

KIC 008264550

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})
008264550-01	OBS	No	0.678097	131.648078	11.7	1.475	8.8	7.3	3.09	8423	1.22	117919.09
008264550-02	OBS	No	0.678105	131.858862	10.9	2.442	8.8	8.3	3.09	8423	1.18	117917.22
008264550-04	OBS	No	83.248635	179.433787	281.4	2.256	10.2	6.5	3.09	8423	5.74	193.26
008264550-05	OBS	No	351.888399	427.788237	391.6	3.833	7.9	7.6	3.09	8423	6.50	28.28

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008264550-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
008264550-02	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_RESOLVED_OFFSET
008264550-04	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
008264550-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—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.

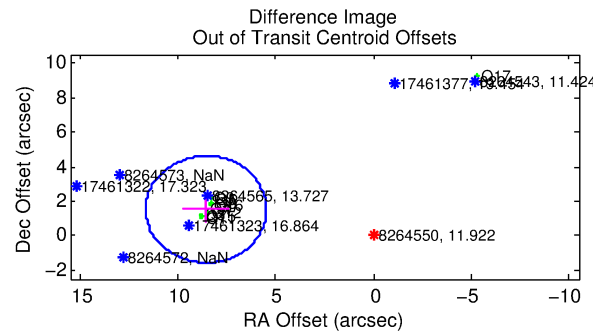
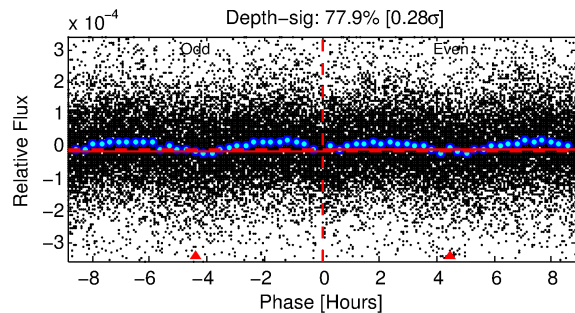
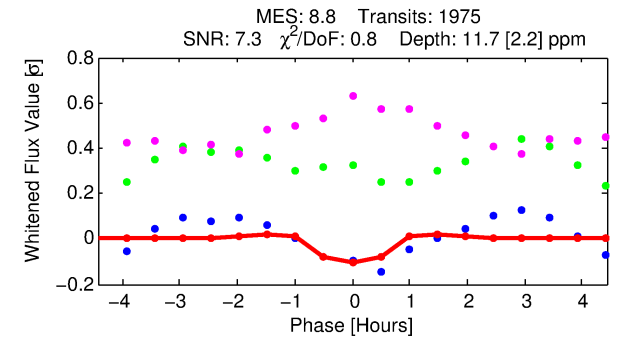
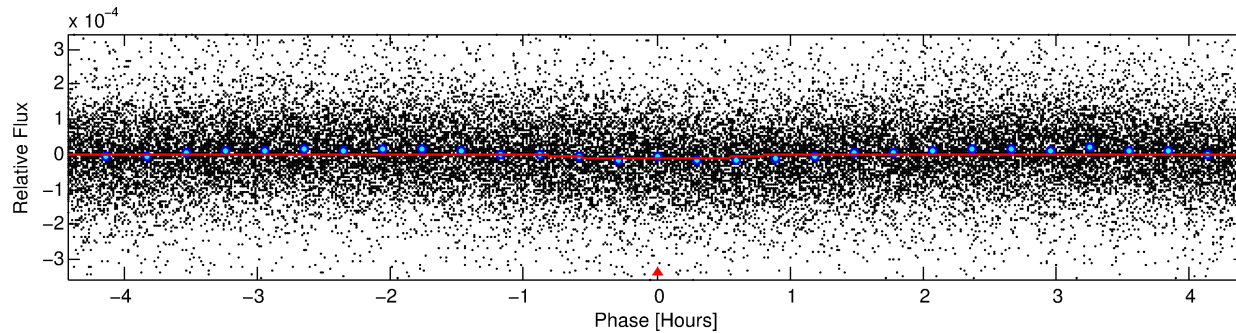
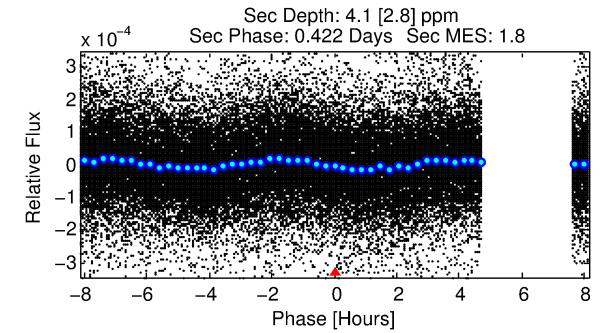
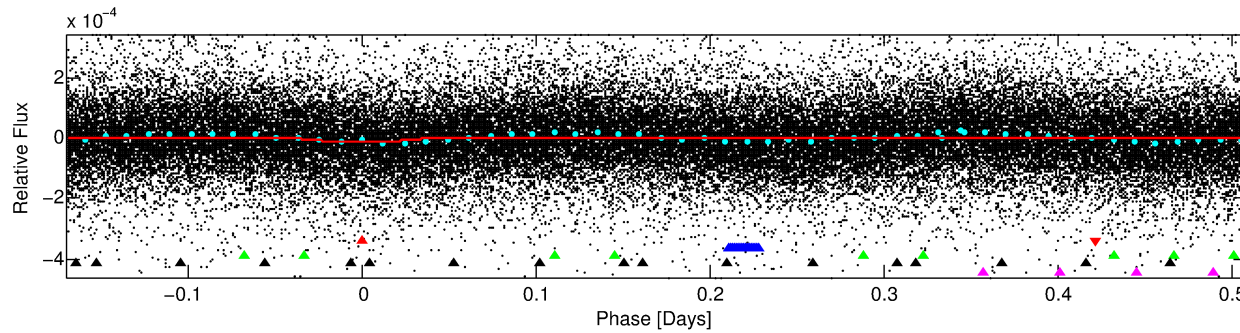
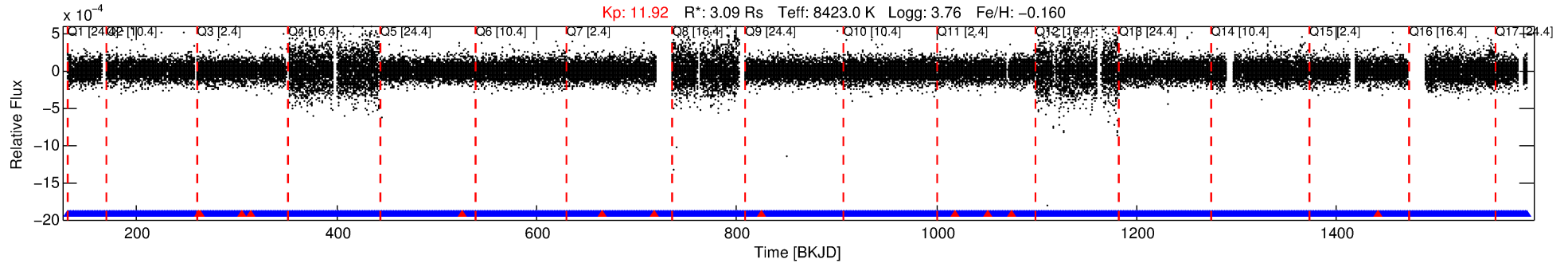
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008264550-01

No Significant Match Found

DV One-Page Summary

KIC: 8264550 Candidate: 1 of 5 Period: 0.678 d



DV Fit Results:

Period = 0.67810 [0.00001] d
Epoch = 131.6481 [0.0027] BKJD
Rp/R* = 0.0036 [0.0006]
a/R* = 1.91 [1.34]
b = 0.88 [0.24]
Seff = 117919.09 [87583.45]
Teq = 4725 [877] K
Rp = 1.22 [0.60] Re
a = 0.0191 [0.0086] AU
Ag = 0.56 [0.59] [-0.75σ]
Teffp = 6322 [1232] K [1.06σ]

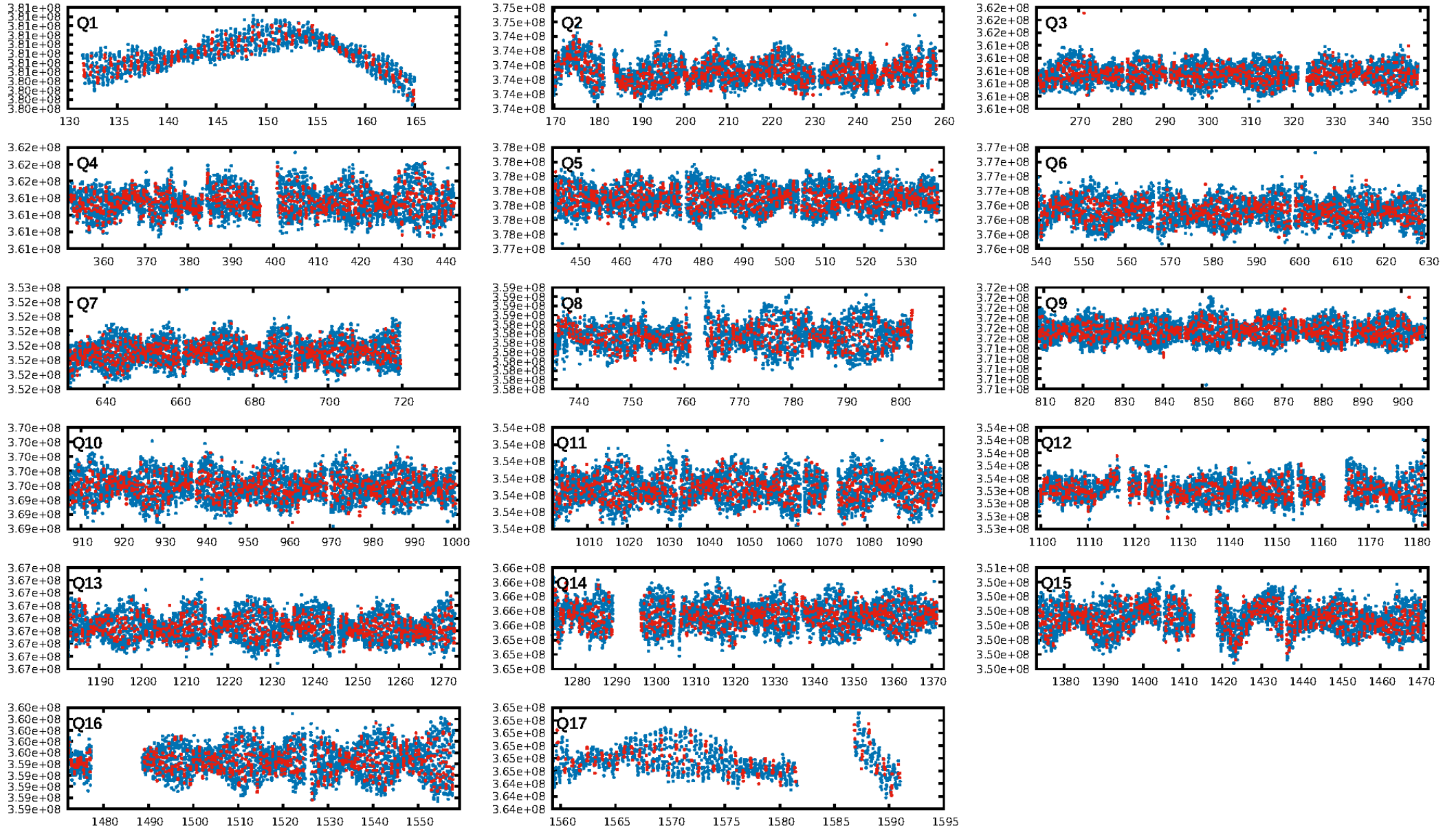
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.99 [1873/1885]
GhostDiagnostic-chr: 2.388
Centroid-sig: 19.1%
Centroid-so: 3.583 arcsec [2.07σ]
OotOffset-rm: 8.698 arcsec [8.47σ]
KicOffset-rm: 8.716 arcsec [8.64σ]
OotOffset-st: 0/4/4/3 [11]
KicOffset-st: 0/4/4/3 [11]
DiffImageQuality-fgm: 1.00 [11/11]
DiffImageOverlap-fno: 0.00 [0/17]

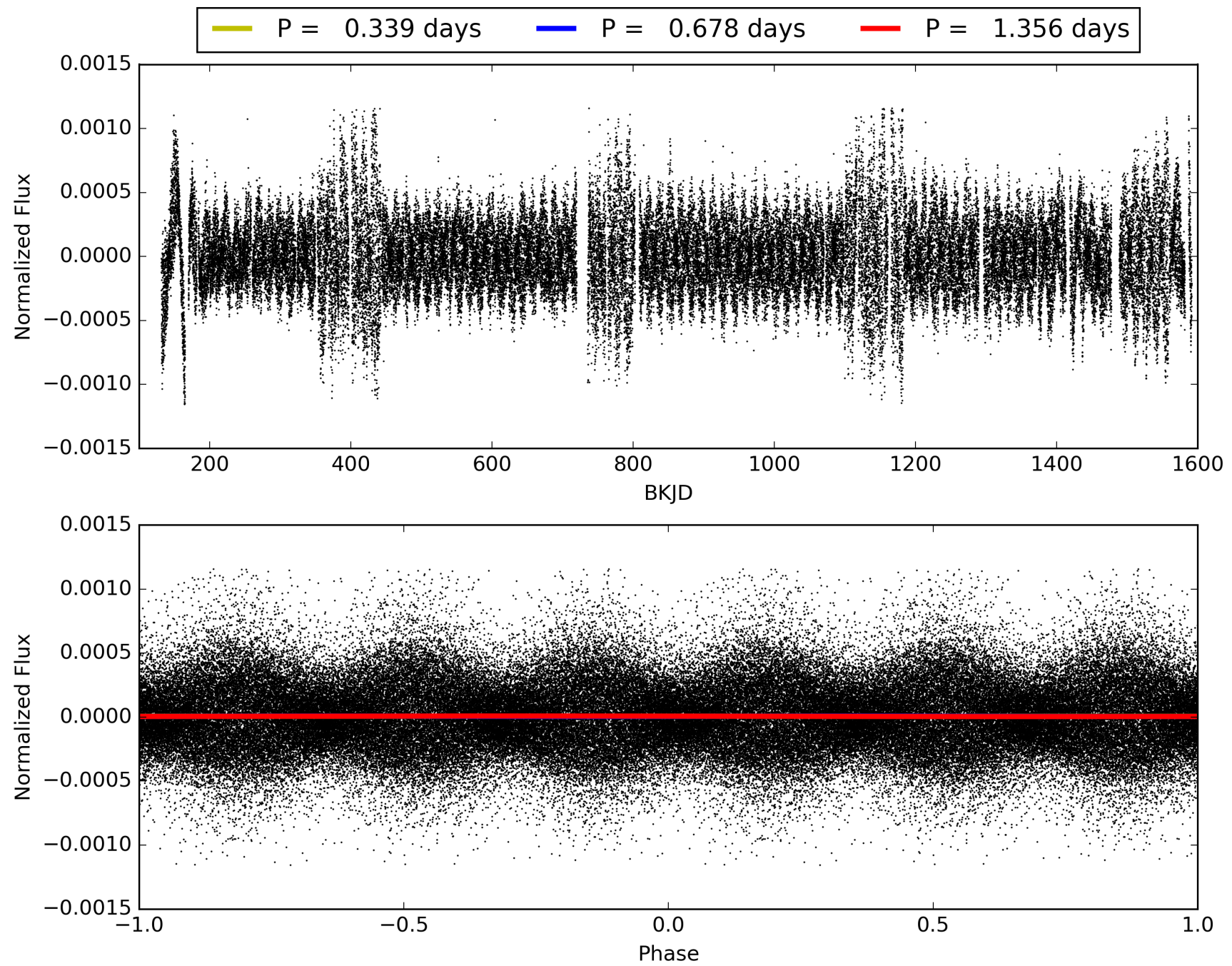
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:19:53 Z

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

TCE 008264550-01, PDC Light Curves

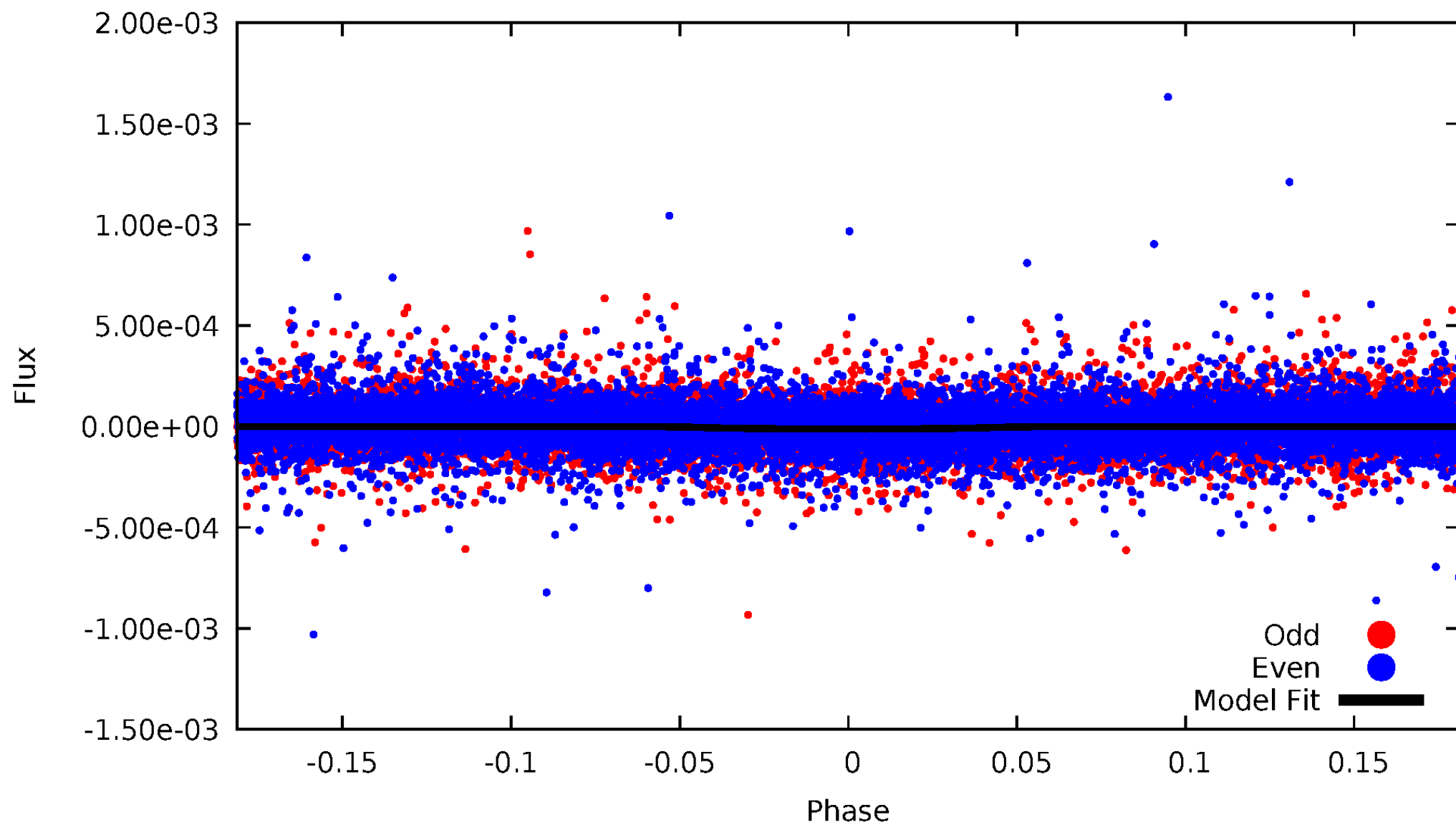


TCE 008264550-01



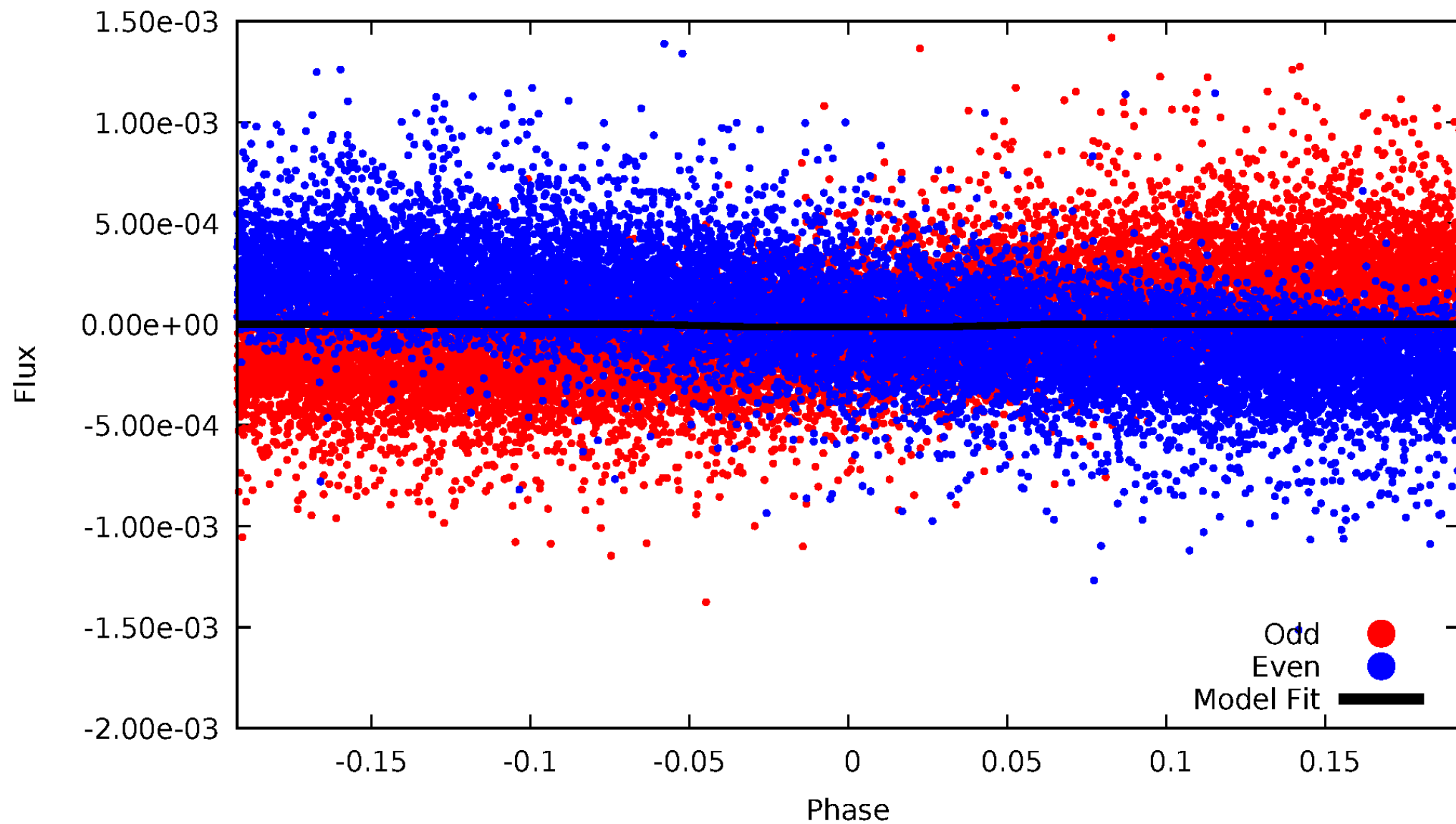
DV Odd/Even

TCE 008264550-01



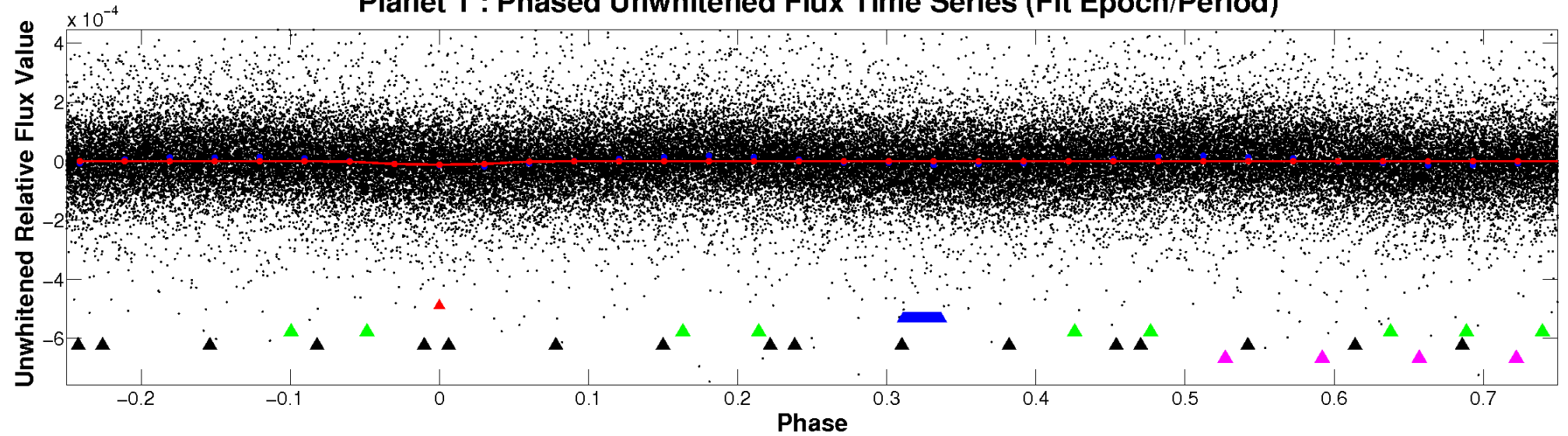
ALT Odd/Even

TCE 008264550-01

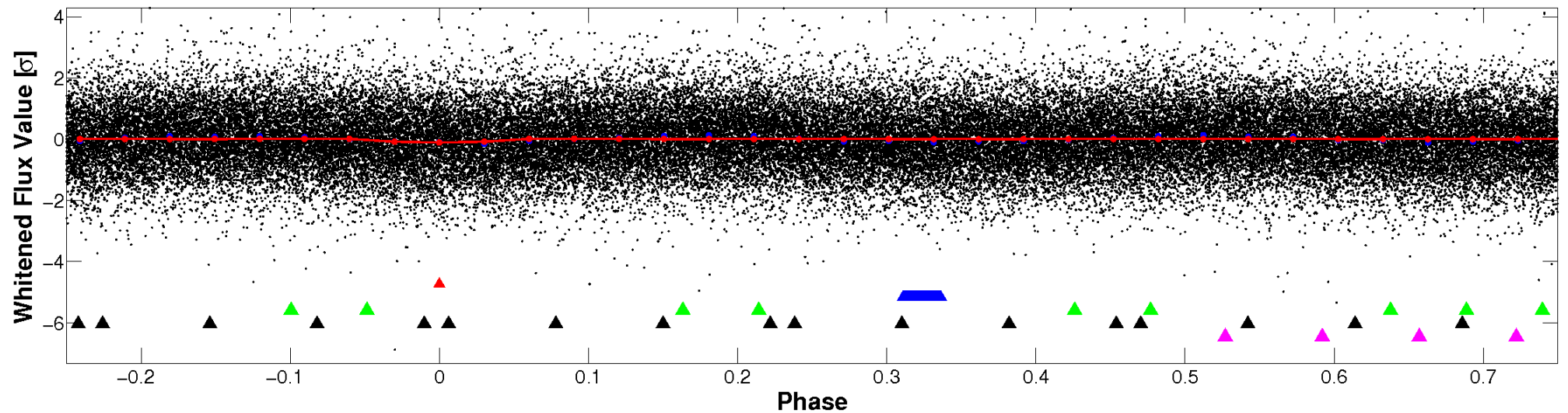


Non-Whitened Vs. Whitened Light Curve

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

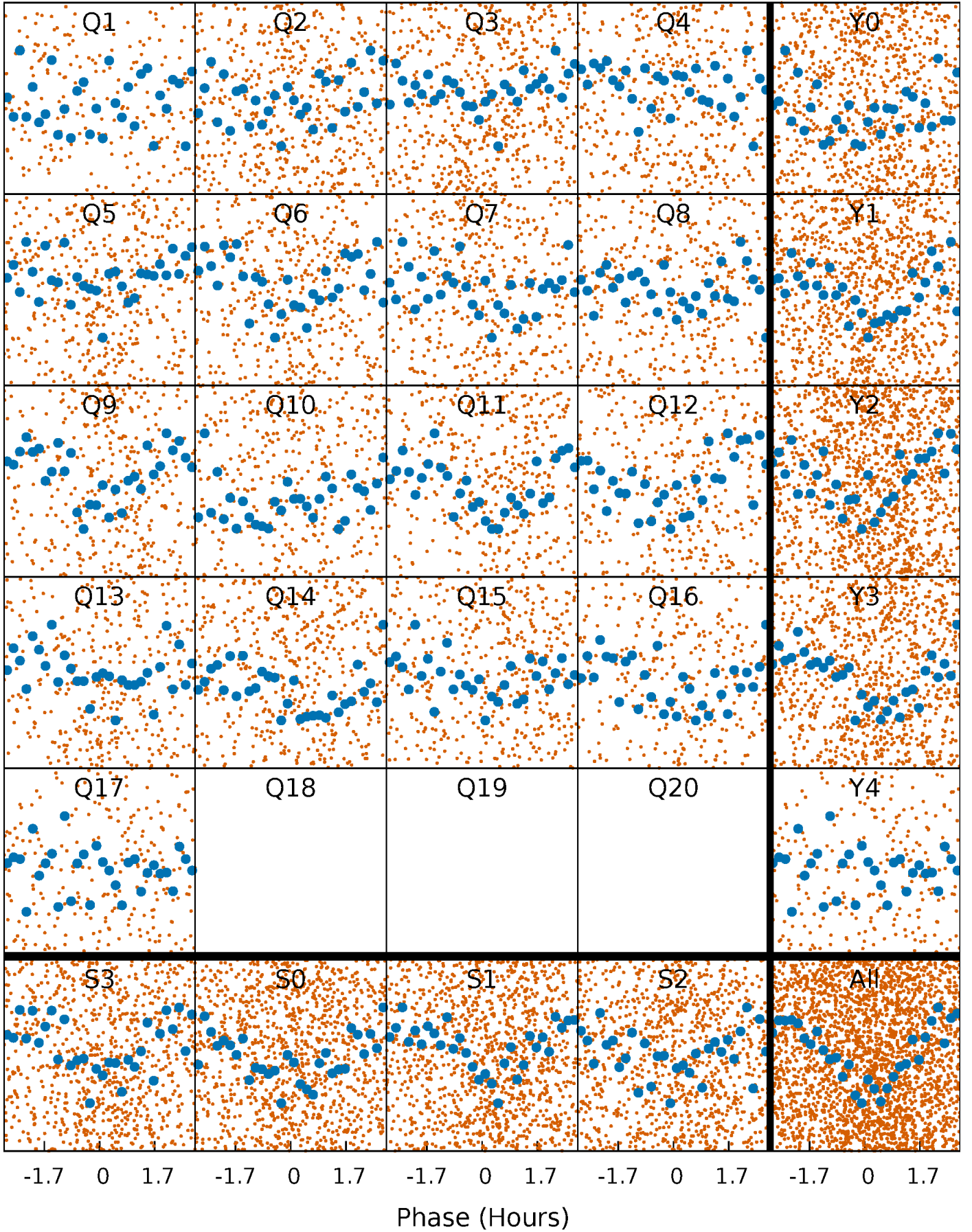


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



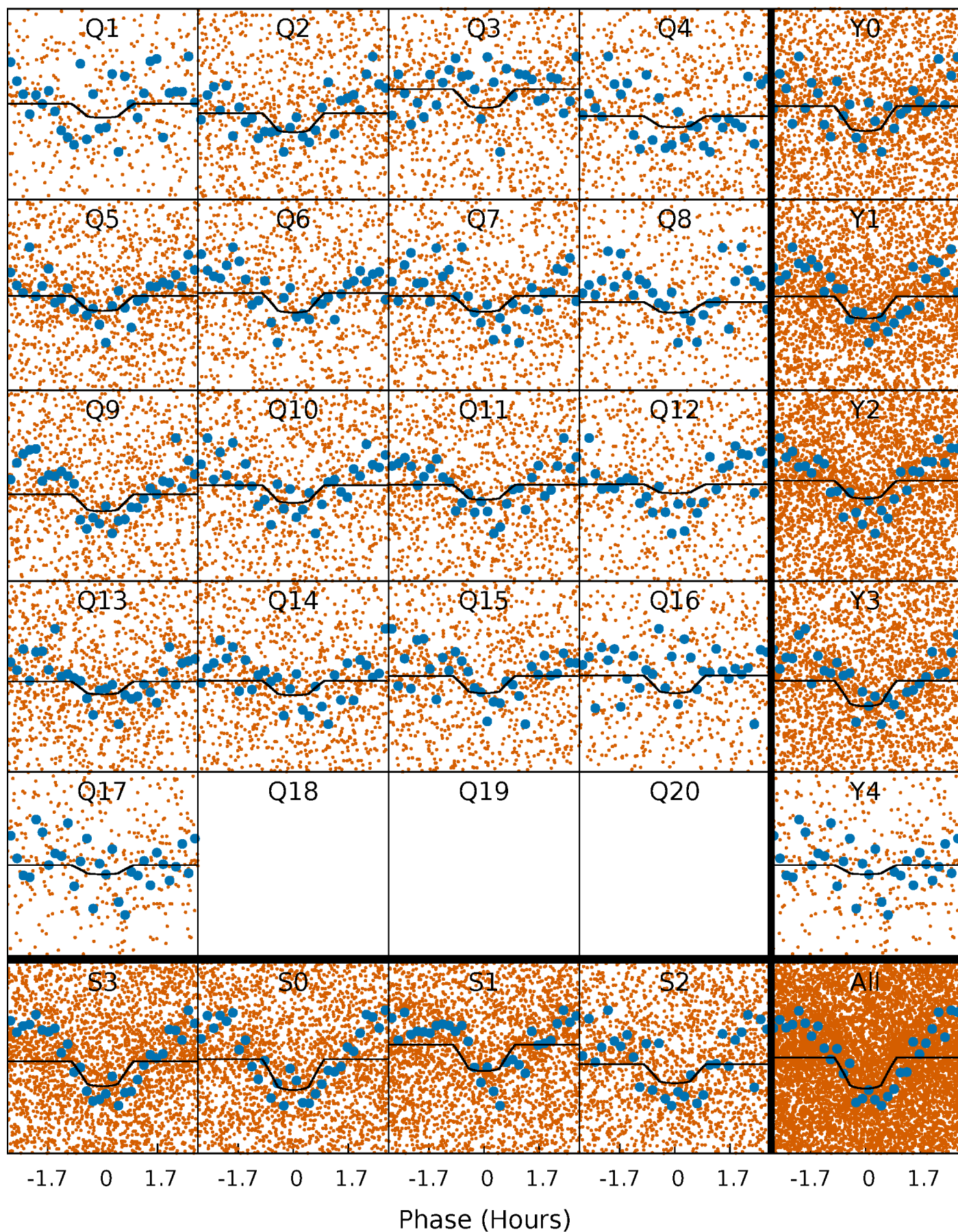
PDC Quarter-Phased Transit Curves

TCE 008264550-01 P= 0.678097 Days $T_0=131.648078$ (BKJD)



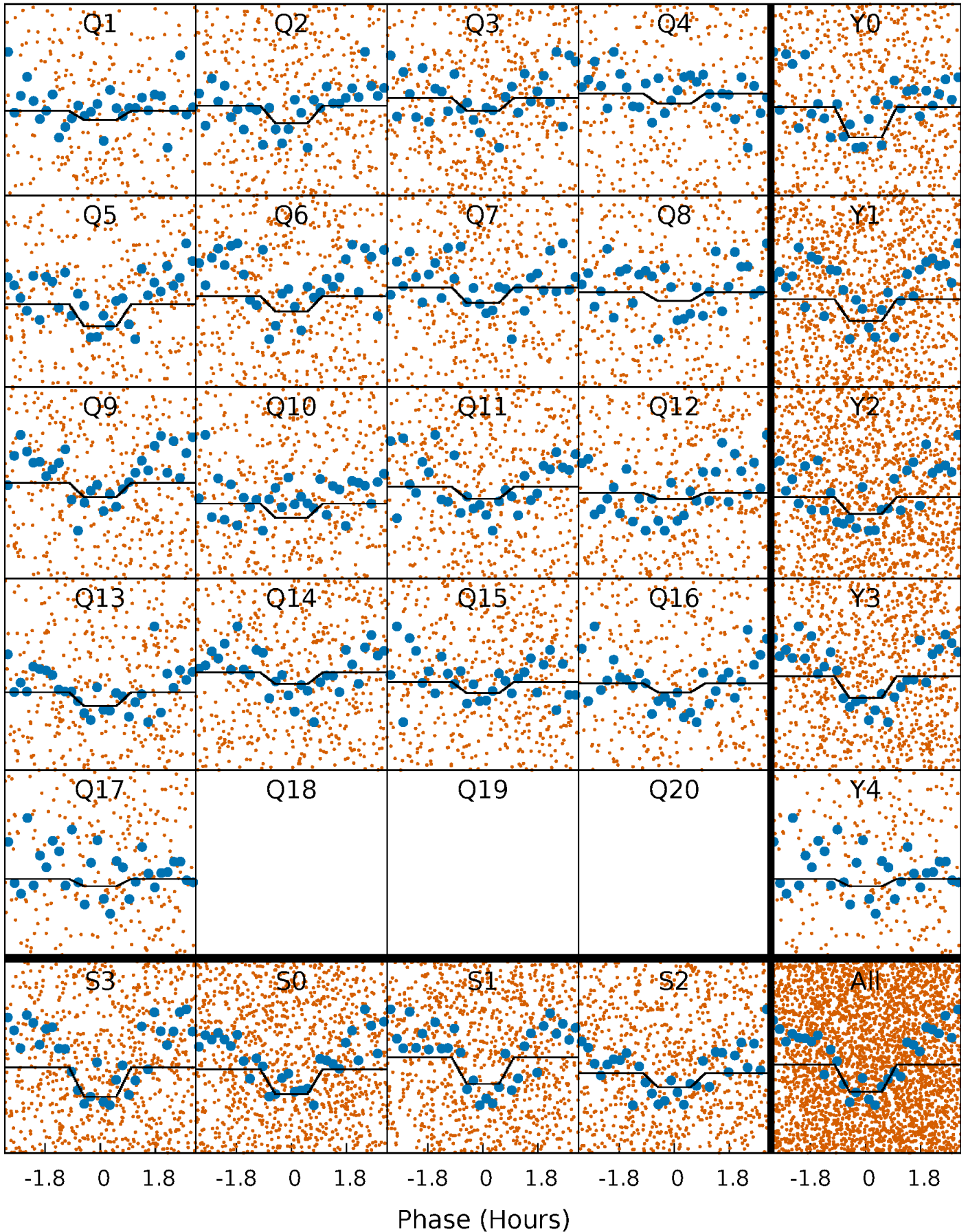
DV Quarter-Phased Transit Curves

TCE 008264550-01 P= 0.678097 Days $T_0=131.648078$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

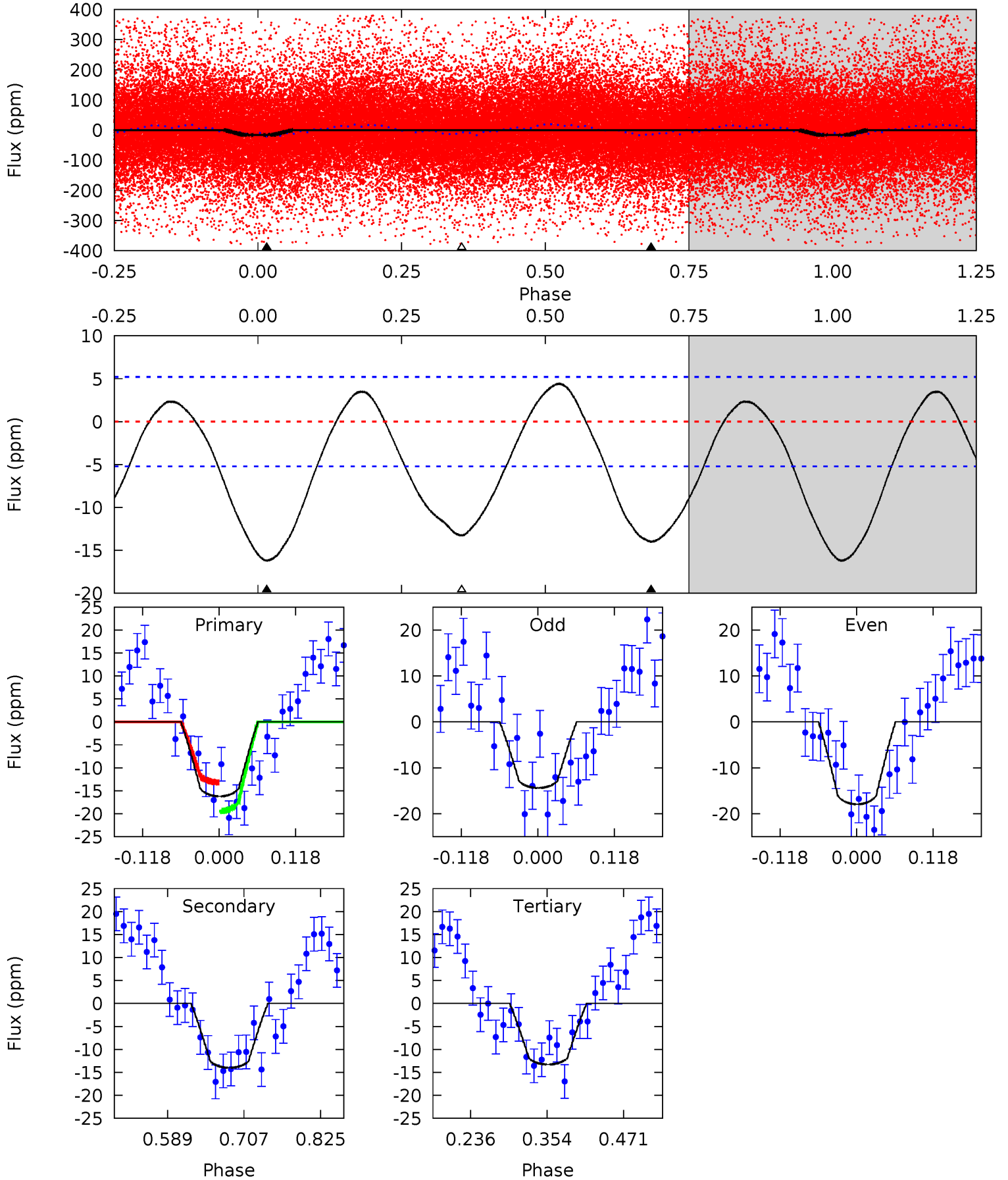
TCE 008264550-01 P= 0.678105 Days $T_0=131.645765$ (BKJD)



