

KIC 006205483

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})
006205483-01	OBS	No	3.722839	134.632504	96.0	10.630	12.2	12.3	1.25	6468	1.55	923.45
006205483-02	OBS	No	443.310633	425.394094	1499.0	39.110	20.4	12.1	1.25	6468	9.09	1.58

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006205483-01	OBS	FP	0.00	1	0	1	1	LPP_DV—CENT_RESOLVED_OFFSET—HALO_GHOST—EPHEM_MATCH
006205483-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS—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.

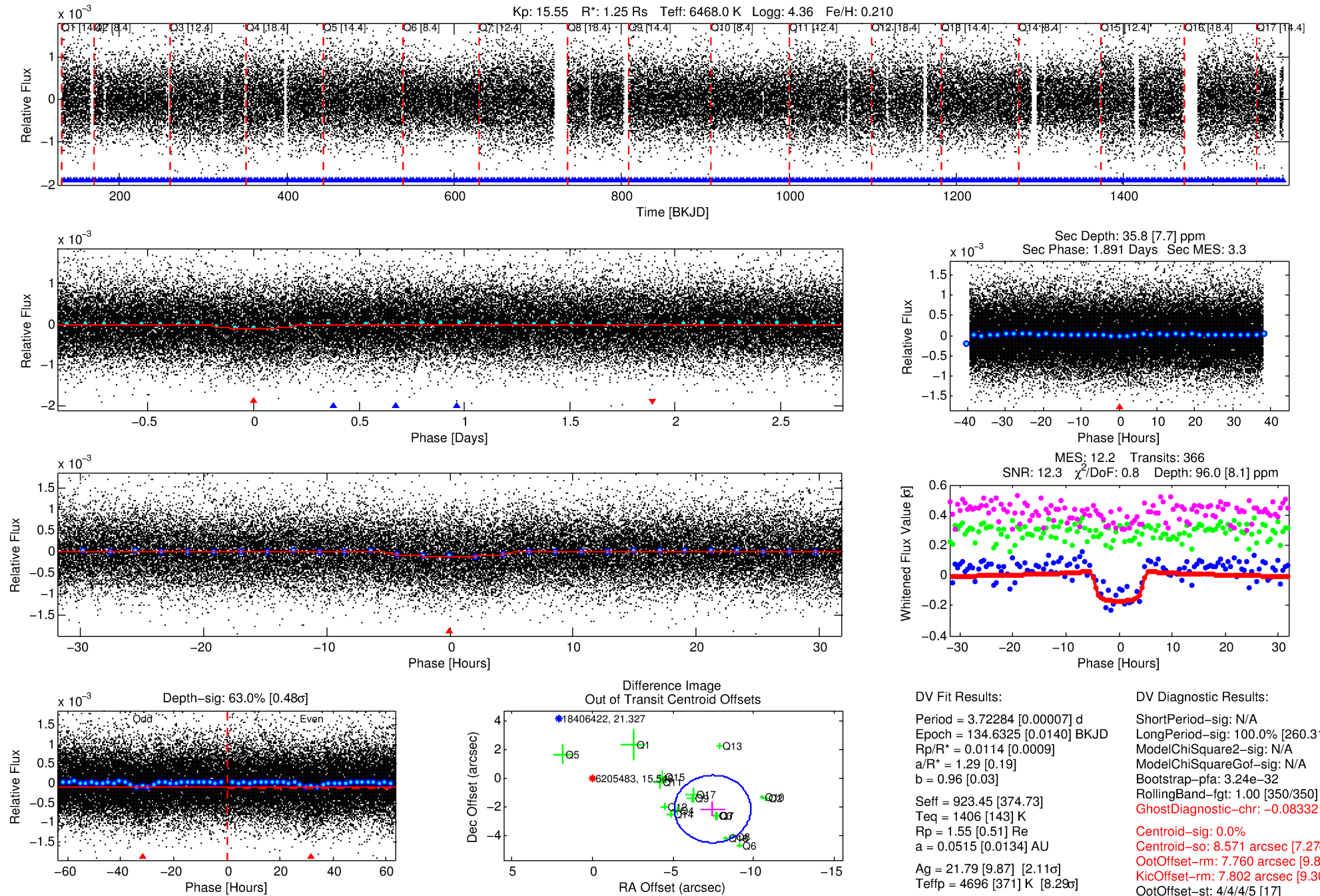
Ephemeris Match Information For 006205483-01

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
006205483-01	6205483	006205460-pri	6205460	1:1	45.8	7	10	12.75	15.55	6487.50	Direct-PRF	0	0.10	0.40

Notes: $P_1:P_2$ 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. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 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

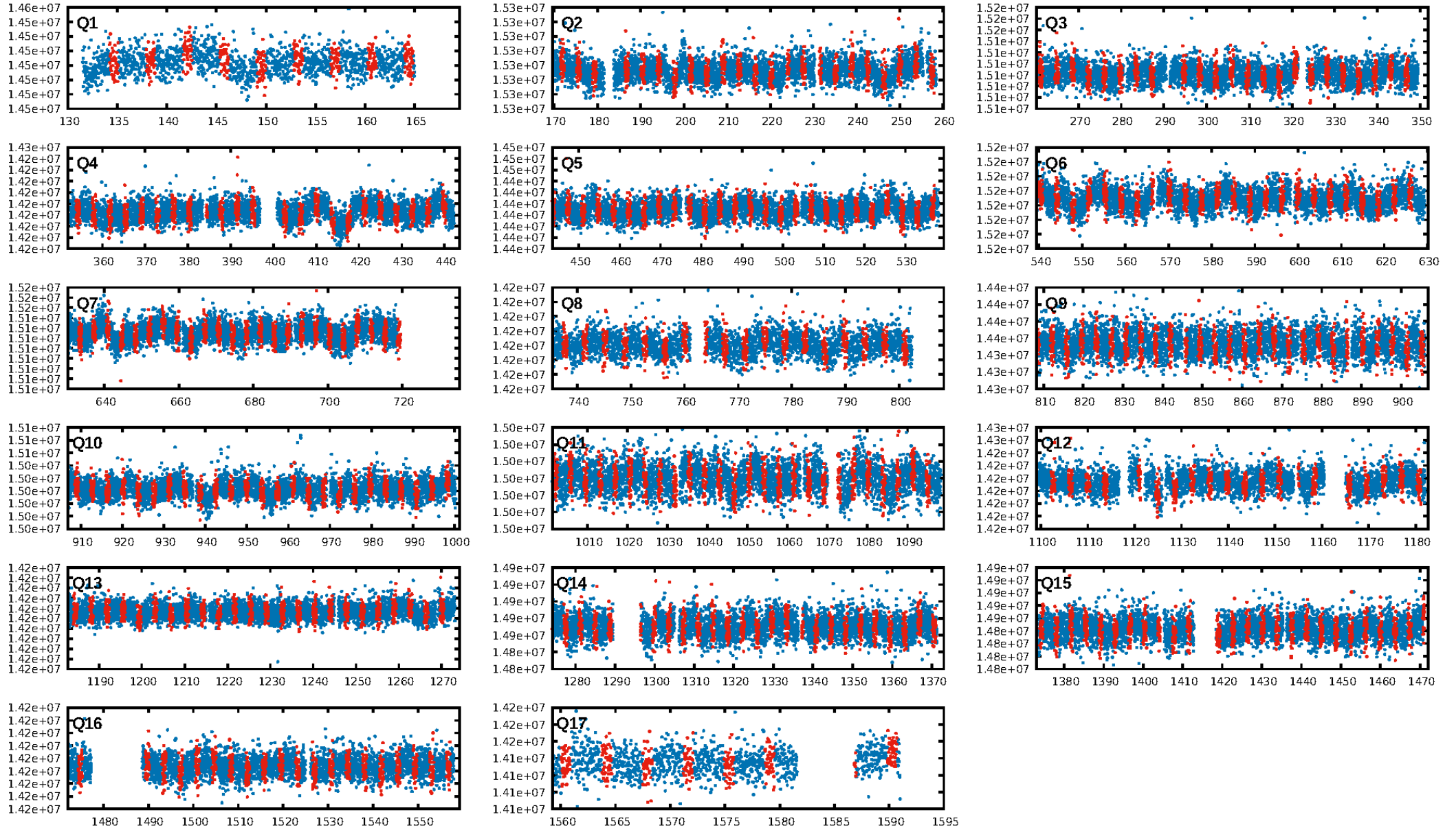
KIC: 6205483 Candidate: 1 of 2 Period: 3.723 d



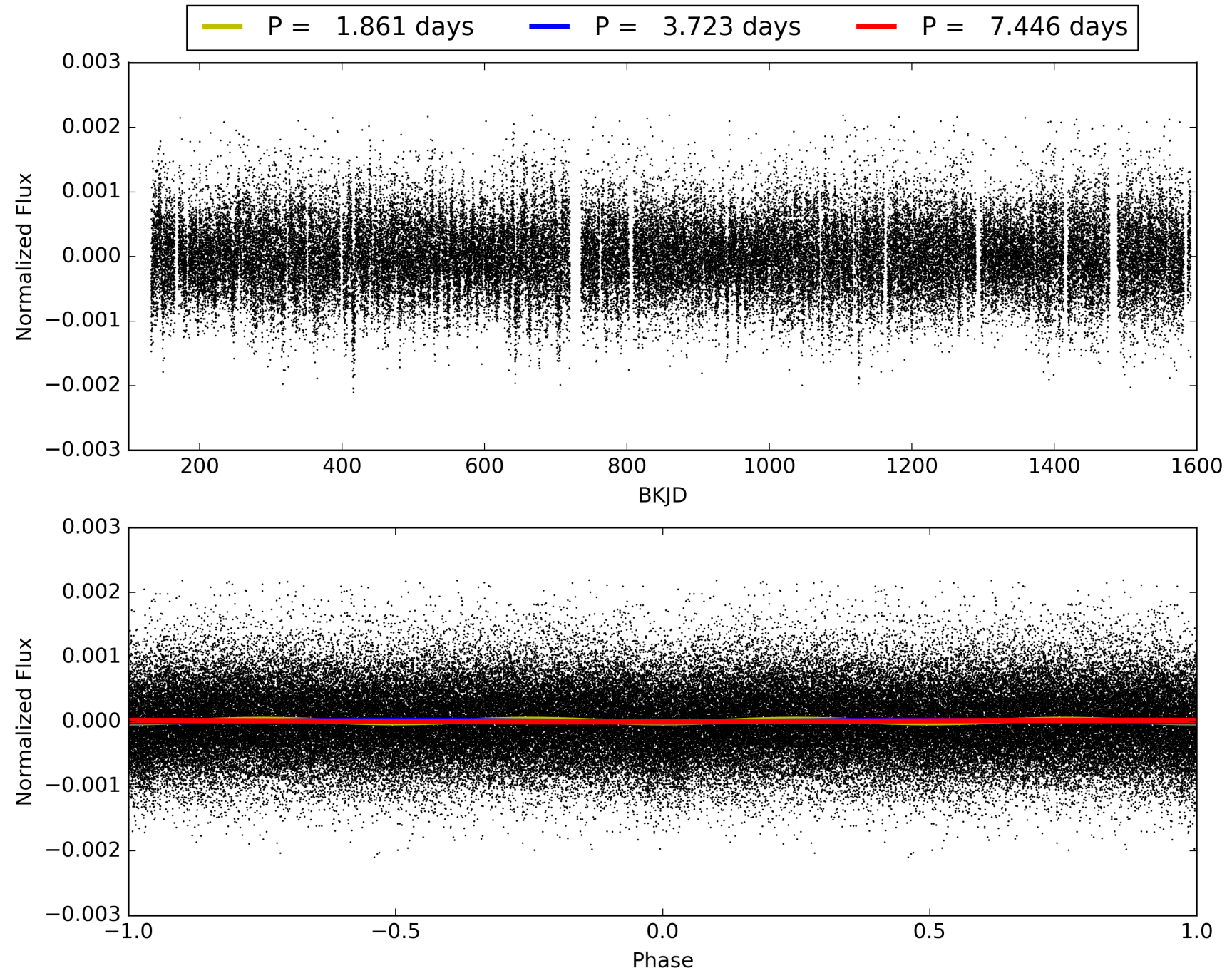
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 20:36:33 Z

