

KIC 012268579

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})
012268579-01	OBS	No	1.202447	131.860865	23.5	6.507	10.5	9.5	1.66	7304	0.84	11330.47
012268579-02	OBS	No	234.319903	308.169124	330.6	8.506	10.0	8.2	1.66	7304	3.32	10.03
012268579-03	OBS	No	51.237200	151.376116	440.8	1.378	8.5	8.7	1.66	7304	6.78	76.13
012268579-04	OBS	No	130.032605	190.126204	250.0	5.111	8.1	6.8	1.66	7304	2.90	21.99
012268579-05	OBS	No	250.046673	295.932130	450.7	1.751	7.8	6.9	1.66	7304	4.08	9.20

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012268579-01	OBS	FP	0.00	1	0	0	0	LPP_DV
012268579-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS
012268579-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
012268579-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
012268579-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT— MOD_POS_ALT

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

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

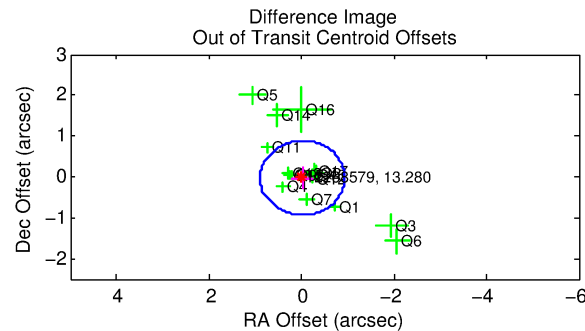
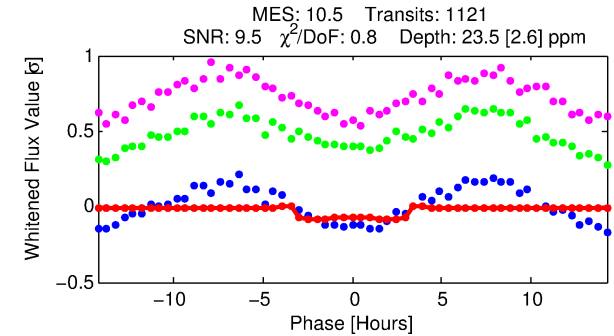
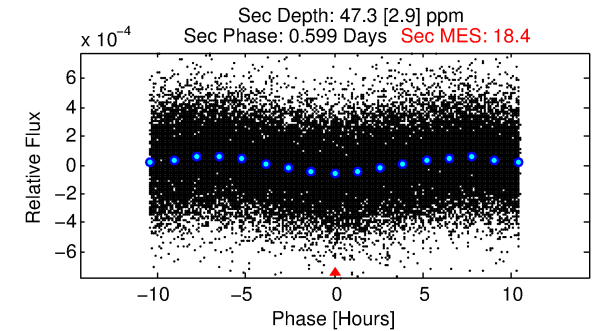
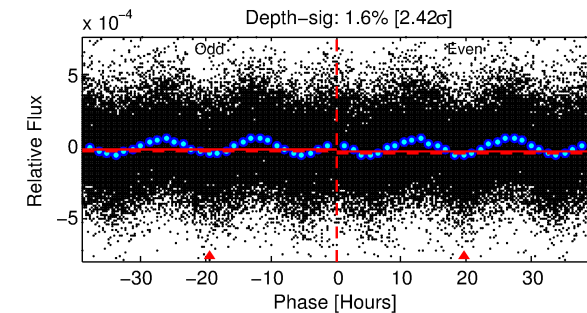
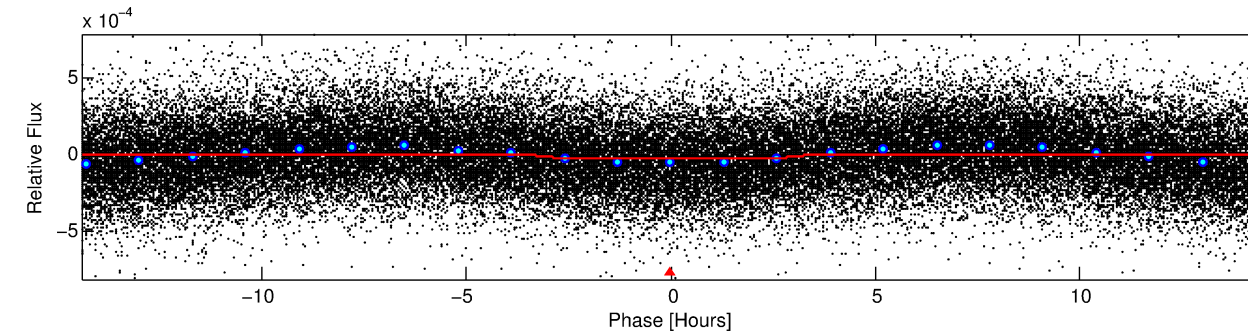
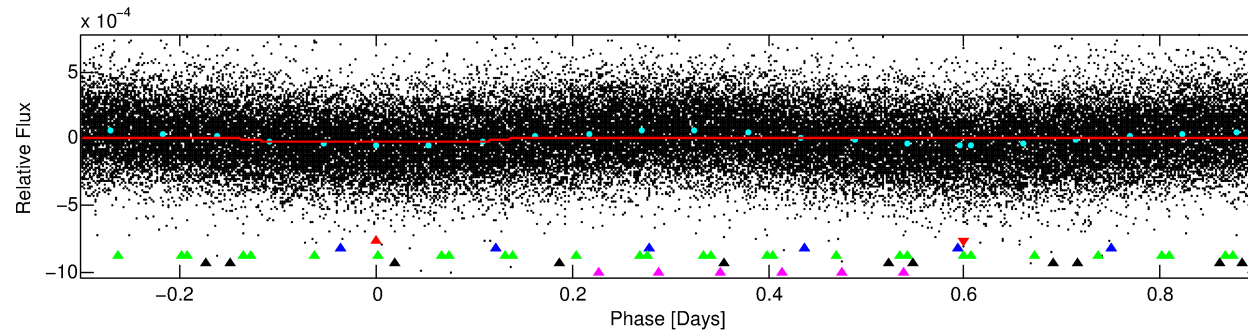
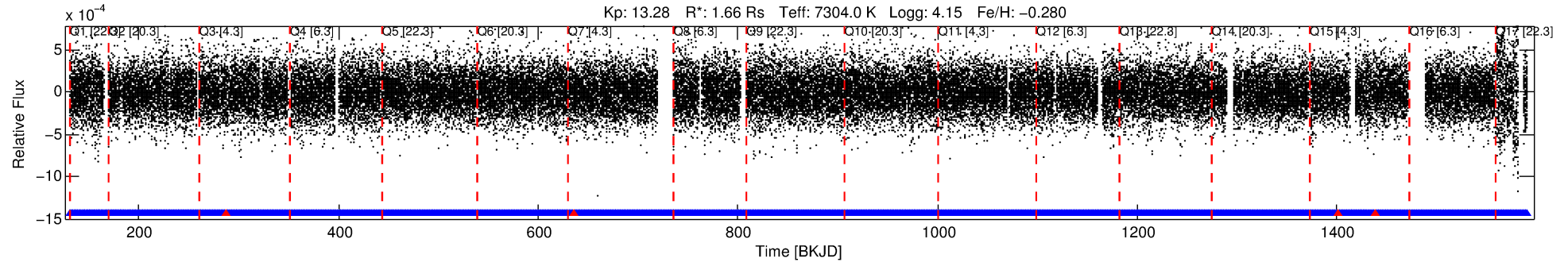
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012268579-01

No Significant Match Found

DV One-Page Summary

KIC: 12268579 Candidate: 1 of 5 Period: 1.202 d



DV Fit Results:

Period = 1.20245 [0.00002] d
Epoch = 131.8609 [0.0050] BKJD
Rp/R* = 0.0047 [0.0021]
a/R* = 1.38 [1.86]
b = 0.59 [3.15]
Seff = 11330.47 [4448.75]
Teq = 2631 [258] K
Rp = 0.84 [0.47] Re
a = 0.0248 [0.0063] AU
Ag = 22.53 [22.15] [0.97σ]
Teffp = 8862 [2063] K [3.00σ]

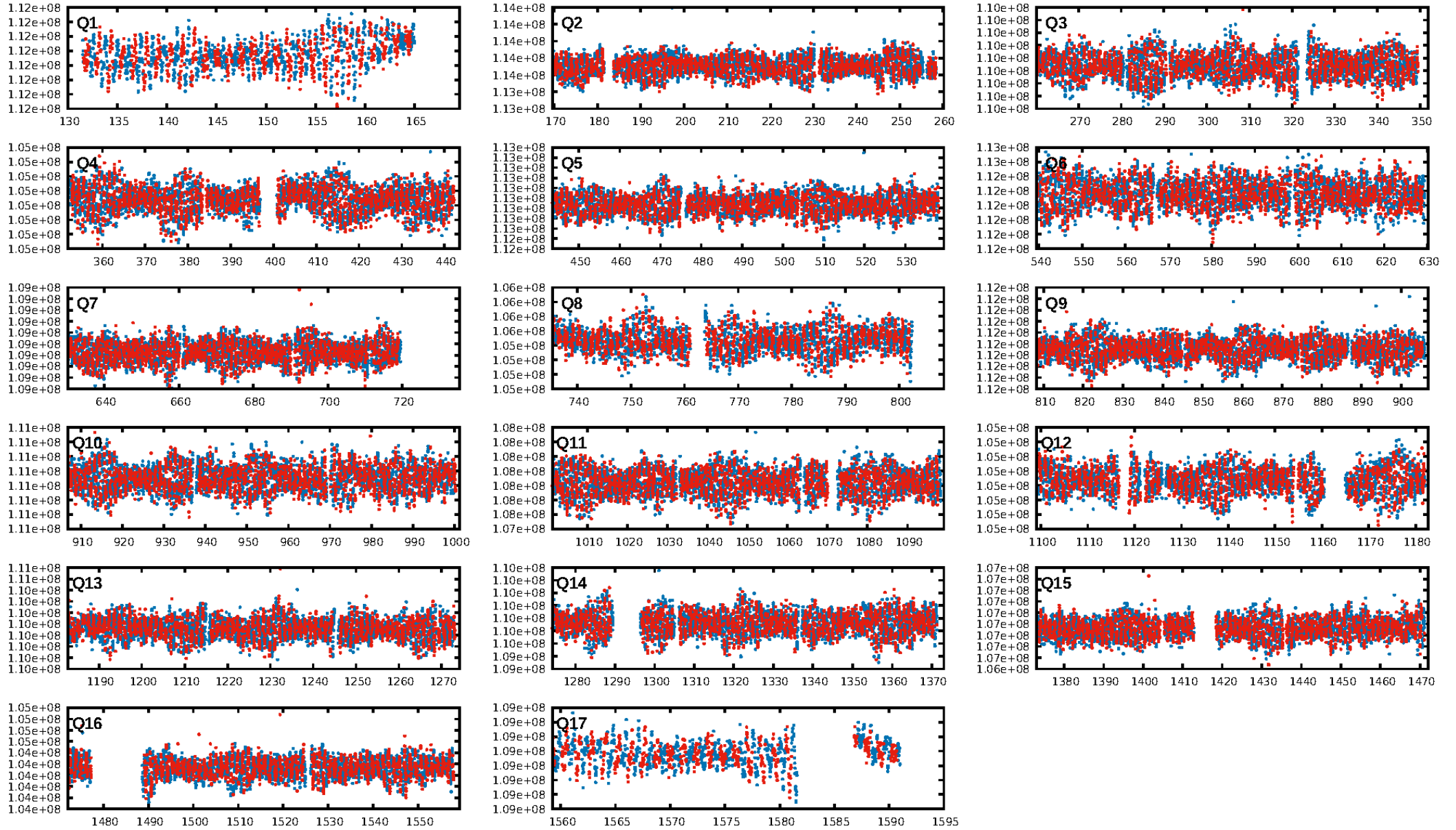
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [180.55σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.17e-14
RollingBand-fgt: 1.00 [1066/1070]
GhostDiagnostic-chr: 2.278
Centroid-sig: 67.1%
Centroid-so: 0.287 arcsec [0.30σ]
OotOffset-rm: 0.032 arcsec [0.10σ]
OotOffset-st: 4/4/3/5 [16]
KicOffset-rm: 0.112 arcsec [0.39σ]
KicOffset-st: 4/4/3/5 [16]
DiffImageQuality-fgm: 0.94 [15/16]
DiffImageOverlap-fno: 1.00 [17/17]

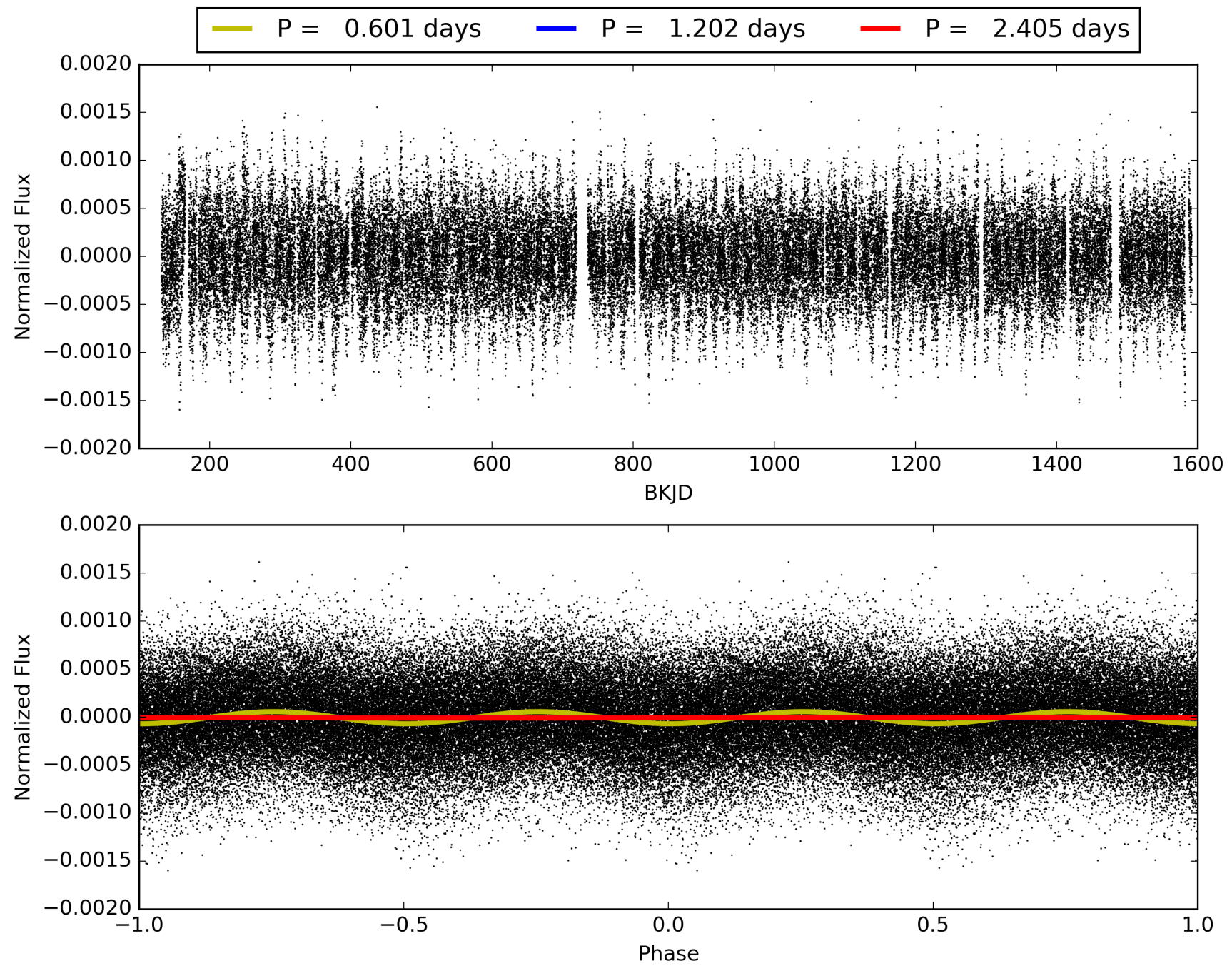
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 03:10:30 Z

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

TCE 012268579-01, PDC Light Curves

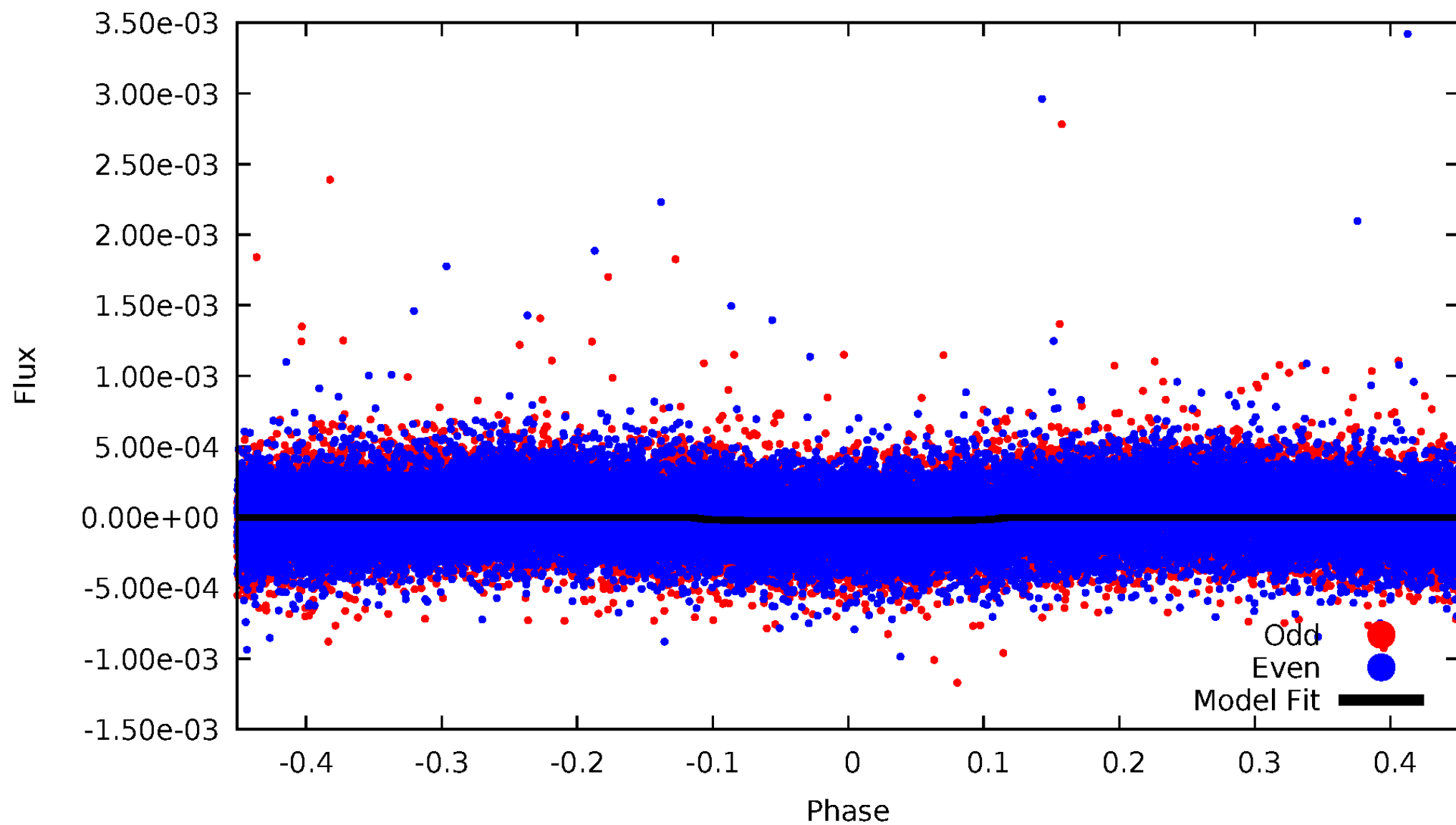


TCE 012268579-01



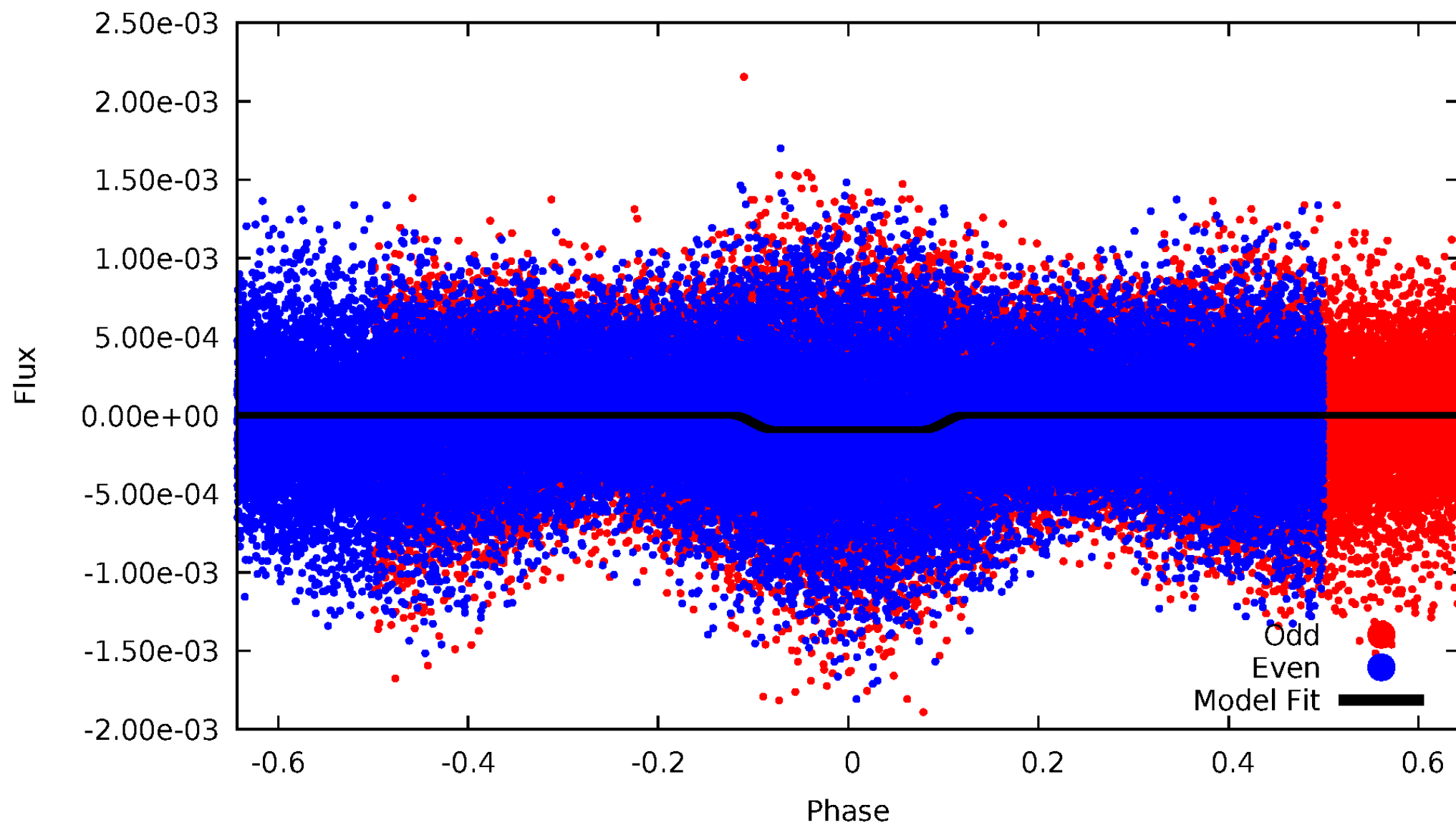
DV Odd/Even

TCE 012268579-01

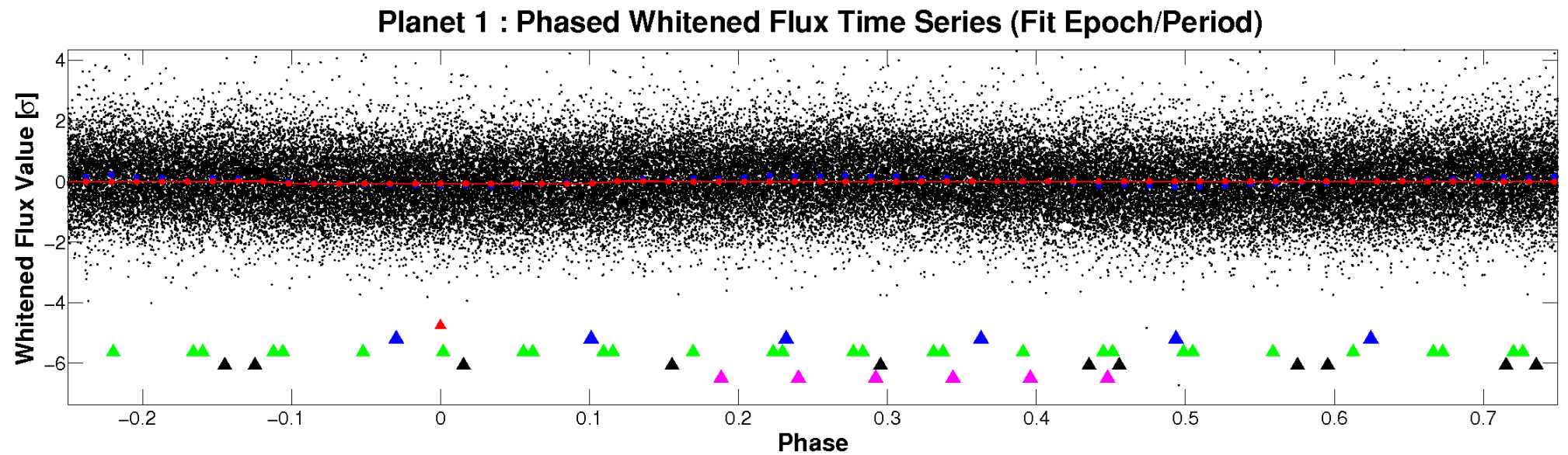
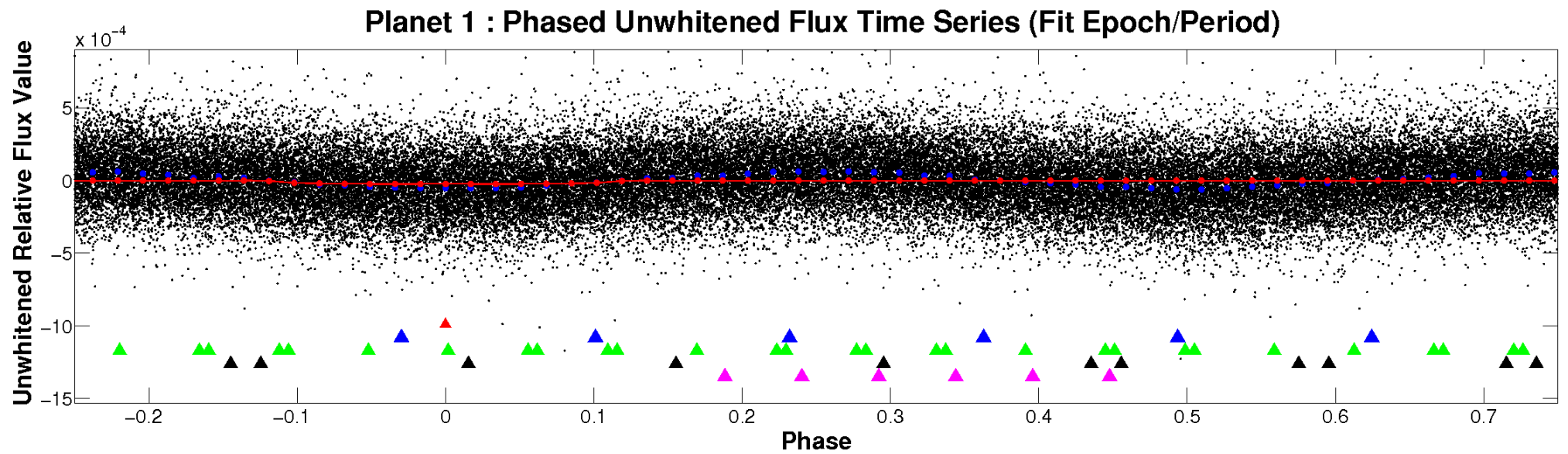


ALT Odd/Even

TCE 012268579-01

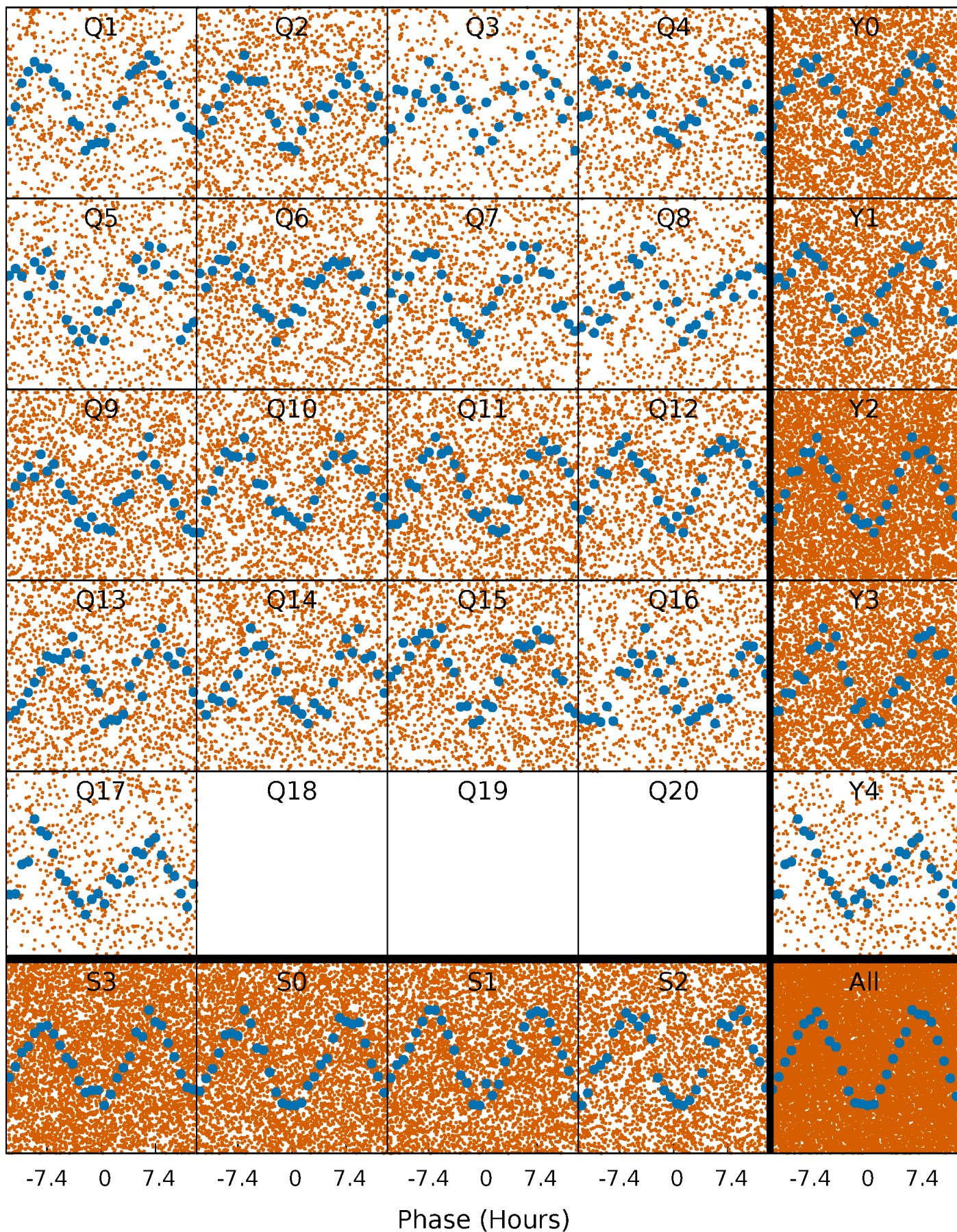


Non-Whitened Vs. Whitened Light Curve



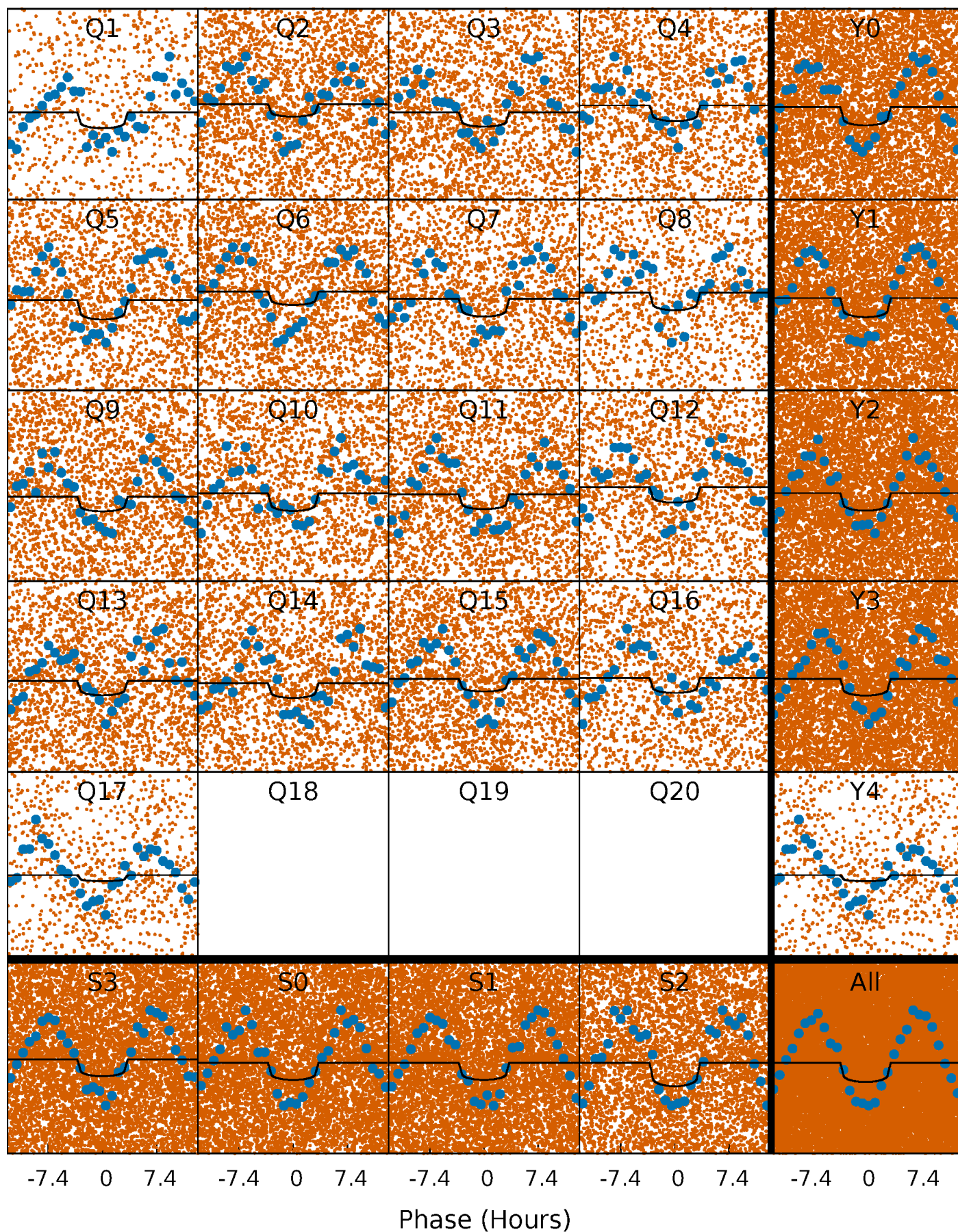
PDC Quarter-Phased Transit Curves

TCE 012268579-01 P= 1.202447 Days $T_0=131.860865$ (BKJD)



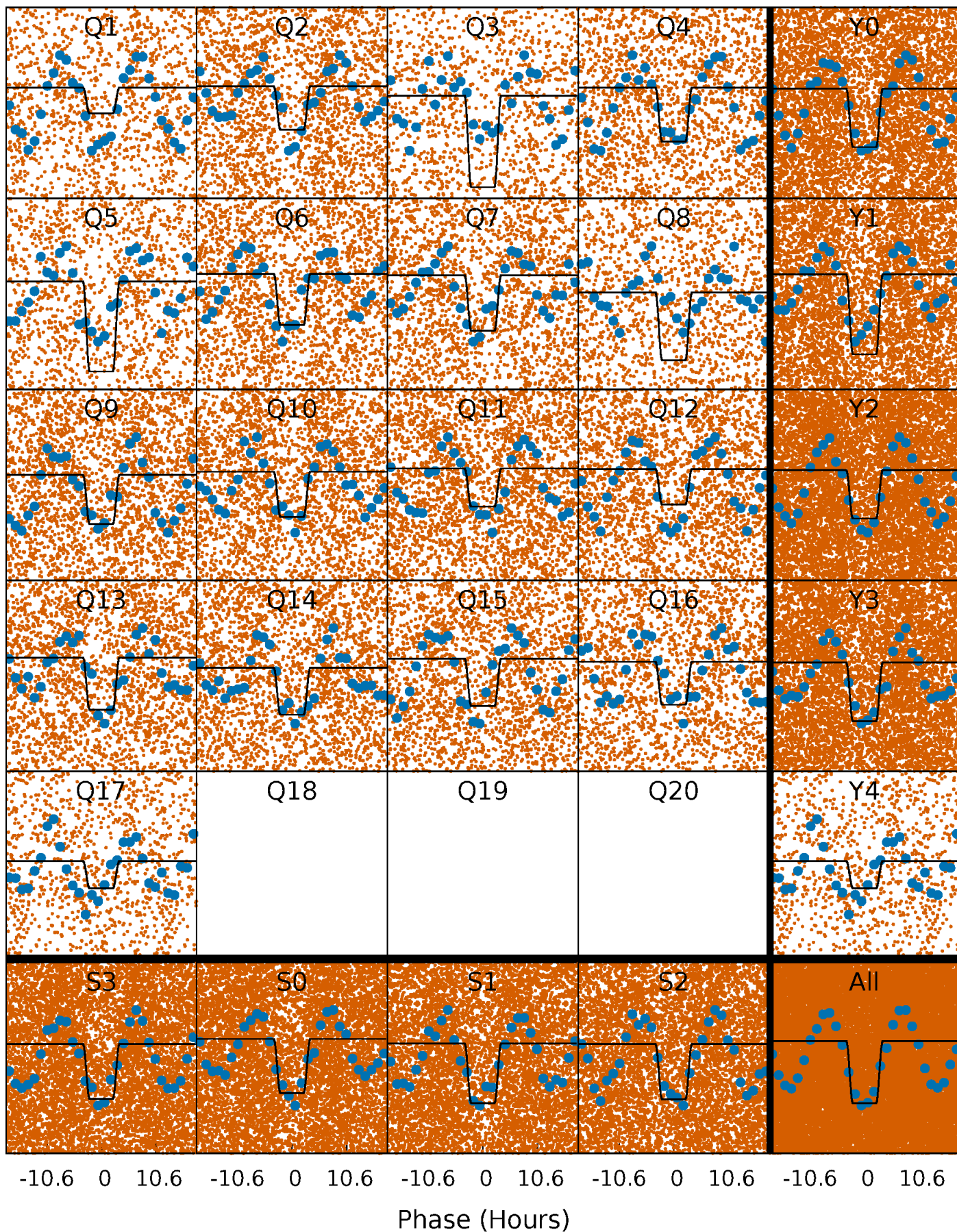
DV Quarter-Phased Transit Curves

TCE 012268579-01 P= 1.202447 Days $T_0=131.860865$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

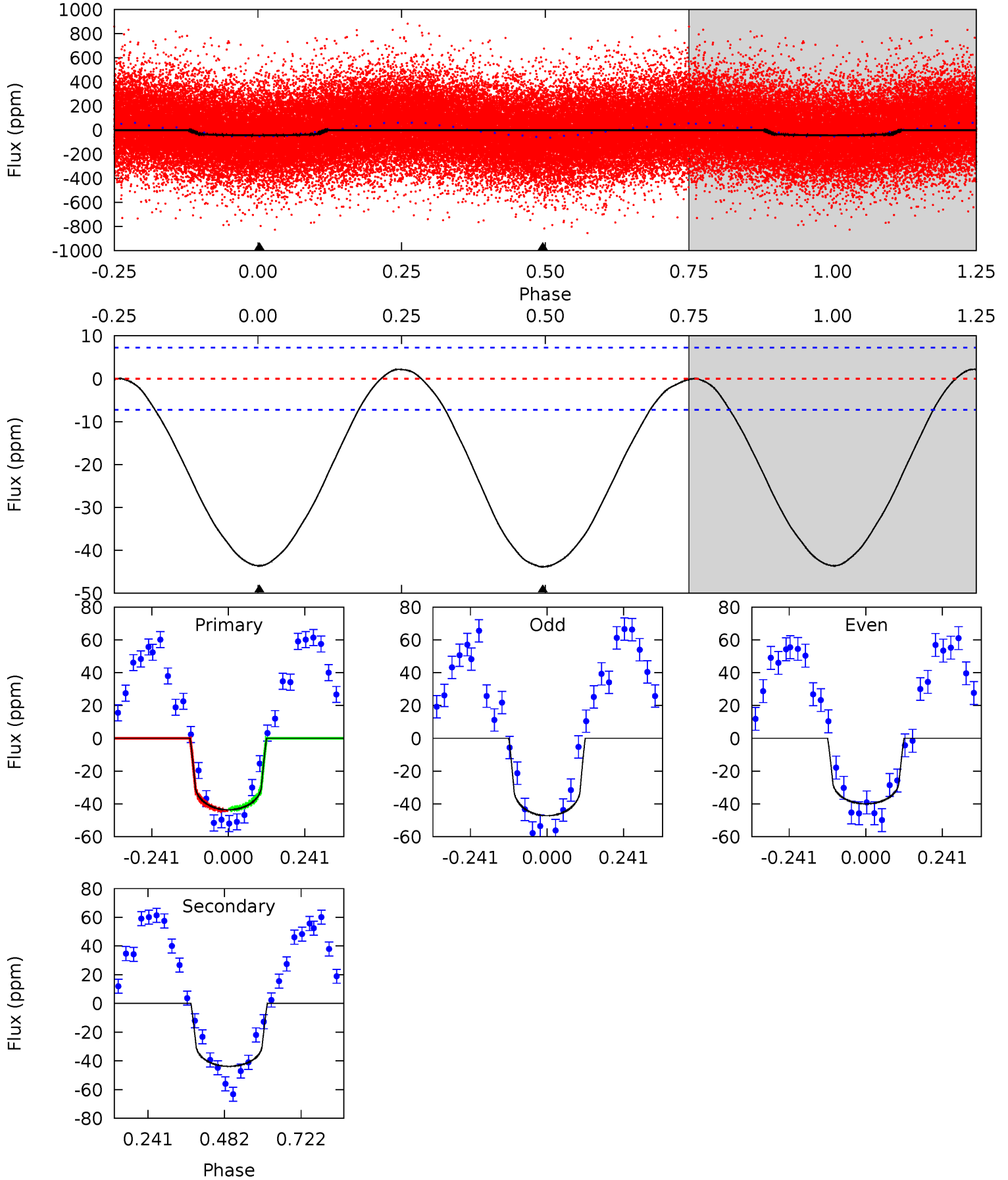
TCE 012268579-01 P= 1.202516 Days $T_0=131.829186$ (BKJD)



DV Model-Shift Uniqueness Test

012268579-01, P = 1.202447 Days, E = 130.658418 Days

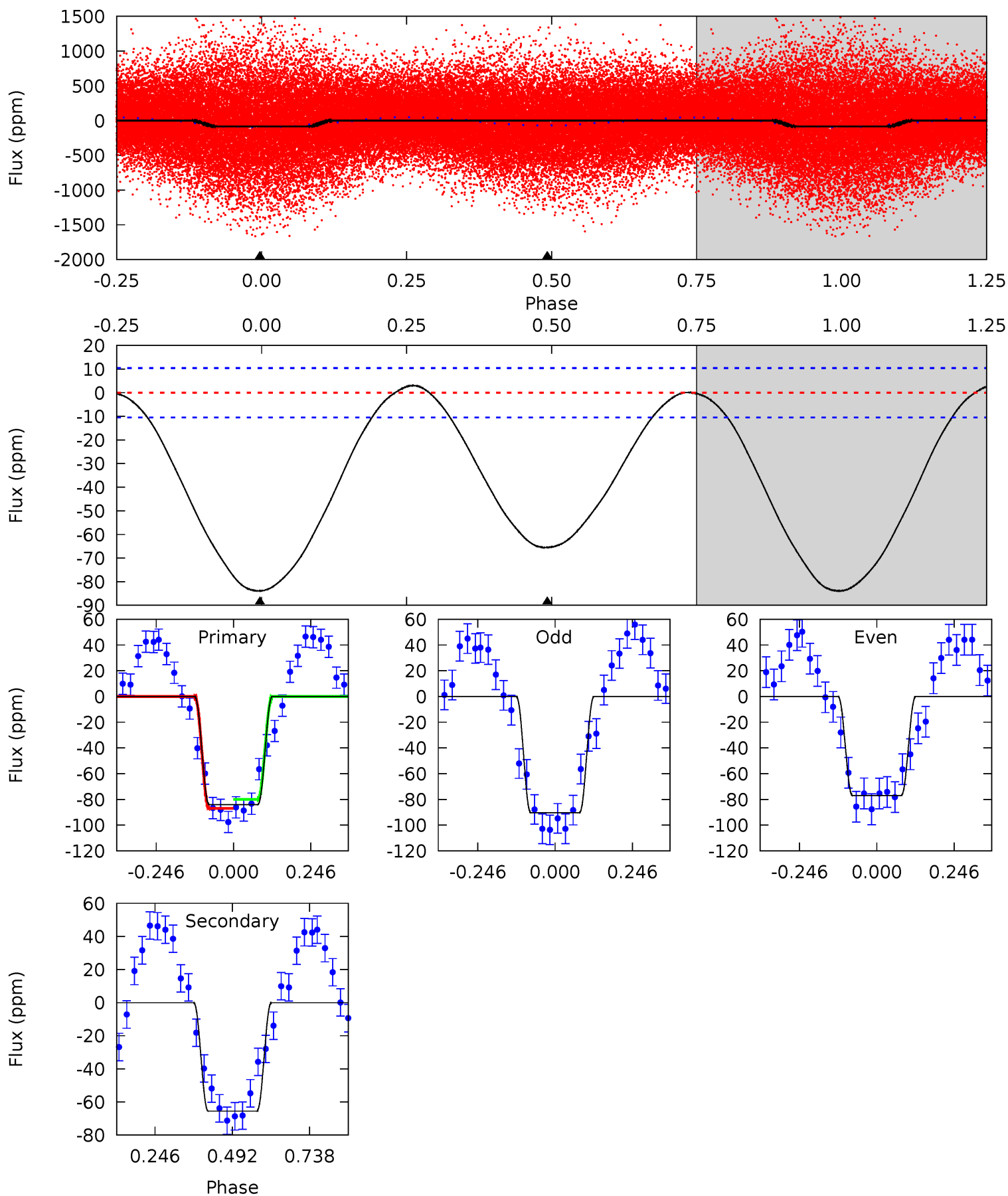
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.3	26.4	0	0	4.38	1.17	0.79	26.3	26.3	26.4	26.4	2.24	0.93	0.05	0.29



