

KIC 006057401

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})
006057401-01	OBS	No	0.808054	132.110916	100.6	5.719	10.7	6.1	1.83	7497	1.88	23486.83
006057401-02	OBS	No	17.659040	145.562937	2662.0	1.837	17.9	10.8	1.83	7497	9.61	384.40
006057401-03	OBS	No	20.238761	140.576765	3128.6	1.906	16.3	13.7	1.83	7497	13.54	320.50
006057401-04	OBS	No	9.041831	133.346933	2592.3	1.423	16.9	17.2	1.83	7497	9.88	938.43
006057401-05	OBS	No	16.216110	141.563860	3346.5	1.127	17.1	14.7	1.83	7497	10.86	430.68
006057401-06	OBS	No	20.020123	132.519915	2731.9	2.102	16.8	16.5	1.83	7497	9.77	325.18
006057401-07	OBS	No	6.791879	137.775779	512.8	2.000	15.3	-1.0	1.83	7497	4.22	1374.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006057401-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
006057401-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
006057401-03	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
006057401-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006057401-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006057401-06	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
006057401-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

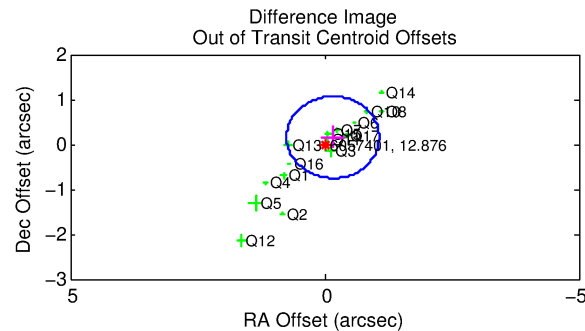
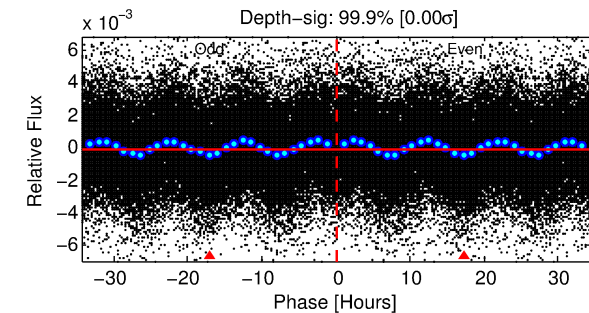
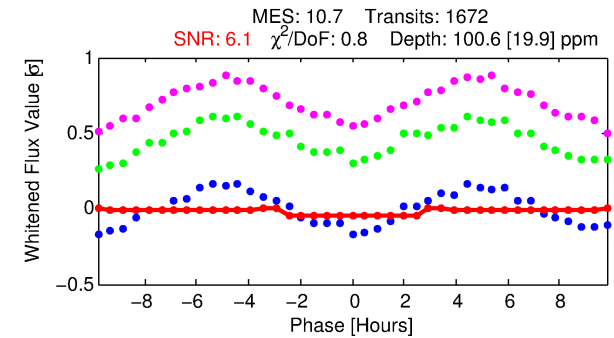
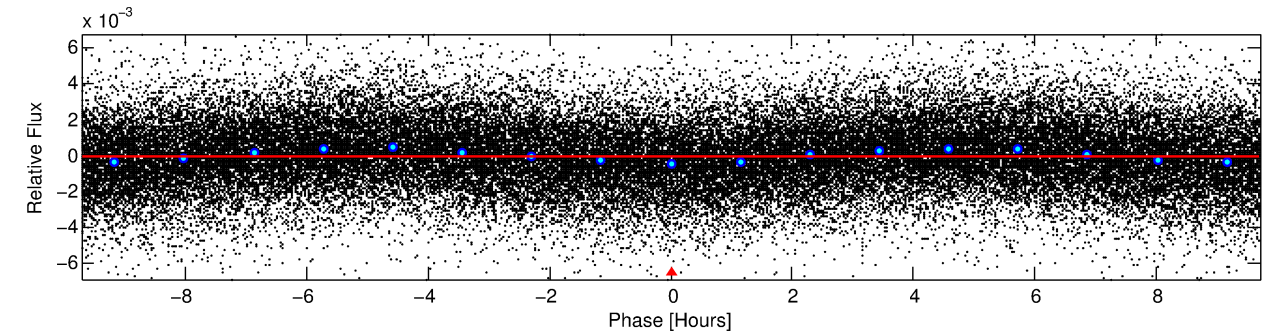
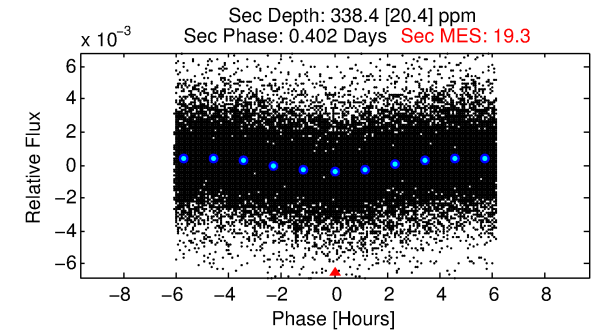
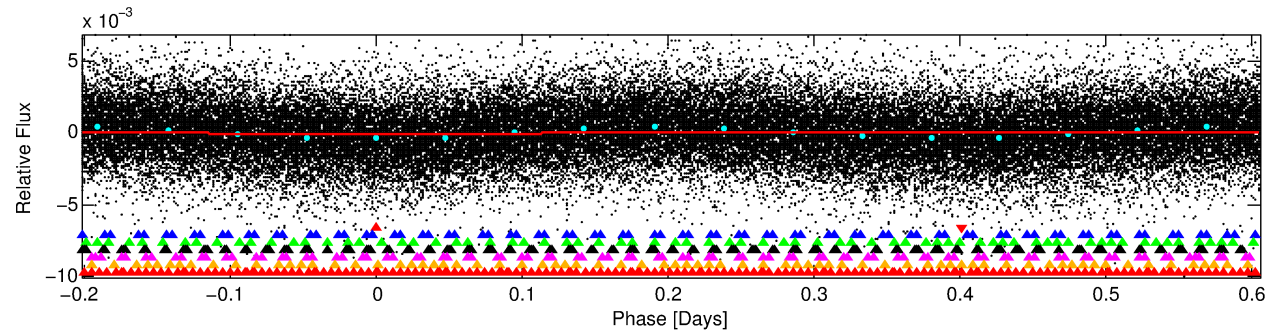
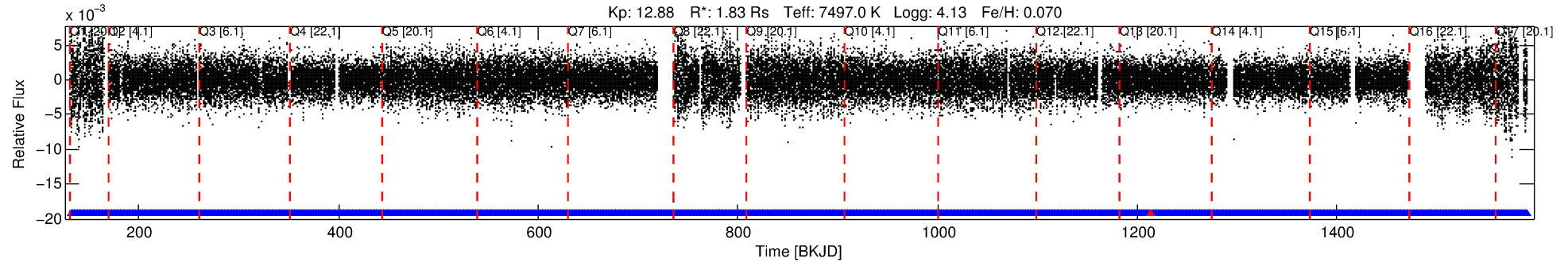
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006057401-01

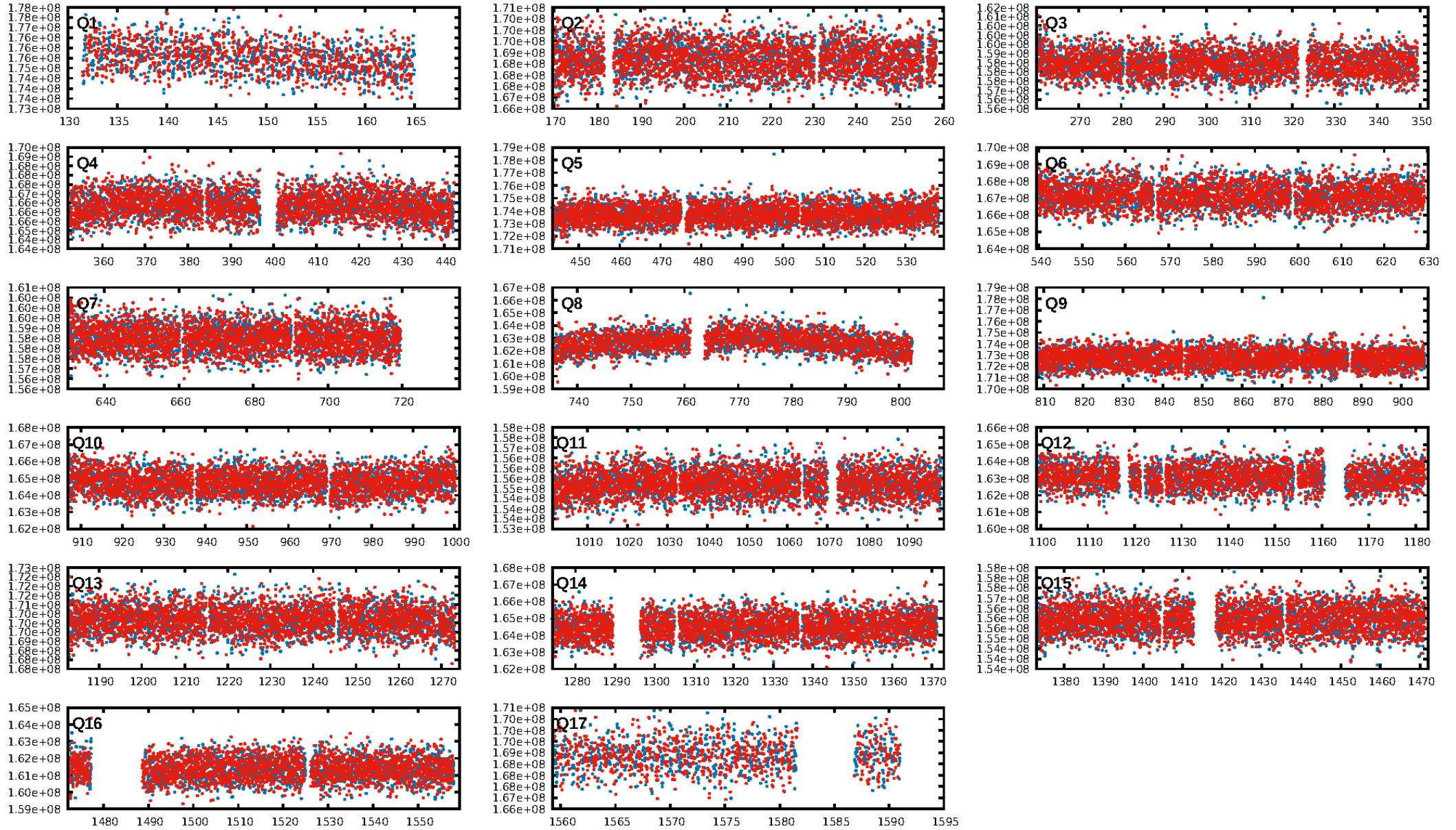
No Significant Match Found

DV One-Page Summary

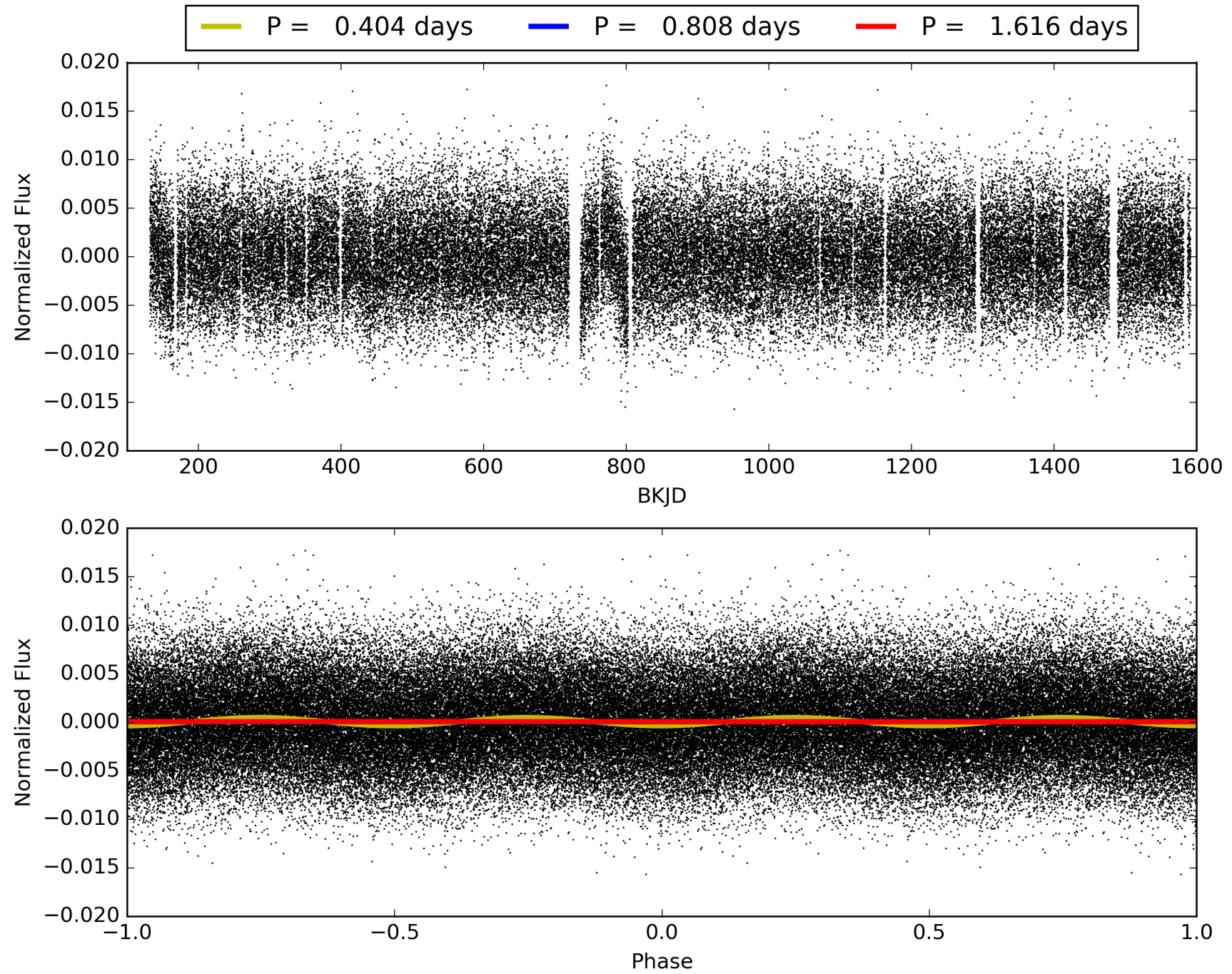
KIC: 6057401 Candidate: 1 of 7 Period: 0.808 d



TCE 006057401-01, PDC Light Curves

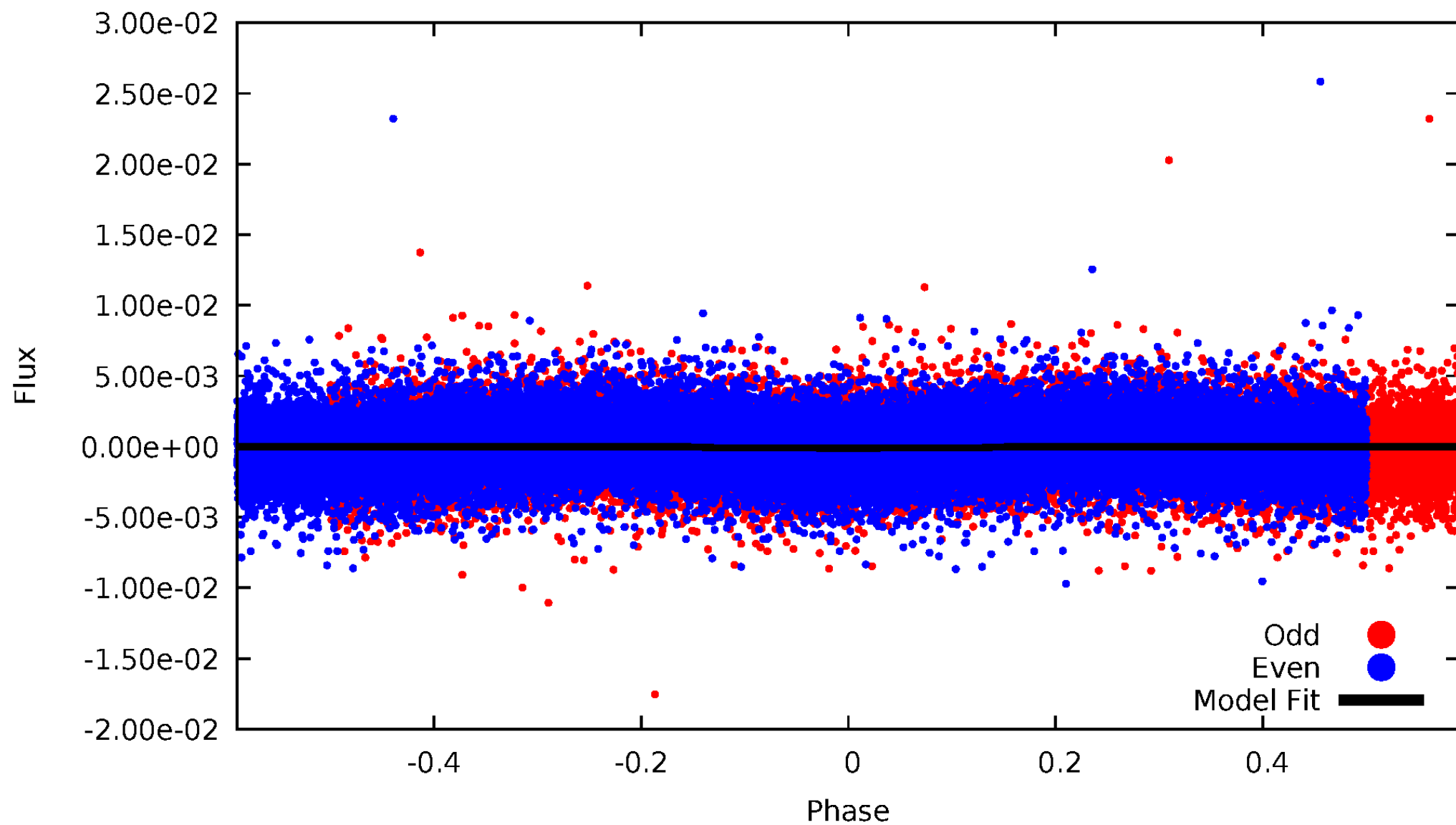


TCE 006057401-01



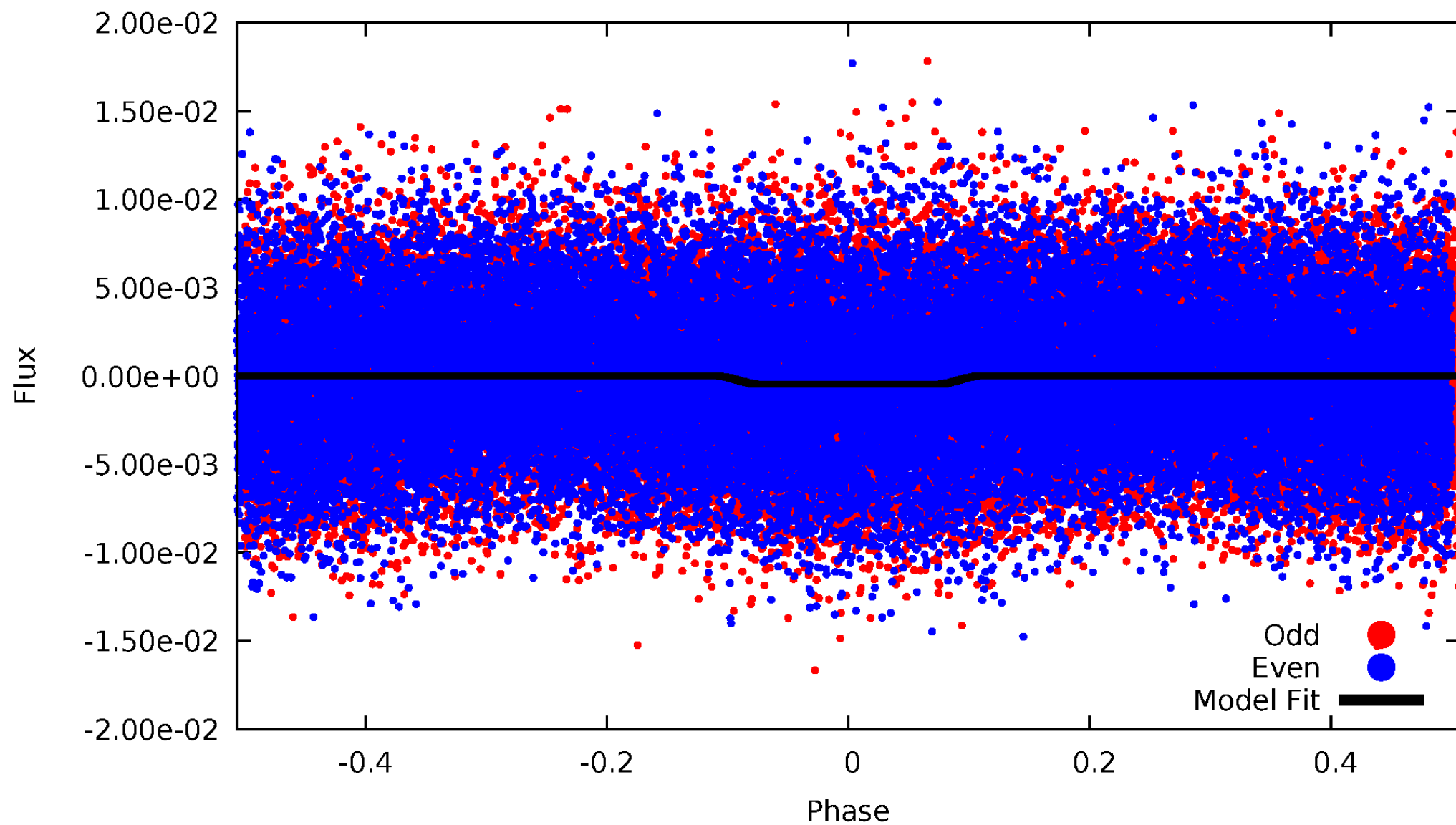
DV Odd/Even

TCE 006057401-01



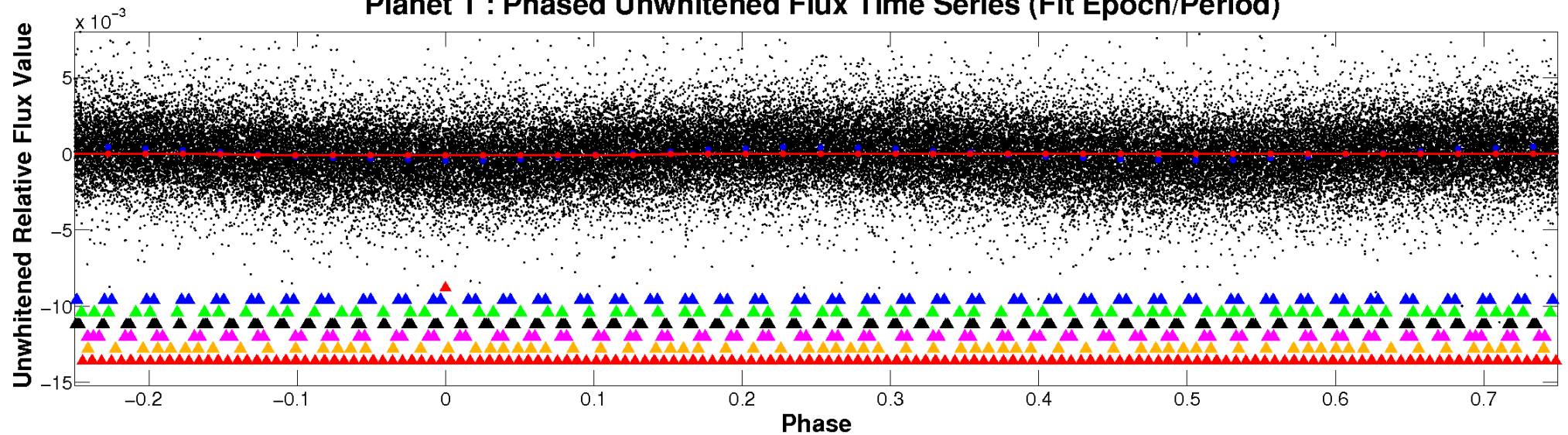
ALT Odd/Even

TCE 006057401-01

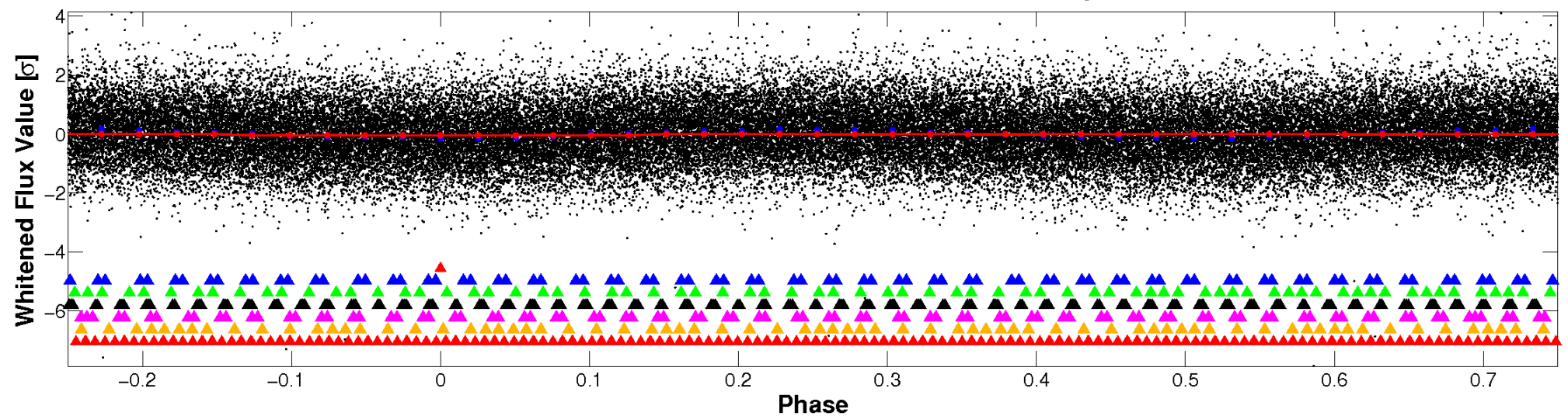


Non-Whitened Vs. Whitened Light Curve

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

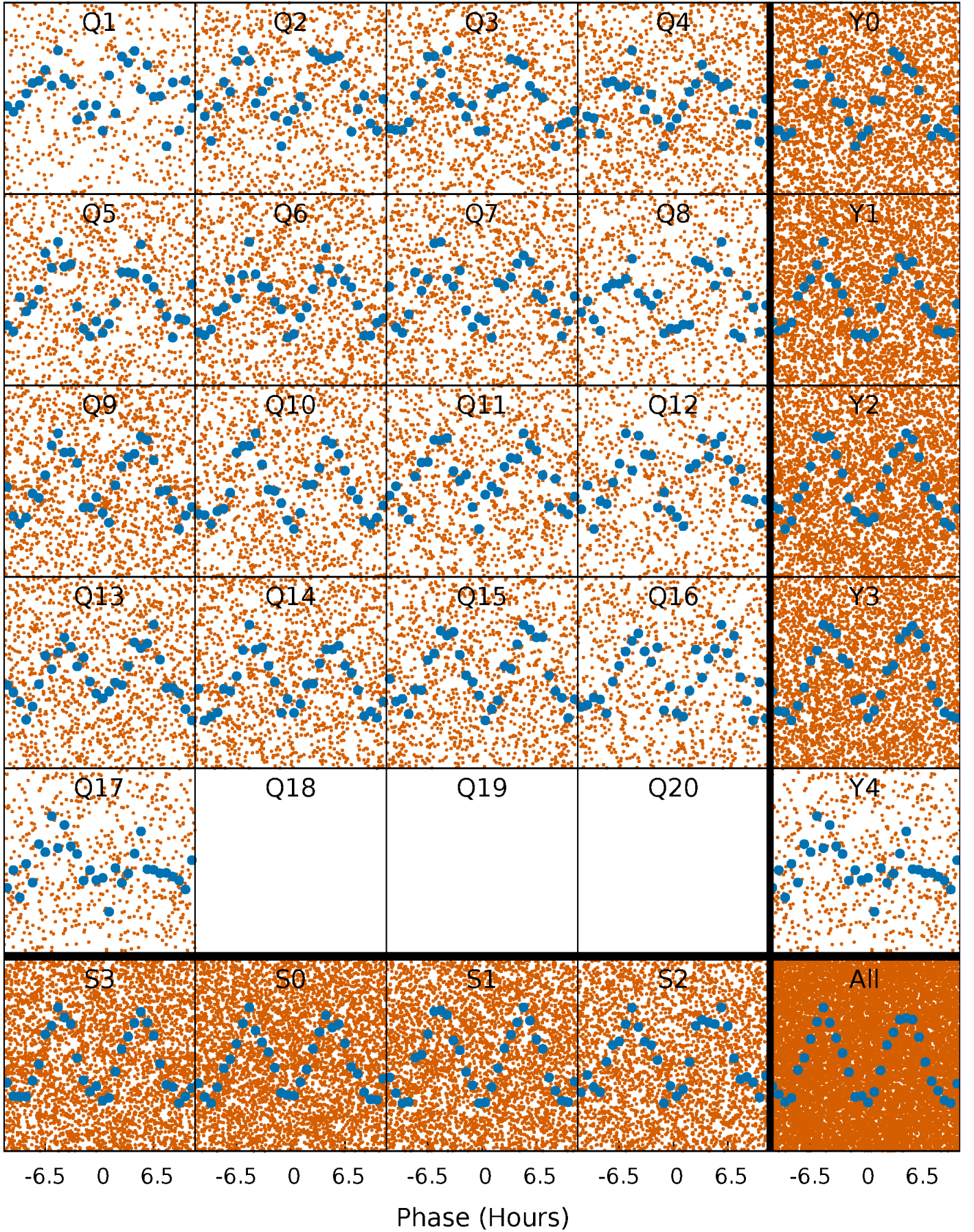


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



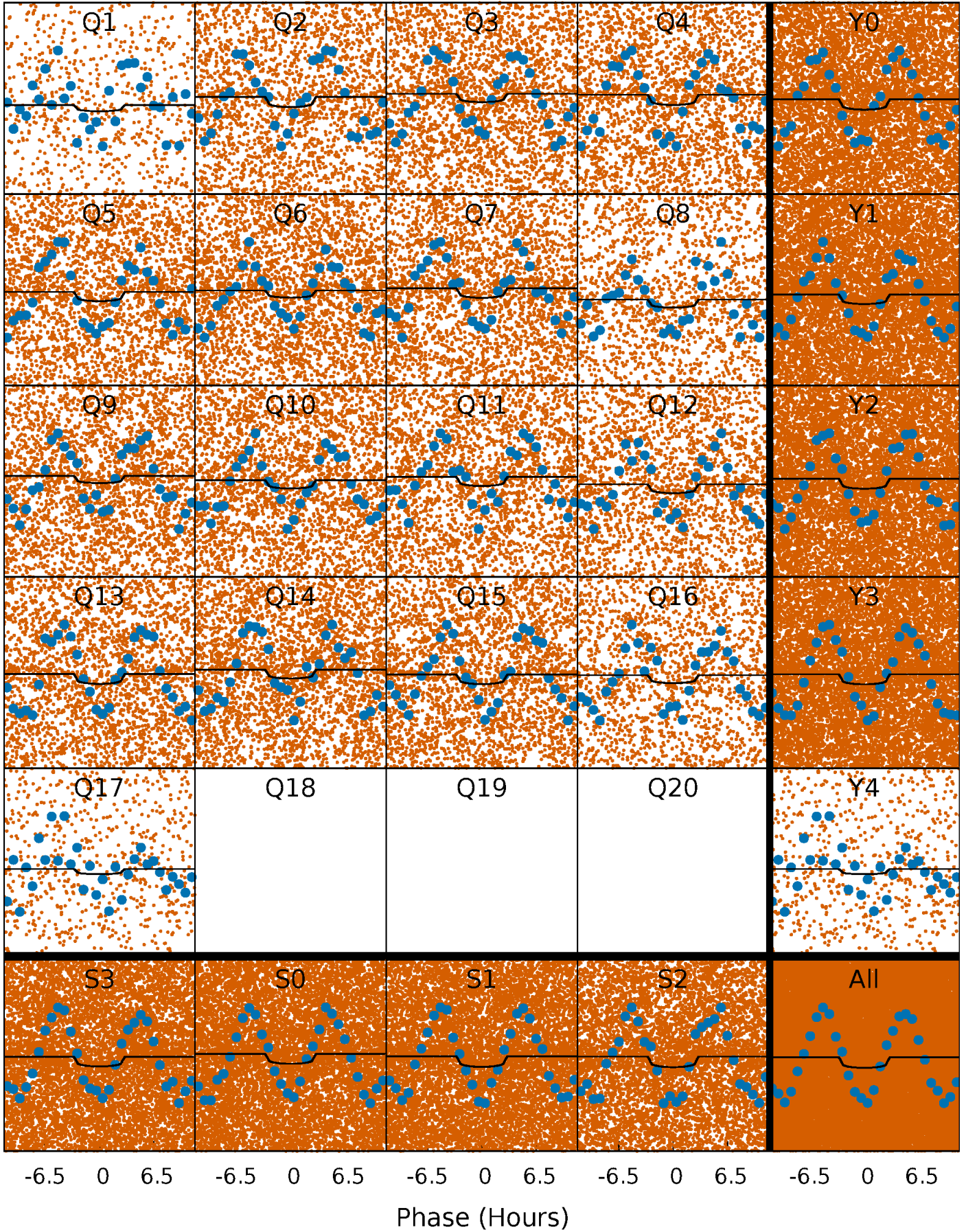
PDC Quarter-Phased Transit Curves

TCE 006057401-01 P= 0.808054 Days $T_0=132.110916$ (BKJD)



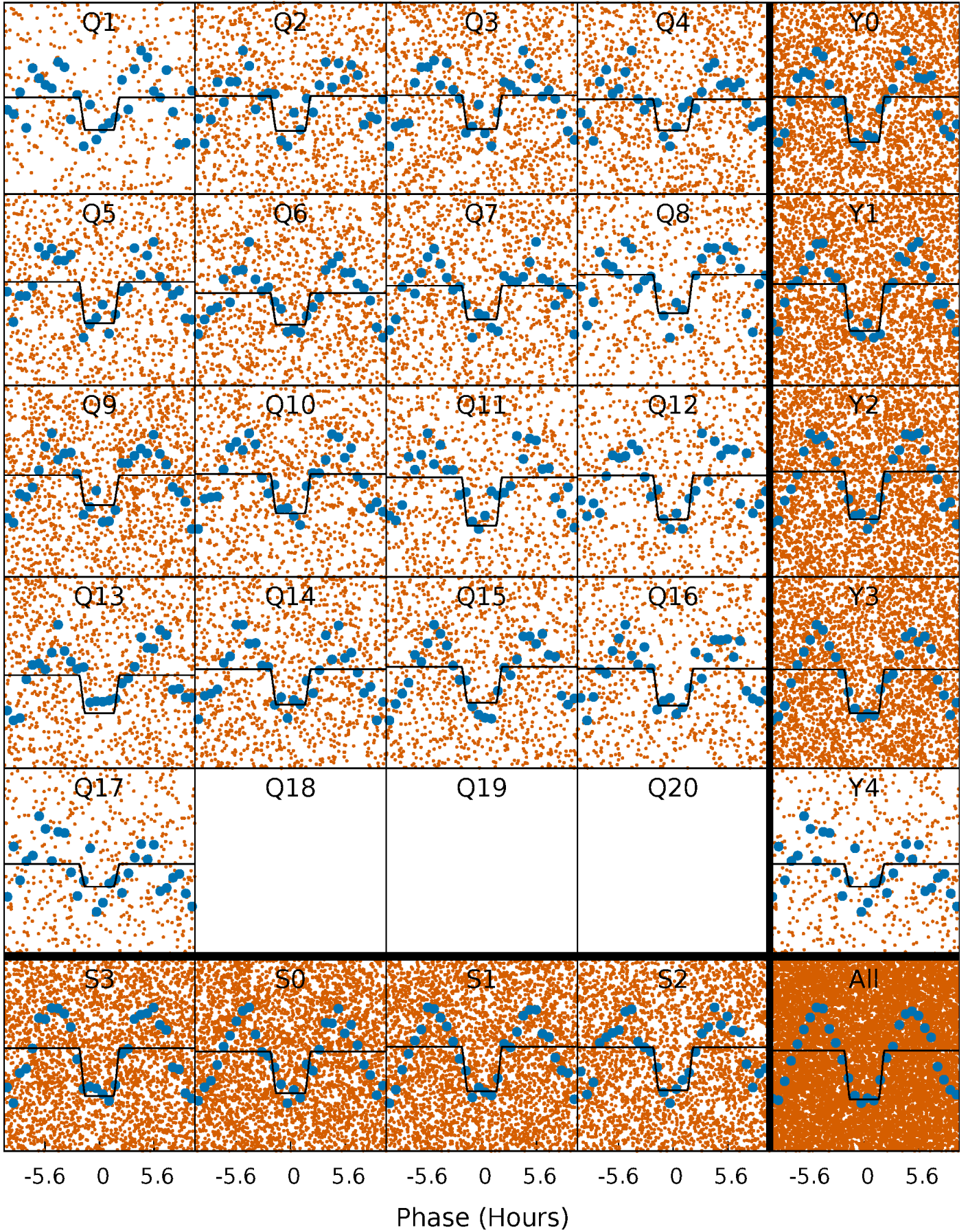
DV Quarter-Phased Transit Curves

TCE 006057401-01 P= 0.808054 Days $T_0=132.110916$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

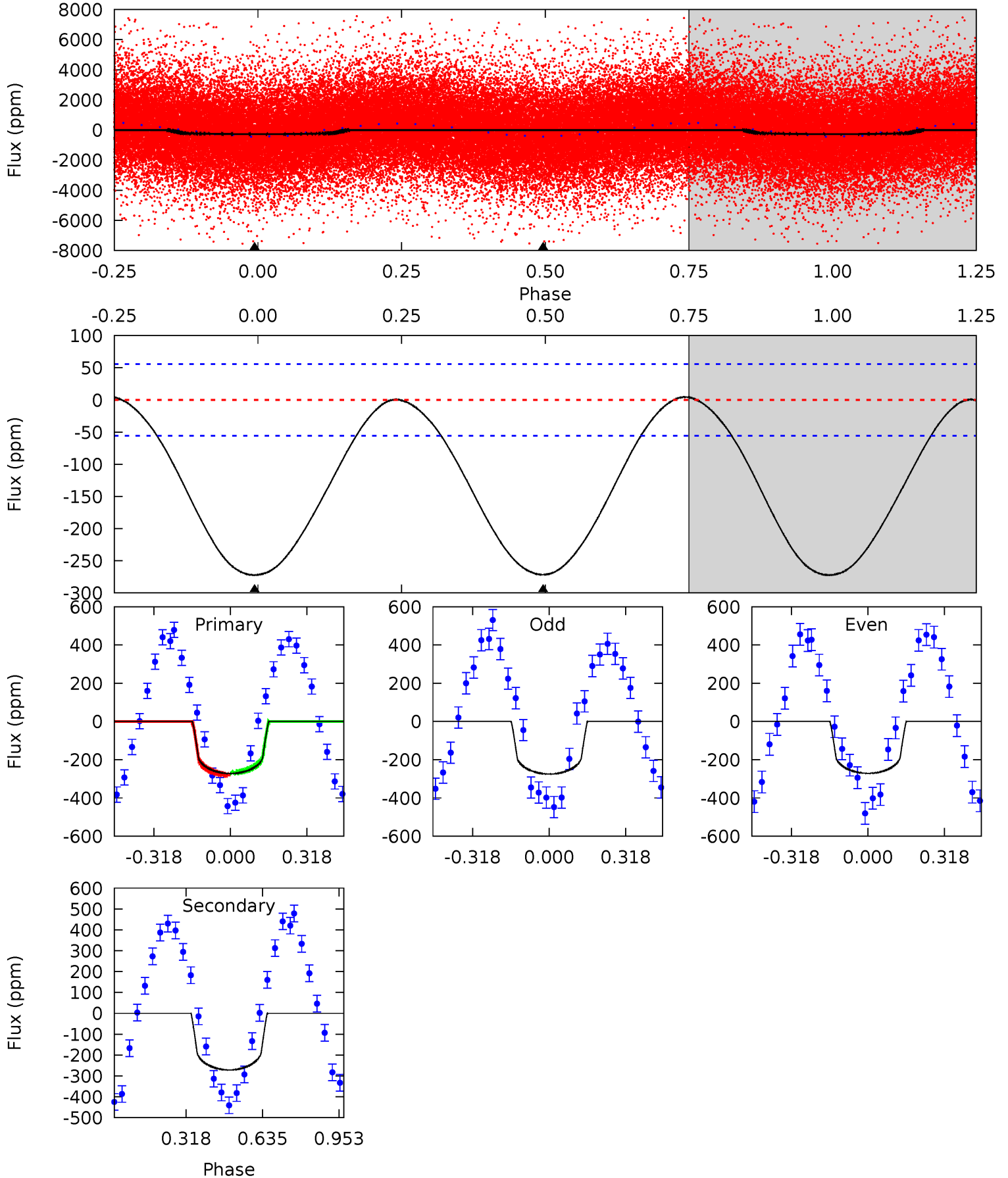
TCE 006057401-01 P= 0.808083 Days $T_0=132.080215$ (BKJD)



DV Model-Shift Uniqueness Test

006057401-01, P = 0.808054 Days, E = 131.302862 Days

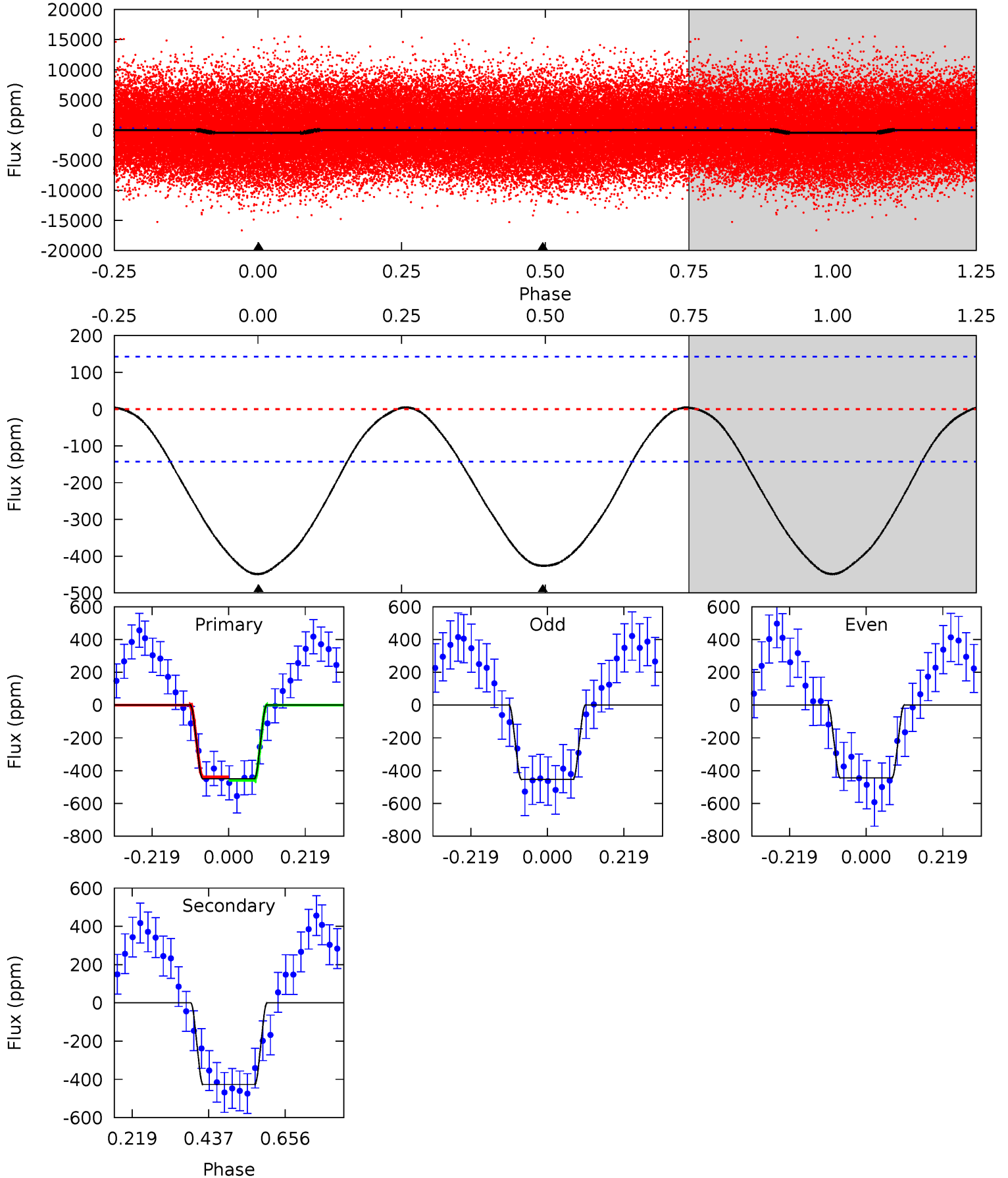
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.1	21.0	0	0	4.32	1.00	0.27	21.1	21.1	21.0	21.0	0.15	1.01	0.02	0.46



Alt Model-Shift Uniqueness Test

006057401-01, P = 0.808083 Days, E = 131.272132 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.8	13.1	0	0	4.40	1.23	0.18	13.8	13.8	13.1	13.1	0.14	0.95	0.01	0.32



Stellar Parameters For KIC 006057401

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7497^{+210}_{-341}	$4.132^{+0.120}_{-0.180}$	$0.070^{+0.200}_{-0.350}$	$1.830^{+0.554}_{-0.341}$	$1.656^{+0.205}_{-0.251}$	$0.380^{+0.218}_{-0.188}$
	+3%/-5%	+3%/-4%	+286%/-500%	+30%/-19%	+12%/-15%	+57%/-49%
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 006057401-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-272 ± 13	$2.55^{+2.39}_{-1.70}$	4444^{+318}_{-278}	8734^{+14538}_{-2829}	$8.996^{+67.246}_{-6.542}$
Alt.	-426 ± 32	$4.53^{+2.77}_{-2.35}$	4428^{+306}_{-279}	6982^{+4377}_{-1559}	$4.562^{+15.047}_{-2.778}$

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 $A_{obs} \gg 1.0$

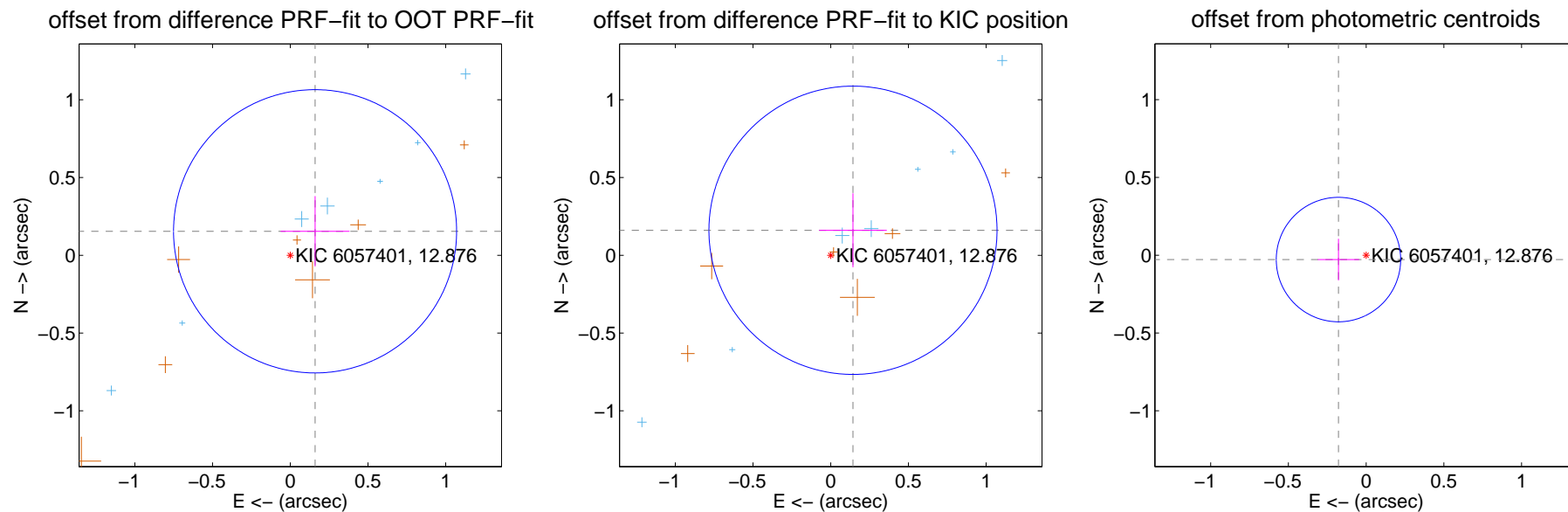
DV Centroid Data

Supplemental centroid analysis for 006057401-01. Kepler magnitude: 12.88. Transit SNR 6.13

There are 8 quarters with good PRF difference image offsets

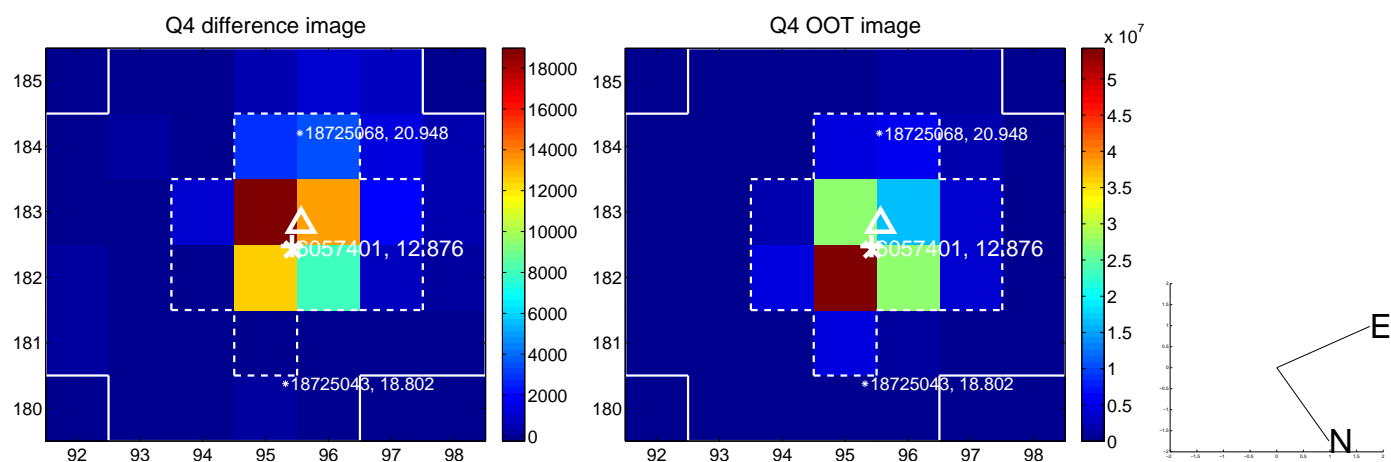
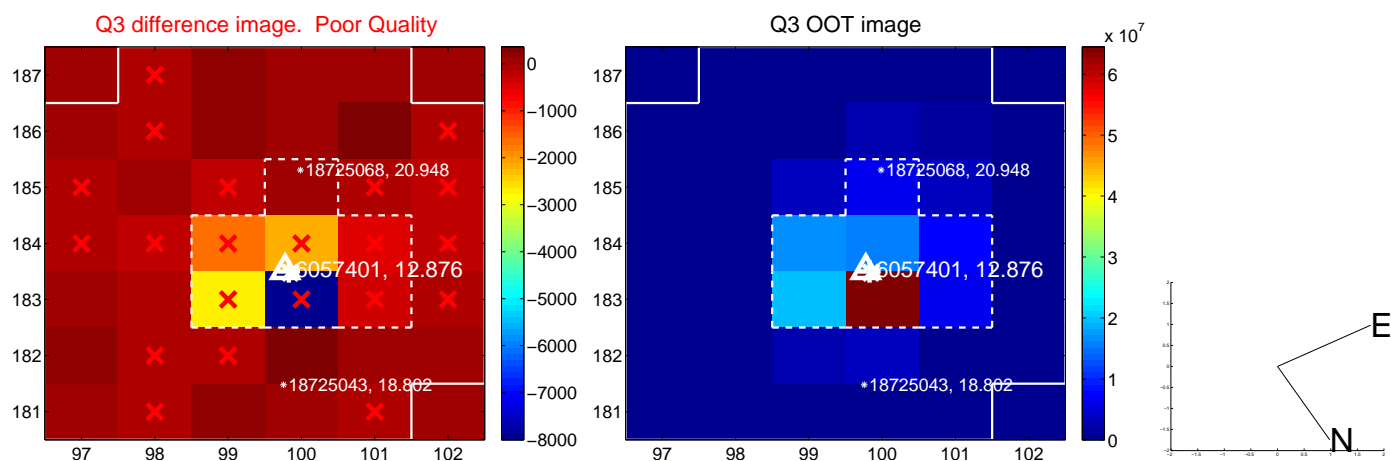
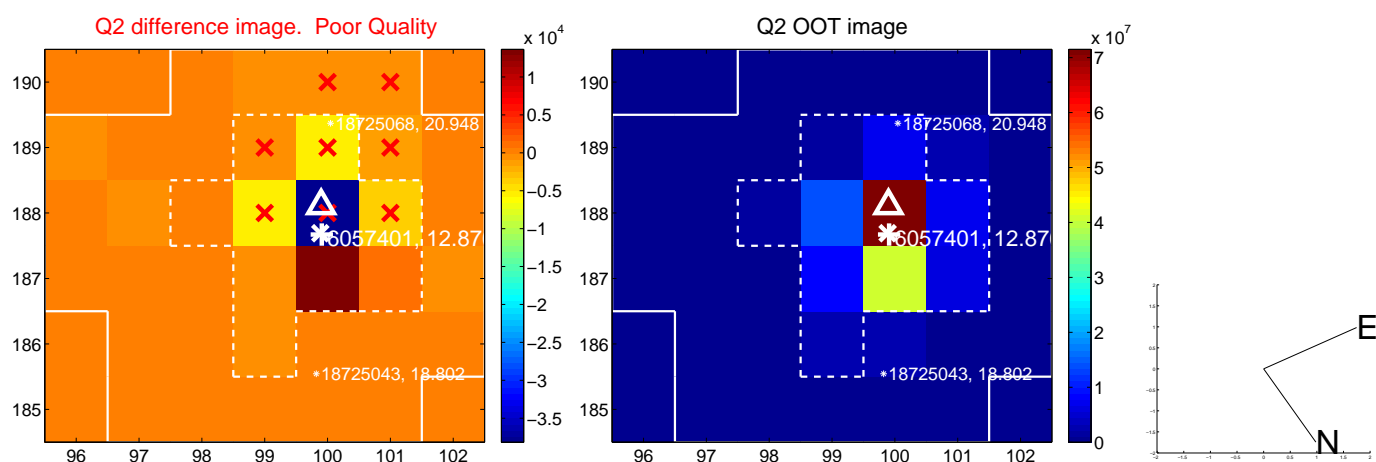
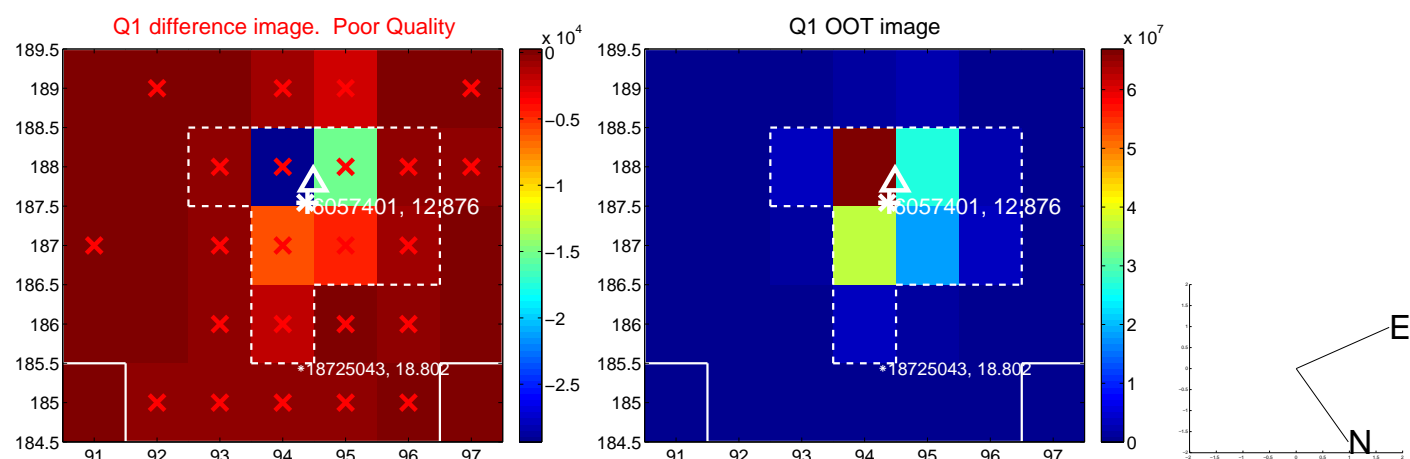
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.222 ± 0.303	0.73	-0.160 ± 0.221	0.154 ± 0.226
PRF-fit source offset from KIC position	0.215 ± 0.309	0.70	-0.143 ± 0.217	0.161 ± 0.238
photometric centroid source offset	0.18 ± 0.13	1.35	0.18 ± 0.13	-0.03 ± 0.13

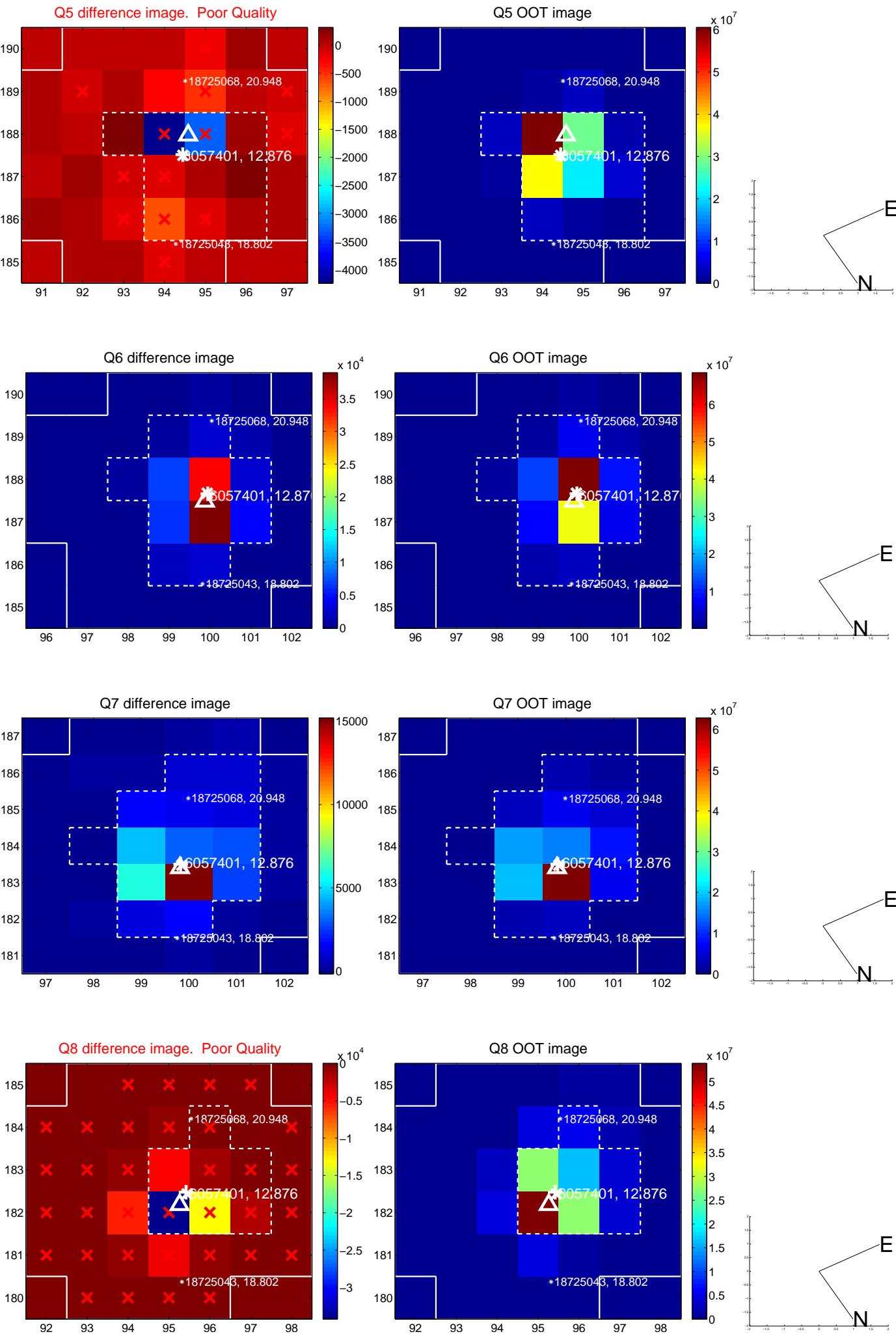


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

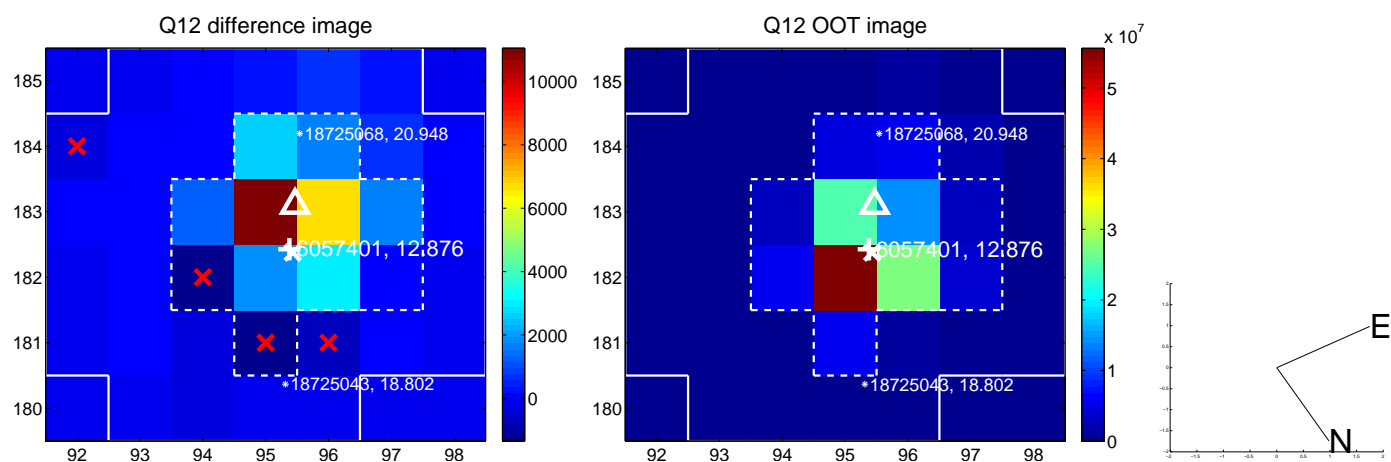
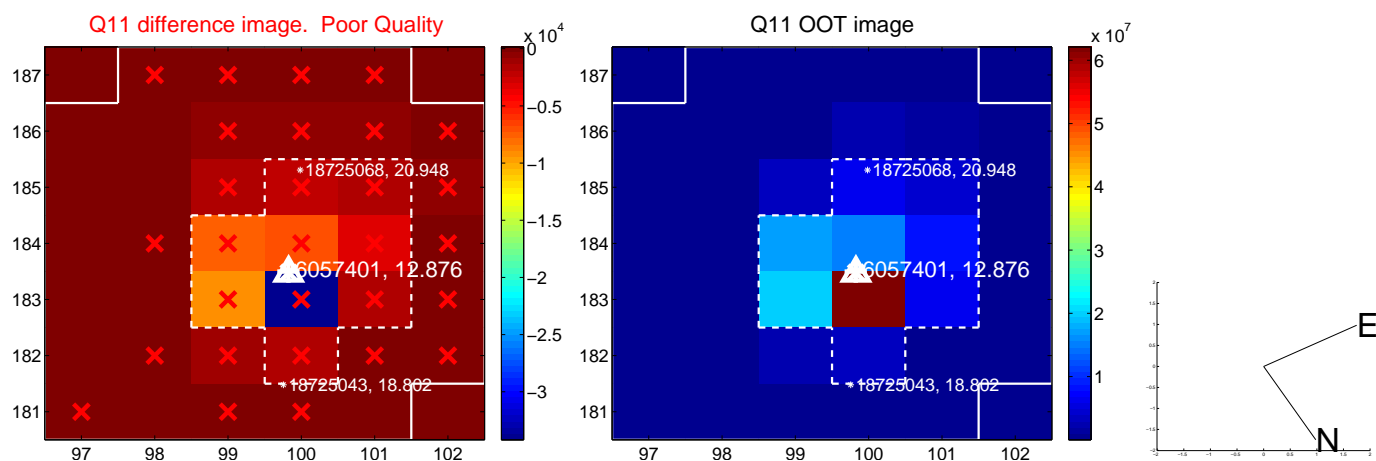
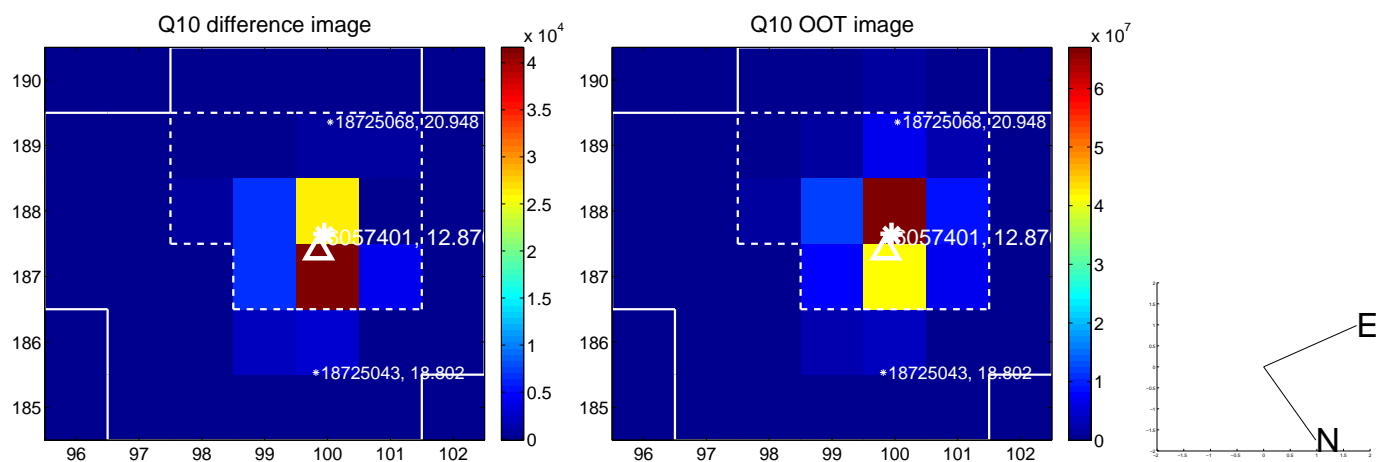
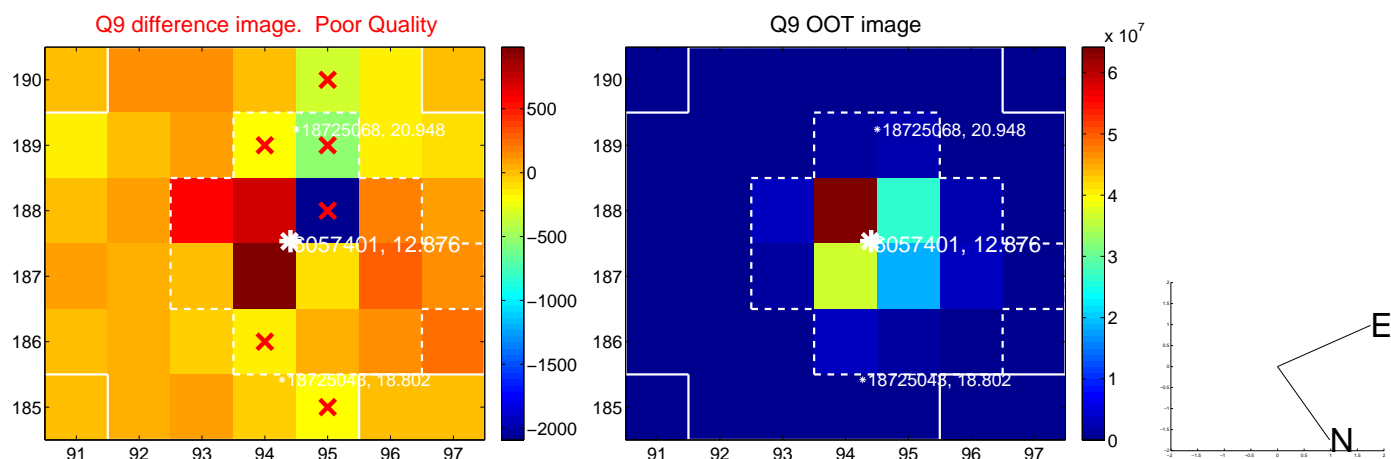
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