DV Model-Shift Uniqueness Test

008264550-01, P = 0.678097 Days, E = 130.969981 Days

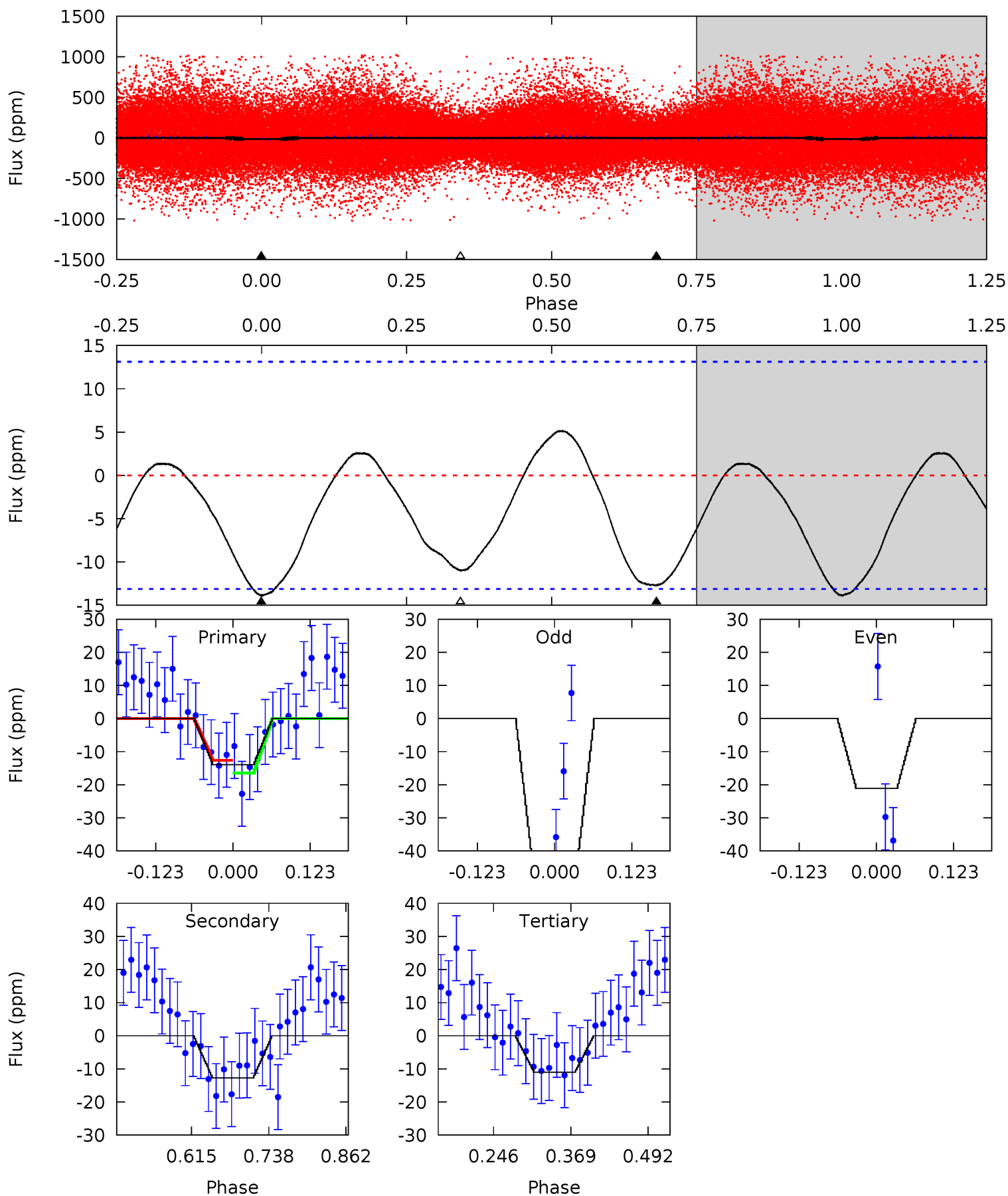
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.1	12.2	11.5	0	4.53	1.56	5.06	2.55	14.1	0.62	12.2	1.56	1.10	0.21	2.74



Alt Model-Shift Uniqueness Test

008264550-01, P = 0.678105 Days, E = 130.967660 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.81	4.39	3.80	0	4.52	1.54	1.74	1.01	4.81	0.59	4.39	5.05	0.99	0.27	0.63



Stellar Parameters For KIC 008264550

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8423^{+204}_{-379}	$3.764^{+0.424}_{-0.106}$	$-0.160^{+0.250}_{-0.350}$	$3.089^{+0.772}_{-1.433}$	$2.024^{+0.333}_{-0.458}$	$0.097^{+0.377}_{-0.041}$
	+2%/-4%	+11%/-3%	+156%/-219%	+25%/-46%	+16%/-23%	+390%/-42%
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 008264550-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-14 ± 1	$1.08^{+0.32}_{-0.30}$	6324^{+518}_{-752}	8276^{+1463}_{-999}	$2.423^{+2.022}_{-0.990}$
Alt.	-13 ± 3	$1.08^{+0.30}_{-0.28}$	6351^{+497}_{-816}	8056^{+1325}_{-1170}	$2.158^{+1.857}_{-0.886}$

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

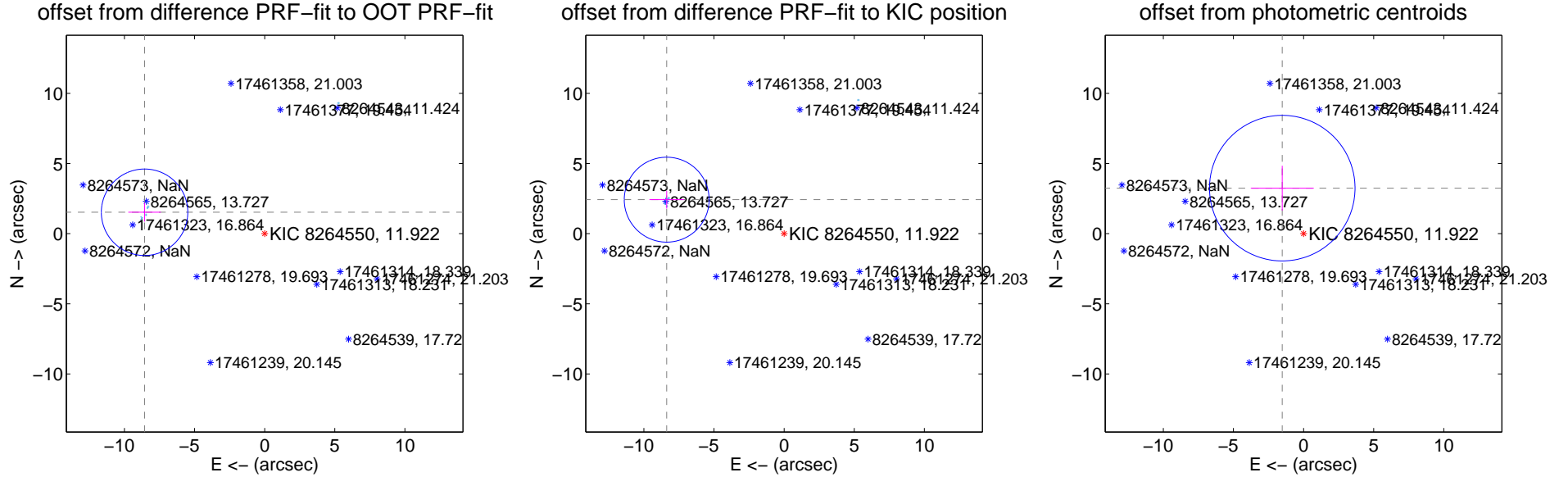
DV Centroid Data

Supplemental centroid analysis for 008264550-01. **Kepler magnitude: 11.92.** Transit SNR 7.34

There are 11 quarters with good PRF difference image offsets

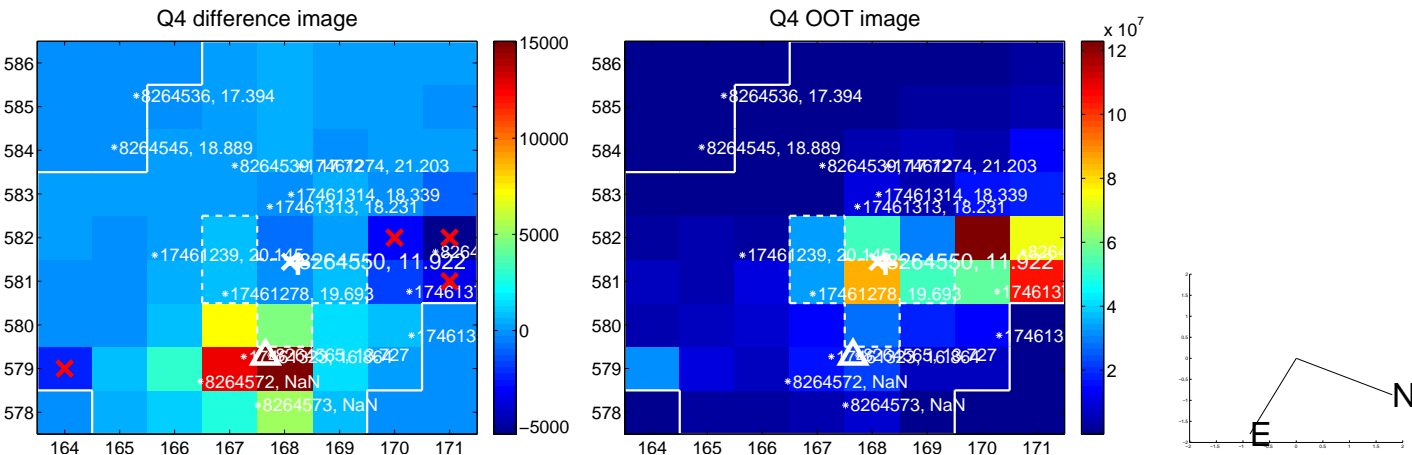
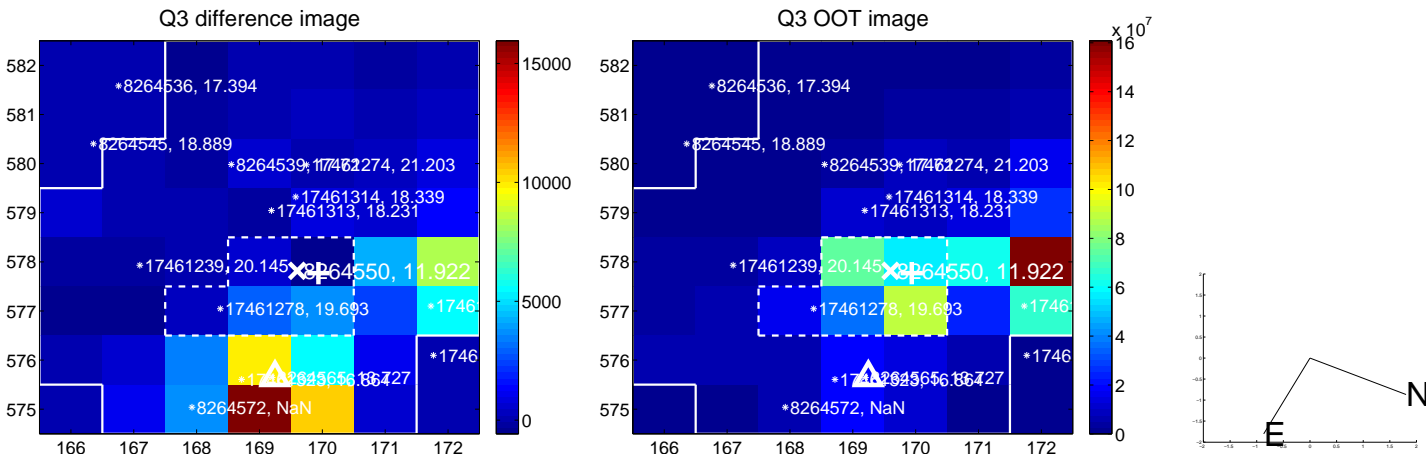
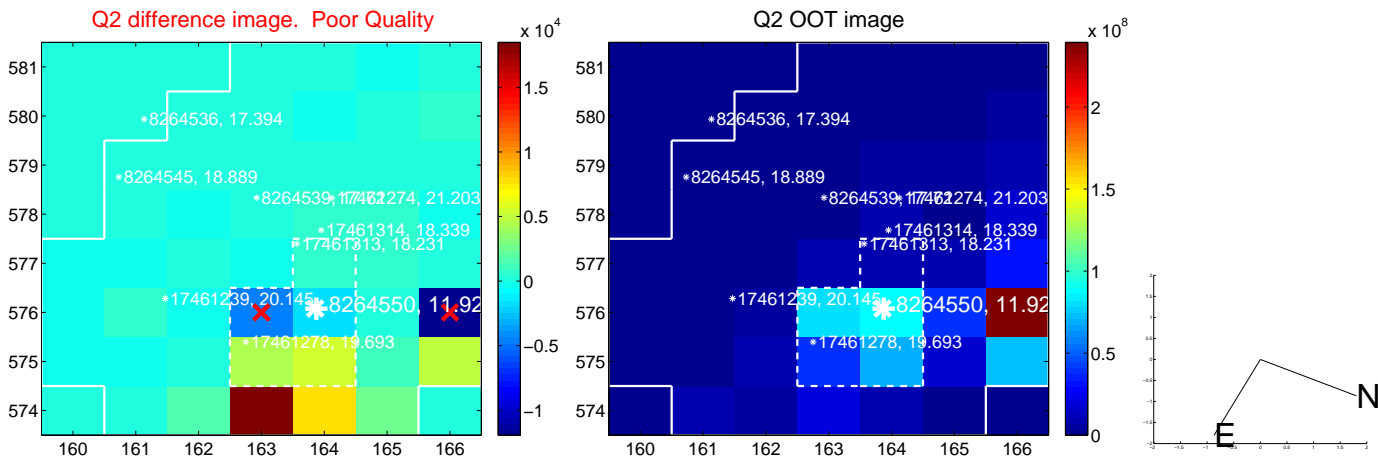
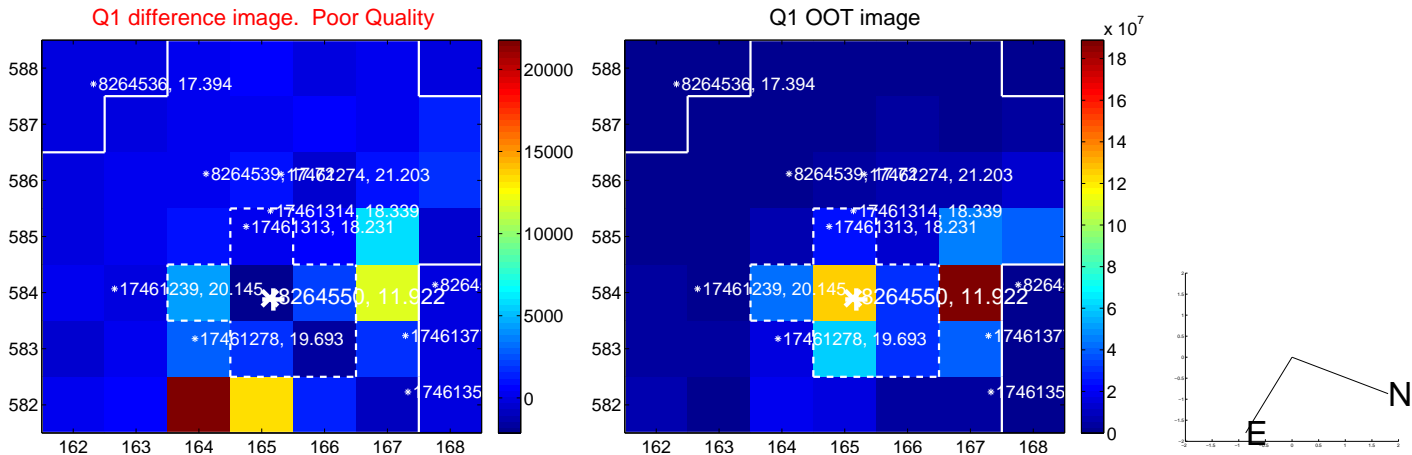
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	8.698 \pm 1.027	8.47	8.563 \pm 1.160	1.526 \pm 0.669
PRF-fit source offset from KIC position	8.716 \pm 1.009	8.64	8.373 \pm 1.233	2.423 \pm 0.640
photometric centroid source offset	3.58 \pm 1.73	2.07	1.52 \pm 2.24	3.24 \pm 1.59

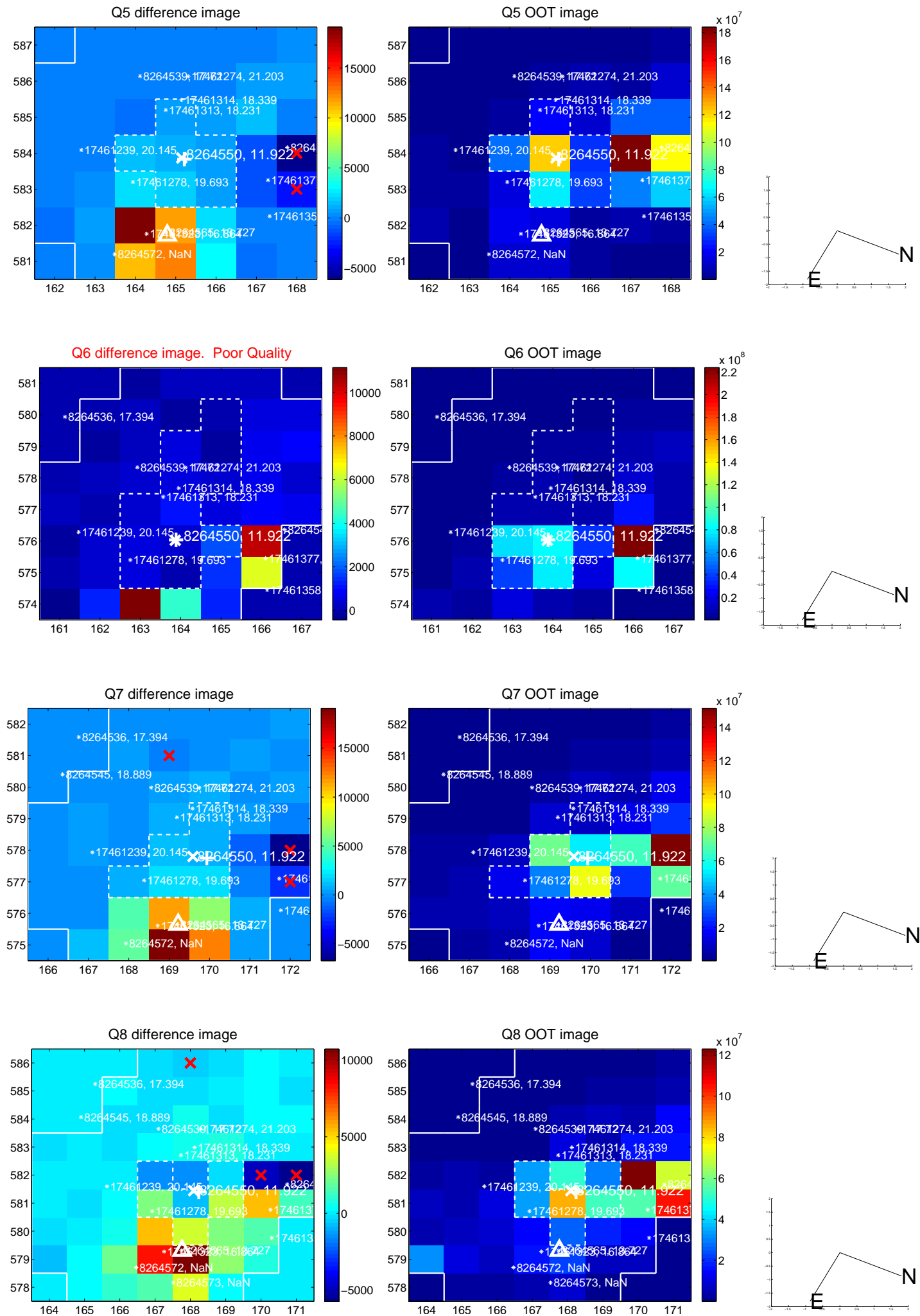


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

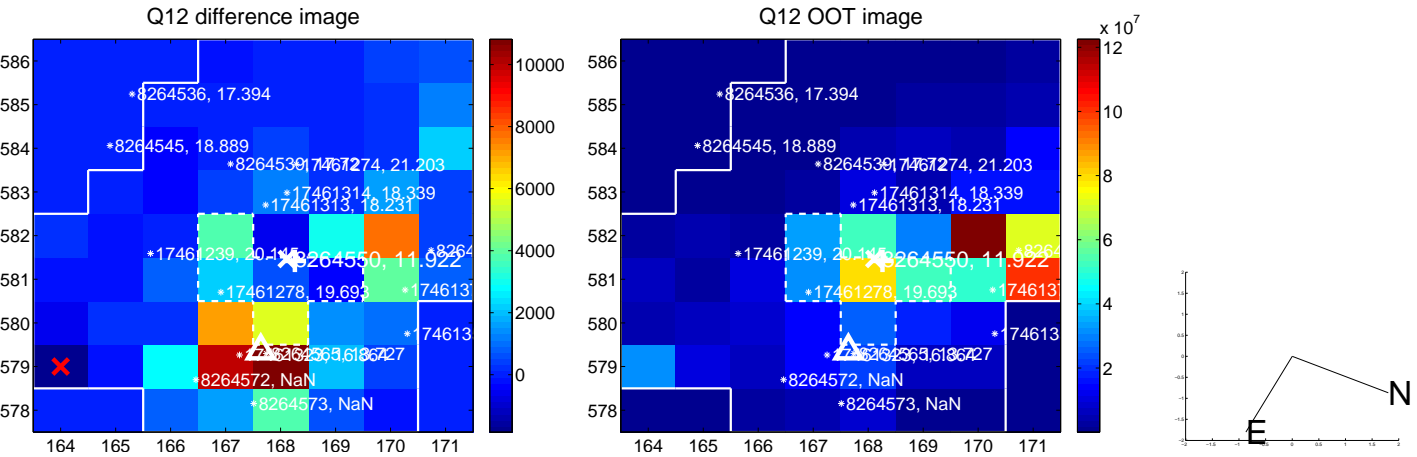
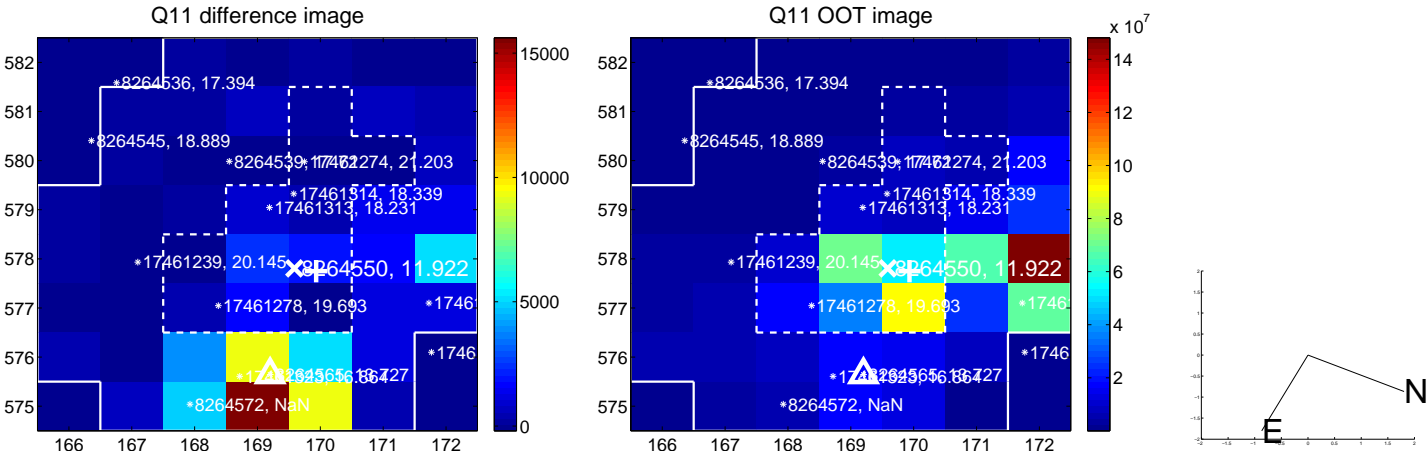
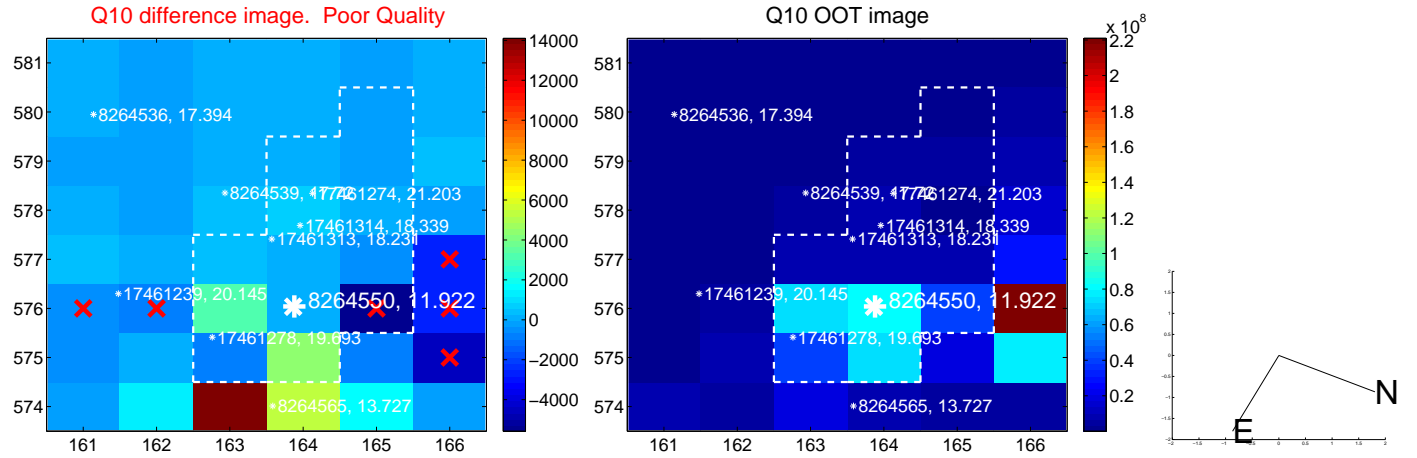
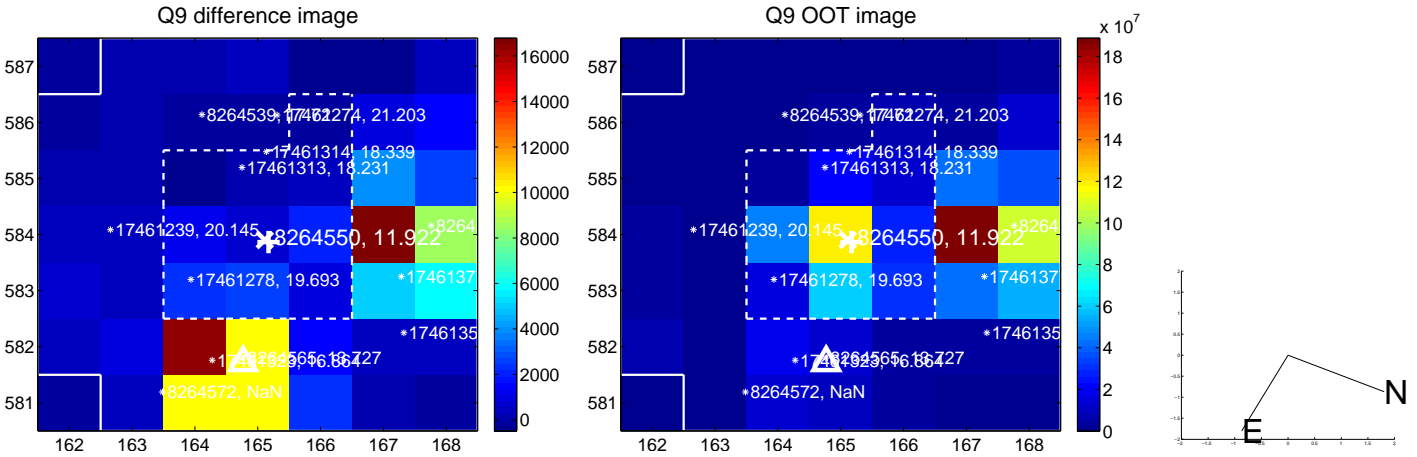
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



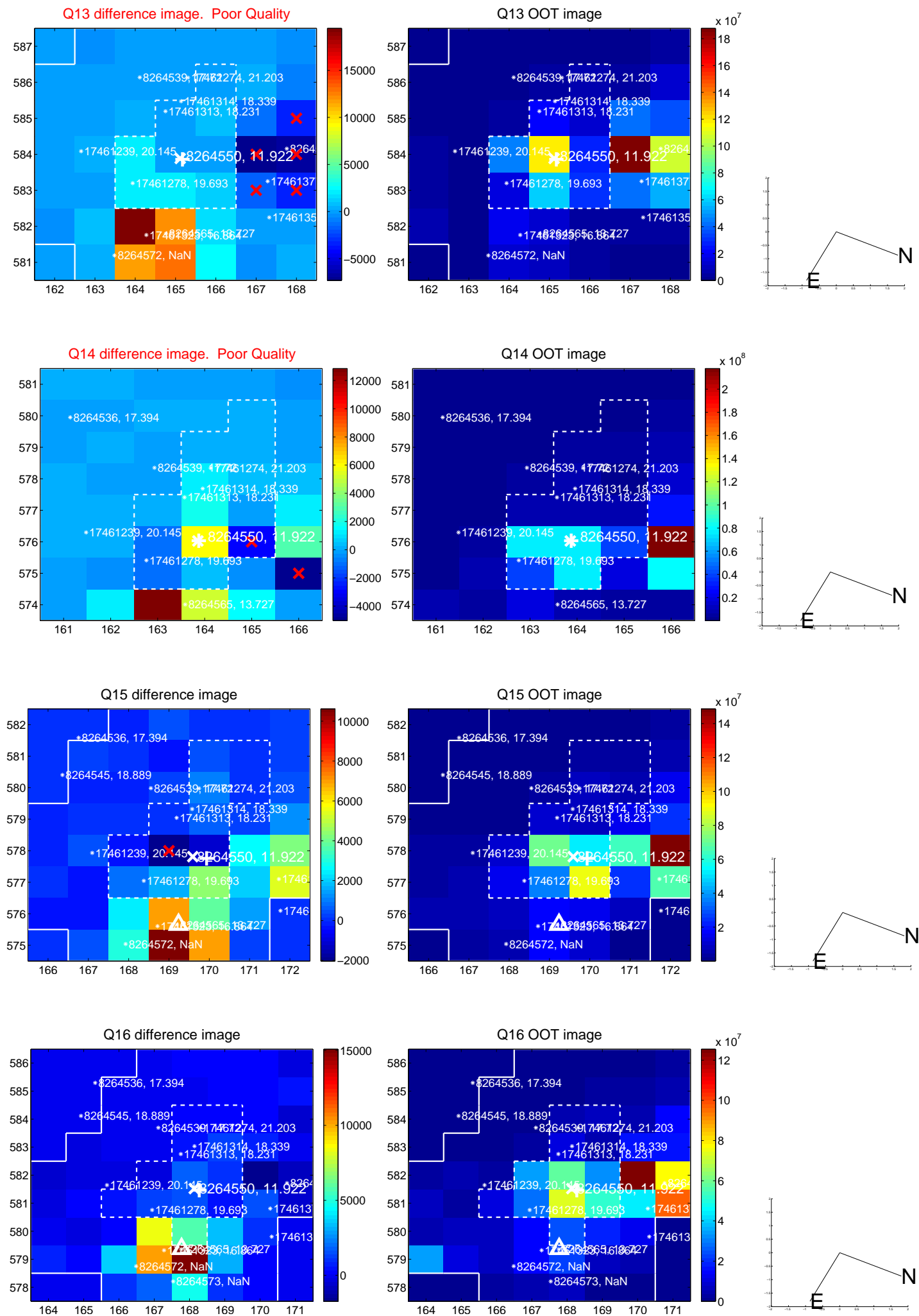
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



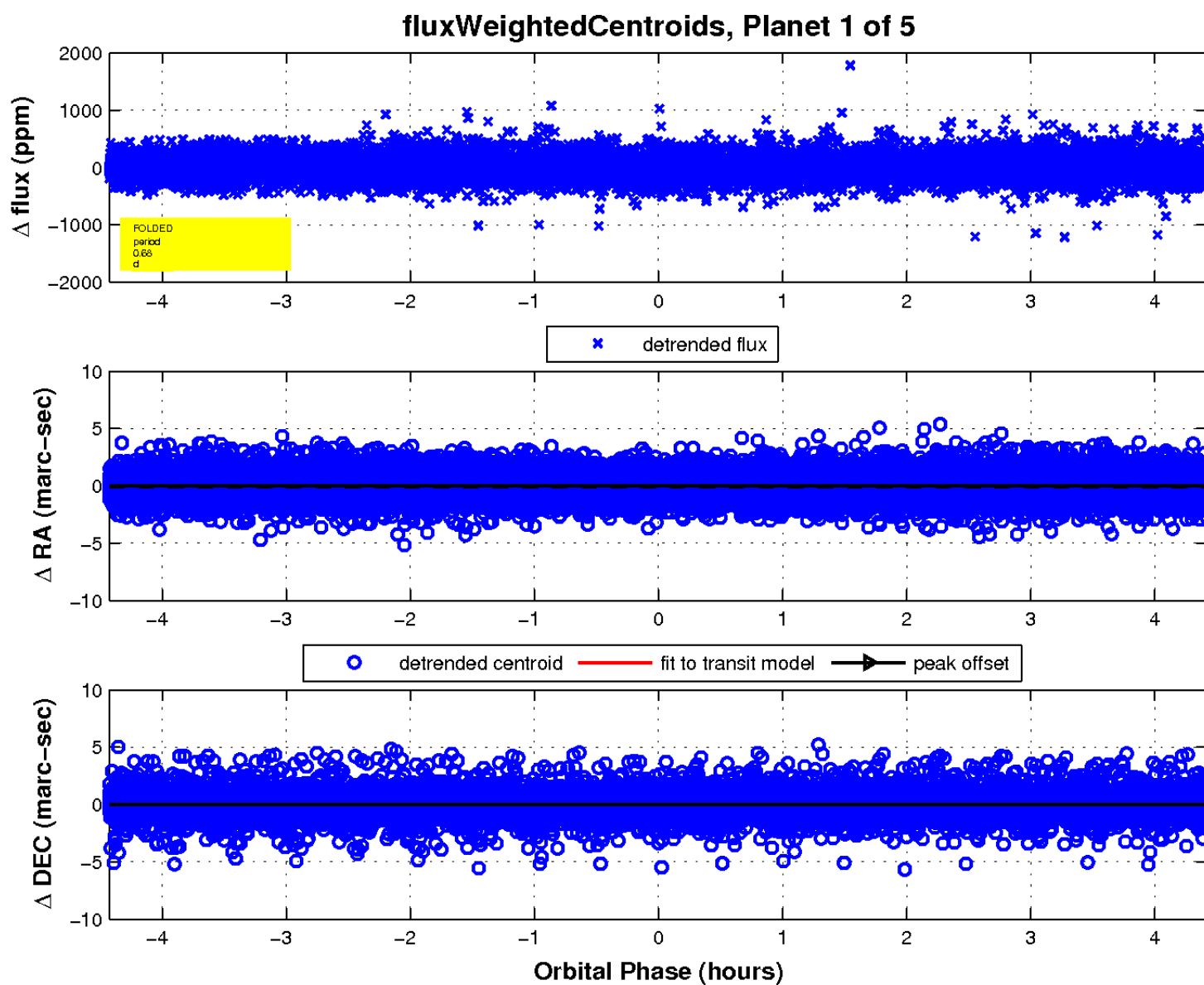
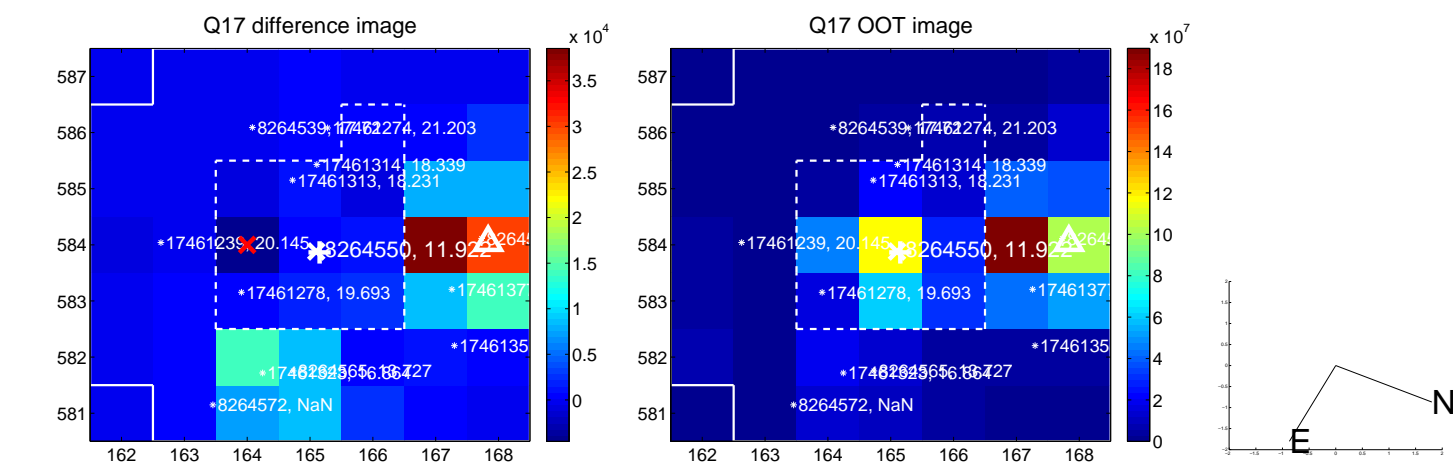
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

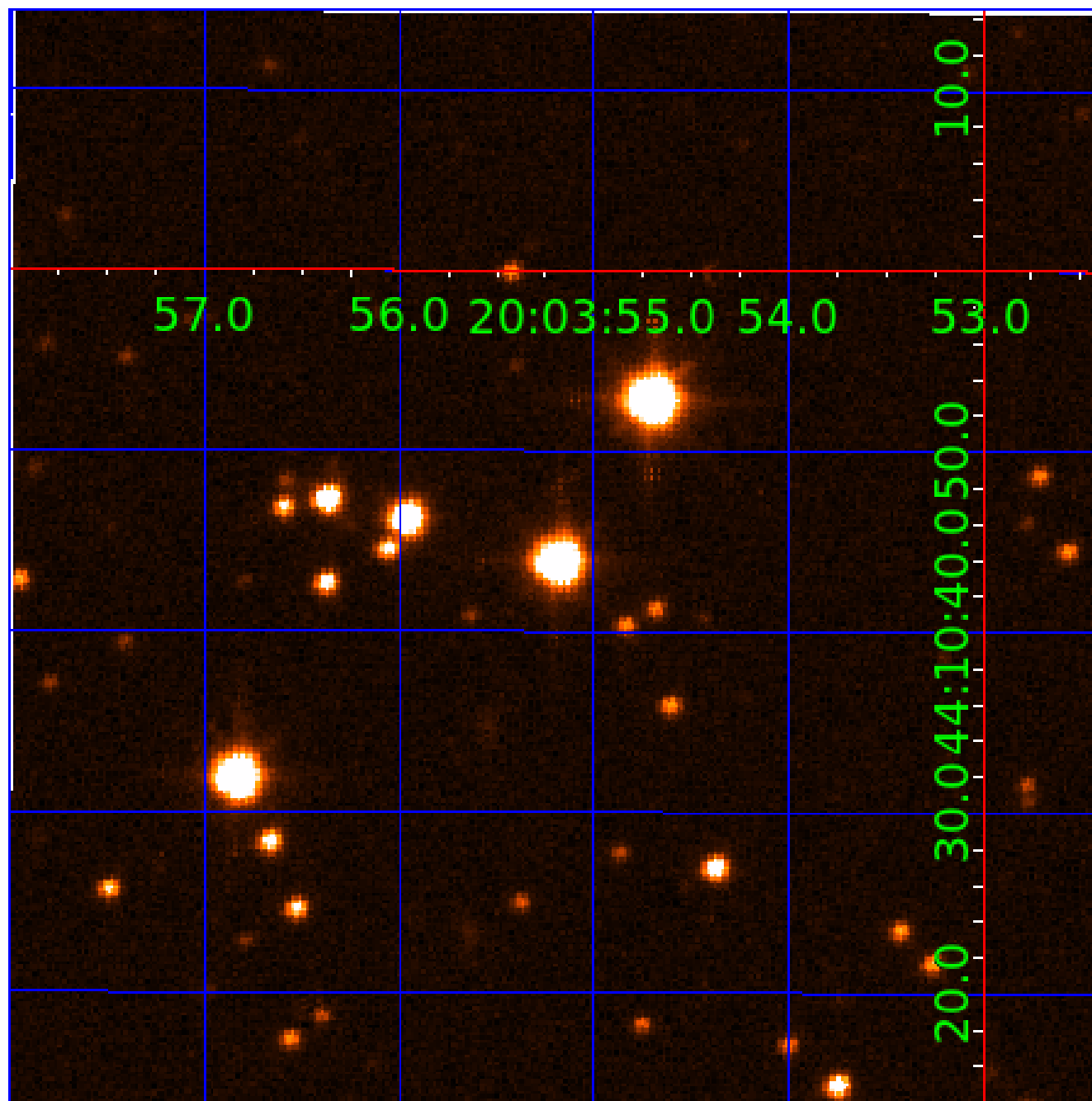


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008264550

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})
008264550-01	OBS	No	0.678097	131.648078	11.7	1.475	8.8	7.3	3.09	8423	1.22	117919.09
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
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008264550-02	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_RESOLVED_OFFSET
008264550-04	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
008264550-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—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.

