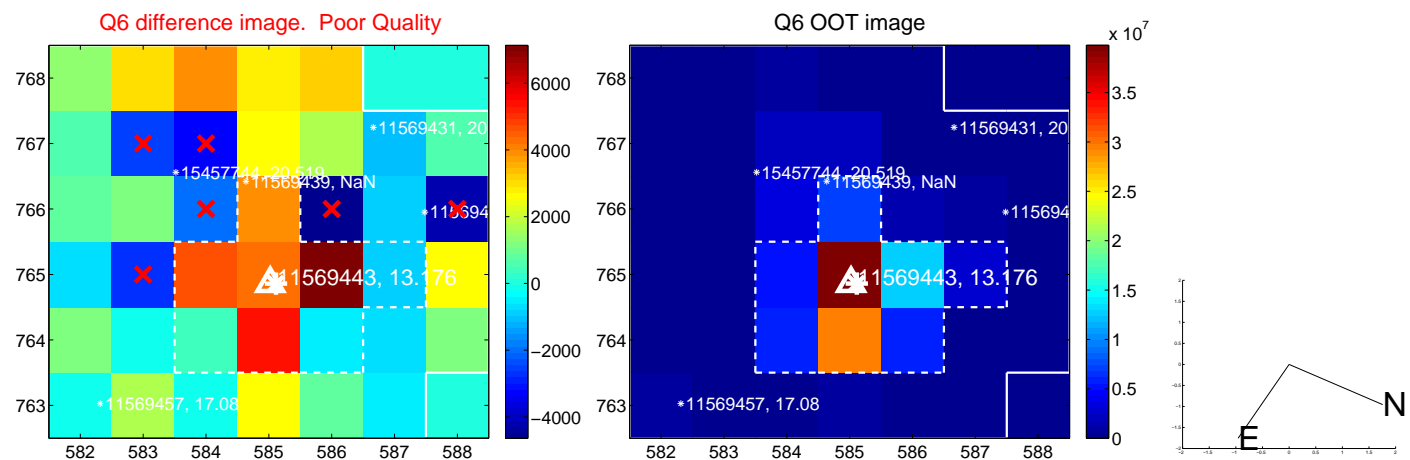
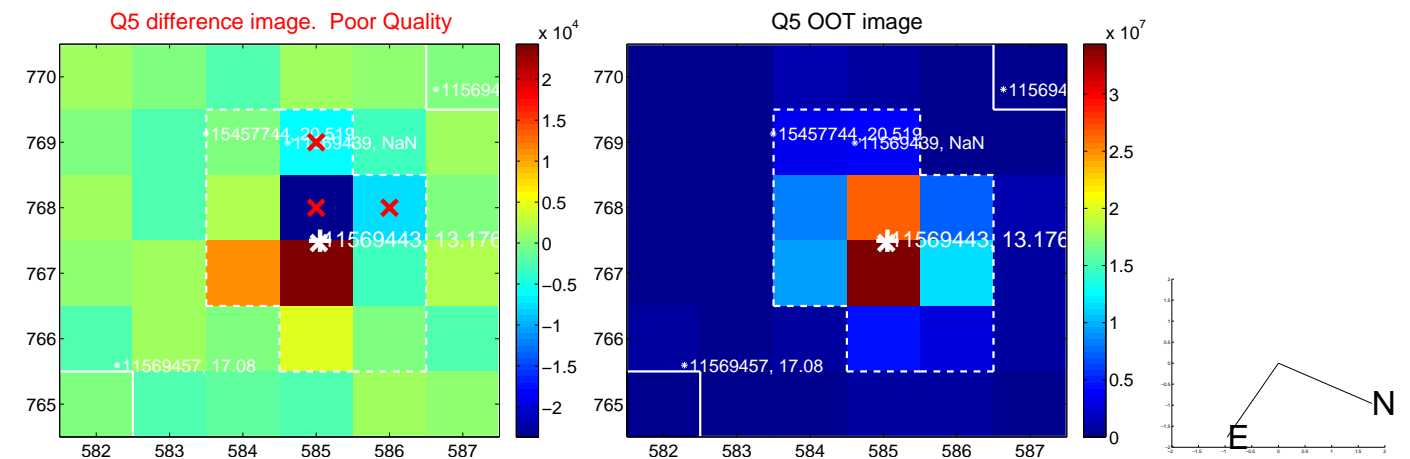


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

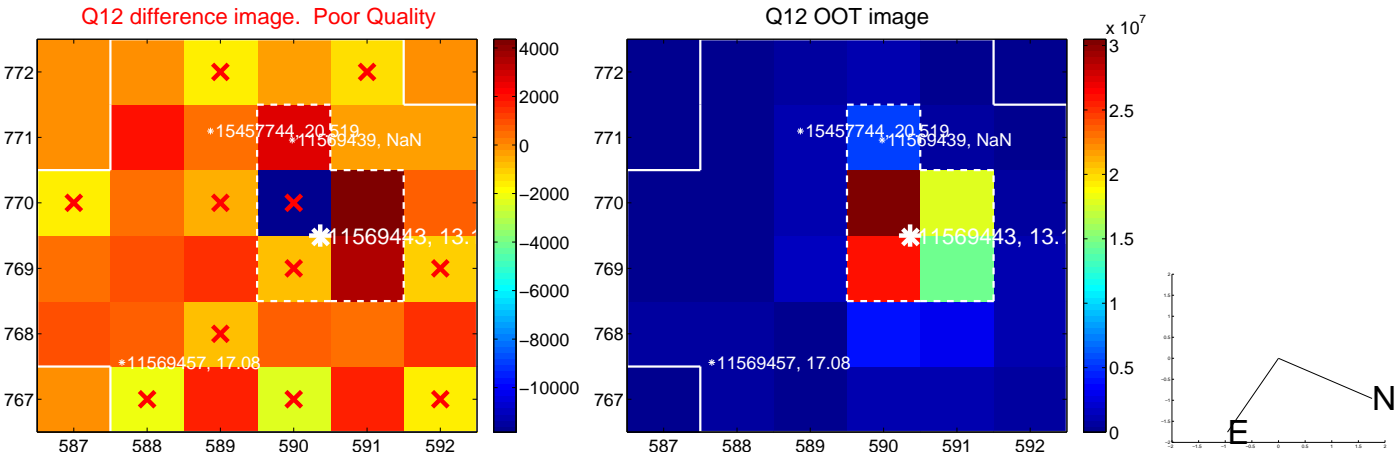
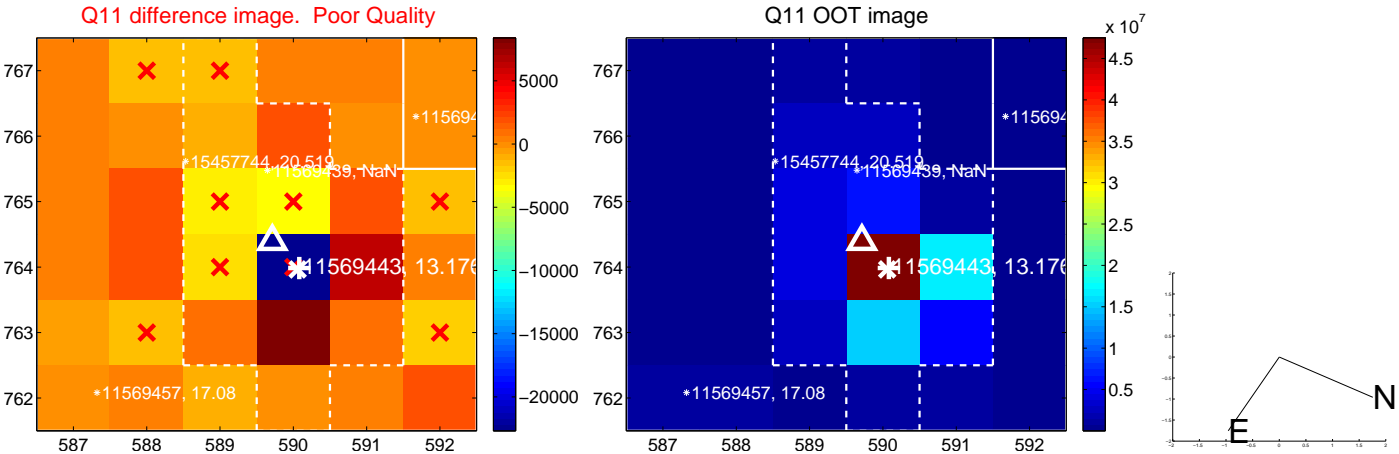
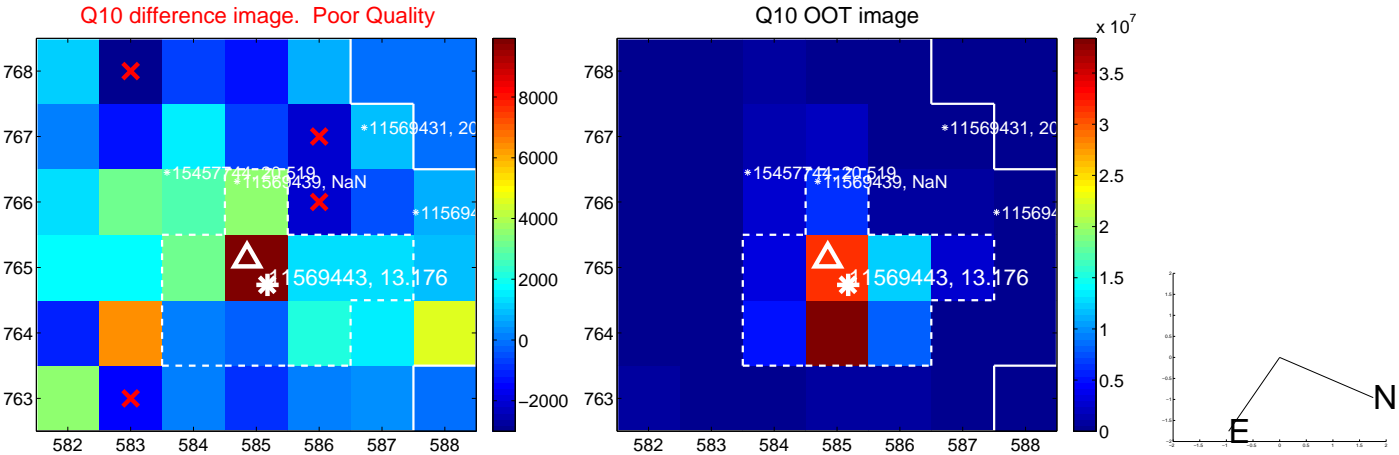
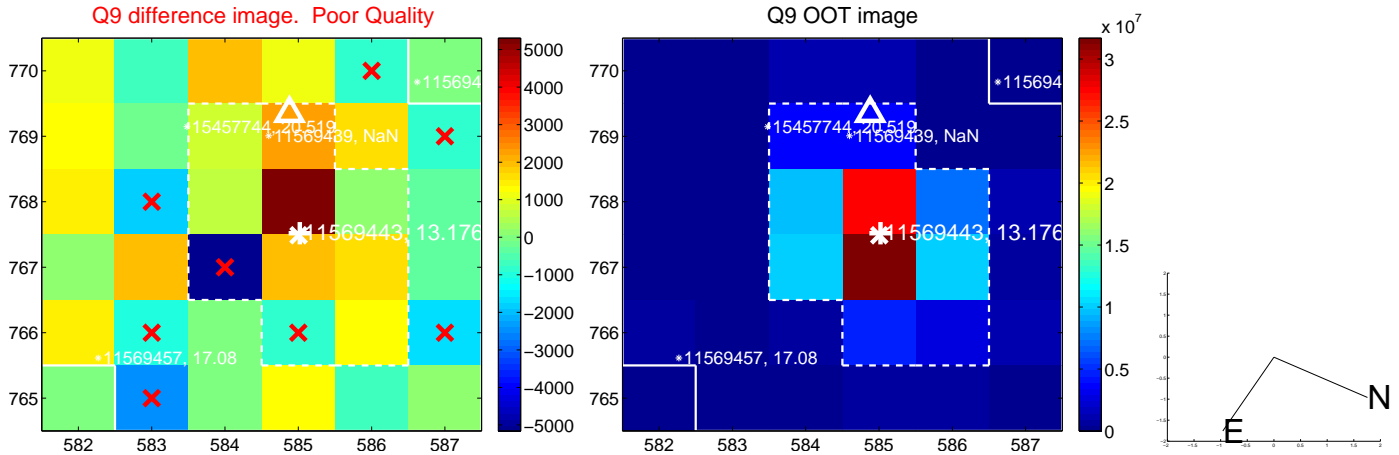
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



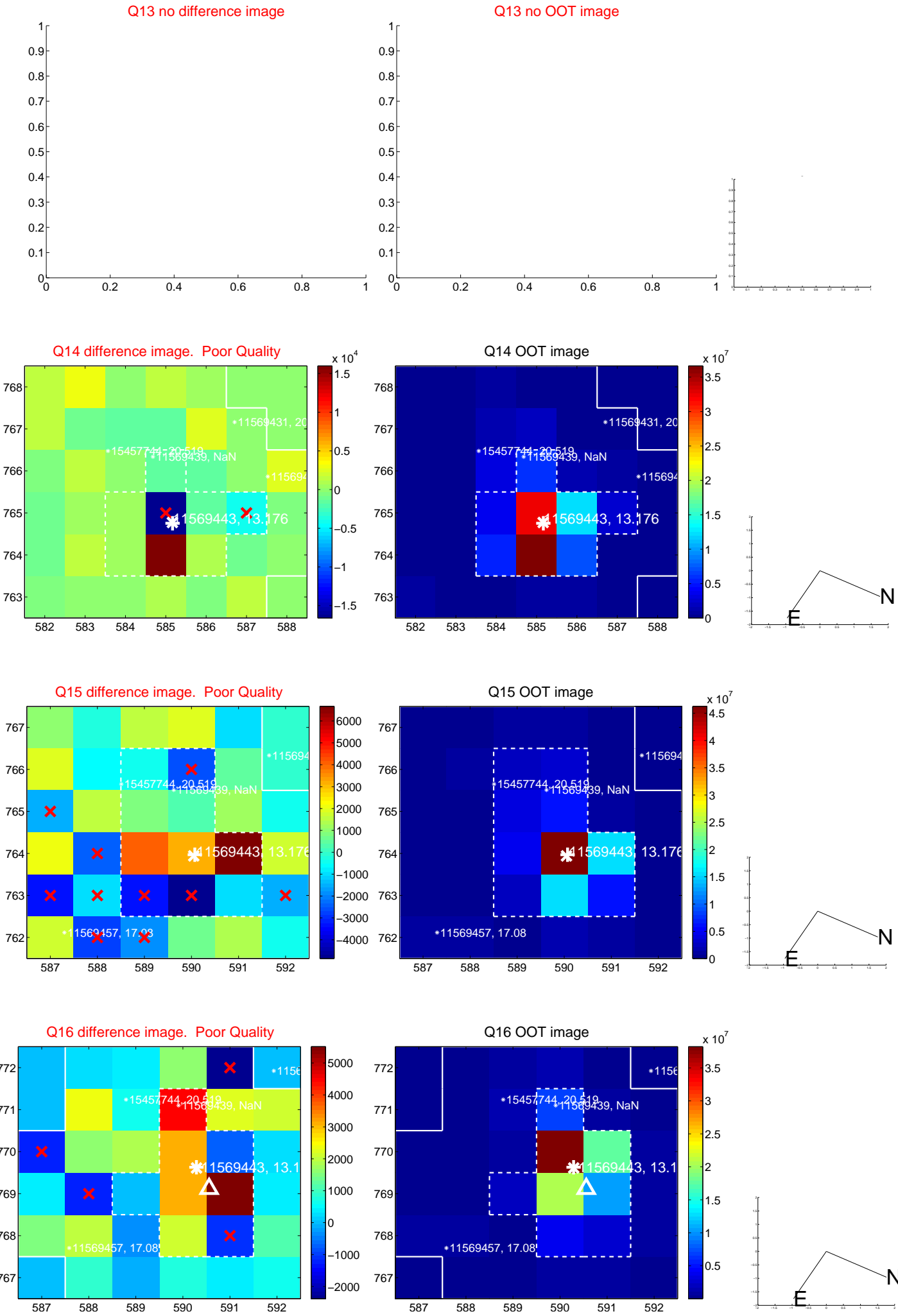
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



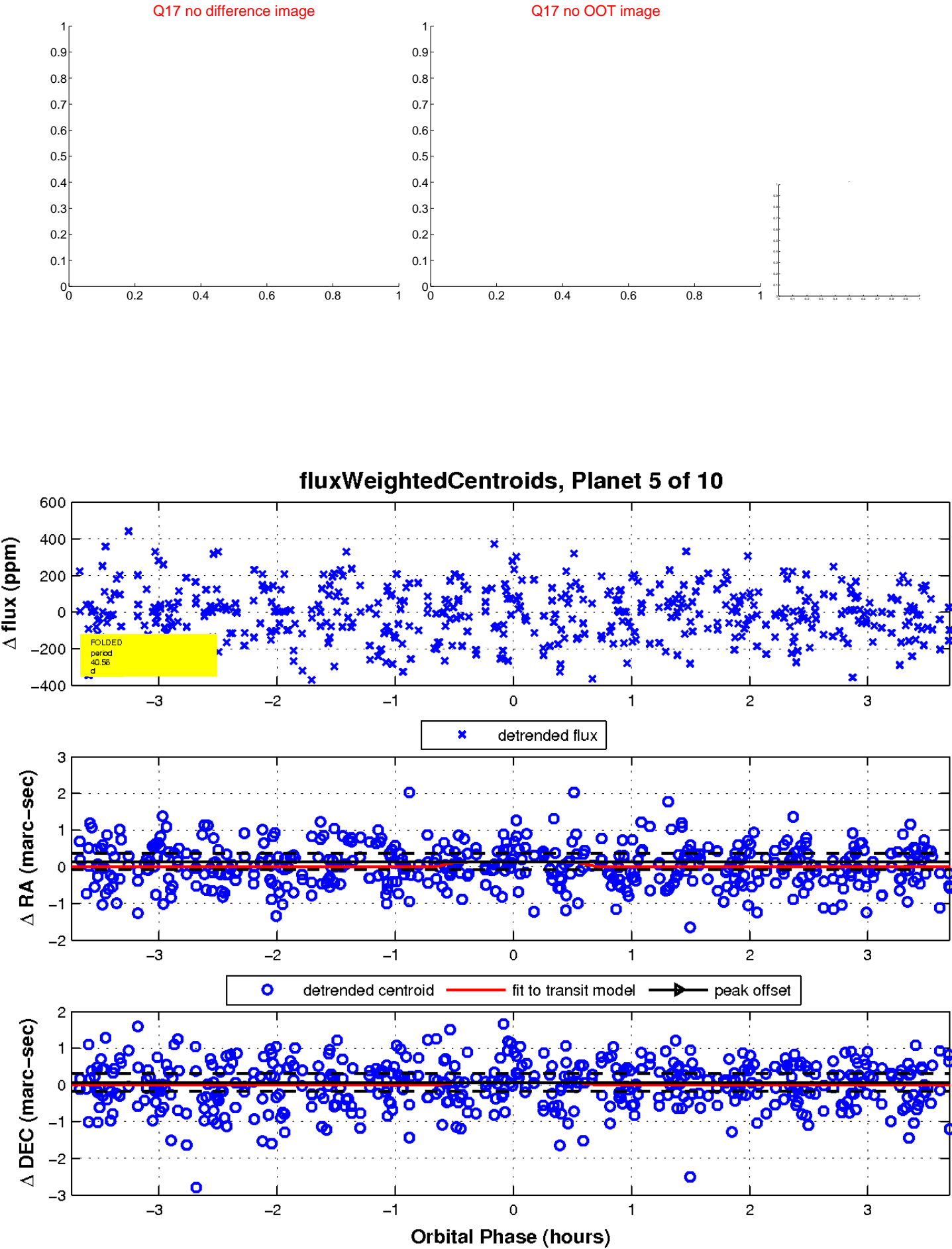
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

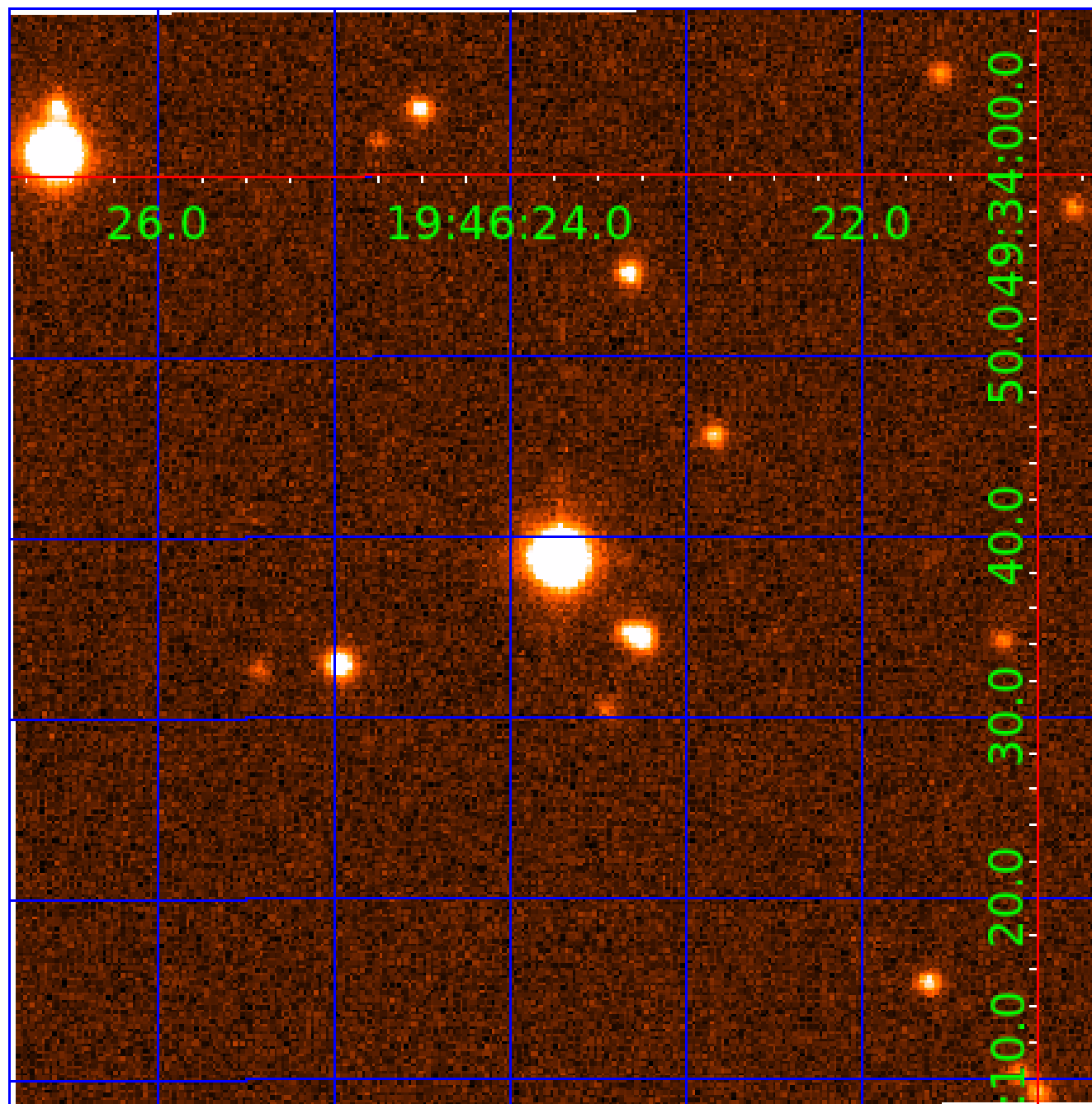


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



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})
011569443-01	OBS	No	2.344129	132.983449	25.4	15.857	8.1	8.4	1.56	6685	0.92	2961.54
011569443-02	OBS	No	412.469578	146.020096	168.6	8.779	10.2	8.4	1.56	6685	2.21	3.00
011569443-03	OBS	No	72.987289	157.607486	270.7	2.219	9.4	10.5	1.56	6685	3.28	30.23
011569443-04	OBS	No	32.077750	145.382778	159.8	4.570	9.1	9.2	1.56	6685	2.15	90.48
011569443-05	OBS	No	40.558747	133.378934	266.8	1.247	8.6	9.0	1.56	6685	2.59	66.18
011569443-06	OBS	No	74.686409	184.106204	190.2	6.743	8.7	9.4	1.56	6685	2.36	29.32
011569443-07	OBS	No	41.646178	159.524234	203.5	2.180	8.0	8.8	1.56	6685	2.64	63.88
011569443-08	OBS	No	104.678723	217.862789	306.0	1.405	8.2	7.6	1.56	6685	3.19	18.69
011569443-09	OBS	No	44.318975	149.204173	184.9	2.422	7.8	8.1	1.56	6685	2.45	58.80
011569443-10	OBS	No	281.444595	187.802605	249.5	12.521	9.4	11.2	1.56	6685	2.77	5.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011569443-01	OBS	FP	0.00	1	0	0	0	LPP_DV
011569443-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
011569443-03	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
011569443-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011569443-05	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_FEW_DIFFS—HALO_GHOST
011569443-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
011569443-07	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011569443-08	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_MEAS
011569443-09	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011569443-10	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS—HALO_GHOST

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

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

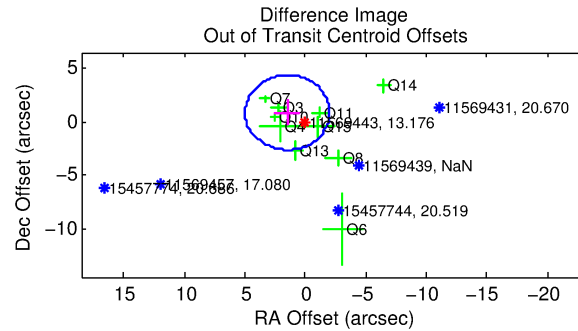
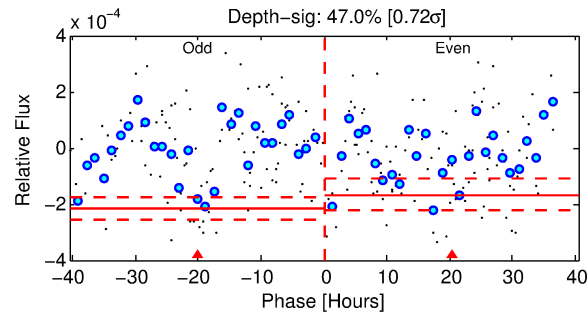
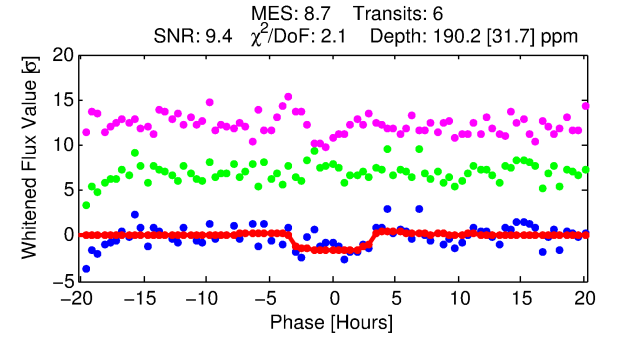
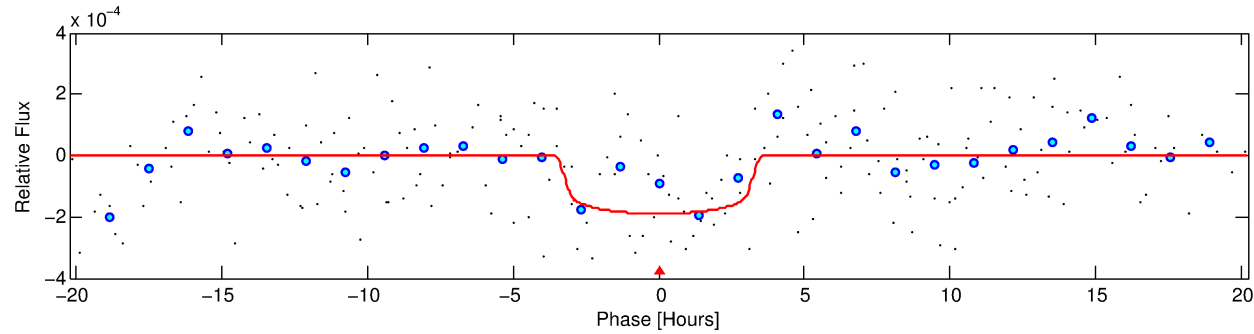
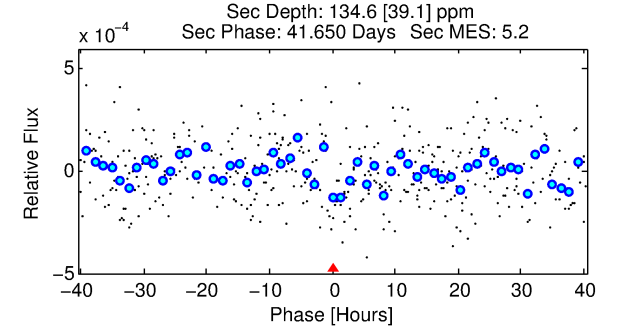
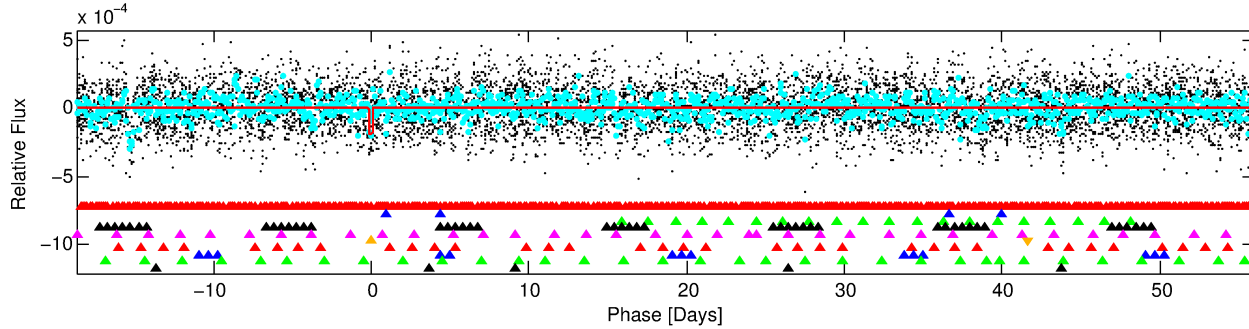
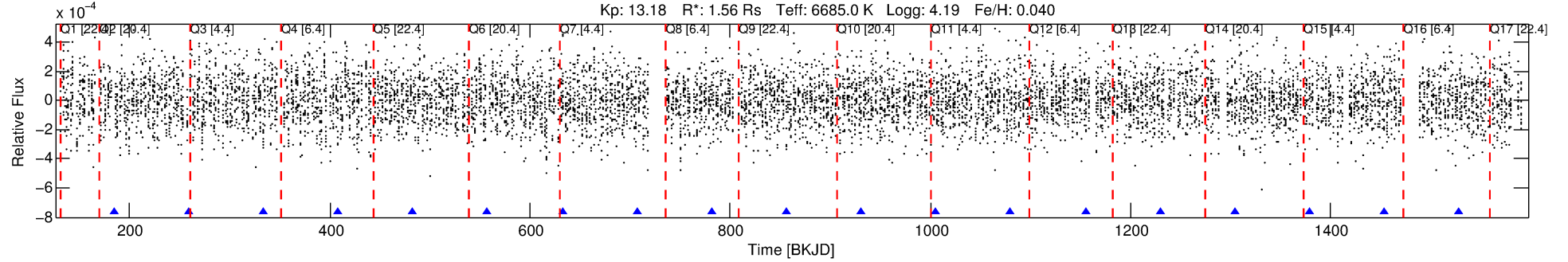
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011569443-06

No Significant Match Found

DV One-Page Summary

KIC: 11569443 Candidate: 6 of 10 Period: 74.686 d



DV Fit Results:

Period = 74.68641 [0.00160] d
Epoch = 184.1062 [0.0187] BKJD
Rp/R* = 0.0139 [0.0109]
a/R* = 54.28 [238.29]
b = 0.79 [2.17]
Seff = 29.32 [12.13]
Teq = 593 [61] K
Rp = 2.36 [2.00] Re
a = 0.3846 [0.1012] AU
Ag = 1971.81 [3241.85] [0.61σ]
Teffp = 6113 [2459] K [2.24σ]

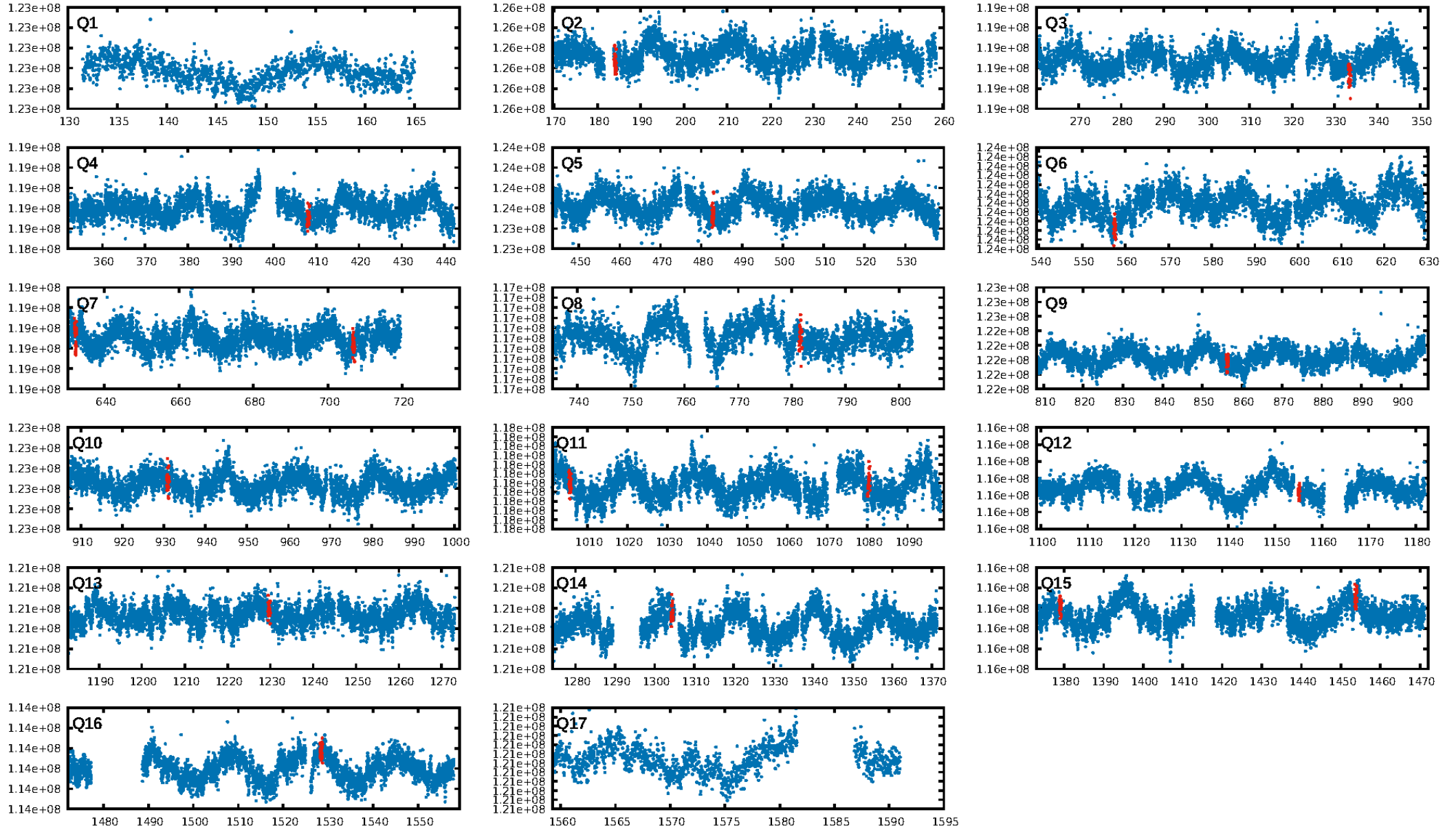
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [5.74σ]
LongPeriod-sig: 100.0% [104.51σ]
ModelChiSquare2-sig: 41.8%
ModelChiSquareGof-sig: 96.9%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: -5.011
Centroid-sig: 37.7%
Centroid-so: 0.631 arcsec [0.85σ]
OotOffset-rm: 1.723 arcsec [1.48σ]
KicOffset-rm: 1.651 arcsec [1.45σ]
OotOffset-st: 3/4/2/1 [10]
KicOffset-st: 3/4/2/1 [10]
DiffImageQuality-fgm: 0.40 [4/10]
DiffImageOverlap-fno: 0.38 [5/13]

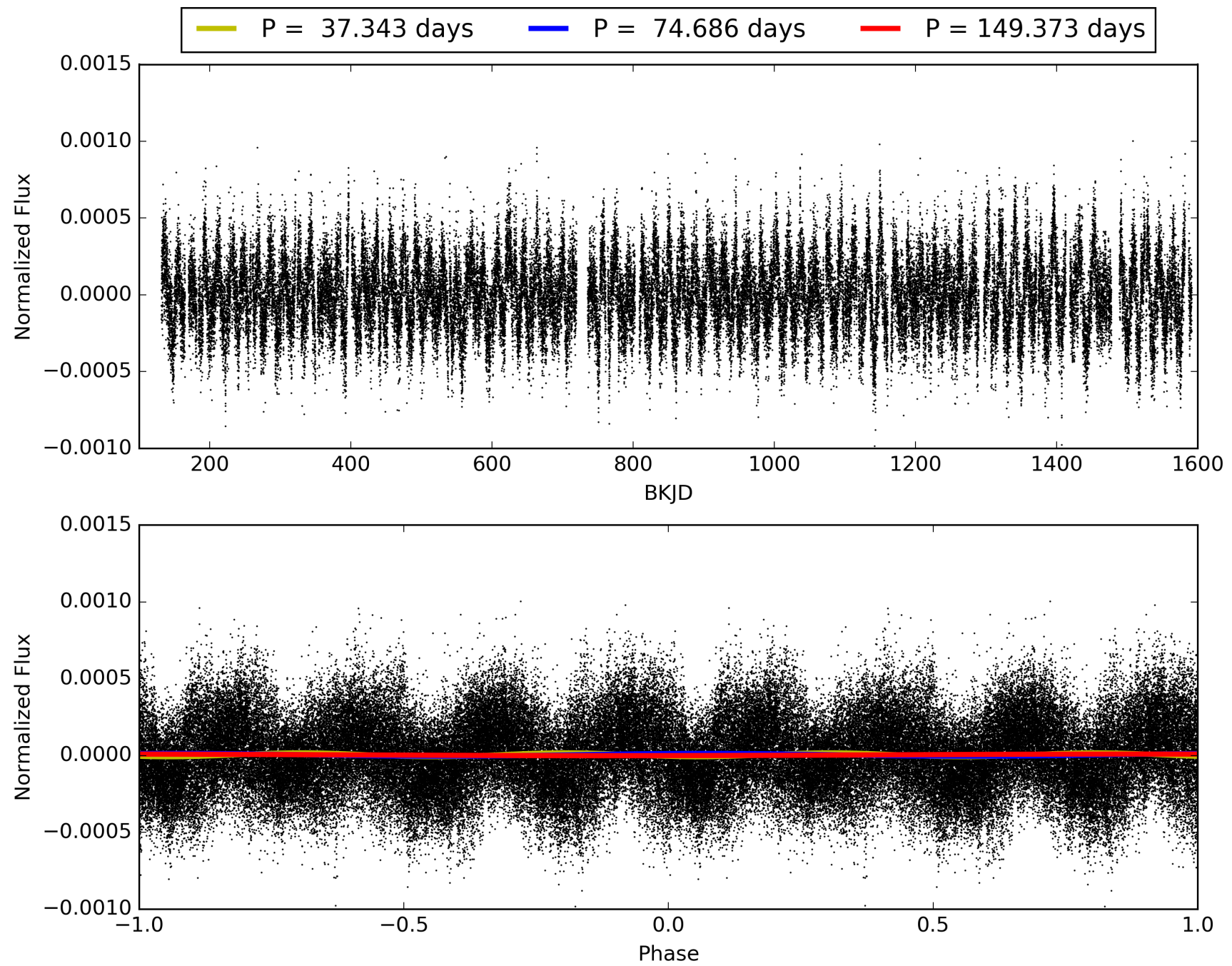
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:25:47 Z

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

TCE 011569443-06, PDC Light Curves

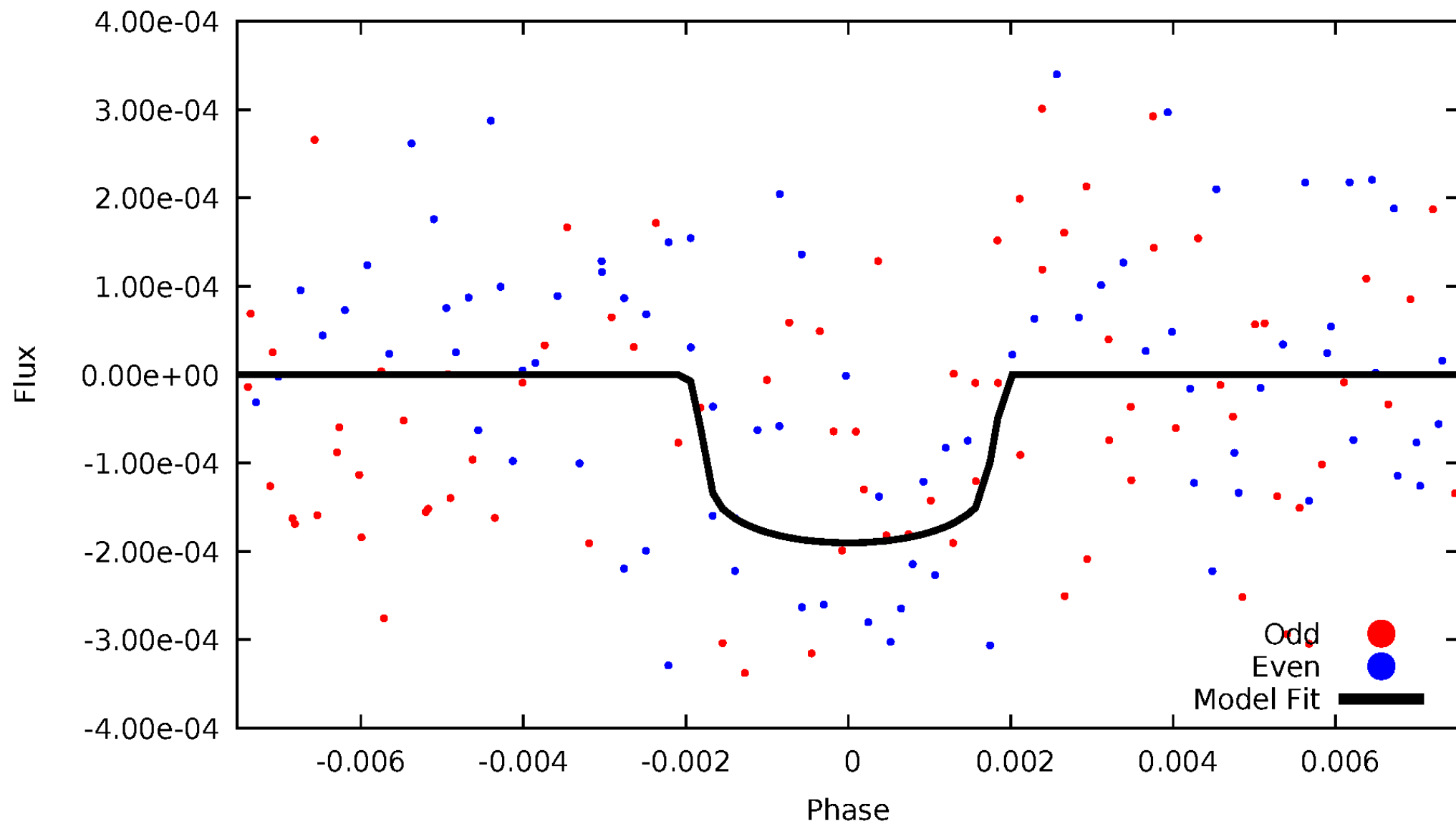


TCE 011569443-06



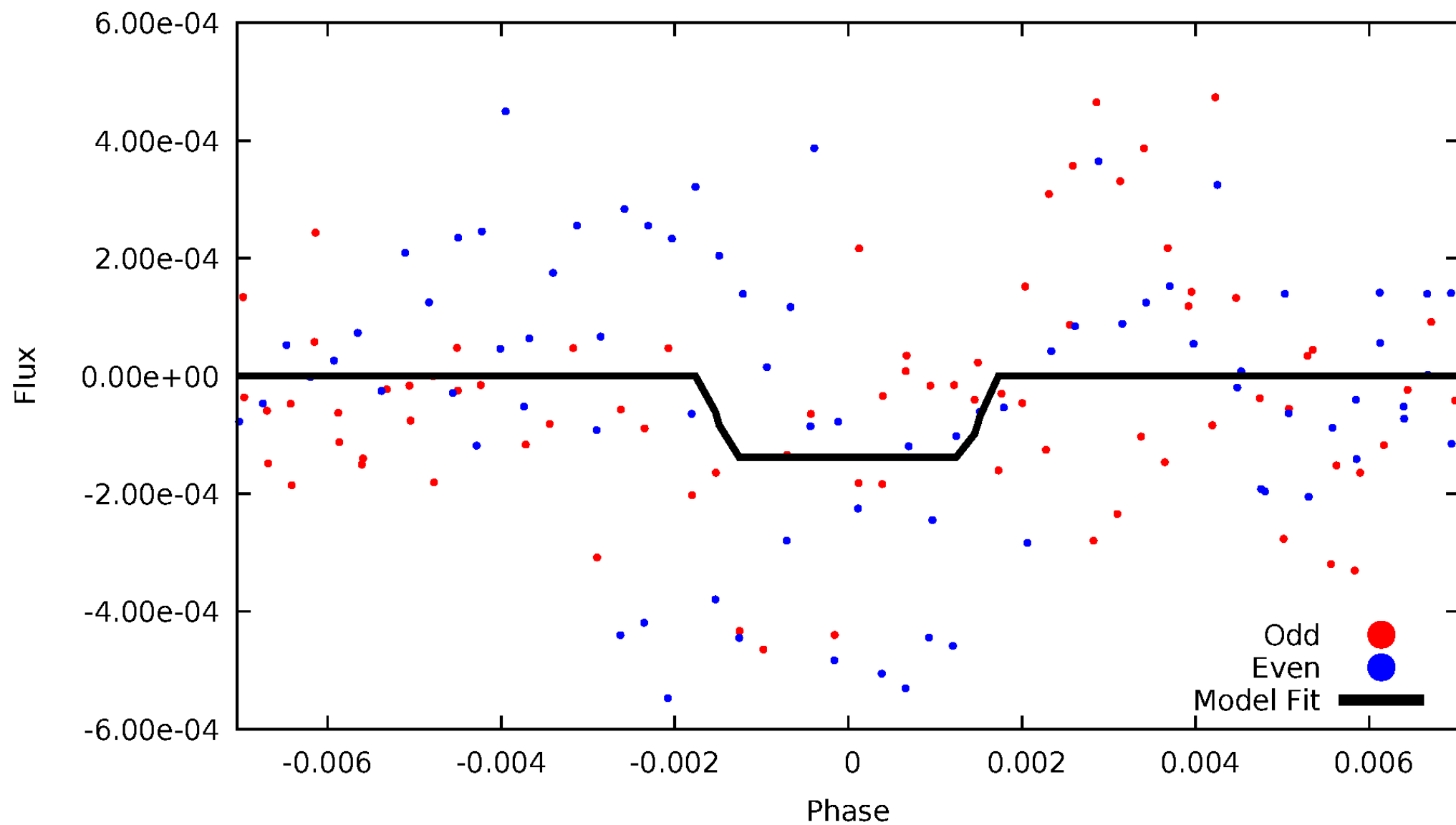
DV Odd/Even

TCE 011569443-06



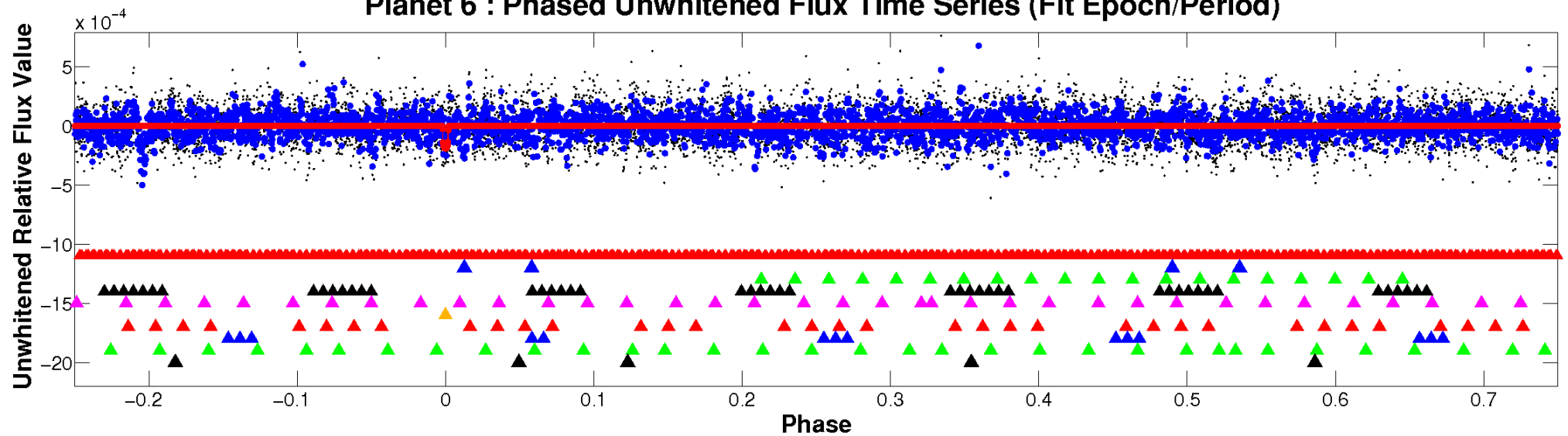
ALT Odd/Even

TCE 011569443-06

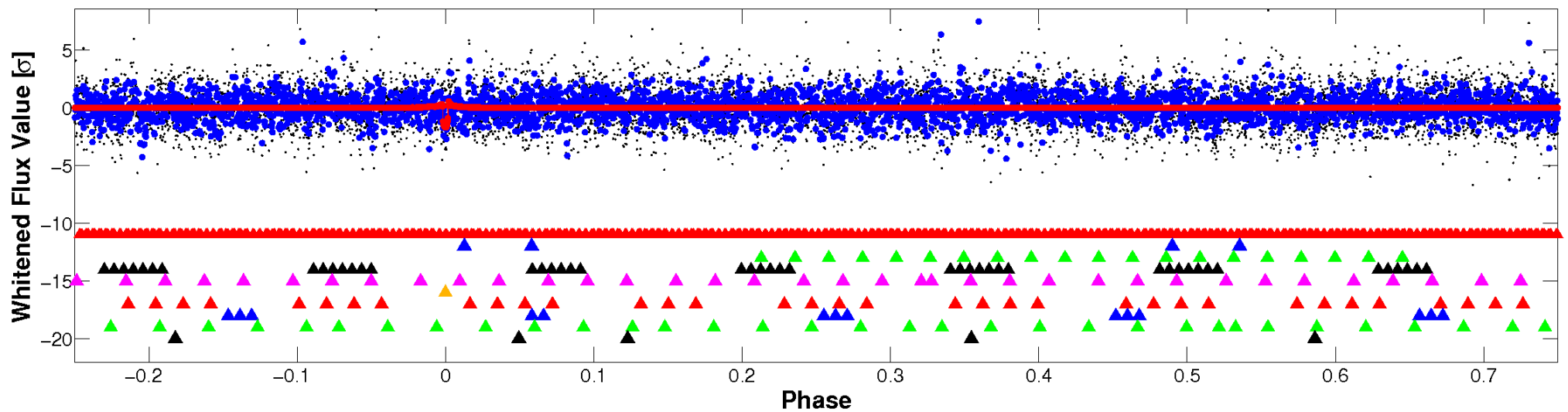


Non-Whitened Vs. Whitened Light Curve

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

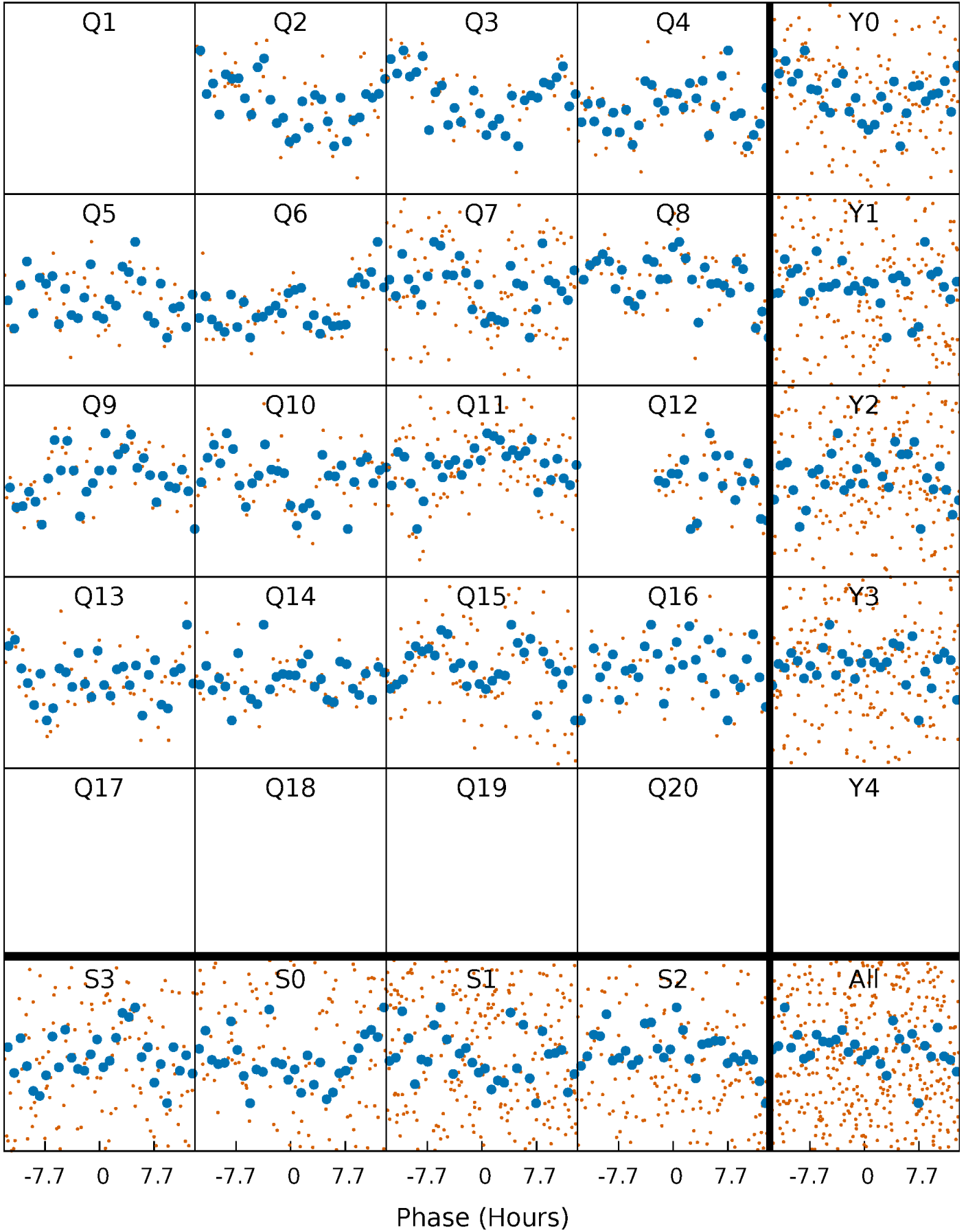


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



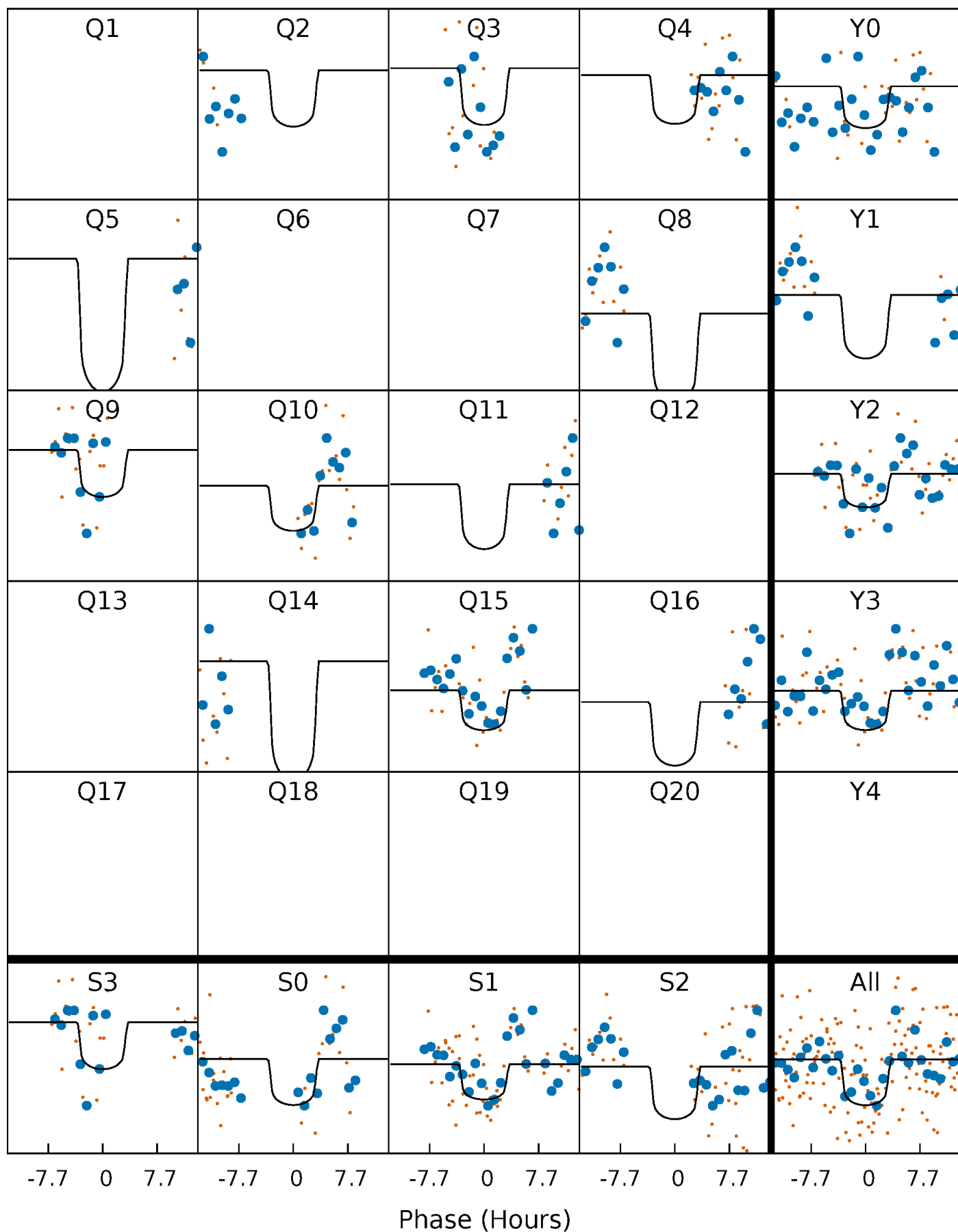
PDC Quarter-Phased Transit Curves

TCE 011569443-06 P= 74.686409 Days $T_0=184.106204$ (BKJD)