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

TCE 006205483-01, PDC Light Curves

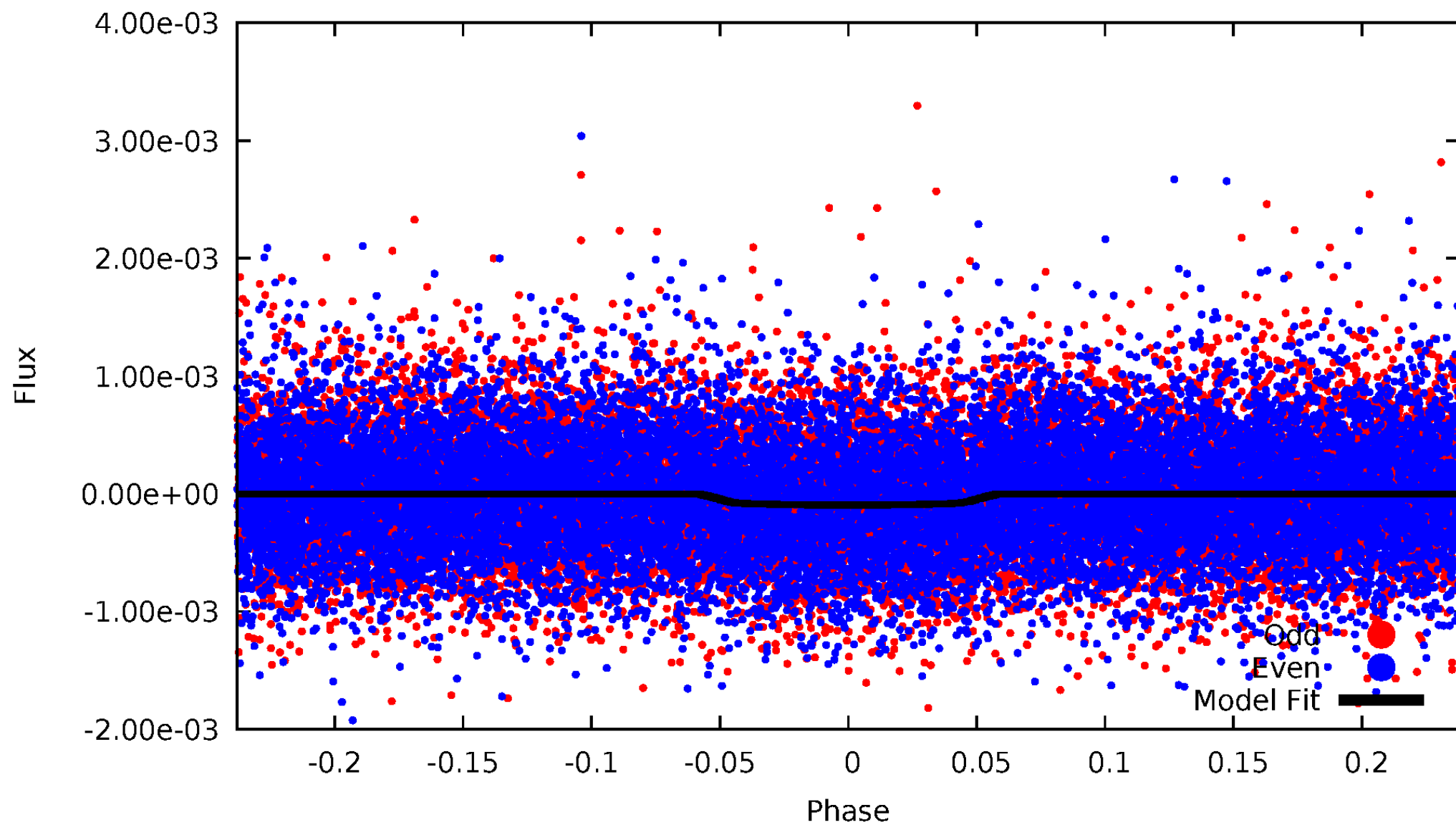


TCE 006205483-01



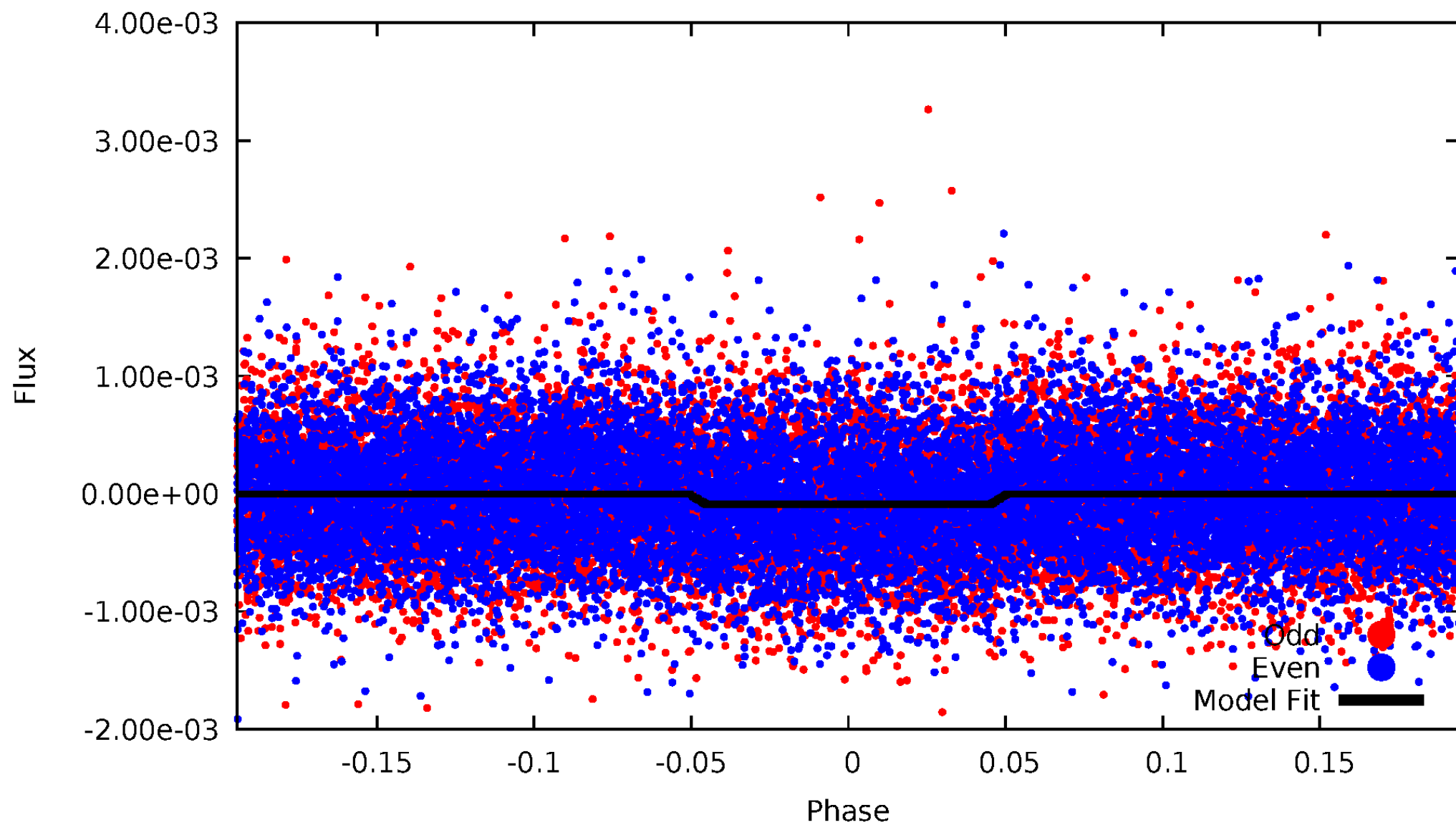
DV Odd/Even

TCE 006205483-01



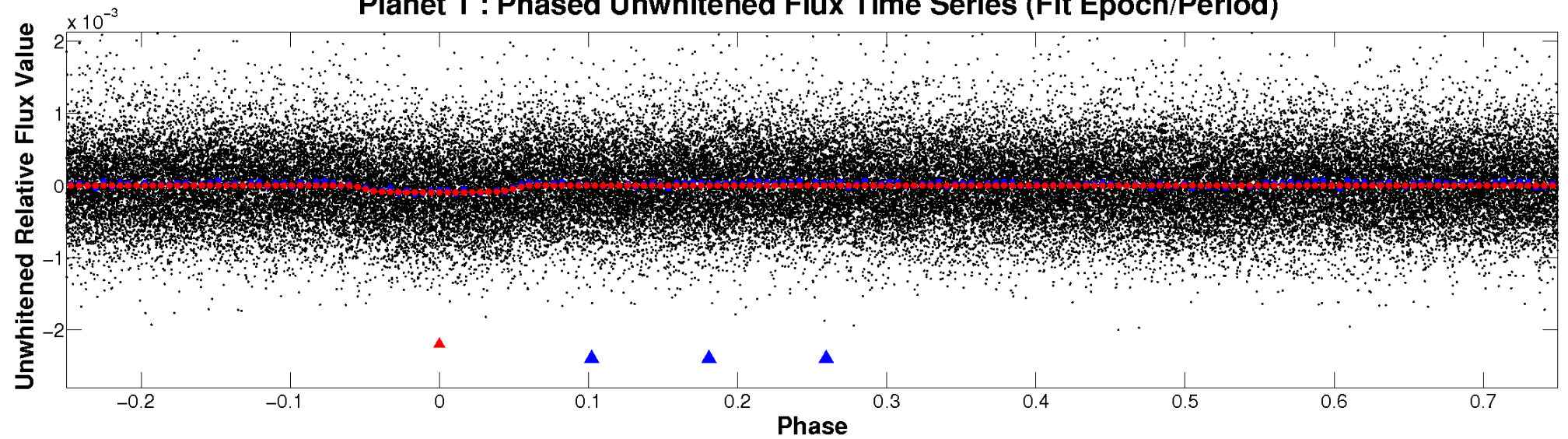
ALT Odd/Even

TCE 006205483-01

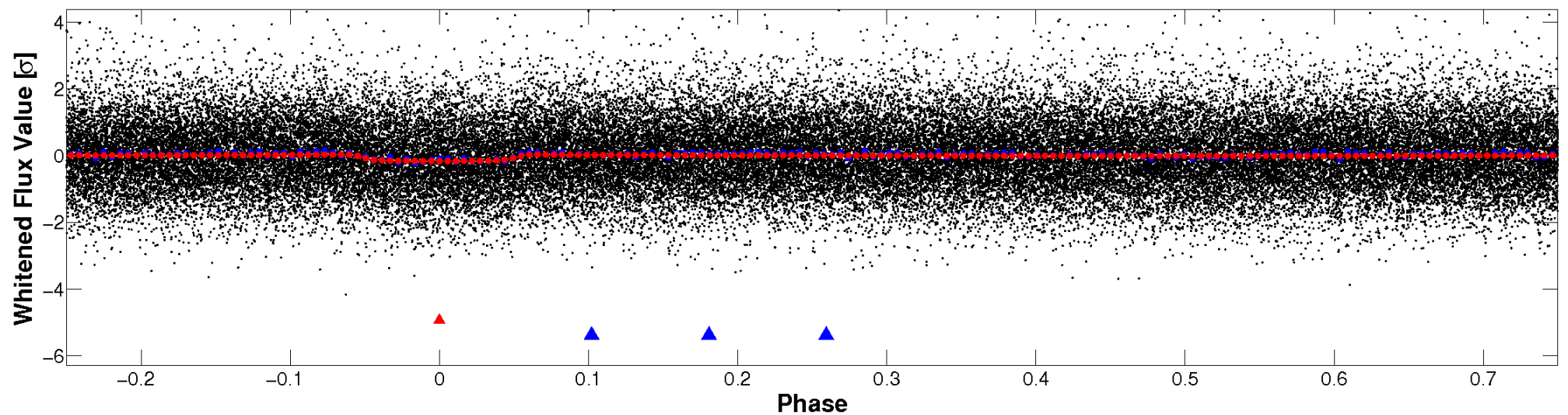


Non-Whitened Vs. Whitened Light Curve

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

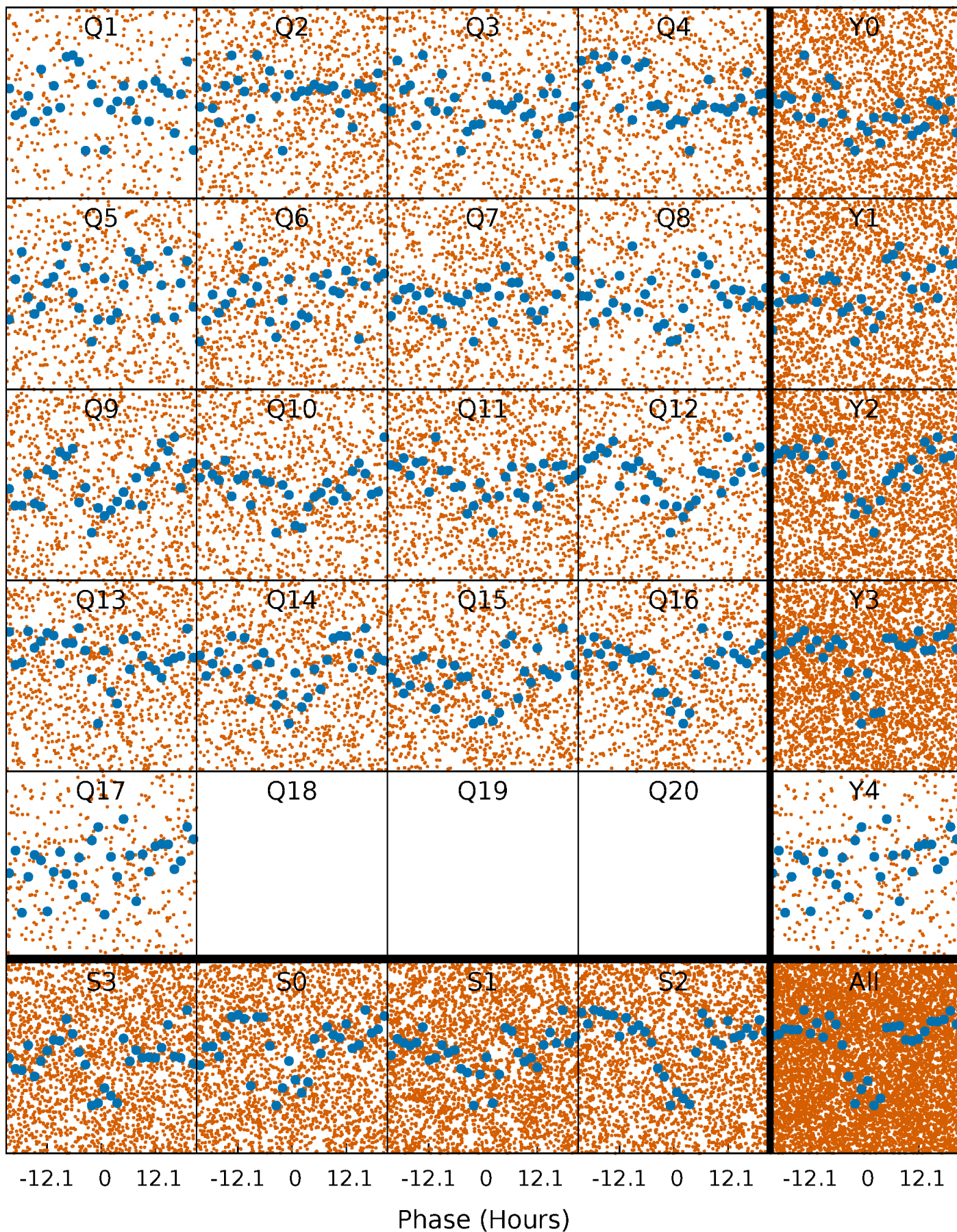


