

KIC 005476835

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})
005476835-01	OBS	No	1.591673	132.806415	52.6	7.713	8.8	7.7	1.02	6102	0.74	1735.71
005476835-02	OBS	No	475.853598	434.262047	1038.1	27.870	8.1	7.6	1.02	6102	3.67	0.87
005476835-03	OBS	No	180.519543	209.698529	466.4	20.413	8.5	5.5	1.02	6102	2.35	3.16
005476835-04	OBS	No	167.505353	136.633548	823.1	3.119	7.4	7.2	1.02	6102	3.39	3.49
005476835-05	OBS	No	204.606824	145.098458	860.2	9.892	7.2	8.6	1.02	6102	3.36	2.67

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005476835-01	OBS	FP	0.00	1	0	1	1	LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET—EPHEM_MATCH
005476835-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
005476835-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
005476835-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_RESOLVED_OFFSET
005476835-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_RESOLVED_OFFSET—HALO_GHOST

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.

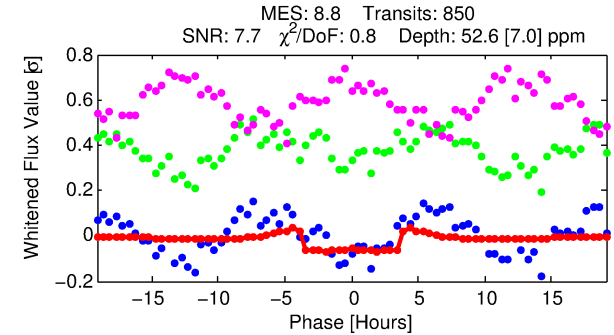
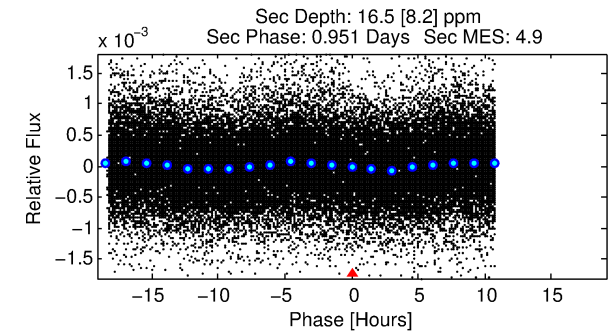
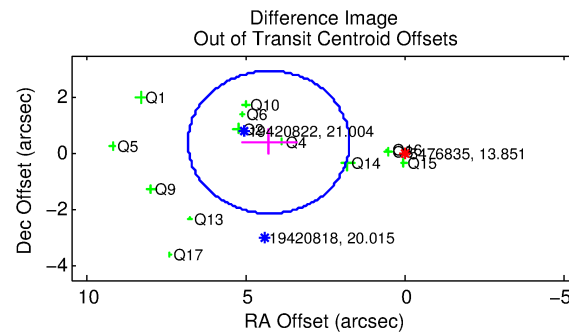
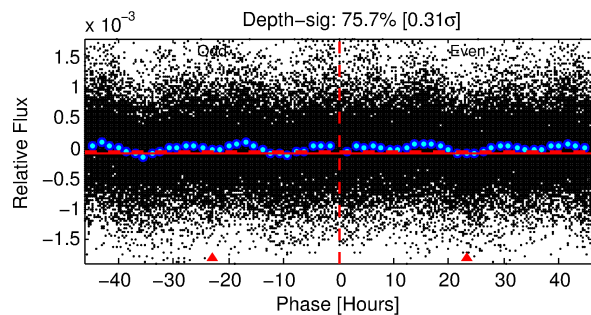
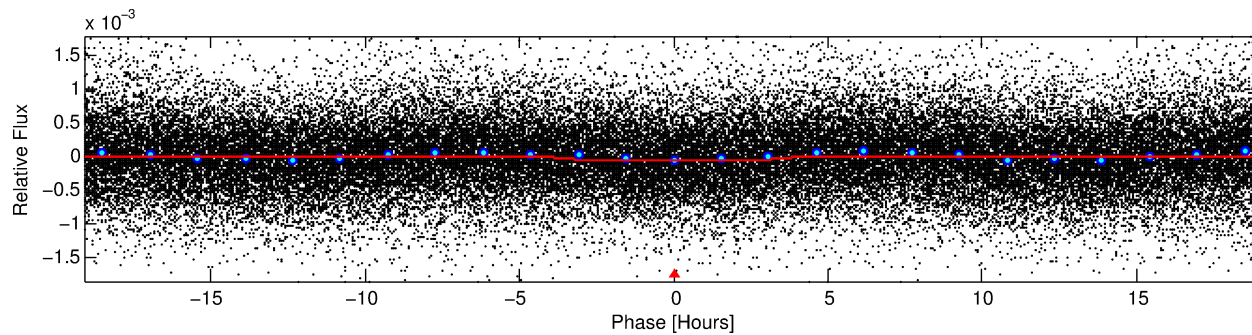
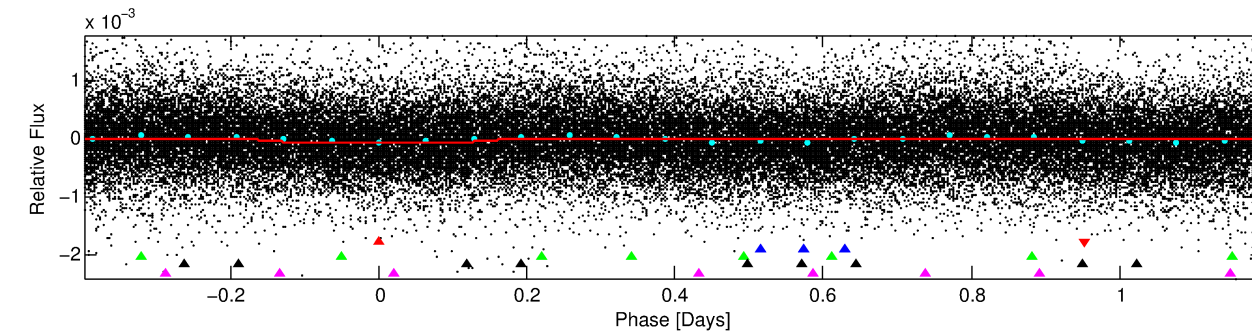
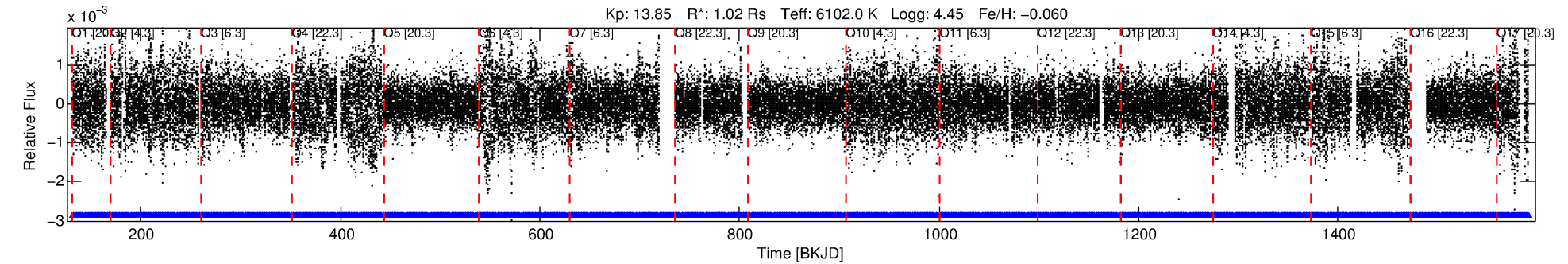
Ephemeris Match Information For 005476835-01

TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist (″)	Δ Row	Δ Col	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ_P	σ_T
005476835-01	5476835	005476864-01	5476864	1:1	15.5	3	3	11.47	13.85	2.72	Direct-PRF	0	0.38	1.66

Notes: P₁:P₂ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 5476835 Candidate: 1 of 5 Period: 1.592 d



DV Fit Results:

Period = 1.59167 [0.00002] d
Epoch = 132.8064 [0.0050] BKJD
Rp/R* = 0.0067 [0.0065]
R* = 1.64 [4.90]
b = 0.31 [13.65]
Seff = 1735.71 [754.39]
Teq = 1646 [179] K
Rp = 0.74 [0.77] Re
a = 0.0272 [0.0077] AU
Ag = 12.12 [24.87] [0.45 σ]
Teffp = 4748 [2392] K [1.29 σ]

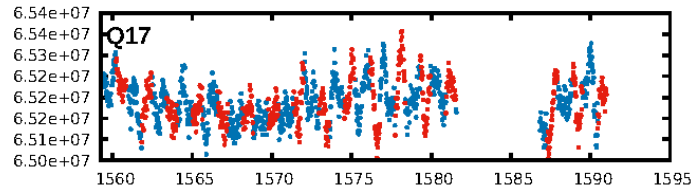
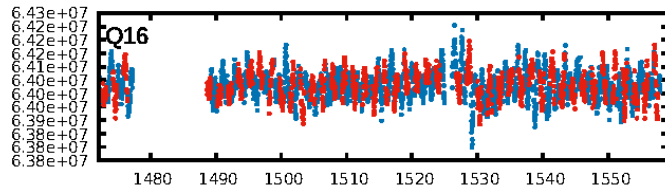
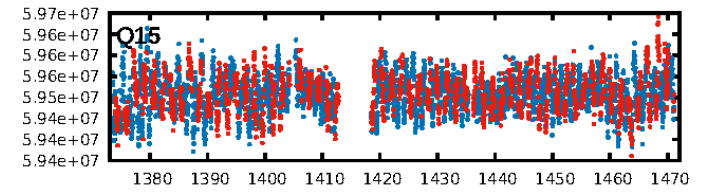
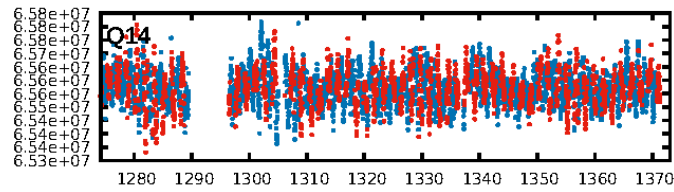
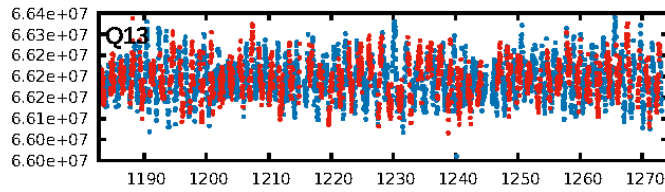
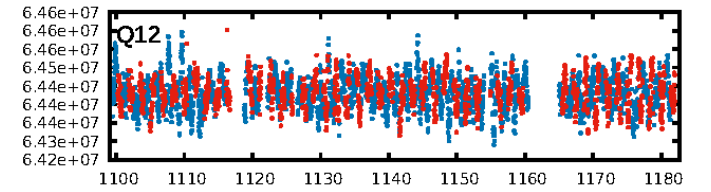
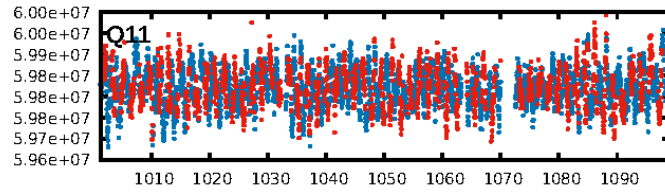
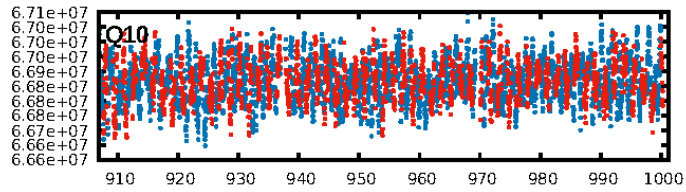
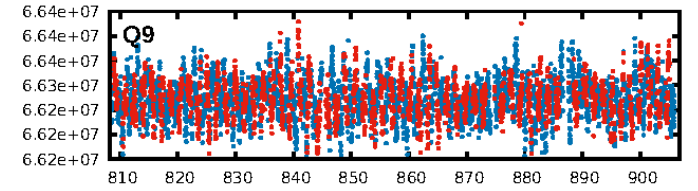
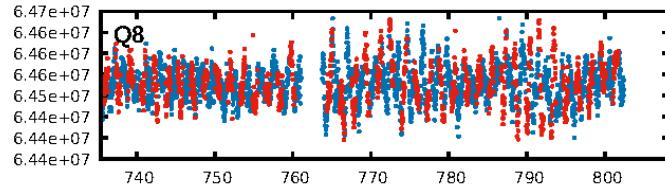
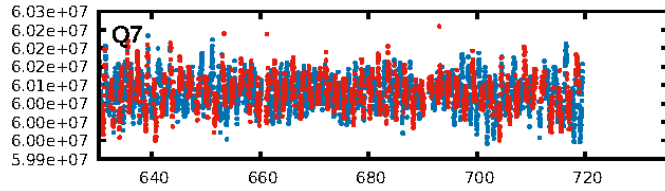
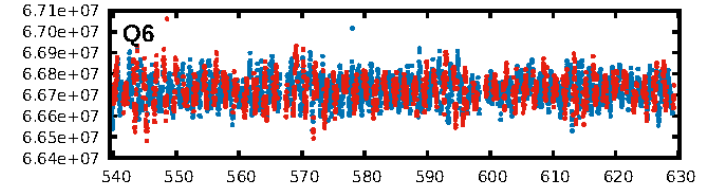
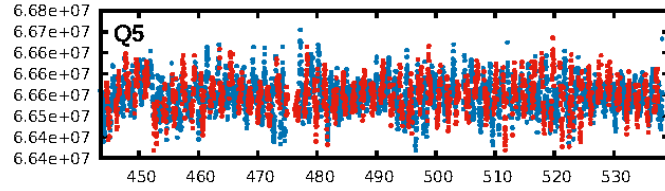
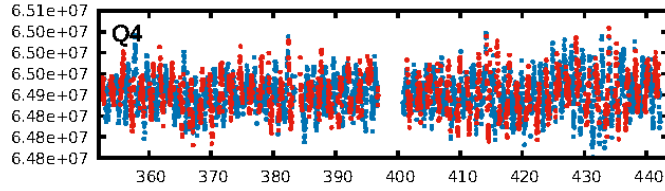
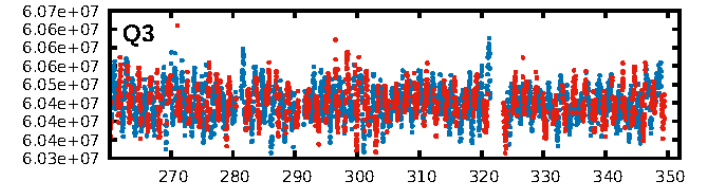
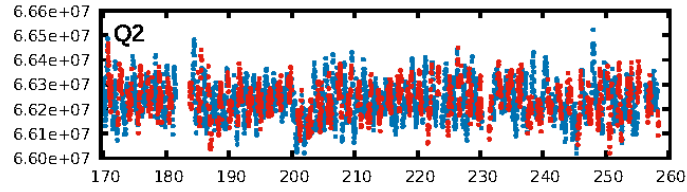
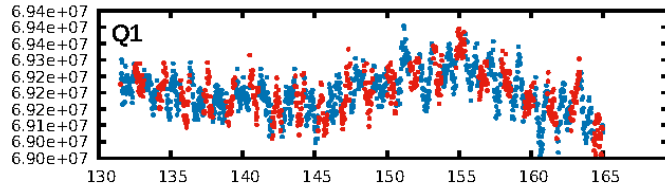
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [478.61 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.92e-12
RollingBand-fgt: 1.00 [812/812]
GhostDiagnostic-chr: -0.4137
Centroid-sig: 28.4%
Centroid-so: 2.685 arcsec [2.56 σ]
OotOffset-rm: 4.308 arcsec [5.09 σ]
KicOffset-rm: 9.432 arcsec [20.46 σ]
OotOffset-st: 4/1/3/5 [13]
KicOffset-st: 4/1/3/5 [13]
DiffImageQuality-fgm: 0.92 [12/13]
DiffImageOverlap-fno: 1.00 [17/17]

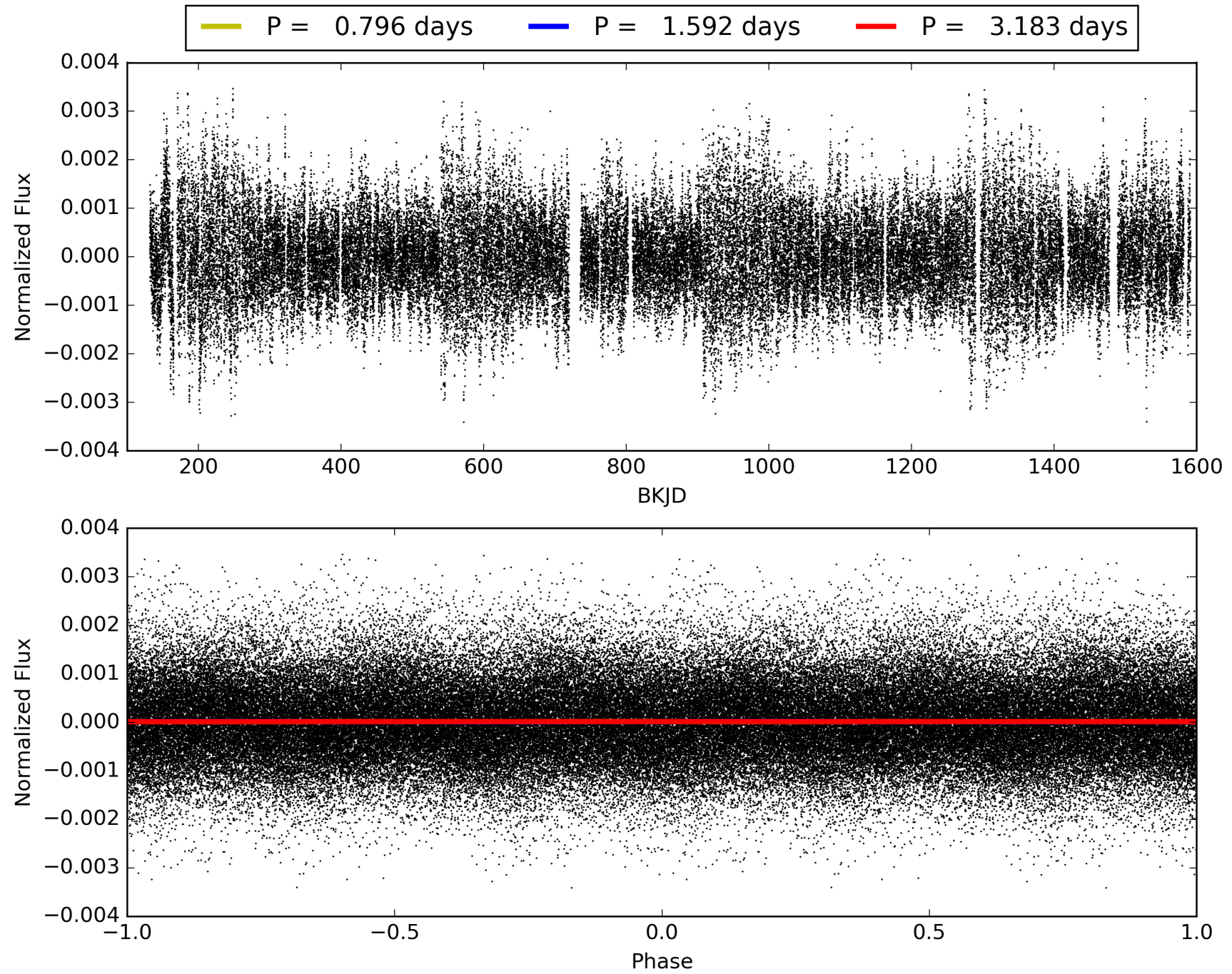
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 005476835-01, PDC Light Curves

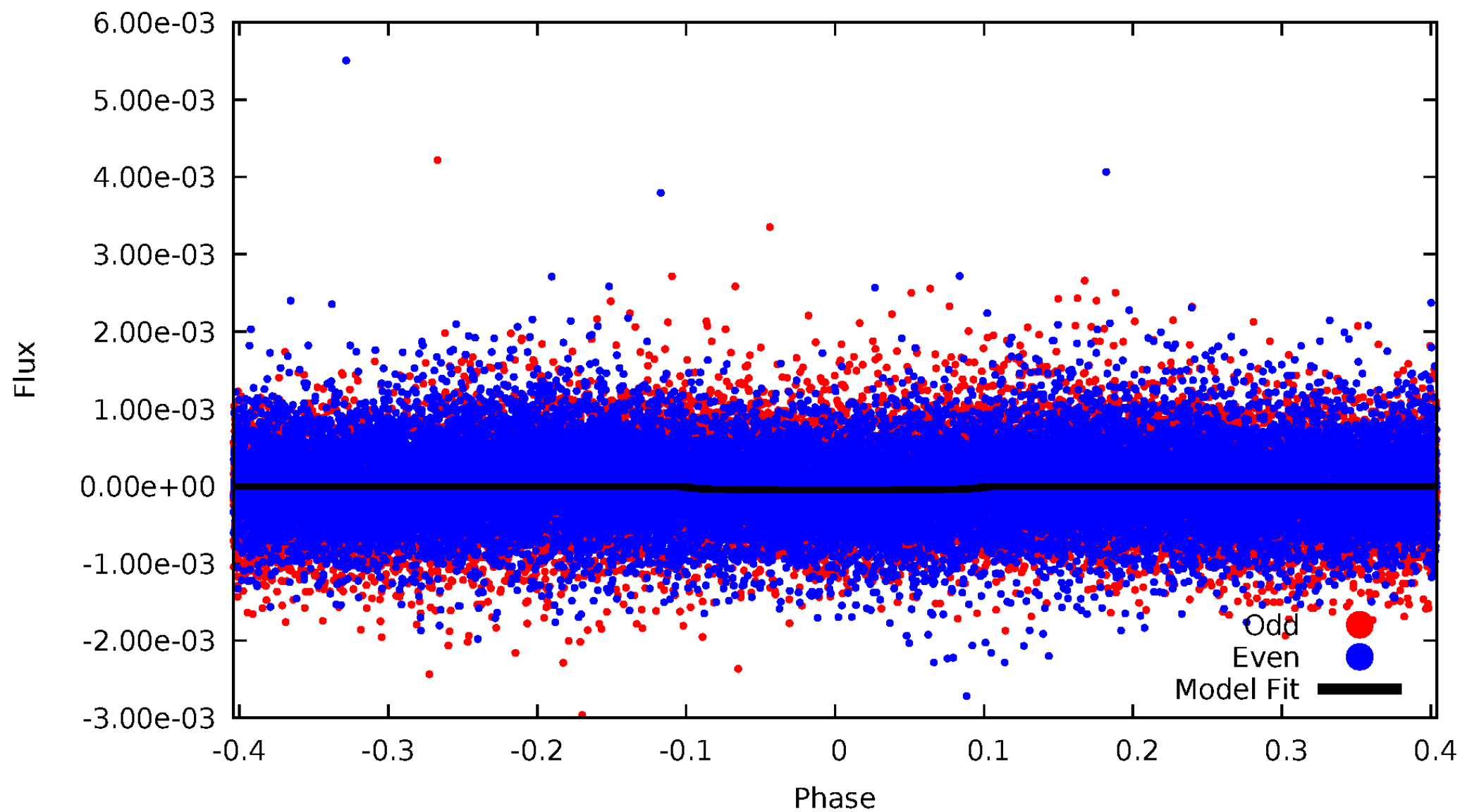


TCE 005476835-01



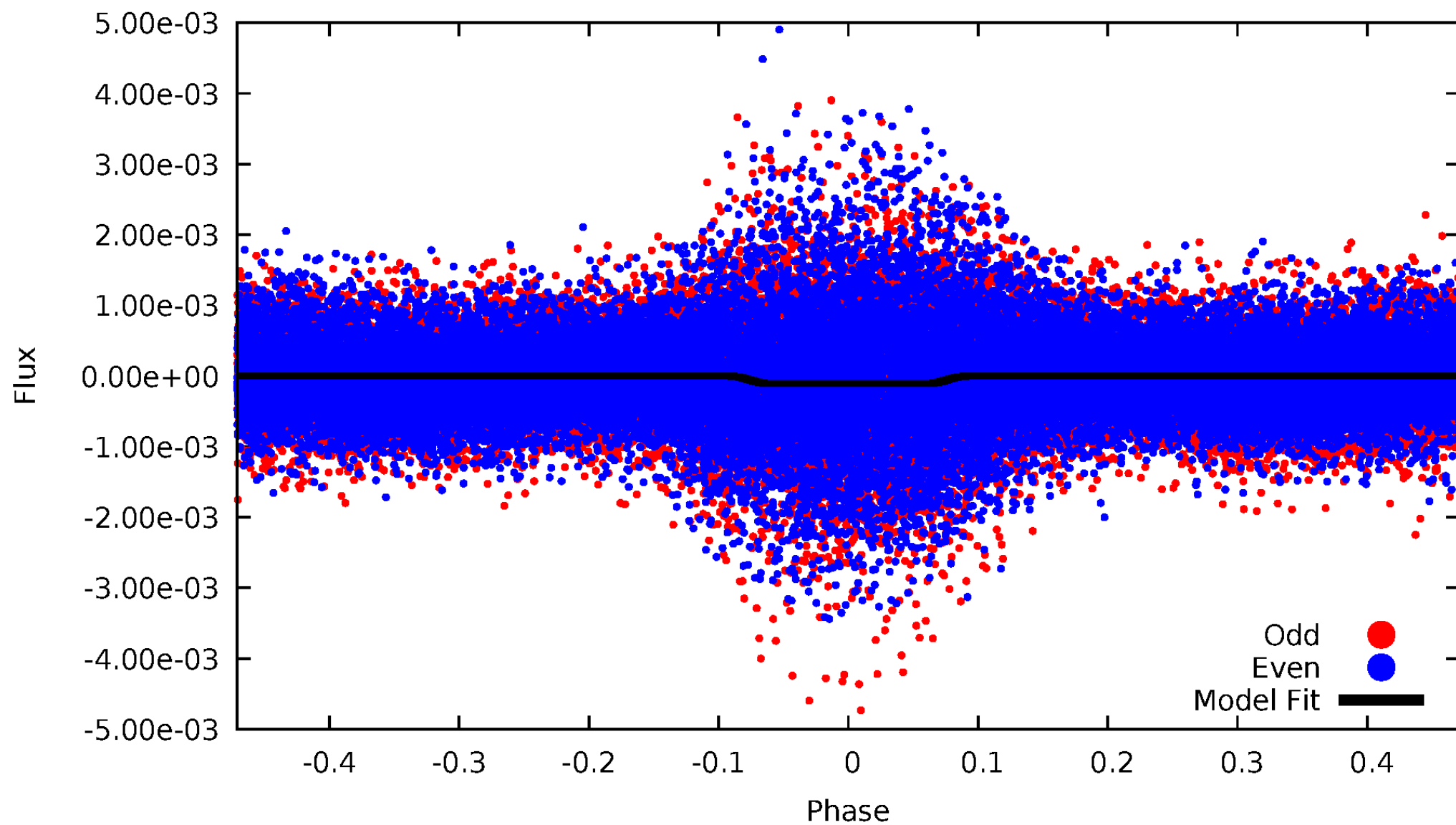
DV Odd/Even

TCE 005476835-01

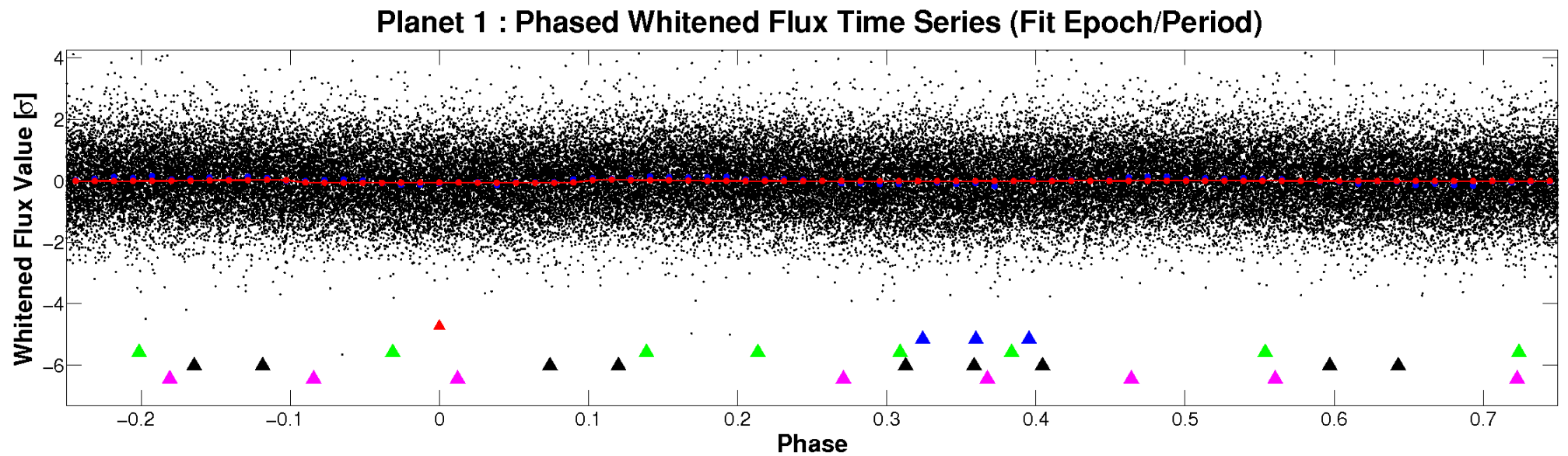
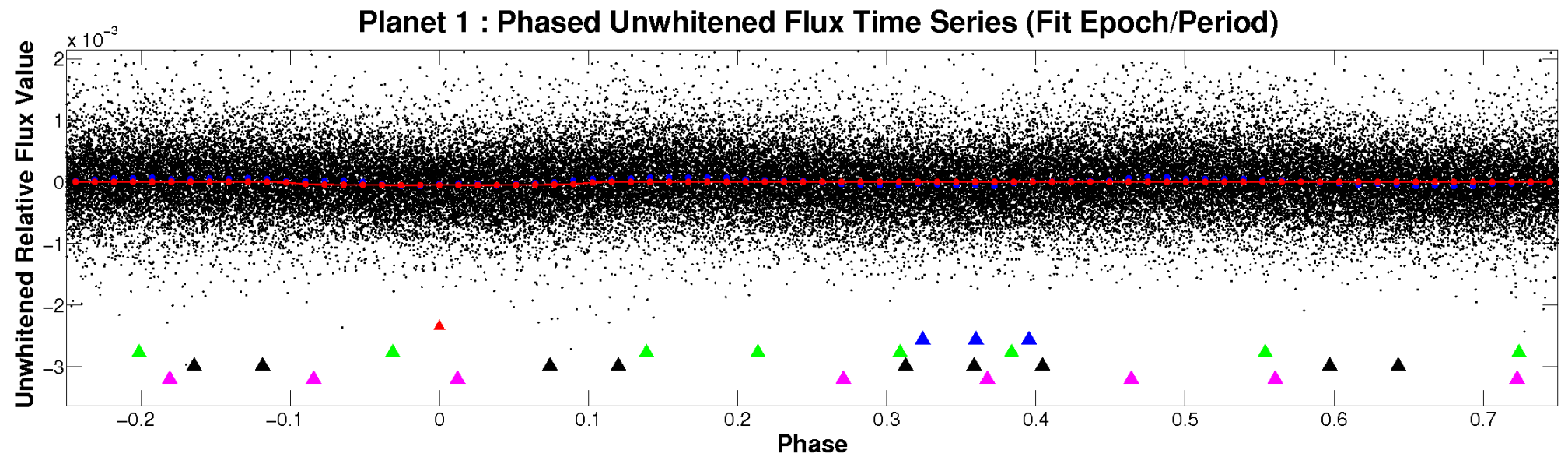


ALT Odd/Even

TCE 005476835-01

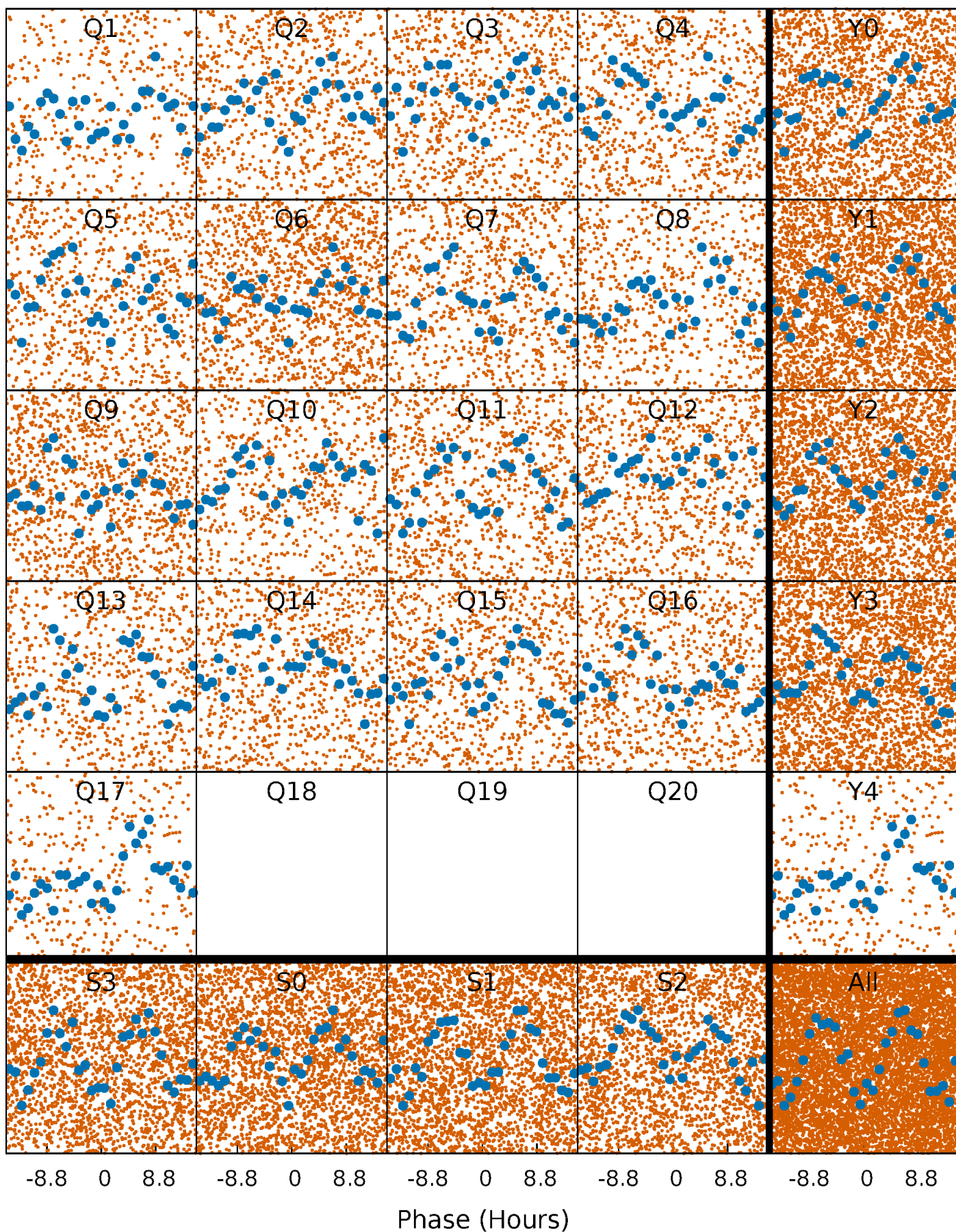


Non-Whitened Vs. Whitened Light Curve



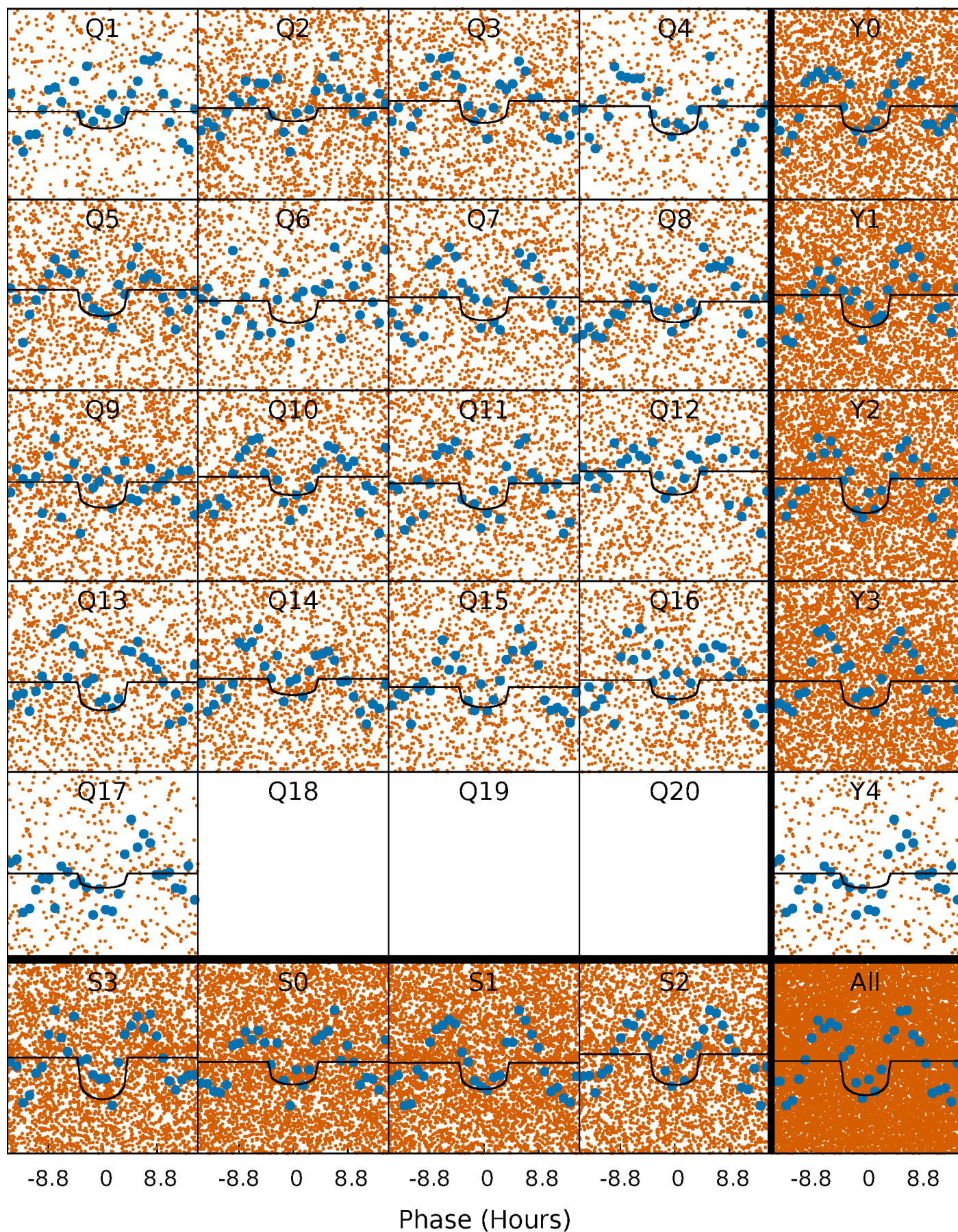
PDC Quarter-Phased Transit Curves

TCE 005476835-01 P= 1.591673 Days $T_0=132.806415$ (BKJD)



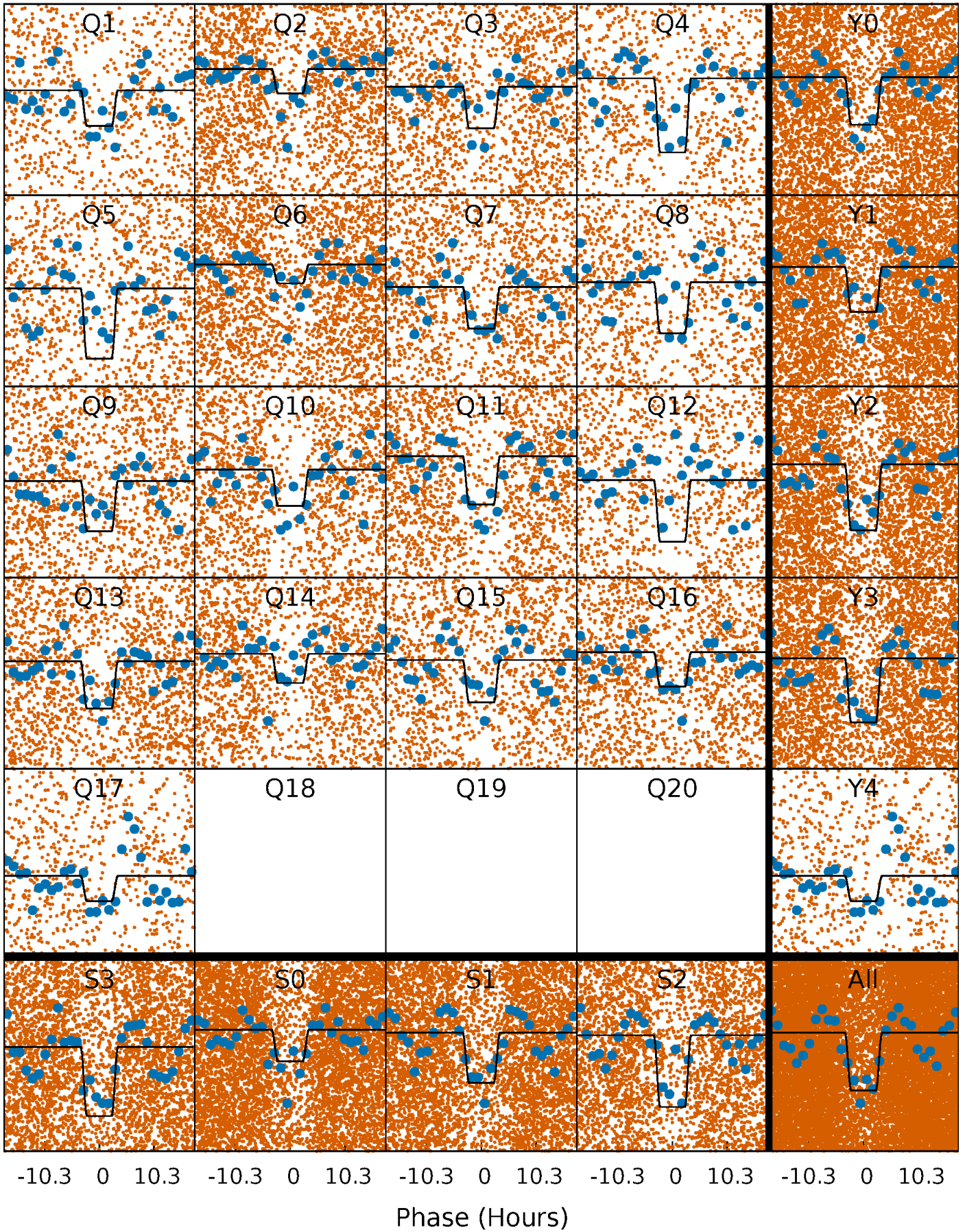
DV Quarter-Phased Transit Curves

TCE 005476835-01 P= 1.591673 Days $T_0=132.806415$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

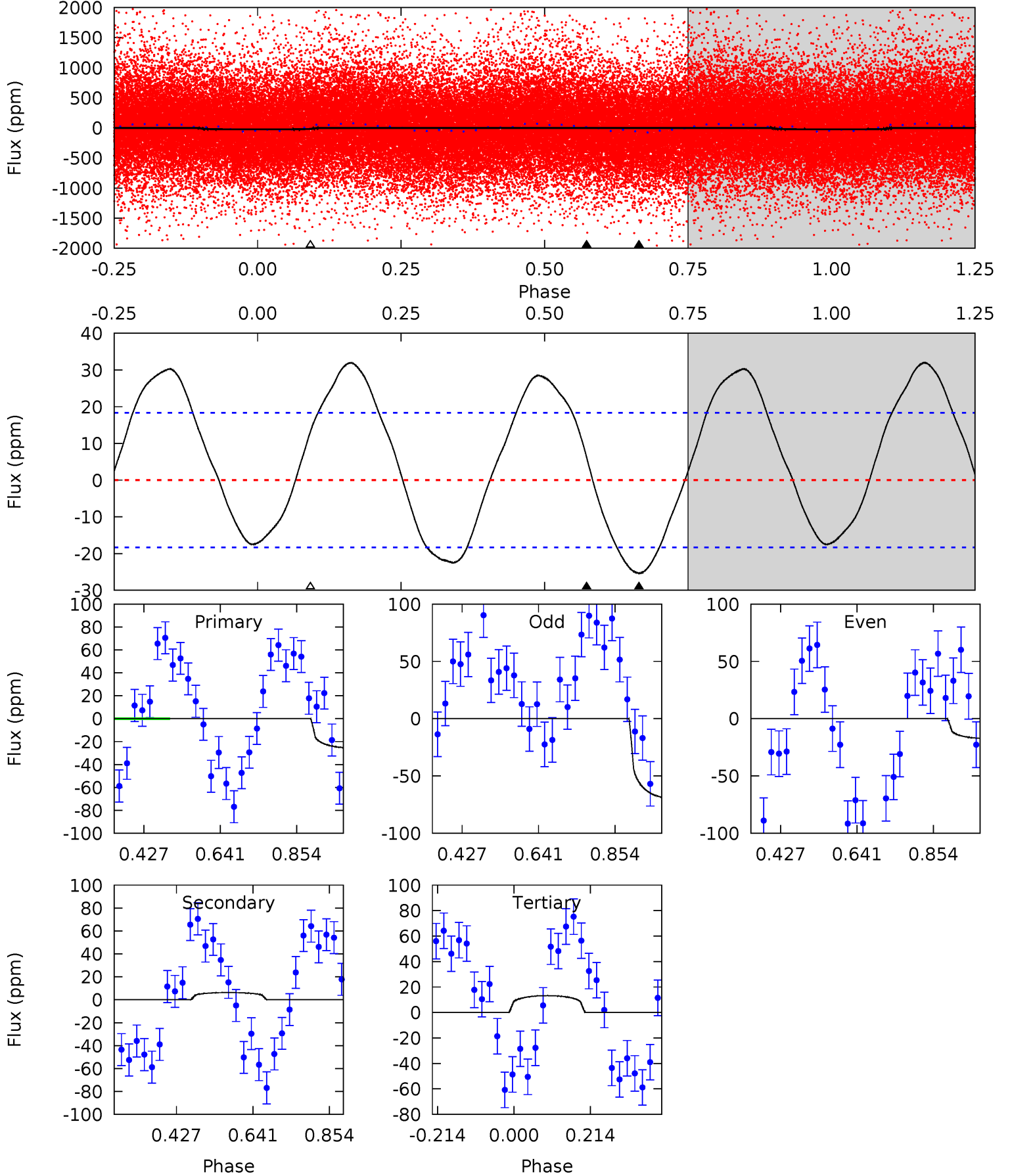
TCE 005476835-01 P= 1.591658 Days $T_0=132.814664$ (BKJD)