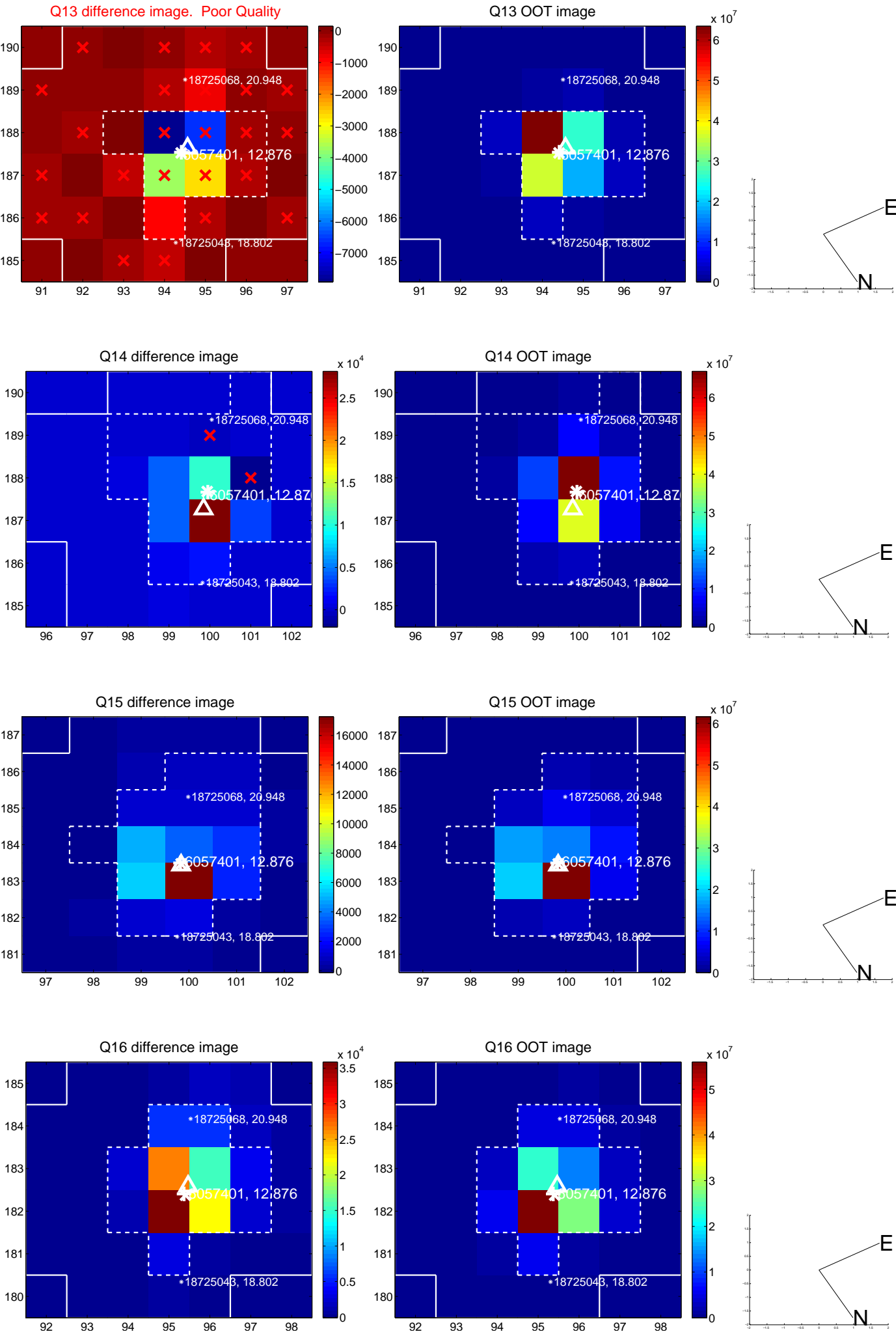
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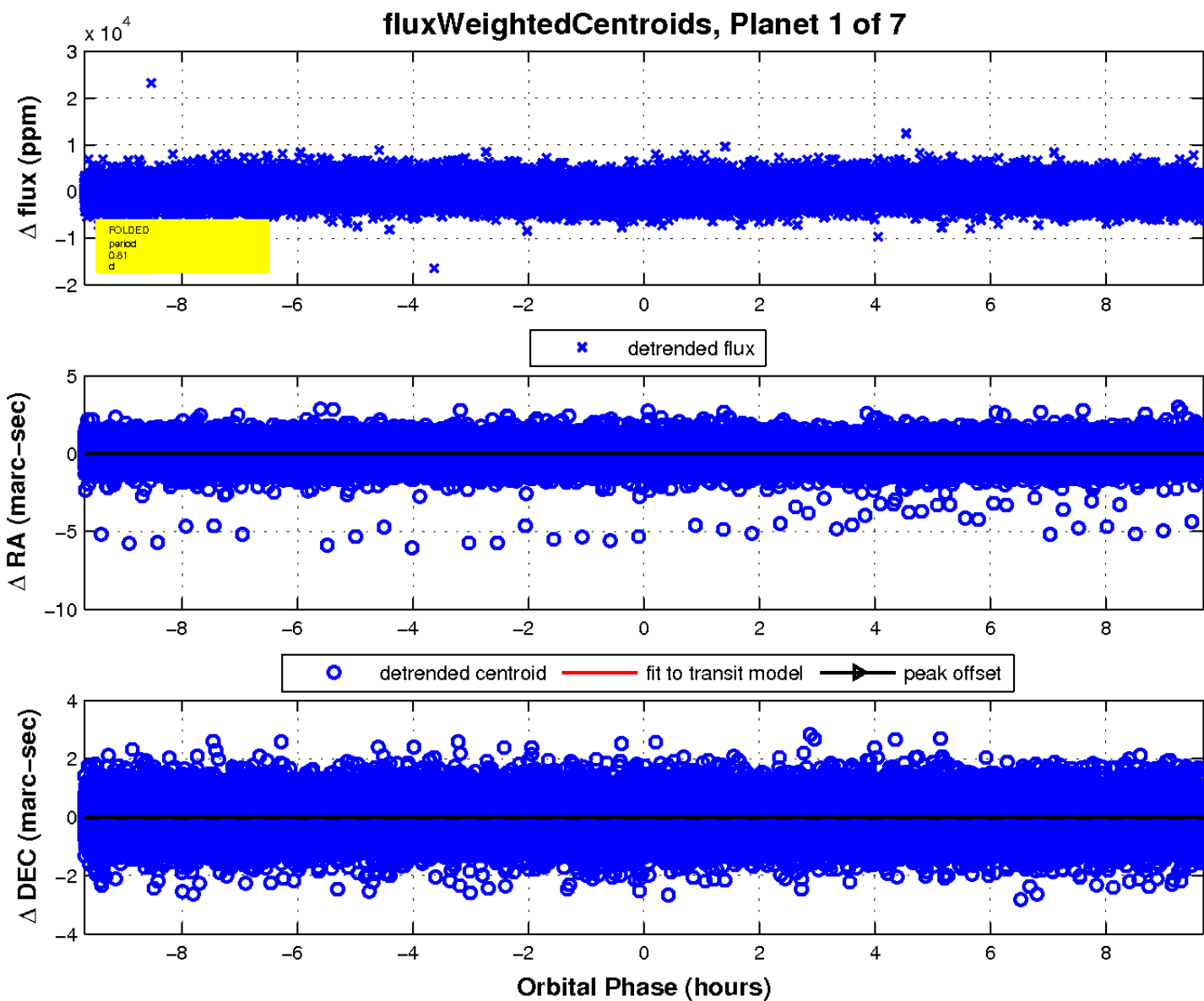
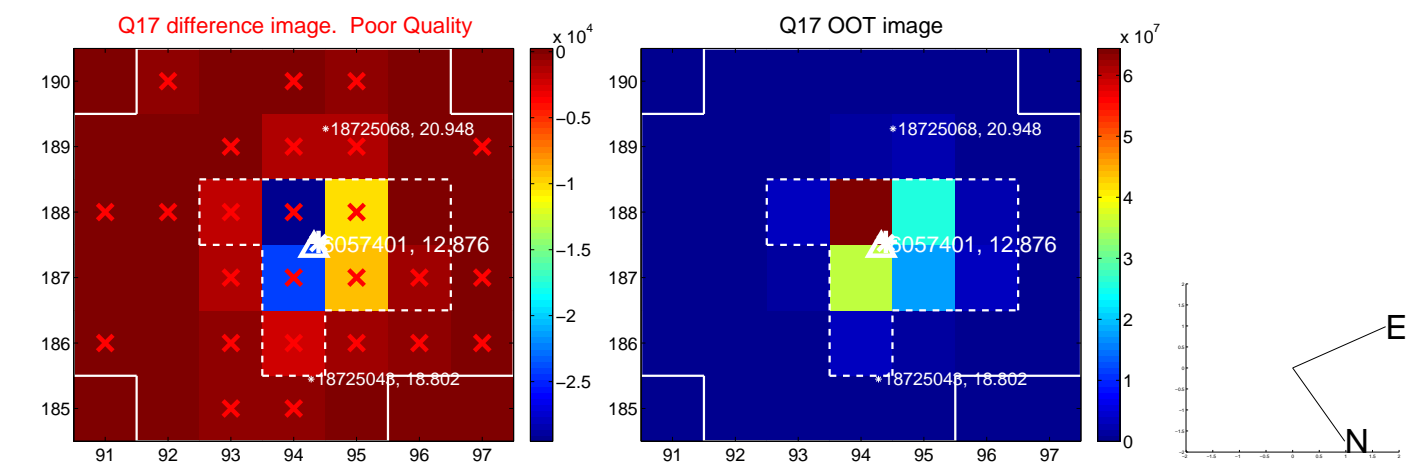
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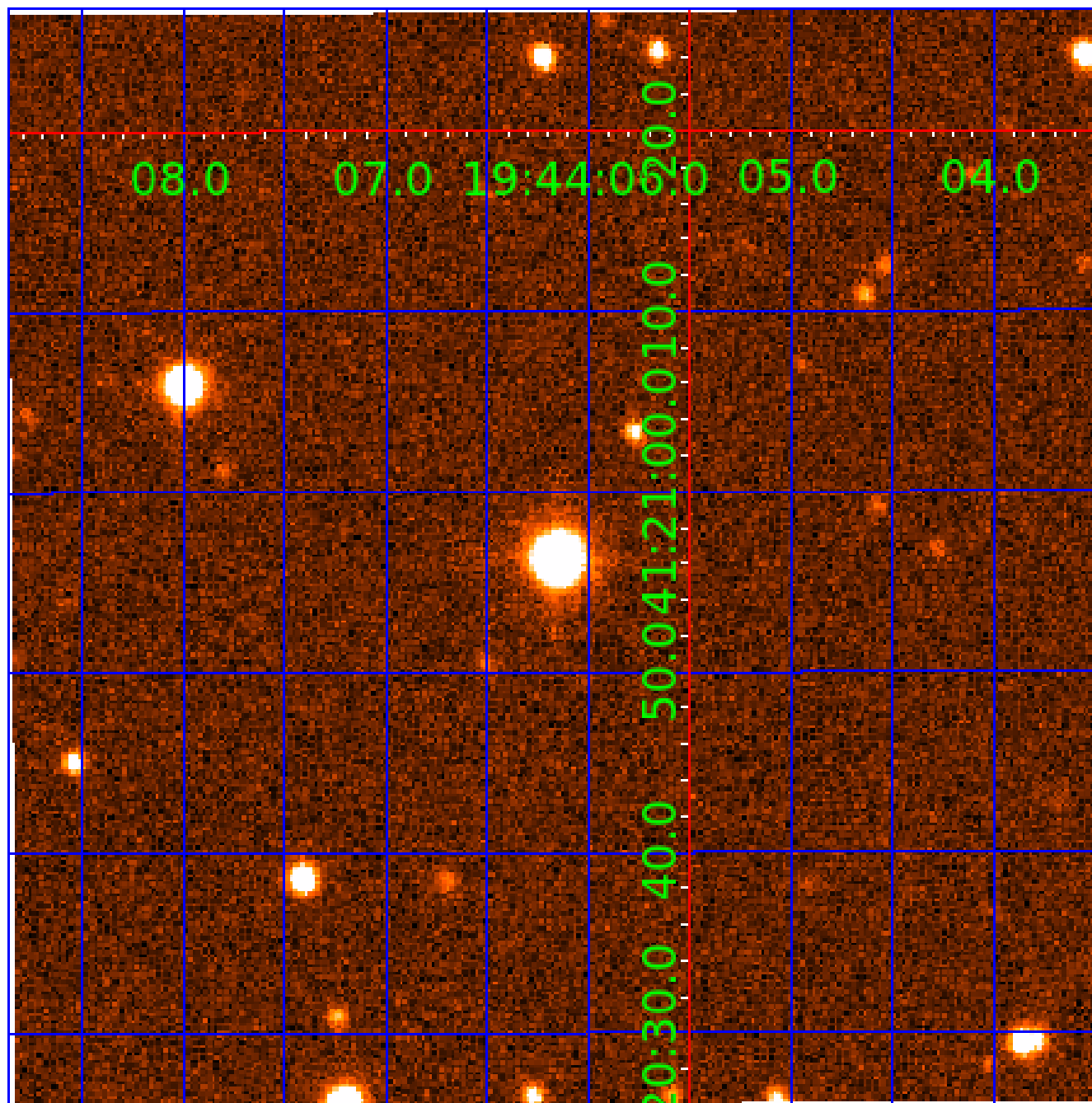


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006057401

Q1-17 DR25 TCE Parameters

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

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006057401-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
006057401-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
006057401-03	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
006057401-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006057401-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006057401-06	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
006057401-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

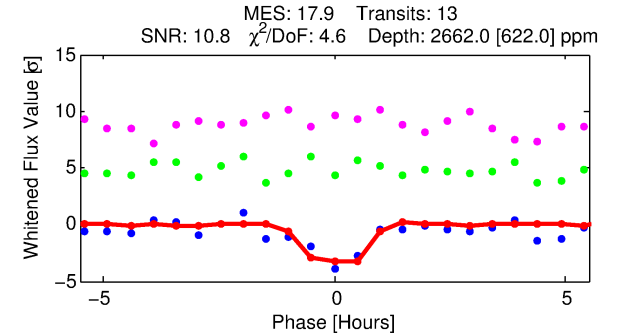
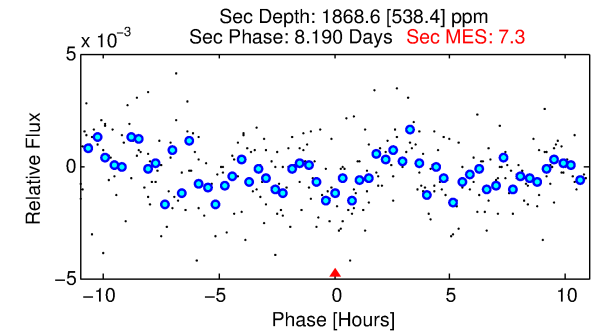
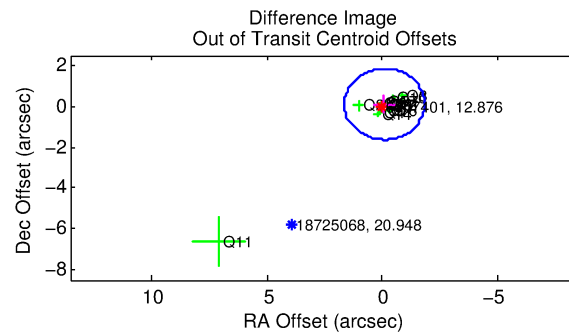
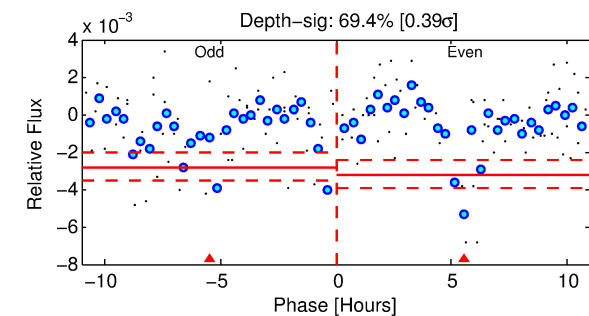
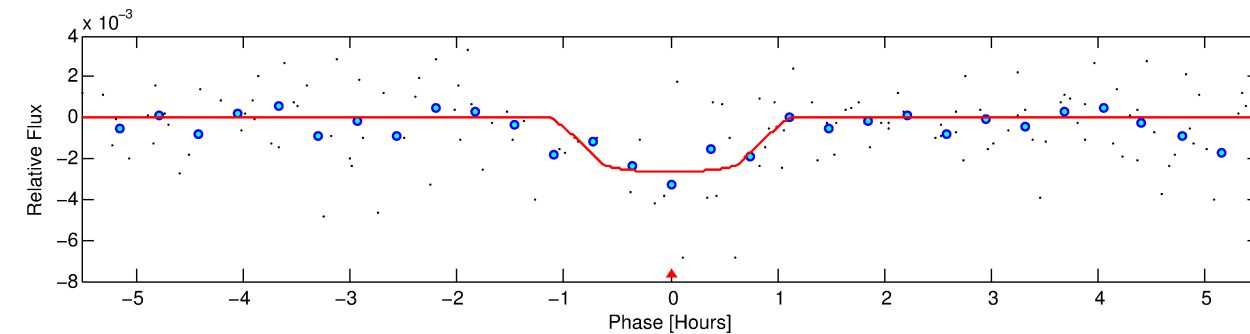
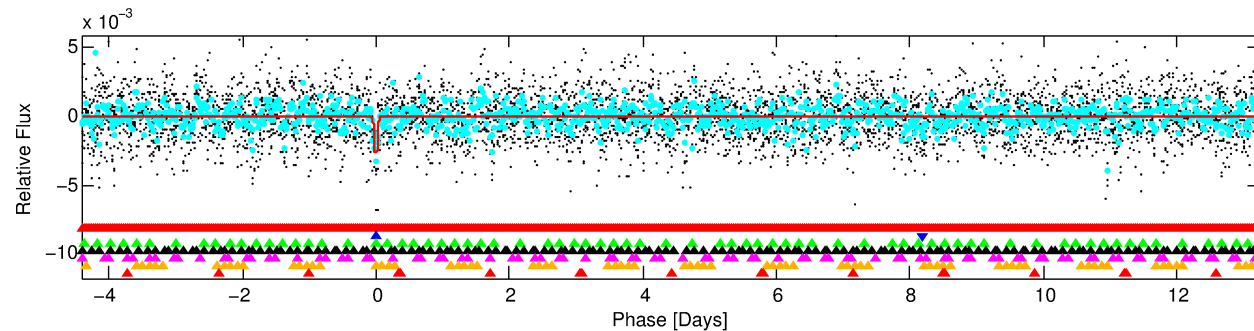
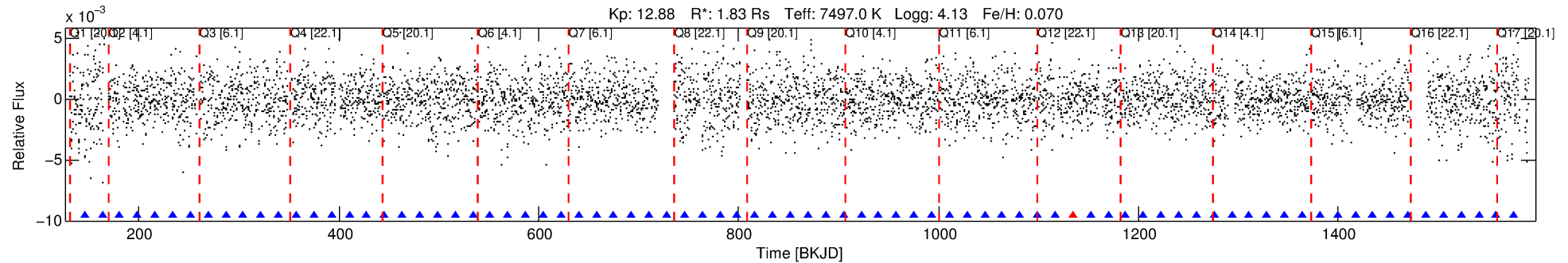
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006057401-02

No Significant Match Found

DV One-Page Summary

KIC: 6057401 Candidate: 2 of 7 Period: 17.659 d



DV Fit Results:

Period = 17.65904 [0.00018] d
Epoch = 145.5629 [0.0080] BKJD
Rp/R* = 0.0481 [0.1420]
a/R* = 76.96 [1355.96]
b = 0.01 [2307.05]
Seff = 384.40 [148.97]
Teq = 1129 [109] K
Rp = 9.61 [28.51] Re
a = 0.1570 [0.0384] AU
Ag = 274.72 [1627.13] [0.17 σ]
Teffp = 7107 [10511] K [0.57 σ]

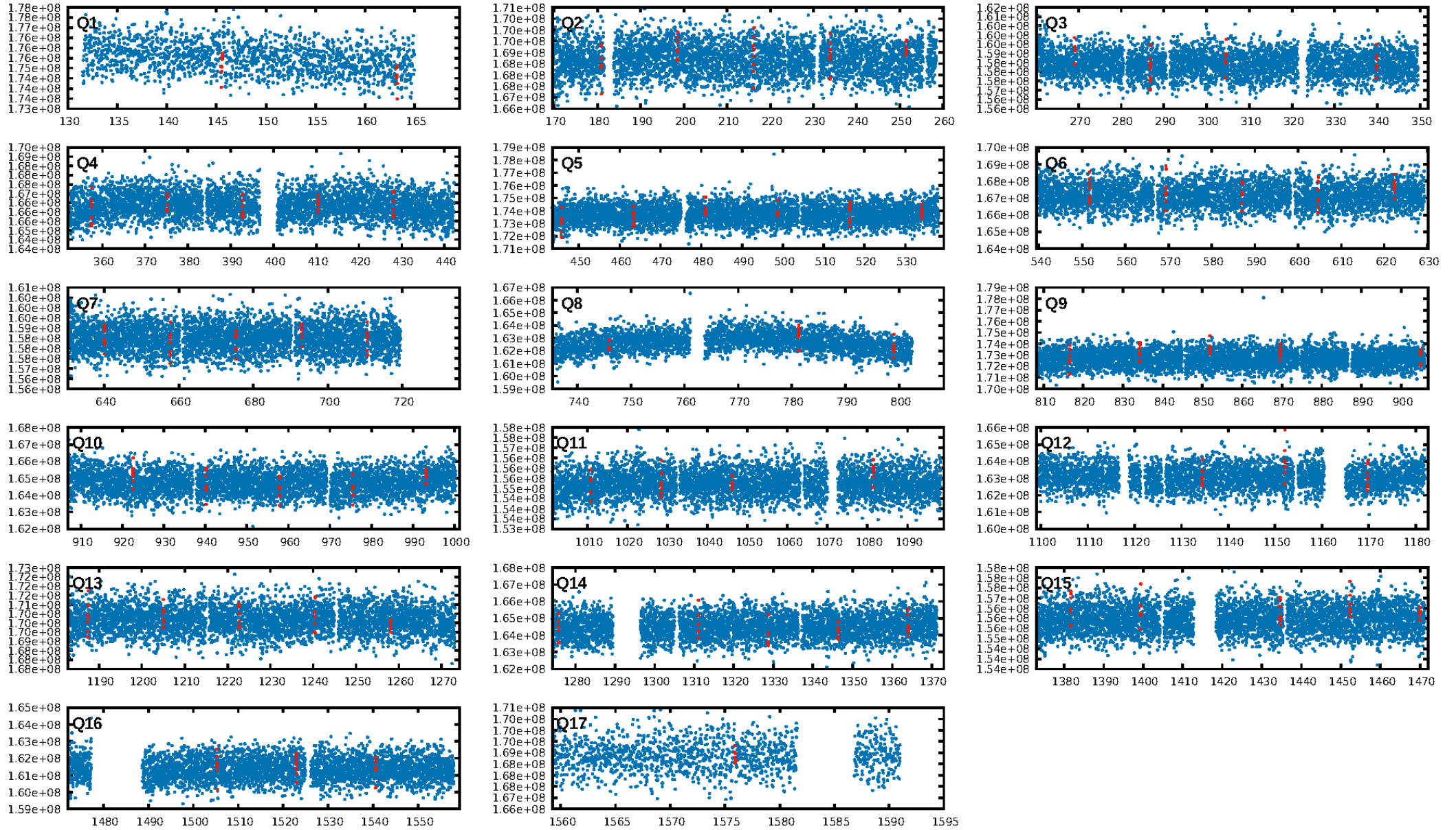
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [16.07 σ]
LongPeriod-sig: 100.0% [20.30 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.8%
Bootstrap-pfa: N/A
RollingBand-fgt: 0.92 [11/12]
GhostDiagnostic-chr: 0.4168
Centroid-sig: 0.6%
Centroid-so: 0.187 arcsec [4.36 σ]
OotOffset-rm: 0.134 arcsec [0.23 σ]
KicOffset-rm: 0.142 arcsec [0.23 σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
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DiffImageOverlap-fno: 0.06 [1/17]

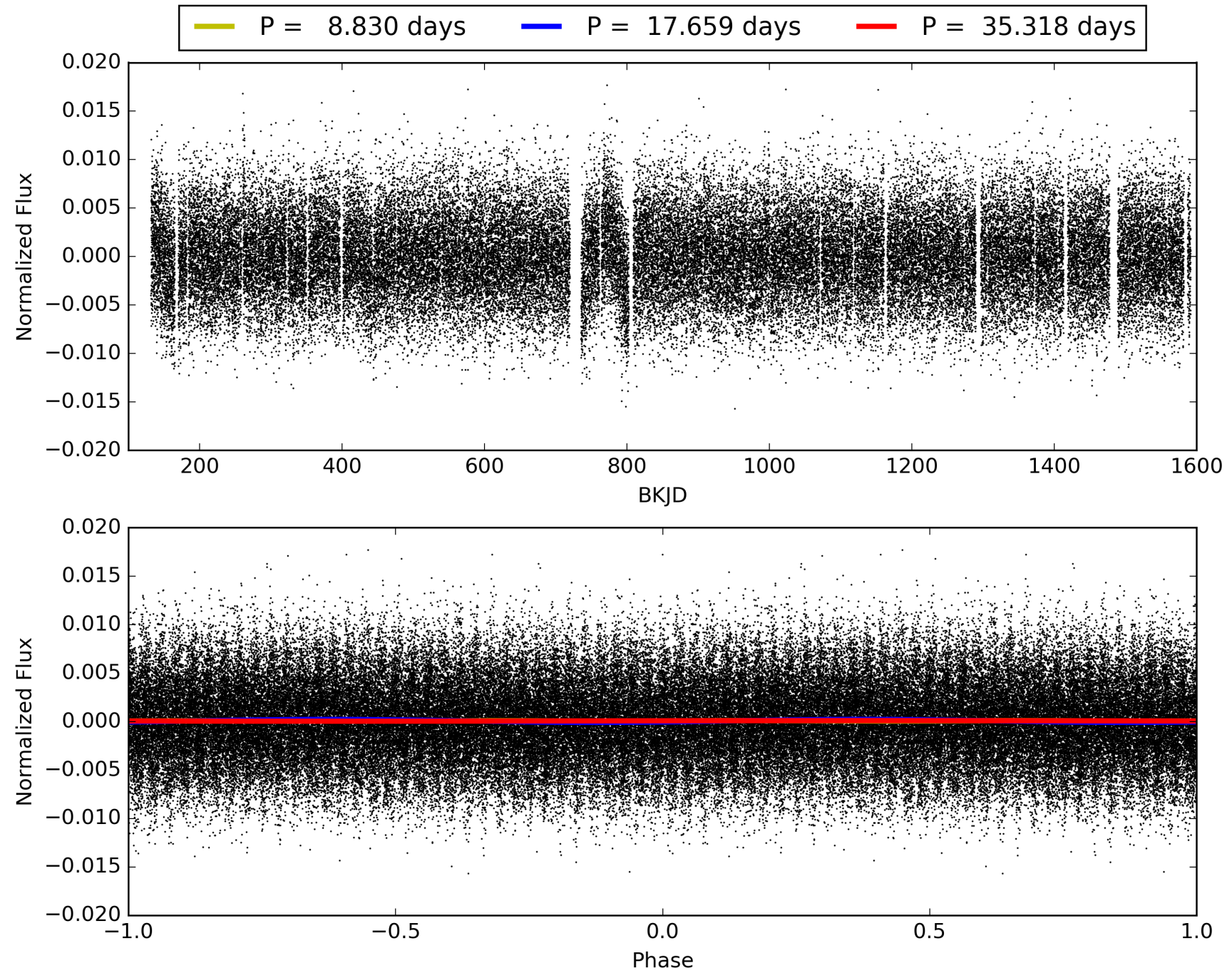
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 08:19:57 Z

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

TCE 006057401-02, PDC Light Curves

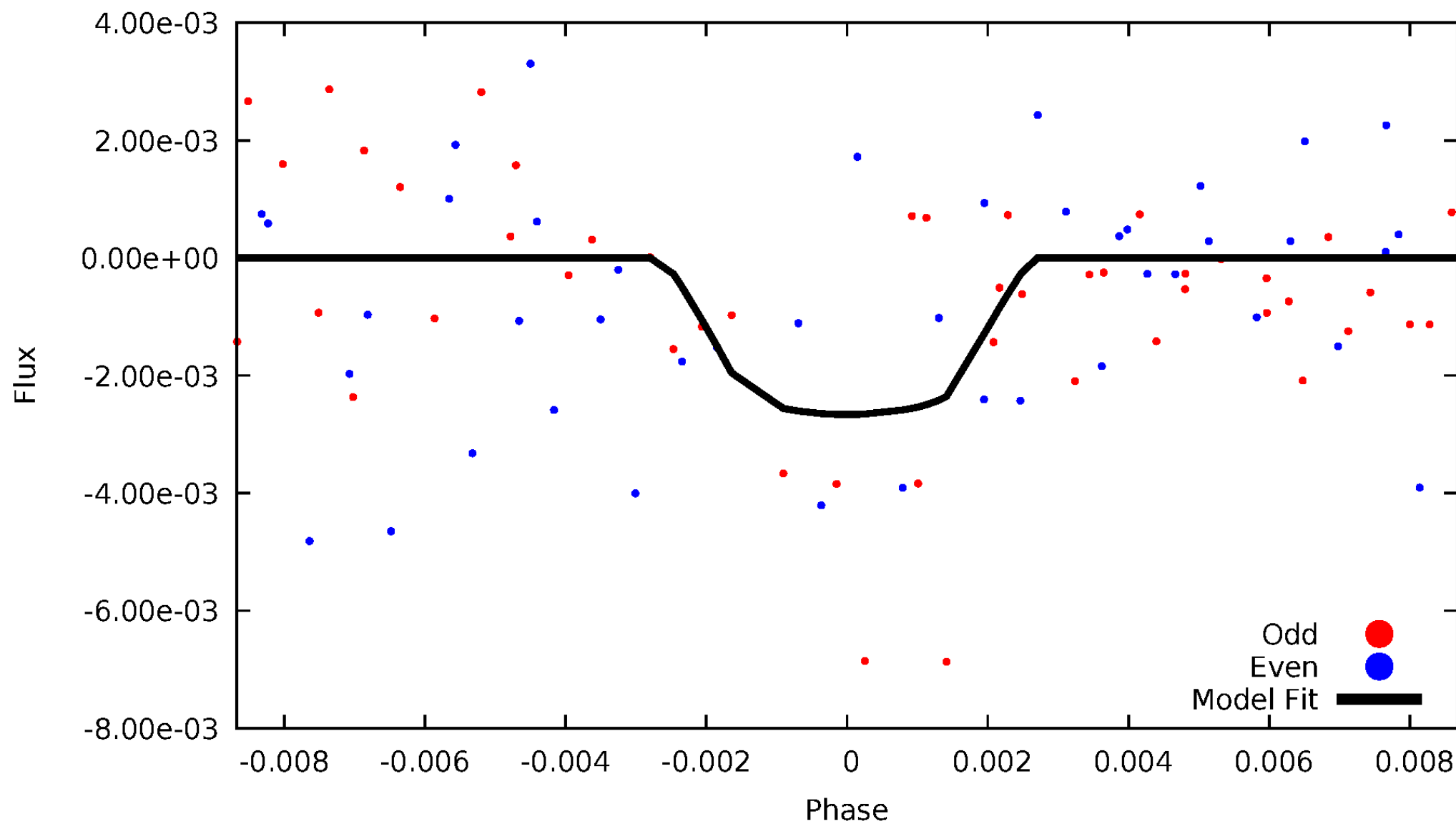


TCE 006057401-02



DV Odd/Even

TCE 006057401-02

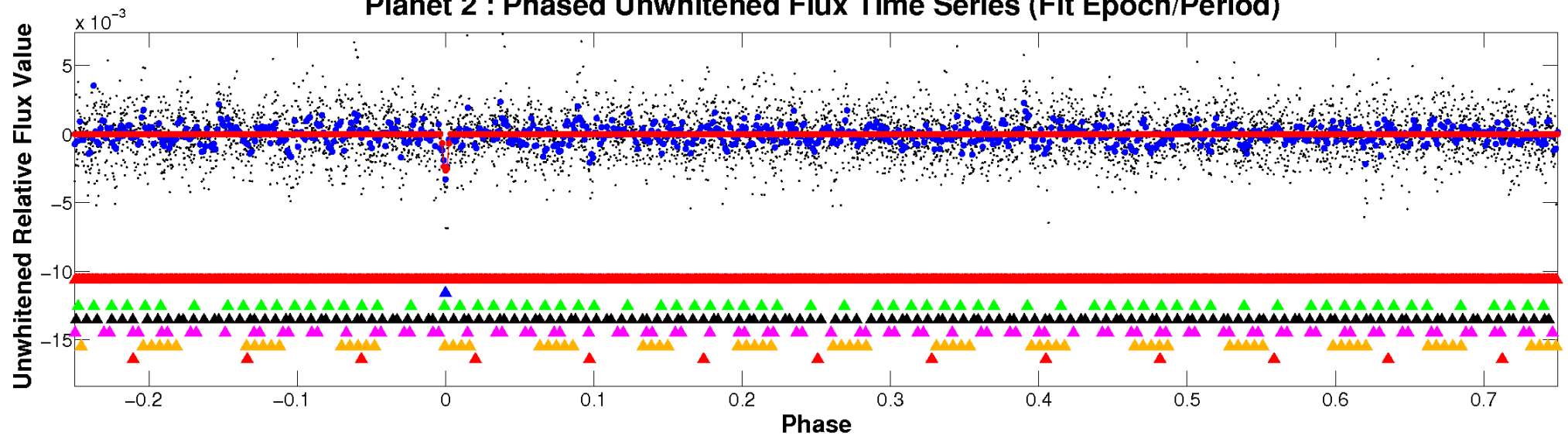


ALT Odd/Even

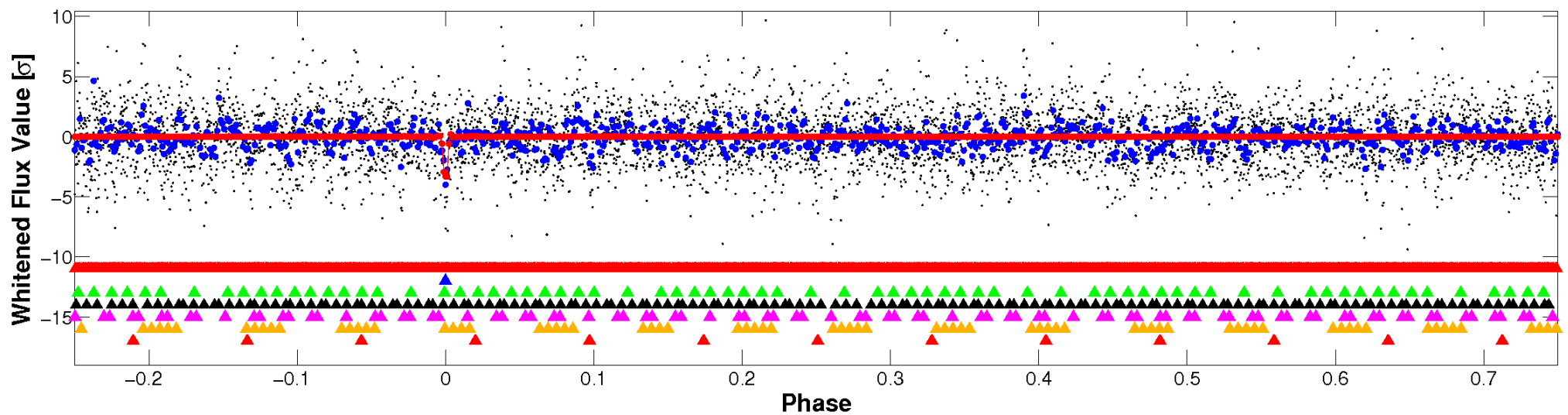
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

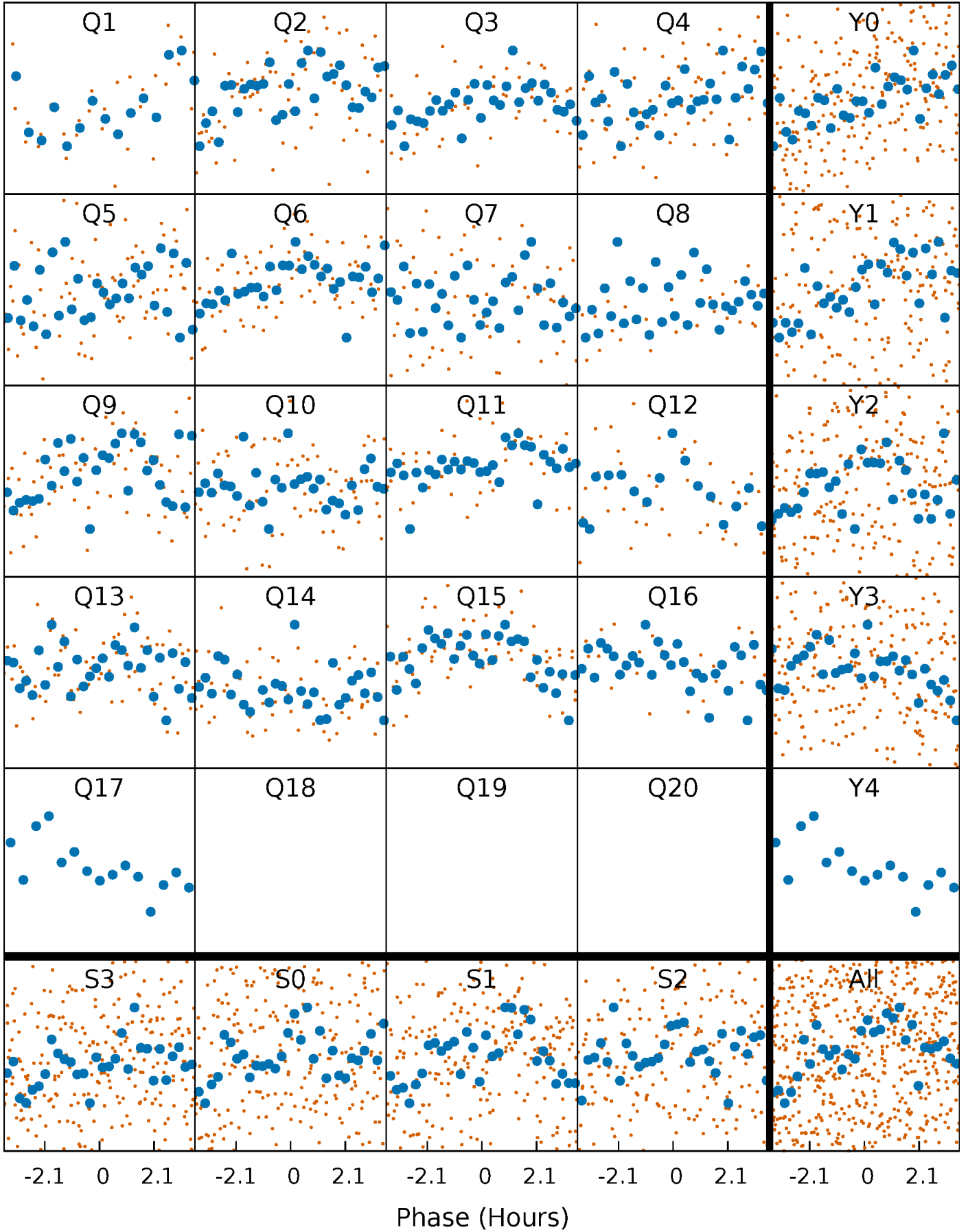


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



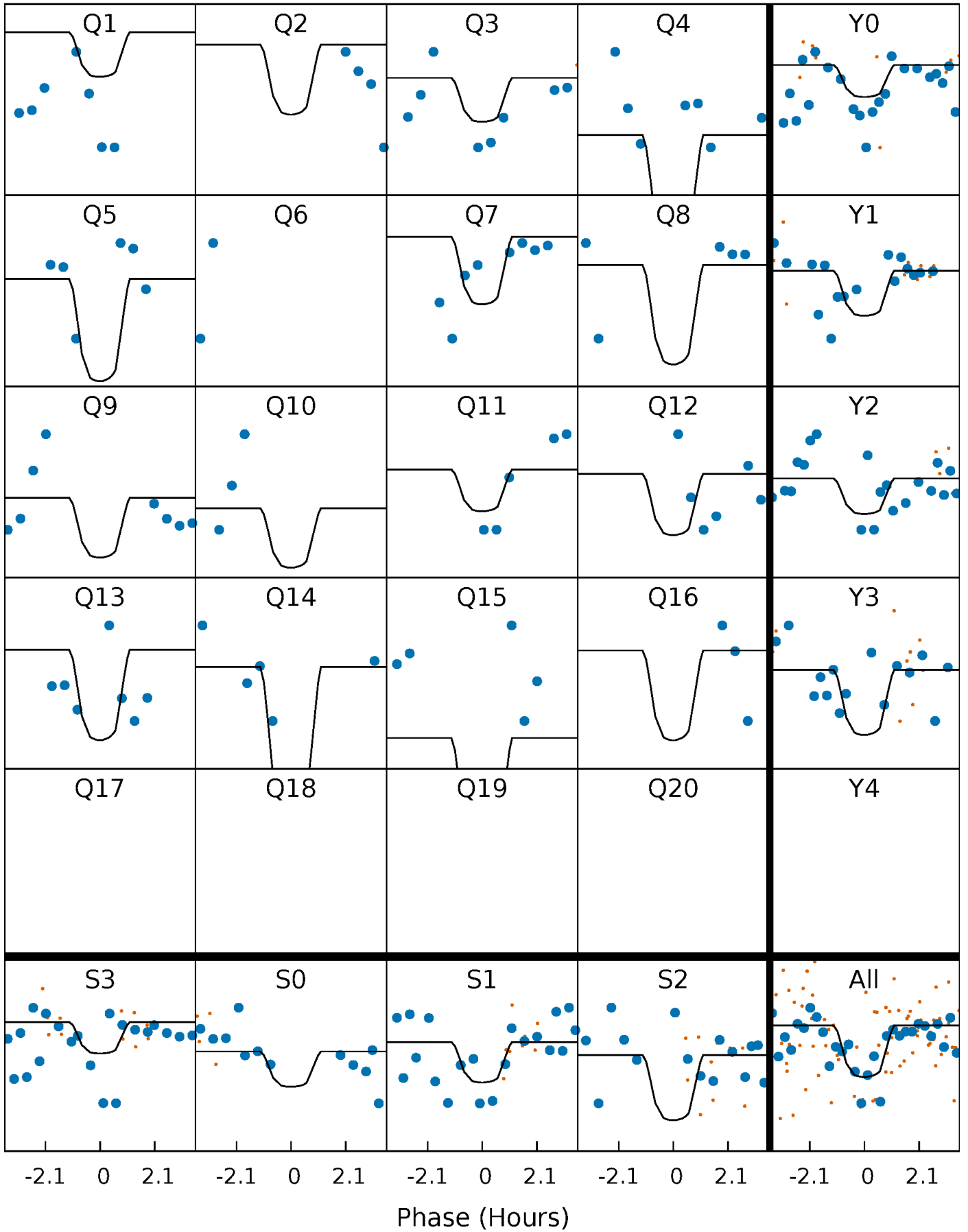
PDC Quarter-Phased Transit Curves

TCE 006057401-02 P= 17.659040 Days $T_0=145.562937$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 006057401-02 $P = 17.659040$ Days $T_0 = 145.562937$ (BKJD)

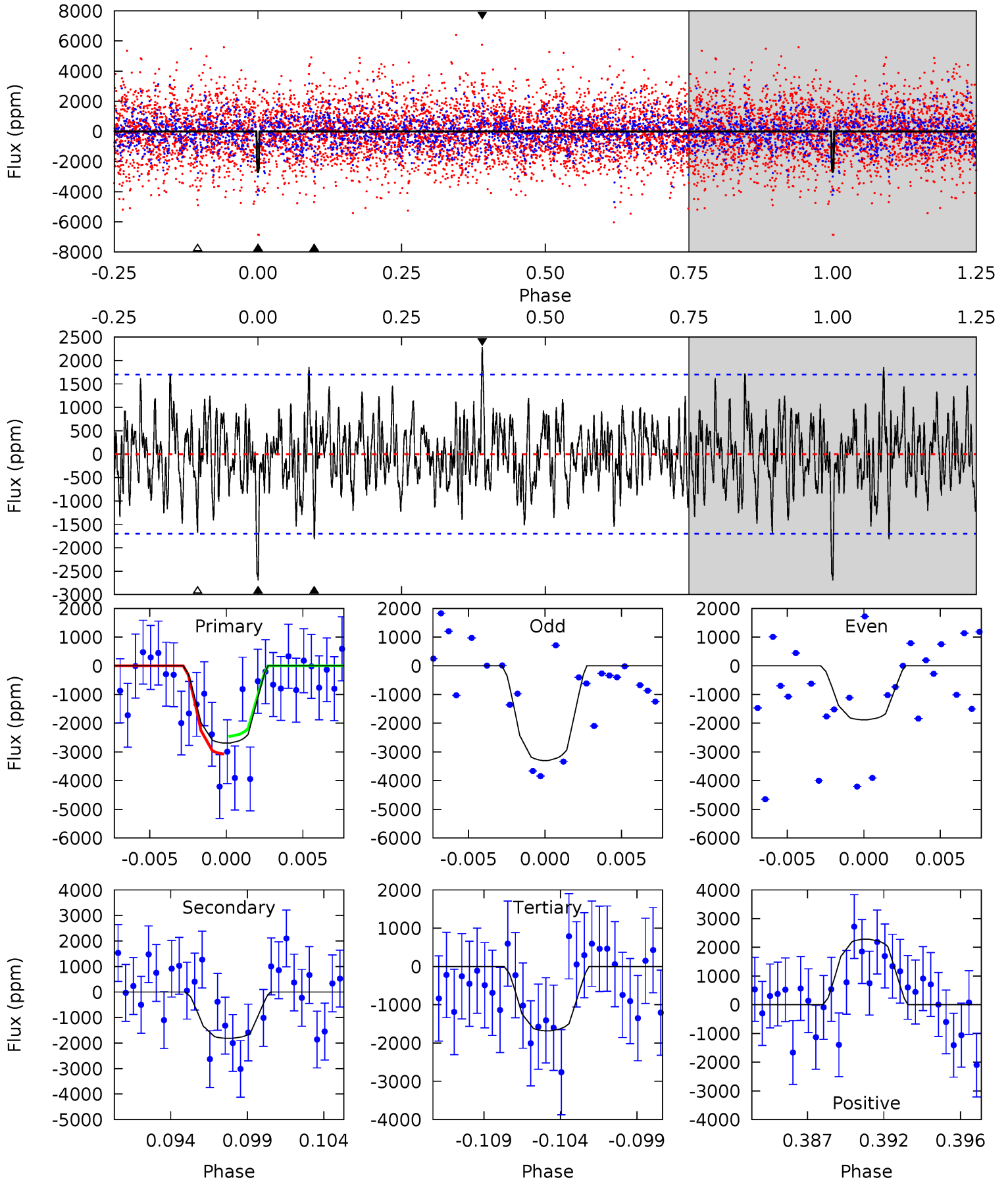


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

006057401-02, P = 17.659040 Days, E = 127.903897 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.18	5.51	5.10	6.93	5.16	2.81	1.79	3.08	1.25	0.41	-1.42	2.15	1.33	0.46	0.89



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 006057401

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7497^{+210}_{-341}	$4.132^{+0.120}_{-0.180}$	$0.070^{+0.200}_{-0.350}$	$1.830^{+0.554}_{-0.341}$	$1.656^{+0.205}_{-0.251}$	$0.380^{+0.218}_{-0.188}$
	+3%/-5%	+3%/-4%	+286%/-500%	+30%/-19%	+12%/-15%	+57%/-49%
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 006057401-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1816 ± 329	$23.97^{+24.16}_{-16.60}$	1592^{+112}_{-105}	4534^{+3898}_{-1030}	42^{+428}_{-32}
Alt.	N/A	N/A	N/A	N/A	N/A

T_{max} = Theoretical Maximum Planetary Temperature

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

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

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

DV Centroid Data

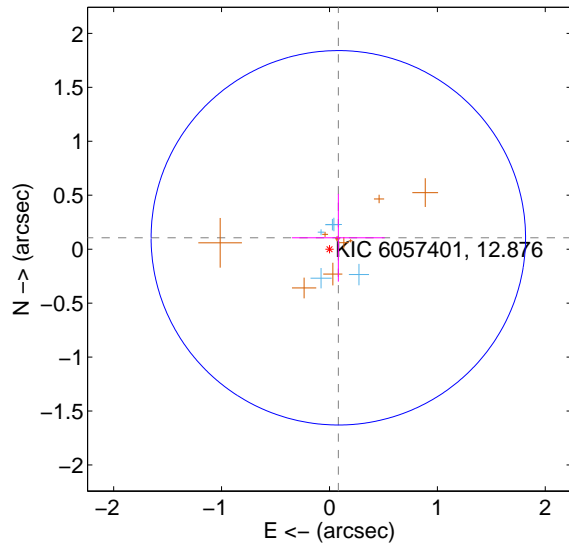
Supplemental centroid analysis for 006057401-02. Kepler magnitude: 12.88. Transit SNR 10.78

There are 5 quarters with good PRF difference image offsets

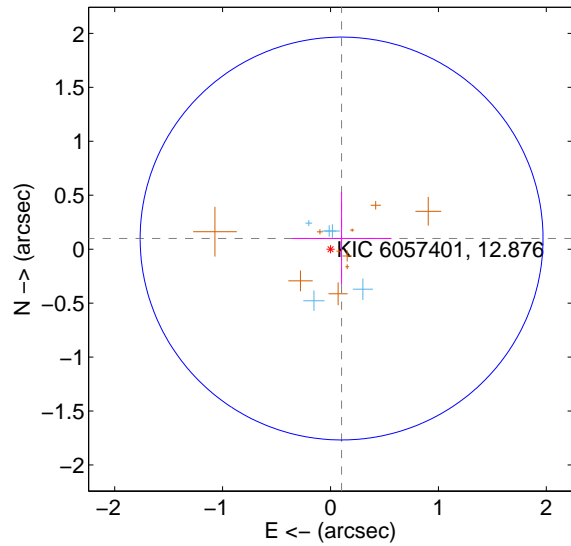
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.134 ± 0.578	0.23	-0.082 ± 0.430	0.105 ± 0.407
PRF-fit source offset from KIC position	0.142 ± 0.622	0.23	-0.103 ± 0.461	0.099 ± 0.429
photometric centroid source offset	0.19 ± 0.04	4.36	0.14 ± 0.04	-0.12 ± 0.04

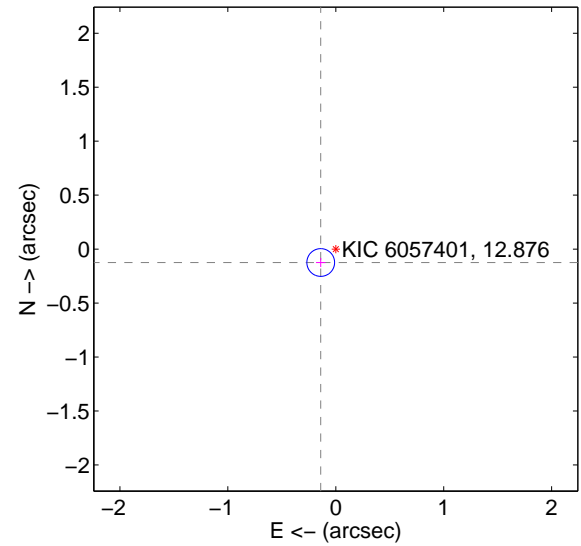
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

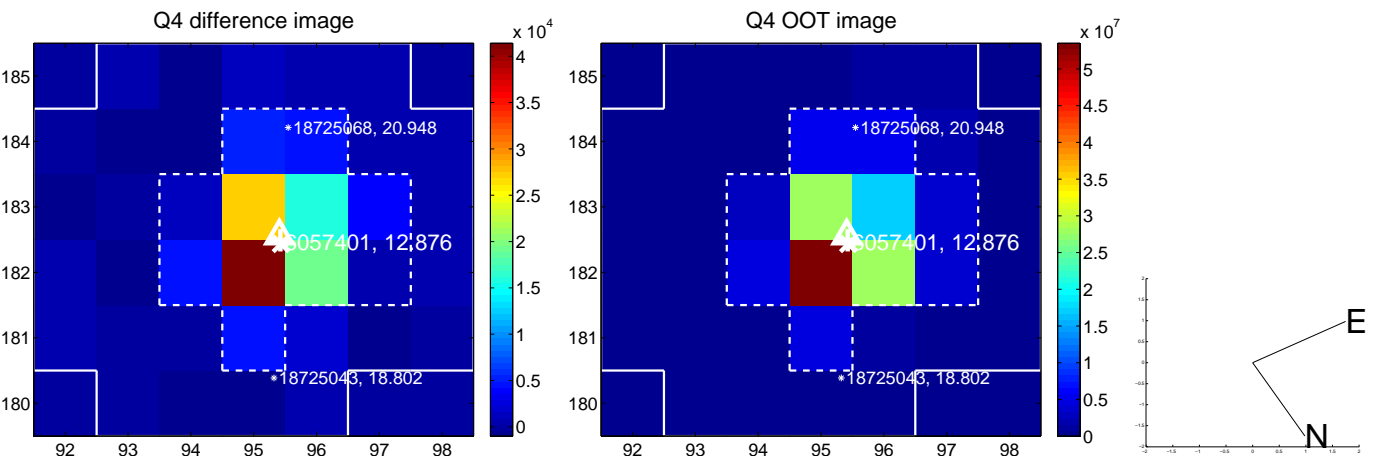
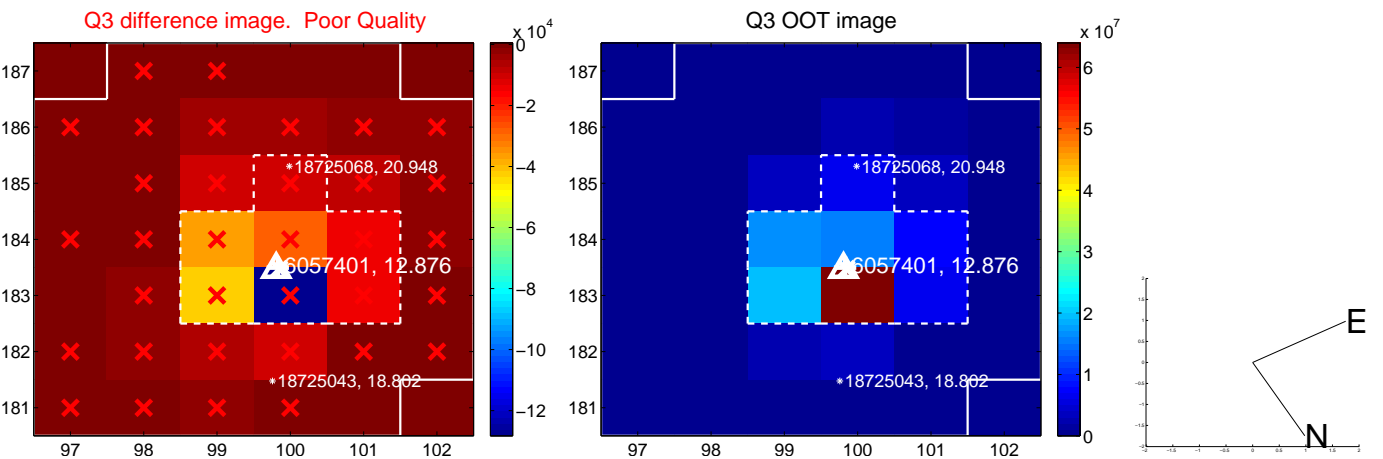
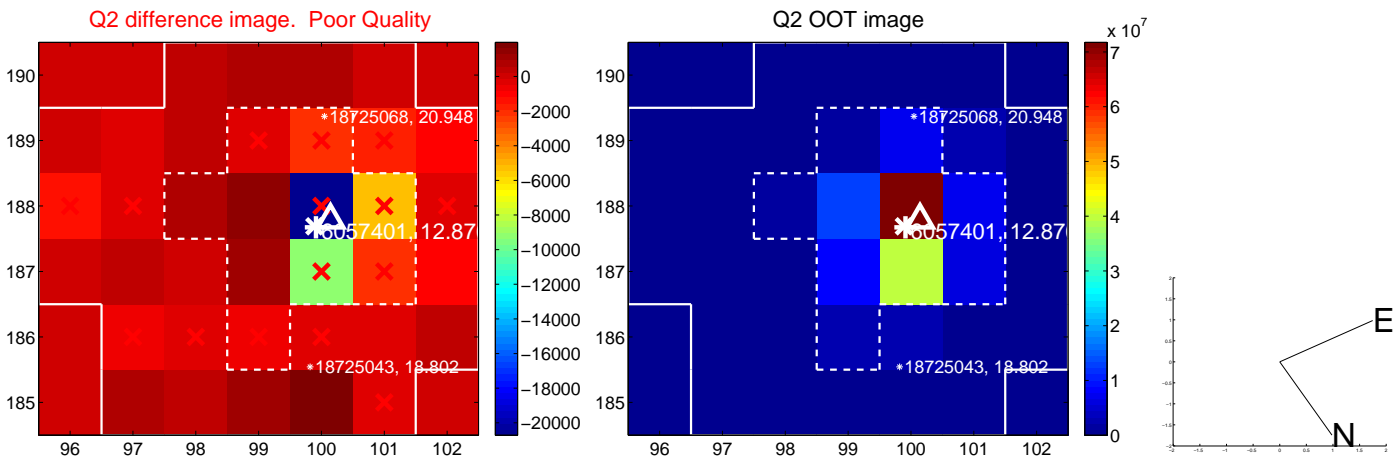
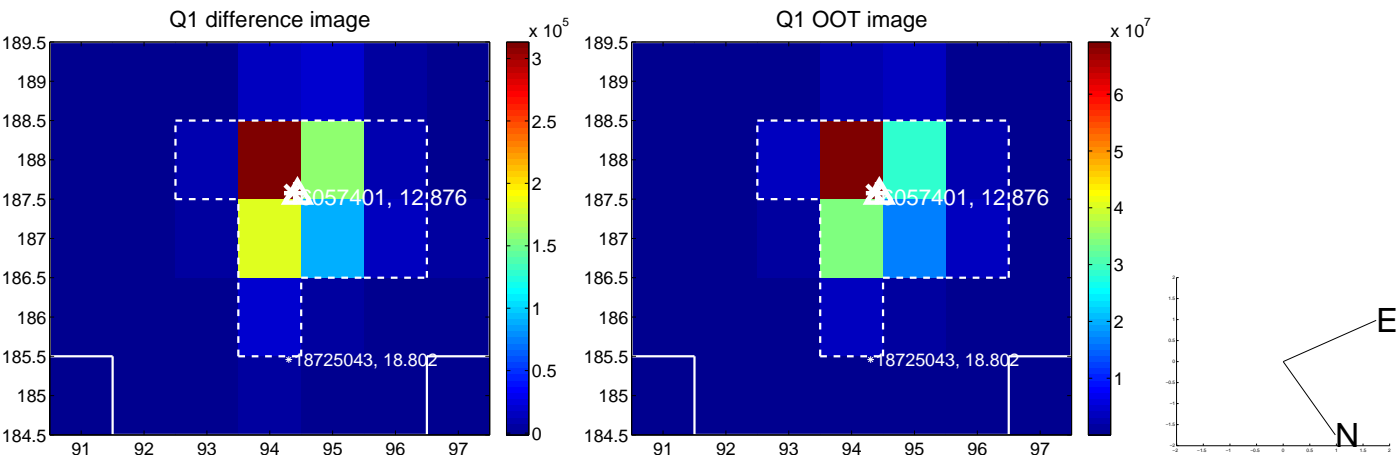


offset from photometric centroids

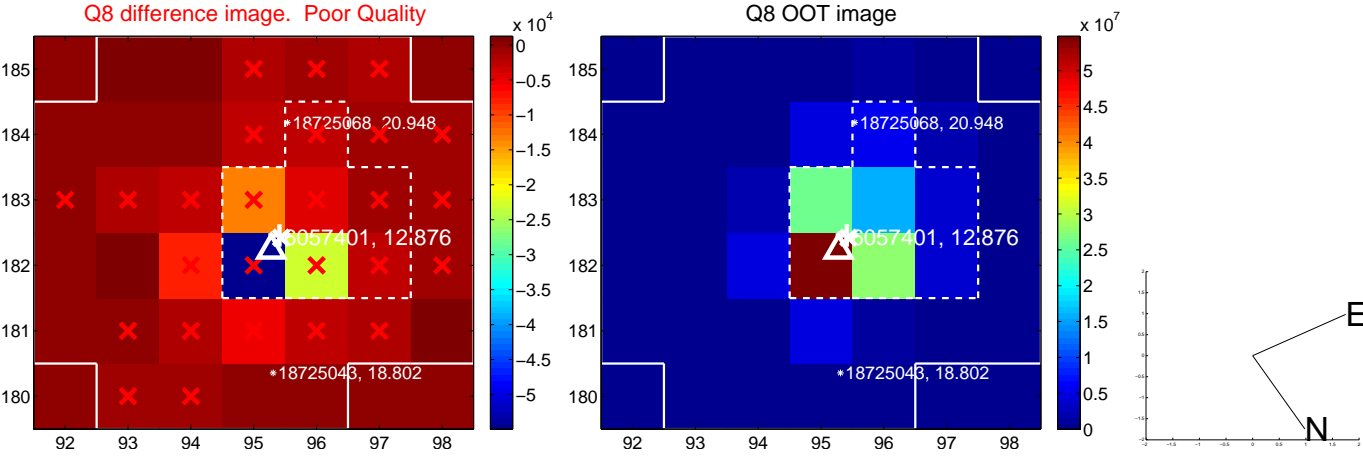
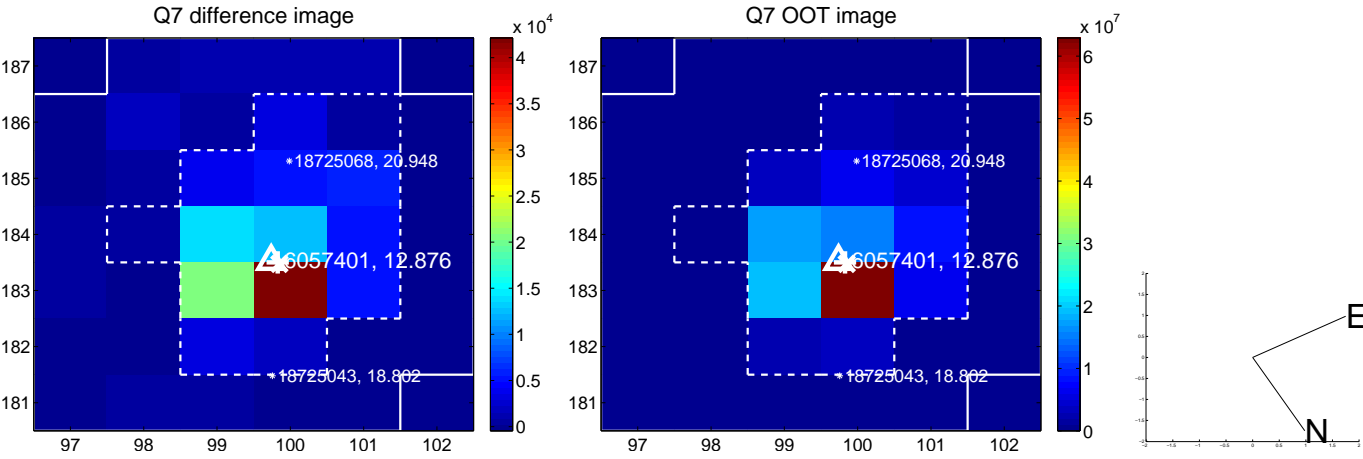
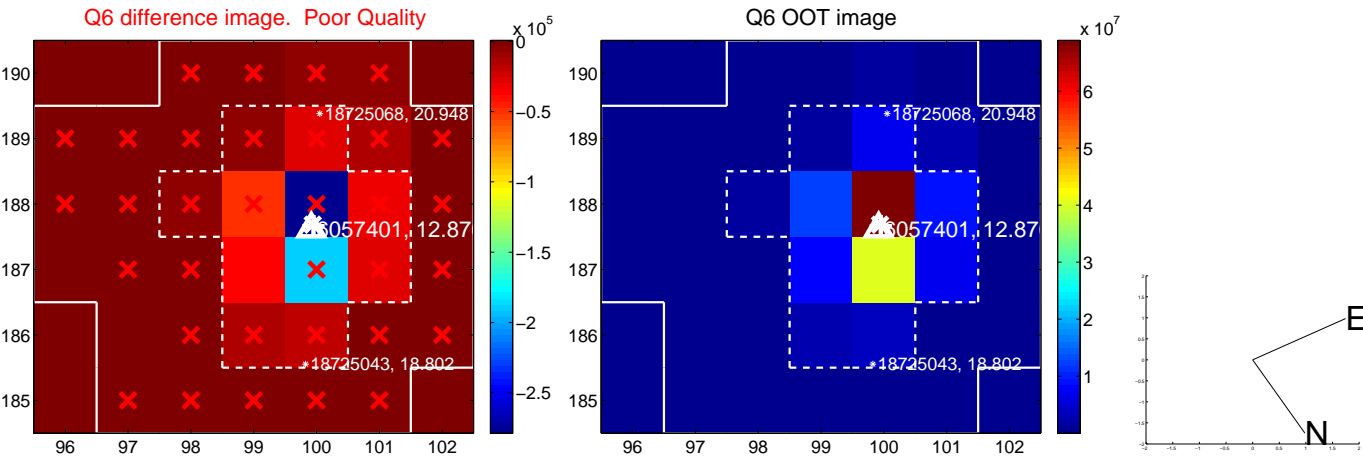
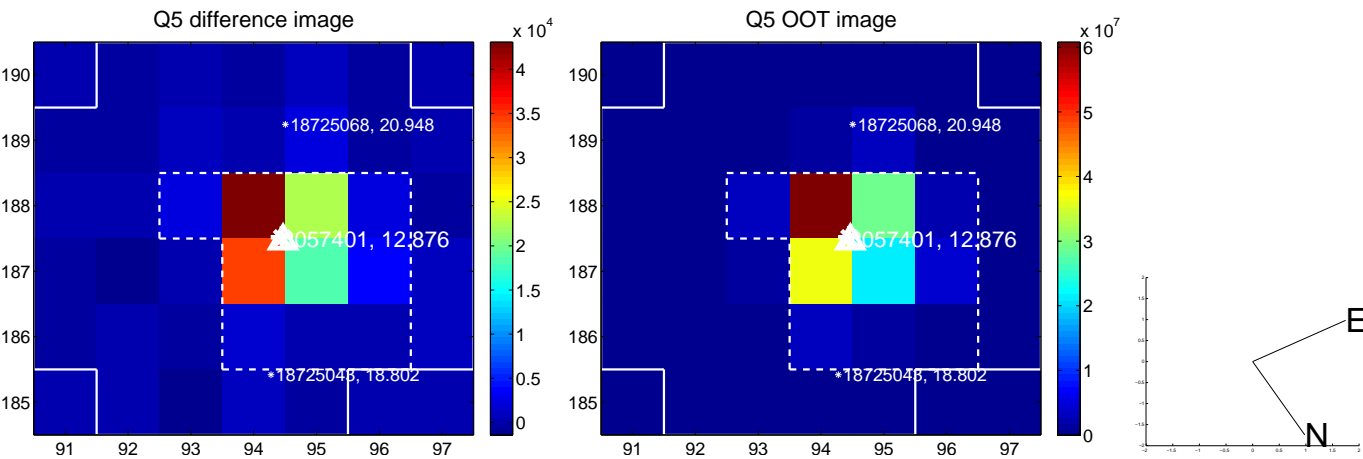