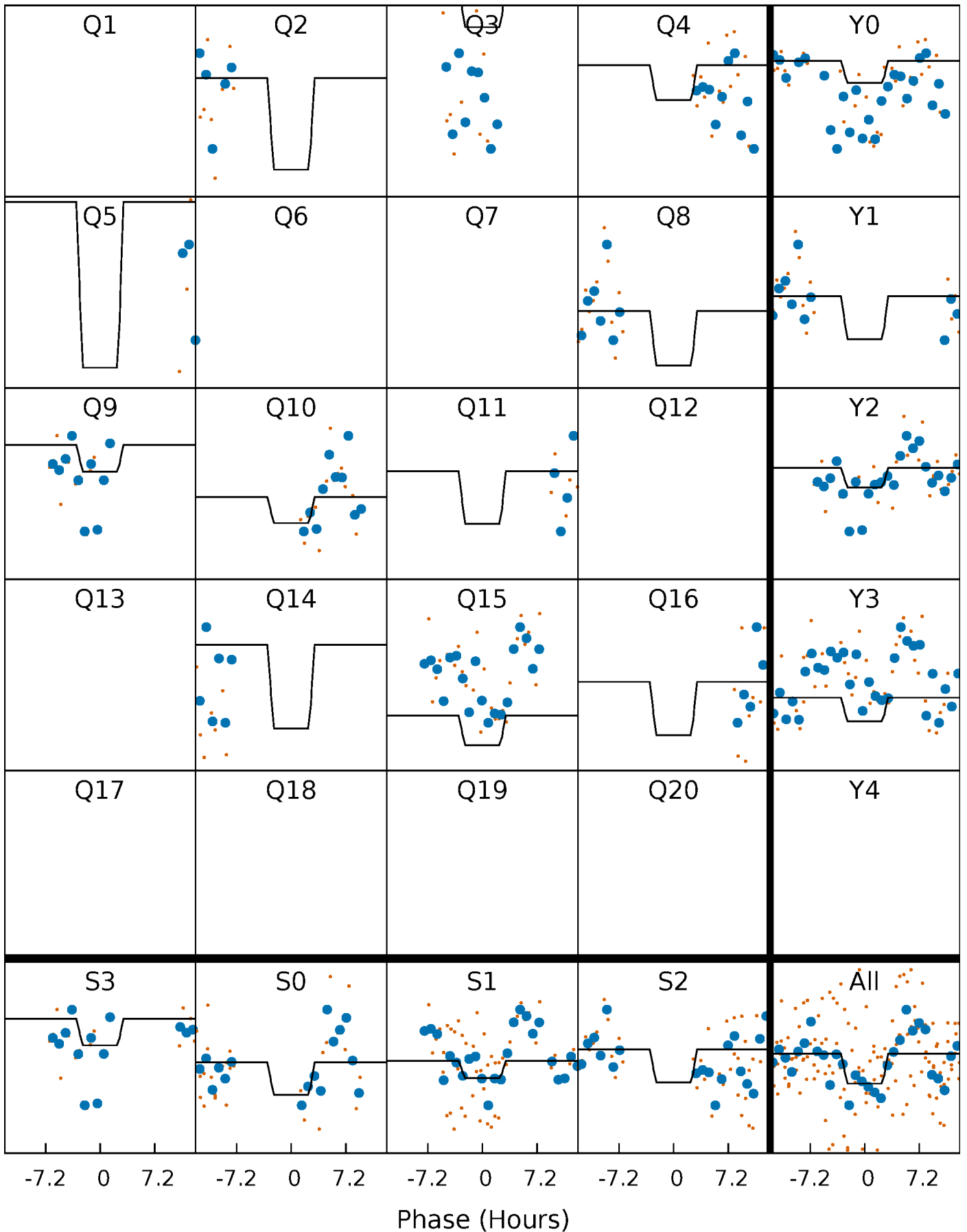
DV Quarter-Phased Transit Curves

TCE 011569443-06 P= 74.686409 Days $T_0=184.106204$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

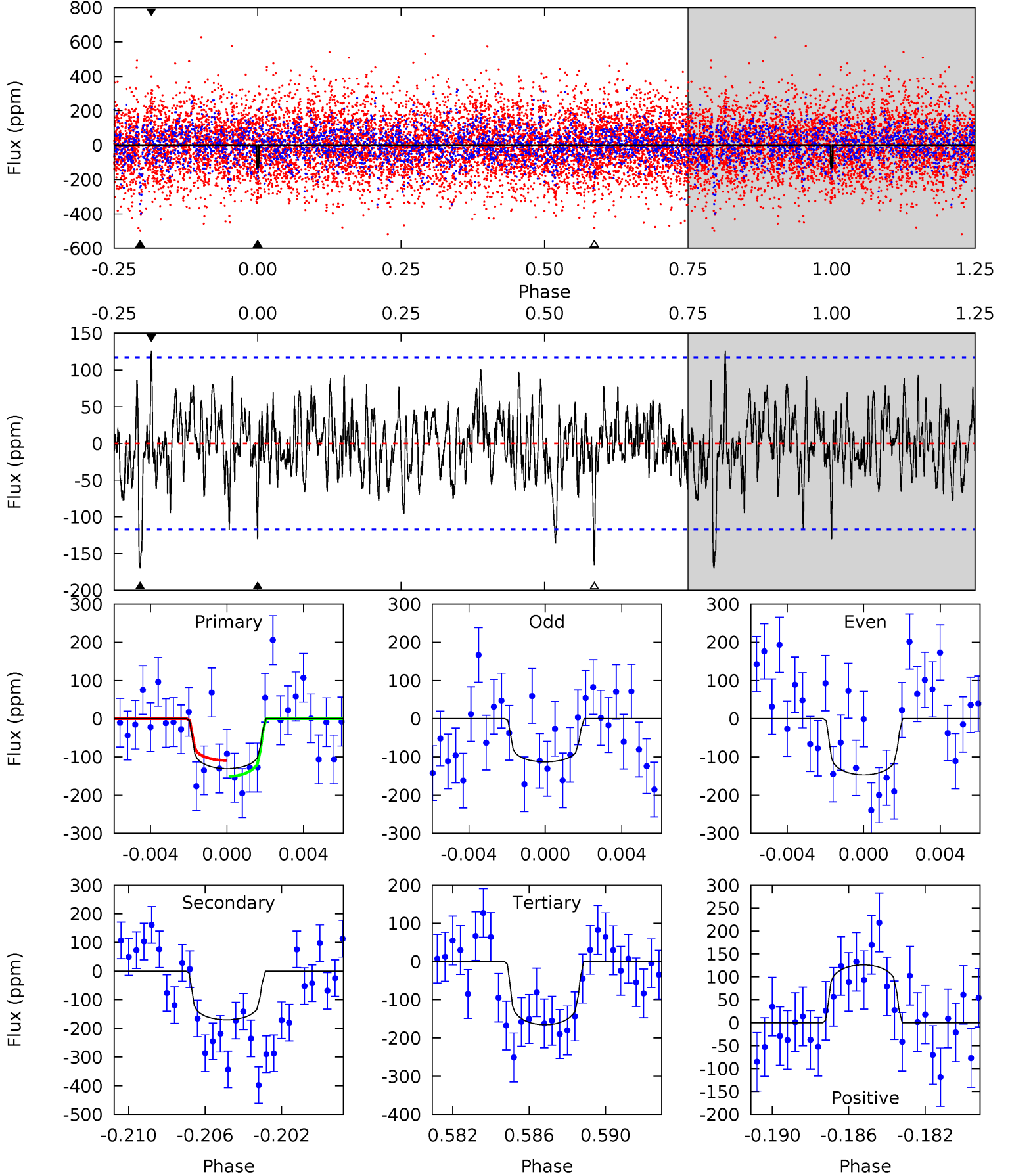
TCE 011569443-06 P= 74.684729 Days $T_0=184.099235$ (BKJD)



DV Model-Shift Uniqueness Test

011569443-06, $P = 74.686409$ Days, $E = 109.419795$ Days

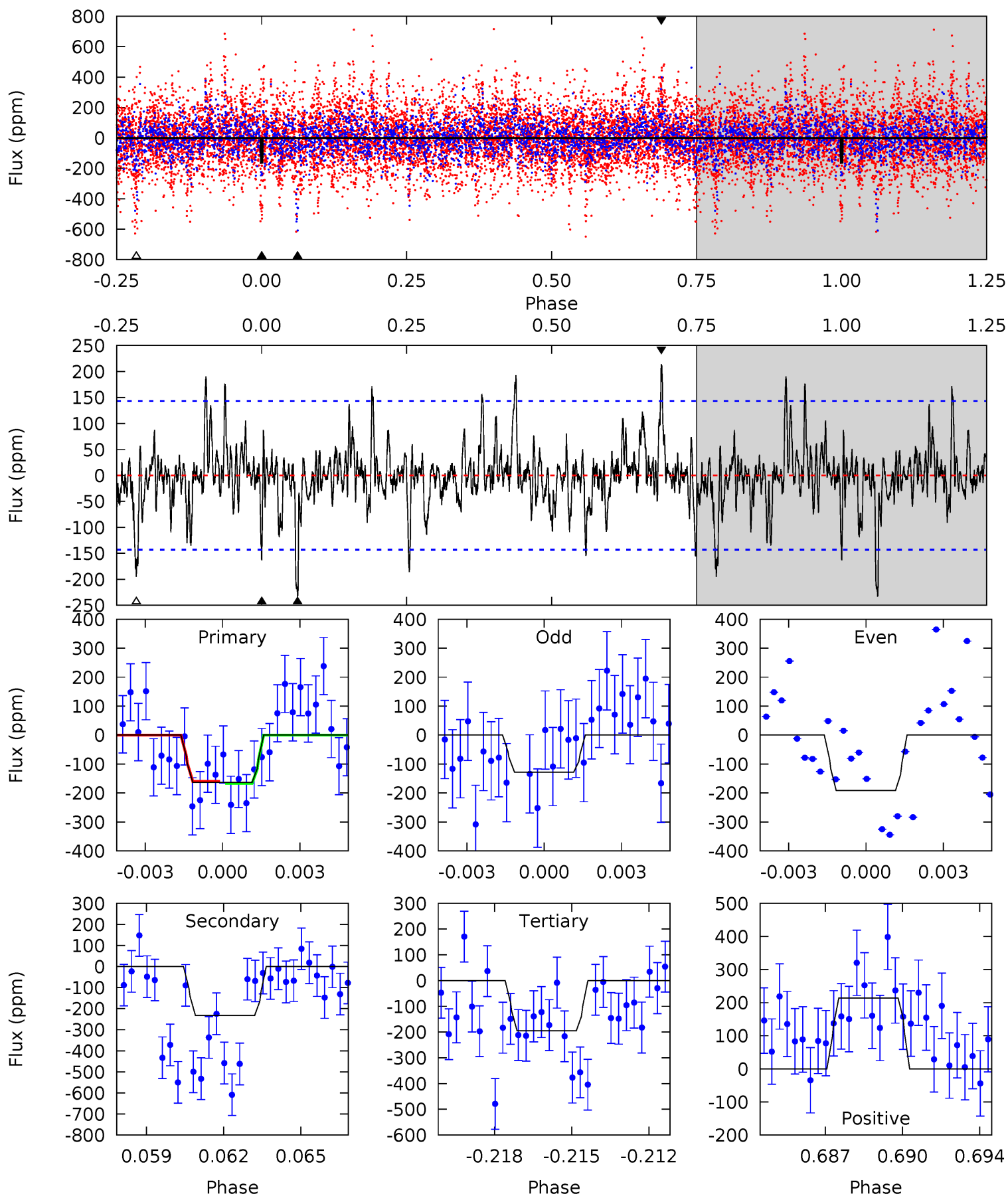
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.81	7.56	7.35	5.60	5.20	2.88	1.66	-1.54	0.21	0.20	1.96	0.76	1.01	0.43	0.93



Alt Model-Shift Uniqueness Test

011569443-06, P = 74.684729 Days, E = 109.414506 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.98	8.50	7.13	7.83	5.24	2.94	1.90	-1.15	-1.85	1.37	0.67	1.16	0.81	0.48	0.11



Stellar Parameters For KIC 011569443

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6685^{+187}_{-281}	$4.187^{+0.136}_{-0.204}$	$0.040^{+0.250}_{-0.350}$	$1.557^{+0.494}_{-0.329}$	$1.358^{+0.214}_{-0.235}$	$0.507^{+0.389}_{-0.251}$
	+3%/-4%	+3%/-5%	+625%/-875%	+32%/-21%	+16%/-17%	+77%/-50%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 011569443-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-170 ± 22	$2.68^{+1.91}_{-1.66}$	833^{+65}_{-53}	6136^{+4772}_{-1307}	1932^{+11395}_{-1297}
Alt.	-232 ± 27	$2.32^{+1.81}_{-1.42}$	837^{+69}_{-58}	7117^{+6855}_{-1724}	3375^{+19206}_{-2285}

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 $A_{obs} \gg 1.0$

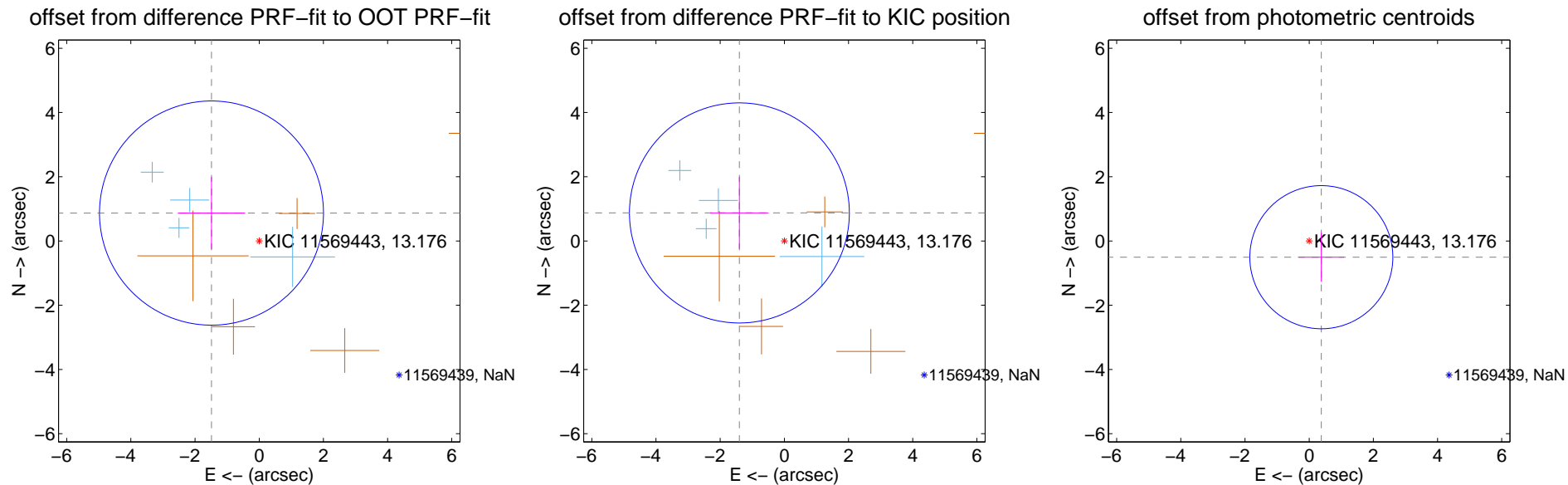
DV Centroid Data

Supplemental centroid analysis for 011569443-06. Kepler magnitude: 13.18. Transit SNR 9.36

There are 4 quarters with good PRF difference image offsets

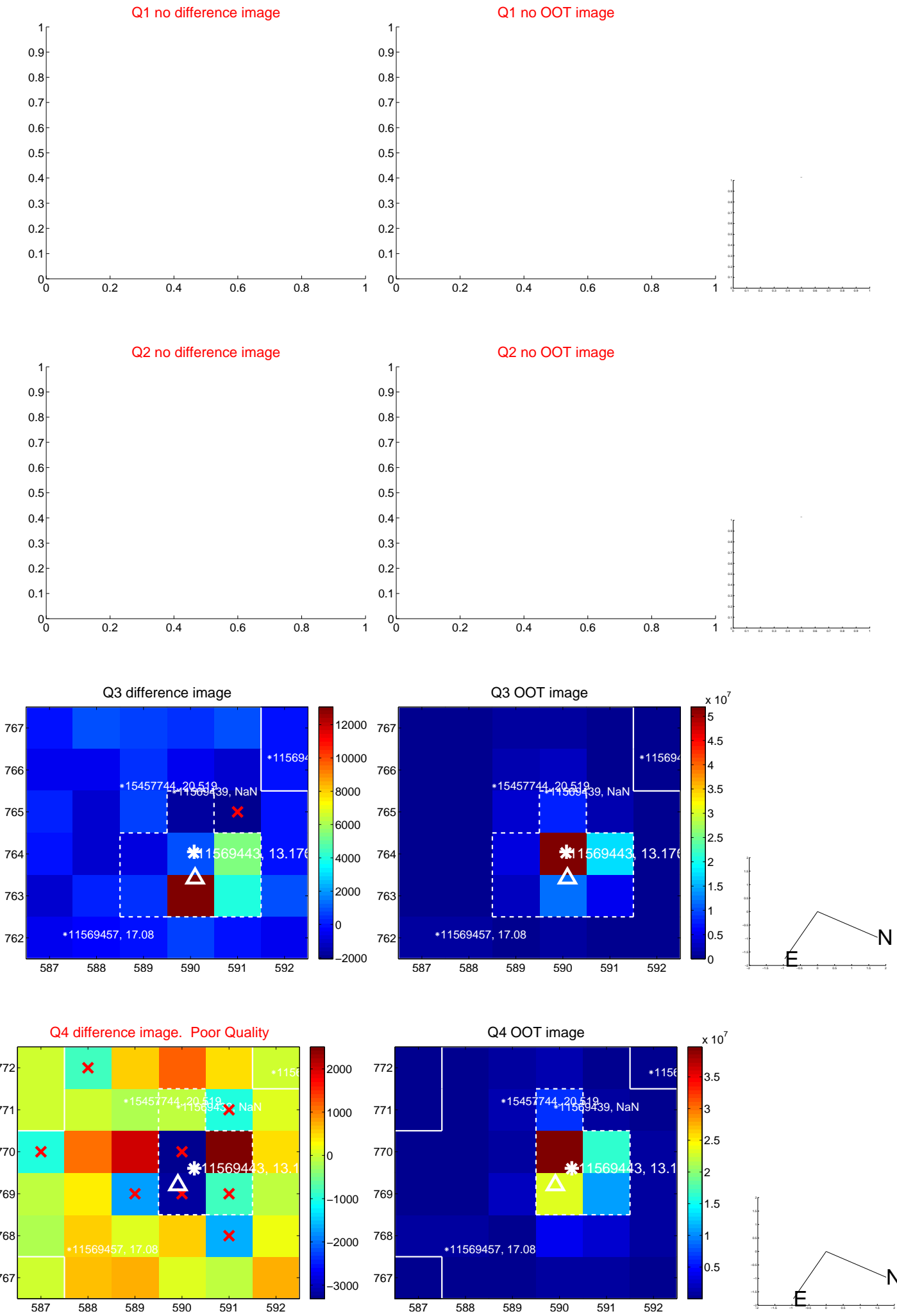
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.723 ± 1.163	1.48	1.488 ± 1.047	0.869 ± 1.123
PRF-fit source offset from KIC position	1.651 ± 1.142	1.45	1.401 ± 0.908	0.873 ± 1.119
photometric centroid source offset	0.63 ± 0.74	0.85	-0.38 ± 0.71	-0.50 ± 0.76

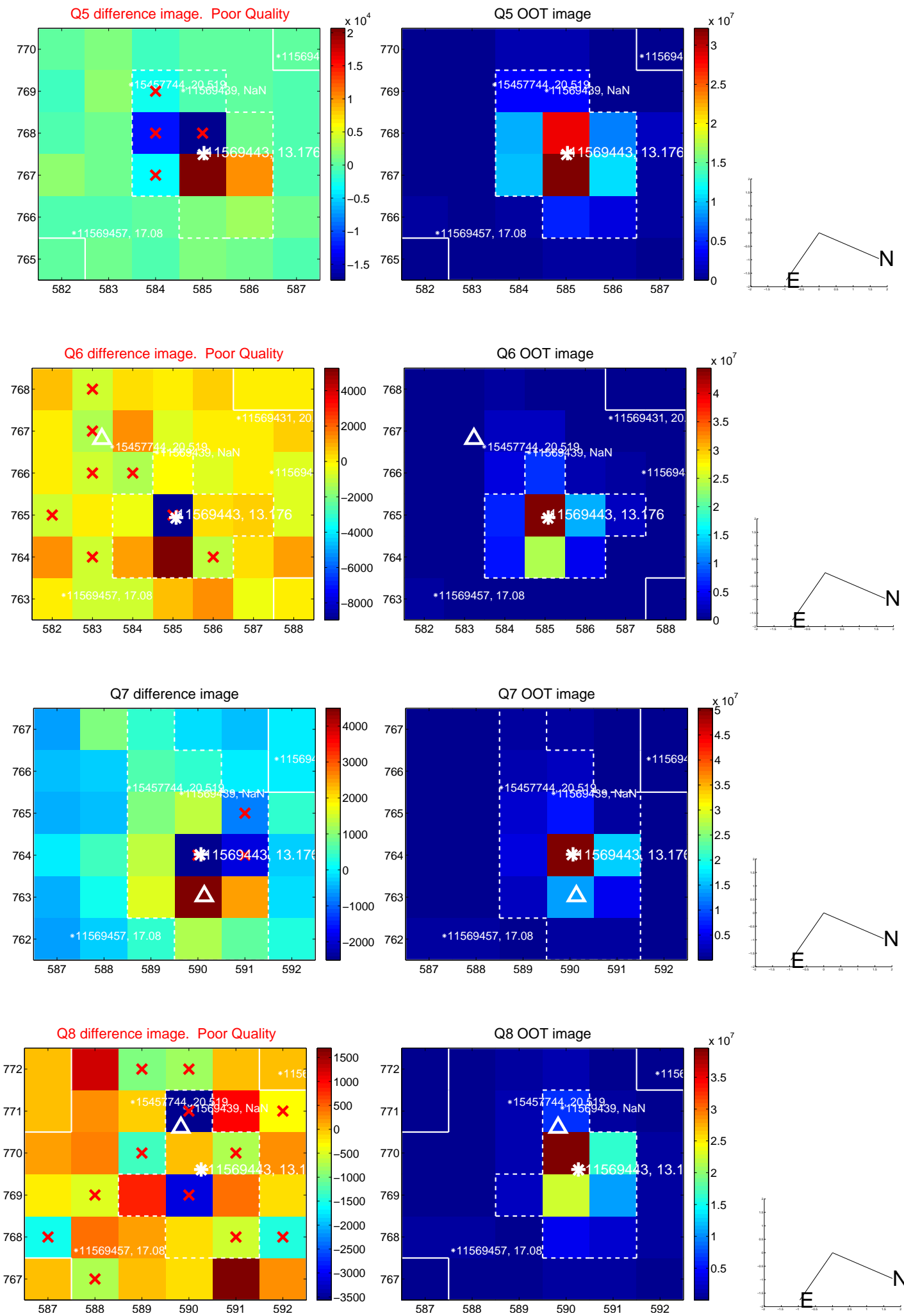


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

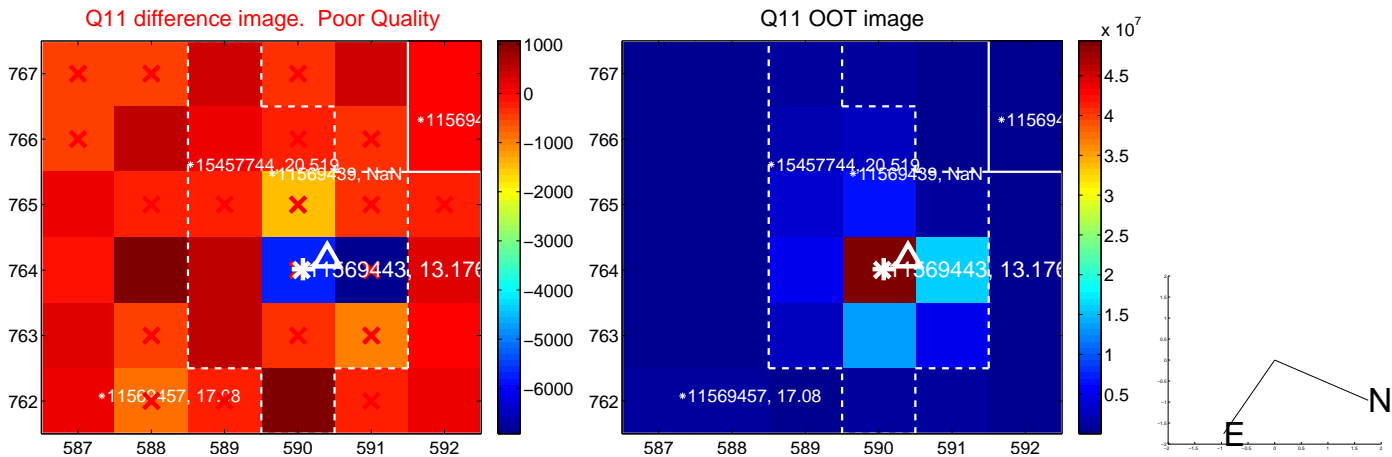
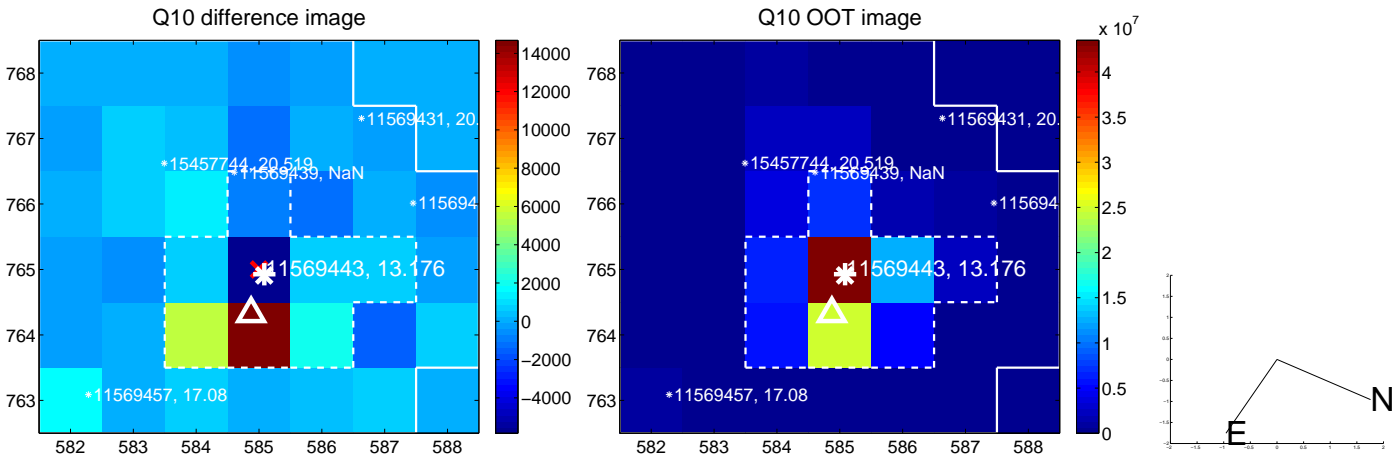
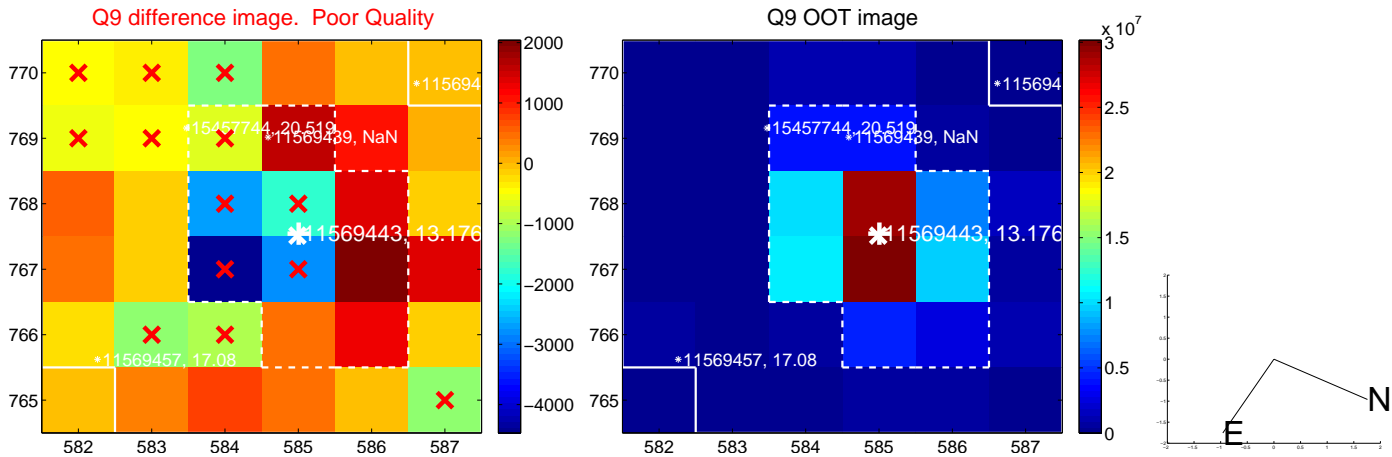
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



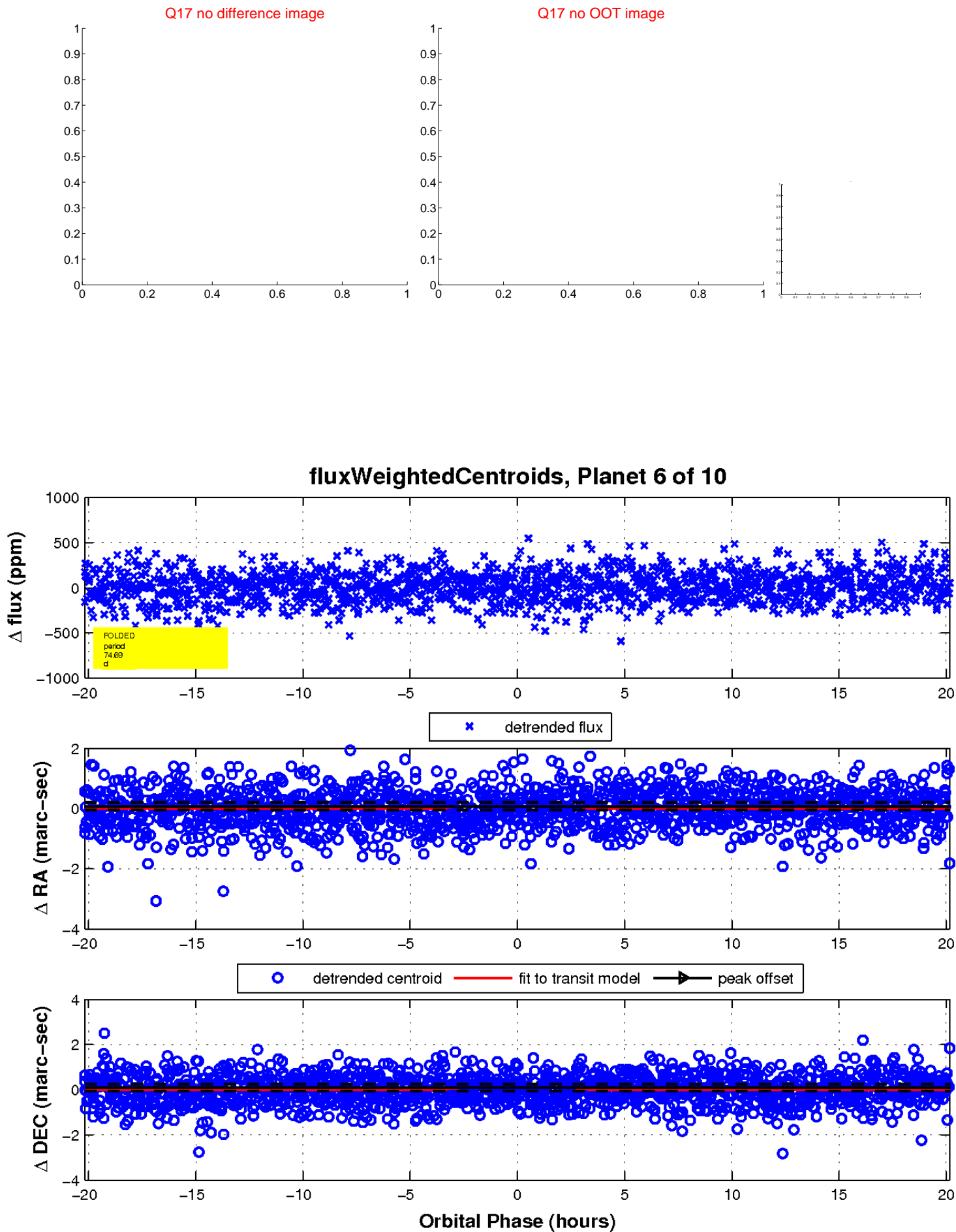
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

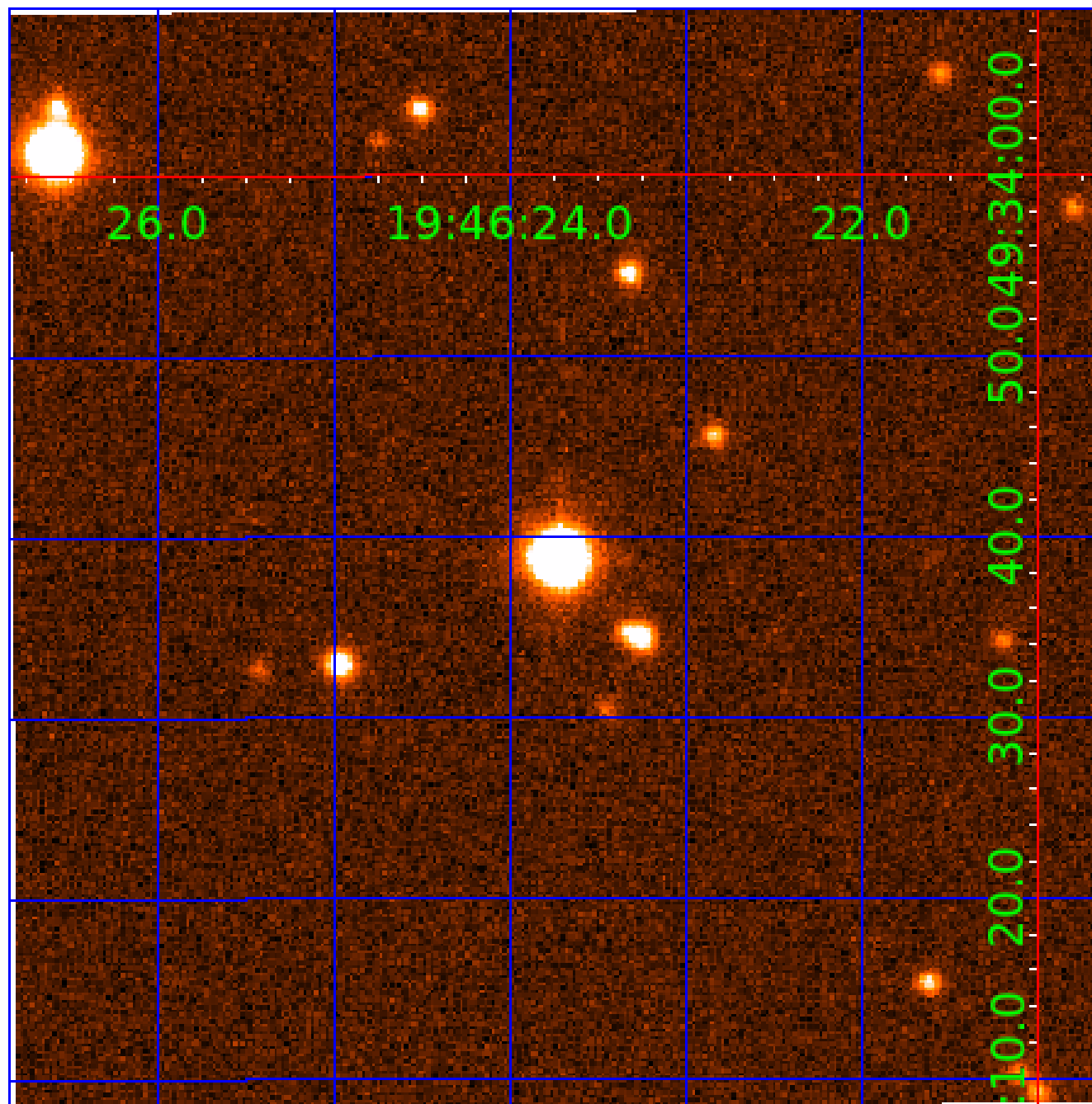


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



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})
011569443-01	OBS	No	2.344129	132.983449	25.4	15.857	8.1	8.4	1.56	6685	0.92	2961.54
011569443-02	OBS	No	412.469578	146.020096	168.6	8.779	10.2	8.4	1.56	6685	2.21	3.00
011569443-03	OBS	No	72.987289	157.607486	270.7	2.219	9.4	10.5	1.56	6685	3.28	30.23
011569443-04	OBS	No	32.077750	145.382778	159.8	4.570	9.1	9.2	1.56	6685	2.15	90.48
011569443-05	OBS	No	40.558747	133.378934	266.8	1.247	8.6	9.0	1.56	6685	2.59	66.18
011569443-06	OBS	No	74.686409	184.106204	190.2	6.743	8.7	9.4	1.56	6685	2.36	29.32
011569443-07	OBS	No	41.646178	159.524234	203.5	2.180	8.0	8.8	1.56	6685	2.64	63.88
011569443-08	OBS	No	104.678723	217.862789	306.0	1.405	8.2	7.6	1.56	6685	3.19	18.69
011569443-09	OBS	No	44.318975	149.204173	184.9	2.422	7.8	8.1	1.56	6685	2.45	58.80
011569443-10	OBS	No	281.444595	187.802605	249.5	12.521	9.4	11.2	1.56	6685	2.77	5.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011569443-01	OBS	FP	0.00	1	0	0	0	LPP_DV
011569443-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
011569443-03	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
011569443-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011569443-05	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_FEW_DIFFS—HALO_GHOST
011569443-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
011569443-07	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011569443-08	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_MEAS
011569443-09	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011569443-10	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS—HALO_GHOST

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

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

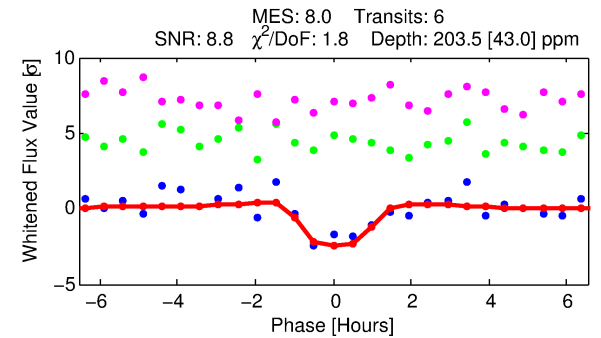
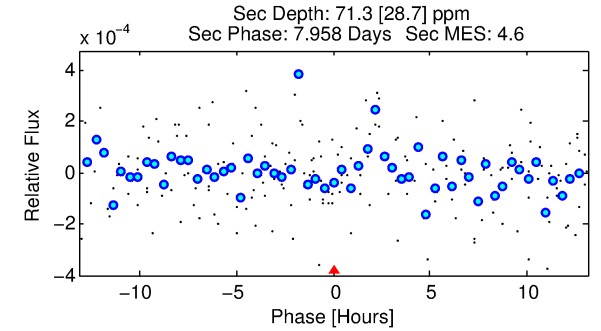
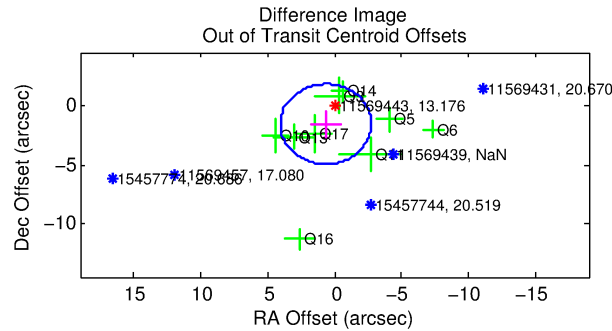
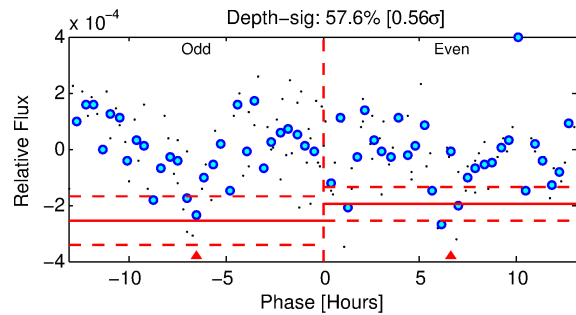
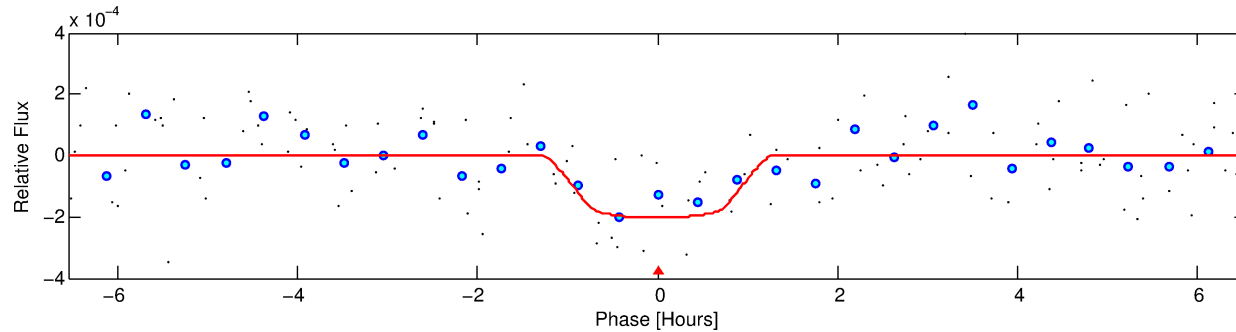
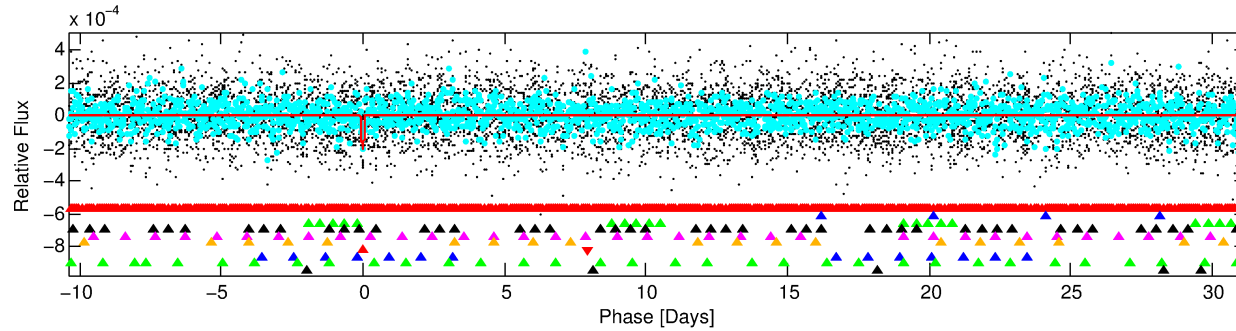
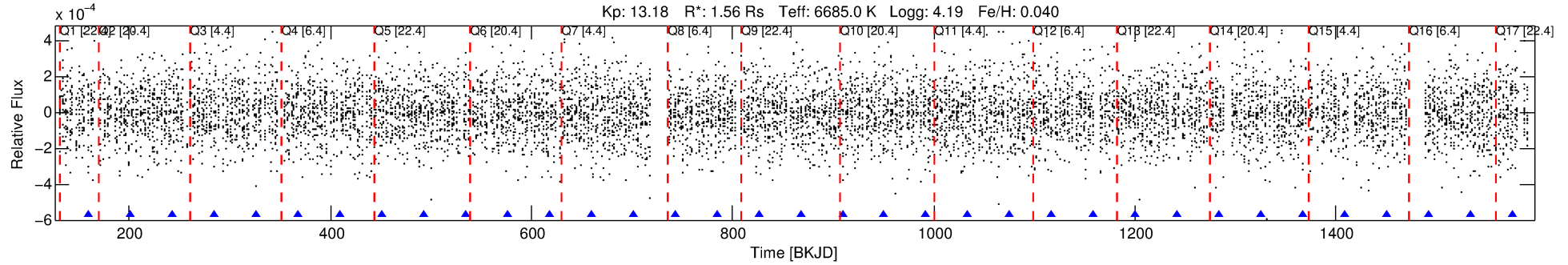
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011569443-07

No Significant Match Found

DV One-Page Summary

KIC: 11569443 Candidate: 7 of 10 Period: 41.646 d



DV Fit Results:

Period = 41.64618 [0.00059] d
Epoch = 159.5242 [0.0120] BKJD
Rp/R* = 0.0156 [0.0185]
a/R* = 62.70 [439.02]
b = 0.92 [1.18]
Seff = 63.88 [26.42]
Teq = 721 [75] K
Rp = 2.64 [3.26] Re
a = 0.2606 [0.0686] AU
Ag = 381.28 [933.29] [0.41 σ]
Teffp = 4925 [2985] K [1.41 σ]

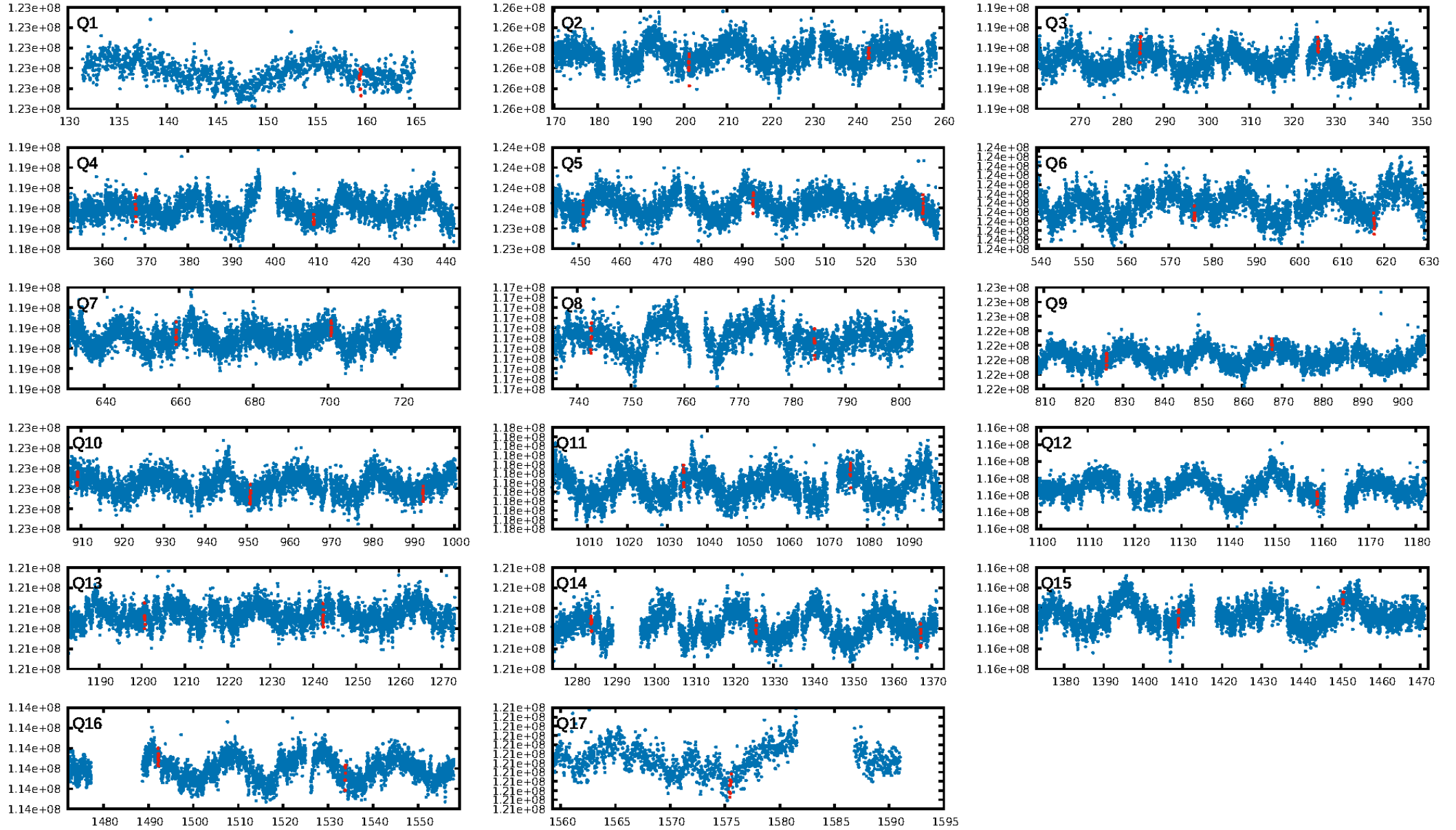
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [10.39 σ]
LongPeriod-sig: 100.0% [19.68 σ]
ModelChiSquare2-sig: 22.0%
ModelChiSquareGof-sig: 86.2%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: 0.6616
Centroid-sig: 97.2%
Centroid-so: 0.119 arcsec [0.14 σ]
OotOffset-rm: 1.704 arcsec [1.51 σ]
OotOffset-st: 3/2/1/3 [9]
KicOffset-rm: 1.691 arcsec [1.32 σ]
KicOffset-st: 3/2/1/3 [9]
DiffImageQuality-fgm: 0.11 [1/9]
DiffImageOverlap-fno: 0.59 [10/17]