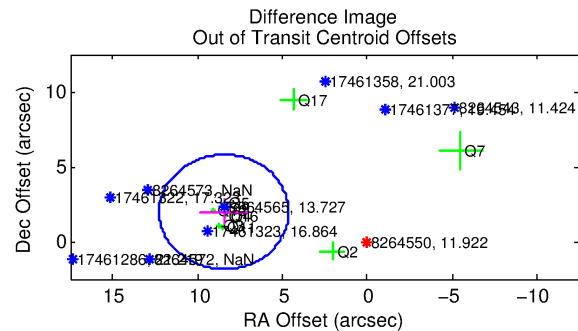
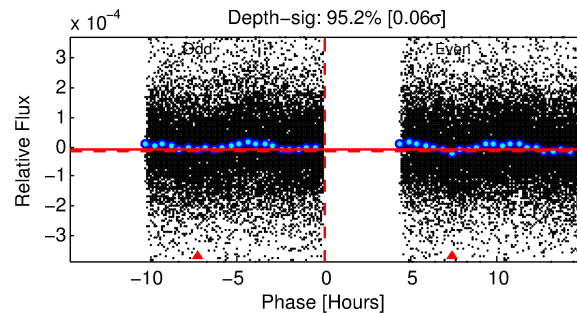
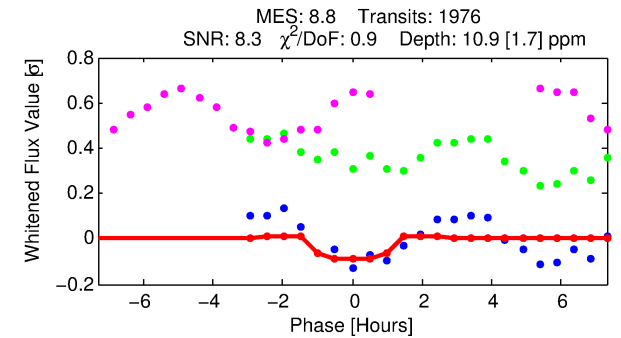
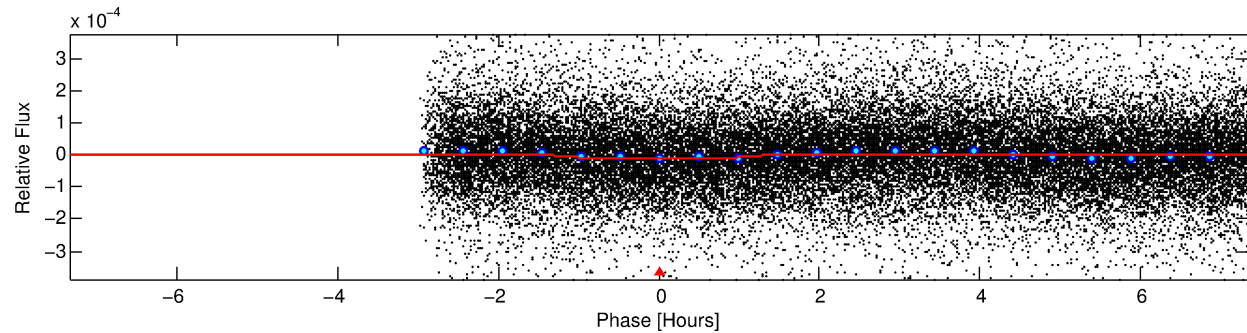
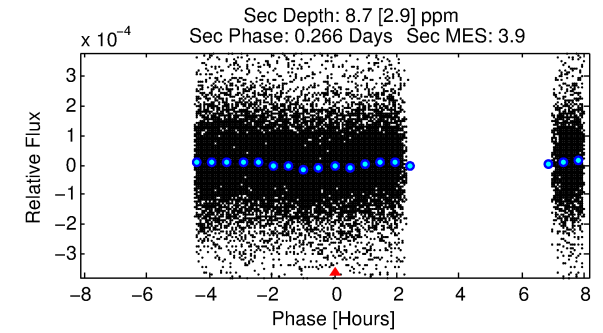
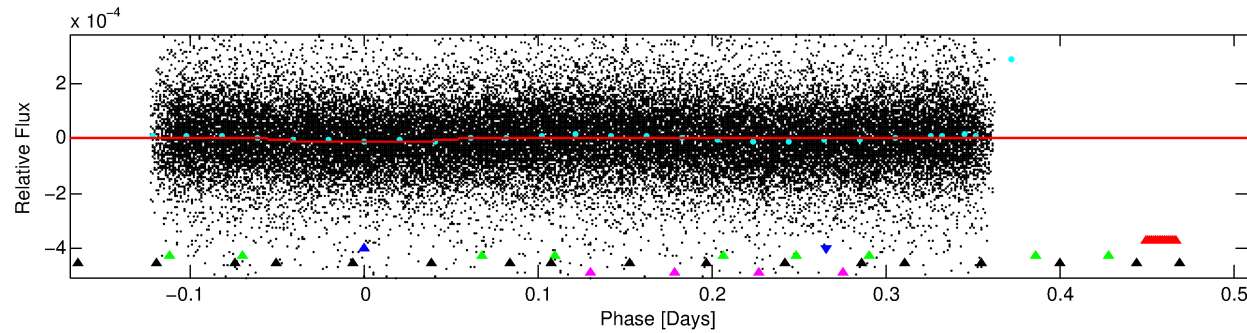
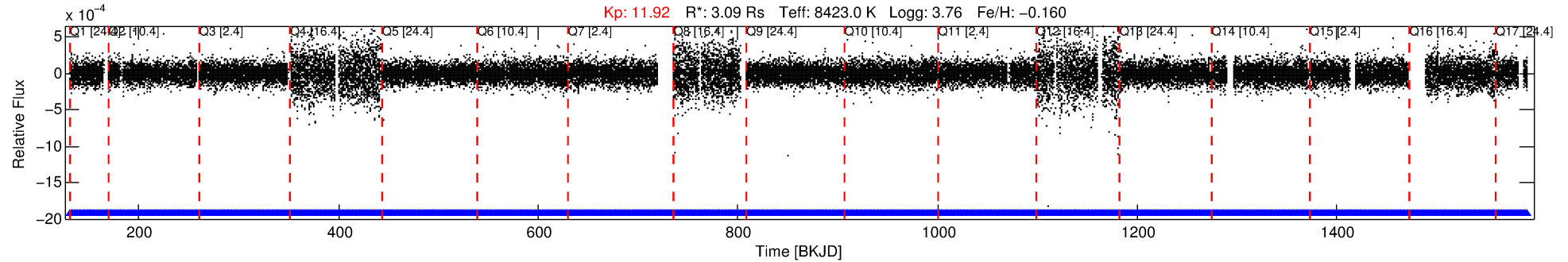
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008264550-02

No Significant Match Found

DV One-Page Summary

KIC: 8264550 Candidate: 2 of 5 Period: 0.678 d



DV Fit Results:

Period = 0.67811 [0.00001] d
Epoch = 131.8589 [0.0033] BKJD
Rp/R* = 0.0035 [0.0007]
a/R* = 1.34 [0.72]
b = 0.89 [0.27]
Seff = 117917.22 [87582.07]
Teq = 4725 [877] K
Rp = 1.18 [0.59] Re
a = 0.0191 [0.0086] AU
Ag = 1.26 [1.12] [0.24σ]
Teffp = 7746 [1050] K [2.21σ]

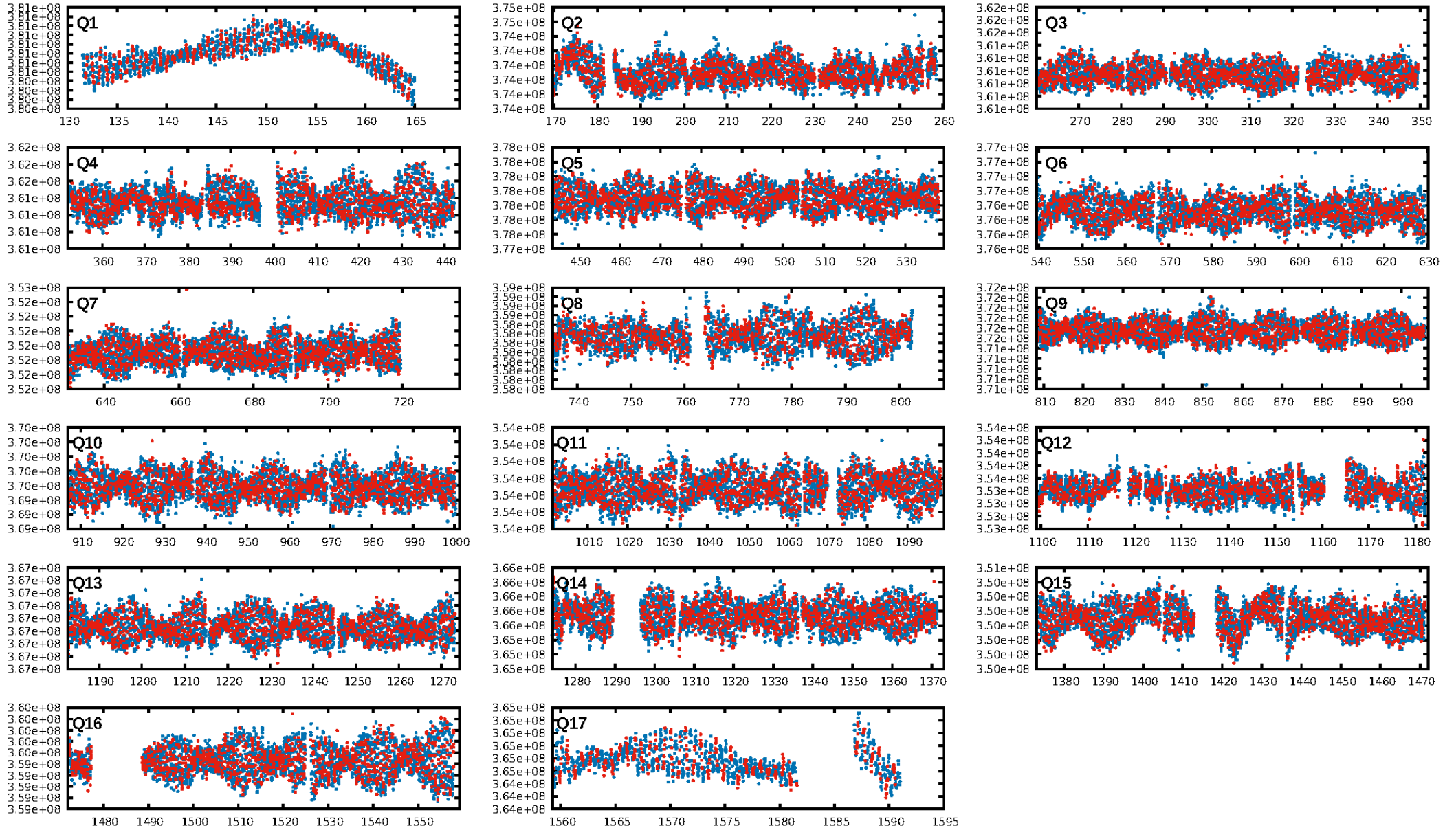
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 100.0% [596.04σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1888/1888]
GhostDiagnostic-chr: 2.041
Centroid-sig: 0.0%
Centroid-so: 1.579 arcsec [0.99σ]
OotOffset-rm: 8.674 arcsec [6.81σ]
KicOffset-rm: 8.739 arcsec [6.82σ]
OotOffset-st: 1/3/3/3 [10]
KicOffset-st: 1/3/3/3 [10]
DiffImageQuality-fgm: 0.70 [7/10]
DiffImageOverlap-fno: 0.00 [0/17]

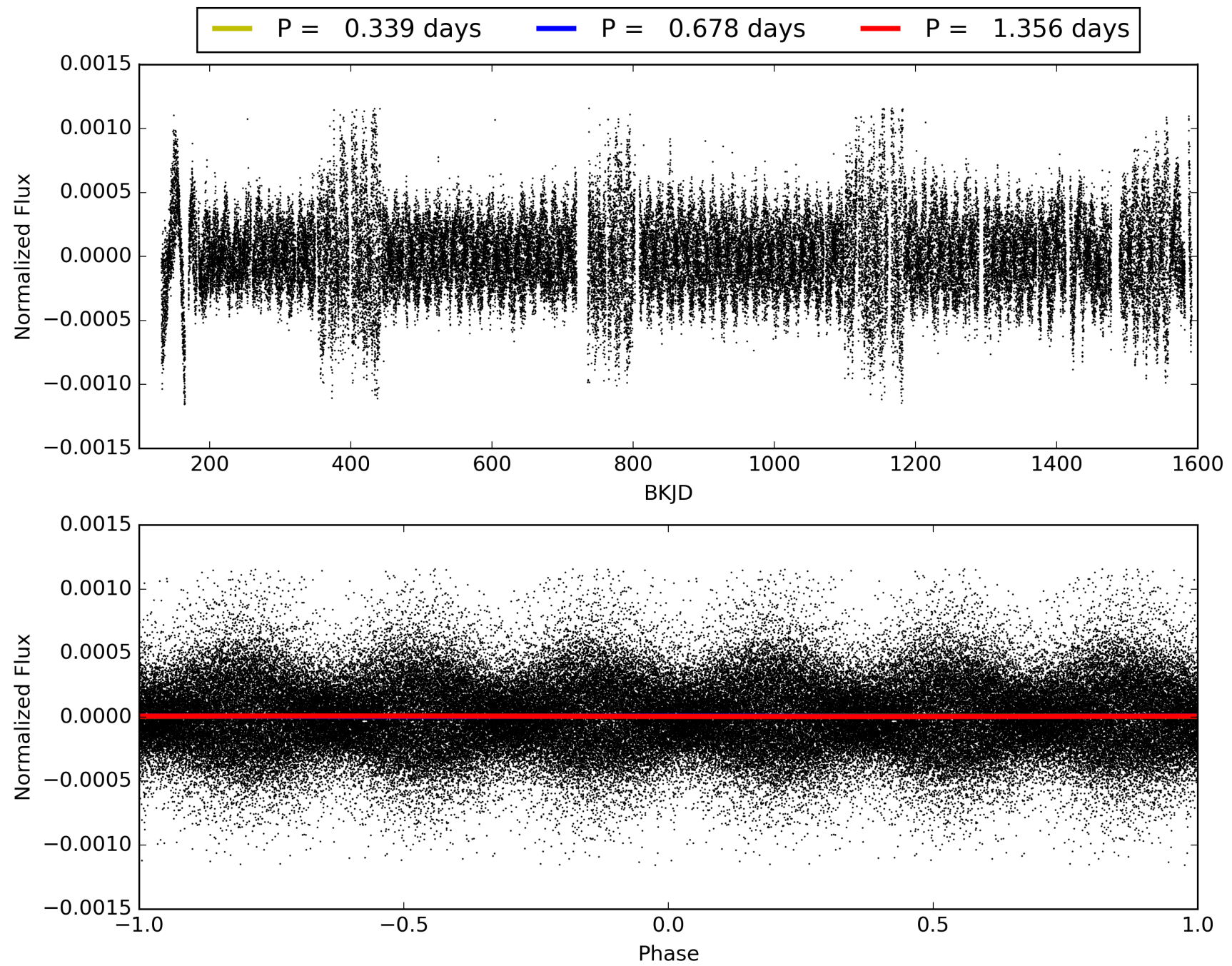
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:20:04 Z

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

TCE 008264550-02, PDC Light Curves

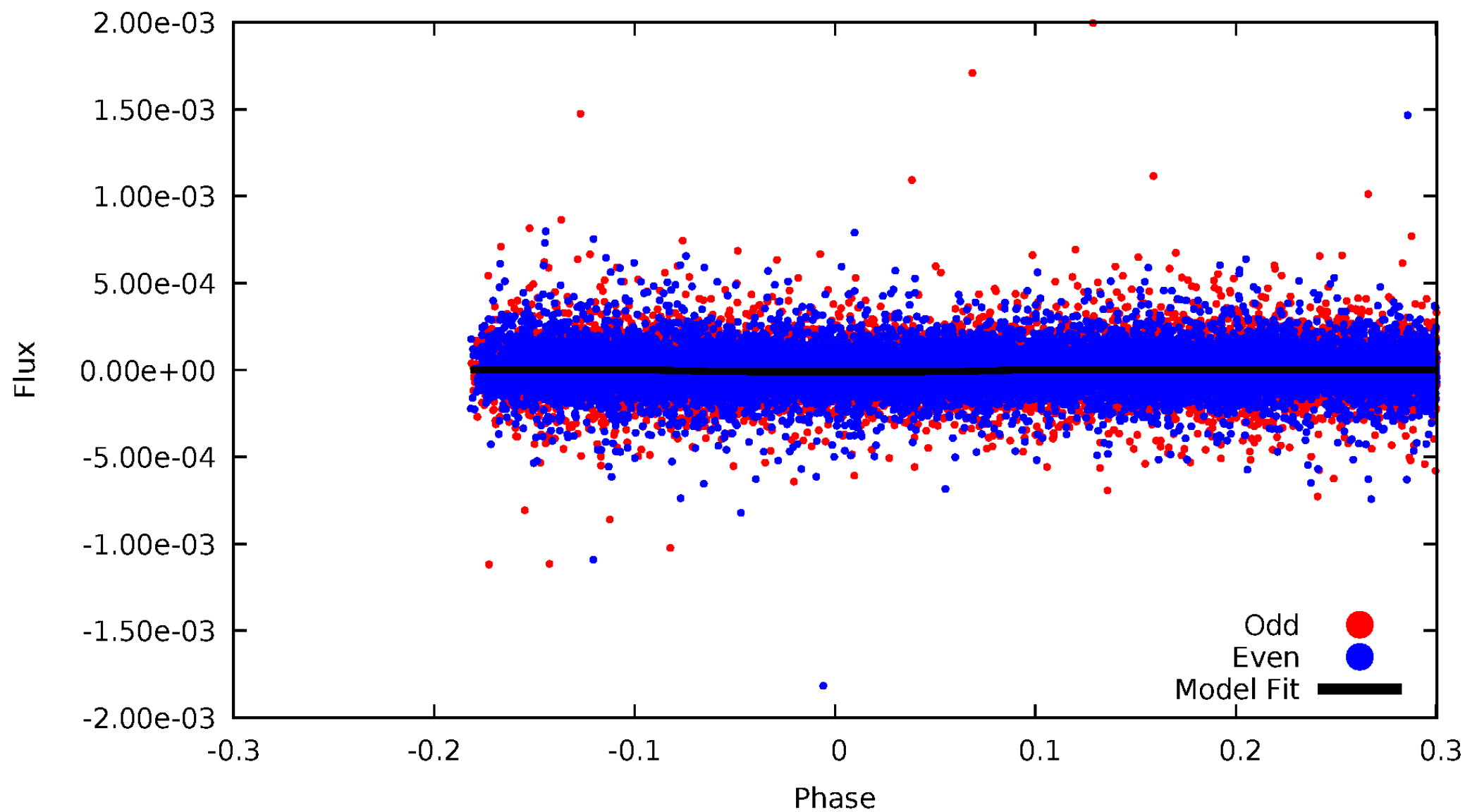


TCE 008264550-02



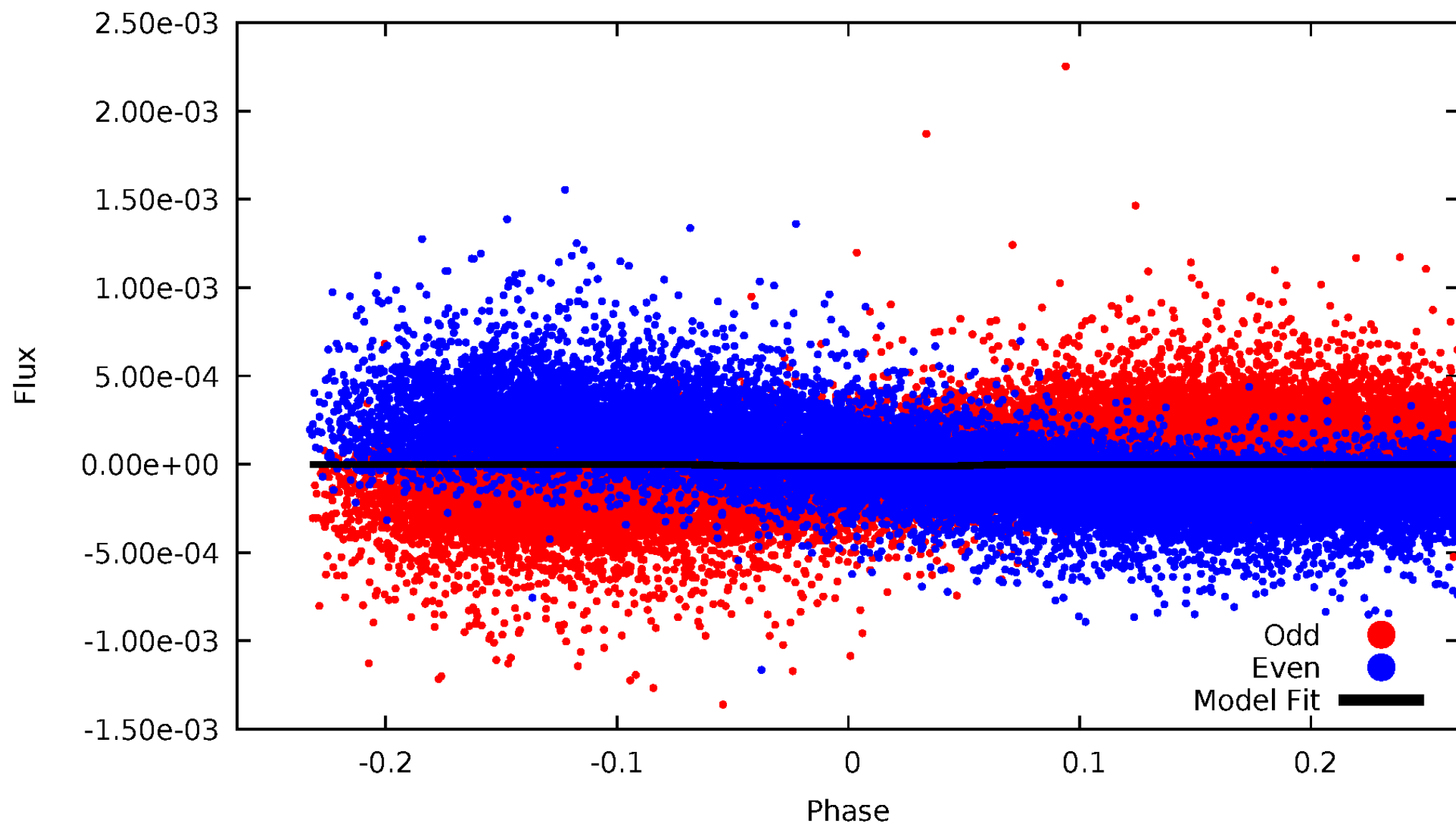
DV Odd/Even

TCE 008264550-02



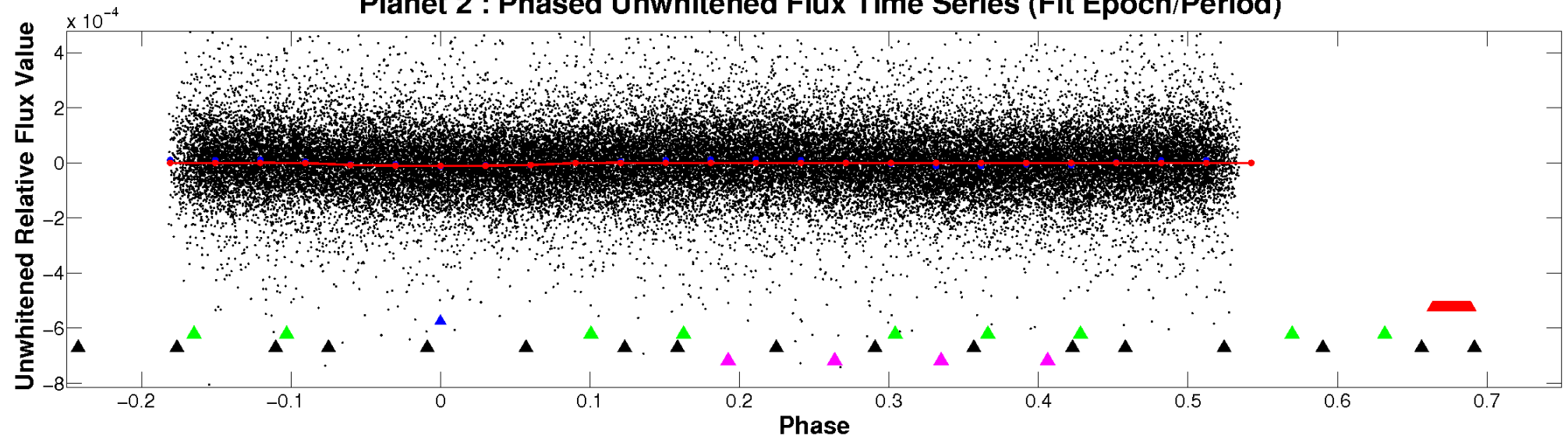
ALT Odd/Even

TCE 008264550-02

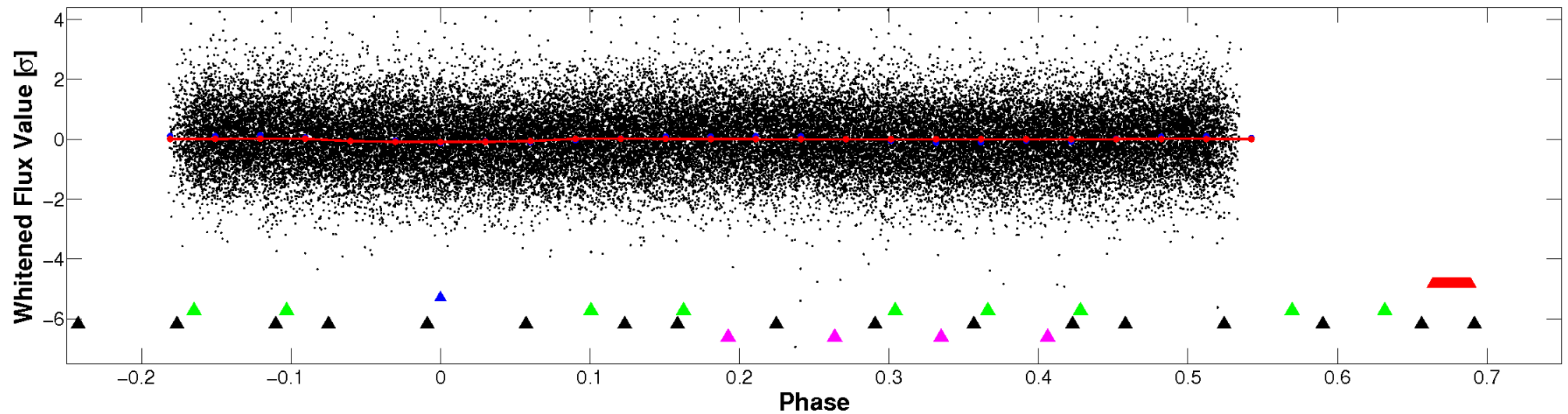


Non-Whitened Vs. Whitened Light Curve

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

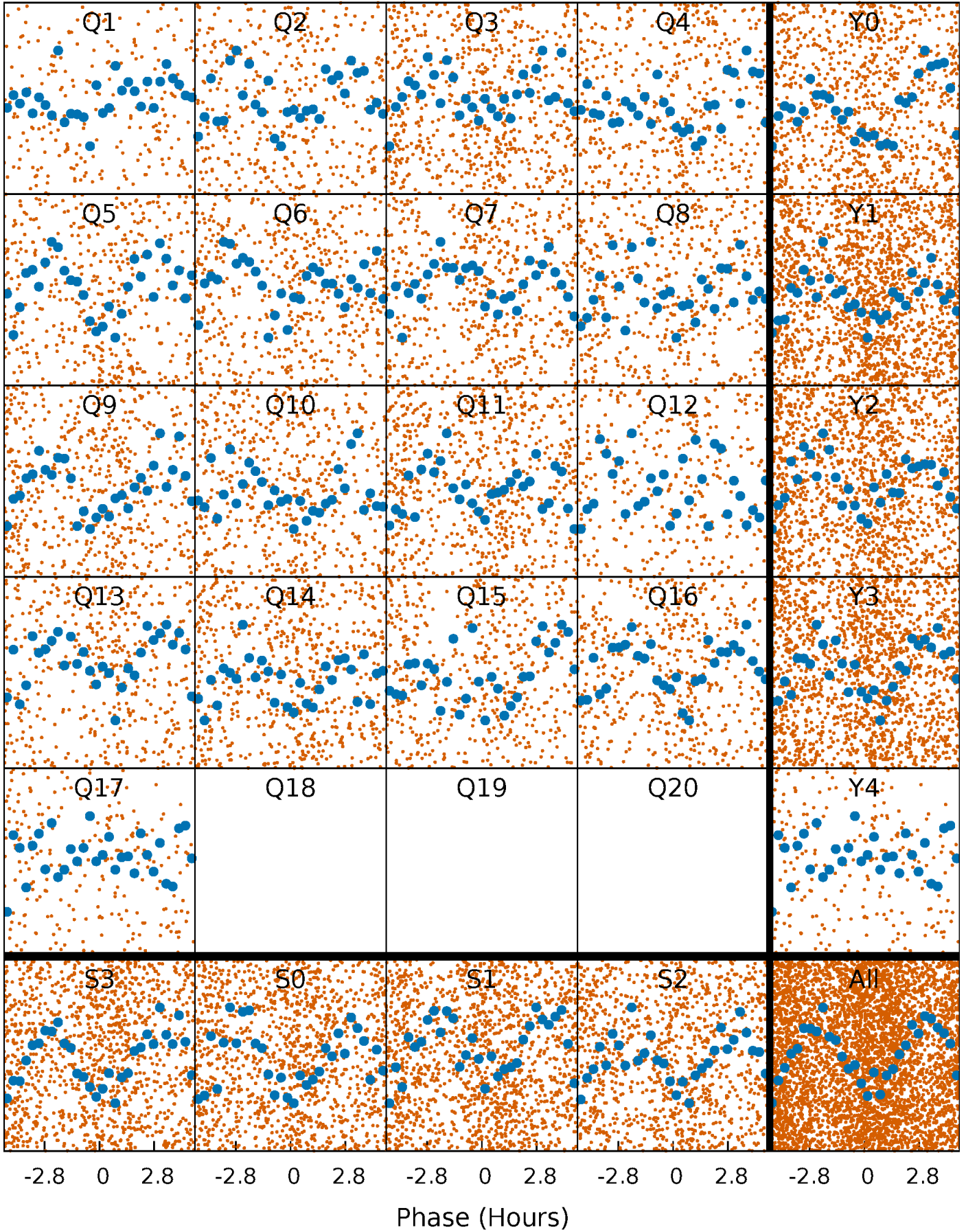


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



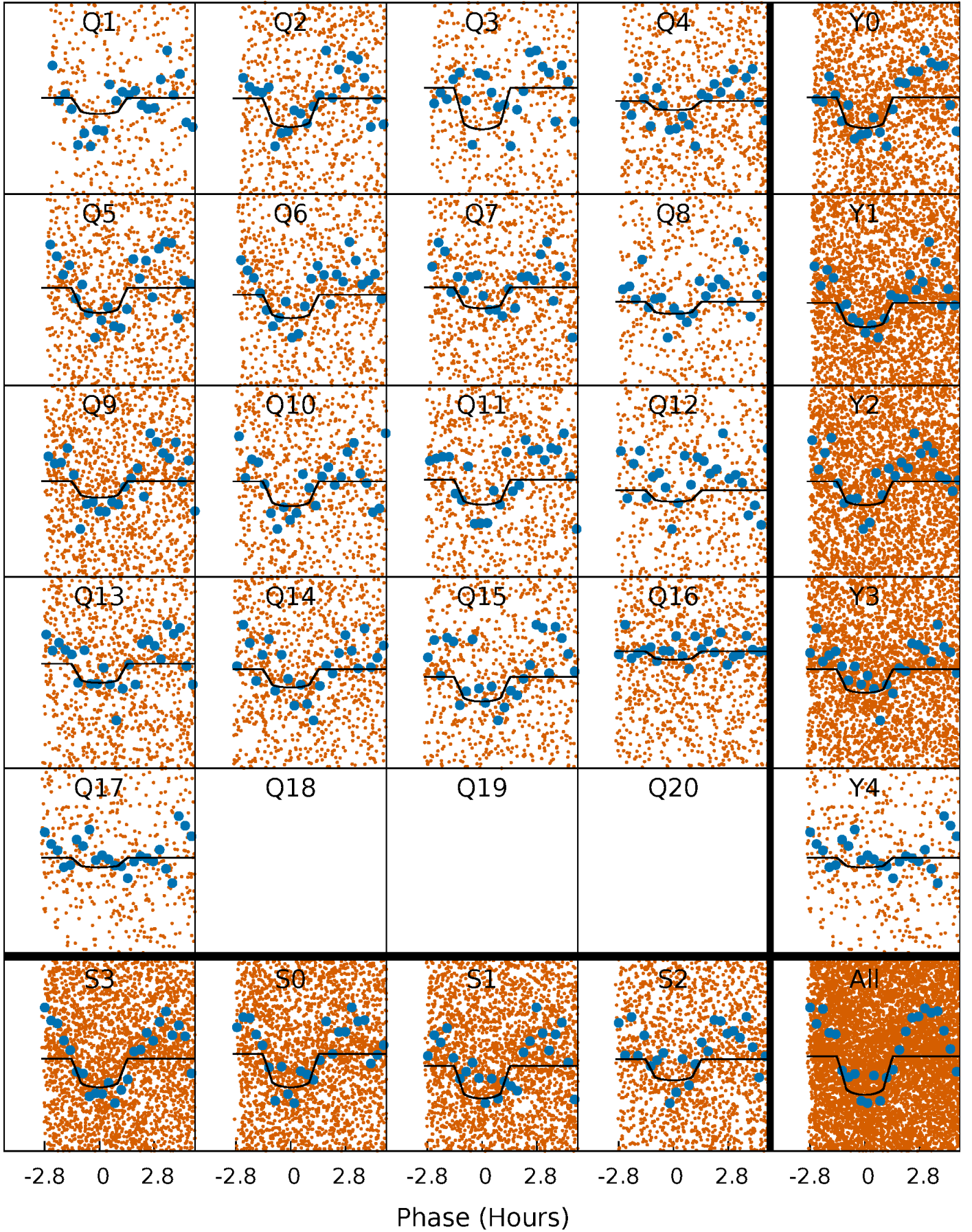
PDC Quarter-Phased Transit Curves

TCE 008264550-02 P= 0.678105 Days $T_0=131.858862$ (BKJD)



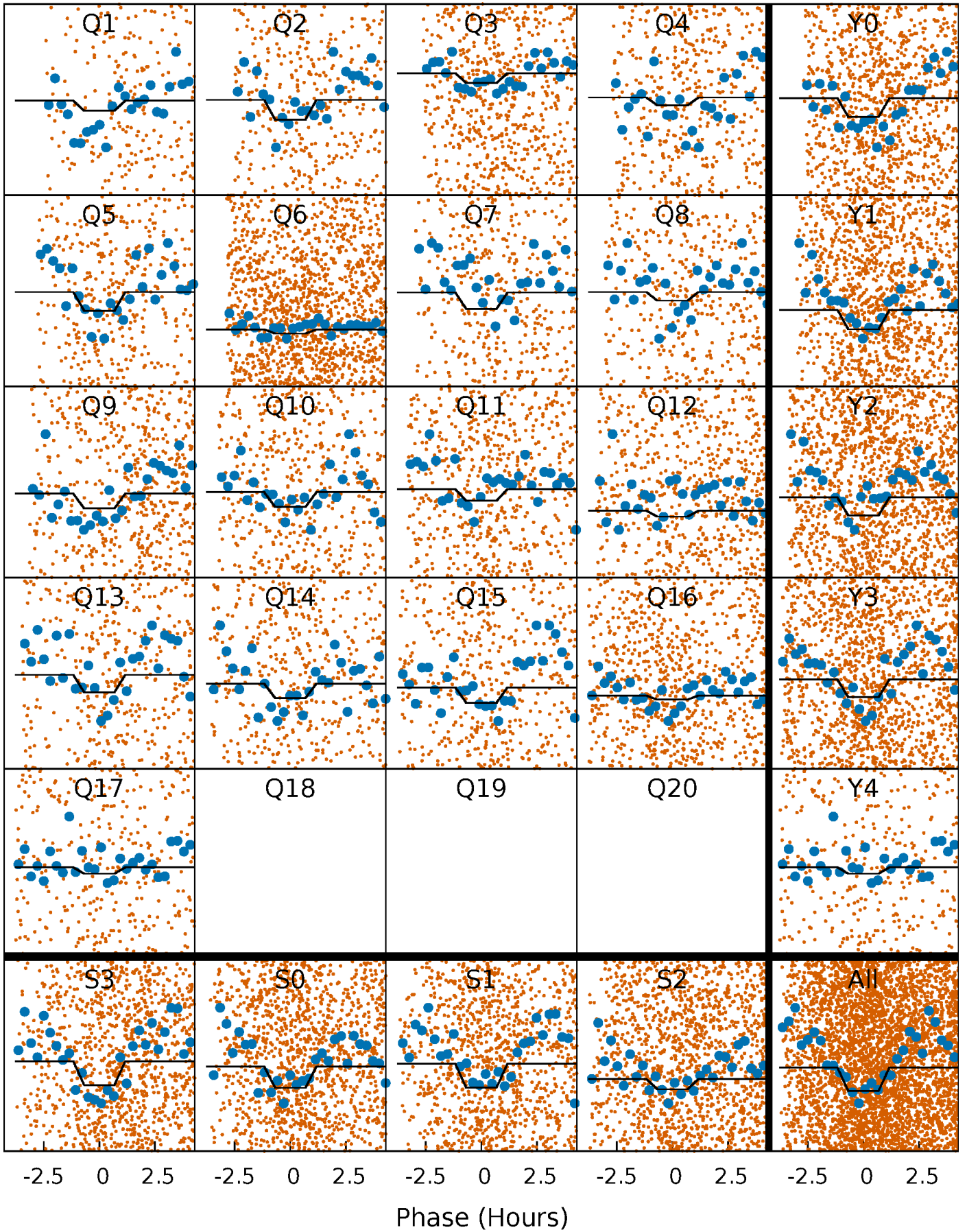
DV Quarter-Phased Transit Curves

TCE 008264550-02 $P = 0.678105$ Days $T_0 = 131.858862$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