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

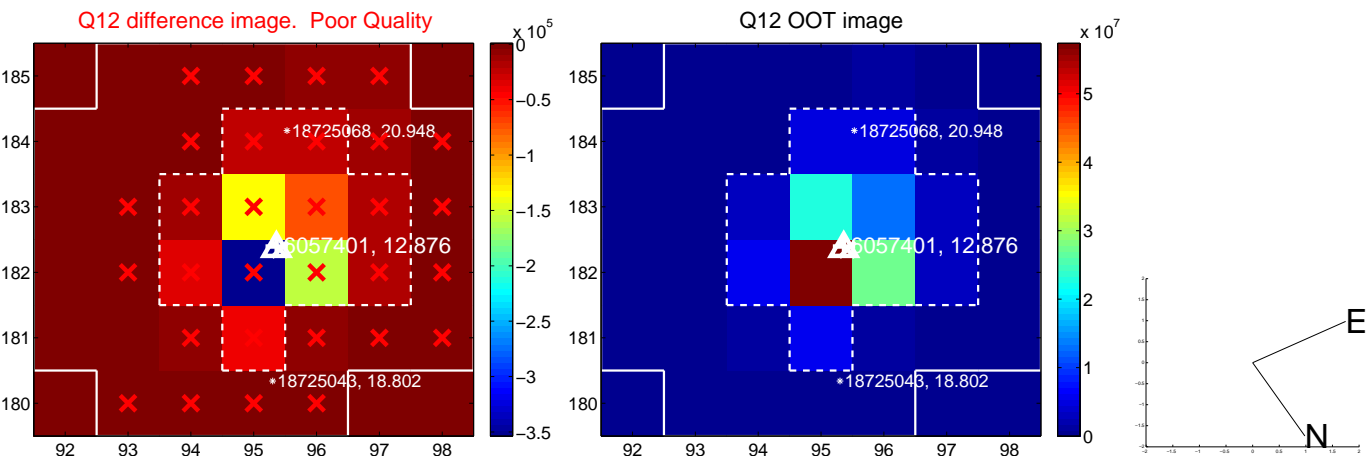
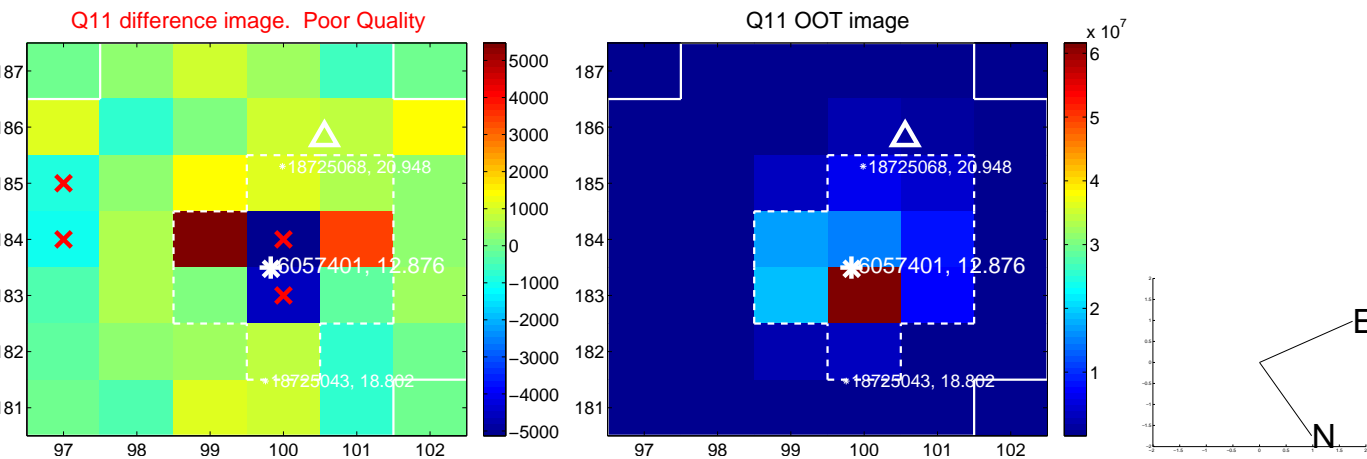
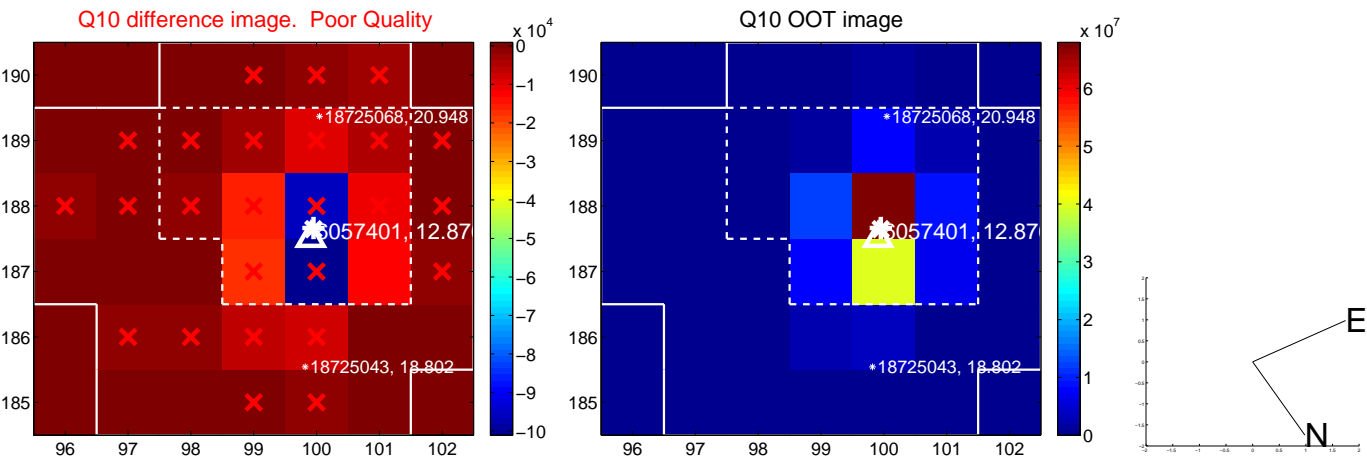
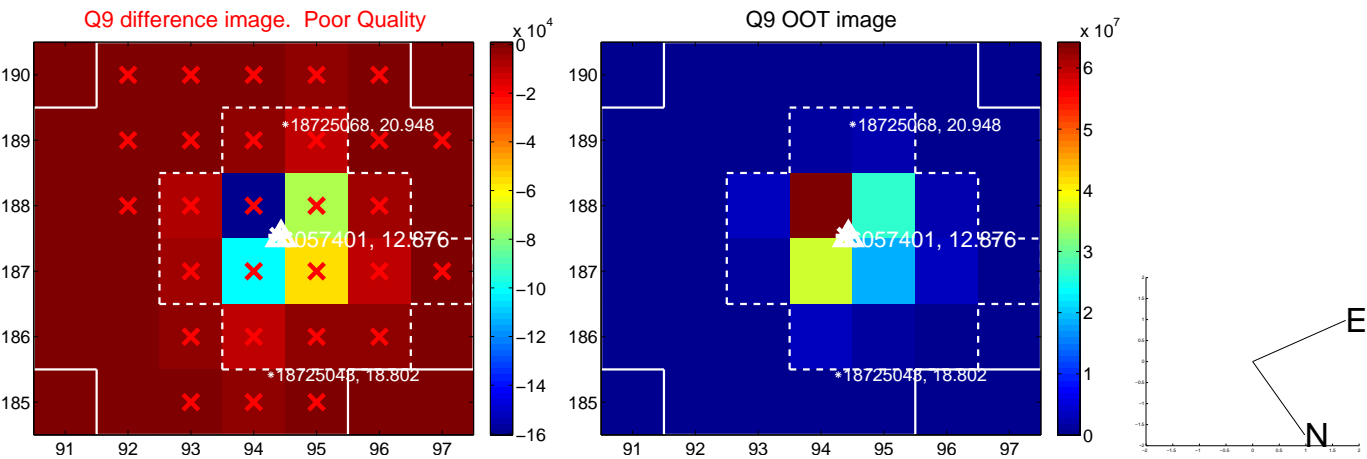
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



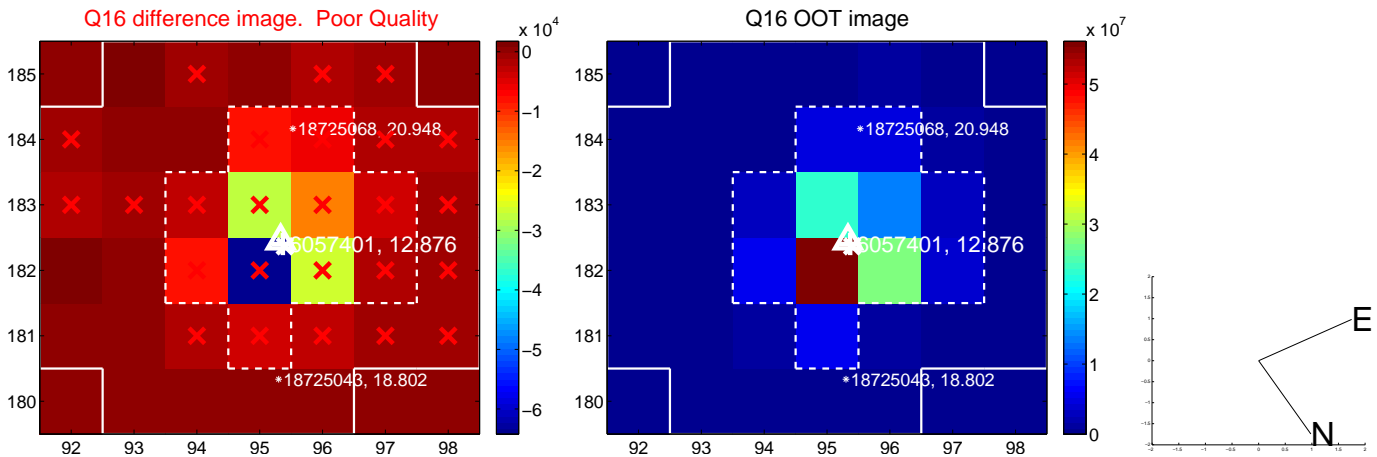
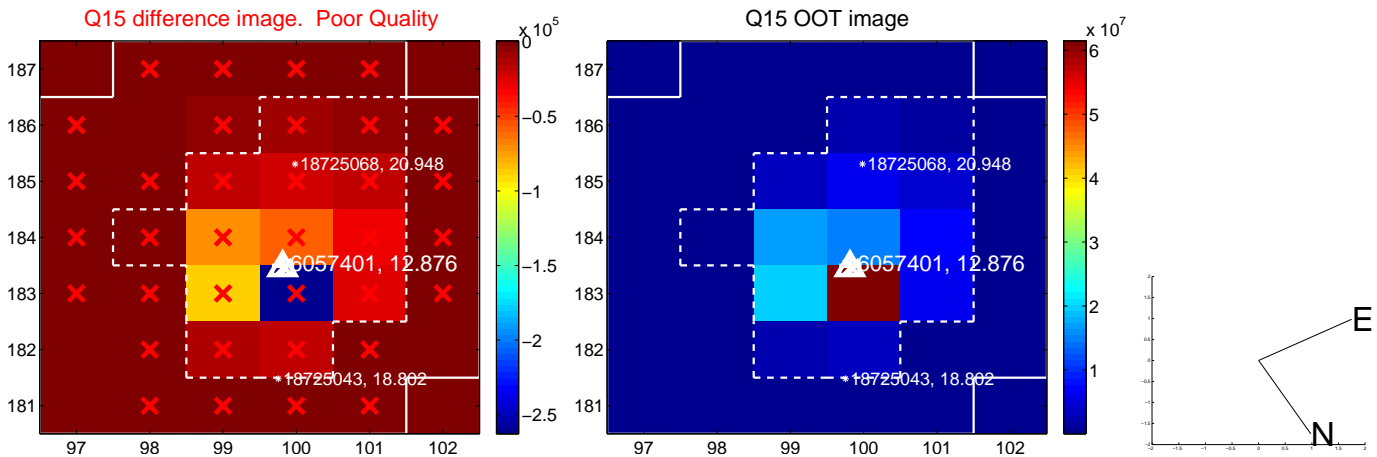
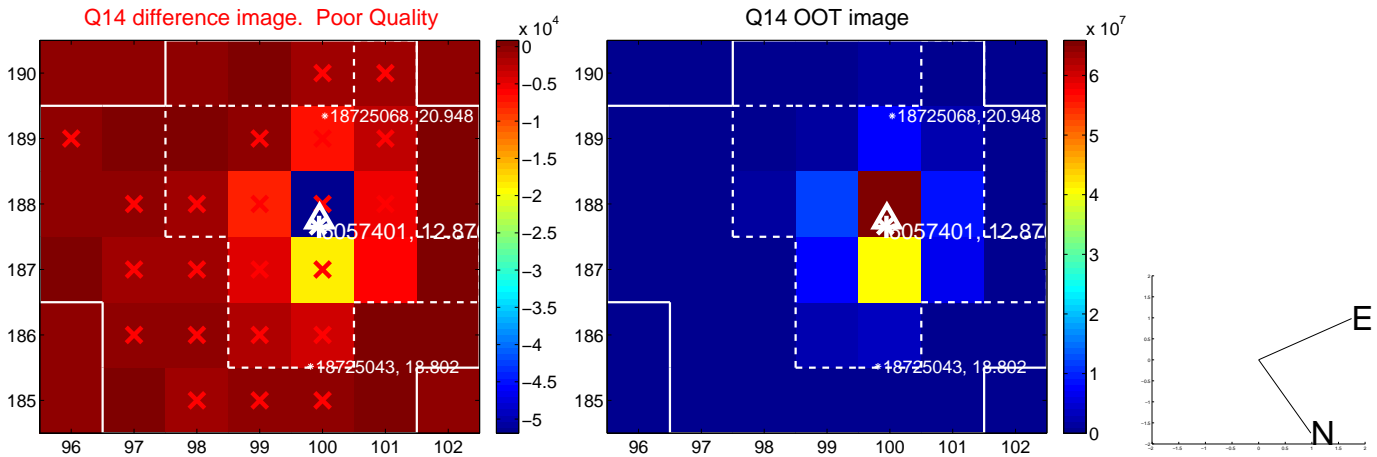
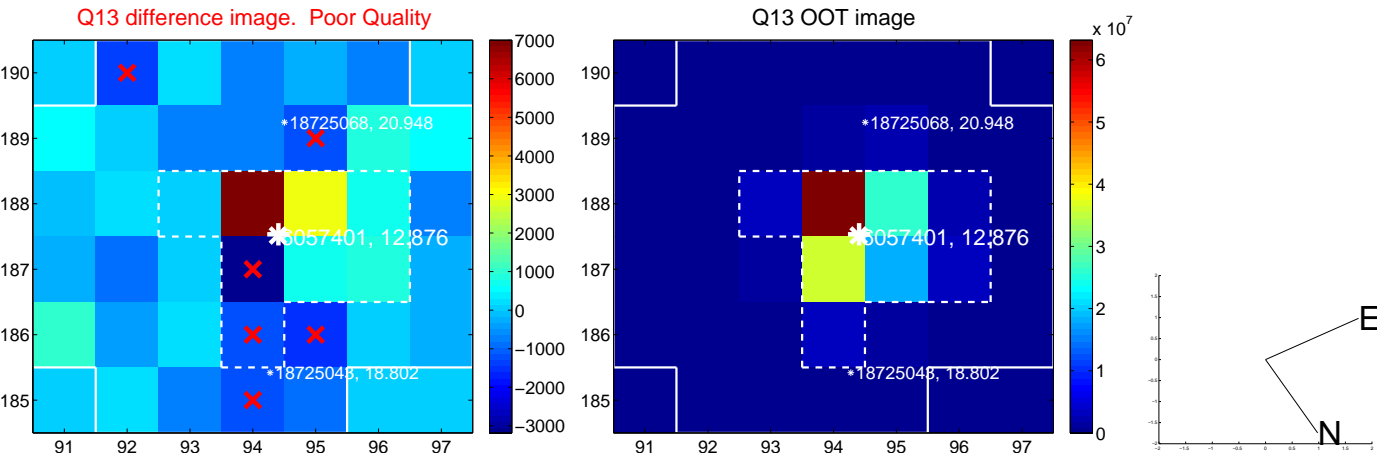
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



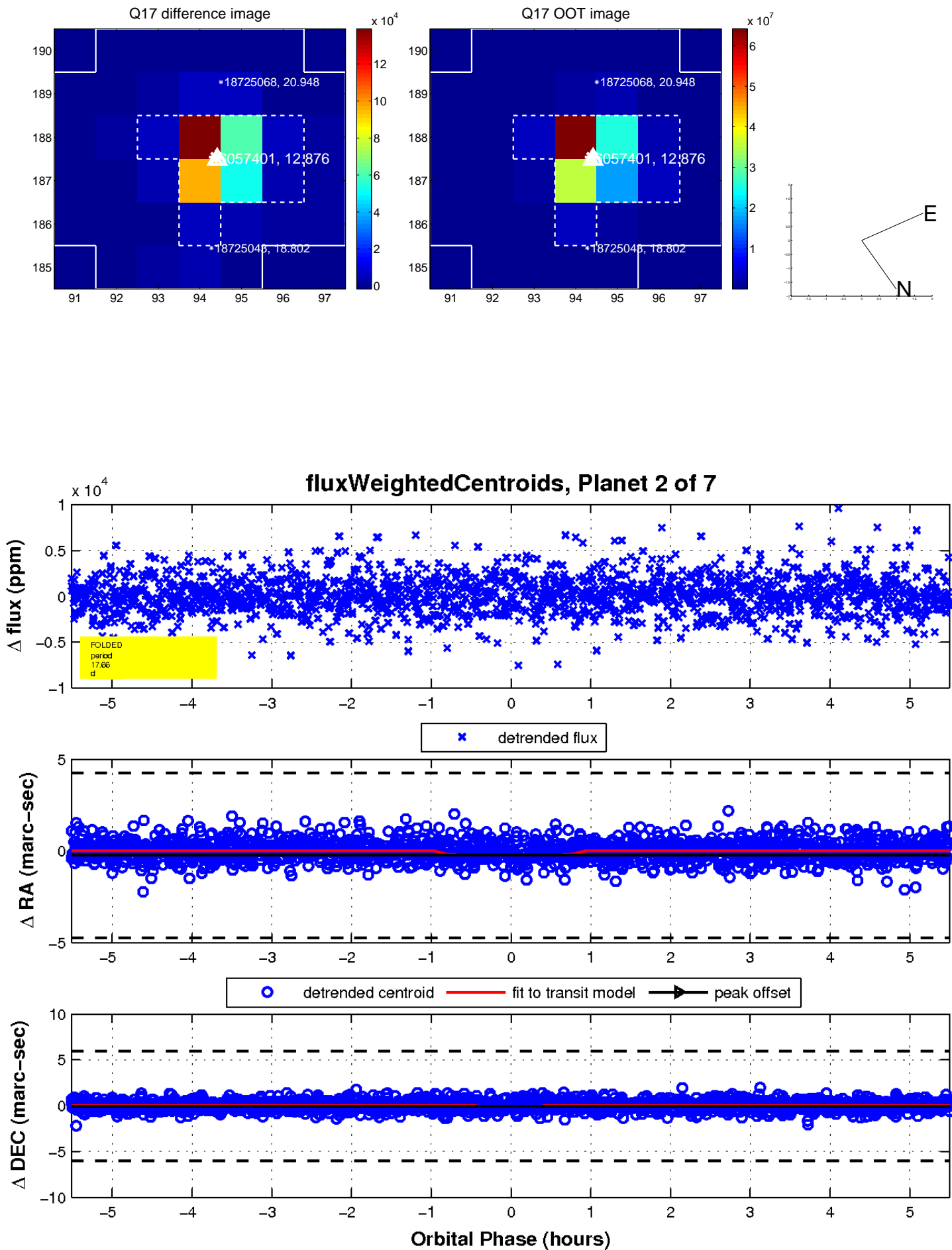
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

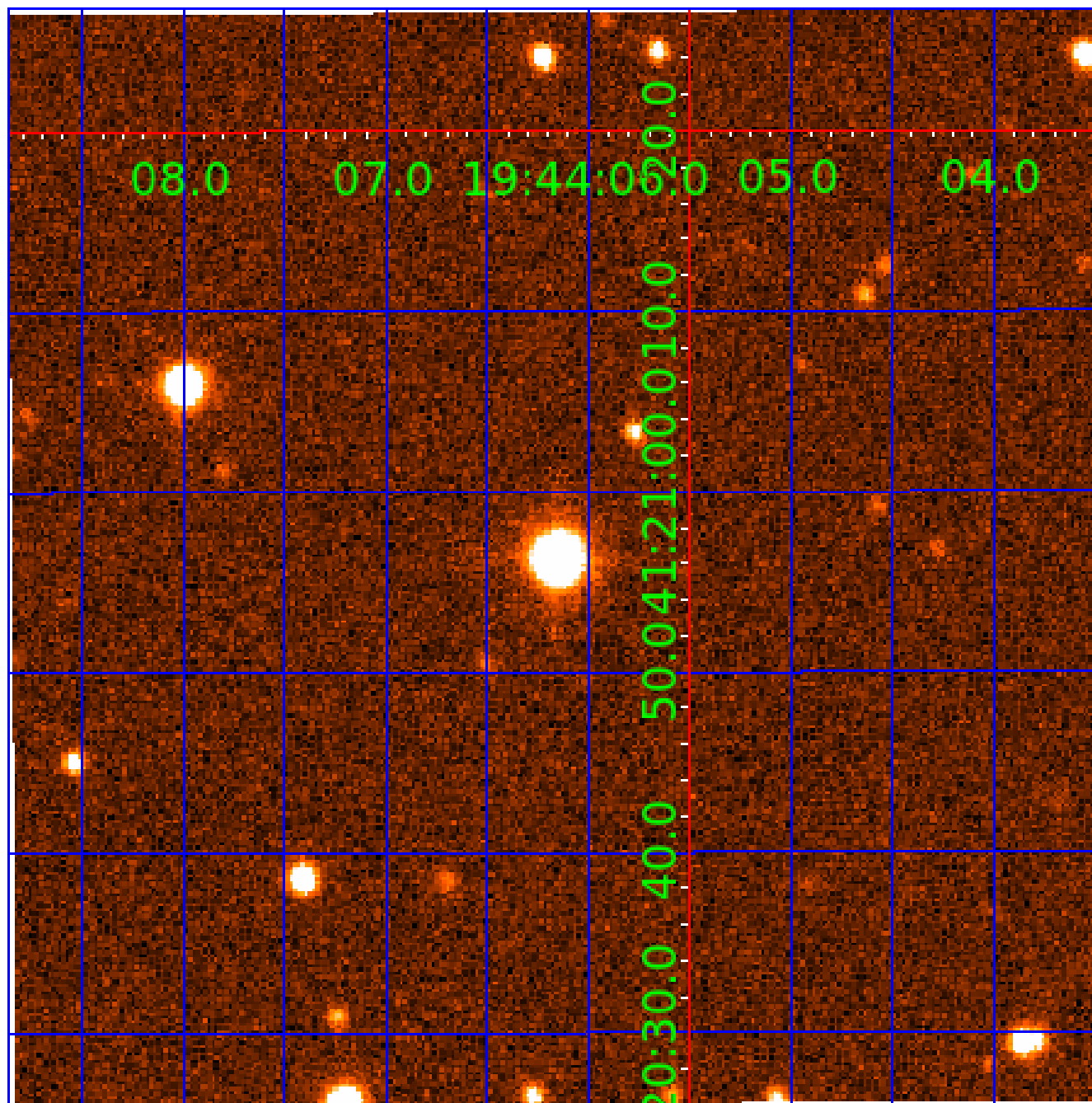


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006057401

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})
006057401-01	OBS	No	0.808054	132.110916	100.6	5.719	10.7	6.1	1.83	7497	1.88	23486.83
006057401-02	OBS	No	17.659040	145.562937	2662.0	1.837	17.9	10.8	1.83	7497	9.61	384.40
006057401-03	OBS	No	20.238761	140.576765	3128.6	1.906	16.3	13.7	1.83	7497	13.54	320.50
006057401-04	OBS	No	9.041831	133.346933	2592.3	1.423	16.9	17.2	1.83	7497	9.88	938.43
006057401-05	OBS	No	16.216110	141.563860	3346.5	1.127	17.1	14.7	1.83	7497	10.86	430.68
006057401-06	OBS	No	20.020123	132.519915	2731.9	2.102	16.8	16.5	1.83	7497	9.77	325.18
006057401-07	OBS	No	6.791879	137.775779	512.8	2.000	15.3	-1.0	1.83	7497	4.22	1374.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006057401-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
006057401-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
006057401-03	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
006057401-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006057401-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006057401-06	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
006057401-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

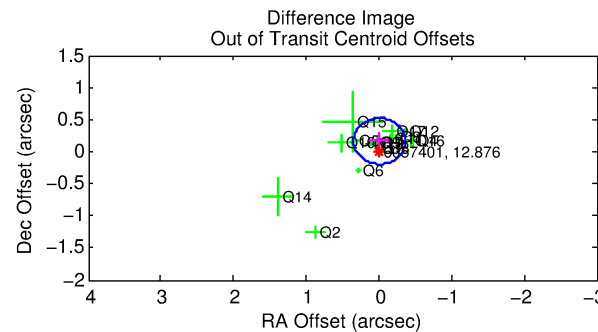
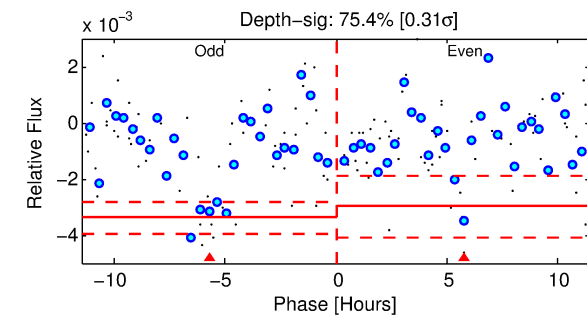
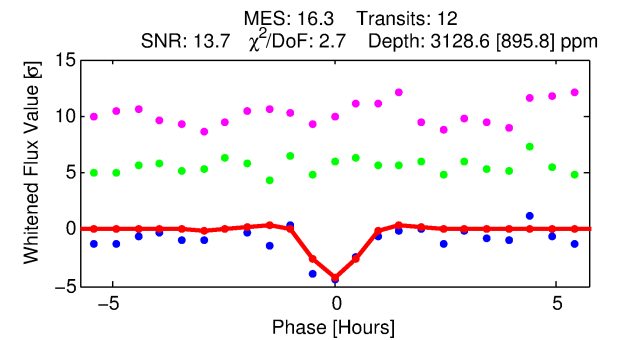
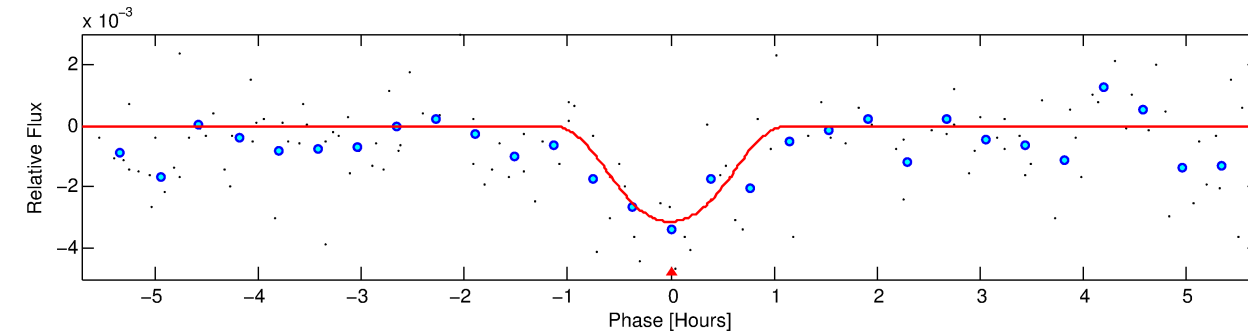
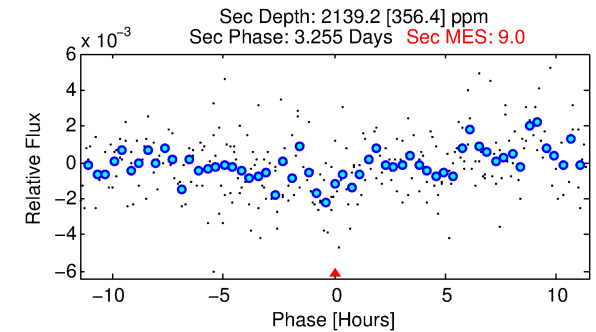
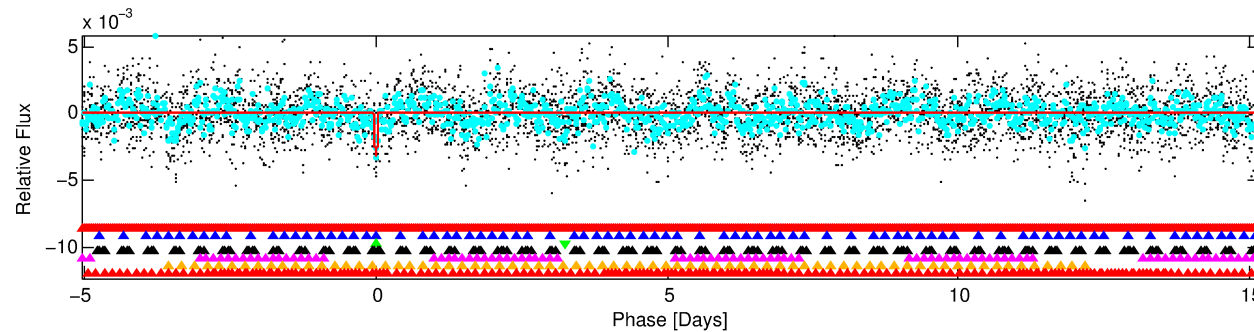
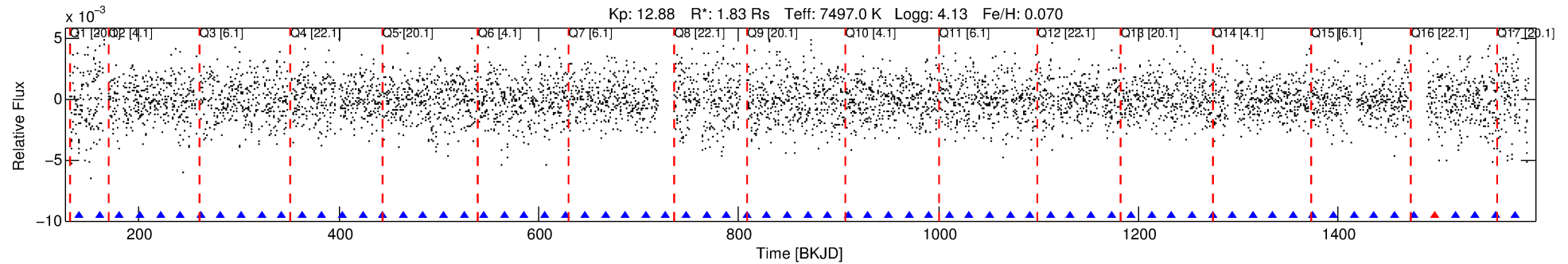
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006057401-03

No Significant Match Found

DV One-Page Summary

KIC: 6057401 Candidate: 3 of 7 Period: 20.239 d



DV Fit Results:

Period = 20.23876 [0.00015] d
Epoch = 140.5768 [0.0052] BKJD
Rp/R* = 0.0678 [0.1191]
a/R* = 38.72 [36.83]
b = 0.96 [0.28]
Seff = 320.50 [124.21]
Teq = 1079 [105] K
Rp = 13.54 [24.13] Re
a = 0.1720 [0.0421] AU
Ag = 189.73 [670.04] [0.28σ]
Teffp = 6191 [5448] K [0.94σ]

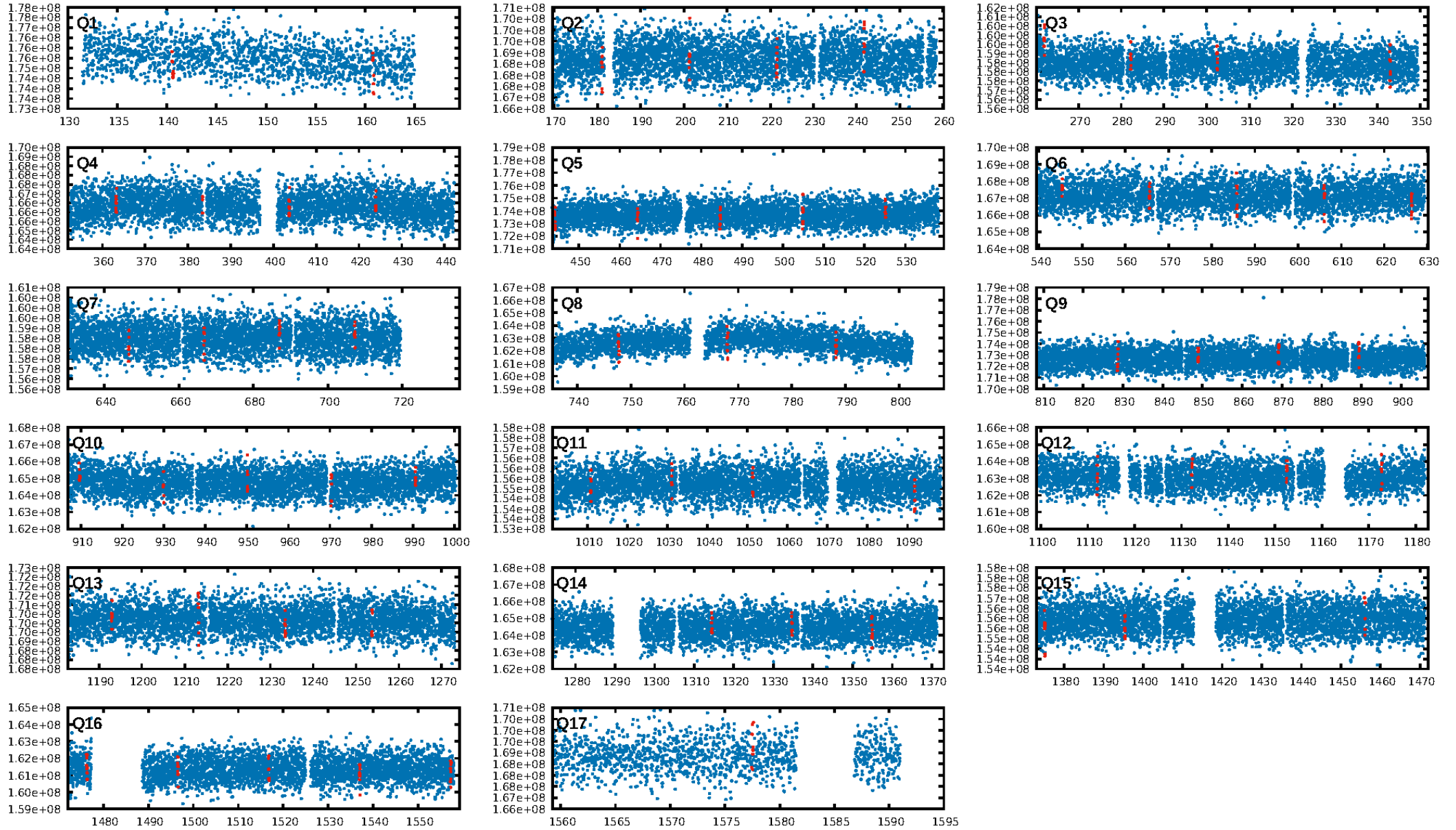
DV Diagnostic Results:

ShortPeriod-sig: 93.6% [1.85σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.4%
ModelChiSquareGof-sig: 97.8%
Bootstrap-pfa: N/A
RollingBand-fgt: 0.90 [9/10]
GhostDiagnostic-chr: -0.6863
Centroid-sig: 39.8%
Centroid-so: 0.139 arcsec [2.97σ]
OotOffset-rm: 0.162 arcsec [1.36σ]
KicOffset-rm: 0.087 arcsec [1.01σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.59 [10/17]
DiffImageOverlap-fno: 0.18 [3/17]

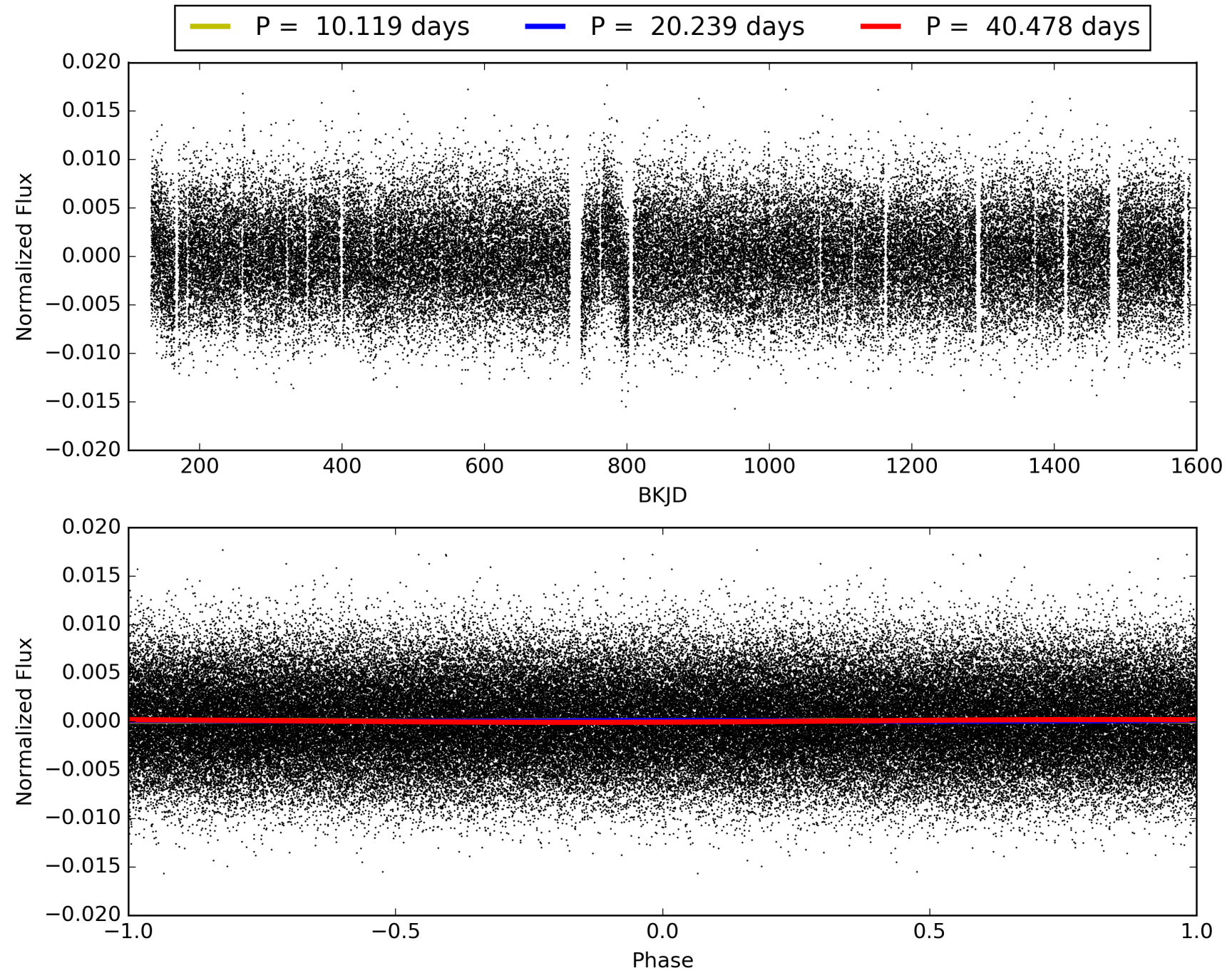
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 08:20:01 Z

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

TCE 006057401-03, PDC Light Curves

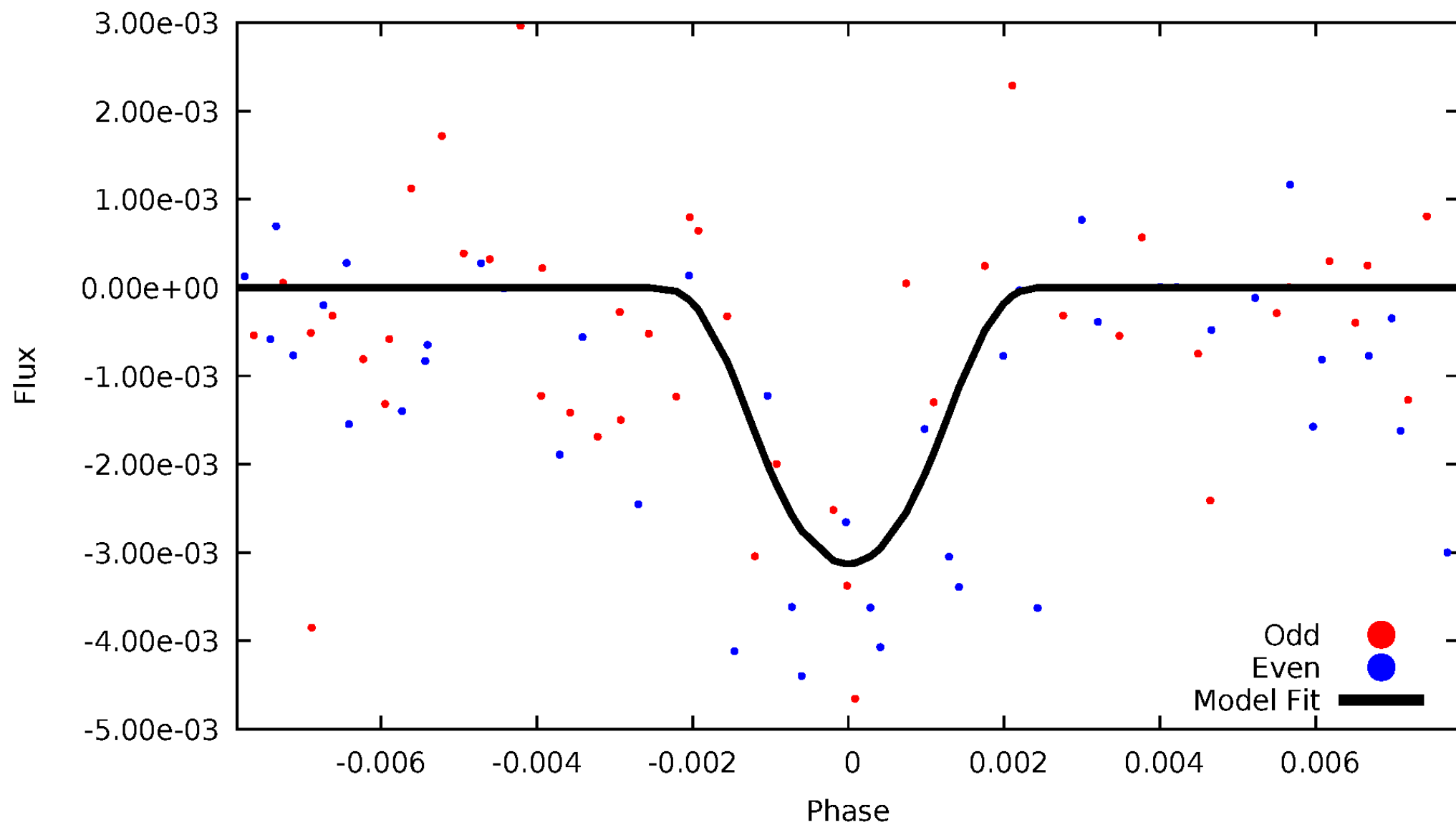


TCE 006057401-03



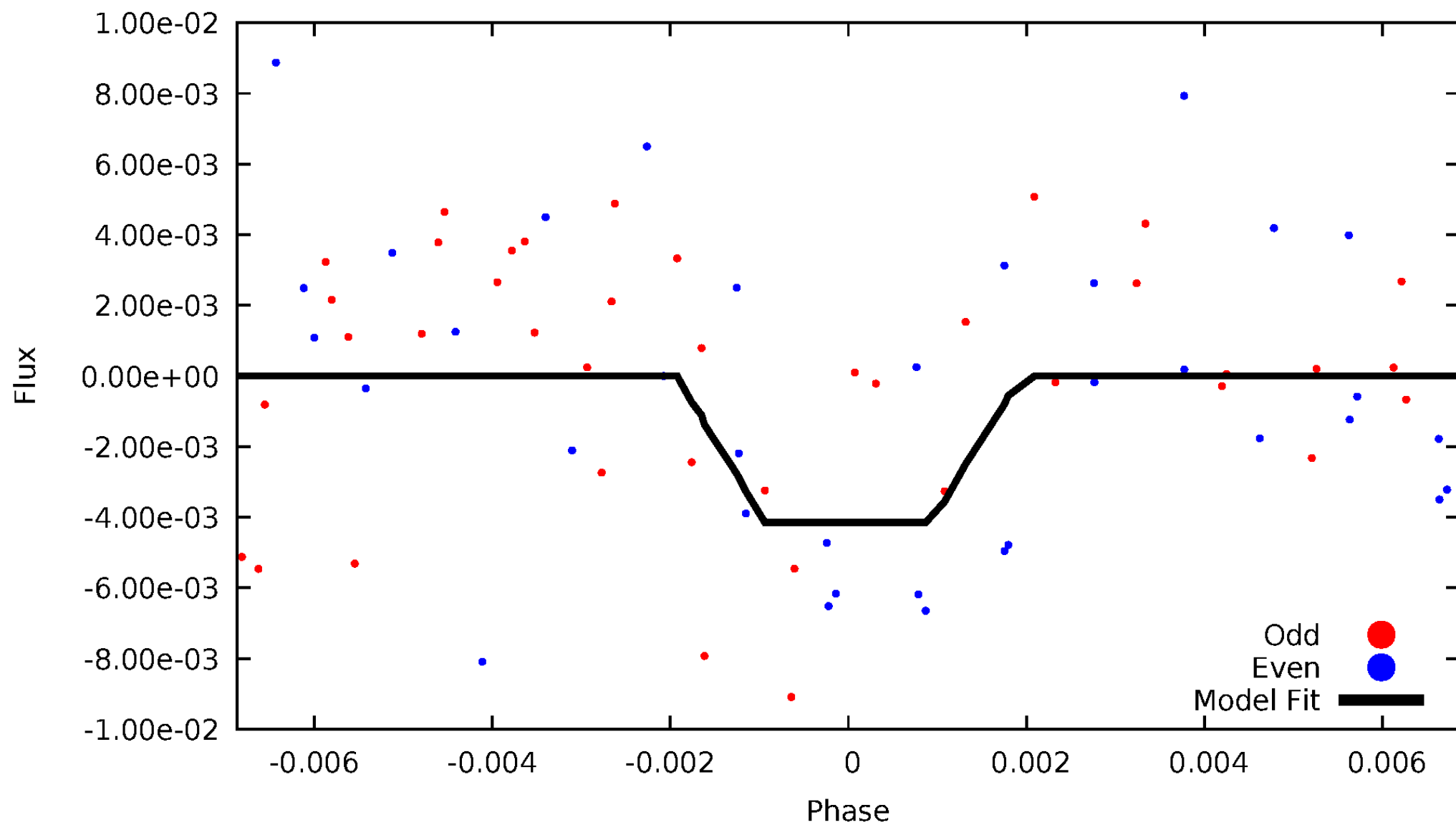
DV Odd/Even

TCE 006057401-03

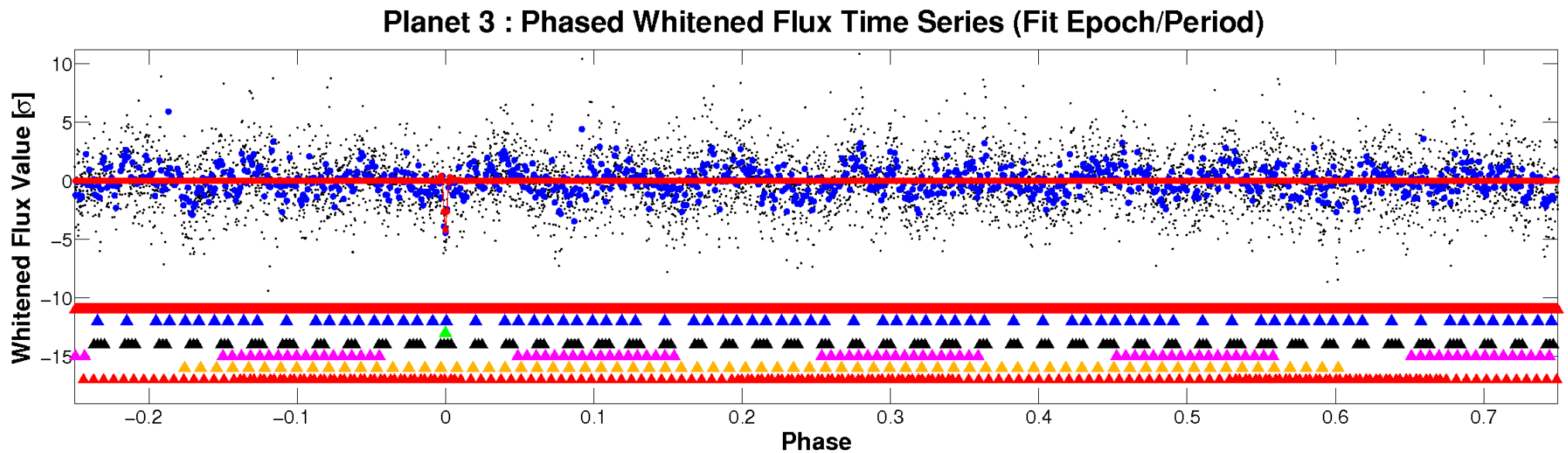
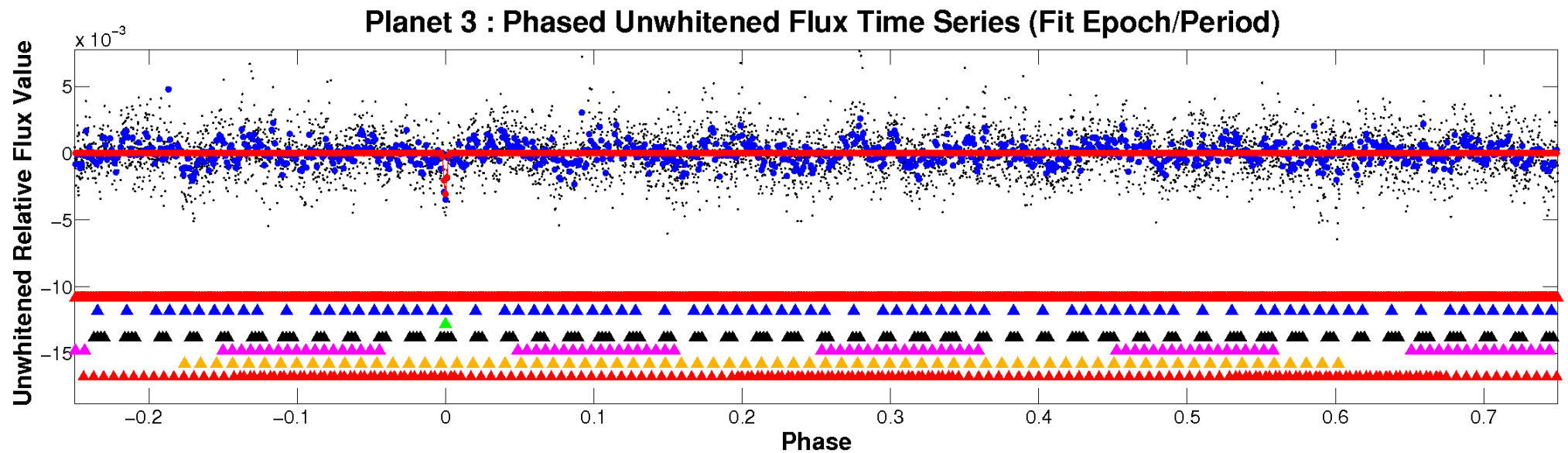


ALT Odd/Even

TCE 006057401-03

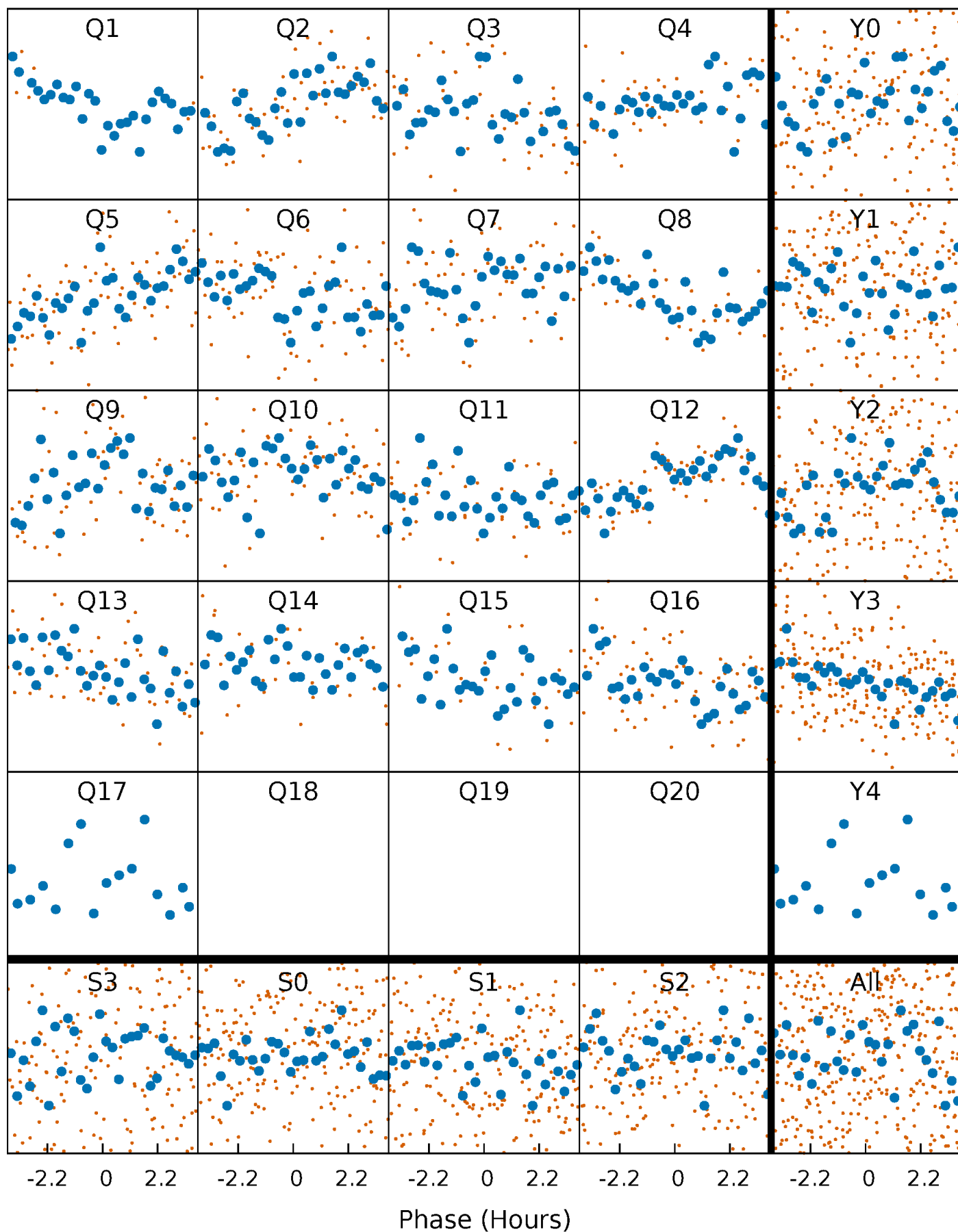


Non-Whitened Vs. Whitened Light Curve



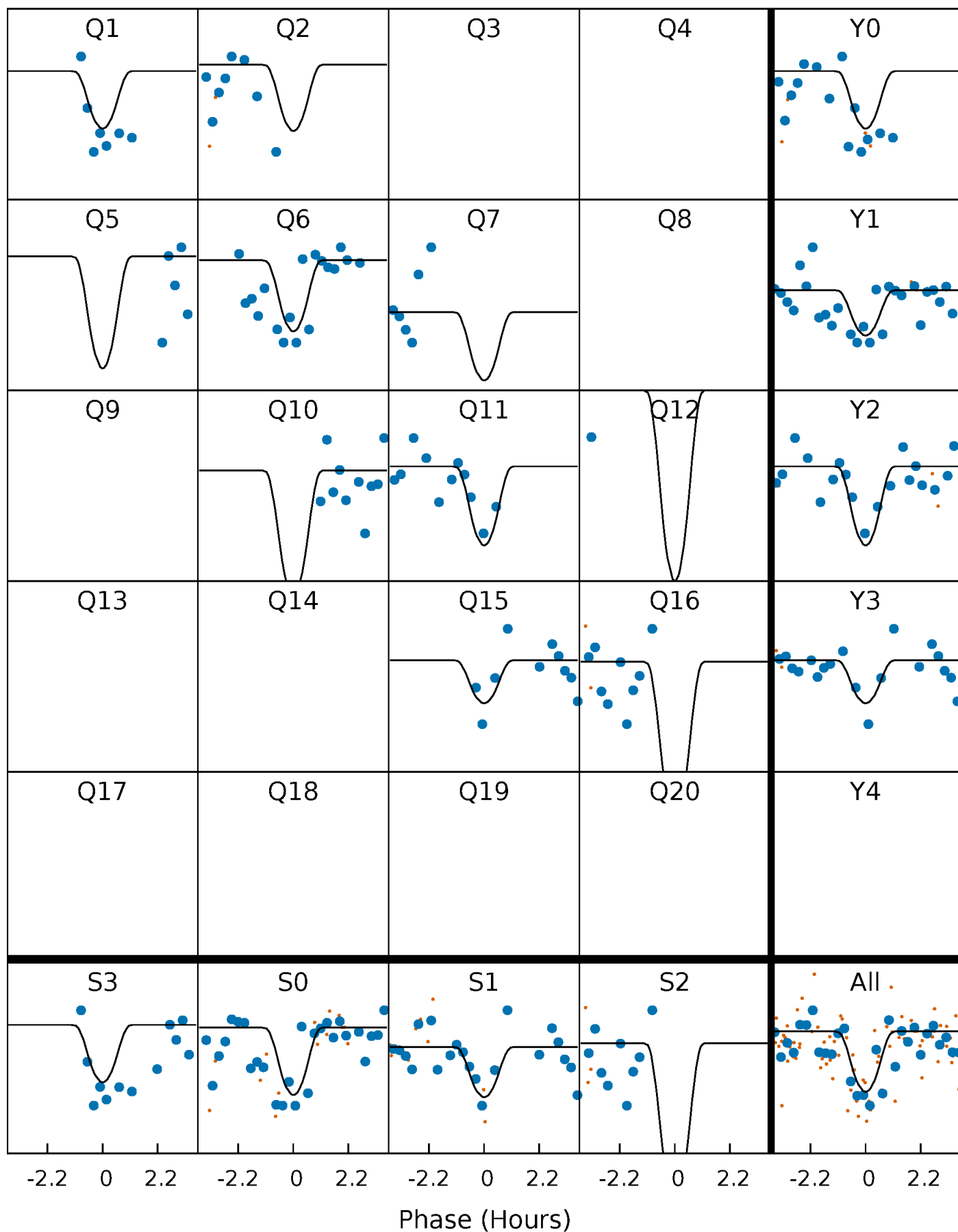
PDC Quarter-Phased Transit Curves

TCE 006057401-03 P= 20.238761 Days $T_0=140.576765$ (BKJD)



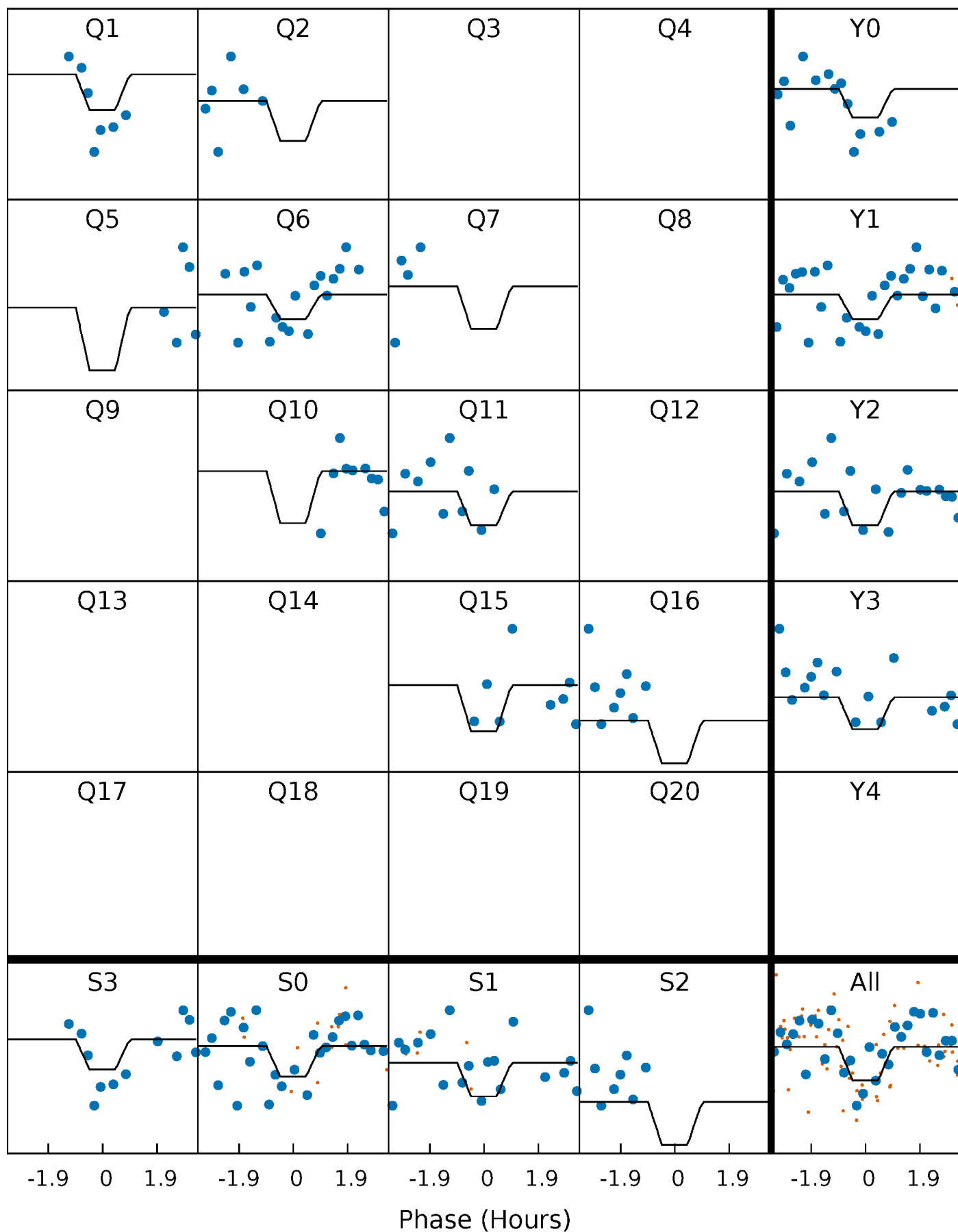
DV Quarter-Phased Transit Curves

TCE 006057401-03 $P = 20.238761$ Days $T_0 = 140.576765$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

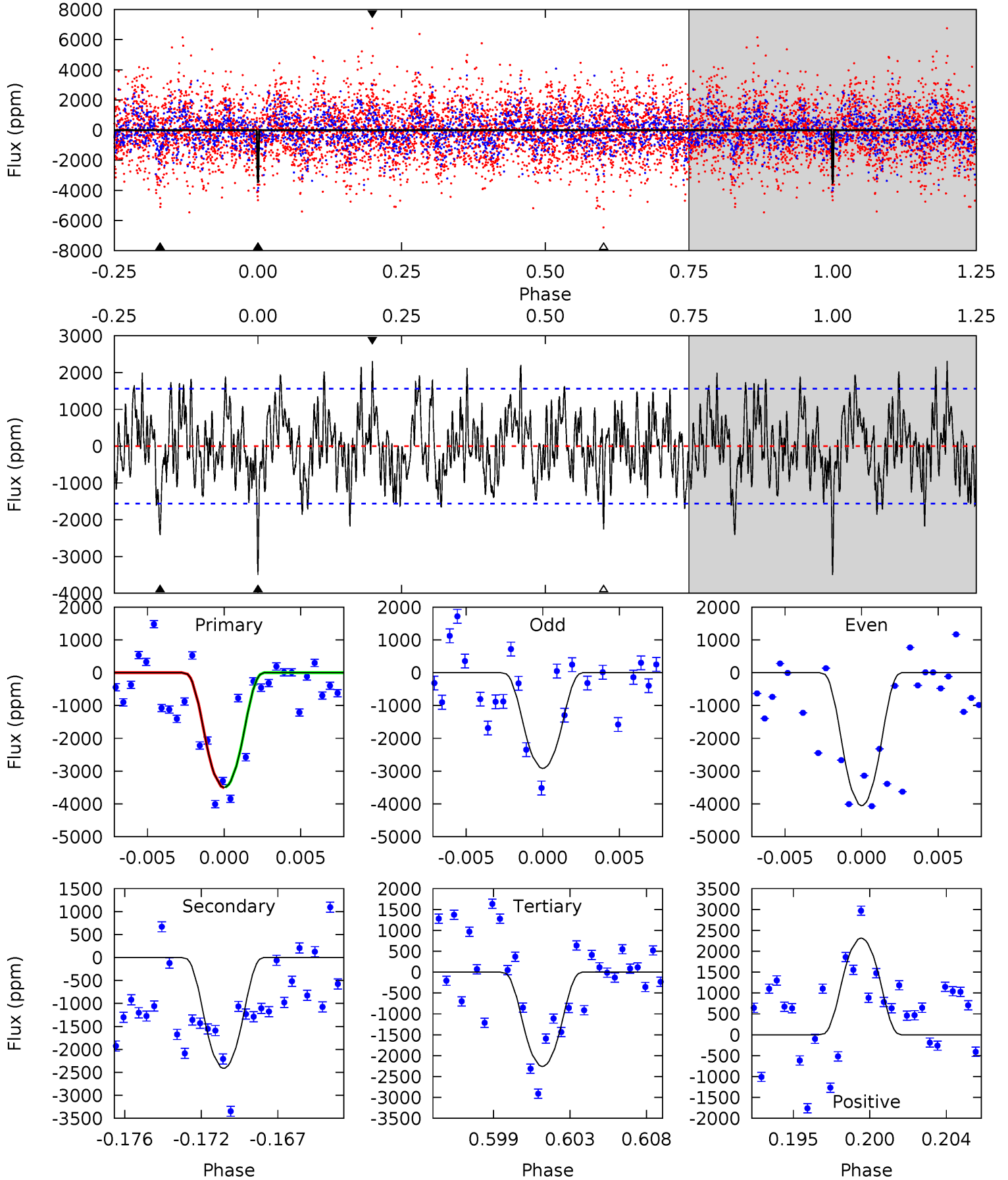
TCE 006057401-03 P= 20.238569 Days $T_0=140.589571$ (BKJD)



DV Model-Shift Uniqueness Test

006057401-03, P = 20.238761 Days, E = 120.338004 Days

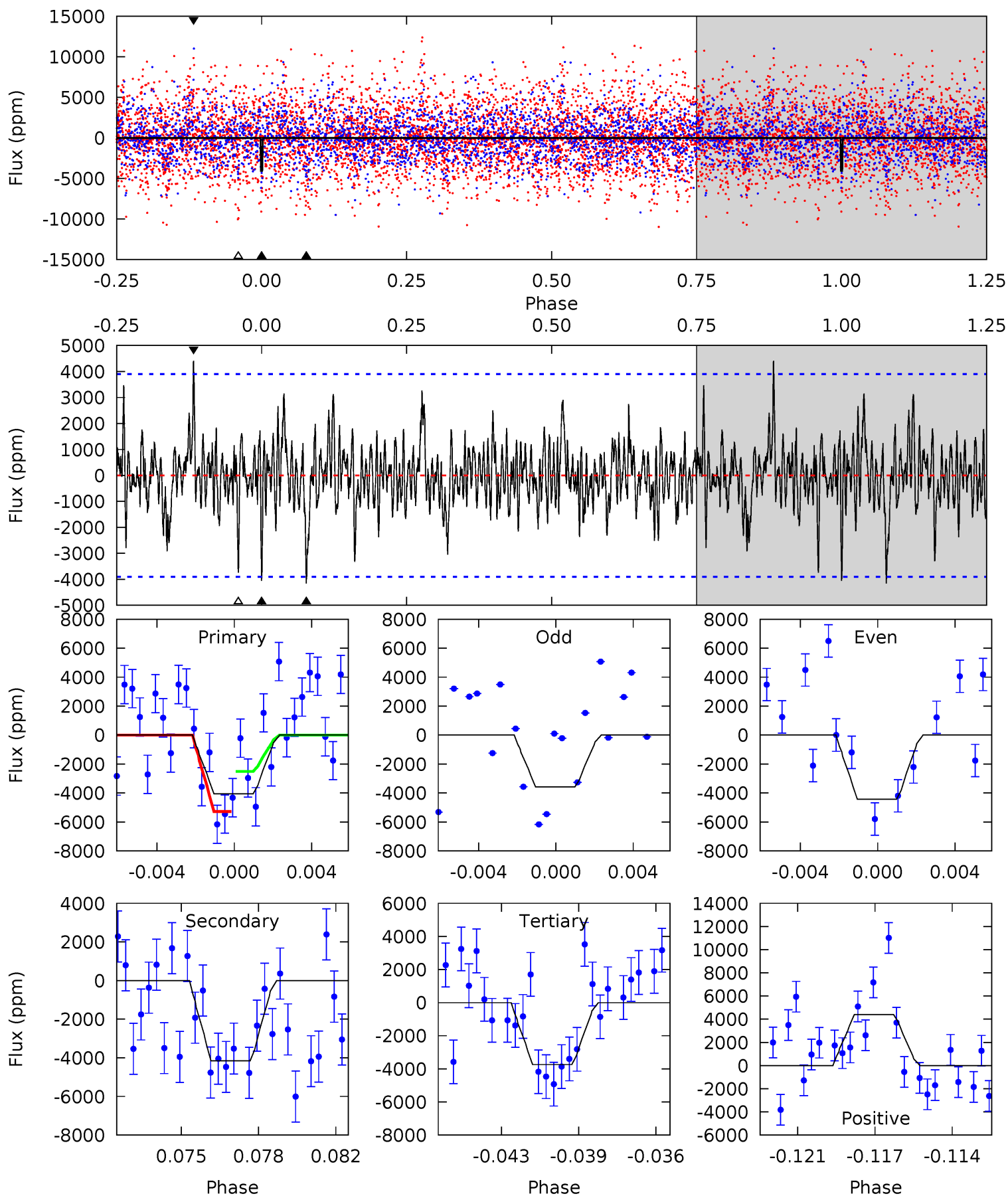
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.6	7.99	7.48	7.66	5.17	2.83	2.58	4.12	3.93	0.51	0.33	1.88	0.95	0.40	0.02



Alt Model-Shift Uniqueness Test

006057401-03, P = 20.238569 Days, E = 120.351002 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.42	5.56	5.00	5.89	5.22	2.92	1.37	0.42	-0.47	0.56	-0.33	0.56	0.73	0.51	1.85



Stellar Parameters For KIC 006057401

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7497^{+210}_{-341}	$4.132^{+0.120}_{-0.180}$	$0.070^{+0.200}_{-0.350}$	$1.830^{+0.554}_{-0.341}$	$1.656^{+0.205}_{-0.251}$	$0.380^{+0.218}_{-0.188}$
	+3%/-5%	+3%/-4%	+286%/-500%	+30%/-19%	+12%/-15%	+57%/-49%
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 006057401-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-2414 ± 302	$22.11^{+21.78}_{-15.51}$	1514^{+117}_{-96}	5012^{+4493}_{-1143}	84^{+765}_{-64}
Alt.	-4157 ± 747	$22.15^{+20.79}_{-15.80}$	1509^{+101}_{-91}	5610^{+6380}_{-1315}	133^{+1388}_{-98}

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

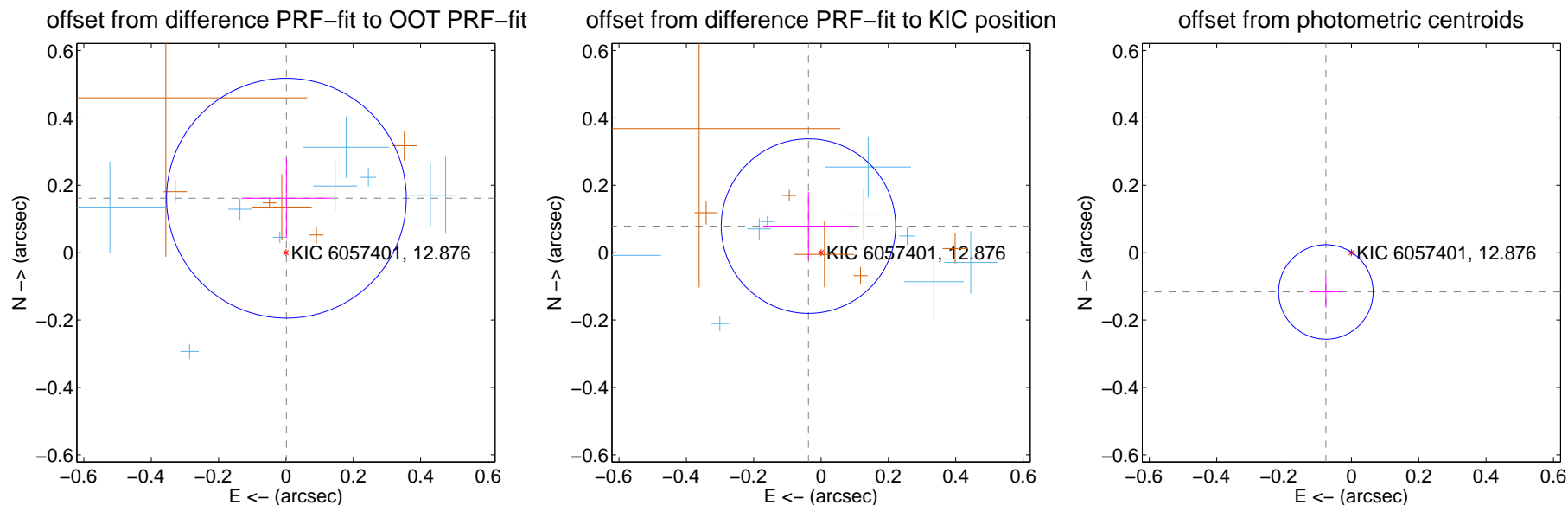
DV Centroid Data

Supplemental centroid analysis for 006057401-03. Kepler magnitude: 12.88. Transit SNR 13.71