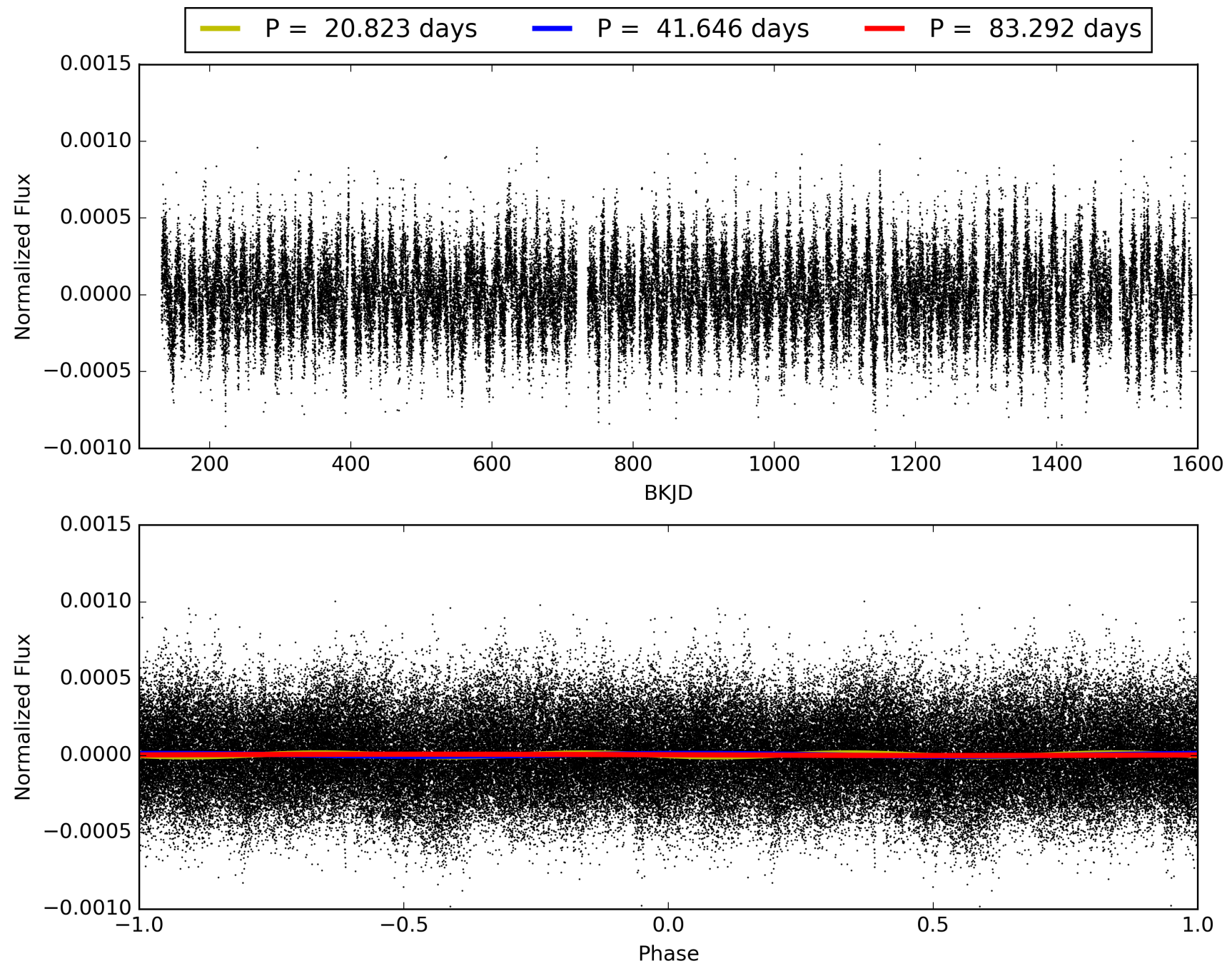
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:25:50 Z

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

TCE 011569443-07, PDC Light Curves

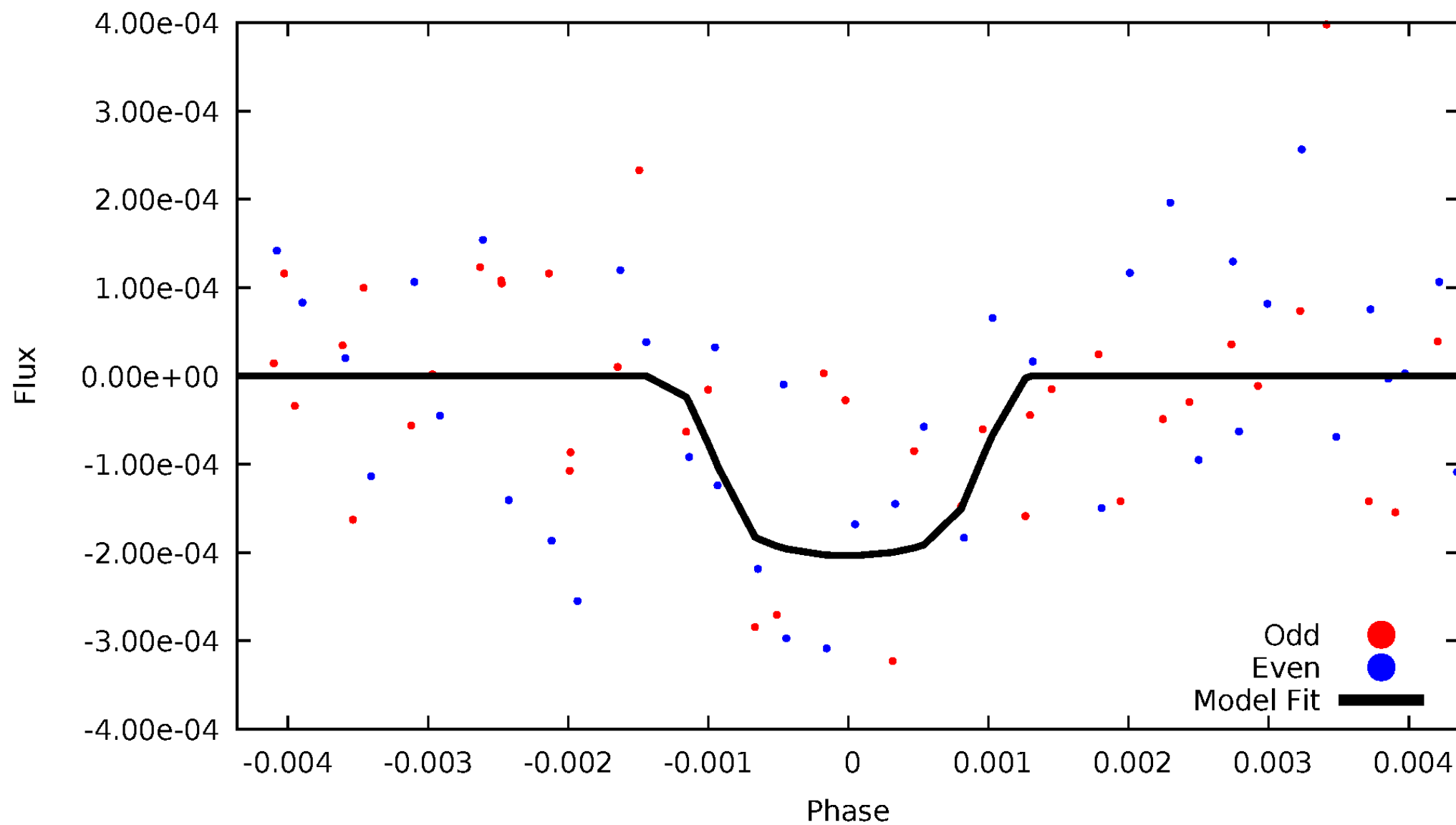


TCE 011569443-07



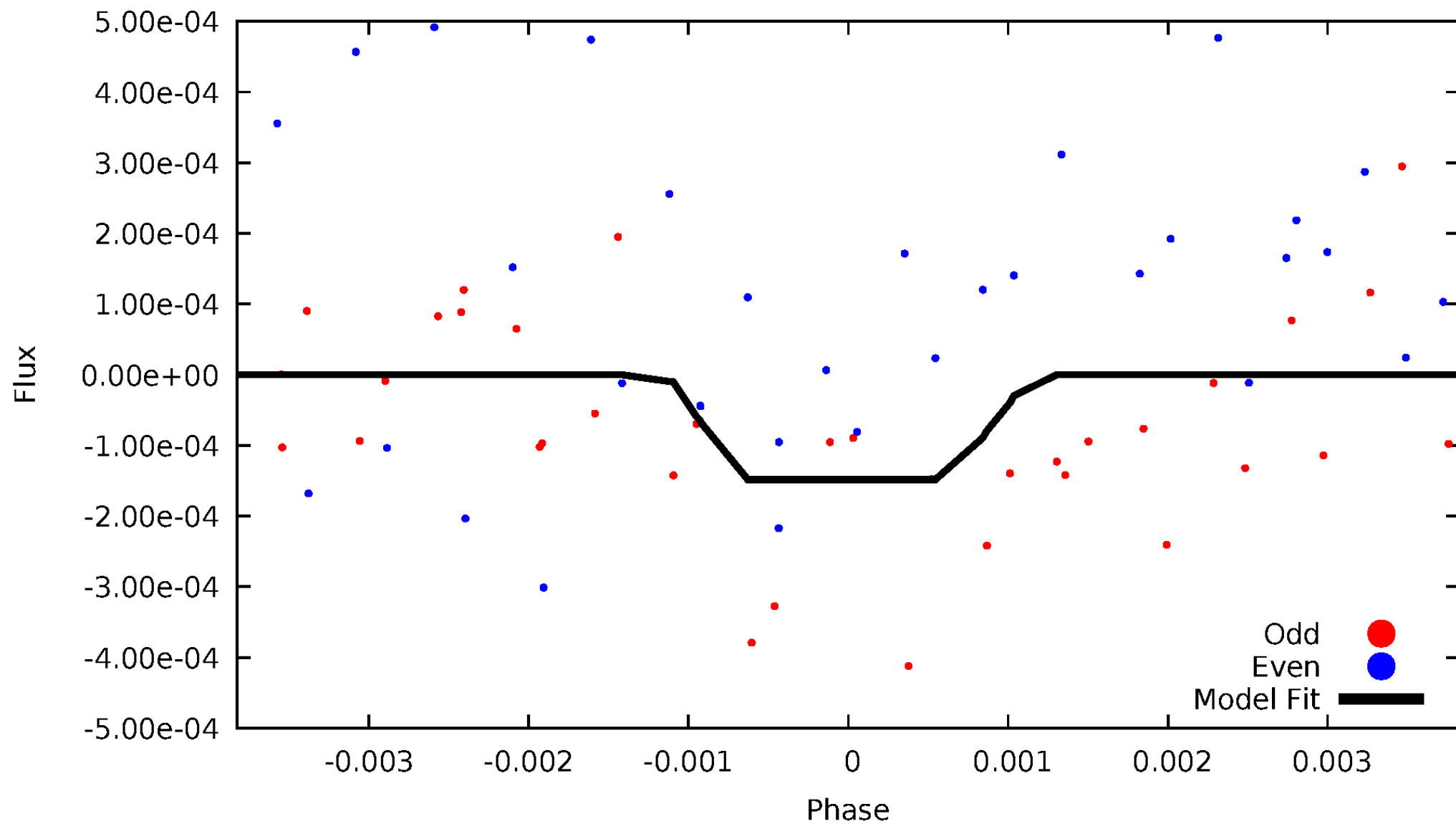
DV Odd/Even

TCE 011569443-07



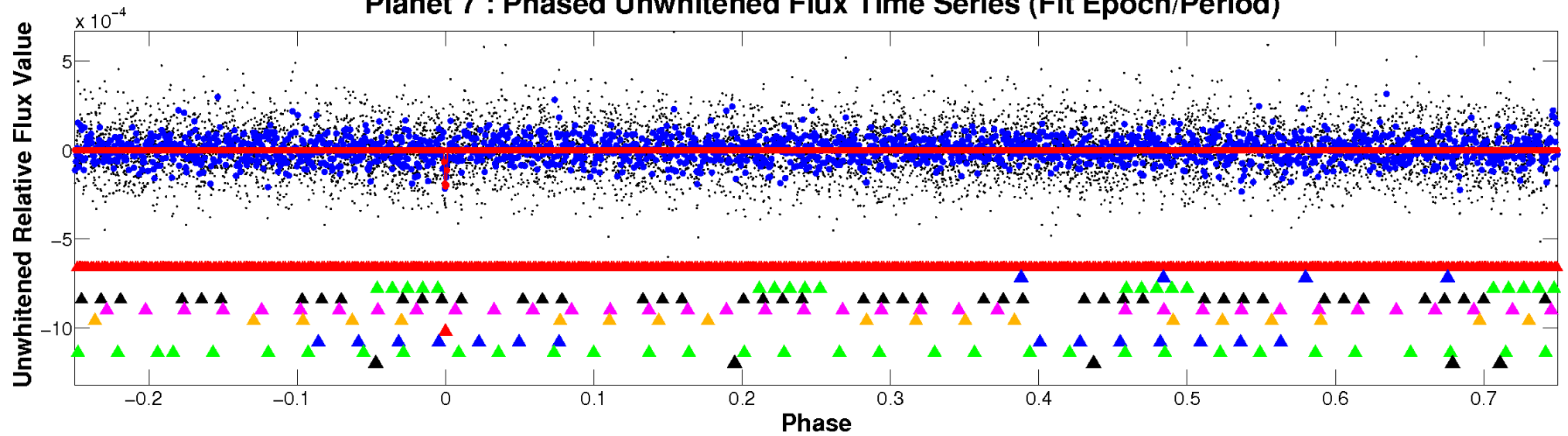
ALT Odd/Even

TCE 011569443-07

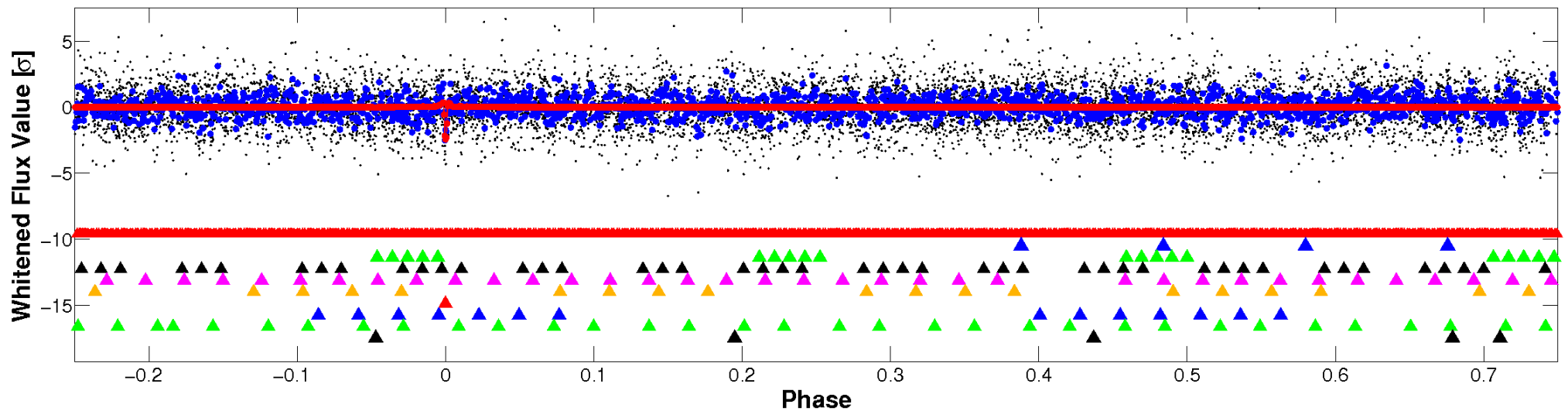


Non-Whitened Vs. Whitened Light Curve

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

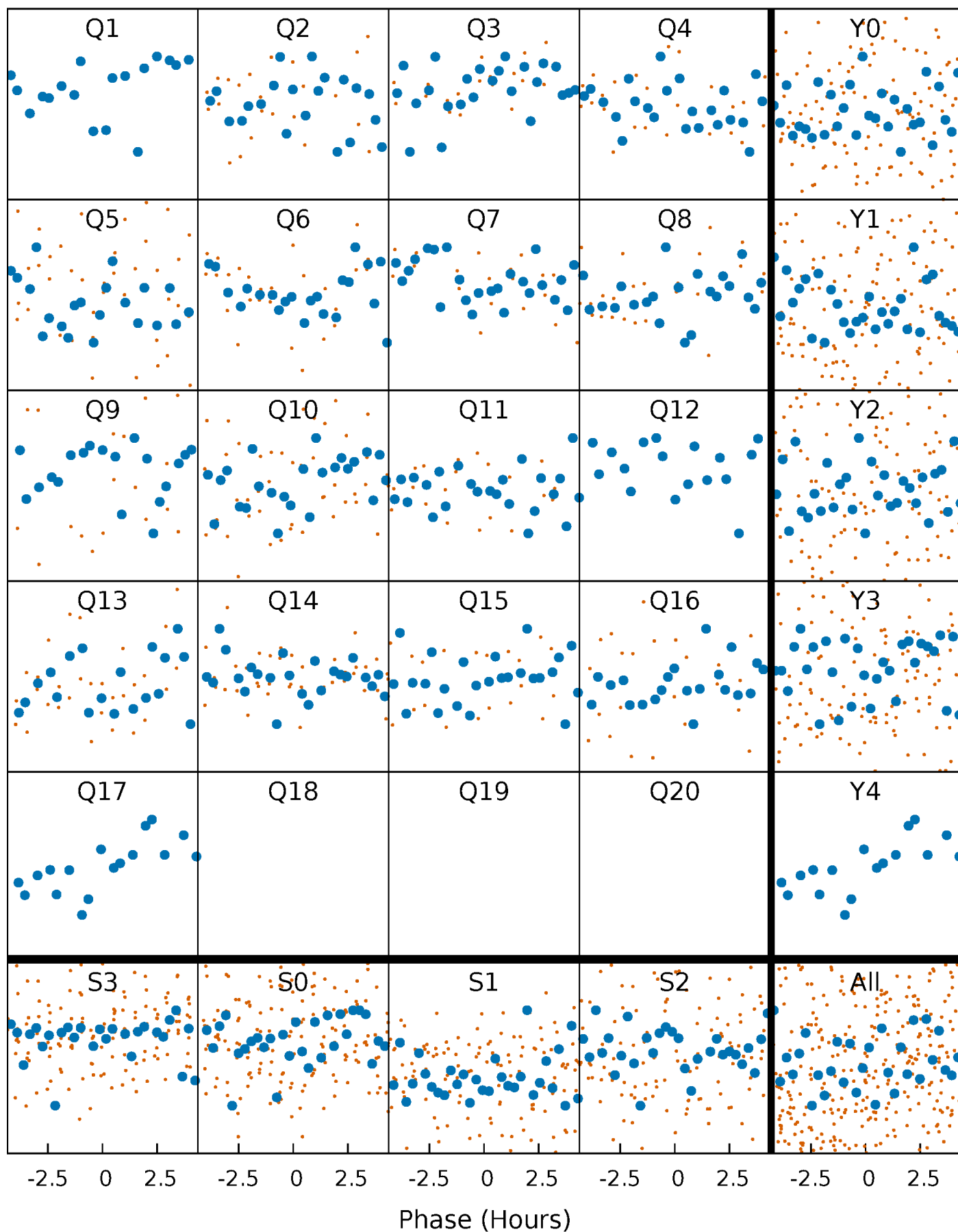


Planet 7 : Phased Whitened Flux Time Series (Fit Epoch/Period)



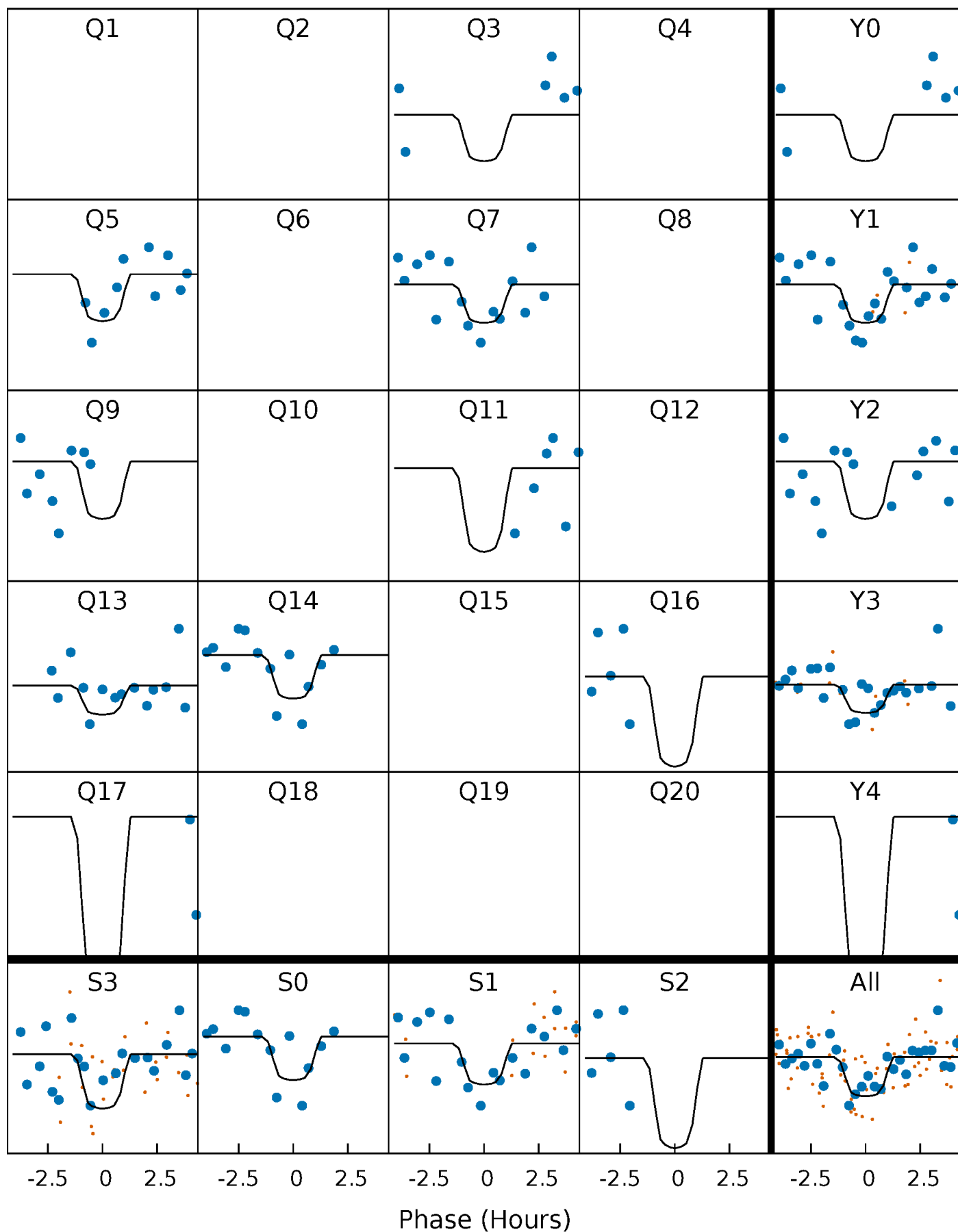
PDC Quarter-Phased Transit Curves

TCE 011569443-07 $P = 41.646178$ Days $T_0 = 159.524234$ (BKJD)



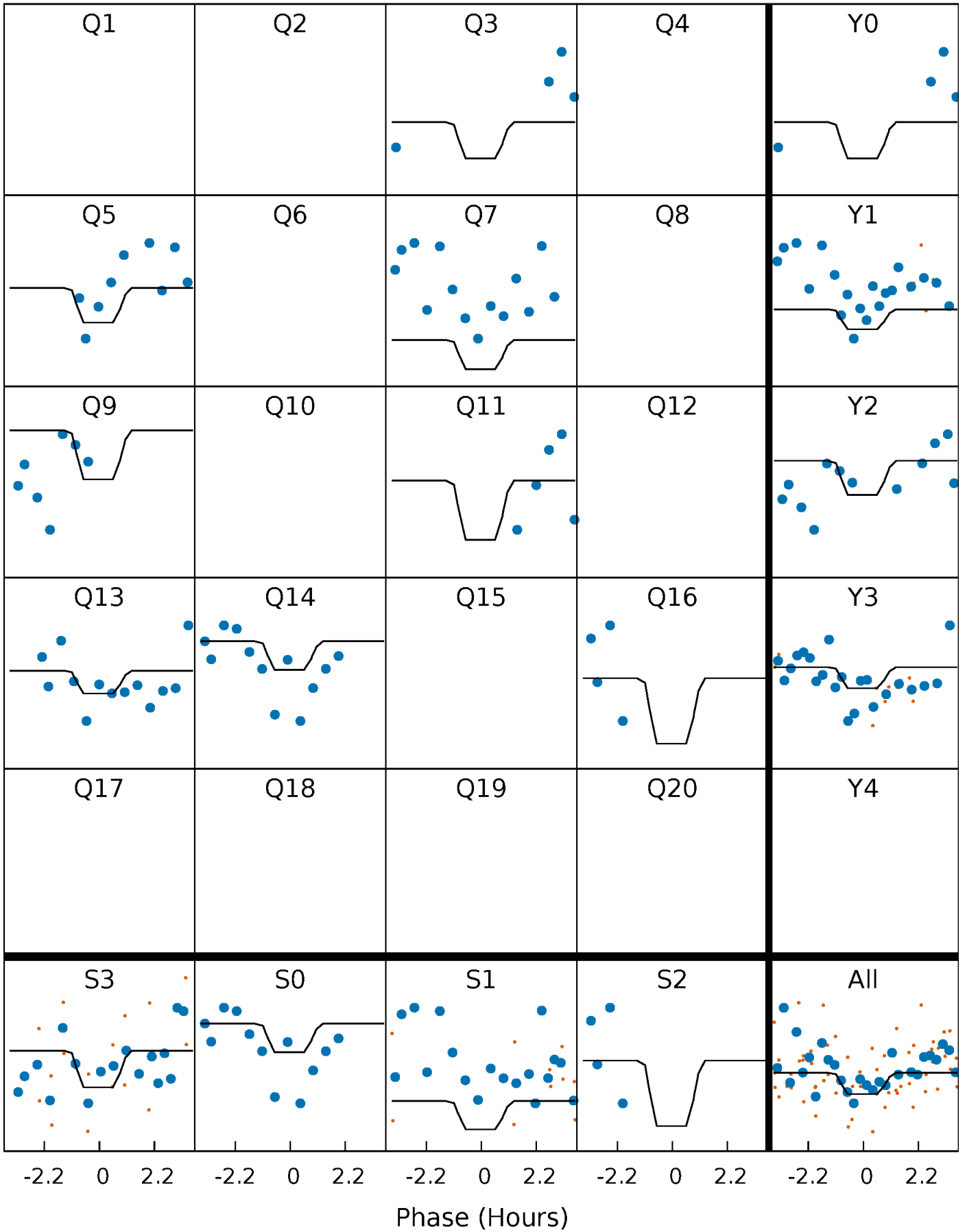
DV Quarter-Phased Transit Curves

TCE 011569443-07 $P = 41.646178$ Days $T_0 = 159.524234$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

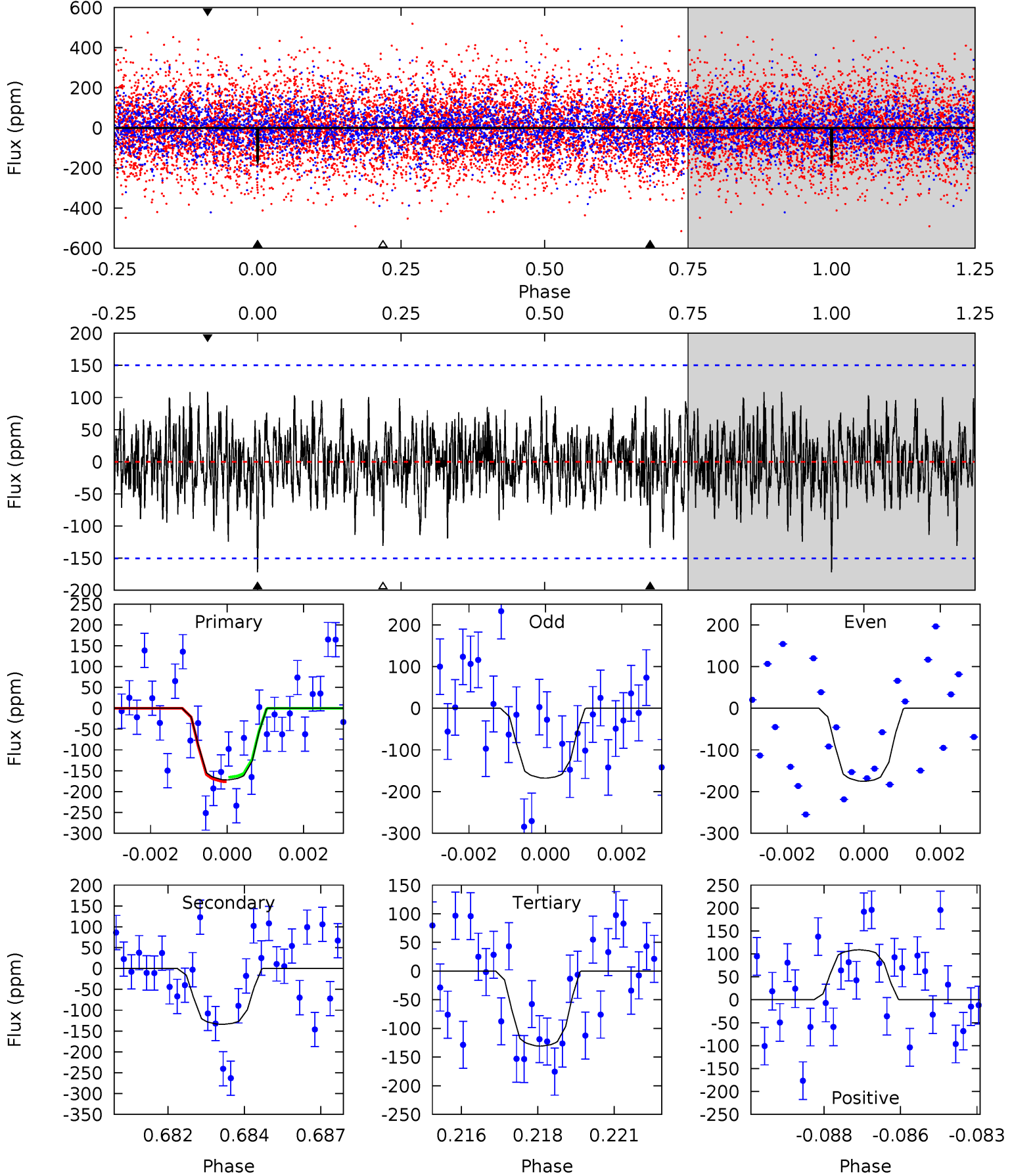
TCE 011569443-07 P= 41.646069 Days $T_0=159.524843$ (BKJD)



DV Model-Shift Uniqueness Test

011569443-07, P = 41.646178 Days, E = 117.878056 Days

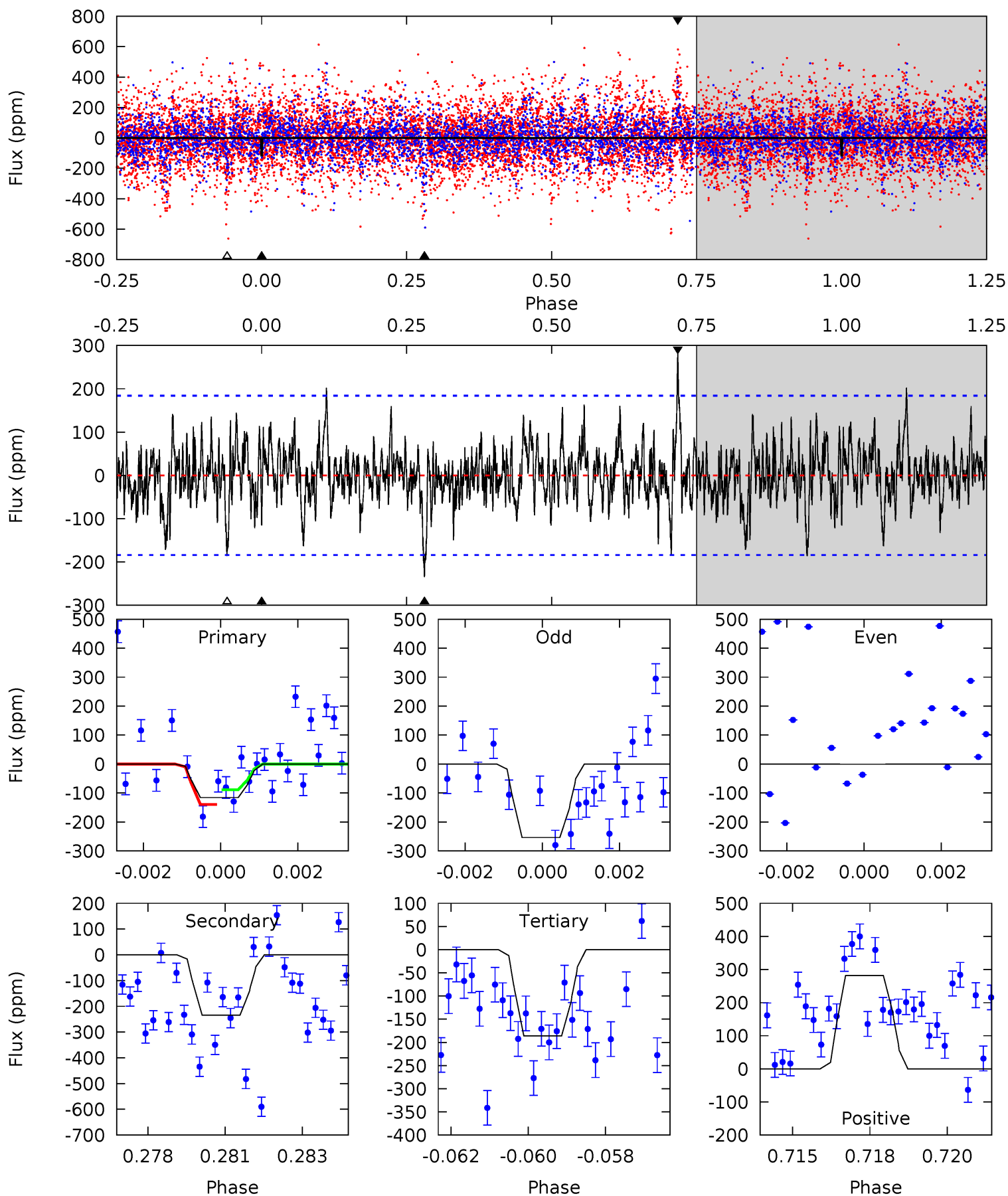
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.05	4.72	4.61	3.83	5.29	3.03	1.35	1.45	2.22	0.11	0.89	0.14	0.86	0.39	0.19



Alt Model-Shift Uniqueness Test

011569443-07, P = 41.646069 Days, E = 117.878774 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.33	6.75	5.35	8.11	5.29	3.04	1.64	-2.01	-4.78	1.41	-1.36	3.62	1.20	0.55	0.74



Stellar Parameters For KIC 011569443

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6685^{+187}_{-281}	$4.187^{+0.136}_{-0.204}$	$0.040^{+0.250}_{-0.350}$	$1.557^{+0.494}_{-0.329}$	$1.358^{+0.214}_{-0.235}$	$0.507^{+0.389}_{-0.251}$
	+3%/-4%	+3%/-5%	+625%/-875%	+32%/-21%	+16%/-17%	+77%/-50%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 011569443-07 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-134 ± 28	$3.59^{+3.13}_{-2.26}$	1019^{+77}_{-68}	5069^{+3396}_{-1110}	403^{+2330}_{-296}
Alt.	-235 ± 35	$3.21^{+2.67}_{-2.11}$	1012^{+82}_{-65}	6098^{+6107}_{-1469}	872^{+6065}_{-622}

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

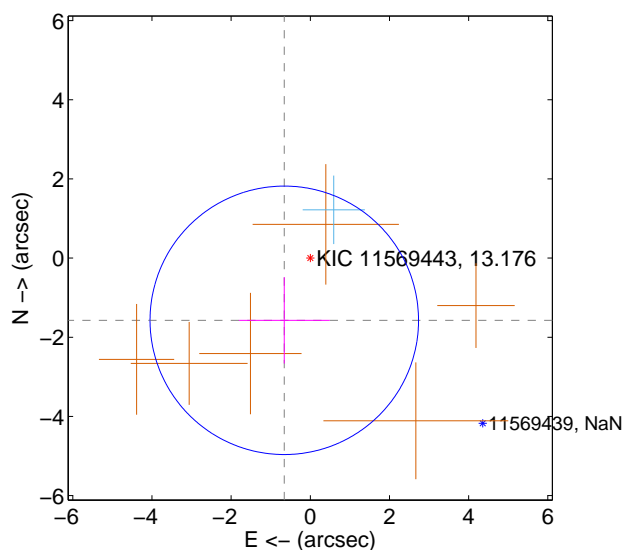
Supplemental centroid analysis for 011569443-07. Kepler magnitude: 13.18. Transit SNR 8.80

There are 1 quarters with good PRF difference image offsets

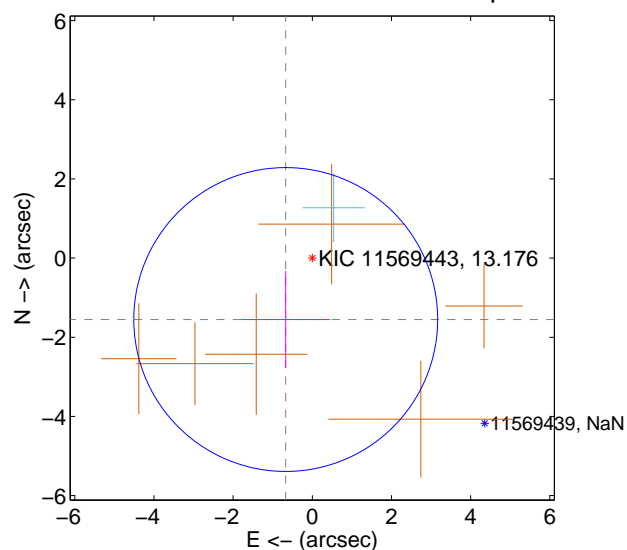
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.704 ± 1.130	1.51	0.657 ± 1.146	-1.572 ± 1.091
PRF-fit source offset from KIC position	1.691 ± 1.279	1.32	0.671 ± 1.125	-1.552 ± 1.226
photometric centroid source offset	0.12 ± 0.84	0.14	-0.08 ± 0.82	0.09 ± 0.86

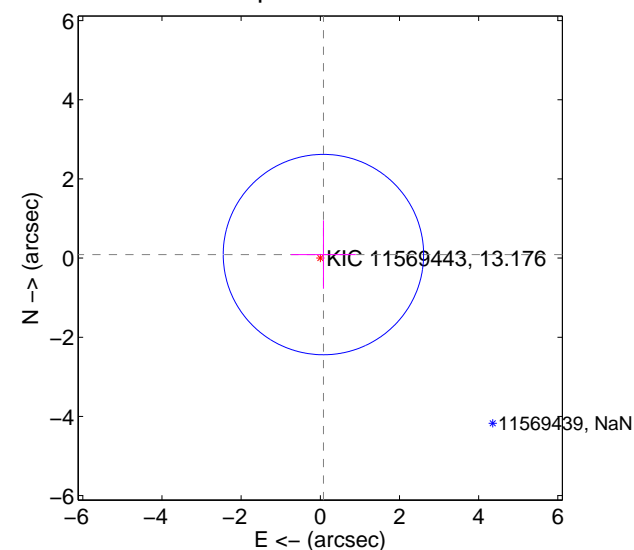
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

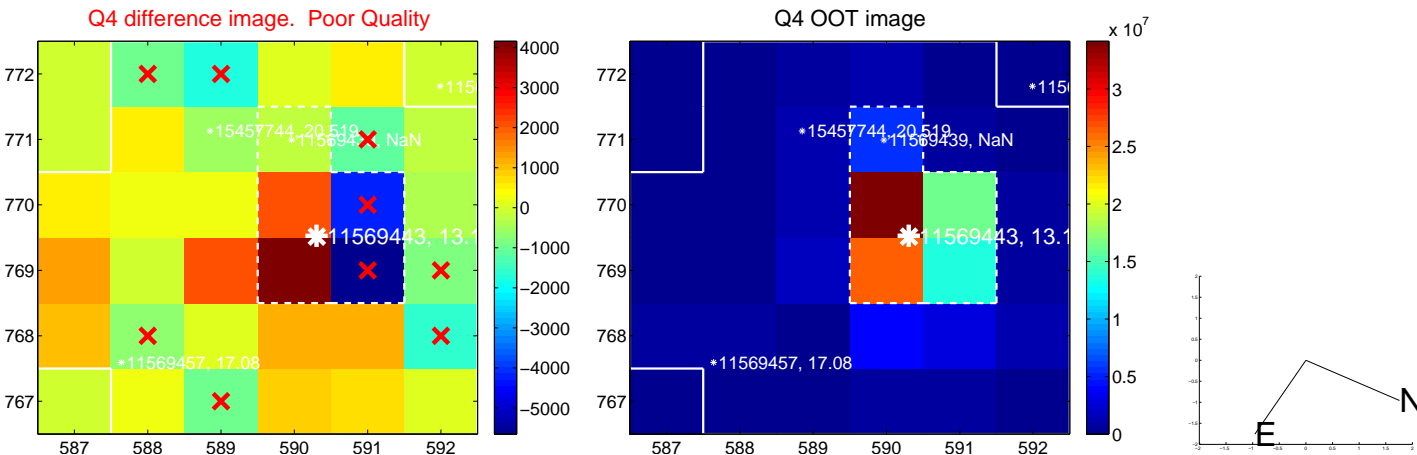
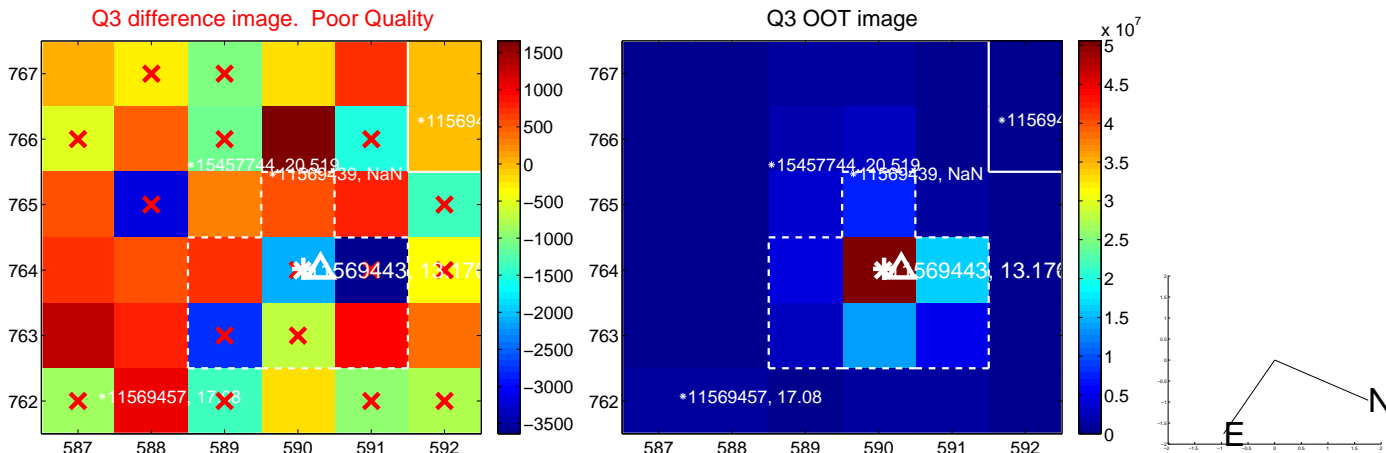
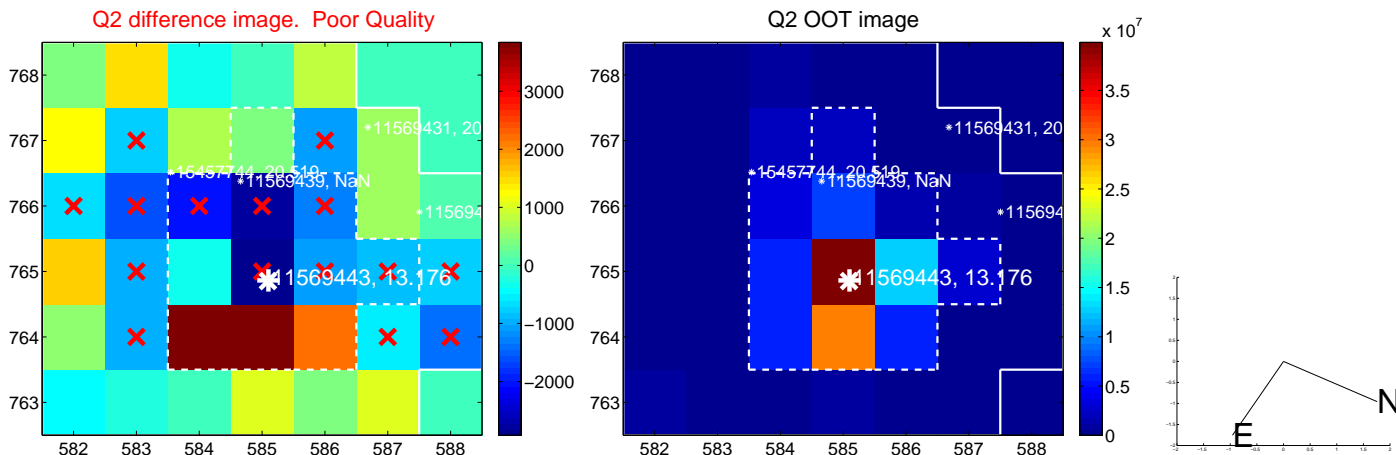
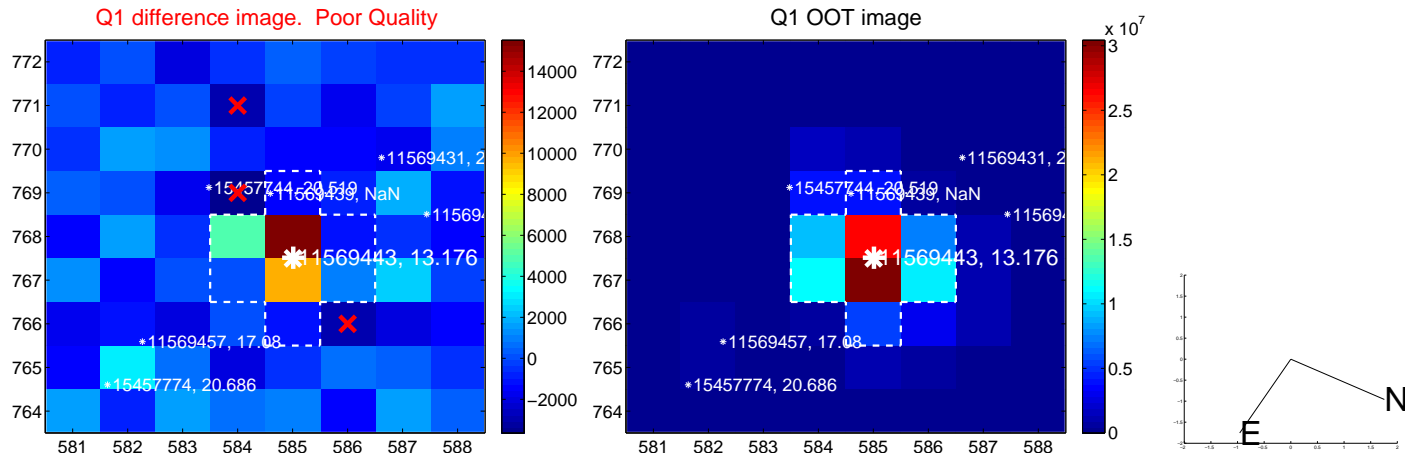


offset from photometric centroids

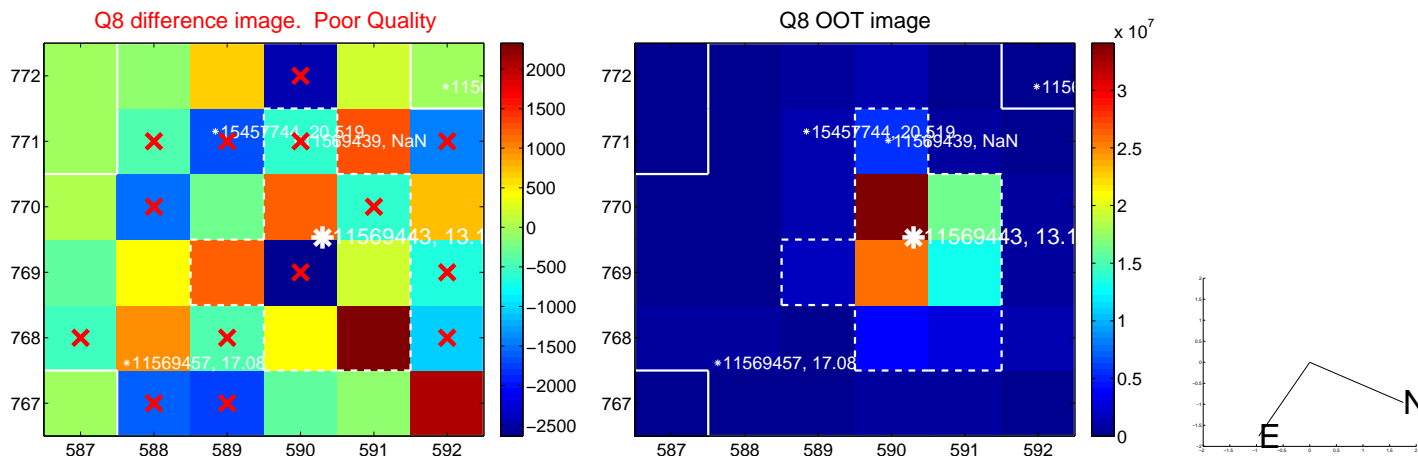
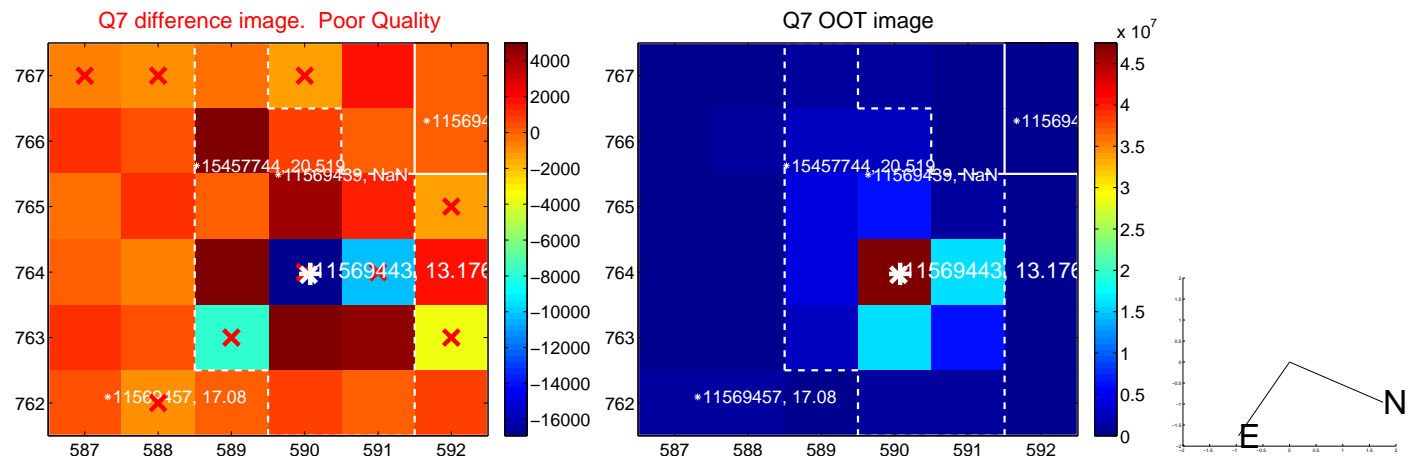
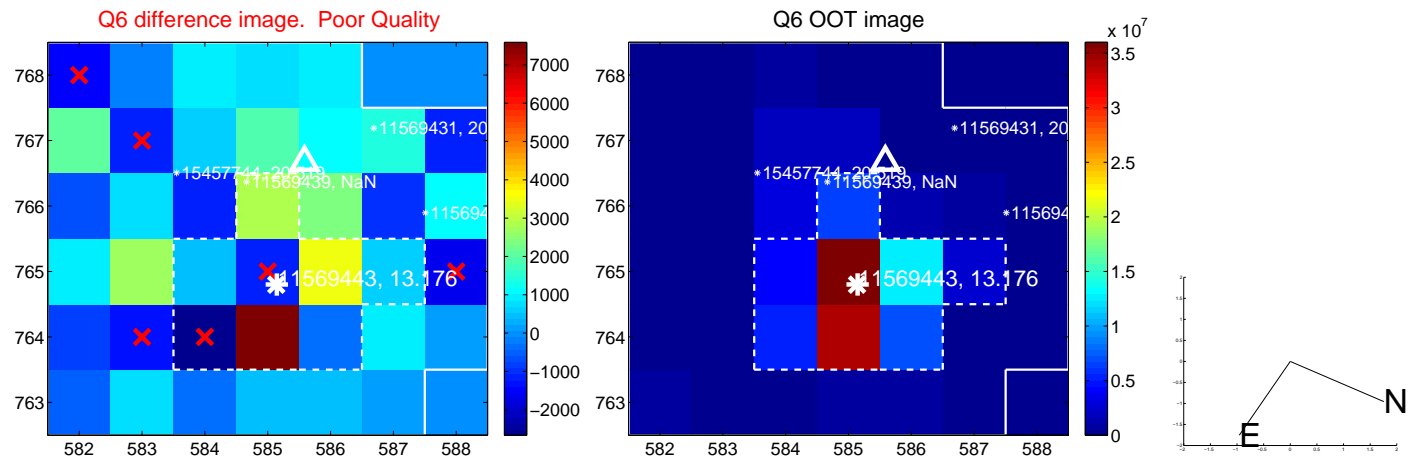
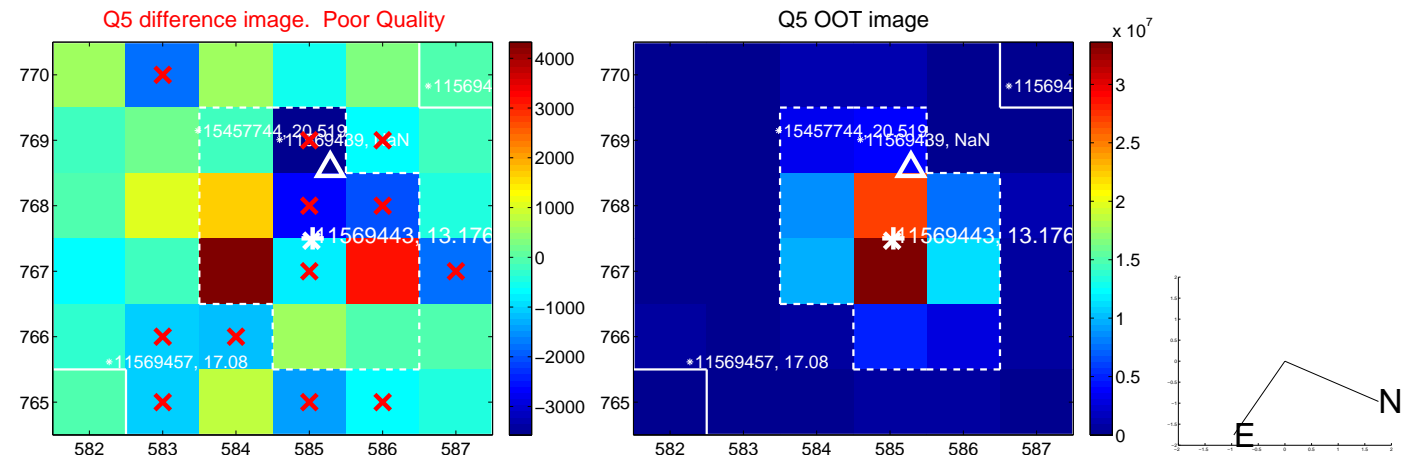