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



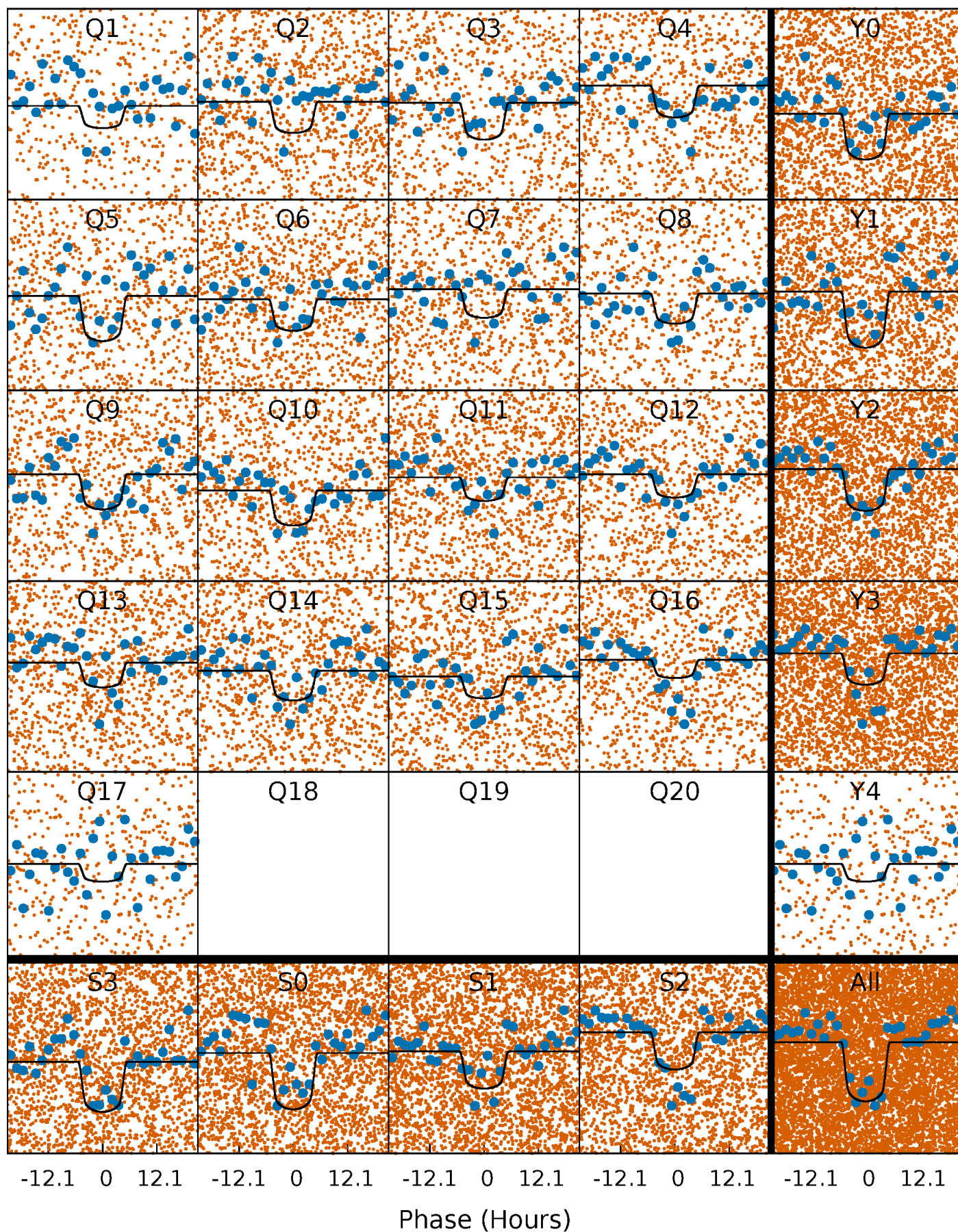
PDC Quarter-Phased Transit Curves

TCE 006205483-01 P= 3.722839 Days $T_0=134.632504$ (BKJD)



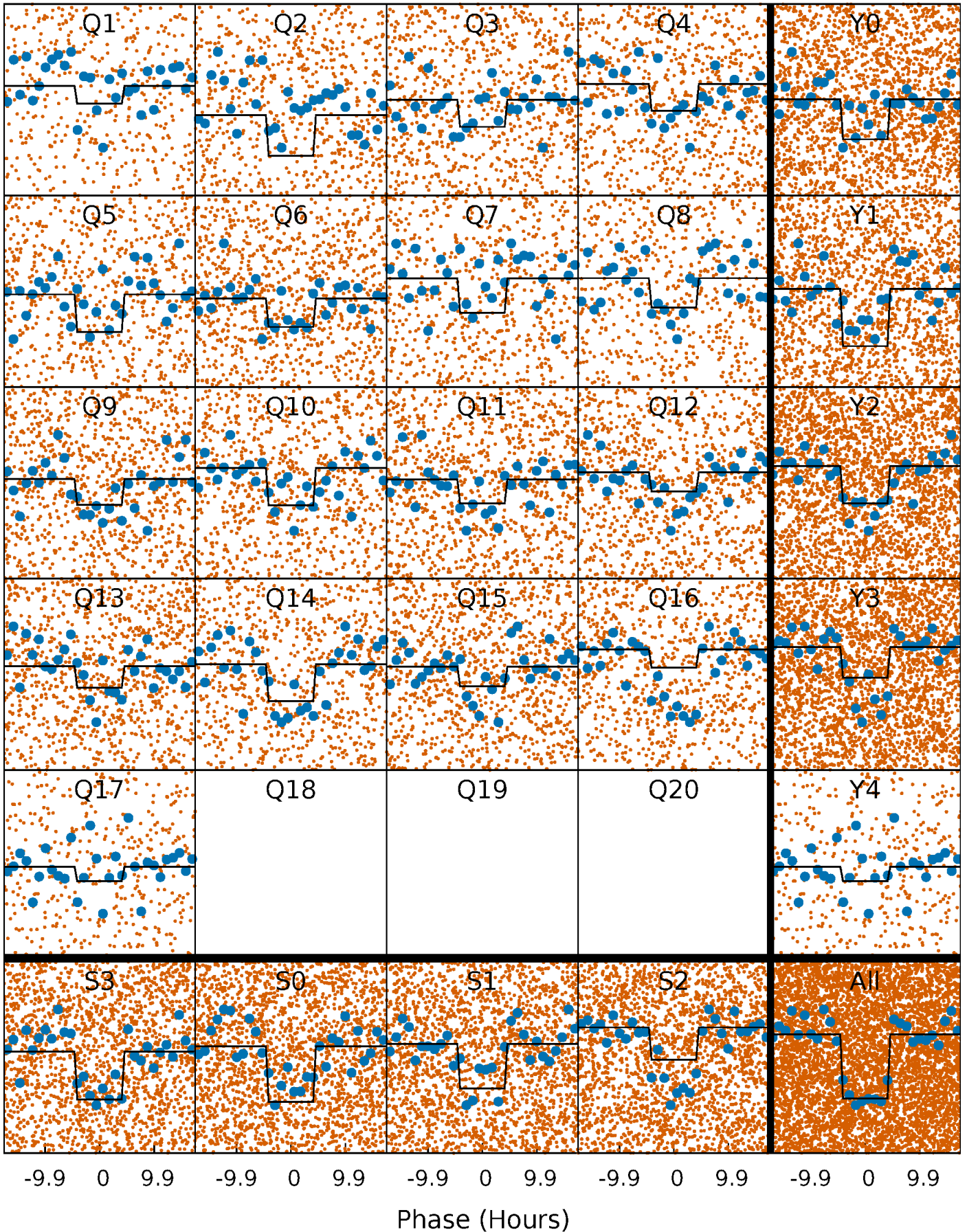
DV Quarter-Phased Transit Curves

TCE 006205483-01 P= 3.722839 Days $T_0=134.632504$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

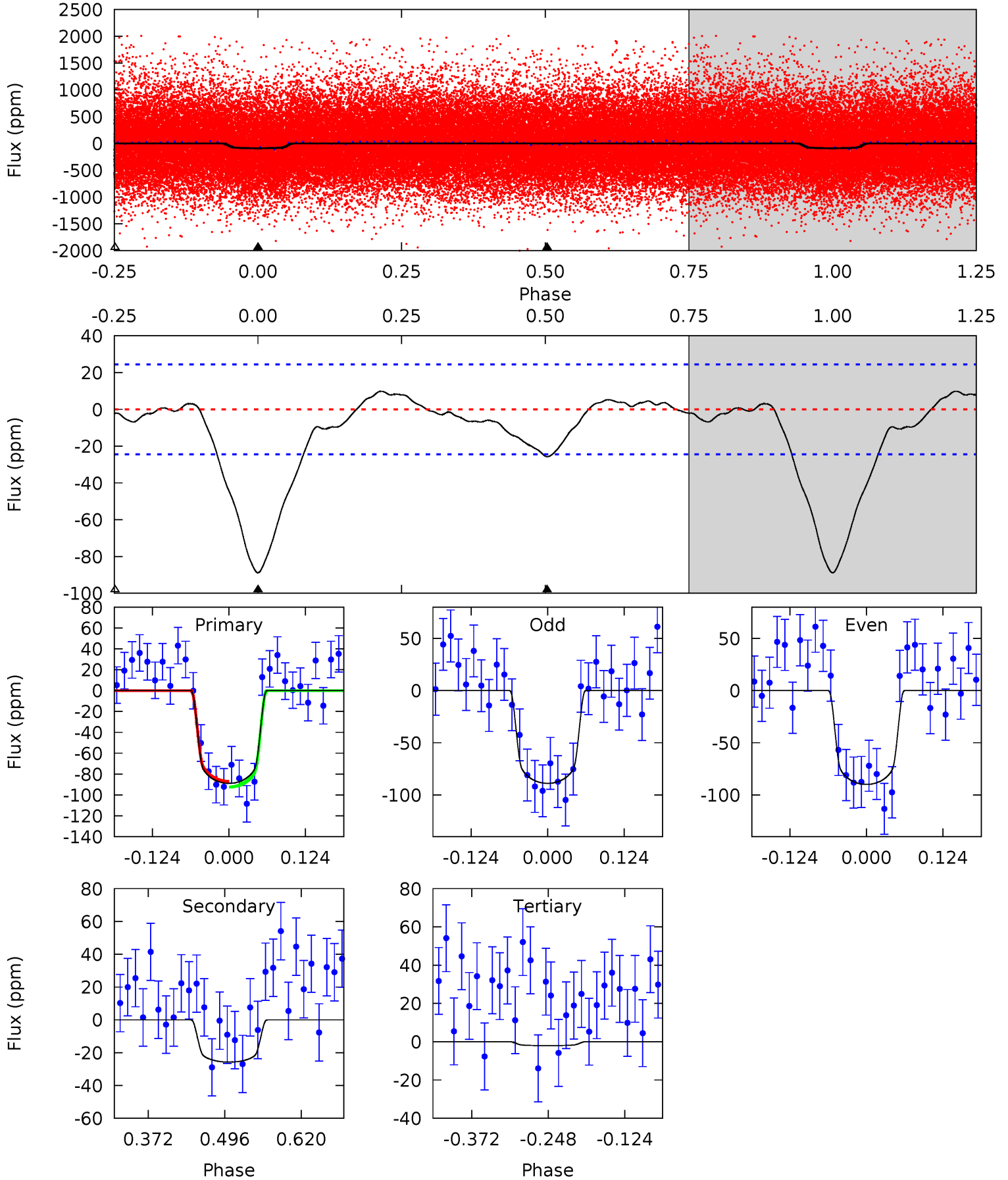
TCE 006205483-01 P= 3.722837 Days $T_0=134.637863$ (BKJD)