There are 10 quarters with good PRF difference image offsets

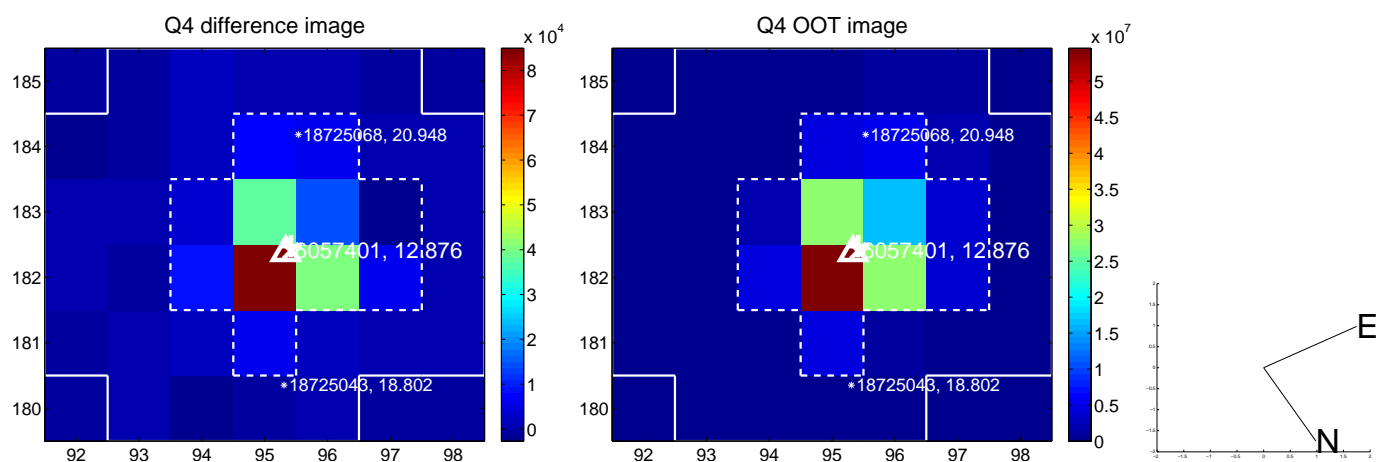
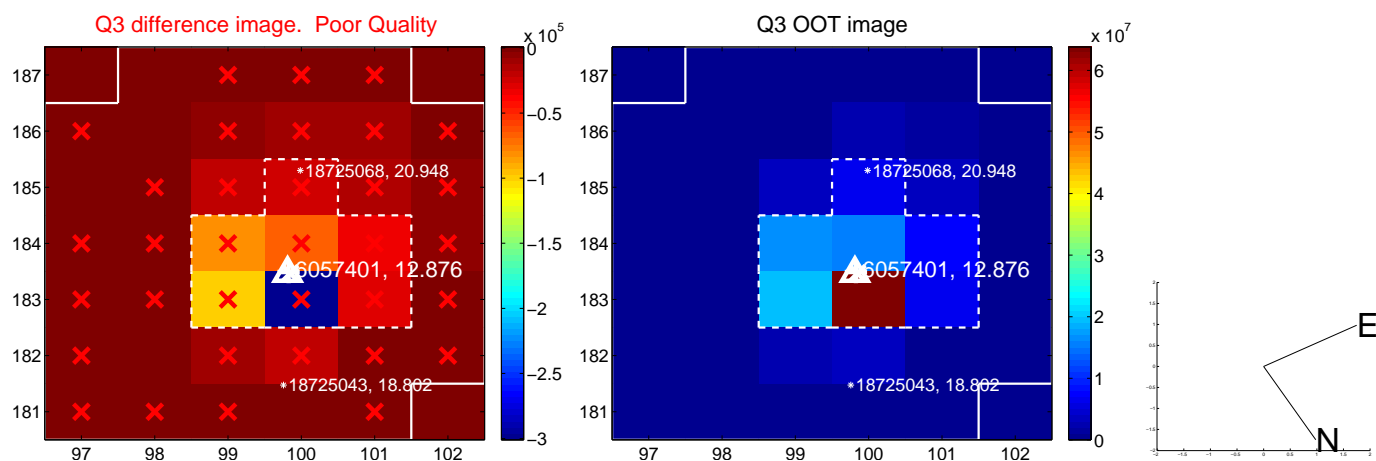
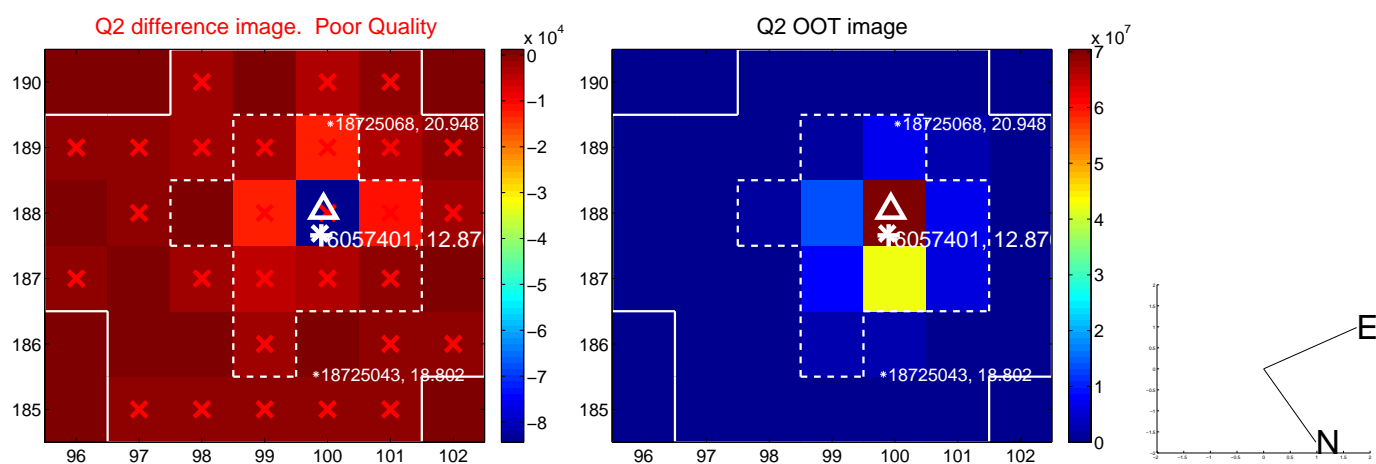
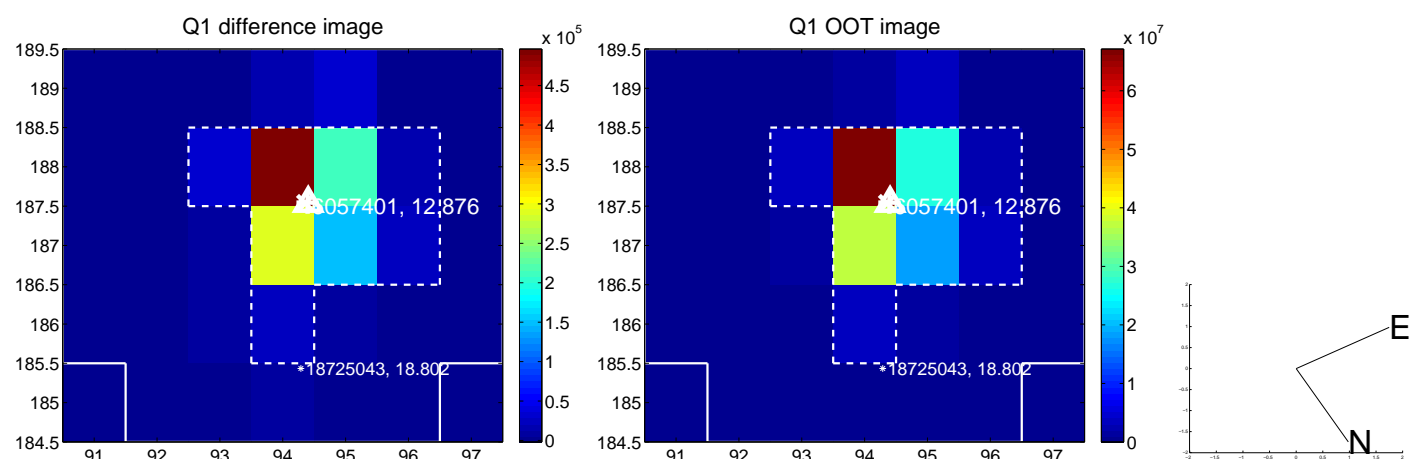
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.162 ± 0.119	1.36	-0.001 ± 0.132	0.162 ± 0.118
PRF-fit source offset from KIC position	0.087 ± 0.086	1.01	0.037 ± 0.135	0.079 ± 0.101
photometric centroid source offset	0.14 ± 0.05	2.97	0.08 ± 0.05	-0.12 ± 0.05

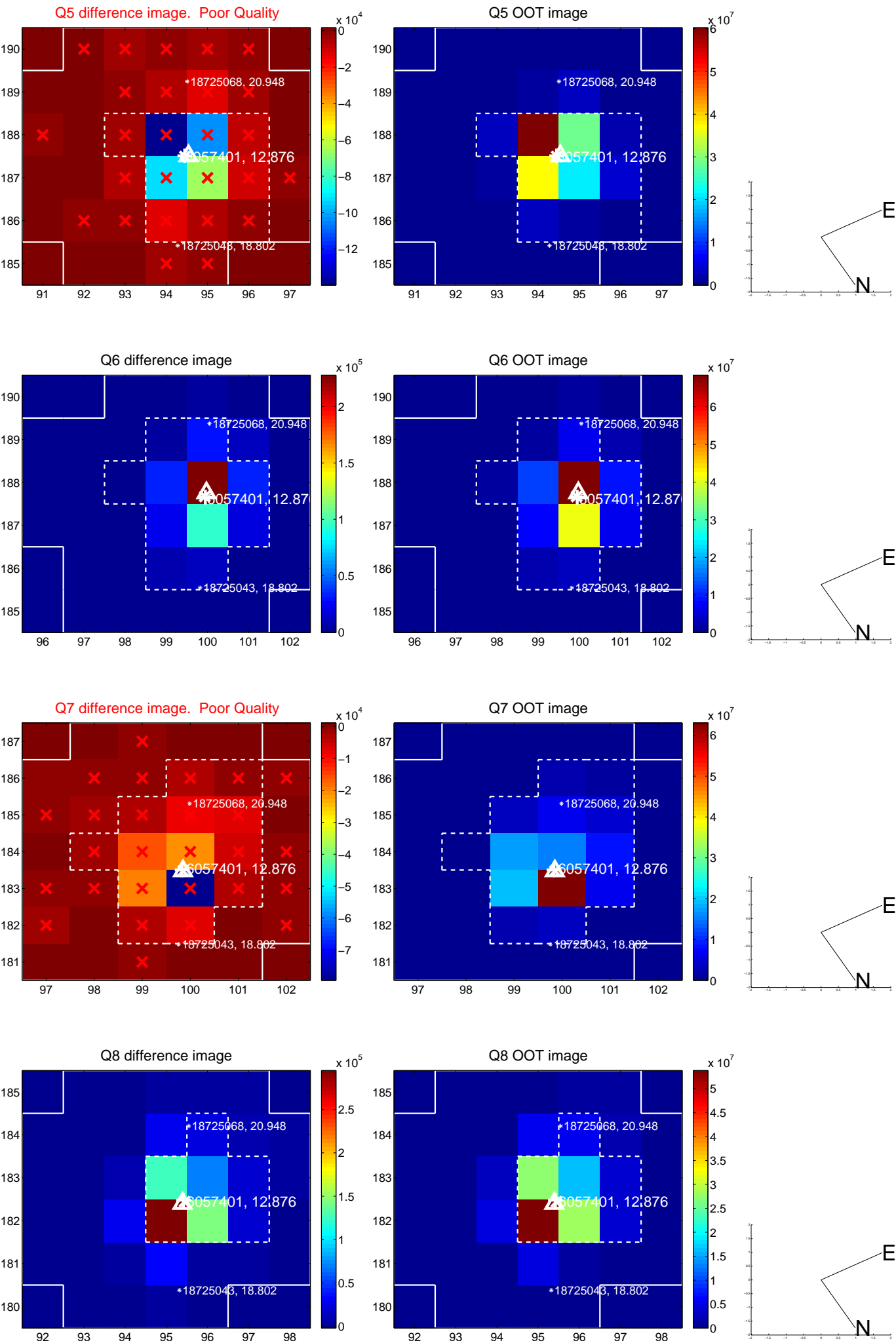


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

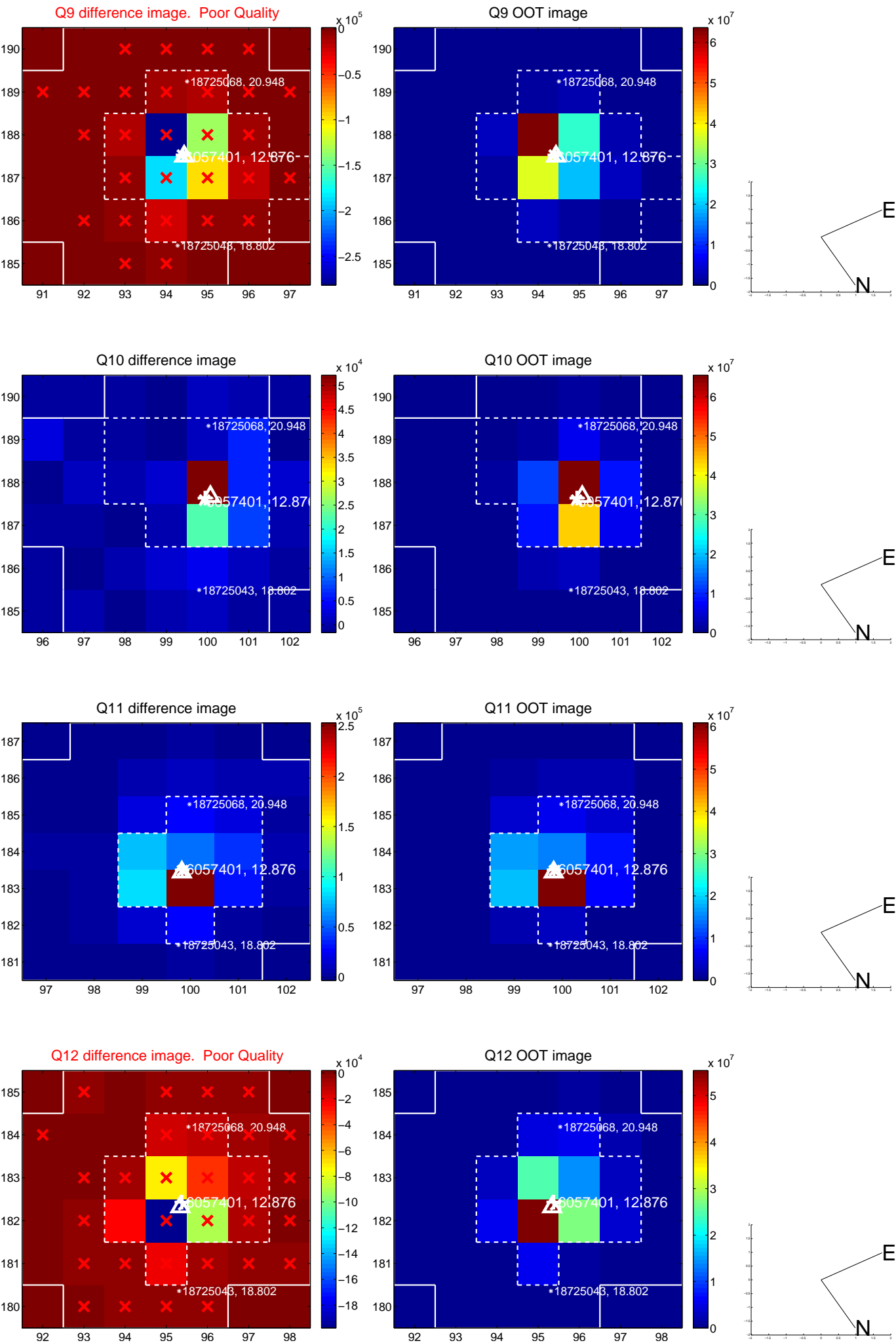
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



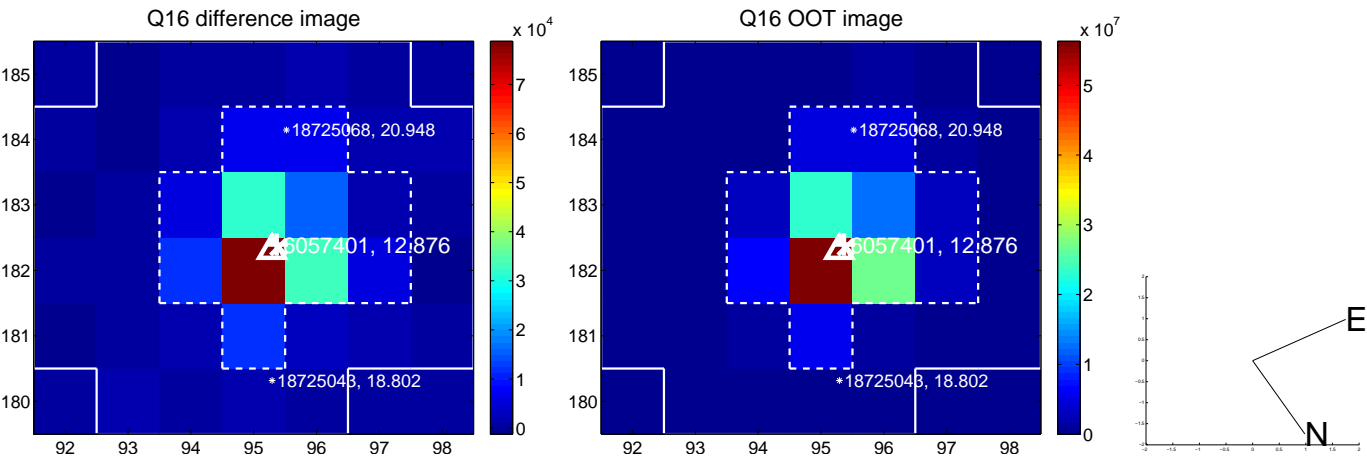
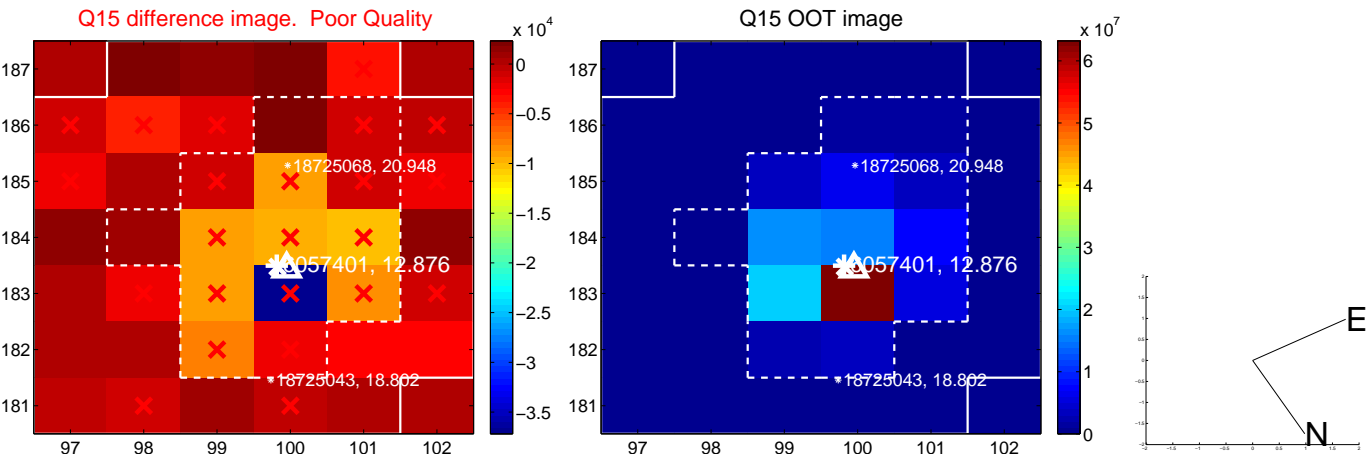
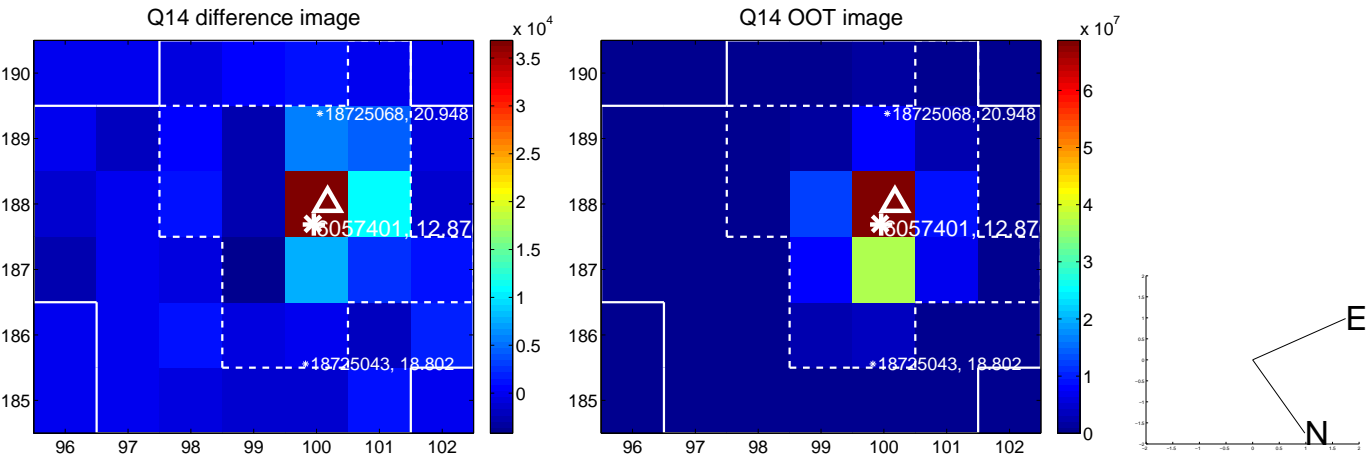
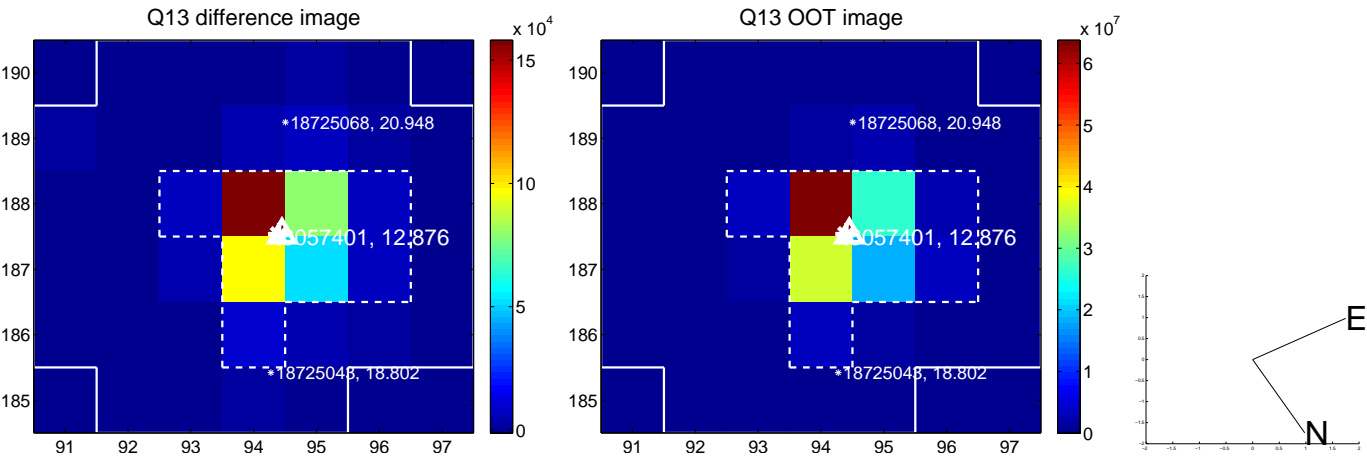
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



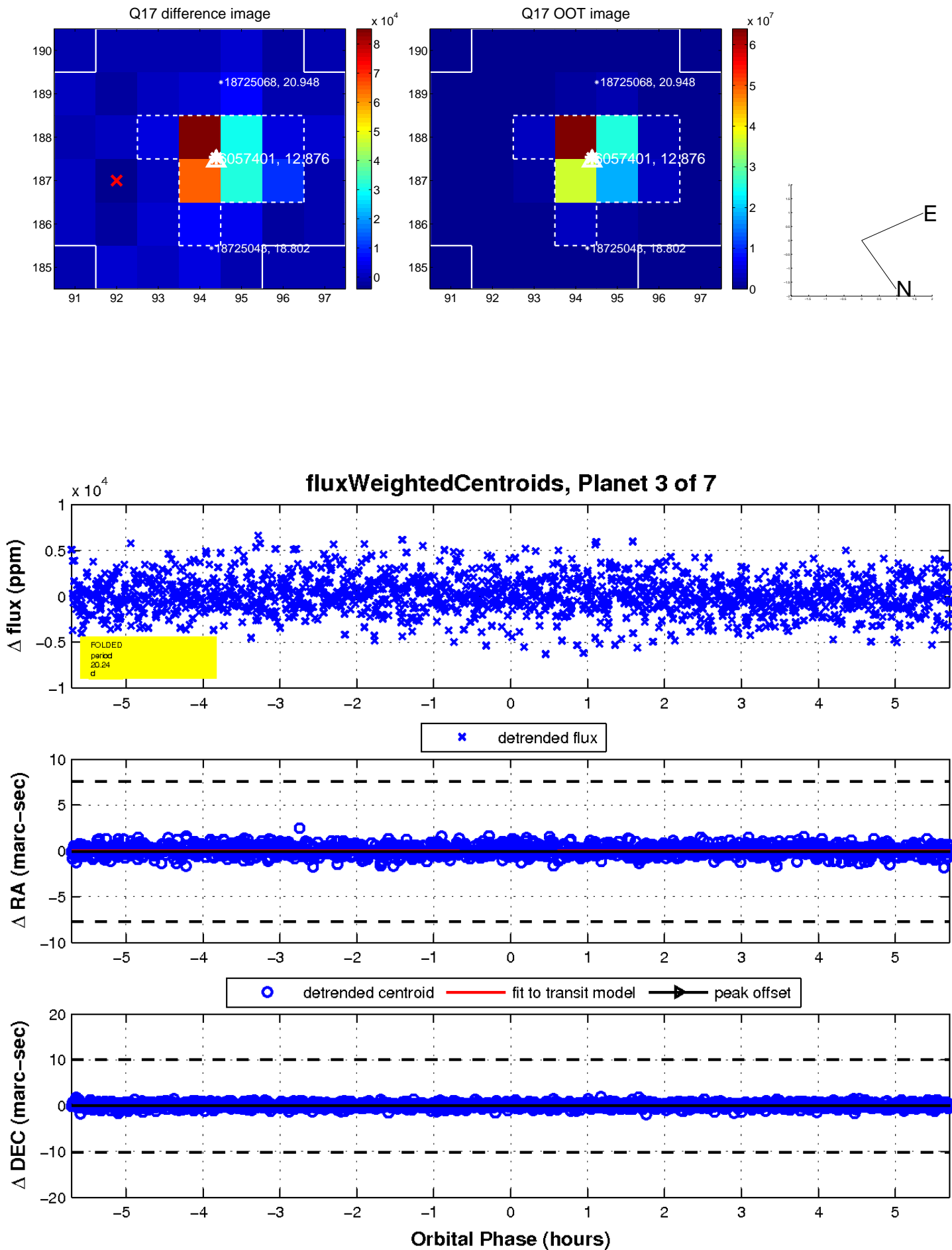
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

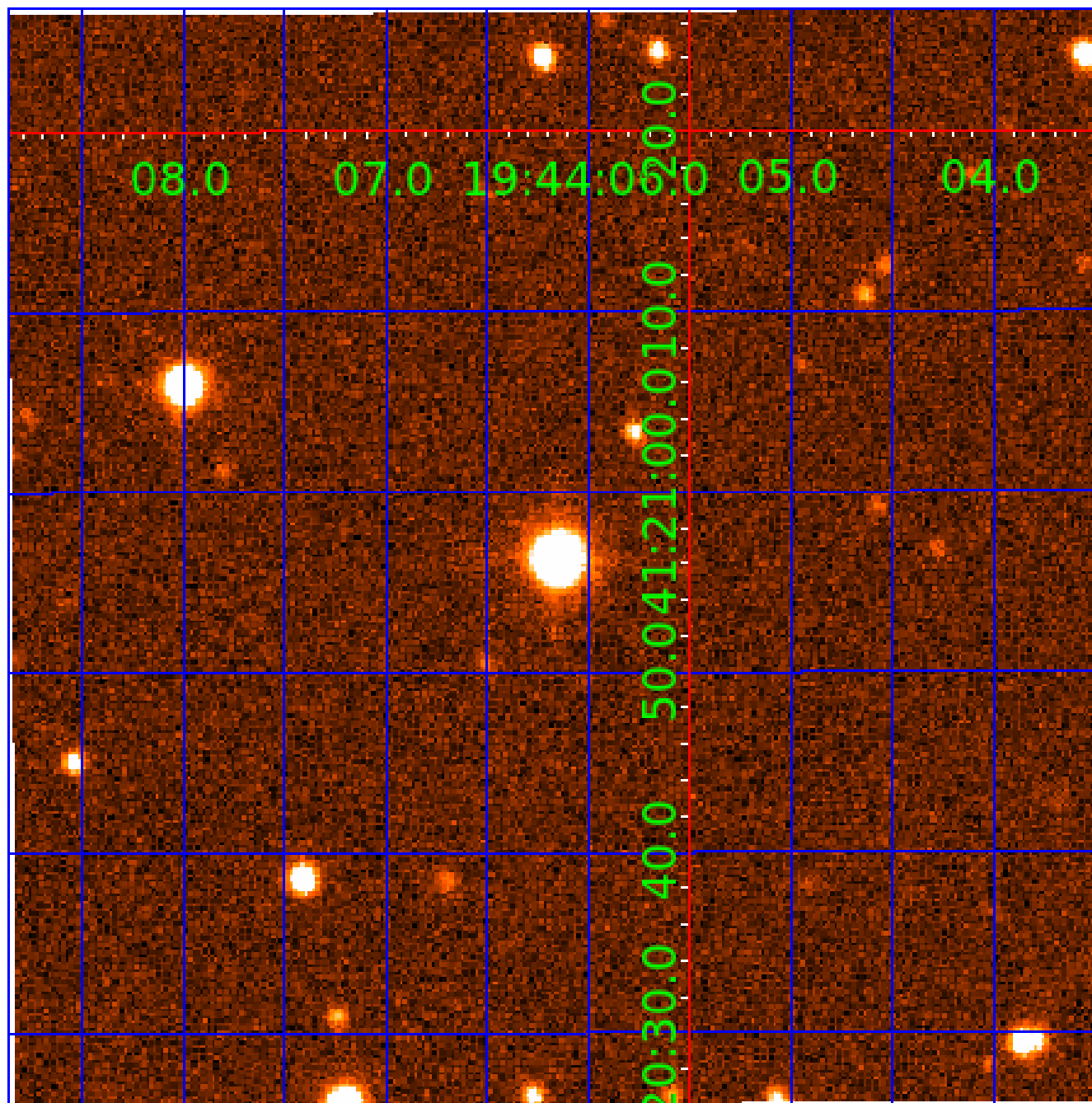


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006057401

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})
006057401-01	OBS	No	0.808054	132.110916	100.6	5.719	10.7	6.1	1.83	7497	1.88	23486.83
006057401-02	OBS	No	17.659040	145.562937	2662.0	1.837	17.9	10.8	1.83	7497	9.61	384.40
006057401-03	OBS	No	20.238761	140.576765	3128.6	1.906	16.3	13.7	1.83	7497	13.54	320.50
006057401-04	OBS	No	9.041831	133.346933	2592.3	1.423	16.9	17.2	1.83	7497	9.88	938.43
006057401-05	OBS	No	16.216110	141.563860	3346.5	1.127	17.1	14.7	1.83	7497	10.86	430.68
006057401-06	OBS	No	20.020123	132.519915	2731.9	2.102	16.8	16.5	1.83	7497	9.77	325.18
006057401-07	OBS	No	6.791879	137.775779	512.8	2.000	15.3	-1.0	1.83	7497	4.22	1374.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006057401-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
006057401-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
006057401-03	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
006057401-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006057401-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006057401-06	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
006057401-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

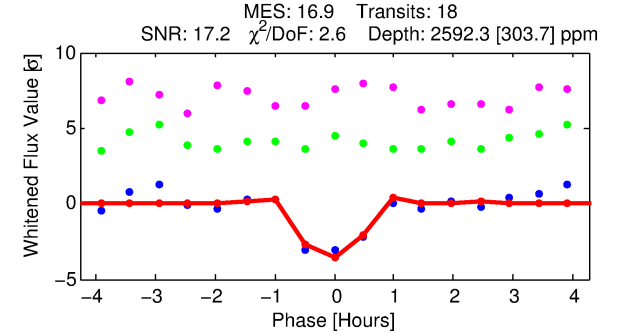
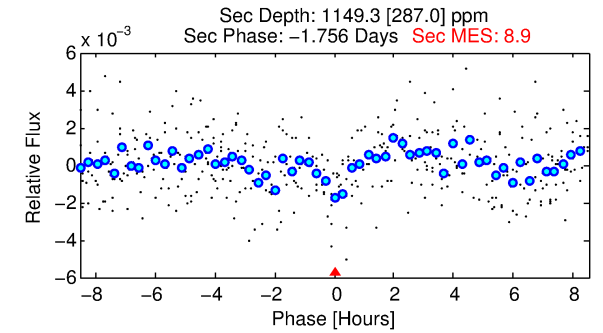
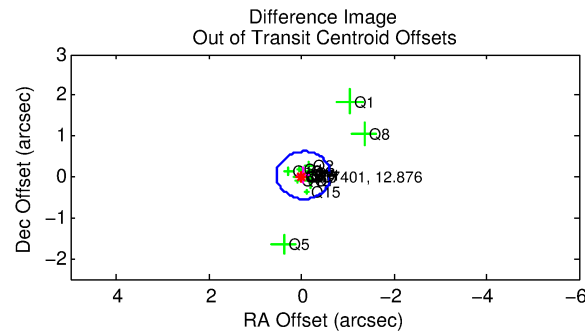
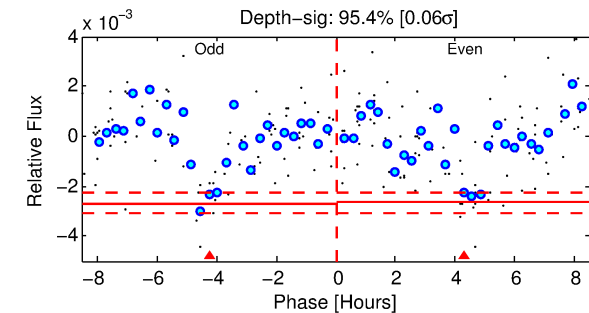
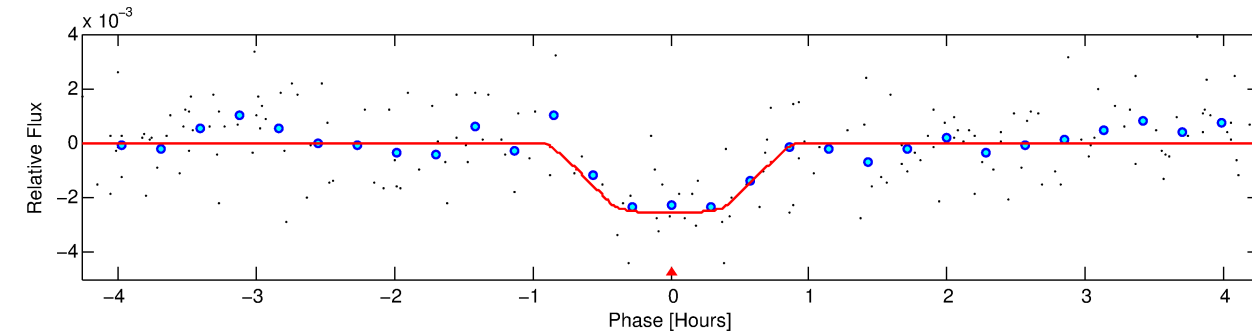
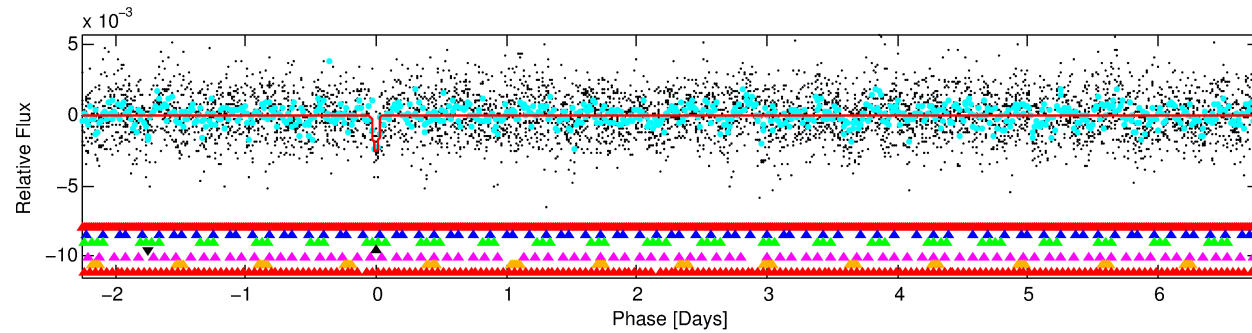
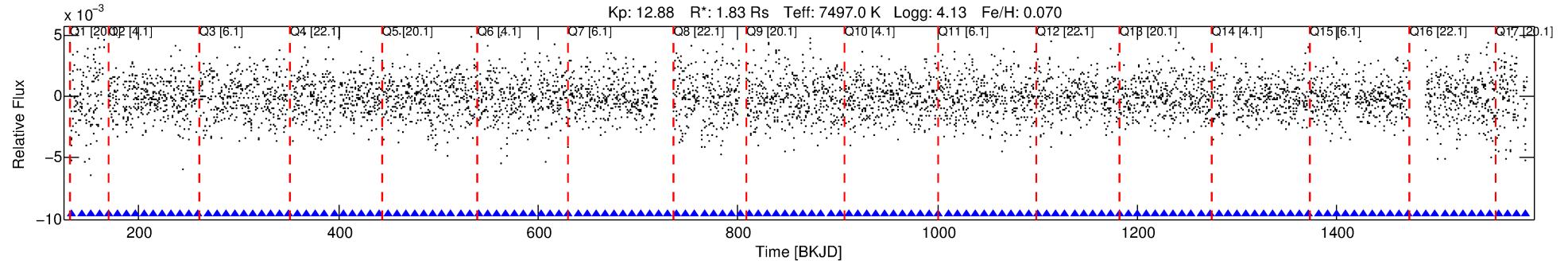
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006057401-04

No Significant Match Found

DV One-Page Summary

KIC: 6057401 Candidate: 4 of 7 Period: 9.042 d



DV Fit Results:

Period = 9.04183 [0.00004] d
Epoch = 133.3469 [0.0041] BKJD
Rp/R* = 0.0495 [0.0253]
a/R* = 41.12 [125.14]
b = 0.62 [3.06]
Seff = 938.43 [363.67]
Teq = 1411 [137] K
Rp = 9.88 [5.88] Re
a = 0.1005 [0.0246] AU
Ag = 65.45 [72.53] [0.89 σ]
Teffp = 6206 [1660] K [2.88 σ]

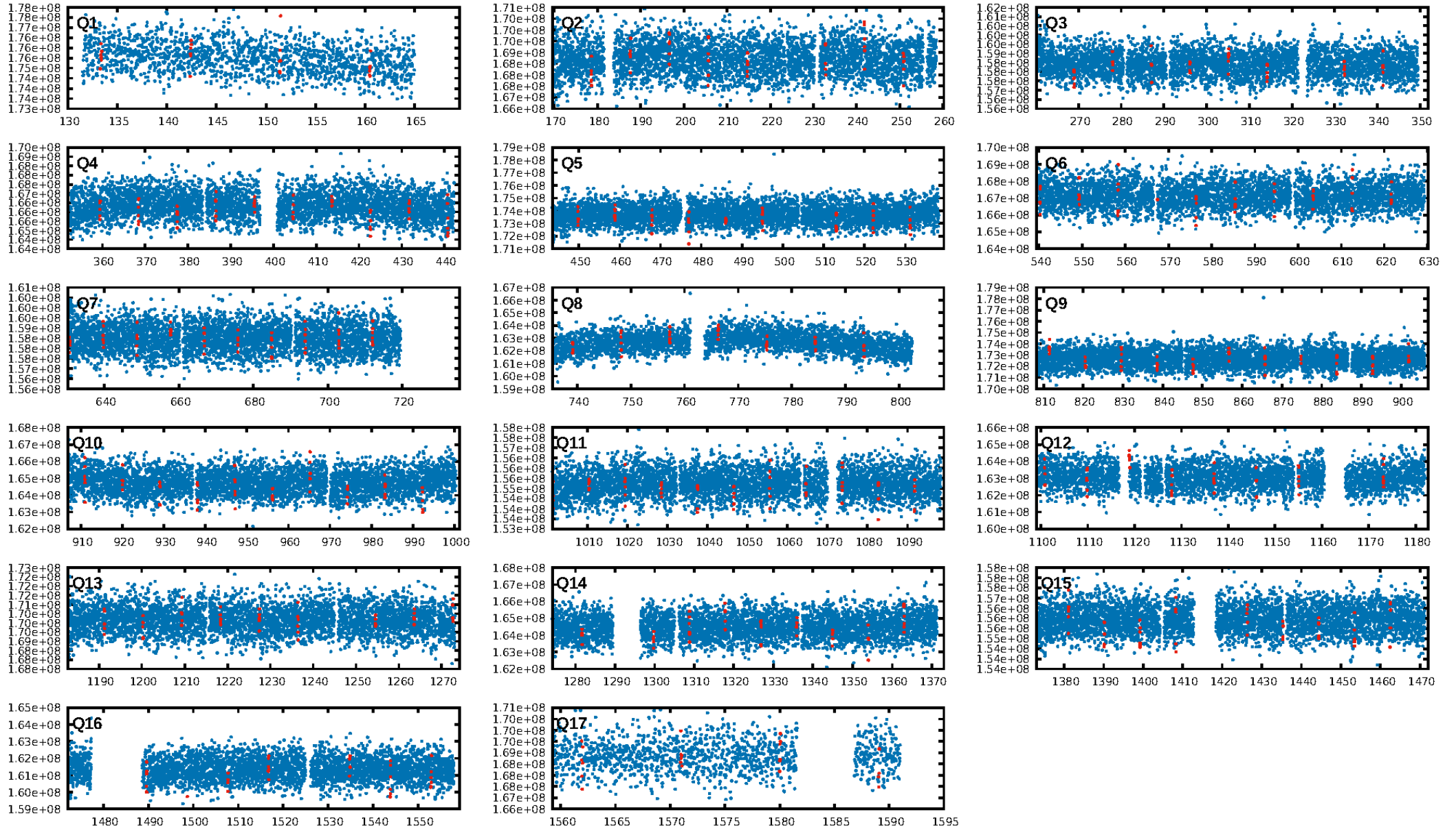
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [22.00 σ]
LongPeriod-sig: 100.0% [94.83 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 30.8%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [16/16]
GhostDiagnostic-chr: -8.709
Centroid-sig: 3.6%
Centroid-so: 0.146 arcsec [4.16 σ]
OotOffset-rm: 0.059 arcsec [0.30 σ]
KicOffset-rm: 0.011 arcsec [0.10 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.94 [16/17]
DiffImageOverlap-fno: 0.65 [11/17]

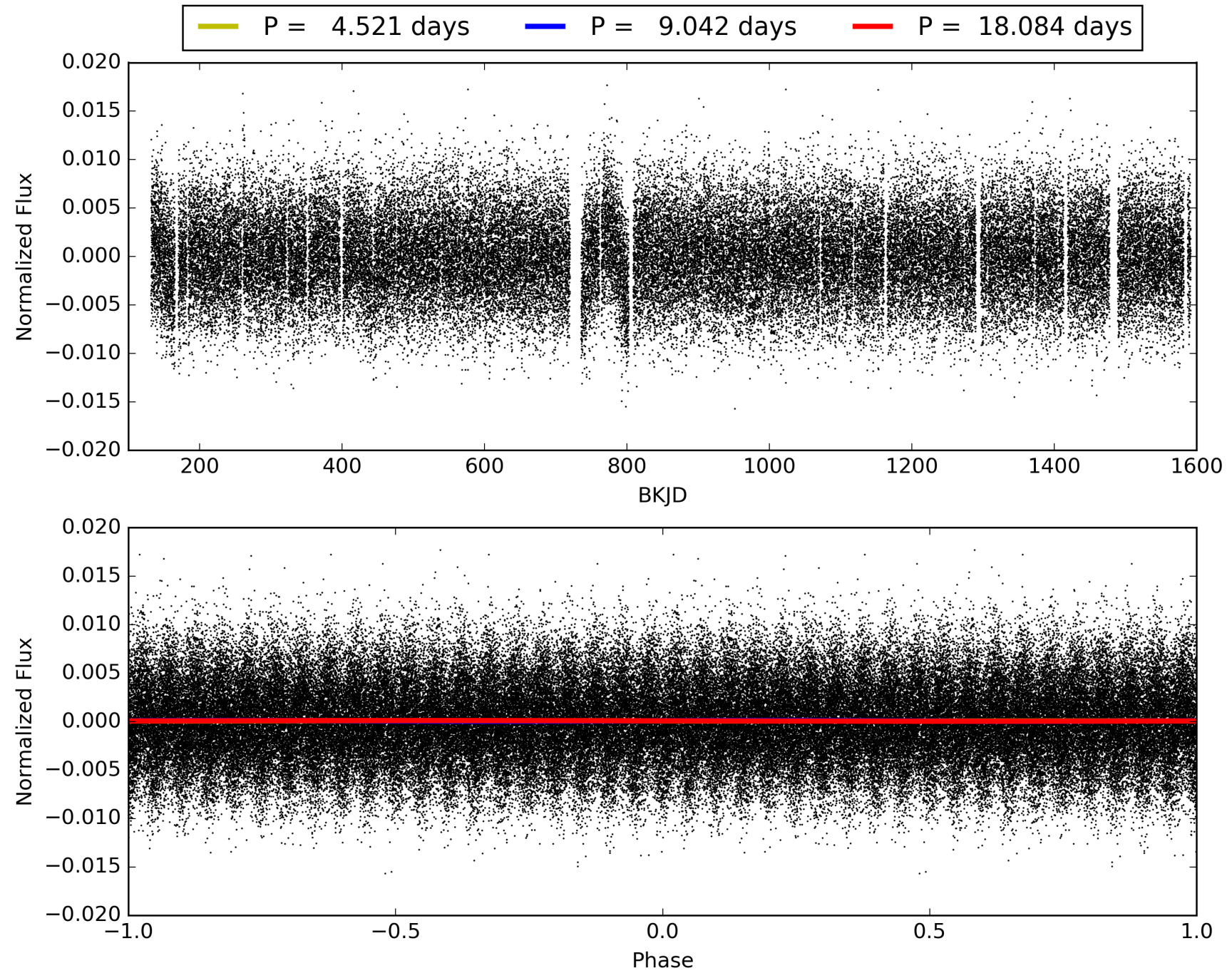
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 08:20:04 Z

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

TCE 006057401-04, PDC Light Curves

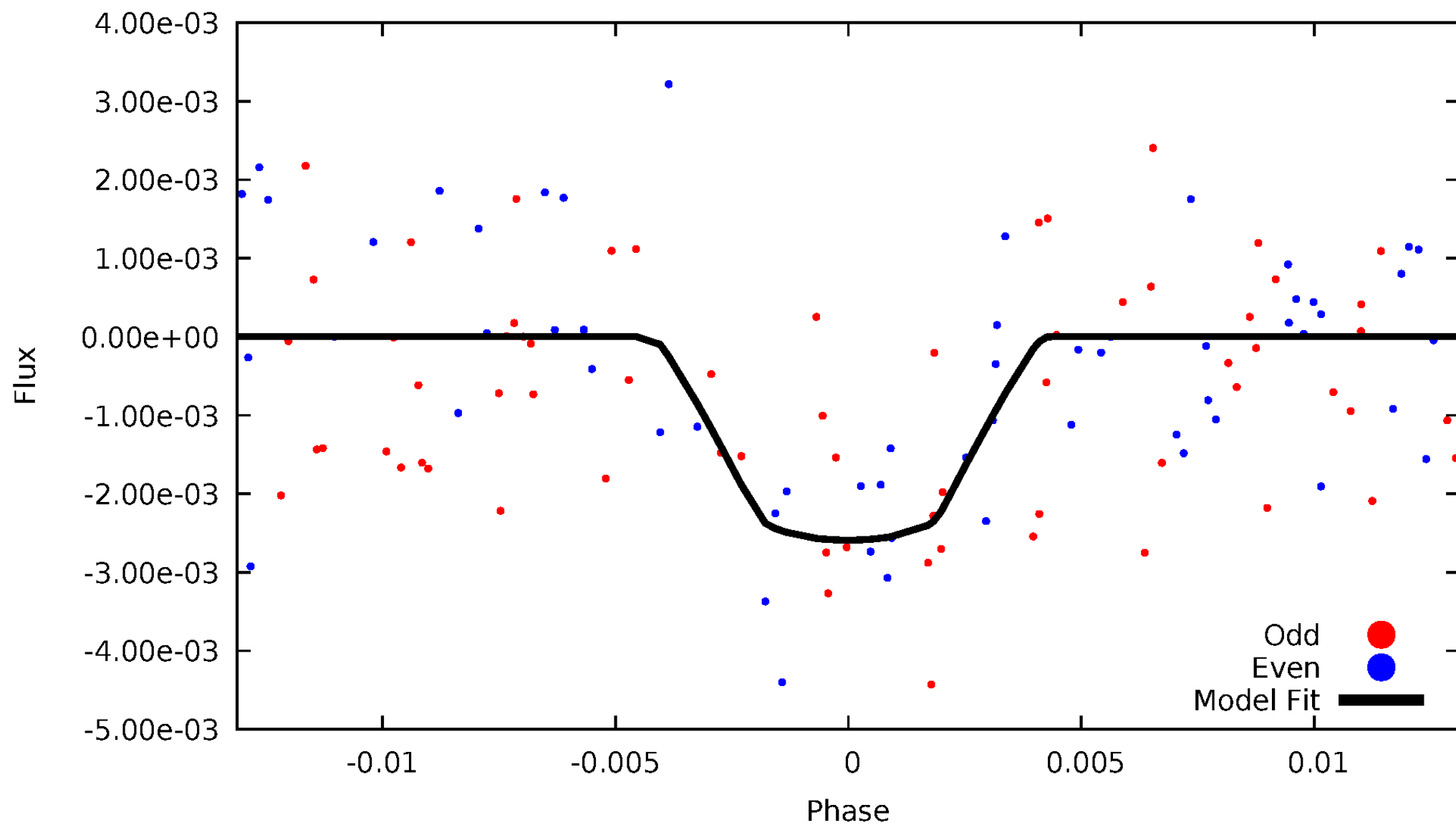


TCE 006057401-04



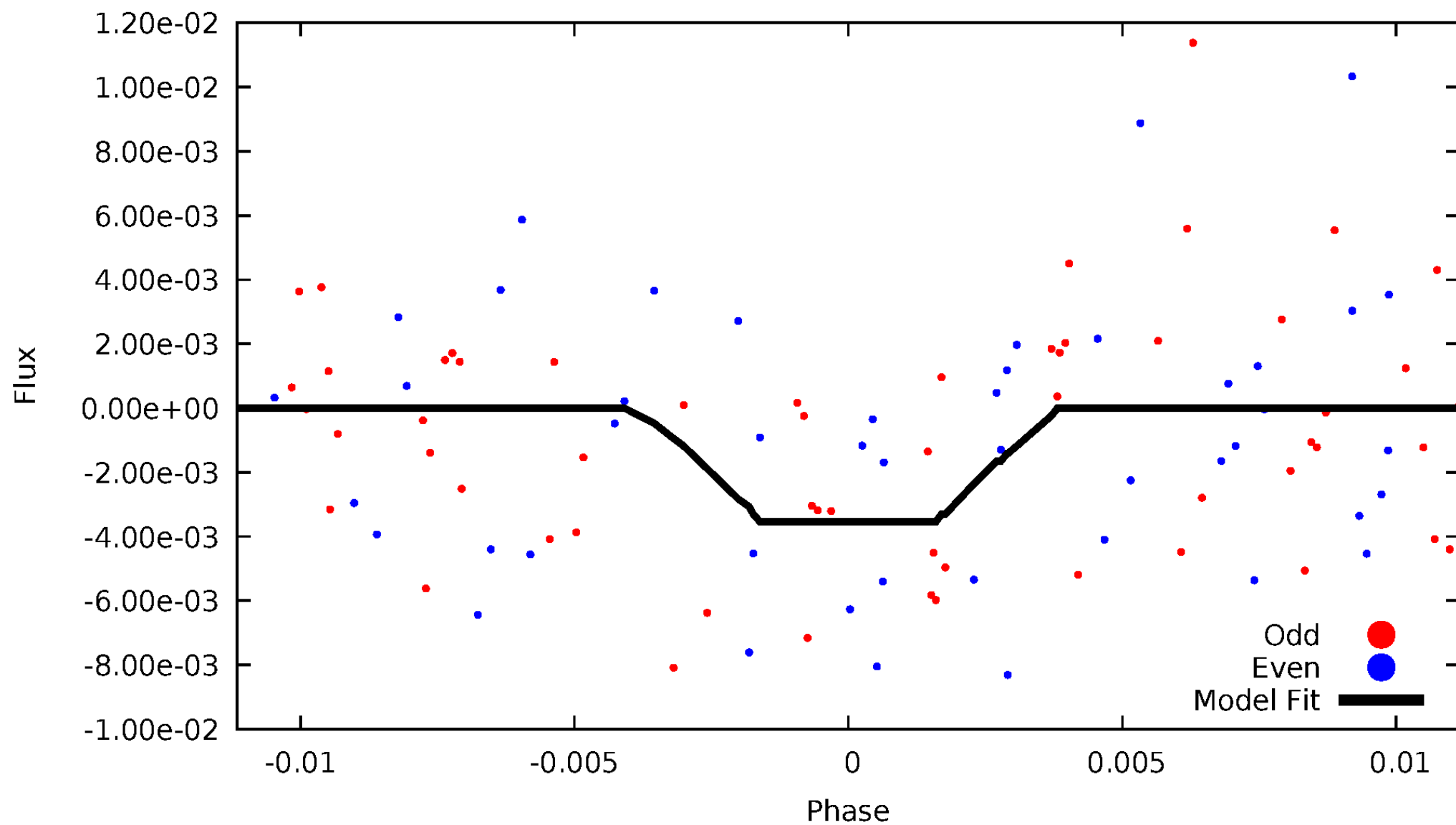
DV Odd/Even

TCE 006057401-04



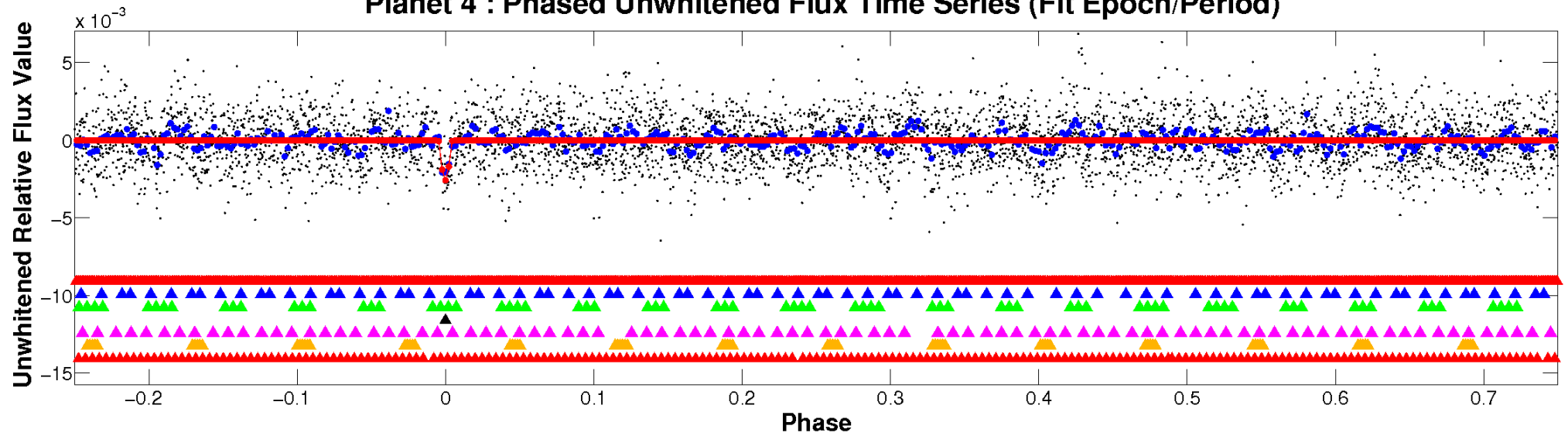
ALT Odd/Even

TCE 006057401-04

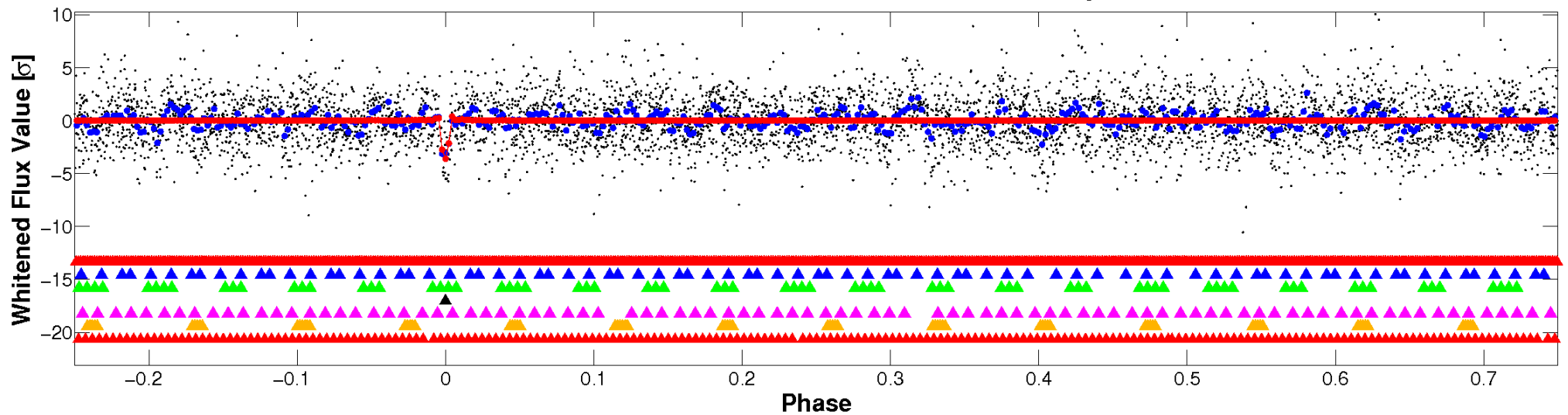


Non-Whitened Vs. Whitened Light Curve

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

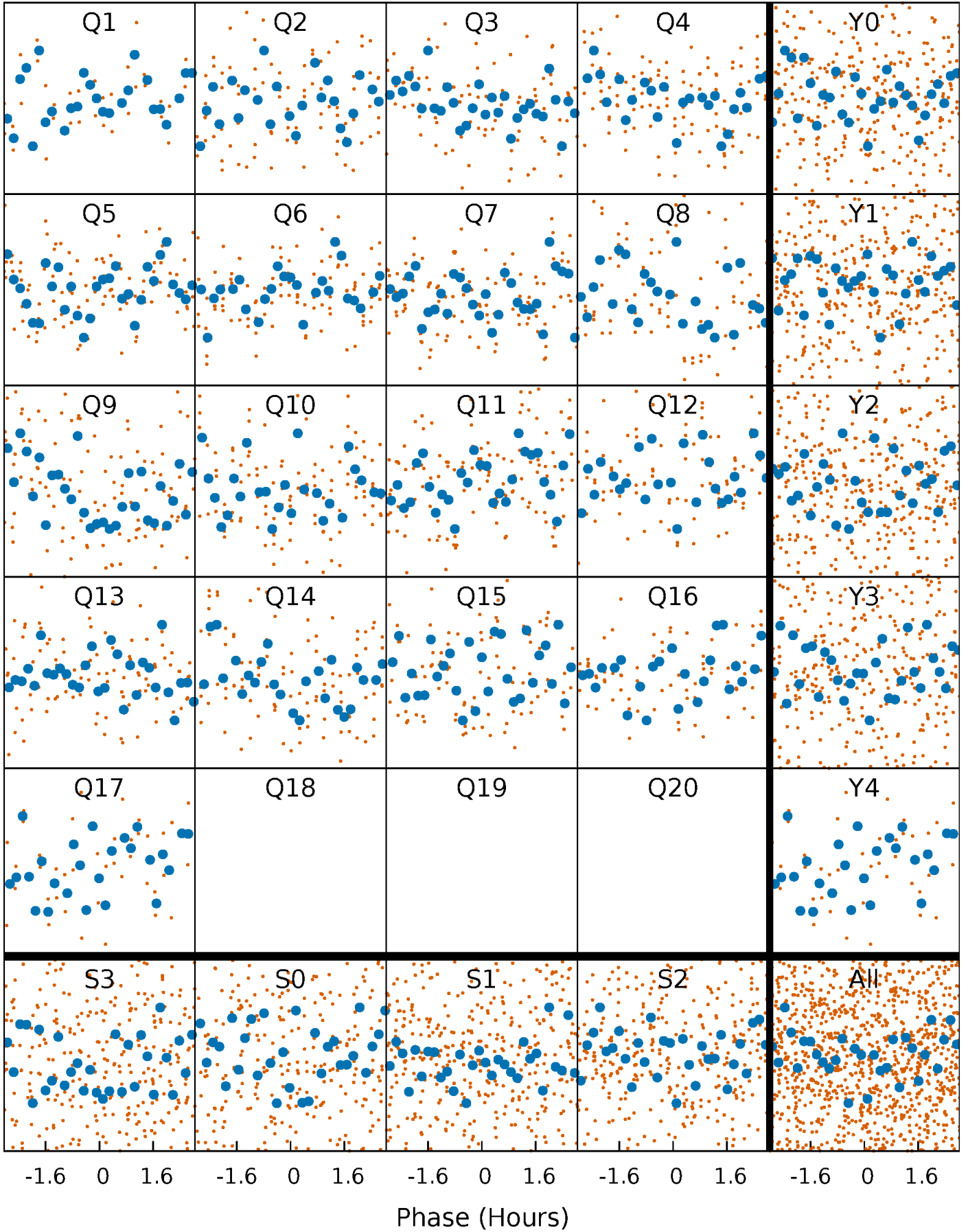


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



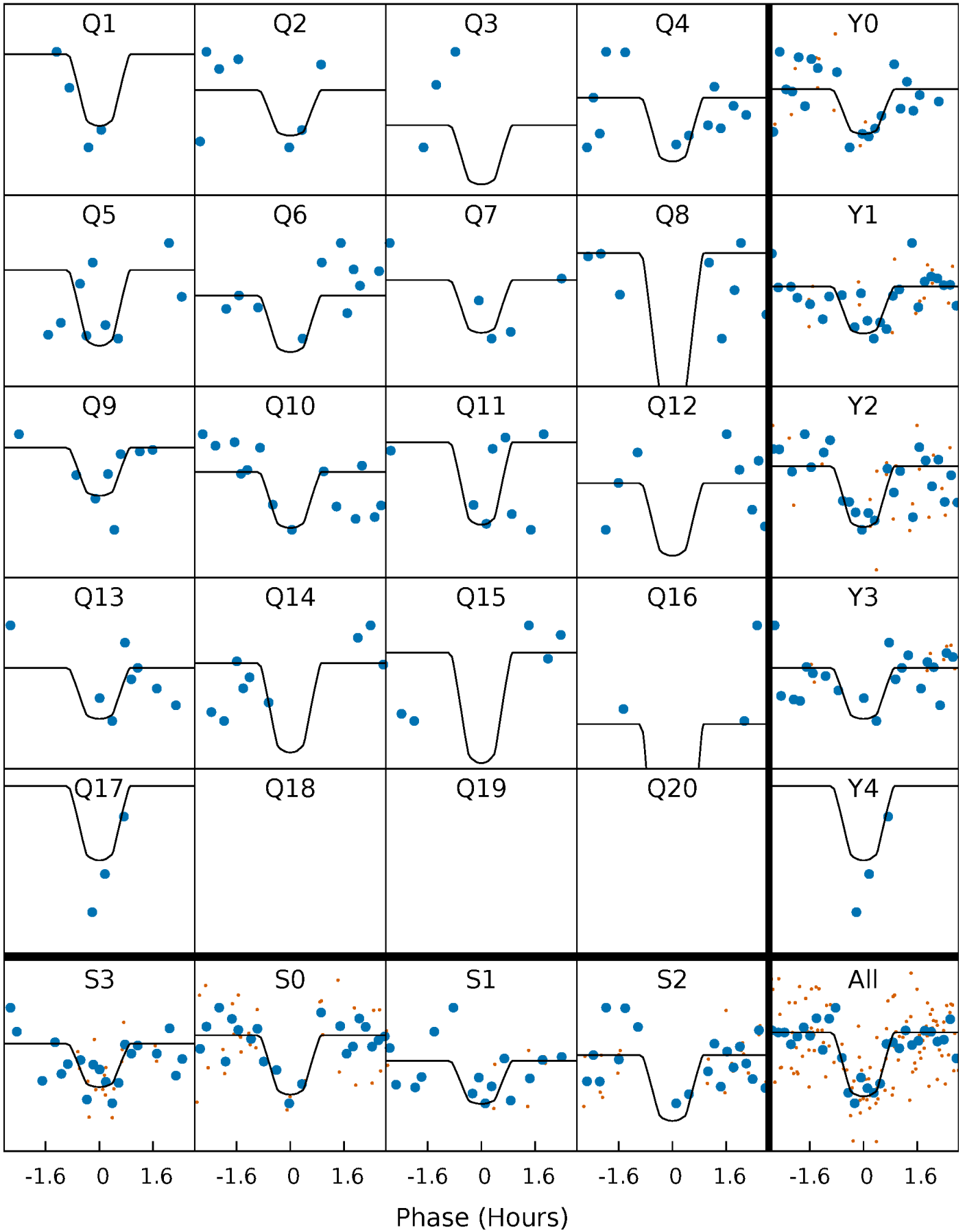
PDC Quarter-Phased Transit Curves

TCE 006057401-04 P= 9.041831 Days $T_0=133.346933$ (BKJD)



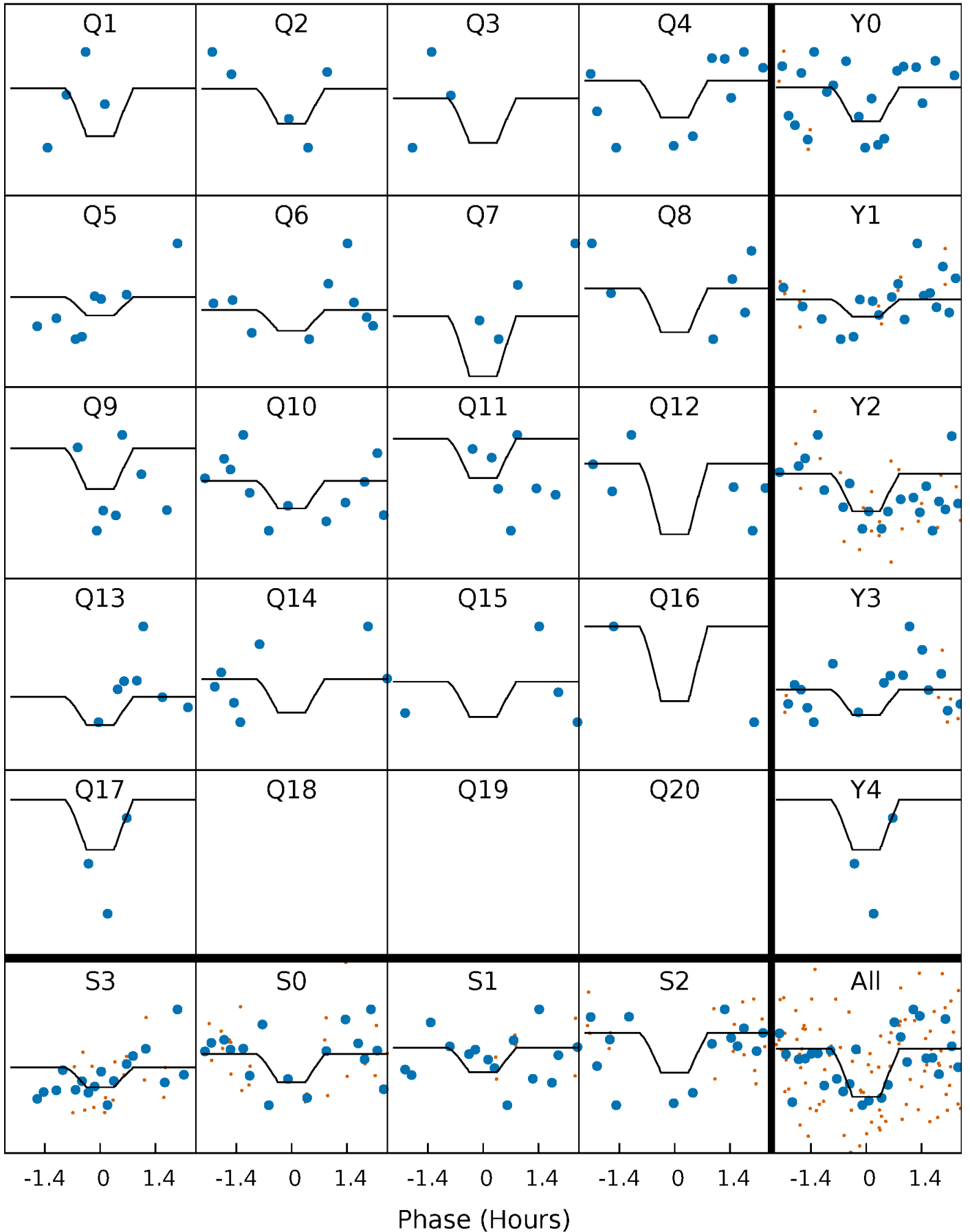
DV Quarter-Phased Transit Curves

TCE 006057401-04 $P = 9.041831$ Days $T_0 = 133.346933$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

