

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})
007700880-01	OBS	No	2.711831	133.076025	79.4	4.438	8.9	10.3	1.26	6739	1.30	1817.97
007700880-02	OBS	No	1.553862	131.997646	32.9	9.156	8.1	5.7	1.26	6739	0.75	3819.91
007700880-03	OBS	No	130.853517	252.755847	640.1	5.069	10.5	8.7	1.26	6739	3.82	10.35
007700880-04	OBS	No	36.128406	132.528556	326.7	5.539	9.6	9.5	1.26	6739	2.56	57.56
007700880-06	OBS	No	161.399146	278.961203	829.7	19.846	10.9	10.2	1.26	6739	4.34	7.82
007700880-07	OBS	No	92.145114	152.634577	210.9	0.940	8.4	1.9	1.26	6739	2.12	16.52
007700880-08	OBS	No	92.138931	153.022111	450.8	5.333	8.5	7.9	1.26	6739	2.92	16.52
007700880-09	OBS	No	64.651118	157.112939	105.5	14.705	8.1	2.4	1.26	6739	1.42	26.50
007700880-10	OBS	No	29.889930	147.843900	268.6	7.381	8.8	8.0	1.26	6739	2.22	74.11

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007700880-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_KIC_POS
007700880-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_KIC_POS
007700880-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
007700880-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS—HALO_GHOST
007700880-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007700880-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS
007700880-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_FEW_DIFFS
007700880-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_KIC_POS
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Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

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

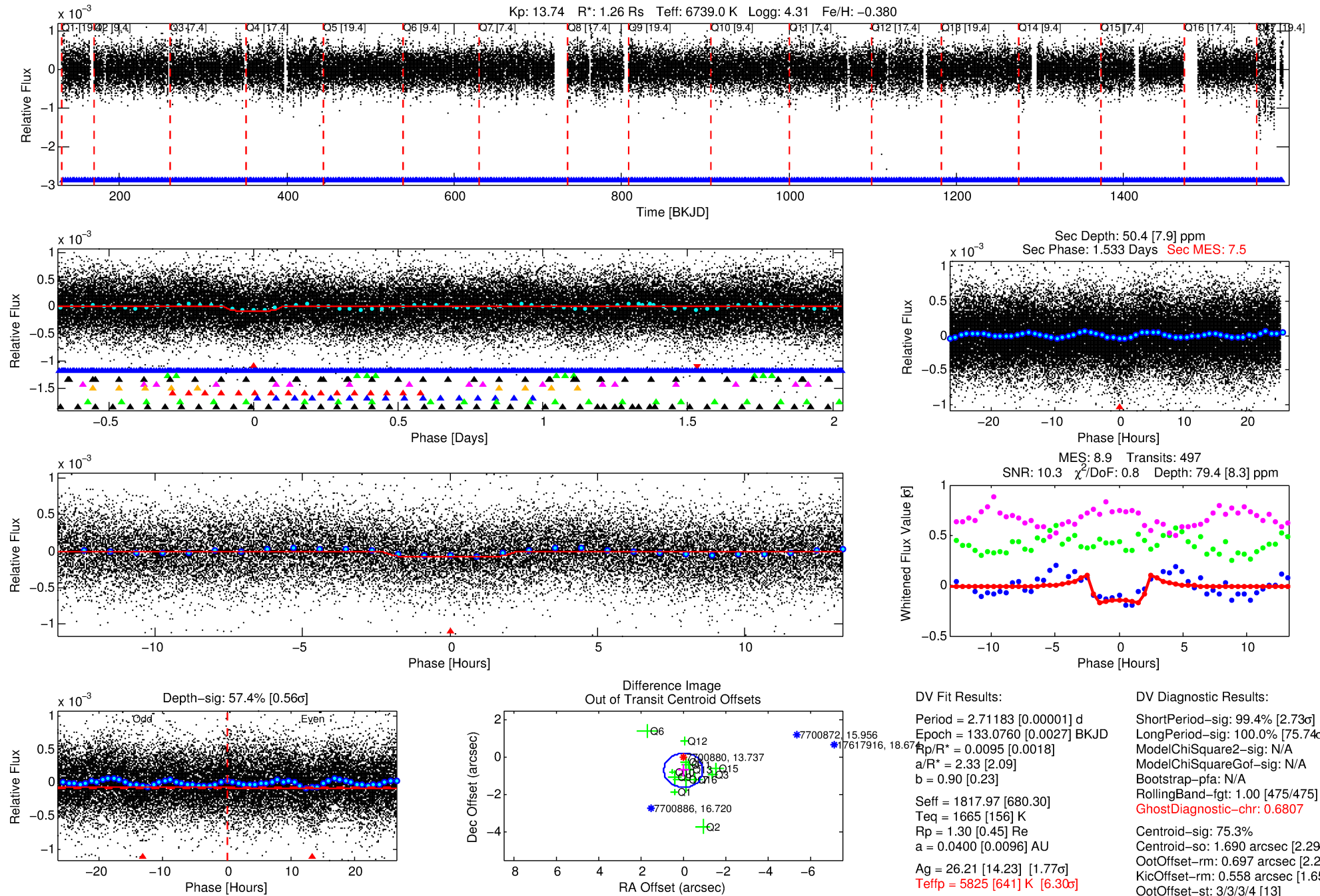
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007700880-01

No Significant Match Found

DV One-Page Summary

KIC: 7700880 Candidate: 1 of 10 Period: 2.712 d



DV Fit Results:

Period = 2.71183 [0.00001] d
Epoch = 133.0760 [0.0027] BKJD
Rp/R* = 0.0095 [0.0018]
a/R* = 2.33 [2.09]
b = 0.90 [0.23]
Seff = 1817.97 [680.30]
Teff = 1665 [156] K
Rp = 1.30 [0.45] Re
a = 0.0400 [0.0096] AU
Ag = 26.21 [14.23] [1.77 σ]
Teffp = 5825 [641] K [6.30 σ]

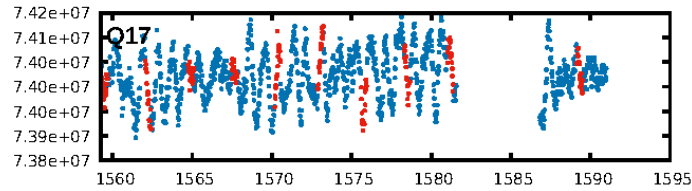
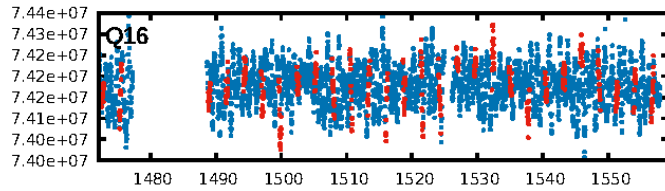
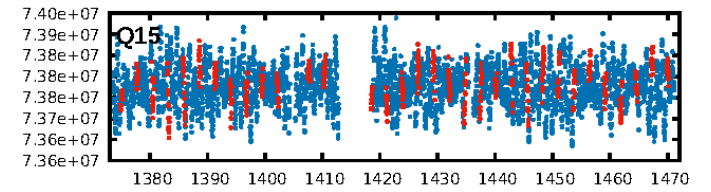
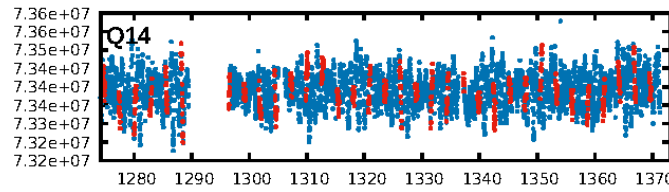
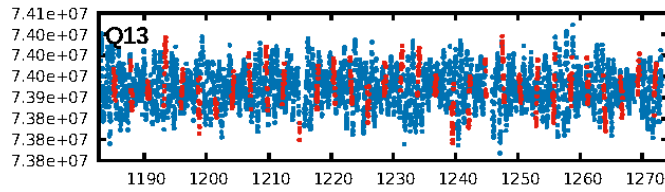
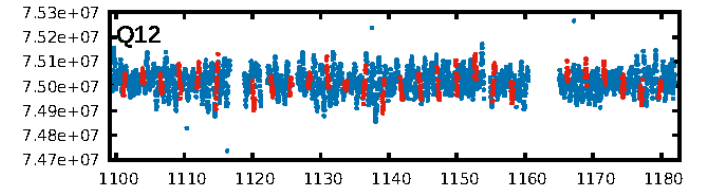
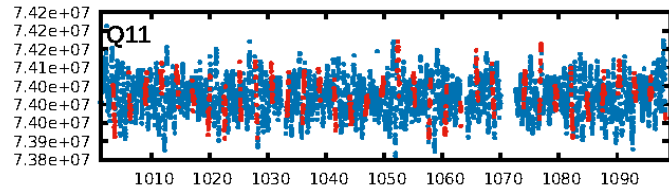
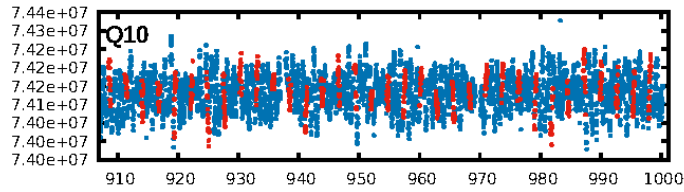
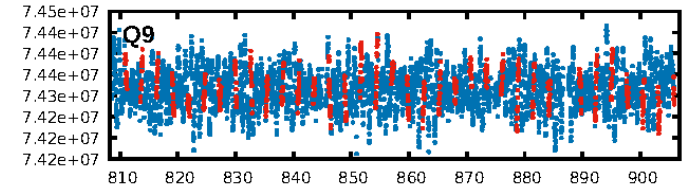
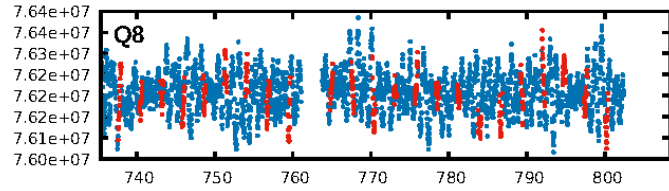
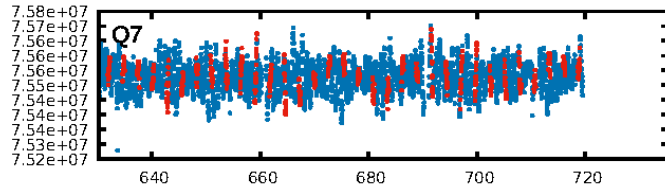
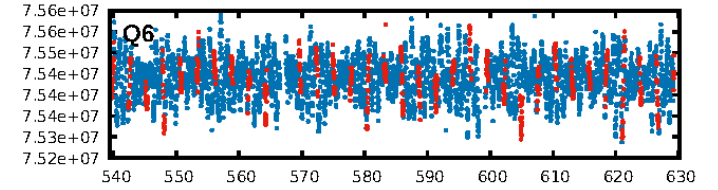
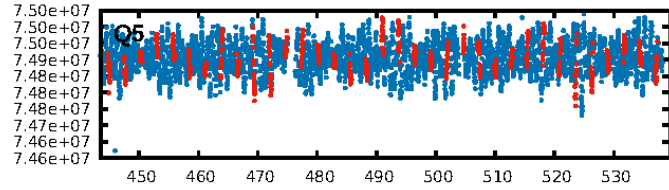
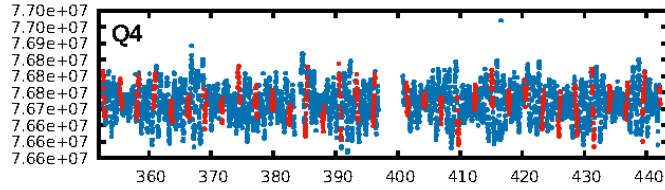
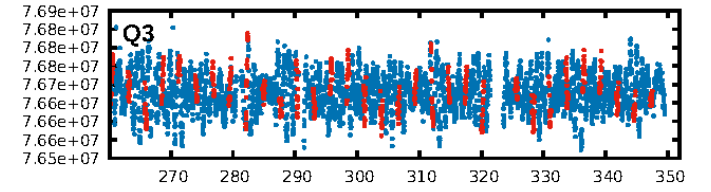
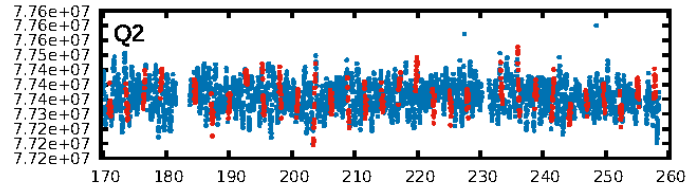
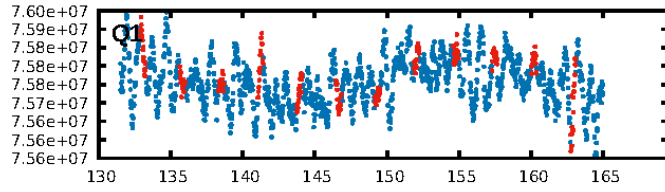
DV Diagnostic Results:

ShortPeriod-sig: 99.4% [2.73 σ]
LongPeriod-sig: 100.0% [75.74 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [475/475]
GhostDiagnostic-chr: 0.6807
Centroid-sig: 75.3%
Centroid-so: 1.690 arcsec [2.29 σ]
OotOffset-rm: 0.697 arcsec [2.28 σ]
KicOffset-rm: 0.558 arcsec [1.65 σ]
OotOffset-st: 3/3/3/4 [13]
KicOffset-st: 3/3/3/4 [13]
DiffImageQuality-fgm: 0.62 [8/13]
DiffImageOverlap-fno: 1.00 [17/17]

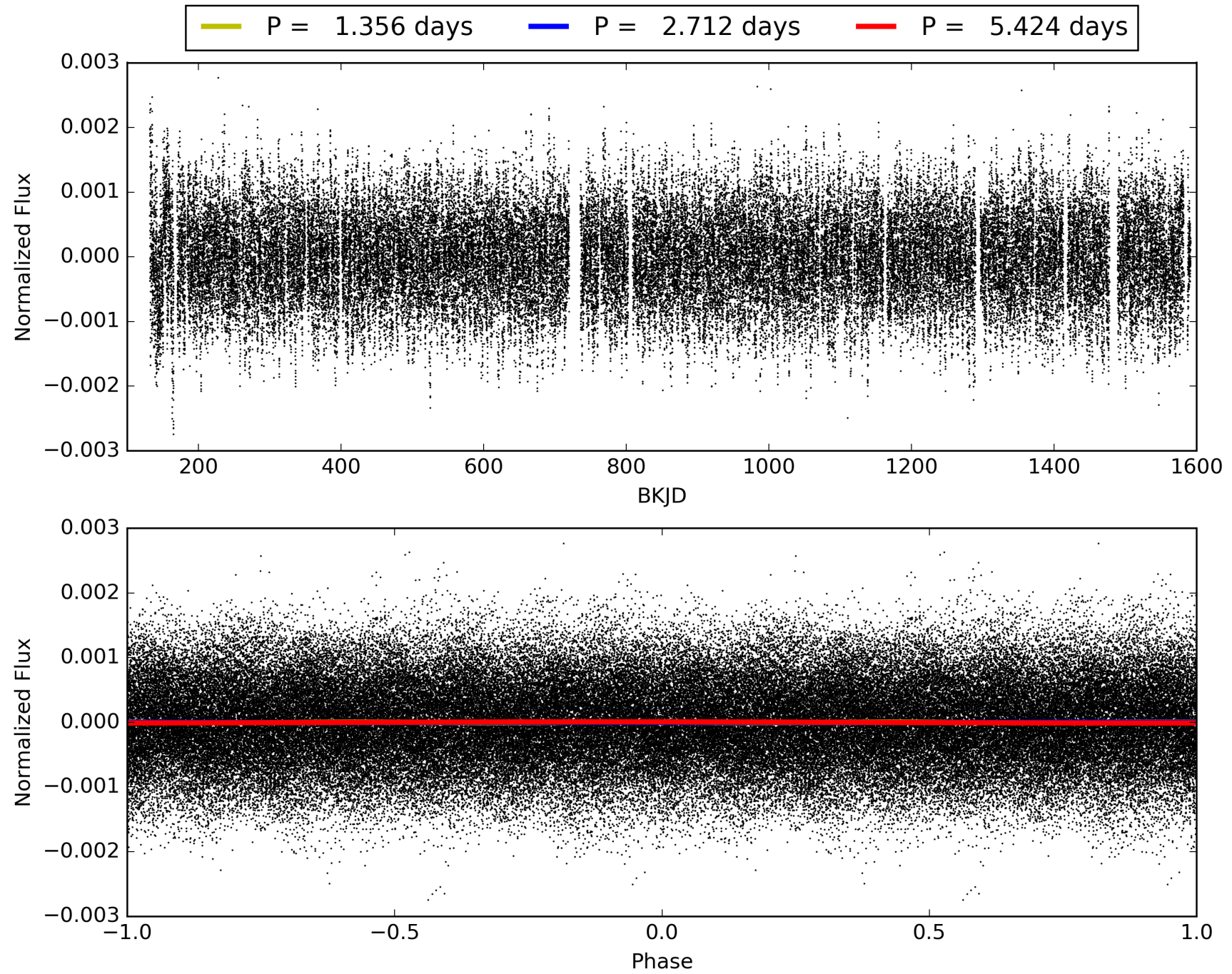
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 03:39:28 Z

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

TCE 007700880-01, PDC Light Curves

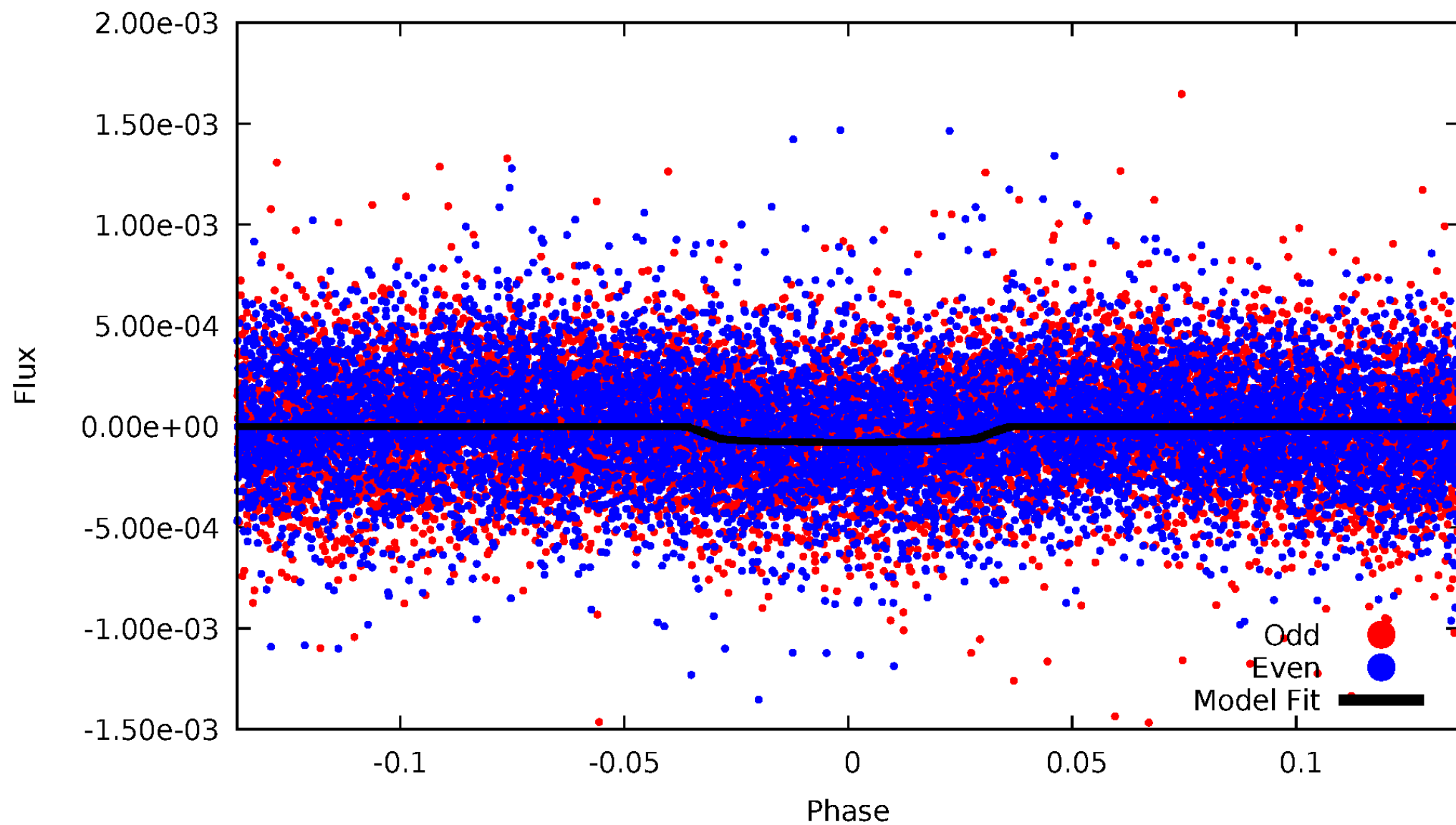


TCE 007700880-01



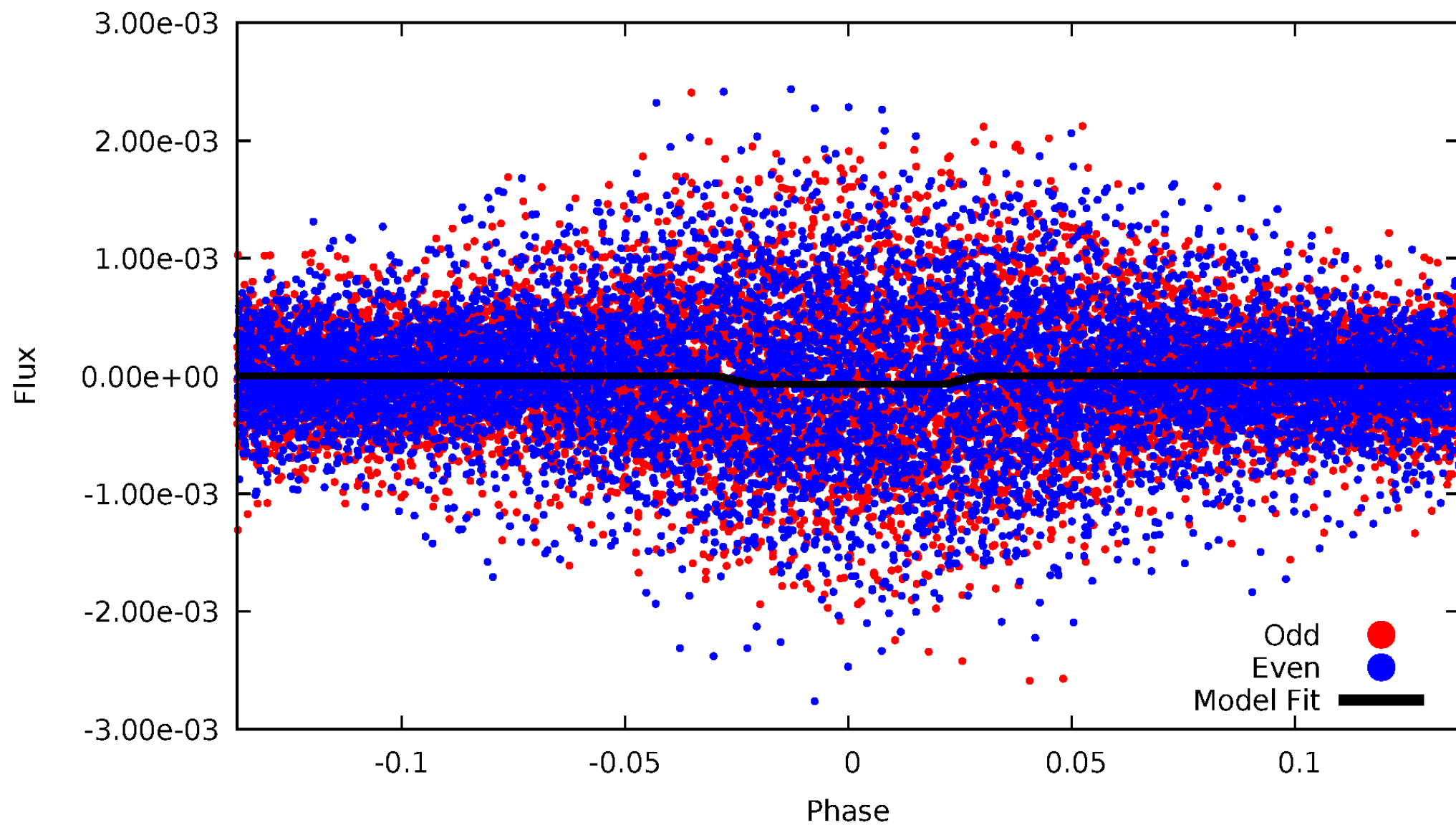
DV Odd/Even

TCE 007700880-01



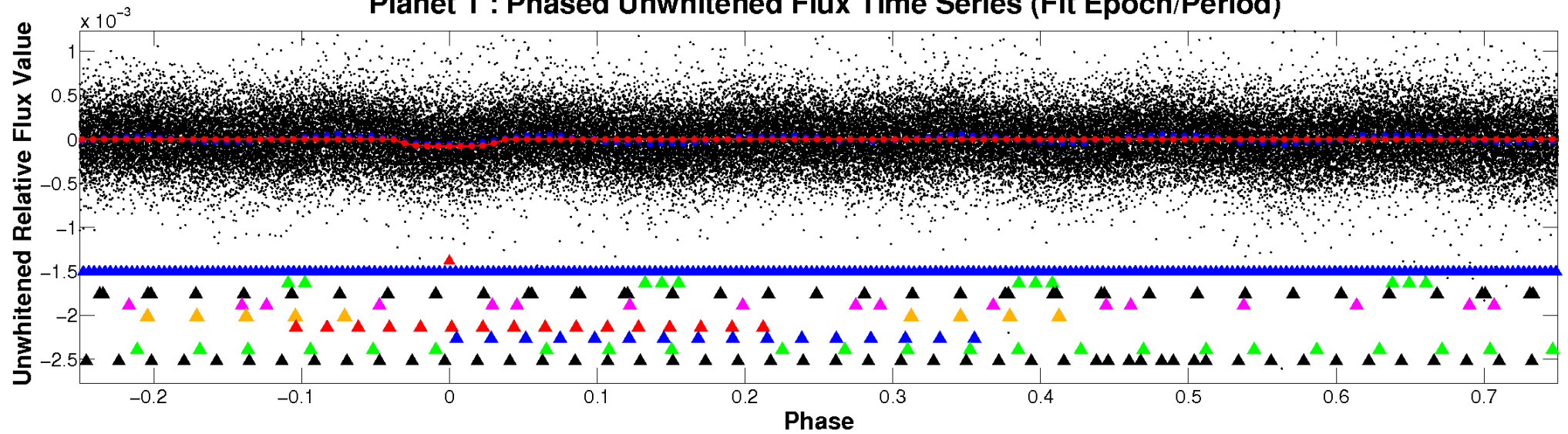
ALT Odd/Even

TCE 007700880-01

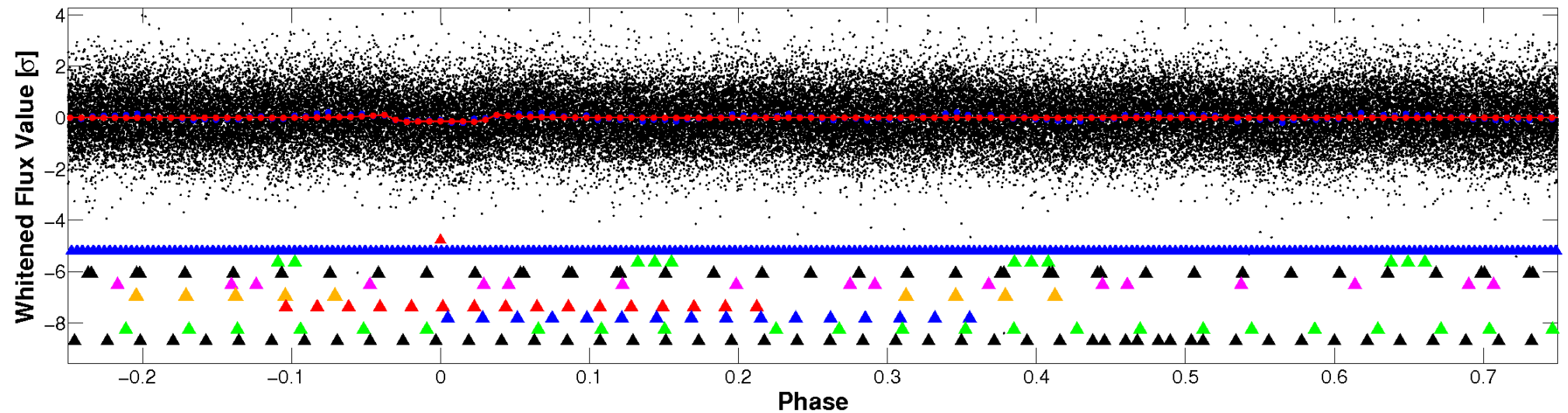


Non-Whitened Vs. Whitened Light Curve

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

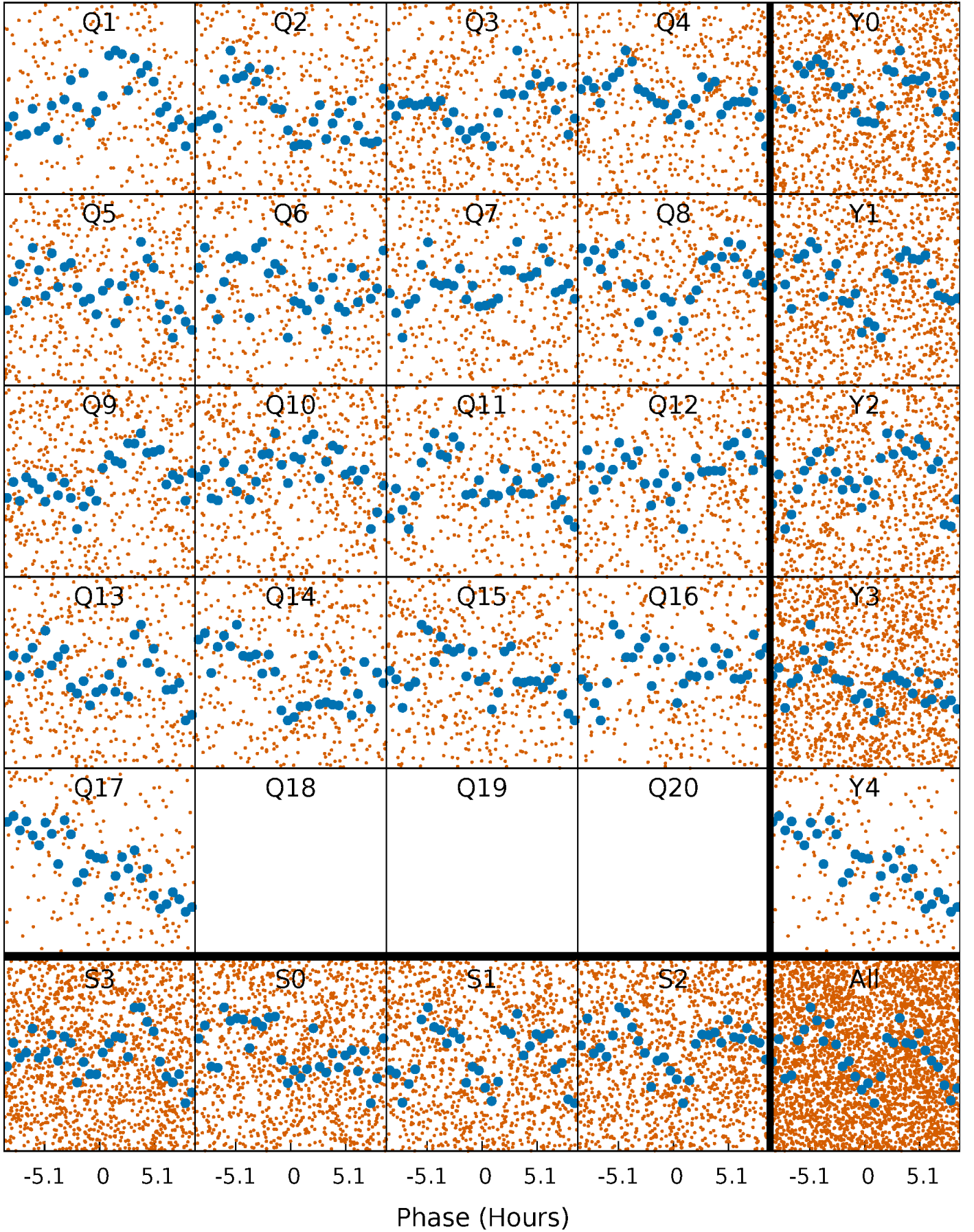


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



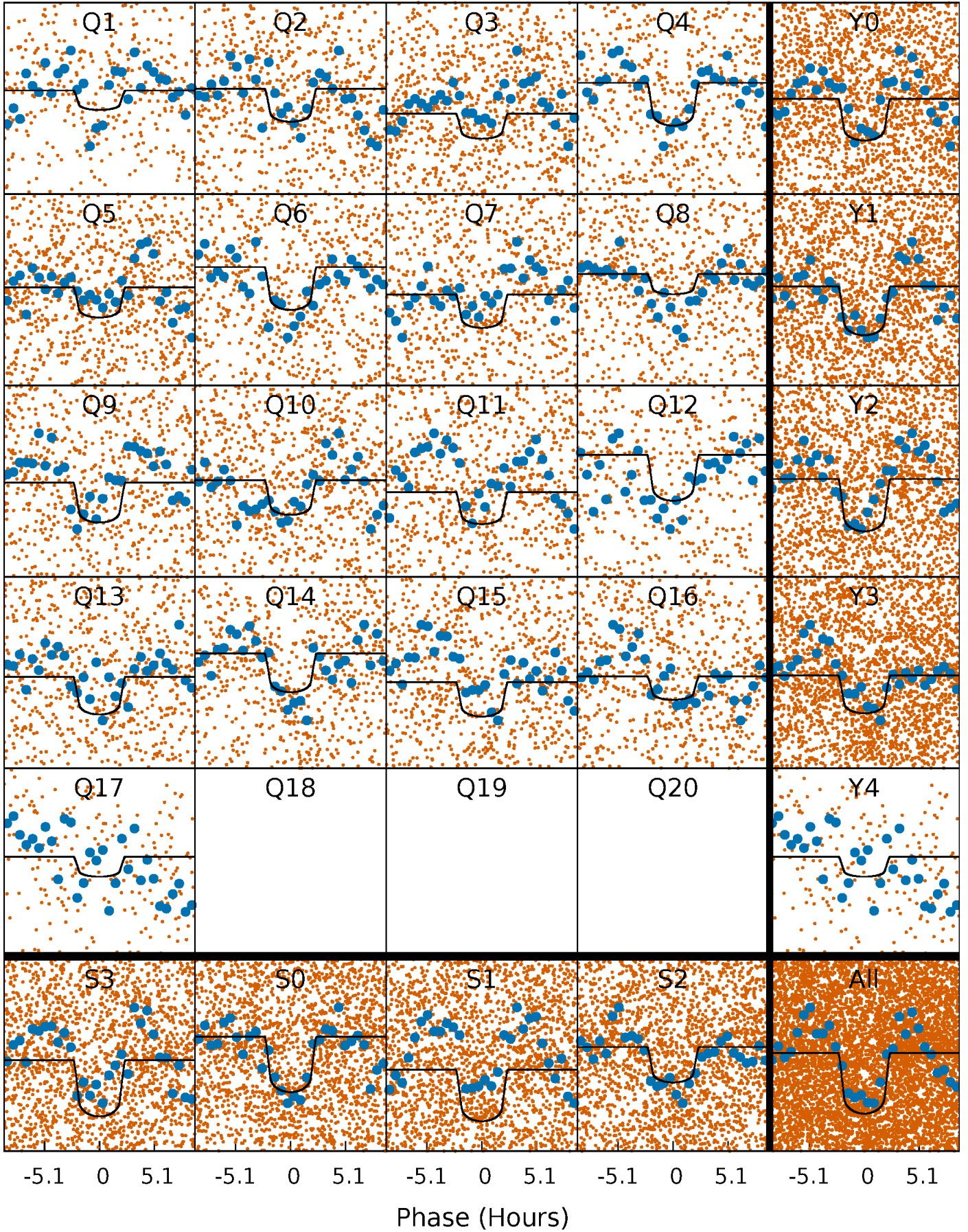
PDC Quarter-Phased Transit Curves

TCE 007700880-01 P= 2.711831 Days $T_0=133.076025$ (BKJD)



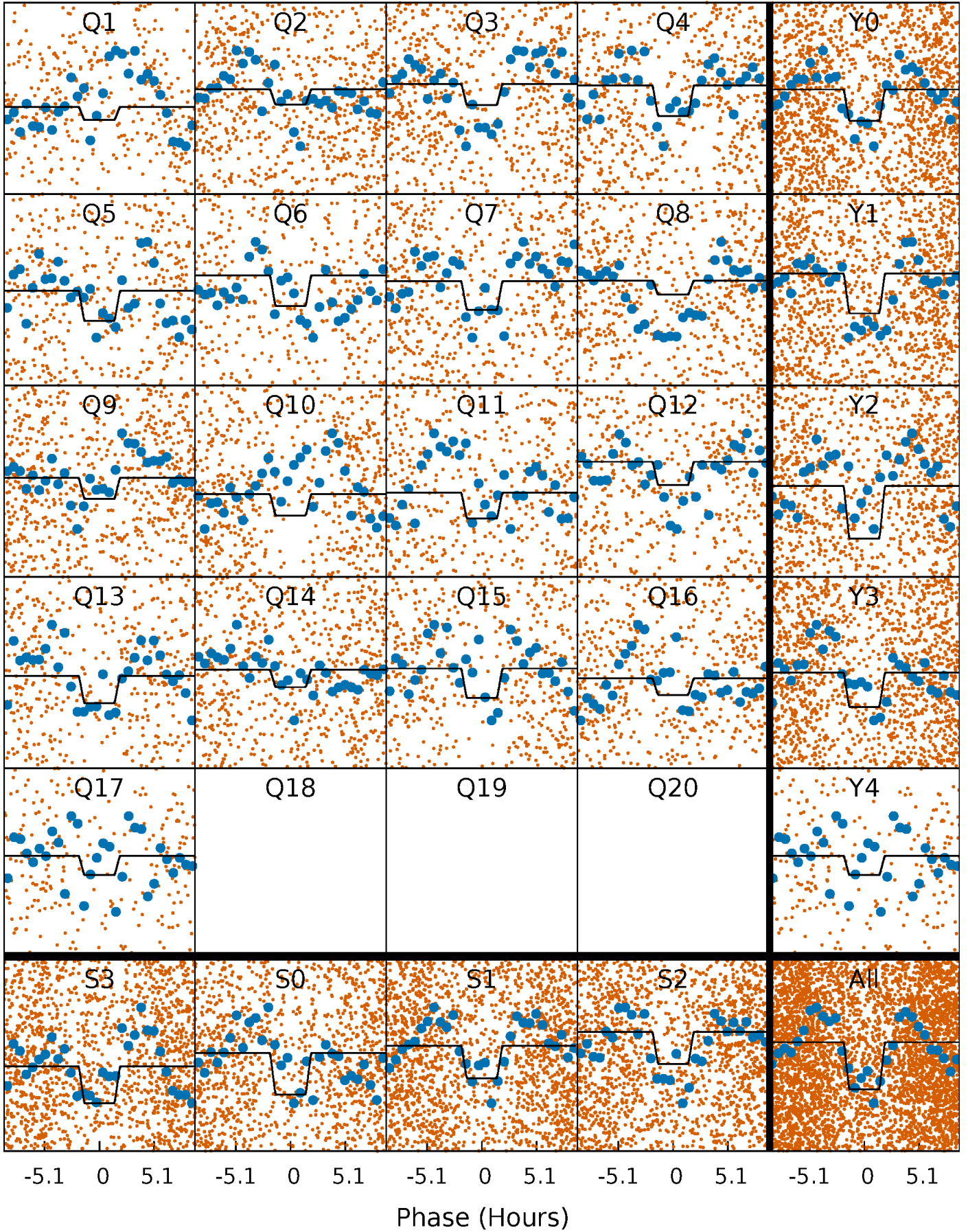
DV Quarter-Phased Transit Curves

TCE 007700880-01 P= 2.711831 Days $T_0=133.076025$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

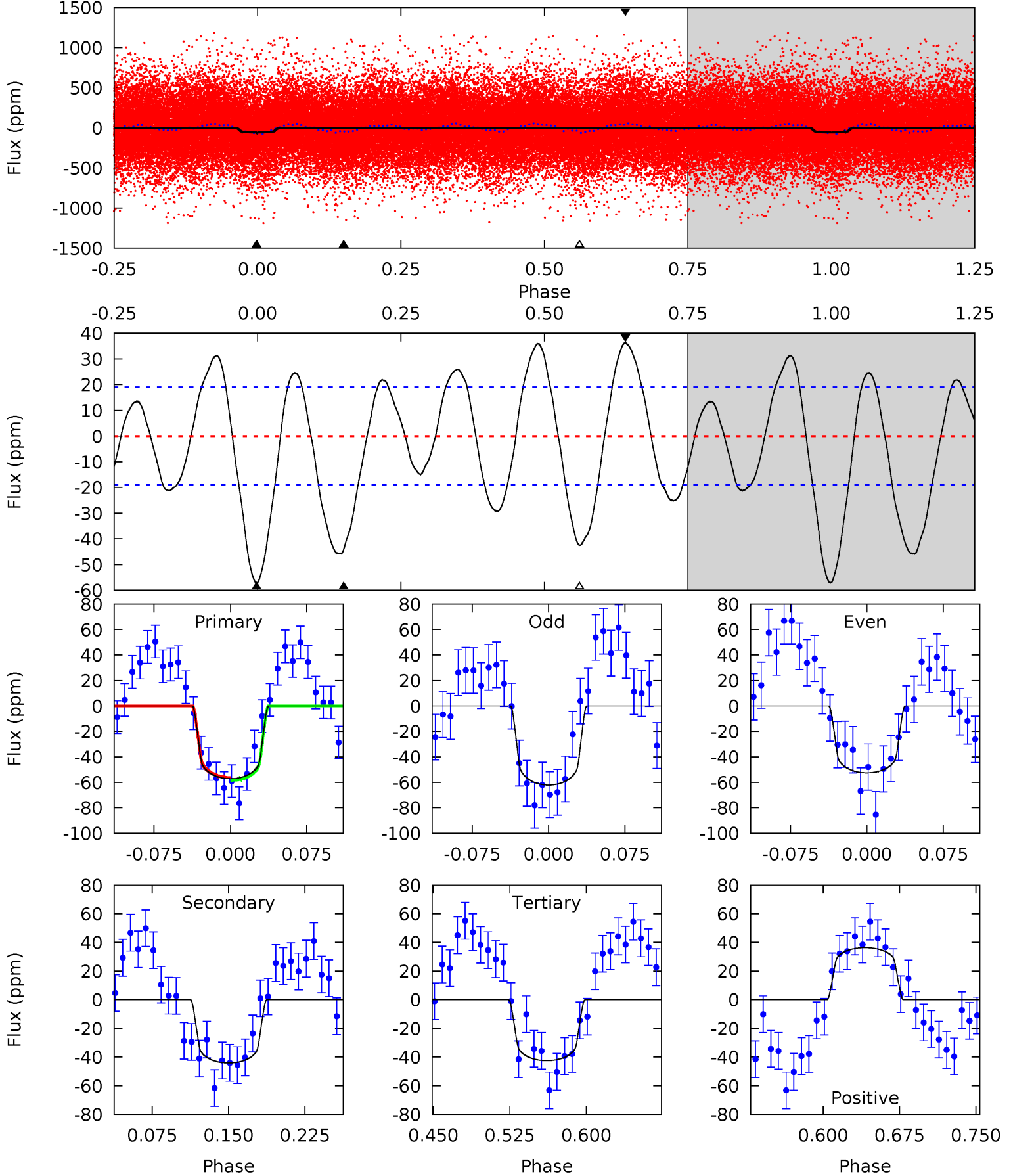
TCE 007700880-01 P= 2.711780 Days $T_0=133.076081$ (BKJD)



DV Model-Shift Uniqueness Test

007700880-01, P = 2.711831 Days, E = 130.364194 Days

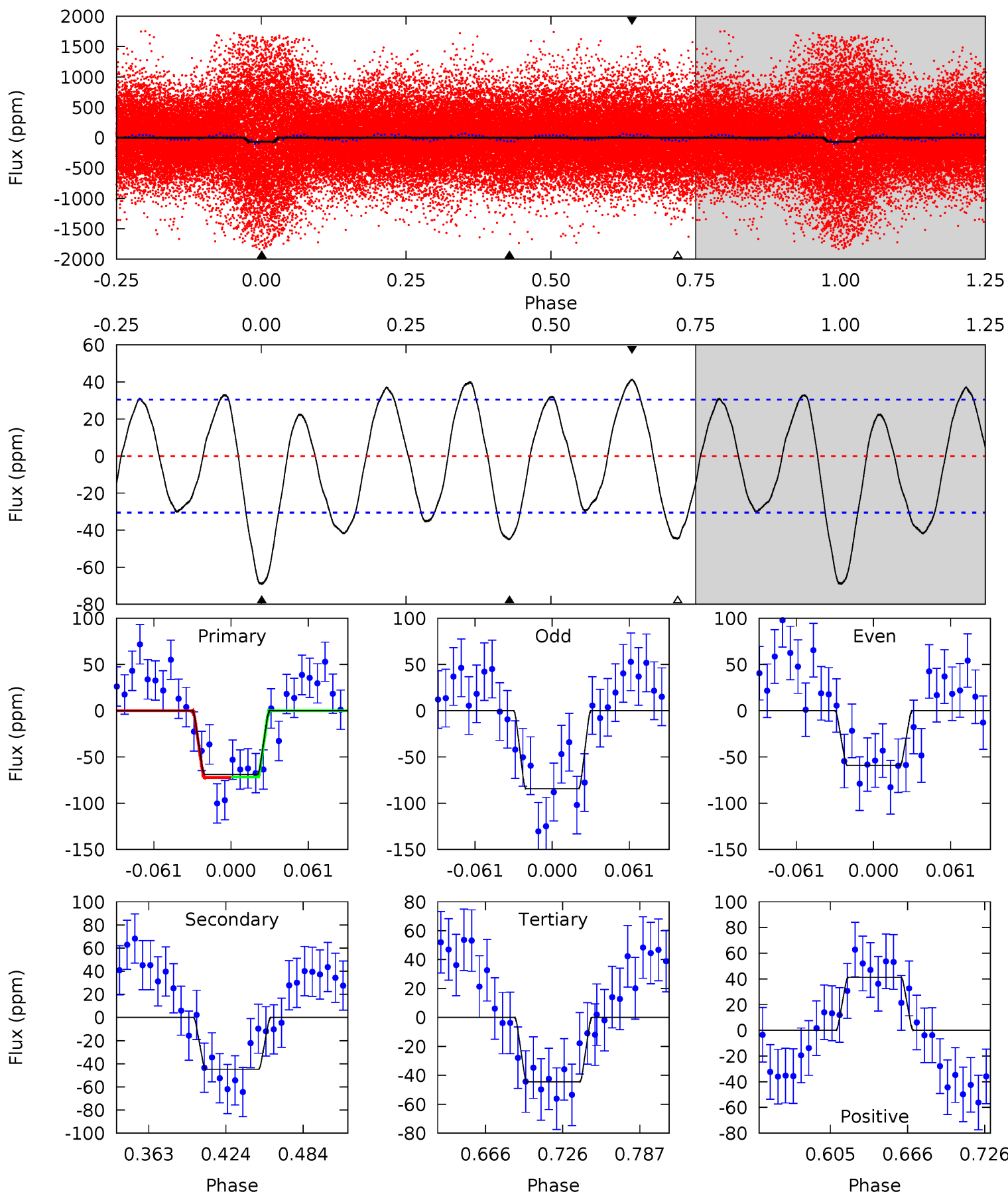
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.9	10.7	10.3	8.84	4.62	1.78	5.02	3.56	5.06	0.40	1.90	1.16	0.87	0.39	0.27



Alt Model-Shift Uniqueness Test

007700880-01, P = 2.711780 Days, E = 130.364301 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.5	6.87	6.83	6.31	4.67	1.88	3.93	3.72	4.23	0.05	0.56	1.93	0.60	0.37	0.03



Stellar Parameters For KIC 007700880

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6739^{+189}_{-236}	$4.306^{+0.101}_{-0.188}$	$-0.380^{+0.250}_{-0.300}$	$1.256^{+0.363}_{-0.196}$	$1.170^{+0.175}_{-0.158}$	$0.831^{+0.384}_{-0.422}$
	+3%/-4%	+2%/-4%	+66%/-79%	+29%/-16%	+15%/-14%	+46%/-51%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007700880-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-44 ± 4	$1.34^{+0.30}_{-0.28}$	2346^{+164}_{-129}	5601^{+667}_{-475}	22^{+13}_{-7}
Alt.	-45 ± 7	$1.17^{+0.30}_{-0.27}$	2353^{+152}_{-143}	6004^{+865}_{-646}	29^{+20}_{-11}

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

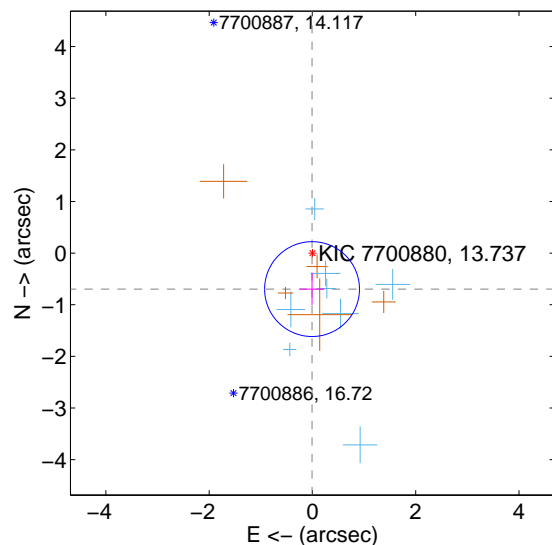
Supplemental centroid analysis for 007700880-01. Kepler magnitude: 13.74. Transit SNR 10.26

There are 8 quarters with good PRF difference image offsets

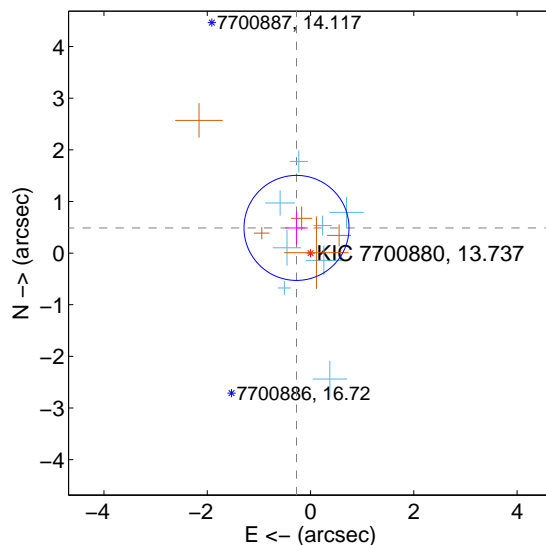
The direct PRF centroid is offset from the target star catalog position by about 1.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.697 ± 0.306	2.28	0.008 ± 0.241	-0.697 ± 0.307
PRF-fit source offset from KIC position	0.558 ± 0.339	1.65	0.271 ± 0.216	0.488 ± 0.321
photometric centroid source offset	1.69 ± 0.74	2.29	0.26 ± 0.52	1.67 ± 0.74

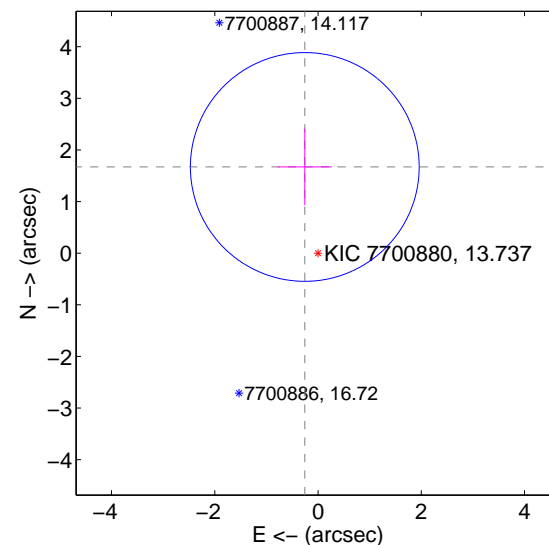
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

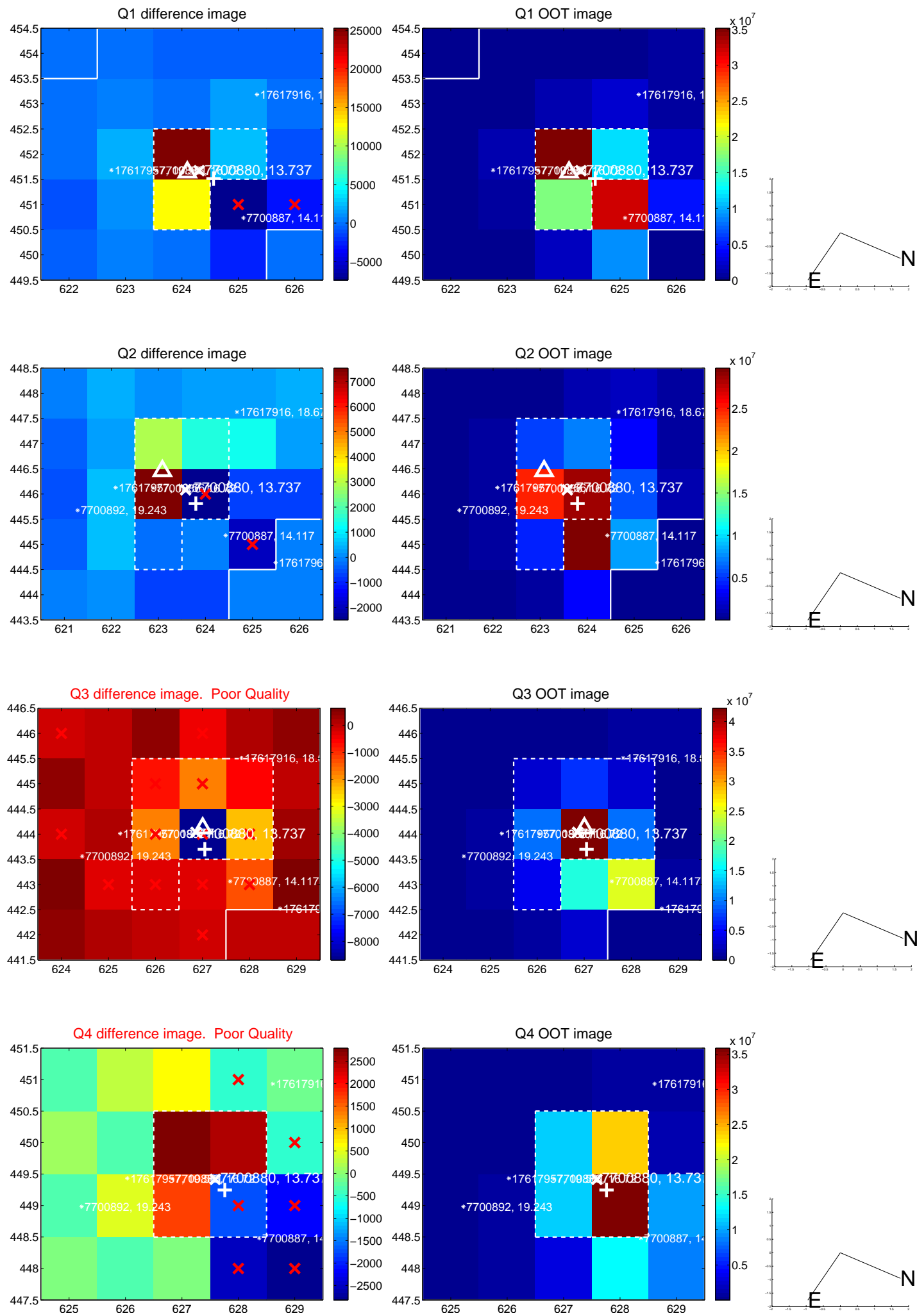


offset from photometric centroids

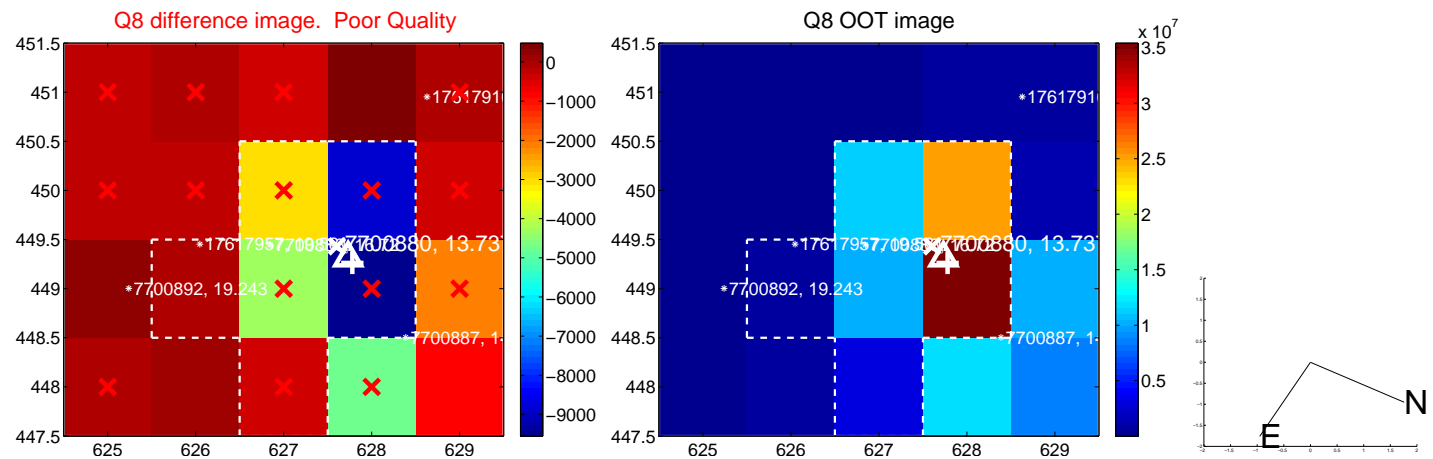
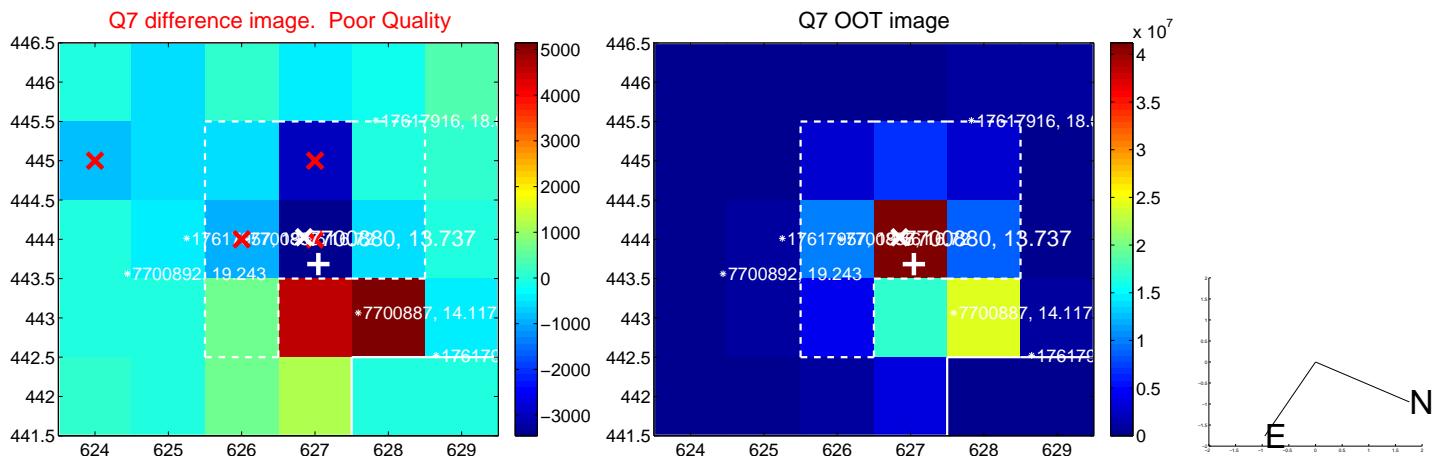
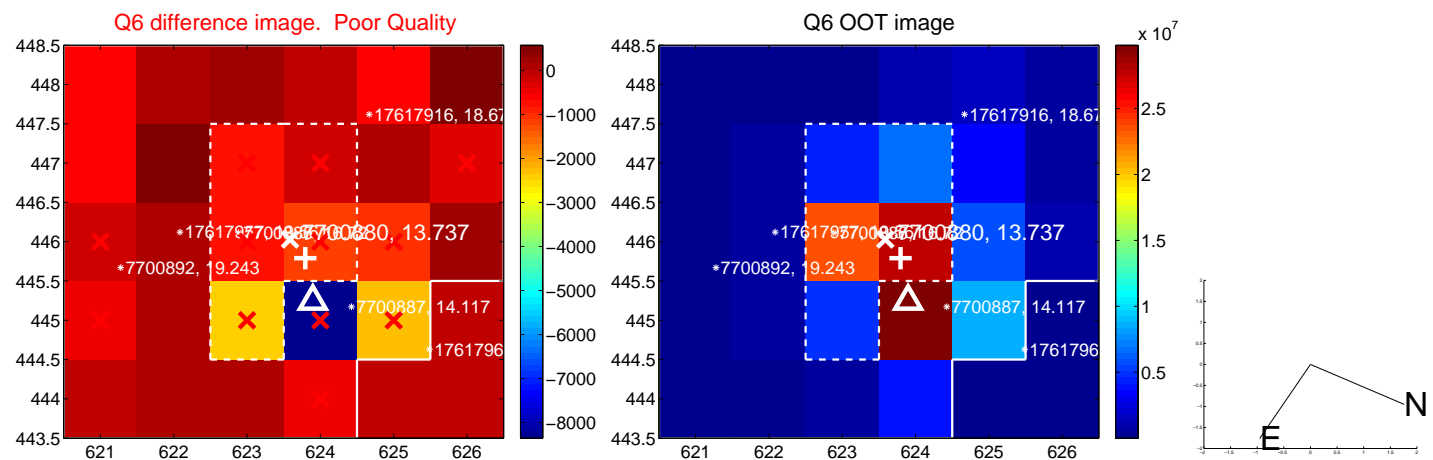
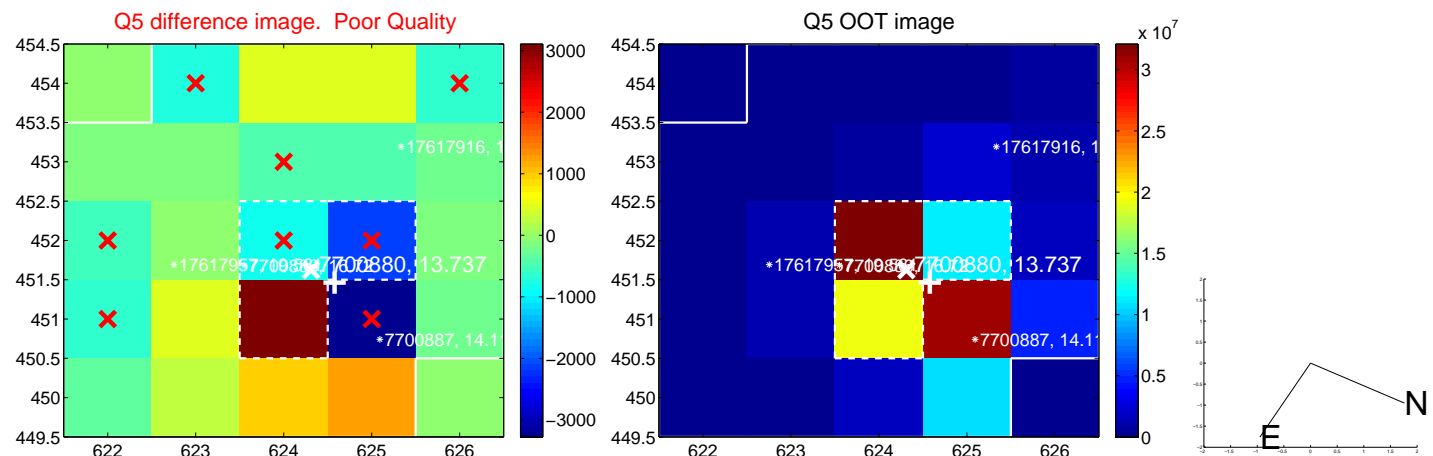


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

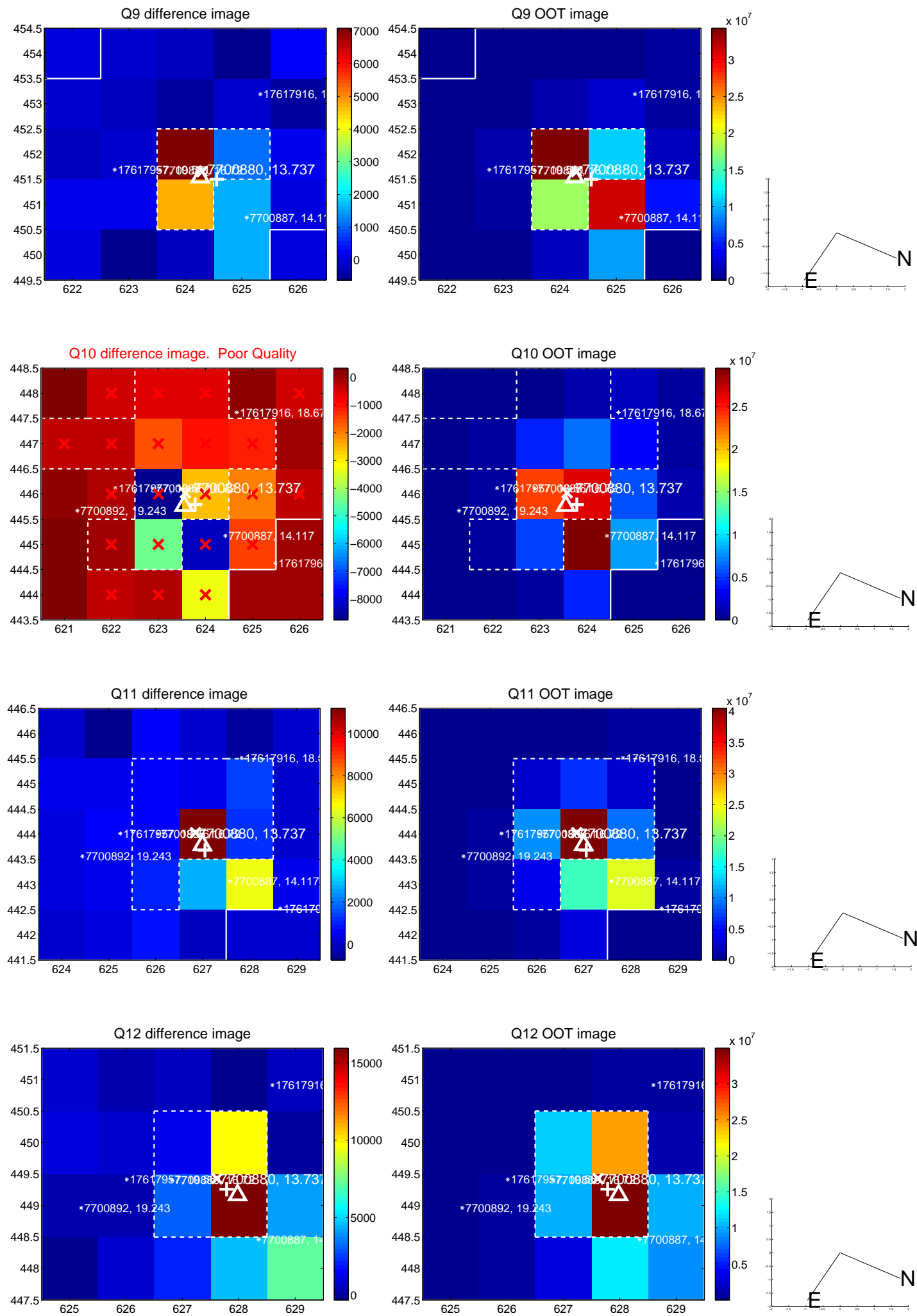
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



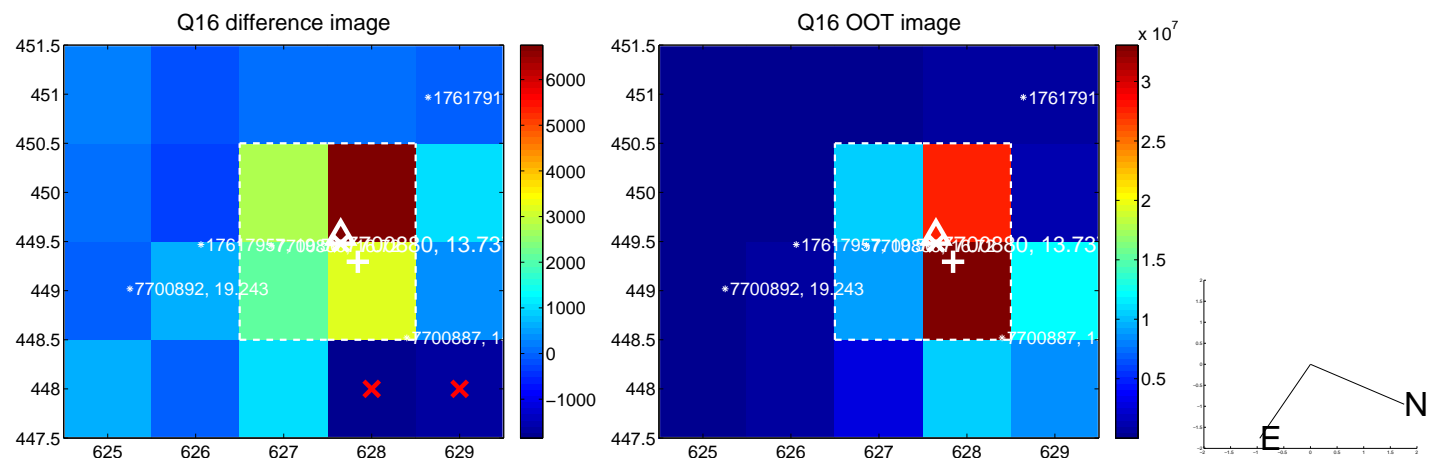
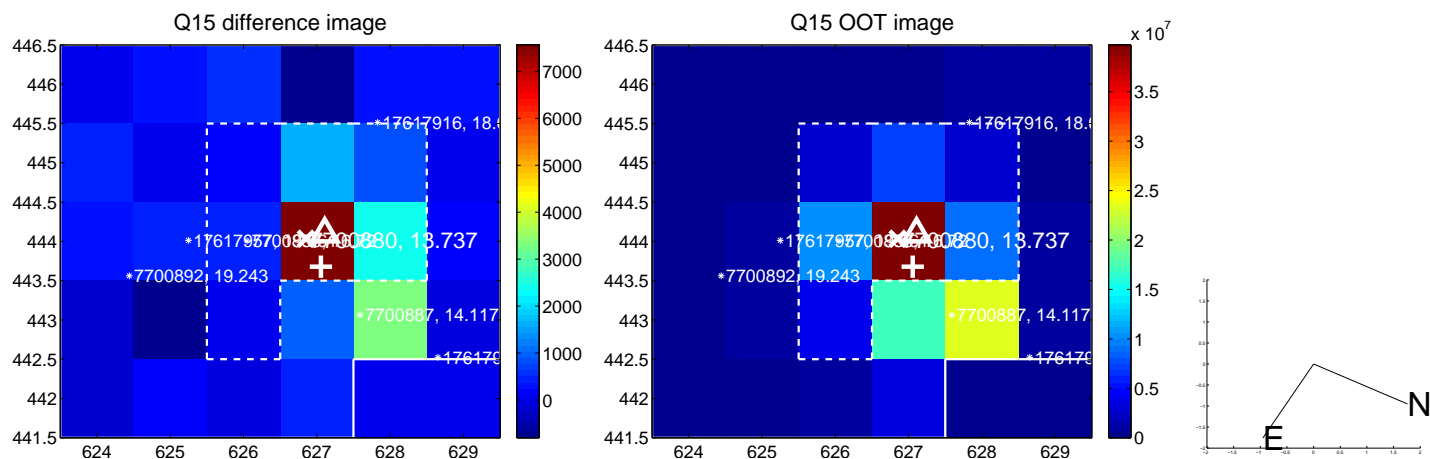
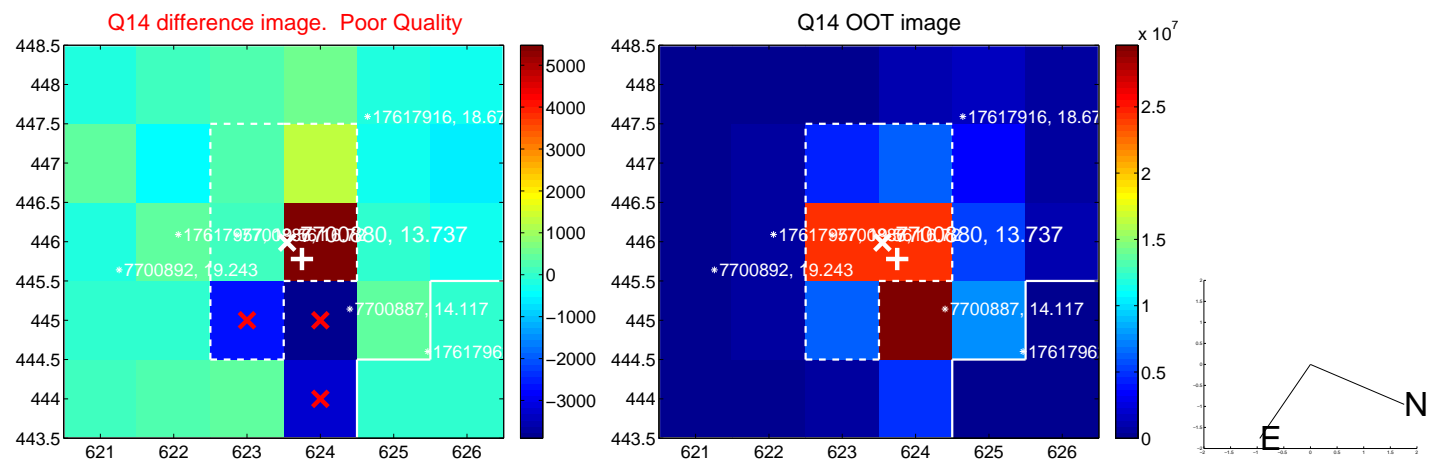
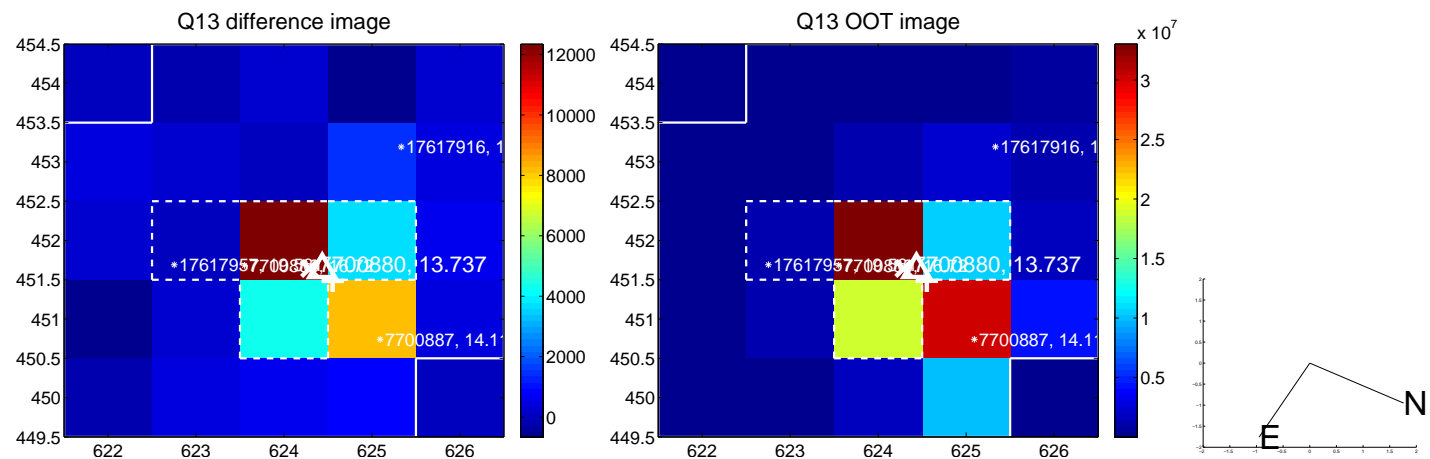
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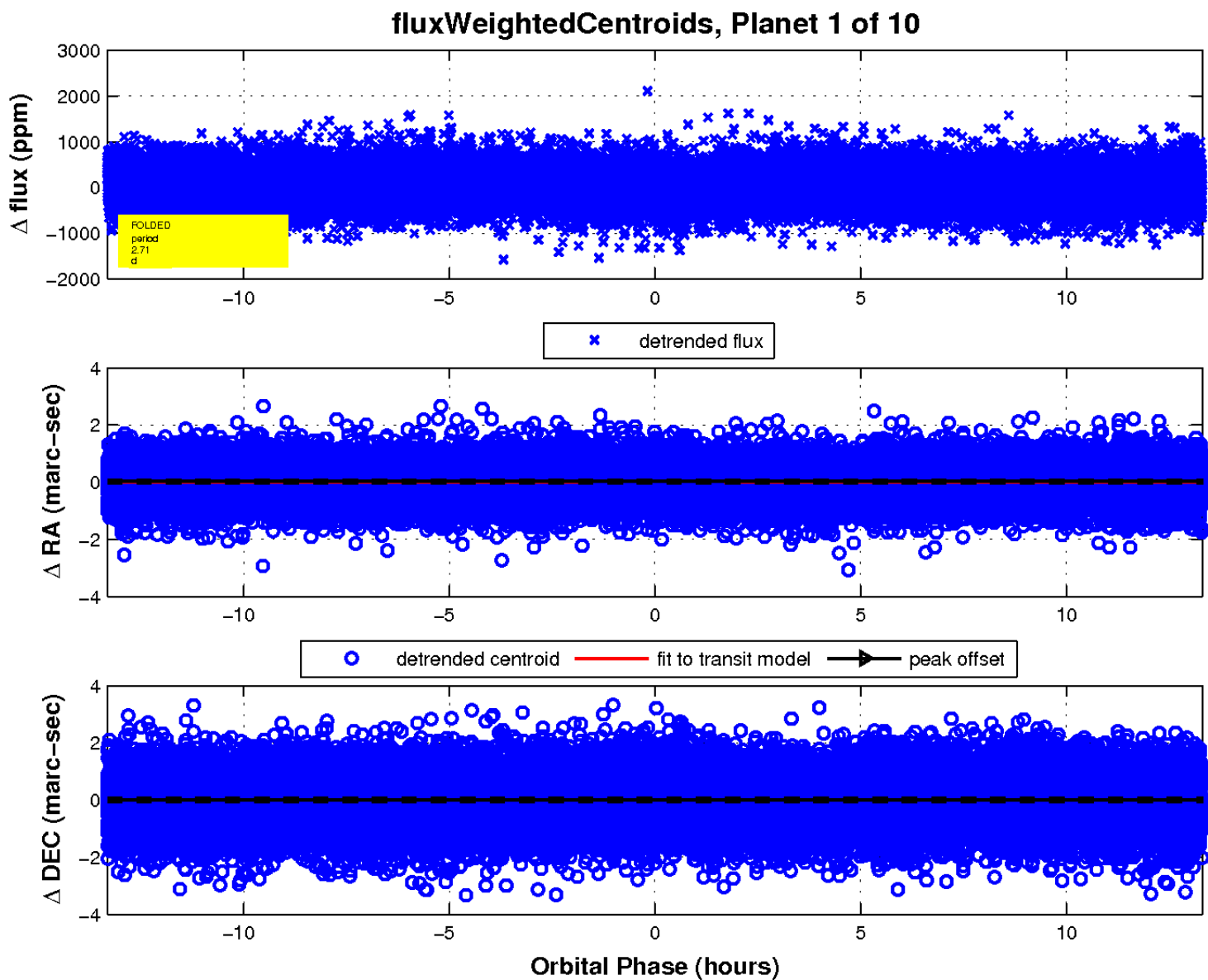
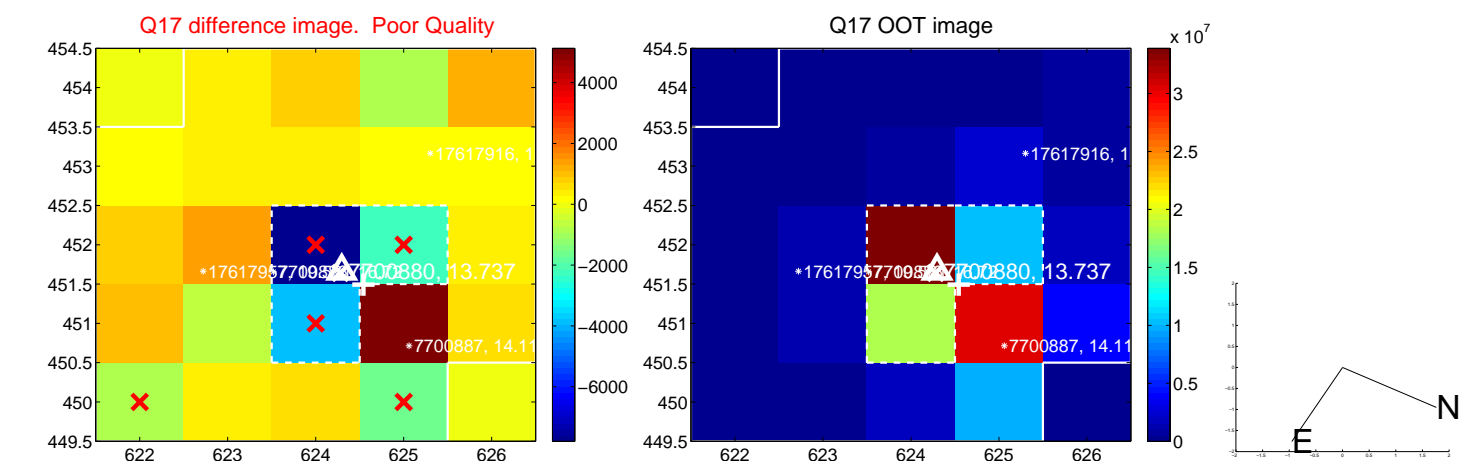
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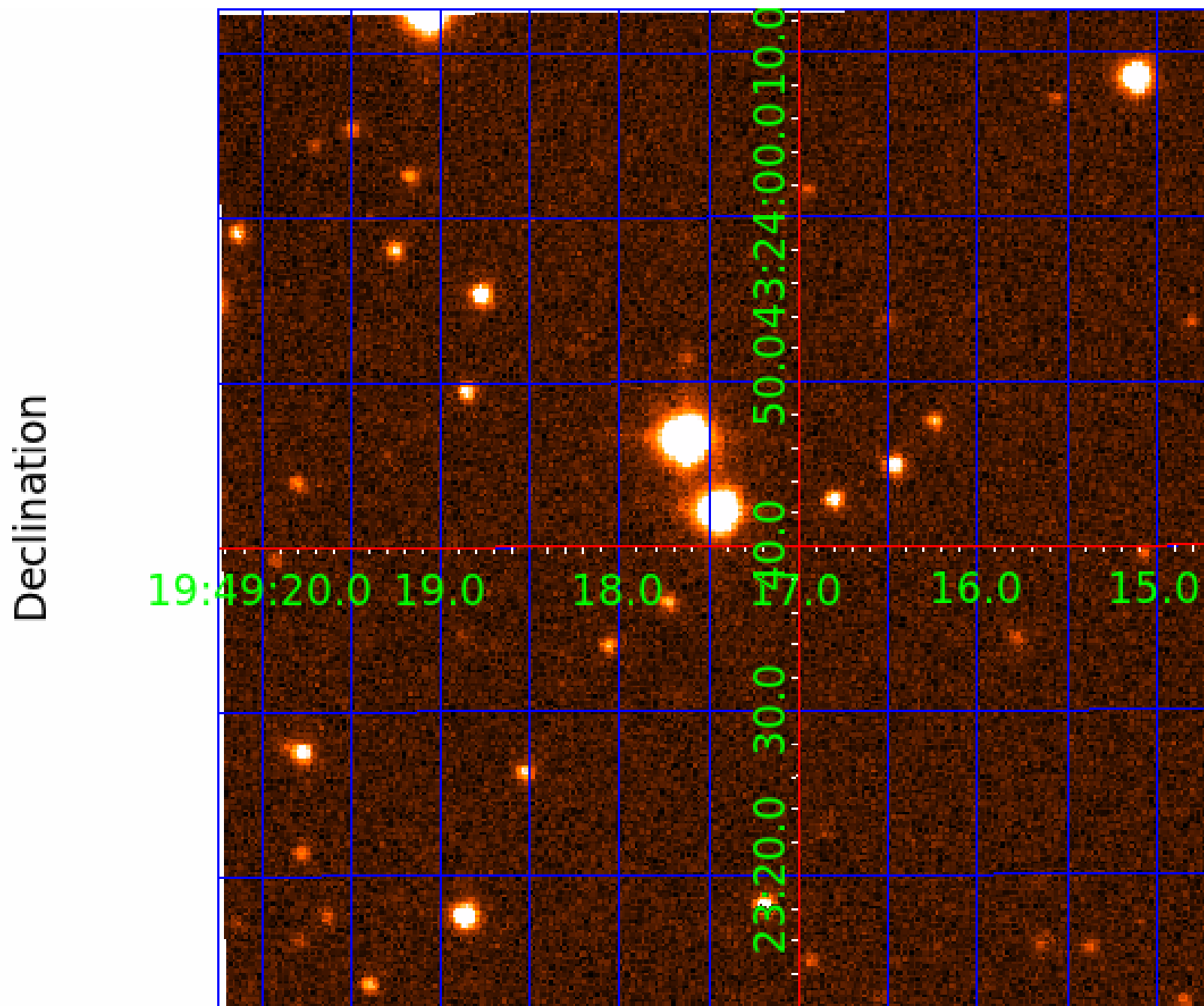
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UKIRT Image



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007700880-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
007700880-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS—HALO_GHOST
007700880-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007700880-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS
007700880-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_FEW_DIFFS
007700880-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_KIC_POS
007700880-10	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—CENT_KIC_POS

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

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

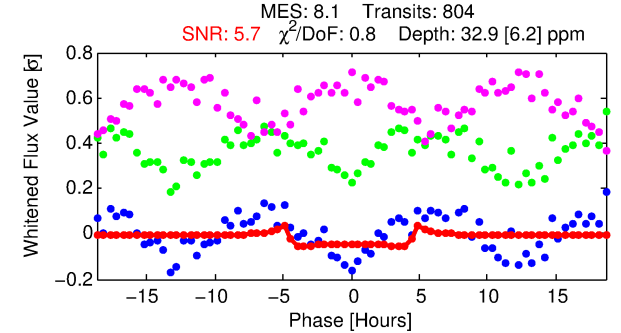
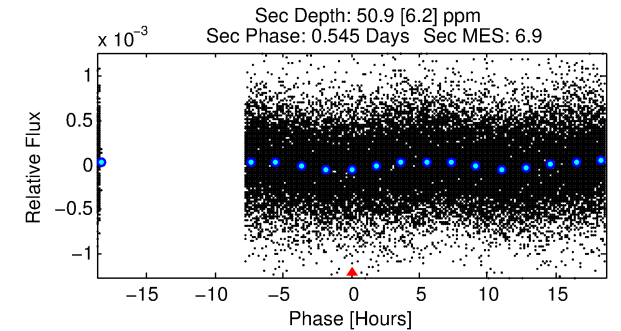
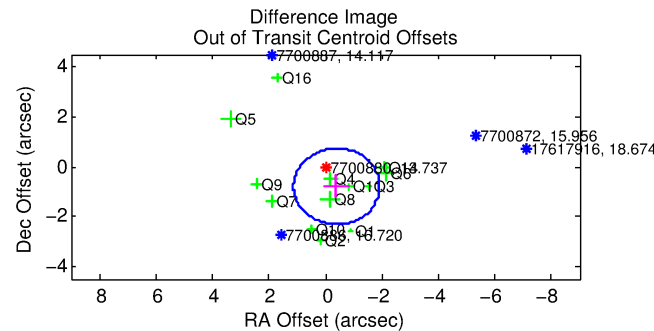
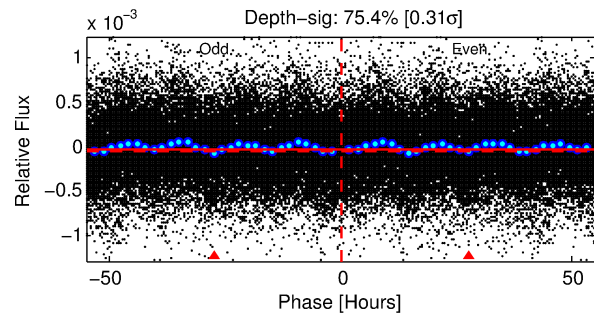
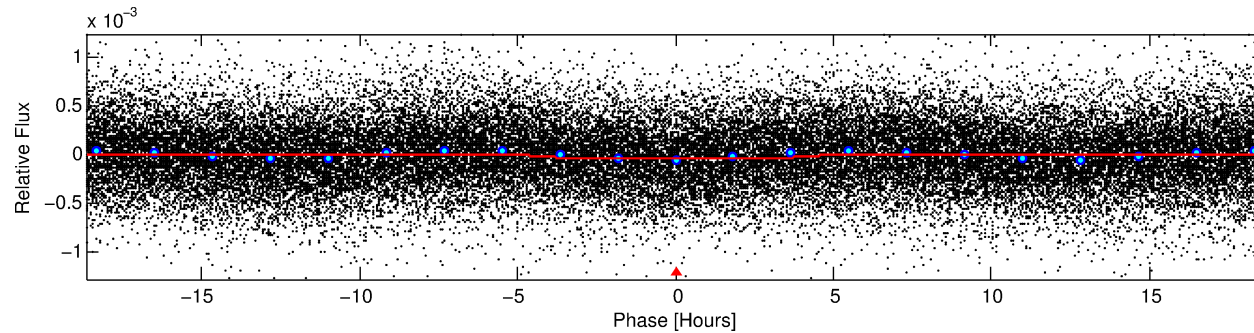
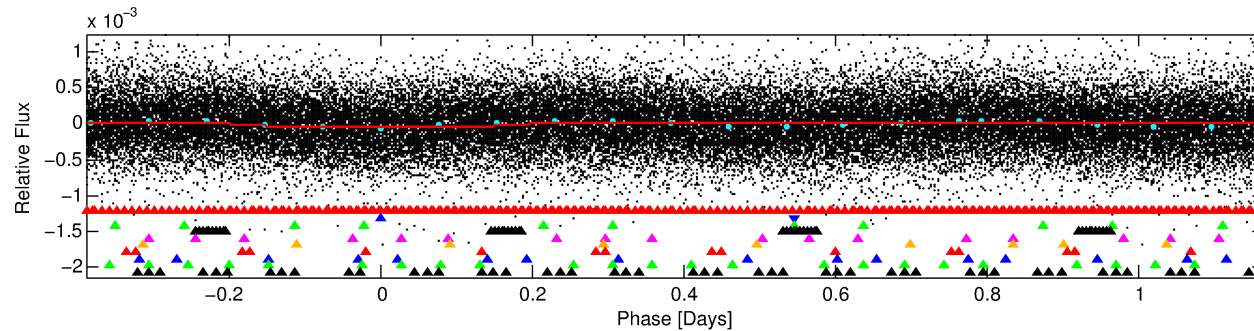
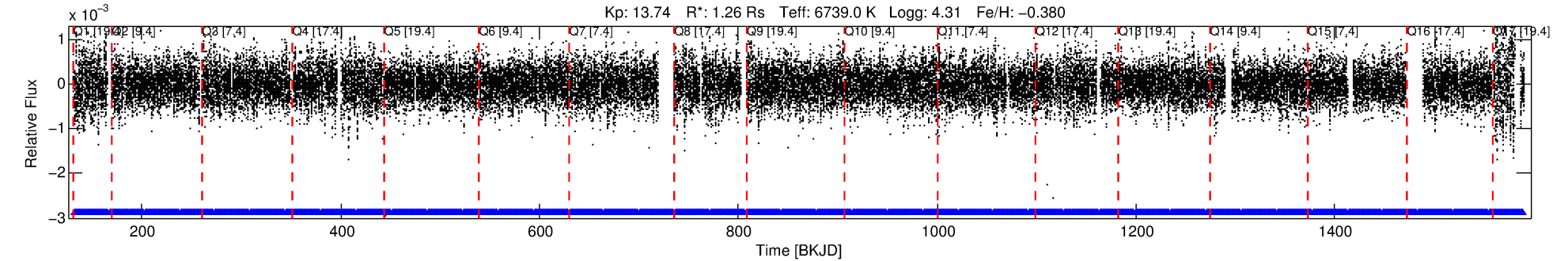
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007700880-02

