

KIC 008358253

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})
008358253-01	OBS	No	1.560070	132.642266	32.2	11.560	11.0	13.5	0.85	5985	0.48	1261.64
008358253-02	OBS	No	22.544851	133.437573	437.2	1.328	14.3	13.8	0.85	5985	1.82	35.84
008358253-03	OBS	No	32.494713	140.172890	406.3	4.066	13.7	15.3	0.85	5985	1.89	22.02
008358253-04	OBS	No	12.937468	132.727048	276.7	2.664	13.2	12.0	0.85	5985	1.66	75.16
008358253-05	OBS	No	15.455704	140.176654	300.4	1.951	11.8	12.0	0.85	5985	1.73	59.29
008358253-06	OBS	No	35.454416	159.998443	204.3	7.238	11.3	9.3	0.85	5985	1.43	19.60
008358253-07	OBS	No	21.549892	139.252006	293.9	2.069	10.1	11.1	0.85	5985	1.66	38.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008358253-01	OBS	FP	0.00	1	0	0	0	LPP_DV
008358253-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS
008358253-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
008358253-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
008358253-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
008358253-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS
008358253-07	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_FEW_DIFFS

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

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

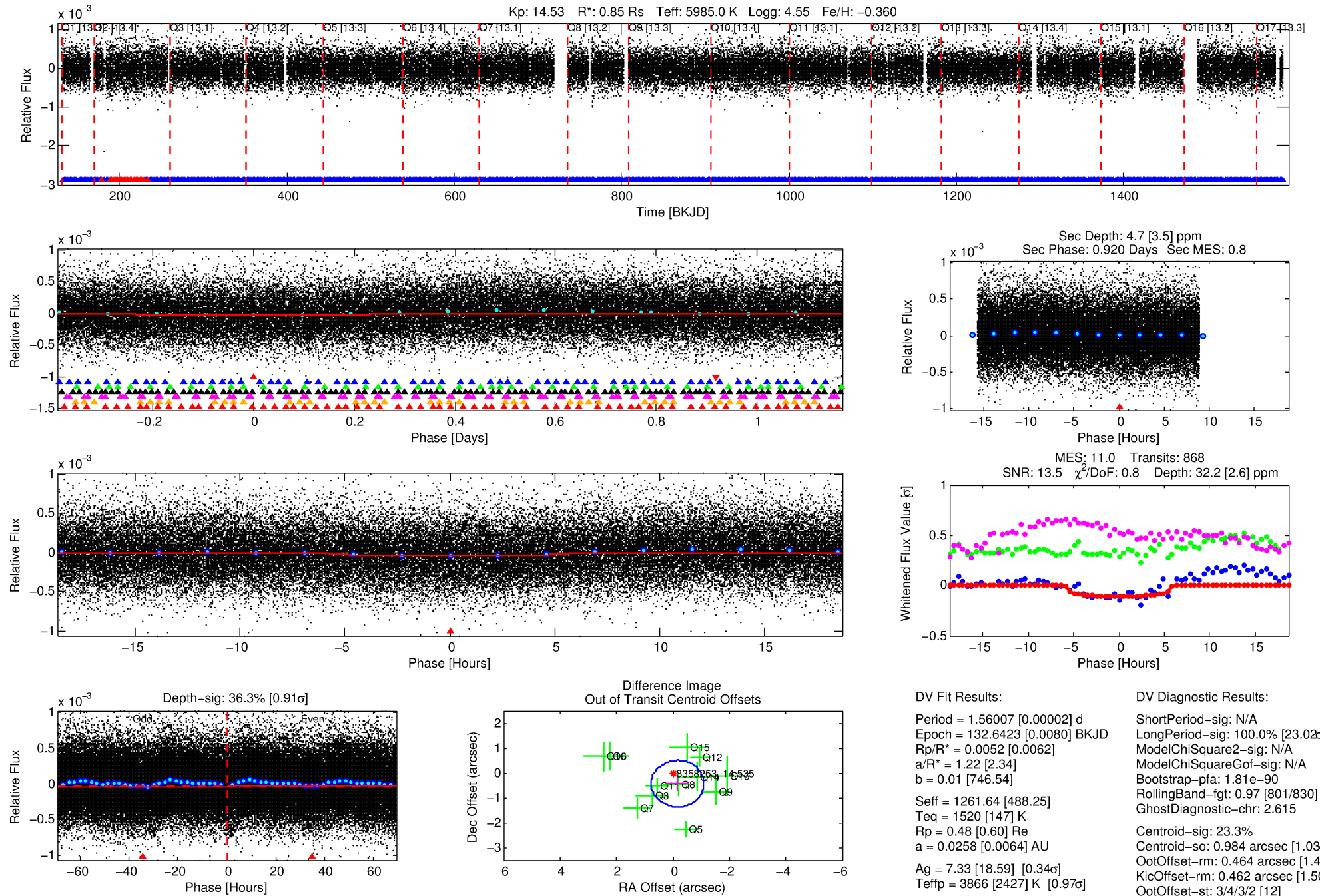
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008358253-01

No Significant Match Found

DV One-Page Summary

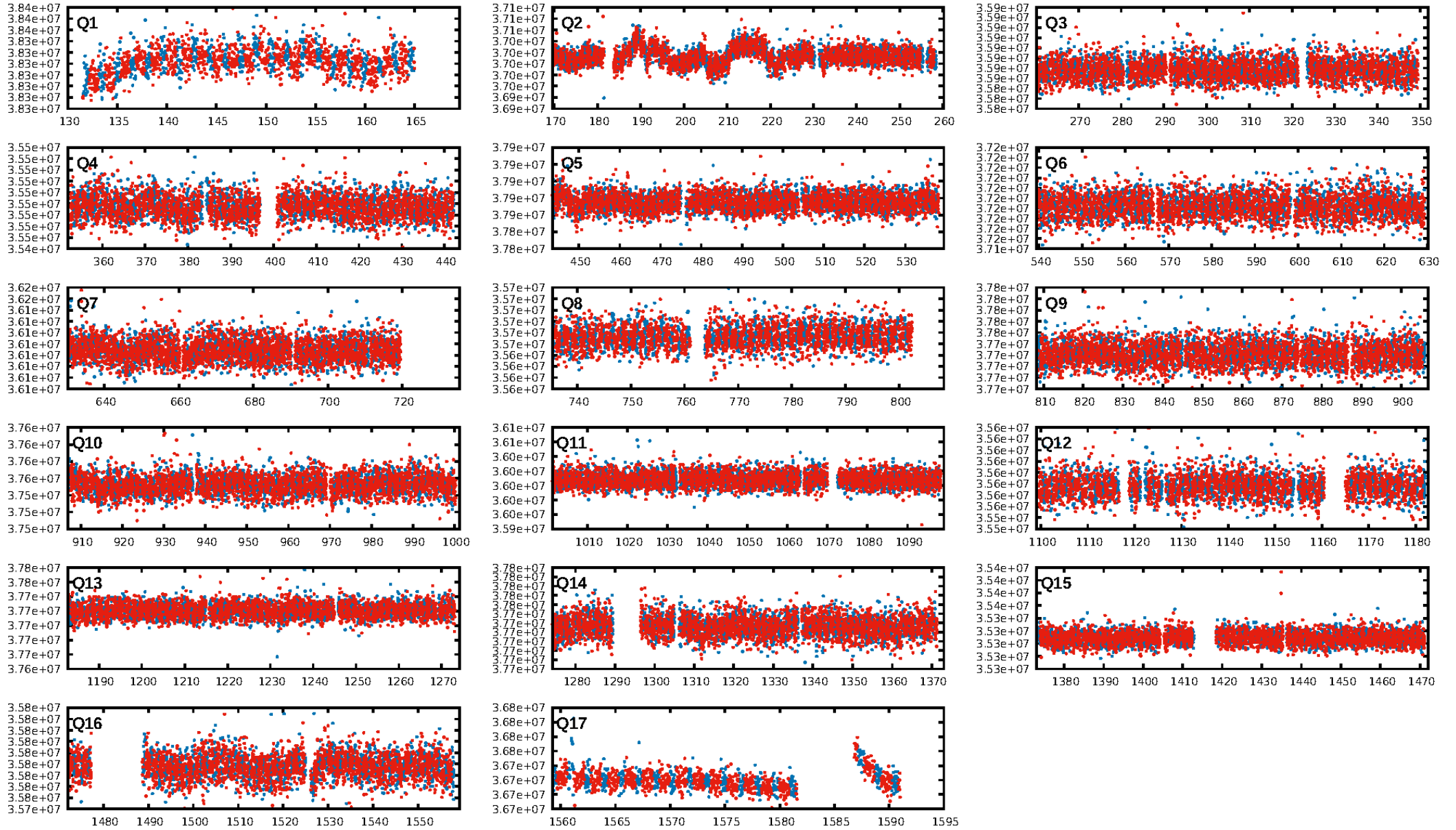
KIC: 8358253 Candidate: 1 of 7 Period: 1.560 d



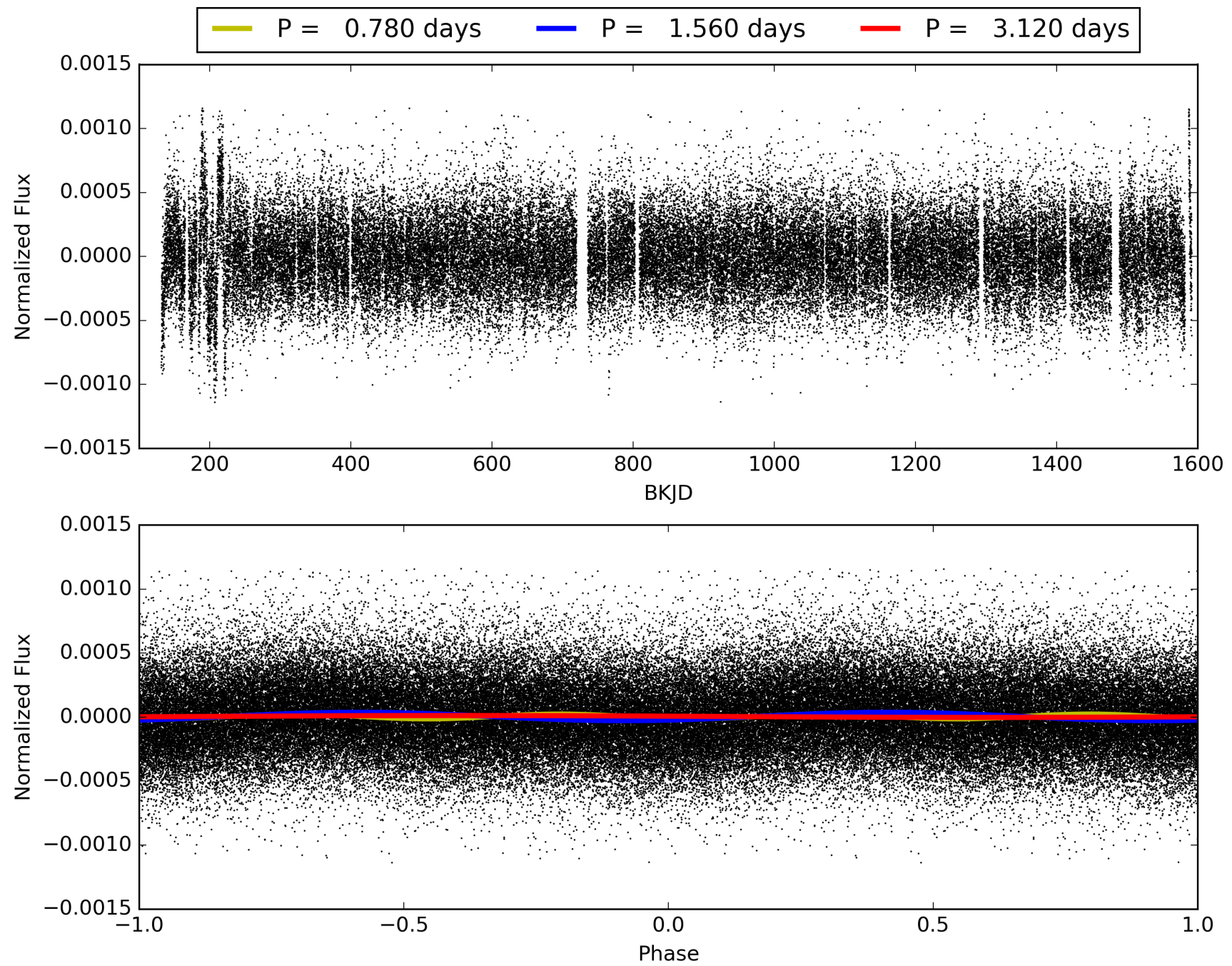
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 19:39:53 Z

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

TCE 008358253-01, PDC Light Curves

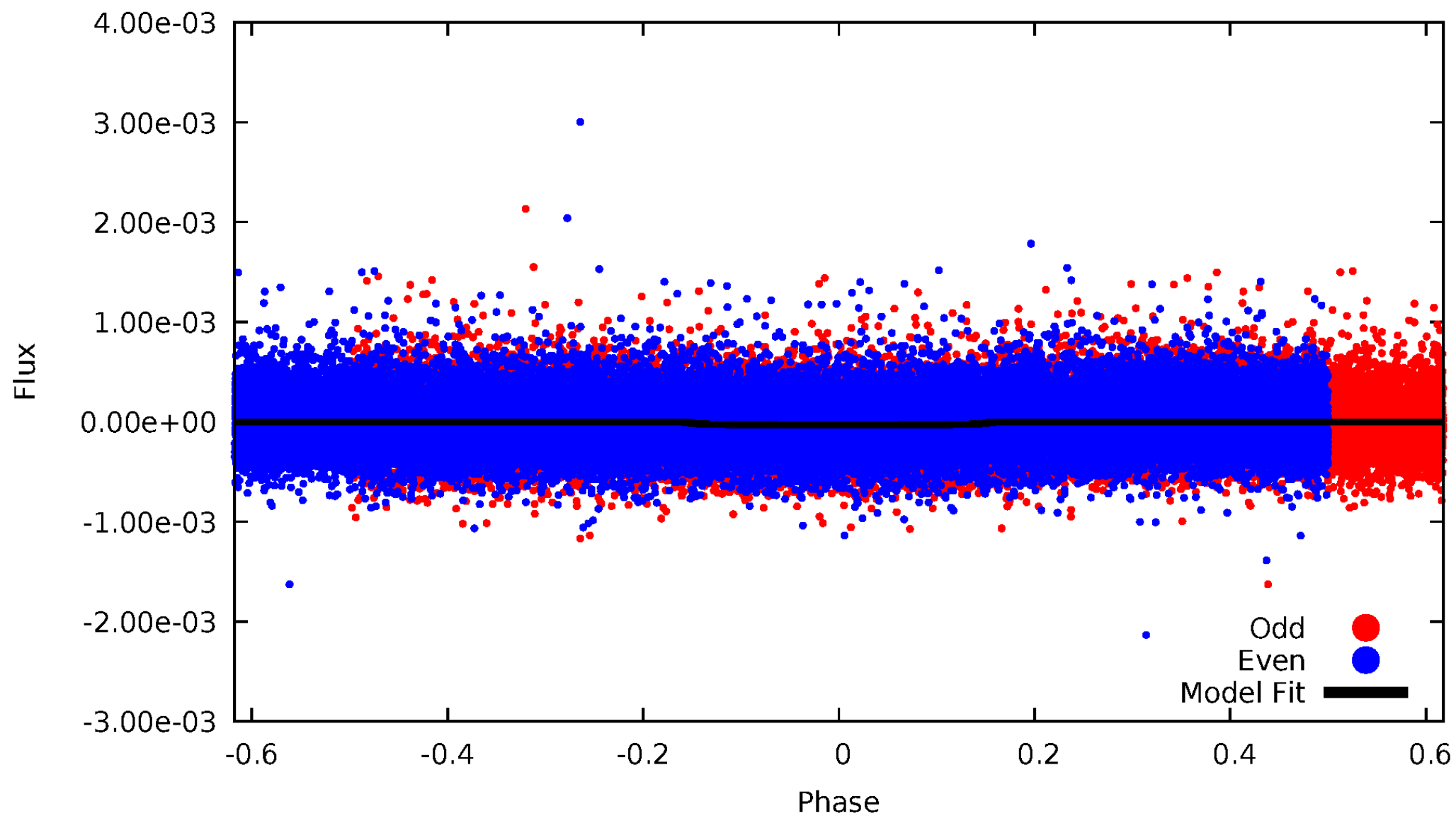


TCE 008358253-01



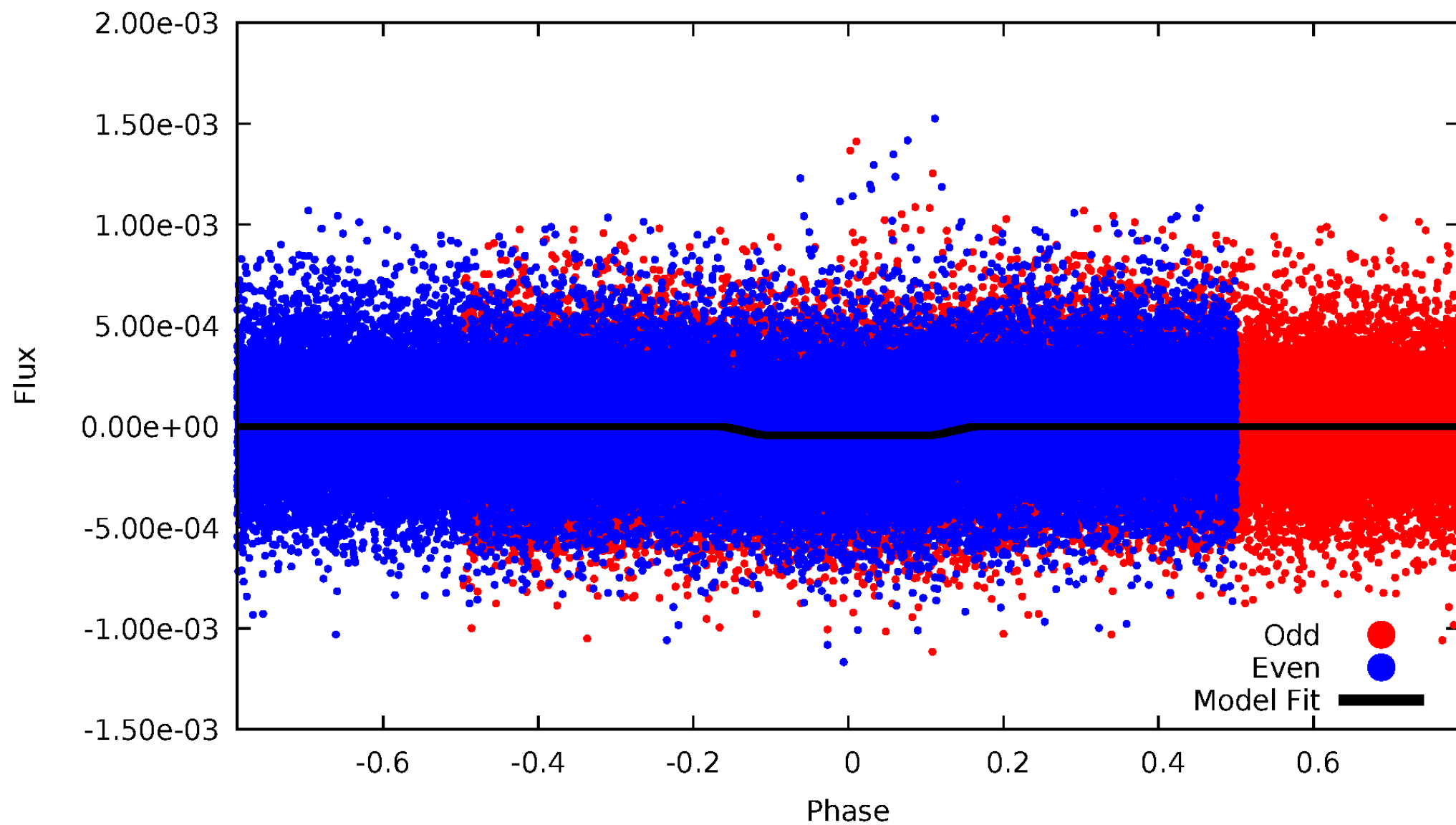
DV Odd/Even

TCE 008358253-01



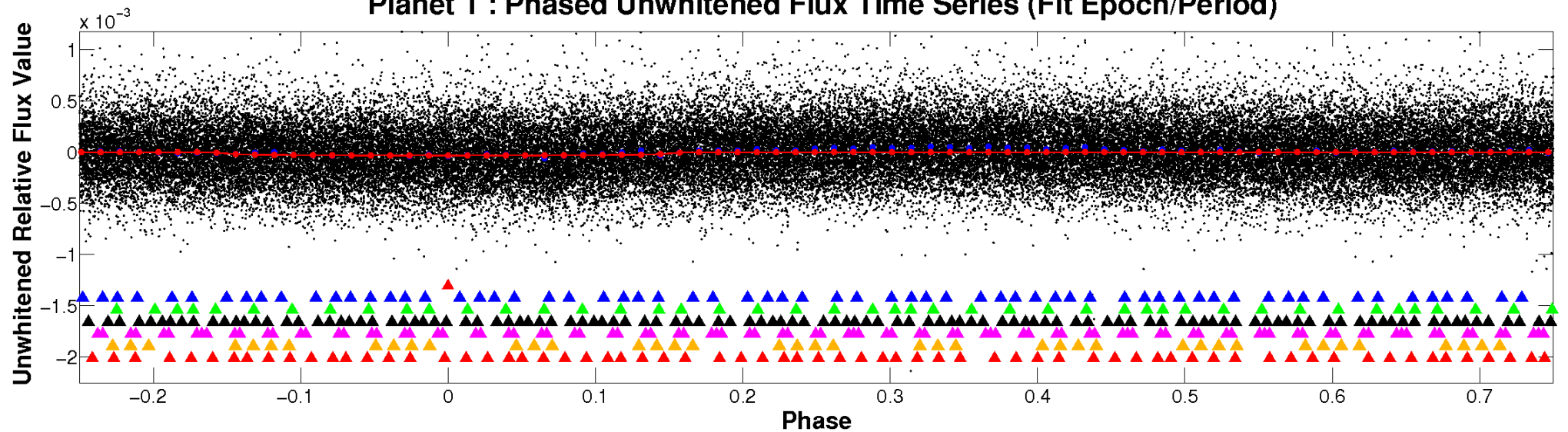
ALT Odd/Even

TCE 008358253-01

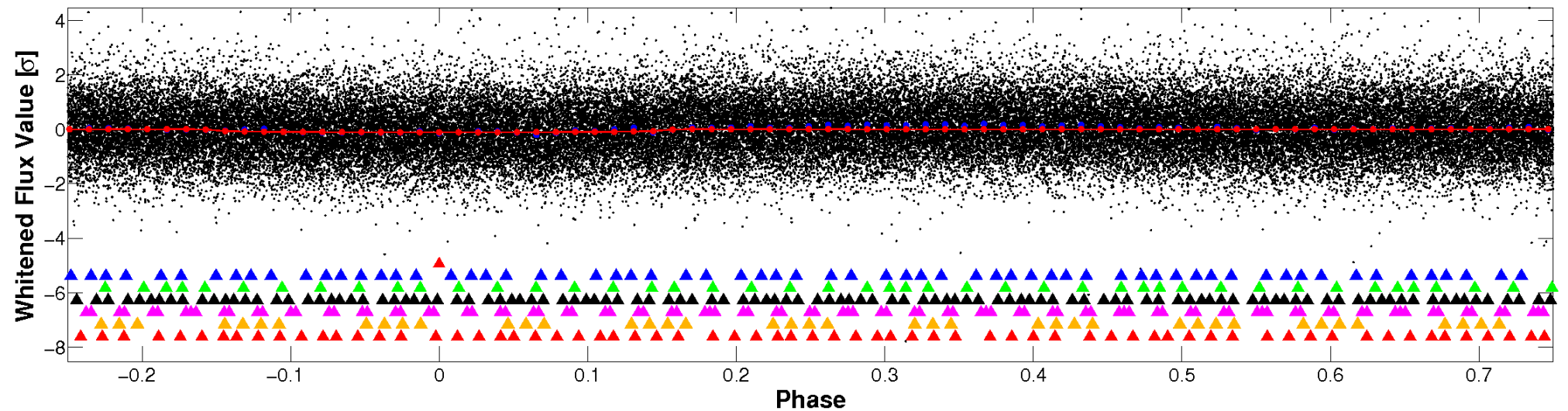


Non-Whitened Vs. Whitened Light Curve

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

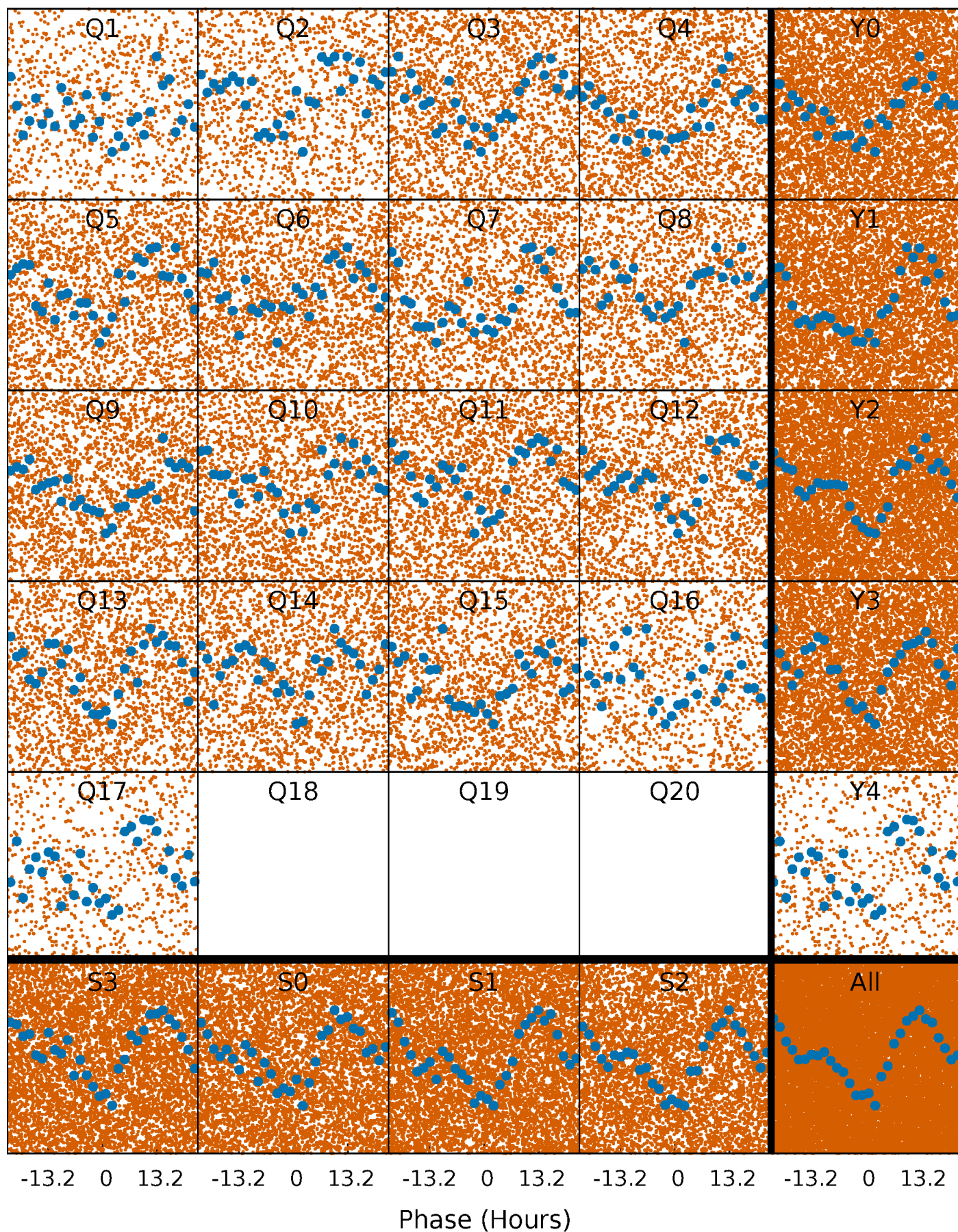


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



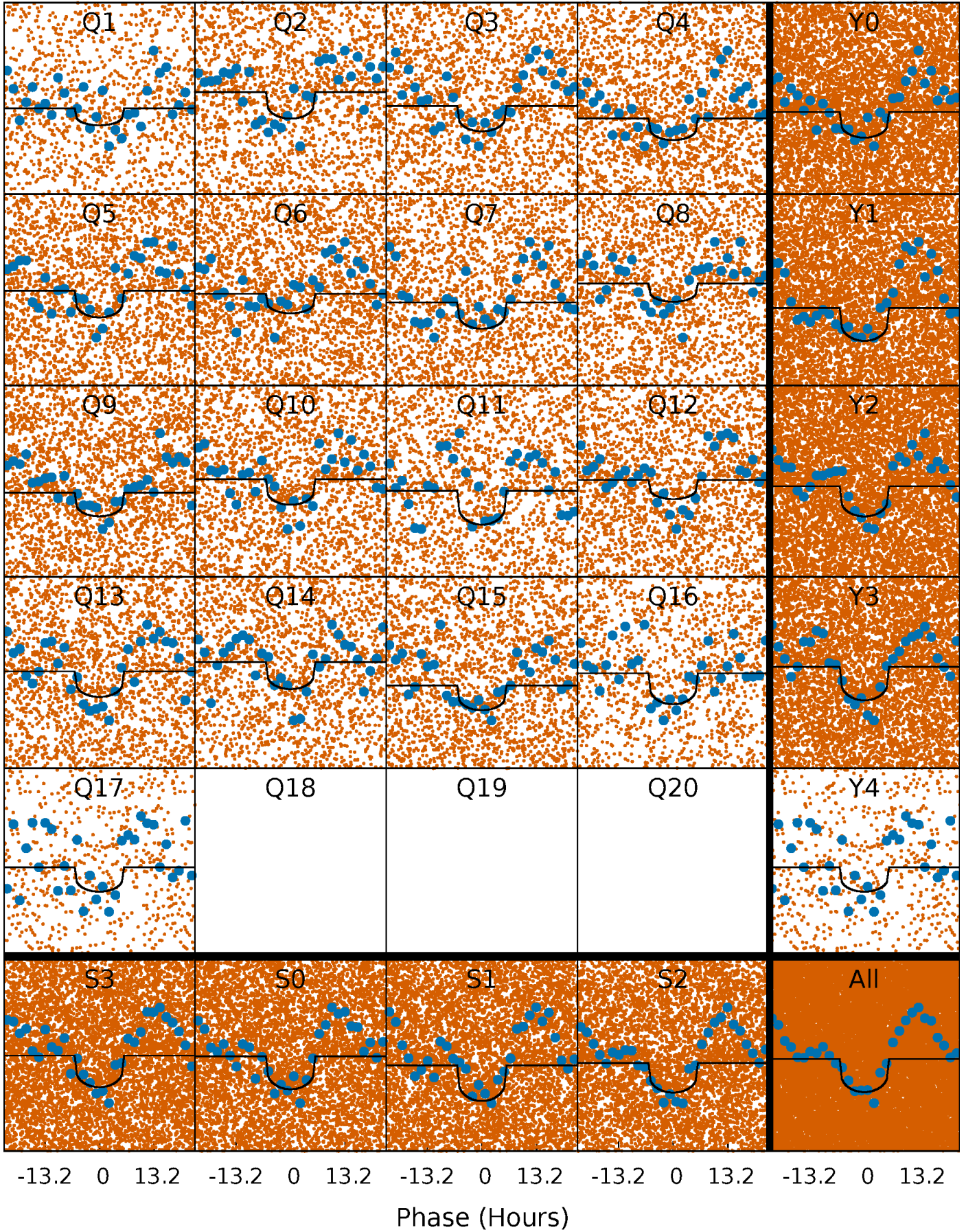
PDC Quarter-Phased Transit Curves

TCE 008358253-01 P= 1.560070 Days $T_0=132.642266$ (BKJD)



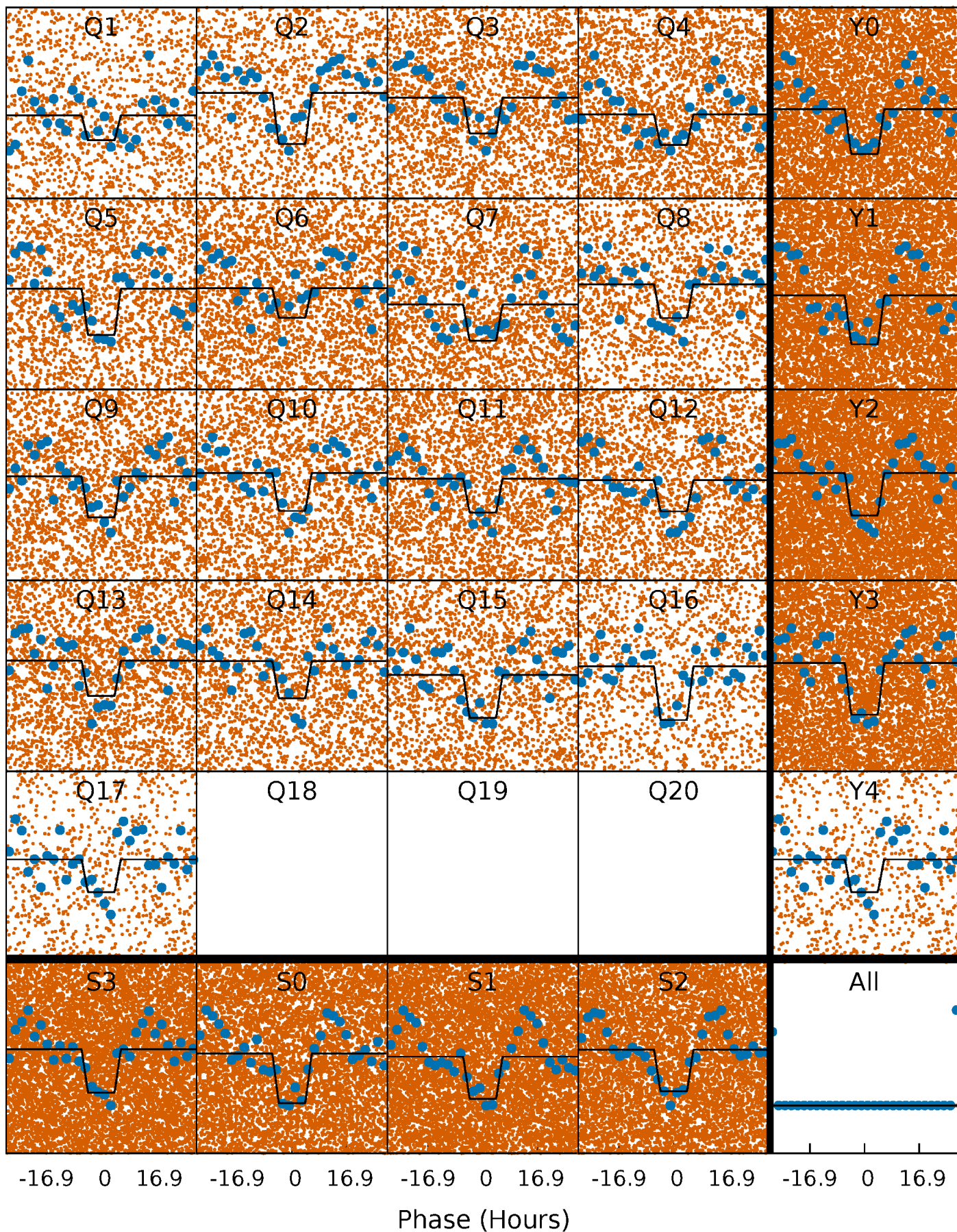
DV Quarter-Phased Transit Curves

TCE 008358253-01 P= 1.560070 Days $T_0=132.642266$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

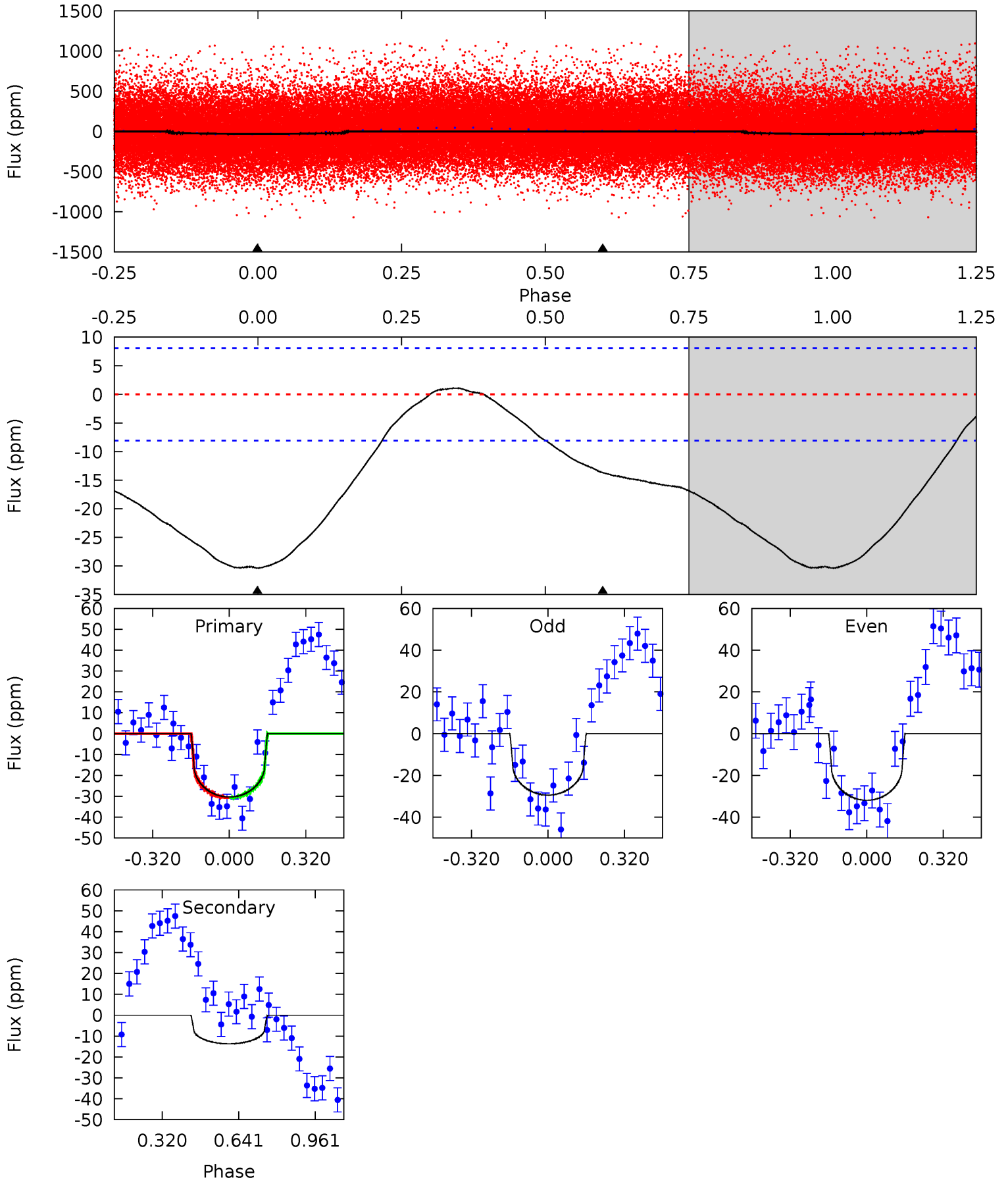
TCE 008358253-01 P= 1.560156 Days $T_0=132.583365$ (BKJD)



DV Model-Shift Uniqueness Test

008358253-01, P = 1.560070 Days, E = 131.082196 Days

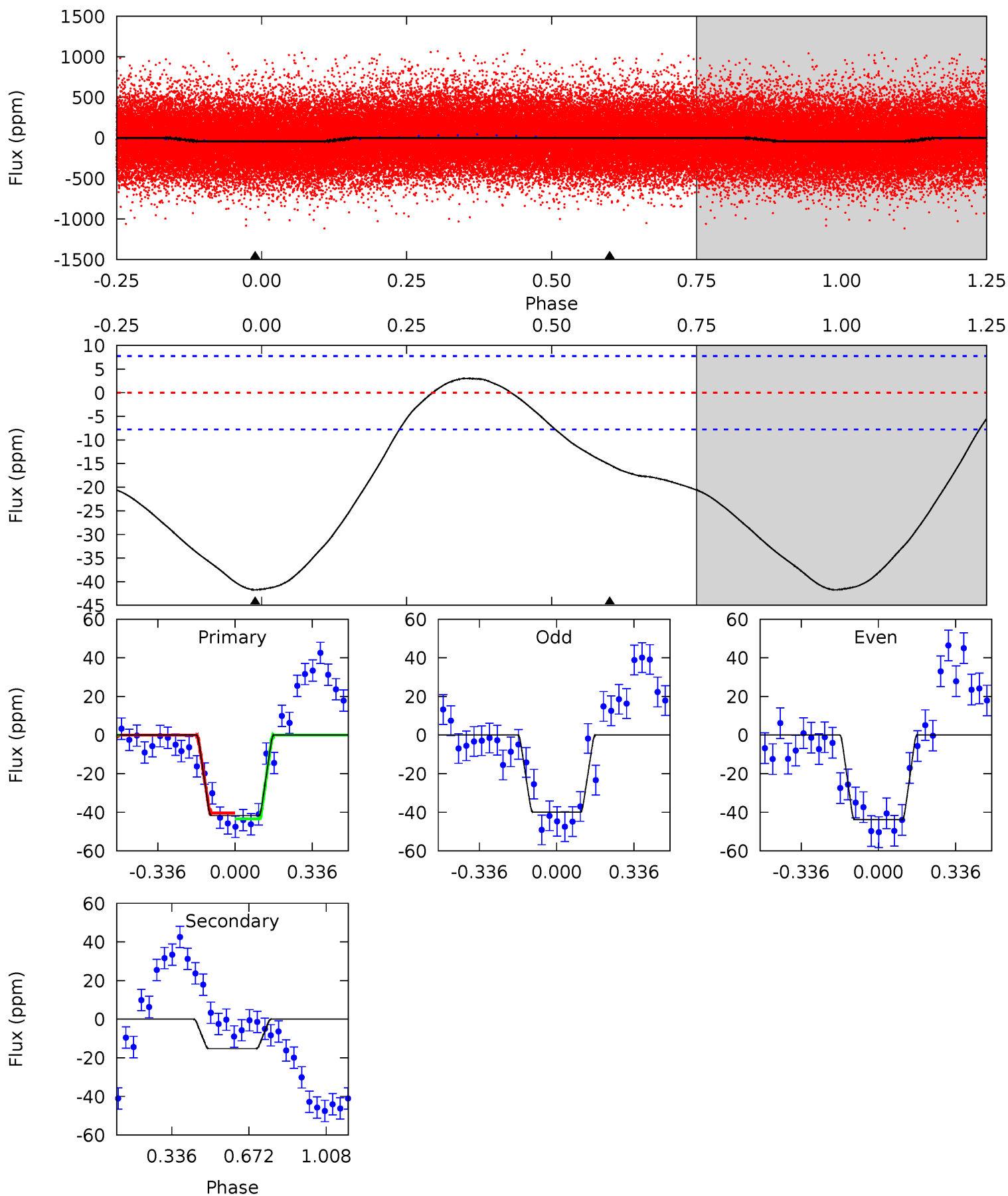
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.2	7.30	0	0	4.31	0.99	0.83	16.2	16.2	7.30	7.30	0.67	0.95	0.03	0.00



Alt Model-Shift Uniqueness Test

008358253-01, P = 1.560156 Days, E = 131.023209 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.1	8.45	0	0	4.30	0.96	1.52	23.1	23.1	8.45	8.45	1.09	0.93	0.07	0.84



Stellar Parameters For KIC 008358253

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5985^{+161}_{-179}	$4.548^{+0.048}_{-0.204}$	$-0.360^{+0.300}_{-0.300}$	$0.855^{+0.248}_{-0.083}$	$0.942^{+0.109}_{-0.109}$	$2.122^{+0.425}_{-1.108}$
	+3%/-3%	+1%/-4%	+83%/-83%	+29%/-10%	+12%/-12%	+20%/-52%
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 008358253-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-14 ± 2	$0.64^{+0.57}_{-0.39}$	2160^{+156}_{-95}	4596^{+2695}_{-954}	12^{+67}_{-9}
Alt.	-15 ± 2	$0.70^{+0.62}_{-0.44}$	2162^{+157}_{-95}	4562^{+2877}_{-973}	11^{+72}_{-8}

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

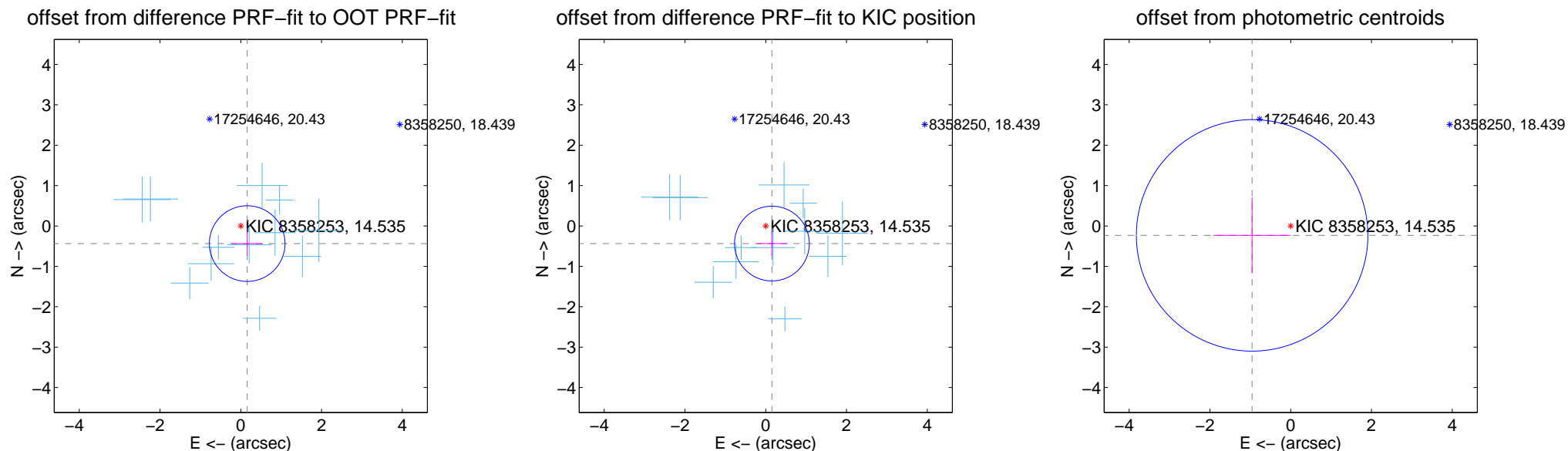
DV Centroid Data

Supplemental centroid analysis for 008358253-01. Kepler magnitude: 14.54. Transit SNR 13.45

There are 12 quarters with good PRF difference image offsets

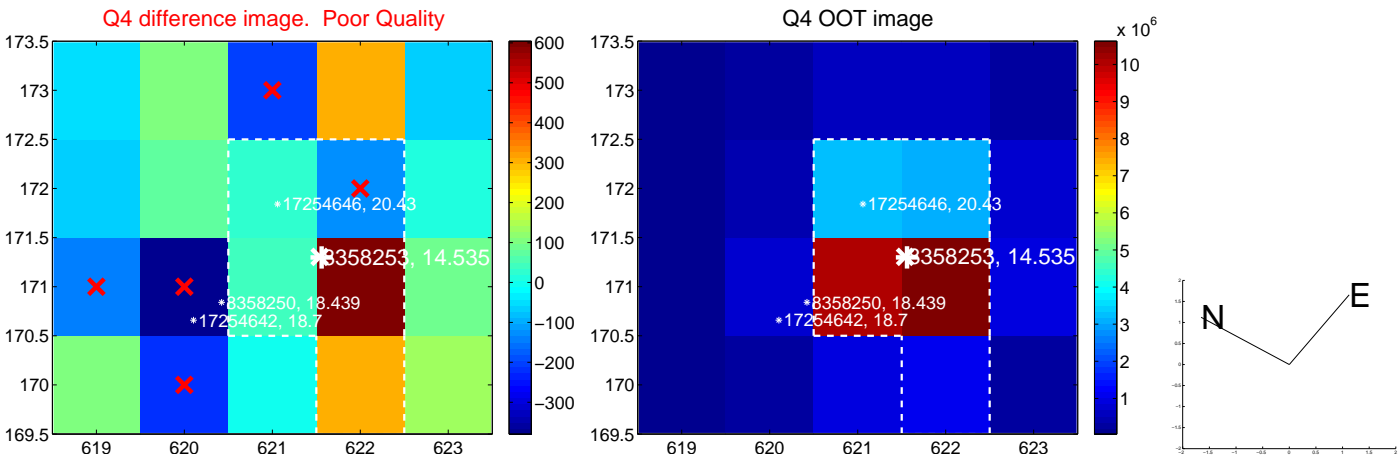
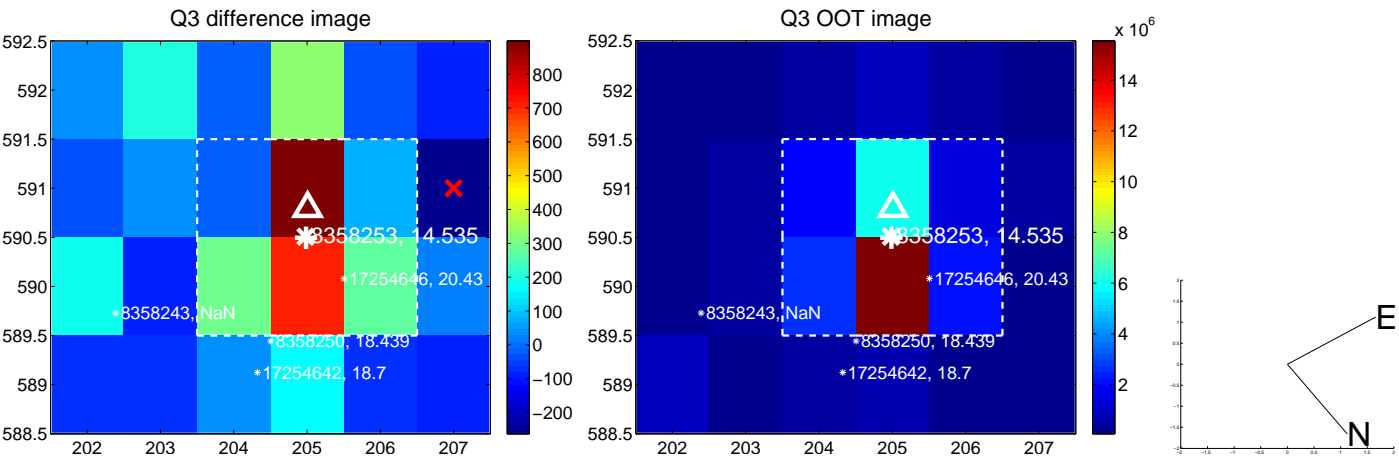
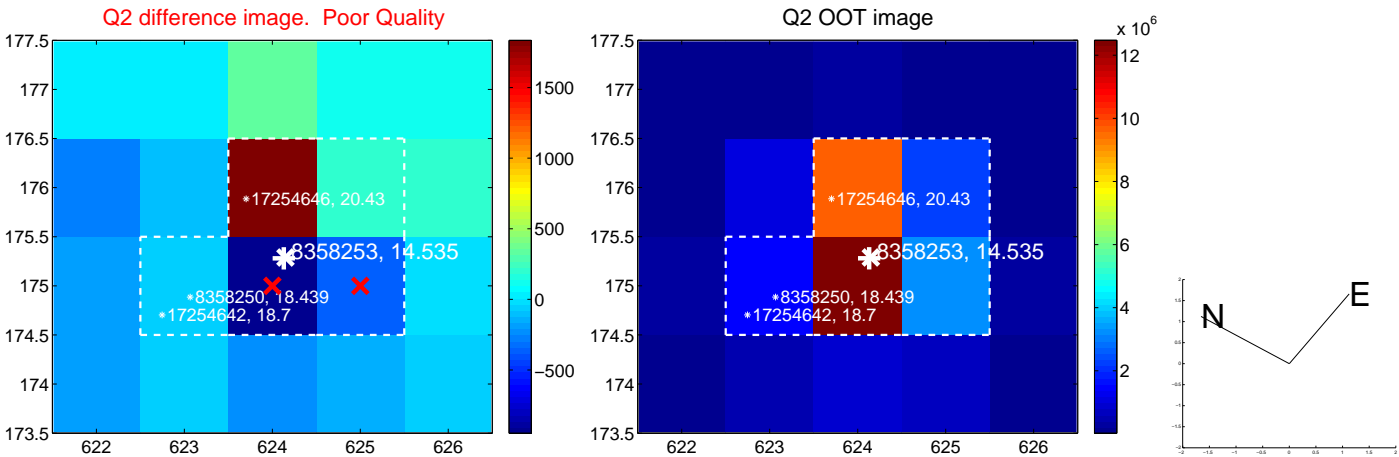
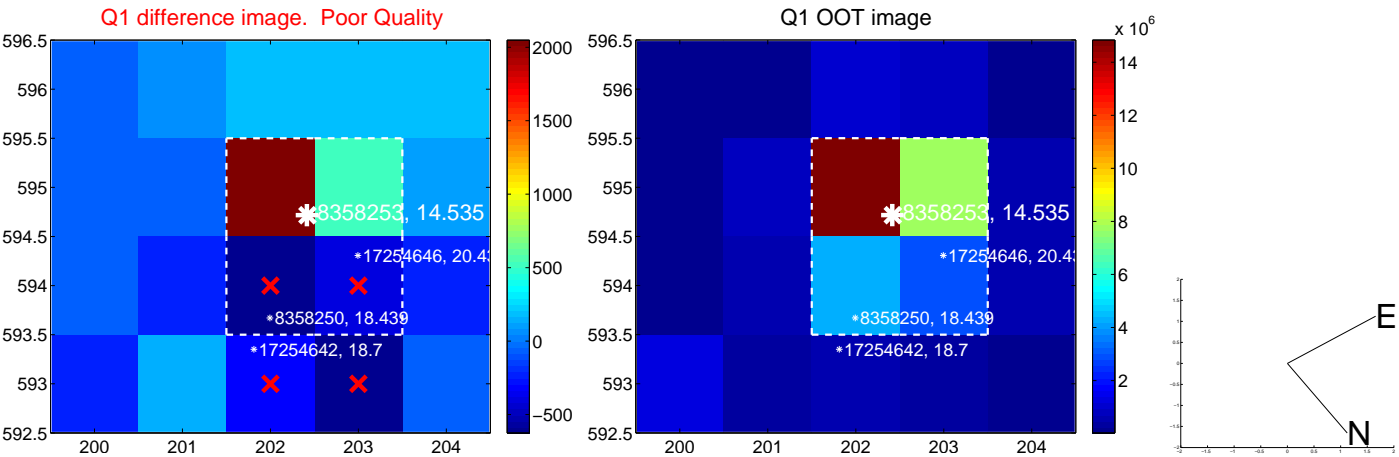
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.464 ± 0.312	1.49	-0.159 ± 0.382	-0.436 ± 0.302
PRF-fit source offset from KIC position	0.462 ± 0.309	1.50	-0.153 ± 0.380	-0.436 ± 0.299
photometric centroid source offset	0.98 ± 0.96	1.03	0.96 ± 0.96	-0.23 ± 0.94

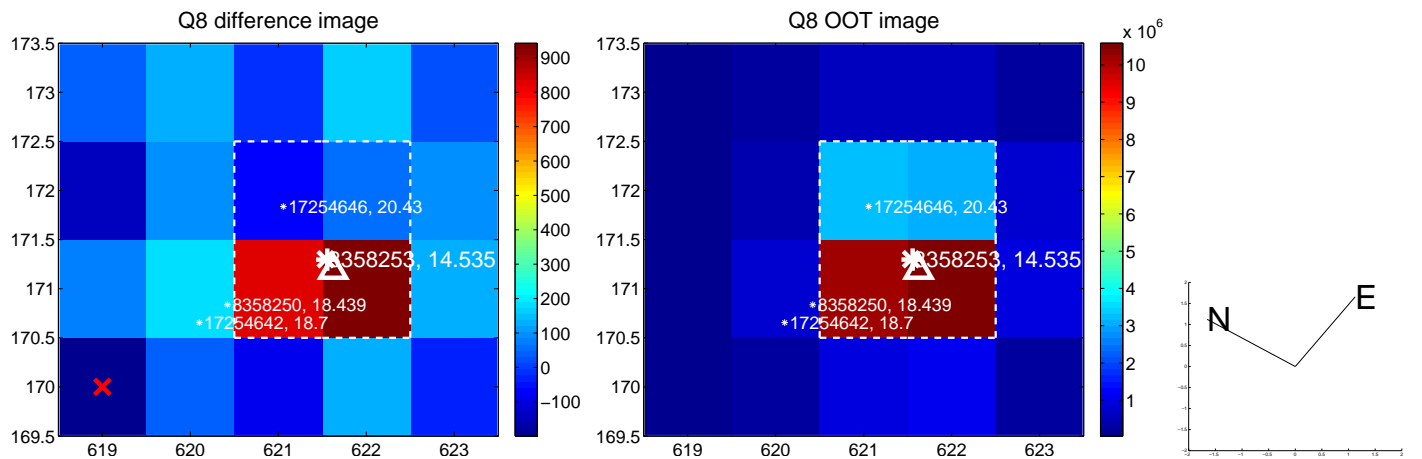
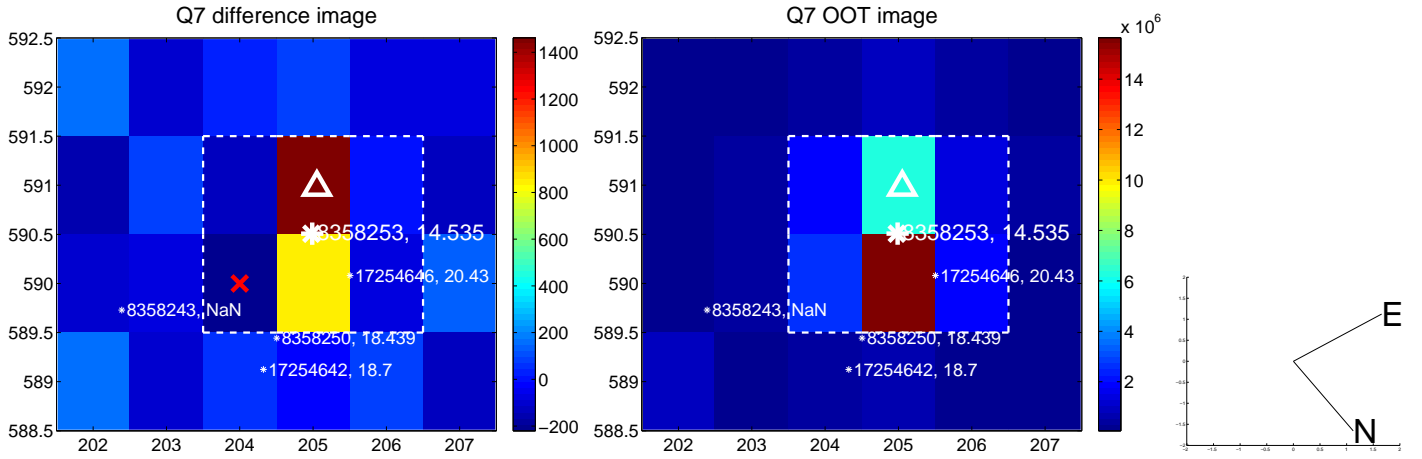
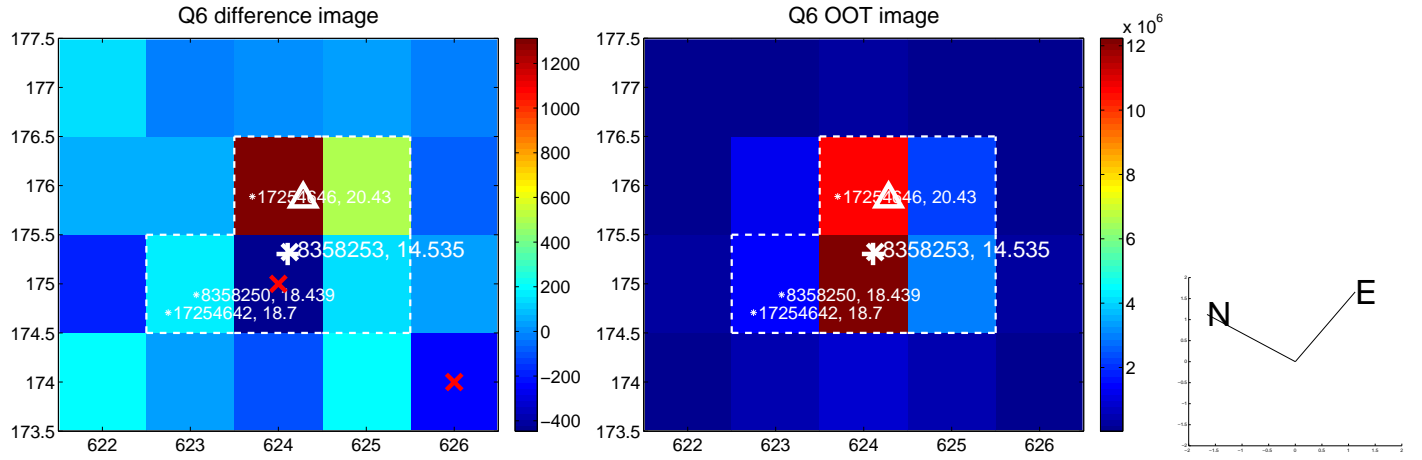
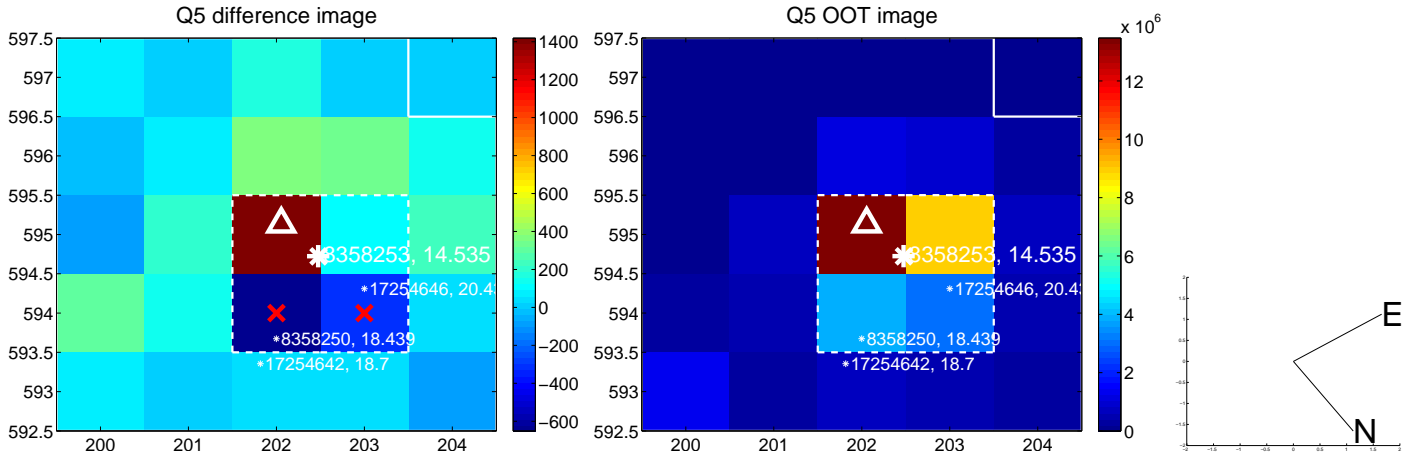


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

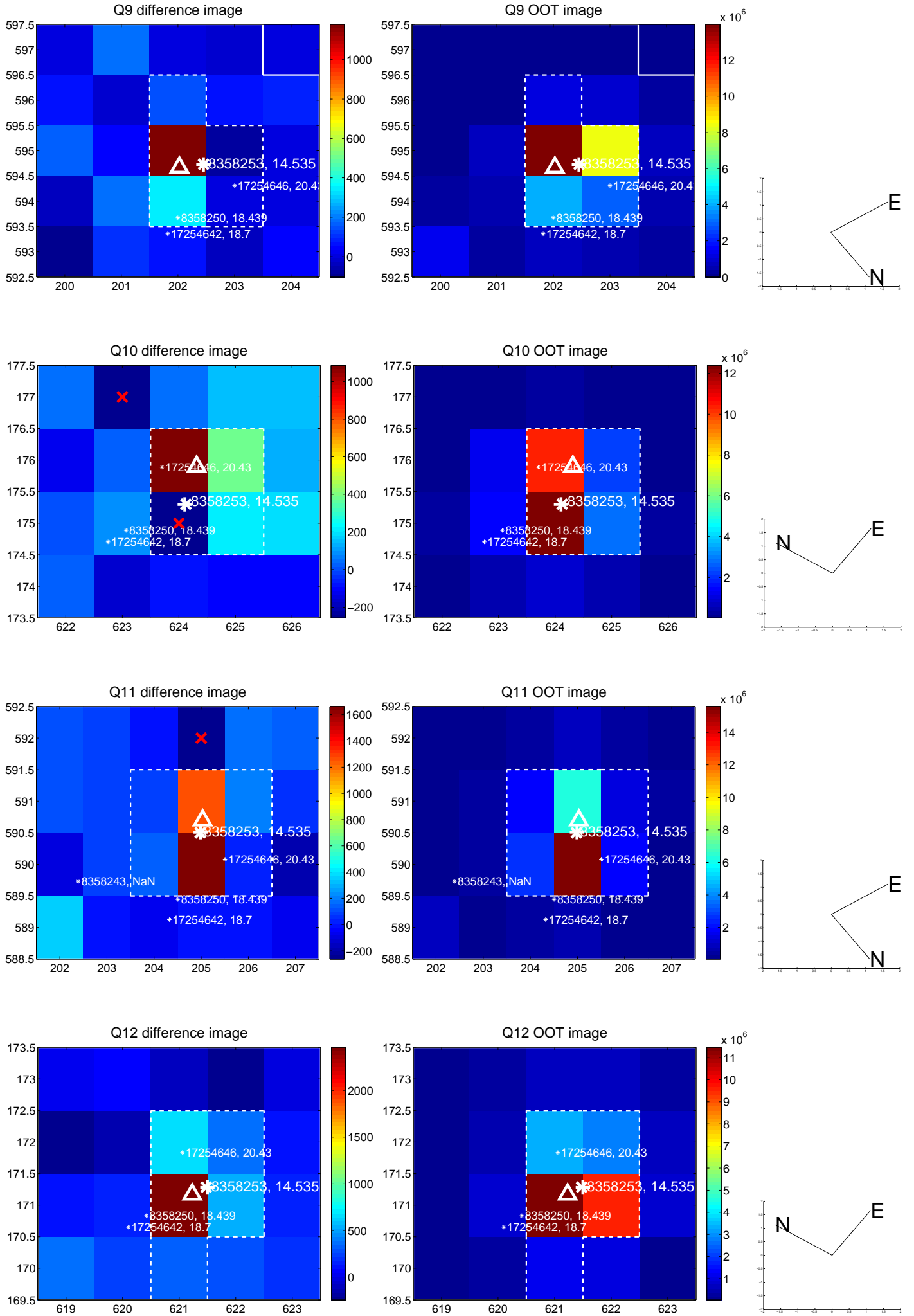
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



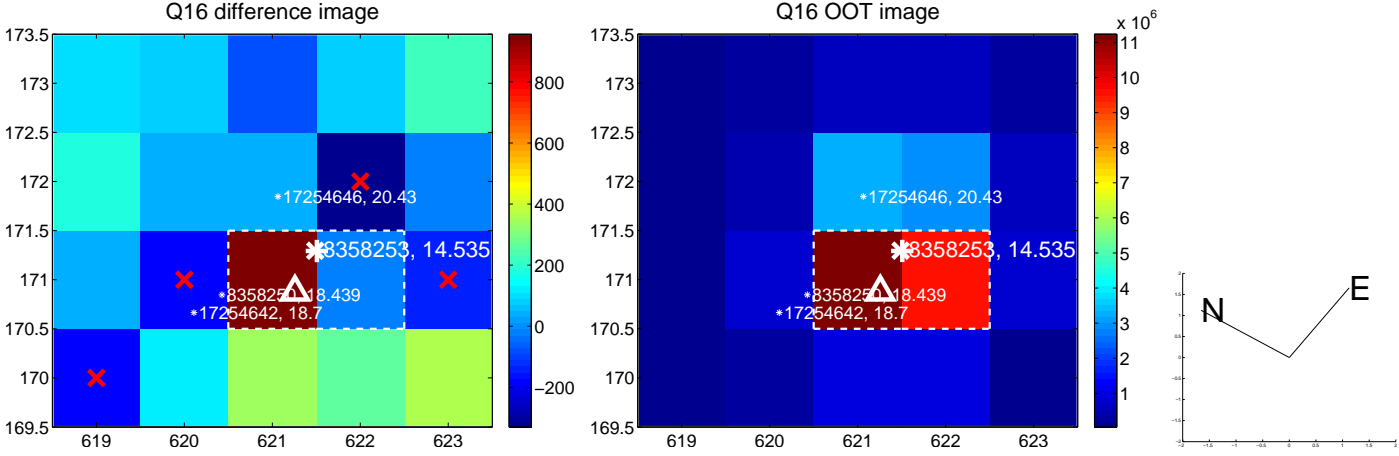
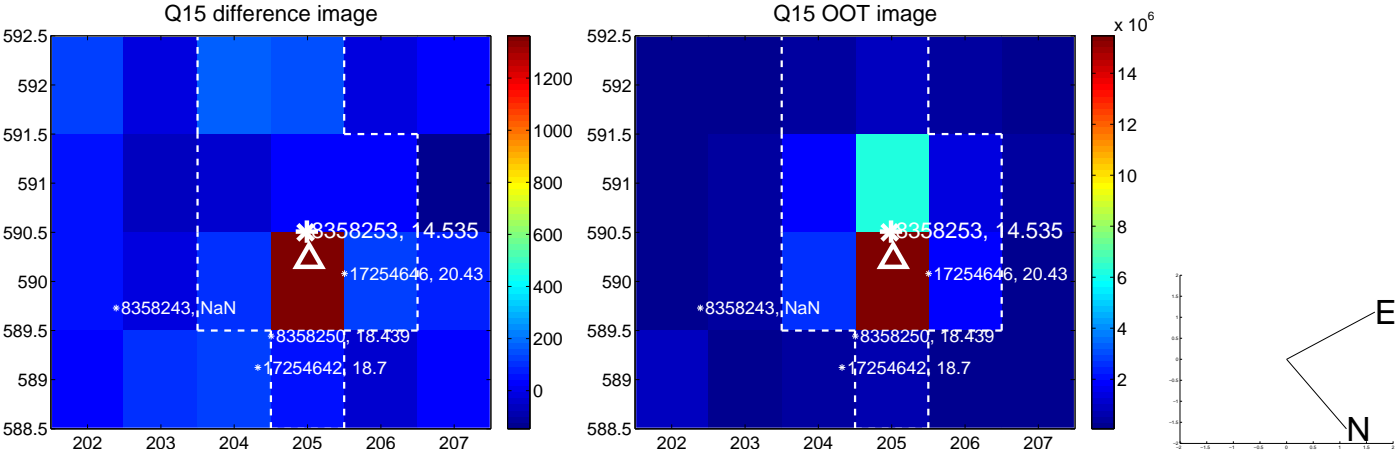
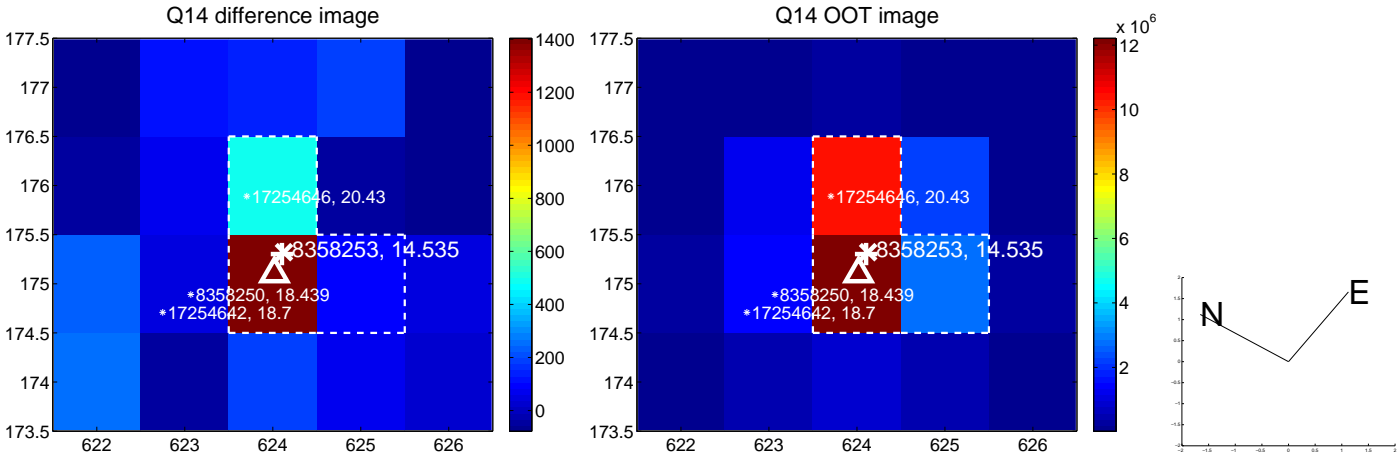
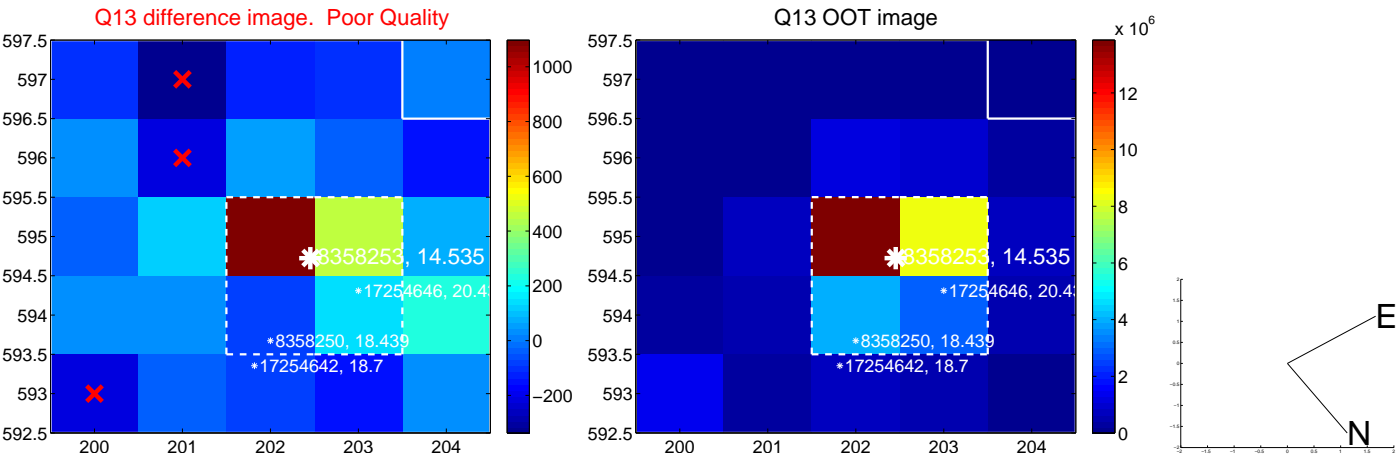
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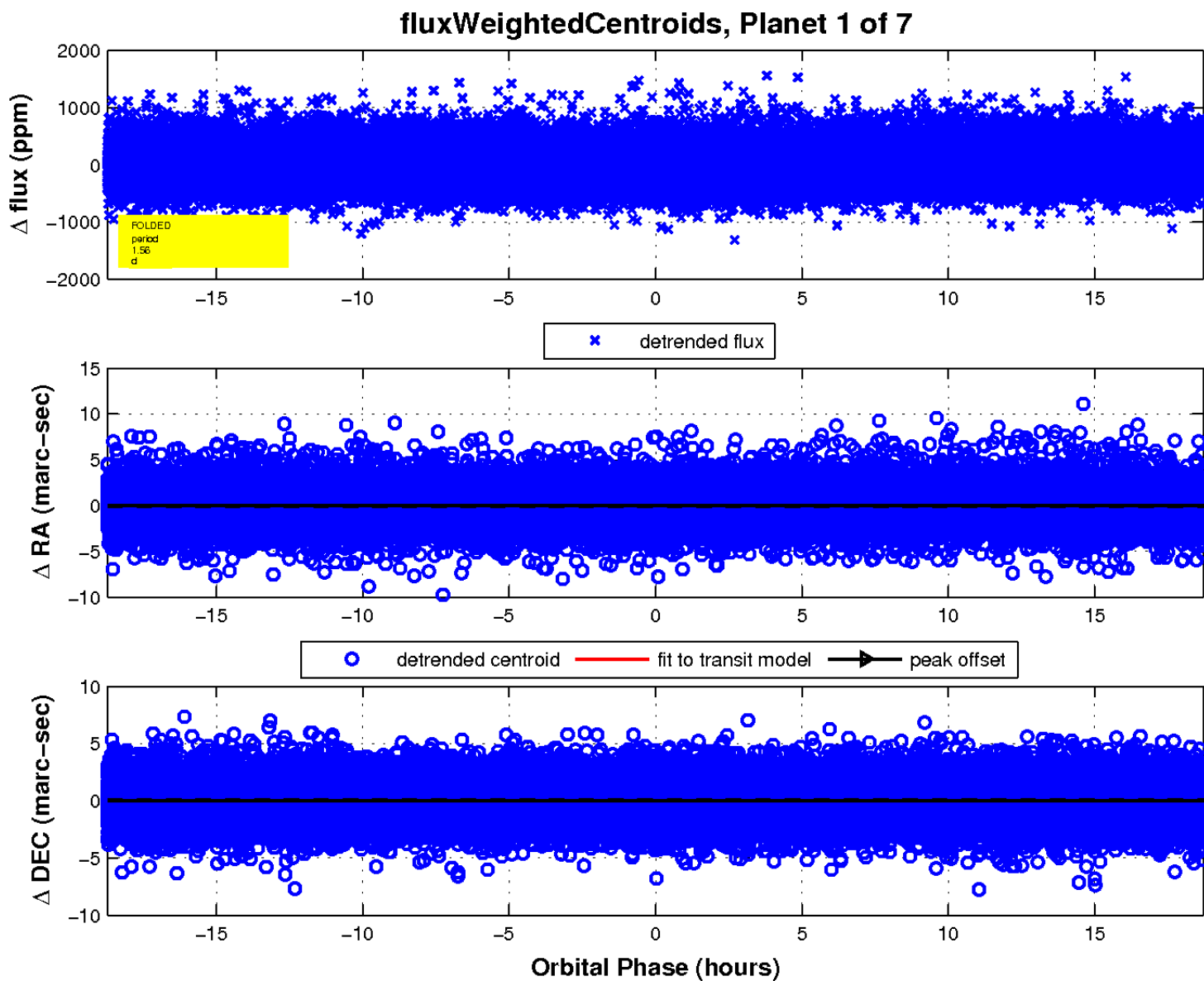
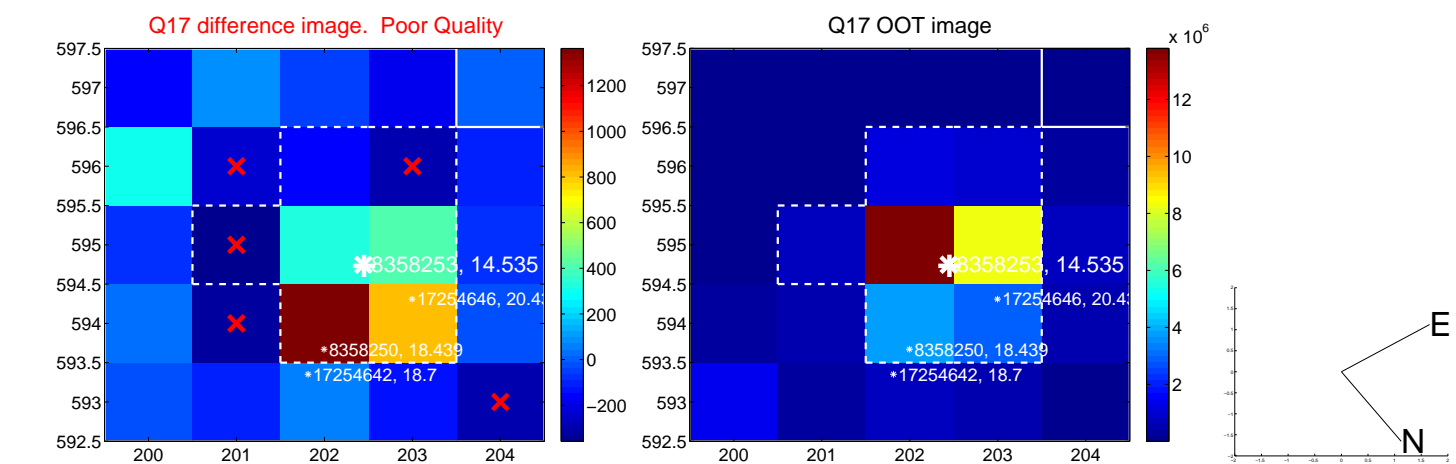
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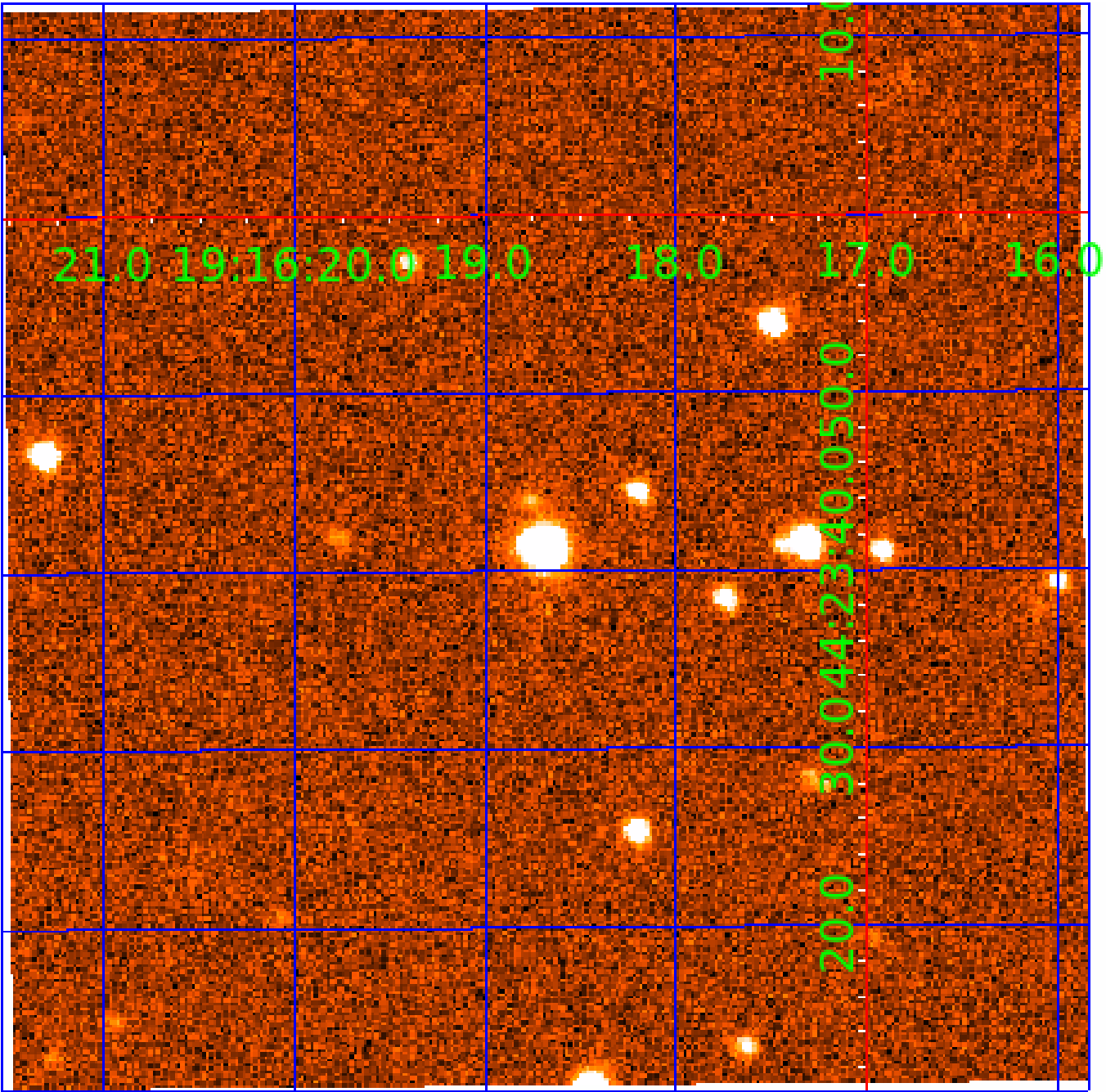