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

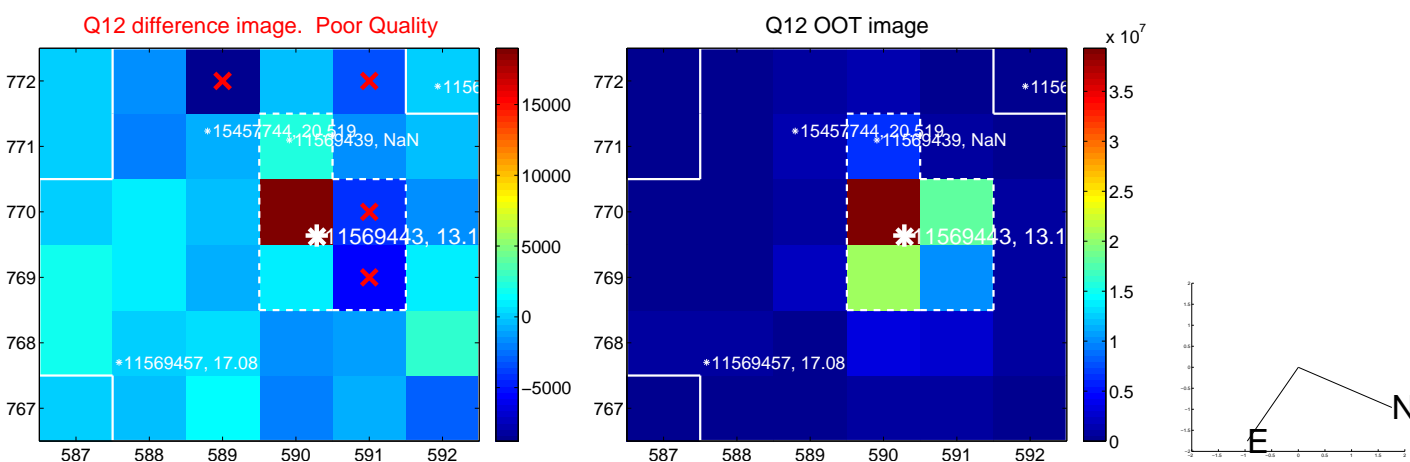
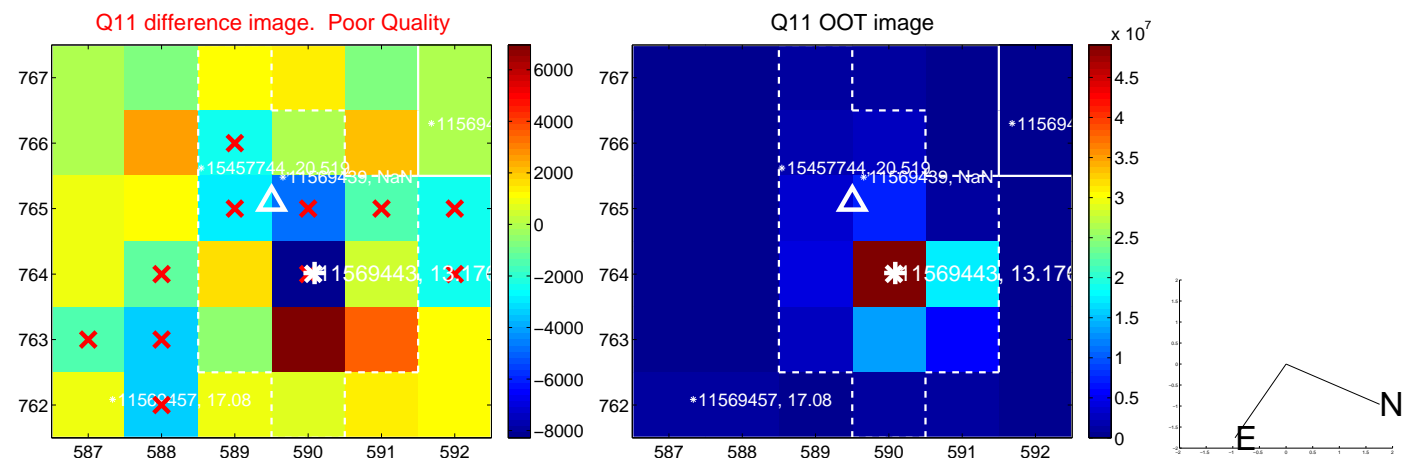
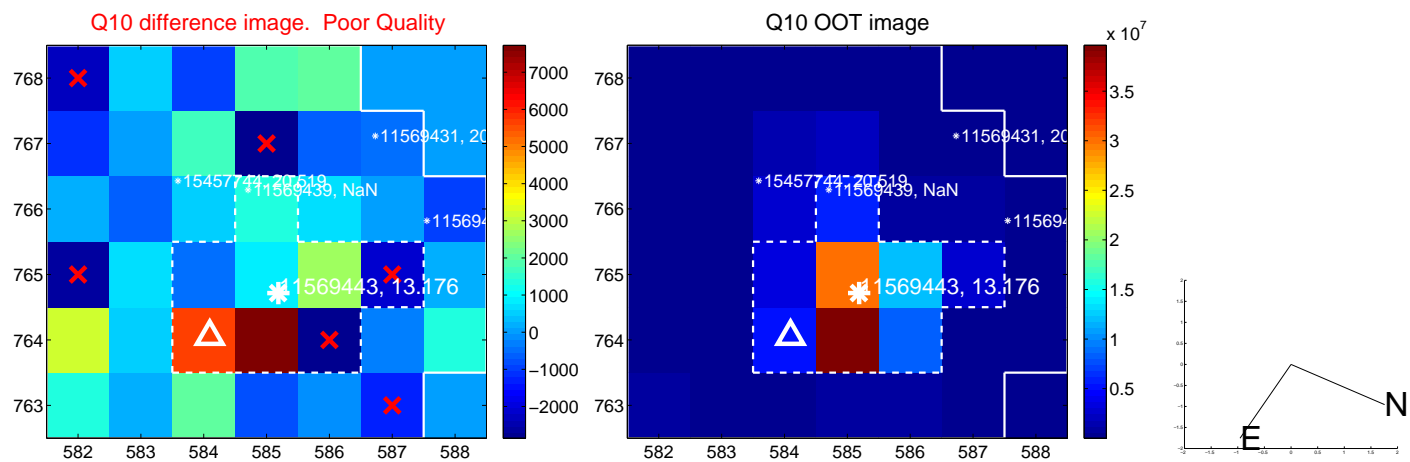
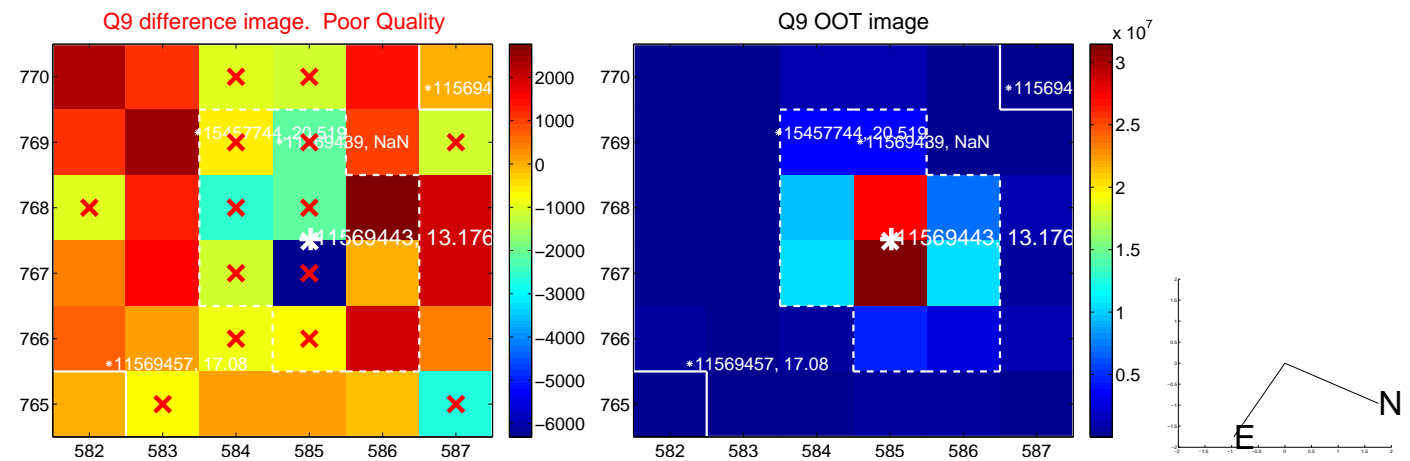
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



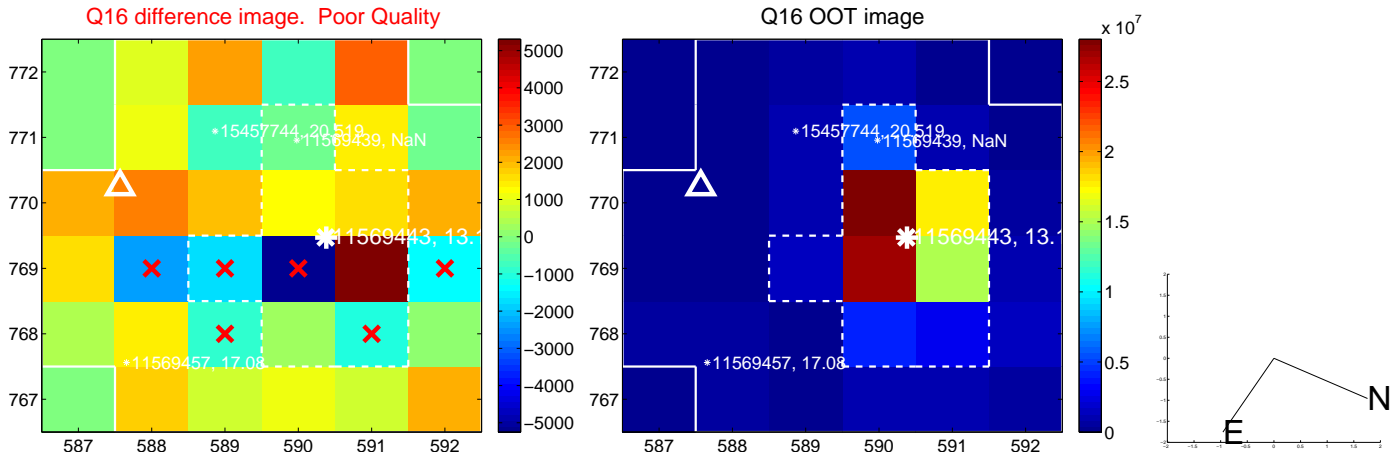
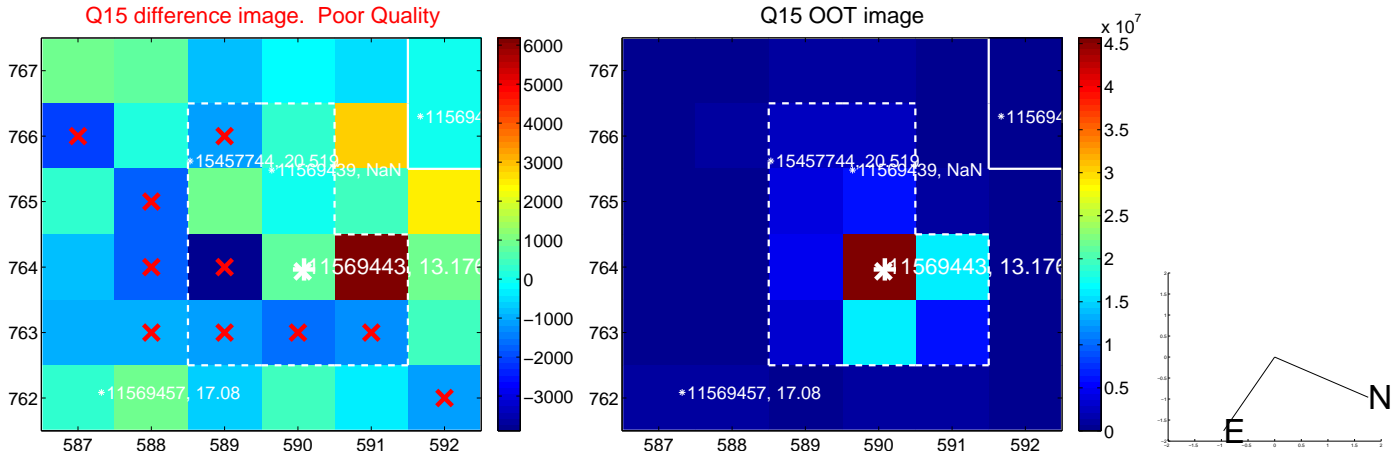
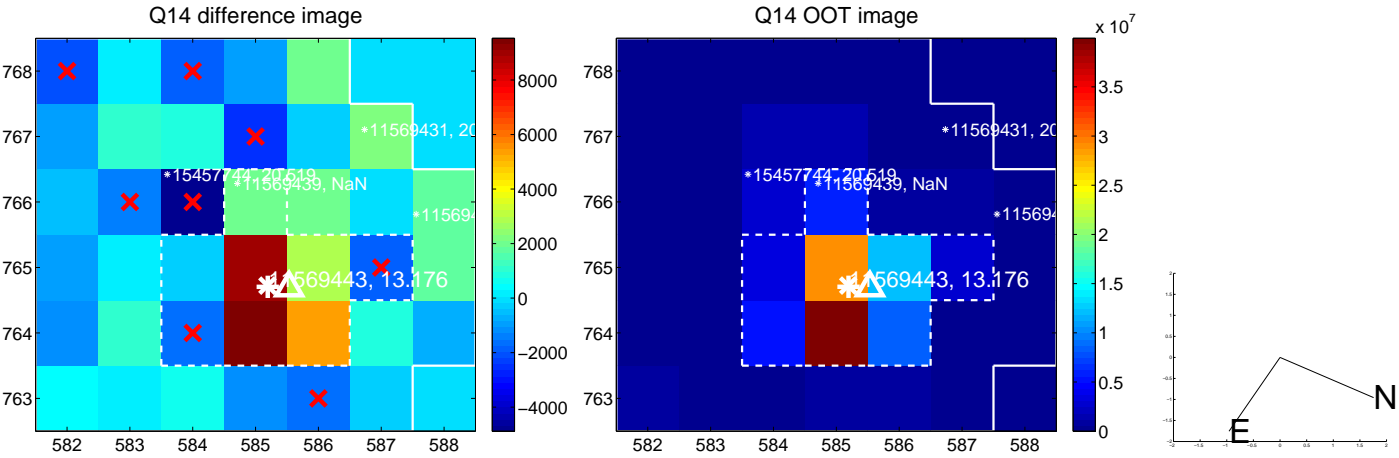
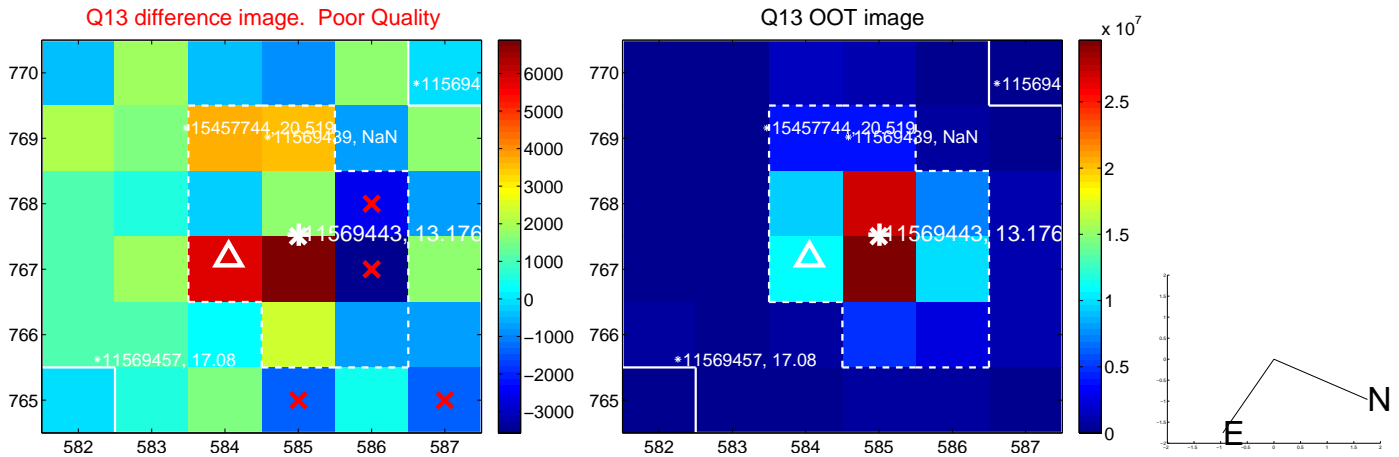
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



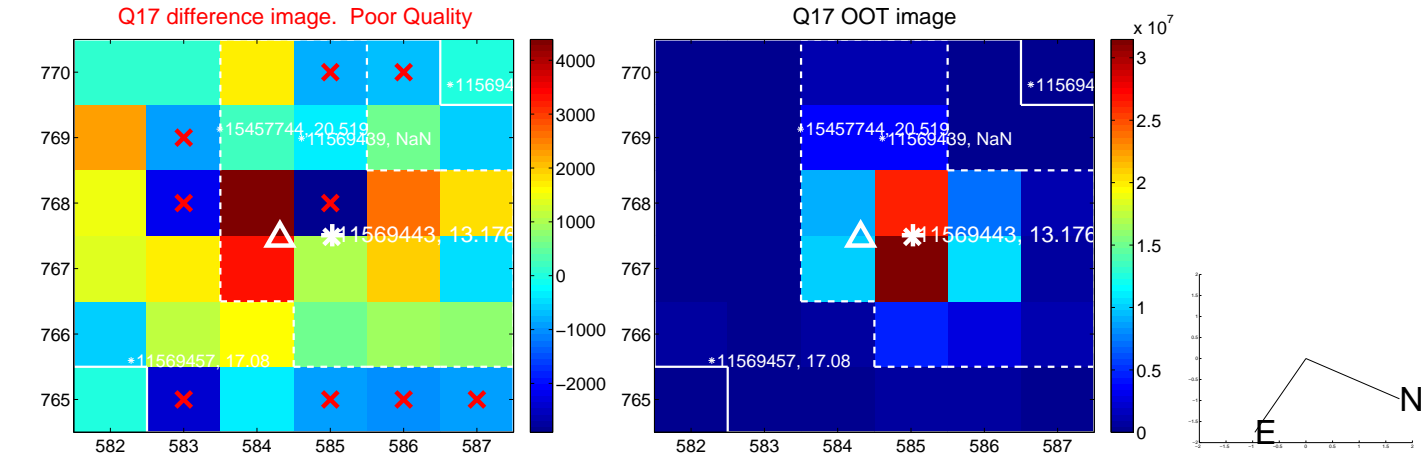
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



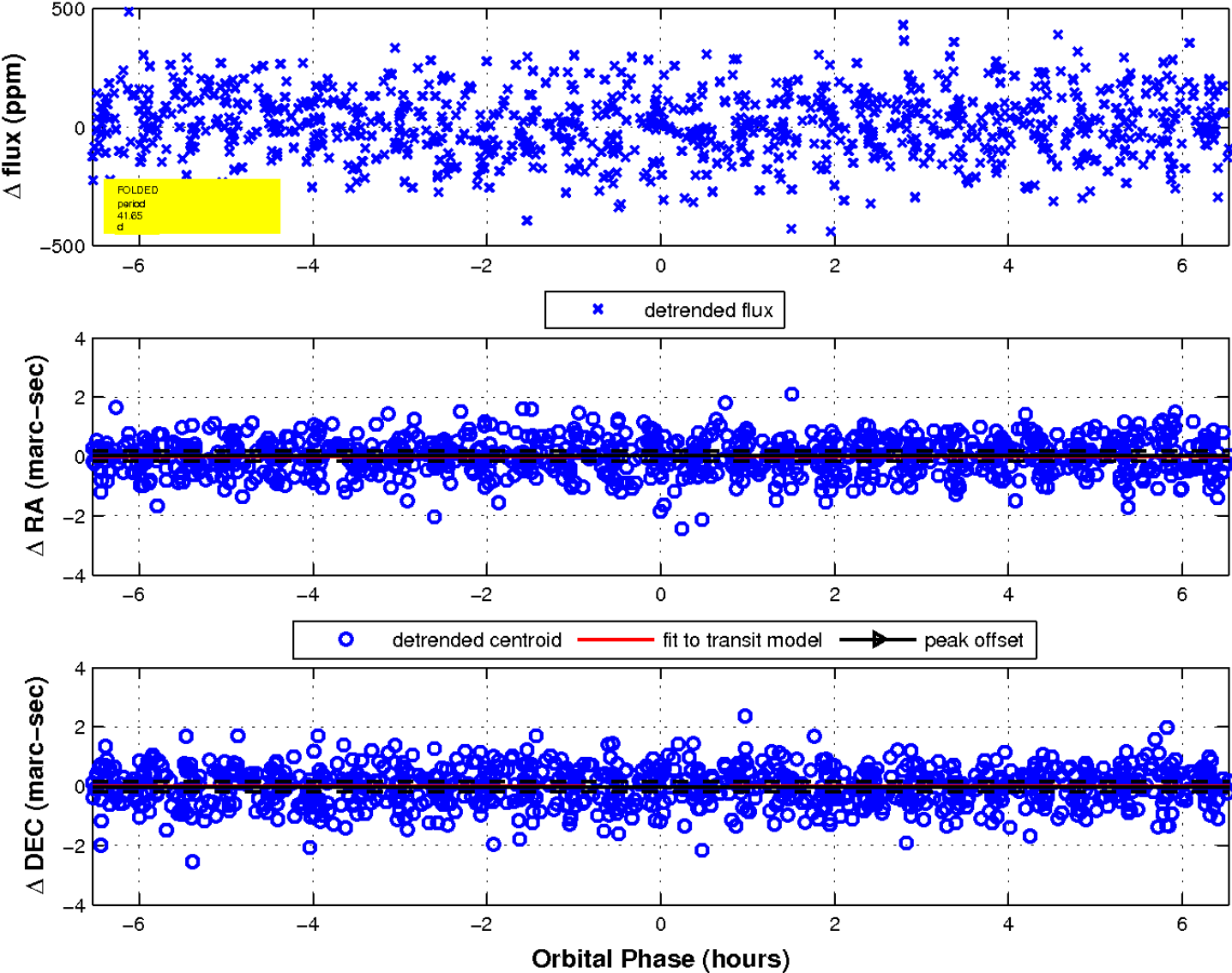
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

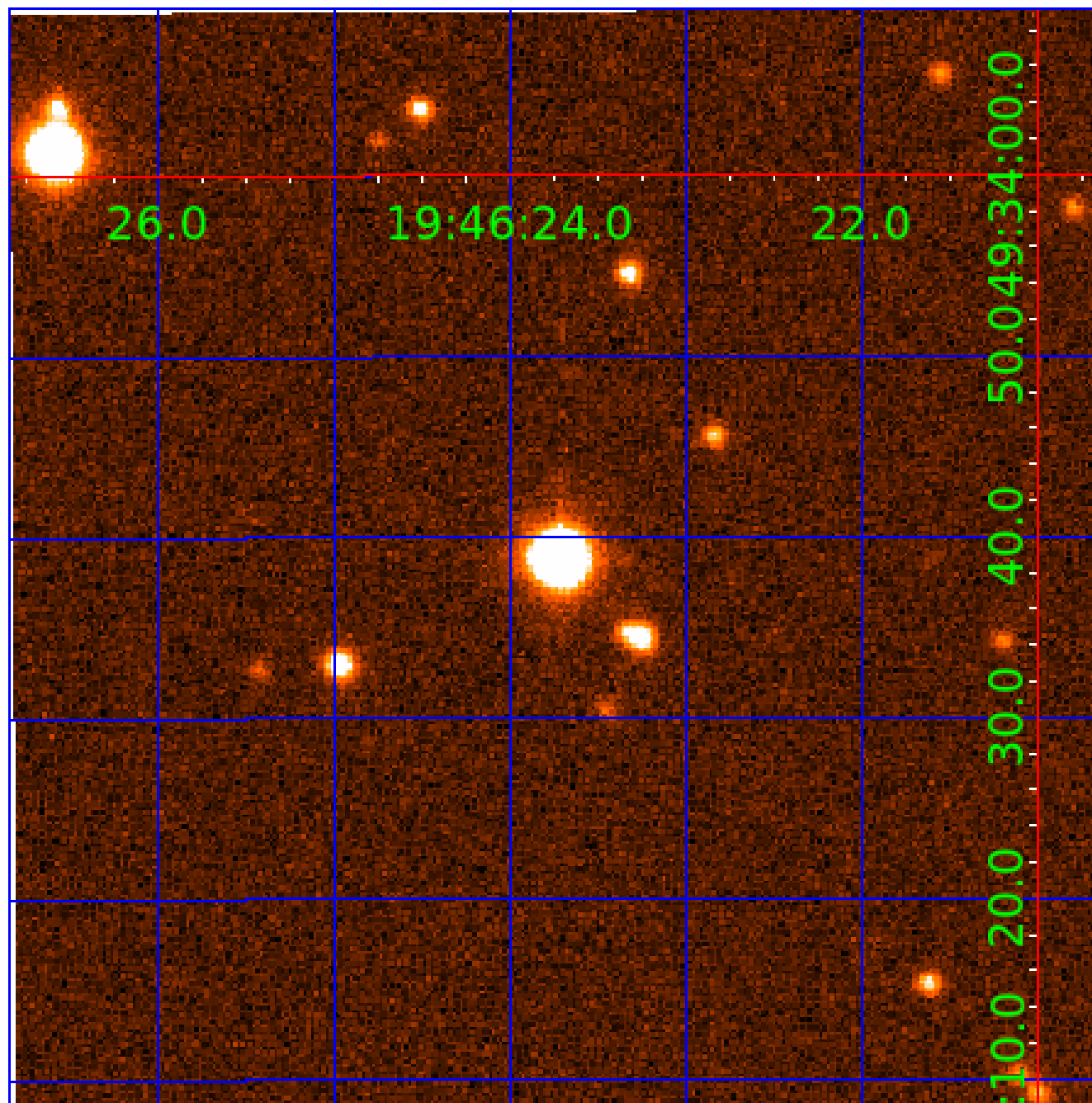


fluxWeightedCentroids, Planet 7 of 10



UKIRT Image

Declination



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})
011569443-01	OBS	No	2.344129	132.983449	25.4	15.857	8.1	8.4	1.56	6685	0.92	2961.54
011569443-02	OBS	No	412.469578	146.020096	168.6	8.779	10.2	8.4	1.56	6685	2.21	3.00
011569443-03	OBS	No	72.987289	157.607486	270.7	2.219	9.4	10.5	1.56	6685	3.28	30.23
011569443-04	OBS	No	32.077750	145.382778	159.8	4.570	9.1	9.2	1.56	6685	2.15	90.48
011569443-05	OBS	No	40.558747	133.378934	266.8	1.247	8.6	9.0	1.56	6685	2.59	66.18
011569443-06	OBS	No	74.686409	184.106204	190.2	6.743	8.7	9.4	1.56	6685	2.36	29.32
011569443-07	OBS	No	41.646178	159.524234	203.5	2.180	8.0	8.8	1.56	6685	2.64	63.88
011569443-08	OBS	No	104.678723	217.862789	306.0	1.405	8.2	7.6	1.56	6685	3.19	18.69
011569443-09	OBS	No	44.318975	149.204173	184.9	2.422	7.8	8.1	1.56	6685	2.45	58.80
011569443-10	OBS	No	281.444595	187.802605	249.5	12.521	9.4	11.2	1.56	6685	2.77	5.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011569443-01	OBS	FP	0.00	1	0	0	0	LPP_DV
011569443-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
011569443-03	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
011569443-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011569443-05	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_FEW_DIFFS—HALO_GHOST
011569443-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
011569443-07	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011569443-08	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_MEAS
011569443-09	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011569443-10	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS—HALO_GHOST

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

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

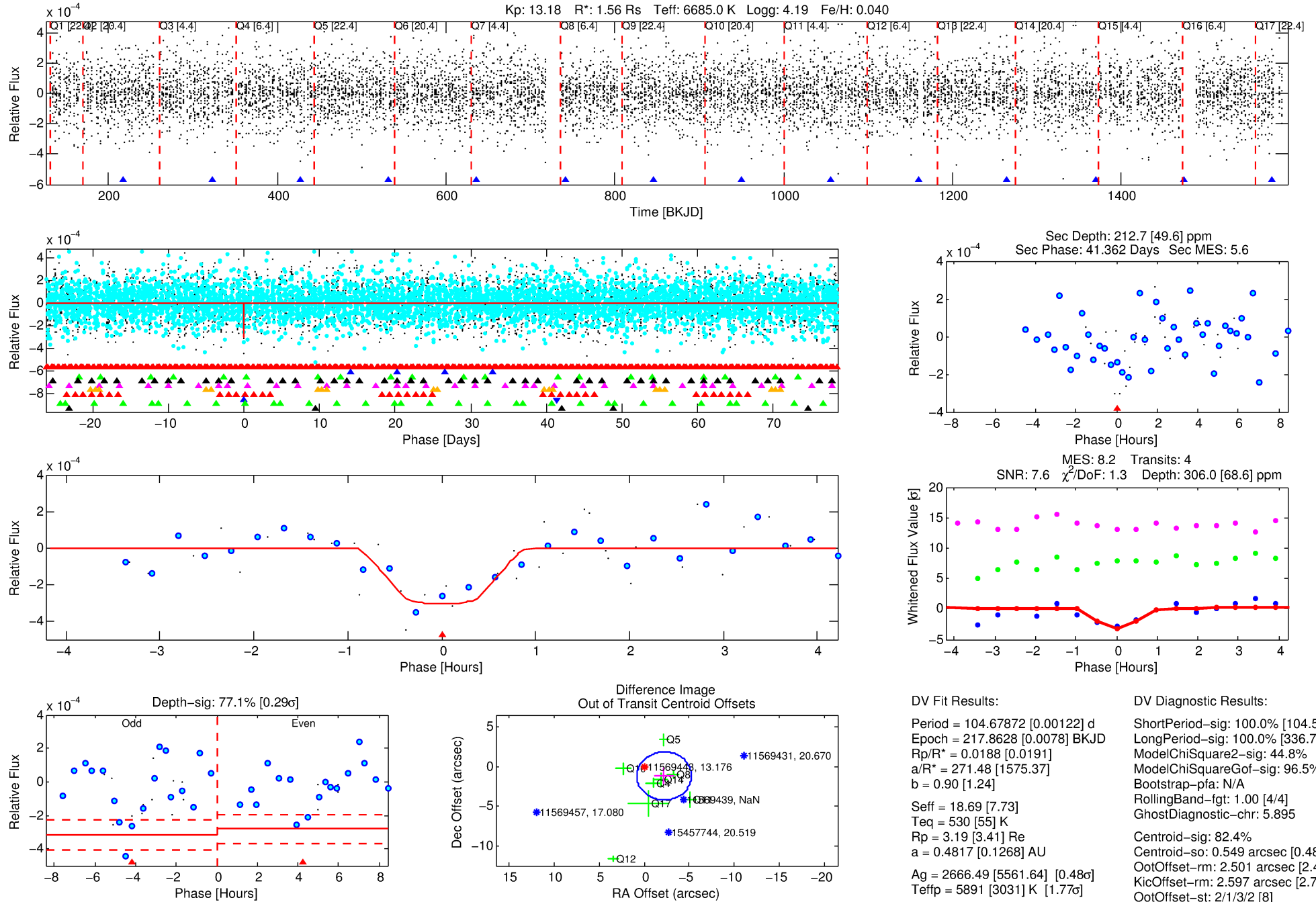
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011569443-08

No Significant Match Found

DV One-Page Summary

KIC: 11569443 Candidate: 8 of 10 Period: 104.679 d



DV Fit Results:

Period = 104.67872 [0.00122] d
Epoch = 217.8628 [0.0078] BKJD
Rp/R* = 0.0188 [0.0191]
a/R* = 271.48 [1575.37]
b = 0.90 [1.24]
Seff = 18.69 [7.73]
Teff = 530 [55] K
Rp = 3.19 [3.41] Re
a = 0.4817 [0.1268] AU
Ag = 2666.49 [5561.64] [0.48σ]
Teffp = 5891 [3031] K [1.77σ]

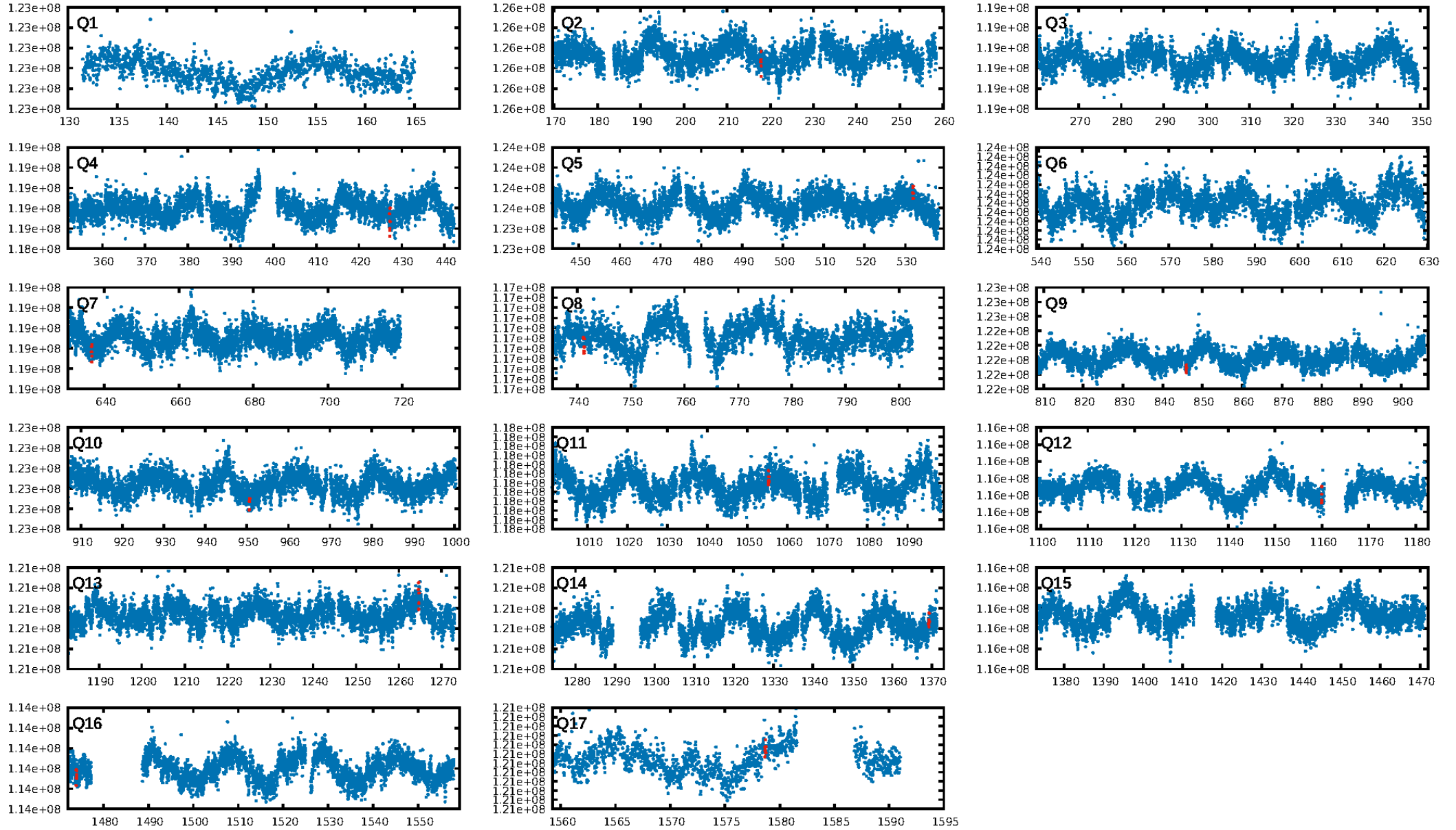
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [104.51σ]
LongPeriod-sig: 100.0% [336.70σ]
ModelChiSquare2-sig: 44.8%
ModelChiSquareGof-sig: 96.5%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 5.895
Centroid-sig: 82.4%
Centroid-so: 0.549 arcsec [0.48σ]
OotOffset-rm: 2.501 arcsec [2.48σ]
KicOffset-rm: 2.597 arcsec [2.71σ]
OotOffset-st: 2/1/3/2 [8]
KicOffset-st: 2/1/3/2 [8]
DiffImageQuality-fgm: 0.25 [2/8]
DiffImageOverlap-fno: 0.36 [4/11]

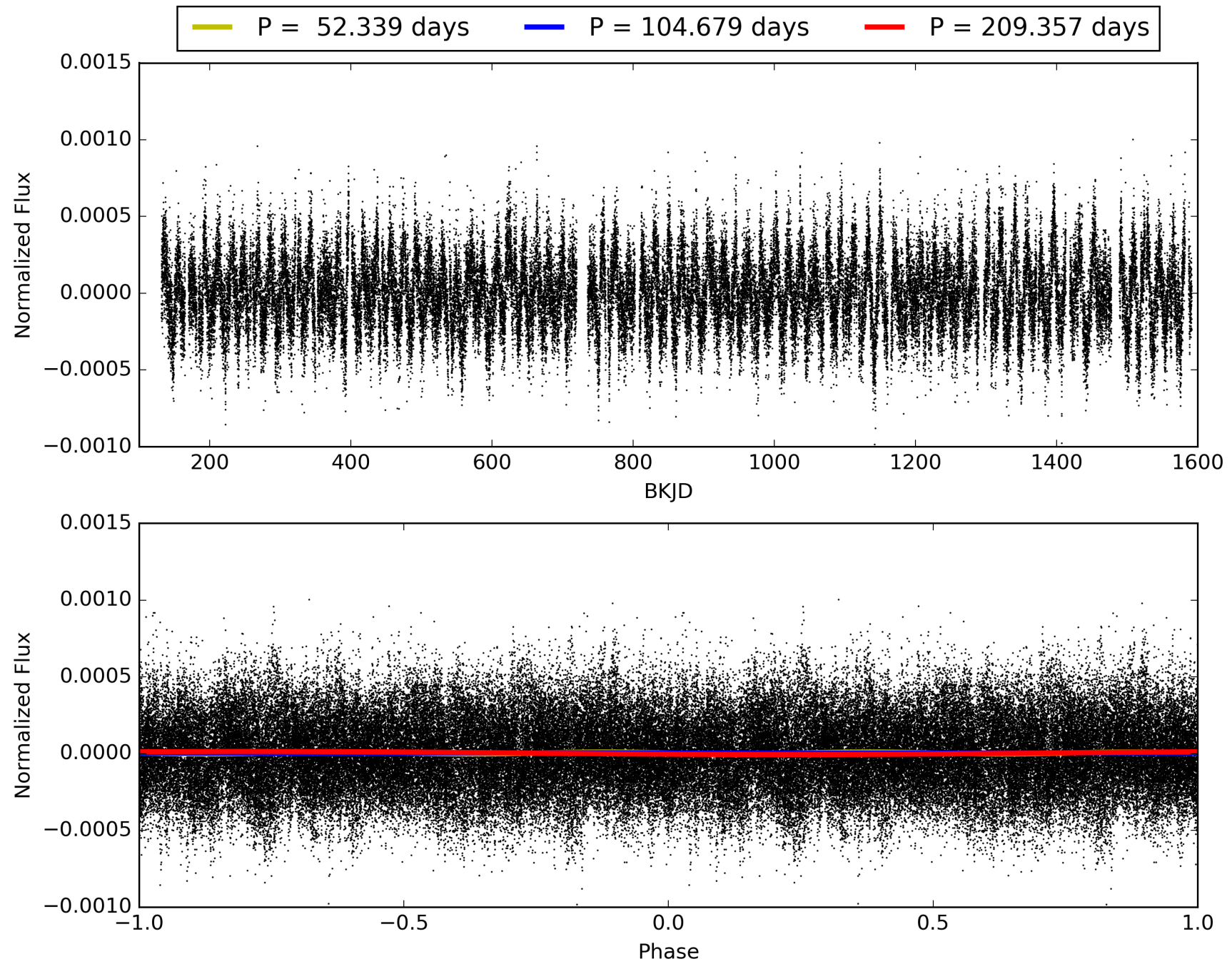
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:25:55 Z

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

TCE 011569443-08, PDC Light Curves

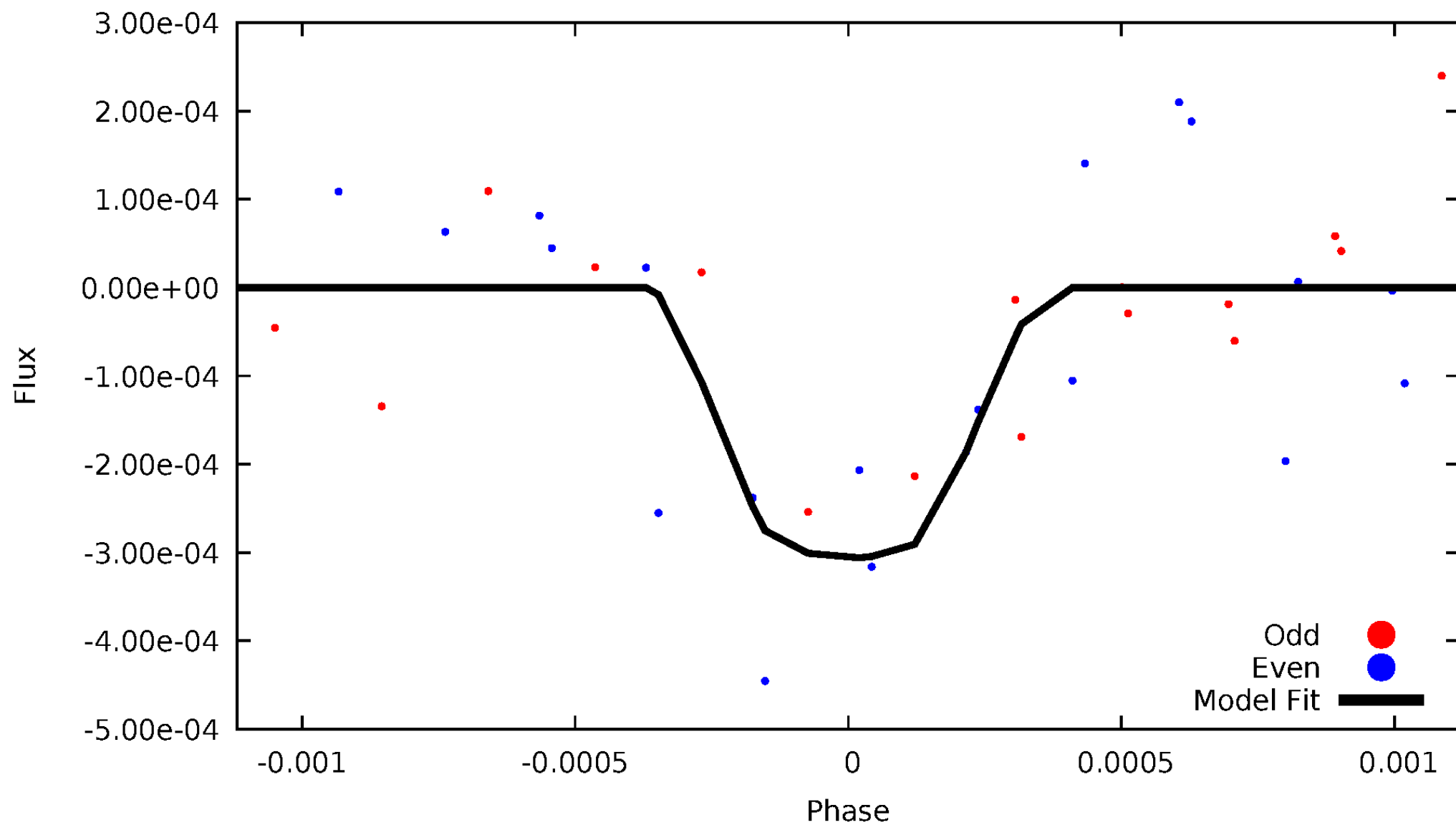


TCE 011569443-08



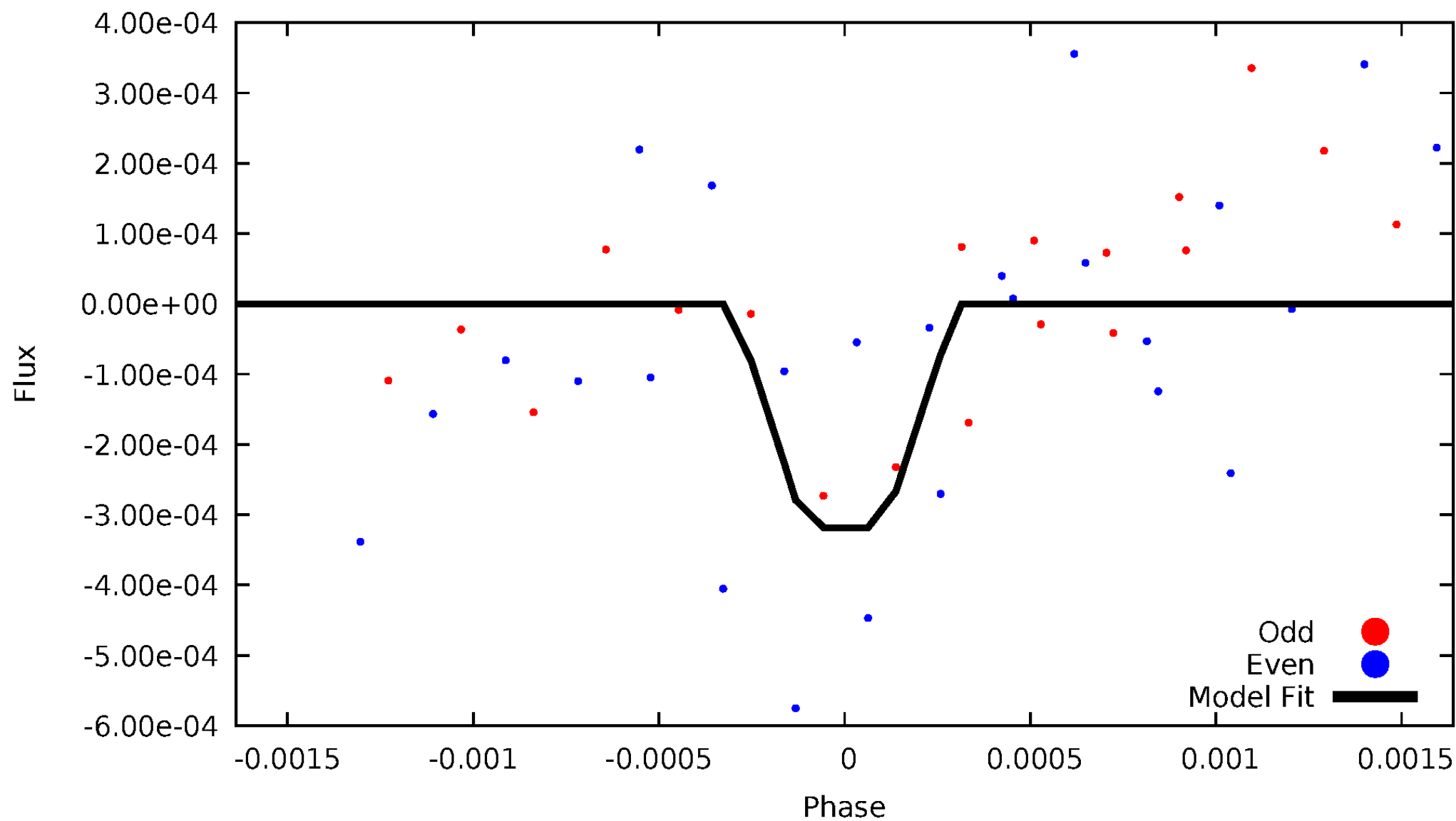
DV Odd/Even

TCE 011569443-08



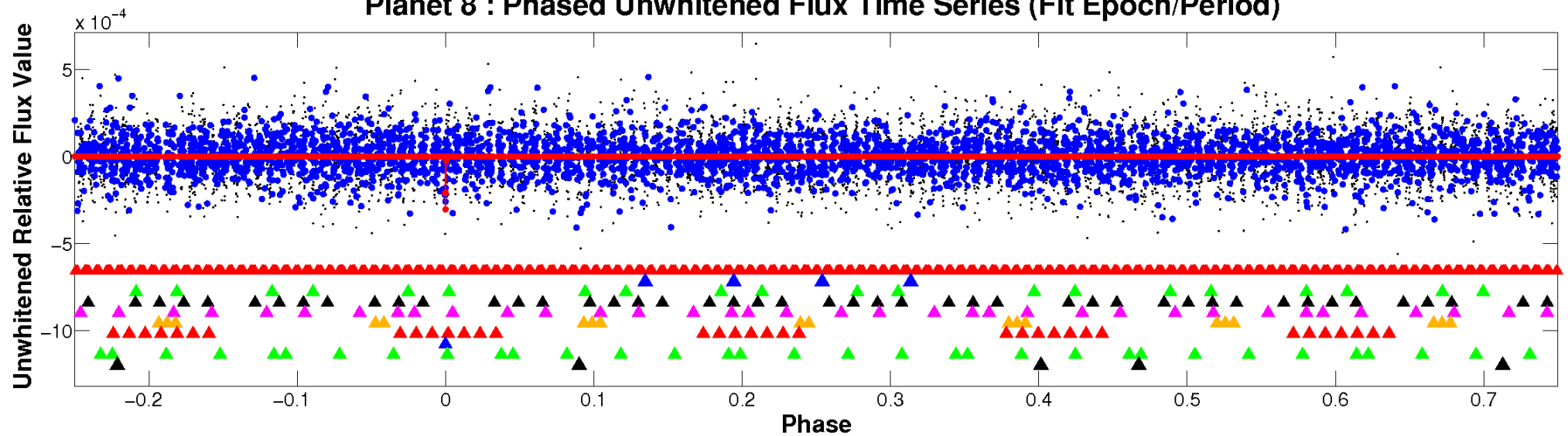
ALT Odd/Even

TCE 011569443-08

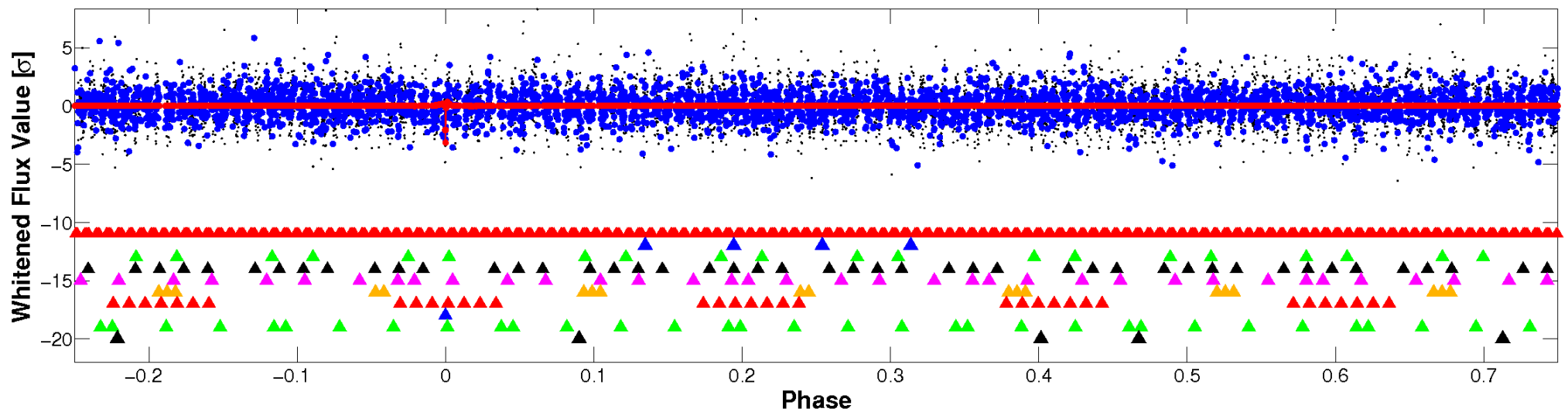


Non-Whitened Vs. Whitened Light Curve

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

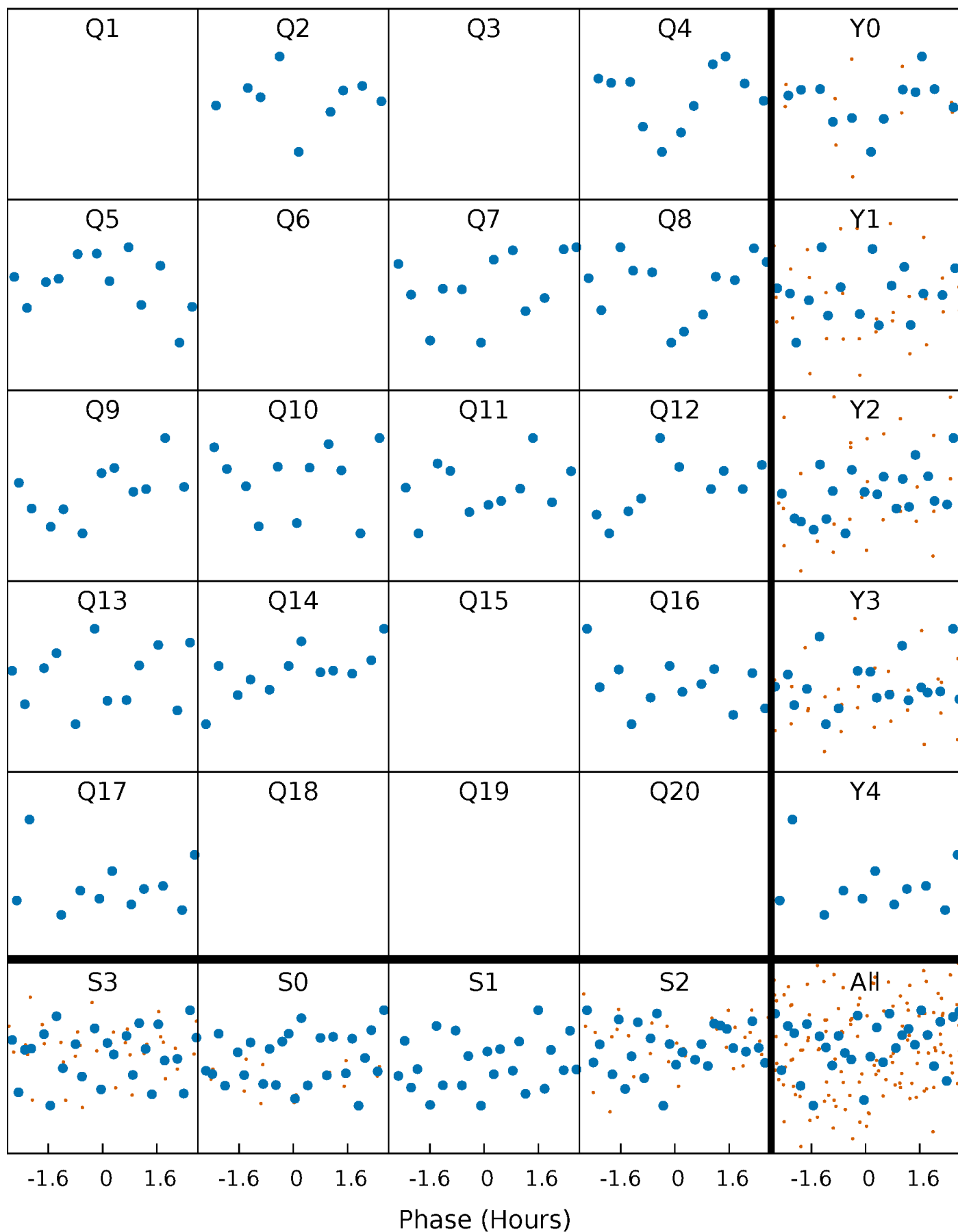


Planet 8 : Phased Whitened Flux Time Series (Fit Epoch/Period)