No Significant Match Found

DV One-Page Summary

KIC: 7700880 Candidate: 2 of 10 Period: 1.554 d



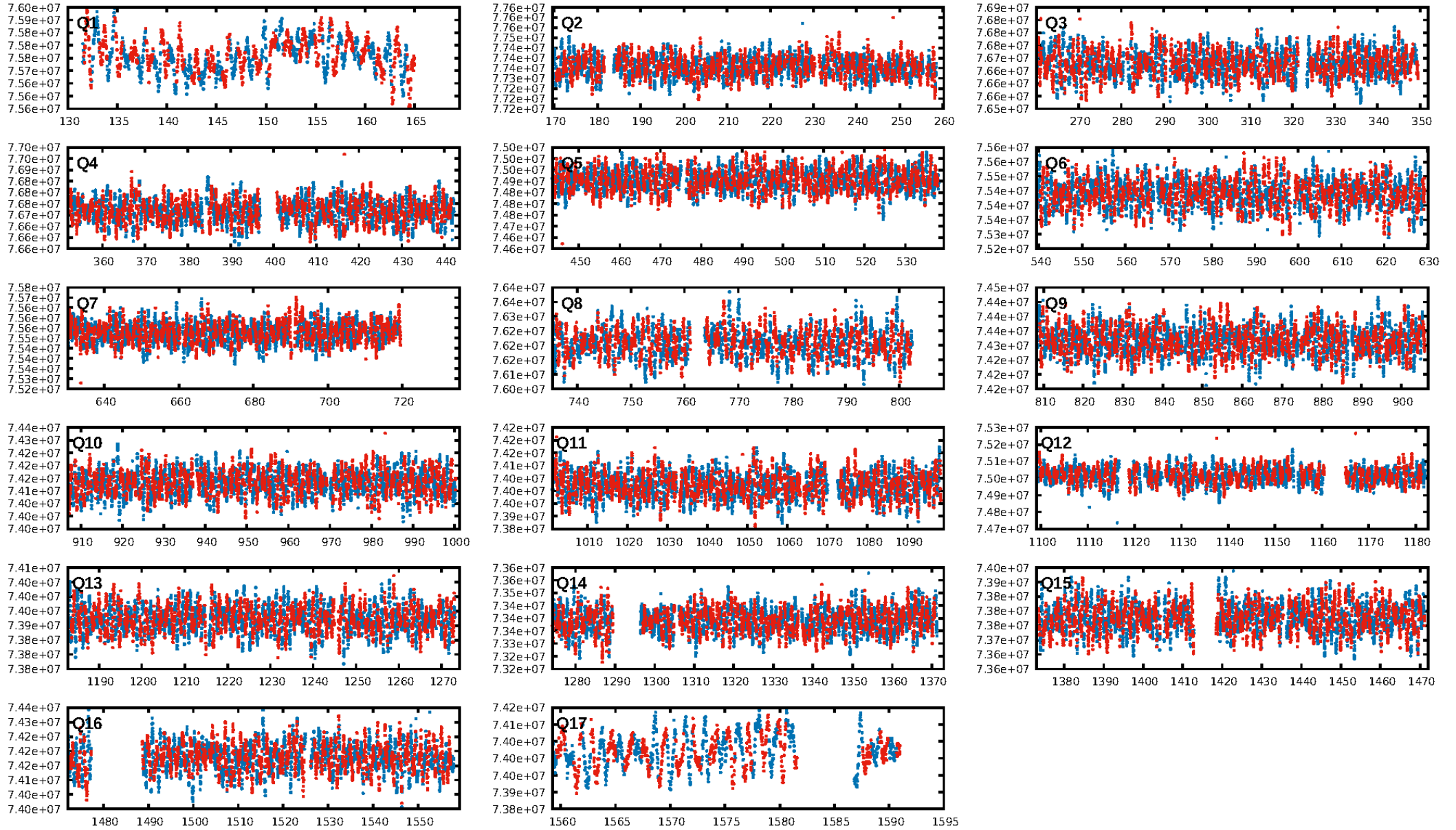
DV Fit Results:

Period = 1.55386 [0.00003] d
Epoch = 131.9976 [0.0060] BKJD
Rp/R* = 0.0055 [0.0033]
a/R* = 1.34 [2.03]
b = 0.52 [4.87]
Seff = 3819.91 [1429.43]
Teff = 2005 [188] K
Rp = 0.75 [0.50] Re
a = 0.0276 [0.0066] AU
Ag = 38.24 [48.13] [0.77 σ]
Teffp = 7707 [2347] K [2.42 σ]

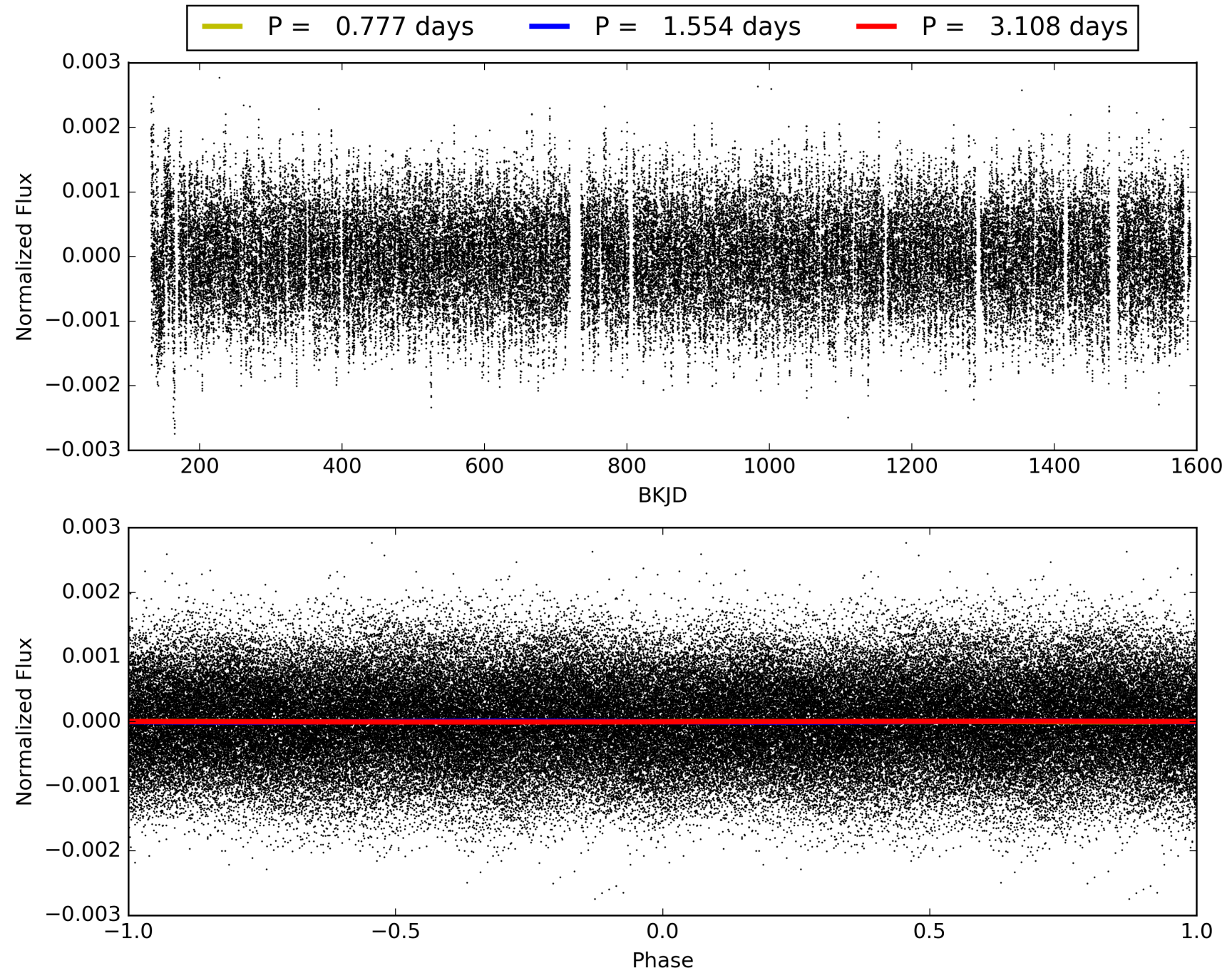
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 99.4% [2.73 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [764/764]
GhostDiagnostic-chr: 0.7487
Centroid-sig: 0.4%
Centroid-so: 0.483 arcsec [0.69 σ]
OotOffset-rm: 0.888 arcsec [1.75 σ]
OotOffset-st: 4/3/3/3 [13]
KicOffset-rm: 0.480 arcsec [1.00 σ]
KicOffset-st: 4/3/3/3 [13]
DiffImageQuality-fgm: 0.46 [6/13]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 007700880-02, PDC Light Curves

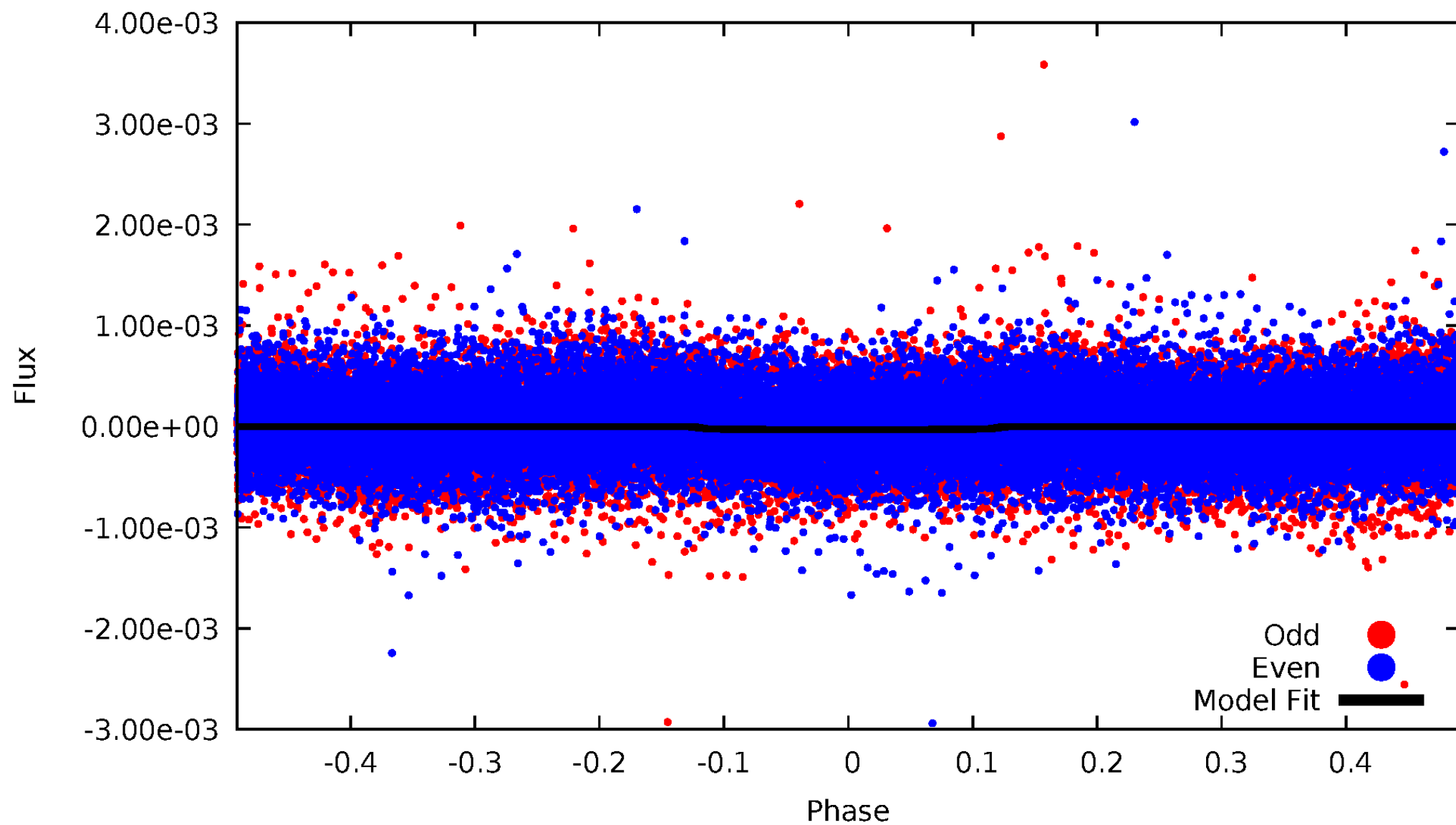


TCE 007700880-02



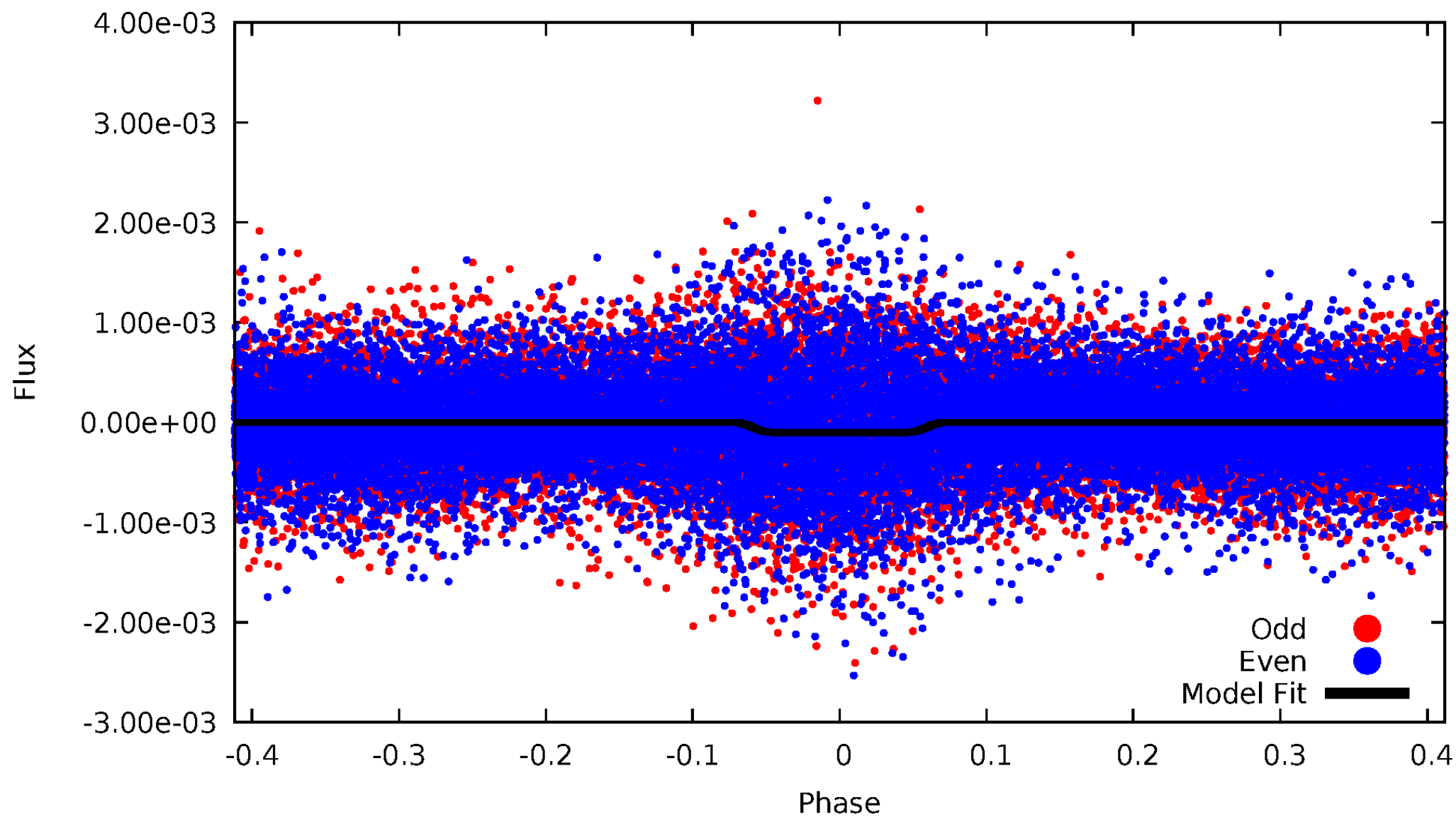
DV Odd/Even

TCE 007700880-02



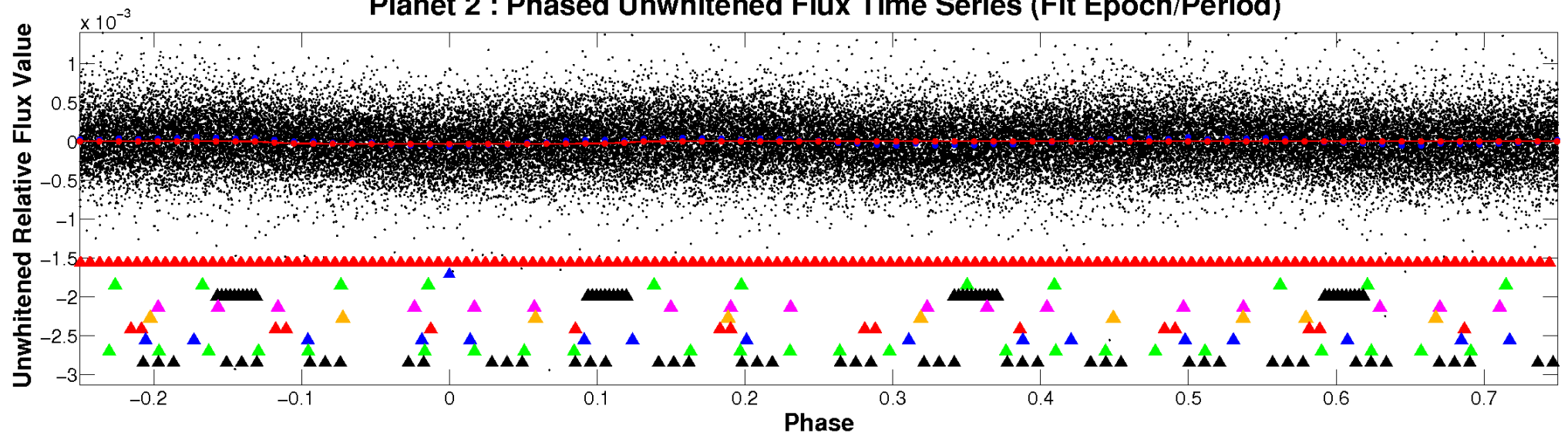
ALT Odd/Even

TCE 007700880-02

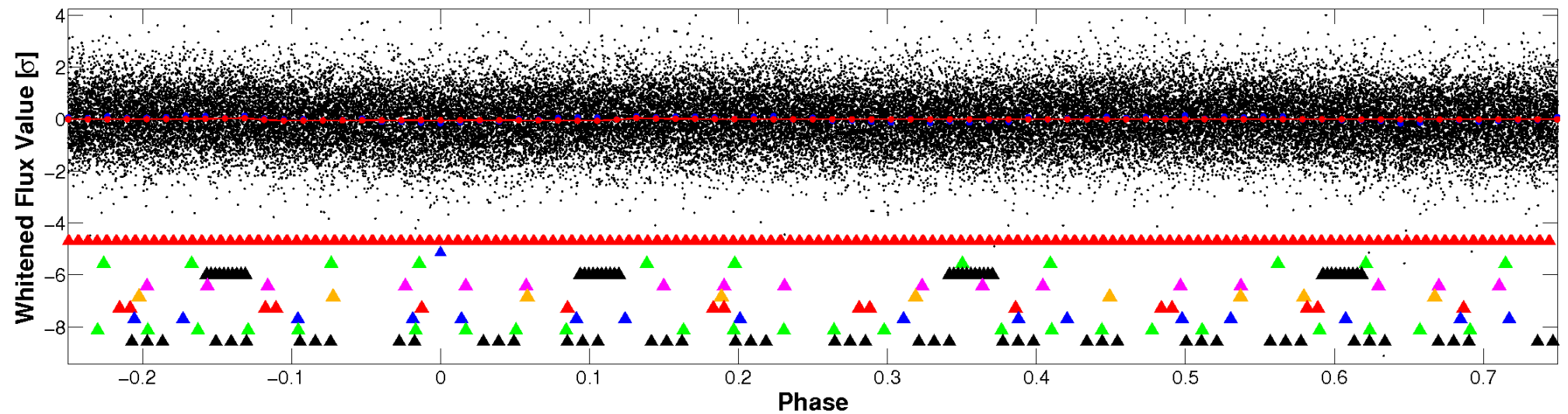


Non-Whitened Vs. Whitened Light Curve

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

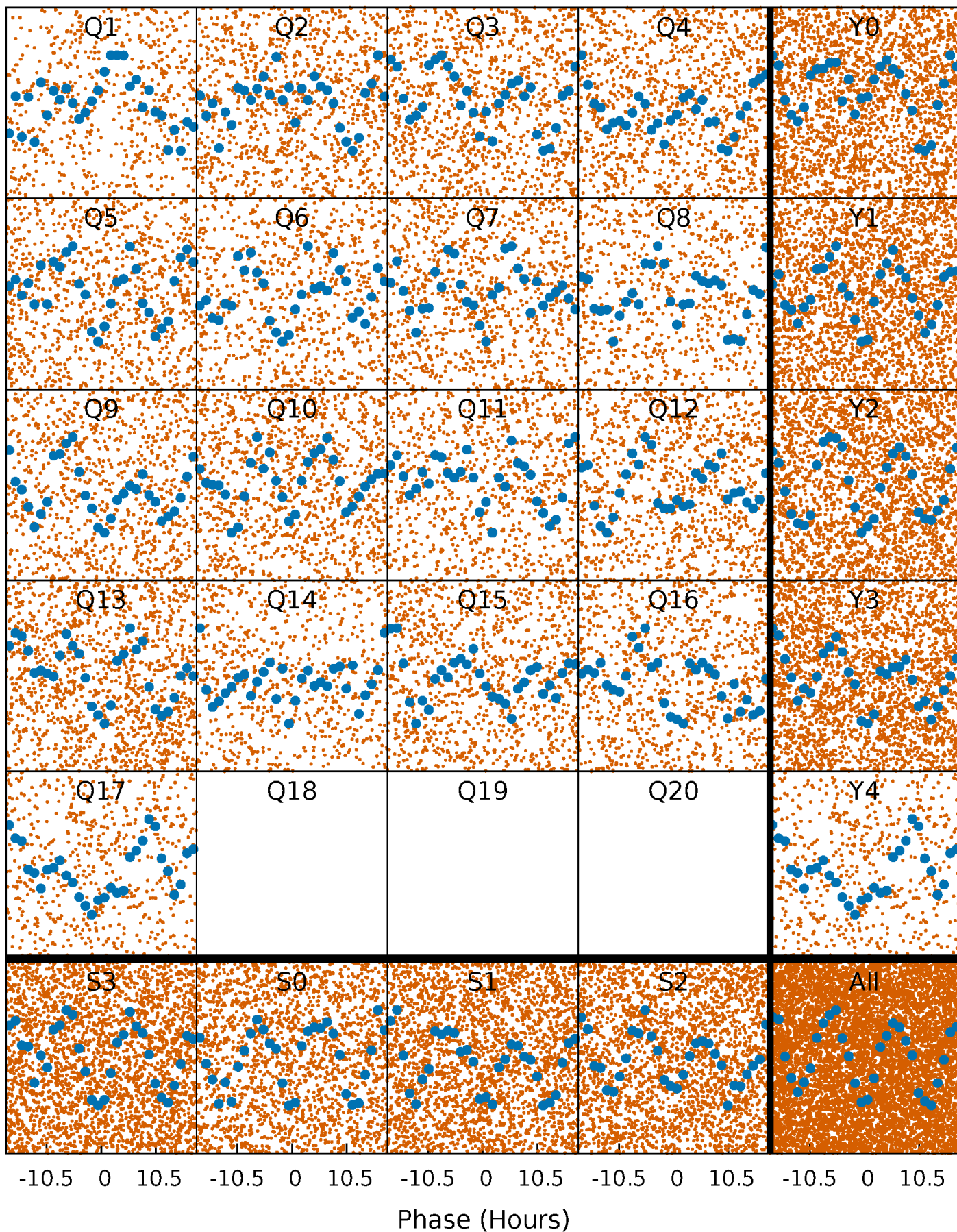


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



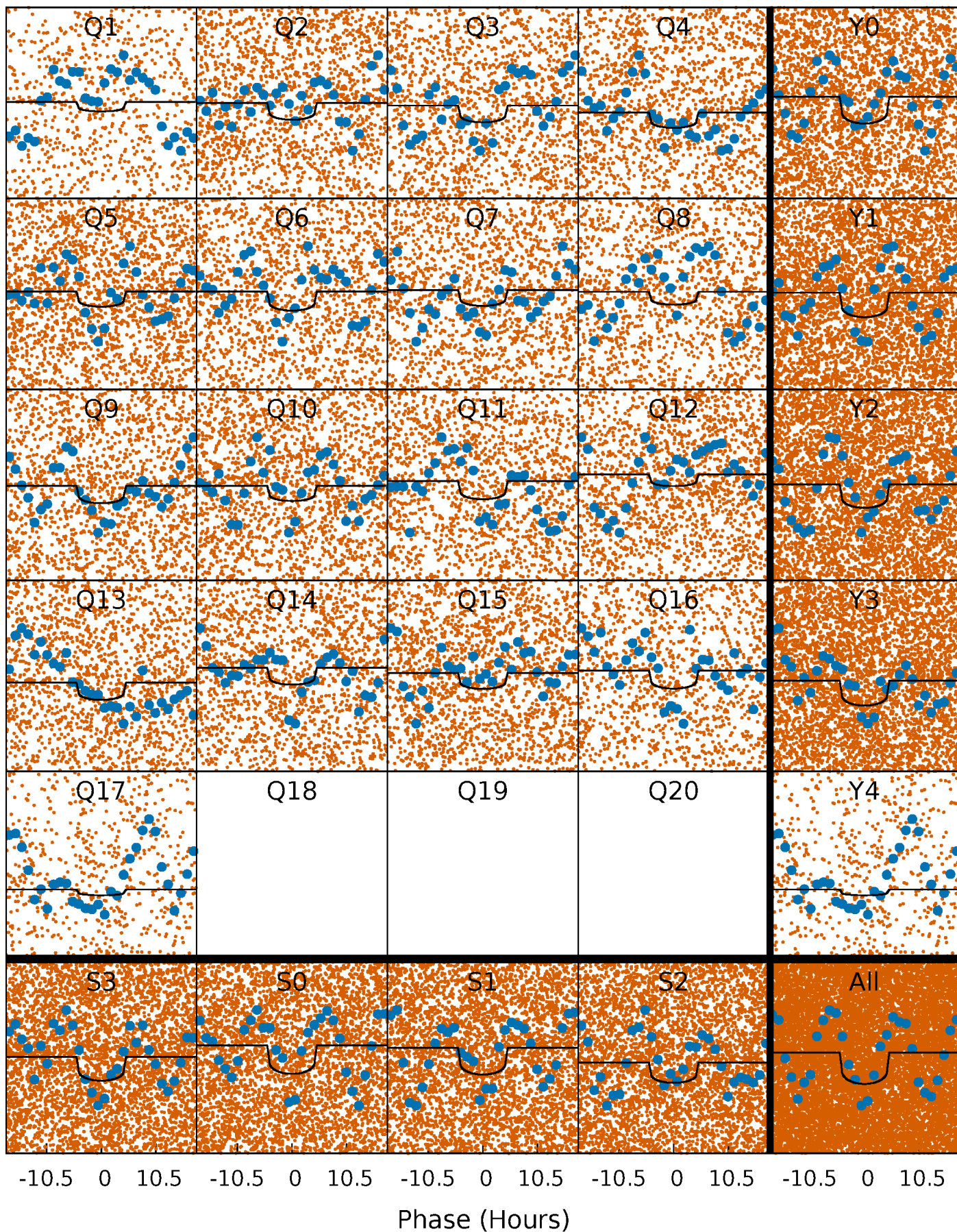
PDC Quarter-Phased Transit Curves

TCE 007700880-02 P= 1.553862 Days $T_0=131.997646$ (BKJD)



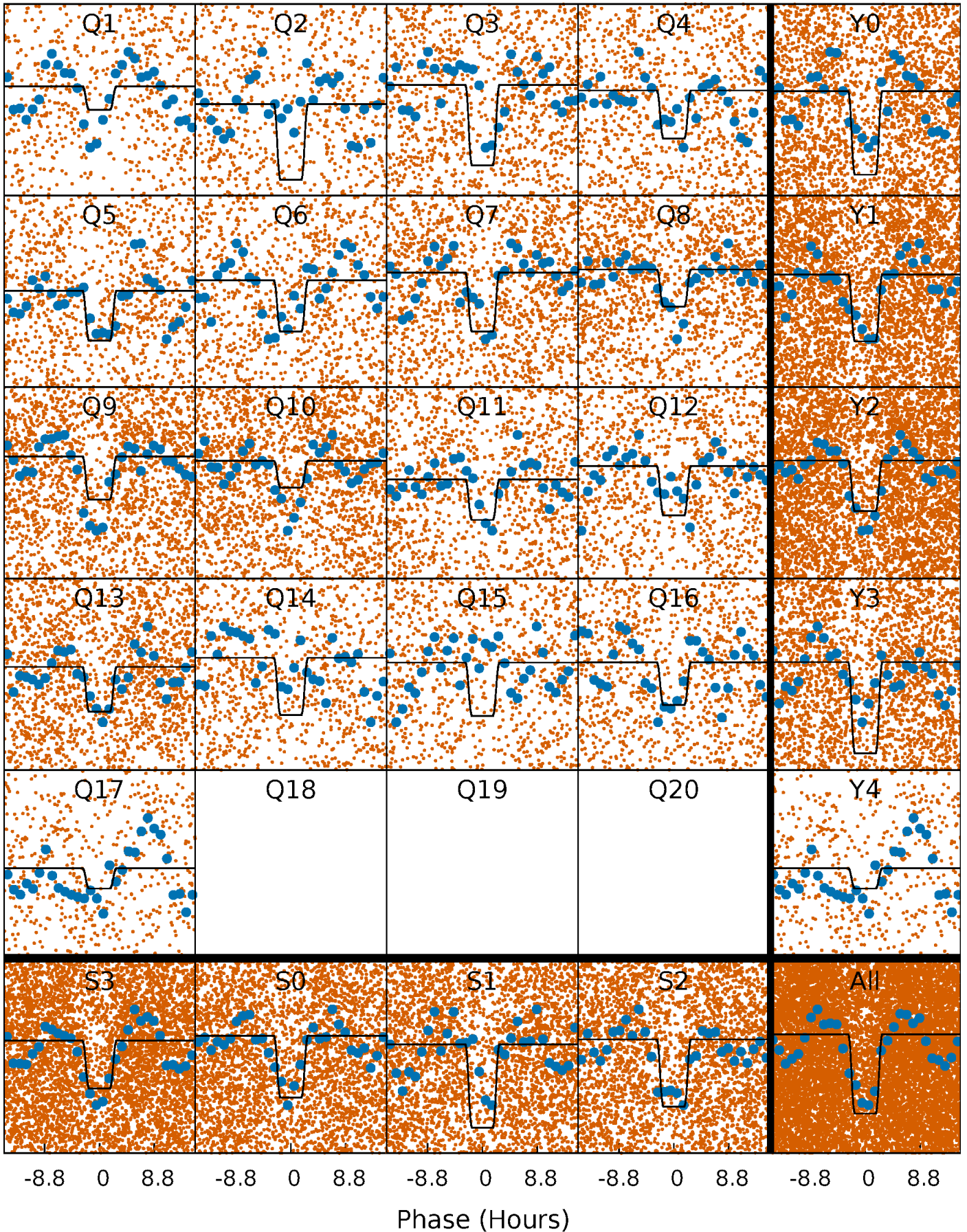
DV Quarter-Phased Transit Curves

TCE 007700880-02 P= 1.553862 Days $T_0=131.997646$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

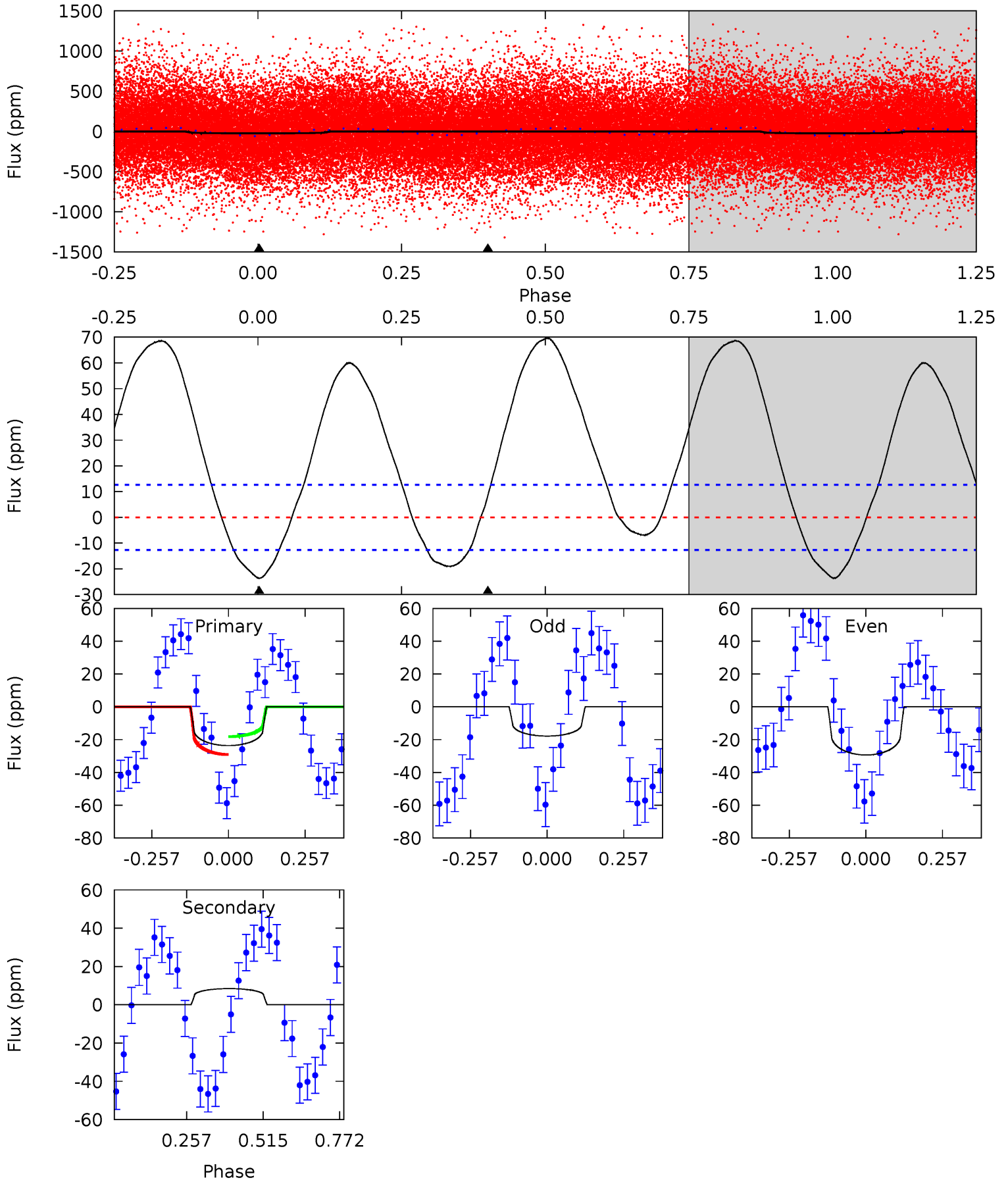
TCE 007700880-02 P= 1.553943 Days $T_0=131.953760$ (BKJD)



DV Model-Shift Uniqueness Test

007700880-02, P = 1.553862 Days, E = 130.443784 Days

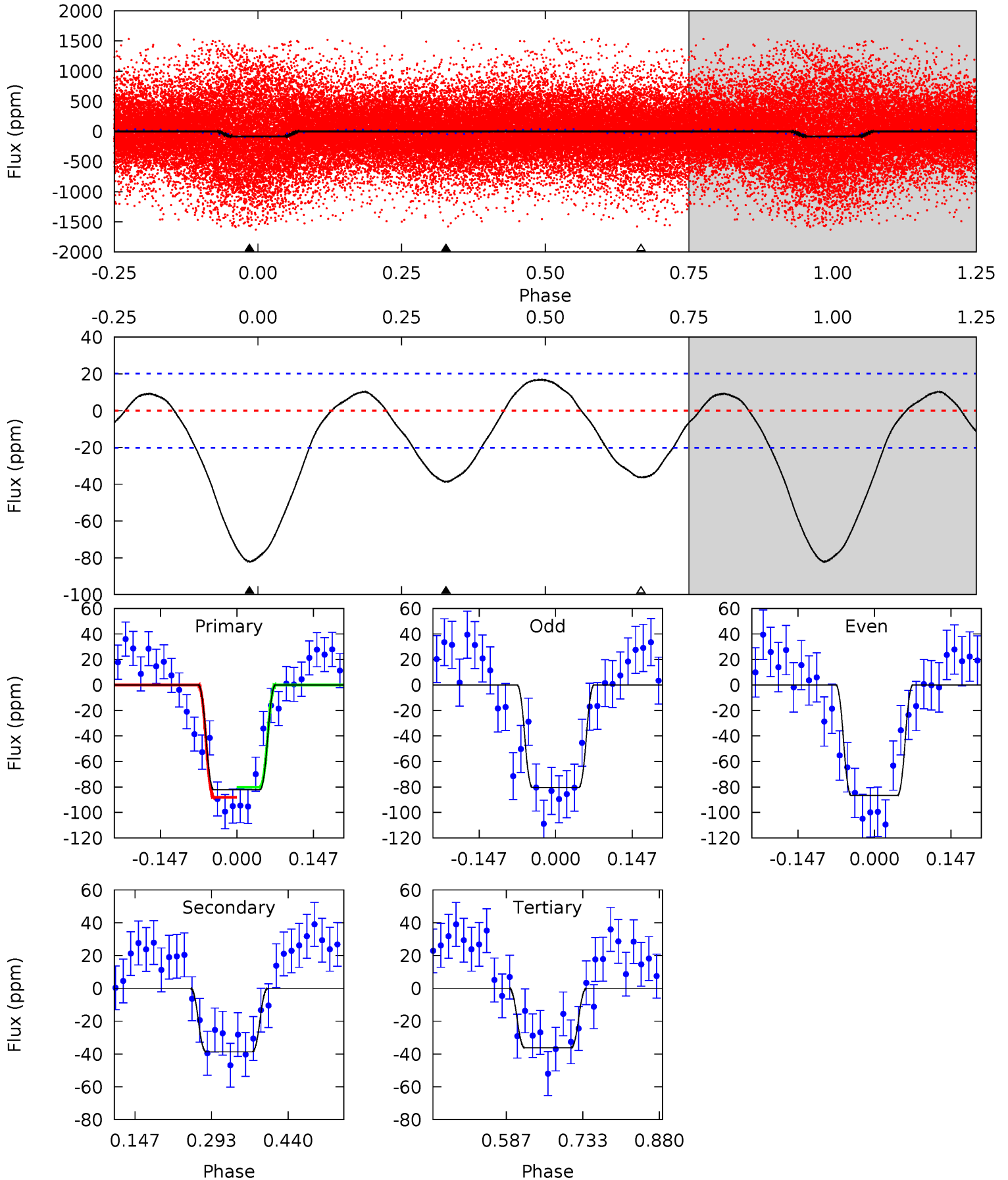
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.16	-2.91	0	0	4.36	1.13	4.60	8.16	8.16	-2.91	-2.91	2.00	0.97	0.75	1.97



Alt Model-Shift Uniqueness Test

007700880-02, P = 1.553943 Days, E = 130.399817 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.3	8.61	8.06	0	4.48	1.45	3.91	10.2	18.3	0.55	8.61	0.70	0.85	0.17	0.91



Stellar Parameters For KIC 007700880

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6739^{+189}_{-236}	$4.306^{+0.101}_{-0.188}$	$-0.380^{+0.250}_{-0.300}$	$1.256^{+0.363}_{-0.196}$	$1.170^{+0.175}_{-0.158}$	$0.831^{+0.384}_{-0.422}$
	+3%/-4%	+2%/-4%	+66%/-79%	+29%/-16%	+15%/-14%	+46%/-51%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007700880-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	8 ± 3	$0.78^{+0.48}_{-0.43}$	2822^{+200}_{-173}	-4937^{+810}_{-2339}	$-5.616^{+3.625}_{-24.733}$
Alt.	-39 ± 4	$1.43^{+0.49}_{-0.46}$	2841^{+212}_{-177}	5263^{+1080}_{-667}	$7.965^{+9.253}_{-3.797}$

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

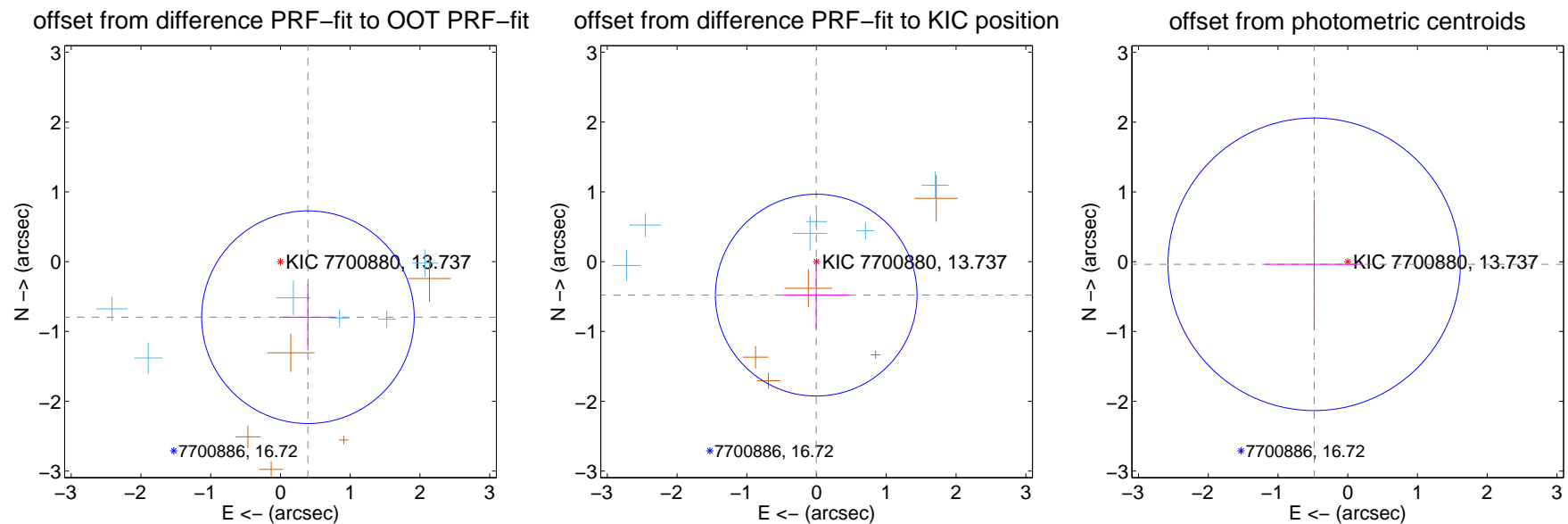
DV Centroid Data

Supplemental centroid analysis for 007700880-02. Kepler magnitude: 13.74. Transit SNR 5.67

There are 6 quarters with good PRF difference image offsets

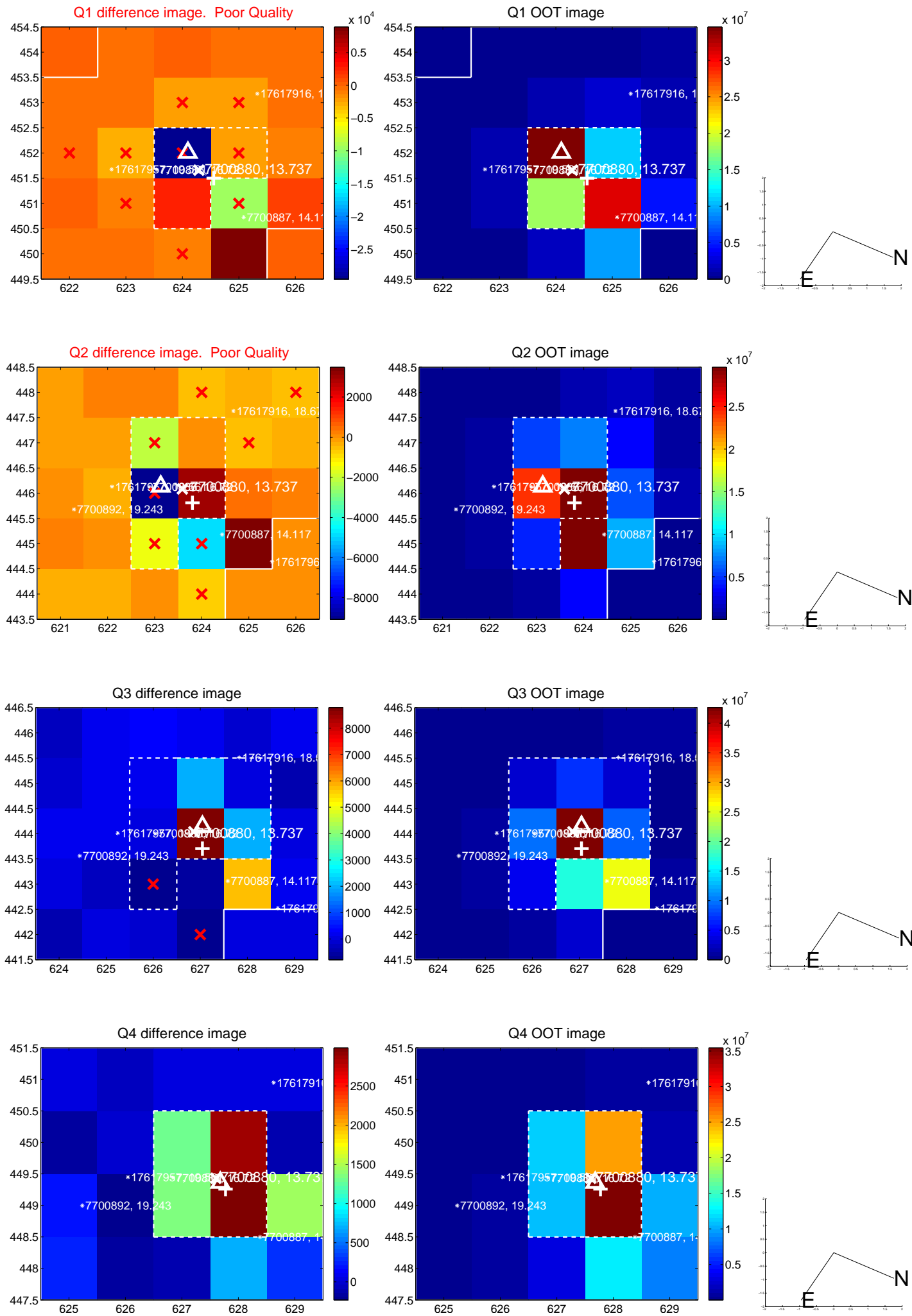
The direct PRF centroid is offset from the target star catalog position by about 1.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.888 ± 0.508	1.75	-0.394 ± 0.413	-0.796 ± 0.477
PRF-fit source offset from KIC position	0.480 ± 0.482	1.00	0.005 ± 0.479	-0.480 ± 0.484
photometric centroid source offset	0.48 ± 0.70	0.69	0.48 ± 0.70	-0.04 ± 0.93

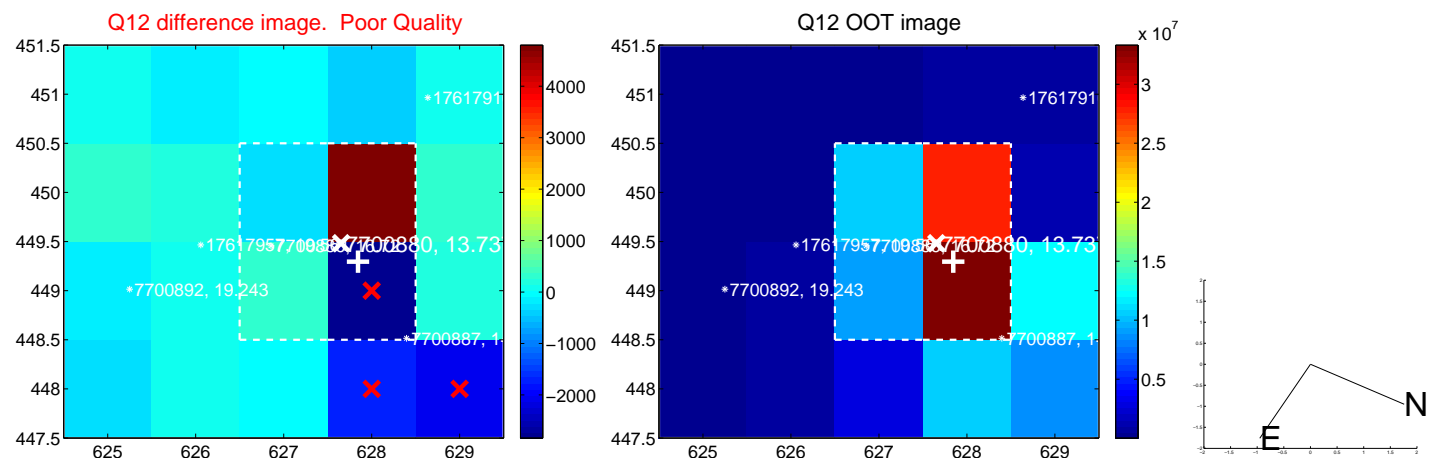
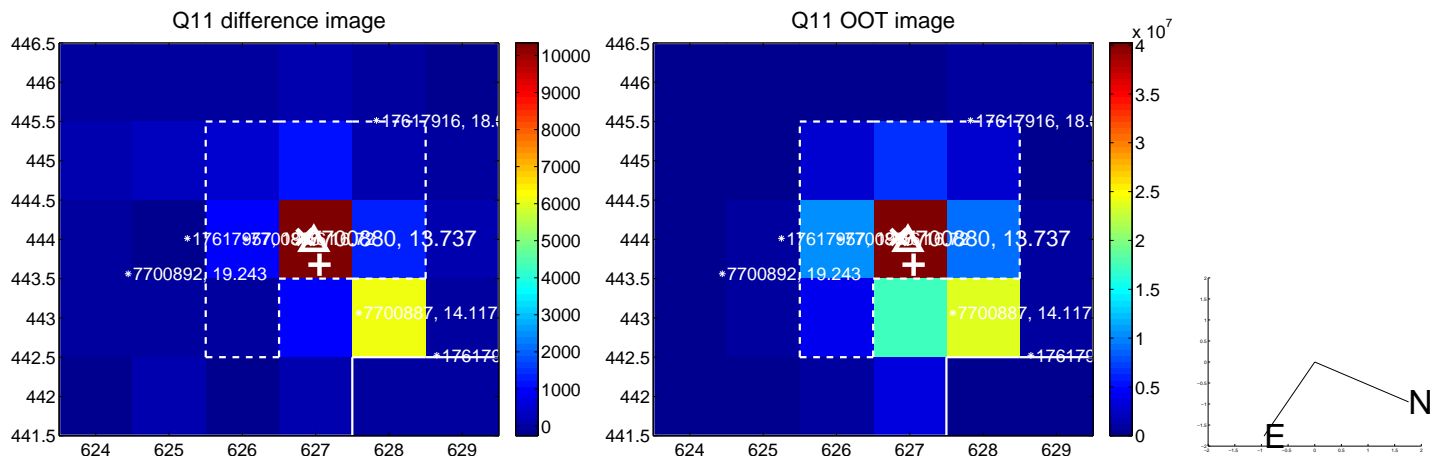
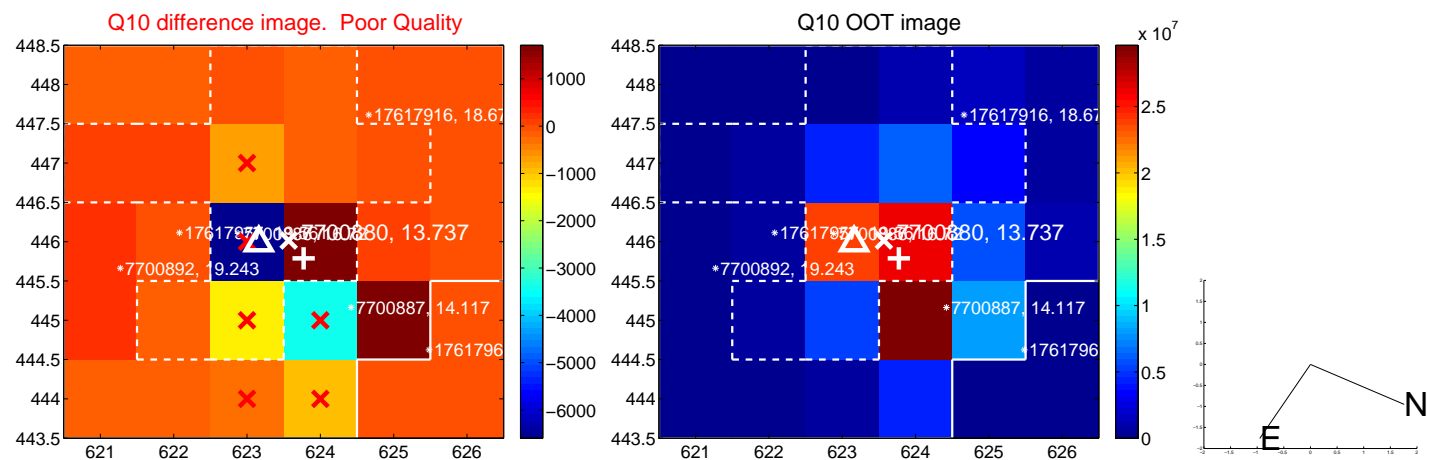
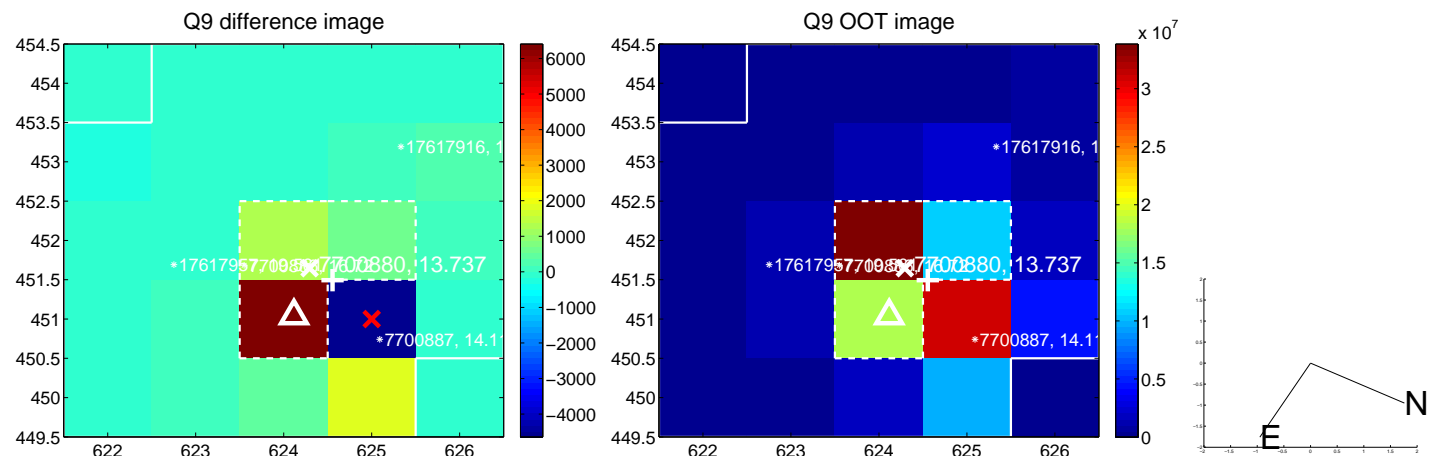


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

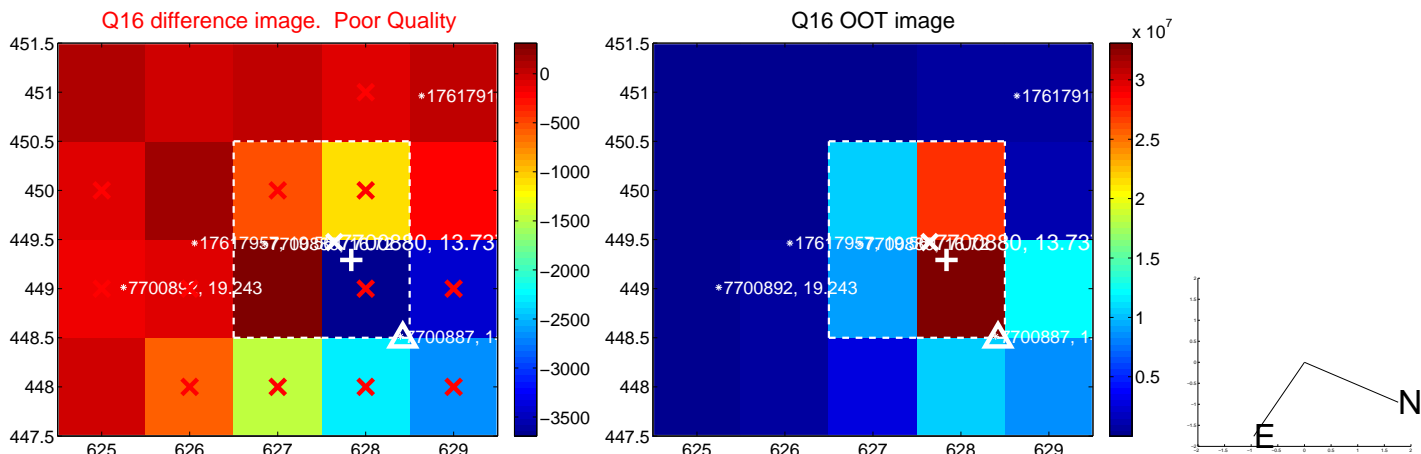
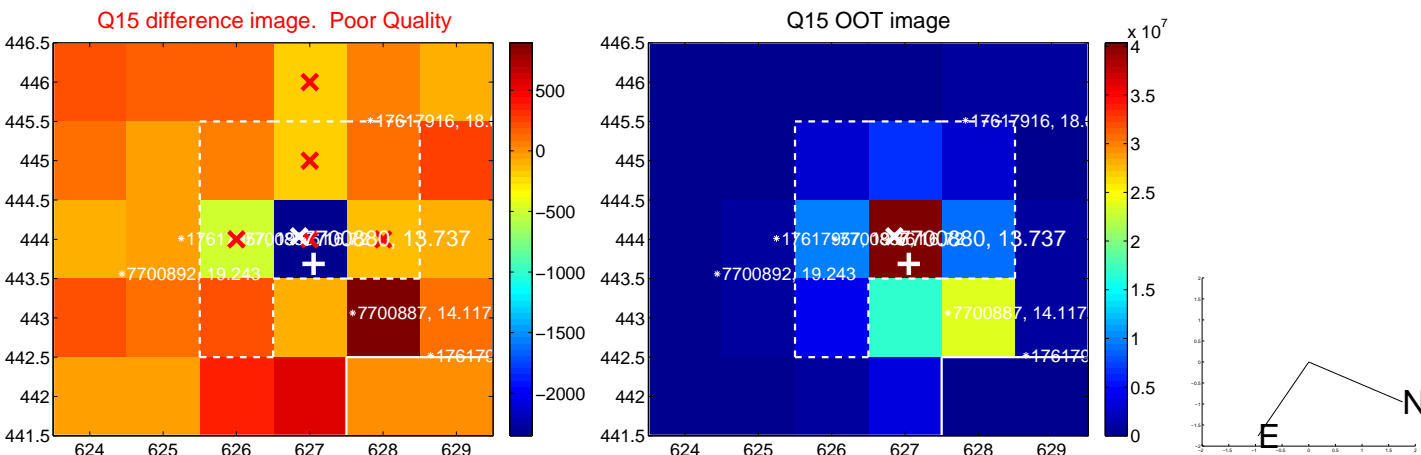
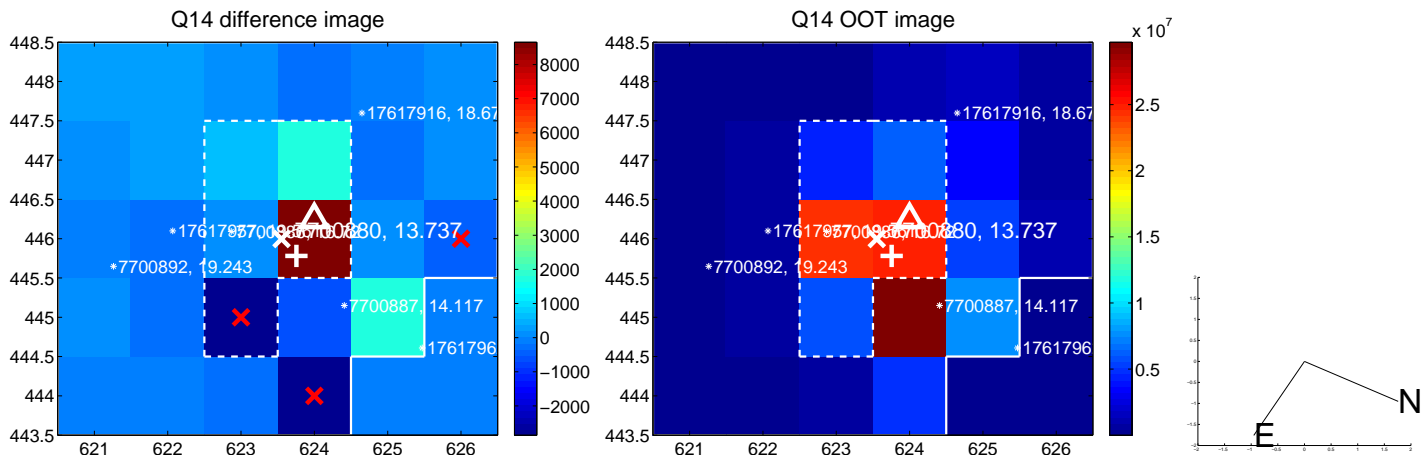
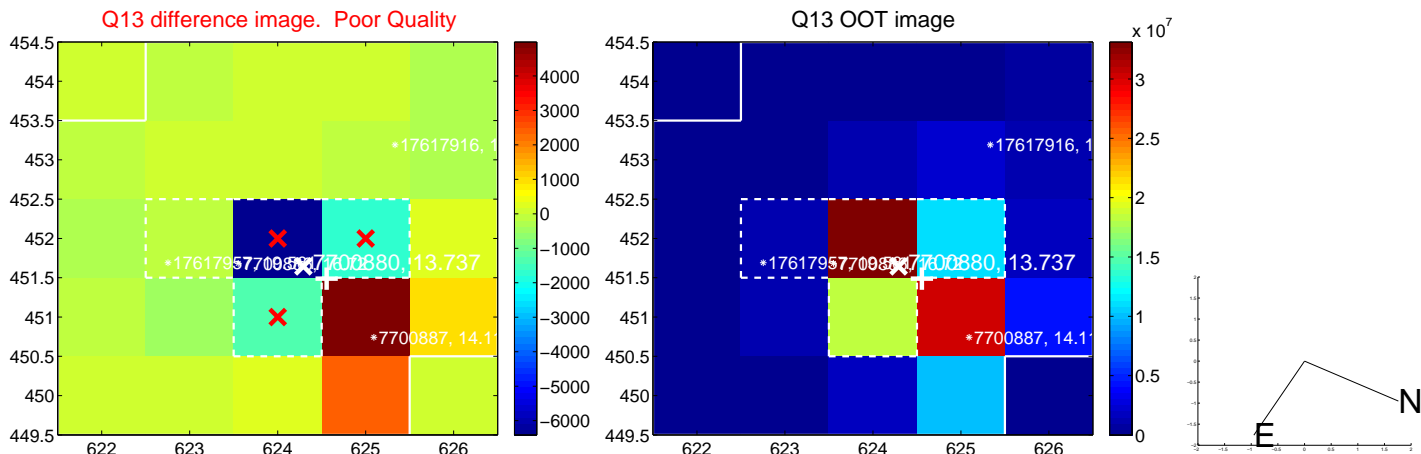
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



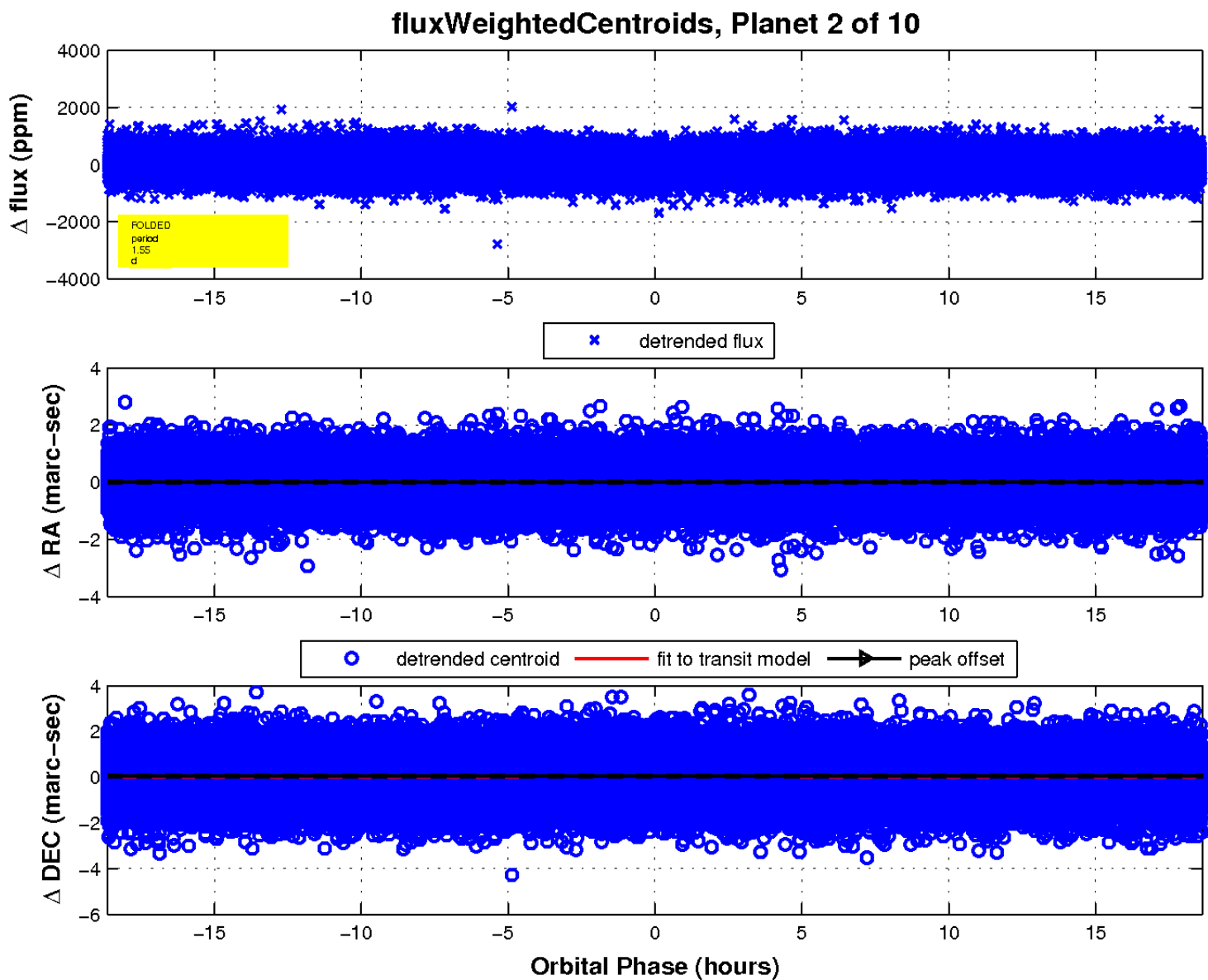
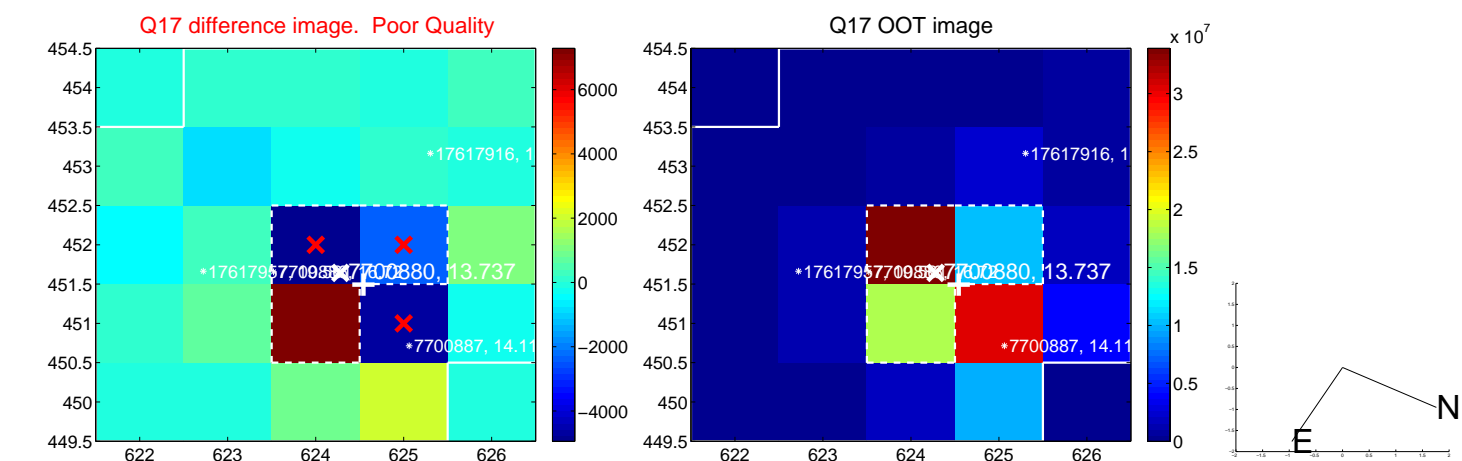
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



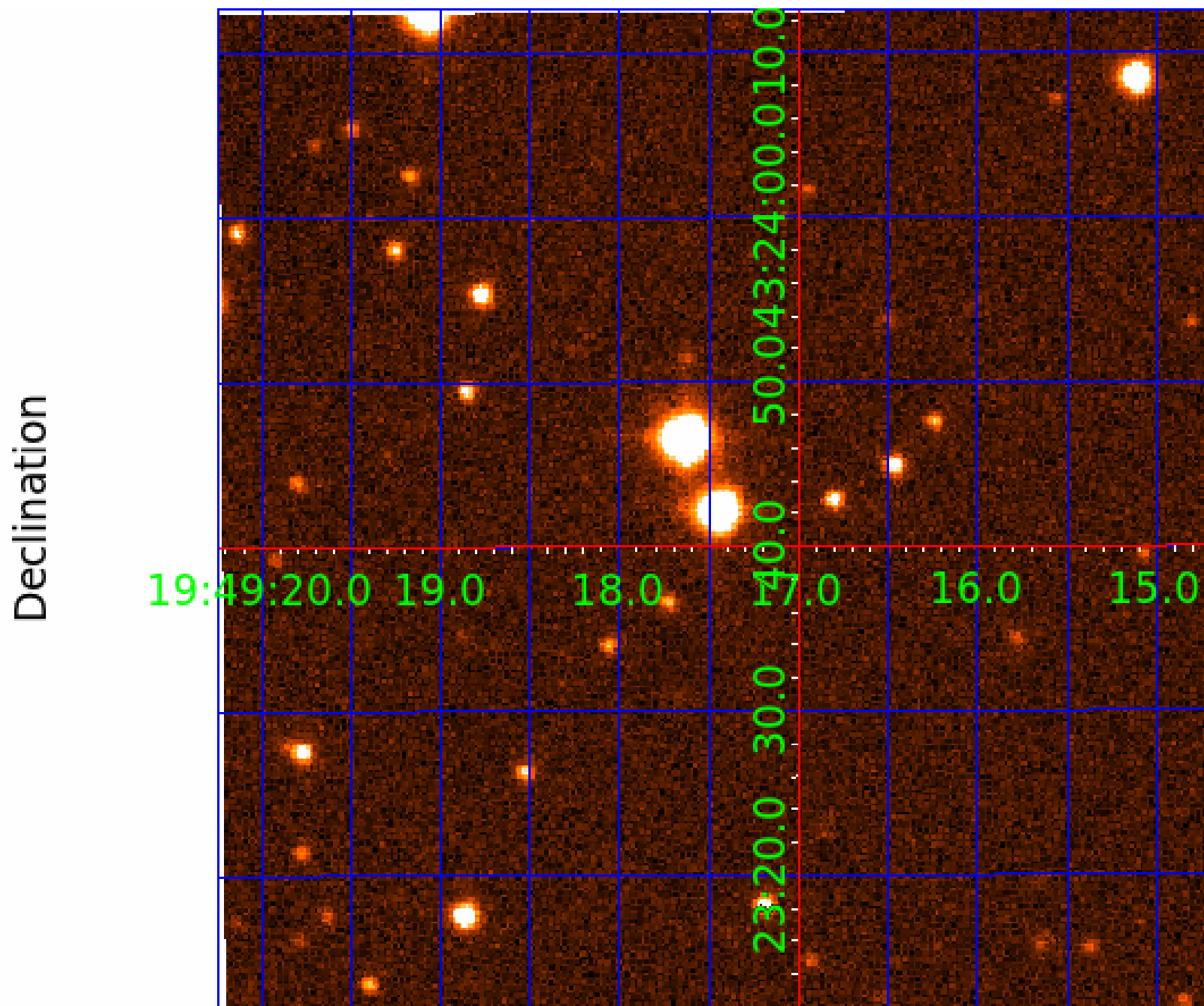
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
007700880-01	OBS	No	2.711831	133.076025	79.4	4.438	8.9	10.3	1.26	6739	1.30	1817.97
007700880-02	OBS	No	1.553862	131.997646	32.9	9.156	8.1	5.7	1.26	6739	0.75	3819.91
007700880-03	OBS	No	130.853517	252.755847	640.1	5.069	10.5	8.7	1.26	6739	3.82	10.35
007700880-04	OBS	No	36.128406	132.528556	326.7	5.539	9.6	9.5	1.26	6739	2.56	57.56
007700880-06	OBS	No	161.399146	278.961203	829.7	19.846	10.9	10.2	1.26	6739	4.34	7.82
007700880-07	OBS	No	92.145114	152.634577	210.9	0.940	8.4	1.9	1.26	6739	2.12	16.52
007700880-08	OBS	No	92.138931	153.022111	450.8	5.333	8.5	7.9	1.26	6739	2.92	16.52
007700880-09	OBS	No	64.651118	157.112939	105.5	14.705	8.1	2.4	1.26	6739	1.42	26.50
007700880-10	OBS	No	29.889930	147.843900	268.6	7.381	8.8	8.0	1.26	6739	2.22	74.11

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007700880-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_KIC_POS
007700880-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_KIC_POS
007700880-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
007700880-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS—HALO_GHOST
007700880-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007700880-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS
007700880-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_FEW_DIFFS
007700880-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_KIC_POS
007700880-10	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—CENT_KIC_POS

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

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

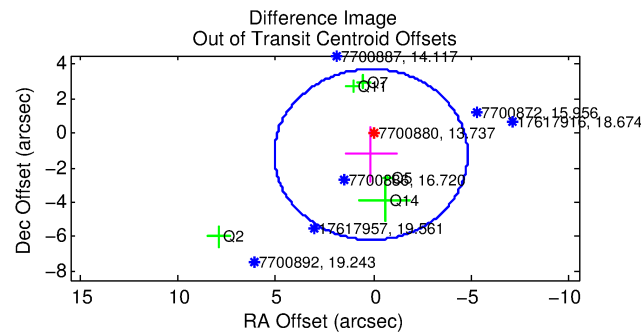
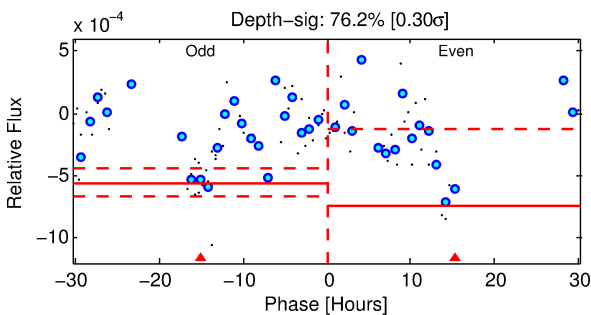
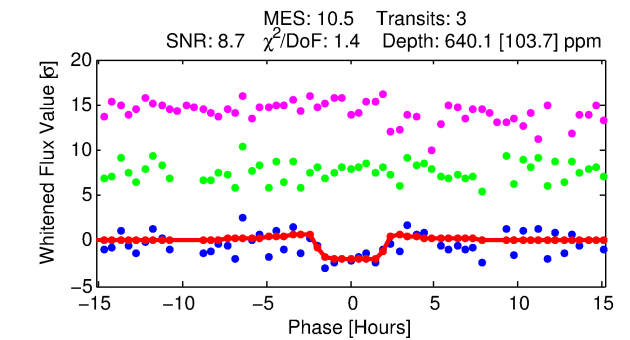
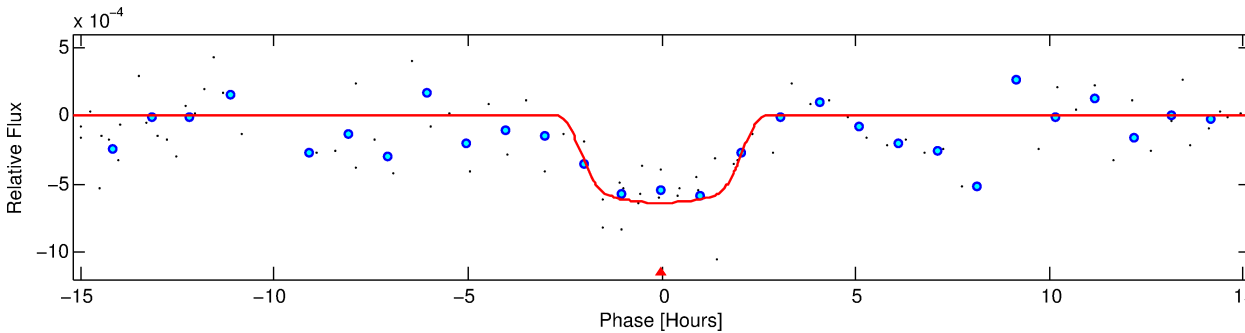
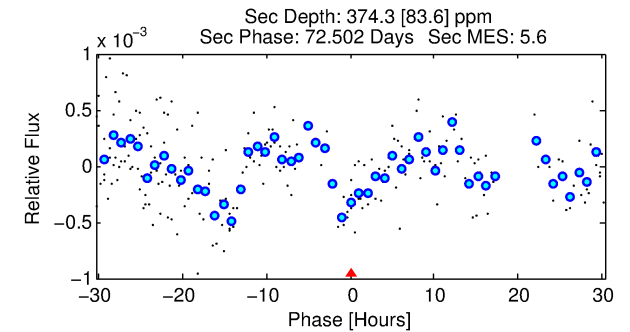
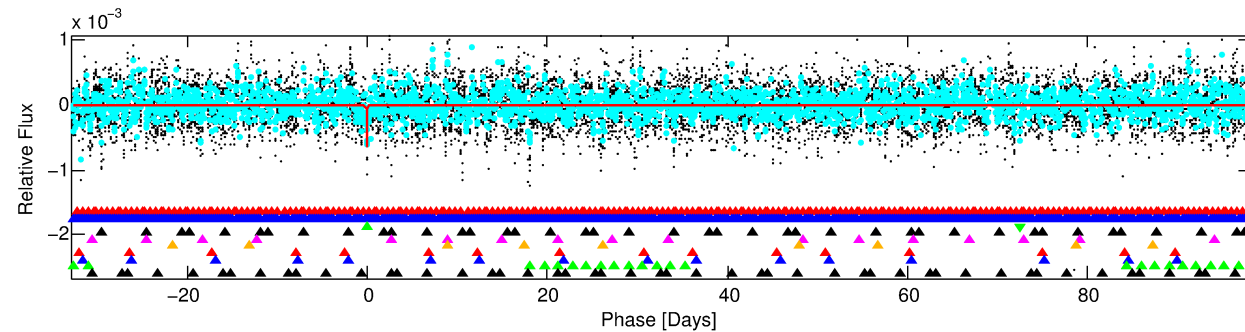
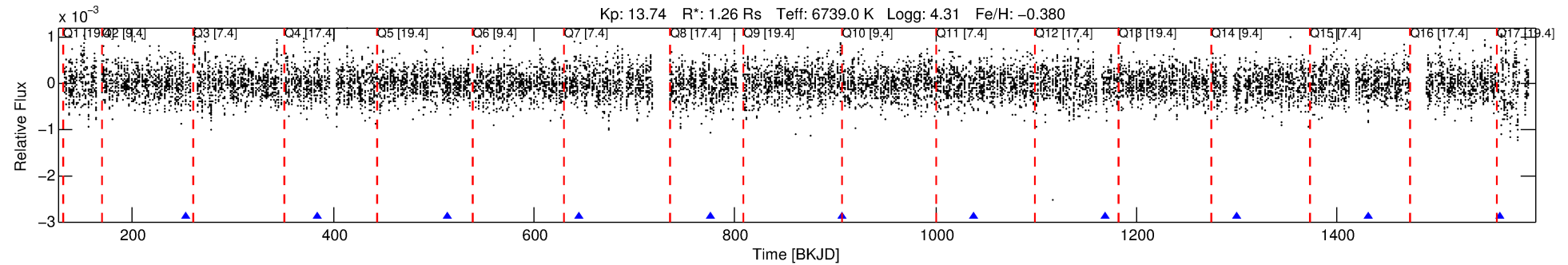
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007700880-03

No Significant Match Found

DV One-Page Summary

KIC: 7700880 Candidate: 3 of 10 Period: 130.854 d



DV Fit Results:

Period = 130.85352 [0.00342] d
Epoch = 252.7558 [0.0245] BKJD
Rp/R* = 0.0279 [0.0042]
a/R* = 84.97 [59.17]
b = 0.93 [0.09]
Seff = 10.35 [3.87]
Teq = 457 [43] K
Rp = 3.82 [1.25] Re
a = 0.5307 [0.1278] AU
Ag = 3973.97 [2037.03] [1.95 σ]
Teffp = 5614 [565] K [9.10 σ]

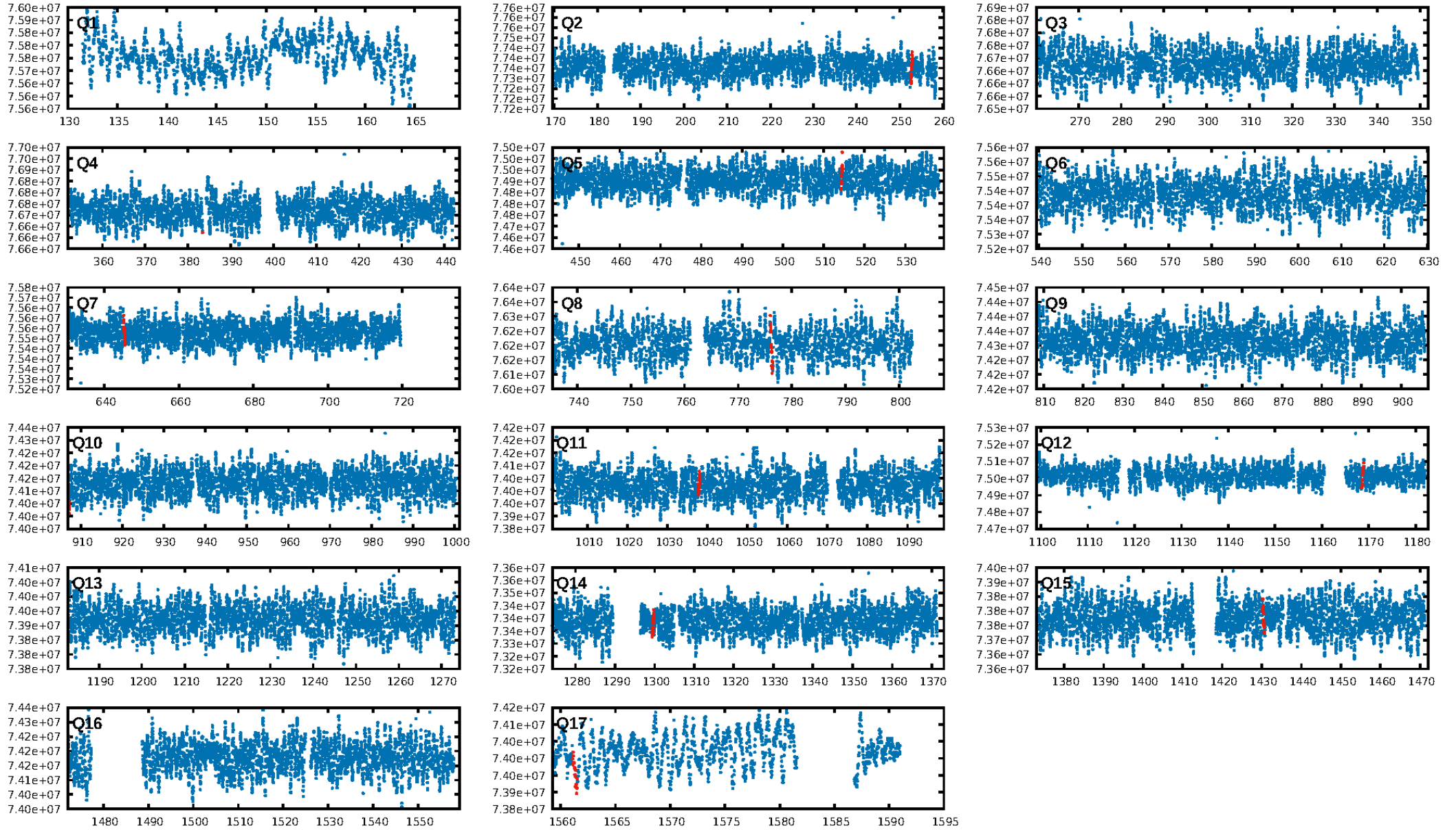
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [180.19 σ]
LongPeriod-sig: 100.0% [35.79 σ]
ModelChiSquare2-sig: 48.0%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.7276
Centroid-sig: 21.9%
Centroid-so: 1.005 arcsec [1.53 σ]
OotOffset-rm: 1.247 arcsec [0.76 σ]
KicOffset-rm: 1.566 arcsec [1.09 σ]
OotOffset-st: 2/2/0/1 [5]
KicOffset-st: 2/2/0/1 [5]
DiffImageQuality-fgm: 0.00 [0/5]
DiffImageOverlap-fno: 0.00 [0/8]