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



UKIRT Image

Declination



KIC 008358253

Q1-17 DR25 TCE Parameters

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

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008358253-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
008358253-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
008358253-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
008358253-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS
008358253-07	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_FEW_DIFFS

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

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

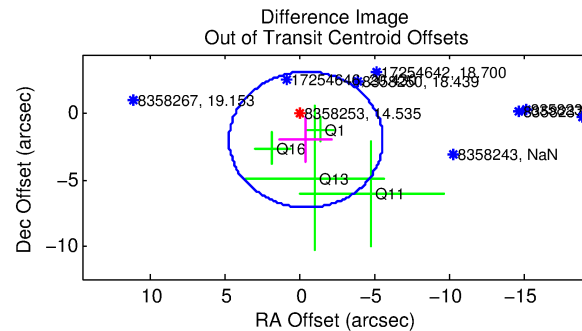
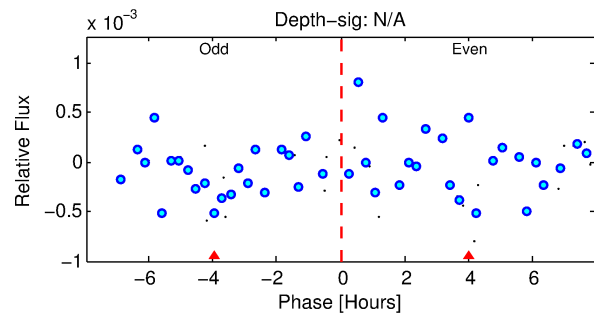
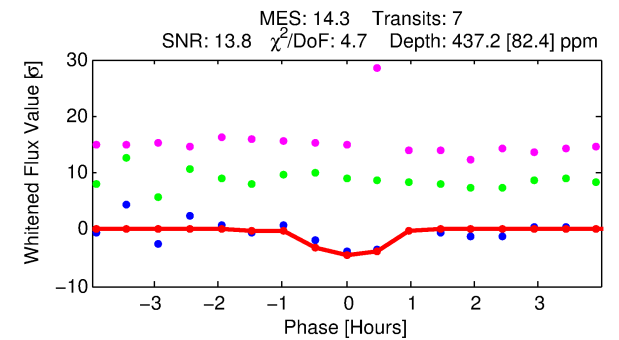
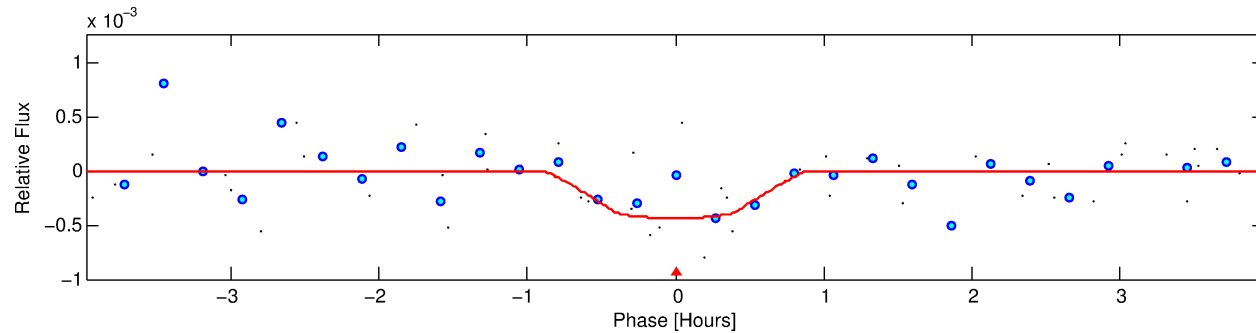
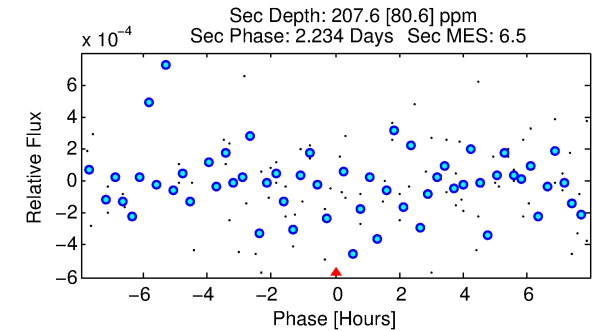
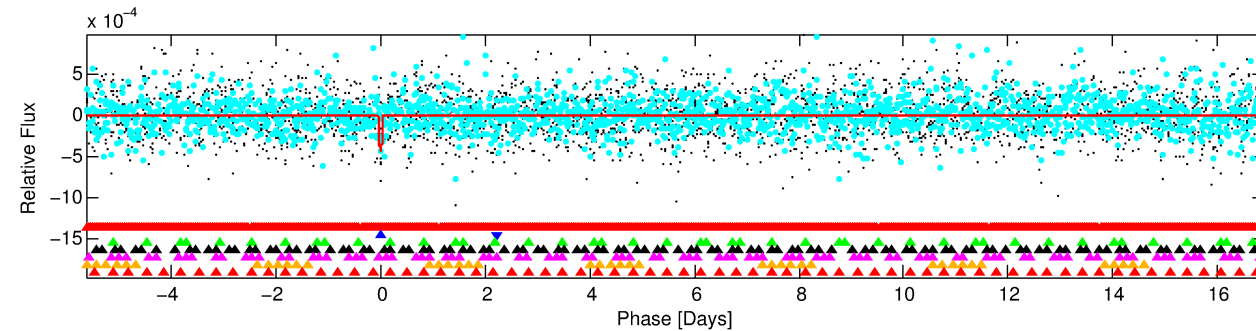
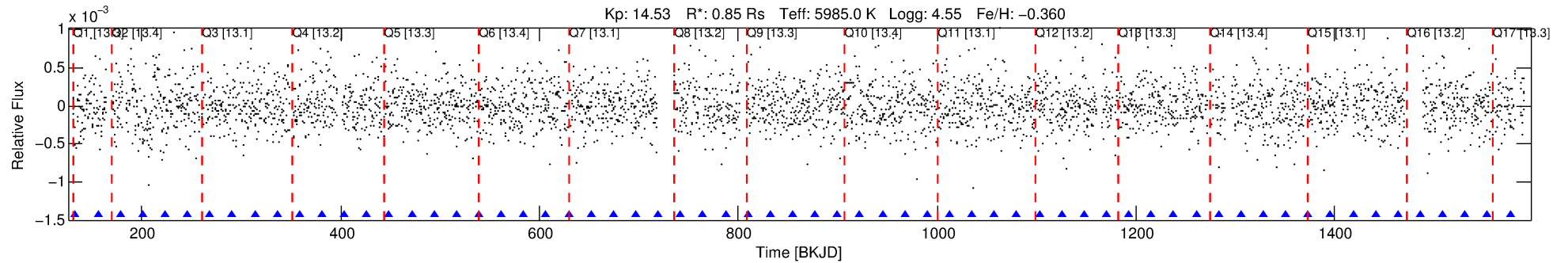
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008358253-02

No Significant Match Found

DV One-Page Summary

KIC: 8358253 Candidate: 2 of 7 Period: 22.545 d



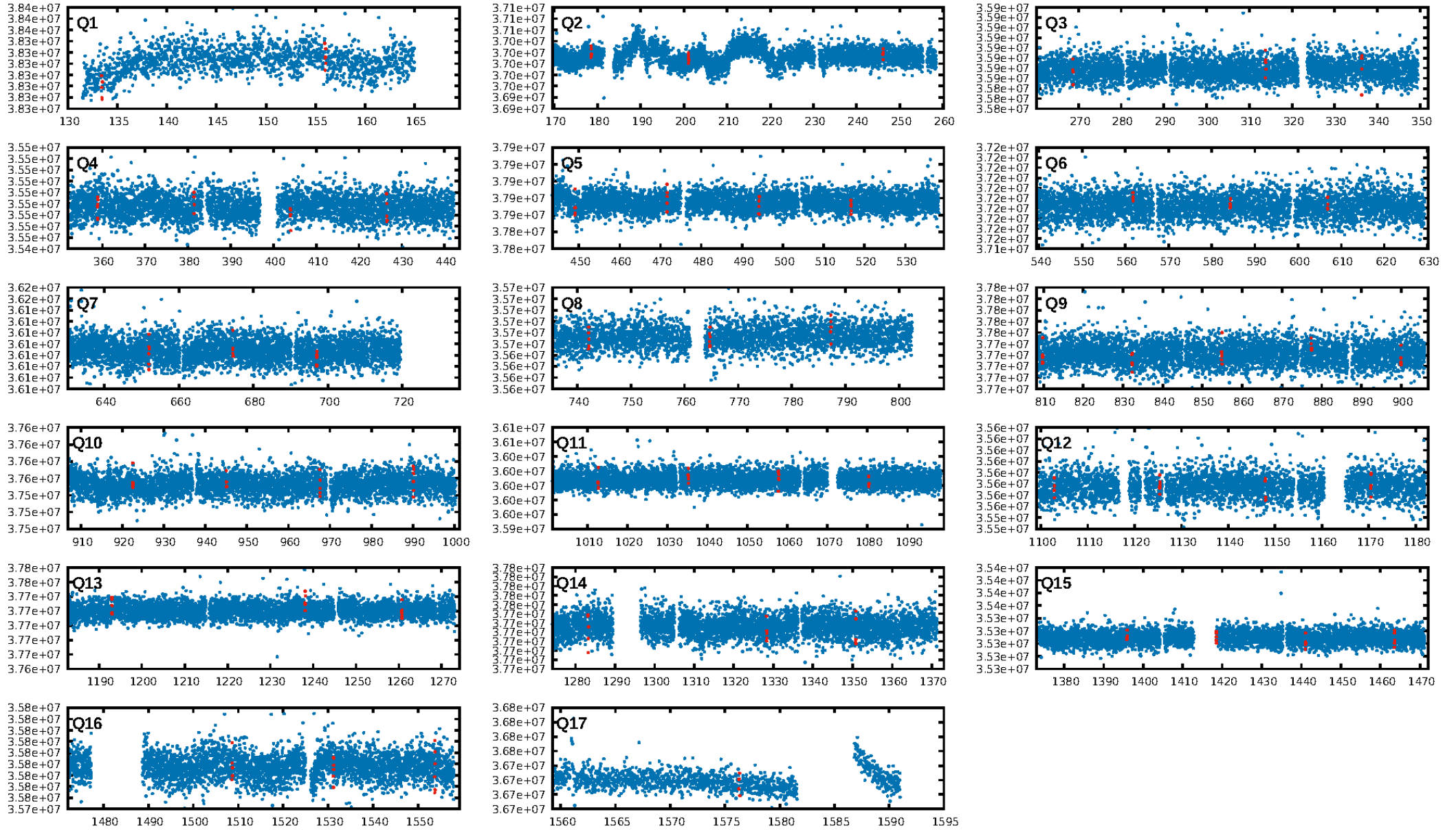
DV Fit Results:

Period = 22.54485 [0.00035] d
Epoch = 133.4376 [0.0144] BKJD
Rp/R* = 0.0195 [0.0564]
a/R* = 124.79 [1768.21]
b = 0.34 [37.57]
Seff = 35.84 [13.87]
Teff = 624 [60] K
Rp = 1.82 [5.29] Re
a = 0.1531 [0.0381] AU
Ag = 812.47 [4728.91] [0.17σ]
Teffp = 5150 [7481] K [0.61σ]

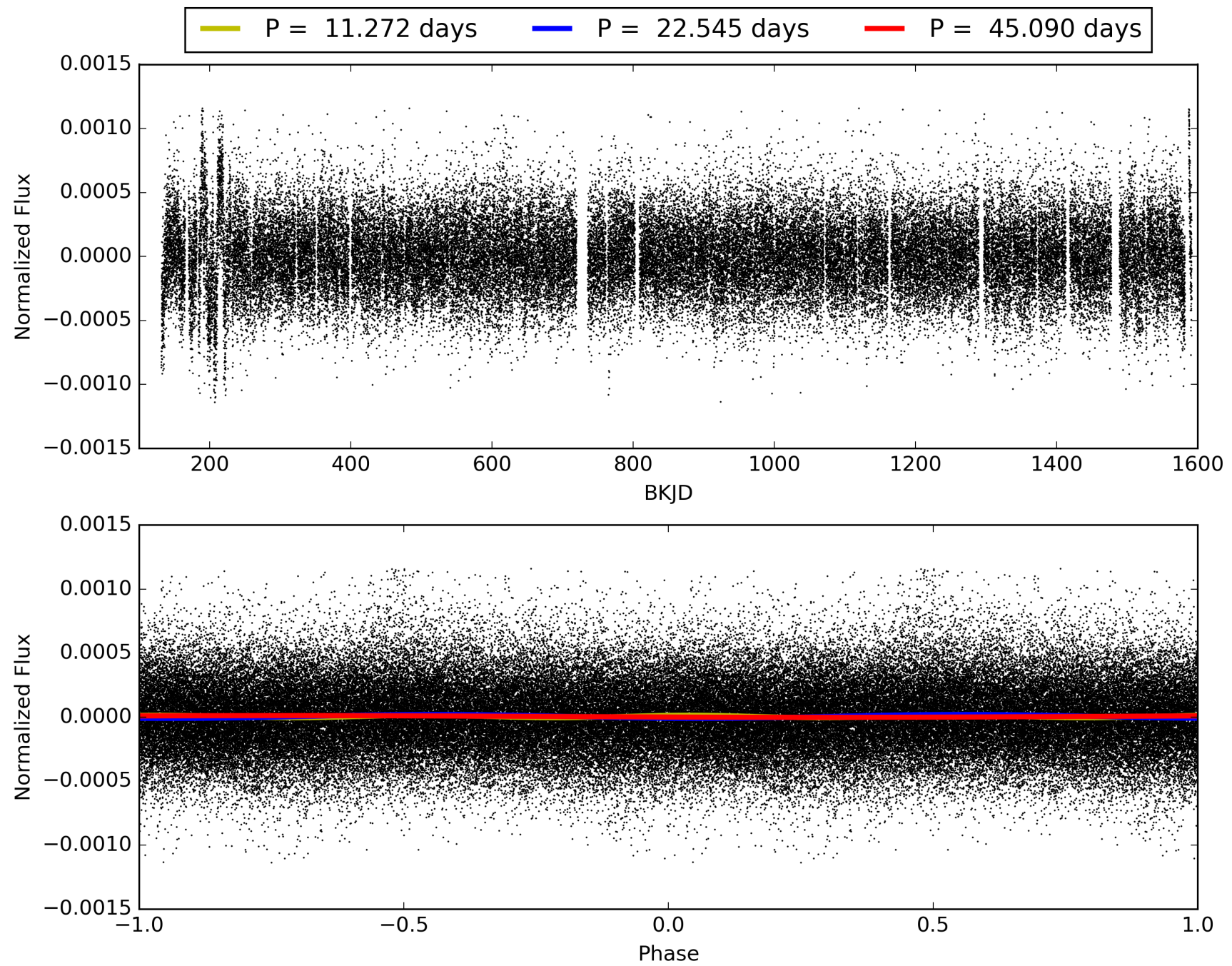
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [9.71σ]
LongPeriod-sig: 100.0% [55.82σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 7.7%
Bootstrap-pfa: 1.78e-11
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: 2625
Centroid-sig: 11.6%
Centroid-so: 0.961 arcsec [1.21σ]
OotOffset-rm: 2.019 arcsec [1.18σ]
KicOffset-rm: 2.053 arcsec [1.20σ]
OotOffset-st: 0/1/1/2 [4]
KicOffset-st: 0/1/1/2 [4]
DiffImageQuality-fgm: 0.50 [2/4]
DiffImageOverlap-fno: 0.82 [14/17]

TCE 008358253-02, PDC Light Curves

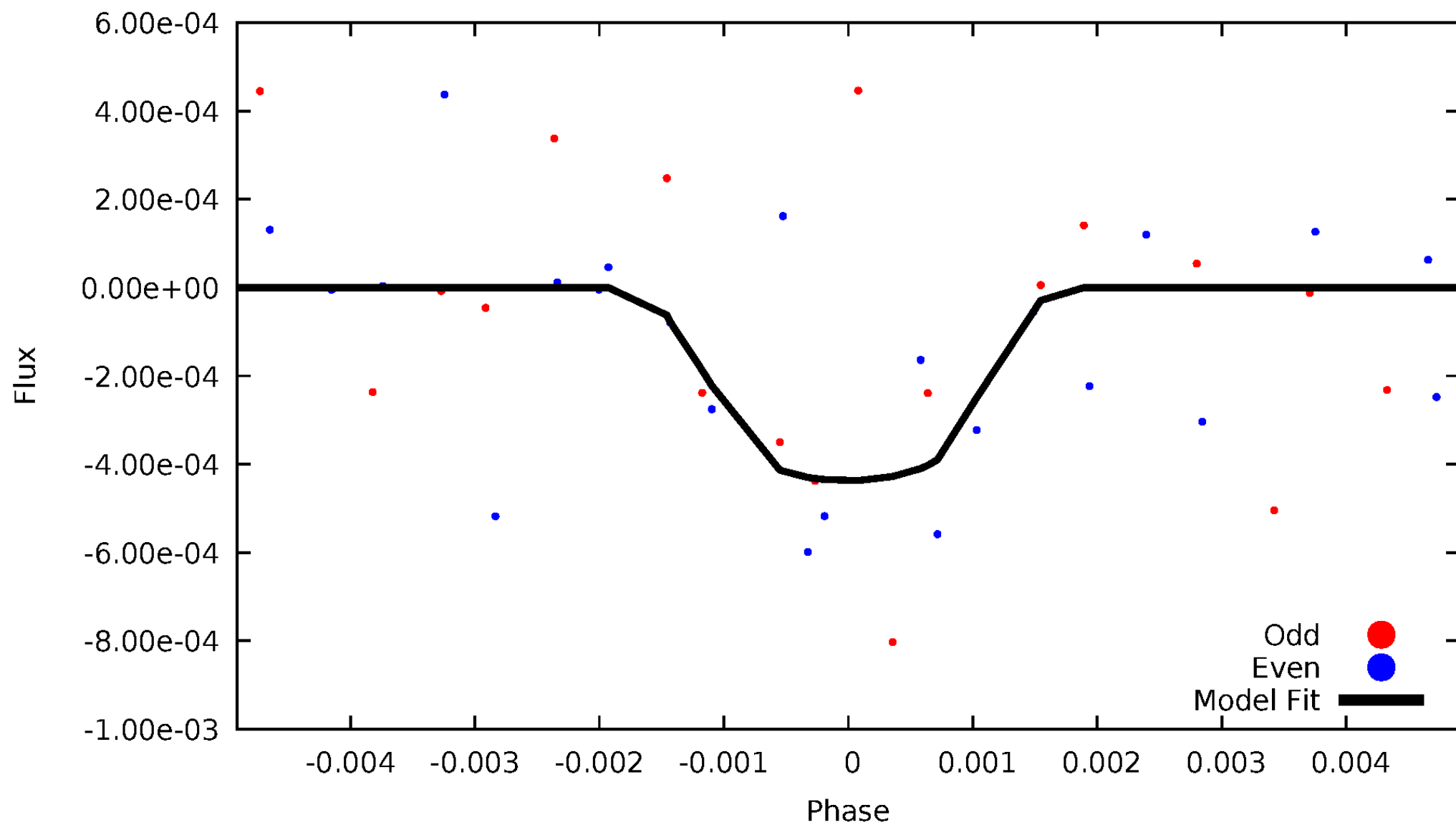


TCE 008358253-02



DV Odd/Even

TCE 008358253-02

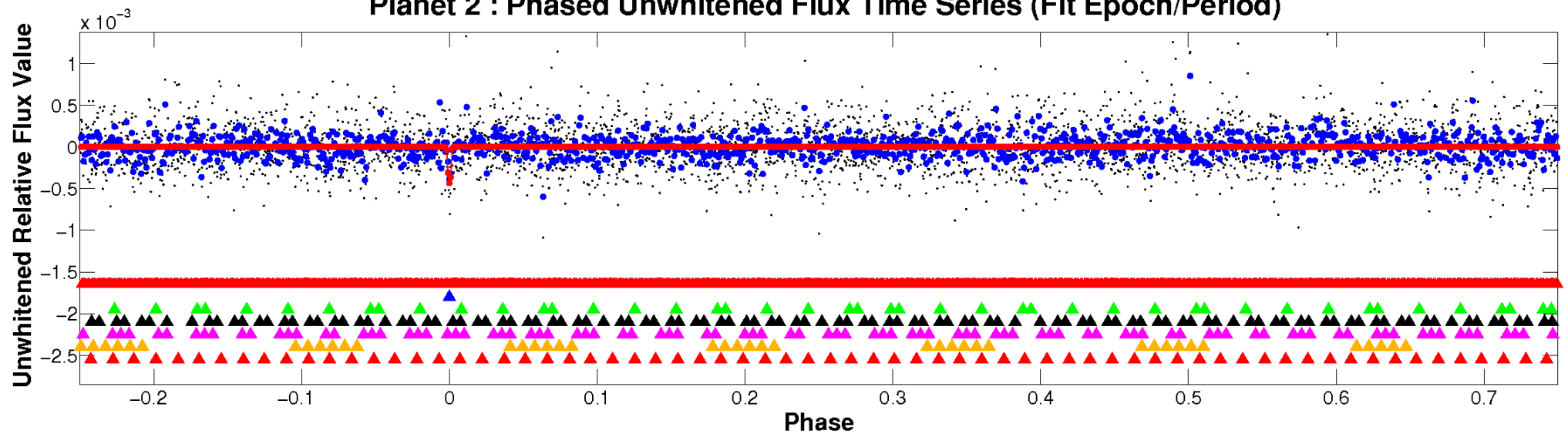


ALT Odd/Even

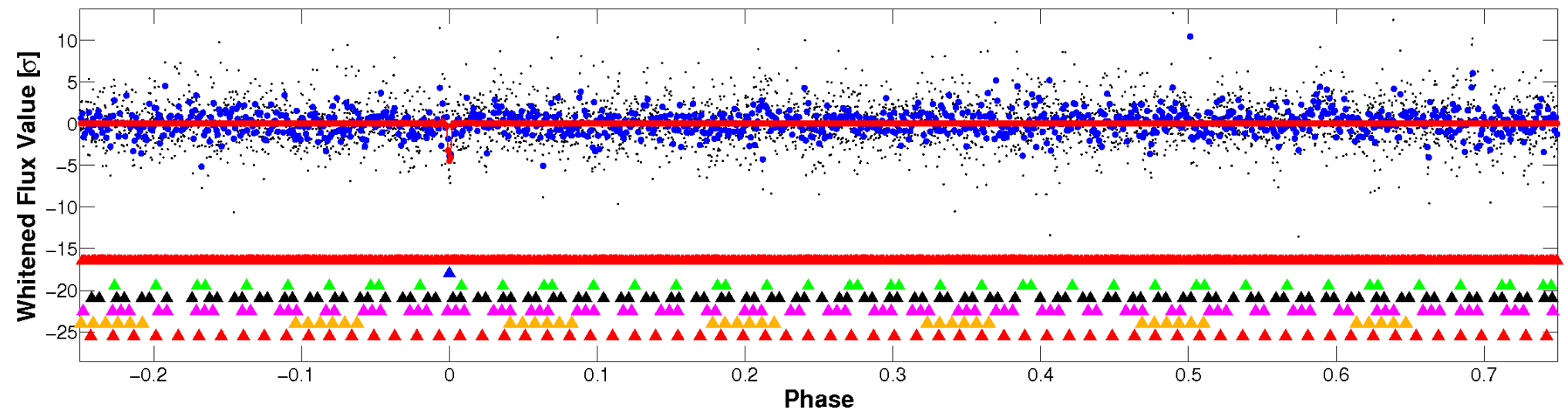
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

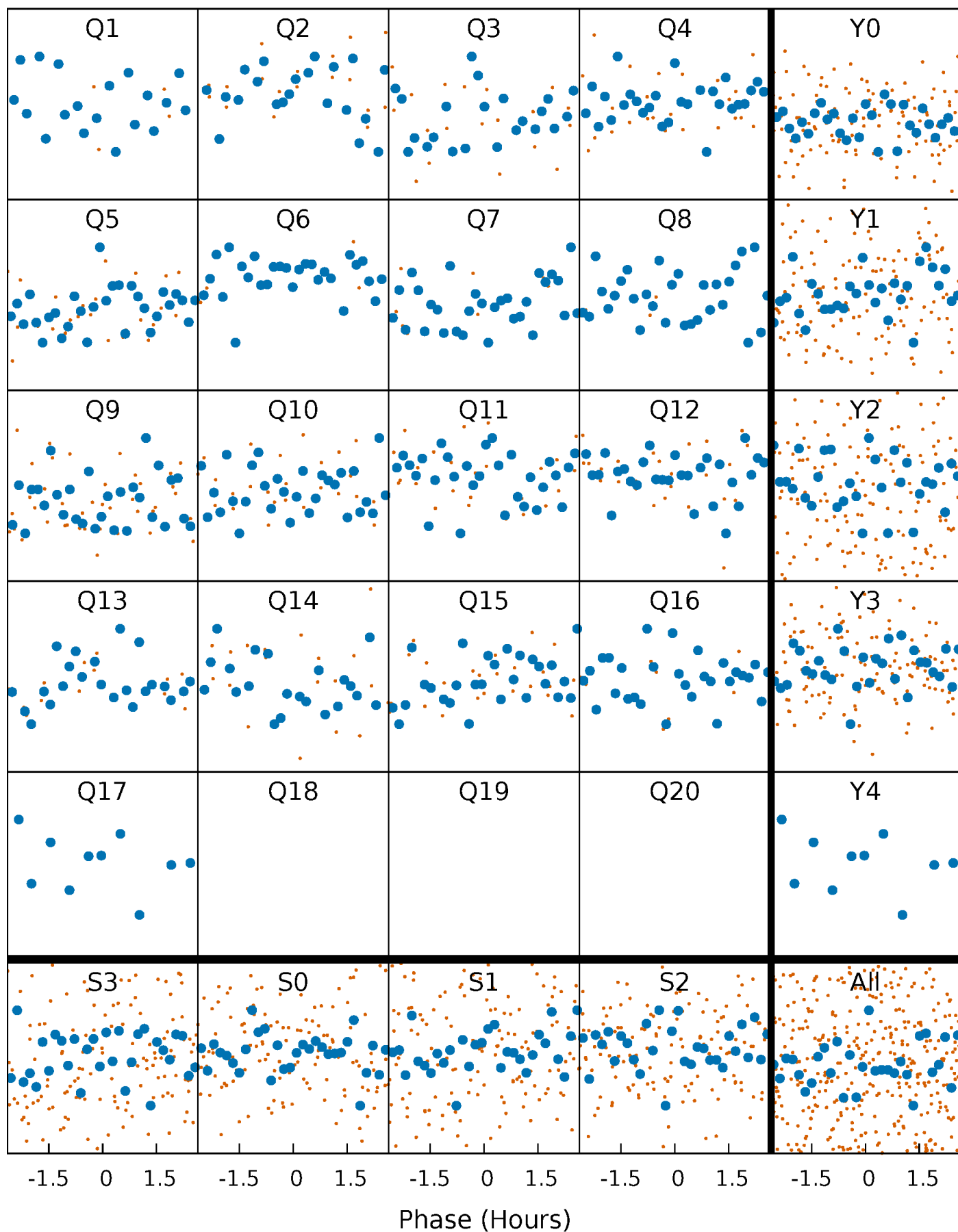


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



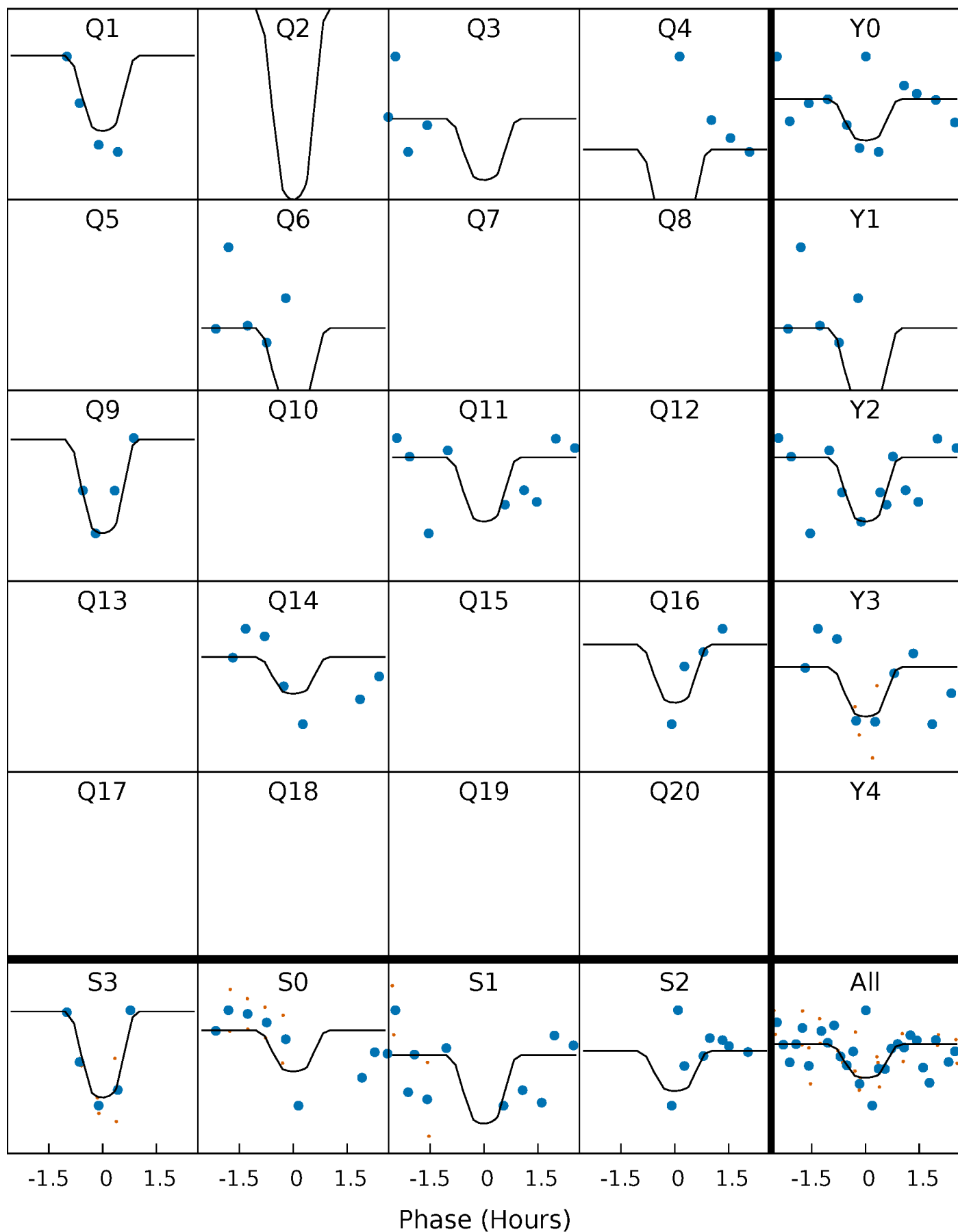
PDC Quarter-Phased Transit Curves

TCE 008358253-02 P= 22.544851 Days $T_0=133.437573$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 008358253-02 P= 22.544851 Days $T_0=133.437573$ (BKJD)

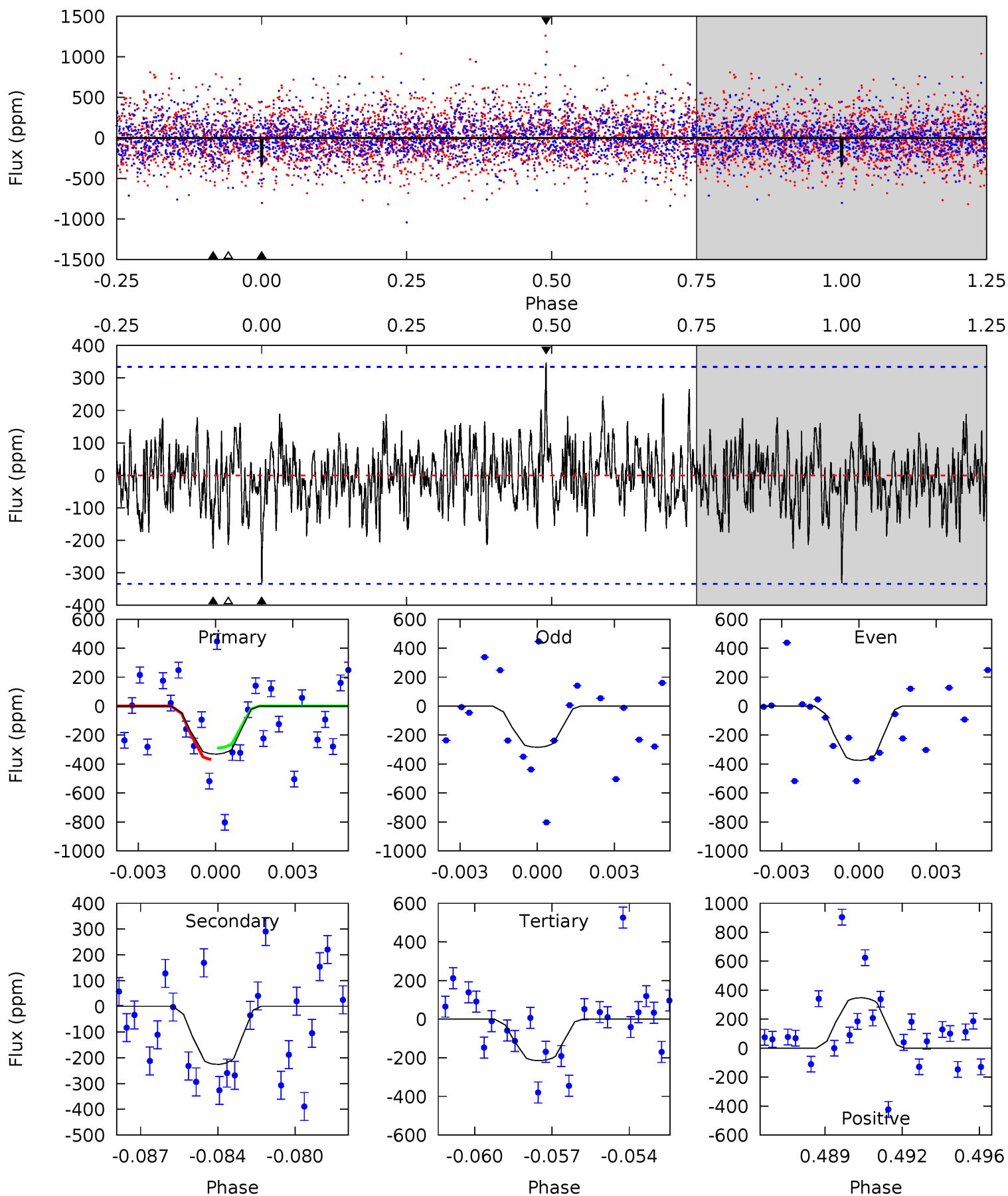


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

008358253-02, P = 22.544851 Days, E = 110.892722 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.20	3.53	3.36	5.45	5.23	2.93	1.23	1.84	-0.25	0.17	-1.92	0.71	0.88	0.51	0.62



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 008358253

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5985^{+161}_{-179}	$4.548^{+0.048}_{-0.204}$	$-0.360^{+0.300}_{-0.300}$	$0.855^{+0.248}_{-0.083}$	$0.942^{+0.109}_{-0.109}$	$2.122^{+0.425}_{-1.108}$
	+3%/-3%	+1%/-4%	+83%/-83%	+29%/-10%	+12%/-12%	+20%/-52%
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 008358253-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-225 ± 64	$4.65^{+4.57}_{-3.08}$	891^{+68}_{-40}	3762^{+2129}_{-713}	128^{+1138}_{-93}
Alt.	N/A	N/A	N/A	N/A	N/A

T_{max} = Theoretical Maximum Planetary Temperature

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

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

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

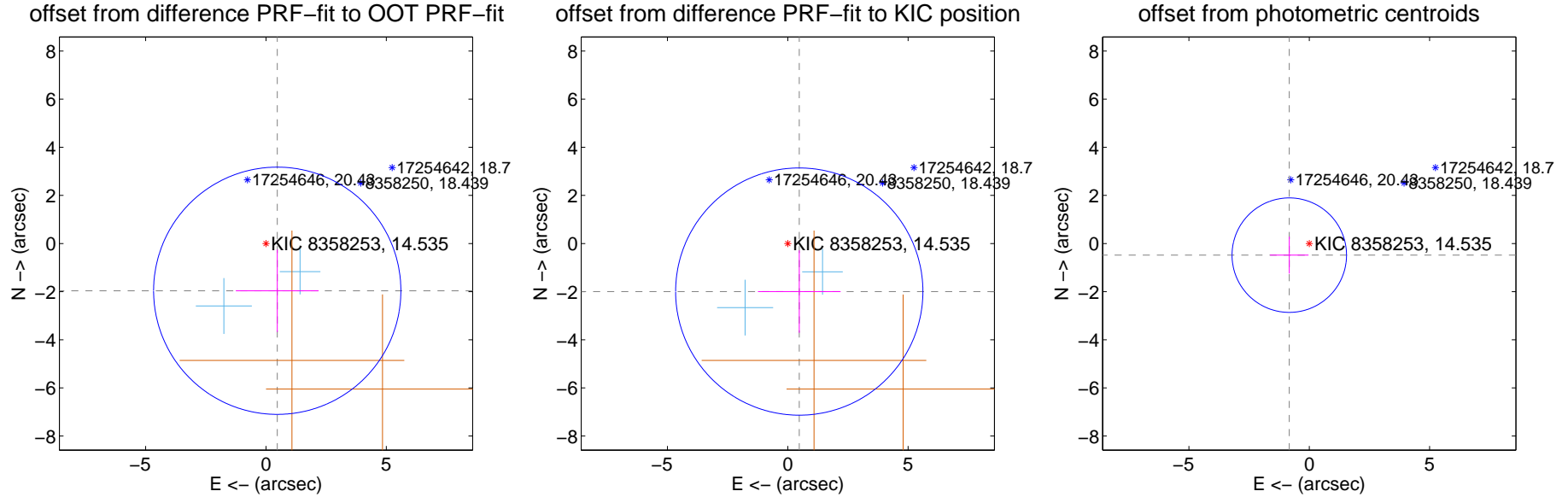
DV Centroid Data

Supplemental centroid analysis for 008358253-02. Kepler magnitude: 14.54. Transit SNR 13.79

There are 2 quarters with good PRF difference image offsets

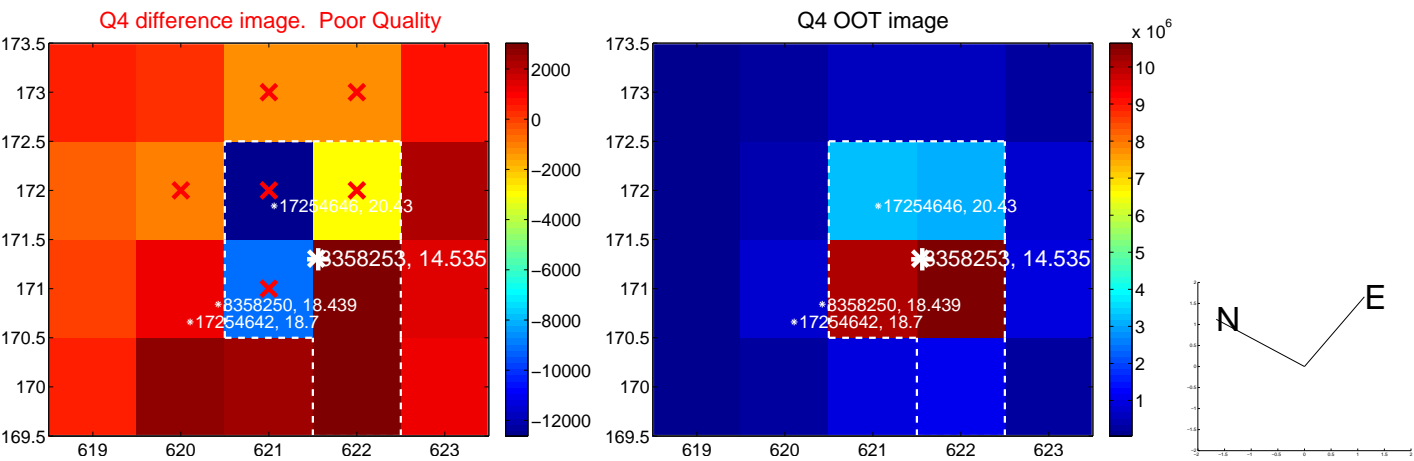
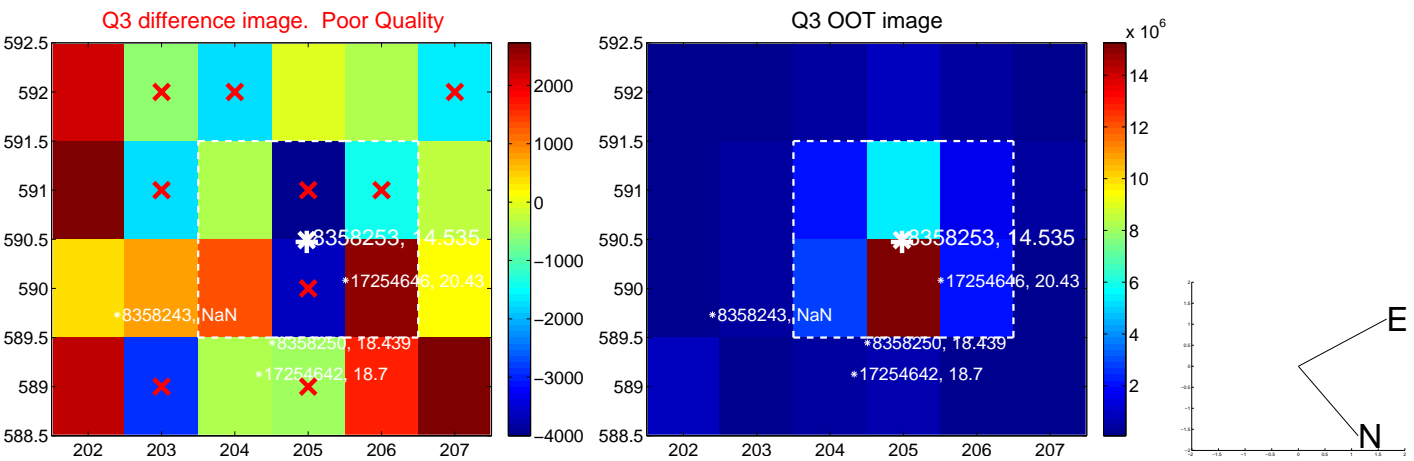
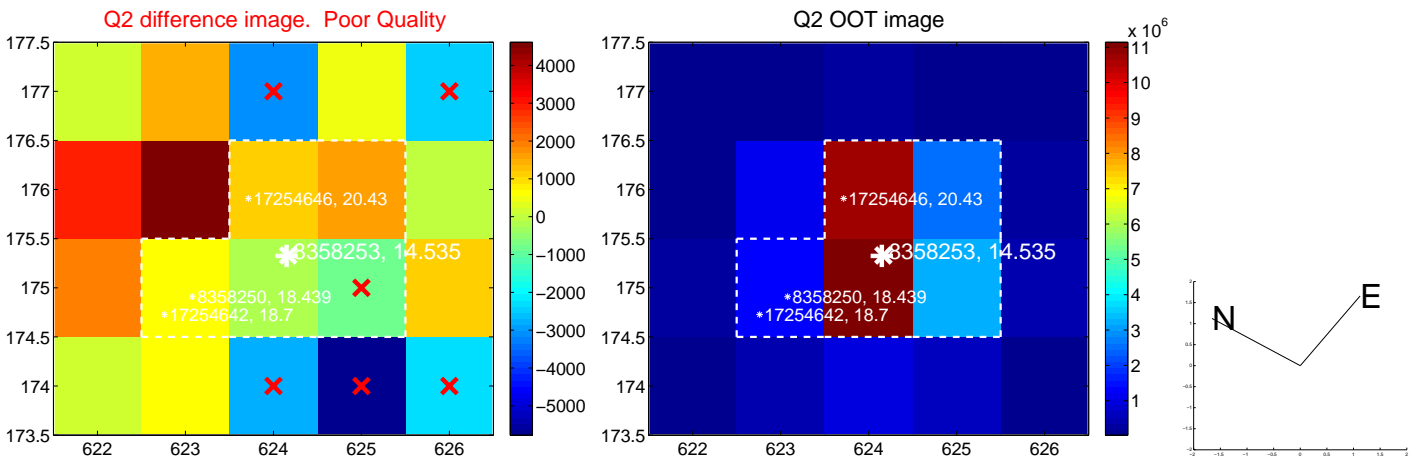
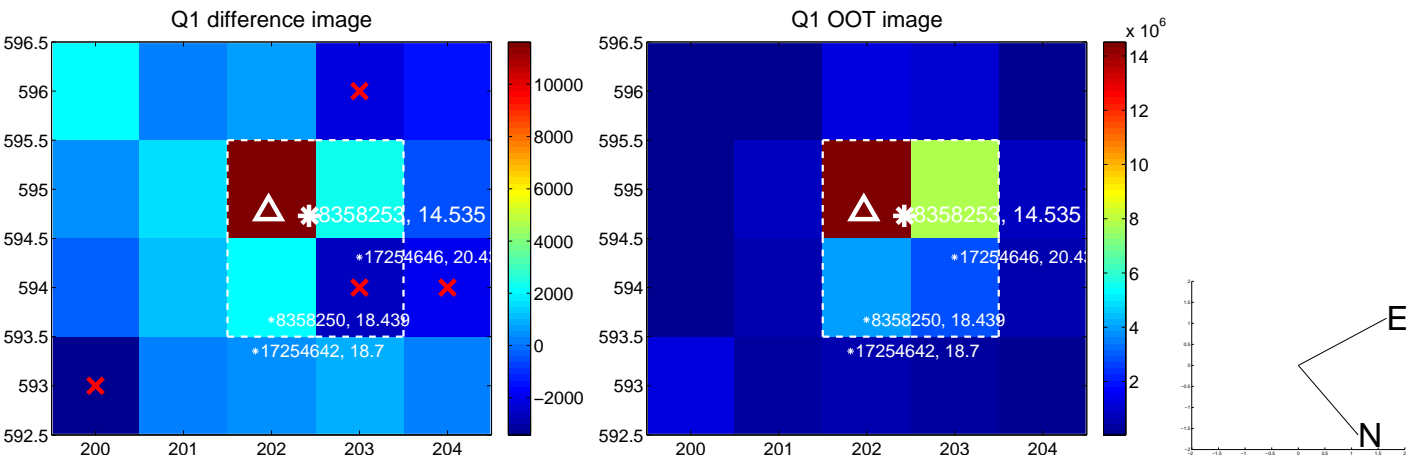
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.019 ± 1.713	1.18	-0.468 ± 1.721	-1.964 ± 1.713
PRF-fit source offset from KIC position	2.053 ± 1.713	1.20	-0.477 ± 1.721	-1.997 ± 1.713
photometric centroid source offset	0.96 ± 0.79	1.21	0.83 ± 0.80	-0.48 ± 0.77

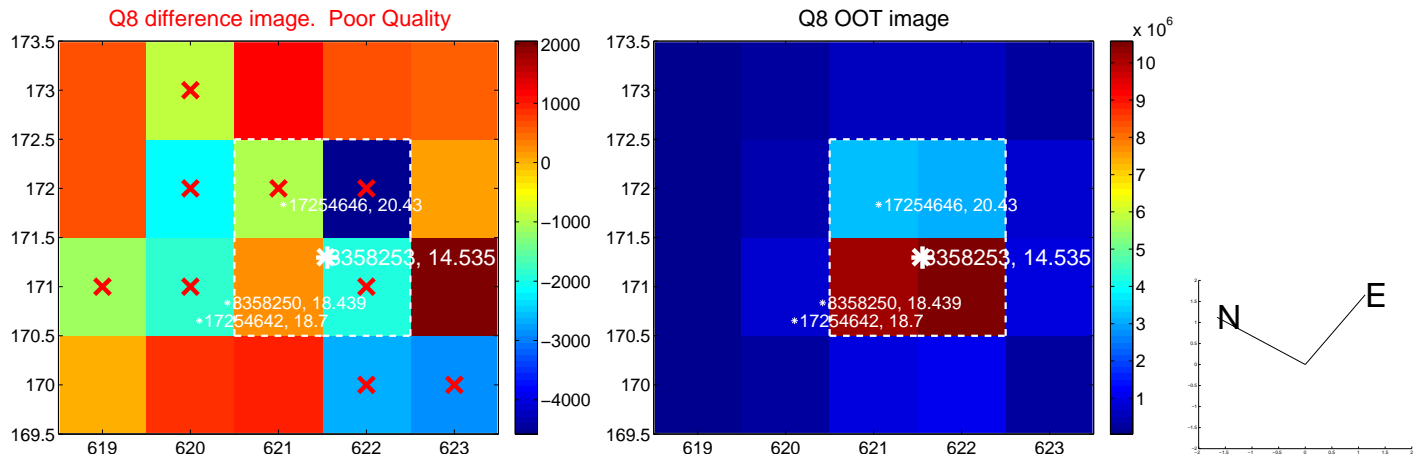
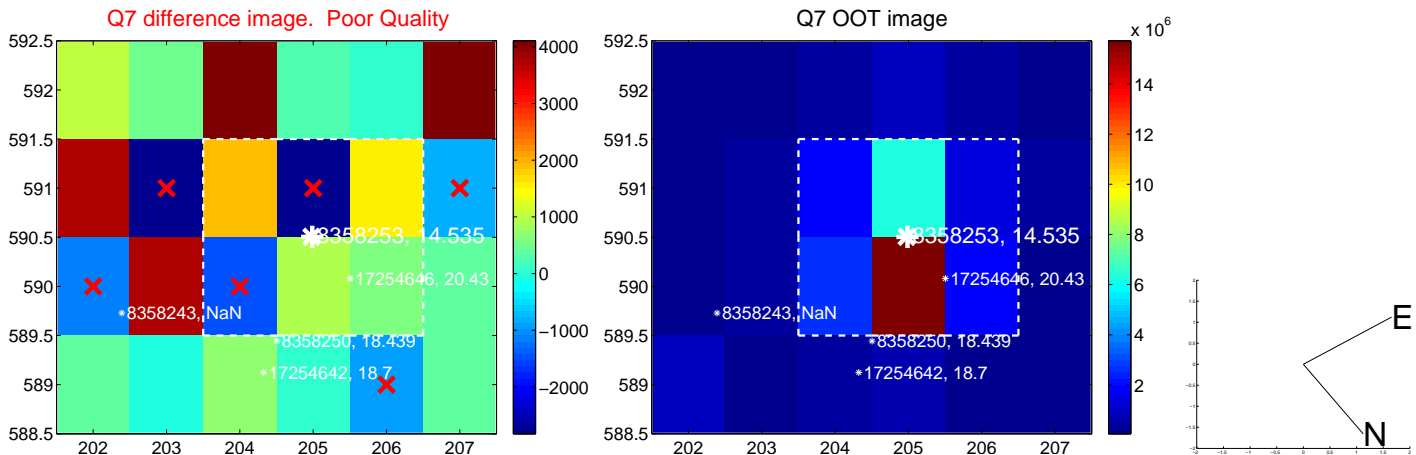
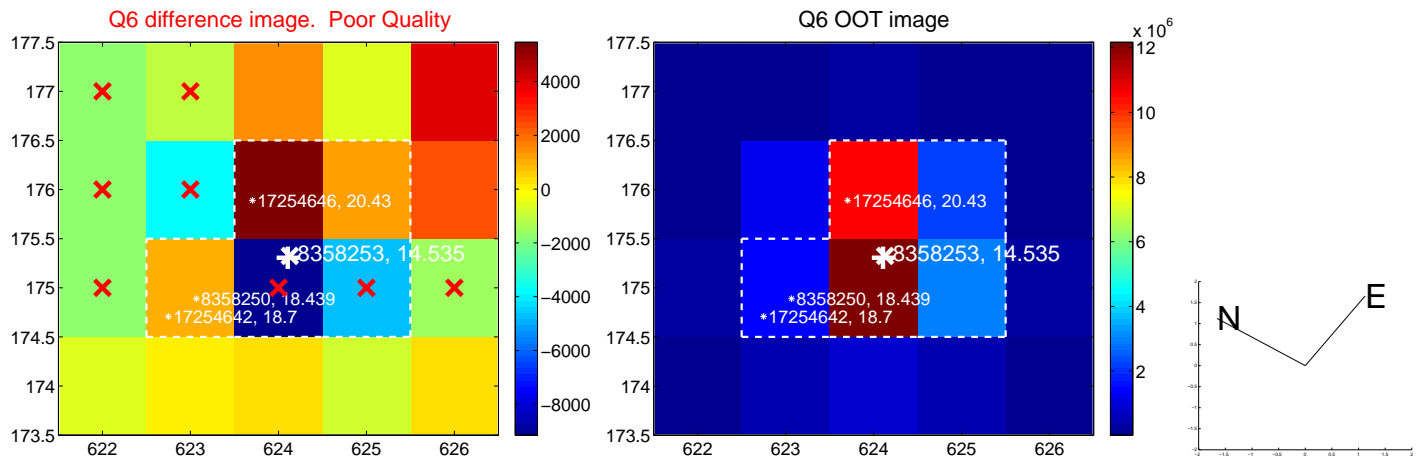
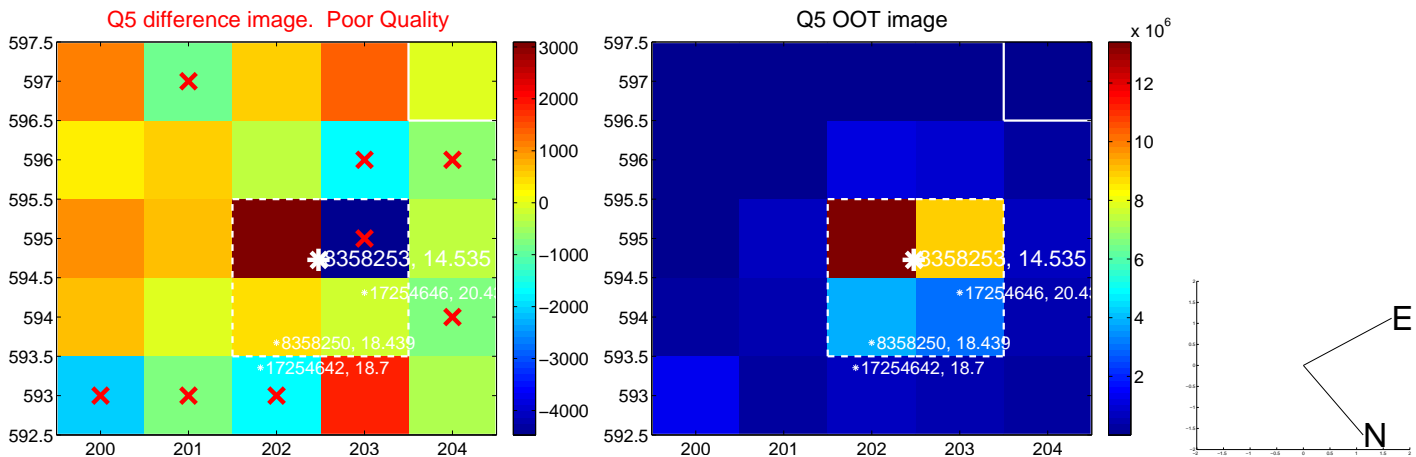


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

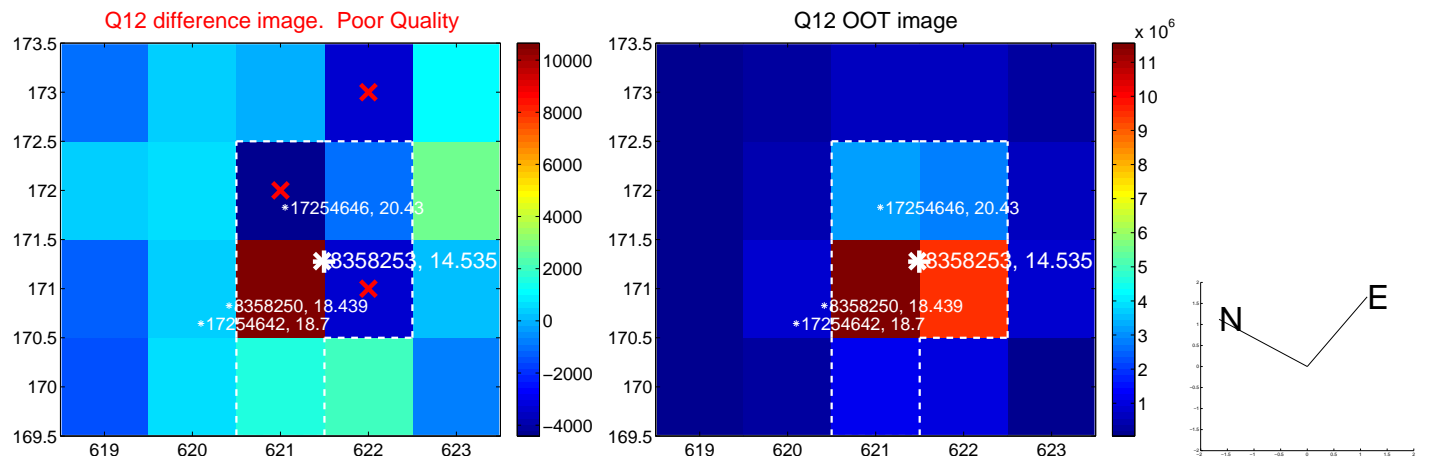
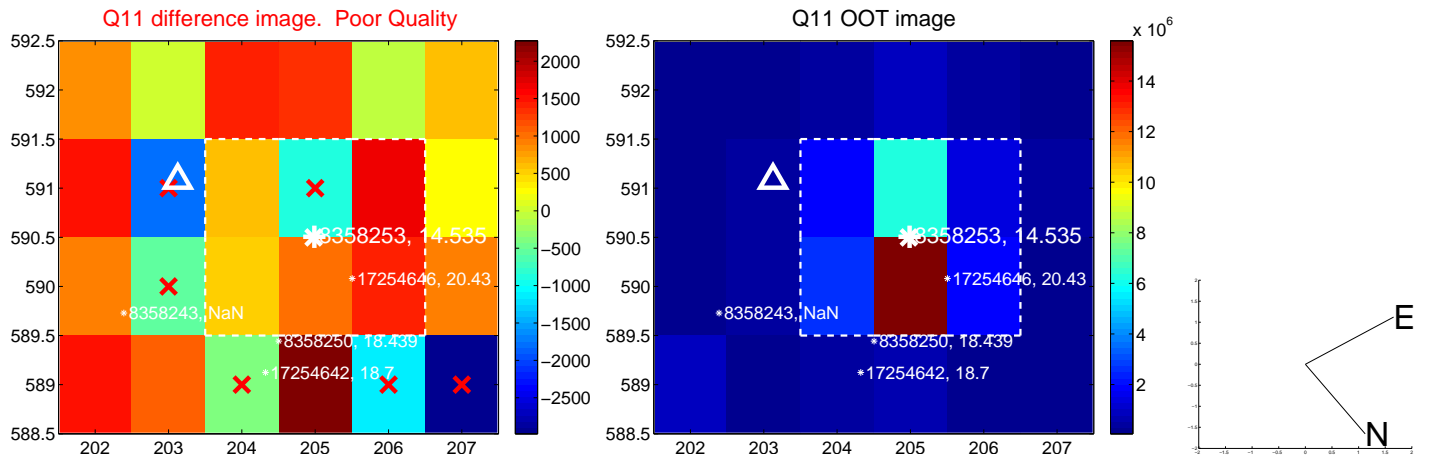
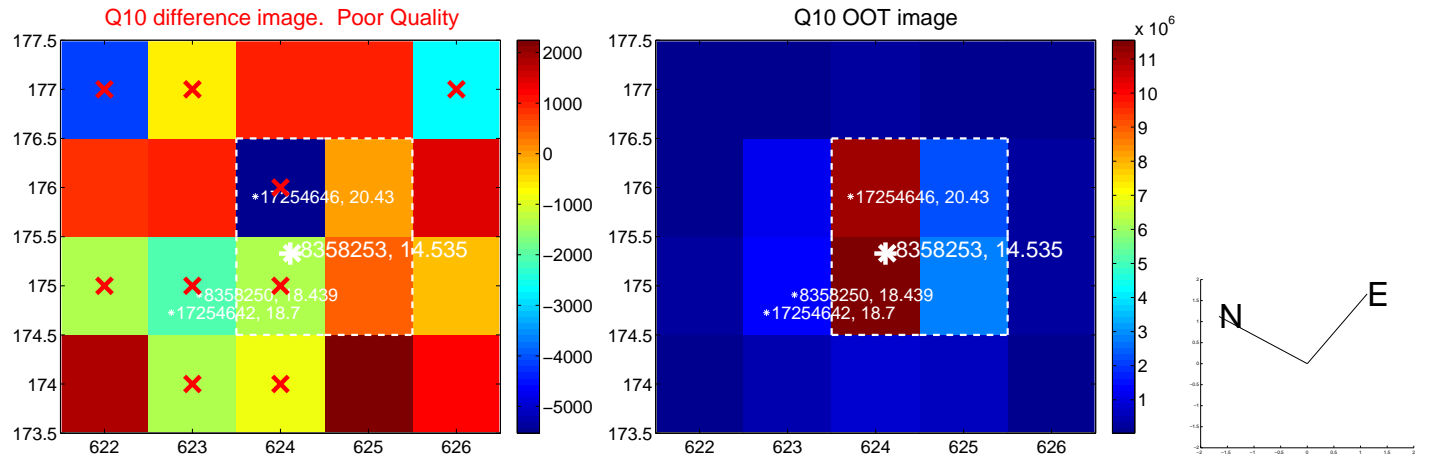
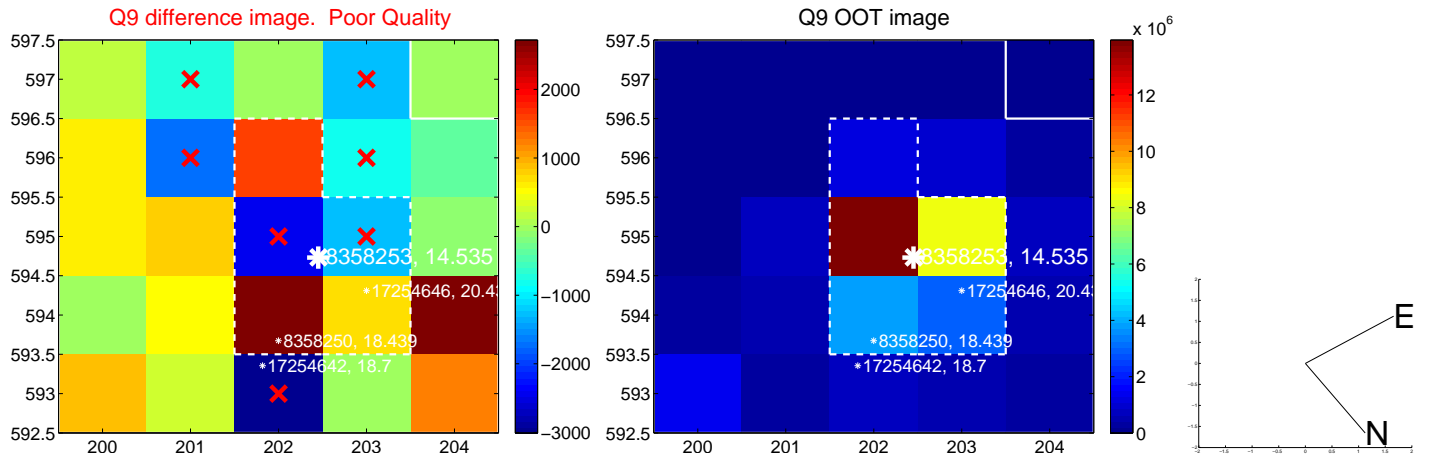
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



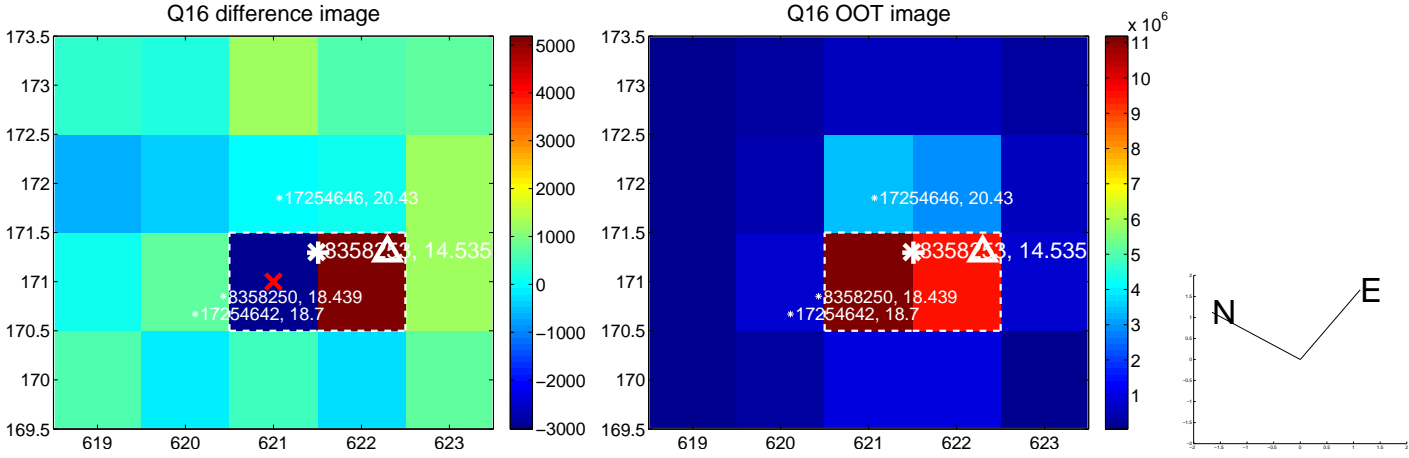
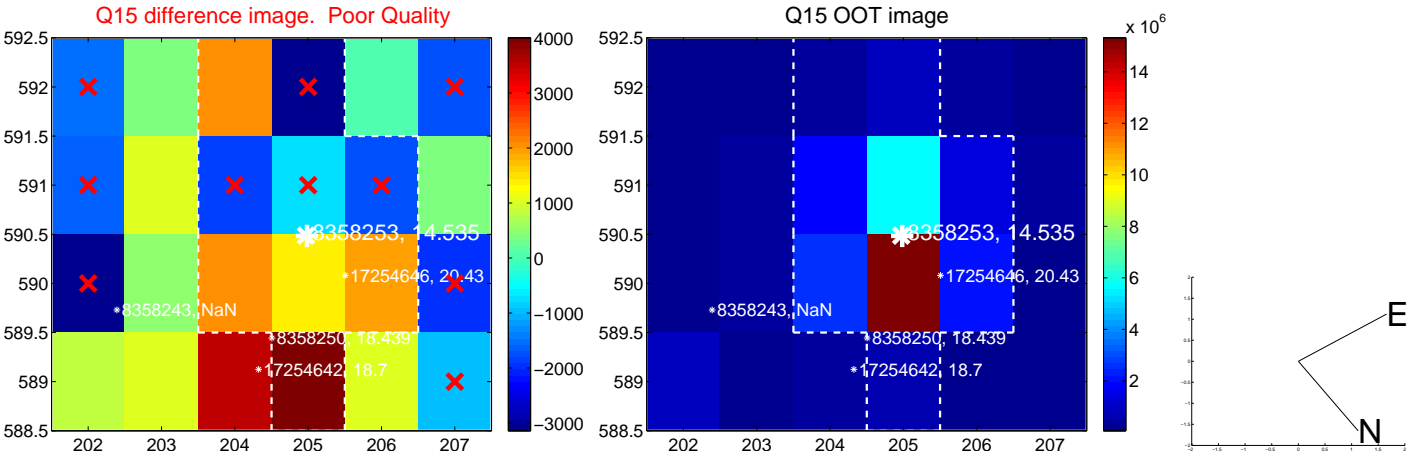
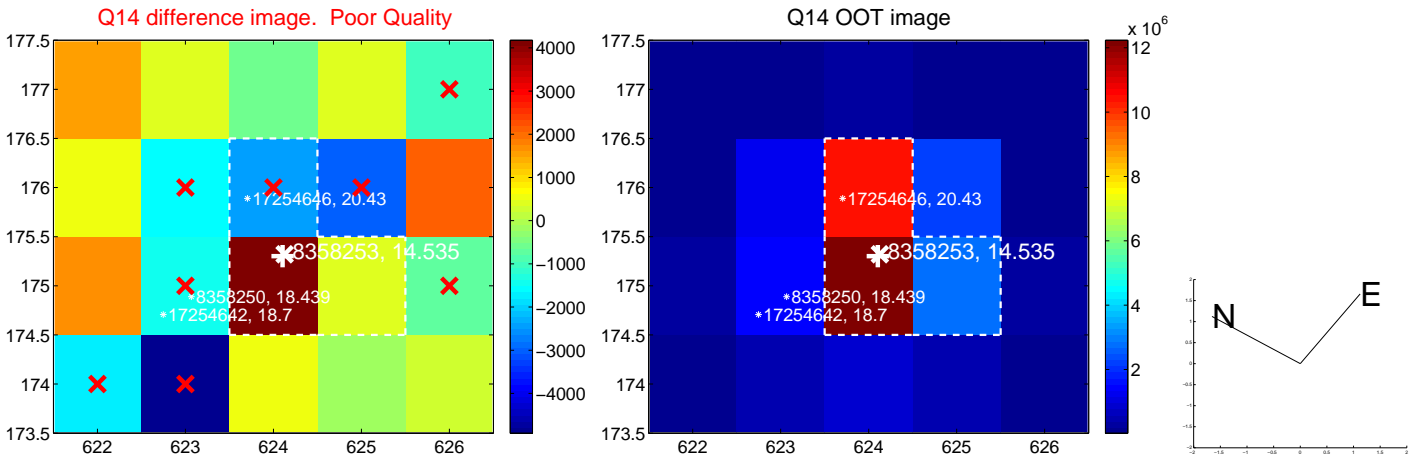
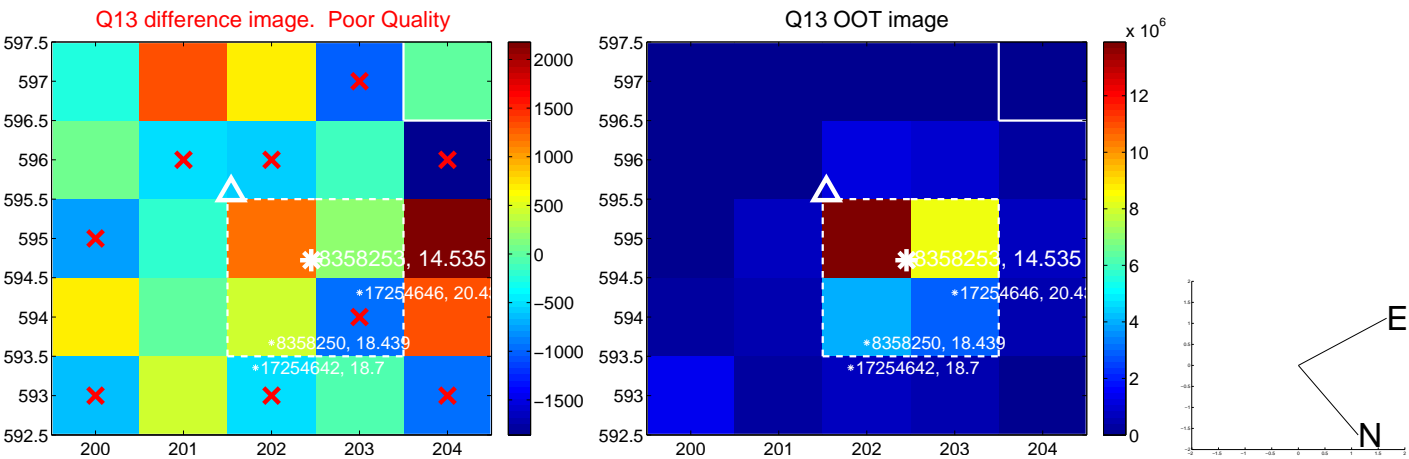
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