Alt Model-Shift Uniqueness Test

012268579-01, P = 1.202516 Days, E = 130.626670 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
35.0	27.4	0	0	4.37	1.16	0.67	35.0	35.0	27.4	27.4	2.78	1.13	0.04	1.02



Stellar Parameters For KIC 012268579

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7304^{+228}_{-304}	$4.150^{+0.153}_{-0.187}$	$-0.280^{+0.250}_{-0.350}$	$1.655^{+0.521}_{-0.347}$	$1.410^{+0.226}_{-0.226}$	$0.438^{+0.387}_{-0.217}$
	+3%/-4%	+4%/-5%	+89%/-125%	+31%/-21%	+16%/-16%	+88%/-50%
Source	KIC0	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 012268579-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-44 ± 2	$0.87^{+0.40}_{-0.40}$	3672^{+329}_{-242}	8893^{+5378}_{-1802}	19^{+48}_{-10}
Alt.	-66 ± 2	$1.73^{+0.53}_{-0.40}$	3672^{+293}_{-243}	6574^{+1011}_{-690}	$7.380^{+5.056}_{-3.039}$

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

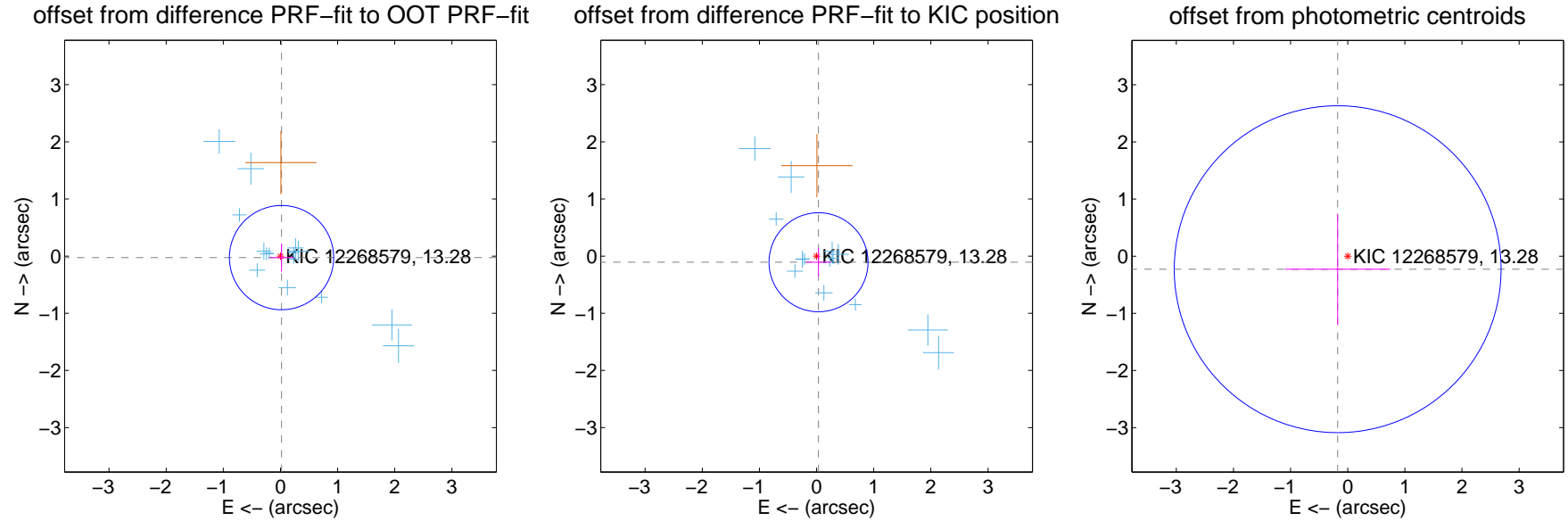
DV Centroid Data

Supplemental centroid analysis for 012268579-01. Kepler magnitude: 13.28. Transit SNR 9.51

There are 15 quarters with good PRF difference image offsets

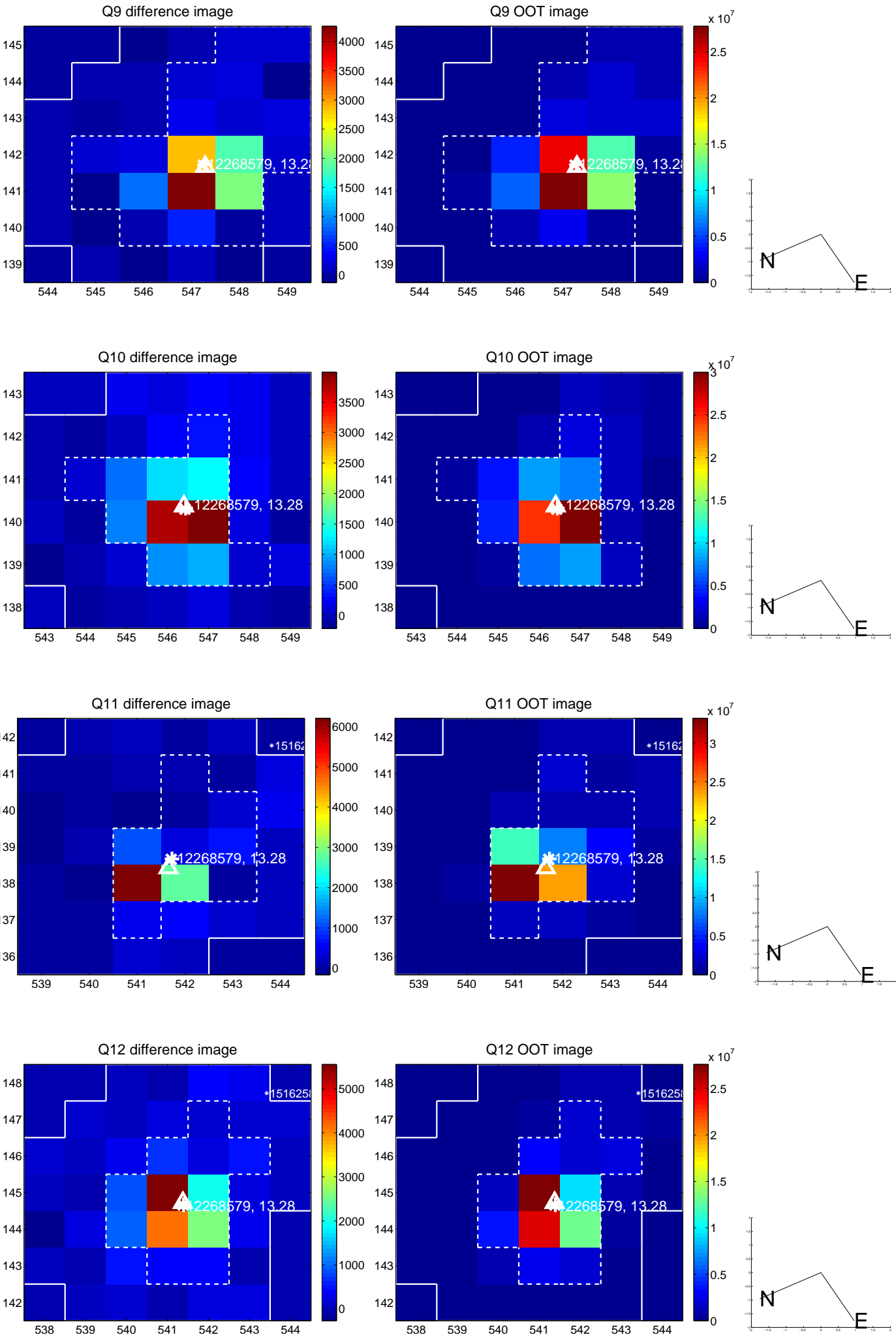
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.032 ± 0.304	0.10	-0.019 ± 0.211	-0.026 ± 0.246
PRF-fit source offset from KIC position	0.112 ± 0.289	0.39	-0.034 ± 0.219	-0.107 ± 0.249
photometric centroid source offset	0.29 ± 0.95	0.30	0.18 ± 0.92	-0.23 ± 0.97

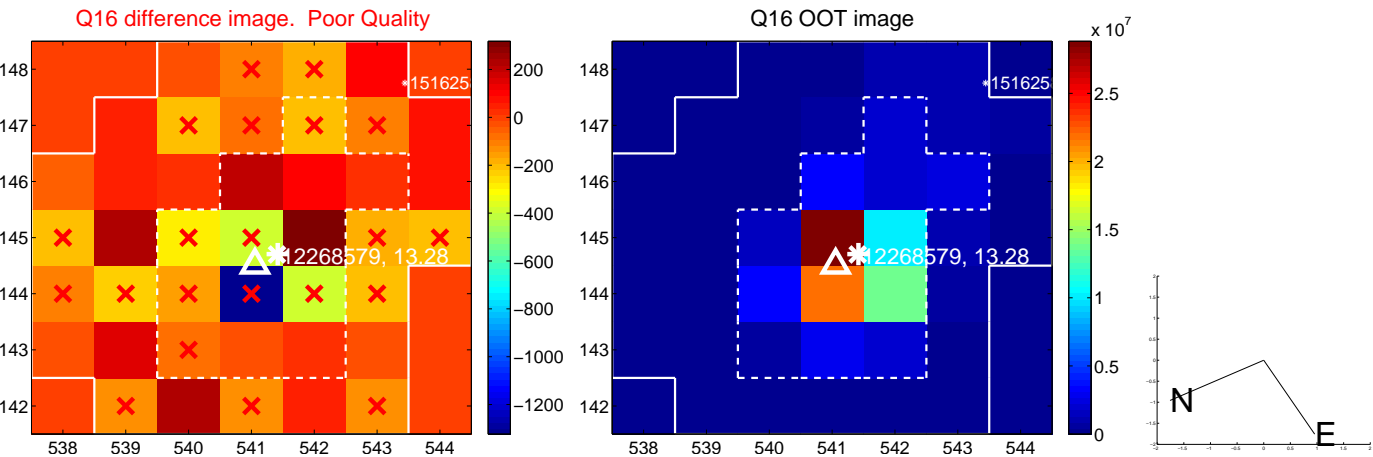
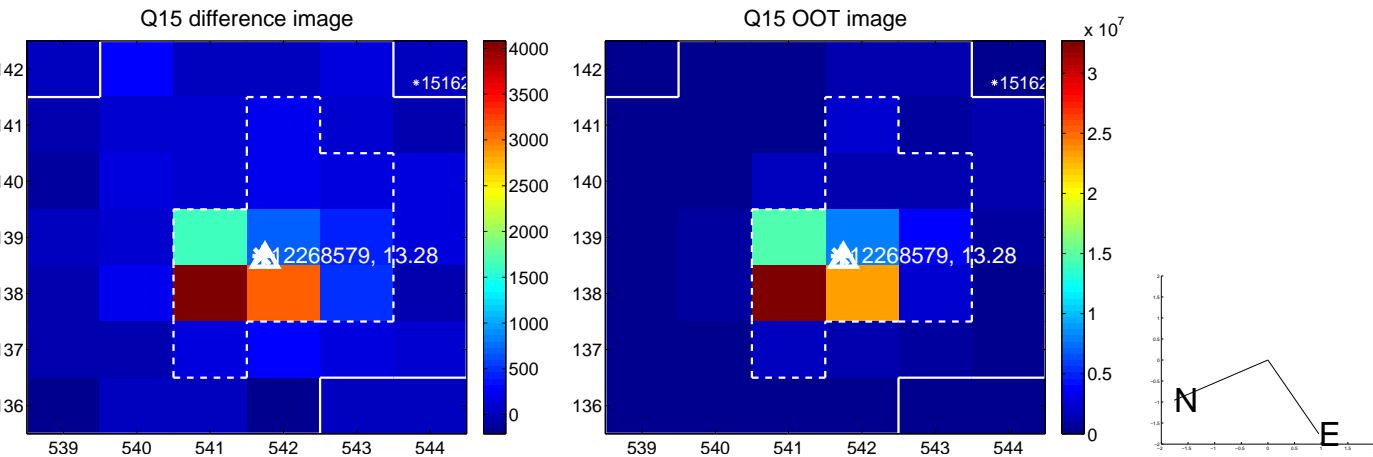
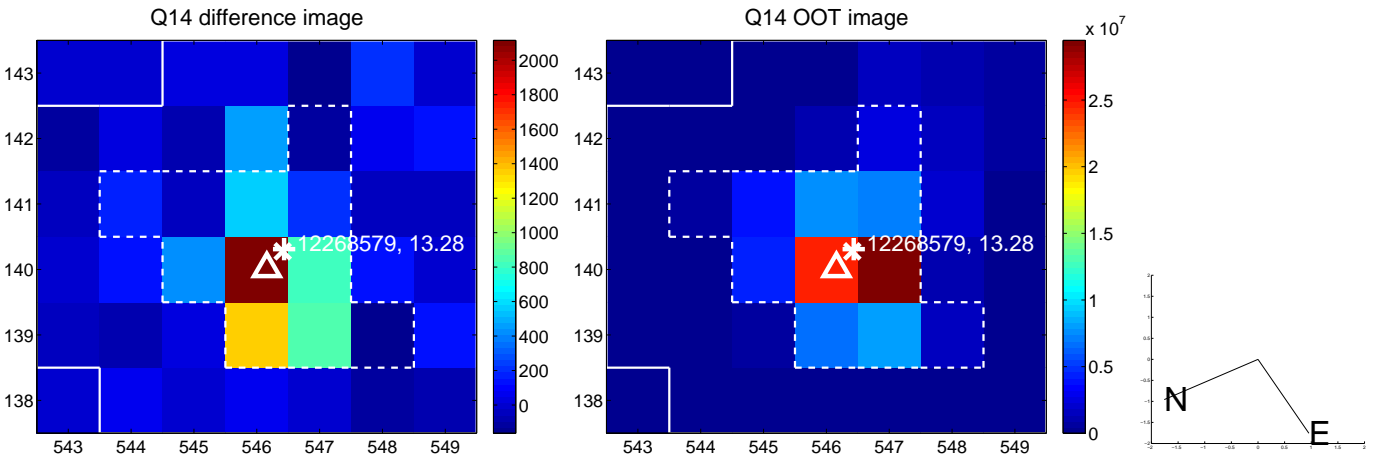
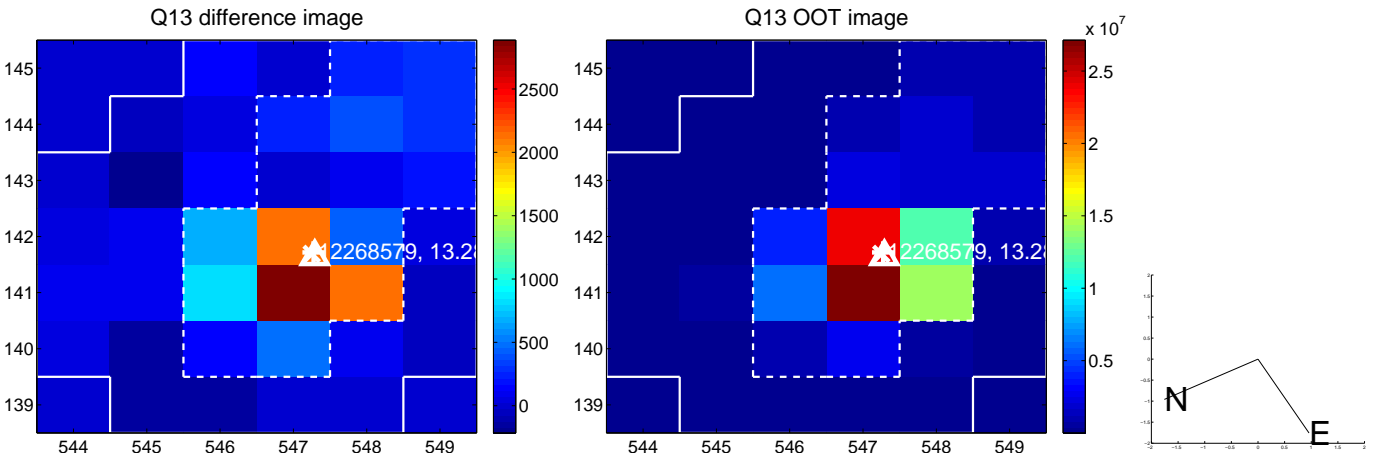


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

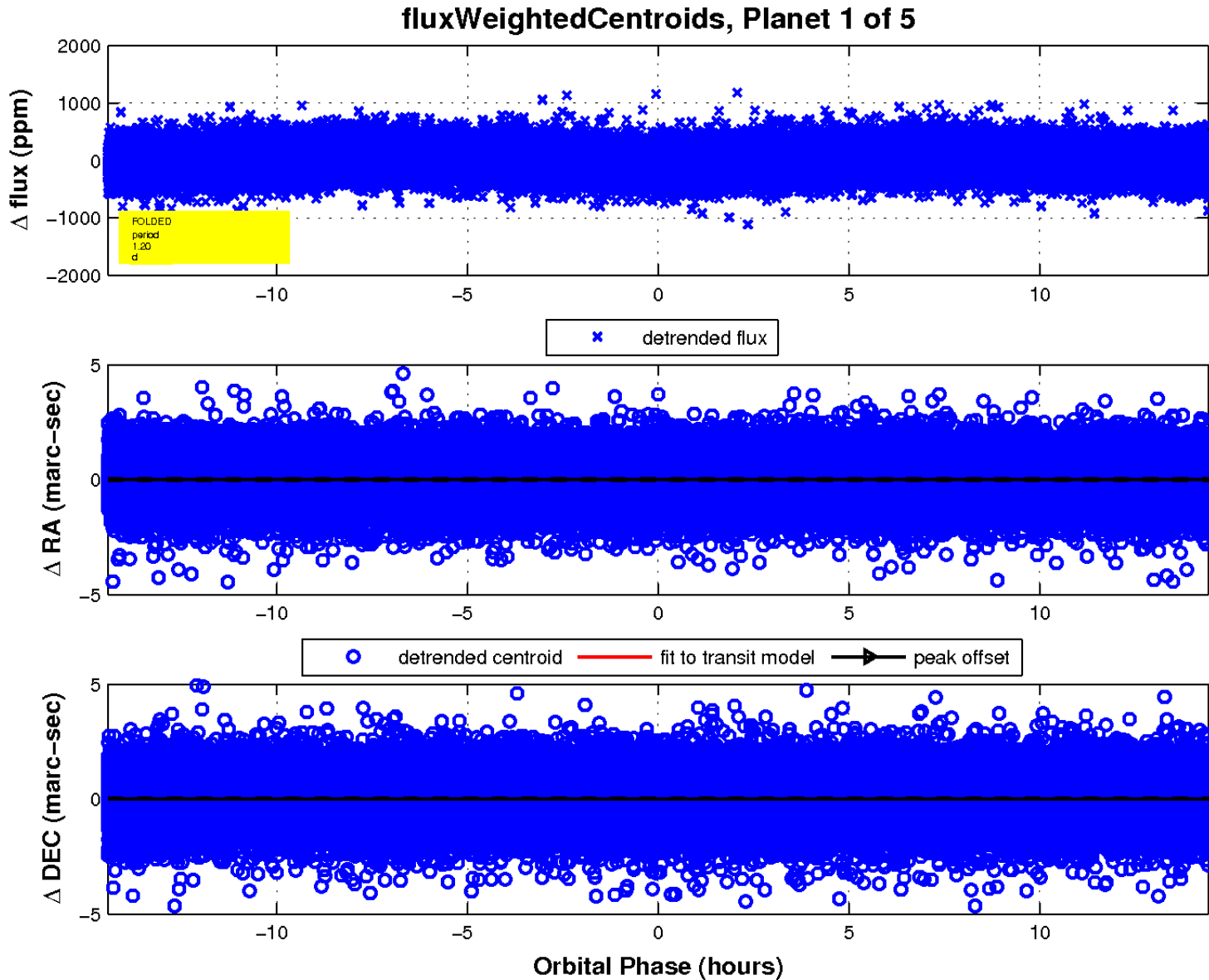
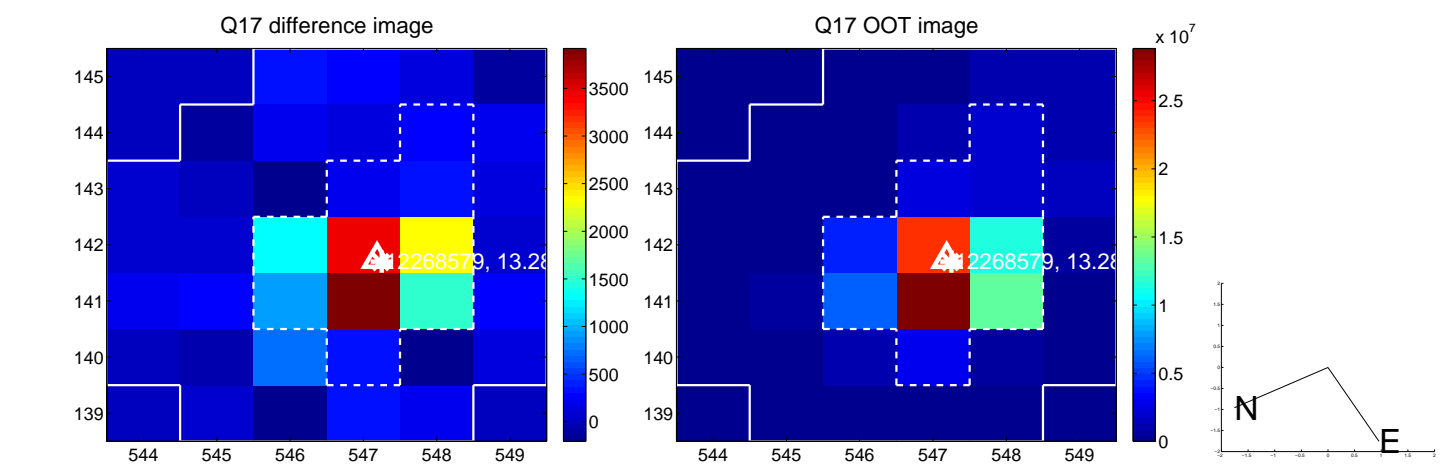
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

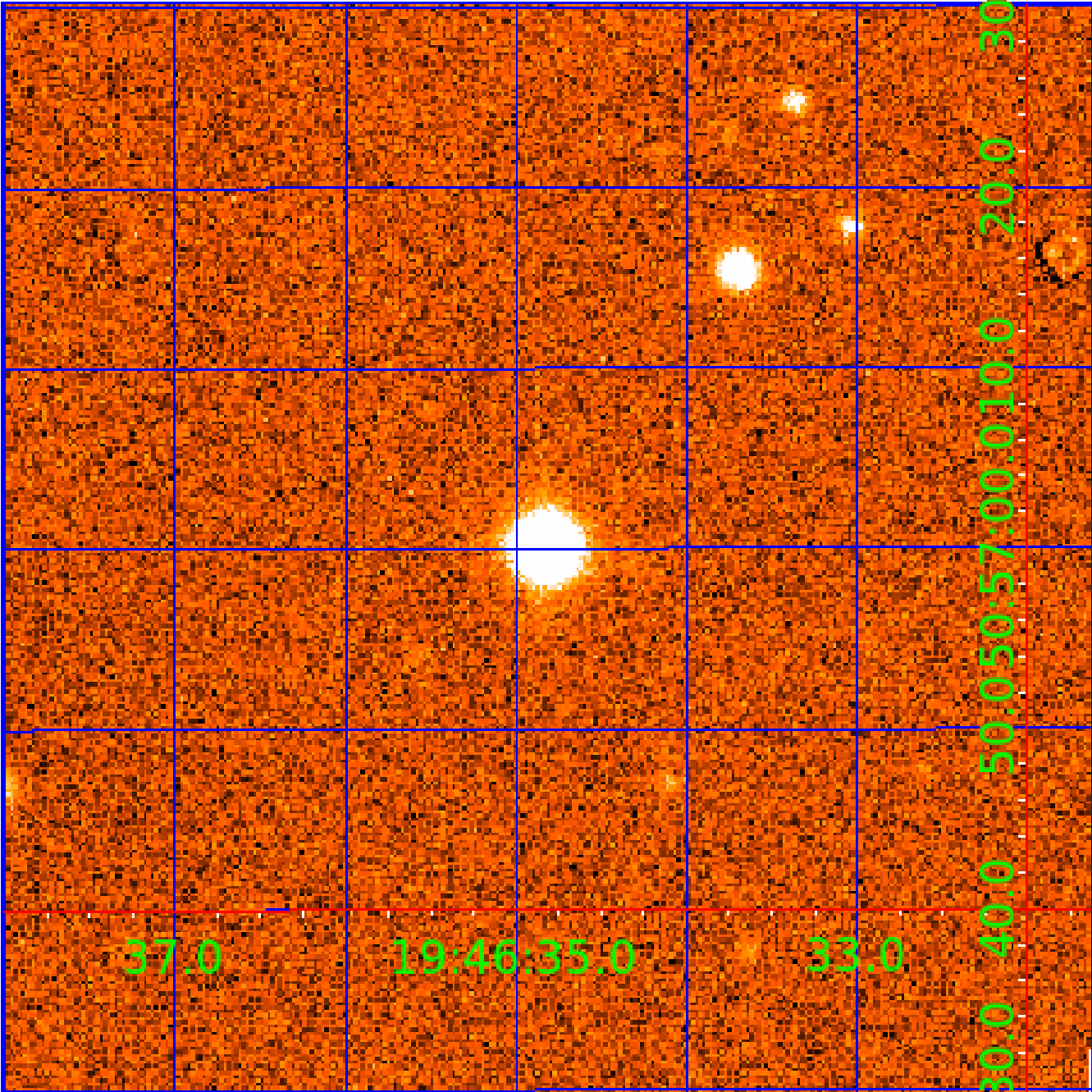


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 012268579

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})
012268579-01	OBS	No	1.202447	131.860865	23.5	6.507	10.5	9.5	1.66	7304	0.84	11330.47
012268579-02	OBS	No	234.319903	308.169124	330.6	8.506	10.0	8.2	1.66	7304	3.32	10.03
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012268579-04	OBS	No	130.032605	190.126204	250.0	5.111	8.1	6.8	1.66	7304	2.90	21.99
012268579-05	OBS	No	250.046673	295.932130	450.7	1.751	7.8	6.9	1.66	7304	4.08	9.20

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012268579-01	OBS	FP	0.00	1	0	0	0	LPP_DV
012268579-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS
012268579-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
012268579-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
012268579-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT— MOD_POS_ALT

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

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

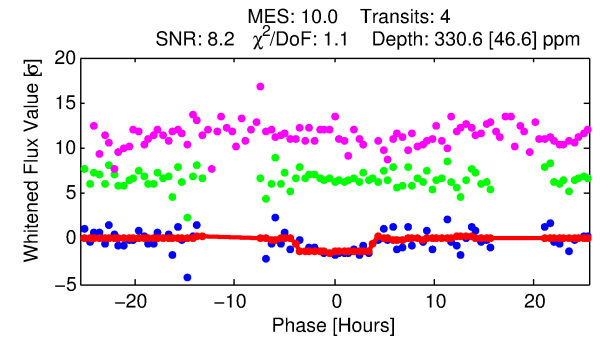
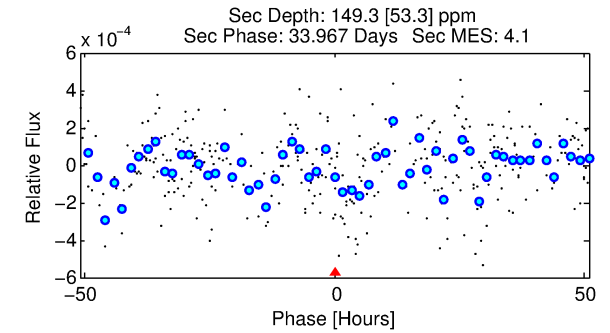
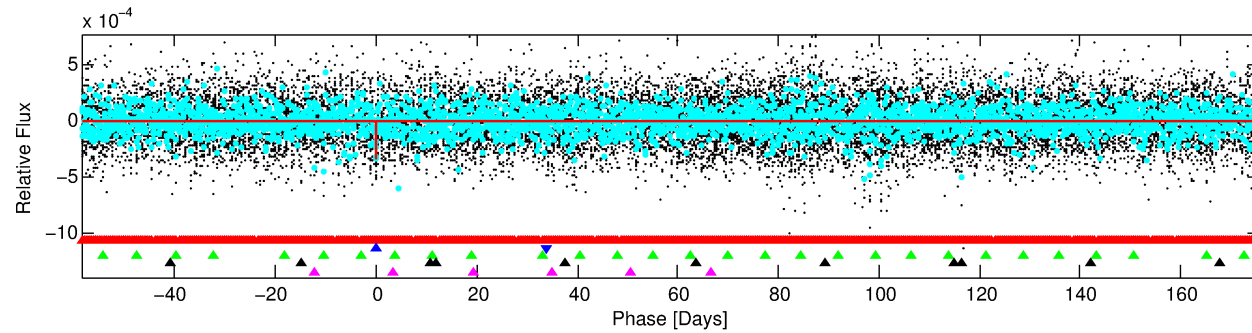
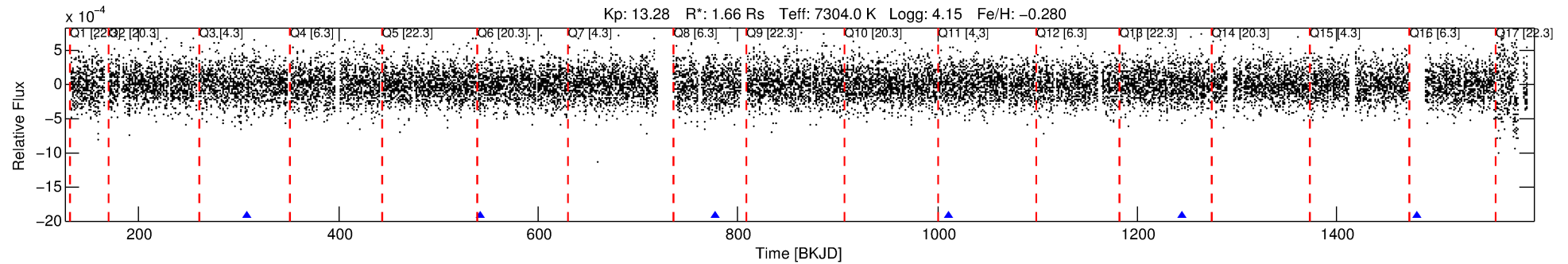
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012268579-02

No Significant Match Found

DV One-Page Summary

KIC: 12268579 Candidate: 2 of 5 Period: 234.320 d

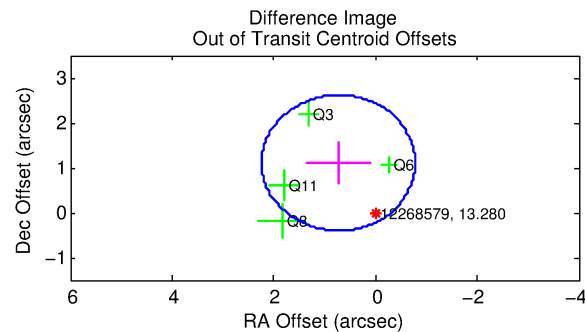
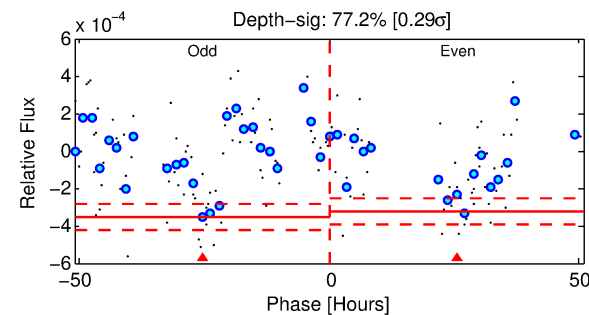
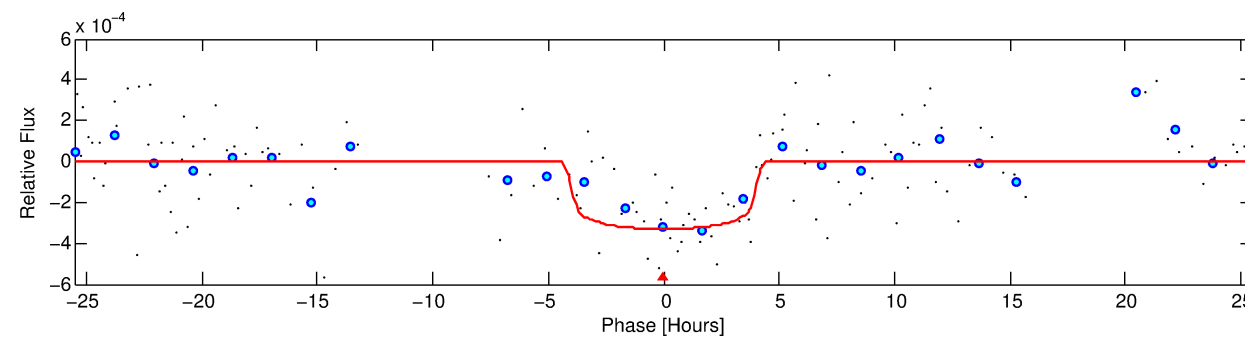


DV Fit Results:

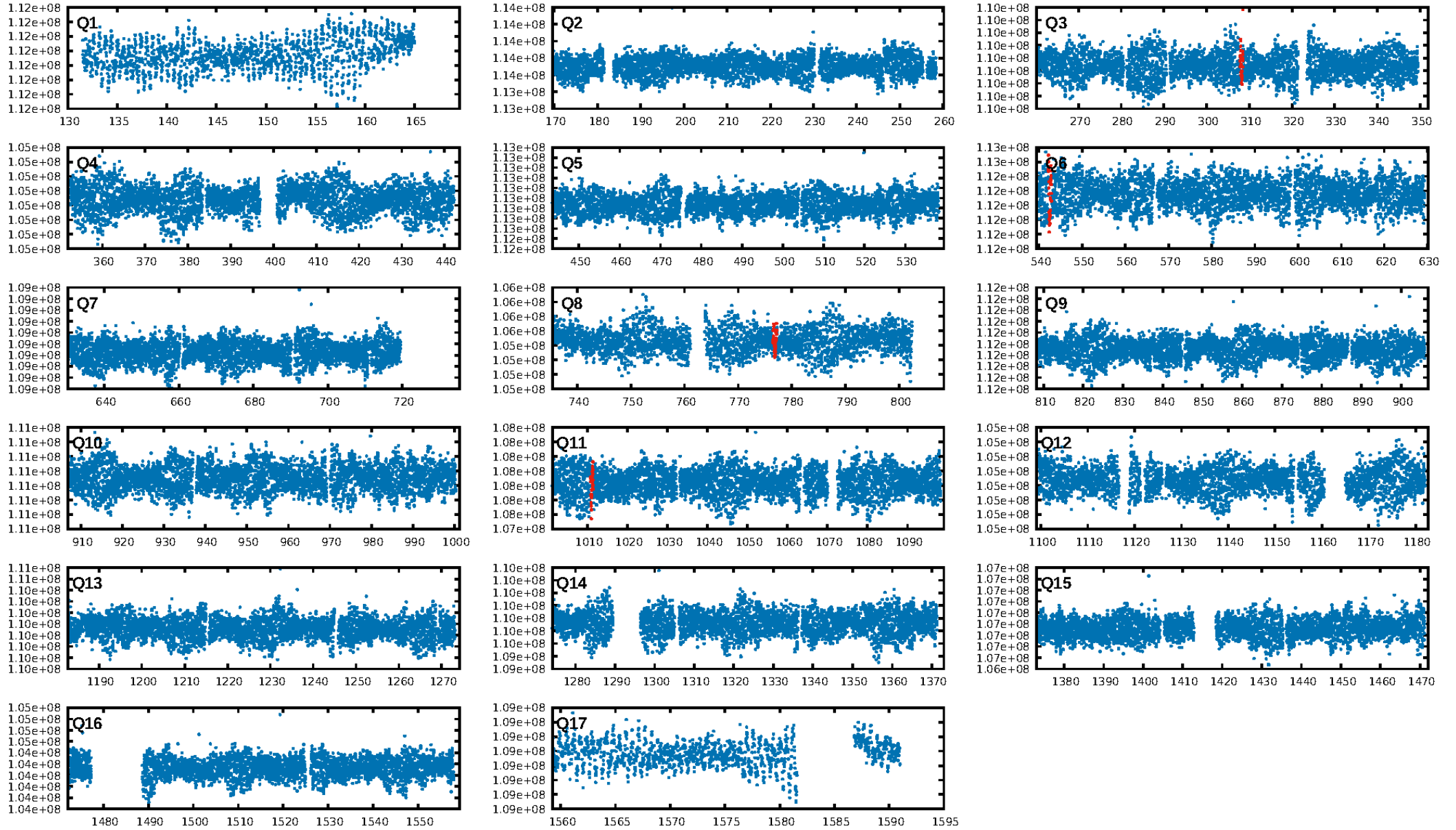
Period = 234.31990 [0.01098] d
Epoch = 308.1691 [0.0149] BKJD
Rp/R* = 0.0184 [0.0051]
a/R* = 130.86 [214.65]
b = 0.81 [0.71]
Seff = 10.03 [3.94]
Teq = 454 [45] K
Rp = 3.32 [1.40] Re
a = 0.8345 [0.2122] AU
Ag = 5180.17 [3894.83] [1.33σ]
Teffp = 5952 [1016] K [5.40σ]

DV Diagnostic Results:

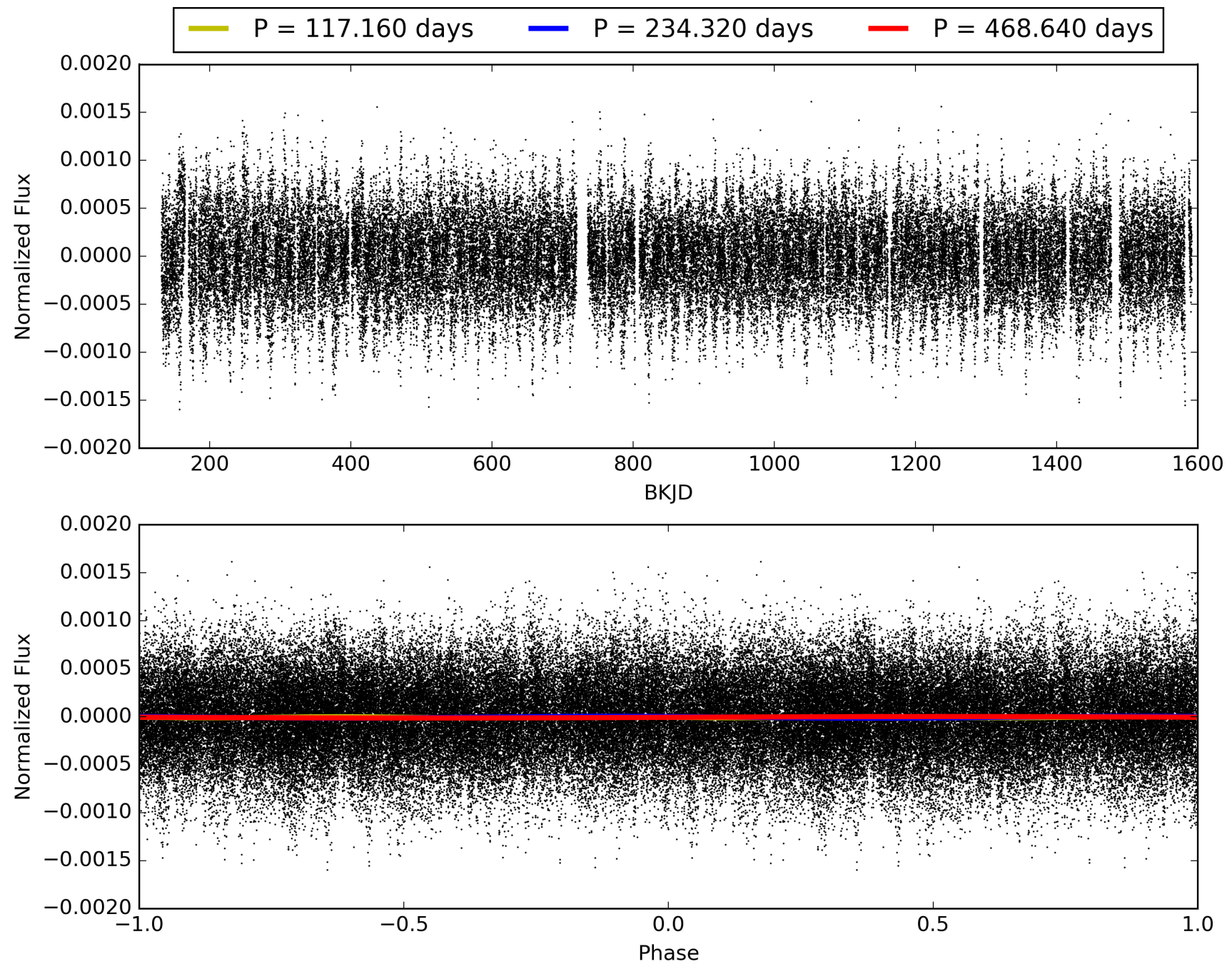
ShortPeriod-sig: 100.0% [252.23σ]
LongPeriod-sig: 100.0% [43.46σ]
ModelChiSquare2-sig: 84.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.71e-15
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 1.544
Centroid-sig: 29.3%
Centroid-so: 1.374 arcsec [1.49σ]
OotOffset-rm: 1.325 arcsec [2.63σ]
KicOffset-rm: 1.226 arcsec [2.37σ]
OotOffset-st: 1/2/1/0 [4]
KicOffset-st: 1/2/1/0 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 0.00 [0/4]