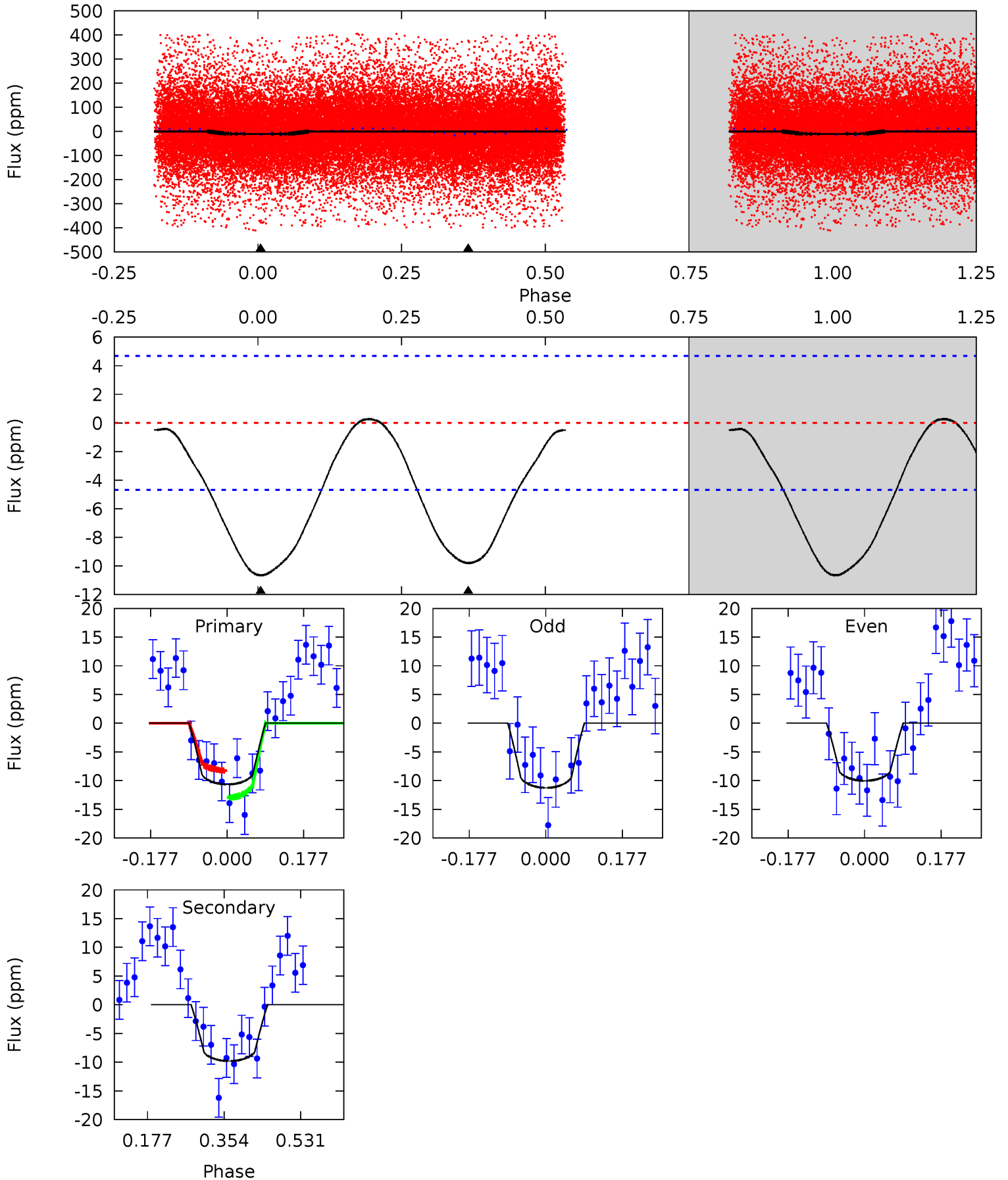
TCE 008264550-02 P= 0.678125 Days $T_0=131.852408$ (BKJD)



DV Model-Shift Uniqueness Test

008264550-02, P = 0.678105 Days, E = 131.180757 Days

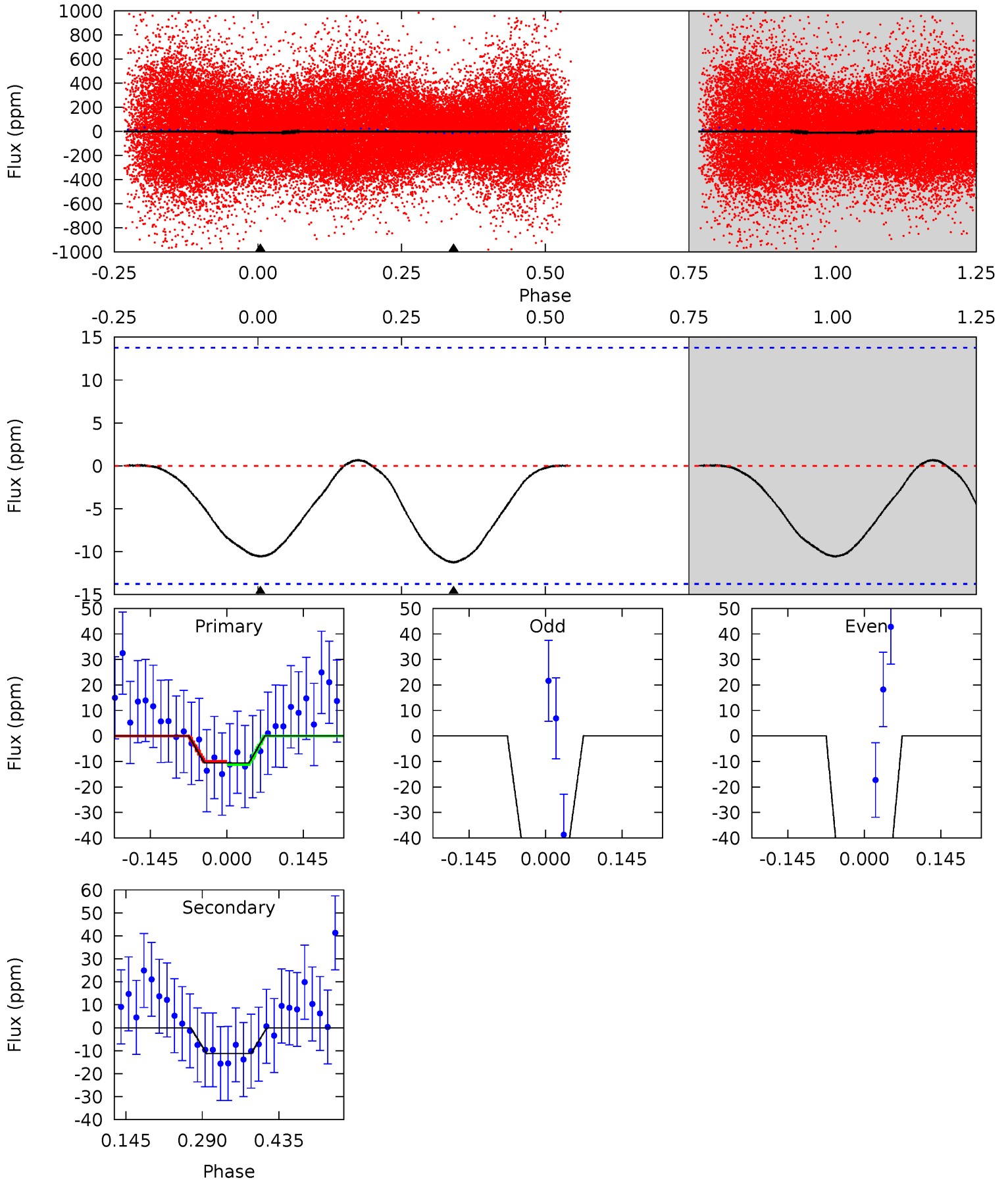
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.1	9.30	0	0	4.44	1.35	0.30	10.1	10.1	9.30	9.30	0.59	0.79	0.03	2.29



Alt Model-Shift Uniqueness Test

008264550-02, P = 0.678125 Days, E = 131.174283 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.45	3.67	0	0	4.49	1.46	0.18	3.45	3.45	3.67	3.67	4.67	0.79	0.06	0.21



Stellar Parameters For KIC 008264550

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8423^{+204}_{-379}	$3.764^{+0.424}_{-0.106}$	$-0.160^{+0.250}_{-0.350}$	$3.089^{+0.772}_{-1.433}$	$2.024^{+0.333}_{-0.458}$	$0.097^{+0.377}_{-0.041}$
	+2%/-4%	+11%/-3%	+156%/-219%	+25%/-46%	+16%/-23%	+390%/-42%
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 008264550-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-10 ± 1	$1.06^{+0.31}_{-0.30}$	6317^{+482}_{-749}	7371^{+1266}_{-942}	$1.785^{+1.487}_{-0.717}$
Alt.	-11 ± 3	$1.00^{+0.30}_{-0.28}$	6343^{+517}_{-733}	8107^{+1756}_{-1332}	$2.220^{+2.069}_{-0.967}$

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 $A_{obs} \gg 1.0$

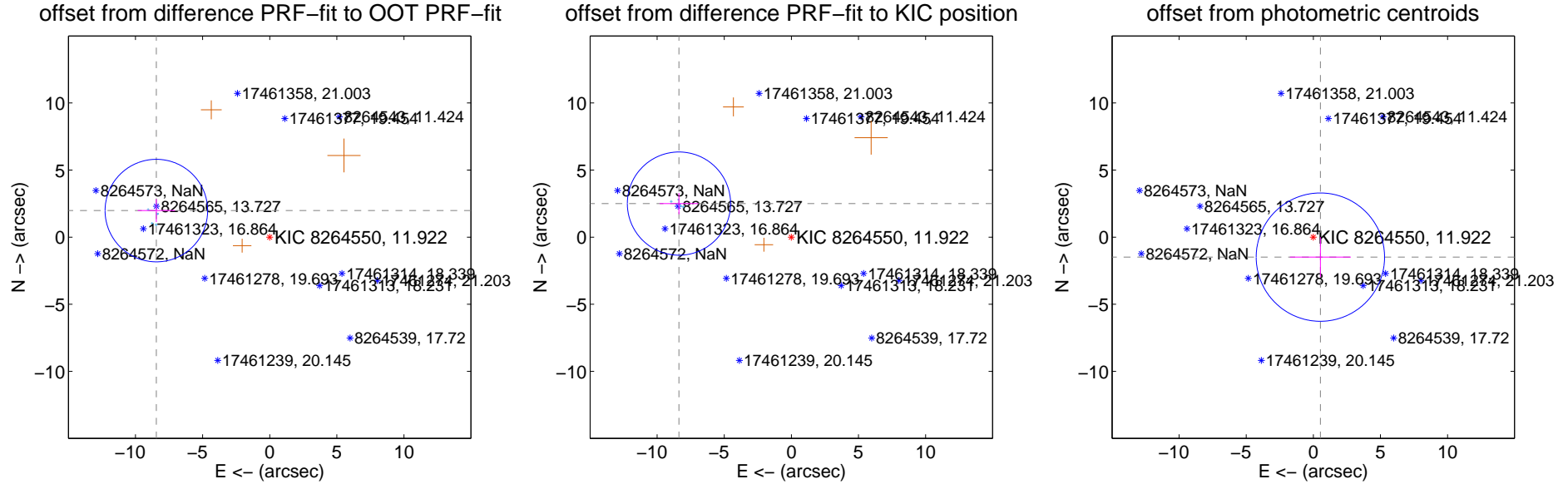
DV Centroid Data

Supplemental centroid analysis for 008264550-02. **Kepler magnitude: 11.92.** Transit SNR 8.29

There are 7 quarters with good PRF difference image offsets

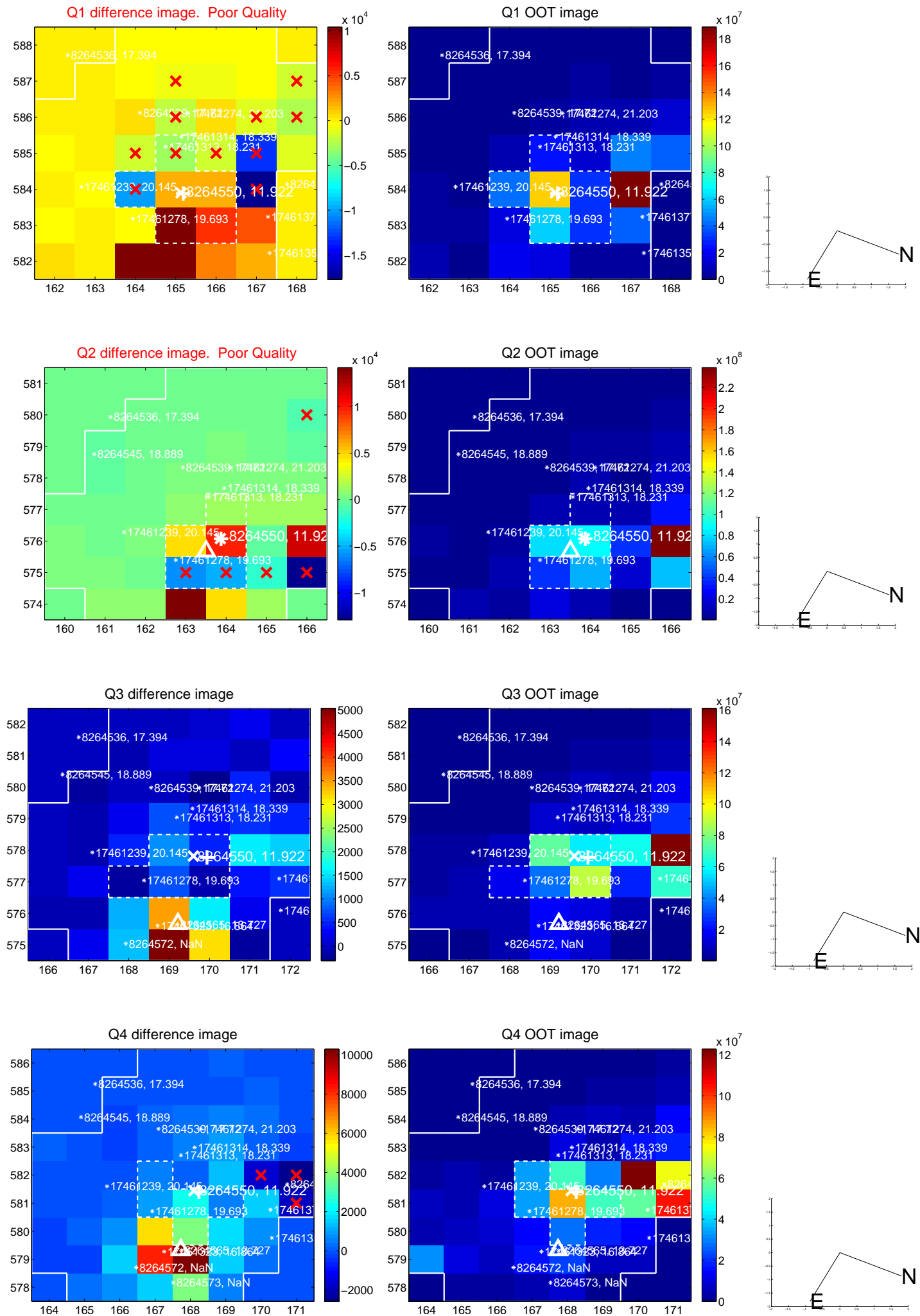
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	8.674 \pm 1.273	6.81	8.445 \pm 1.384	1.980 \pm 0.853
PRF-fit source offset from KIC position	8.739 \pm 1.282	6.82	8.373 \pm 1.435	2.501 \pm 0.786
photometric centroid source offset	1.58 \pm 1.59	0.99	-0.53 \pm 2.27	-1.49 \pm 1.49

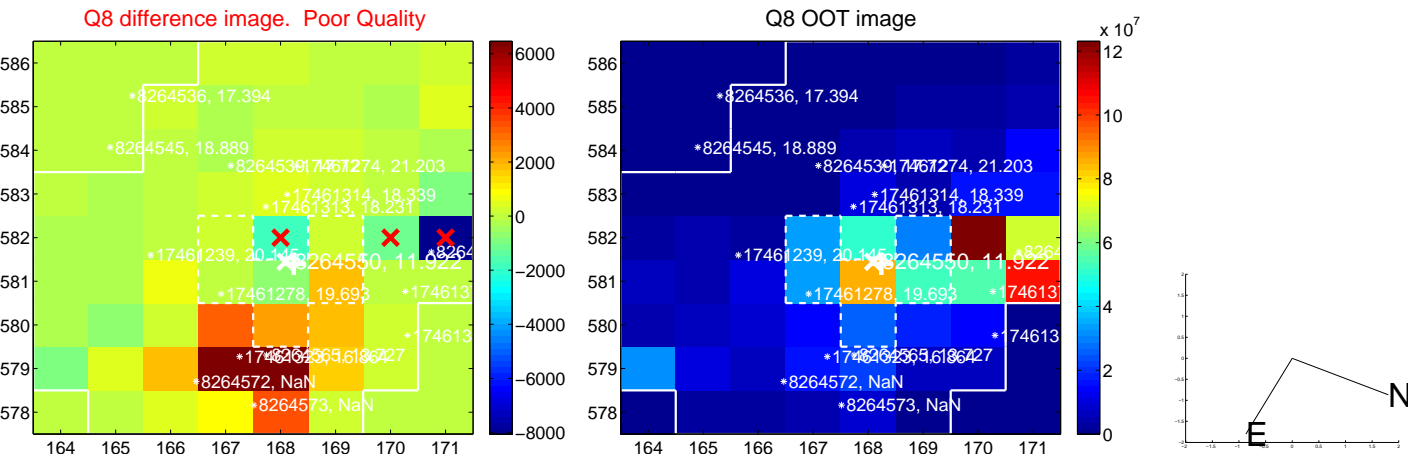
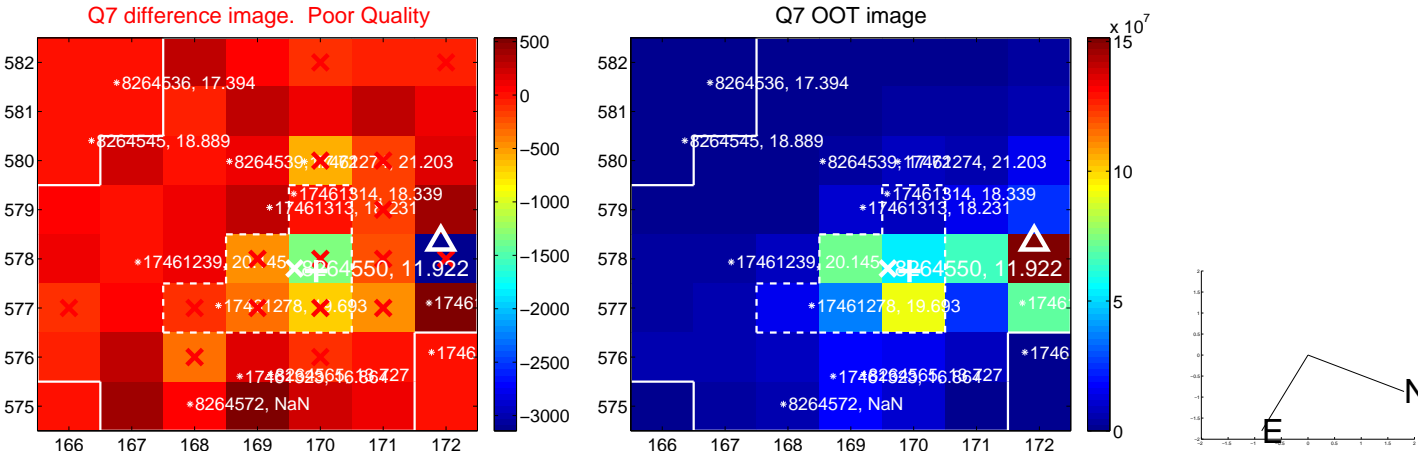
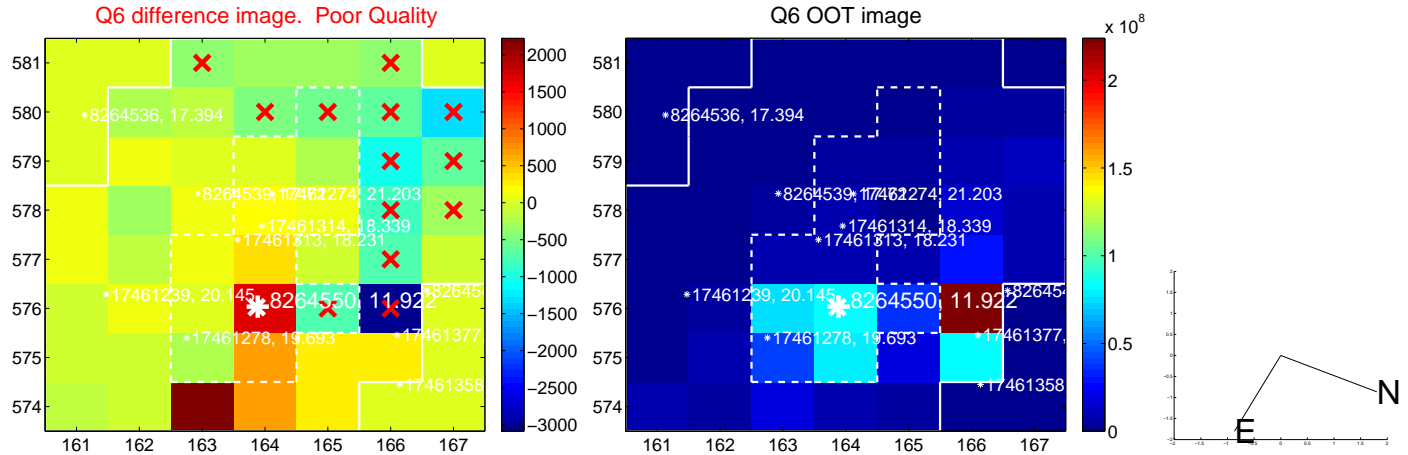
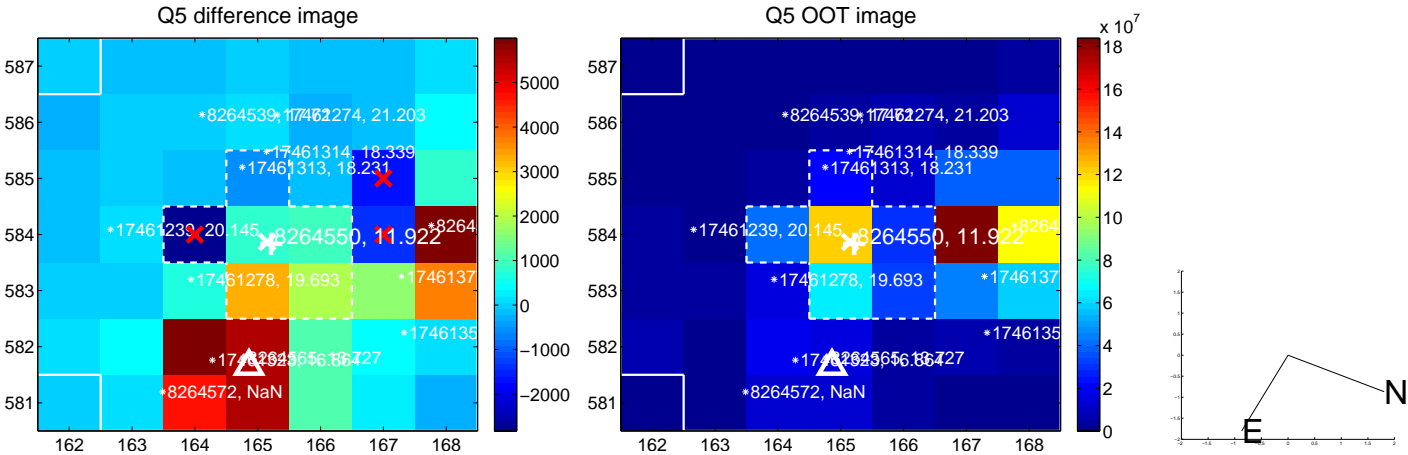


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

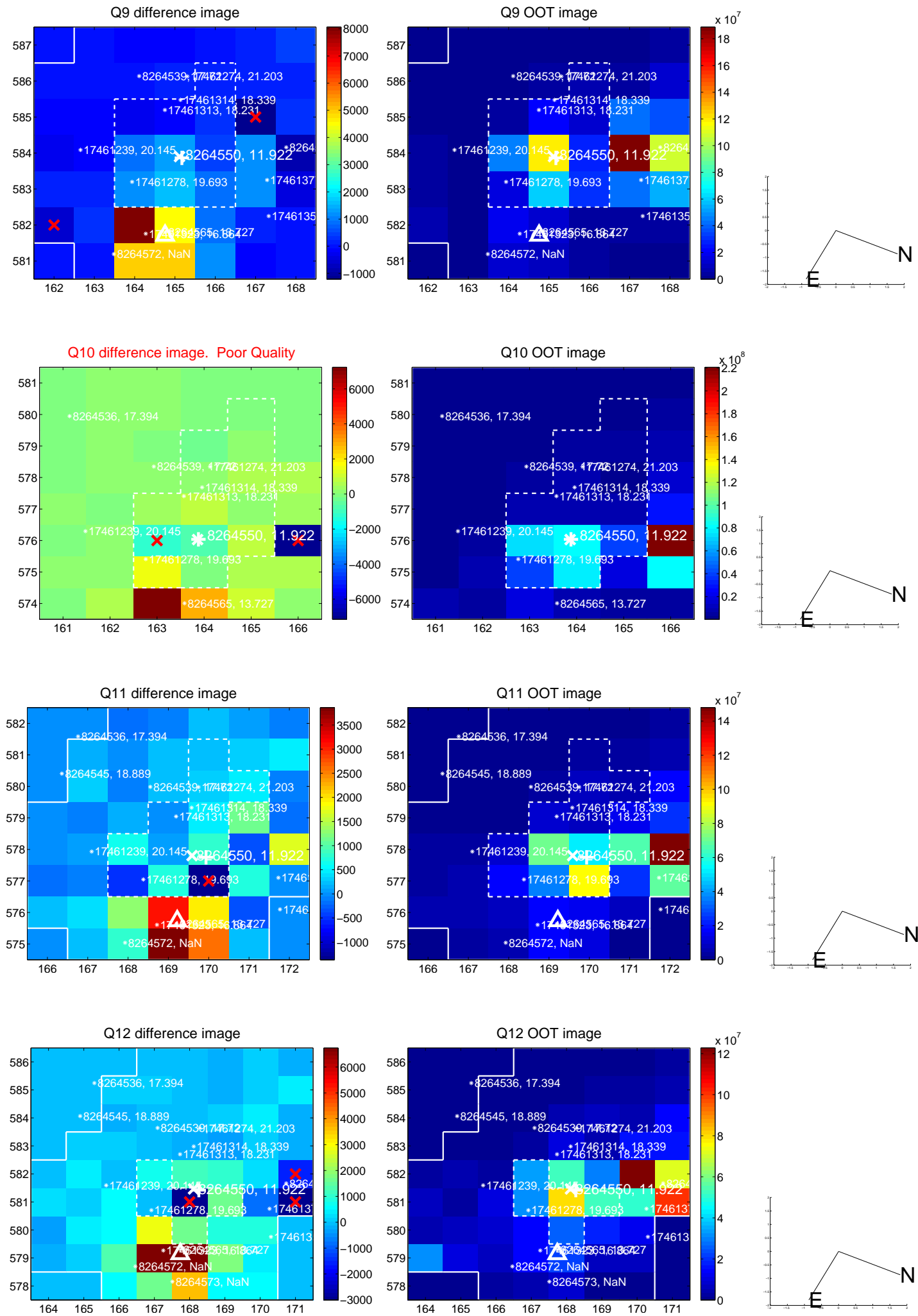
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



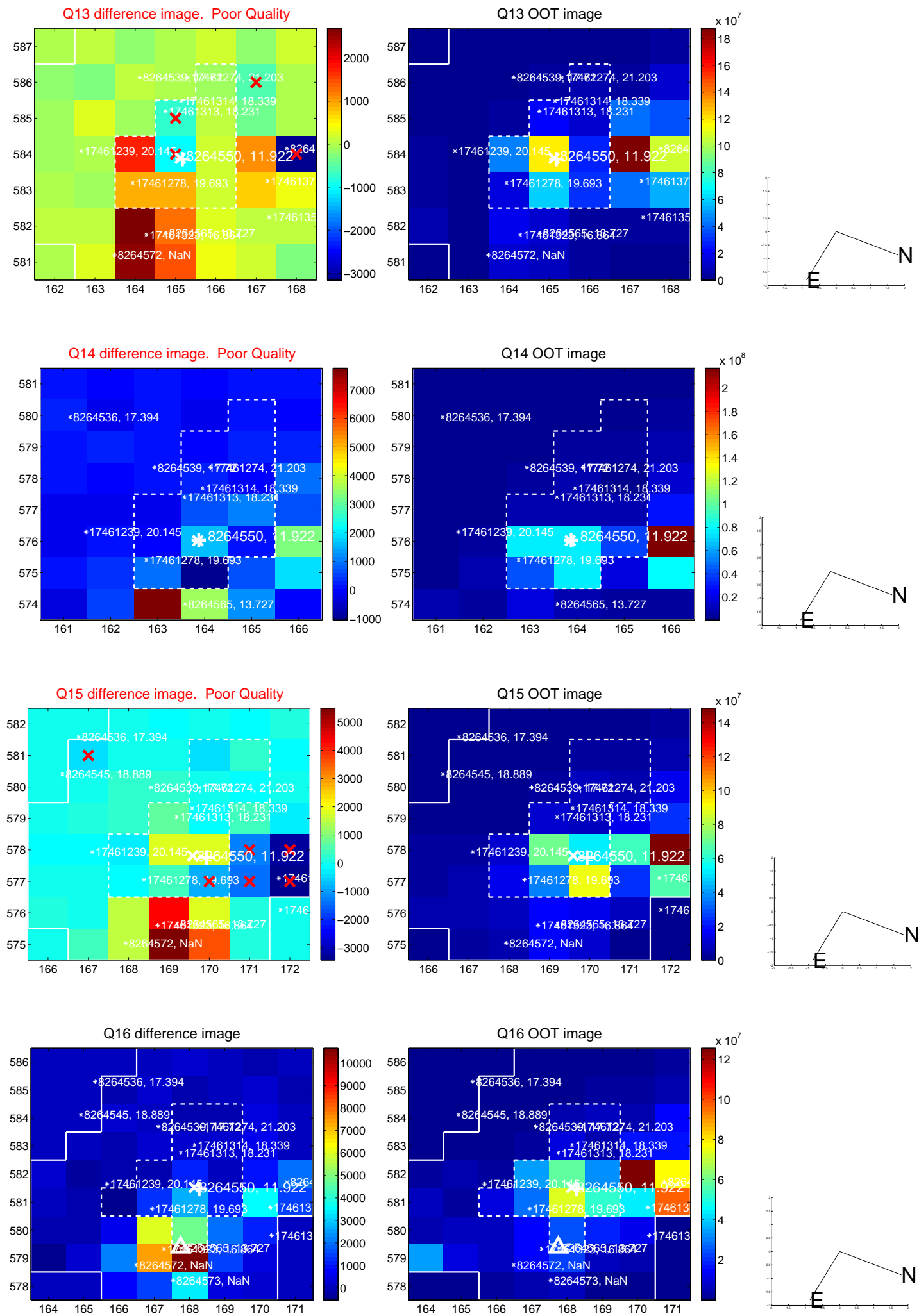
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



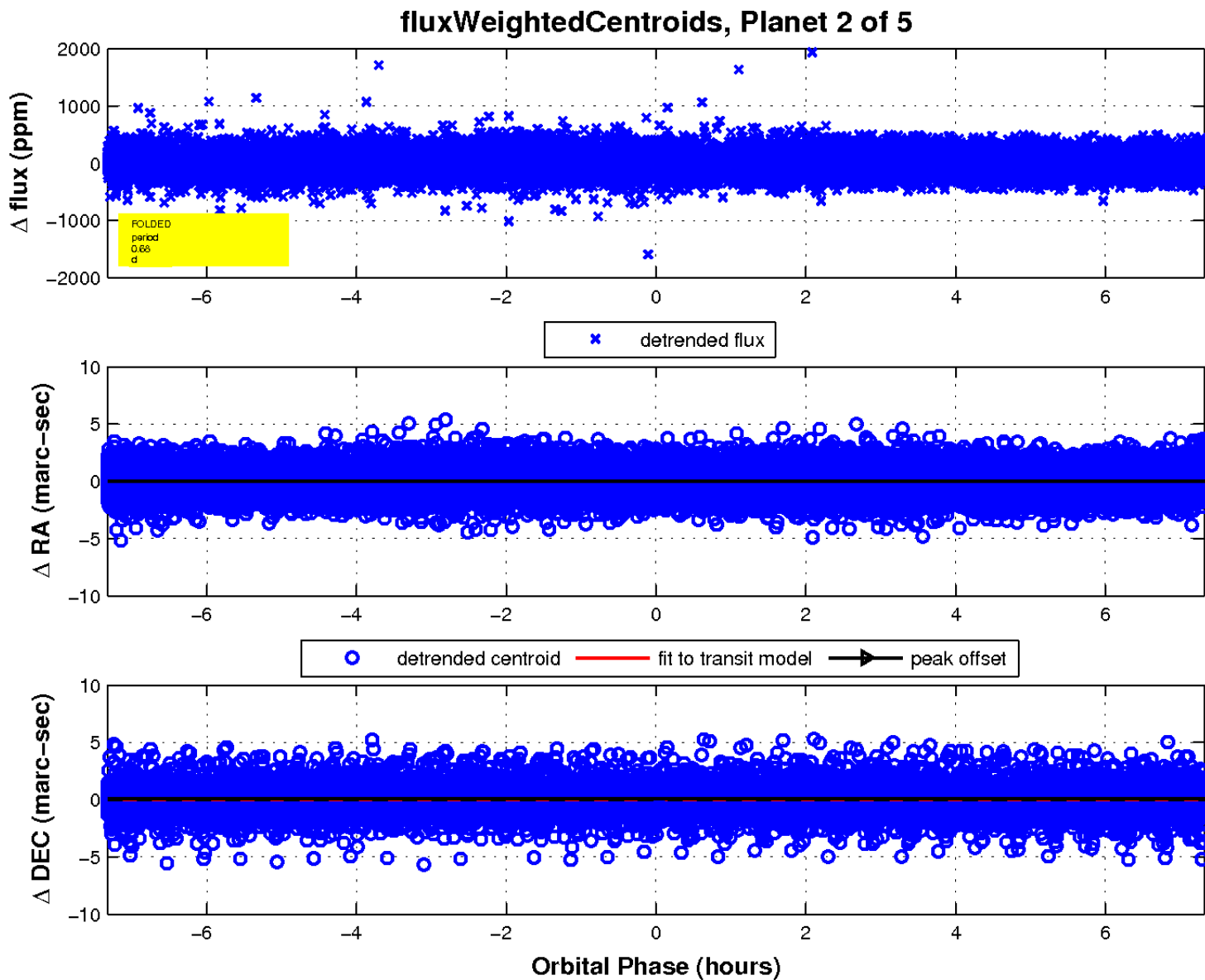
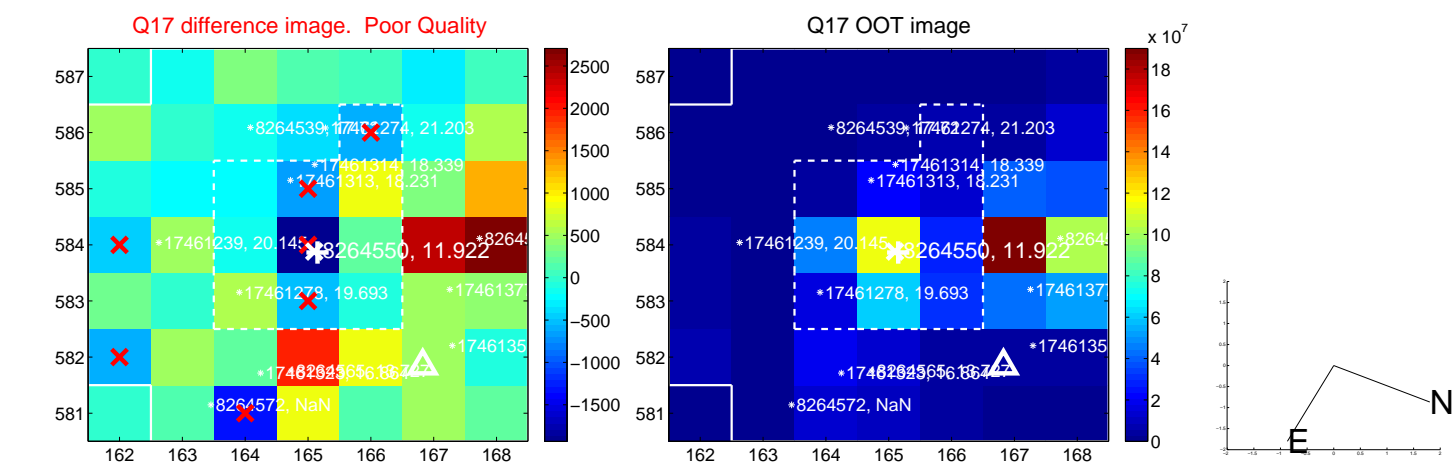
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

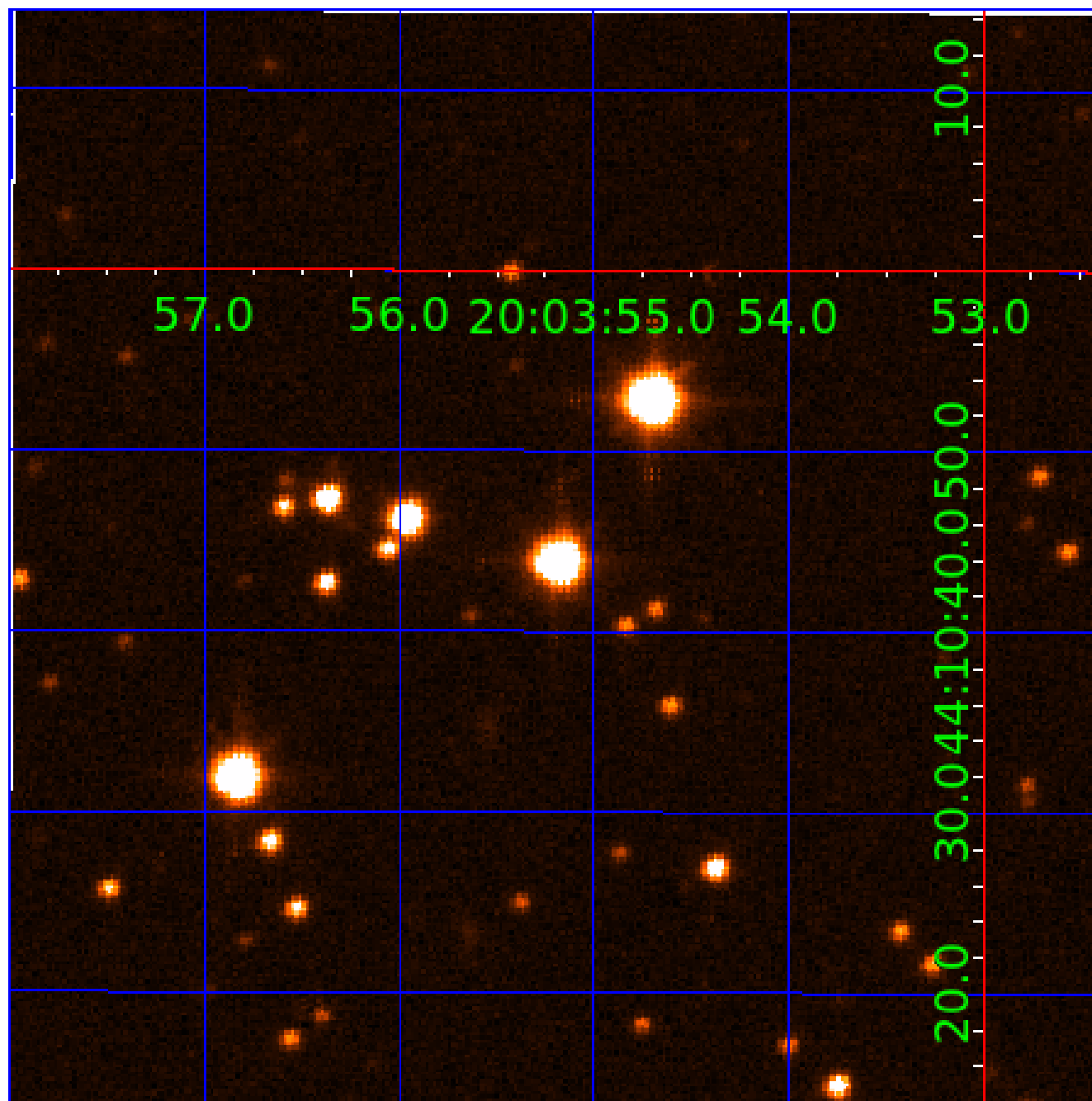


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008264550

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})
008264550-01	OBS	No	0.678097	131.648078	11.7	1.475	8.8	7.3	3.09	8423	1.22	117919.09
008264550-02	OBS	No	0.678105	131.858862	10.9	2.442	8.8	8.3	3.09	8423	1.18	117917.22
008264550-04	OBS	No	83.248635	179.433787	281.4	2.256	10.2	6.5	3.09	8423	5.74	193.26
008264550-05	OBS	No	351.888399	427.788237	391.6	3.833	7.9	7.6	3.09	8423	6.50	28.28

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008264550-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
008264550-02	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_RESOLVED_OFFSET
008264550-04	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
008264550-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—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.