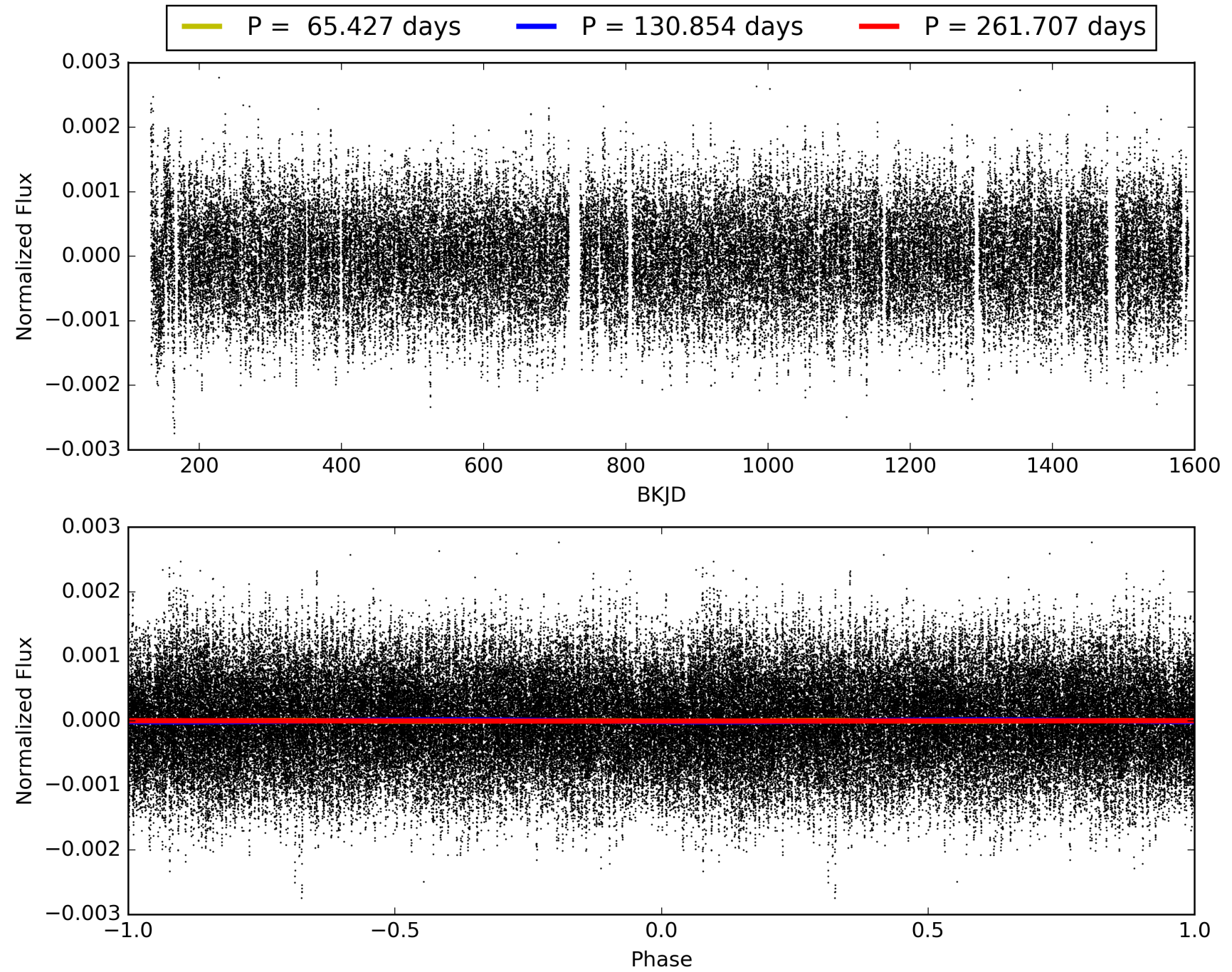
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 007700880-03, PDC Light Curves

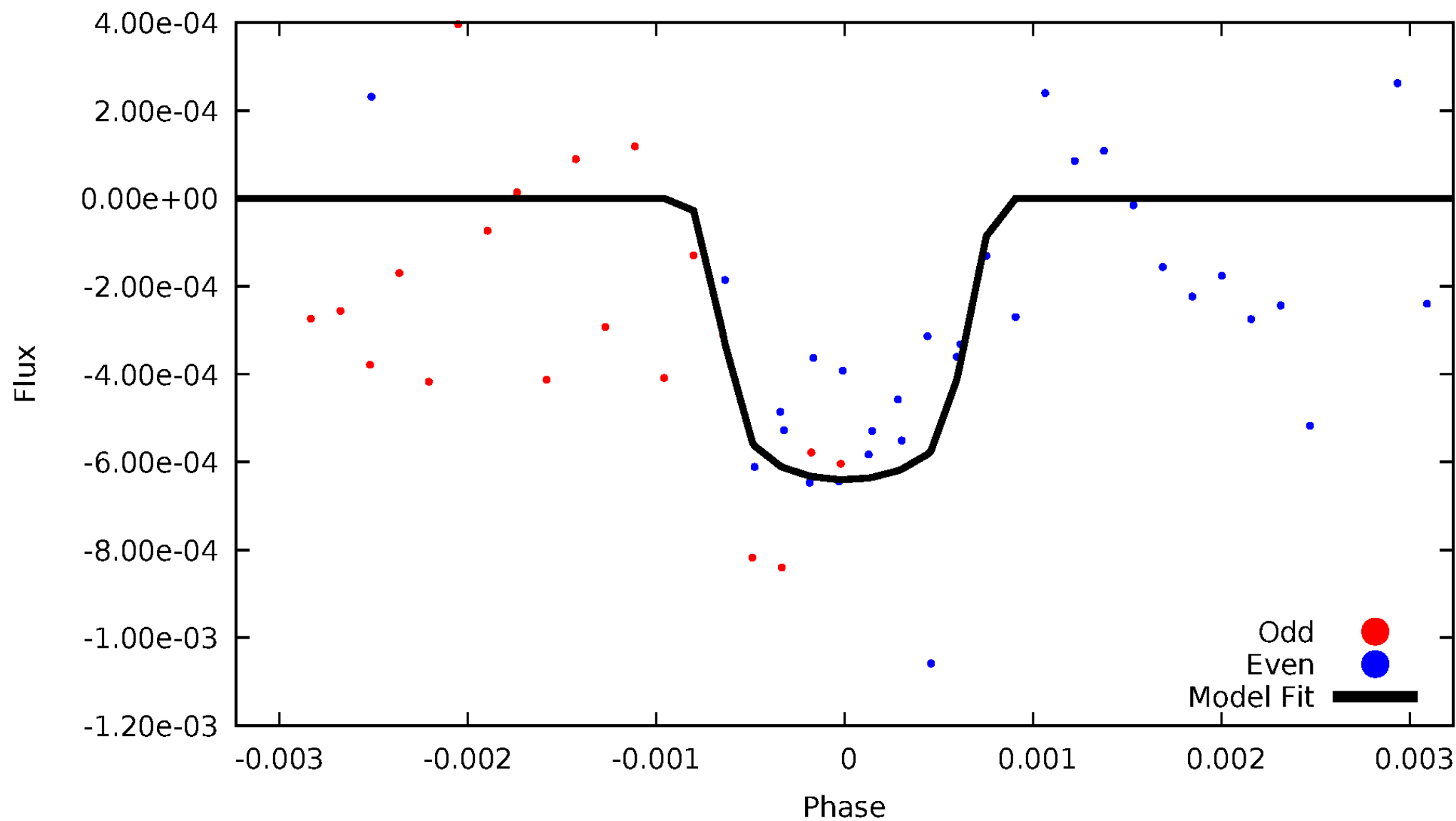


TCE 007700880-03



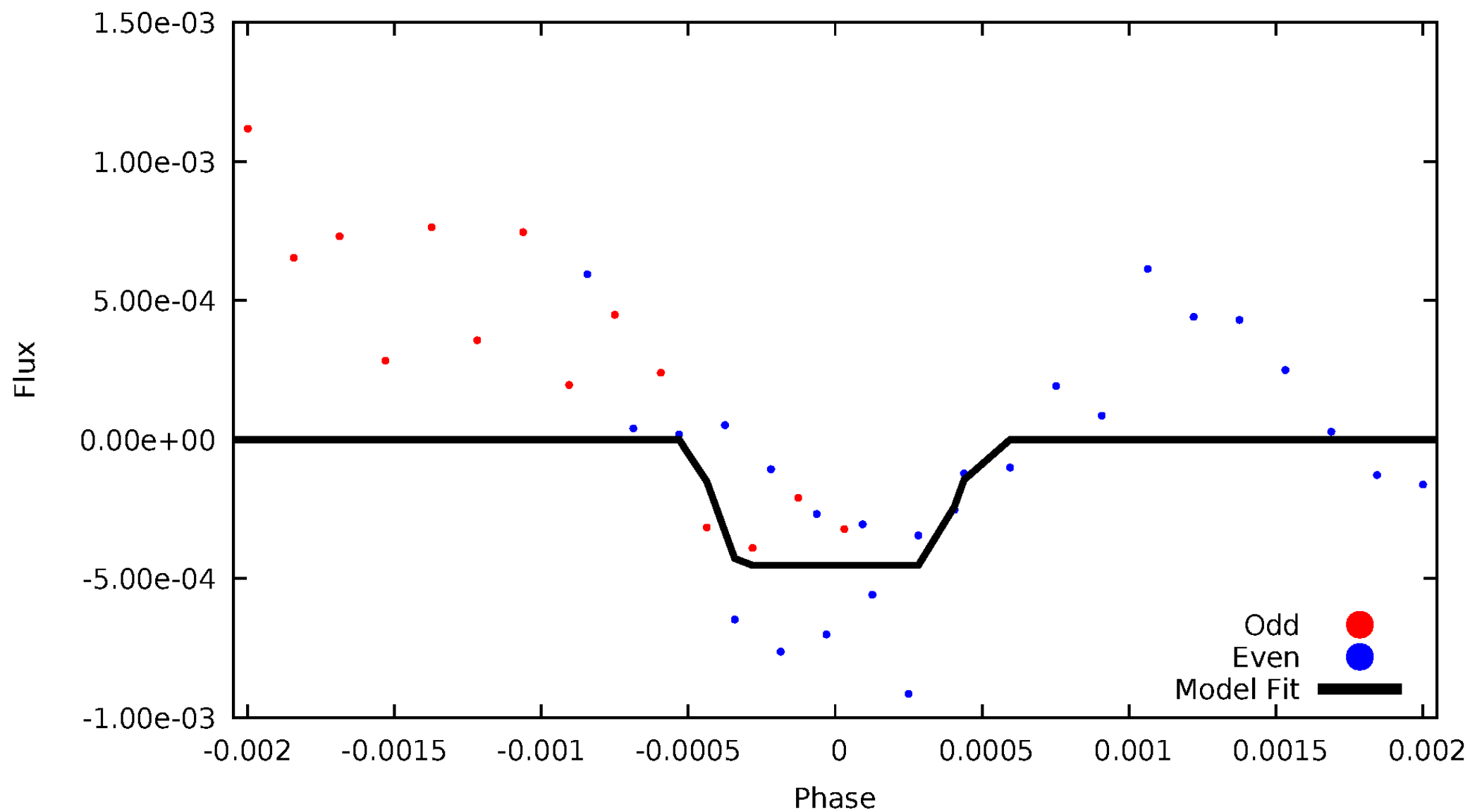
DV Odd/Even

TCE 007700880-03



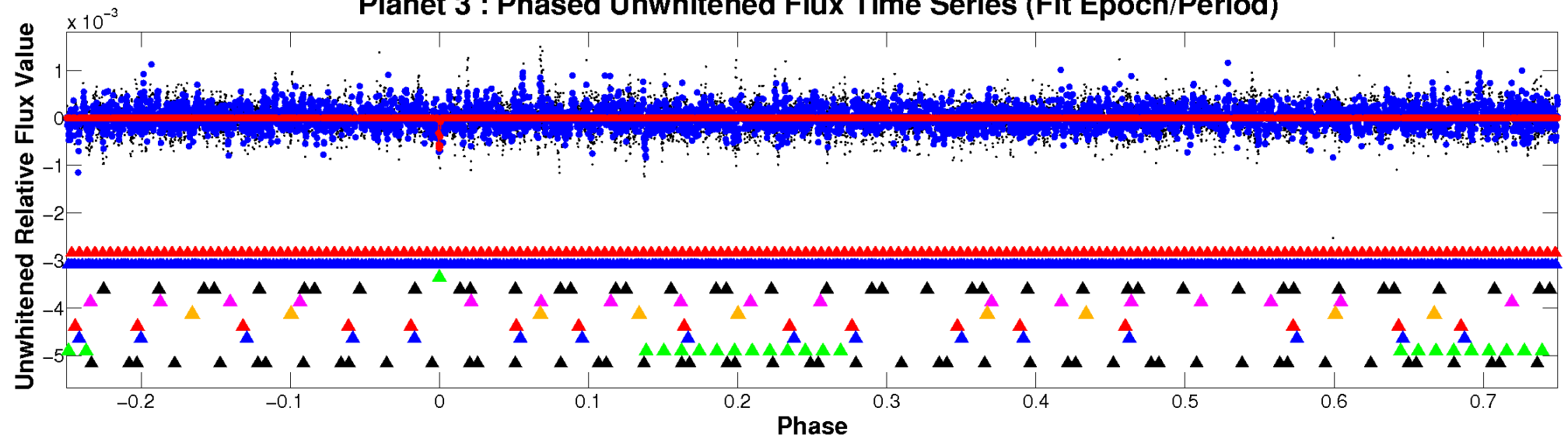
ALT Odd/Even

TCE 007700880-03

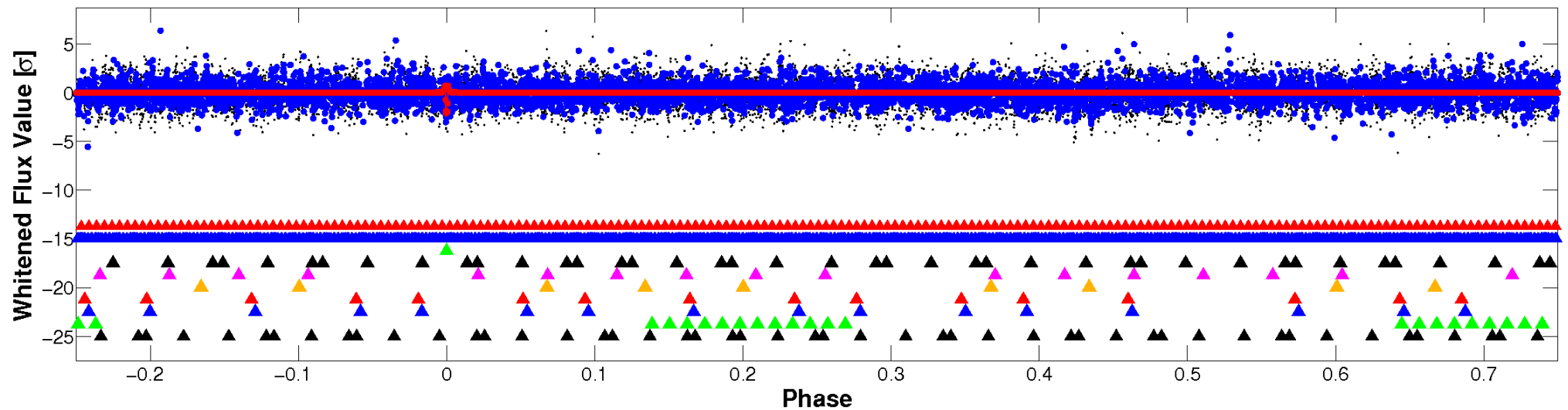


Non-Whitened Vs. Whitened Light Curve

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

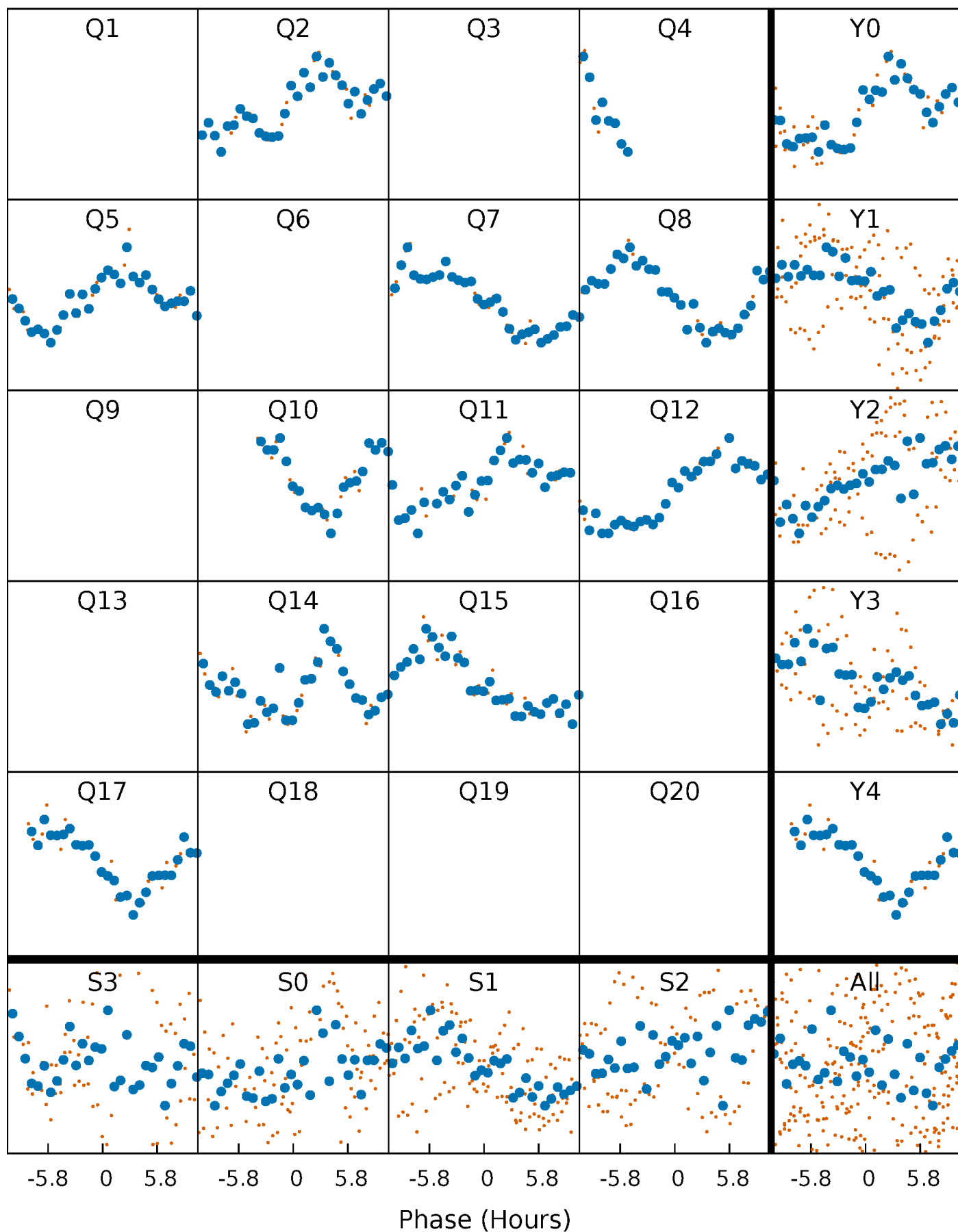


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



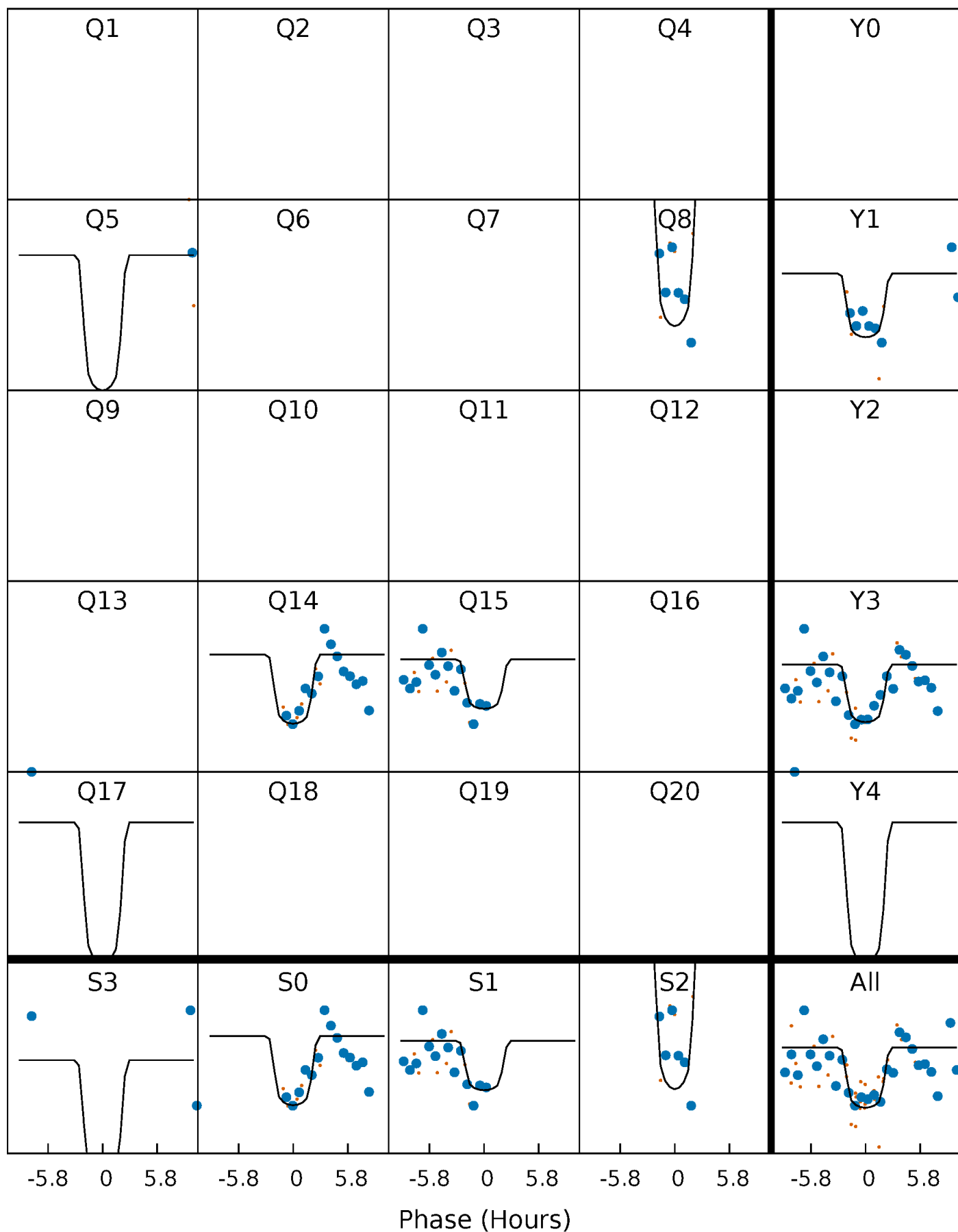
PDC Quarter-Phased Transit Curves

TCE 007700880-03 P=130.853517 Days $T_0=252.755847$ (BKJD)



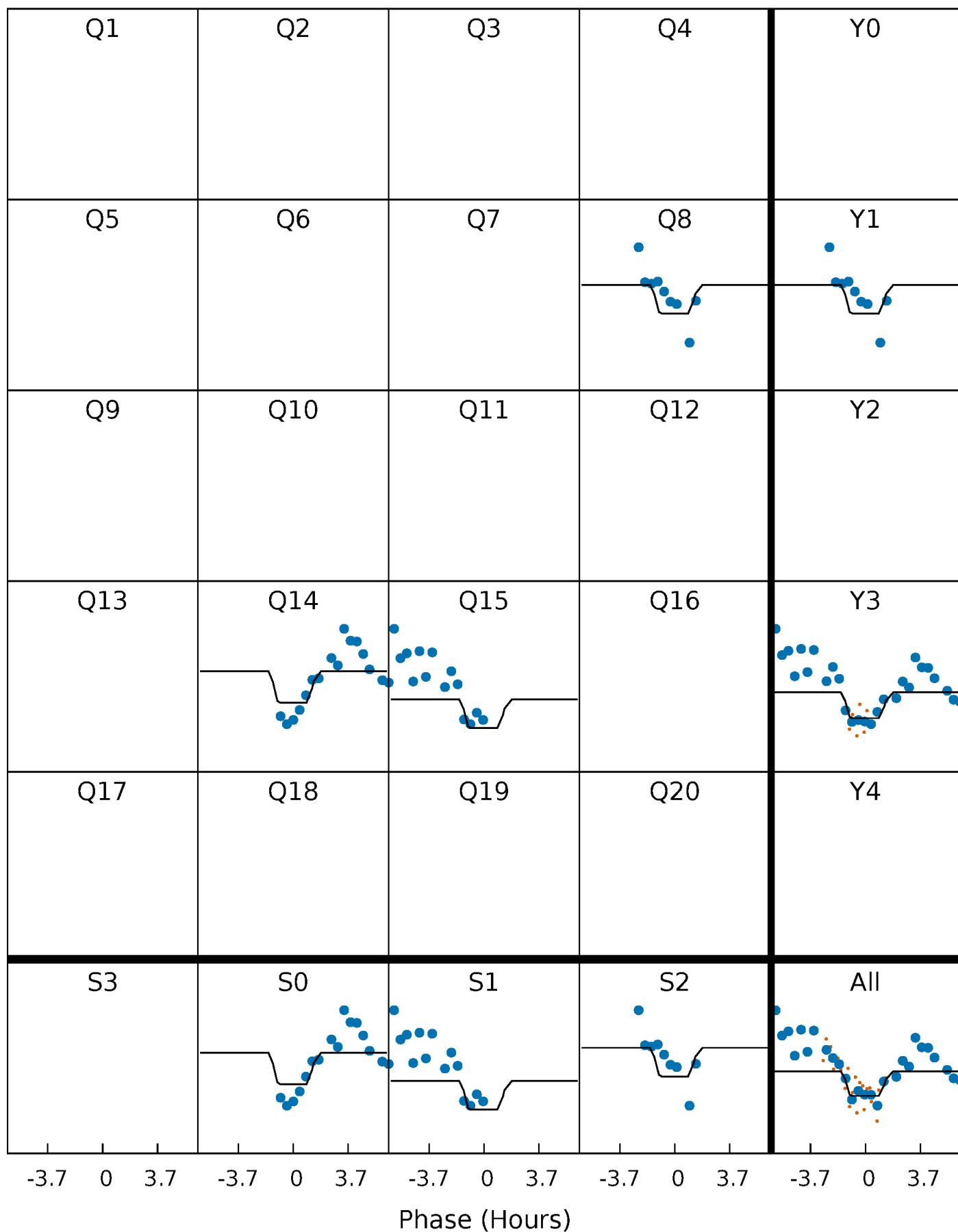
DV Quarter-Phased Transit Curves

TCE 007700880-03 P=130.853517 Days $T_0=252.755847$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

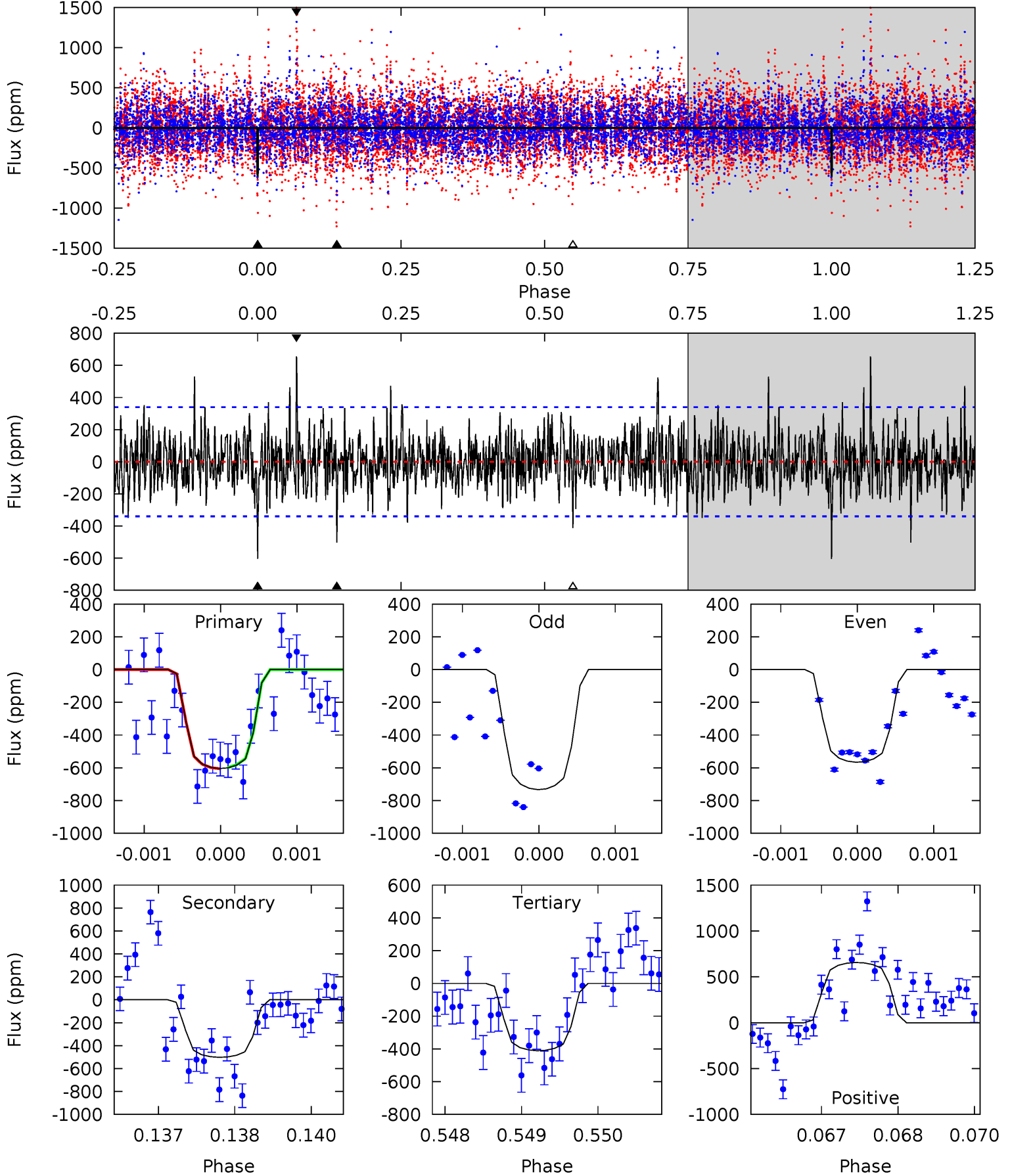
TCE 007700880-03 P=130.846688 Days $T_0=252.810526$ (BKJD)



DV Model-Shift Uniqueness Test

007700880-03, P = 130.853517 Days, E = 121.902330 Days

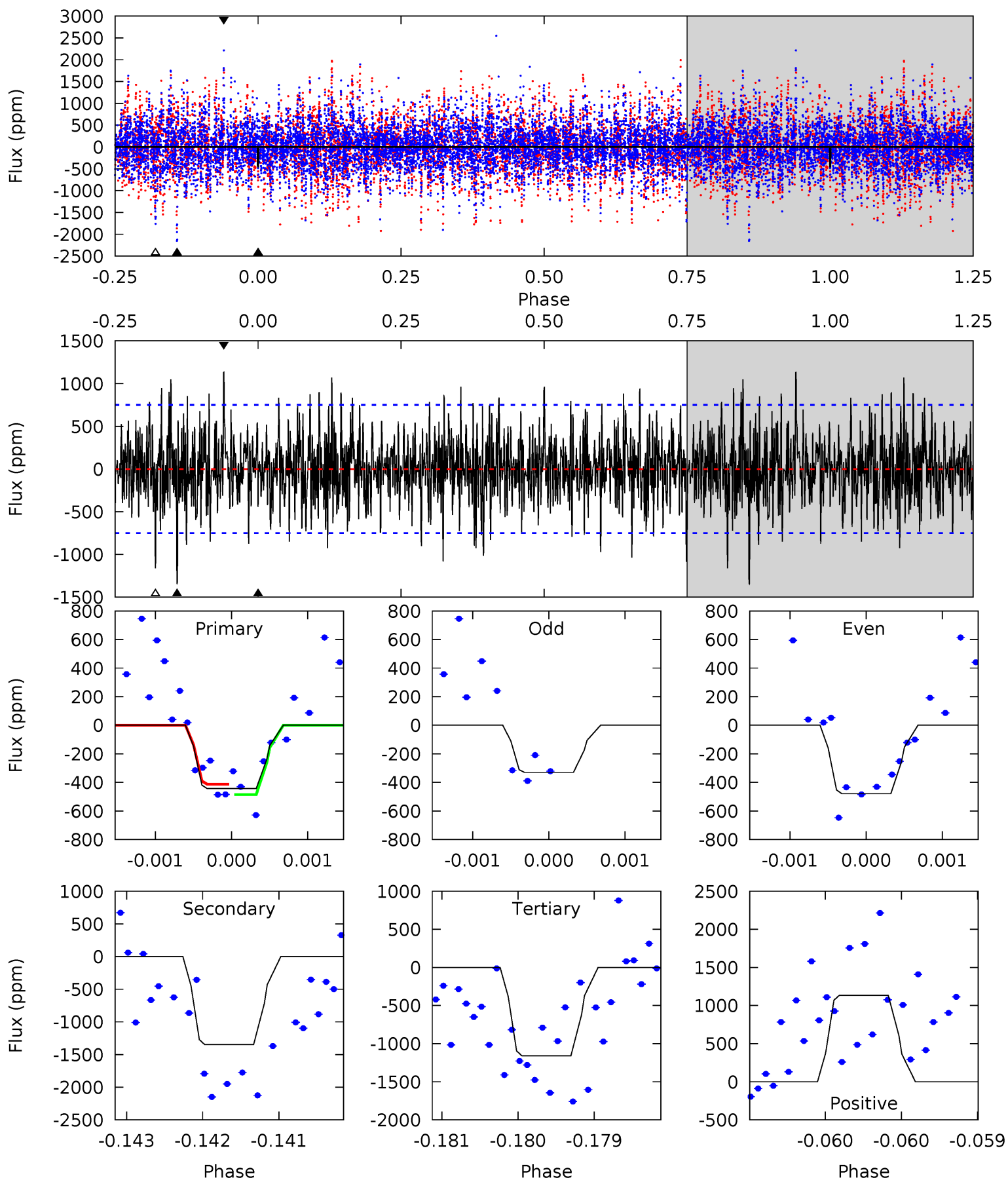
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.58	7.96	6.51	10.4	5.39	3.20	1.98	3.06	-0.82	1.45	-2.44	1.07	1.06	0.52	0.06



Alt Model-Shift Uniqueness Test

007700880-03, P = 130.846688 Days, E = 121.963838 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.23	9.82	8.45	8.26	5.47	3.33	2.41	-5.22	-5.03	1.36	1.56	0.45	1.22	0.46	0.26



Stellar Parameters For KIC 007700880

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6739^{+189}_{-236}	$4.306^{+0.101}_{-0.188}$	$-0.380^{+0.250}_{-0.300}$	$1.256^{+0.363}_{-0.196}$	$1.170^{+0.175}_{-0.158}$	$0.831^{+0.384}_{-0.422}$
	+3%/-4%	+2%/-4%	+66%/-79%	+29%/-16%	+15%/-14%	+46%/-51%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007700880-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-502 ± 63	$3.92^{+0.90}_{-0.76}$	646^{+50}_{-37}	6026^{+571}_{-492}	5035^{+2657}_{-1735}
Alt.	-1346 ± 137	$2.97^{+0.77}_{-0.67}$	648^{+47}_{-38}	9444^{+1855}_{-1236}	23304^{+15618}_{-8427}

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

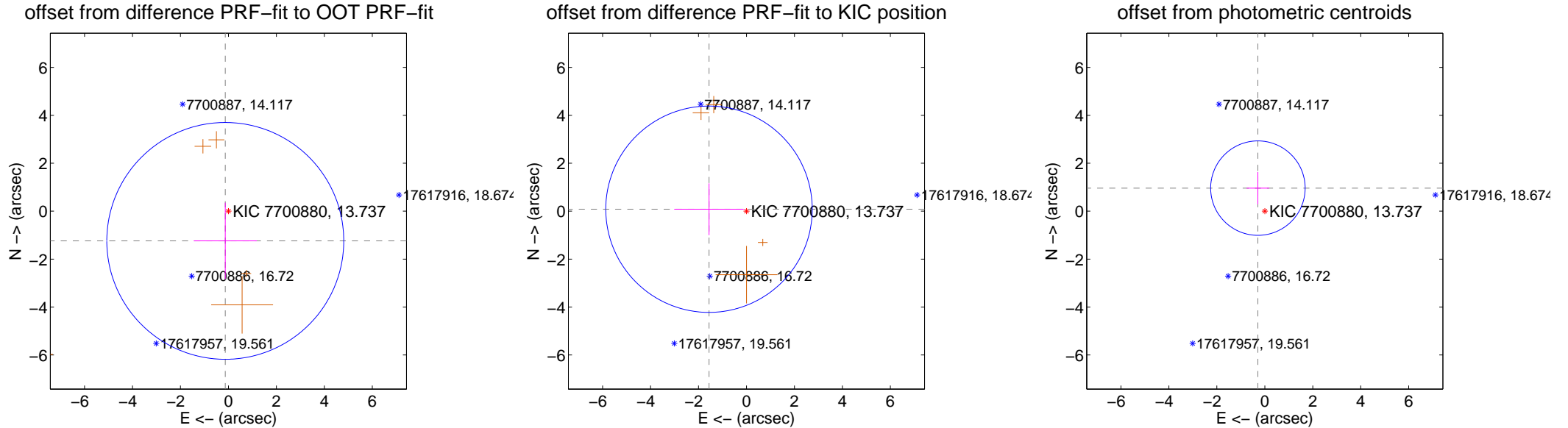
DV Centroid Data

Supplemental centroid analysis for 007700880-03. Kepler magnitude: 13.74. Transit SNR 8.67

There are 0 quarters with good PRF difference image offsets

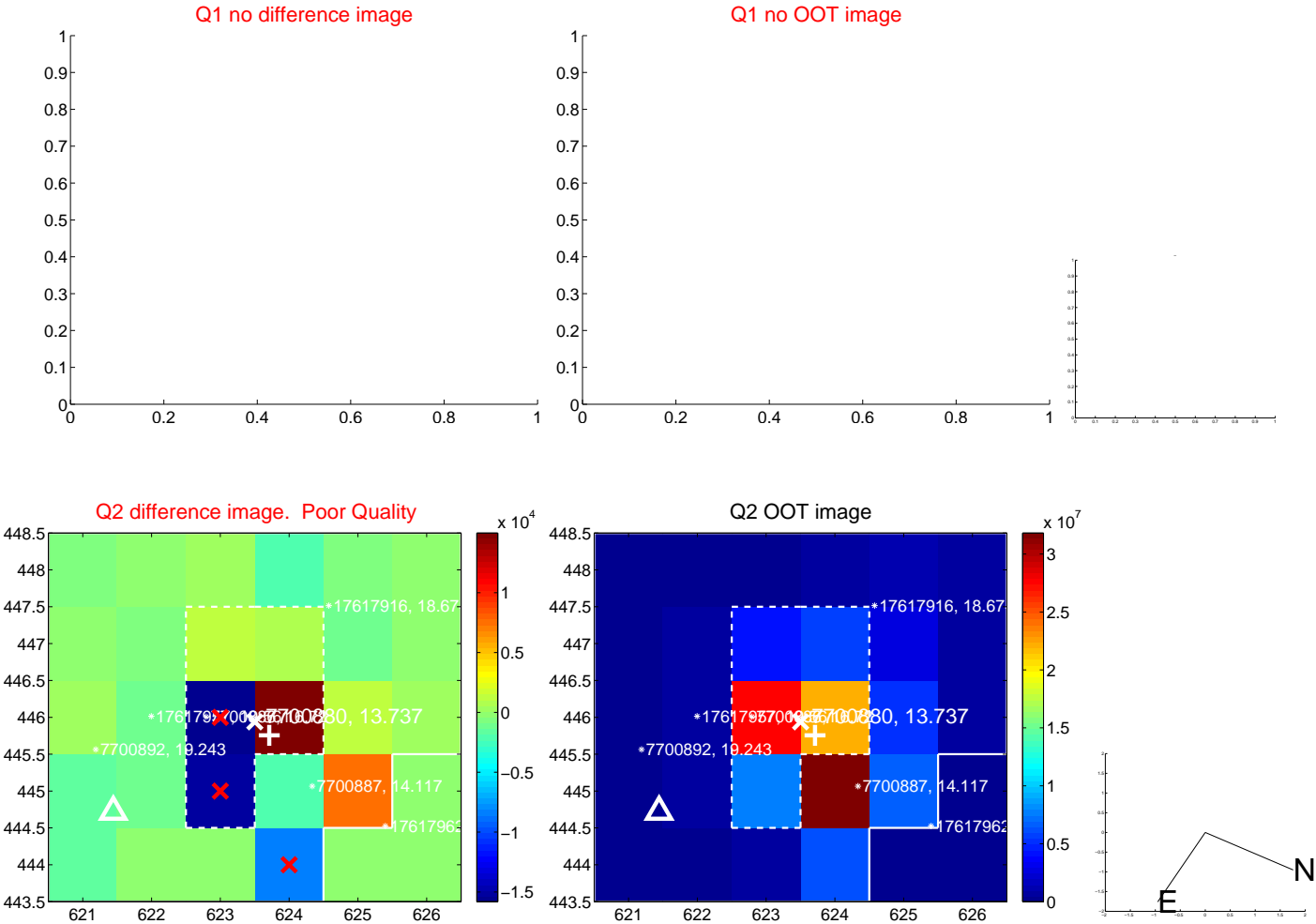
The direct PRF centroid is offset from the target star catalog position by about 1.38 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.247 ± 1.647	0.76	0.131 ± 1.313	-1.240 ± 1.594
PRF-fit source offset from KIC position	1.566 ± 1.435	1.09	1.563 ± 1.451	0.082 ± 1.080
photometric centroid source offset	1.00 ± 0.66	1.53	0.29 ± 0.47	0.96 ± 0.67

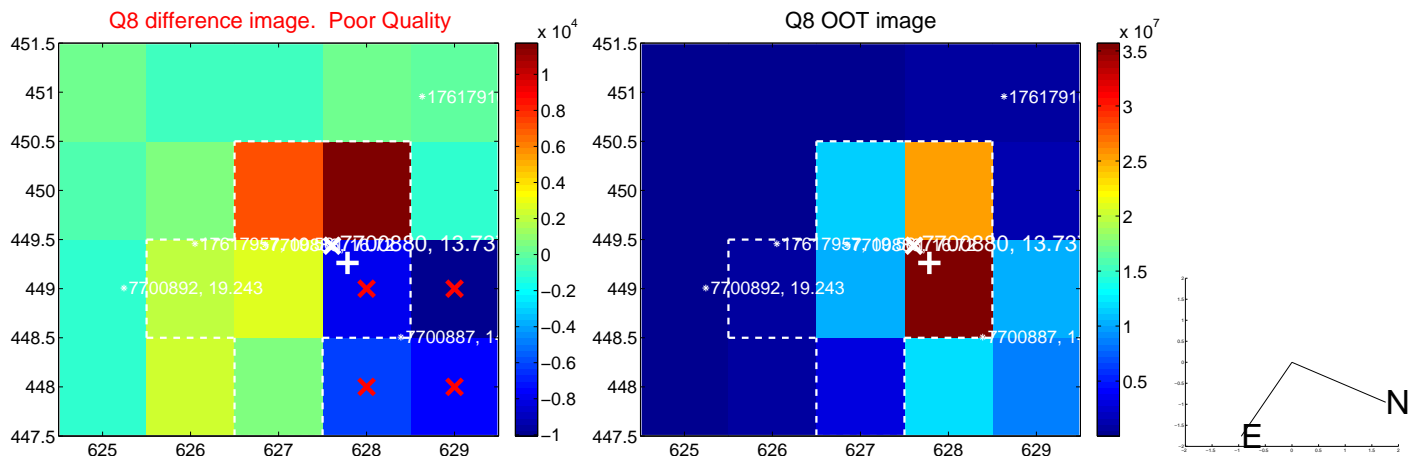
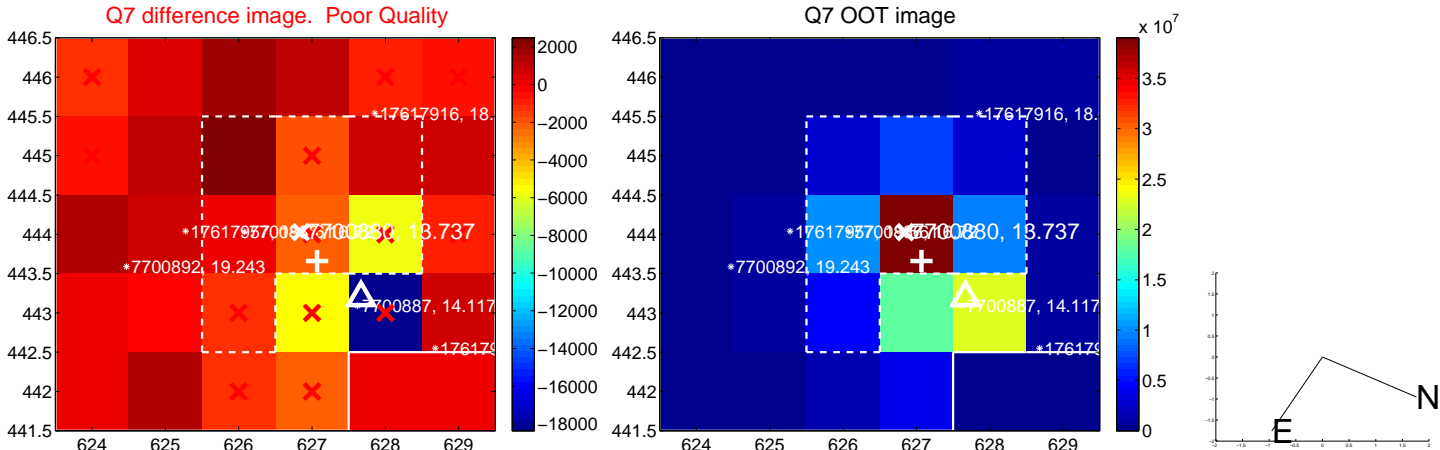
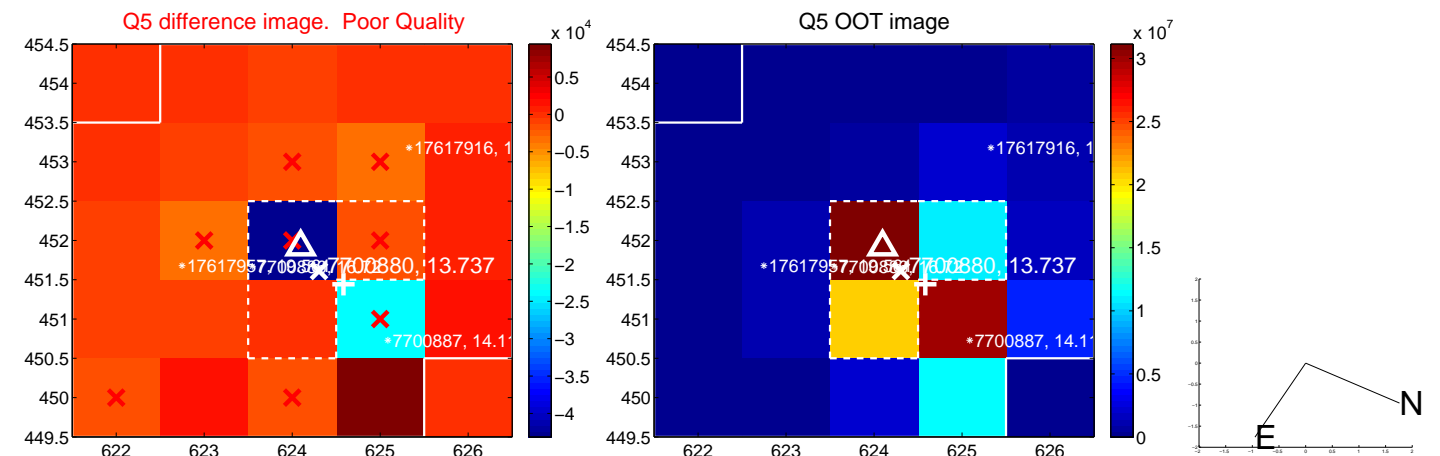


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

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



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



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

Q9 no difference image



Q9 no OOT image



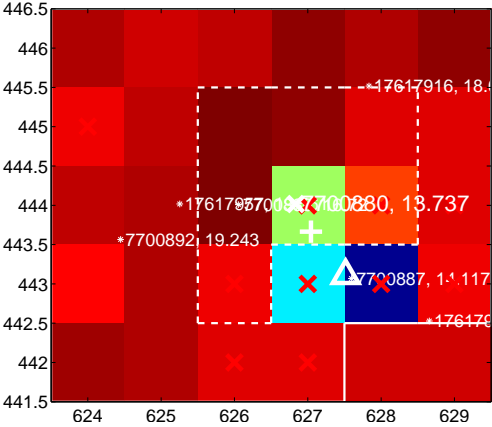
Q10 no difference image



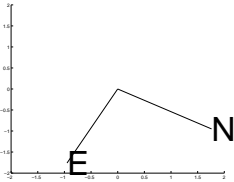
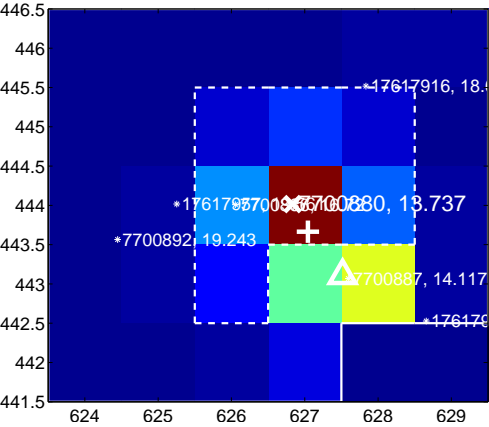
Q10 no OOT image



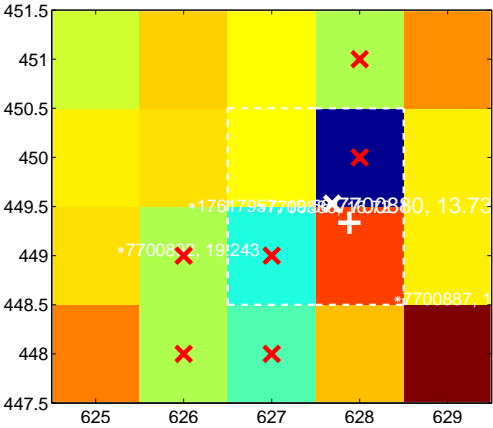
Q11 difference image. Poor Quality



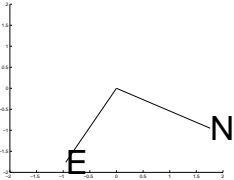
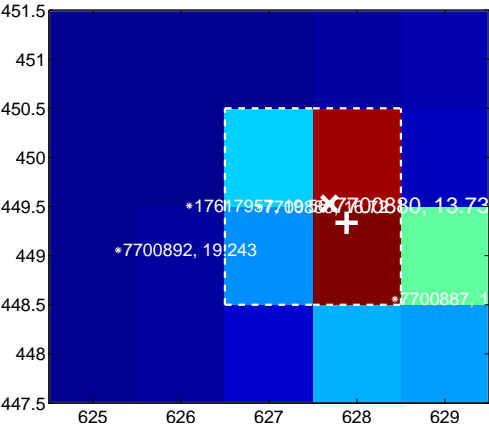
Q11 OOT image



Q12 difference image. Poor Quality

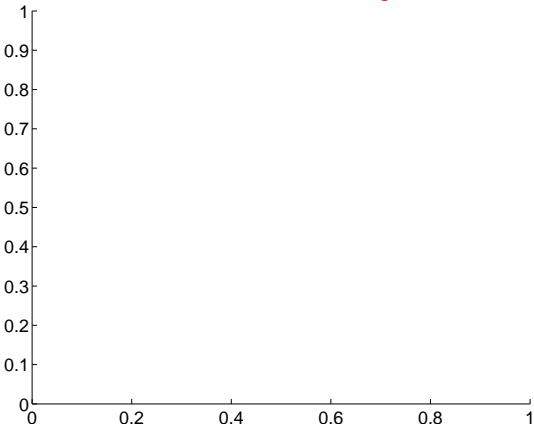


Q12 OOT image

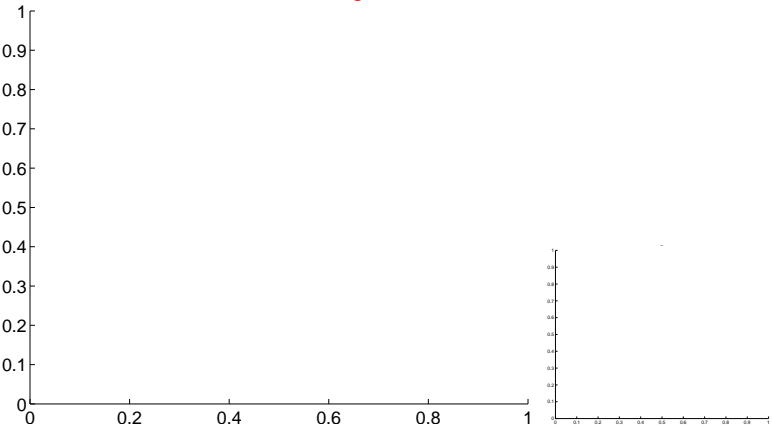


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

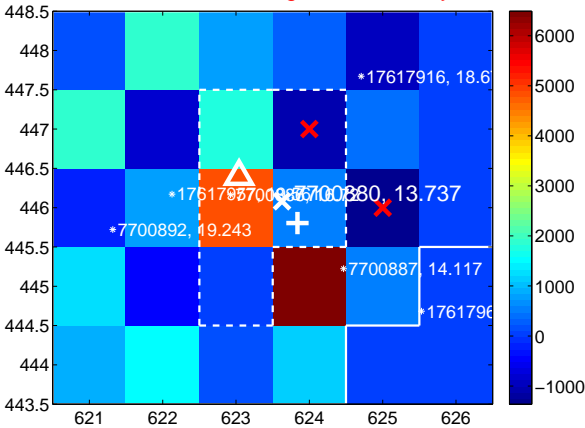
Q13 no difference image



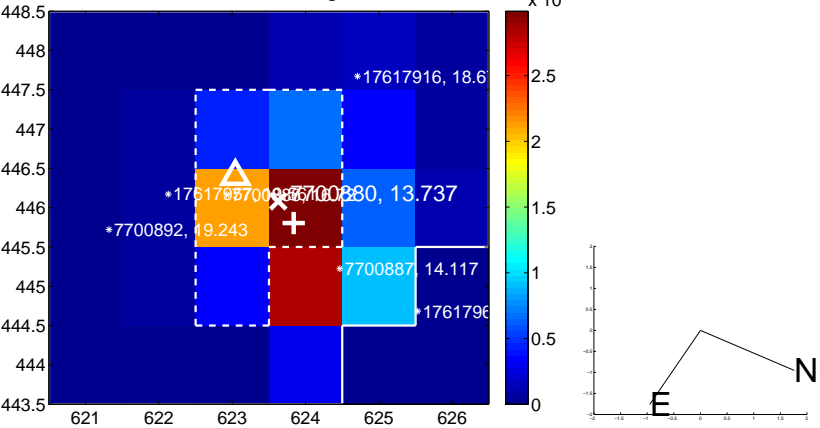
Q13 no OOT image



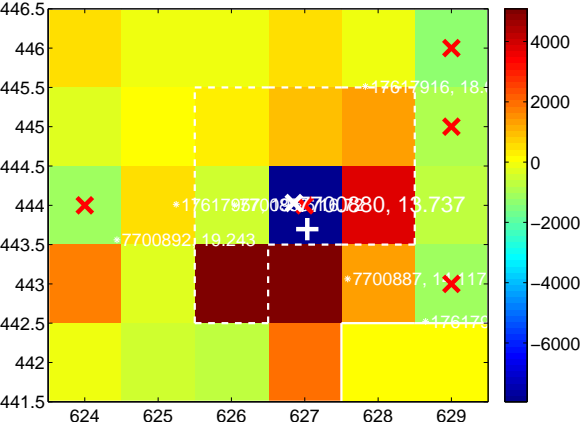
Q14 difference image. Poor Quality



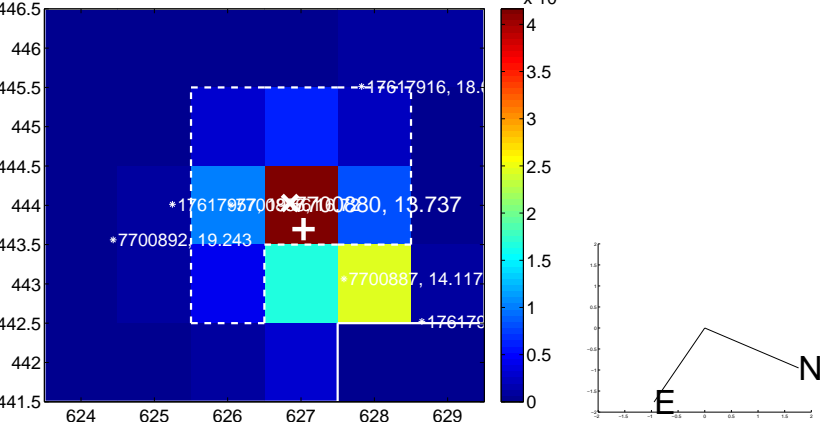
Q14 OOT image



Q15 difference image. Poor Quality



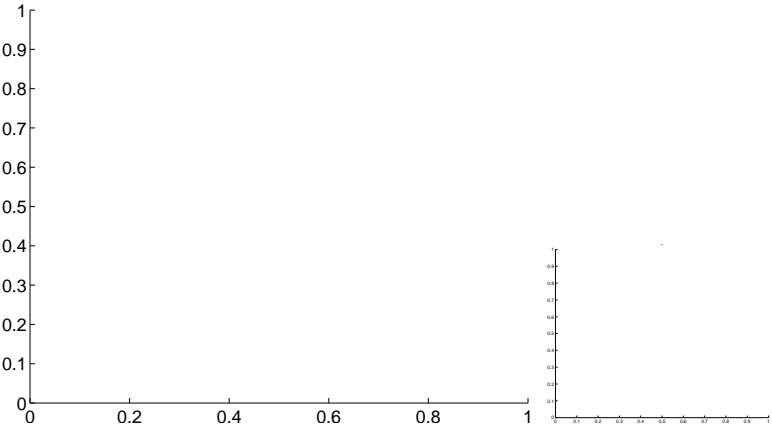
Q15 OOT image



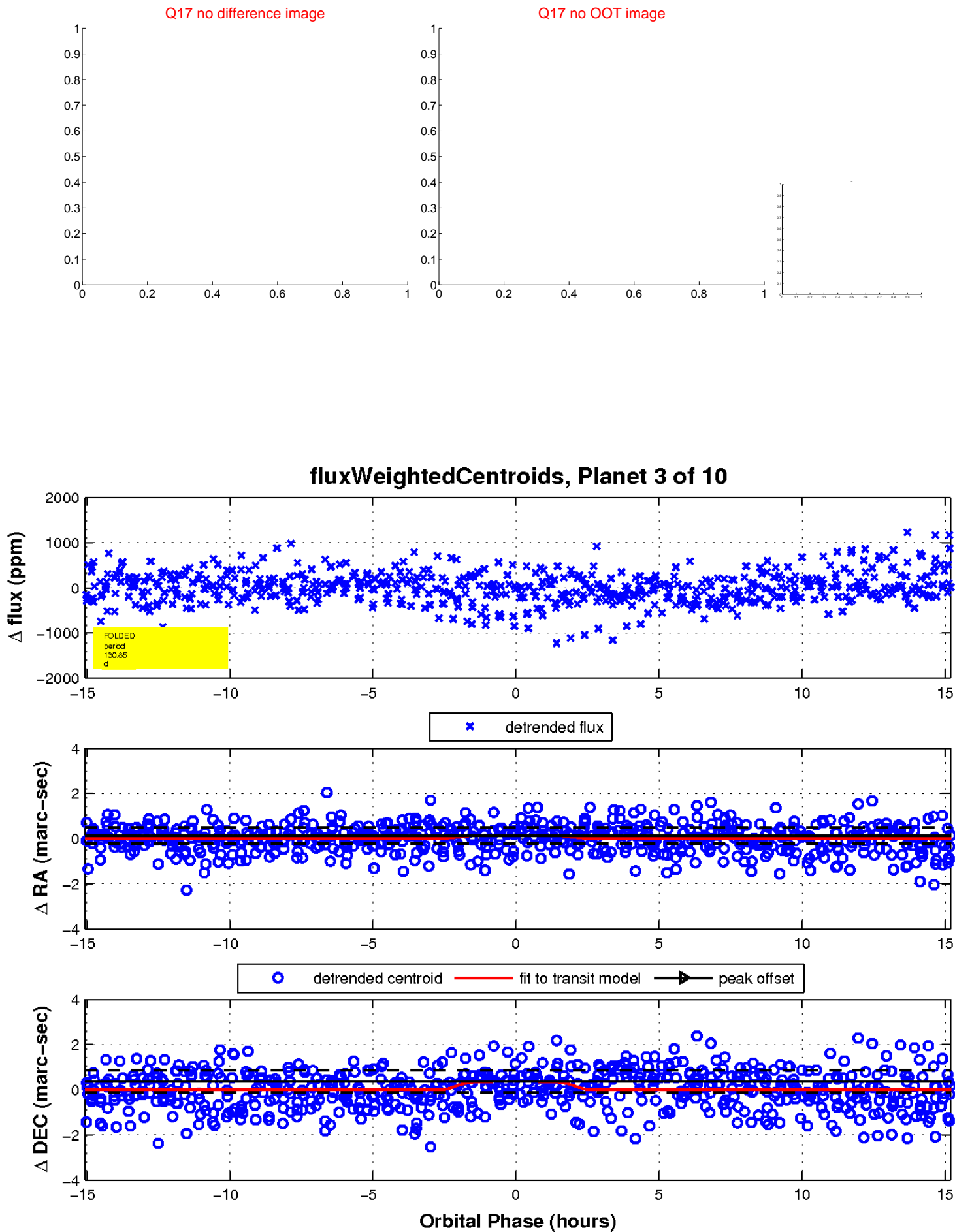
Q16 no difference image



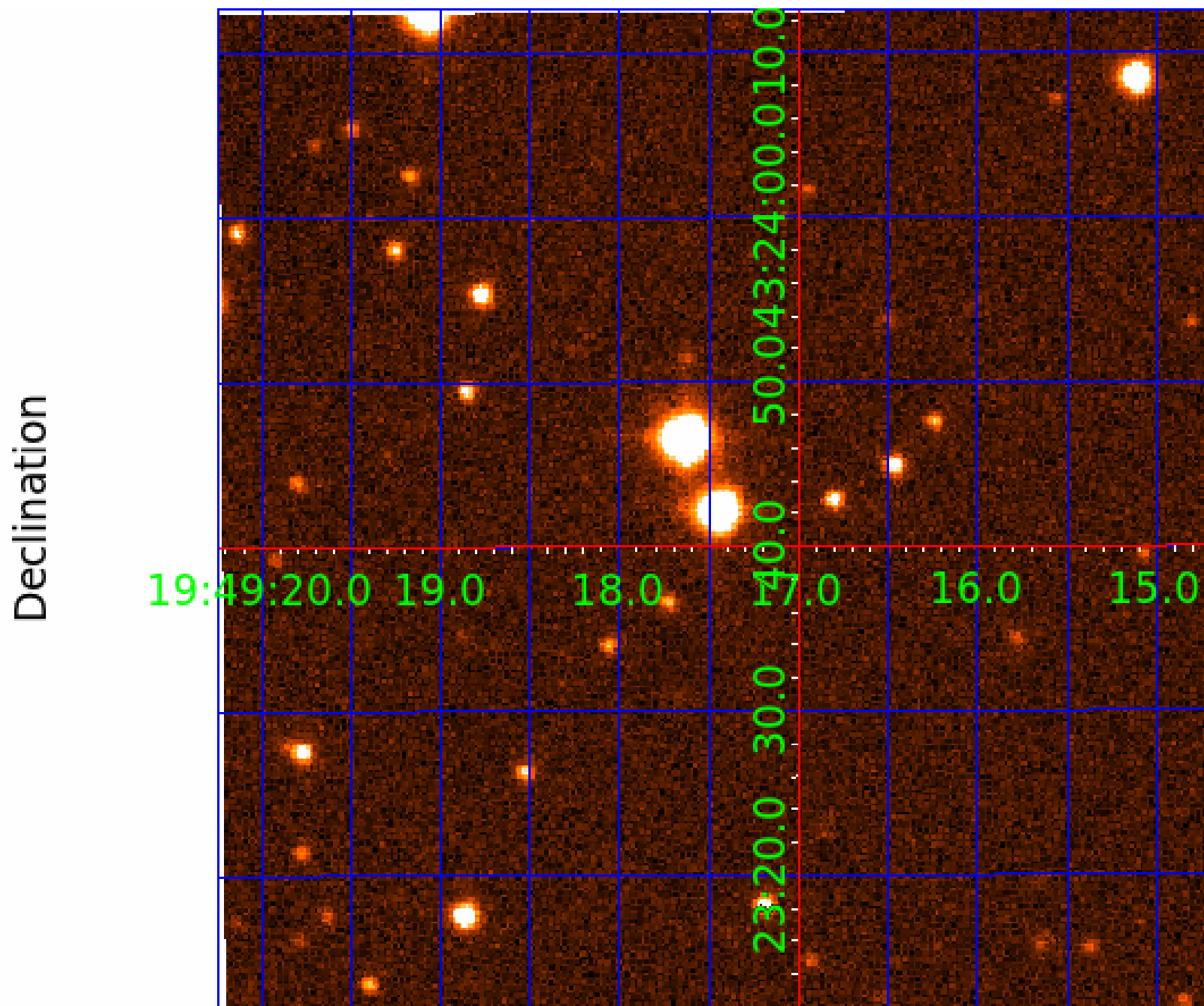
Q16 no OOT image



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



UKIRT Image



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})
007700880-01	OBS	No	2.711831	133.076025	79.4	4.438	8.9	10.3	1.26	6739	1.30	1817.97
007700880-02	OBS	No	1.553862	131.997646	32.9	9.156	8.1	5.7	1.26	6739	0.75	3819.91
007700880-03	OBS	No	130.853517	252.755847	640.1	5.069	10.5	8.7	1.26	6739	3.82	10.35
007700880-04	OBS	No	36.128406	132.528556	326.7	5.539	9.6	9.5	1.26	6739	2.56	57.56
007700880-06	OBS	No	161.399146	278.961203	829.7	19.846	10.9	10.2	1.26	6739	4.34	7.82
007700880-07	OBS	No	92.145114	152.634577	210.9	0.940	8.4	1.9	1.26	6739	2.12	16.52
007700880-08	OBS	No	92.138931	153.022111	450.8	5.333	8.5	7.9	1.26	6739	2.92	16.52
007700880-09	OBS	No	64.651118	157.112939	105.5	14.705	8.1	2.4	1.26	6739	1.42	26.50
007700880-10	OBS	No	29.889930	147.843900	268.6	7.381	8.8	8.0	1.26	6739	2.22	74.11

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007700880-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_KIC_POS
007700880-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_KIC_POS
007700880-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
007700880-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS—HALO_GHOST
007700880-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007700880-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS
007700880-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_FEW_DIFFS
007700880-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_KIC_POS
007700880-10	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—CENT_KIC_POS

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

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

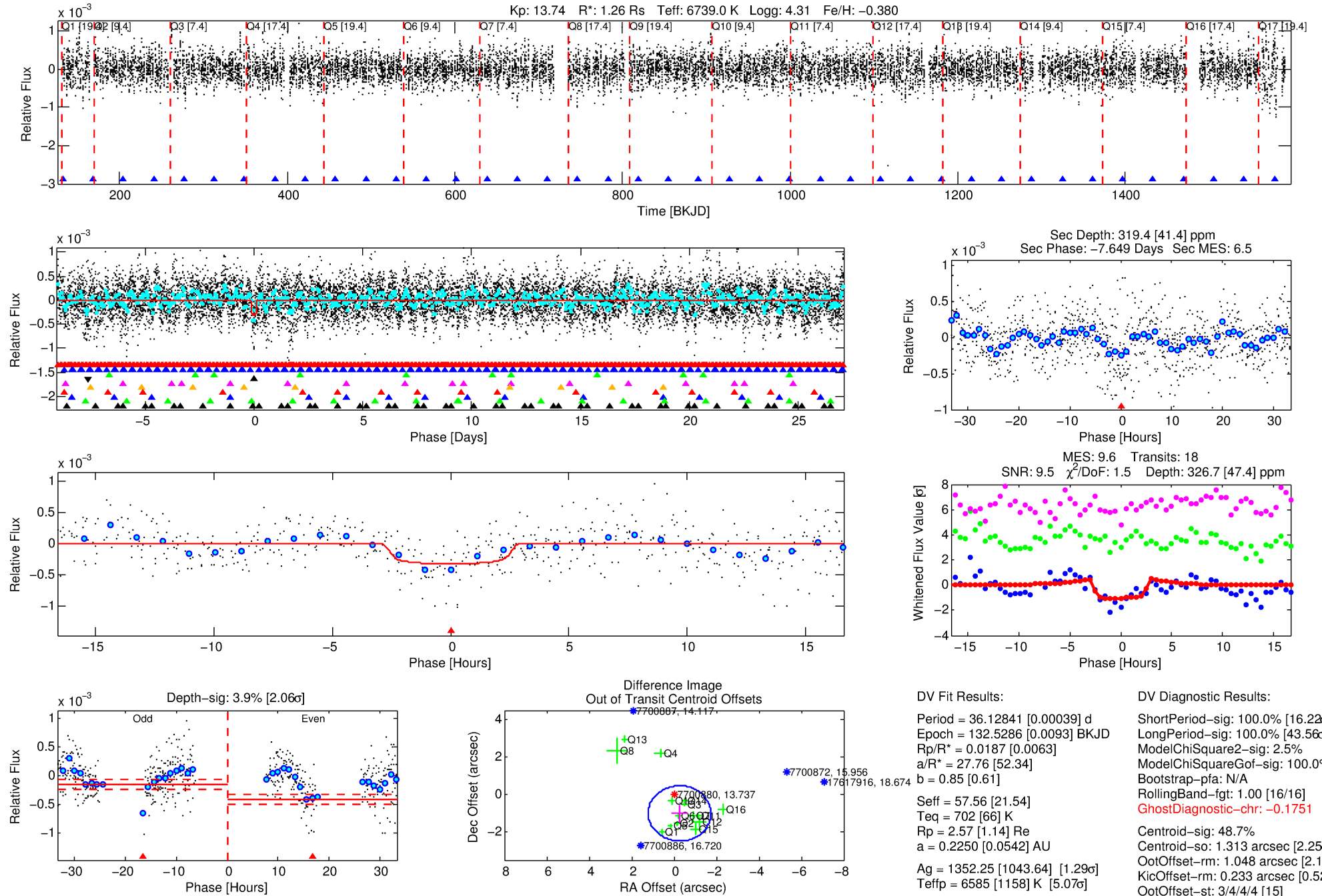
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007700880-04

No Significant Match Found

DV One-Page Summary

KIC: 7700880 Candidate: 4 of 10 Period: 36.128 d



DV Fit Results:

Period = 36.12841 [0.00039] d
Epoch = 132.5286 [0.0093] BKJD
Rp/R* = 0.0187 [0.0063]
a/R* = 27.76 [52.34]
b = 0.85 [0.61]
Seff = 57.56 [21.54]
Teff = 702 [66] K
Rp = 2.57 [1.14] Re
a = 0.2250 [0.0542] AU
Ag = 1352.25 [1043.64] [1.29σ]
Teffp = 6585 [1158] K [5.07σ]

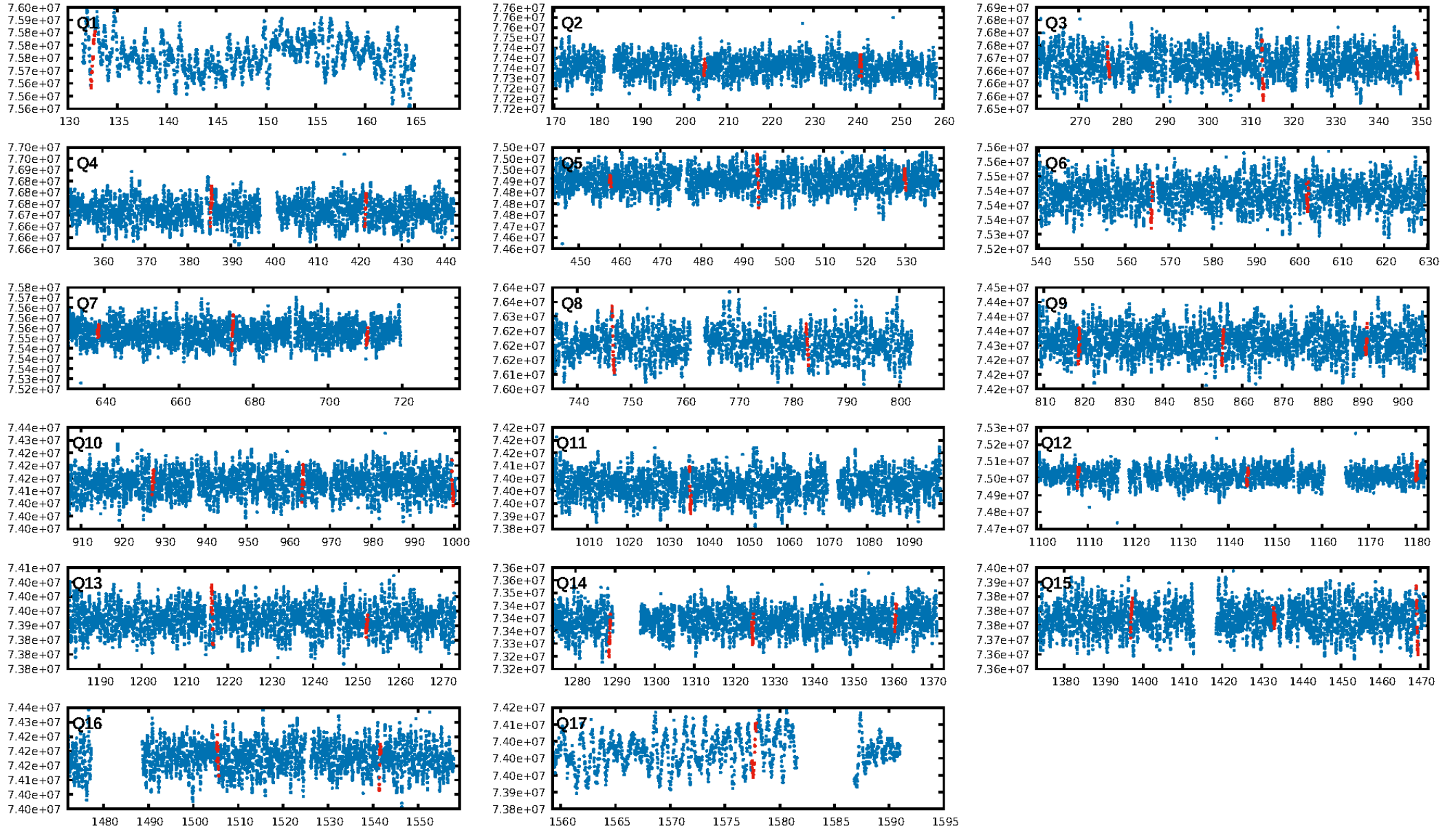
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [16.22σ]
LongPeriod-sig: 100.0% [43.56σ]
ModelChiSquare2-sig: 2.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [16/16]
GhostDiagnostic-chr: -0.1751
Centroid-sig: 48.7%
Centroid-so: 1.313 arcsec [2.25σ]
OotOffset-rm: 1.048 arcsec [2.13σ]
KicOffset-rm: 0.233 arcsec [0.52σ]
OotOffset-st: 3/4/4/4 [15]
KicOffset-st: 3/4/4/4 [15]
DiffImageQuality-fgm: 0.53 [8/15]
DiffImageOverlap-fno: 0.00 [0/17]

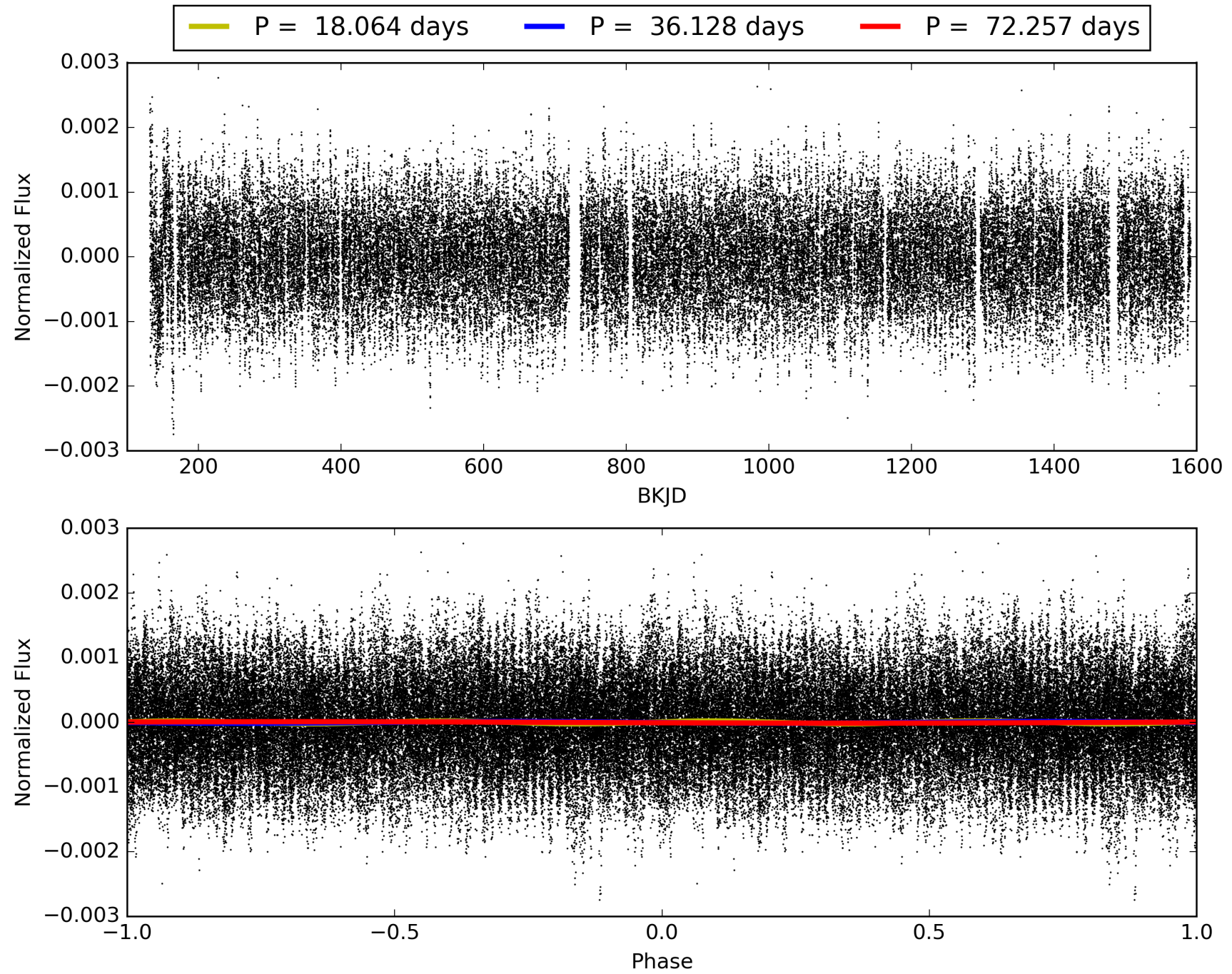
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 03:39:54 Z

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

TCE 007700880-04, PDC Light Curves

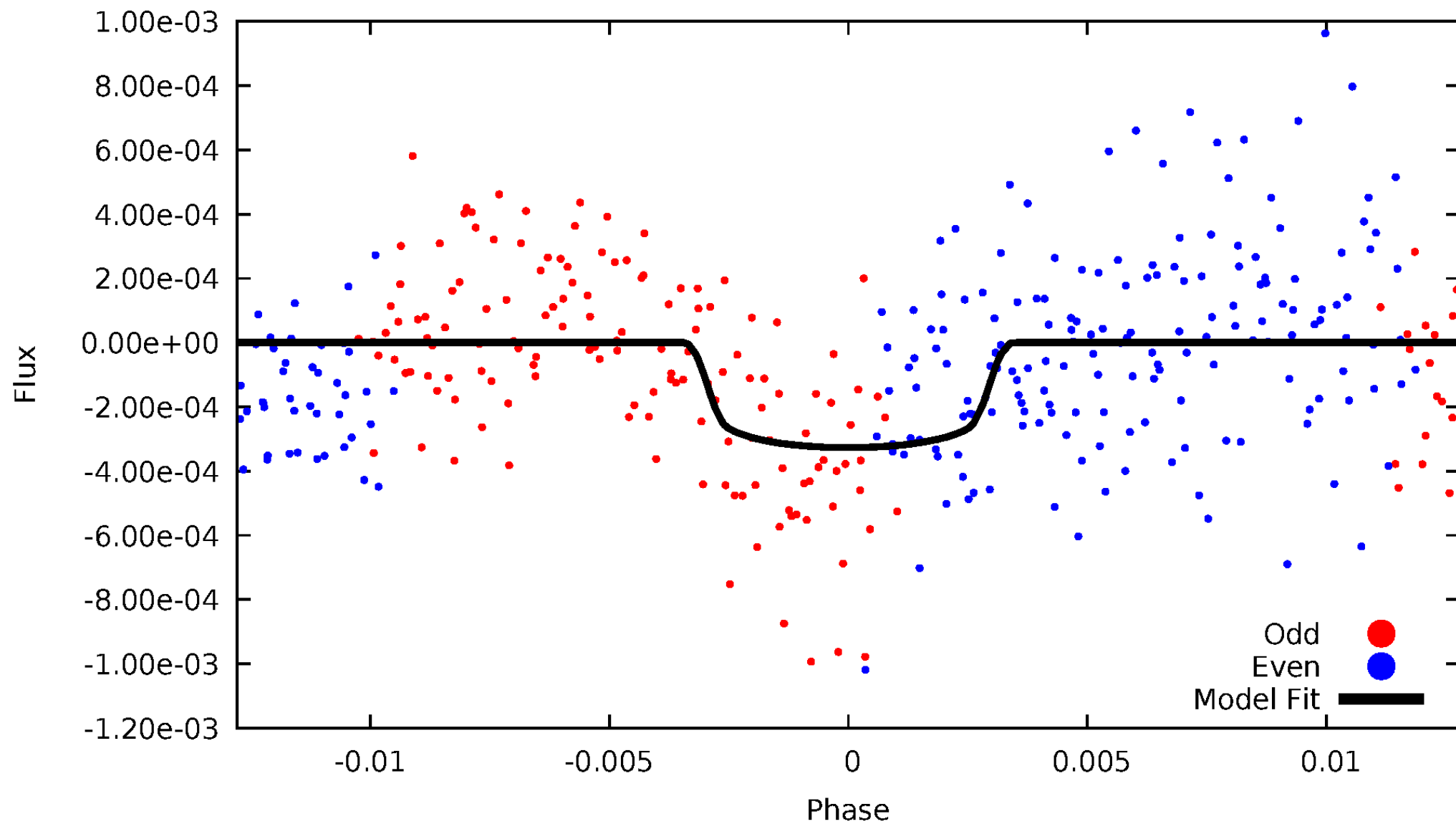


TCE 007700880-04



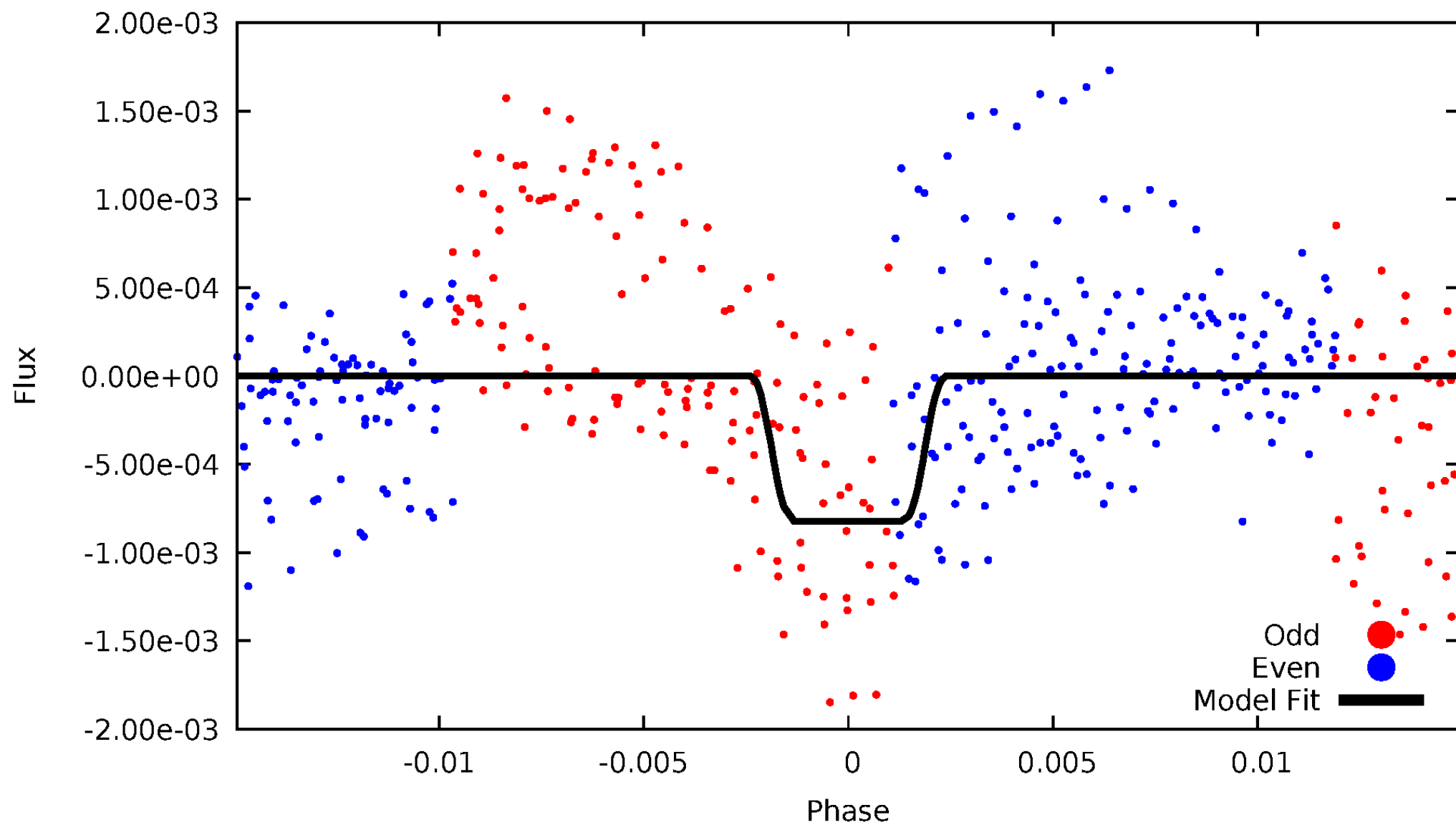
DV Odd/Even

TCE 007700880-04



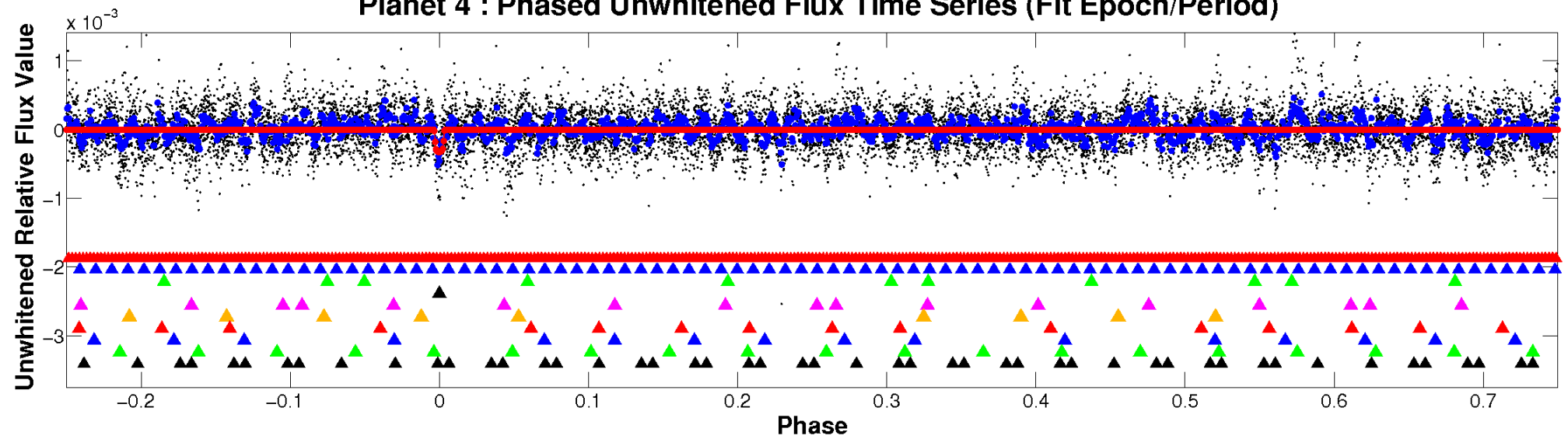
ALT Odd/Even

TCE 007700880-04

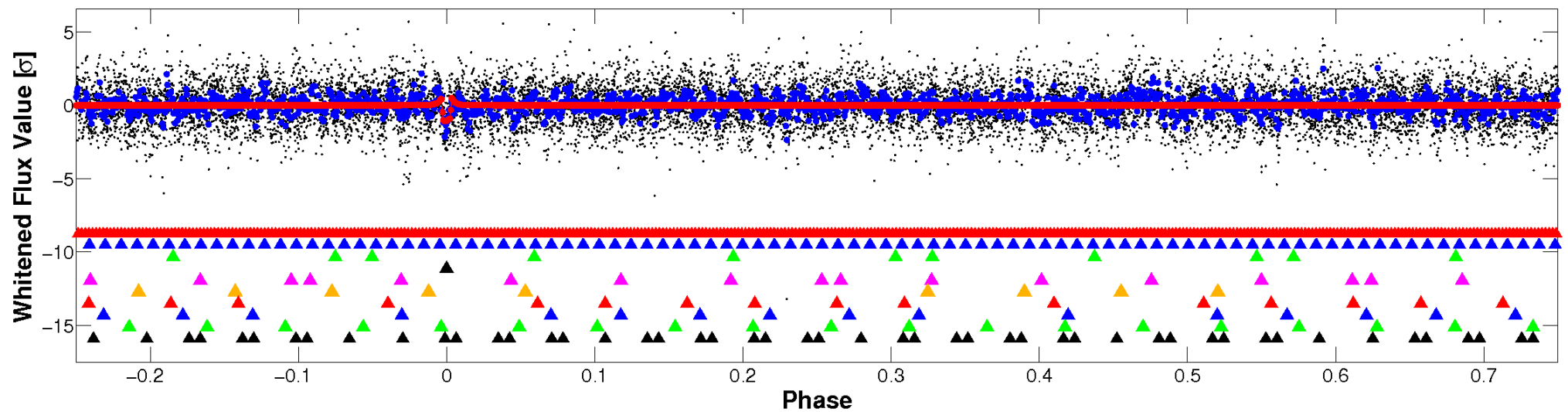


Non-Whitened Vs. Whitened Light Curve

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

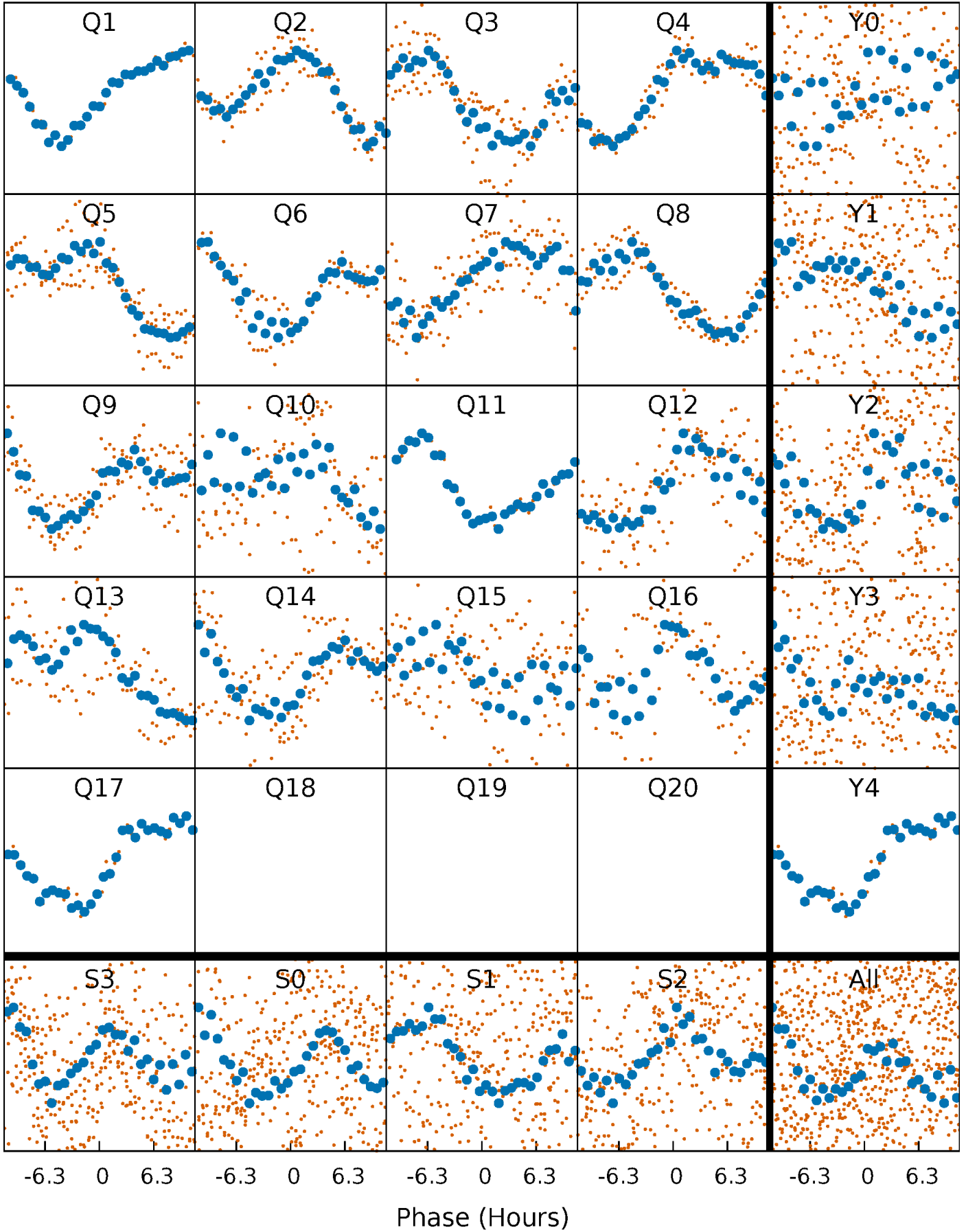


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



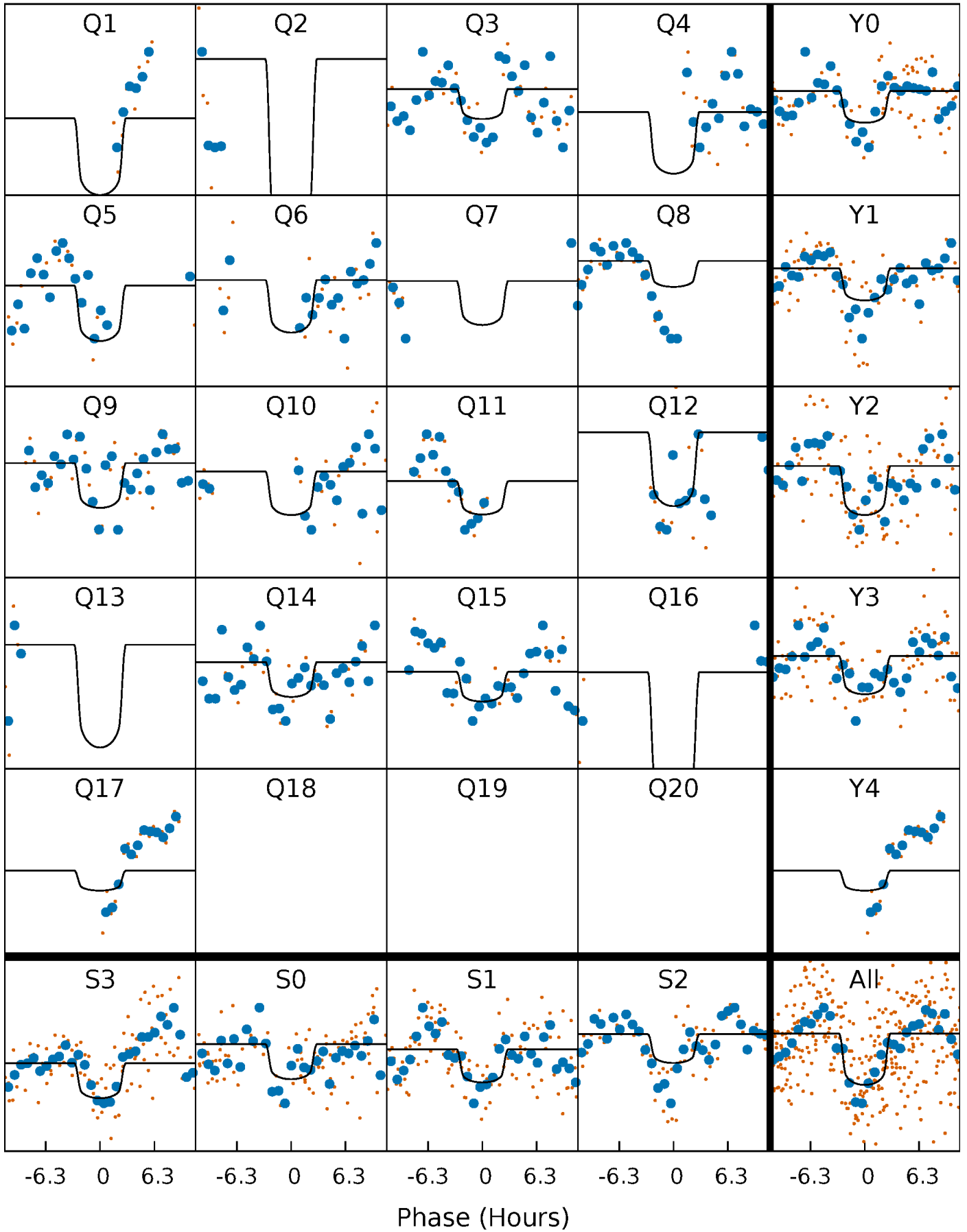
PDC Quarter-Phased Transit Curves

TCE 007700880-04 P= 36.128406 Days $T_0=132.528556$ (BKJD)