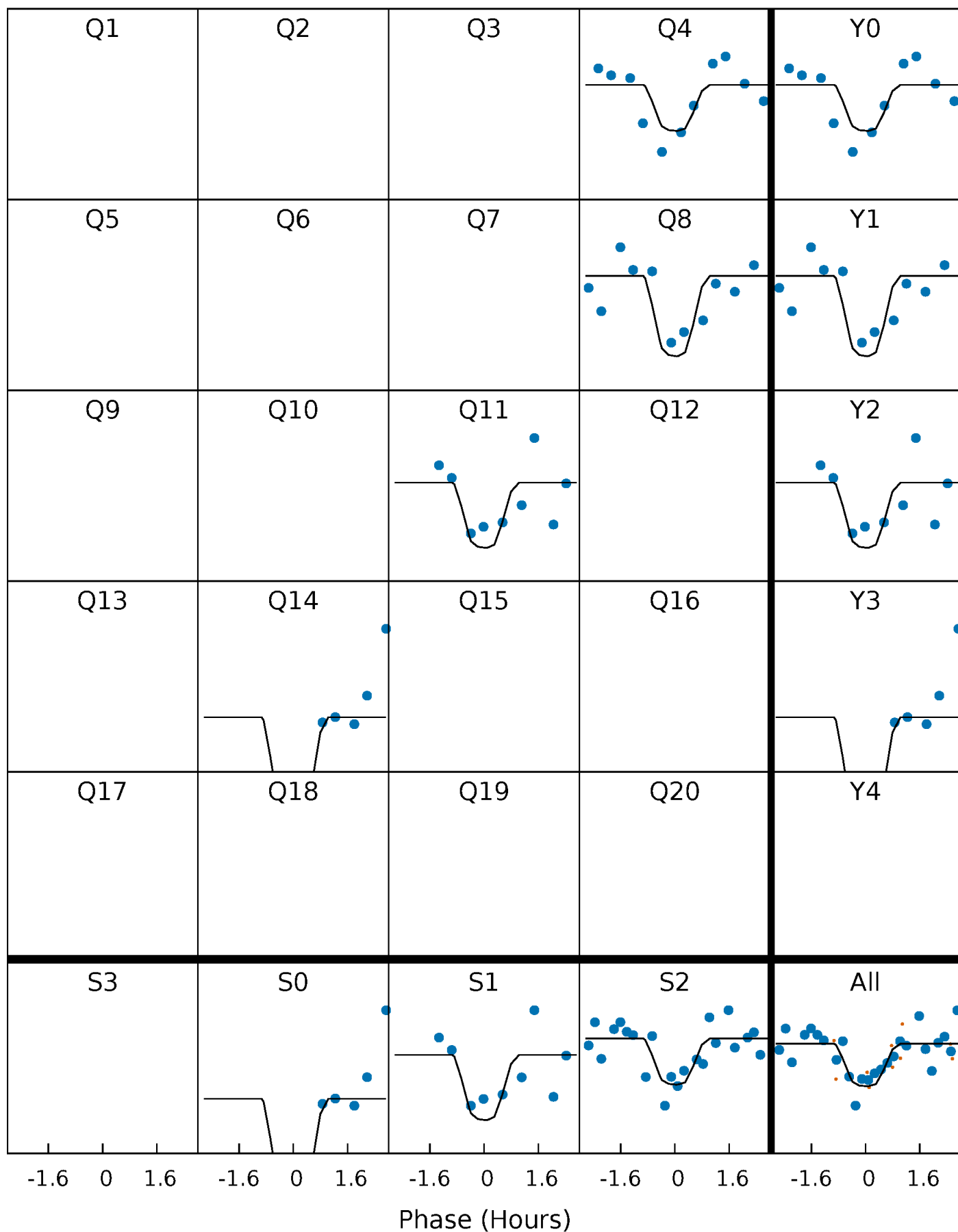
PDC Quarter-Phased Transit Curves

TCE 011569443-08 P=104.678723 Days $T_0=217.862789$ (BKJD)



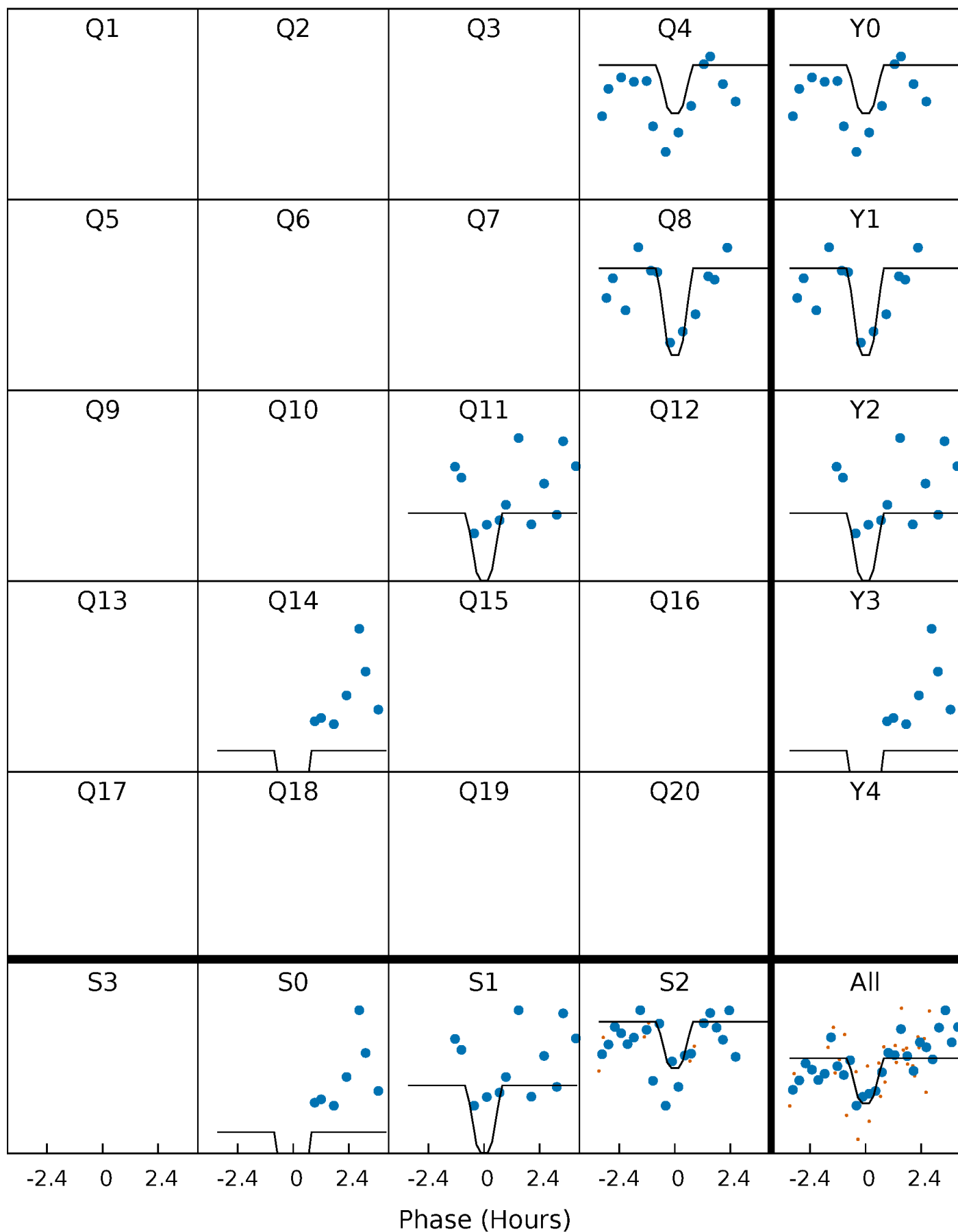
DV Quarter-Phased Transit Curves

TCE 011569443-08 $P=104.678723$ Days $T_0=217.862789$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

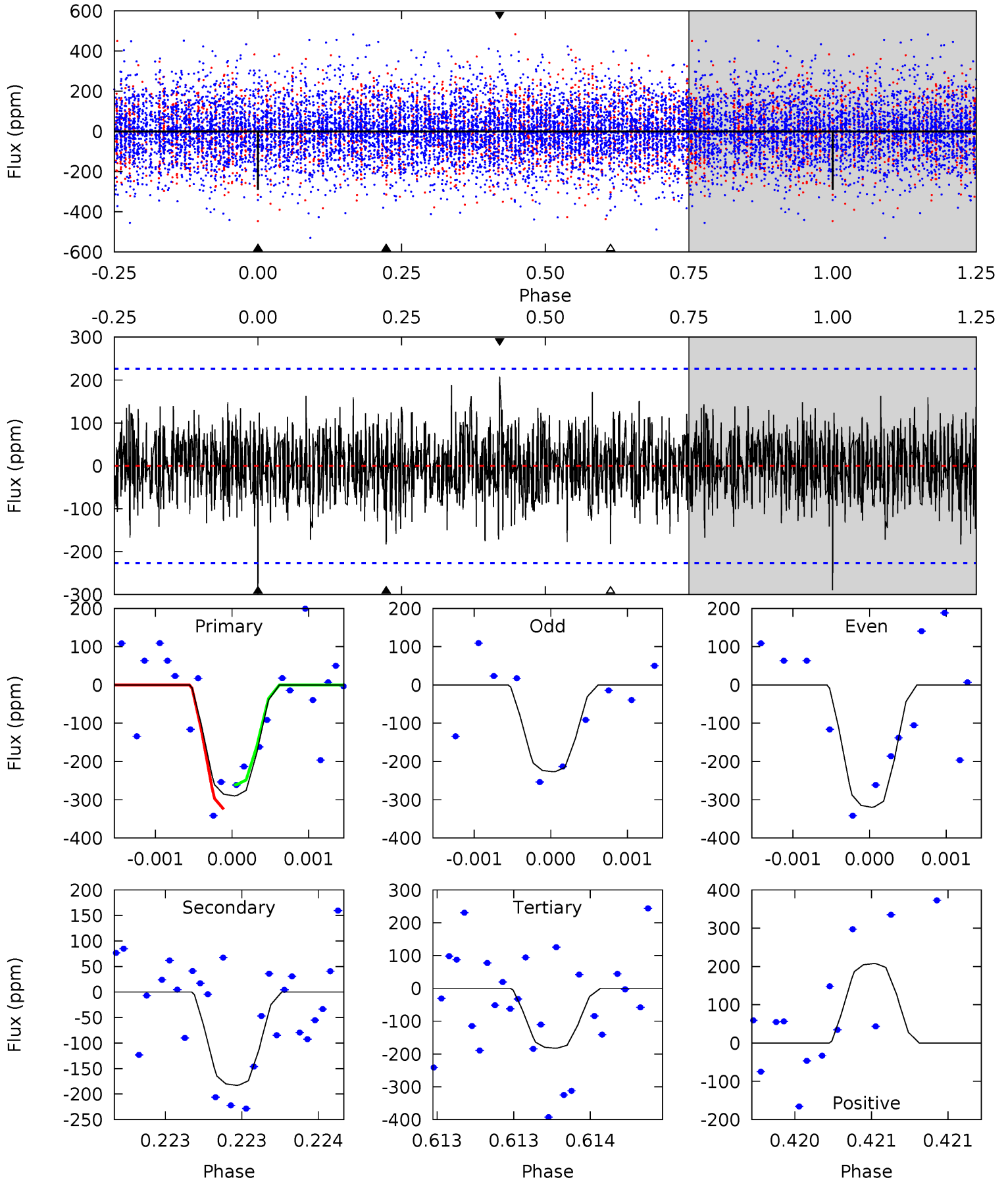
TCE 011569443-08 P=104.678853 Days $T_0=217.860388$ (BKJD)



DV Model-Shift Uniqueness Test

011569443-08, P = 104.678723 Days, E = 113.184066 Days

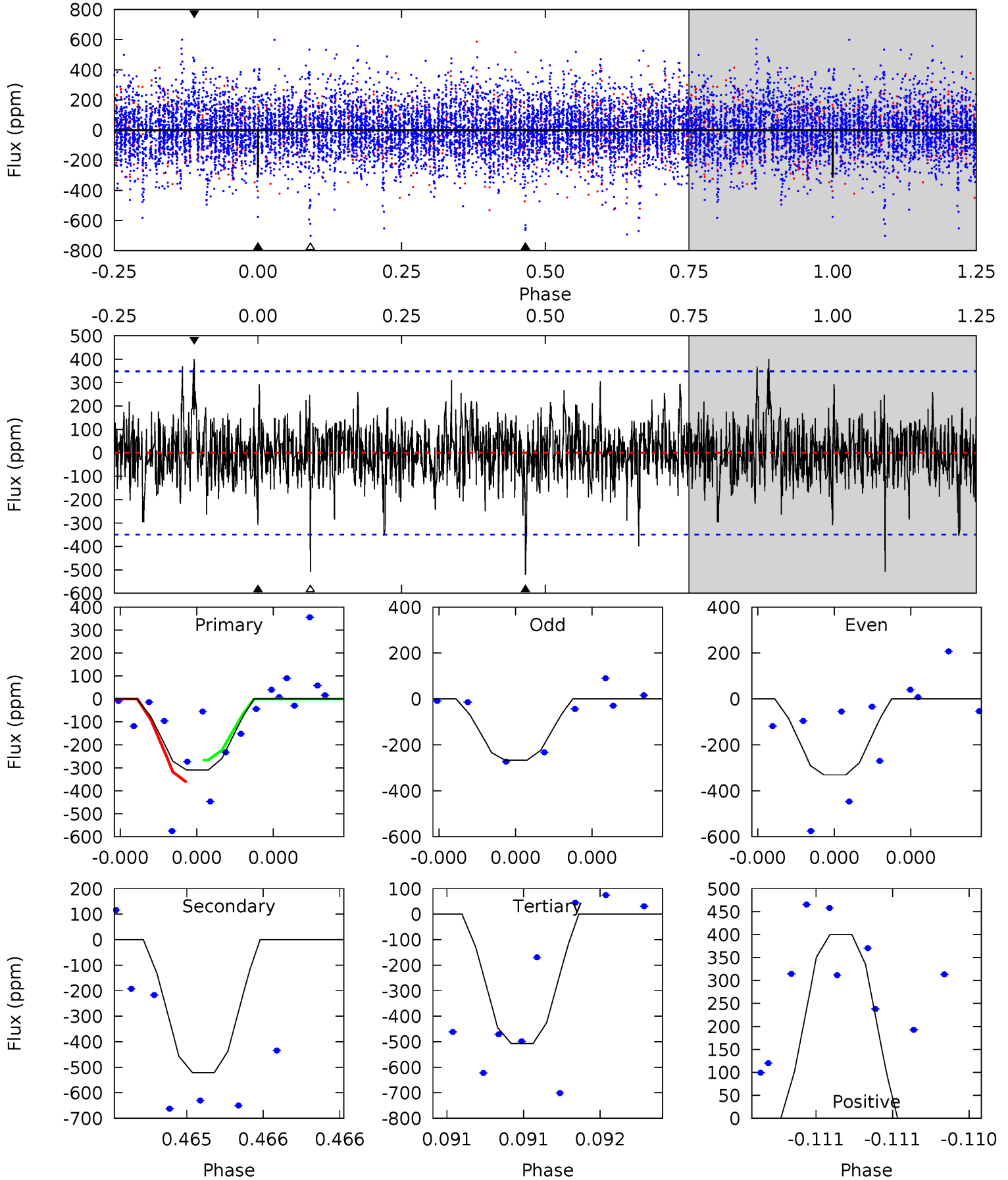
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.08	4.46	4.45	5.07	5.52	3.40	1.28	2.63	2.01	0.01	-0.60	1.12	1.15	0.42	0.76



Alt Model-Shift Uniqueness Test

011569443-08, P = 104.678853 Days, E = 113.181535 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.97	8.37	8.14	6.43	5.60	3.53	1.33	-3.18	-1.46	0.23	1.95	0.49	1.13	0.43	0.73



Stellar Parameters For KIC 011569443

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6685^{+187}_{-281}	$4.187^{+0.136}_{-0.204}$	$0.040^{+0.250}_{-0.350}$	$1.557^{+0.494}_{-0.329}$	$1.358^{+0.214}_{-0.235}$	$0.507^{+0.389}_{-0.251}$
	+3%/-4%	+3%/-5%	+625%/-875%	+32%/-21%	+16%/-17%	+77%/-50%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 011569443-08 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-183 ± 41	$3.87^{+3.22}_{-2.33}$	746^{+60}_{-47}	5145^{+3561}_{-1080}	1462^{+8099}_{-1027}
Alt.	-521 ± 62	$3.95^{+2.97}_{-2.53}$	746^{+60}_{-49}	6650^{+6763}_{-1506}	4169^{+29281}_{-2764}

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 $A_{obs} \gg 1.0$

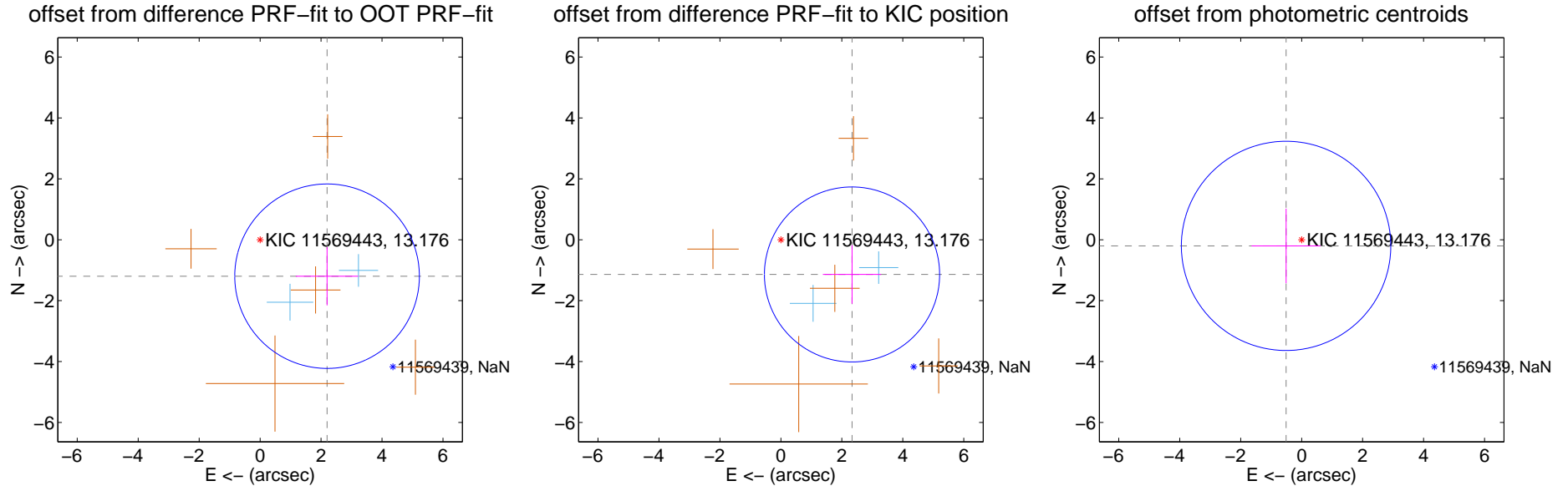
DV Centroid Data

Supplemental centroid analysis for 011569443-08. Kepler magnitude: 13.18. Transit SNR 7.57

There are 2 quarters with good PRF difference image offsets

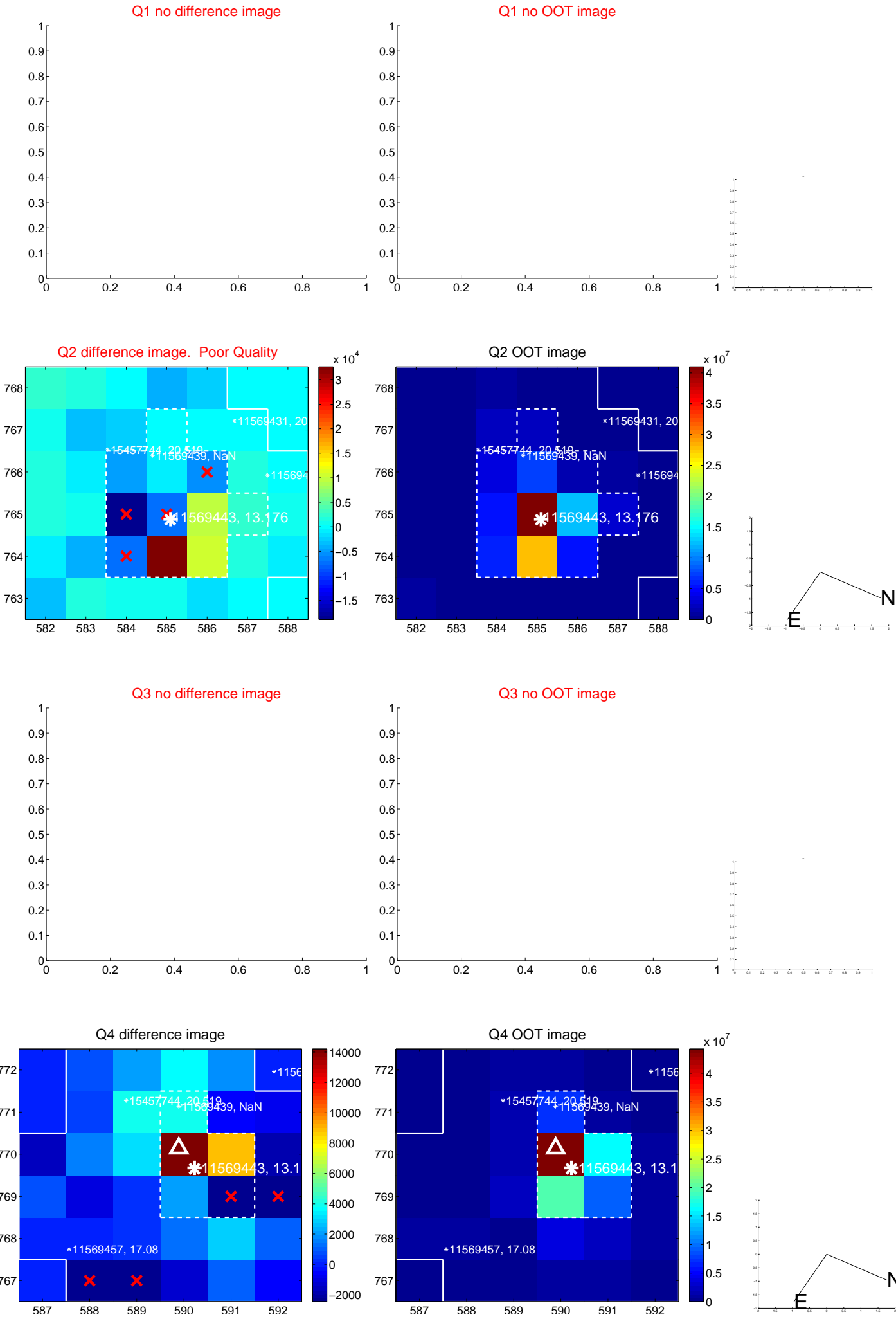
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.501 ± 1.009	2.48	-2.197 ± 1.024	-1.197 ± 0.958
PRF-fit source offset from KIC position	2.597 ± 0.958	2.71	-2.333 ± 0.957	-1.140 ± 0.961
photometric centroid source offset	0.55 ± 1.14	0.48	0.51 ± 1.13	-0.20 ± 1.22

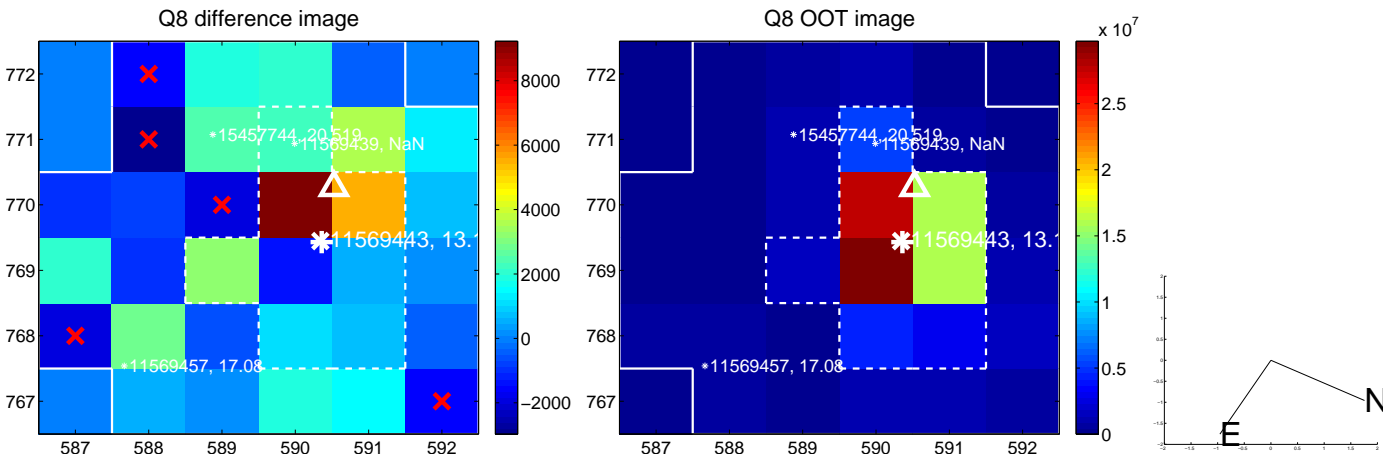
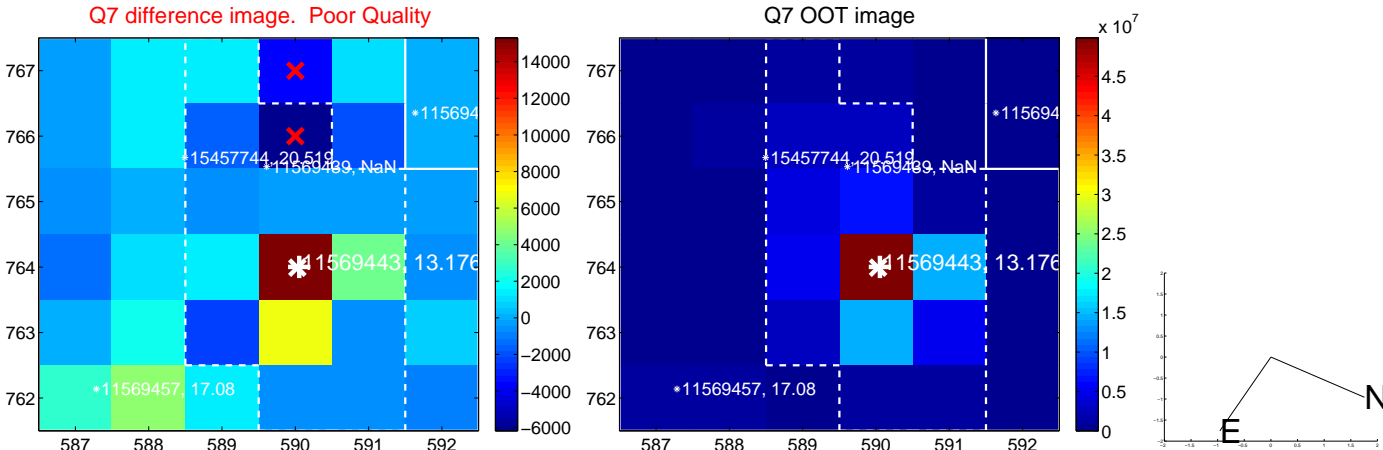
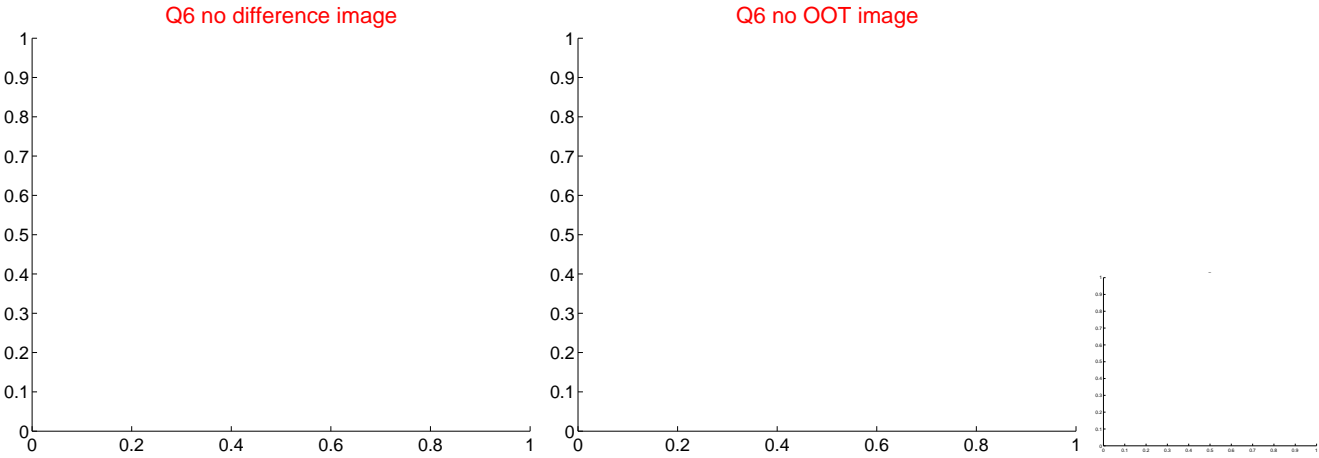
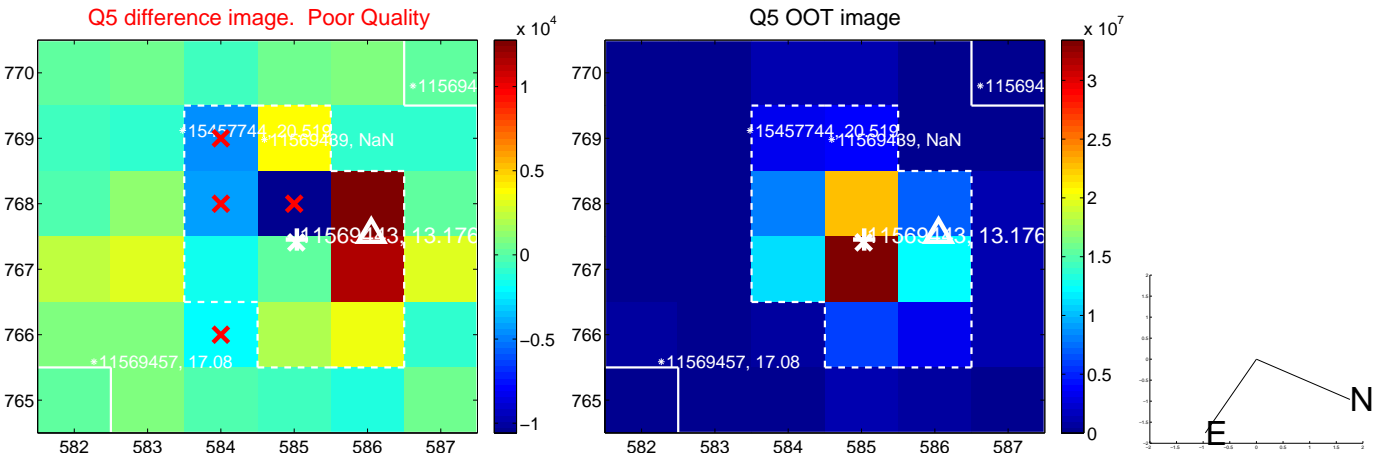


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

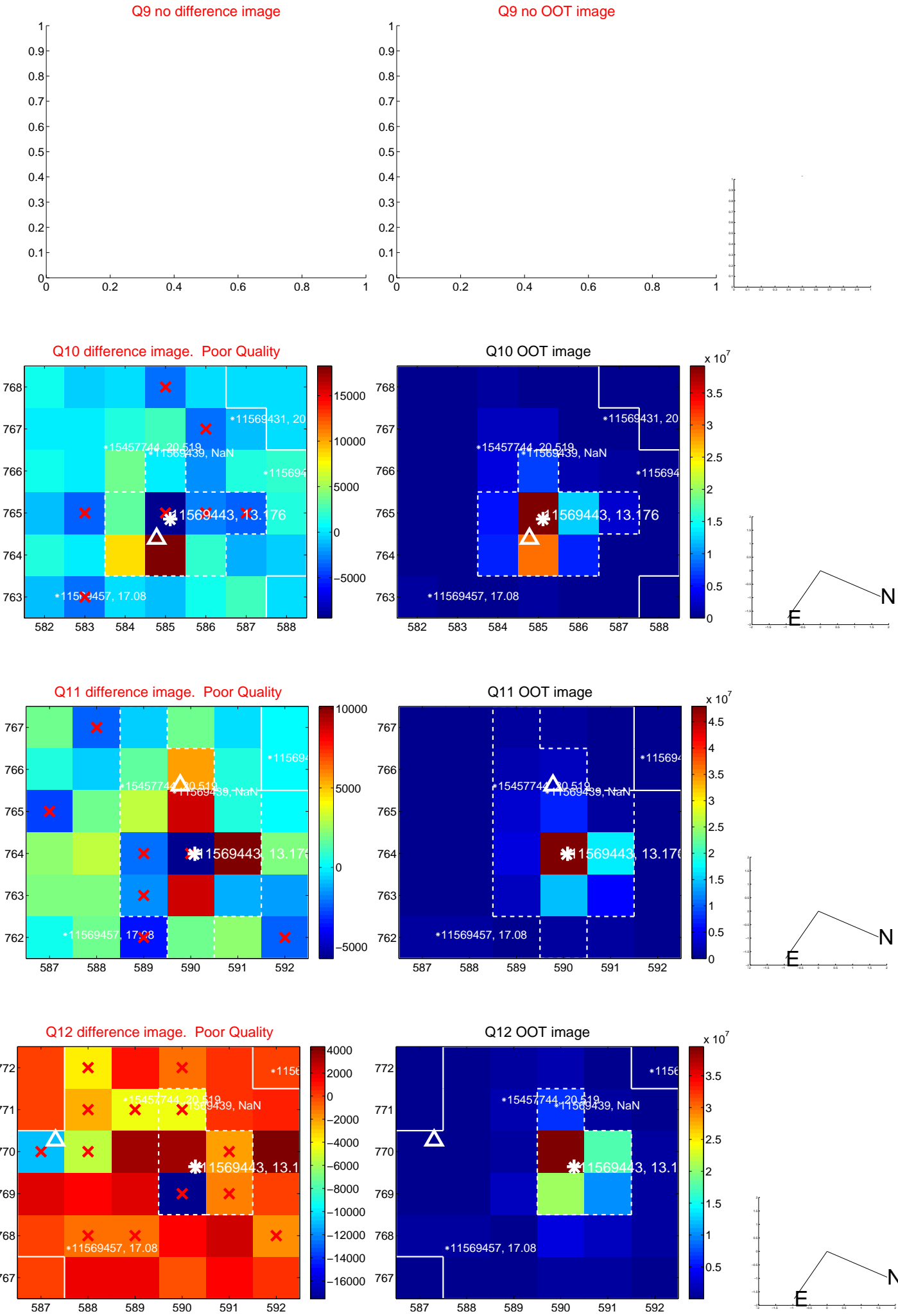
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



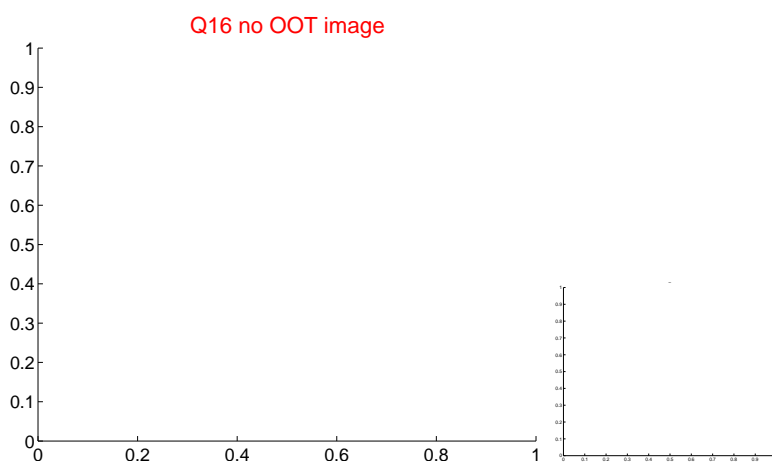
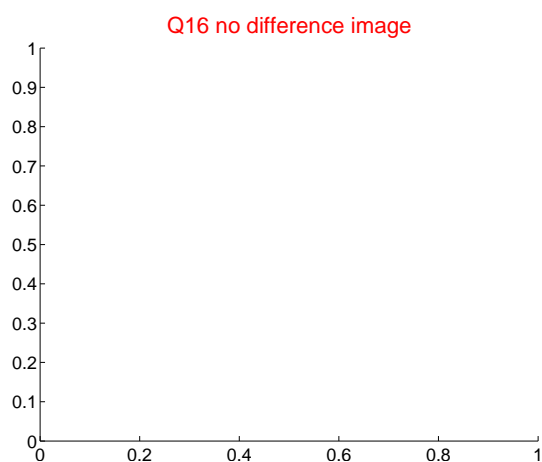
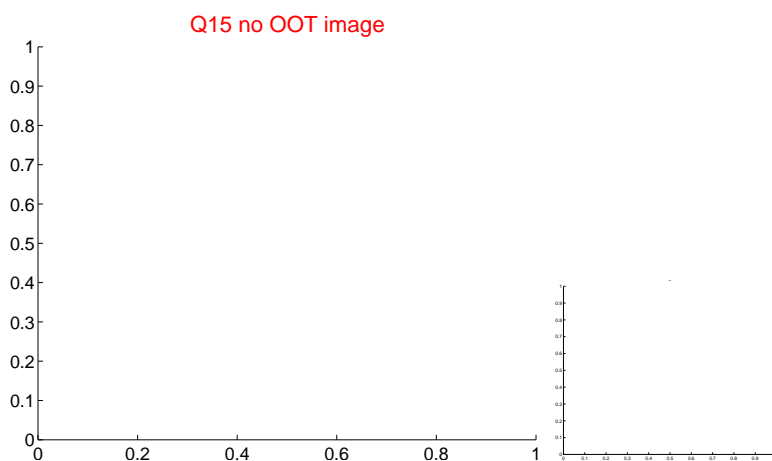
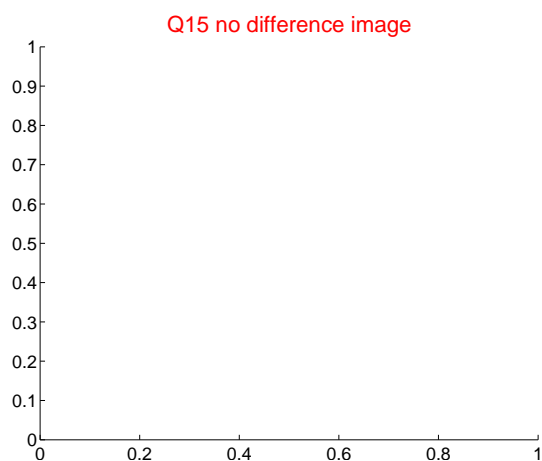
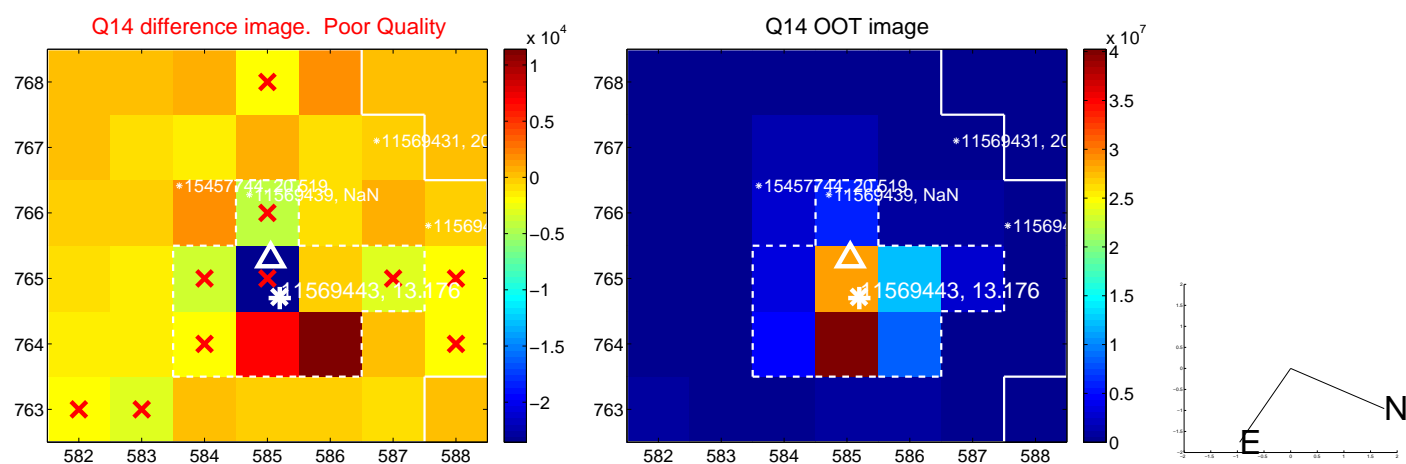
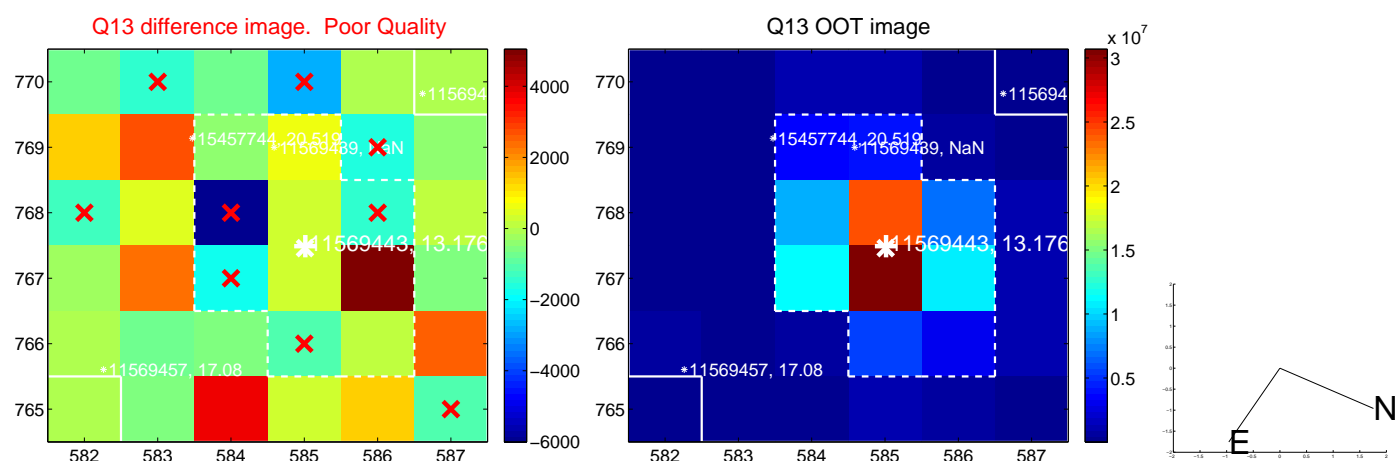
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



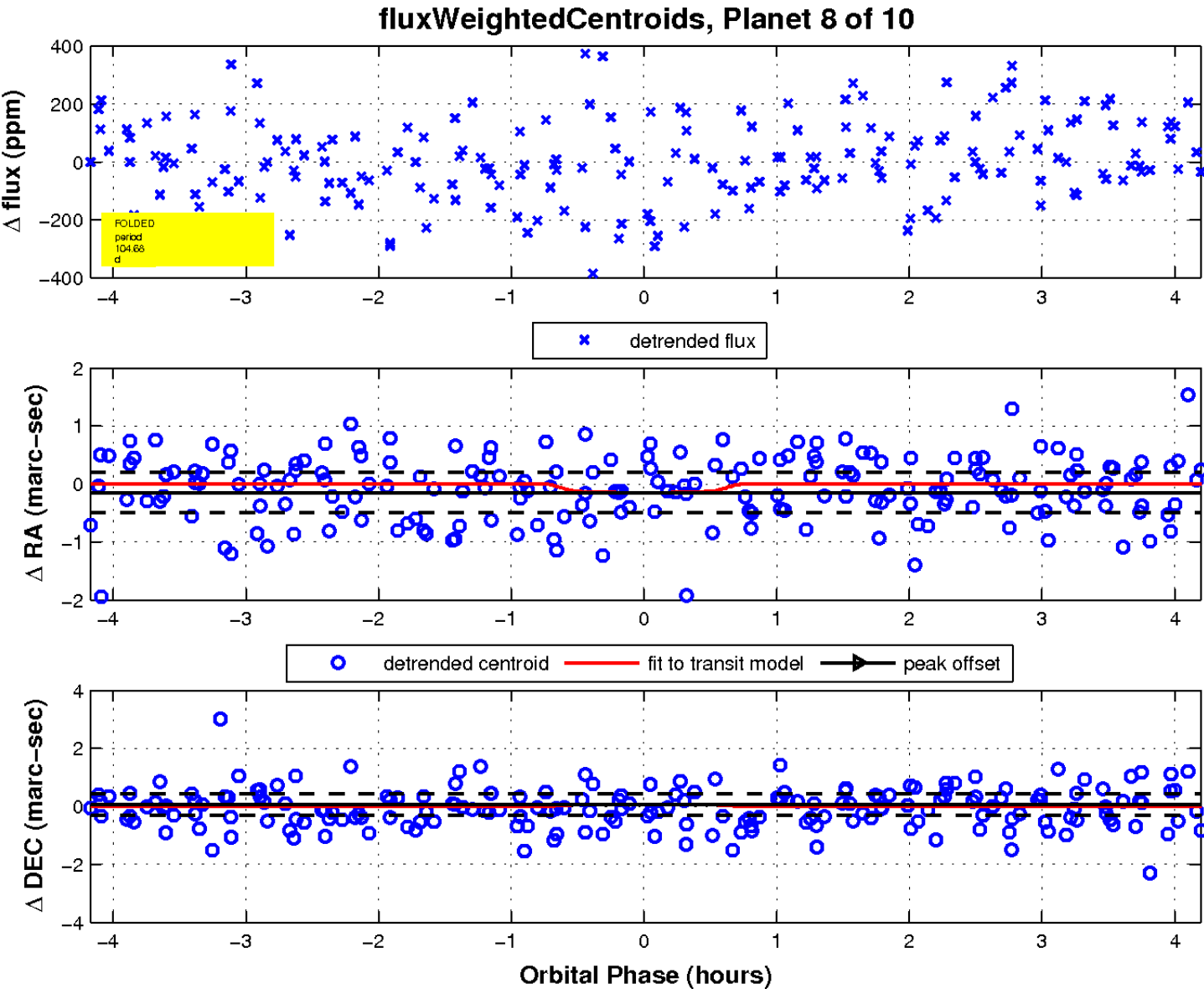
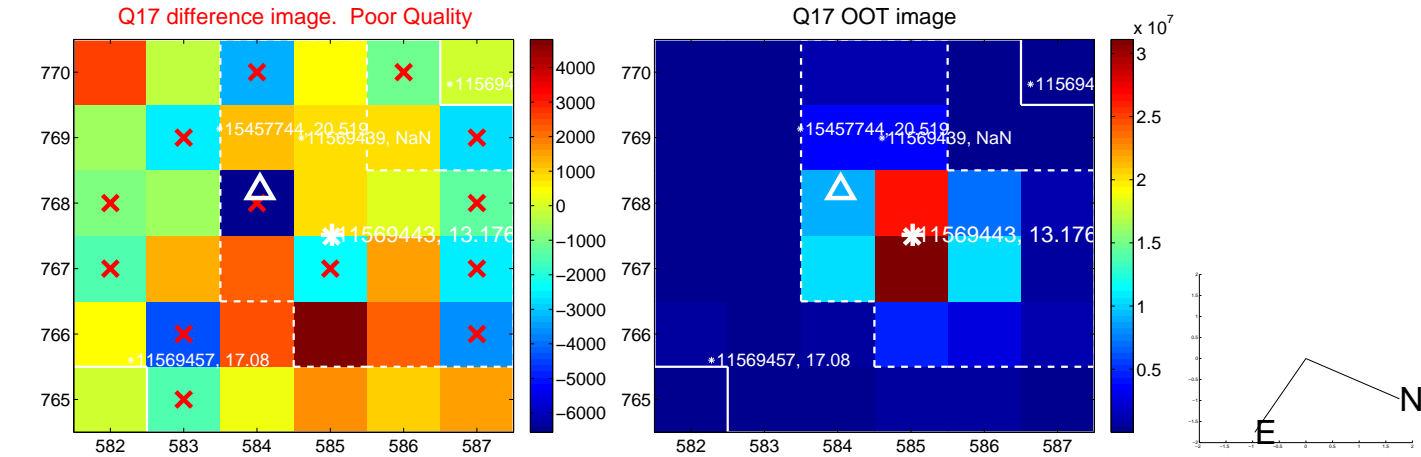
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