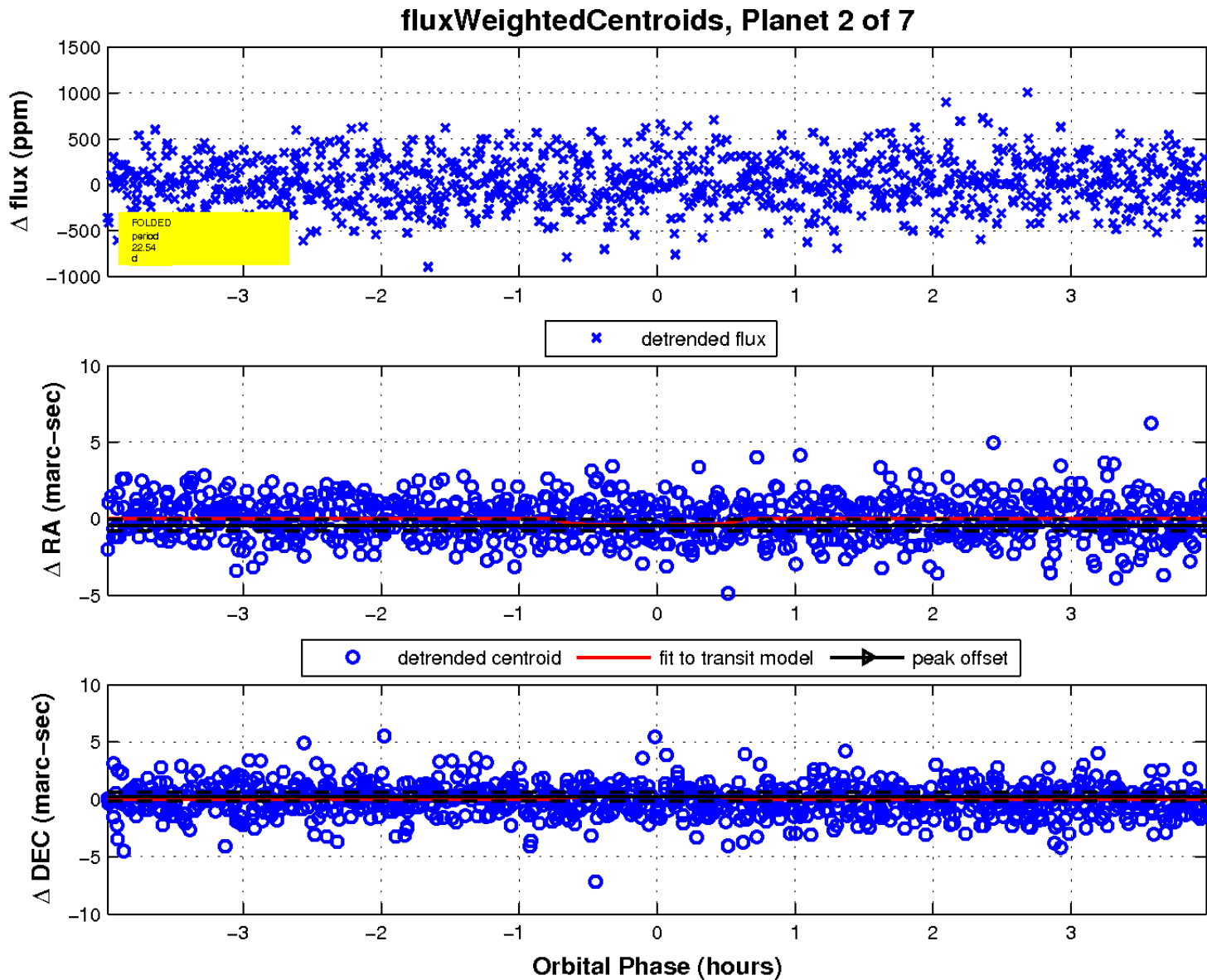
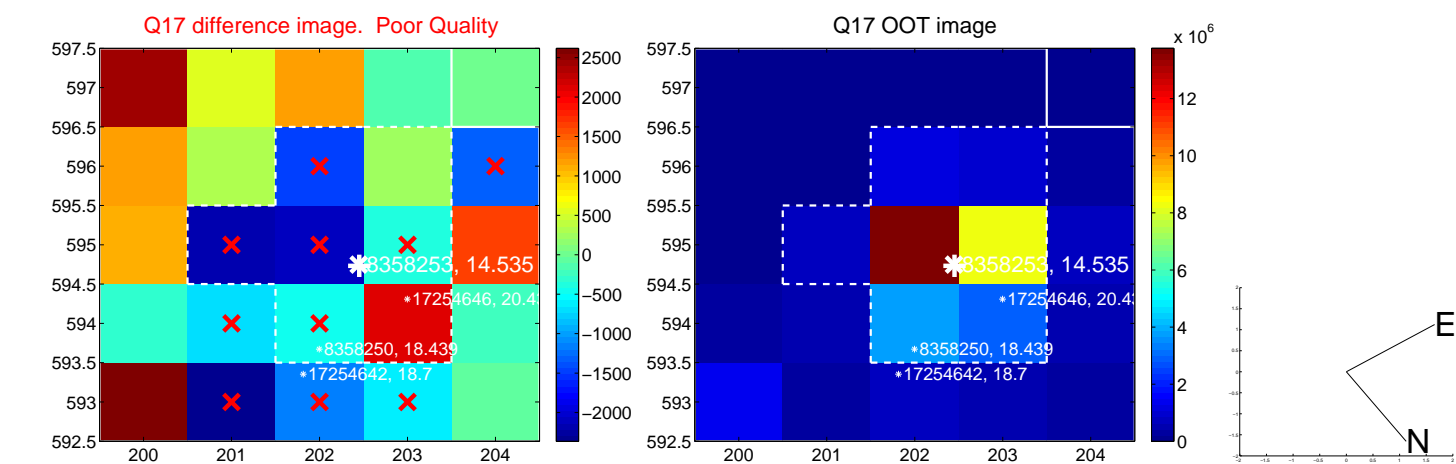
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

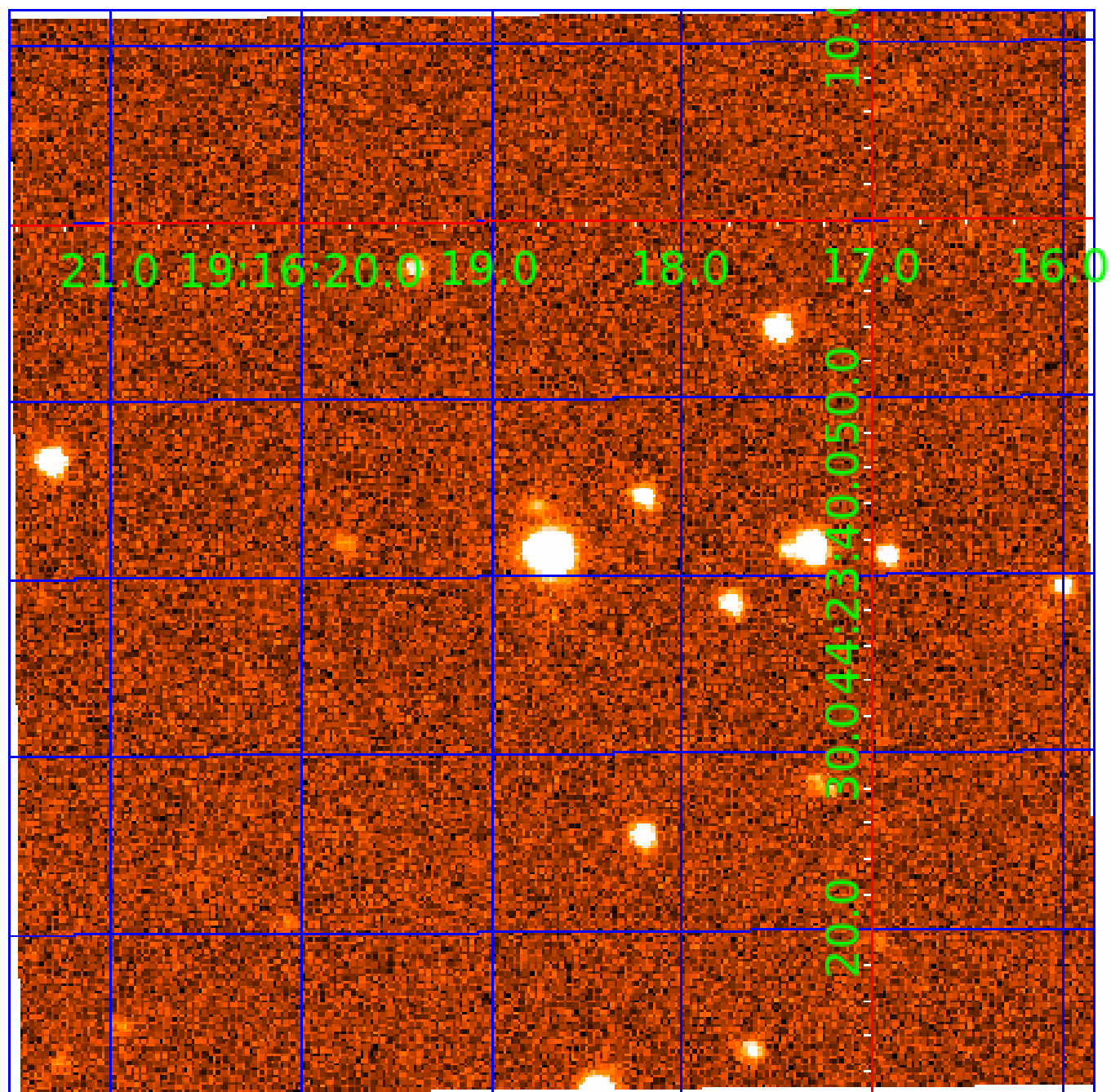


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008358253

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})
008358253-01	OBS	No	1.560070	132.642266	32.2	11.560	11.0	13.5	0.85	5985	0.48	1261.64
008358253-02	OBS	No	22.544851	133.437573	437.2	1.328	14.3	13.8	0.85	5985	1.82	35.84
008358253-03	OBS	No	32.494713	140.172890	406.3	4.066	13.7	15.3	0.85	5985	1.89	22.02
008358253-04	OBS	No	12.937468	132.727048	276.7	2.664	13.2	12.0	0.85	5985	1.66	75.16
008358253-05	OBS	No	15.455704	140.176654	300.4	1.951	11.8	12.0	0.85	5985	1.73	59.29
008358253-06	OBS	No	35.454416	159.998443	204.3	7.238	11.3	9.3	0.85	5985	1.43	19.60
008358253-07	OBS	No	21.549892	139.252006	293.9	2.069	10.1	11.1	0.85	5985	1.66	38.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008358253-01	OBS	FP	0.00	1	0	0	0	LPP_DV
008358253-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS
008358253-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
008358253-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
008358253-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
008358253-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS
008358253-07	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_FEW_DIFFS

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

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

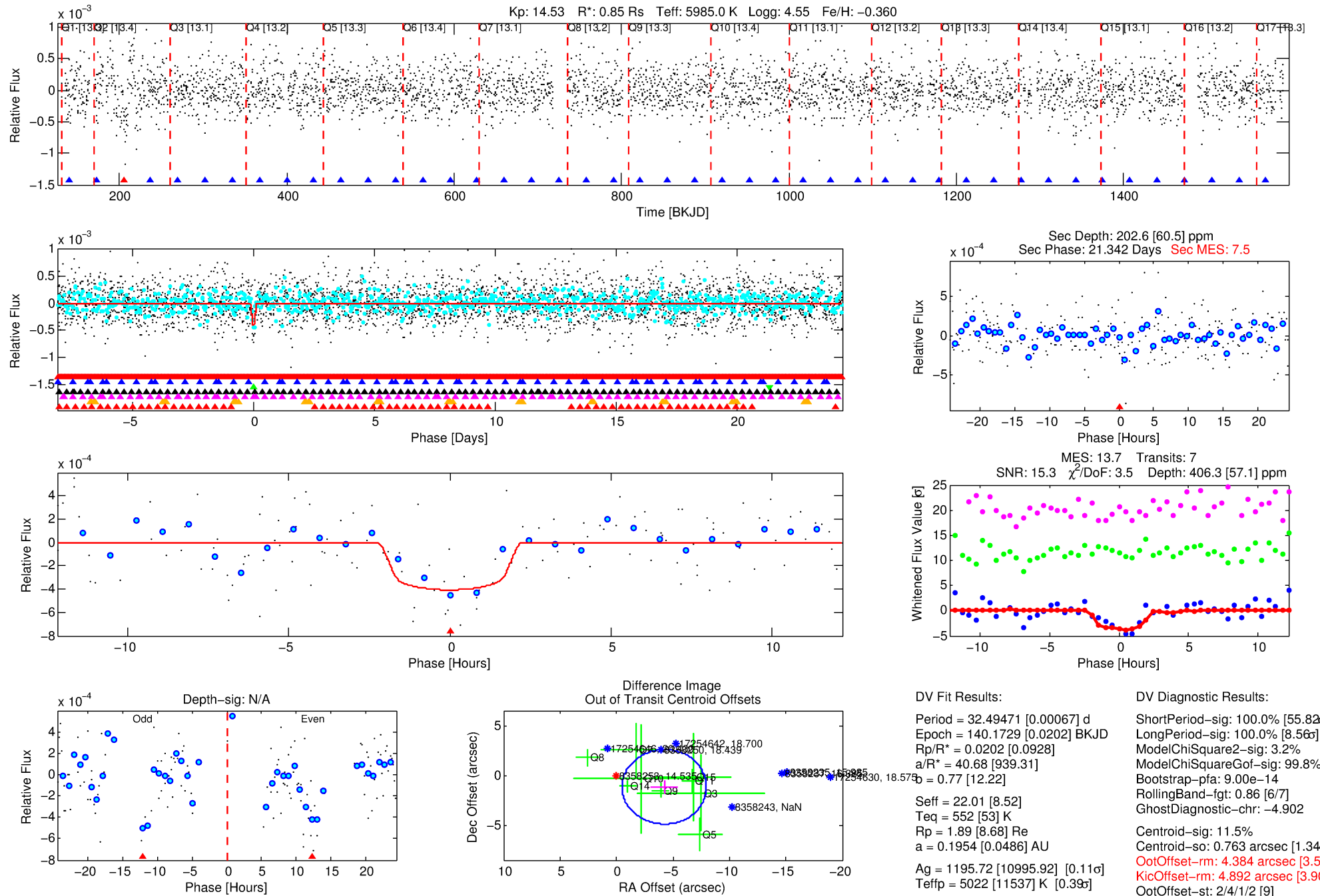
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008358253-03

No Significant Match Found

DV One-Page Summary

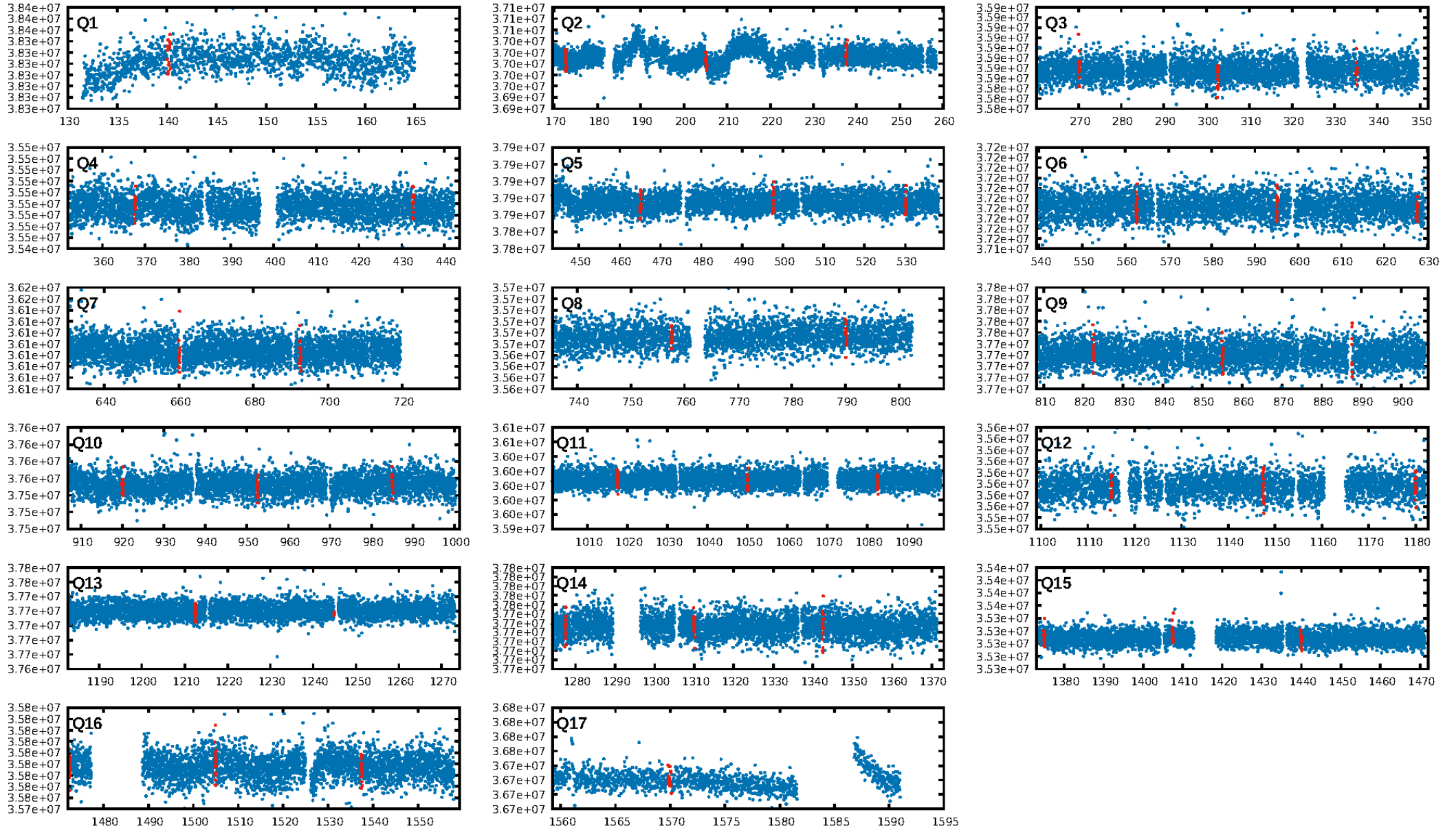
KIC: 8358253 Candidate: 3 of 7 Period: 32.495 d



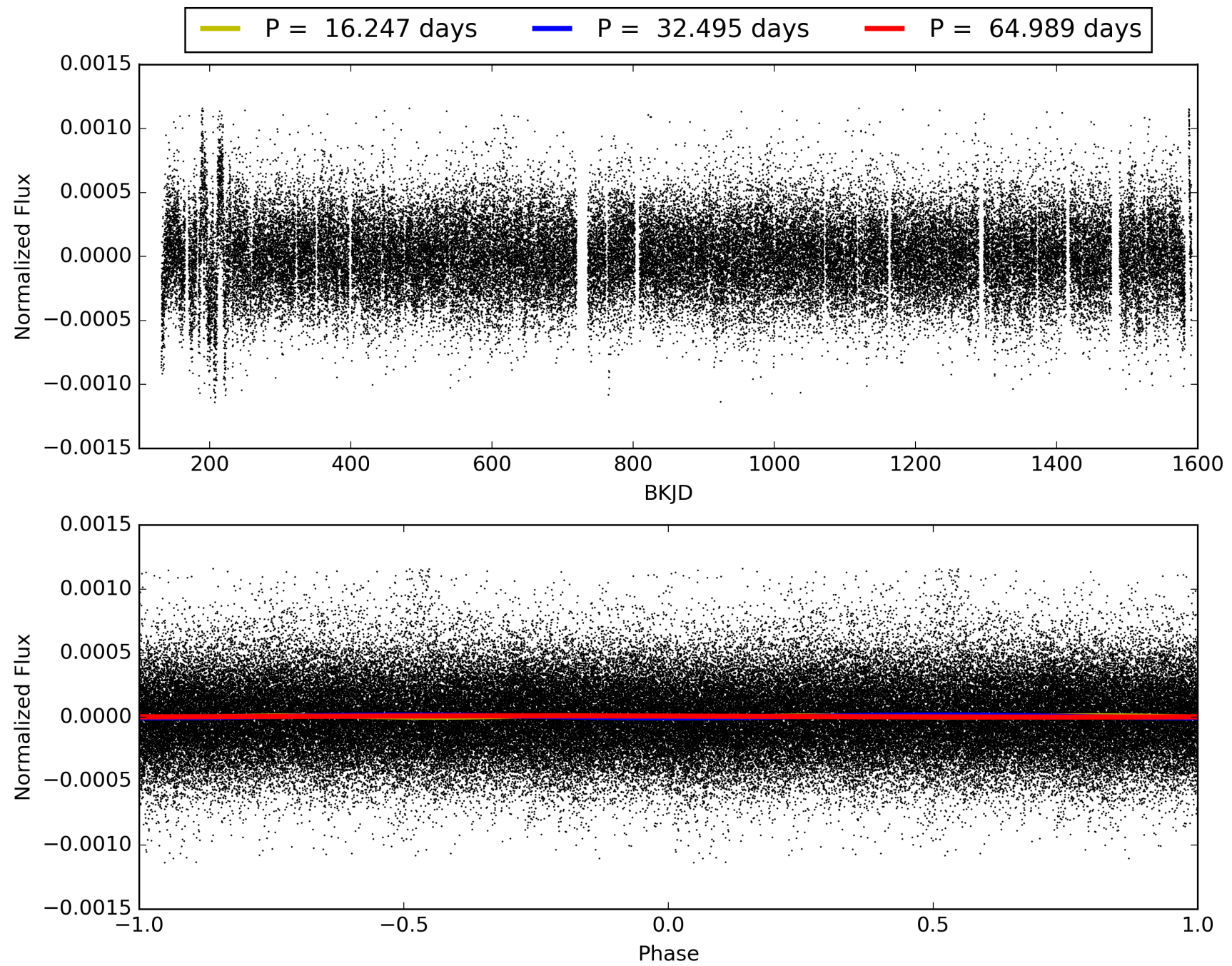
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 19:40:07 Z

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

TCE 008358253-03, PDC Light Curves

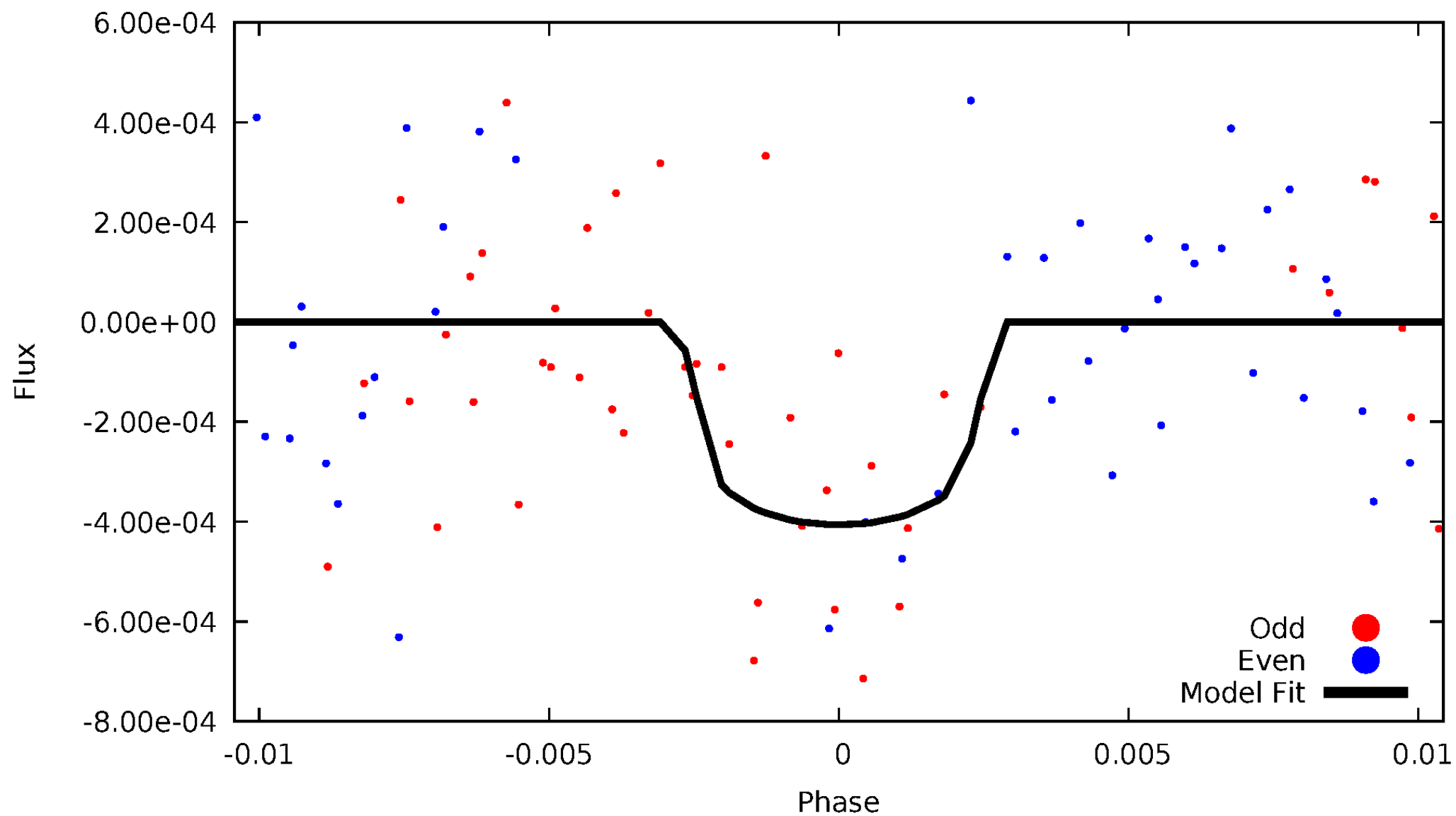


TCE 008358253-03



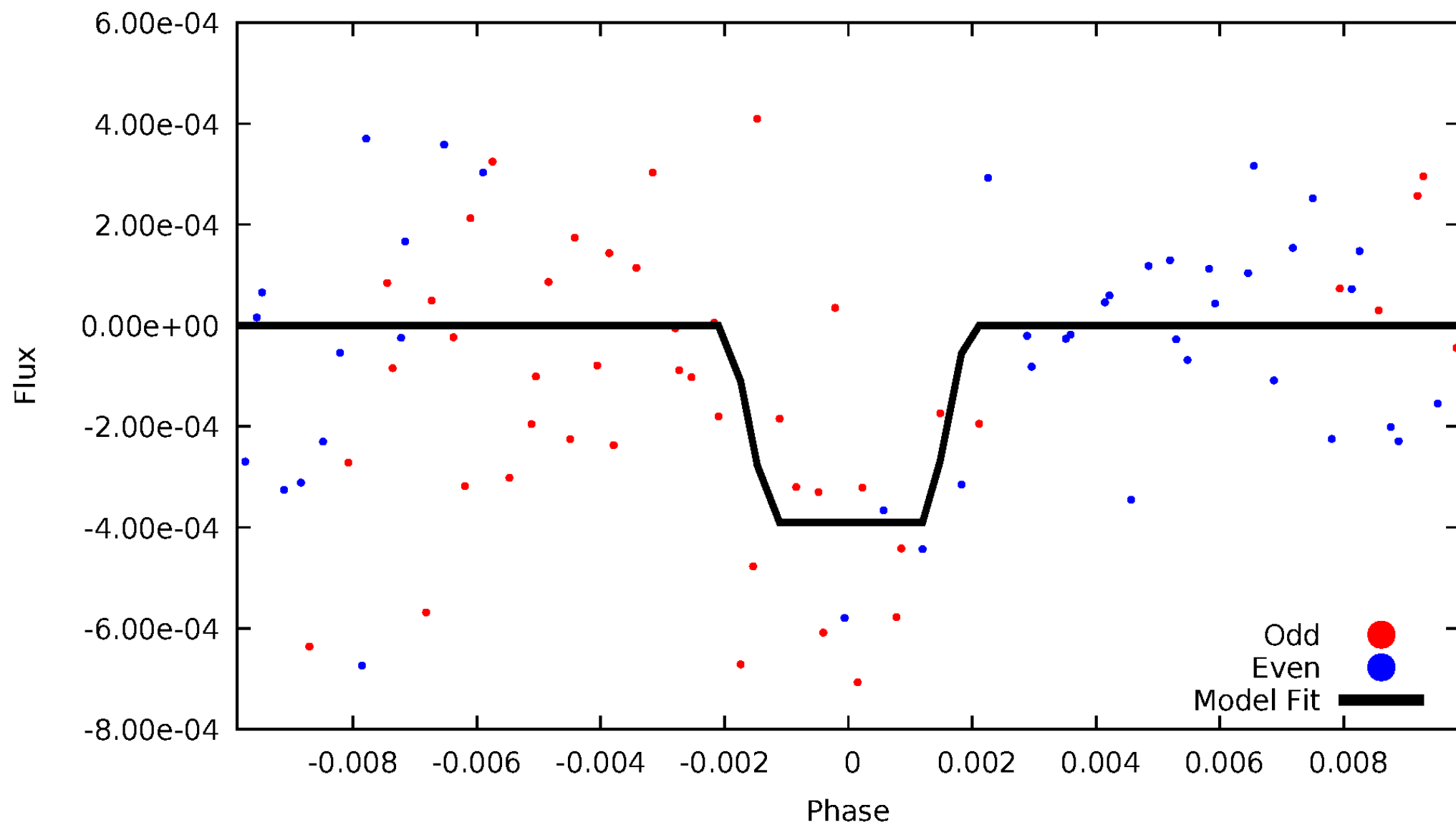
DV Odd/Even

TCE 008358253-03



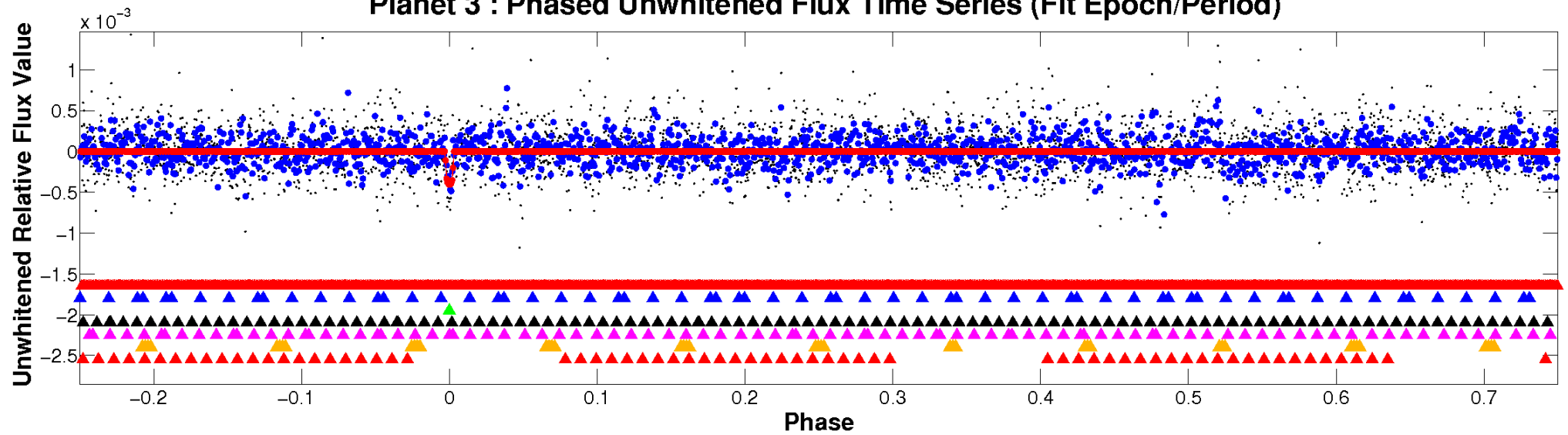
ALT Odd/Even

TCE 008358253-03

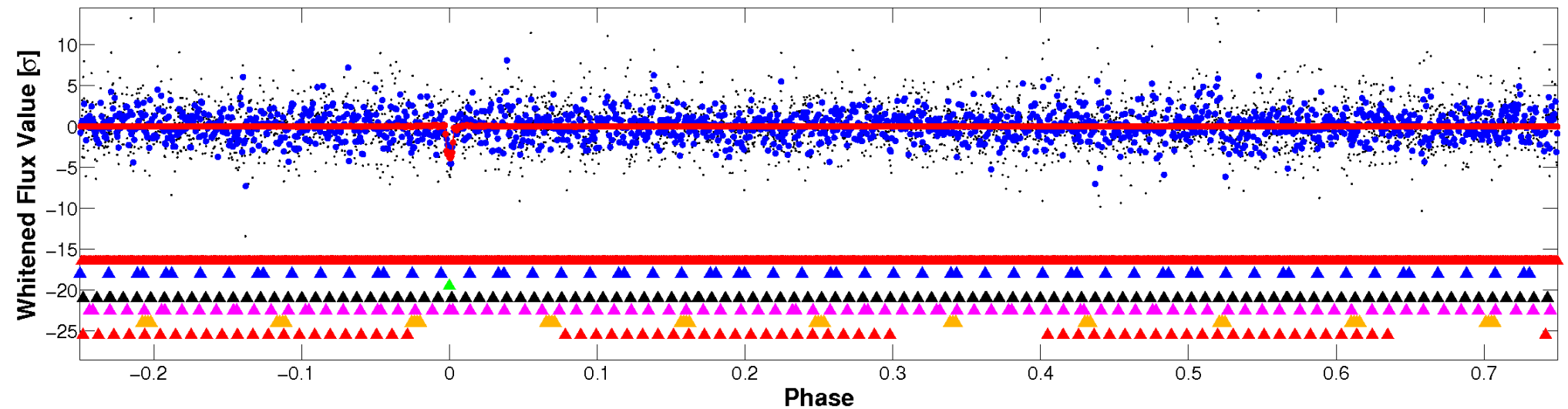


Non-Whitened Vs. Whitened Light Curve

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

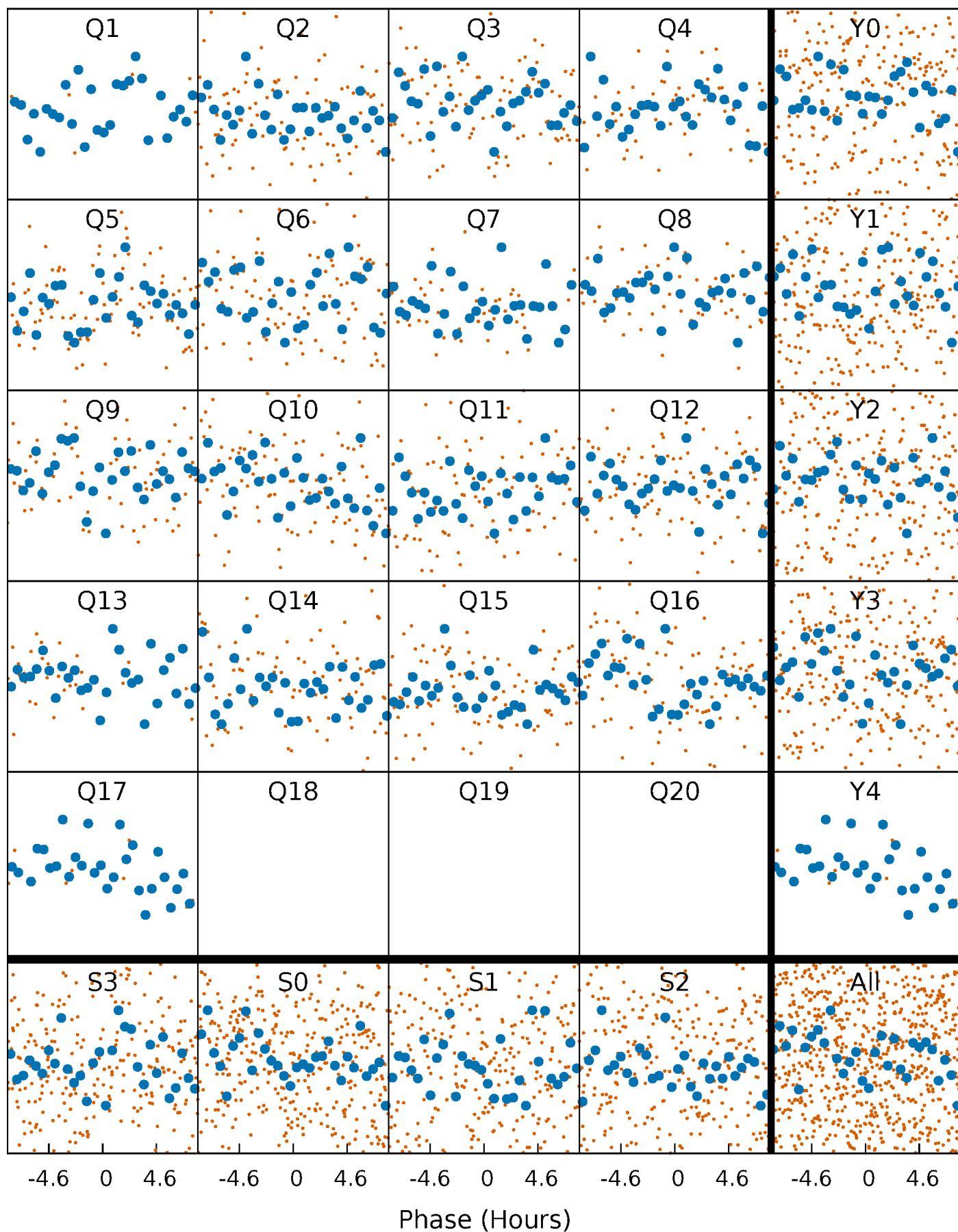


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



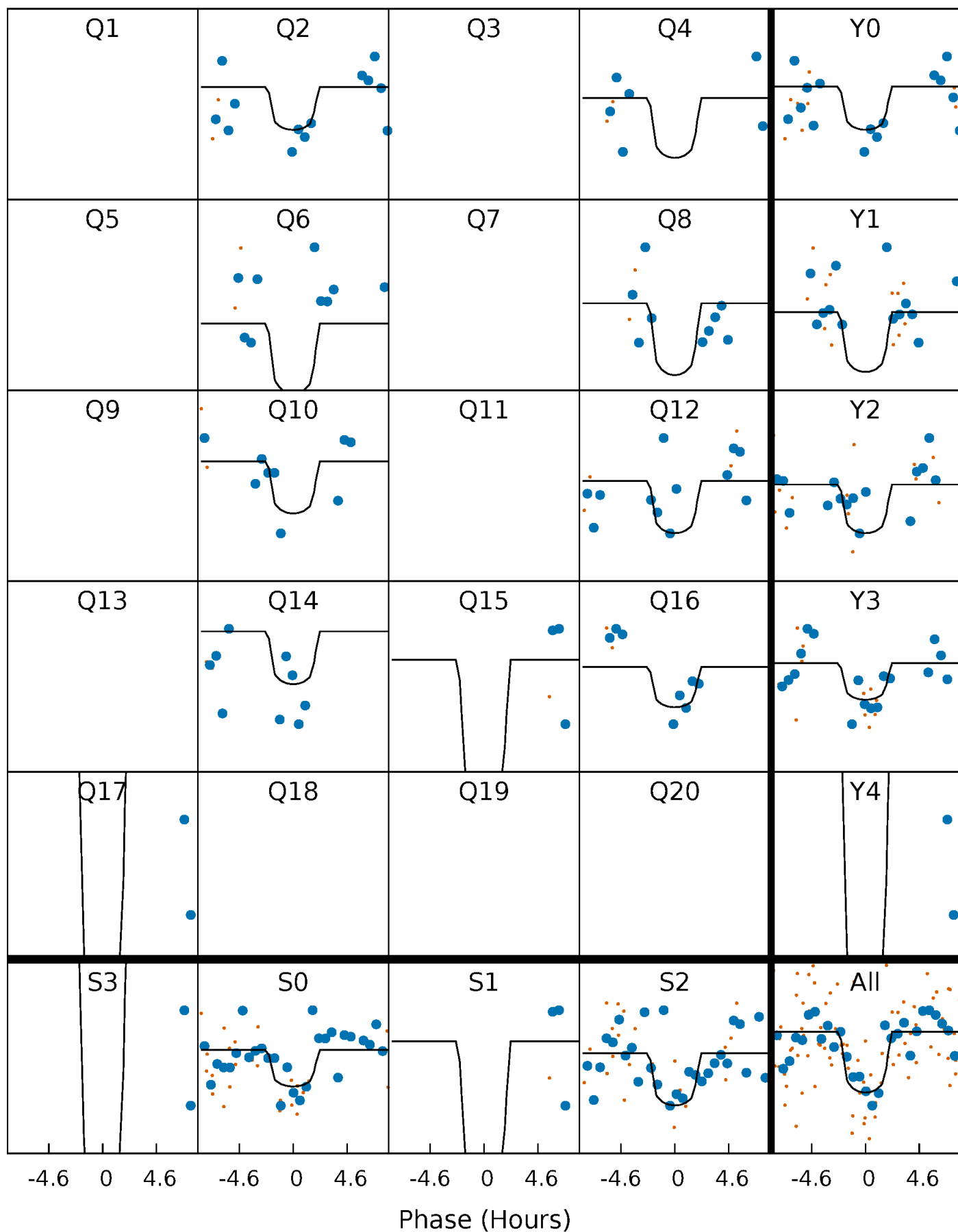
PDC Quarter-Phased Transit Curves

TCE 008358253-03 P= 32.494713 Days $T_0=140.172890$ (BKJD)



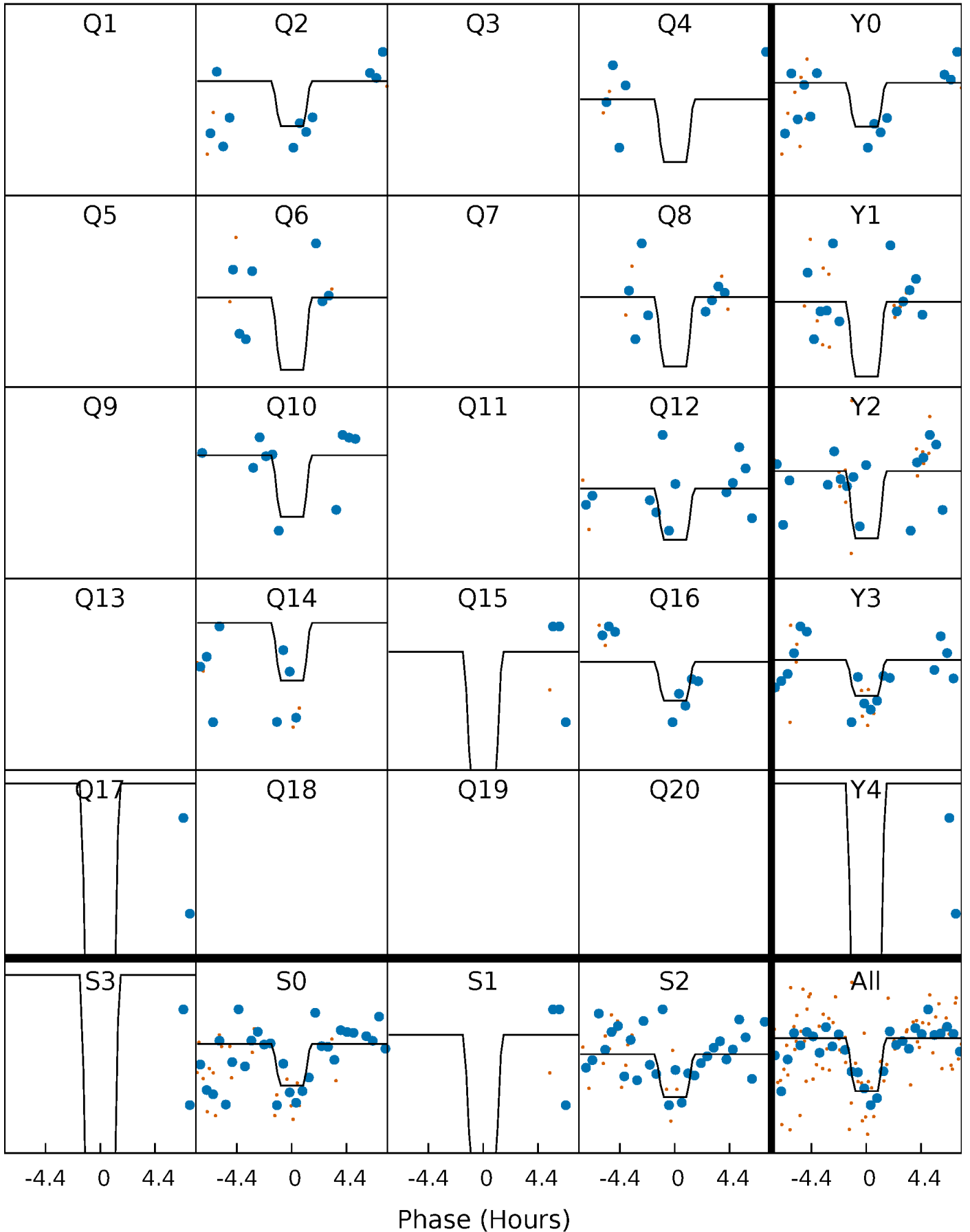
DV Quarter-Phased Transit Curves

TCE 008358253-03 P= 32.494713 Days $T_0=140.172890$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

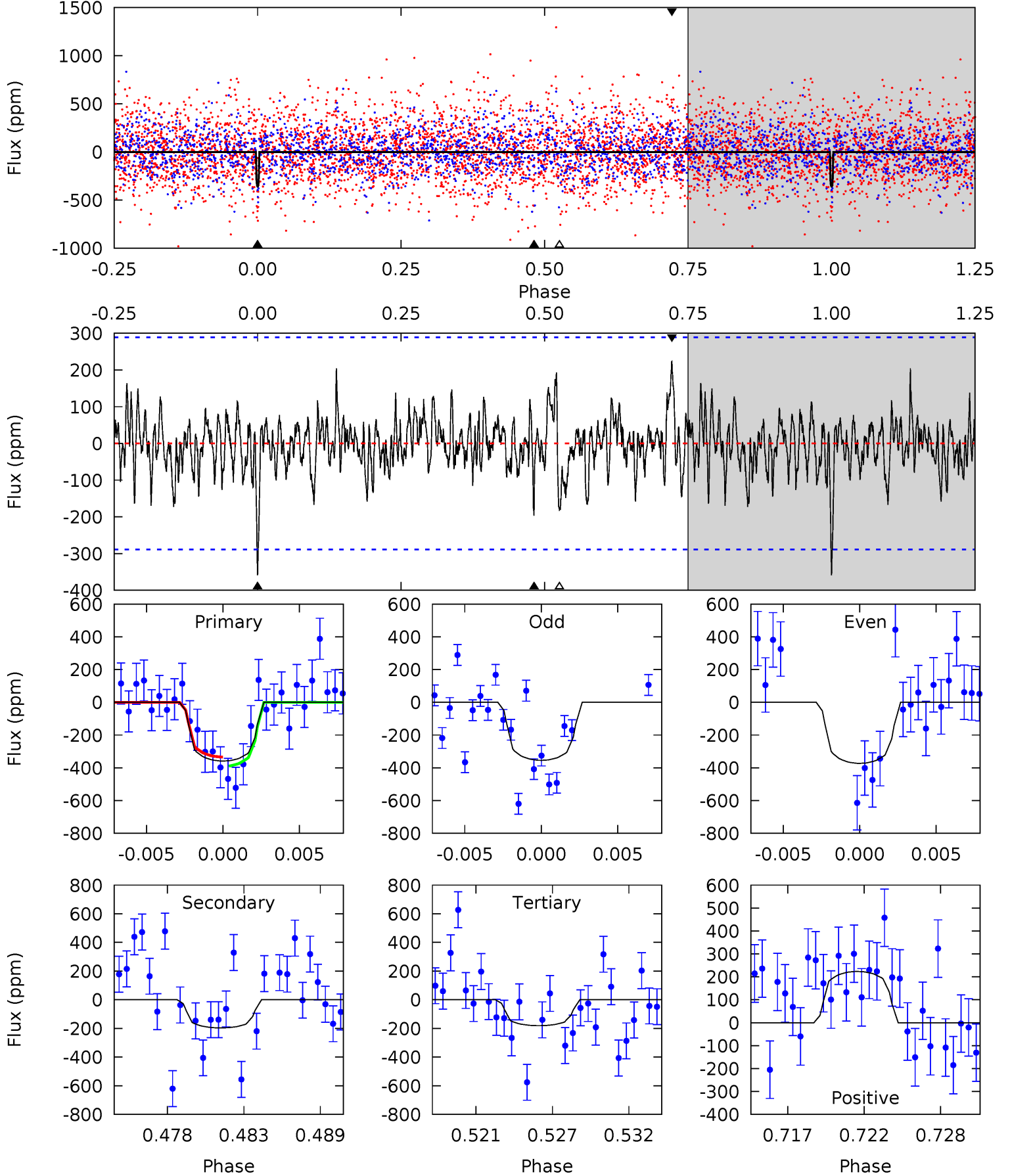
TCE 008358253-03 P= 32.495064 Days $T_0=140.168705$ (BKJD)



DV Model-Shift Uniqueness Test

008358253-03, P = 32.494713 Days, E = 107.678177 Days

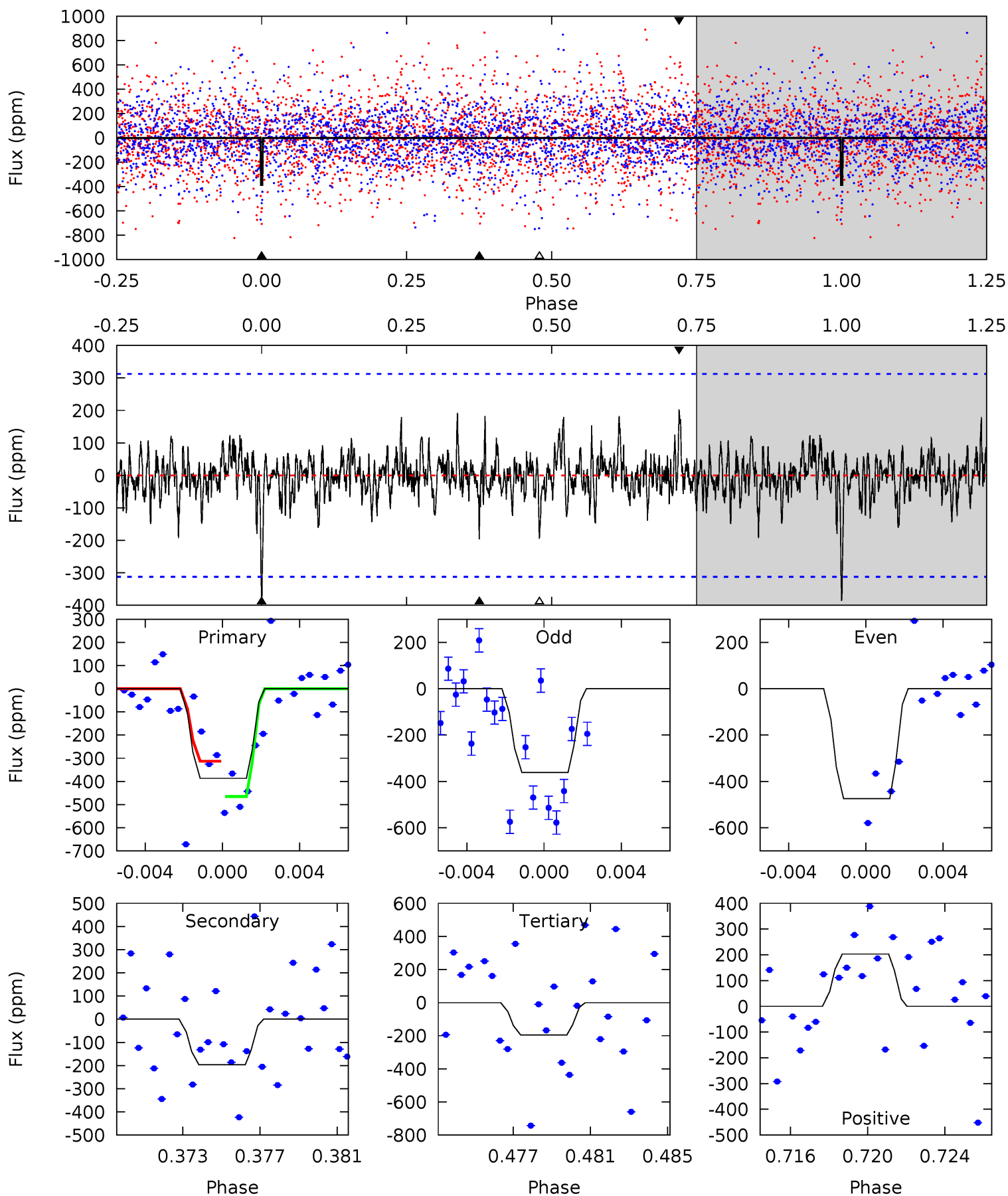
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.38	3.50	3.22	3.98	5.14	2.78	1.12	3.17	2.41	0.28	-0.48	0.14	0.95	0.38	0.49



Alt Model-Shift Uniqueness Test

008358253-03, P = 32.495064 Days, E = 107.673641 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.44	3.28	3.25	3.38	5.21	2.89	0.92	3.20	3.06	0.03	-0.10	0.79	0.77	0.34	1.28



Stellar Parameters For KIC 008358253

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5985^{+161}_{-179}	$4.548^{+0.048}_{-0.204}$	$-0.360^{+0.300}_{-0.300}$	$0.855^{+0.248}_{-0.083}$	$0.942^{+0.109}_{-0.109}$	$2.122^{+0.425}_{-1.108}$
	+3%/-3%	+1%/-4%	+83%/-83%	+29%/-10%	+12%/-12%	+20%/-52%
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 008358253-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-197 ± 56	$6.96^{+7.16}_{-4.83}$	788^{+53}_{-35}	3228^{+1624}_{-608}	83^{+787}_{-65}
Alt.	-197 ± 60	$7.05^{+7.00}_{-4.80}$	786^{+55}_{-38}	3212^{+1512}_{-569}	79^{+685}_{-60}

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

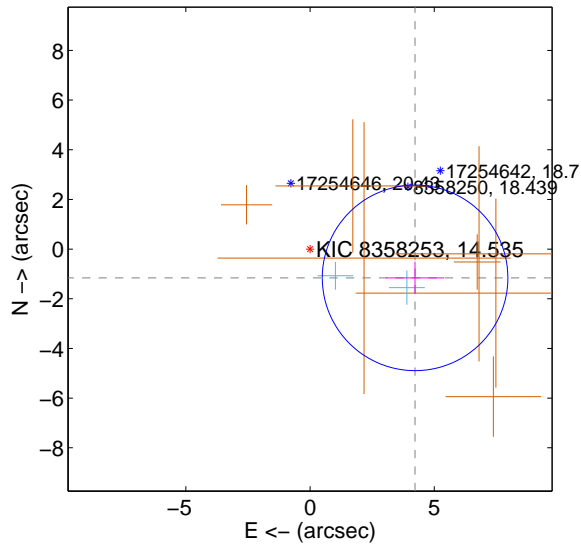
Supplemental centroid analysis for 008358253-03. Kepler magnitude: 14.54. Transit SNR 15.34

There are 2 quarters with good PRF difference image offsets

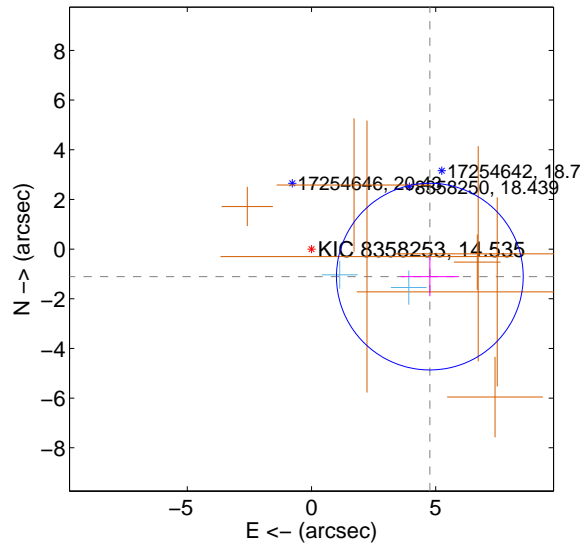
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.384 ± 1.245	3.52	-4.229 ± 1.179	-1.158 ± 0.653
PRF-fit source offset from KIC position	4.892 ± 1.253	3.90	-4.765 ± 1.170	-1.107 ± 0.792
photometric centroid source offset	0.76 ± 0.57	1.34	-0.20 ± 0.59	0.74 ± 0.57

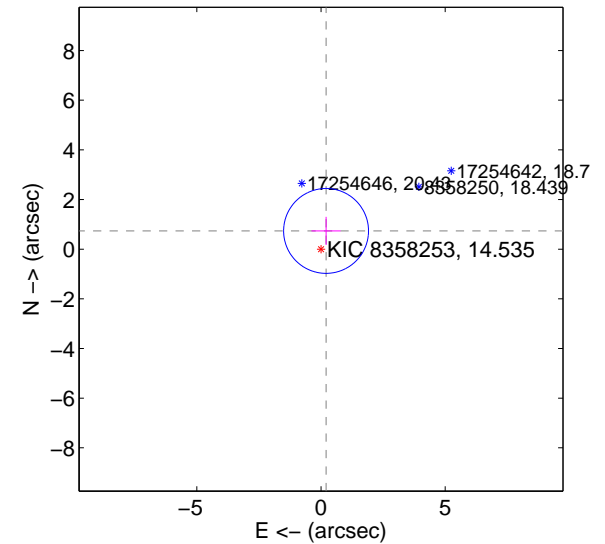
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

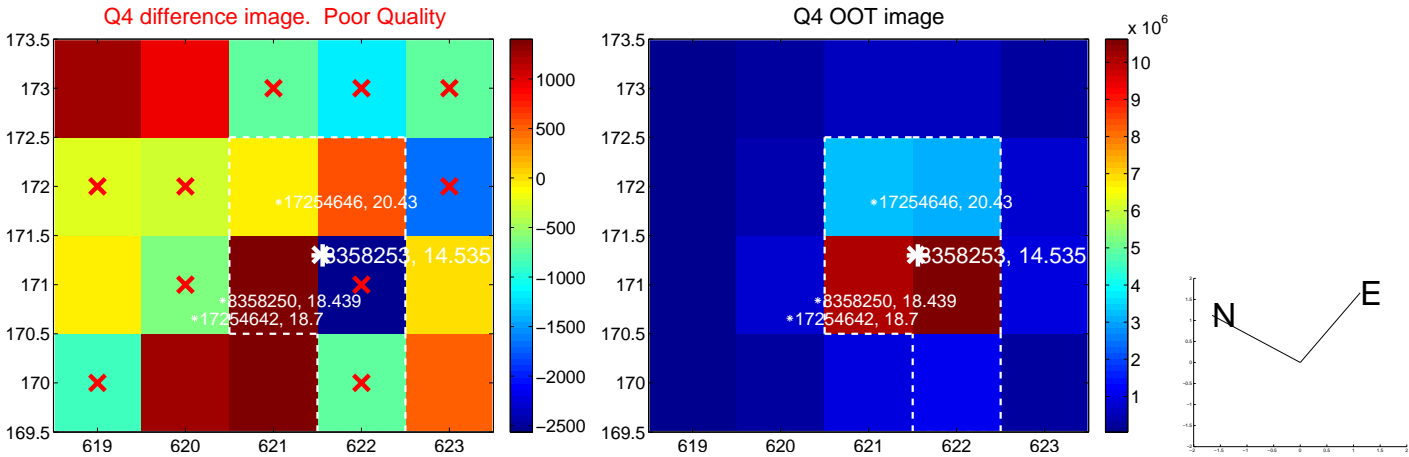
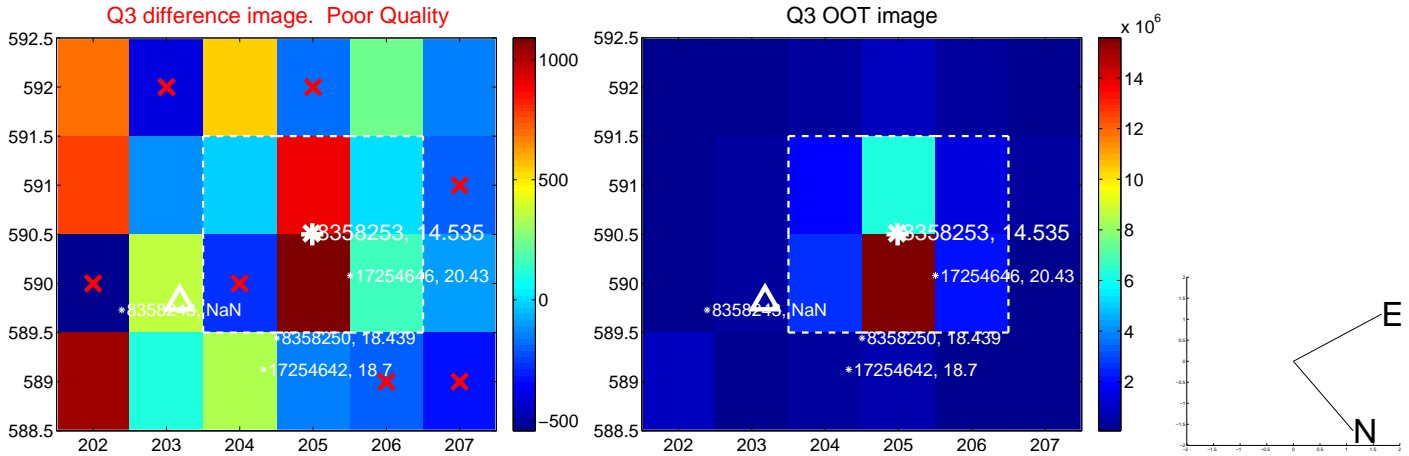
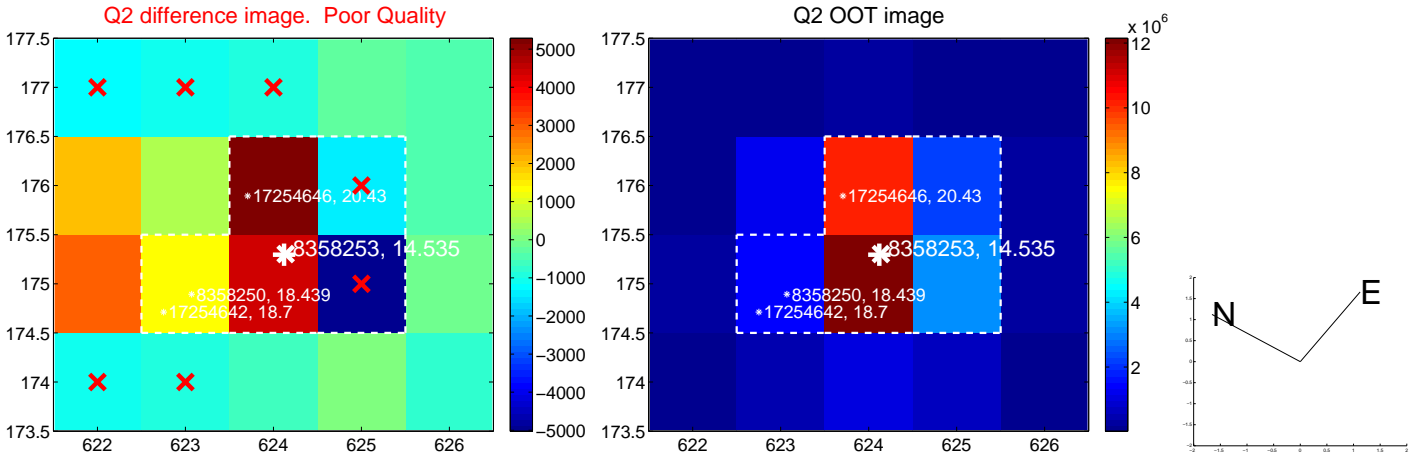
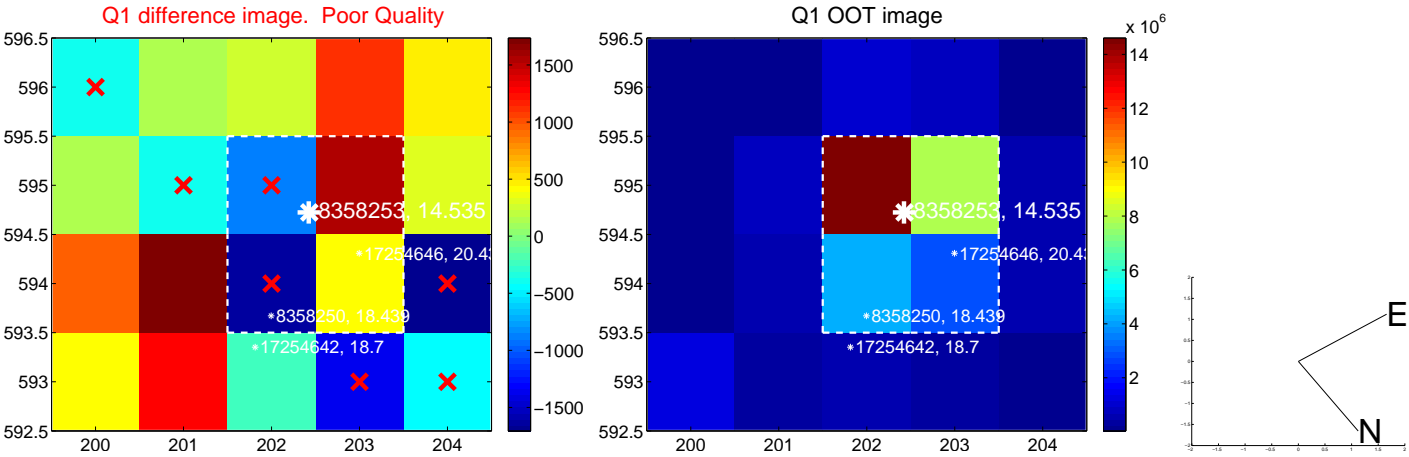


offset from photometric centroids

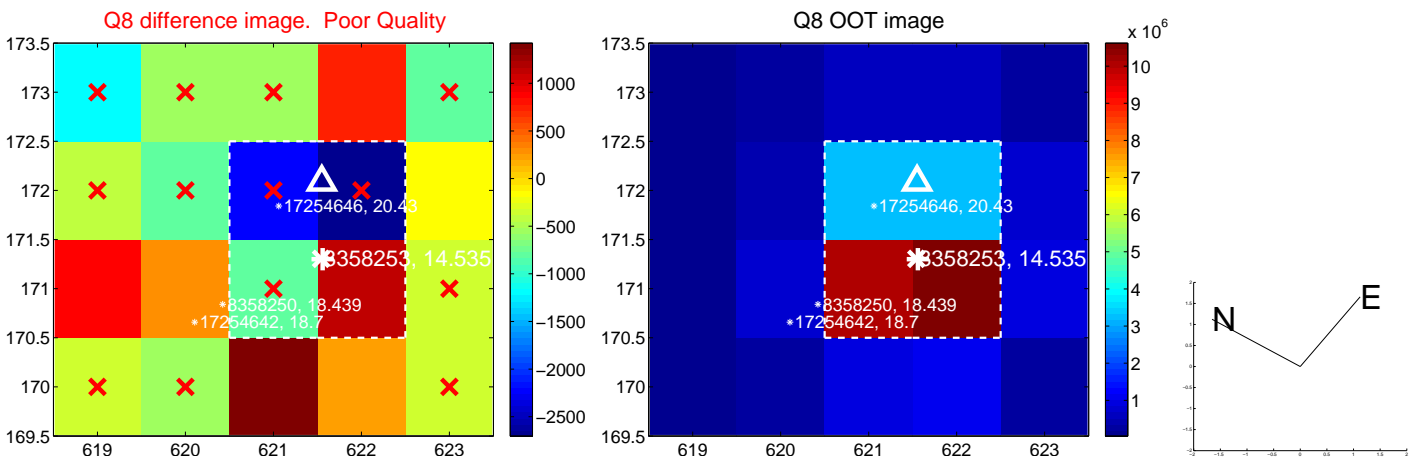
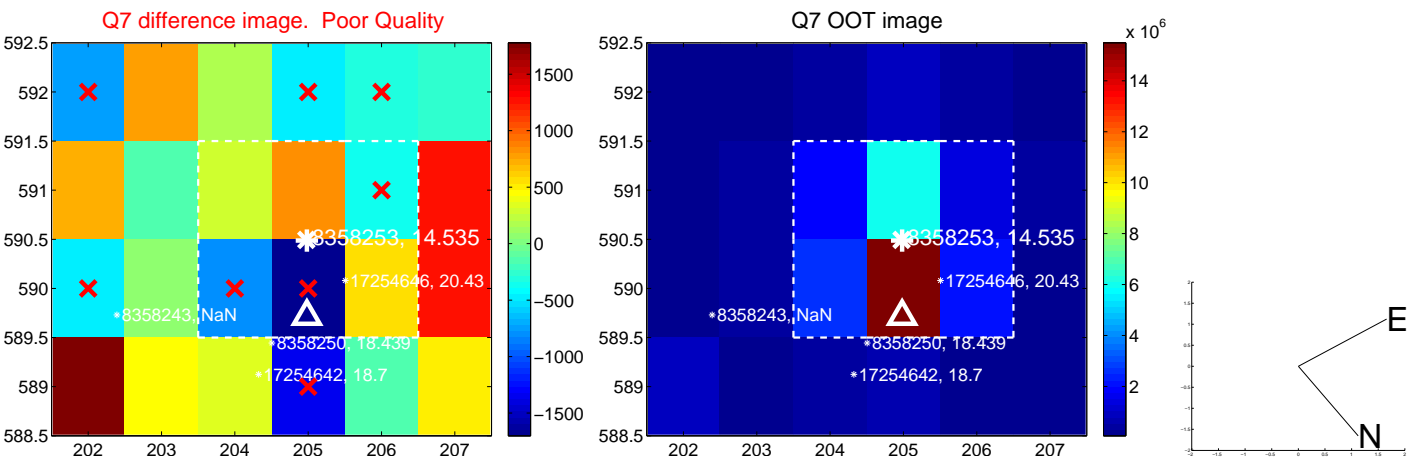
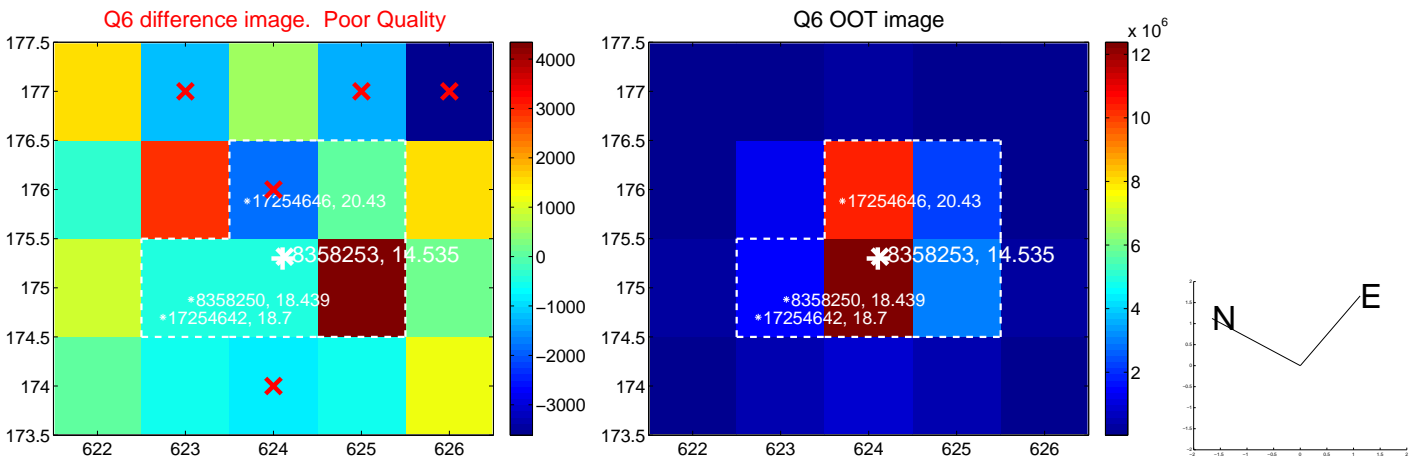
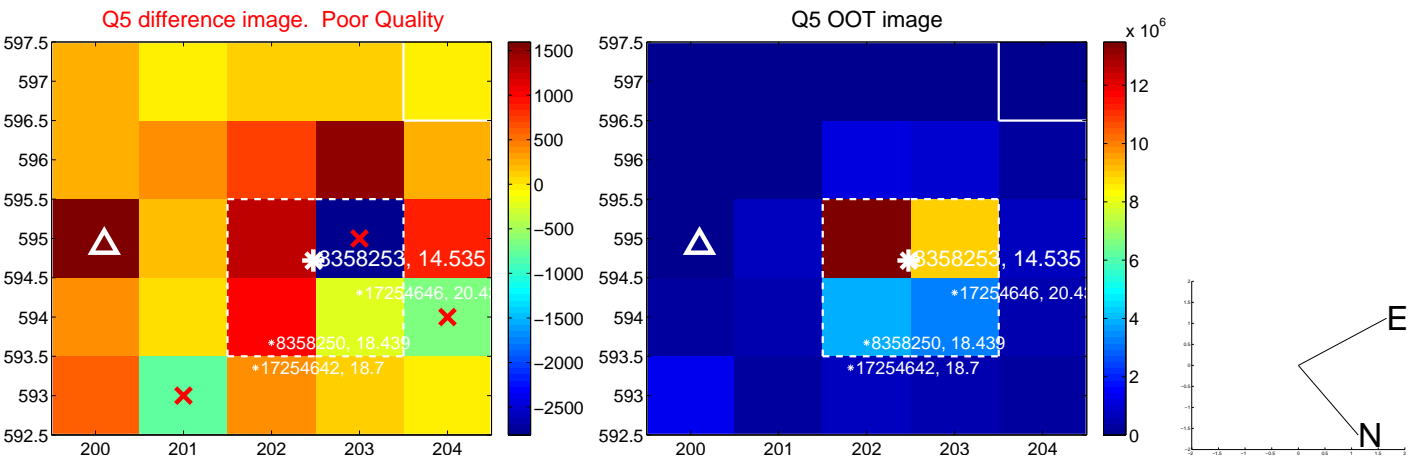


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

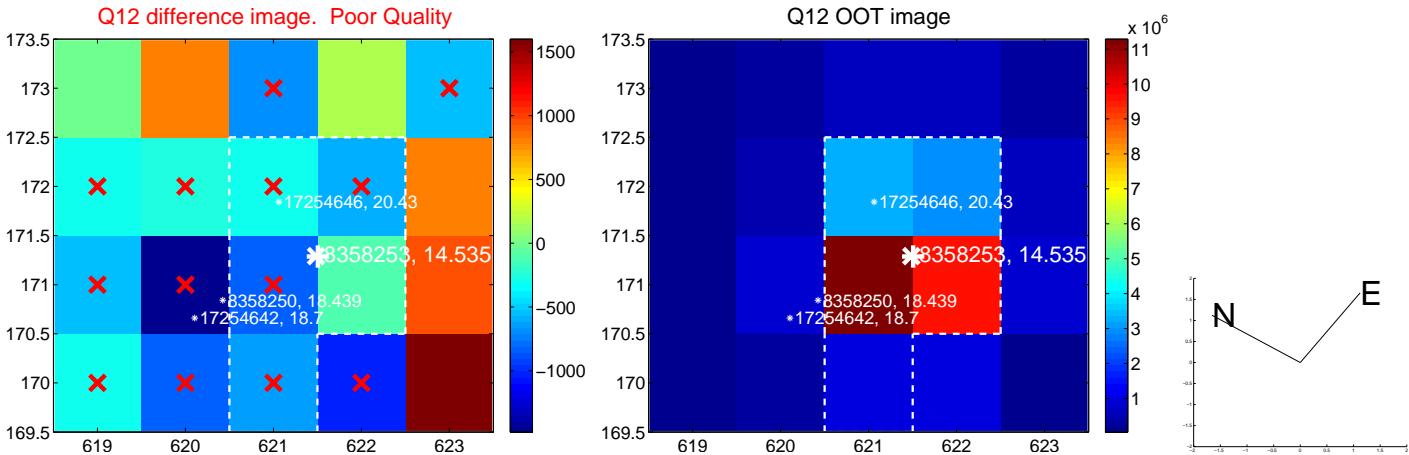
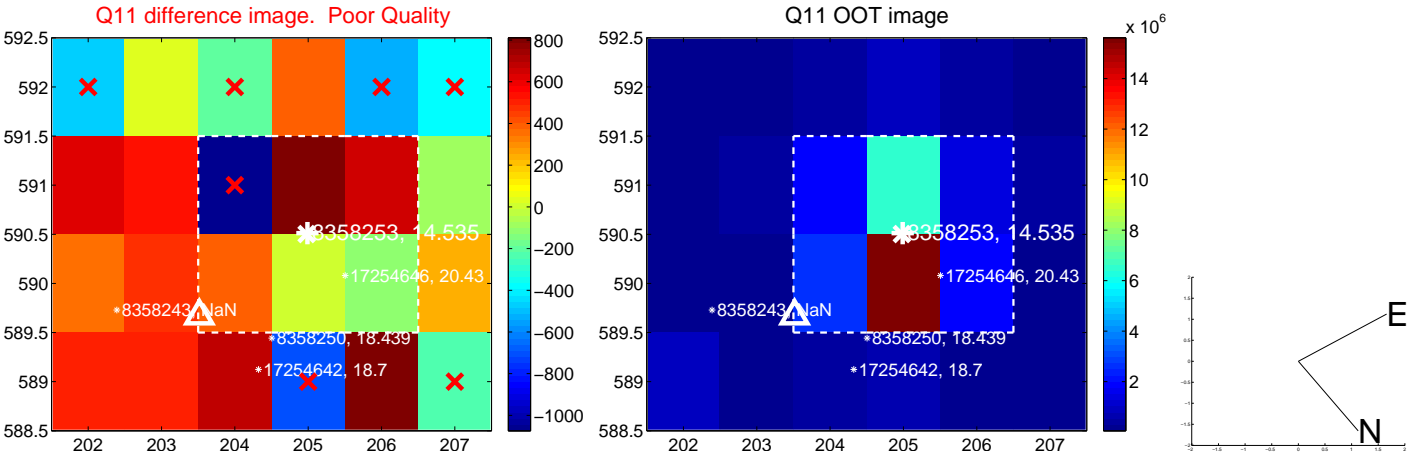
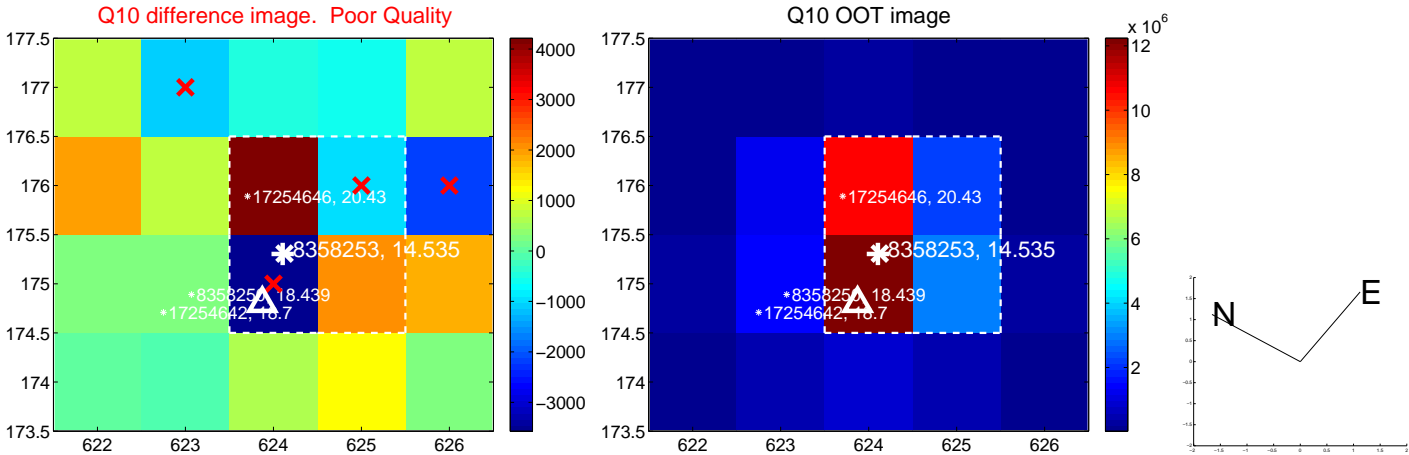
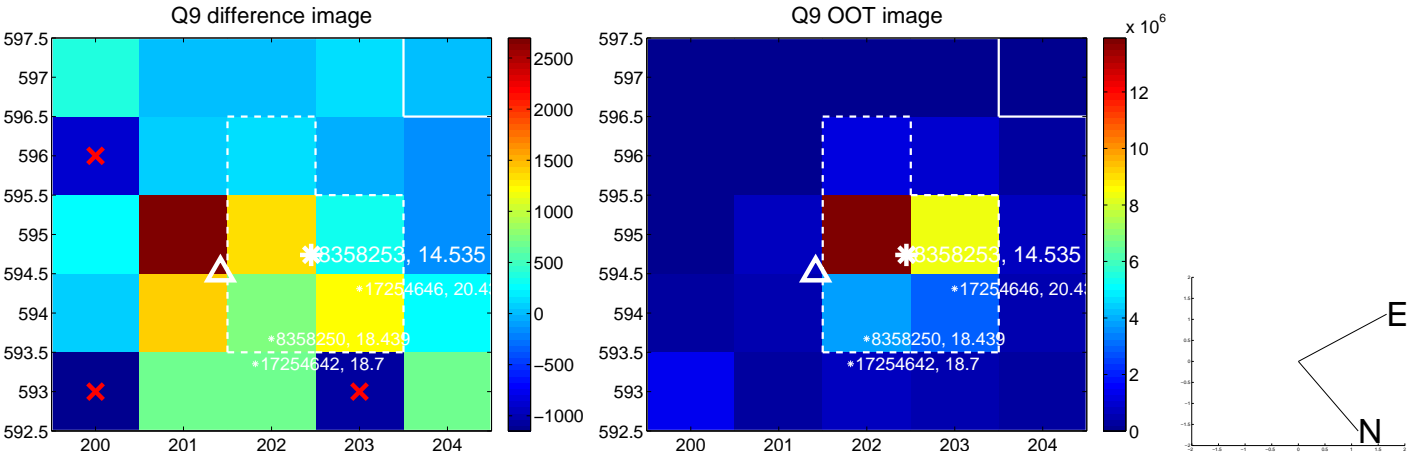
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