TCE 012268579-02, PDC Light Curves

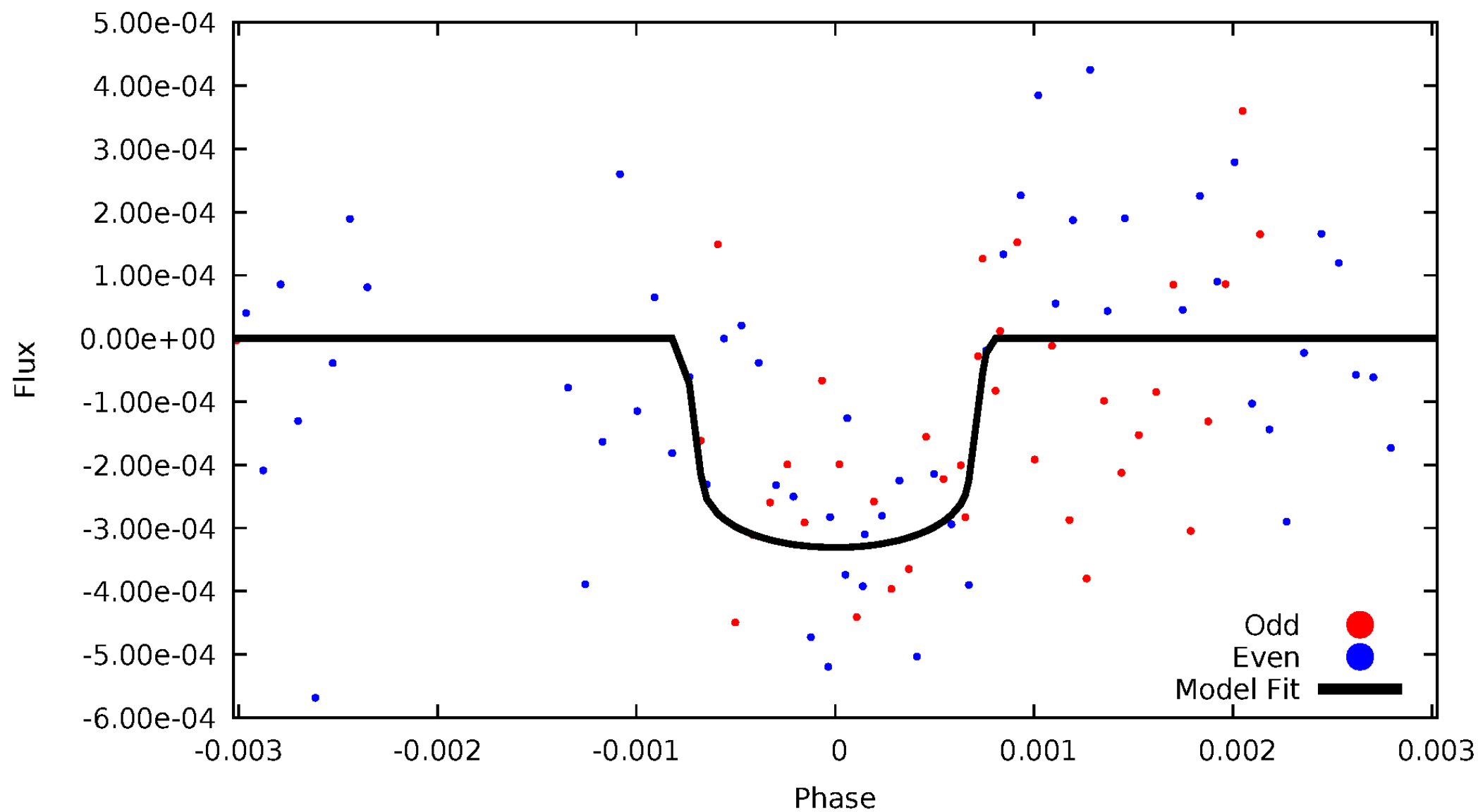


TCE 012268579-02



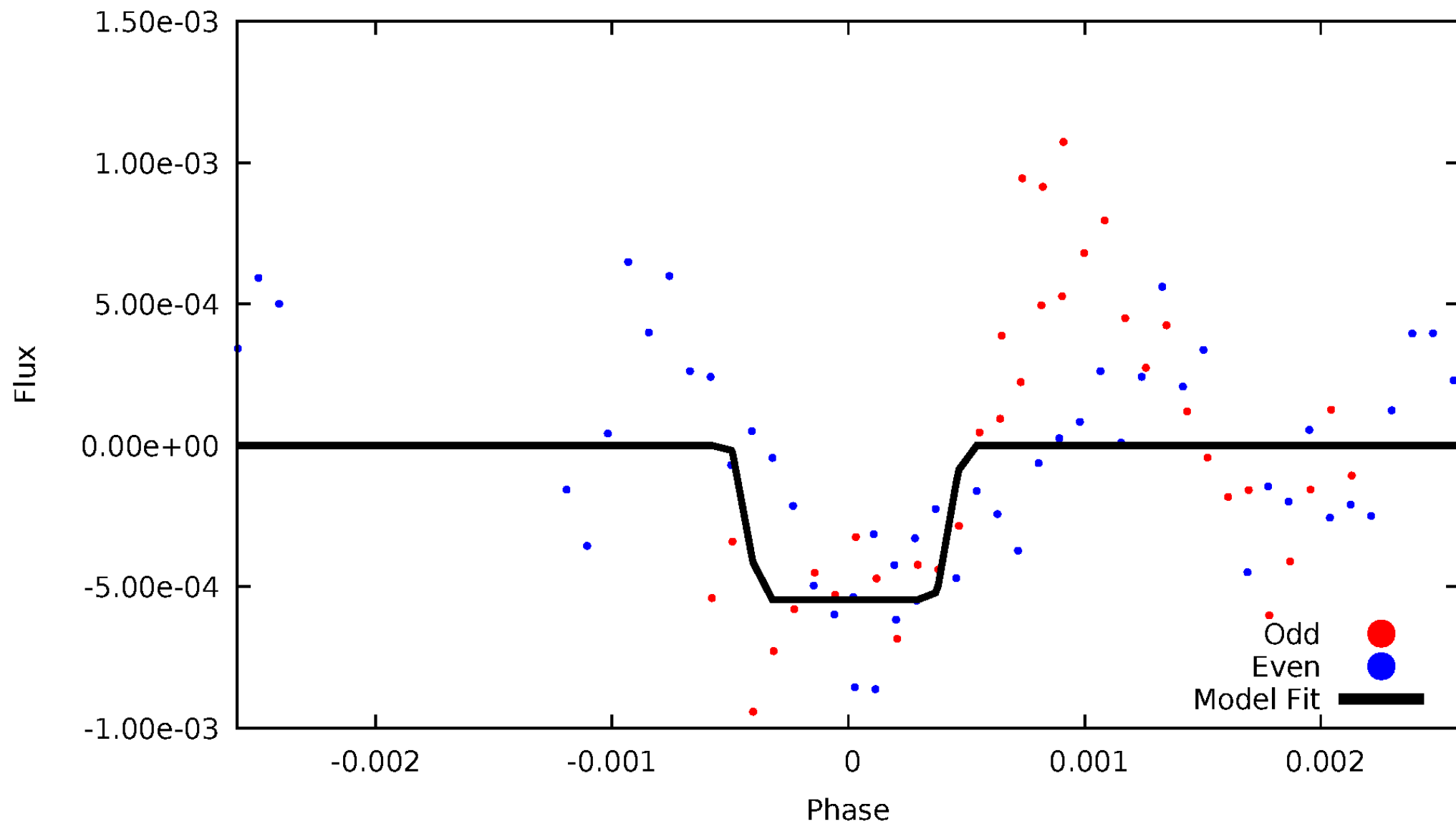
DV Odd/Even

TCE 012268579-02



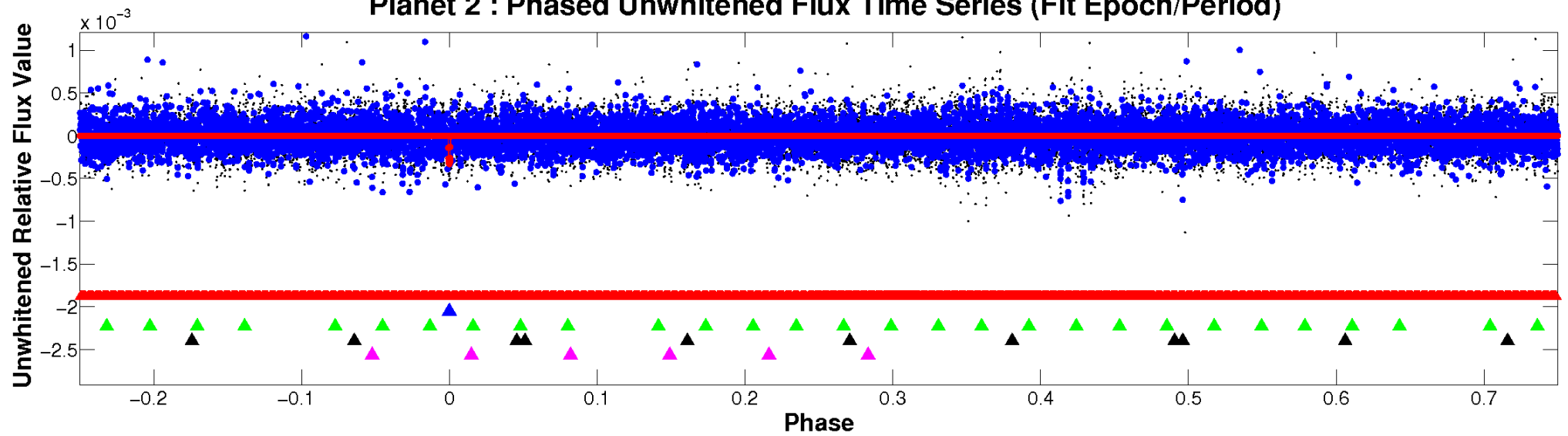
ALT Odd/Even

TCE 012268579-02

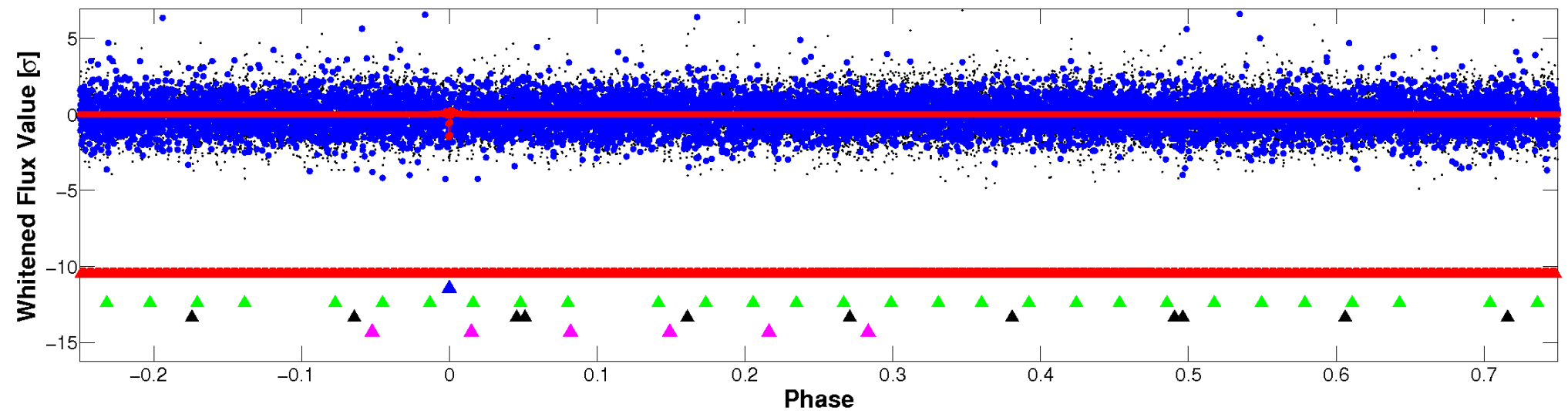


Non-Whitened Vs. Whitened Light Curve

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

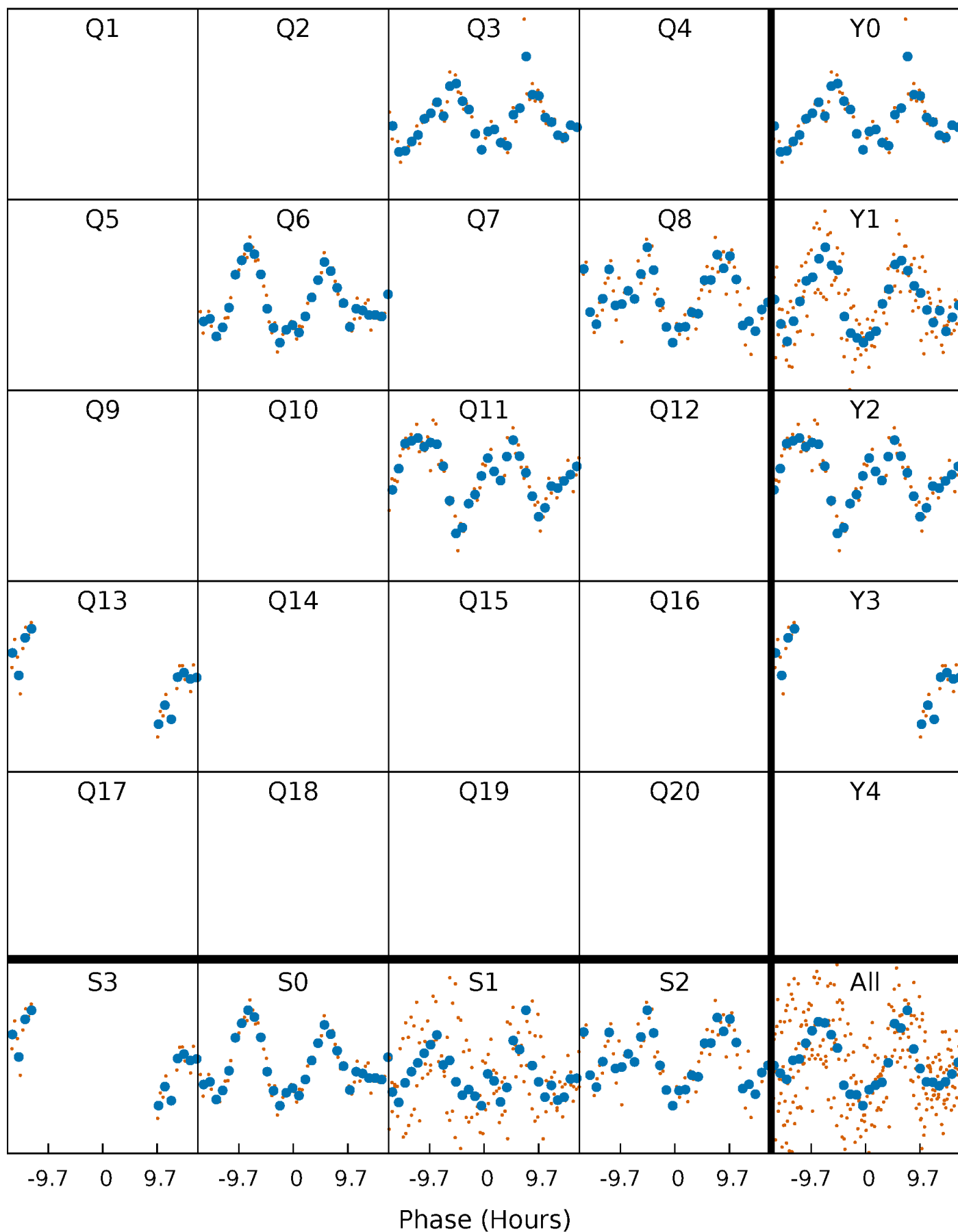


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



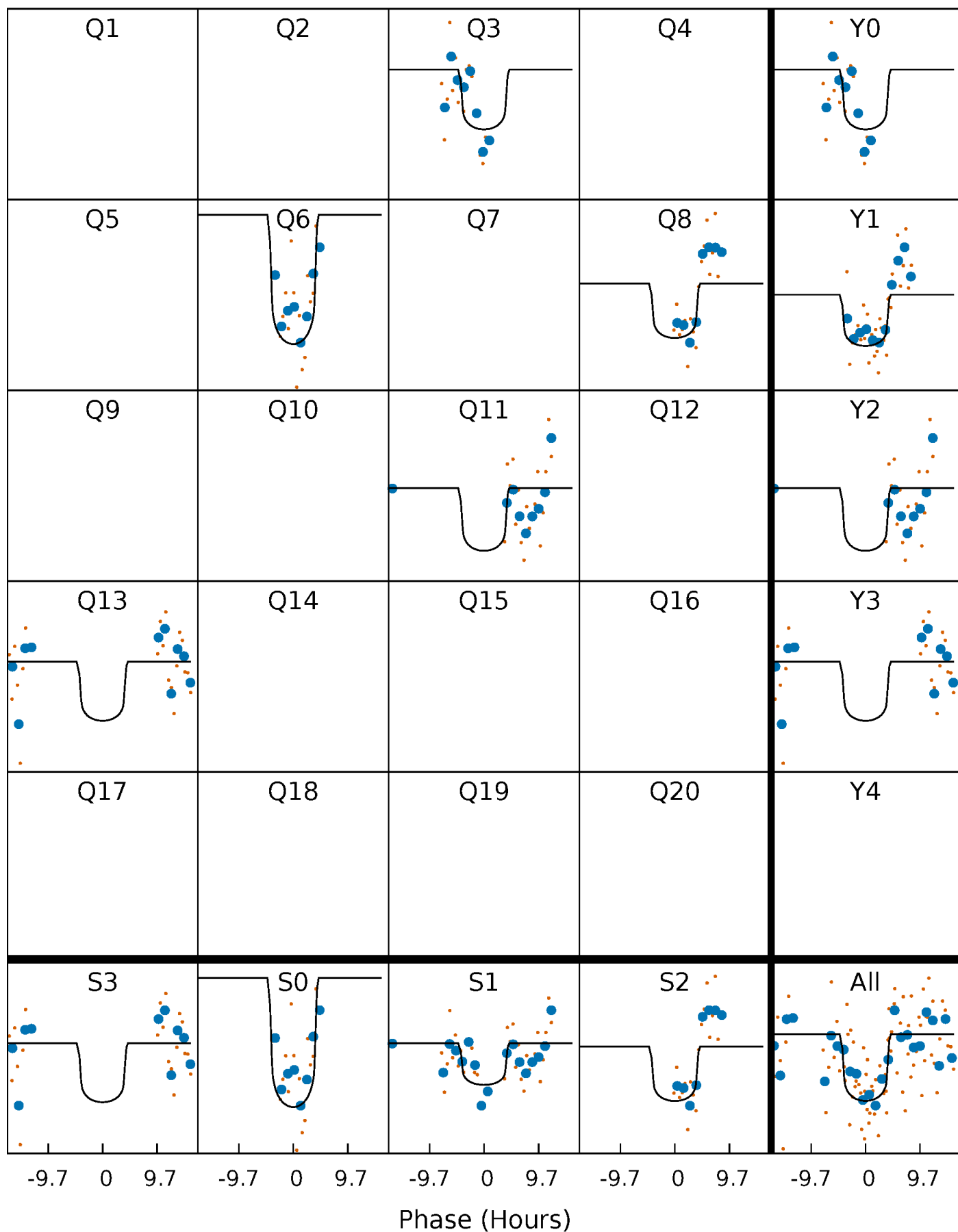
PDC Quarter-Phased Transit Curves

TCE 012268579-02 P=234.319903 Days $T_0=308.169125$ (BKJD)



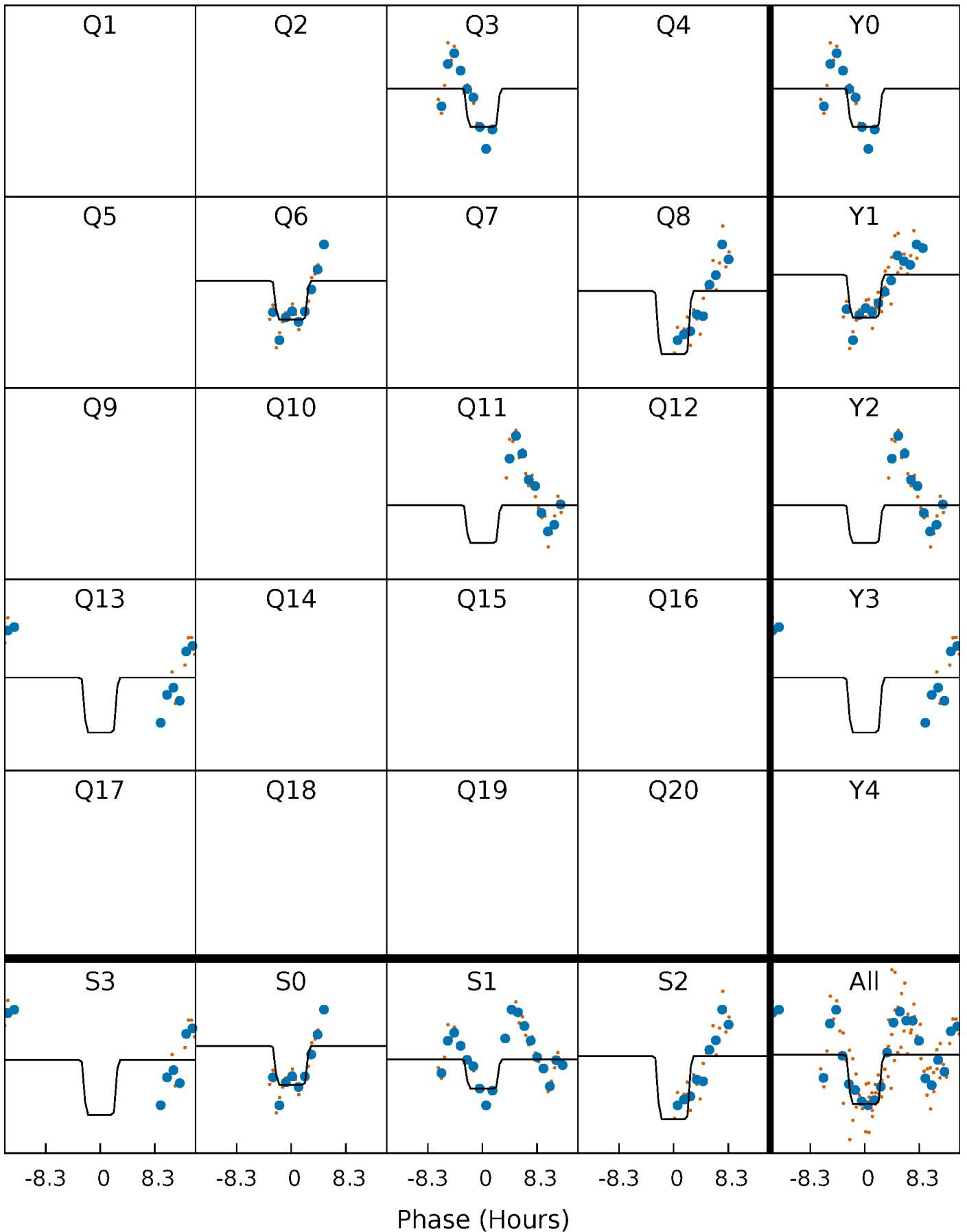
DV Quarter-Phased Transit Curves

TCE 012268579-02 $P=234.319903$ Days $T_0=308.169125$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

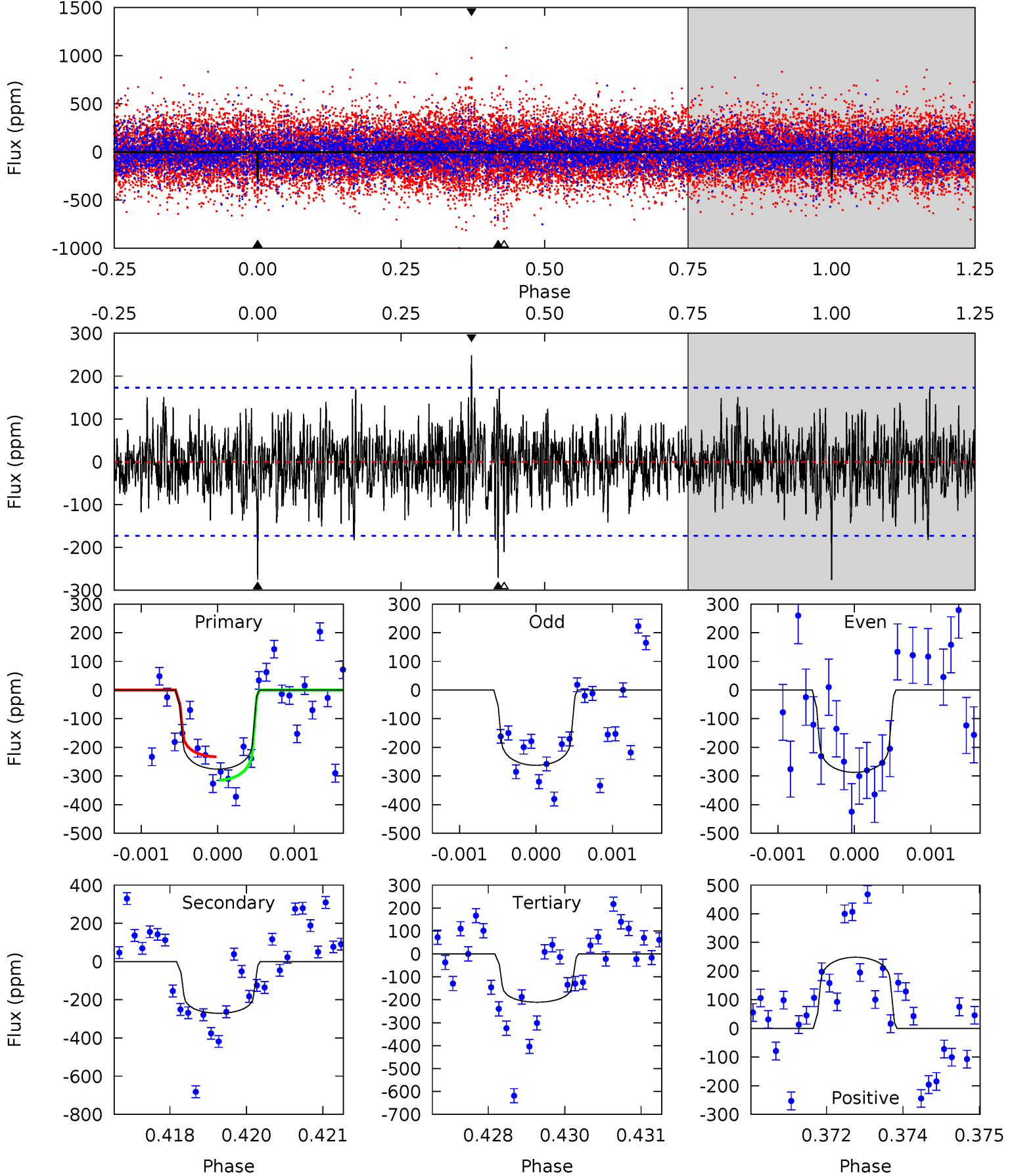
TCE 012268579-02 P=234.332066 Days $T_0=308.133792$ (BKJD)



DV Model-Shift Uniqueness Test

012268579-02, P = 234.319903 Days, E = 73.849222 Days

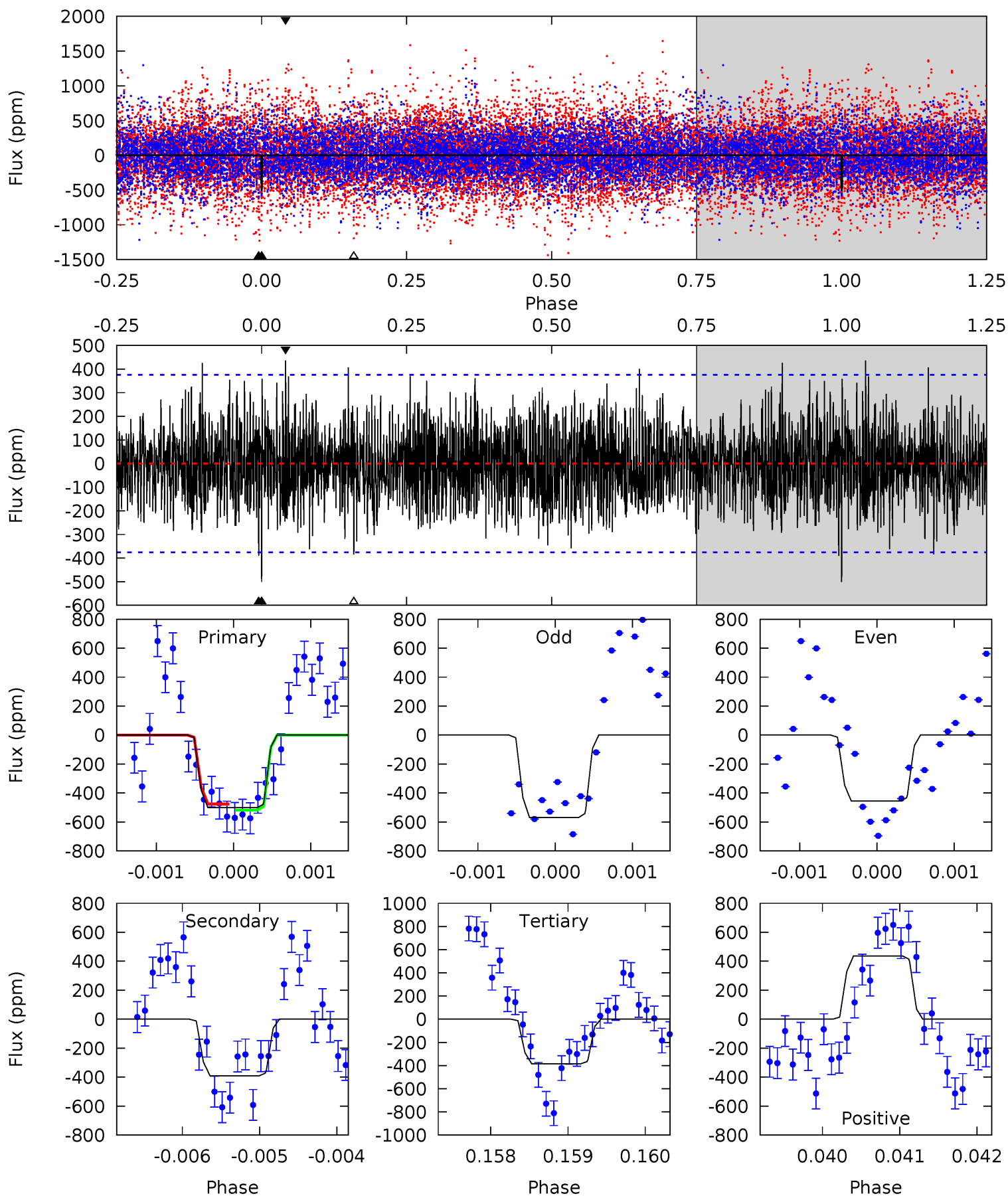
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.60	8.43	6.56	7.73	5.38	3.18	1.65	2.04	0.87	1.87	0.70	0.38	1.01	0.47	1.26



Alt Model-Shift Uniqueness Test

012268579-02, P = 234.332066 Days, E = 73.801726 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.28	5.67	5.58	6.32	5.46	3.30	1.81	1.70	0.96	0.09	-0.65	0.82	0.98	0.46	0.30



Stellar Parameters For KIC 012268579

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7304^{+228}_{-304}	$4.150^{+0.153}_{-0.187}$	$-0.280^{+0.250}_{-0.350}$	$1.655^{+0.521}_{-0.347}$	$1.410^{+0.226}_{-0.226}$	$0.438^{+0.387}_{-0.217}$
	+3%/-4%	+4%/-5%	+89%/-125%	+31%/-21%	+16%/-16%	+88%/-50%
Source	KIC0	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 012268579-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-271 ± 32	$3.31^{+1.04}_{-1.02}$	634^{+48}_{-45}	6858^{+1633}_{-879}	9483^{+10217}_{-4198}
Alt.	-390 ± 69	$4.26^{+1.19}_{-1.05}$	637^{+48}_{-45}	6587^{+1066}_{-695}	8094^{+6111}_{-3295}

T_{max} = Theoretical Maximum Planetary Temperature

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

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

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

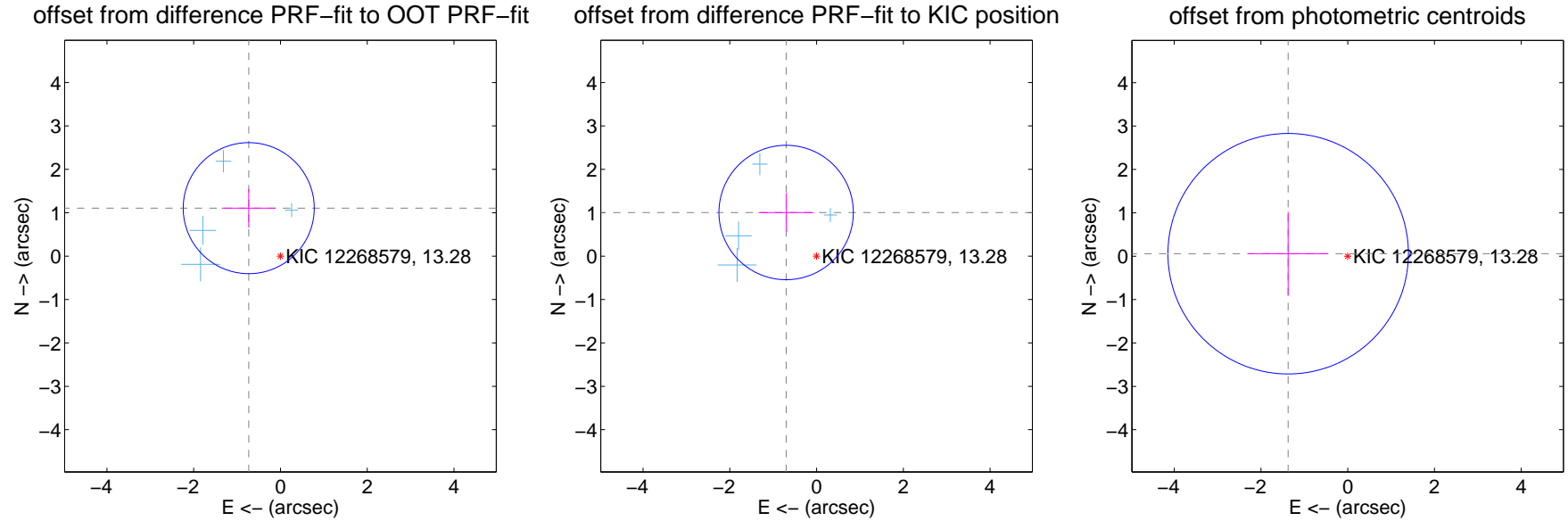
DV Centroid Data

Supplemental centroid analysis for 012268579-02. Kepler magnitude: 13.28. Transit SNR 8.25

There are 4 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.325 ± 0.503	2.63	0.731 ± 0.618	1.105 ± 0.444
PRF-fit source offset from KIC position	1.226 ± 0.516	2.37	0.702 ± 0.637	1.005 ± 0.446
photometric centroid source offset	1.37 ± 0.92	1.49	1.37 ± 0.92	0.06 ± 0.96



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

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

Q1 no difference image



Q1 no OOT image



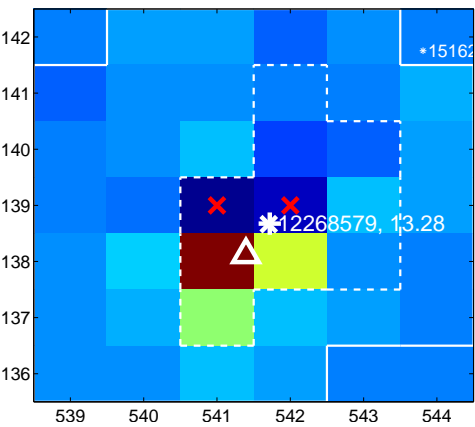
Q2 no difference image



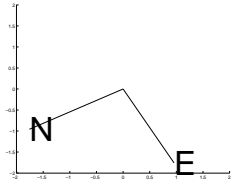
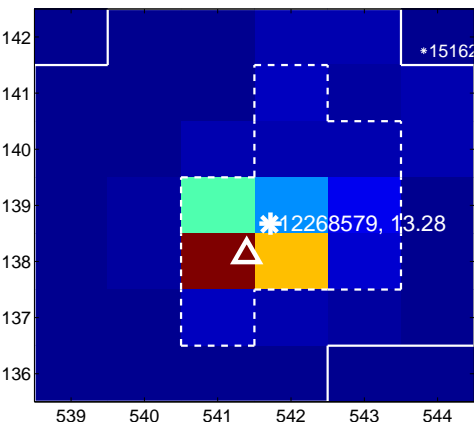
Q2 no OOT image



Q3 difference image



Q3 OOT image



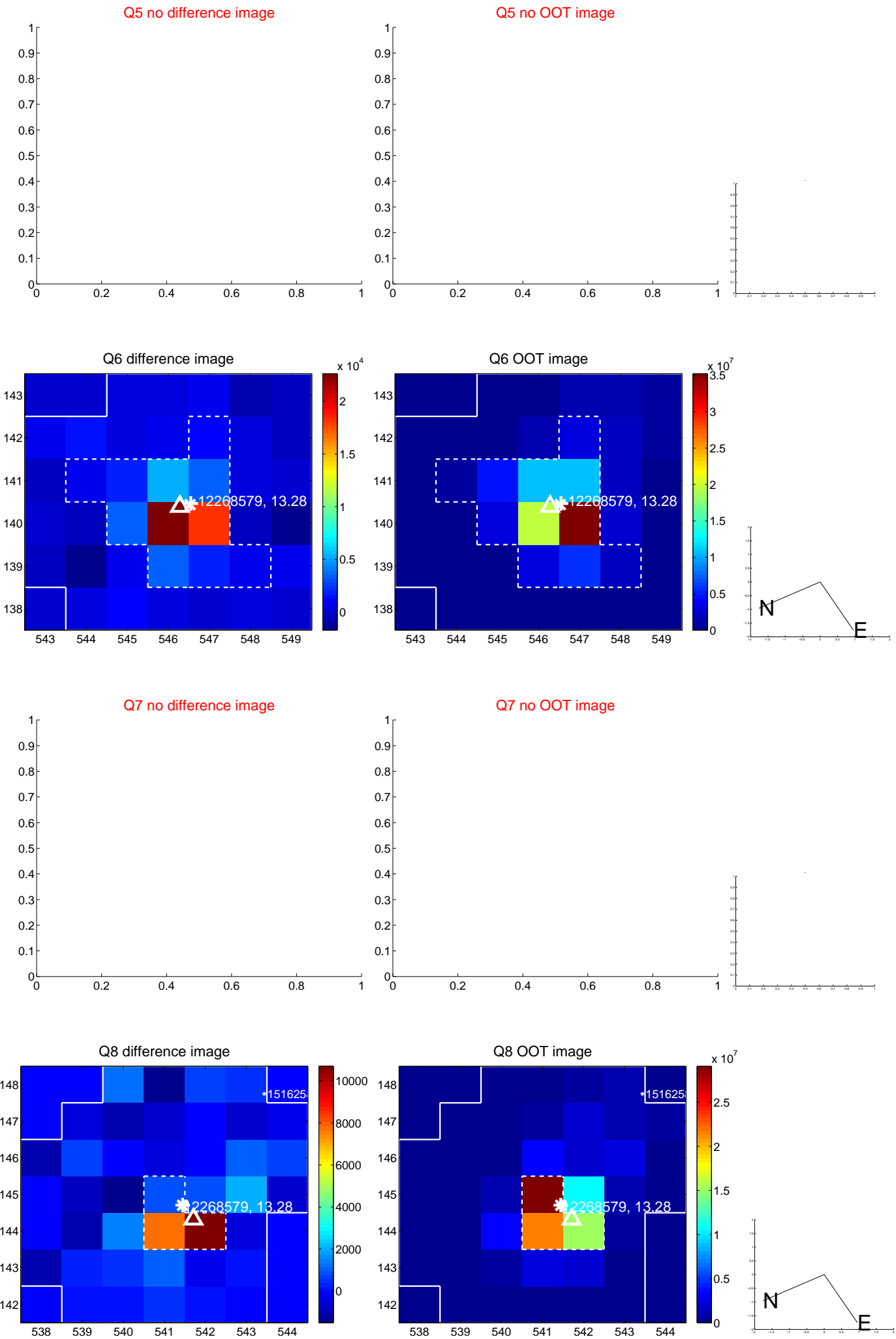
Q4 no difference image



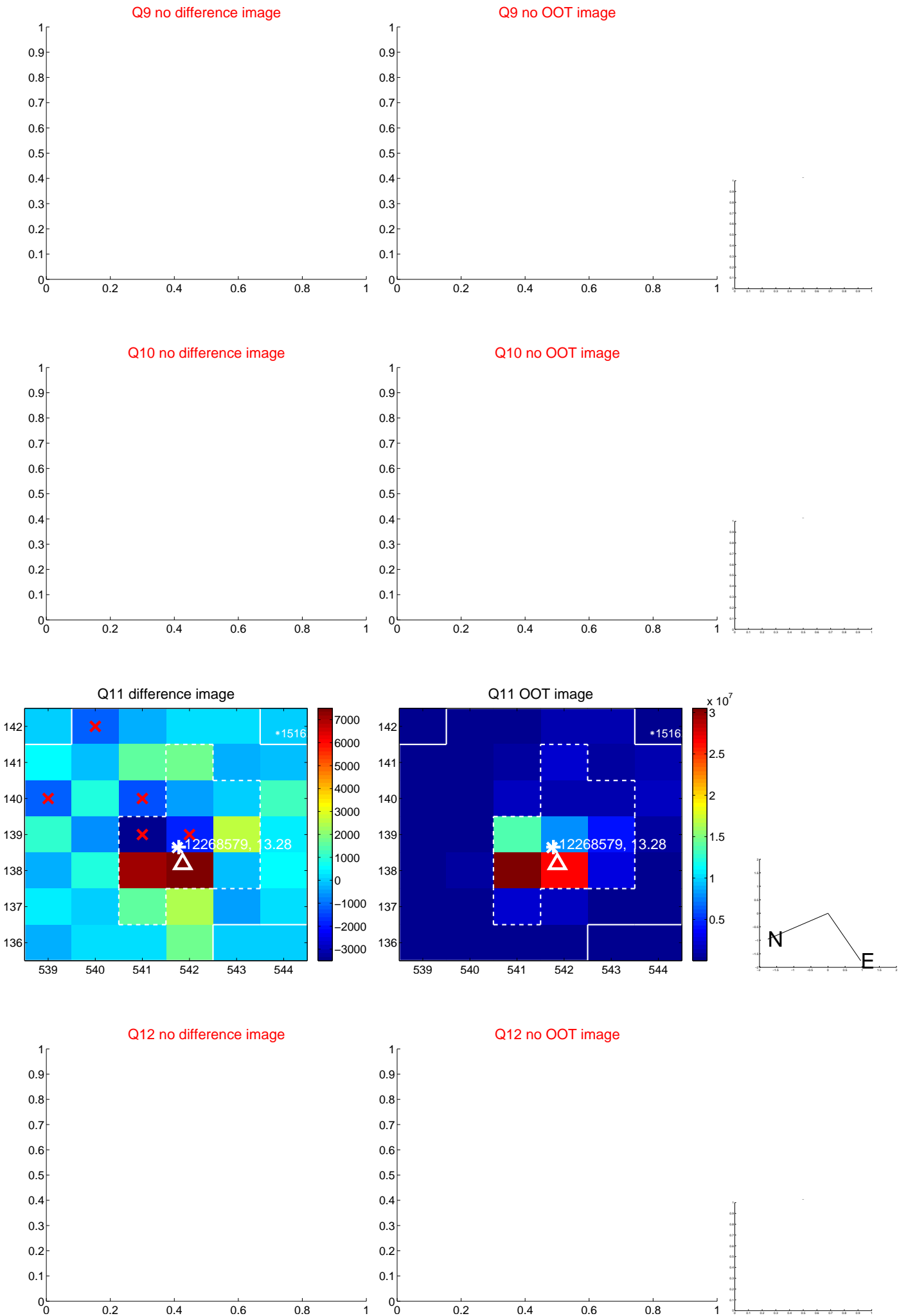
Q4 no OOT image



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



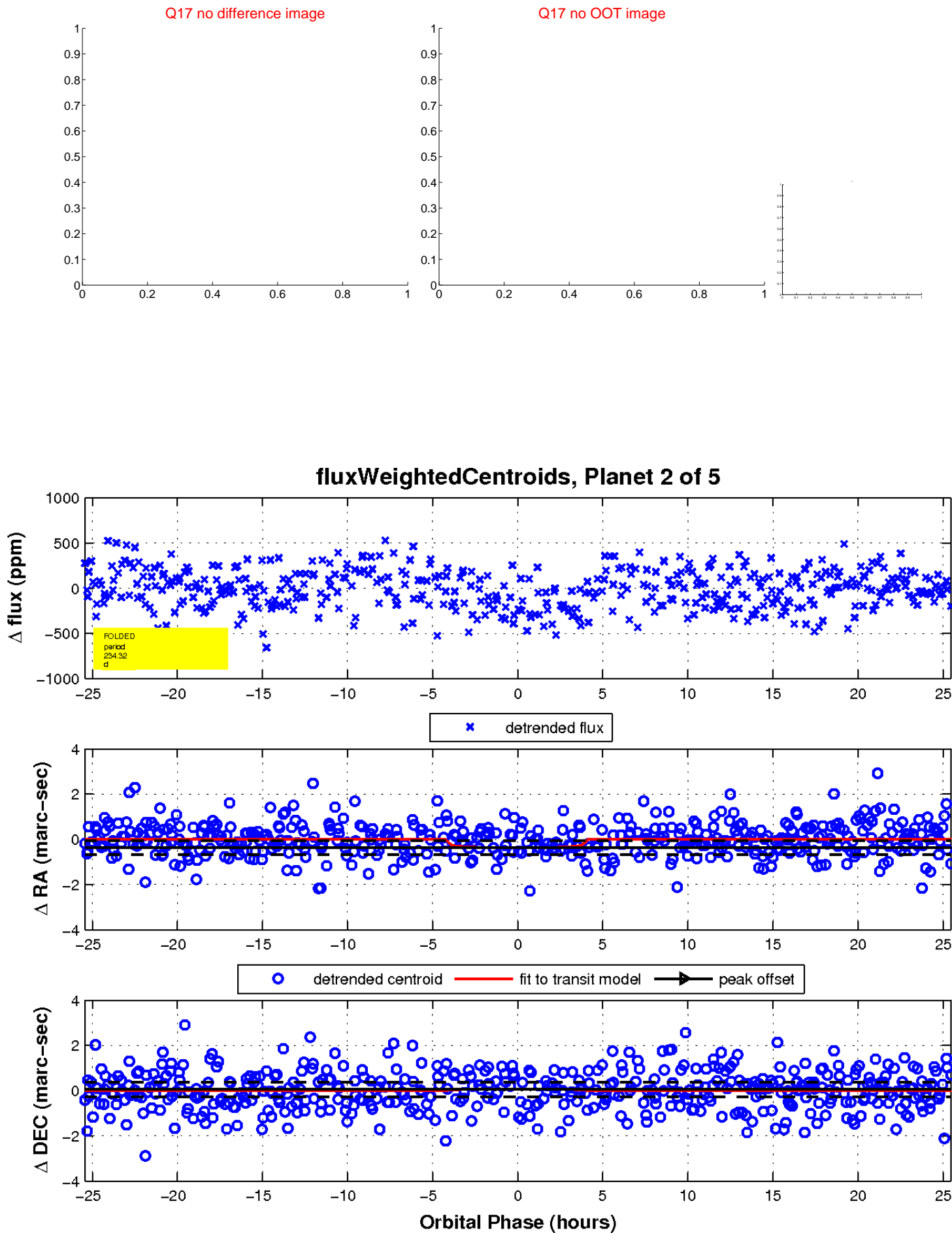
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

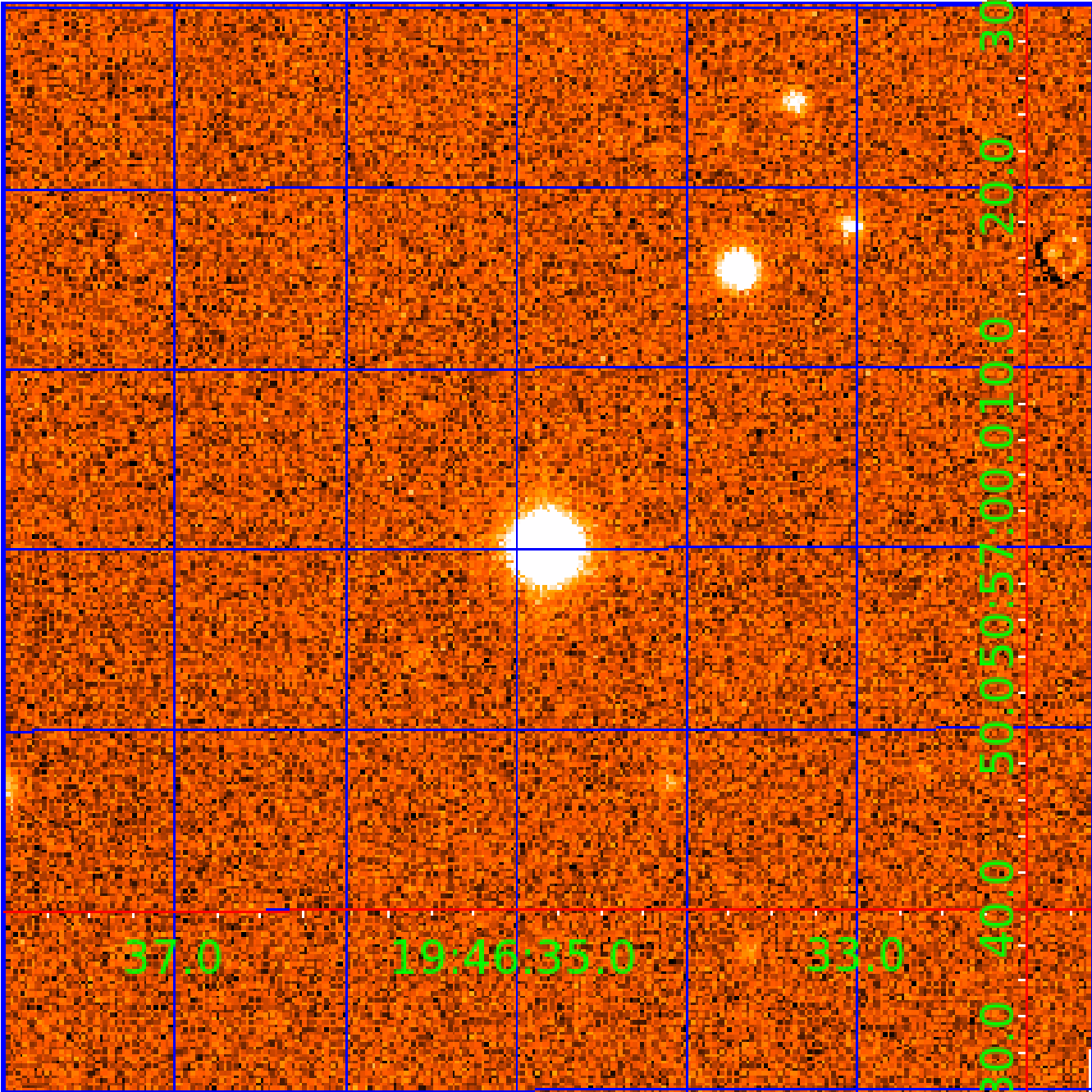


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 012268579

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})
012268579-01	OBS	No	1.202447	131.860865	23.5	6.507	10.5	9.5	1.66	7304	0.84	11330.47
012268579-02	OBS	No	234.319903	308.169124	330.6	8.506	10.0	8.2	1.66	7304	3.32	10.03
012268579-03	OBS	No	51.237200	151.376116	440.8	1.378	8.5	8.7	1.66	7304	6.78	76.13
012268579-04	OBS	No	130.032605	190.126204	250.0	5.111	8.1	6.8	1.66	7304	2.90	21.99
012268579-05	OBS	No	250.046673	295.932130	450.7	1.751	7.8	6.9	1.66	7304	4.08	9.20