DV Model-Shift Uniqueness Test

006205483-01, P = 3.722839 Days, E = 130.909665 Days

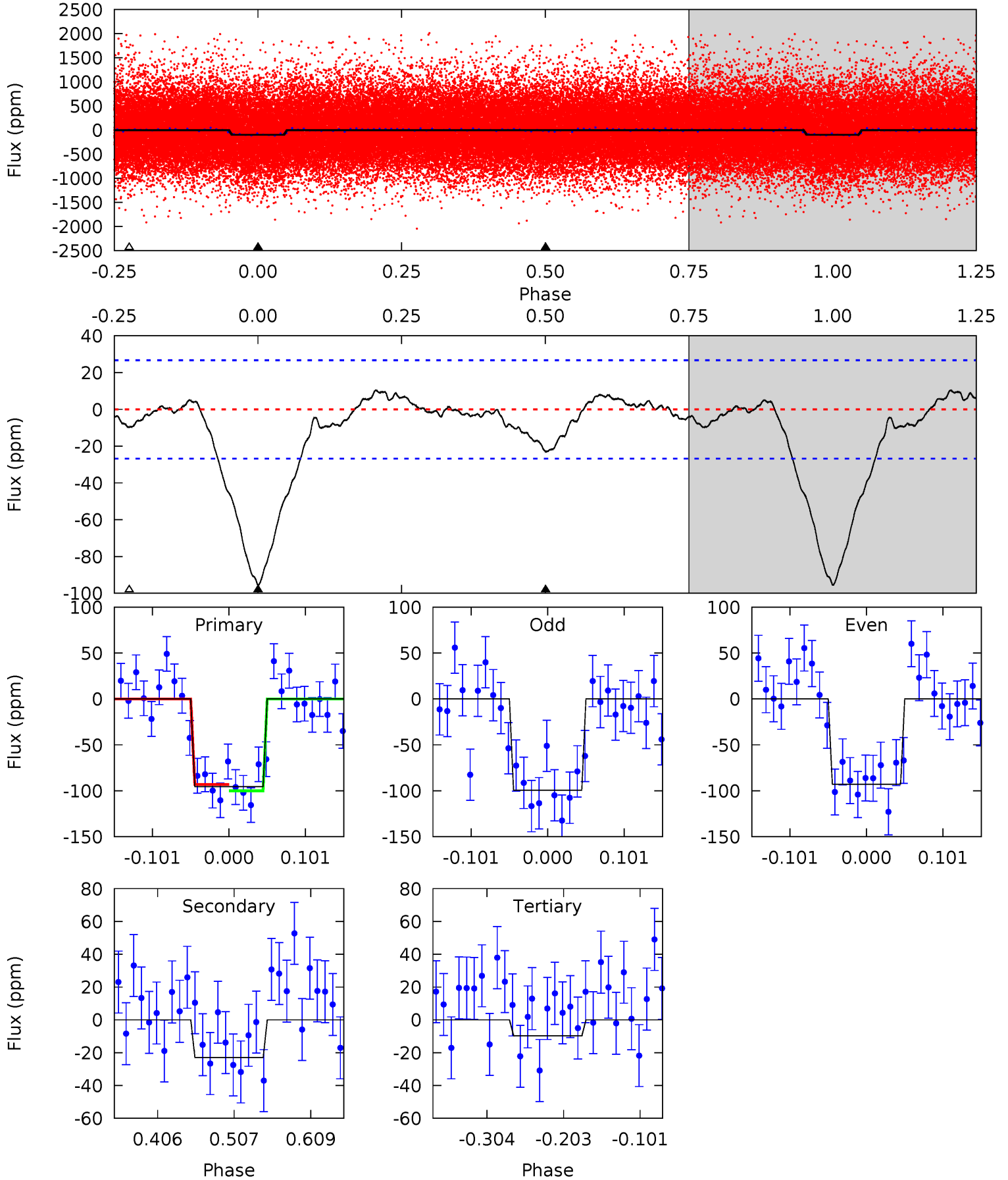
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.4	4.76	0.38	0	4.52	1.54	0.89	16.0	16.4	4.38	4.76	0.10	1.09	0.10	0.50



Alt Model-Shift Uniqueness Test

006205483-01, P = 3.722837 Days, E = 130.915026 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.3	3.93	1.65	0	4.56	1.64	0.85	14.7	16.3	2.28	3.93	0.56	1.09	0.10	0.59



Stellar Parameters For KIC 006205483

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6468^{+177}_{-278}	$4.363^{+0.065}_{-0.195}$	$0.210^{+0.200}_{-0.350}$	$1.250^{+0.400}_{-0.160}$	$1.313^{+0.163}_{-0.200}$	$0.948^{+0.278}_{-0.514}$
	+3%/-4%	+1%/-4%	+95%/-167%	+32%/-13%	+12%/-15%	+29%/-54%
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 006205483-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-26 ± 5	$1.60^{+0.26}_{-0.20}$	1993^{+151}_{-114}	4463^{+274}_{-270}	14^{+5}_{-4}
Alt.	-23 ± 6	$1.33^{+0.26}_{-0.18}$	1995^{+160}_{-103}	4682^{+351}_{-326}	18^{+8}_{-6}

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

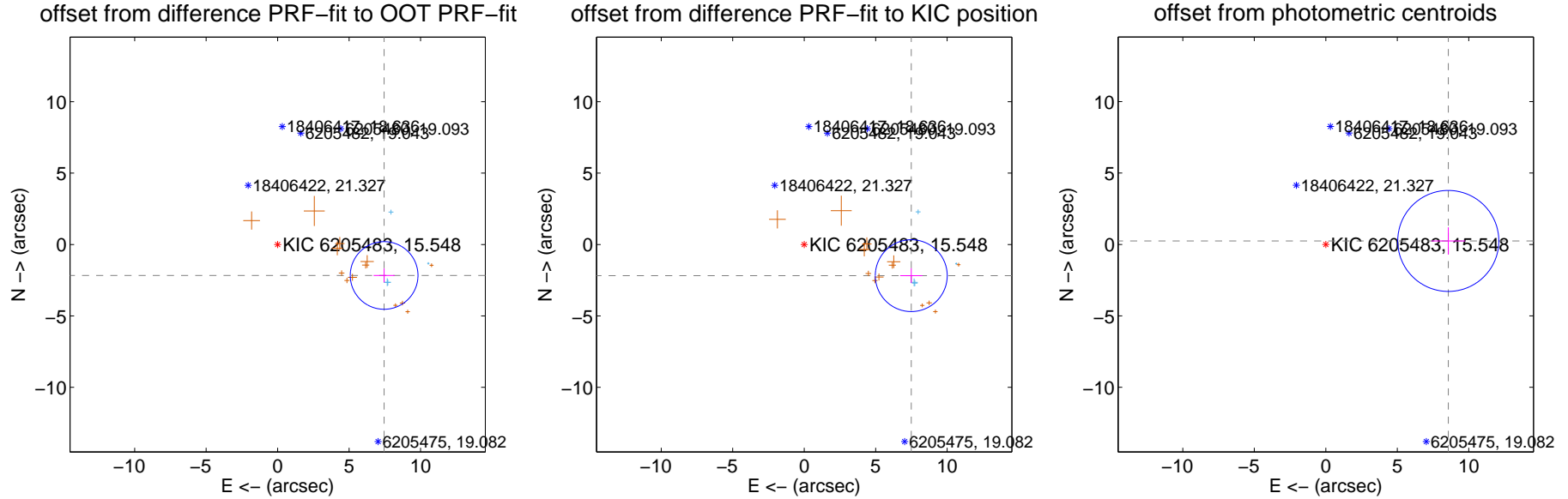
DV Centroid Data

Supplemental centroid analysis for 006205483-01. Kepler magnitude: 15.55. Transit SNR 12.27

There are 4 quarters with good PRF difference image offsets

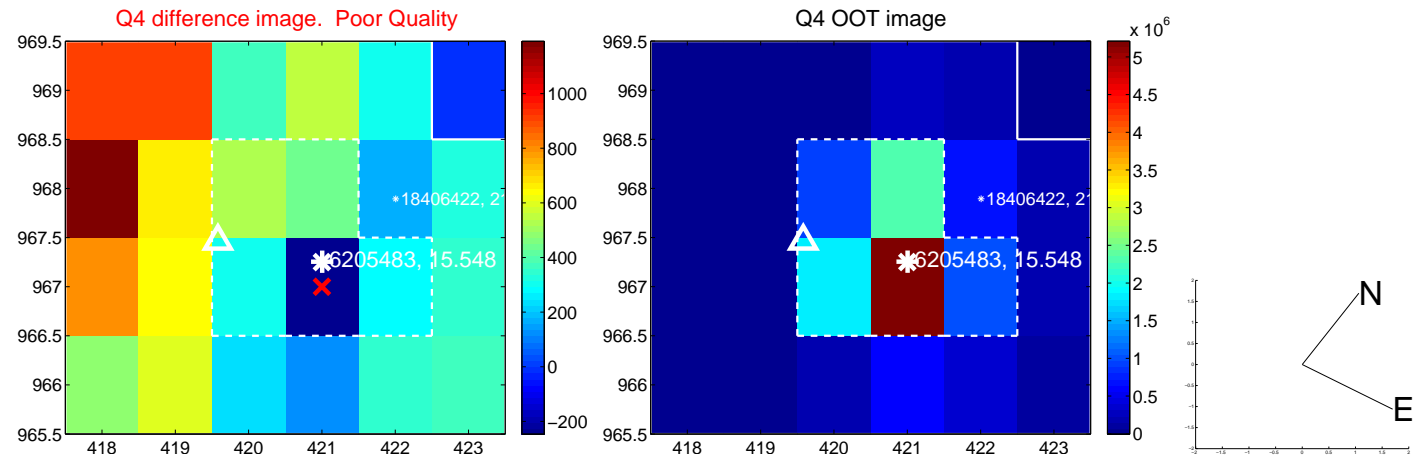
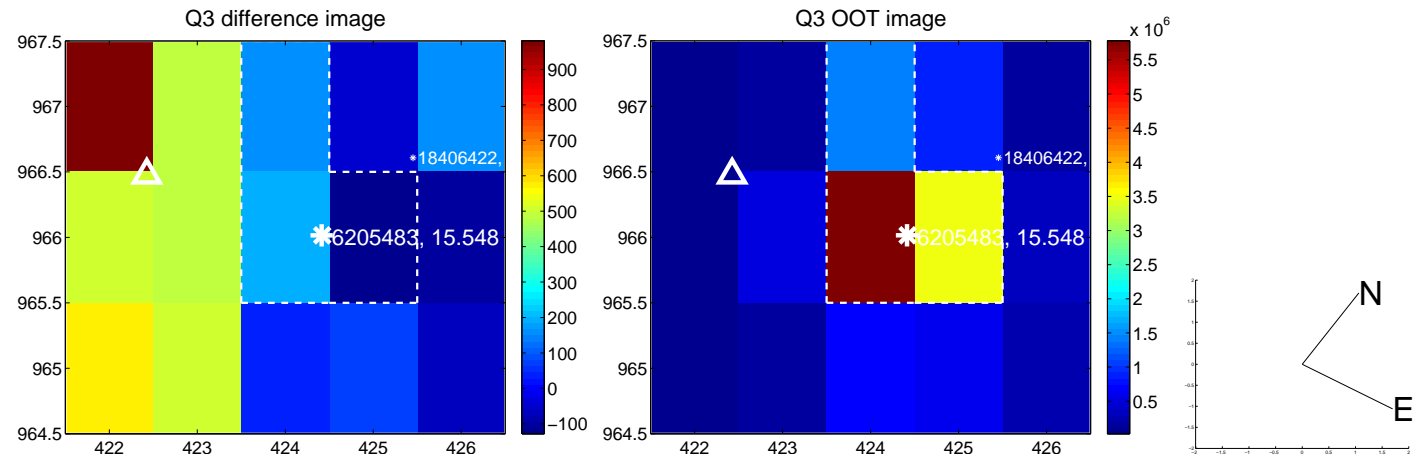
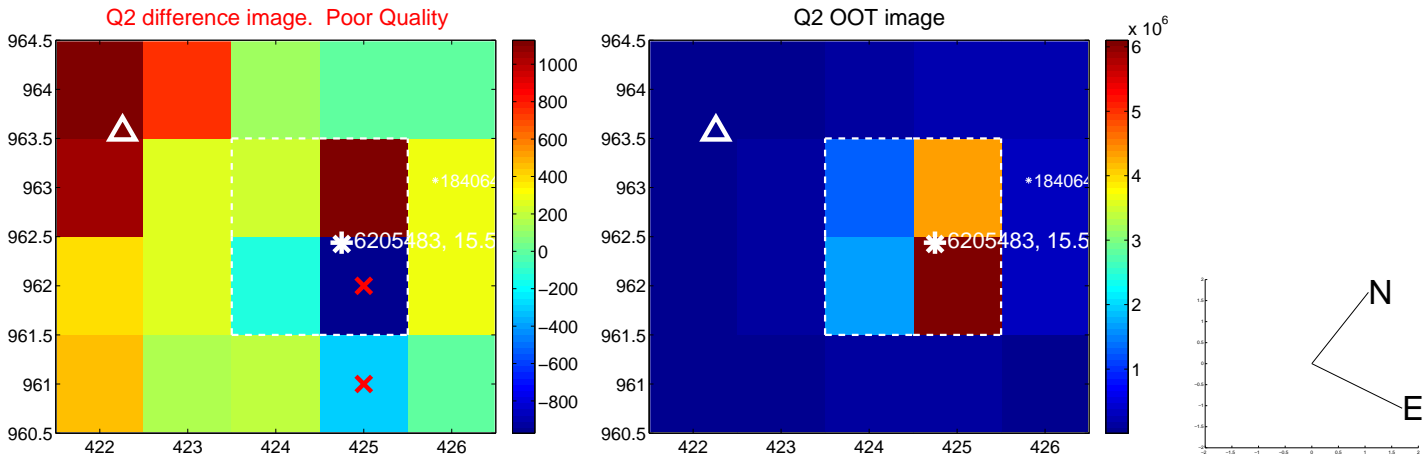
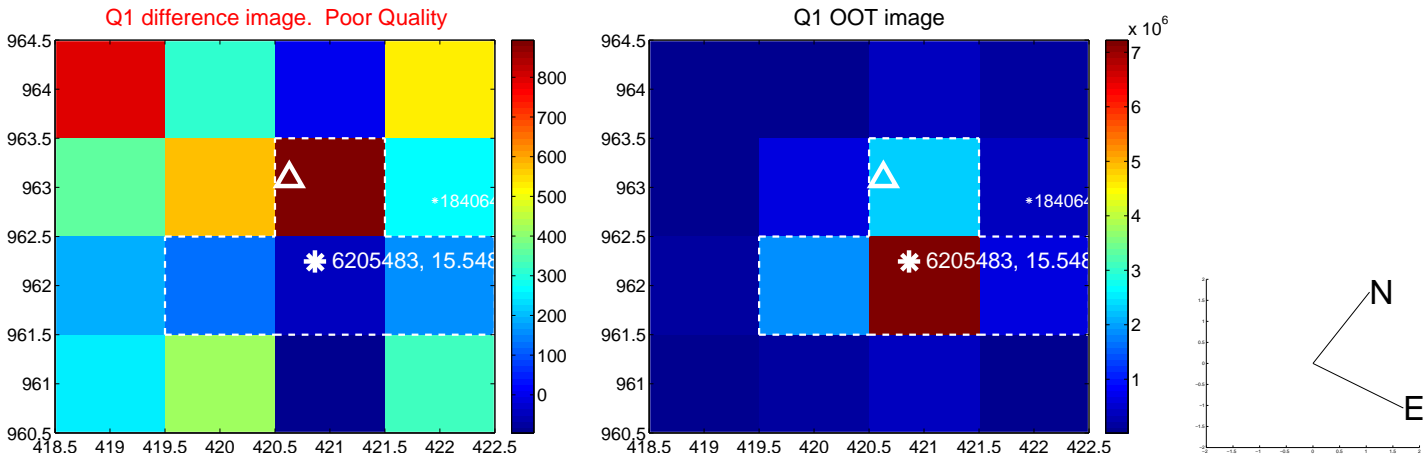
The direct PRF centroid is offset from the target star catalog position by about 0.01 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.760 ± 0.790	9.83	-7.451 ± 0.734	-2.167 ± 0.491
PRF-fit source offset from KIC position	7.802 ± 0.839	9.30	-7.491 ± 0.777	-2.181 ± 0.521
photometric centroid source offset	8.57 ± 1.18	7.27	-8.57 ± 1.18	0.25 ± 0.96