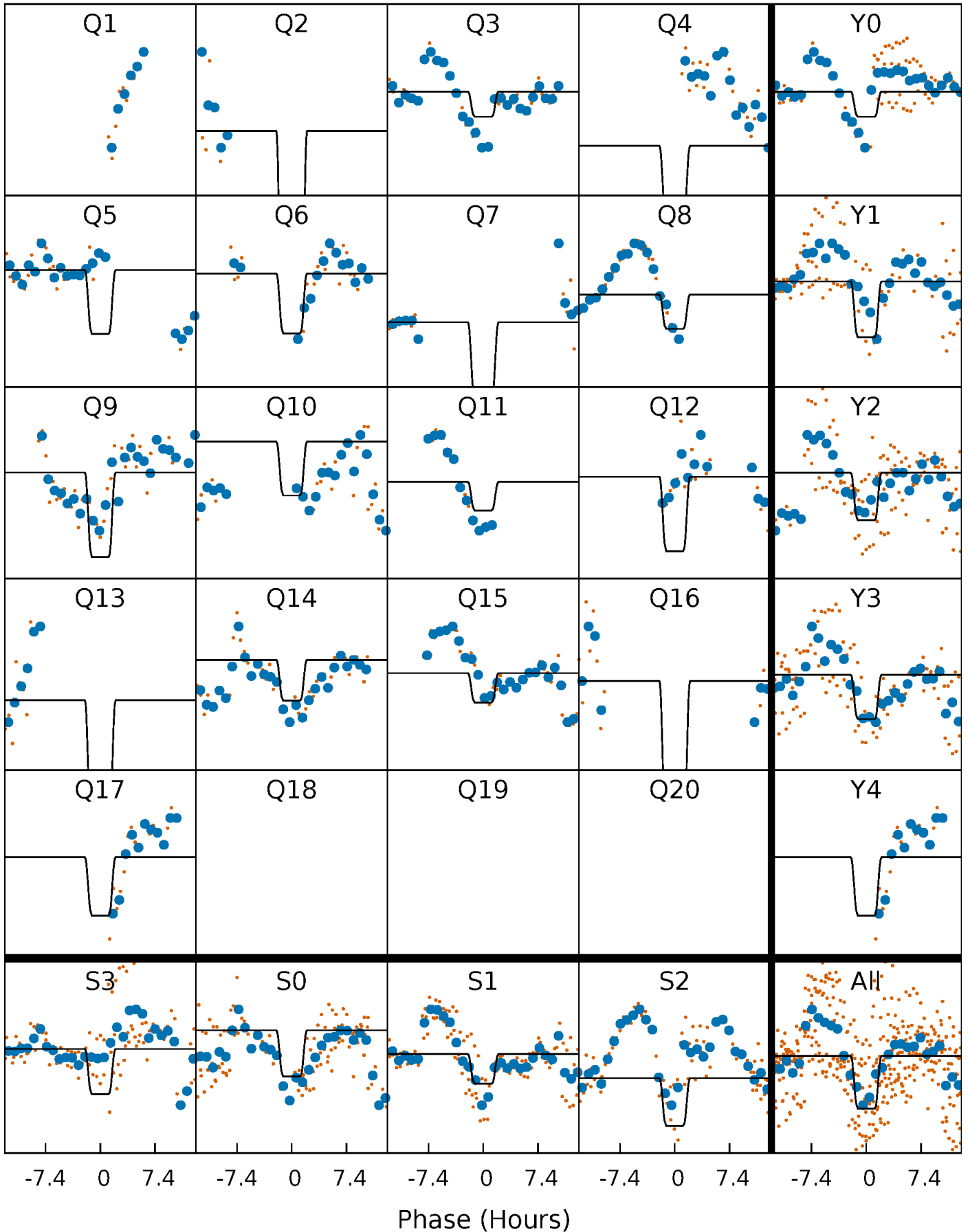
DV Quarter-Phased Transit Curves

TCE 007700880-04 P= 36.128406 Days $T_0=132.528556$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

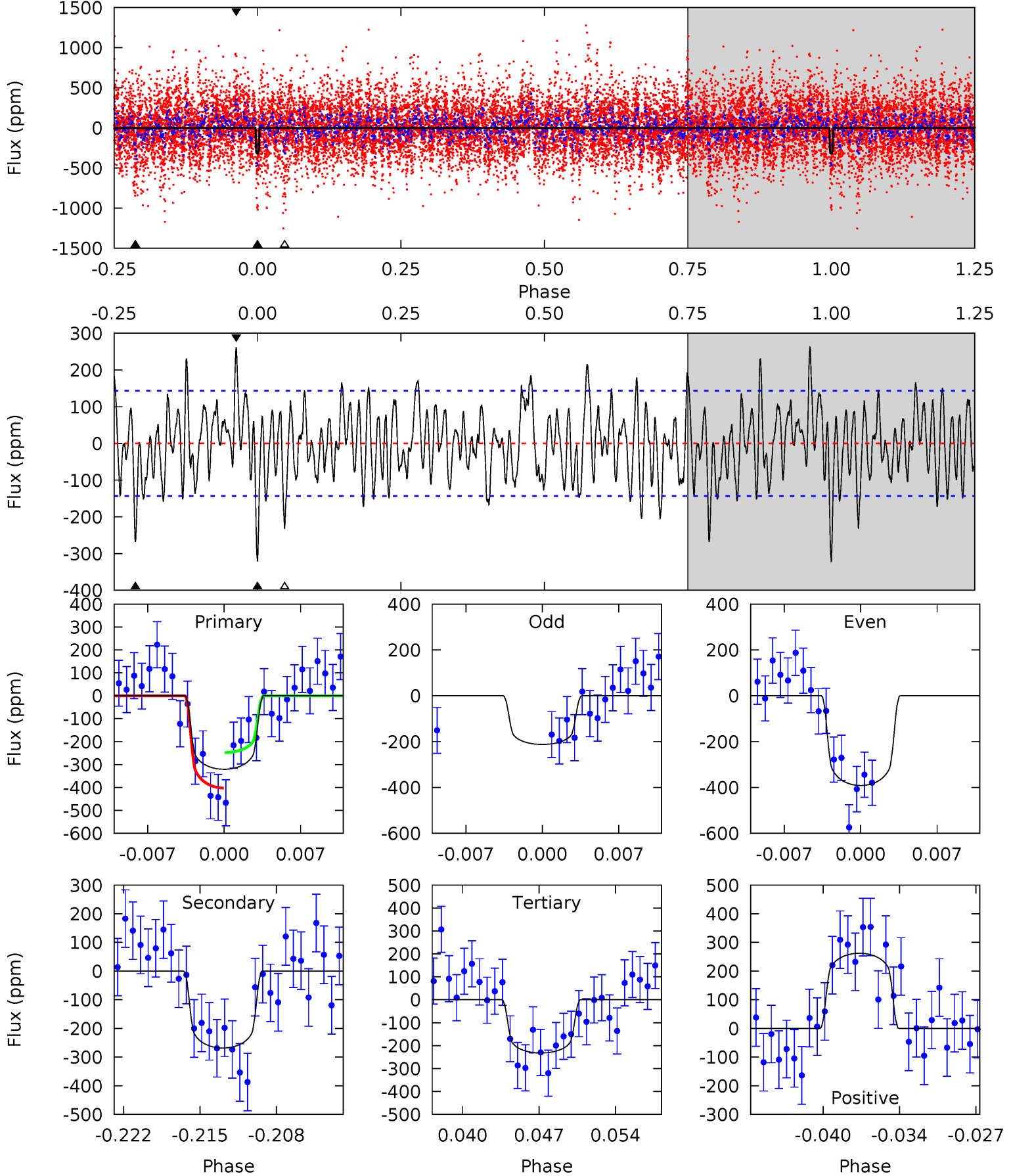
TCE 007700880-04 P= 36.126904 Days $T_0=132.548166$ (BKJD)



DV Model-Shift Uniqueness Test

007700880-04, P = 36.128406 Days, E = 132.528556 Days

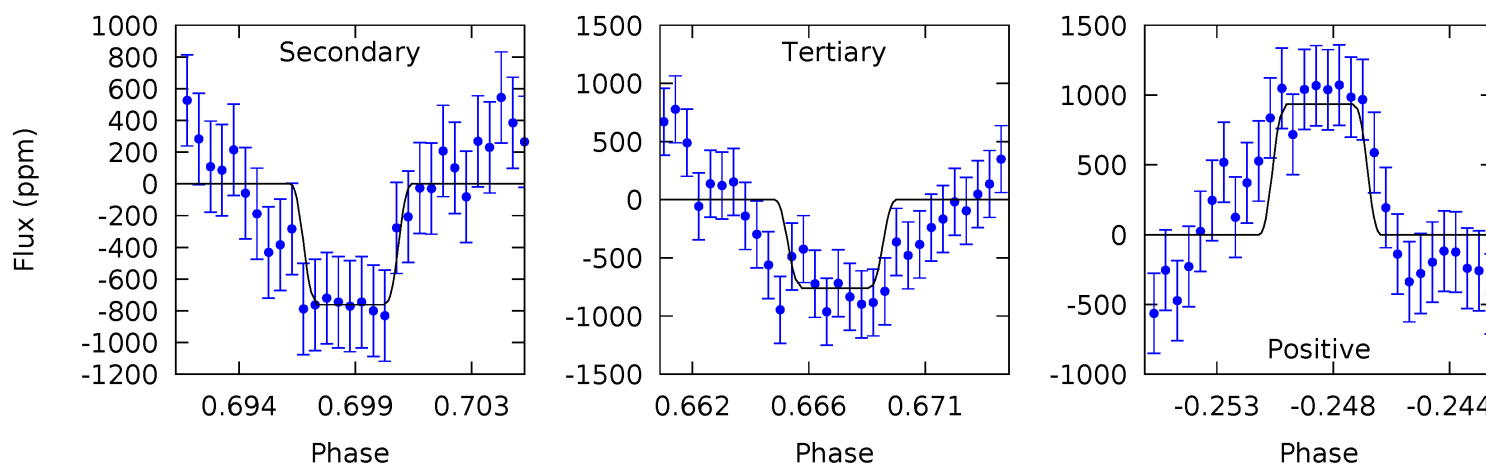
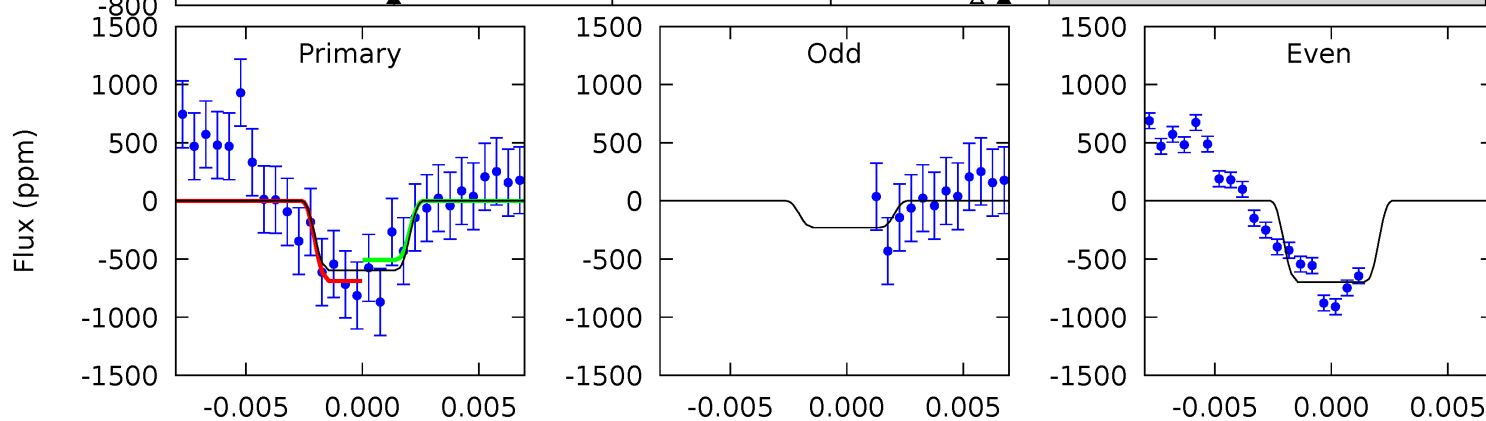
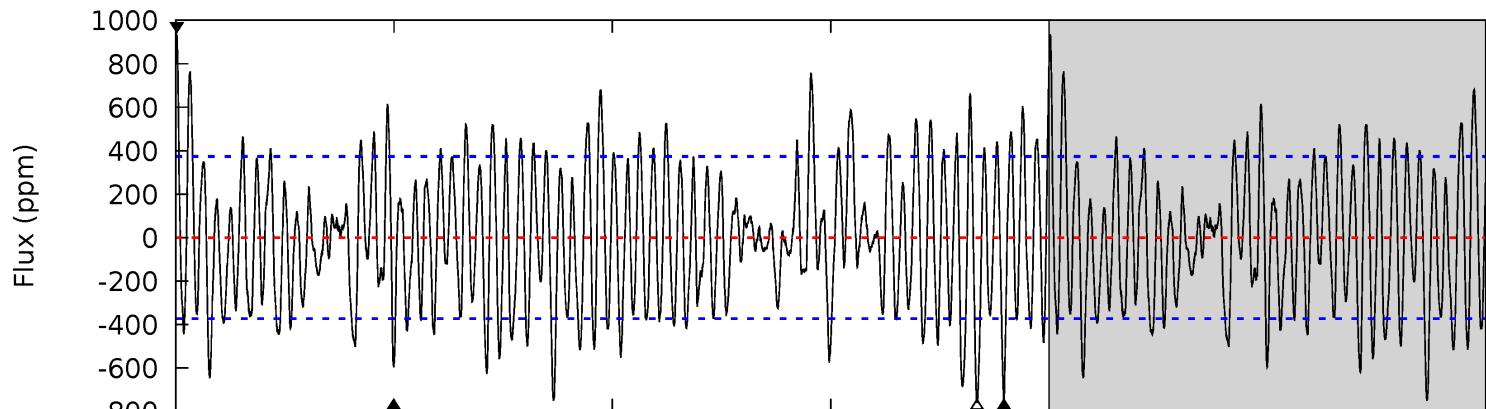
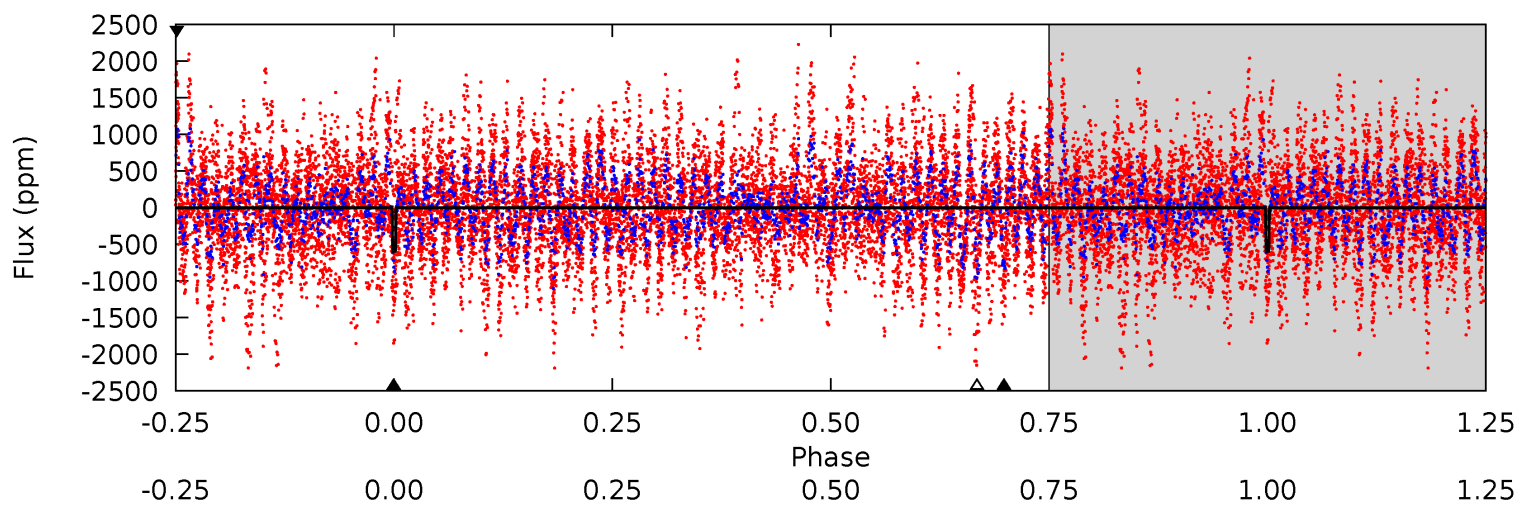
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.4	9.55	8.26	9.33	5.10	2.71	2.95	3.15	2.08	1.29	0.22	3.17	1.07	0.45	2.72



Alt Model-Shift Uniqueness Test

007700880-04, P = 36.126904 Days, E = 132.548166 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.28	10.6	10.5	13.0	5.17	2.83	4.07	-2.26	-4.68	0.03	-2.39	2.94	0.99	0.55	1.25



Stellar Parameters For KIC 007700880

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6739^{+189}_{-236}	$4.306^{+0.101}_{-0.188}$	$-0.380^{+0.250}_{-0.300}$	$1.256^{+0.363}_{-0.196}$	$1.170^{+0.175}_{-0.158}$	$0.831^{+0.384}_{-0.422}$
	+3%/-4%	+2%/-4%	+66%/-79%	+29%/-16%	+15%/-14%	+46%/-51%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007700880-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-268 ± 28	$2.59^{+1.07}_{-0.84}$	992^{+71}_{-54}	6344^{+1396}_{-923}	1108^{+1246}_{-540}
Alt.	-762 ± 72	$3.96^{+1.05}_{-0.91}$	993^{+69}_{-51}	6643^{+1038}_{-691}	1323^{+953}_{-489}

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

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

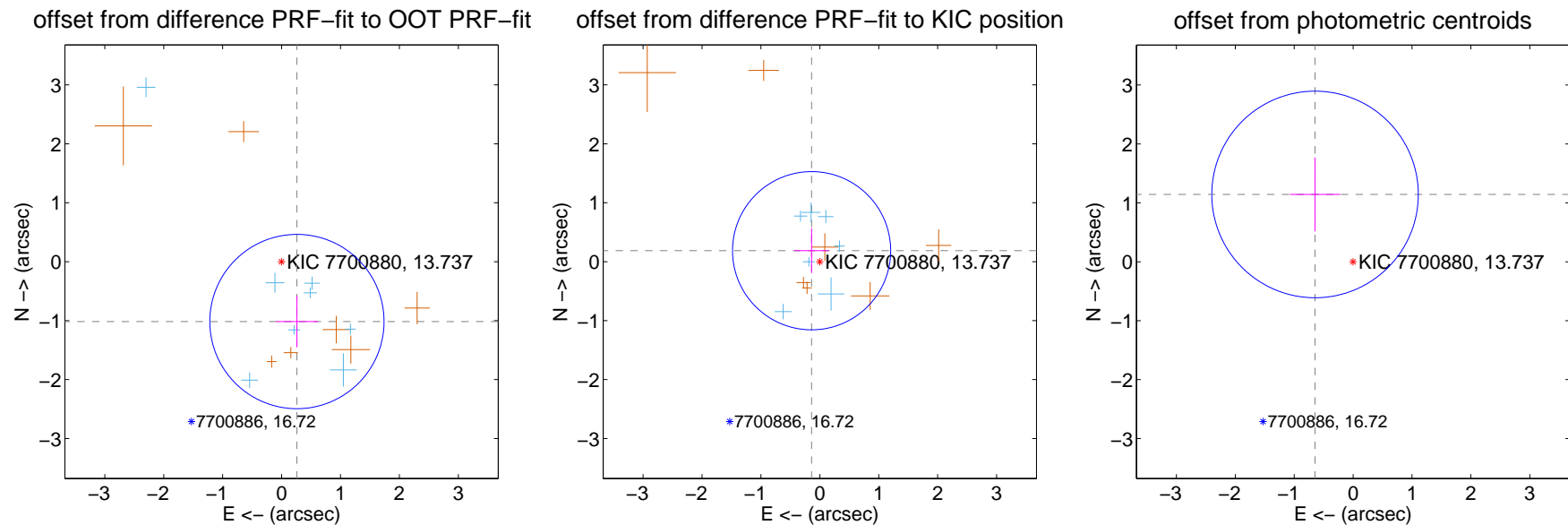
DV Centroid Data

Supplemental centroid analysis for 007700880-04. Kepler magnitude: 13.74. Transit SNR 9.47

There are 8 quarters with good PRF difference image offsets

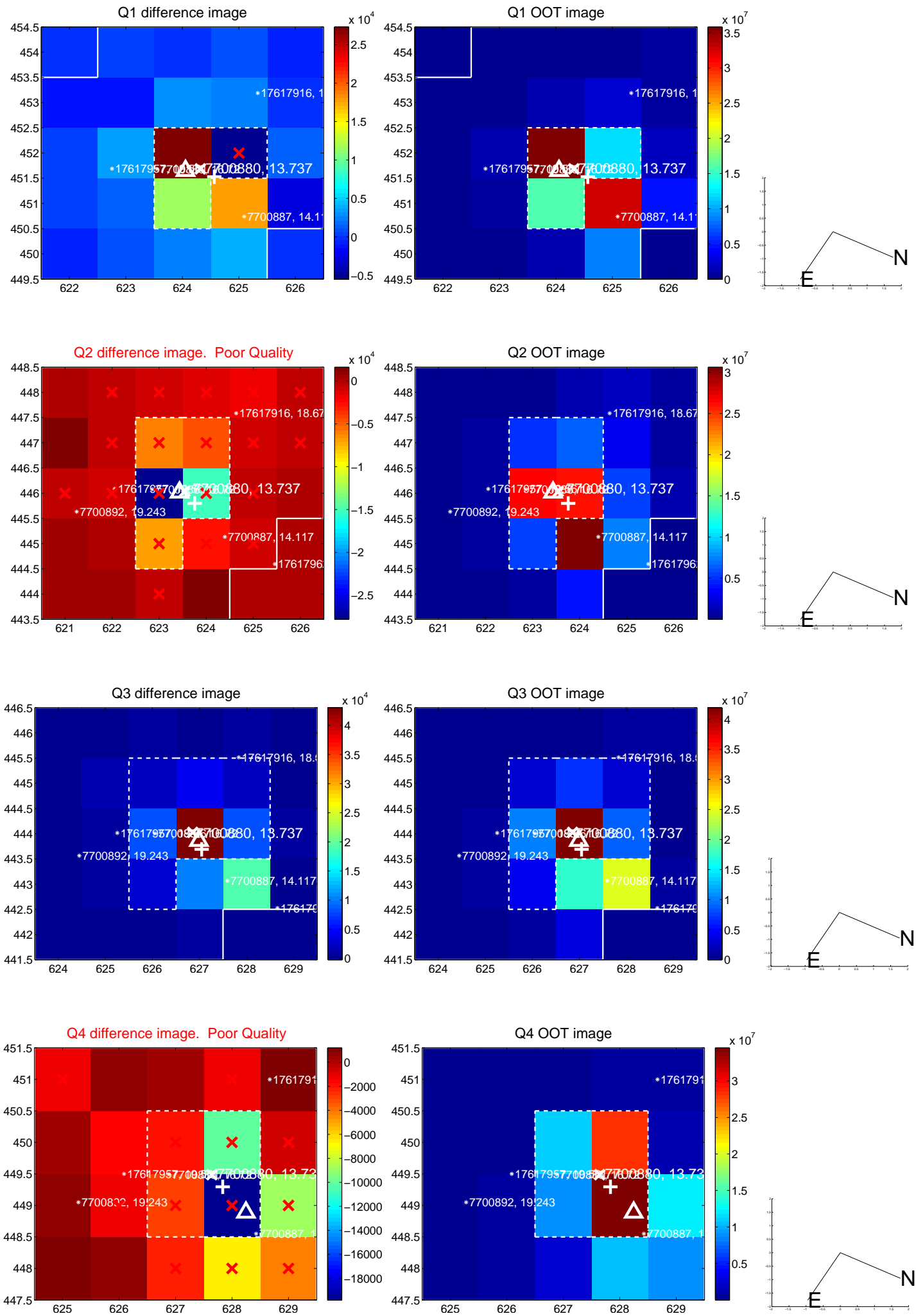
The direct PRF centroid is offset from the target star catalog position by about 1.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.048 ± 0.493	2.13	-0.261 ± 0.356	-1.015 ± 0.439
PRF-fit source offset from KIC position	0.233 ± 0.447	0.52	0.140 ± 0.295	0.186 ± 0.381
photometric centroid source offset	1.31 ± 0.58	2.25	0.65 ± 0.43	1.14 ± 0.63

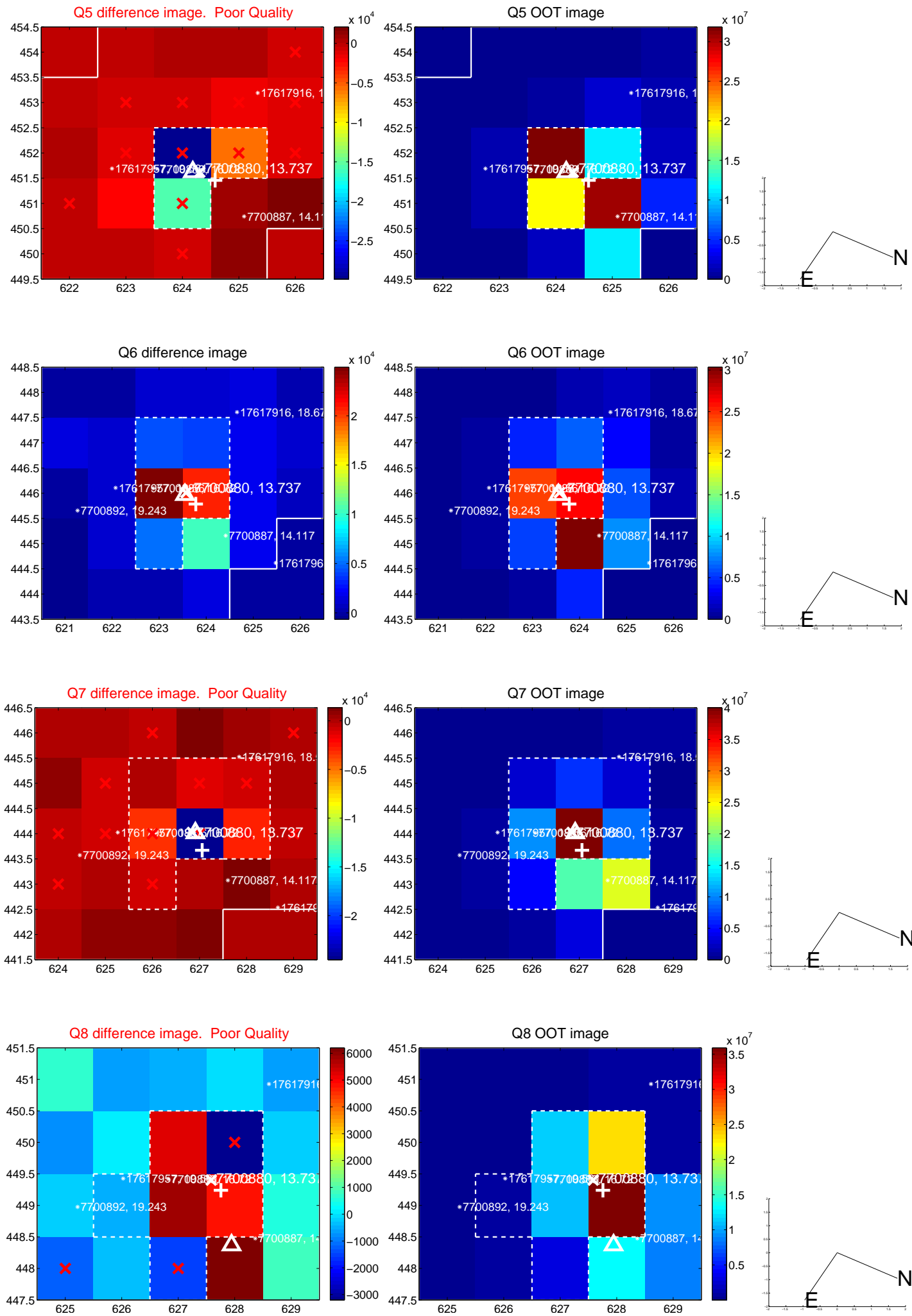


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

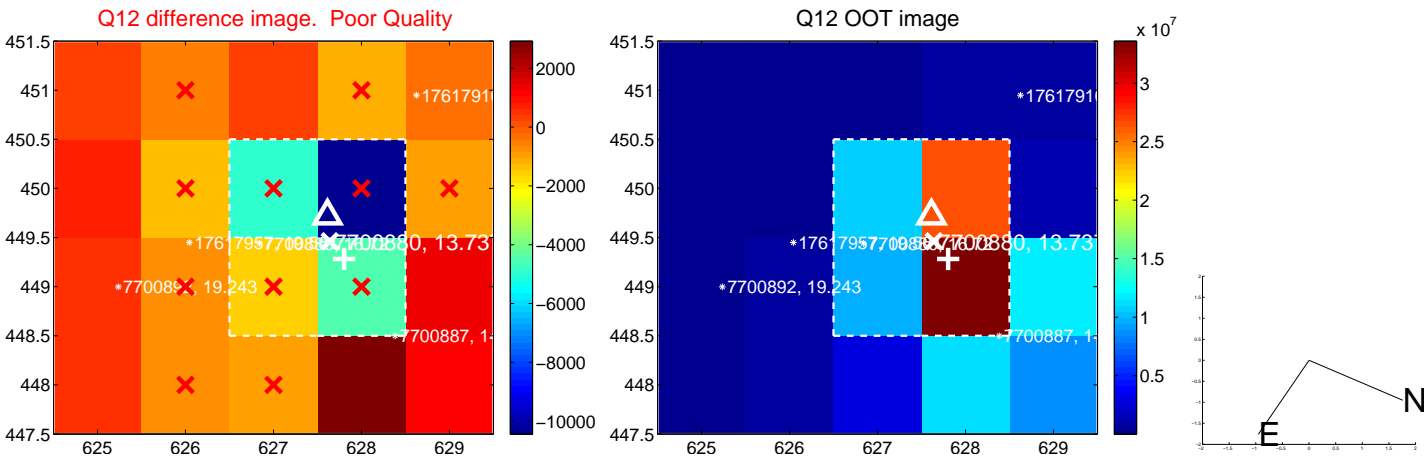
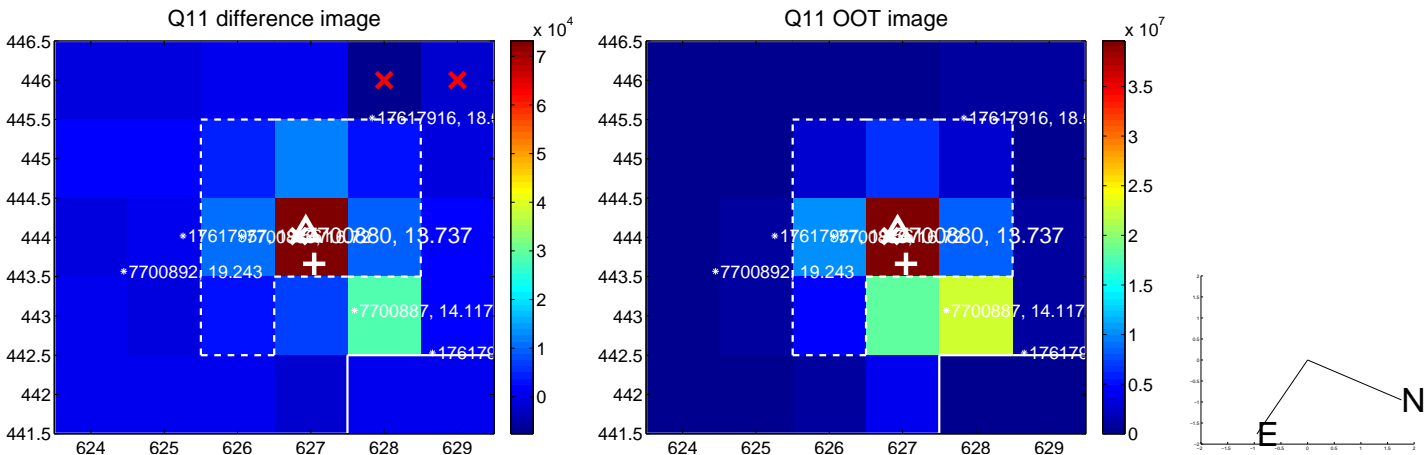
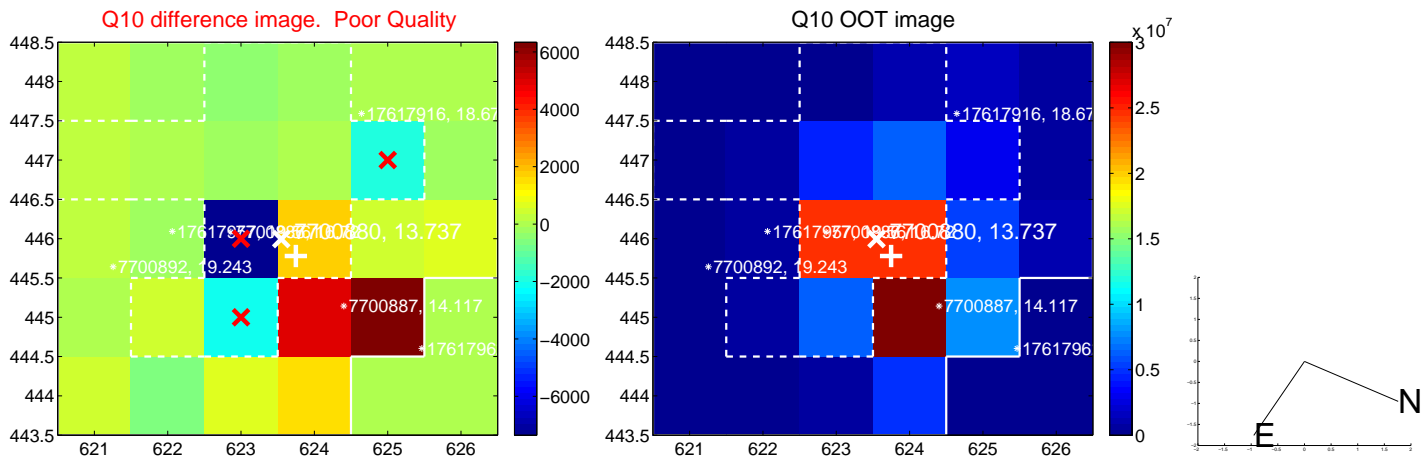
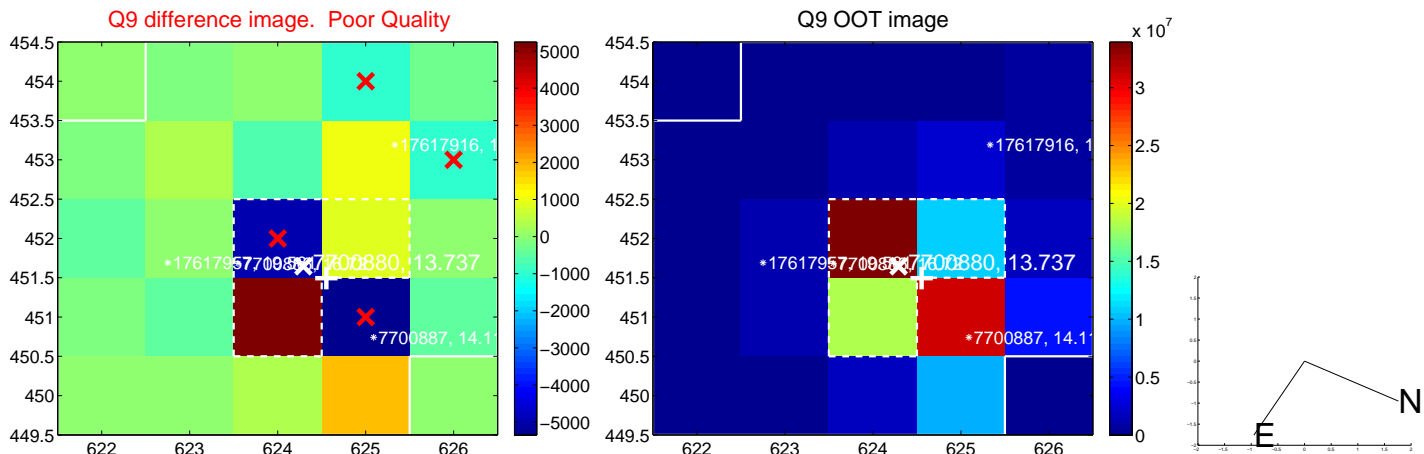
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



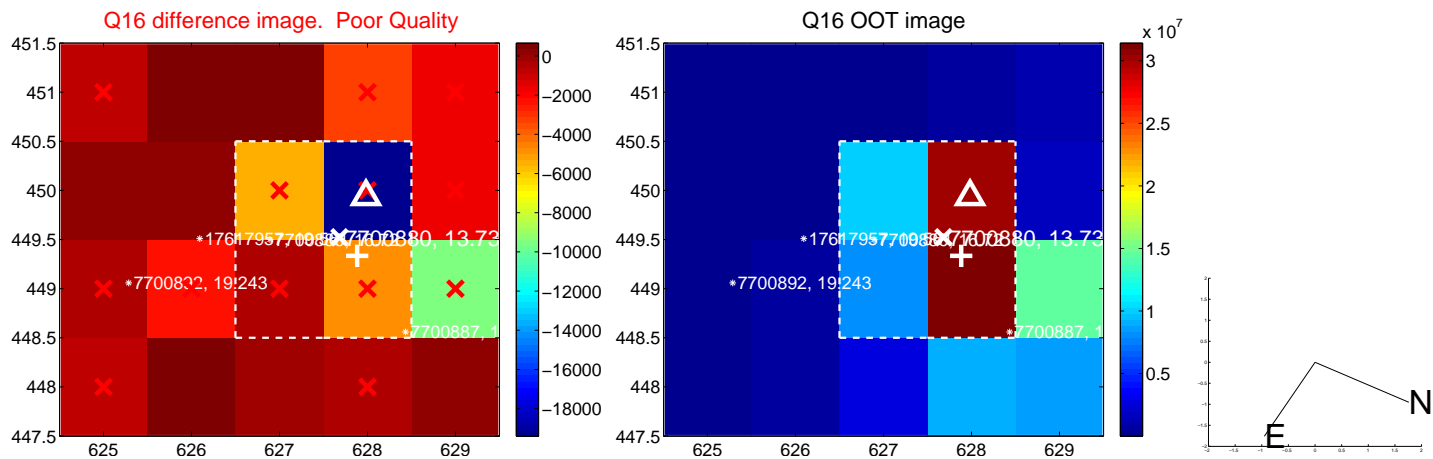
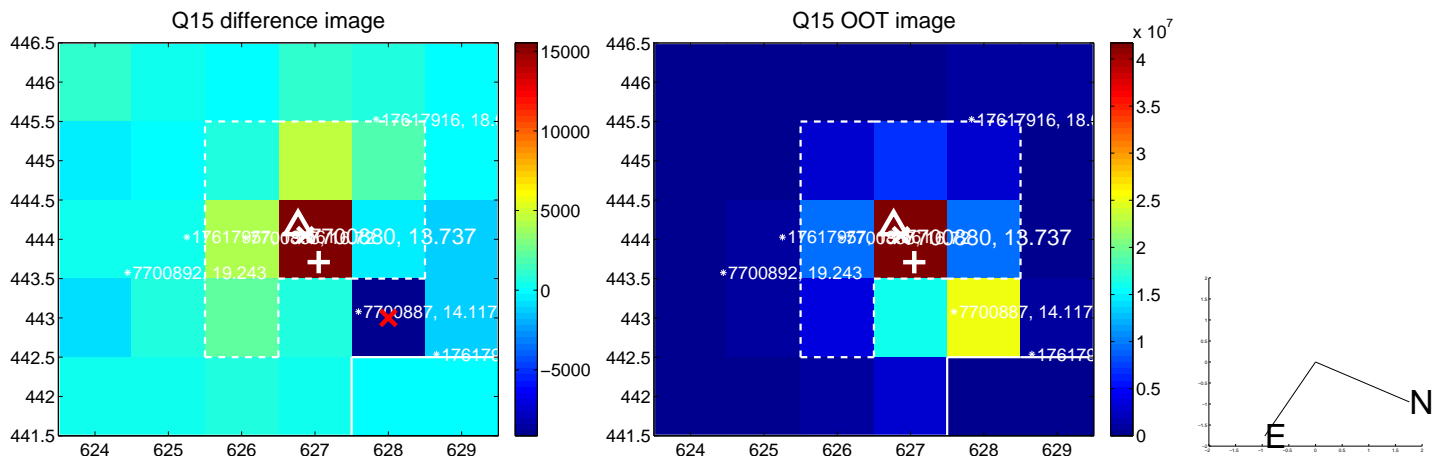
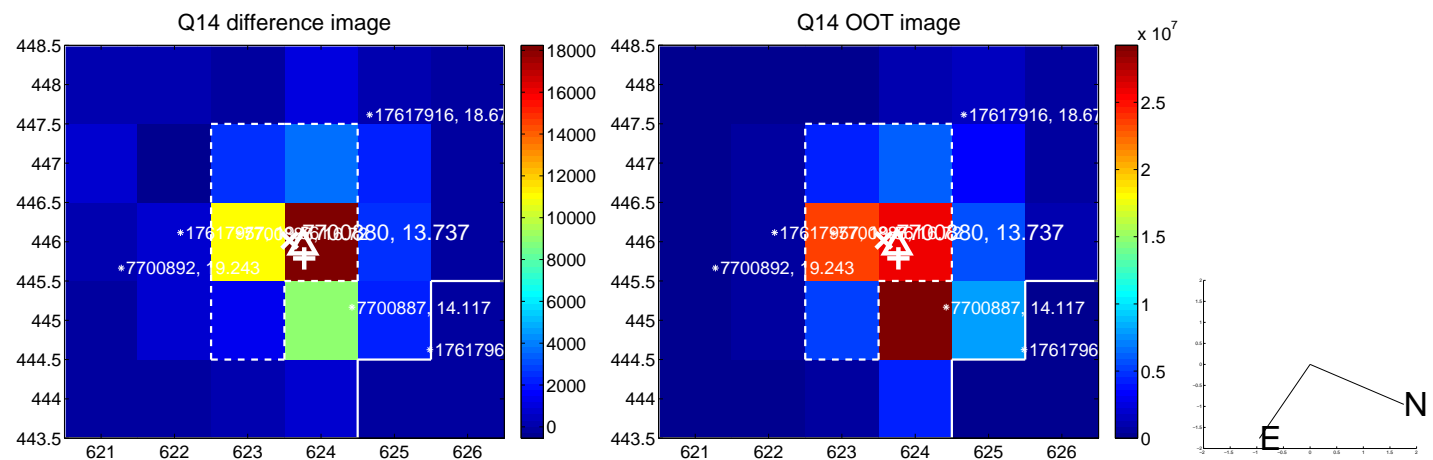
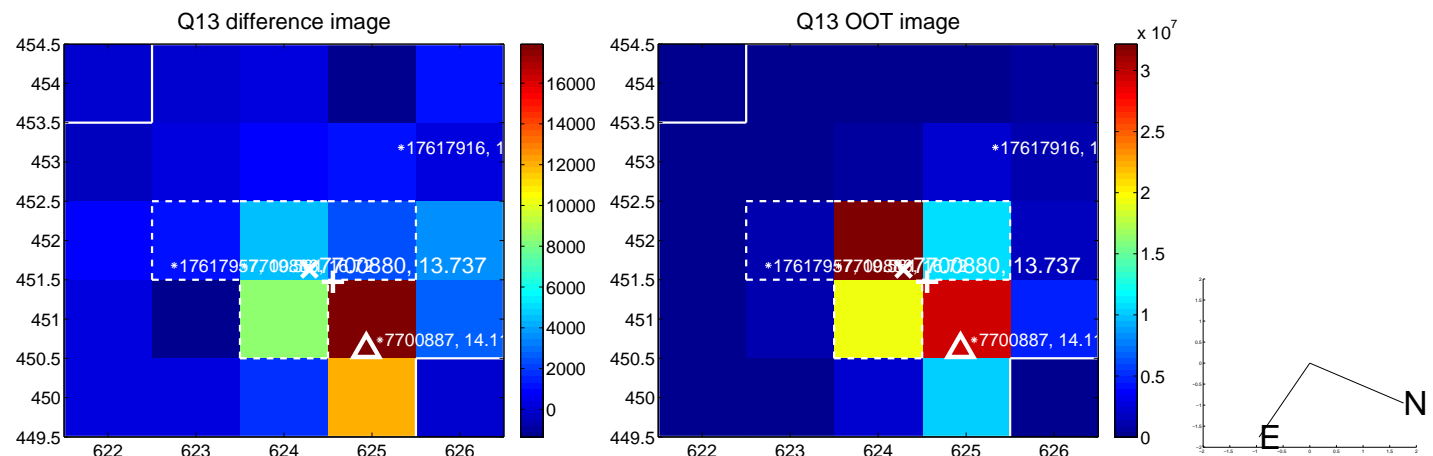
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



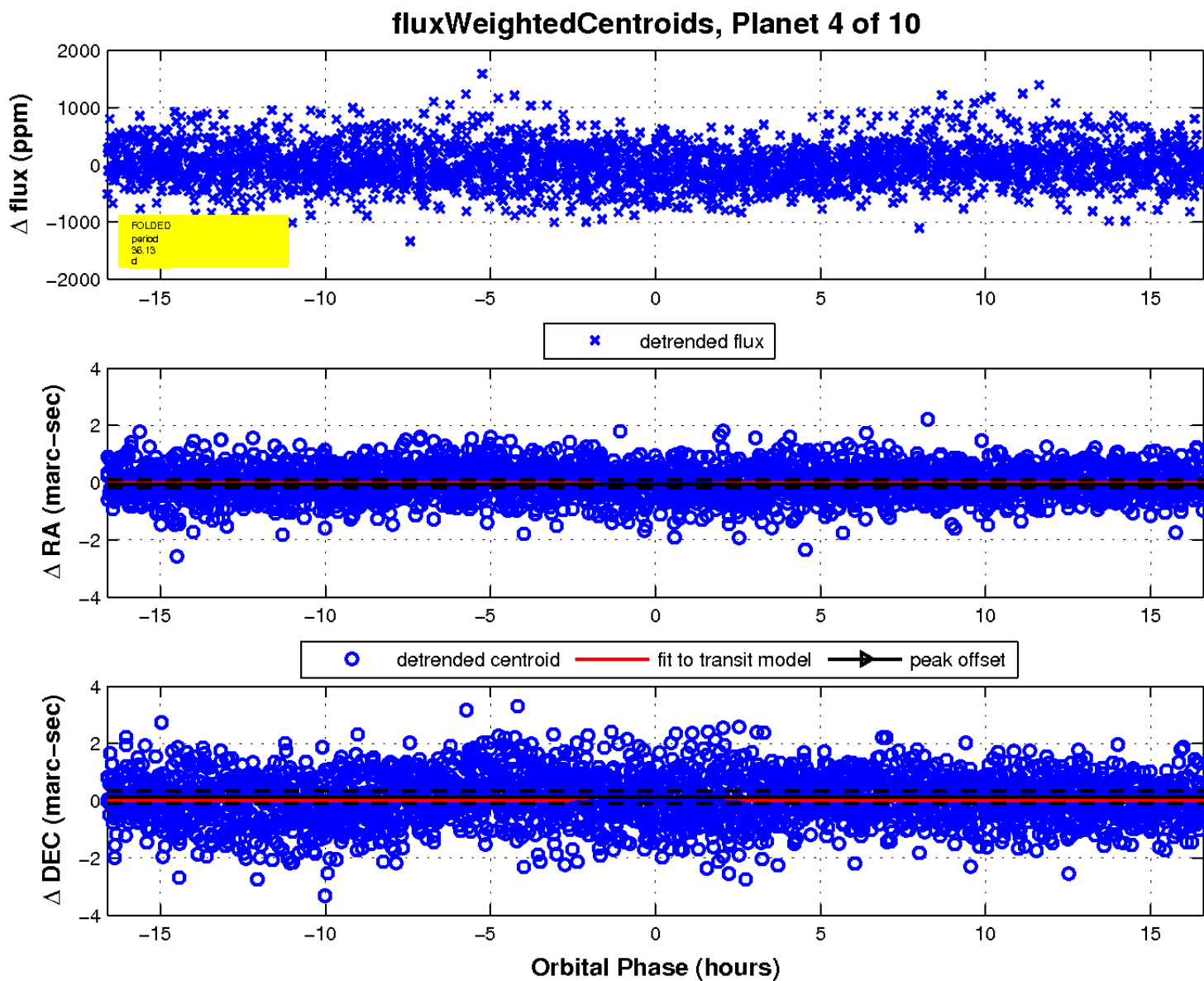
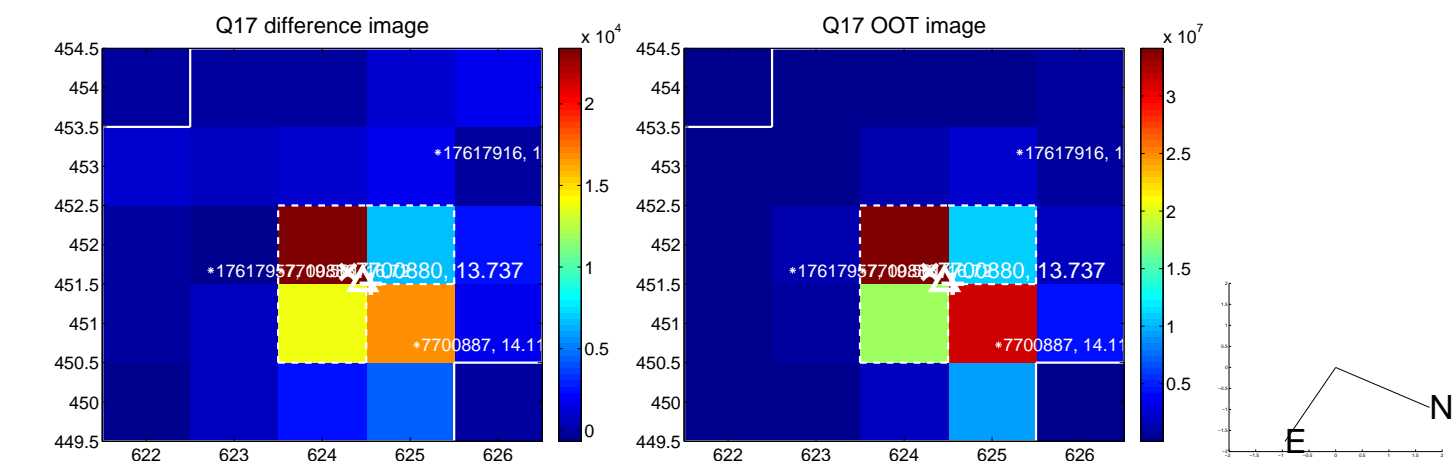
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



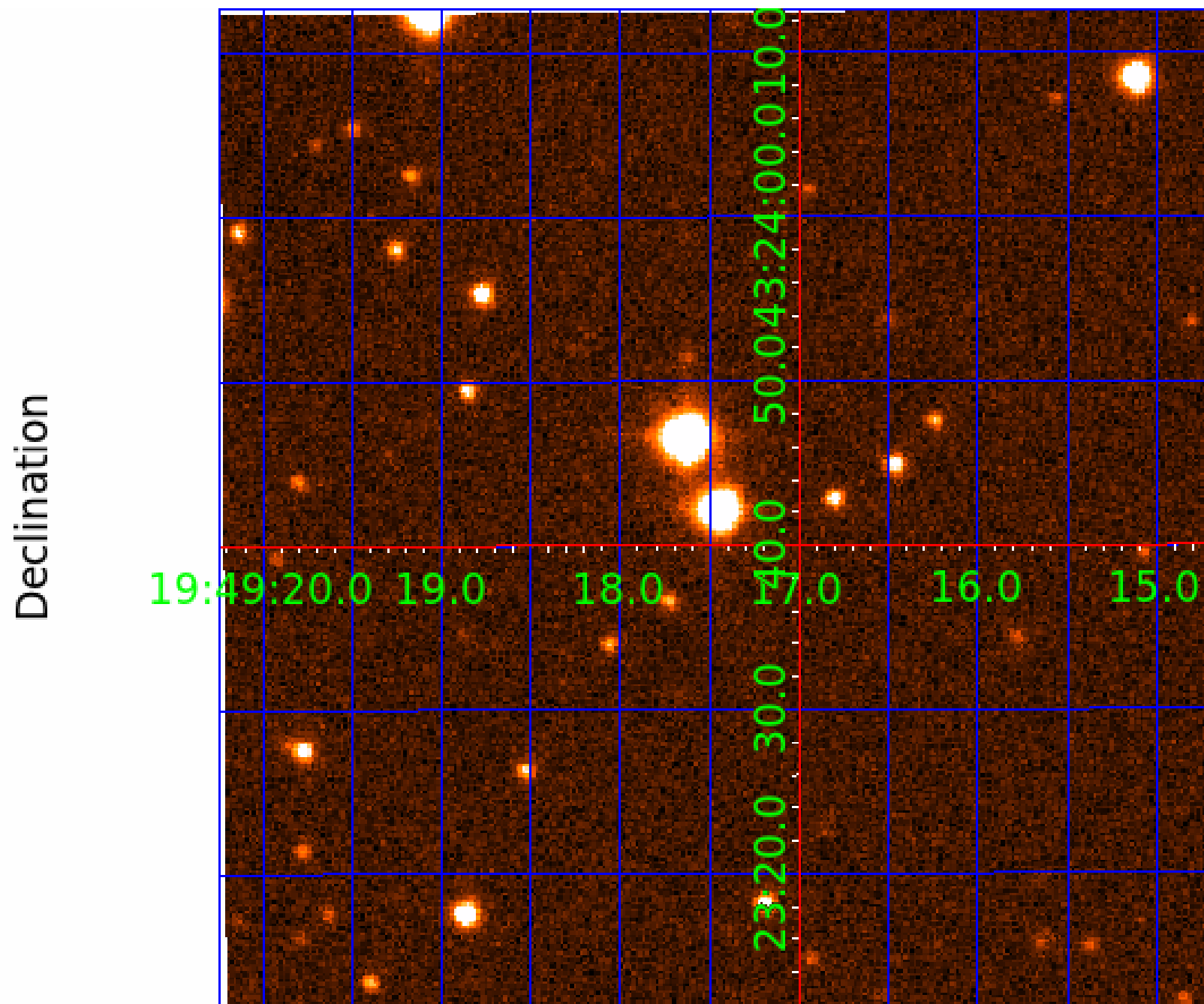
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
007700880-01	OBS	No	2.711831	133.076025	79.4	4.438	8.9	10.3	1.26	6739	1.30	1817.97
007700880-02	OBS	No	1.553862	131.997646	32.9	9.156	8.1	5.7	1.26	6739	0.75	3819.91
007700880-03	OBS	No	130.853517	252.755847	640.1	5.069	10.5	8.7	1.26	6739	3.82	10.35
007700880-04	OBS	No	36.128406	132.528556	326.7	5.539	9.6	9.5	1.26	6739	2.56	57.56
007700880-06	OBS	No	161.399146	278.961203	829.7	19.846	10.9	10.2	1.26	6739	4.34	7.82
007700880-07	OBS	No	92.145114	152.634577	210.9	0.940	8.4	1.9	1.26	6739	2.12	16.52
007700880-08	OBS	No	92.138931	153.022111	450.8	5.333	8.5	7.9	1.26	6739	2.92	16.52
007700880-09	OBS	No	64.651118	157.112939	105.5	14.705	8.1	2.4	1.26	6739	1.42	26.50
007700880-10	OBS	No	29.889930	147.843900	268.6	7.381	8.8	8.0	1.26	6739	2.22	74.11

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007700880-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_KIC_POS
007700880-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_KIC_POS
007700880-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
007700880-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS—HALO_GHOST
007700880-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007700880-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS
007700880-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_FEW_DIFFS
007700880-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_KIC_POS
007700880-10	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—CENT_KIC_POS

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

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

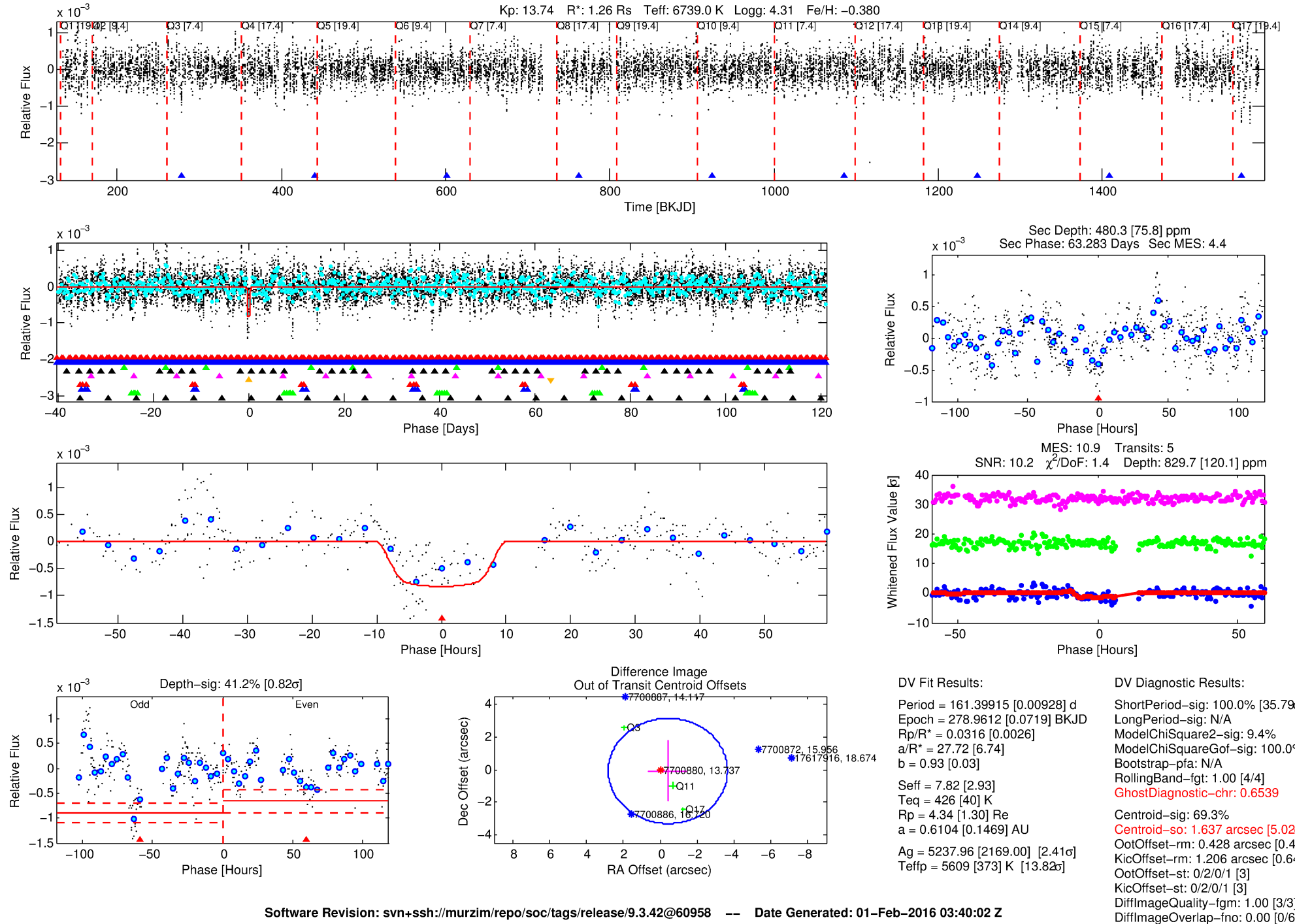
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007700880-06

No Significant Match Found

DV One-Page Summary

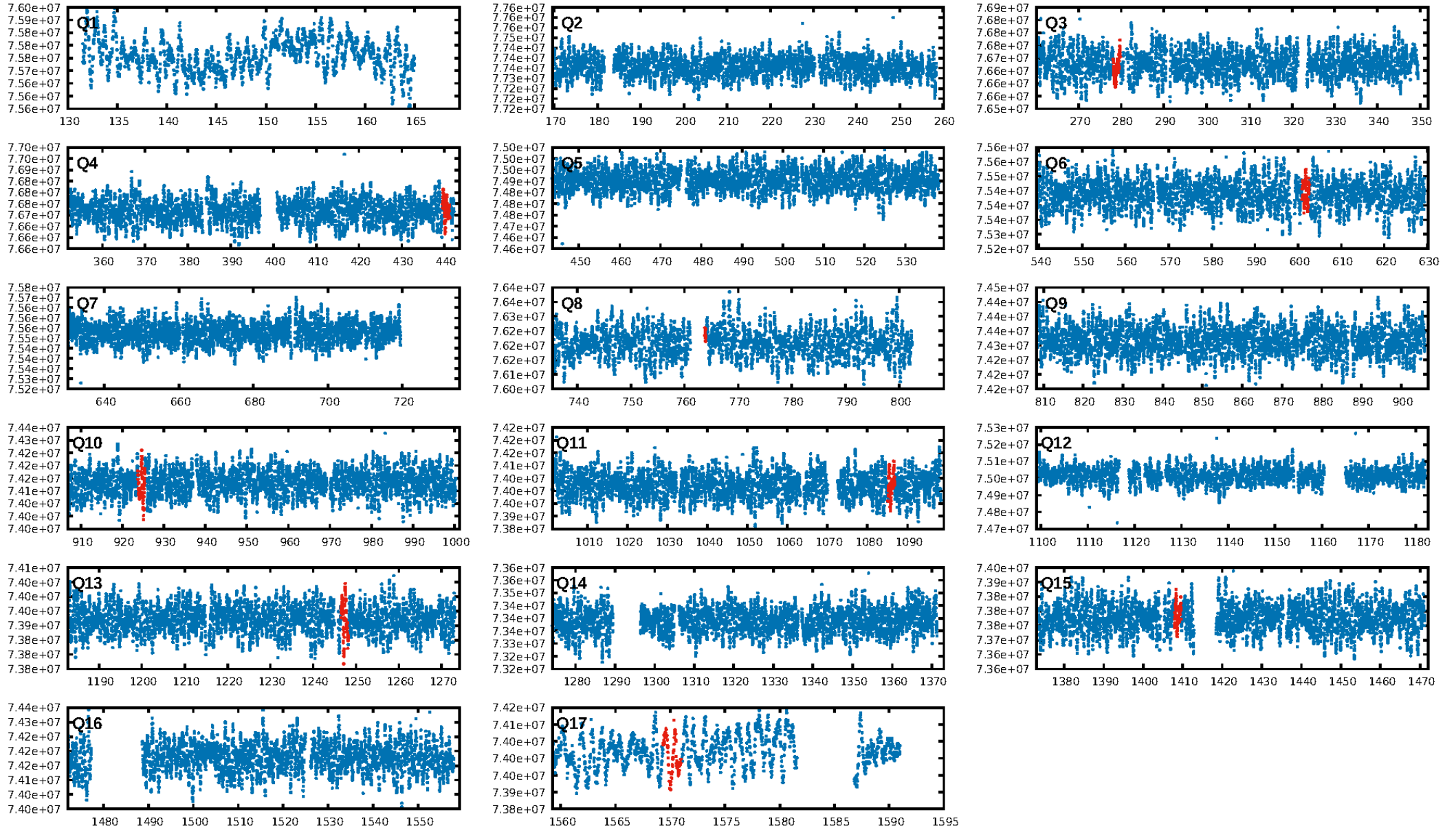
KIC: 7700880 Candidate: 6 of 10 Period: 161.399 d



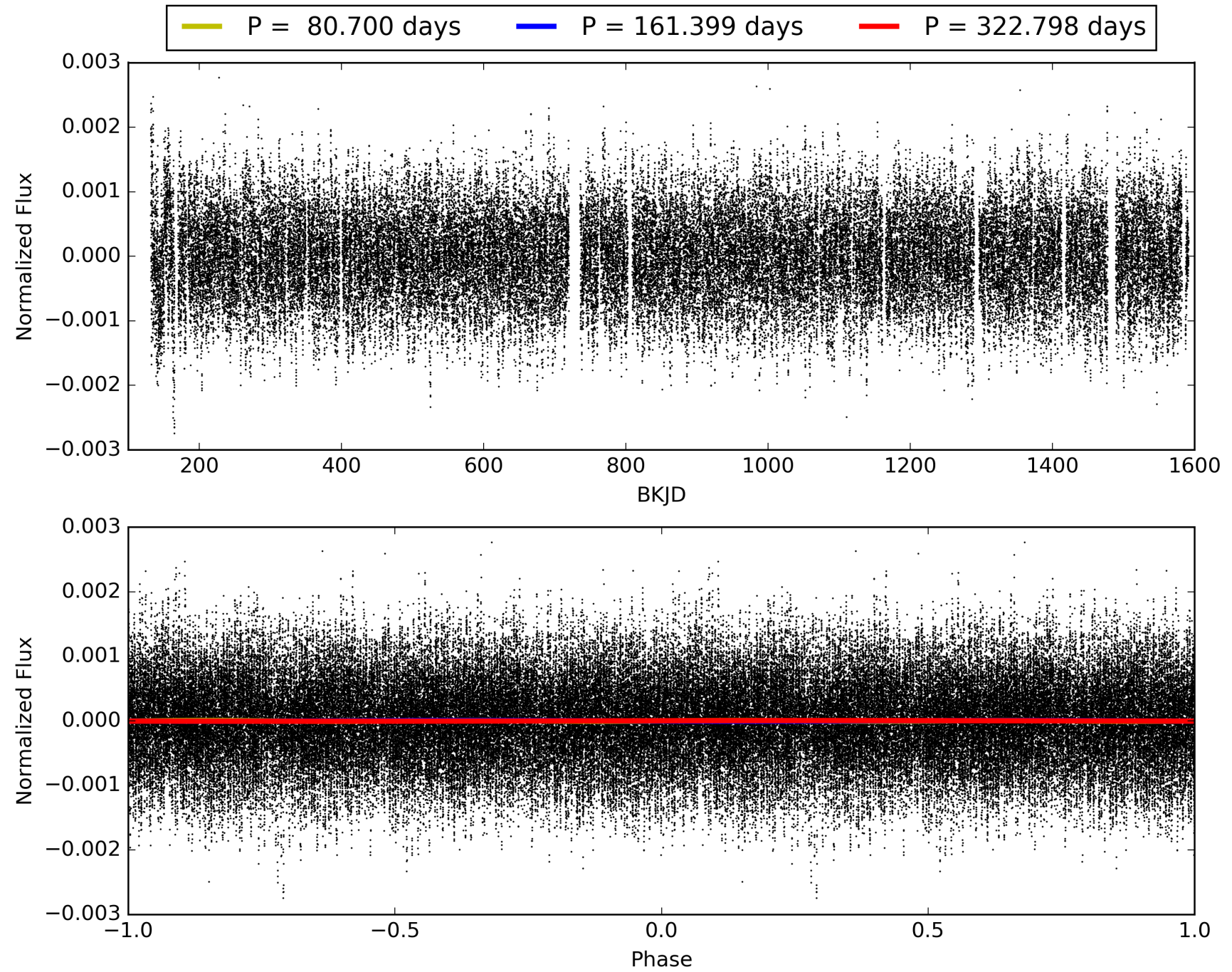
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 03:40:02 Z

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

TCE 007700880-06, PDC Light Curves

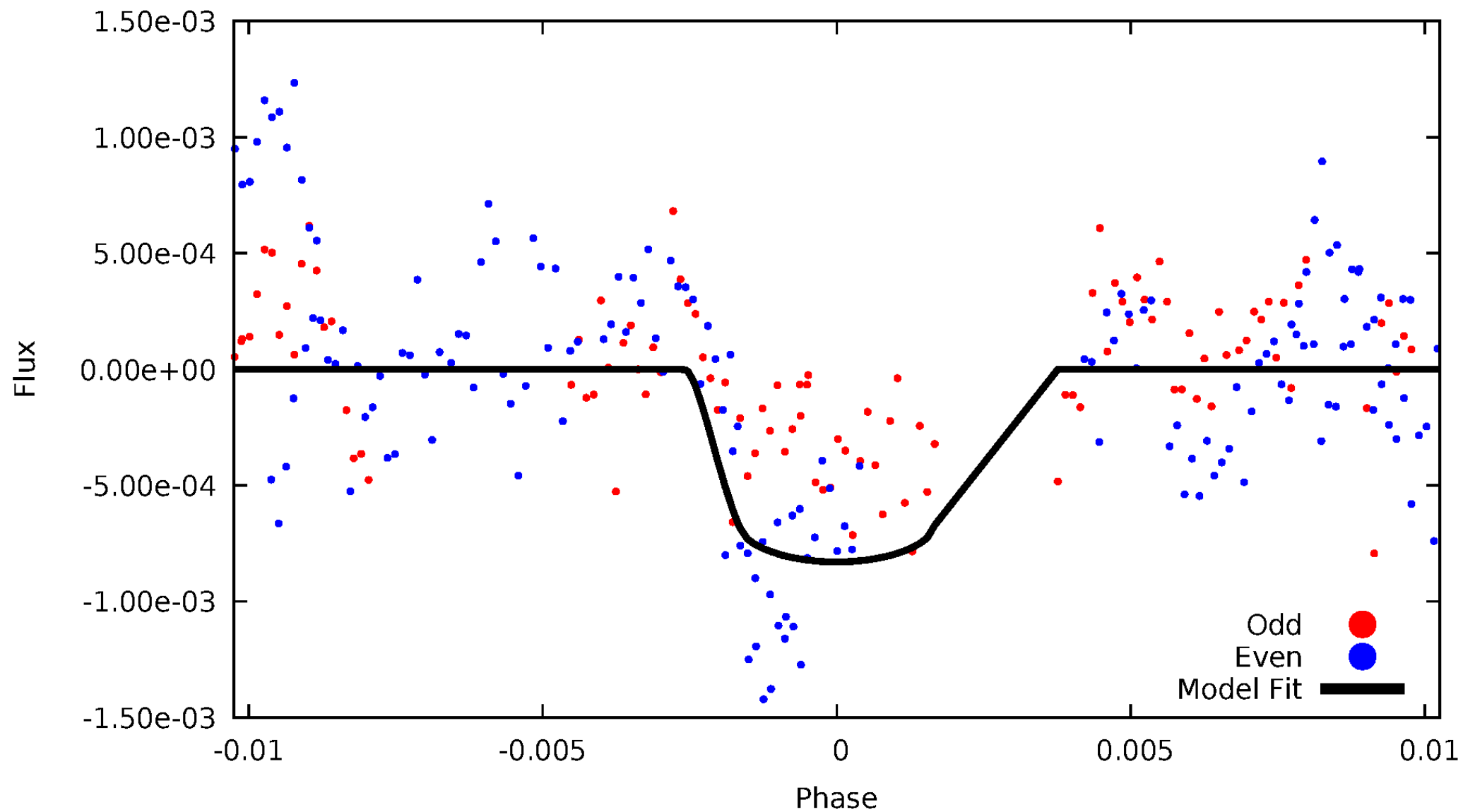


TCE 007700880-06



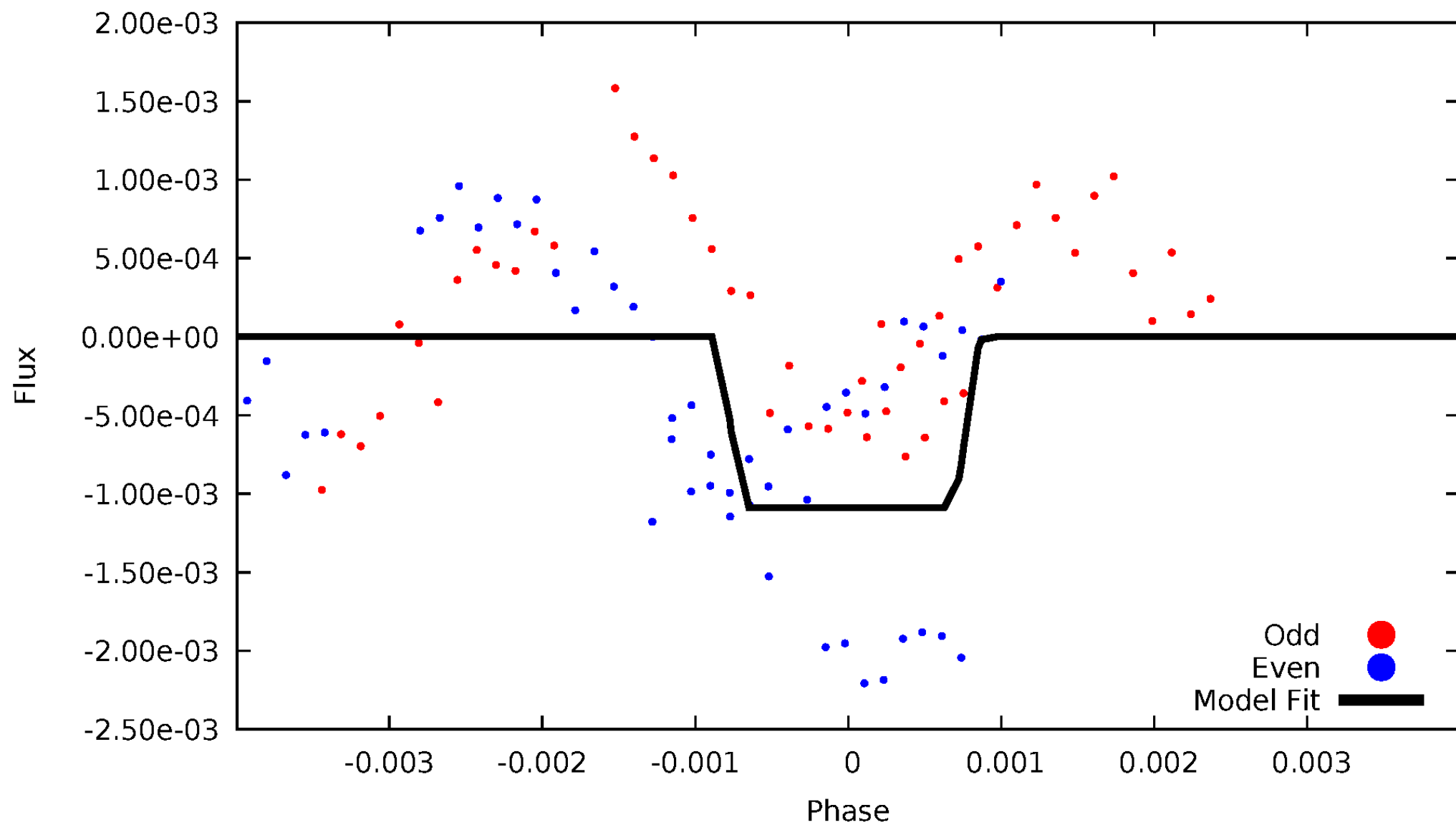
DV Odd/Even

TCE 007700880-06



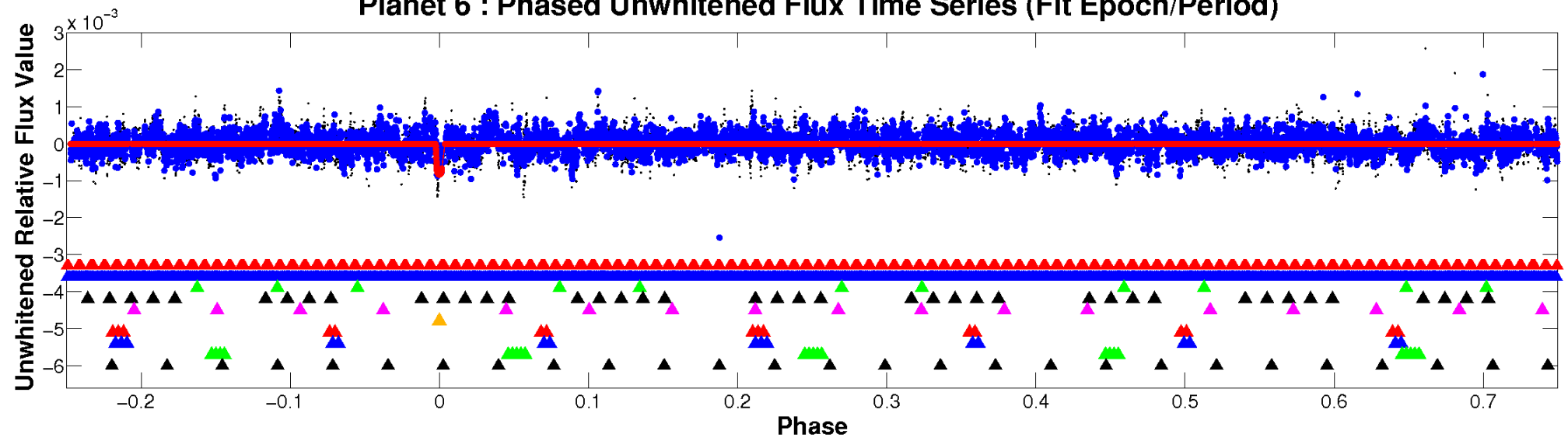
ALT Odd/Even

TCE 007700880-06

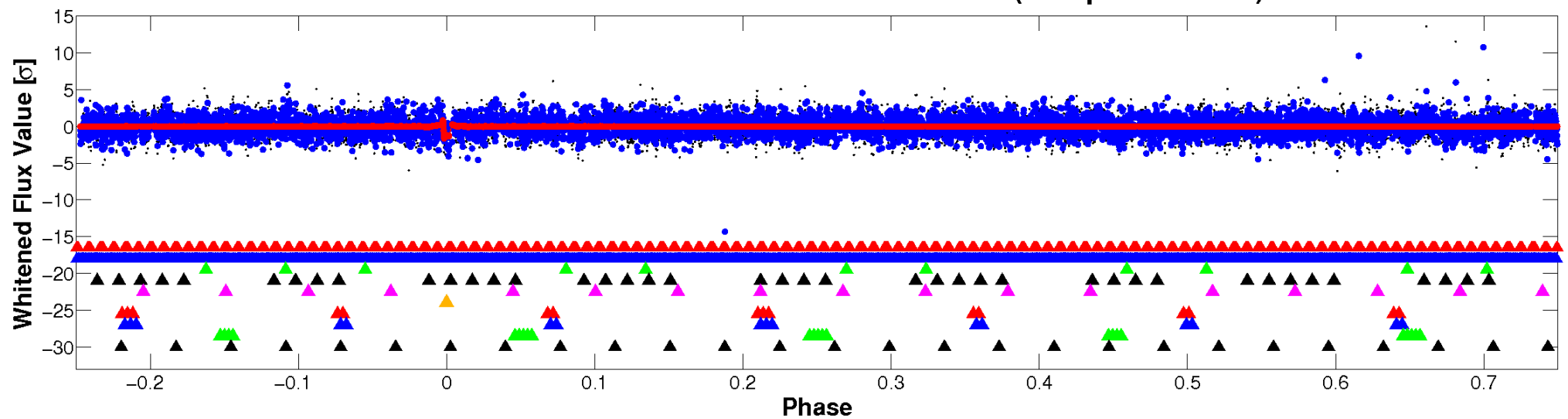


Non-Whitened Vs. Whitened Light Curve

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

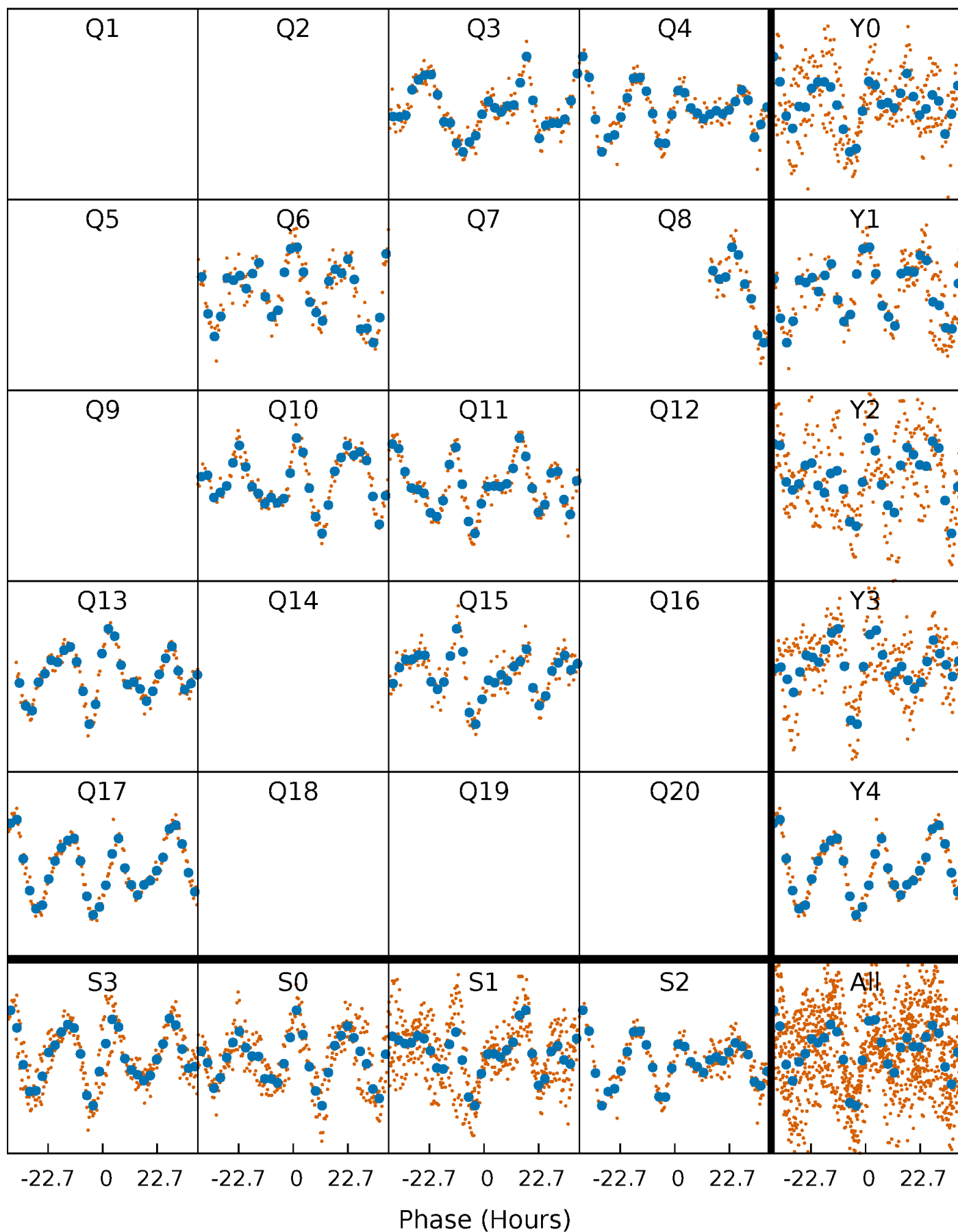


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



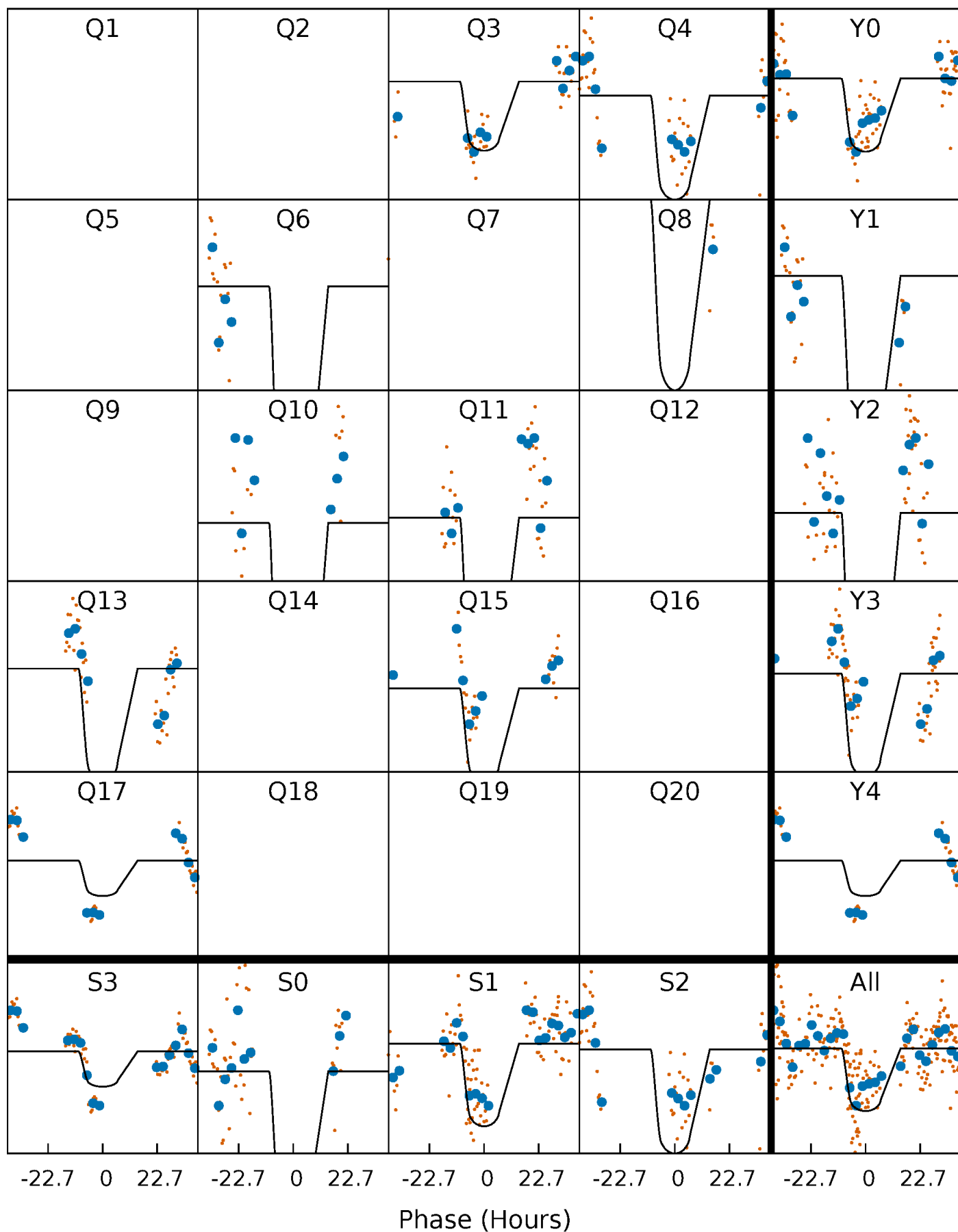
PDC Quarter-Phased Transit Curves

TCE 007700880-06 P=161.399146 Days $T_0=278.961203$ (BKJD)