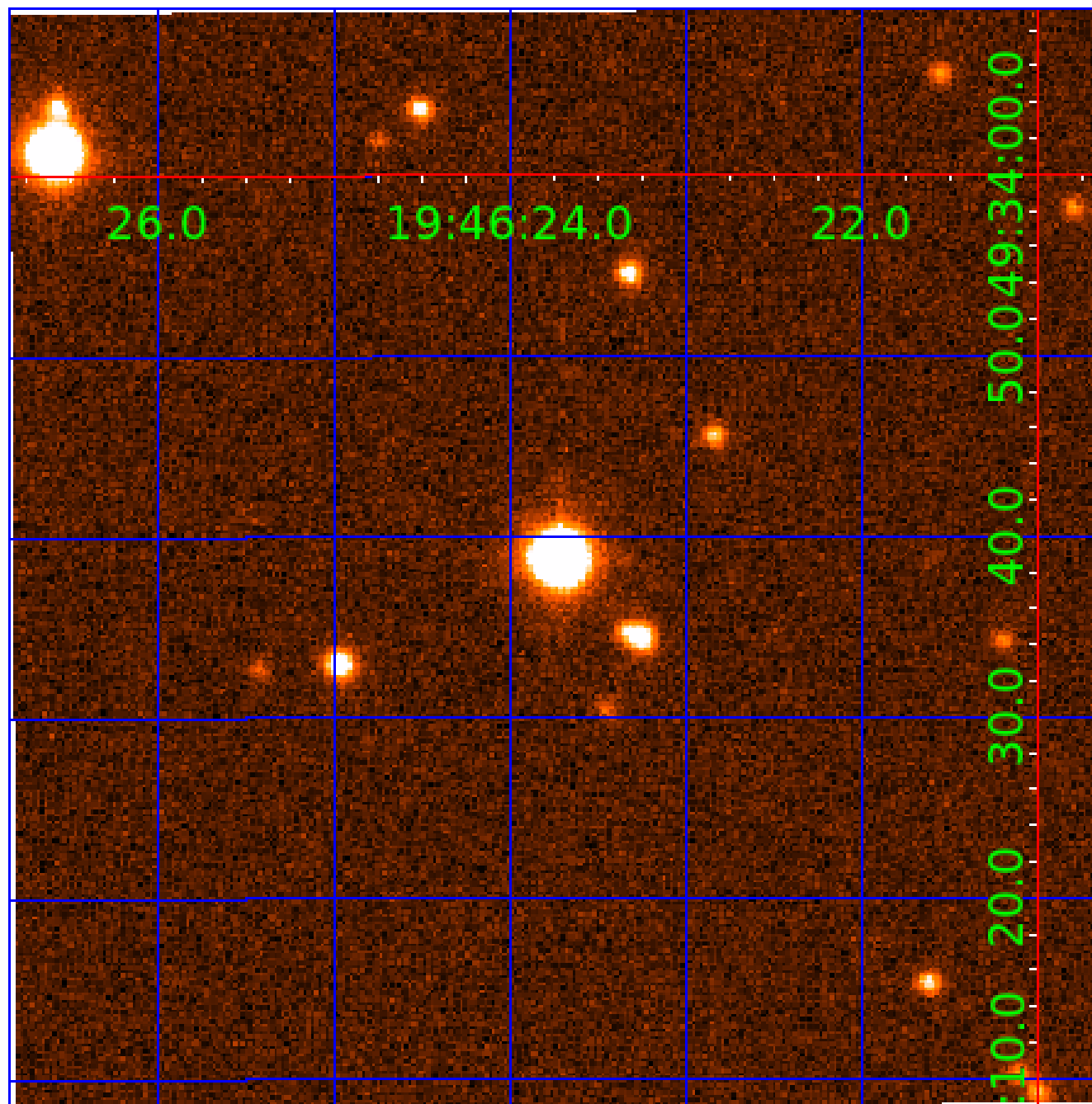


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011569443

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})
011569443-01	OBS	No	2.344129	132.983449	25.4	15.857	8.1	8.4	1.56	6685	0.92	2961.54
011569443-02	OBS	No	412.469578	146.020096	168.6	8.779	10.2	8.4	1.56	6685	2.21	3.00
011569443-03	OBS	No	72.987289	157.607486	270.7	2.219	9.4	10.5	1.56	6685	3.28	30.23
011569443-04	OBS	No	32.077750	145.382778	159.8	4.570	9.1	9.2	1.56	6685	2.15	90.48
011569443-05	OBS	No	40.558747	133.378934	266.8	1.247	8.6	9.0	1.56	6685	2.59	66.18
011569443-06	OBS	No	74.686409	184.106204	190.2	6.743	8.7	9.4	1.56	6685	2.36	29.32
011569443-07	OBS	No	41.646178	159.524234	203.5	2.180	8.0	8.8	1.56	6685	2.64	63.88
011569443-08	OBS	No	104.678723	217.862789	306.0	1.405	8.2	7.6	1.56	6685	3.19	18.69
011569443-09	OBS	No	44.318975	149.204173	184.9	2.422	7.8	8.1	1.56	6685	2.45	58.80
011569443-10	OBS	No	281.444595	187.802605	249.5	12.521	9.4	11.2	1.56	6685	2.77	5.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011569443-01	OBS	FP	0.00	1	0	0	0	LPP_DV
011569443-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
011569443-03	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
011569443-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011569443-05	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_FEW_DIFFS—HALO_GHOST
011569443-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
011569443-07	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011569443-08	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_MEAS
011569443-09	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011569443-10	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS—HALO_GHOST

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

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

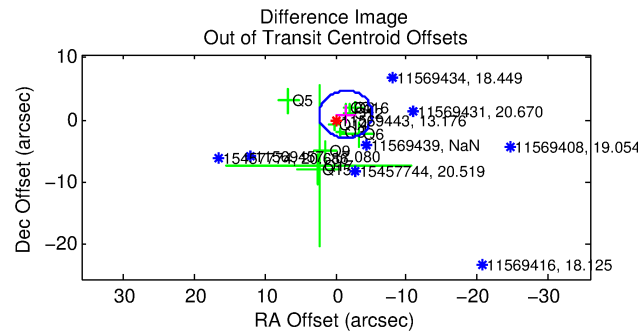
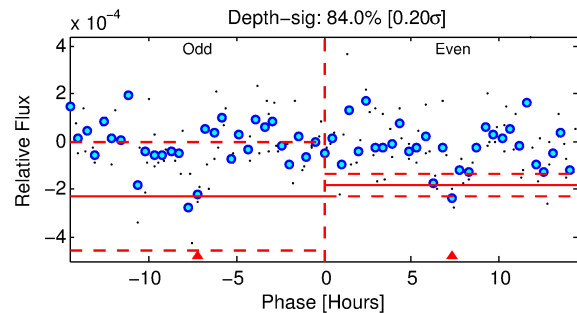
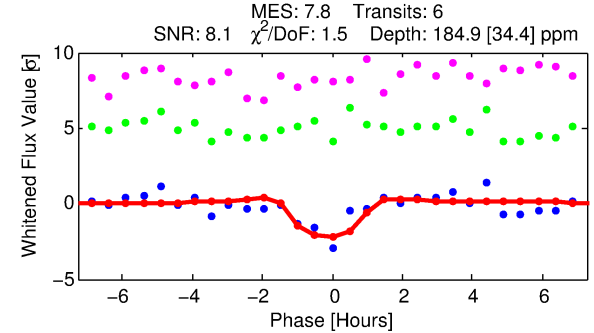
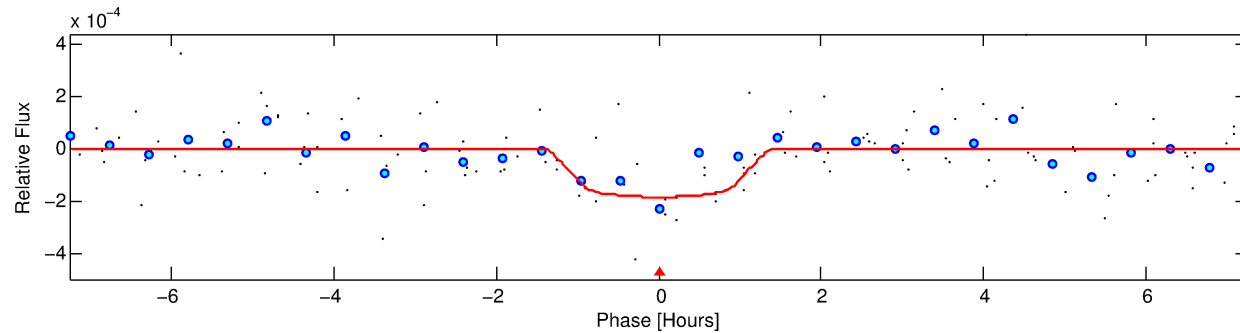
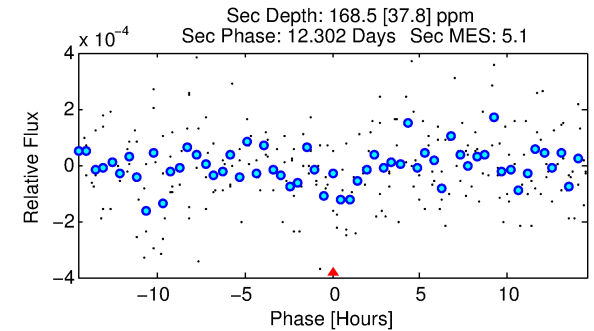
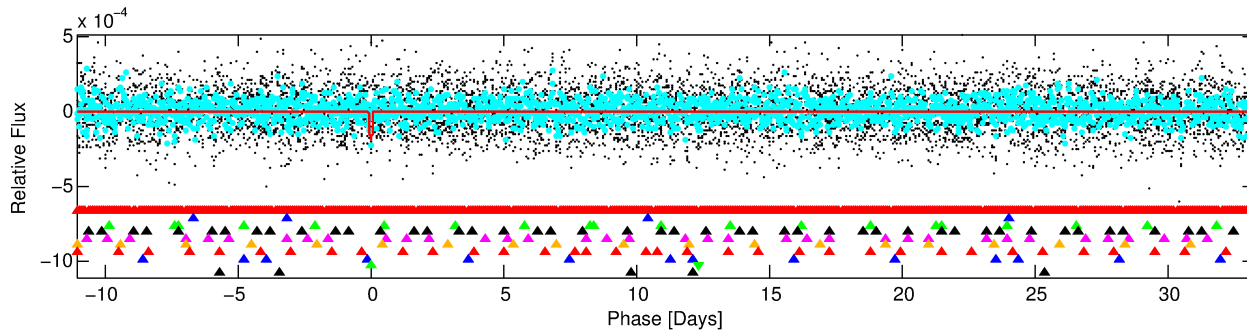
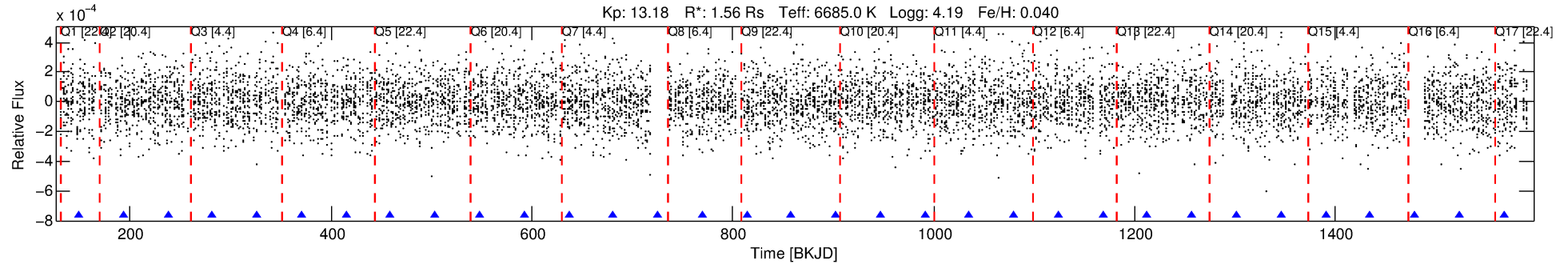
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011569443-09

No Significant Match Found

DV One-Page Summary

KIC: 11569443 Candidate: 9 of 10 Period: 44.319 d



DV Fit Results:

Period = 44.31897 [0.00056] d
Epoch = 149.2042 [0.0093] BKJD
Rp/R* = 0.0144 [0.0222]
a/R* = 69.16 [625.82]
b = 0.89 [2.22]
Seff = 58.80 [24.32]
Teff = 706 [73] K
Rp = 2.45 [3.85] Re
a = 0.2716 [0.0715] AU
Ag = 1142.90 [3556.91] [0.32σ]
Teffp = 6348 [4909] K [1.15σ]

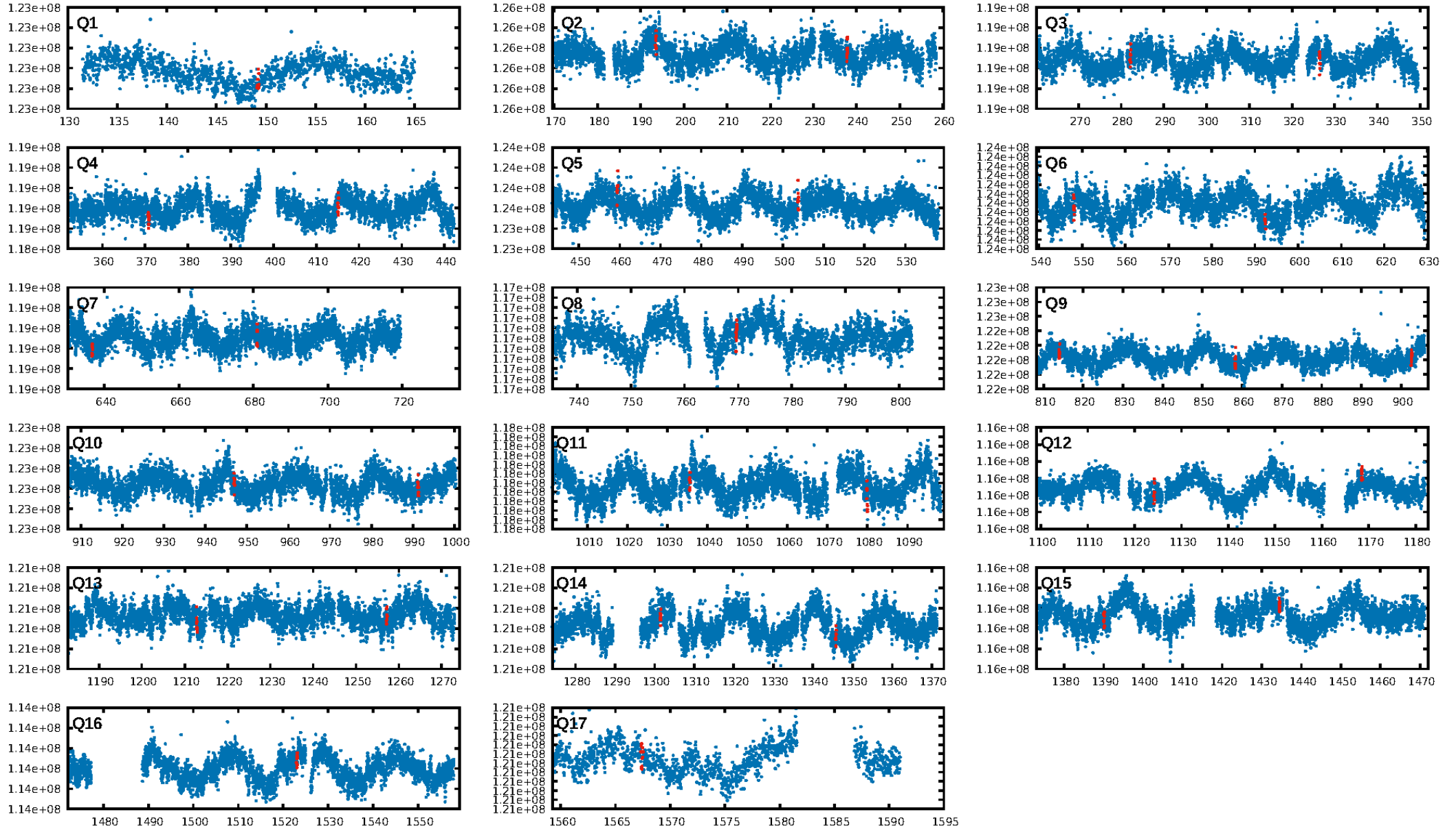
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [19.68σ]
LongPeriod-sig: 100.0% [209.45σ]
ModelChiSquare2-sig: 13.0%
ModelChiSquareGof-sig: 98.1%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: 1.7
Centroid-sig: 52.1%
Centroid-so: 0.616 arcsec [0.68σ]
OotOffset-rm: 1.679 arcsec [1.34σ]
KicOffset-rm: 1.708 arcsec [1.36σ]
OotOffset-st: 3/2/3/3 [11]
KicOffset-st: 3/2/3/3 [11]
DiffImageQuality-fgm: 0.27 [3/11]
DiffImageOverlap-fno: 0.53 [9/17]

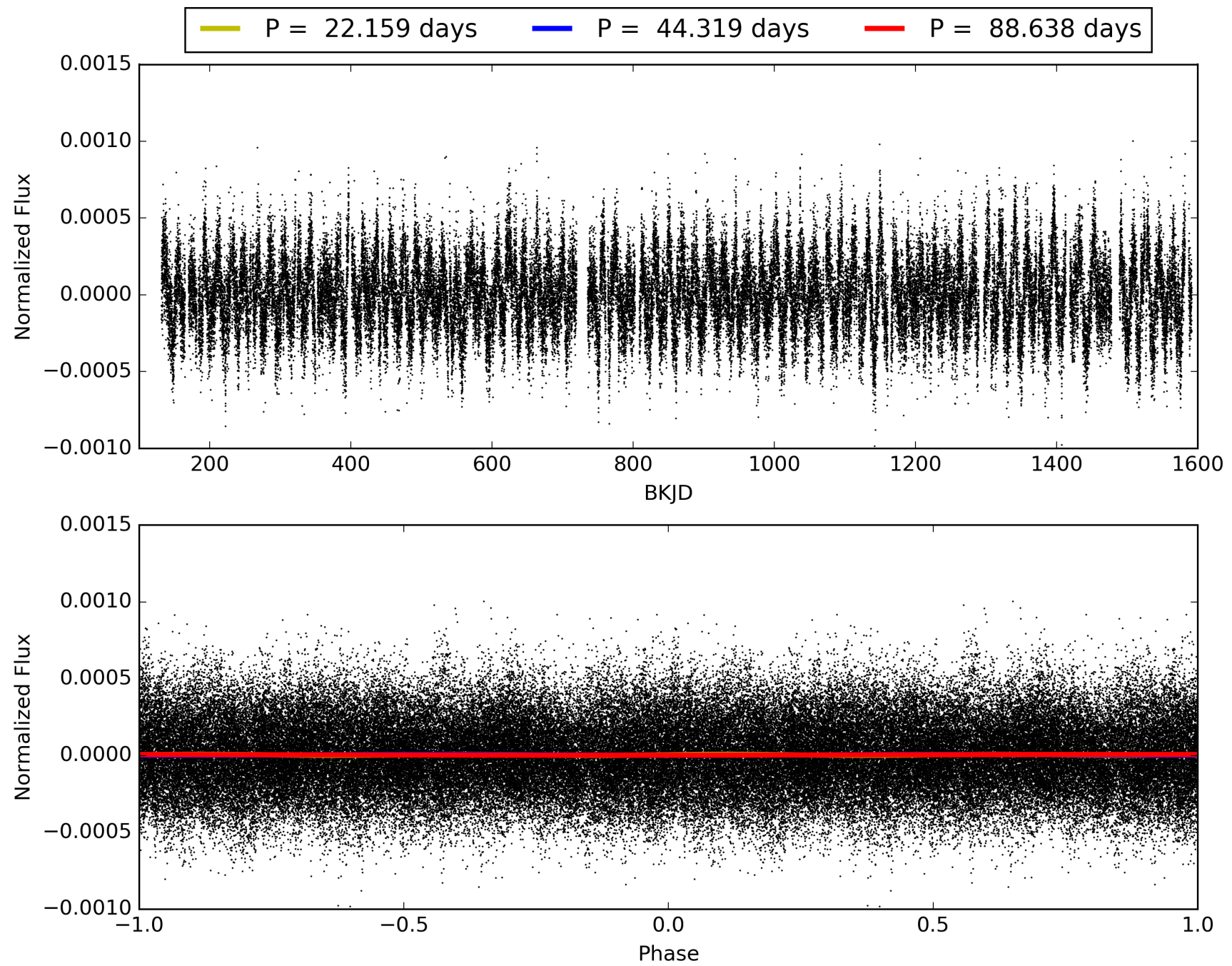
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:25:58 Z

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

TCE 011569443-09, PDC Light Curves

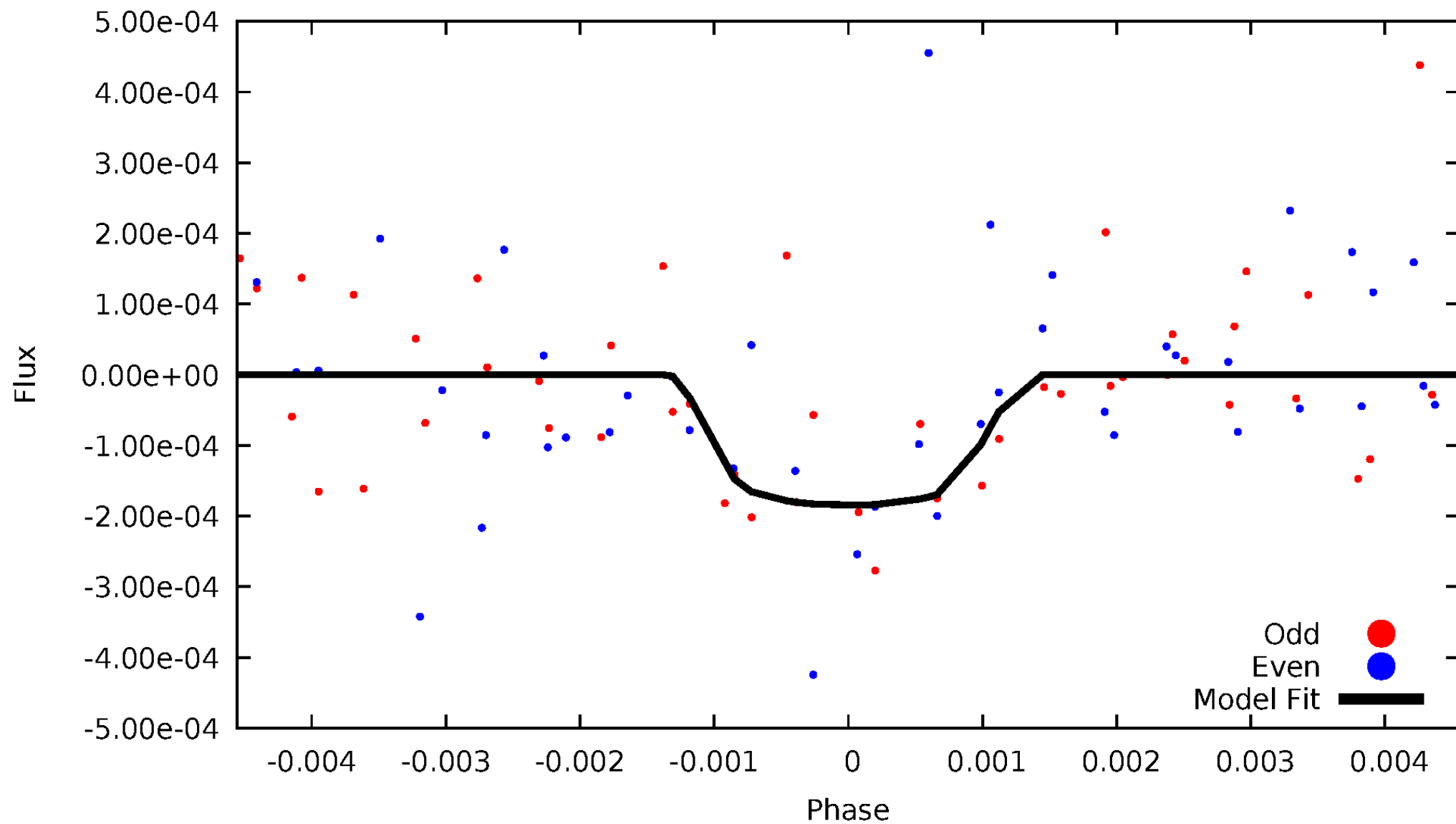


TCE 011569443-09



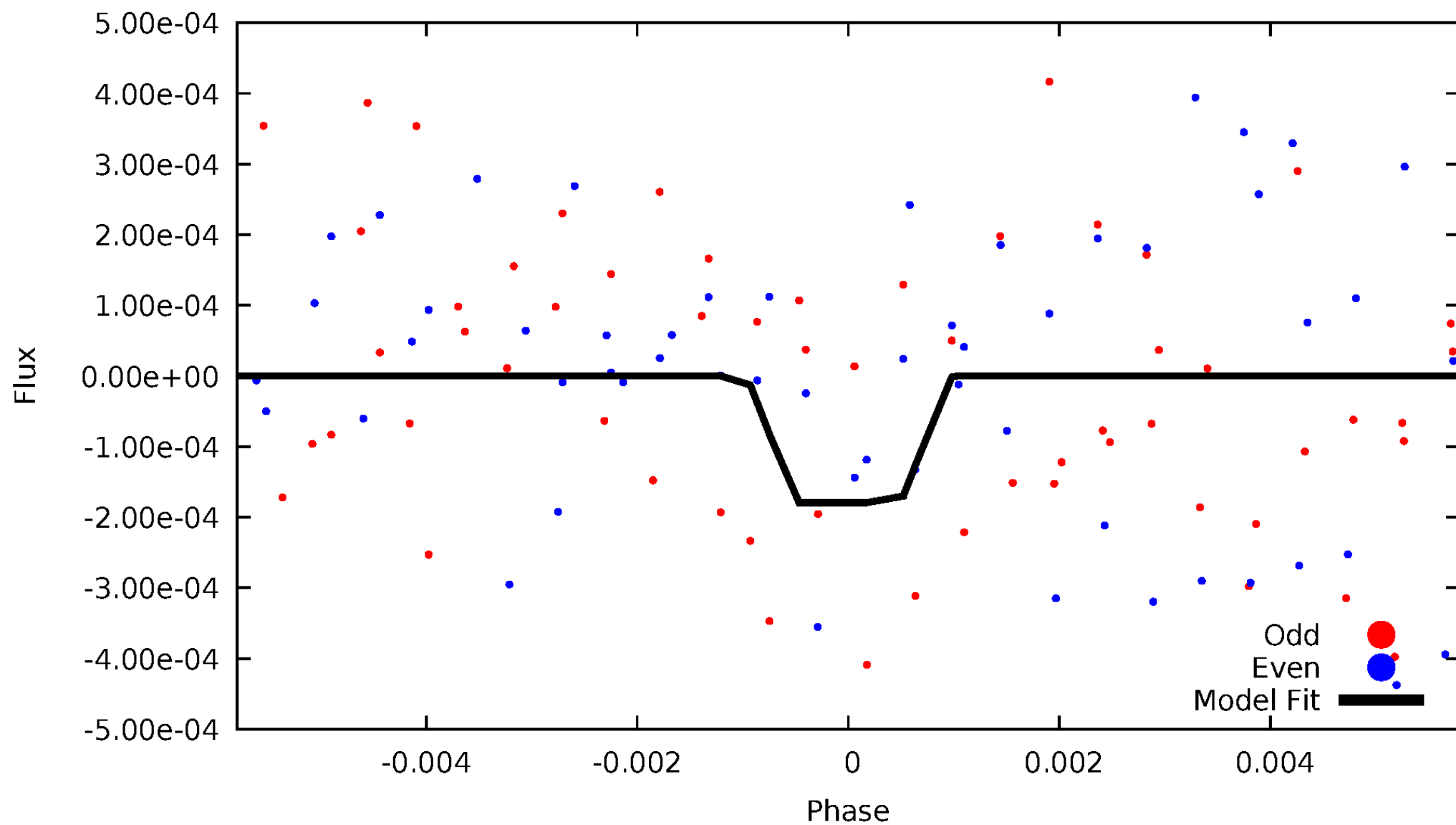
DV Odd/Even

TCE 011569443-09



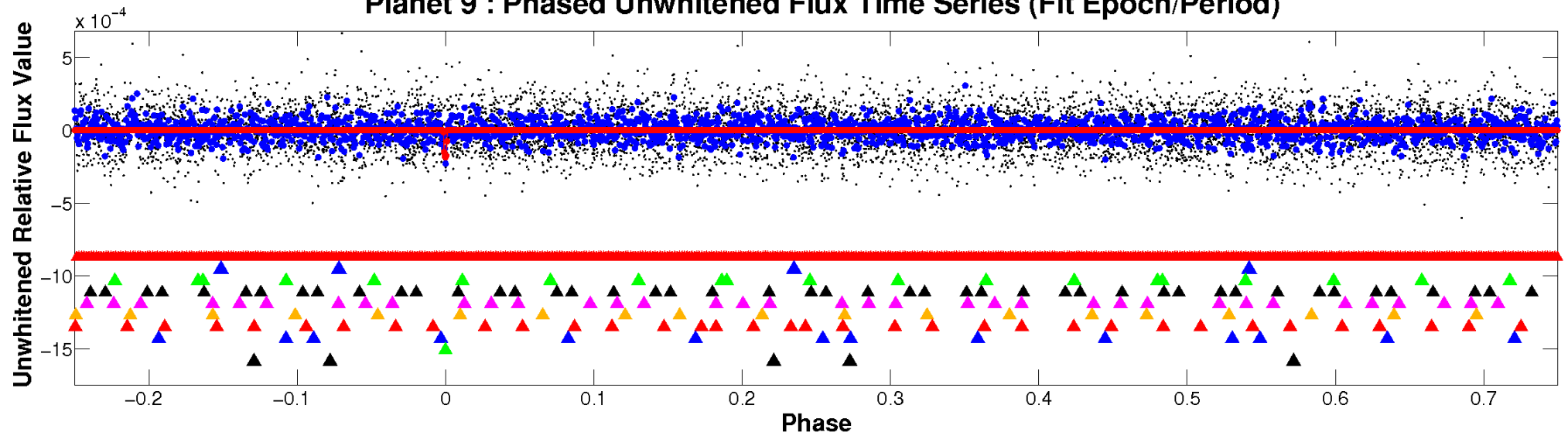
ALT Odd/Even

TCE 011569443-09

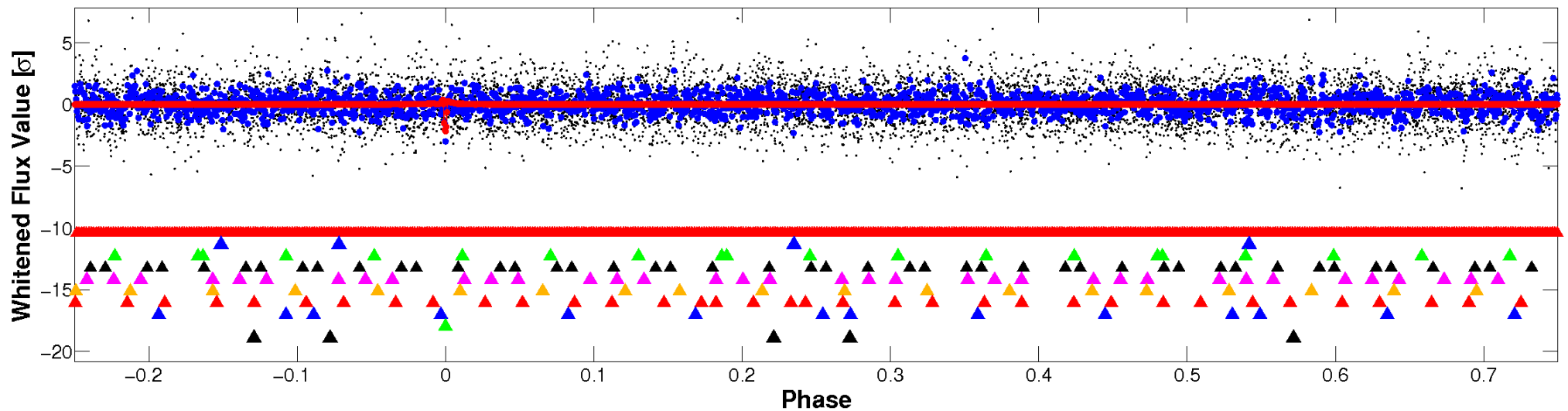


Non-Whitened Vs. Whitened Light Curve

Planet 9 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

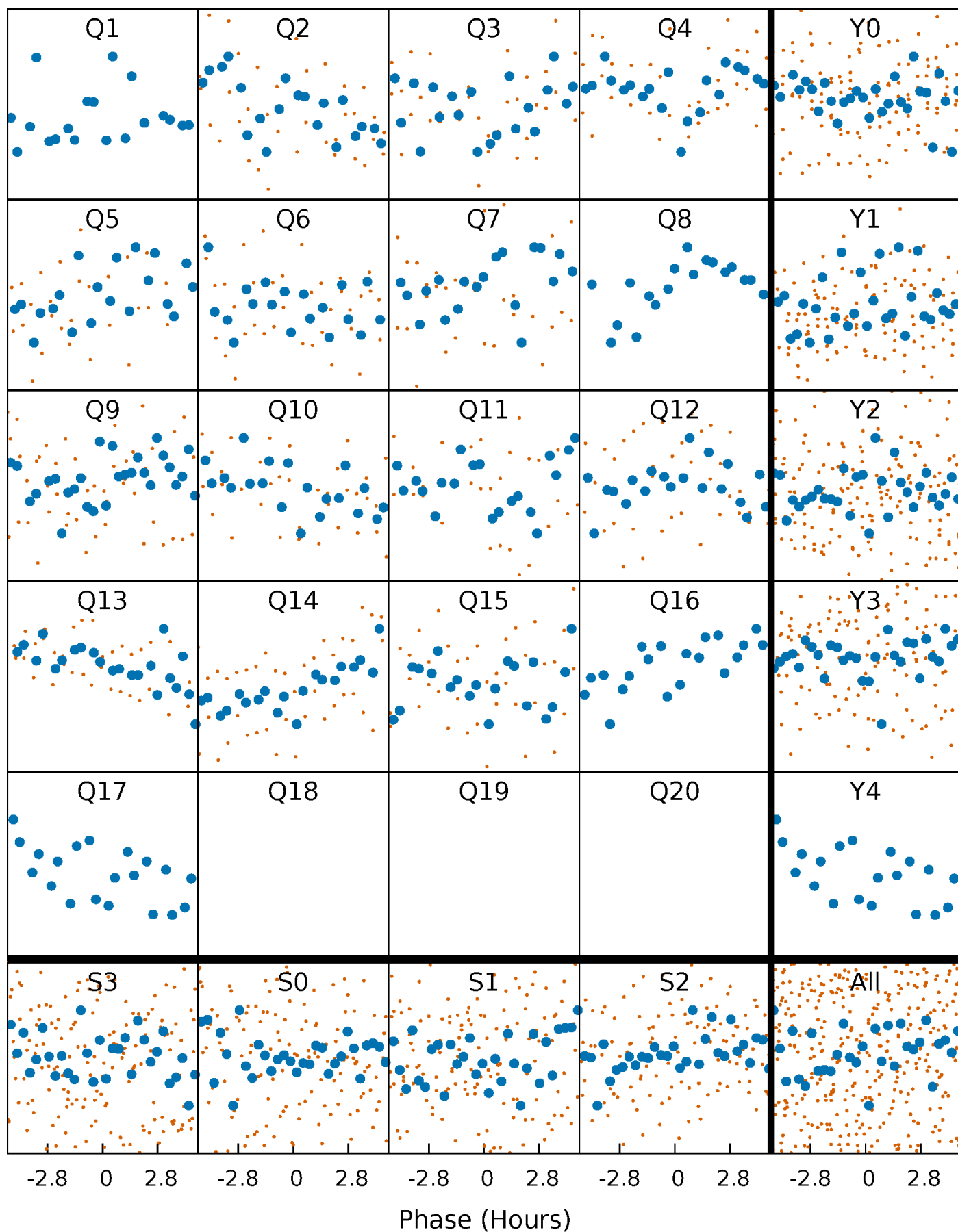


Planet 9 : Phased Whitened Flux Time Series (Fit Epoch/Period)



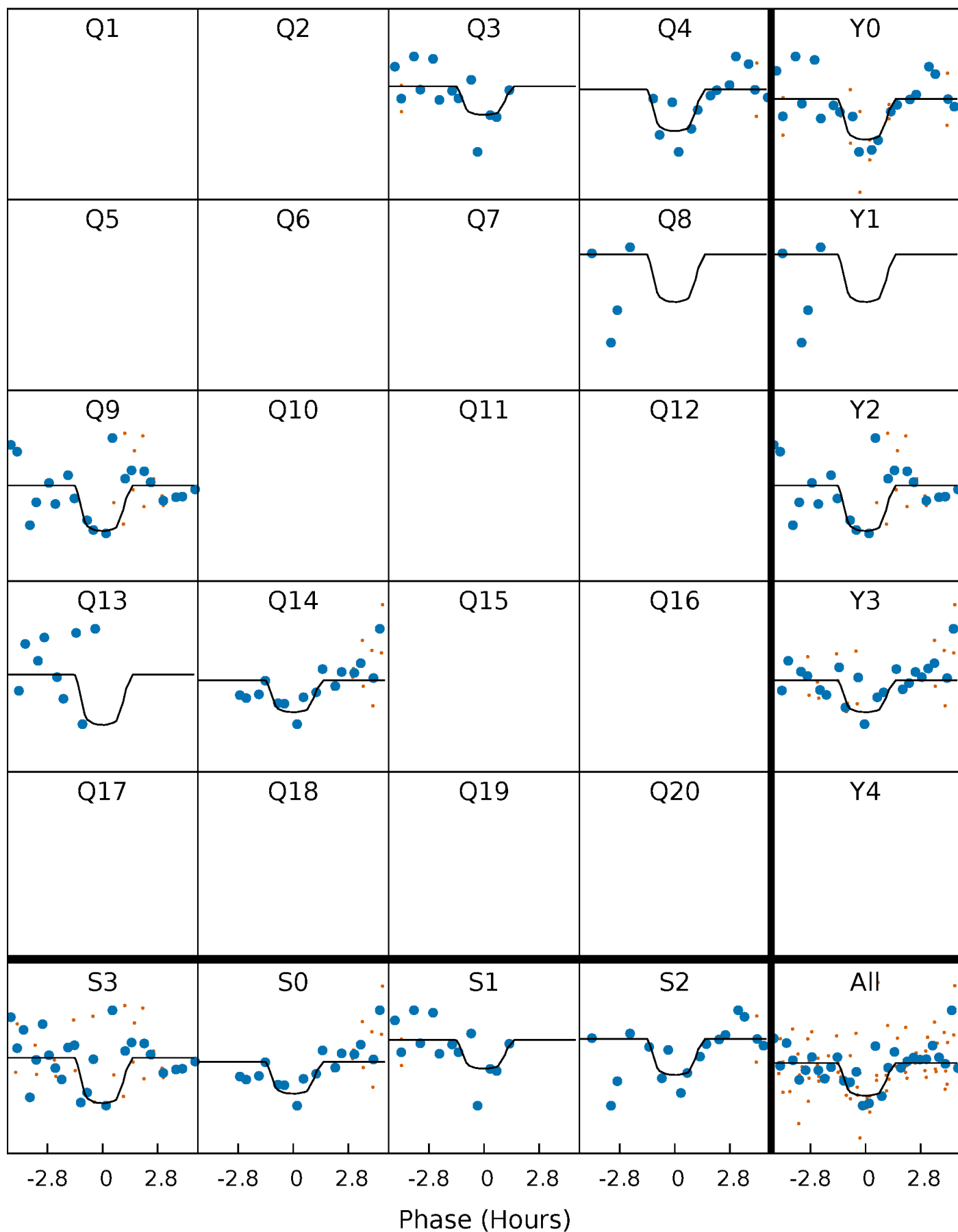
PDC Quarter-Phased Transit Curves

TCE 011569443-09 P= 44.318975 Days $T_0=149.204173$ (BKJD)



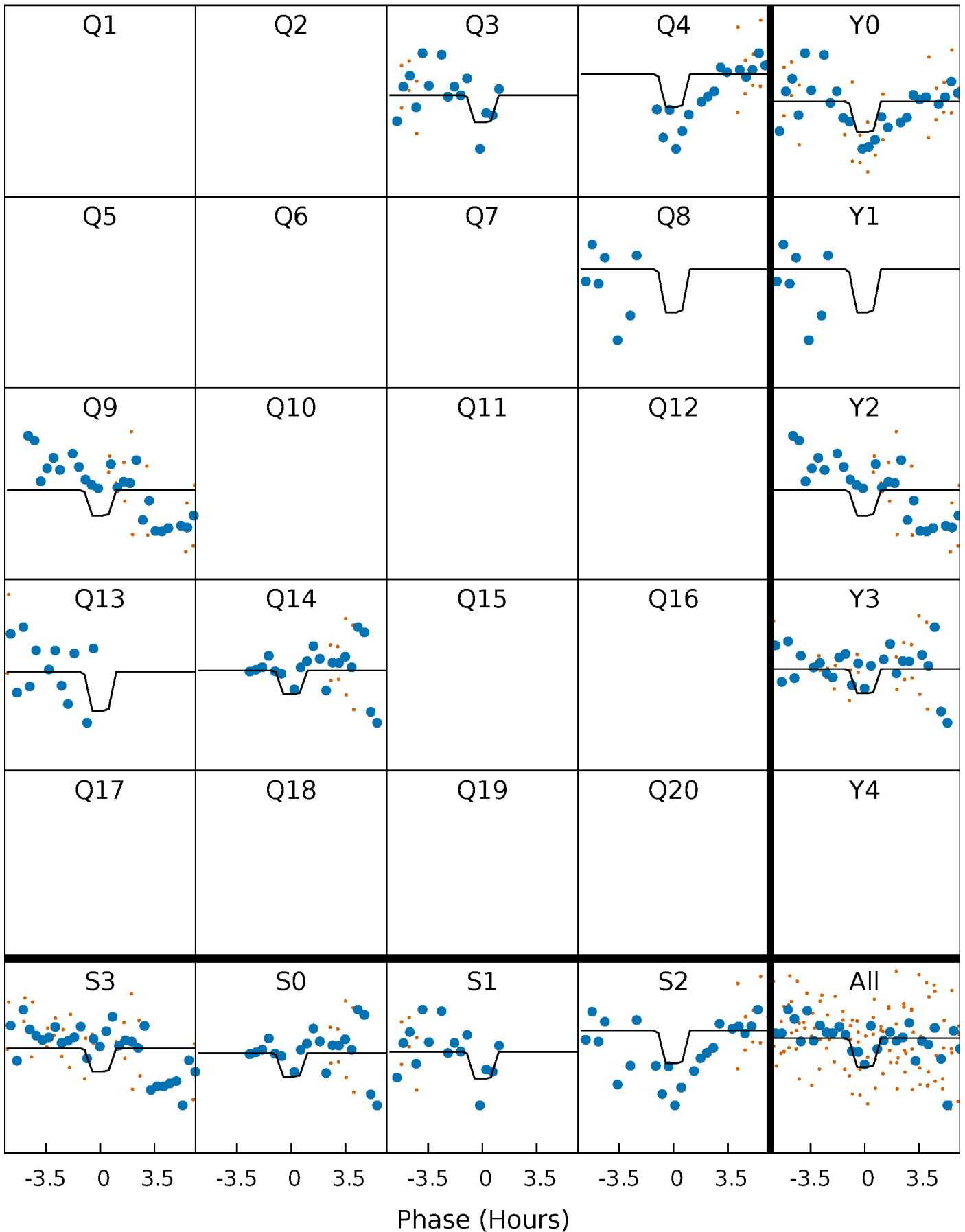
DV Quarter-Phased Transit Curves

TCE 011569443-09 $P = 44.318975$ Days $T_0 = 149.204173$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

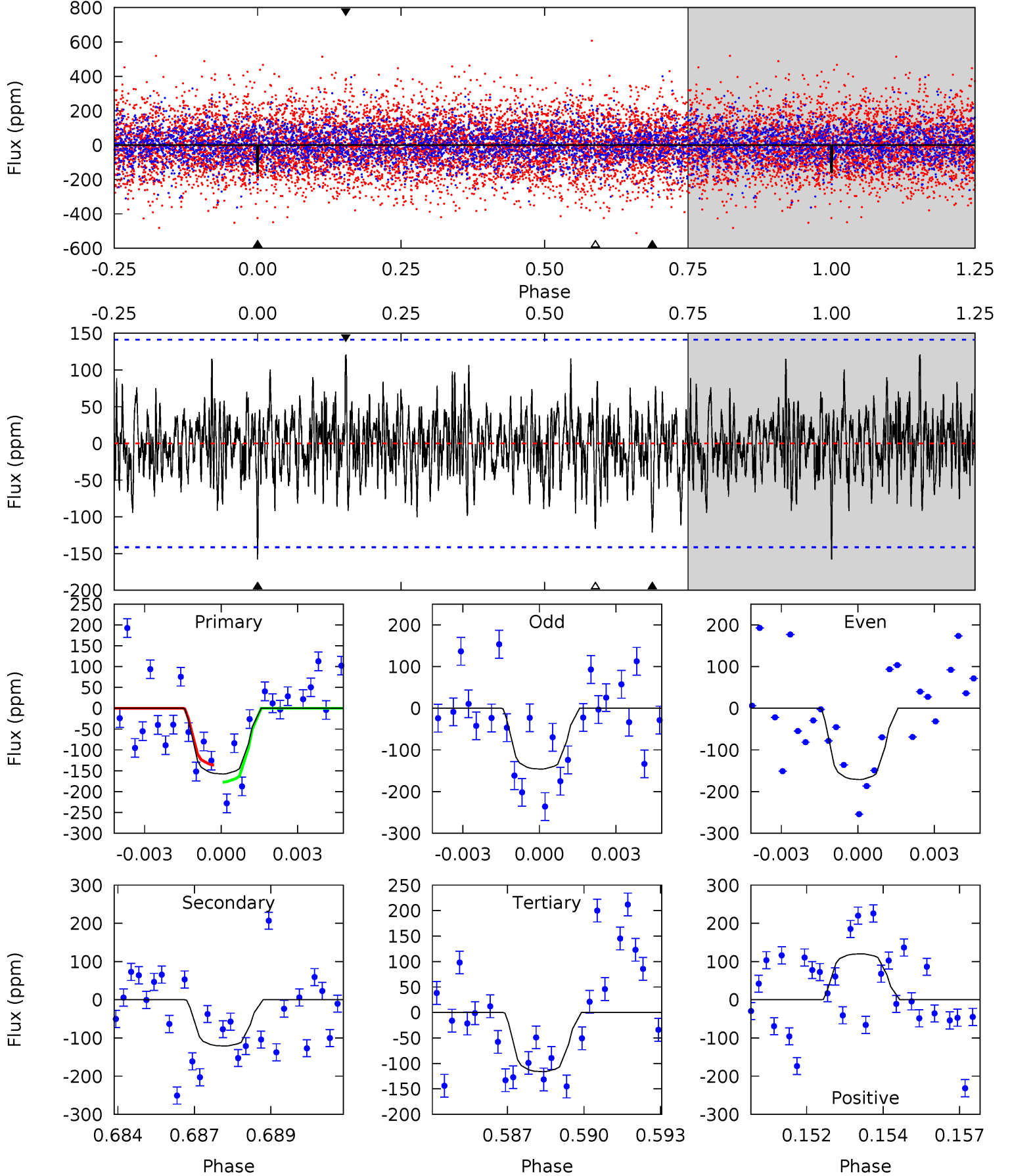
TCE 011569443-09 P= 44.318933 Days $T_0=149.205537$ (BKJD)



DV Model-Shift Uniqueness Test

011569443-09, P = 44.318975 Days, E = 104.885198 Days

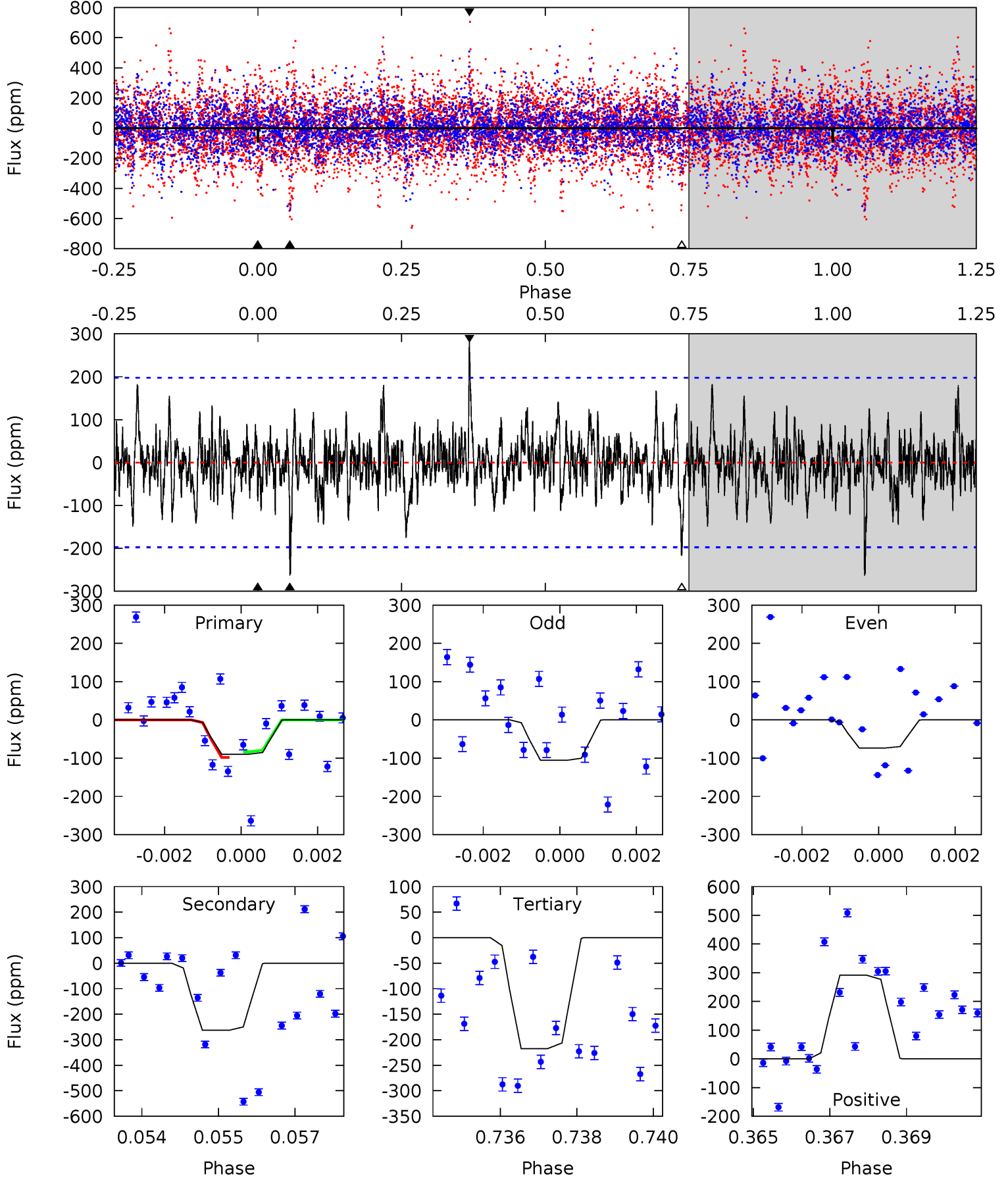
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.88	4.52	4.33	4.49	5.27	2.99	1.32	1.55	1.40	0.18	0.03	0.48	0.21	0.43	0.76



Alt Model-Shift Uniqueness Test

011569443-09, P = 44.318933 Days, E = 104.886604 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.43	7.12	5.88	7.89	5.34	3.11	1.42	-3.45	-5.46	1.24	-0.77	0.43	1.80	0.53	0.20



Stellar Parameters For KIC 011569443

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6685^{+187}_{-281}	$4.187^{+0.136}_{-0.204}$	$0.040^{+0.250}_{-0.350}$	$1.557^{+0.494}_{-0.329}$	$1.358^{+0.214}_{-0.235}$	$0.507^{+0.389}_{-0.251}$
	+3%/-4%	+3%/-5%	+625%/-875%	+32%/-21%	+16%/-17%	+77%/-50%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 011569443-09 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-121 ± 27	$3.83^{+3.43}_{-2.49}$	988^{+88}_{-65}	4734^{+3131}_{-994}	311^{+2197}_{-226}
Alt.	-263 ± 37	$3.63^{+3.27}_{-2.36}$	994^{+78}_{-75}	5863^{+5374}_{-1431}	794^{+6166}_{-580}

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 $A_{obs} \gg 1.0$

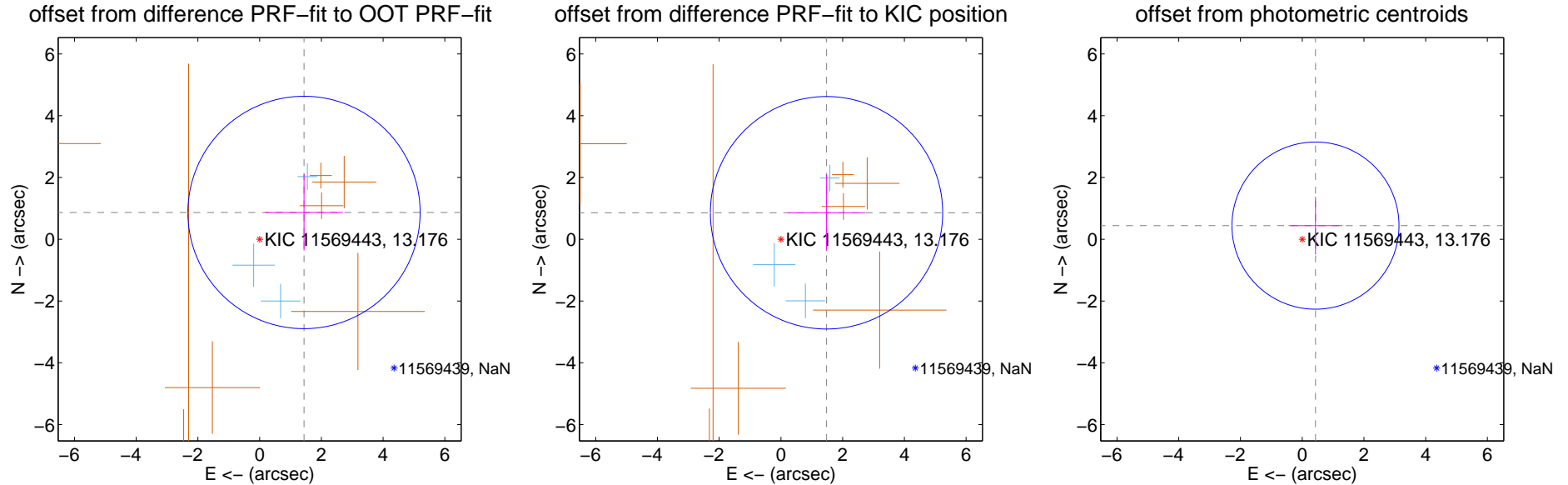
DV Centroid Data

Supplemental centroid analysis for 011569443-09. Kepler magnitude: 13.18. Transit SNR 8.12