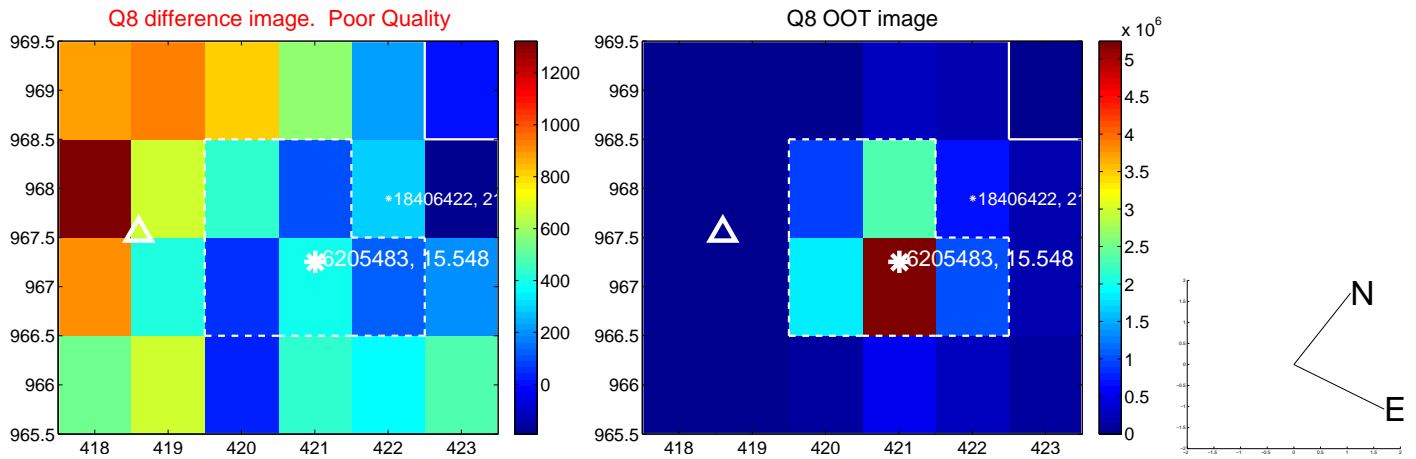
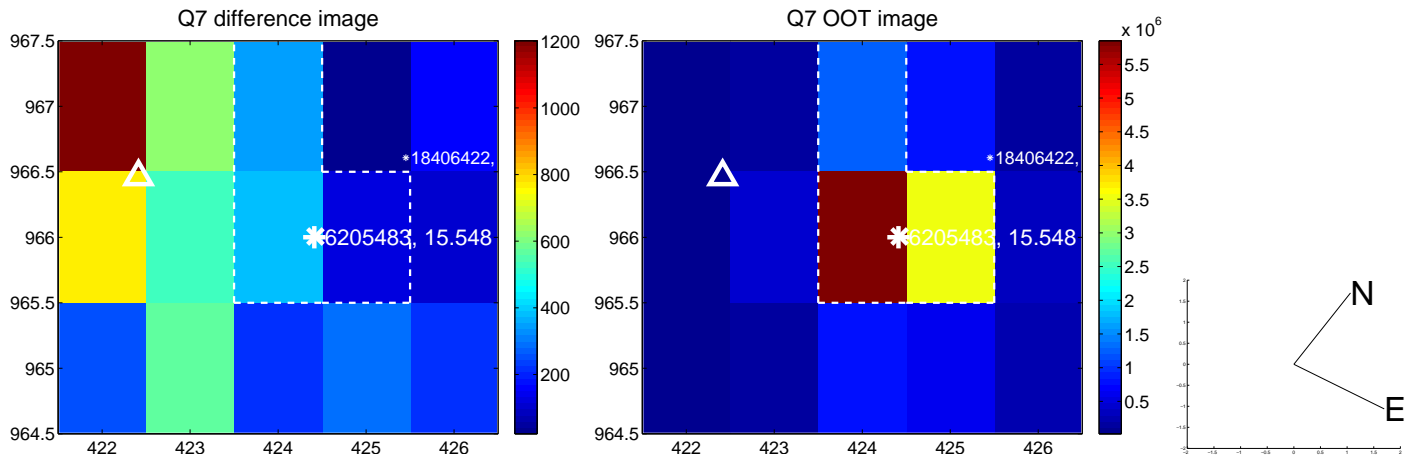
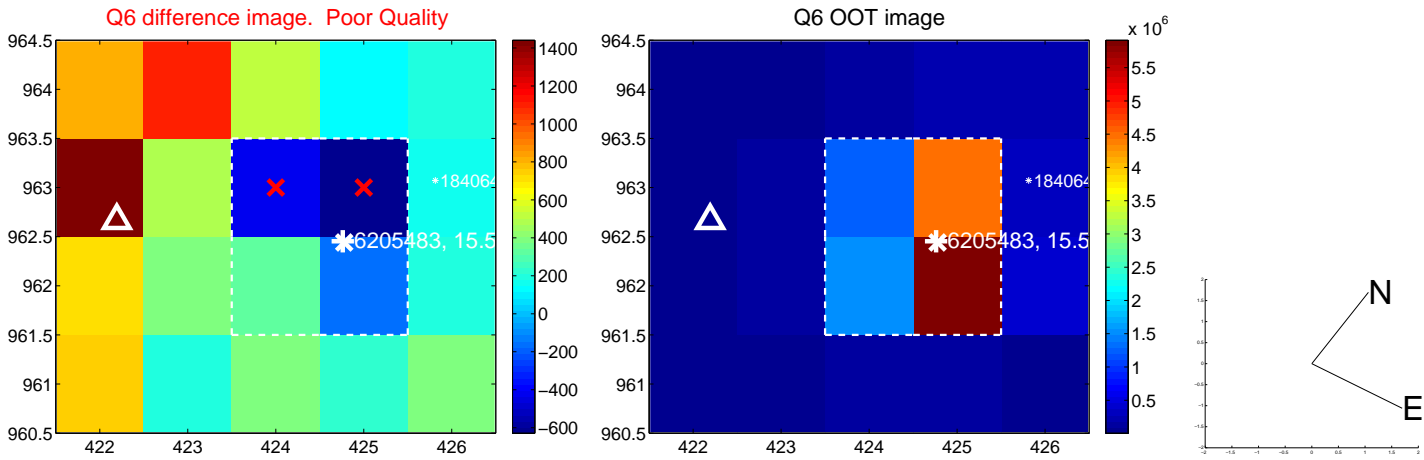
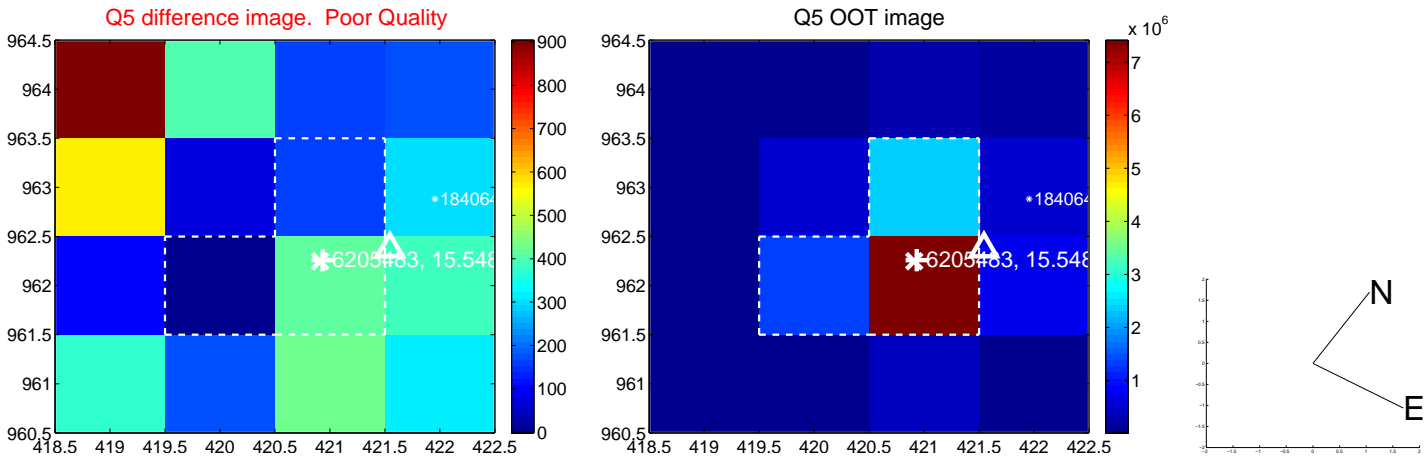