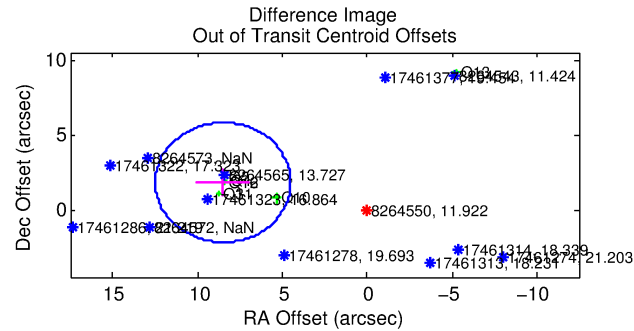
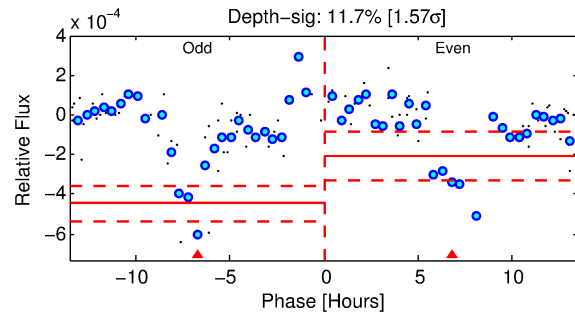
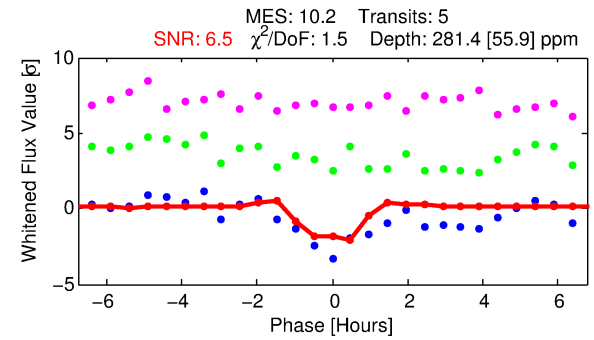
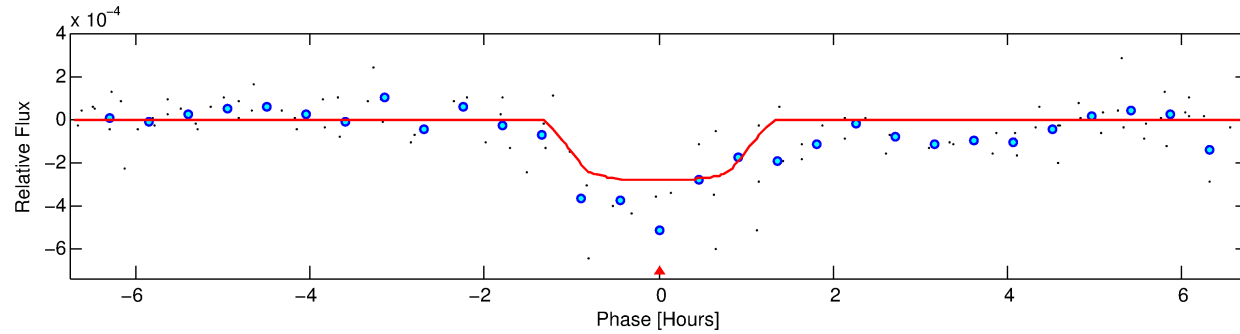
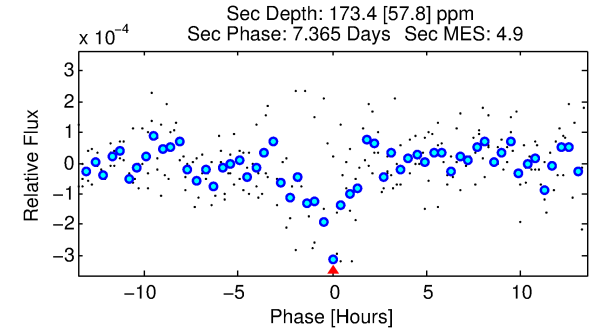
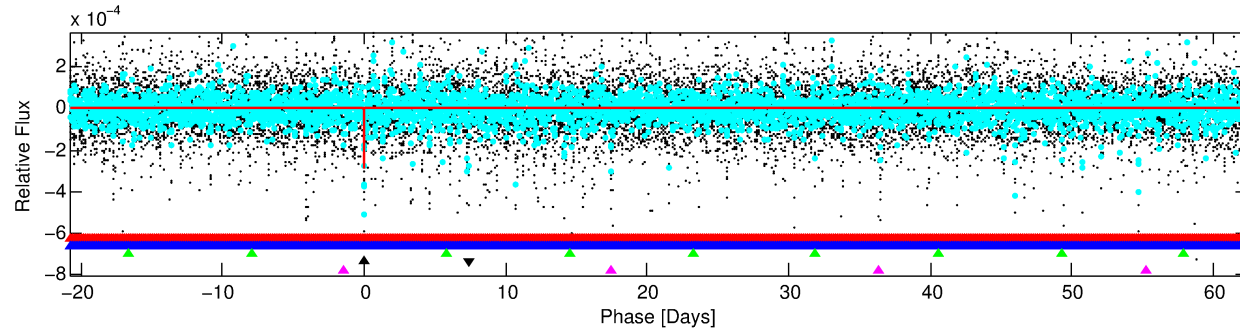
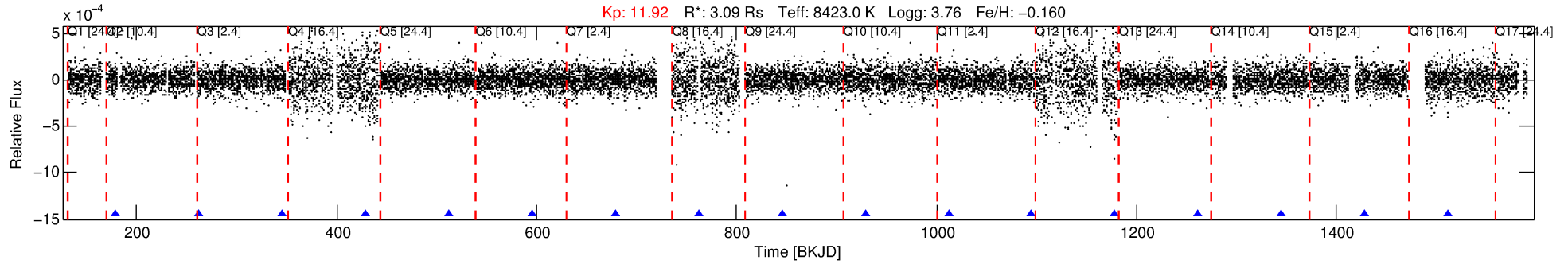
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008264550-04

No Significant Match Found

DV One-Page Summary

KIC: 8264550 Candidate: 4 of 5 Period: 83.249 d



DV Fit Results:

Period = 83.24864 [0.00081] d
Epoch = 179.4338 [0.0080] BKJD
Rp/R* = 0.0170 [0.0164]
a/R* = 173.82 [1027.64]
b = 0.81 [2.55]
Seff = 193.26 [143.54]
Teq = 951 [177] K
Rp = 5.74 [6.13] Re
a = 0.4719 [0.2118] AU
Ag = 643.83 [1339.39] [0.48σ]
Teffp = 7404 [3628] K [1.78σ]

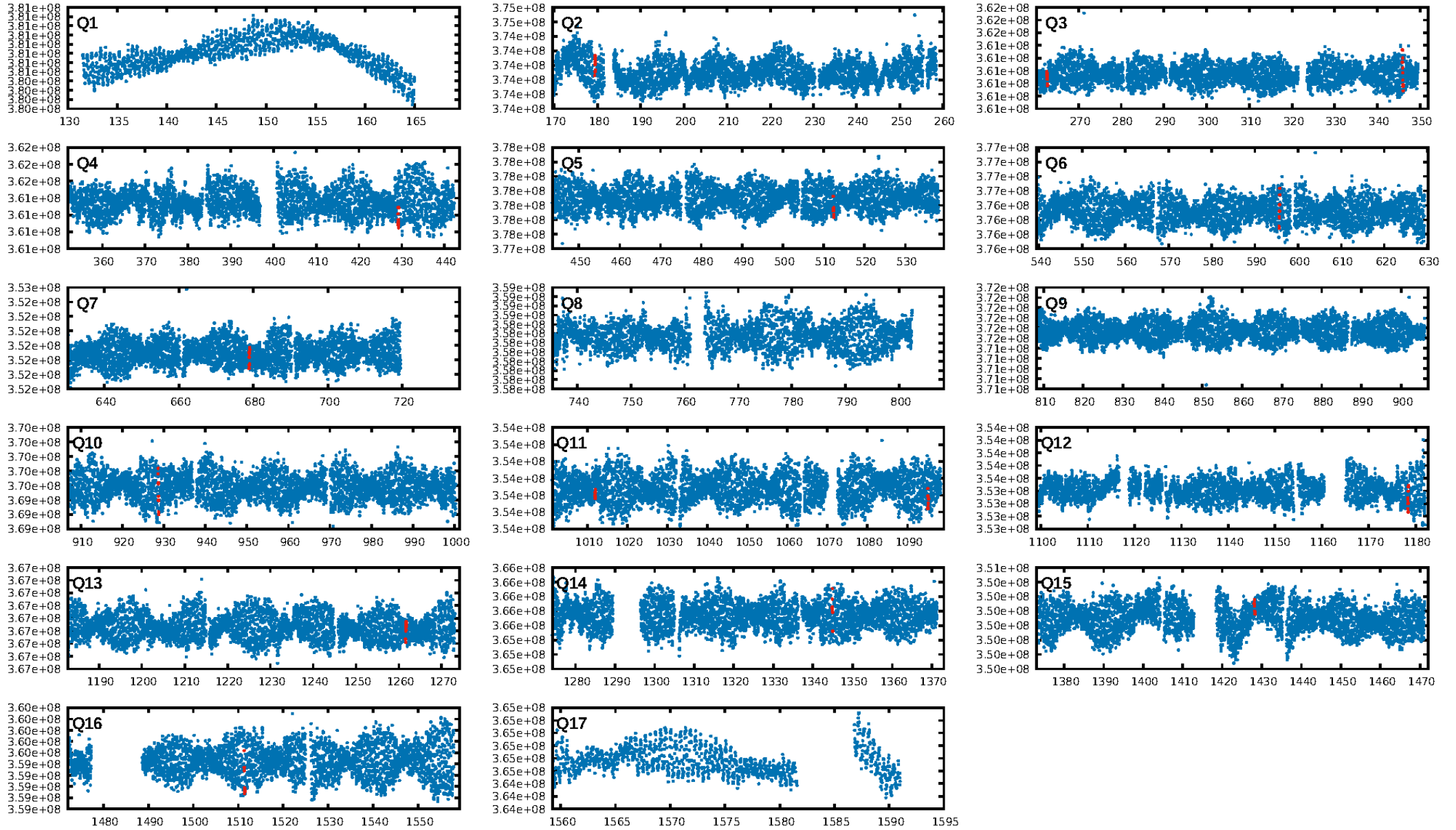
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [596.04σ]
LongPeriod-sig: 100.0% [287.50σ]
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 90.4%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: -3.842
Centroid-sig: 43.3%
Centroid-so: 2.541 arcsec [3.66σ]
OotOffset-rm: 8.685 arcsec [6.52σ]
KicOffset-rm: 8.689 arcsec [7.26σ]
OotOffset-st: 1/2/3/2 [8]
KicOffset-st: 1/2/3/2 [8]
DiffImageQuality-fgm: 0.50 [4/8]
DiffImageOverlap-fno: 0.00 [0/13]

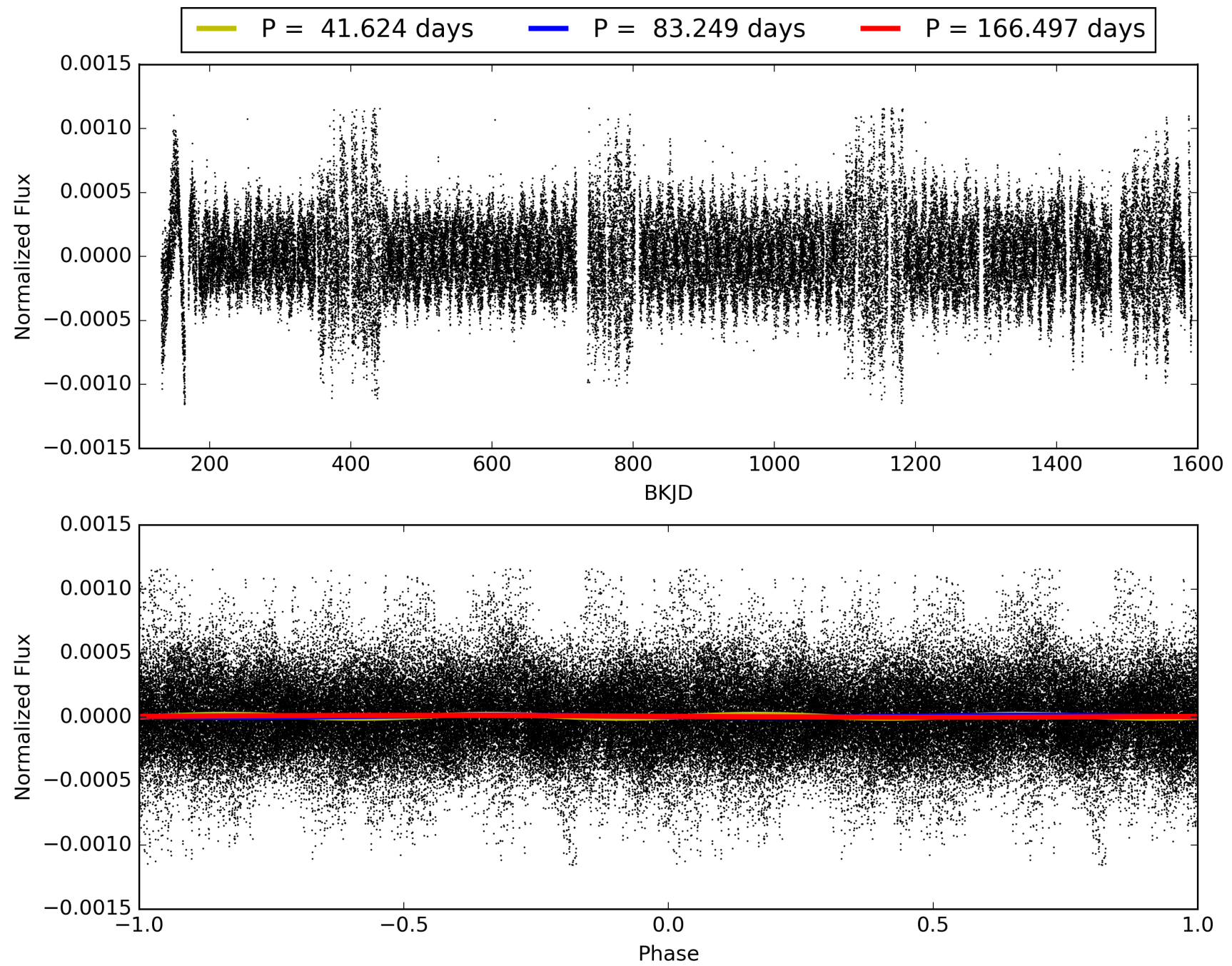
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:20:17 Z

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

TCE 008264550-04, PDC Light Curves

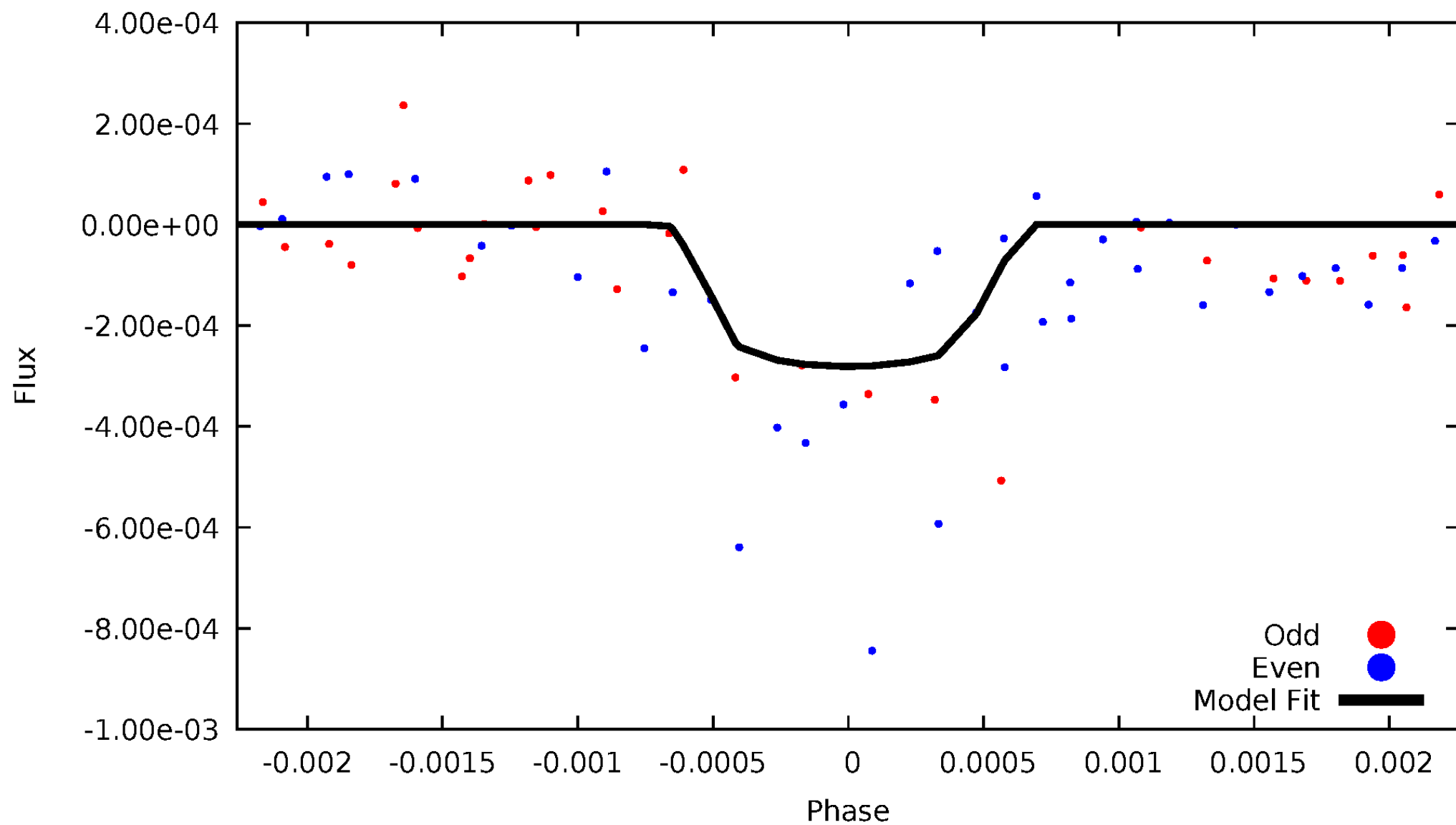


TCE 008264550-04



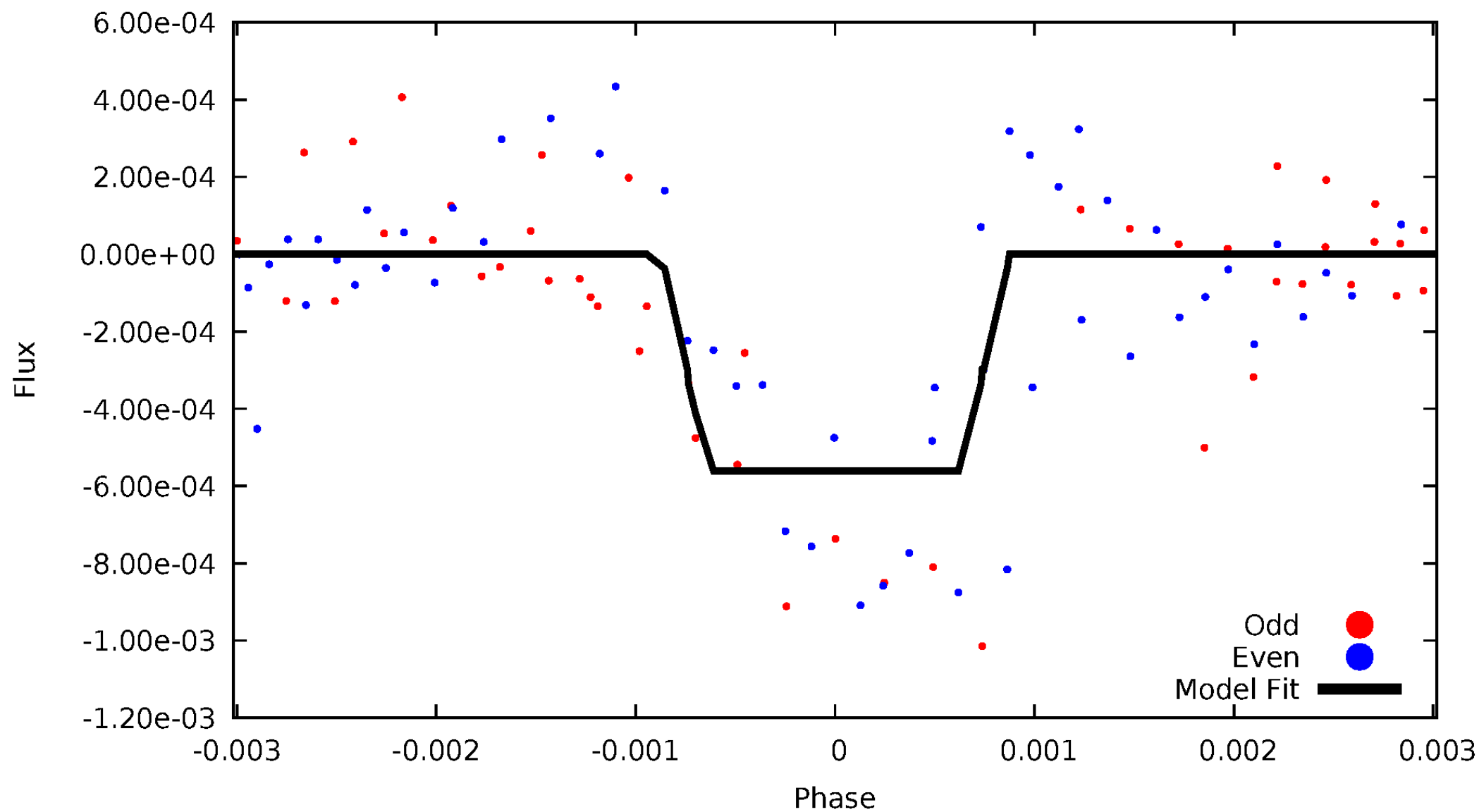
DV Odd/Even

TCE 008264550-04



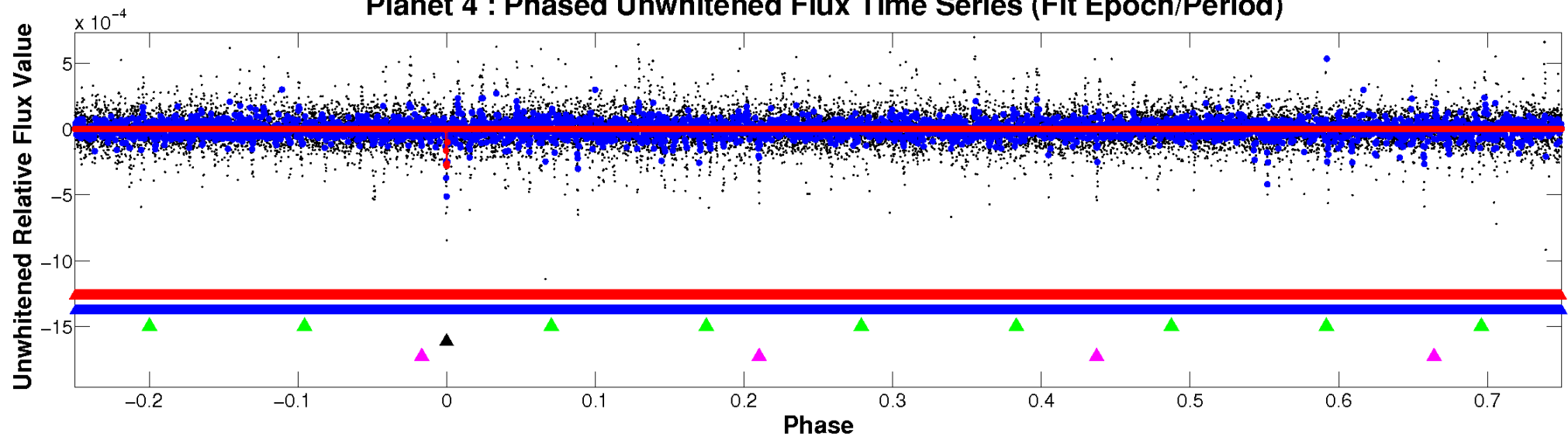
ALT Odd/Even

TCE 008264550-04

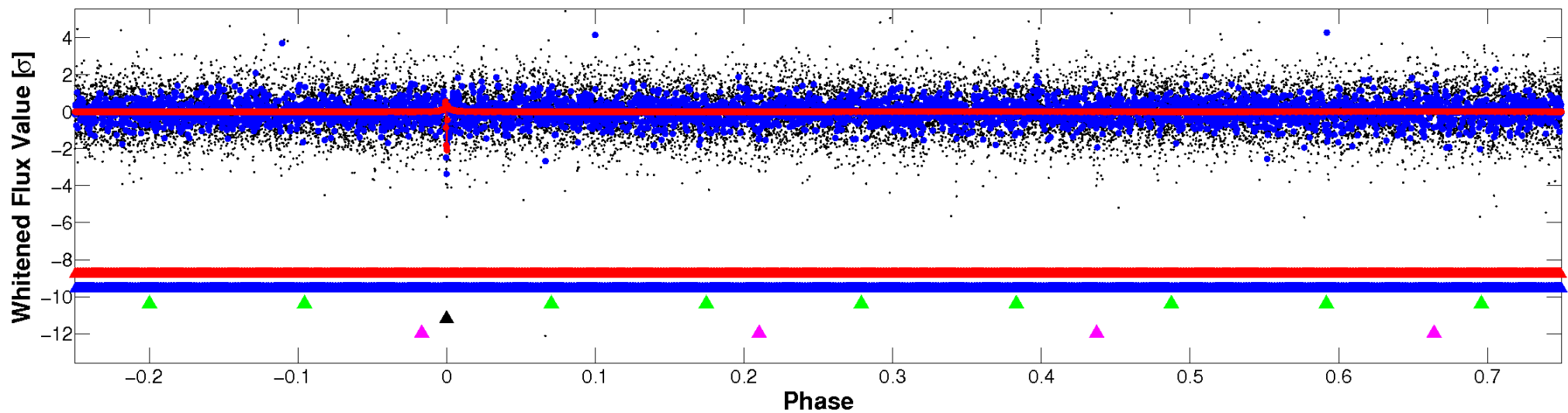


Non-Whitened Vs. Whitened Light Curve

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

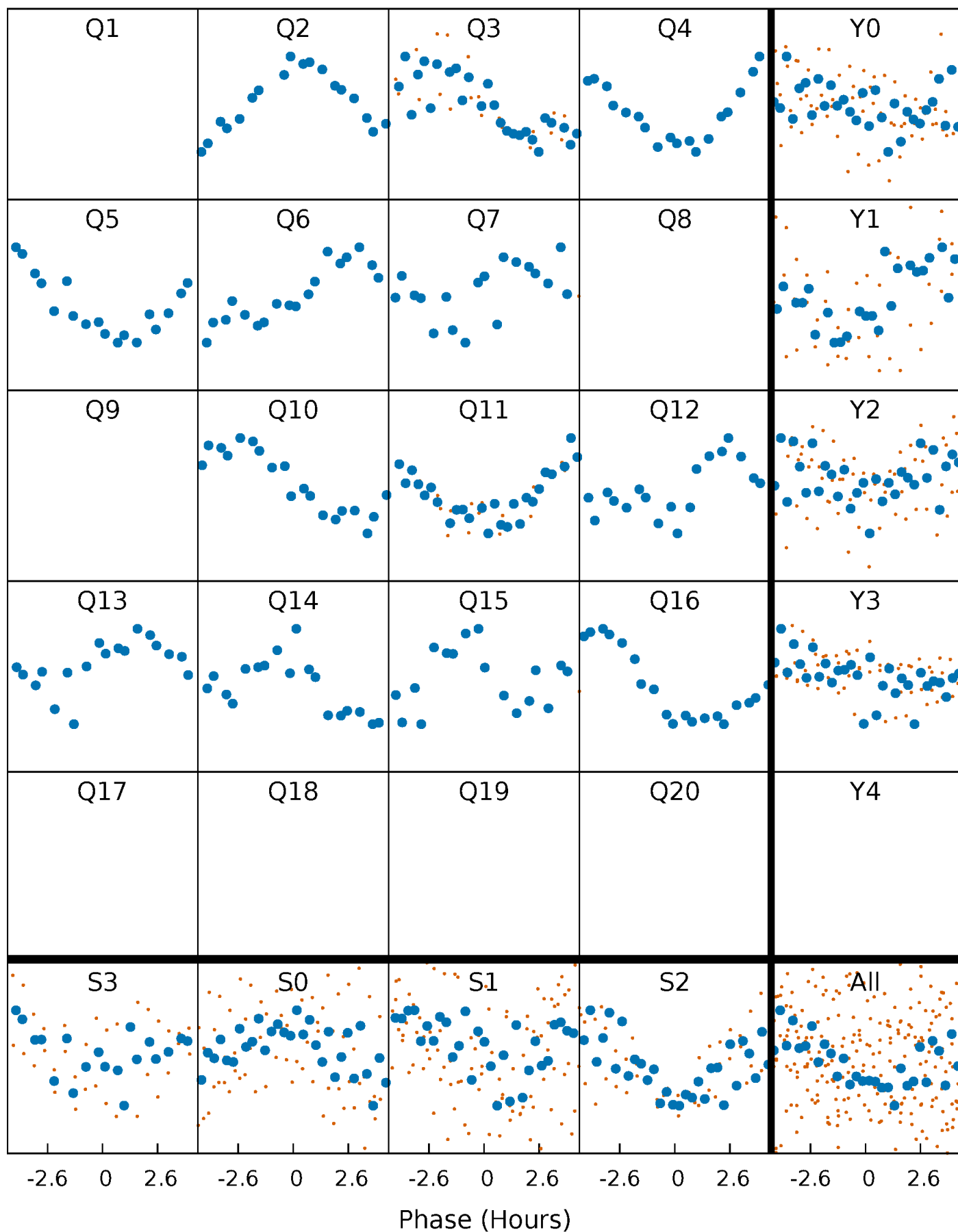


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



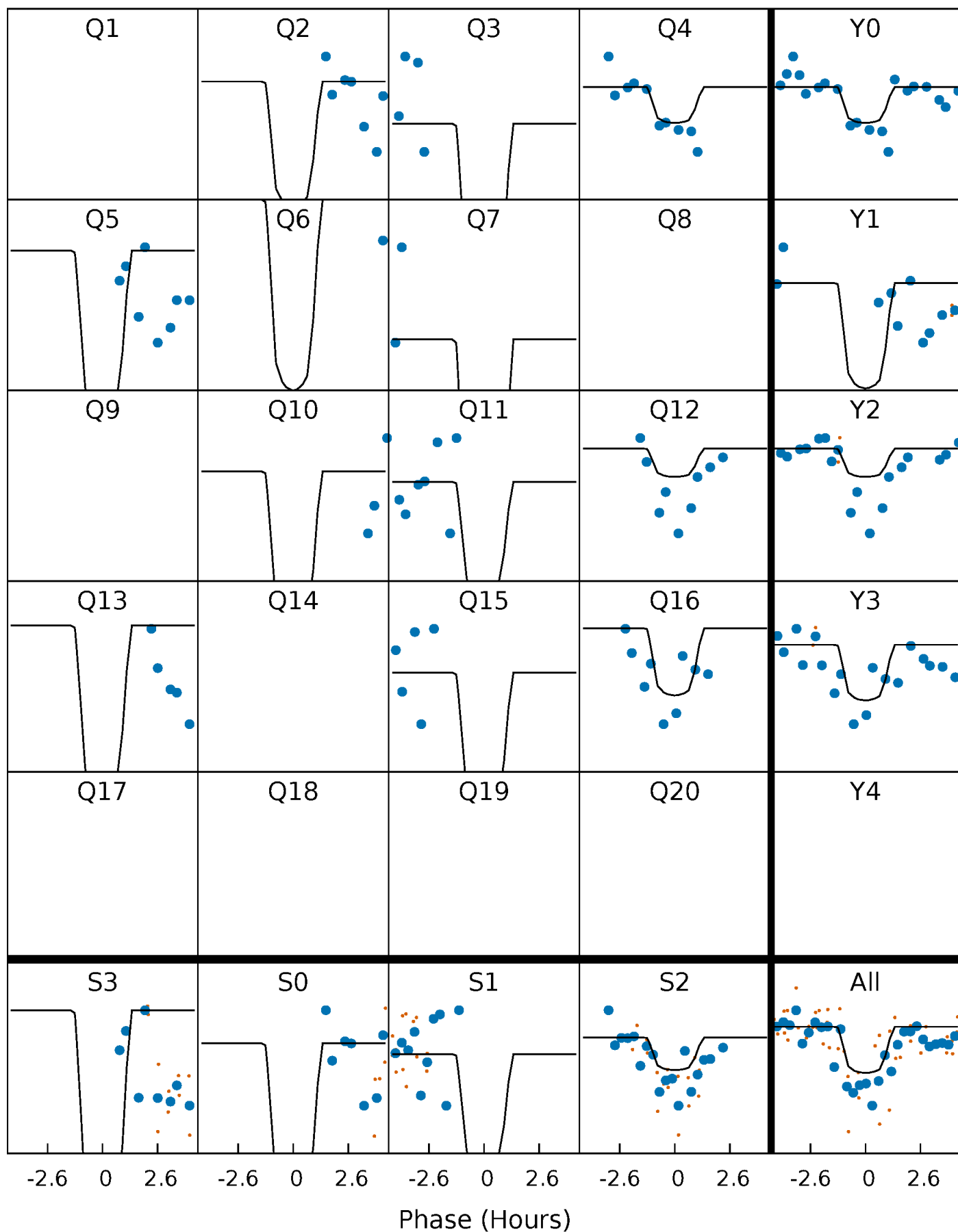
PDC Quarter-Phased Transit Curves

TCE 008264550-04 P= 83.248635 Days $T_0=179.433787$ (BKJD)



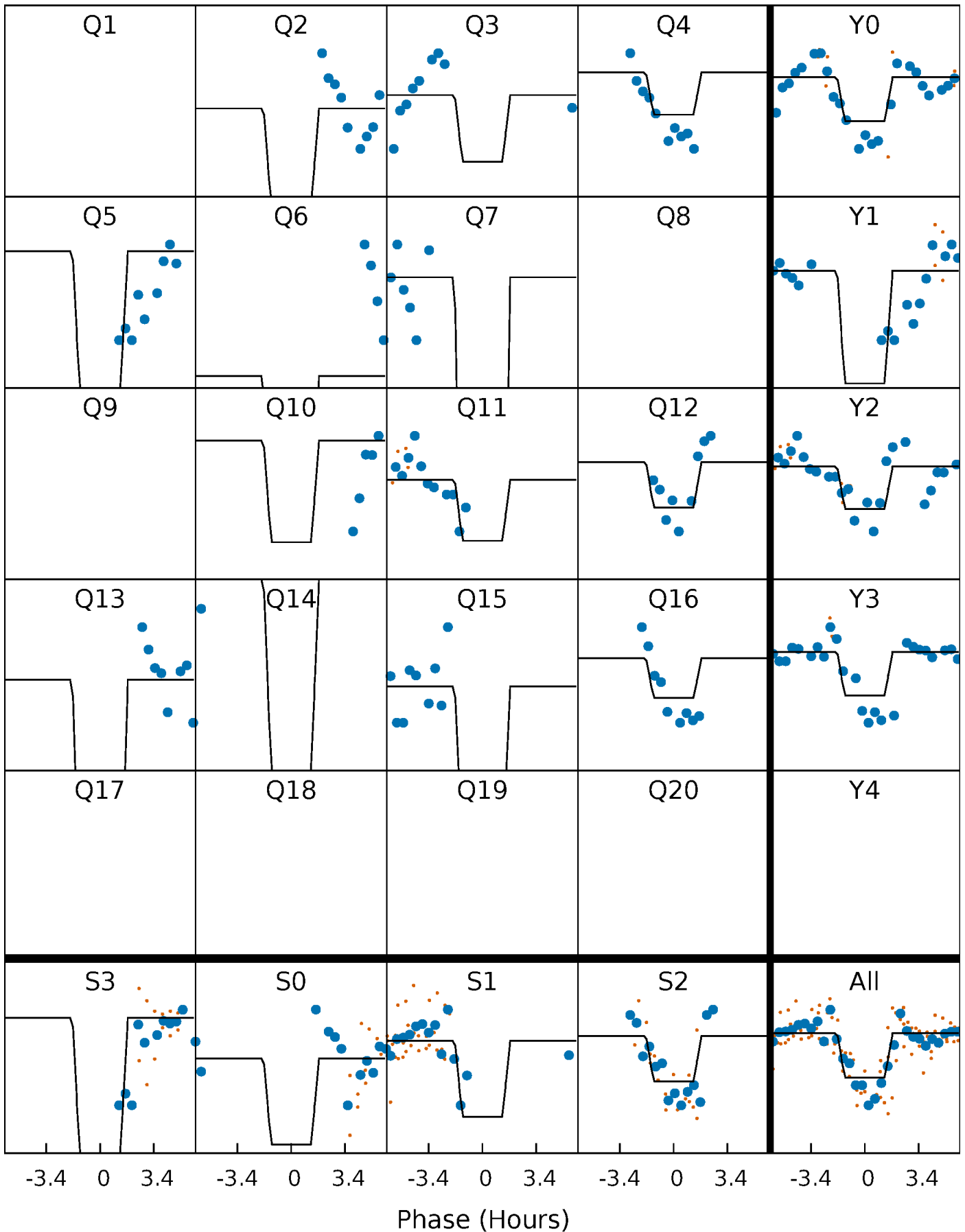
DV Quarter-Phased Transit Curves

TCE 008264550-04 P= 83.248635 Days $T_0=179.433787$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

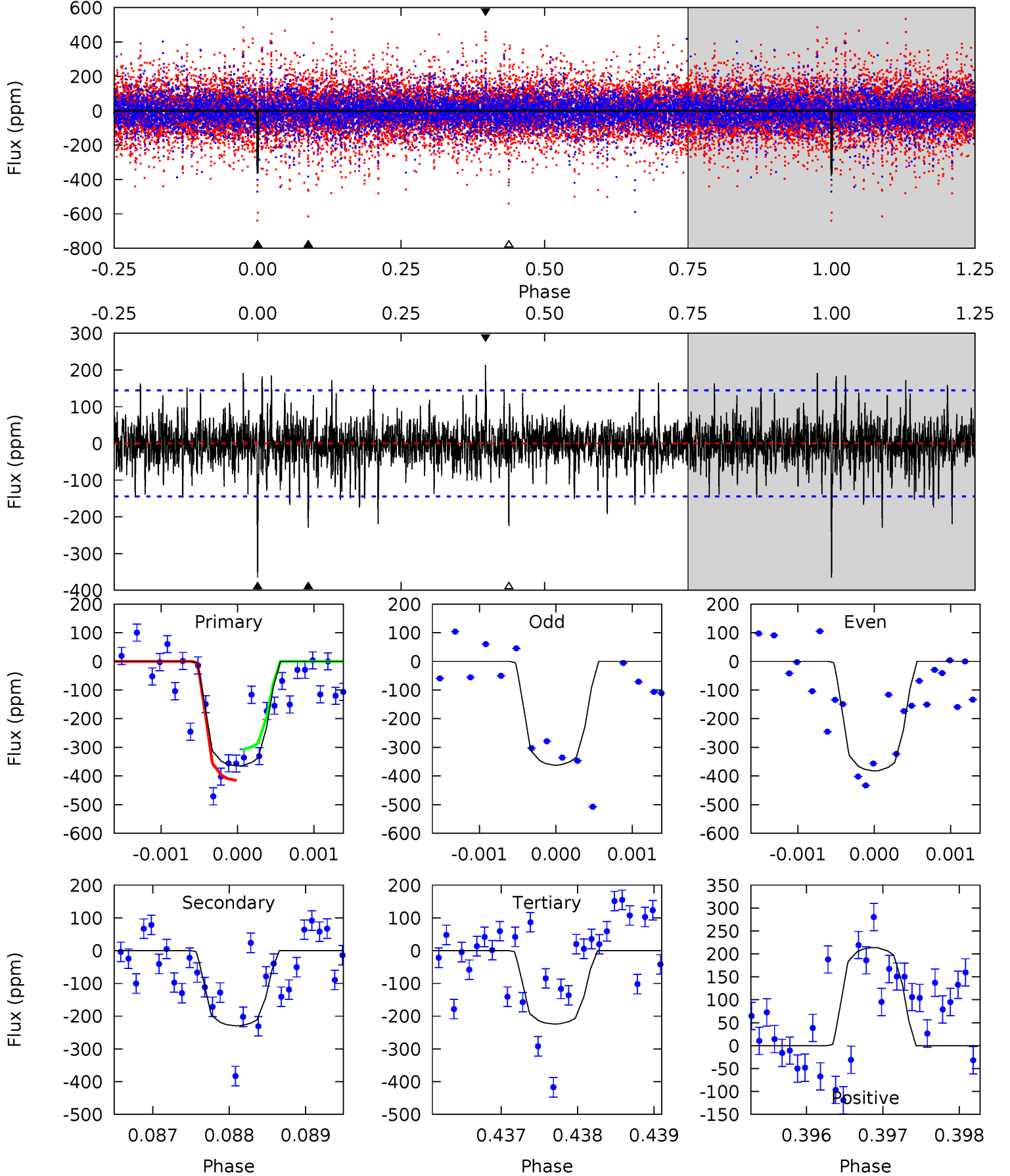
TCE 008264550-04 P= 83.248815 Days $T_0=179.418846$ (BKJD)