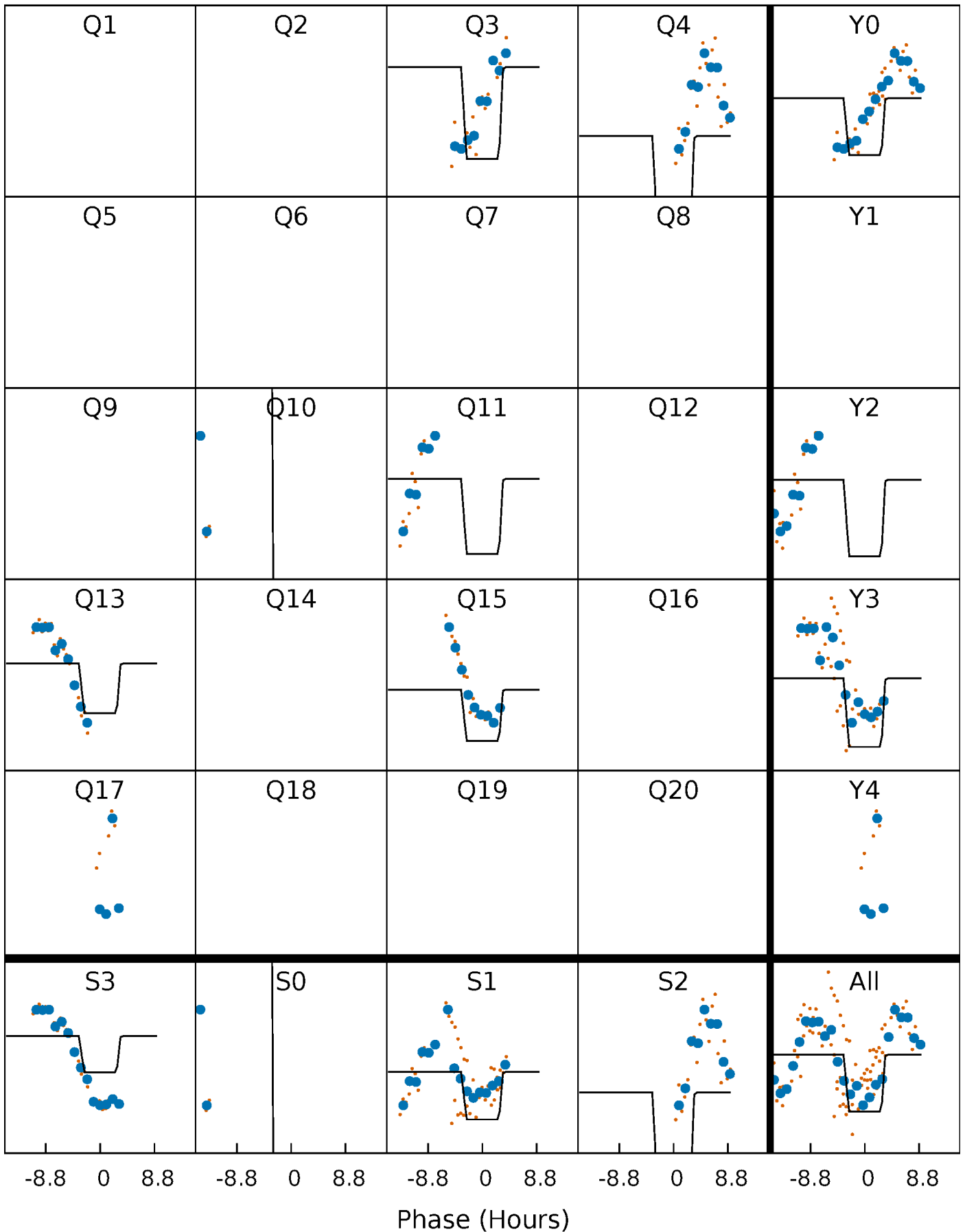
DV Quarter-Phased Transit Curves

TCE 007700880-06 P=161.399146 Days $T_0=278.961203$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

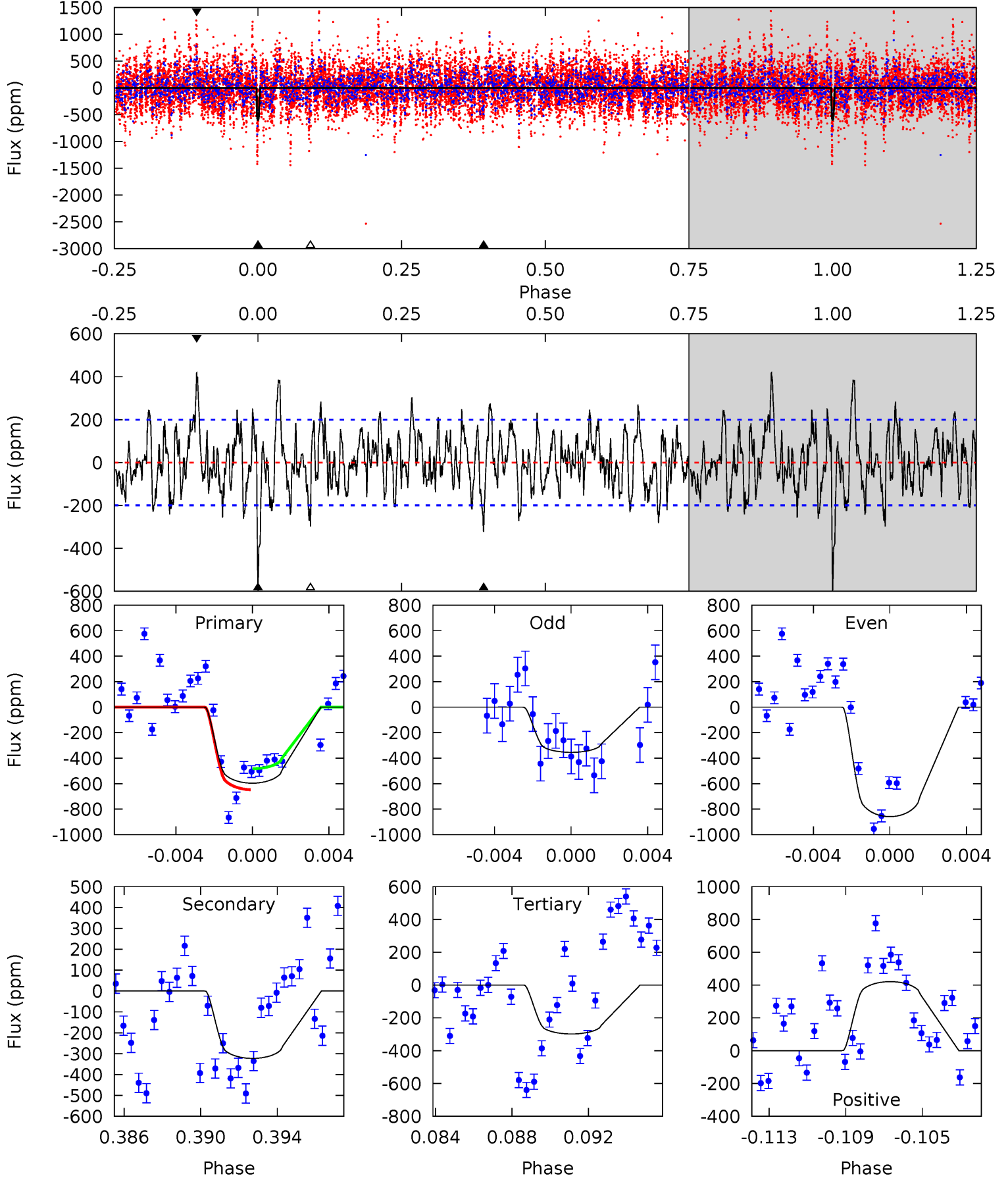
TCE 007700880-06 P=161.384257 Days $T_0=278.862602$ (BKJD)



DV Model-Shift Uniqueness Test

007700880-06, P = 161.399146 Days, E = 117.562057 Days

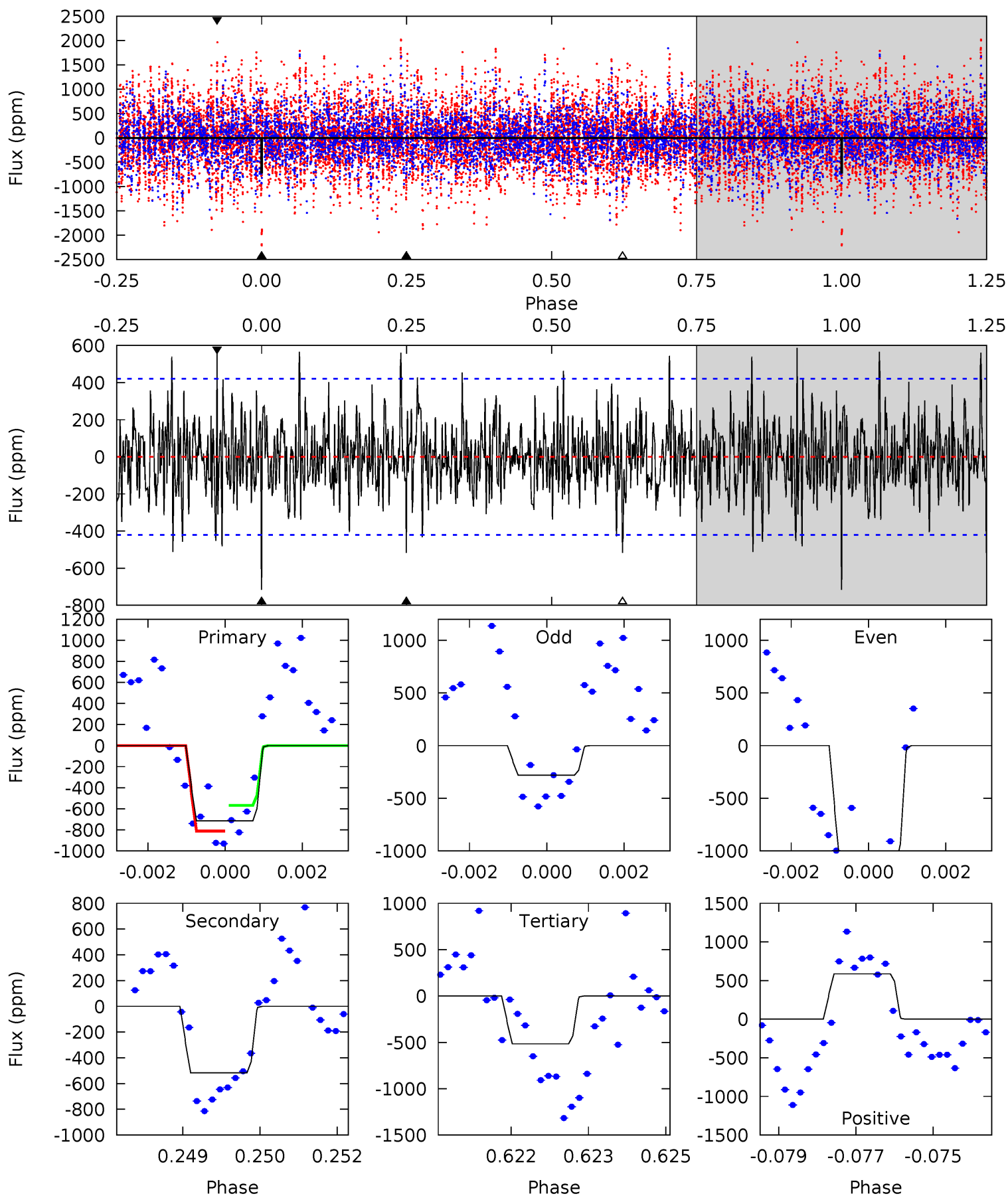
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.5	8.39	7.76	10.9	5.19	2.86	2.97	7.75	4.56	0.64	-2.55	6.57	1.39	0.41	1.85



Alt Model-Shift Uniqueness Test

007700880-06, P = 161.384257 Days, E = 117.478345 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.10	6.56	6.56	7.46	5.35	3.13	2.00	2.54	1.64	0.00	-0.89	5.36	1.89	0.45	1.52



Stellar Parameters For KIC 007700880

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6739^{+189}_{-236}	$4.306^{+0.101}_{-0.188}$	$-0.380^{+0.250}_{-0.300}$	$1.256^{+0.363}_{-0.196}$	$1.170^{+0.175}_{-0.158}$	$0.831^{+0.384}_{-0.422}$
	+3%/-4%	+2%/-4%	+66%/-79%	+29%/-16%	+15%/-14%	+46%/-51%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007700880-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-323 ± 38	$4.50^{+0.72}_{-0.67}$	604^{+43}_{-36}	5113^{+277}_{-254}	3262^{+1160}_{-900}
Alt.	-516 ± 79	$4.62^{+0.84}_{-0.56}$	603^{+41}_{-34}	5585^{+319}_{-326}	4793^{+1665}_{-1306}

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

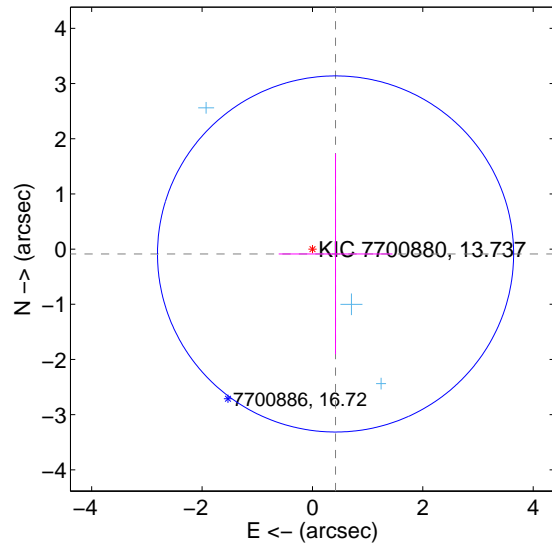
Supplemental centroid analysis for 007700880-06. Kepler magnitude: 13.74. Transit SNR 10.24

There are 3 quarters with good PRF difference image offsets

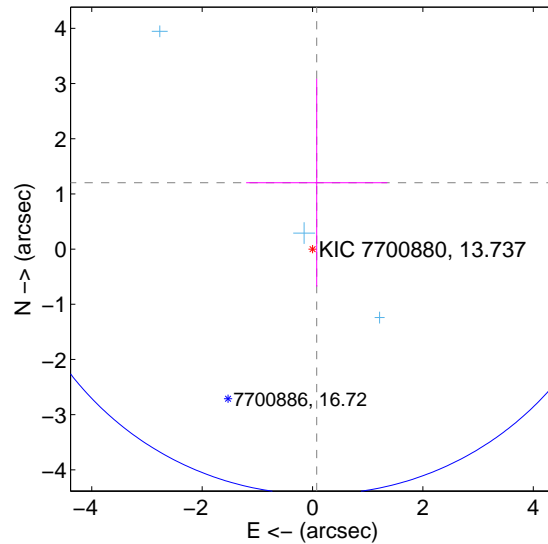
The direct PRF centroid is offset from the target star catalog position by about 1.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.428 ± 1.076	0.40	-0.419 ± 1.030	-0.088 ± 1.819
PRF-fit source offset from KIC position	1.206 ± 1.883	0.64	-0.076 ± 1.278	1.203 ± 1.885
photometric centroid source offset	1.64 ± 0.33	5.02	0.36 ± 0.24	1.60 ± 0.33

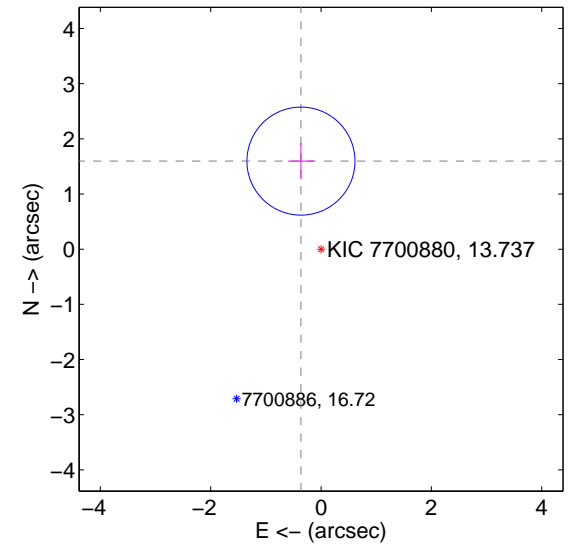
offset from difference PRF-fit to OOT PRF-fit



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.

Q1 no difference image



Q1 no OOT image



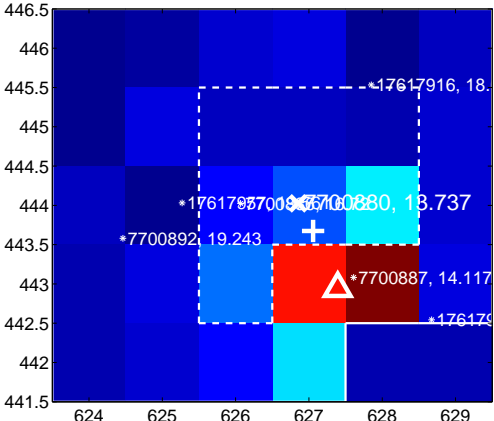
Q2 no difference image



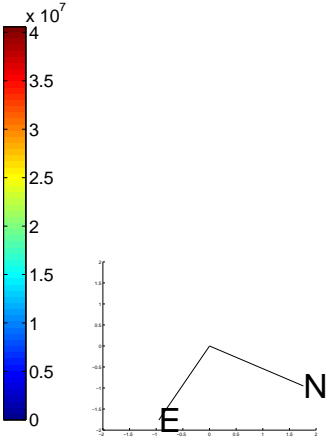
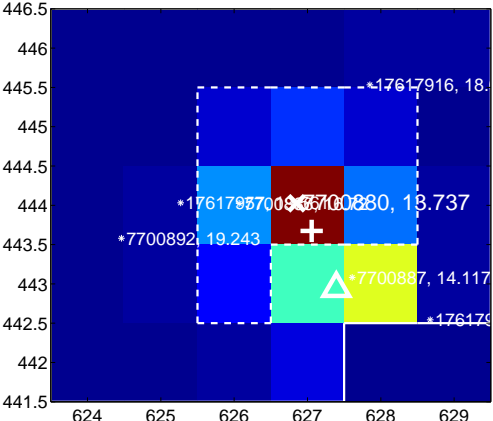
Q2 no OOT image



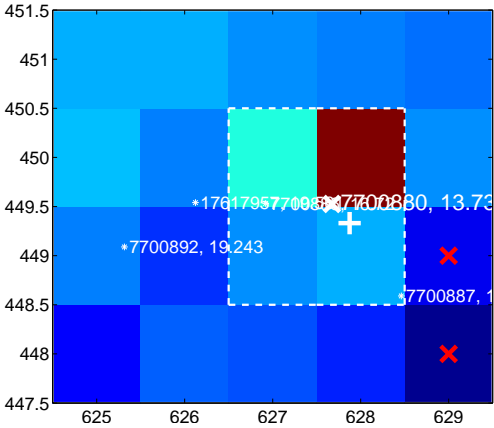
Q3 difference image



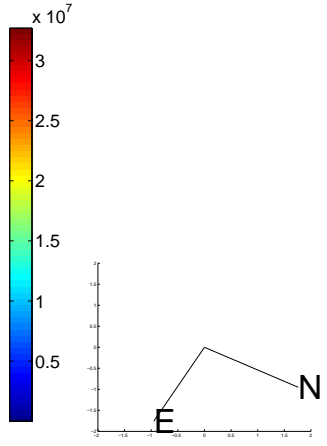
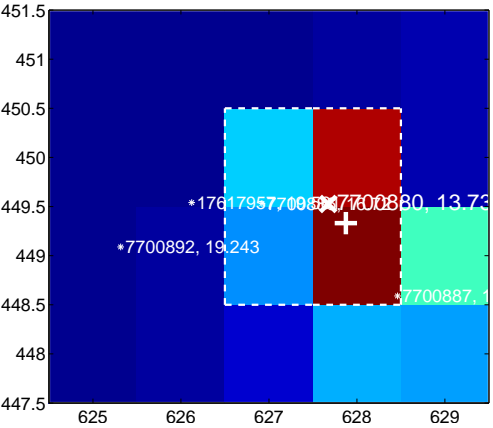
Q3 OOT image



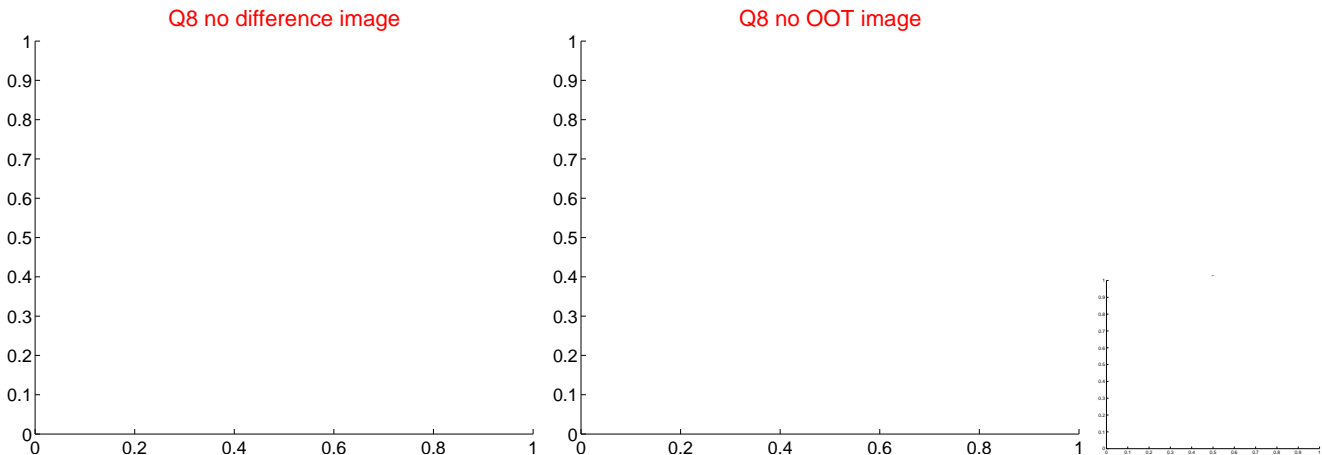
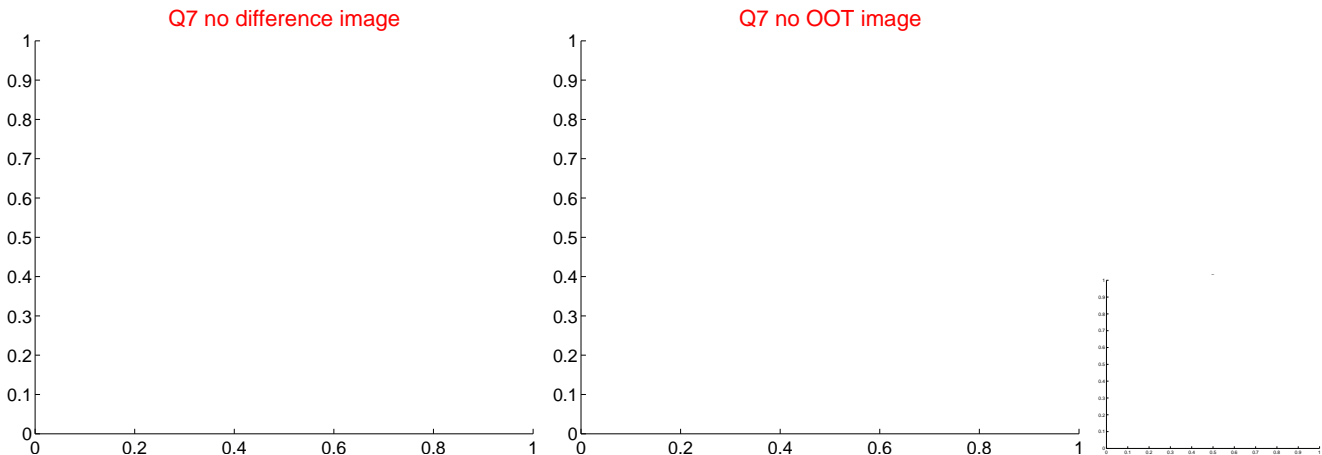
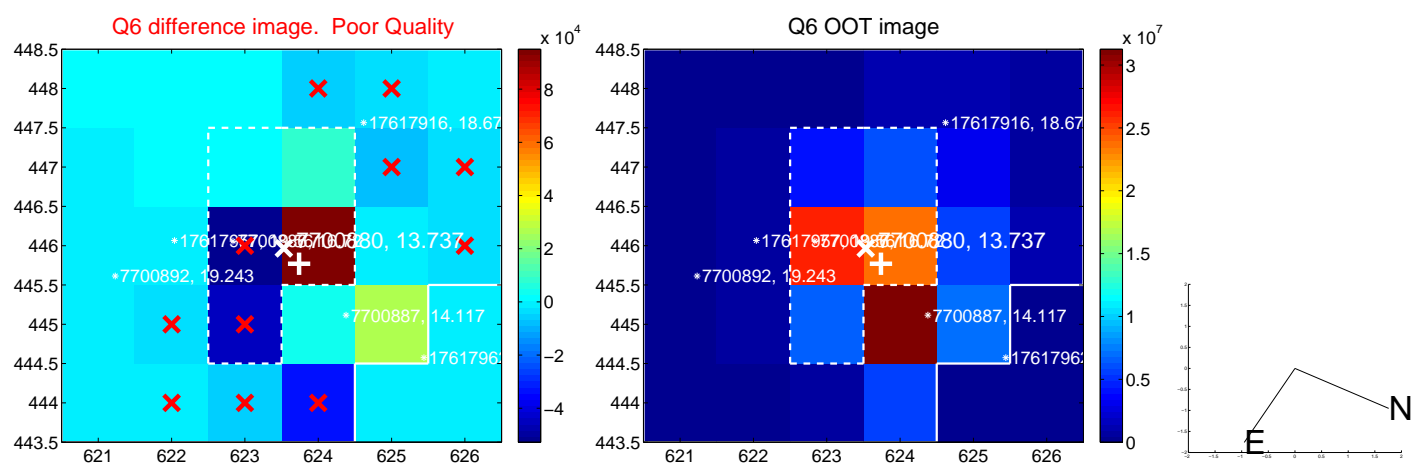
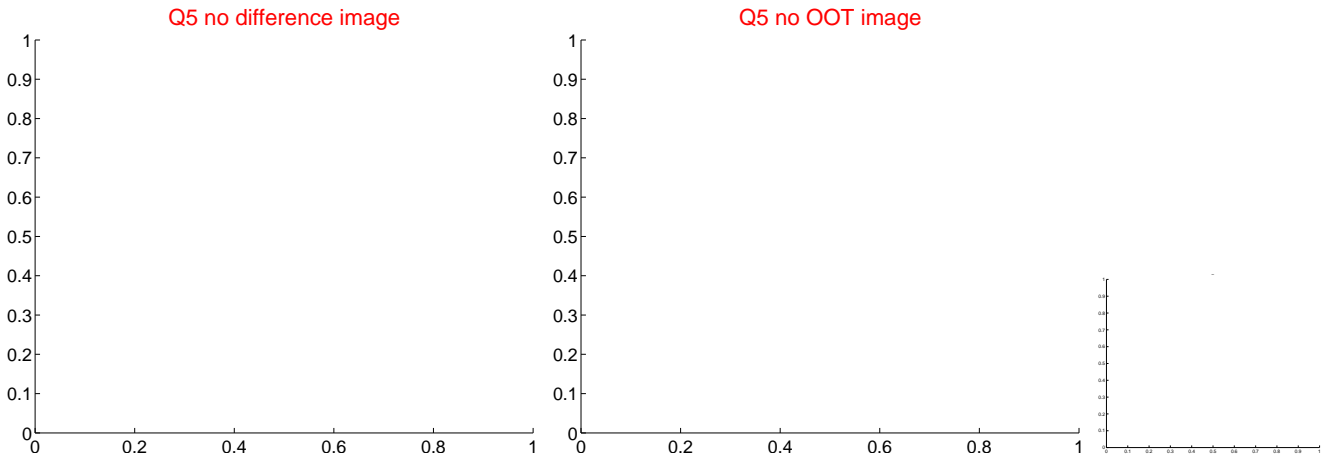
Q4 difference image. Poor Quality



Q4 OOT image



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



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

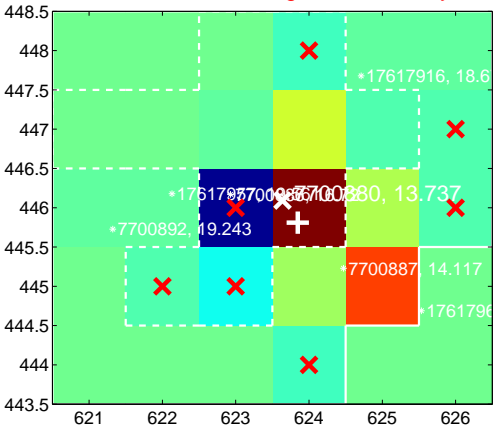
Q9 no difference image



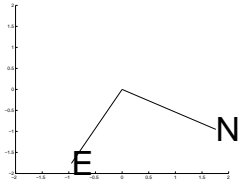
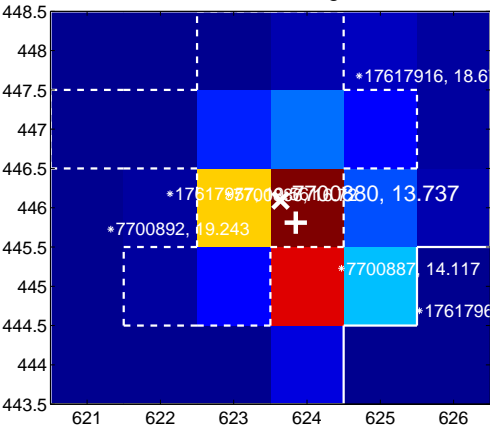
Q9 no OOT image



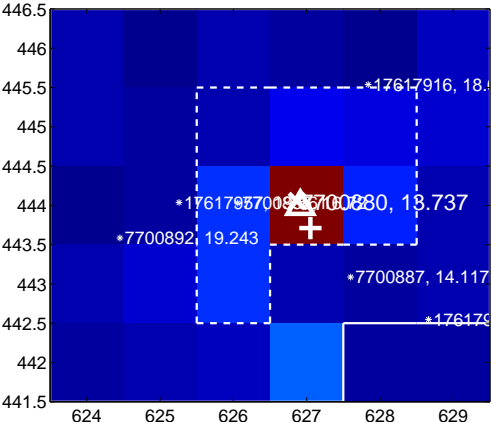
Q10 difference image. Poor Quality



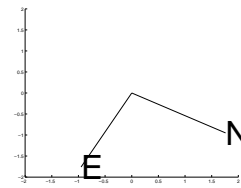
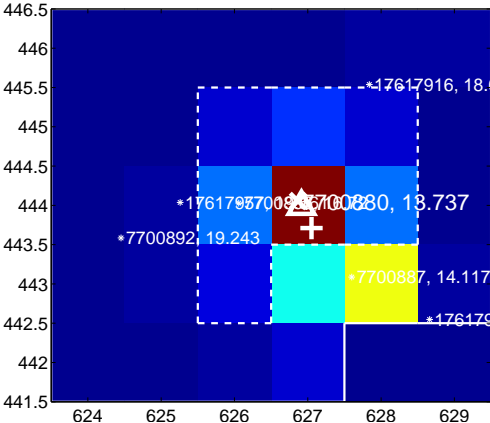
Q10 OOT image



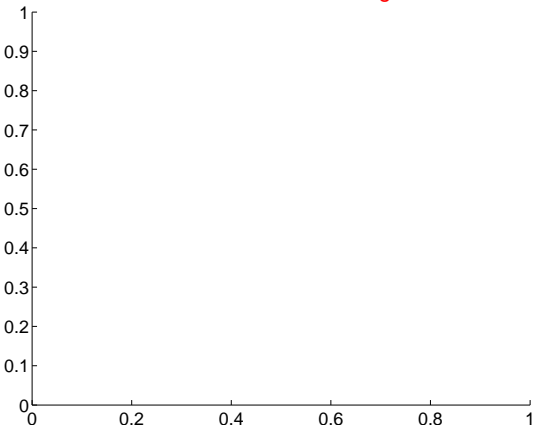
Q11 difference image



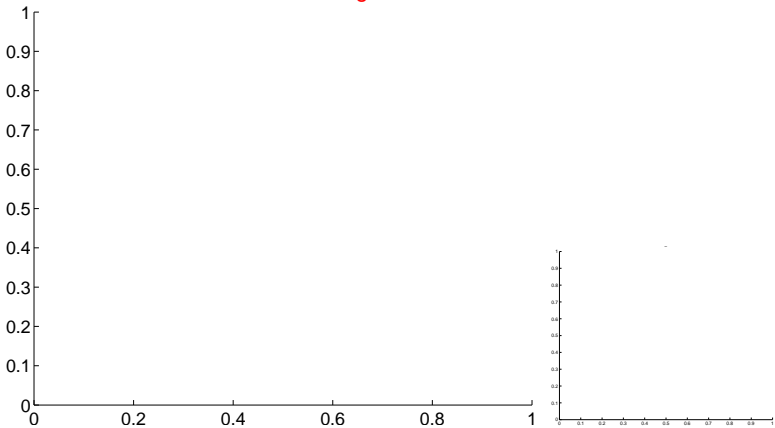
Q11 OOT image



Q12 no difference image



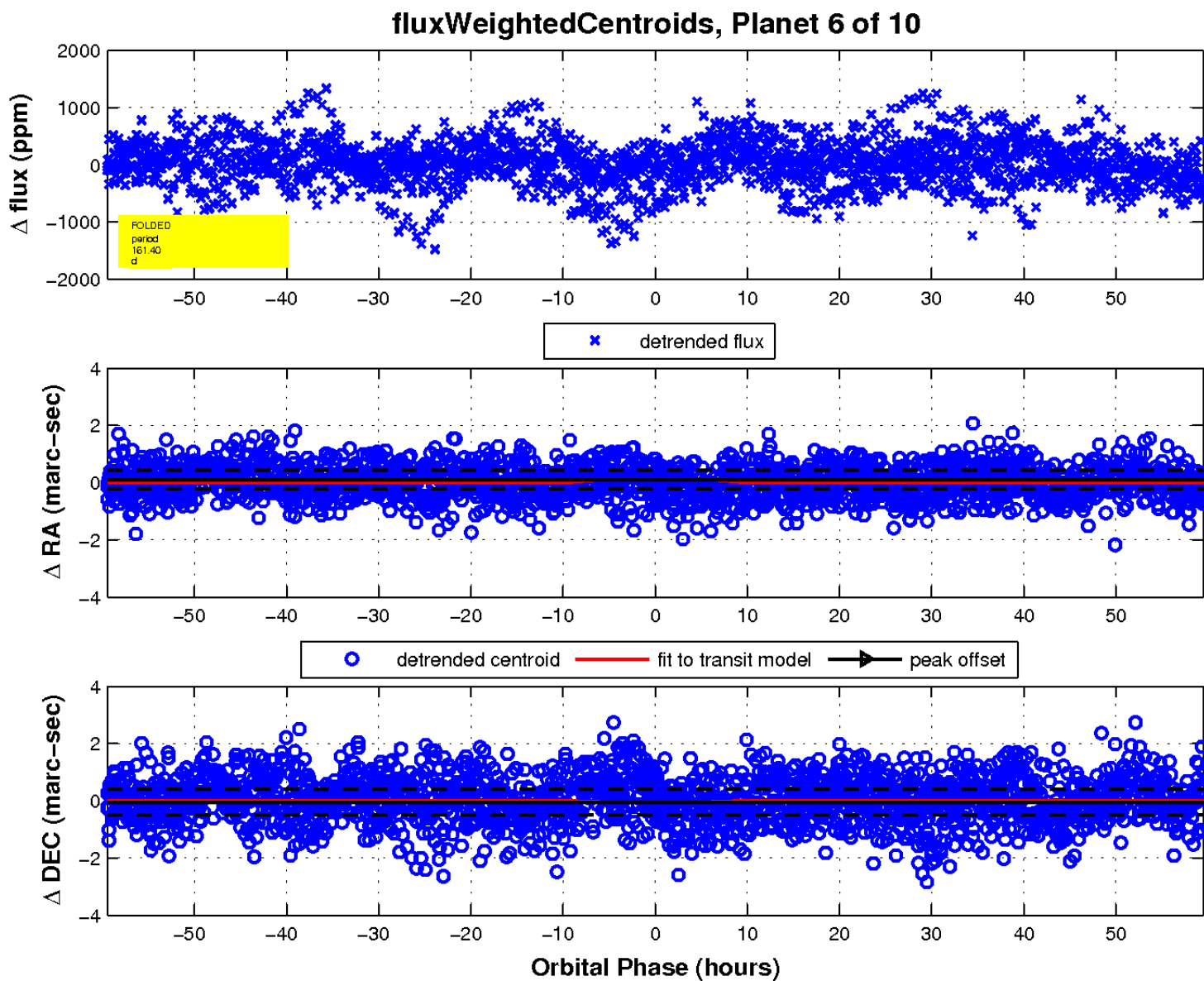
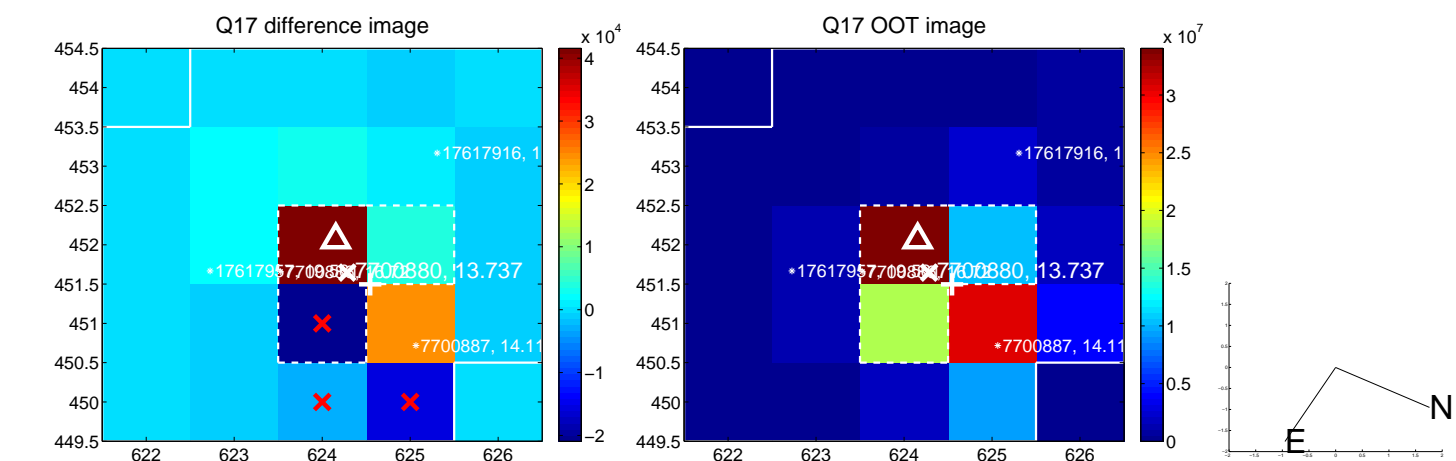
Q12 no OOT image



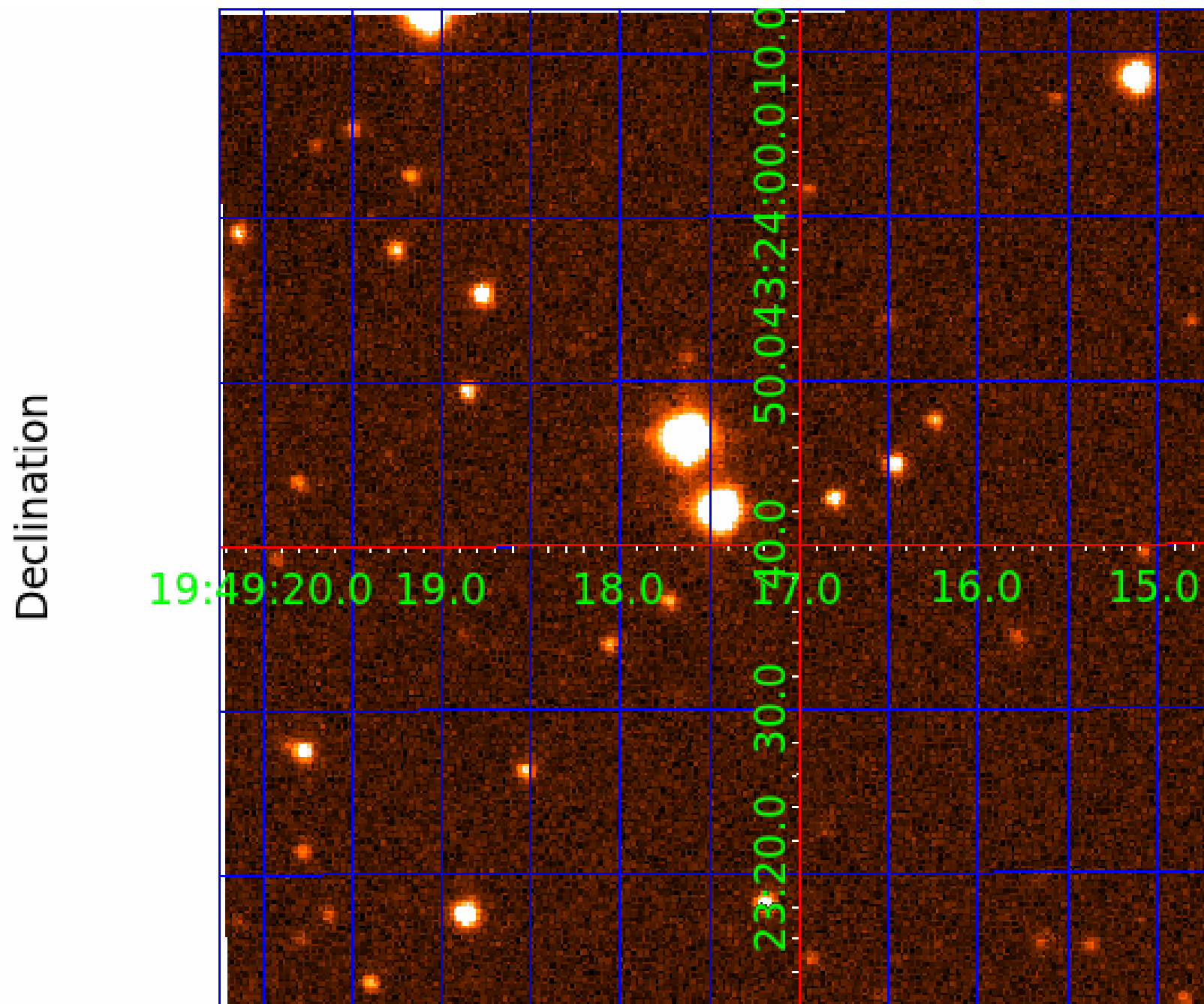
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
007700880-01	OBS	No	2.711831	133.076025	79.4	4.438	8.9	10.3	1.26	6739	1.30	1817.97
007700880-02	OBS	No	1.553862	131.997646	32.9	9.156	8.1	5.7	1.26	6739	0.75	3819.91
007700880-03	OBS	No	130.853517	252.755847	640.1	5.069	10.5	8.7	1.26	6739	3.82	10.35
007700880-04	OBS	No	36.128406	132.528556	326.7	5.539	9.6	9.5	1.26	6739	2.56	57.56
007700880-06	OBS	No	161.399146	278.961203	829.7	19.846	10.9	10.2	1.26	6739	4.34	7.82
007700880-07	OBS	No	92.145114	152.634577	210.9	0.940	8.4	1.9	1.26	6739	2.12	16.52
007700880-08	OBS	No	92.138931	153.022111	450.8	5.333	8.5	7.9	1.26	6739	2.92	16.52
007700880-09	OBS	No	64.651118	157.112939	105.5	14.705	8.1	2.4	1.26	6739	1.42	26.50
007700880-10	OBS	No	29.889930	147.843900	268.6	7.381	8.8	8.0	1.26	6739	2.22	74.11

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007700880-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_KIC_POS
007700880-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_KIC_POS
007700880-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
007700880-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS—HALO_GHOST
007700880-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007700880-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS
007700880-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_FEW_DIFFS
007700880-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_KIC_POS
007700880-10	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—CENT_KIC_POS

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

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

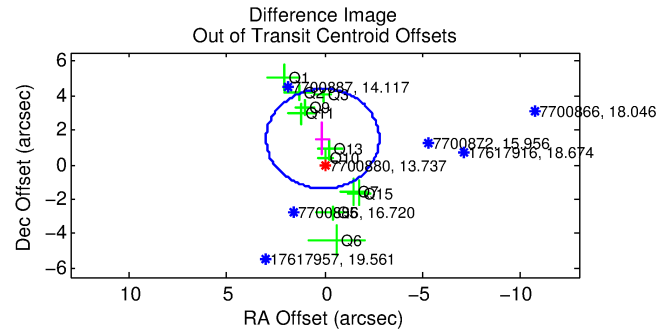
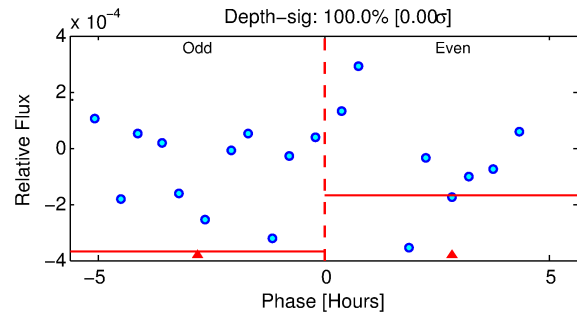
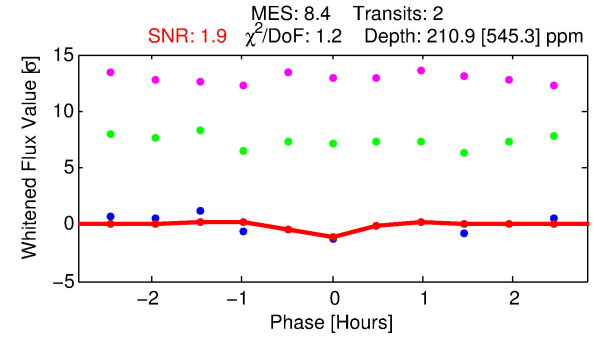
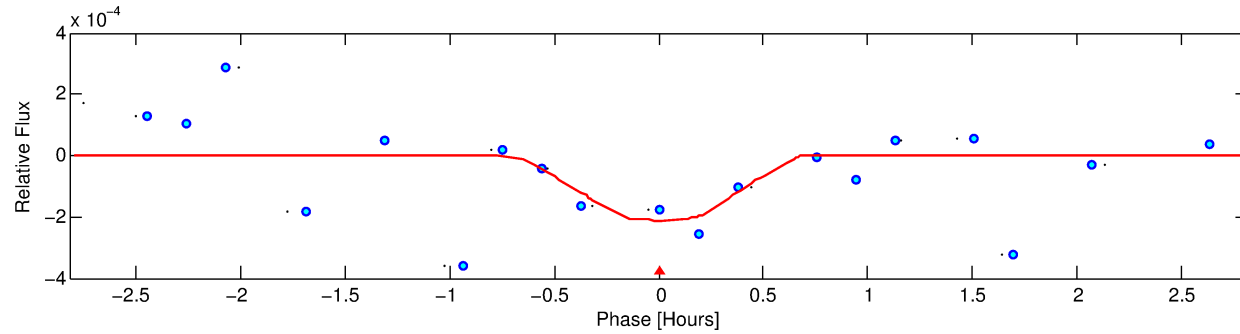
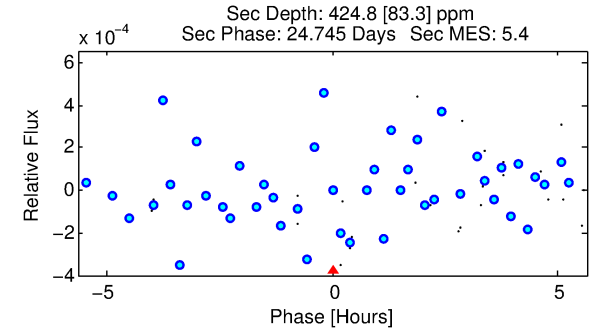
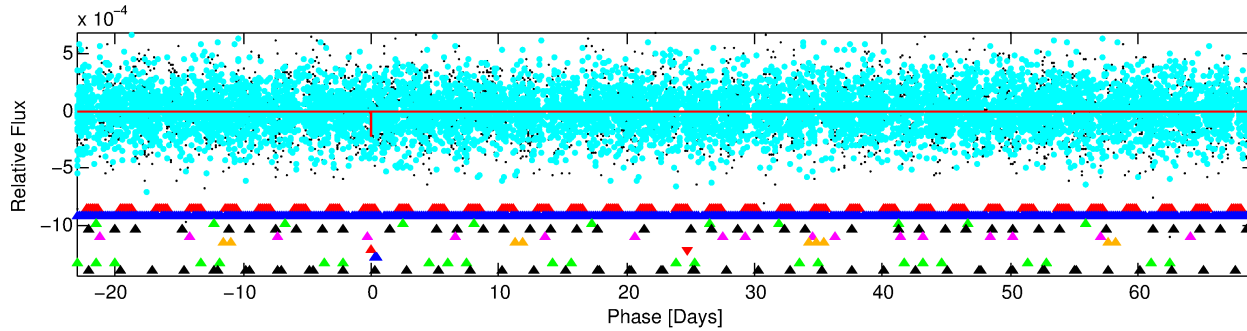
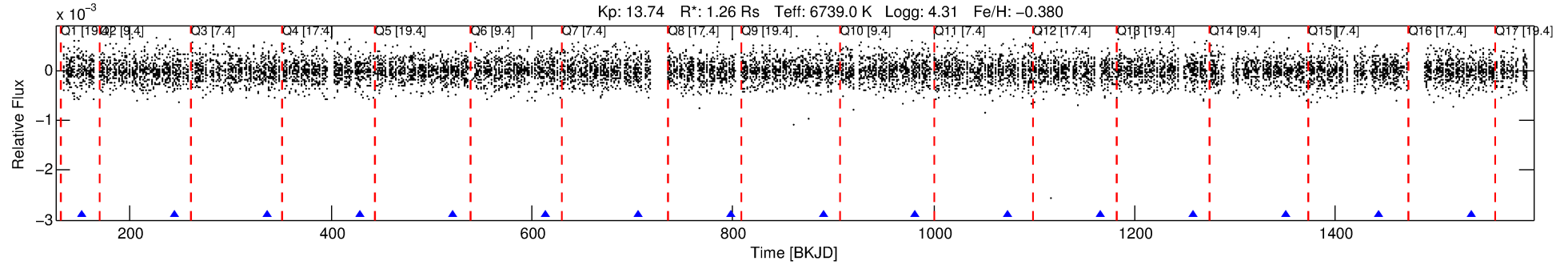
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007700880-07

No Significant Match Found

DV One-Page Summary

KIC: 7700880 Candidate: 7 of 10 Period: 92.145 d



DV Fit Results:

Period = 92.14511 [0.00715] d
Epoch = 152.6346 [0.0231] BKJD
Rp/R* = 0.0155 [0.3885]
a/R* = 367.96 [52803.06]
b = 0.89 [35.51]
Seff = 16.52 [6.18]
Teq = 514 [48] K
Rp = 2.12 [53.26] Re
a = 0.4201 [0.1011] AU
Ag = 9136.18 [458032.88] [0.02 σ]
Teffp = 7771 [97390] K [0.07 σ]

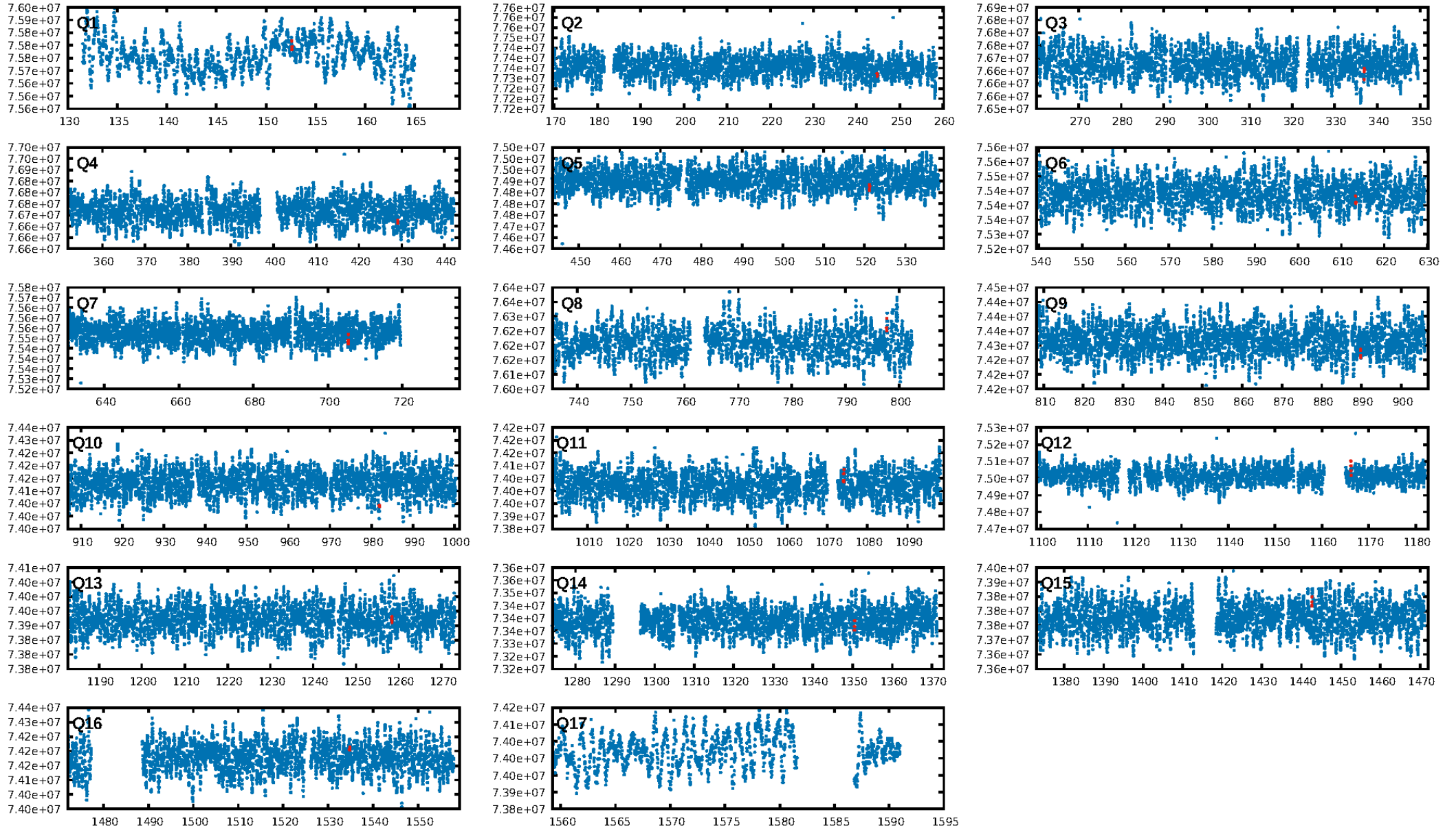
DV Diagnostic Results:

ShortPeriod-sig: 2.2% [0.03 σ]
LongPeriod-sig: 100.0% [180.19 σ]
ModelChiSquare2-sig: 82.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: -0.4742
Centroid-sig: 15.3%
Centroid-so: 1.751 arcsec [1.04 σ]
OotOffset-rm: 1.504 arcsec [1.56 σ]
OotOffset-st: 3/4/0/4 [11]
KicOffset-rm: 2.754 arcsec [2.92 σ]
KicOffset-st: 3/4/0/4 [11]
DiffImageQuality-fgm: 0.45 [5/11]
DiffImageOverlap-fno: 0.20 [3/15]

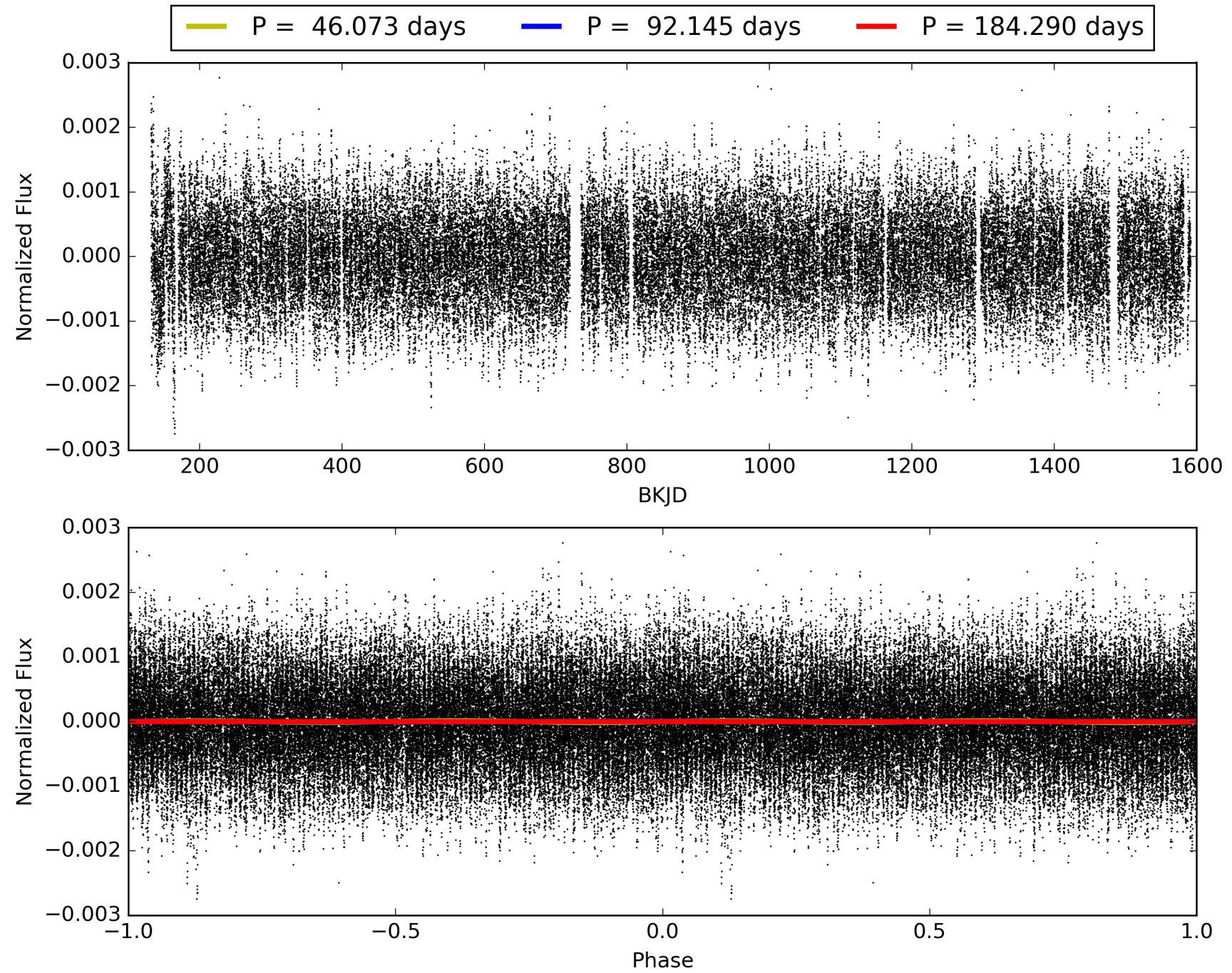
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 03:40:08 Z

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

TCE 007700880-07, PDC Light Curves

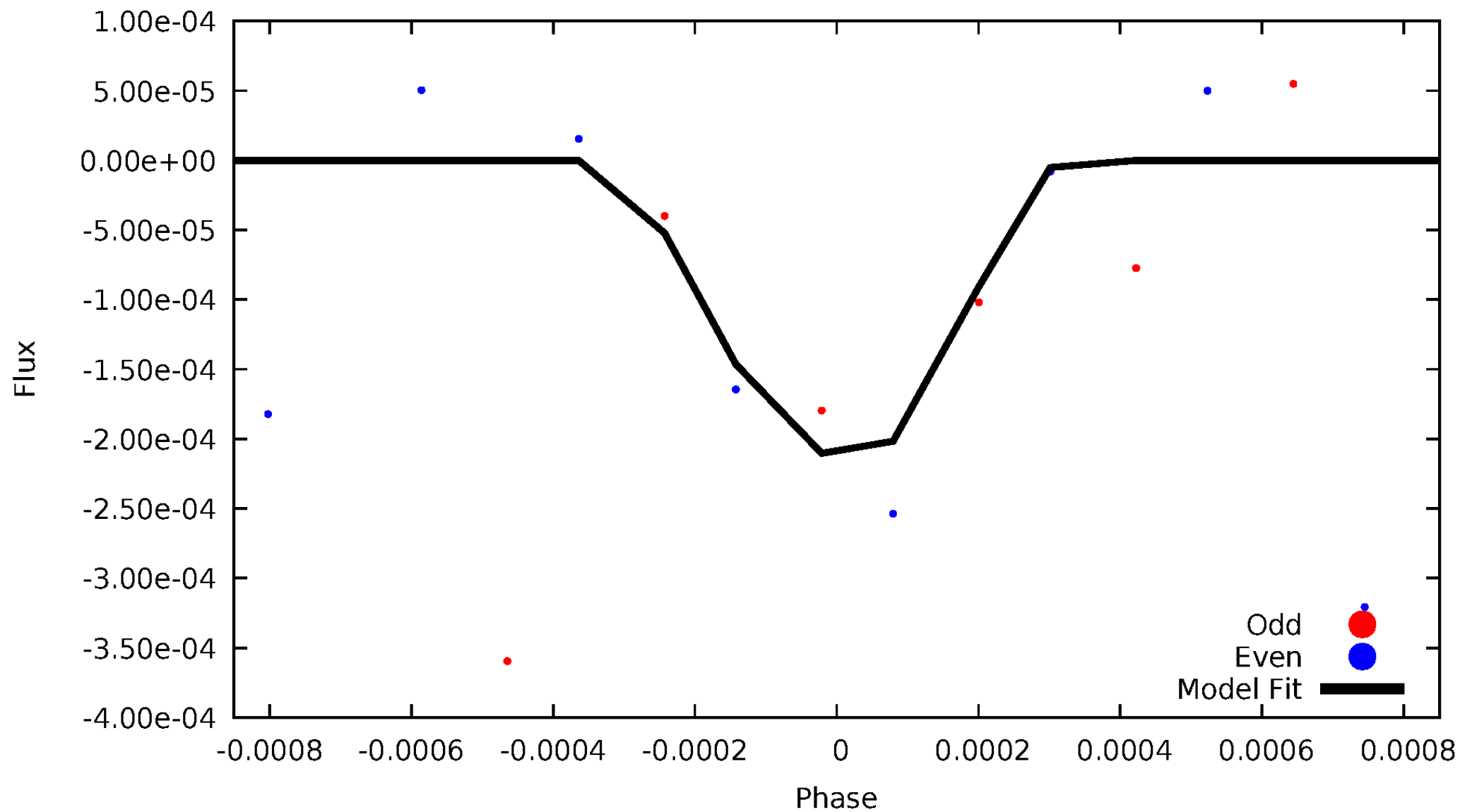


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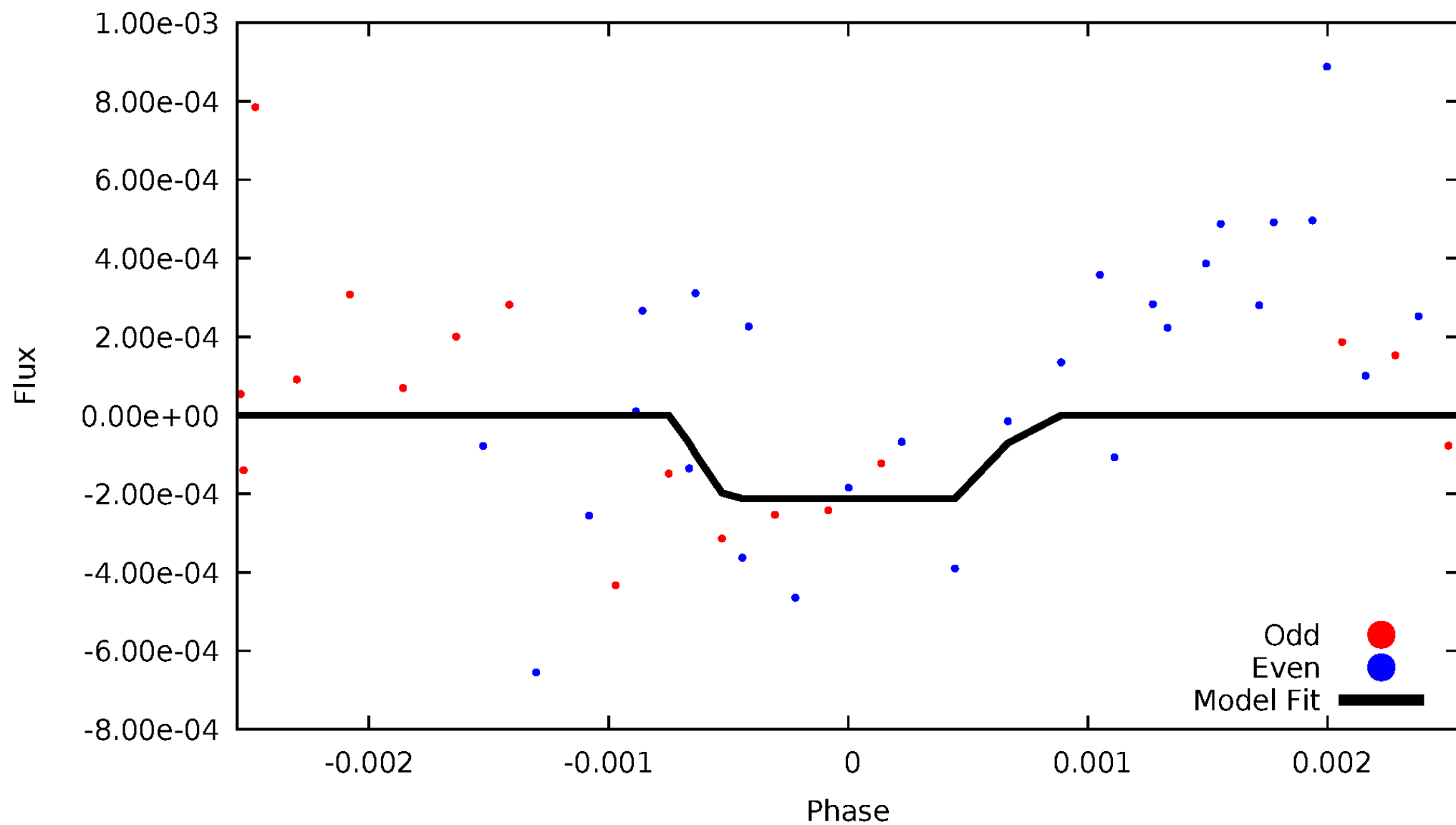
DV Odd/Even

TCE 007700880-07



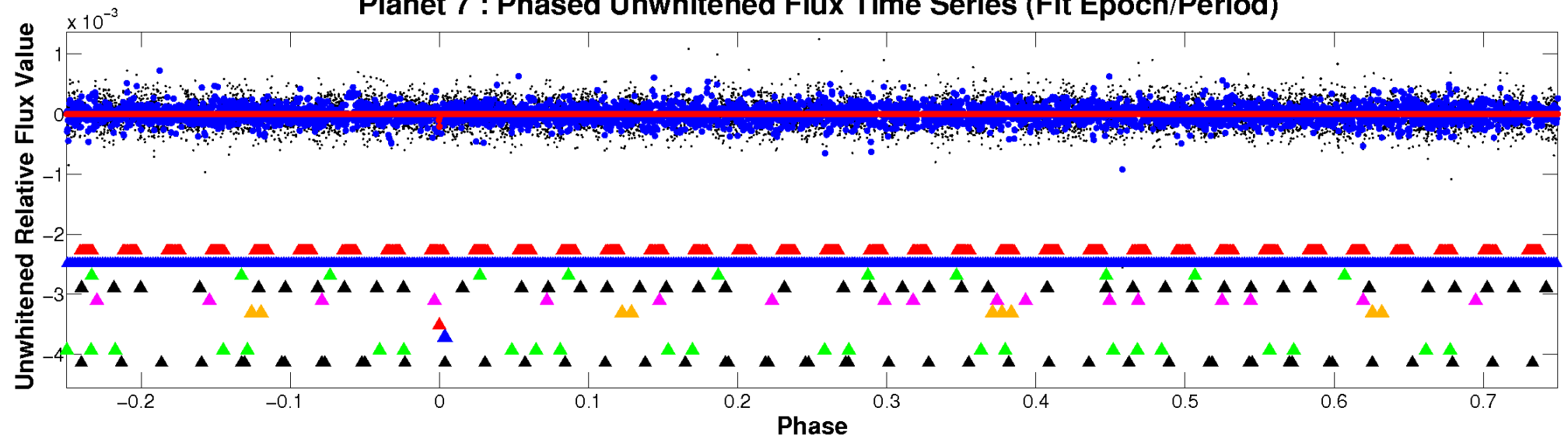
ALT Odd/Even

TCE 007700880-07

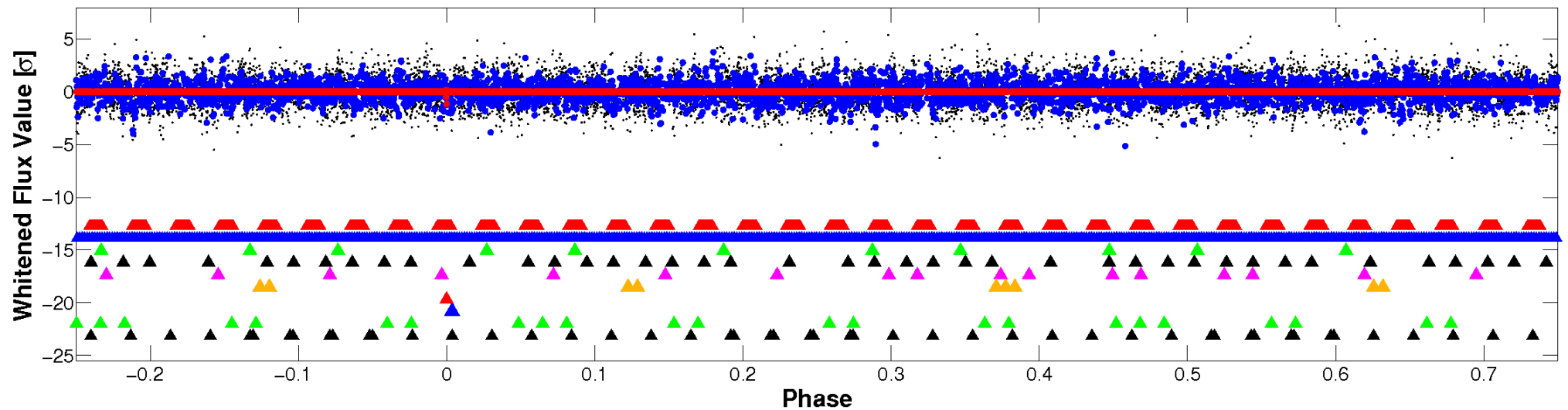


Non-Whitened Vs. Whitened Light Curve

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

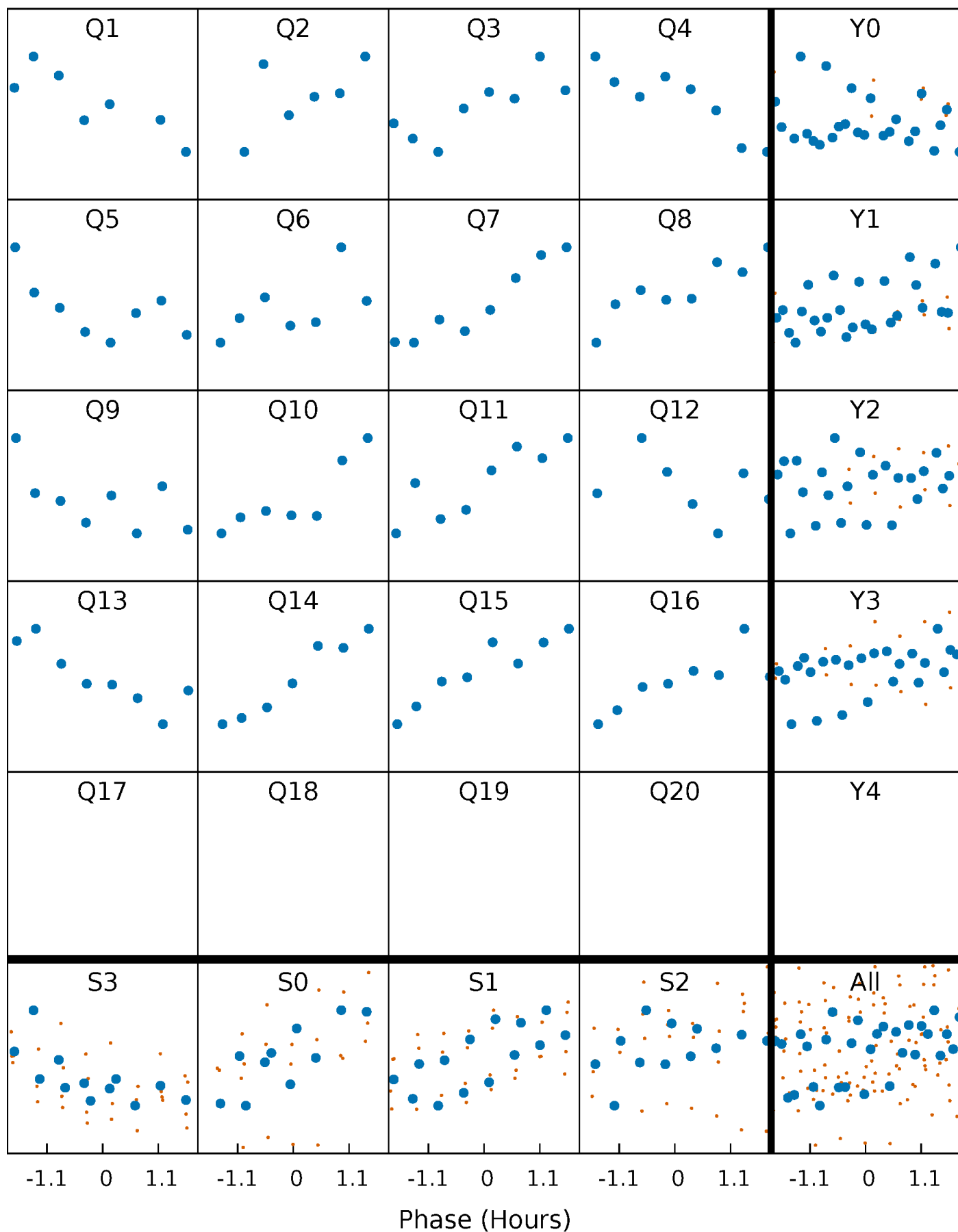


Planet 7 : Phased Whitened Flux Time Series (Fit Epoch/Period)



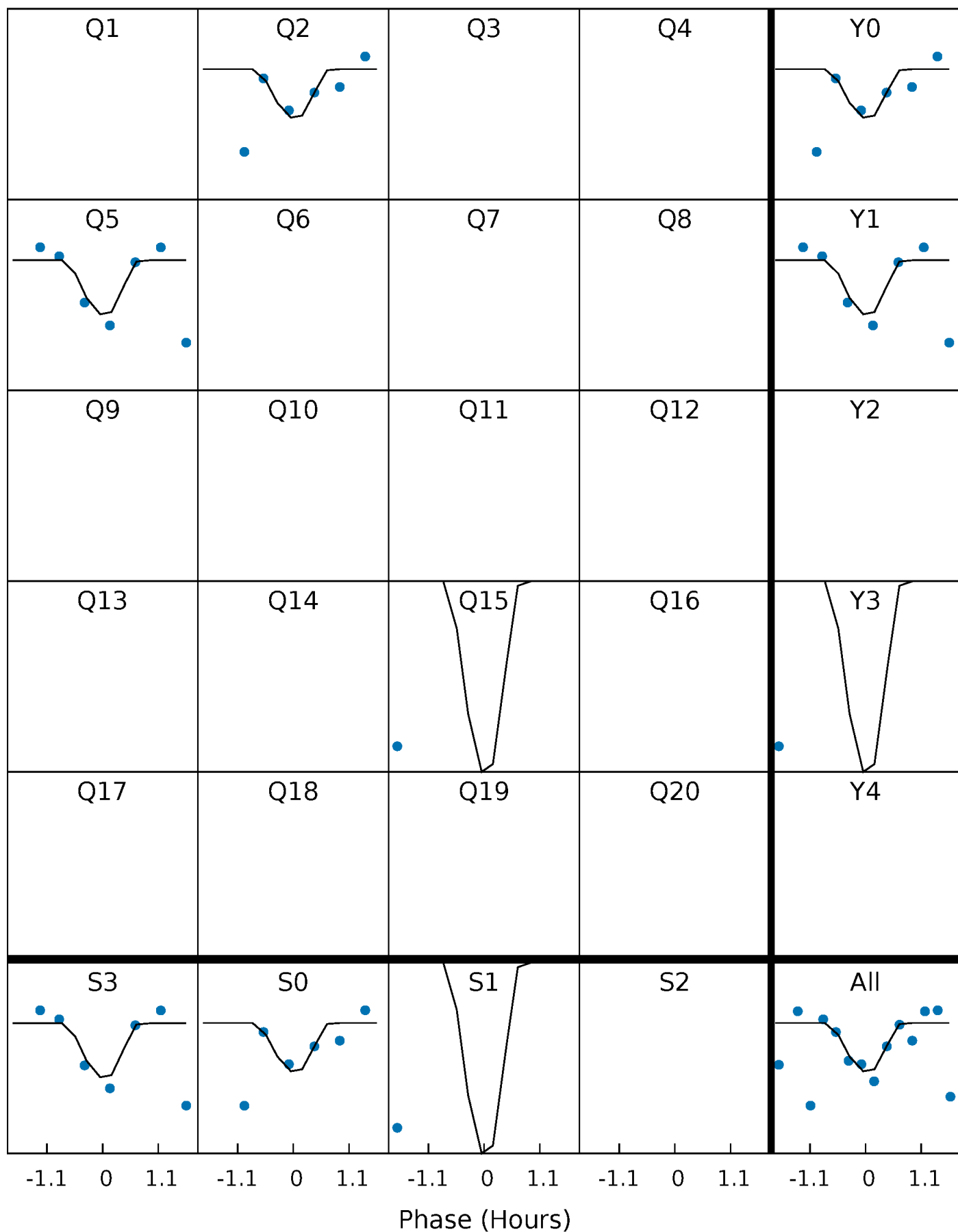
PDC Quarter-Phased Transit Curves

TCE 007700880-07 $P = 92.145114$ Days $T_0 = 152.634577$ (BKJD)



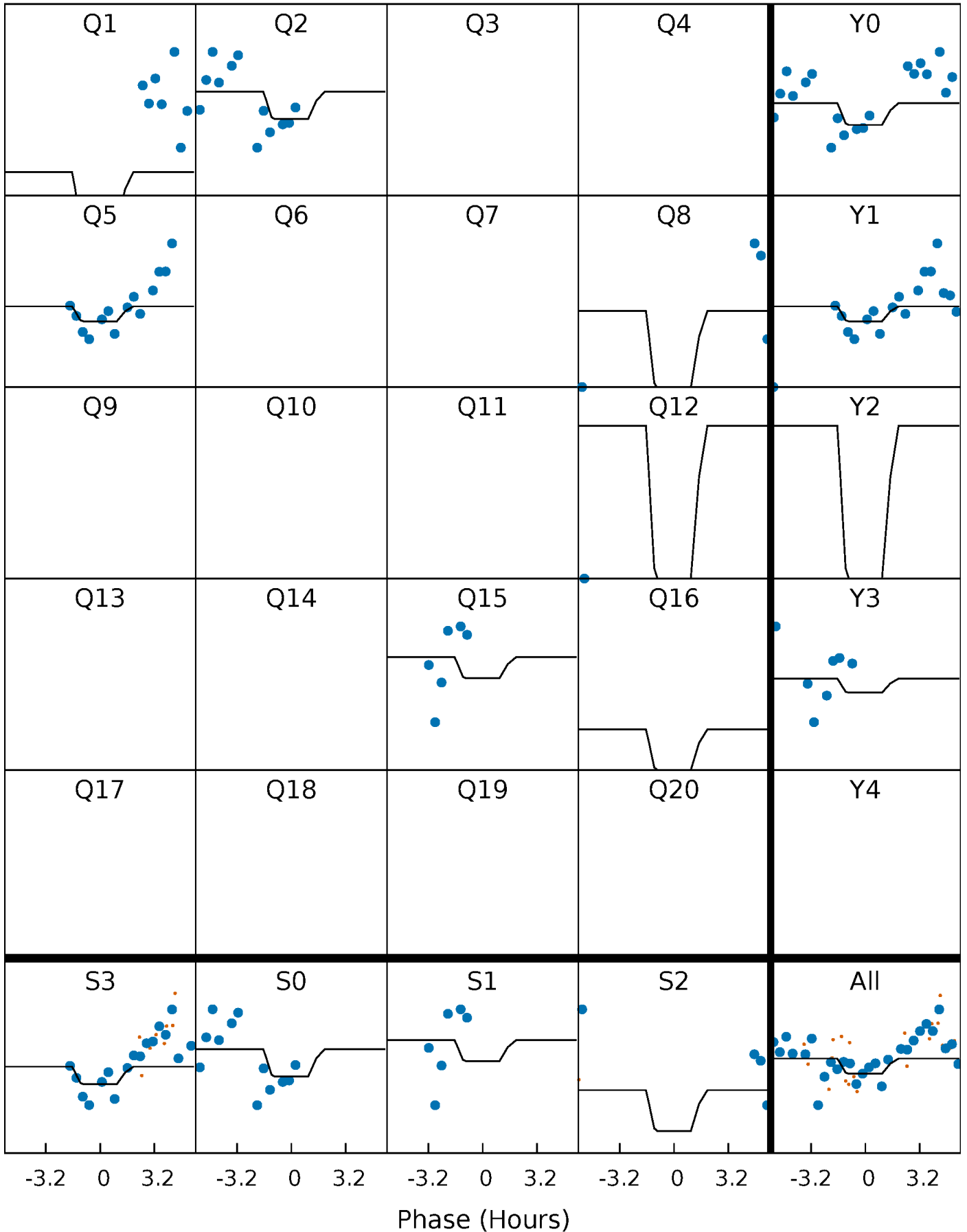
DV Quarter-Phased Transit Curves

TCE 007700880-07 P= 92.145114 Days $T_0=152.634577$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

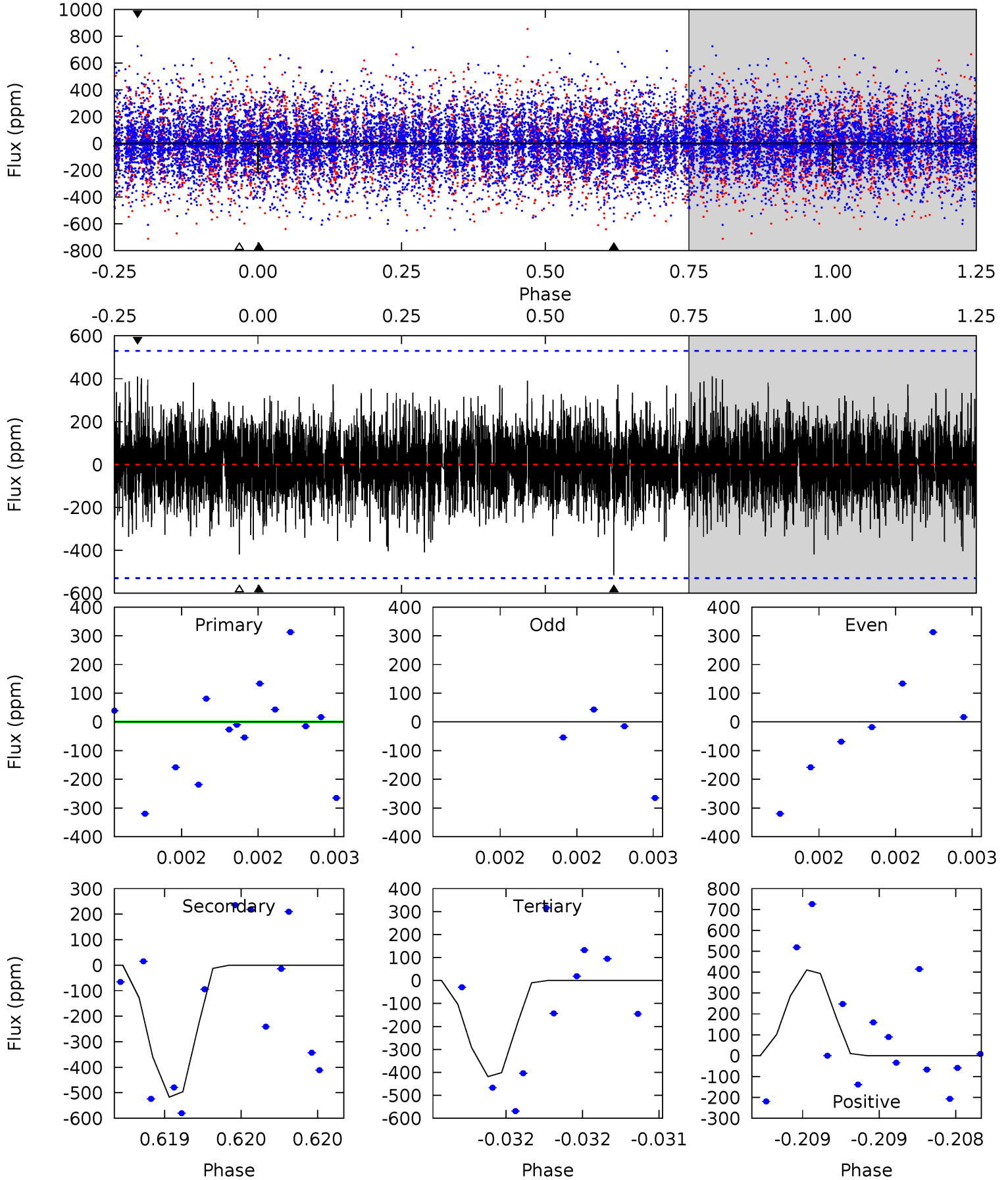
TCE 007700880-07 $P = 92.138783$ Days $T_0 = 152.687576$ (BKJD)