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

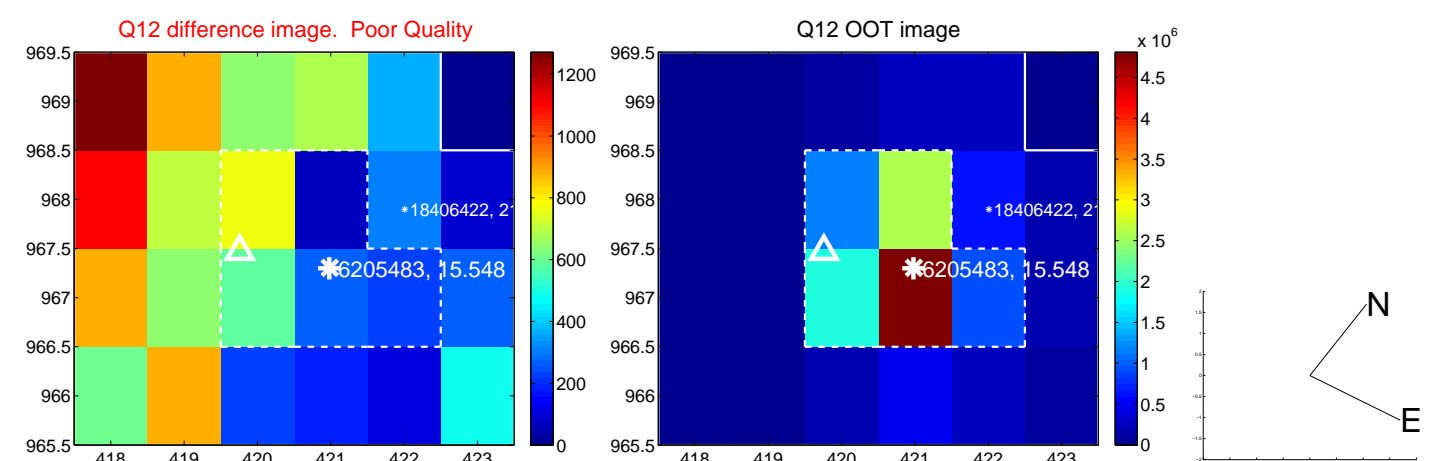
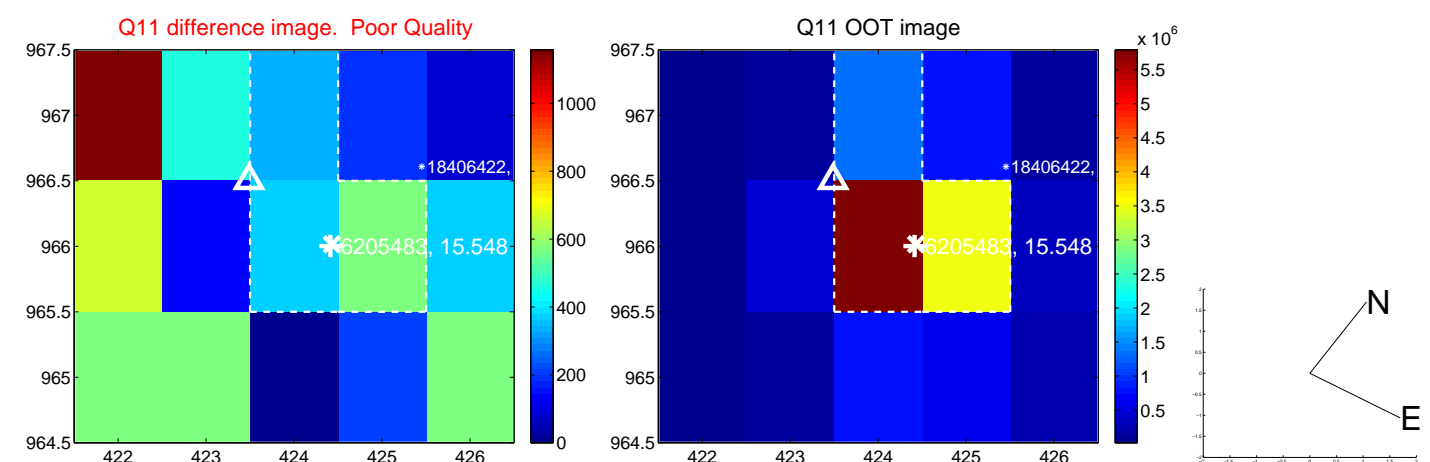
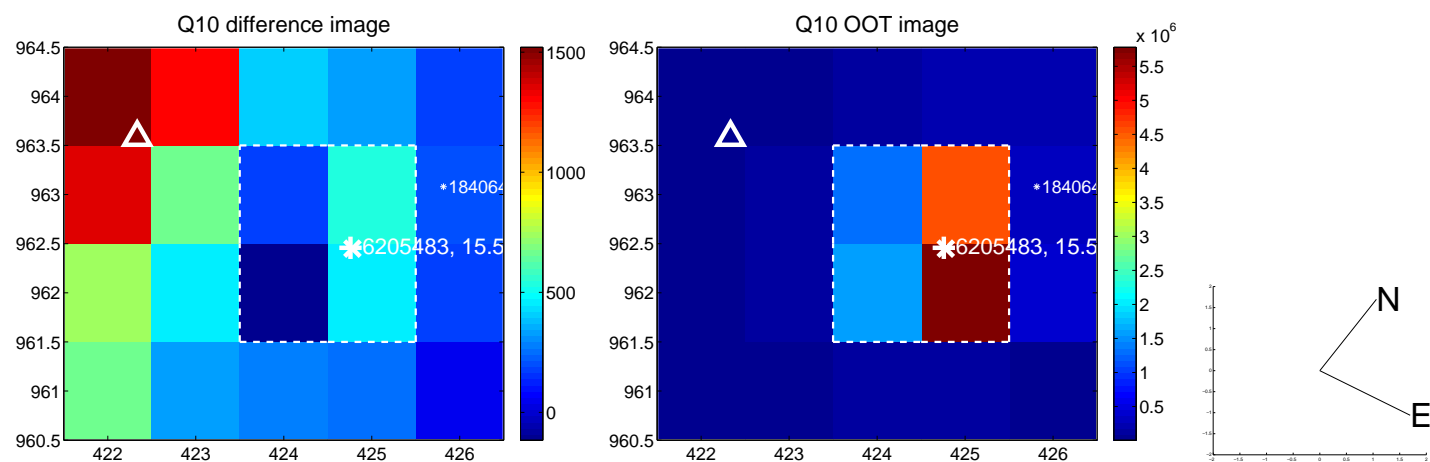
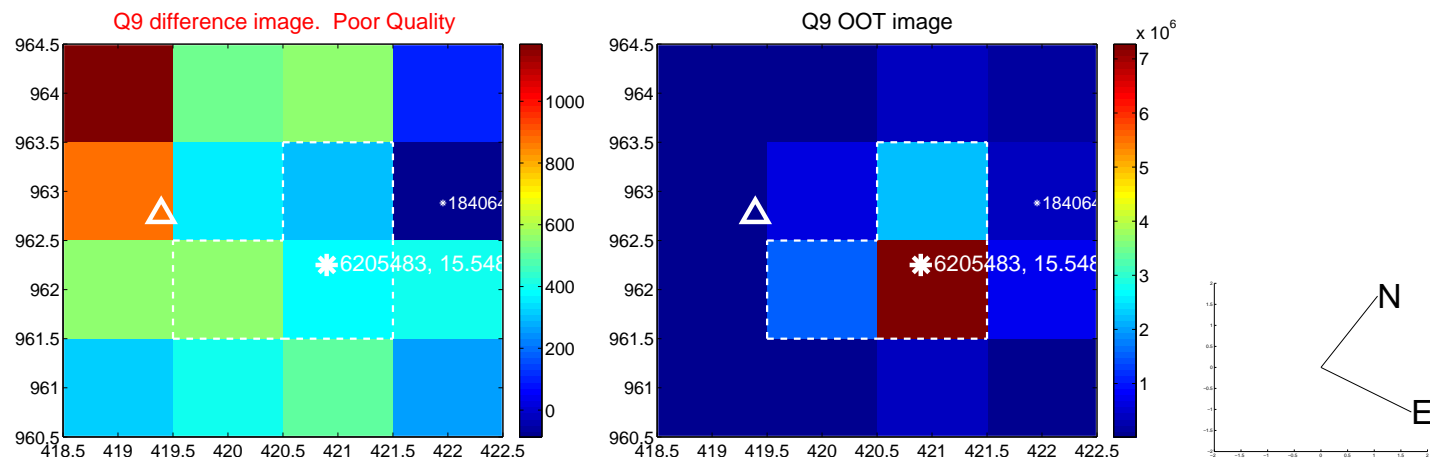
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



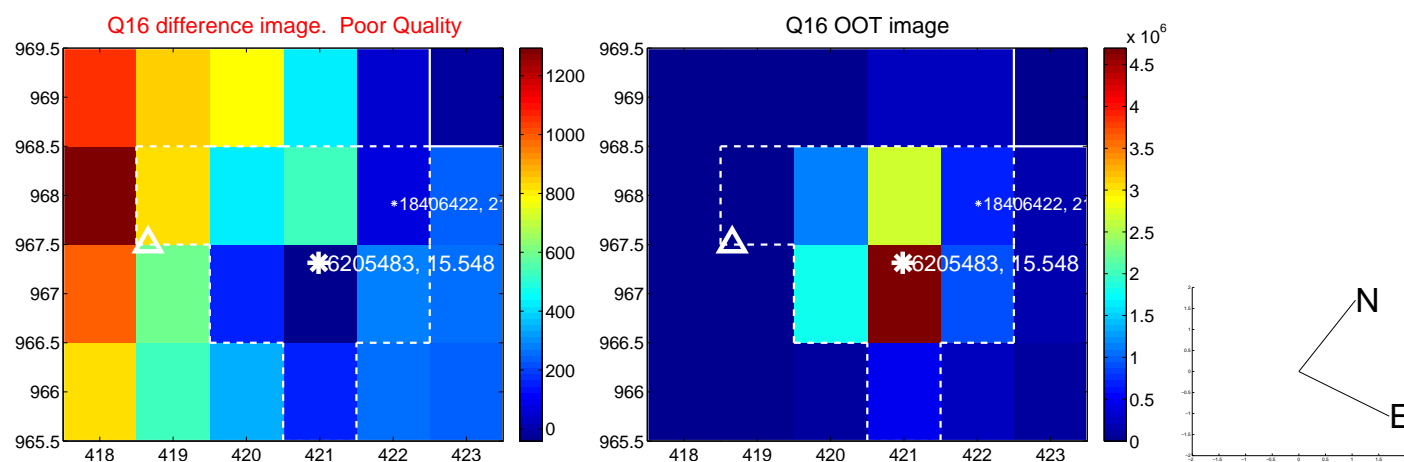
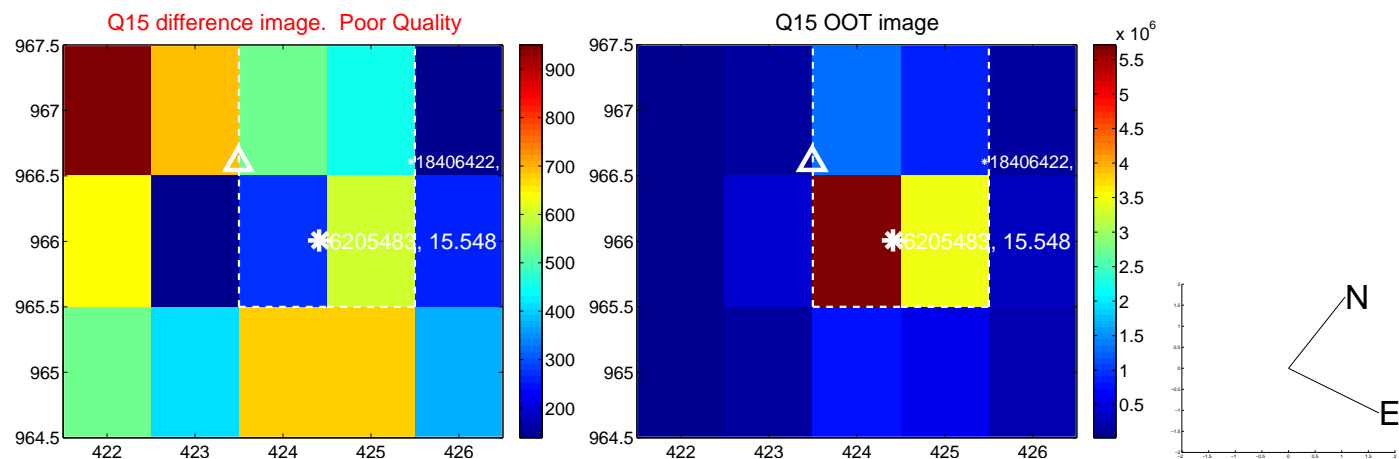
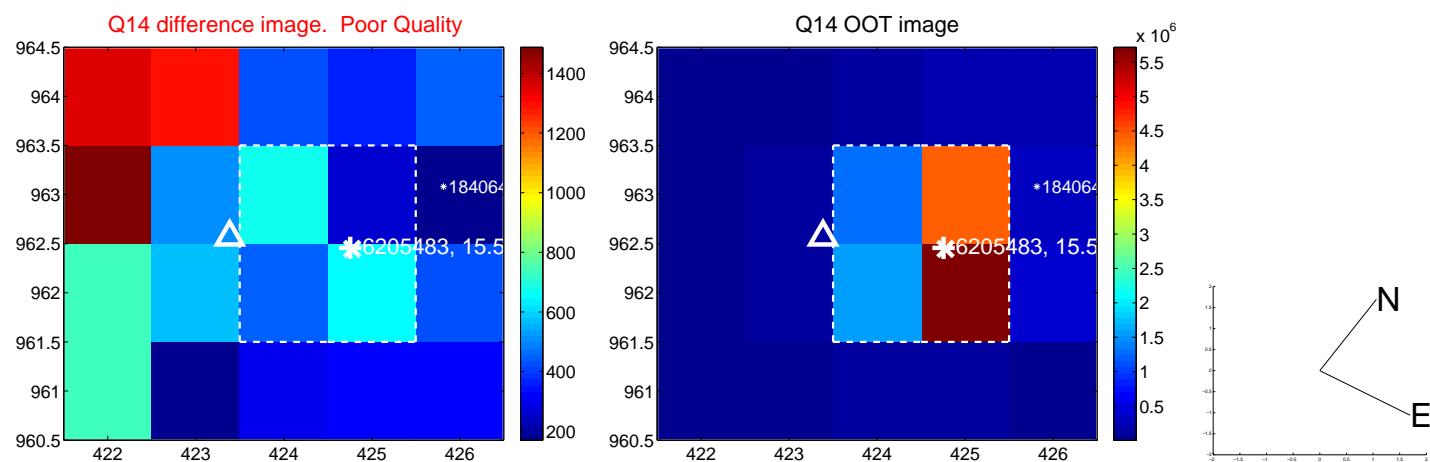
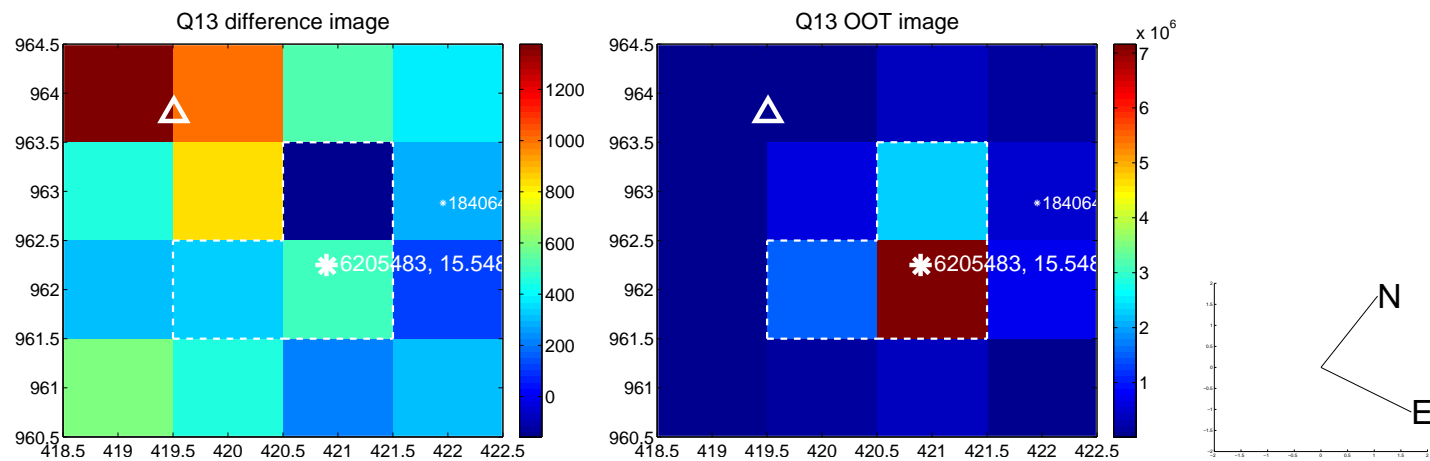
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