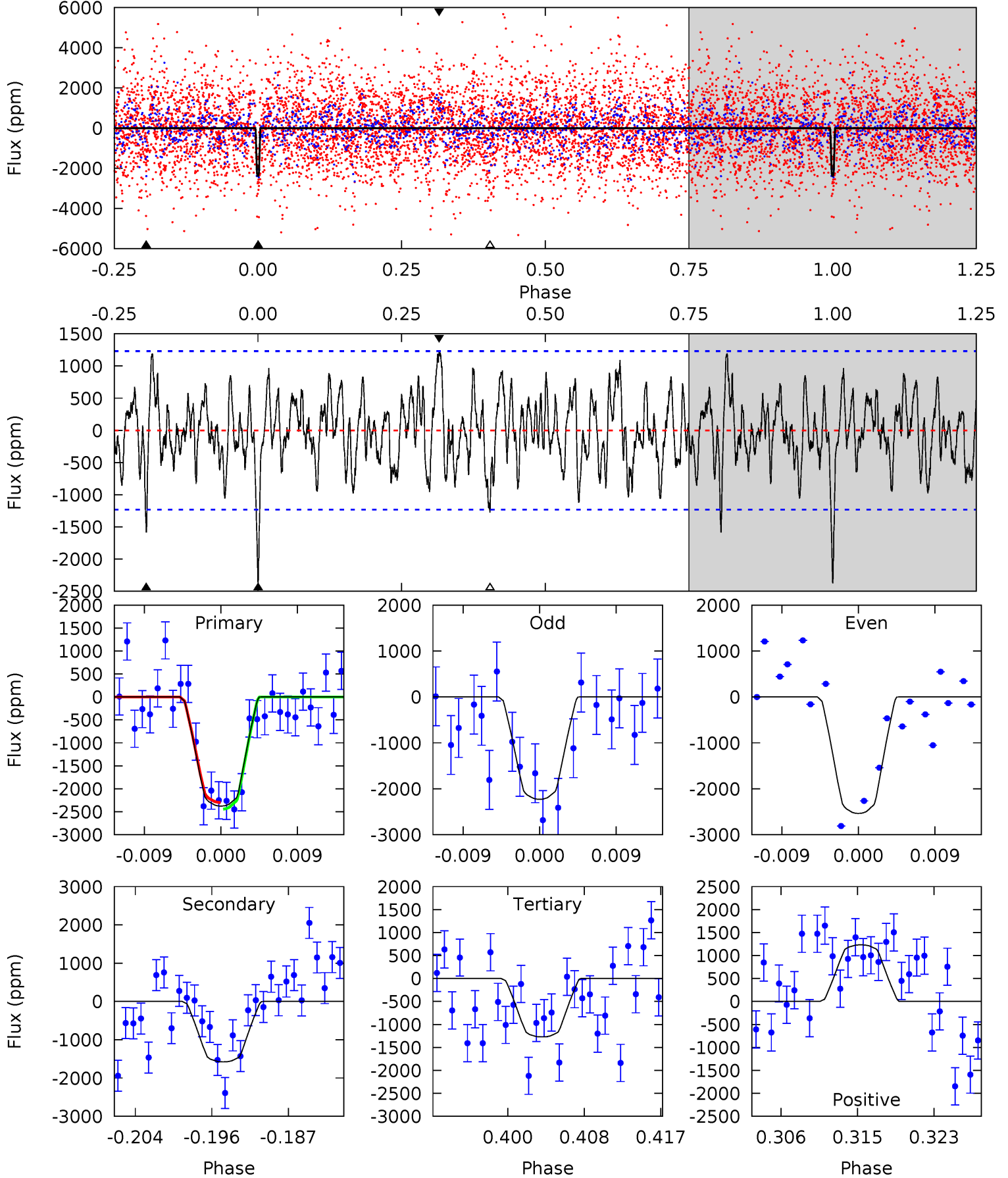
TCE 006057401-04 $P = 9.041836$ Days $T_0 = 133.348956$ (BKJD)



DV Model-Shift Uniqueness Test

006057401-04, P = 9.041831 Days, E = 124.305102 Days

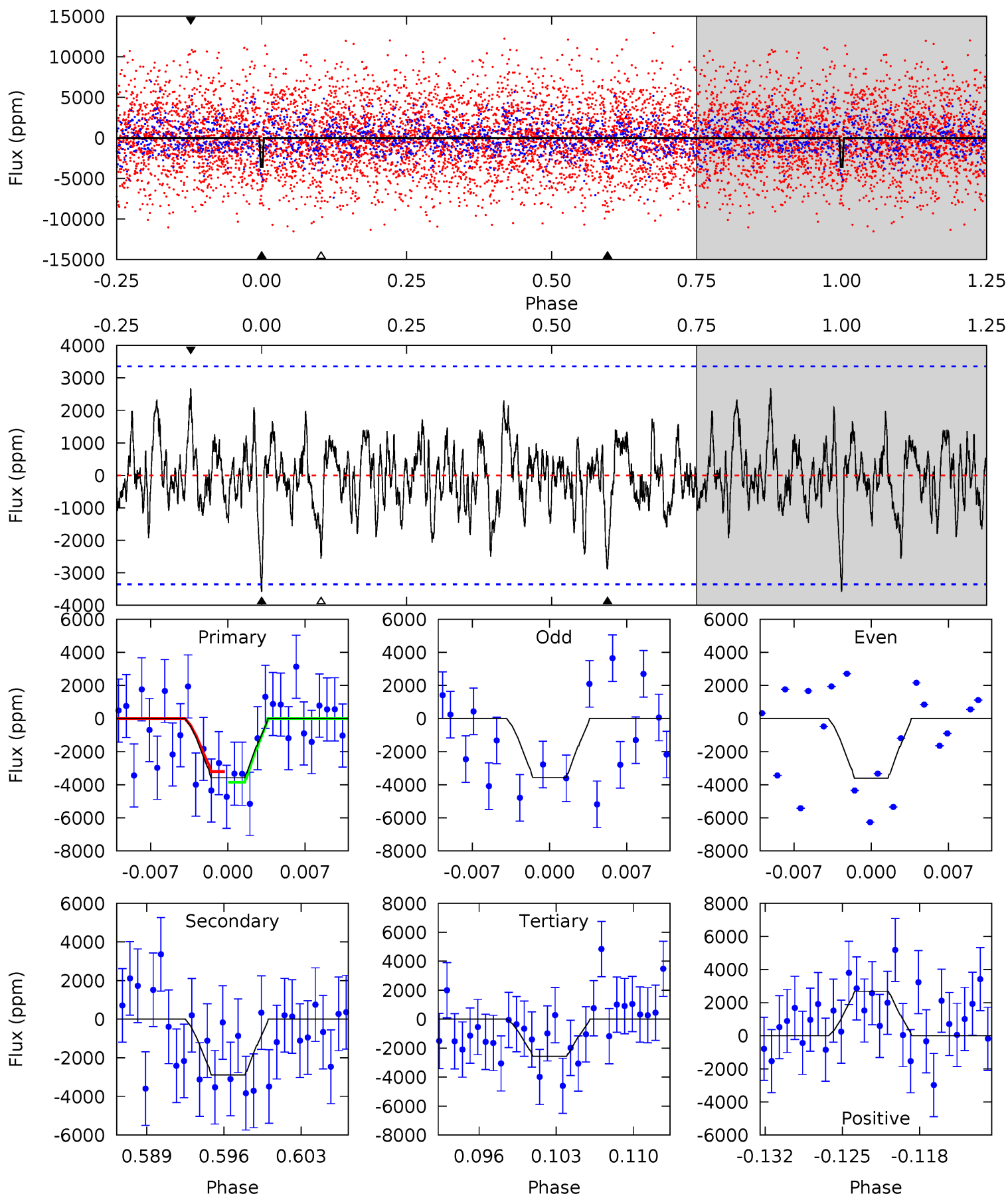
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.76	6.49	5.23	5.06	5.06	2.63	1.94	4.53	4.70	1.26	1.42	0.64	0.97	0.34	0.29



Alt Model-Shift Uniqueness Test

006057401-04, P = 9.041836 Days, E = 124.307120 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.42	4.38	3.88	4.07	5.08	2.68	1.29	1.54	1.35	0.50	0.31	0.03	0.92	0.43	0.48



Stellar Parameters For KIC 006057401

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7497^{+210}_{-341}	$4.132^{+0.120}_{-0.180}$	$0.070^{+0.200}_{-0.350}$	$1.830^{+0.554}_{-0.341}$	$1.656^{+0.205}_{-0.251}$	$0.380^{+0.218}_{-0.188}$
	+3%/-5%	+3%/-4%	+286%/-500%	+30%/-19%	+12%/-15%	+57%/-49%
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 006057401-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1579 ± 243	$9.95^{+5.40}_{-4.70}$	1980^{+151}_{-121}	6666^{+3264}_{-1320}	89^{+242}_{-54}
Alt.	-2891 ± 660	$11.91^{+5.66}_{-5.04}$	1971^{+143}_{-126}	6987^{+3152}_{-1258}	110^{+238}_{-61}

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 $A_{obs} \gg 1.0$

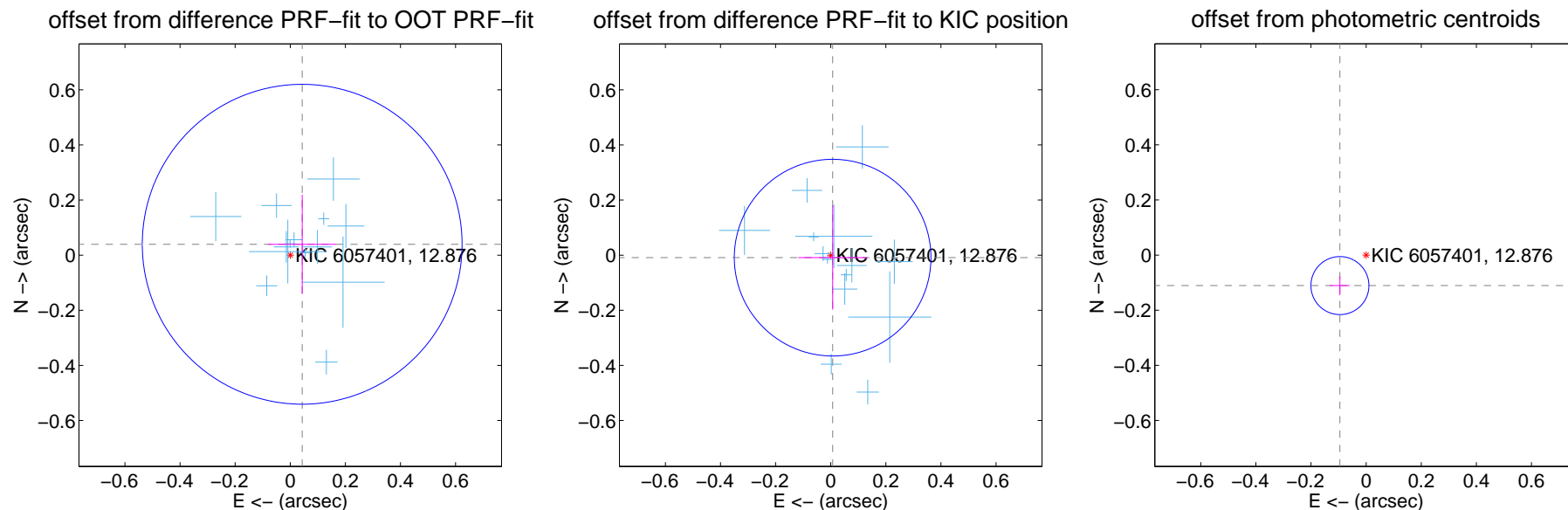
DV Centroid Data

Supplemental centroid analysis for 006057401-04. Kepler magnitude: 12.88. Transit SNR 17.24

There are 16 quarters with good PRF difference image offsets

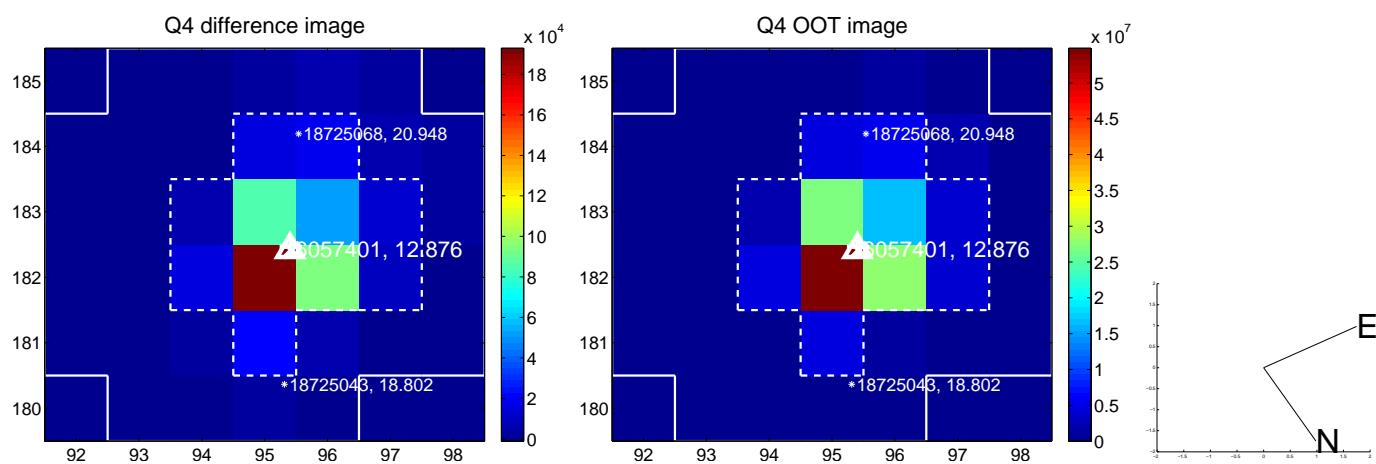
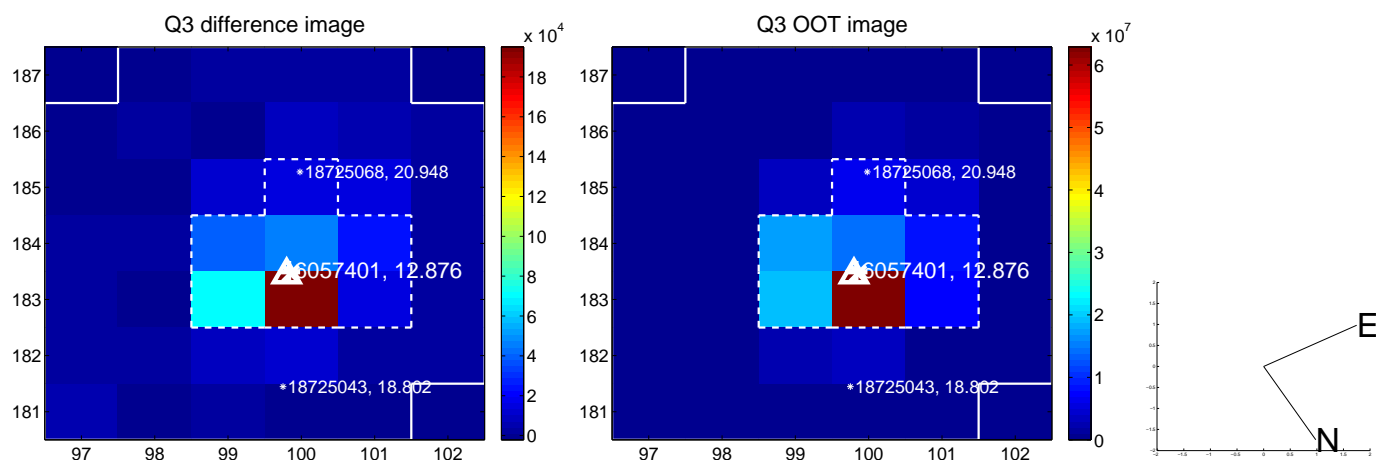
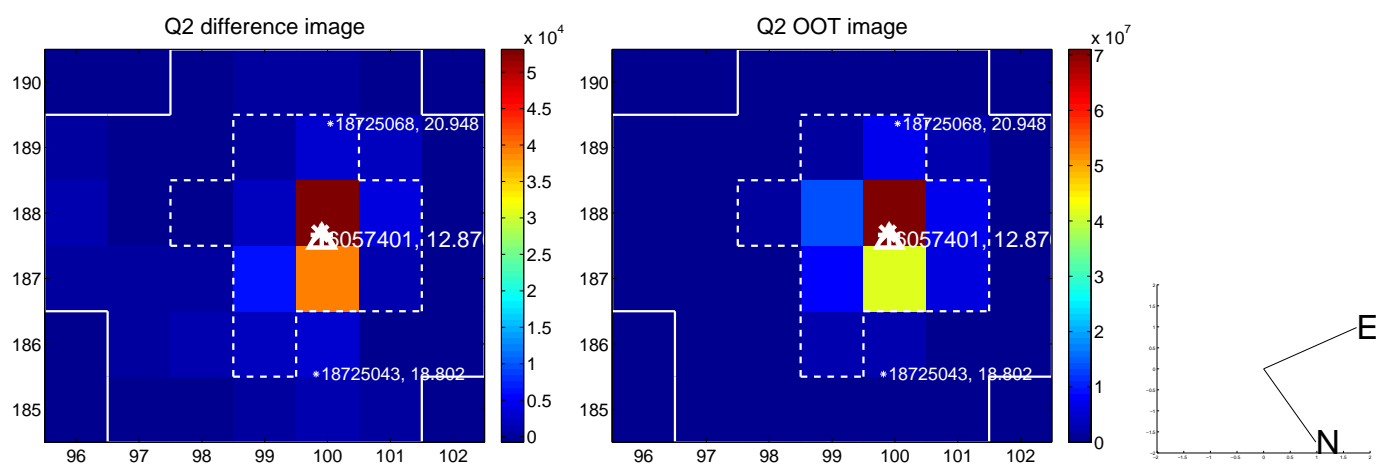
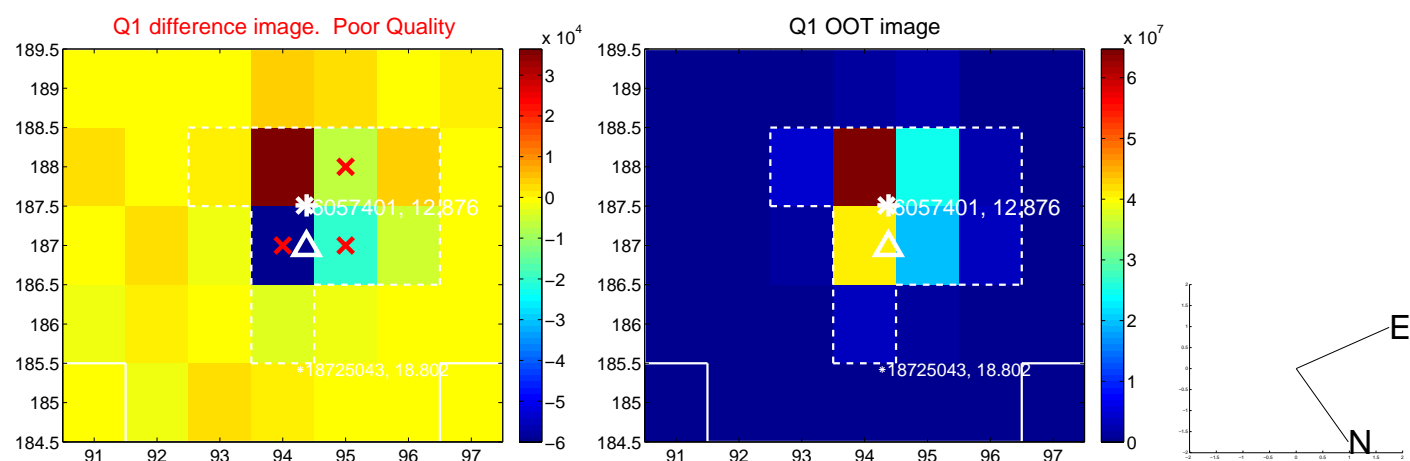
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.059 ± 0.194	0.30	-0.043 ± 0.124	0.039 ± 0.180
PRF-fit source offset from KIC position	0.011 ± 0.119	0.10	-0.007 ± 0.125	-0.009 ± 0.189
photometric centroid source offset	0.15 ± 0.04	4.16	0.10 ± 0.04	-0.11 ± 0.03

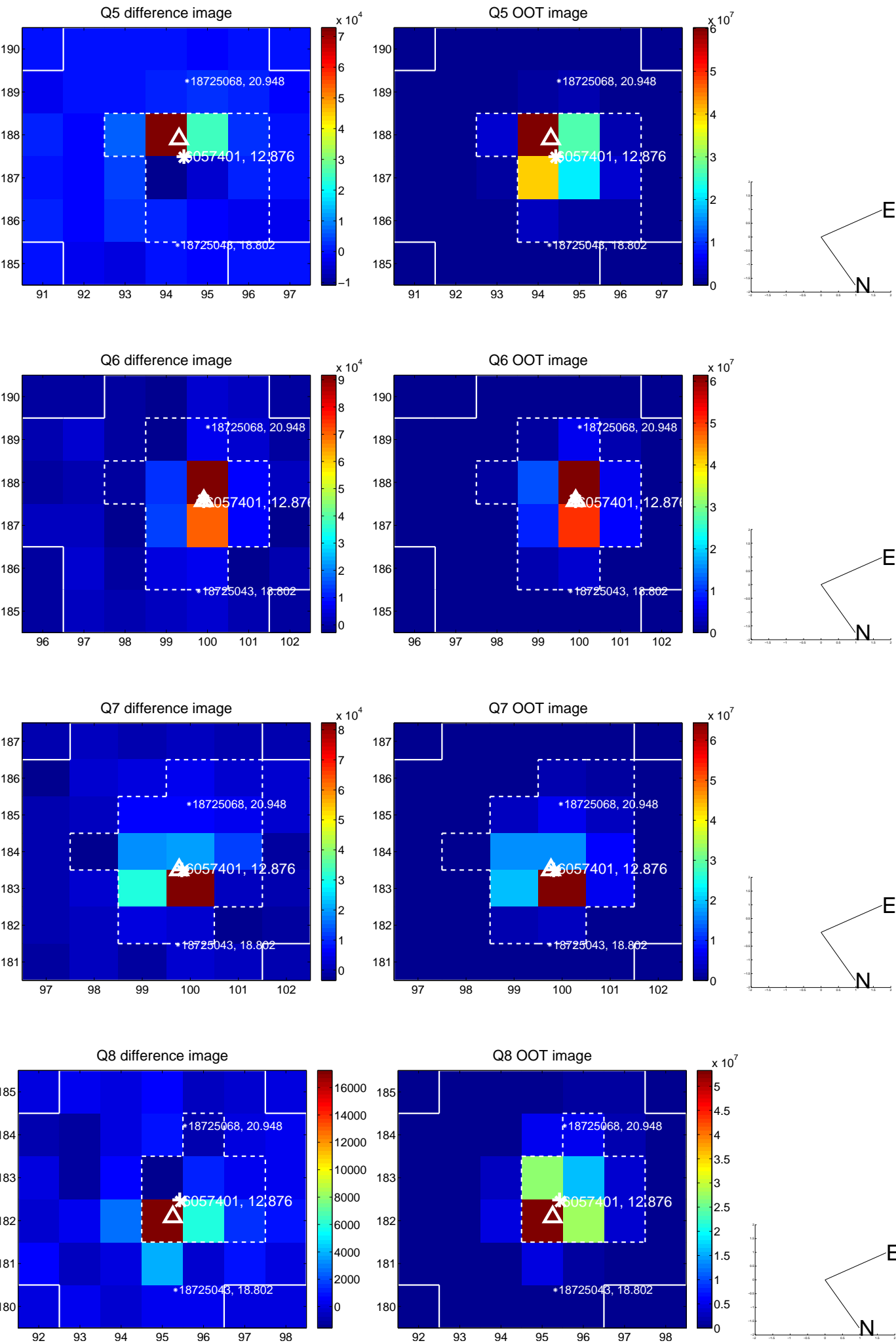


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

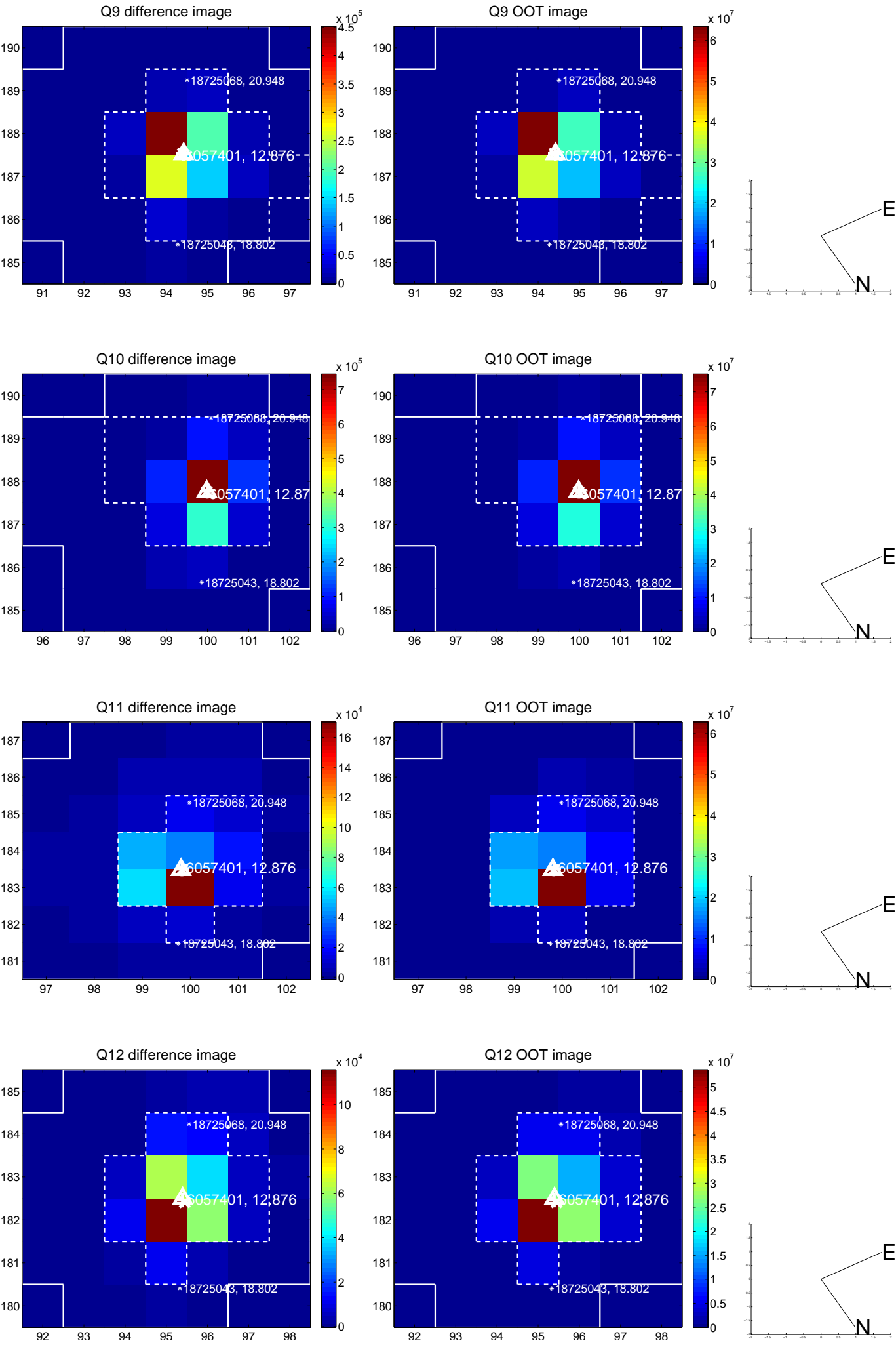
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



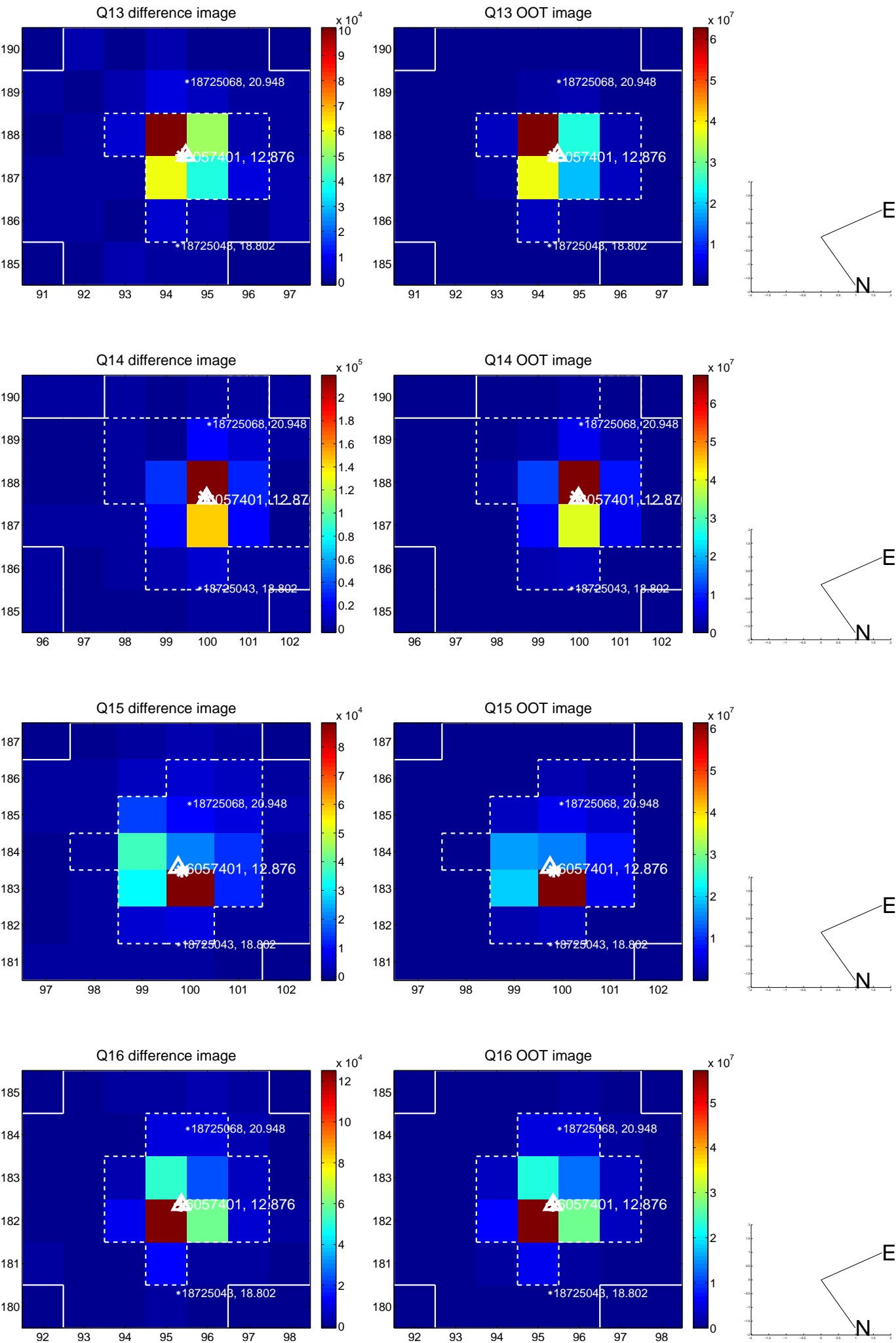
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



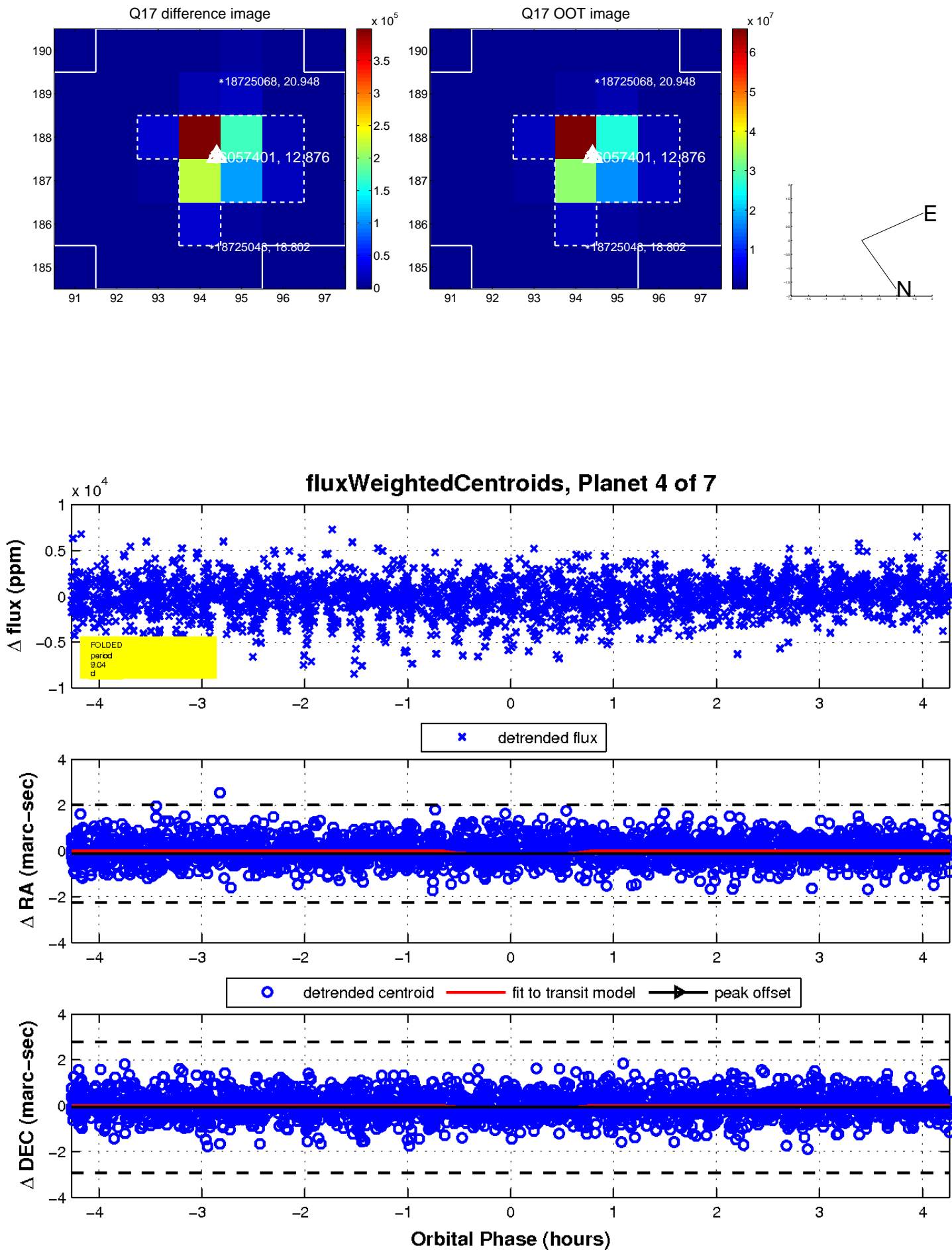
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

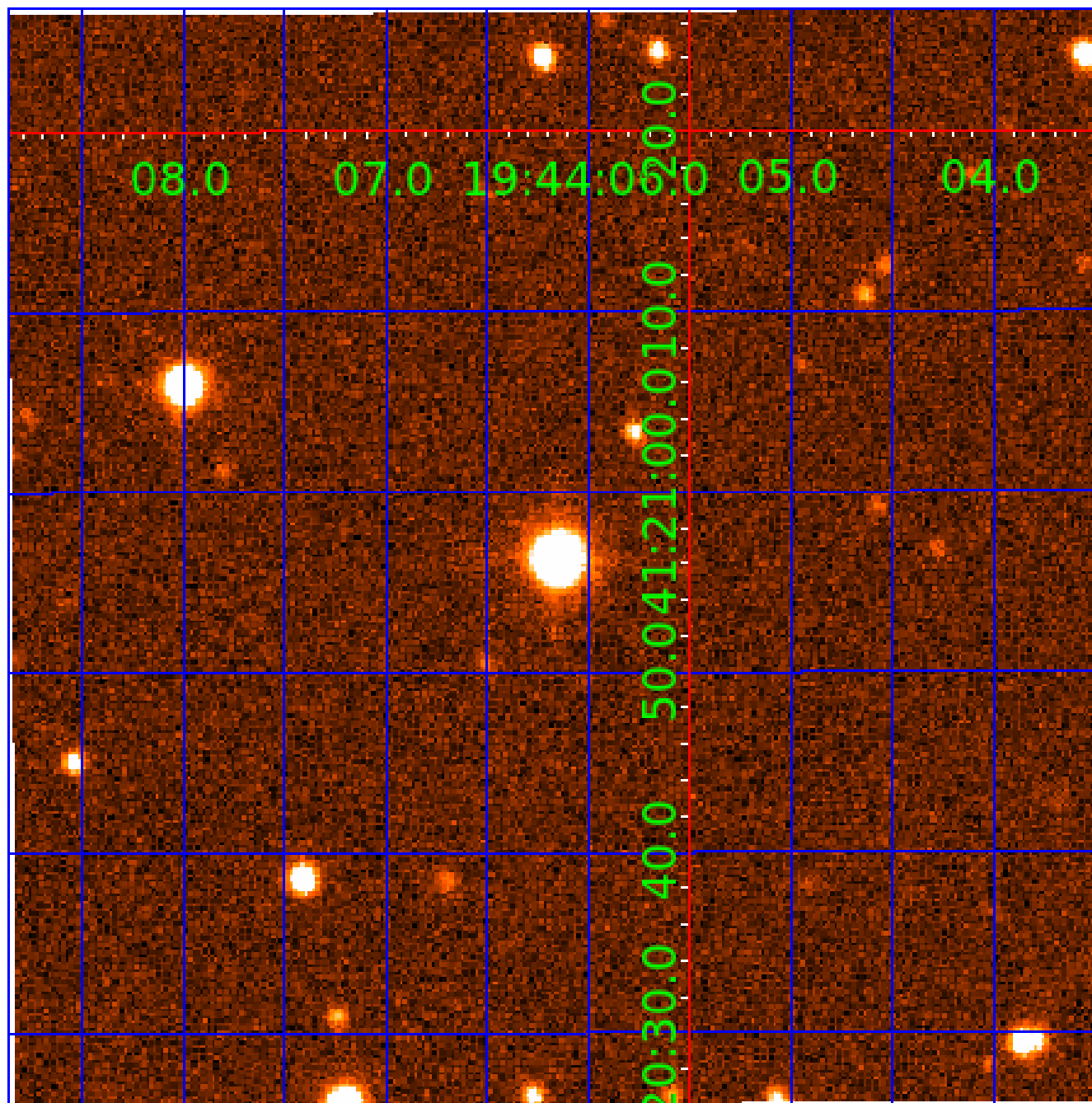


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006057401

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})
006057401-01	OBS	No	0.808054	132.110916	100.6	5.719	10.7	6.1	1.83	7497	1.88	23486.83
006057401-02	OBS	No	17.659040	145.562937	2662.0	1.837	17.9	10.8	1.83	7497	9.61	384.40
006057401-03	OBS	No	20.238761	140.576765	3128.6	1.906	16.3	13.7	1.83	7497	13.54	320.50
006057401-04	OBS	No	9.041831	133.346933	2592.3	1.423	16.9	17.2	1.83	7497	9.88	938.43
006057401-05	OBS	No	16.216110	141.563860	3346.5	1.127	17.1	14.7	1.83	7497	10.86	430.68
006057401-06	OBS	No	20.020123	132.519915	2731.9	2.102	16.8	16.5	1.83	7497	9.77	325.18
006057401-07	OBS	No	6.791879	137.775779	512.8	2.000	15.3	-1.0	1.83	7497	4.22	1374.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006057401-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
006057401-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
006057401-03	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
006057401-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006057401-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006057401-06	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
006057401-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

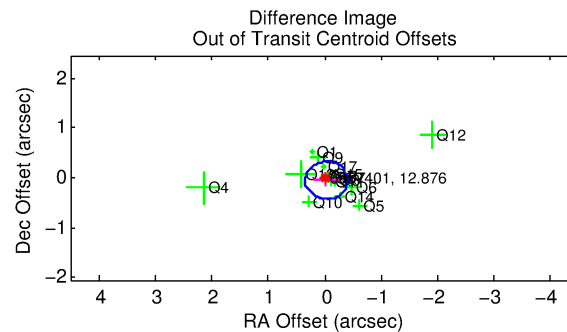
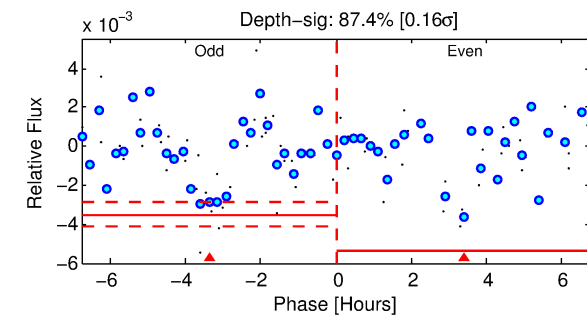
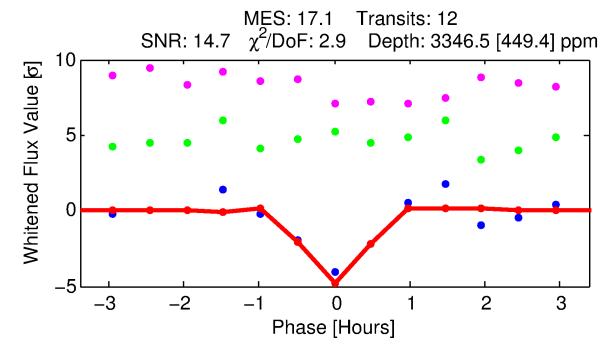
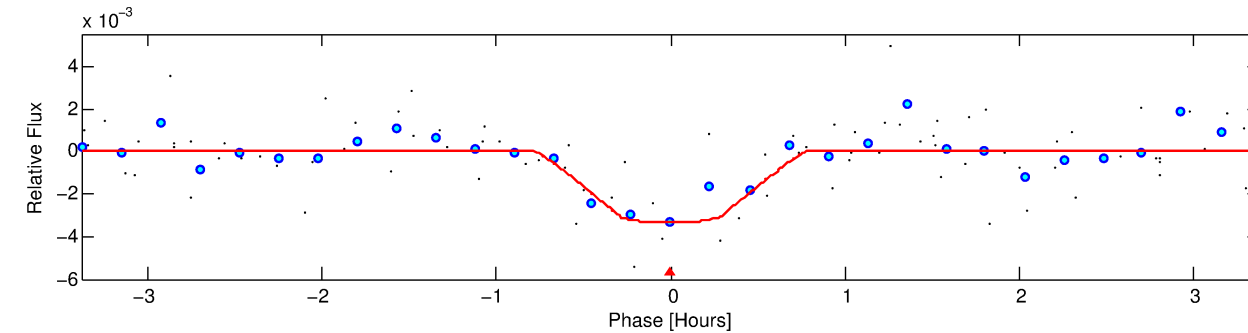
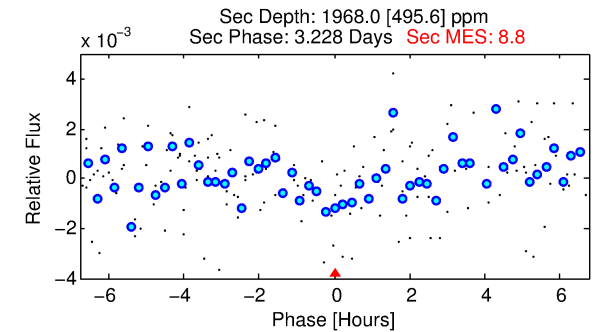
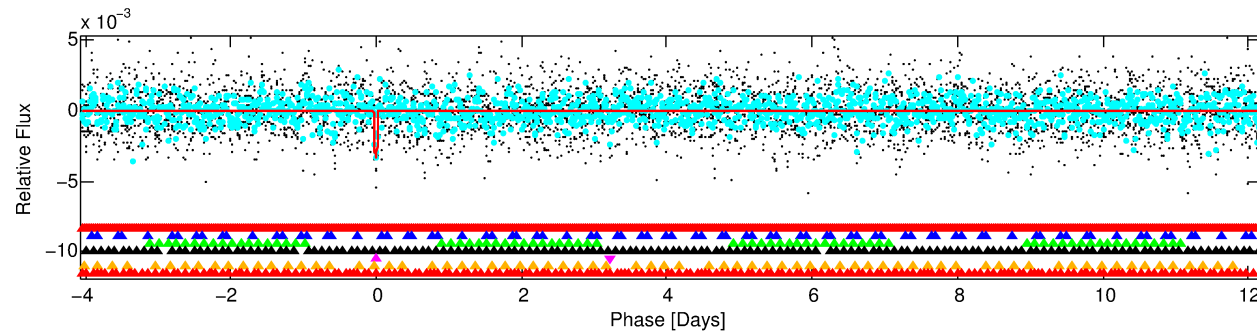
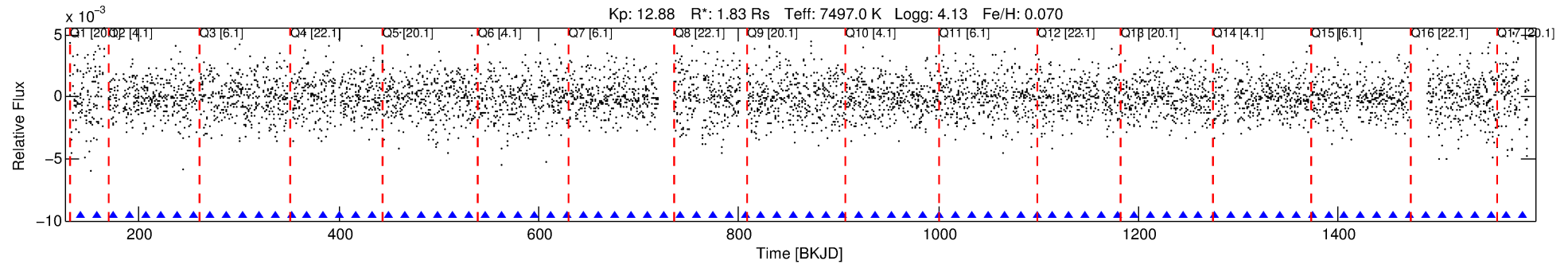
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006057401-05

No Significant Match Found

DV One-Page Summary

KIC: 6057401 Candidate: 5 of 7 Period: 16.216 d



DV Fit Results:

Period = 16.21611 [0.00009] d
Epoch = 141.5639 [0.0047] BKJD
Rp/R* = 0.0544 [0.0450]
a/R* = 113.51 [551.22]
b = 0.21 [22.08]
Seff = 430.67 [166.90]
Teq = 1162 [113] K
Rp = 10.86 [9.57] Re
a = 0.1484 [0.0363] AU
Ag = 202.21 [345.63] [0.58 σ]
Teffp = 6773 [2852] K [1.97 σ]

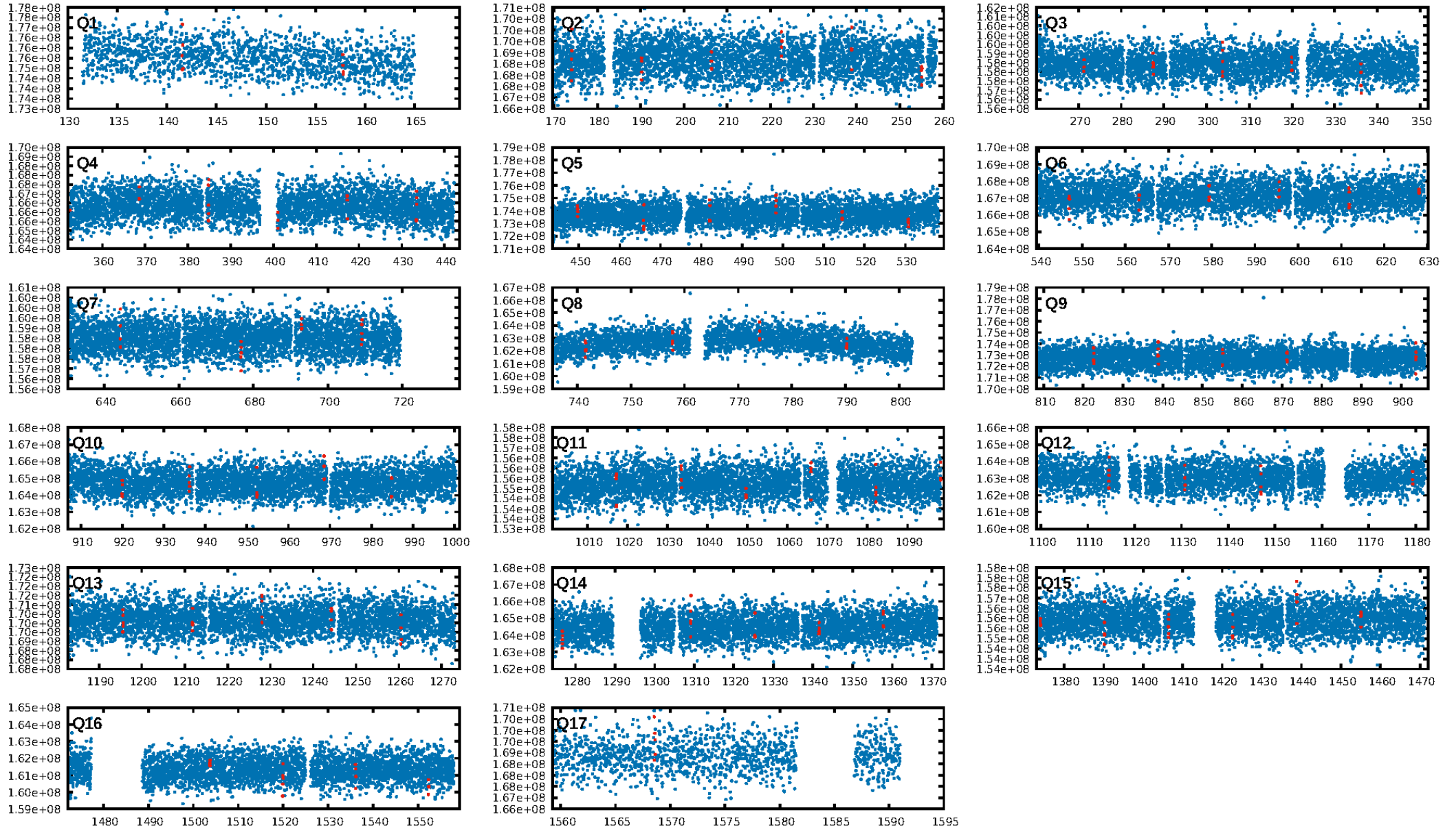
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [94.83 σ]
LongPeriod-sig: 100.0% [16.07 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 36.2%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [12/12]
GhostDiagnostic-chr: -0.8013
Centroid-sig: 58.9%
Centroid-so: 0.157 arcsec [3.88 σ]
OotOffset-rm: 0.060 arcsec [0.48 σ]
KicOffset-rm: 0.165 arcsec [1.55 σ]
OotOffset-st: 3/4/4/5 [16]
KicOffset-st: 3/4/4/5 [16]
DiffImageQuality-fgm: 0.56 [9/16]
DiffImageOverlap-fno: 0.35 [6/17]

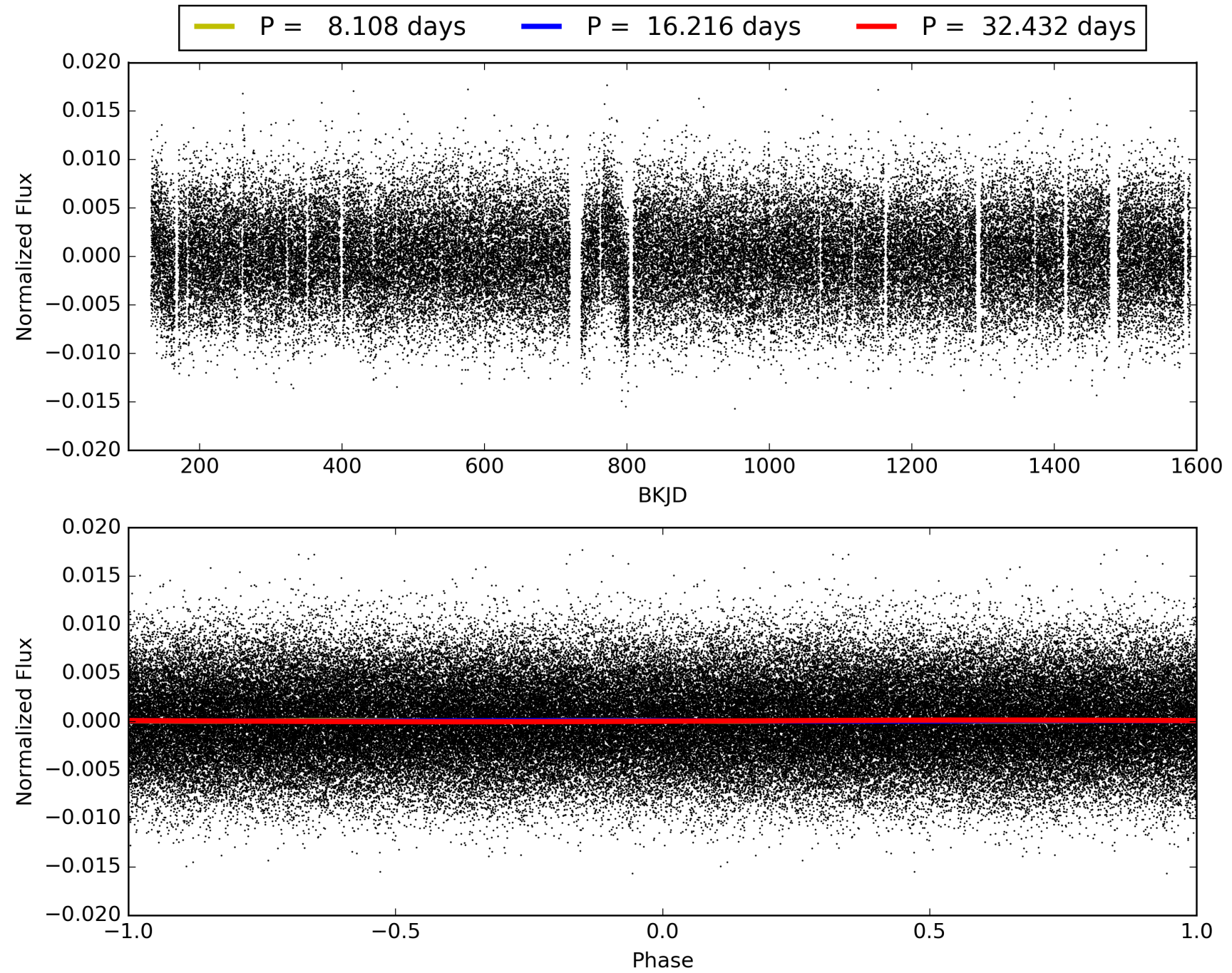
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 08:20:07 Z

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

TCE 006057401-05, PDC Light Curves

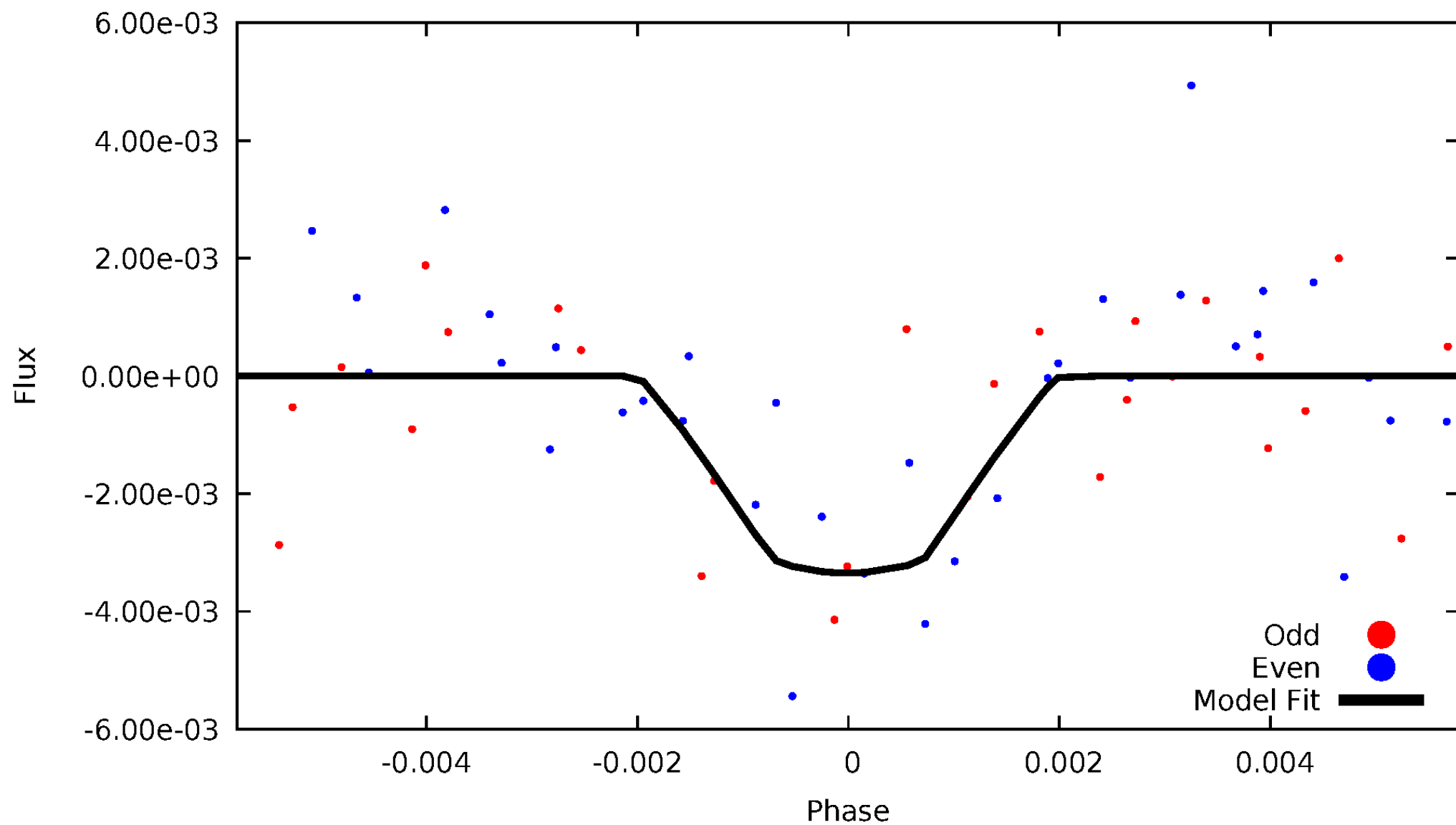


TCE 006057401-05



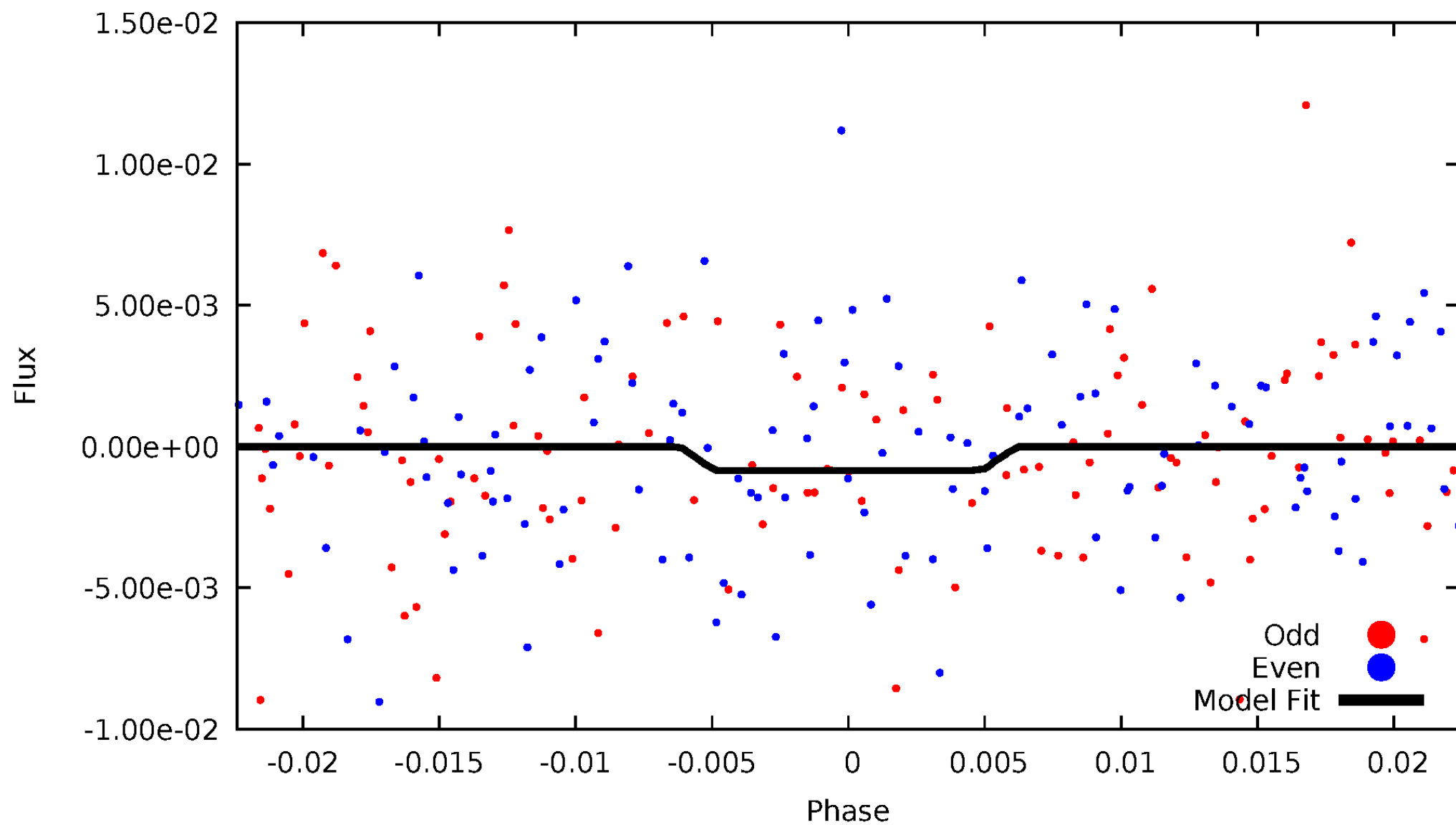
DV Odd/Even

TCE 006057401-05



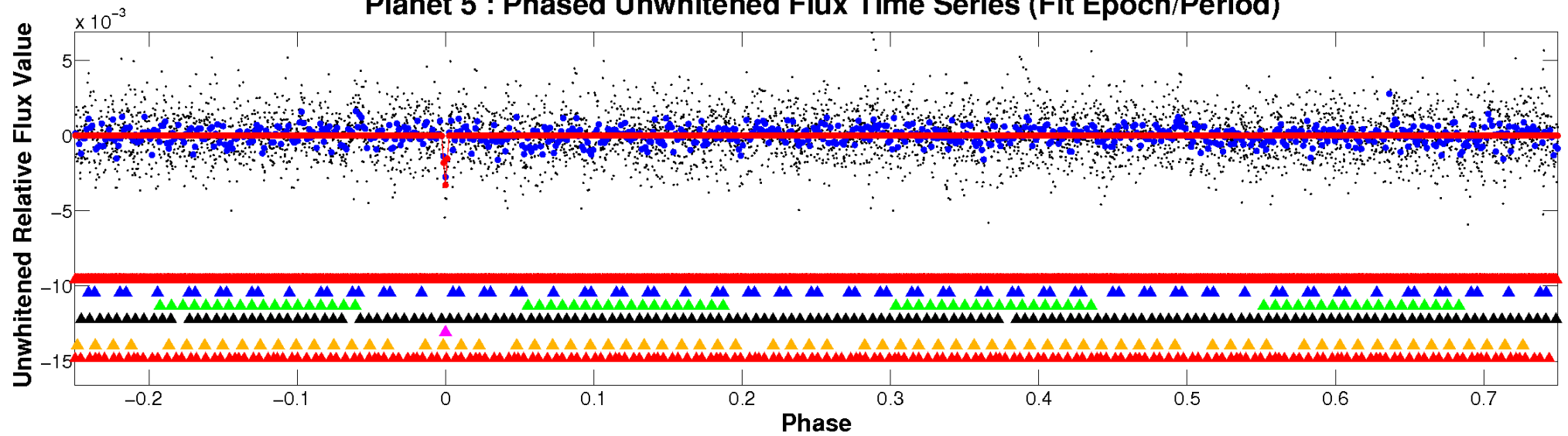
ALT Odd/Even

TCE 006057401-05

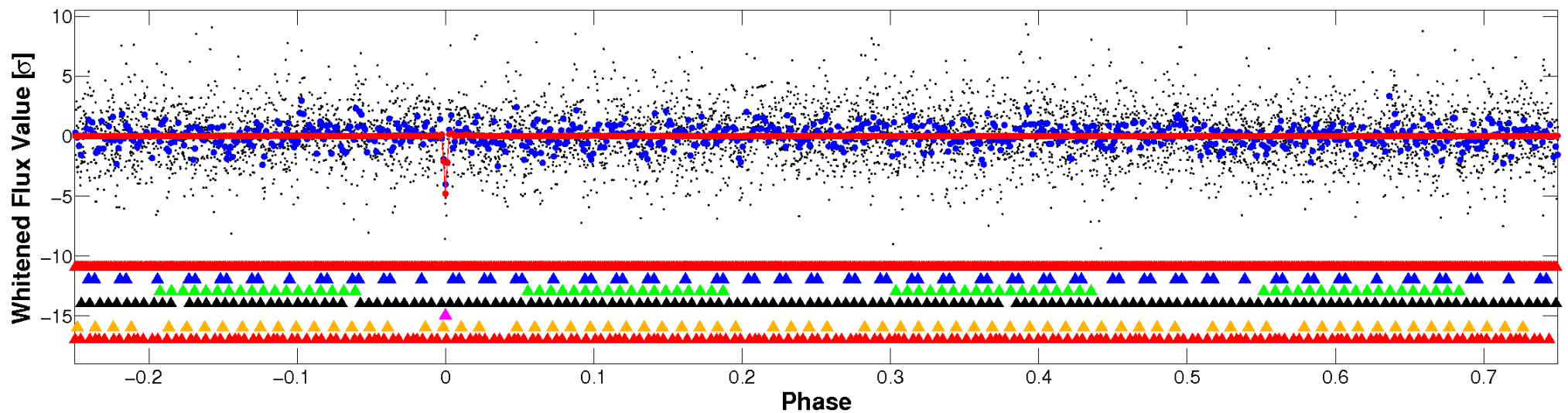


Non-Whitened Vs. Whitened Light Curve

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

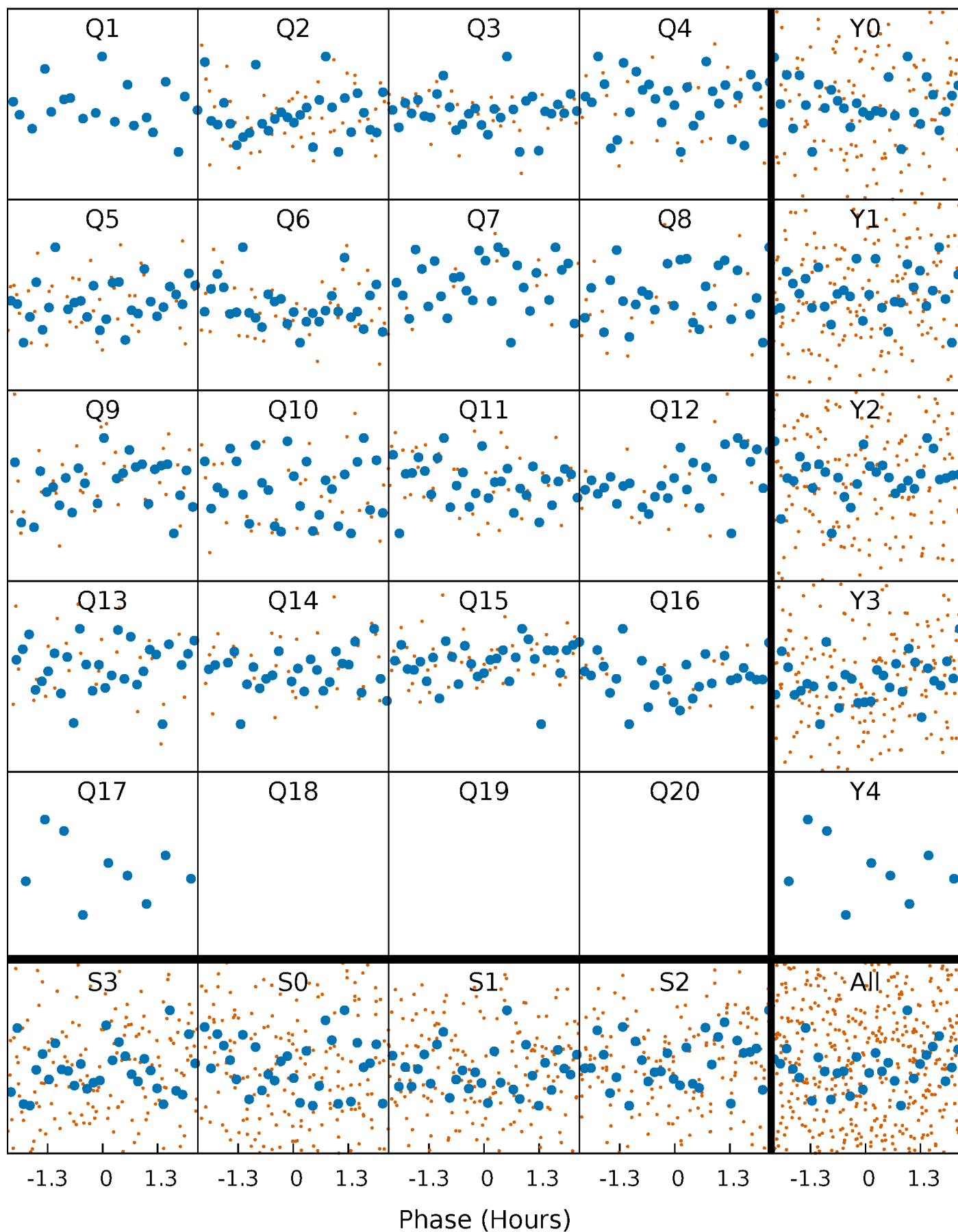


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



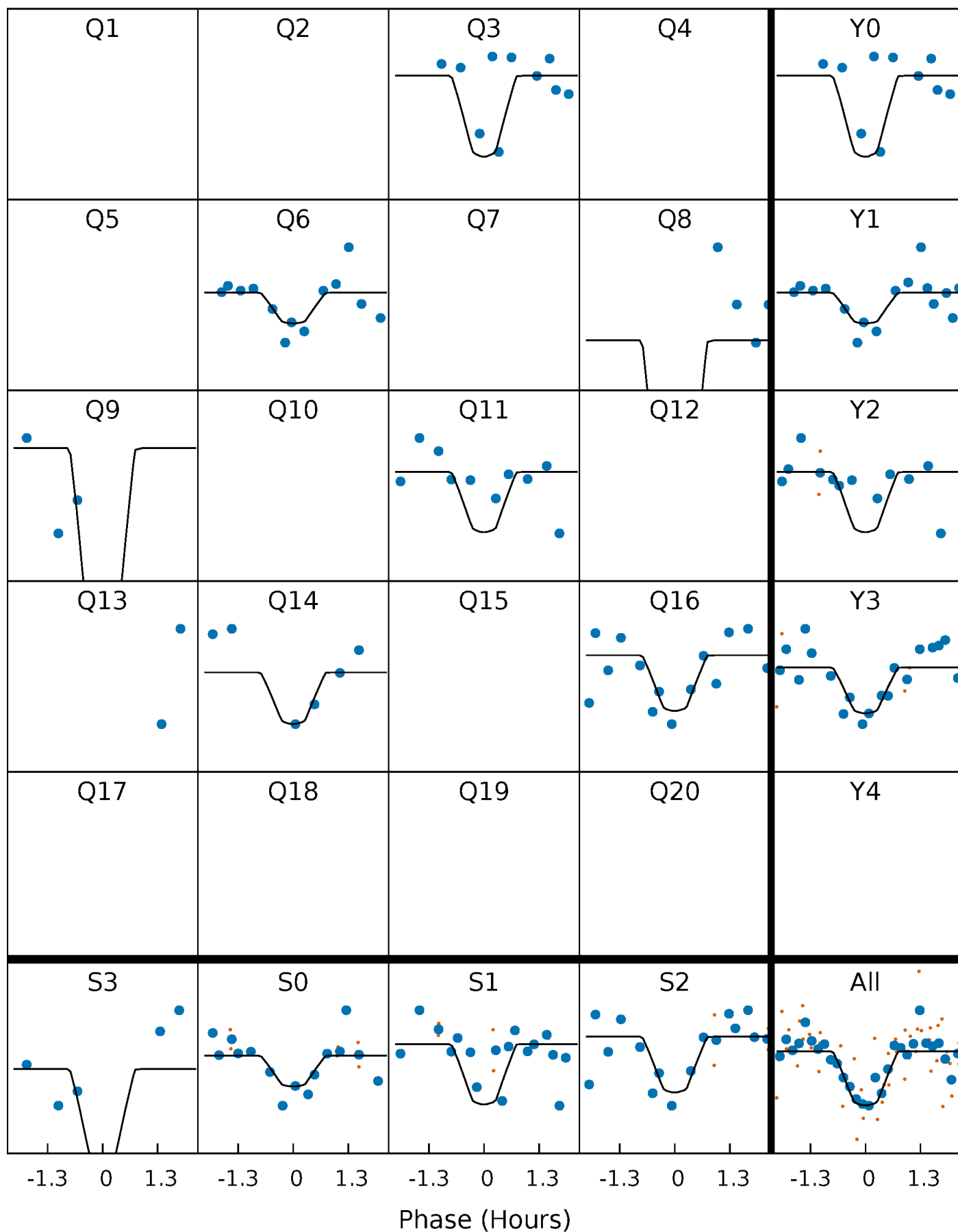
PDC Quarter-Phased Transit Curves

TCE 006057401-05 $P = 16.216110$ Days $T_0 = 141.563860$ (BKJD)