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012268579-01	OBS	FP	0.00	1	0	0	0	LPP_DV
012268579-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS
012268579-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
012268579-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
012268579-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT— MOD_POS_ALT

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

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

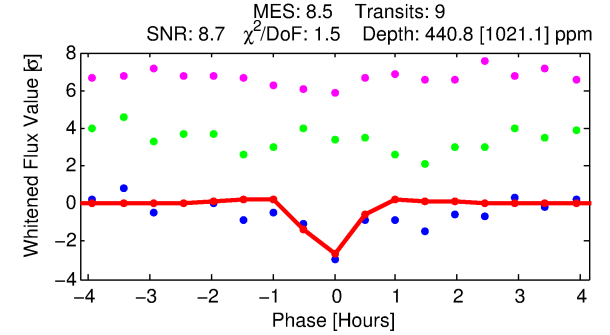
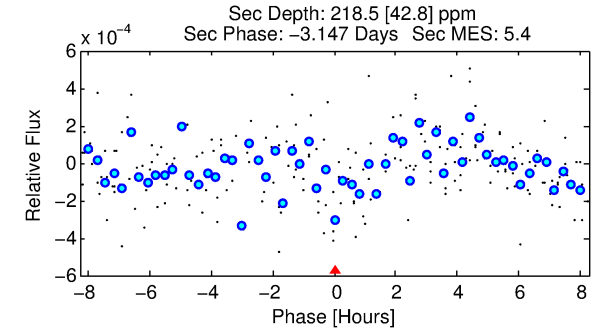
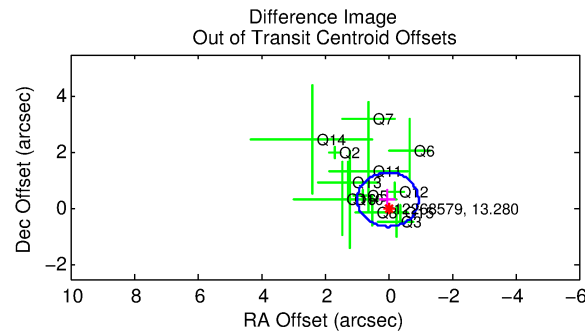
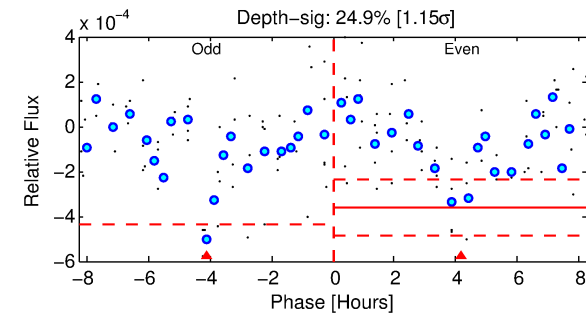
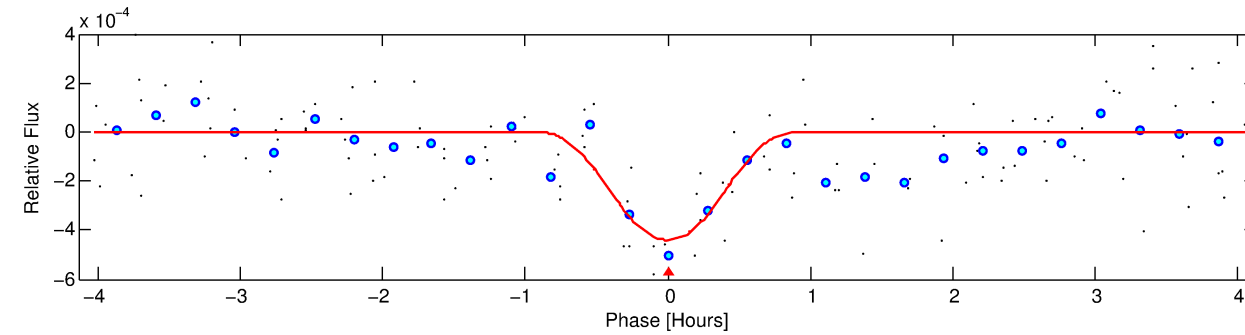
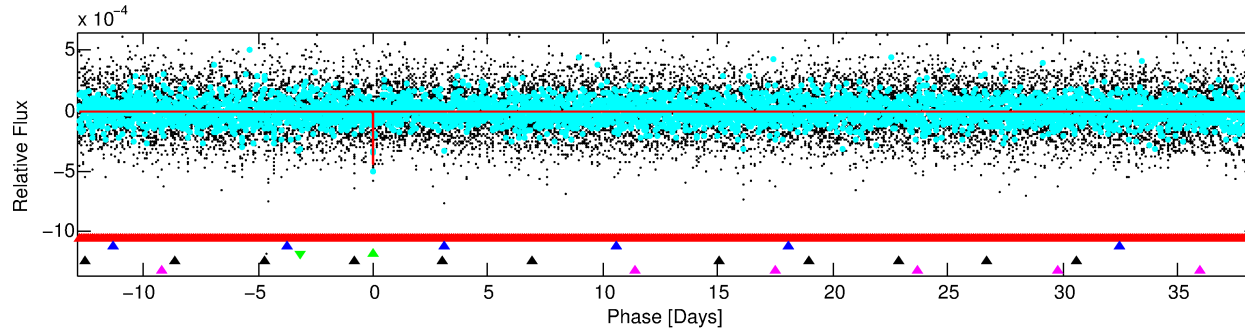
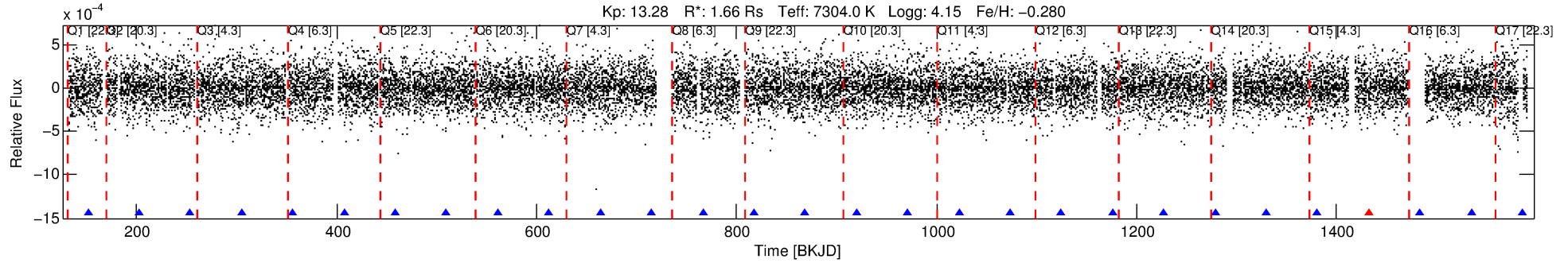
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012268579-03

No Significant Match Found

DV One-Page Summary

KIC: 12268579 Candidate: 3 of 5 Period: 51.237 d



DV Fit Results:

Period = 51.23720 [0.00033] d
Epoch = 151.3761 [0.0053] BKJD
Rp/R* = 0.0375 [0.5386]
a/R* = 78.57 [288.85]
b = 1.00 [0.72]
Seff = 76.13 [29.89]
Teq = 753 [74] K
Rp = 6.78 [97.30] Re
a = 0.3029 [0.0770] AU
Ag = 240.24 [6899.12] [0.03 σ]
Teffp = 4585 [32914] K [0.12 σ]

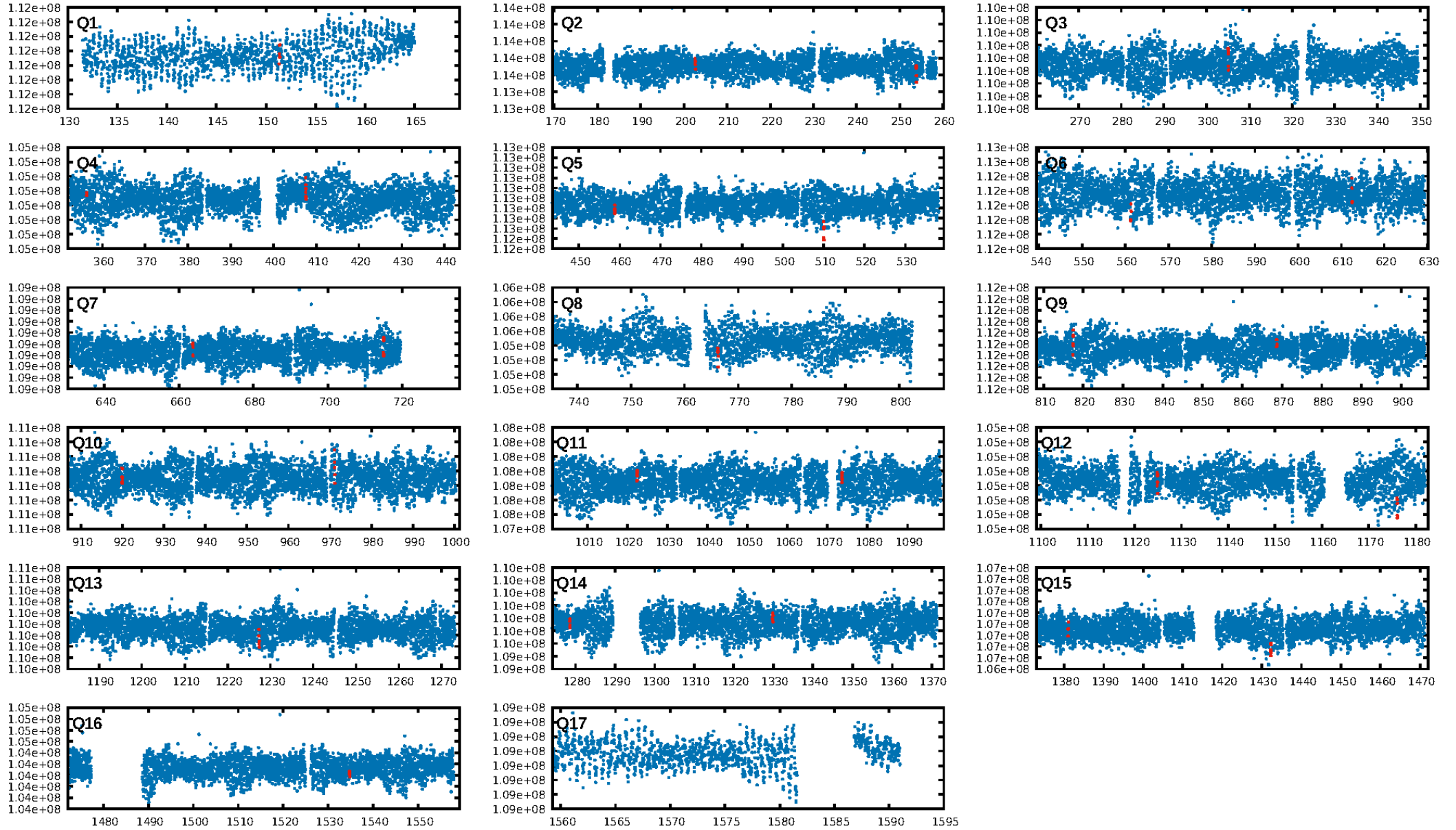
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [180.55 σ]
LongPeriod-sig: 100.0% [357.27 σ]
ModelChiSquare2-sig: 15.5%
ModelChiSquareGof-sig: 65.6%
Bootstrap-pfa: 7.27e-10
RollingBand-fgt: 0.89 [8/9]
GhostDiagnostic-chr: 0.3342
Centroid-sig: 39.9%
Centroid-so: 0.394 arcsec [0.43 σ]
OotOffset-rm: 0.329 arcsec [1.02 σ]
OotOffset-st: 4/4/3/2 [13]
KicOffset-rm: 0.235 arcsec [0.74 σ]
KicOffset-st: 4/4/3/2 [13]
DiffImageQuality-fgm: 0.54 [7/13]
DiffImageOverlap-fno: 0.56 [9/16]

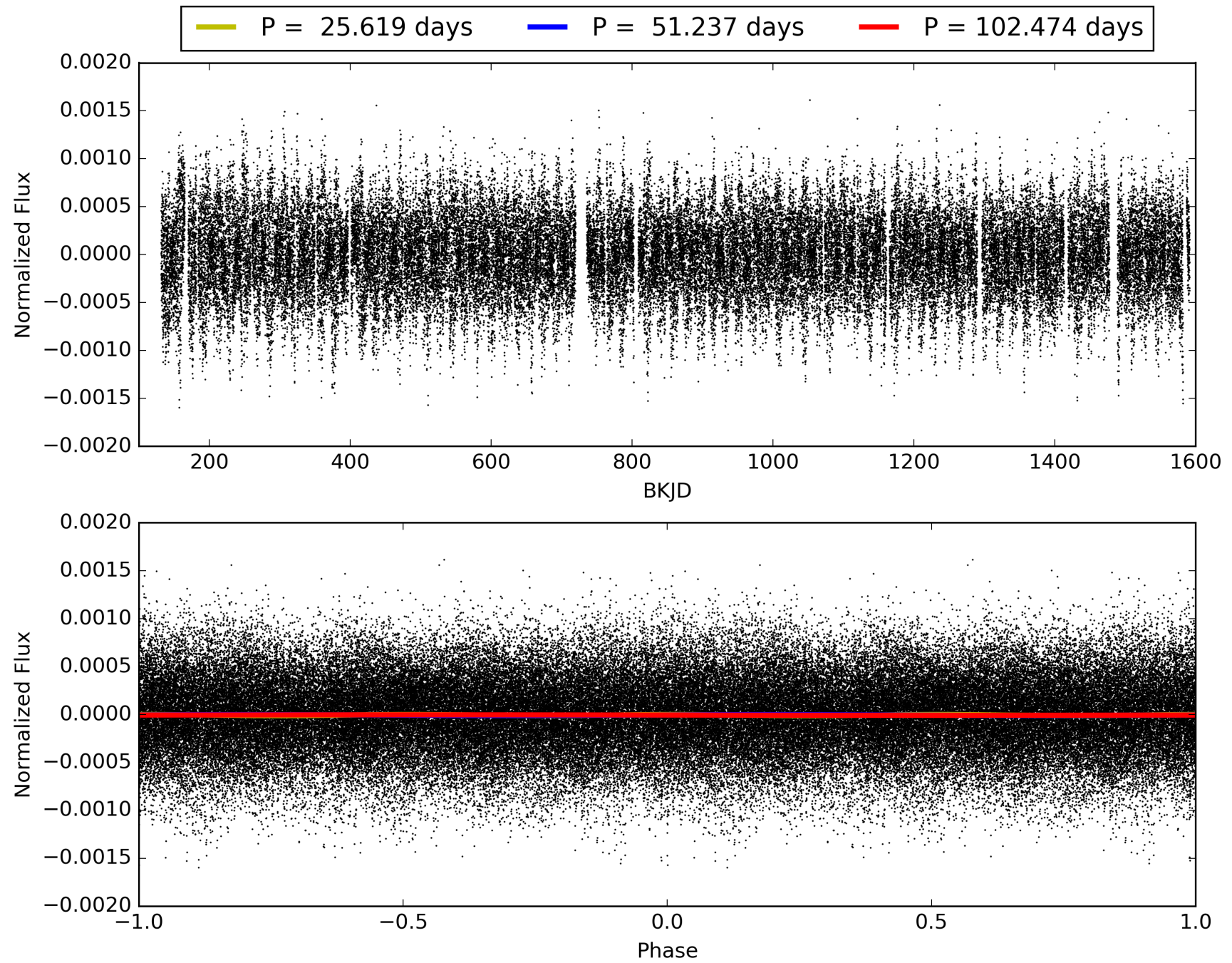
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 03:10:46 Z

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

TCE 012268579-03, PDC Light Curves

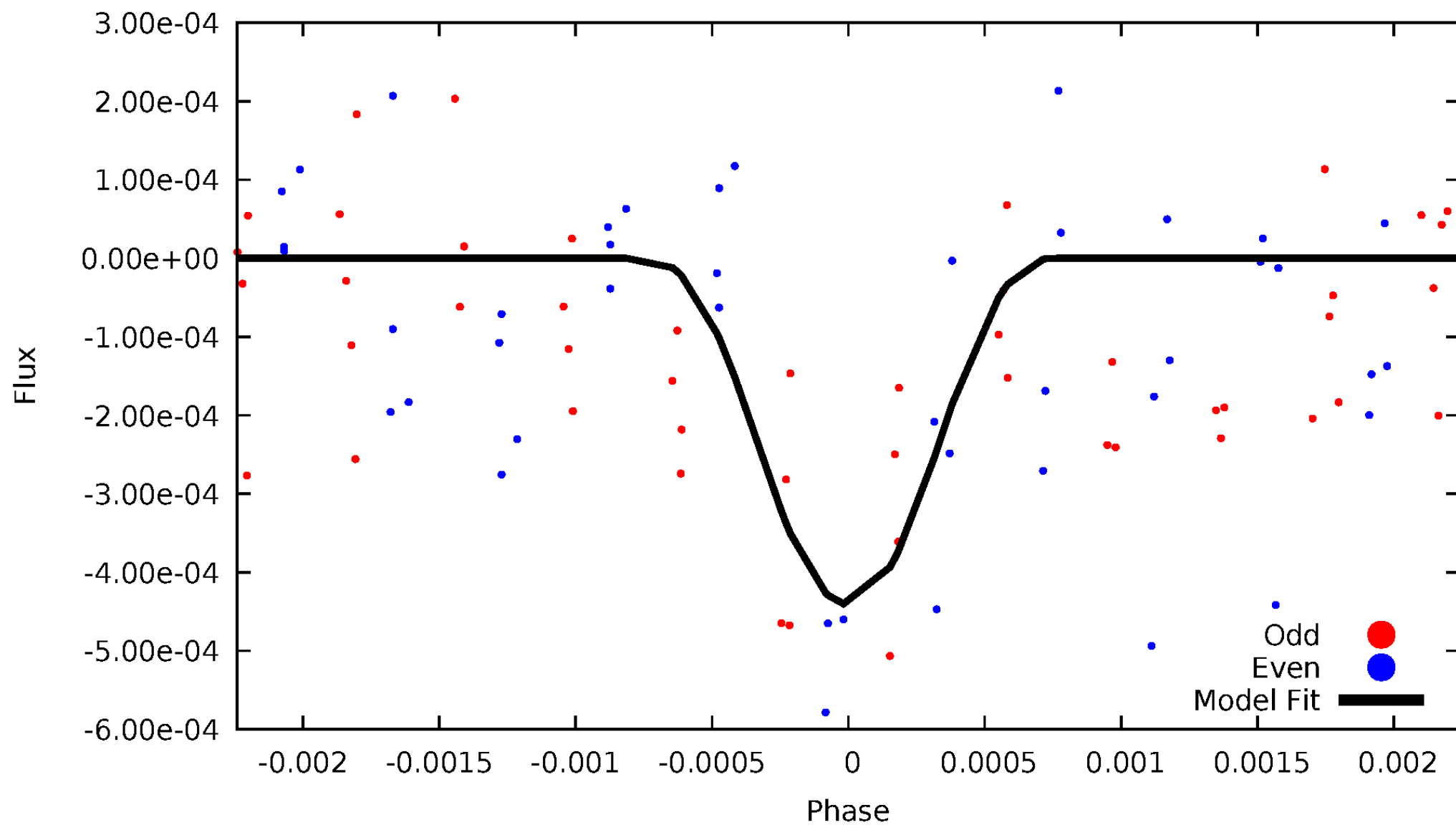


TCE 012268579-03



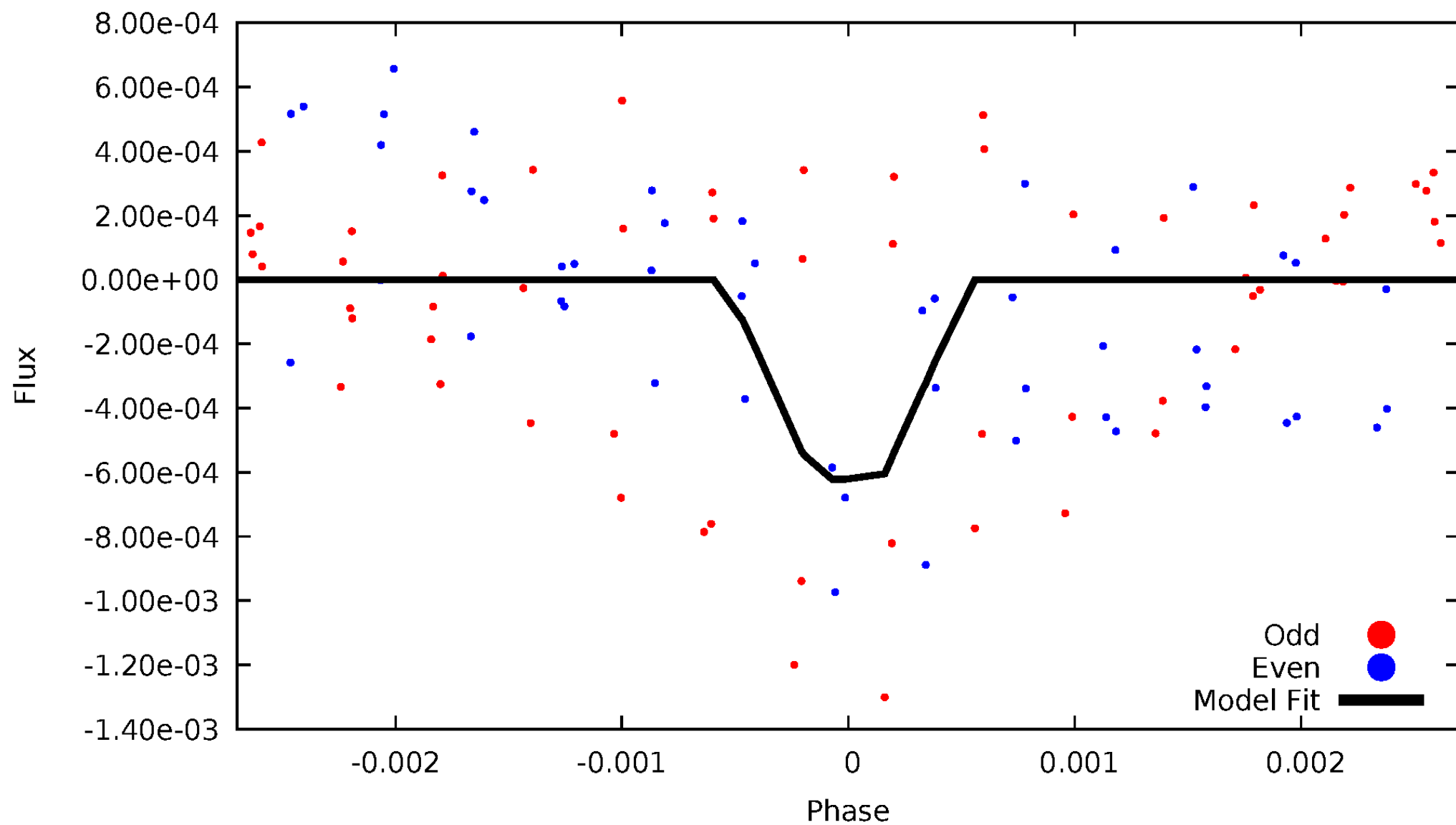
DV Odd/Even

TCE 012268579-03



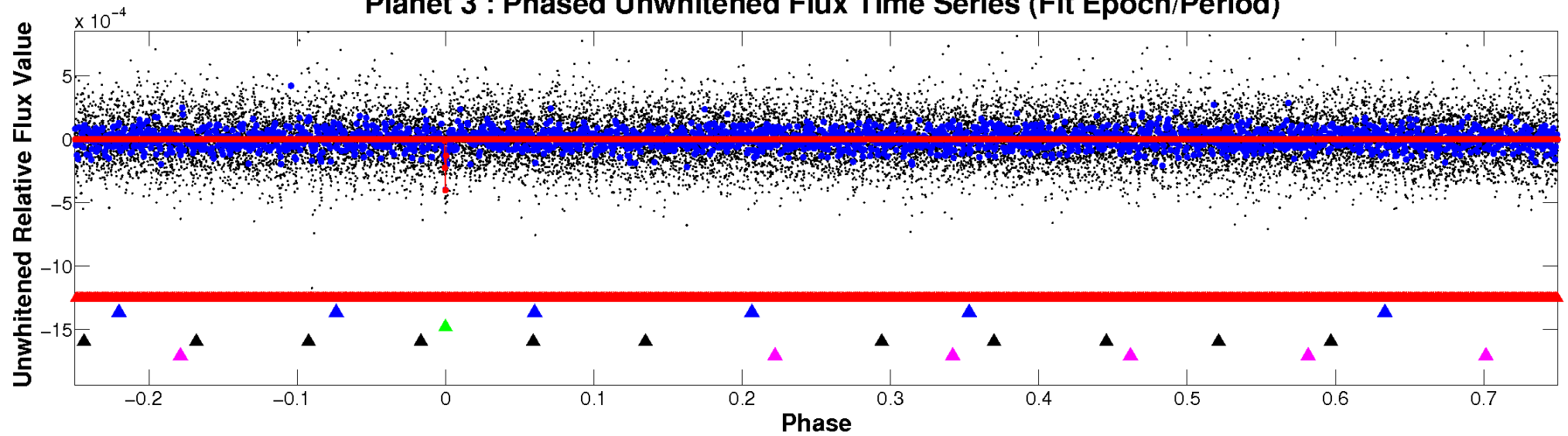
ALT Odd/Even

TCE 012268579-03

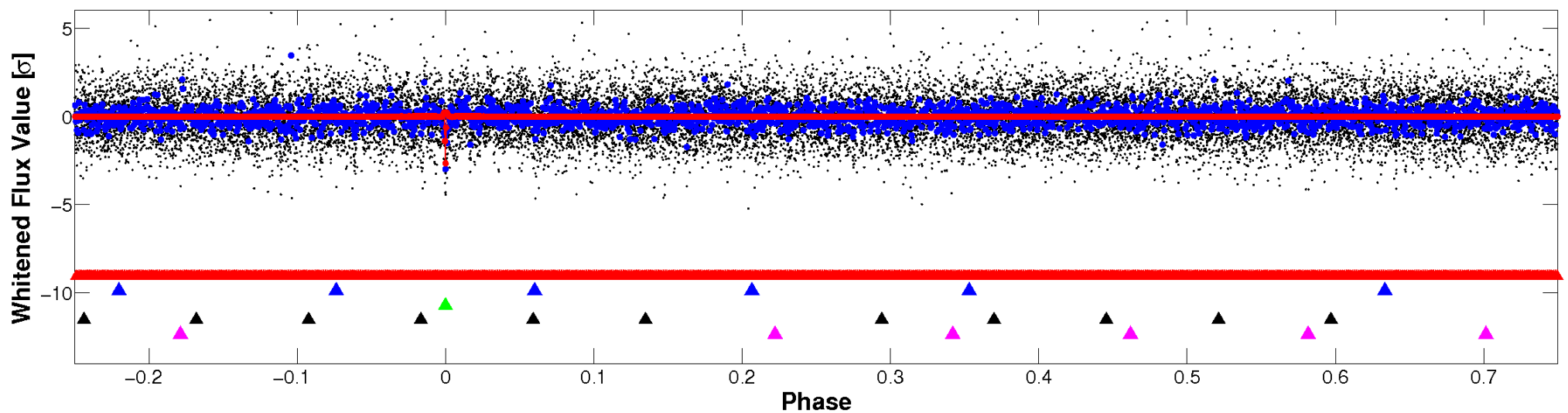


Non-Whitened Vs. Whitened Light Curve

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

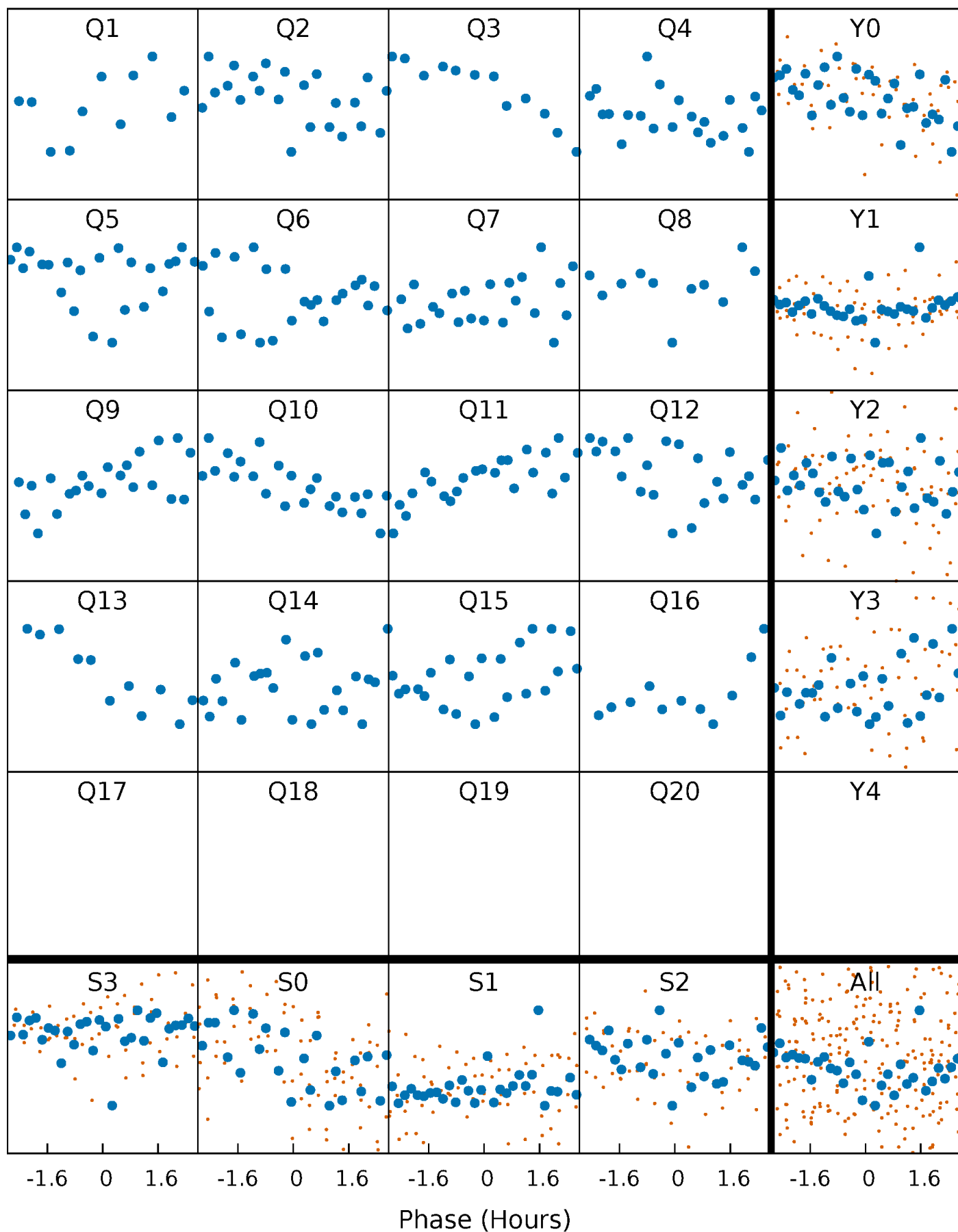


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



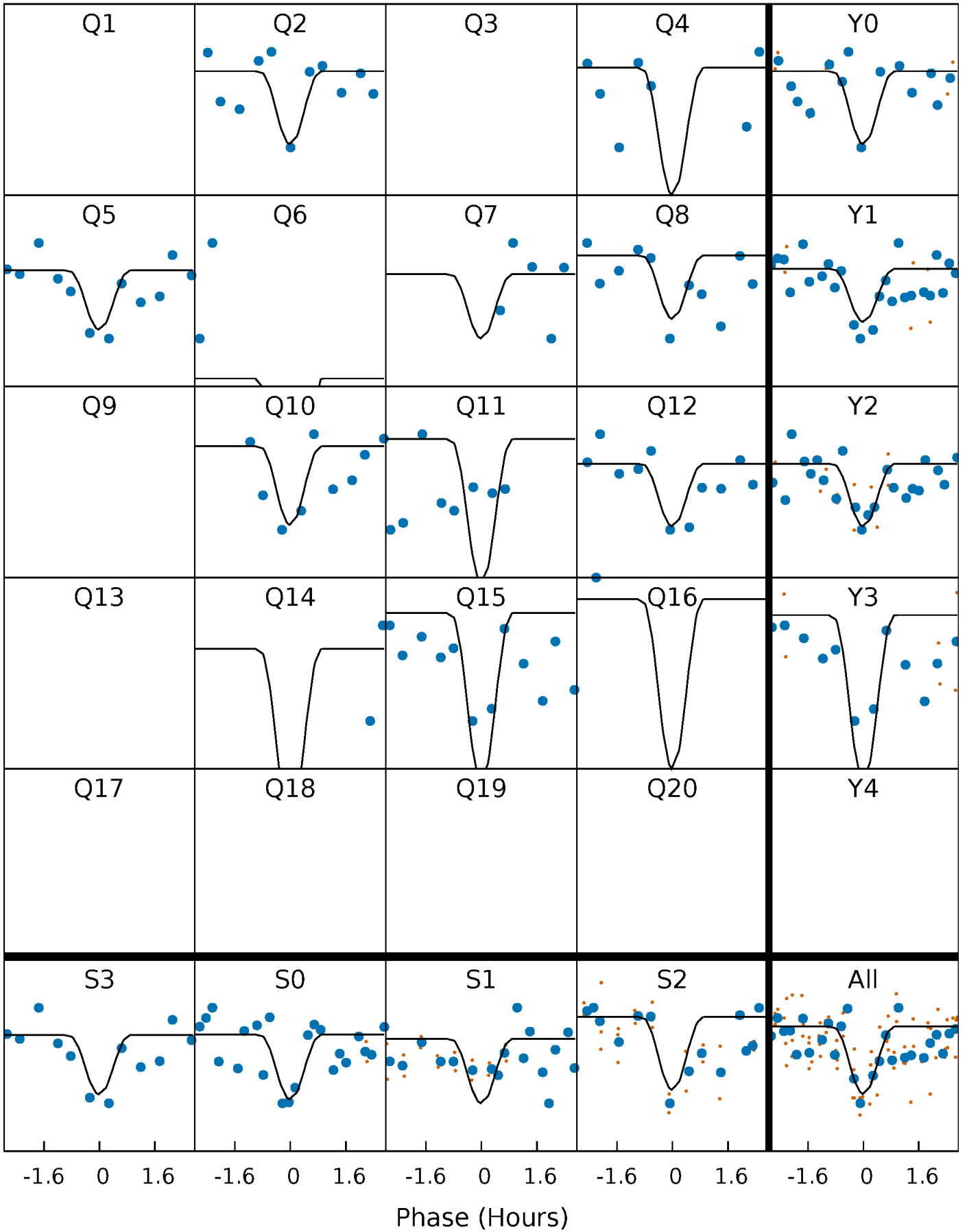
PDC Quarter-Phased Transit Curves

TCE 012268579-03 P= 51.237200 Days $T_0=151.376116$ (BKJD)



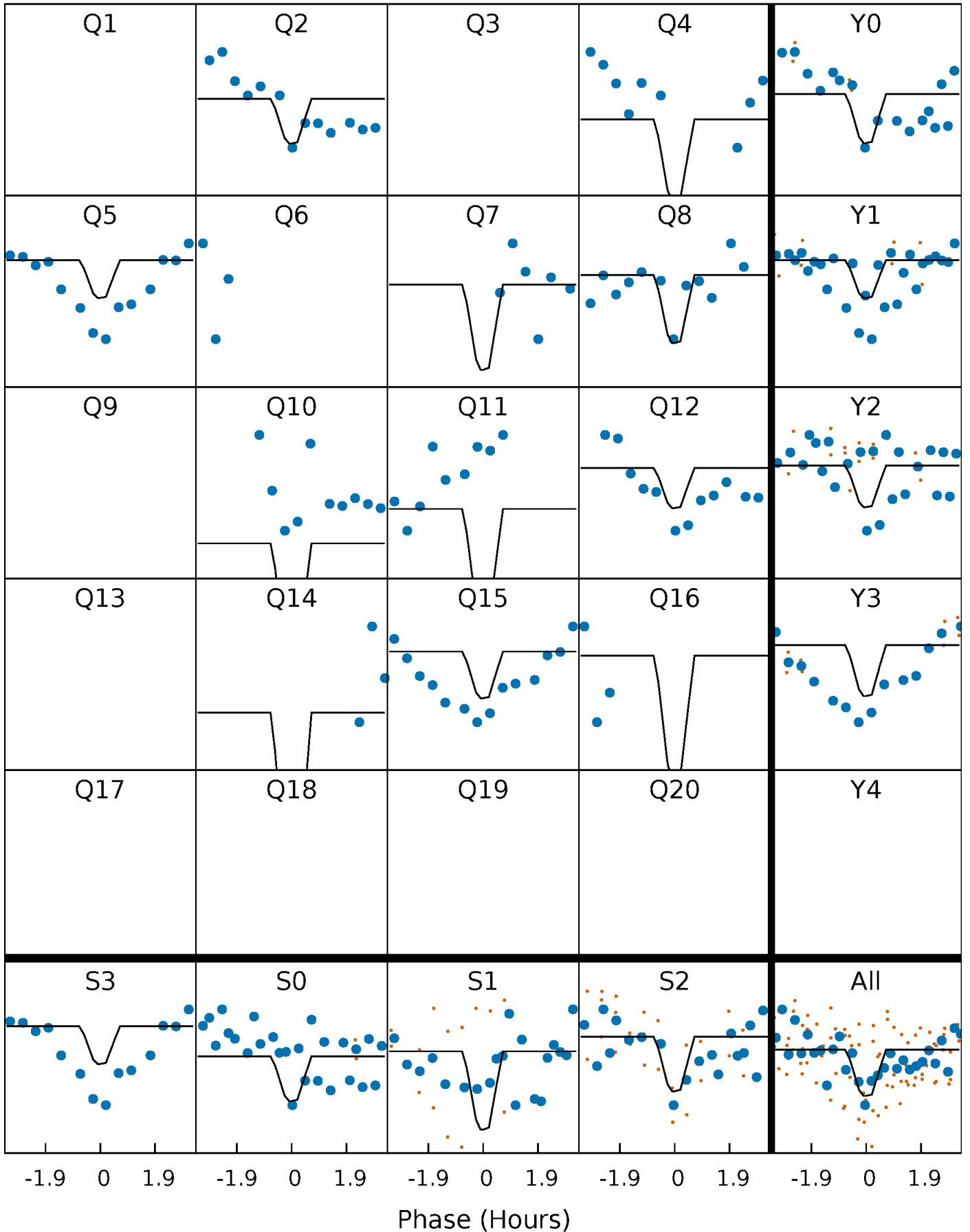
DV Quarter-Phased Transit Curves

TCE 012268579-03 P= 51.237200 Days $T_0=151.376116$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

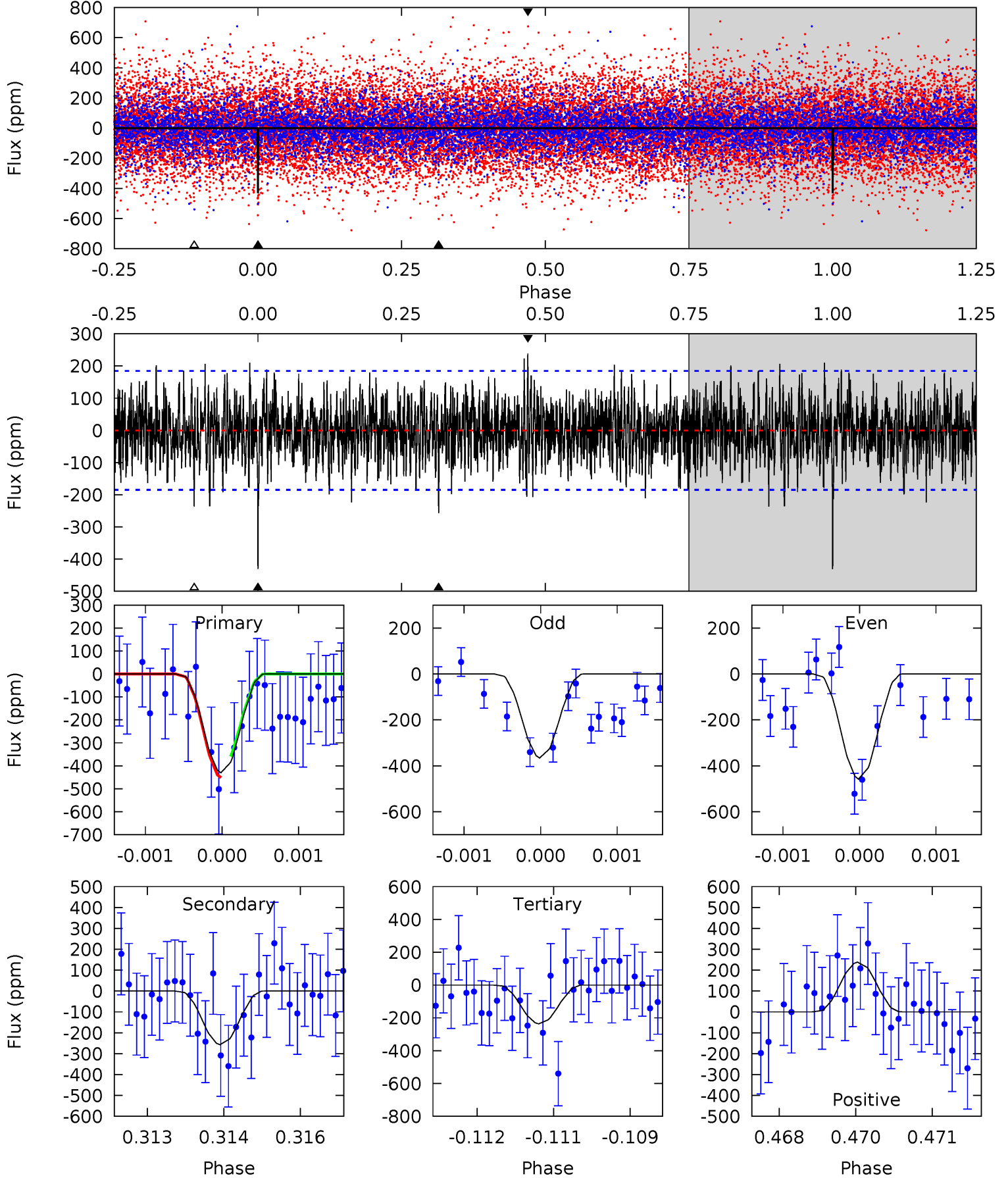
TCE 012268579-03 P= 51.237161 Days $T_0=151.375983$ (BKJD)



DV Model-Shift Uniqueness Test

012268579-03, $P = 51.237200$ Days, $E = 100.138916$ Days

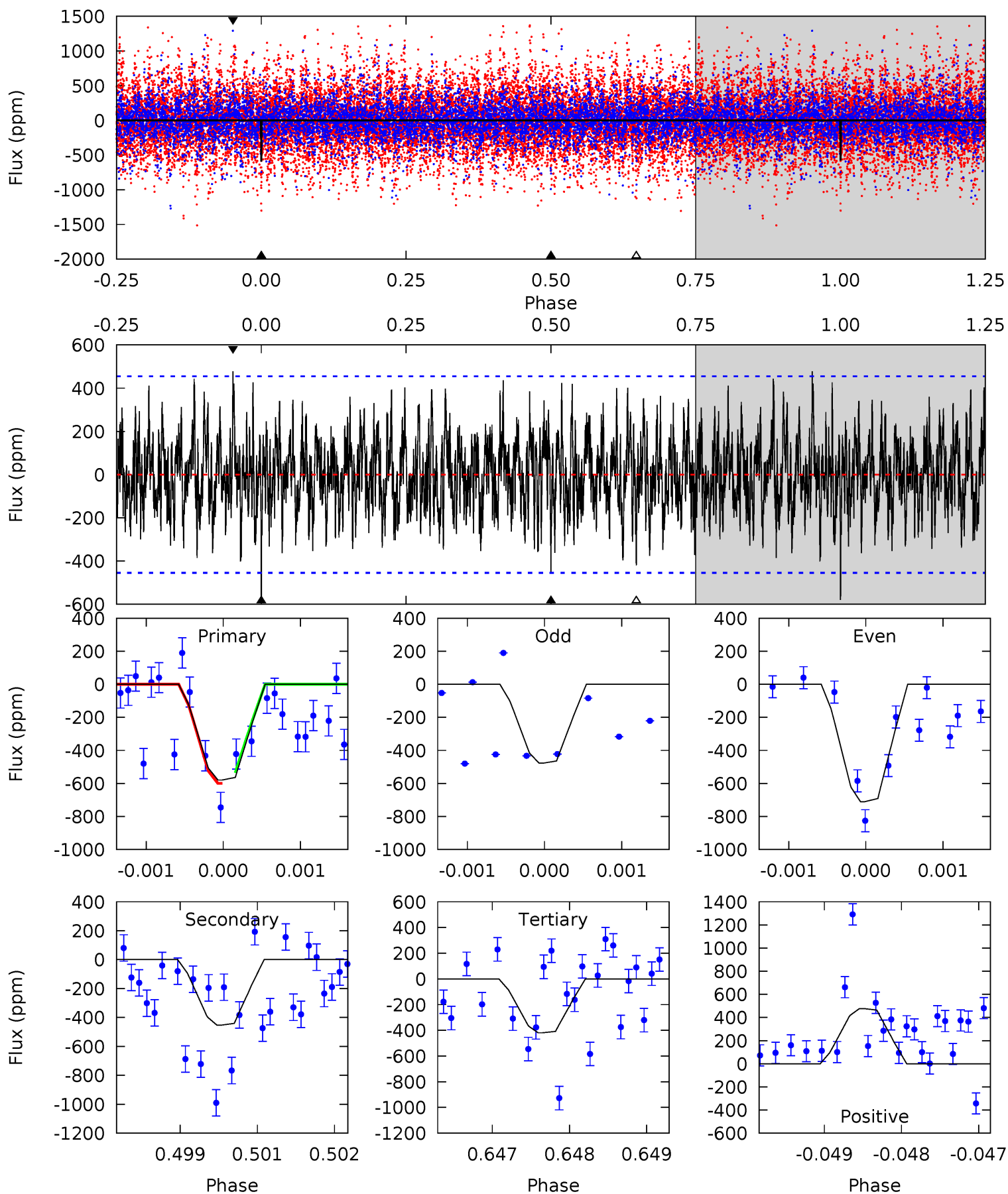
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.6	7.51	6.91	6.96	5.40	3.21	2.00	5.67	5.61	0.60	0.55	1.35	0.85	0.36	1.36