There are 3 quarters with good PRF difference image offsets

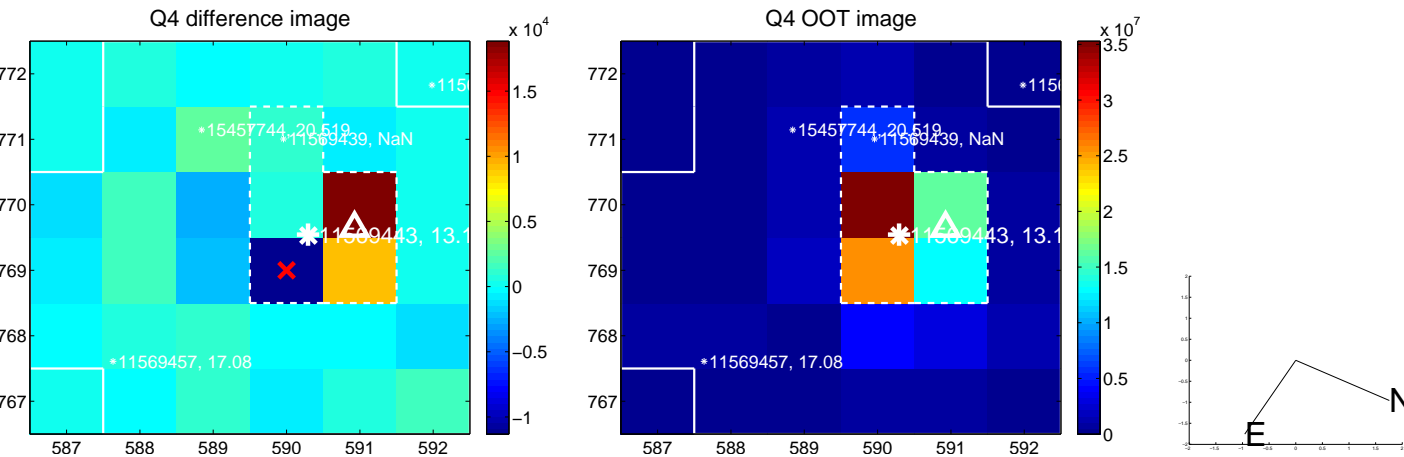
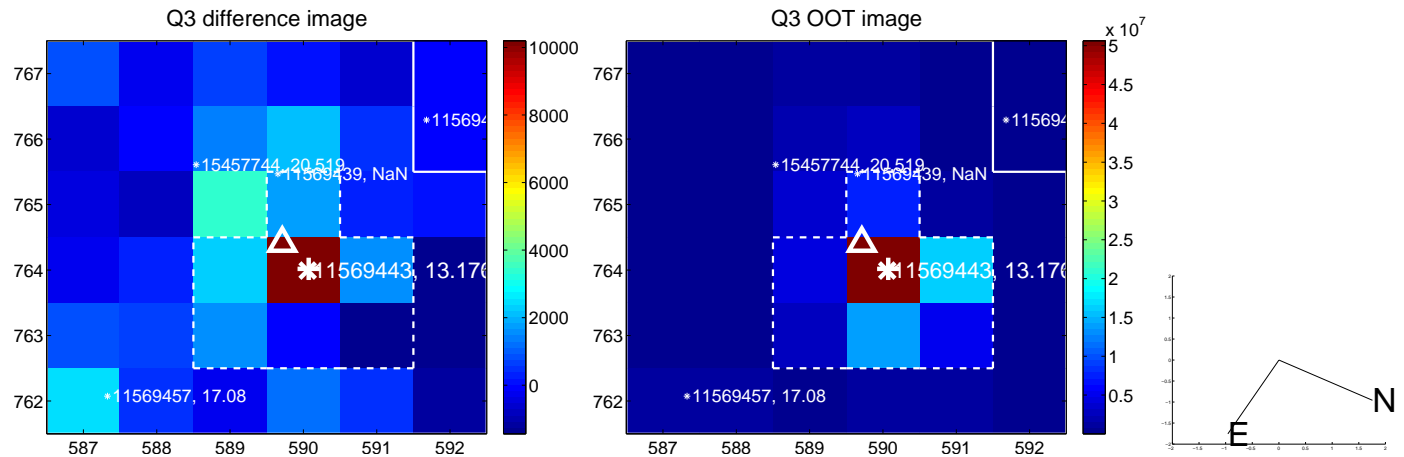
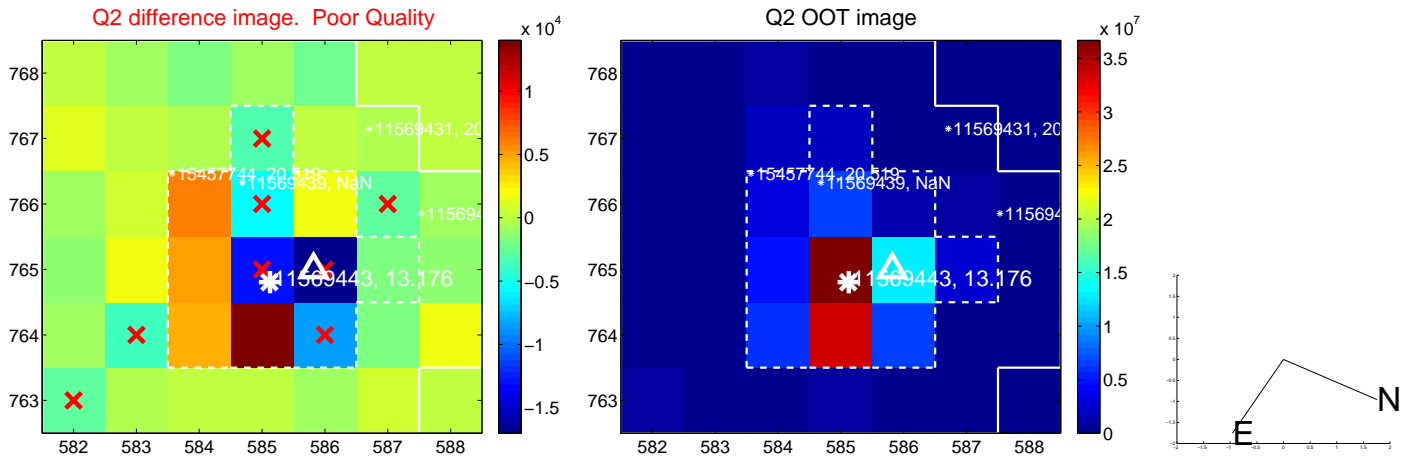
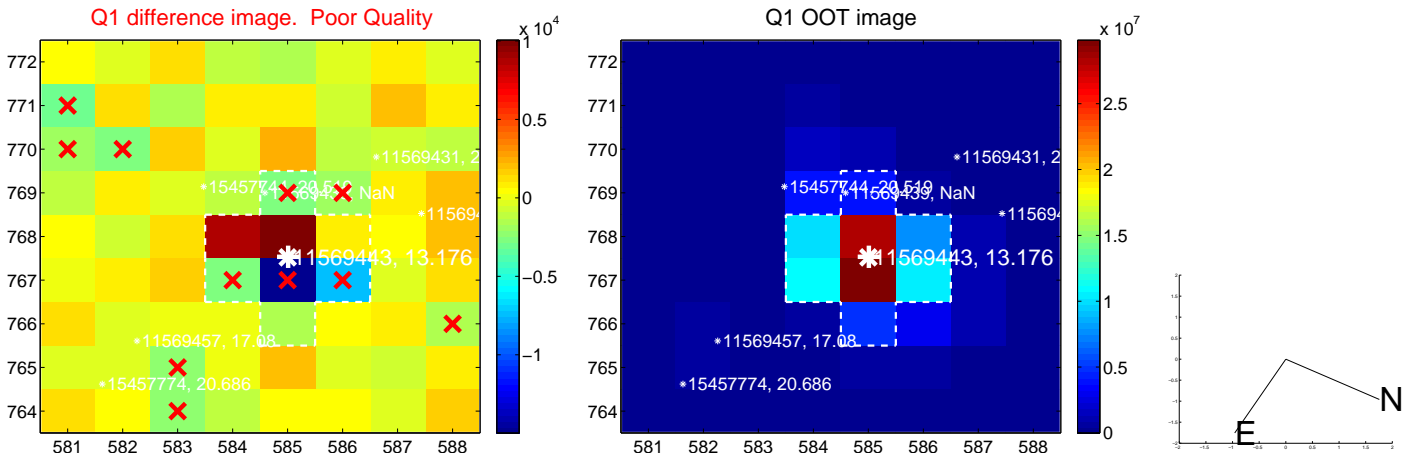
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.679 ± 1.254	1.34	-1.438 ± 1.261	0.867 ± 1.235
PRF-fit source offset from KIC position	1.708 ± 1.255	1.36	-1.478 ± 1.261	0.857 ± 1.235
photometric centroid source offset	0.62 ± 0.90	0.68	-0.43 ± 0.87	0.44 ± 0.93

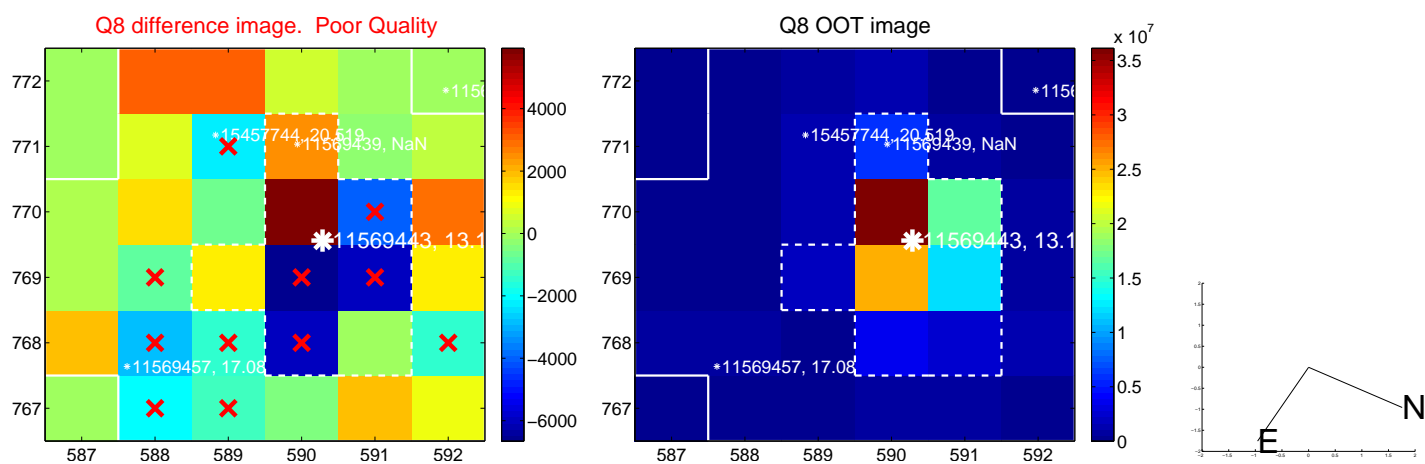
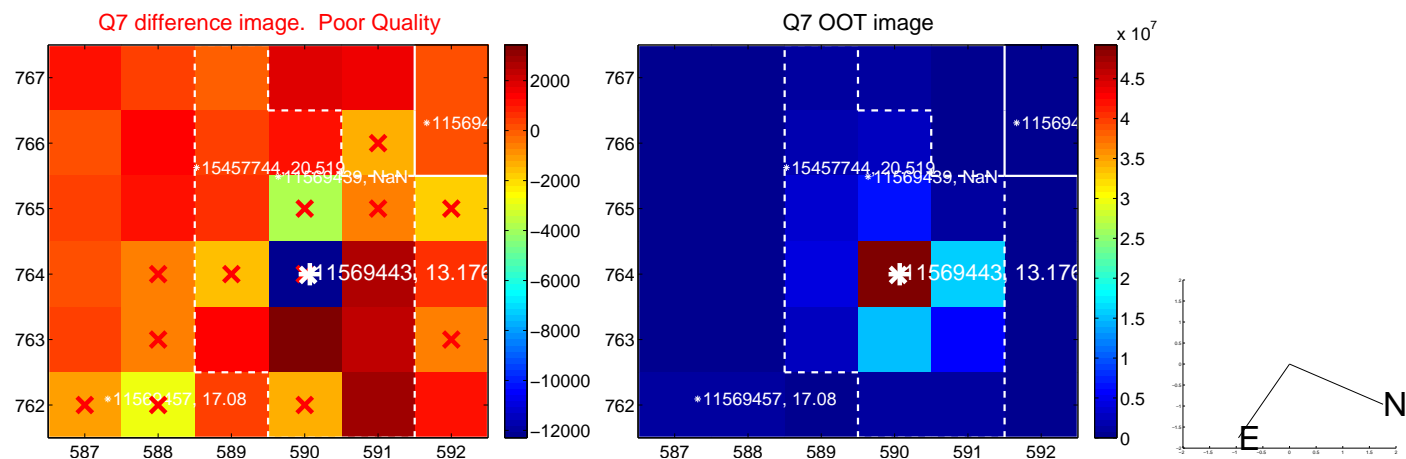
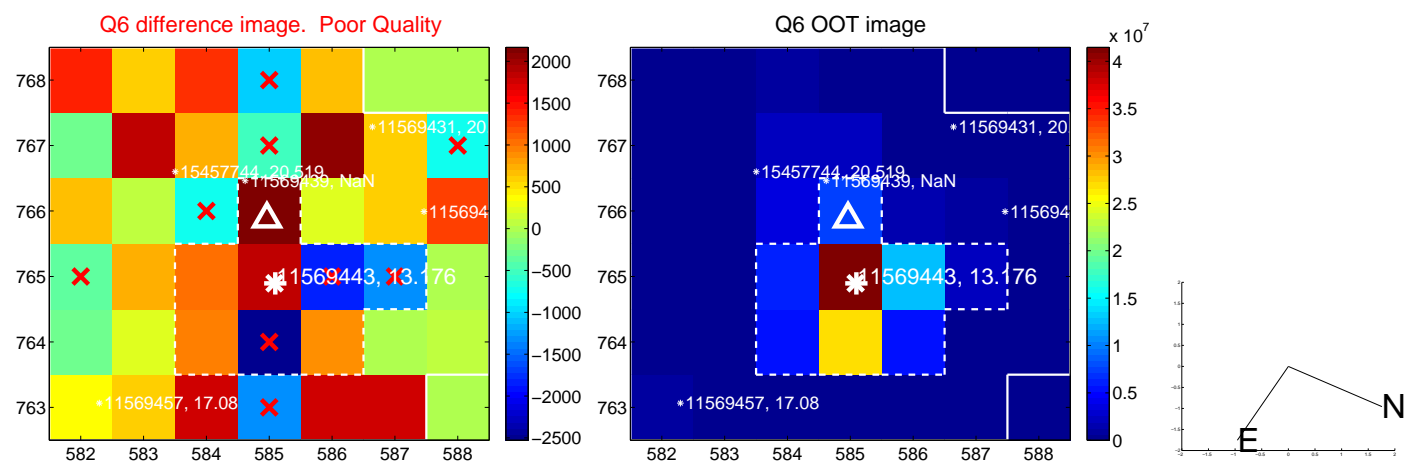
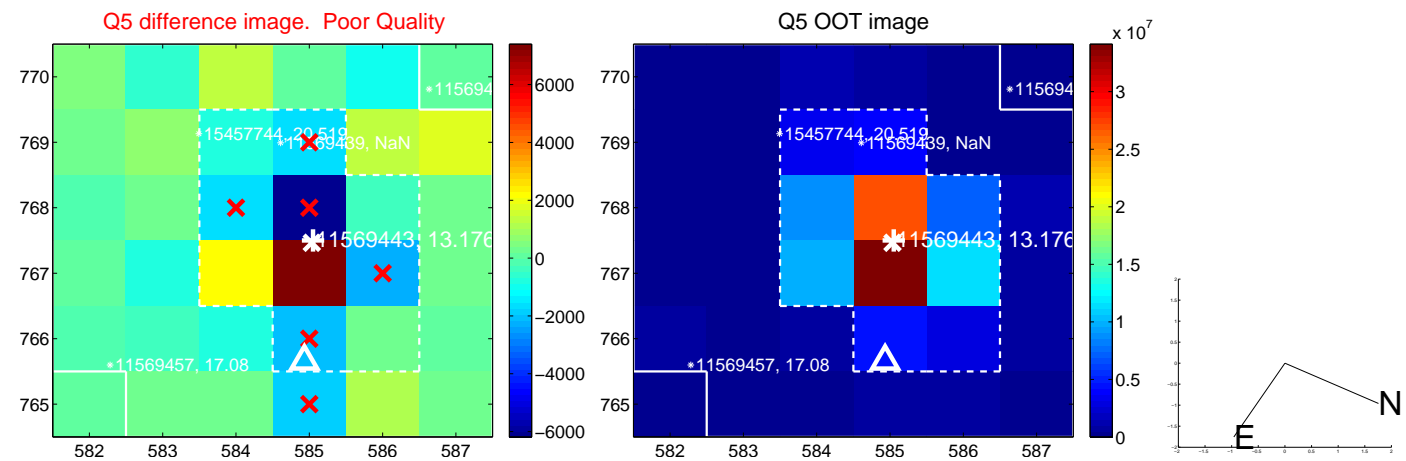


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

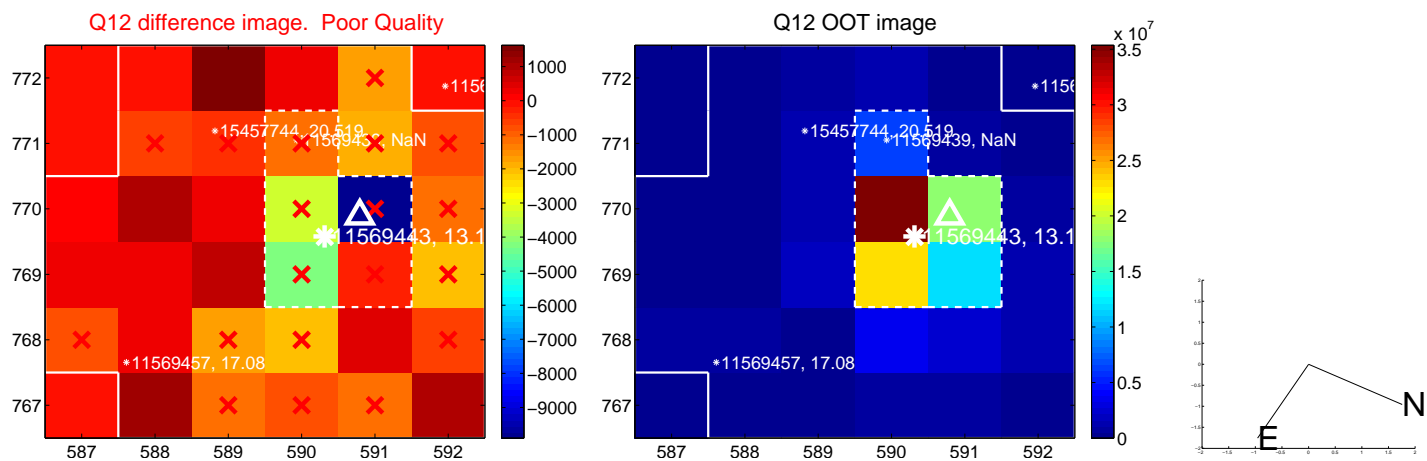
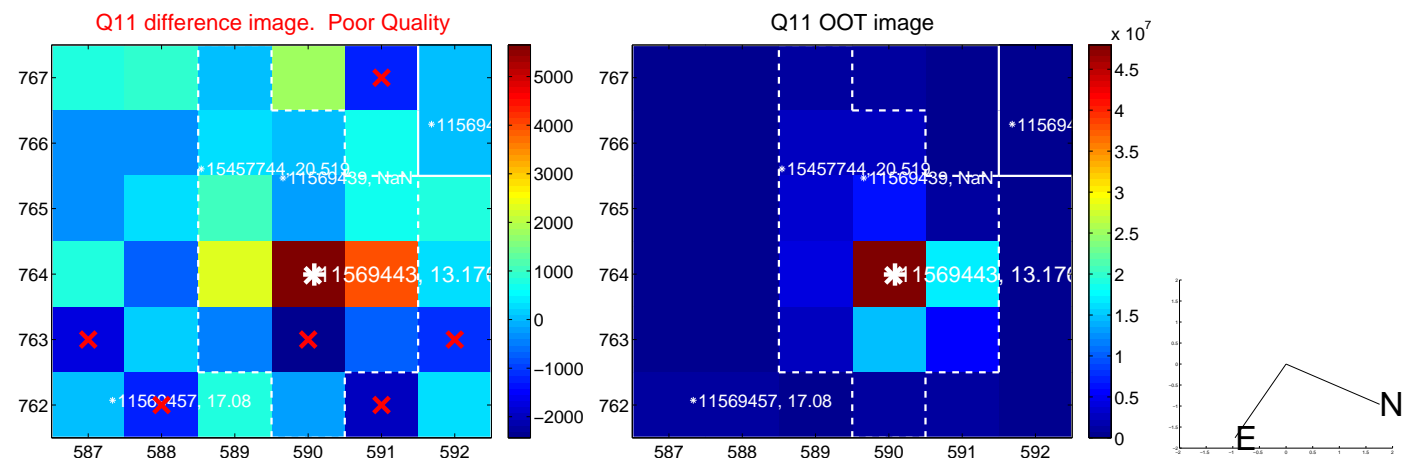
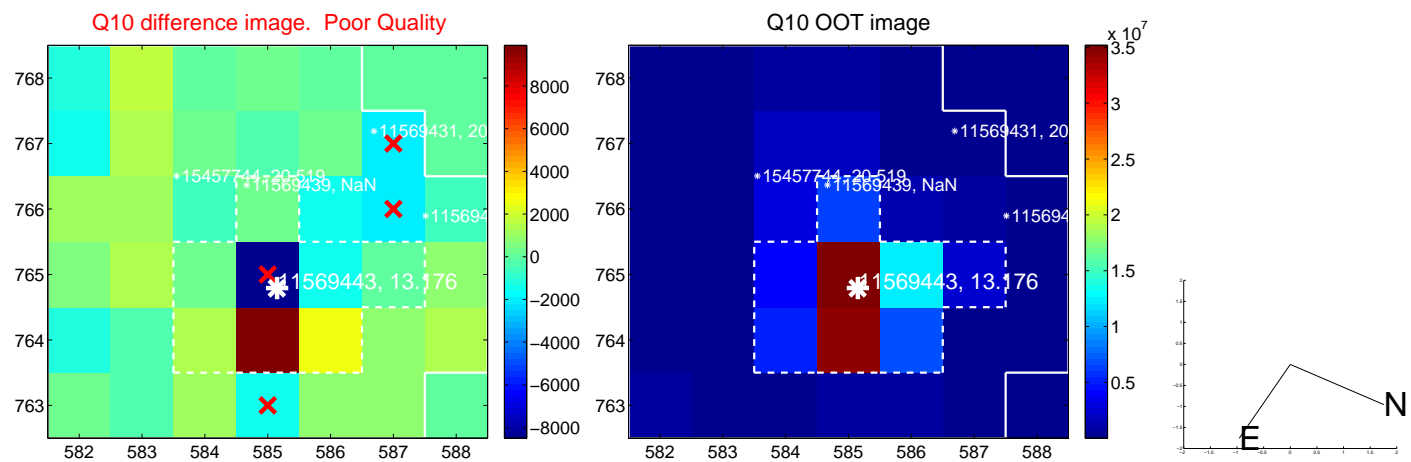
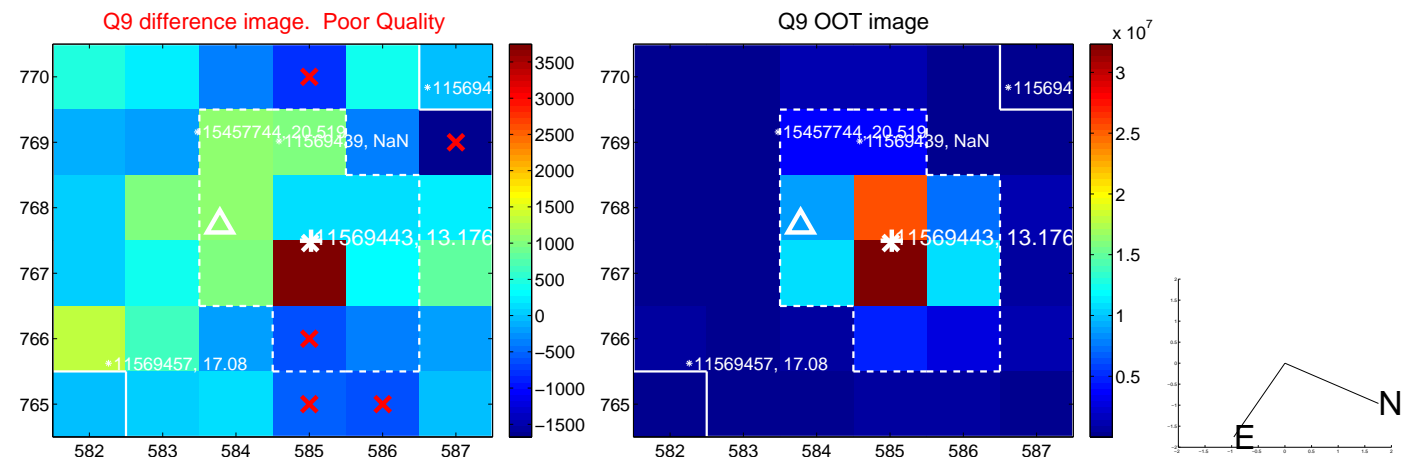
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



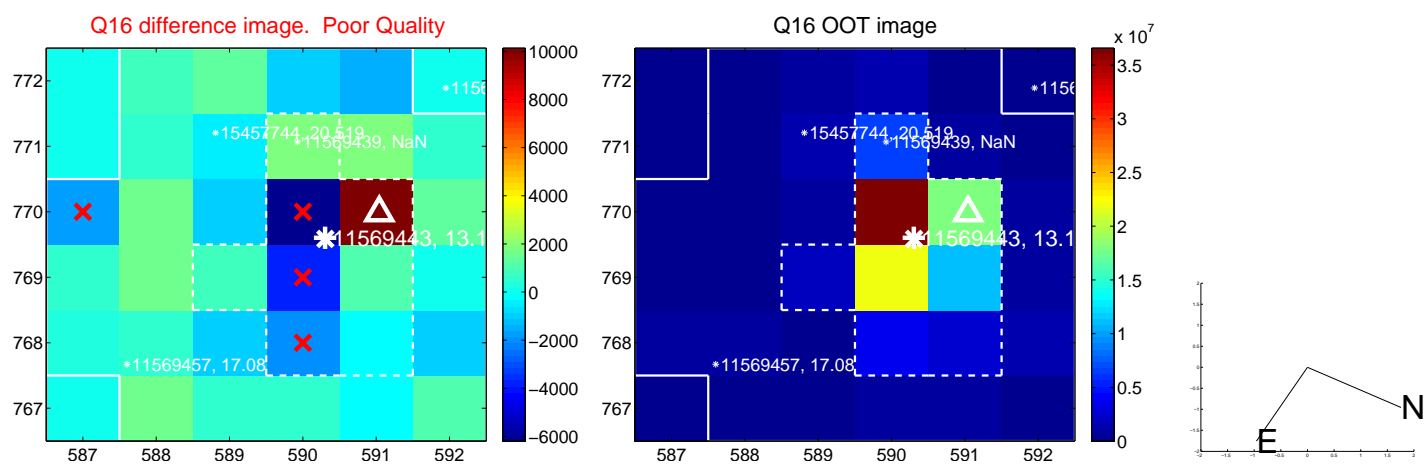
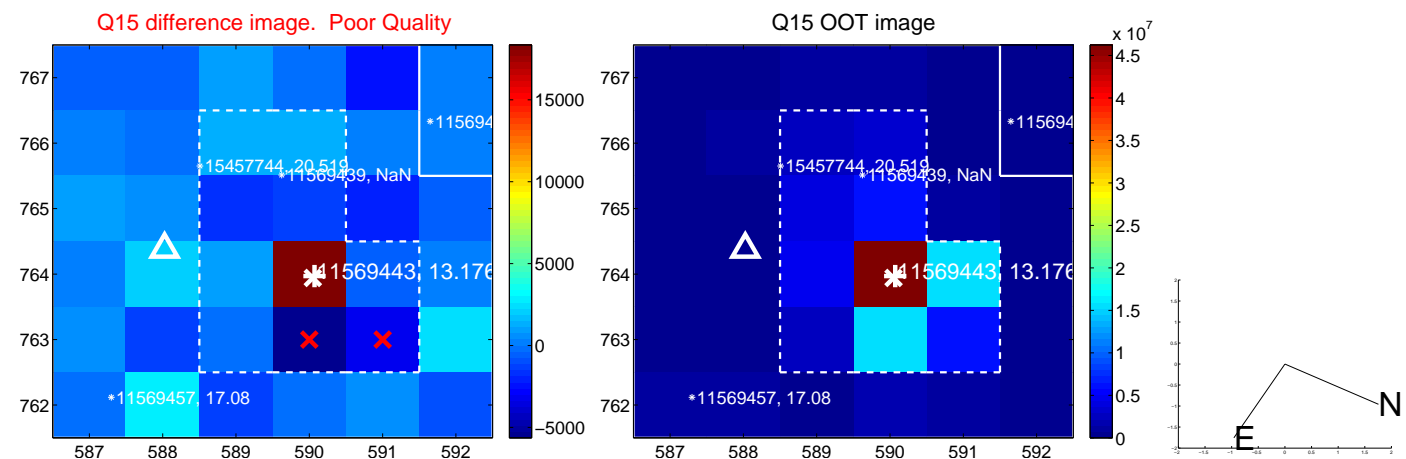
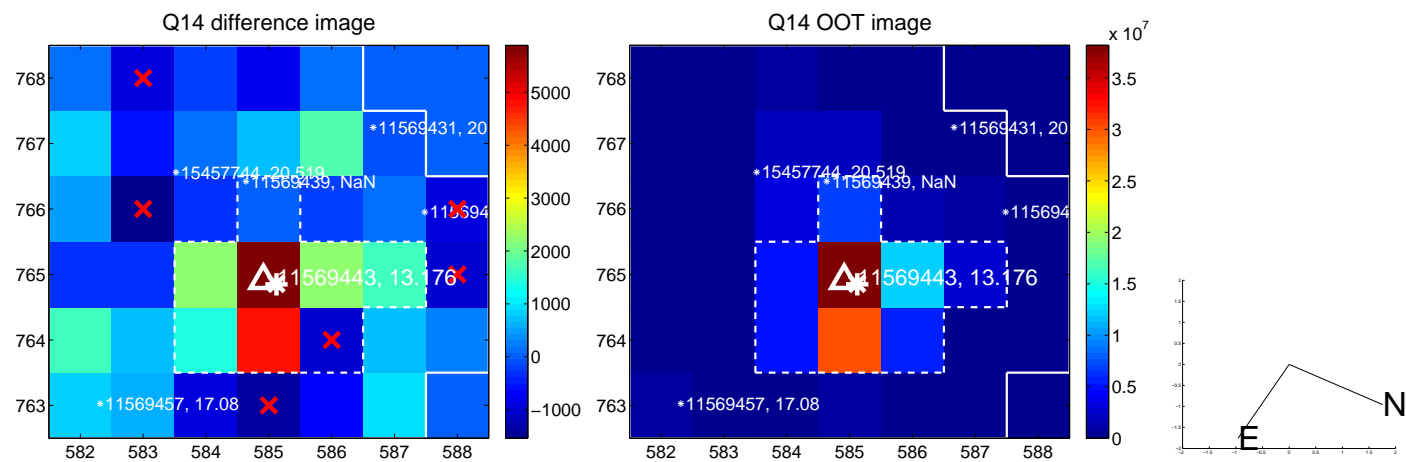
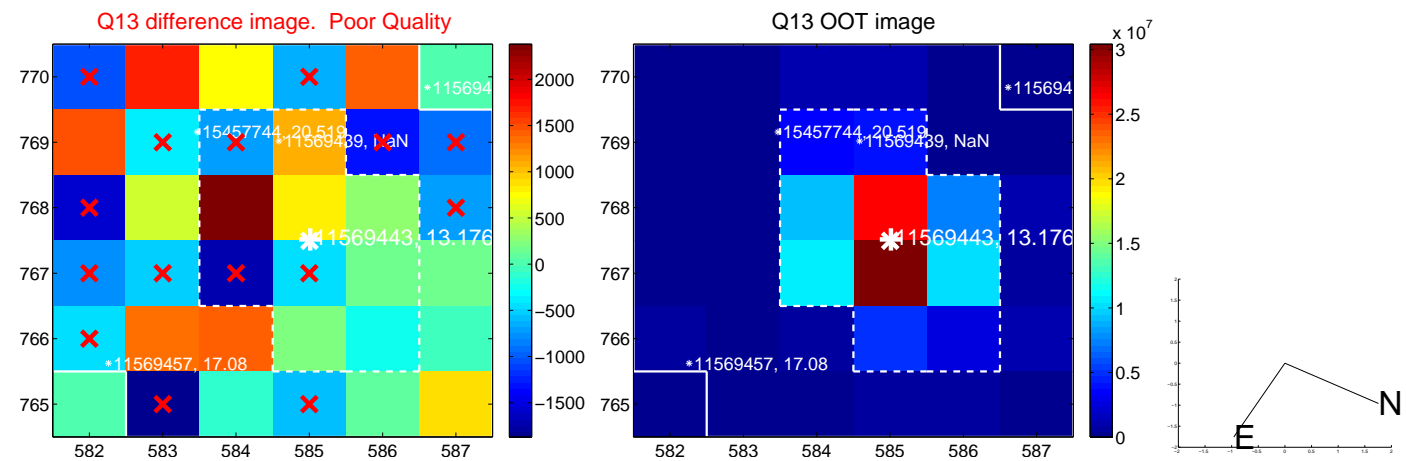
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



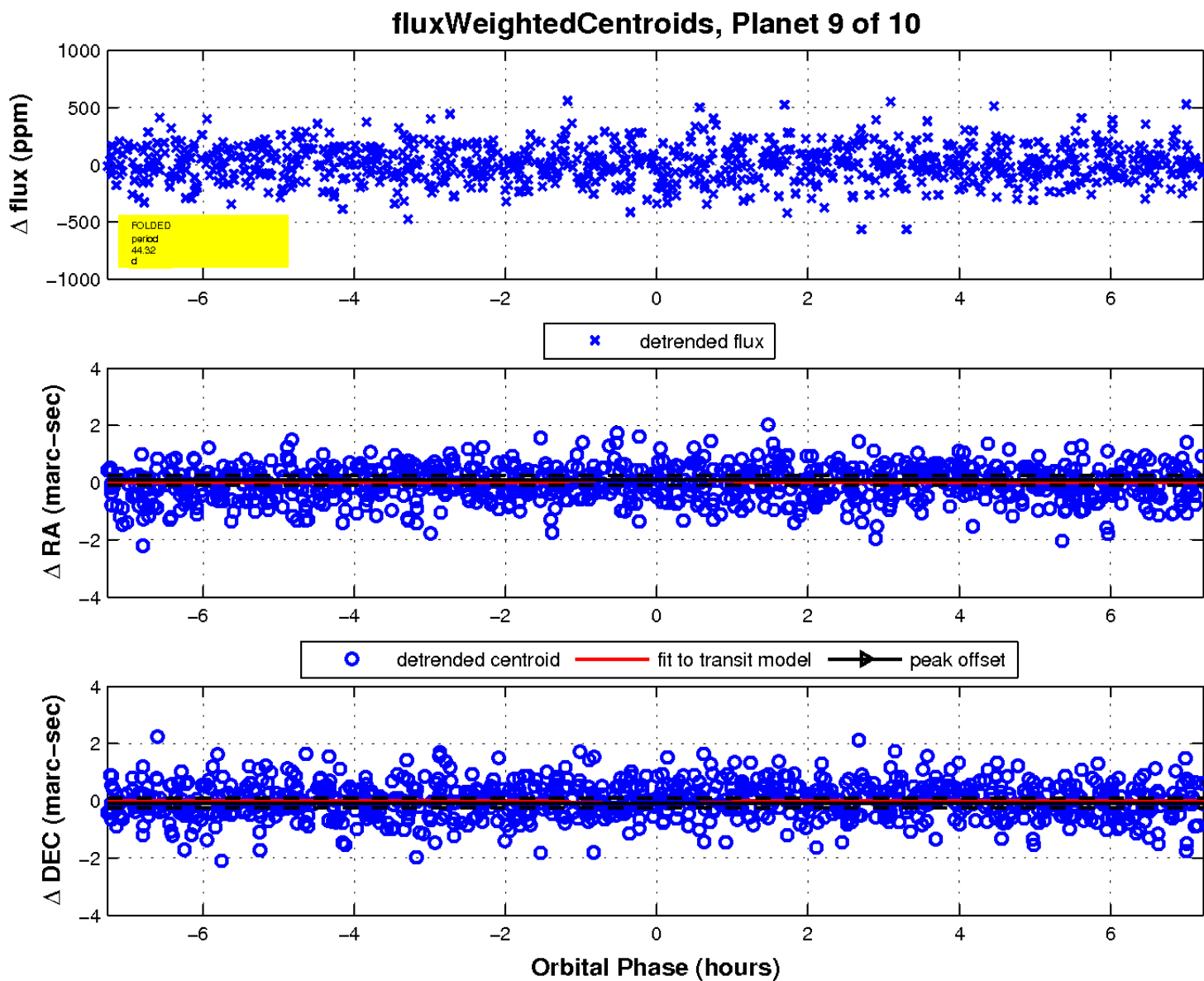
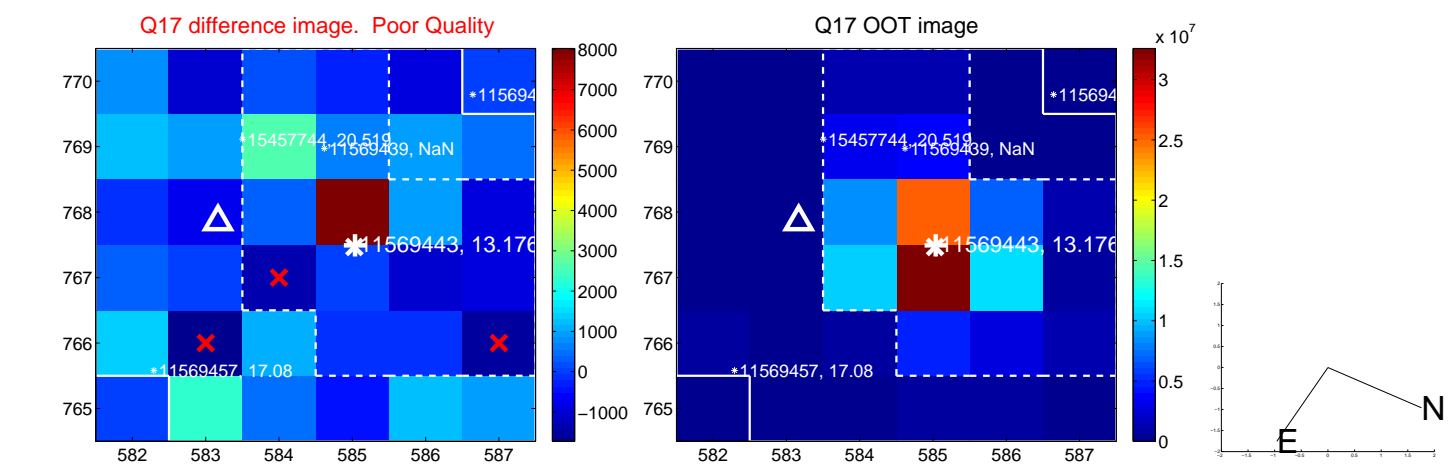
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

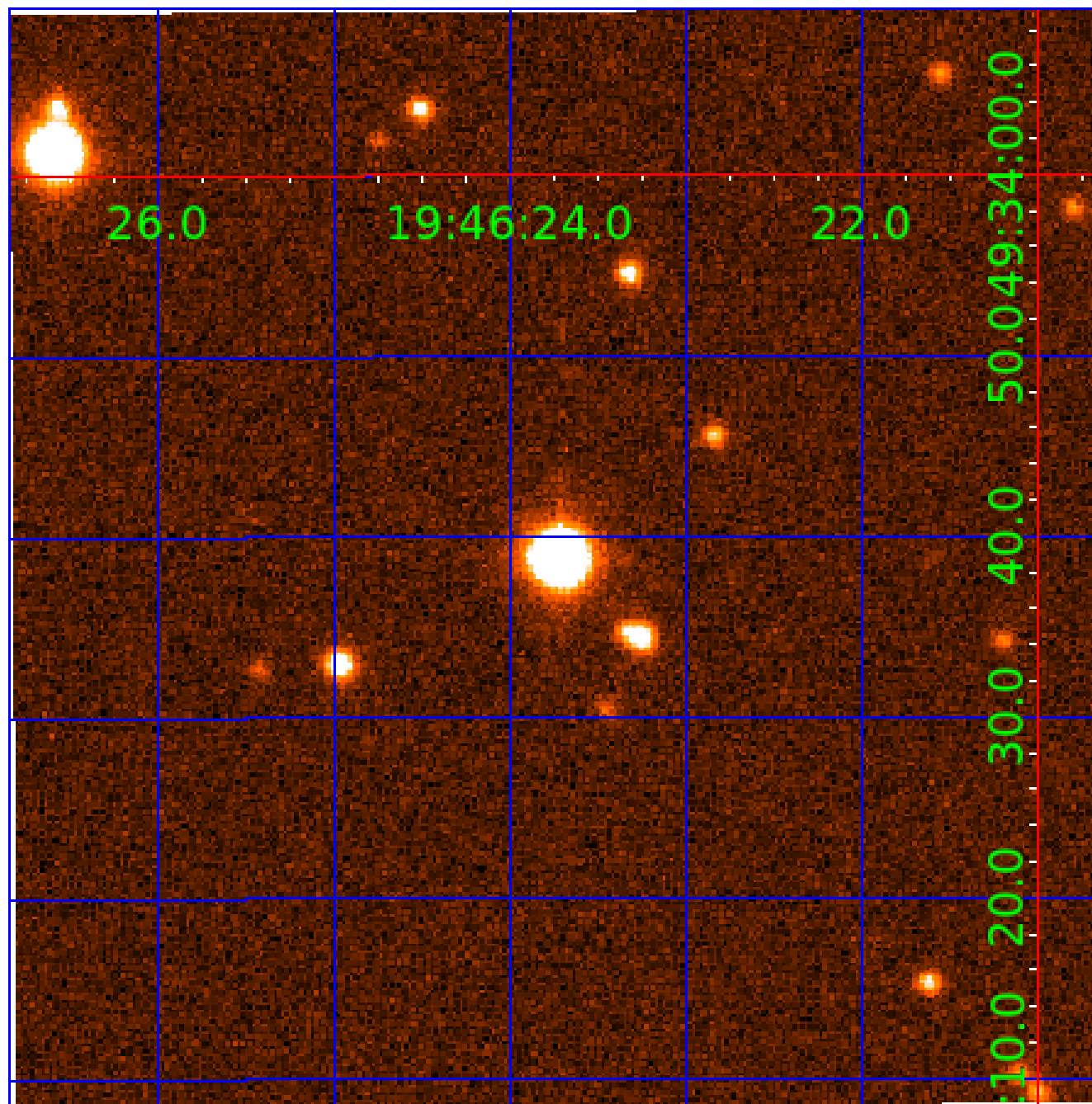


white \times : KIC target position; $+$: OOT centroid; Δ : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



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})
011569443-01	OBS	No	2.344129	132.983449	25.4	15.857	8.1	8.4	1.56	6685	0.92	2961.54
011569443-02	OBS	No	412.469578	146.020096	168.6	8.779	10.2	8.4	1.56	6685	2.21	3.00
011569443-03	OBS	No	72.987289	157.607486	270.7	2.219	9.4	10.5	1.56	6685	3.28	30.23
011569443-04	OBS	No	32.077750	145.382778	159.8	4.570	9.1	9.2	1.56	6685	2.15	90.48
011569443-05	OBS	No	40.558747	133.378934	266.8	1.247	8.6	9.0	1.56	6685	2.59	66.18
011569443-06	OBS	No	74.686409	184.106204	190.2	6.743	8.7	9.4	1.56	6685	2.36	29.32
011569443-07	OBS	No	41.646178	159.524234	203.5	2.180	8.0	8.8	1.56	6685	2.64	63.88
011569443-08	OBS	No	104.678723	217.862789	306.0	1.405	8.2	7.6	1.56	6685	3.19	18.69
011569443-09	OBS	No	44.318975	149.204173	184.9	2.422	7.8	8.1	1.56	6685	2.45	58.80
011569443-10	OBS	No	281.444595	187.802605	249.5	12.521	9.4	11.2	1.56	6685	2.77	5.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011569443-01	OBS	FP	0.00	1	0	0	0	LPP_DV
011569443-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
011569443-03	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
011569443-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011569443-05	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_FEW_DIFFS—HALO_GHOST
011569443-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
011569443-07	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011569443-08	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_MEAS
011569443-09	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011569443-10	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS—HALO_GHOST

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

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

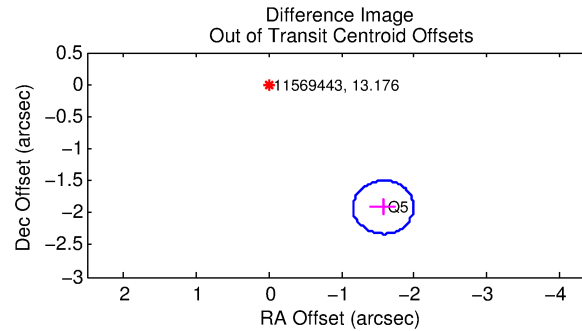
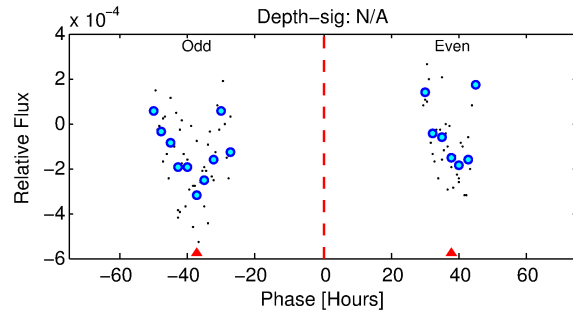
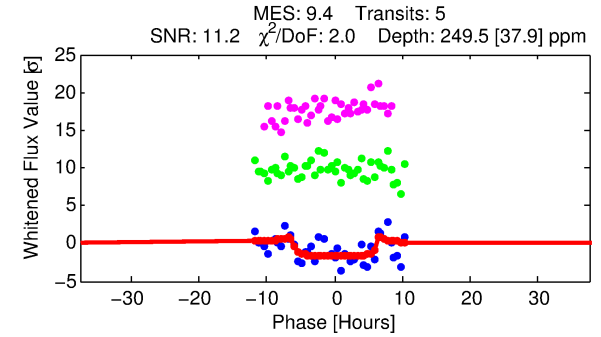
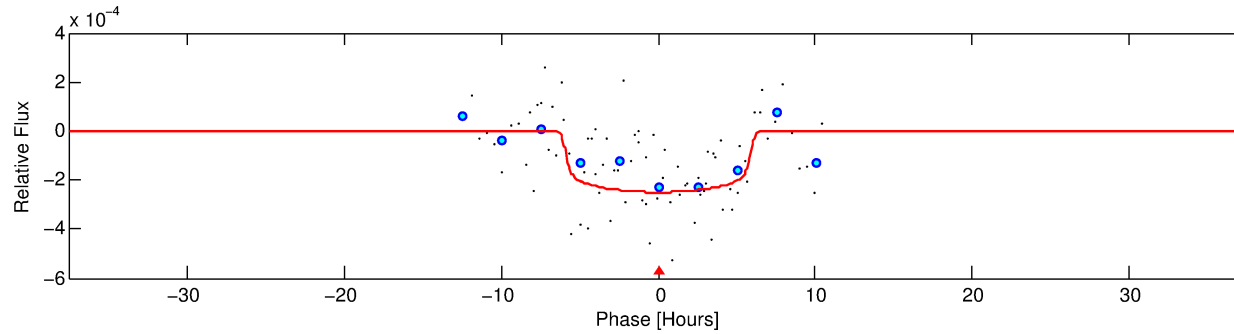
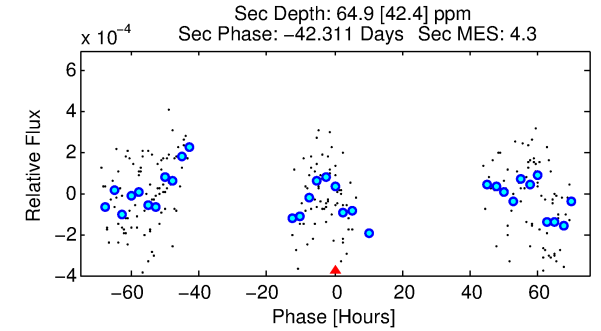
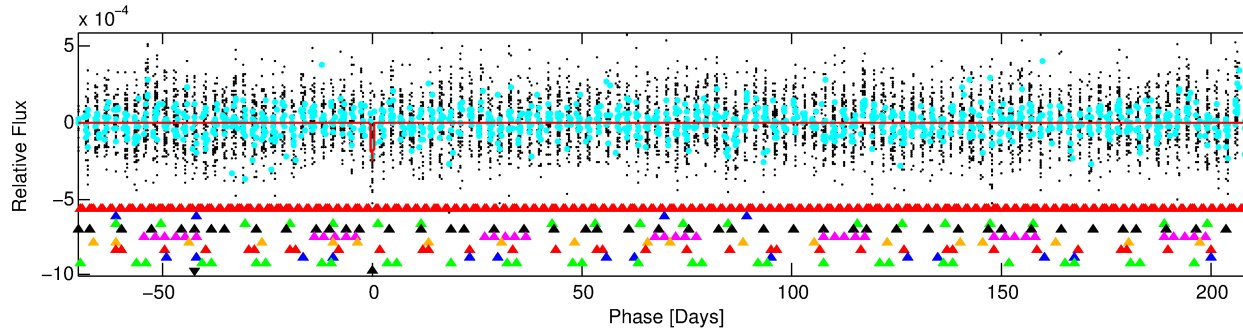
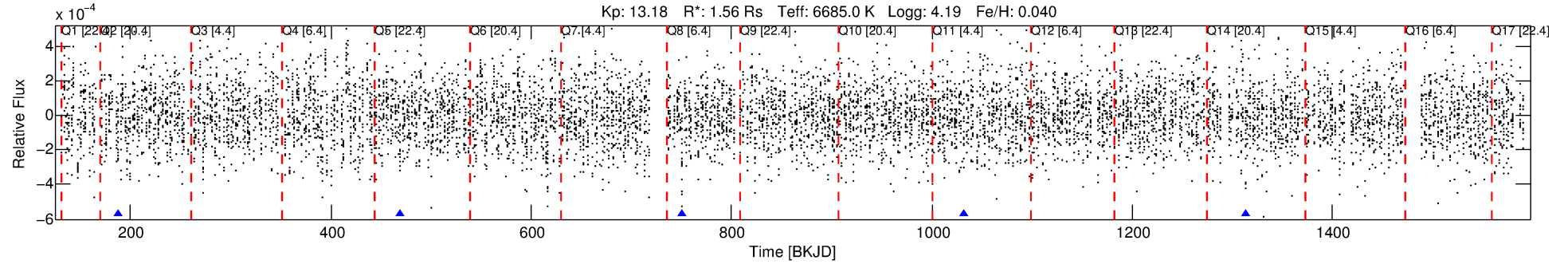
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011569443-10

No Significant Match Found

DV One-Page Summary

KIC: 11569443 Candidate: 10 of 10 Period: 281.445 d



DV Fit Results:

Period = 281.44460 [0.02672] d
Epoch = 187.8026 [0.0591] BKJD
Rp/R* = 0.0163 [0.0036]
a/R* = 96.90 [112.40]
b = 0.85 [0.36]
Seff = 5.00 [2.07]
Teq = 381 [39] K
Rp = 2.77 [1.07] Re
a = 0.9314 [0.2451] AU
Ag = 4035.53 [3533.83] [1.14σ]
Teffp = 4699 [949] K [4.55σ]

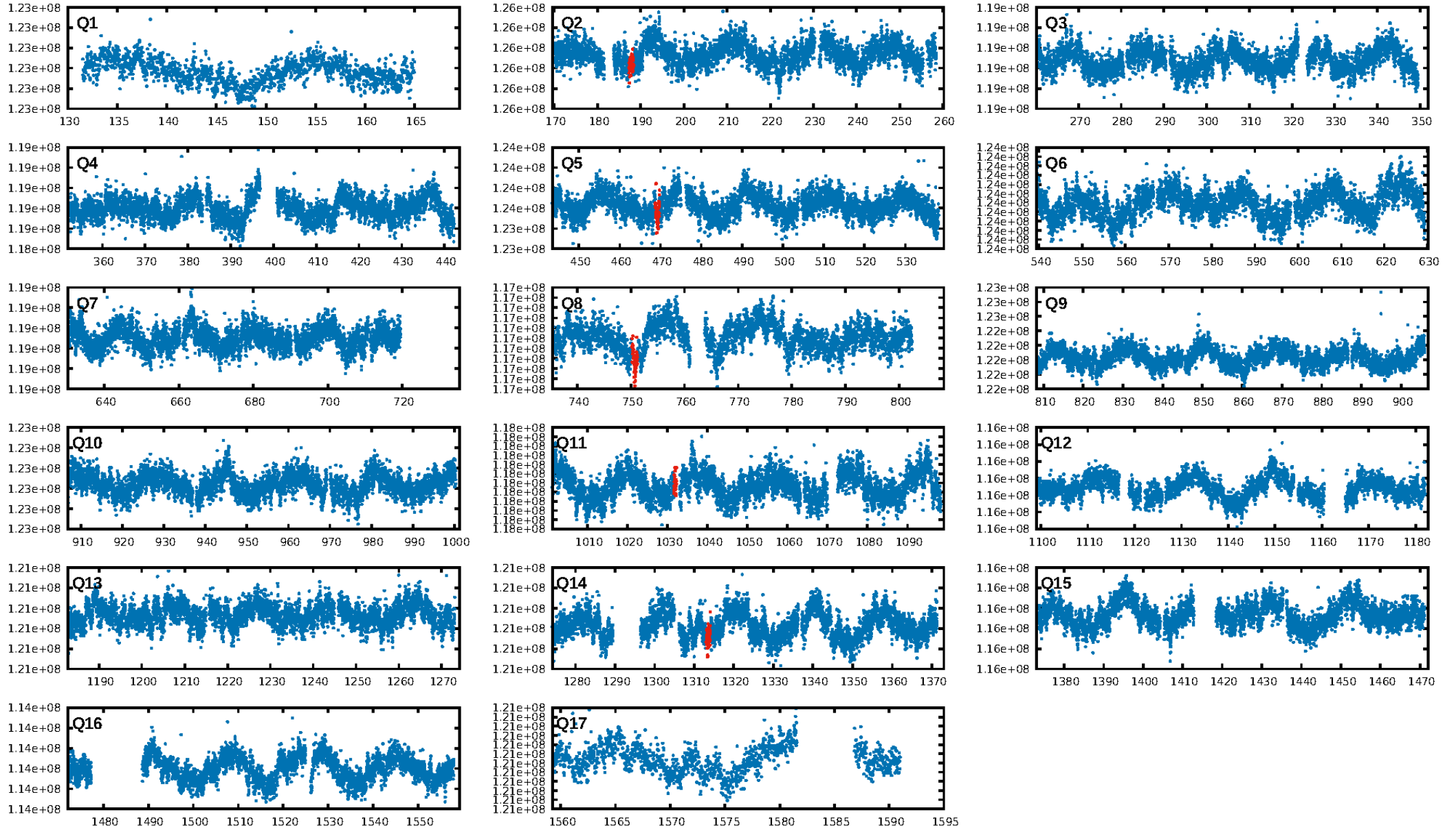
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [336.70σ]
LongPeriod-sig: 100.0% [205.63σ]
ModelChiSquare2-sig: 3.0%
ModelChiSquareGof-sig: 99.8%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: -0.0917
Centroid-sig: 20.2%
Centroid-so: 1.058 arcsec [1.14σ]
OotOffset-rm: 2.478 arcsec [17.86σ]
KicOffset-rm: 2.585 arcsec [18.38σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 0.00 [0/4]