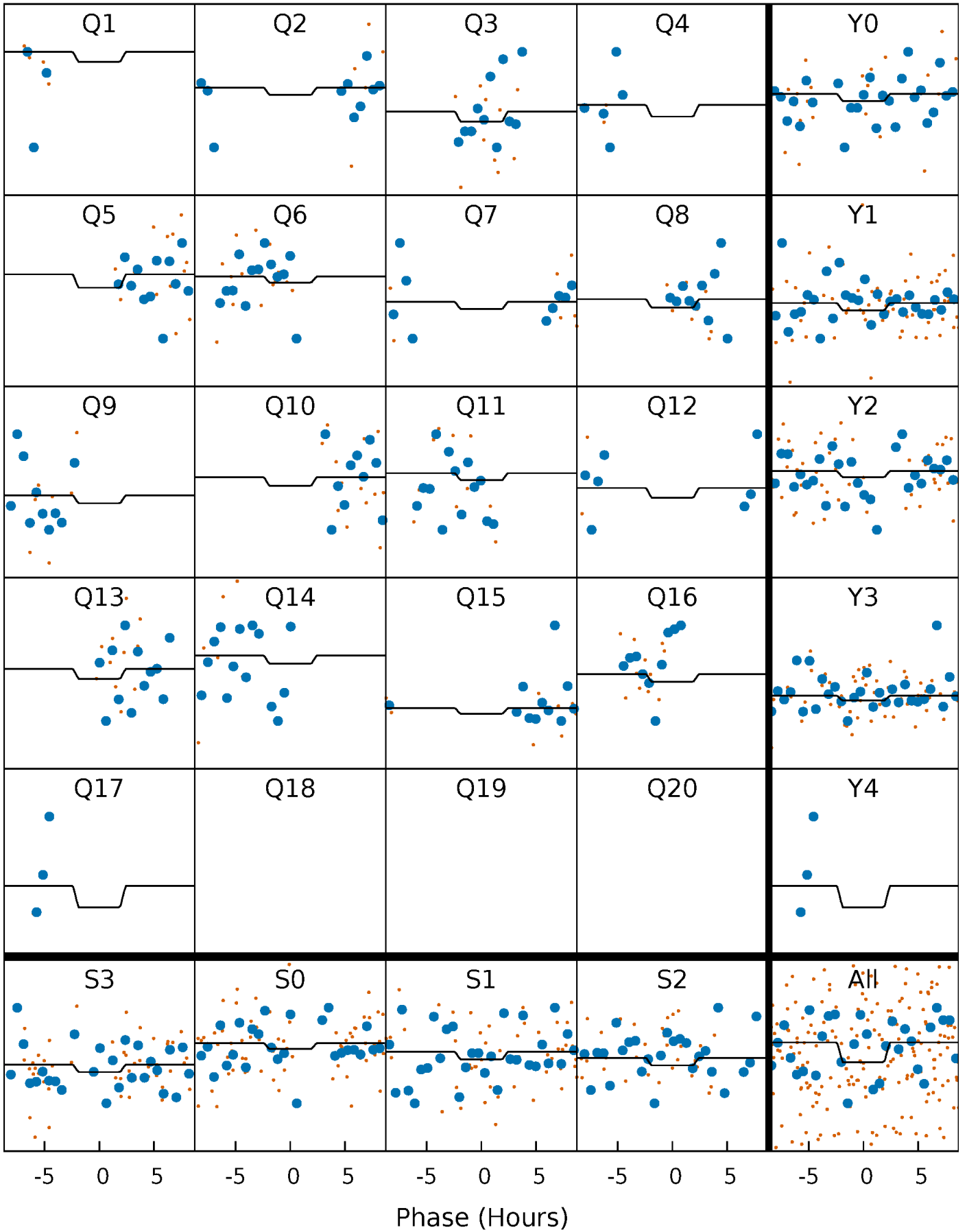
DV Quarter-Phased Transit Curves

TCE 006057401-05 P= 16.216110 Days $T_0=141.563860$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

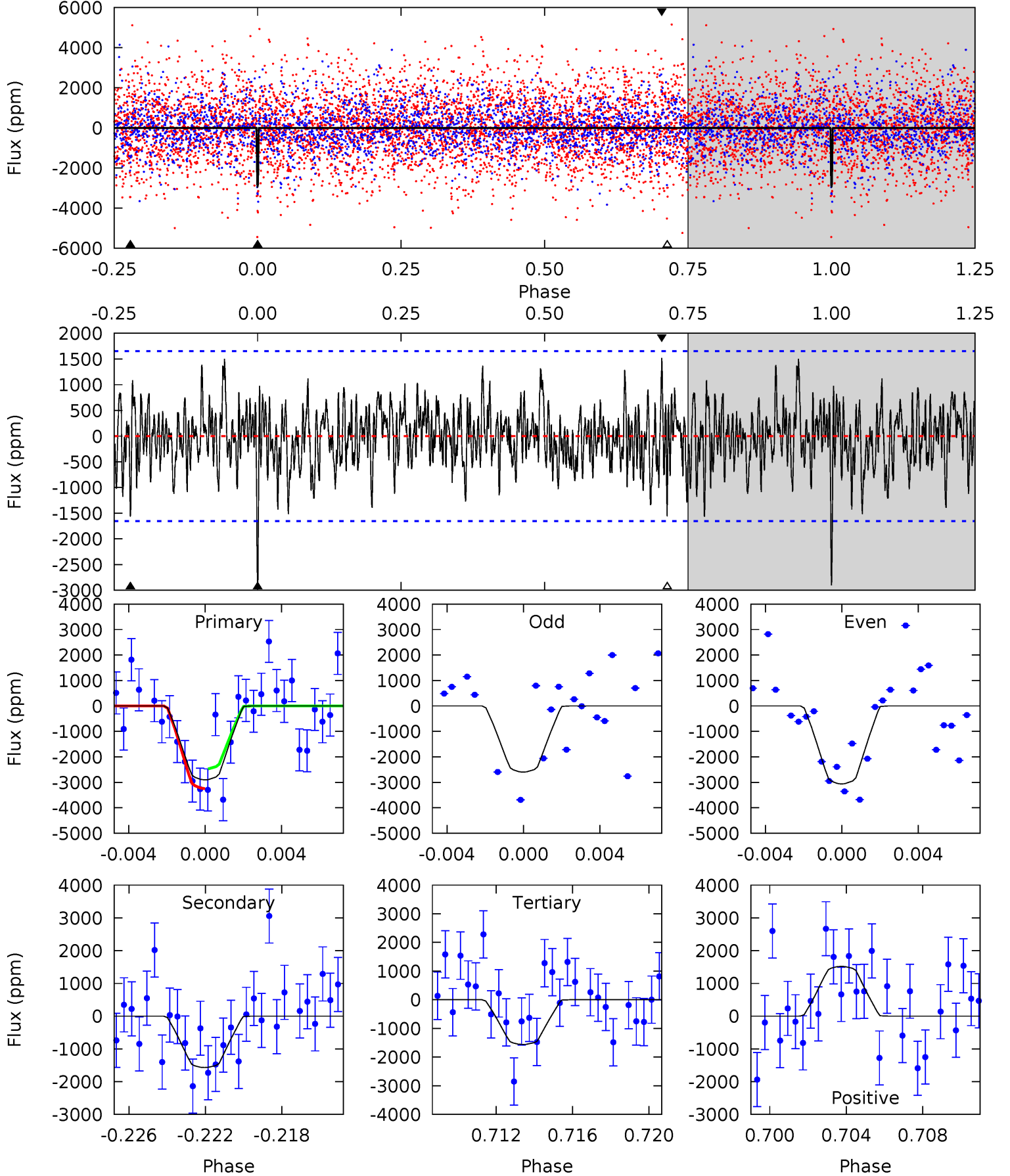
TCE 006057401-05 $P = 16.216321$ Days $T_0 = 141.615194$ (BKJD)



DV Model-Shift Uniqueness Test

006057401-05, P = 16.216110 Days, E = 125.347750 Days

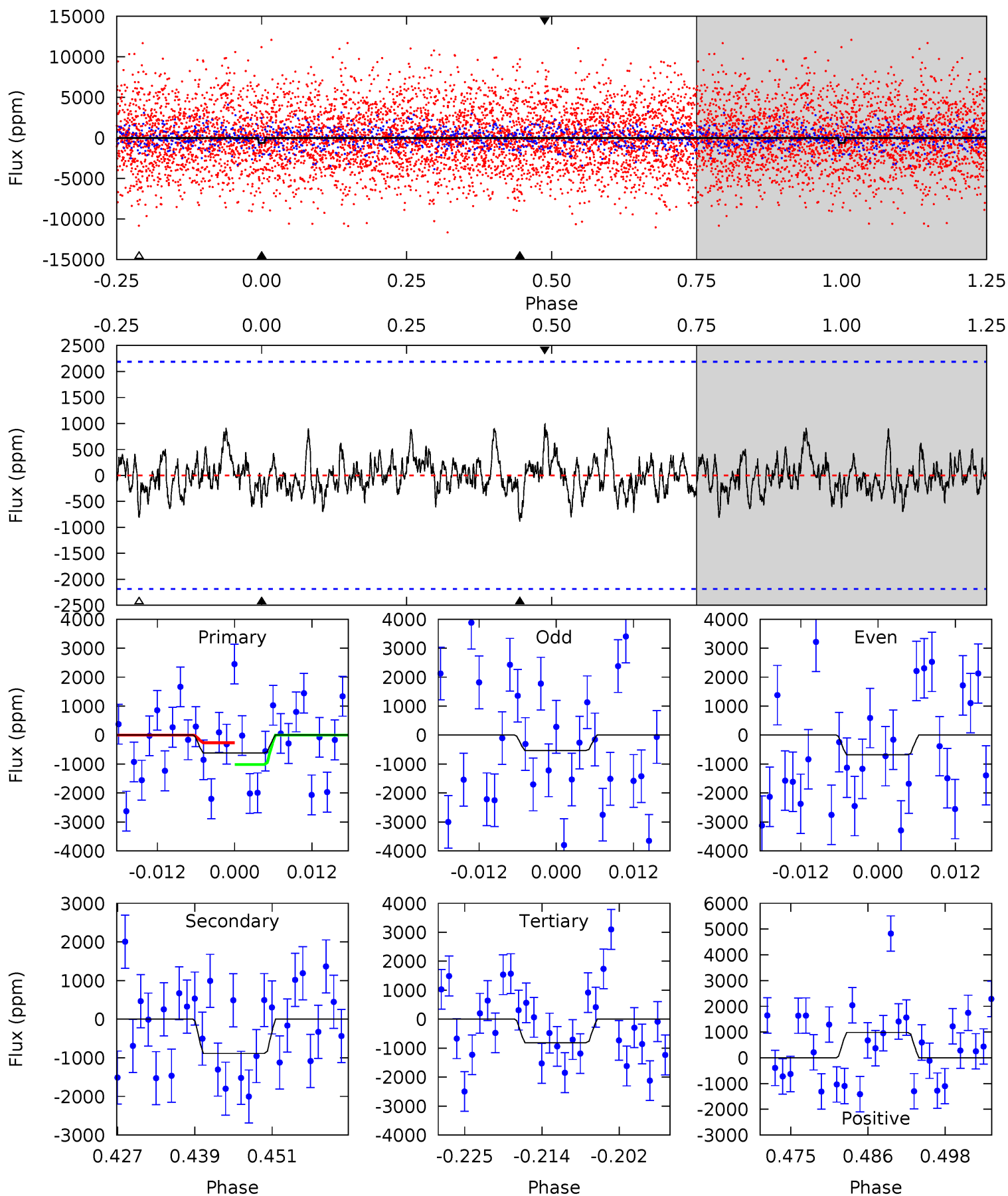
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.13	4.94	4.91	4.78	5.20	2.88	1.54	4.22	4.35	0.03	0.16	0.71	0.84	0.34	1.21



Alt Model-Shift Uniqueness Test

006057401-05, P = 16.216321 Days, E = 125.398873 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.41	2.03	1.86	2.25	4.99	2.52	0.70	-0.44	-0.84	0.17	-0.22	0.17	1.20	0.53	0.86



Stellar Parameters For KIC 006057401

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7497^{+210}_{-341}	$4.132^{+0.120}_{-0.180}$	$0.070^{+0.200}_{-0.350}$	$1.830^{+0.554}_{-0.341}$	$1.656^{+0.205}_{-0.251}$	$0.380^{+0.218}_{-0.188}$
	+3%/-5%	+3%/-4%	+286%/-500%	+30%/-19%	+12%/-15%	+57%/-49%
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 006057401-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1569 ± 318	$12.63^{+8.66}_{-7.57}$	1619^{+124}_{-102}	5871^{+3605}_{-1252}	117^{+544}_{-77}
Alt.	-888 ± 438	$9.27^{+7.88}_{-6.05}$	1632^{+113}_{-108}	5879^{+5131}_{-1545}	118^{+843}_{-89}

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 $A_{obs} \gg 1.0$

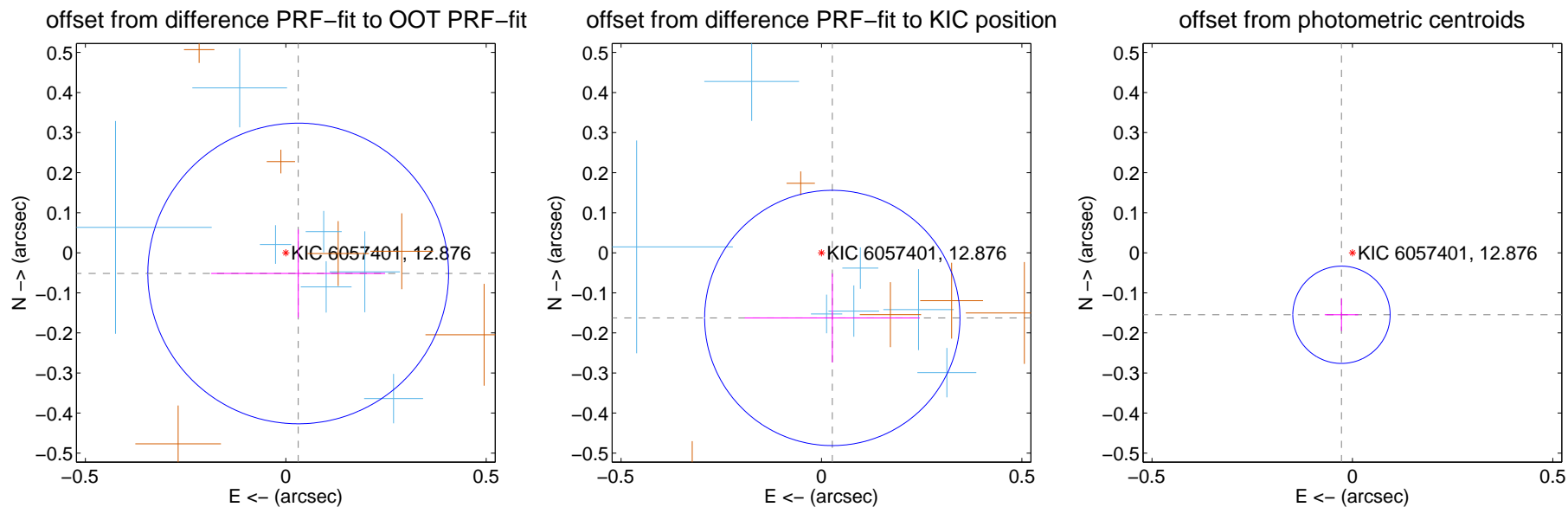
DV Centroid Data

Supplemental centroid analysis for 006057401-05. Kepler magnitude: 12.88. Transit SNR 14.72

There are 9 quarters with good PRF difference image offsets

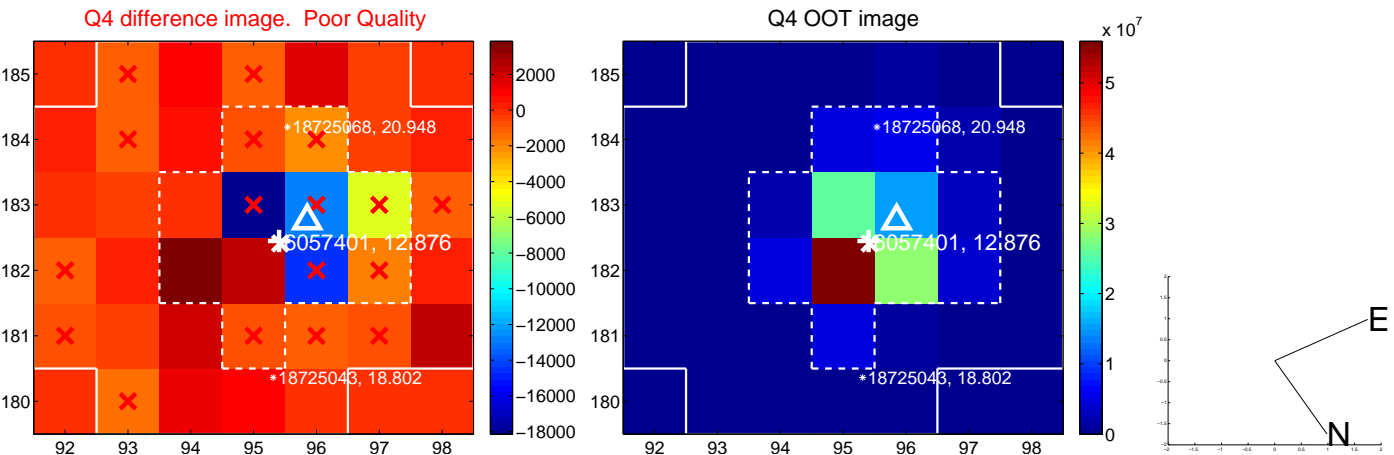
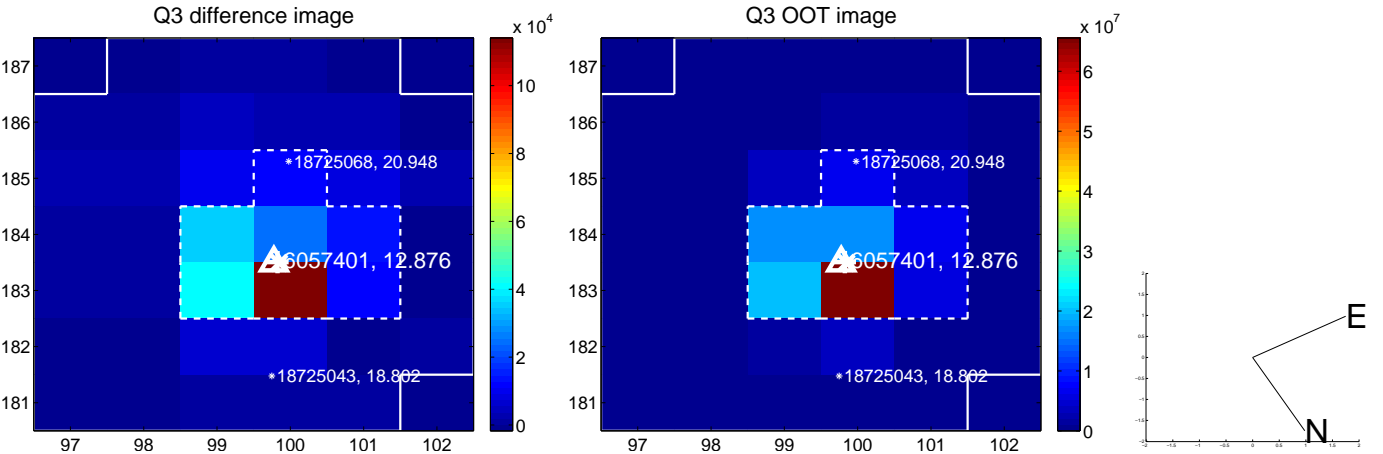
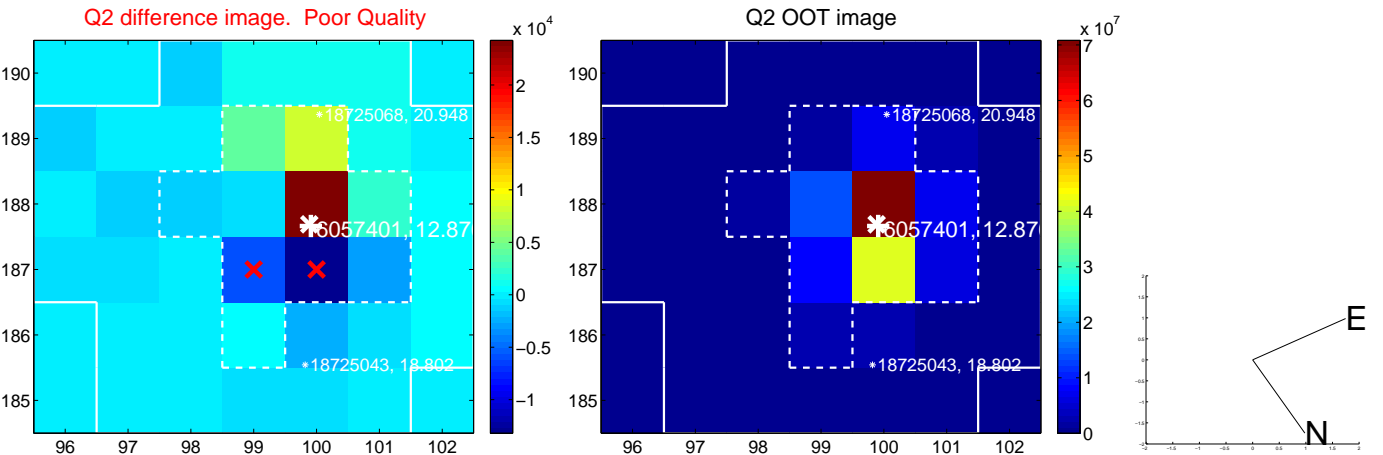
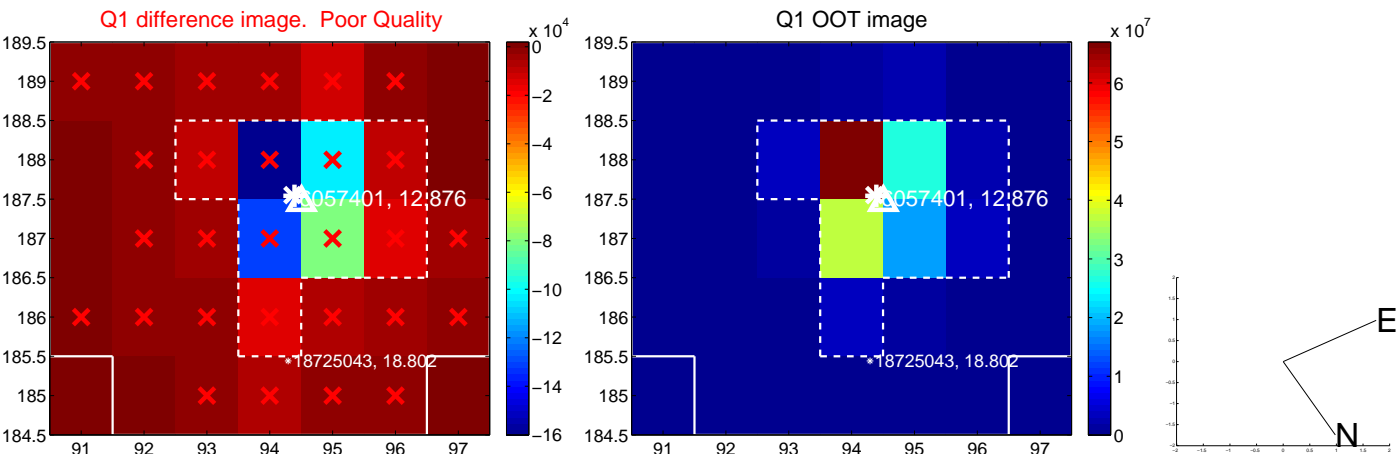
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.060 ± 0.125	0.48	-0.031 ± 0.217	-0.052 ± 0.110
PRF-fit source offset from KIC position	0.165 ± 0.106	1.55	-0.027 ± 0.218	-0.163 ± 0.111
photometric centroid source offset	0.16 ± 0.04	3.88	0.03 ± 0.04	-0.15 ± 0.04

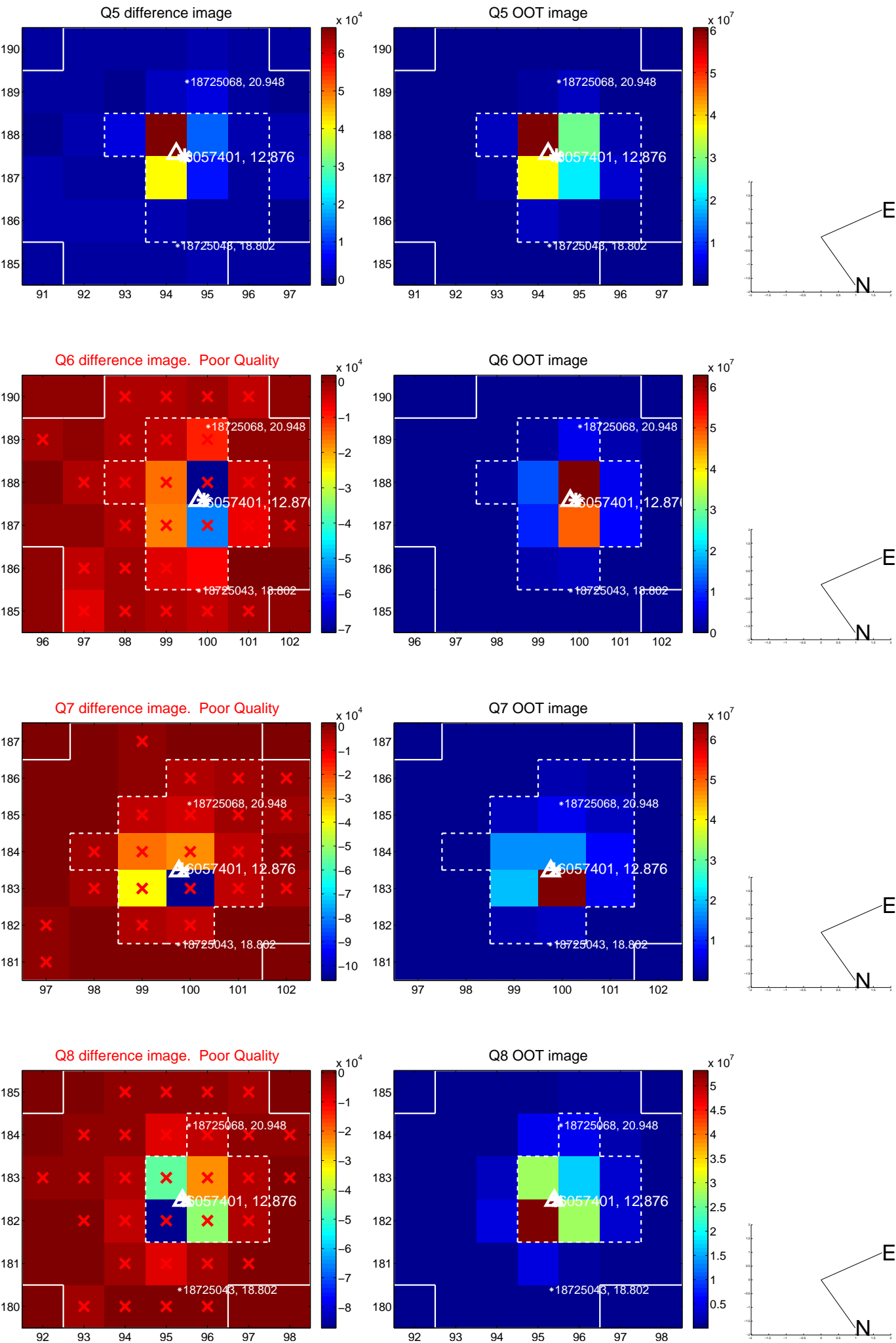


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

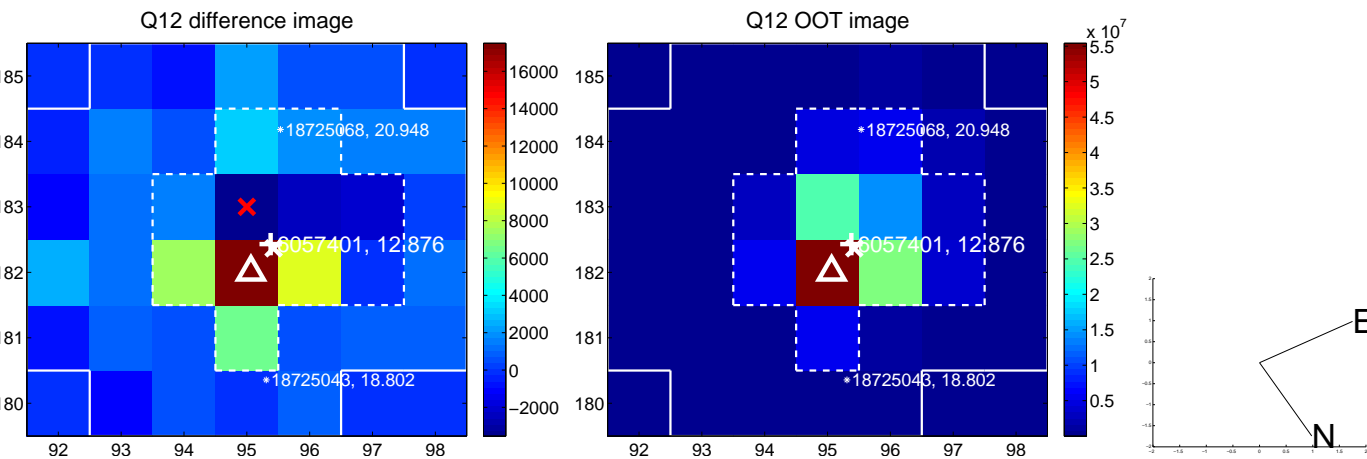
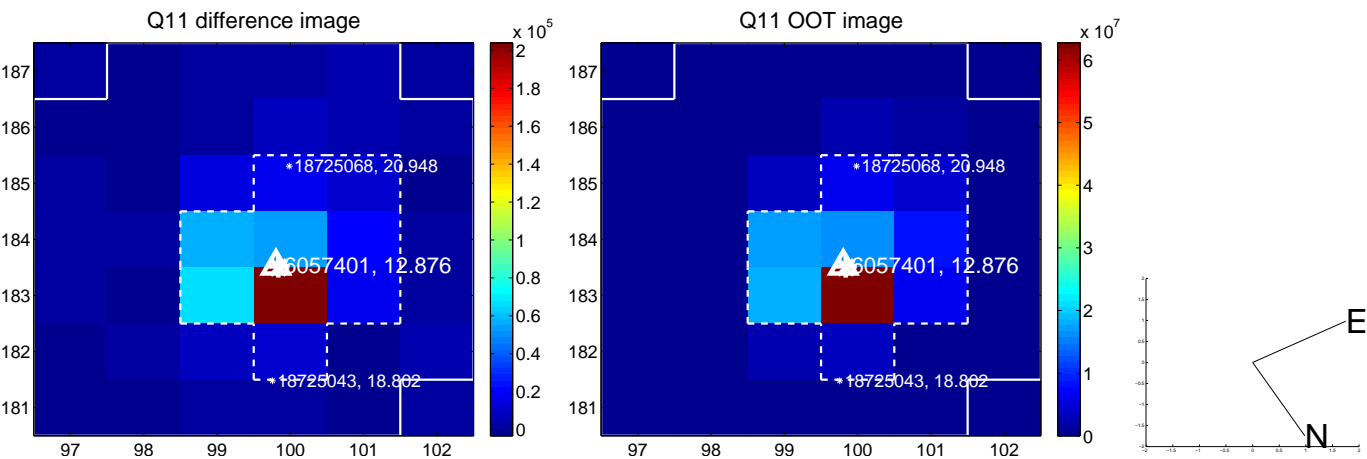
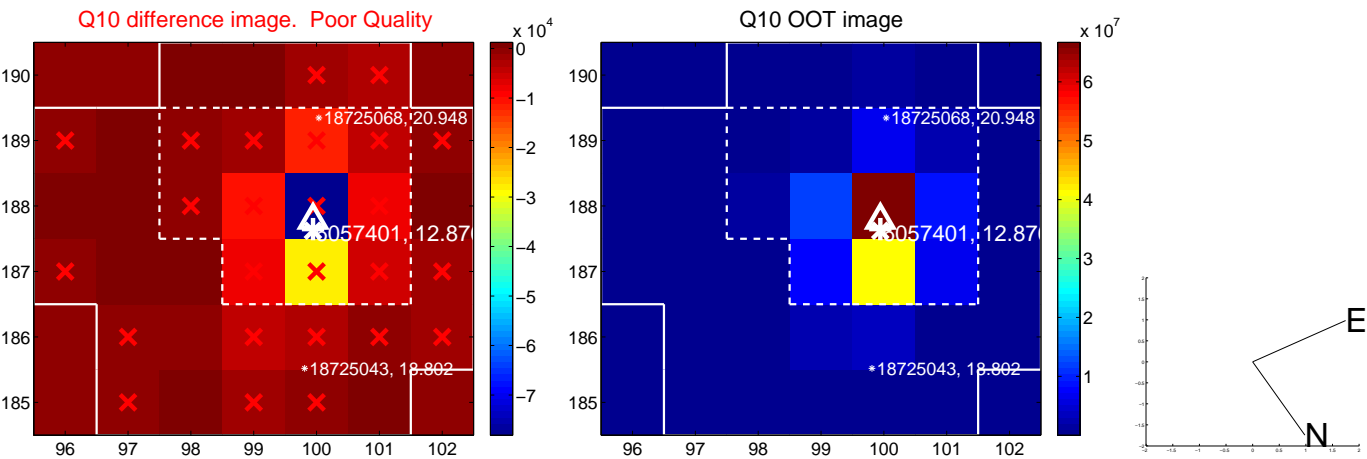
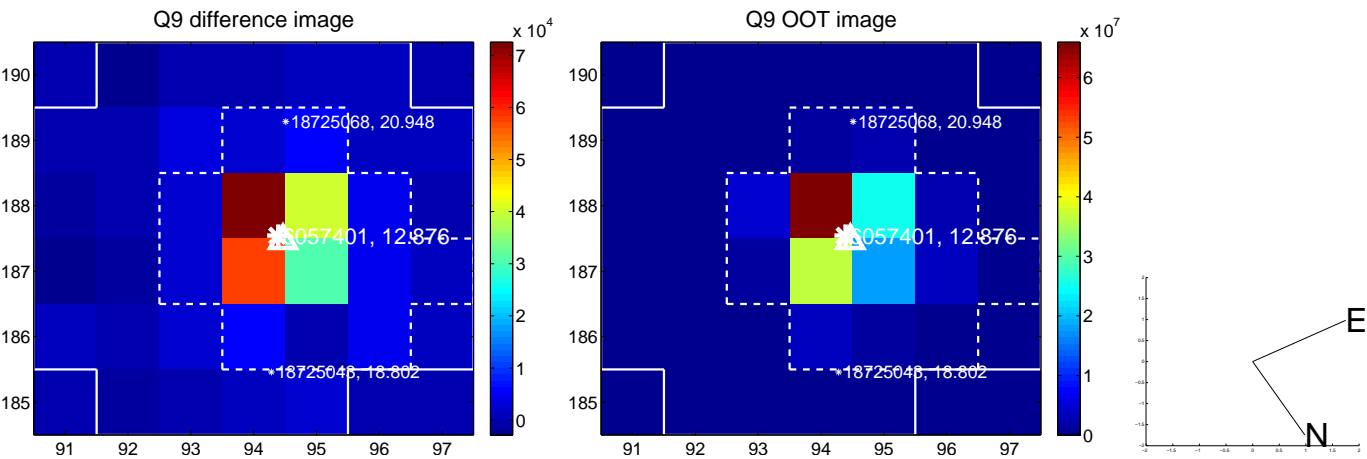
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



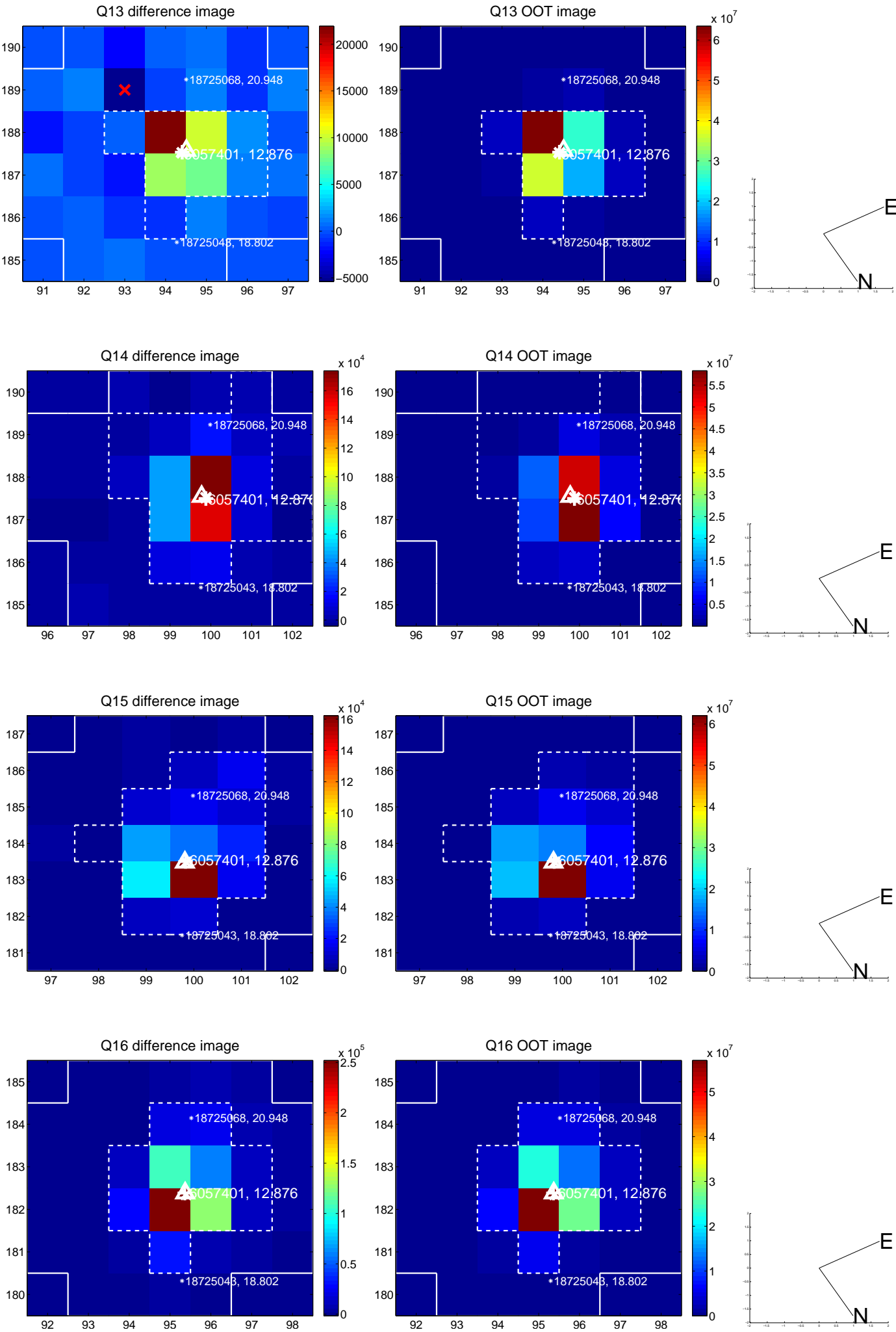
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



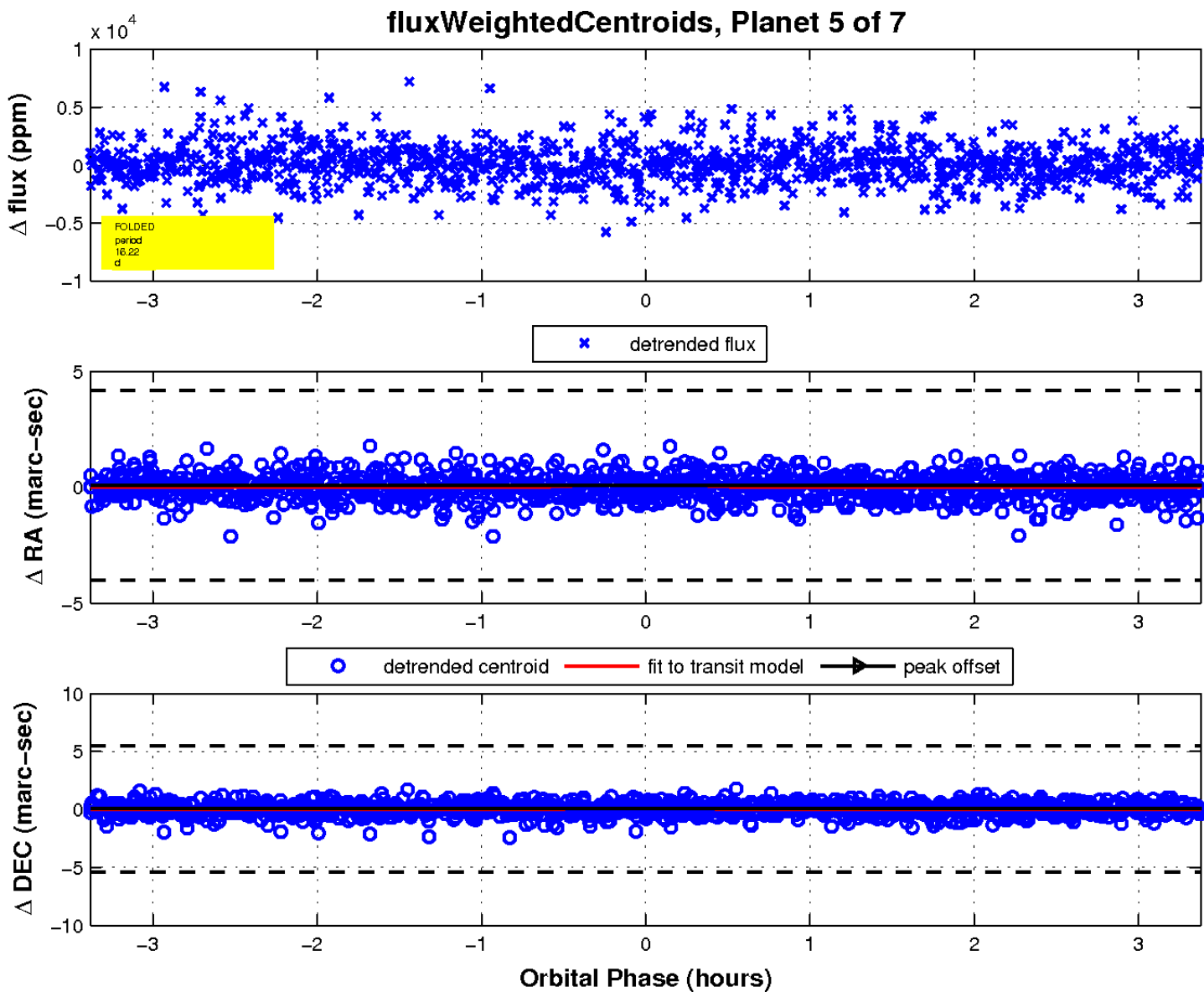
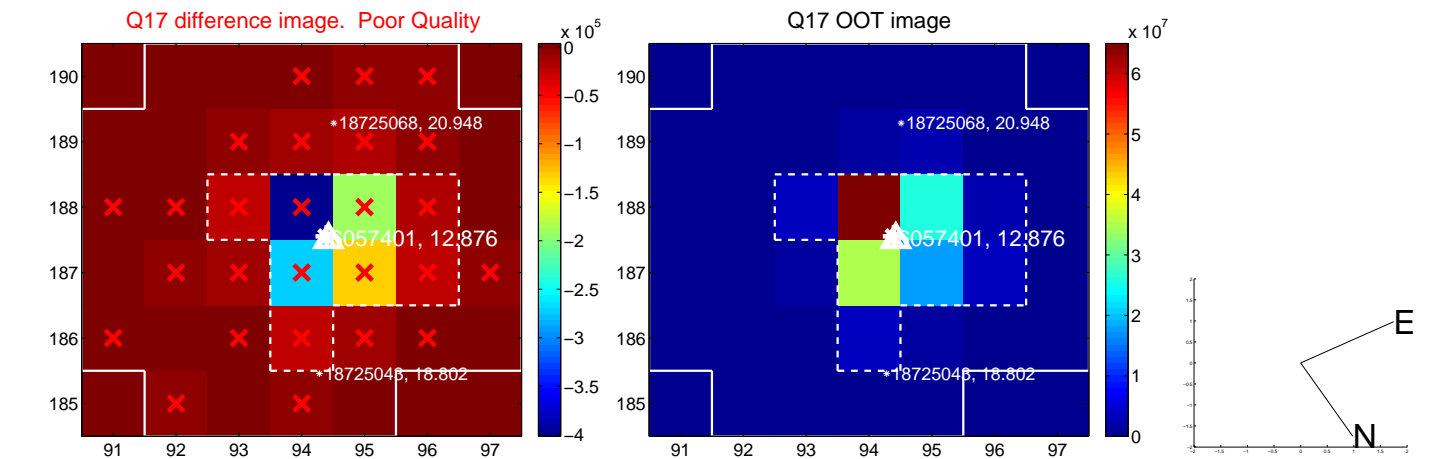
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

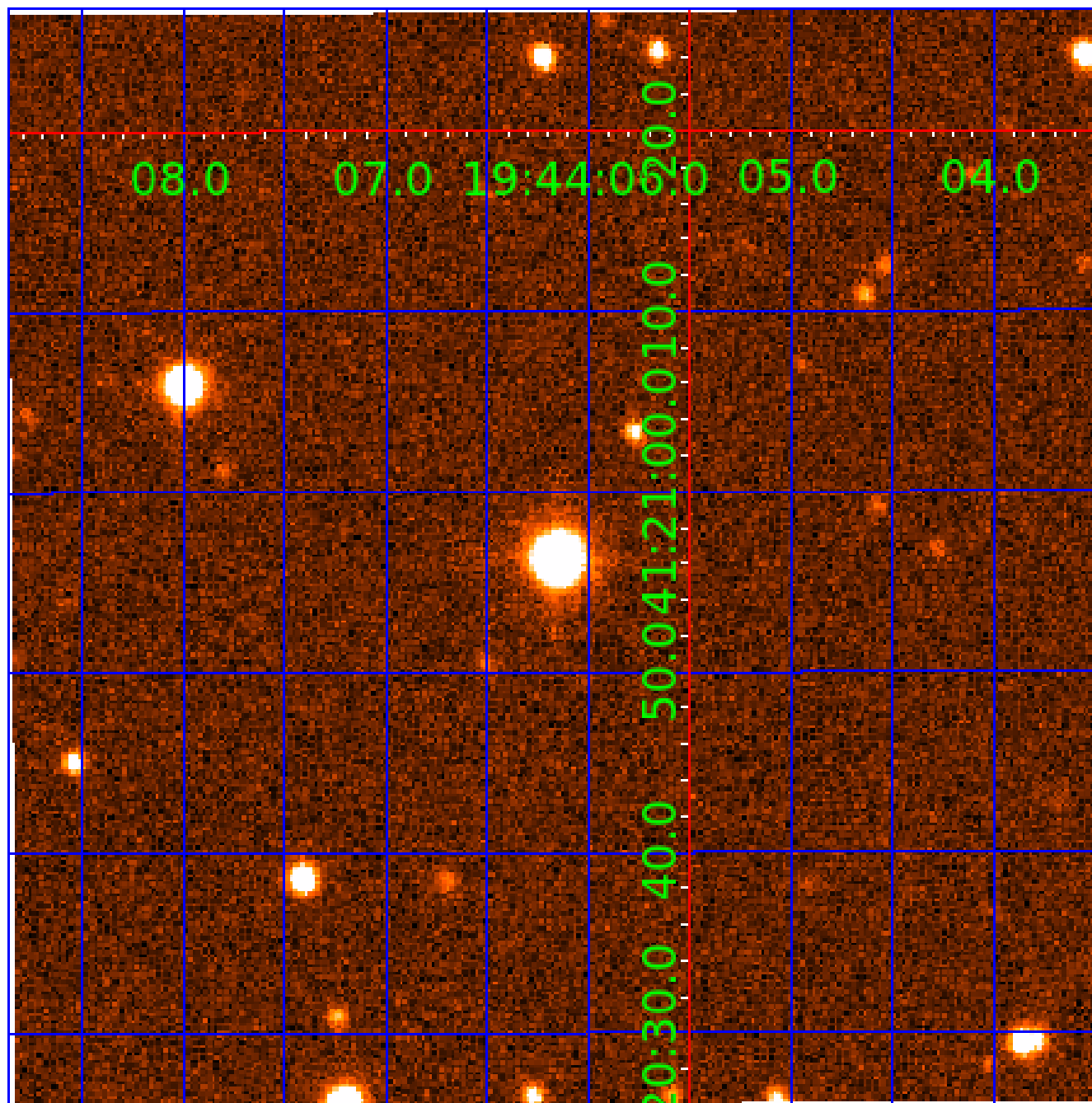


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006057401

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})
006057401-01	OBS	No	0.808054	132.110916	100.6	5.719	10.7	6.1	1.83	7497	1.88	23486.83
006057401-02	OBS	No	17.659040	145.562937	2662.0	1.837	17.9	10.8	1.83	7497	9.61	384.40
006057401-03	OBS	No	20.238761	140.576765	3128.6	1.906	16.3	13.7	1.83	7497	13.54	320.50
006057401-04	OBS	No	9.041831	133.346933	2592.3	1.423	16.9	17.2	1.83	7497	9.88	938.43
006057401-05	OBS	No	16.216110	141.563860	3346.5	1.127	17.1	14.7	1.83	7497	10.86	430.68
006057401-06	OBS	No	20.020123	132.519915	2731.9	2.102	16.8	16.5	1.83	7497	9.77	325.18
006057401-07	OBS	No	6.791879	137.775779	512.8	2.000	15.3	-1.0	1.83	7497	4.22	1374.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006057401-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
006057401-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
006057401-03	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
006057401-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006057401-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006057401-06	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
006057401-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

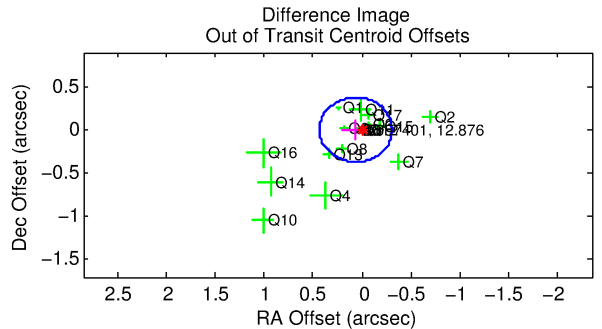
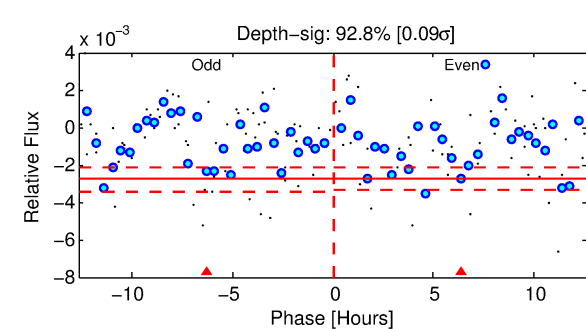
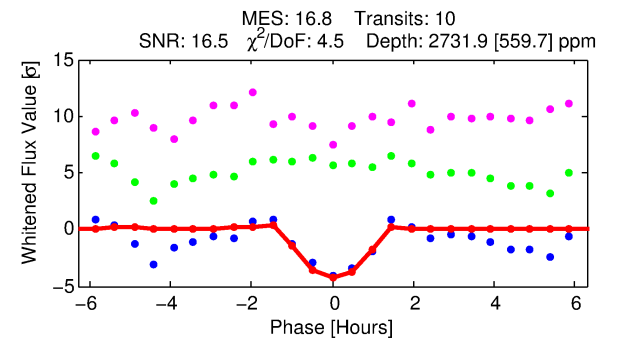
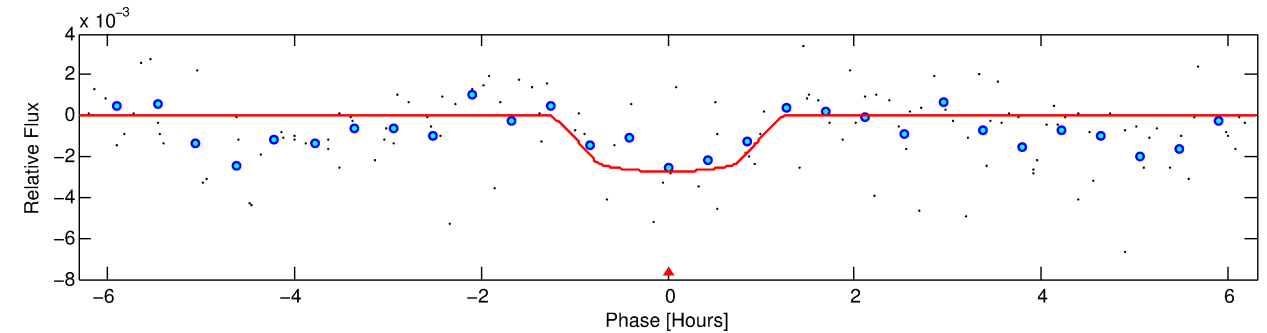
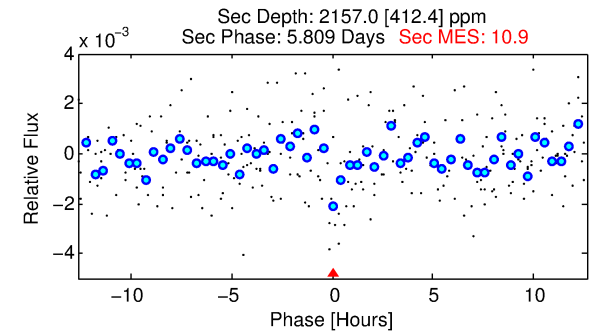
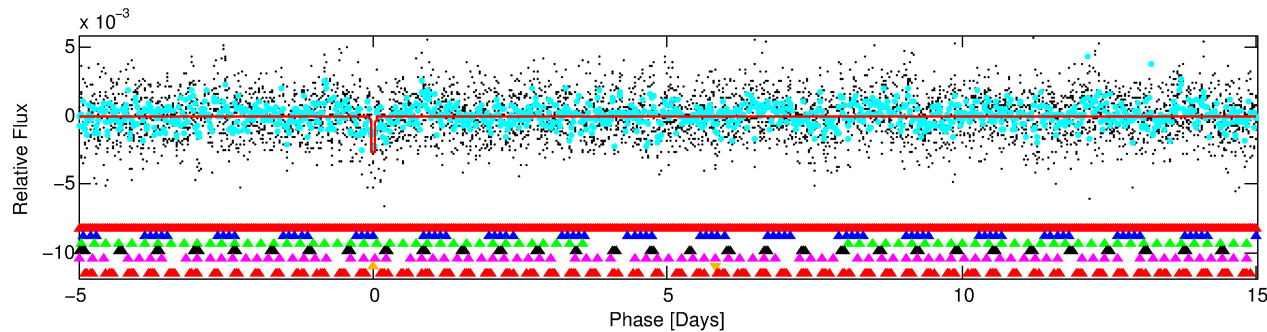
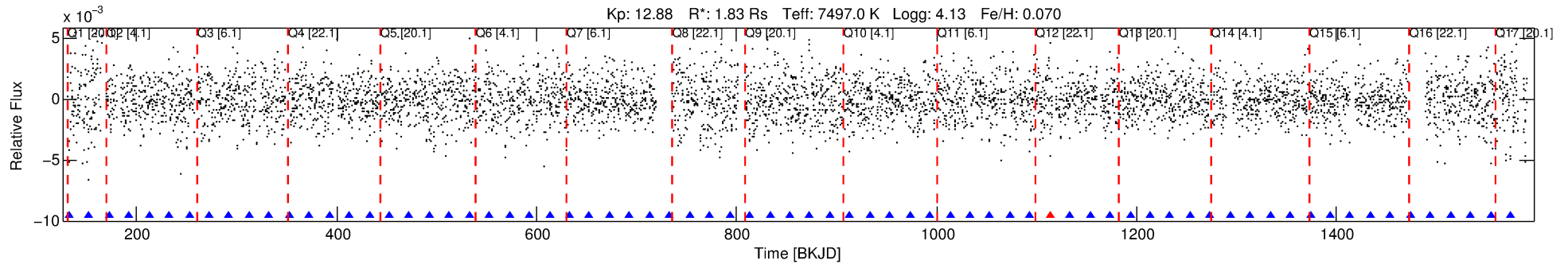
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006057401-06

No Significant Match Found

DV One-Page Summary

KIC: 6057401 Candidate: 6 of 7 Period: 20.020 d



DV Fit Results:

Period = 20.02012 [0.00030] d
Epoch = 132.5199 [0.0099] BKJD
Rp/R* = 0.0489 [0.2230]
a/R* = 74.39 [2040.97]
b = 0.23 [111.65]
Seff = 325.18 [126.02]
Teff = 1083 [105] K
Rp = 9.77 [44.63] Re
a = 0.1707 [0.0418] AU
Ag = 362.22 [3304.10] [0.11σ]
Teffp = 7304 [16647] K [0.37σ]

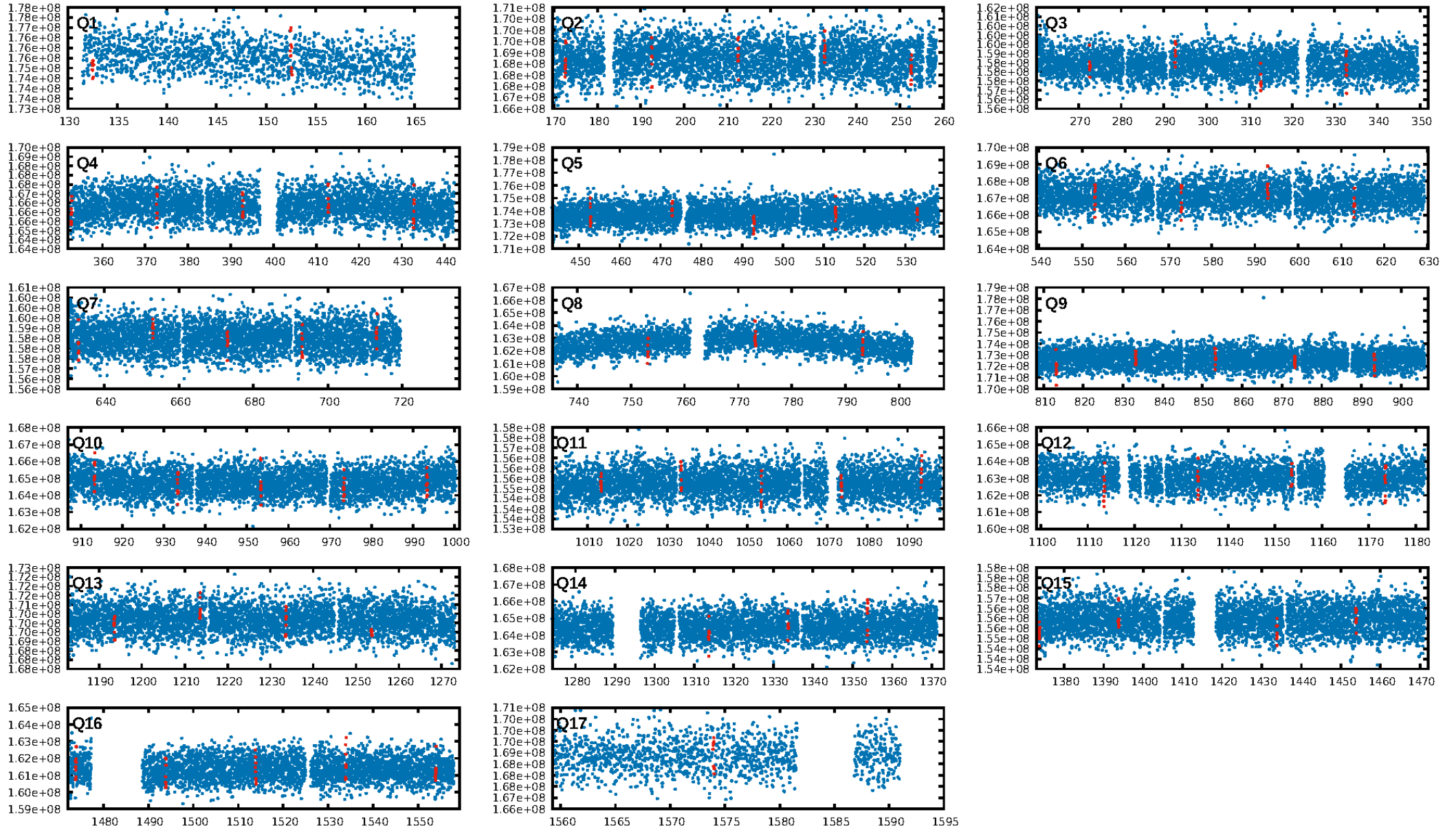
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [20.30σ]
LongPeriod-sig: 93.6% [1.85σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 25.7%
Bootstrap-pfa: N/A
RollingBand-fgt: 0.89 [8/9]
GhostDiagnostic-chr: 1.301
Centroid-sig: 75.3%
Centroid-so: 0.152 arcsec [3.84σ]
OotOffset-rm: 0.067 arcsec [0.54σ]
KicOffset-rm: 0.112 arcsec [0.77σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.82 [14/17]
DiffImageOverlap-fno: 0.24 [4/17]

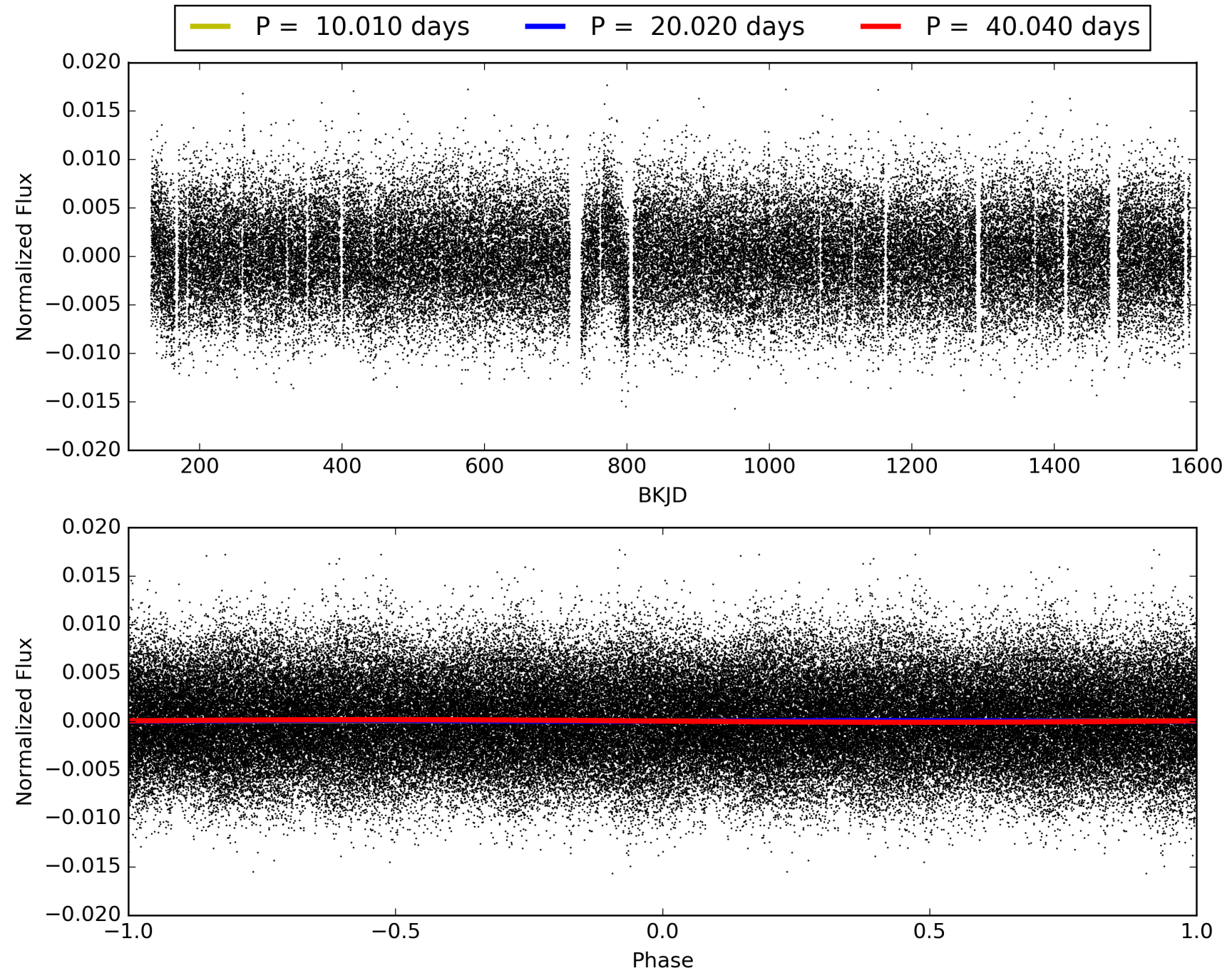
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 08:20:10 Z