DV Model-Shift Uniqueness Test

005476835-01, P = 1.591673 Days, E = 131.214742 Days

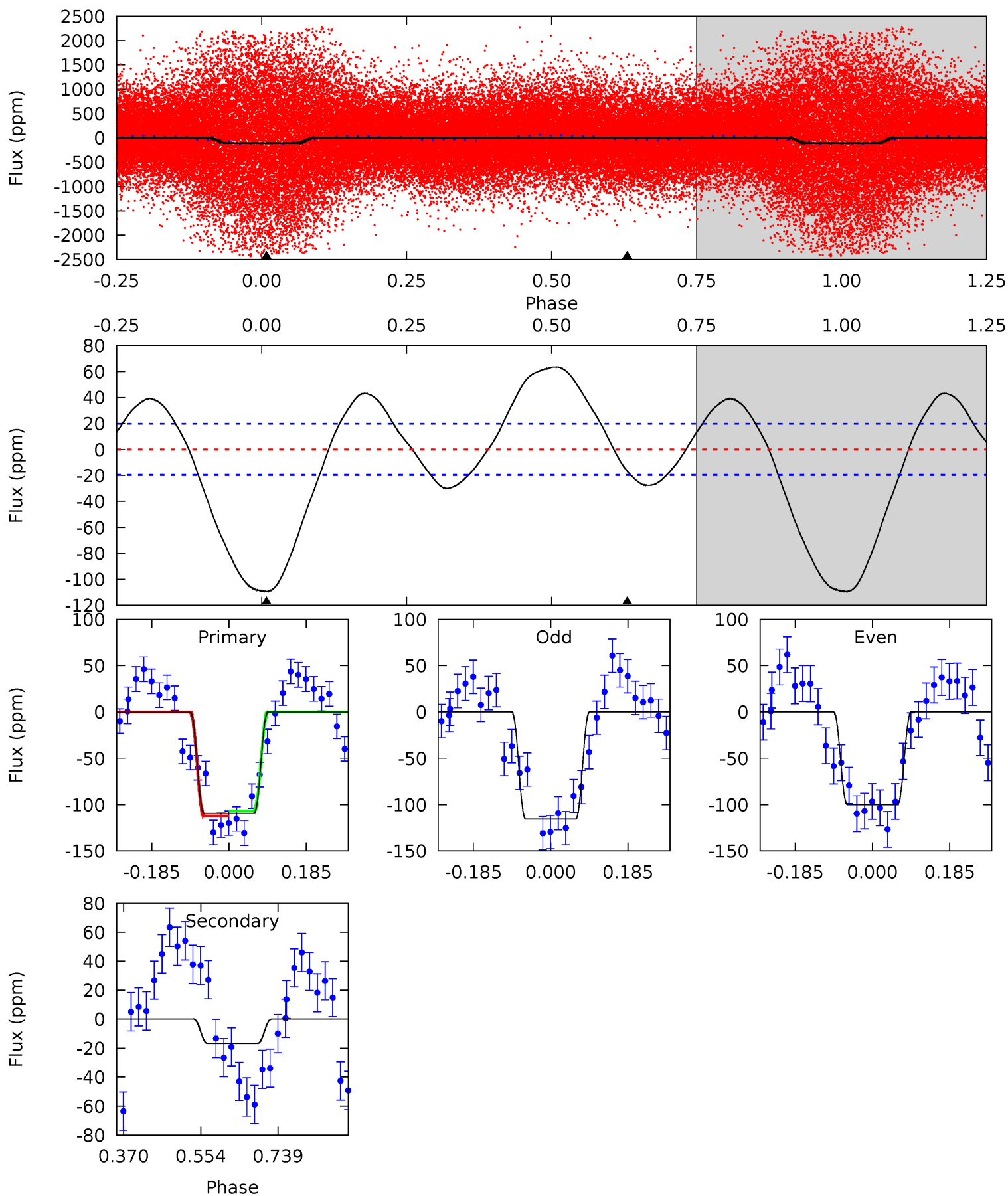
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.09	-1.51	-3.17	0	4.40	1.24	4.23	9.27	6.09	1.66	-1.51	6.23	0.79	0.56	0.13



Alt Model-Shift Uniqueness Test

005476835-01, P = 1.591658 Days, E = 131.223006 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.6	3.75	0	0	4.43	1.33	5.24	24.6	24.6	3.75	3.75	1.76	1.25	0.37	0.65



Stellar Parameters For KIC 005476835

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6102^{+184}_{-220}	$4.449^{+0.056}_{-0.224}$	$-0.060^{+0.250}_{-0.300}$	$1.018^{+0.341}_{-0.114}$	$1.058^{+0.151}_{-0.135}$	$1.413^{+0.408}_{-0.746}$
	+3%/-4%	+1%/-5%	+417%/-500%	+33%/-11%	+14%/-13%	+29%/-53%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 005476835-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	6 ± 4	$0.95^{+0.72}_{-0.58}$	2367^{+154}_{-138}	-3800^{+613}_{-1437}	$-2.485^{+1.870}_{-14.330}$
Alt.	-17 ± 4	$1.27^{+0.79}_{-0.67}$	2361^{+165}_{-134}	3982^{+1449}_{-710}	$4.057^{+14.806}_{-2.615}$

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

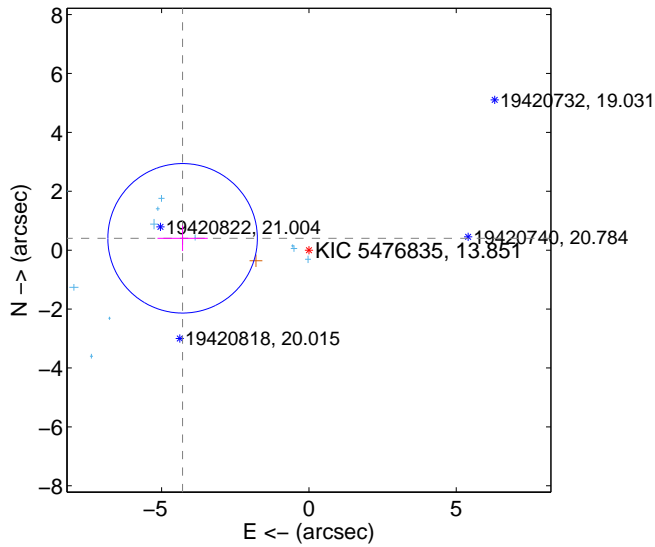
Supplemental centroid analysis for 005476835-01. Kepler magnitude: 13.85. Transit SNR 7.70

There are 12 quarters with good PRF difference image offsets

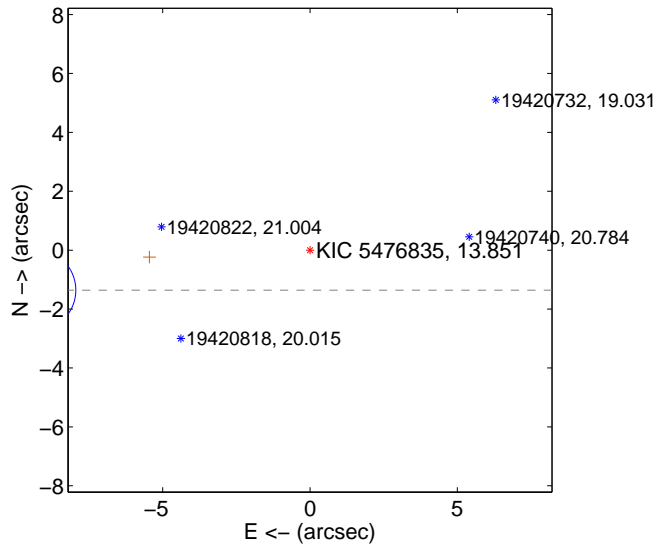
The direct PRF centroid is offset from the target star catalog position by about 1.76 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.308 ± 0.846	5.09	4.289 ± 0.853	0.403 ± 0.433
PRF-fit source offset from KIC position	9.432 ± 0.461	20.46	9.333 ± 0.450	-1.357 ± 0.508
photometric centroid source offset	2.68 ± 1.05	2.56	2.43 ± 1.10	-1.14 ± 0.74

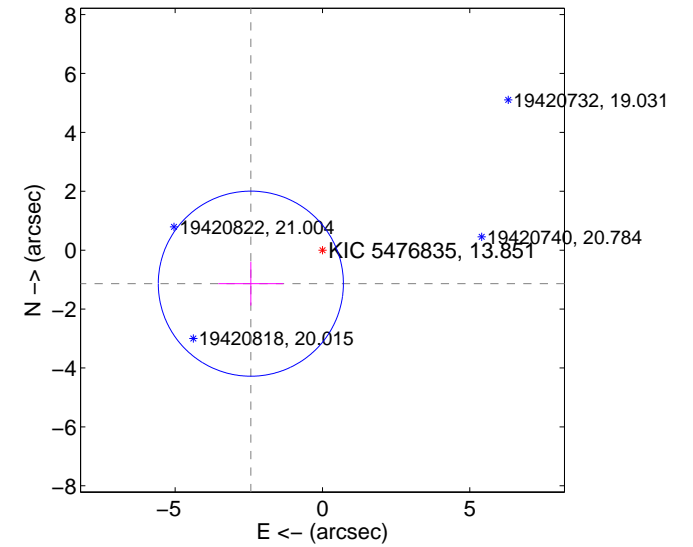
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

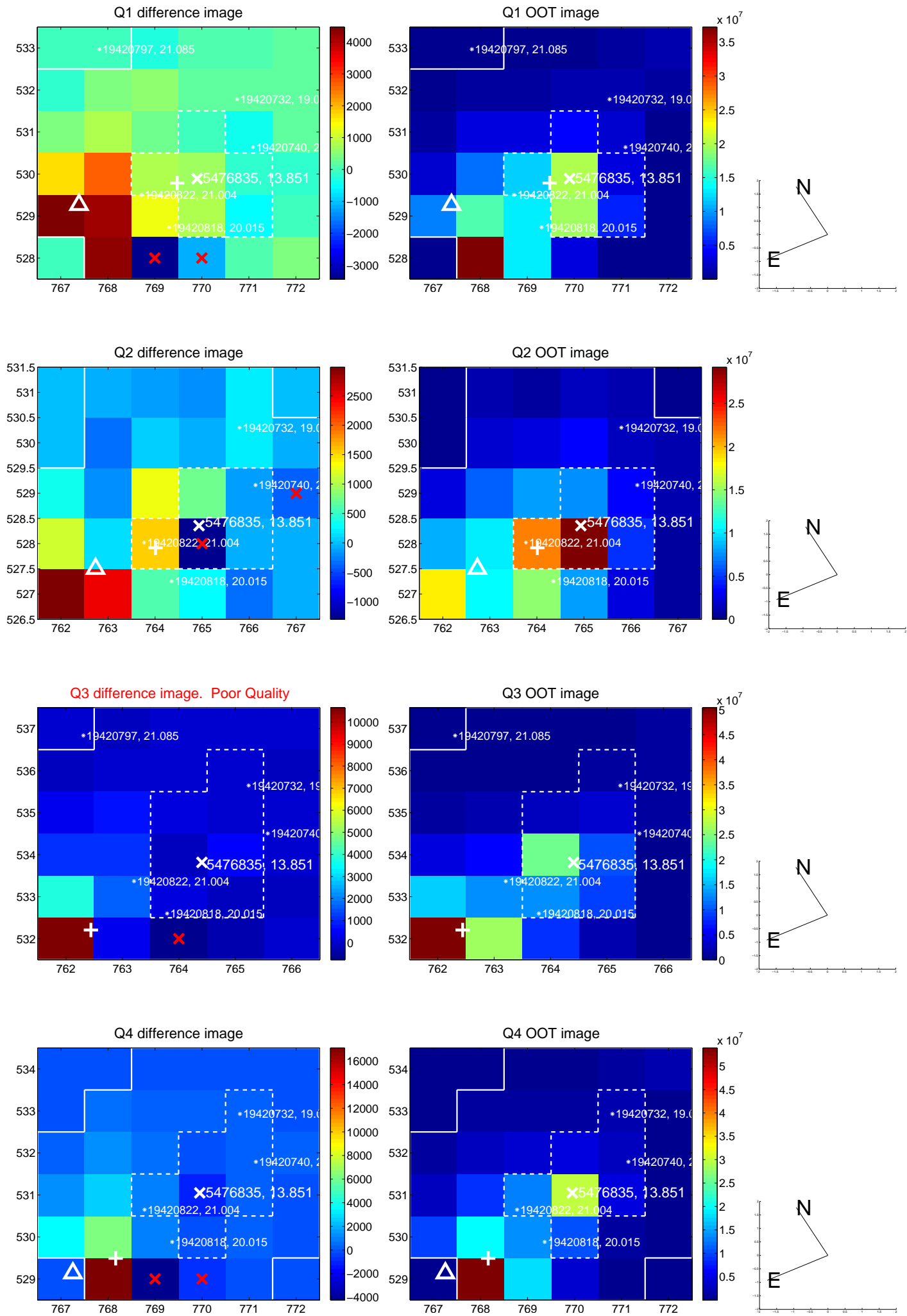


offset from photometric centroids

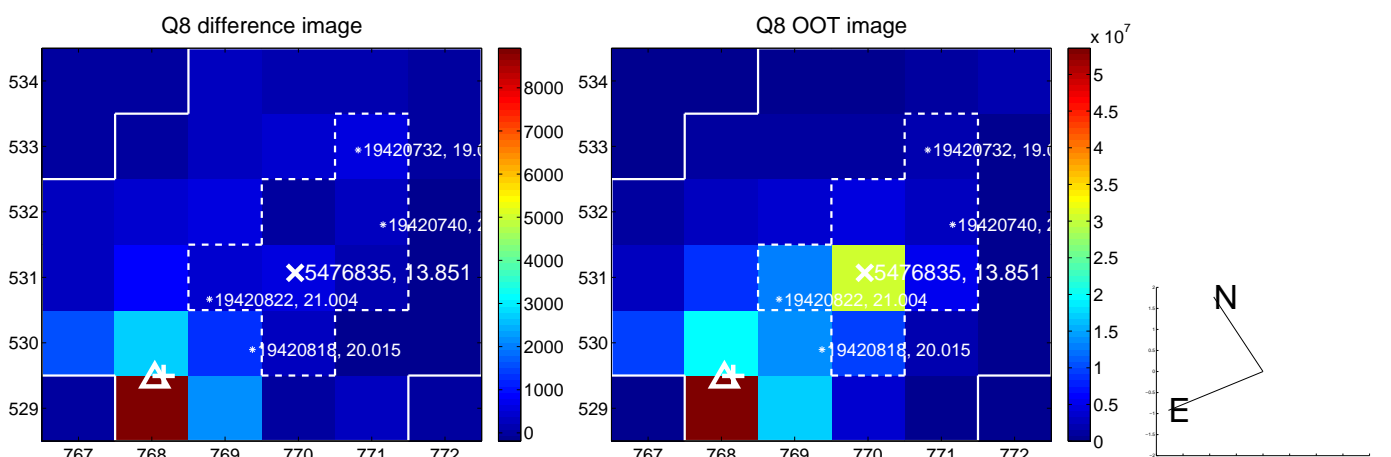
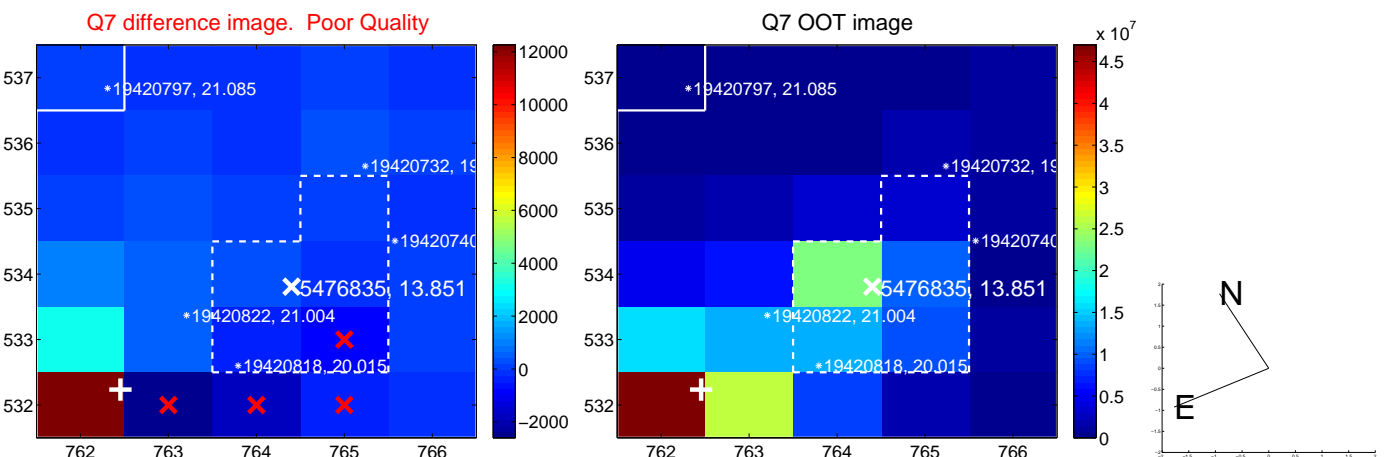
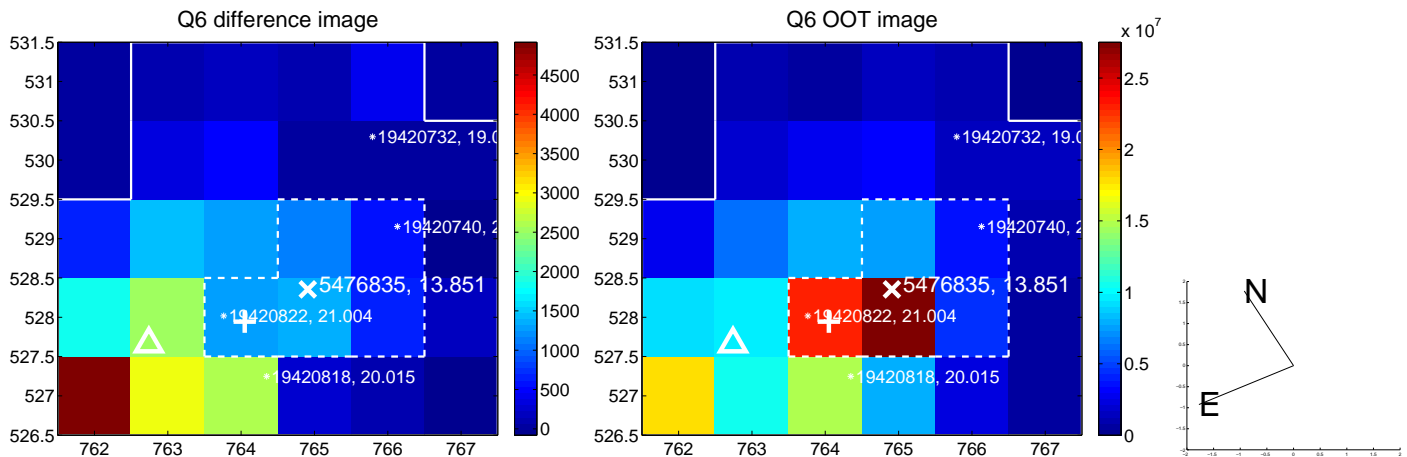
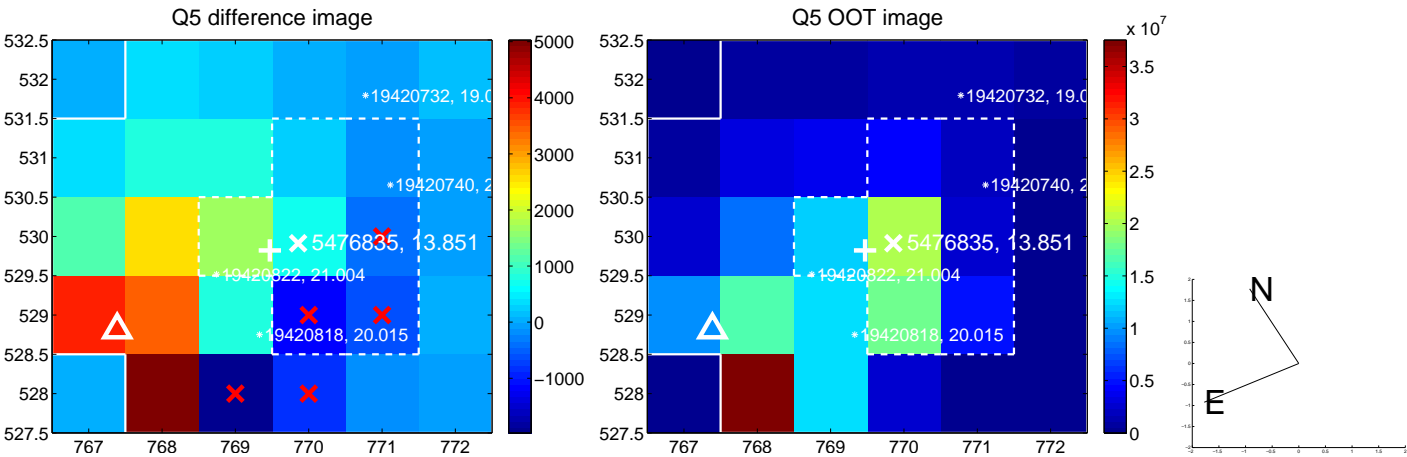


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

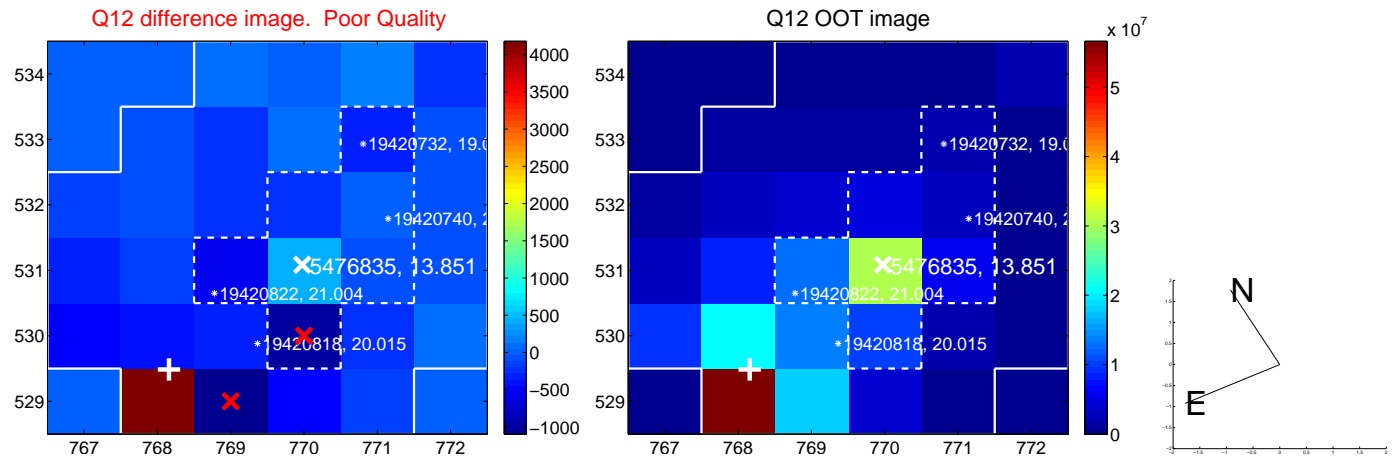
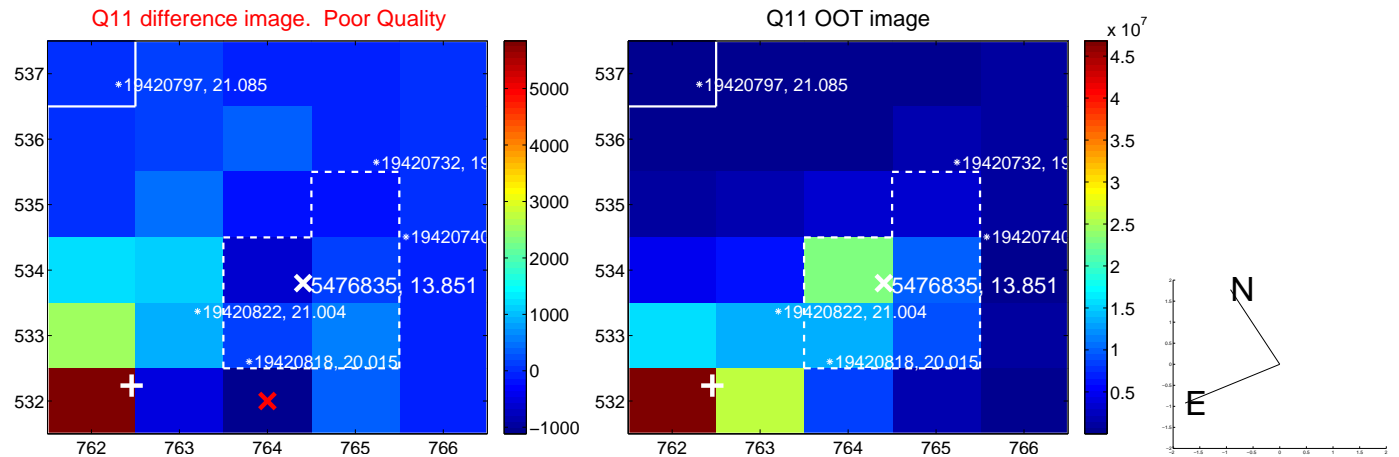
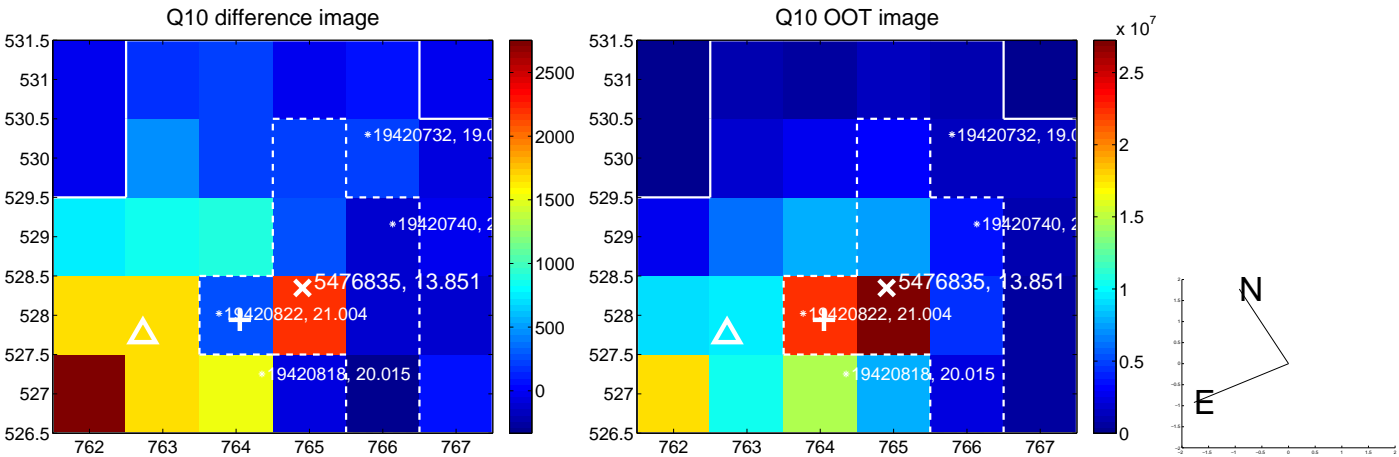
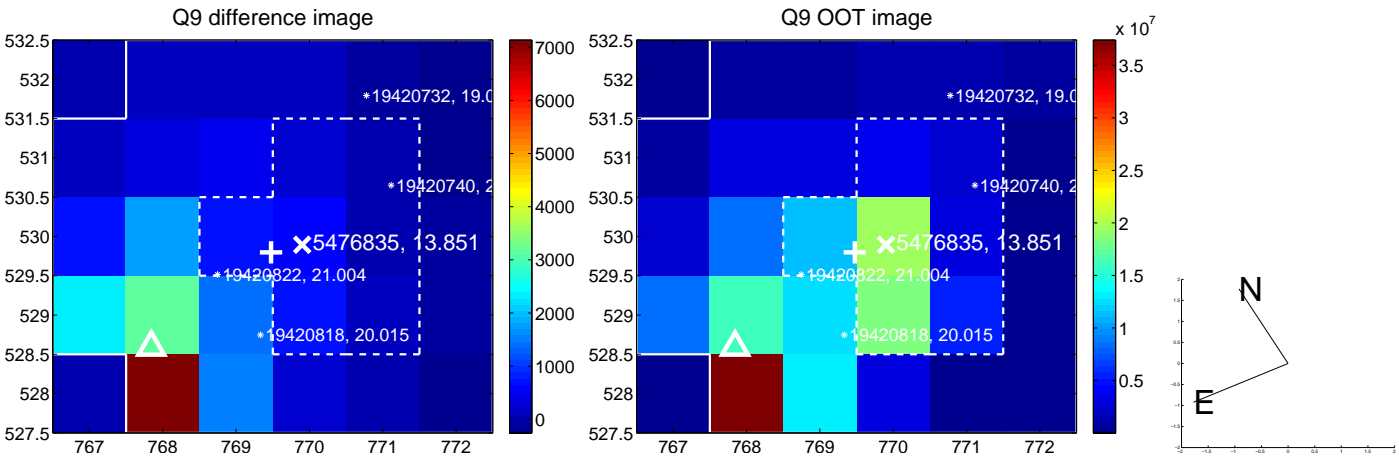
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



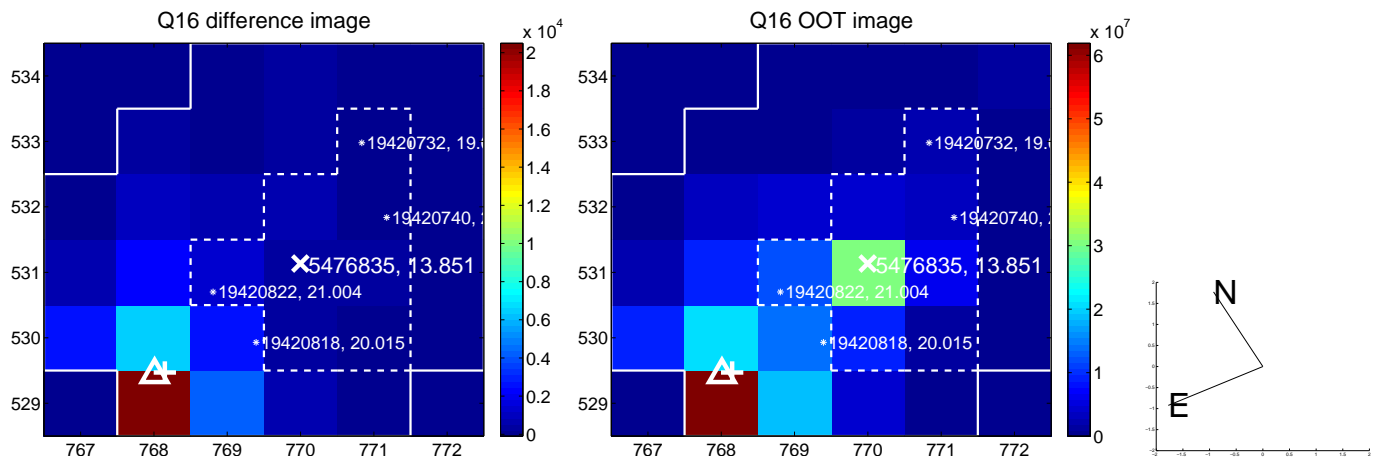
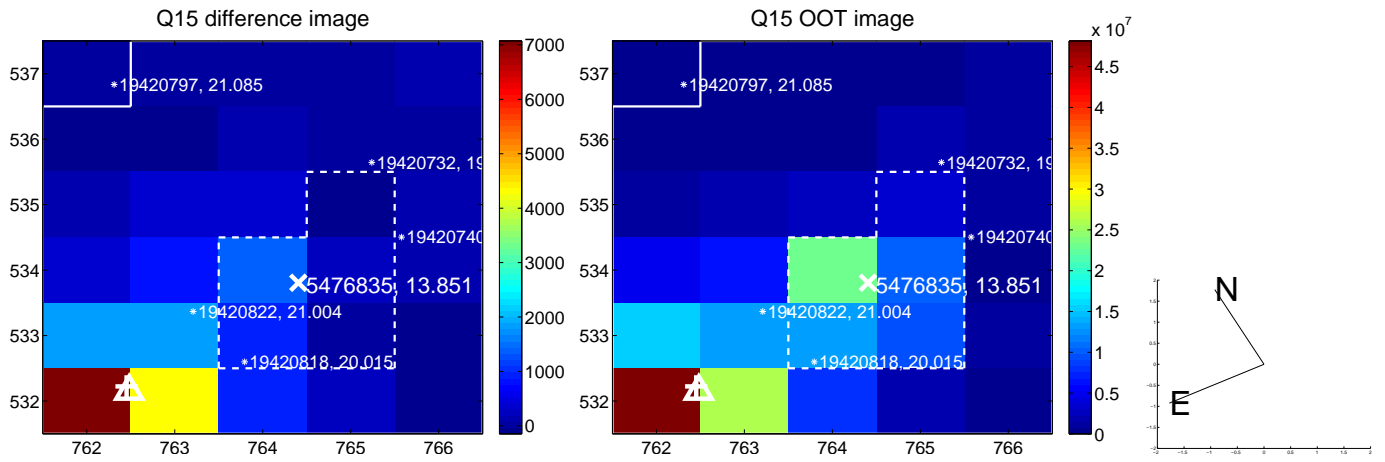
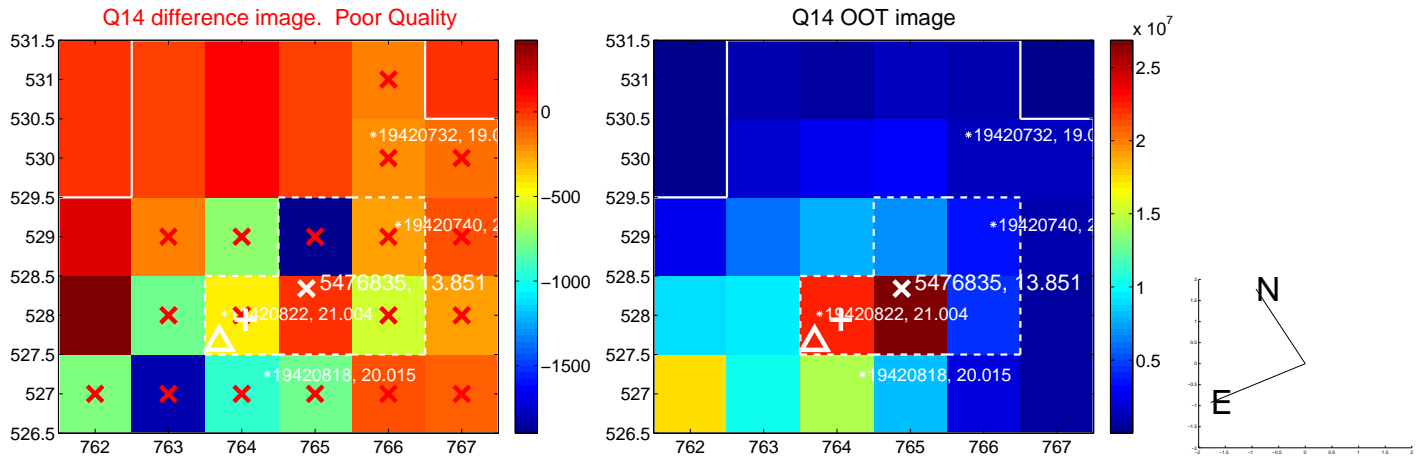
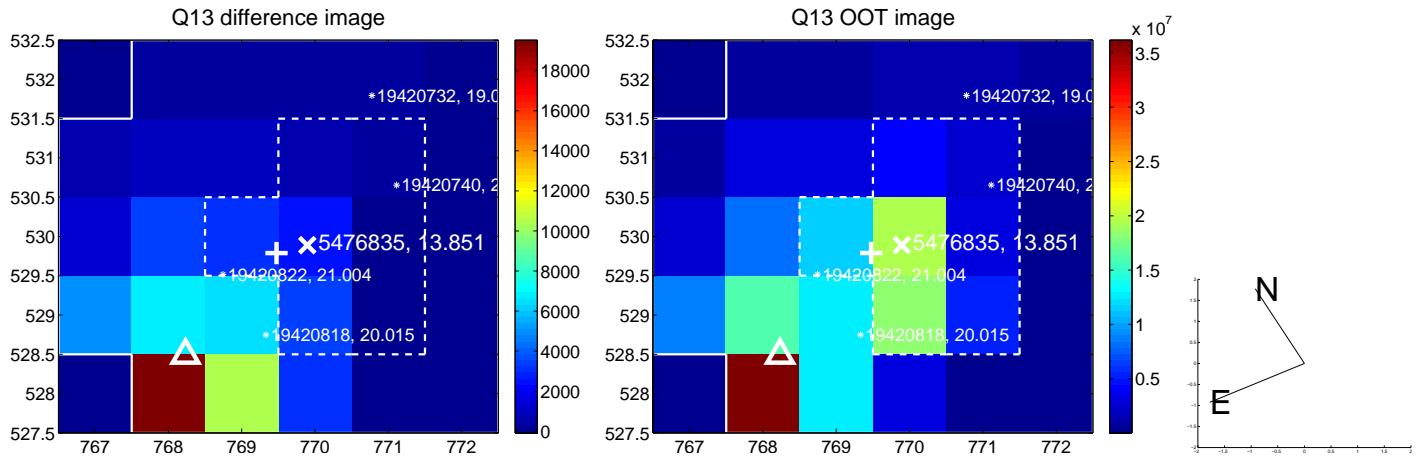
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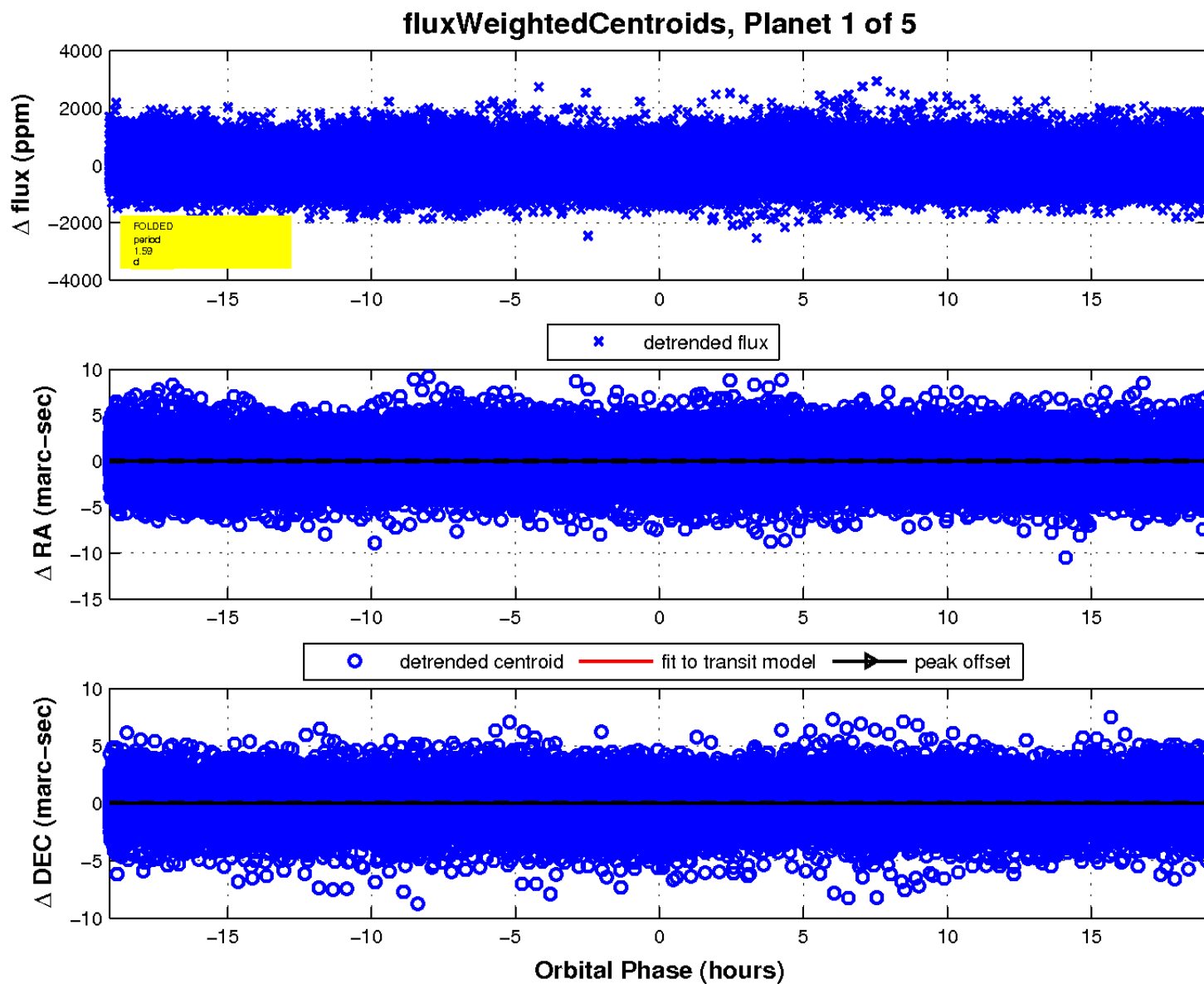
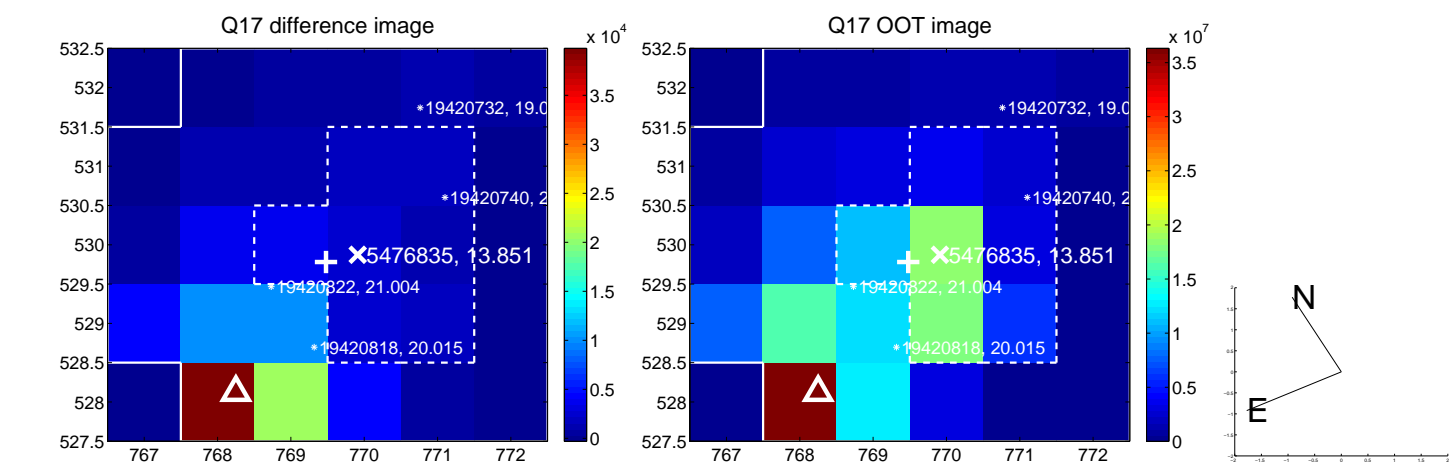
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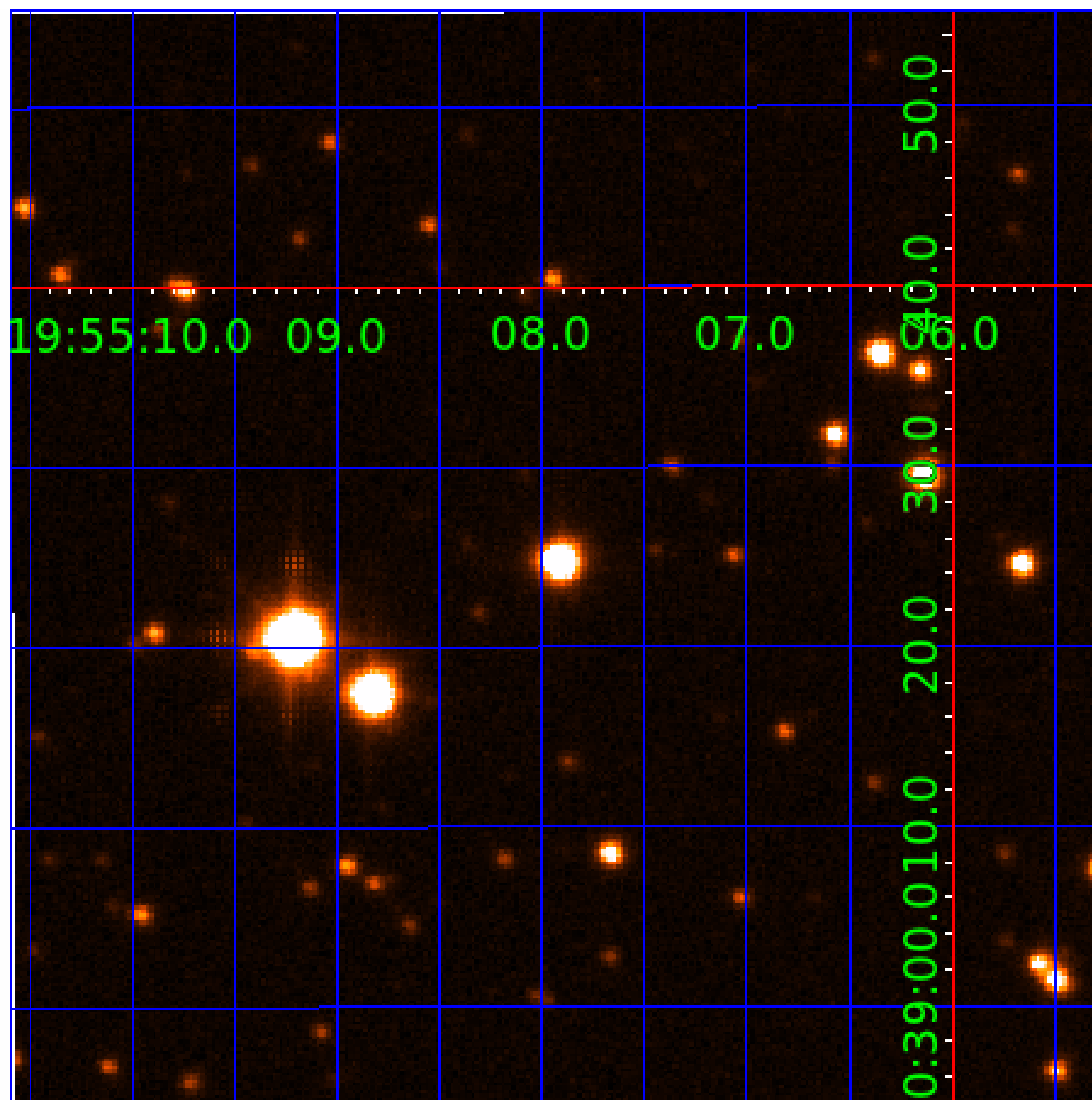


white \times : KIC target position; $+$: OOT centroid; Δ : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005476835

Q1-17 DR25 TCE Parameters

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005476835-01	OBS	FP	0.00	1	0	1	1	LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET—EPHEM_MATCH
005476835-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
005476835-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
005476835-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_RESOLVED_OFFSET
005476835-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_RESOLVED_OFFSET—HALO_GHOST