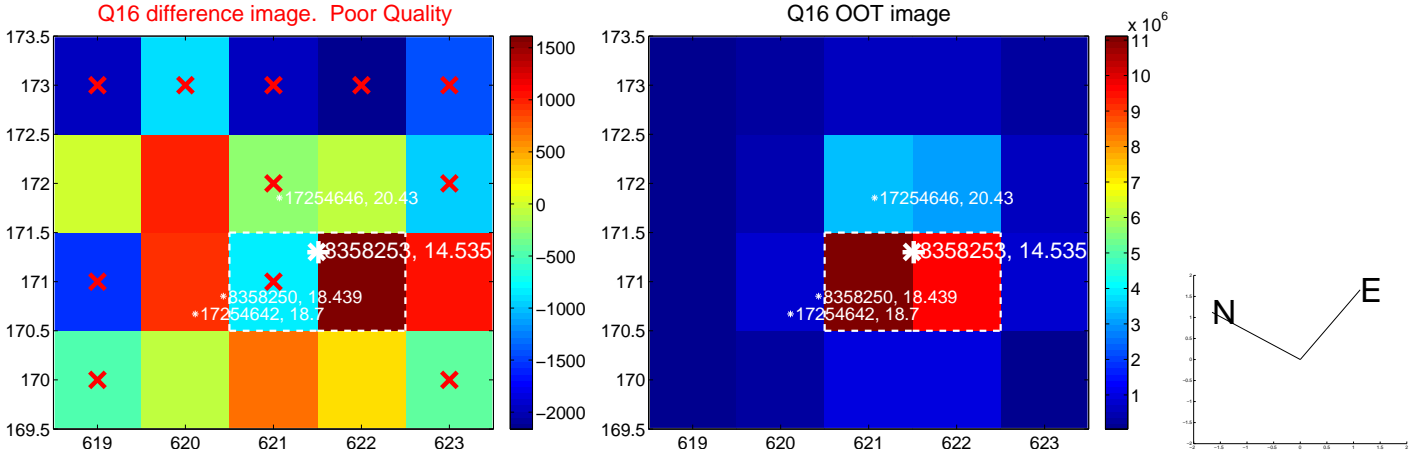
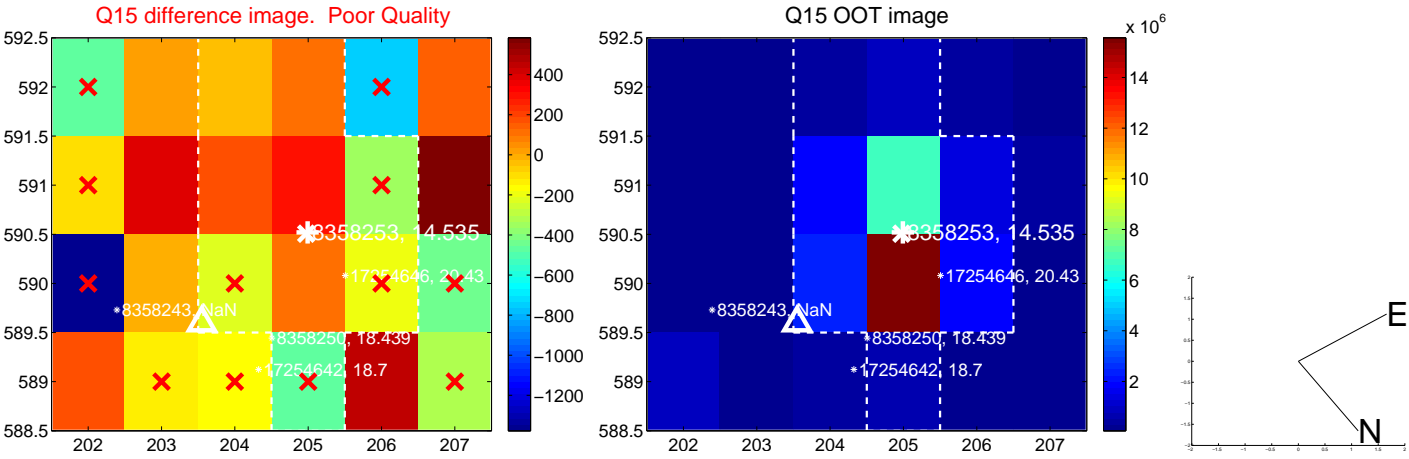
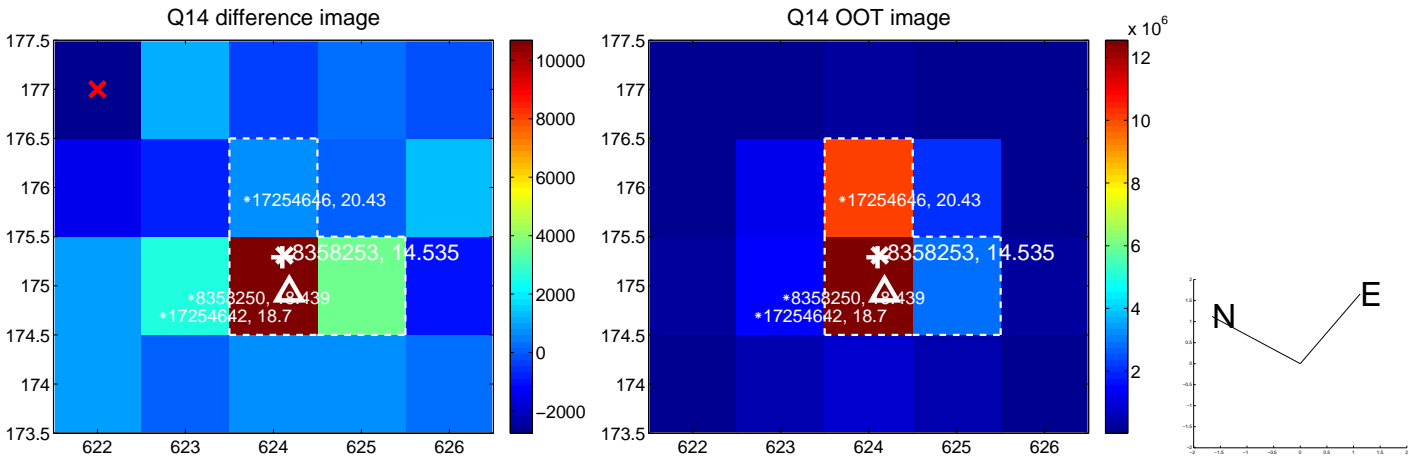
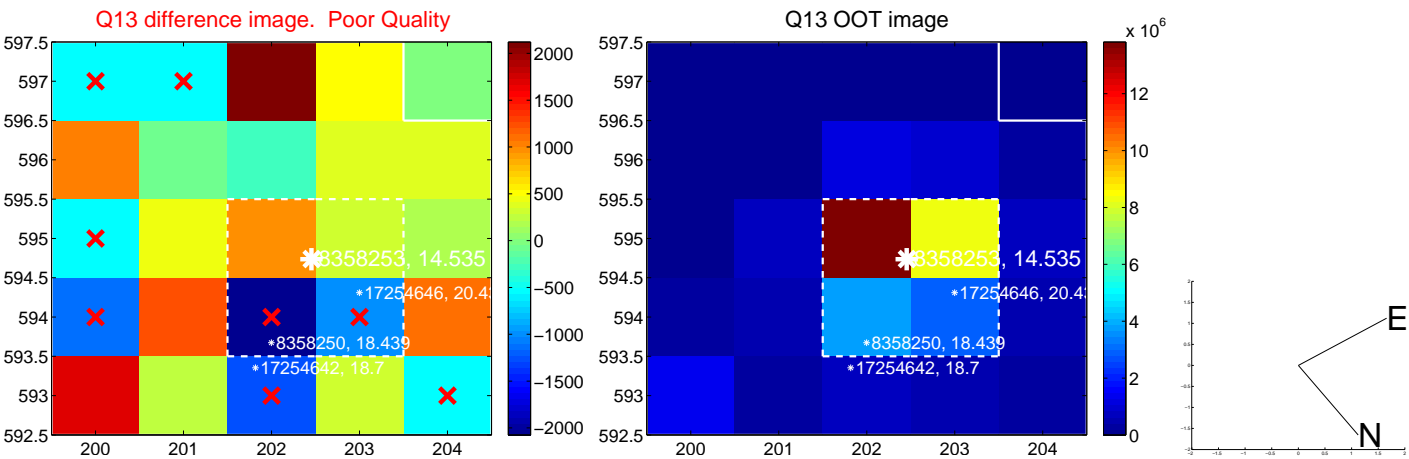
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



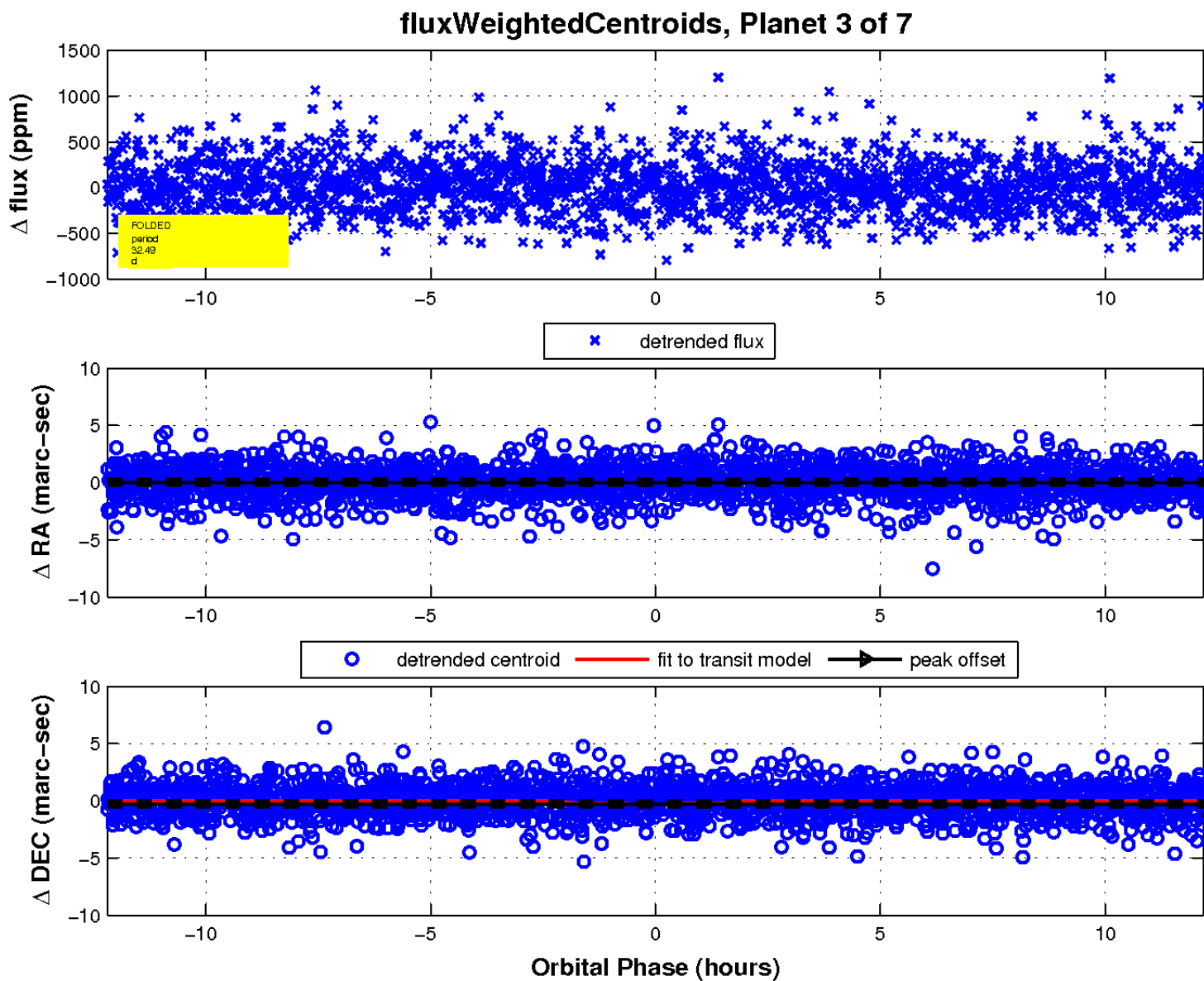
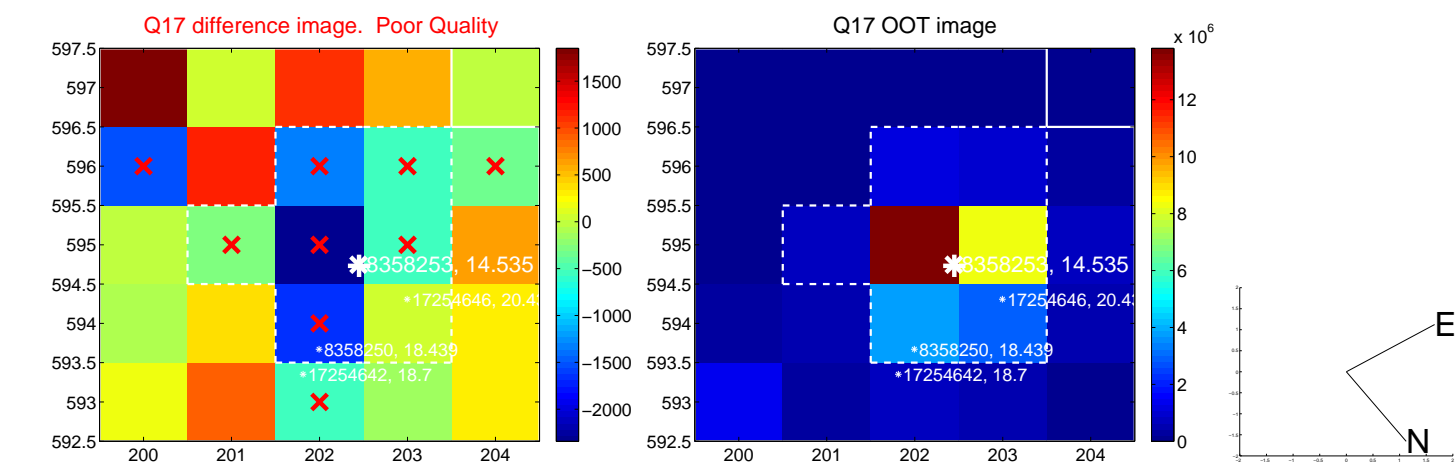
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

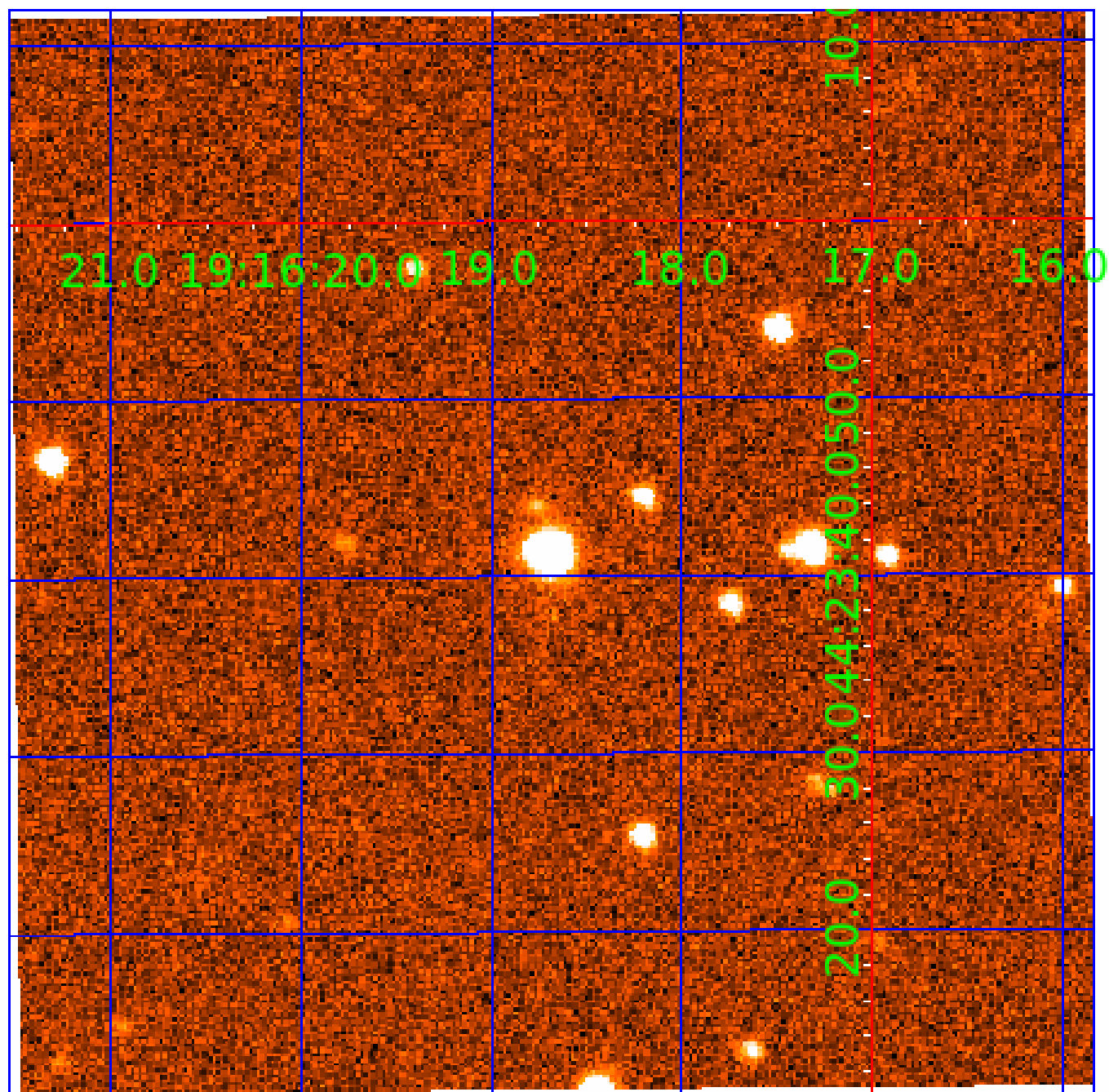


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008358253

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})
008358253-01	OBS	No	1.560070	132.642266	32.2	11.560	11.0	13.5	0.85	5985	0.48	1261.64
008358253-02	OBS	No	22.544851	133.437573	437.2	1.328	14.3	13.8	0.85	5985	1.82	35.84
008358253-03	OBS	No	32.494713	140.172890	406.3	4.066	13.7	15.3	0.85	5985	1.89	22.02
008358253-04	OBS	No	12.937468	132.727048	276.7	2.664	13.2	12.0	0.85	5985	1.66	75.16
008358253-05	OBS	No	15.455704	140.176654	300.4	1.951	11.8	12.0	0.85	5985	1.73	59.29
008358253-06	OBS	No	35.454416	159.998443	204.3	7.238	11.3	9.3	0.85	5985	1.43	19.60
008358253-07	OBS	No	21.549892	139.252006	293.9	2.069	10.1	11.1	0.85	5985	1.66	38.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008358253-01	OBS	FP	0.00	1	0	0	0	LPP_DV
008358253-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS
008358253-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
008358253-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
008358253-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
008358253-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS
008358253-07	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_FEW_DIFFS

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

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

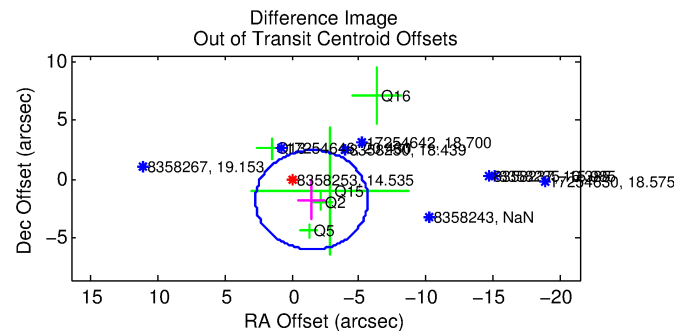
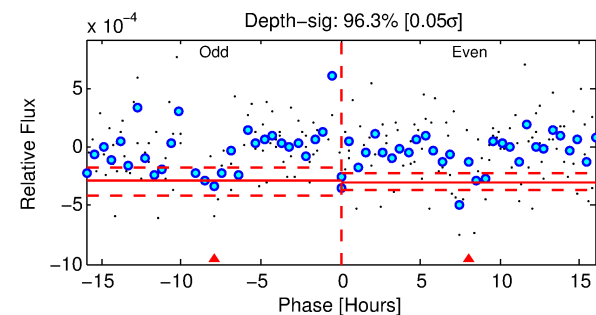
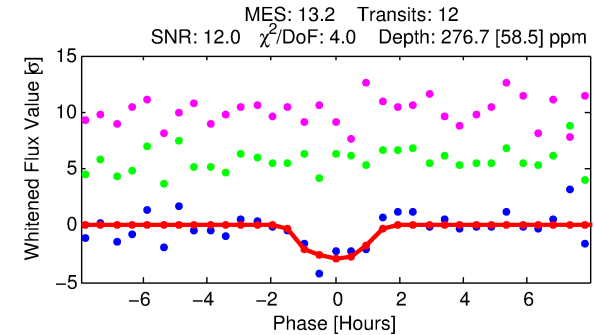
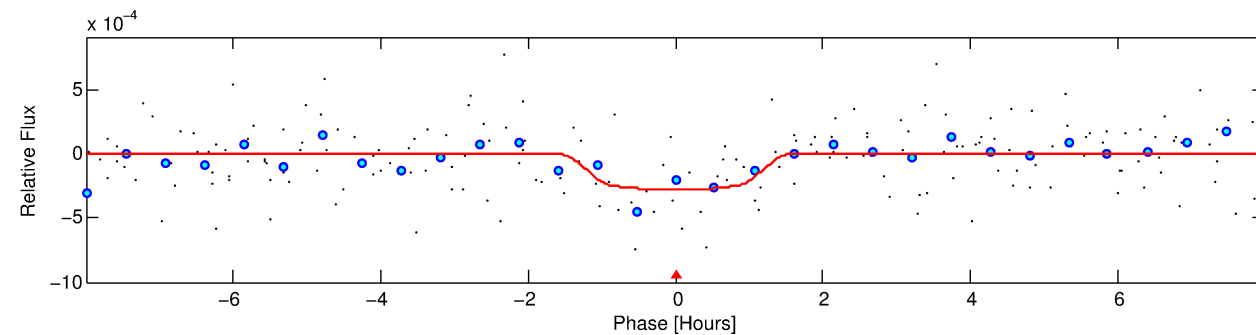
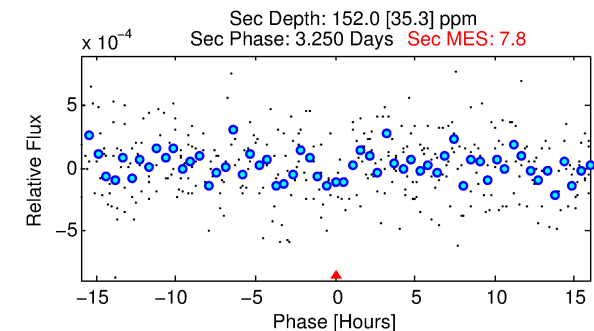
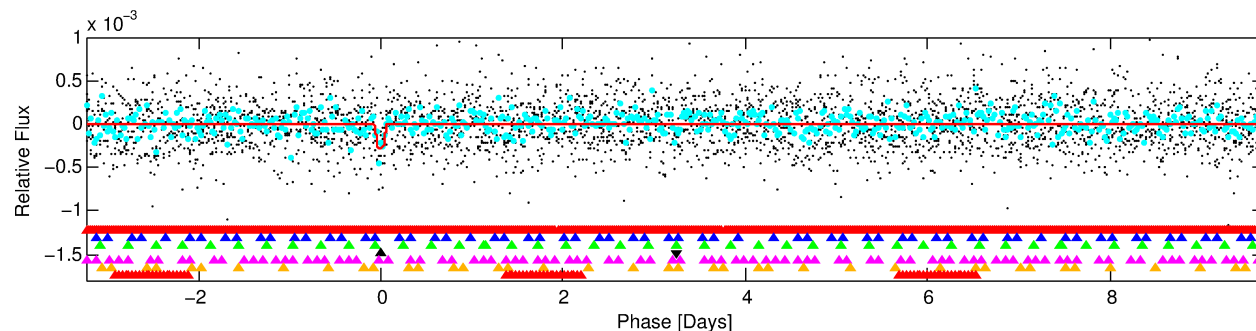
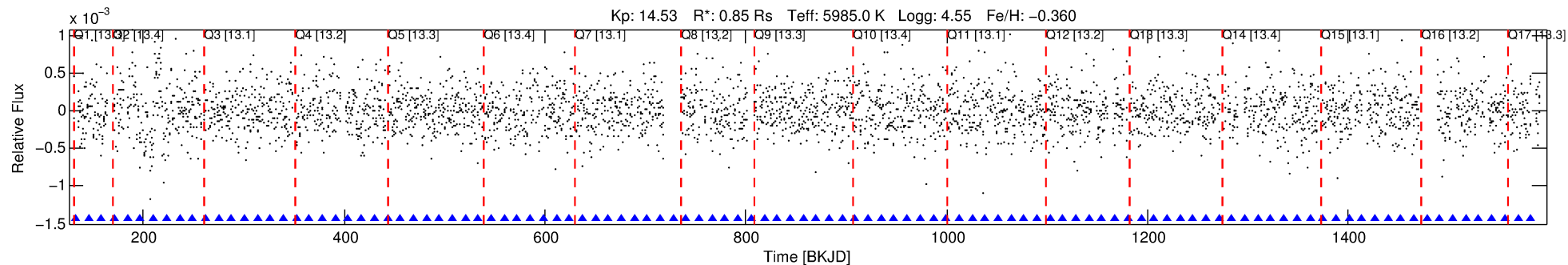
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008358253-04

No Significant Match Found

DV One-Page Summary

KIC: 8358253 Candidate: 4 of 7 Period: 12.937 d



DV Fit Results:

Period = 12.93747 [0.00023] d
Epoch = 132.7270 [0.0132] BKJD
Rp/R* = 0.0178 [0.0362]
a/R* = 18.52 [196.73]
b = 0.89 [2.60]
Seff = 75.16 [29.09]
Teff = 751 [73] K
Rp = 1.66 [3.42] Re
a = 0.1057 [0.0263] AU
Ag = 340.42 [1397.30] [0.24 σ]
Teffp = 4986 [5098] K [0.83 σ]

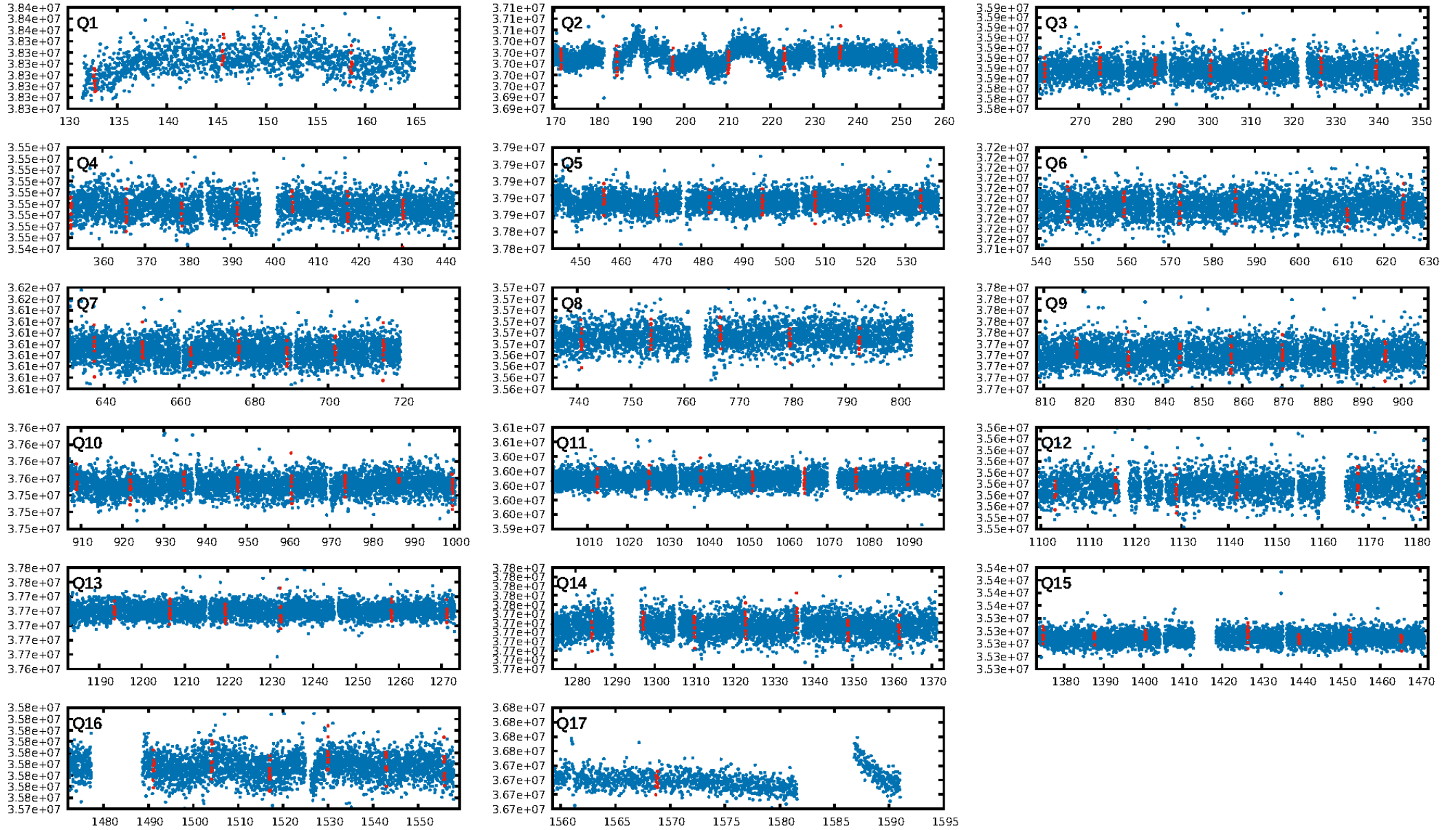
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [23.02 σ]
LongPeriod-sig: 100.0% [18.30 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 24.4%
Bootstrap-pfa: 1.93e-17
RollingBand-fgt: 1.00 [11/11]
GhostDiagnostic-chr: 2.795
Centroid-sig: 21.3%
Centroid-so: 0.723 arcsec [1.12 σ]
OotOffset-rm: 2.271 arcsec [1.62 σ]
KicOffset-rm: 2.278 arcsec [1.64 σ]
OotOffset-st: 1/1/1/2 [5]
KicOffset-st: 1/1/1/2 [5]
DiffImageQuality-fgm: 0.00 [0/5]
DiffImageOverlap-fno: 1.00 [17/17]

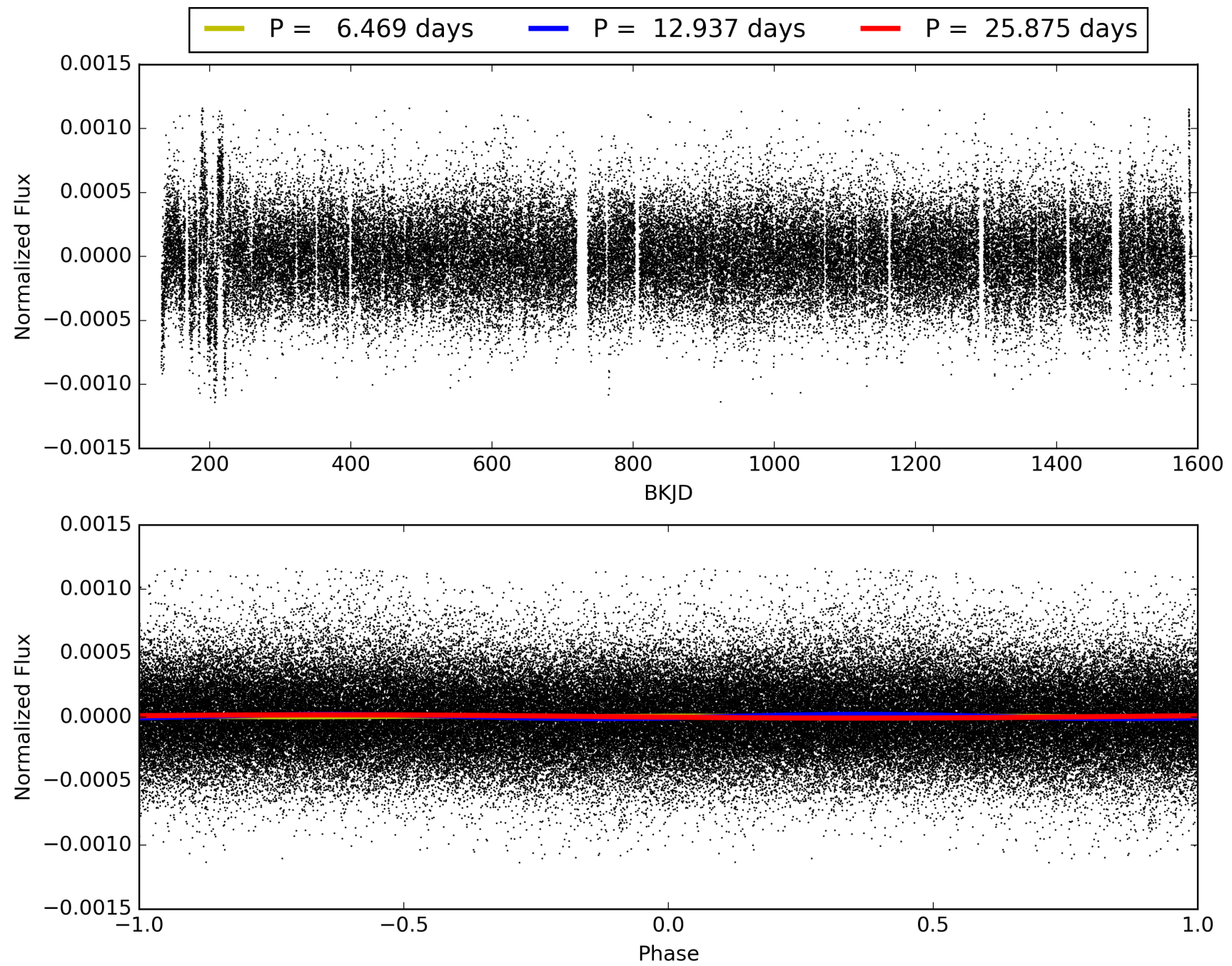
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 19:40:10 Z

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

TCE 008358253-04, PDC Light Curves

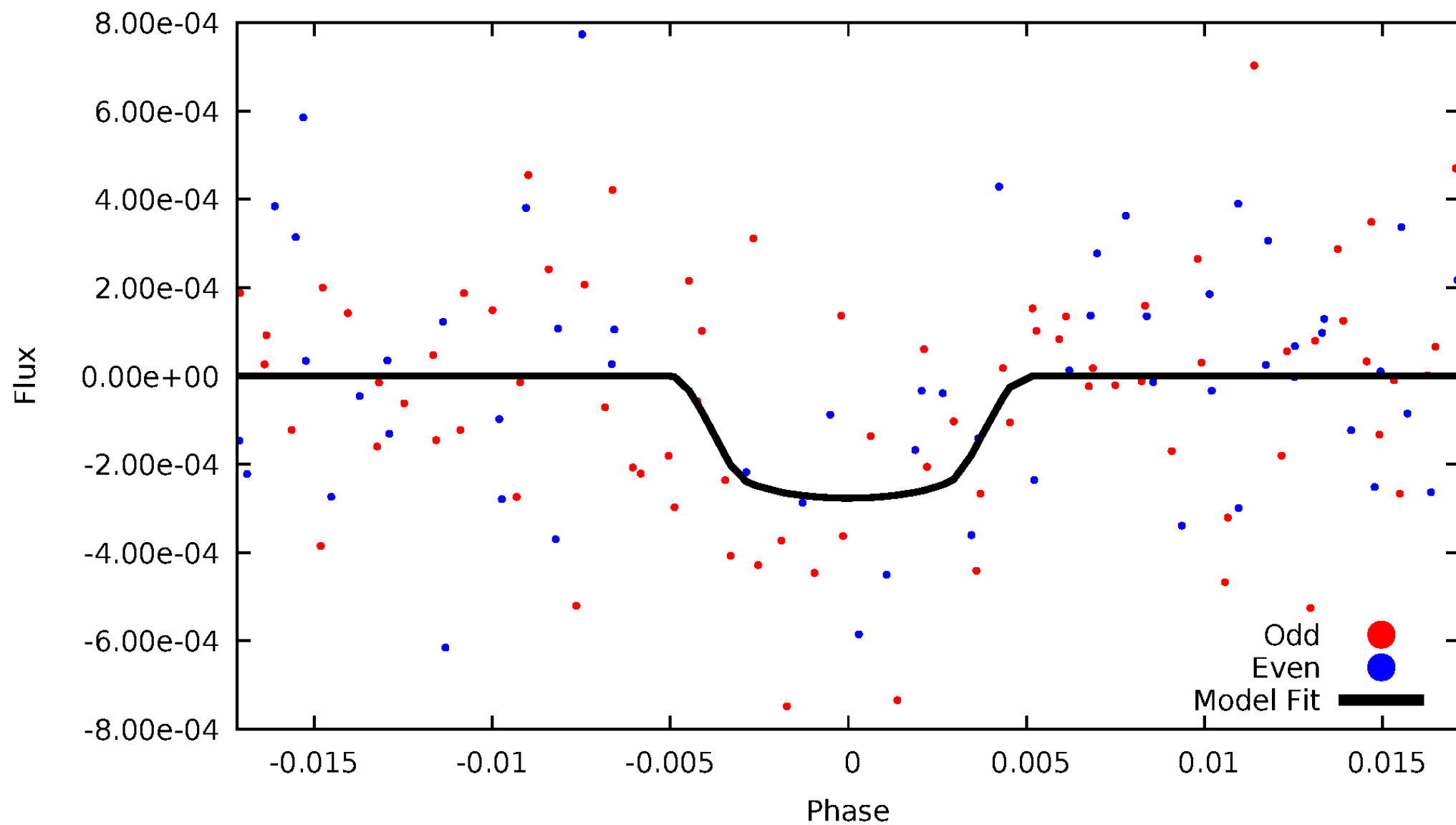


TCE 008358253-04



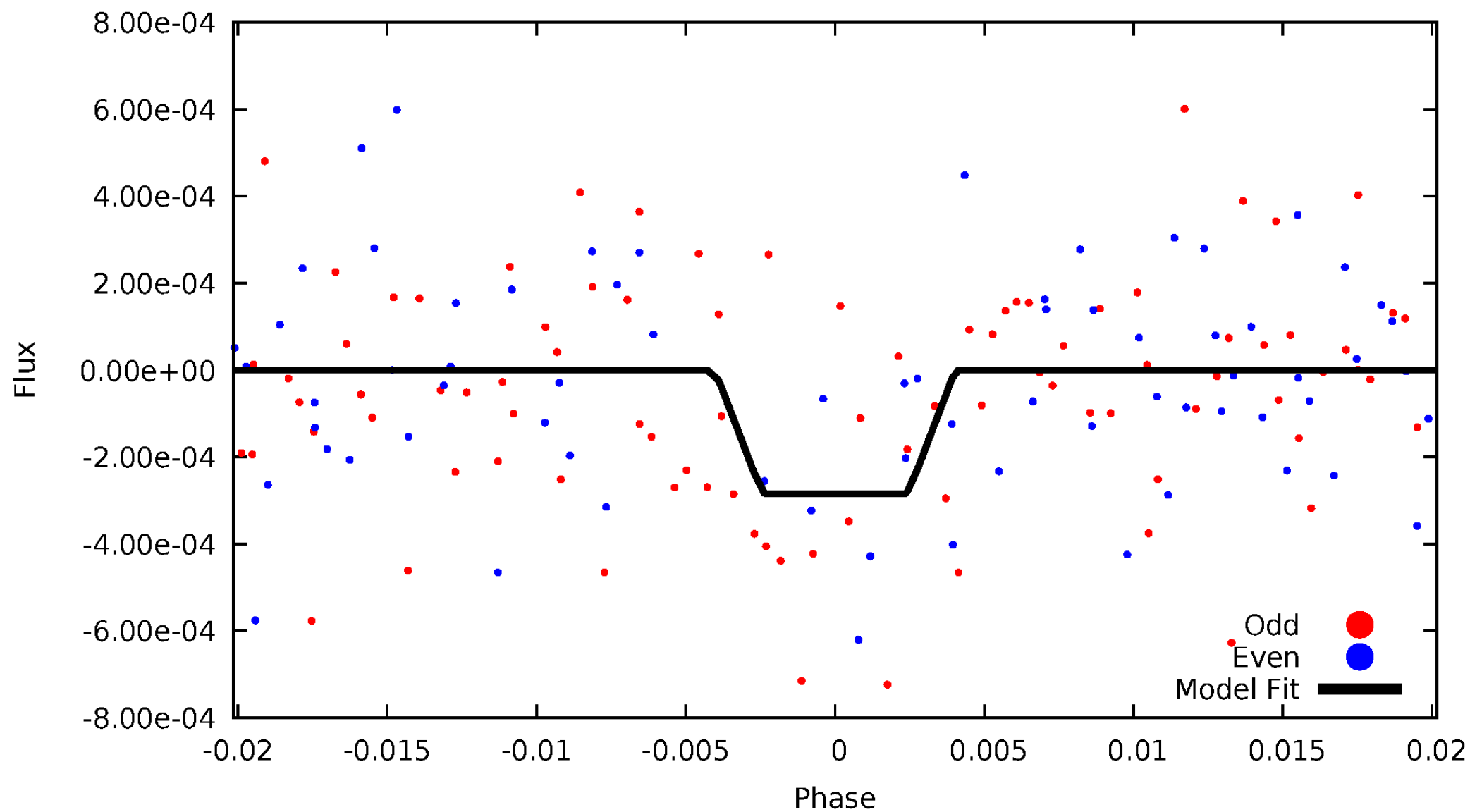
DV Odd/Even

TCE 008358253-04



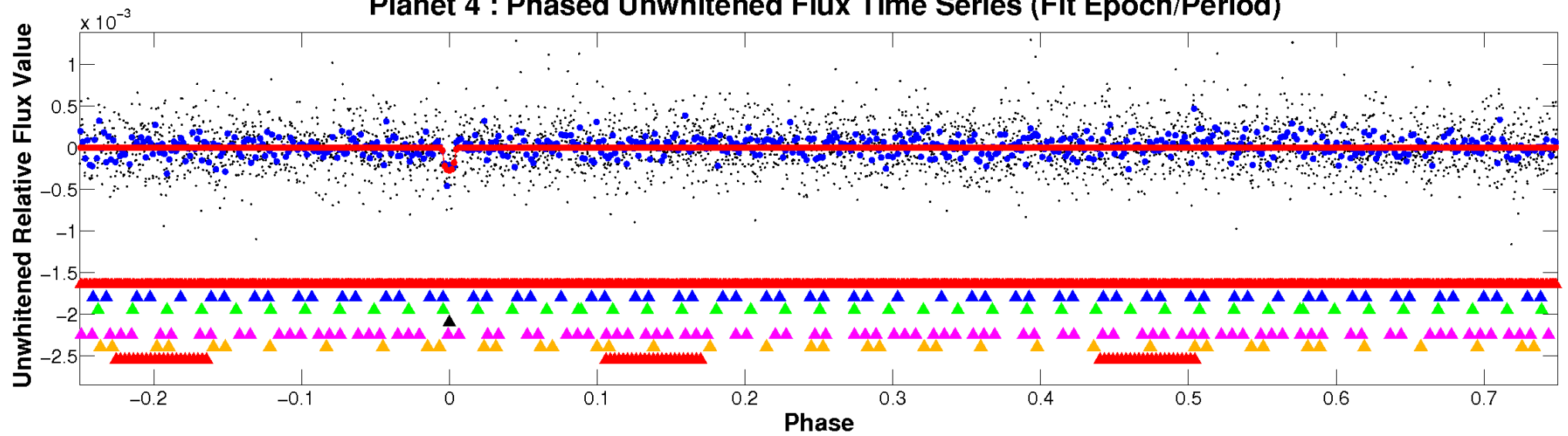
ALT Odd/Even

TCE 008358253-04

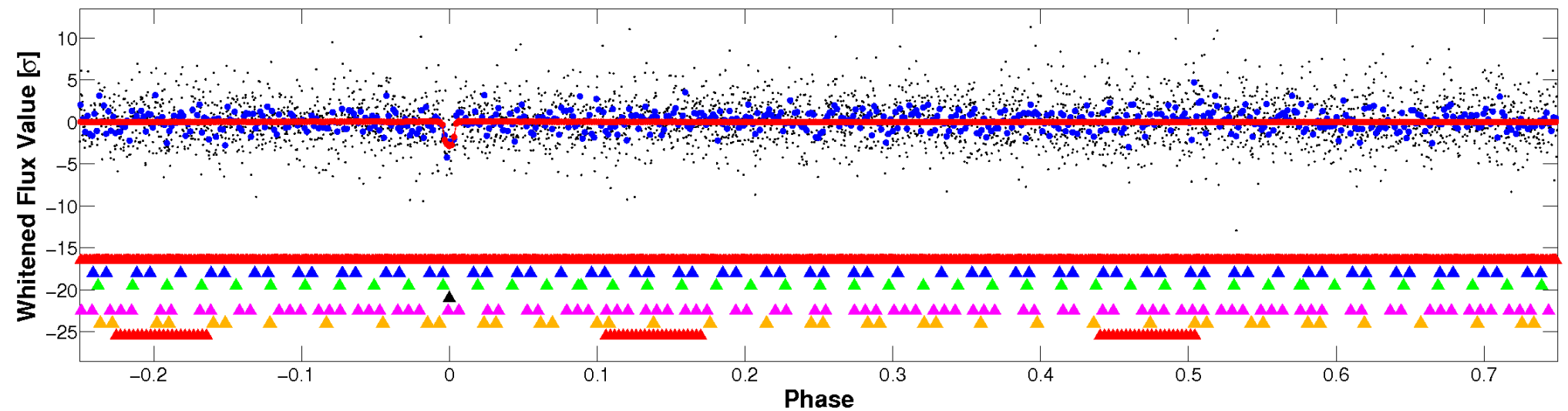


Non-Whitened Vs. Whitened Light Curve

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

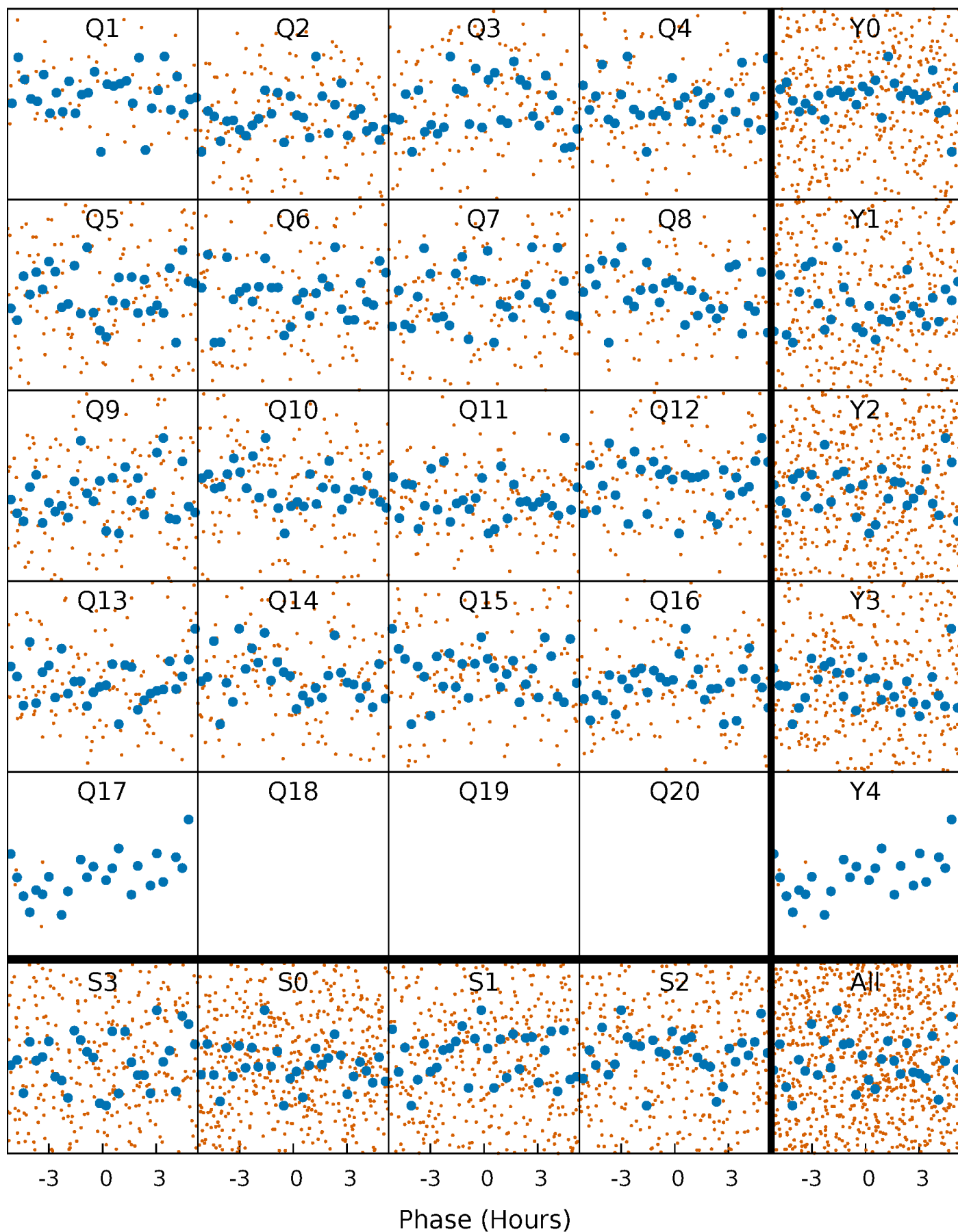


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



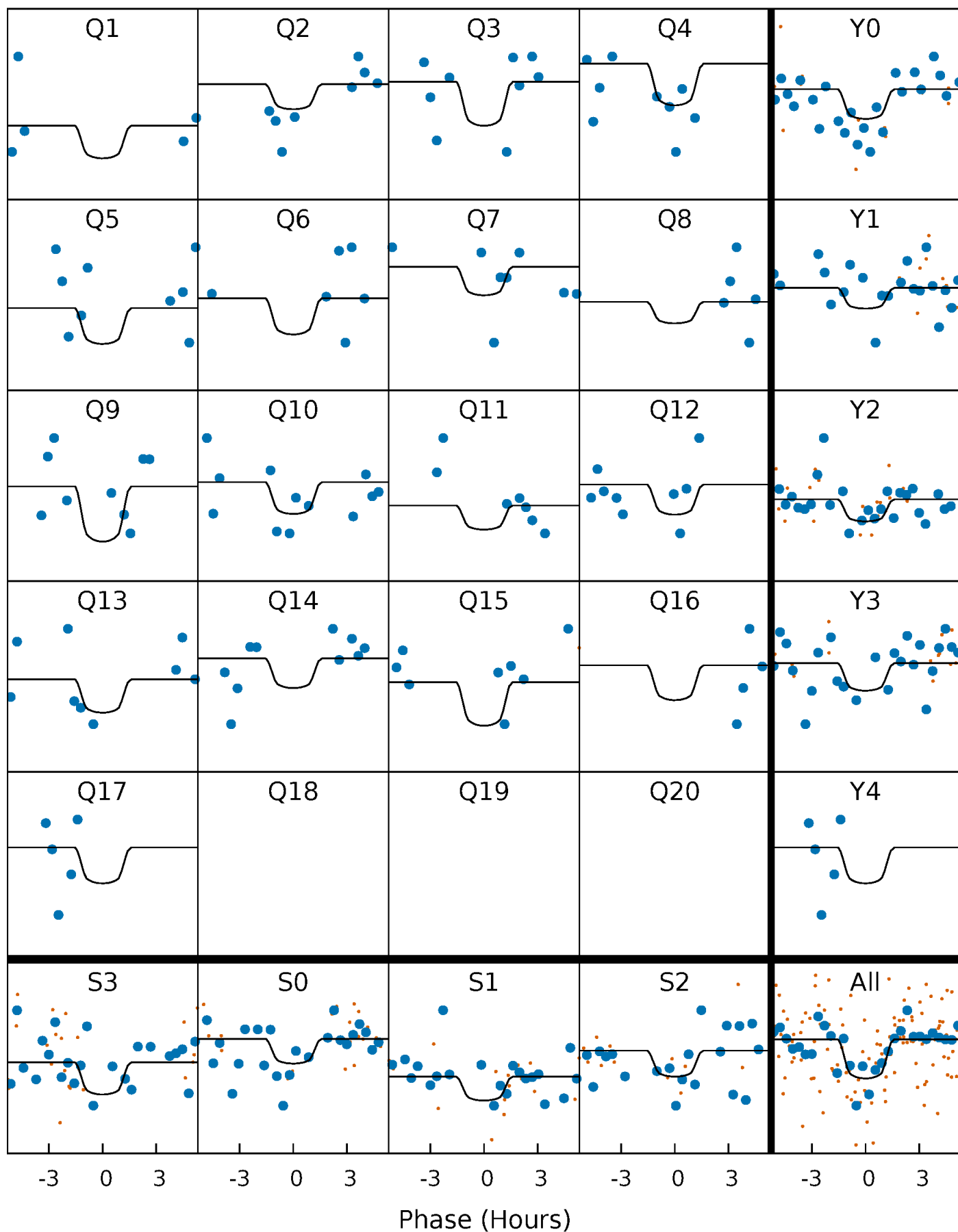
PDC Quarter-Phased Transit Curves

TCE 008358253-04 P= 12.937468 Days $T_0=132.727048$ (BKJD)



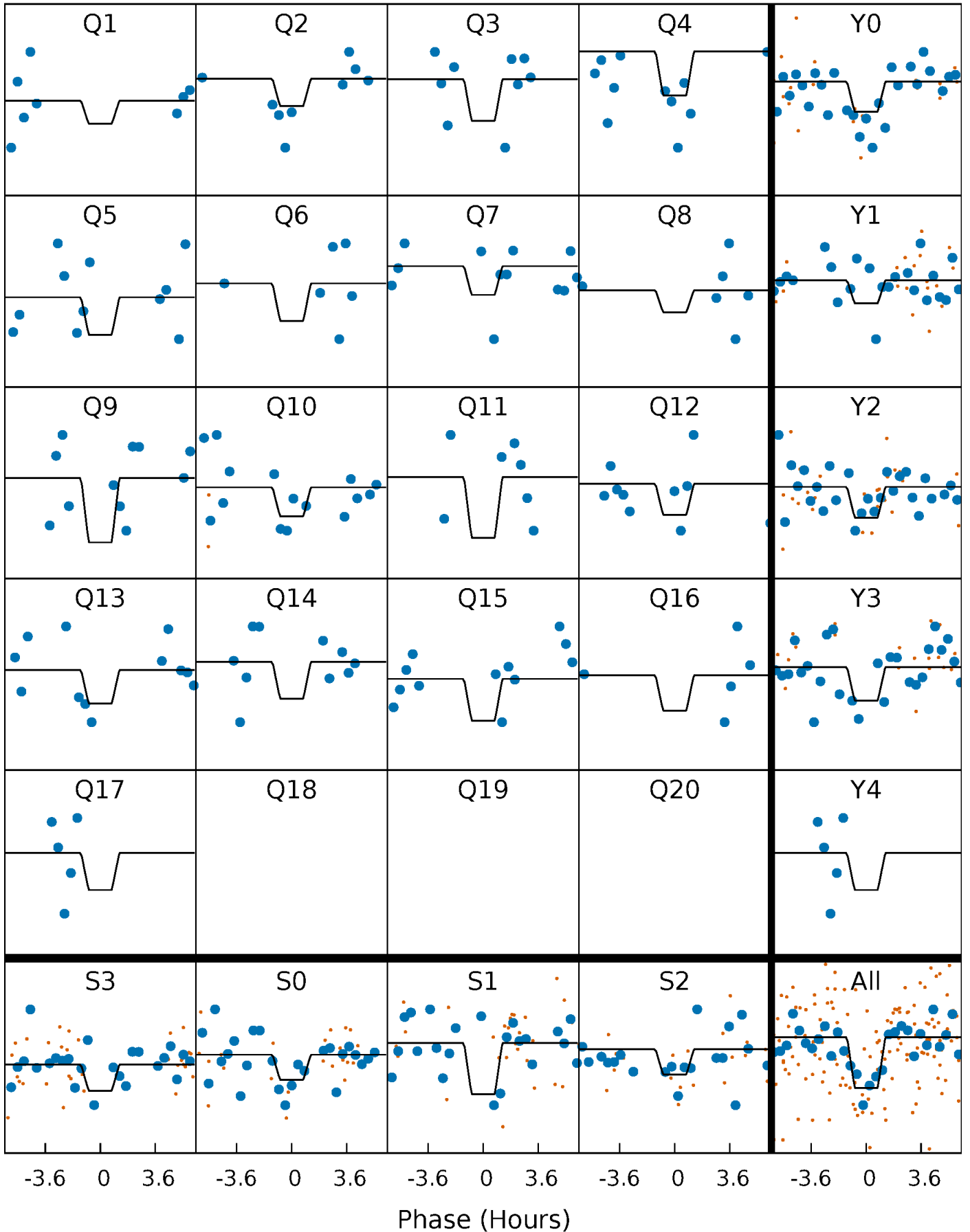
DV Quarter-Phased Transit Curves

TCE 008358253-04 P= 12.937468 Days $T_0=132.727048$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

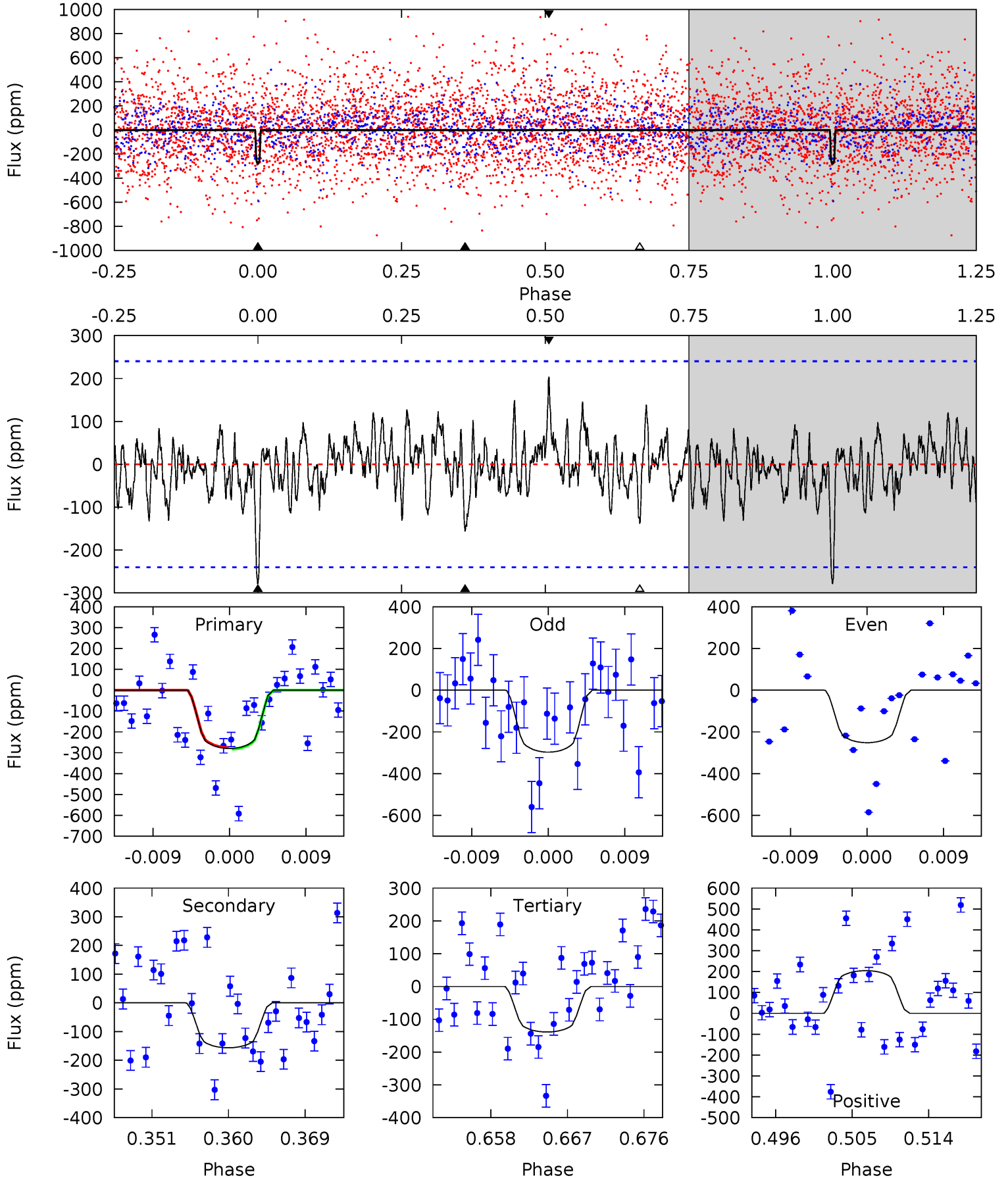
TCE 008358253-04 P= 12.937553 Days $T_0=132.718861$ (BKJD)



DV Model-Shift Uniqueness Test

008358253-04, P = 12.937468 Days, E = 119.789580 Days

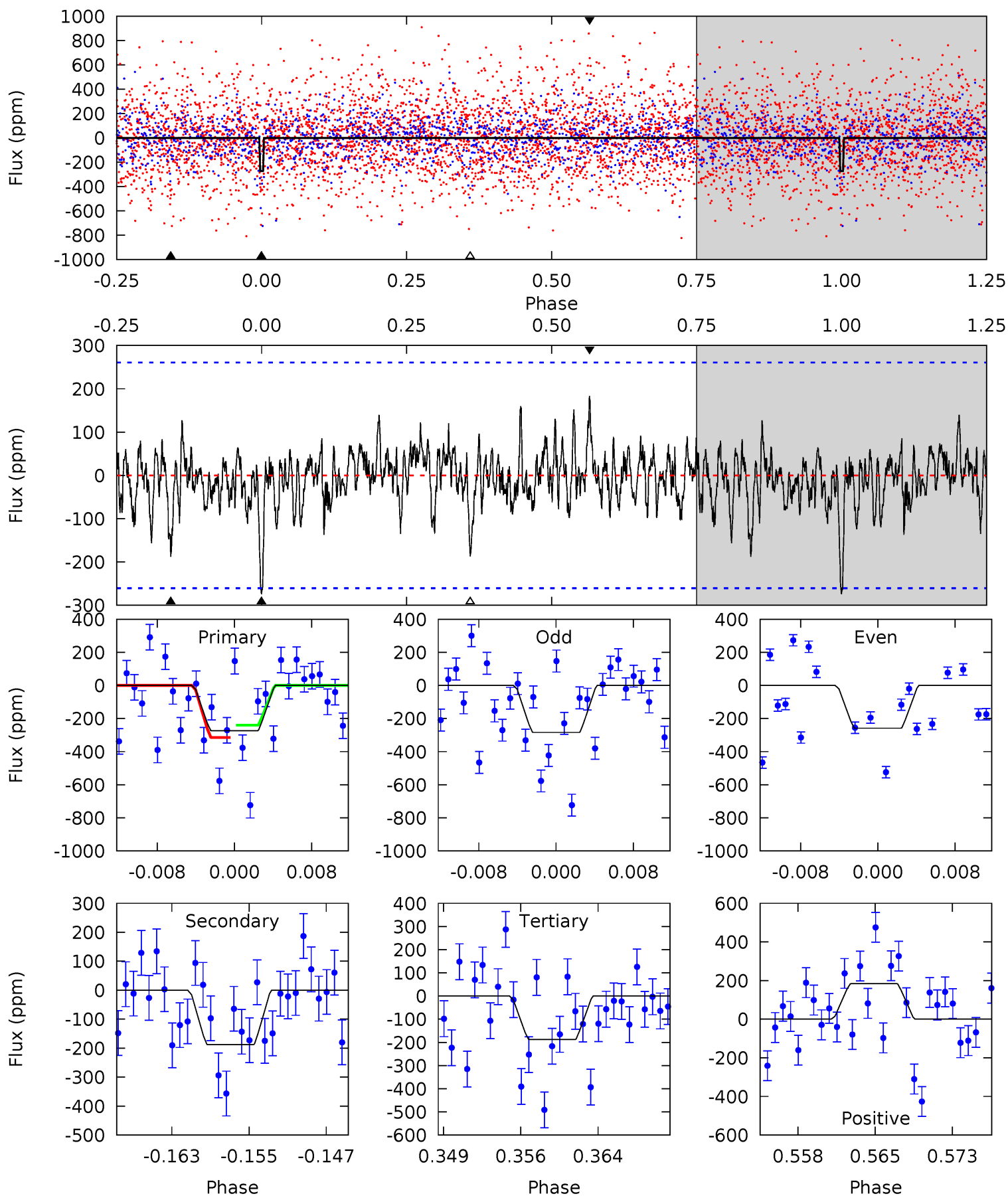
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.87	3.29	2.92	4.29	5.05	2.61	1.10	2.96	1.58	0.37	-1.01	0.46	0.82	0.42	0.08



Alt Model-Shift Uniqueness Test

008358253-04, P = 12.937553 Days, E = 119.781308 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.33	3.65	3.65	3.57	5.08	2.66	0.99	1.69	1.76	0.00	0.08	0.24	0.76	0.40	0.72



Stellar Parameters For KIC 008358253

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5985^{+161}_{-179}	$4.548^{+0.048}_{-0.204}$	$-0.360^{+0.300}_{-0.300}$	$0.855^{+0.248}_{-0.083}$	$0.942^{+0.109}_{-0.109}$	$2.122^{+0.425}_{-1.108}$
	+3%/-3%	+1%/-4%	+83%/-83%	+29%/-10%	+12%/-12%	+20%/-52%
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 008358253-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-156 ± 48	$3.27^{+2.74}_{-2.15}$	1072^{+71}_{-50}	3954^{+2170}_{-720}	89^{+568}_{-66}
Alt.	-188 ± 51	$3.11^{+3.07}_{-2.09}$	1073^{+76}_{-51}	4160^{+2676}_{-859}	110^{+954}_{-82}

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

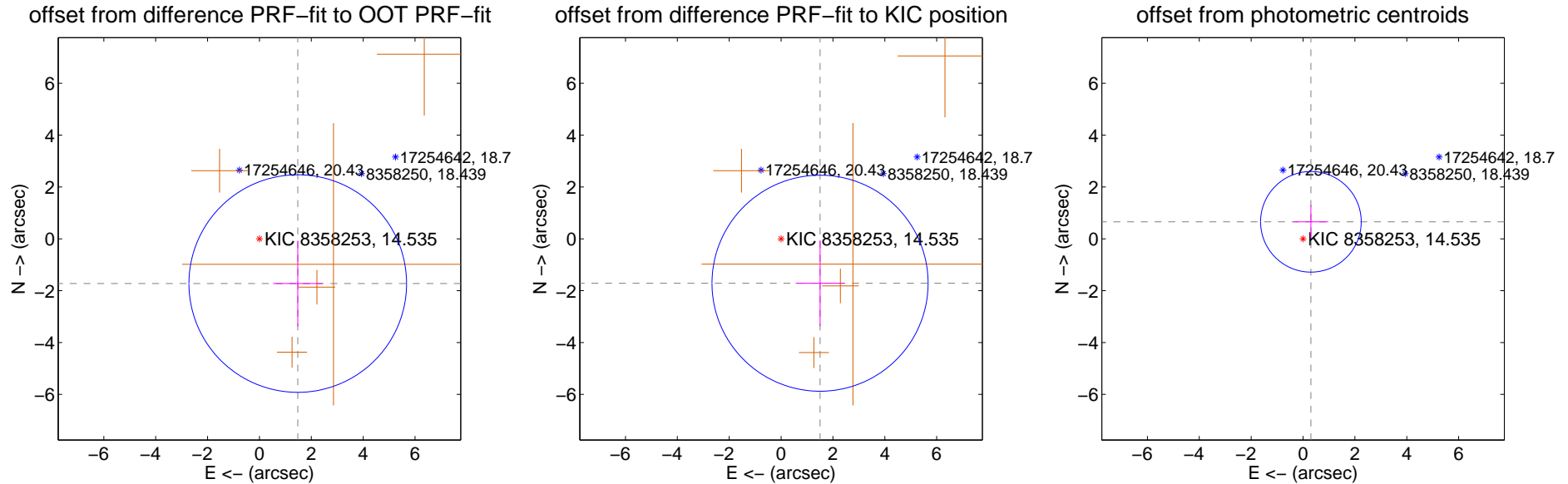
DV Centroid Data

Supplemental centroid analysis for 008358253-04. Kepler magnitude: 14.54. Transit SNR 11.97

There are 0 quarters with good PRF difference image offsets

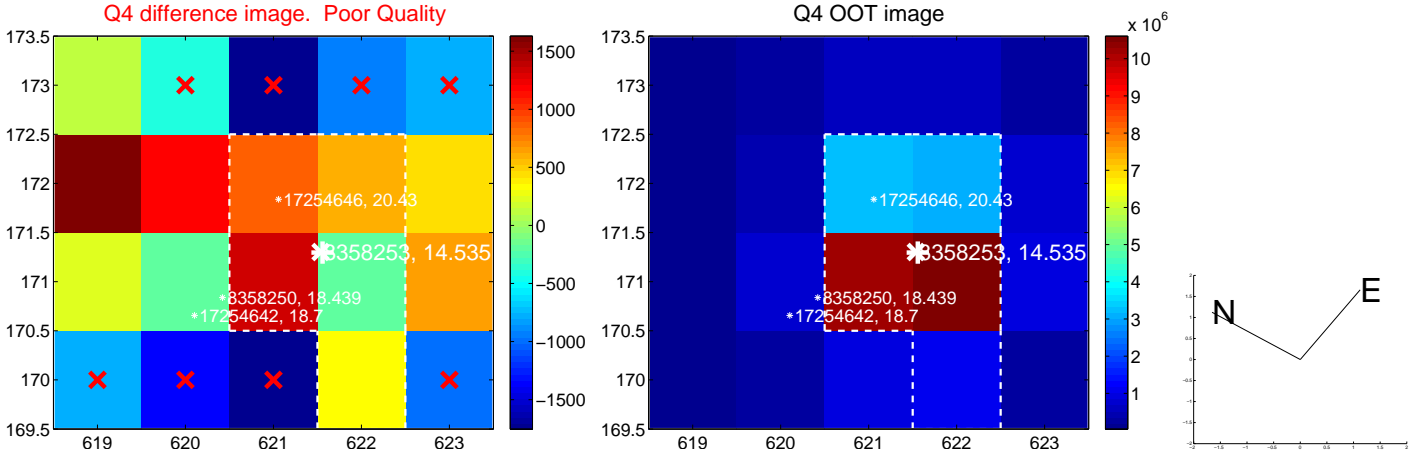
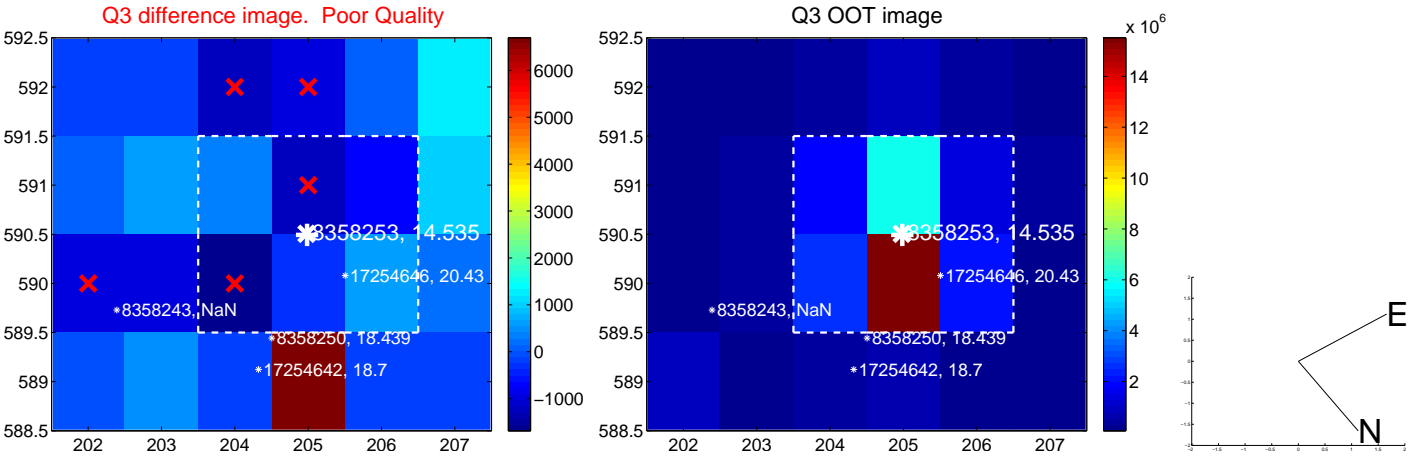
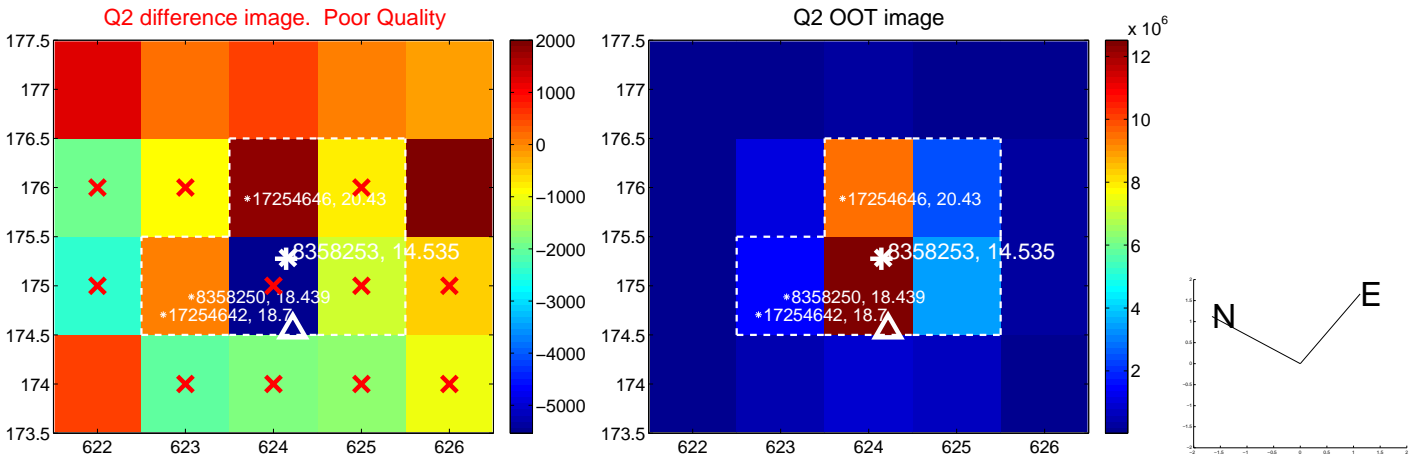
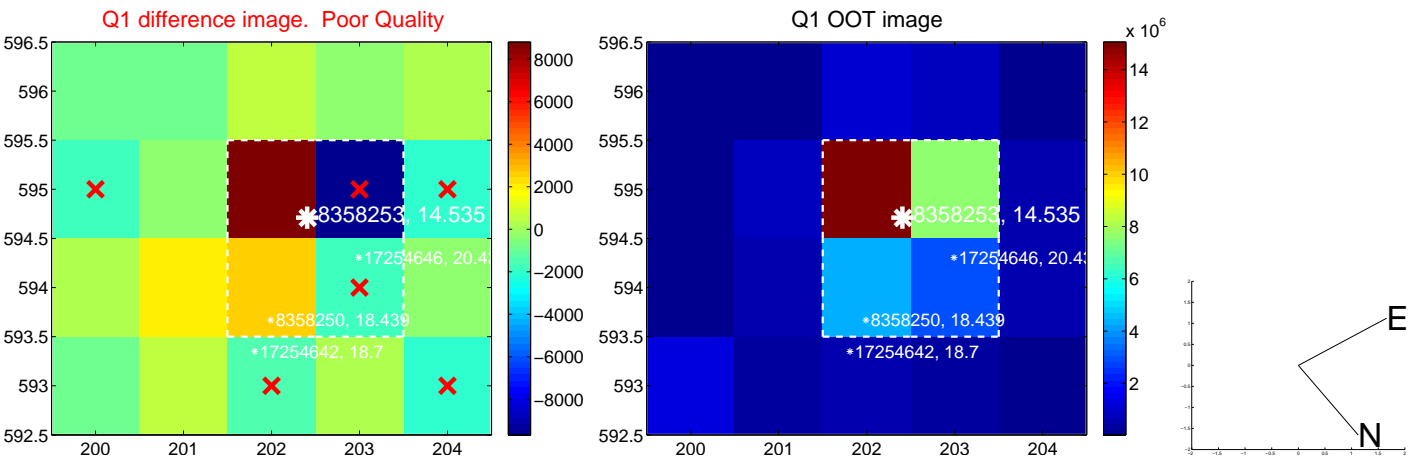
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.271 ± 1.398	1.62	-1.477 ± 0.951	-1.725 ± 1.651
PRF-fit source offset from KIC position	2.278 ± 1.389	1.64	-1.502 ± 0.938	-1.713 ± 1.654
photometric centroid source offset	0.72 ± 0.65	1.12	-0.30 ± 0.67	0.66 ± 0.64