DV Model-Shift Uniqueness Test

007700880-07, P = 92.145114 Days, E = 60.489463 Days

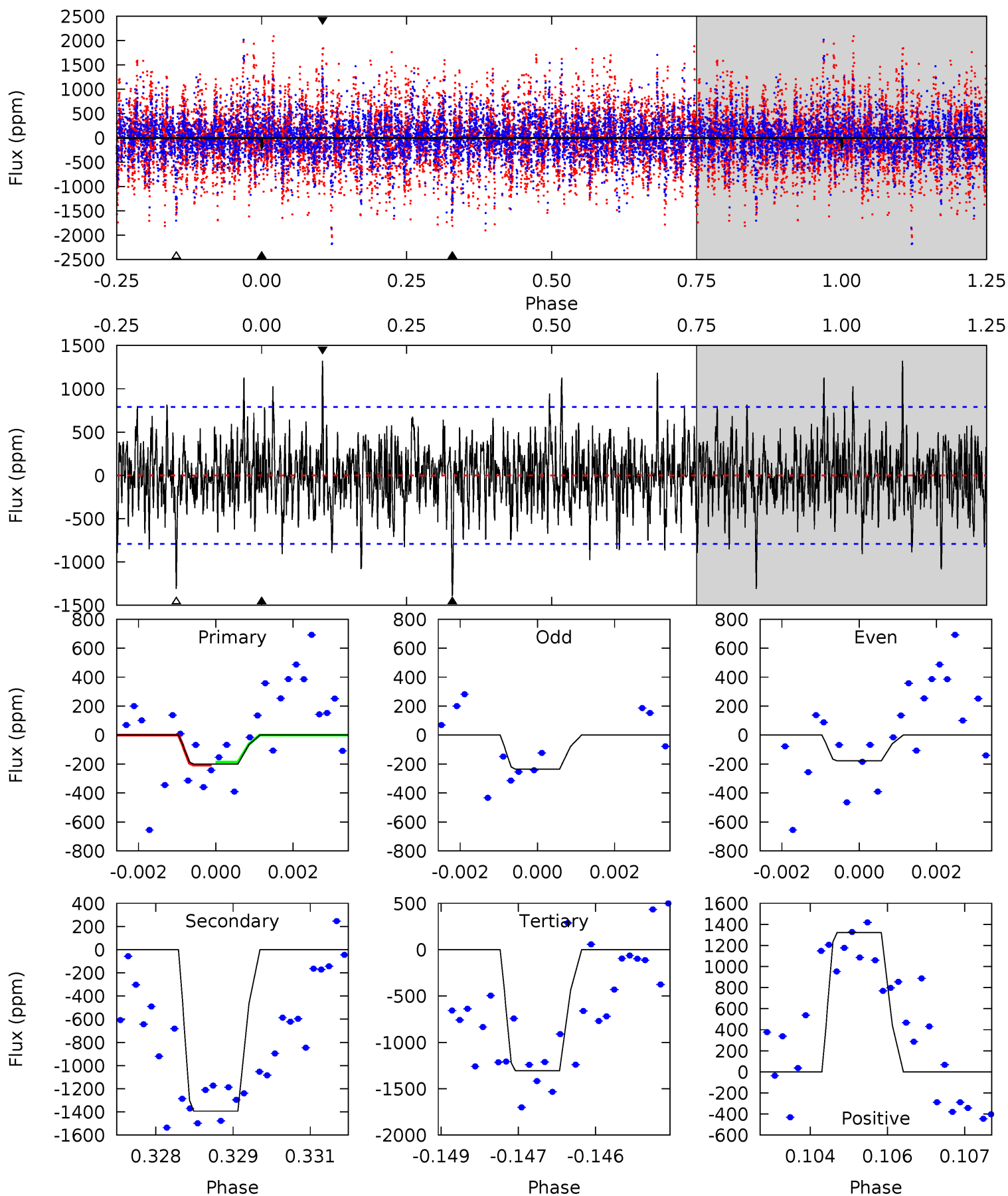
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.34	5.42	4.39	4.30	5.55	3.45	1.18	-2.05	-1.96	1.03	1.12	0.30	1.00	0.44	0.24



Alt Model-Shift Uniqueness Test

007700880-07, P = 92.138783 Days, E = 60.548793 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.36	9.47	8.88	8.99	5.37	3.16	2.06	-7.52	-7.63	0.59	0.48	0.19	0.31	0.49	0.07



Stellar Parameters For KIC 007700880

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6739^{+189}_{-236}	$4.306^{+0.101}_{-0.188}$	$-0.380^{+0.250}_{-0.300}$	$1.256^{+0.363}_{-0.196}$	$1.170^{+0.175}_{-0.158}$	$0.831^{+0.384}_{-0.422}$
	+3%/-4%	+2%/-4%	+66%/-79%	+29%/-16%	+15%/-14%	+46%/-51%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007700880-07 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-517 ± 95	$38.12^{+39.15}_{-28.24}$	723^{+53}_{-42}	2719^{+1417}_{-445}	34^{+494}_{-26}
Alt.	-1393 ± 147	$38.92^{+38.50}_{-27.14}$	726^{+58}_{-42}	3117^{+1511}_{-545}	93^{+865}_{-71}

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

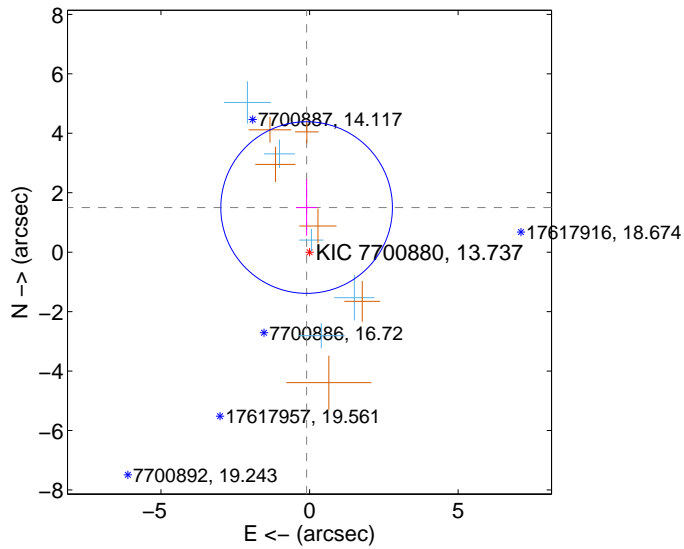
Supplemental centroid analysis for 007700880-07. Kepler magnitude: 13.74. Transit SNR 1.92

There are 5 quarters with good PRF difference image offsets

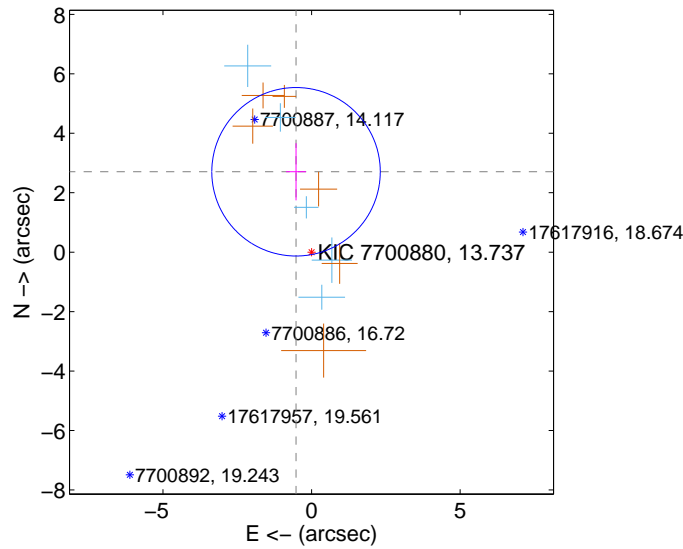
The direct PRF centroid is offset from the target star catalog position by about 1.52 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.504 ± 0.962	1.56	0.098 ± 0.348	1.501 ± 0.947
PRF-fit source offset from KIC position	2.754 ± 0.945	2.92	0.522 ± 0.336	2.704 ± 0.960
photometric centroid source offset	1.75 ± 1.68	1.04	1.75 ± 1.68	-0.13 ± 1.83

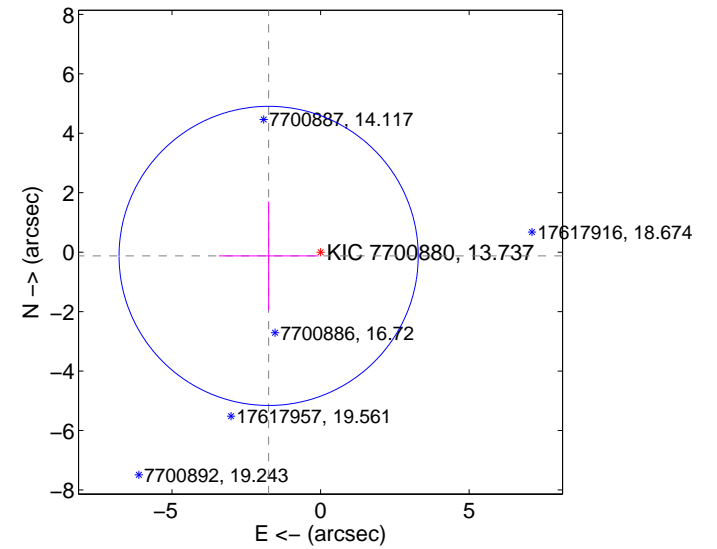
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

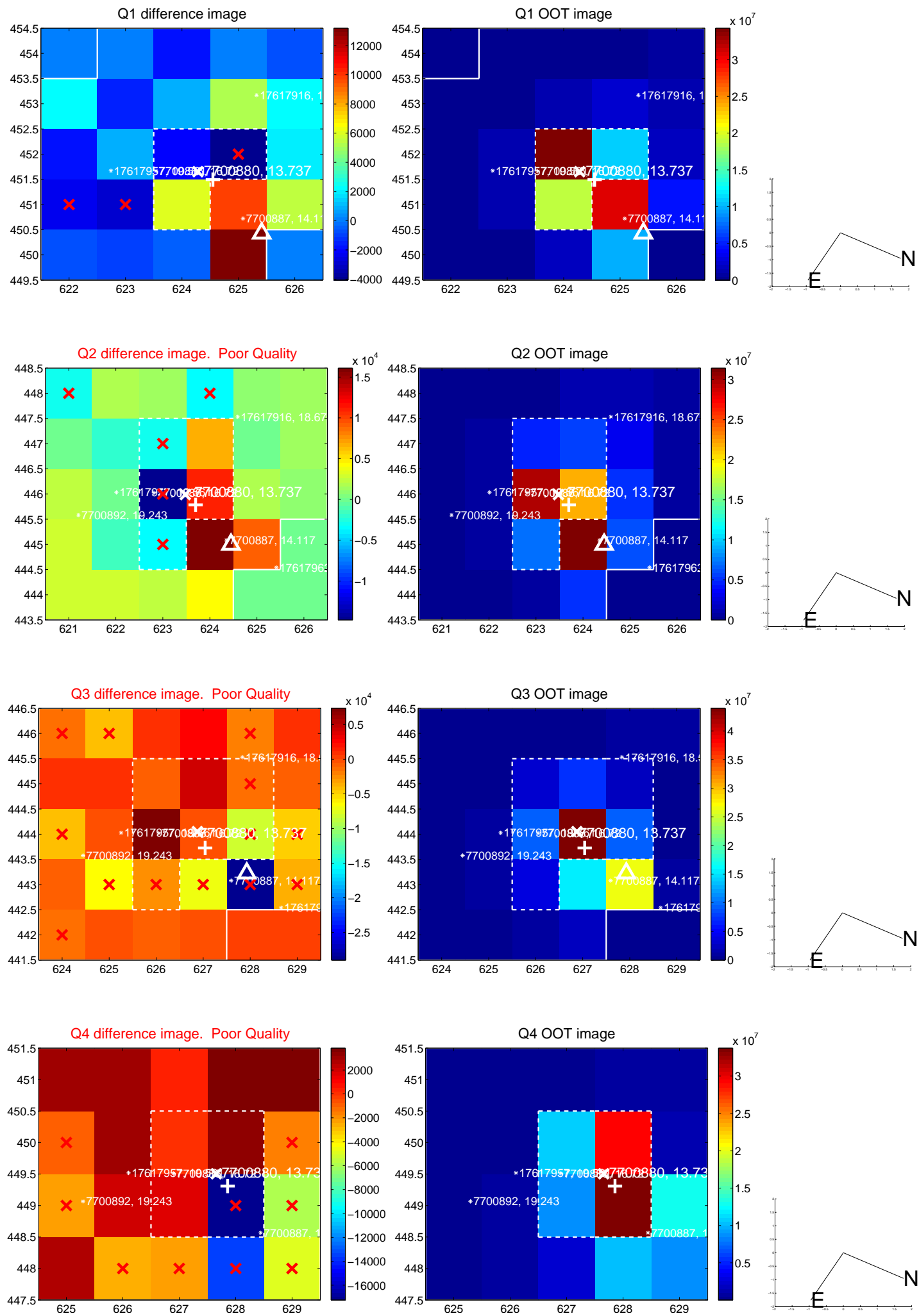


offset from photometric centroids

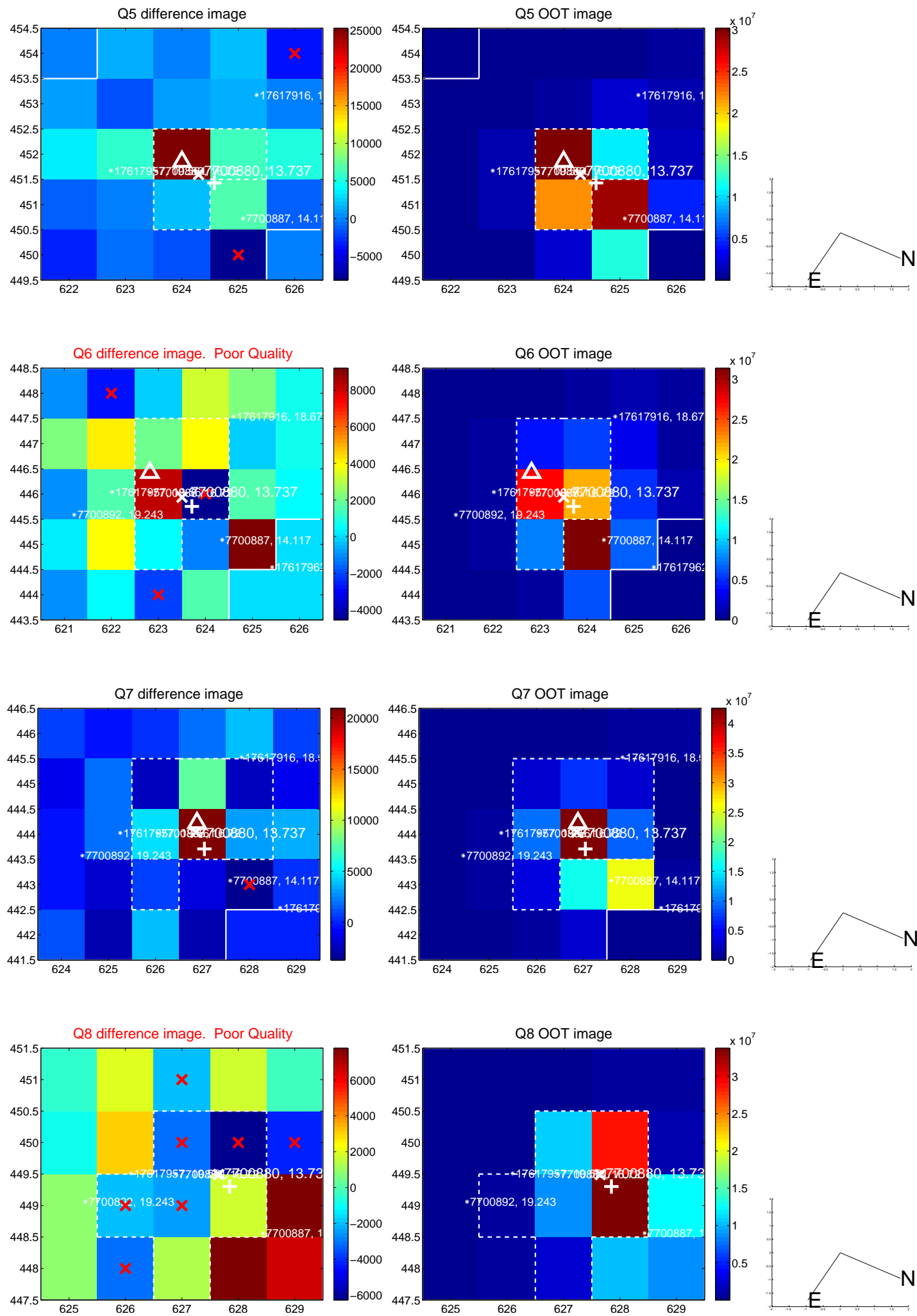


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

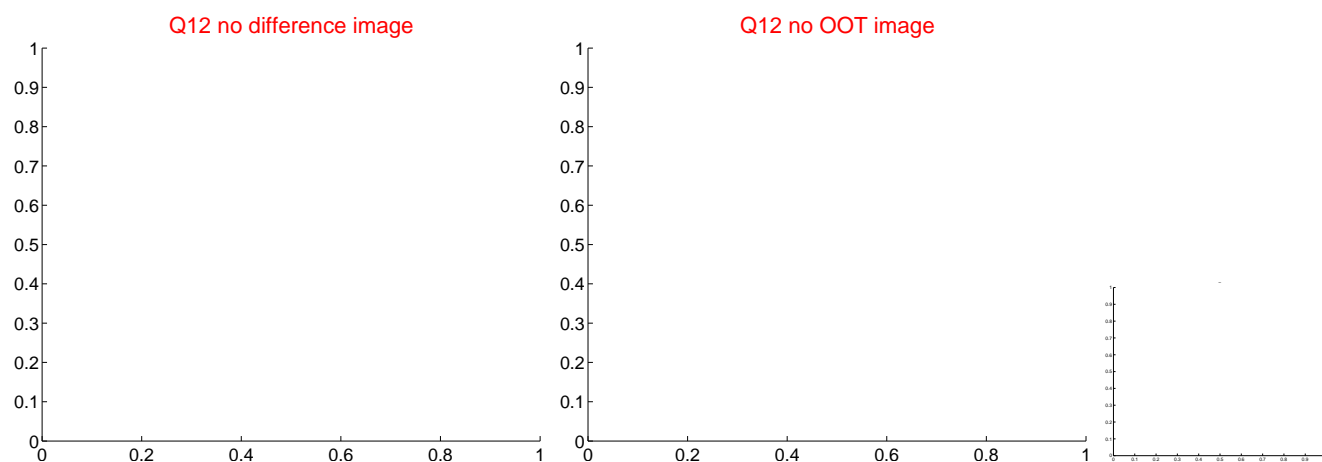
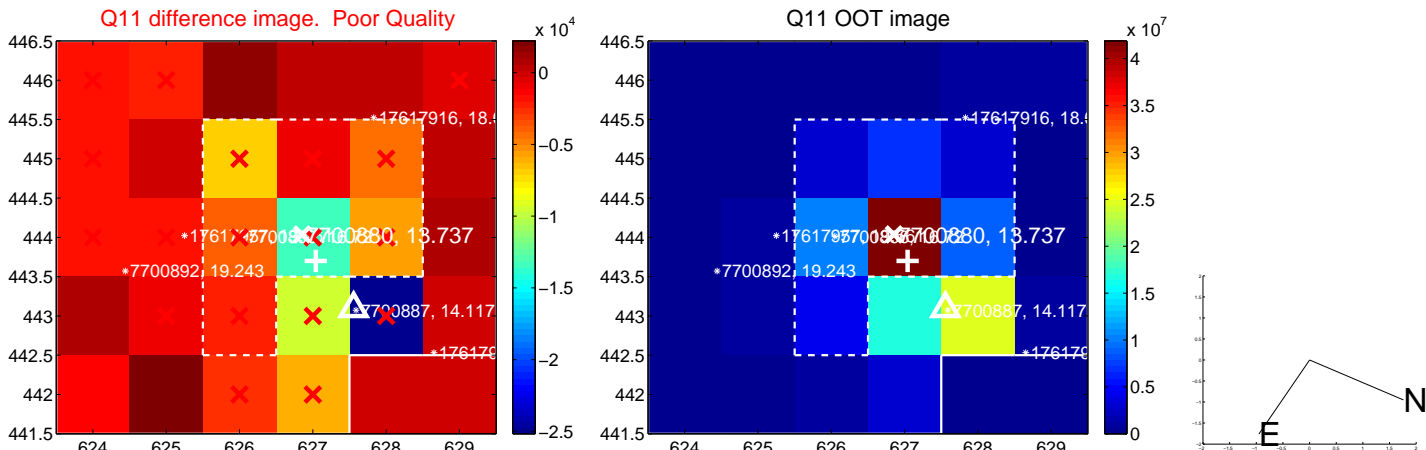
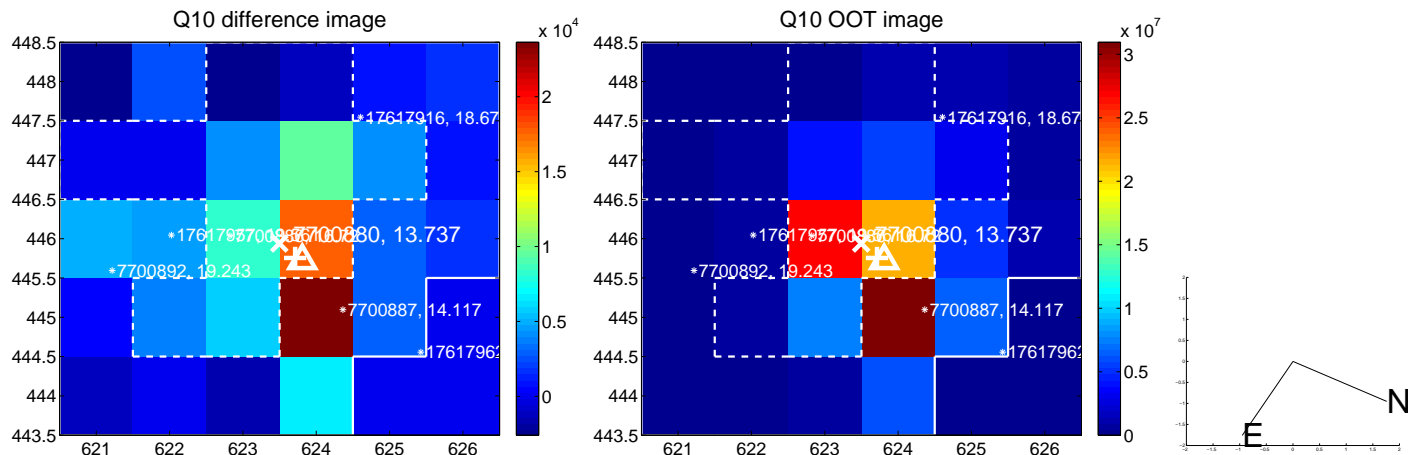
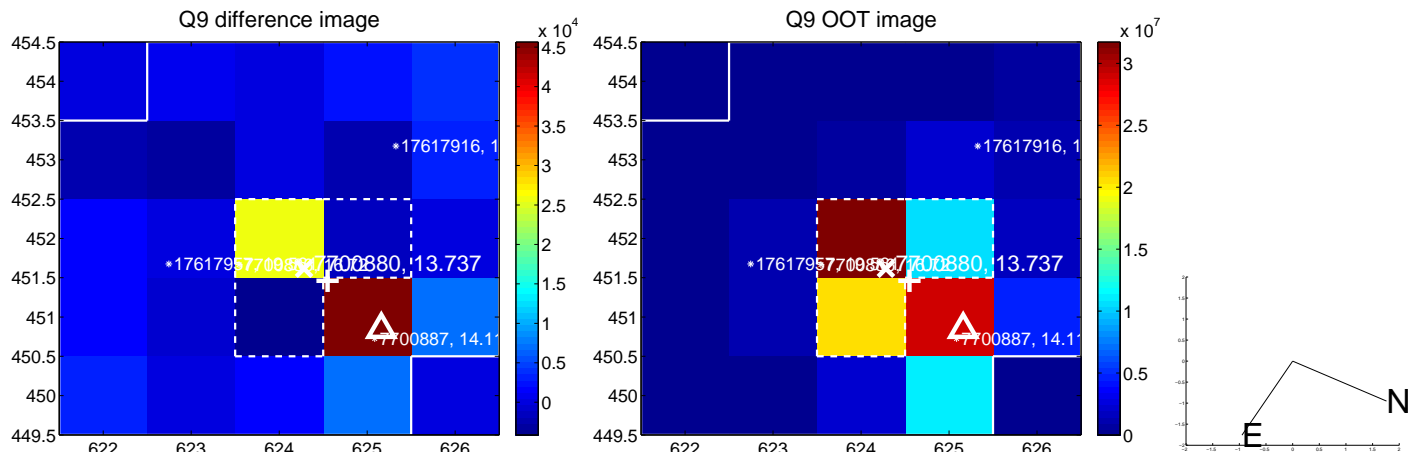
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



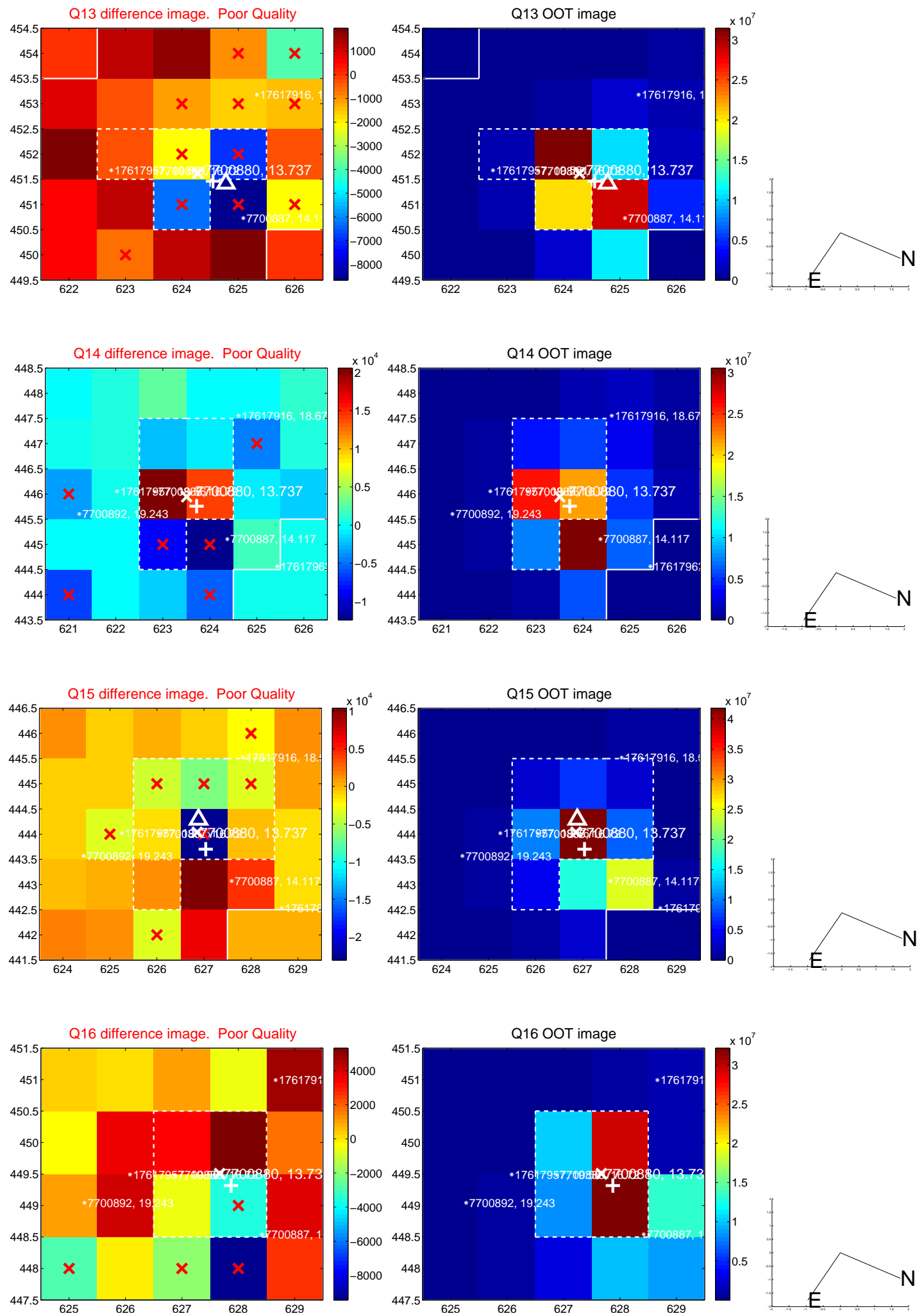
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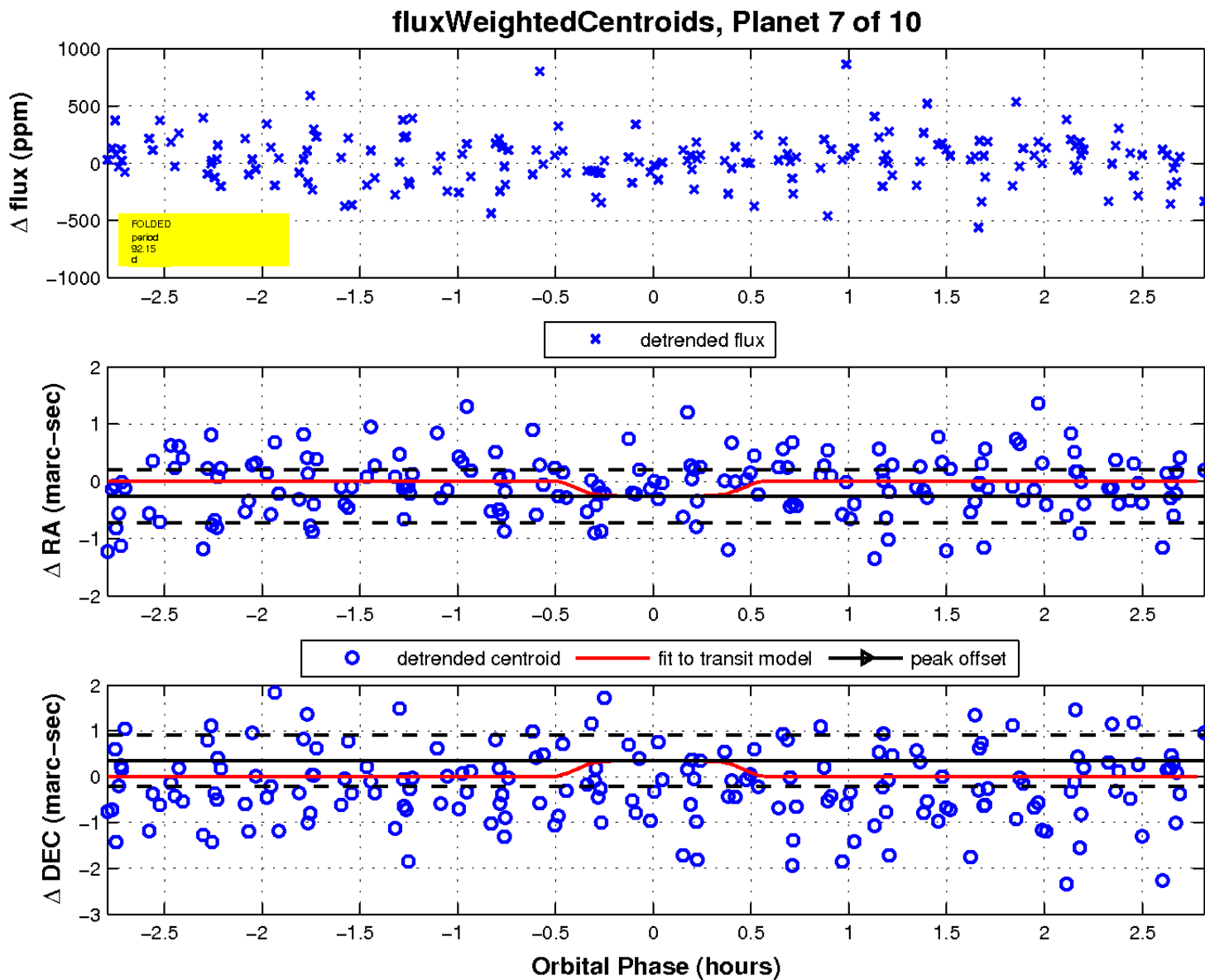
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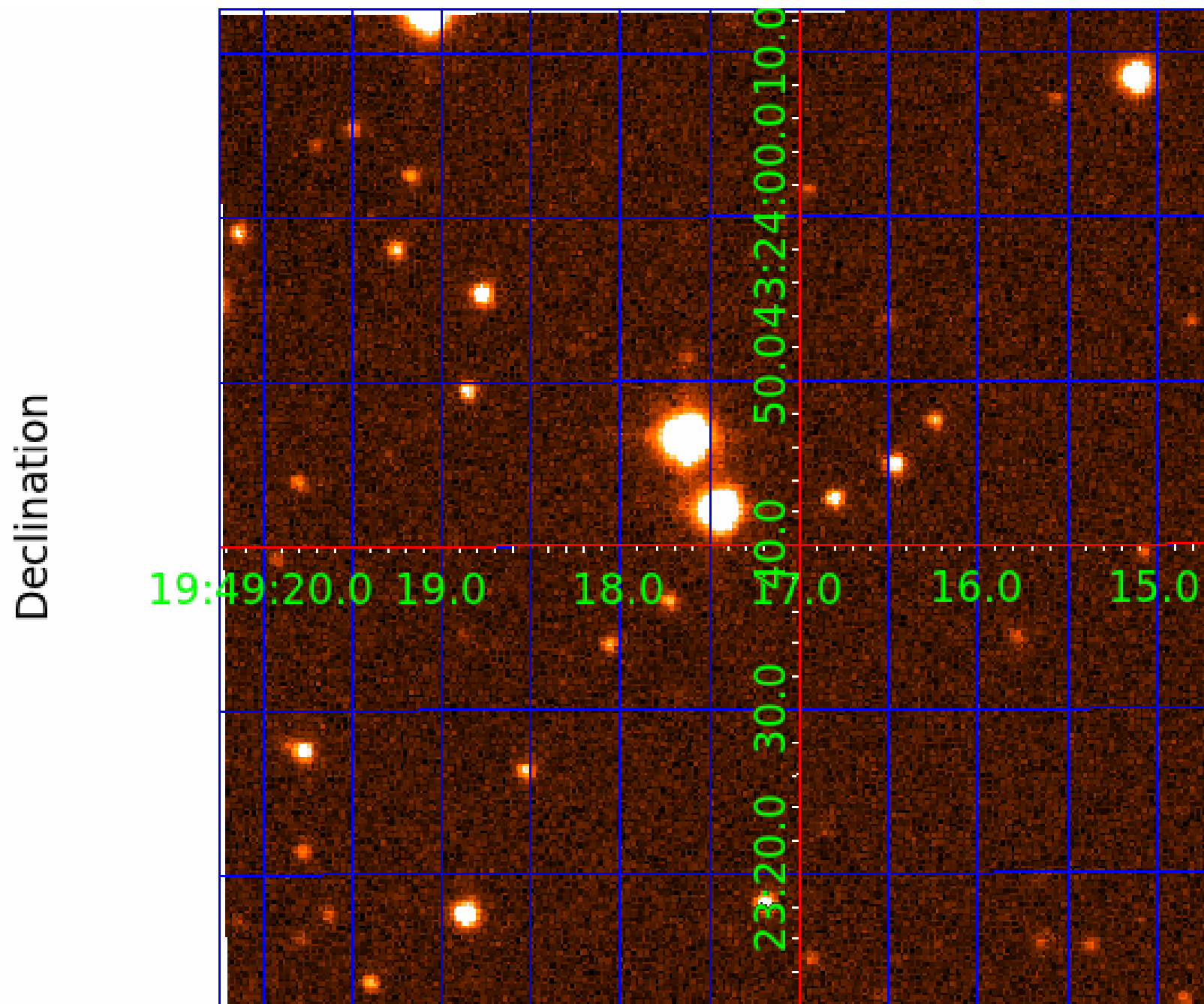
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UKIRT Image



Q1-17 DR25 TCE Parameters

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007700880-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_KIC_POS
007700880-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
007700880-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS—HALO_GHOST
007700880-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007700880-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS
007700880-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_FEW_DIFFS
007700880-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_KIC_POS
007700880-10	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—CENT_KIC_POS

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

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

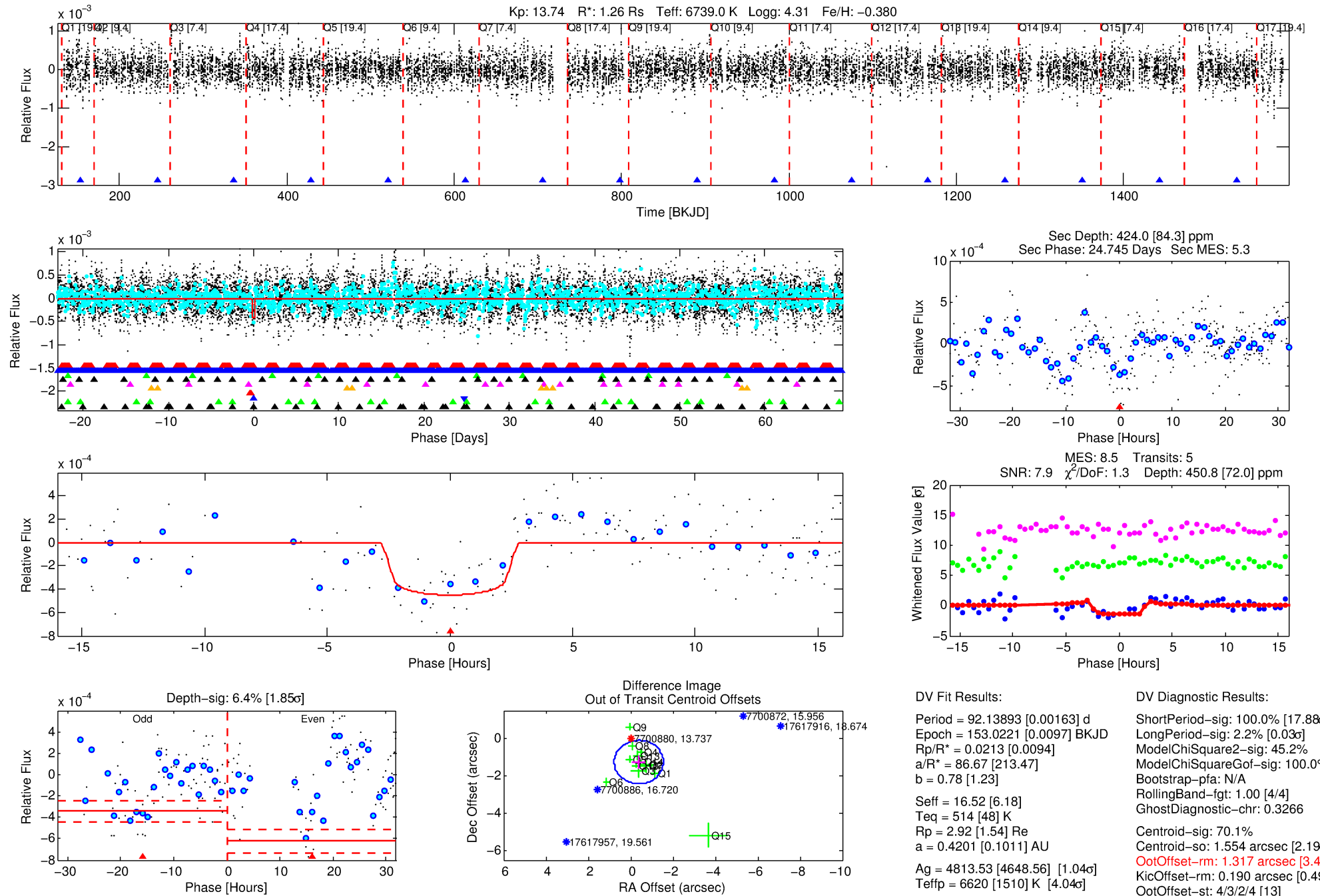
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007700880-08

No Significant Match Found

DV One-Page Summary

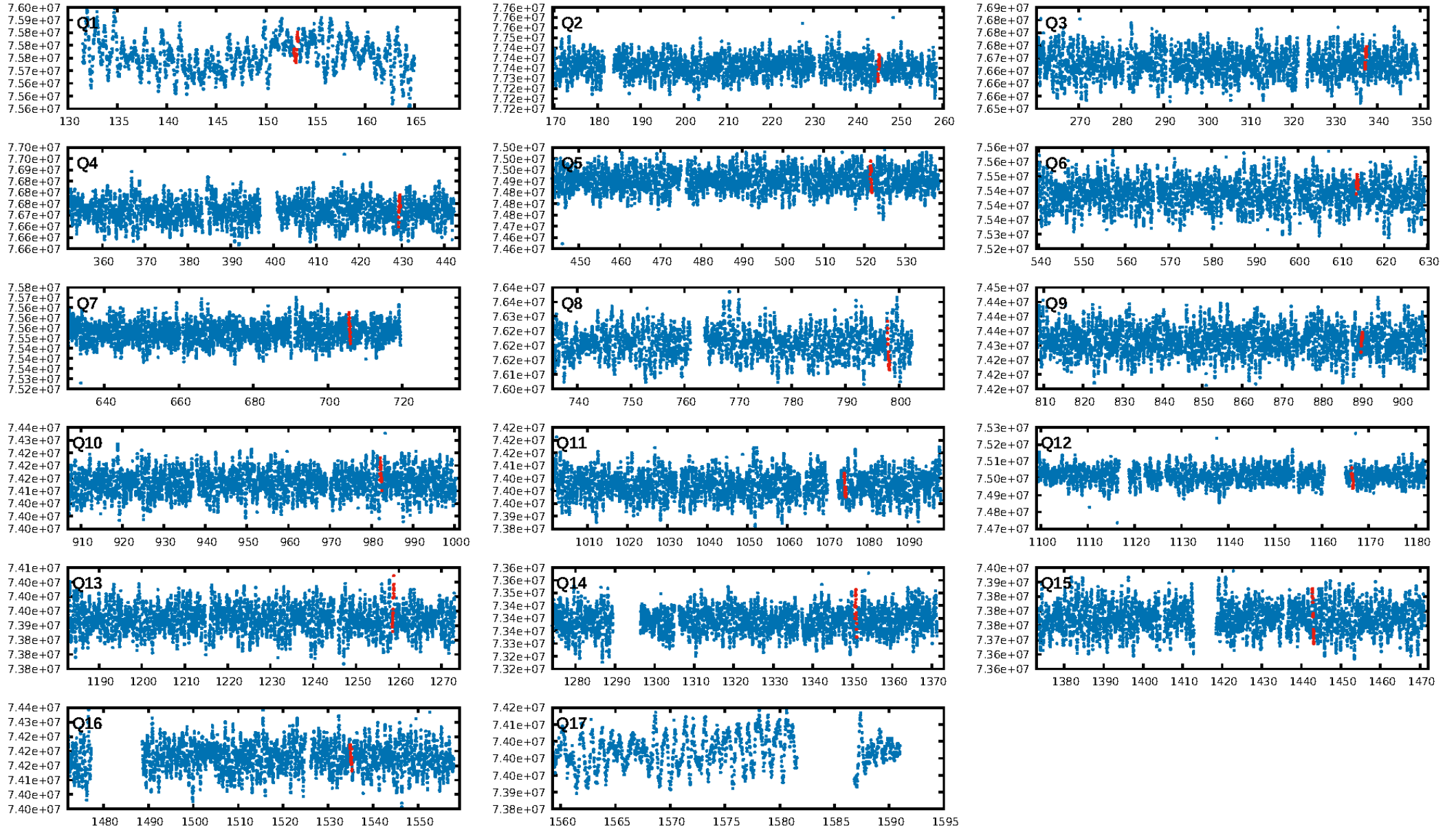
KIC: 7700880 Candidate: 8 of 10 Period: 92.139 d



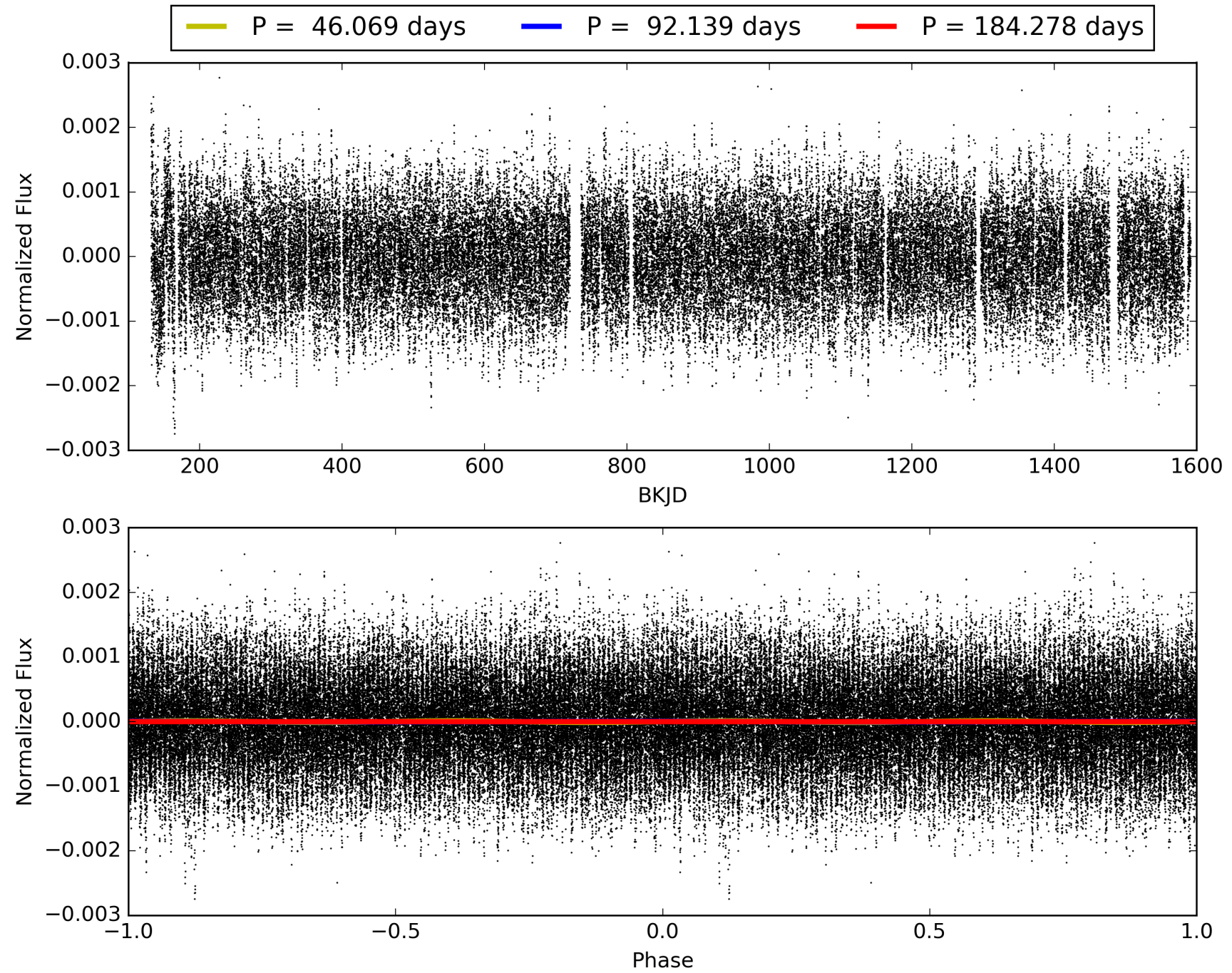
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 007700880-08, PDC Light Curves

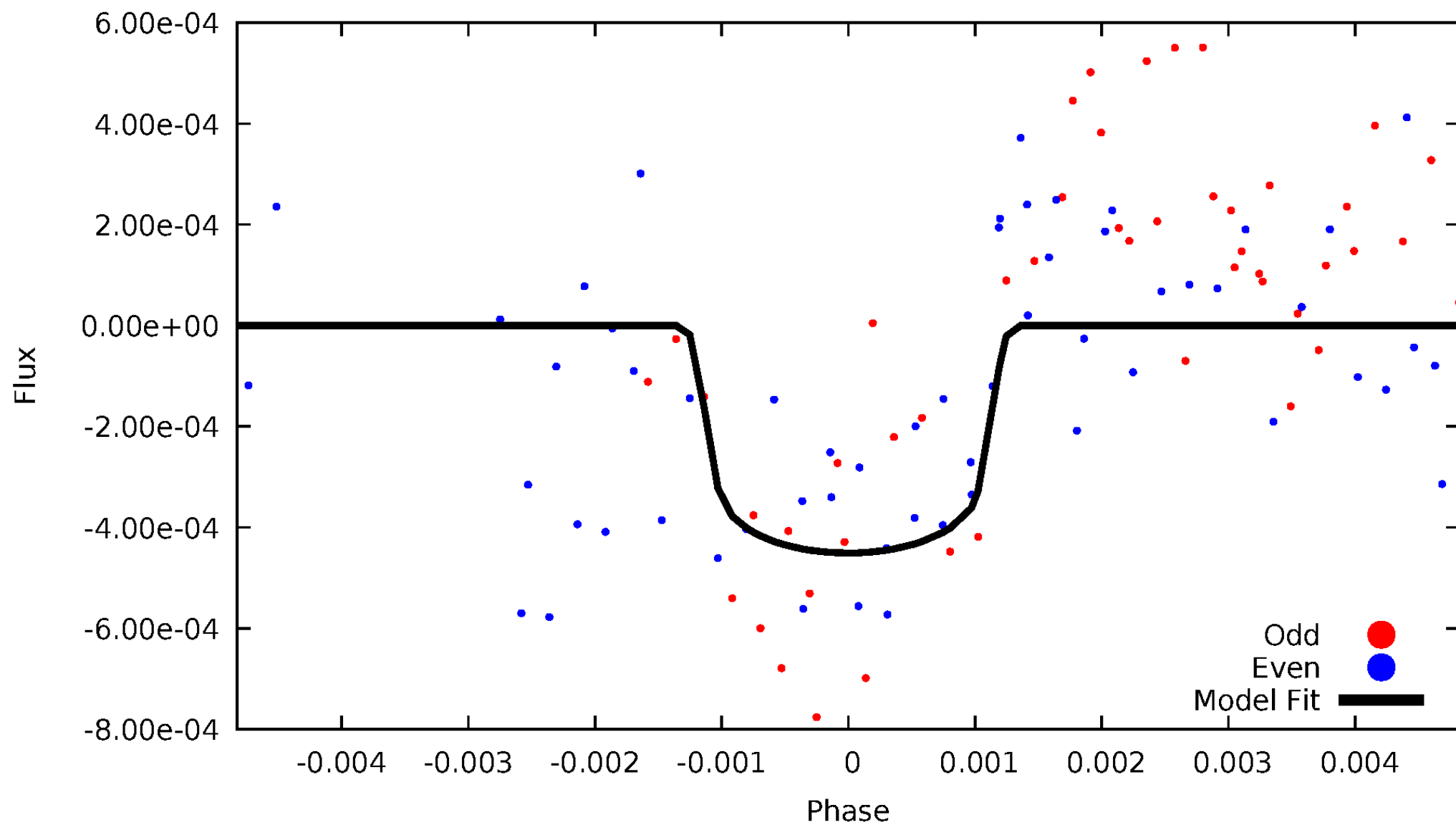


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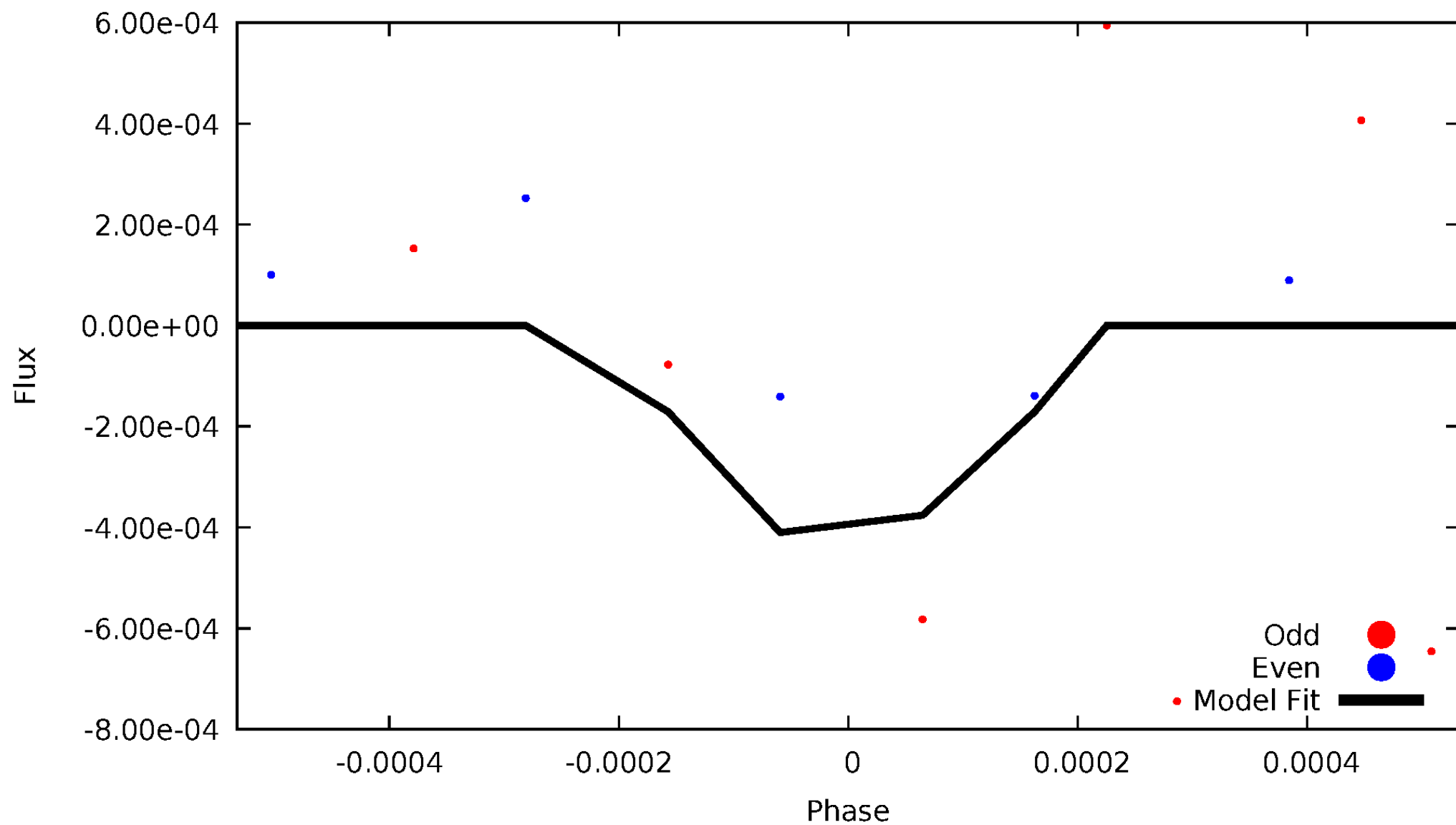
DV Odd/Even

TCE 007700880-08



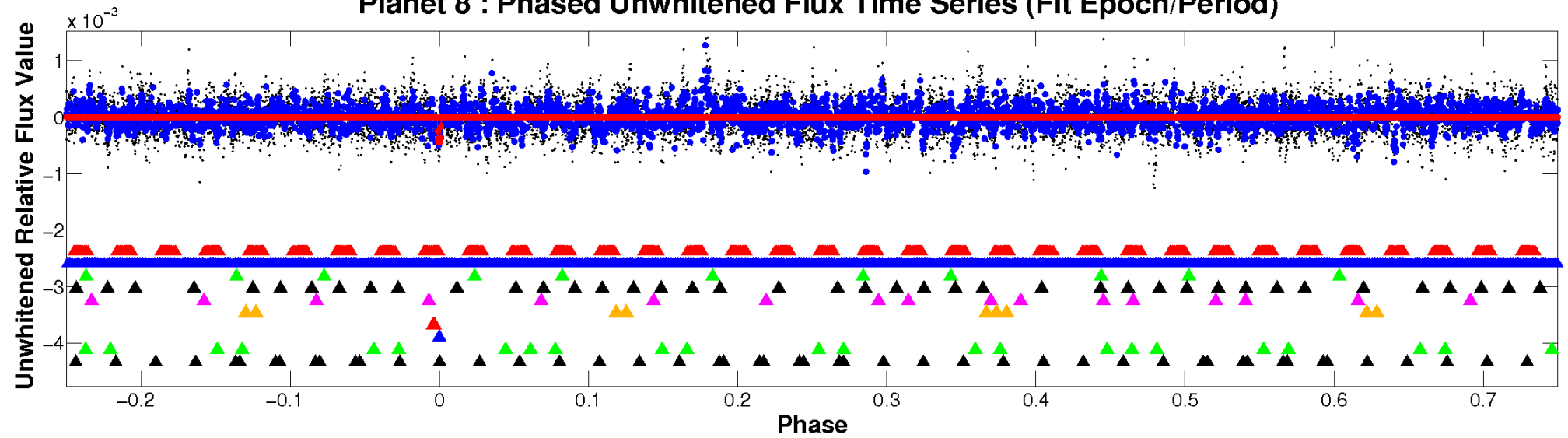
ALT Odd/Even

TCE 007700880-08

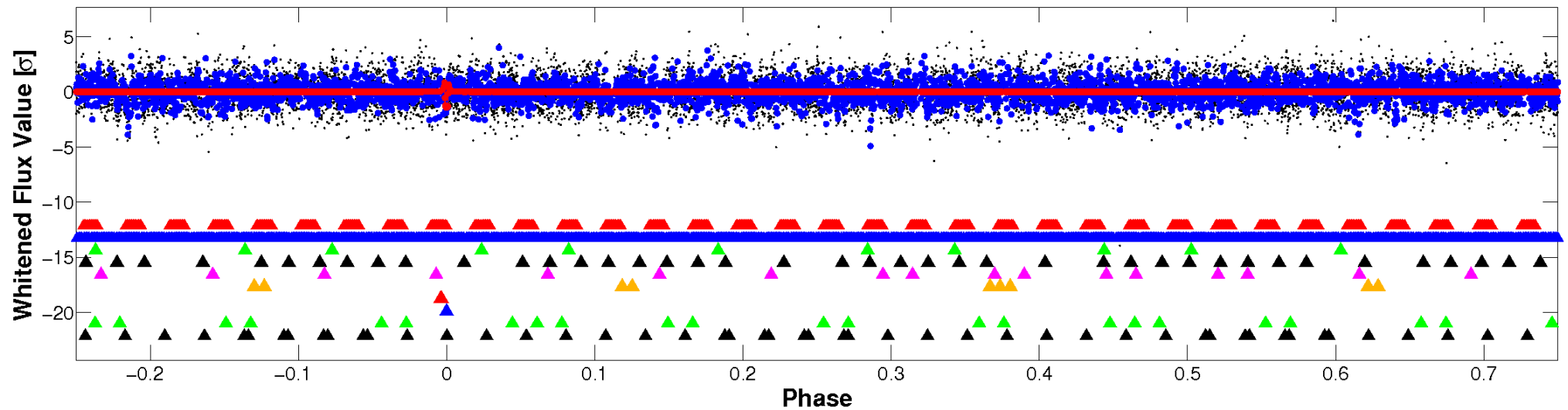


Non-Whitened Vs. Whitened Light Curve

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

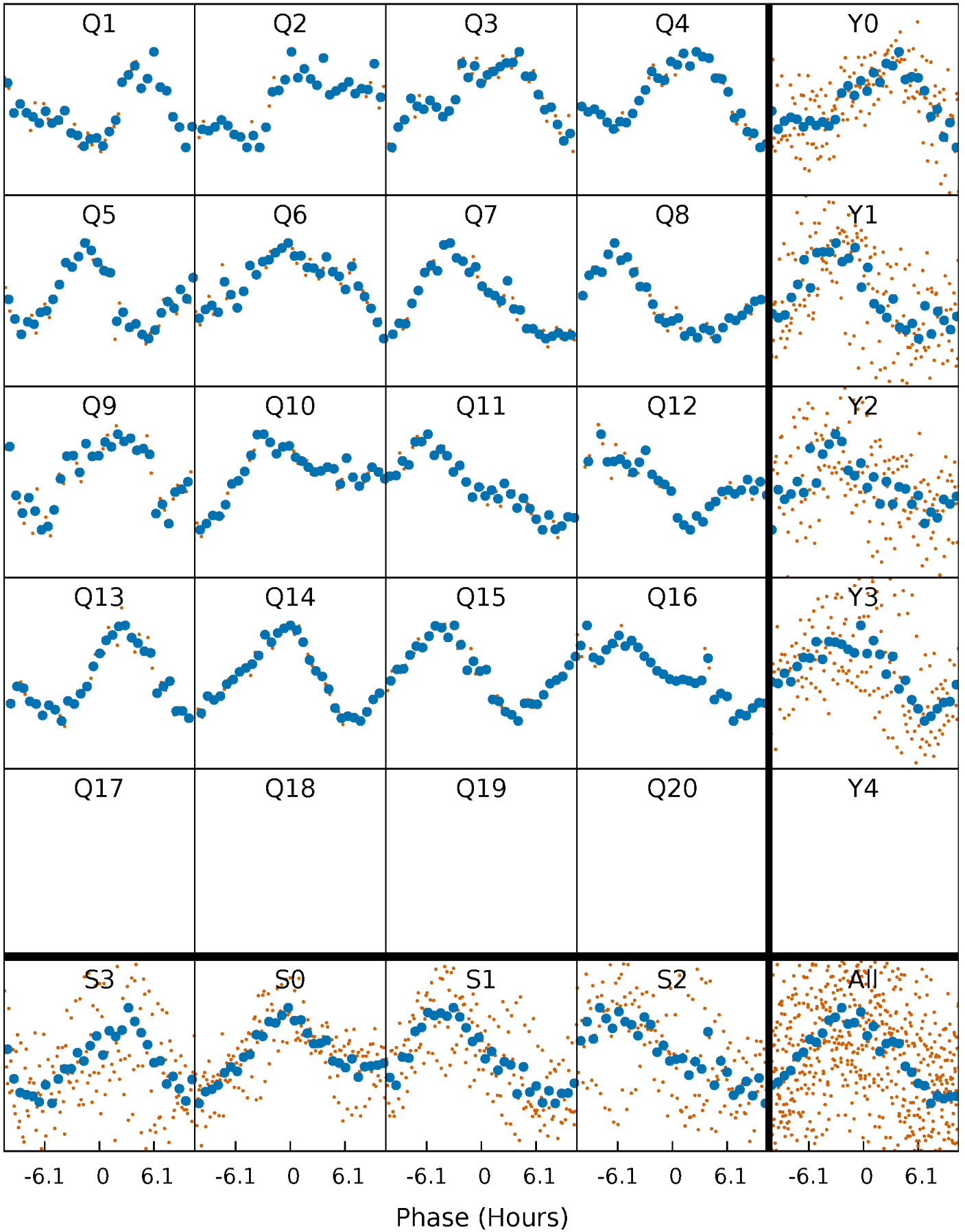


Planet 8 : Phased Whitened Flux Time Series (Fit Epoch/Period)



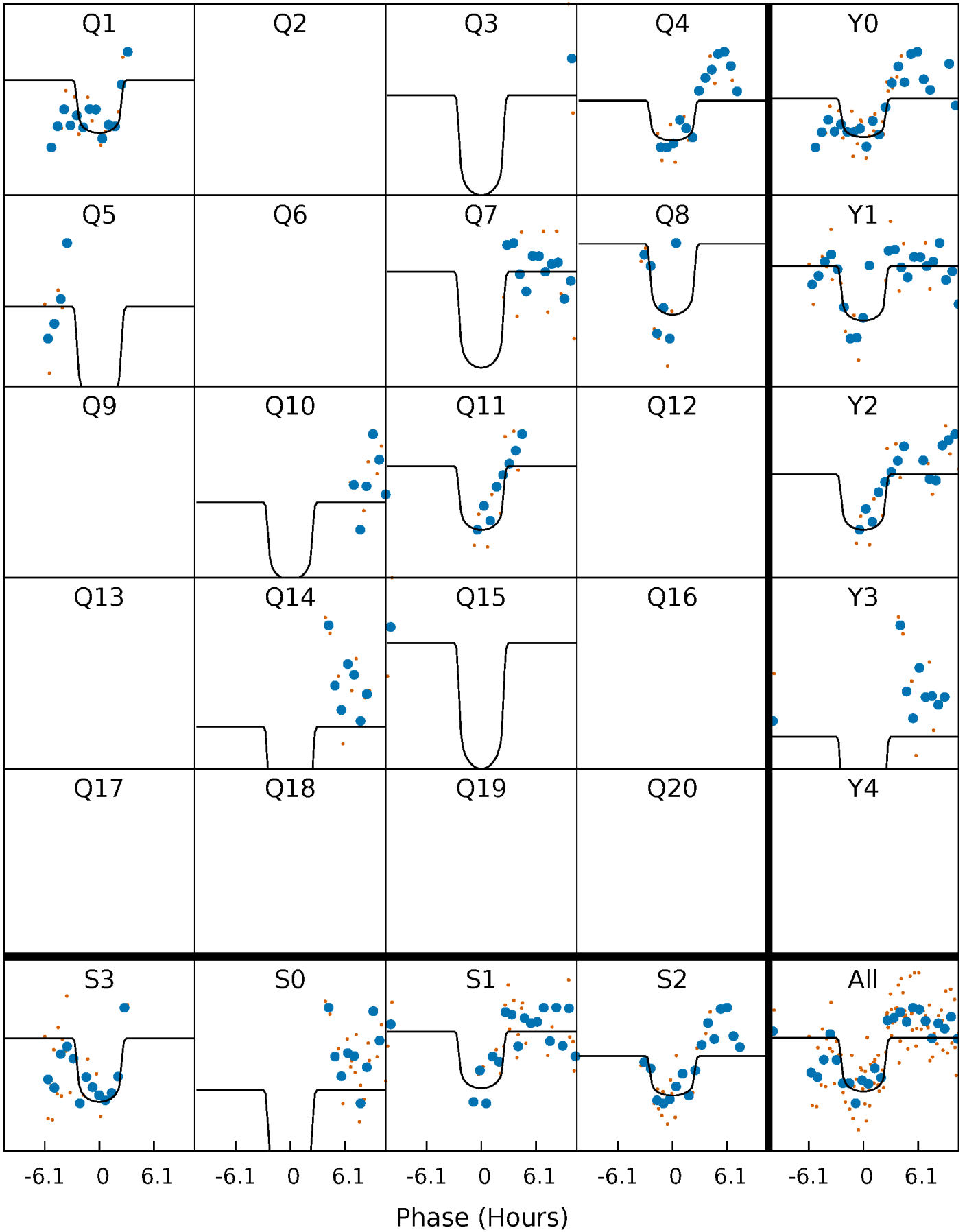
PDC Quarter-Phased Transit Curves

TCE 007700880-08 P= 92.138931 Days $T_0=153.022111$ (BKJD)



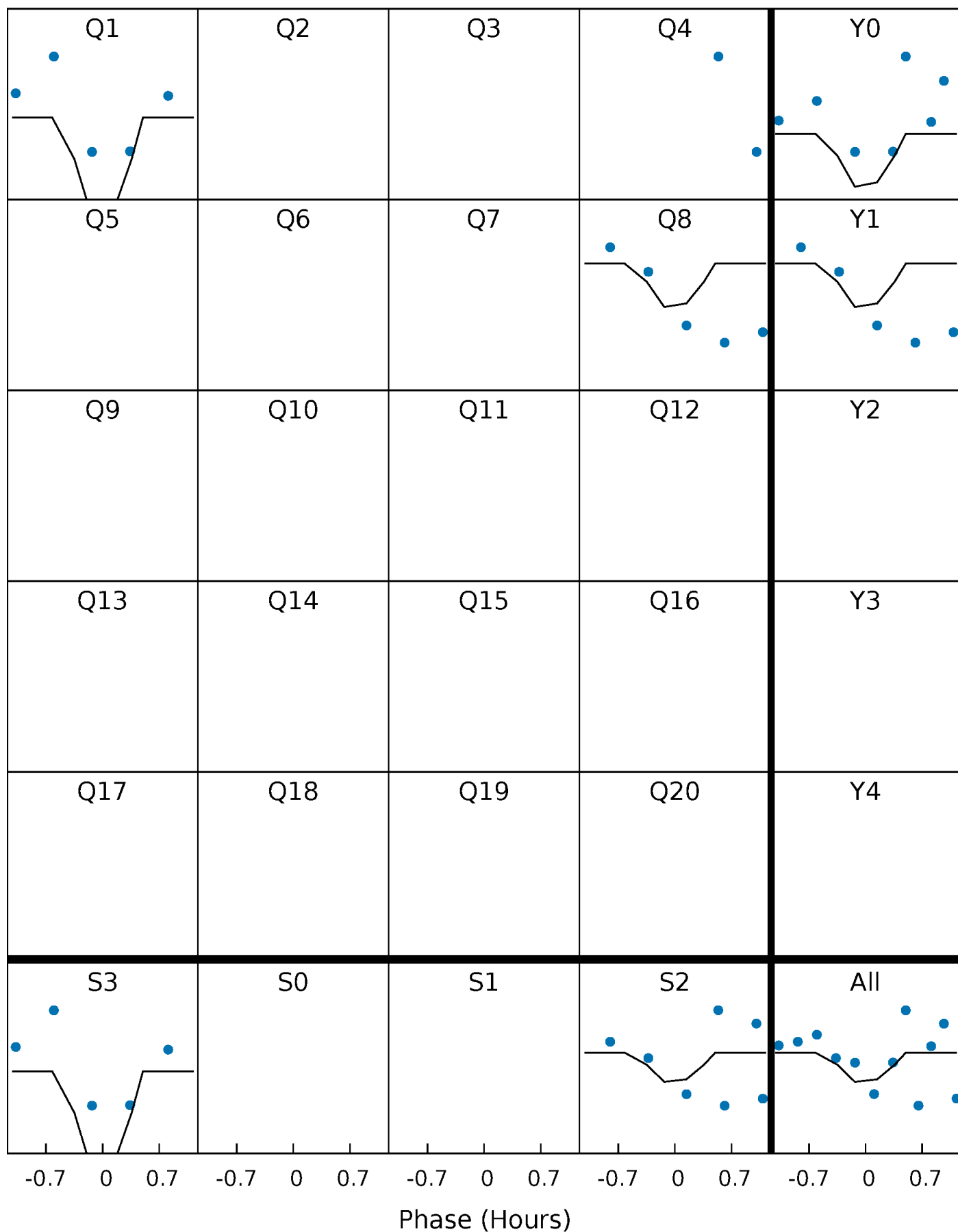
DV Quarter-Phased Transit Curves

TCE 007700880-08 P= 92.138931 Days $T_0=153.022111$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

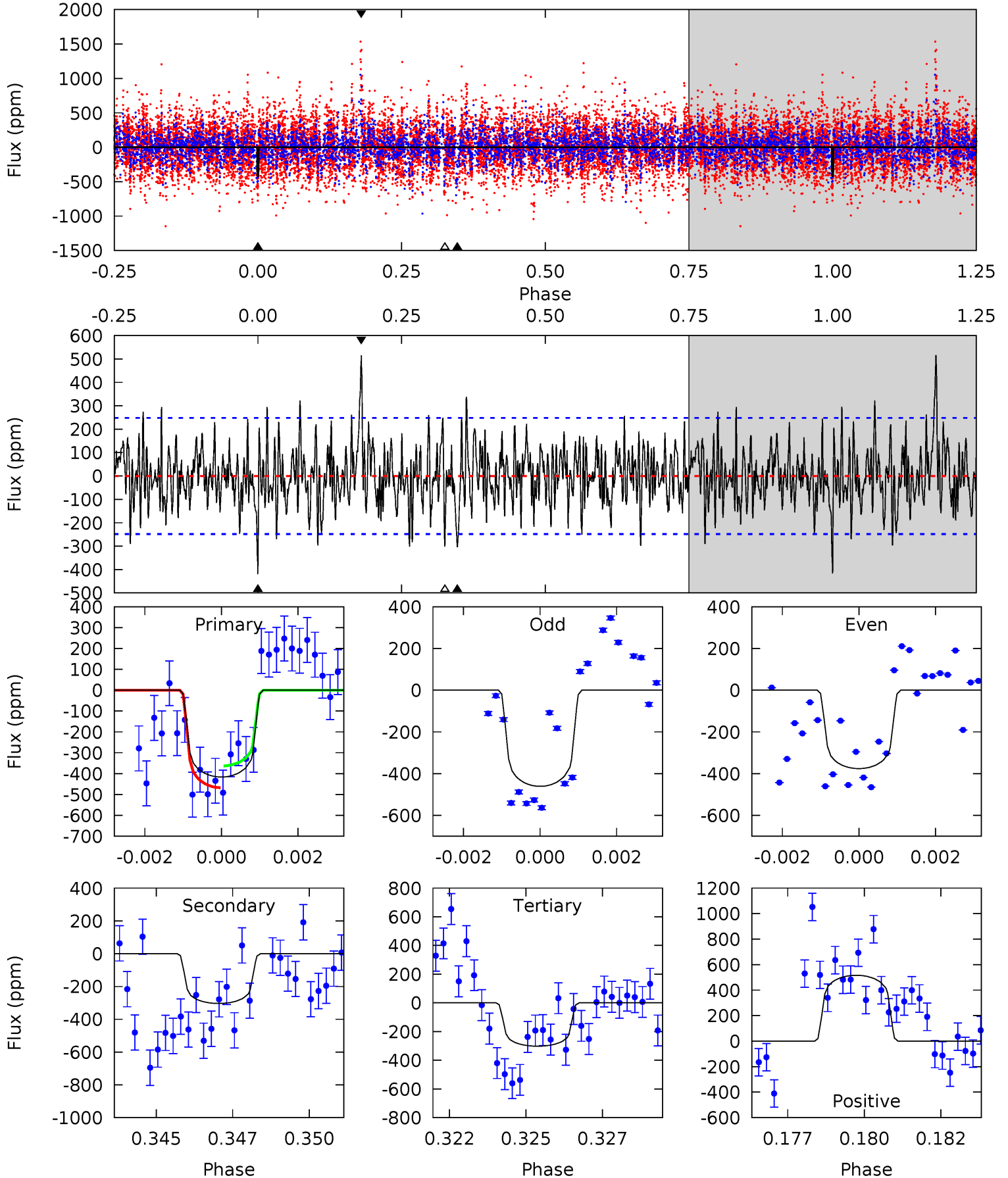
TCE 007700880-08 P= 92.138783 Days $T_0=152.932751$ (BKJD)



DV Model-Shift Uniqueness Test

007700880-08, P = 92.138931 Days, E = 60.883180 Days

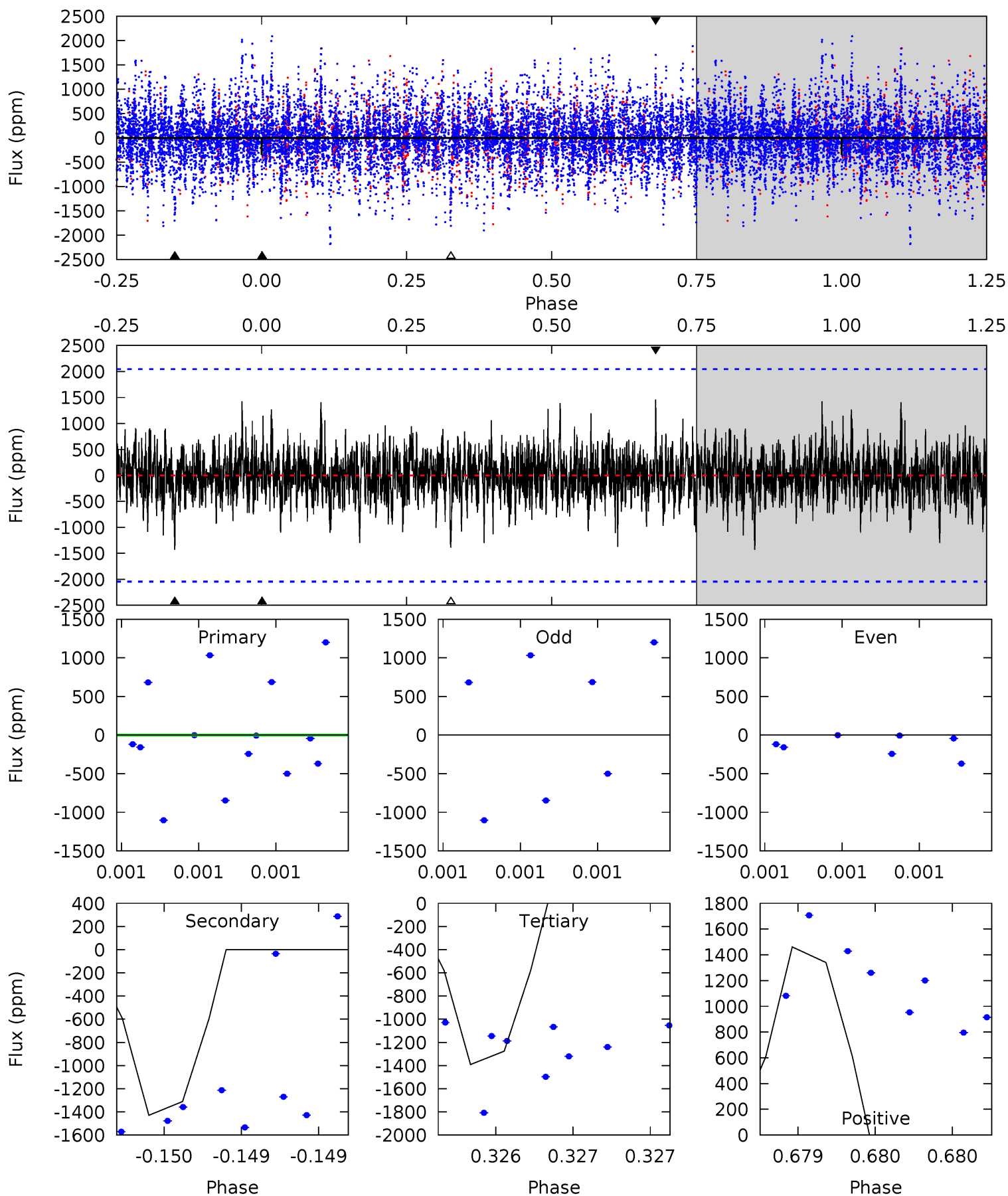
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.86	6.46	6.43	11.0	5.29	3.02	2.20	2.43	-2.13	0.04	-4.52	0.90	1.00	0.55	1.11



Alt Model-Shift Uniqueness Test

007700880-08, P = 92.138783 Days, E = 60.793968 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.97	3.96	3.86	4.05	5.67	3.63	0.96	-2.89	-3.08	0.11	-0.09	0.48	1.00	0.51	0.00



Stellar Parameters For KIC 007700880

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6739^{+189}_{-236}	$4.306^{+0.101}_{-0.188}$	$-0.380^{+0.250}_{-0.300}$	$1.256^{+0.363}_{-0.196}$	$1.170^{+0.175}_{-0.158}$	$0.831^{+0.384}_{-0.422}$
	+3%/-4%	+2%/-4%	+66%/-79%	+29%/-16%	+15%/-14%	+46%/-51%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007700880-08 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-304 ± 47	$3.02^{+1.52}_{-1.38}$	728^{+57}_{-43}	6041^{+2181}_{-972}	3189^{+7036}_{-1781}
Alt.	-1429 ± 361	$3.24^{+1.38}_{-1.34}$	725^{+54}_{-42}	9103^{+4738}_{-1934}	13007^{+24555}_{-6841}

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

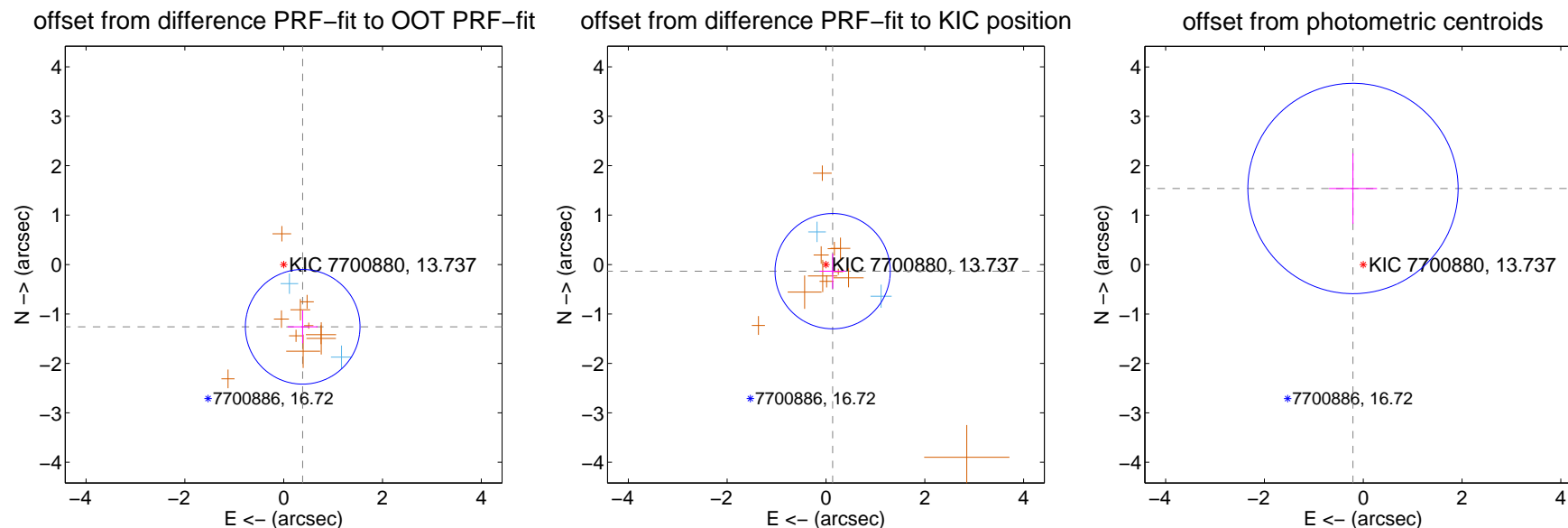
DV Centroid Data

Supplemental centroid analysis for 007700880-08. Kepler magnitude: 13.74. Transit SNR 7.95

There are 2 quarters with good PRF difference image offsets

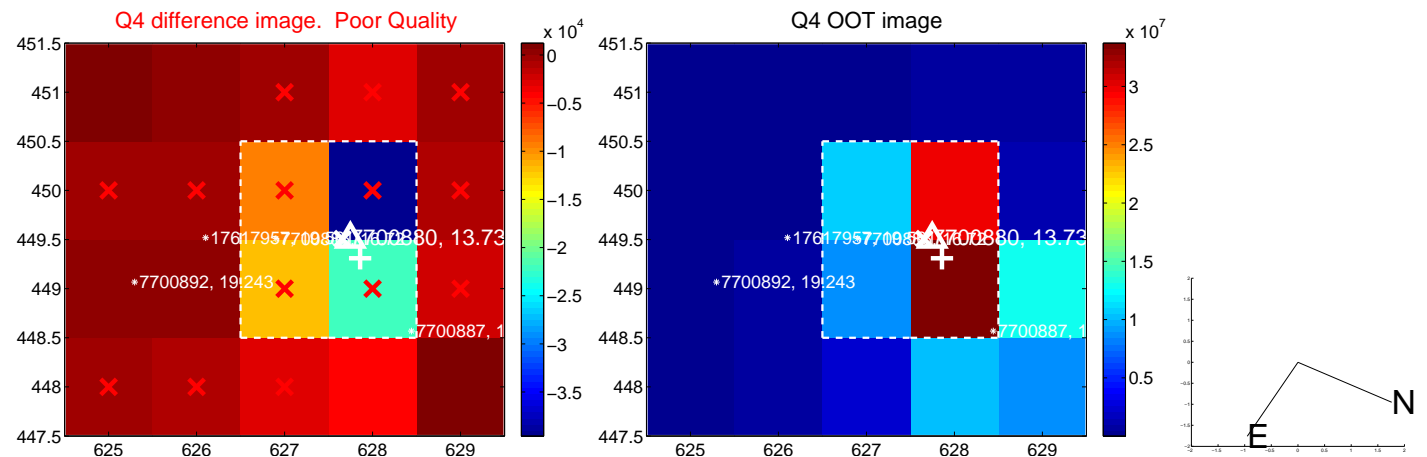
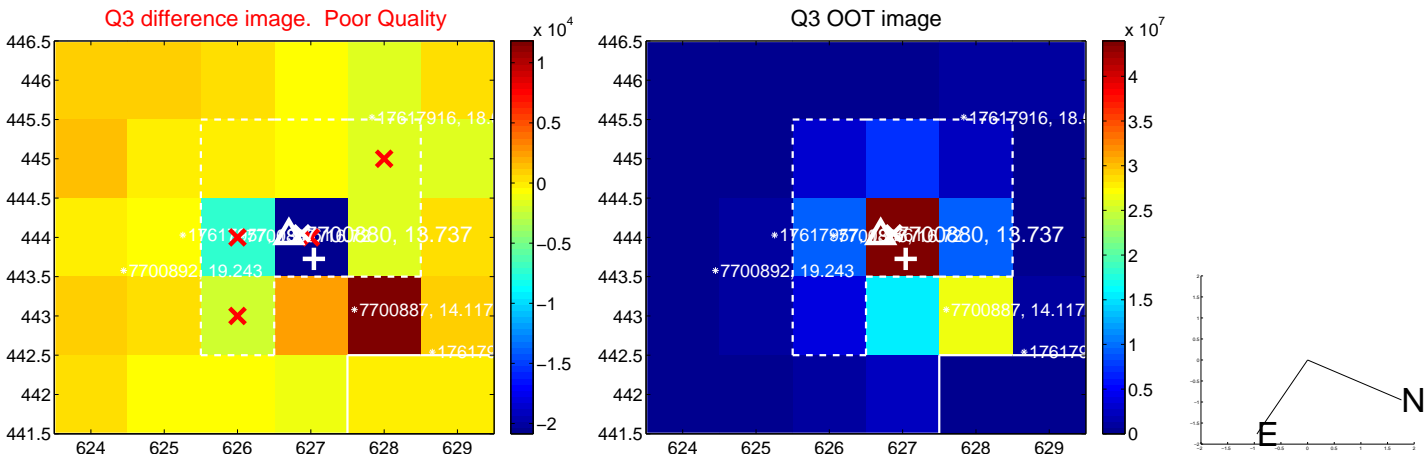
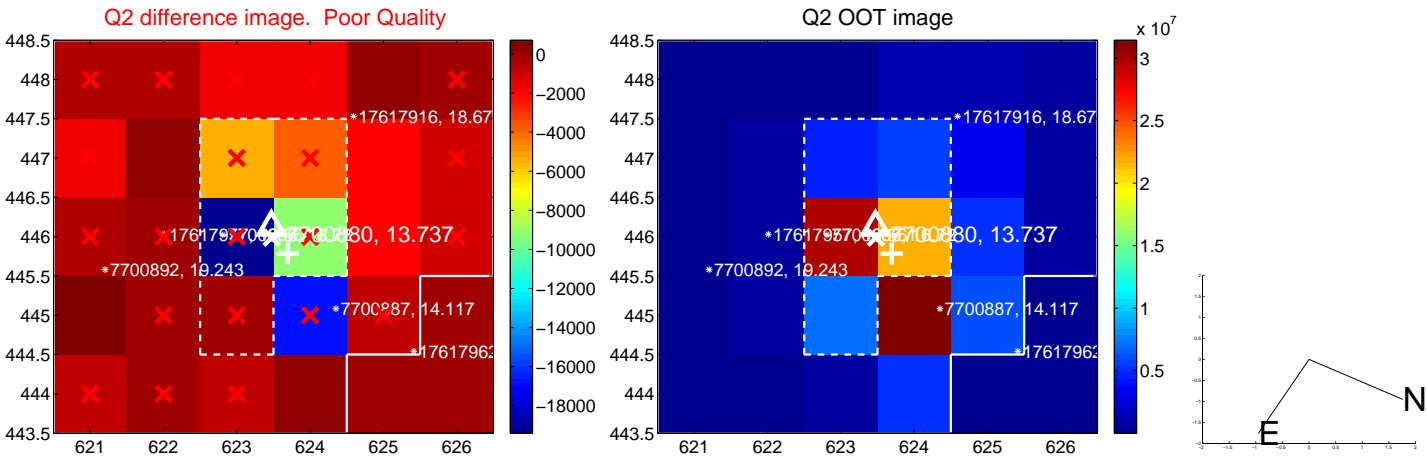
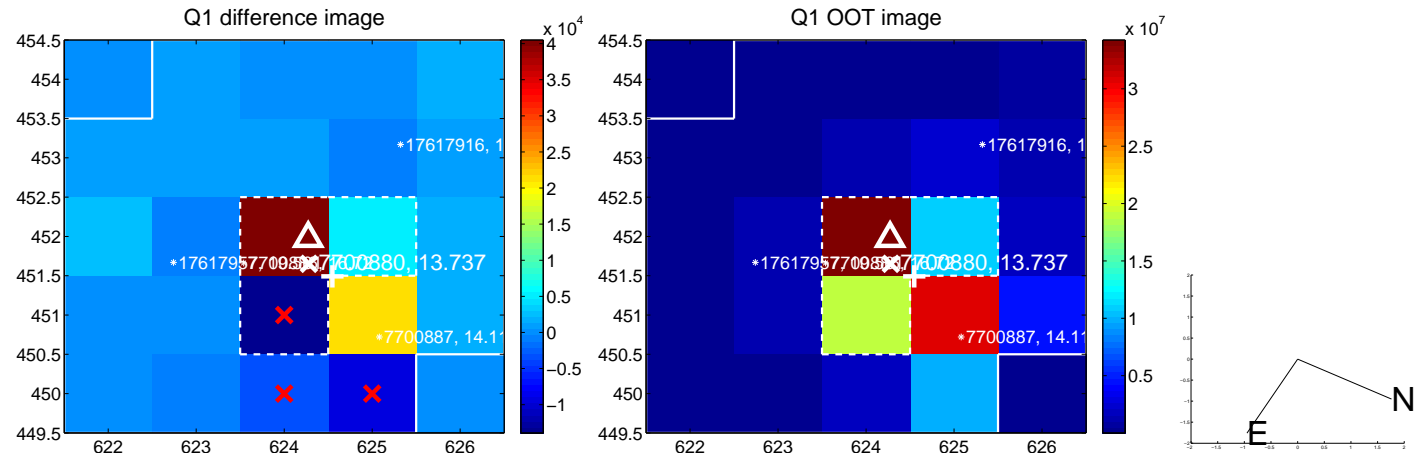
The direct PRF centroid is offset from the target star catalog position by about 1.52 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.317 ± 0.387	3.41	-0.385 ± 0.302	-1.259 ± 0.333
PRF-fit source offset from KIC position	0.190 ± 0.389	0.49	-0.135 ± 0.263	-0.134 ± 0.355
photometric centroid source offset	1.55 ± 0.71	2.19	0.21 ± 0.49	1.54 ± 0.71