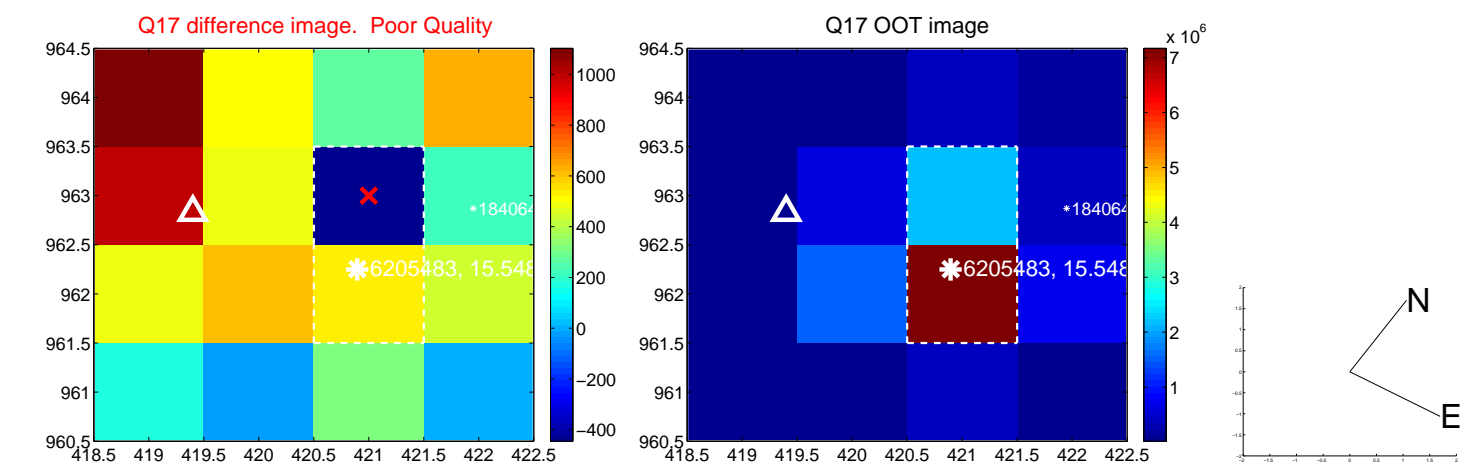
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



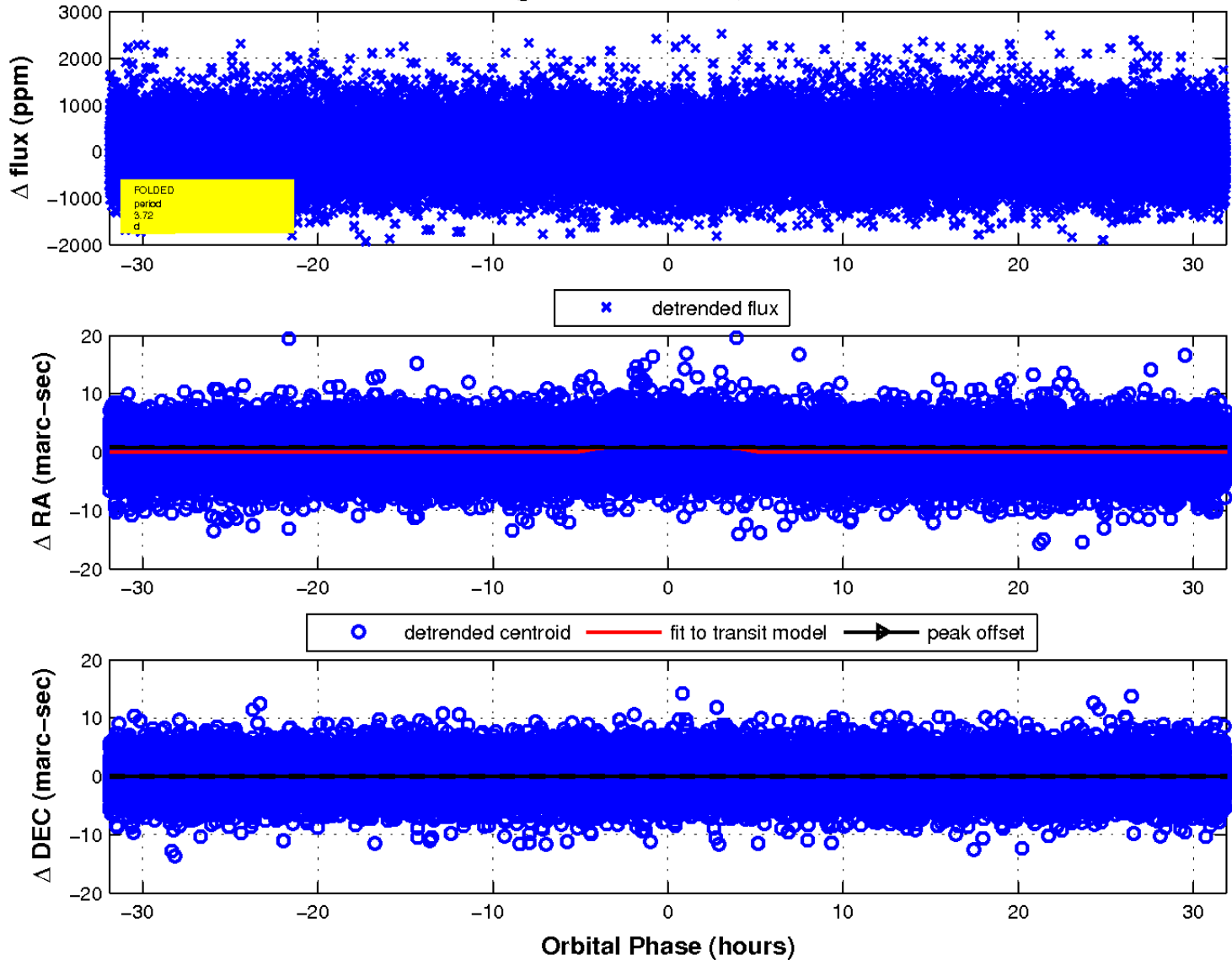
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

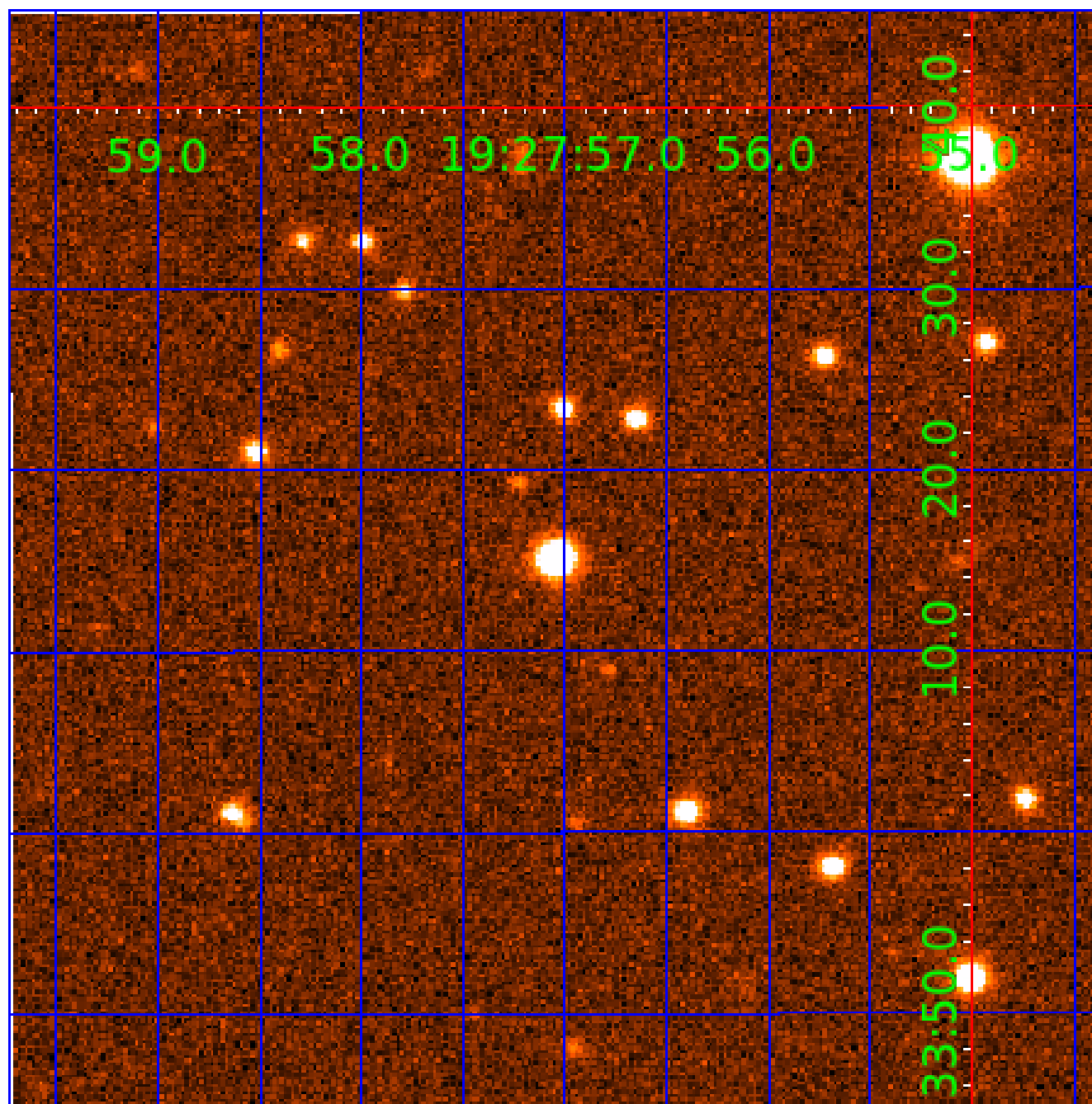


fluxWeightedCentroids, Planet 1 of 2



UKIRT Image

Declination



KIC 006205483

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})
006205483-01	OBS	No	3.722839	134.632504	96.0	10.630	12.2	12.3	1.25	6468	1.55	923.45
006205483-02	OBS	No	443.310633	425.394094	1499.0	39.110	20.4	12.1	1.25	6468	9.09	1.58