DV Model-Shift Uniqueness Test

008264550-04, P = 83.248635 Days, E = 96.185152 Days

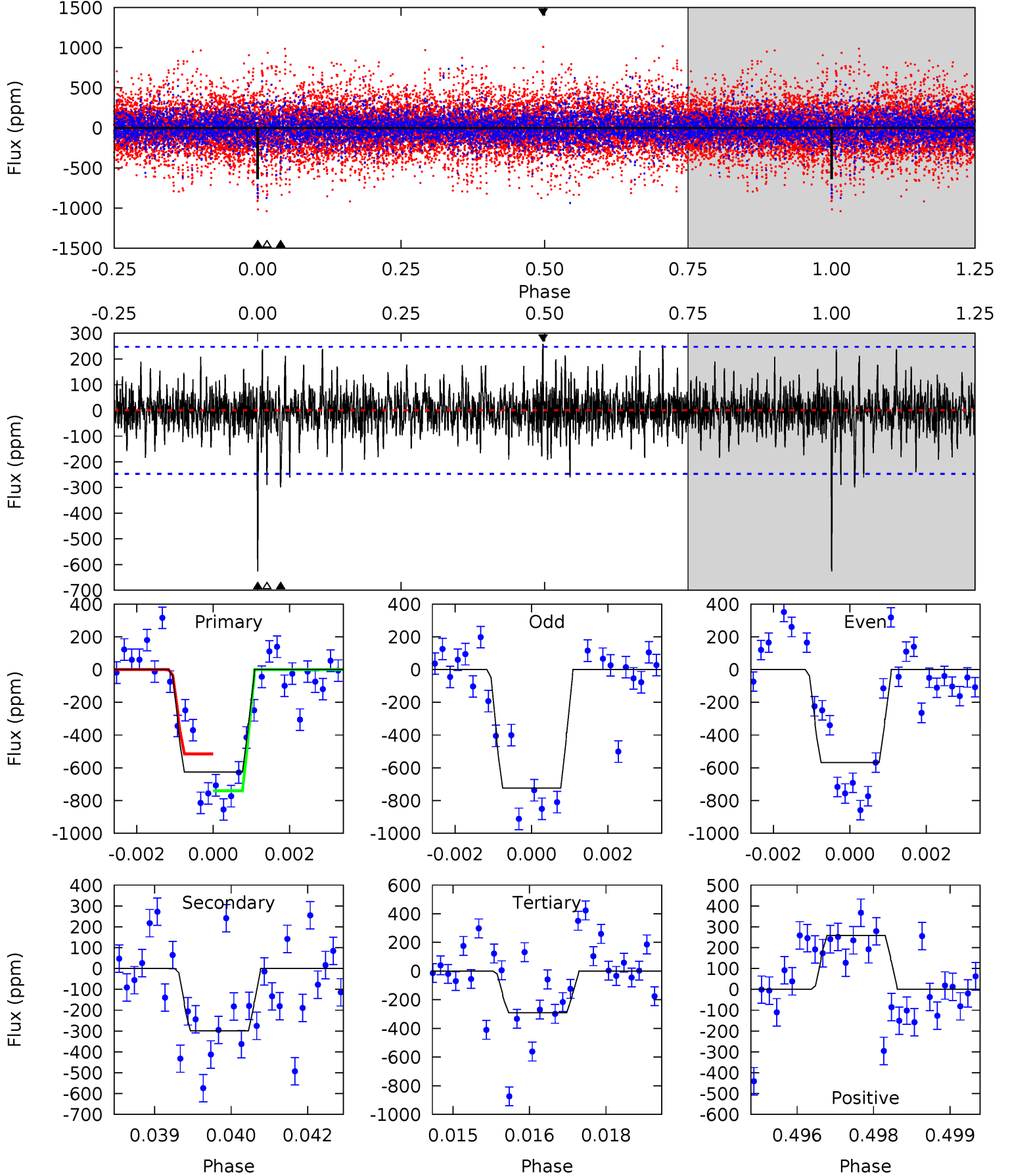
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.7	8.60	8.40	8.02	5.41	3.23	1.60	5.28	5.66	0.20	0.58	0.35	1.05	0.37	2.00



Alt Model-Shift Uniqueness Test

008264550-04, P = 83.248815 Days, E = 96.170031 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.6	6.49	6.29	5.61	5.37	3.15	1.33	7.30	7.99	0.20	0.88	1.60	1.06	0.29	2.46



Stellar Parameters For KIC 008264550

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8423^{+204}_{-379}	$3.764^{+0.424}_{-0.106}$	$-0.160^{+0.250}_{-0.350}$	$3.089^{+0.772}_{-1.433}$	$2.024^{+0.333}_{-0.458}$	$0.097^{+0.377}_{-0.041}$
	+2%/-4%	+11%/-3%	+156%/-219%	+25%/-46%	+16%/-23%	+390%/-42%
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 008264550-04 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-229 ± 27	$6.58^{+4.72}_{-4.16}$	1278^{+106}_{-142}	6861^{+6722}_{-1631}	684^{+4367}_{-462}
Alt.	-299 ± 46	$7.44^{+5.45}_{-4.25}$	1277^{+101}_{-135}	6777^{+4965}_{-1509}	656^{+2760}_{-448}

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

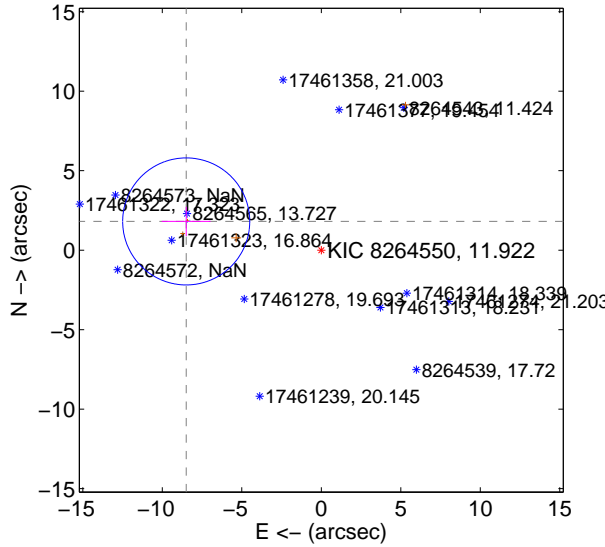
Supplemental centroid analysis for 008264550-04. **Kepler magnitude: 11.92.** Transit SNR 6.54

There are 4 quarters with good PRF difference image offsets

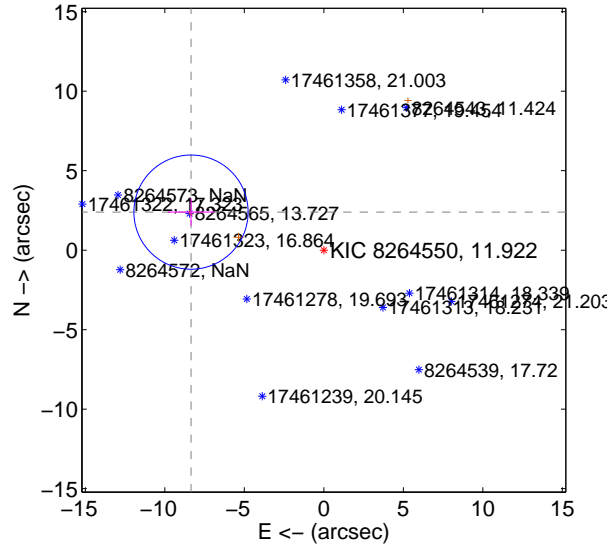
The direct PRF centroid is offset from the target star catalog position by about 0.62 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	8.685 \pm 1.332	6.52	8.495 \pm 1.538	1.808 \pm 0.916
PRF-fit source offset from KIC position	8.689 \pm 1.197	7.26	8.353 \pm 1.465	2.393 \pm 0.846
photometric centroid source offset	2.54 \pm 0.69	3.66	-0.15 \pm 1.00	2.54 \pm 0.69

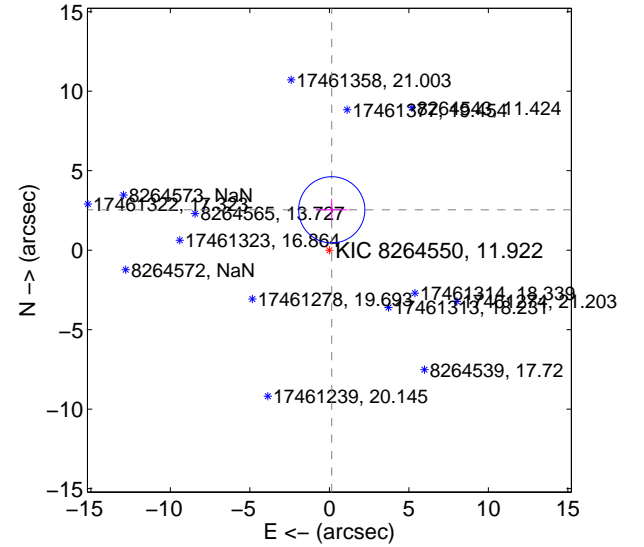
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

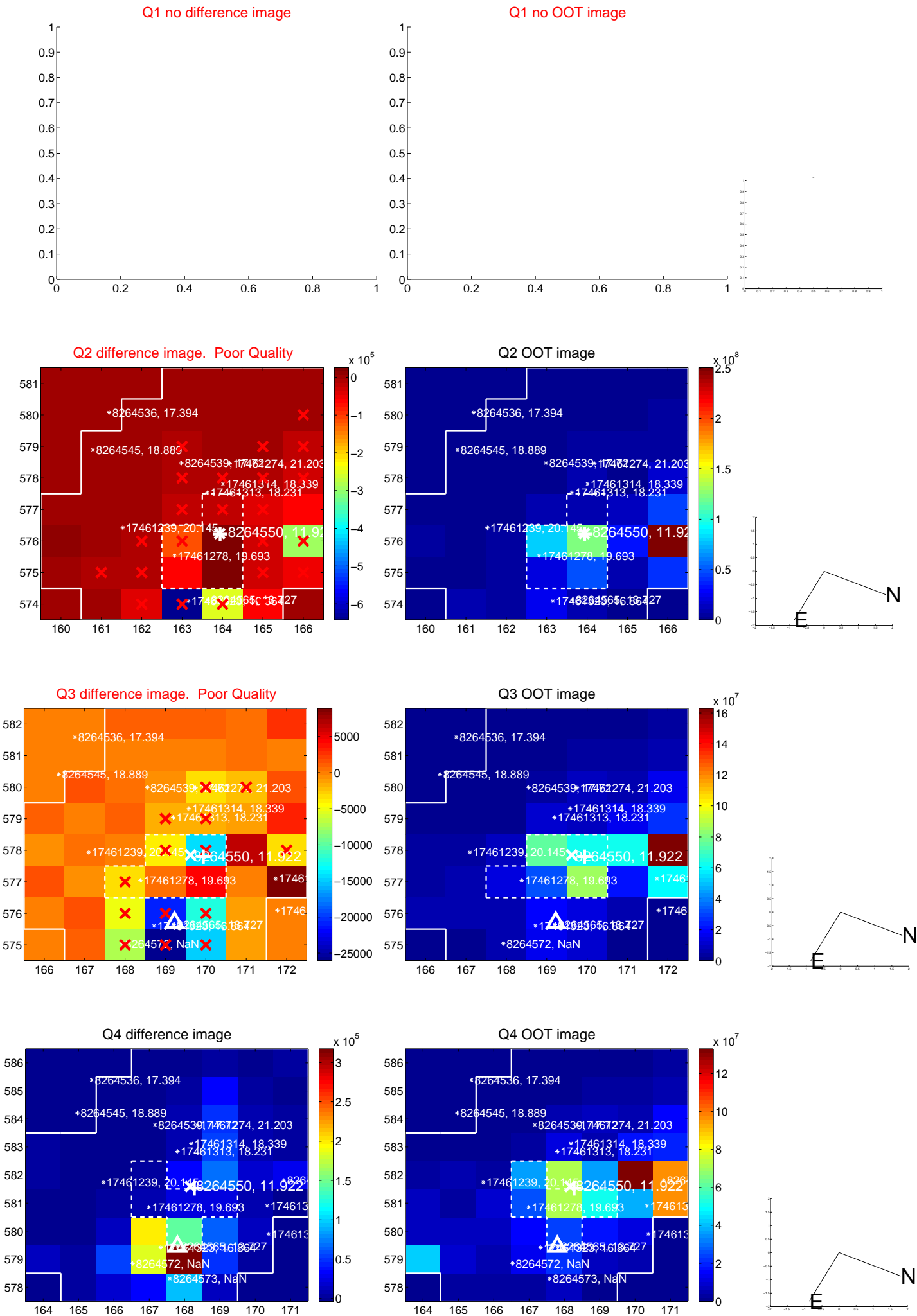


offset from photometric centroids

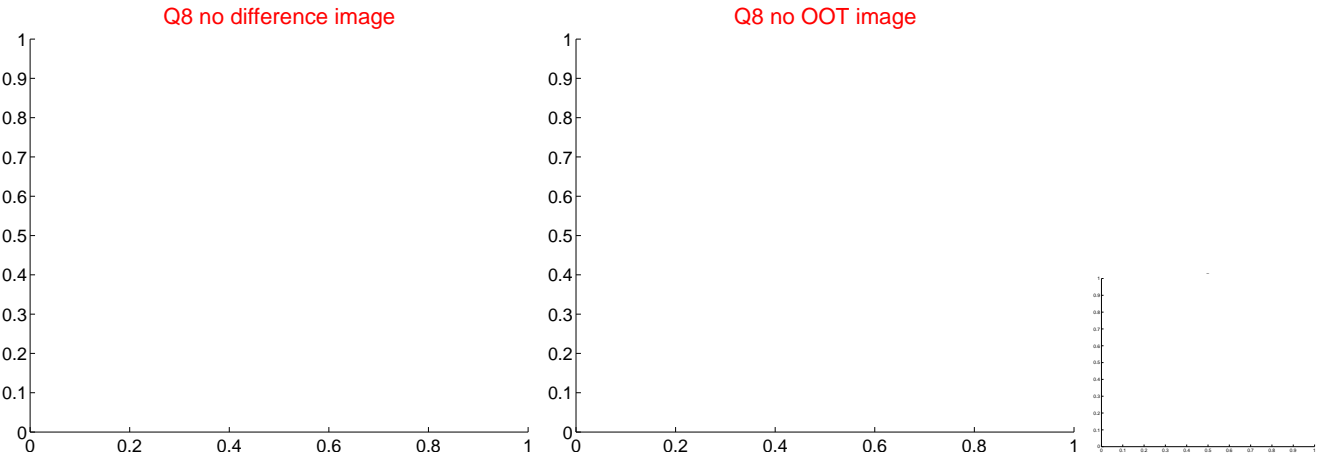
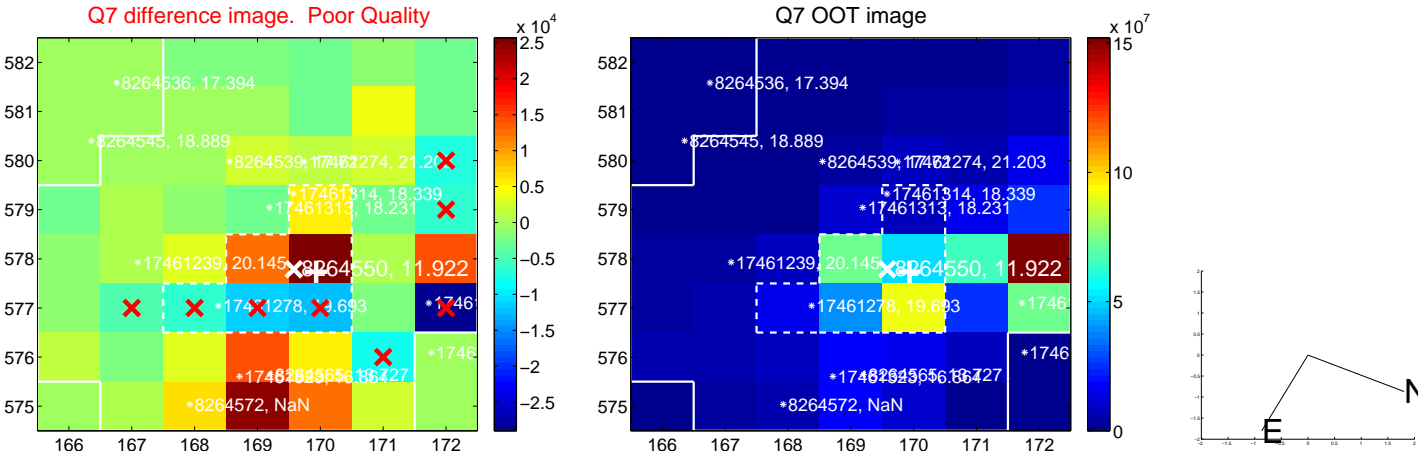
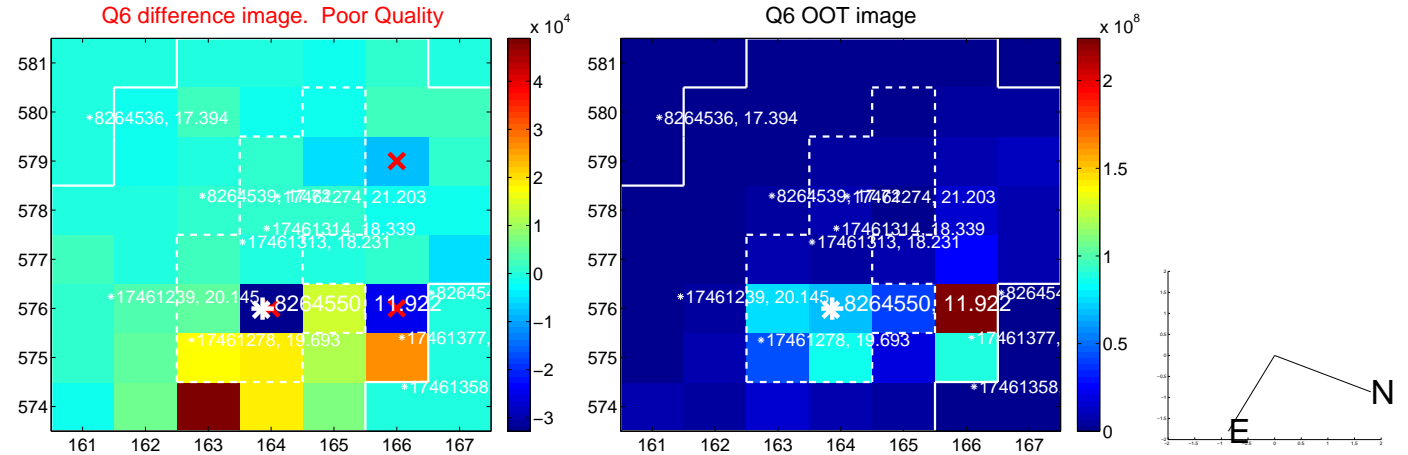
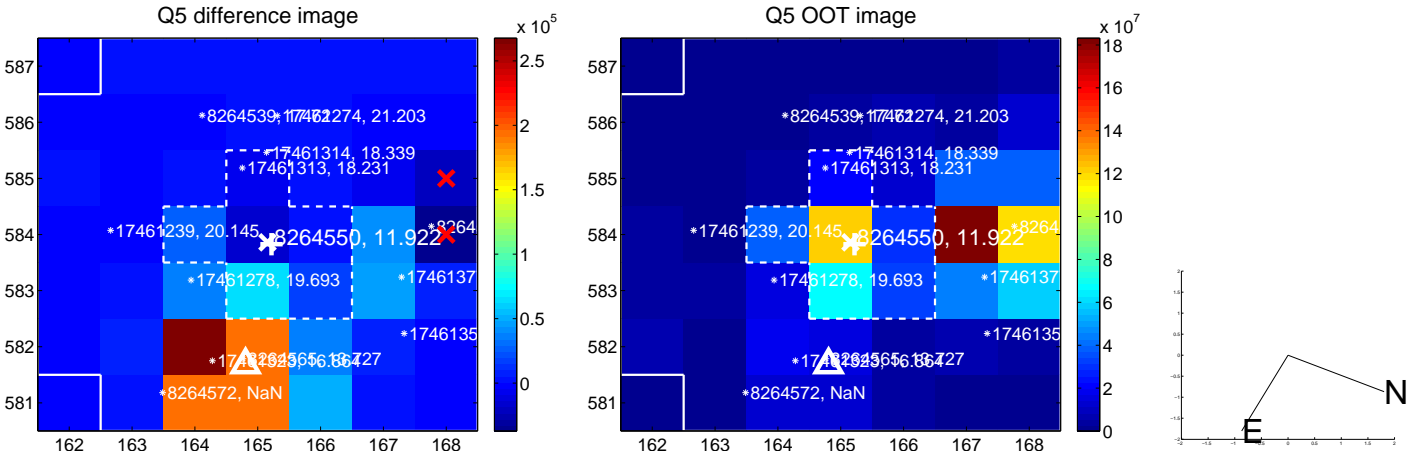


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

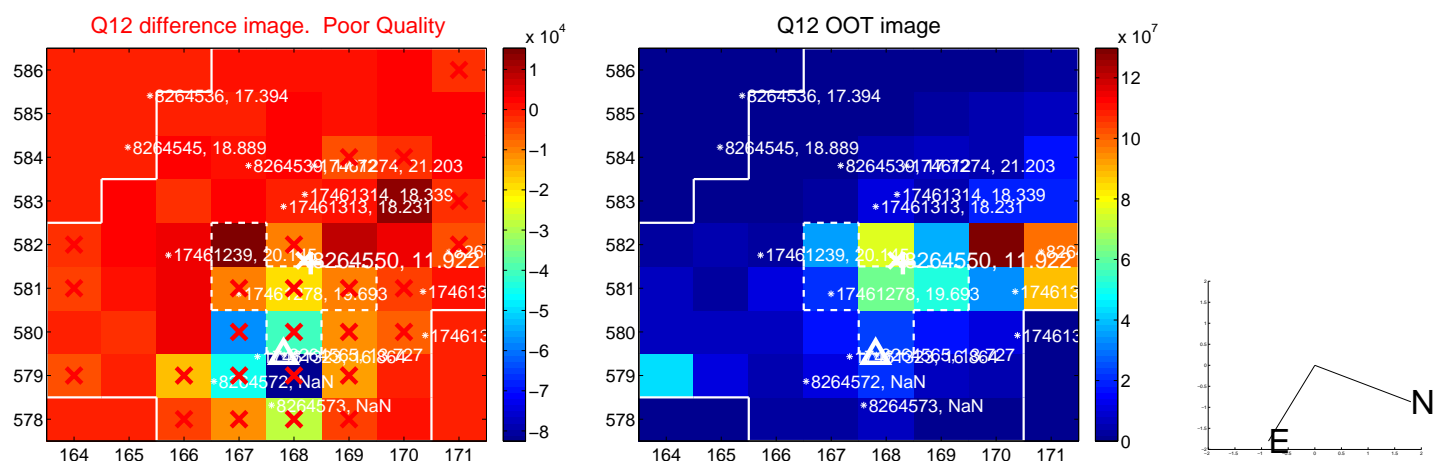
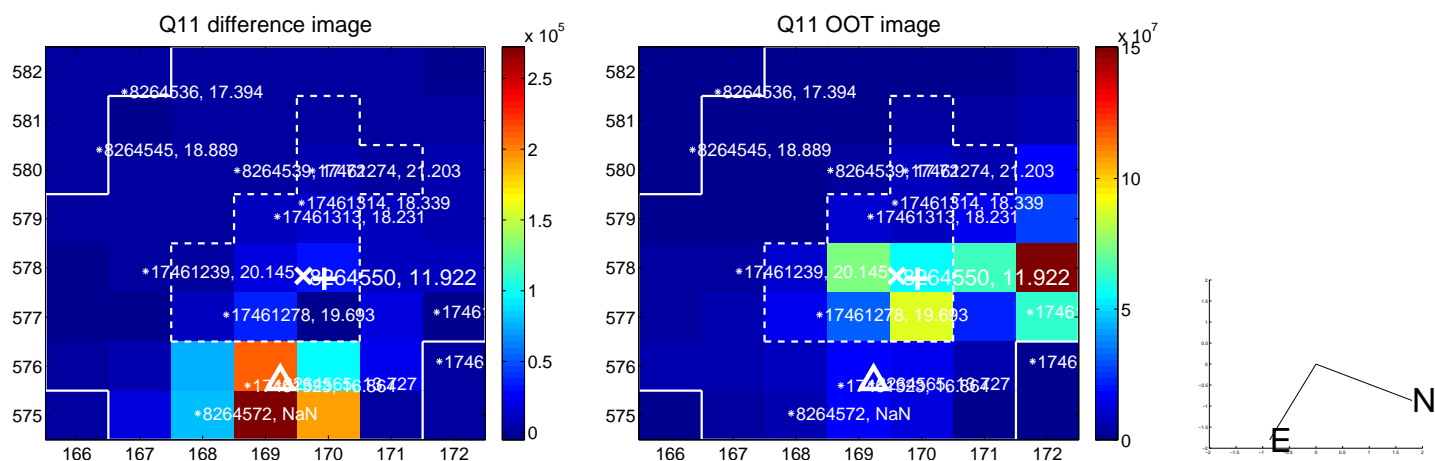
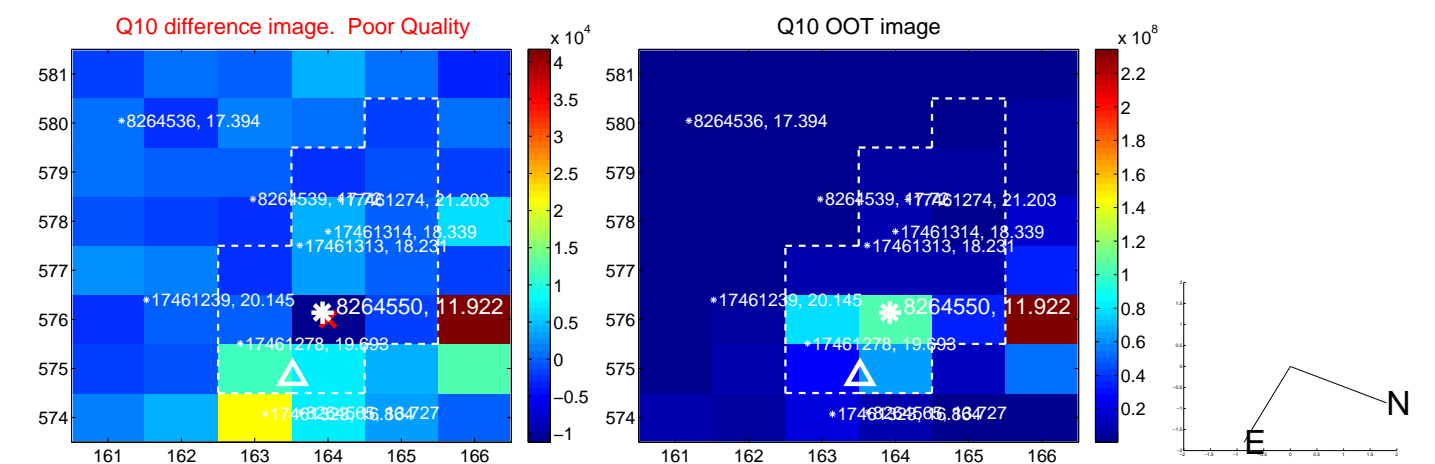
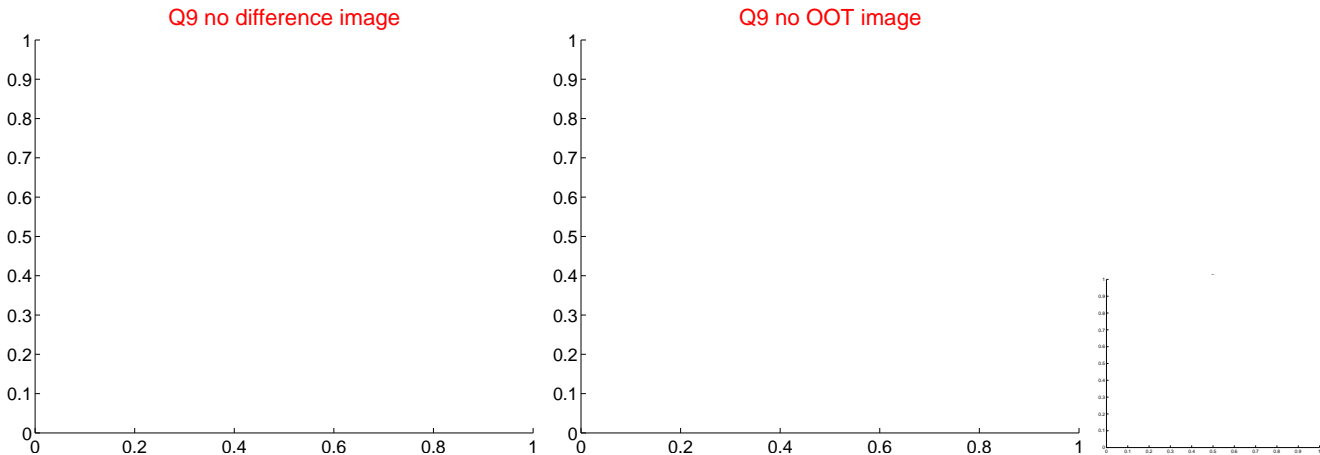
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



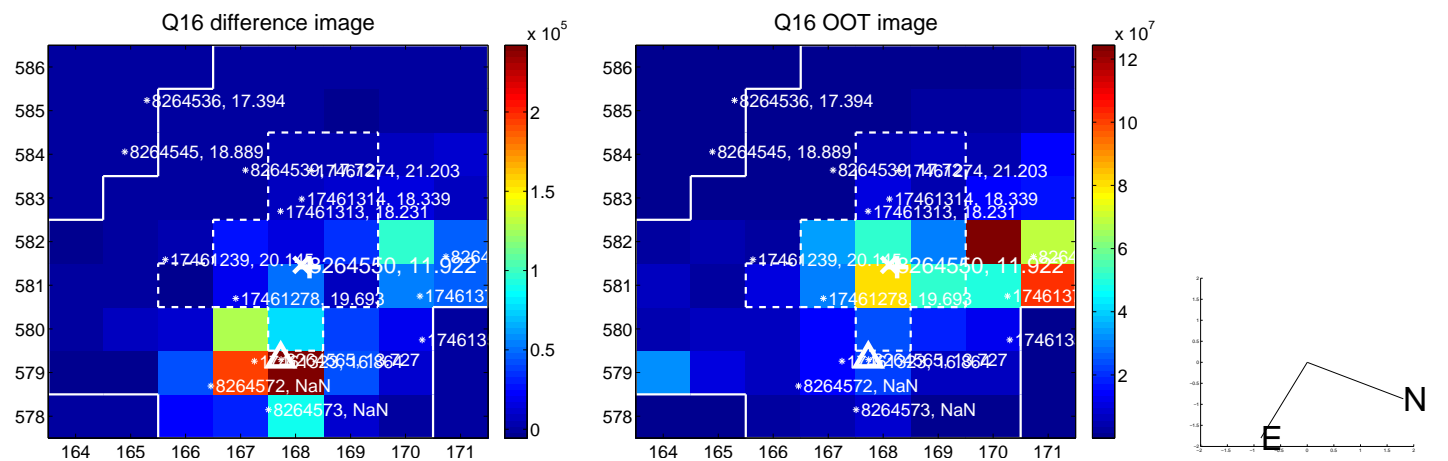
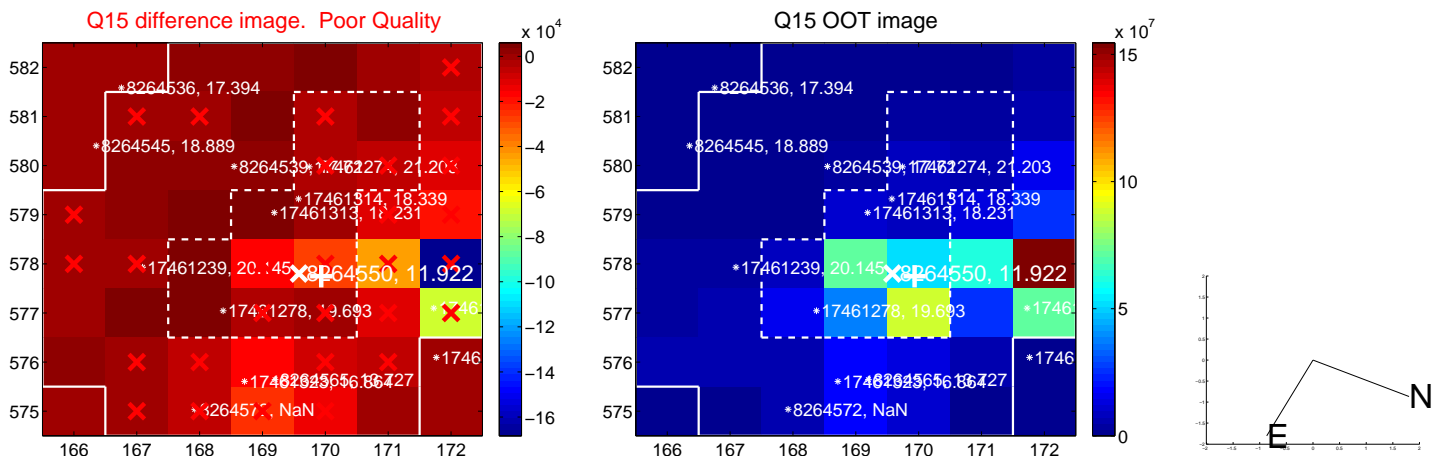
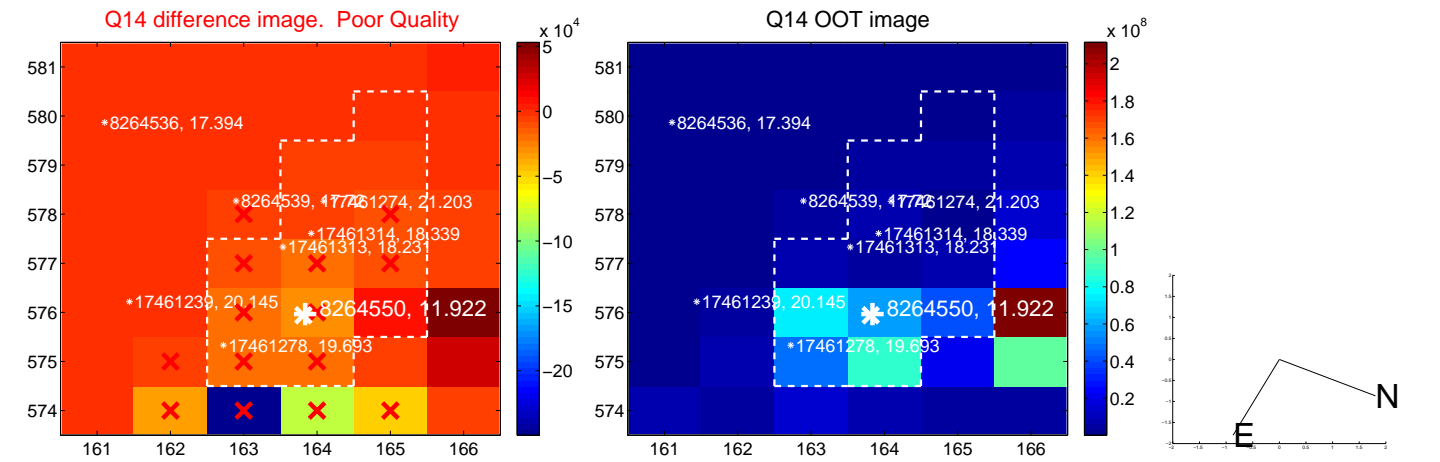
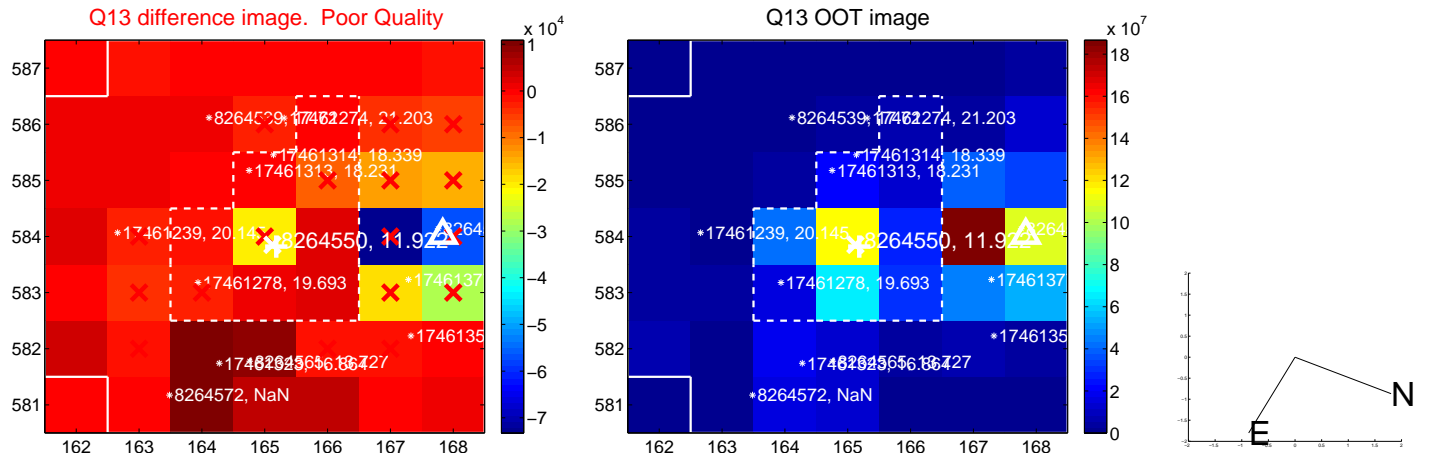
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



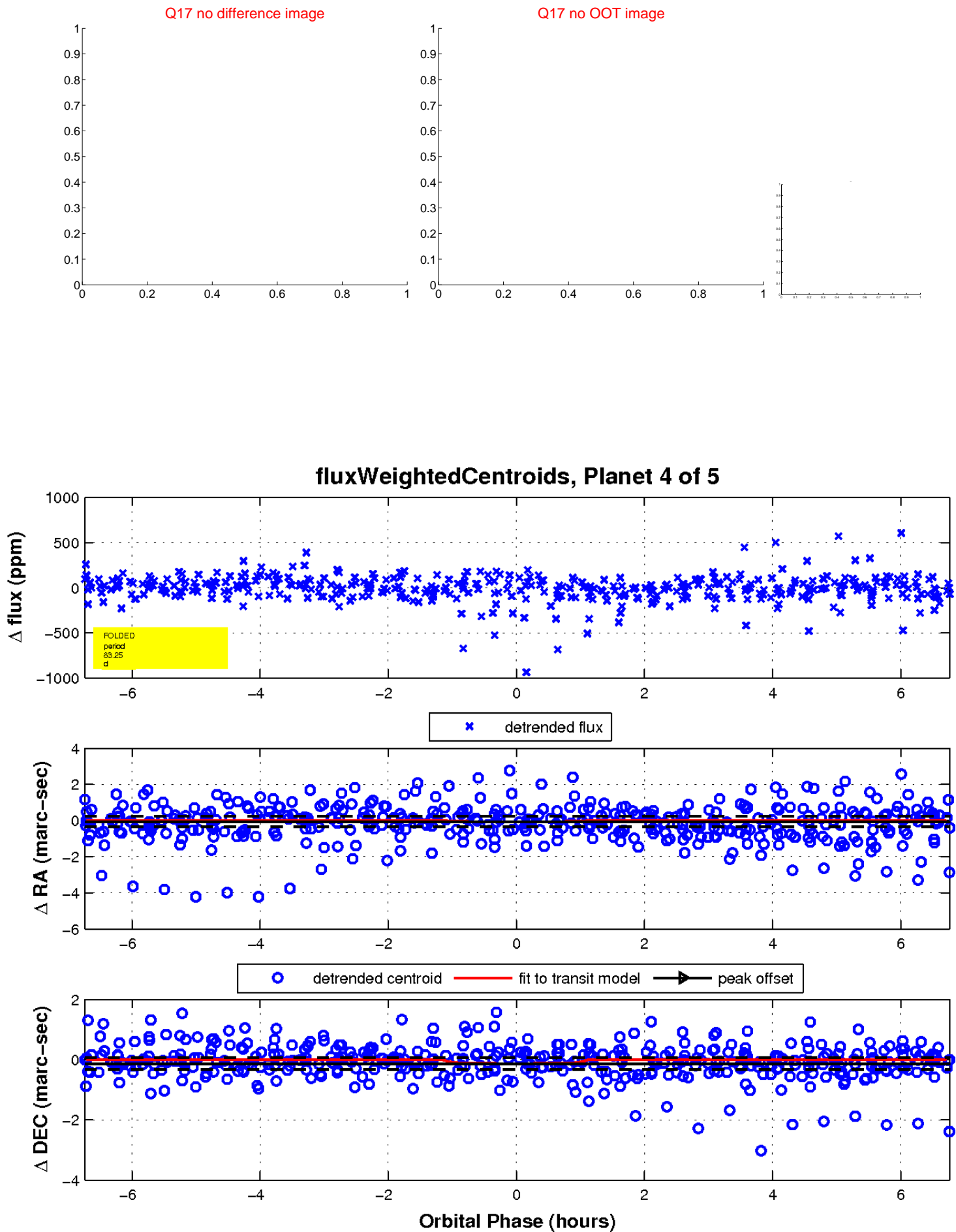
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

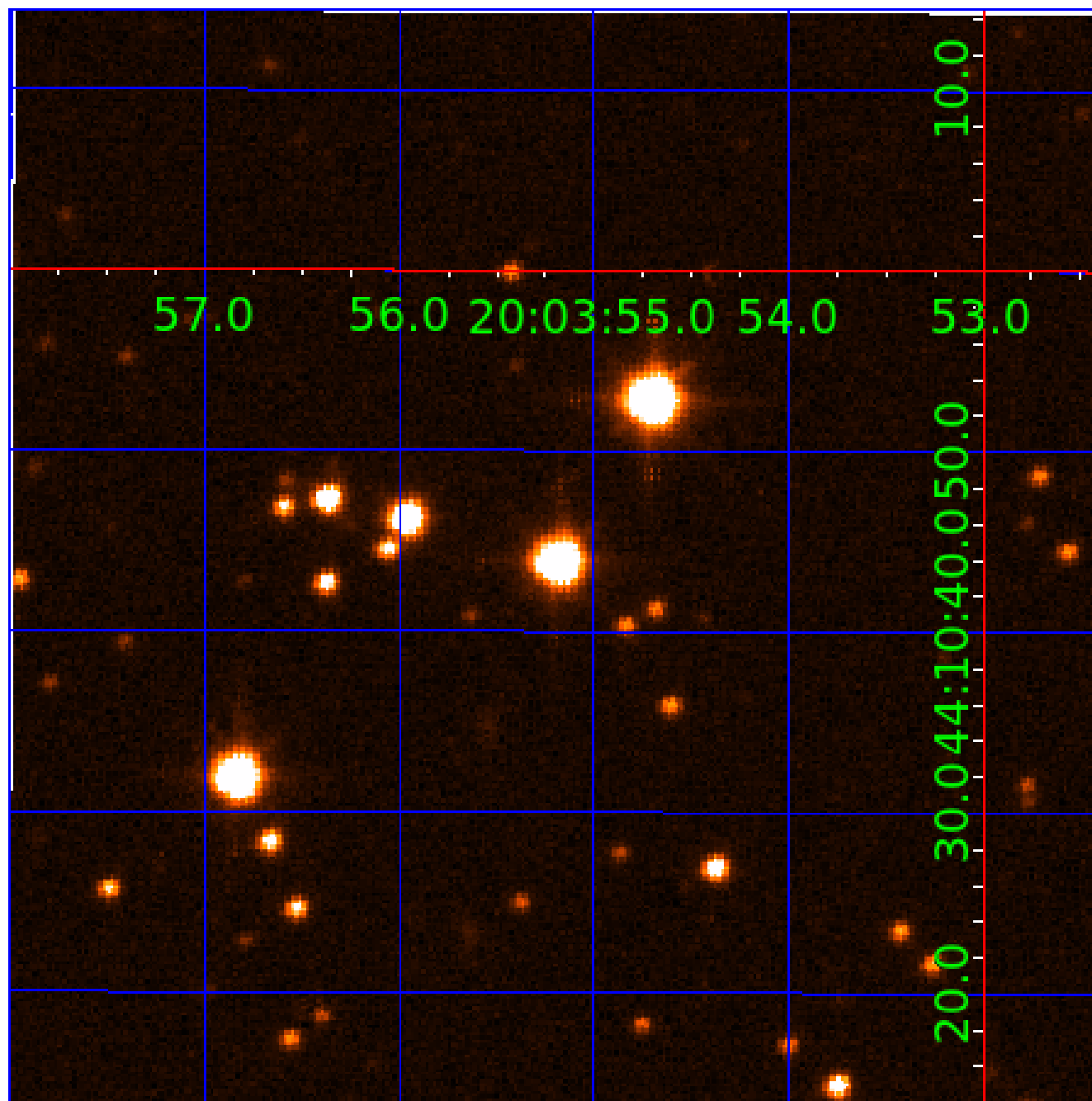


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008264550

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})
008264550-01	OBS	No	0.678097	131.648078	11.7	1.475	8.8	7.3	3.09	8423	1.22	117919.09
008264550-02	OBS	No	0.678105	131.858862	10.9	2.442	8.8	8.3	3.09	8423	1.18	117917.22
008264550-04	OBS	No	83.248635	179.433787	281.4	2.256	10.2	6.5	3.09	8423	5.74	193.26
008264550-05	OBS	No	351.888399	427.788237	391.6	3.833	7.9	7.6	3.09	8423	6.50	28.28

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008264550-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
008264550-02	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_RESOLVED_OFFSET
008264550-04	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
008264550-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—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.