Alt Model-Shift Uniqueness Test

012268579-03, P = 51.237161 Days, E = 100.138822 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.94	5.42	5.02	5.71	5.45	3.28	1.76	1.92	1.23	0.40	-0.29	1.40	0.96	0.45	0.39



Stellar Parameters For KIC 012268579

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7304^{+228}_{-304}	$4.150^{+0.153}_{-0.187}$	$-0.280^{+0.250}_{-0.350}$	$1.655^{+0.521}_{-0.347}$	$1.410^{+0.226}_{-0.226}$	$0.438^{+0.387}_{-0.217}$
	+3%/-4%	+4%/-5%	+89%/-125%	+31%/-21%	+16%/-16%	+88%/-50%
Source	KIC0	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 012268579-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-257 ± 34	$66.23^{+77.86}_{-46.03}$	1061^{+73}_{-74}	2398^{+941}_{-489}	$2.945^{+29.309}_{-2.328}$
Alt.	-453 ± 84	$65.93^{+75.78}_{-47.17}$	1057^{+88}_{-71}	2555^{+1160}_{-453}	$5.360^{+55.500}_{-4.209}$

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

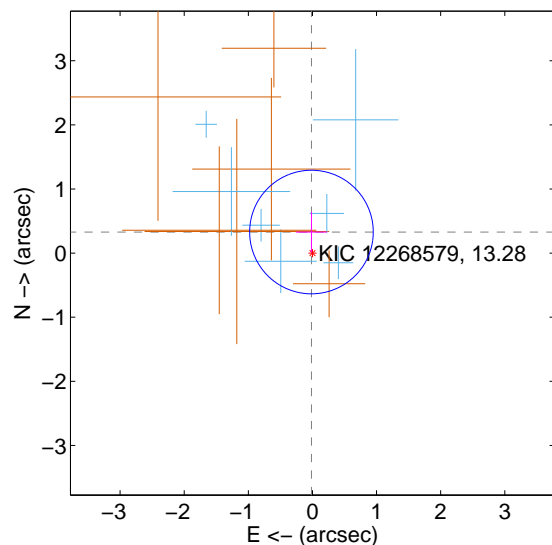
Supplemental centroid analysis for 012268579-03. Kepler magnitude: 13.28. Transit SNR 8.69

There are 7 quarters with good PRF difference image offsets

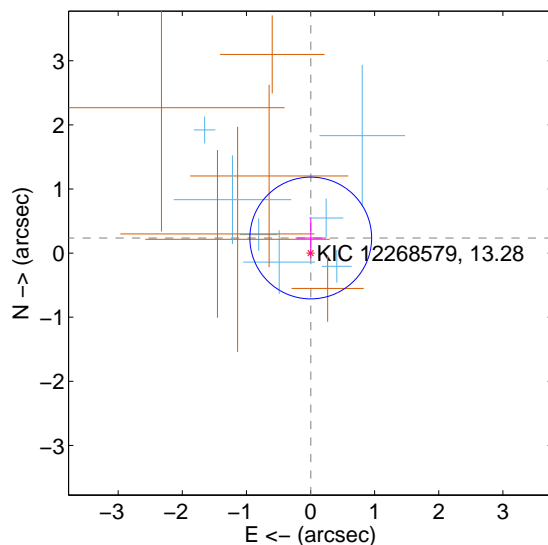
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.329 ± 0.321	1.02	0.015 ± 0.242	0.329 ± 0.318
PRF-fit source offset from KIC position	0.235 ± 0.317	0.74	-0.004 ± 0.236	0.235 ± 0.318
photometric centroid source offset	0.39 ± 0.92	0.43	-0.22 ± 0.89	-0.33 ± 0.93

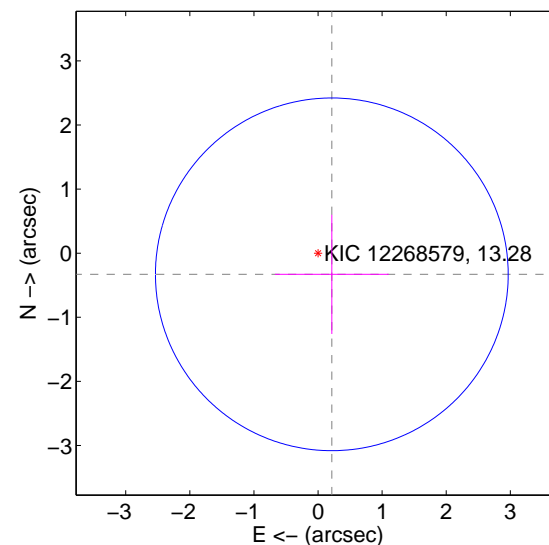
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

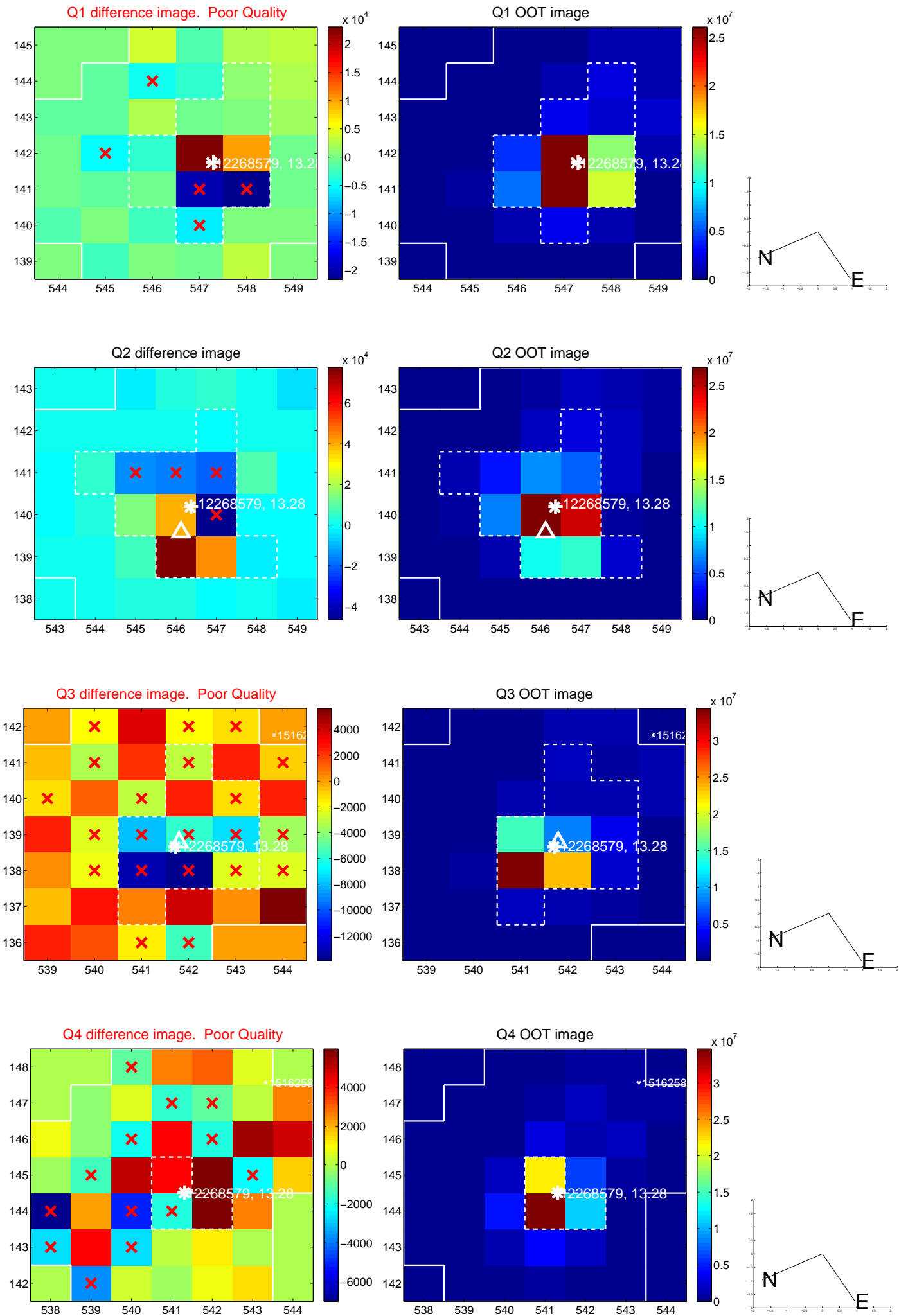


offset from photometric centroids

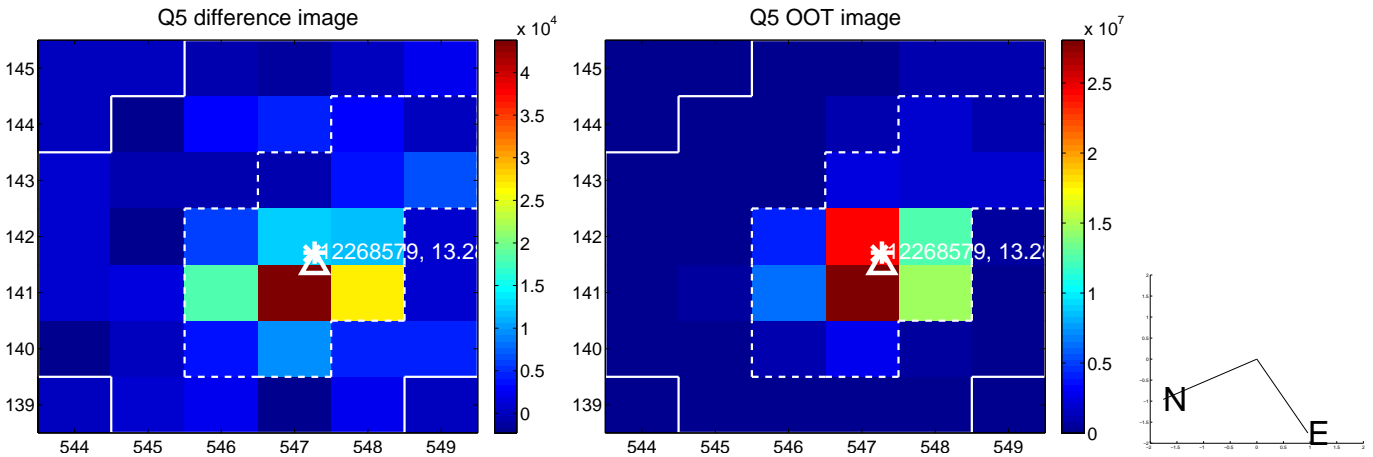


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

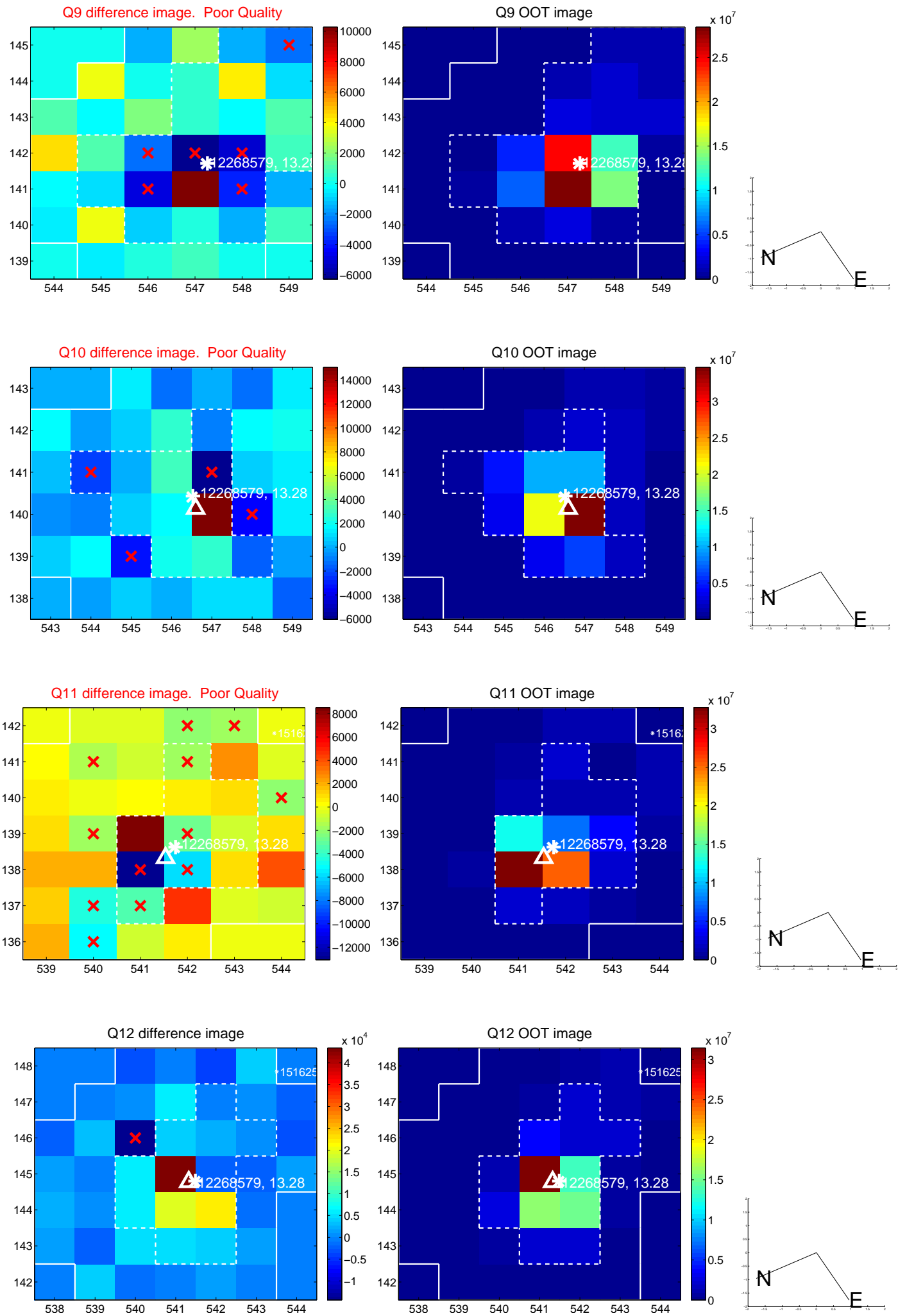
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



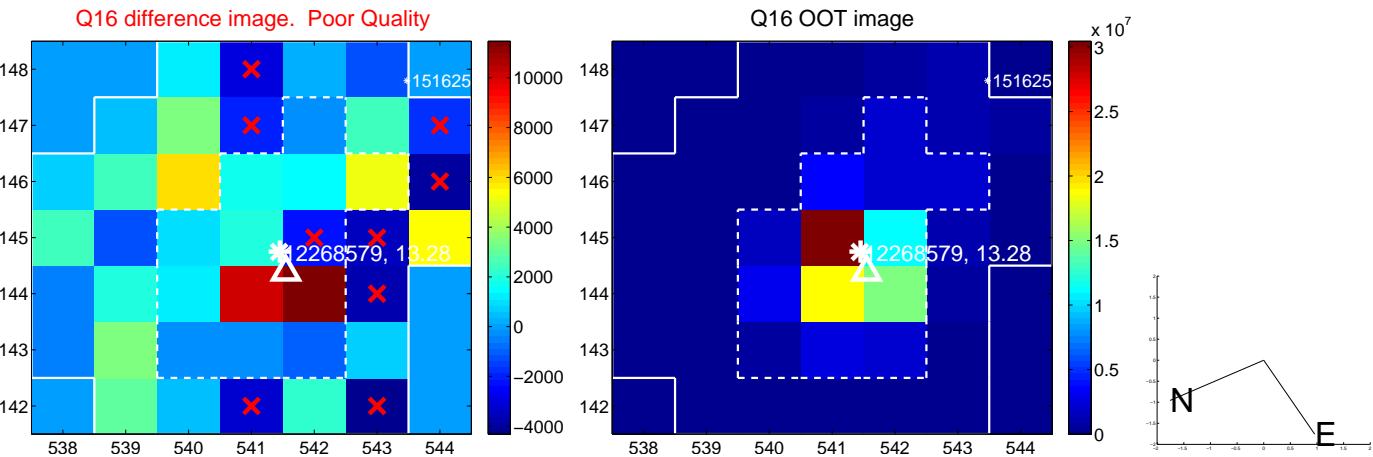
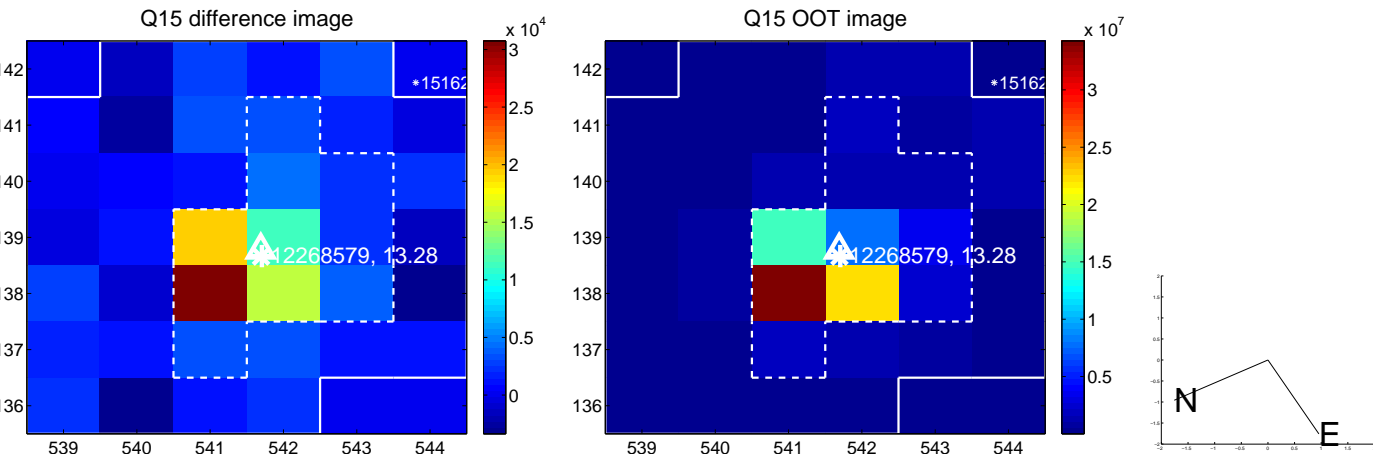
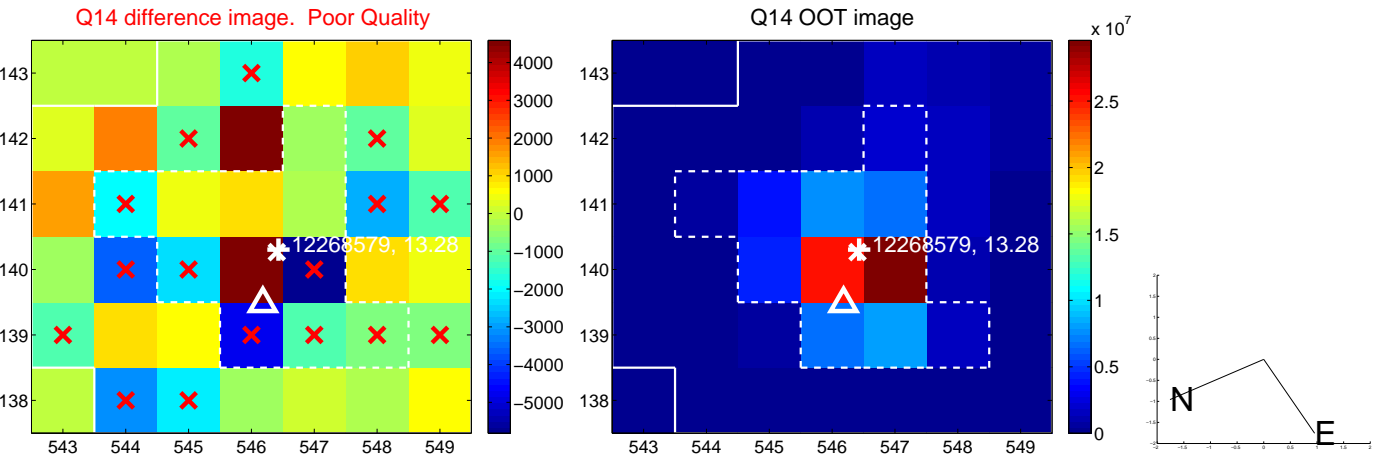
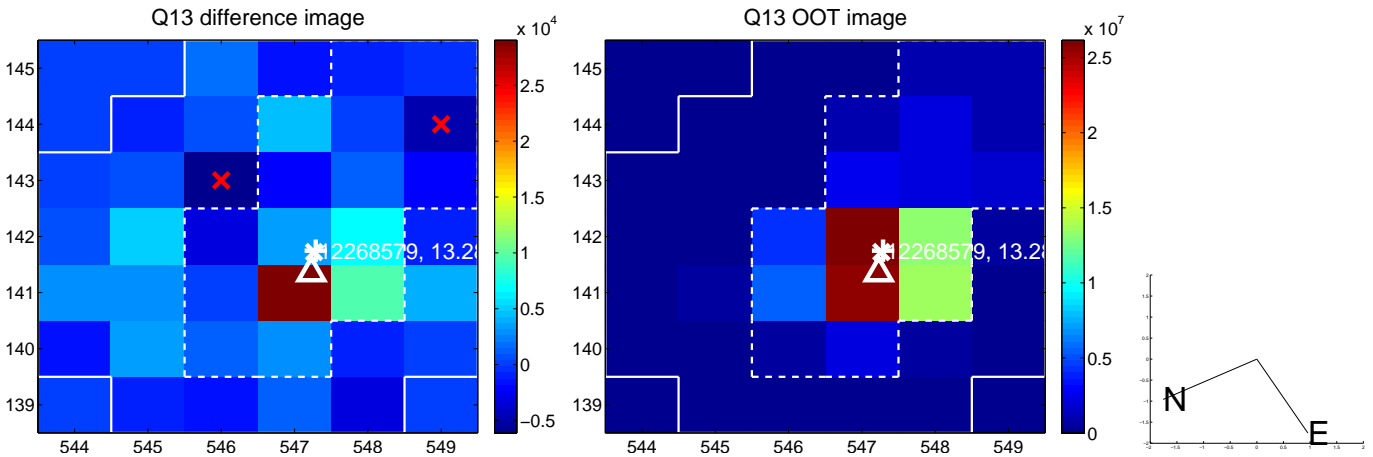
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



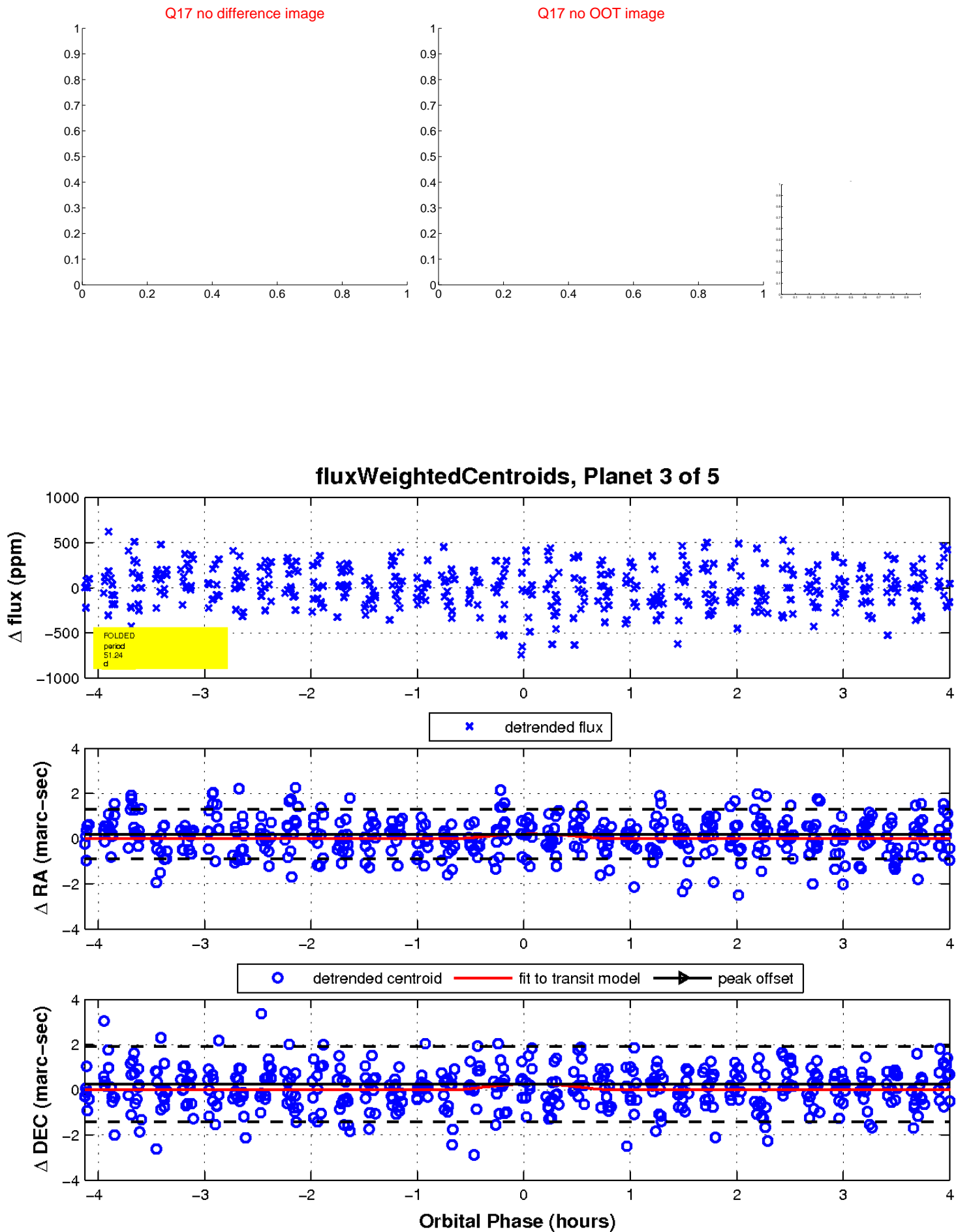
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

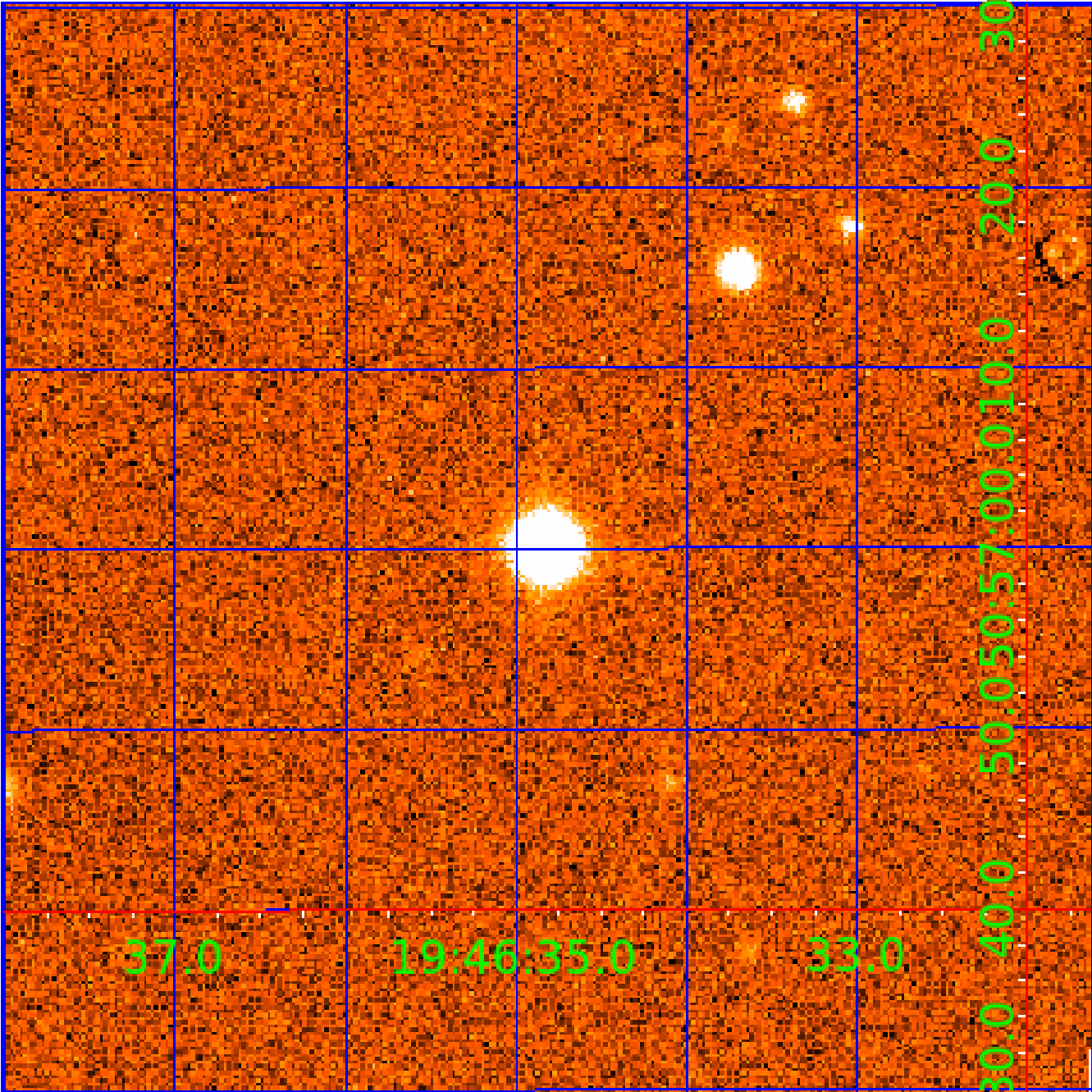


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 012268579

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})
012268579-01	OBS	No	1.202447	131.860865	23.5	6.507	10.5	9.5	1.66	7304	0.84	11330.47
012268579-02	OBS	No	234.319903	308.169124	330.6	8.506	10.0	8.2	1.66	7304	3.32	10.03
012268579-03	OBS	No	51.237200	151.376116	440.8	1.378	8.5	8.7	1.66	7304	6.78	76.13
012268579-04	OBS	No	130.032605	190.126204	250.0	5.111	8.1	6.8	1.66	7304	2.90	21.99
012268579-05	OBS	No	250.046673	295.932130	450.7	1.751	7.8	6.9	1.66	7304	4.08	9.20

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012268579-01	OBS	FP	0.00	1	0	0	0	LPP_DV
012268579-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS
012268579-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
012268579-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
012268579-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT— MOD_POS_ALT

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

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

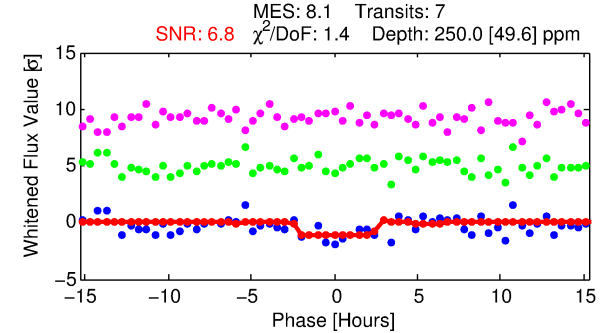
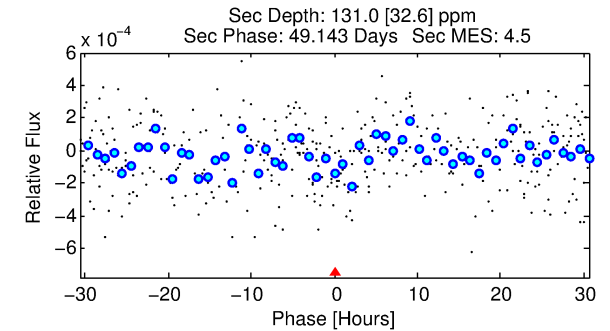
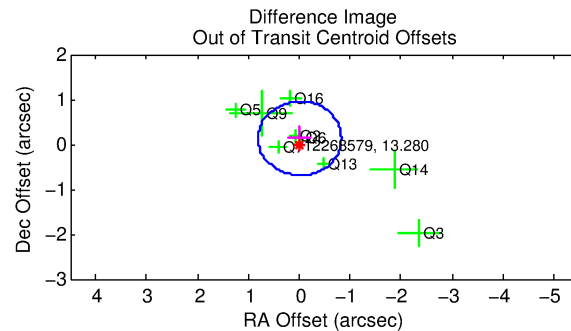
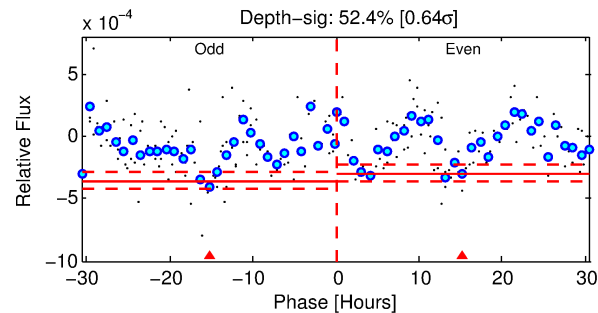
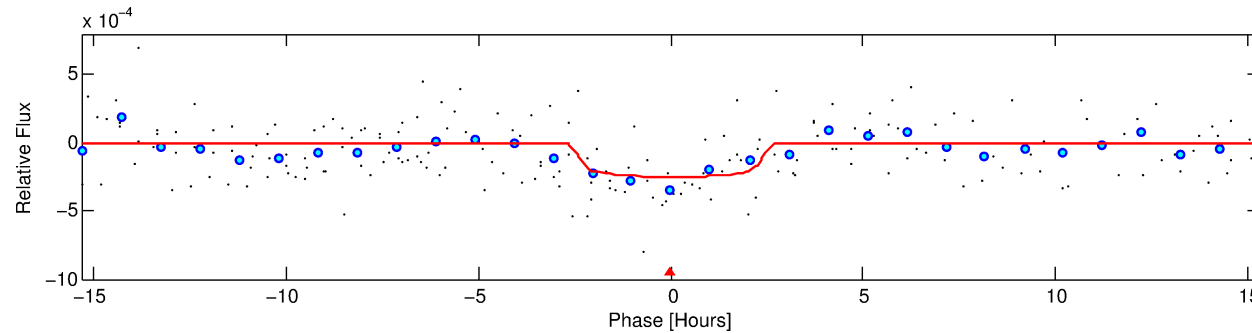
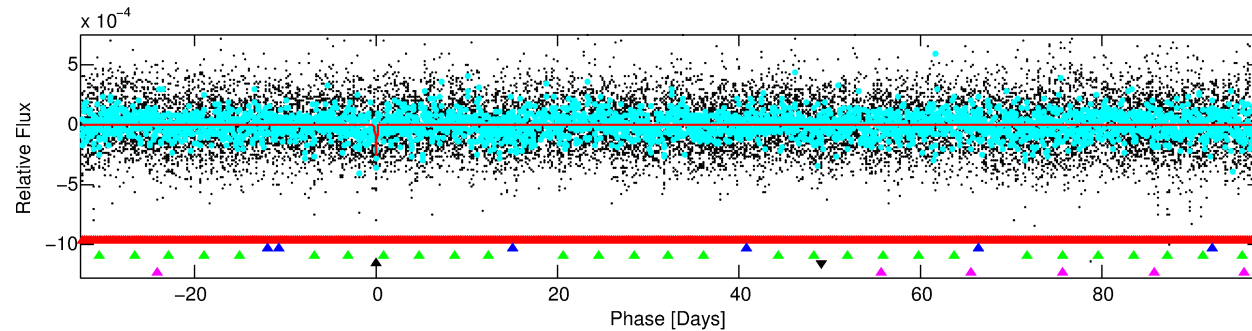
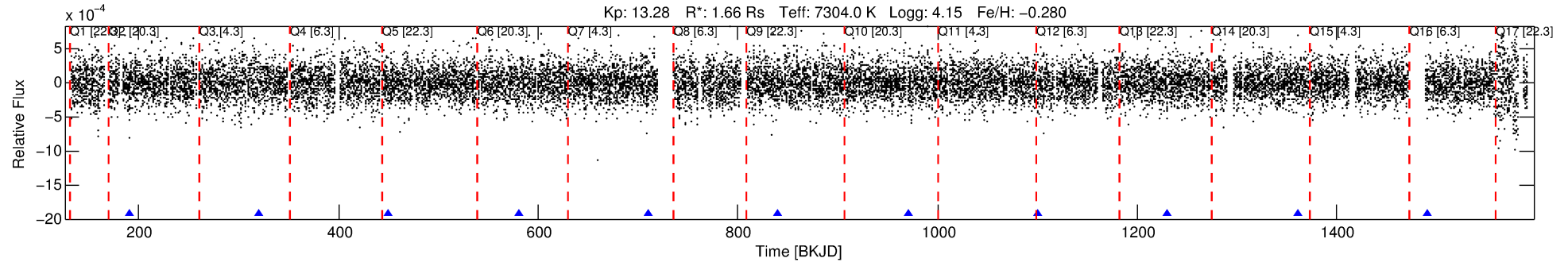
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012268579-04

No Significant Match Found

DV One-Page Summary

KIC: 12268579 Candidate: 4 of 5 Period: 130.033 d



DV Fit Results:

Period = 130.03260 [0.00254] d
Epoch = 190.1262 [0.0156] BKJD
Rp/R* = 0.0161 [0.0077]
a/R* = 116.51 [335.04]
b = 0.82 [1.15]
Seff = 21.99 [8.63]
Teq = 552 [54] K
Rp = 2.91 [1.66] Re
a = 0.5635 [0.1433] AU
Ag = 2711.63 [2845.54] [0.95 σ]
Teffp = 6161 [1542] K [3.63 σ]

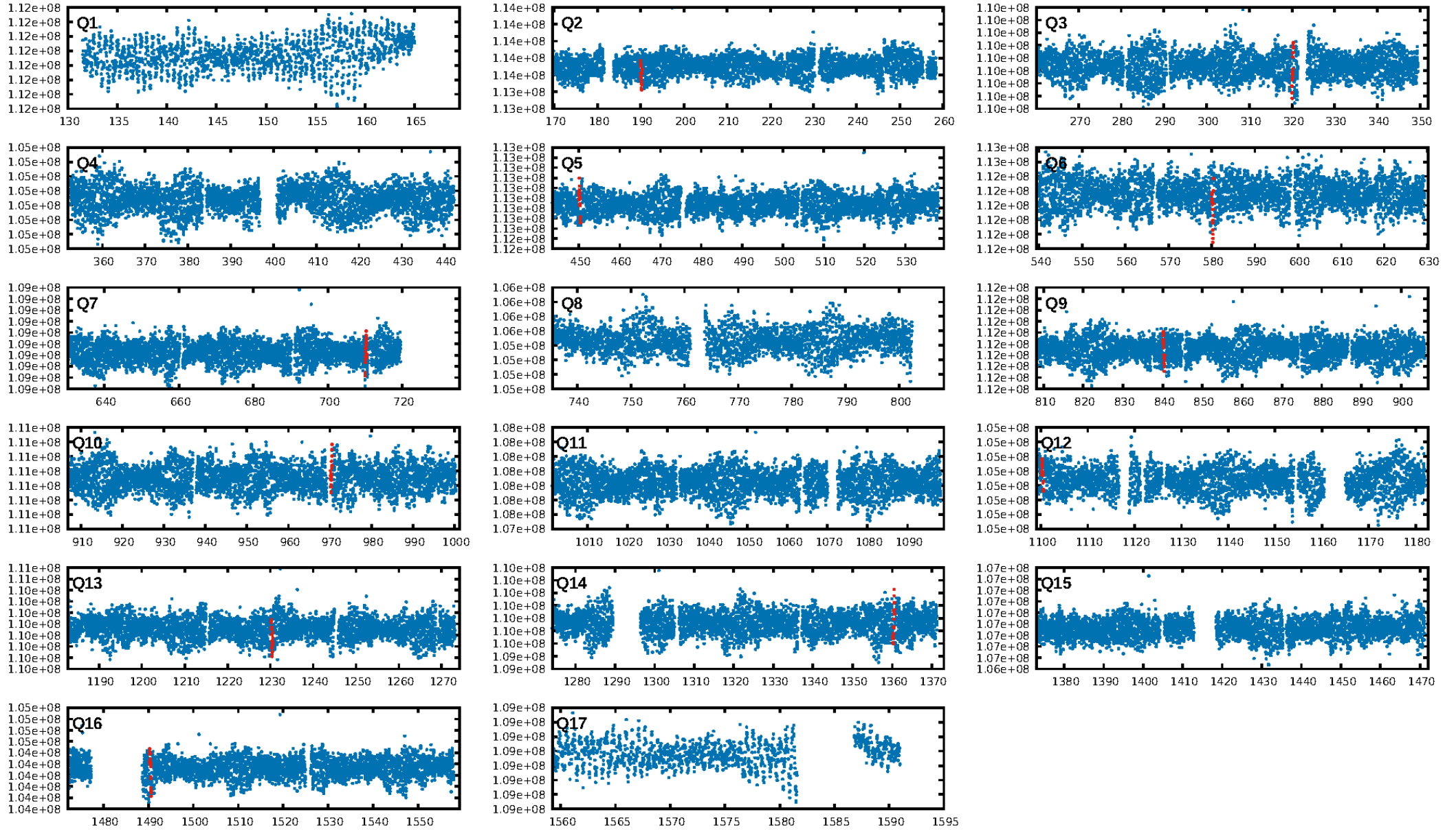
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [357.27 σ]
LongPeriod-sig: 100.0% [252.23 σ]
ModelChiSquare2-sig: 25.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.52e-10
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: 1.262
Centroid-sig: 10.3%
Centroid-so: 1.636 arcsec [1.31 σ]
OotOffset-rm: 0.130 arcsec [0.47 σ]
KicOffset-rm: 0.064 arcsec [0.25 σ]
OotOffset-st: 3/2/1/3 [9]
KicOffset-st: 3/2/1/3 [9]
DiffImageQuality-fgm: 0.44 [4/9]
DiffImageOverlap-fno: 0.00 [0/9]

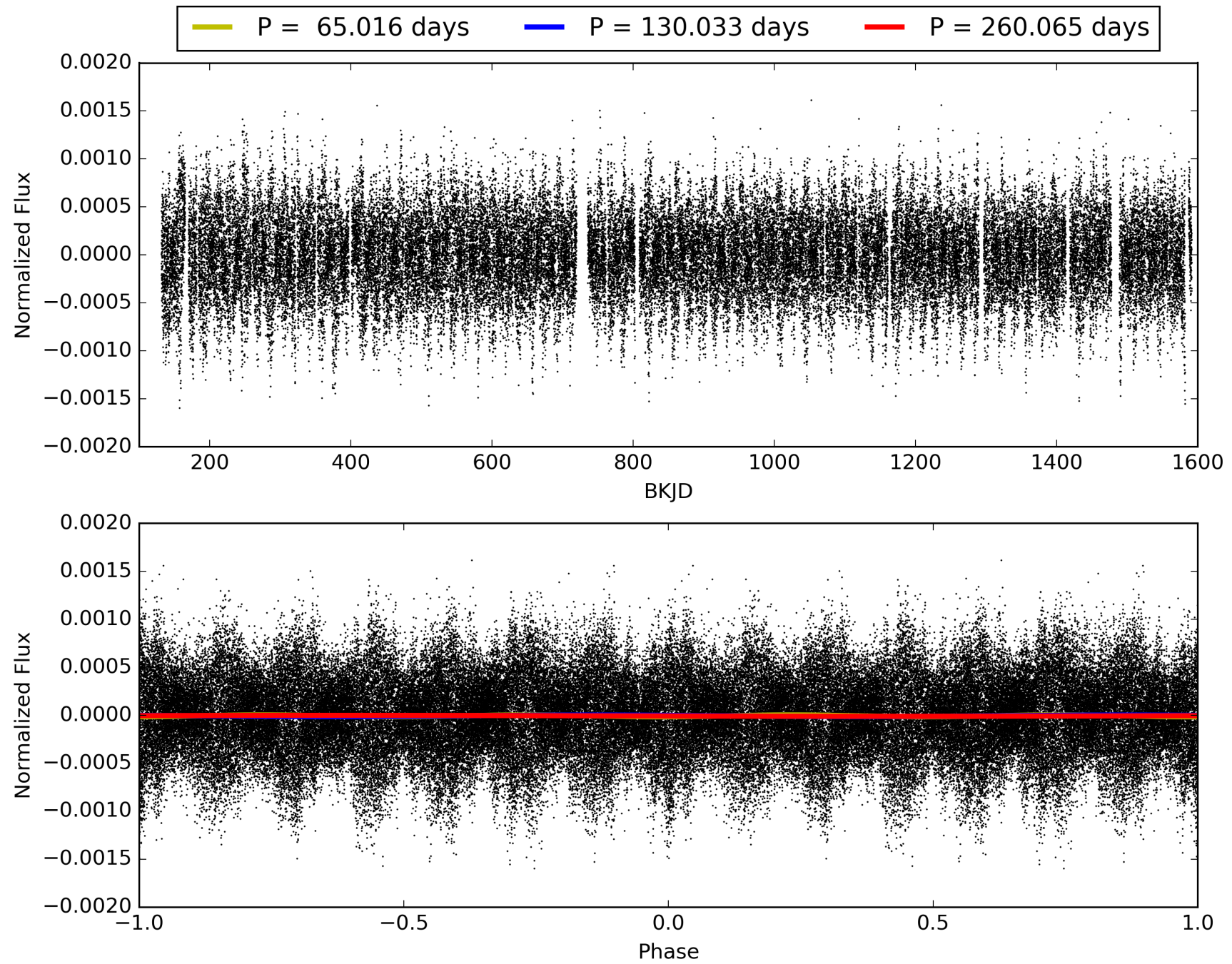
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 03:10:51 Z