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

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

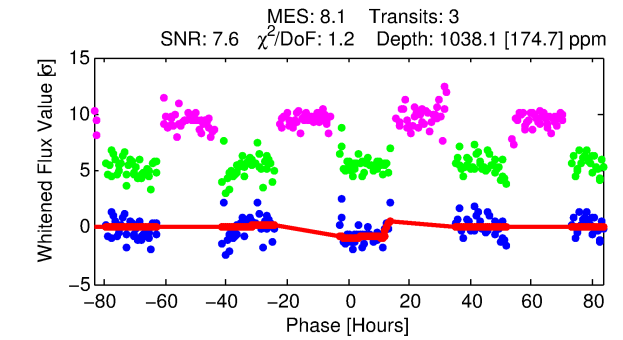
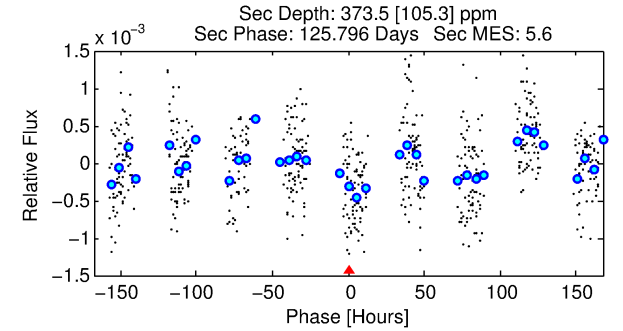
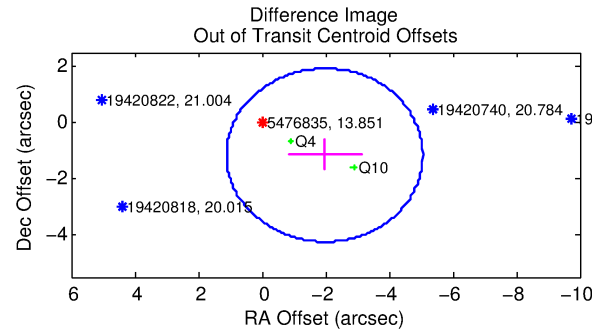
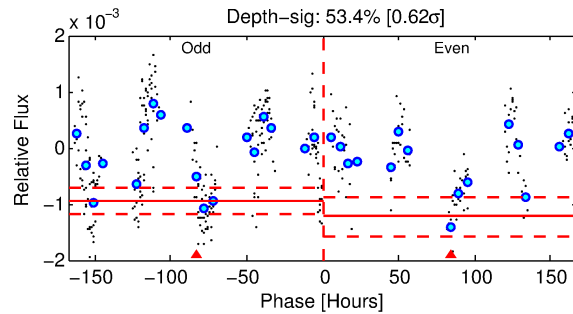
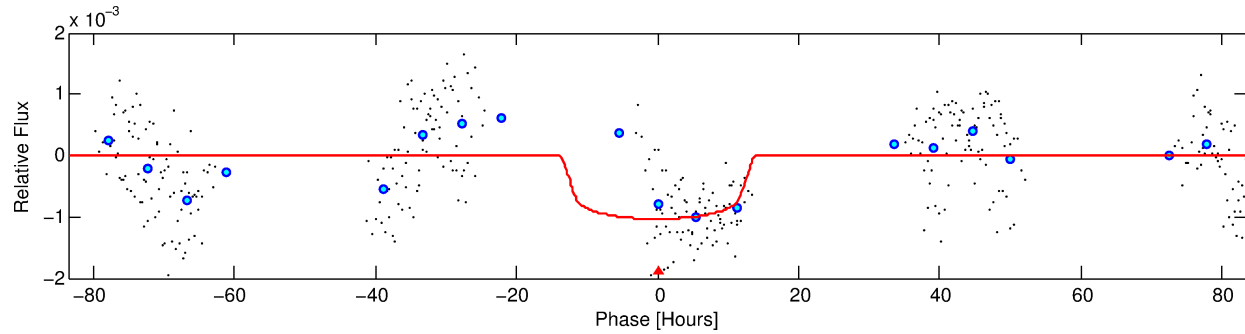
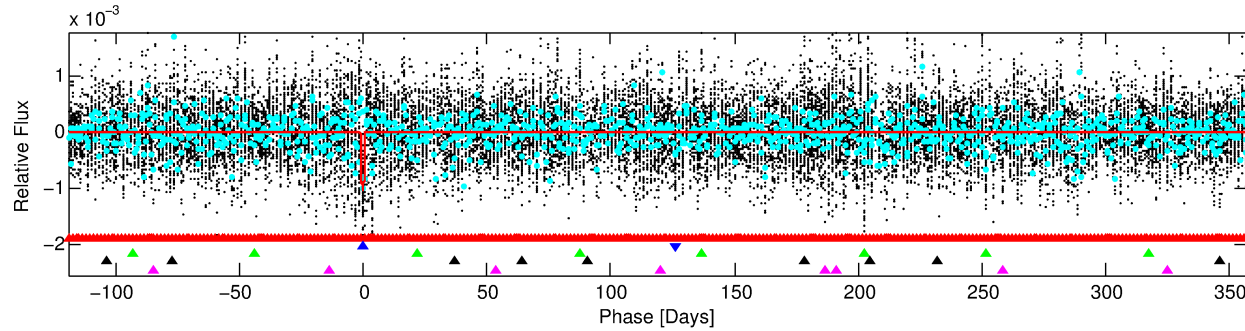
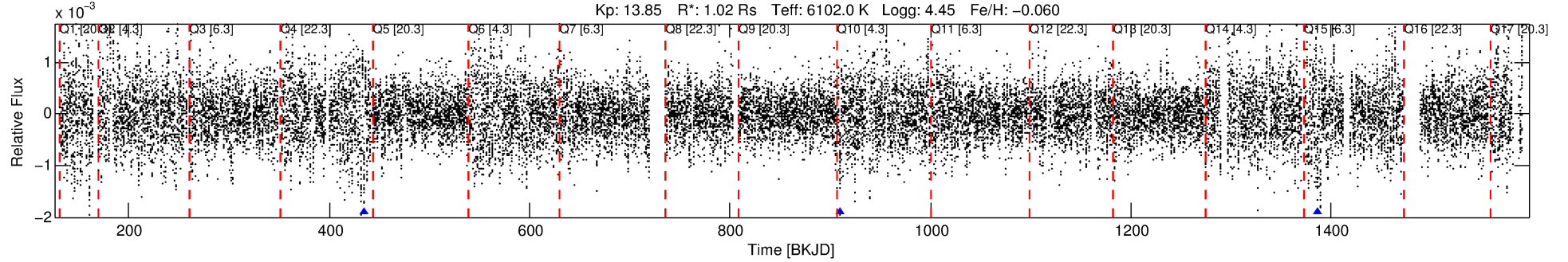
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005476835-02

No Significant Match Found

DV One-Page Summary

KIC: 5476835 Candidate: 2 of 5 Period: 475.854 d



DV Fit Results:

Period = 475.85360 [0.05769] d
Epoch = 434.2620 [0.1727] BKJD
Bp/R* = 0.0330 [0.0044]
a/R* = 81.57 [46.23]
b = 0.82 [0.19]
Seff = 0.87 [0.38]
Teq = 246 [27] K
Rp = 3.67 [1.32] Re
a = 1.2176 [0.3432] AU
Ag = 22624.19 [12771.49] [1.77 σ]
Teffp = 4667 [483] K [9.14 σ]

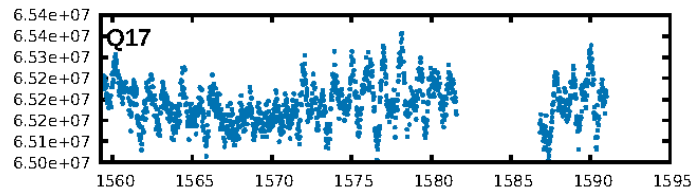
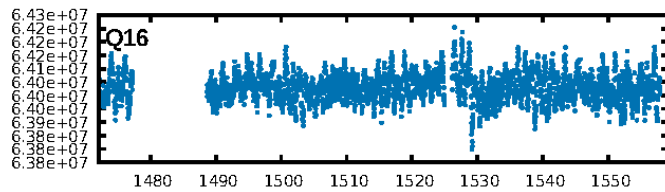
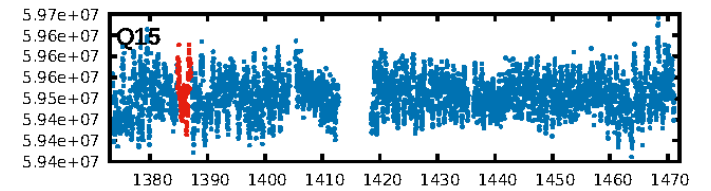
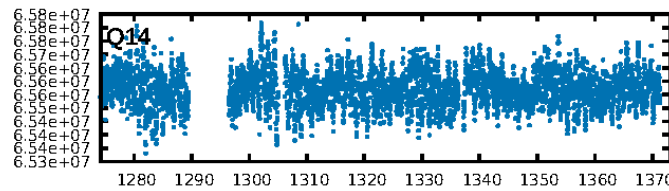
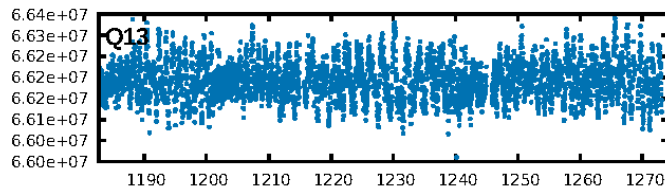
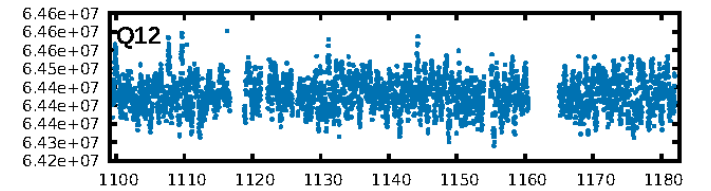
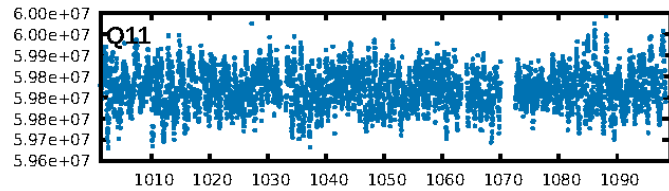
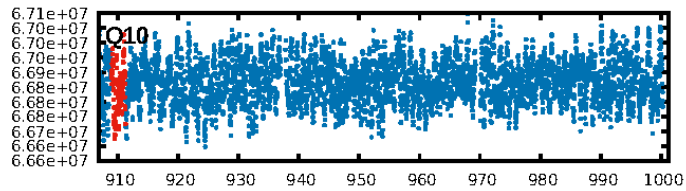
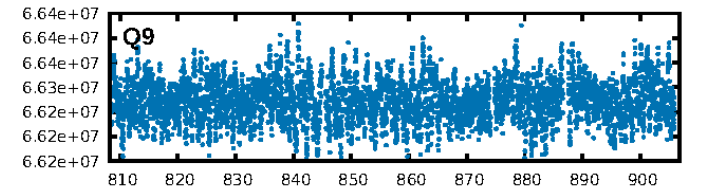
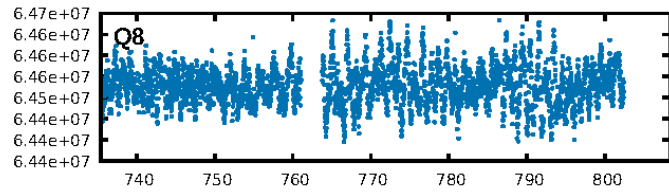
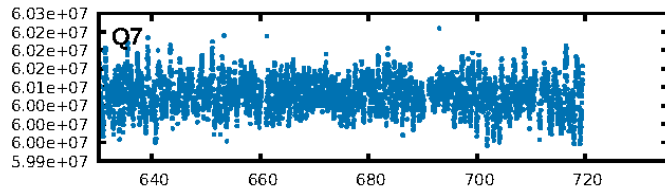
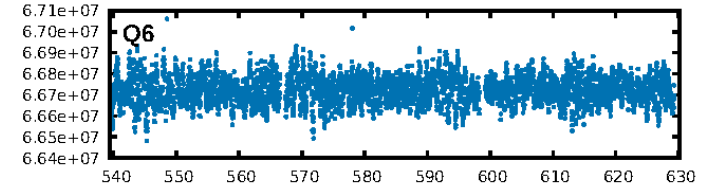
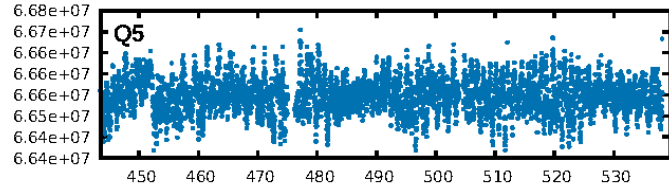
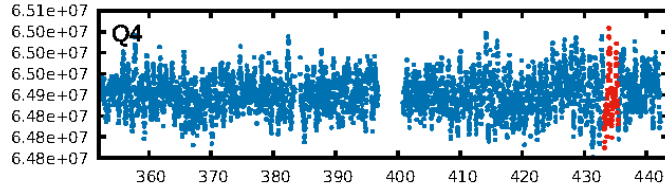
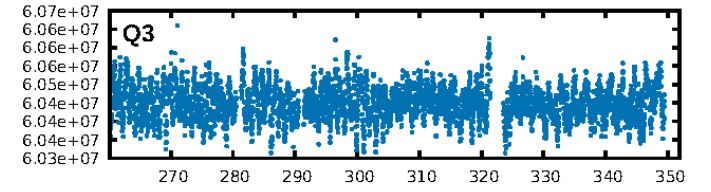
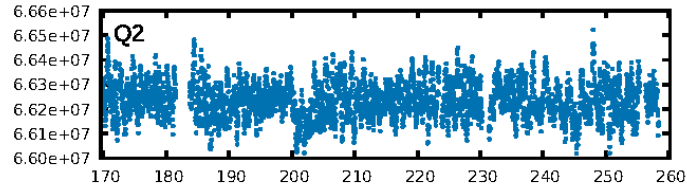
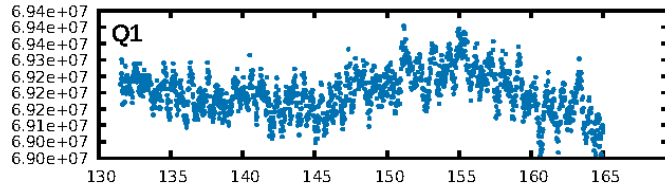
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [220.13 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 78.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.34e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -1.282
Centroid-sig: 5.6%
Centroid-so: 1.831 arcsec [2.38 σ]
OotOffset-rm: 2.290 arcsec [2.23 σ]
OotOffset-st: 1/0/1/0 [2]
KicOffset-rm: 6.020 arcsec [1.66 σ]
KicOffset-st: 1/0/1/0 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 0.00 [0/2]

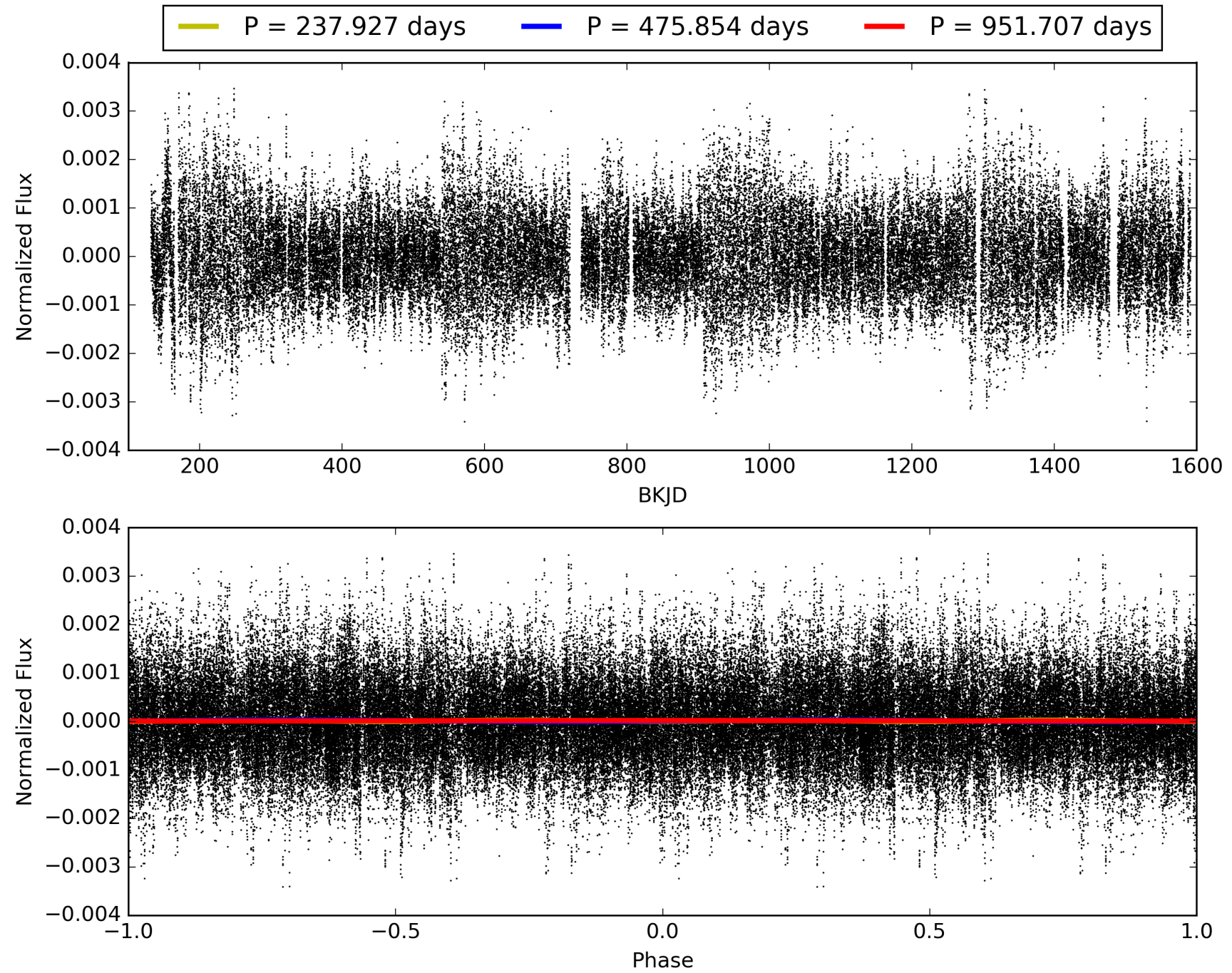
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 01:12:01 Z

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

TCE 005476835-02, PDC Light Curves

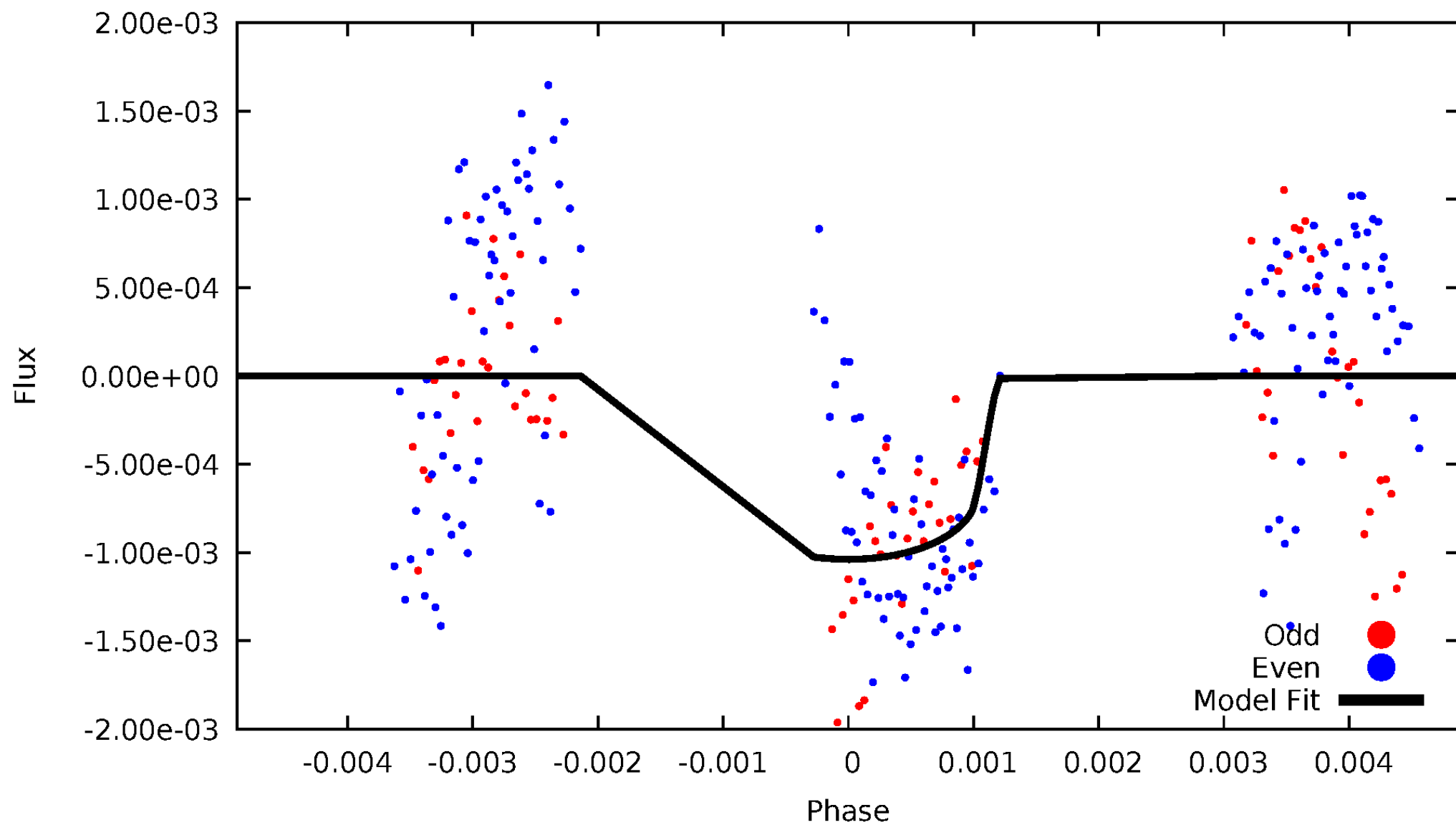


TCE 005476835-02



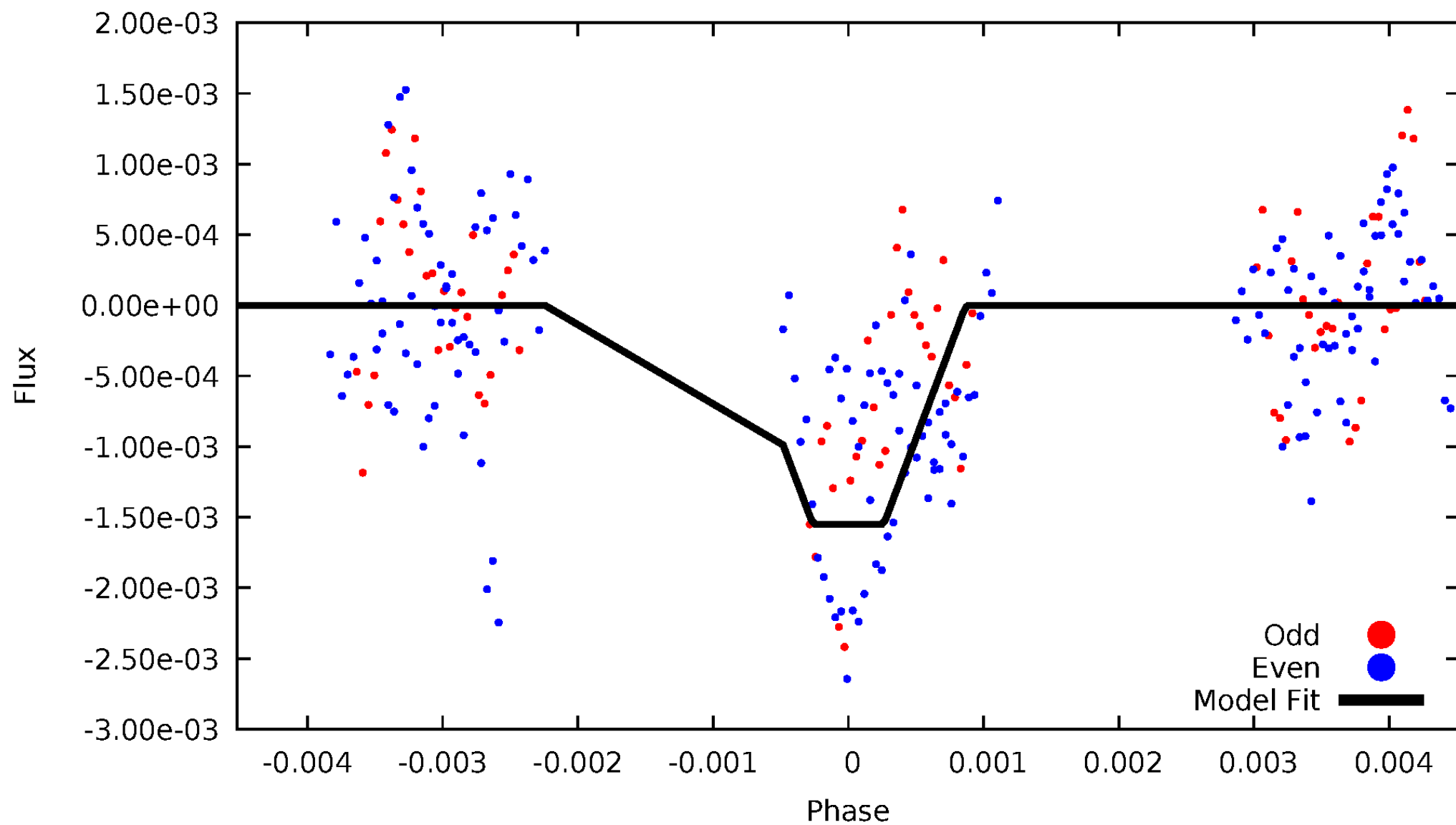
DV Odd/Even

TCE 005476835-02



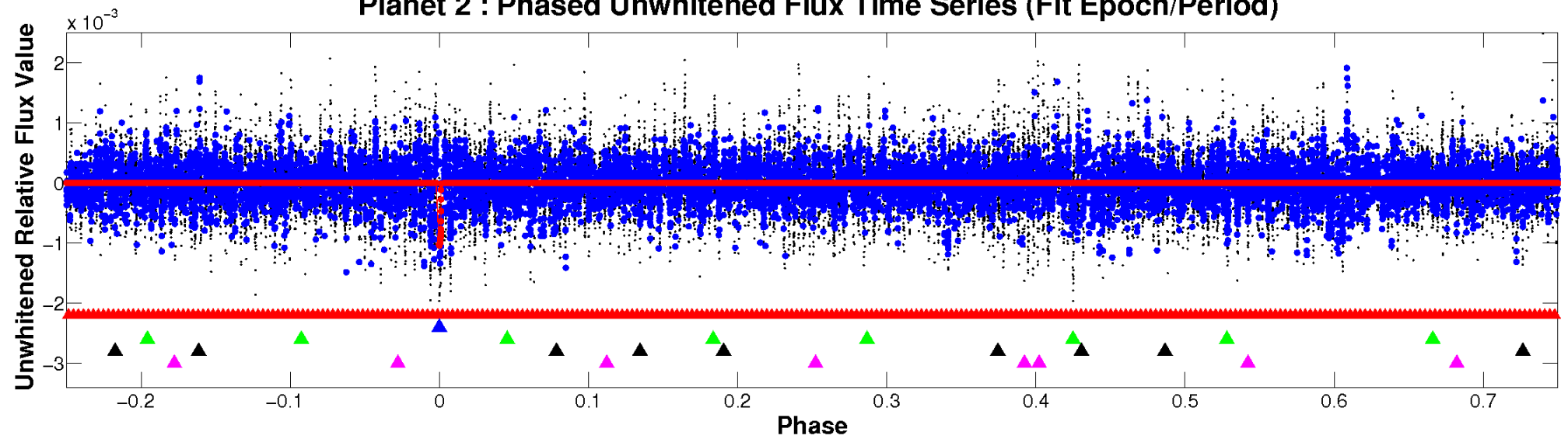
ALT Odd/Even

TCE 005476835-02

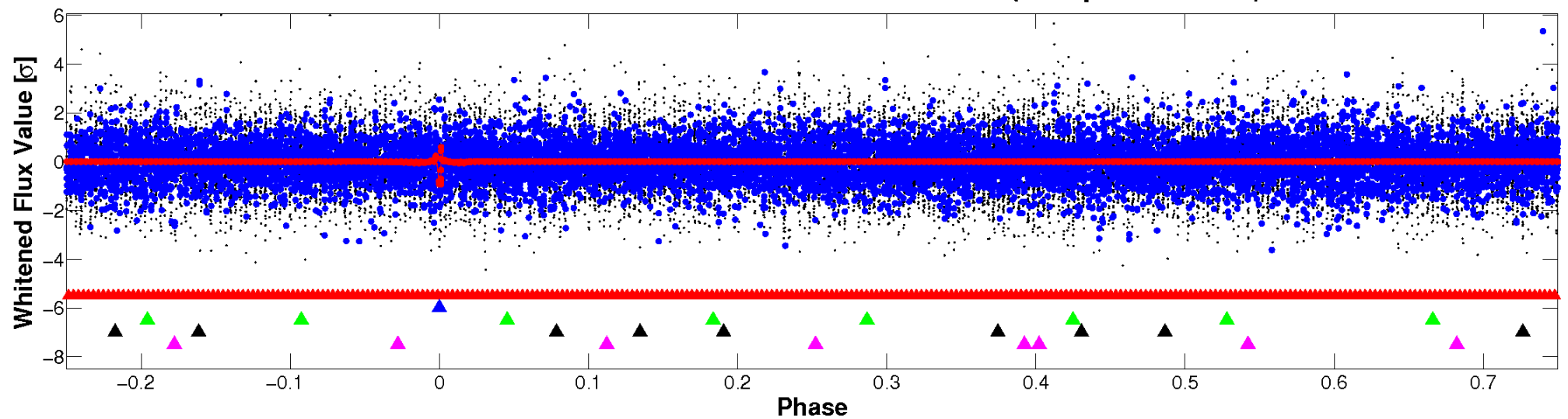


Non-Whitened Vs. Whitened Light Curve

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

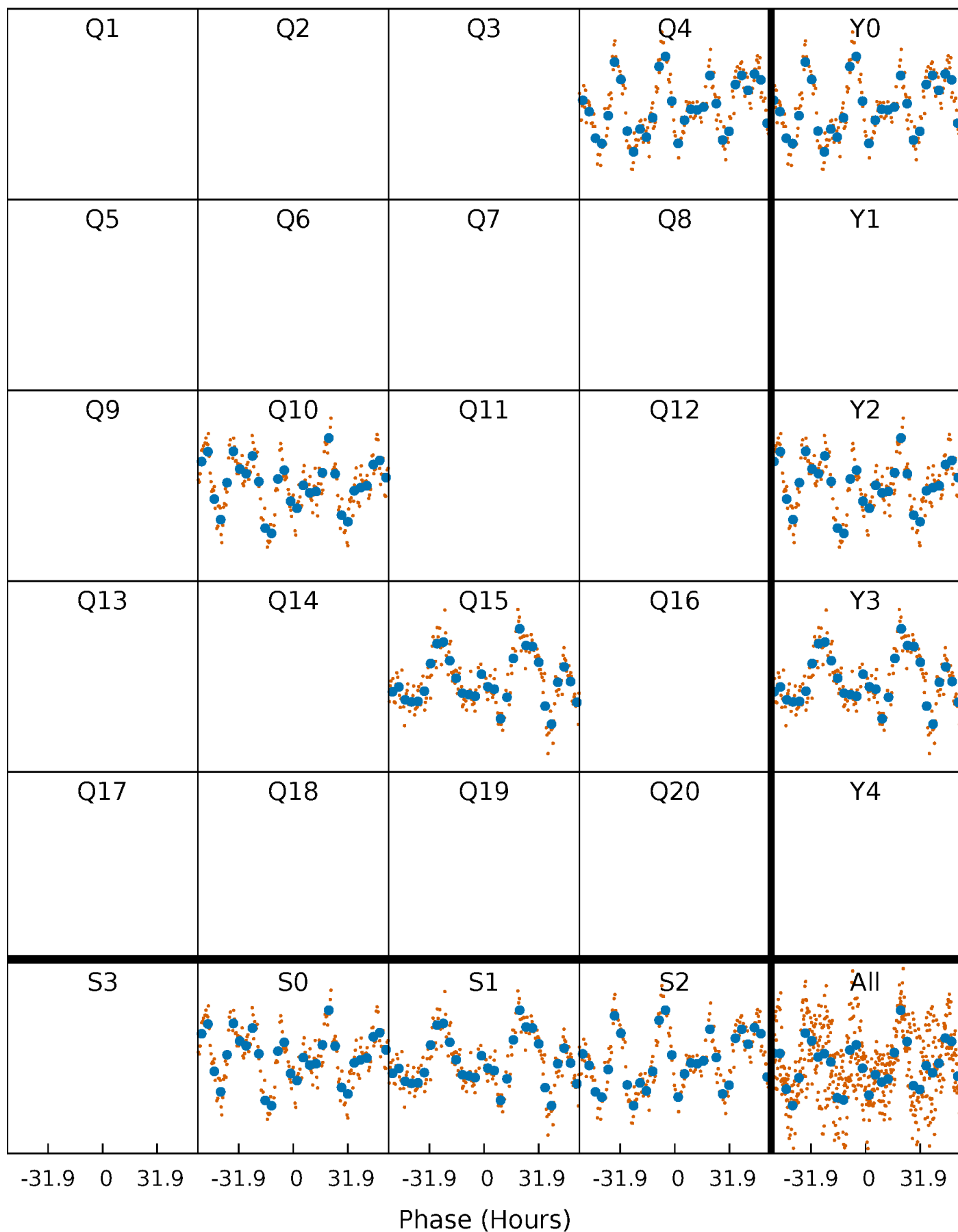


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 005476835-02 P=475.853598 Days $T_0=434.262047$ (BKJD)



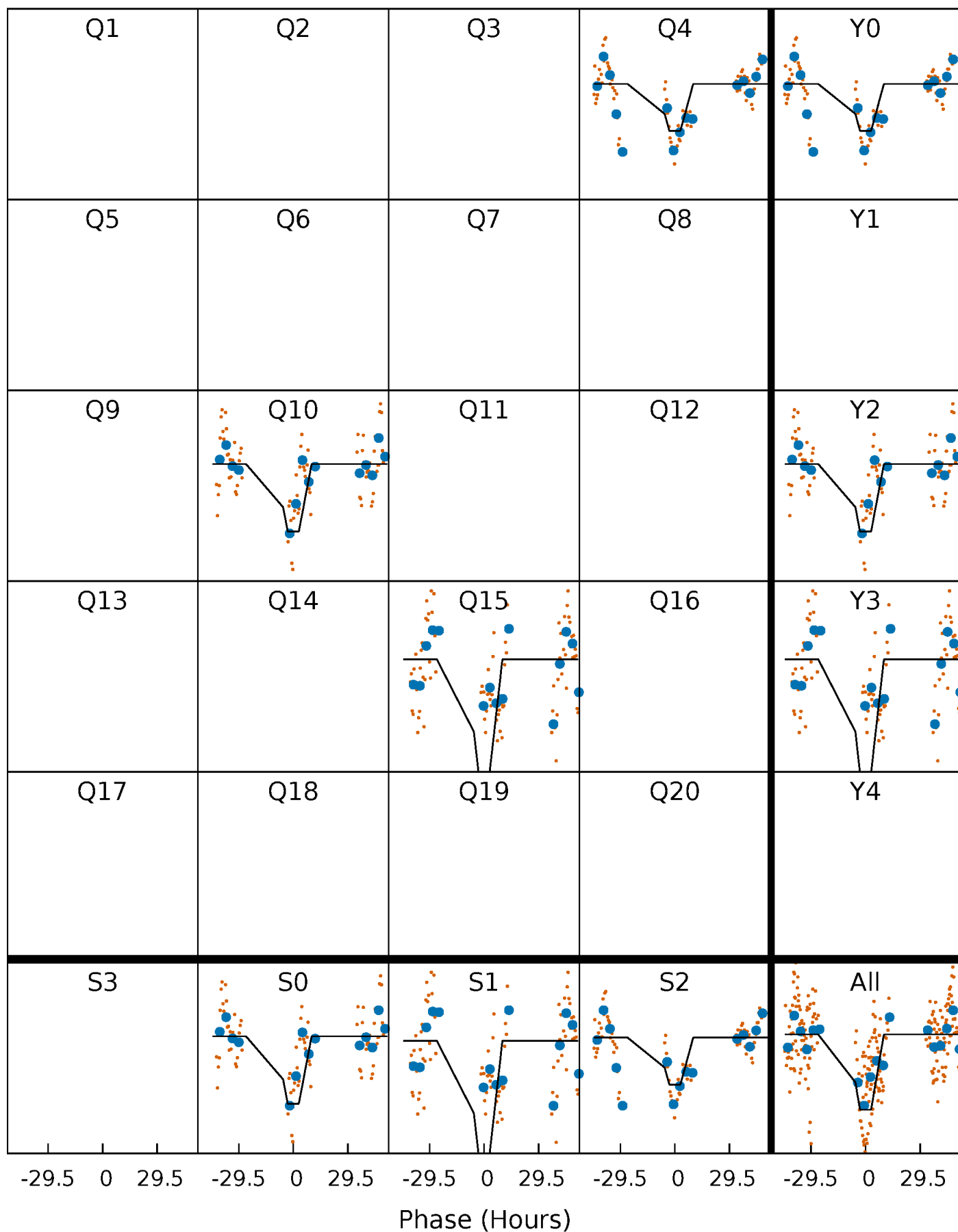
DV Quarter-Phased Transit Curves

TCE 005476835-02 P=475.853598 Days $T_0=434.262047$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

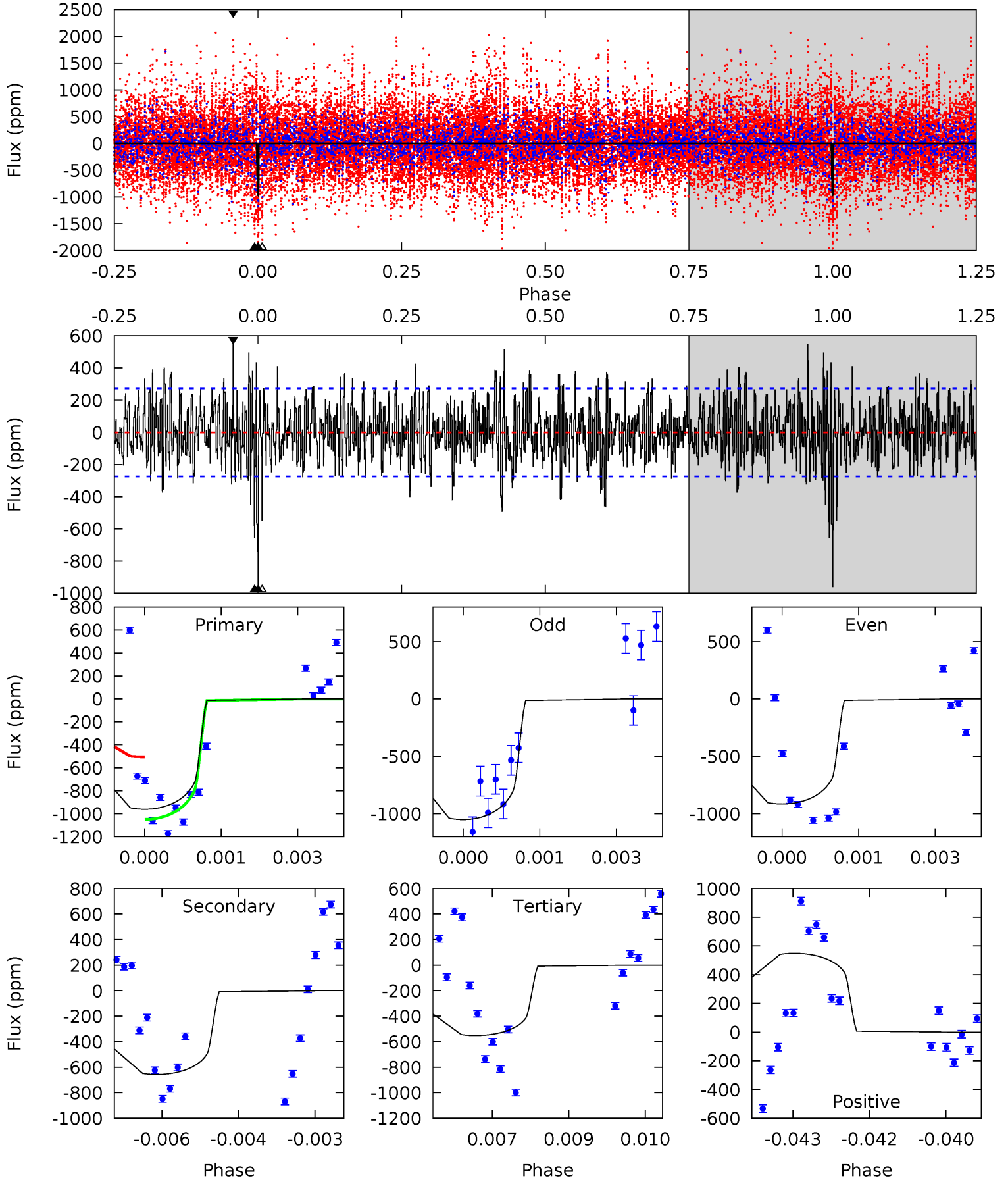
TCE 005476835-02 P=475.829500 Days $T_0=434.360341$ (BKJD)



DV Model-Shift Uniqueness Test

005476835-02, P = 475.853598 Days, E = 434.262047 Days

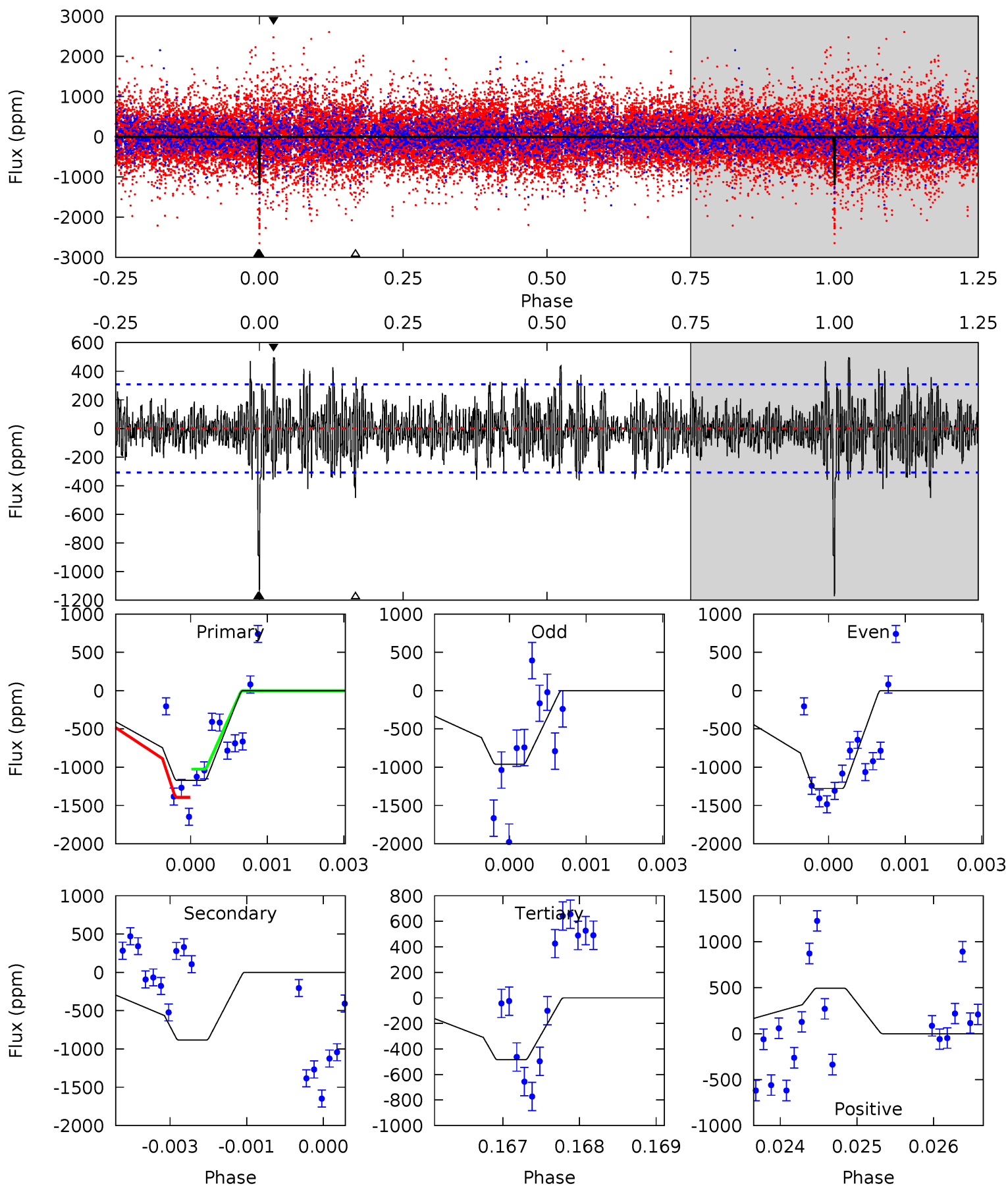
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.9	12.9	10.8	10.8	5.38	3.18	2.95	8.04	8.07	2.07	2.11	1.31	1.04	0.36	3.65



Alt Model-Shift Uniqueness Test

005476835-02, P = 475.829500 Days, E = 434.360341 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.5	15.5	8.50	8.65	5.40	3.21	2.18	12.0	11.9	7.00	6.85	2.59	1.15	0.30	2.94



Stellar Parameters For KIC 005476835

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6102^{+184}_{-220}	$4.449^{+0.056}_{-0.224}$	$-0.060^{+0.250}_{-0.300}$	$1.018^{+0.341}_{-0.114}$	$1.058^{+0.151}_{-0.135}$	$1.413^{+0.408}_{-0.746}$
	+3%/-4%	+1%/-5%	+417%/-500%	+33%/-11%	+14%/-13%	+29%/-53%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 005476835-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-657 ± 51	$3.82^{+0.86}_{-0.62}$	352^{+26}_{-19}	5398^{+407}_{-368}	35369^{+14976}_{-10982}
Alt.	-885 ± 57	$4.62^{+0.84}_{-0.68}$	352^{+26}_{-17}	5313^{+356}_{-277}	33570^{+9917}_{-9666}

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 $A_{obs} \gg 1.0$

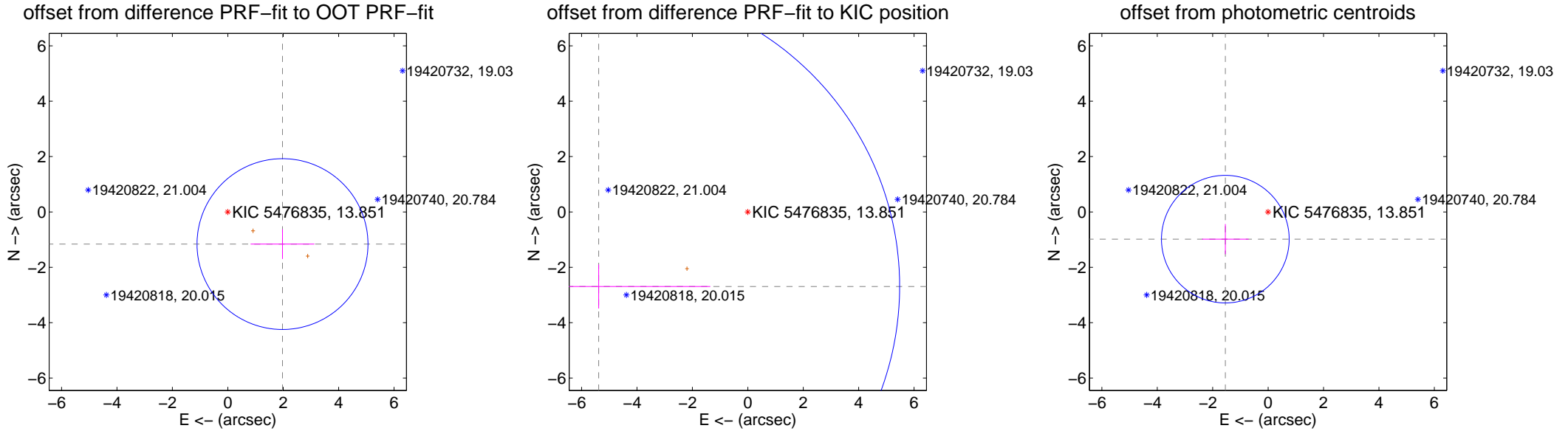
DV Centroid Data

Supplemental centroid analysis for 005476835-02. Kepler magnitude: 13.85. Transit SNR 7.64

There are 0 quarters with good PRF difference image offsets

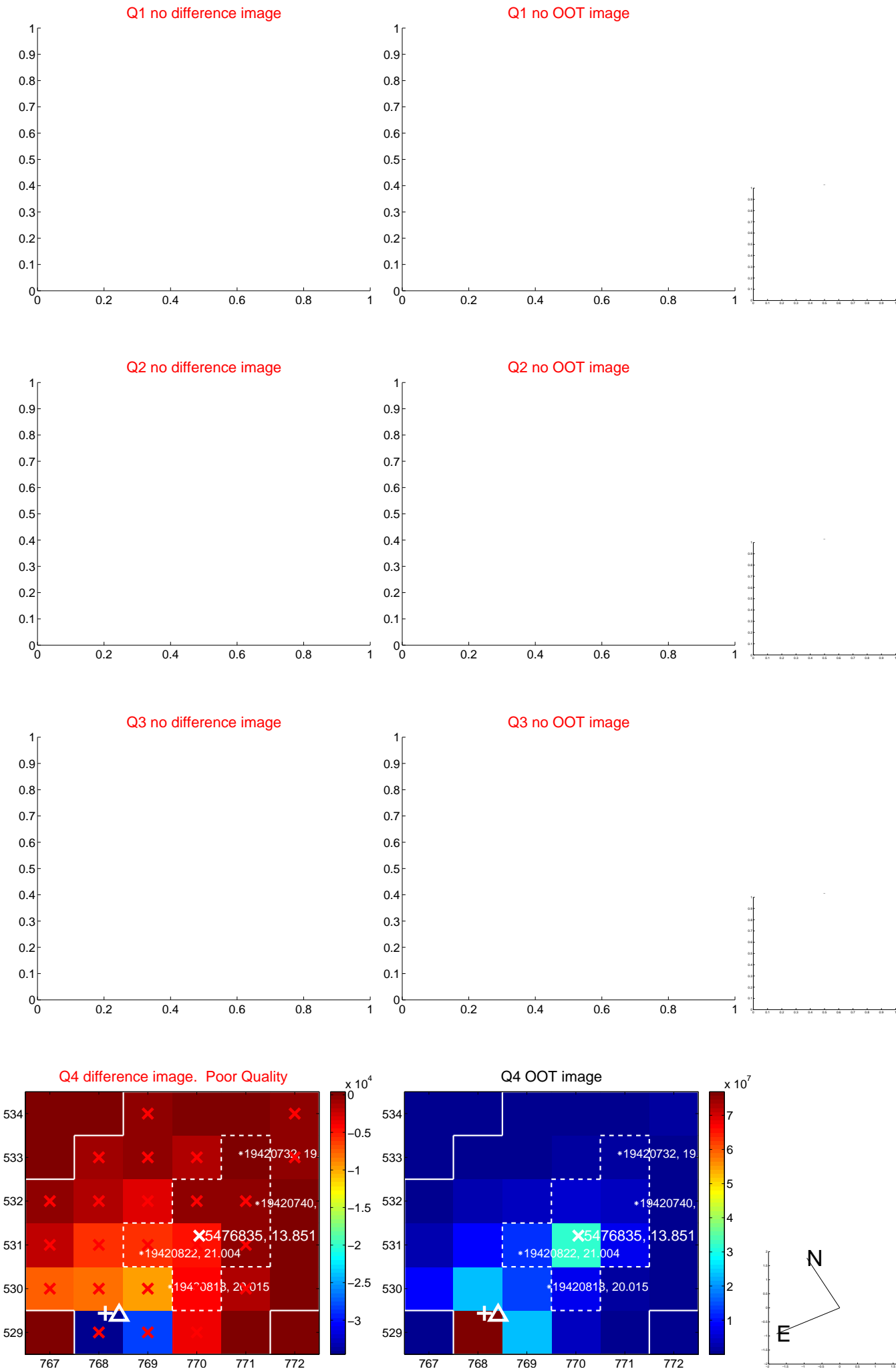
The OOT PRF centroid is offset from the target star catalog position by about 5.10 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.290 ± 1.028	2.23	-1.974 ± 1.151	-1.161 ± 0.537
PRF-fit source offset from KIC position	6.020 ± 3.621	1.66	5.383 ± 4.030	-2.694 ± 0.792
photometric centroid source offset	1.83 ± 0.77	2.38	1.54 ± 0.84	-0.98 ± 0.55



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.