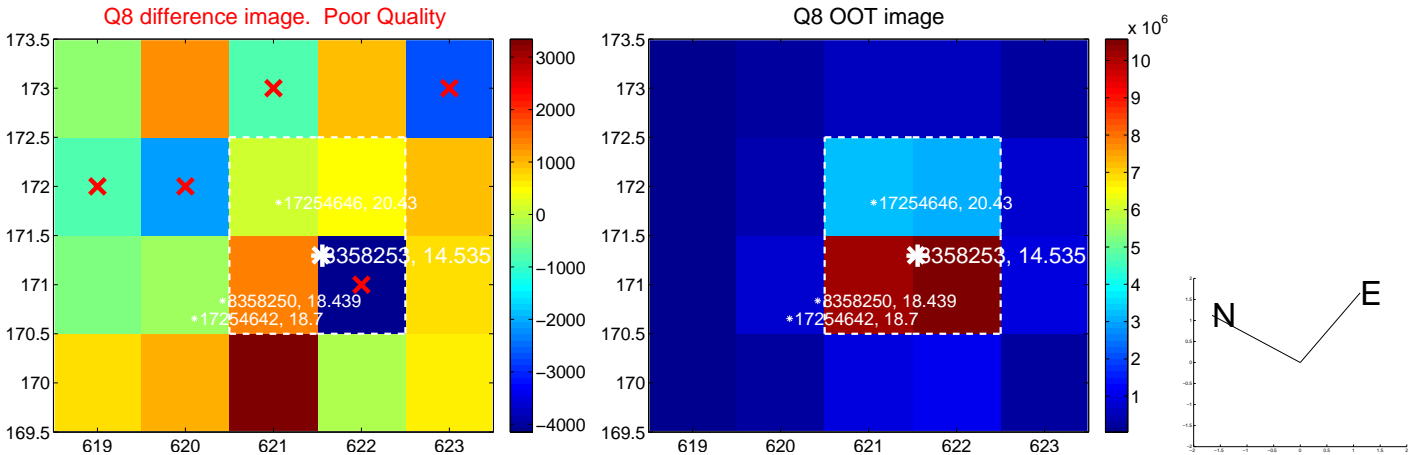
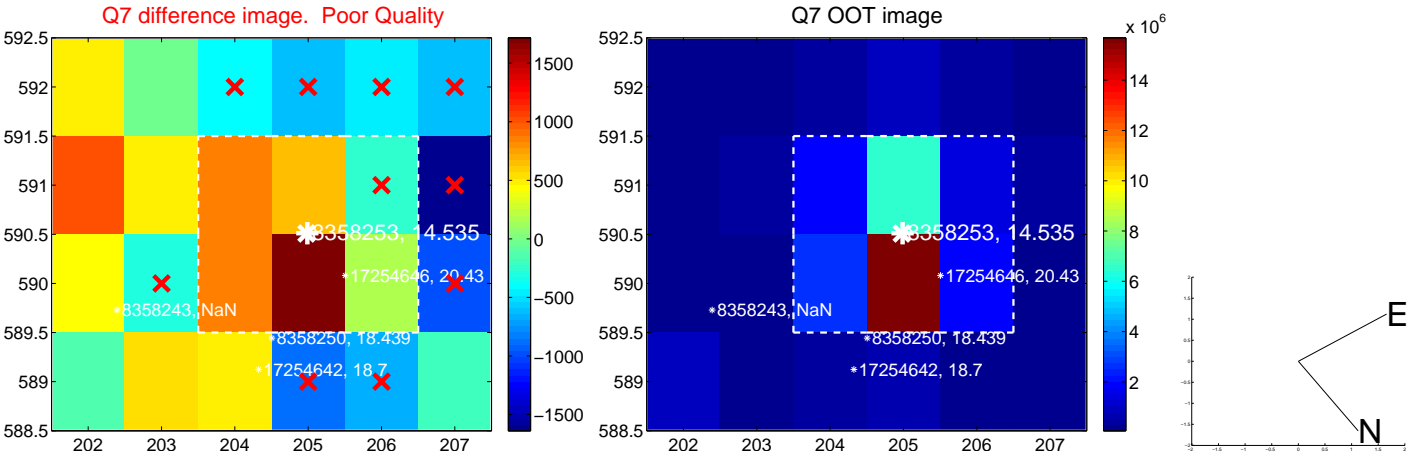
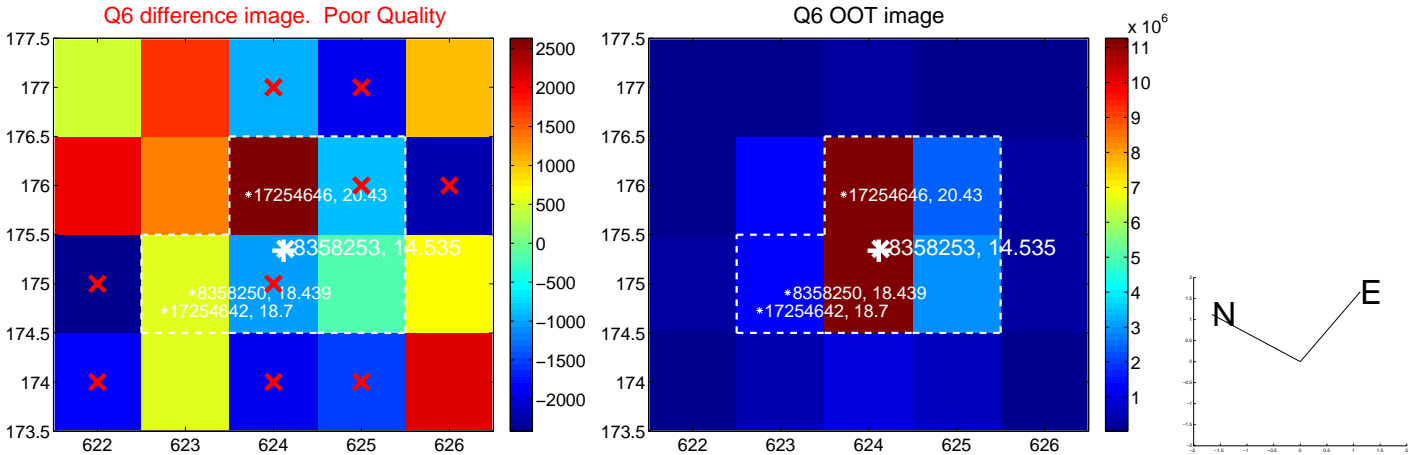
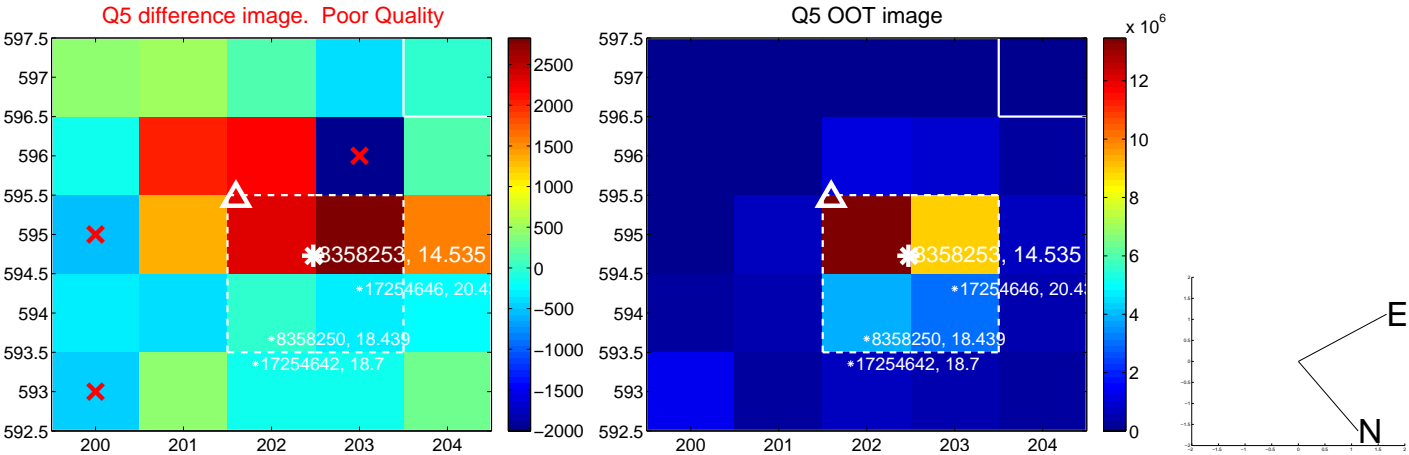


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

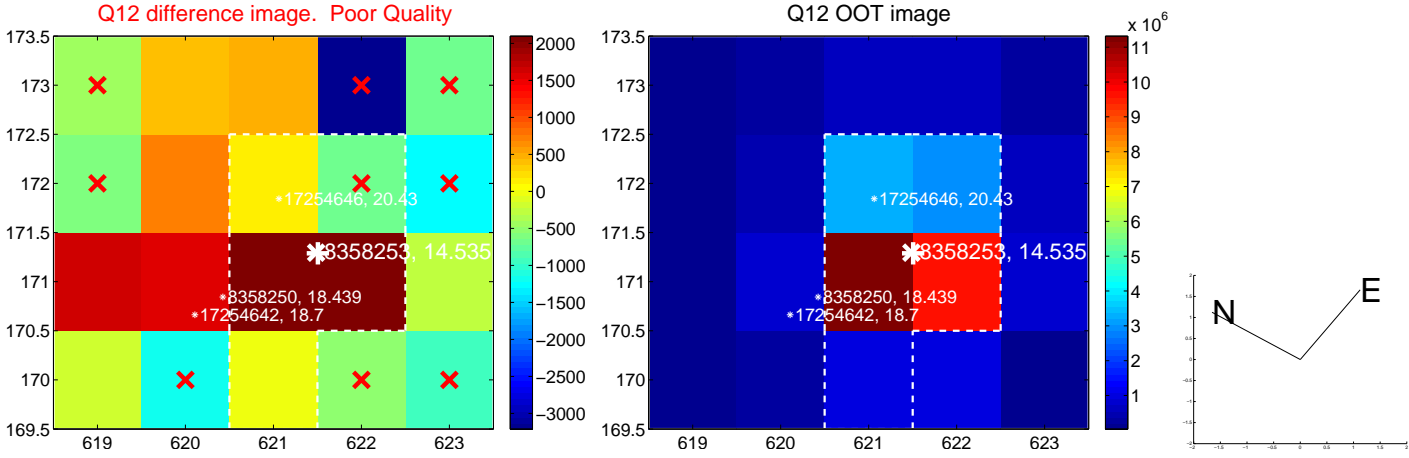
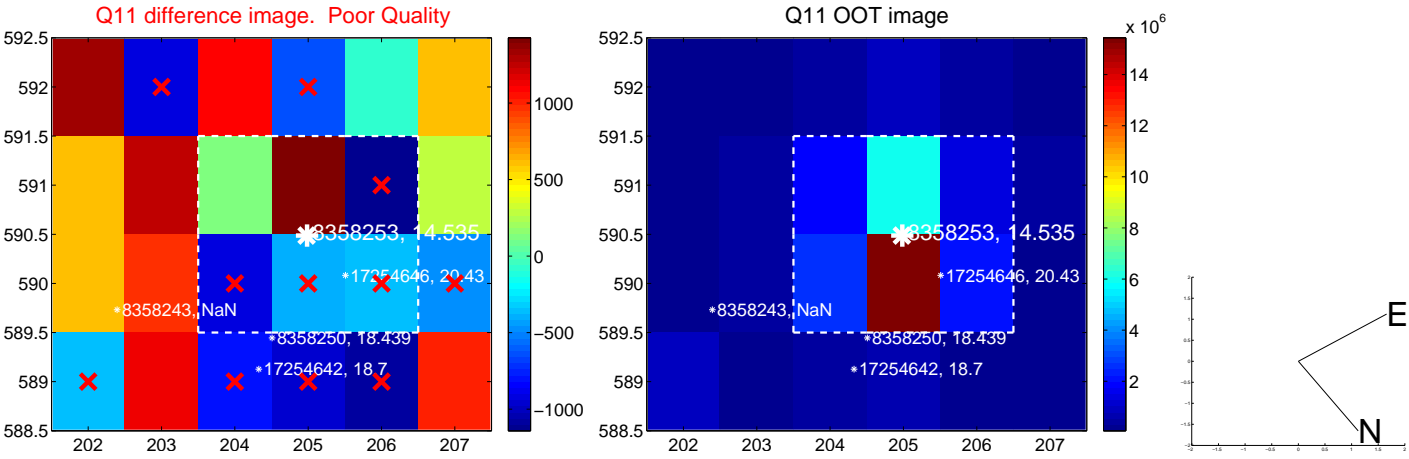
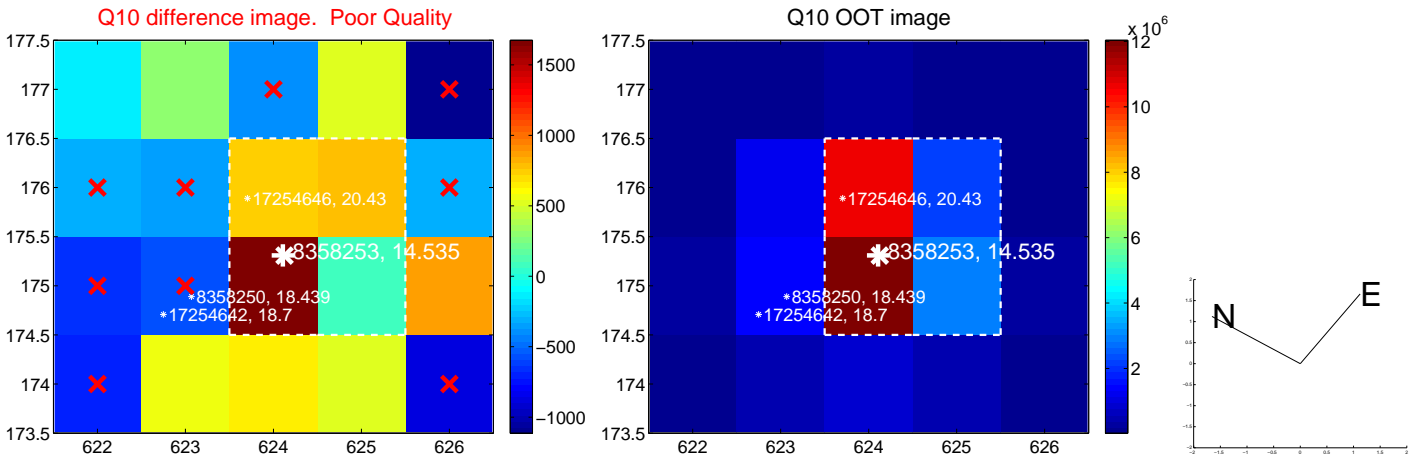
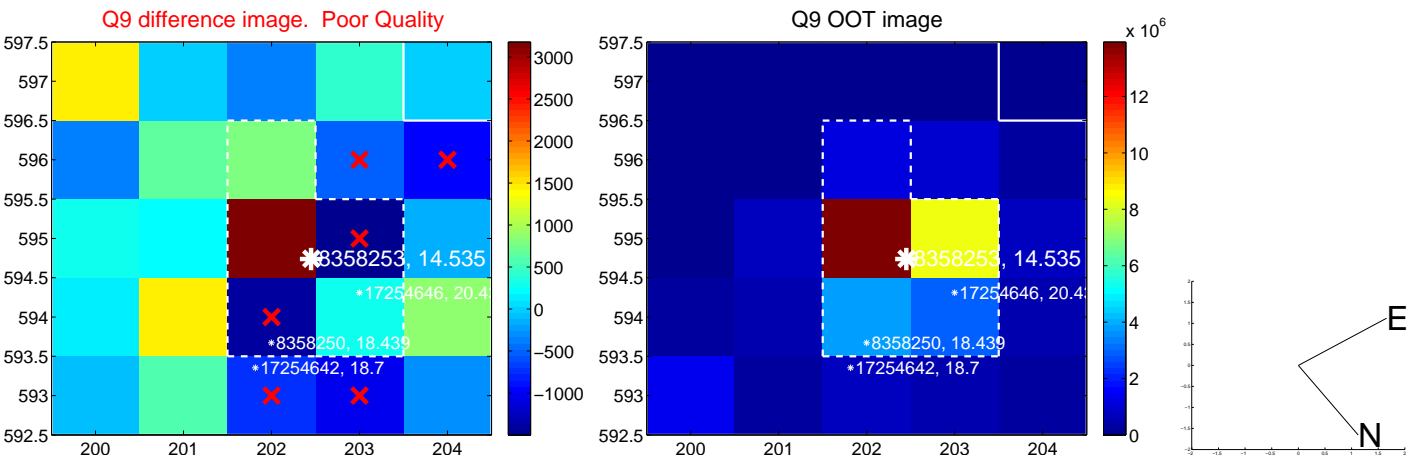
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



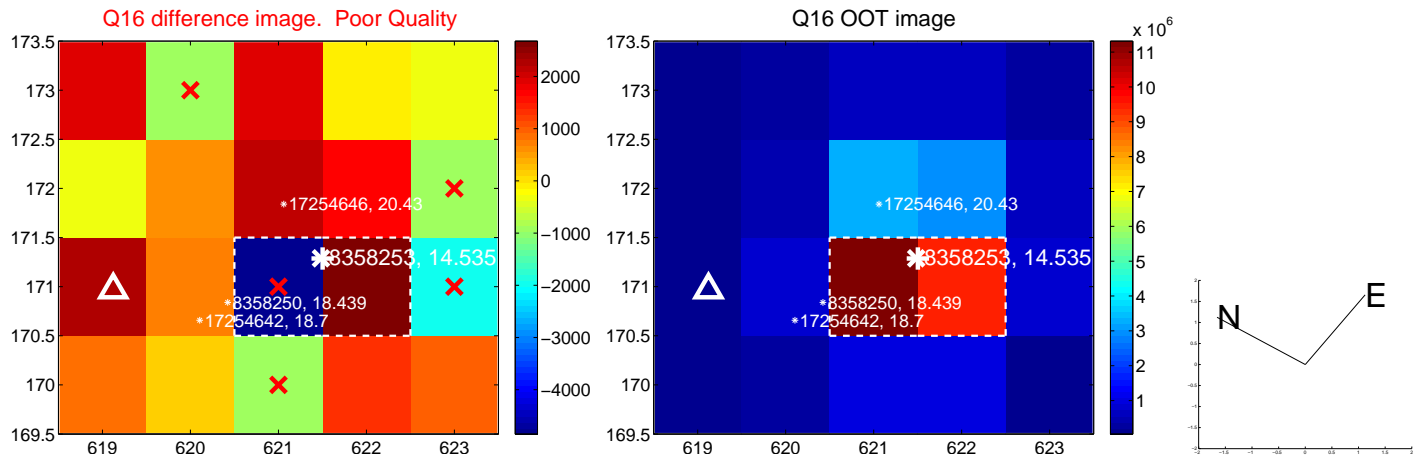
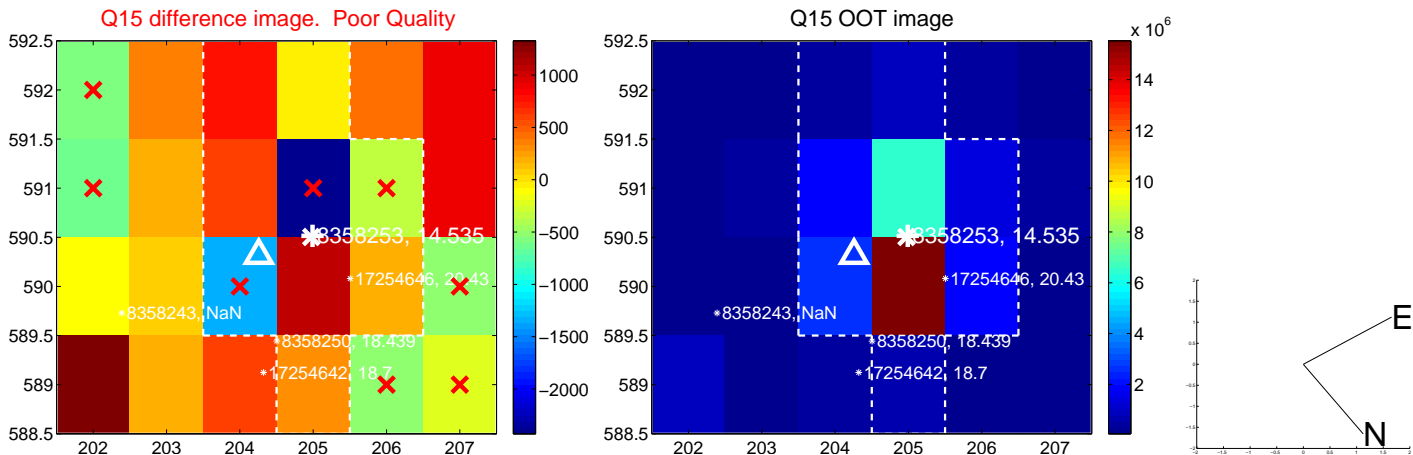
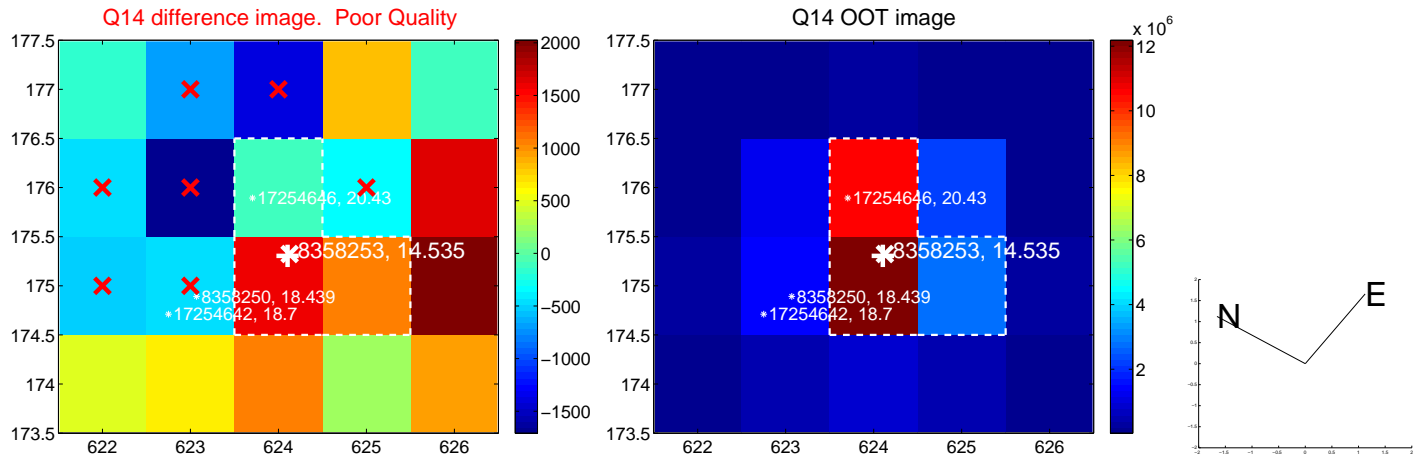
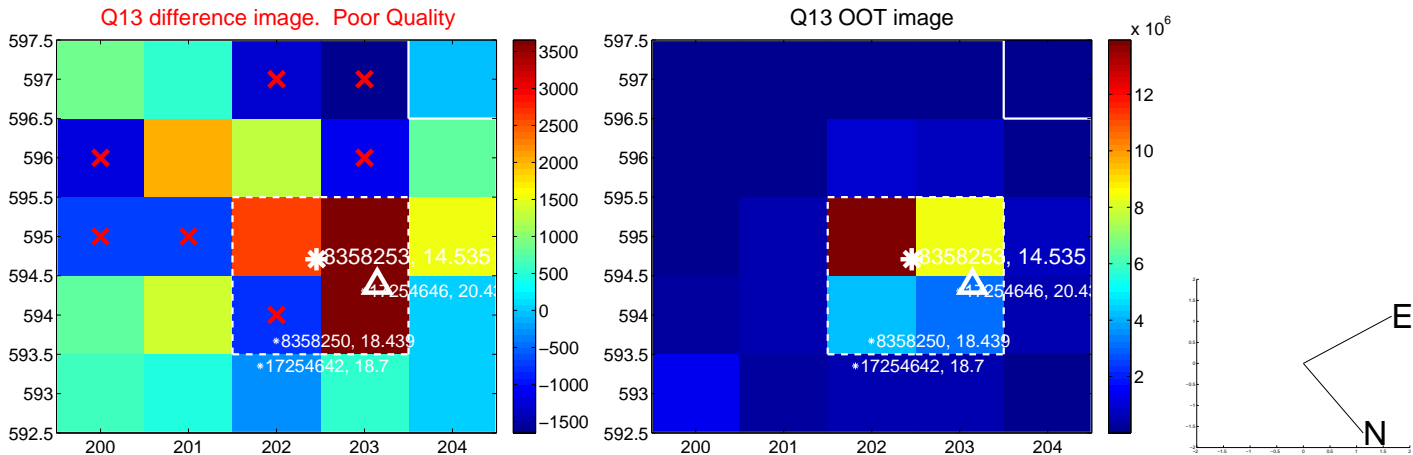
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



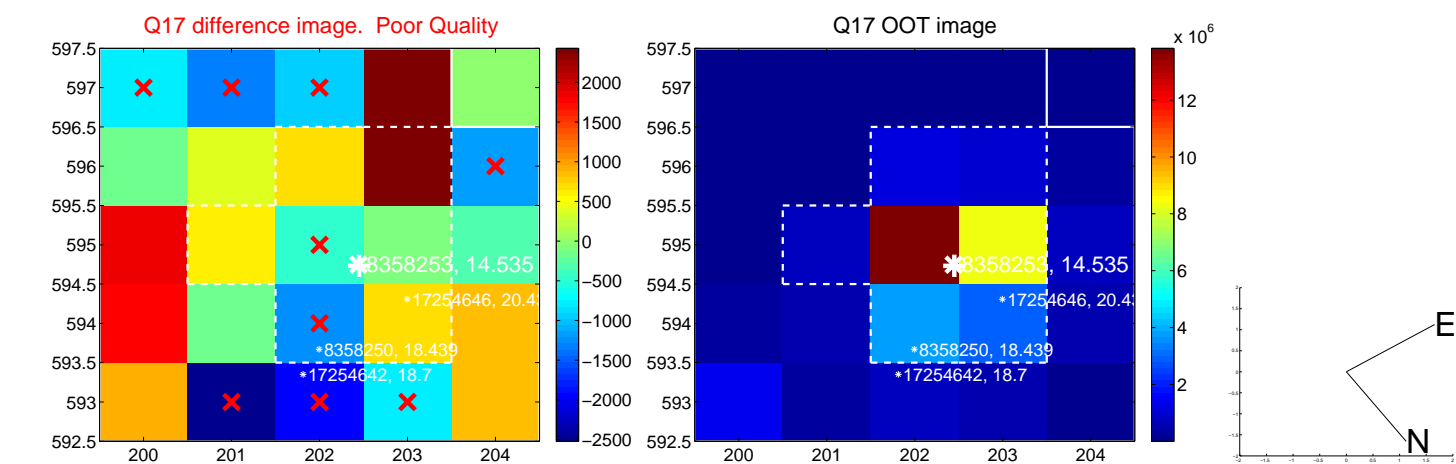
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



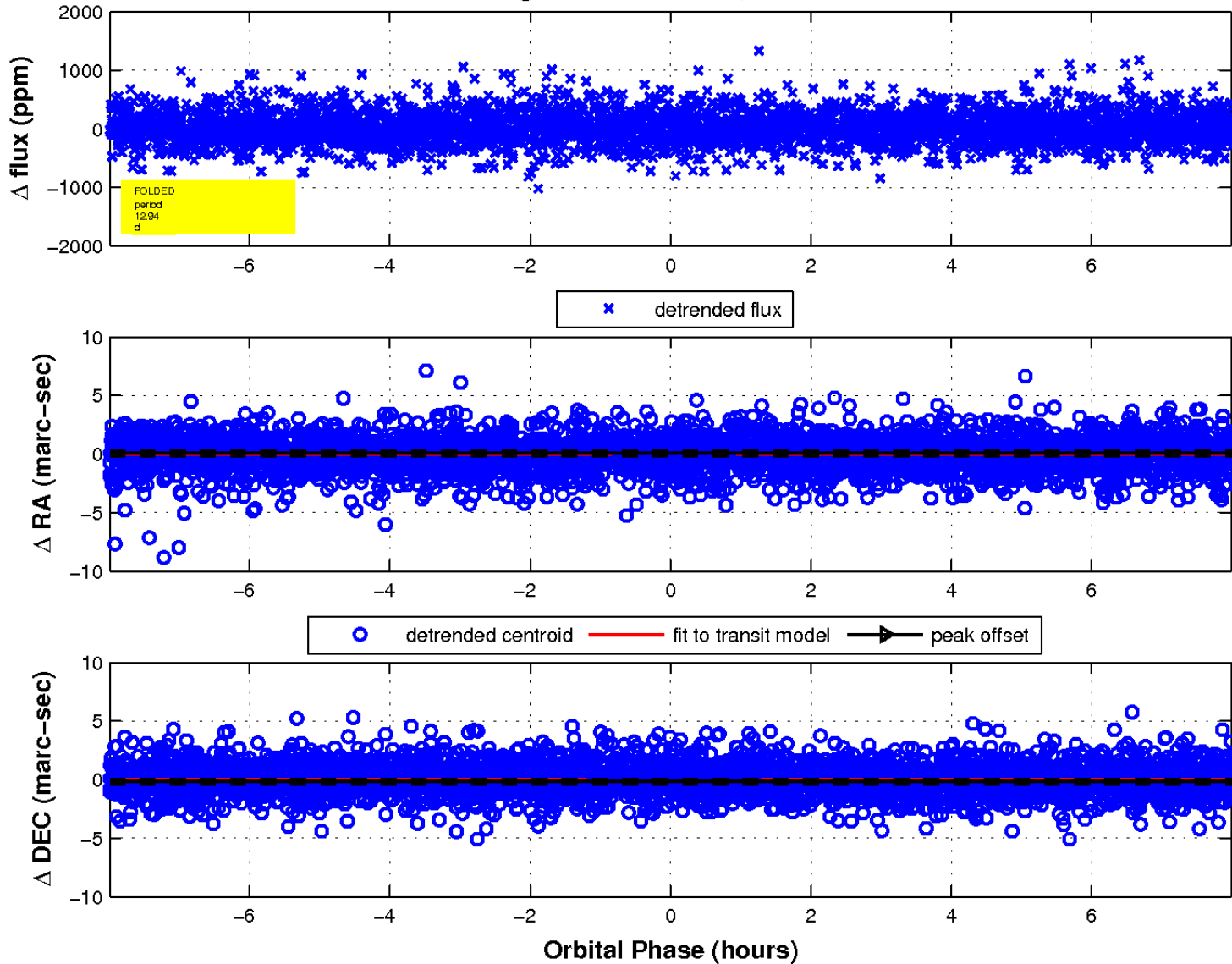
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

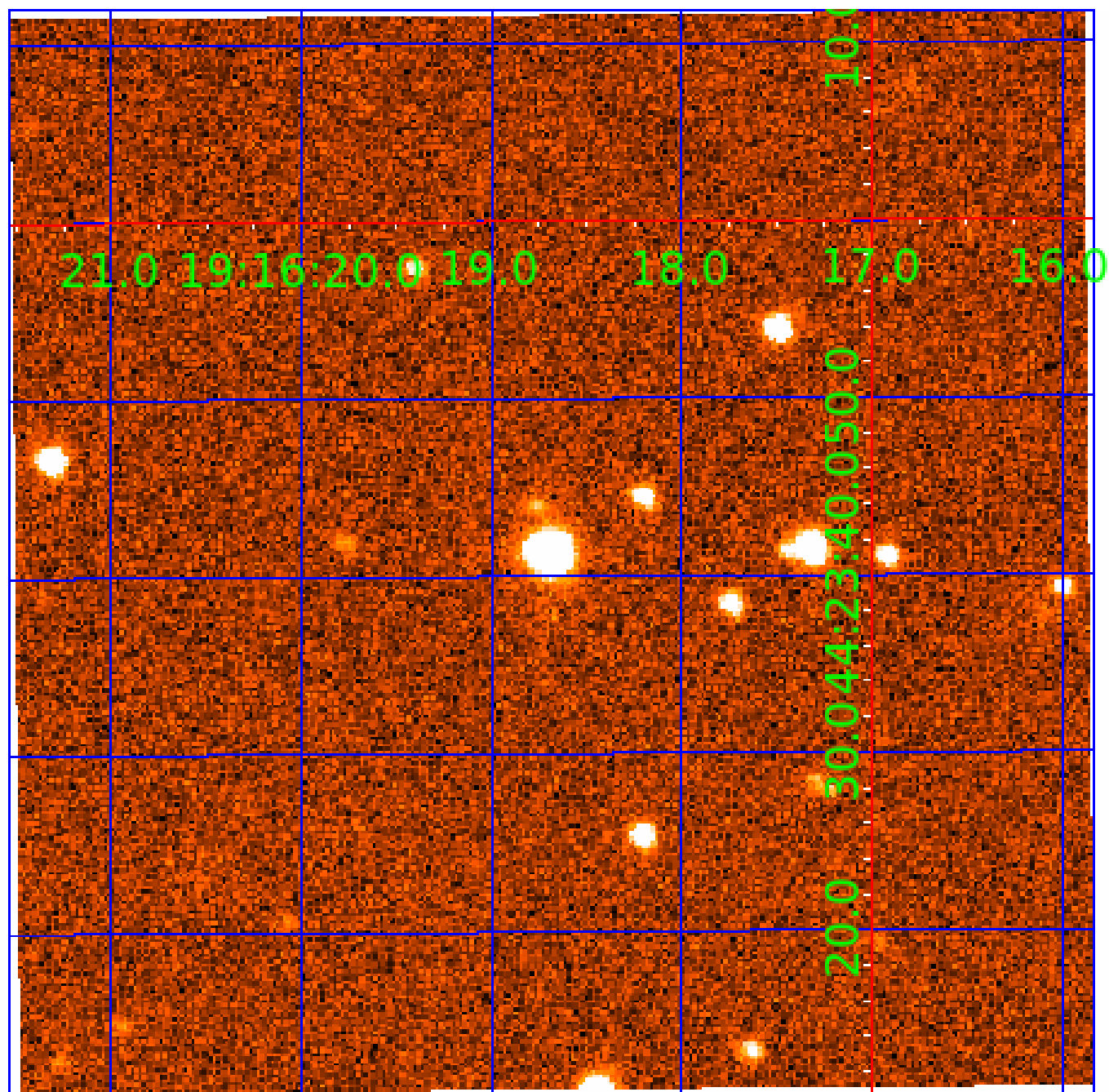


fluxWeightedCentroids, Planet 4 of 7



UKIRT Image

Declination



KIC 008358253

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})
008358253-01	OBS	No	1.560070	132.642266	32.2	11.560	11.0	13.5	0.85	5985	0.48	1261.64
008358253-02	OBS	No	22.544851	133.437573	437.2	1.328	14.3	13.8	0.85	5985	1.82	35.84
008358253-03	OBS	No	32.494713	140.172890	406.3	4.066	13.7	15.3	0.85	5985	1.89	22.02
008358253-04	OBS	No	12.937468	132.727048	276.7	2.664	13.2	12.0	0.85	5985	1.66	75.16
008358253-05	OBS	No	15.455704	140.176654	300.4	1.951	11.8	12.0	0.85	5985	1.73	59.29
008358253-06	OBS	No	35.454416	159.998443	204.3	7.238	11.3	9.3	0.85	5985	1.43	19.60
008358253-07	OBS	No	21.549892	139.252006	293.9	2.069	10.1	11.1	0.85	5985	1.66	38.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008358253-01	OBS	FP	0.00	1	0	0	0	LPP_DV
008358253-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS
008358253-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
008358253-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
008358253-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
008358253-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS
008358253-07	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_FEW_DIFFS

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

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

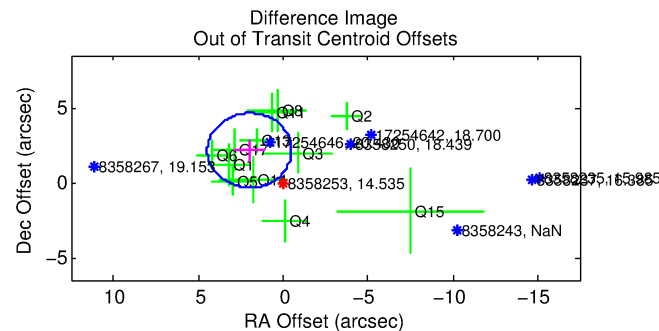
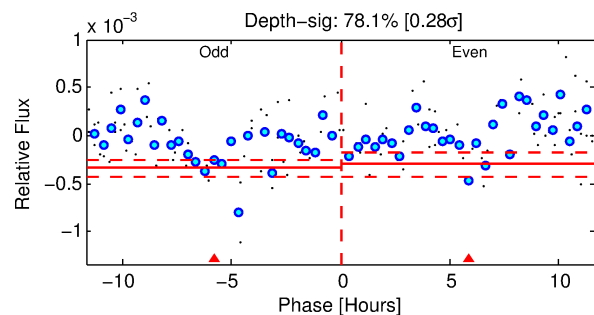
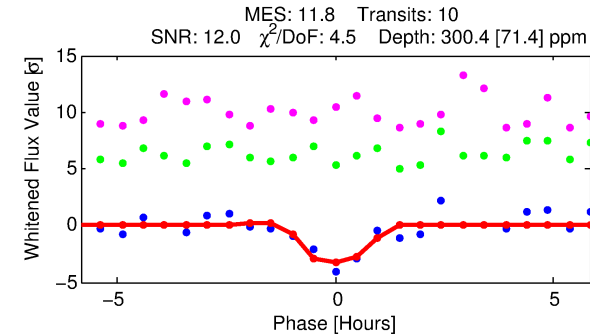
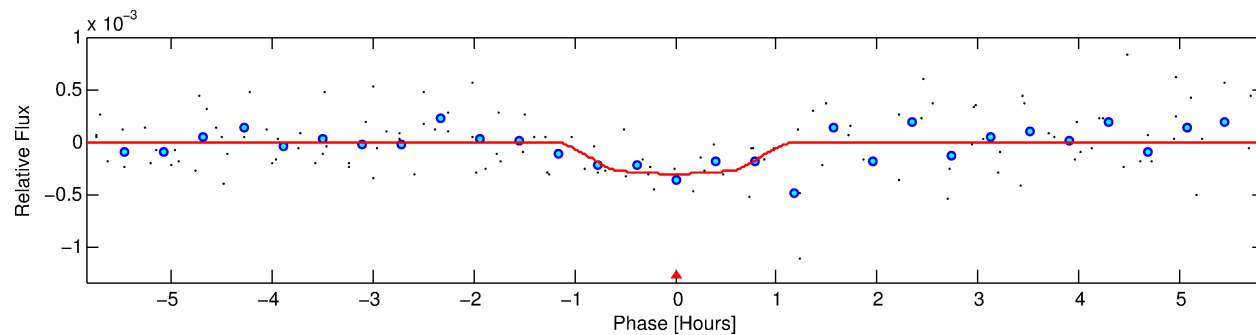
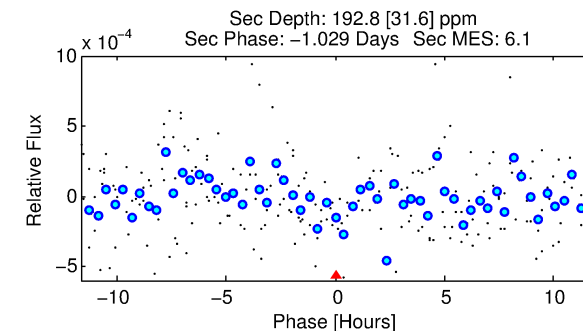
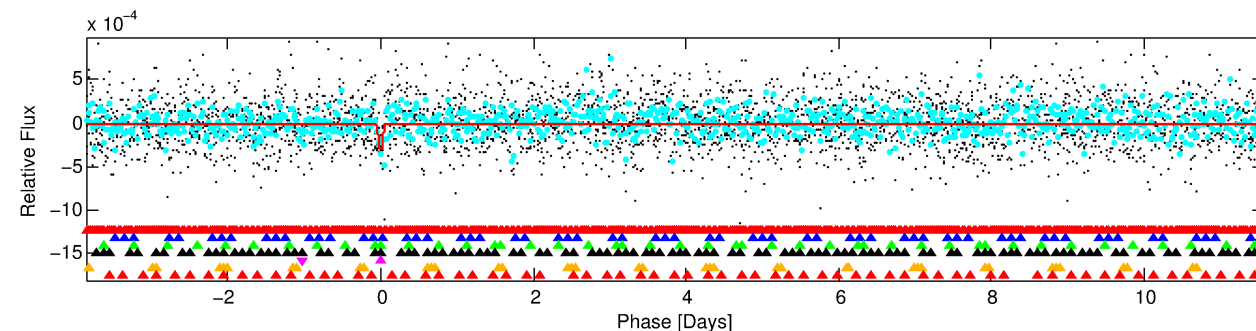
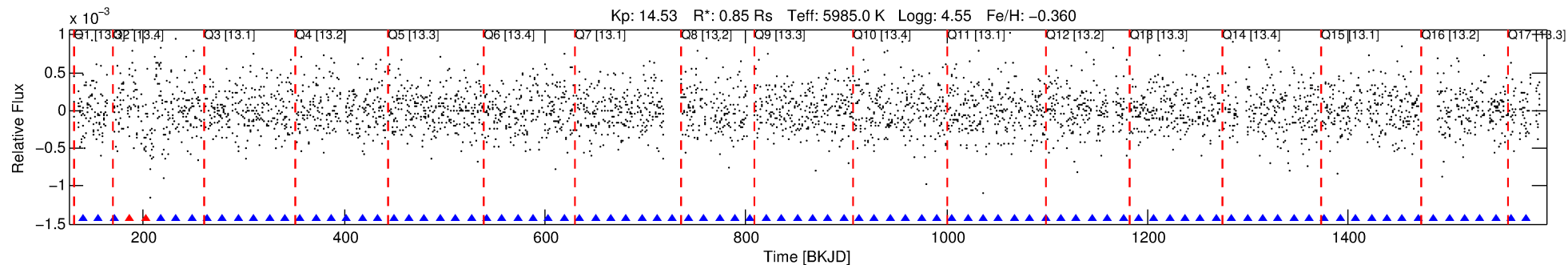
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008358253-05

No Significant Match Found

DV One-Page Summary

KIC: 8358253 Candidate: 5 of 7 Period: 15.456 d



DV Fit Results:

Period = 15.45570 [0.00028] d
Epoch = 140.1767 [0.0129] BKJD
Rp/R* = 0.0185 [0.0351]
a/R* = 30.47 [301.31]
b = 0.89 [2.45]
Seff = 59.29 [22.95]
Teff = 708 [68] K
Rp = 1.73 [3.31] Re
a = 0.1191 [0.0296] AU
Ag = 504.39 [1923.64] [0.26 σ]
Teffp = 5185 [4923] K [0.91 σ]

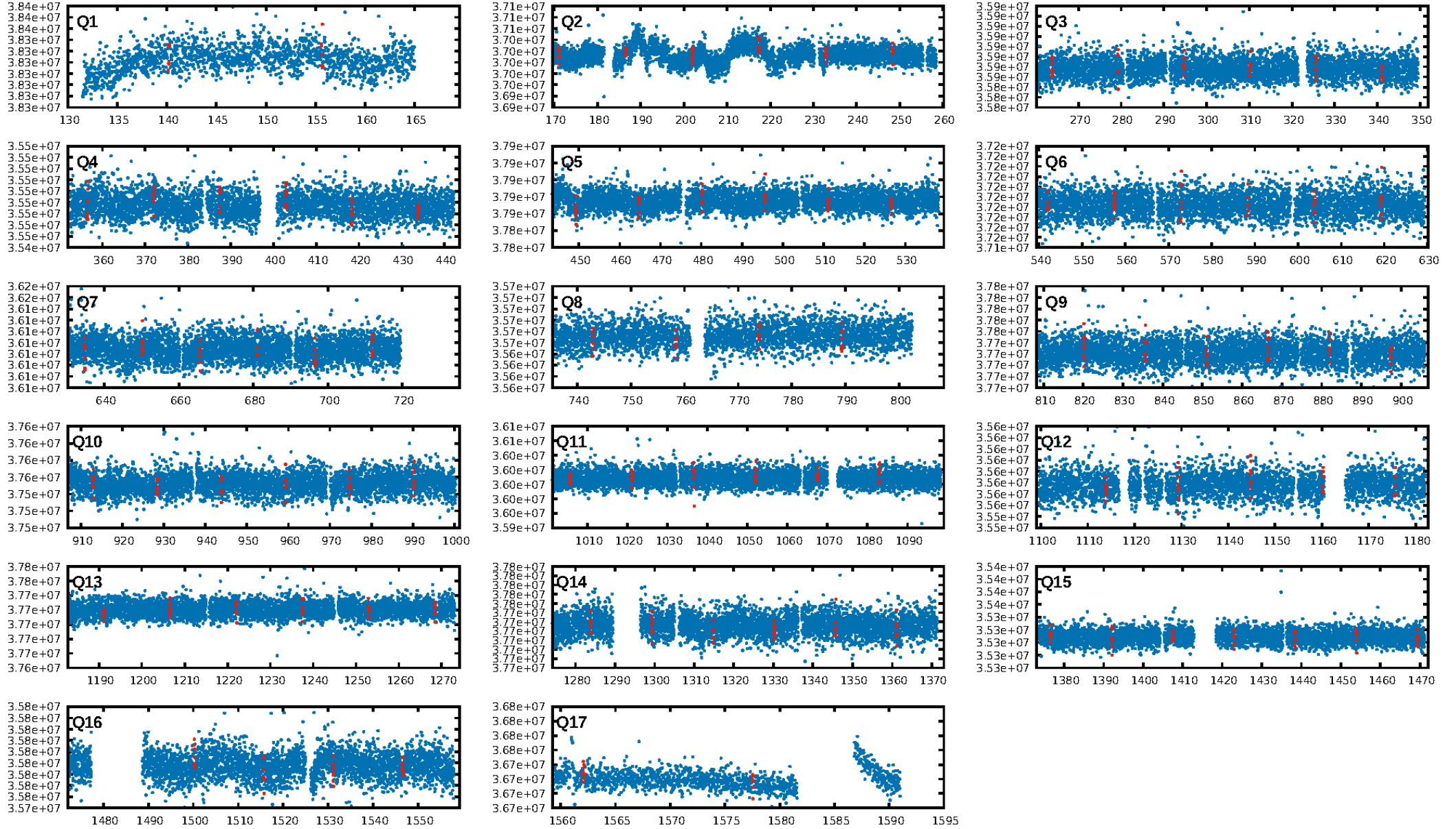
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [18.30 σ]
LongPeriod-sig: 100.0% [51.44 σ]
ModelChiSquare2-sig: 0.6%
ModelChiSquareGof-sig: 72.9%
Bootstrap-pfa: 1.05e-11
RollingBand-fgt: 0.80 [8/10]
GhostDiagnostic-chr: 0.6015
Centroid-sig: 64.0%
Centroid-so: 0.498 arcsec [0.65 σ]
OotOffset-rm: 2.926 arcsec [3.53 σ]
KicOffset-rm: 2.925 arcsec [3.56 σ]
OotOffset-st: 3/3/2/4 [12]
KicOffset-st: 3/3/2/4 [12]
DiffImageQuality-fgm: 0.17 [2/12]
DiffImageOverlap-fno: 0.76 [13/17]

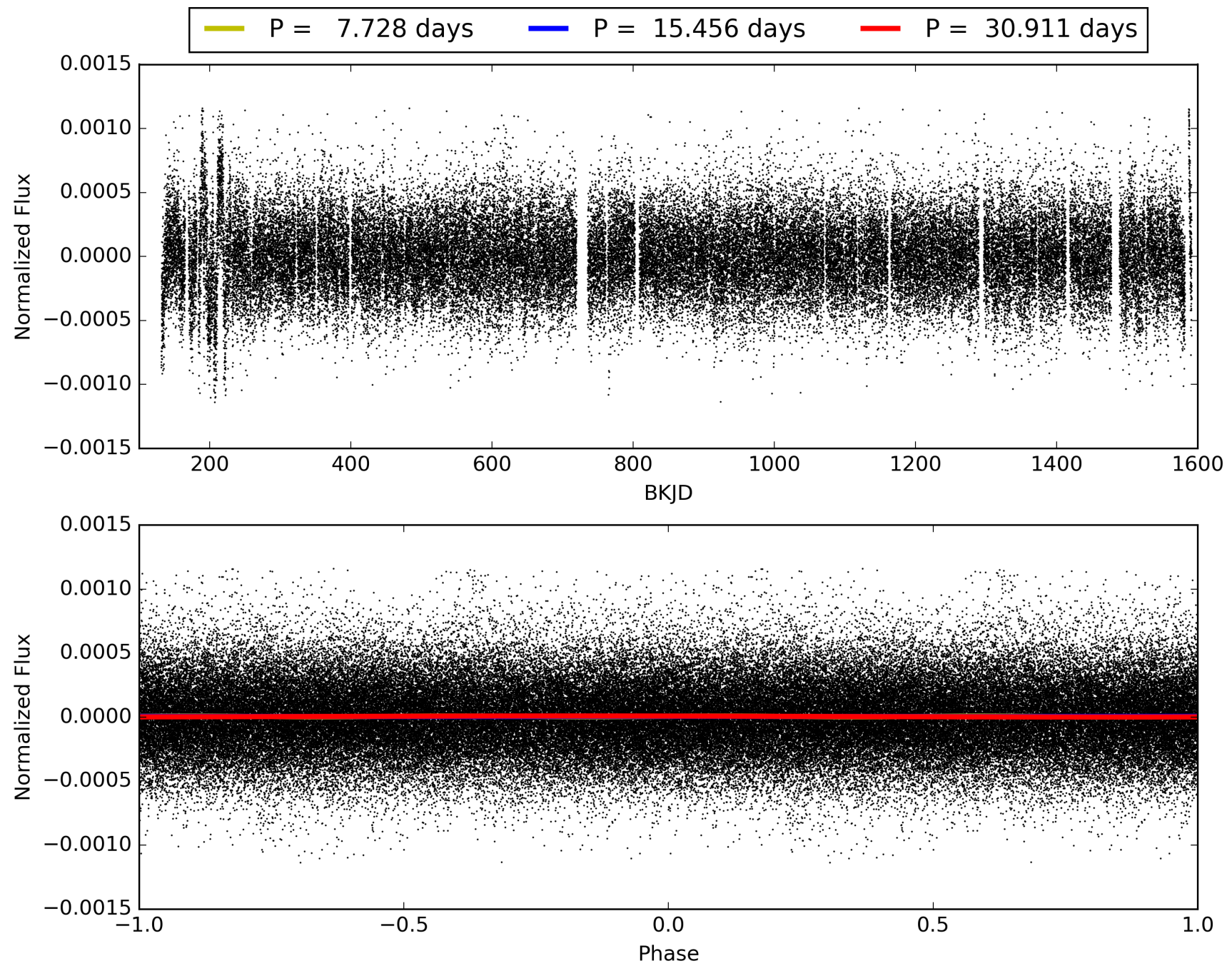
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 19:40:13 Z

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

TCE 008358253-05, PDC Light Curves

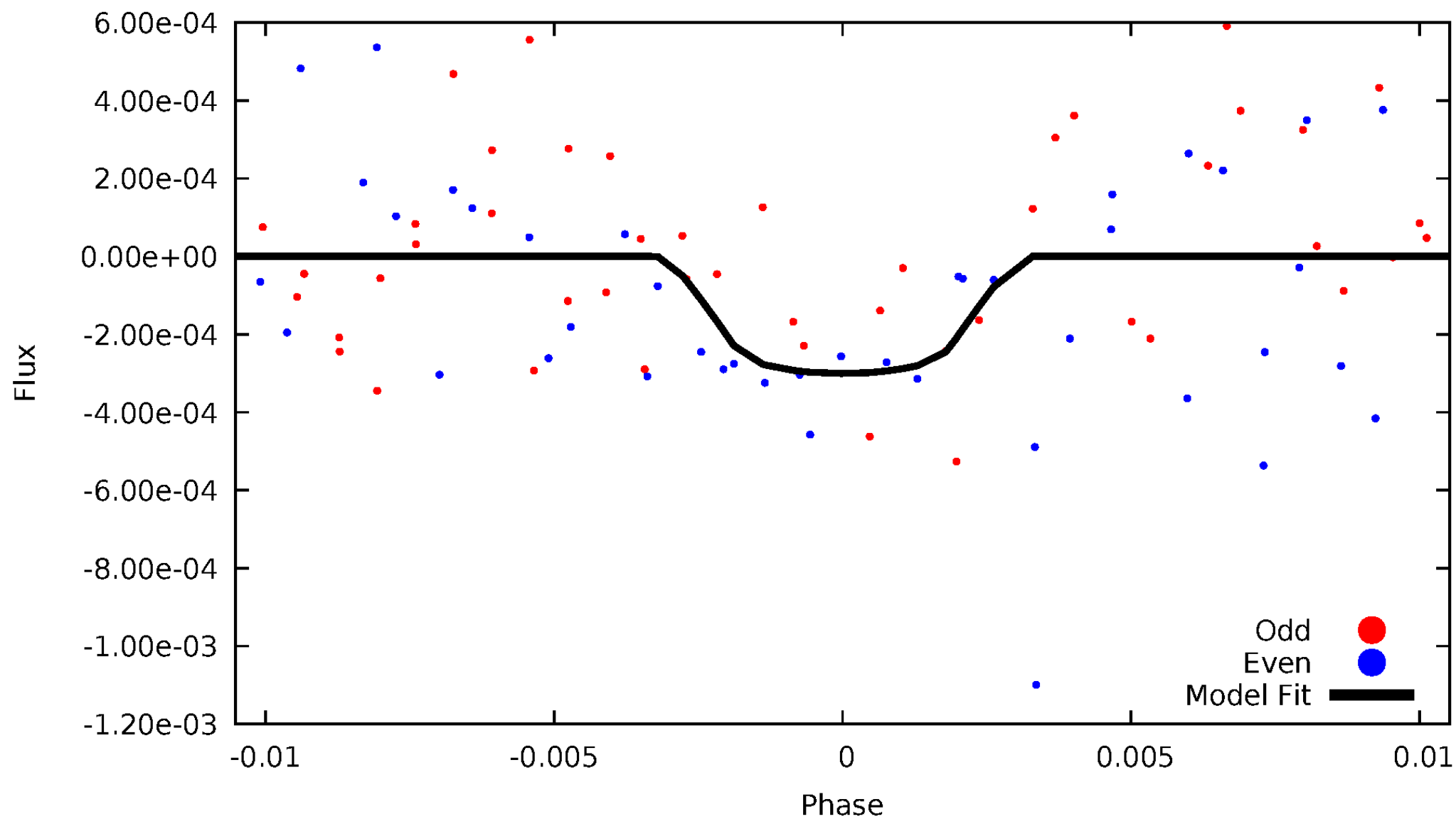


TCE 008358253-05



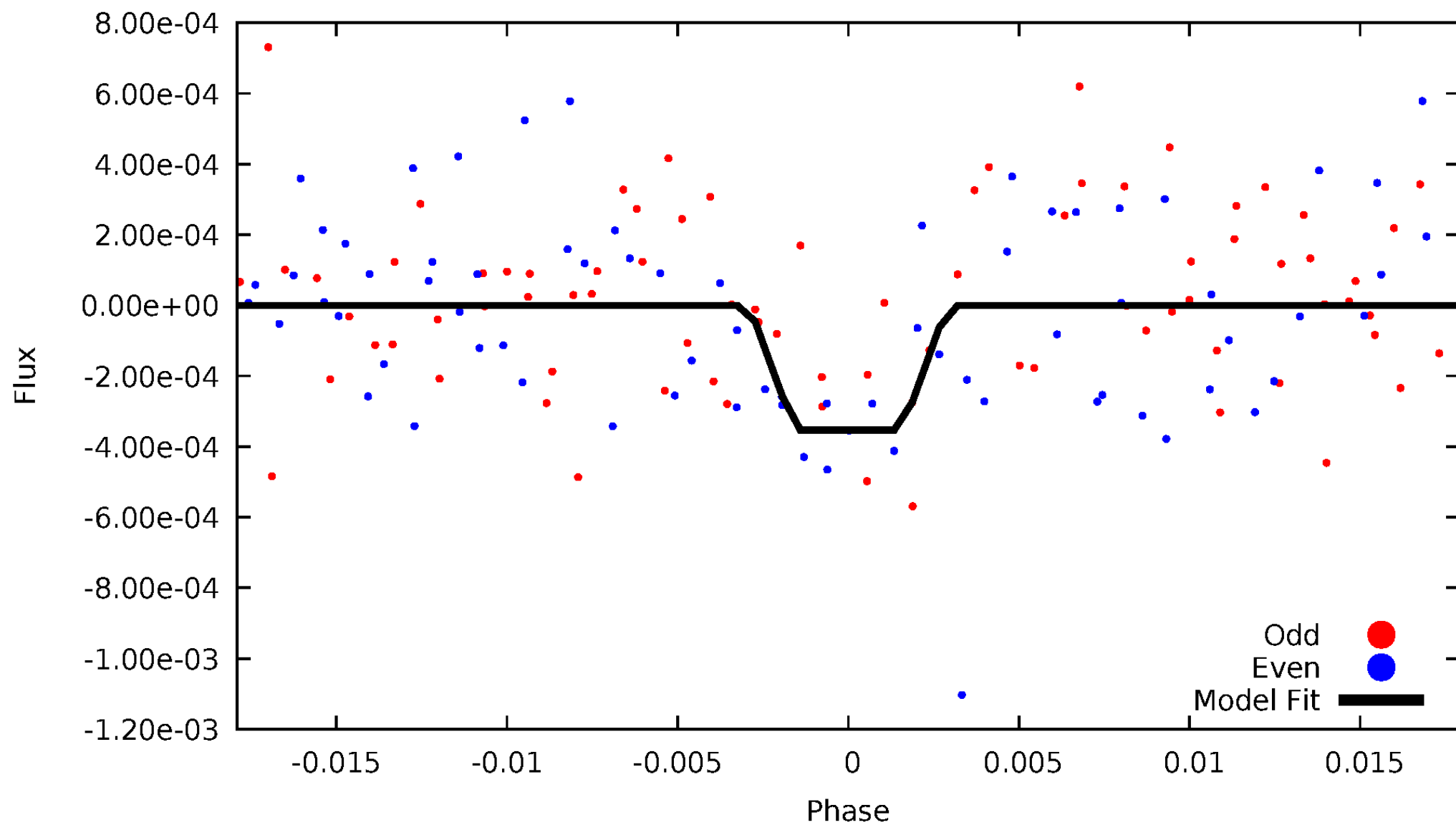
DV Odd/Even

TCE 008358253-05



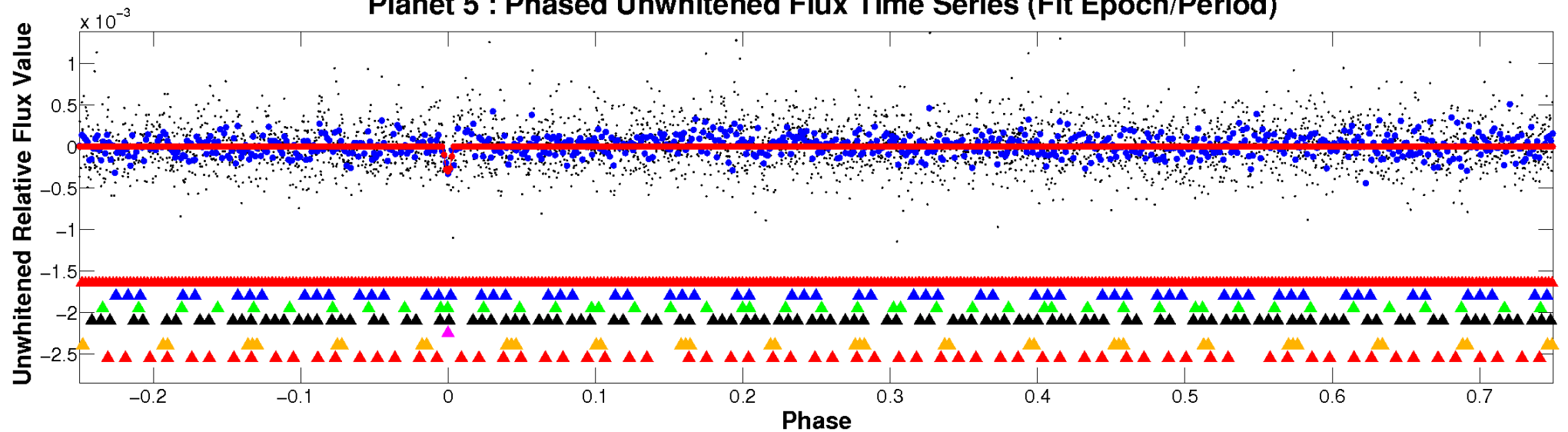
ALT Odd/Even

TCE 008358253-05

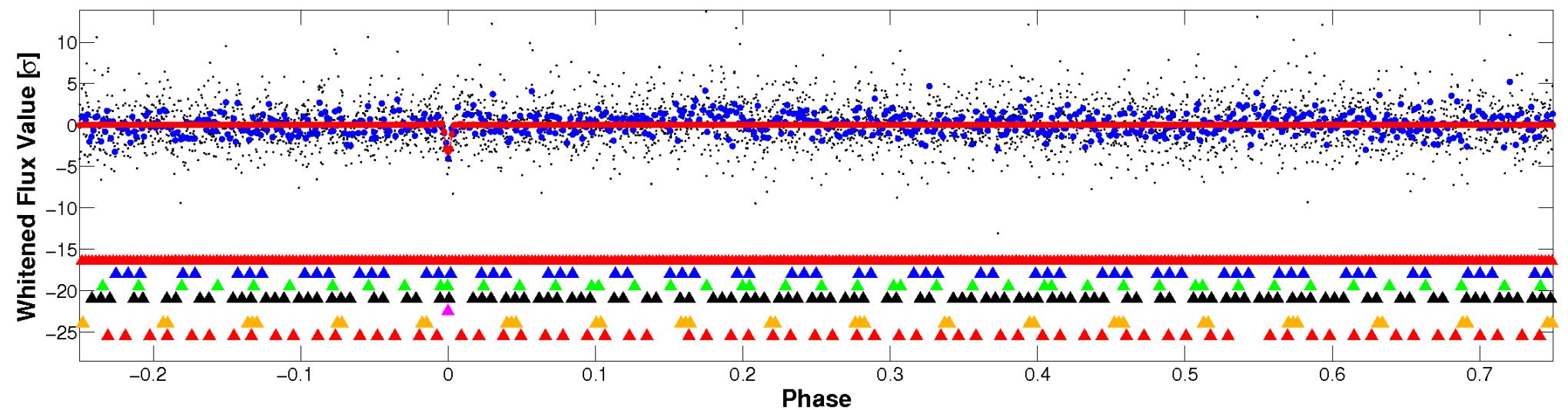


Non-Whitened Vs. Whitened Light Curve

Planet 5 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

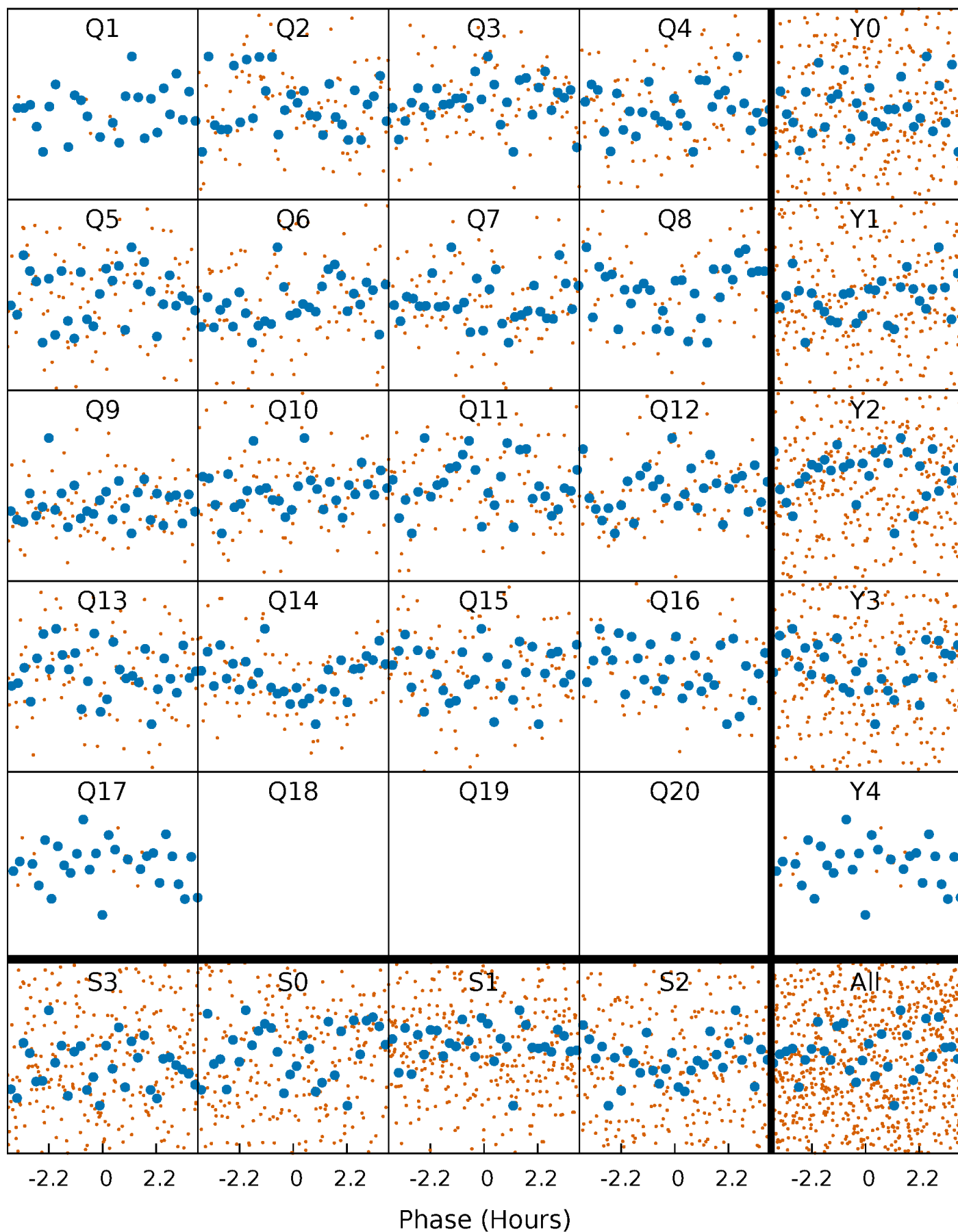


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



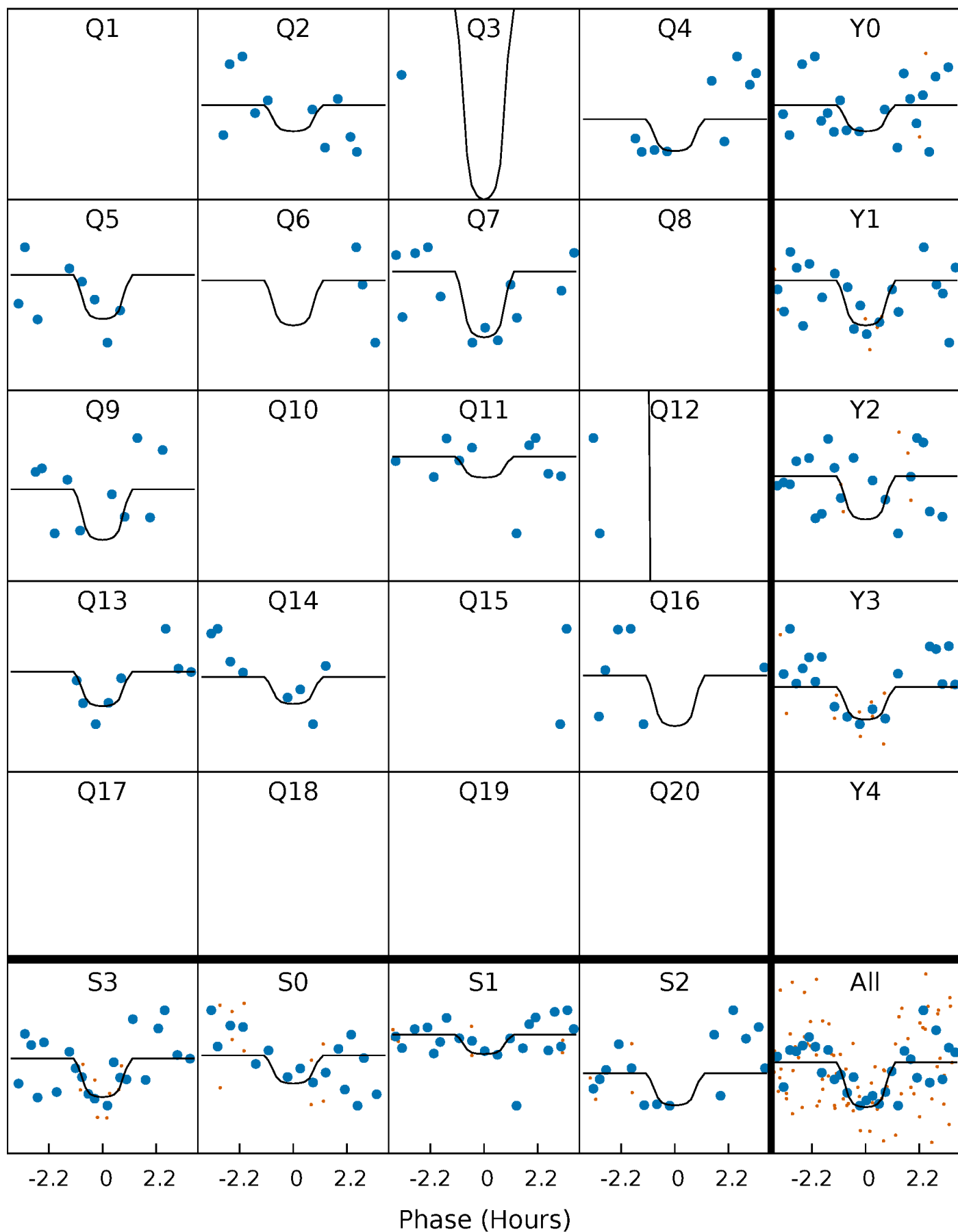
PDC Quarter-Phased Transit Curves

TCE 008358253-05 $P = 15.455704$ Days $T_0 = 140.176654$ (BKJD)



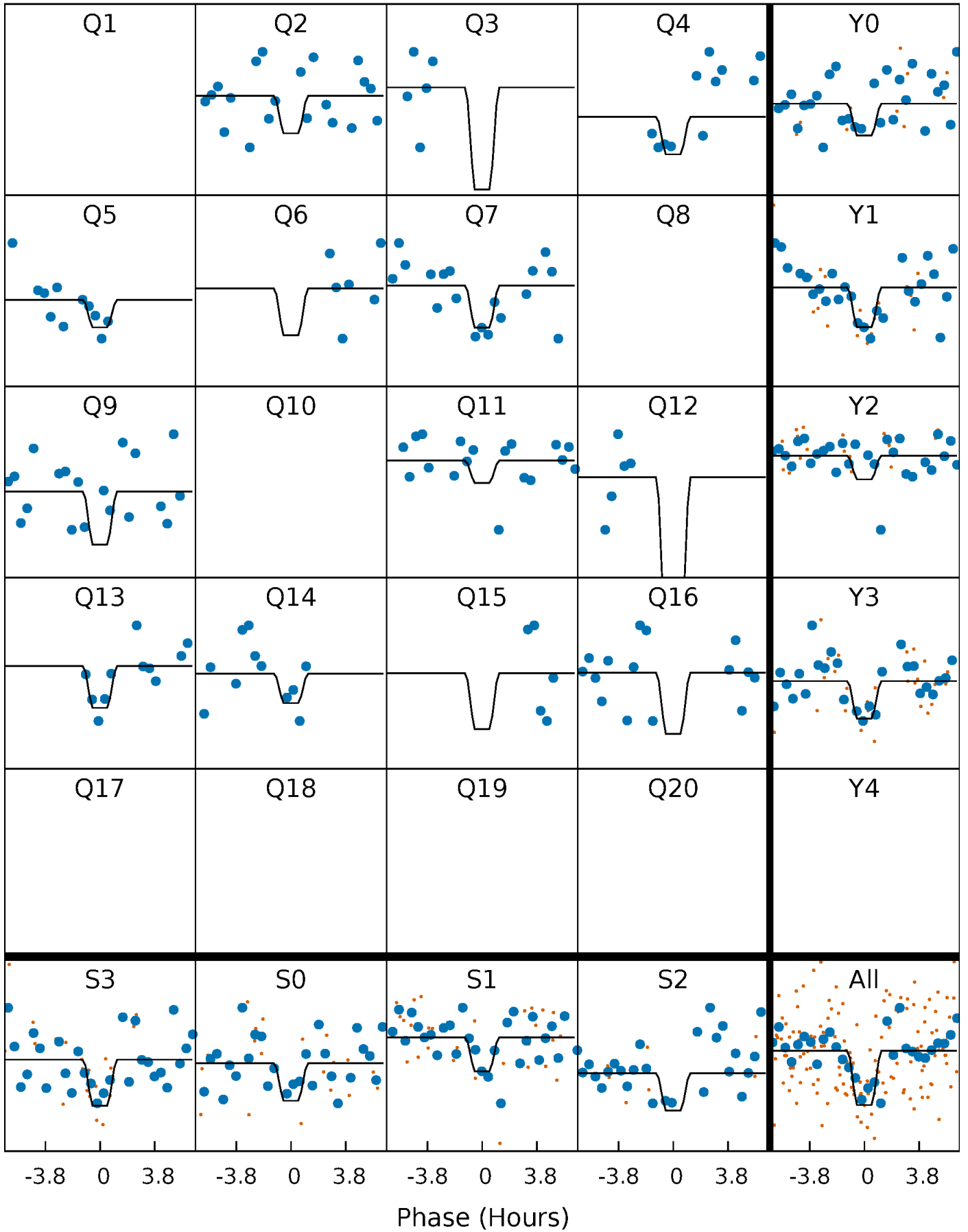
DV Quarter-Phased Transit Curves

TCE 008358253-05 P= 15.455704 Days $T_0=140.176654$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

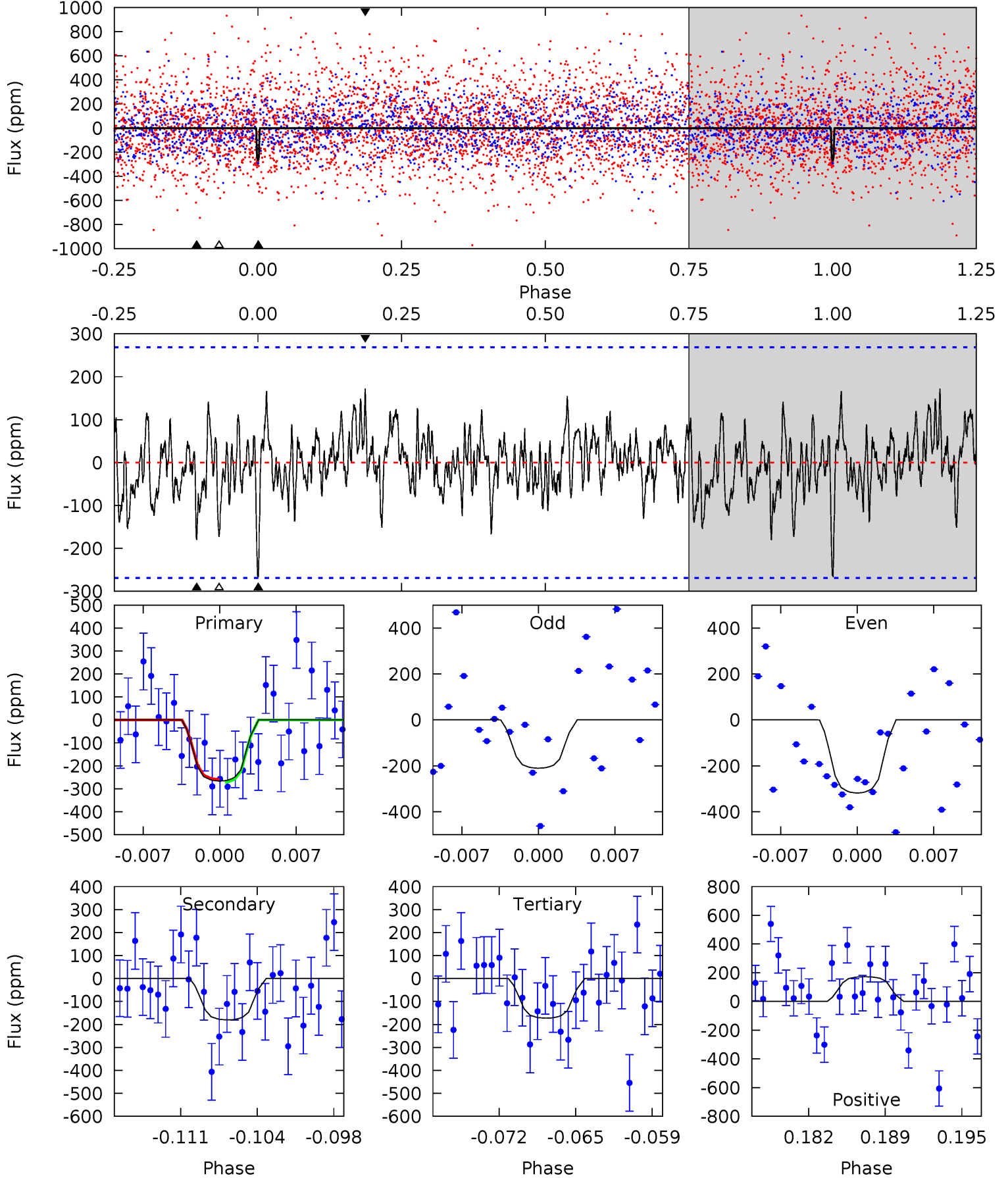
TCE 008358253-05 $P = 15.455753$ Days $T_0 = 140.174209$ (BKJD)