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

TCE 012268579-04, PDC Light Curves

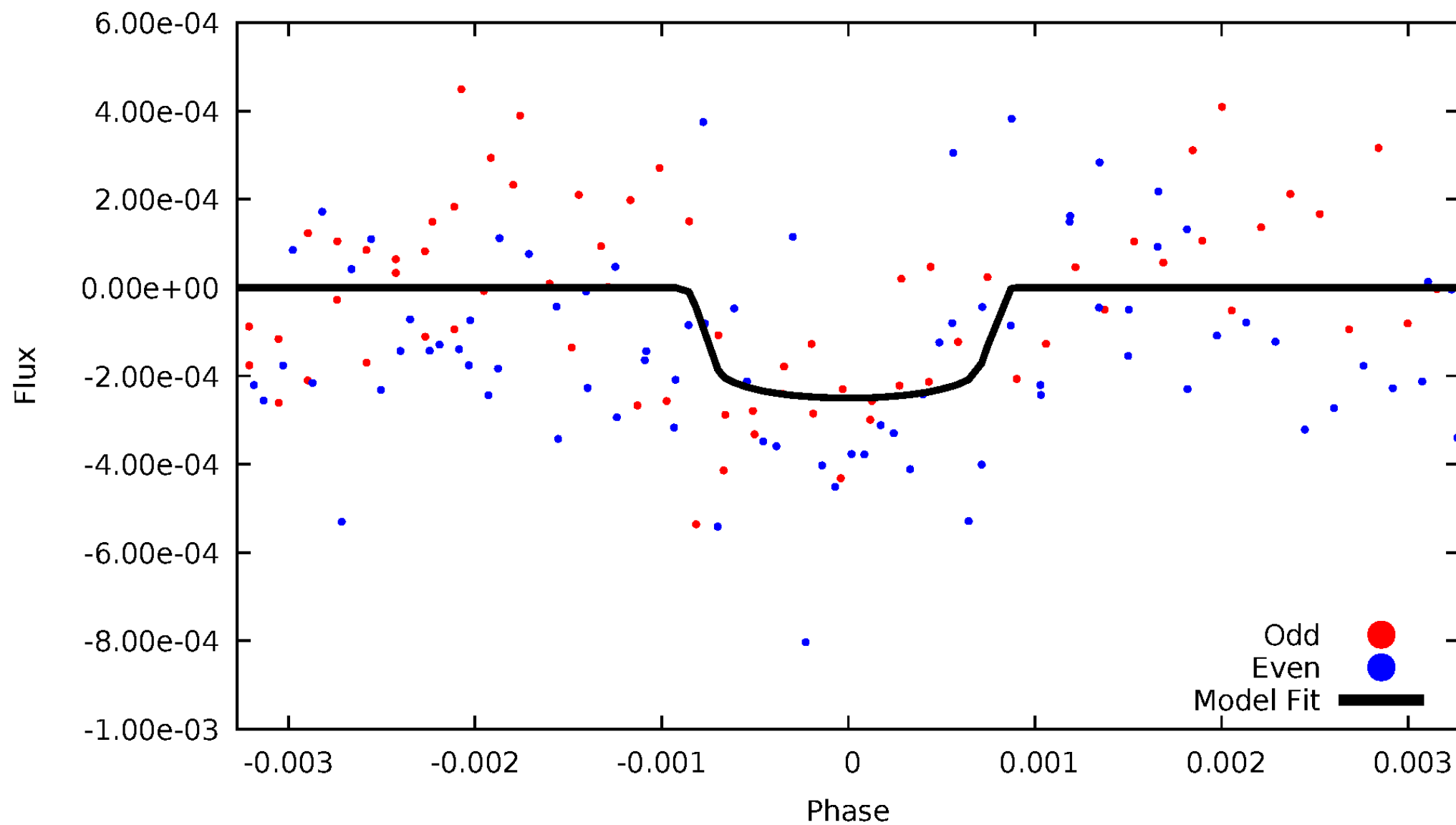


TCE 012268579-04



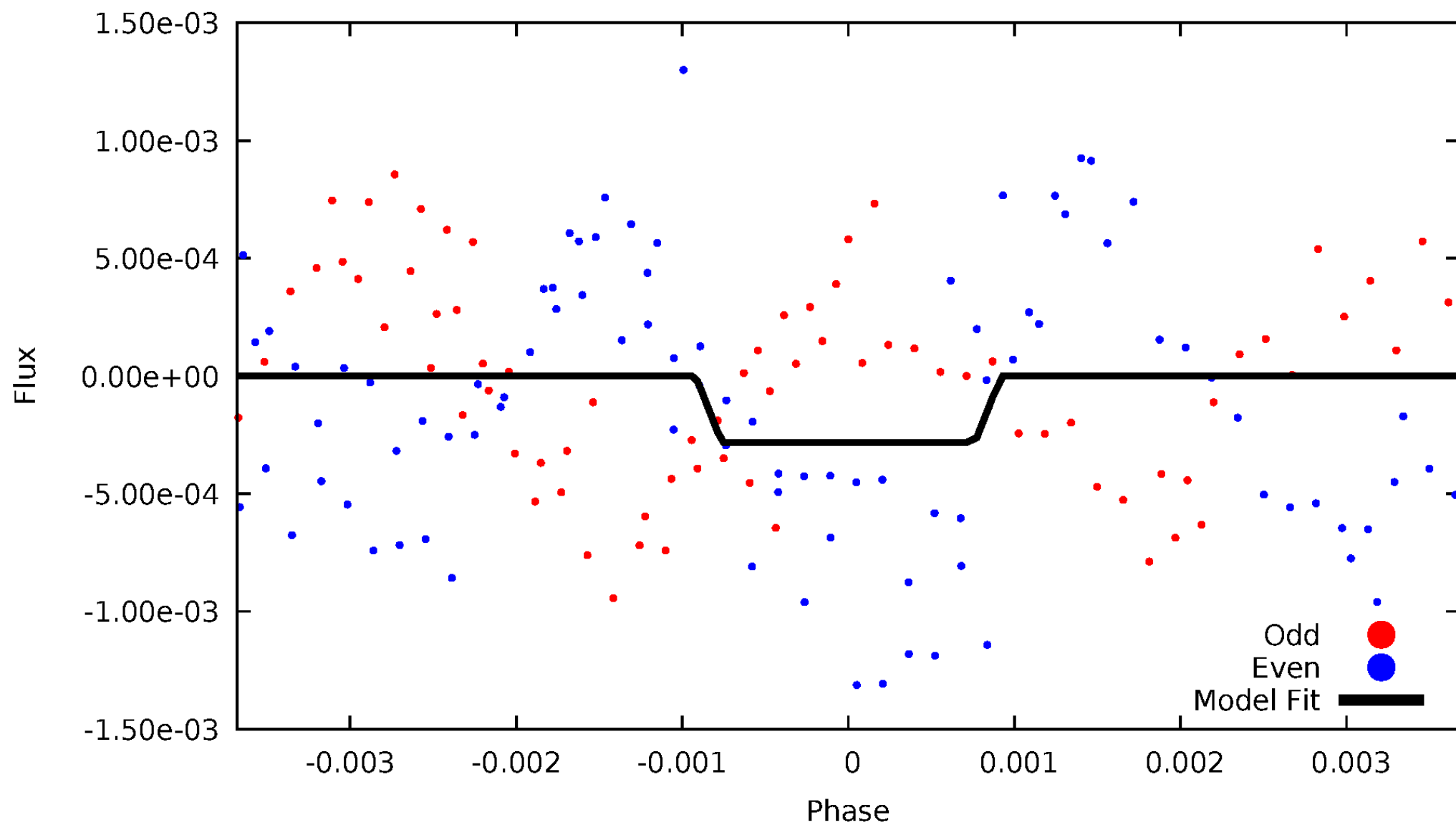
DV Odd/Even

TCE 012268579-04



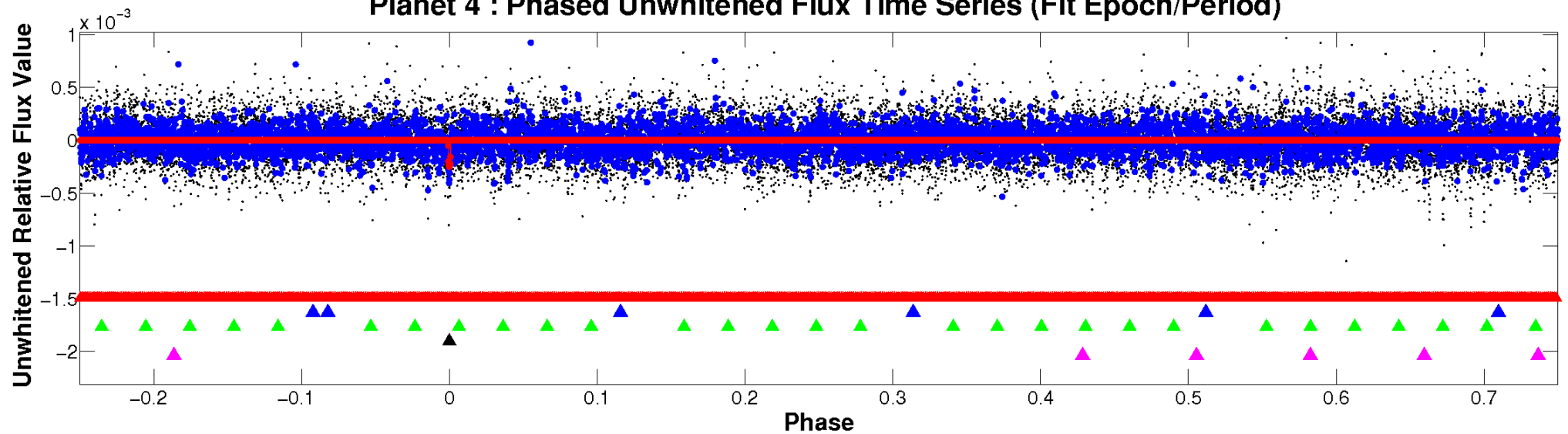
ALT Odd/Even

TCE 012268579-04

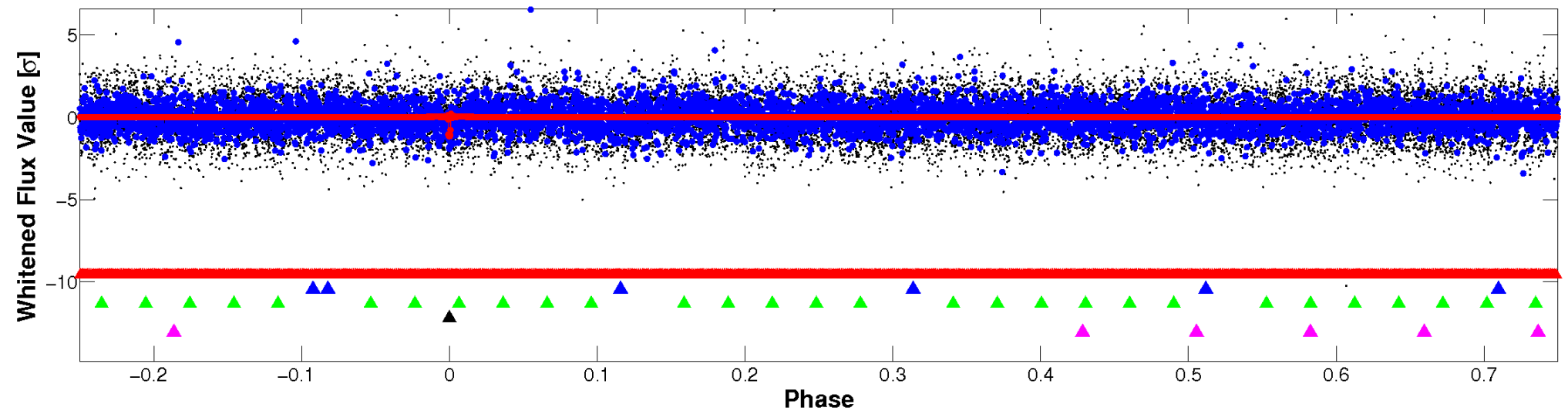


Non-Whitened Vs. Whitened Light Curve

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

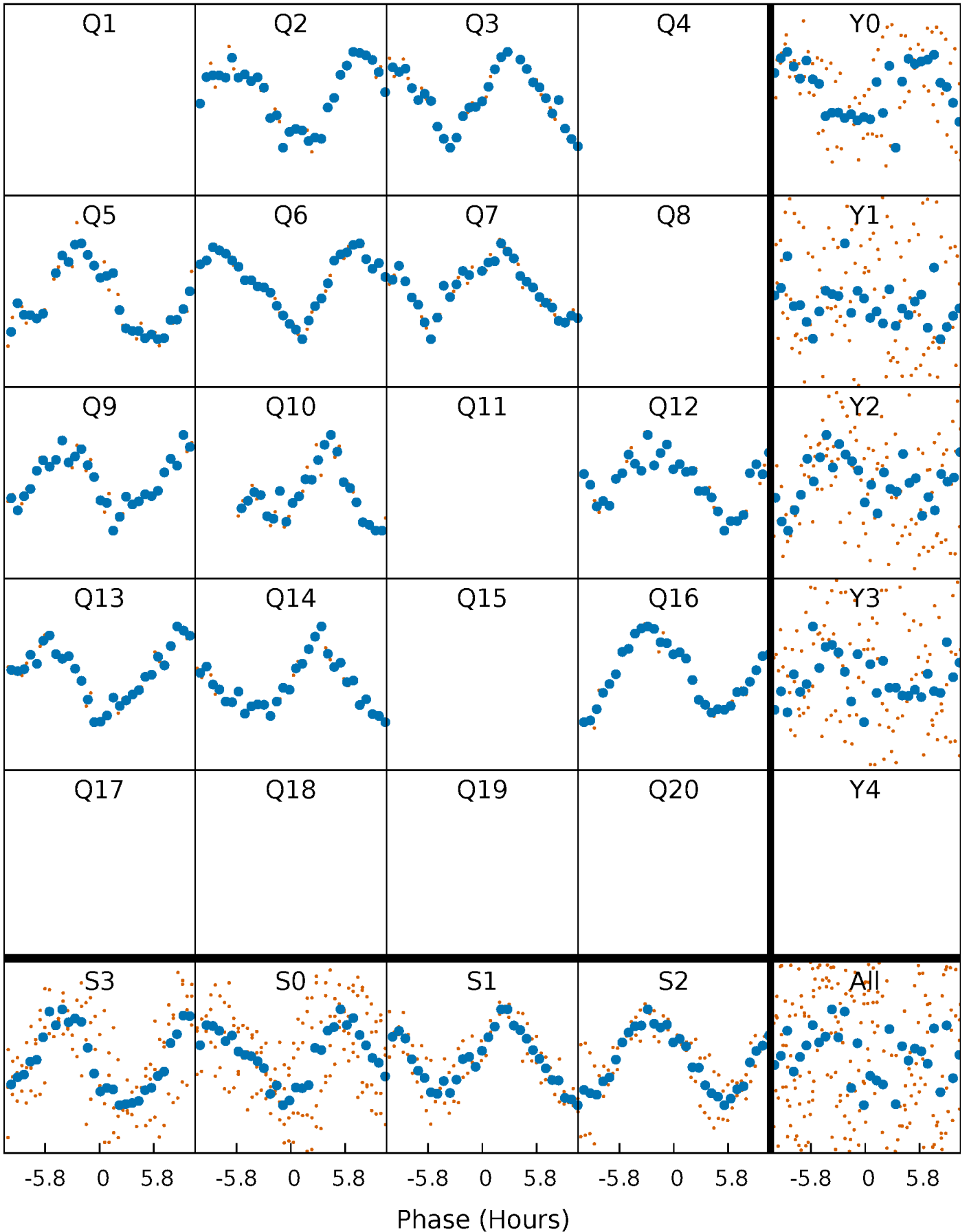


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



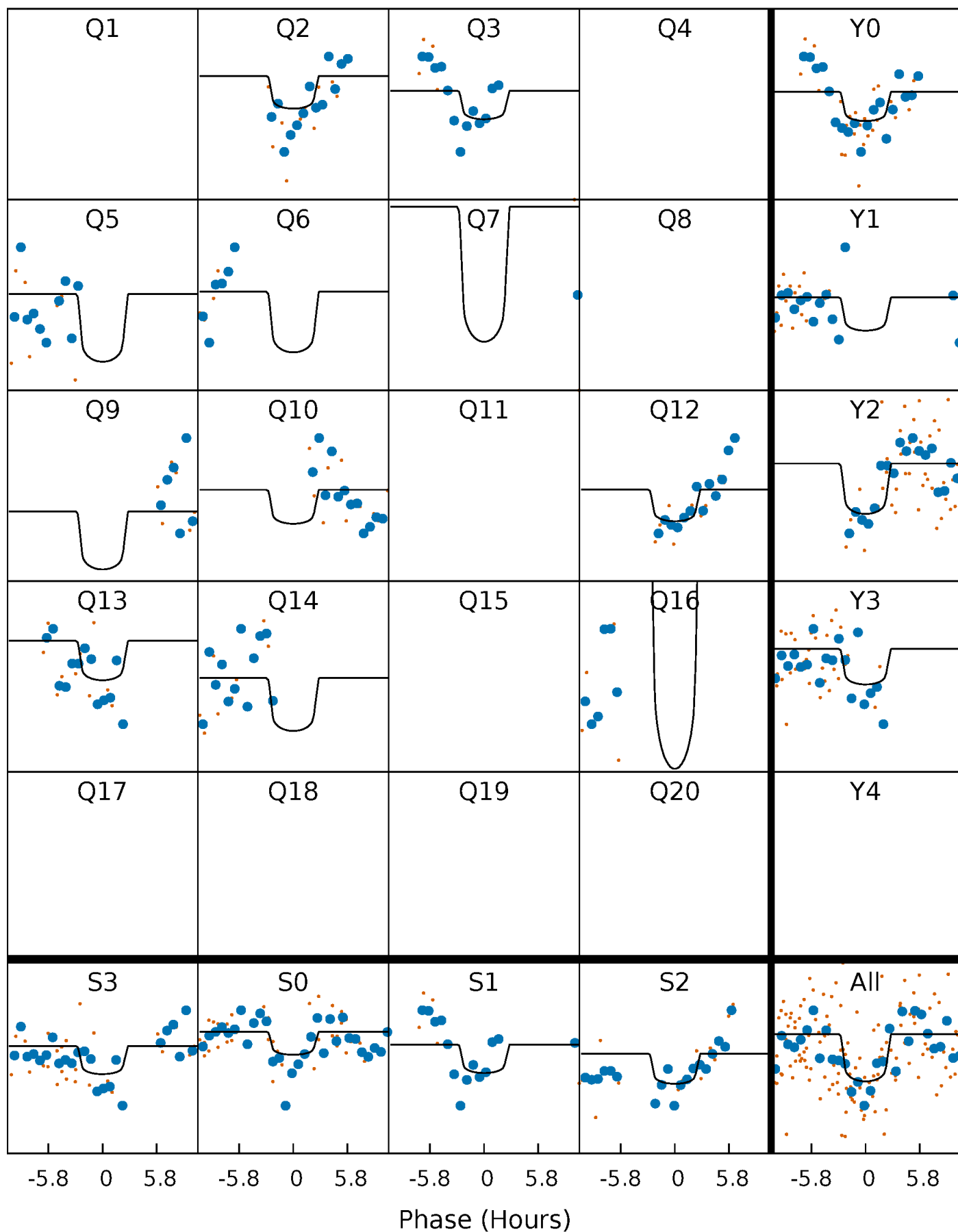
PDC Quarter-Phased Transit Curves

TCE 012268579-04 P=130.032605 Days $T_0=190.126204$ (BKJD)



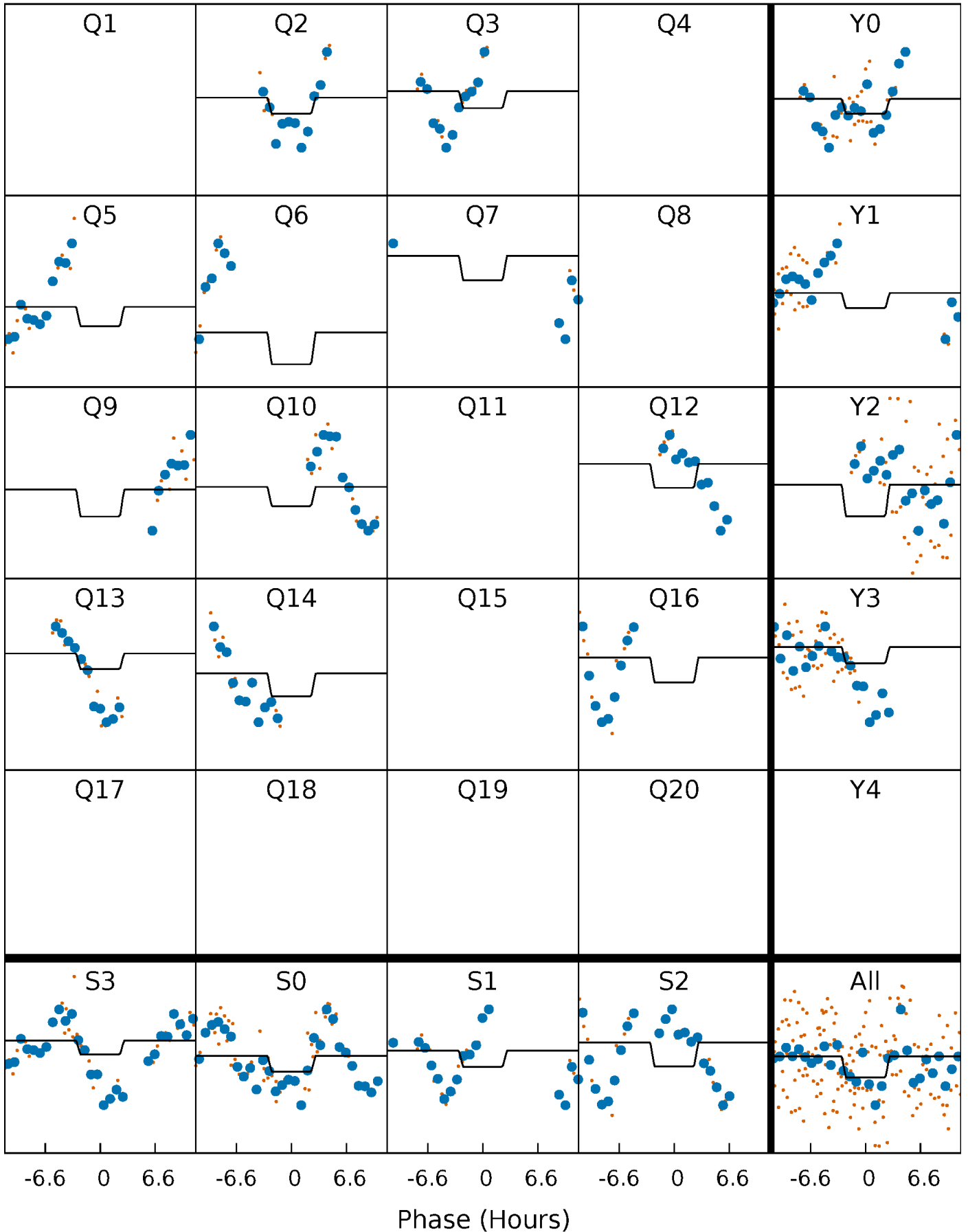
DV Quarter-Phased Transit Curves

TCE 012268579-04 P=130.032605 Days $T_0=190.126204$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

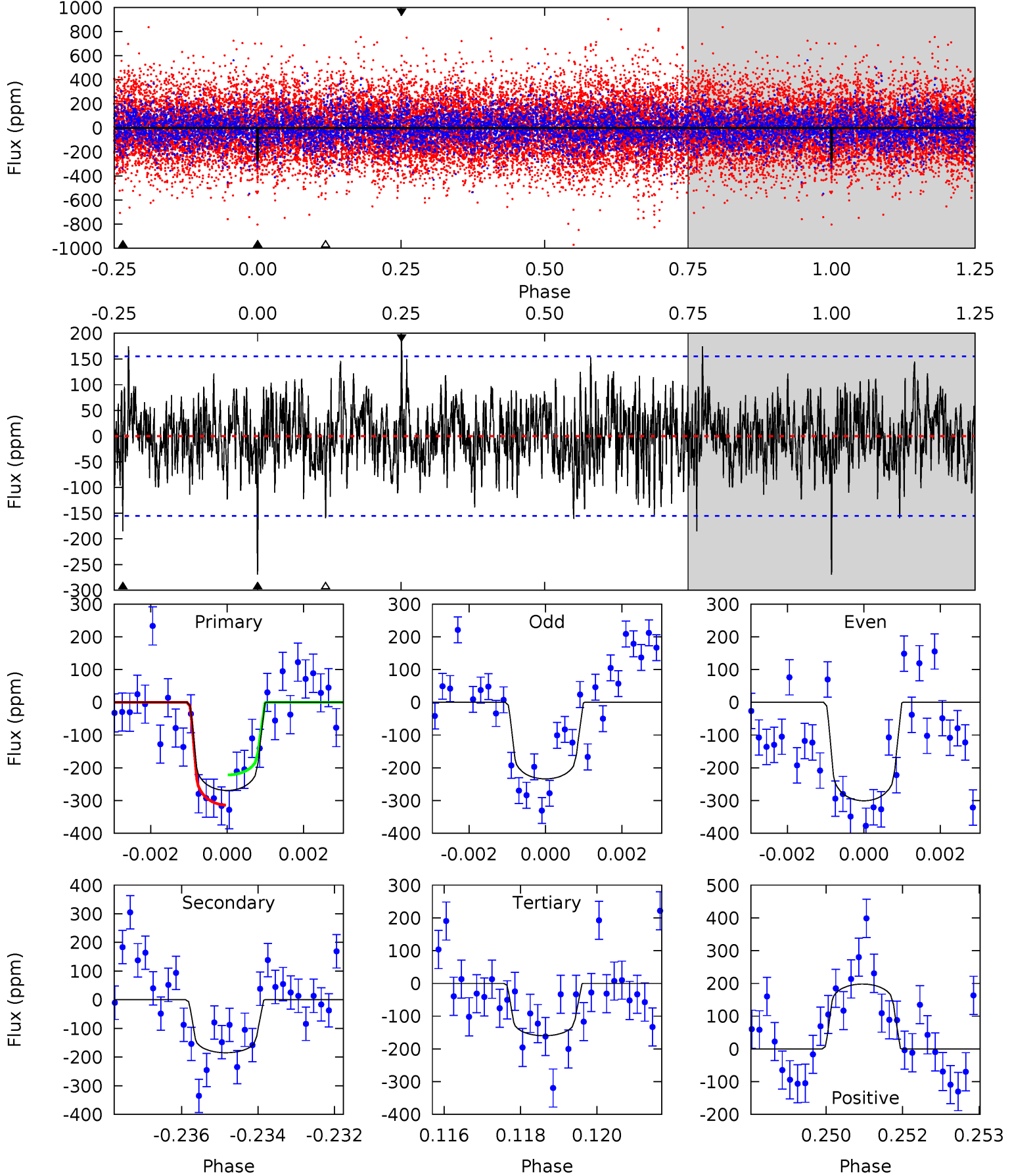
TCE 012268579-04 P=130.023772 Days $T_0=190.171973$ (BKJD)



DV Model-Shift Uniqueness Test

012268579-04, P = 130.032605 Days, E = 60.093599 Days

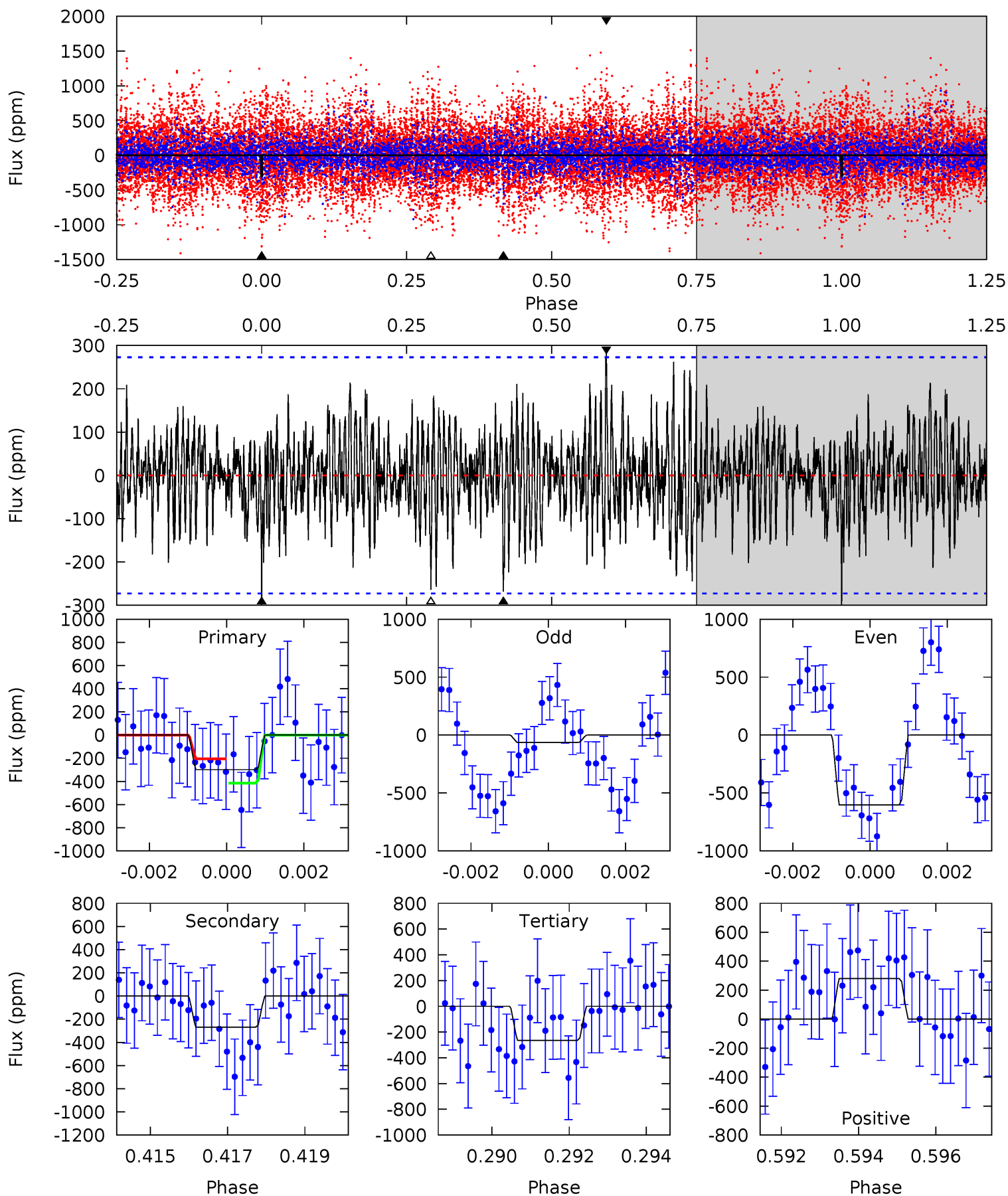
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.27	6.37	5.51	6.82	5.35	3.13	1.73	3.77	2.45	0.86	-0.45	1.16	0.78	0.42	1.59



Alt Model-Shift Uniqueness Test

012268579-04, P = 130.023772 Days, E = 60.148201 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.85	5.25	5.16	5.48	5.34	3.11	1.53	0.68	0.36	0.09	-0.23	5.28	1.18	0.48	2.07



Stellar Parameters For KIC 012268579

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7304^{+228}_{-304}	$4.150^{+0.153}_{-0.187}$	$-0.280^{+0.250}_{-0.350}$	$1.655^{+0.521}_{-0.347}$	$1.410^{+0.226}_{-0.226}$	$0.438^{+0.387}_{-0.217}$
	+3%/-4%	+4%/-5%	+89%/-125%	+31%/-21%	+16%/-16%	+88%/-50%
Source	KIC0	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 012268579-04 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-185 ± 29	$2.86^{+1.54}_{-1.35}$	770^{+65}_{-52}	6628^{+3167}_{-1183}	3883^{+10316}_{-2242}
Alt.	-268 ± 51	$3.00^{+1.55}_{-1.29}$	777^{+60}_{-54}	7260^{+3227}_{-1480}	5015^{+10593}_{-2944}

T_{max} = Theoretical Maximum Planetary Temperature

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

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

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

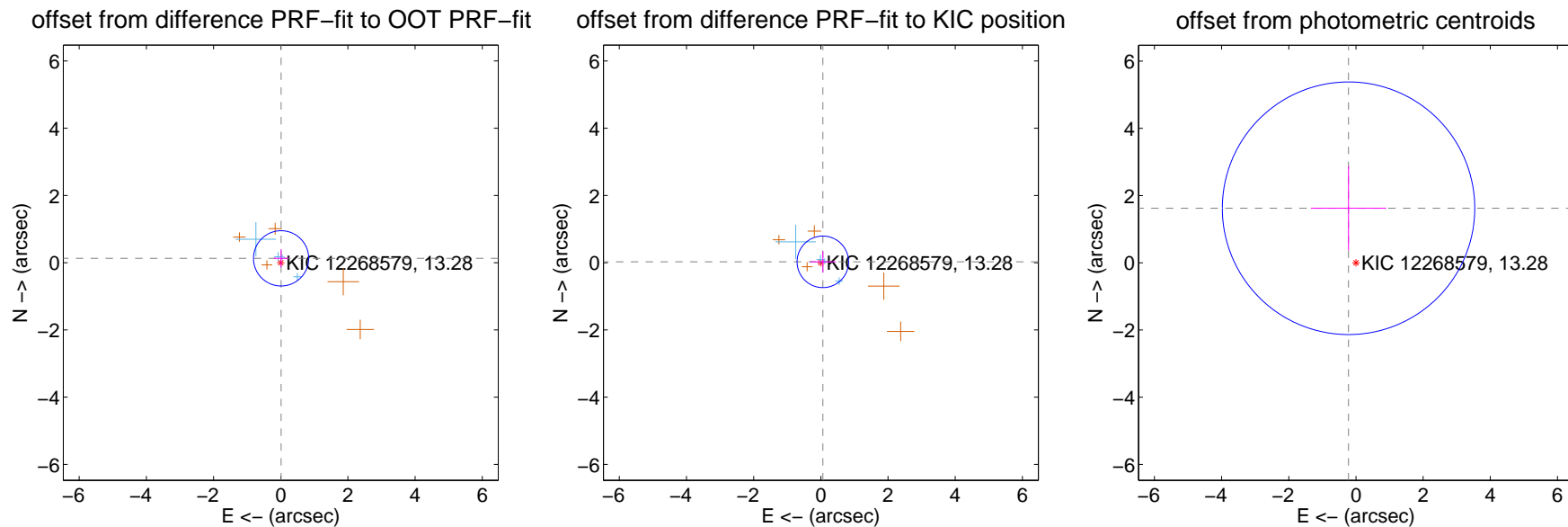
DV Centroid Data

Supplemental centroid analysis for 012268579-04. Kepler magnitude: 13.28. Transit SNR 6.76

There are 4 quarters with good PRF difference image offsets

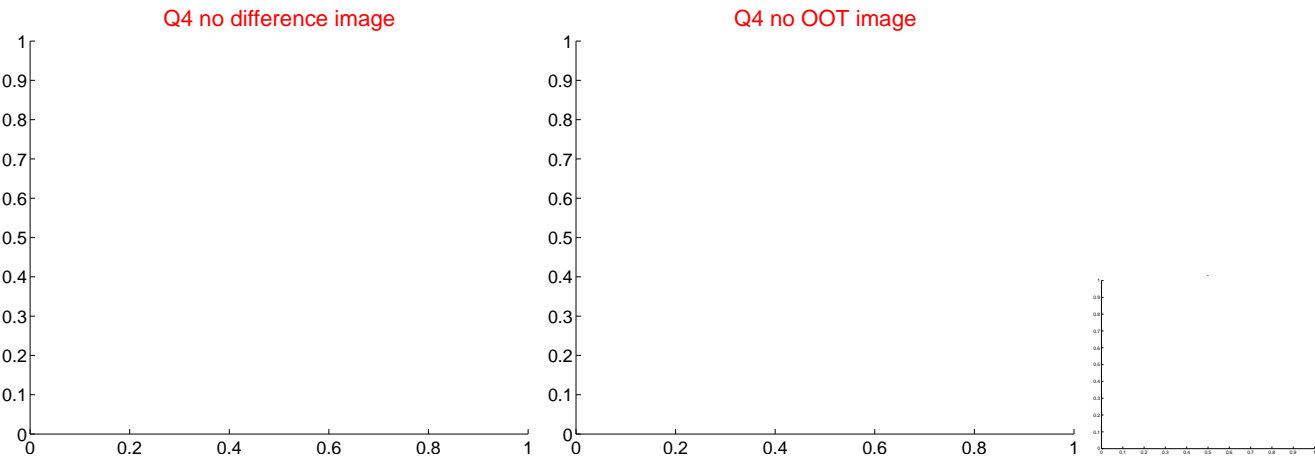
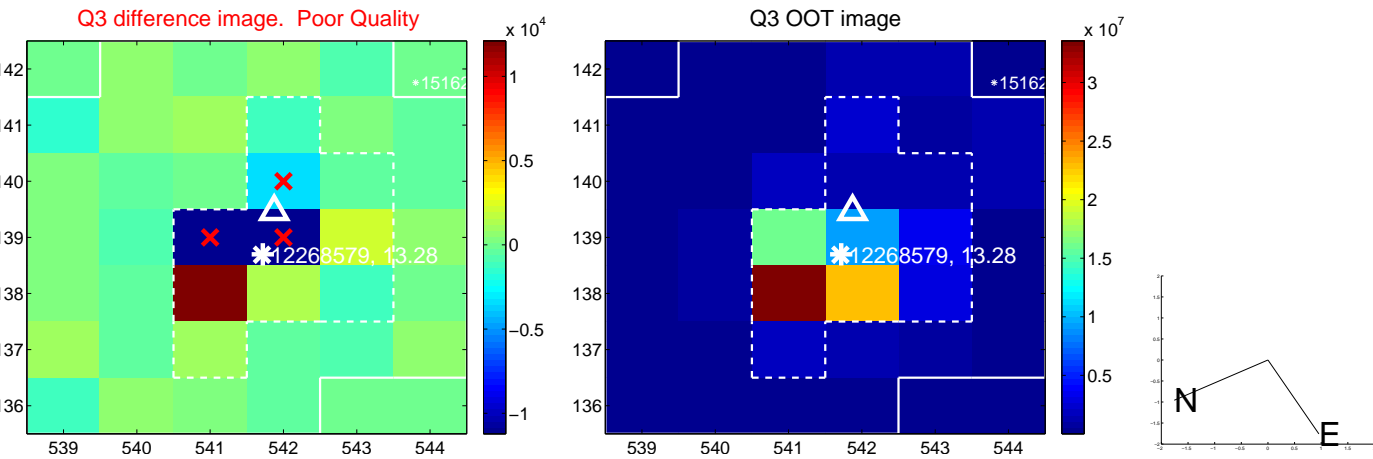
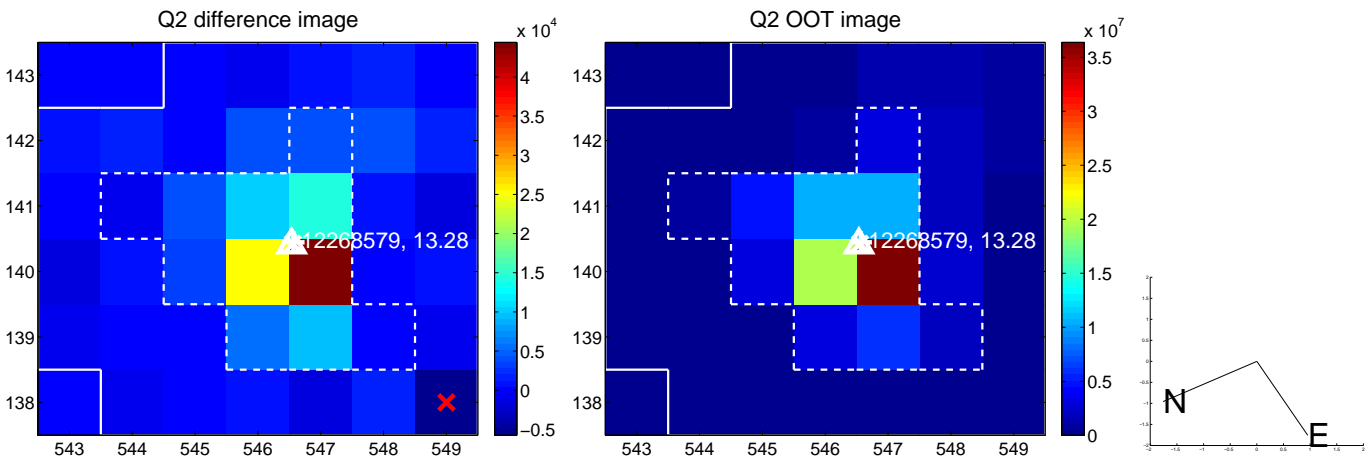
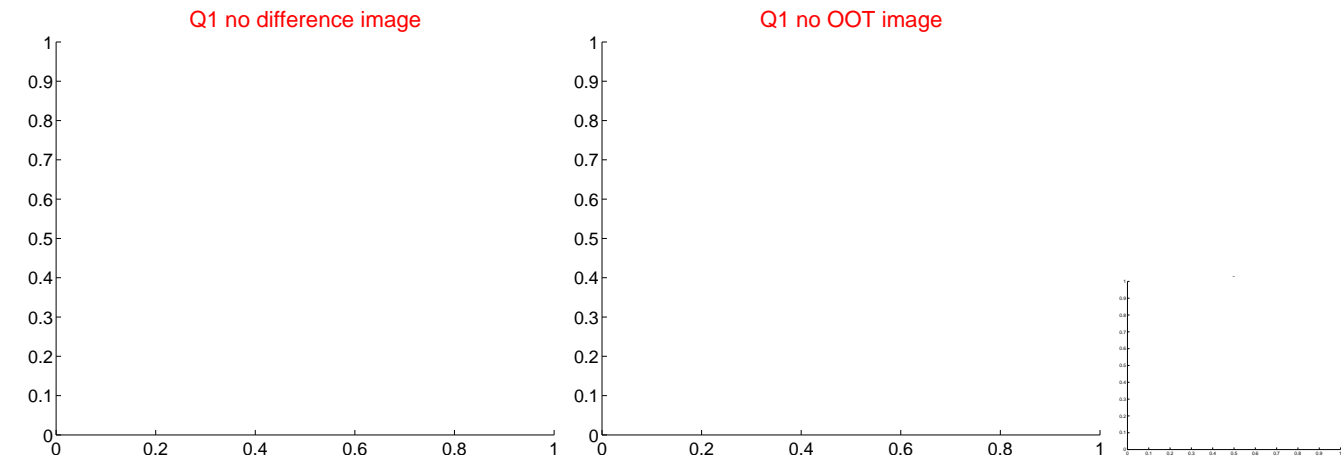
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.130 ± 0.274	0.47	-0.010 ± 0.220	0.129 ± 0.274
PRF-fit source offset from KIC position	0.064 ± 0.256	0.25	-0.059 ± 0.386	0.026 ± 0.315
photometric centroid source offset	1.64 ± 1.25	1.31	0.22 ± 1.12	1.62 ± 1.25