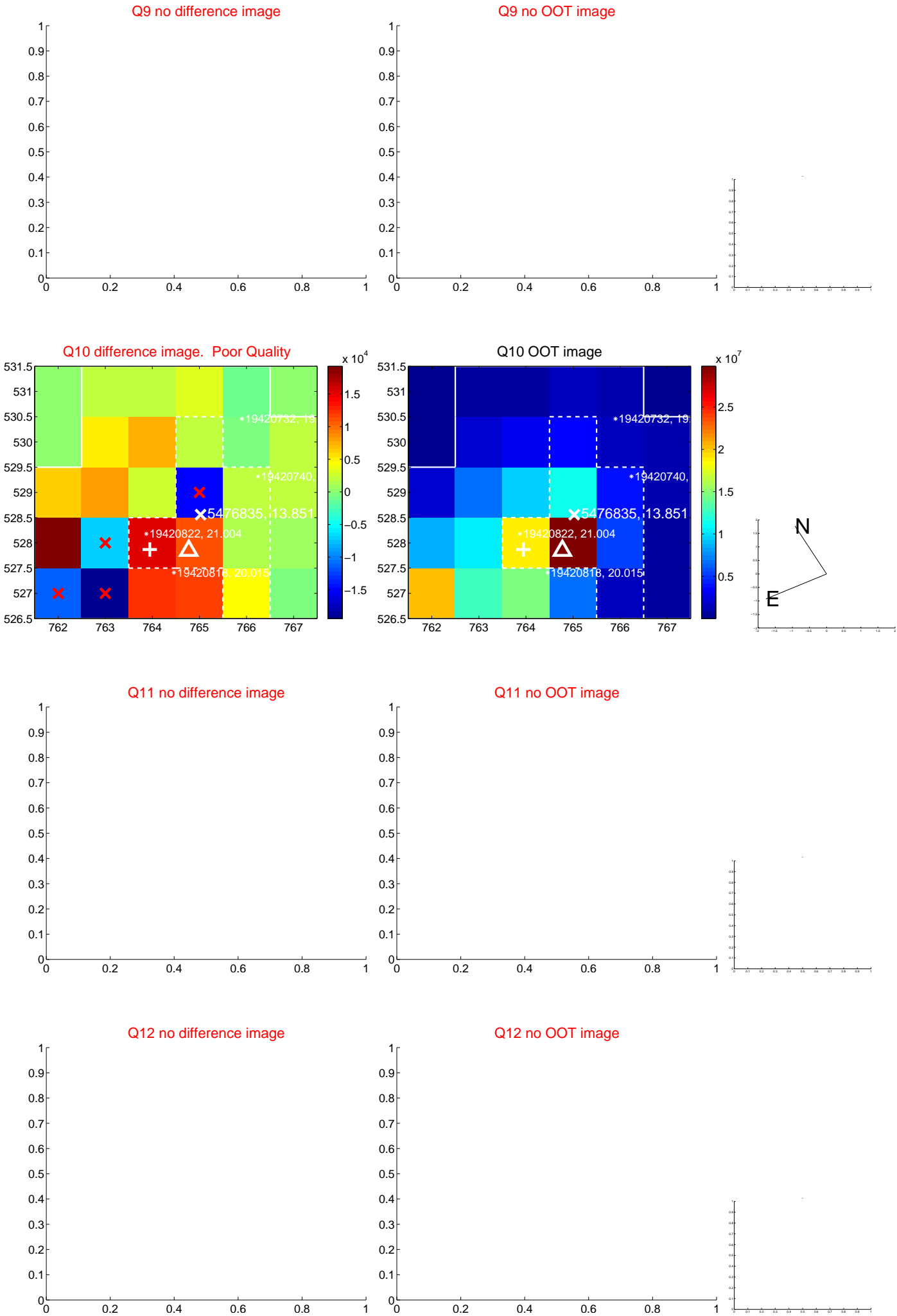
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



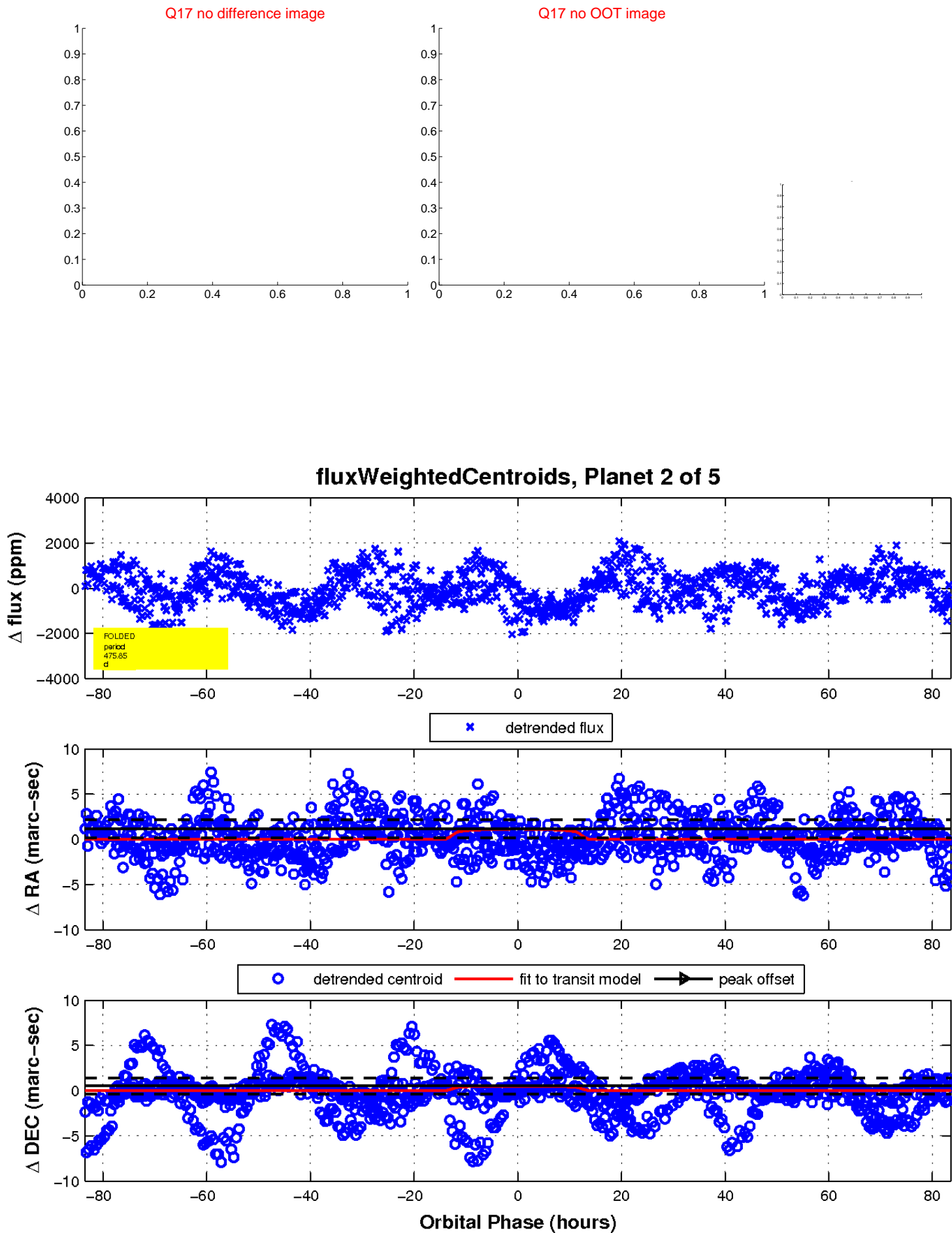
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

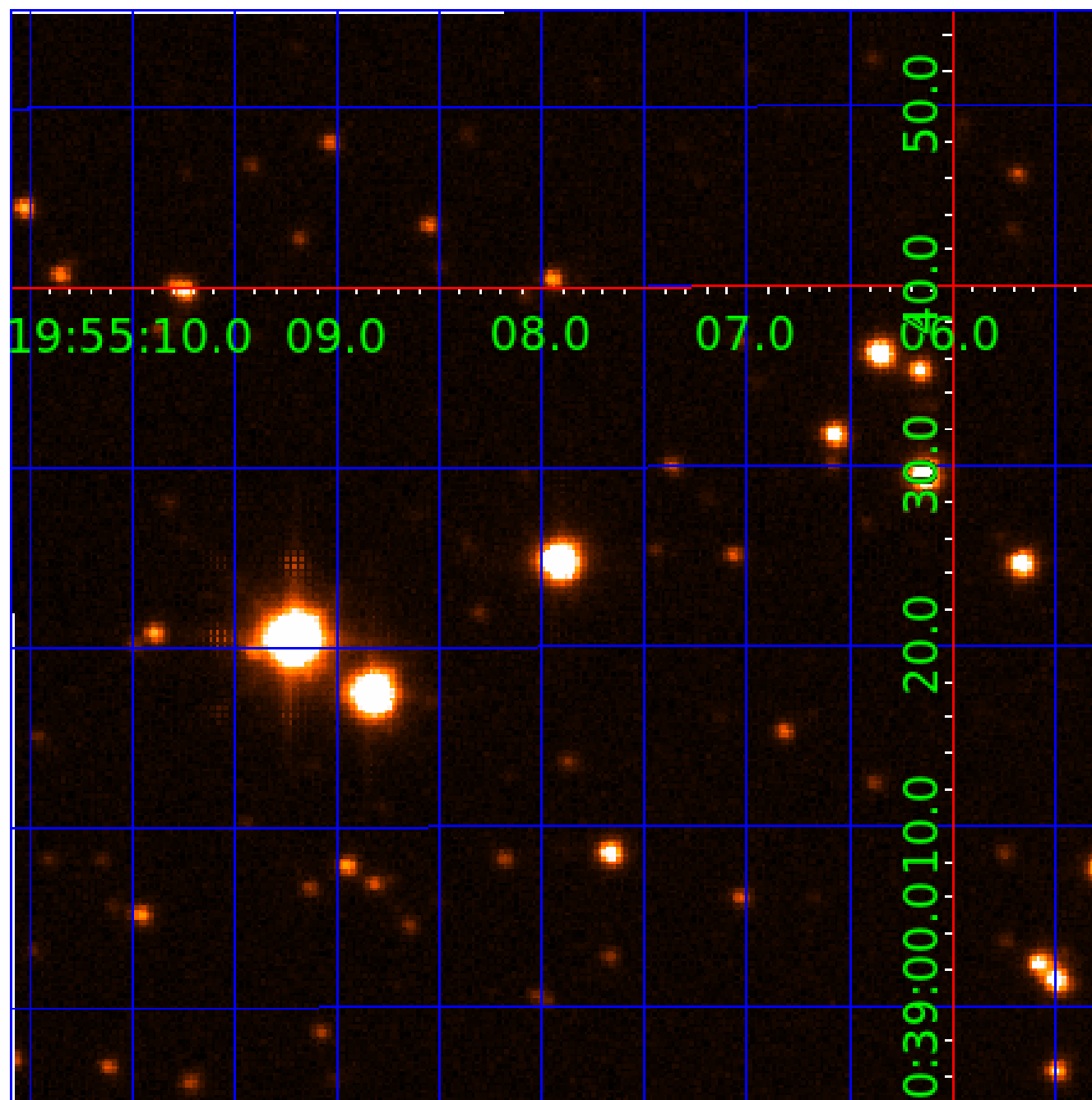


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005476835

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})
005476835-01	OBS	No	1.591673	132.806415	52.6	7.713	8.8	7.7	1.02	6102	0.74	1735.71
005476835-02	OBS	No	475.853598	434.262047	1038.1	27.870	8.1	7.6	1.02	6102	3.67	0.87
005476835-03	OBS	No	180.519543	209.698529	466.4	20.413	8.5	5.5	1.02	6102	2.35	3.16
005476835-04	OBS	No	167.505353	136.633548	823.1	3.119	7.4	7.2	1.02	6102	3.39	3.49
005476835-05	OBS	No	204.606824	145.098458	860.2	9.892	7.2	8.6	1.02	6102	3.36	2.67

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005476835-01	OBS	FP	0.00	1	0	1	1	LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET—EPHEM_MATCH
005476835-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
005476835-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
005476835-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_RESOLVED_OFFSET
005476835-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_RESOLVED_OFFSET—HALO_GHOST

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

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

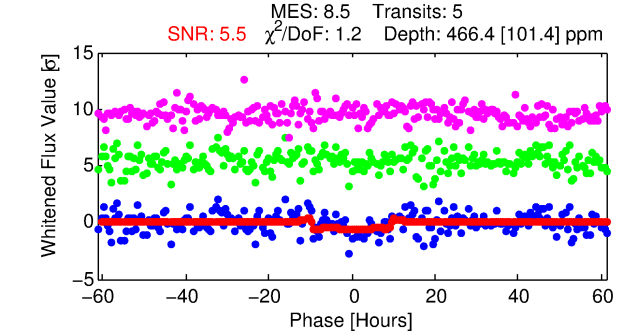
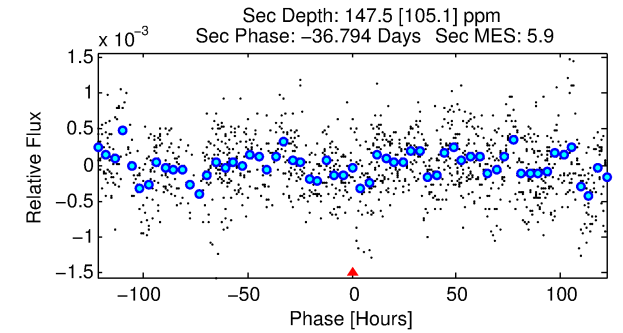
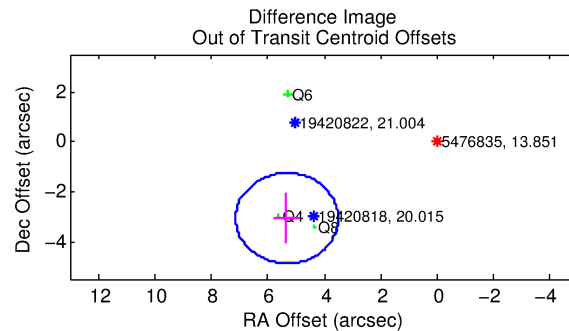
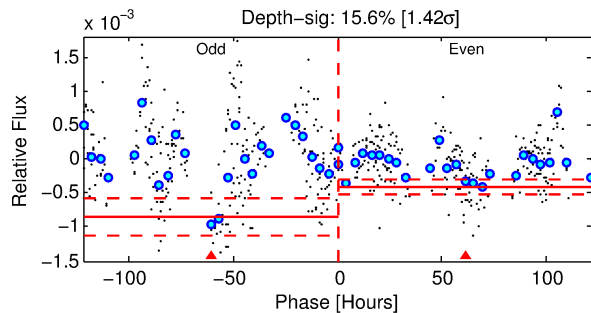
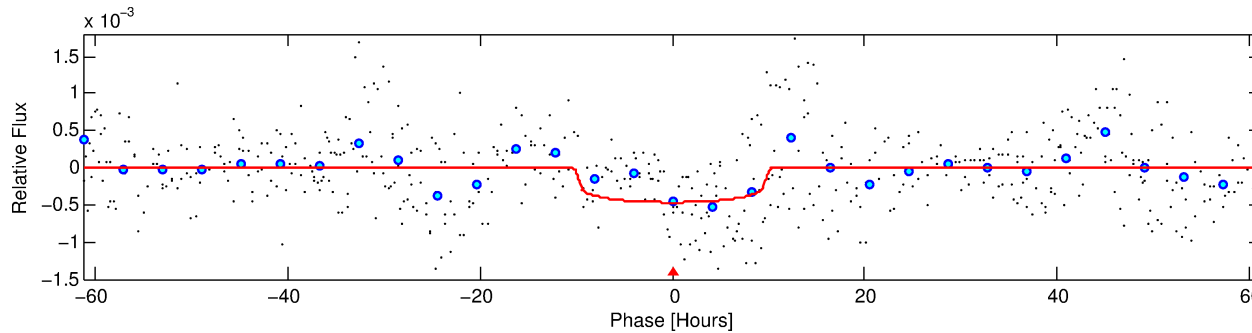
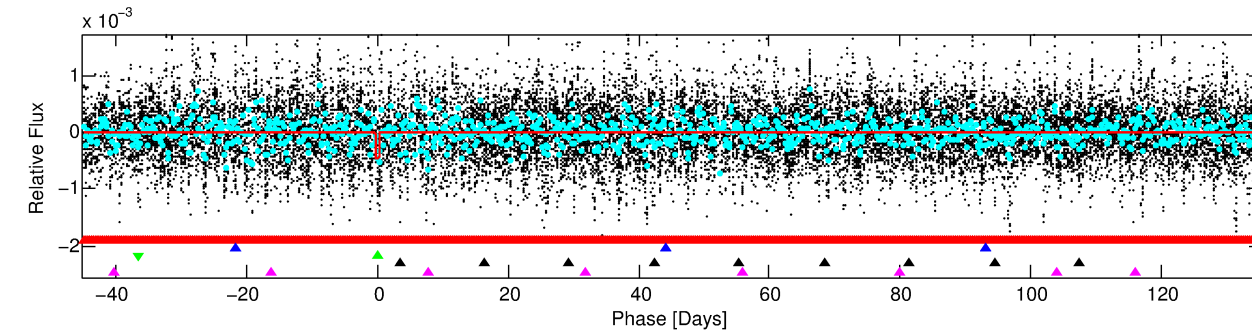
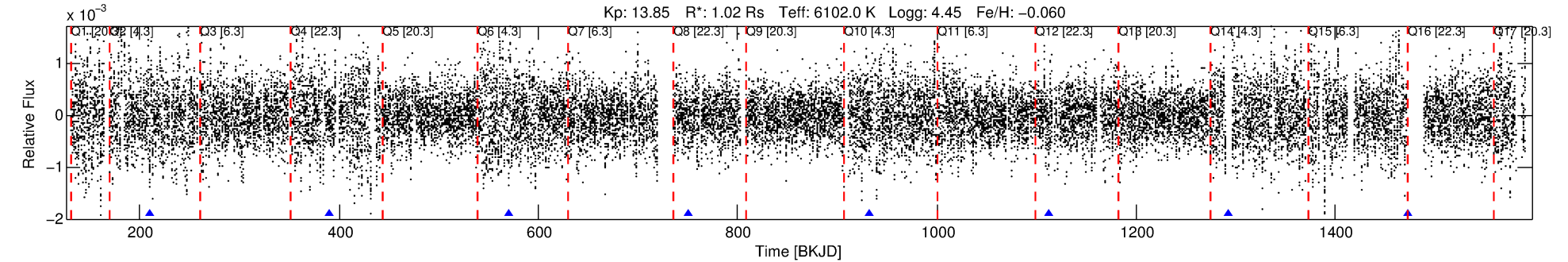
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005476835-03

No Significant Match Found

DV One-Page Summary

KIC: 5476835 Candidate: 3 of 5 Period: 180.520 d



DV Fit Results:

Period = 180.51954 [0.01019] d
Epoch = 209.6985 [0.0273] BKJD
Rp/R* = 0.0211 [0.0063]
a/R* = 50.27 [66.18]
b = 0.70 [0.96]
Seff = 3.16 [1.37]
Teq = 340 [37] K
Rp = 2.35 [1.05] Re
a = 0.6381 [0.1798] AU
Ag = 5988.17 [6083.66] [0.98 σ]
Teffp = 4625 [1088] K [3.94 σ]

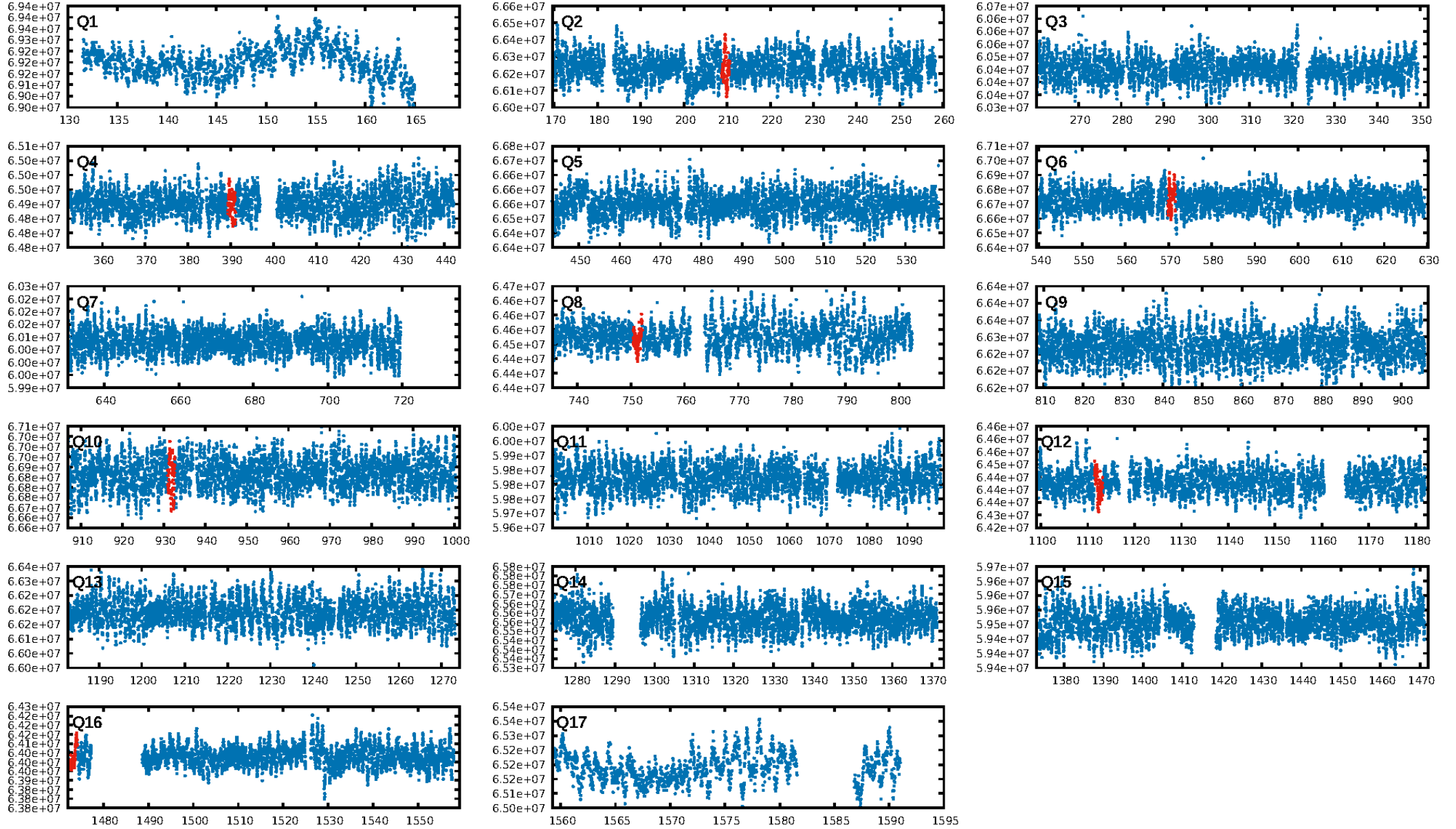
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [15.13 σ]
LongPeriod-sig: 100.0% [25.49 σ]
ModelChiSquare2-sig: 9.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.94e-10
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 2.253
Centroid-sig: 6.4%
Centroid-so: 3.694 arcsec [2.85 σ]
OotOffset-rm: 6.145 arcsec [10.17 σ]
KicOffset-rm: 10.795 arcsec [5.12 σ]
OotOffset-st: 1/0/2/0 [3]
KicOffset-st: 1/0/2/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 0.00 [0/5]

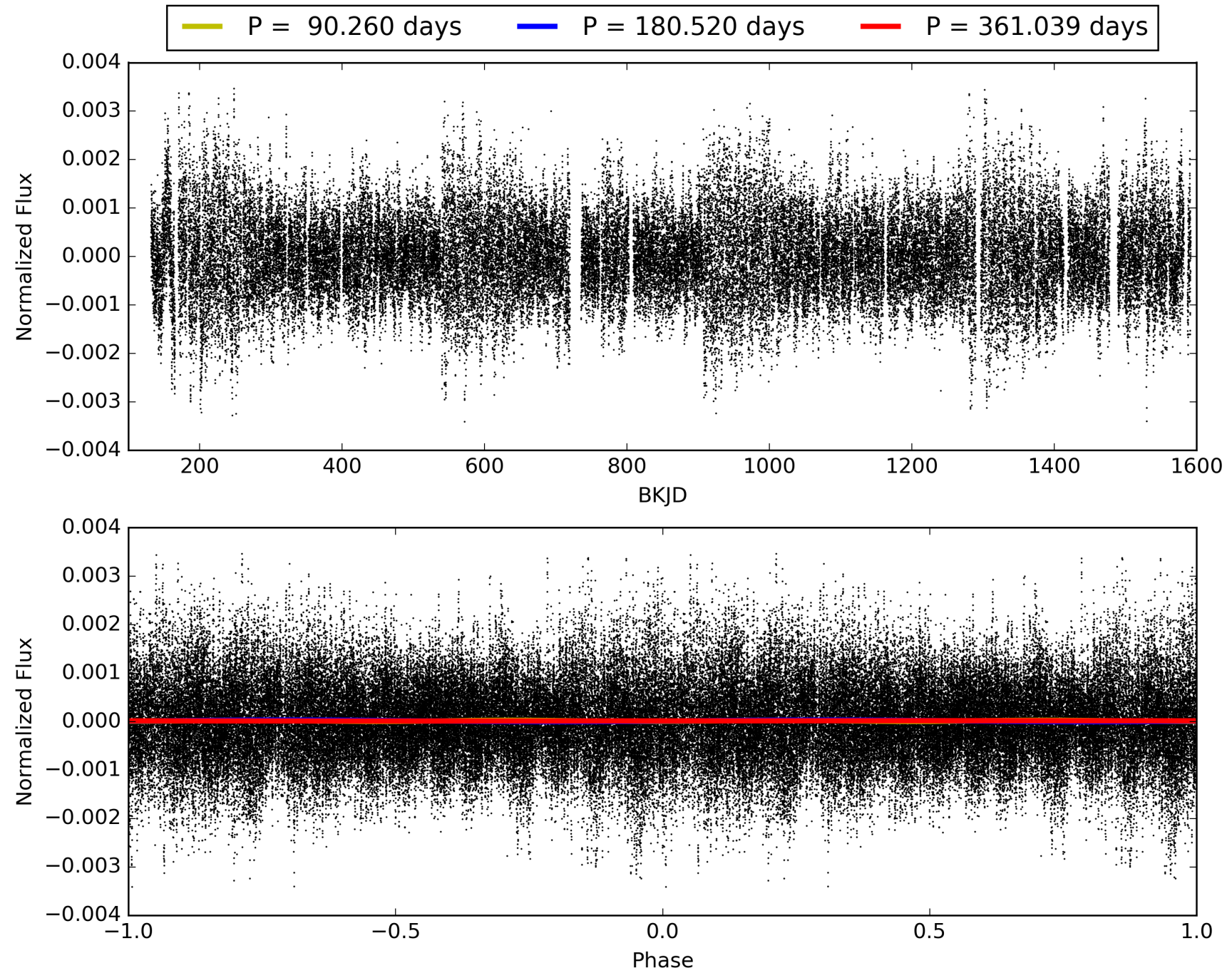
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 01:12:06 Z

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

TCE 005476835-03, PDC Light Curves

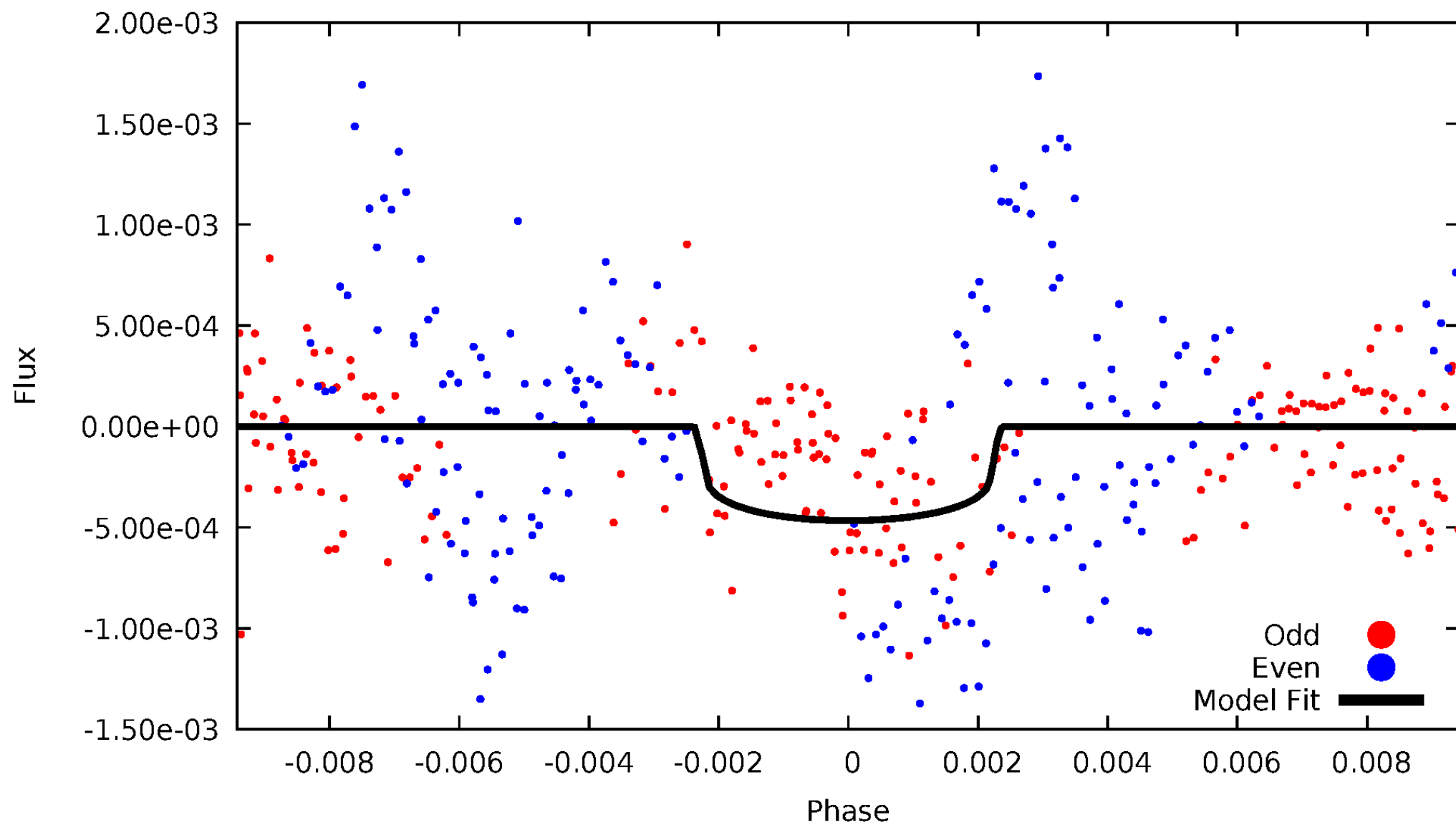


TCE 005476835-03



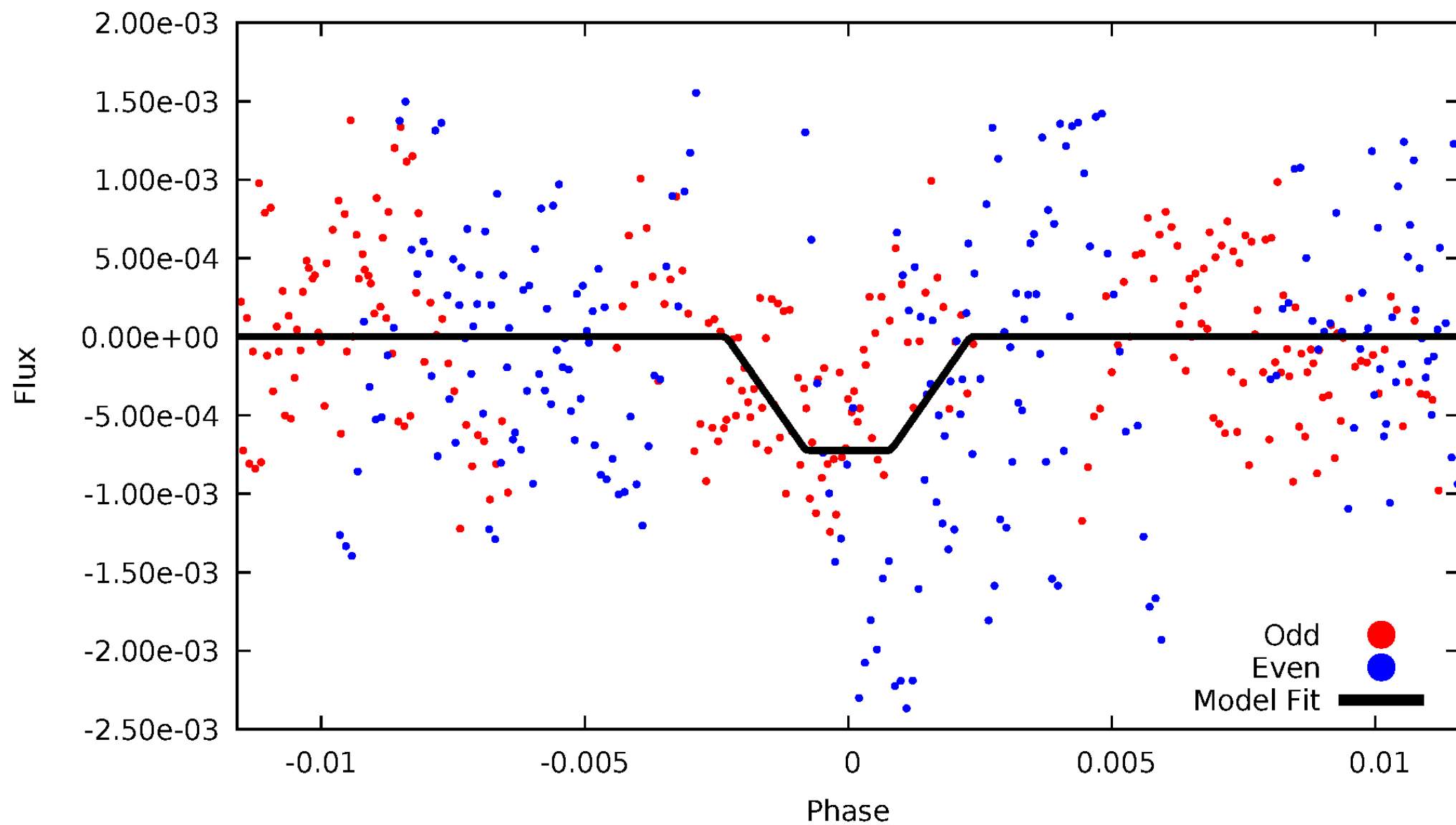
DV Odd/Even

TCE 005476835-03

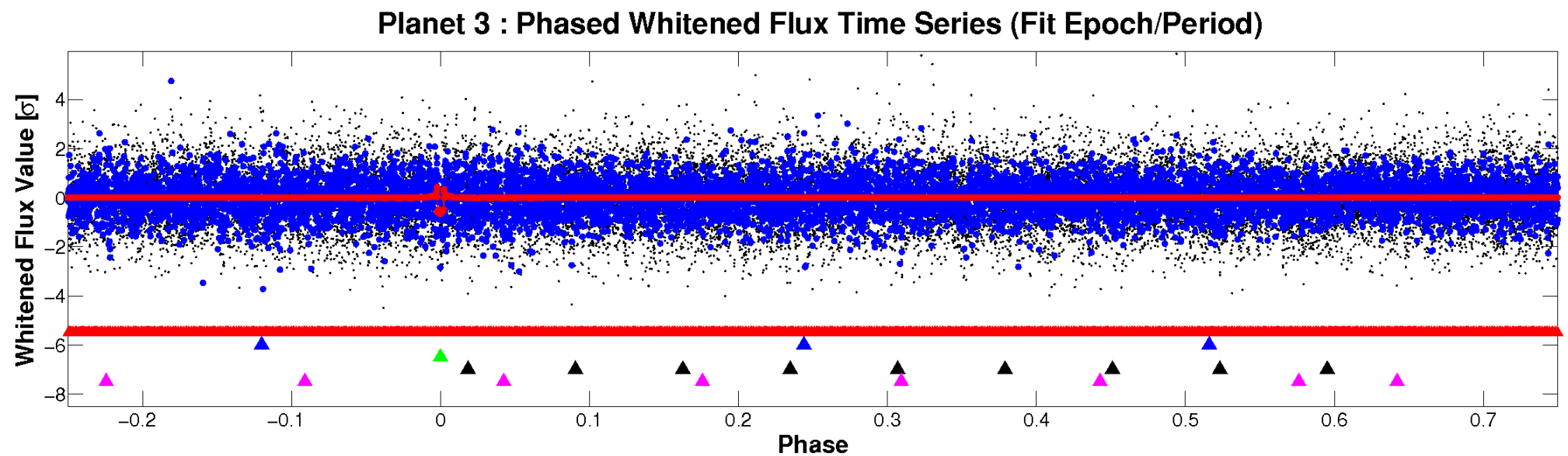
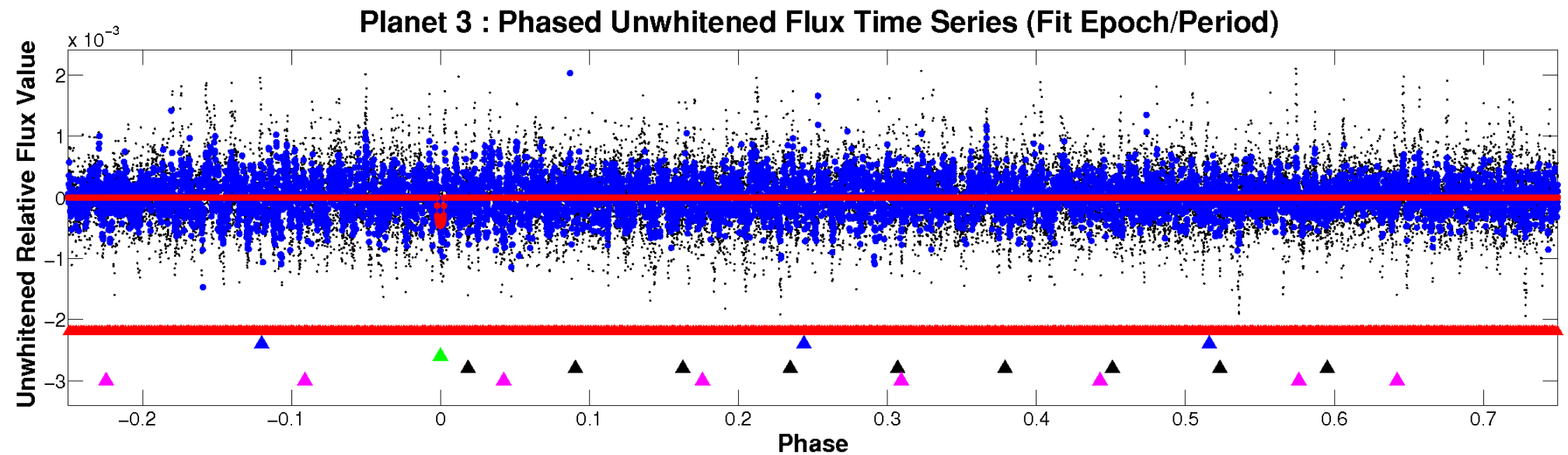


ALT Odd/Even

TCE 005476835-03

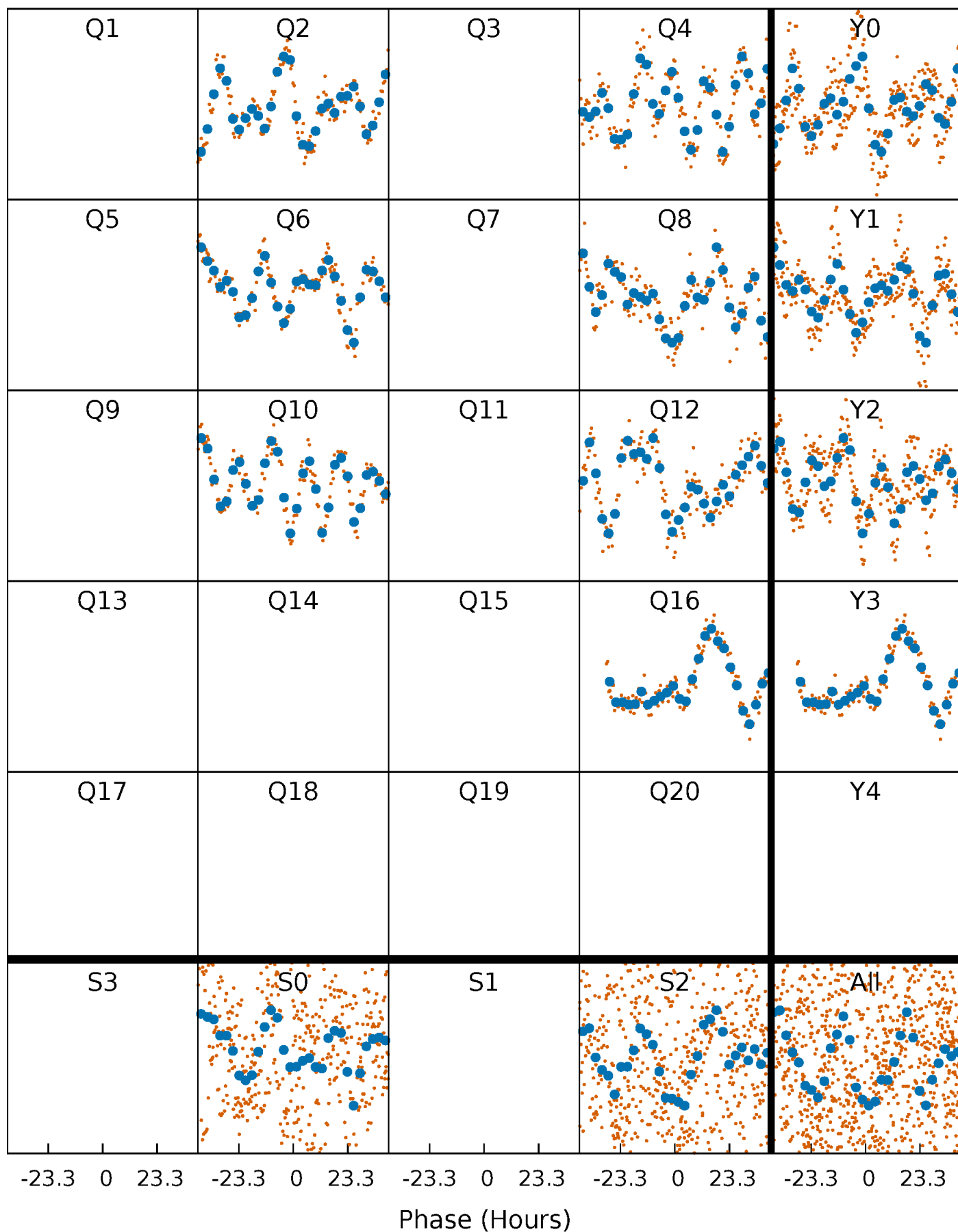


Non-Whitened Vs. Whitened Light Curve



PDC Quarter-Phased Transit Curves

TCE 005476835-03 $P=180.519543$ Days $T_0=209.698529$ (BKJD)