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

TCE 006057401-06, PDC Light Curves

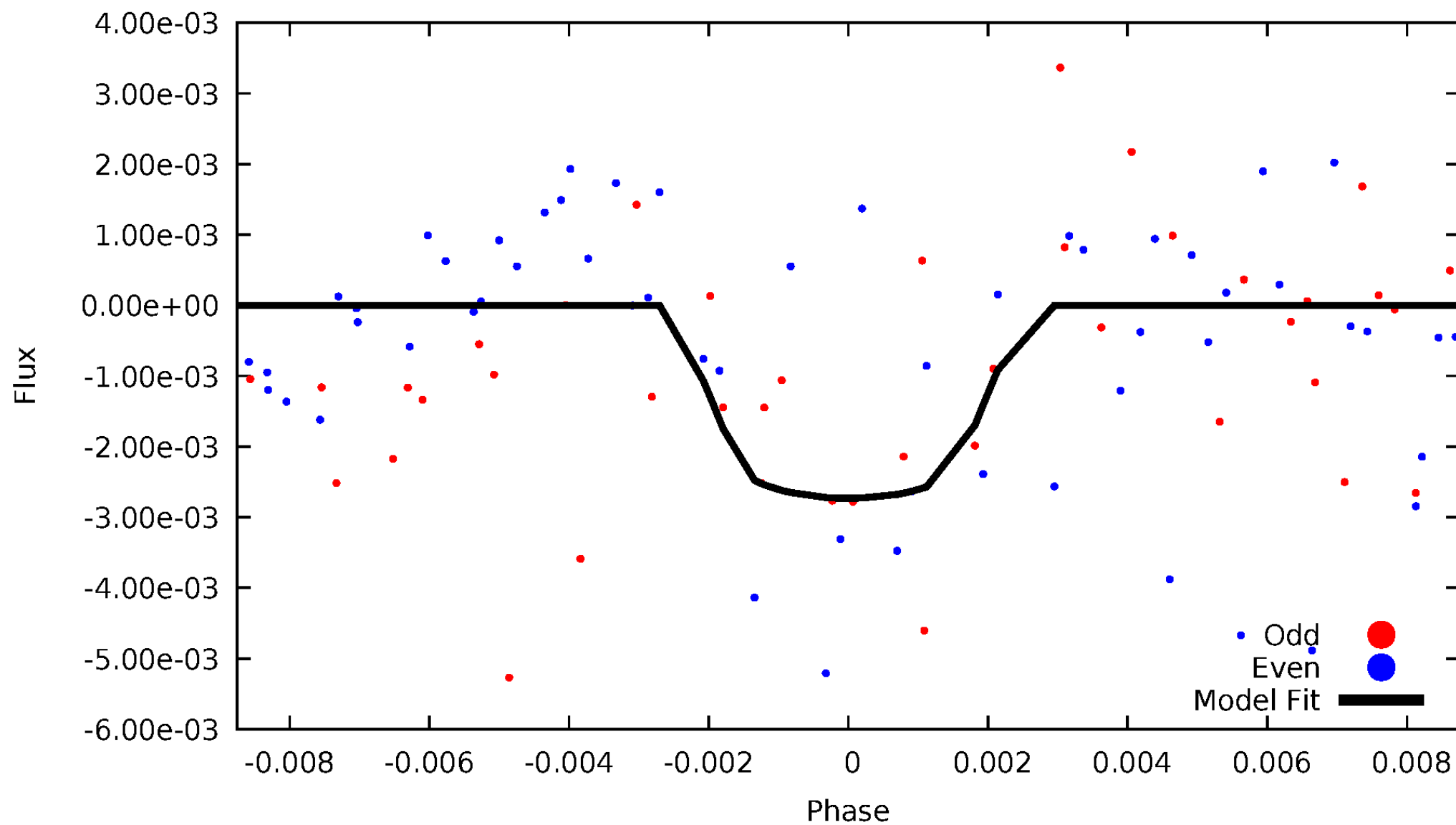


TCE 006057401-06



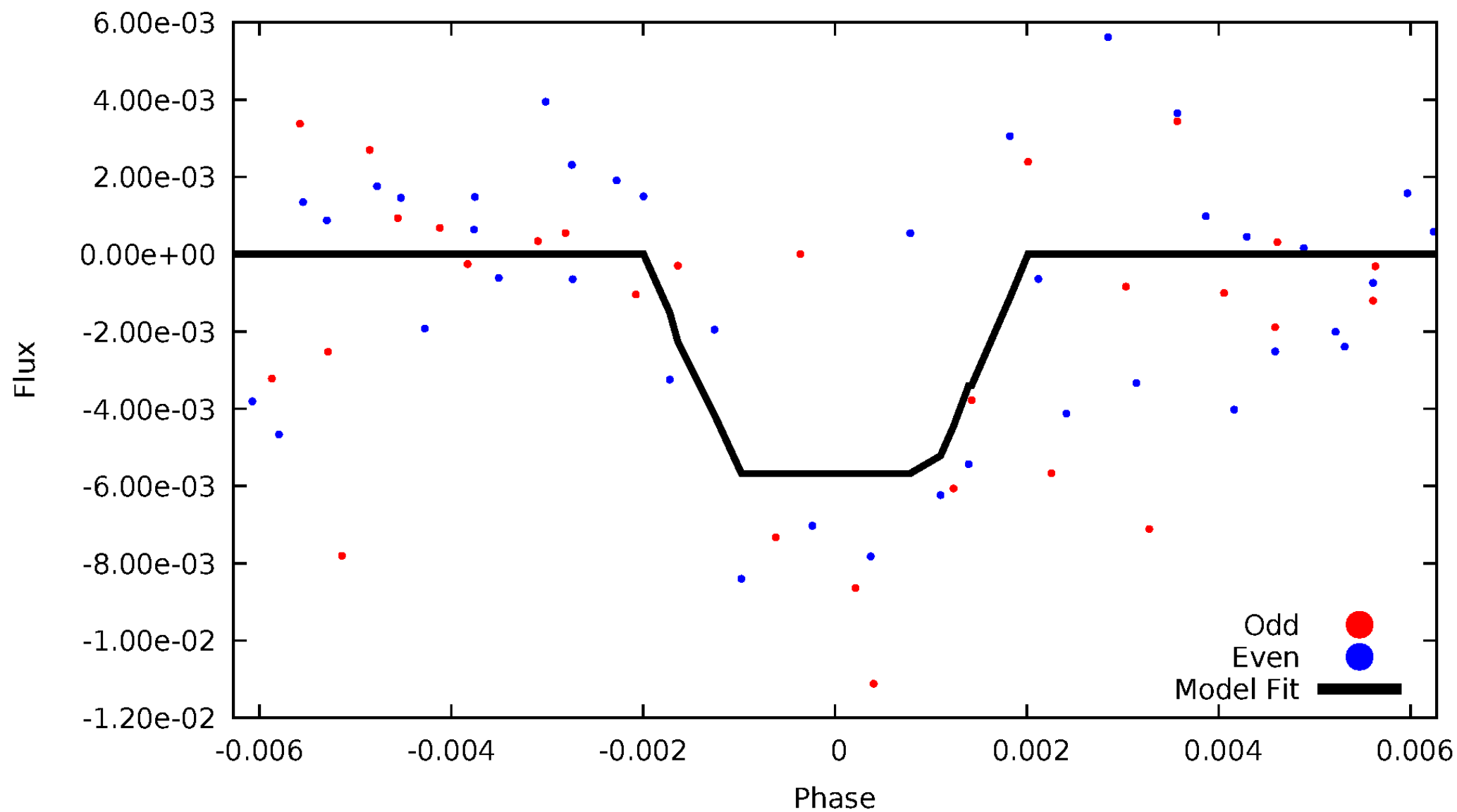
DV Odd/Even

TCE 006057401-06



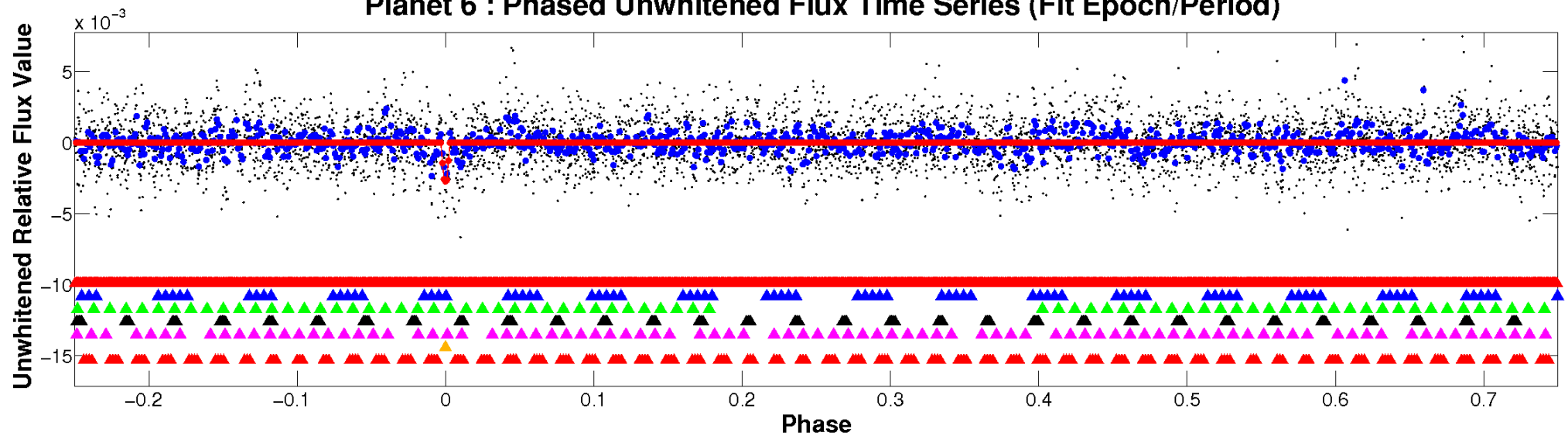
ALT Odd/Even

TCE 006057401-06

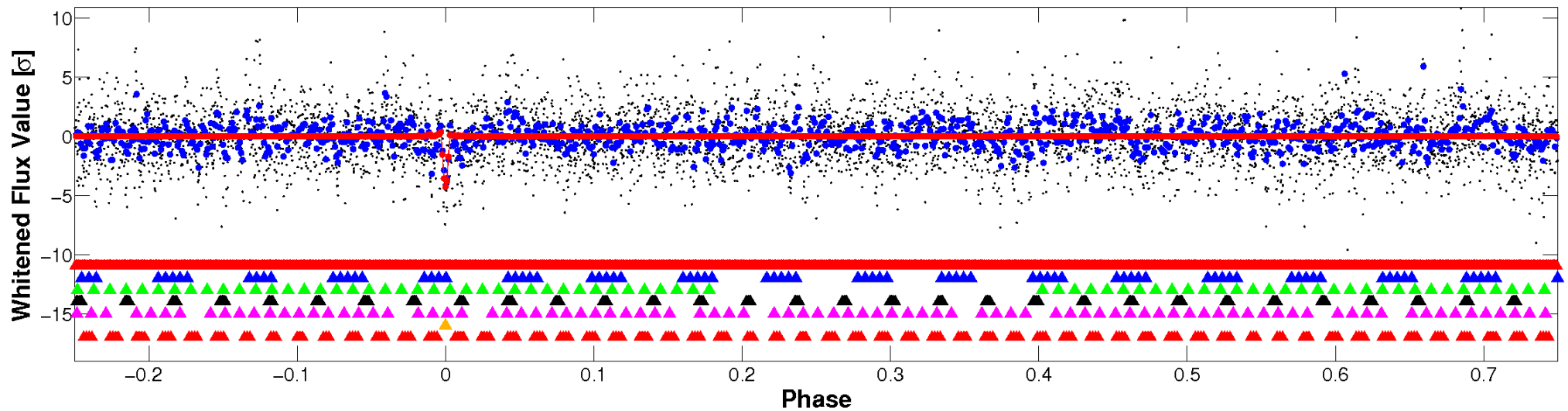


Non-Whitened Vs. Whitened Light Curve

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

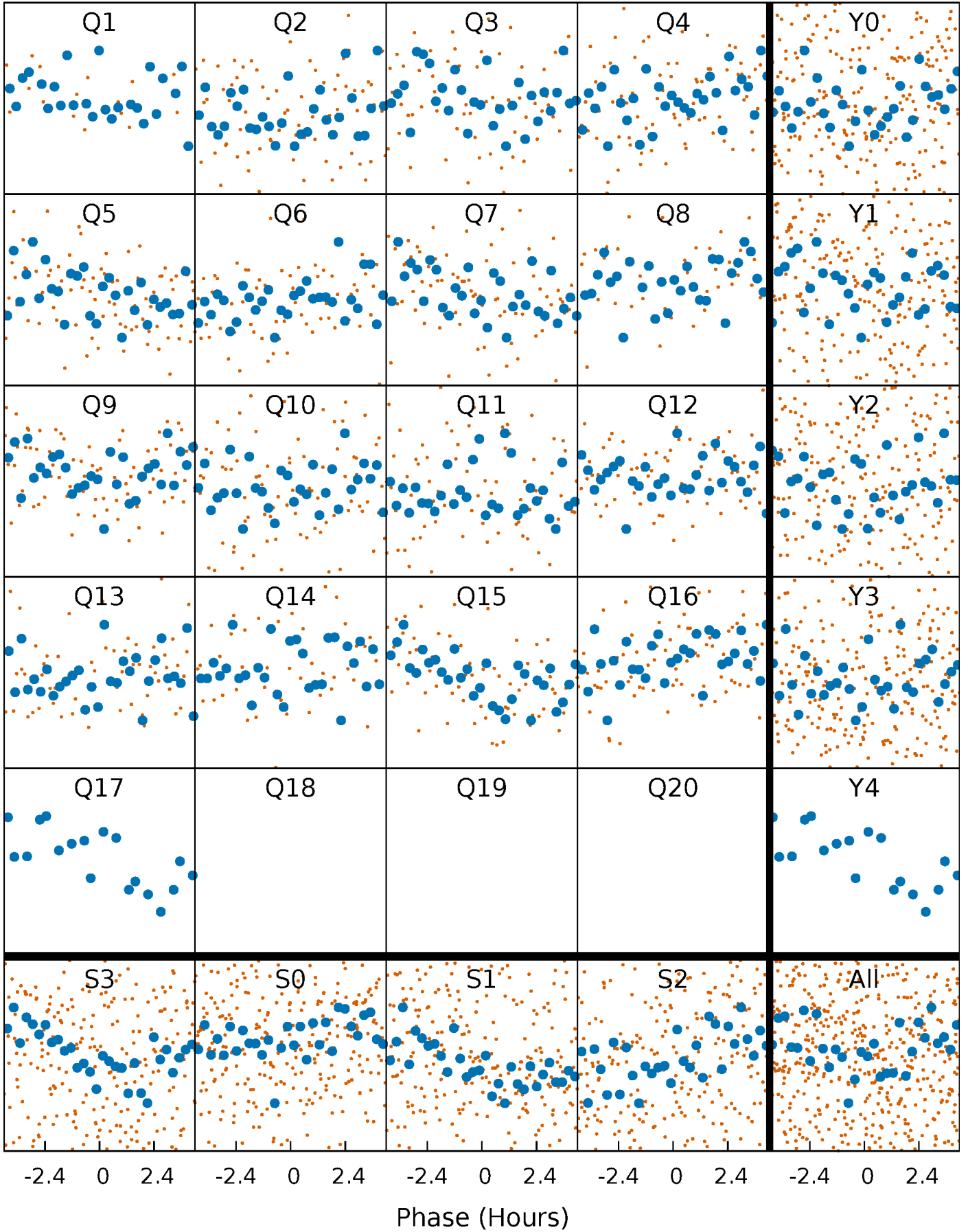


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



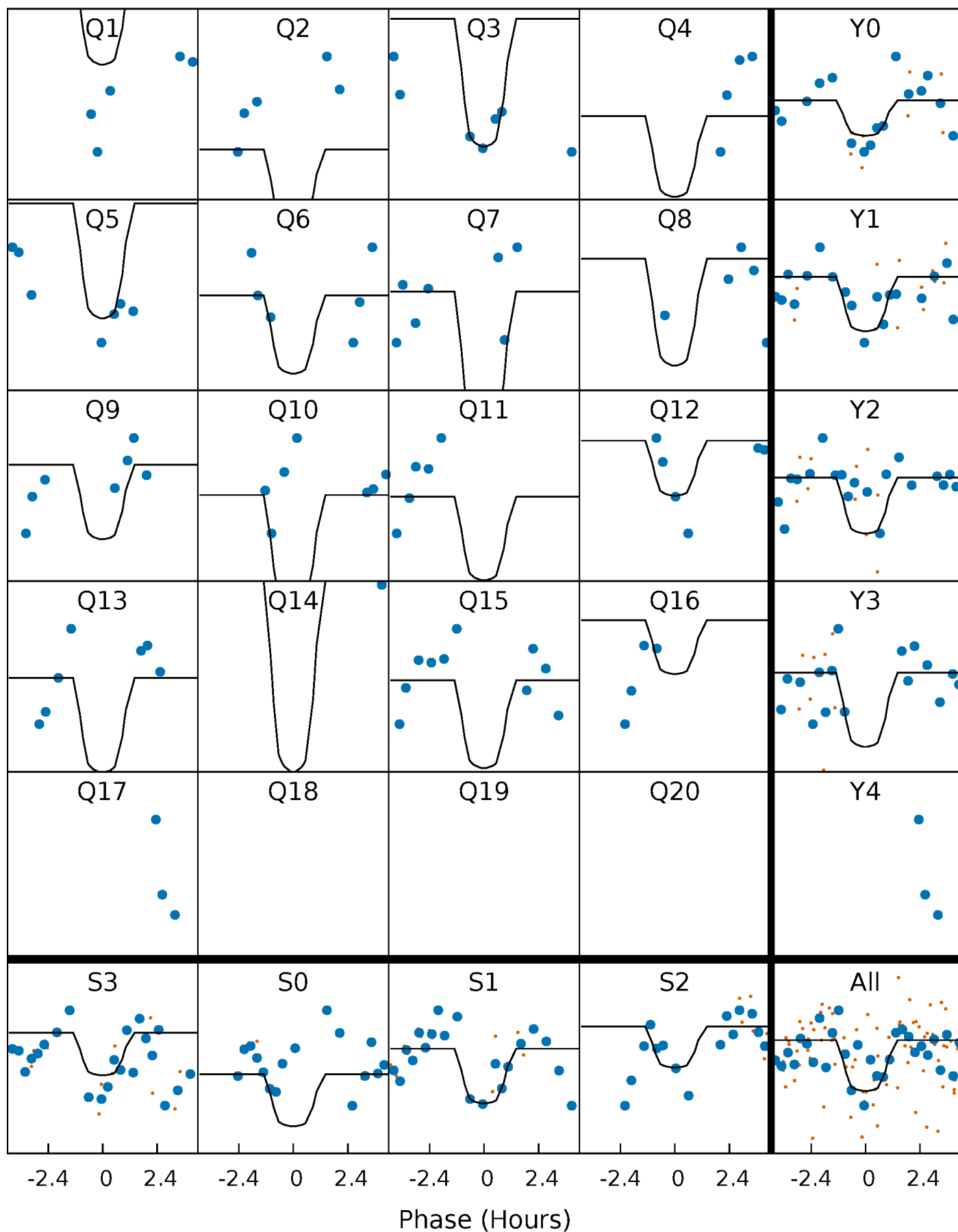
PDC Quarter-Phased Transit Curves

TCE 006057401-06 P= 20.020123 Days $T_0=132.519915$ (BKJD)



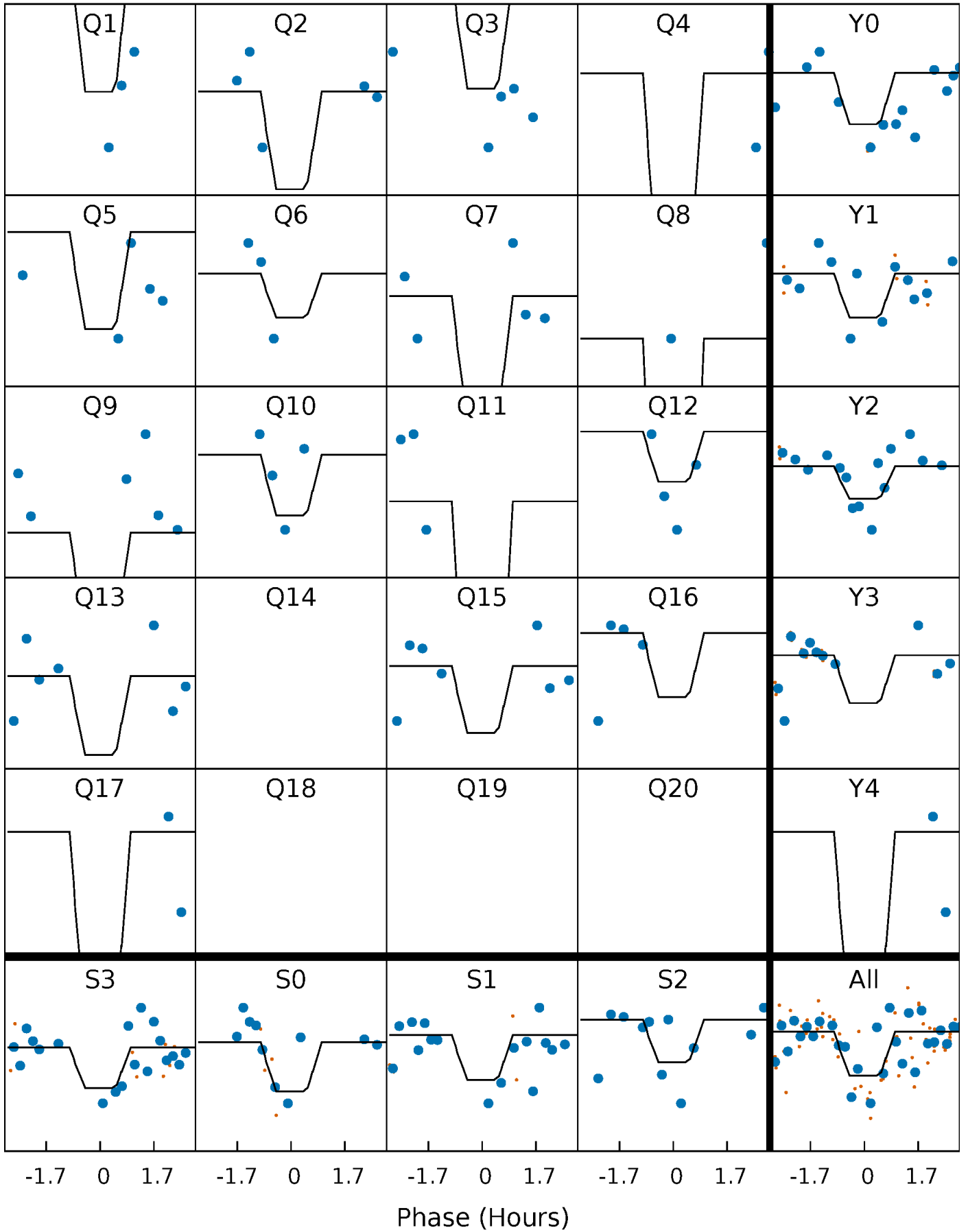
DV Quarter-Phased Transit Curves

TCE 006057401-06 P= 20.020123 Days $T_0=132.519915$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

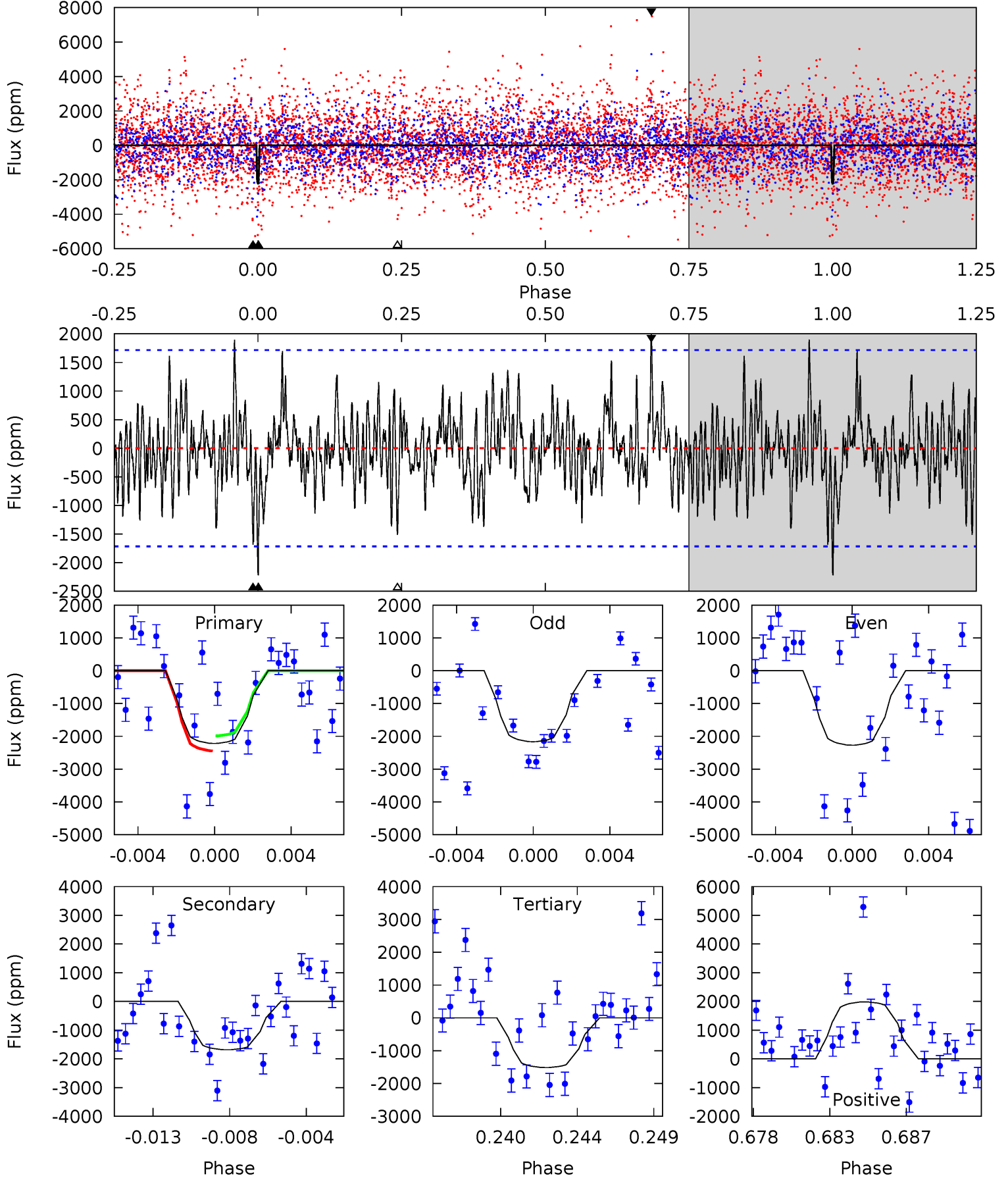
TCE 006057401-06 P= 20.020686 Days $T_0=132.485545$ (BKJD)



DV Model-Shift Uniqueness Test

006057401-06, P = 20.020123 Days, E = 112.499792 Days

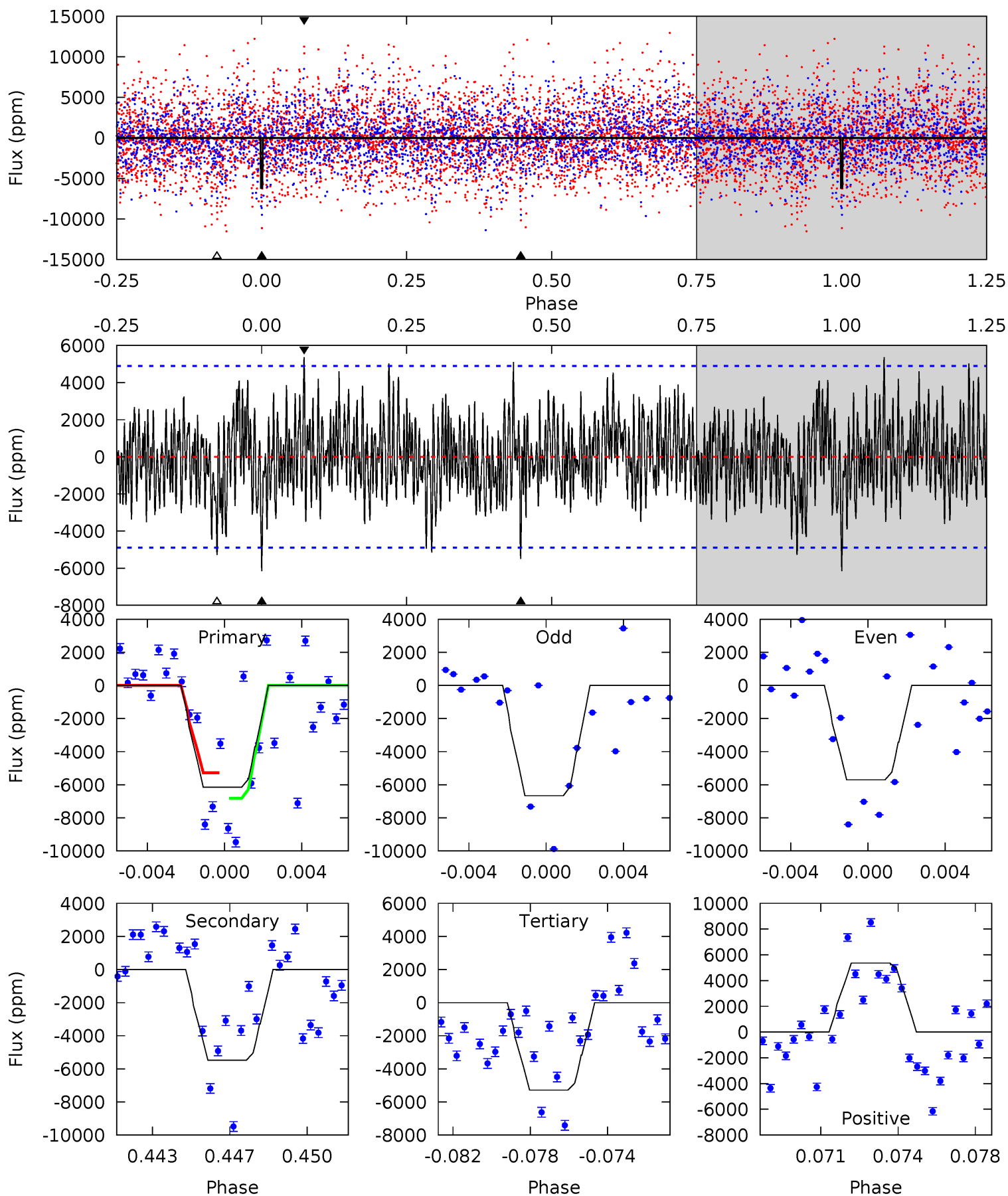
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.71	5.09	4.58	6.01	5.19	2.86	1.61	2.13	0.70	0.51	-0.92	0.17	0.70	0.47	0.69



Alt Model-Shift Uniqueness Test

006057401-06, P = 20.020686 Days, E = 112.464859 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.56	5.85	5.63	5.72	5.22	2.92	1.83	0.93	0.84	0.21	0.13	0.51	0.85	0.47	0.82



Stellar Parameters For KIC 006057401

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7497^{+210}_{-341}	$4.132^{+0.120}_{-0.180}$	$0.070^{+0.200}_{-0.350}$	$1.830^{+0.554}_{-0.341}$	$1.656^{+0.205}_{-0.251}$	$0.380^{+0.218}_{-0.188}$
	+3%/-5%	+3%/-4%	+286%/-500%	+30%/-19%	+12%/-15%	+57%/-49%
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 006057401-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1683 ± 330	$33.42^{+33.46}_{-23.41}$	1523^{+104}_{-101}	3984^{+2624}_{-822}	24^{+243}_{-18}
Alt.	-5485 ± 938	$35.65^{+35.70}_{-25.28}$	1512^{+112}_{-97}	4843^{+4292}_{-1109}	67^{+648}_{-50}

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

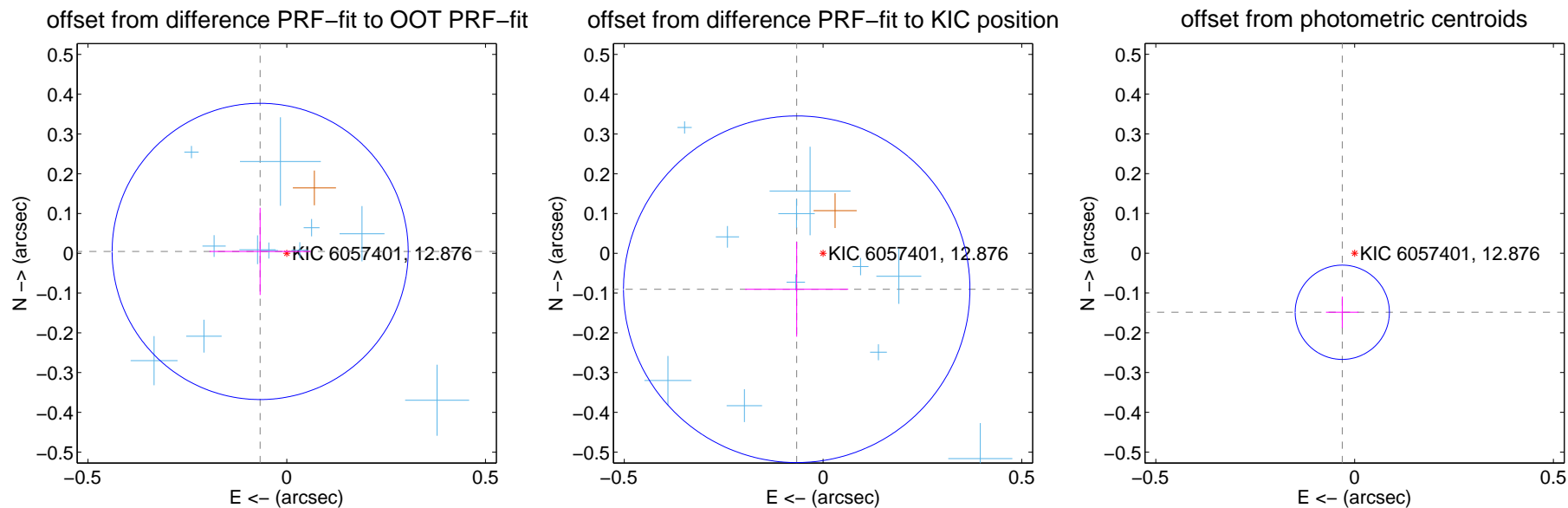
DV Centroid Data

Supplemental centroid analysis for 006057401-06. Kepler magnitude: 12.88. Transit SNR 16.52

There are 14 quarters with good PRF difference image offsets

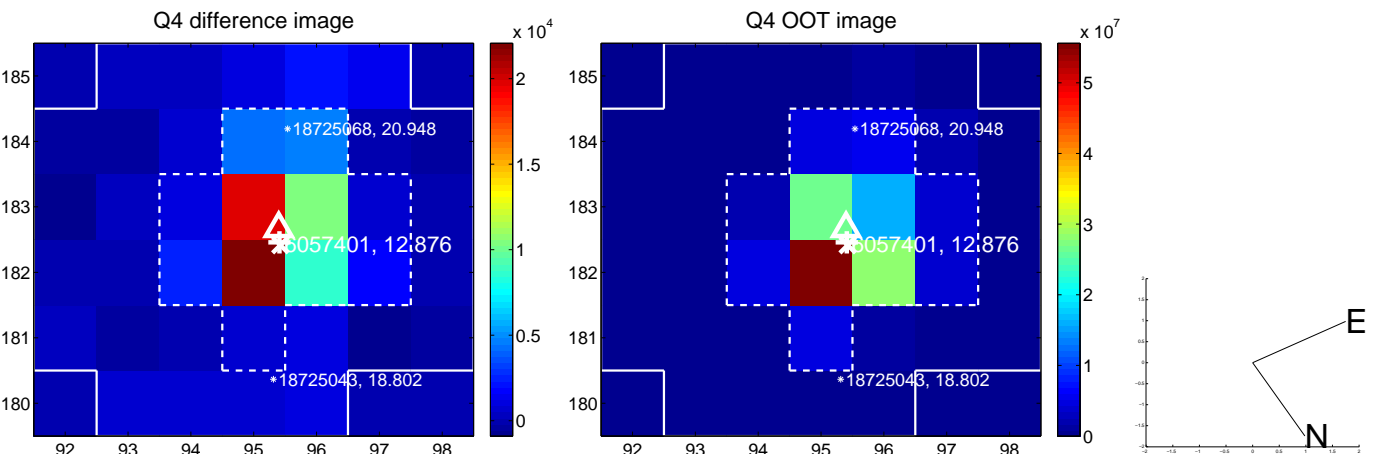
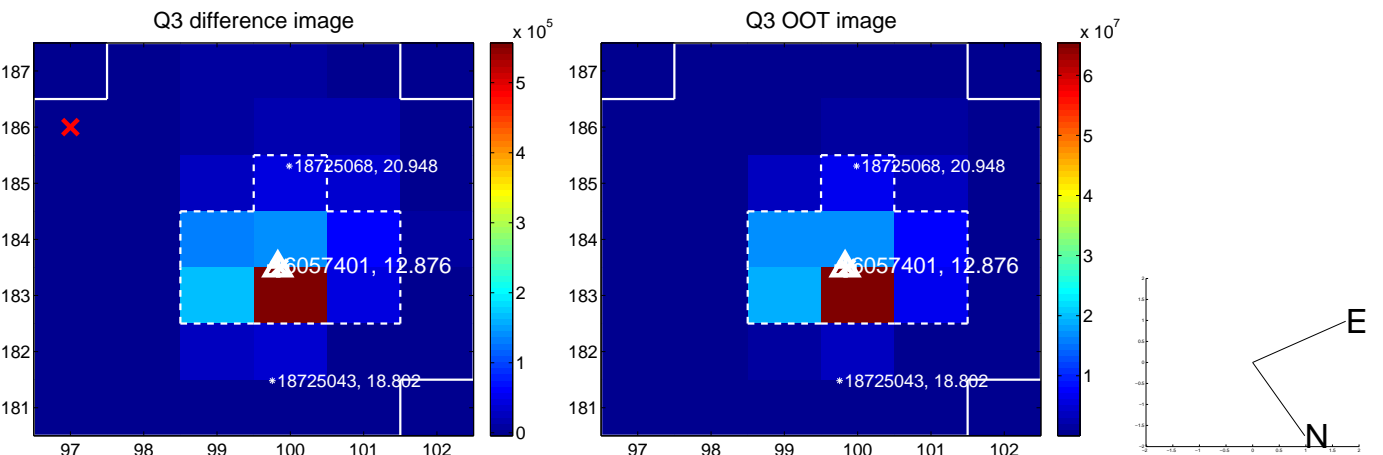
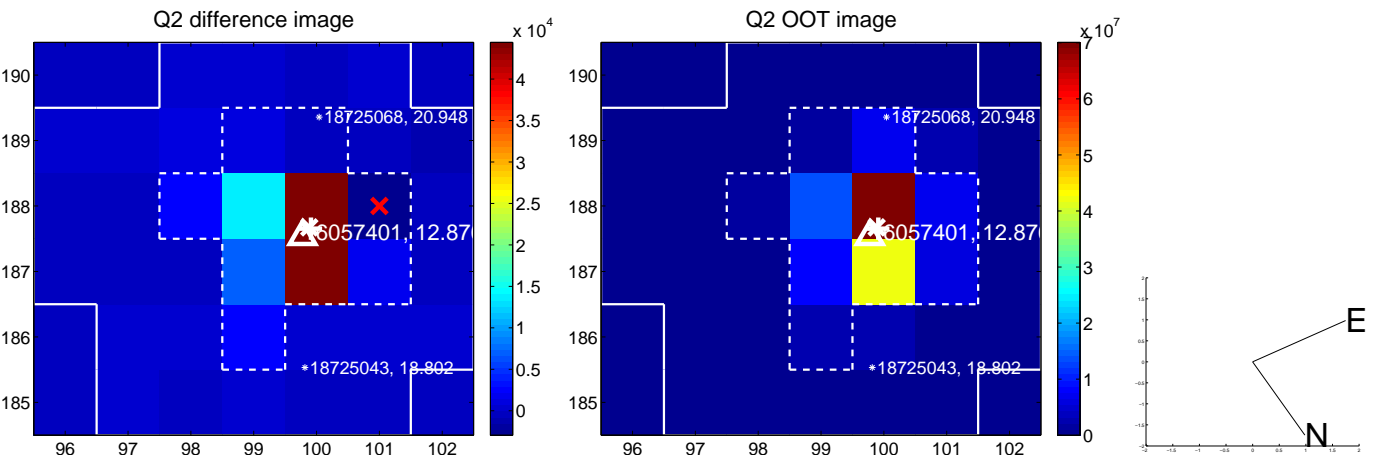
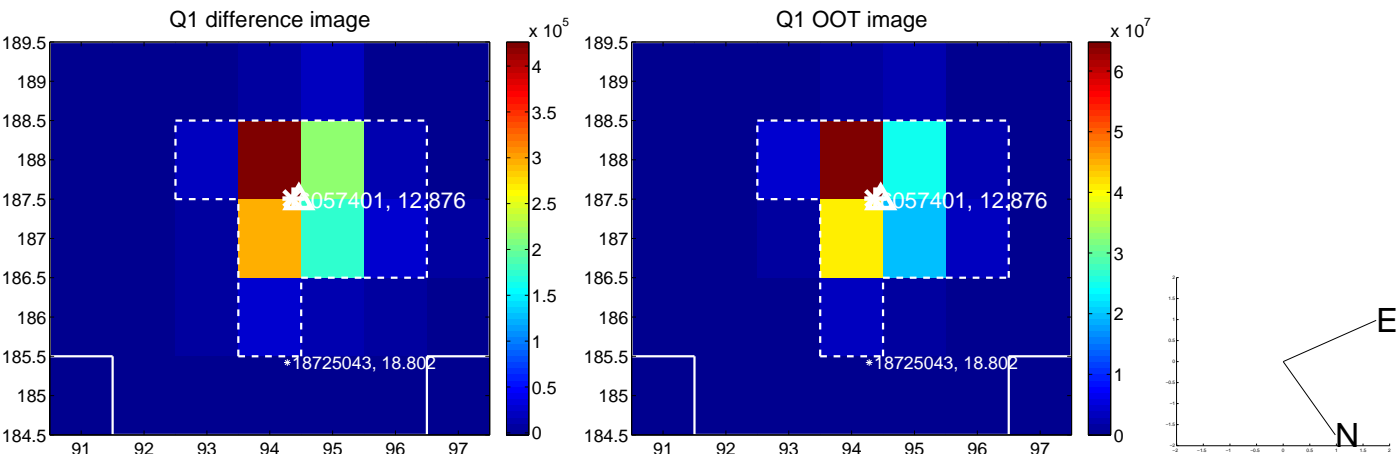
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.067 ± 0.124	0.54	0.067 ± 0.128	0.005 ± 0.110
PRF-fit source offset from KIC position	0.112 ± 0.145	0.77	0.066 ± 0.130	-0.090 ± 0.119
photometric centroid source offset	0.15 ± 0.04	3.84	0.03 ± 0.04	-0.15 ± 0.04

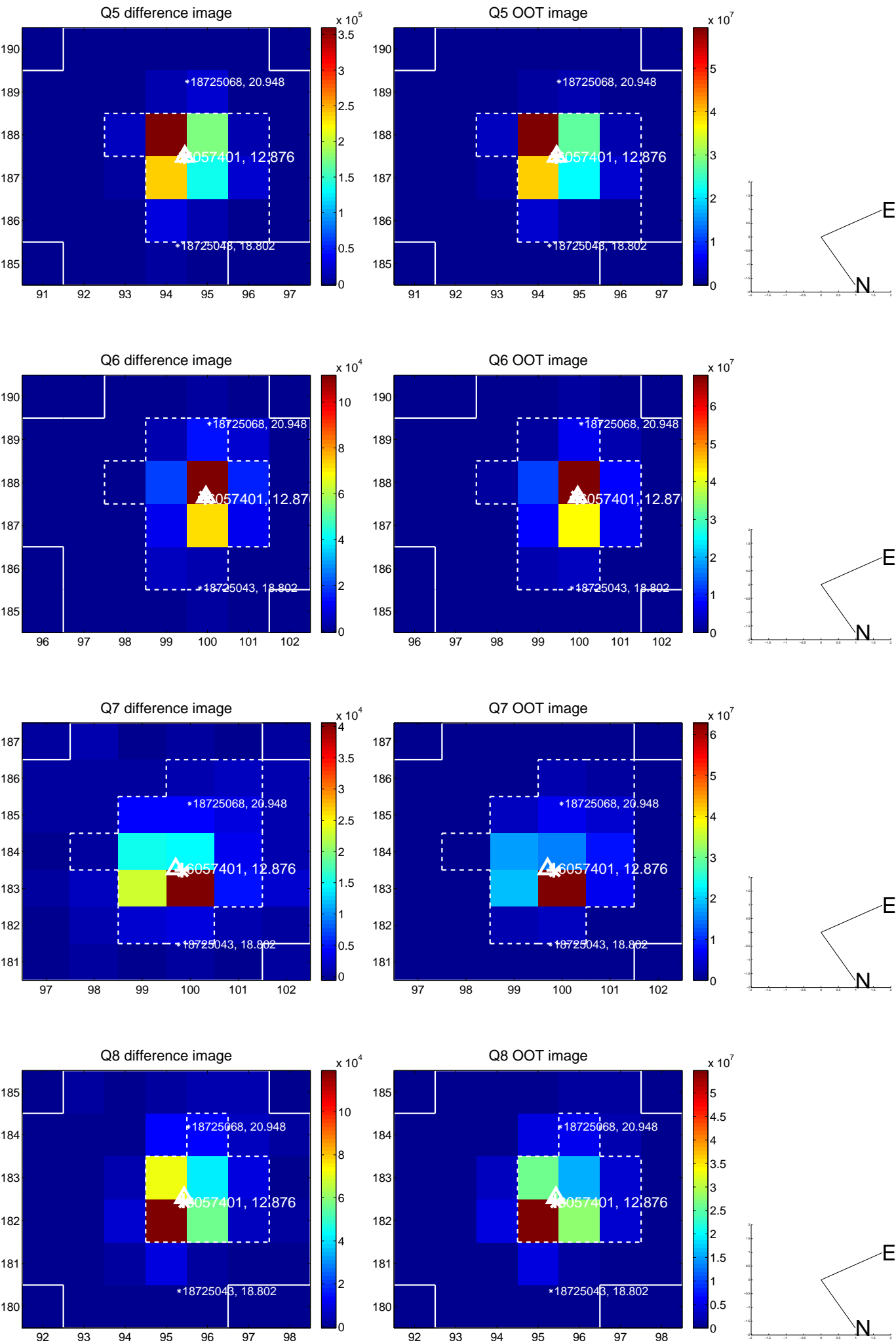


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

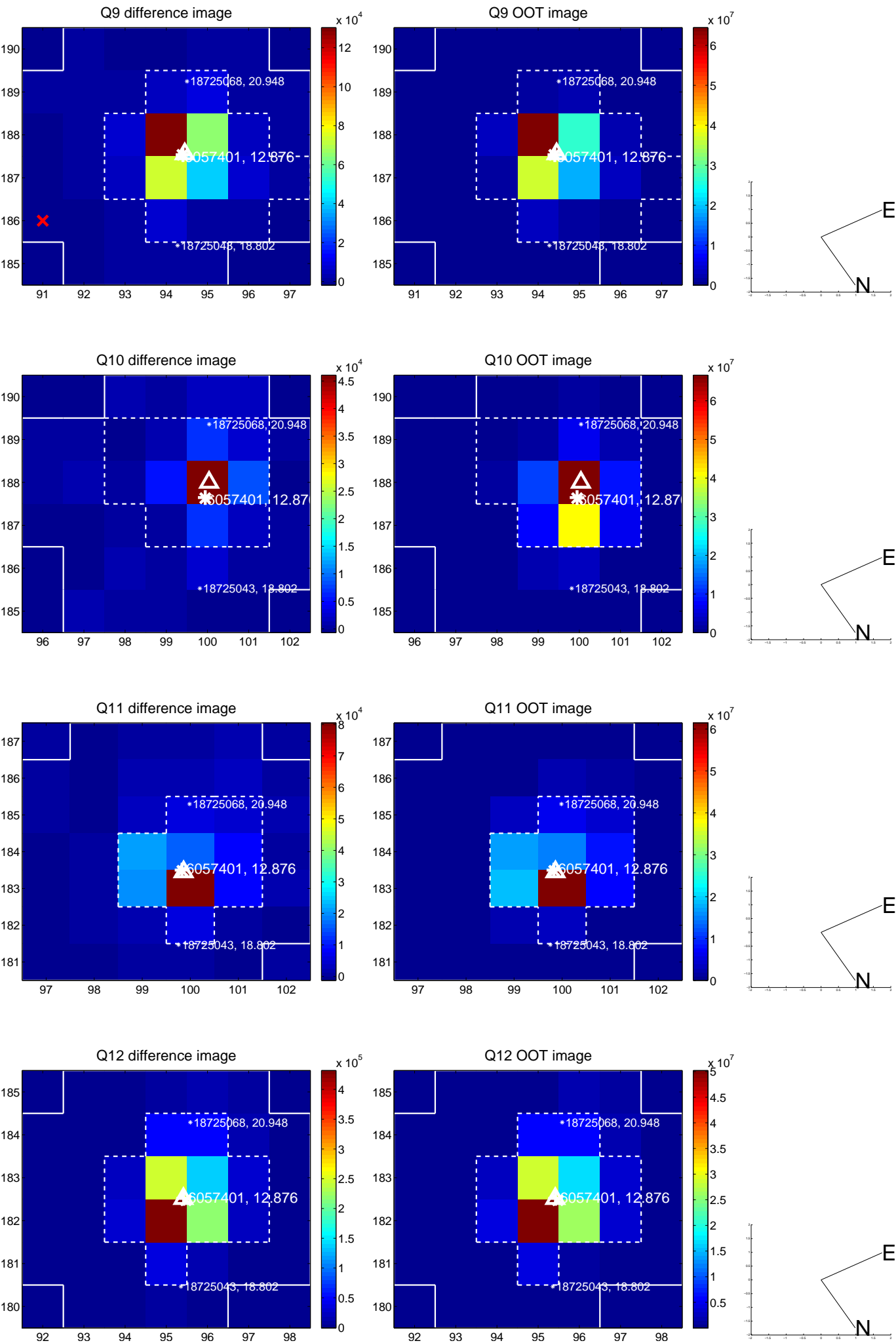
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



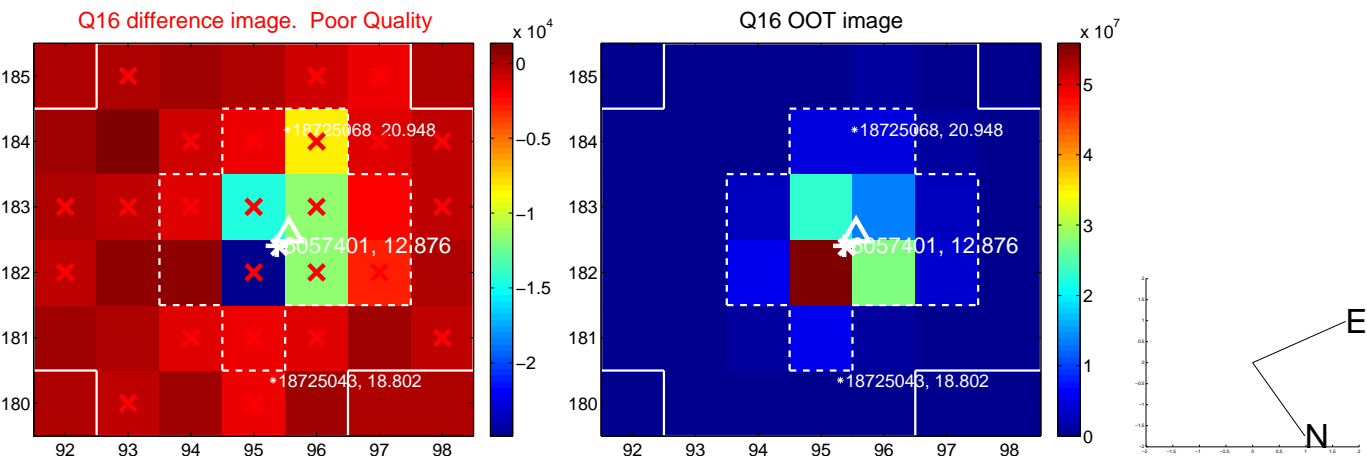
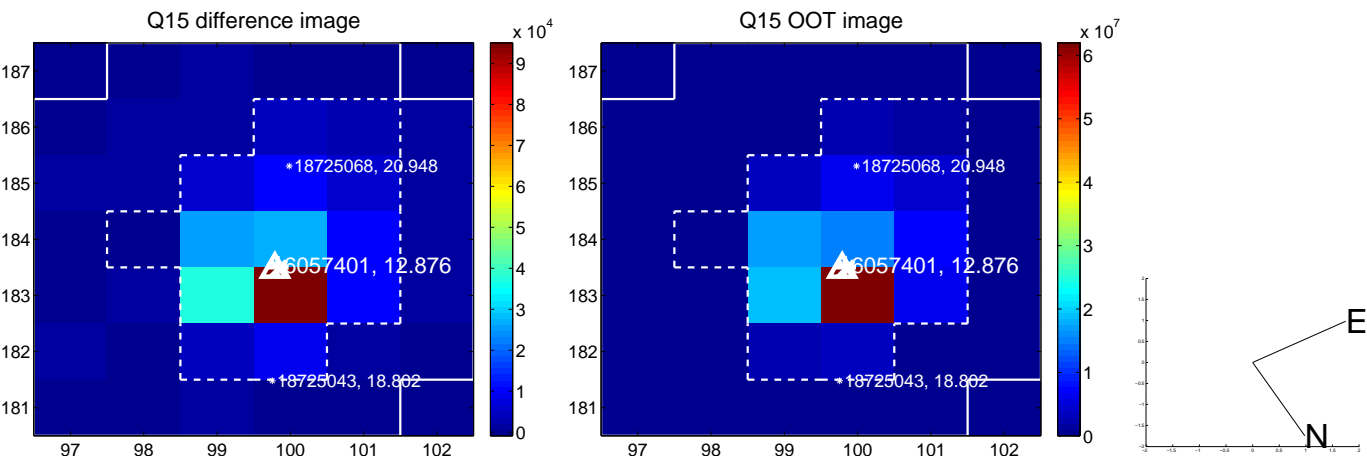
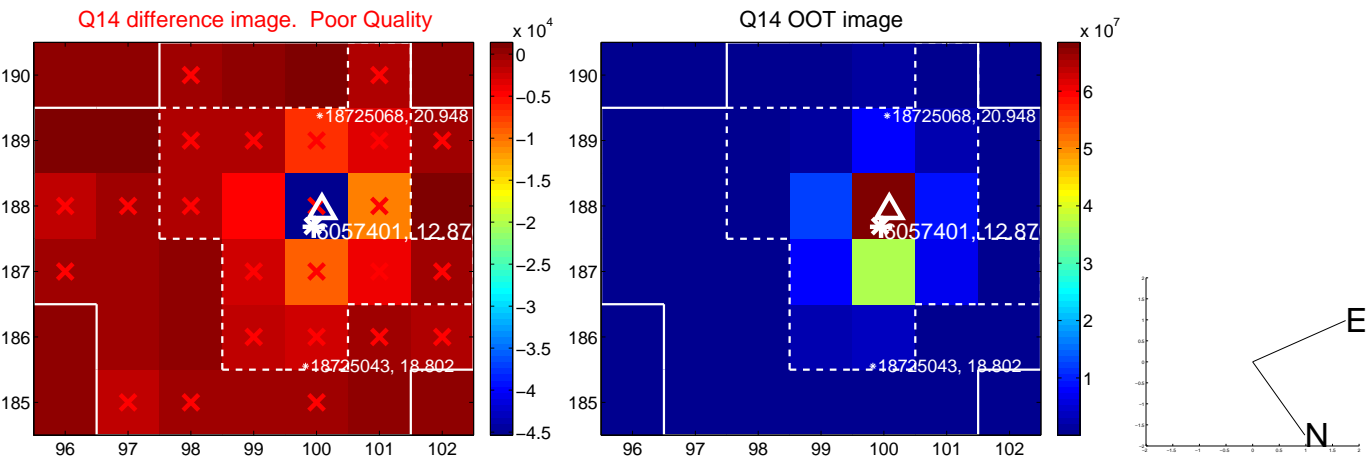
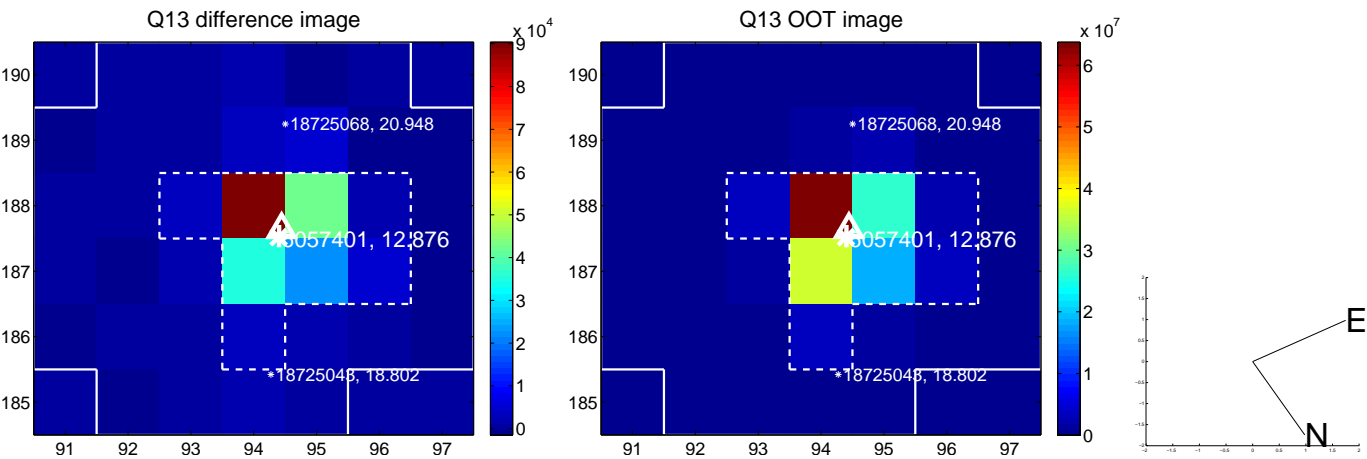
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



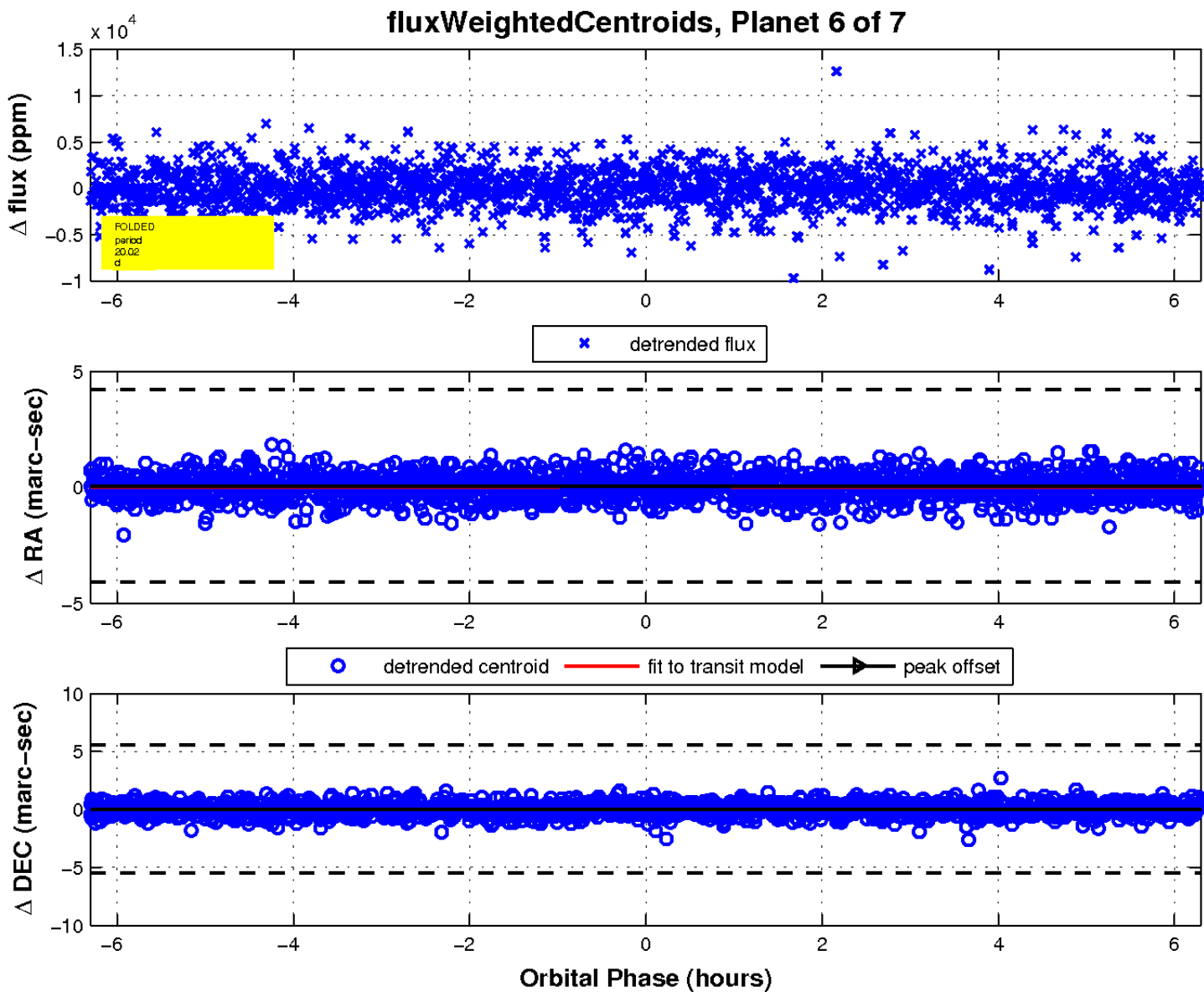
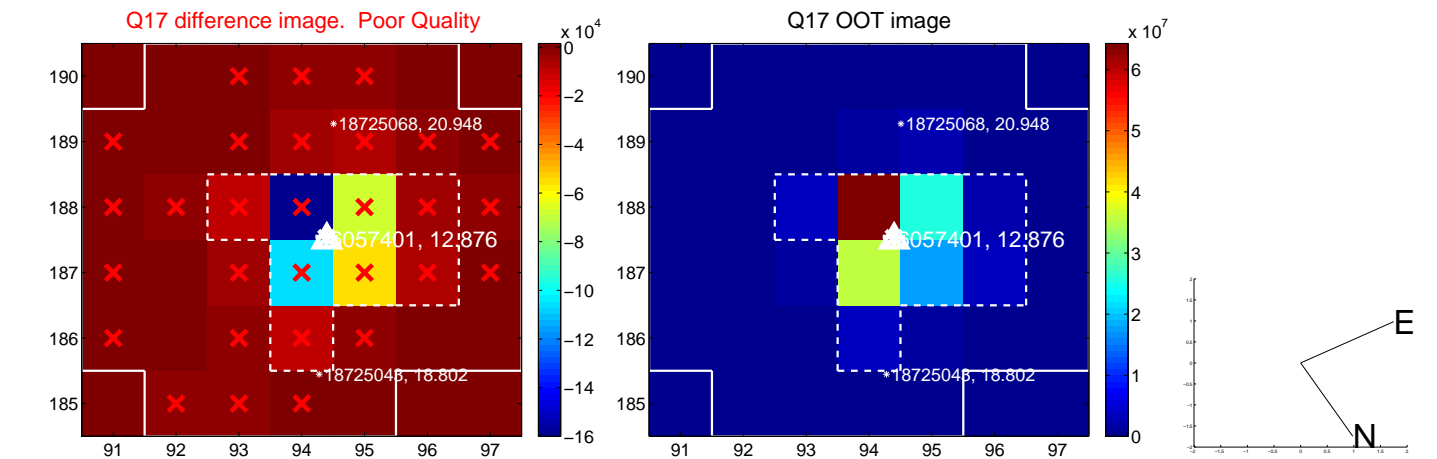
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

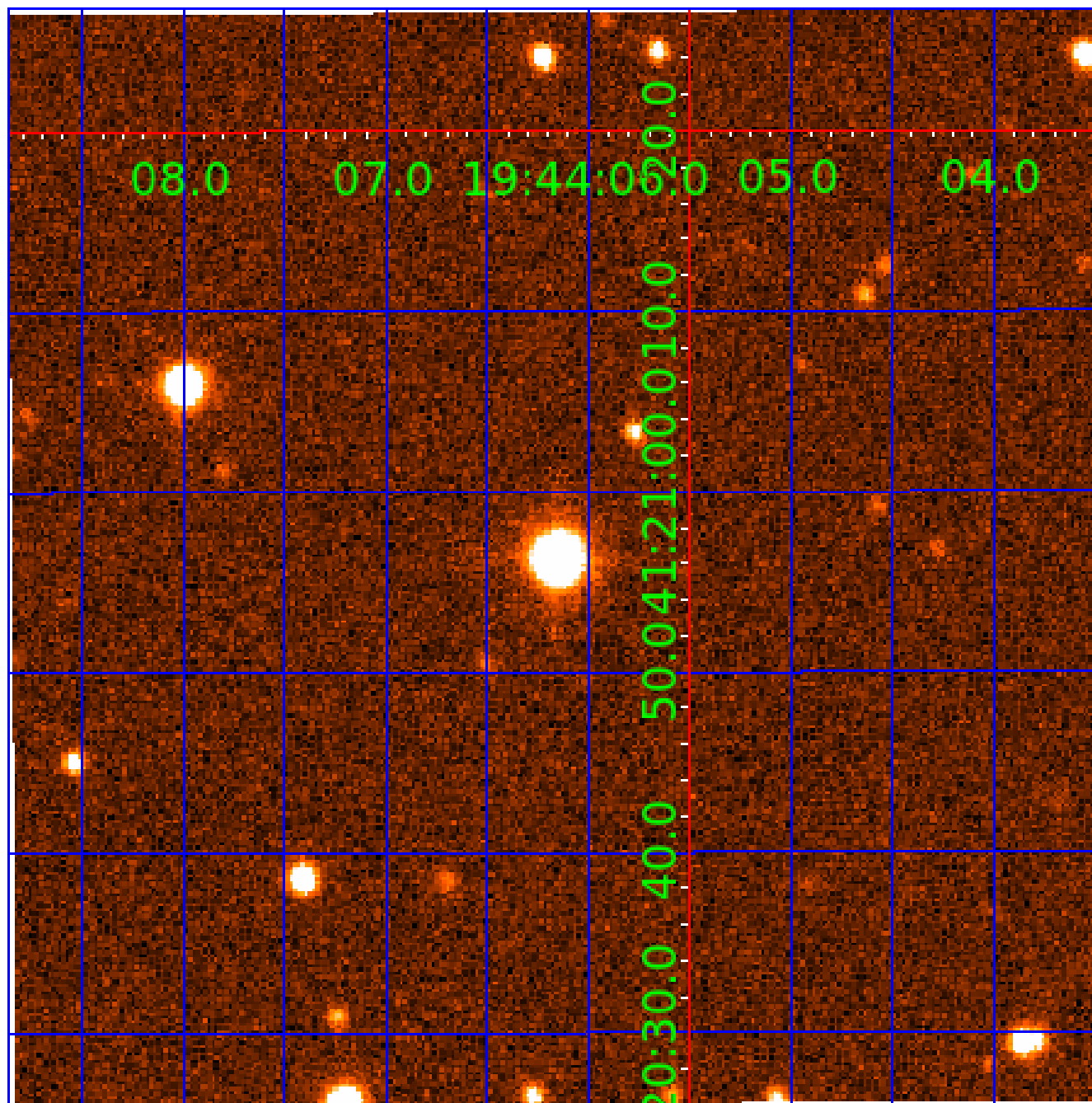


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006057401

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})
006057401-01	OBS	No	0.808054	132.110916	100.6	5.719	10.7	6.1	1.83	7497	1.88	23486.83
006057401-02	OBS	No	17.659040	145.562937	2662.0	1.837	17.9	10.8	1.83	7497	9.61	384.40
006057401-03	OBS	No	20.238761	140.576765	3128.6	1.906	16.3	13.7	1.83	7497	13.54	320.50
006057401-04	OBS	No	9.041831	133.346933	2592.3	1.423	16.9	17.2	1.83	7497	9.88	938.43
006057401-05	OBS	No	16.216110	141.563860	3346.5	1.127	17.1	14.7	1.83	7497	10.86	430.68
006057401-06	OBS	No	20.020123	132.519915	2731.9	2.102	16.8	16.5	1.83	7497	9.77	325.18
006057401-07	OBS	No	6.791879	137.775779	512.8	2.000	15.3	-1.0	1.83	7497	4.22	1374.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006057401-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
006057401-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
006057401-03	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
006057401-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006057401-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006057401-06	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
006057401-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

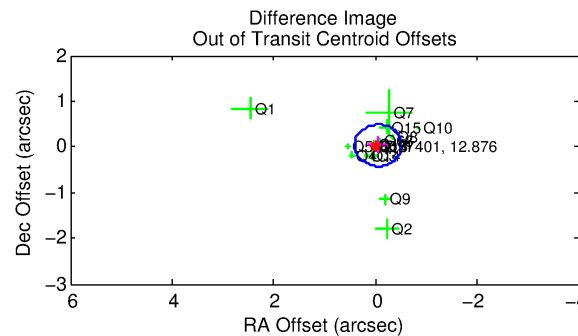
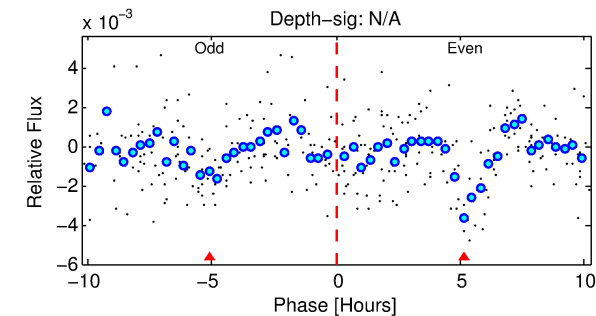
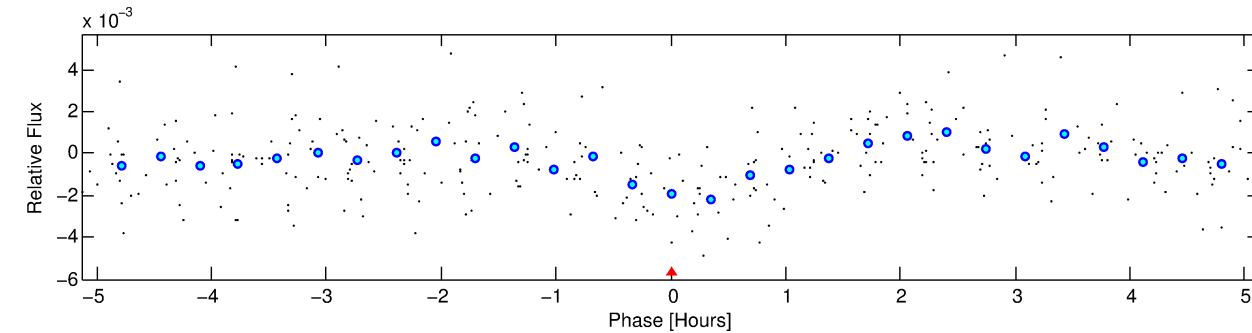
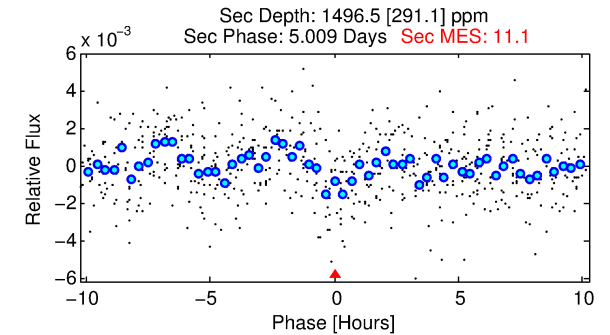
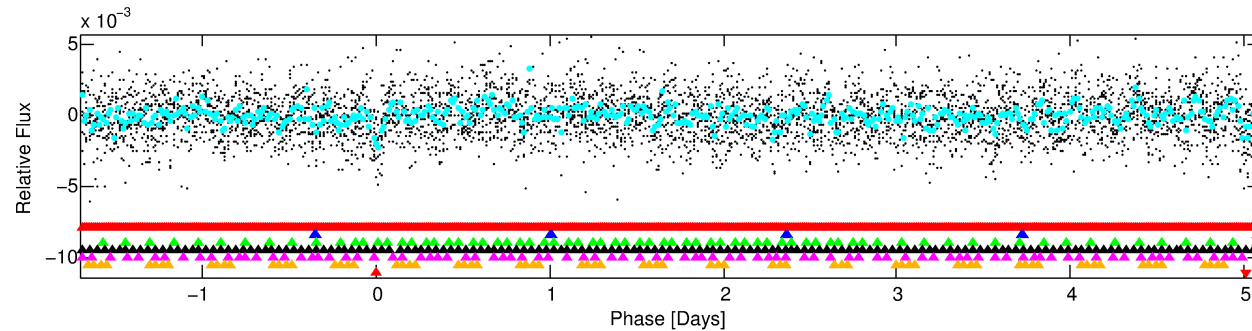
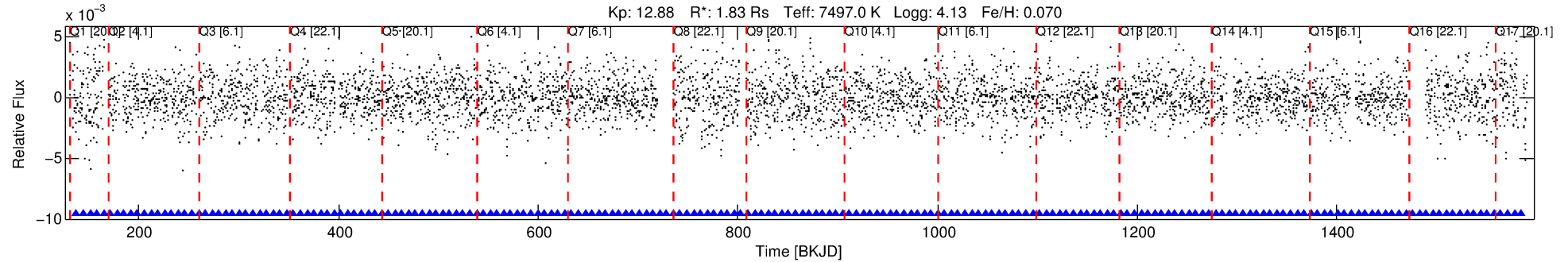
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006057401-07