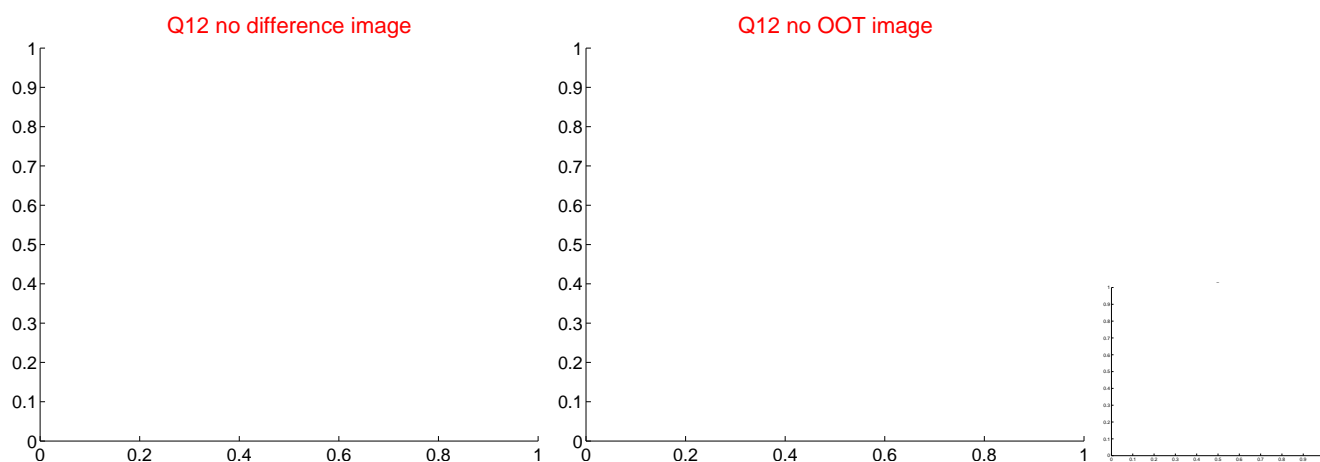
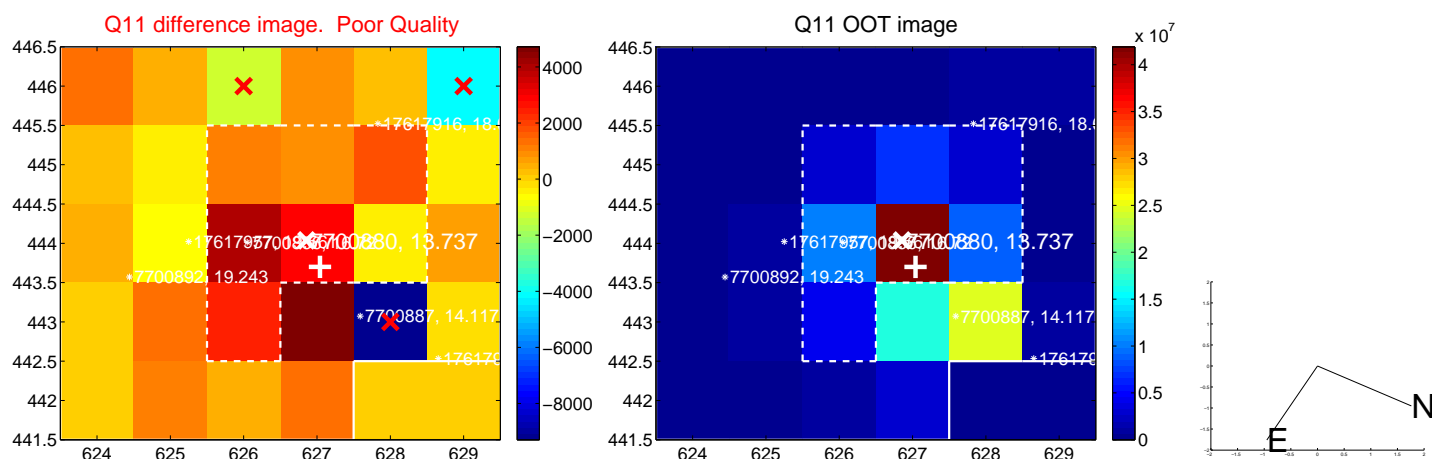
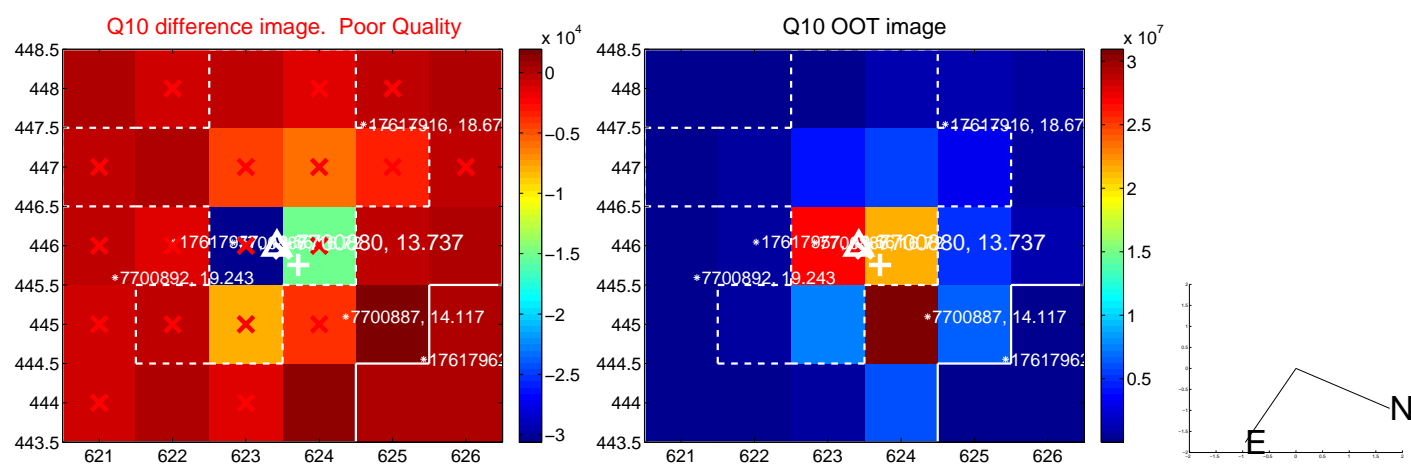
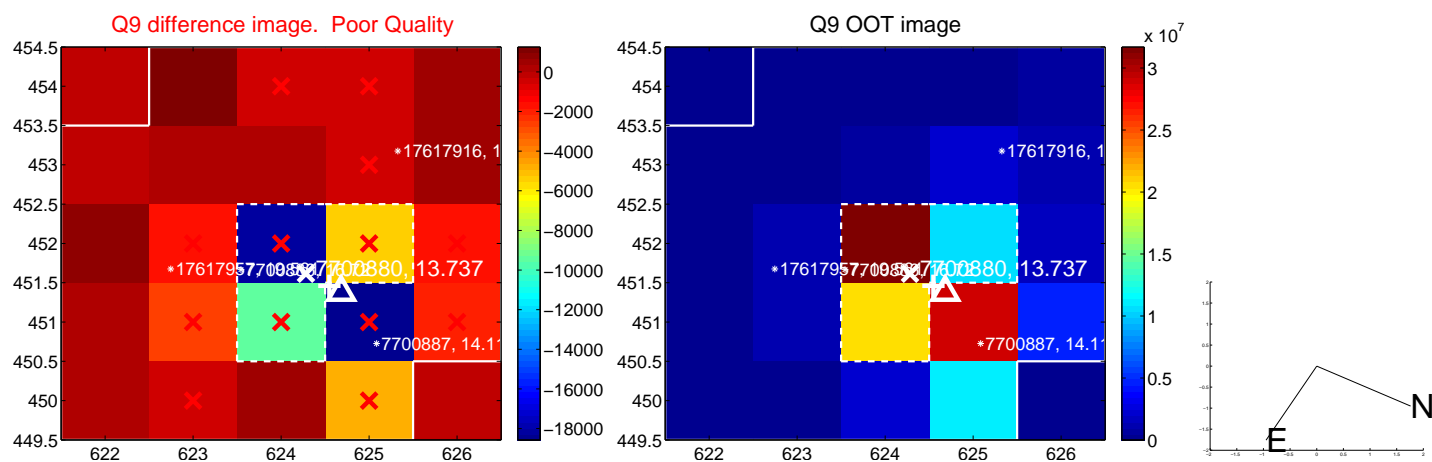


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

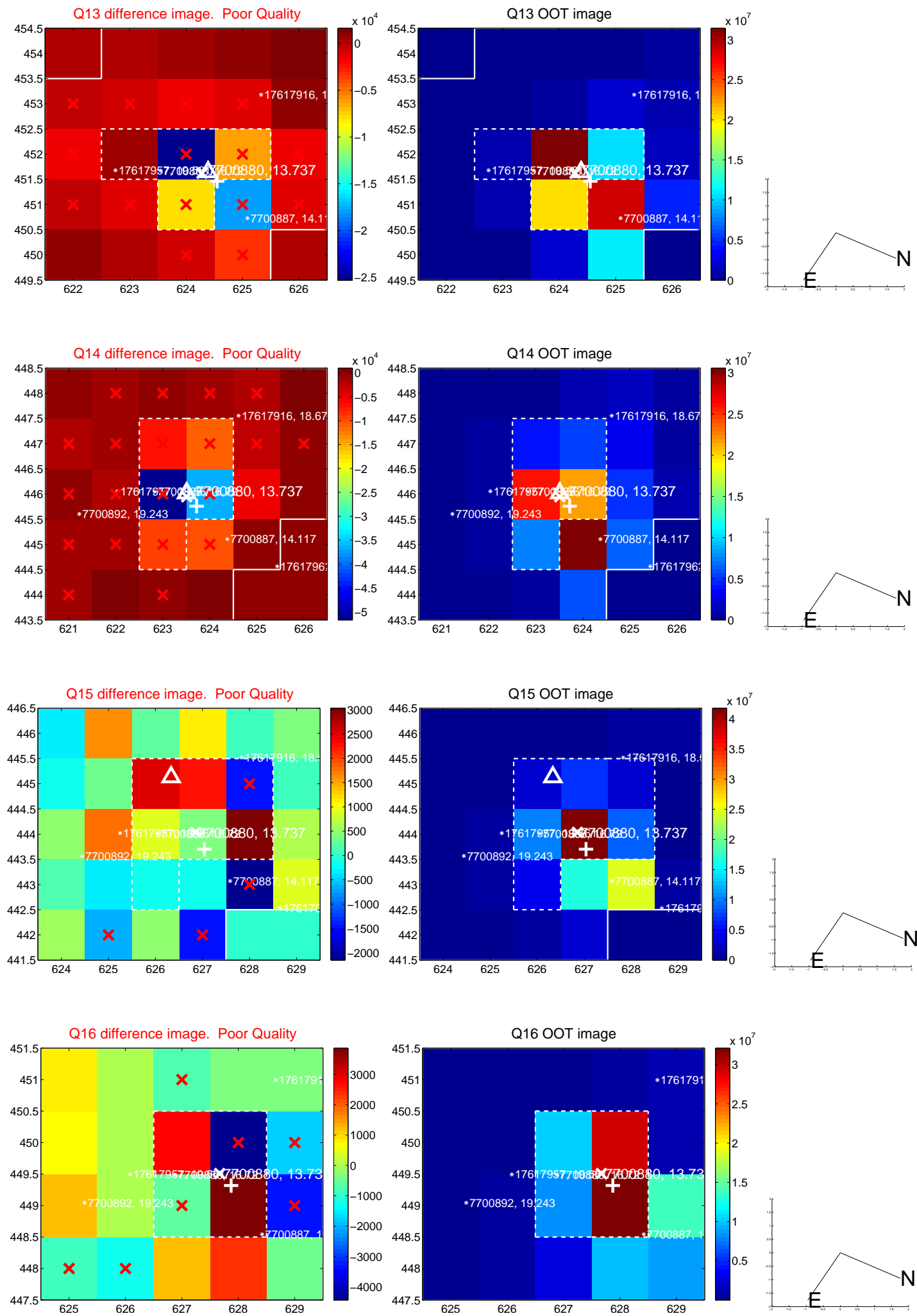
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



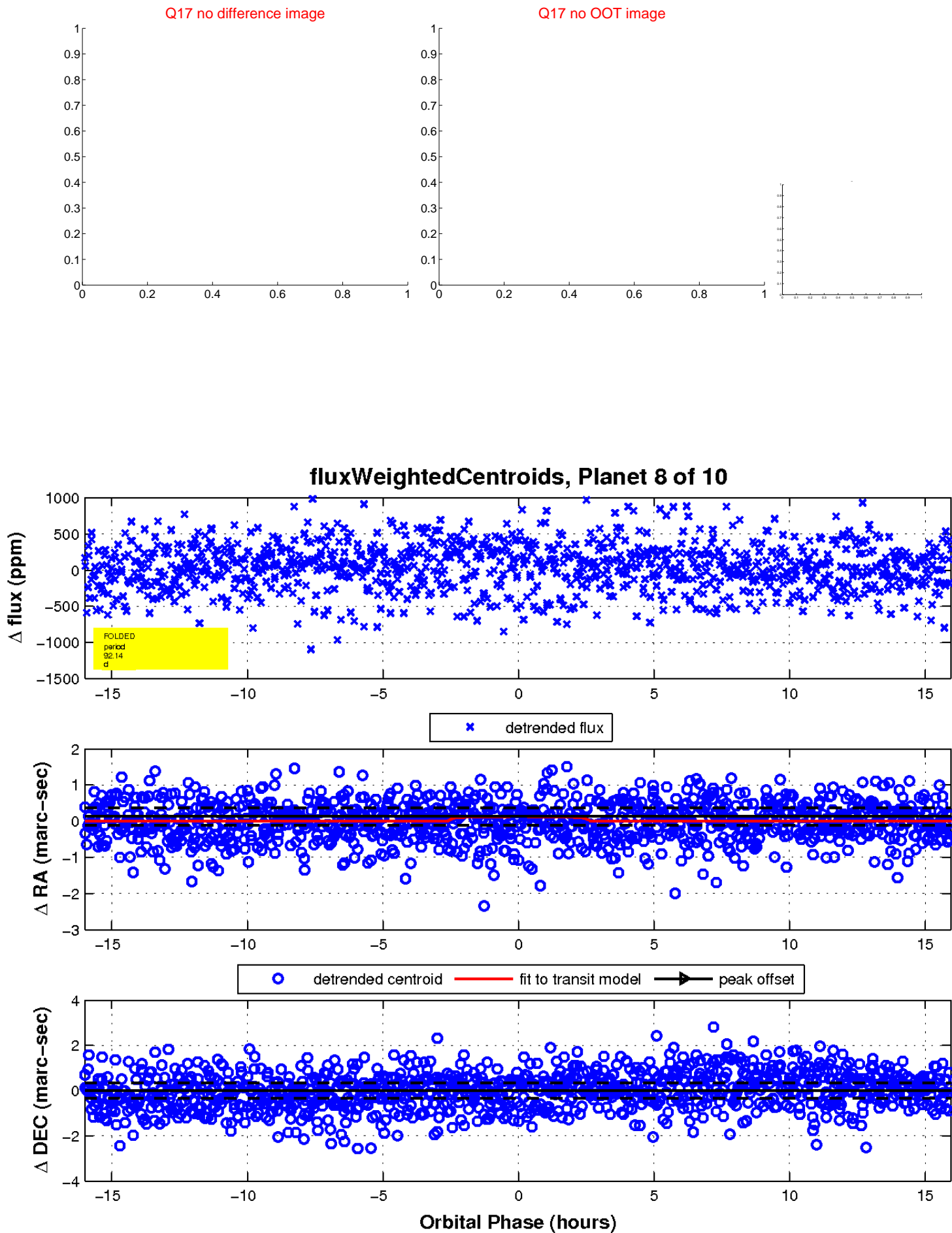
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



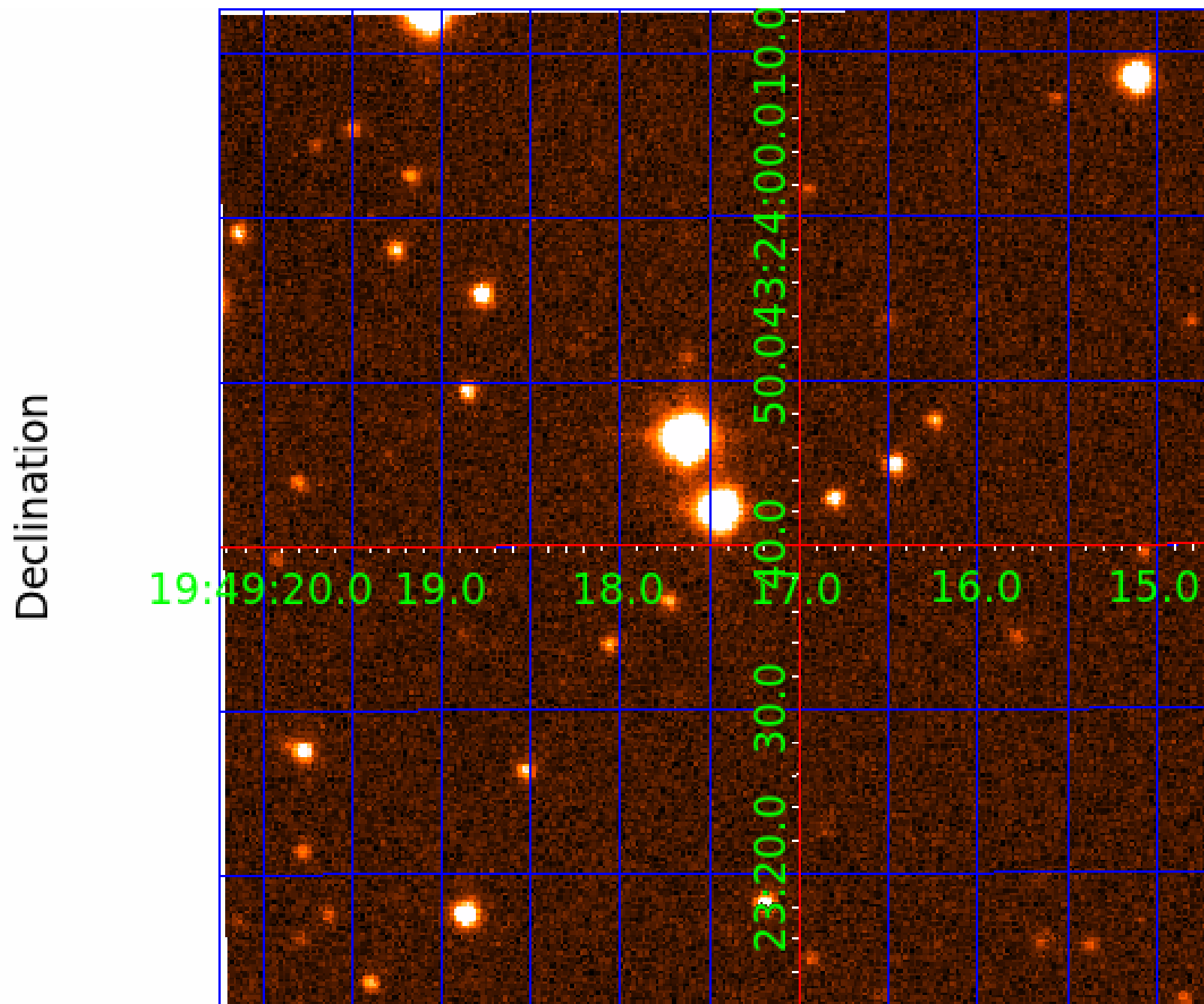
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



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})
007700880-01	OBS	No	2.711831	133.076025	79.4	4.438	8.9	10.3	1.26	6739	1.30	1817.97
007700880-02	OBS	No	1.553862	131.997646	32.9	9.156	8.1	5.7	1.26	6739	0.75	3819.91
007700880-03	OBS	No	130.853517	252.755847	640.1	5.069	10.5	8.7	1.26	6739	3.82	10.35
007700880-04	OBS	No	36.128406	132.528556	326.7	5.539	9.6	9.5	1.26	6739	2.56	57.56
007700880-06	OBS	No	161.399146	278.961203	829.7	19.846	10.9	10.2	1.26	6739	4.34	7.82
007700880-07	OBS	No	92.145114	152.634577	210.9	0.940	8.4	1.9	1.26	6739	2.12	16.52
007700880-08	OBS	No	92.138931	153.022111	450.8	5.333	8.5	7.9	1.26	6739	2.92	16.52
007700880-09	OBS	No	64.651118	157.112939	105.5	14.705	8.1	2.4	1.26	6739	1.42	26.50
007700880-10	OBS	No	29.889930	147.843900	268.6	7.381	8.8	8.0	1.26	6739	2.22	74.11

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007700880-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_KIC_POS
007700880-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_KIC_POS
007700880-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
007700880-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS—HALO_GHOST
007700880-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007700880-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS
007700880-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_FEW_DIFFS
007700880-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_KIC_POS
007700880-10	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—CENT_KIC_POS

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

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

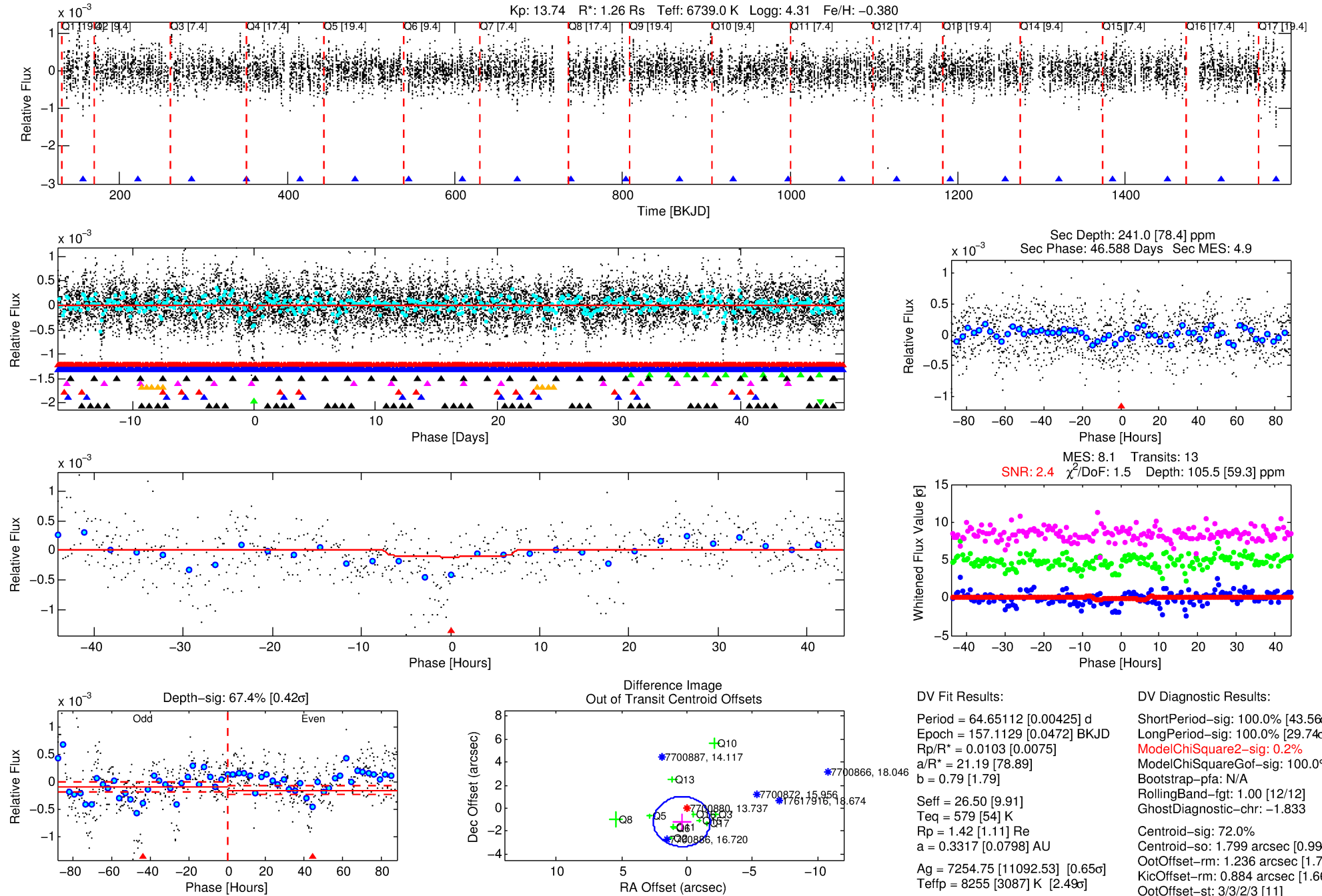
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007700880-09

No Significant Match Found

DV One-Page Summary

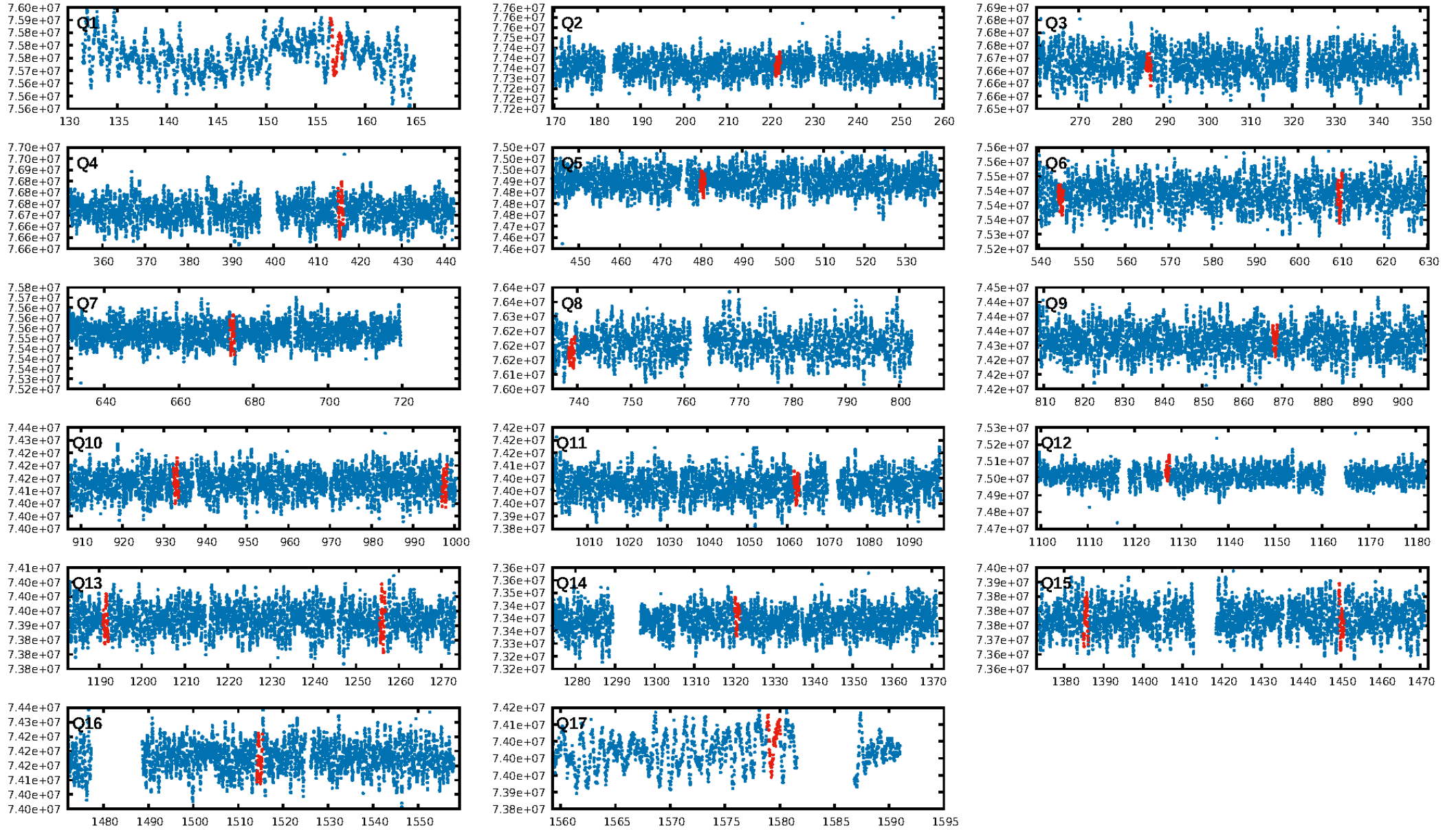
KIC: 7700880 Candidate: 9 of 10 Period: 64.651 d



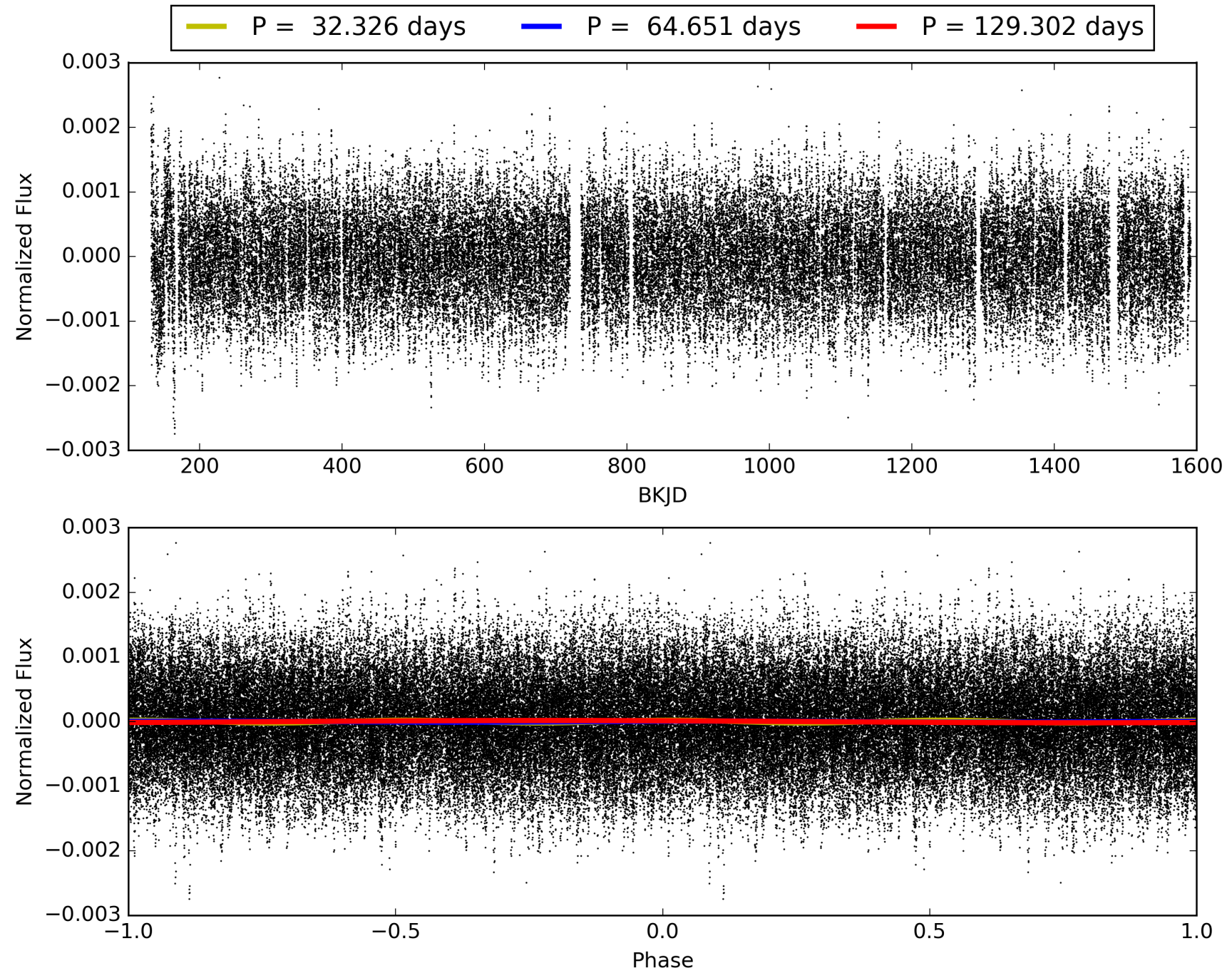
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 03:40:16 Z

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

TCE 007700880-09, PDC Light Curves

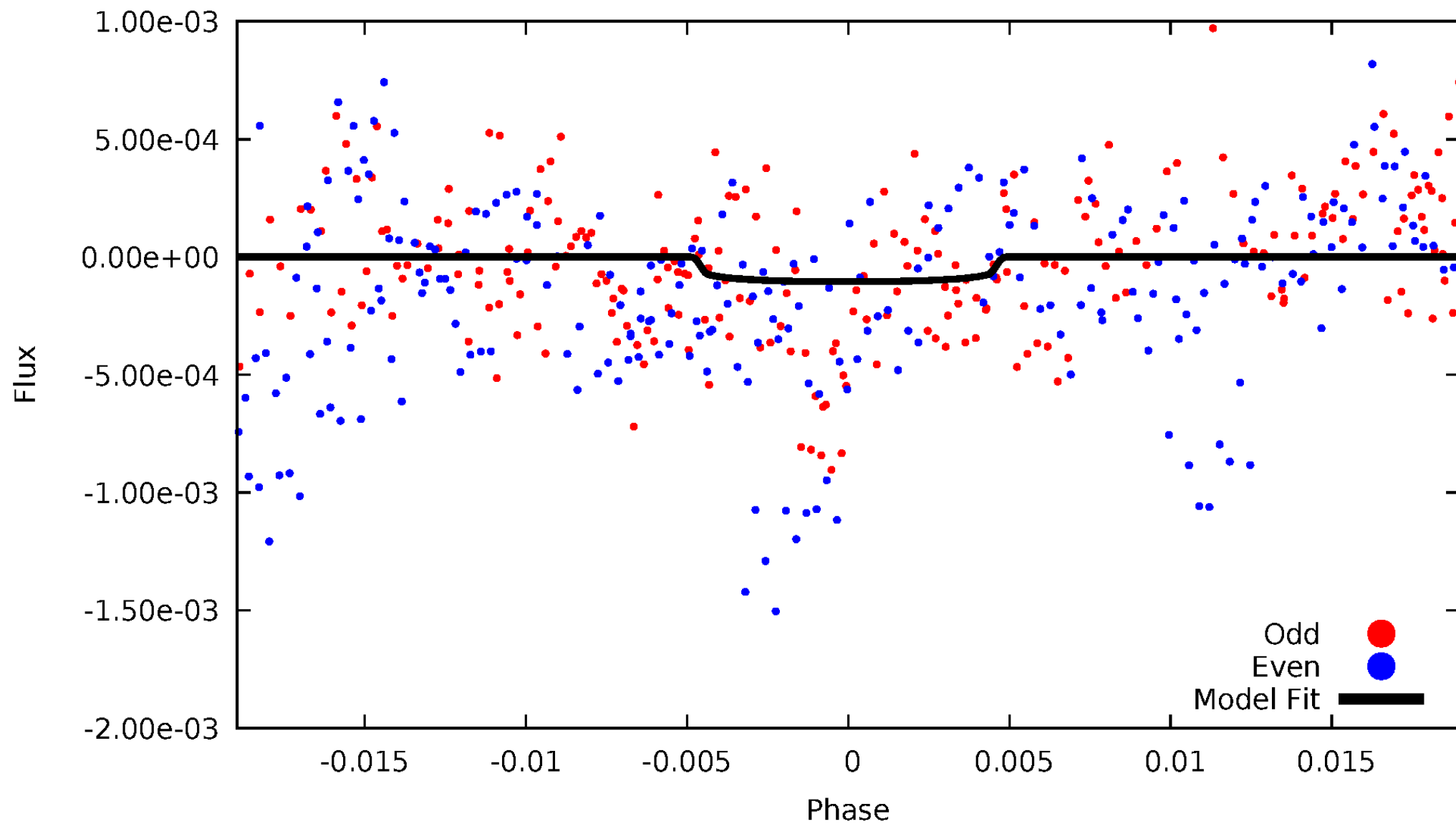


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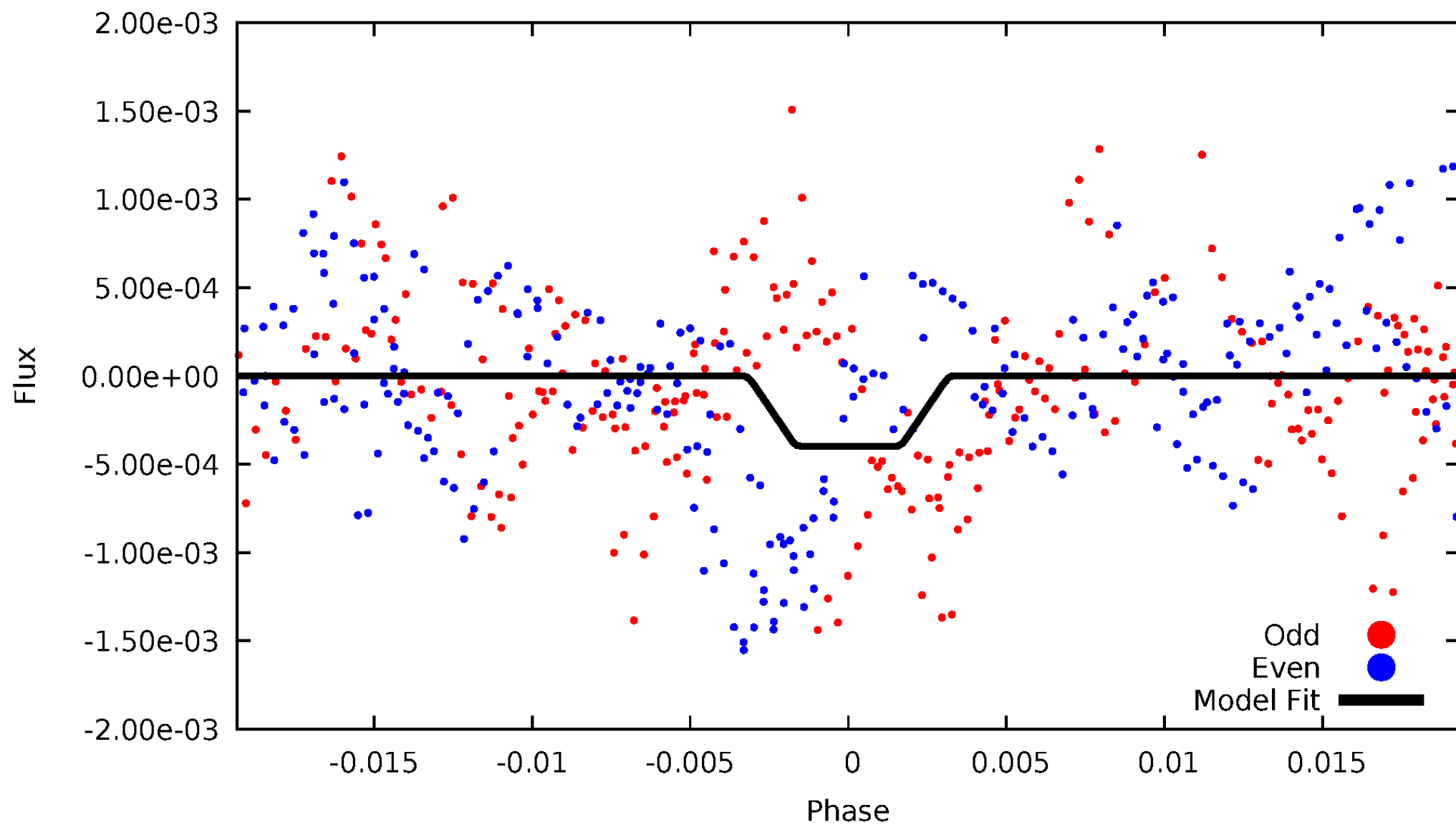
DV Odd/Even

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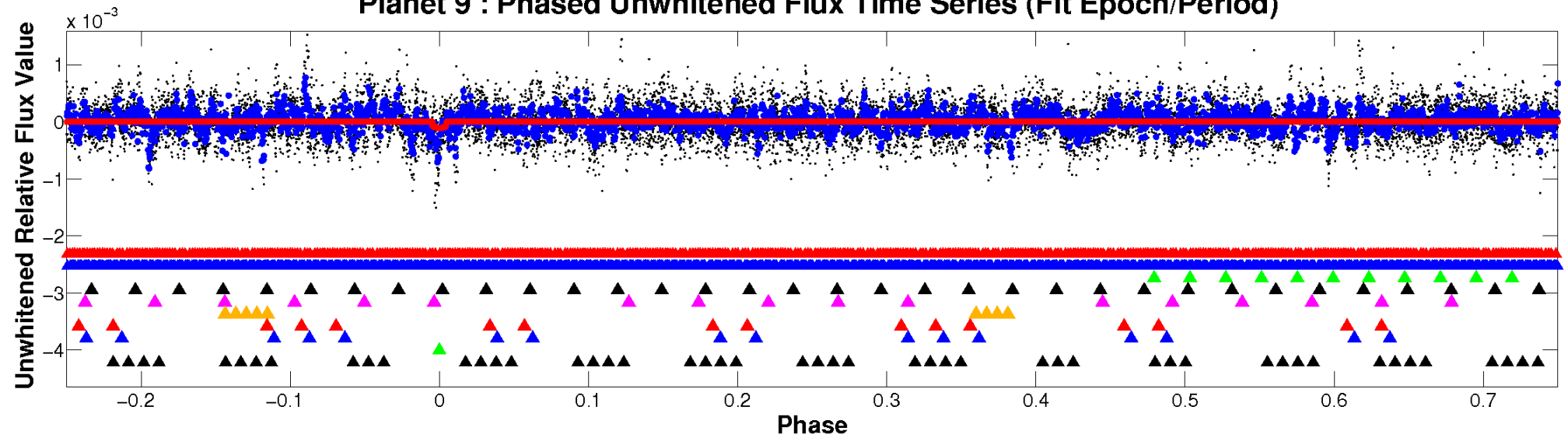
ALT Odd/Even

TCE 007700880-09

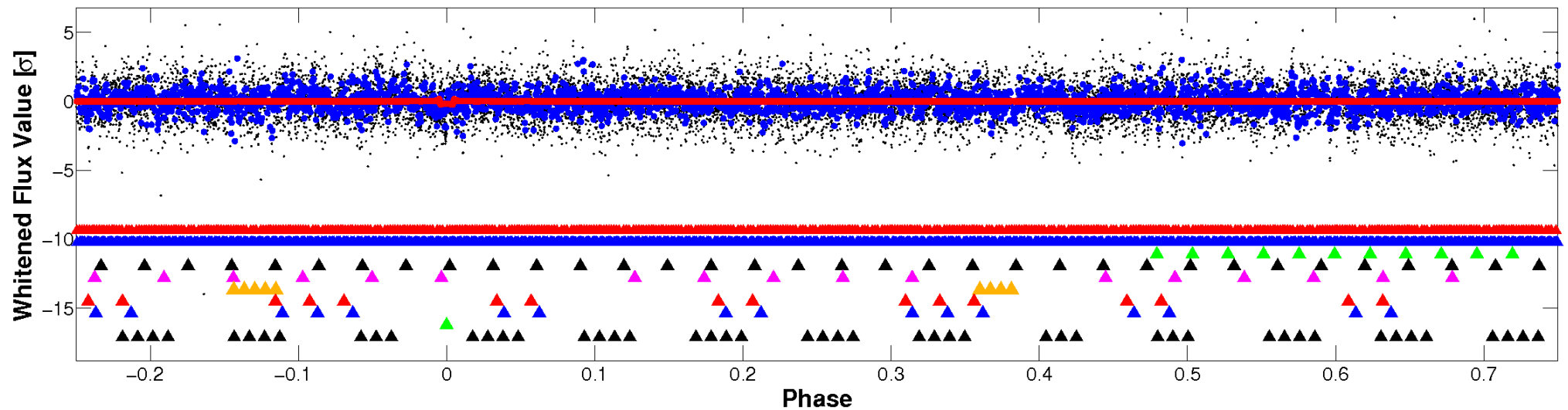


Non-Whitened Vs. Whitened Light Curve

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

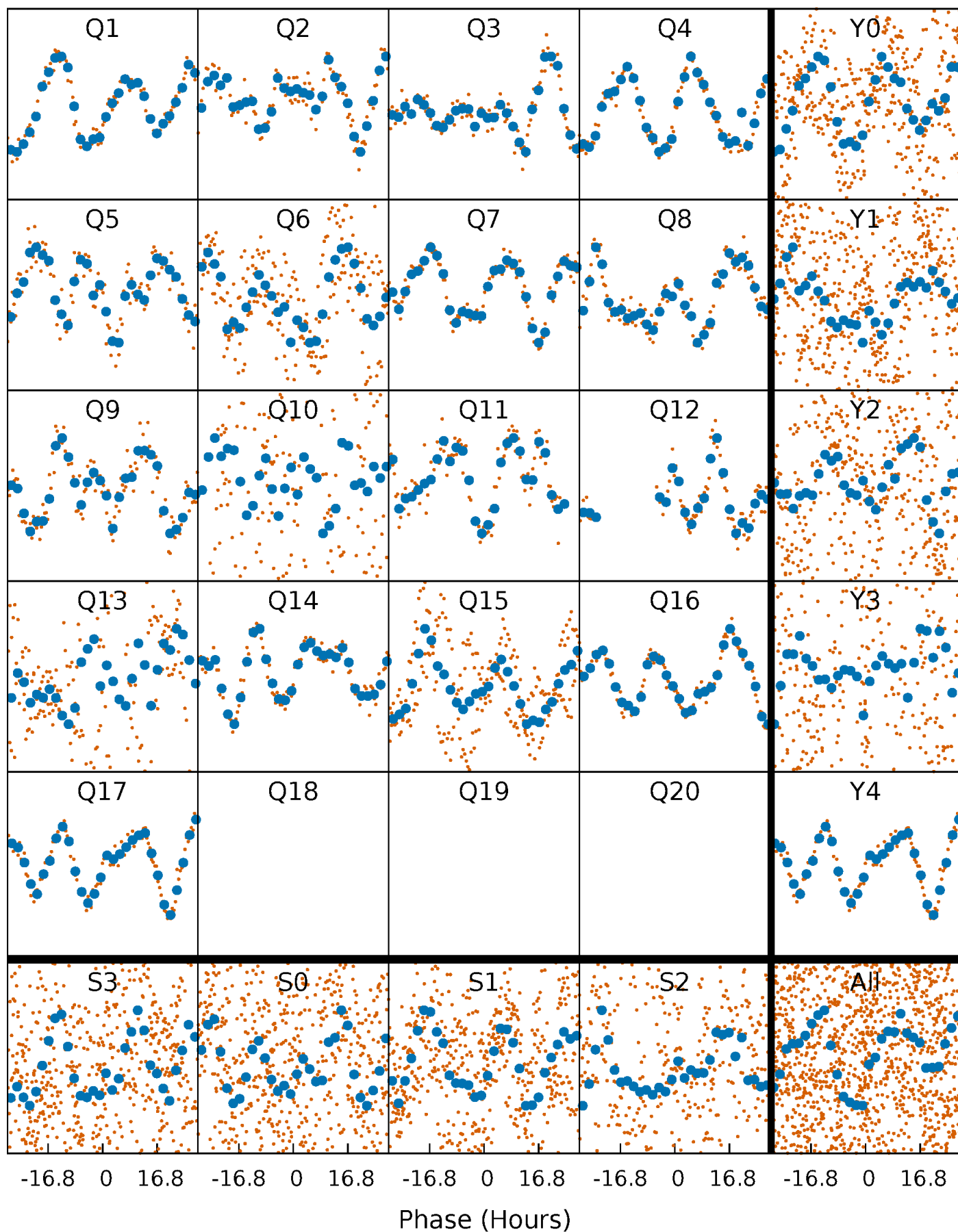


Planet 9 : Phased Whitened Flux Time Series (Fit Epoch/Period)



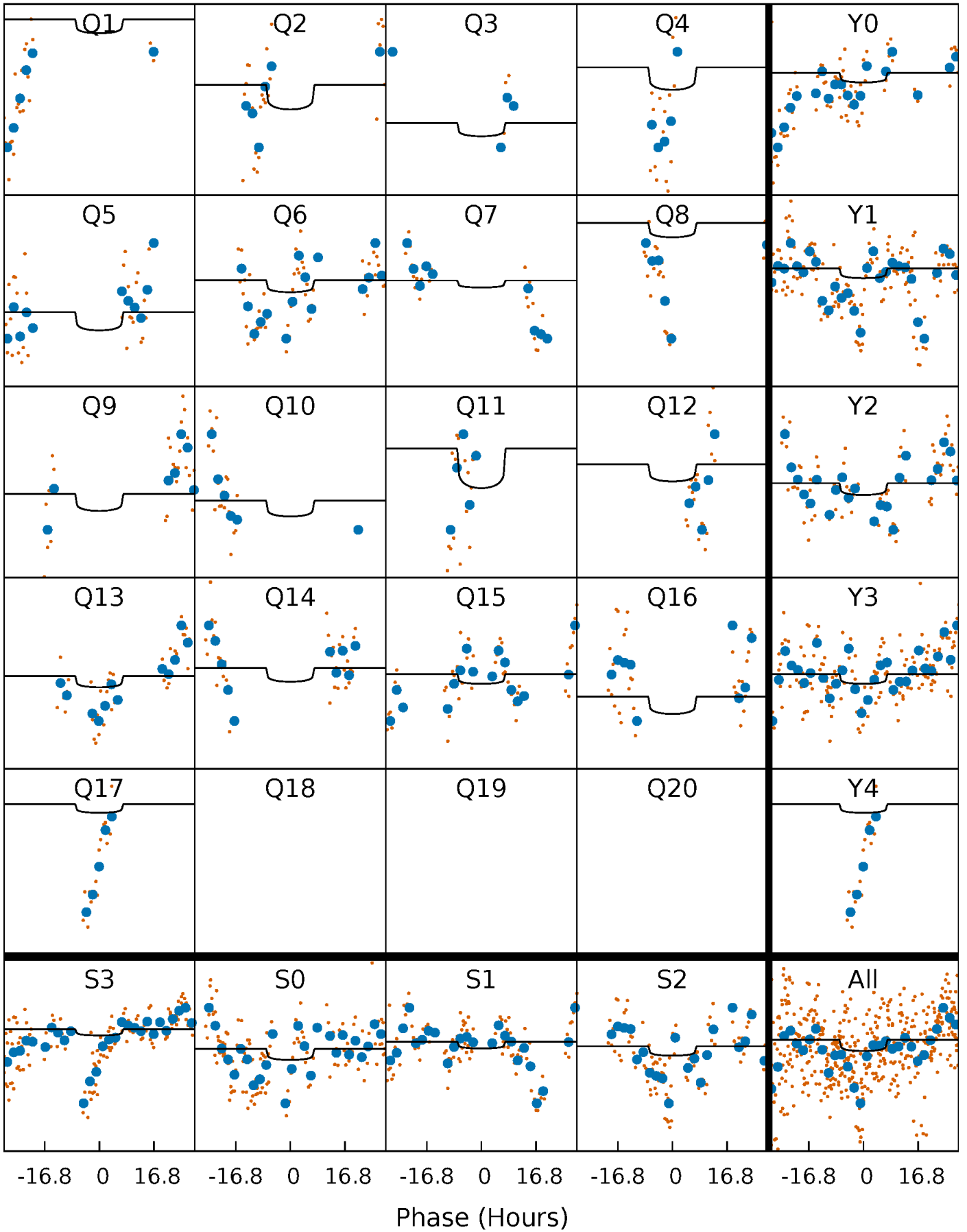
PDC Quarter-Phased Transit Curves

TCE 007700880-09 P= 64.651118 Days $T_0=157.112939$ (BKJD)



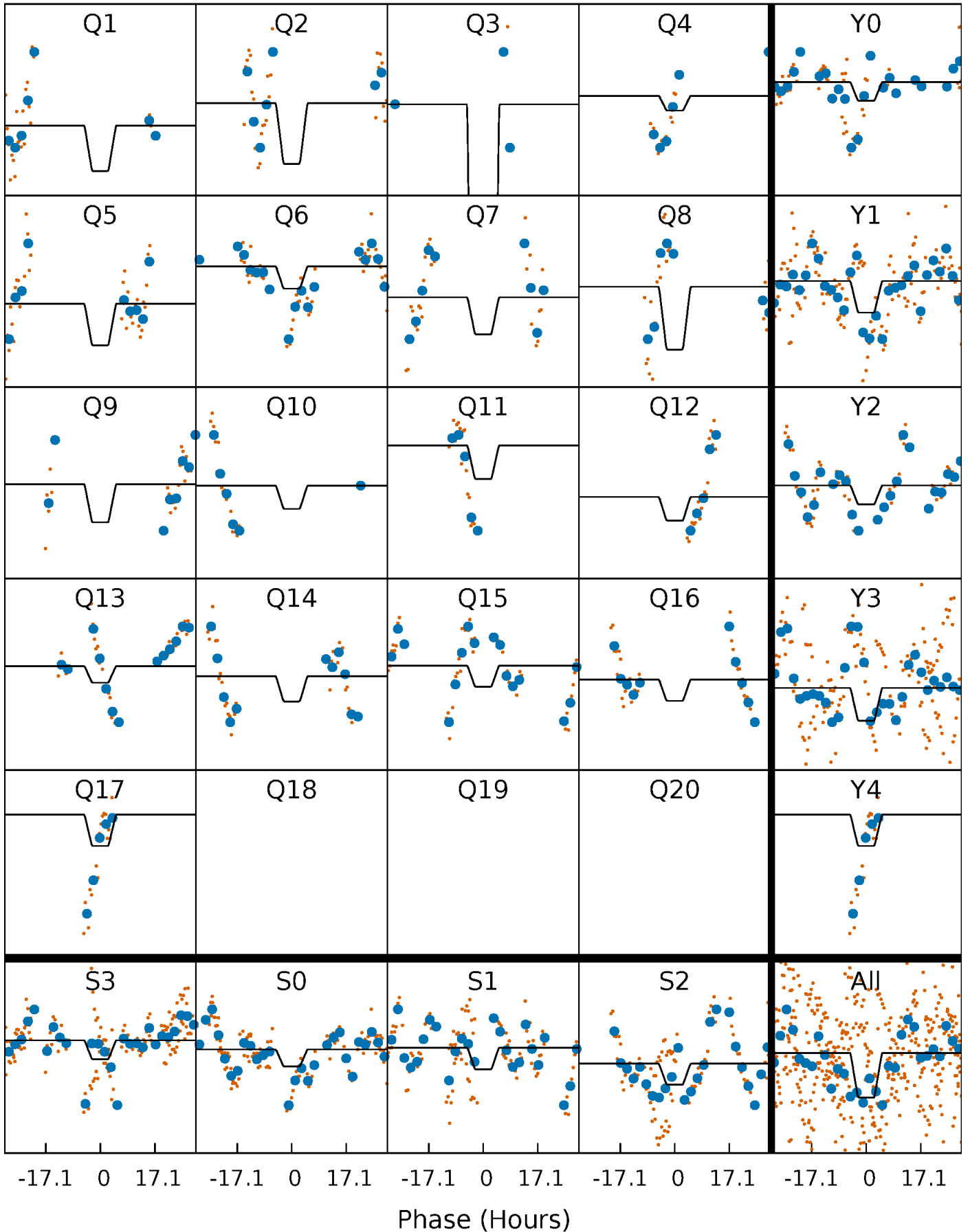
DV Quarter-Phased Transit Curves

TCE 007700880-09 $P = 64.651118$ Days $T_0 = 157.112939$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

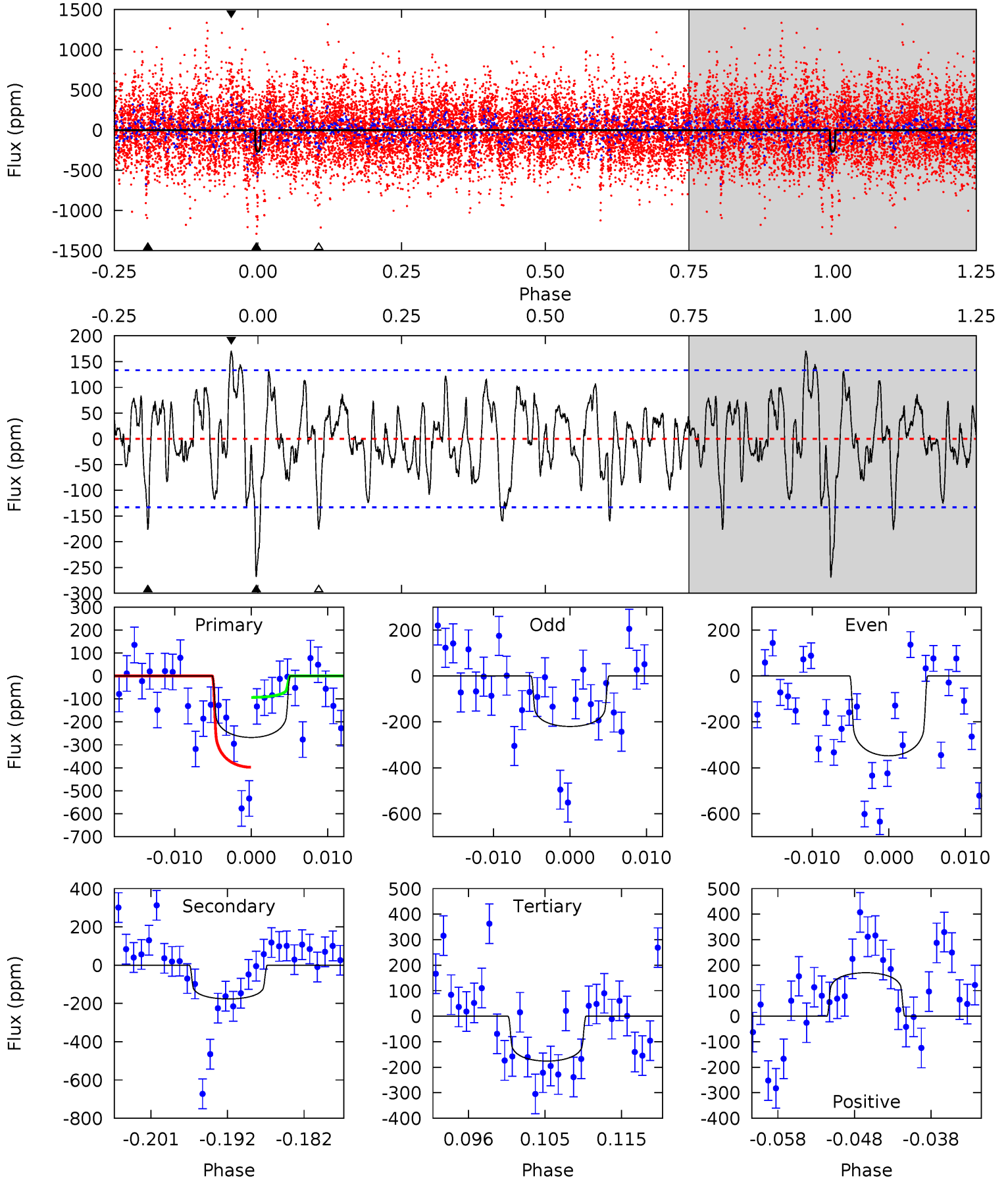
TCE 007700880-09 $P = 64.650877$ Days $T_0 = 157.125759$ (BKJD)



DV Model-Shift Uniqueness Test

007700880-09, P = 64.651118 Days, E = 92.461821 Days

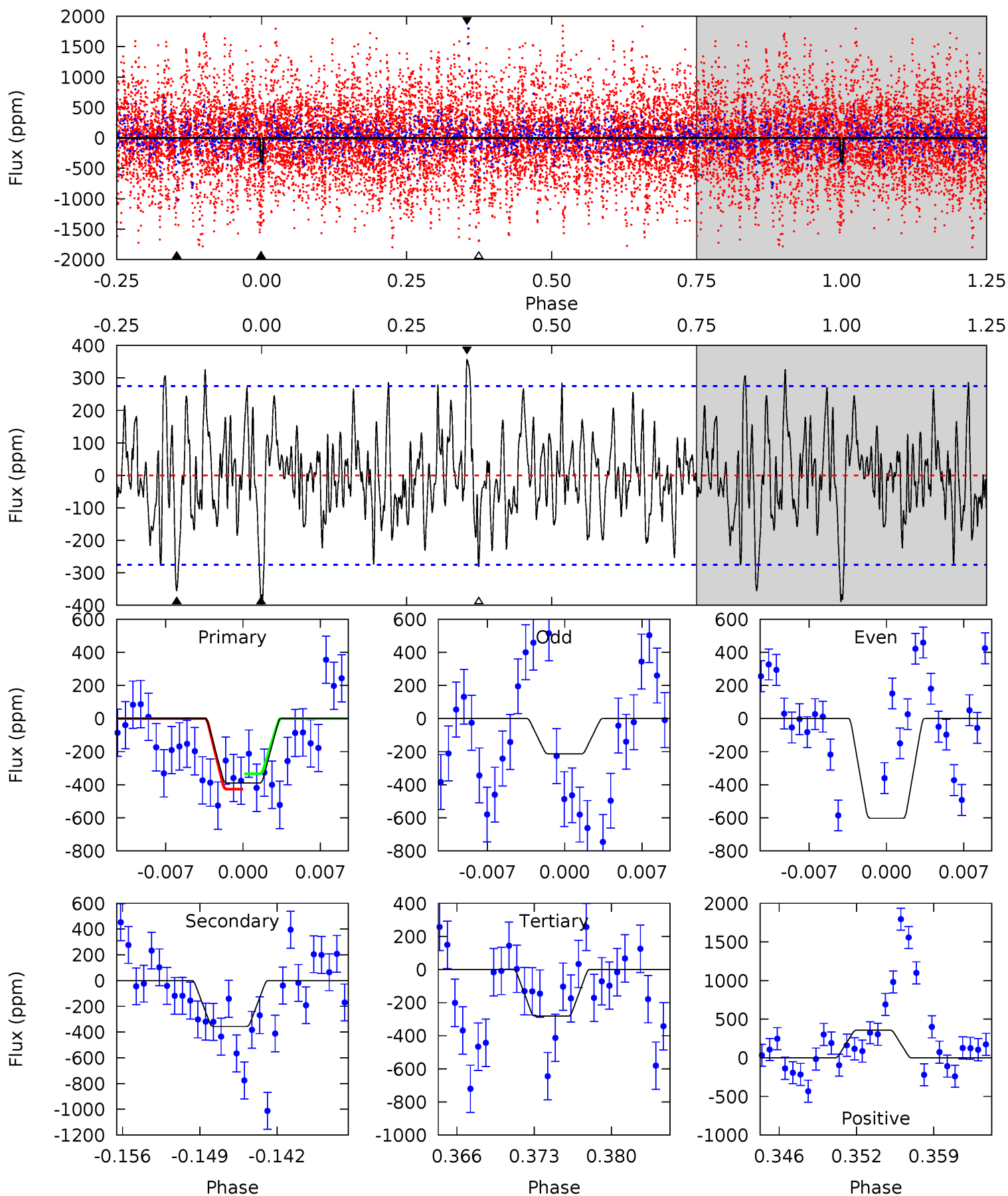
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.1	6.67	6.64	6.44	5.03	2.59	2.28	3.48	3.69	0.03	0.23	2.40	0.95	0.39	5.73



Alt Model-Shift Uniqueness Test

007700880-09, P = 64.650877 Days, E = 92.474882 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.22	6.60	5.22	6.64	5.10	2.71	2.05	2.00	0.58	1.38	-0.04	3.58	0.77	0.48	0.86



Stellar Parameters For KIC 007700880

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6739^{+189}_{-236}	$4.306^{+0.101}_{-0.188}$	$-0.380^{+0.250}_{-0.300}$	$1.256^{+0.363}_{-0.196}$	$1.170^{+0.175}_{-0.158}$	$0.831^{+0.384}_{-0.422}$
	+3%/-4%	+2%/-4%	+66%/-79%	+29%/-16%	+15%/-14%	+46%/-51%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007700880-09 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-176 ± 26	$1.54^{+1.08}_{-0.87}$	815^{+59}_{-46}	7582^{+5641}_{-1948}	4389^{+18787}_{-2803}
Alt.	-356 ± 54	$2.83^{+1.12}_{-1.08}$	814^{+61}_{-44}	6520^{+2015}_{-993}	2683^{+4287}_{-1335}

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 $A_{obs} \gg 1.0$

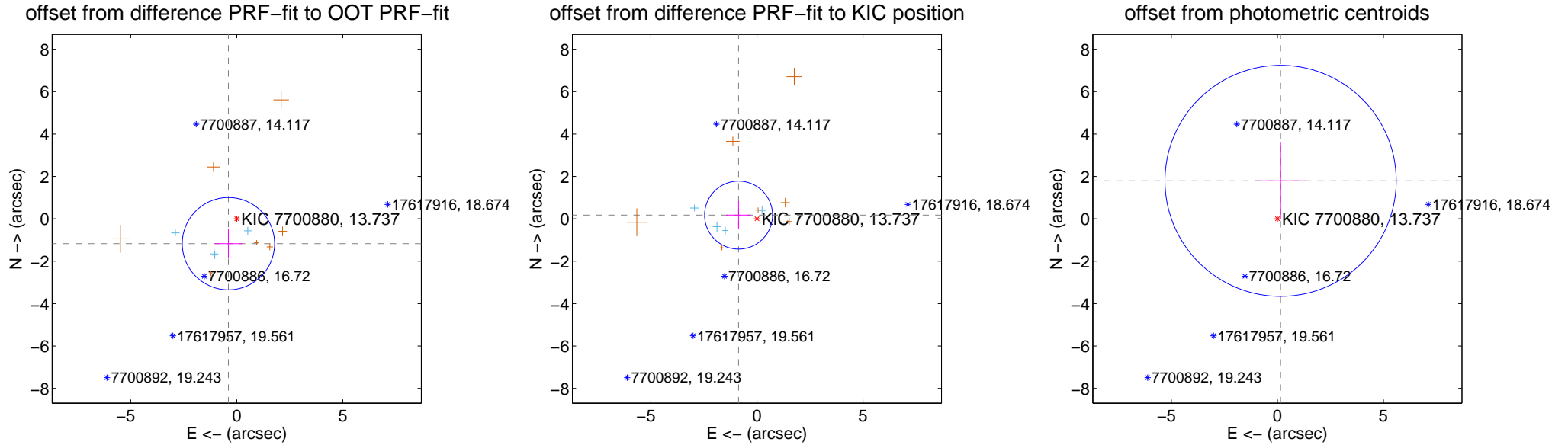
DV Centroid Data

Supplemental centroid analysis for 007700880-09. Kepler magnitude: 13.74. Transit SNR 2.41

There are 4 quarters with good PRF difference image offsets

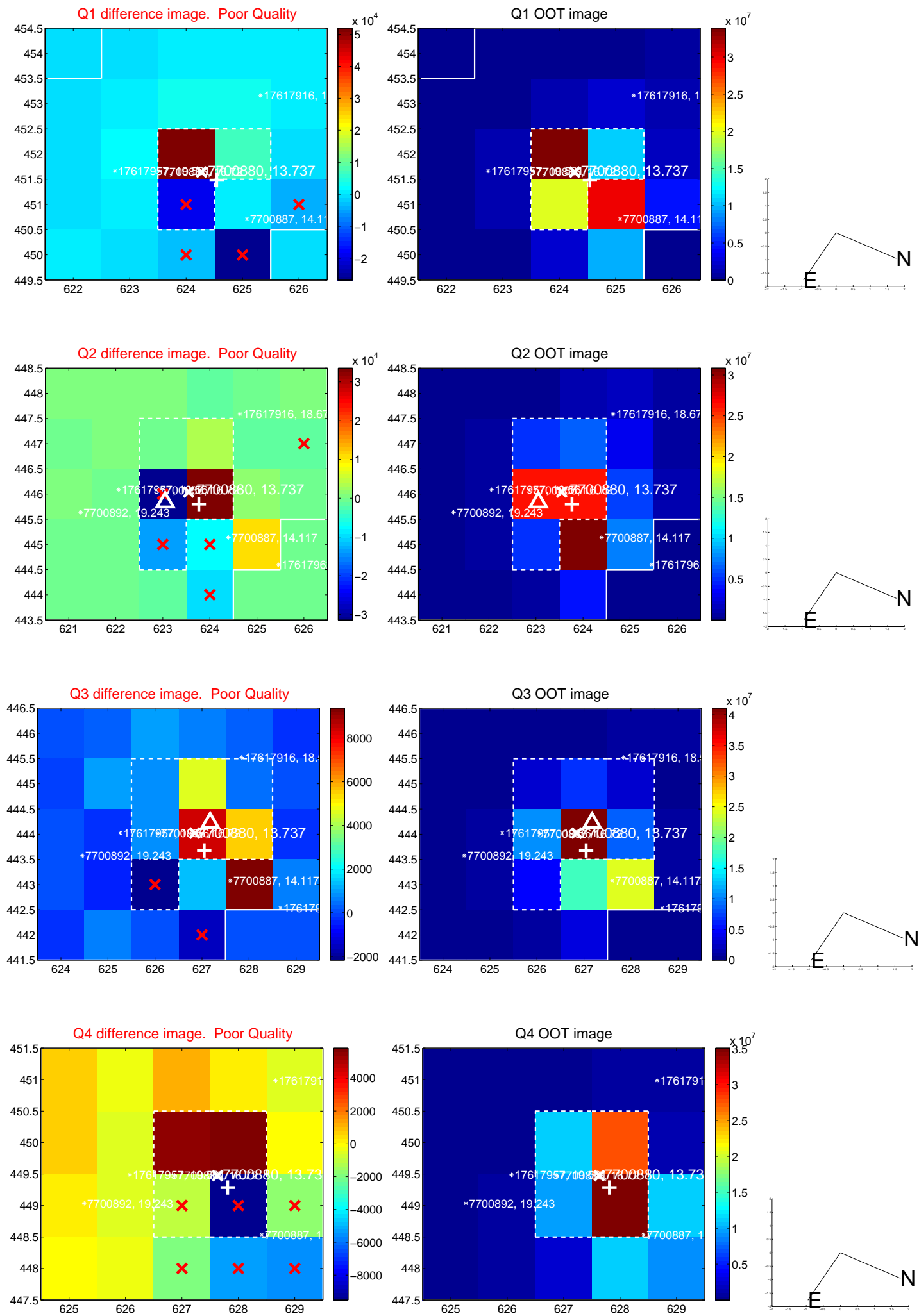
The direct PRF centroid is offset from the target star catalog position by about 1.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.236 ± 0.725	1.70	0.392 ± 0.644	-1.172 ± 0.675
PRF-fit source offset from KIC position	0.884 ± 0.534	1.66	0.866 ± 0.579	0.176 ± 0.650
photometric centroid source offset	1.80 ± 1.82	0.99	-0.15 ± 1.21	1.79 ± 1.82

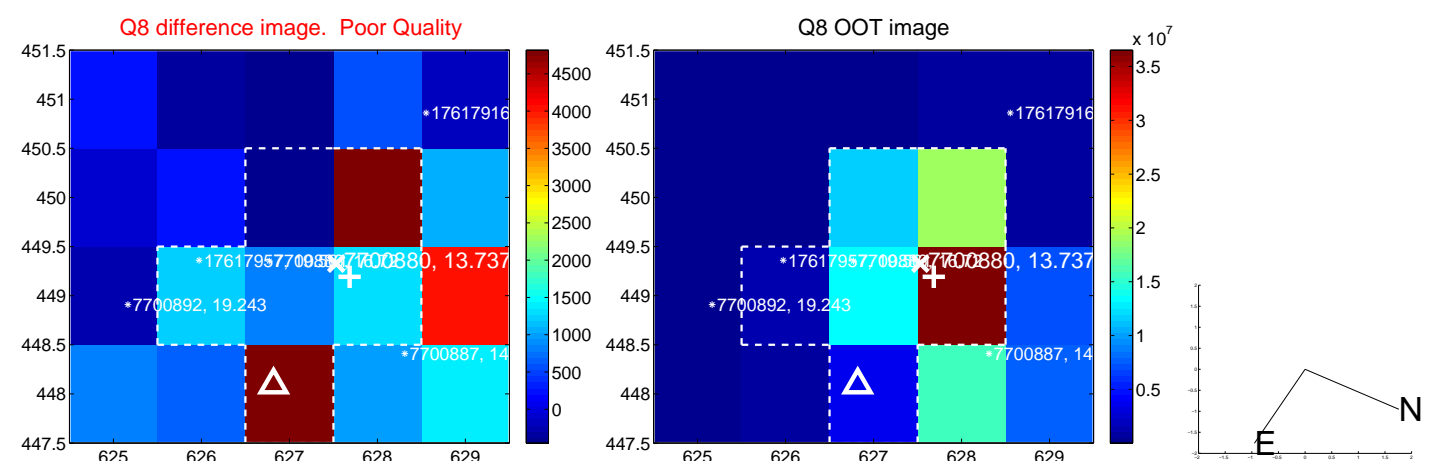
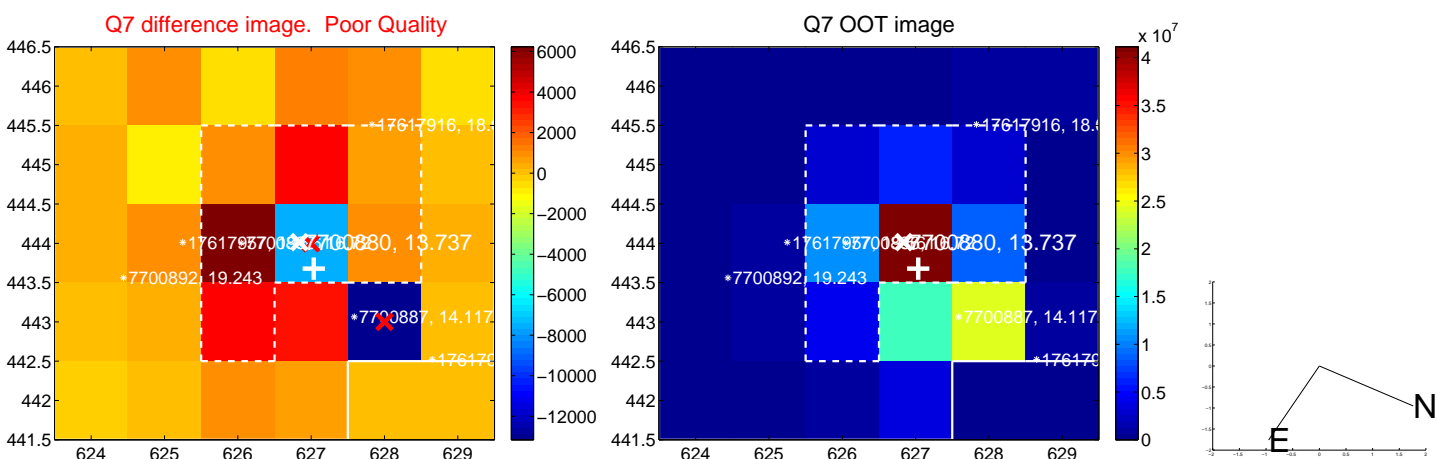
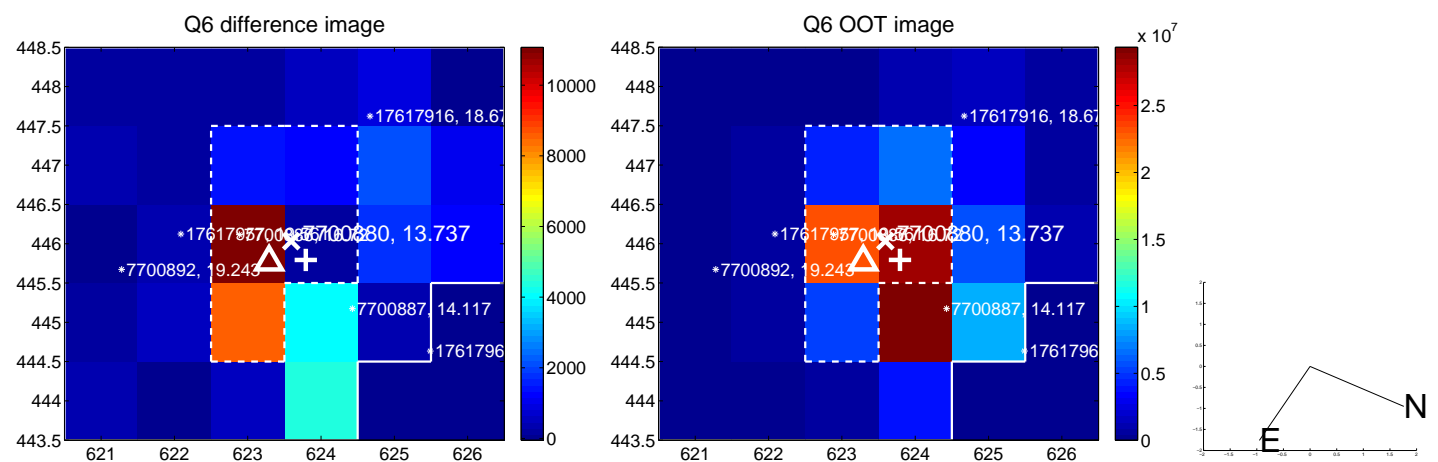
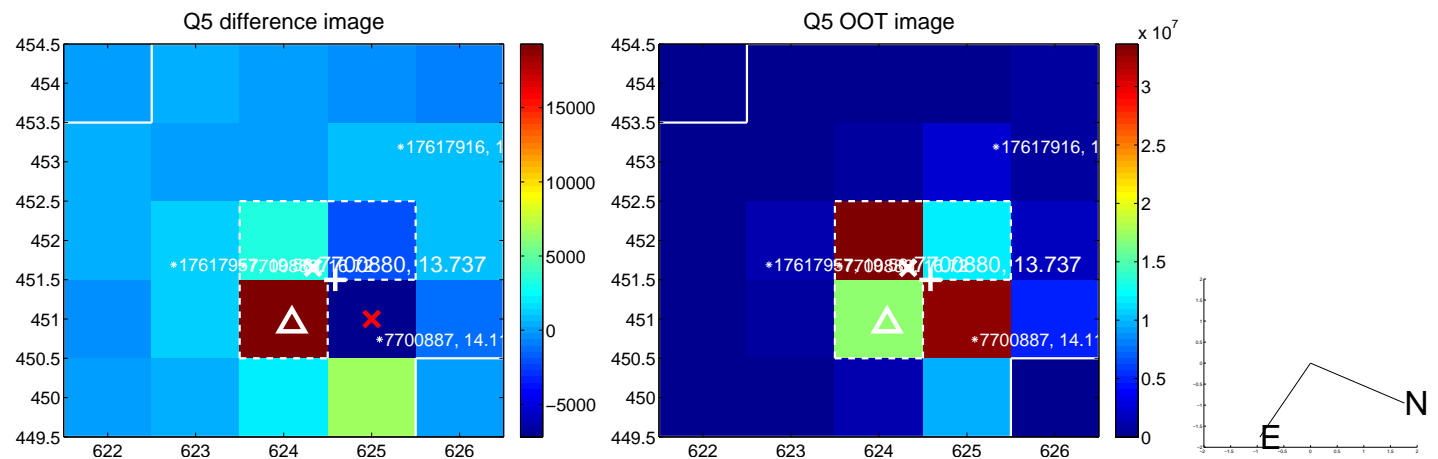


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

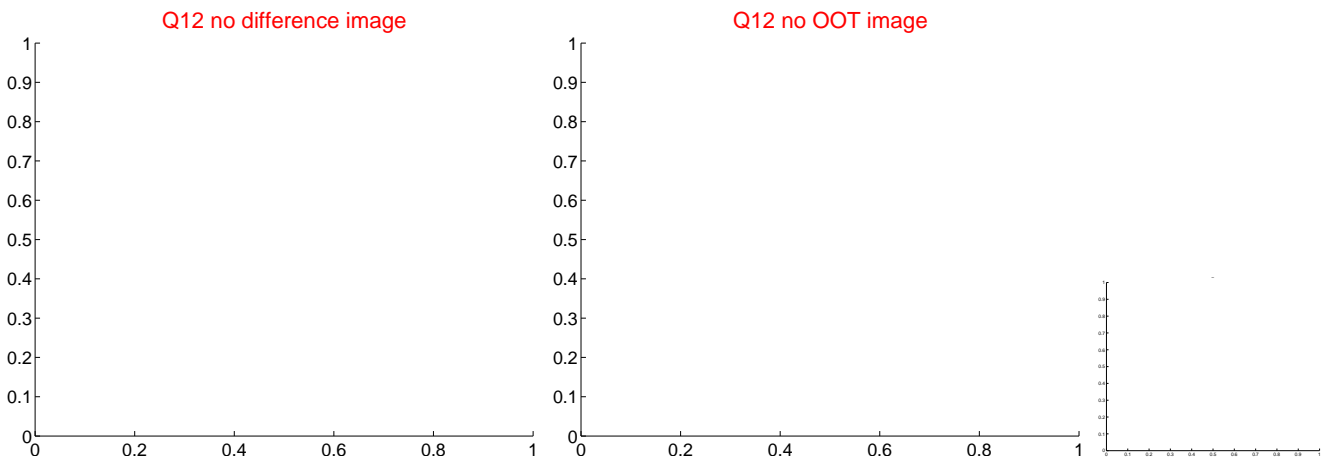
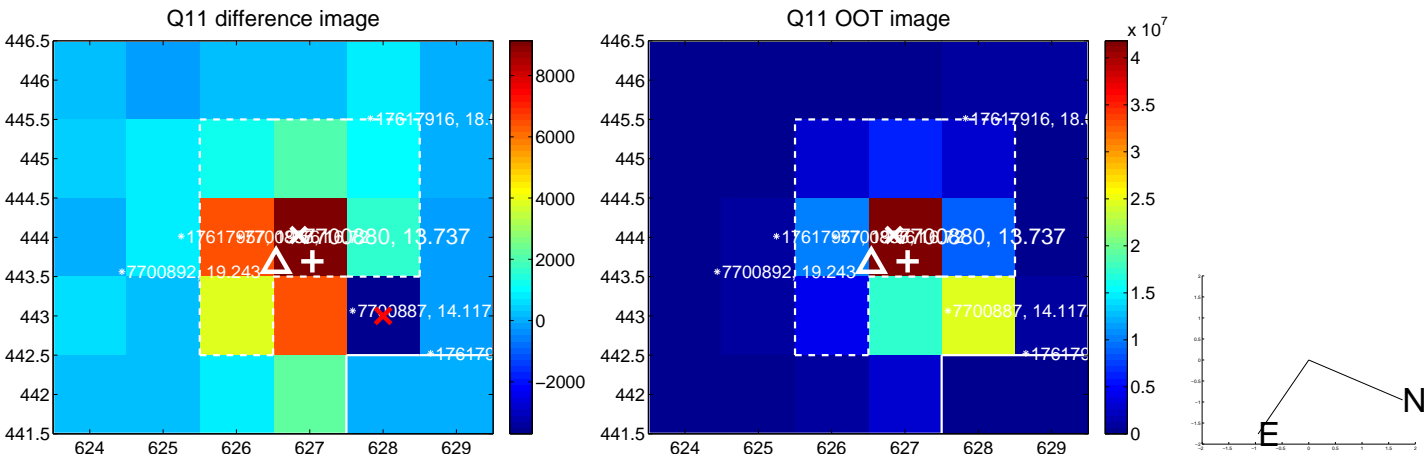
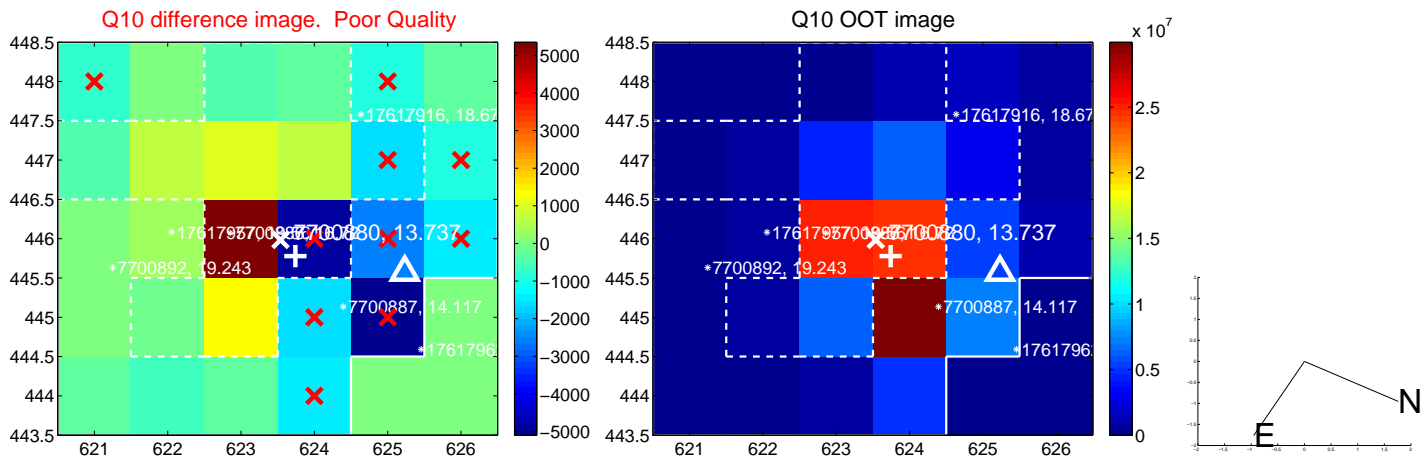
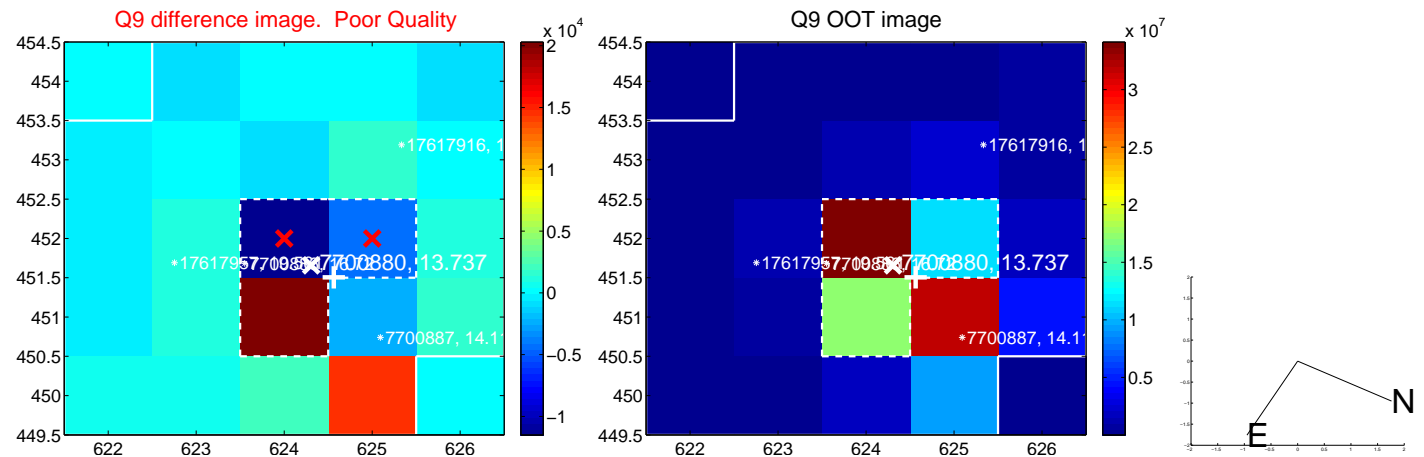
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