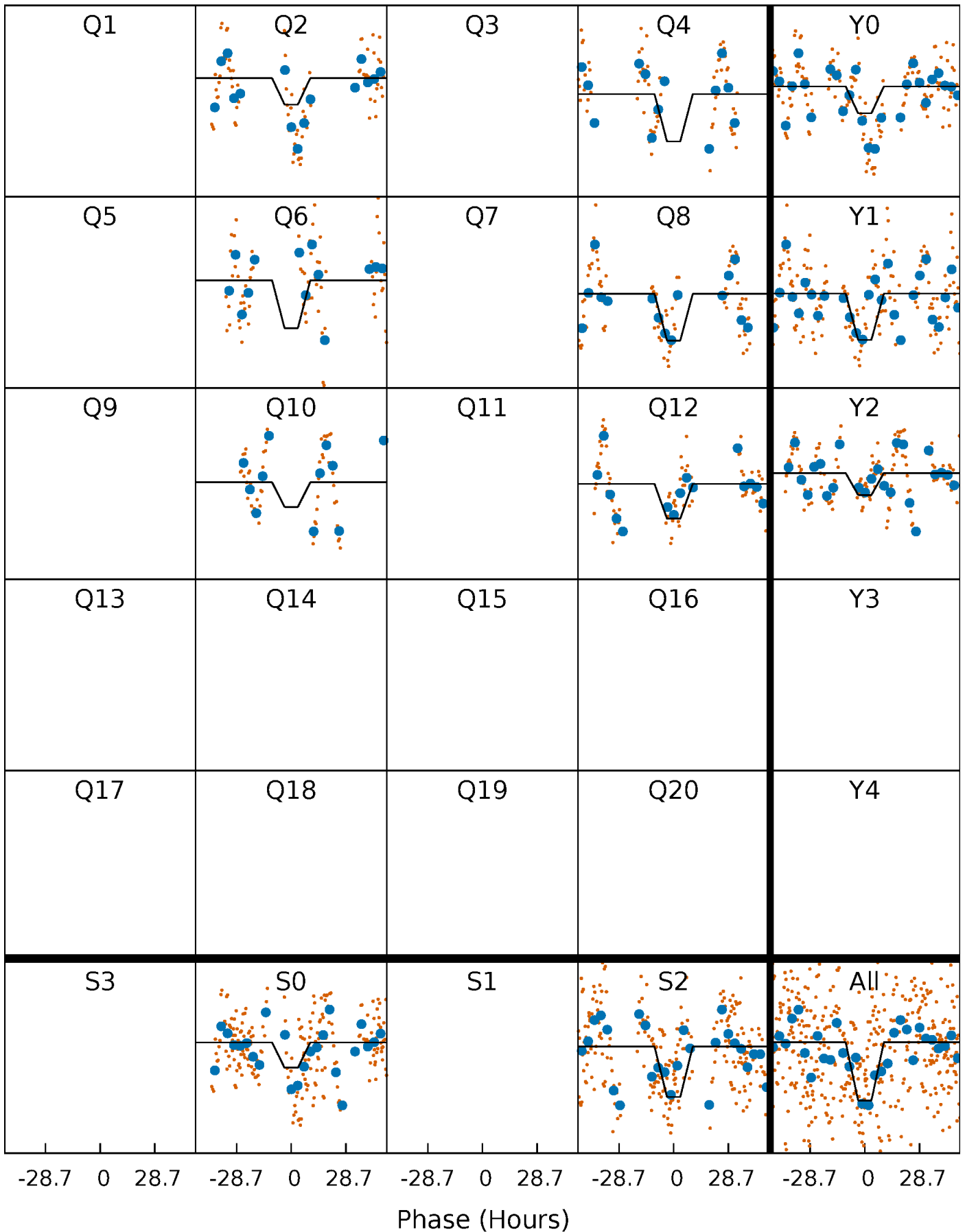
DV Quarter-Phased Transit Curves

TCE 005476835-03 P=180.519543 Days $T_0=209.698529$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

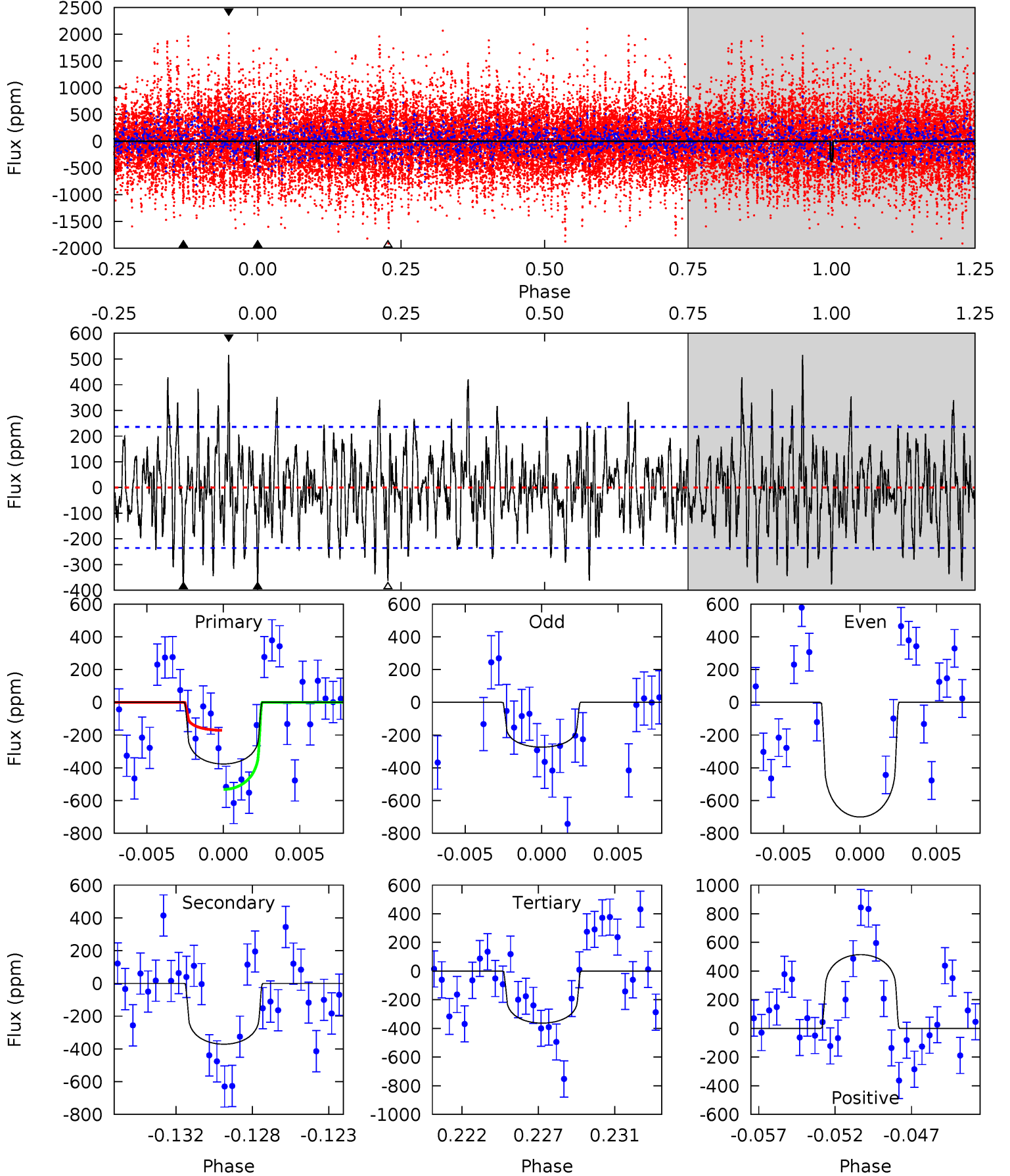
TCE 005476835-03 P=180.496447 Days $T_0=209.861555$ (BKJD)



DV Model-Shift Uniqueness Test

005476835-03, P = 180.519543 Days, E = 29.178986 Days

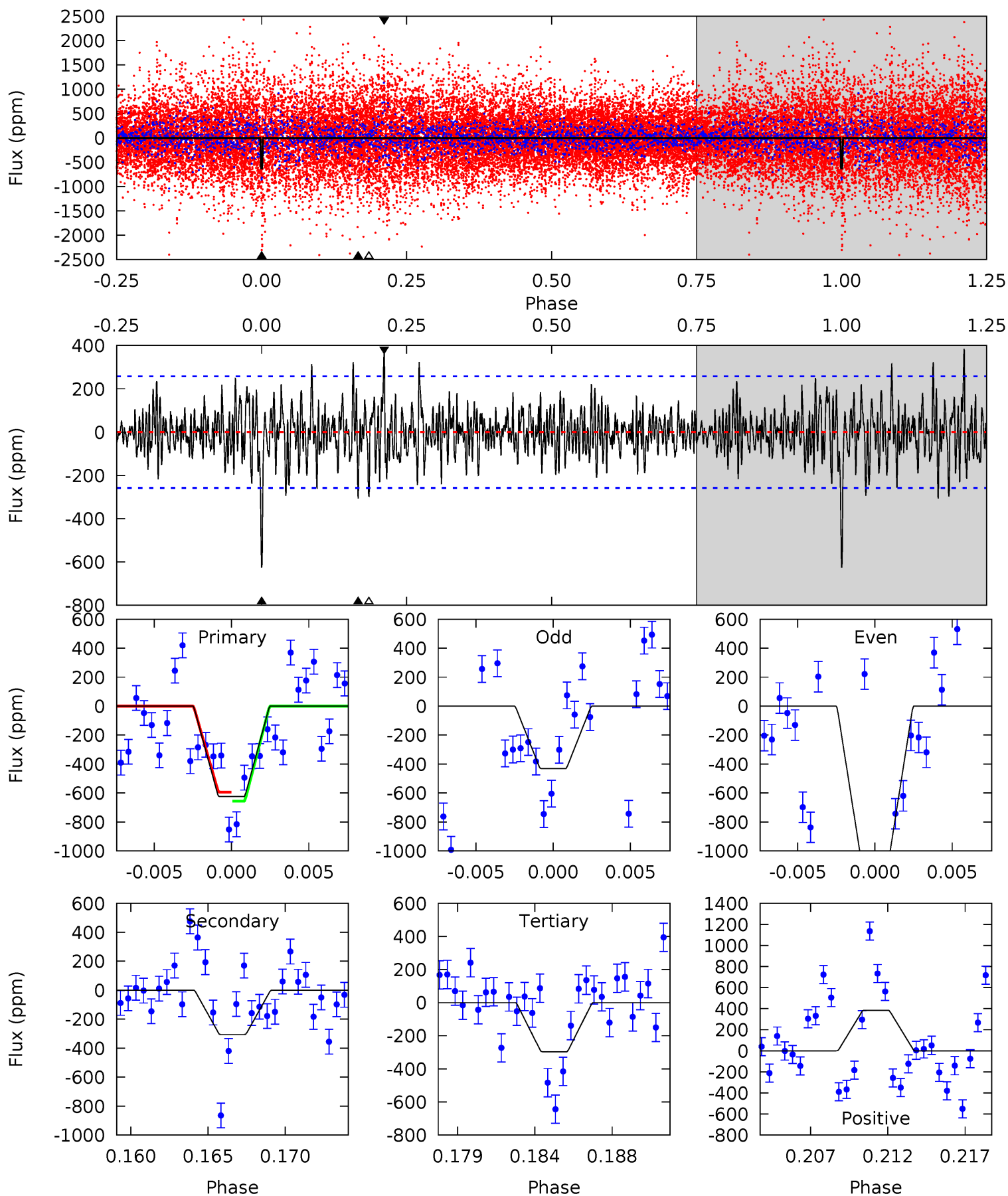
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.27	8.15	7.97	11.3	5.17	2.83	2.80	0.30	-3.03	0.18	-3.15	4.16	0.69	0.58	3.91



Alt Model-Shift Uniqueness Test

005476835-03, P = 180.496447 Days, E = 29.365108 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.5	6.13	5.94	7.70	5.17	2.83	1.79	6.58	4.83	0.18	-1.57	6.31	1.01	0.38	0.63



Stellar Parameters For KIC 005476835

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6102^{+184}_{-220}	$4.449^{+0.056}_{-0.224}$	$-0.060^{+0.250}_{-0.300}$	$1.018^{+0.341}_{-0.114}$	$1.058^{+0.151}_{-0.135}$	$1.413^{+0.408}_{-0.746}$
	+3%/-4%	+1%/-5%	+417%/-500%	+33%/-11%	+14%/-13%	+29%/-53%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 005476835-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-371 ± 46	$2.48^{+0.81}_{-0.79}$	488^{+35}_{-28}	5832^{+1227}_{-726}	12875^{+15214}_{-5290}
Alt.	-306 ± 50	$3.21^{+0.86}_{-0.81}$	488^{+36}_{-27}	4970^{+643}_{-461}	6534^{+4532}_{-2686}

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

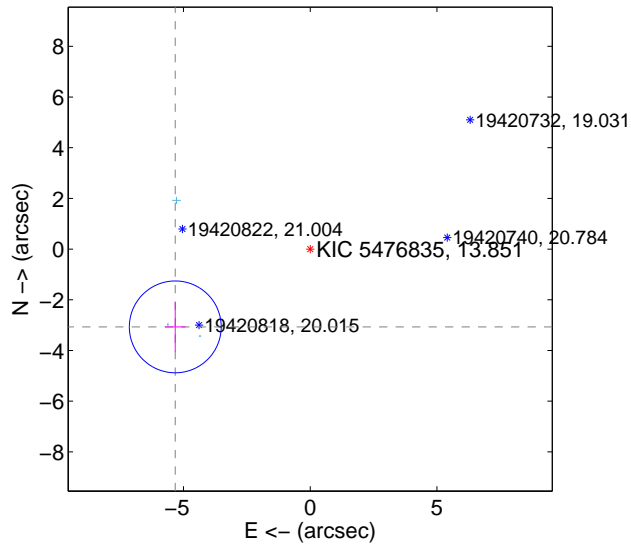
Supplemental centroid analysis for 005476835-03. Kepler magnitude: 13.85. Transit SNR 5.50

There are 3 quarters with good PRF difference image offsets

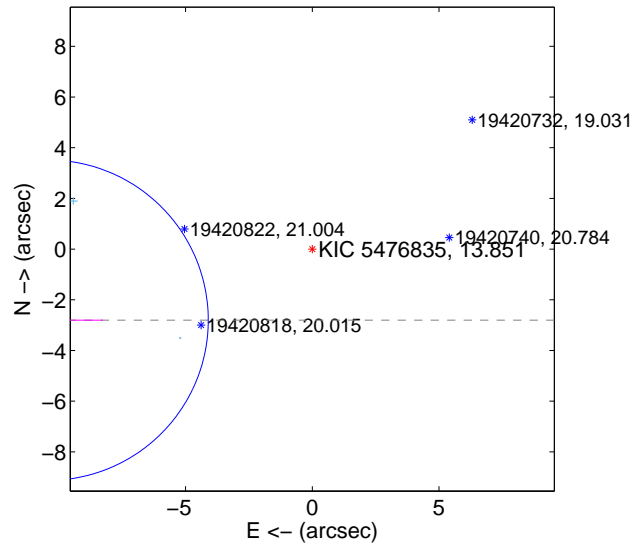
The direct PRF centroid is offset from the target star catalog position by about 0.87 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.145 ± 0.604	10.17	5.324 ± 0.409	-3.069 ± 0.980
PRF-fit source offset from KIC position	10.795 ± 2.107	5.12	10.424 ± 2.165	-2.804 ± 1.020
photometric centroid source offset	3.69 ± 1.30	2.85	3.67 ± 1.30	0.43 ± 0.89

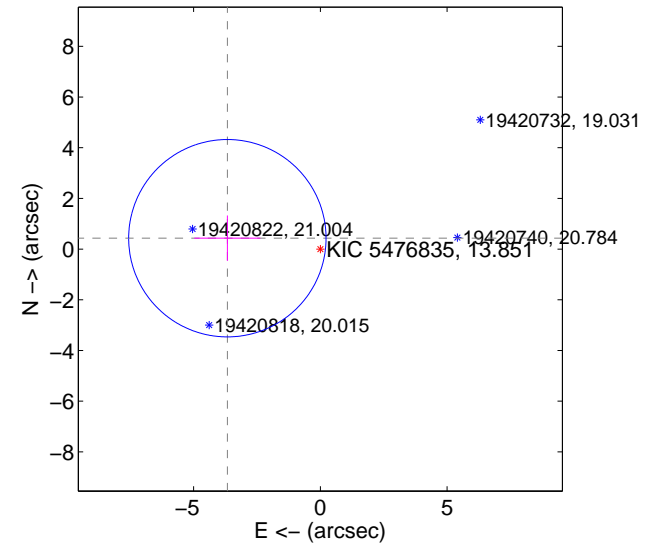
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

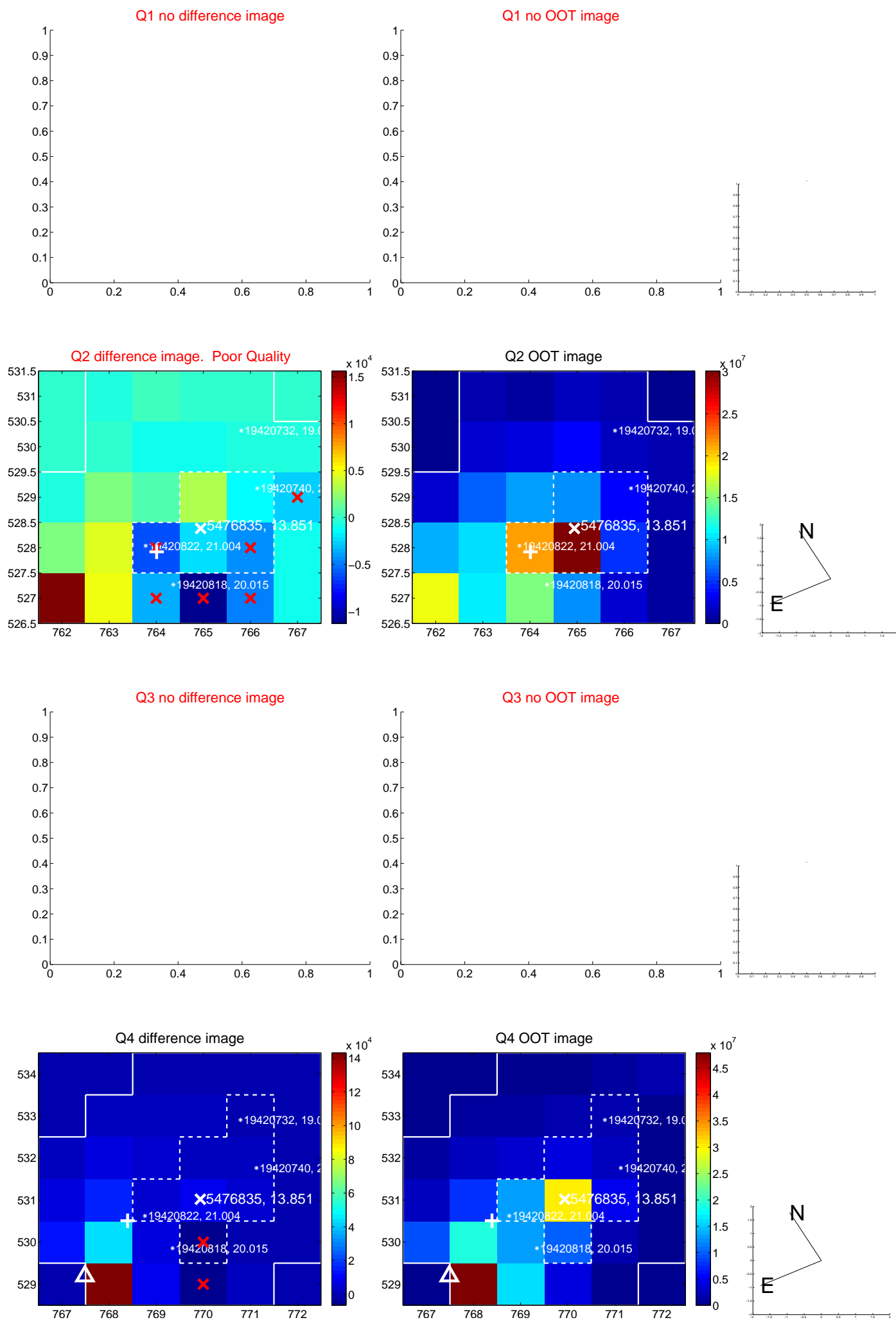


offset from photometric centroids

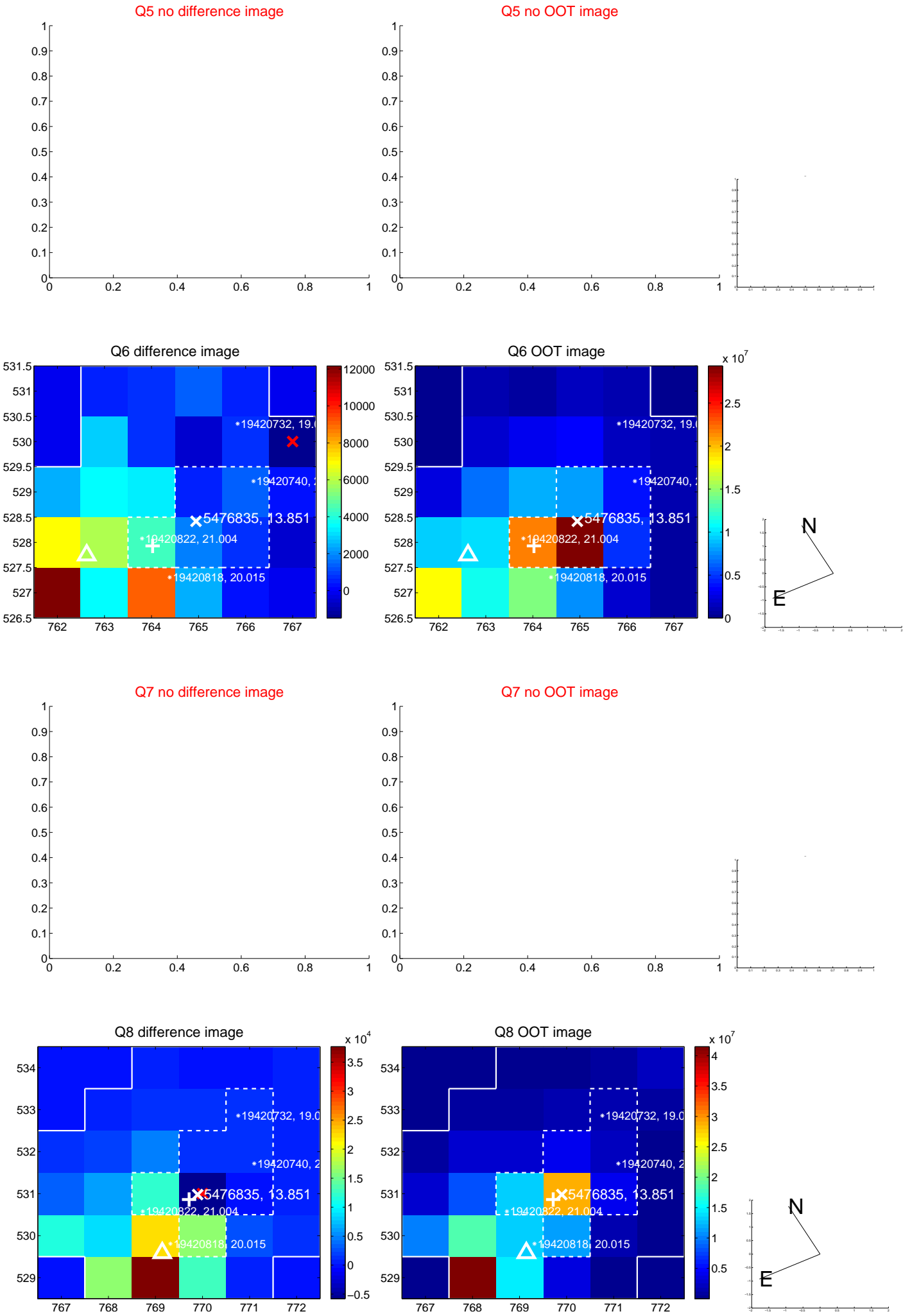


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

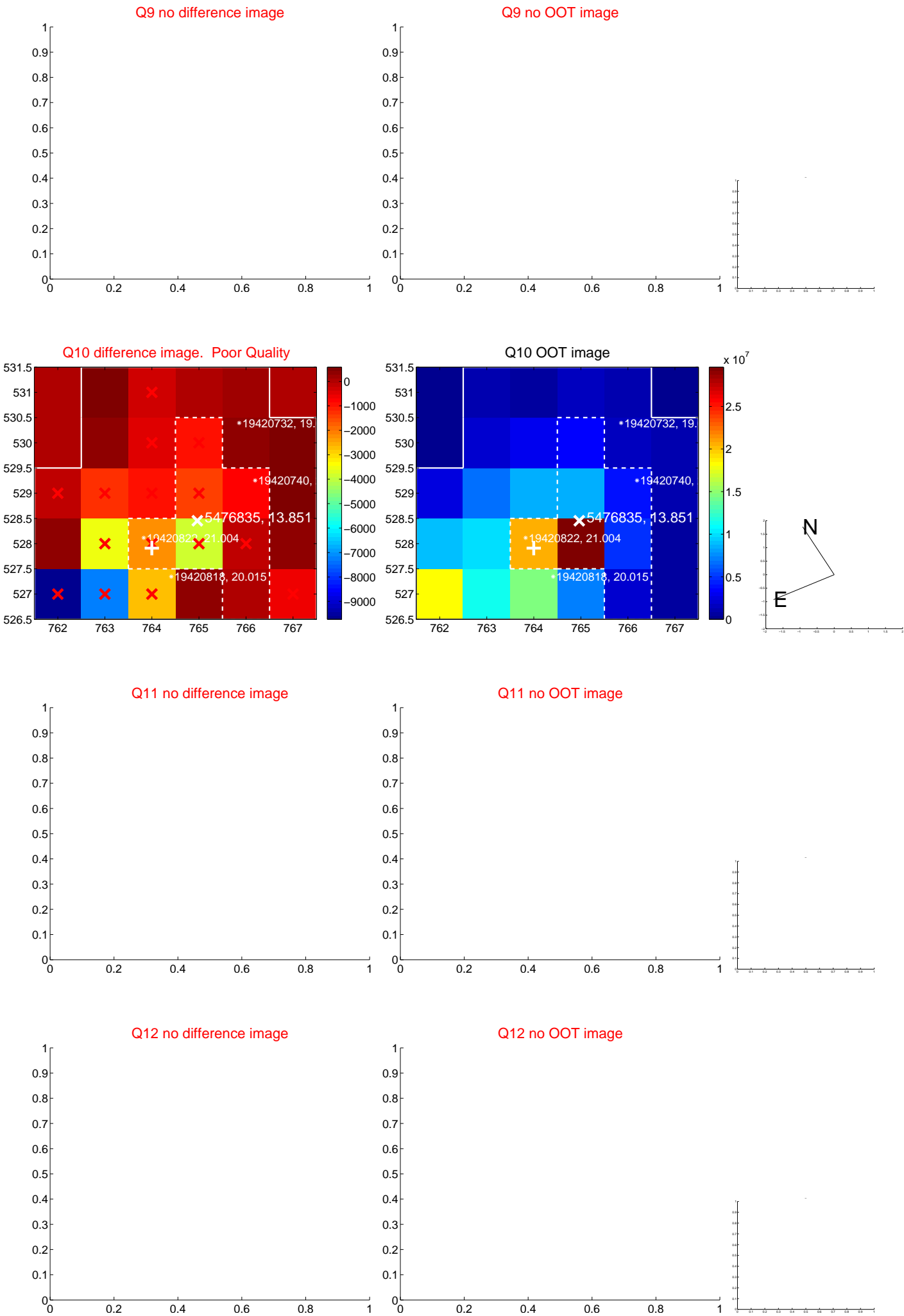
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



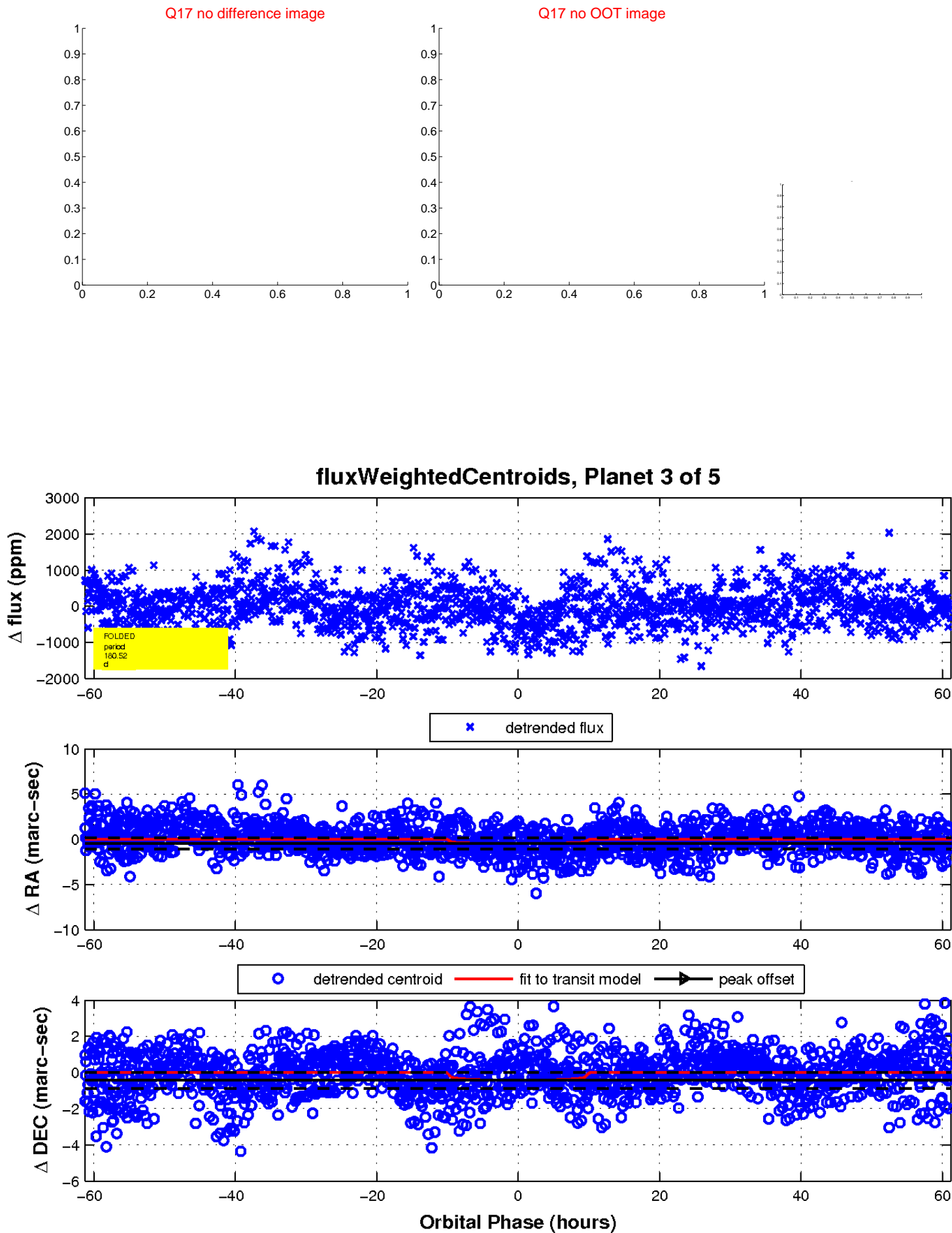
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

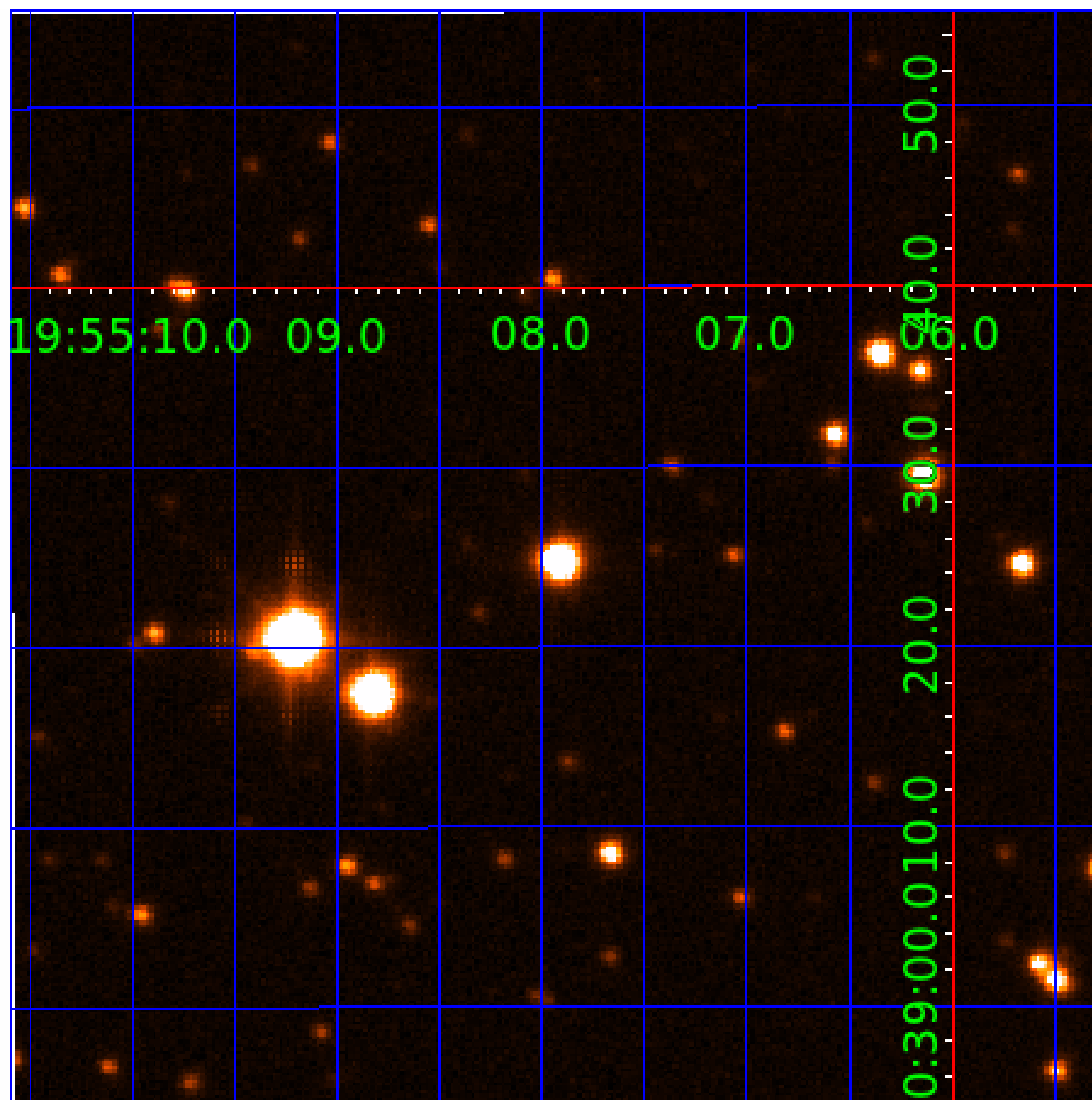


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005476835

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})
005476835-01	OBS	No	1.591673	132.806415	52.6	7.713	8.8	7.7	1.02	6102	0.74	1735.71
005476835-02	OBS	No	475.853598	434.262047	1038.1	27.870	8.1	7.6	1.02	6102	3.67	0.87
005476835-03	OBS	No	180.519543	209.698529	466.4	20.413	8.5	5.5	1.02	6102	2.35	3.16
005476835-04	OBS	No	167.505353	136.633548	823.1	3.119	7.4	7.2	1.02	6102	3.39	3.49
005476835-05	OBS	No	204.606824	145.098458	860.2	9.892	7.2	8.6	1.02	6102	3.36	2.67

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005476835-01	OBS	FP	0.00	1	0	1	1	LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET—EPHEM_MATCH
005476835-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
005476835-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
005476835-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_RESOLVED_OFFSET
005476835-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_RESOLVED_OFFSET—HALO_GHOST

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

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

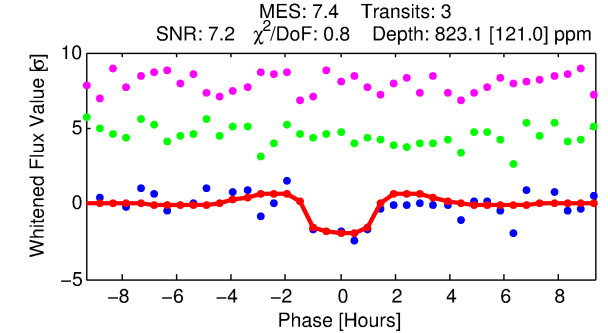
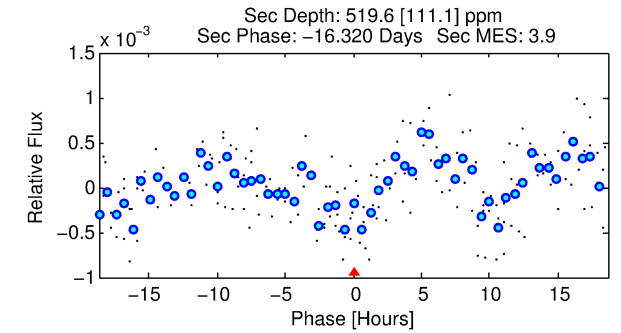
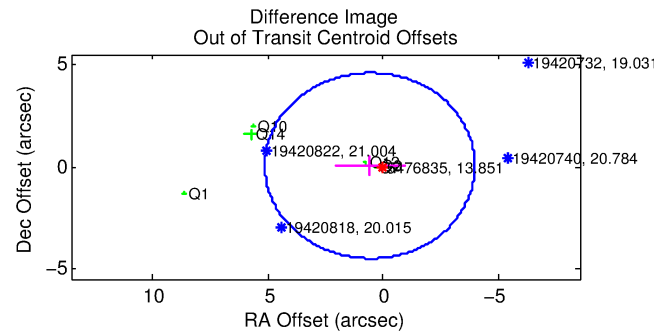
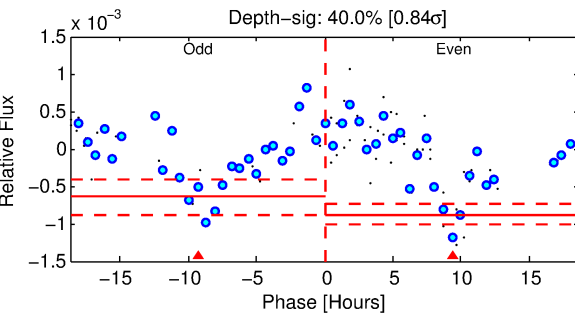
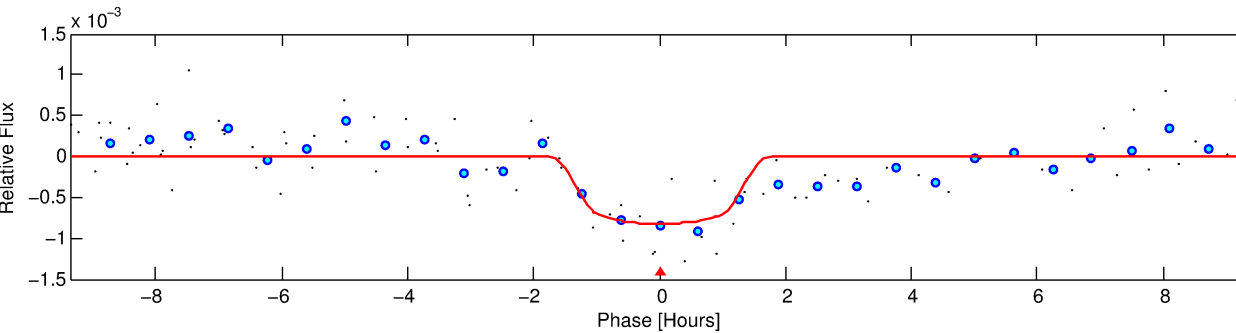
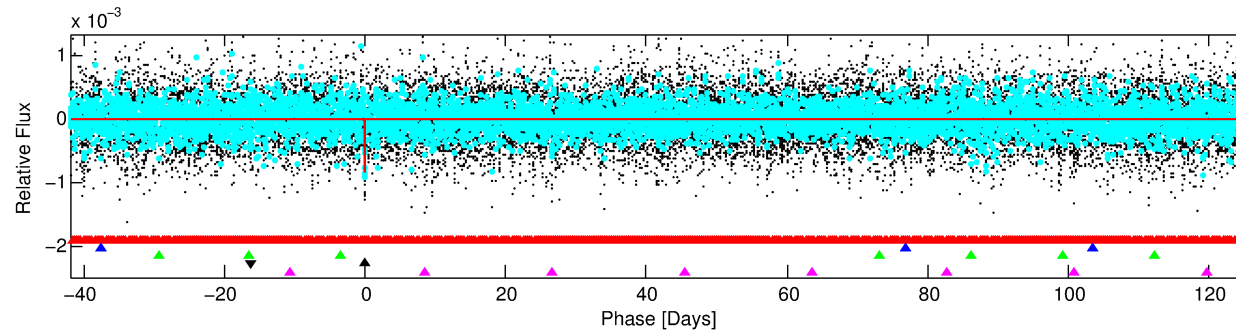
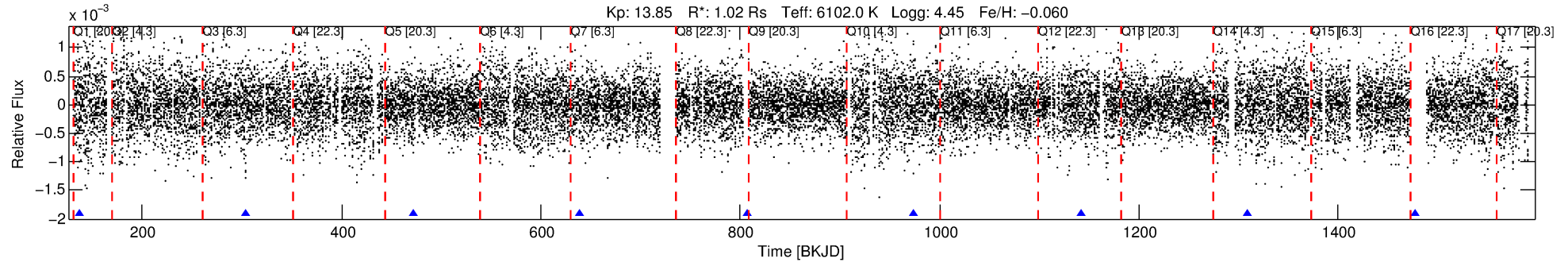
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005476835-04

No Significant Match Found

DV One-Page Summary

KIC: 5476835 Candidate: 4 of 5 Period: 167.505 d



DV Fit Results:

Period = 167.50535 [0.00229] d
Epoch = 136.6335 [0.0058] BKJD
Rp/R* = 0.0305 [0.0098]
a/R* = 218.78 [326.68]
b = 0.88 [0.39]
Seff = 3.49 [1.52]
Teq = 349 [38] K
Rp = 3.39 [1.57] Re
a = 0.6070 [0.1711] AU
Ag = 9146.82 [7214.37] [1.27 σ]
Teffp = 5271 [908] K [5.42 σ]

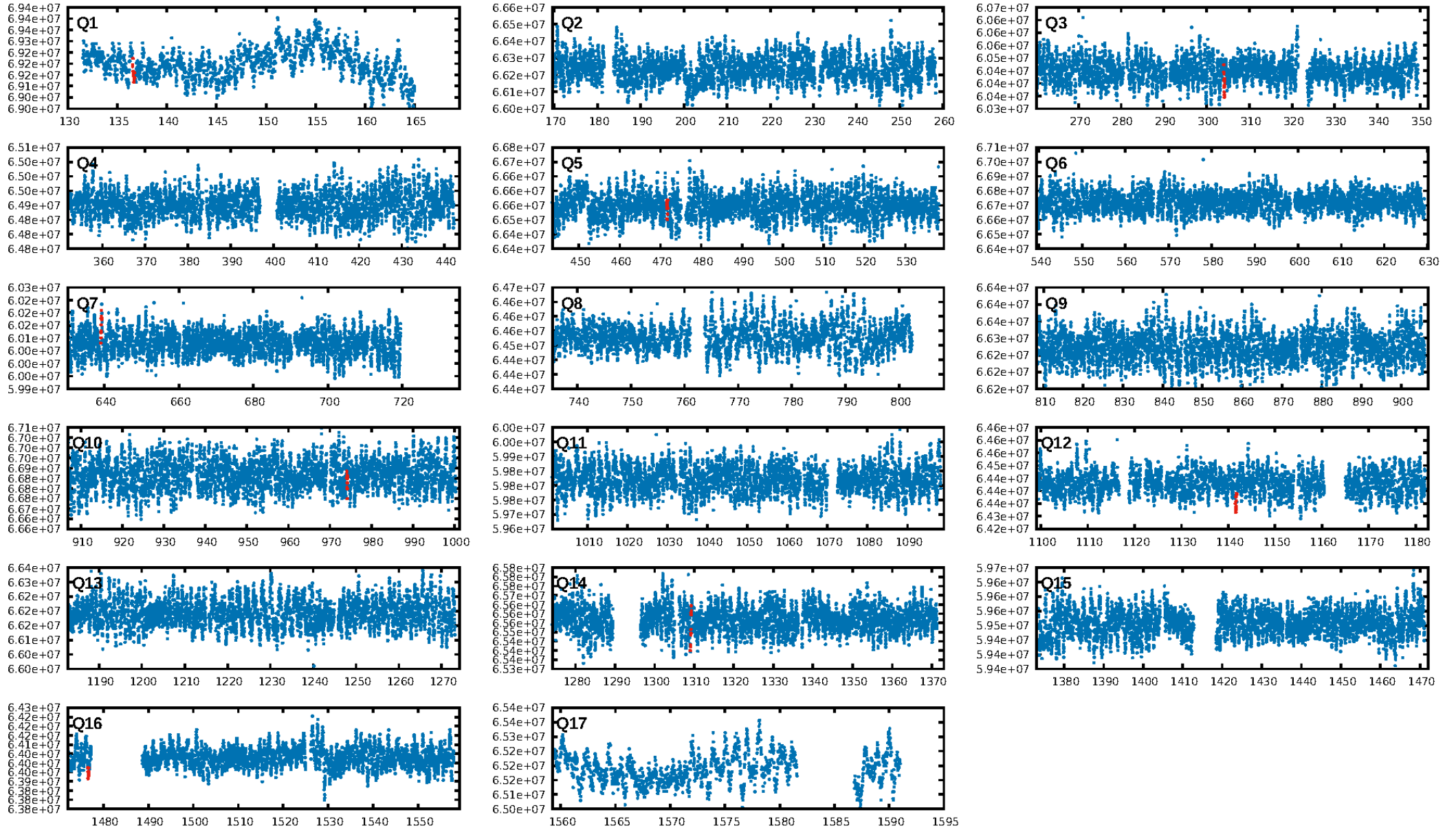
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [478.61 σ]
LongPeriod-sig: 100.0% [15.13 σ]
ModelChiSquare2-sig: 29.8%
ModelChiSquareGof-sig: 99.6%
Bootstrap-pfa: 1.11e-10
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: -6.786
Centroid-sig: 40.7%
Centroid-so: 3.089 arcsec [3.21 σ]
OotOffset-rm: 0.582 arcsec [0.38 σ]
KicOffset-rm: 10.171 arcsec [39.65 σ]
OotOffset-st: 2/2/1/1 [6]
KicOffset-st: 2/2/1/1 [6]
DiffImageQuality-fgm: 0.83 [5/6]
DiffImageOverlap-fno: 0.43 [3/7]