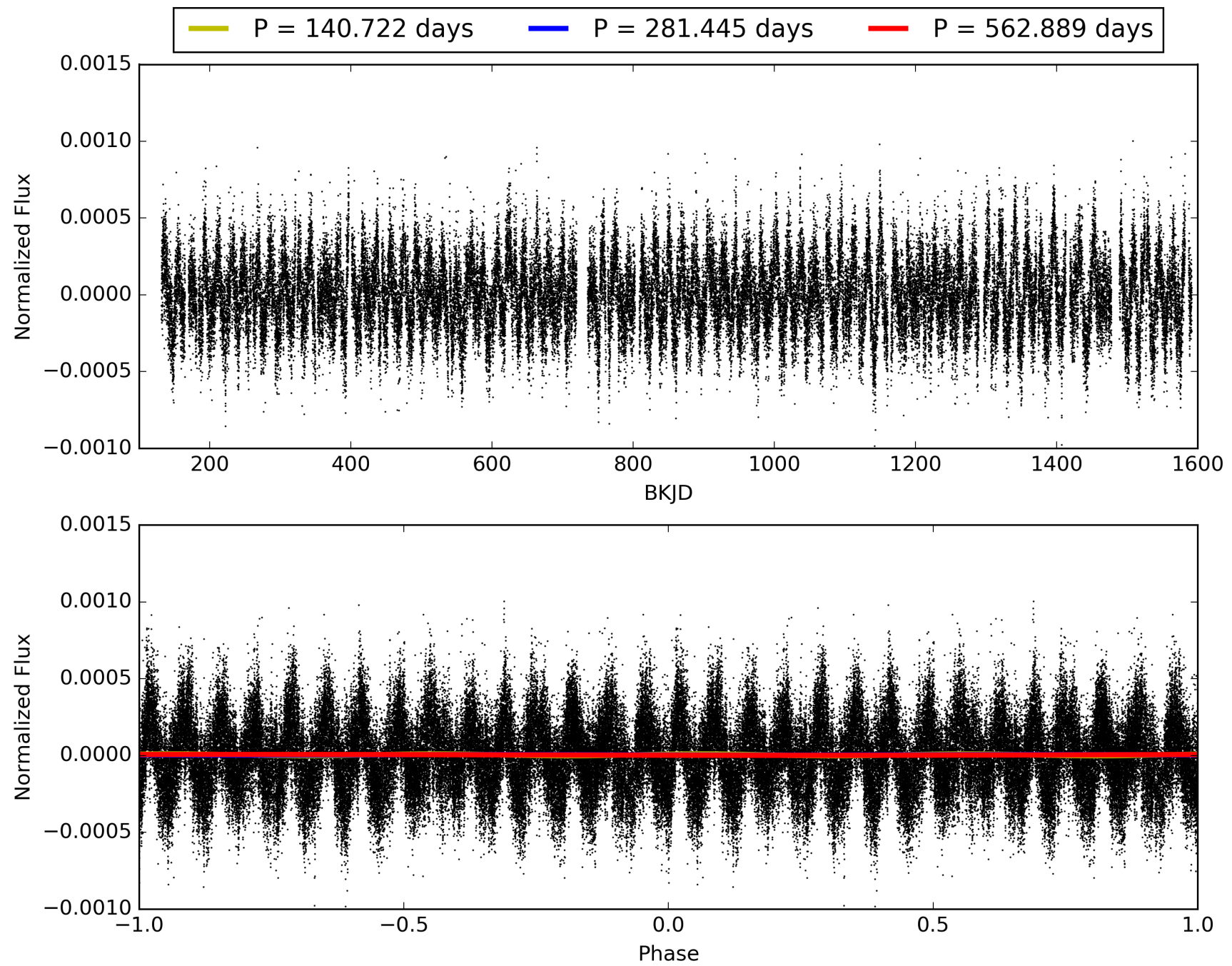
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:26:02 Z

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

TCE 011569443-10, PDC Light Curves

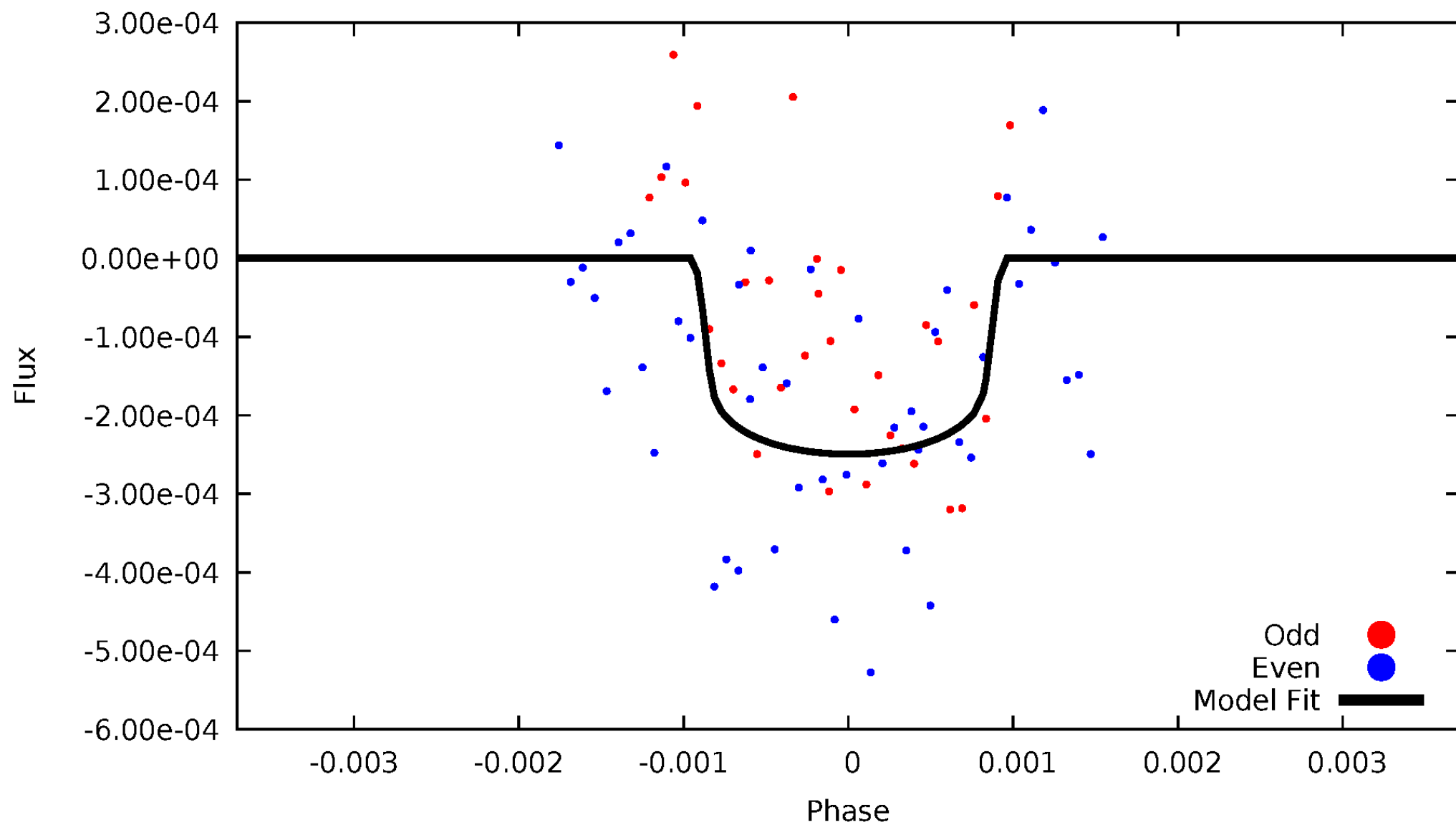


TCE 011569443-10



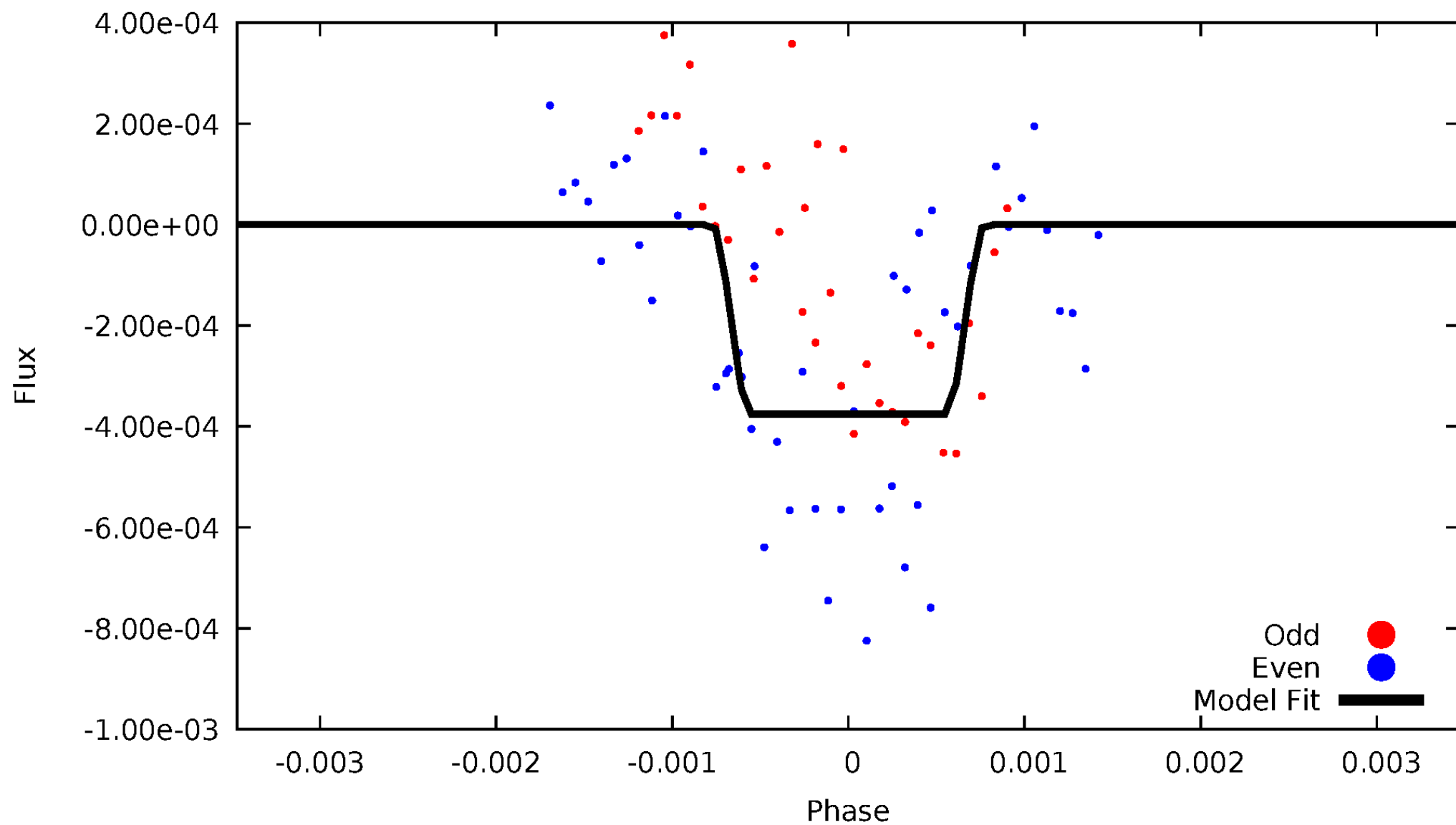
DV Odd/Even

TCE 011569443-10



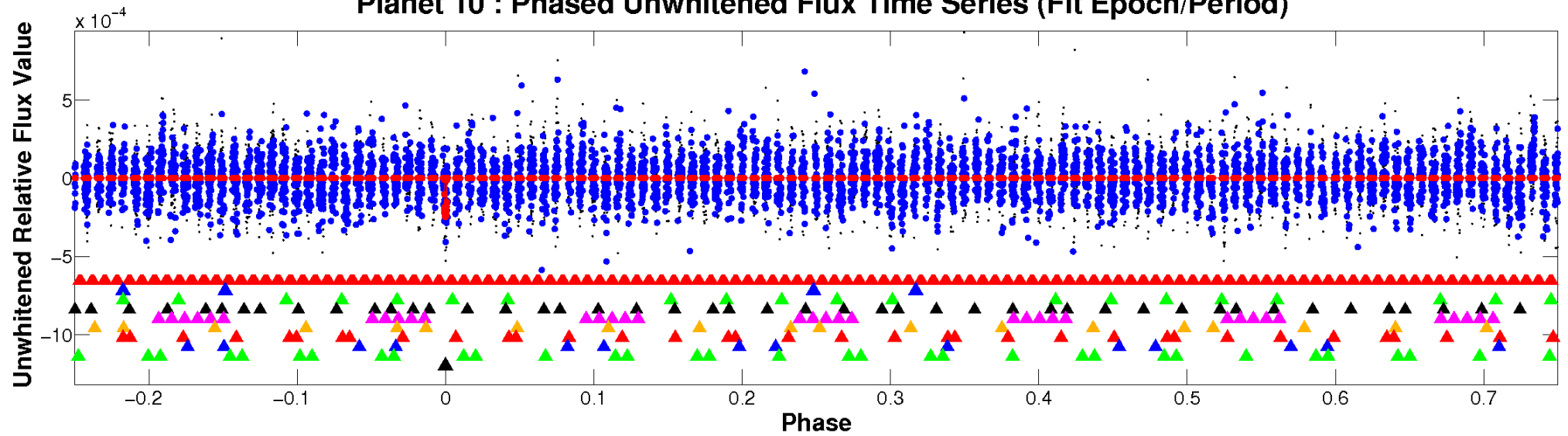
ALT Odd/Even

TCE 011569443-10

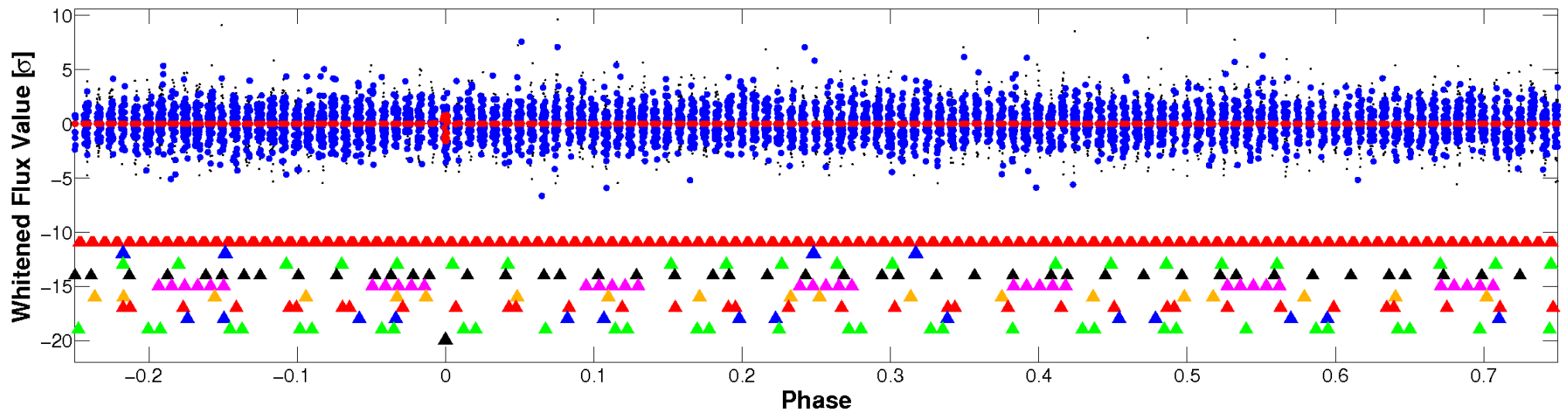


Non-Whitened Vs. Whitened Light Curve

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



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



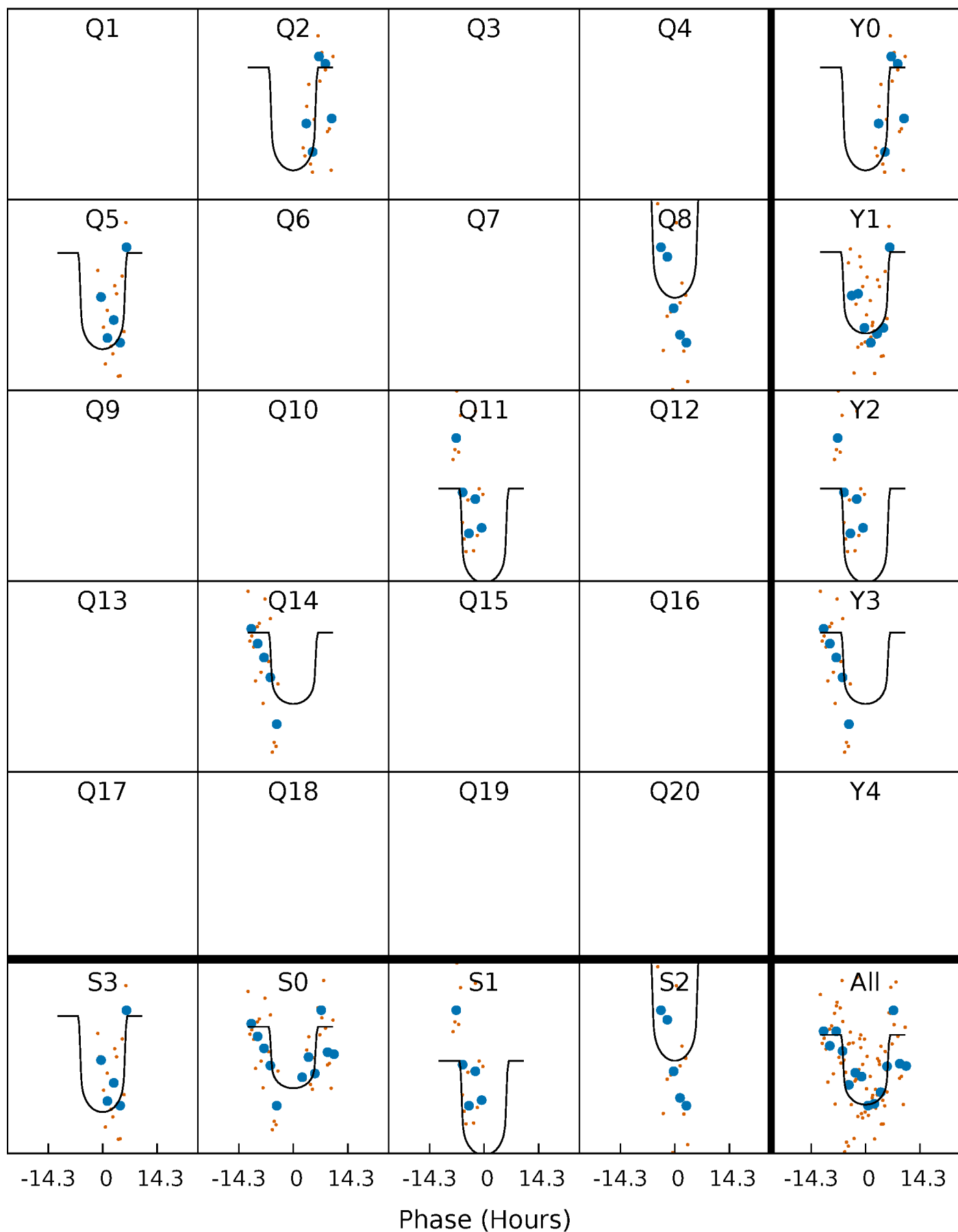
PDC Quarter-Phased Transit Curves

TCE 011569443-10 $P=281.444595$ Days $T_0=187.802605$ (BKJD)



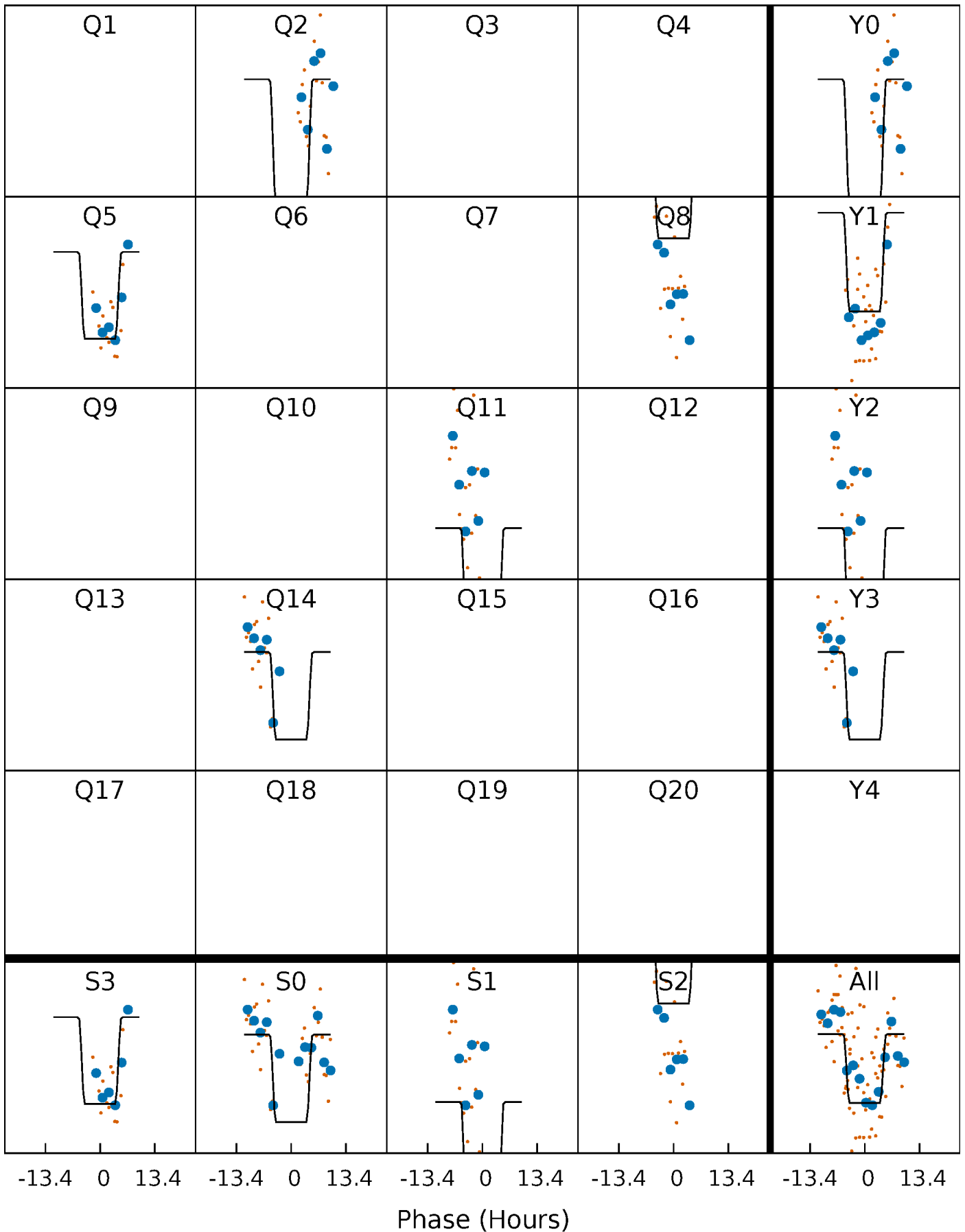
DV Quarter-Phased Transit Curves

TCE 011569443-10 $P=281.444595$ Days $T_0=187.802605$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

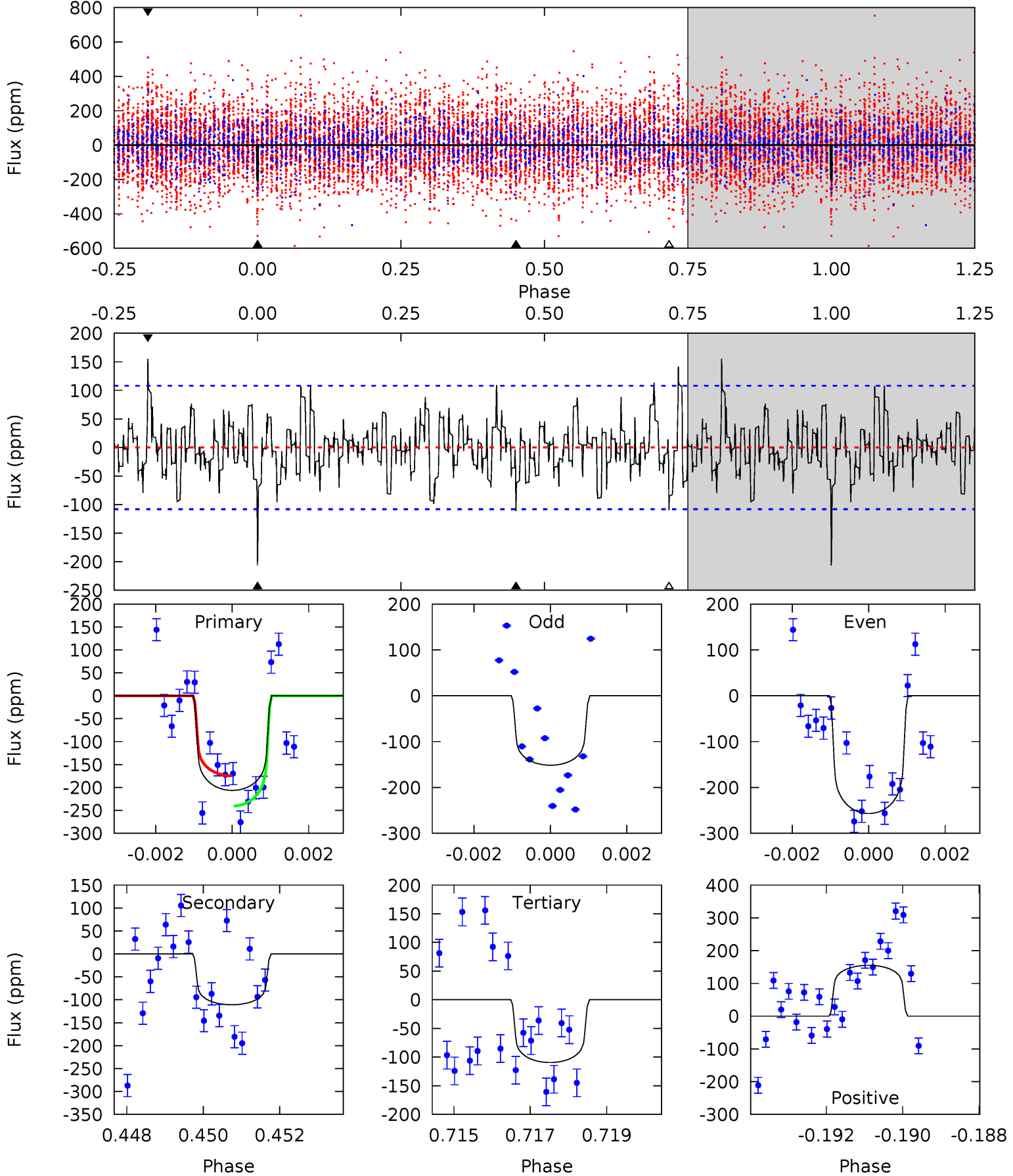
TCE 011569443-10 P=281.431422 Days $T_0=187.837679$ (BKJD)



DV Model-Shift Uniqueness Test

011569443-10, P = 281.444595 Days, E = 187.802605 Days

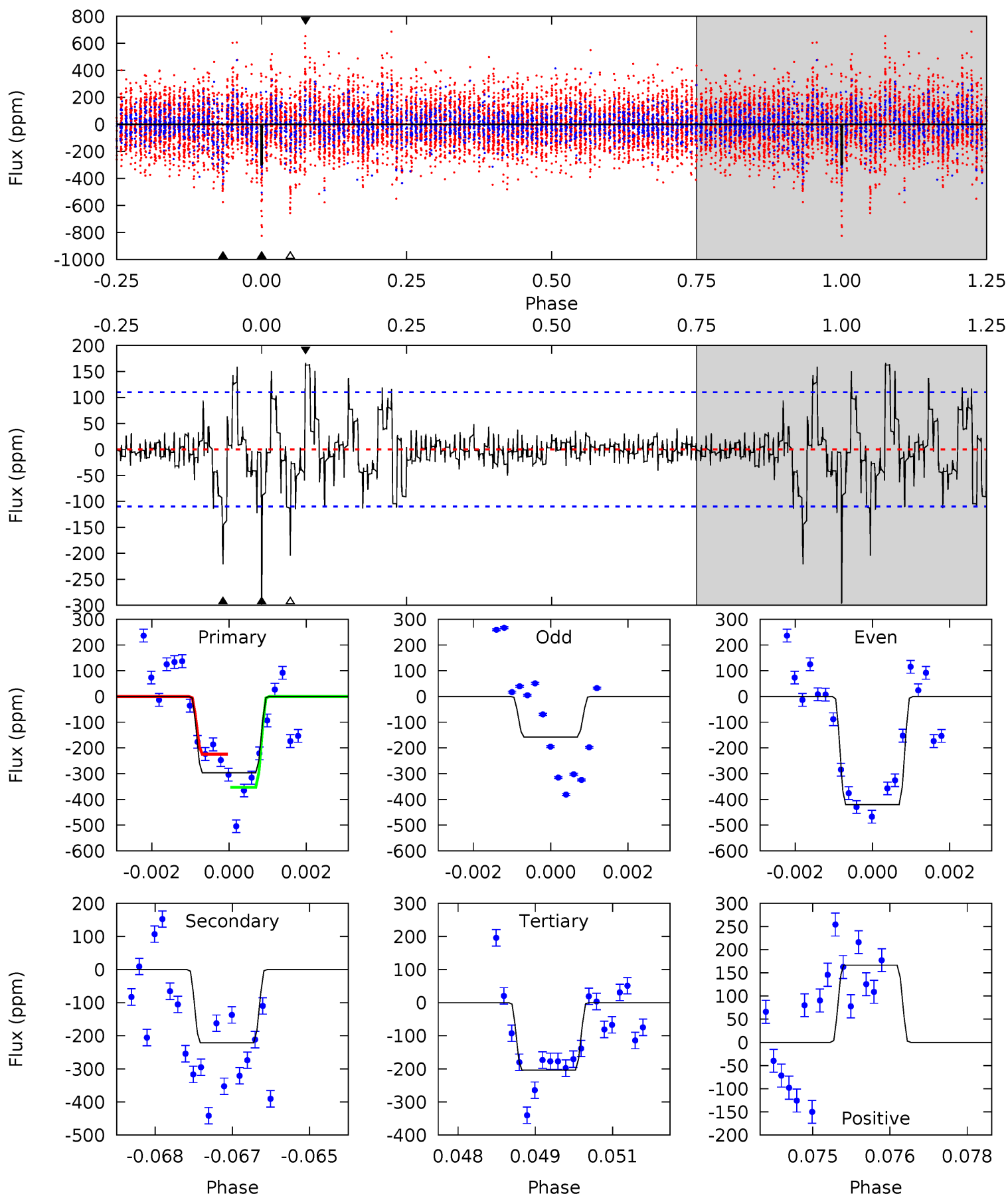
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.2	5.48	5.41	7.66	5.34	3.11	1.93	4.79	2.53	0.07	-2.18	2.61	1.15	0.43	1.63



Alt Model-Shift Uniqueness Test

011569443-10, P = 281.431422 Days, E = 187.837679 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.5	10.8	9.97	8.14	5.37	3.16	2.04	4.52	6.35	0.82	2.65	6.37	0.95	0.36	3.09



Stellar Parameters For KIC 011569443

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6685^{+187}_{-281}	$4.187^{+0.136}_{-0.204}$	$0.040^{+0.250}_{-0.350}$	$1.557^{+0.494}_{-0.329}$	$1.358^{+0.214}_{-0.235}$	$0.507^{+0.389}_{-0.251}$
	+3%/-4%	+3%/-5%	+625%/-875%	+32%/-21%	+16%/-17%	+77%/-50%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 011569443-10 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-111 ± 20	$2.79^{+0.87}_{-0.67}$	537^{+44}_{-36}	5352^{+821}_{-517}	6552^{+5236}_{-2956}
Alt.	-221 ± 20	$3.35^{+0.77}_{-0.73}$	536^{+45}_{-37}	5840^{+707}_{-494}	9360^{+5762}_{-3162}

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 $A_{obs} \gg 1.0$

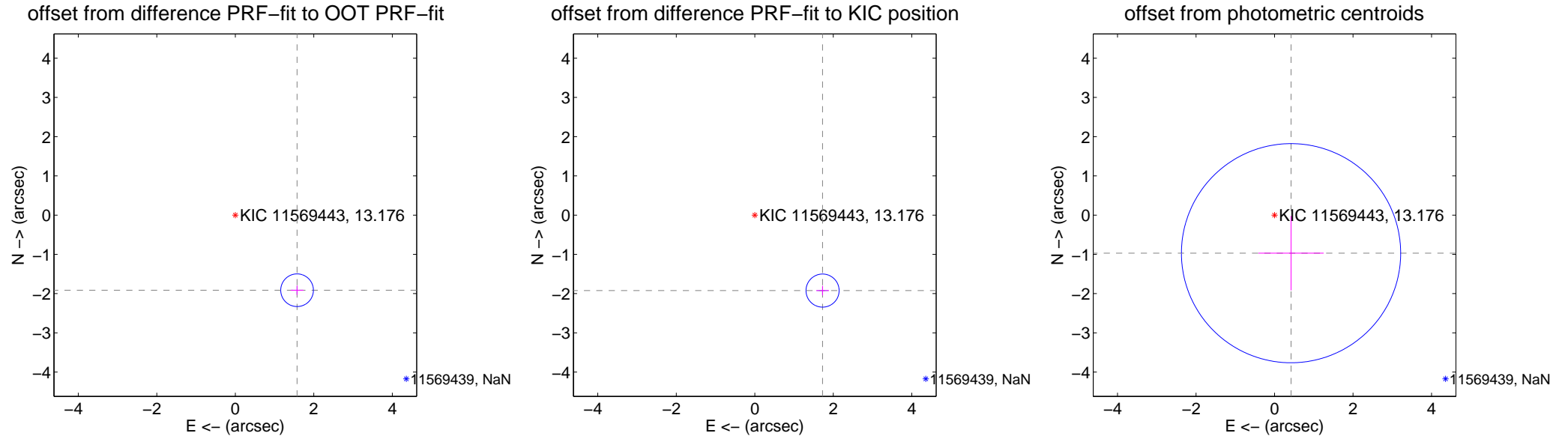
DV Centroid Data

Supplemental centroid analysis for 011569443-10. Kepler magnitude: 13.18. Transit SNR 11.24

There are 1 quarters with good PRF difference image offsets

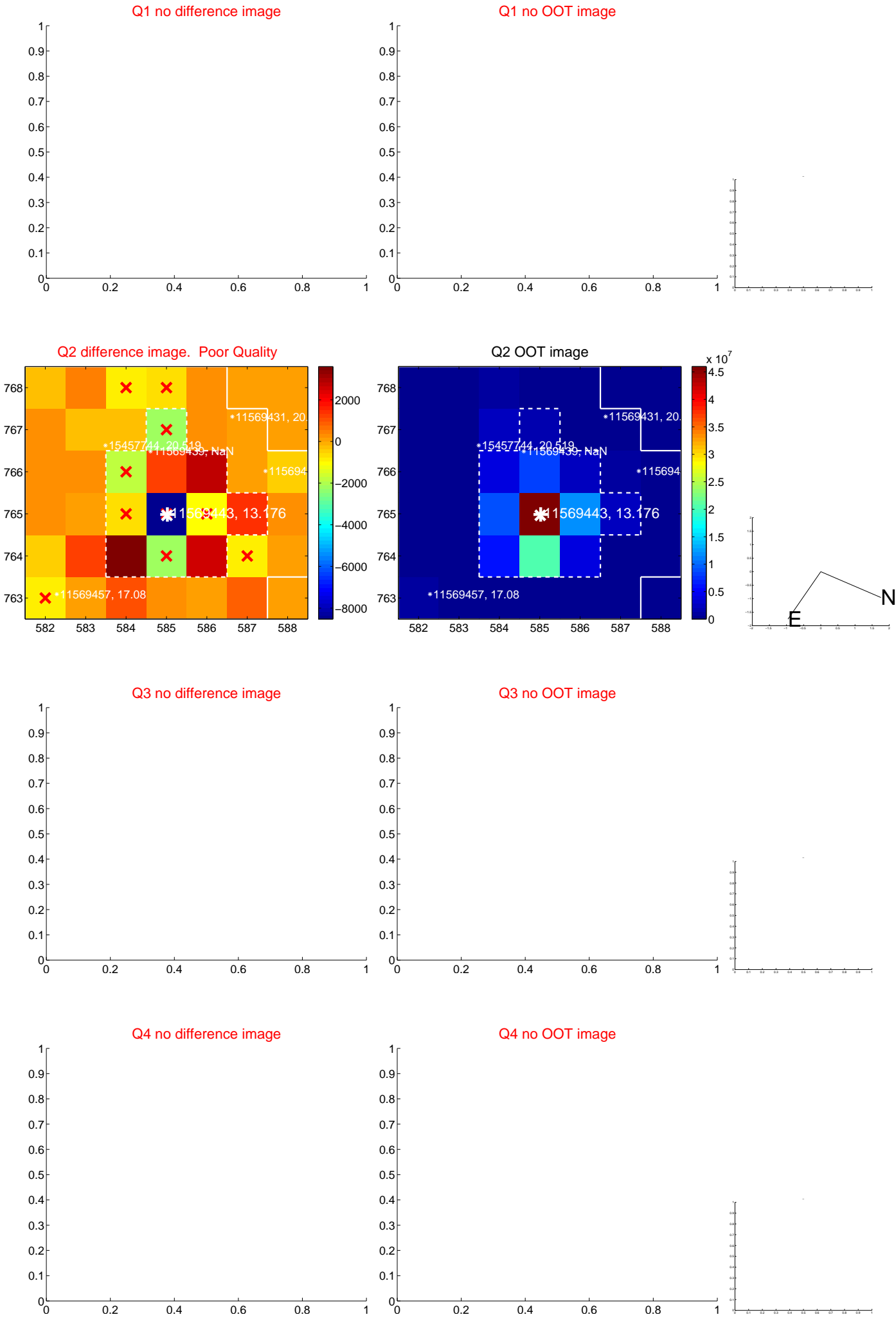
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.478 ± 0.139	17.86	-1.573 ± 0.163	-1.914 ± 0.120
PRF-fit source offset from KIC position	2.585 ± 0.141	18.38	-1.727 ± 0.163	-1.923 ± 0.120
photometric centroid source offset	1.06 ± 0.93	1.14	-0.42 ± 0.83	-0.97 ± 0.95

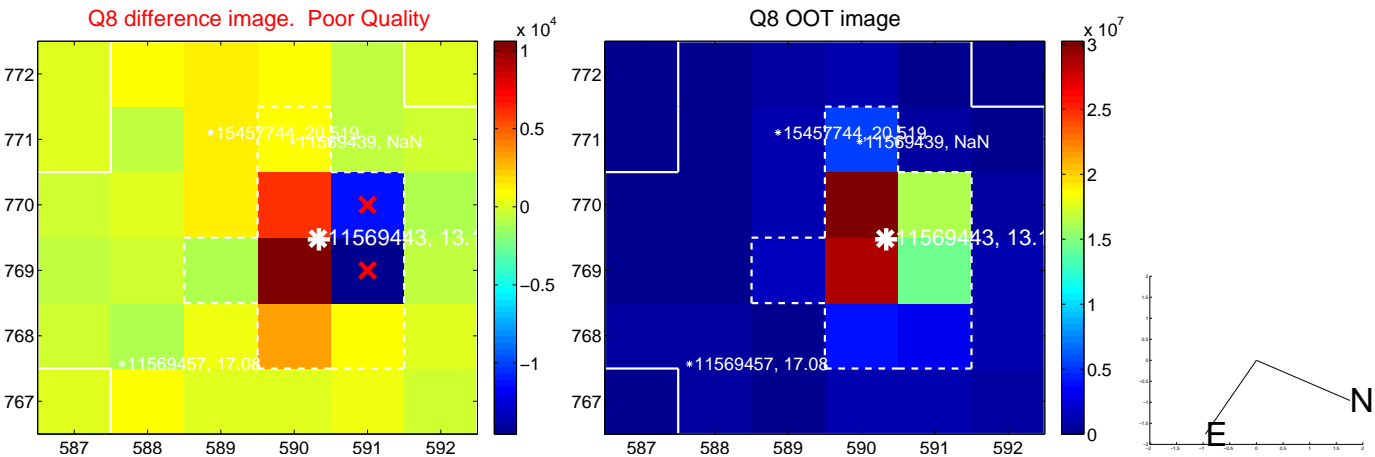
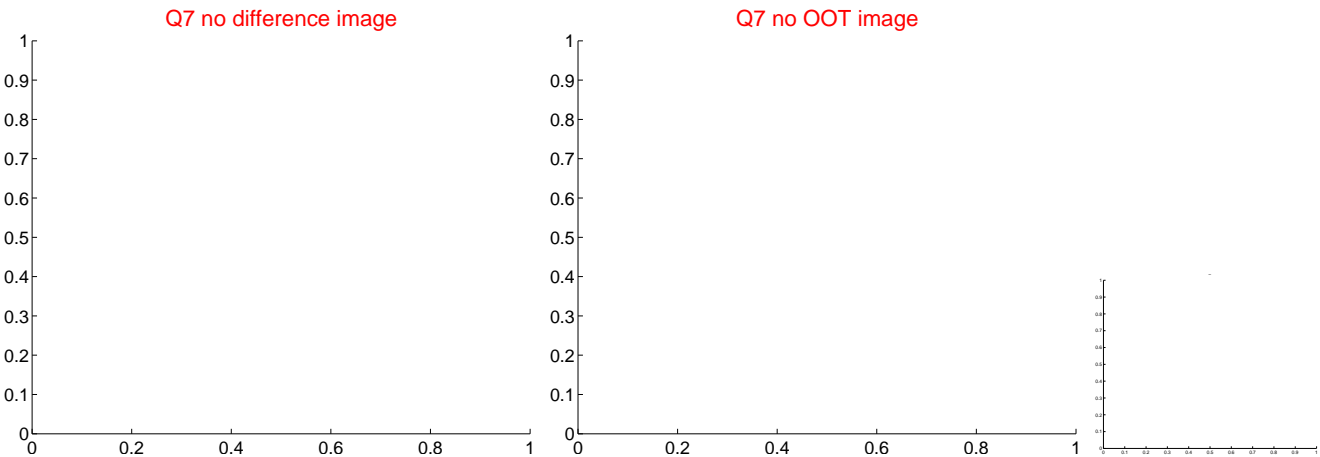
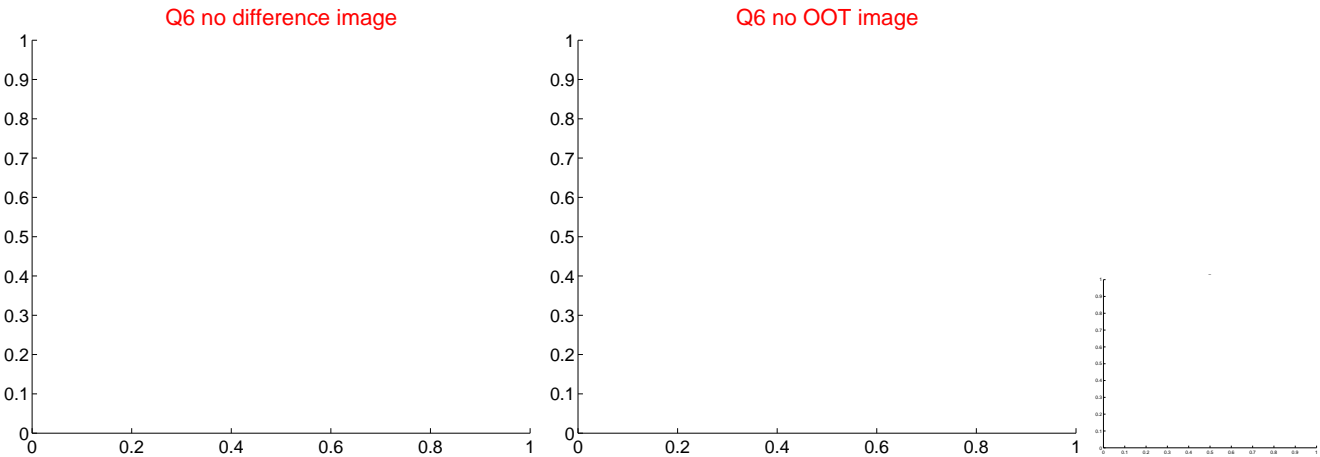
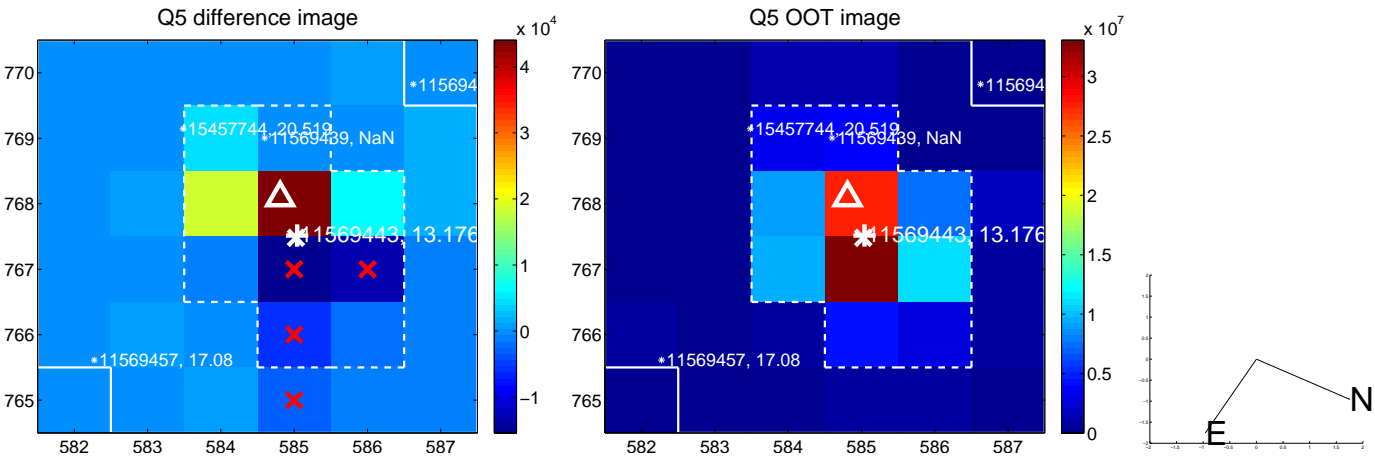


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



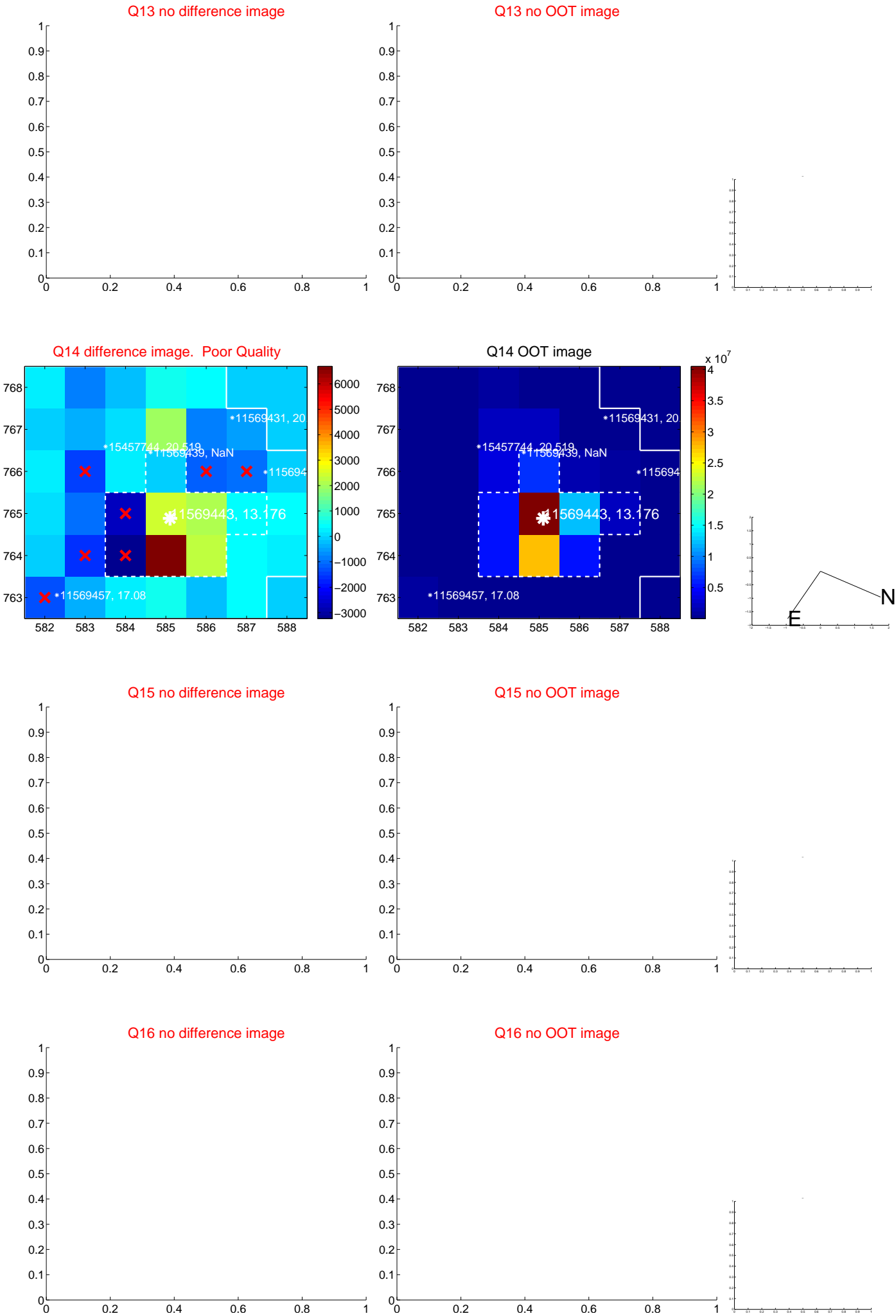
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



Q14 difference image. Poor Quality

Q14 OOT image

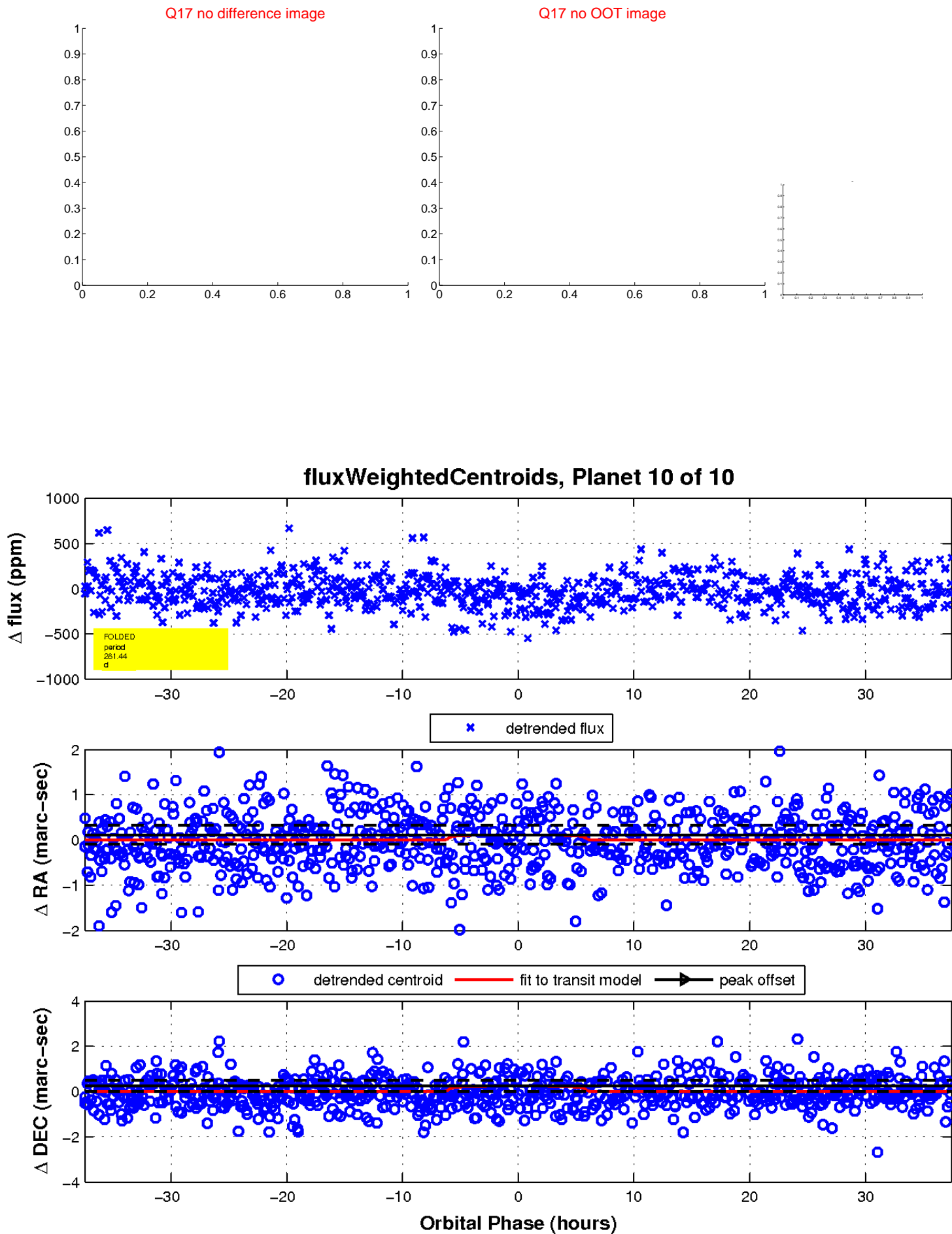
Q15 no difference image

Q15 no OOT image

Q16 no difference image

Q16 no OOT image

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



UKIRT Image

Declination