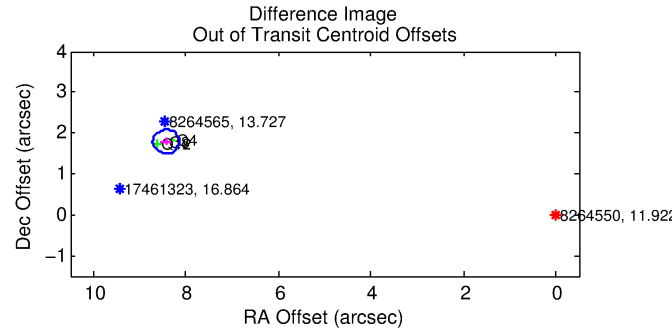
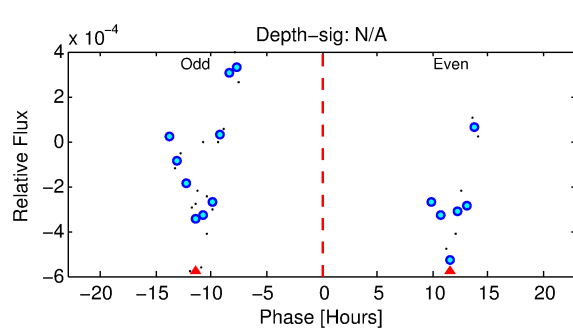
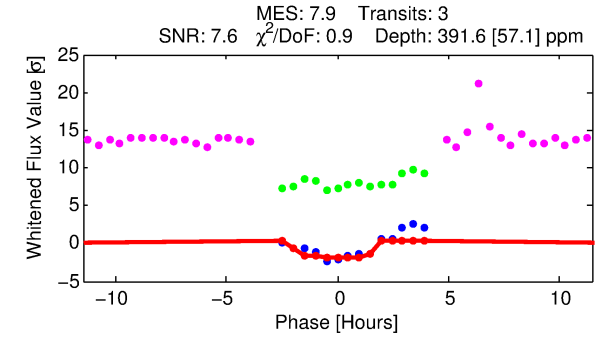
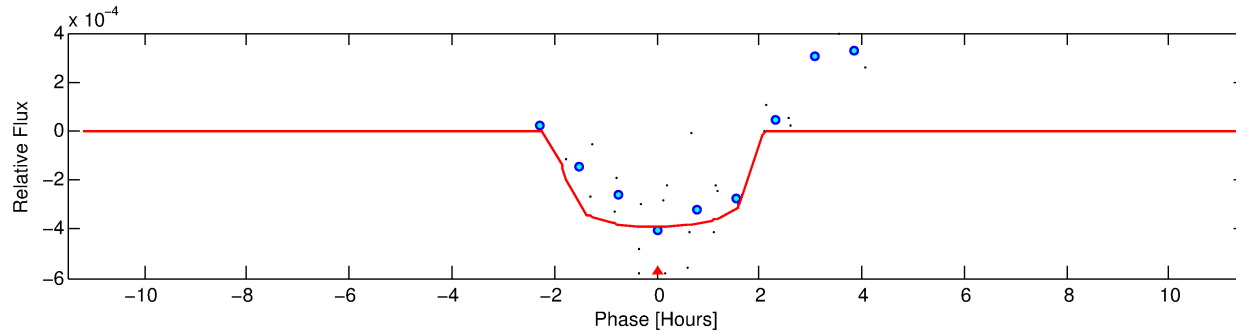
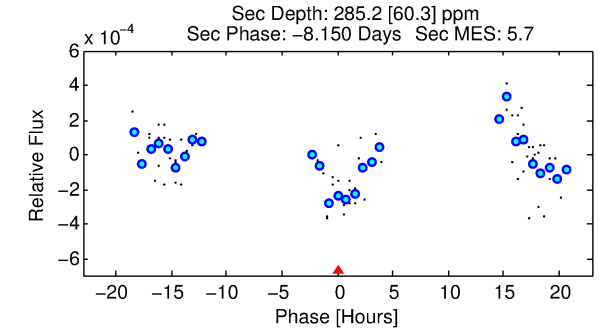
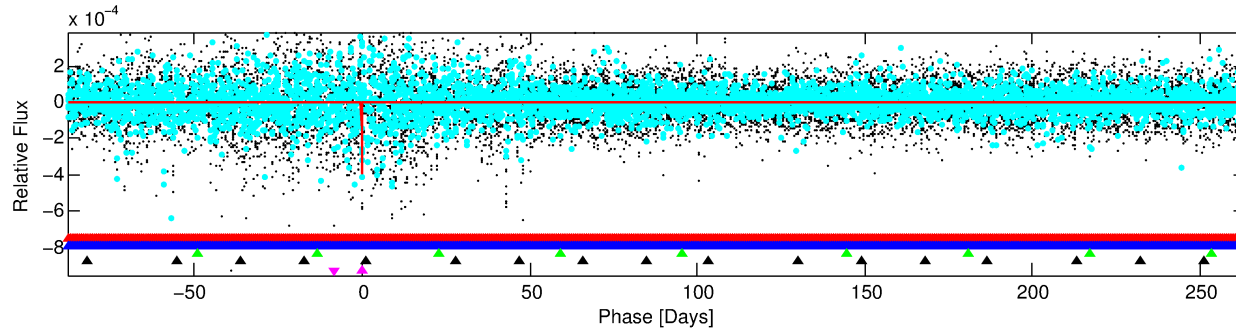
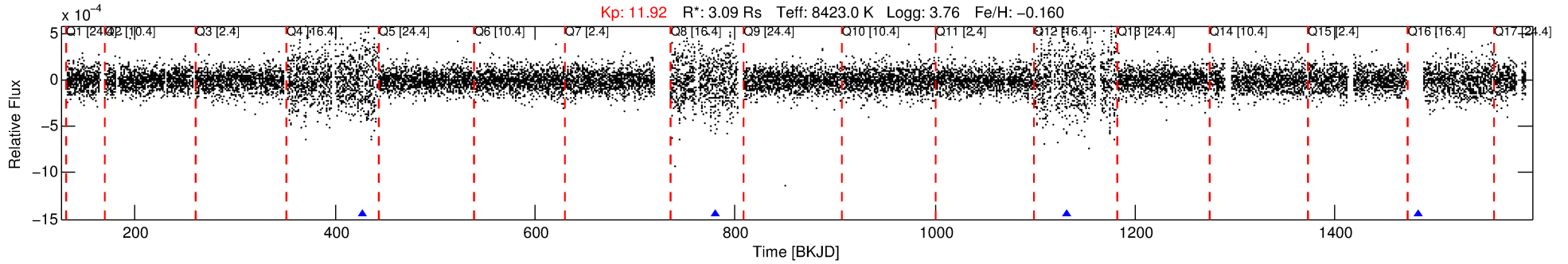
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008264550-05

No Significant Match Found

DV One-Page Summary

KIC: 8264550 Candidate: 5 of 5 Period: 351.888 d



DV Fit Results:

Period = 351.88840 [0.00879] d
Epoch = 427.7882 [0.0088] BKJD
Rp/R* = 0.0193 [0.0174]
a/R* = 546.49 [2876.95]
b = 0.66 [4.59]
Seff = 28.28 [21.00]
Teq = 588 [109] K
Rp = 6.50 [6.60] Re
a = 1.2336 [0.5538] AU
Ag = 5654.05 [11057.42] [0.51σ]
Teffp = 7883 [3601] K [2.03σ]

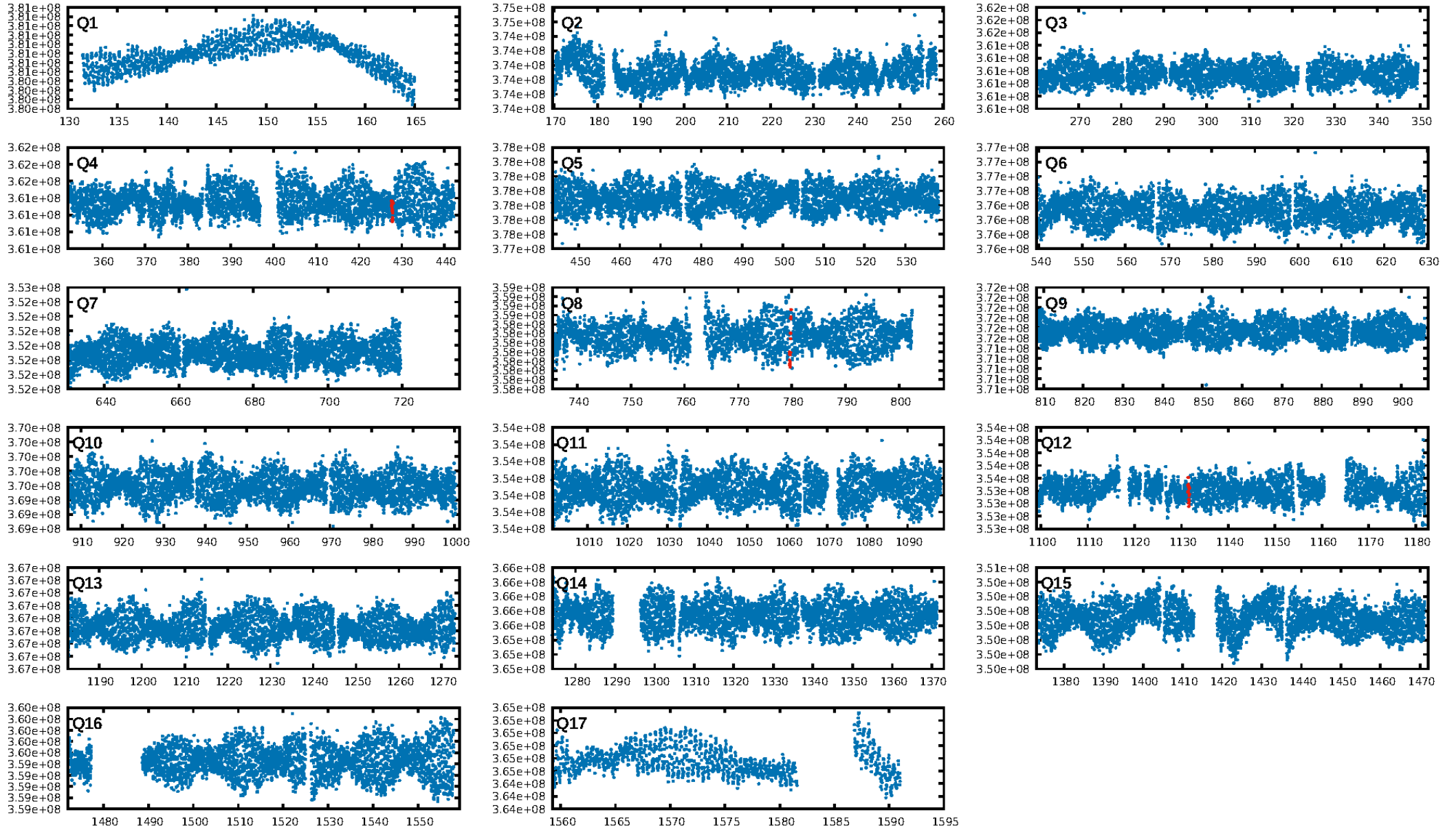
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [669.86σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 23.4%
ModelChiSquareGof-sig: 99.8%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -1.636
Centroid-sig: 5.2%
Centroid-so: 3.669 arcsec [2.55σ]
OotOffset-rm: 8.620 arcsec [89.24σ]
KicOffset-rm: 8.737 arcsec [106.12σ]
OotOffset-st: 0/0/3/0 [3]
KicOffset-st: 0/0/3/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 0.00 [0/3]

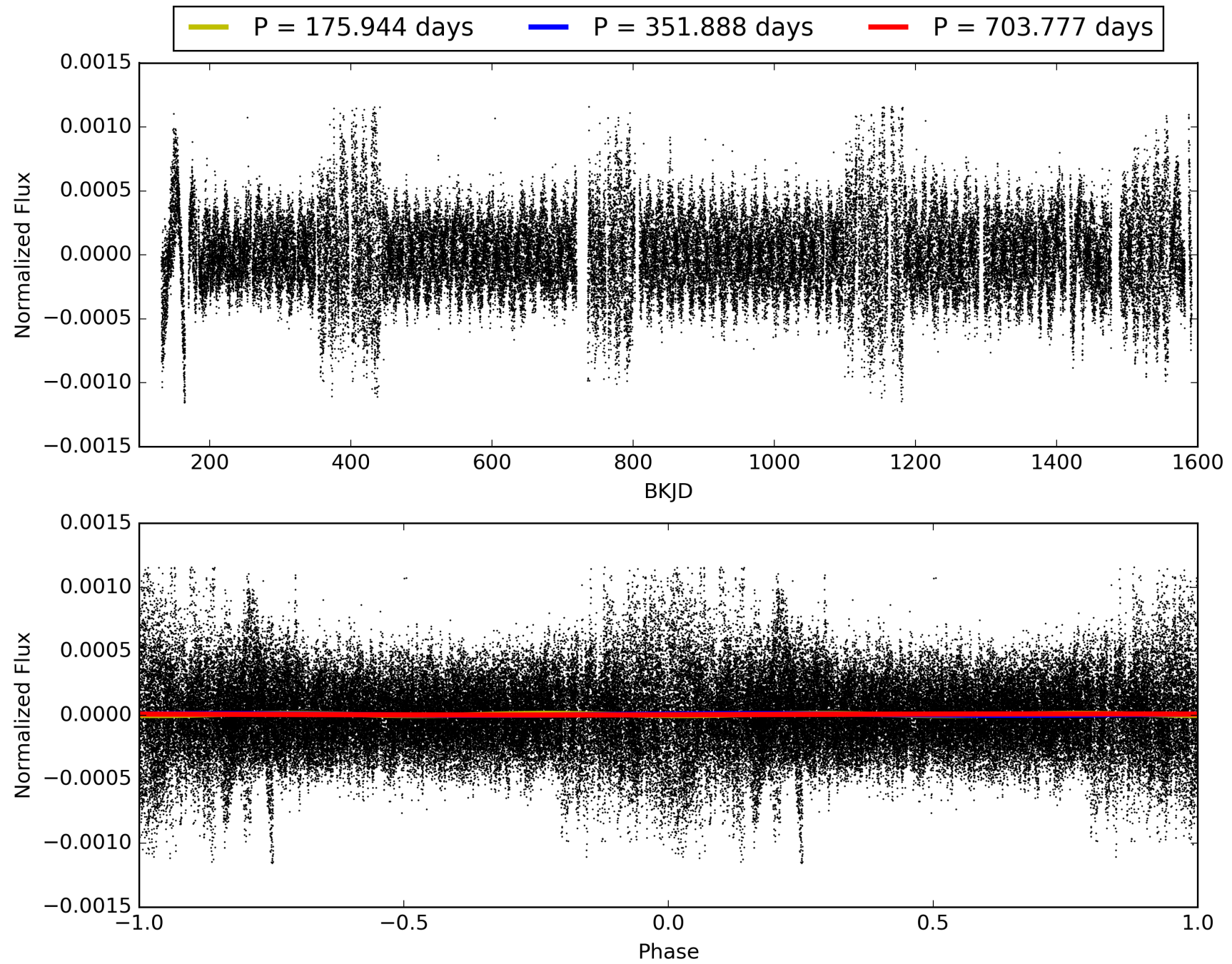
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:20:24 Z

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

TCE 008264550-05, PDC Light Curves

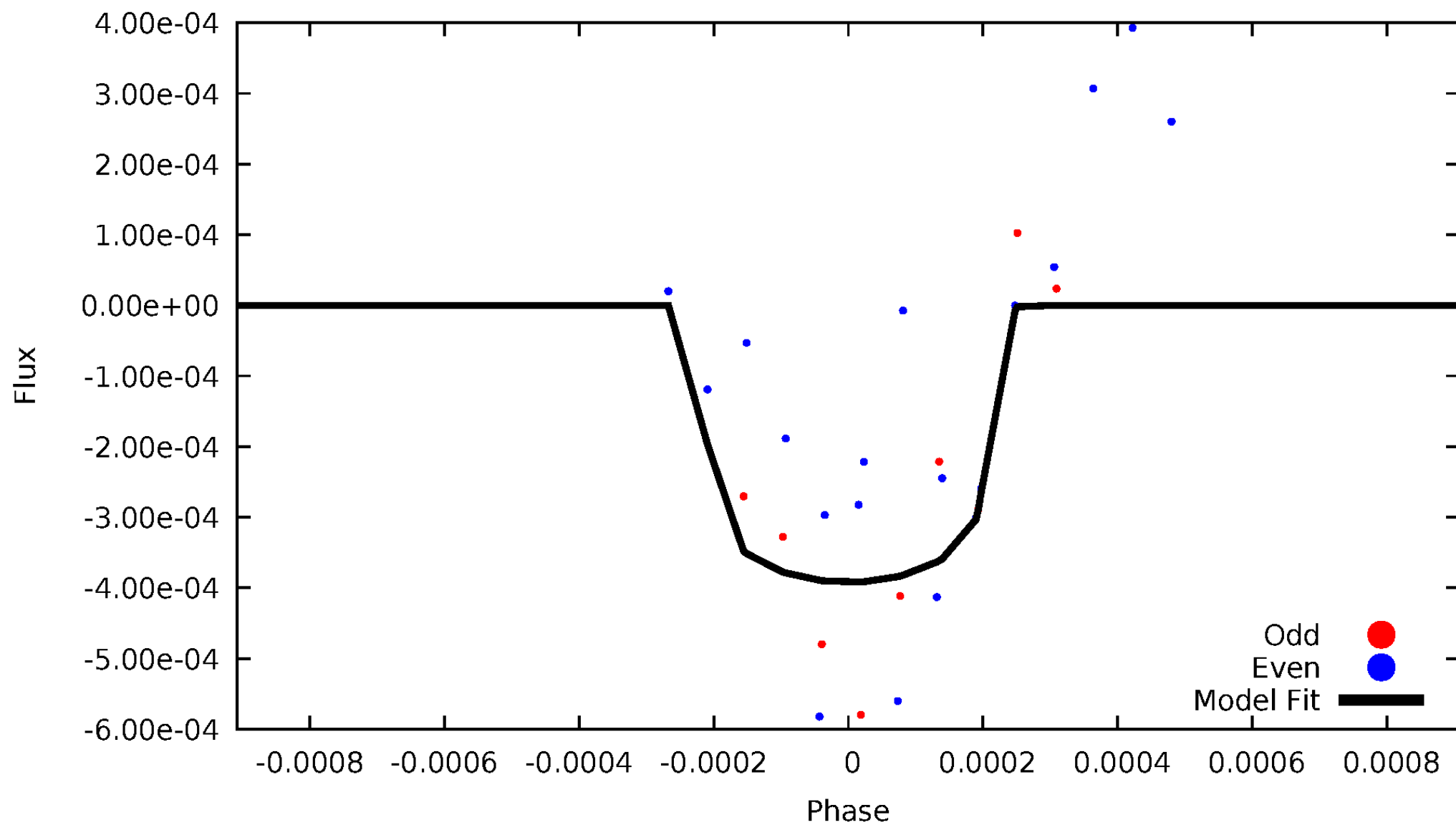


TCE 008264550-05



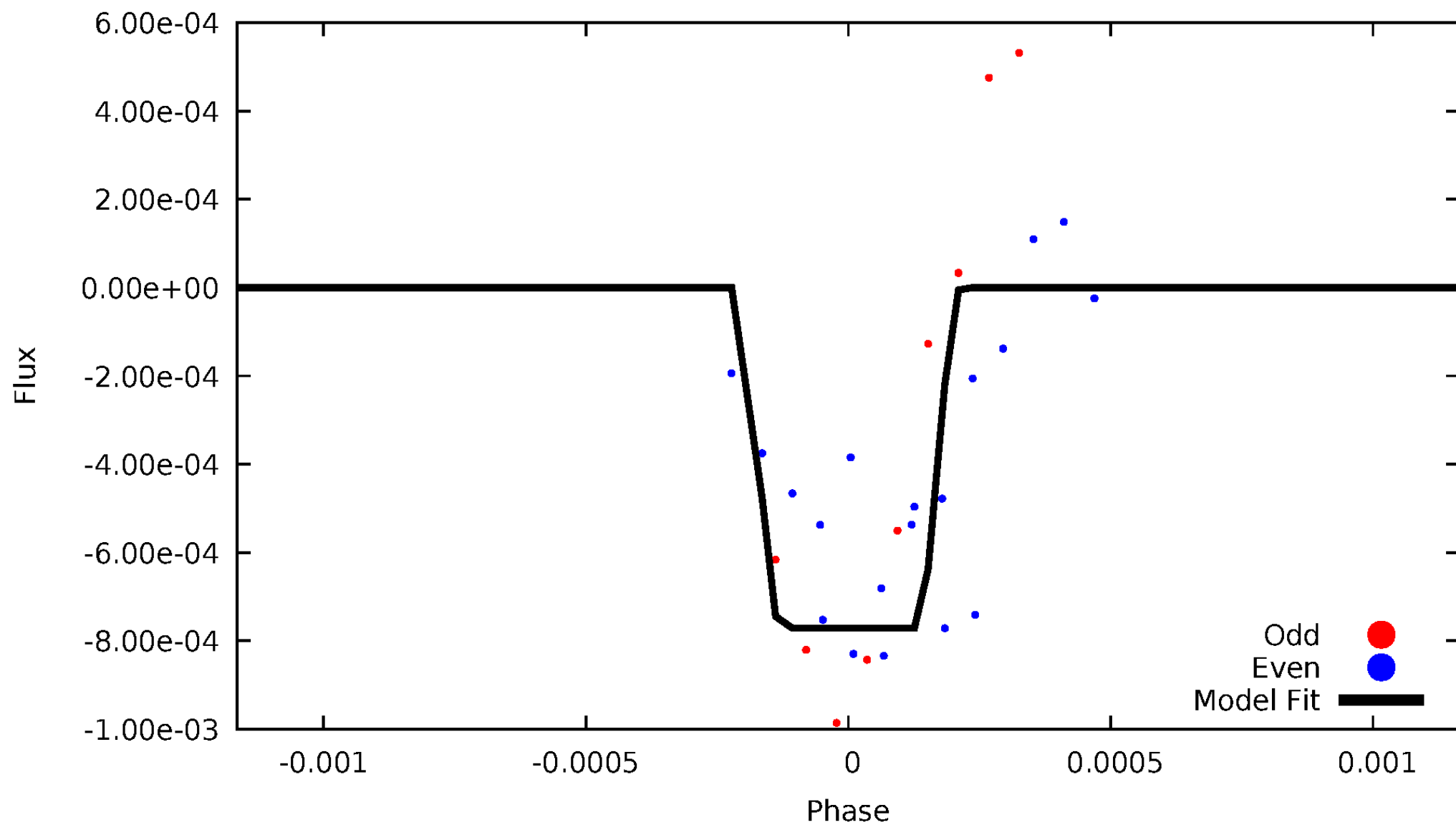
DV Odd/Even

TCE 008264550-05



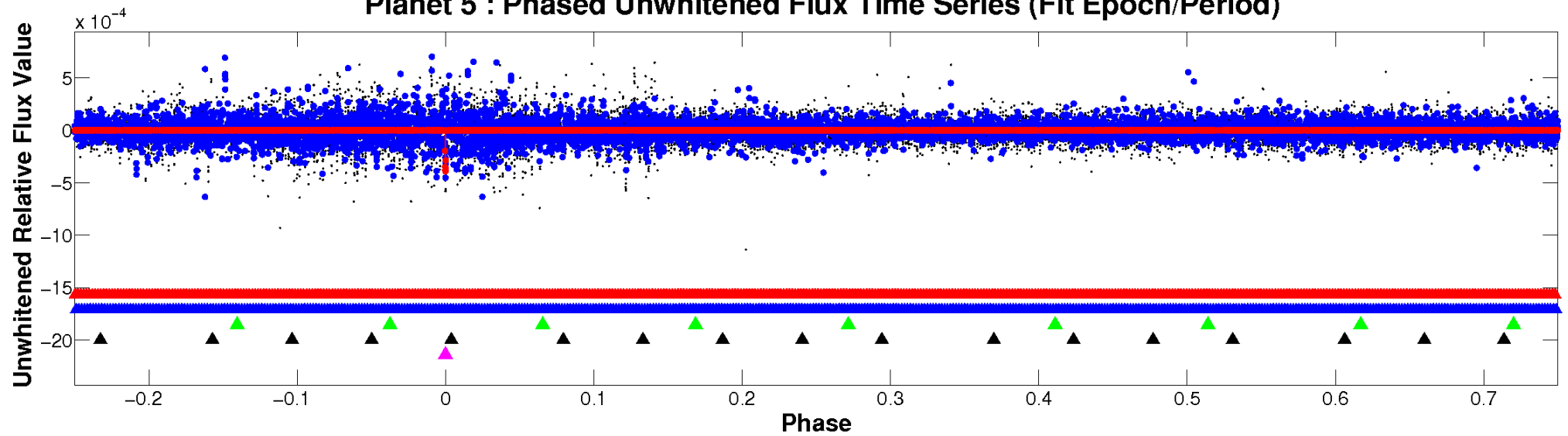
ALT Odd/Even

TCE 008264550-05

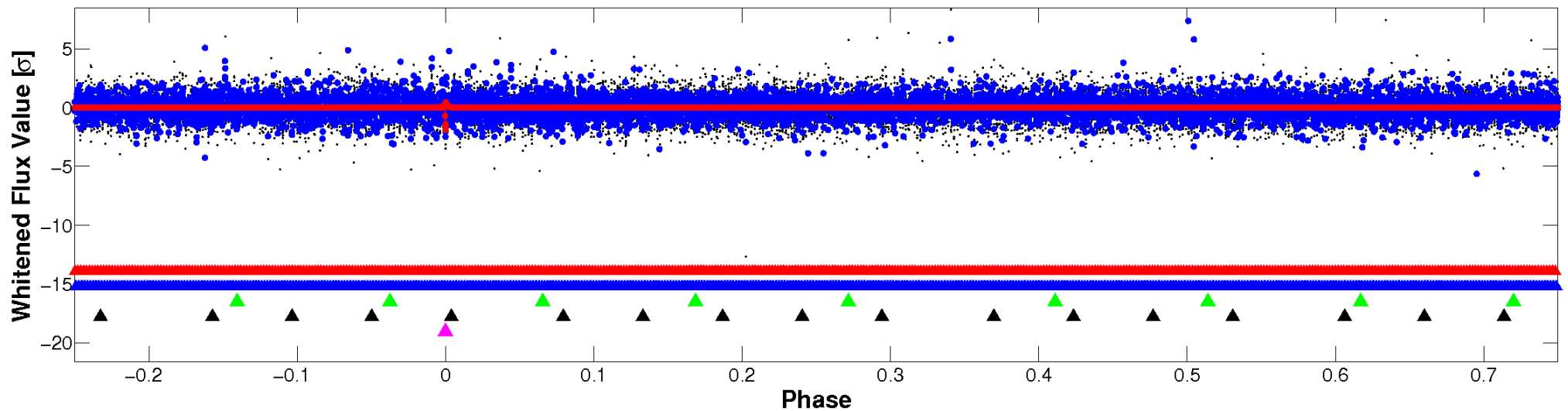


Non-Whitened Vs. Whitened Light Curve

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

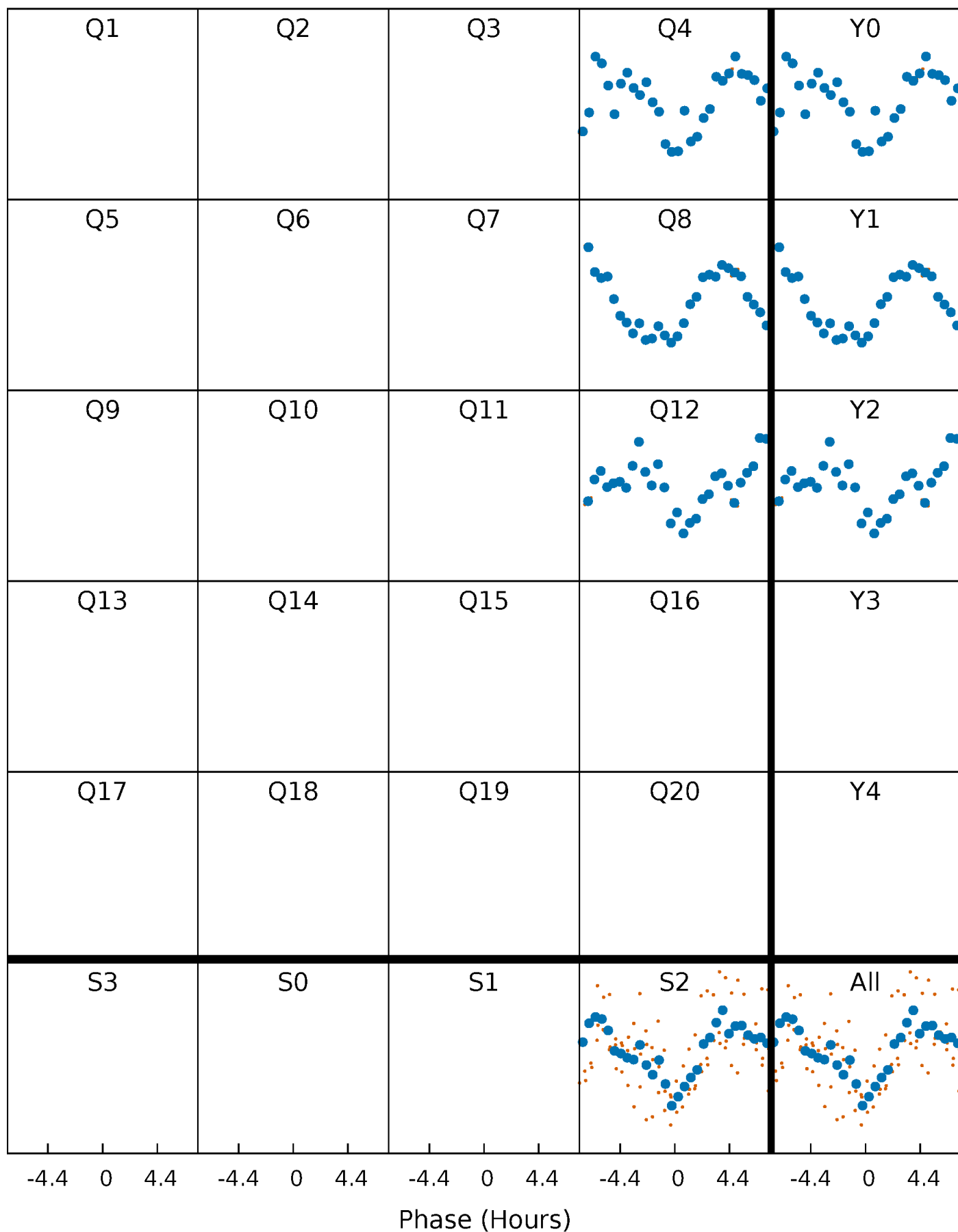


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



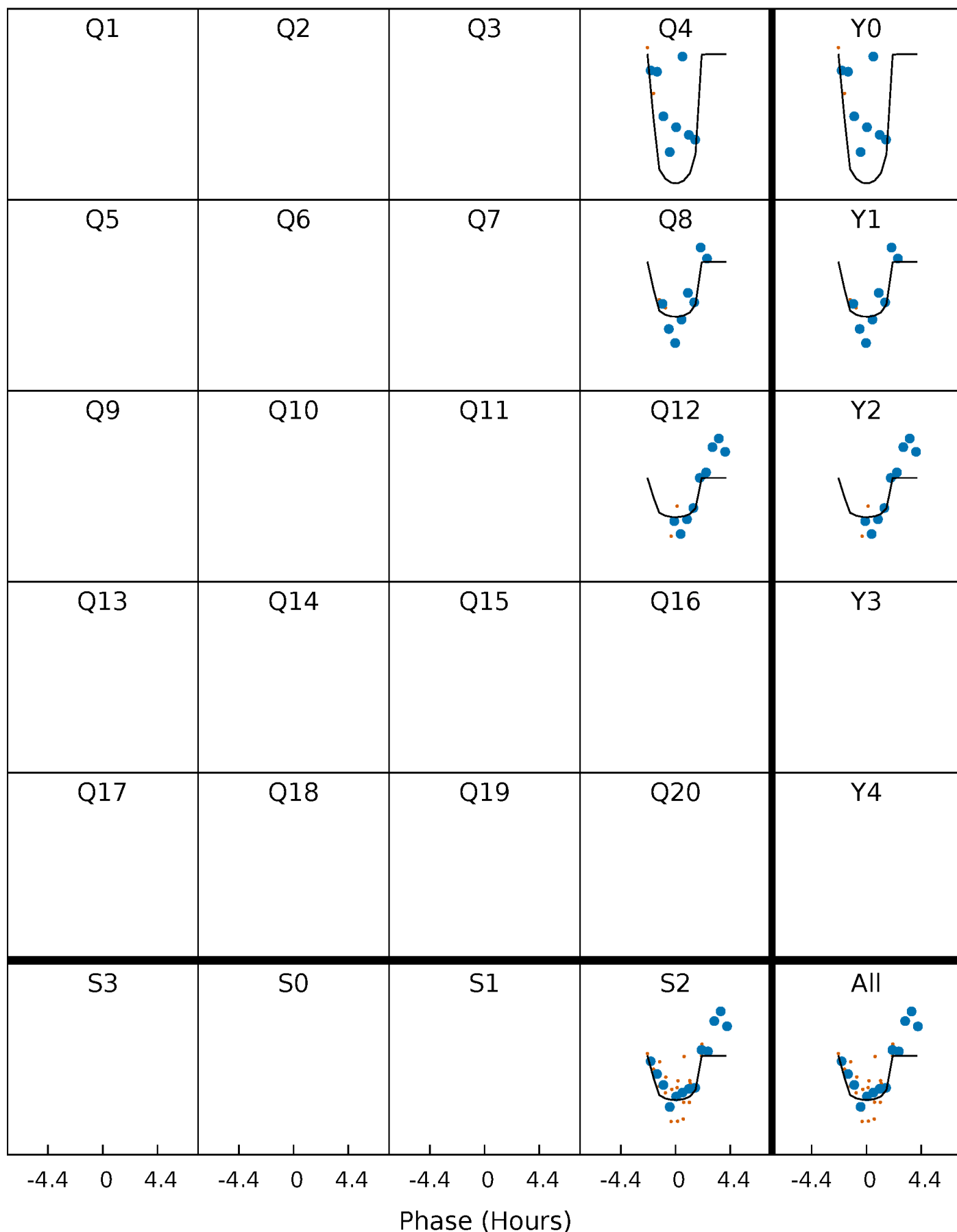
PDC Quarter-Phased Transit Curves

TCE 008264550-05 $P=351.888399$ Days $T_0=427.788237$ (BKJD)



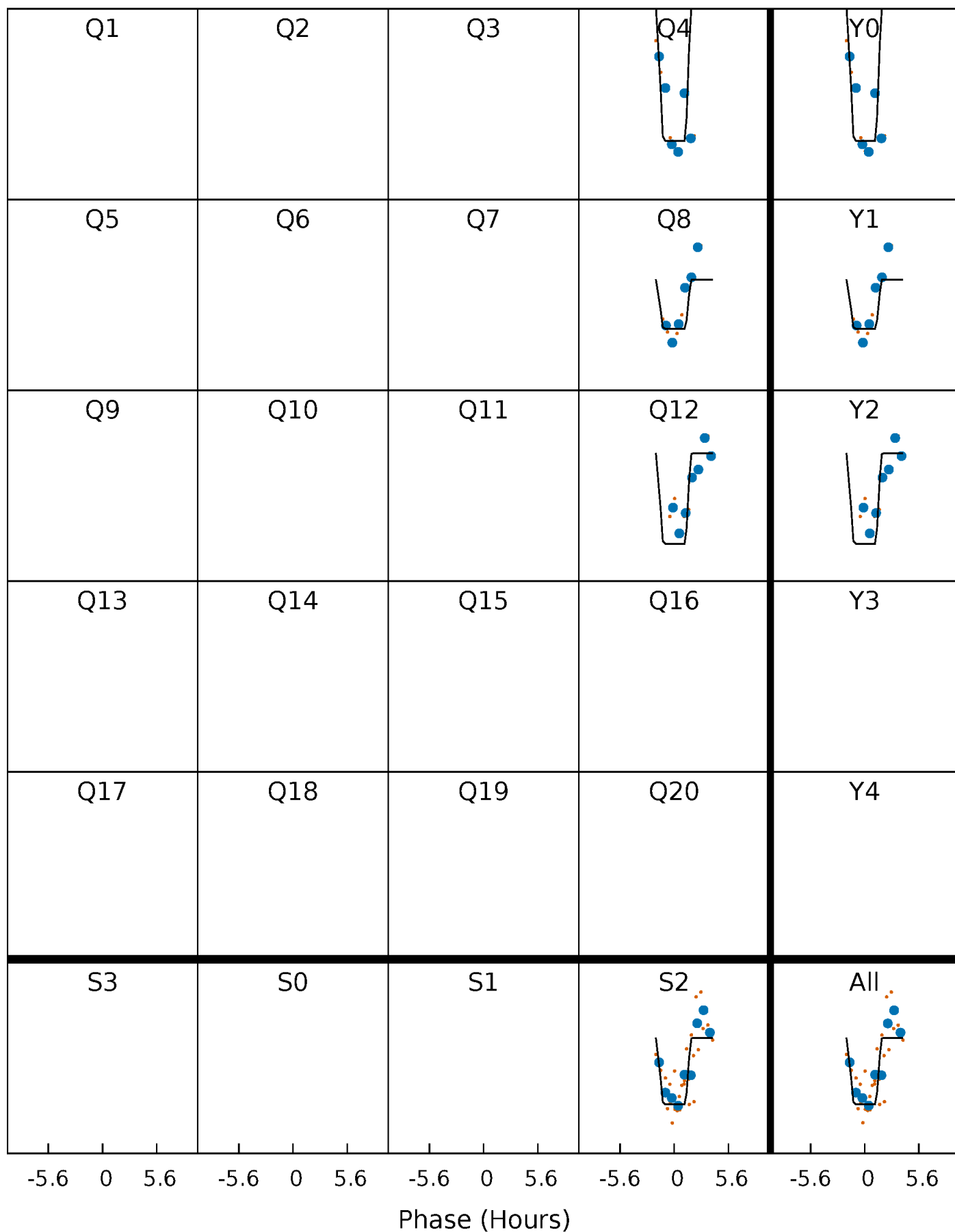
DV Quarter-Phased Transit Curves

TCE 008264550-05 $P=351.888399$ Days $T_0=427.788237$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