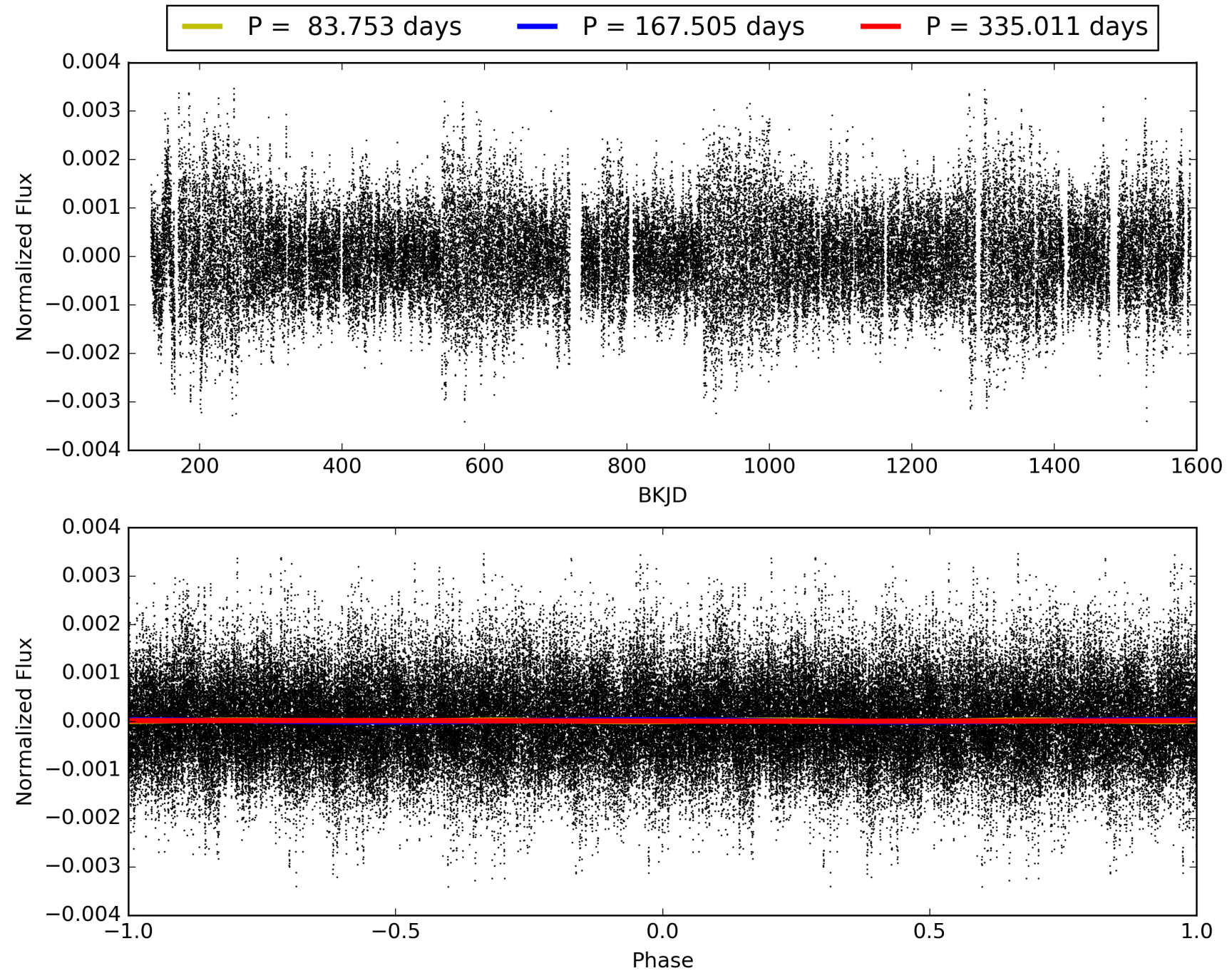
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 01:12:12 Z

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

TCE 005476835-04, PDC Light Curves

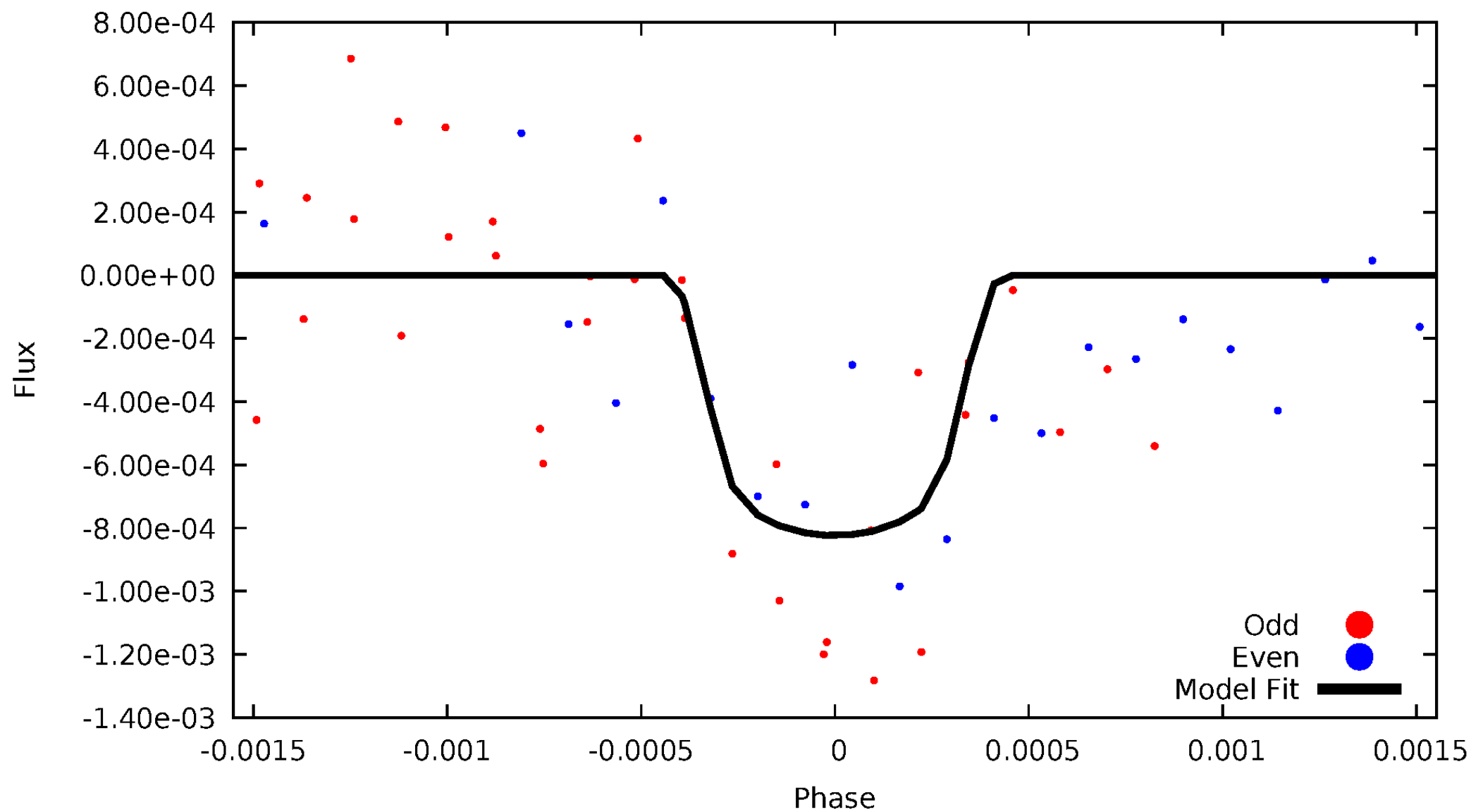


TCE 005476835-04



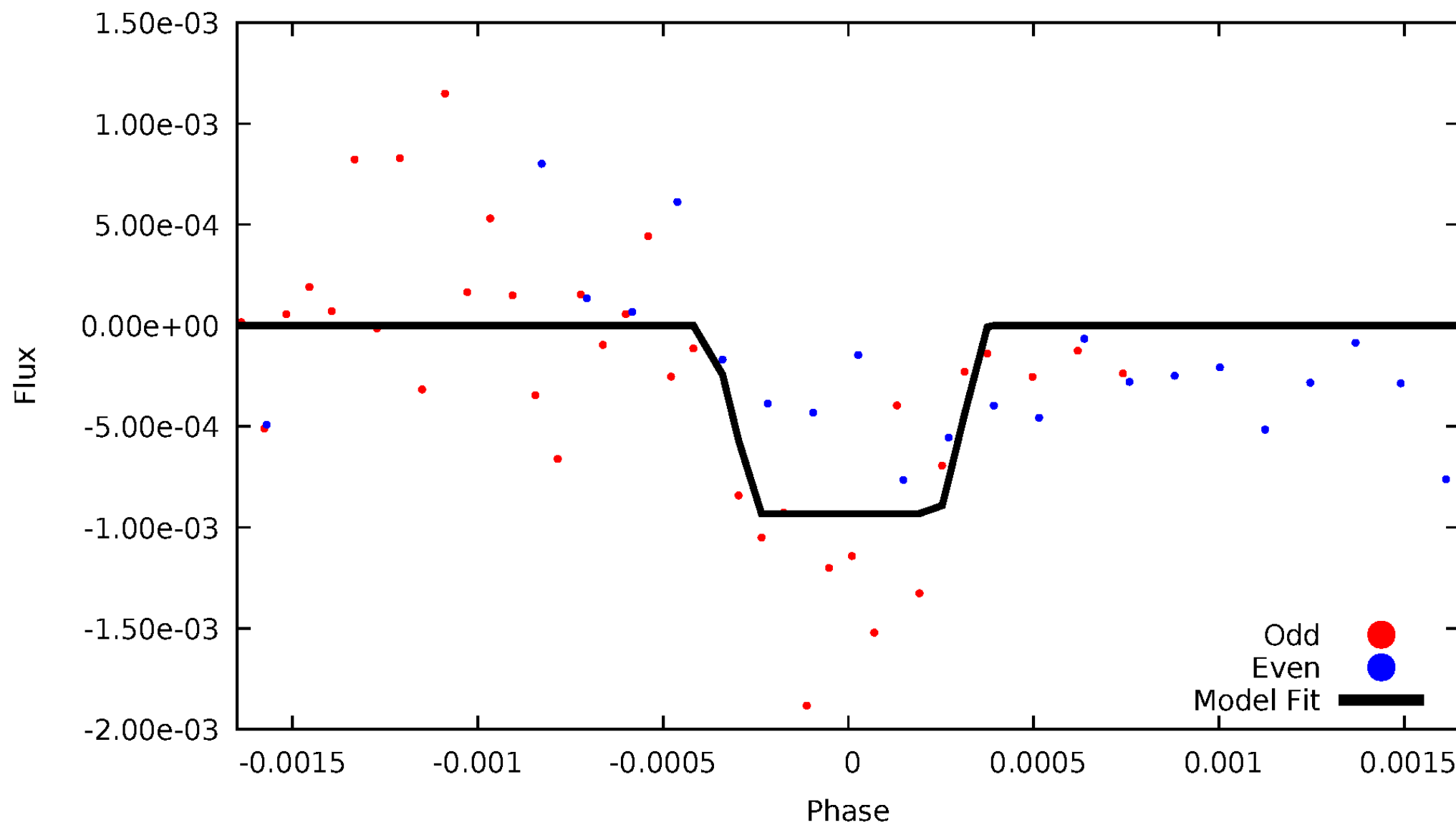
DV Odd/Even

TCE 005476835-04



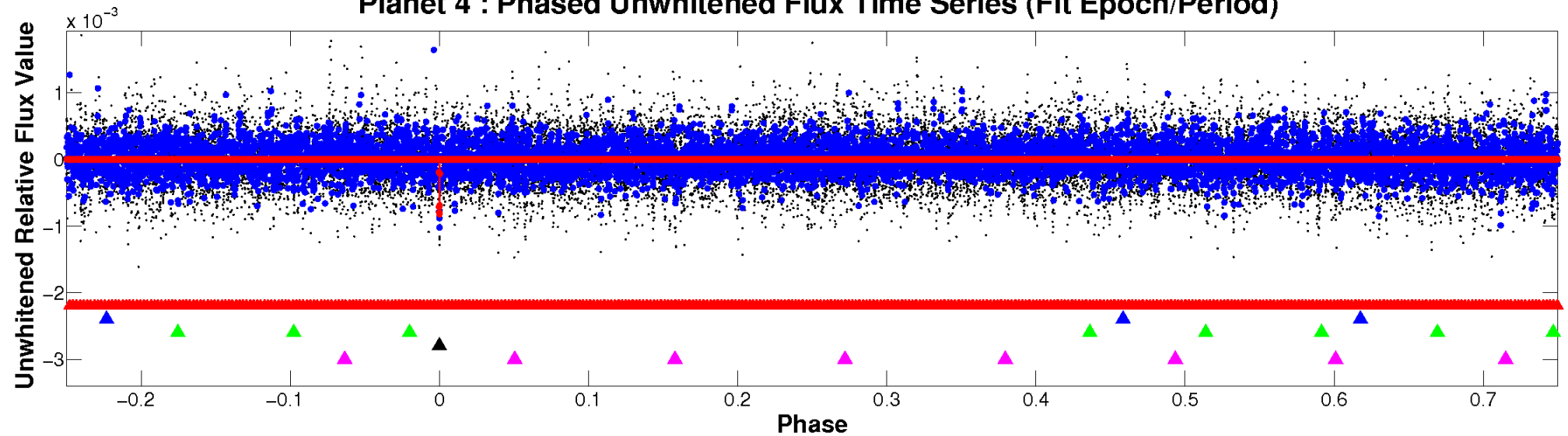
ALT Odd/Even

TCE 005476835-04

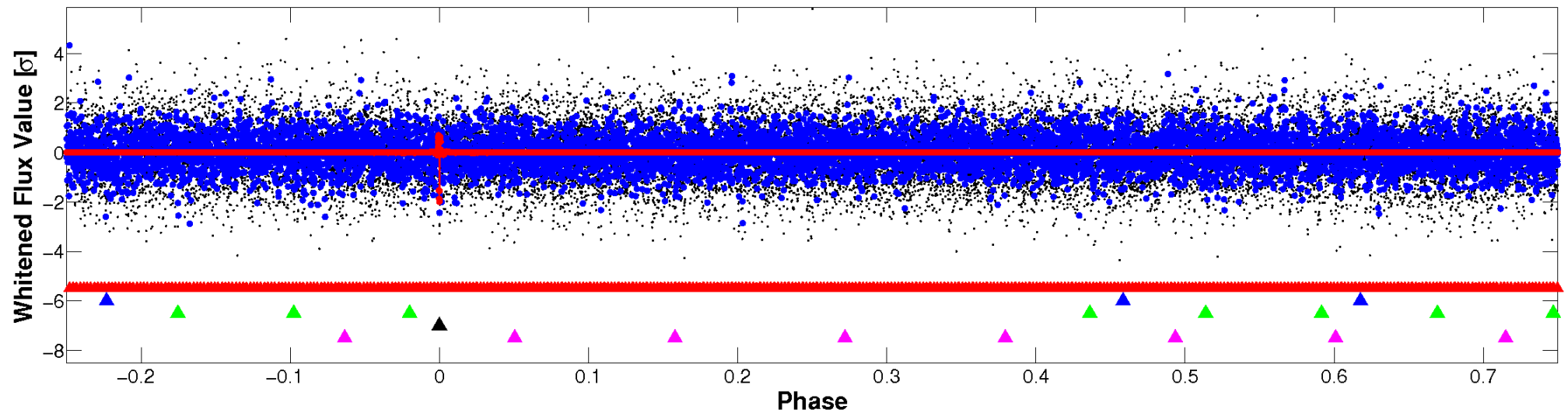


Non-Whitened Vs. Whitened Light Curve

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

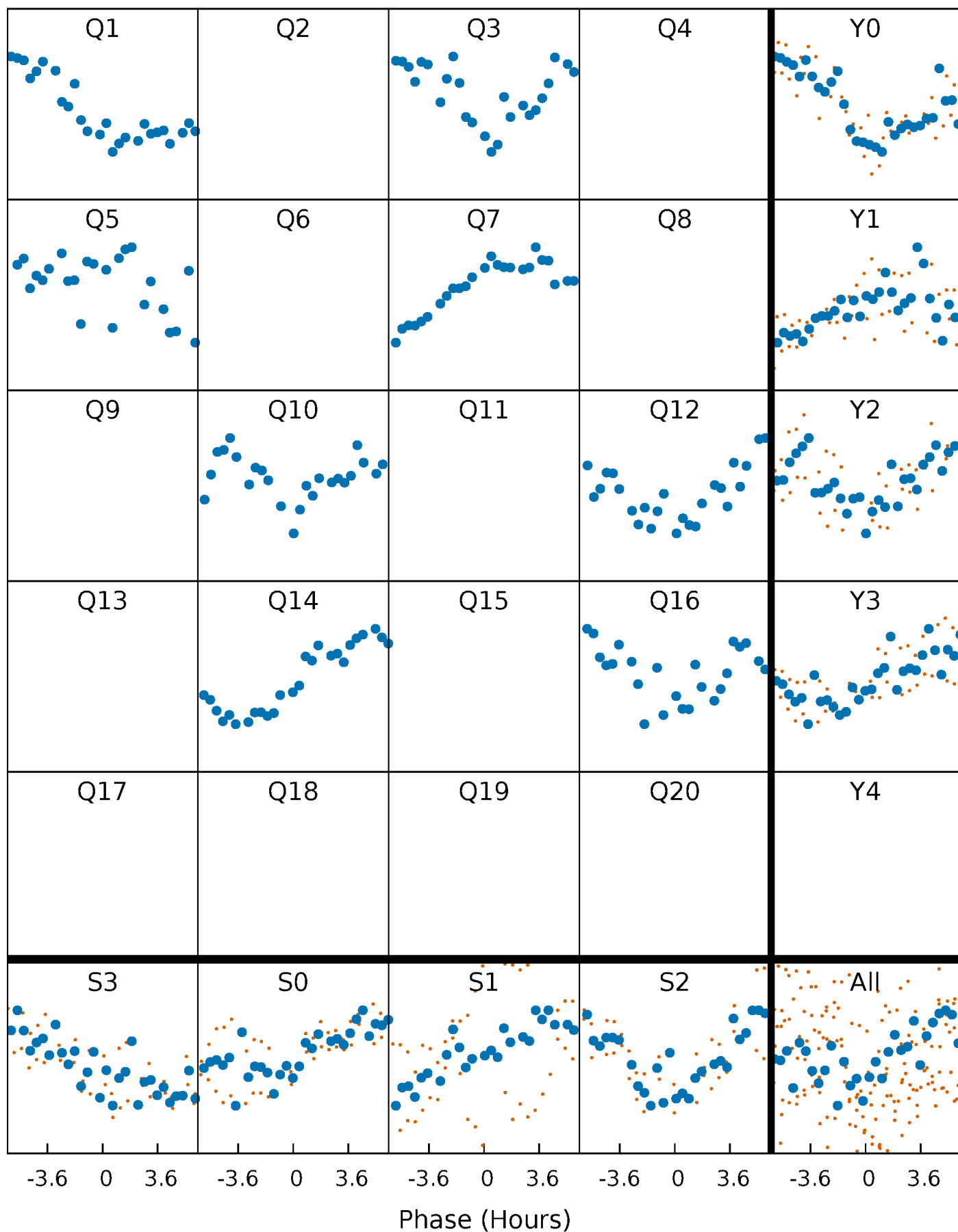


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



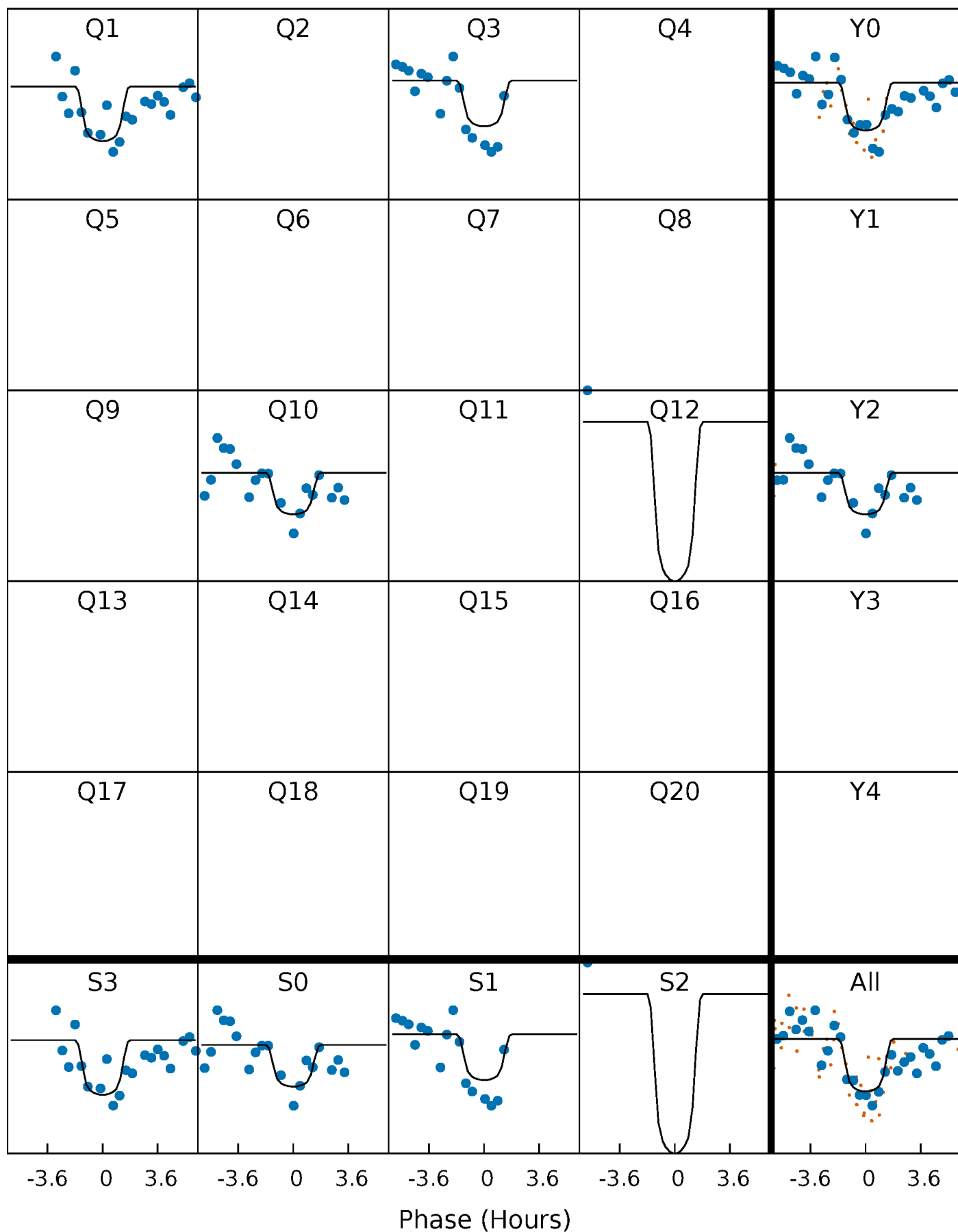
PDC Quarter-Phased Transit Curves

TCE 005476835-04 P=167.505352 Days $T_0=136.633548$ (BKJD)



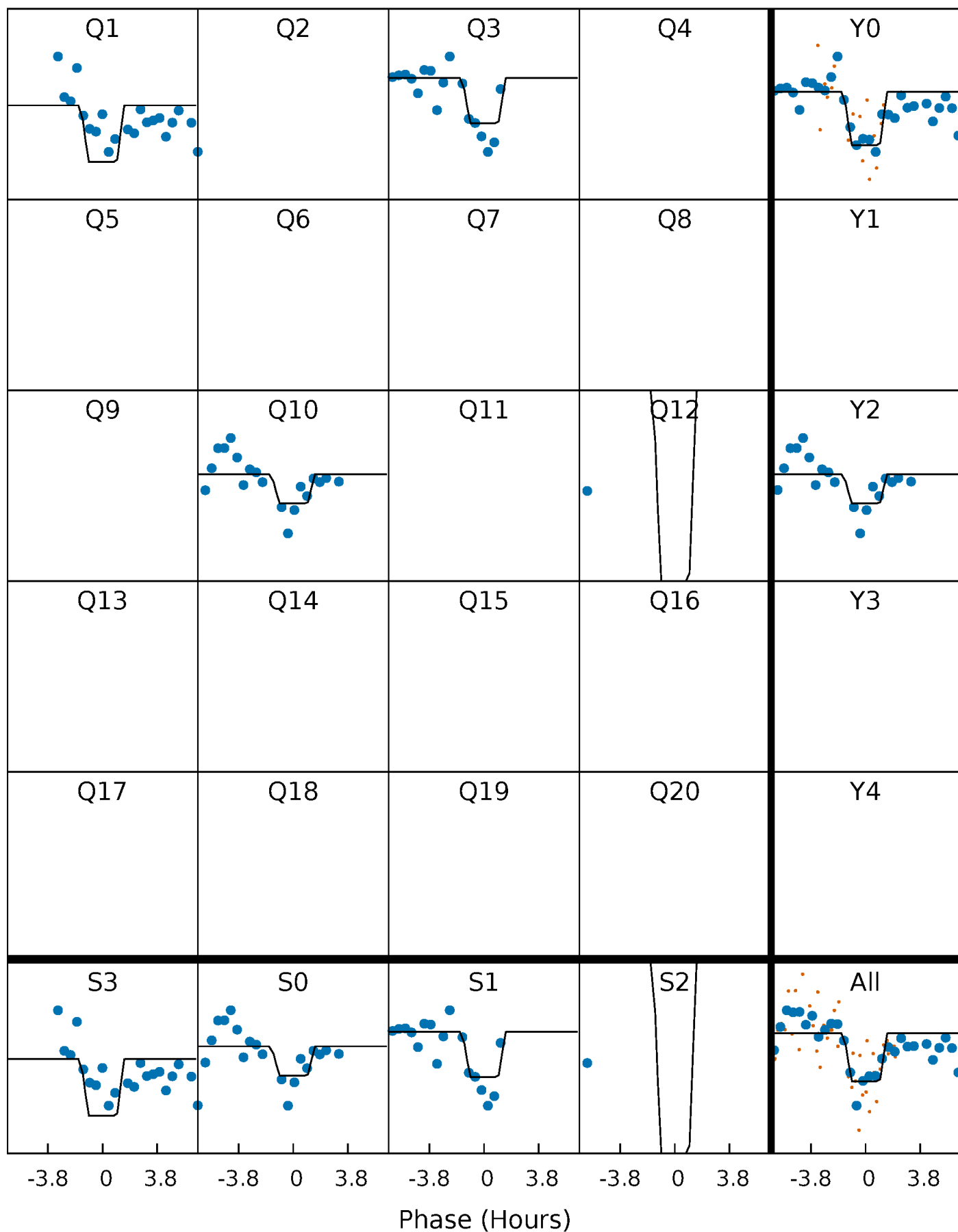
DV Quarter-Phased Transit Curves

TCE 005476835-04 P=167.505352 Days $T_0=136.633548$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

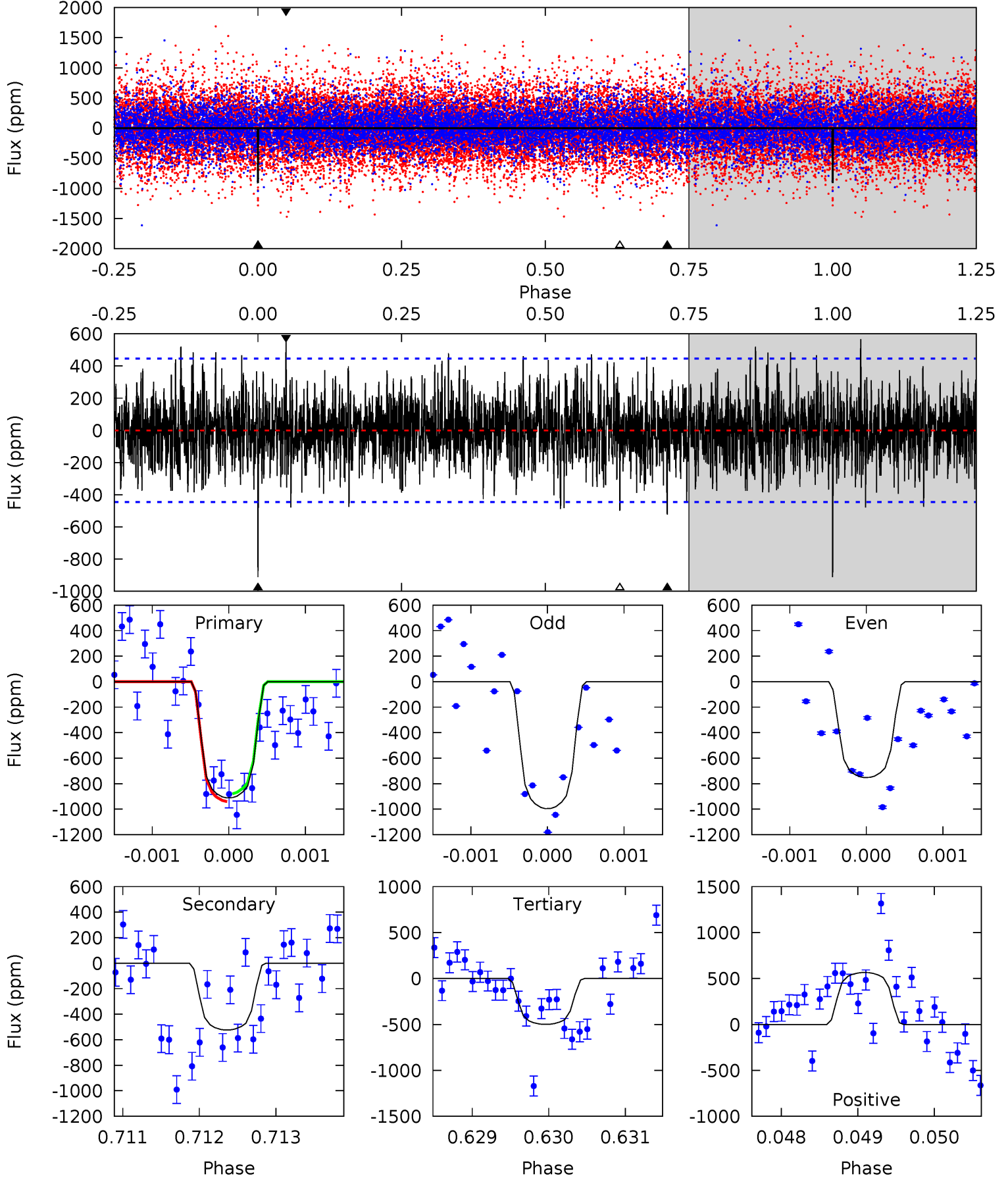
TCE 005476835-04 P=167.507551 Days $T_0=136.636596$ (BKJD)



DV Model-Shift Uniqueness Test

005476835-04, P = 167.505352 Days, E = 136.633548 Days

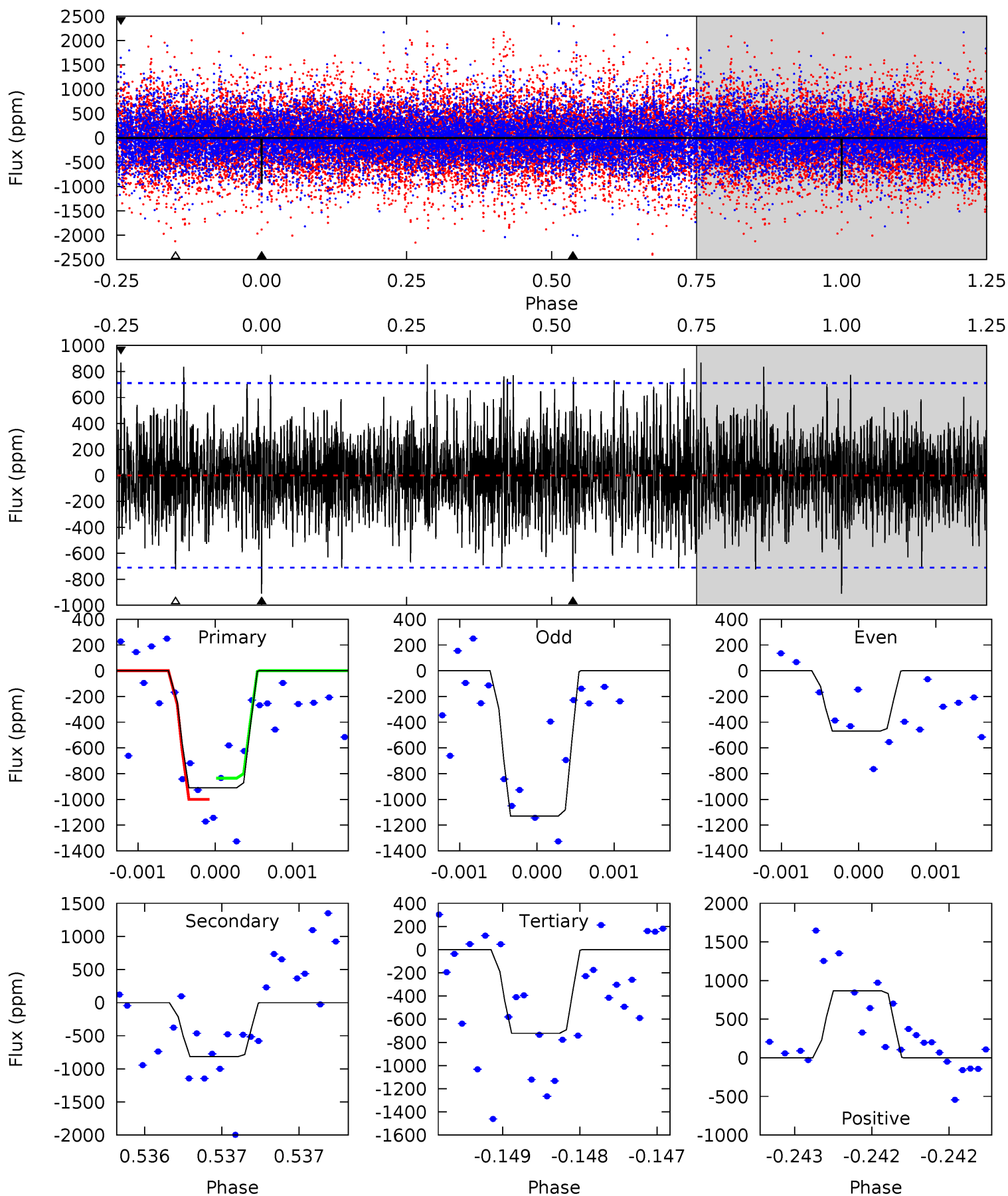
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.2	6.43	6.13	6.94	5.47	3.32	1.83	5.06	4.25	0.30	-0.51	1.44	1.16	0.38	0.38



Alt Model-Shift Uniqueness Test

005476835-04, P = 167.507551 Days, E = 136.636596 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.06	6.35	5.61	6.74	5.52	3.39	1.84	1.45	0.32	0.74	-0.39	2.43	0.87	0.49	0.61



Stellar Parameters For KIC 005476835

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6102^{+184}_{-220}	$4.449^{+0.056}_{-0.224}$	$-0.060^{+0.250}_{-0.300}$	$1.018^{+0.341}_{-0.114}$	$1.058^{+0.151}_{-0.135}$	$1.413^{+0.408}_{-0.746}$
	+3%/-4%	+1%/-5%	+417%/-500%	+33%/-11%	+14%/-13%	+29%/-53%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 005476835-04 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-524 ± 81	$3.53^{+1.28}_{-1.19}$	501^{+39}_{-29}	5366^{+1147}_{-656}	8209^{+10781}_{-3821}
Alt.	-817 ± 129	$3.57^{+1.34}_{-1.22}$	499^{+39}_{-26}	5910^{+1378}_{-767}	12724^{+17006}_{-6013}

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

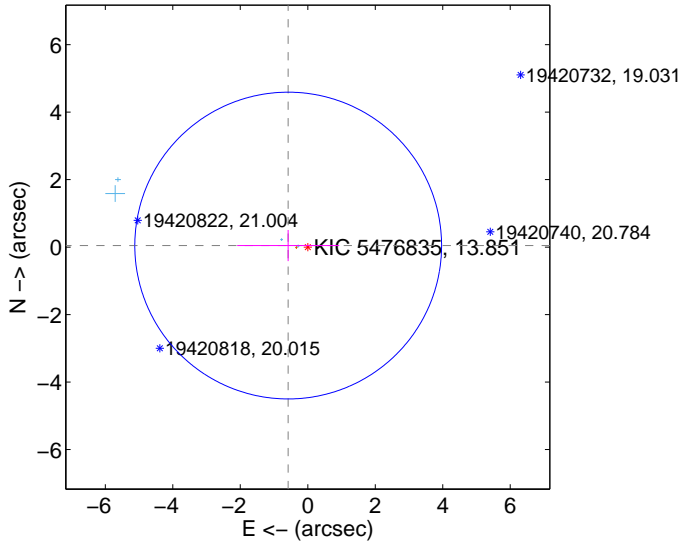
Supplemental centroid analysis for 005476835-04. Kepler magnitude: 13.85. Transit SNR 7.15

There are 5 quarters with good PRF difference image offsets

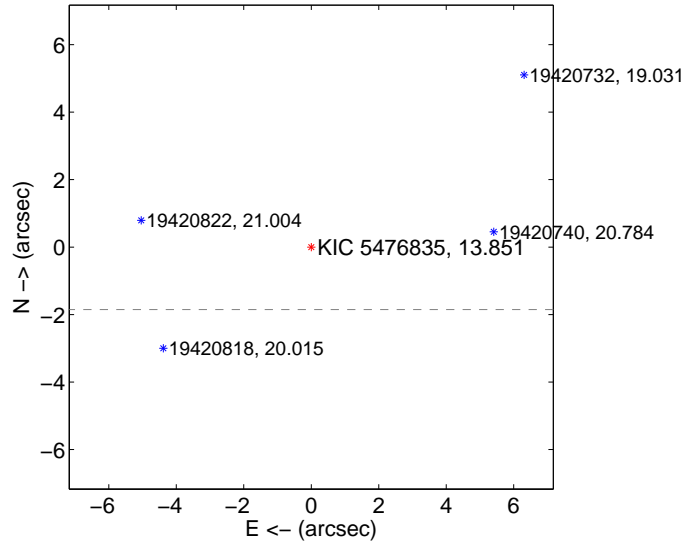
The OOT PRF centroid is offset from the target star catalog position by about 4.18 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.582 ± 1.515	0.38	0.580 ± 1.512	0.045 ± 0.460
PRF-fit source offset from KIC position	10.171 ± 0.257	39.65	10.001 ± 0.168	-1.853 ± 0.648
photometric centroid source offset	3.09 ± 0.96	3.21	3.09 ± 0.96	-0.15 ± 0.62

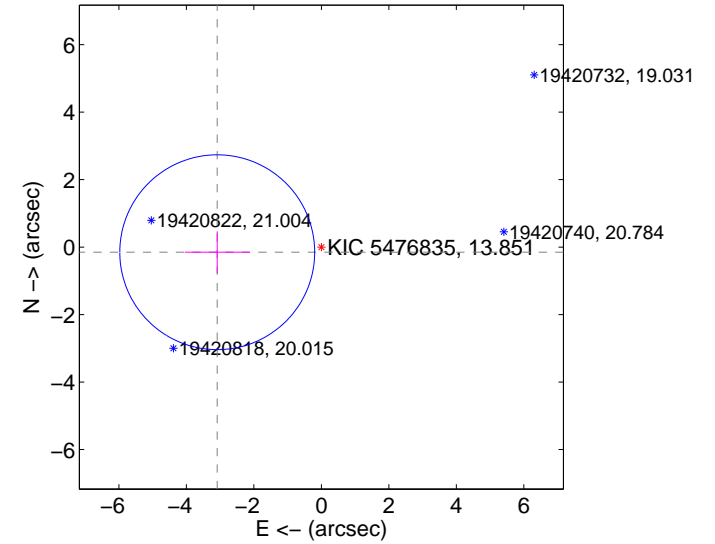
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

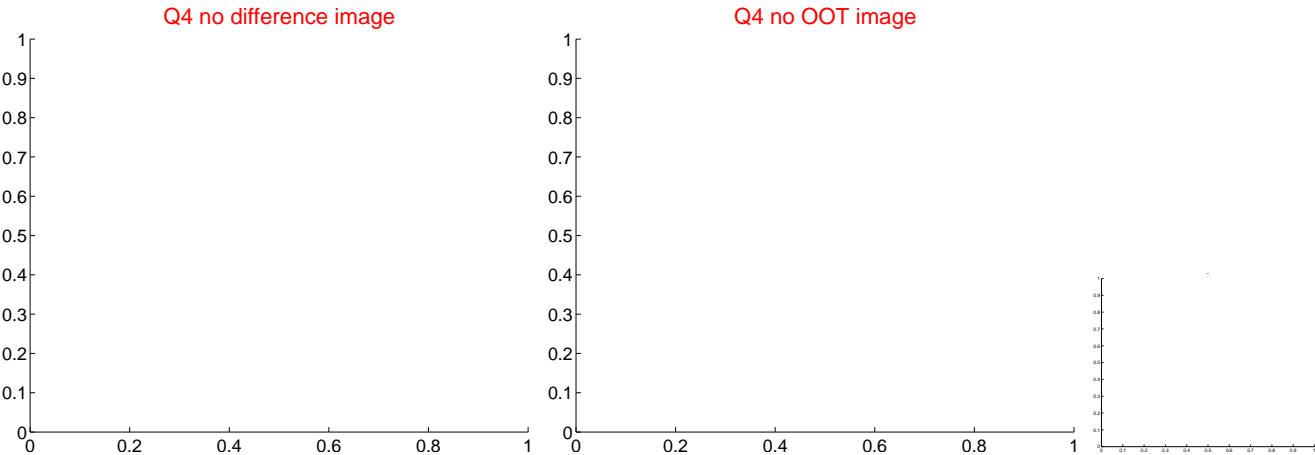
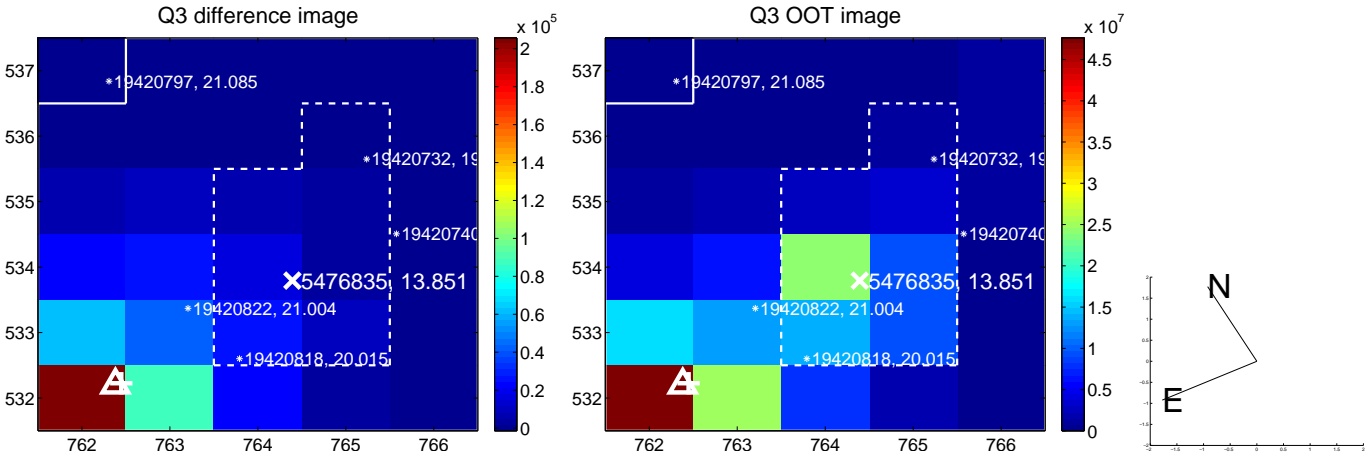
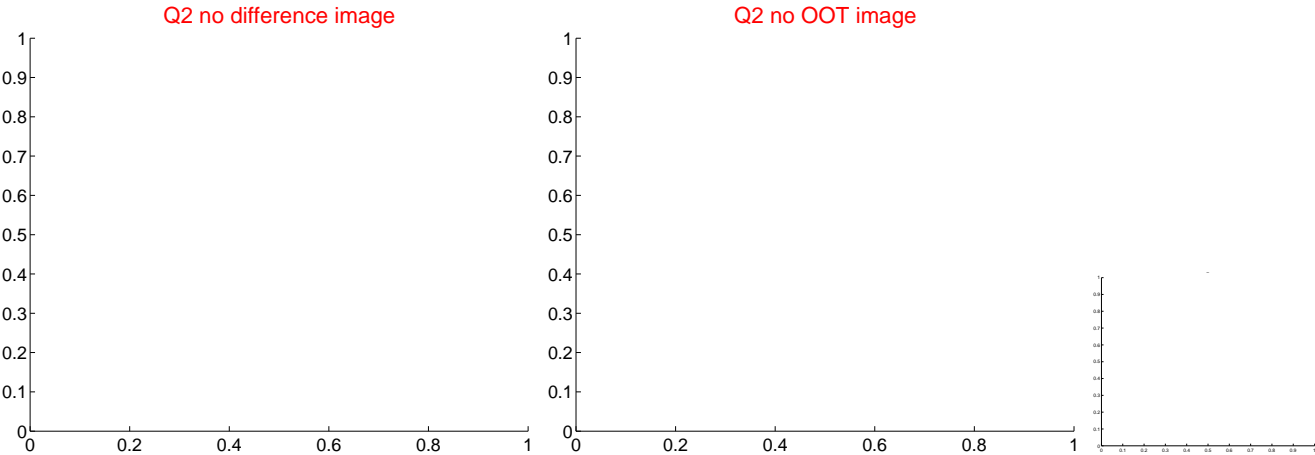
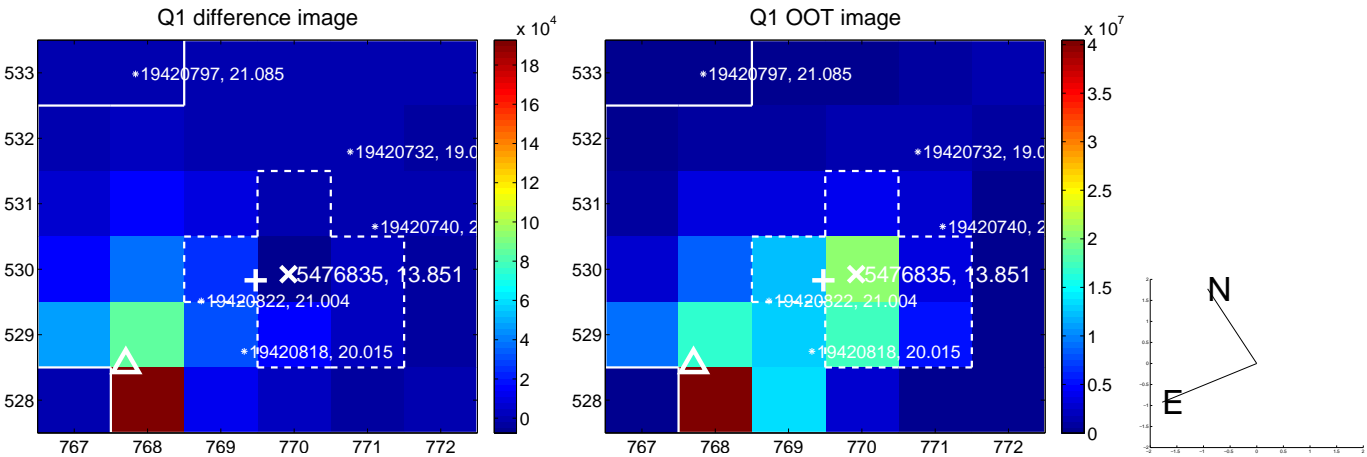