DV Model-Shift Uniqueness Test

008358253-05, P = 15.455704 Days, E = 124.720950 Days

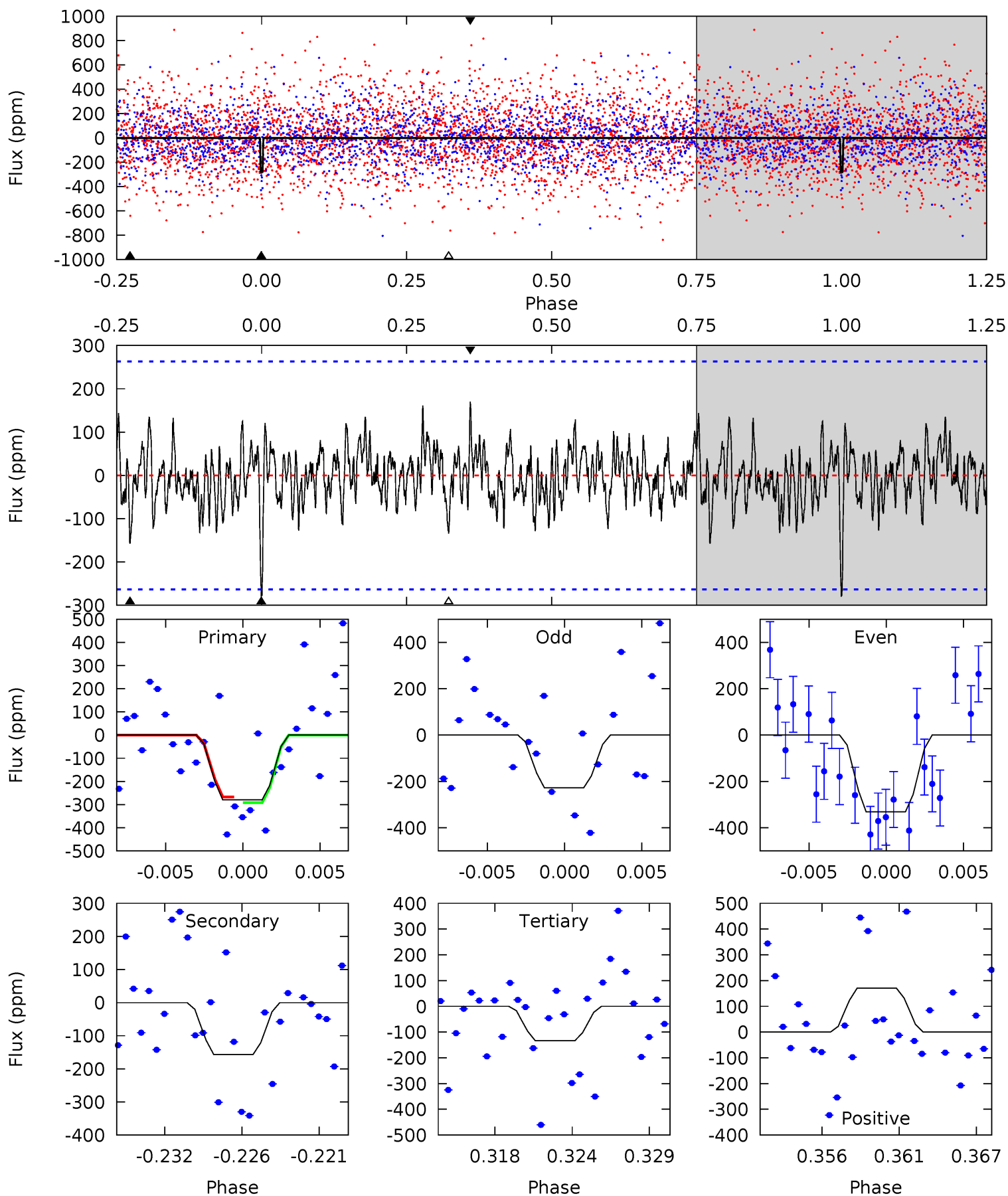
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.06	3.43	3.28	3.28	5.11	2.72	1.09	1.78	1.79	0.15	0.15	1.02	0.74	0.39	0.12



Alt Model-Shift Uniqueness Test

008358253-05, $P = 15.455753$ Days, $E = 124.718456$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.47	3.06	2.62	3.33	5.14	2.78	1.03	2.85	2.14	0.44	-0.27	1.02	0.70	0.38	0.25



Stellar Parameters For KIC 008358253

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5985^{+161}_{-179}	$4.548^{+0.048}_{-0.204}$	$-0.360^{+0.300}_{-0.300}$	$0.855^{+0.248}_{-0.083}$	$0.942^{+0.109}_{-0.109}$	$2.122^{+0.425}_{-1.108}$
	+3%/-3%	+1%/-4%	+83%/-83%	+29%/-10%	+12%/-12%	+20%/-52%
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 008358253-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-180 ± 53	$3.12^{+2.90}_{-2.00}$	1006^{+66}_{-45}	4123^{+2461}_{-812}	131^{+1013}_{-98}
Alt.	-157 ± 51	$3.08^{+2.85}_{-2.12}$	1009^{+74}_{-44}	4058^{+2559}_{-819}	127^{+1166}_{-96}

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

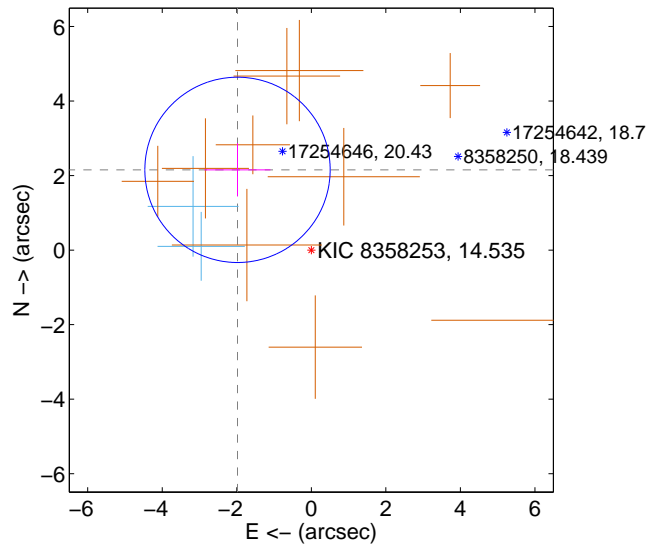
Supplemental centroid analysis for 008358253-05. Kepler magnitude: 14.54. Transit SNR 12.03

There are 2 quarters with good PRF difference image offsets

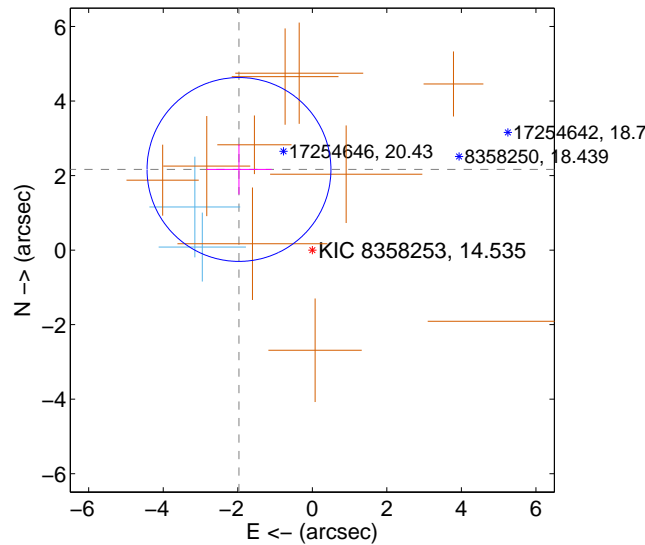
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.926 \pm 0.829	3.53	1.981 \pm 0.884	2.153 \pm 0.715
PRF-fit source offset from KIC position	2.925 \pm 0.822	3.56	1.968 \pm 0.879	2.164 \pm 0.670
photometric centroid source offset	0.50 \pm 0.76	0.65	-0.23 \pm 0.79	0.44 \pm 0.75

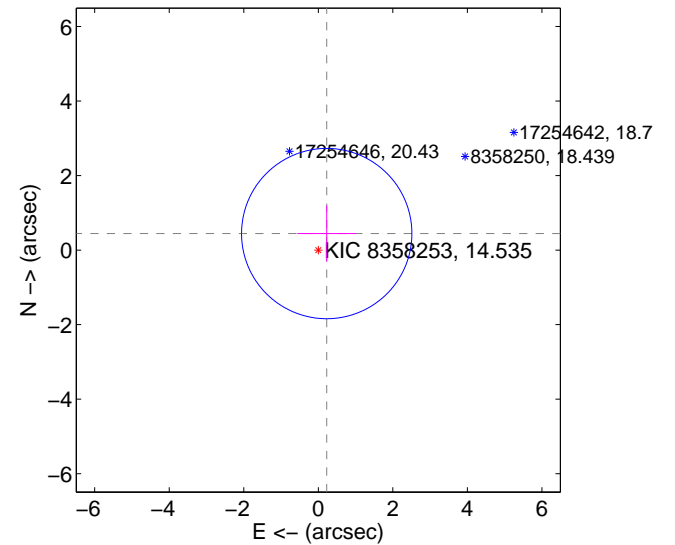
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

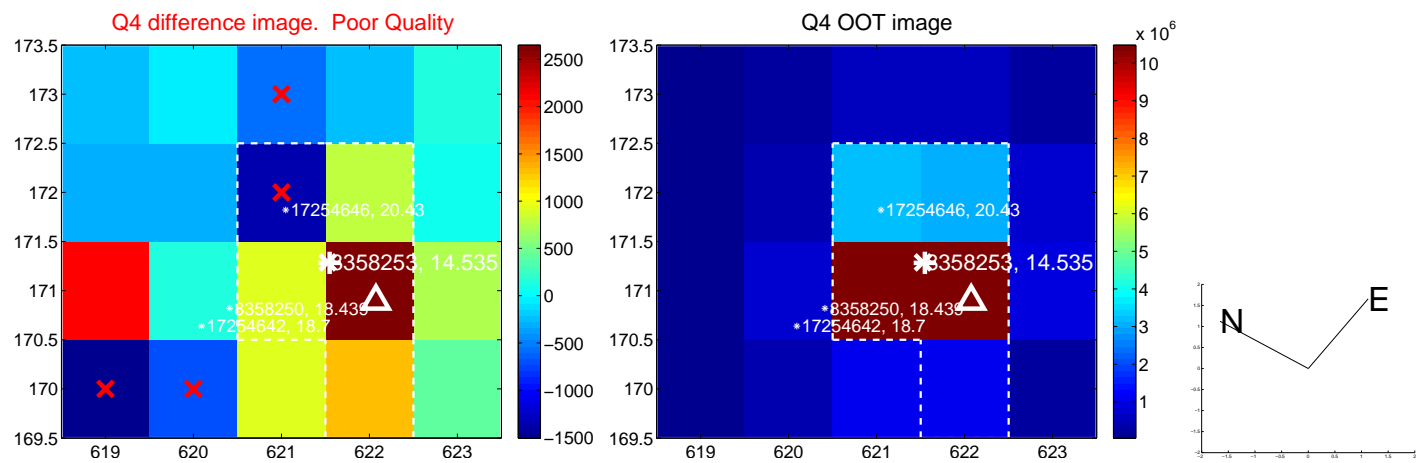
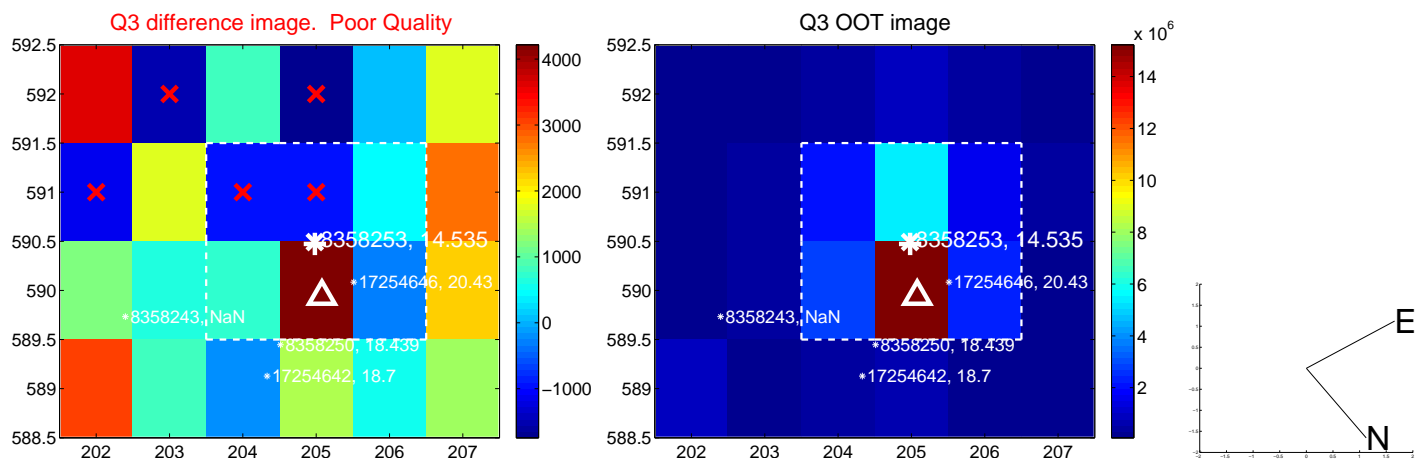
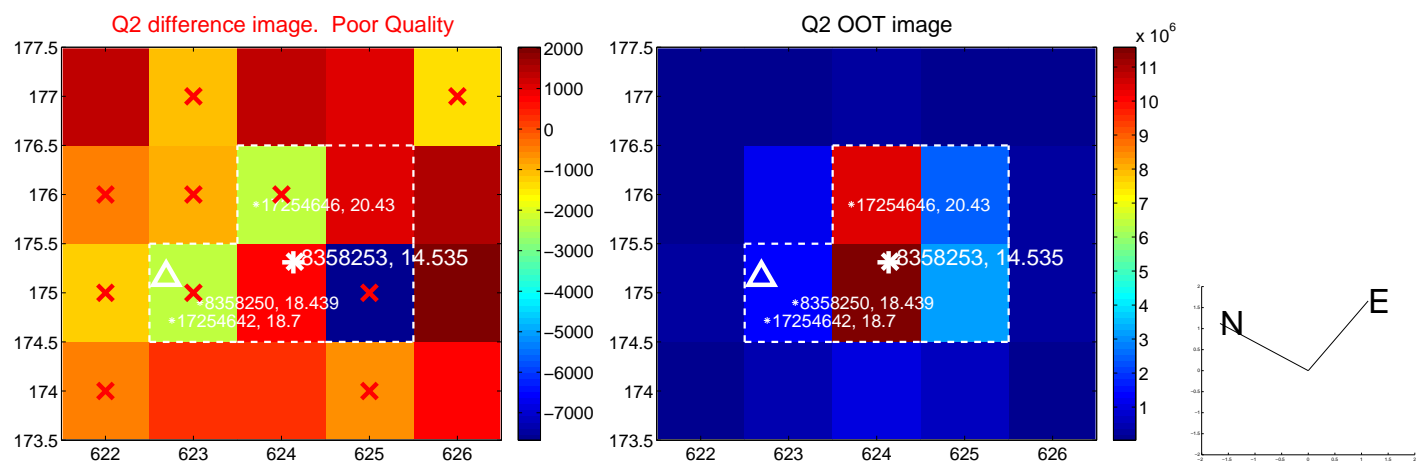
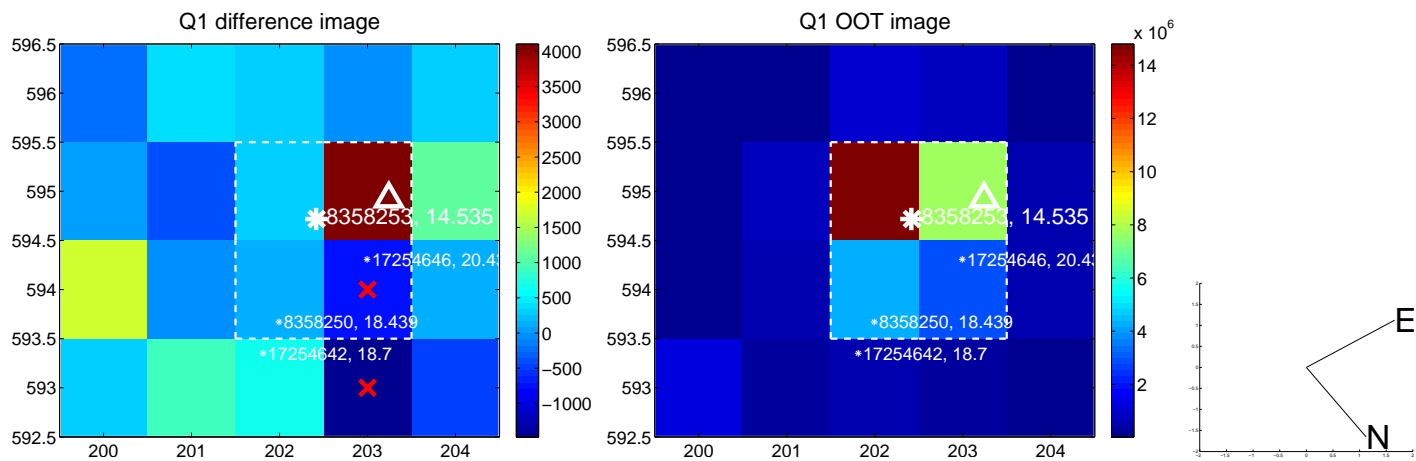


offset from photometric centroids

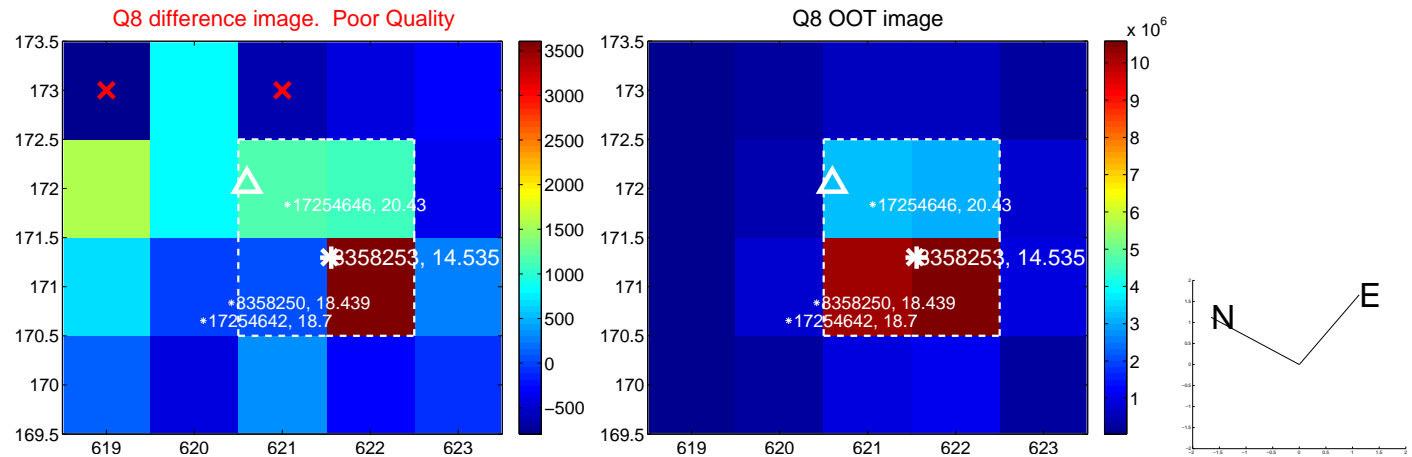
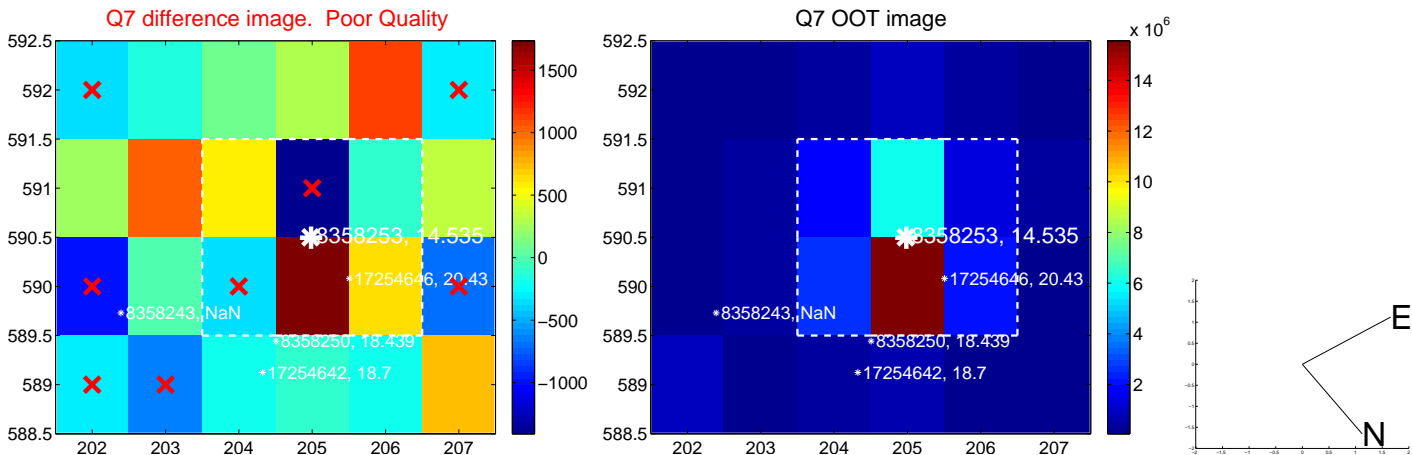
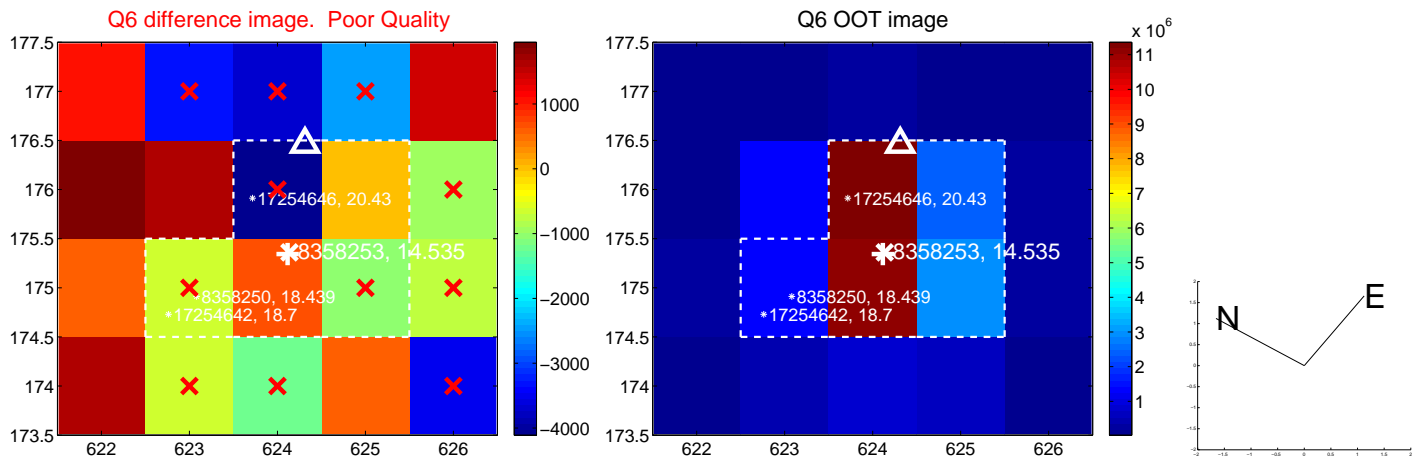
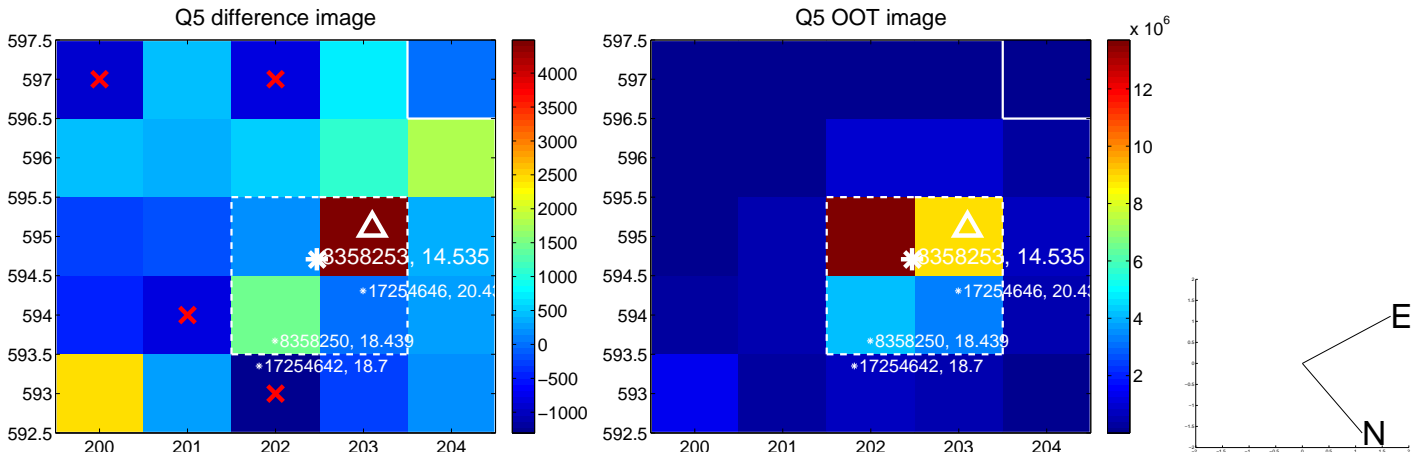


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

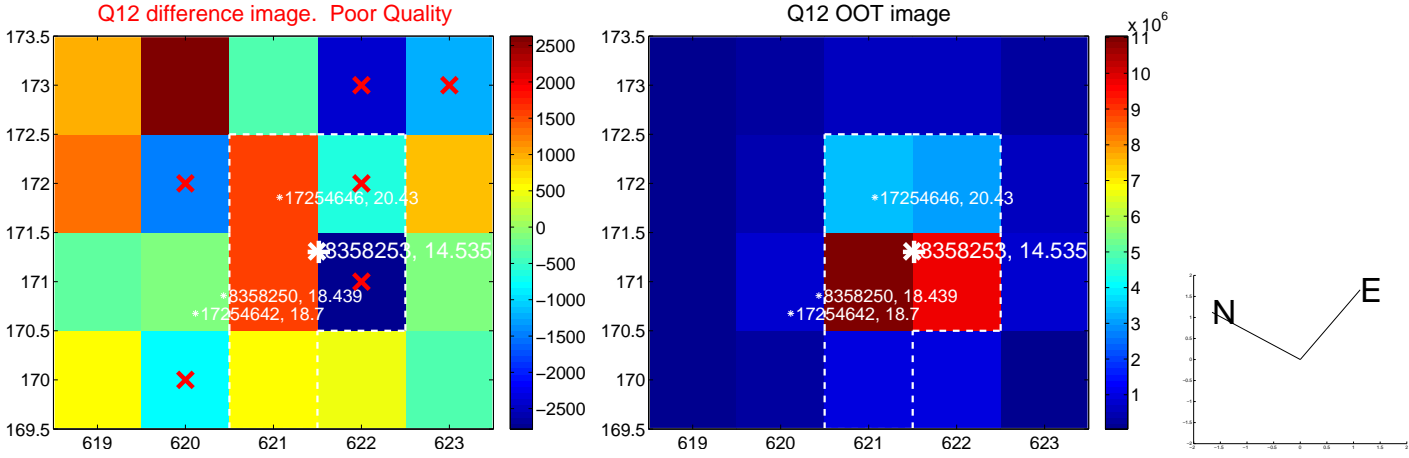
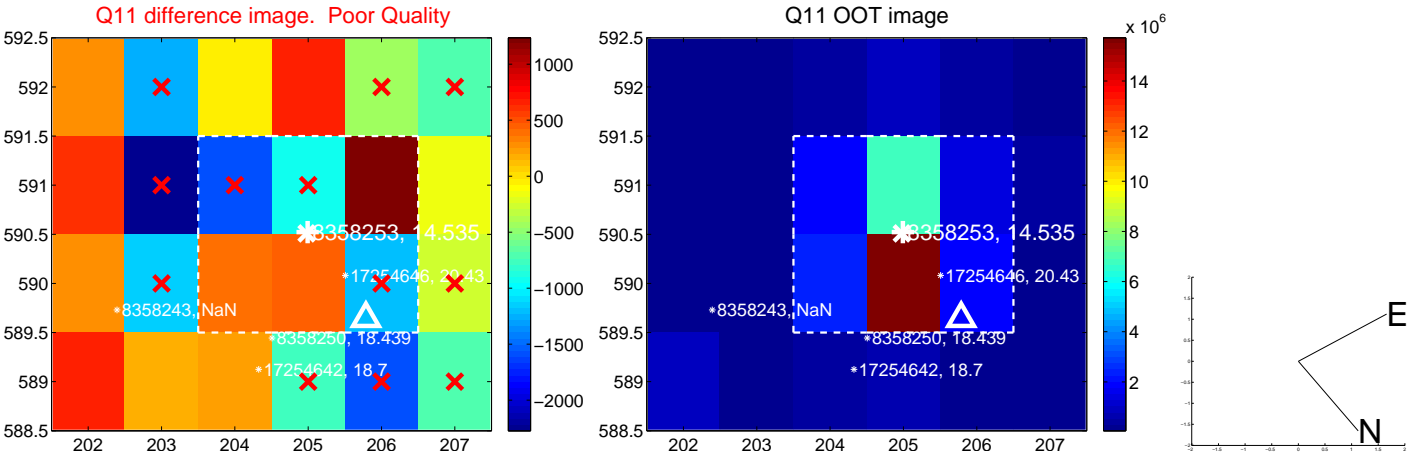
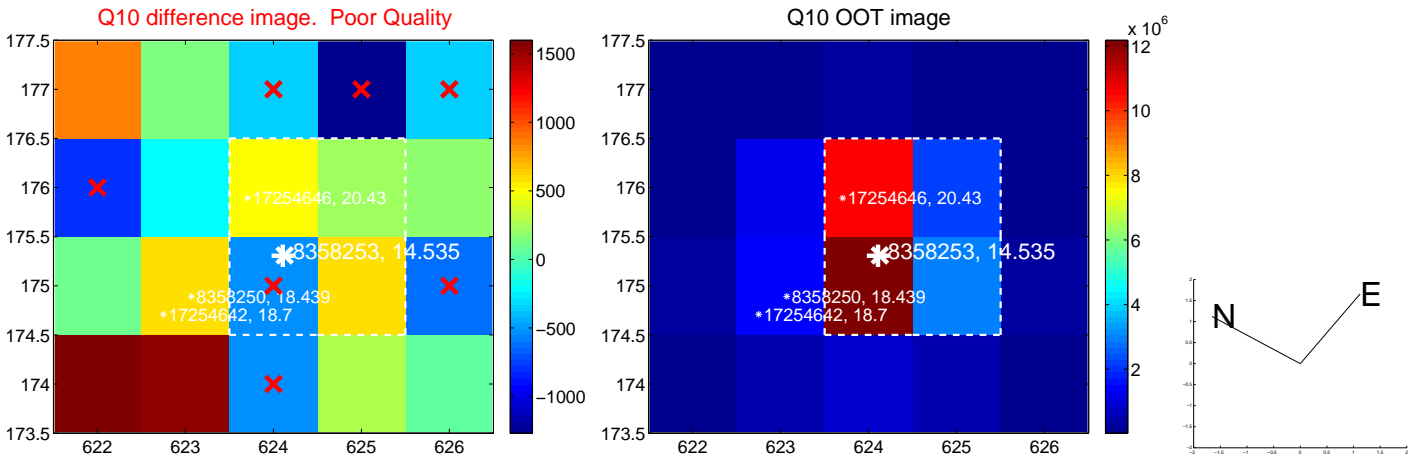
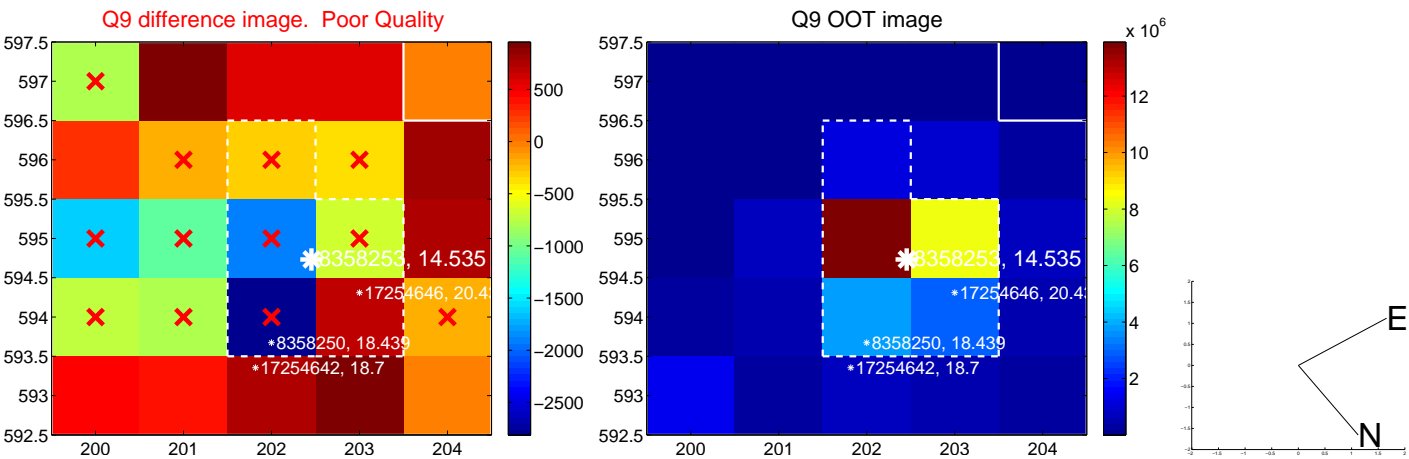
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



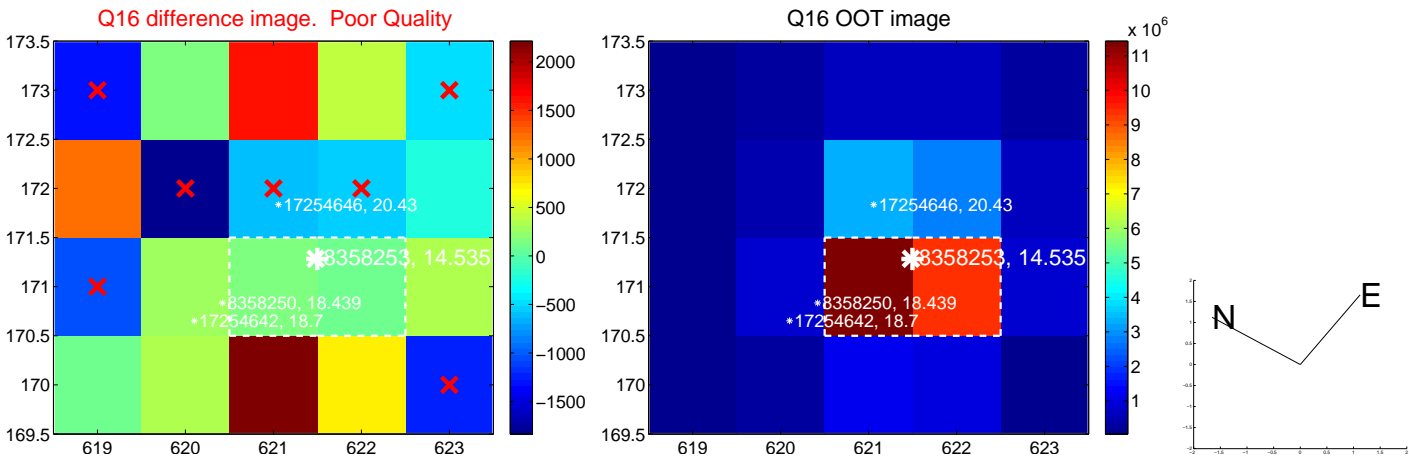
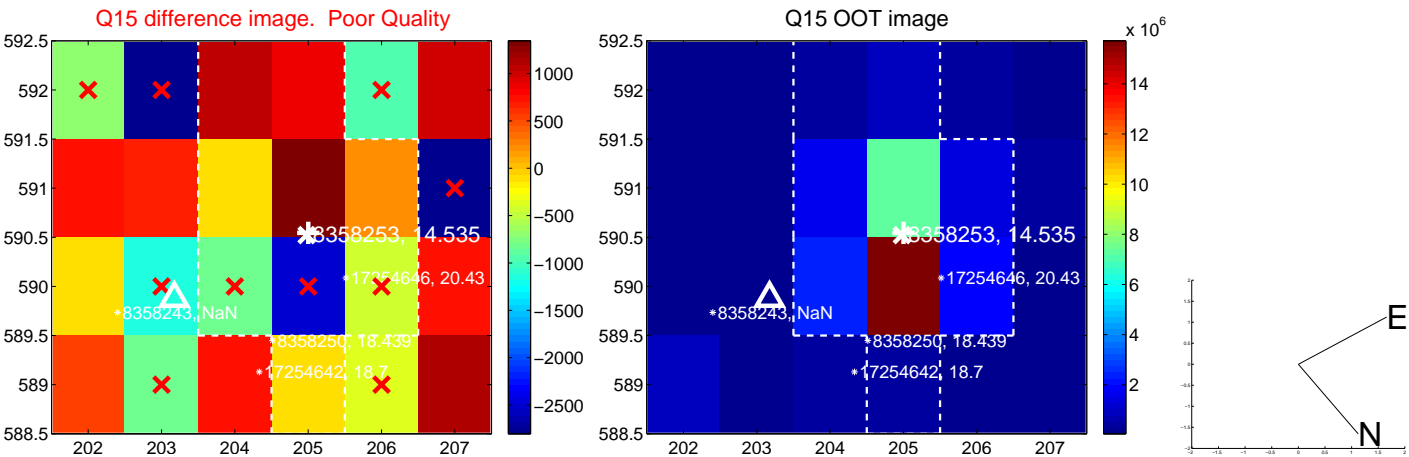
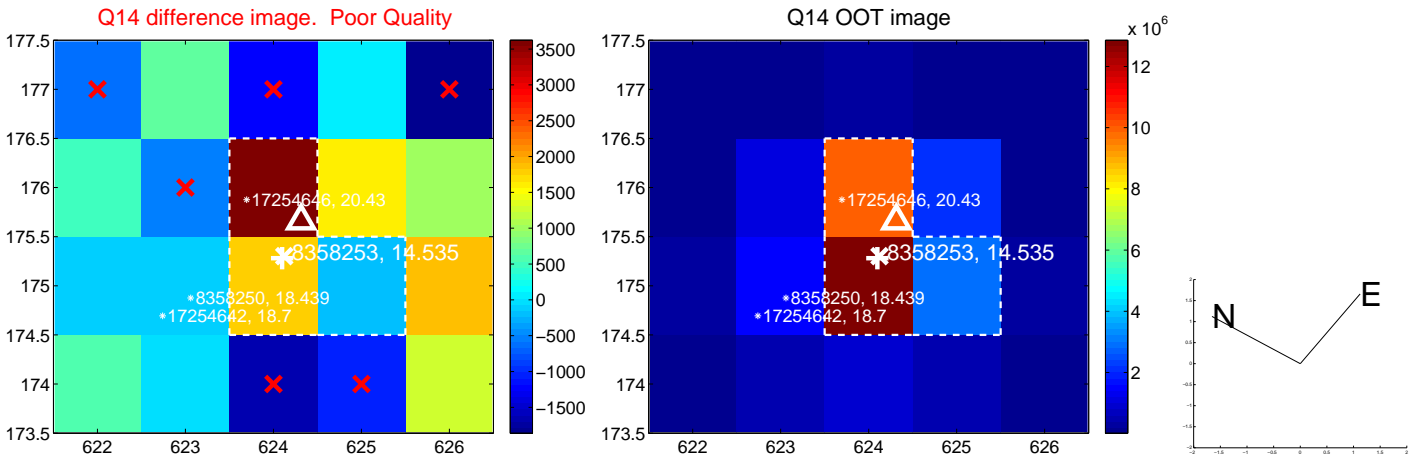
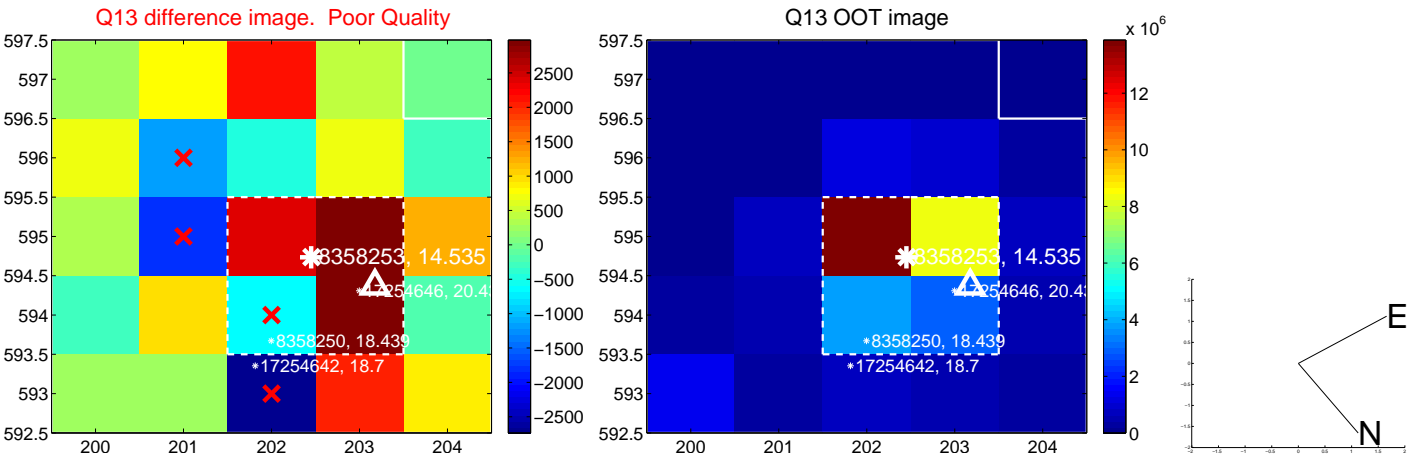
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



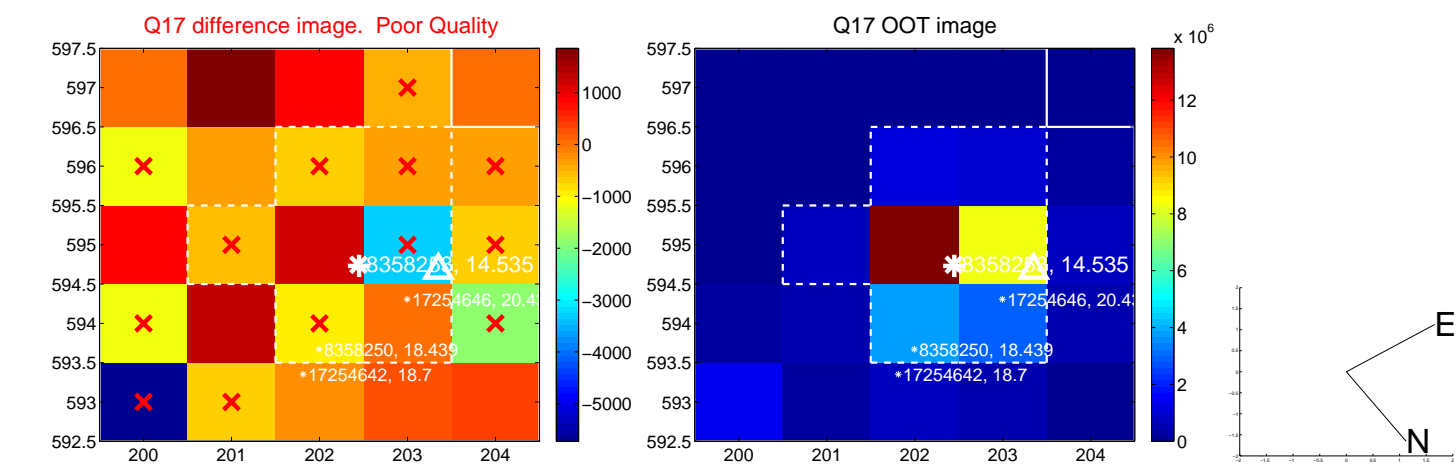
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



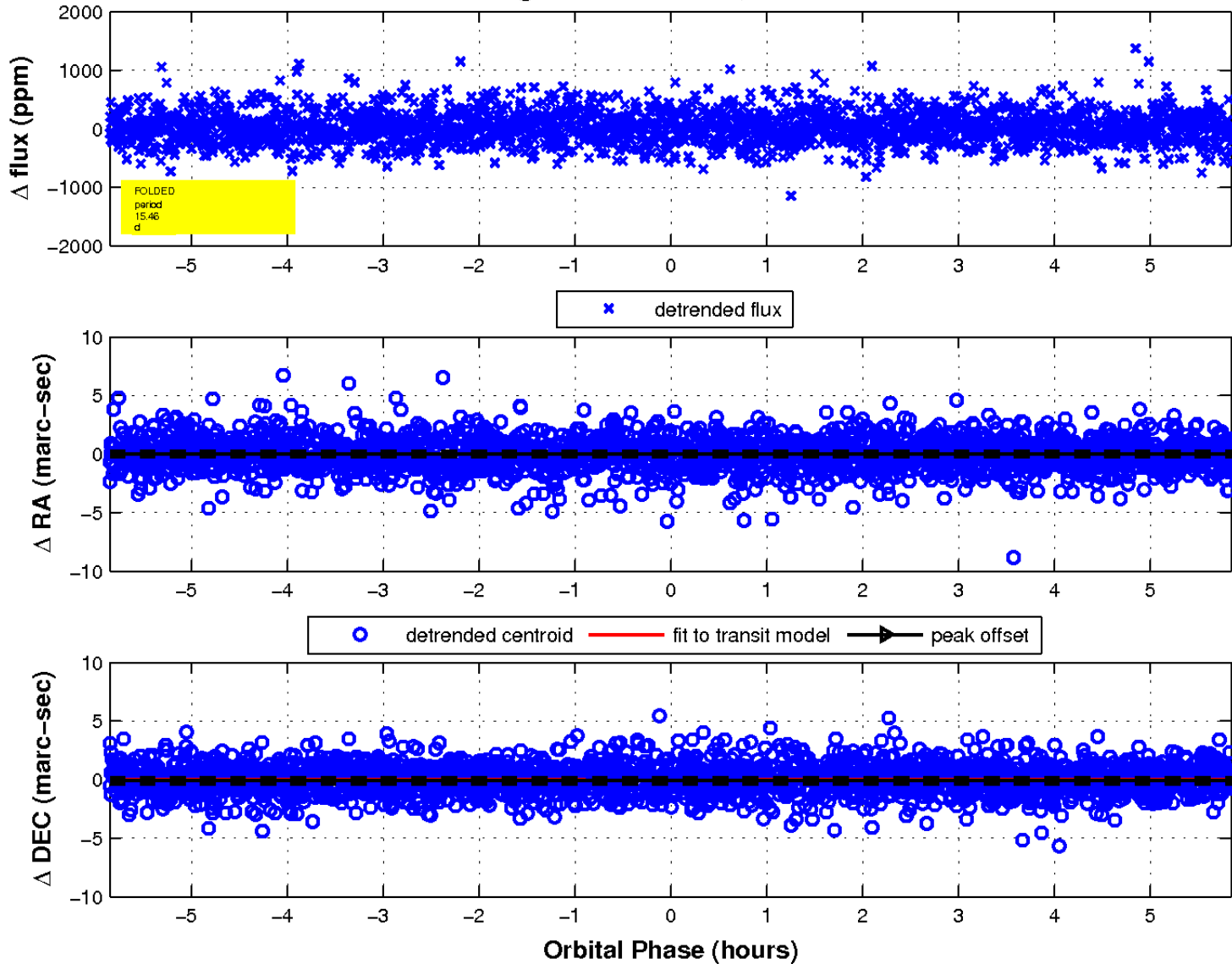
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

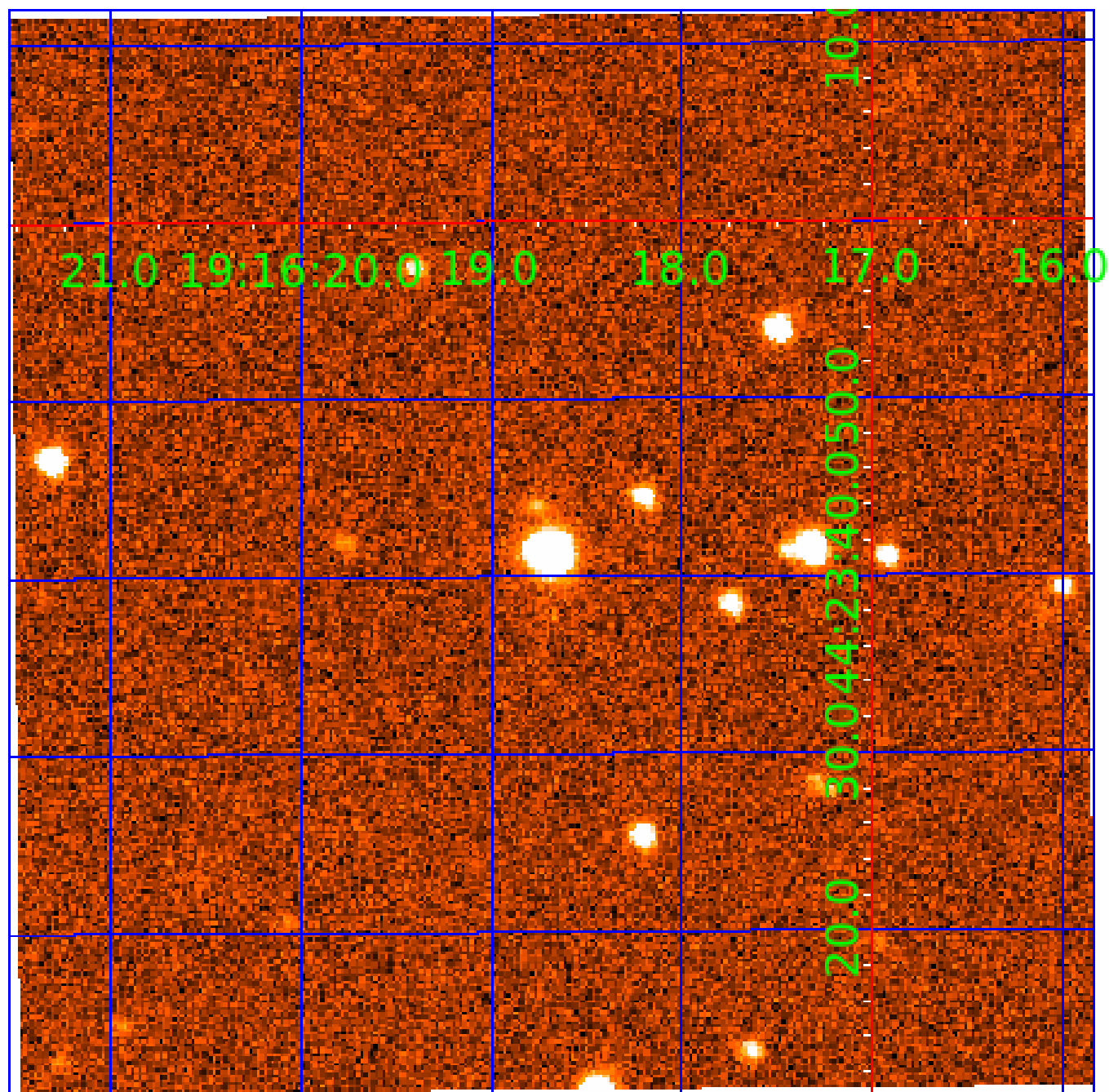


fluxWeightedCentroids, Planet 5 of 7



UKIRT Image

Declination



KIC 008358253

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})
008358253-01	OBS	No	1.560070	132.642266	32.2	11.560	11.0	13.5	0.85	5985	0.48	1261.64
008358253-02	OBS	No	22.544851	133.437573	437.2	1.328	14.3	13.8	0.85	5985	1.82	35.84
008358253-03	OBS	No	32.494713	140.172890	406.3	4.066	13.7	15.3	0.85	5985	1.89	22.02
008358253-04	OBS	No	12.937468	132.727048	276.7	2.664	13.2	12.0	0.85	5985	1.66	75.16
008358253-05	OBS	No	15.455704	140.176654	300.4	1.951	11.8	12.0	0.85	5985	1.73	59.29
008358253-06	OBS	No	35.454416	159.998443	204.3	7.238	11.3	9.3	0.85	5985	1.43	19.60
008358253-07	OBS	No	21.549892	139.252006	293.9	2.069	10.1	11.1	0.85	5985	1.66	38.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008358253-01	OBS	FP	0.00	1	0	0	0	LPP_DV
008358253-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS
008358253-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
008358253-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
008358253-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
008358253-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS
008358253-07	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_FEW_DIFFS

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

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

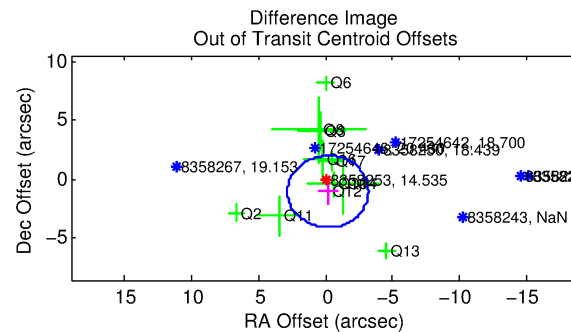
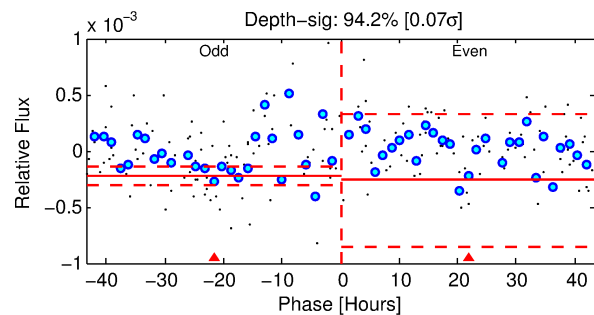
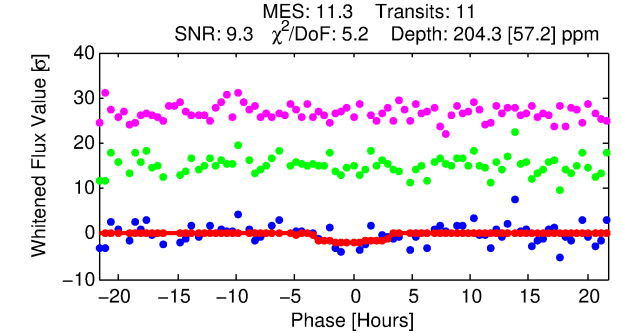
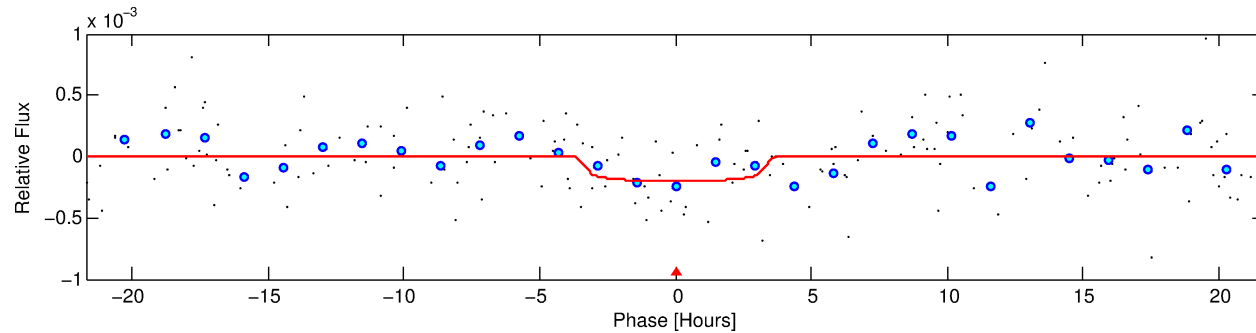
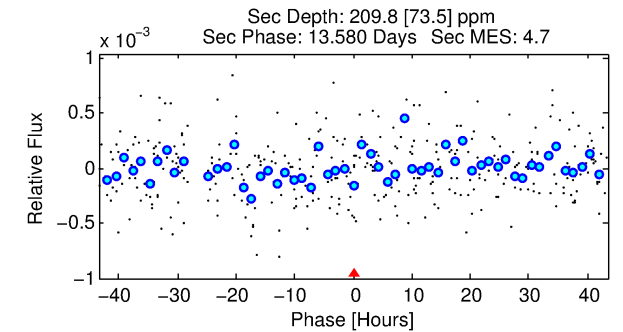
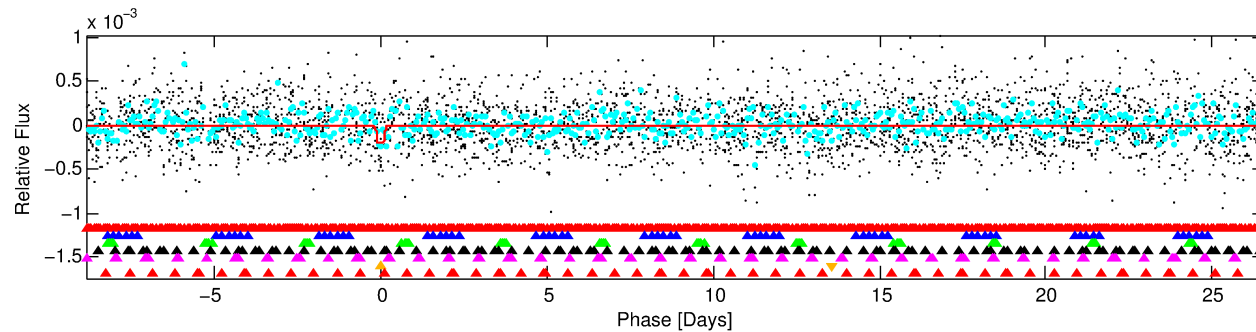
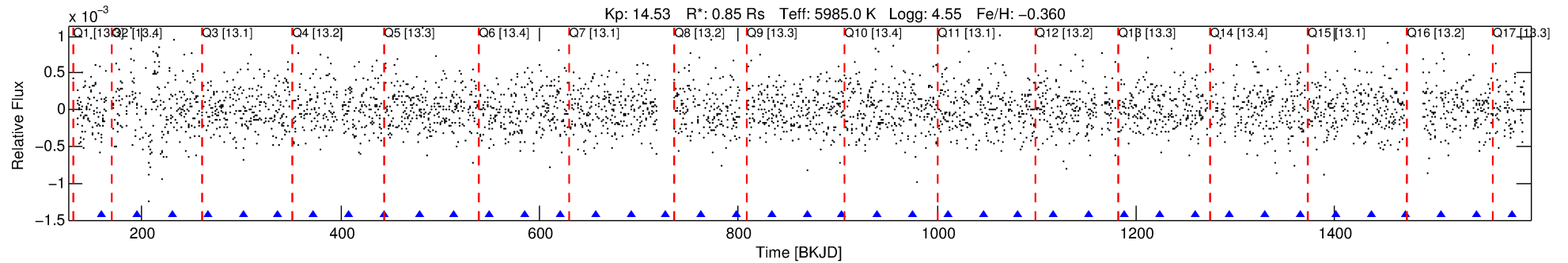
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008358253-06

No Significant Match Found

DV One-Page Summary

KIC: 8358253 Candidate: 6 of 7 Period: 35.454 d



DV Fit Results:

Period = 35.45442 [0.00171] d
Epoch = 159.9984 [0.0394] BKJD
Rp/R* = 0.0153 [0.0074]
a/R* = 18.22 [42.14]
b = 0.89 [0.54]
Self = 19.60 [7.58]
Teff = 537 [52] K
Rp = 1.43 [0.80] Re
a = 0.2071 [0.0515] AU
Ag = 2430.69 [2650.55] [0.92 σ]
Teffp = 5824 [1505] K [3.51 σ]

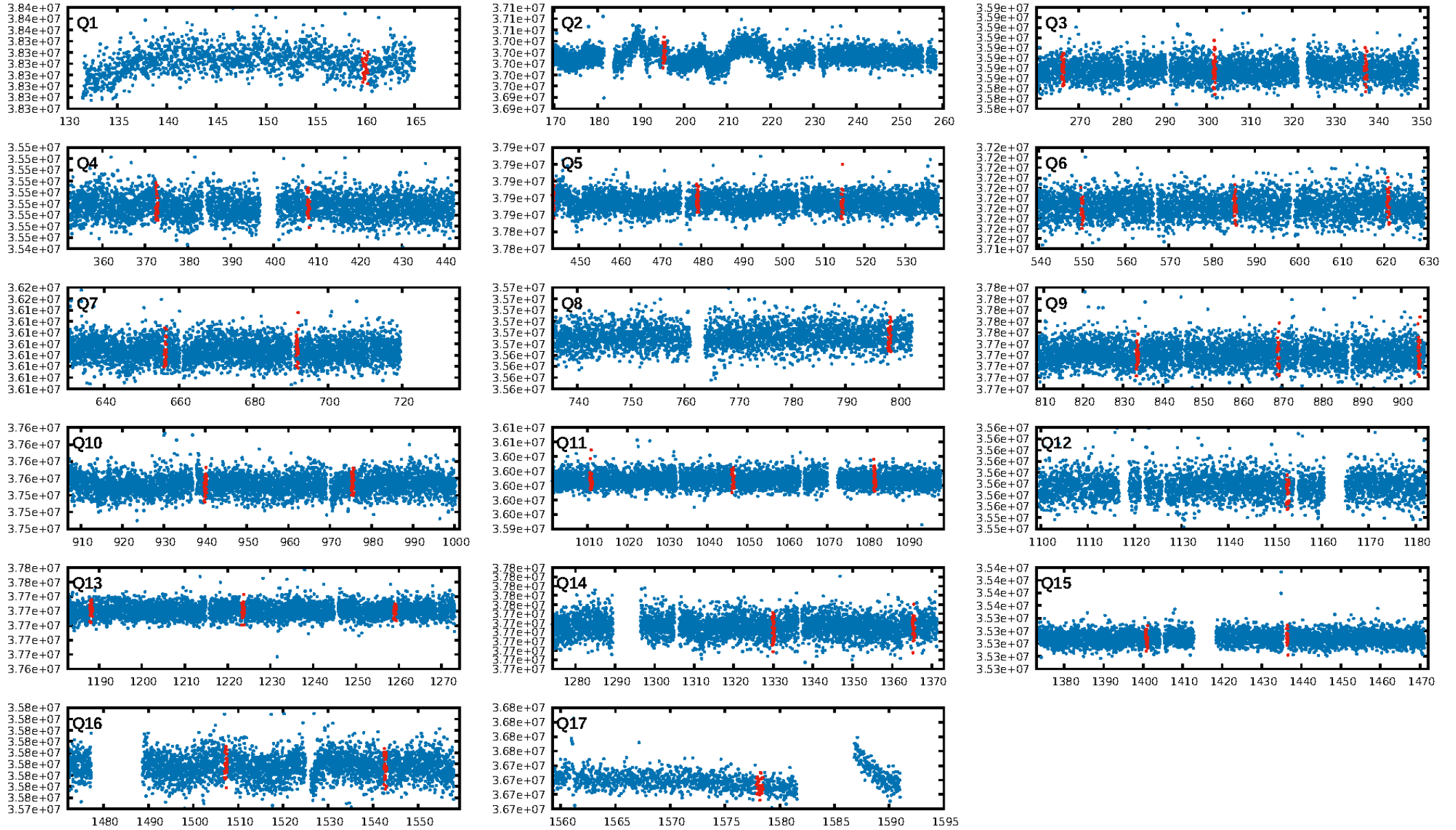
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [8.56 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 1.2%
ModelChiSquareGof-sig: 99.5%
Bootstrap-pfa: 3.87e-10
RollingBand-fgt: 1.00 [9/9]
GhostDiagnostic-chr: -0.5775
Centroid-sig: 0.5%
Centroid-so: 1.601 arcsec [1.76 σ]
OotOffset-rm: 1.046 arcsec [1.03 σ]
KicOffset-rm: 1.005 arcsec [0.95 σ]
OotOffset-st: 4/2/3/2 [11]
KicOffset-st: 4/2/3/2 [11]
DiffImageQuality-fgm: 0.09 [1/11]
DiffImageOverlap-fno: 0.00 [0/17]

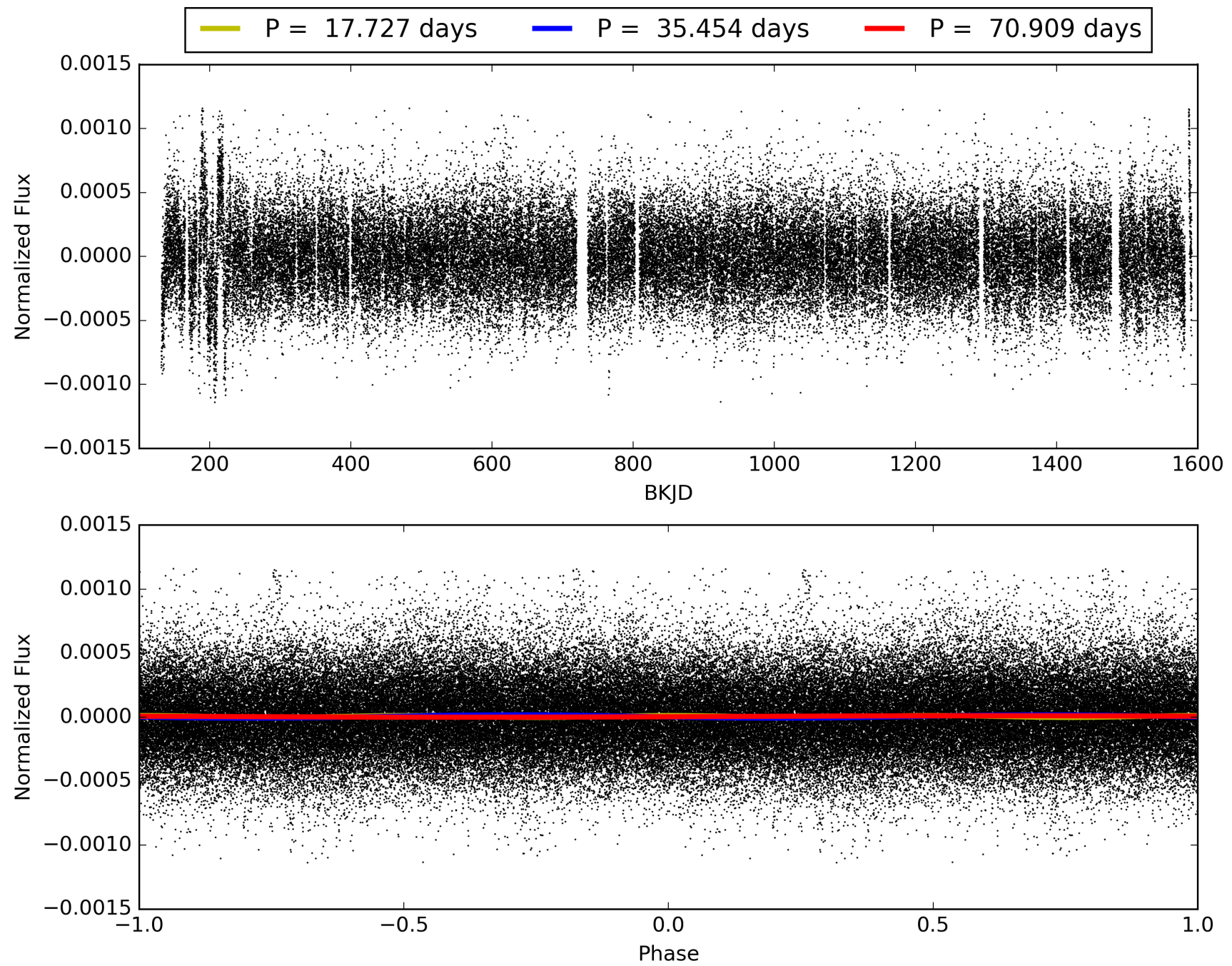
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 19:40:16 Z

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

TCE 008358253-06, PDC Light Curves

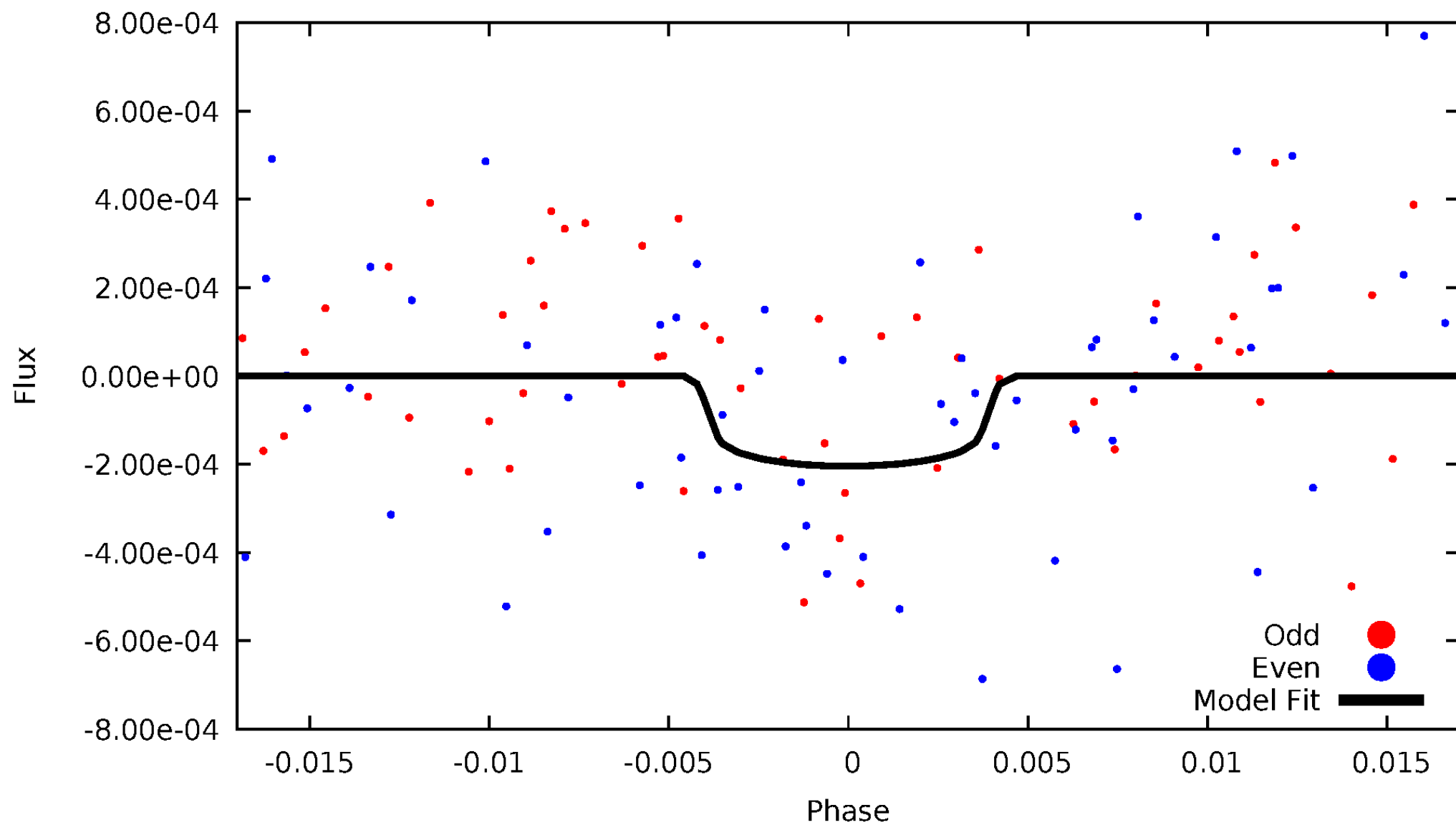


TCE 008358253-06



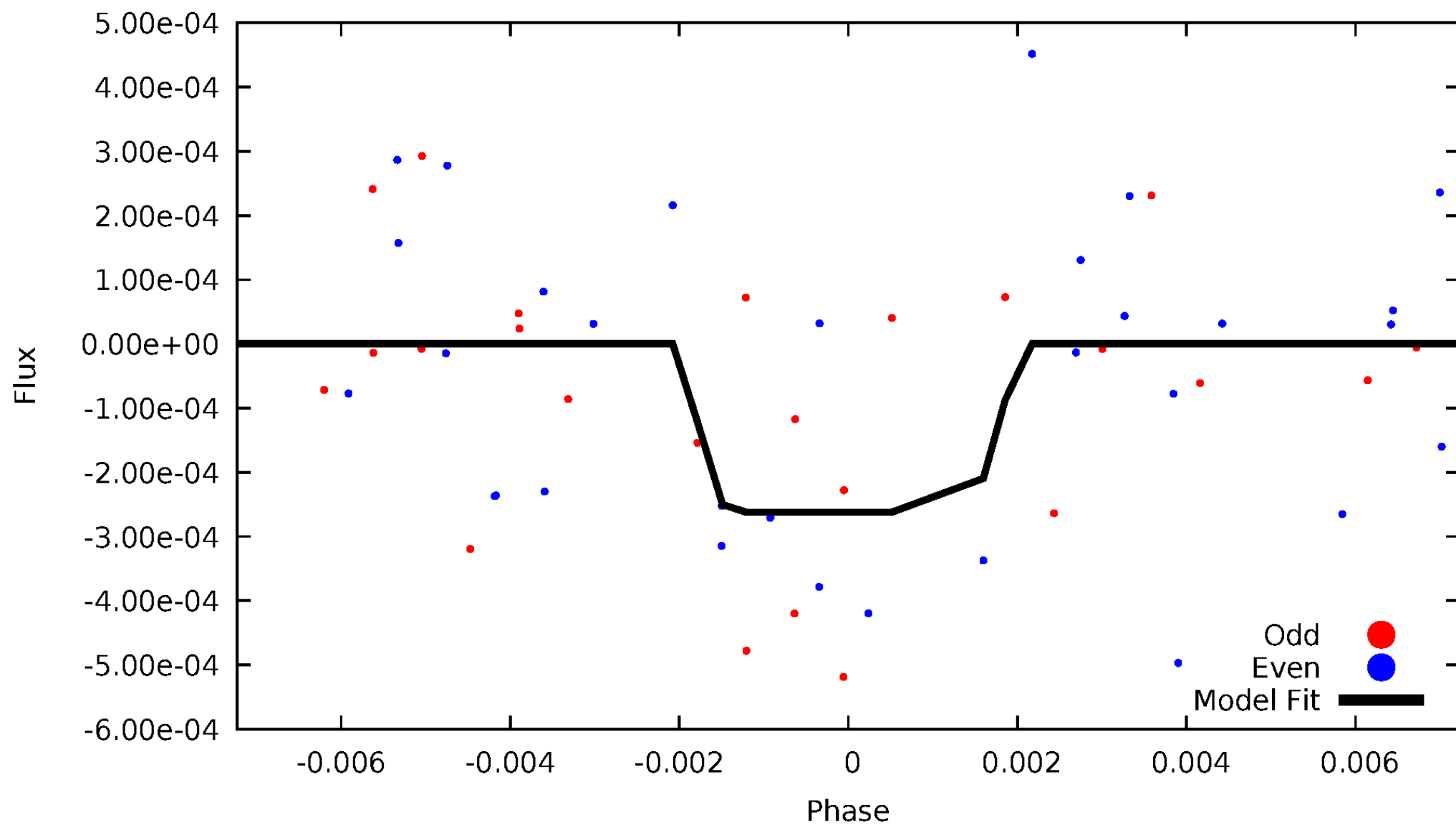
DV Odd/Even

TCE 008358253-06



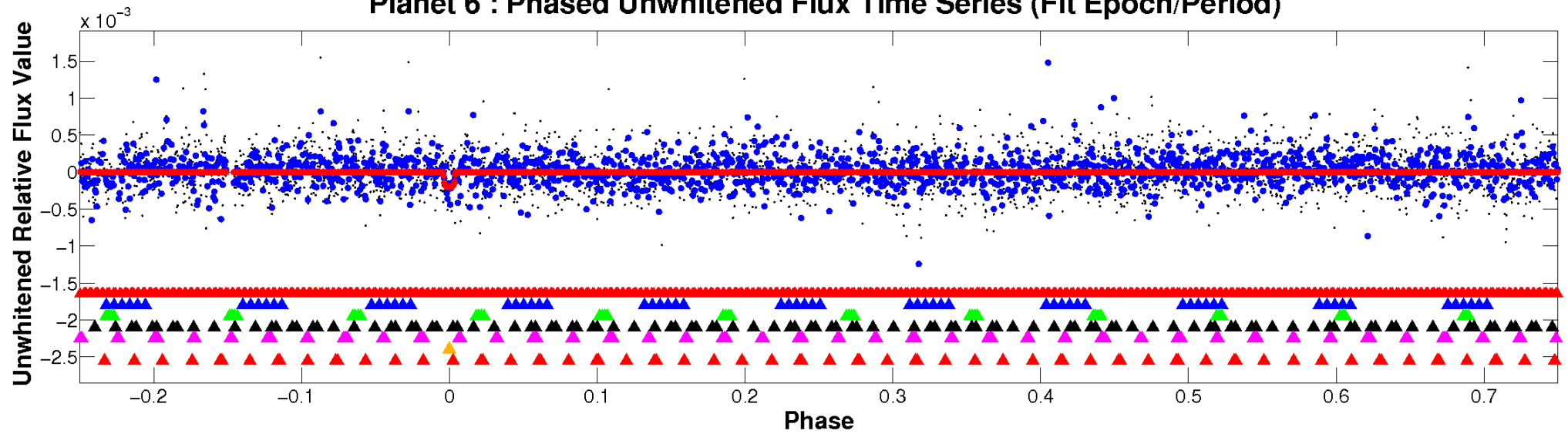
ALT Odd/Even

TCE 008358253-06

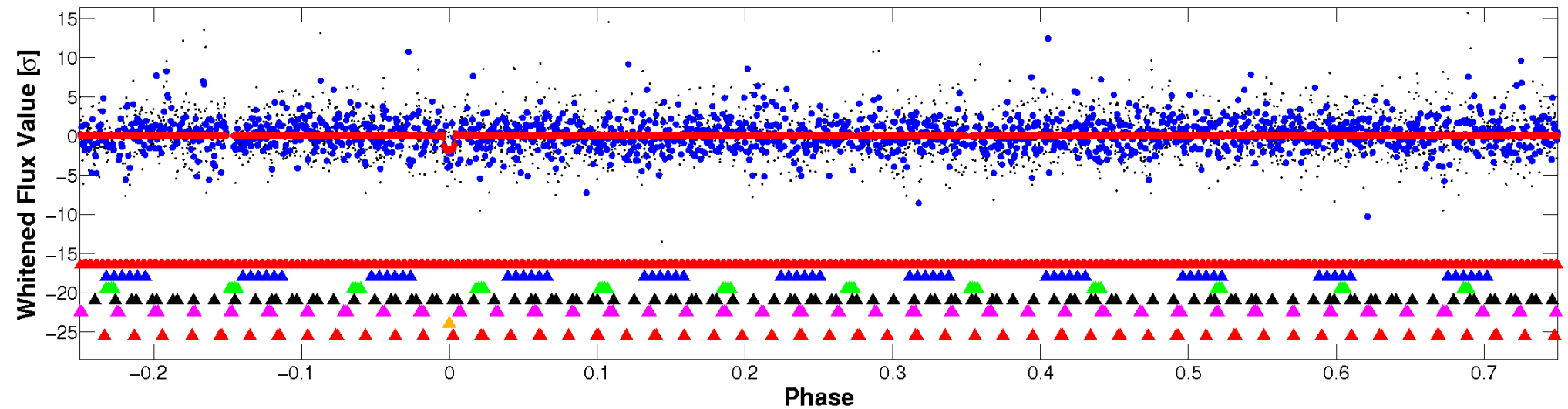


Non-Whitened Vs. Whitened Light Curve

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

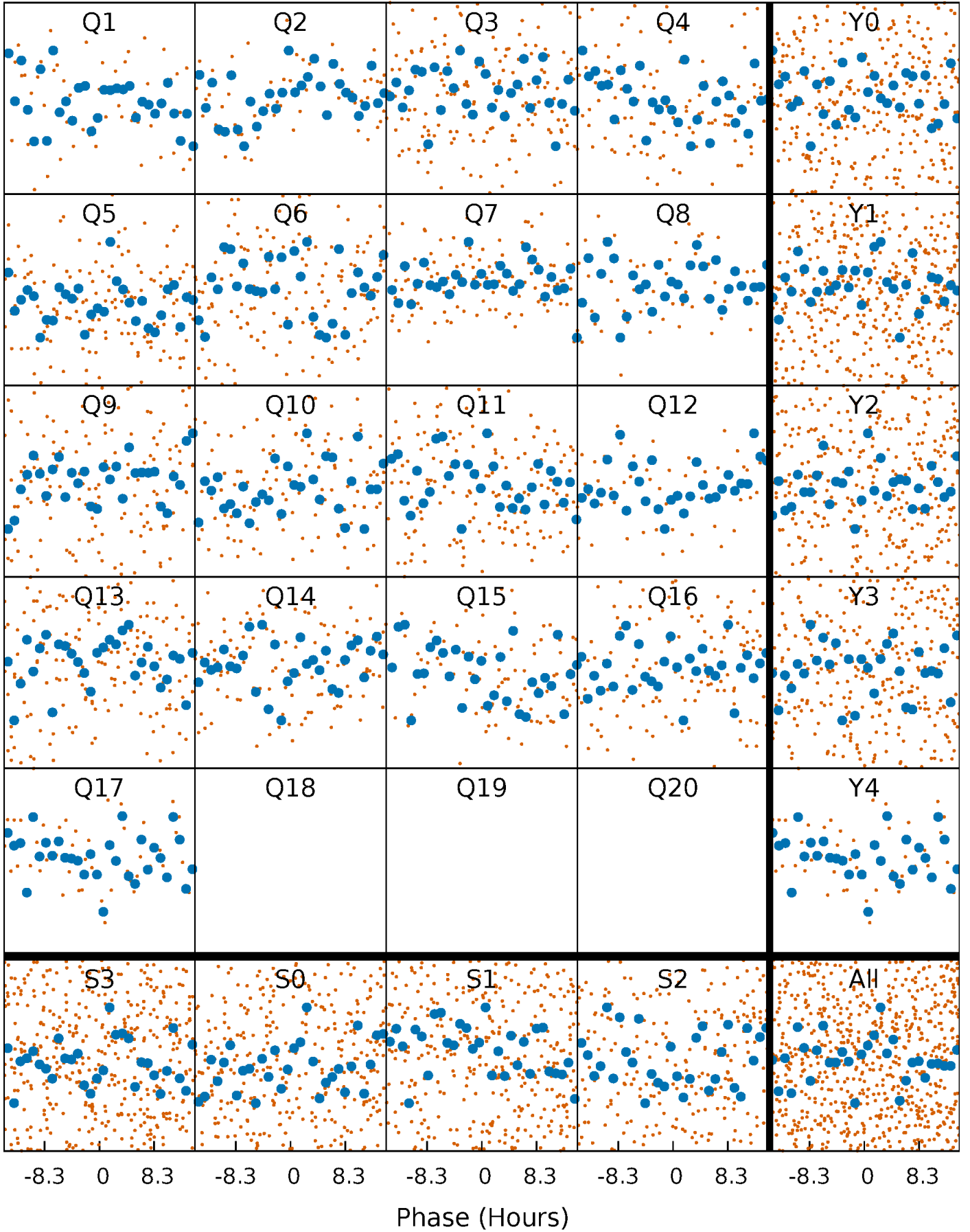


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



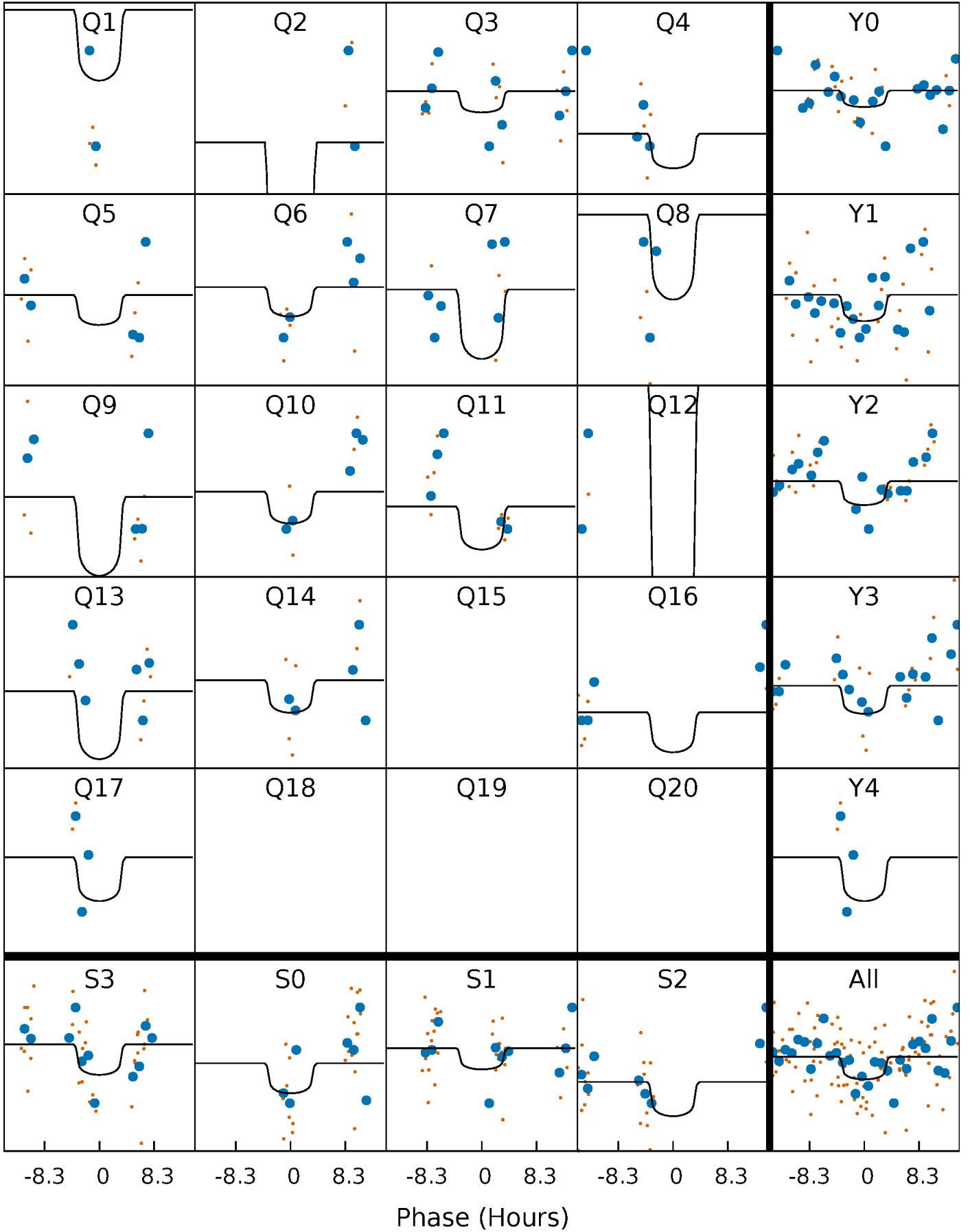
PDC Quarter-Phased Transit Curves

TCE 008358253-06 P= 35.454416 Days $T_0=159.998443$ (BKJD)