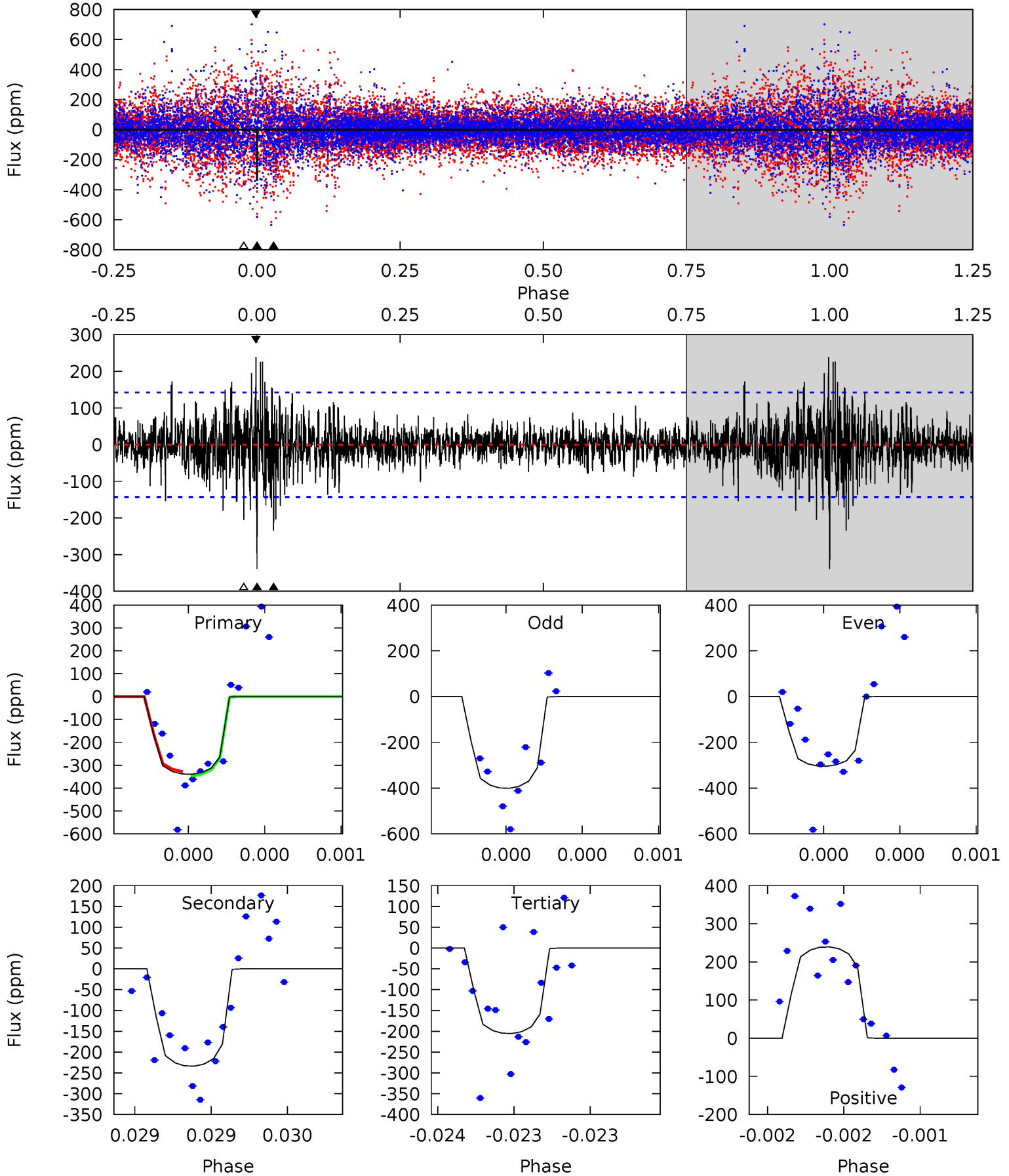
TCE 008264550-05 P=351.898184 Days $T_0=427.772489$ (BKJD)



DV Model-Shift Uniqueness Test

008264550-05, P = 351.888399 Days, E = 75.899838 Days

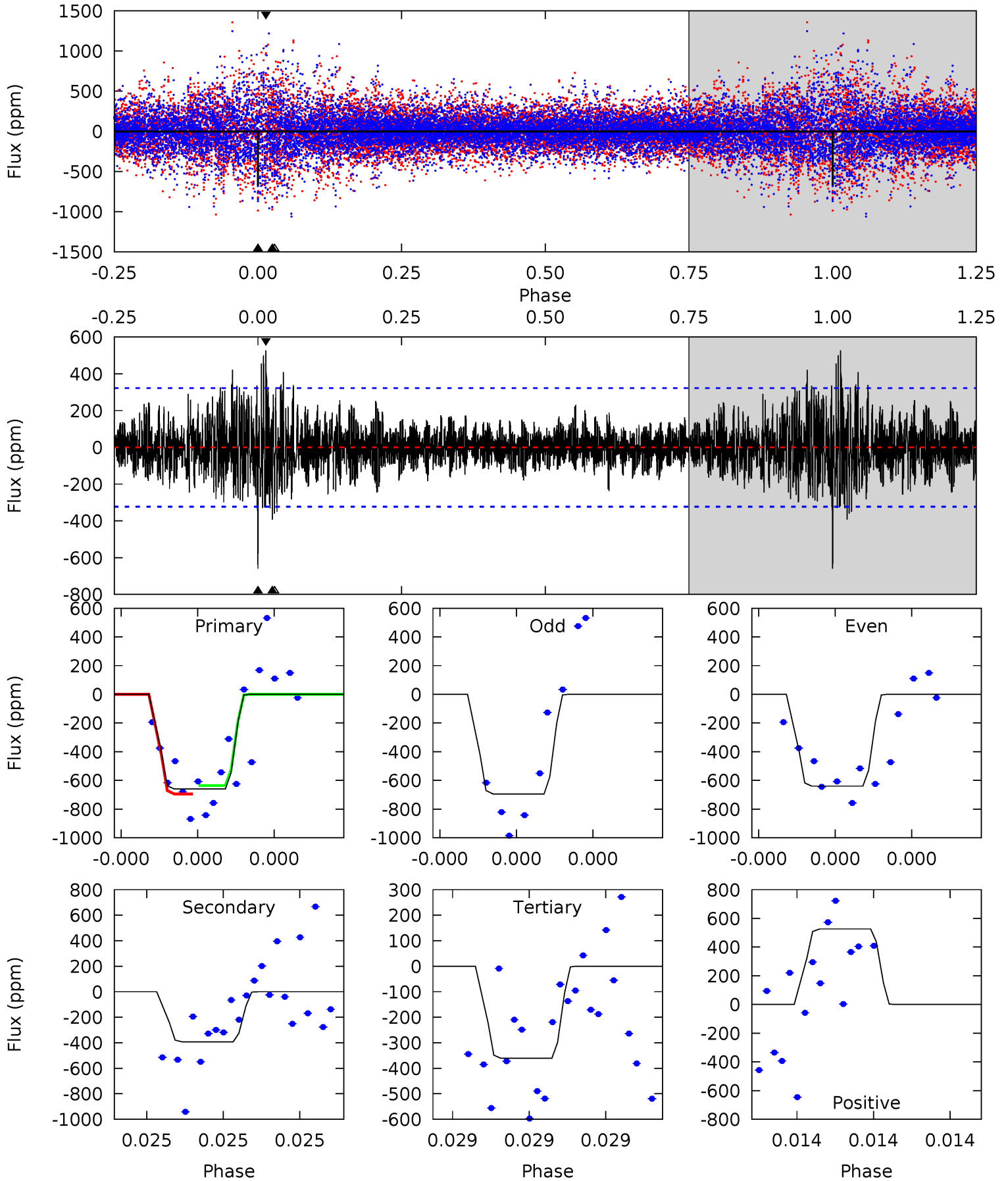
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.3	9.17	8.05	9.38	5.59	3.50	1.60	5.26	3.93	1.12	-0.22	1.82	0.88	0.41	0.34



Alt Model-Shift Uniqueness Test

008264550-05, P = 351.898184 Days, E = 75.874305 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.5	6.87	6.31	9.21	5.64	3.58	1.64	5.23	2.33	0.56	-2.34	0.44	0.94	0.44	0.49



Stellar Parameters For KIC 008264550

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8423^{+204}_{-379}	$3.764^{+0.424}_{-0.106}$	$-0.160^{+0.250}_{-0.350}$	$3.089^{+0.772}_{-1.433}$	$2.024^{+0.333}_{-0.458}$	$0.097^{+0.377}_{-0.041}$
	+2%/-4%	+11%/-3%	+156%/-219%	+25%/-46%	+16%/-23%	+390%/-42%
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 008264550-05 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-234 ± 26	$6.83^{+5.73}_{-4.25}$	795^{+56}_{-89}	6680^{+5850}_{-1571}	4265^{+24882}_{-3005}
Alt.	-393 ± 57	$8.94^{+5.33}_{-4.85}$	786^{+65}_{-84}	6658^{+3994}_{-1361}	4174^{+15946}_{-2611}

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 $A_{obs} \gg 1.0$

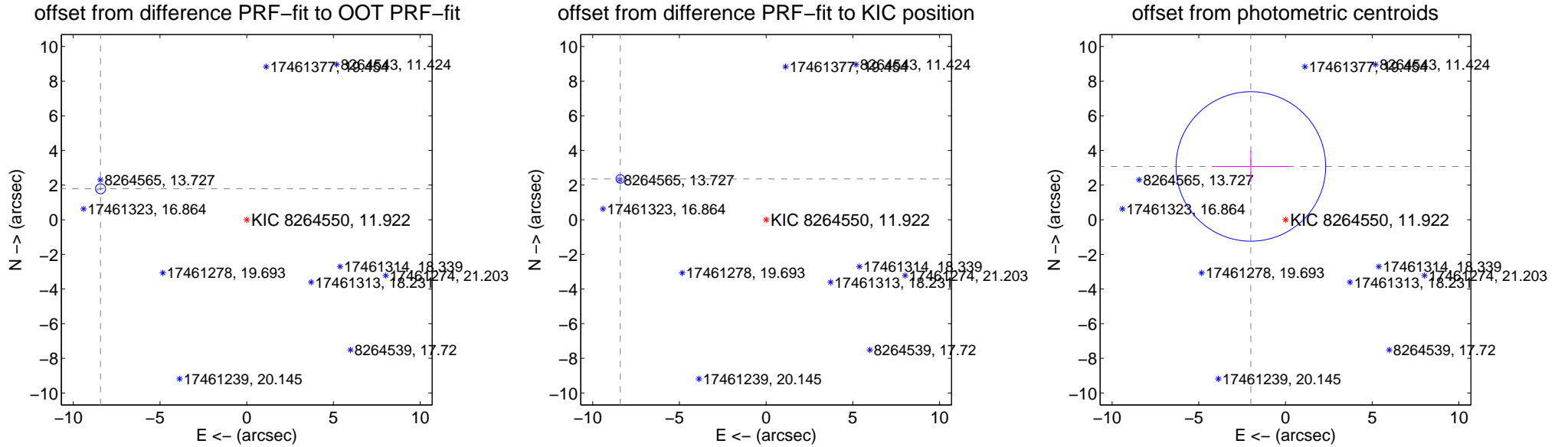
DV Centroid Data

Supplemental centroid analysis for 008264550-05. **Kepler magnitude: 11.92.** Transit SNR 7.57

There are 3 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.62 arcsec

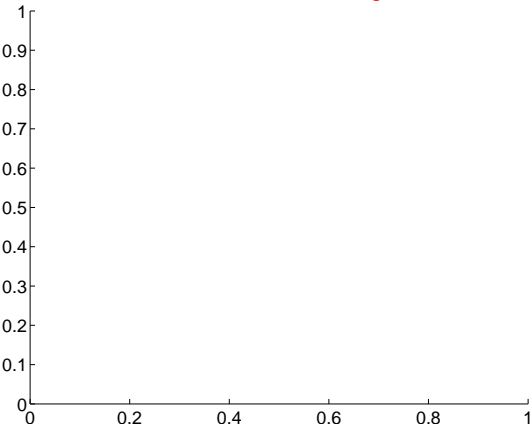
	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	8.620 ± 0.097	89.24	8.433 ± 0.101	1.790 ± 0.069
PRF-fit source offset from KIC position	8.737 ± 0.082	106.12	8.413 ± 0.083	2.357 ± 0.067
photometric centroid source offset	3.67 ± 1.44	2.55	2.00 ± 2.24	3.08 ± 0.91



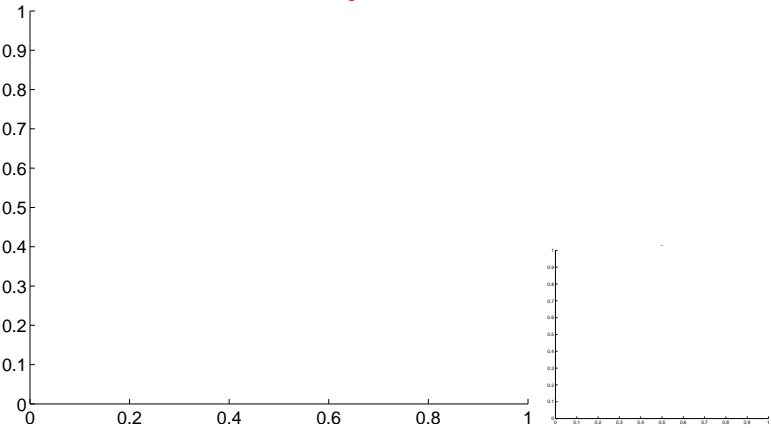
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

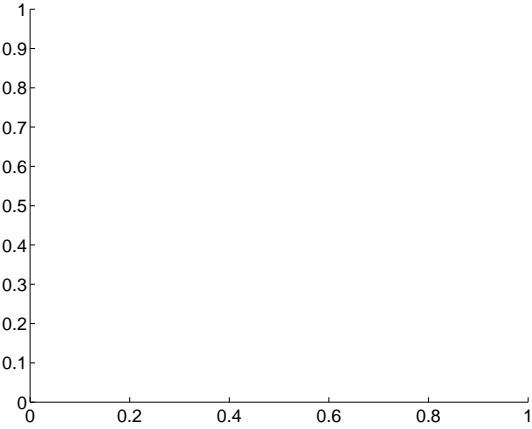
Q1 no difference image



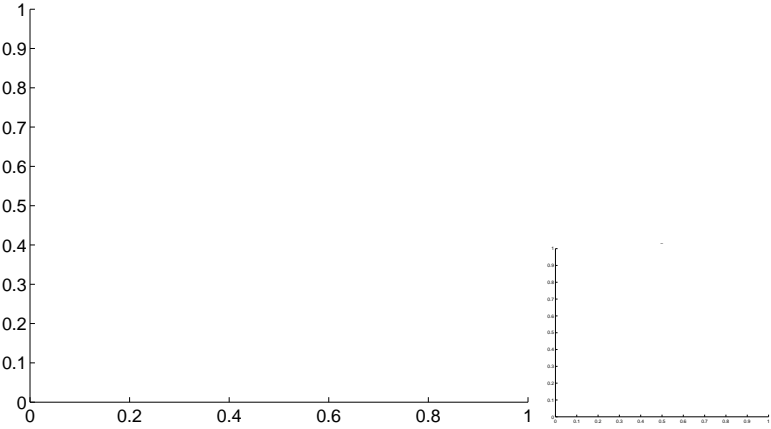
Q1 no OOT image



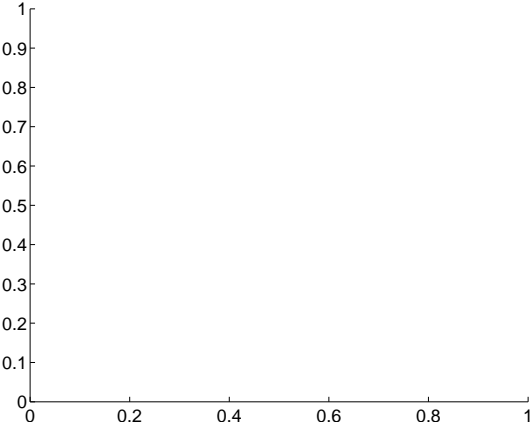
Q2 no difference image



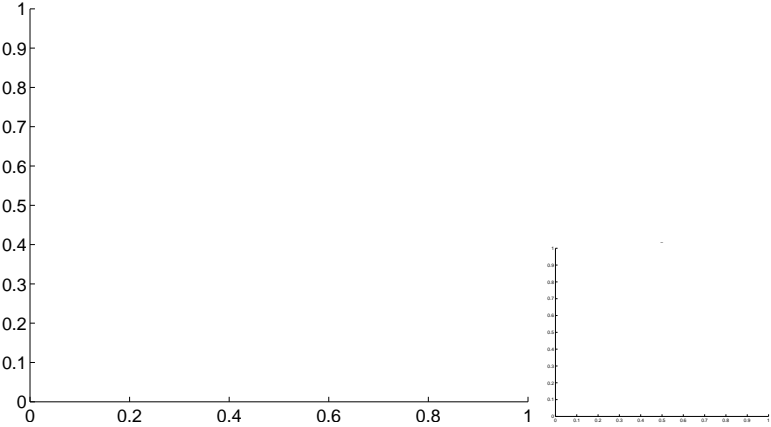
Q2 no OOT image



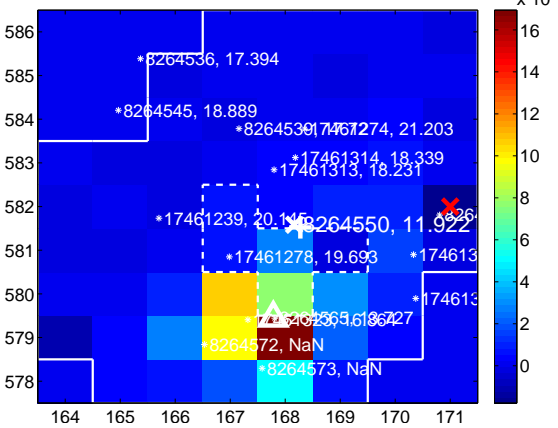
Q3 no difference image



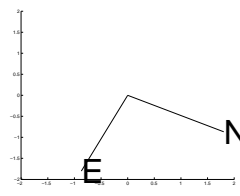
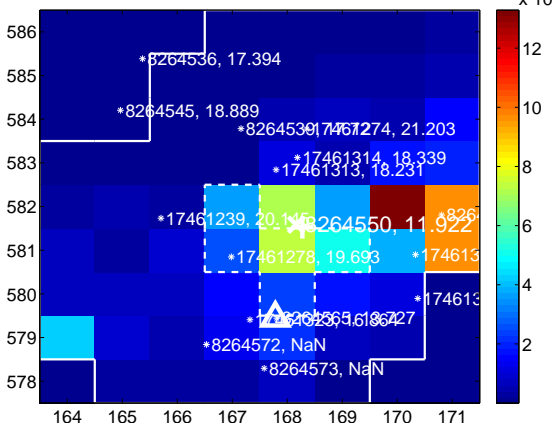
Q3 no OOT image



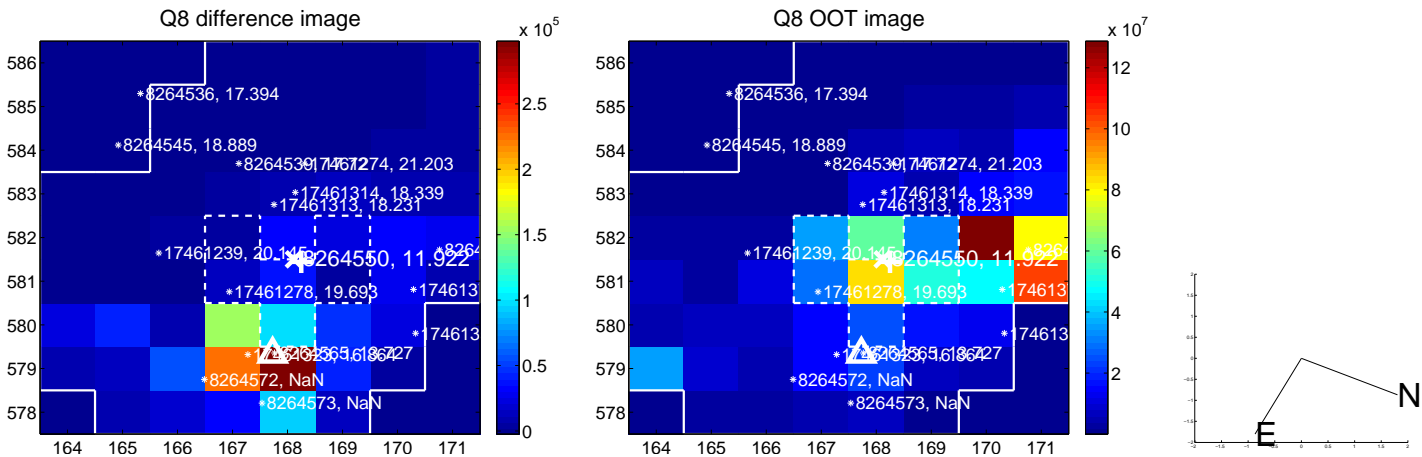
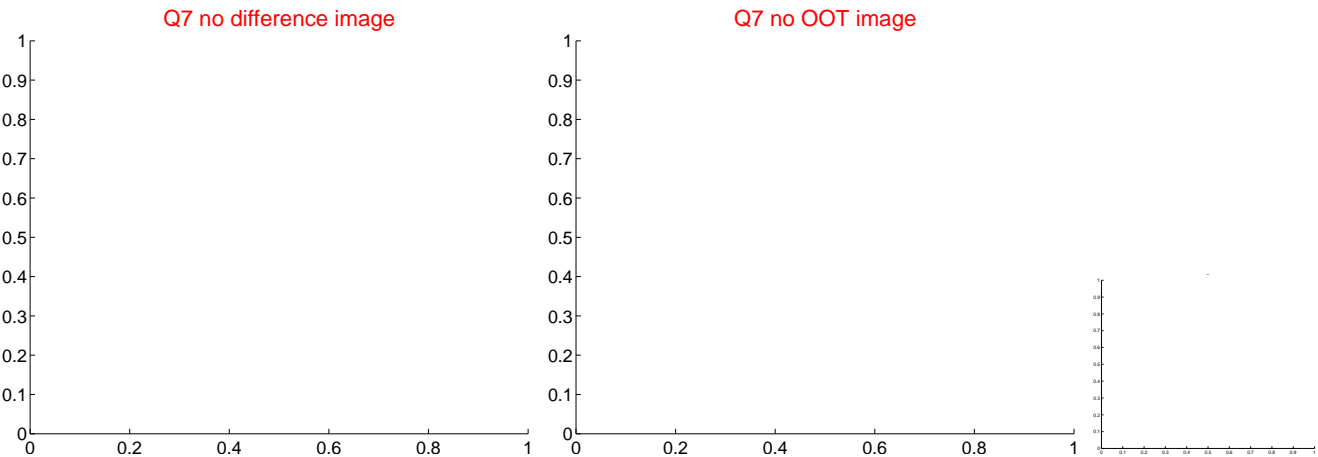
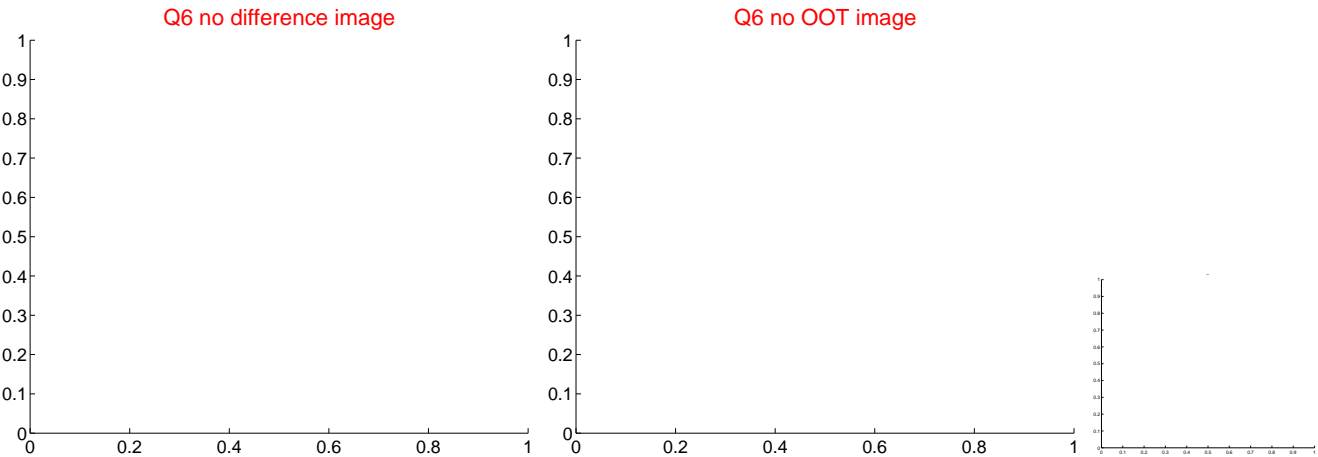
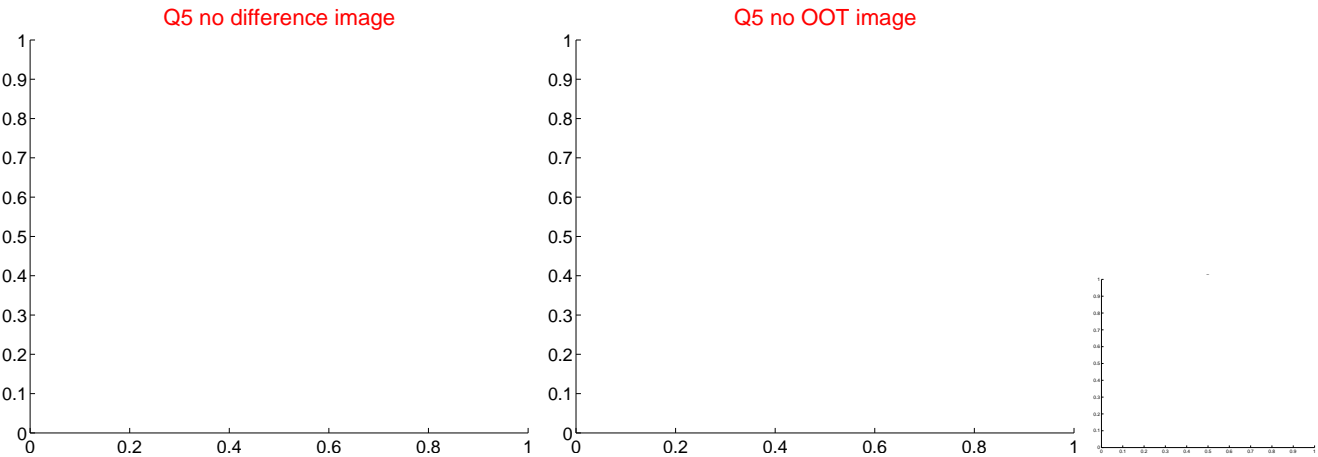
Q4 difference image



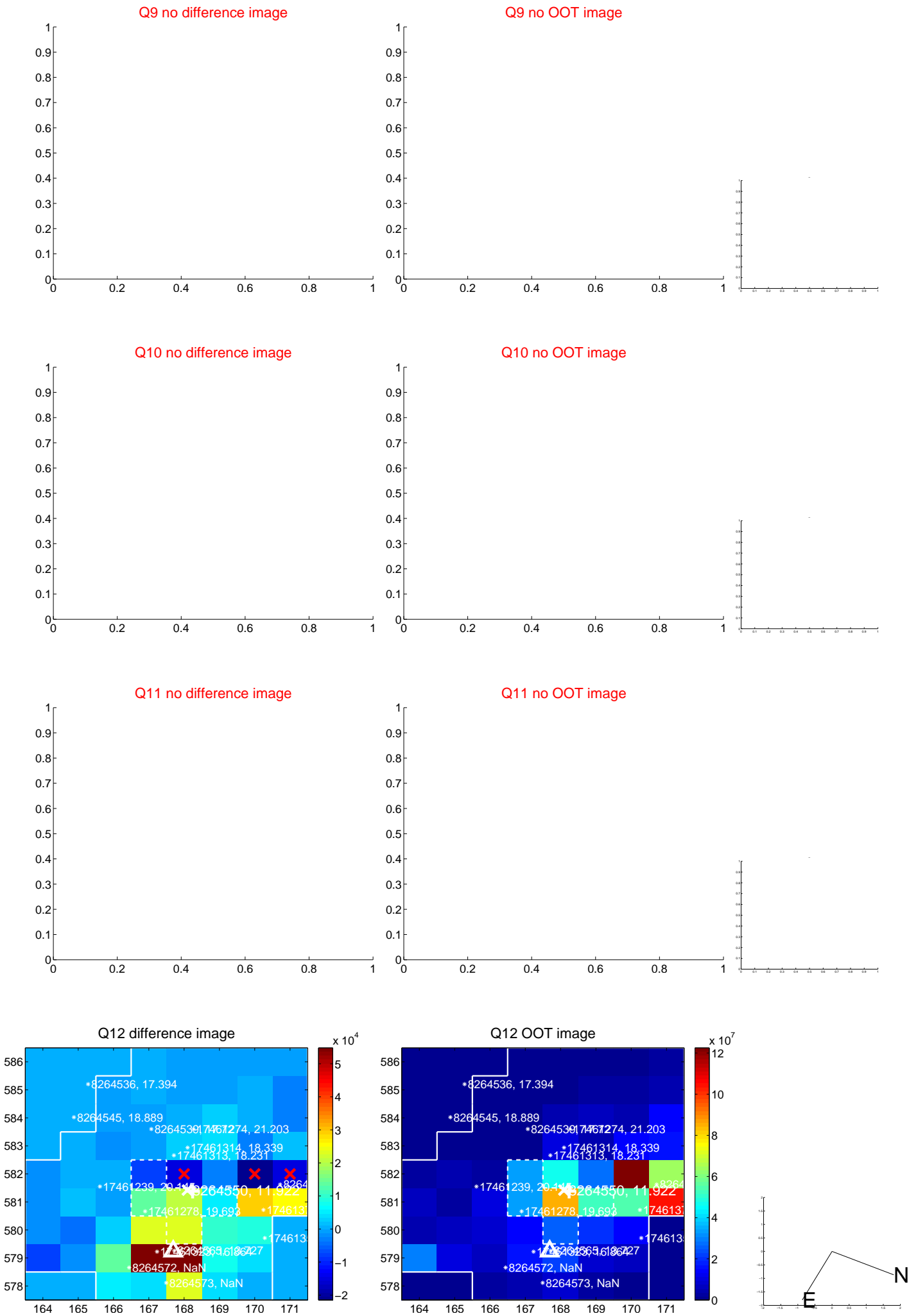
Q4 OOT image



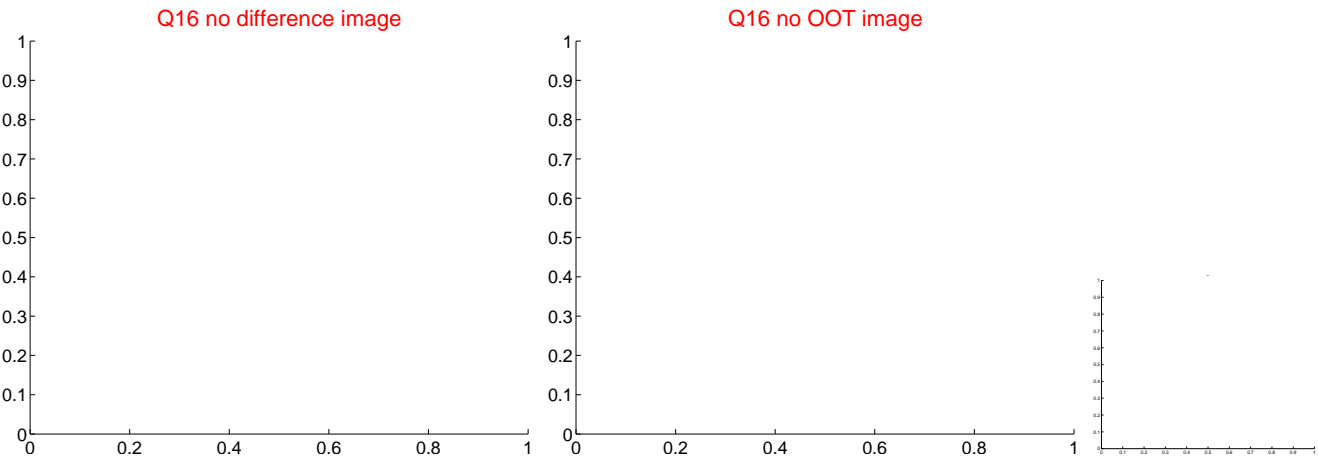
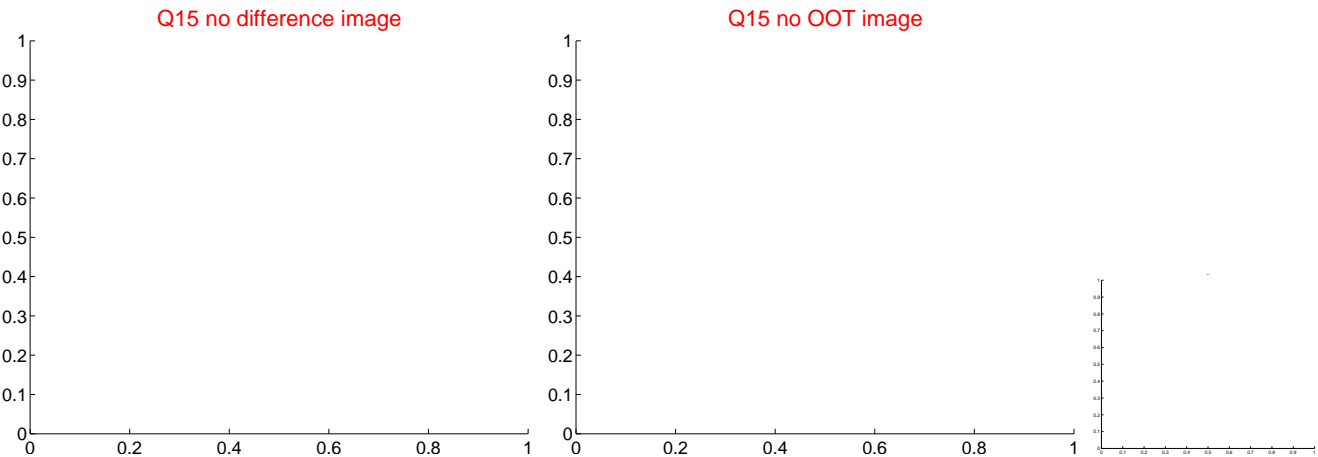
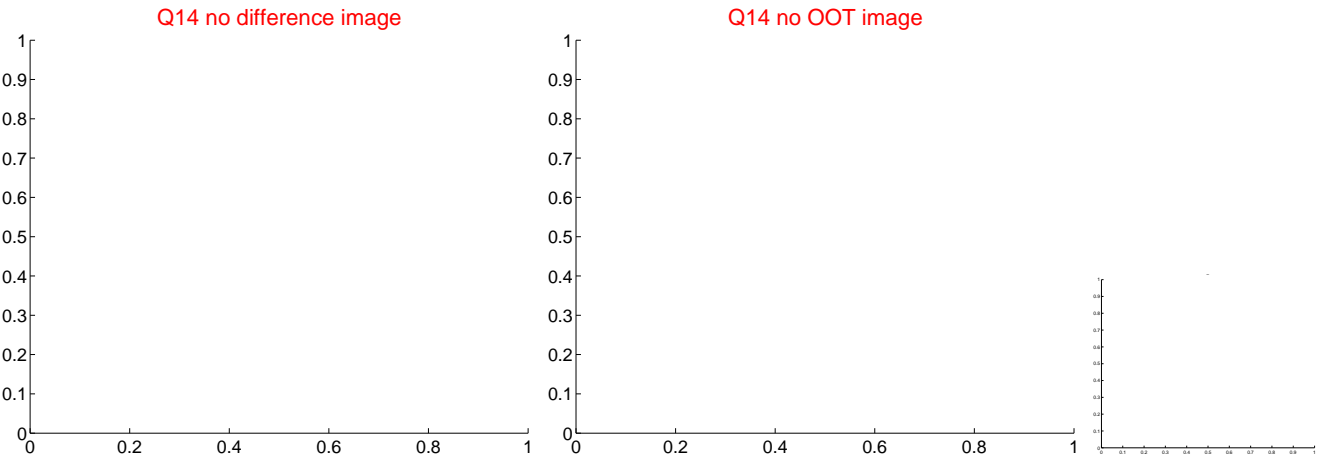
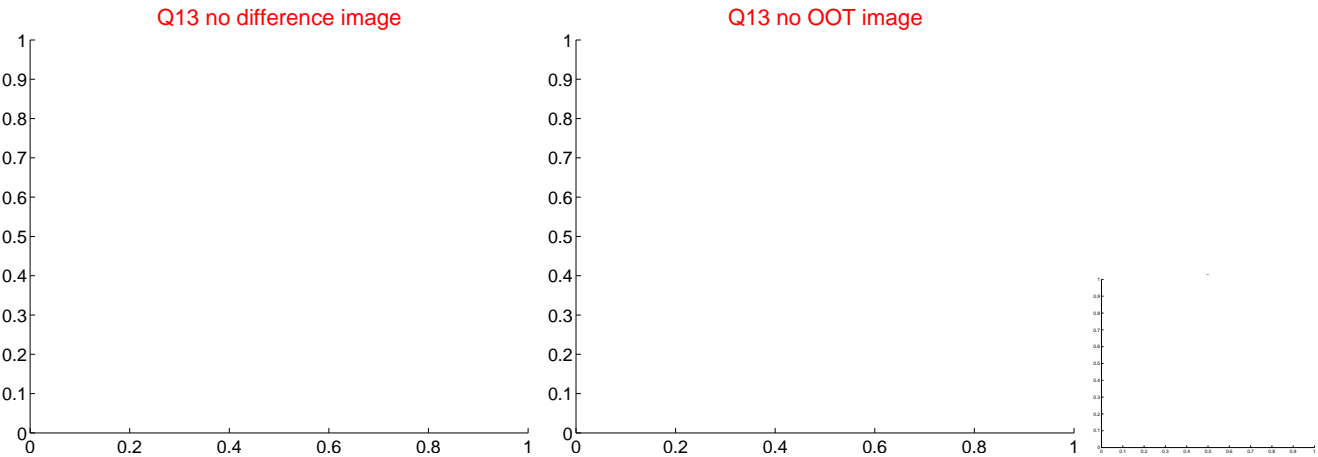
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



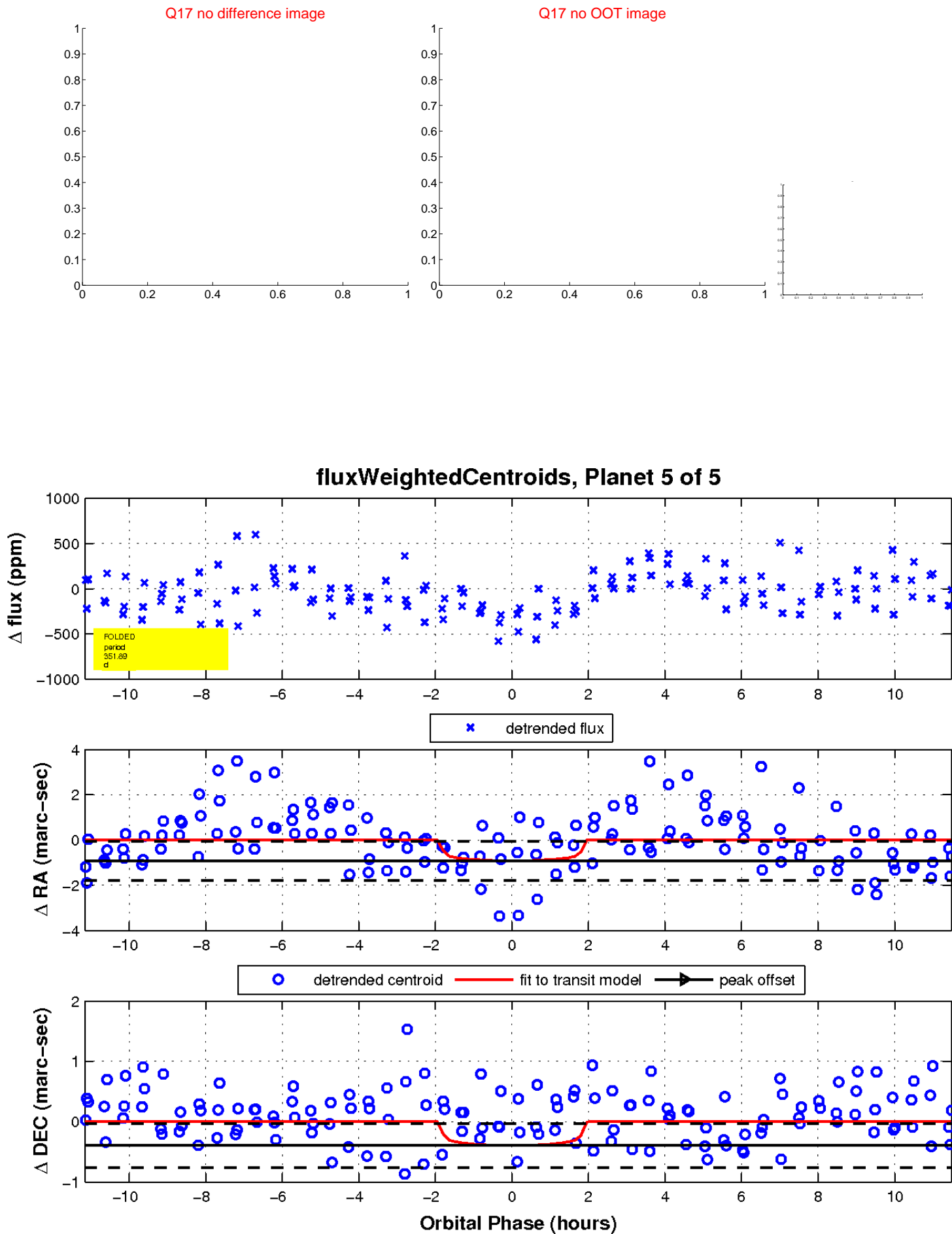
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