offset from photometric centroids

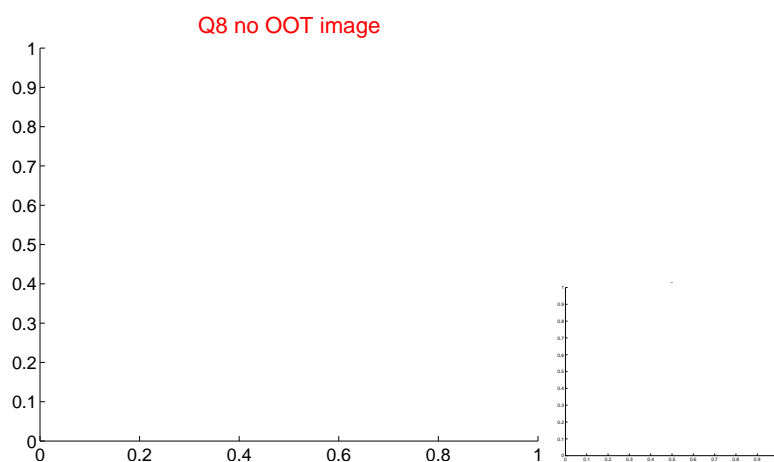
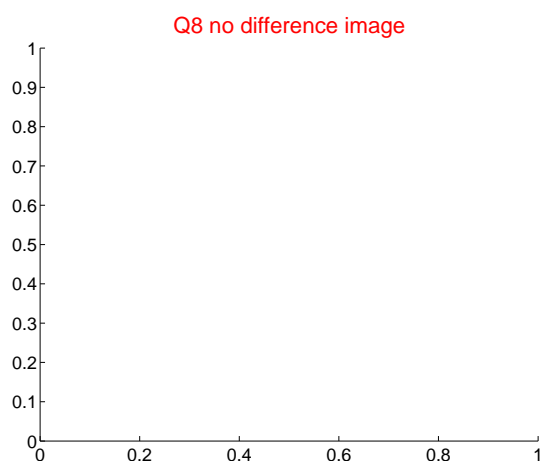
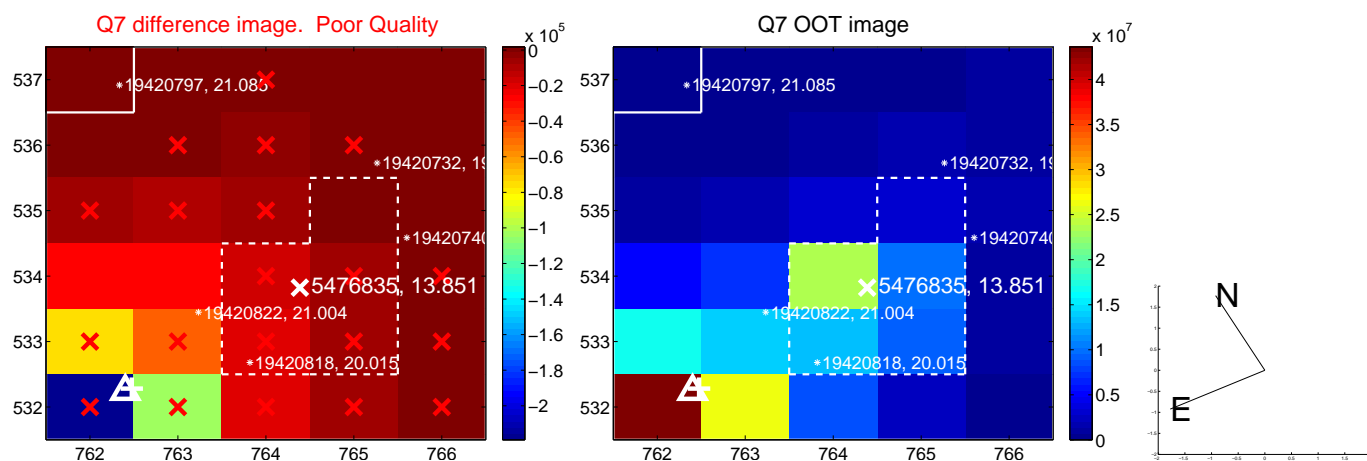
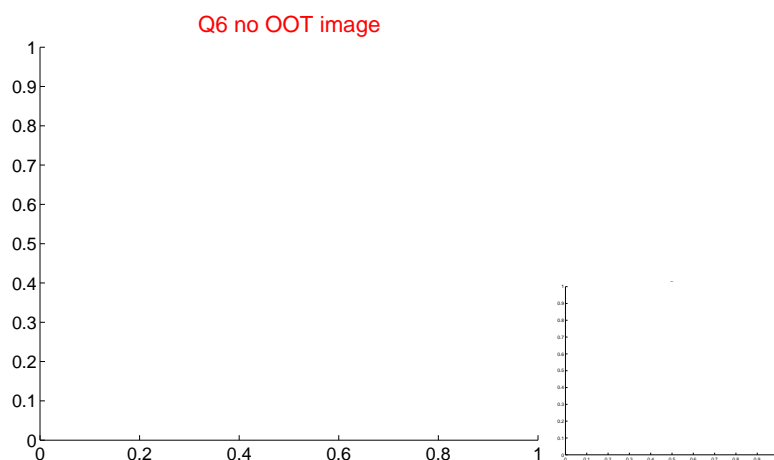
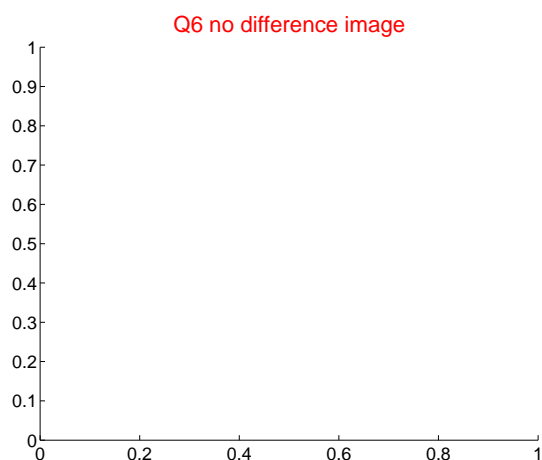
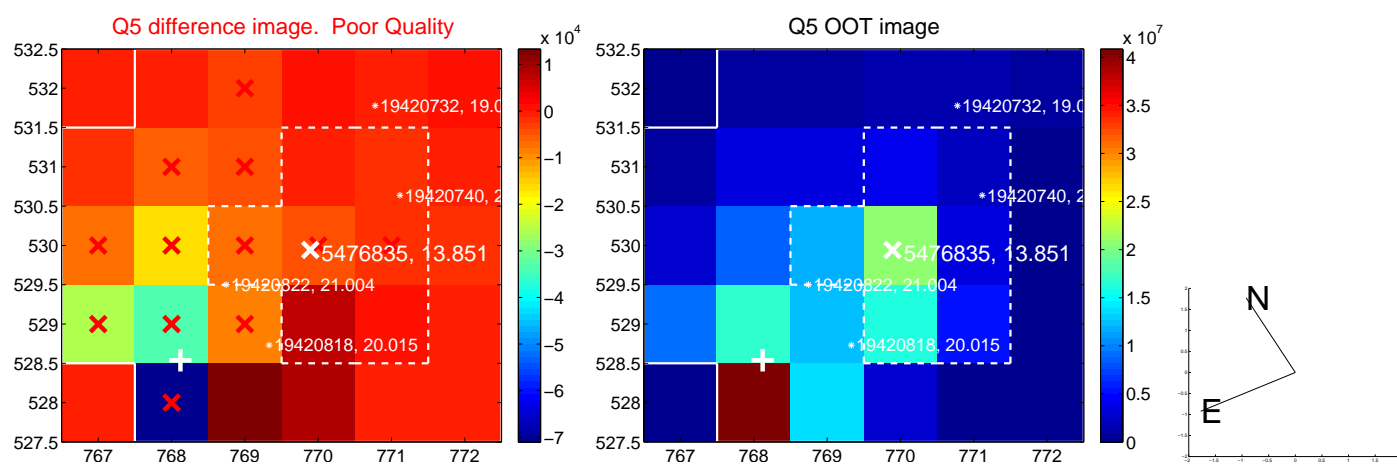


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

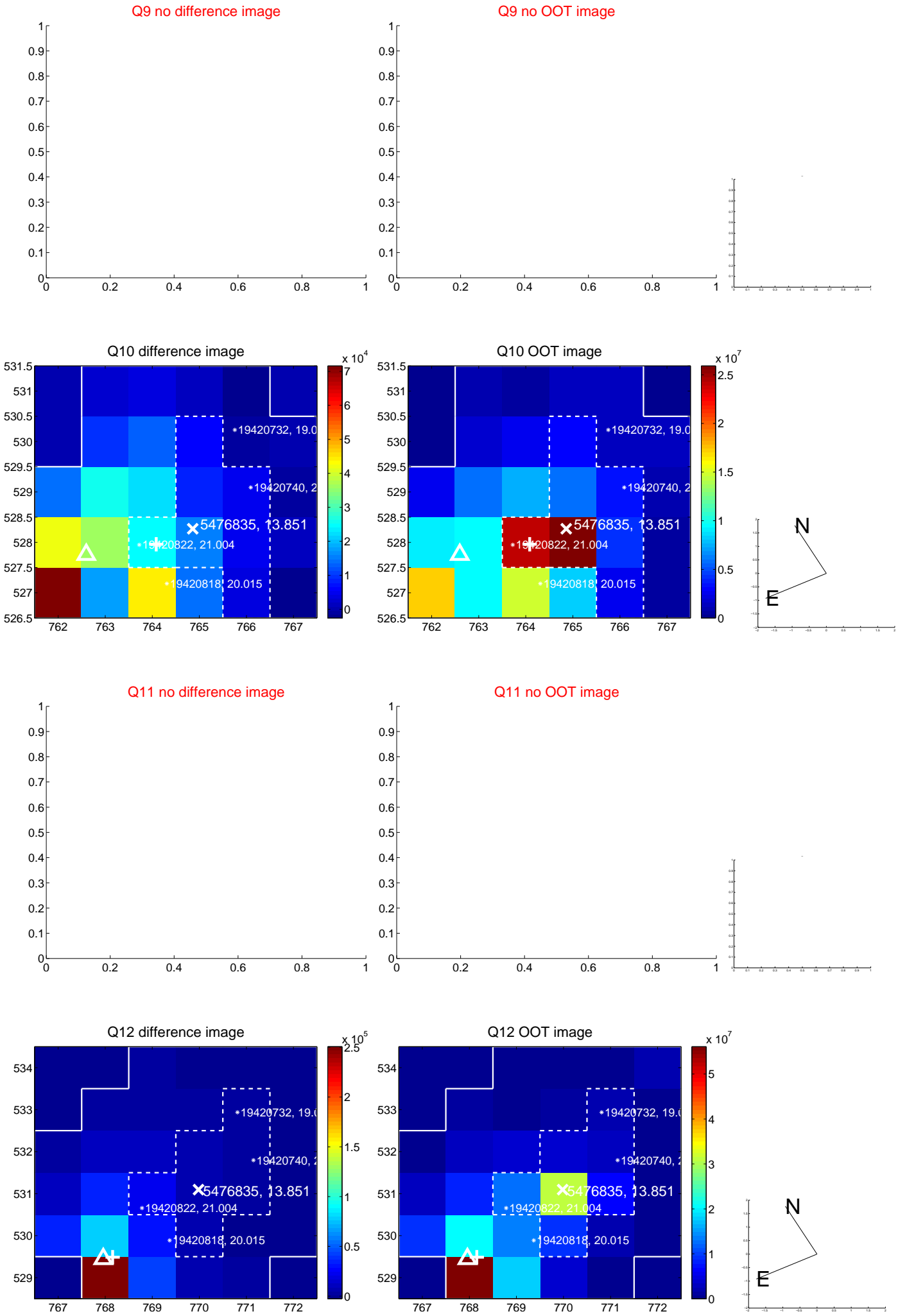
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



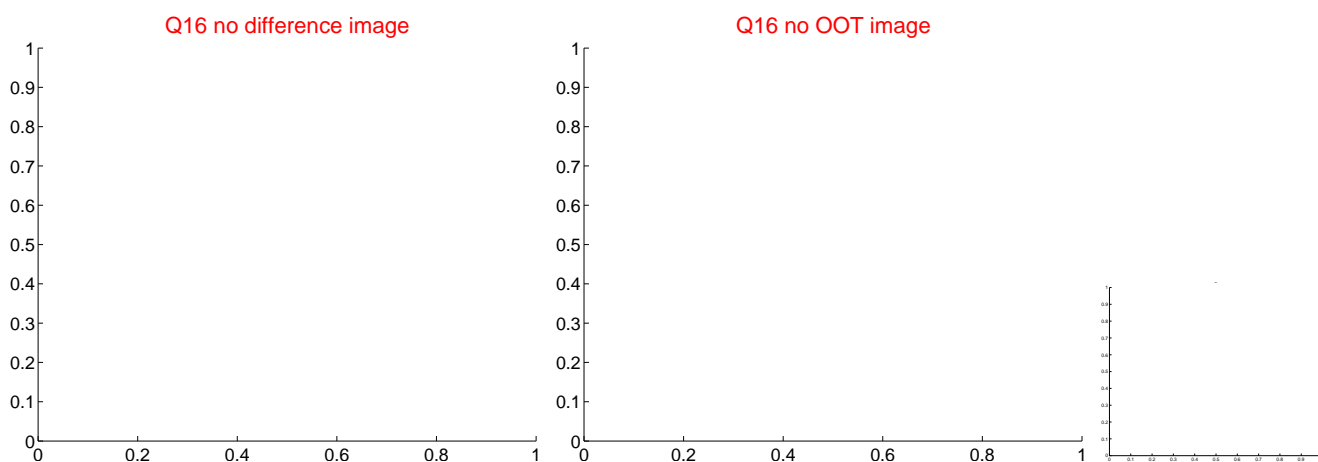
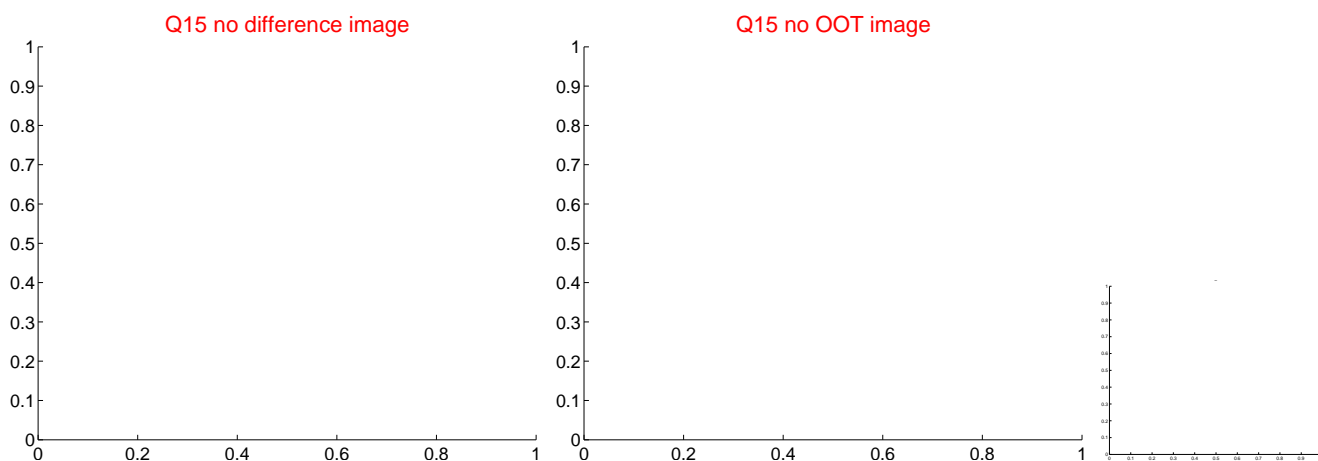
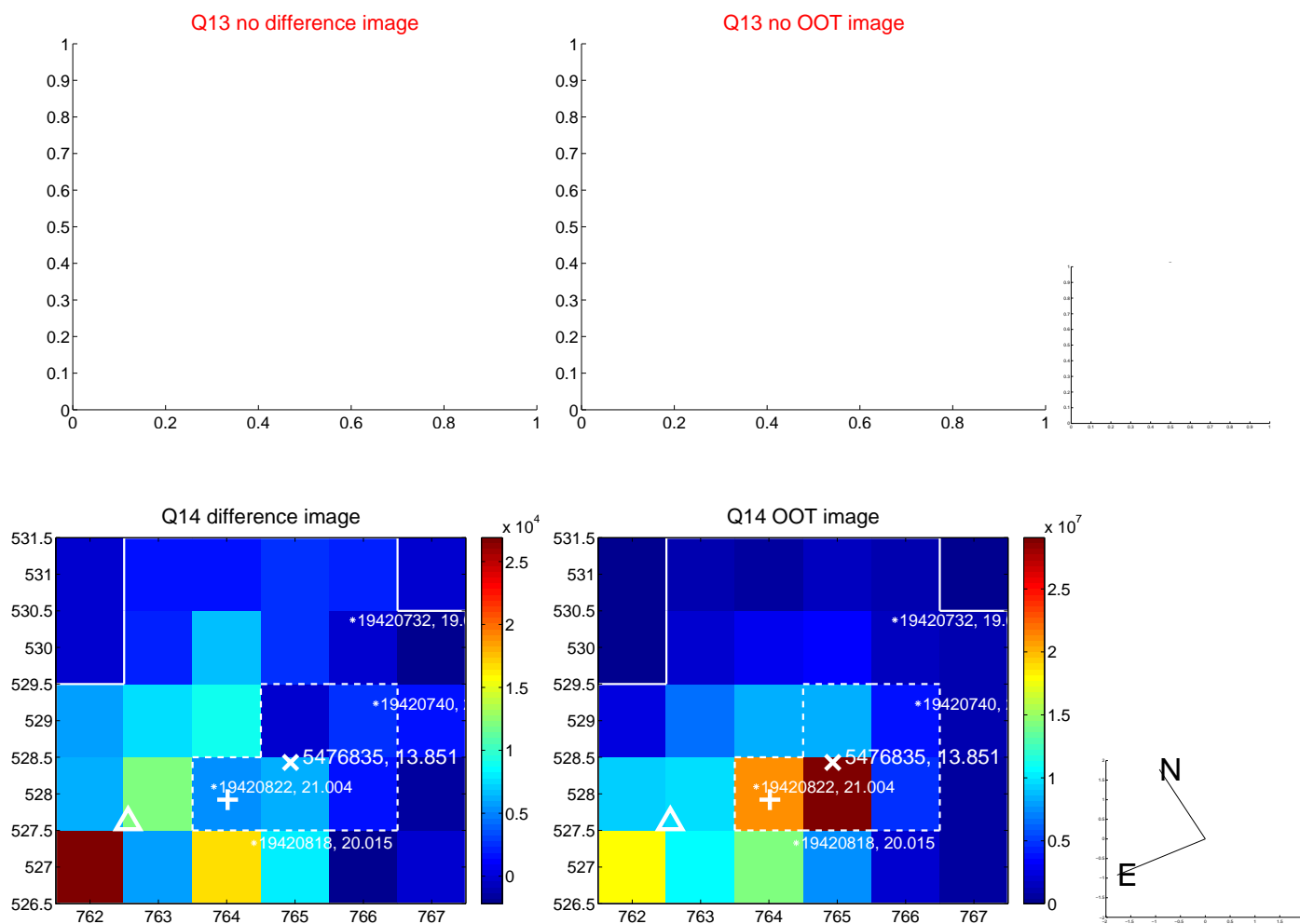
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



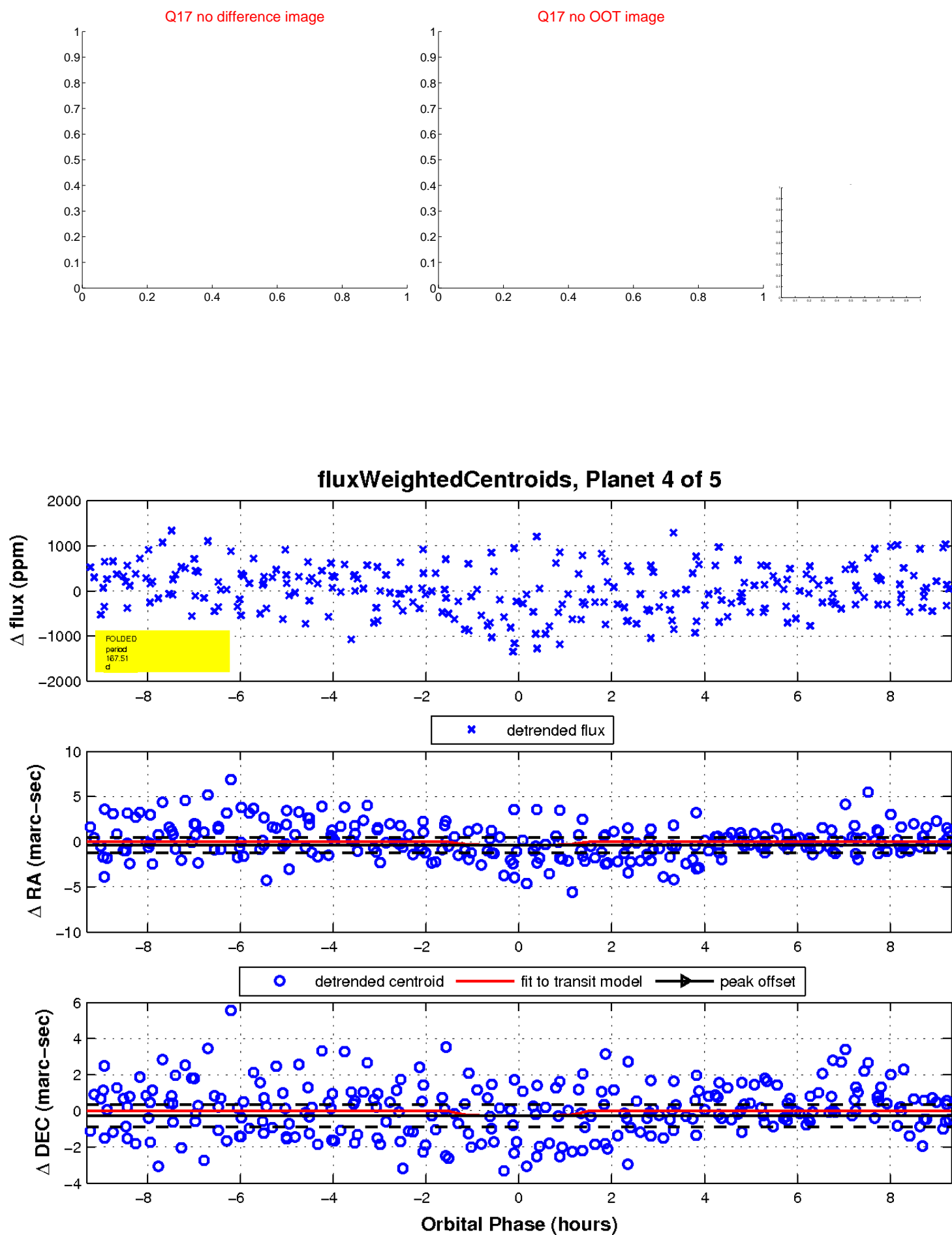
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

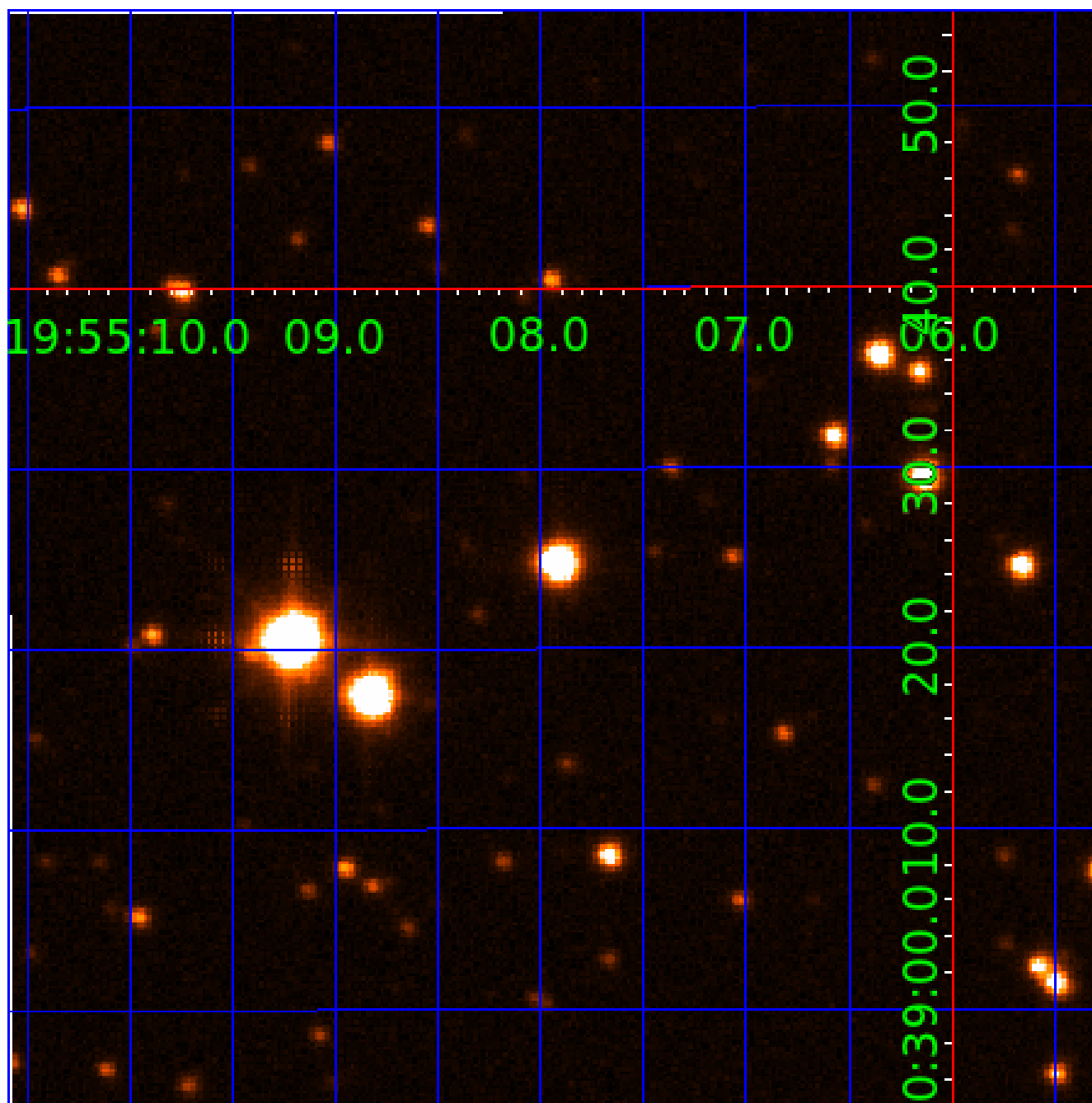


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005476835

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})
005476835-01	OBS	No	1.591673	132.806415	52.6	7.713	8.8	7.7	1.02	6102	0.74	1735.71
005476835-02	OBS	No	475.853598	434.262047	1038.1	27.870	8.1	7.6	1.02	6102	3.67	0.87
005476835-03	OBS	No	180.519543	209.698529	466.4	20.413	8.5	5.5	1.02	6102	2.35	3.16
005476835-04	OBS	No	167.505353	136.633548	823.1	3.119	7.4	7.2	1.02	6102	3.39	3.49
005476835-05	OBS	No	204.606824	145.098458	860.2	9.892	7.2	8.6	1.02	6102	3.36	2.67

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005476835-01	OBS	FP	0.00	1	0	1	1	LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET—EPHEM_MATCH
005476835-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
005476835-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
005476835-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_RESOLVED_OFFSET
005476835-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_RESOLVED_OFFSET—HALO_GHOST

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

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

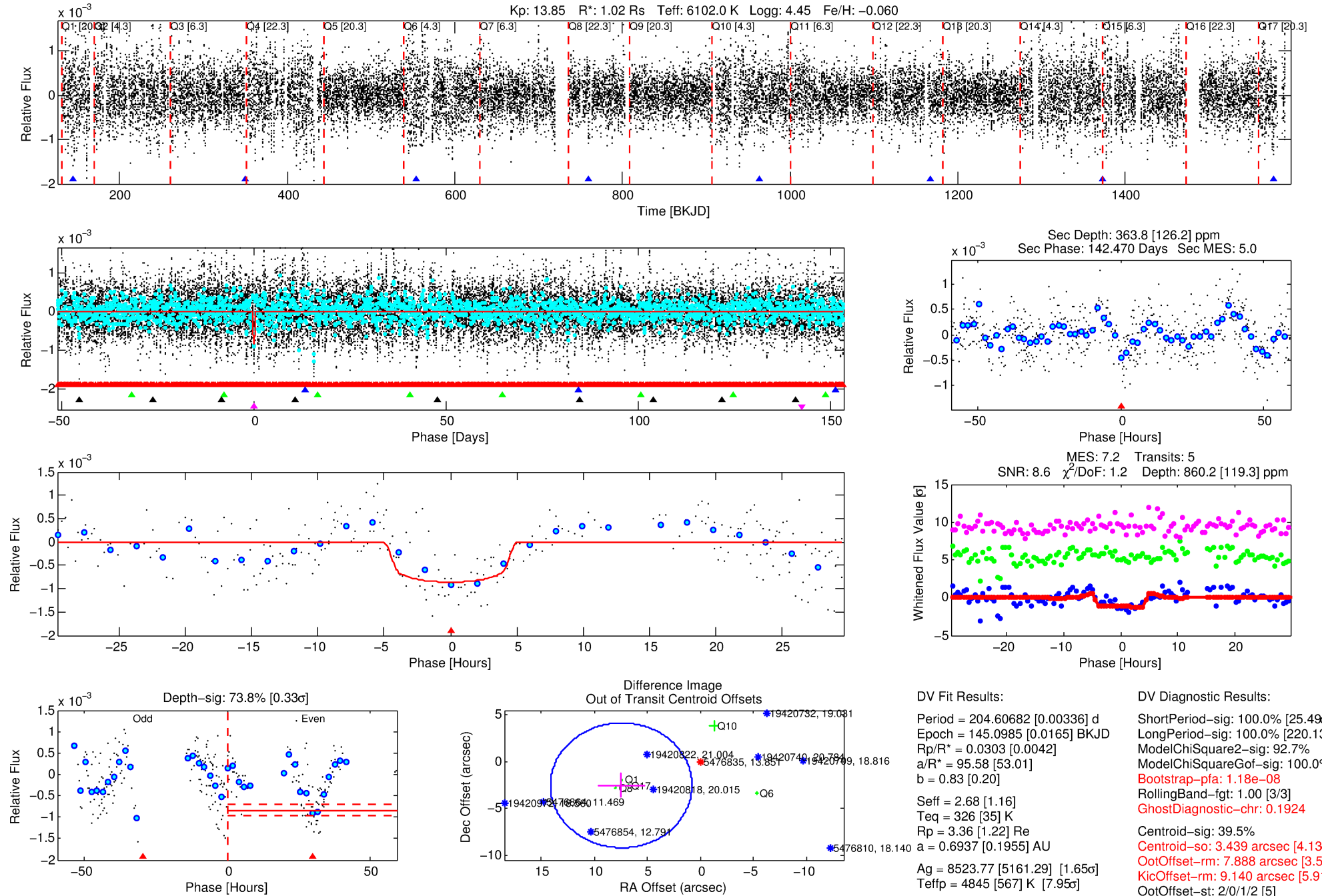
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005476835-05

No Significant Match Found

DV One-Page Summary

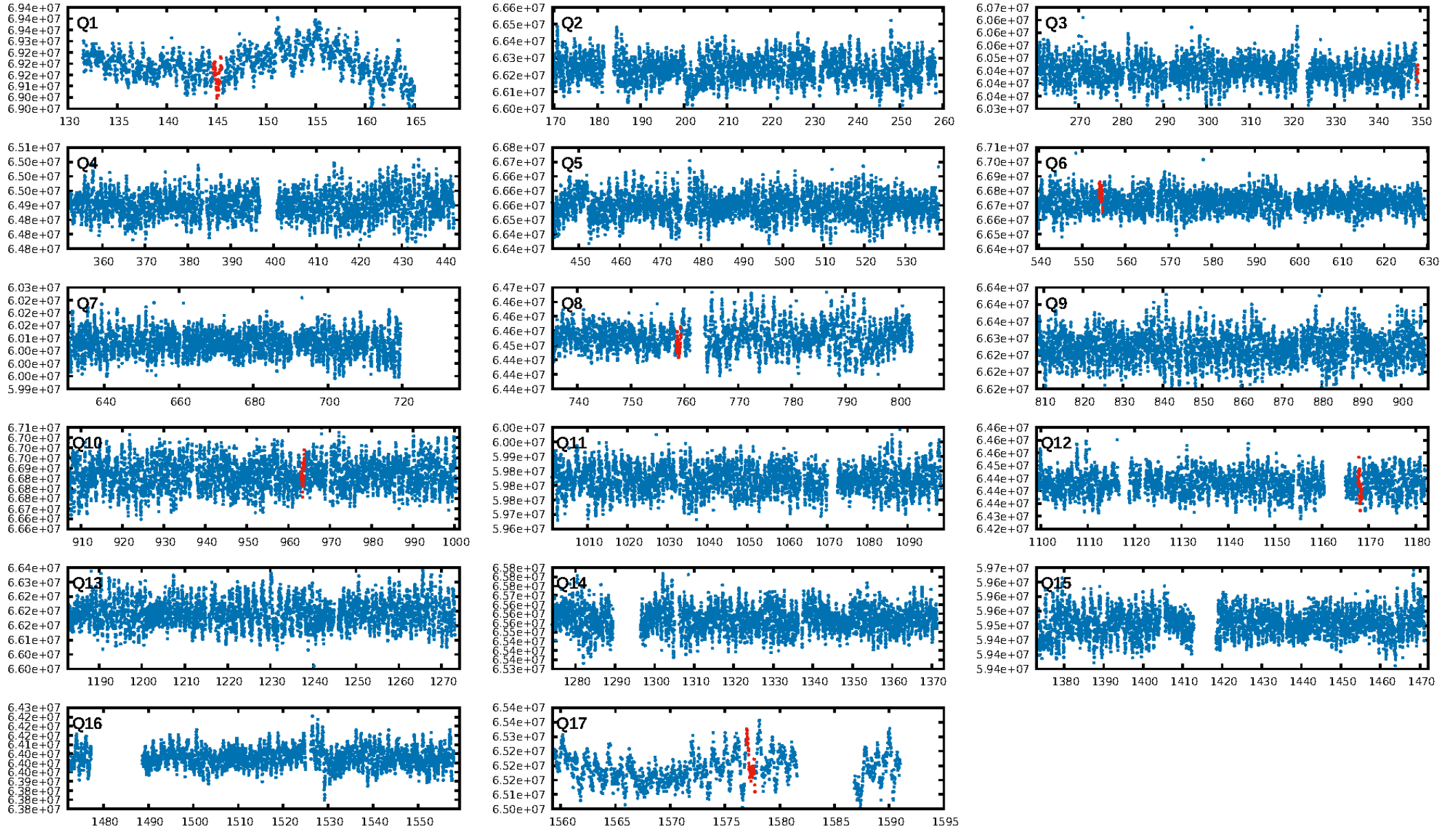
KIC: 5476835 Candidate: 5 of 5 Period: 204.607 d



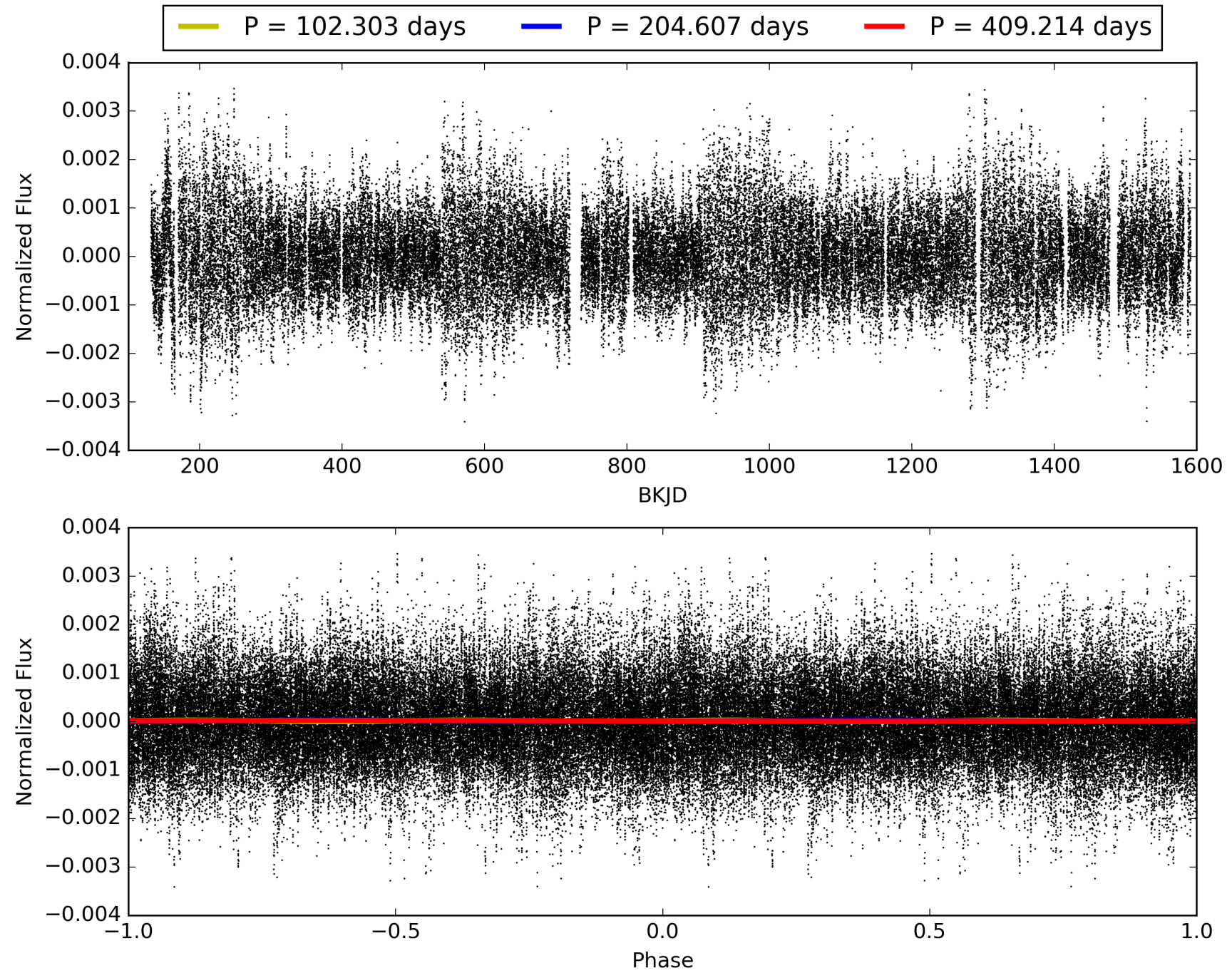
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 01:12:17 Z