No Significant Match Found

DV One-Page Summary

KIC: 6057401 Candidate: 7 of 7 Period: 6.792 d



TPS TCE Results:

Period = 6.79188 d
Epoch = 137.7758 BKJD

DV fit results are unavailable

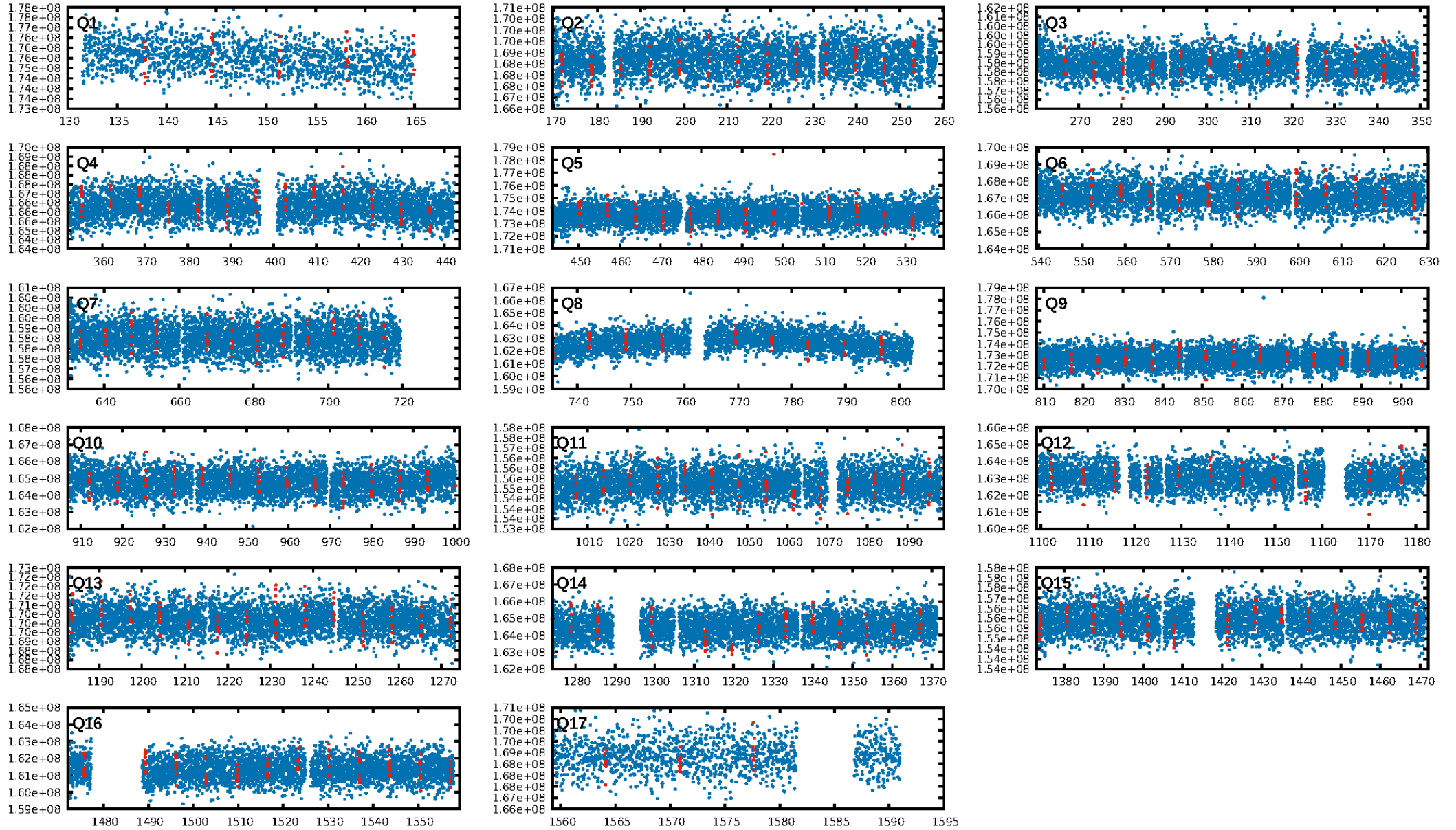
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [23.70 σ]
LongPeriod-sig: 100.0% [22.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [30/30]
GhostDiagnostic-chr: -3.88
Centroid-sig: 1.1%
Centroid-so: 0.108 arcsec [4.14 σ]
OotOffset-rm: 0.060 arcsec [0.39 σ]
KicOffset-rm: 0.064 arcsec [0.33 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.65 [11/17]
DiffImageOverlap-fno: 0.59 [10/17]

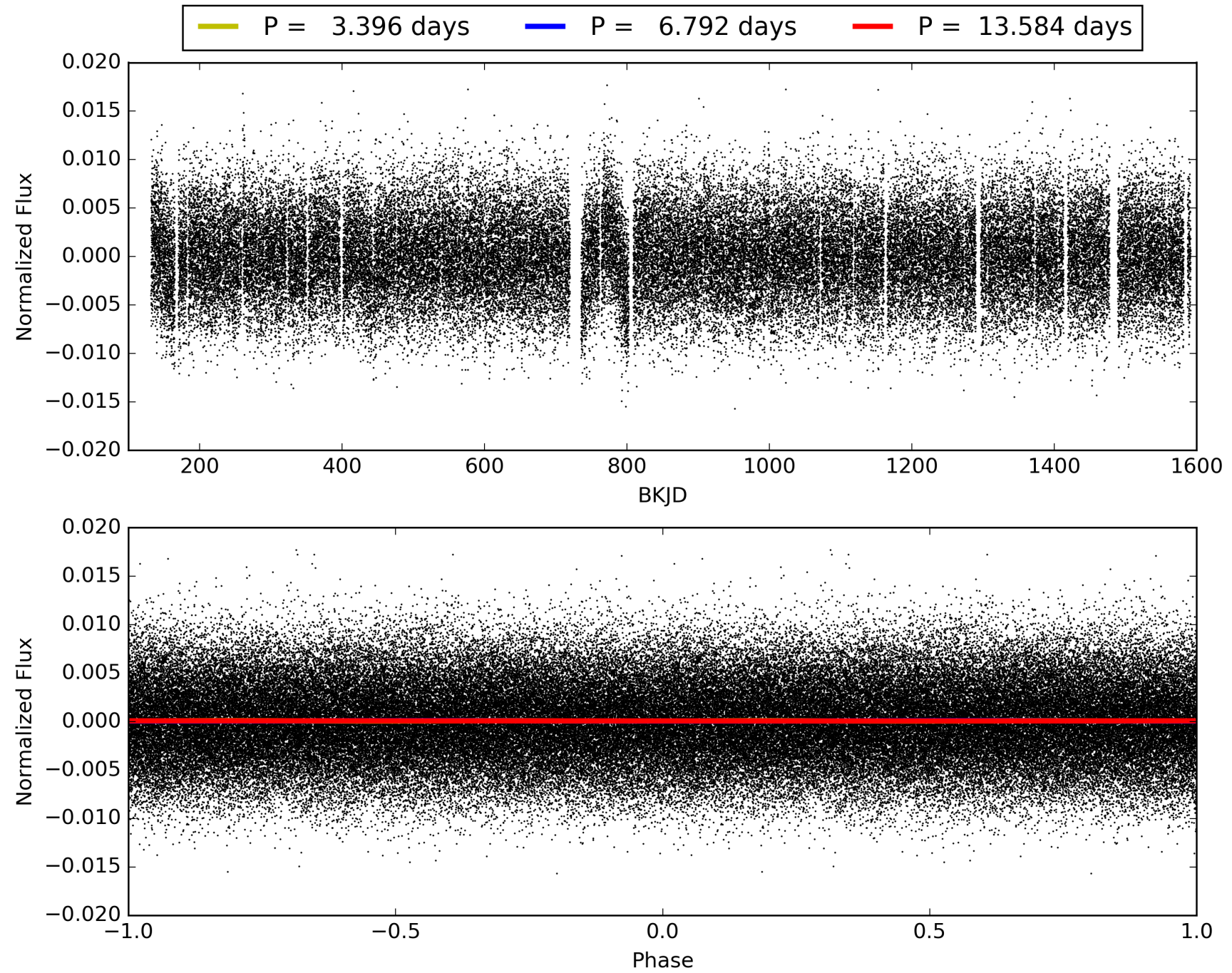
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 08:20:14 Z

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

TCE 006057401-07, PDC Light Curves

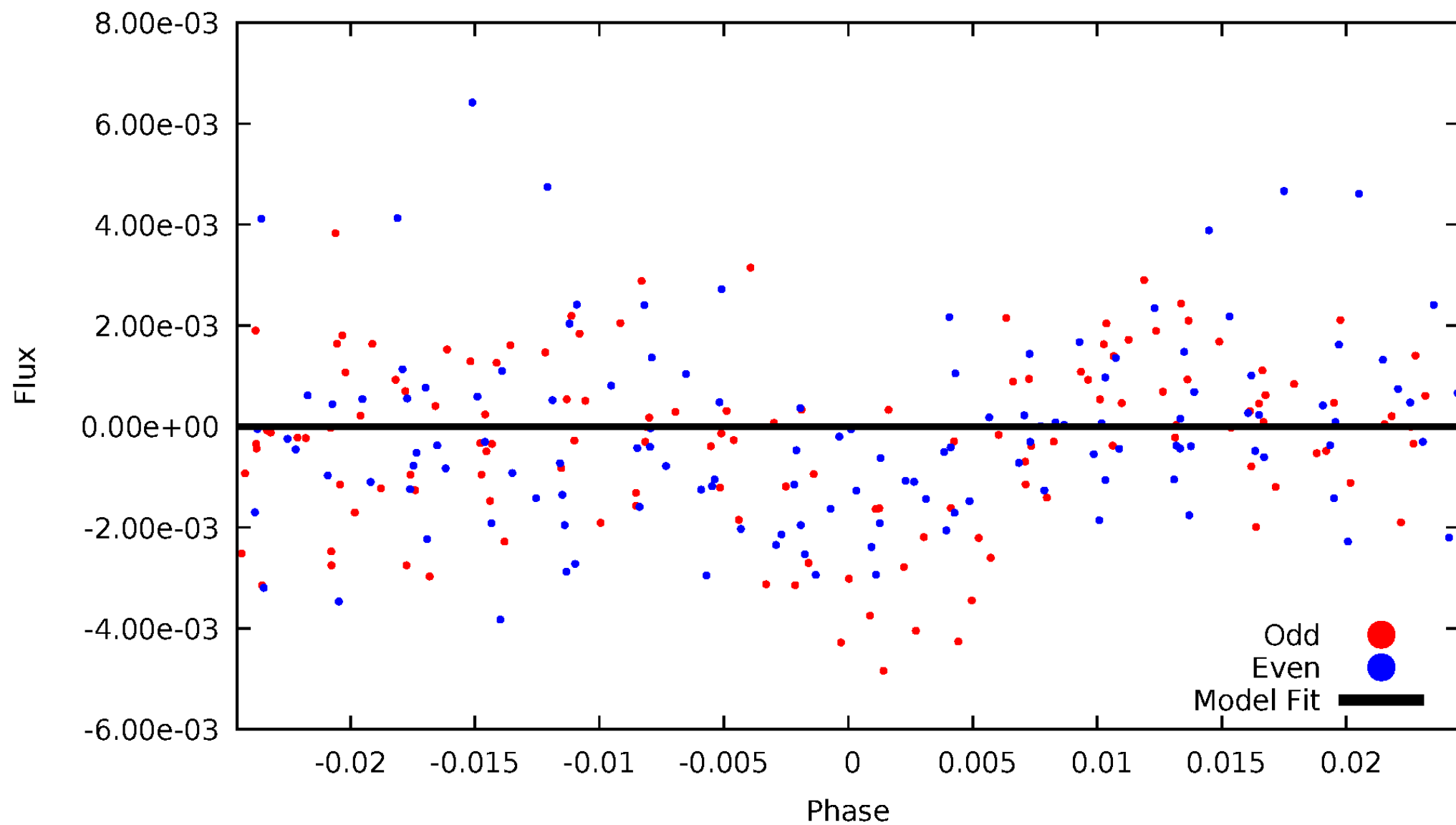


TCE 006057401-07



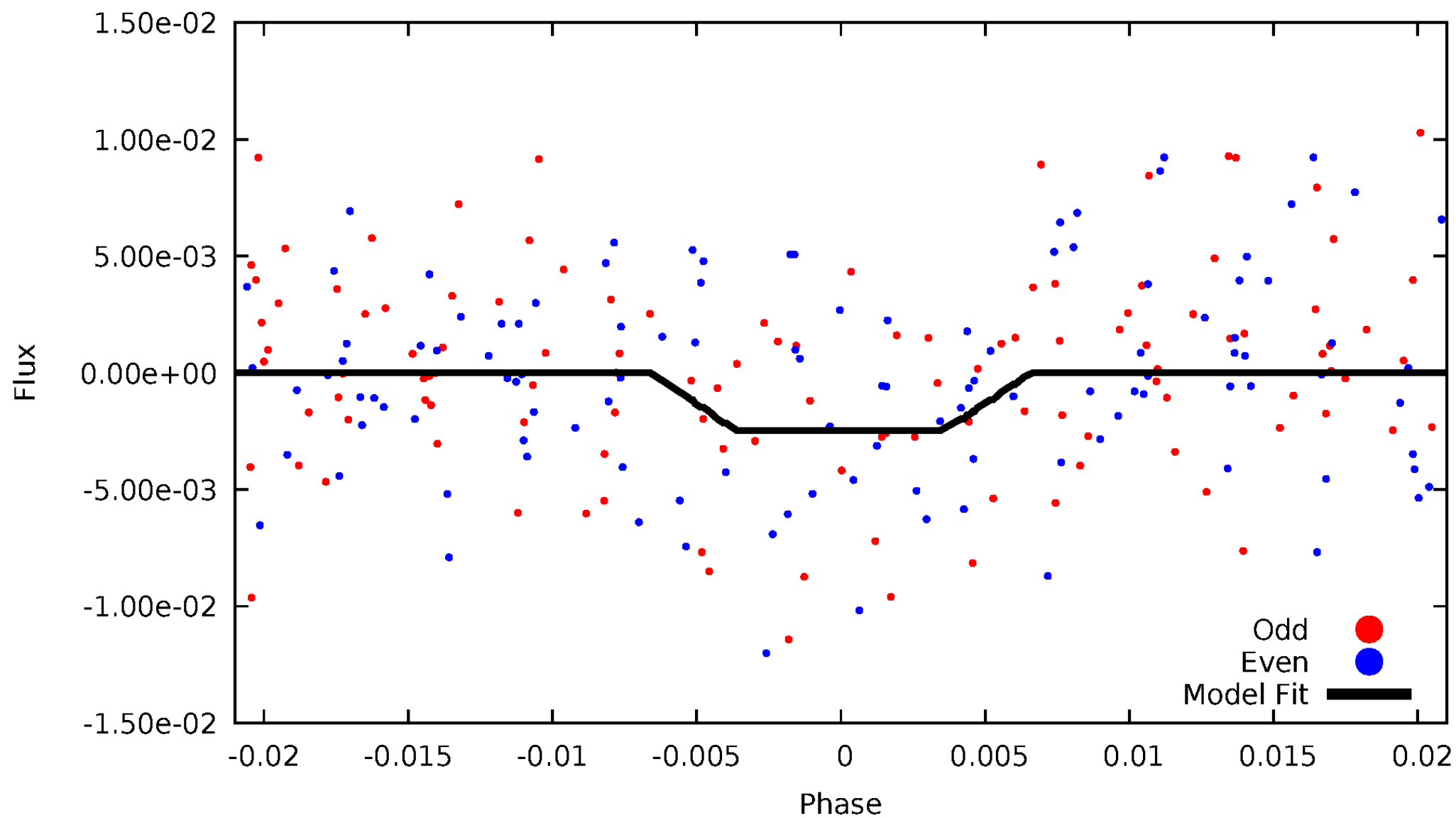
DV Odd/Even

TCE 006057401-07



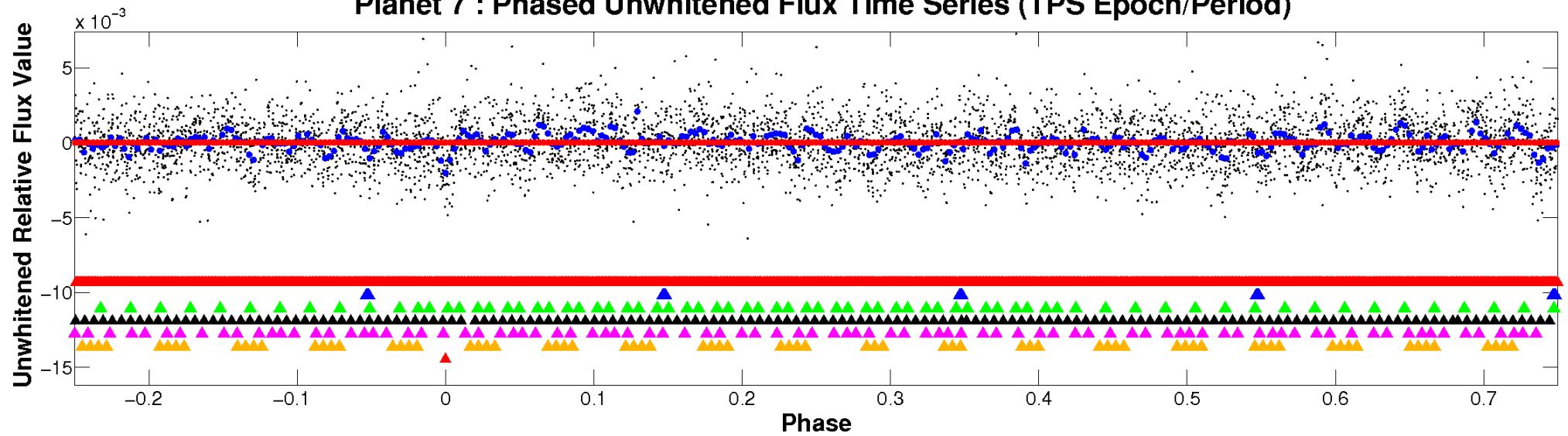
ALT Odd/Even

TCE 006057401-07

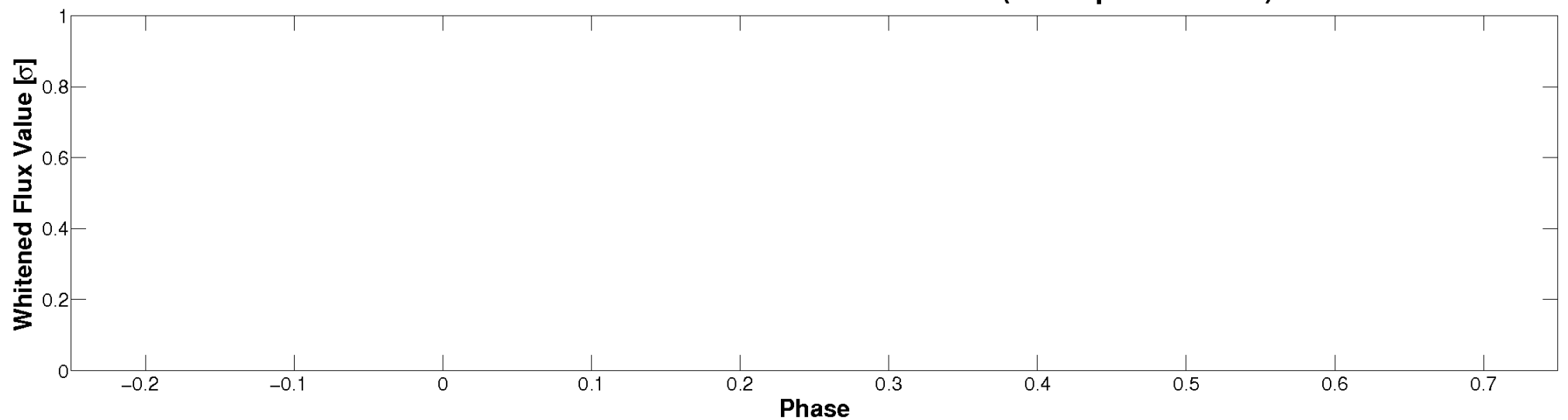


Non-Whitened Vs. Whitened Light Curve

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

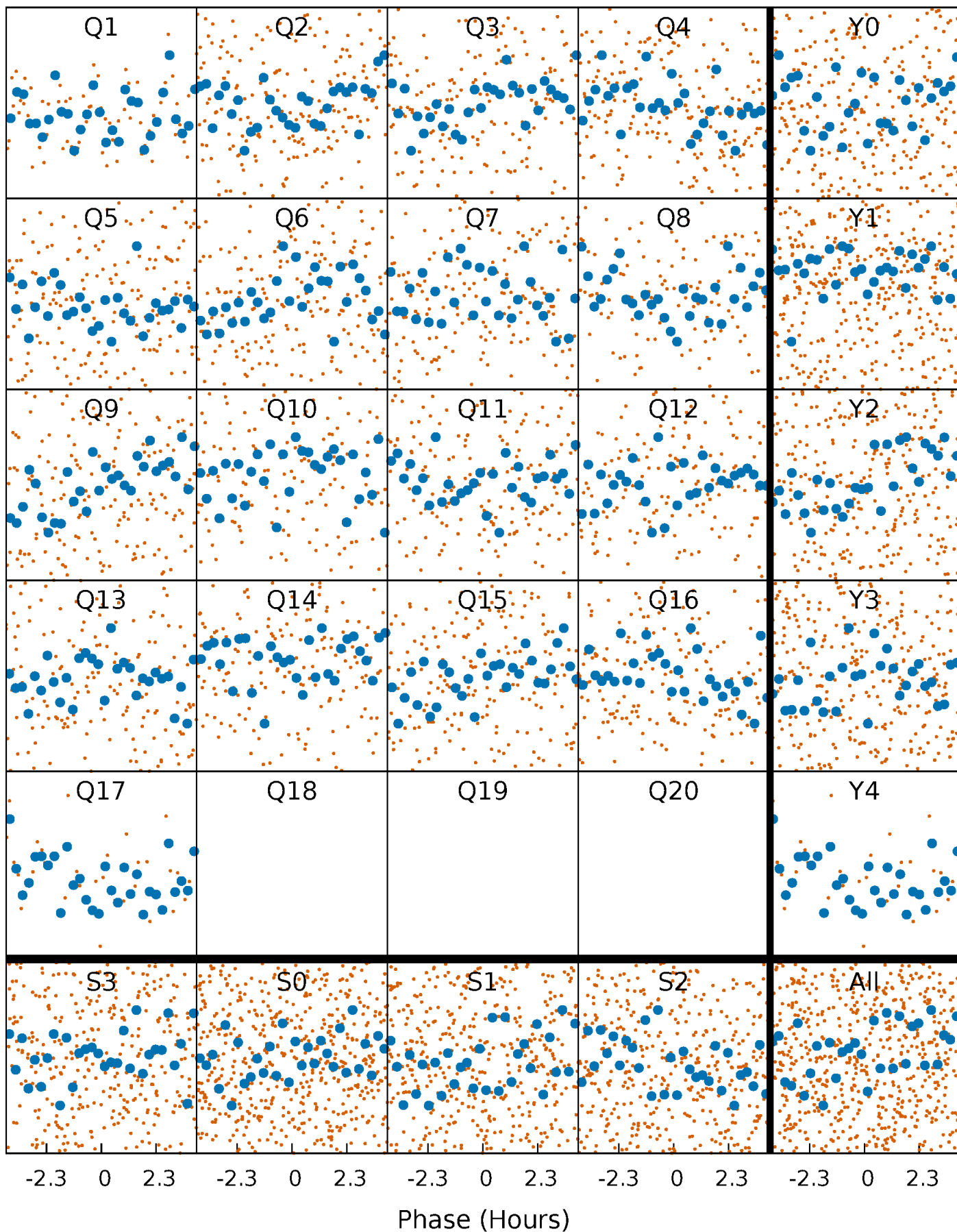


Planet 7 : Phased Whitened Flux Time Series (TPS Epoch/Period)



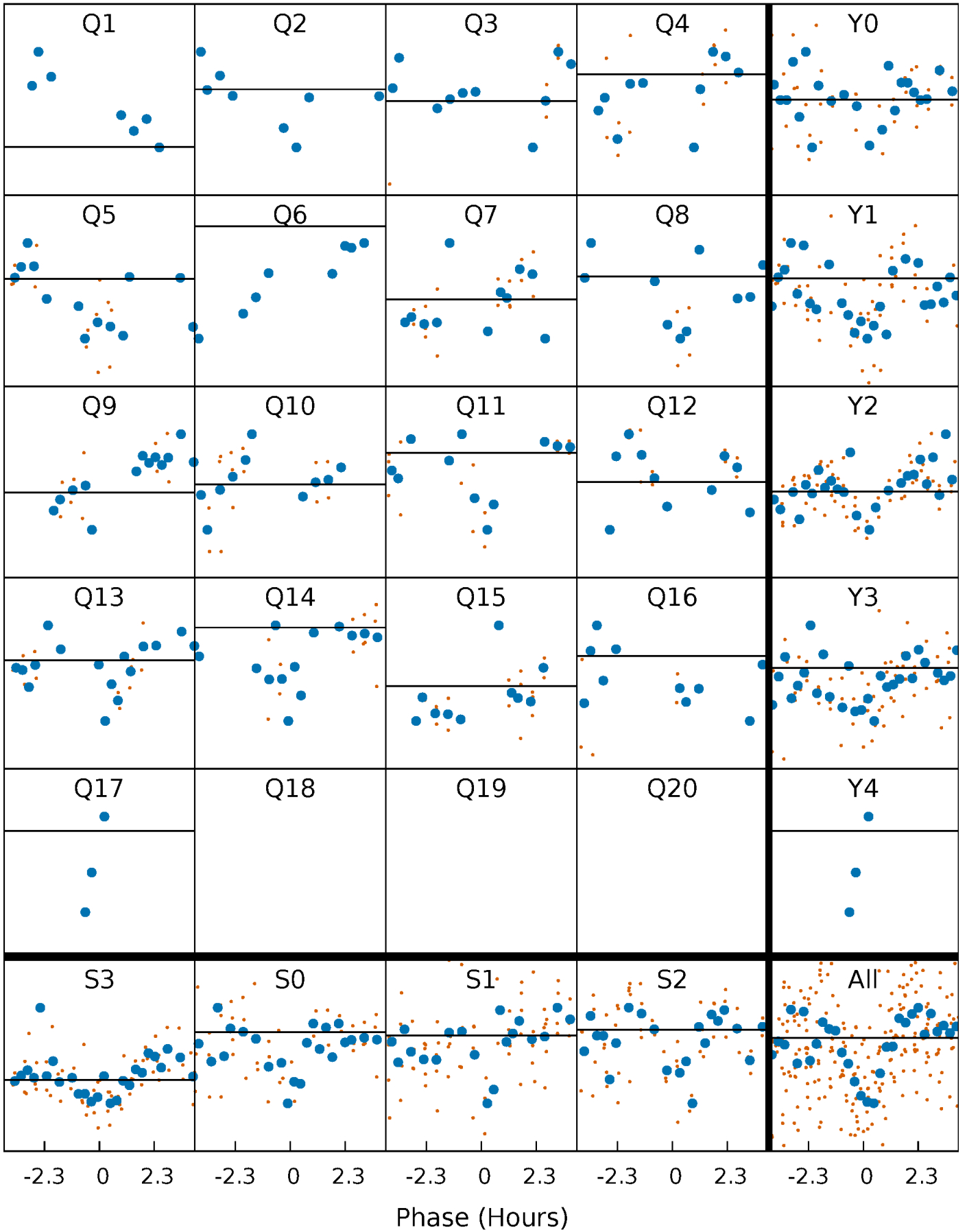
PDC Quarter-Phased Transit Curves

TCE 006057401-07 P= 6.791879 Days $T_0=137.775779$ (BKJD)



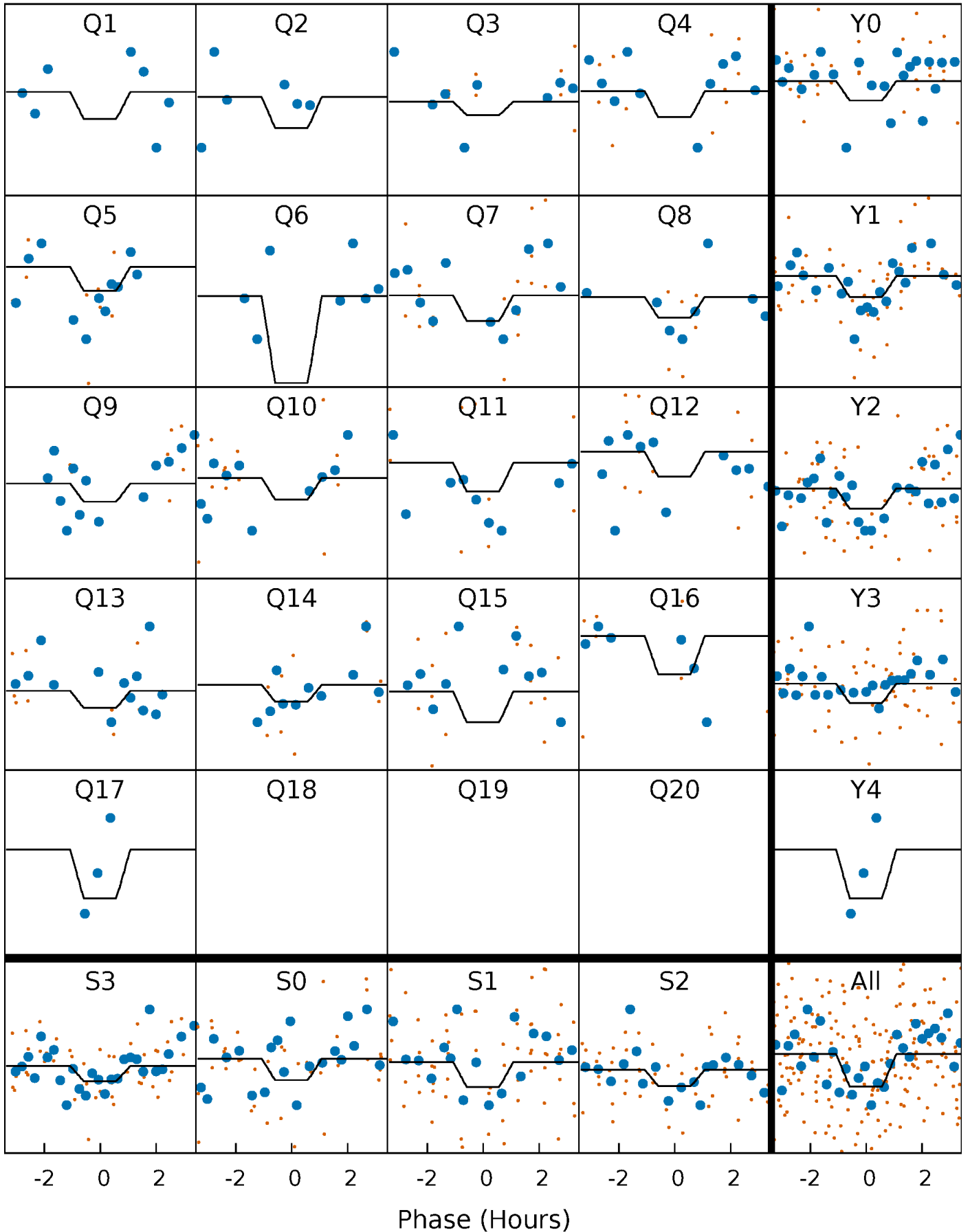
DV Quarter-Phased Transit Curves

TCE 006057401-07 $P = 6.791879$ Days $T_0 = 137.775779$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

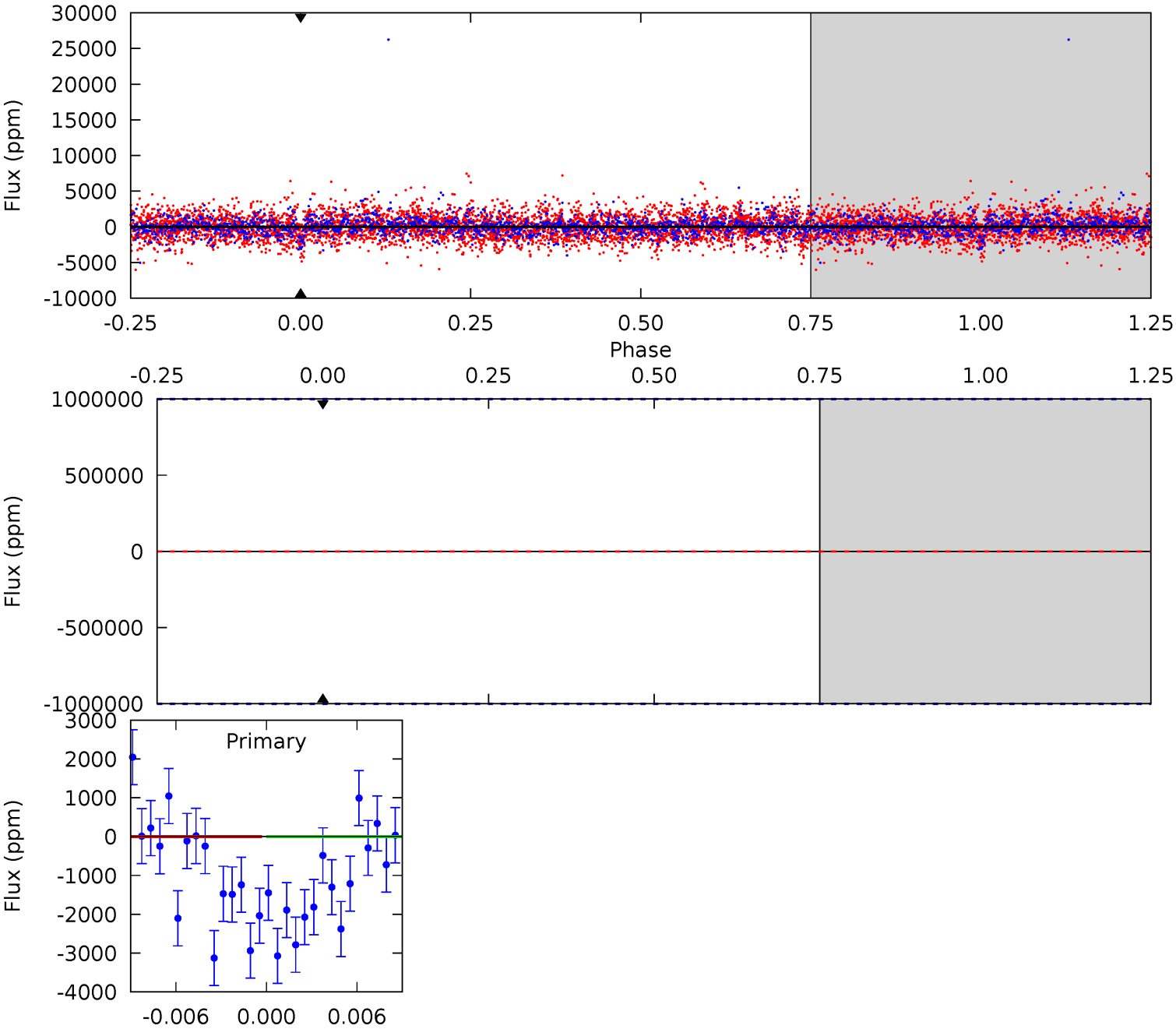
TCE 006057401-07 $P = 6.791879$ Days $T_0 = 137.773570$ (BKJD)



DV Model-Shift Uniqueness Test

006057401-07, P = 6.791879 Days, E = 130.983900 Days

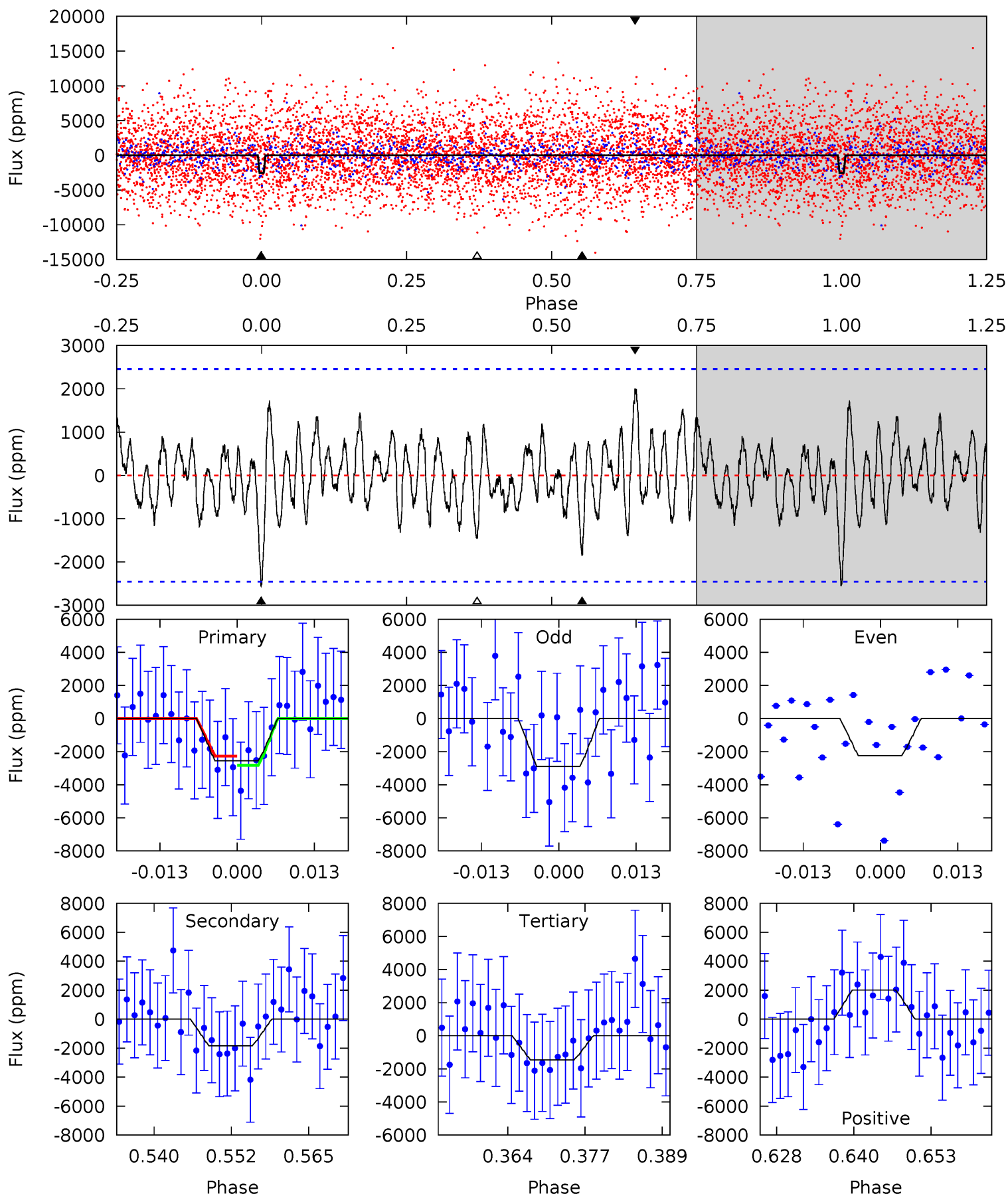
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

006057401-07, P = 6.791879 Days, E = 130.981691 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.18	3.73	2.97	4.07	4.98	2.50	1.31	2.21	1.11	0.76	-0.34	0.65	1.14	0.44	0.57



Stellar Parameters For KIC 006057401

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7497^{+210}_{-341}	$4.132^{+0.120}_{-0.180}$	$0.070^{+0.200}_{-0.350}$	$1.830^{+0.554}_{-0.341}$	$1.656^{+0.205}_{-0.251}$	$0.380^{+0.218}_{-0.188}$
	+3%/-5%	+3%/-4%	+286%/-500%	+30%/-19%	+12%/-15%	+57%/-49%
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 006057401-07 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$15.62^{+15.52}_{-11.02}$	2171^{+154}_{-142}	4202^{+34837}_{-37418}	$7.957^{+2768.142}_{-2161.897}$
Alt.	-1838 ± 493	$18.21^{+16.82}_{-11.95}$	2171^{+169}_{-134}	5110^{+3697}_{-1179}	20^{+145}_{-15}

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

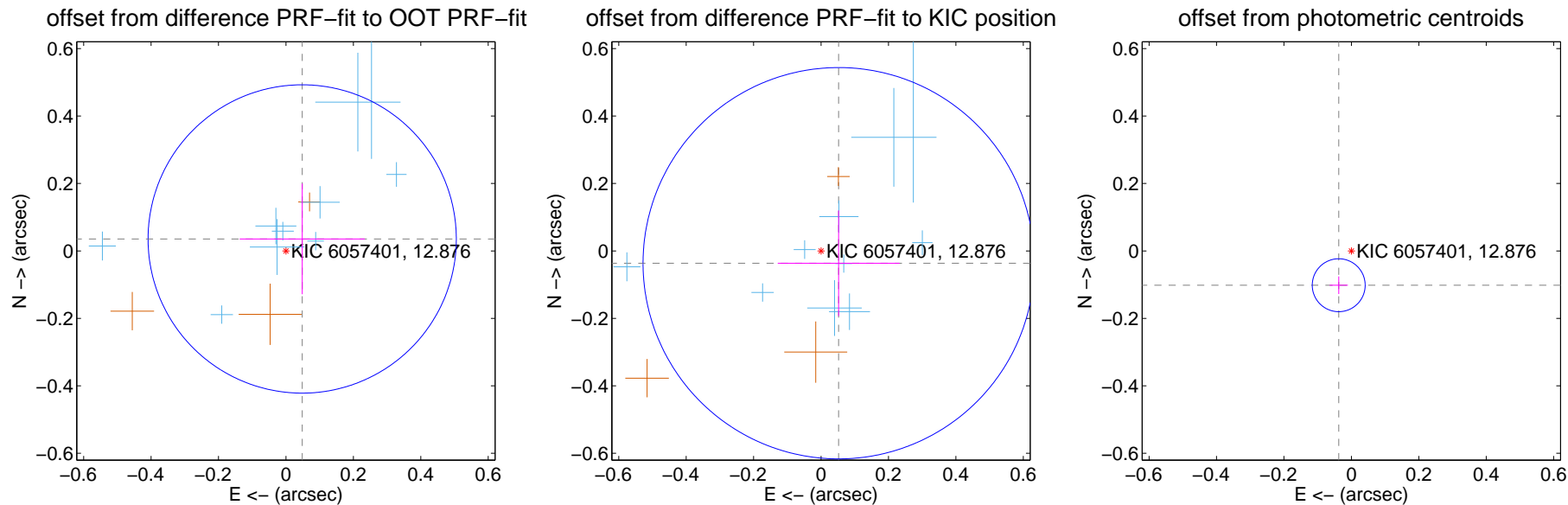
DV Centroid Data

Supplemental centroid analysis for 006057401-07. Kepler magnitude: 12.88. Transit SNR -1.00

There are 11 quarters with good PRF difference image offsets

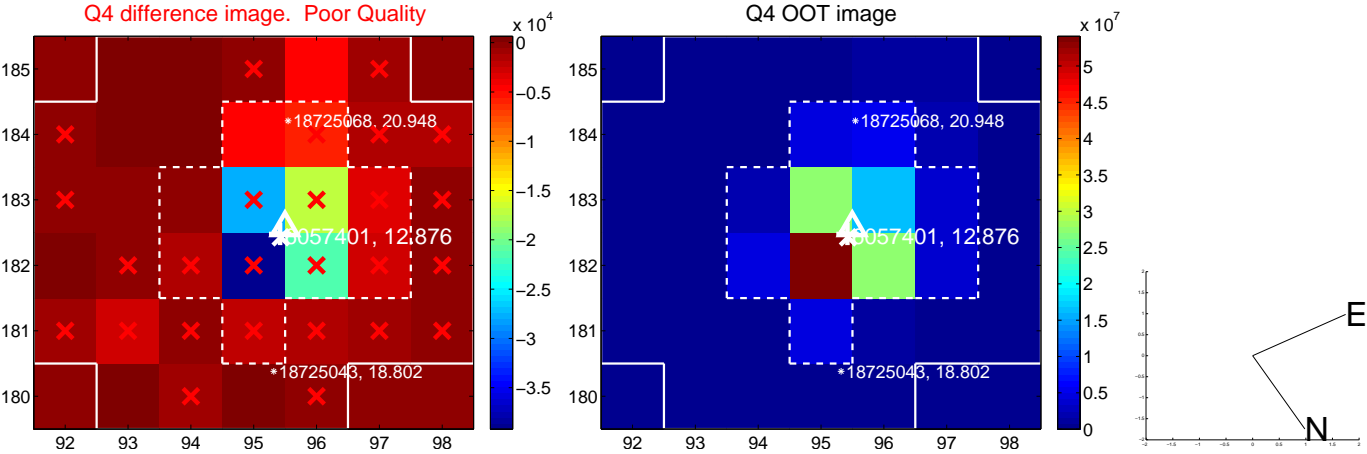
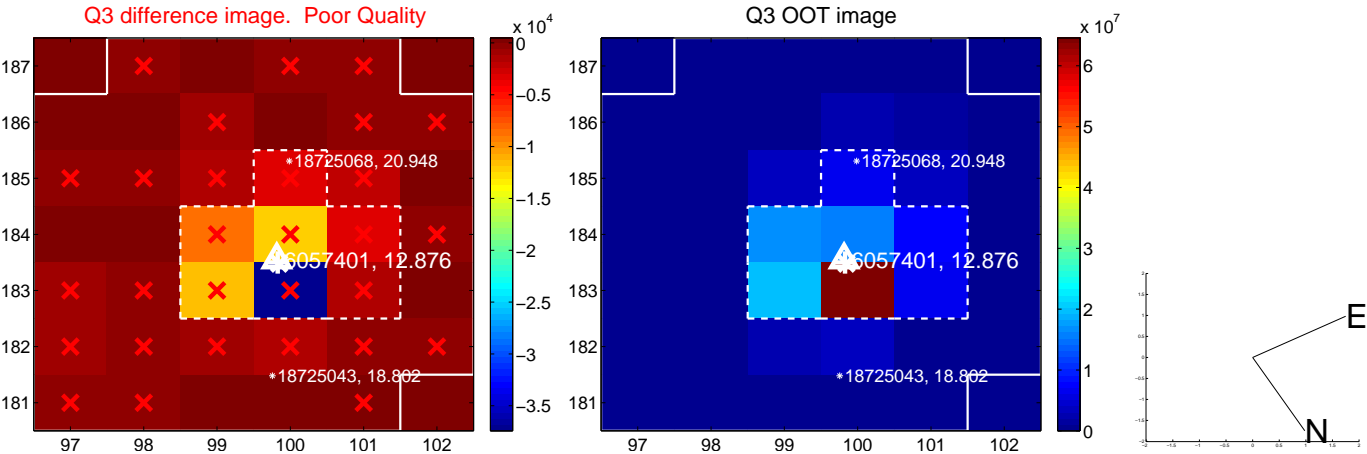
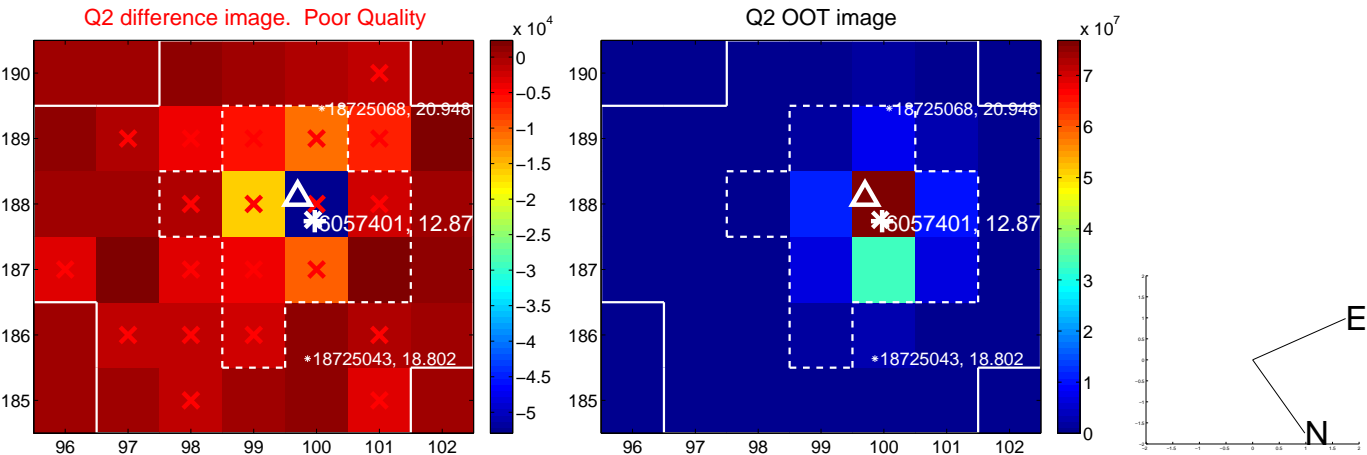
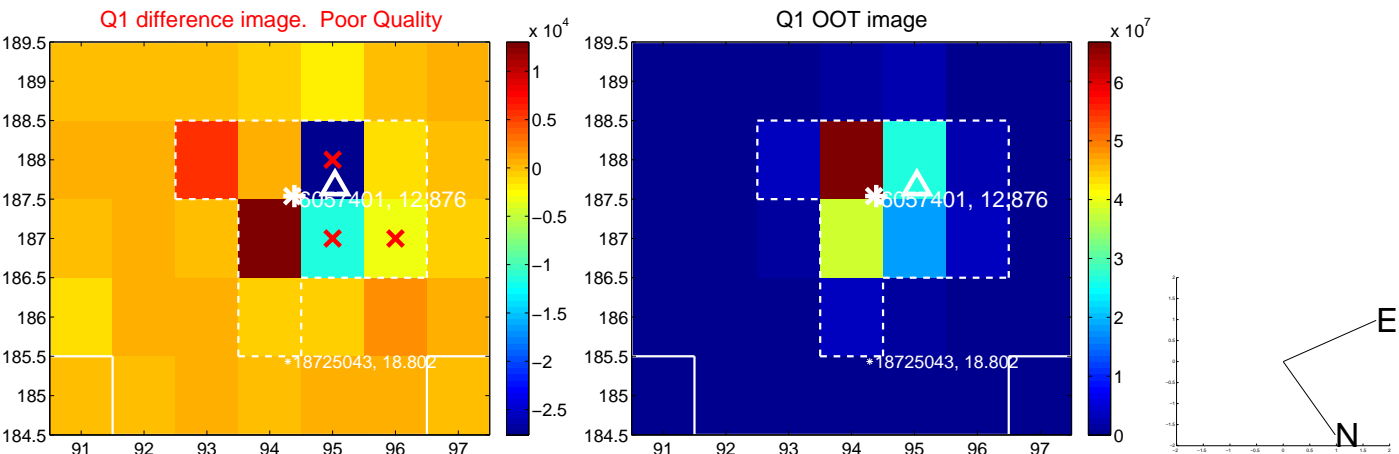
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.060 ± 0.152	0.39	-0.048 ± 0.186	0.035 ± 0.164
PRF-fit source offset from KIC position	0.064 ± 0.193	0.33	-0.052 ± 0.181	-0.036 ± 0.156
photometric centroid source offset	0.11 ± 0.03	4.14	0.04 ± 0.03	-0.10 ± 0.03

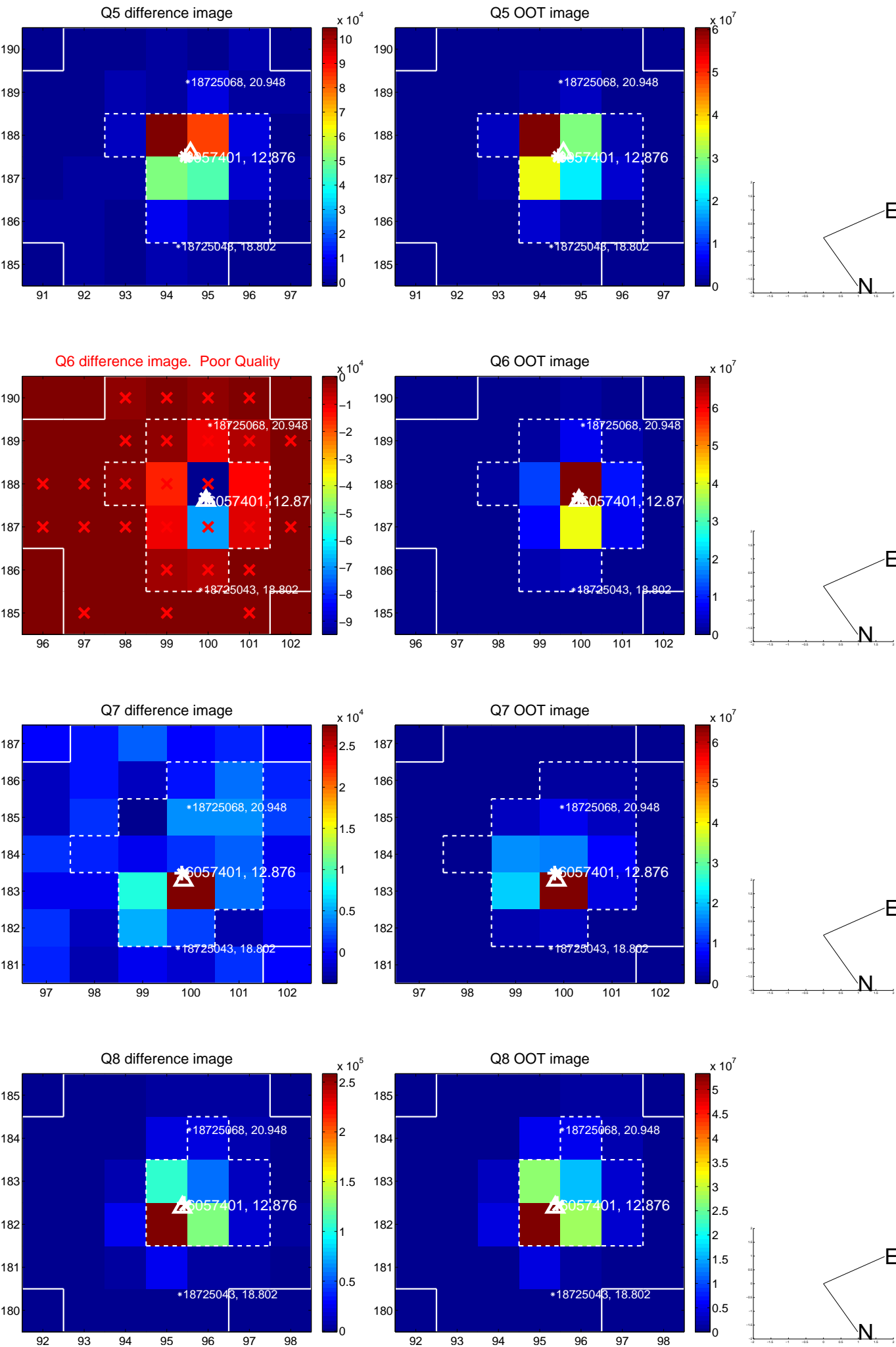


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

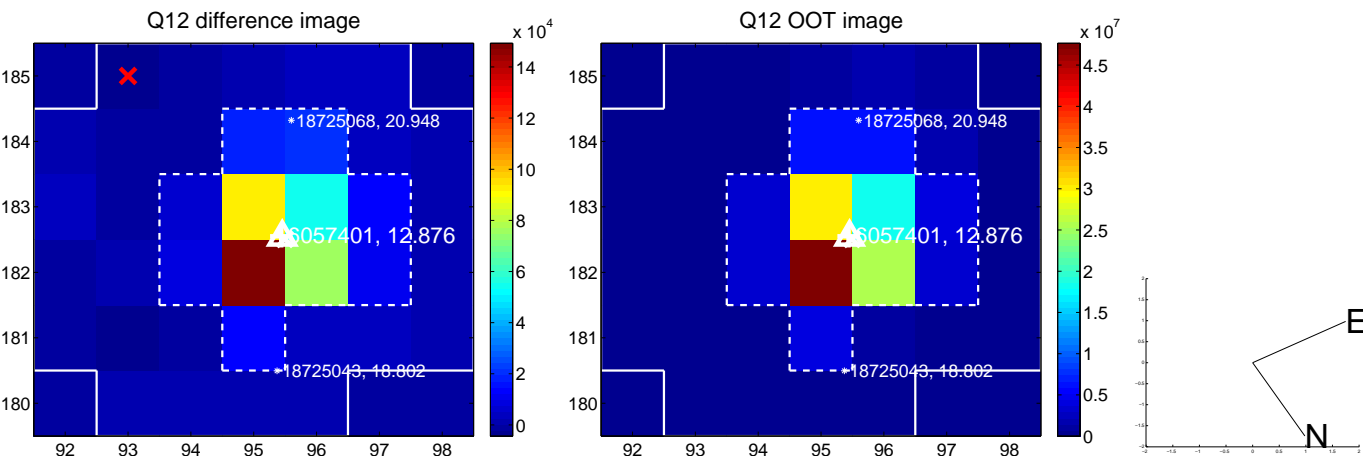
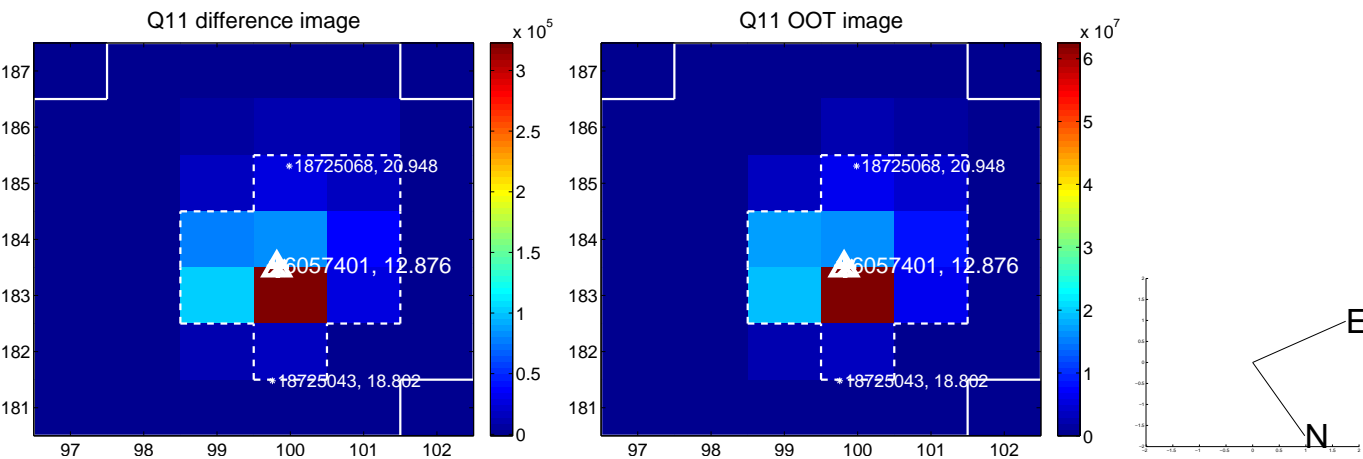
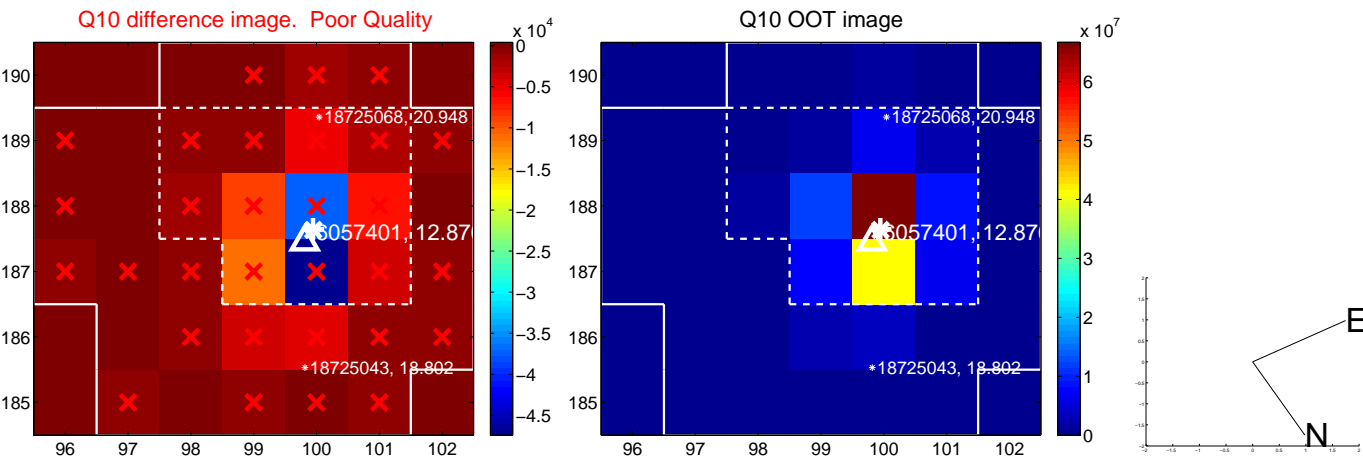
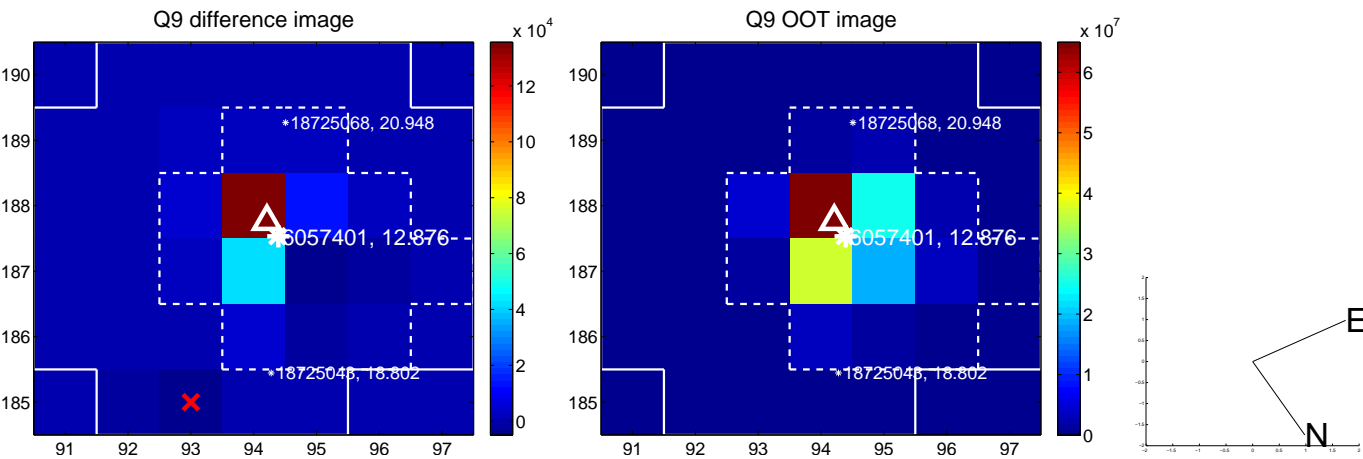
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



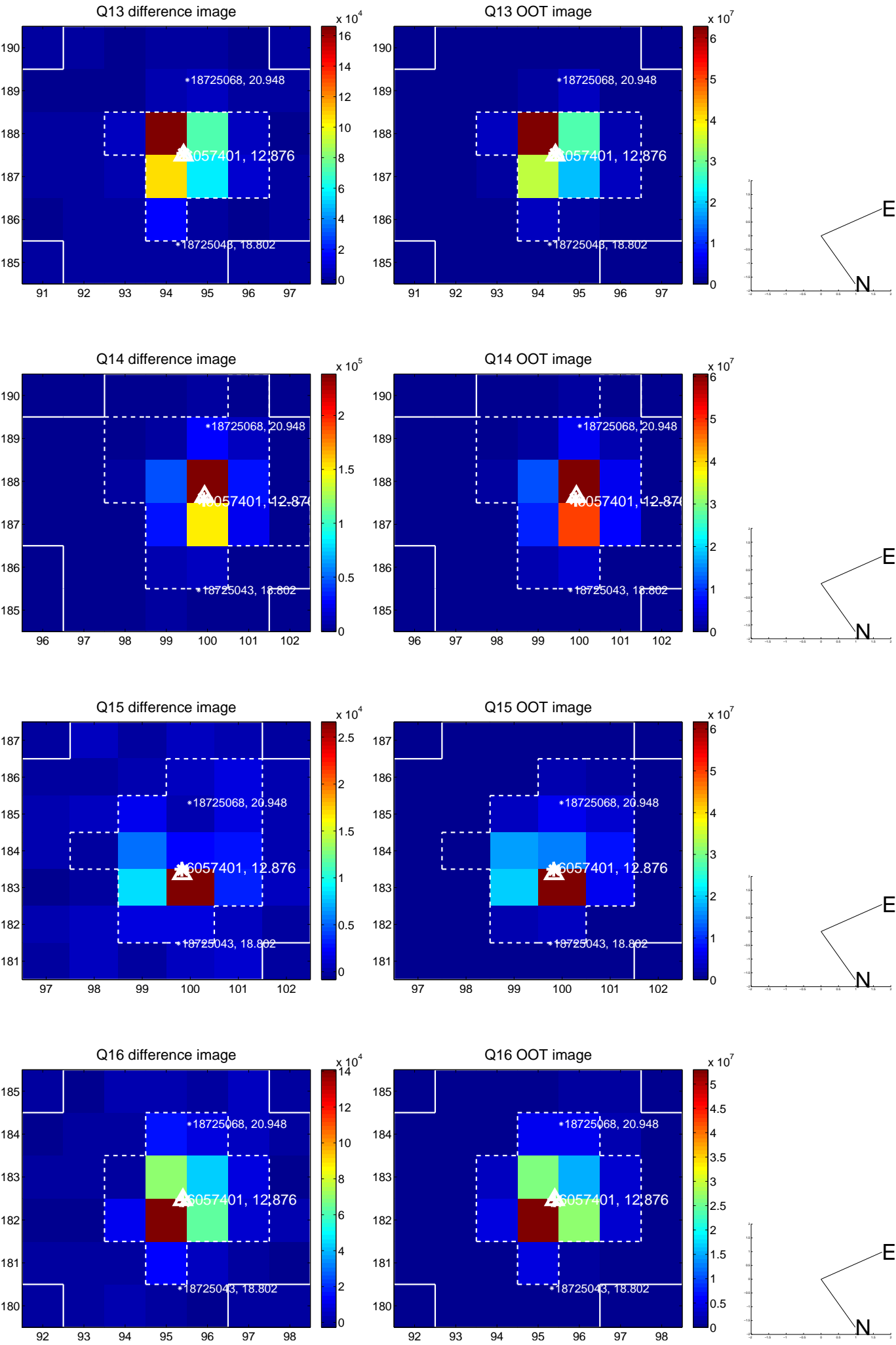
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



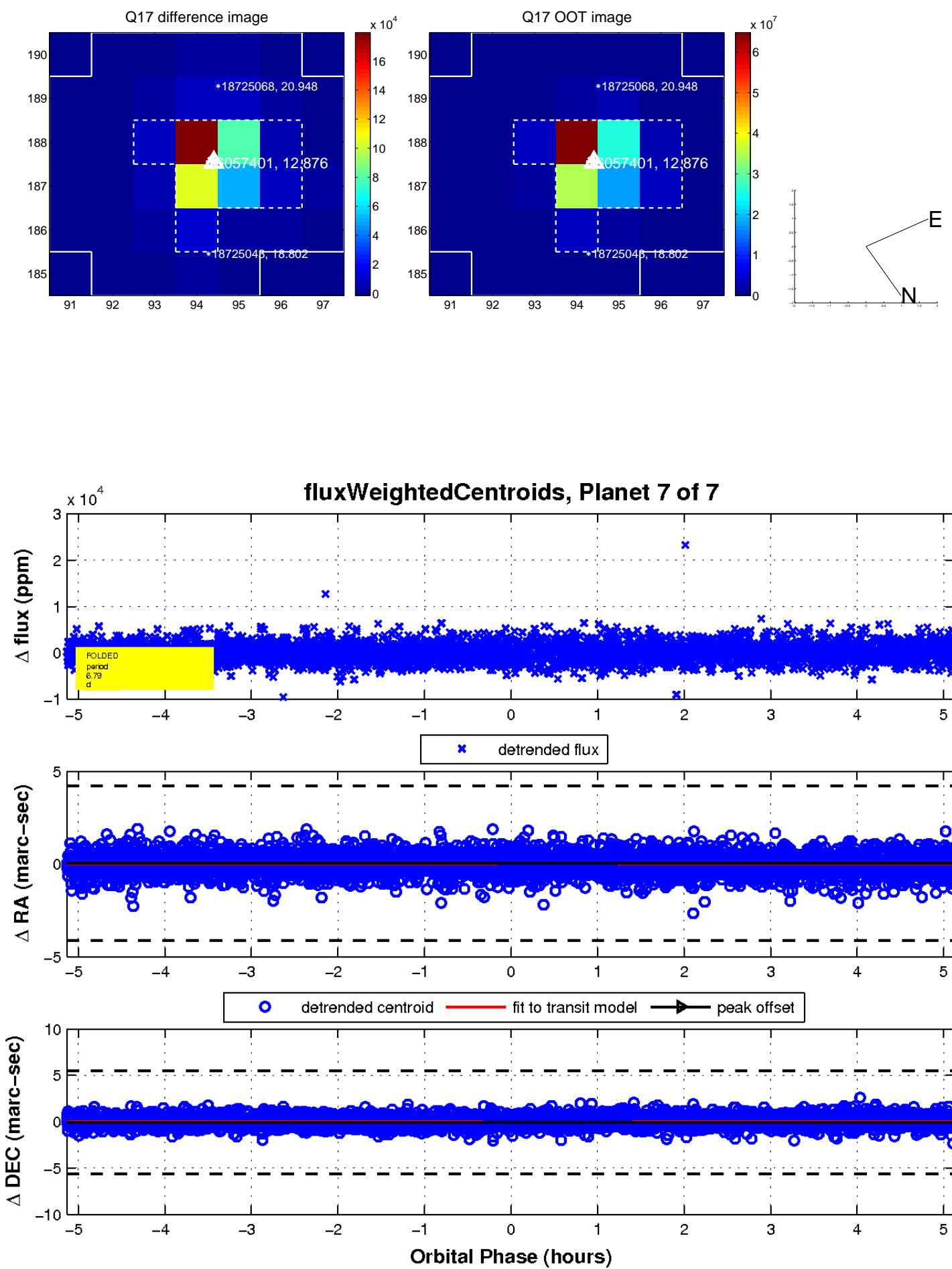
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