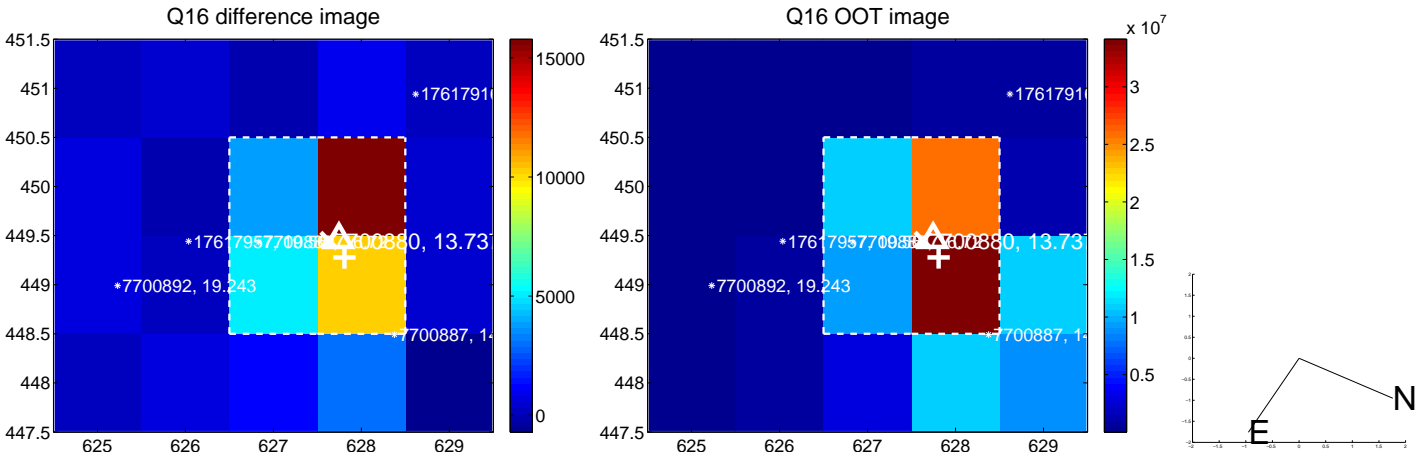
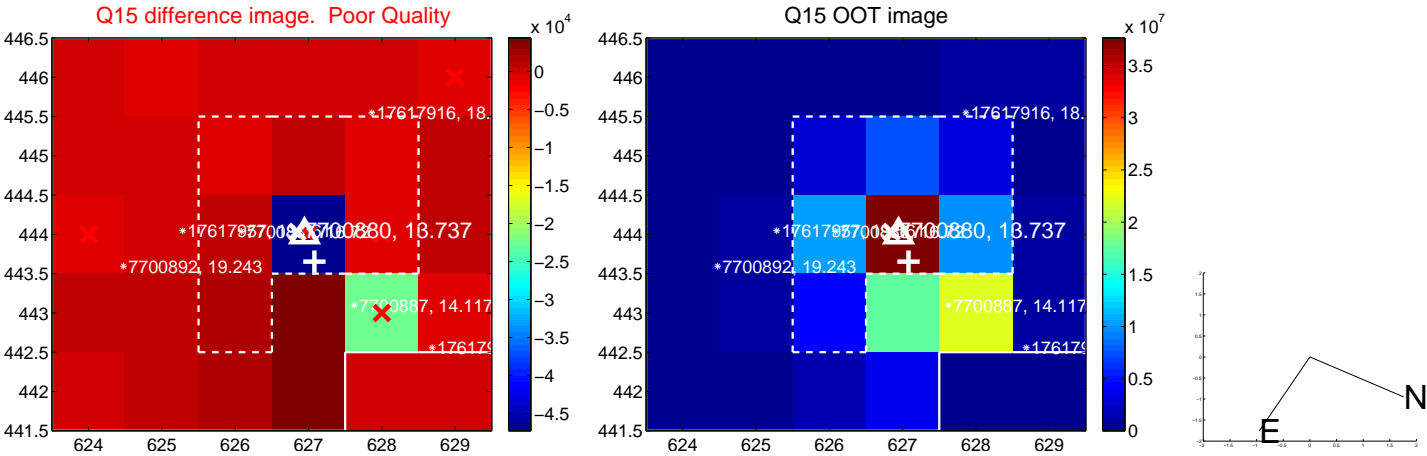
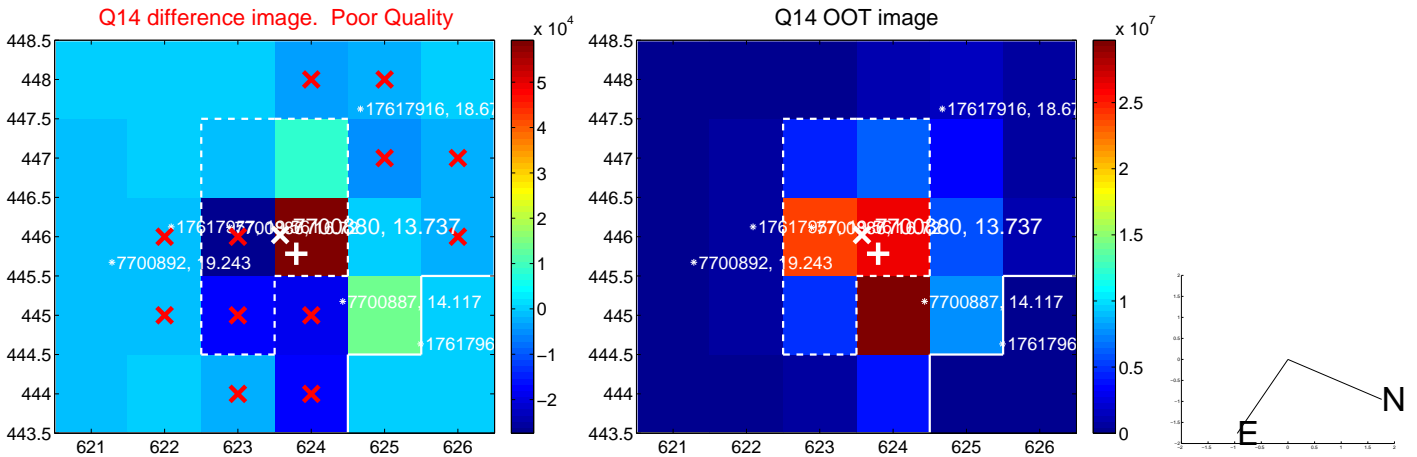
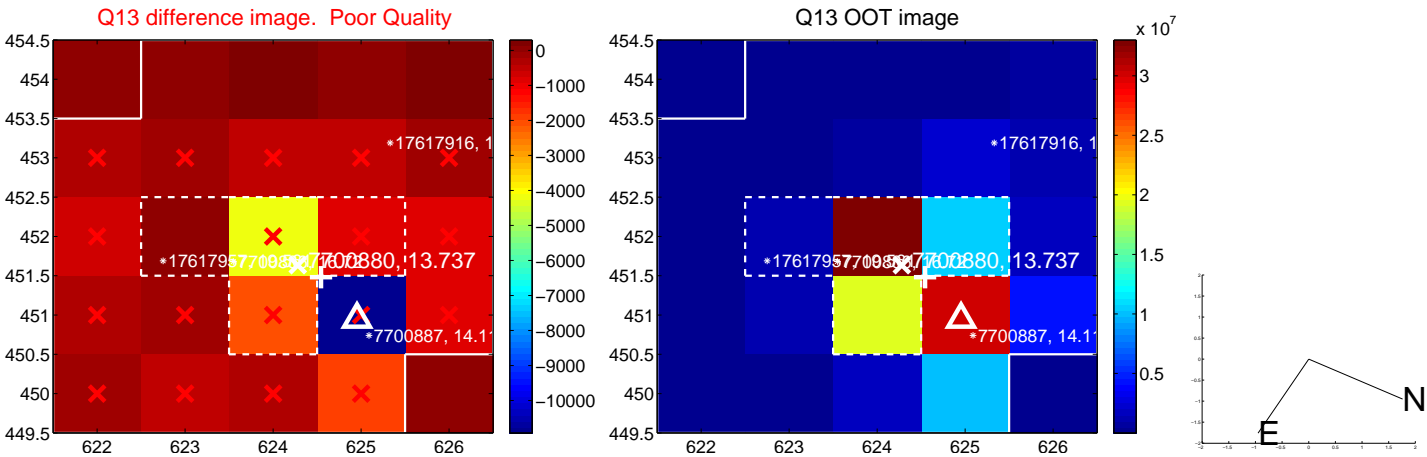
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



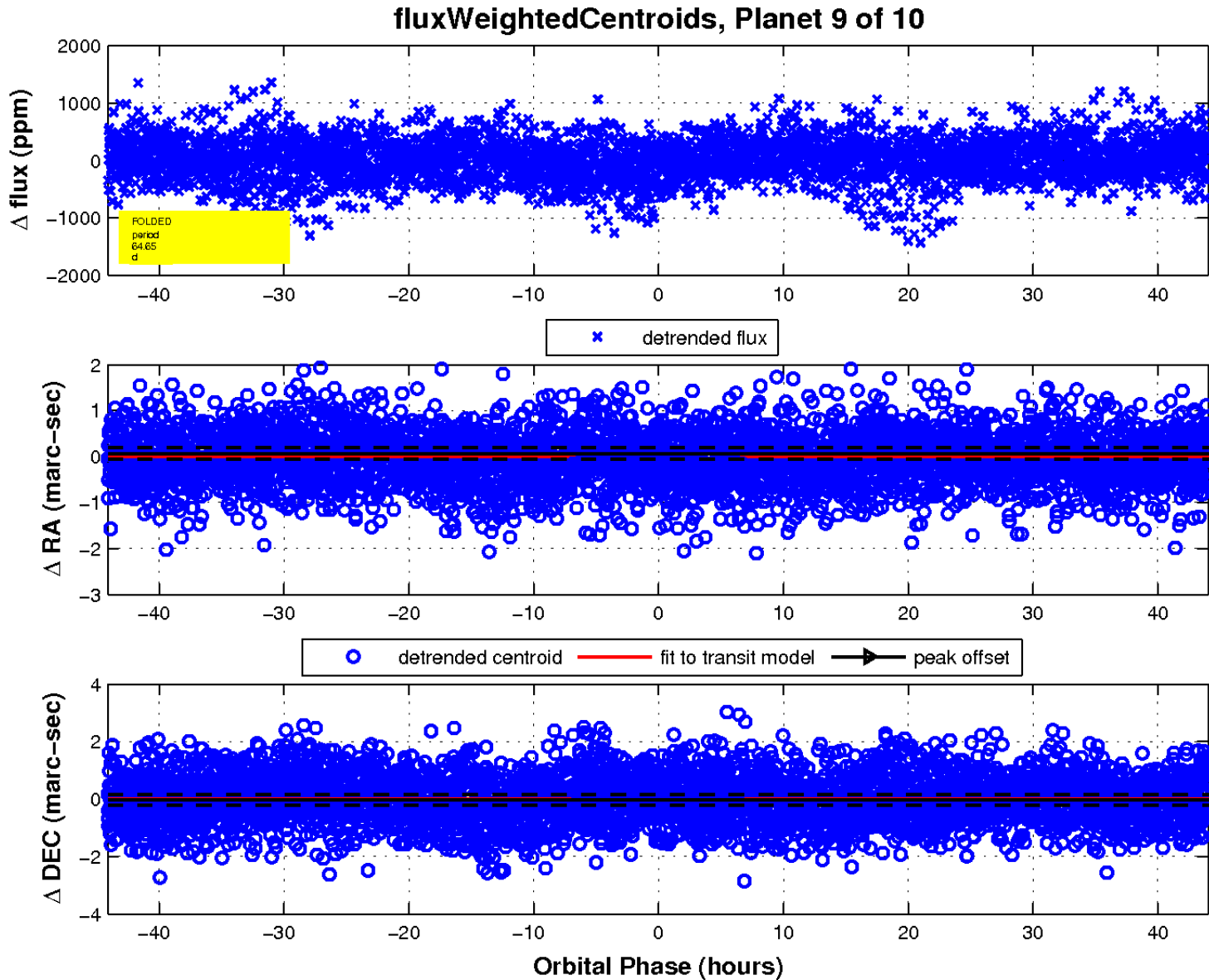
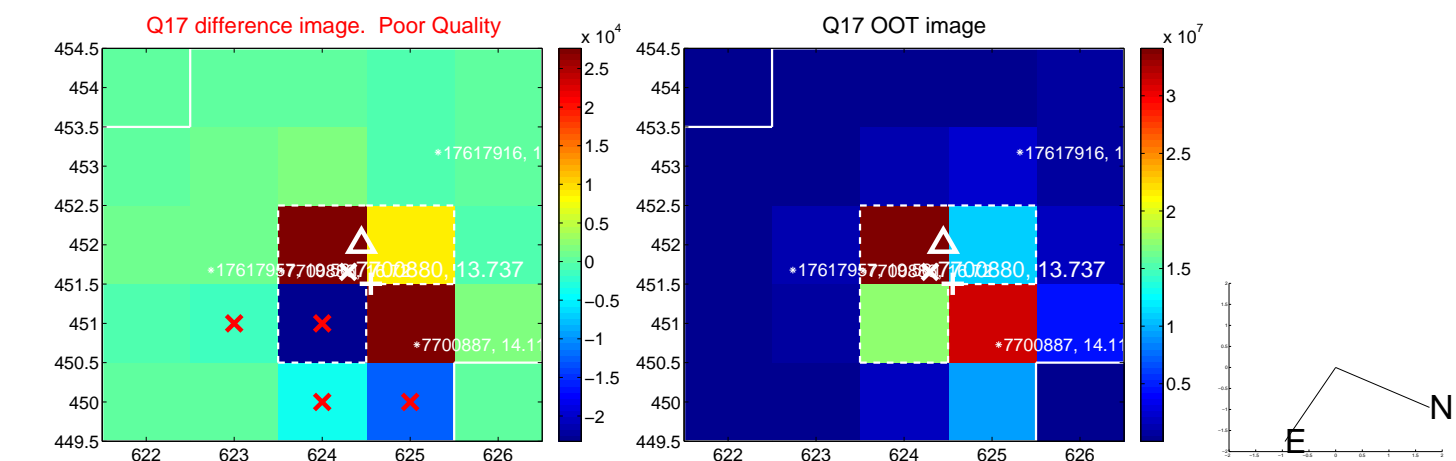
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



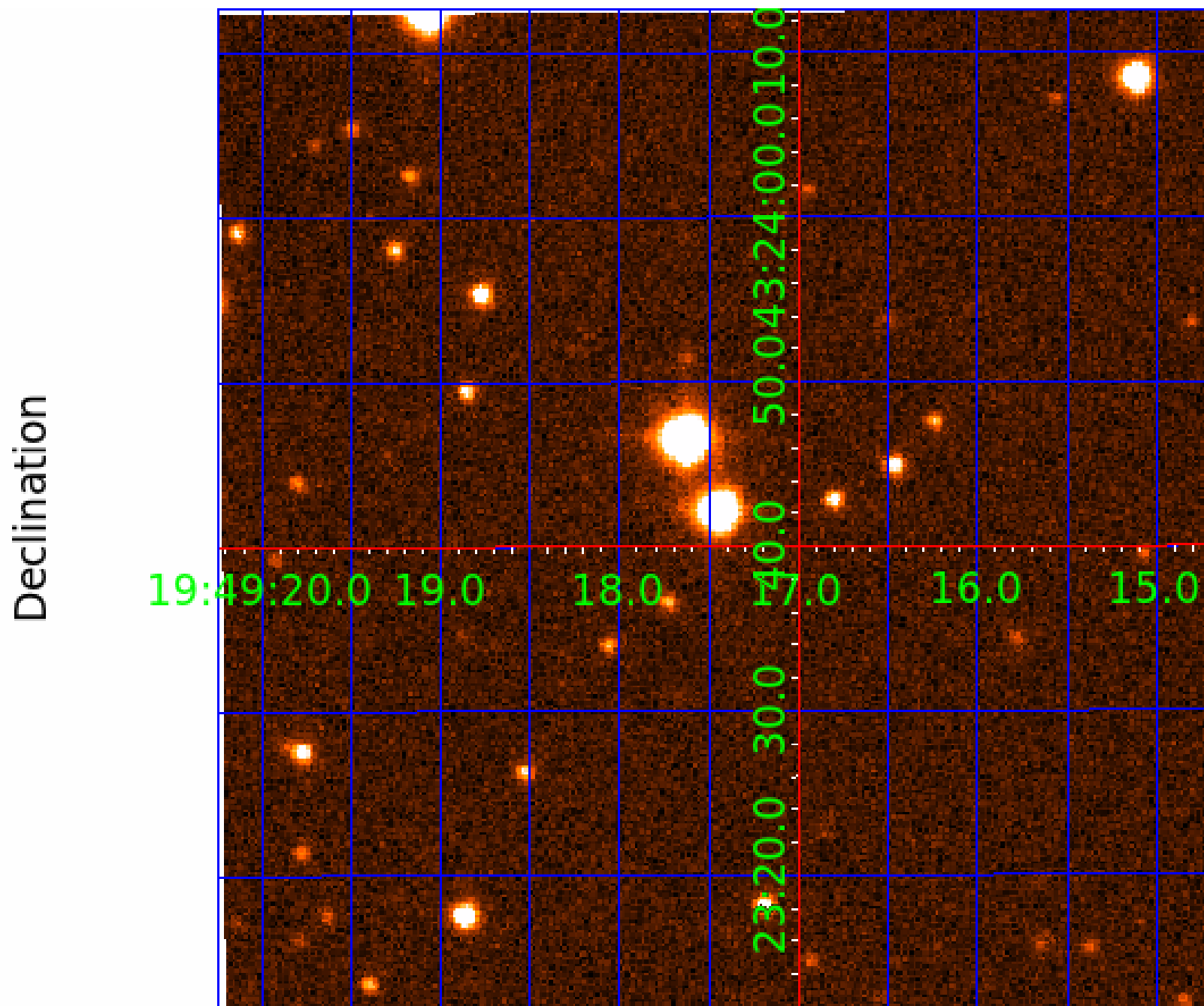
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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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})
007700880-01	OBS	No	2.711831	133.076025	79.4	4.438	8.9	10.3	1.26	6739	1.30	1817.97
007700880-02	OBS	No	1.553862	131.997646	32.9	9.156	8.1	5.7	1.26	6739	0.75	3819.91
007700880-03	OBS	No	130.853517	252.755847	640.1	5.069	10.5	8.7	1.26	6739	3.82	10.35
007700880-04	OBS	No	36.128406	132.528556	326.7	5.539	9.6	9.5	1.26	6739	2.56	57.56
007700880-06	OBS	No	161.399146	278.961203	829.7	19.846	10.9	10.2	1.26	6739	4.34	7.82
007700880-07	OBS	No	92.145114	152.634577	210.9	0.940	8.4	1.9	1.26	6739	2.12	16.52
007700880-08	OBS	No	92.138931	153.022111	450.8	5.333	8.5	7.9	1.26	6739	2.92	16.52
007700880-09	OBS	No	64.651118	157.112939	105.5	14.705	8.1	2.4	1.26	6739	1.42	26.50
007700880-10	OBS	No	29.889930	147.843900	268.6	7.381	8.8	8.0	1.26	6739	2.22	74.11

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007700880-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_KIC_POS
007700880-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_KIC_POS
007700880-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
007700880-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS—HALO_GHOST
007700880-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007700880-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS
007700880-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_FEW_DIFFS
007700880-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_KIC_POS
007700880-10	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—CENT_KIC_POS

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

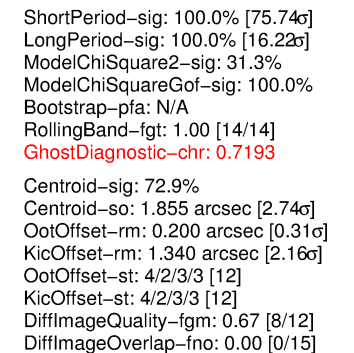
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

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

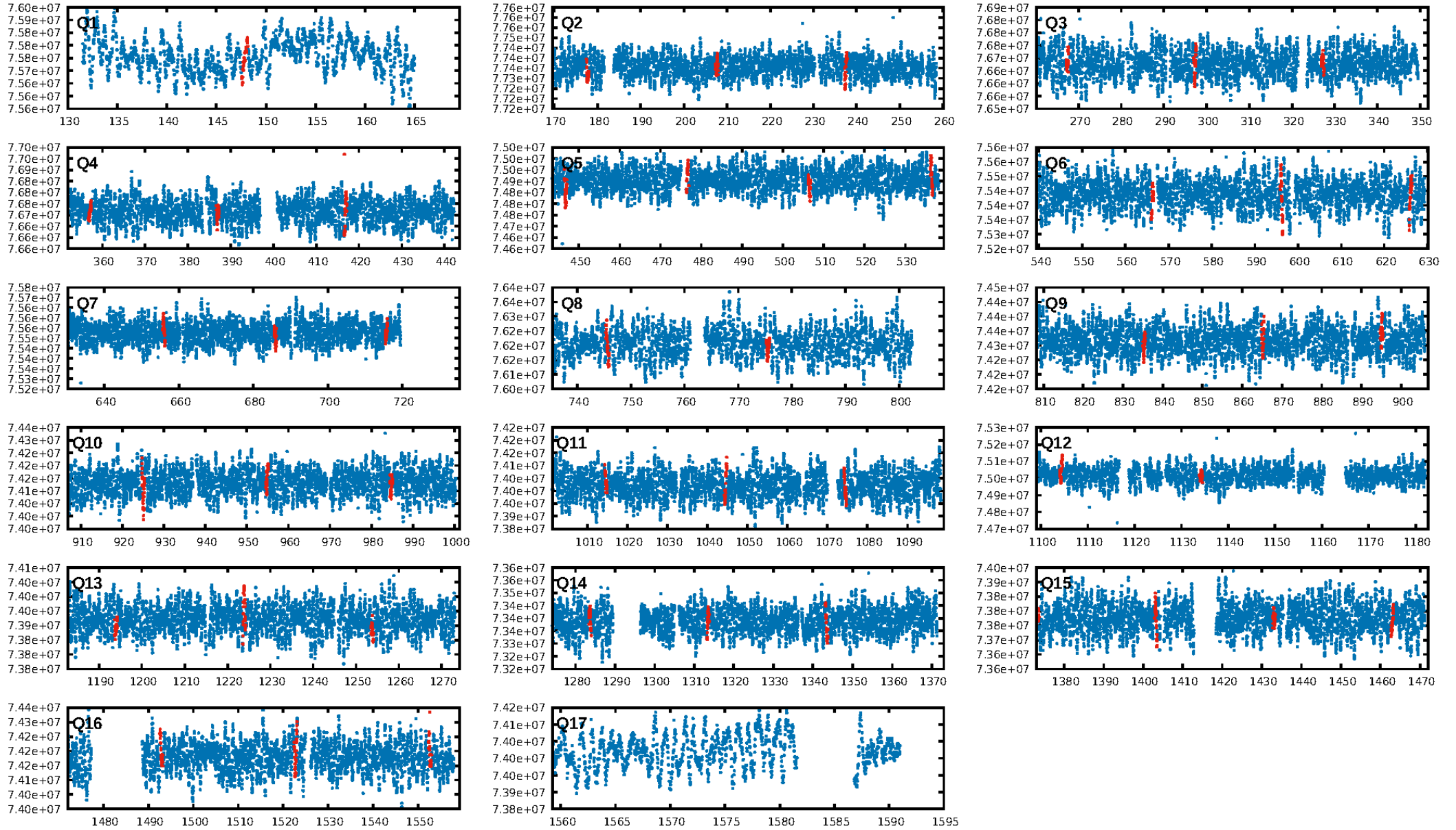
Ephemeris Match Information For 007700880-10

No Significant Match Found

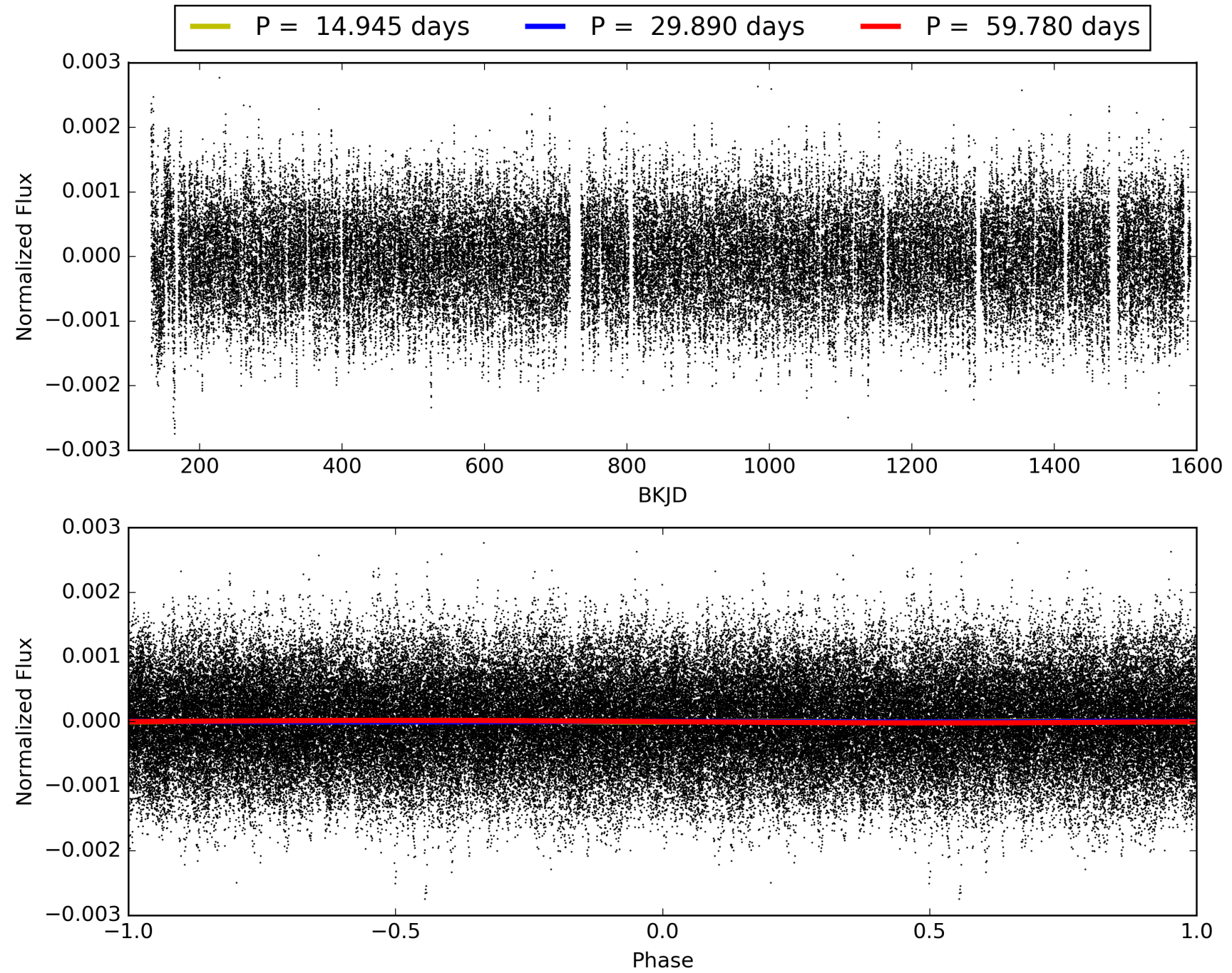
KIC: 7700880 Candidate: 10 of 10 Period: 29.890 d



TCE 007700880-10, PDC Light Curves

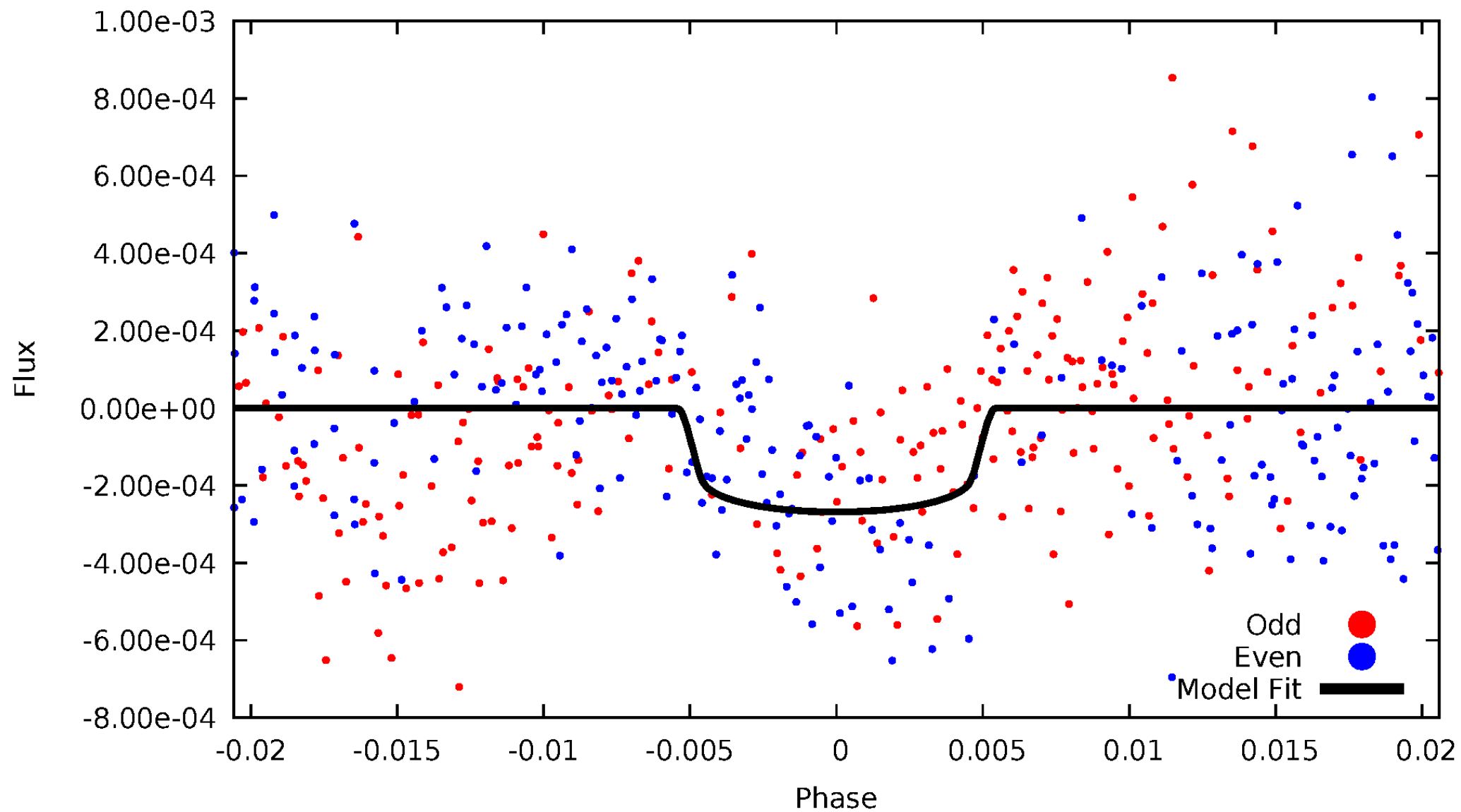


TCE 007700880-10



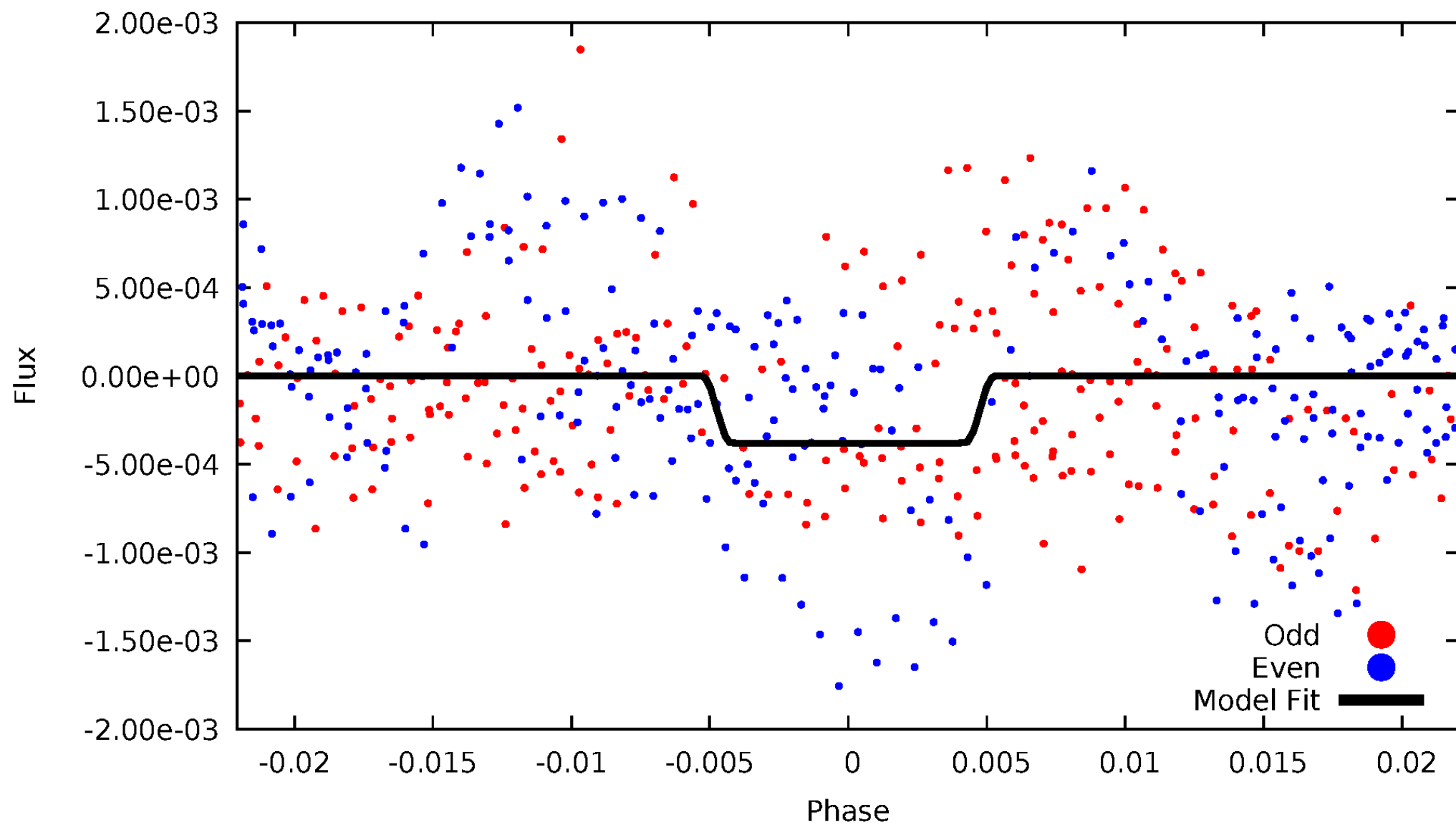
DV Odd/Even

TCE 007700880-10



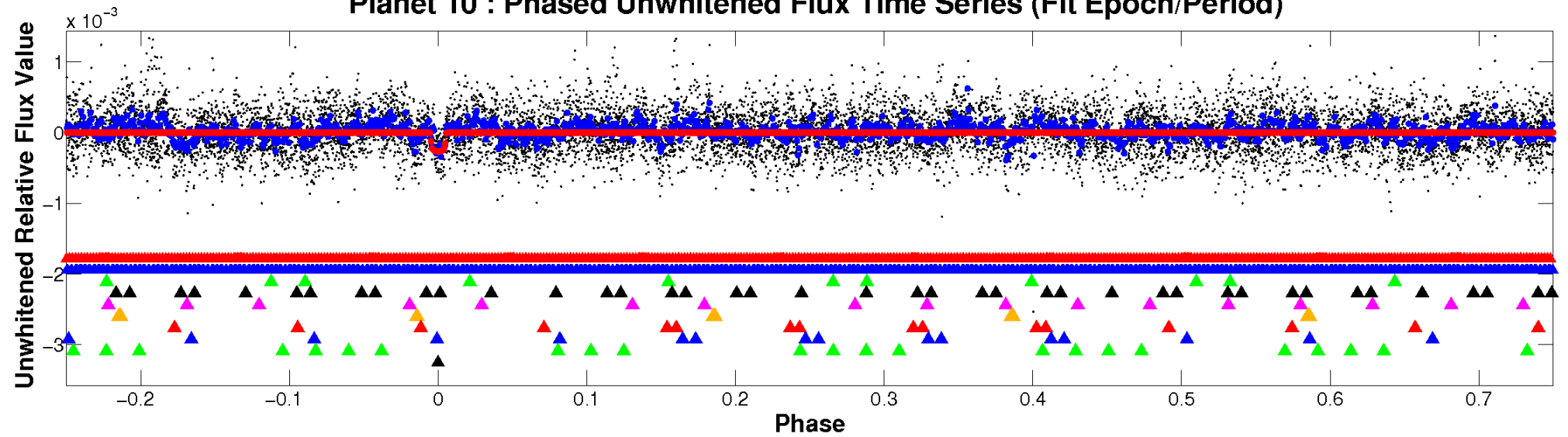
ALT Odd/Even

TCE 007700880-10

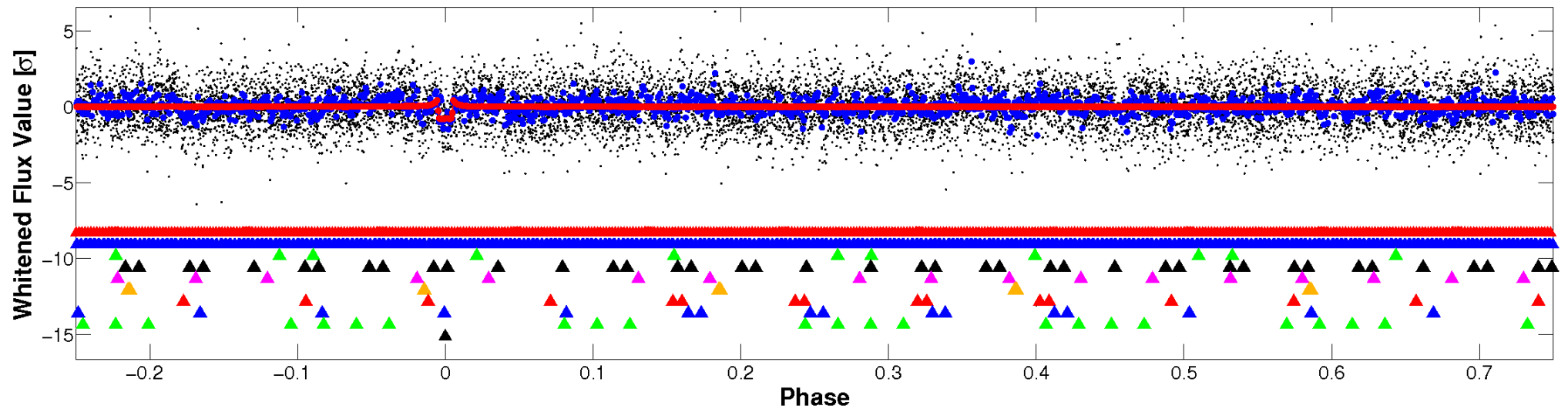


Non-Whitened Vs. Whitened Light Curve

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

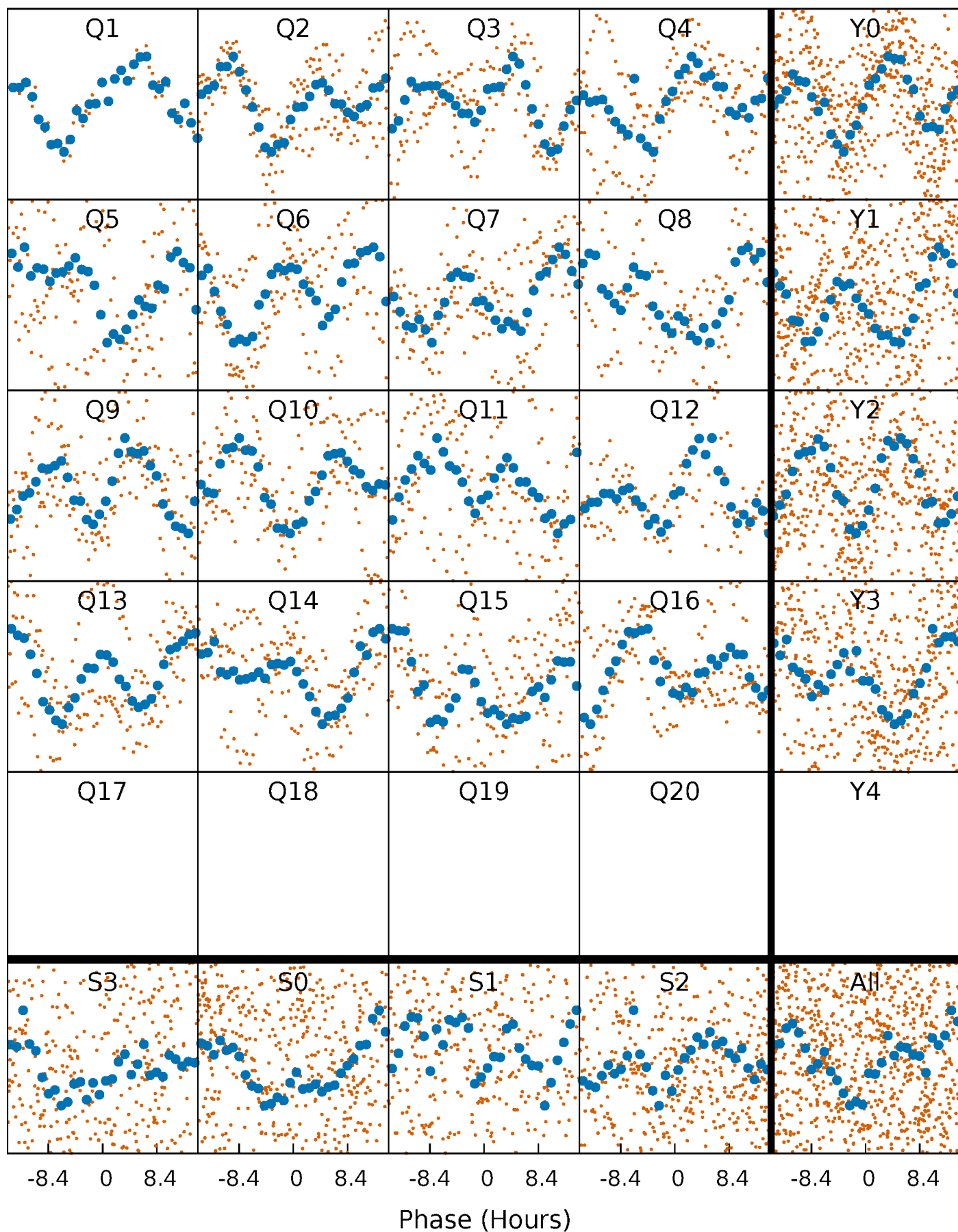


Planet 10 : Phased Whitened Flux Time Series (Fit Epoch/Period)



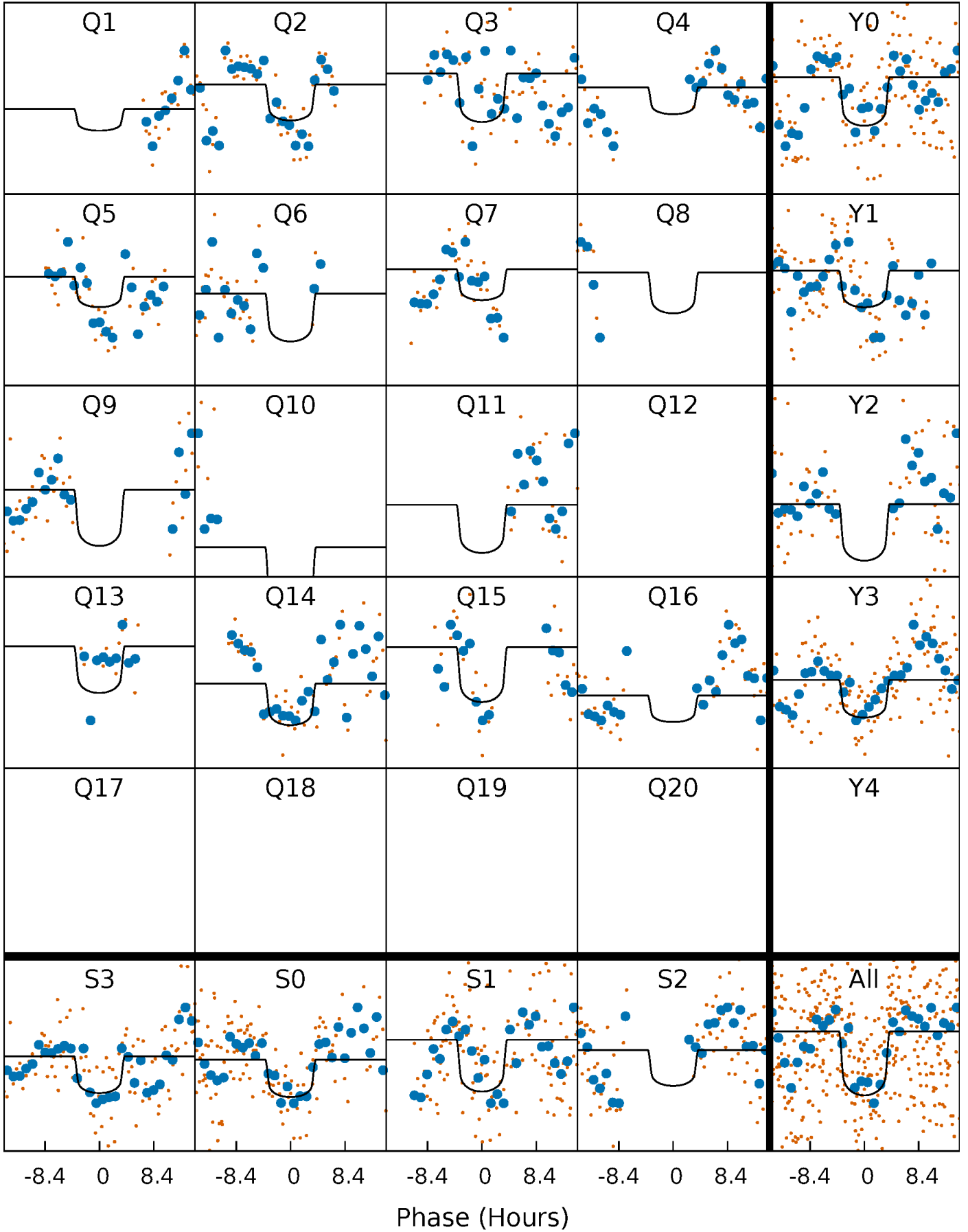
PDC Quarter-Phased Transit Curves

TCE 007700880-10 P= 29.889930 Days $T_0=147.843900$ (BKJD)



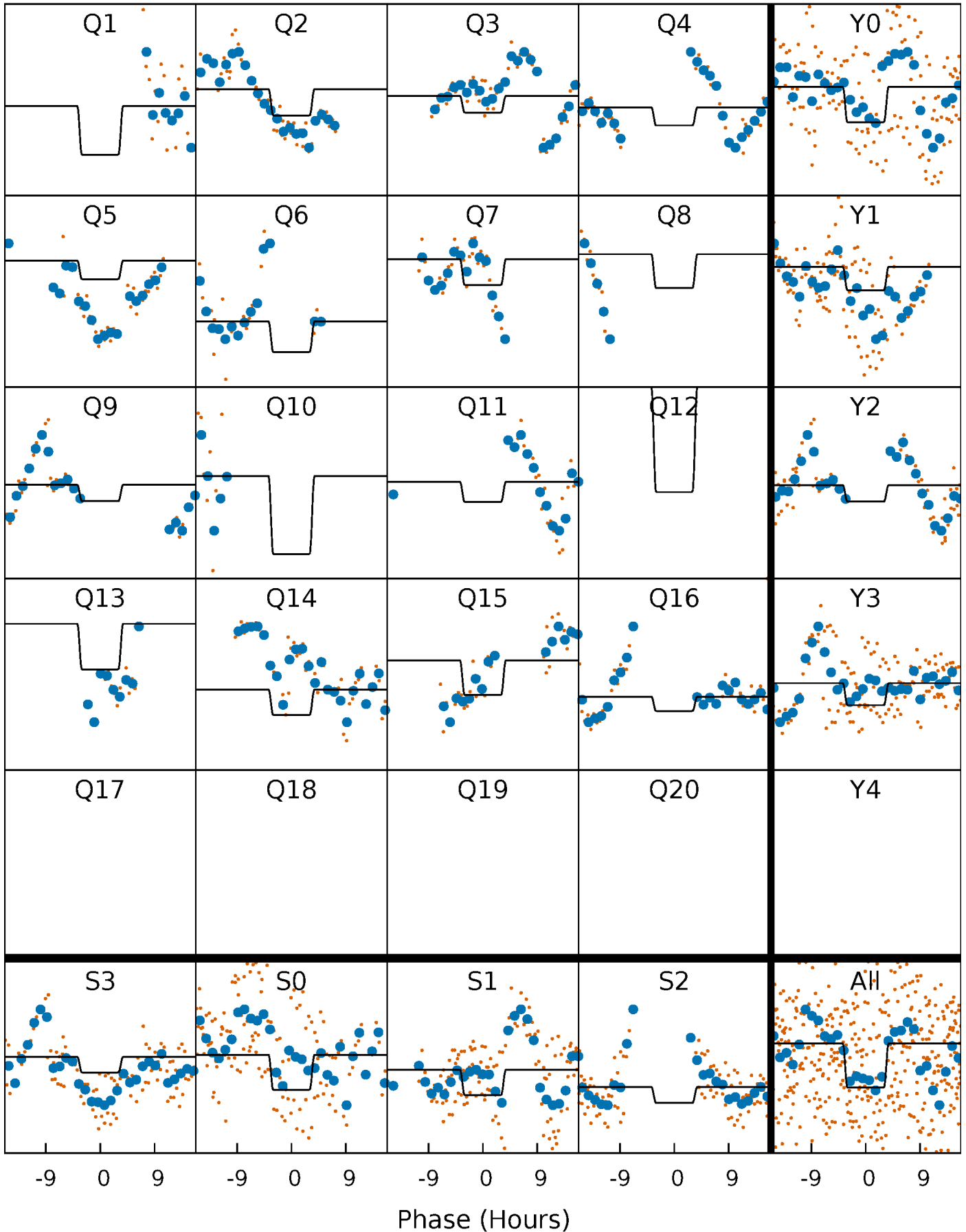
DV Quarter-Phased Transit Curves

TCE 007700880-10 P= 29.889930 Days $T_0=147.843900$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

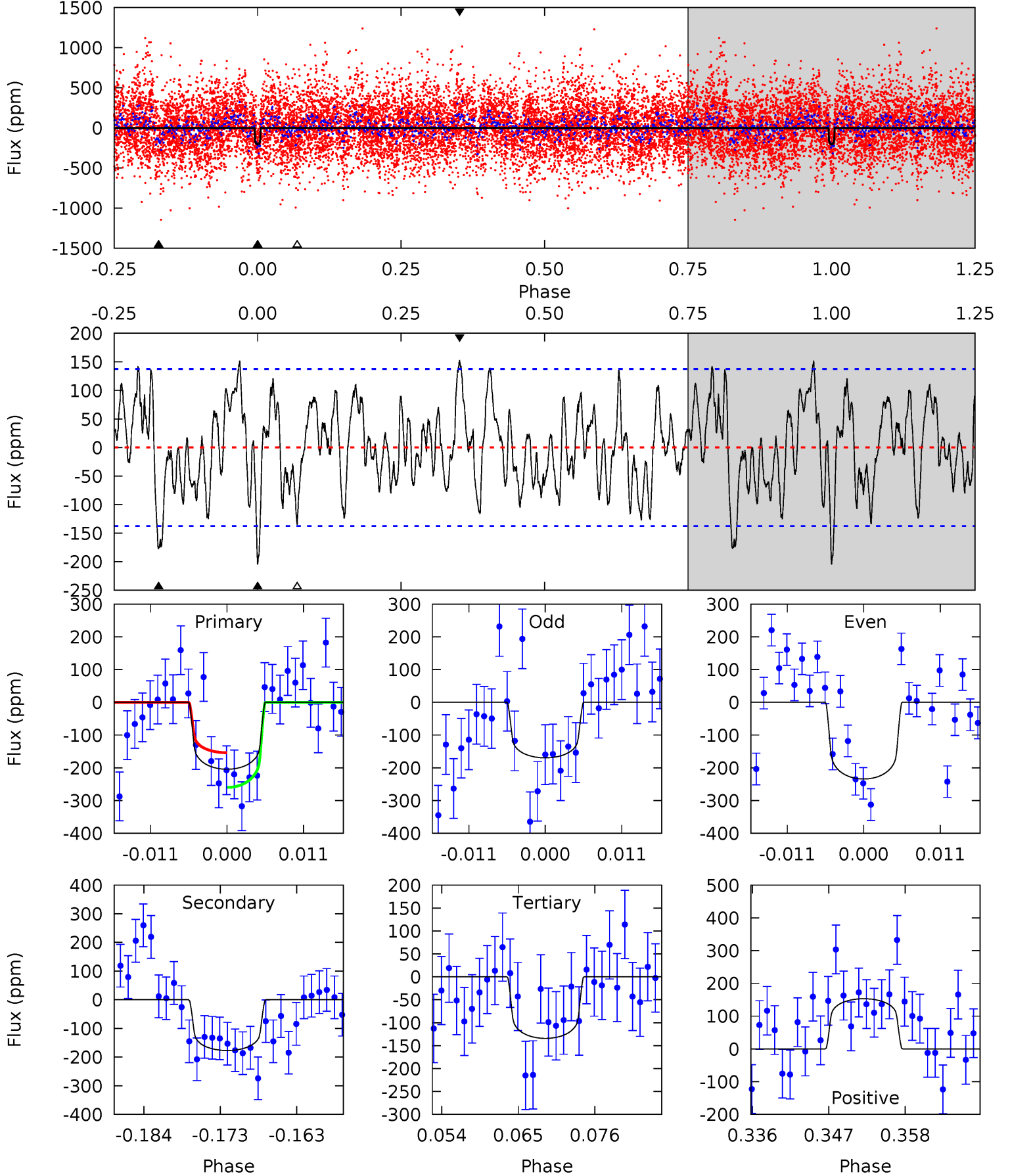
TCE 007700880-10 P= 29.890060 Days $T_0=147.827763$ (BKJD)



DV Model-Shift Uniqueness Test

007700880-10, P = 29.889930 Days, E = 117.953970 Days

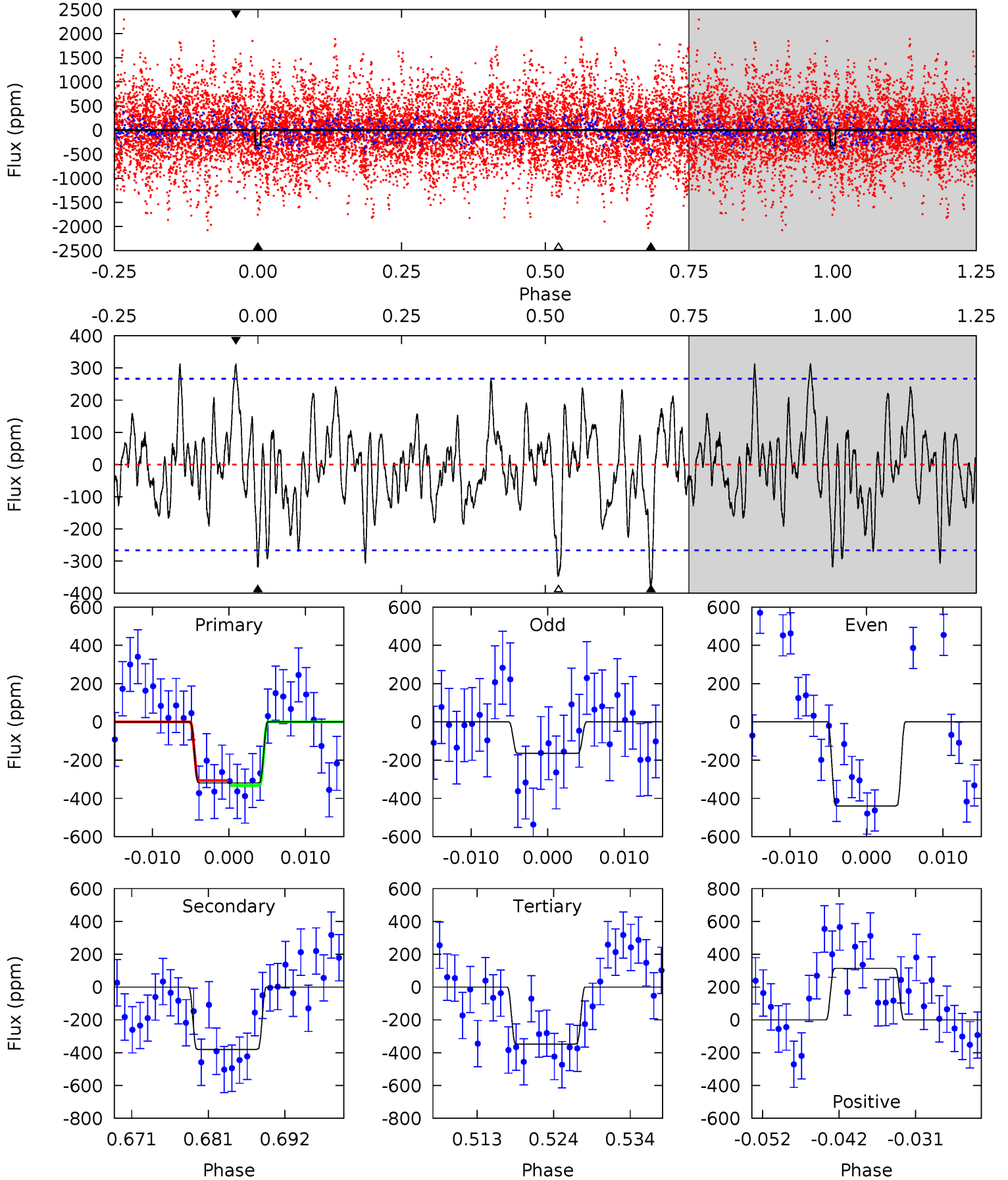
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.45	6.45	4.89	5.58	5.01	2.55	2.23	2.56	1.87	1.56	0.87	1.18	0.98	0.43	1.94



Alt Model-Shift Uniqueness Test

007700880-10, P = 29.890060 Days, E = 117.937703 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.00	7.15	6.53	5.90	5.02	2.56	2.01	-0.53	0.10	0.61	1.25	2.57	0.88	0.45	0.24



Stellar Parameters For KIC 007700880

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6739^{+189}_{-236}	$4.306^{+0.101}_{-0.188}$	$-0.380^{+0.250}_{-0.300}$	$1.256^{+0.363}_{-0.196}$	$1.170^{+0.175}_{-0.158}$	$0.831^{+0.384}_{-0.422}$
	+3%/-4%	+2%/-4%	+66%/-79%	+29%/-16%	+15%/-14%	+46%/-51%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007700880-10 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-177 ± 27	$2.42^{+1.20}_{-1.18}$	1054^{+77}_{-57}	5893^{+2672}_{-1015}	645^{+1973}_{-367}
Alt.	-380 ± 53	$2.70^{+1.34}_{-1.13}$	1058^{+77}_{-58}	6780^{+2615}_{-1212}	1138^{+2022}_{-638}

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

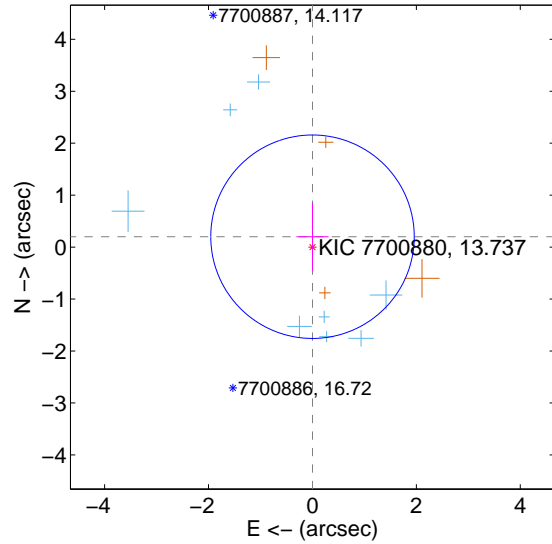
Supplemental centroid analysis for 007700880-10. Kepler magnitude: 13.74. Transit SNR 7.95

There are 8 quarters with good PRF difference image offsets

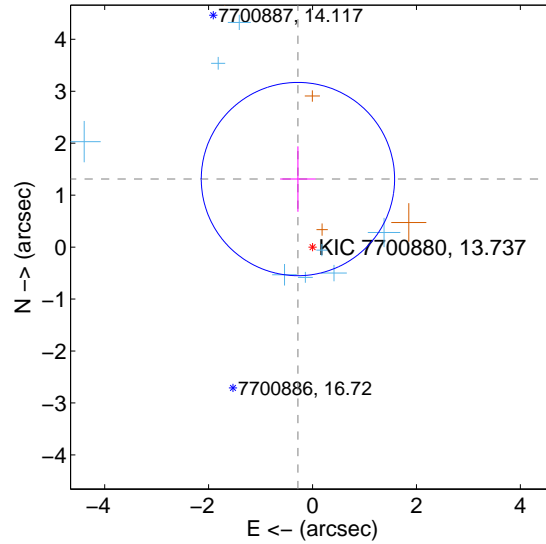
The direct PRF centroid is offset from the target star catalog position by about 1.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.200 ± 0.653	0.31	-0.001 ± 0.308	0.200 ± 0.653
PRF-fit source offset from KIC position	1.340 ± 0.620	2.16	0.281 ± 0.342	1.310 ± 0.630
photometric centroid source offset	1.85 ± 0.68	2.74	0.41 ± 0.45	1.81 ± 0.69

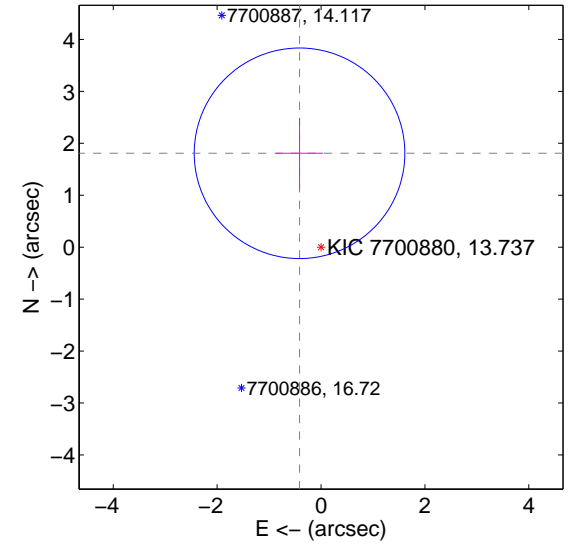
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

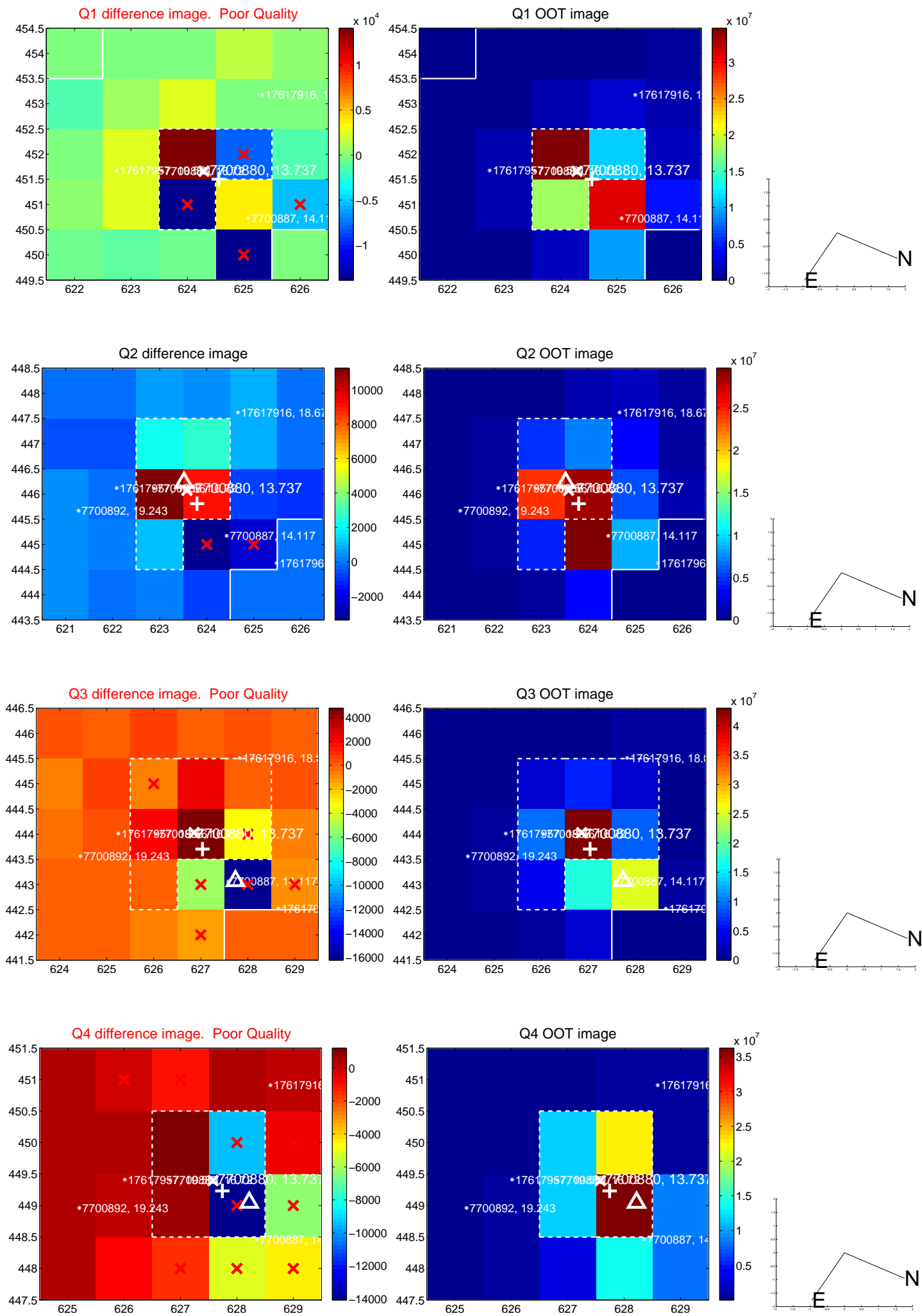


offset from photometric centroids

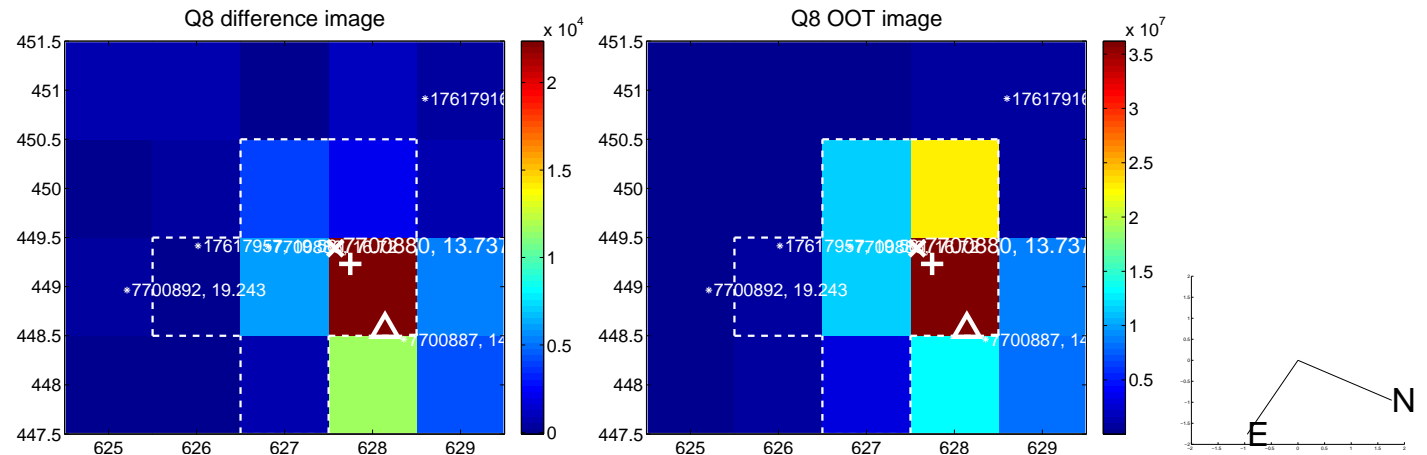
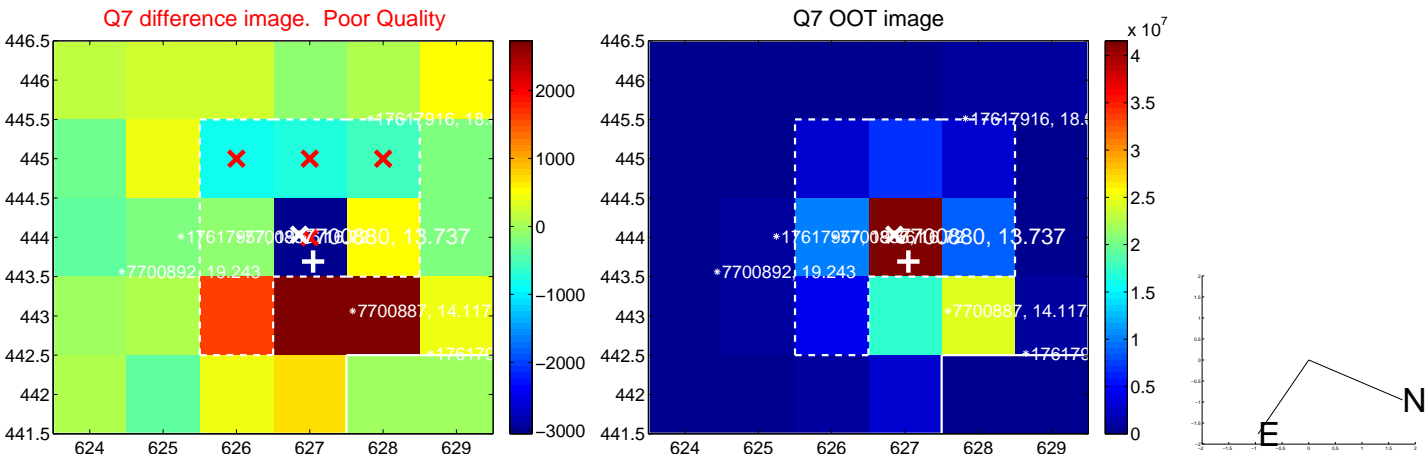
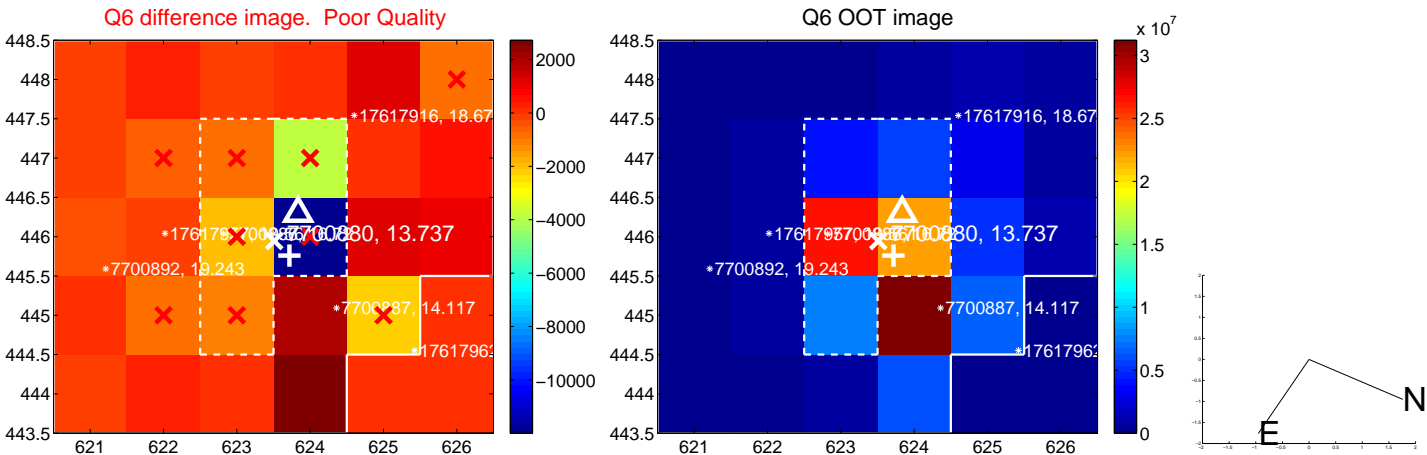
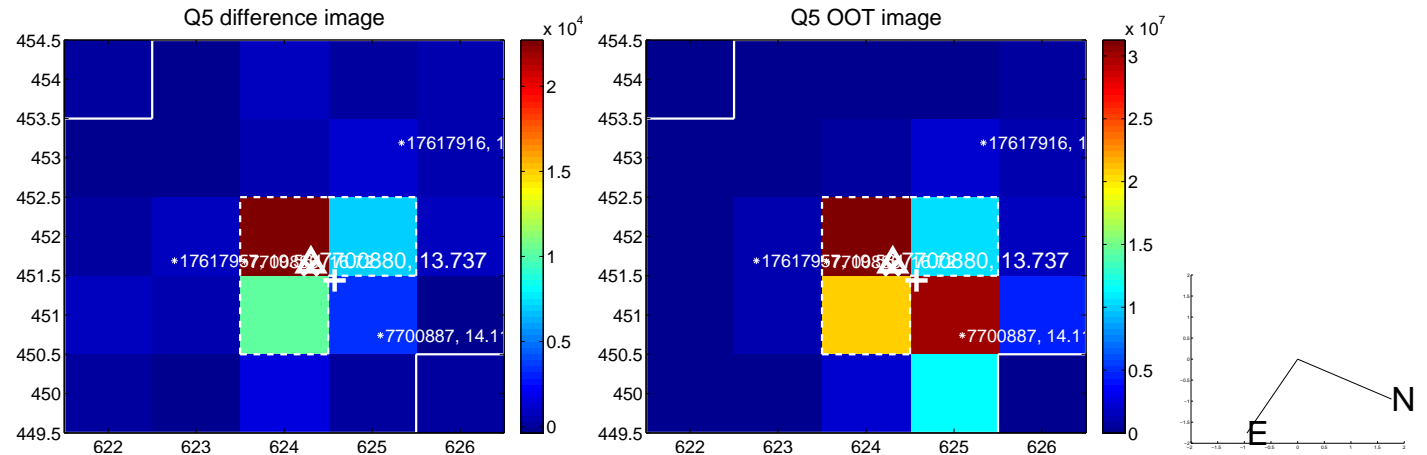


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

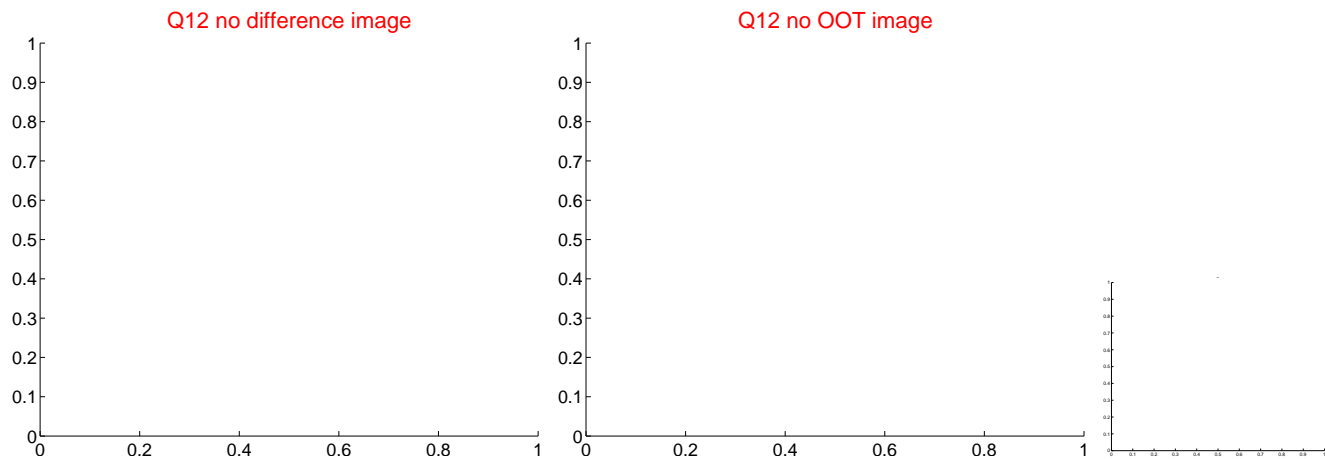
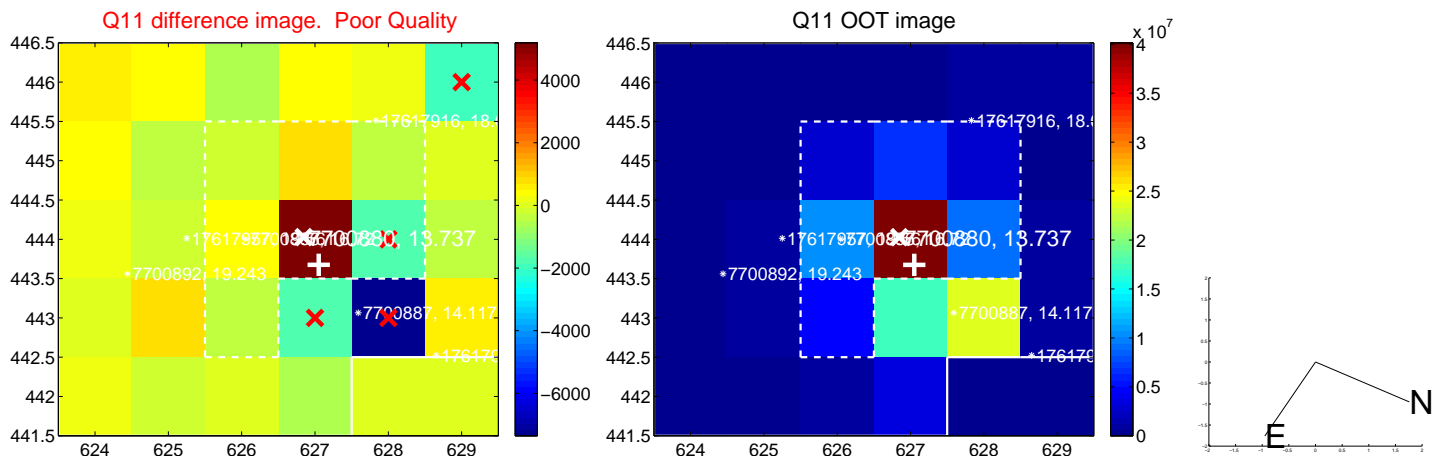
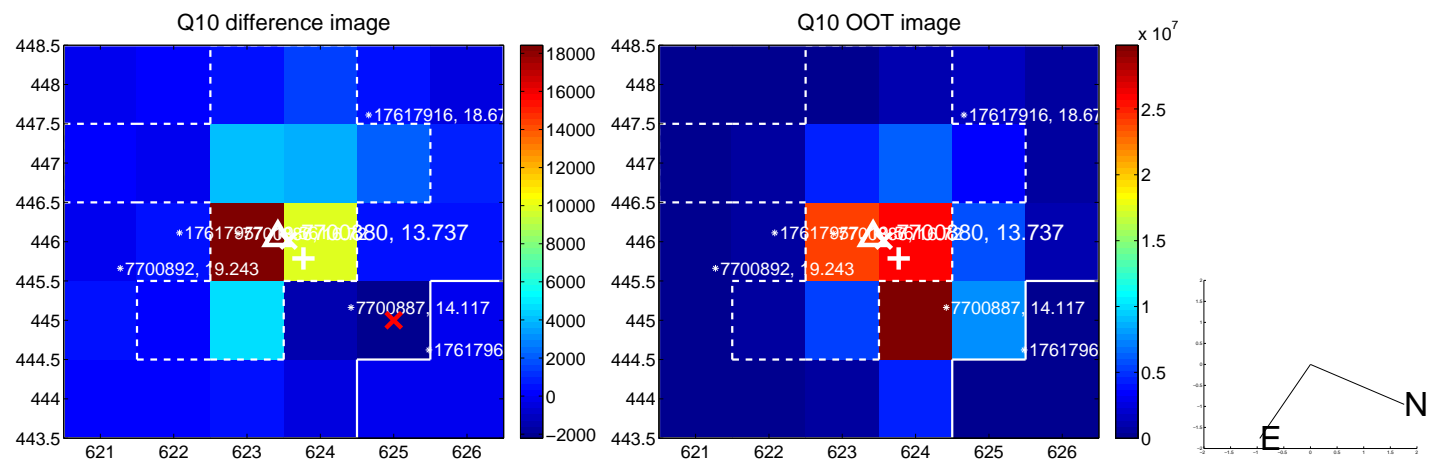
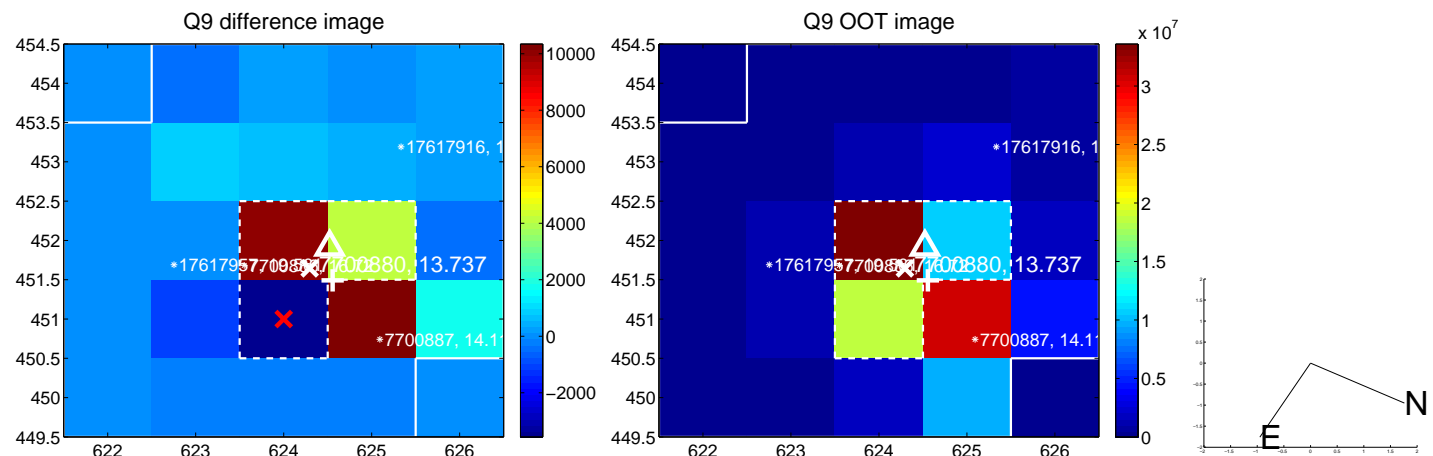
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



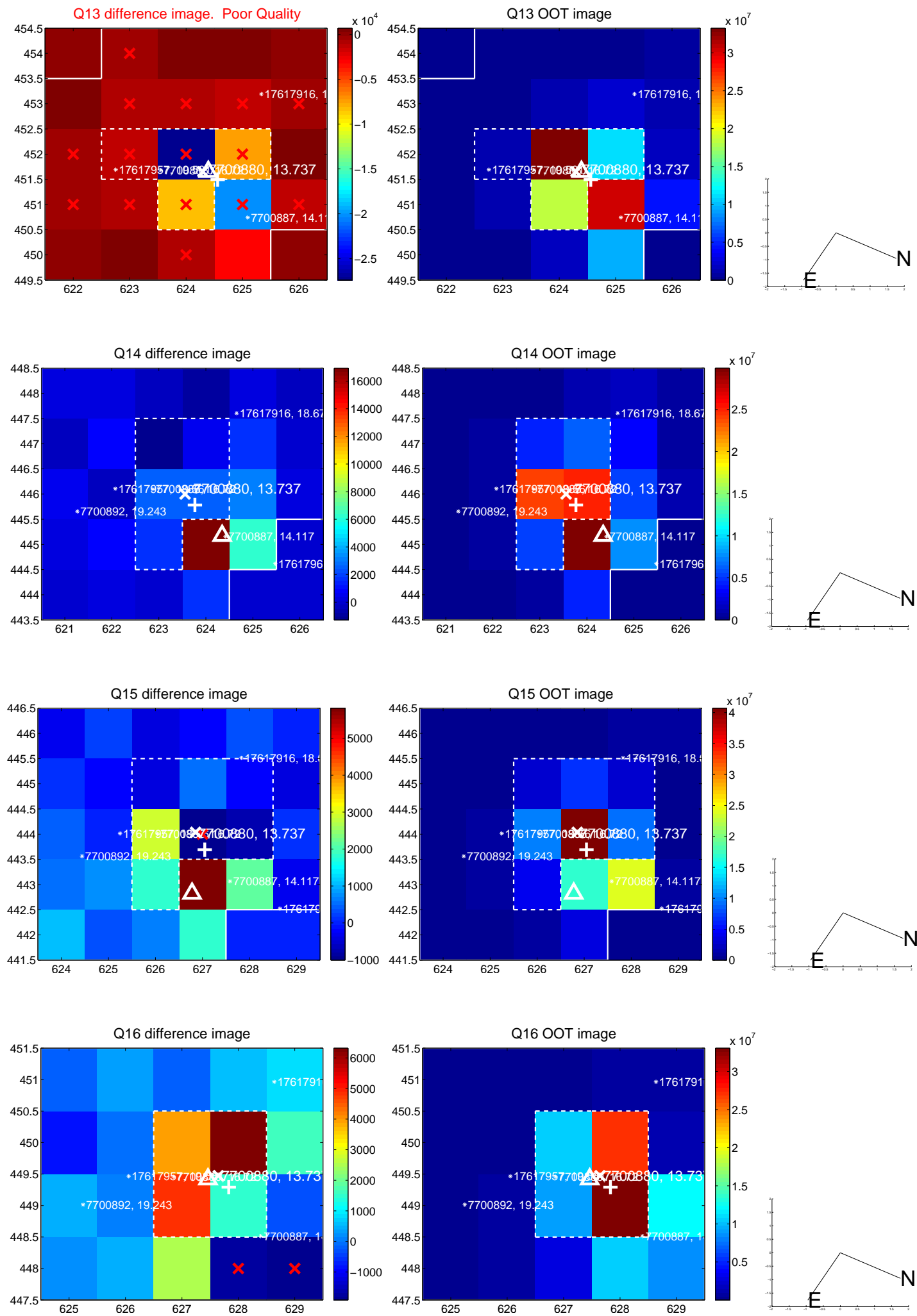
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



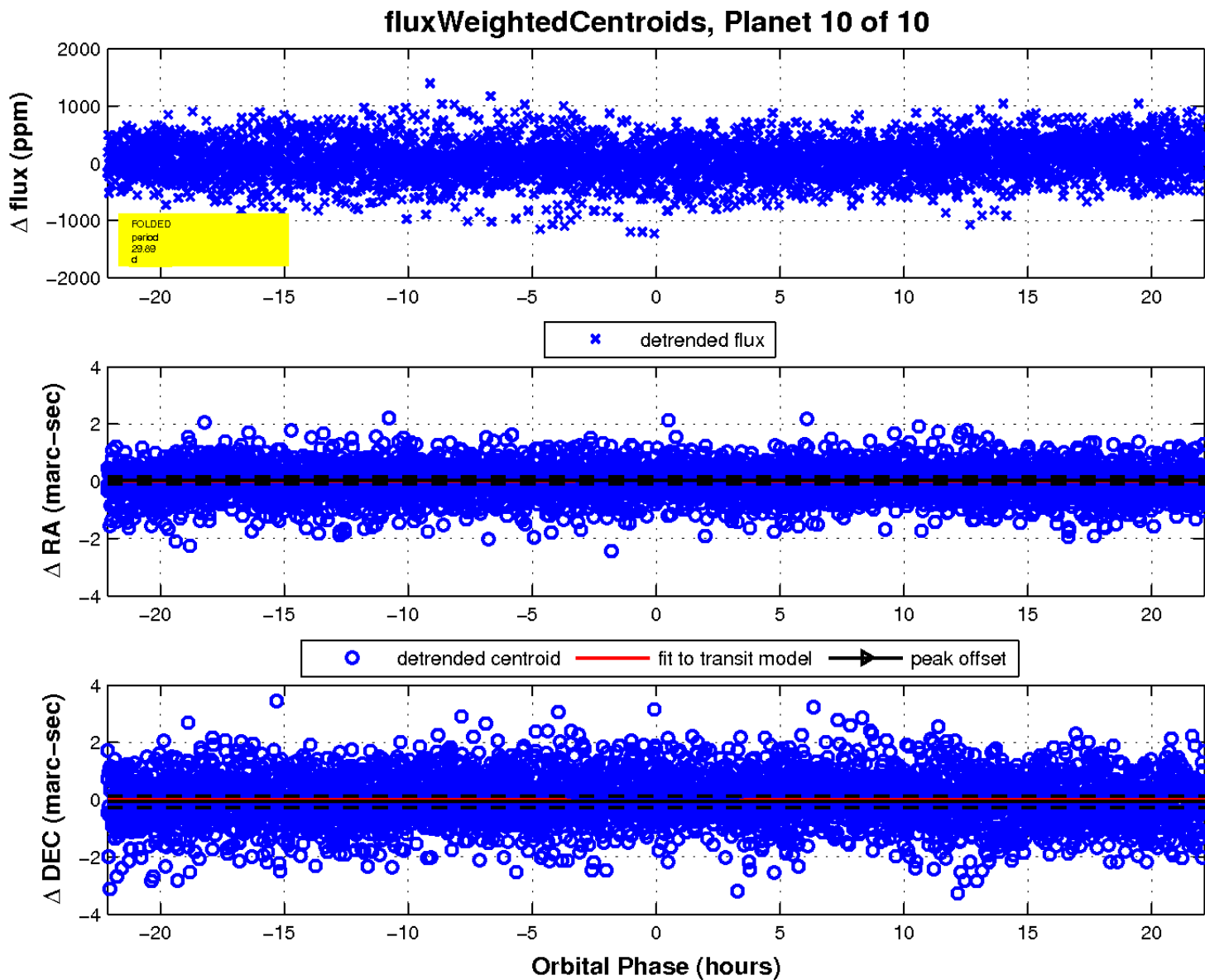
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