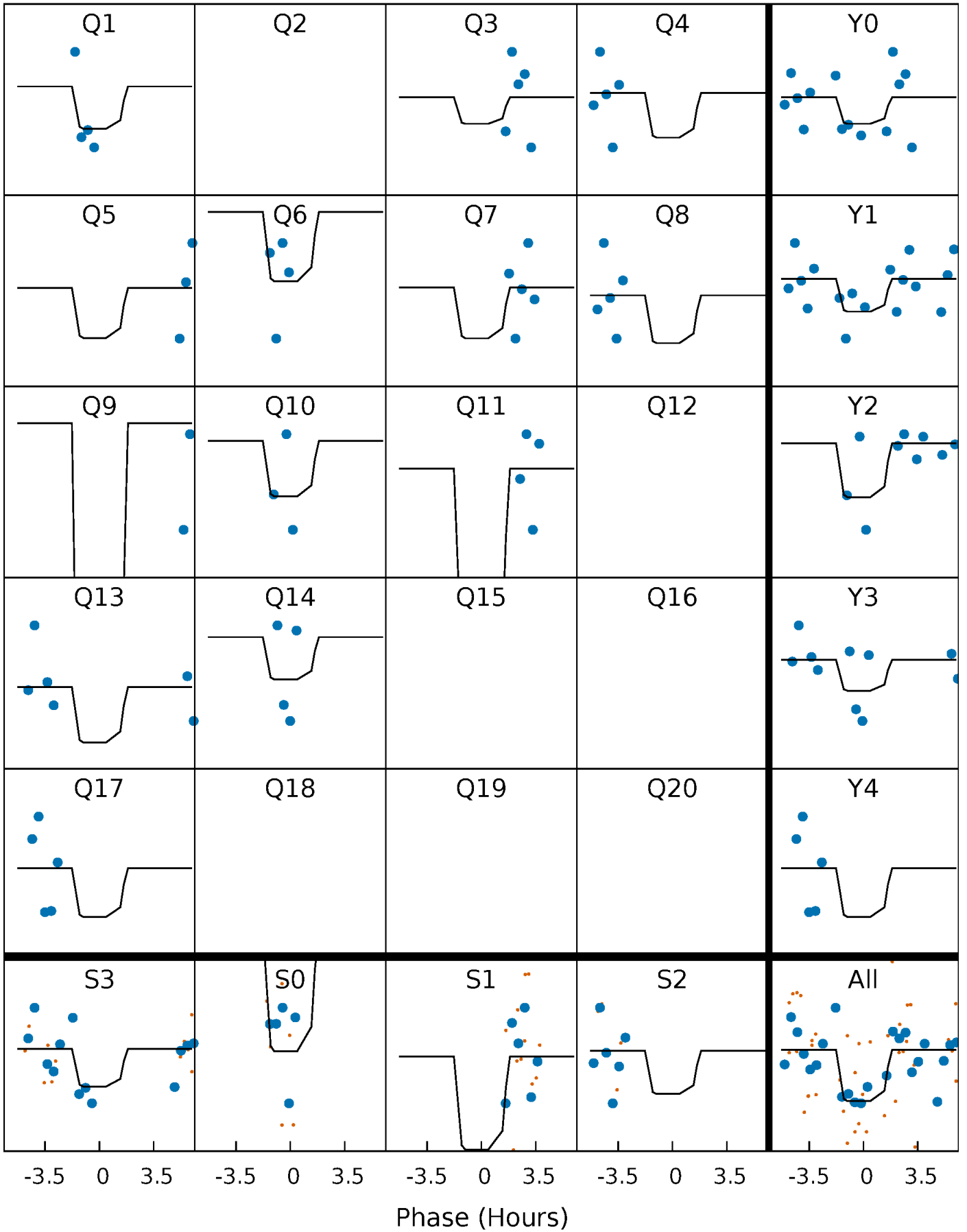
DV Quarter-Phased Transit Curves

TCE 008358253-06 P= 35.454416 Days $T_0=159.998443$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

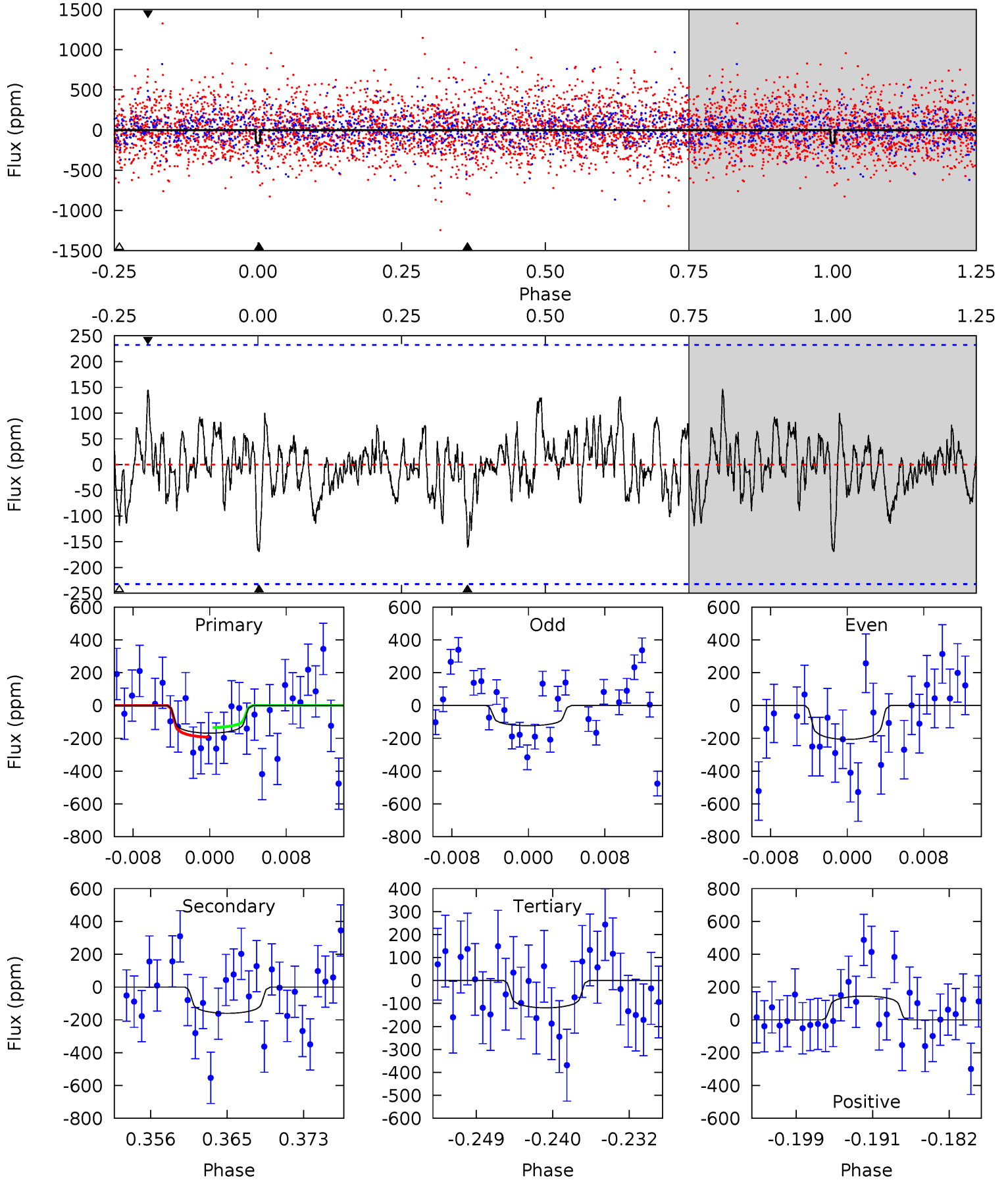
TCE 008358253-06 P= 35.455105 Days $T_0=159.989735$ (BKJD)



DV Model-Shift Uniqueness Test

008358253-06, P = 35.454416 Days, E = 124.544027 Days

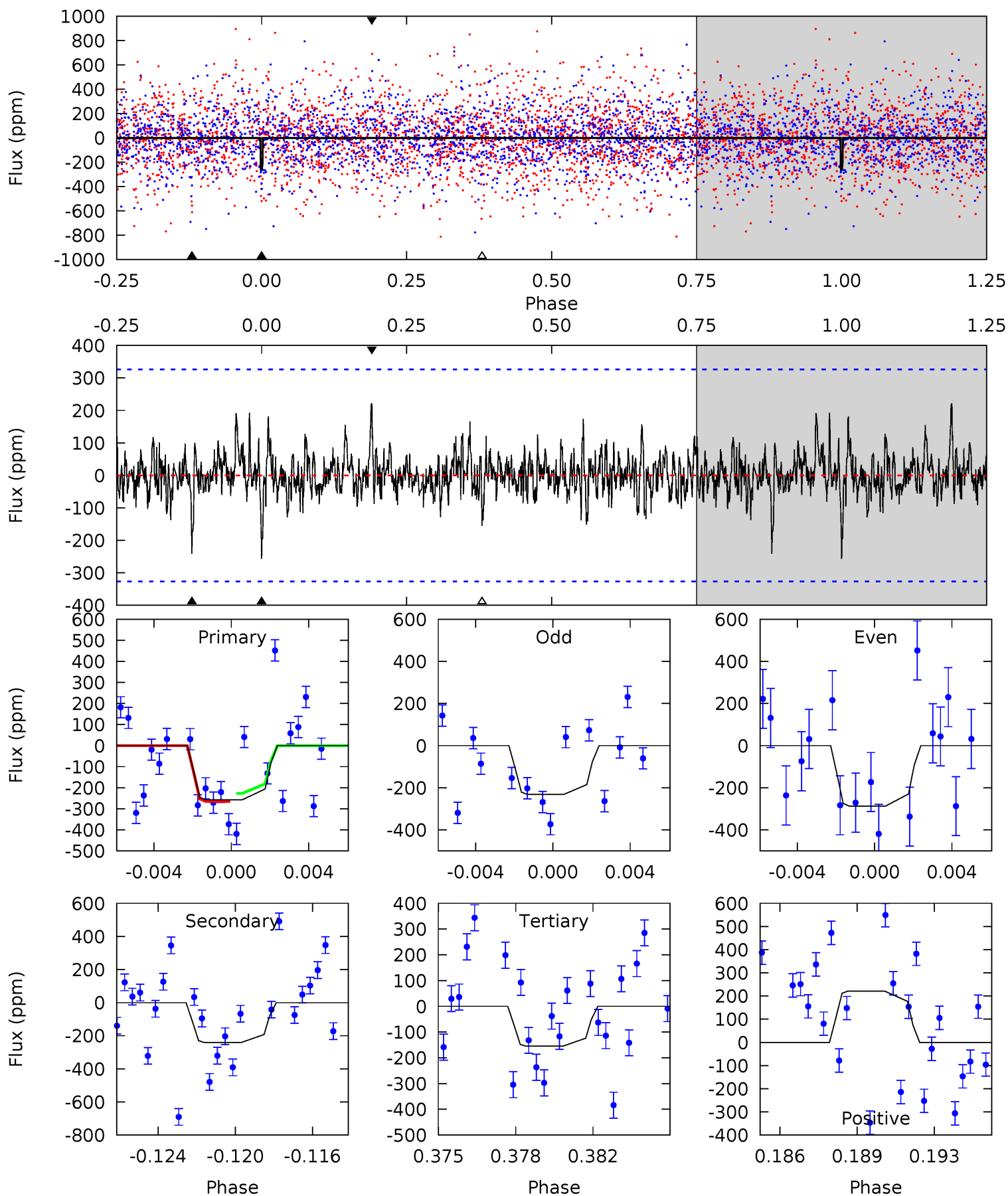
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.68	3.49	2.60	3.16	5.06	2.64	1.01	1.08	0.52	0.89	0.33	0.90	0.85	0.46	0.64



Alt Model-Shift Uniqueness Test

008358253-06, P = 35.455105 Days, E = 124.534630 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.11	3.85	2.47	3.54	5.22	2.91	0.82	1.64	0.57	1.37	0.31	0.44	1.04	0.46	0.25



Stellar Parameters For KIC 008358253

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5985^{+161}_{-179}	$4.548^{+0.048}_{-0.204}$	$-0.360^{+0.300}_{-0.300}$	$0.855^{+0.248}_{-0.083}$	$0.942^{+0.109}_{-0.109}$	$2.122^{+0.425}_{-1.108}$
	+3%/-3%	+1%/-4%	+83%/-83%	+29%/-10%	+12%/-12%	+20%/-52%
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 008358253-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-160 ± 46	$1.51^{+0.76}_{-0.67}$	767^{+53}_{-36}	5402^{+1801}_{-868}	1539^{+3621}_{-880}
Alt.	-241 ± 63	$1.62^{+0.68}_{-0.73}$	766^{+54}_{-36}	5784^{+2204}_{-921}	2118^{+4677}_{-1181}

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

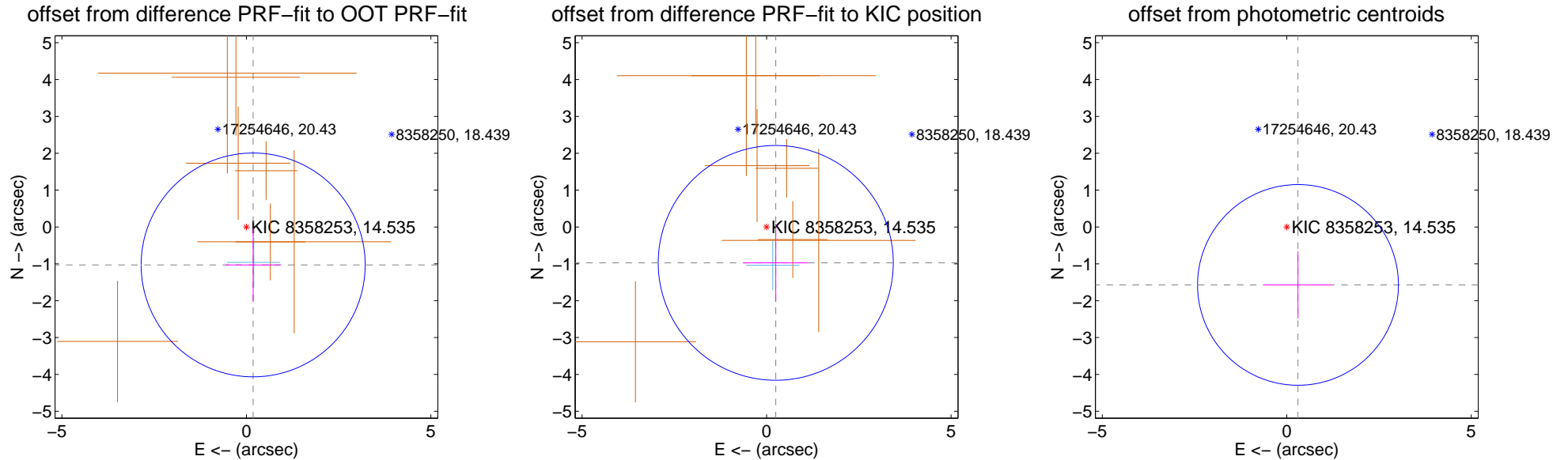
DV Centroid Data

Supplemental centroid analysis for 008358253-06. Kepler magnitude: 14.54. Transit SNR 9.27

There are 1 quarters with good PRF difference image offsets

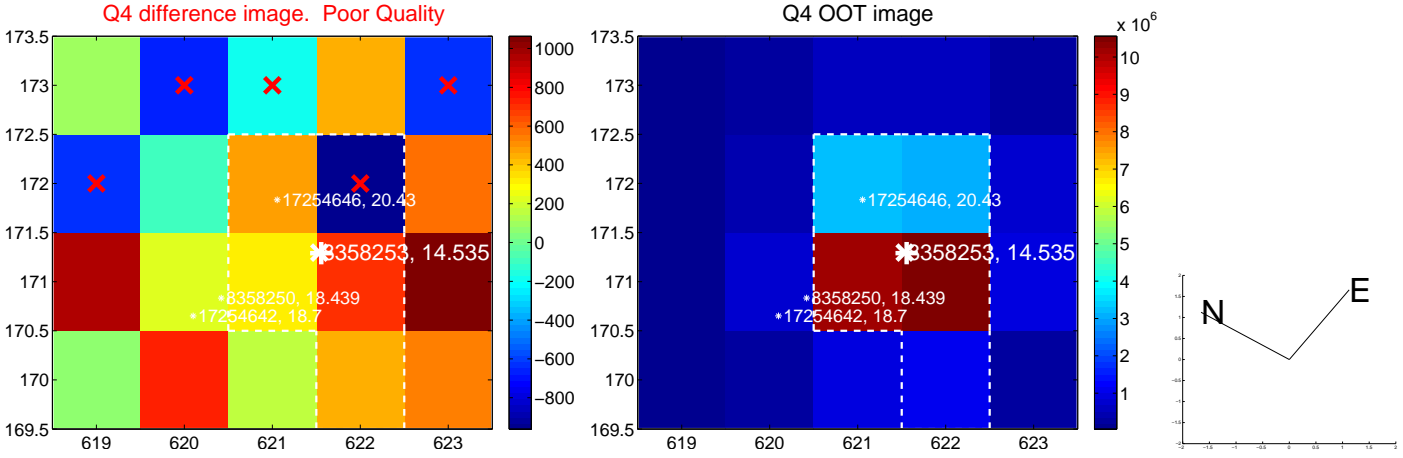
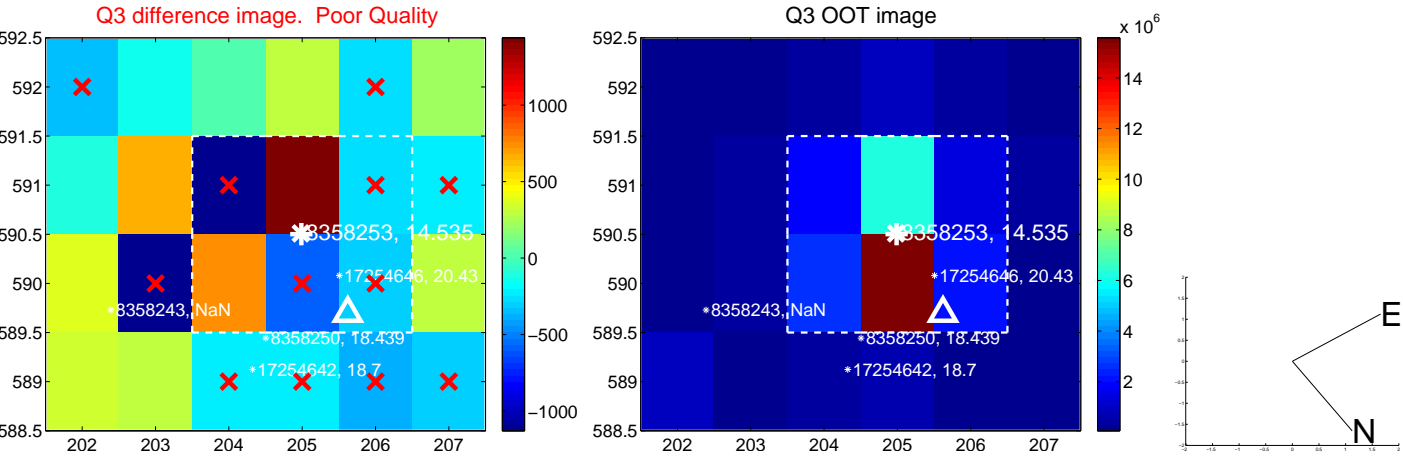
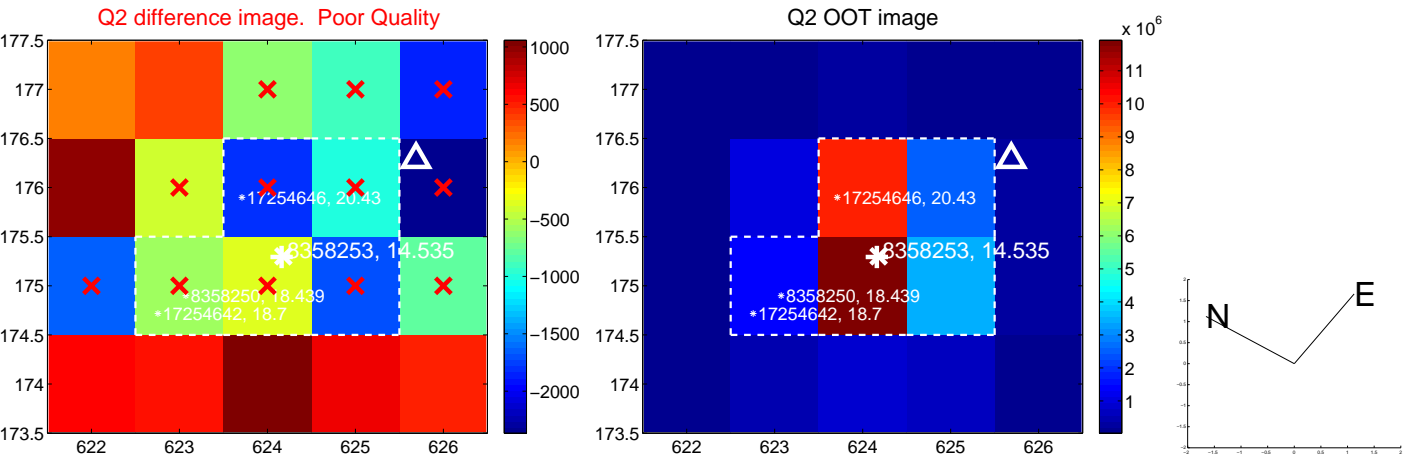
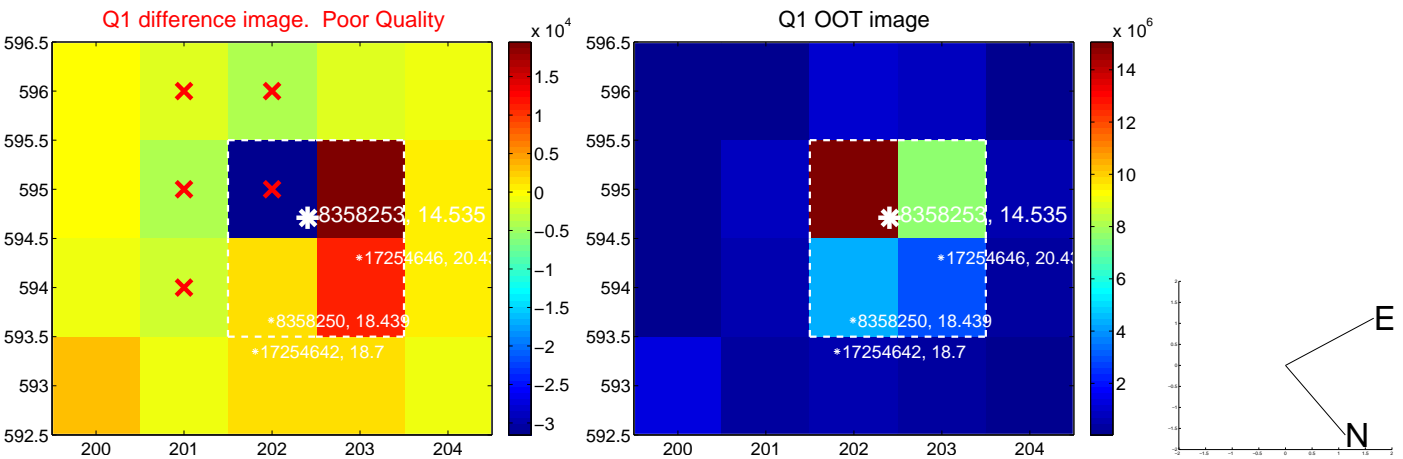
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.046 ± 1.012	1.03	-0.183 ± 0.741	-1.030 ± 1.006
PRF-fit source offset from KIC position	1.005 ± 1.062	0.95	-0.249 ± 0.879	-0.974 ± 1.061
photometric centroid source offset	1.60 ± 0.91	1.76	-0.30 ± 0.93	-1.57 ± 0.91

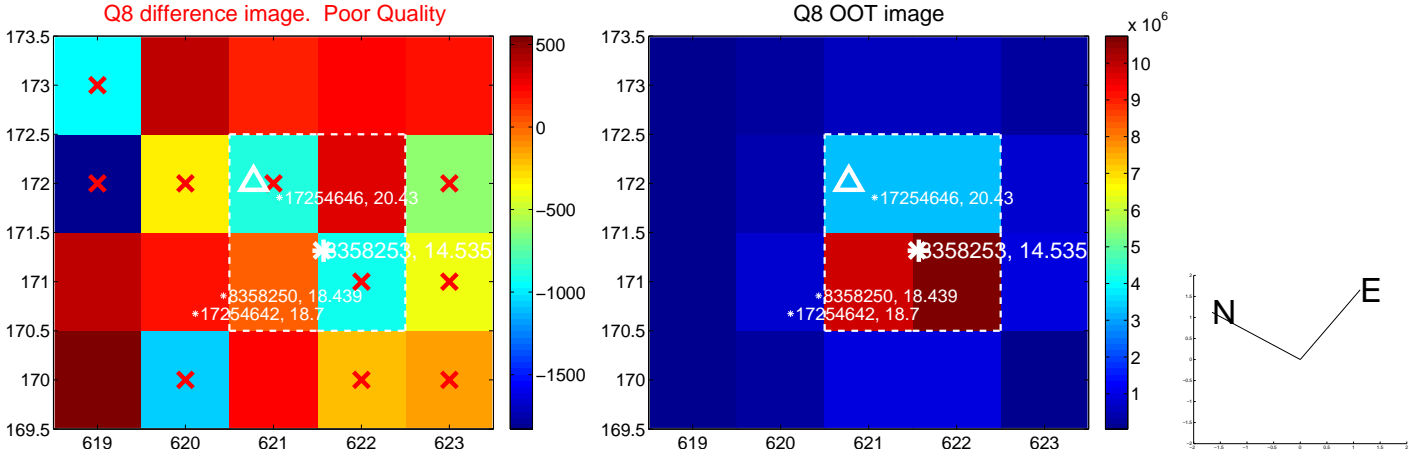
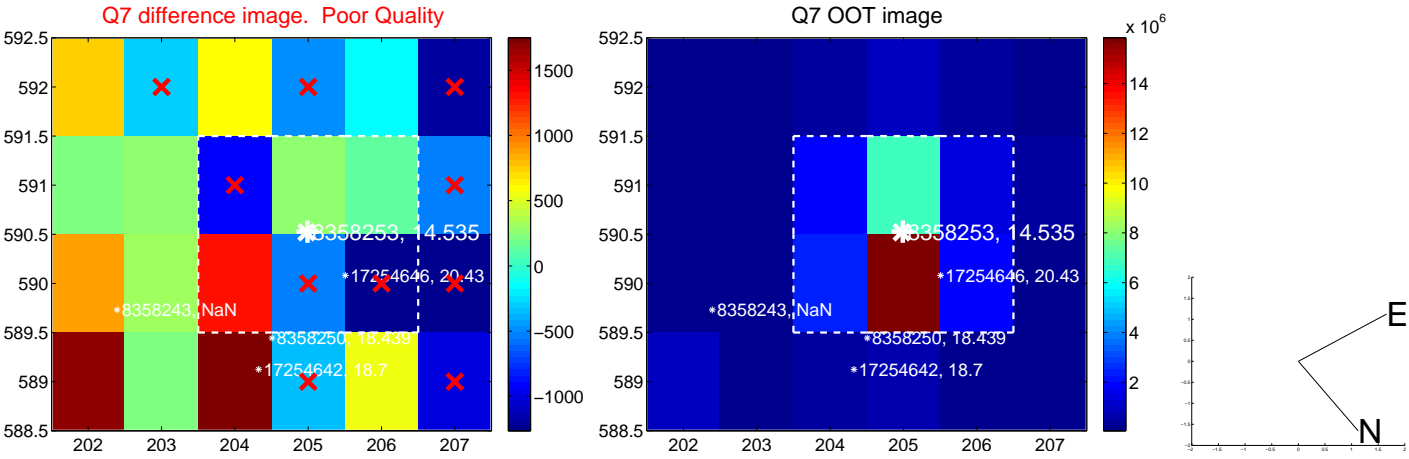
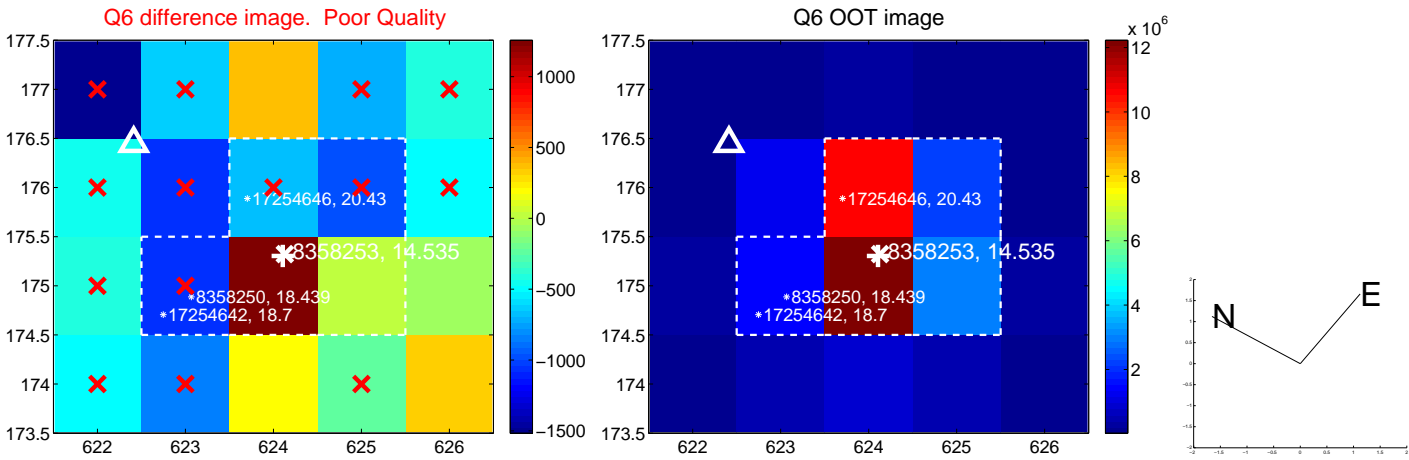
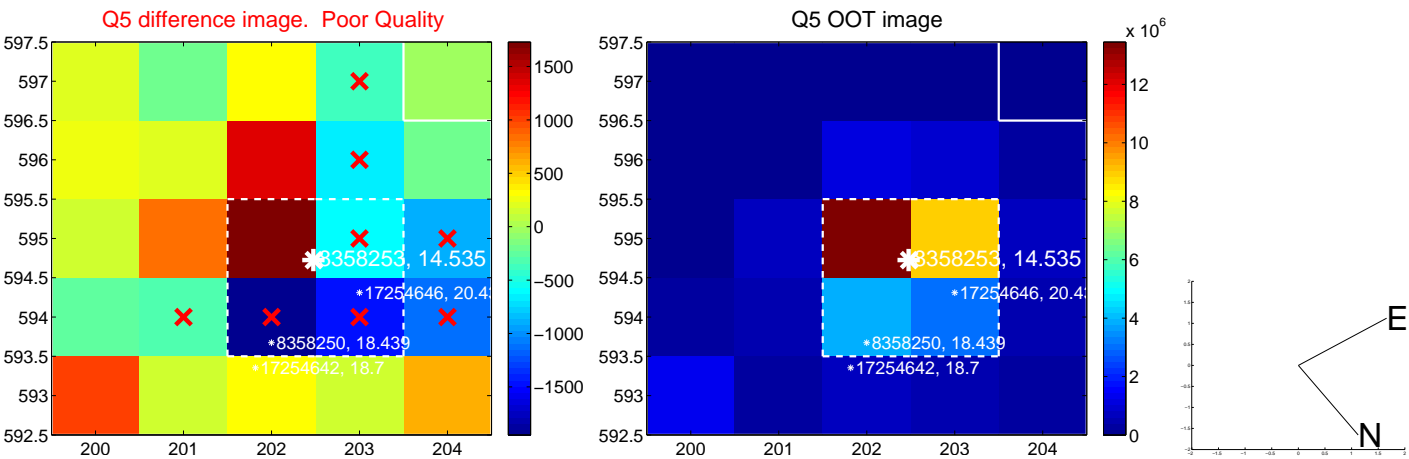


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

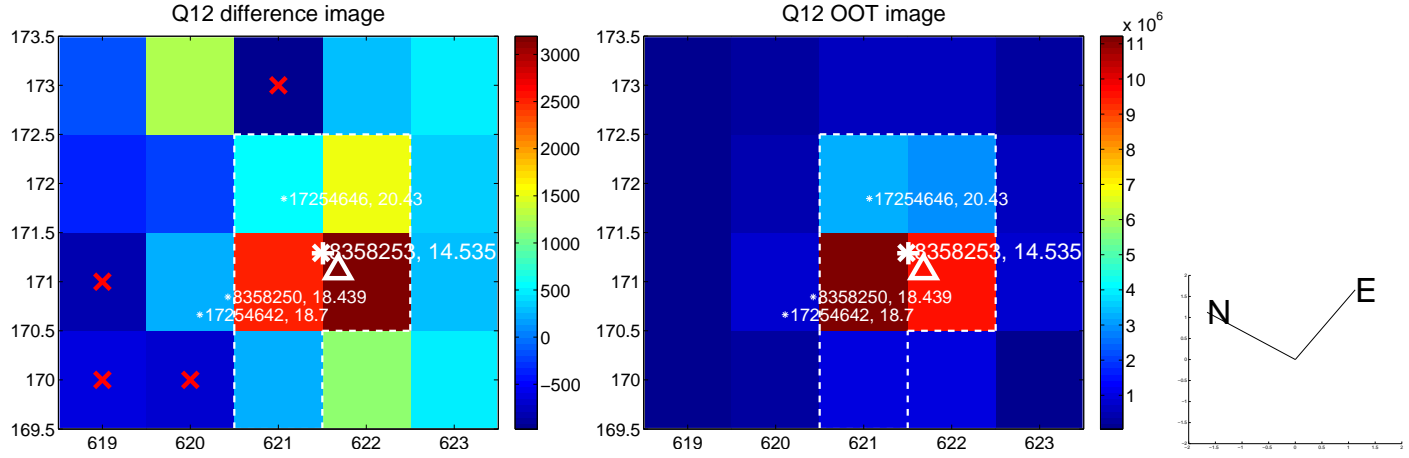
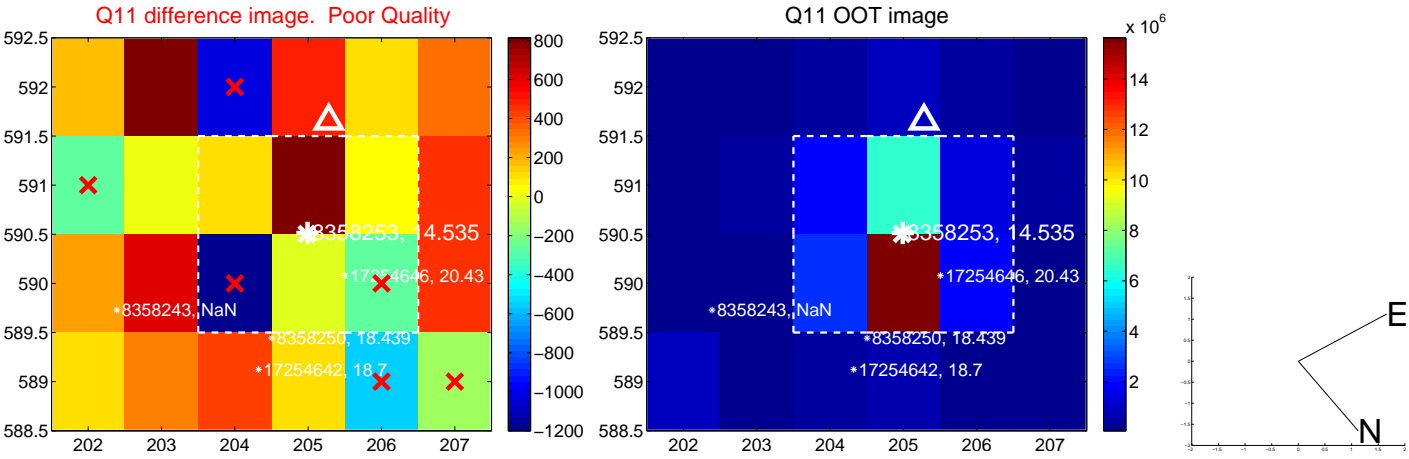
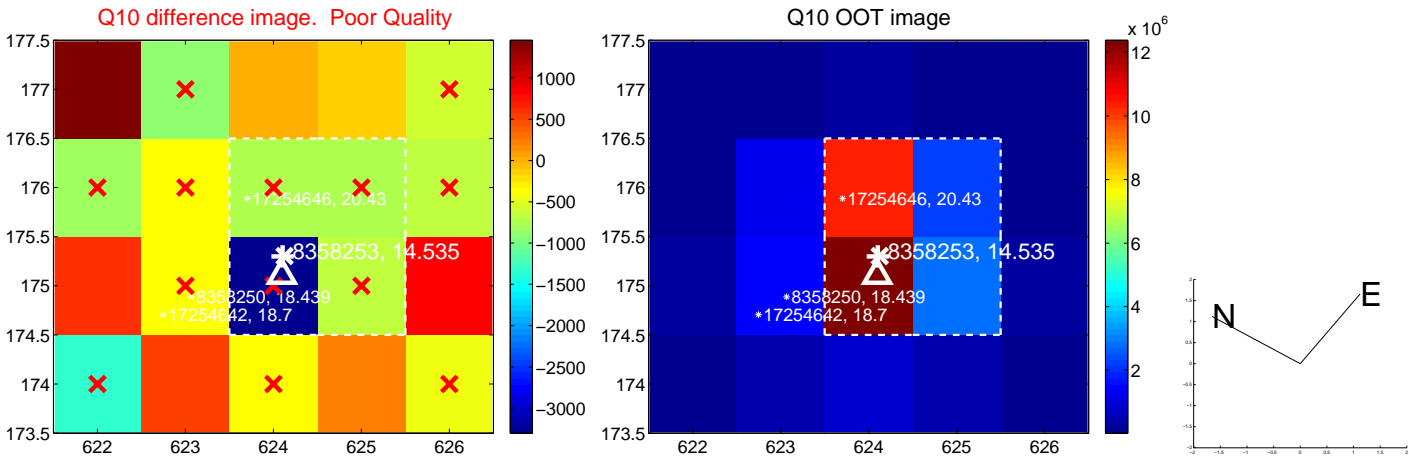
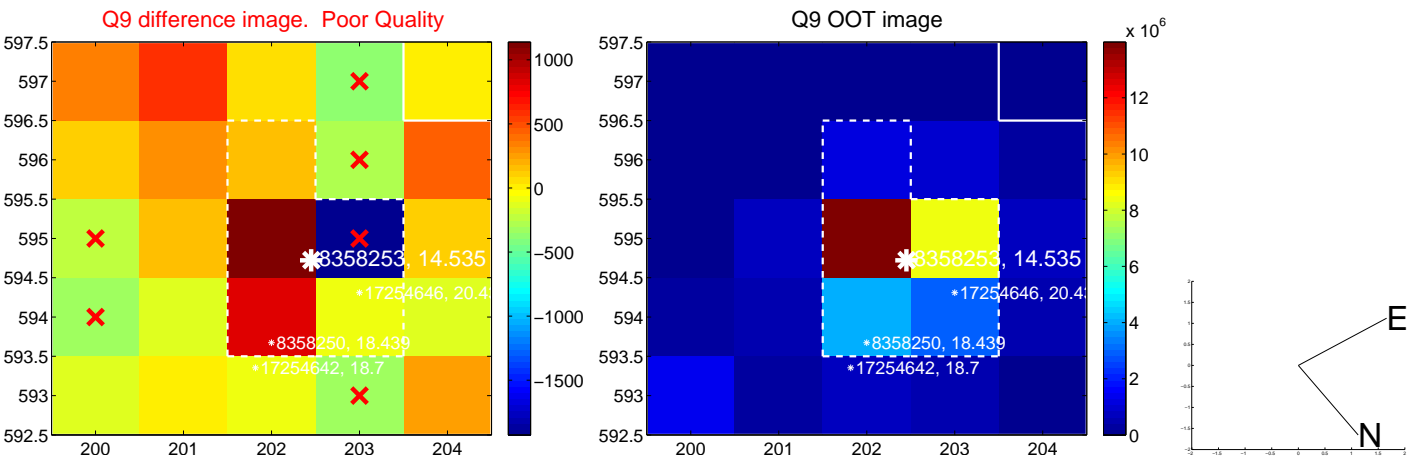
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



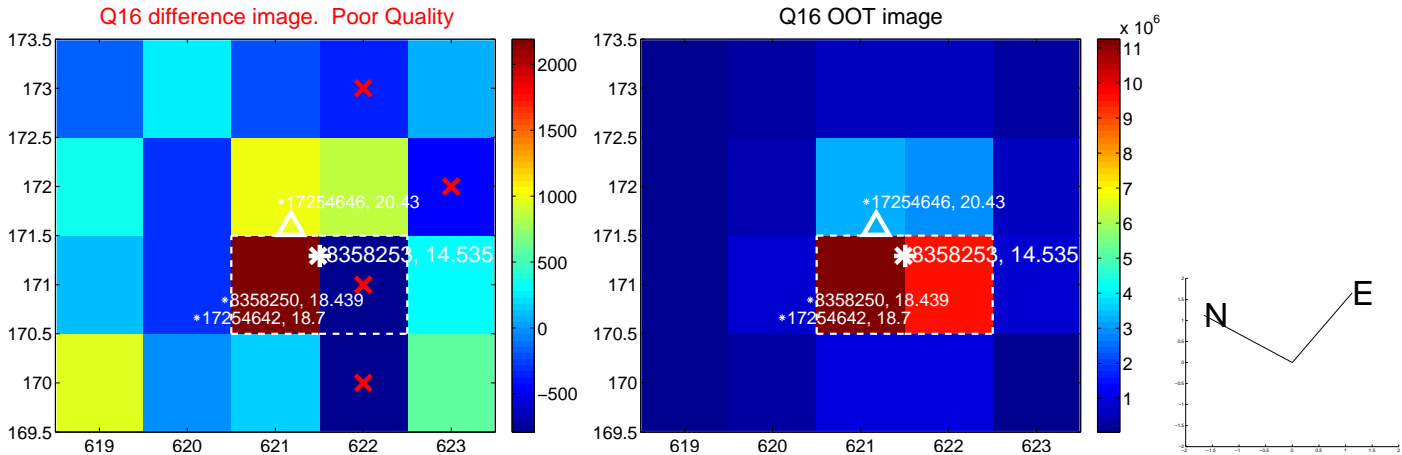
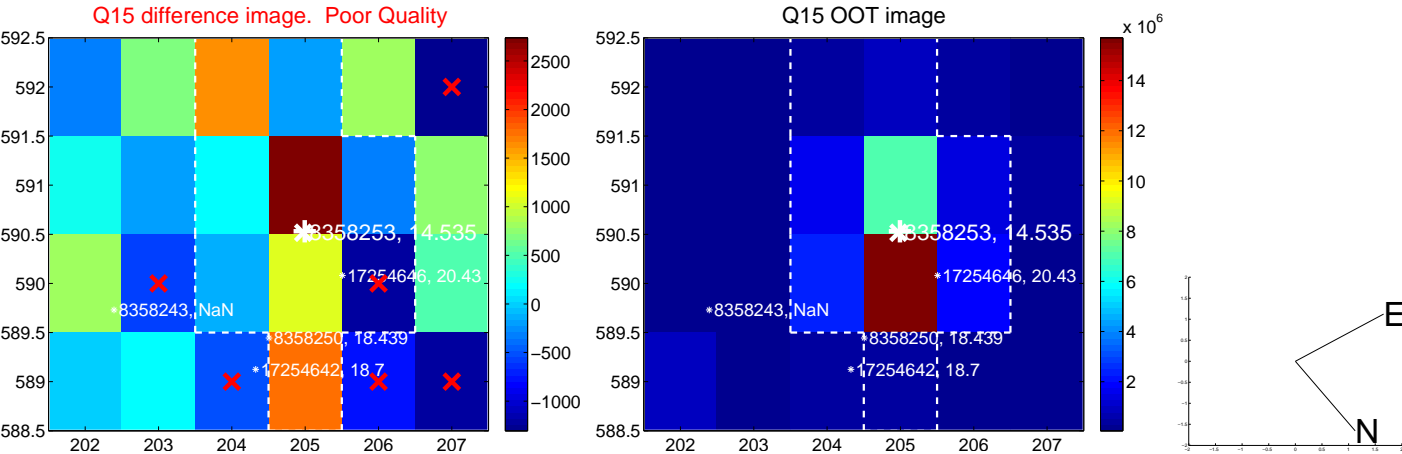
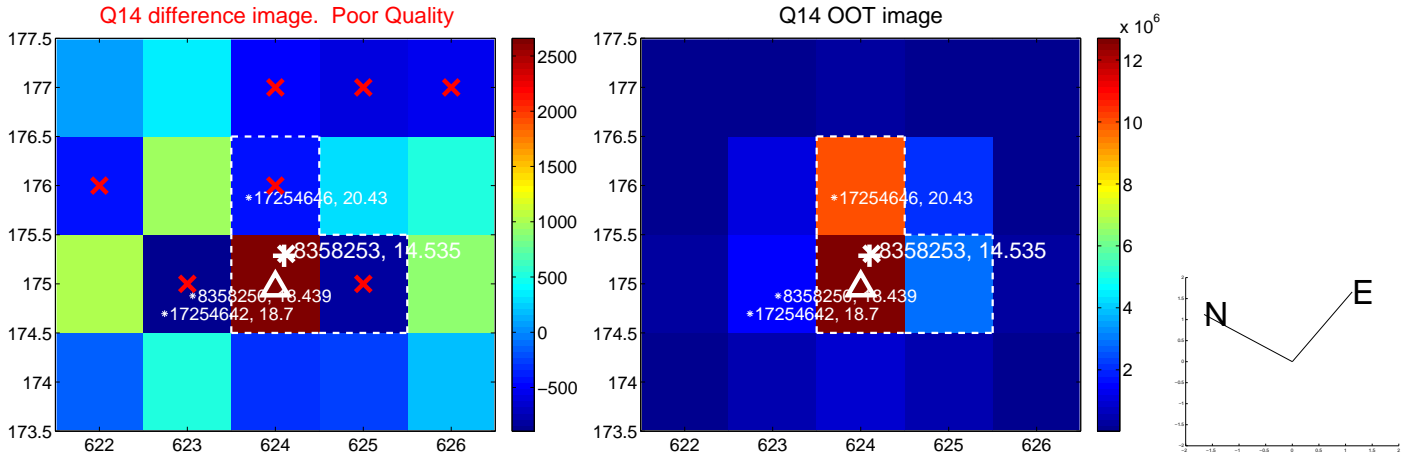
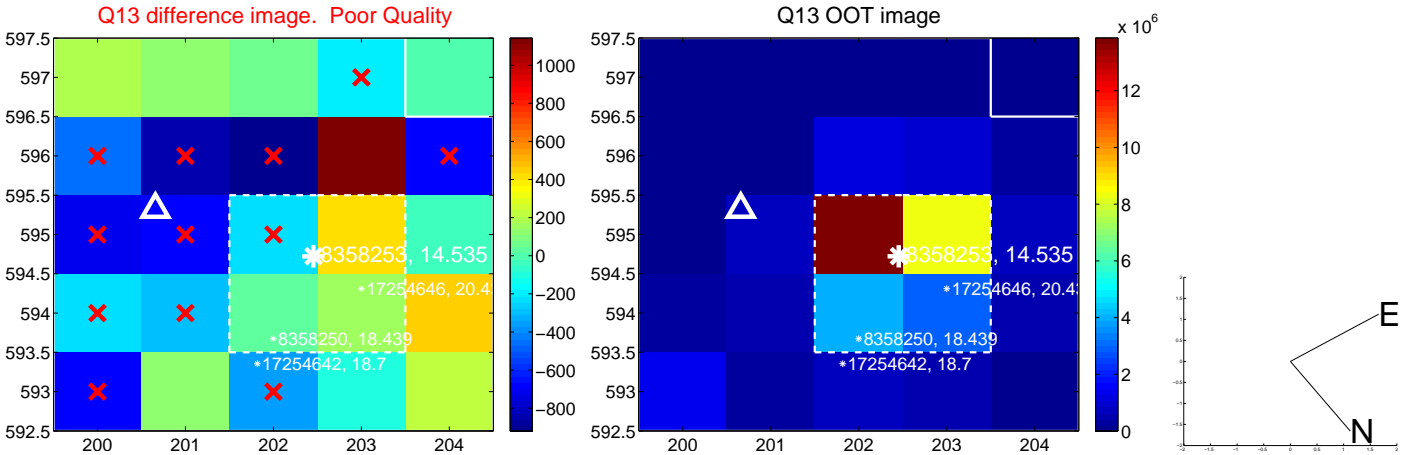
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



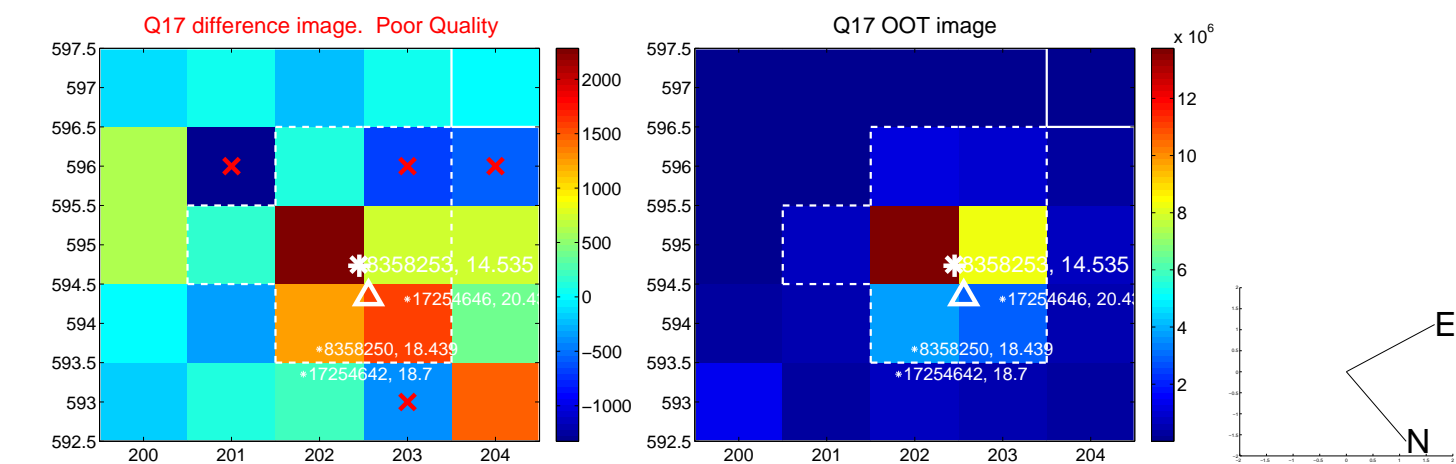
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



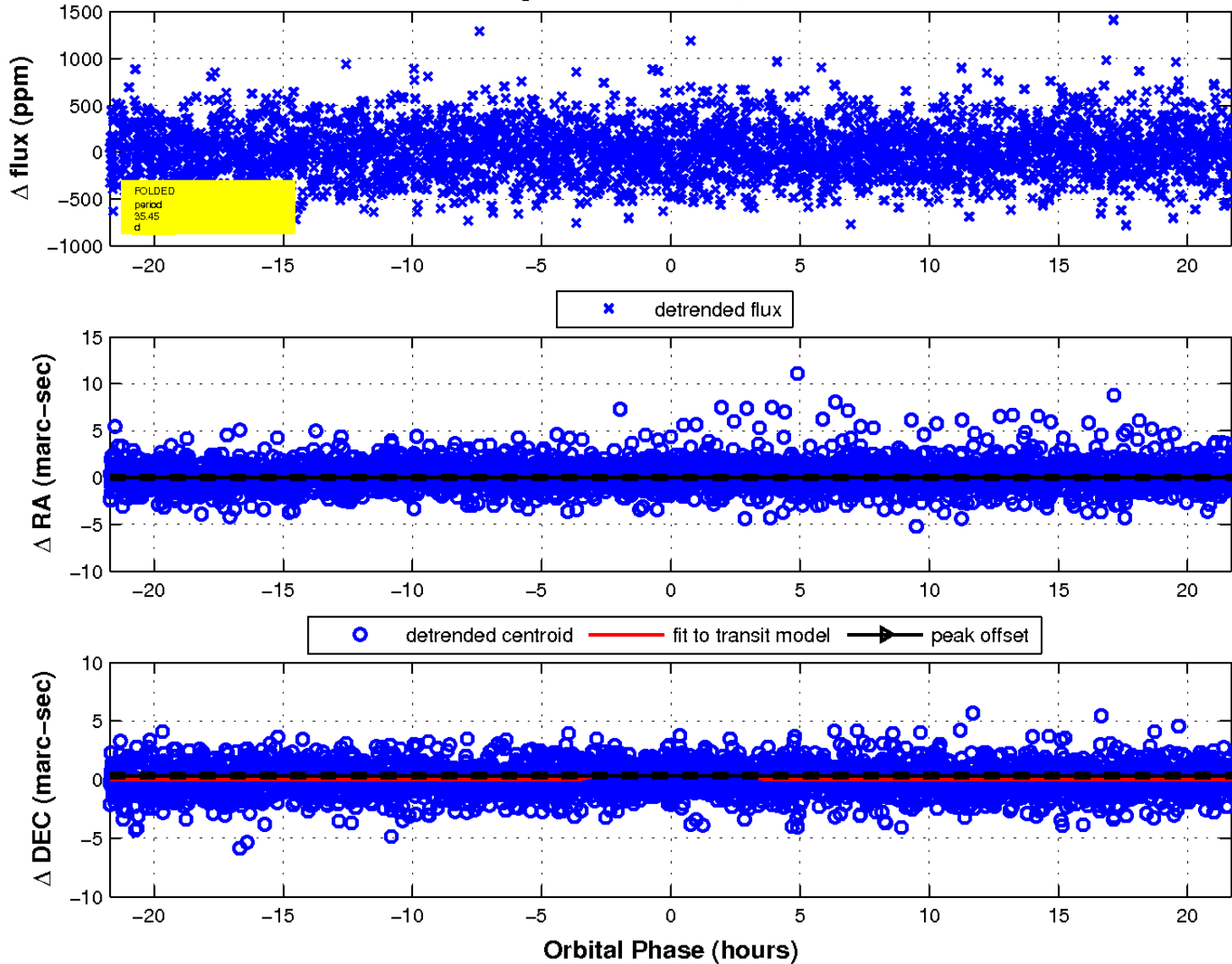
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

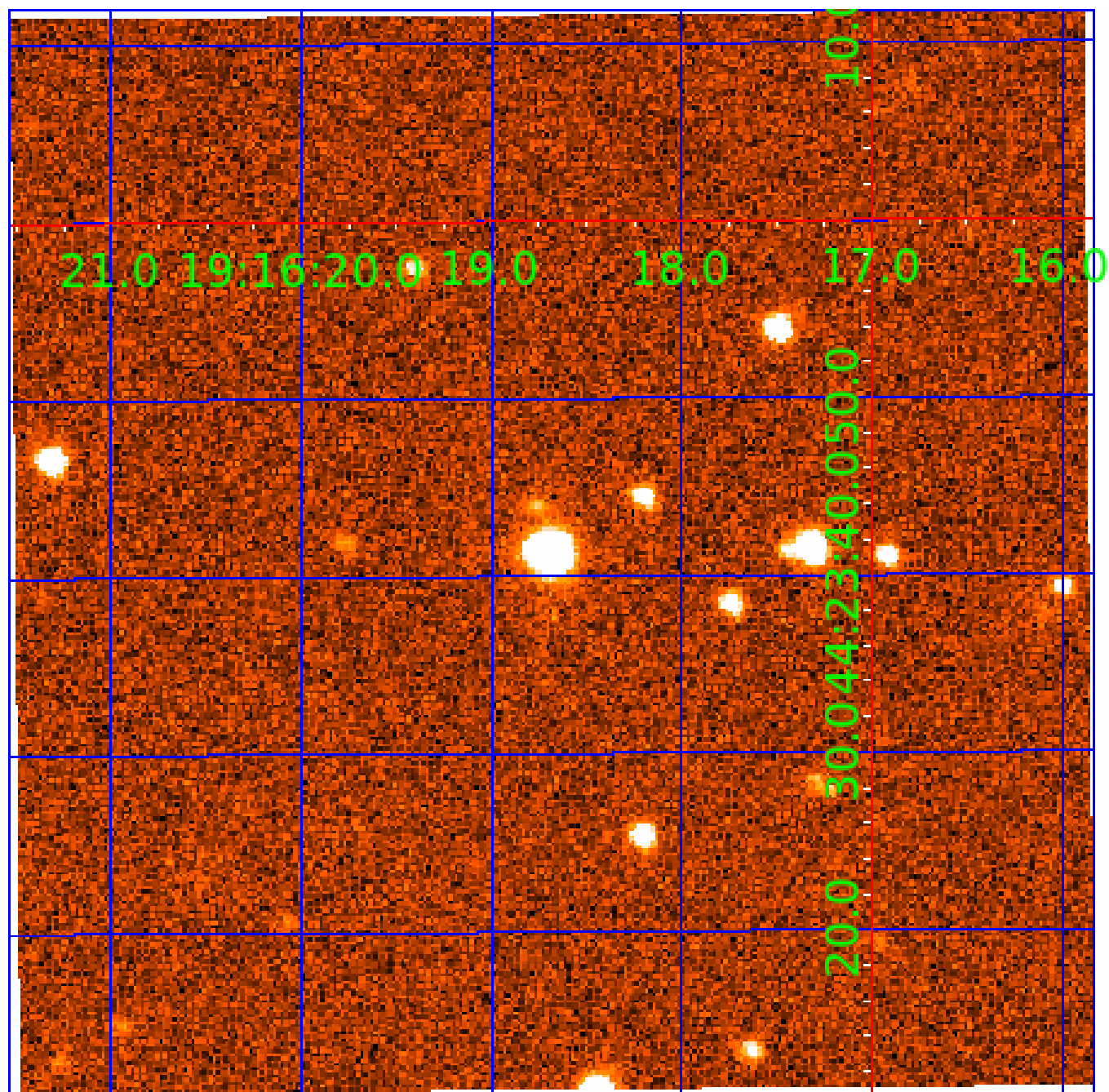


fluxWeightedCentroids, Planet 6 of 7



UKIRT Image

Declination



KIC 008358253

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})
008358253-01	OBS	No	1.560070	132.642266	32.2	11.560	11.0	13.5	0.85	5985	0.48	1261.64
008358253-02	OBS	No	22.544851	133.437573	437.2	1.328	14.3	13.8	0.85	5985	1.82	35.84
008358253-03	OBS	No	32.494713	140.172890	406.3	4.066	13.7	15.3	0.85	5985	1.89	22.02
008358253-04	OBS	No	12.937468	132.727048	276.7	2.664	13.2	12.0	0.85	5985	1.66	75.16
008358253-05	OBS	No	15.455704	140.176654	300.4	1.951	11.8	12.0	0.85	5985	1.73	59.29
008358253-06	OBS	No	35.454416	159.998443	204.3	7.238	11.3	9.3	0.85	5985	1.43	19.60
008358253-07	OBS	No	21.549892	139.252006	293.9	2.069	10.1	11.1	0.85	5985	1.66	38.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008358253-01	OBS	FP	0.00	1	0	0	0	LPP_DV
008358253-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS
008358253-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
008358253-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
008358253-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
008358253-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS
008358253-07	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_FEW_DIFFS

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

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

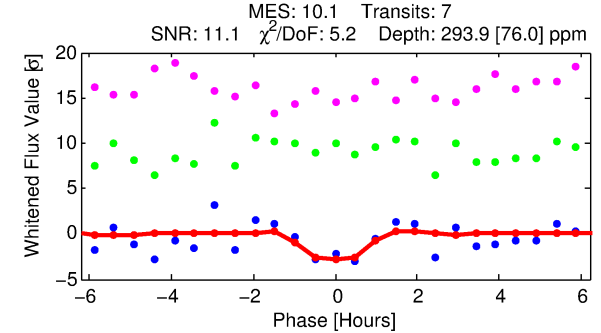
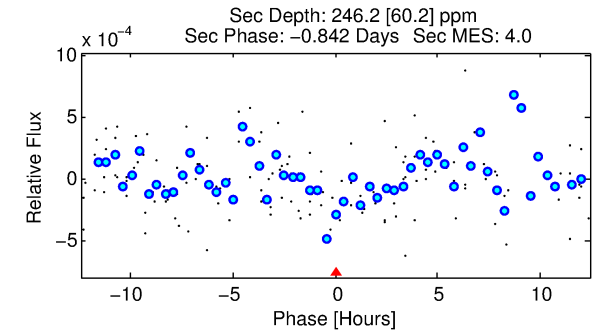
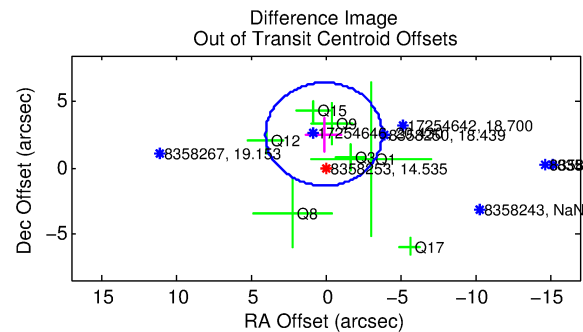
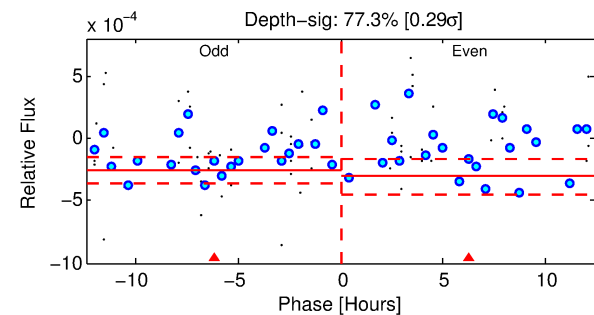
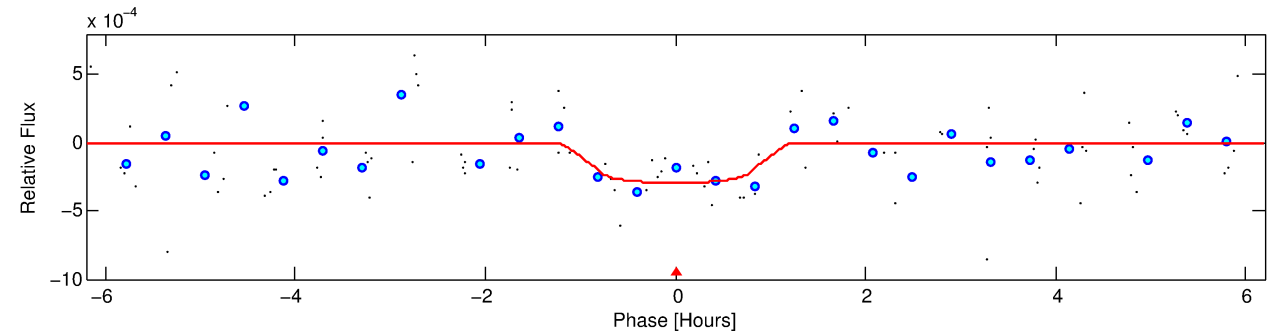
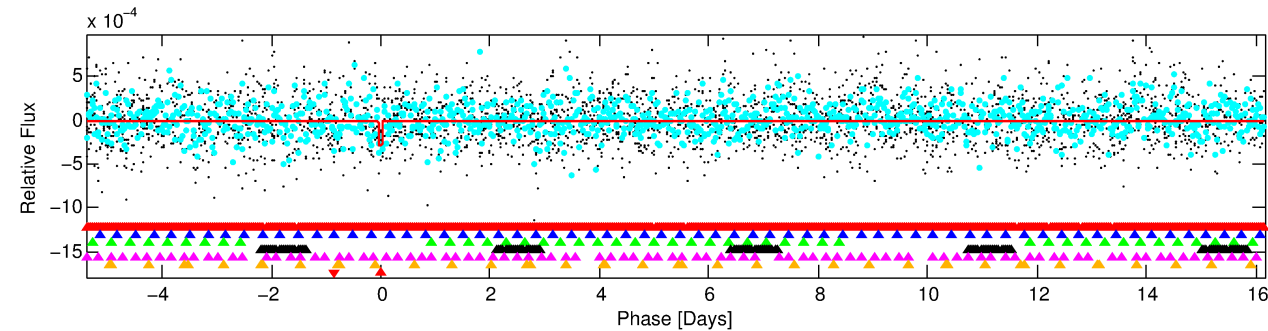
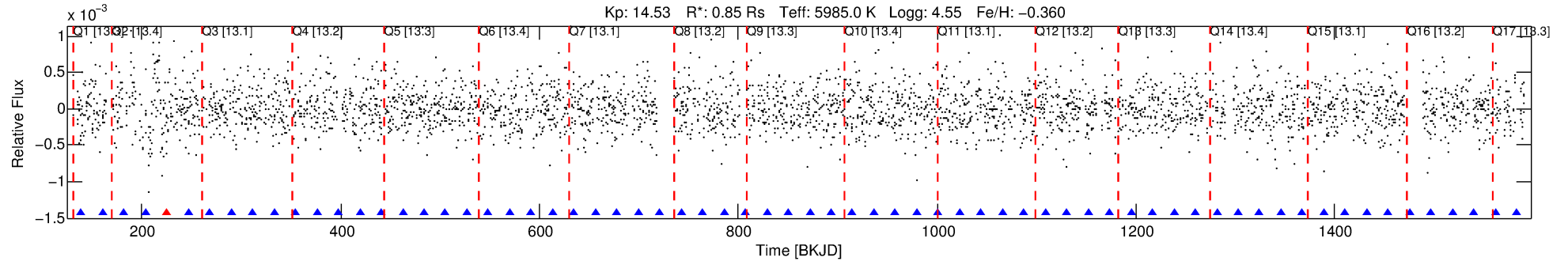
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008358253-07

No Significant Match Found

DV One-Page Summary

KIC: 8358253 Candidate: 7 of 7 Period: 21.550 d



DV Fit Results:

Period = 21.54989 [0.00049] d
Epoch = 139.2520 [0.0199] BKJD
Rp/R* = 0.0177 [0.0309]
a/R* = 45.91 [403.09]
b = 0.84 [3.16]
Seff = 38.07 [14.73]
Teff = 633 [61] K
Rp = 1.66 [2.92] Re
a = 0.1486 [0.0370] AU
Ag = 1090.99 [3829.57] [0.28 σ]
Teffp = 5628 [4914] K [1.02 σ]

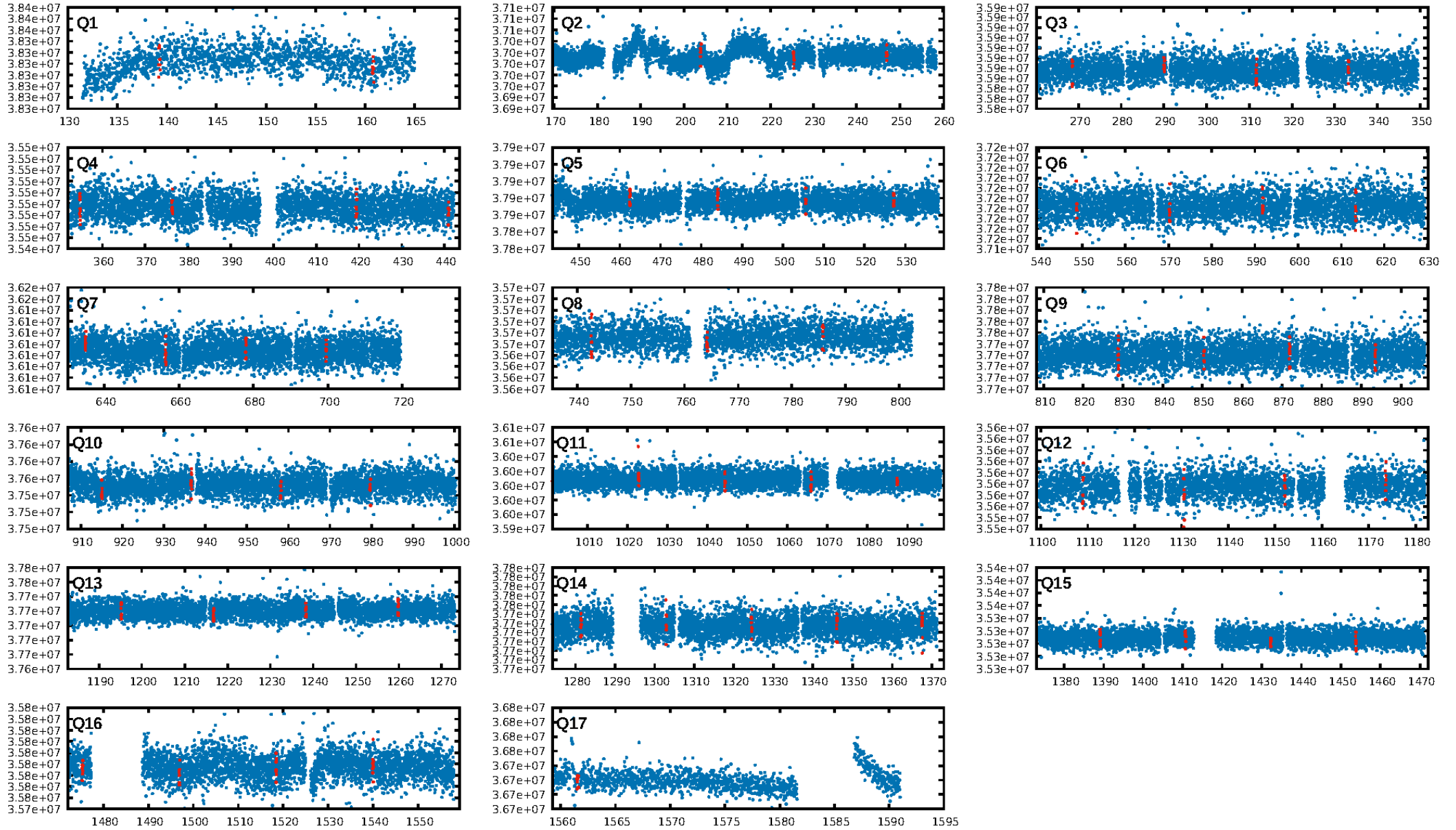
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [51.44 σ]
LongPeriod-sig: 100.0% [9.71 σ]
ModelChiSquare2-sig: 55.9%
ModelChiSquareGof-sig: 46.2%
Bootstrap-pfa: 7.12e-09
RollingBand-fgt: 0.86 [6/7]
GhostDiagnostic-chr: 2.463
Centroid-sig: 38.3%
Centroid-so: 1.079 arcsec [1.18 σ]
OotOffset-rm: 2.530 arcsec [1.95 σ]
OotOffset-st: 0/2/2/3 [7]
KicOffset-rm: 2.517 arcsec [2.04 σ]
KicOffset-st: 0/2/2/3 [7]
DiffImageQuality-fgm: 0.14 [1/7]
DiffImageOverlap-fno: 0.82 [14/17]