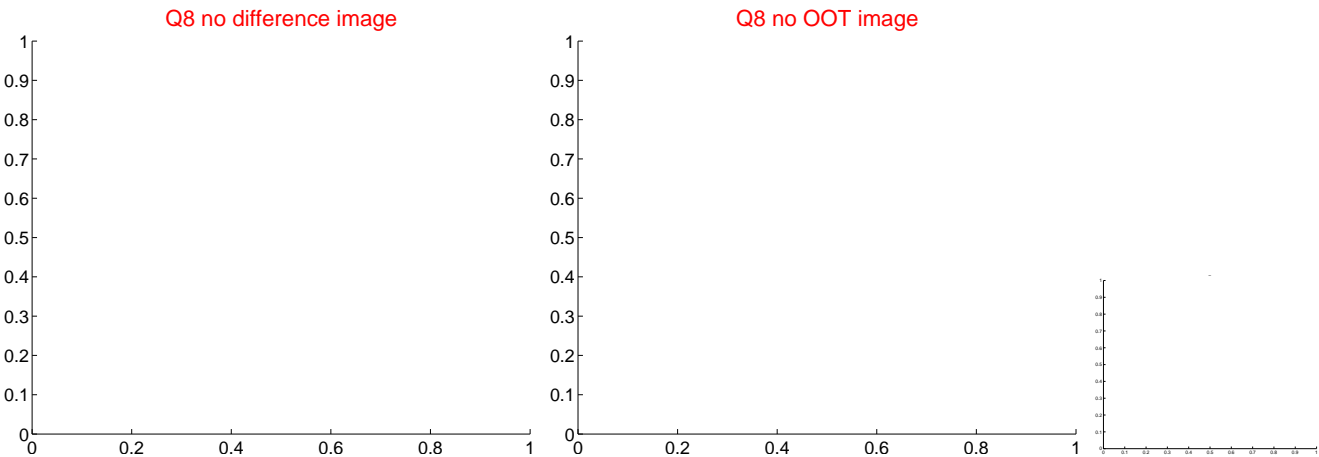
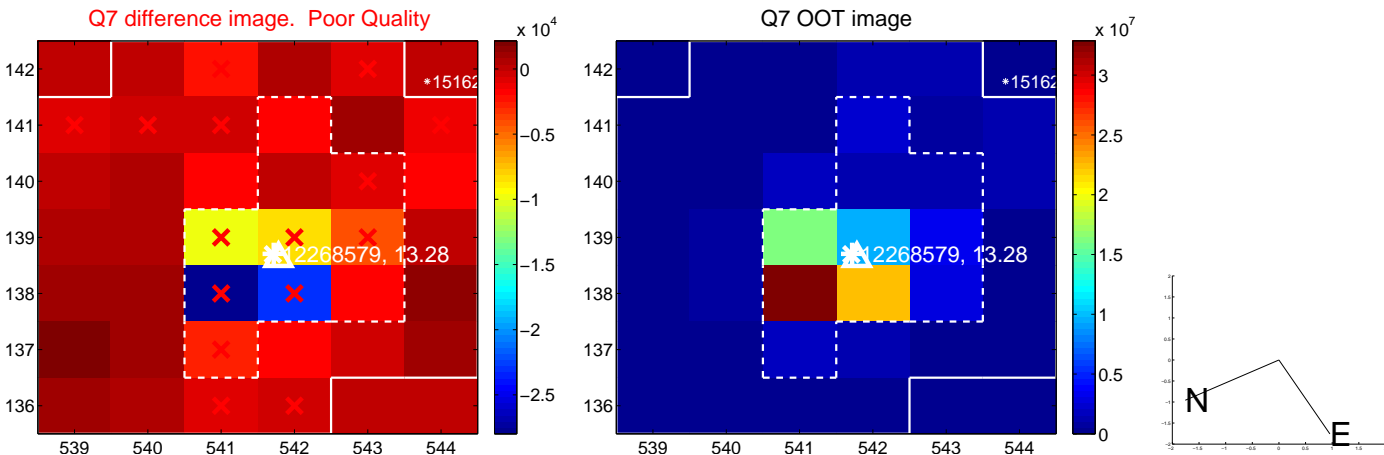
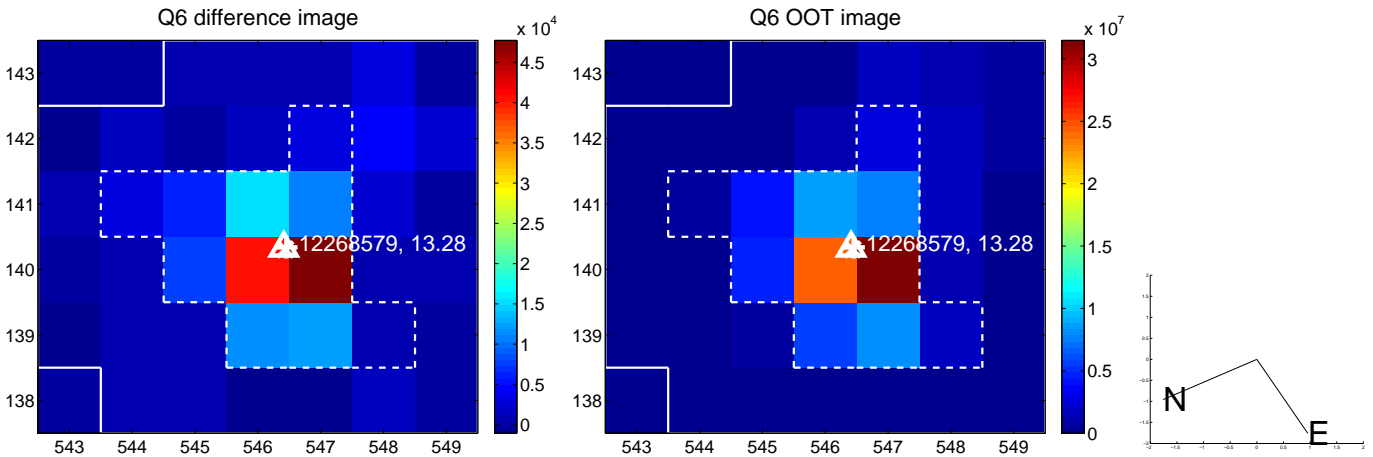
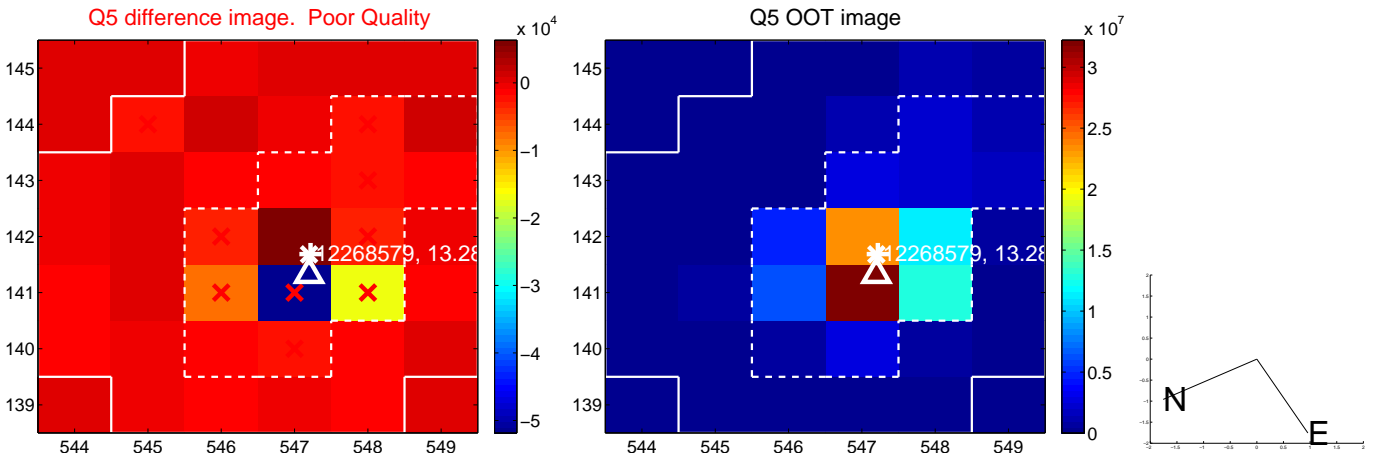


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

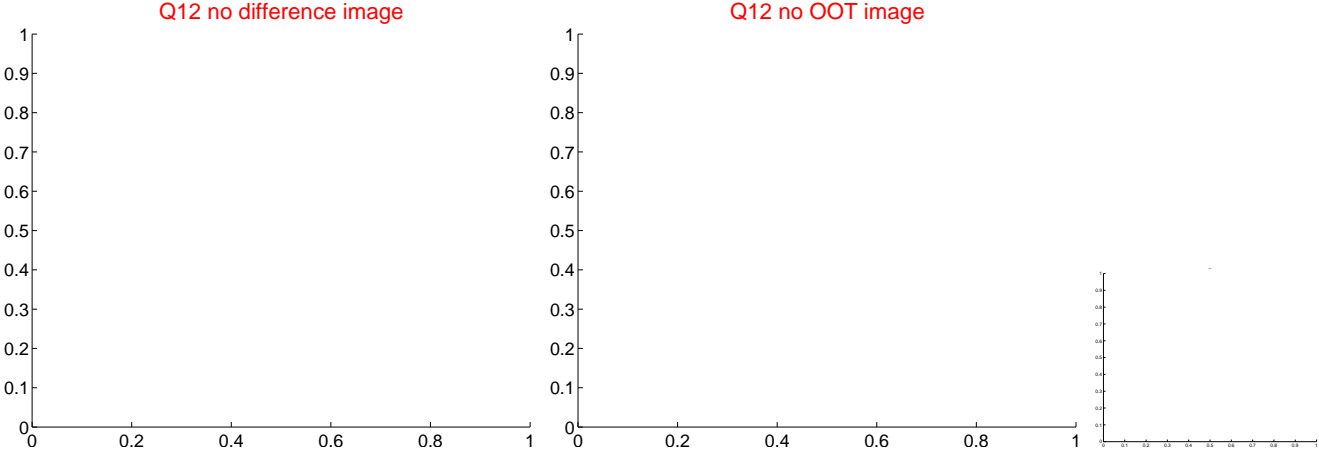
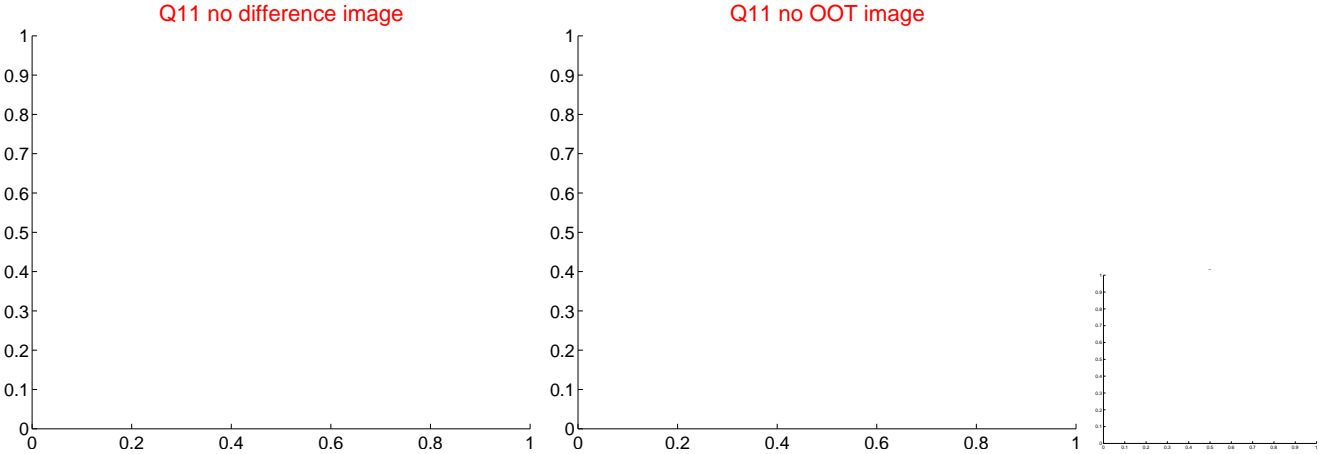
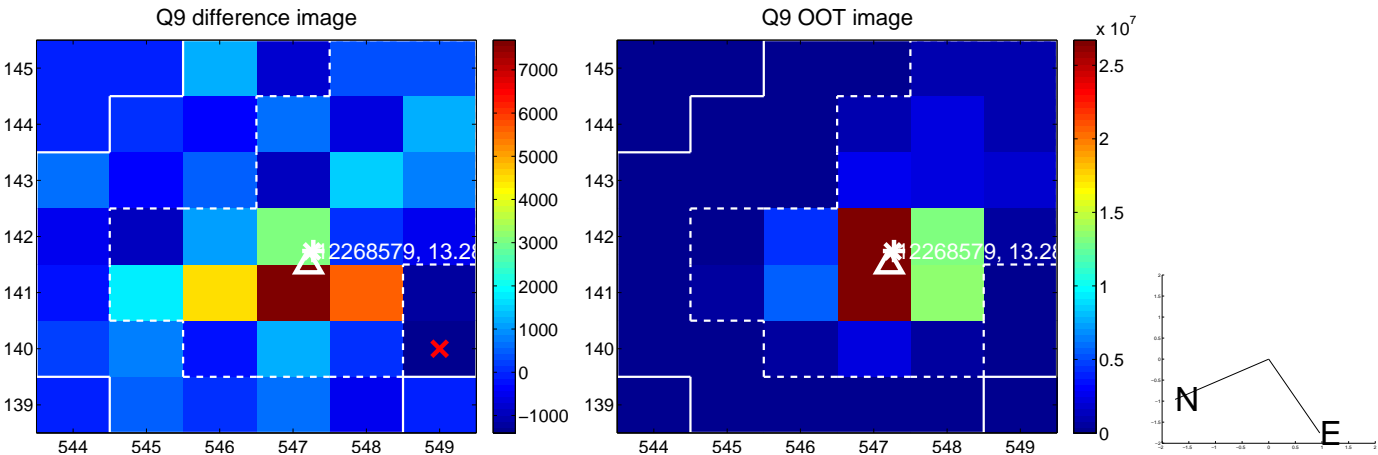
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



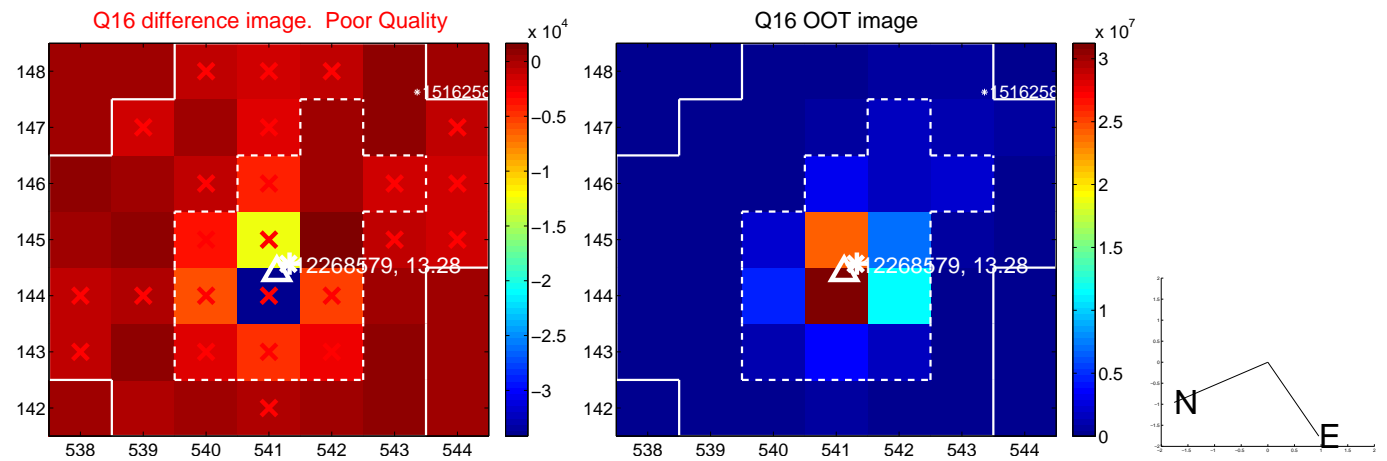
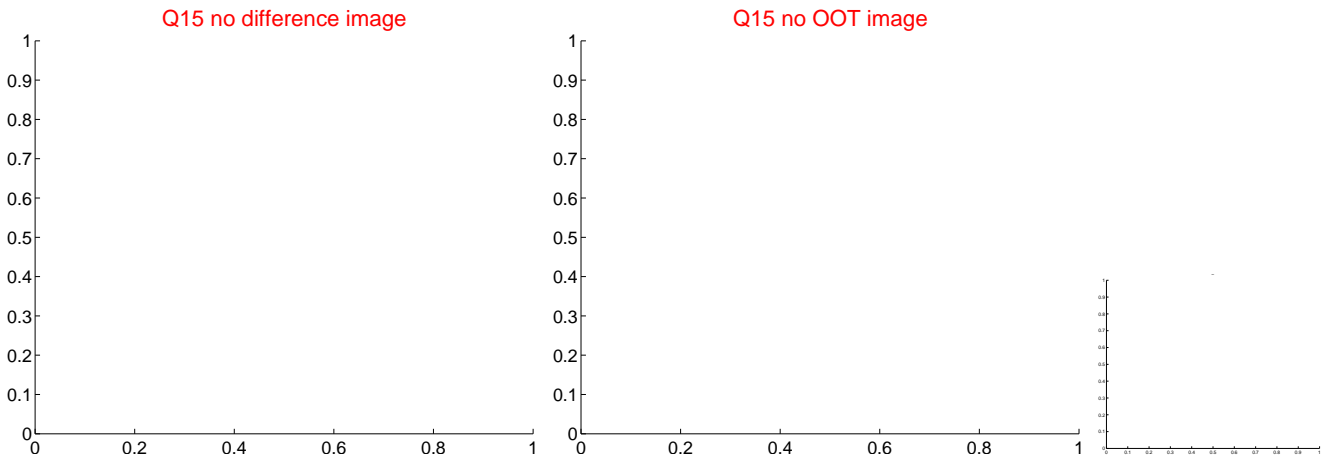
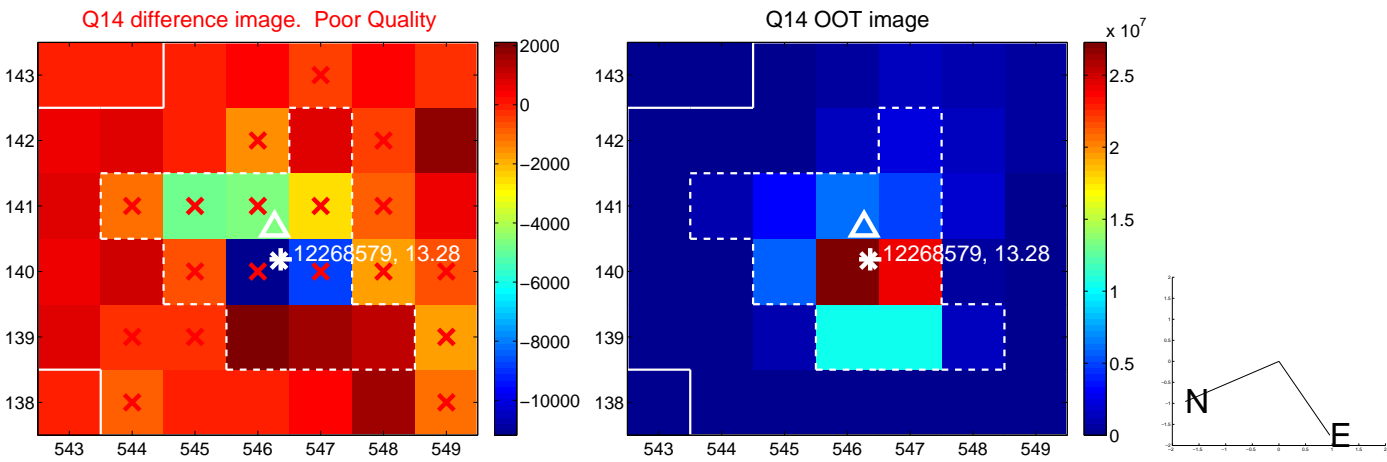
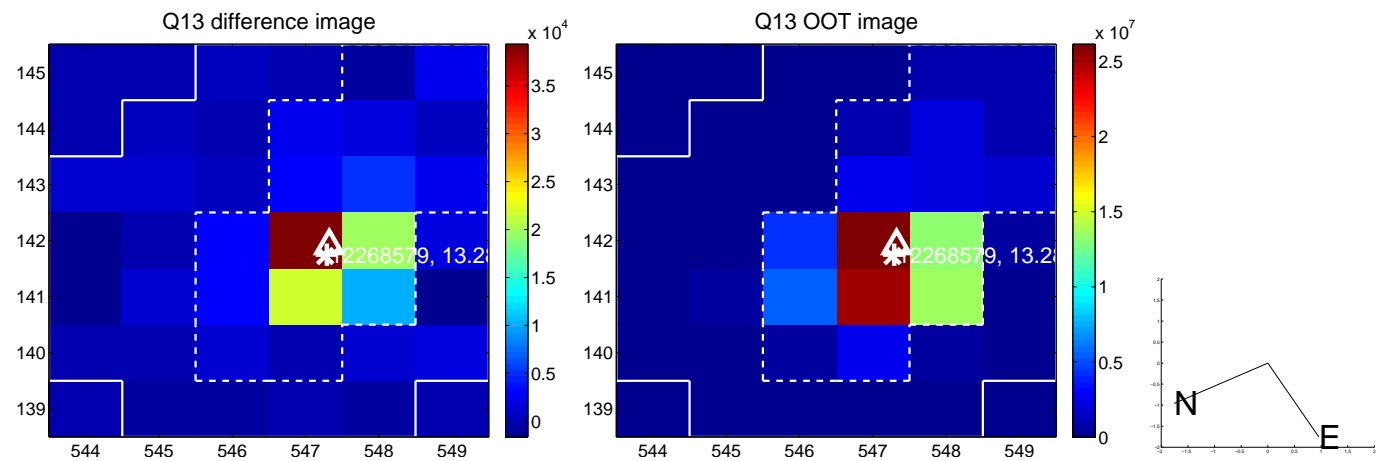
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



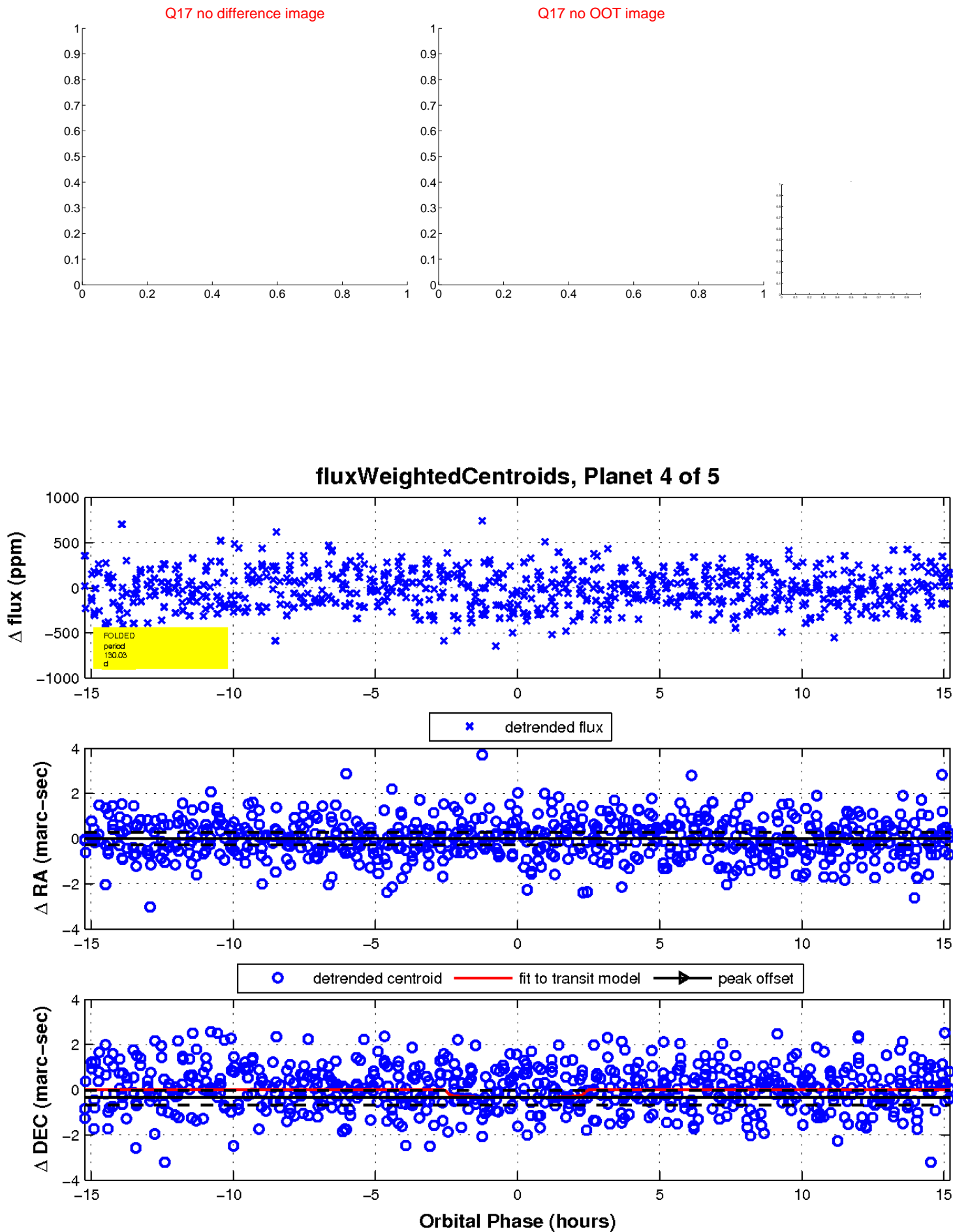
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

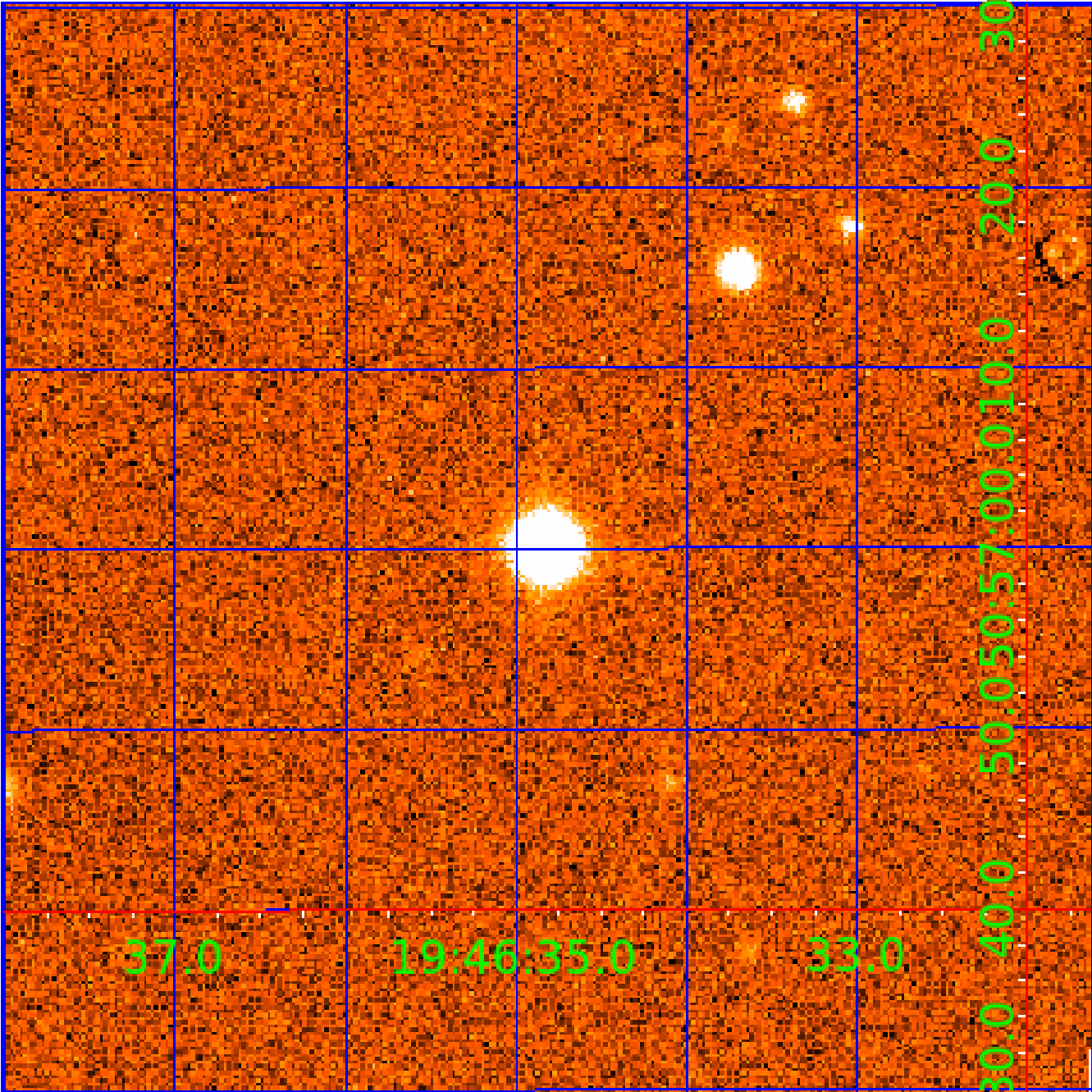


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 012268579

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})
012268579-01	OBS	No	1.202447	131.860865	23.5	6.507	10.5	9.5	1.66	7304	0.84	11330.47
012268579-02	OBS	No	234.319903	308.169124	330.6	8.506	10.0	8.2	1.66	7304	3.32	10.03
012268579-03	OBS	No	51.237200	151.376116	440.8	1.378	8.5	8.7	1.66	7304	6.78	76.13
012268579-04	OBS	No	130.032605	190.126204	250.0	5.111	8.1	6.8	1.66	7304	2.90	21.99
012268579-05	OBS	No	250.046673	295.932130	450.7	1.751	7.8	6.9	1.66	7304	4.08	9.20

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012268579-01	OBS	FP	0.00	1	0	0	0	LPP_DV
012268579-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS
012268579-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
012268579-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
012268579-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT— MOD_POS_ALT

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

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

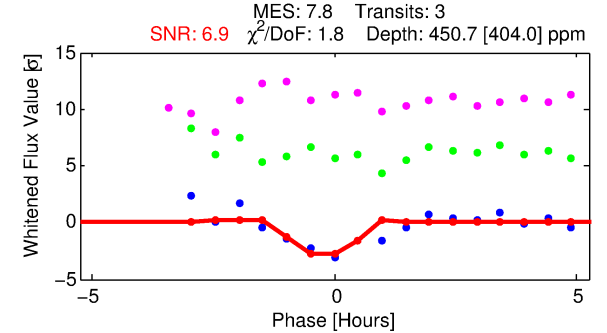
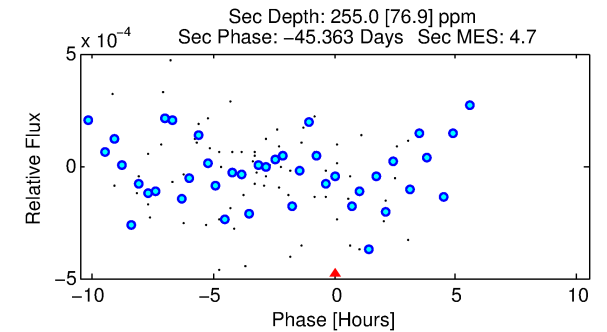
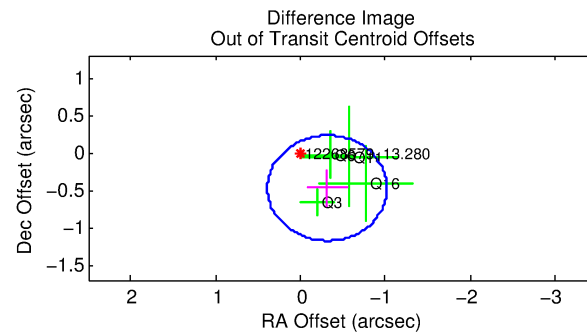
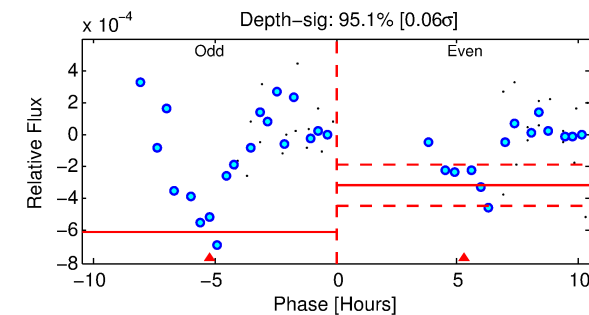
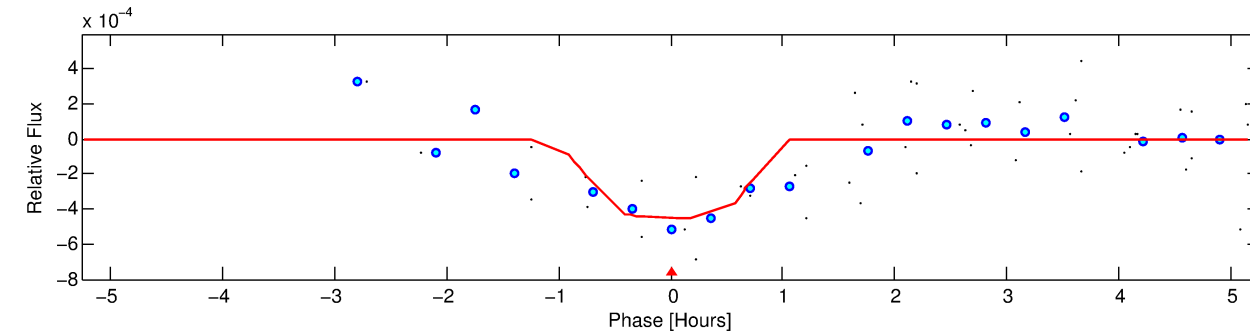
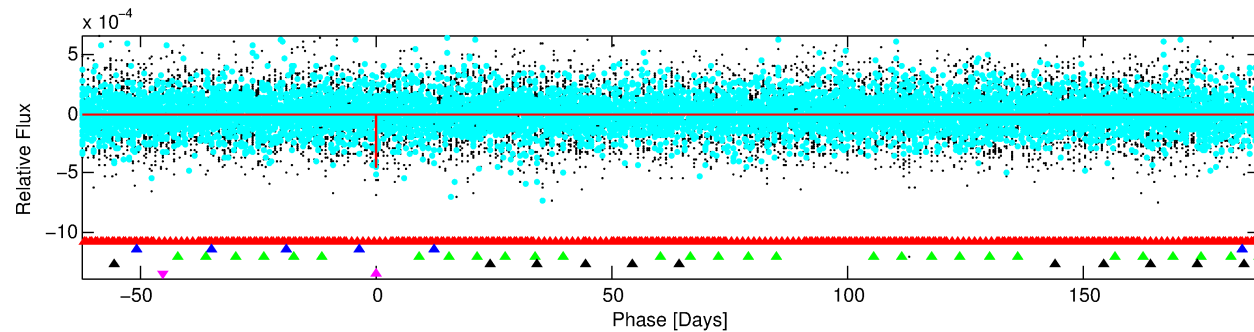
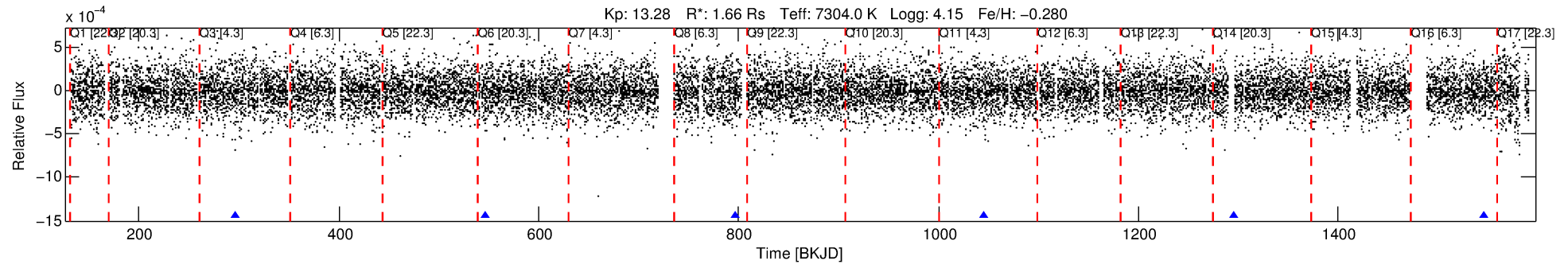
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012268579-05

No Significant Match Found

DV One-Page Summary

KIC: 12268579 Candidate: 5 of 5 Period: 250.047 d



DV Fit Results:

Period = 250.04667 [0.01938] d
Epoch = 295.9321 [0.0253] BKJD
Rp/R* = 0.0226 [0.2820]
a/R* = 529.73 [42358.89]
b = 0.90 [17.05]
Seff = 9.20 [3.61]
Teq = 444 [44] K
Rp = 4.08 [50.94] Re
a = 0.8715 [0.2216] AU
Ag = 6391.13 [159463.59] [0.04σ]
Teffp = 6139 [38288] K [0.15σ]

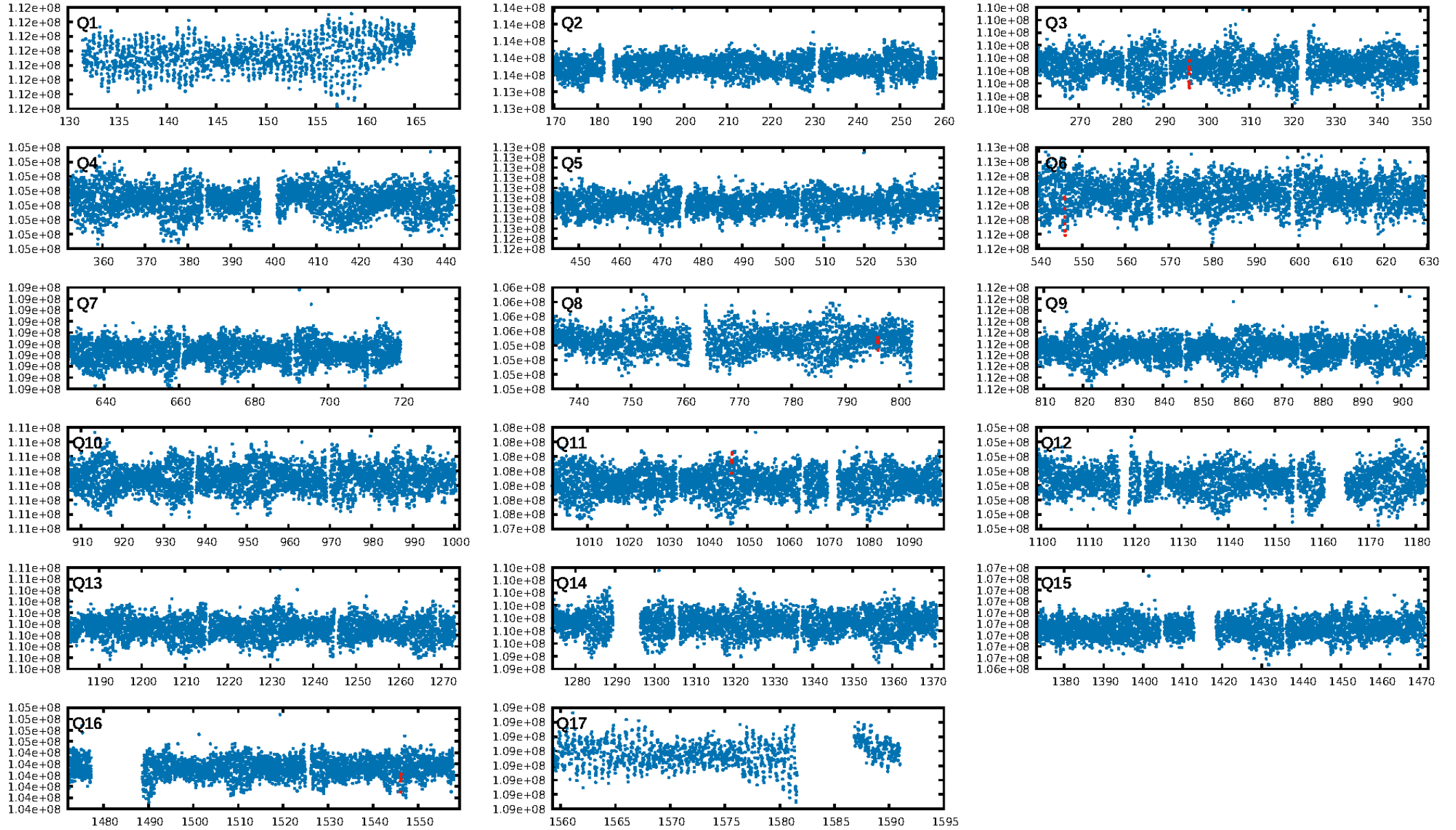
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [43.46σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 18.0%
ModelChiSquareGof-sig: 86.1%
Bootstrap-pfa: 1.89e-08
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 3.868
Centroid-sig: 64.8%
Centroid-so: 0.860 arcsec [0.60σ]
OotOffset-rm: 0.570 arcsec [2.43σ]
OotOffset-st: 1/2/1/0 [4]
KicOffset-rm: 0.658 arcsec [2.80σ]
KicOffset-st: 1/2/1/0 [4]
DiffImageQuality-fgm: 0.75 [3/4]
DiffImageOverlap-fno: 0.60 [3/5]

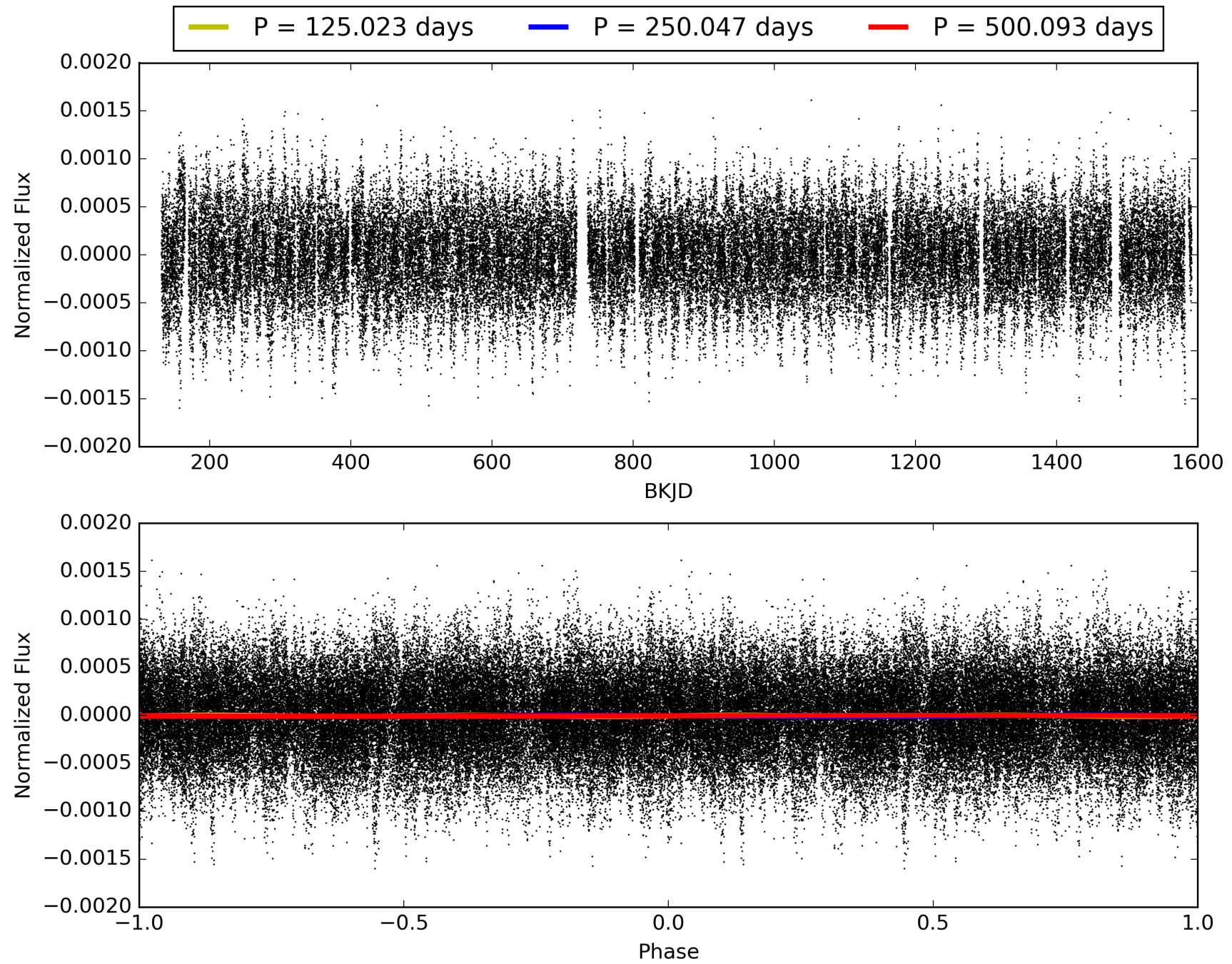
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 03:11:00 Z