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

TCE 005476835-05, PDC Light Curves

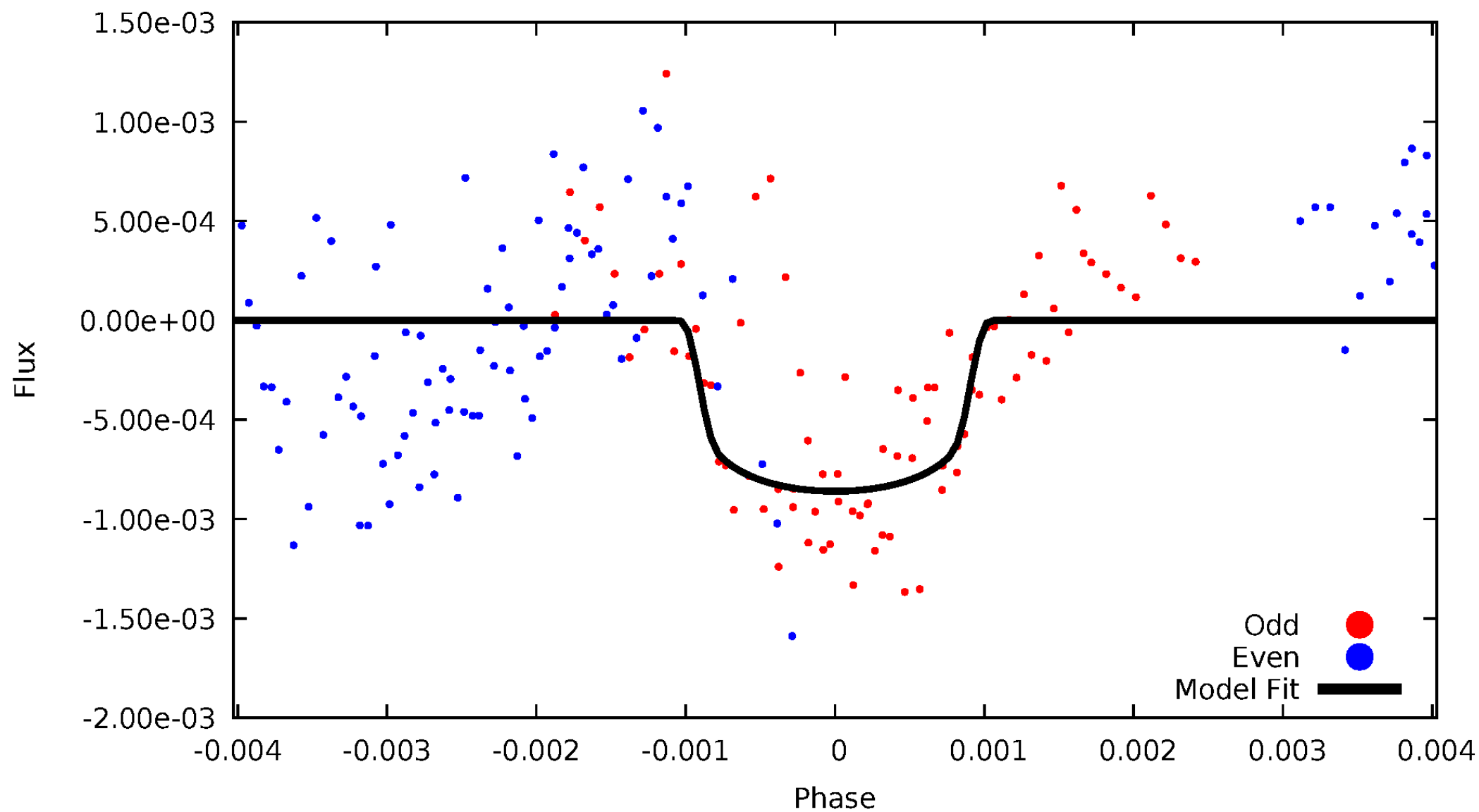


TCE 005476835-05



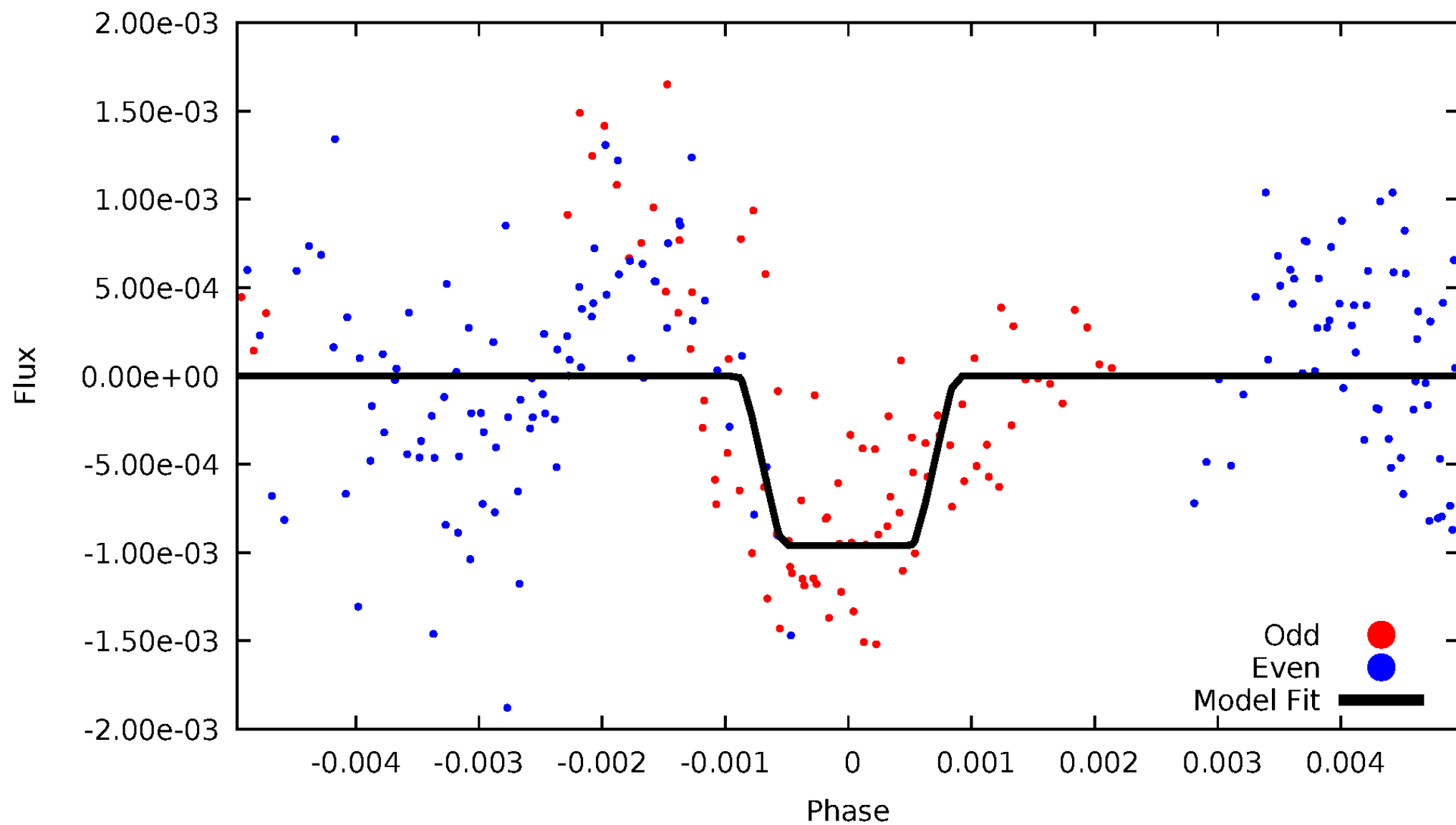
DV Odd/Even

TCE 005476835-05



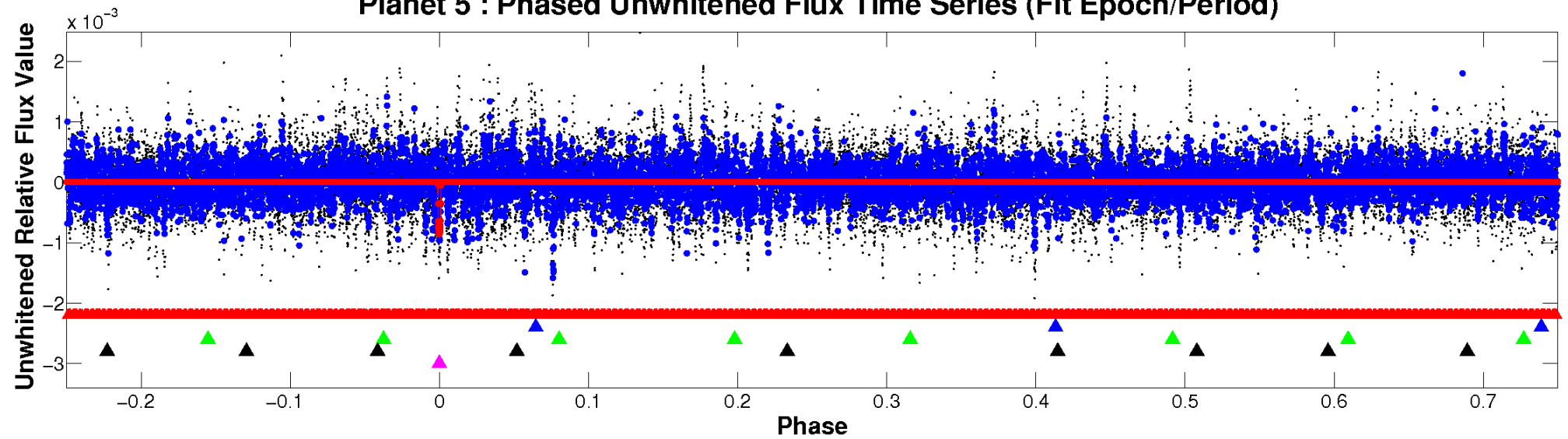
ALT Odd/Even

TCE 005476835-05

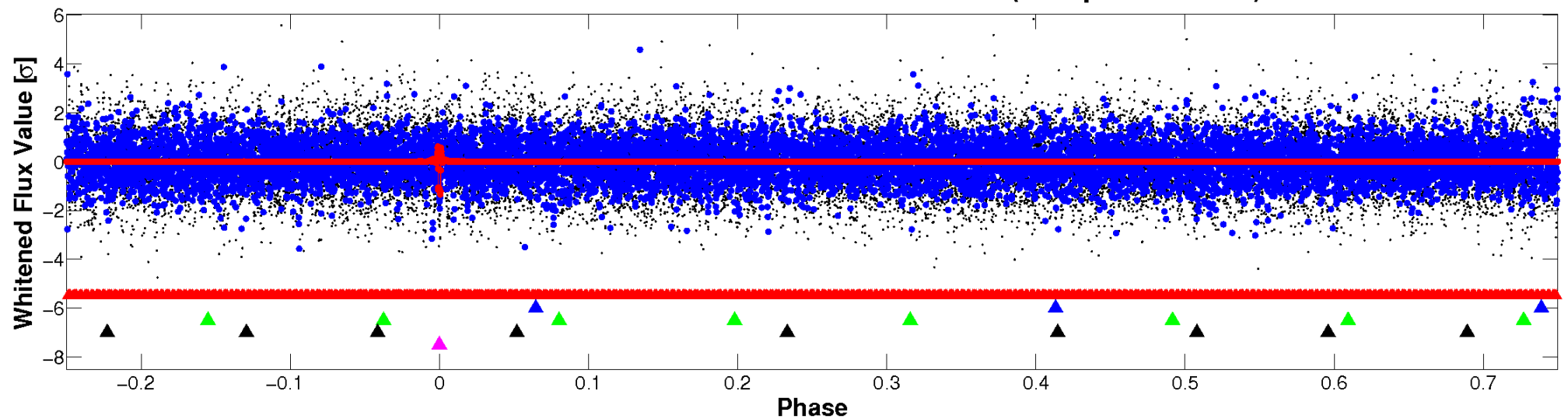


Non-Whitened Vs. Whitened Light Curve

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

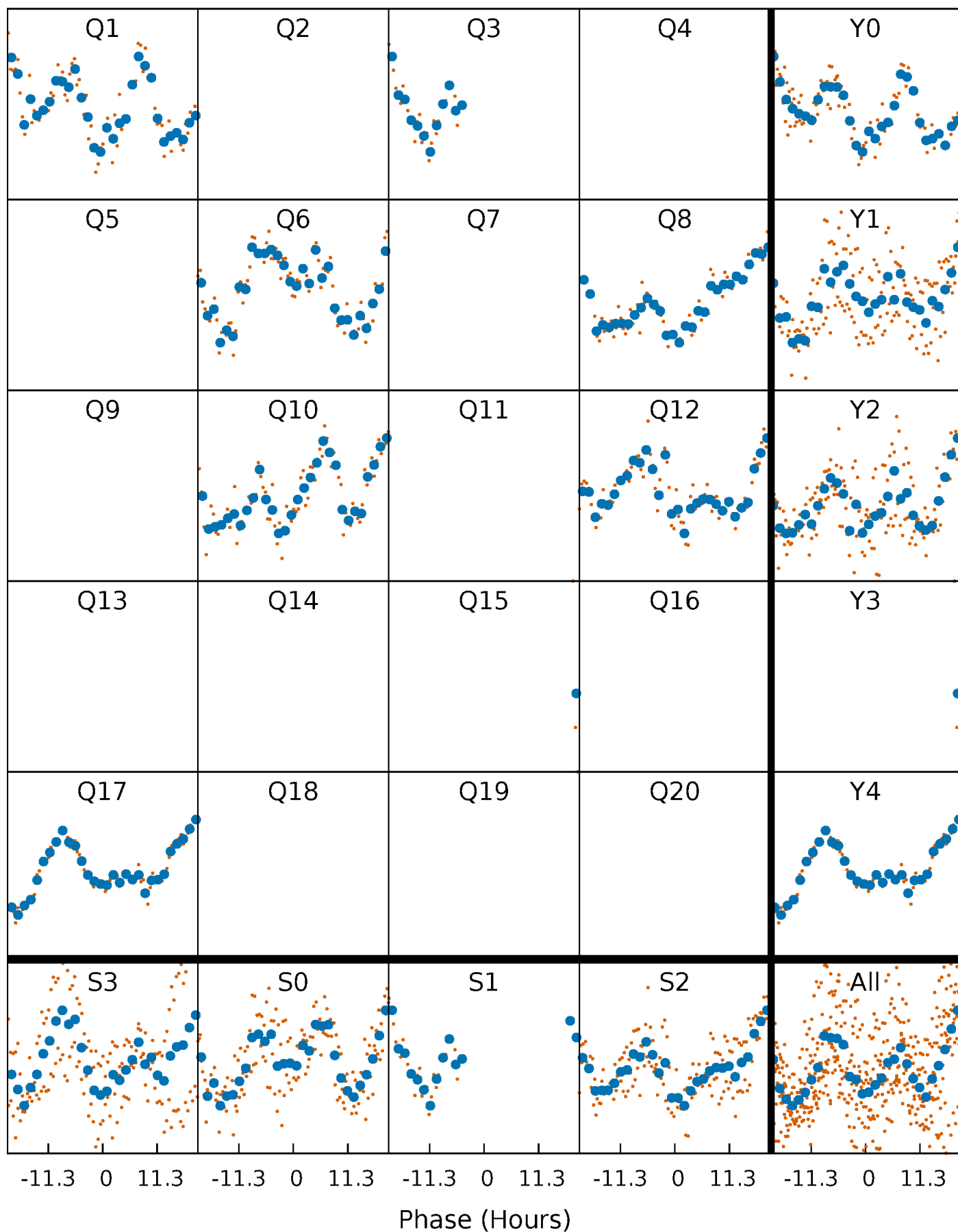


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



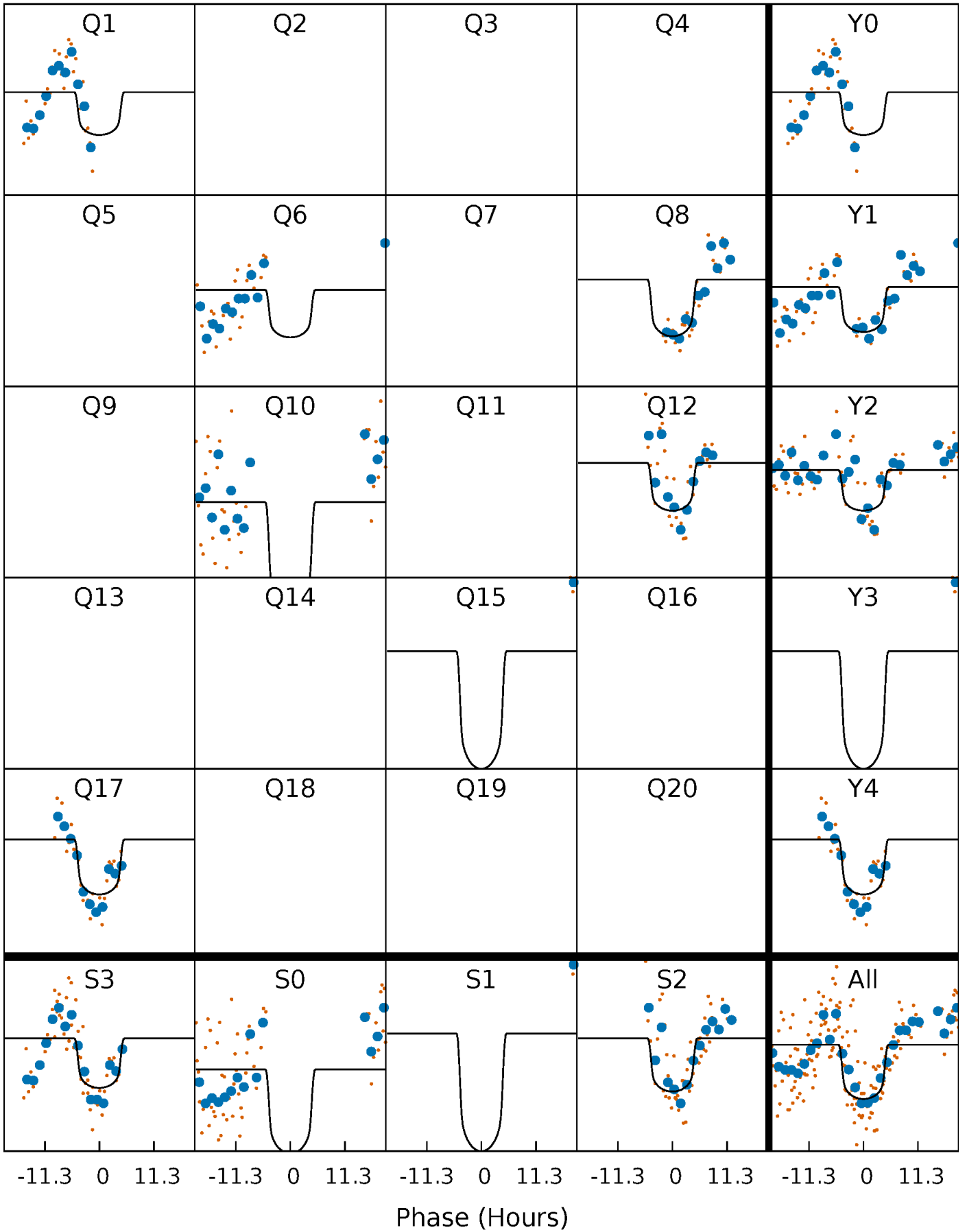
PDC Quarter-Phased Transit Curves

TCE 005476835-05 $P=204.606824$ Days $T_0=145.098458$ (BKJD)



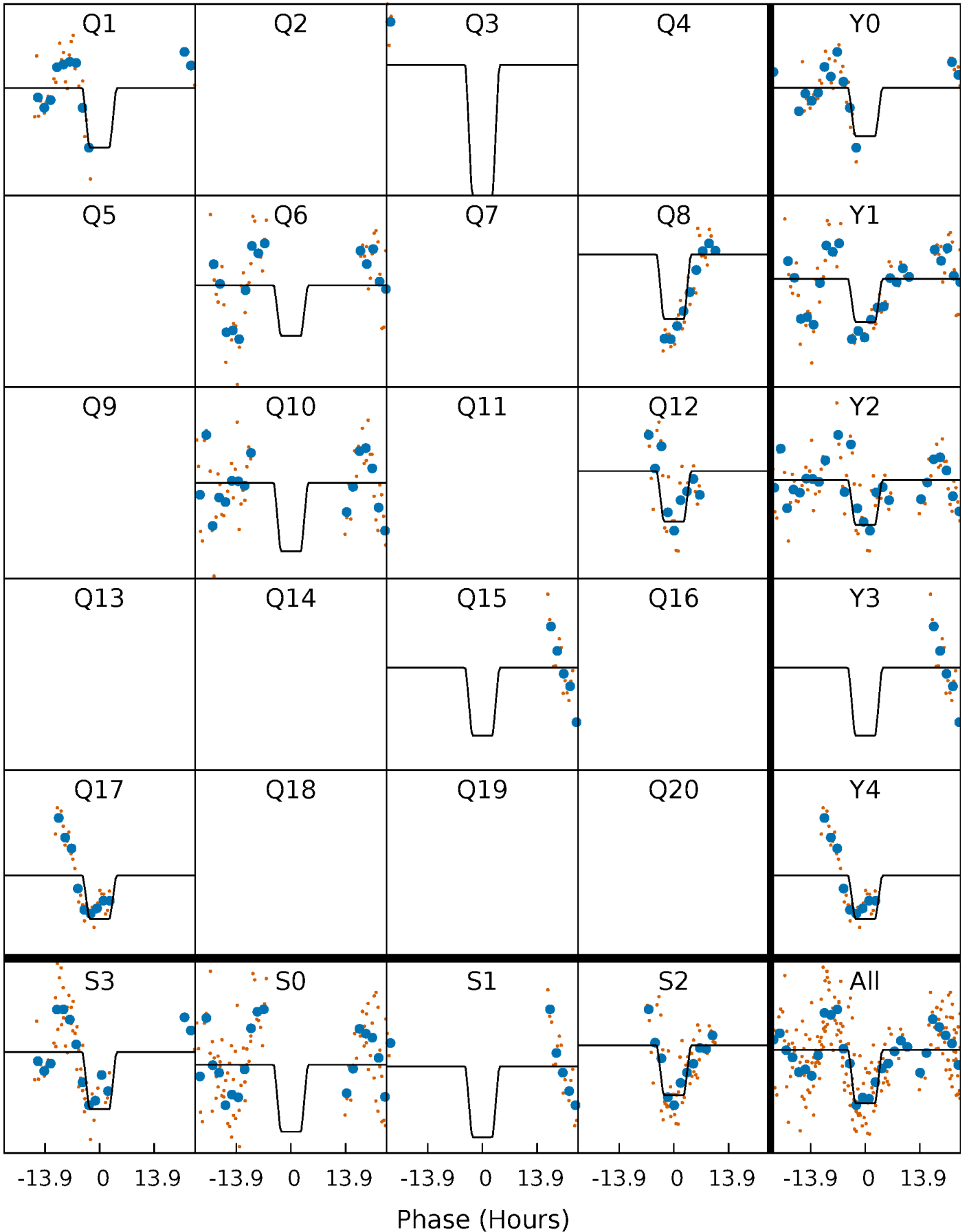
DV Quarter-Phased Transit Curves

TCE 005476835-05 $P=204.606824$ Days $T_0=145.098458$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

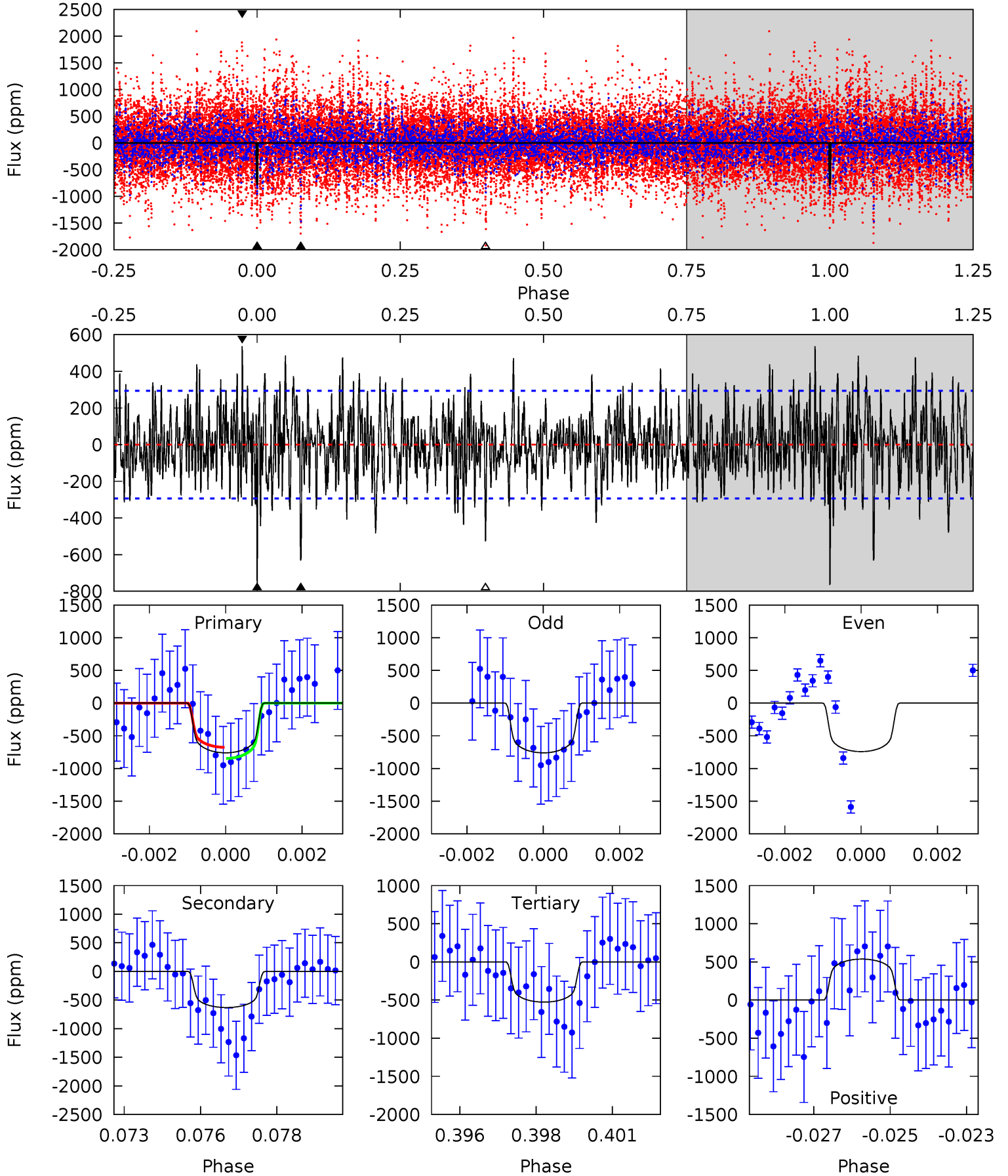
TCE 005476835-05 $P=204.613446$ Days $T_0=145.134902$ (BKJD)



DV Model-Shift Uniqueness Test

005476835-05, P = 204.606824 Days, E = 145.098458 Days

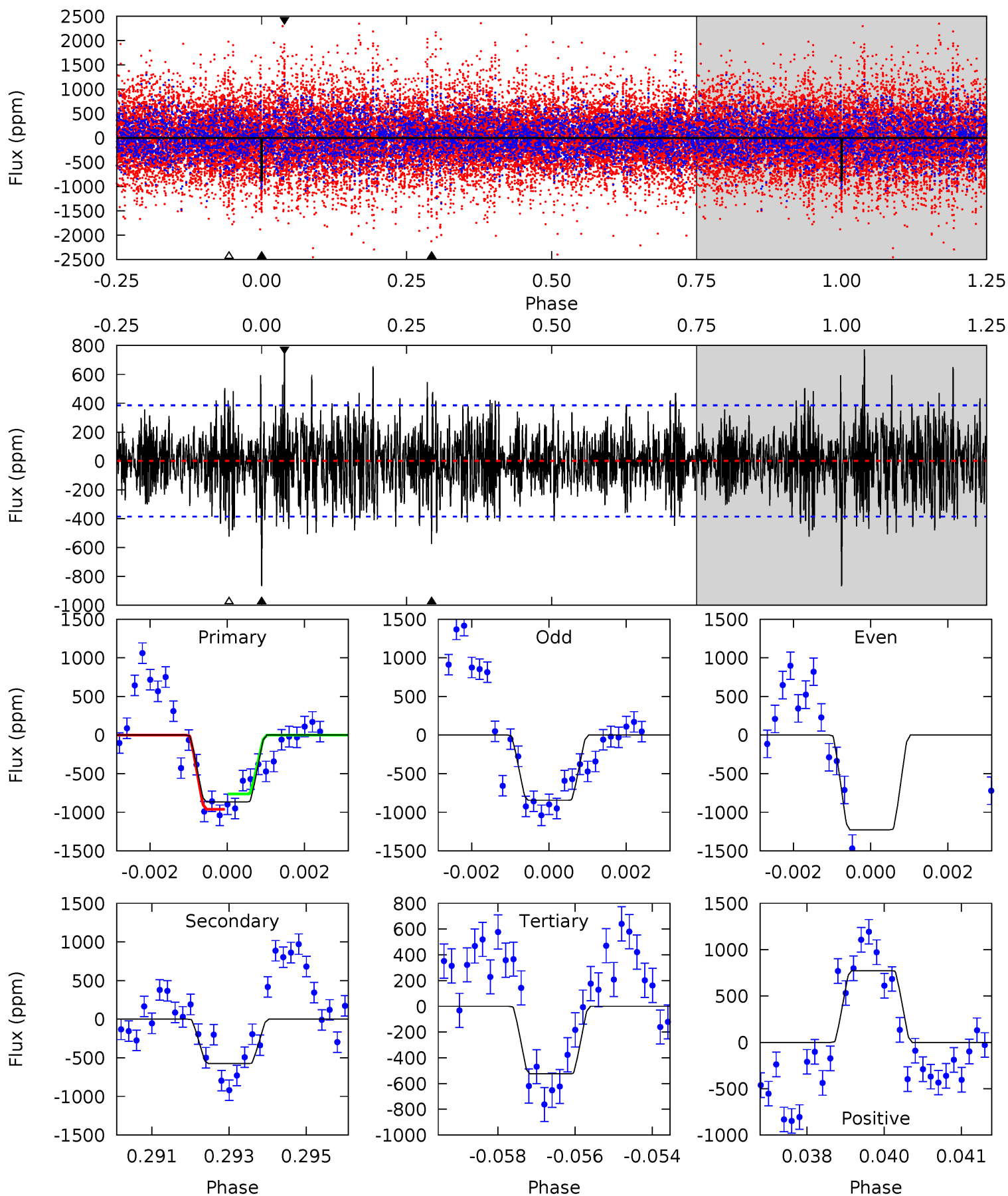
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.8	11.4	9.54	9.72	5.32	3.08	2.76	4.22	4.05	1.88	1.70	0.11	0.95	0.41	1.53



Alt Model-Shift Uniqueness Test

005476835-05, P = 204.613446 Days, E = 145.134902 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.0	7.96	7.27	10.7	5.35	3.12	2.38	4.74	1.30	0.69	-2.75	1.47	1.01	0.47	1.37



Stellar Parameters For KIC 005476835

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6102^{+184}_{-220}	$4.449^{+0.056}_{-0.224}$	$-0.060^{+0.250}_{-0.300}$	$1.018^{+0.341}_{-0.114}$	$1.058^{+0.151}_{-0.135}$	$1.413^{+0.408}_{-0.746}$
	+3%/-4%	+1%/-5%	+417%/-500%	+33%/-11%	+14%/-13%	+29%/-53%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 005476835-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-631 ± 55	$3.52^{+0.71}_{-0.61}$	466^{+34}_{-24}	5586^{+468}_{-396}	13382^{+5986}_{-4389}
Alt.	-574 ± 72	$3.61^{+0.79}_{-0.62}$	466^{+37}_{-25}	5389^{+429}_{-380}	11351^{+5236}_{-3727}

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

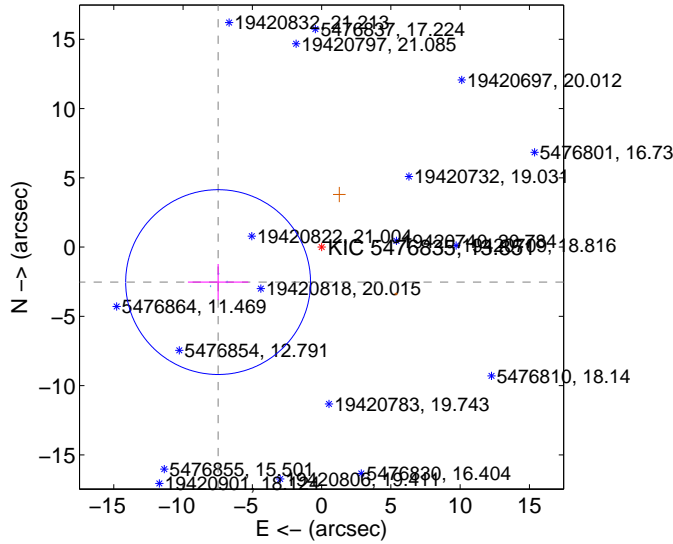
Supplemental centroid analysis for 005476835-05. Kepler magnitude: 13.85. Transit SNR 8.57

There are 3 quarters with good PRF difference image offsets

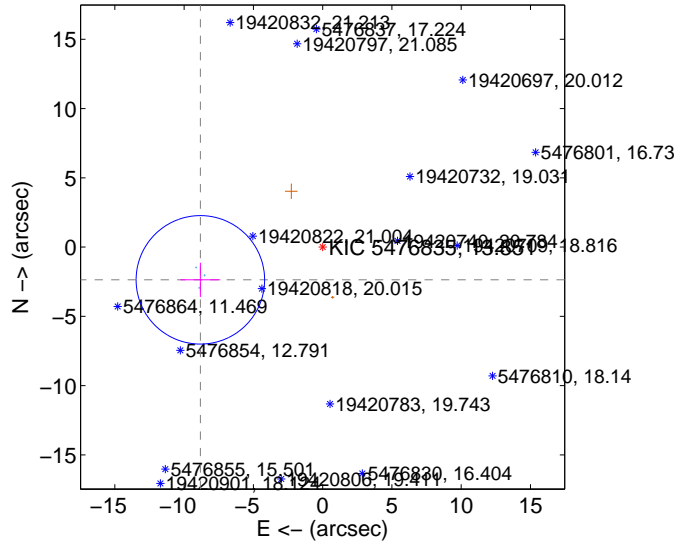
The direct PRF centroid is offset from the target star catalog position by about 1.77 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.888 ± 2.224	3.55	7.473 ± 2.184	-2.526 ± 1.304
PRF-fit source offset from KIC position	9.140 ± 1.546	5.91	8.829 ± 1.445	-2.364 ± 1.235
photometric centroid source offset	3.44 ± 0.83	4.13	3.37 ± 0.84	-0.71 ± 0.65

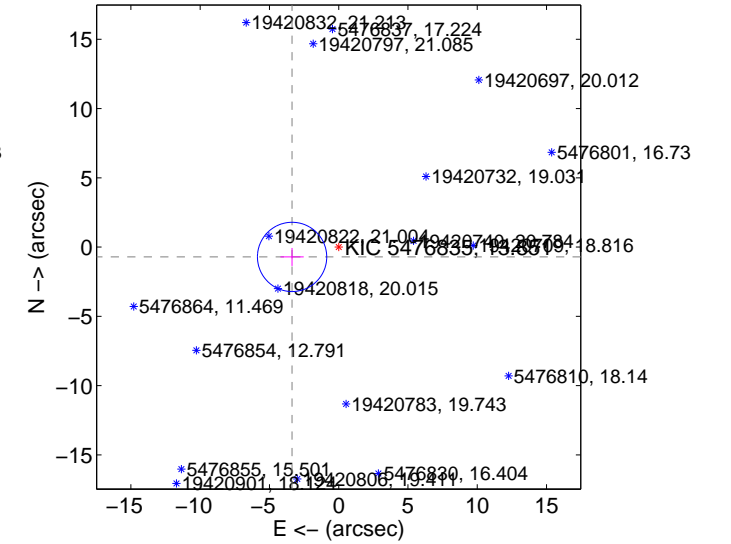
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

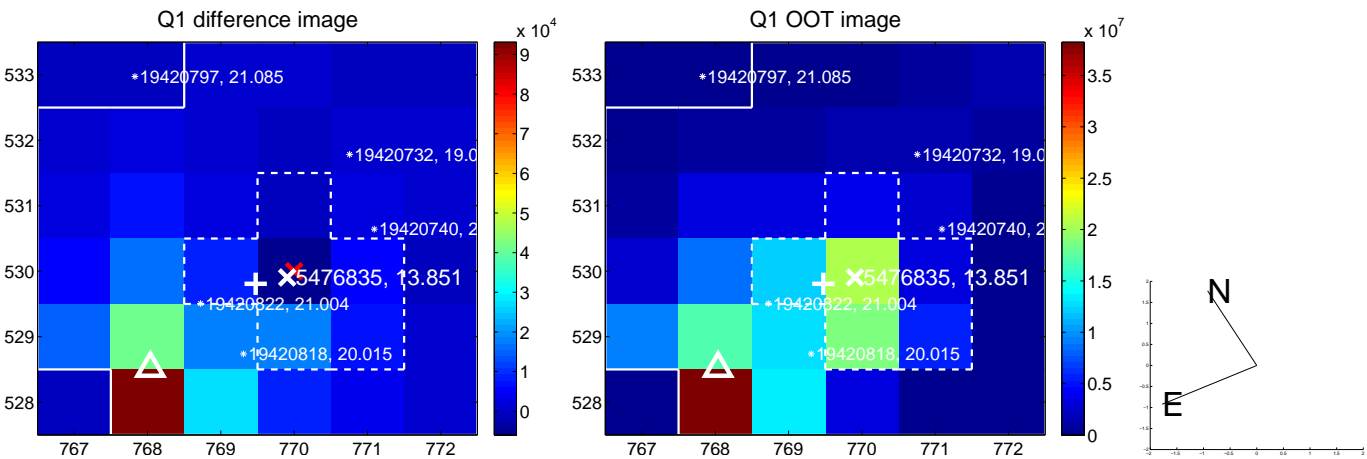


offset from photometric centroids

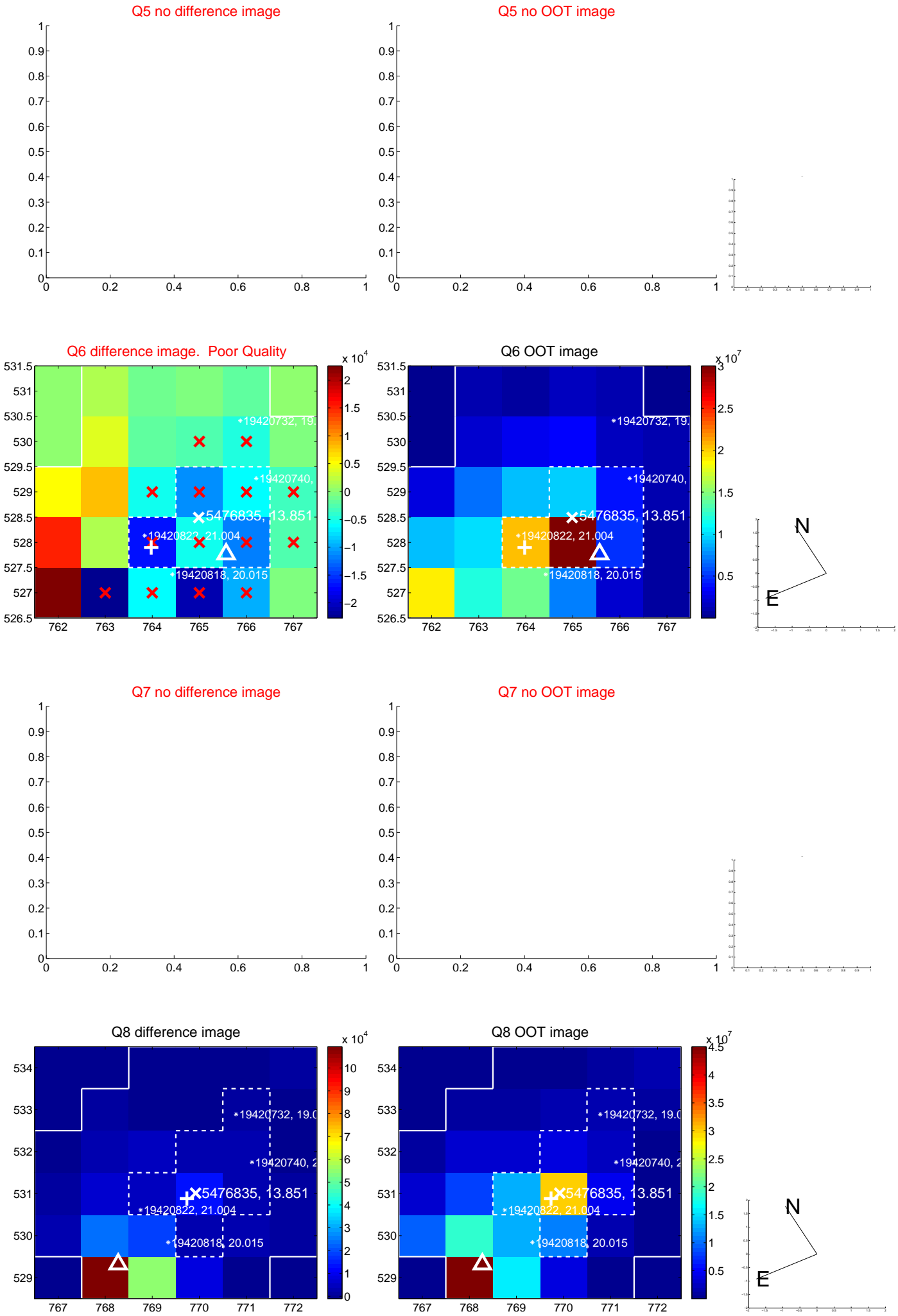


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

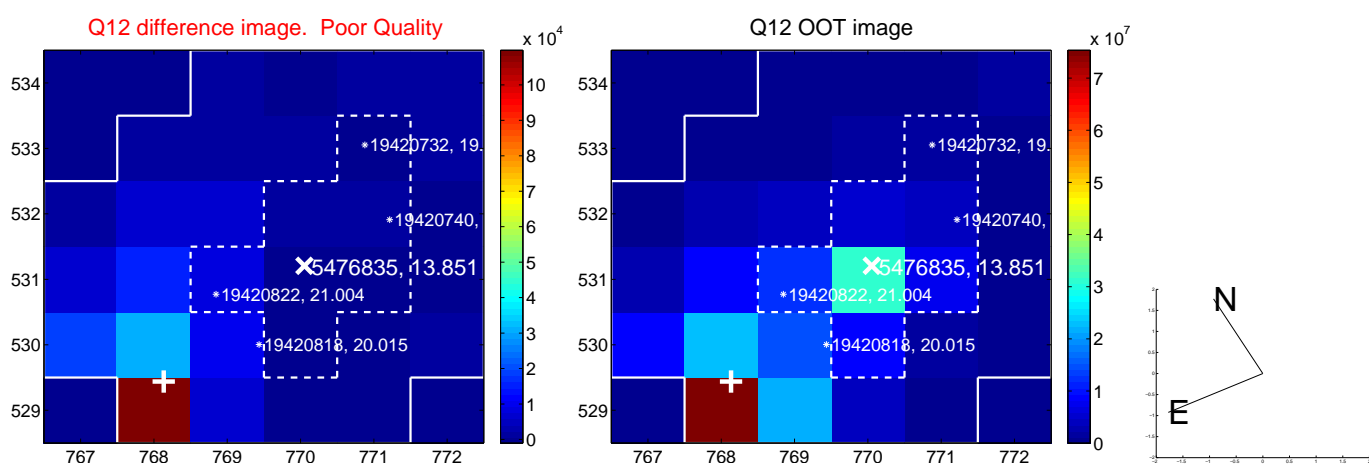
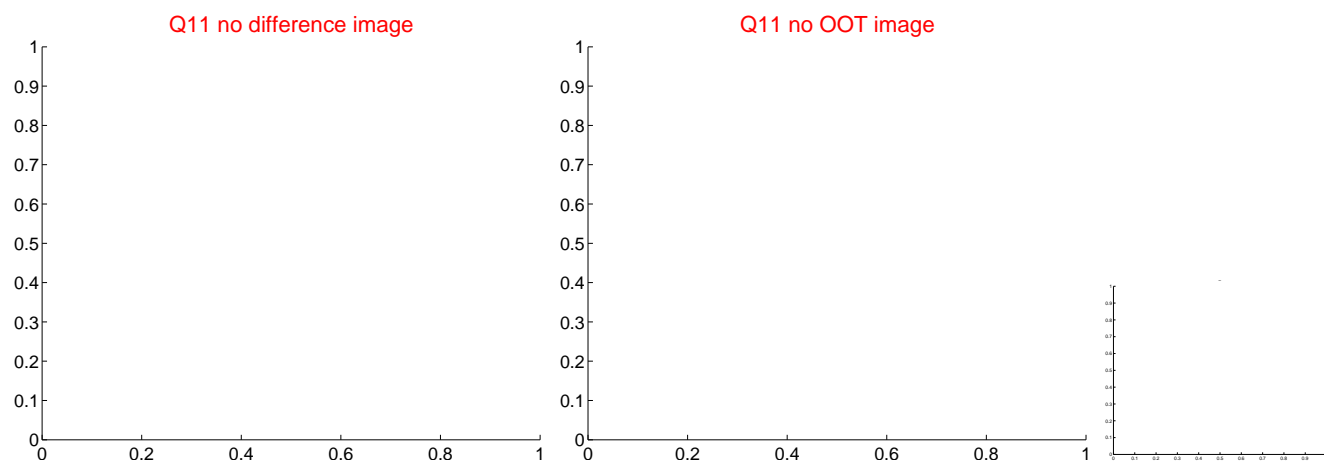
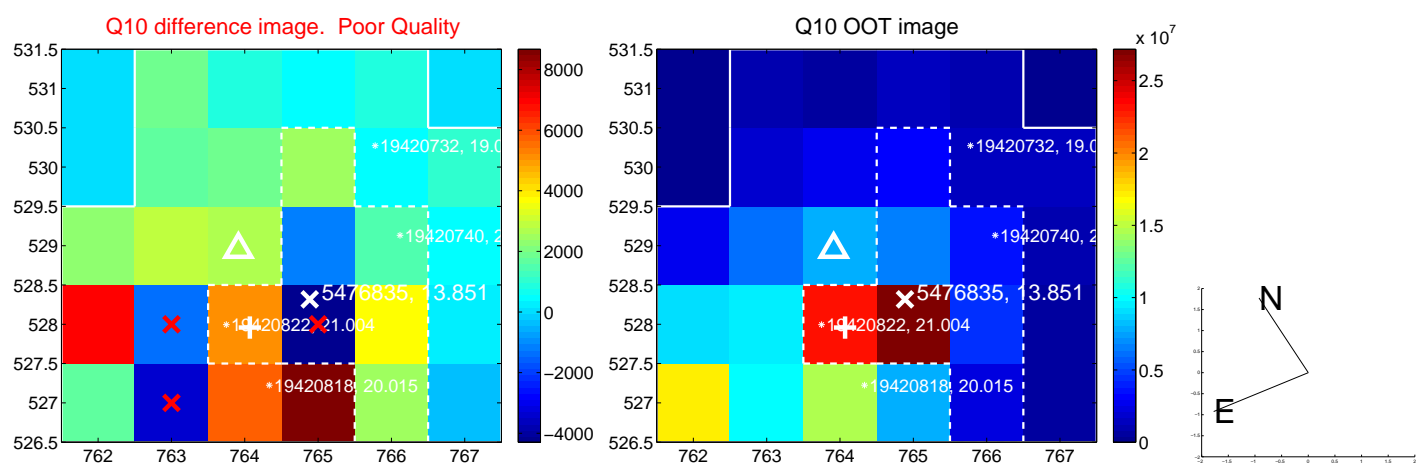
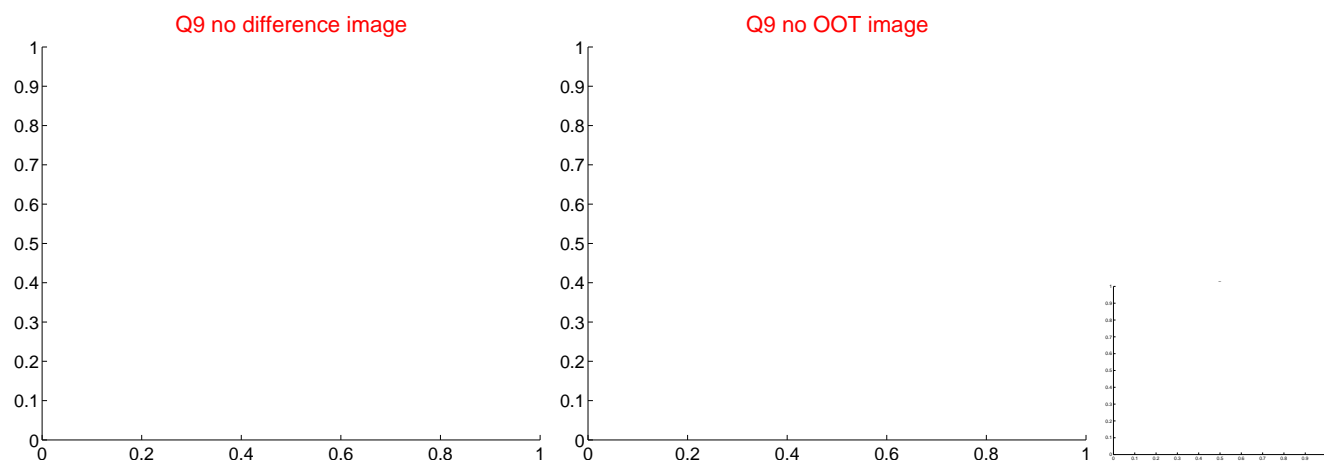
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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



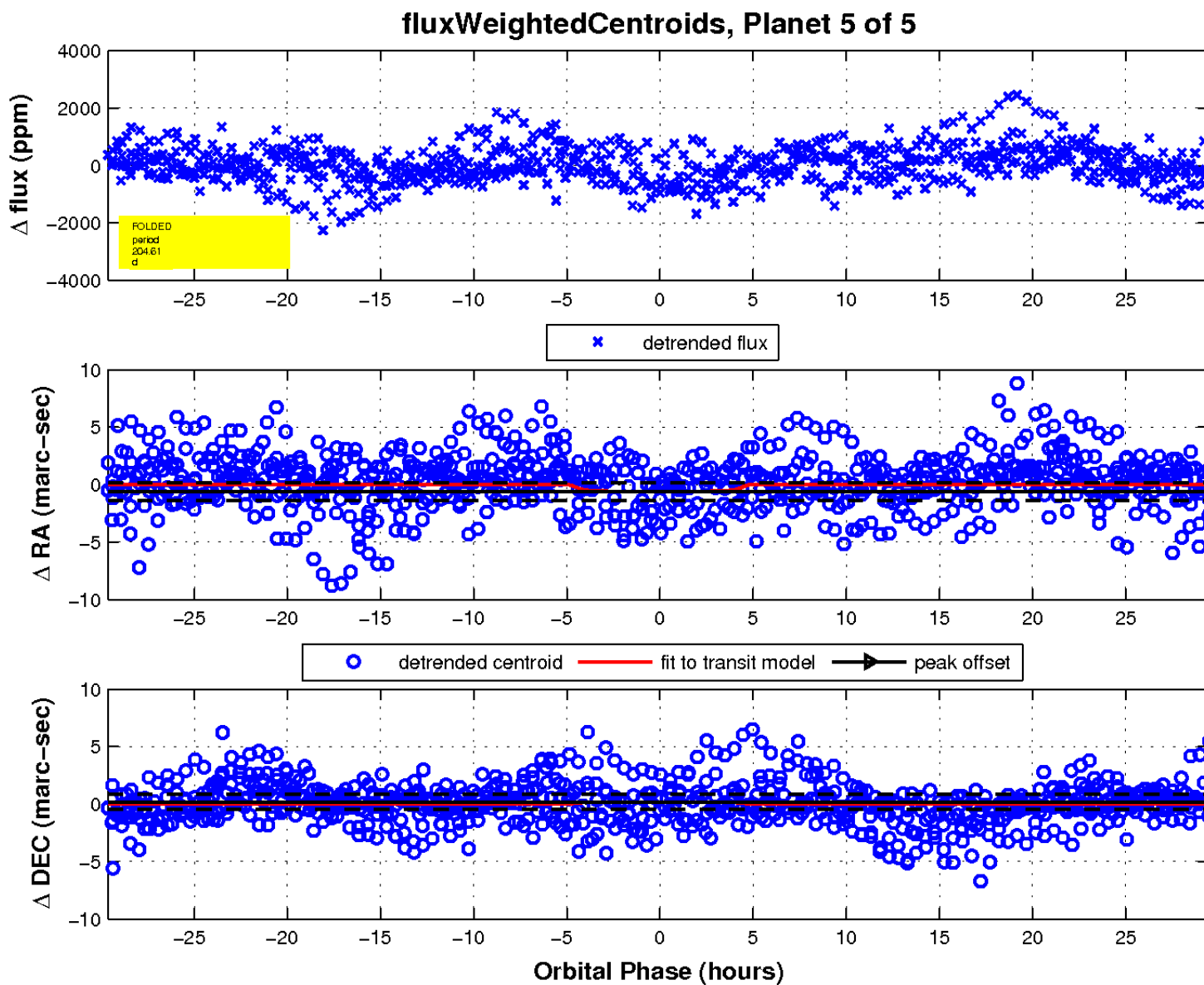
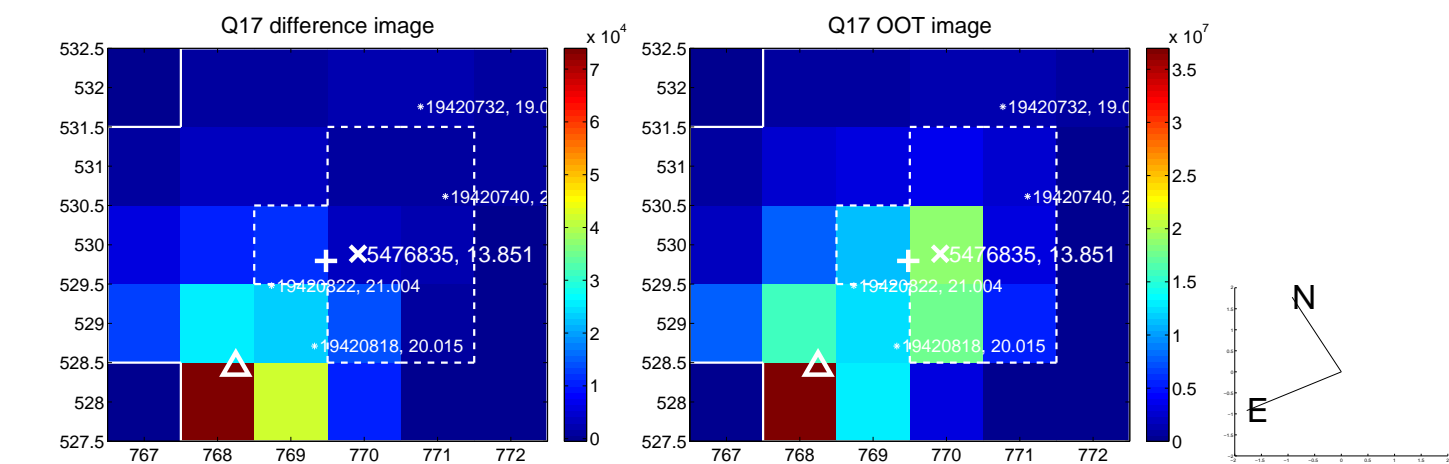
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UKIRT Image

Declination