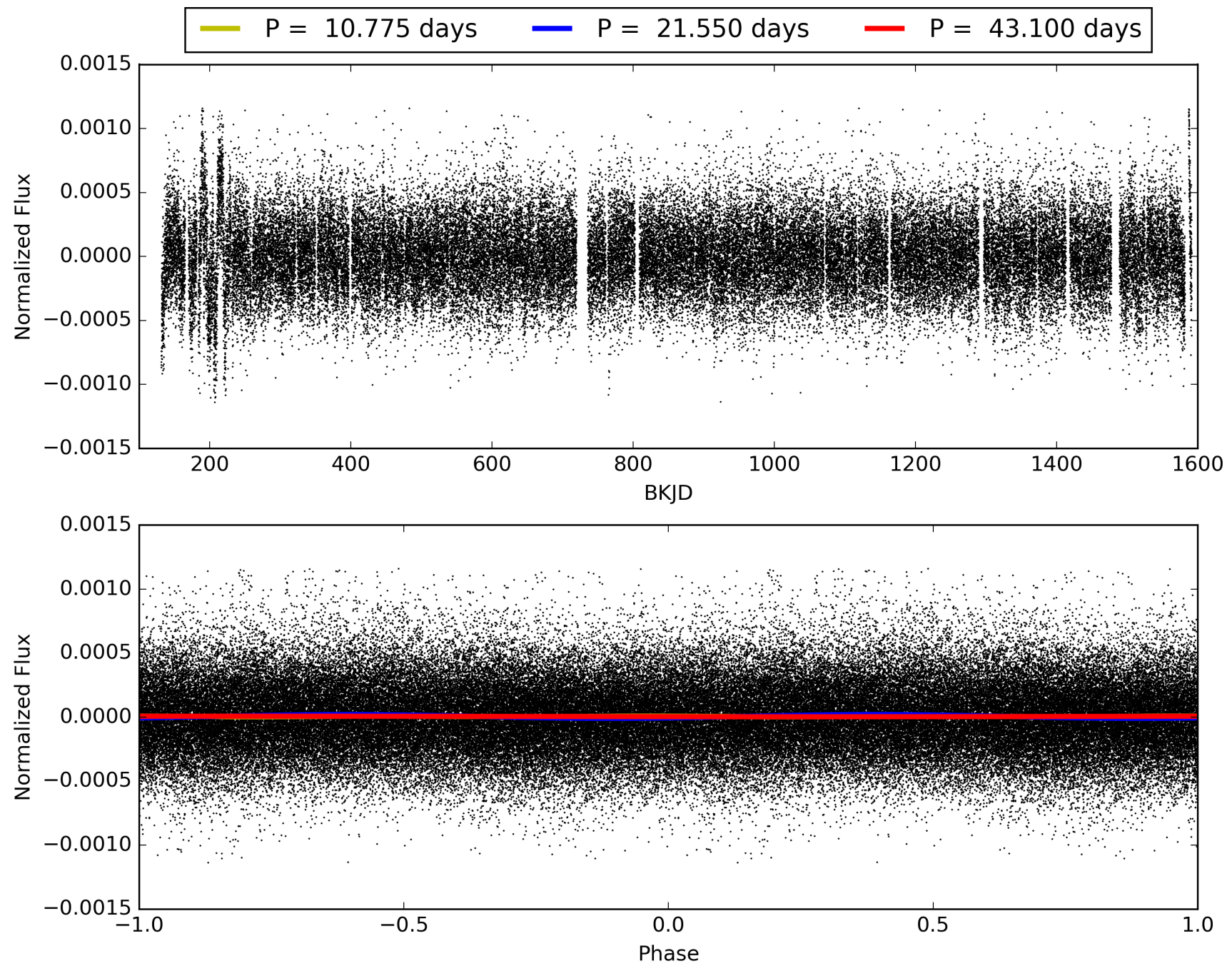
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 19:40:19 Z

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

TCE 008358253-07, PDC Light Curves

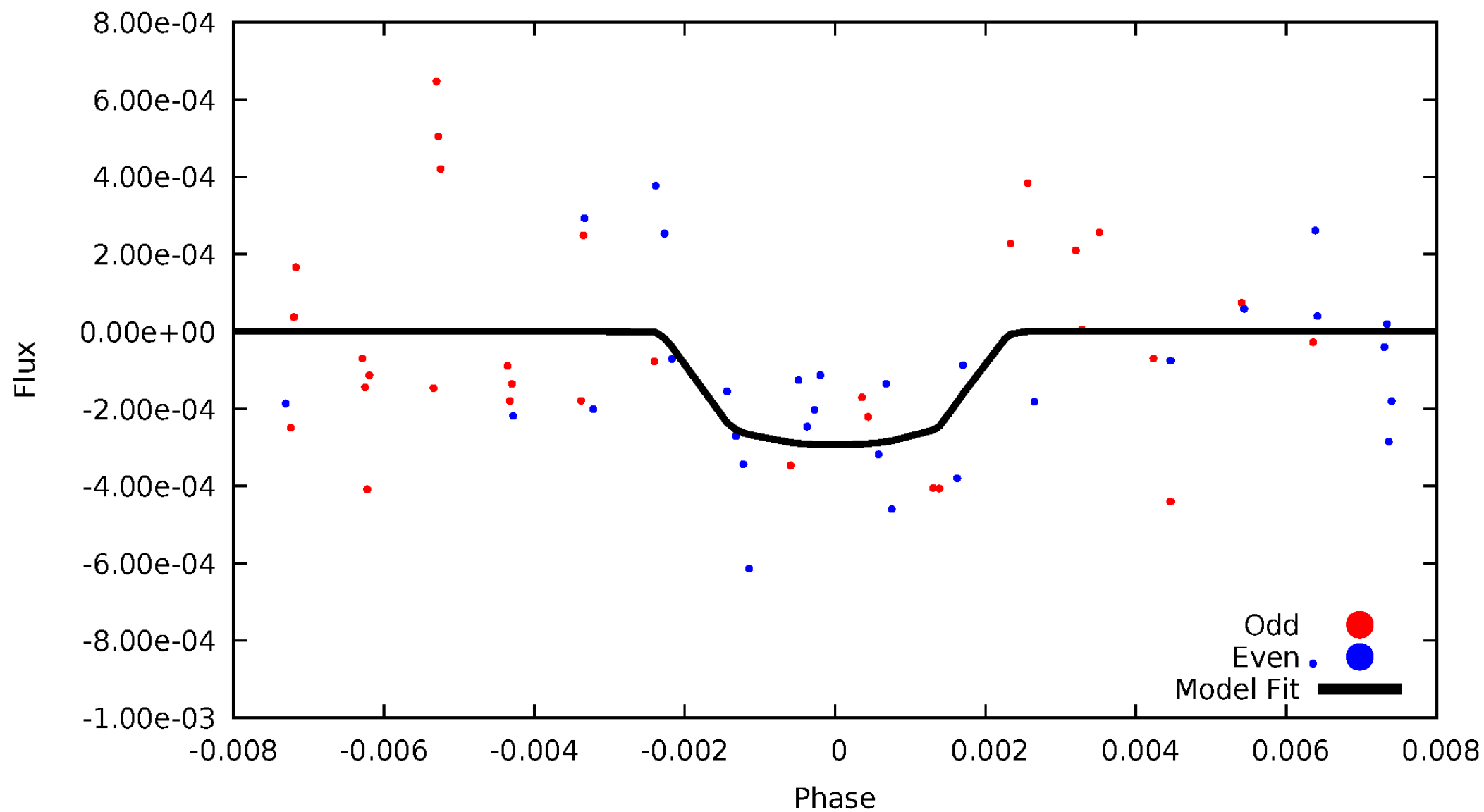


TCE 008358253-07



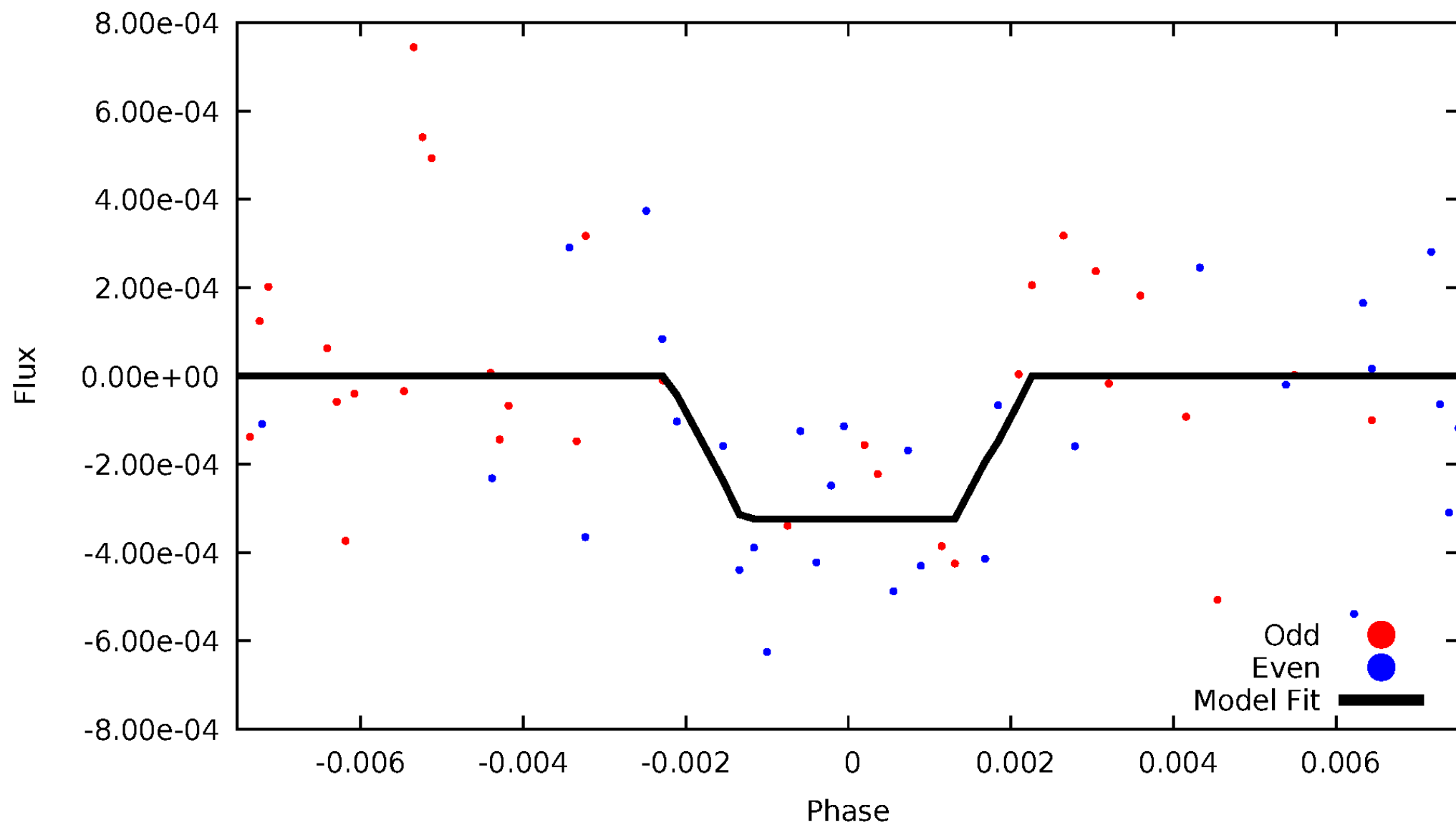
DV Odd/Even

TCE 008358253-07



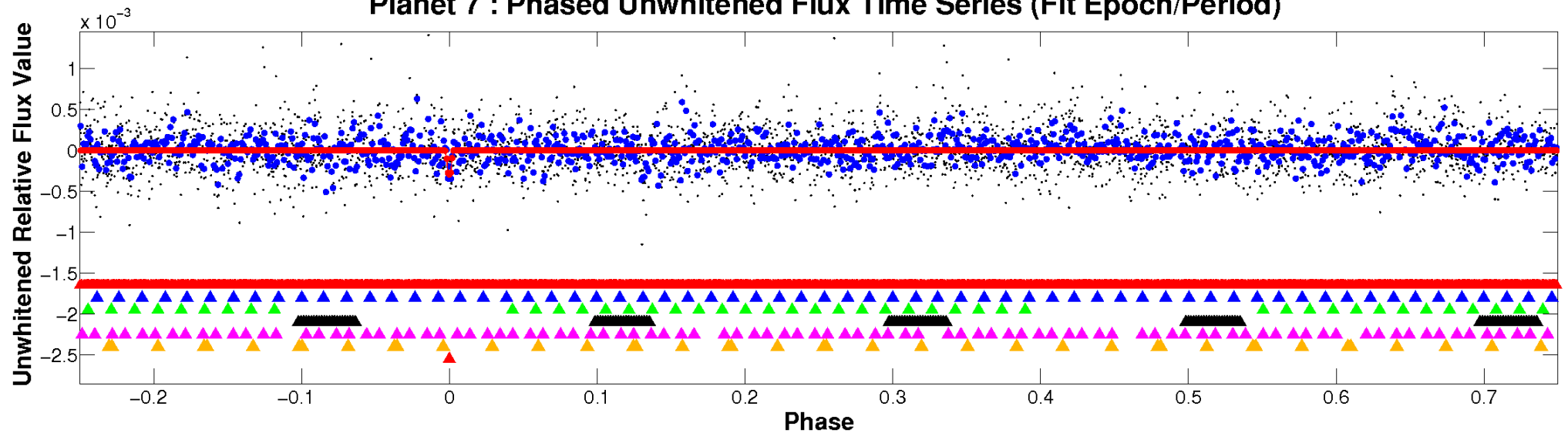
ALT Odd/Even

TCE 008358253-07

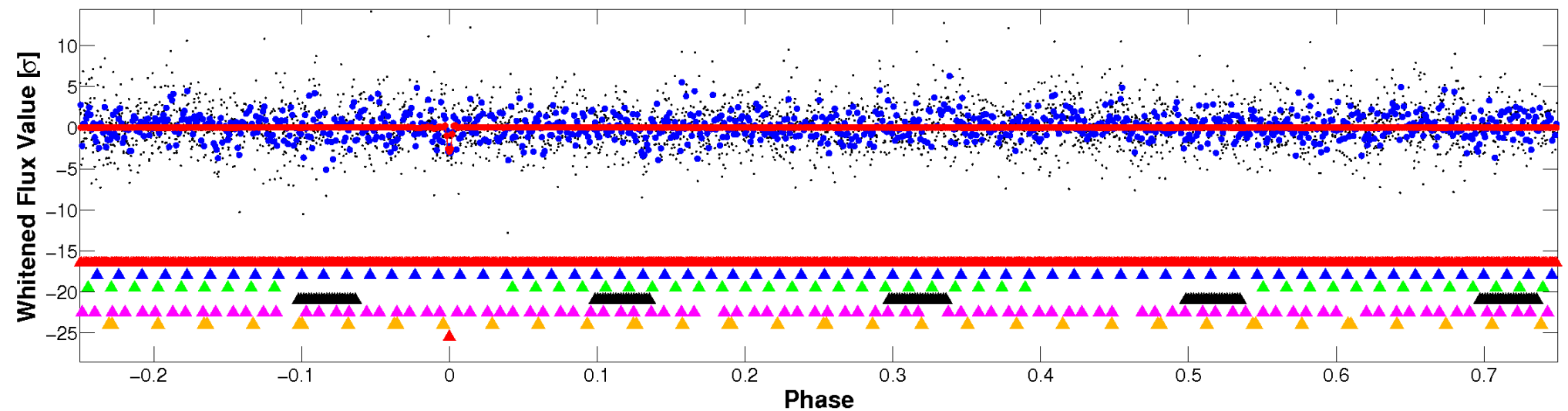


Non-Whitened Vs. Whitened Light Curve

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

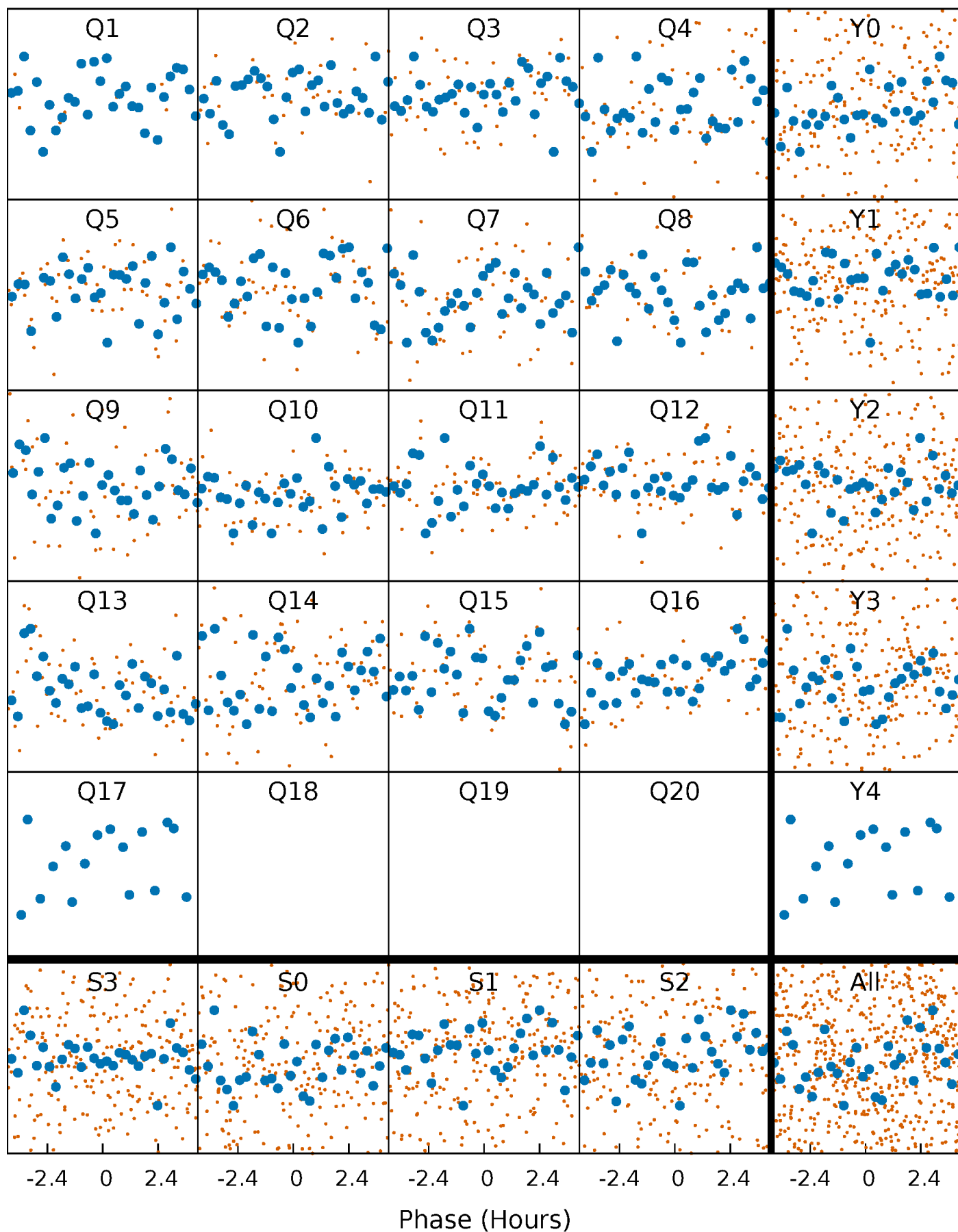


Planet 7 : Phased Whitened Flux Time Series (Fit Epoch/Period)



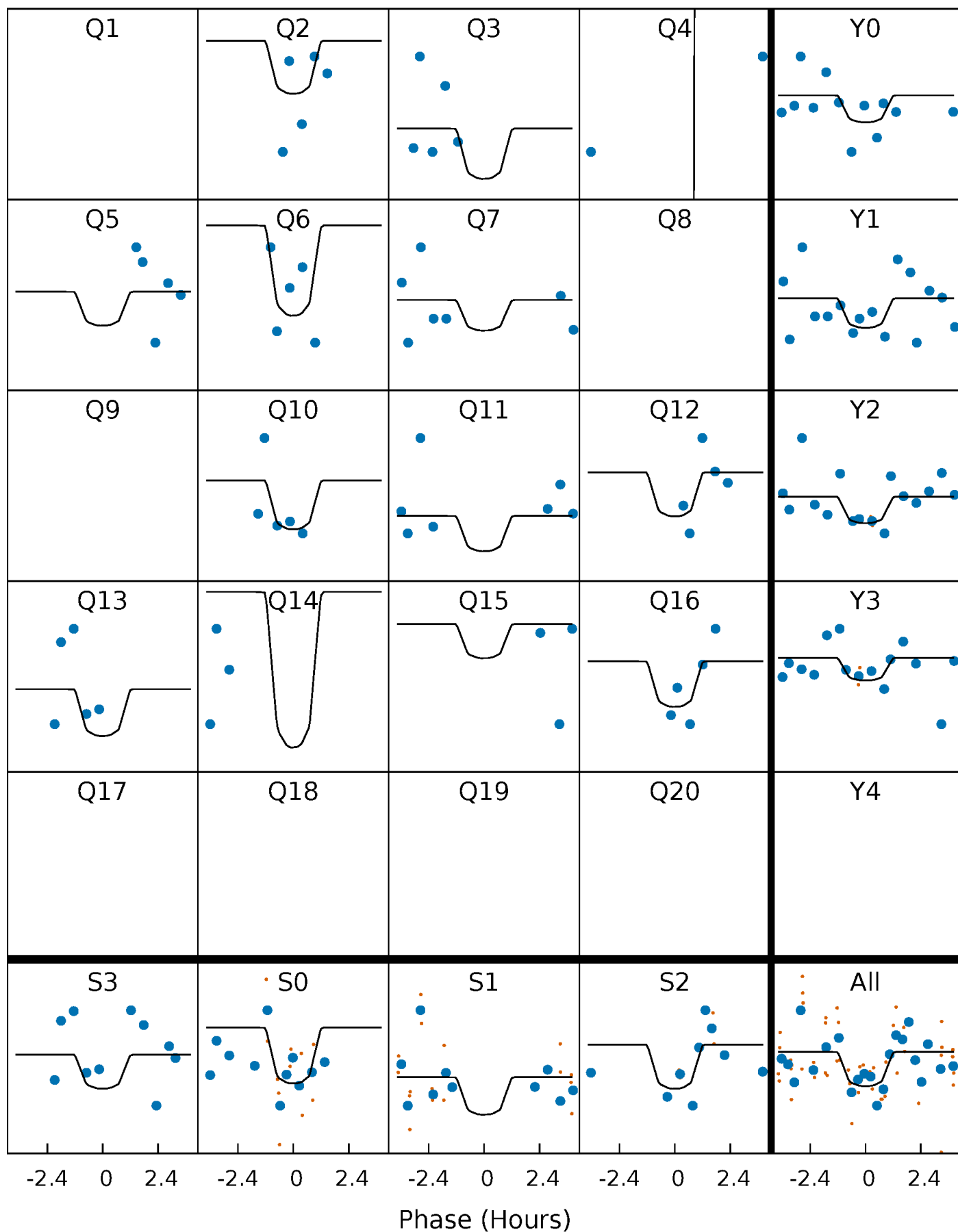
PDC Quarter-Phased Transit Curves

TCE 008358253-07 $P = 21.549892$ Days $T_0 = 139.252006$ (BKJD)



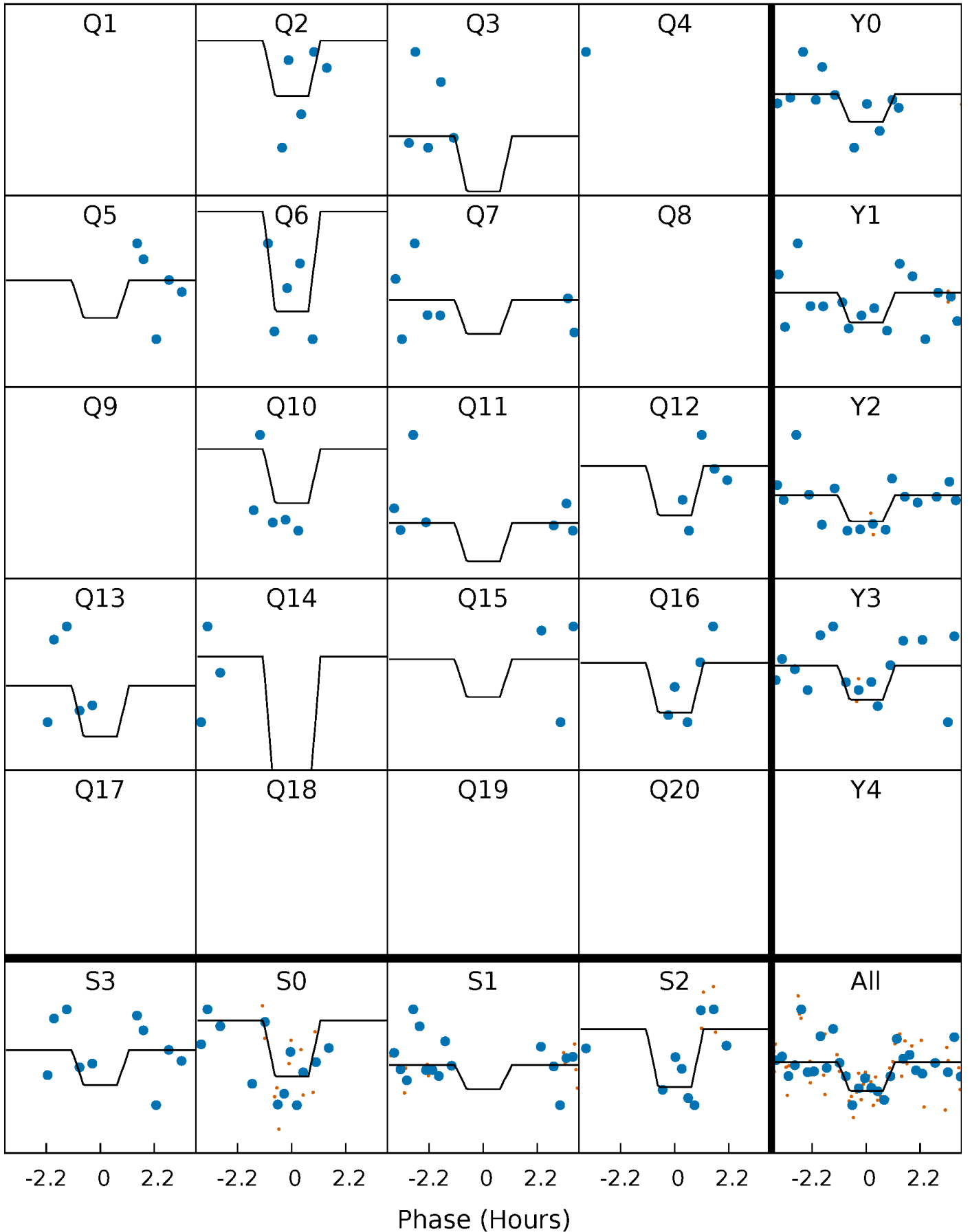
DV Quarter-Phased Transit Curves

TCE 008358253-07 P= 21.549892 Days $T_0=139.252006$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

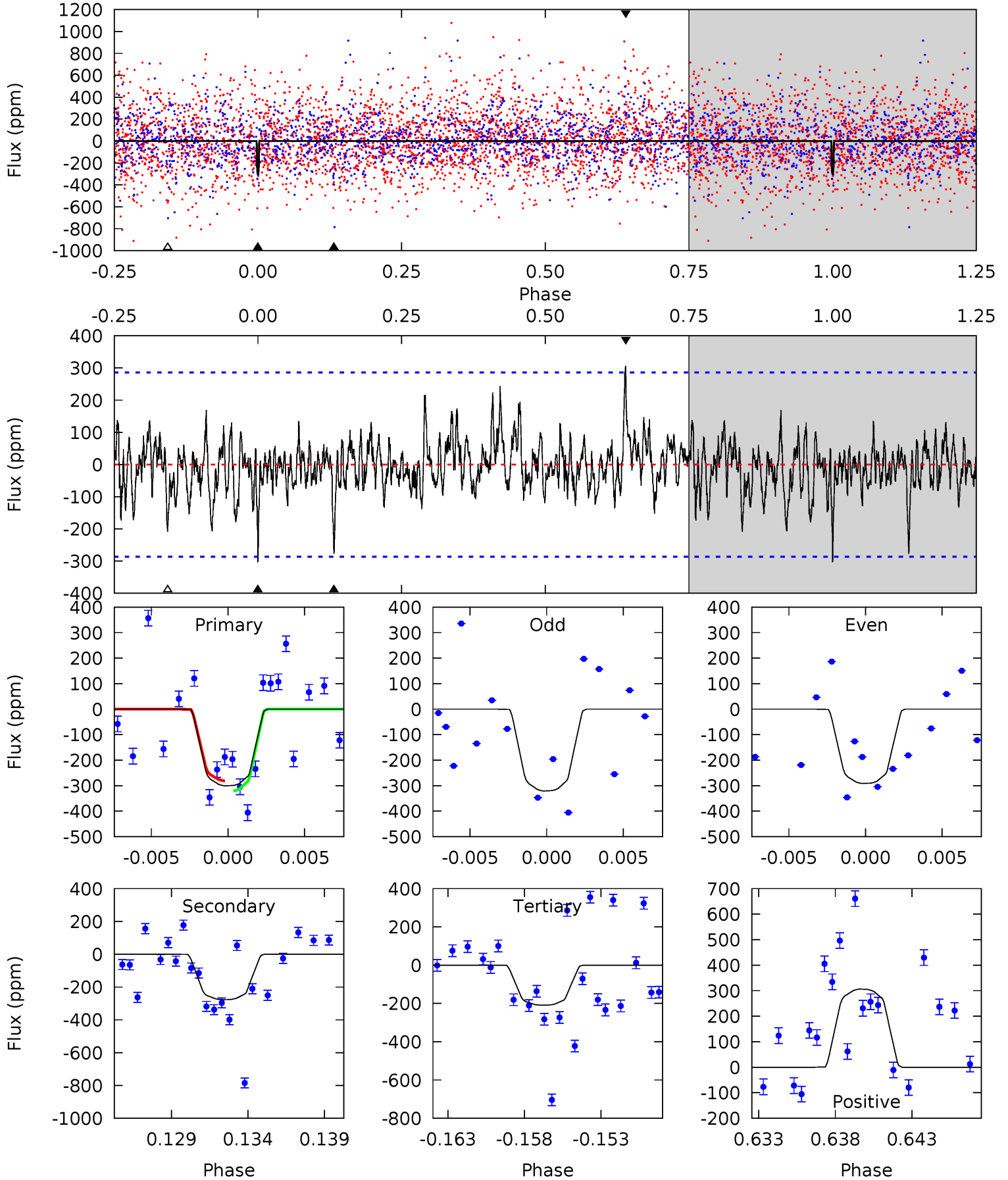
TCE 008358253-07 P= 21.550000 Days $T_0=139.248563$ (BKJD)



DV Model-Shift Uniqueness Test

008358253-07, P = 21.549892 Days, E = 117.702114 Days

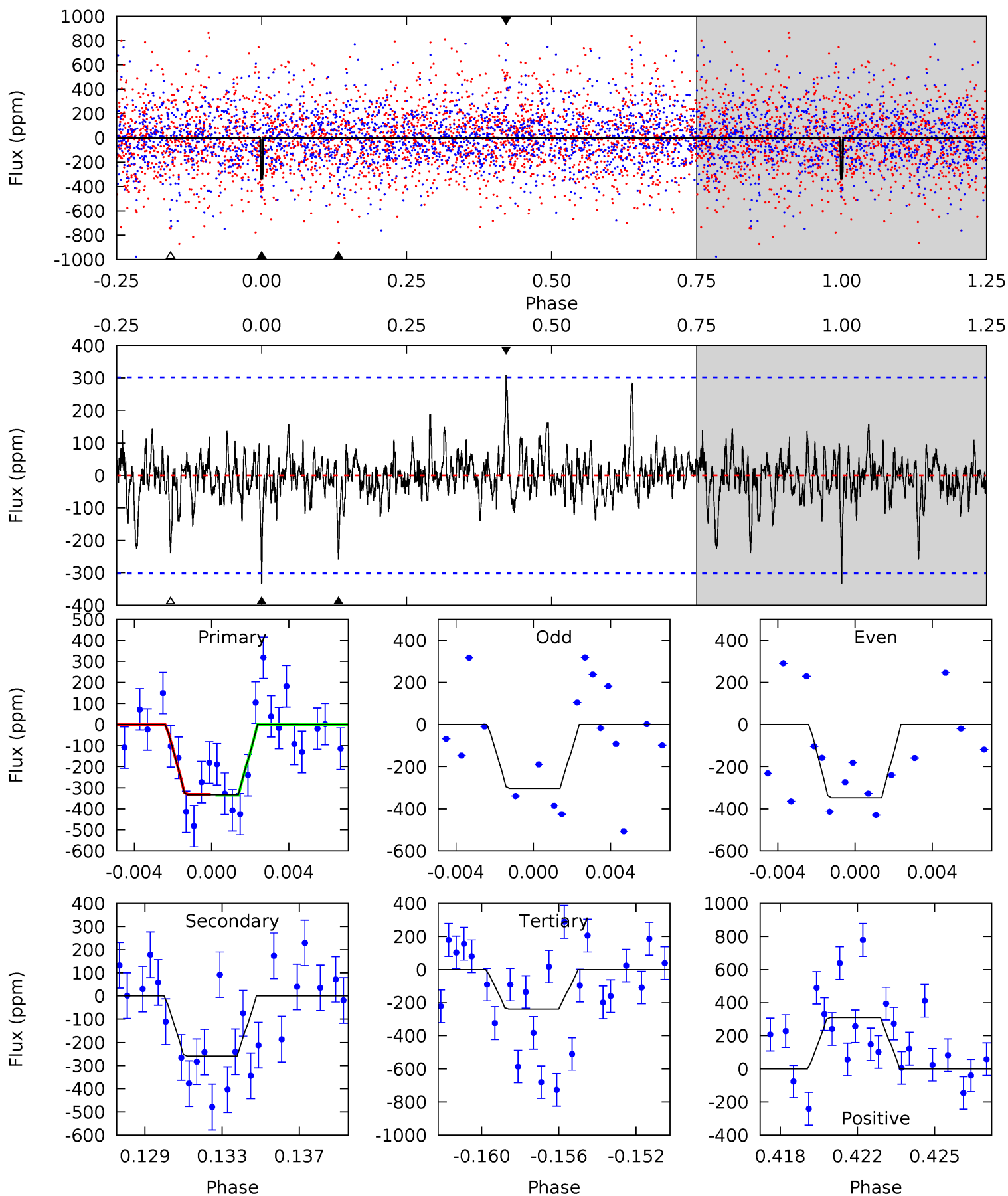
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.42	4.99	3.77	5.52	5.16	2.81	1.24	1.65	-0.10	1.22	-0.53	0.25	0.96	0.50	0.36



Alt Model-Shift Uniqueness Test

008358253-07, P = 21.550000 Days, E = 117.698563 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.74	4.46	4.11	5.33	5.21	2.89	1.07	1.63	0.41	0.34	-0.88	0.36	1.00	0.48	0.04



Stellar Parameters For KIC 008358253

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5985^{+161}_{-179}	$4.548^{+0.048}_{-0.204}$	$-0.360^{+0.300}_{-0.300}$	$0.855^{+0.248}_{-0.083}$	$0.942^{+0.109}_{-0.109}$	$2.122^{+0.425}_{-1.108}$
	+3%/-3%	+1%/-4%	+83%/-83%	+29%/-10%	+12%/-12%	+20%/-52%
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 008358253-07 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-277 ± 55	$2.74^{+2.65}_{-1.67}$	905^{+61}_{-41}	4689^{+2858}_{-1030}	423^{+2619}_{-320}
Alt.	-259 ± 58	$3.01^{+2.54}_{-2.03}$	907^{+67}_{-41}	4538^{+3289}_{-876}	361^{+2760}_{-263}

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

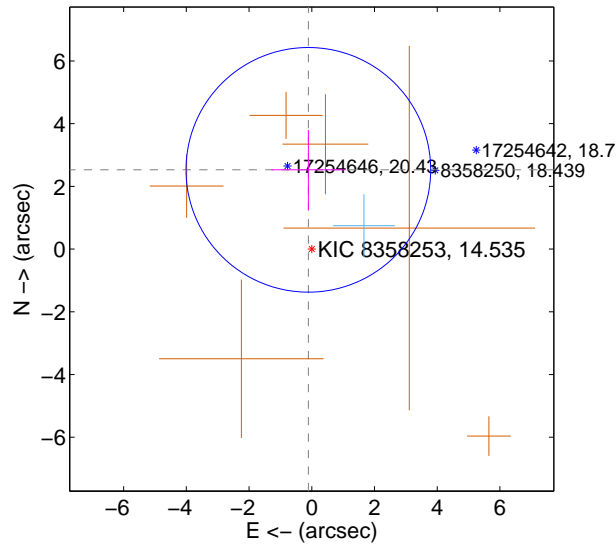
Supplemental centroid analysis for 008358253-07. Kepler magnitude: 14.54. Transit SNR 11.08

There are 1 quarters with good PRF difference image offsets

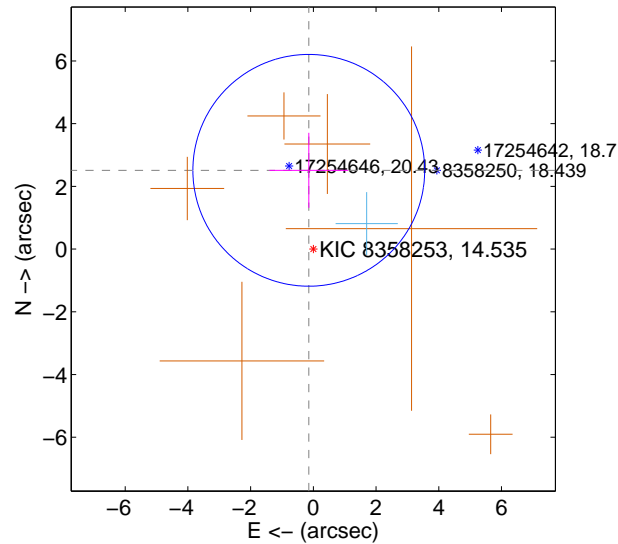
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.530 ± 1.300	1.95	0.109 ± 1.173	2.528 ± 1.272
PRF-fit source offset from KIC position	2.517 ± 1.232	2.04	0.145 ± 1.257	2.512 ± 1.197
photometric centroid source offset	1.08 ± 0.92	1.18	-1.08 ± 0.92	-0.01 ± 0.88

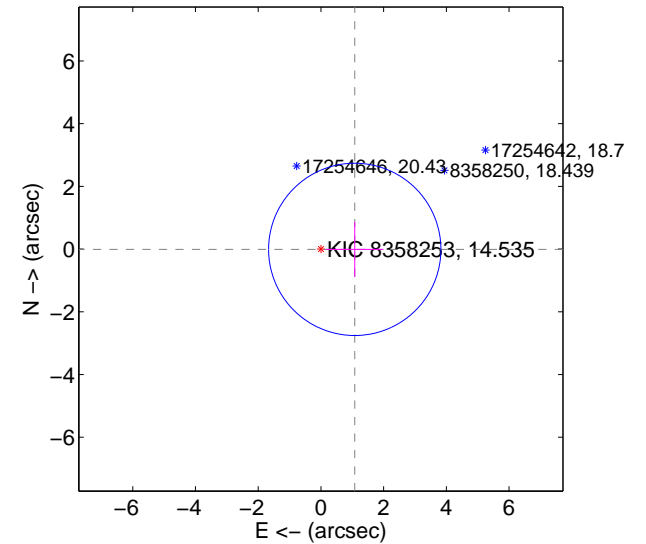
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

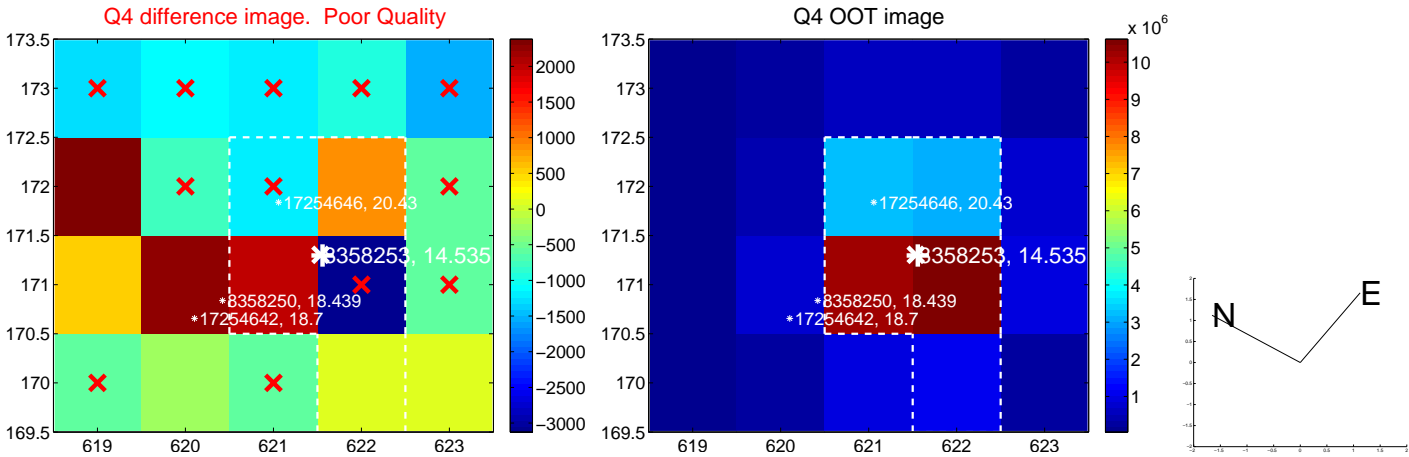
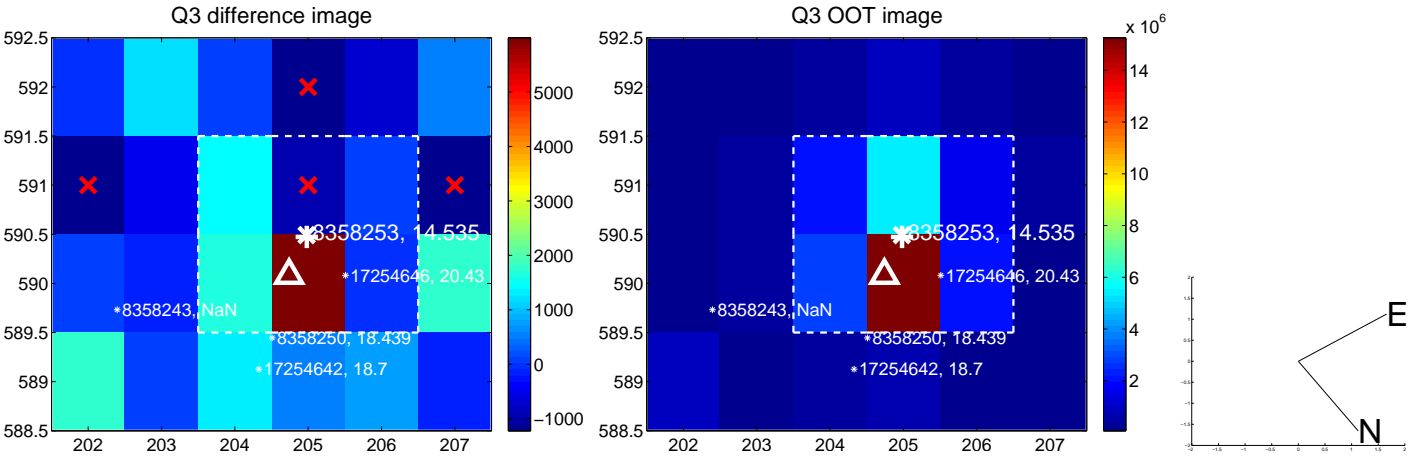
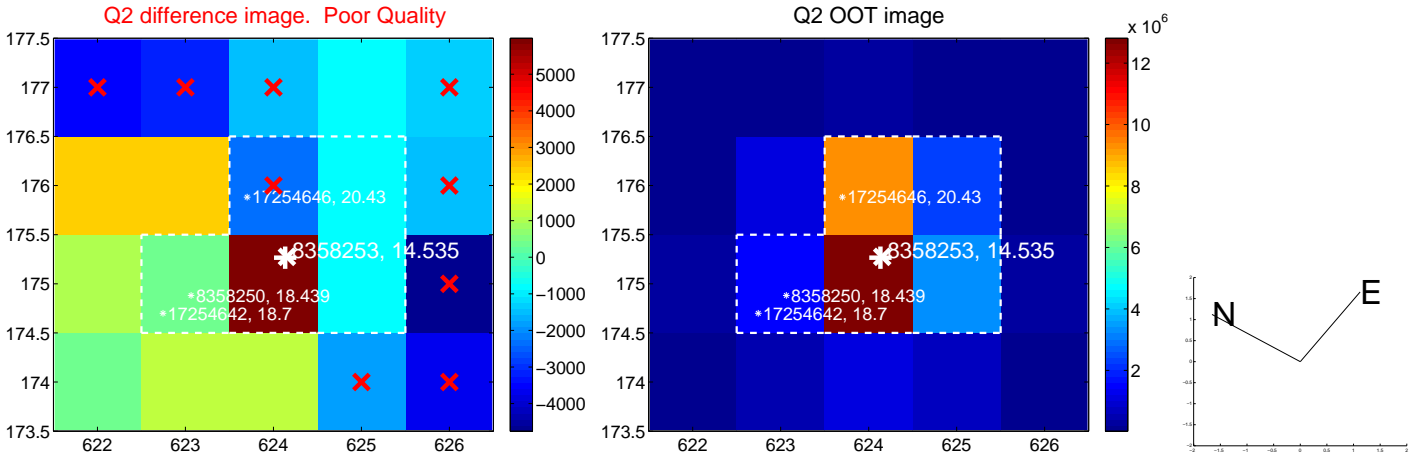
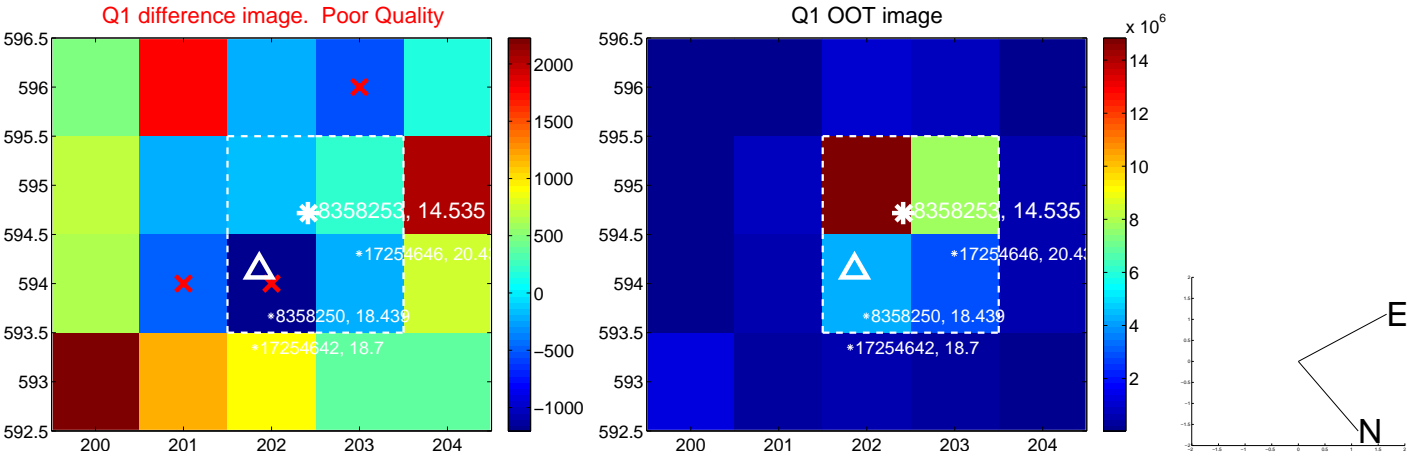


offset from photometric centroids

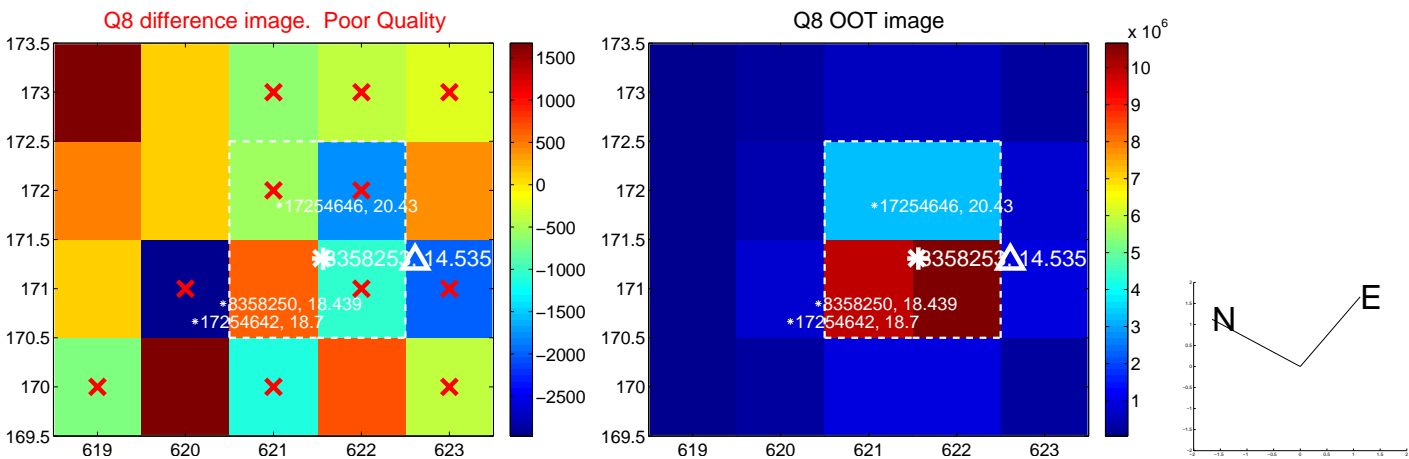
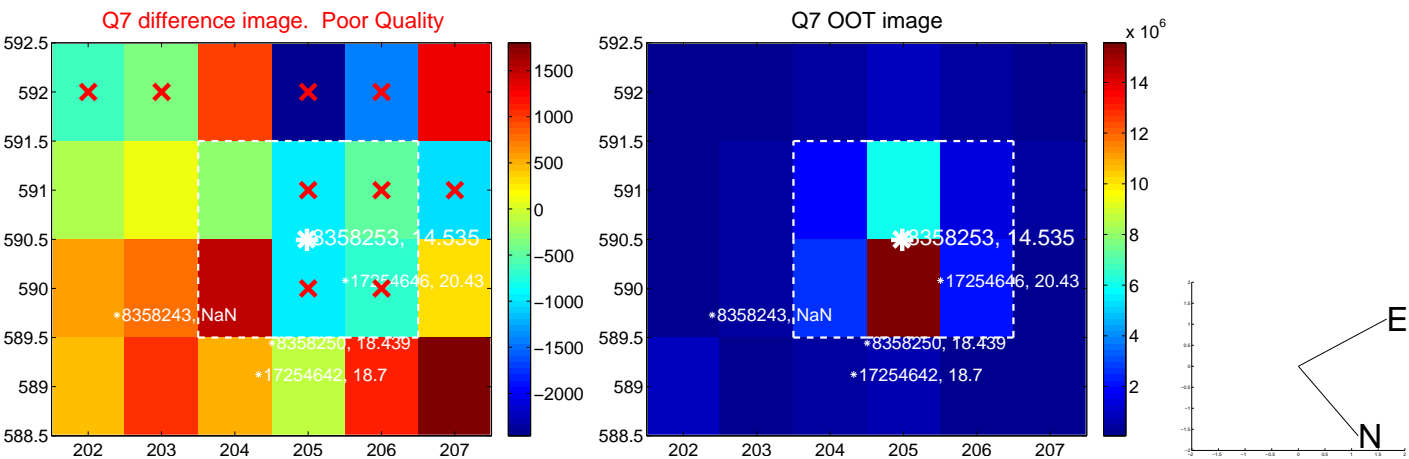
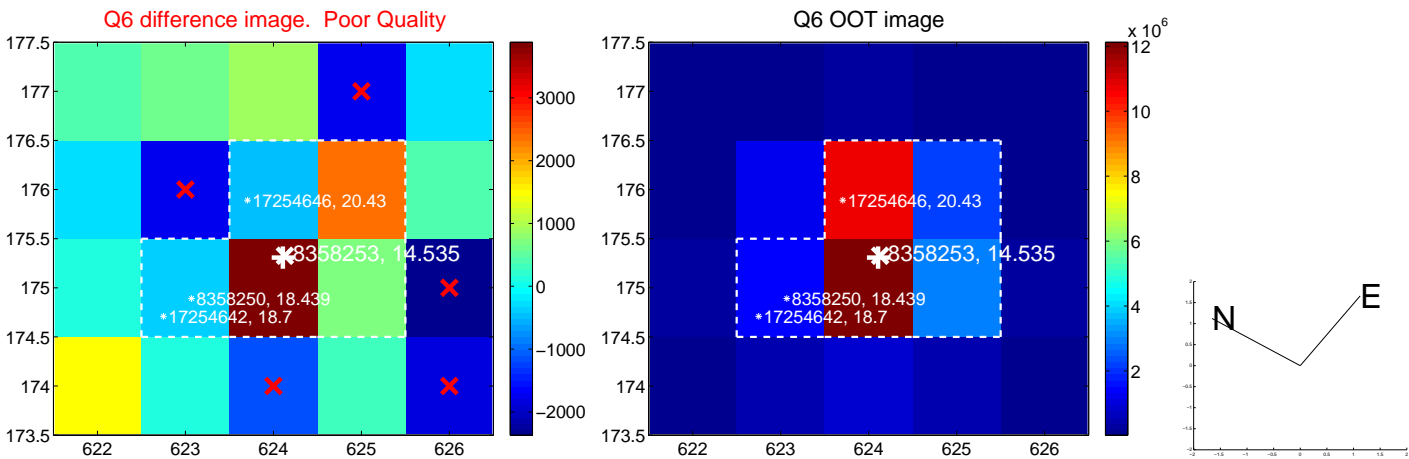
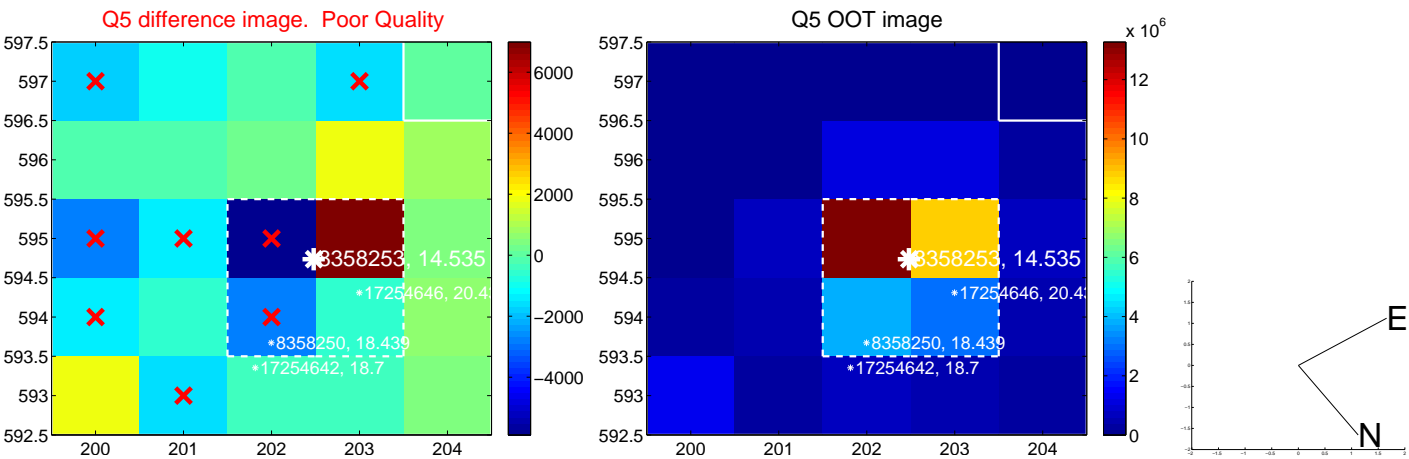


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

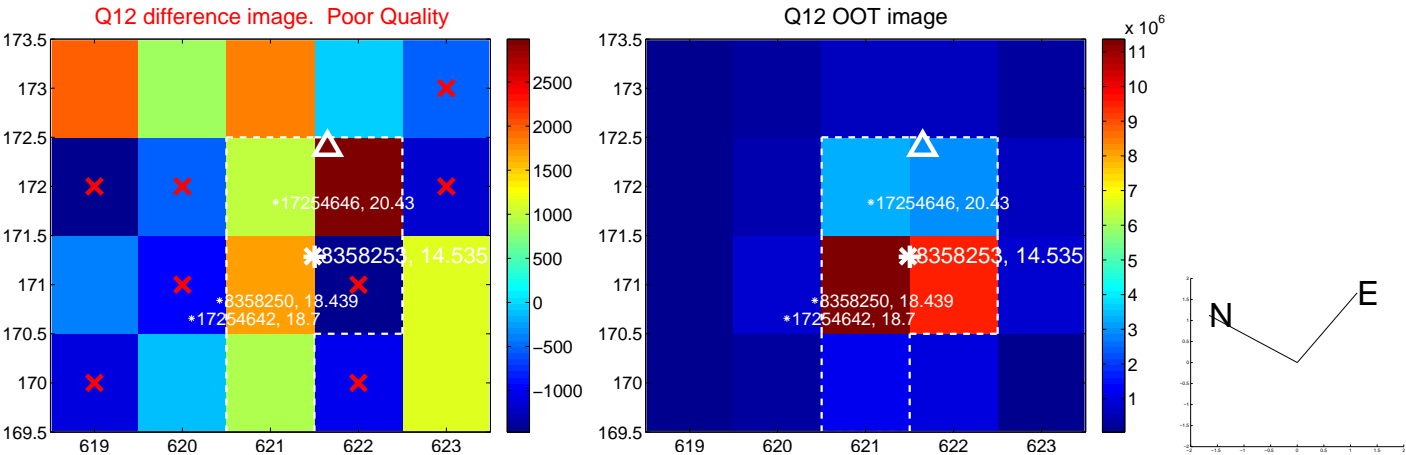
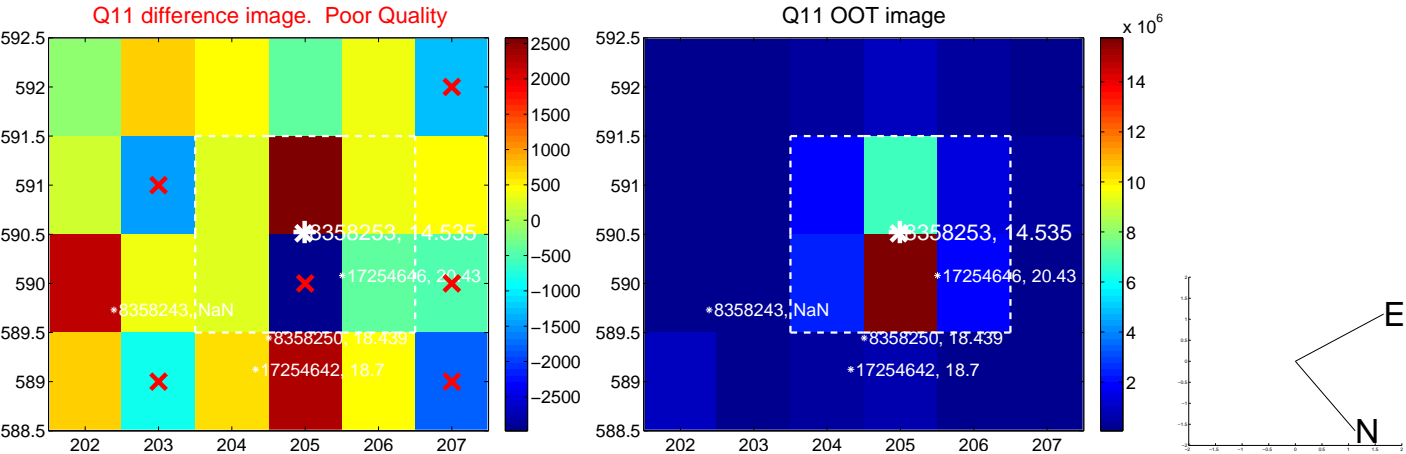
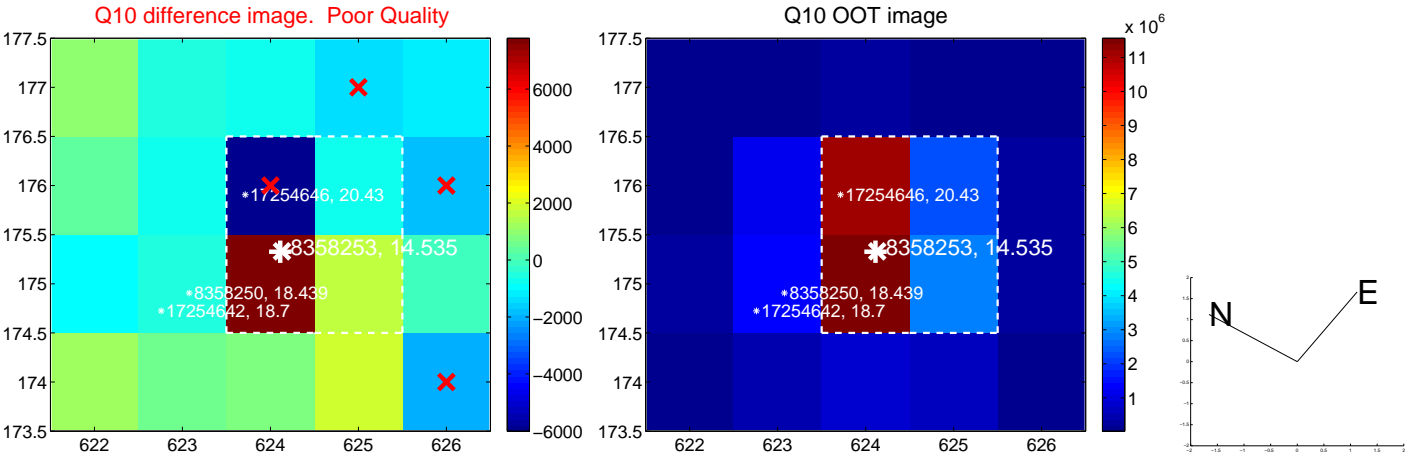
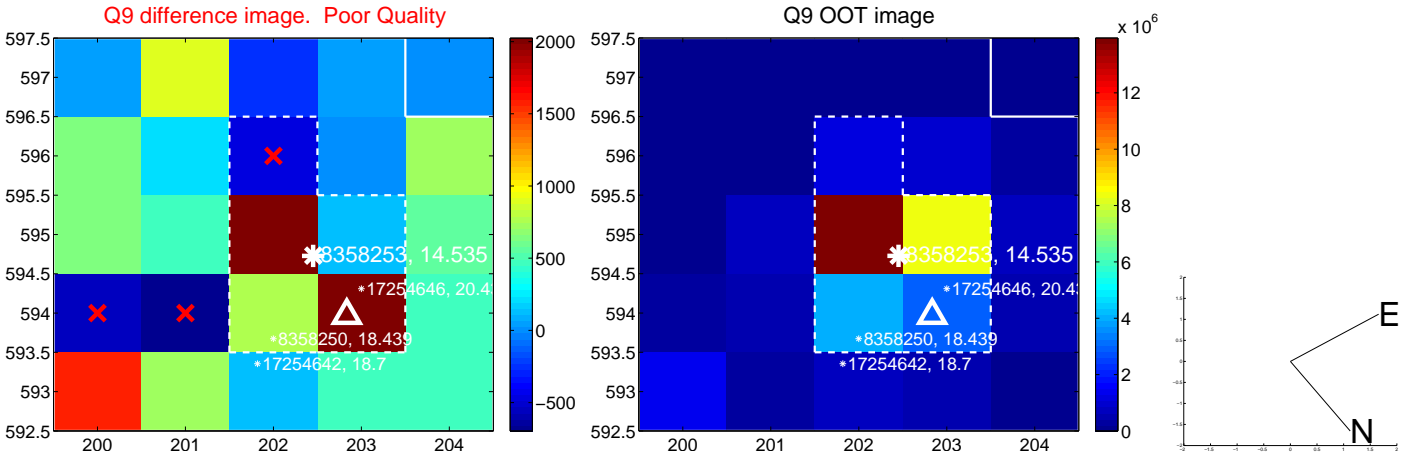
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



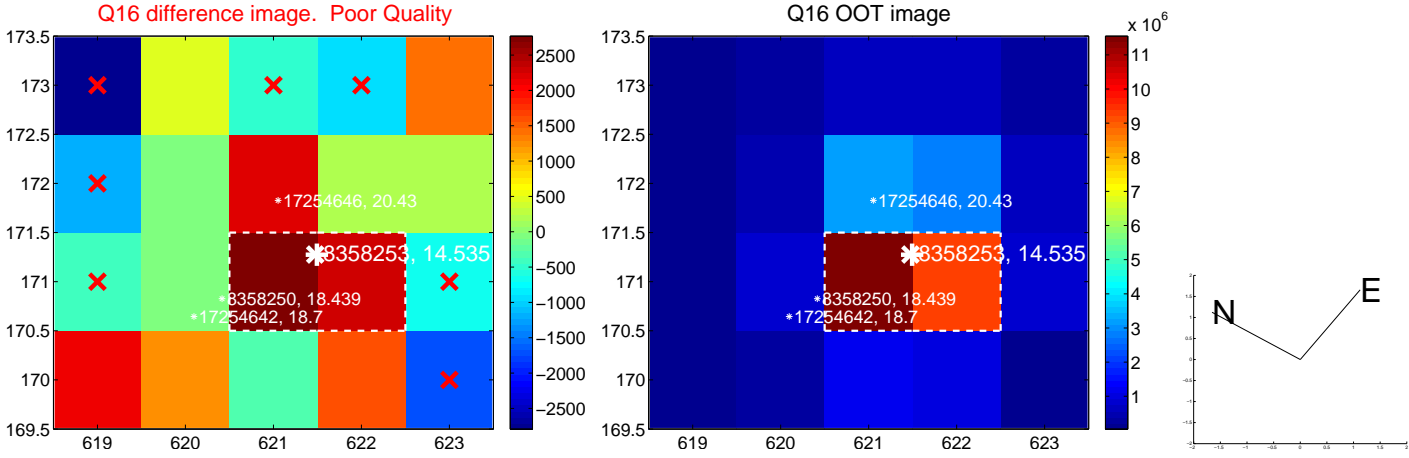
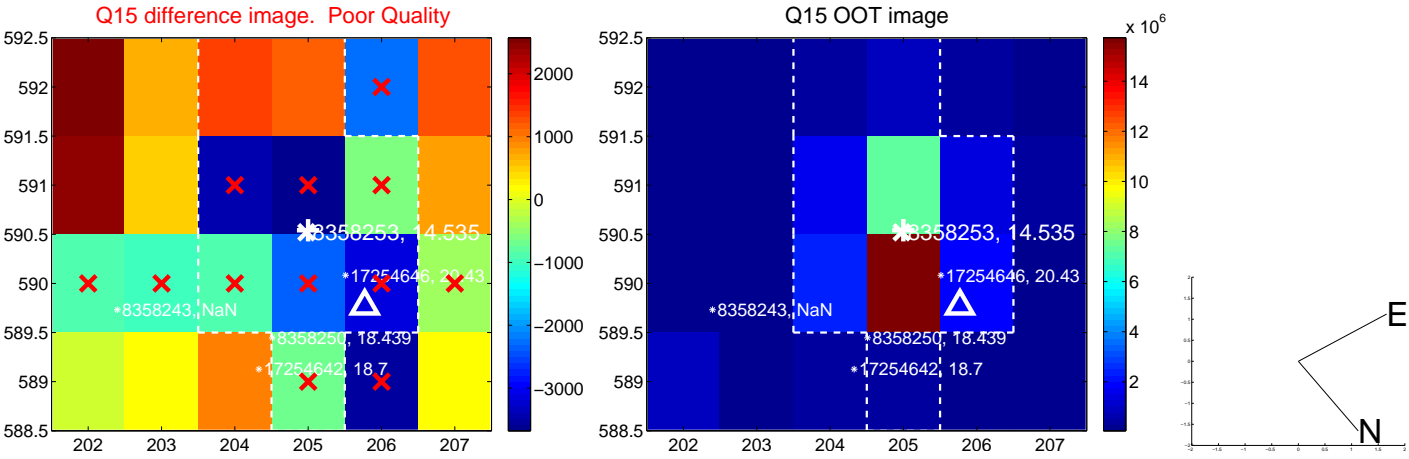
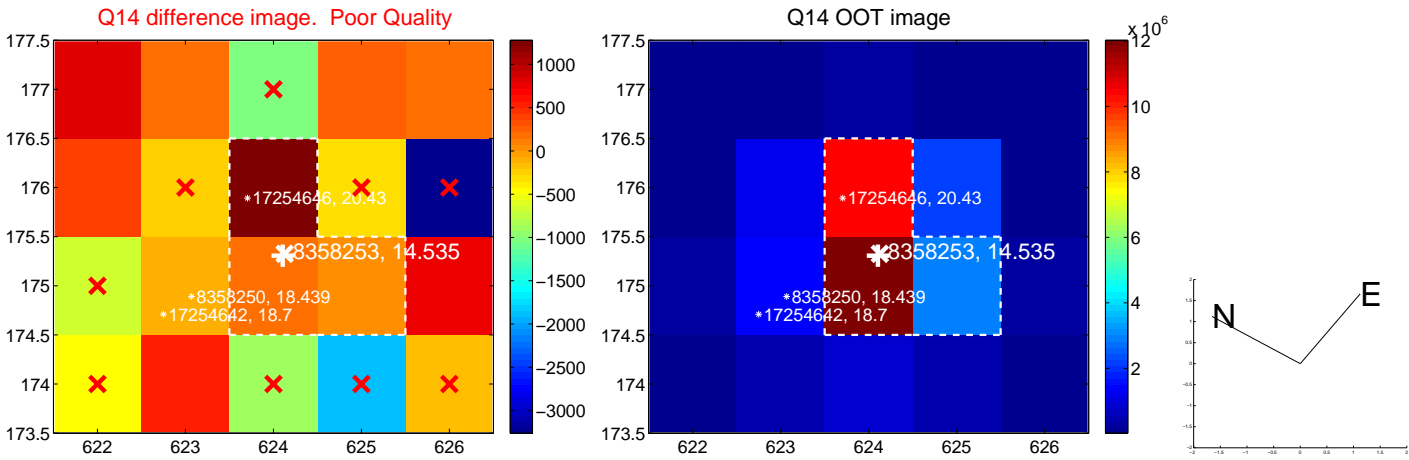
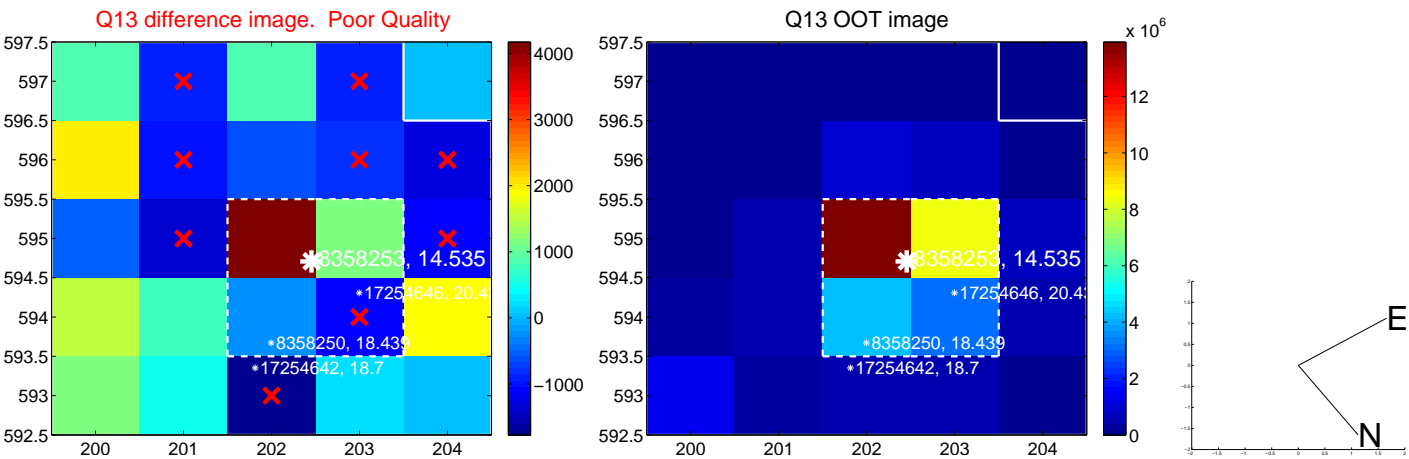
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



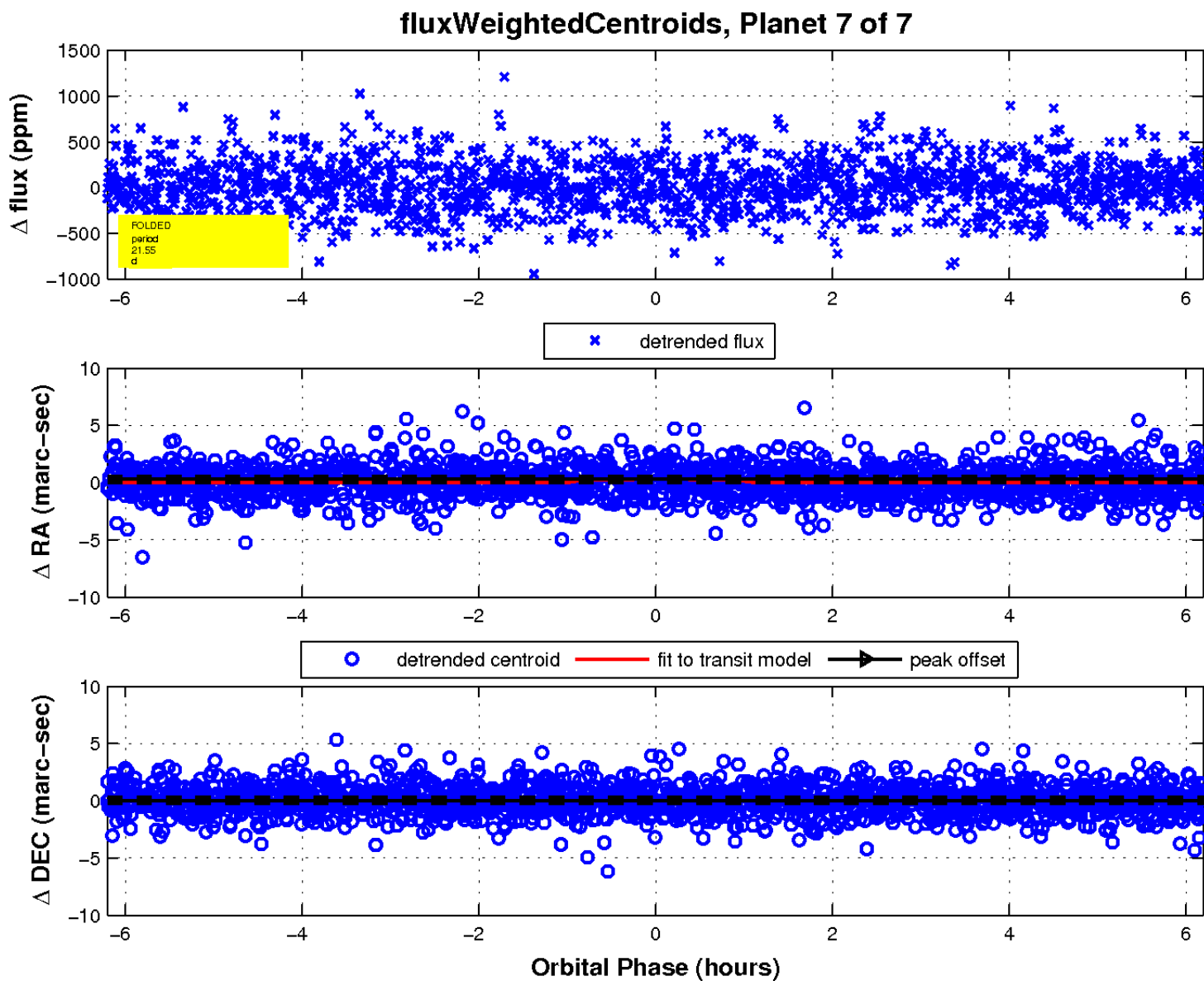
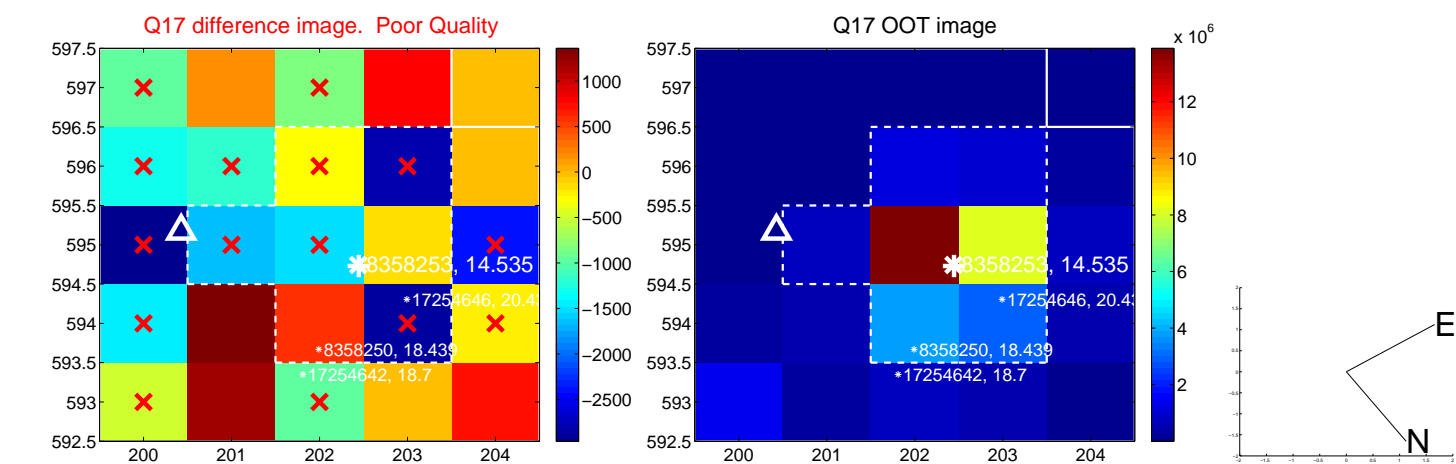
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