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

TCE 012268579-05, PDC Light Curves

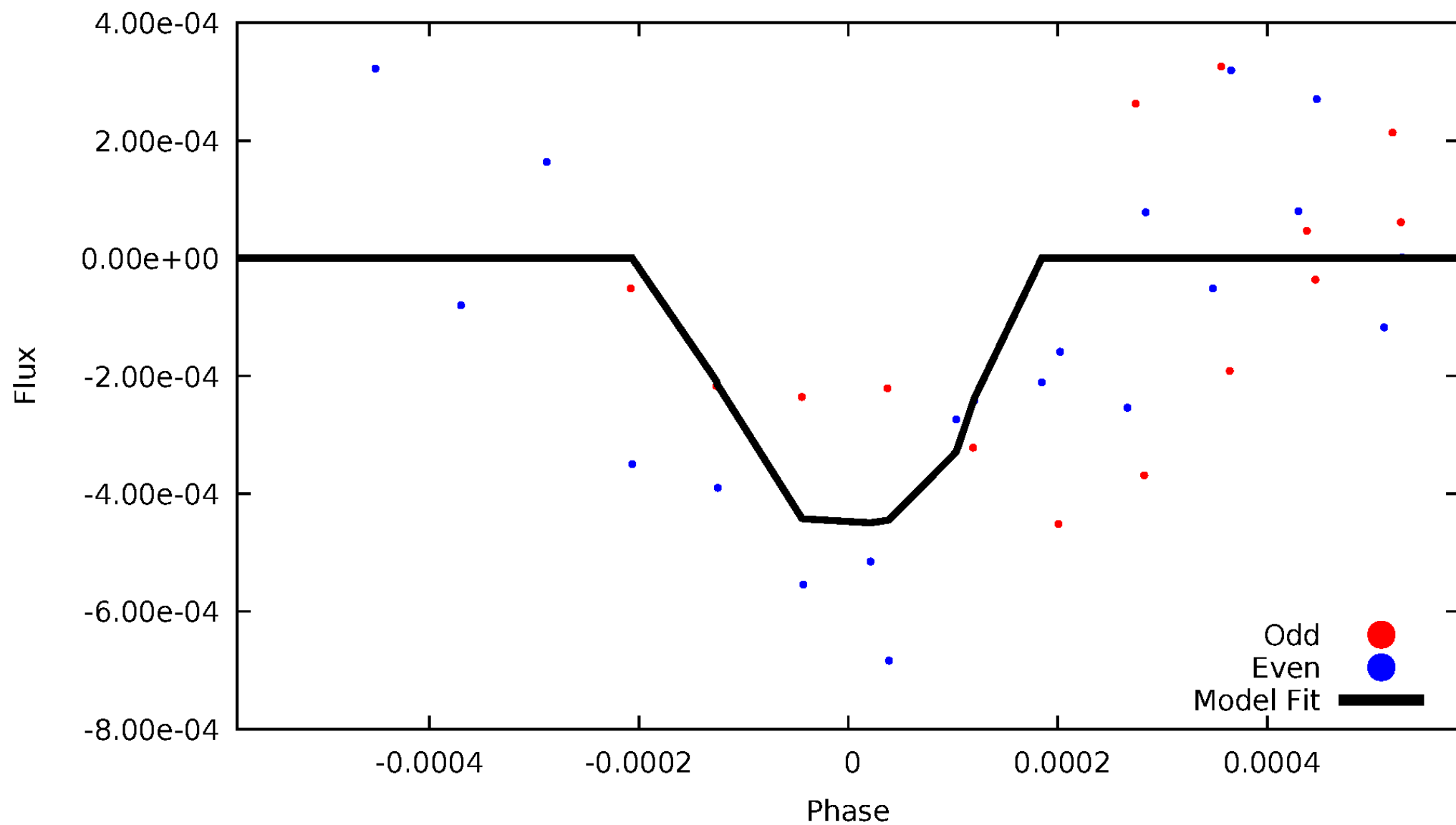


TCE 012268579-05



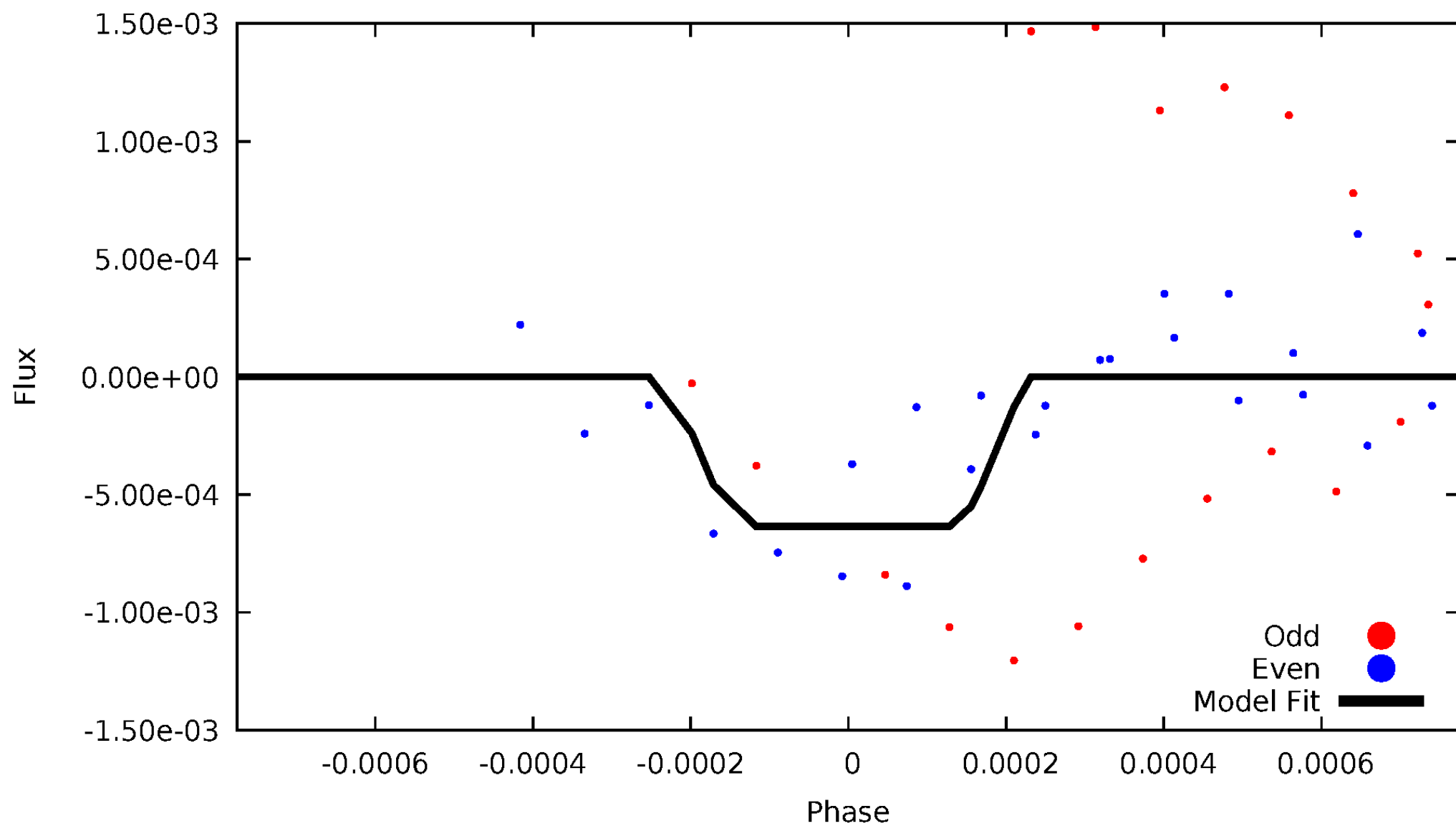
DV Odd/Even

TCE 012268579-05



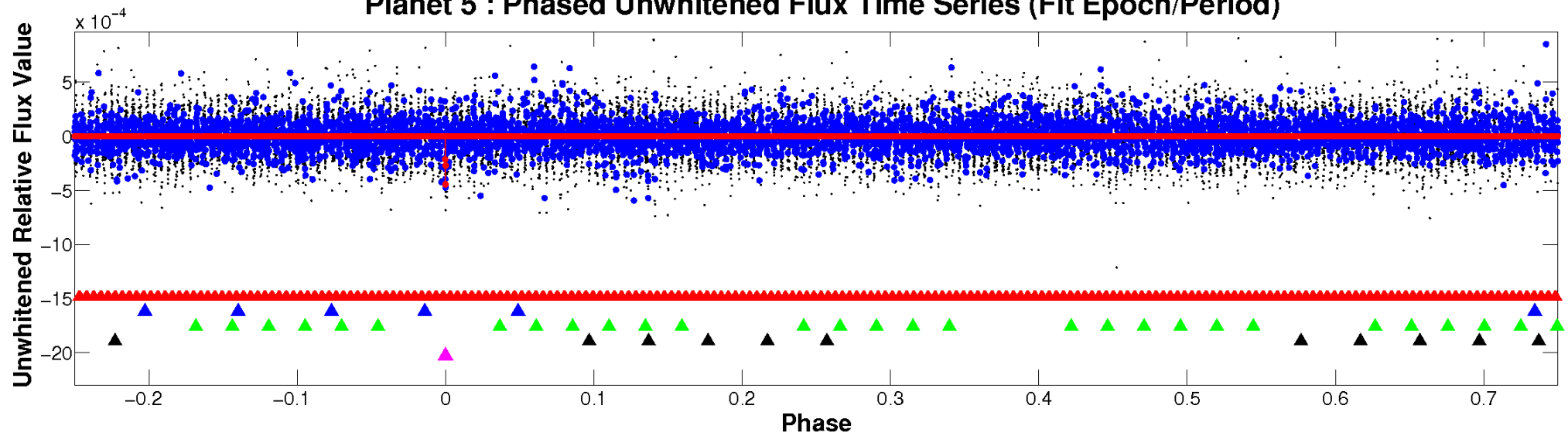
ALT Odd/Even

TCE 012268579-05

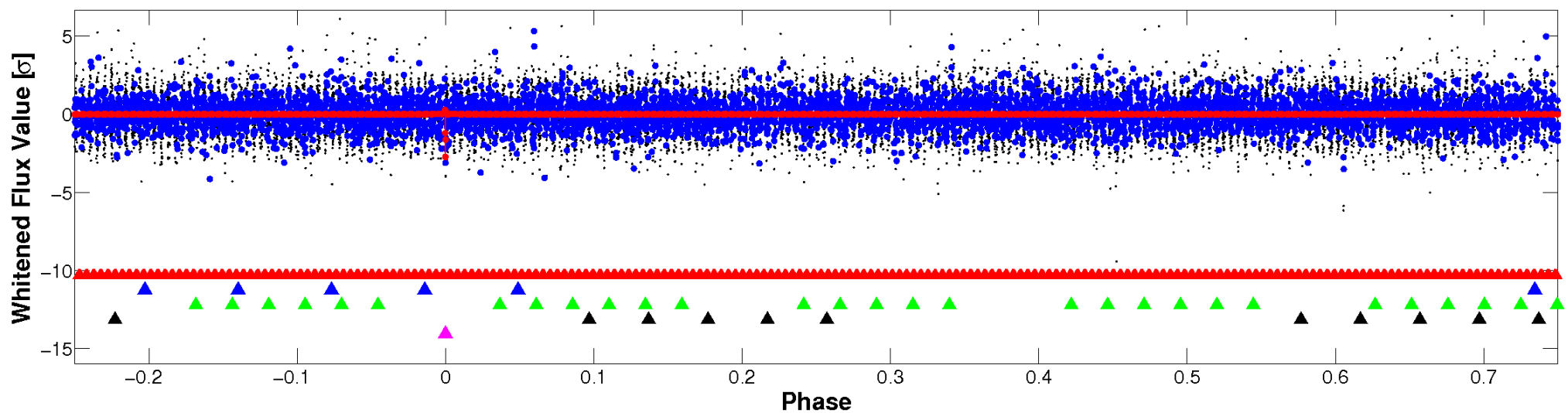


Non-Whitened Vs. Whitened Light Curve

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

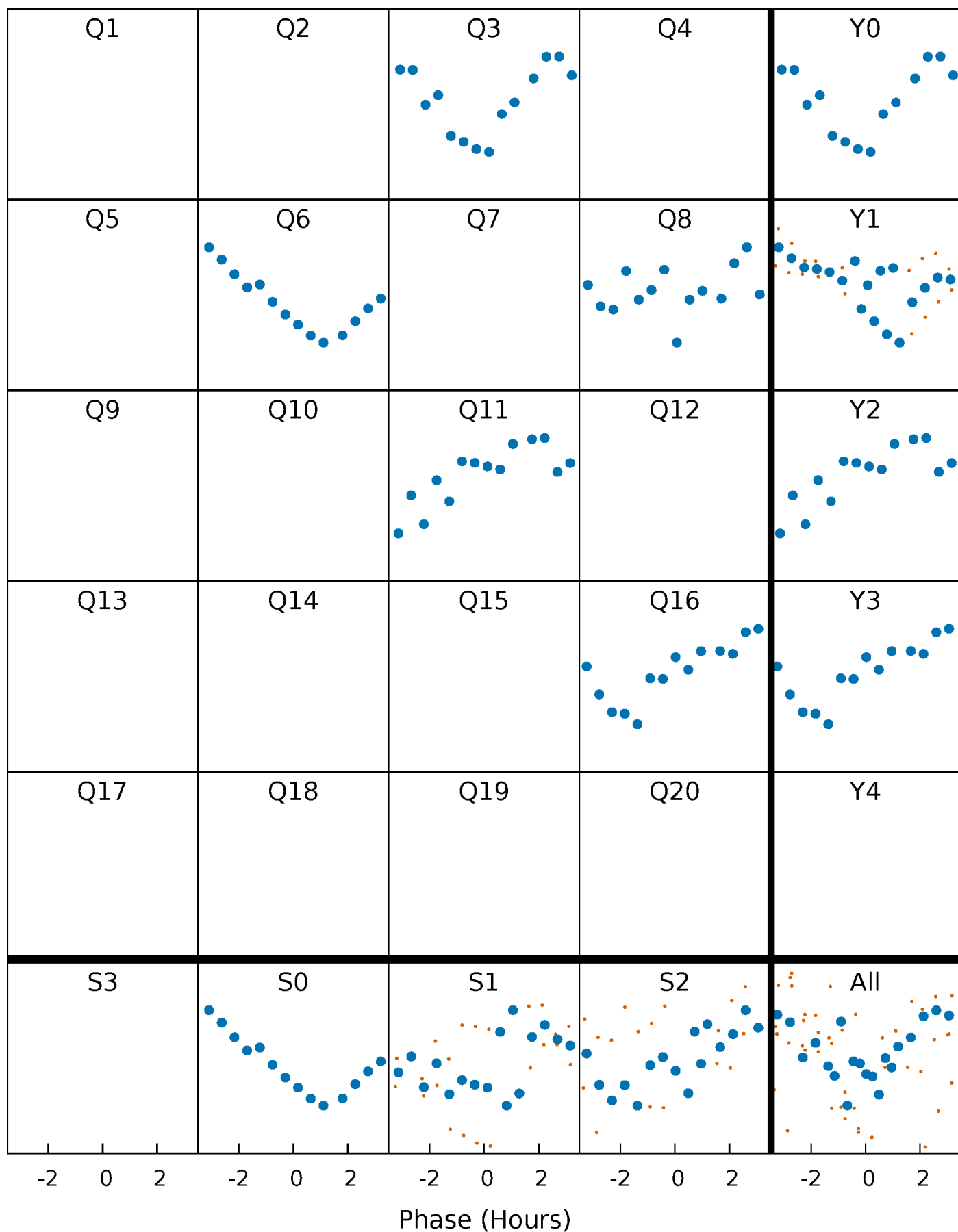


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 012268579-05 $P=250.046673$ Days $T_0=295.932130$ (BKJD)



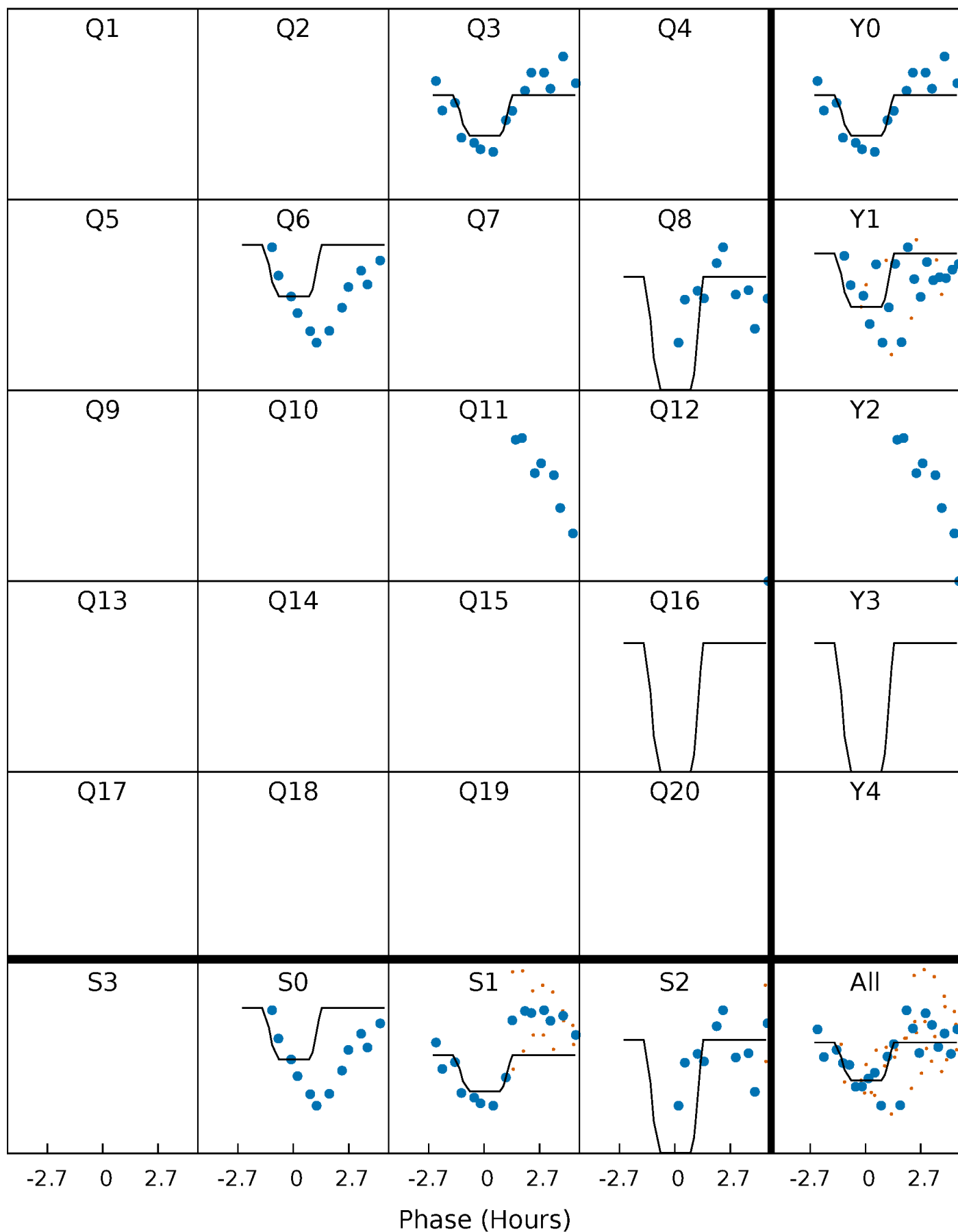
DV Quarter-Phased Transit Curves

TCE 012268579-05 $P=250.046673$ Days $T_0=295.932130$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

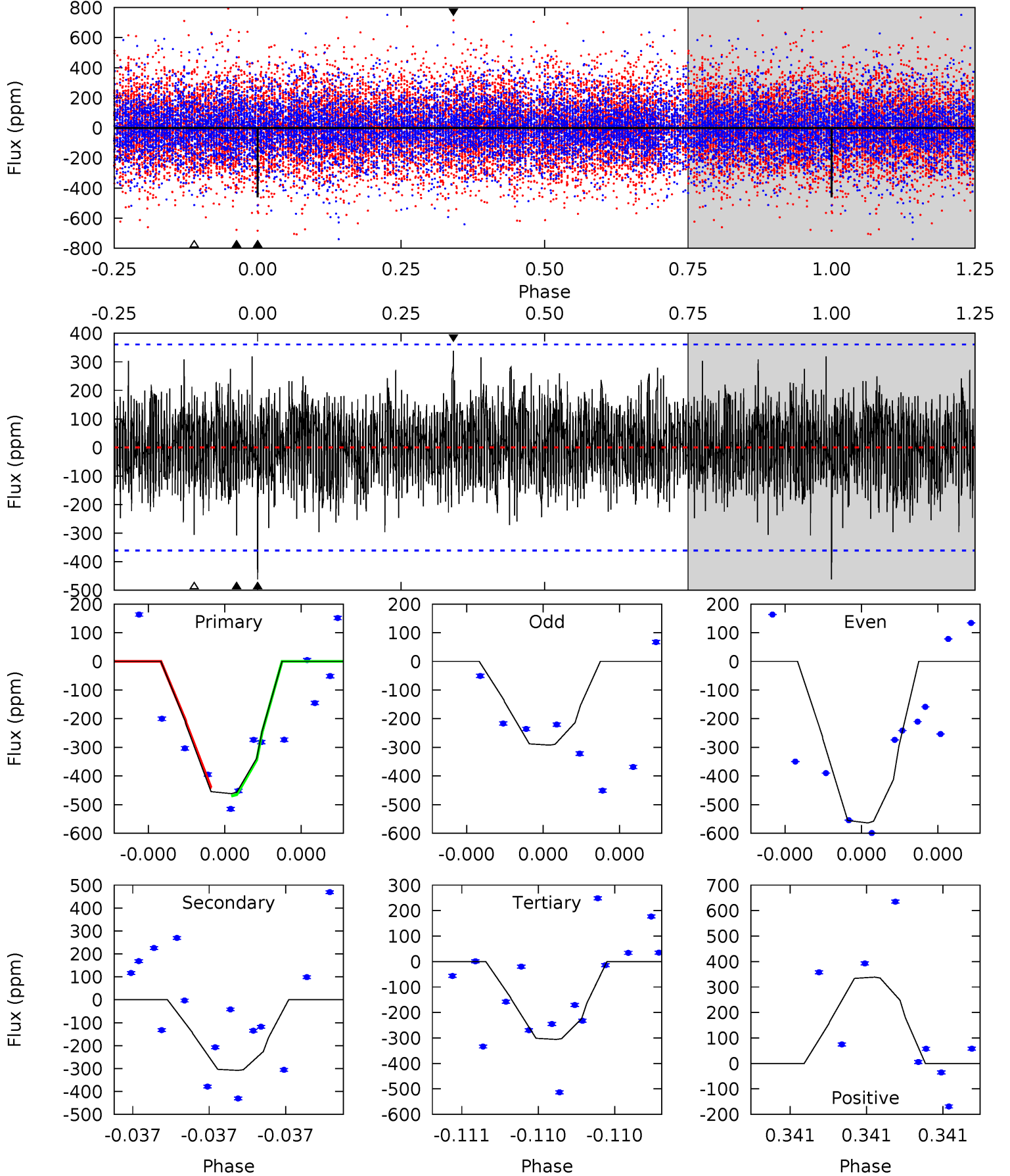
TCE 012268579-05 $P=250.053159$ Days $T_0=295.923297$ (BKJD)



DV Model-Shift Uniqueness Test

012268579-05, P = 250.046673 Days, E = 45.885457 Days

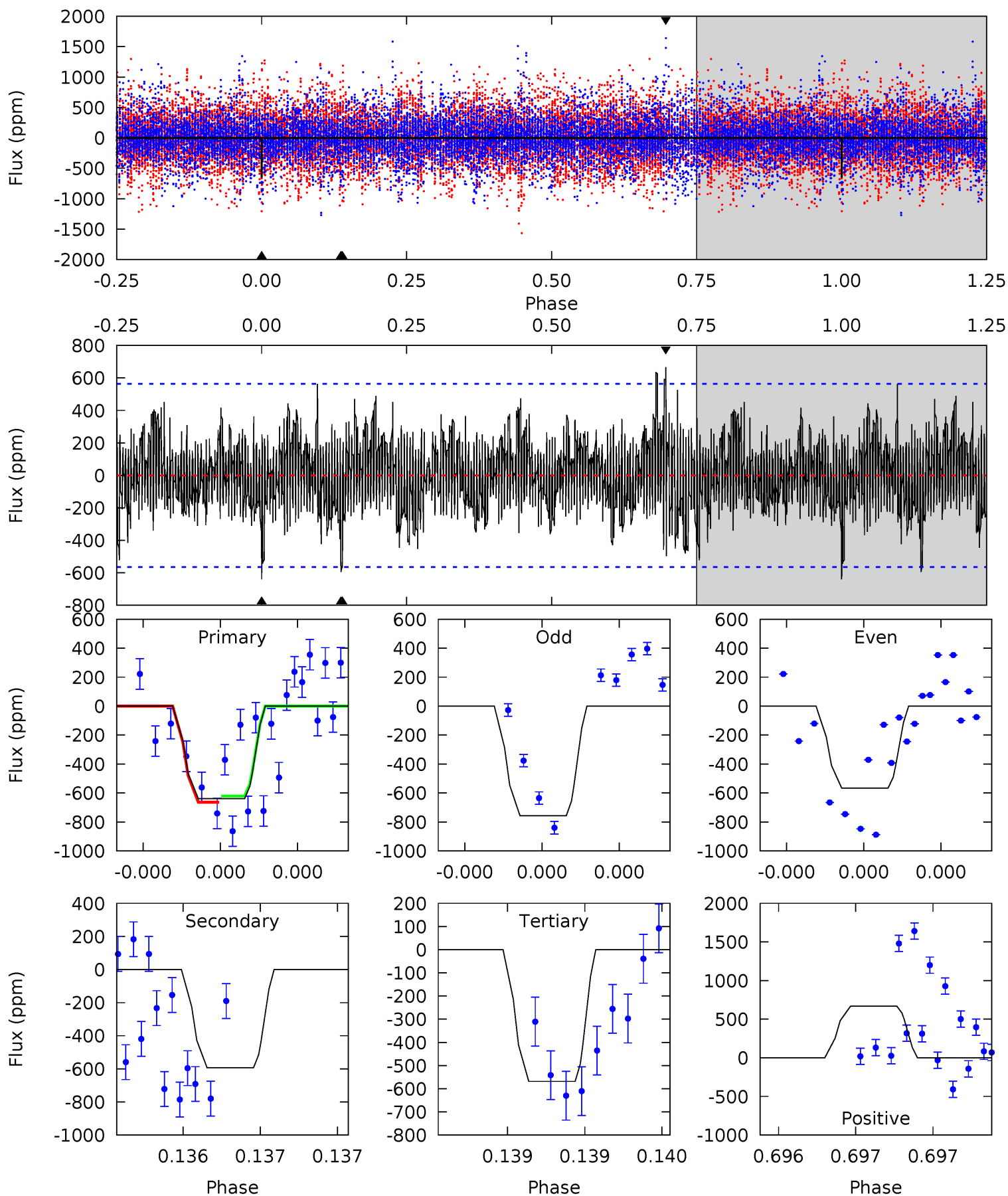
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.28	4.86	4.83	5.35	5.70	3.67	1.27	2.46	1.94	0.04	-0.48	2.08	0.99	0.42	0.22



Alt Model-Shift Uniqueness Test

012268579-05, P = 250.053159 Days, E = 45.870138 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.35	5.90	5.65	6.63	5.61	3.53	1.37	0.70	-0.28	0.25	-0.73	0.89	0.77	0.51	0.21



Stellar Parameters For KIC 012268579

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7304^{+228}_{-304}	$4.150^{+0.153}_{-0.187}$	$-0.280^{+0.250}_{-0.350}$	$1.655^{+0.521}_{-0.347}$	$1.410^{+0.226}_{-0.226}$	$0.438^{+0.387}_{-0.217}$
	+3%/-4%	+4%/-5%	+89%/-125%	+31%/-21%	+16%/-16%	+88%/-50%
Source	KIC0	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 012268579-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-308 ± 63	$35.59^{+37.79}_{-24.97}$	618^{+45}_{-39}	2858^{+1375}_{-475}	100^{+1082}_{-77}
Alt.	-594 ± 101	$34.52^{+40.40}_{-24.17}$	620^{+48}_{-41}	3150^{+1680}_{-553}	200^{+2049}_{-156}

T_{max} = Theoretical Maximum Planetary Temperature

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

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

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

DV Centroid Data

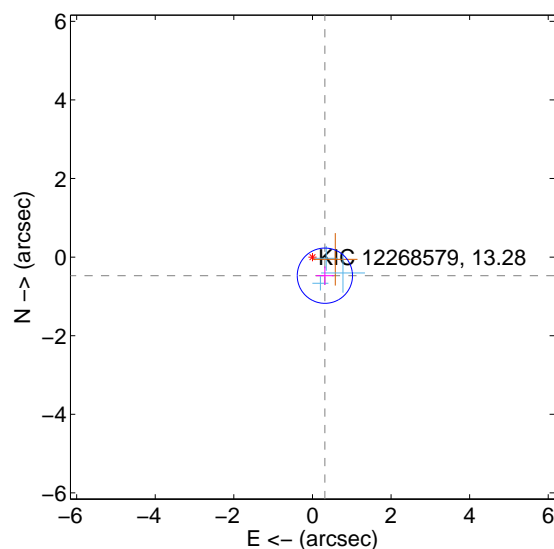
Supplemental centroid analysis for 012268579-05. Kepler magnitude: 13.28. Transit SNR 6.87

There are 3 quarters with good PRF difference image offsets

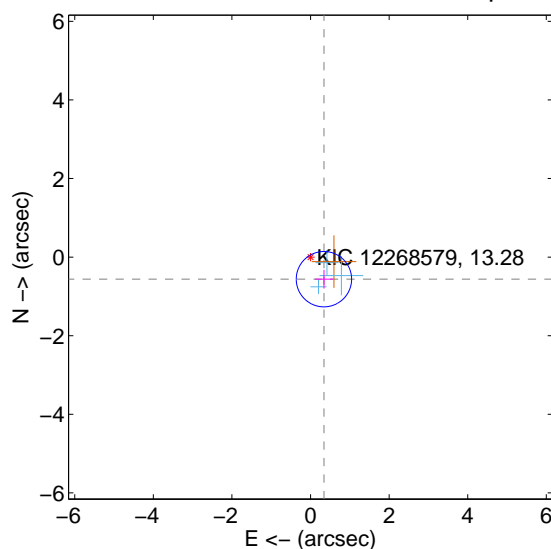
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.570 ± 0.234	2.43	-0.317 ± 0.228	-0.474 ± 0.237
PRF-fit source offset from KIC position	0.658 ± 0.235	2.80	-0.341 ± 0.228	-0.562 ± 0.237
photometric centroid source offset	0.86 ± 1.42	0.60	0.33 ± 1.36	0.79 ± 1.44

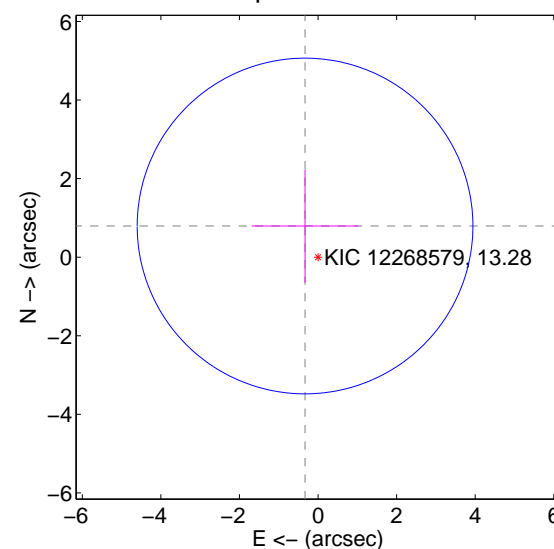
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids



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

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

Q1 no difference image



Q1 no OOT image



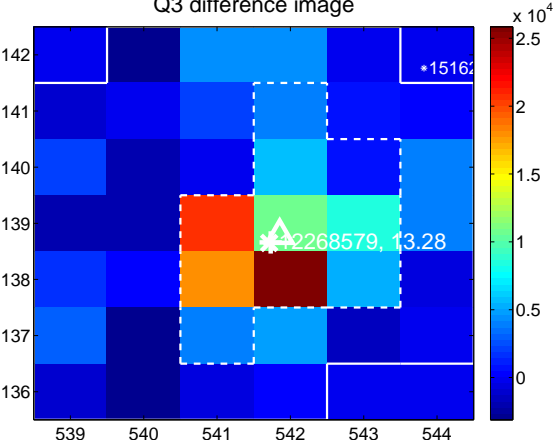
Q2 no difference image



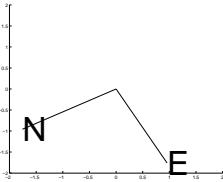
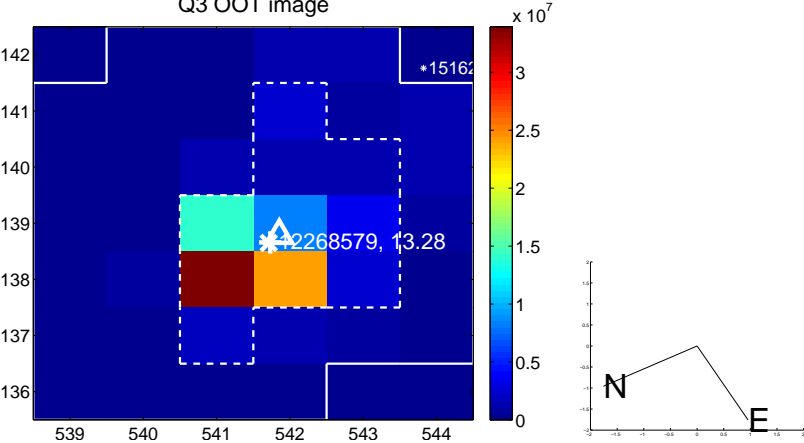
Q2 no OOT image



Q3 difference image



Q3 OOT image



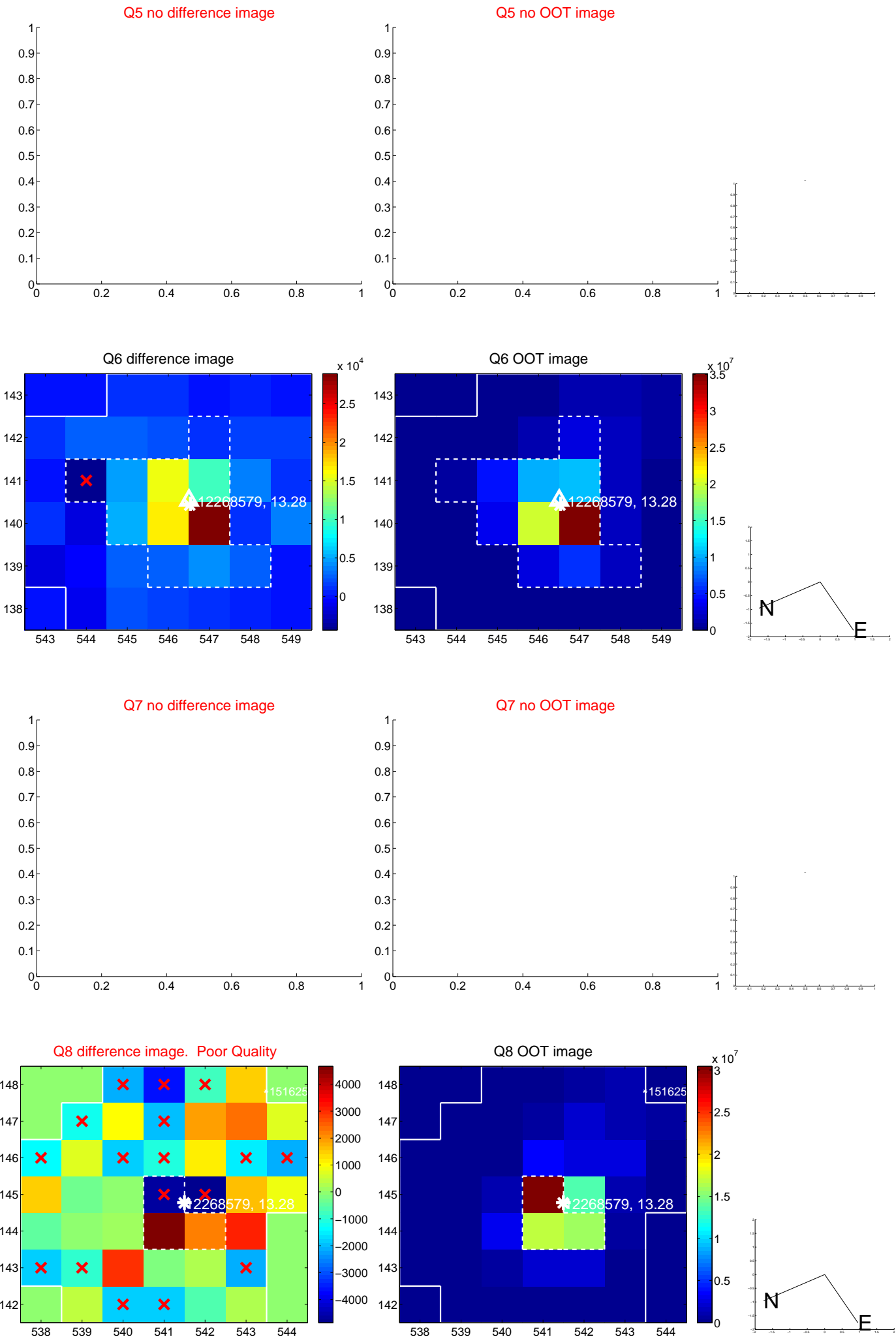
Q4 no difference image



Q4 no OOT image



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



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

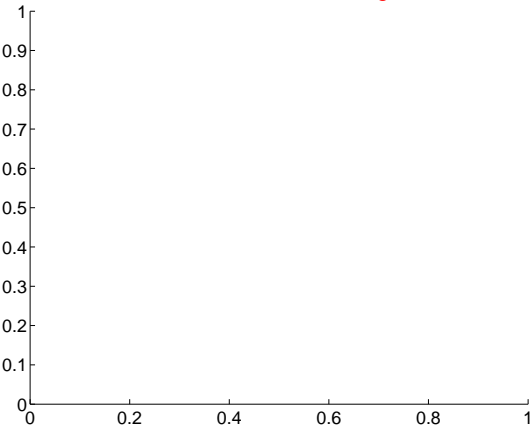
Q9 no difference image



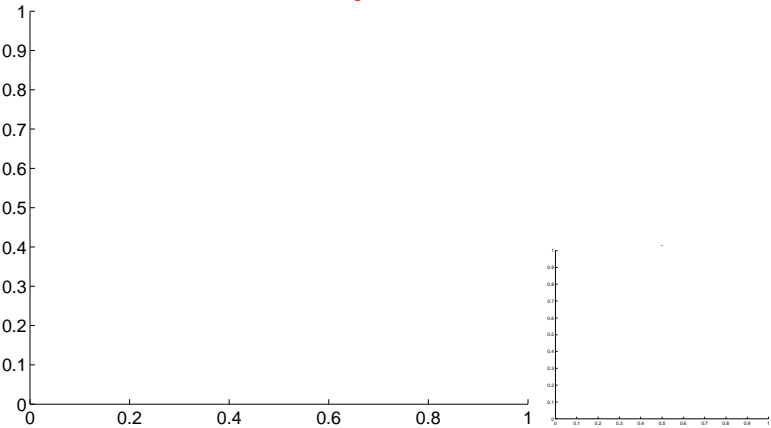
Q9 no OOT image



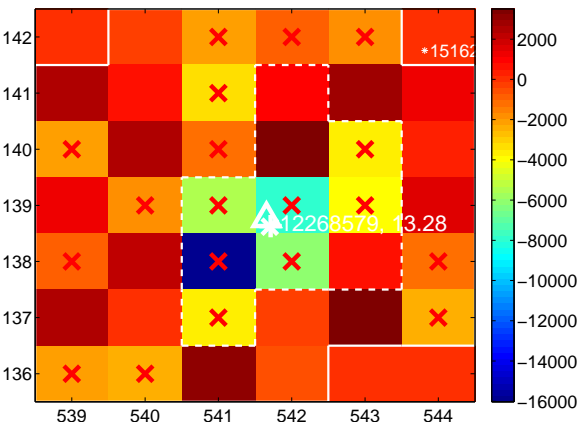
Q10 no difference image



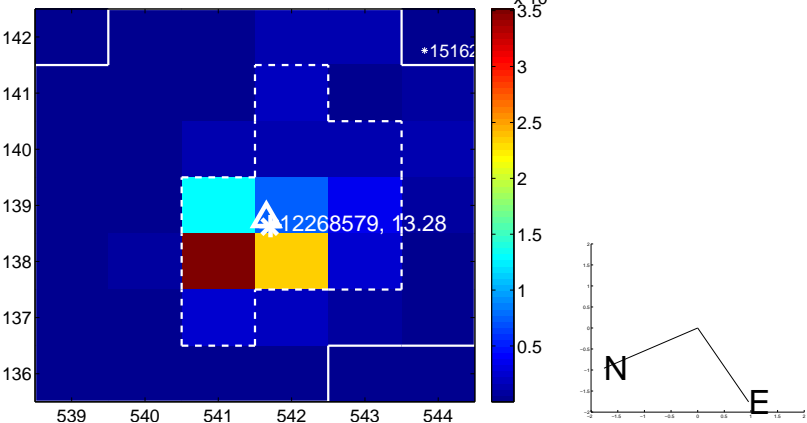
Q10 no OOT image



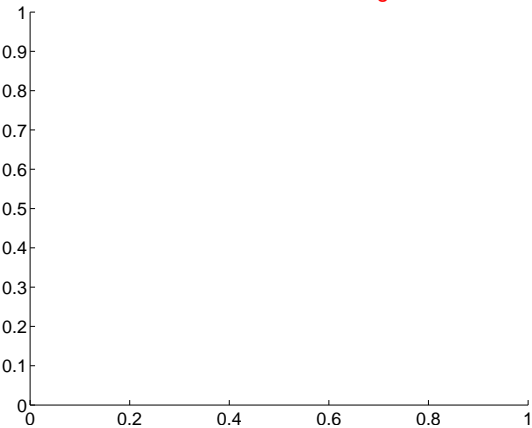
Q11 difference image. Poor Quality



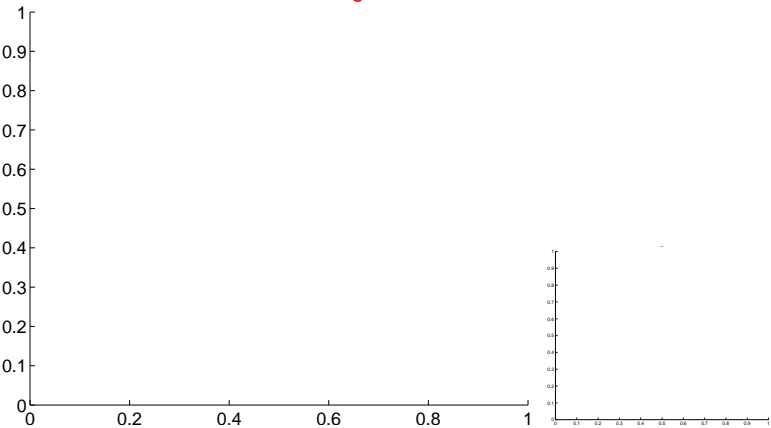
Q11 OOT image



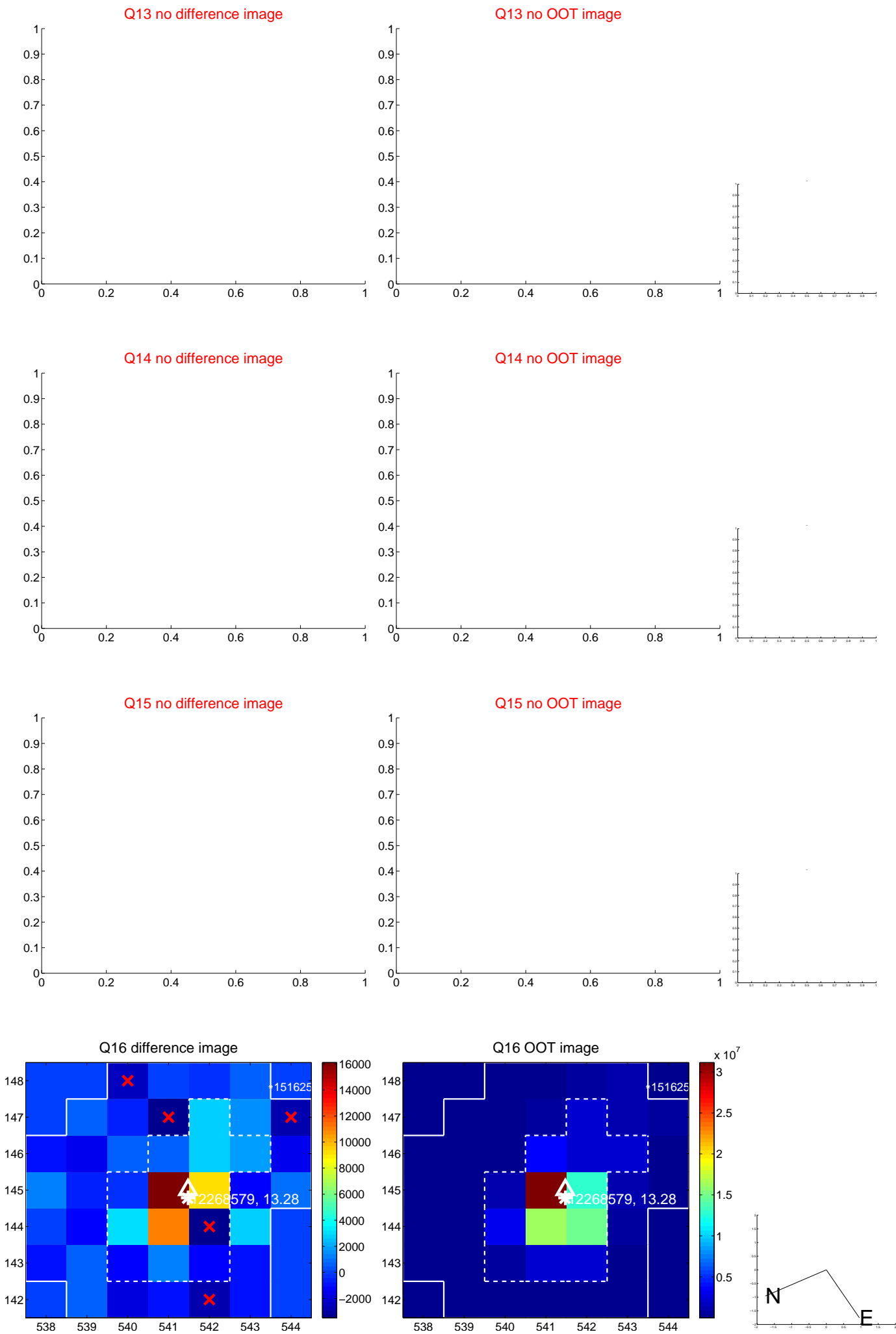
Q12 no difference image



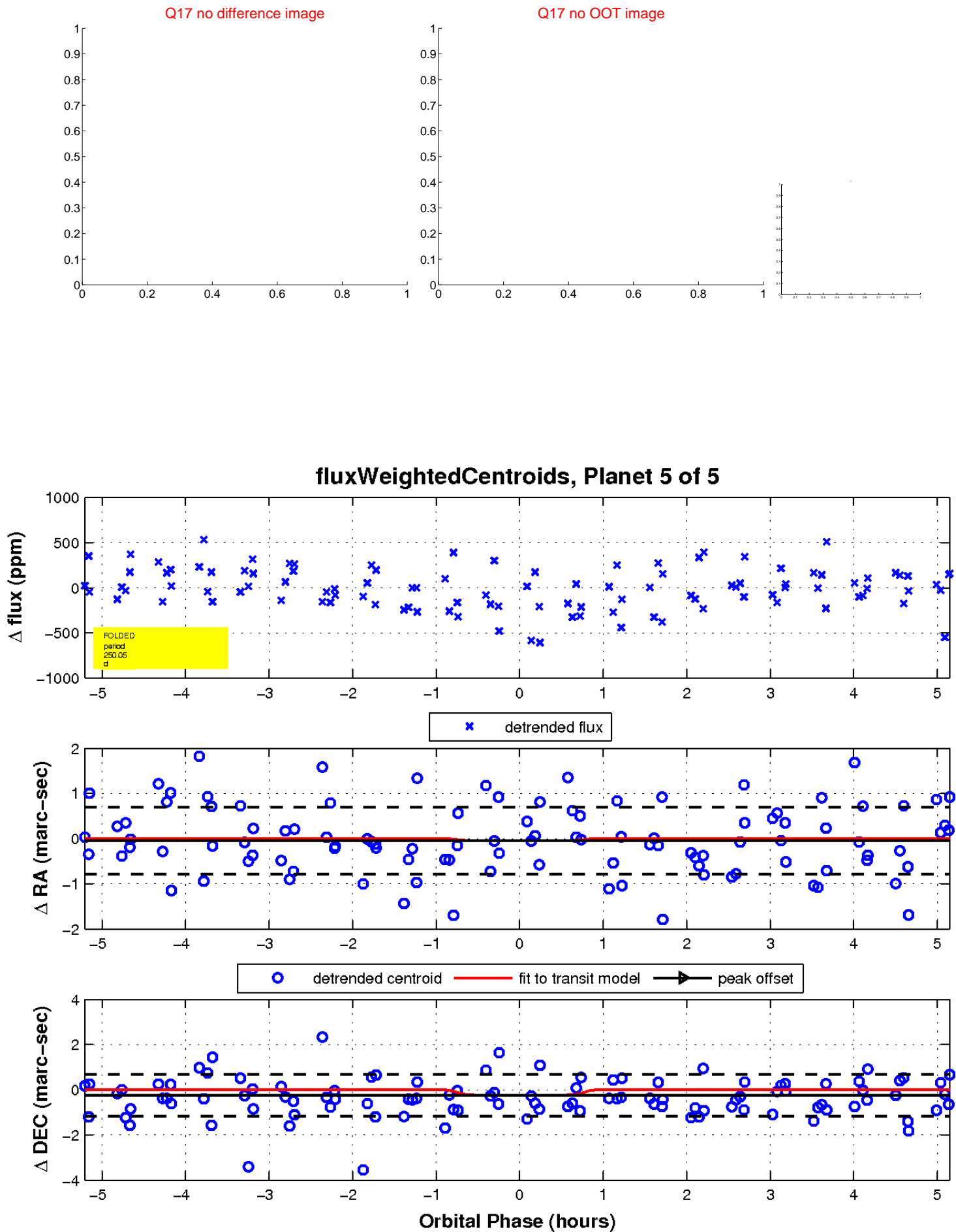
Q12 no OOT image



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



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



UKIRT Image

Declination