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006205483-01	OBS	FP	0.00	1	0	1	1	LPP_DV—CENT_RESOLVED_OFFSET—HALO_GHOST—EPHEM_MATCH
006205483-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST

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

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

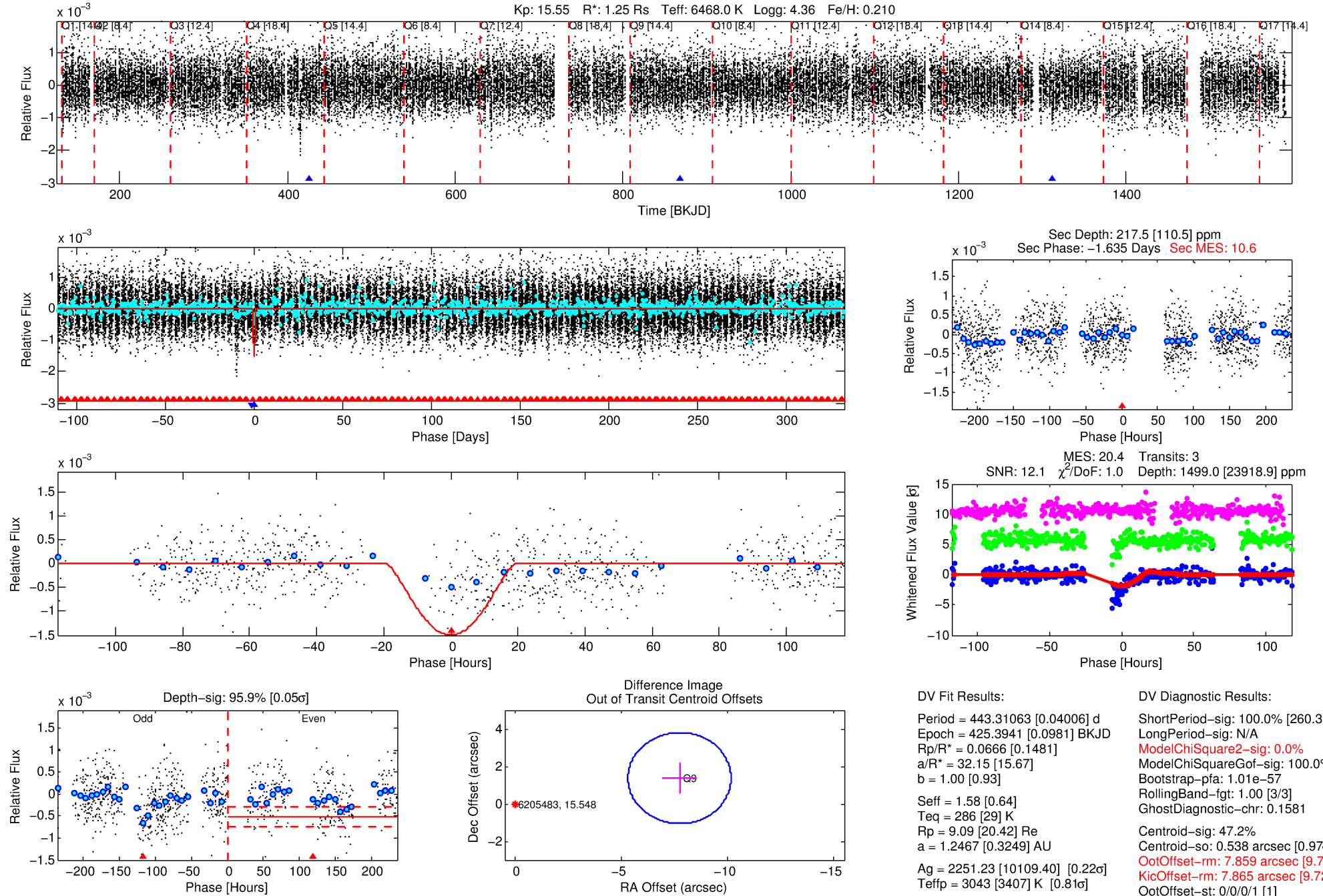
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006205483-02

No Significant Match Found

DV One-Page Summary

KIC: 6205483 Candidate: 2 of 2 Period: 443.311 d



DV Fit Results:

Period = 443.31063 [0.04006] d
Epoch = 425.3941 [0.0981] BKJD
Rp/R* = 0.0666 [0.1481]
a/R* = 32.15 [15.67]
b = 1.00 [0.93]
Seff = 1.58 [0.64]
Teq = 286 [29] K
Rp = 9.09 [20.42] Re
a = 1.2467 [0.3249] AU
Ag = 2251.23 [10109.40] [0.22 σ]
Teffp = 3043 [3407] K [0.81 σ]

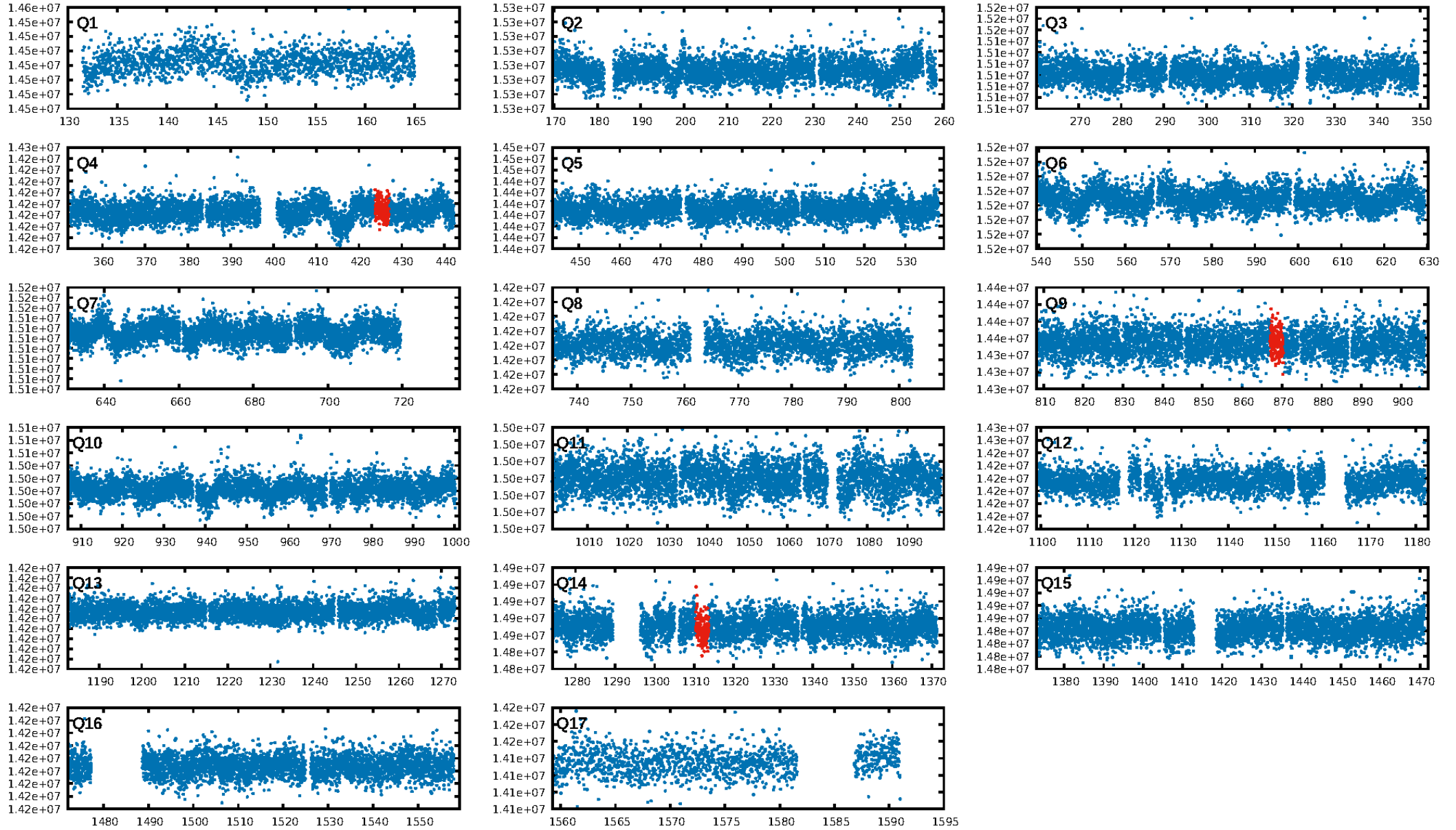
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [260.31 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.01e-57
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.1581
Centroid-sig: 47.2%
Centroid-so: 0.538 arcsec [0.97 σ]
OotOffset-rm: 7.859 arcsec [9.71 σ]
KicOffset-rm: 7.865 arcsec [9.72 σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 0.00 [0/3]

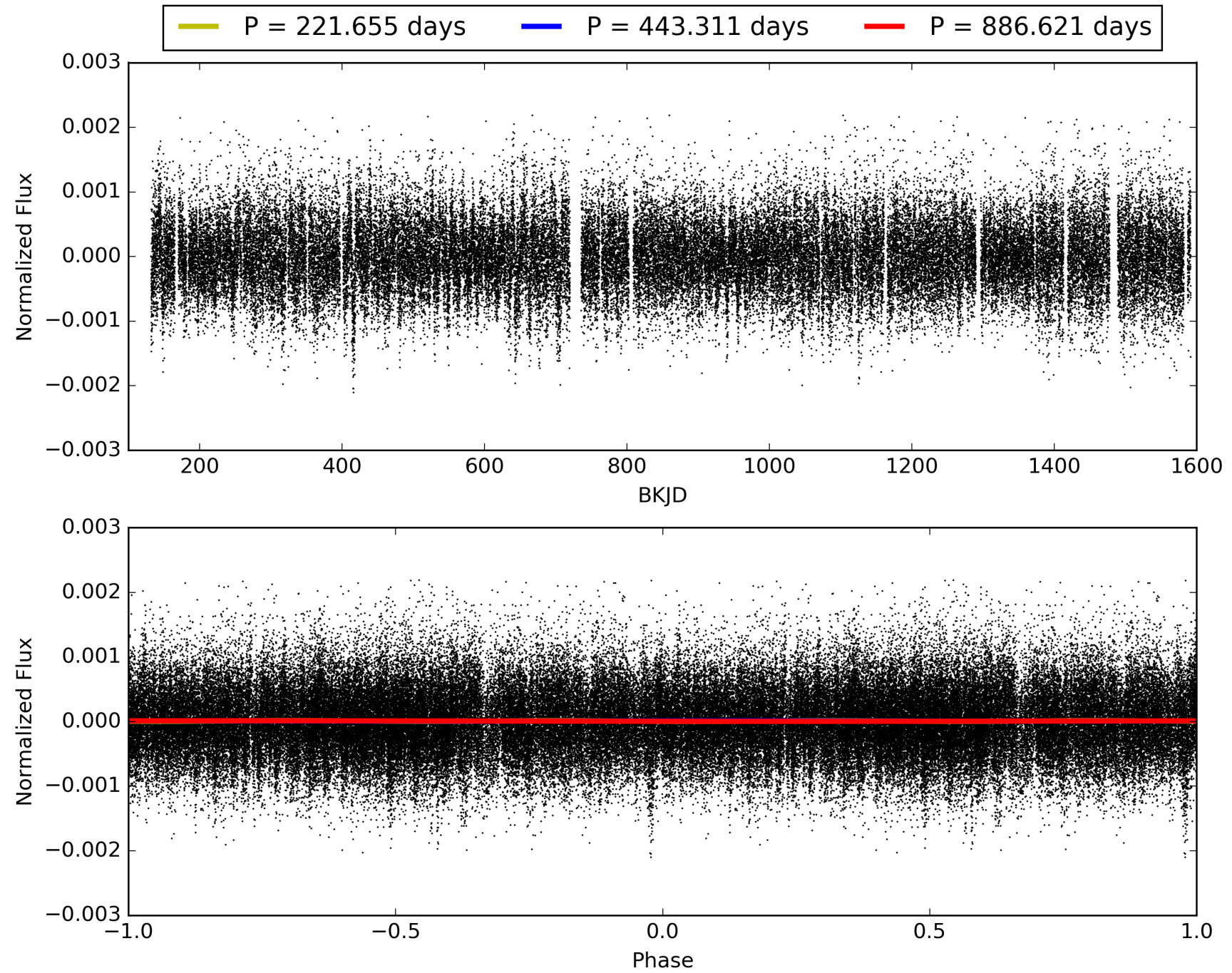
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 20:36:44 Z

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

TCE 006205483-02, PDC Light Curves

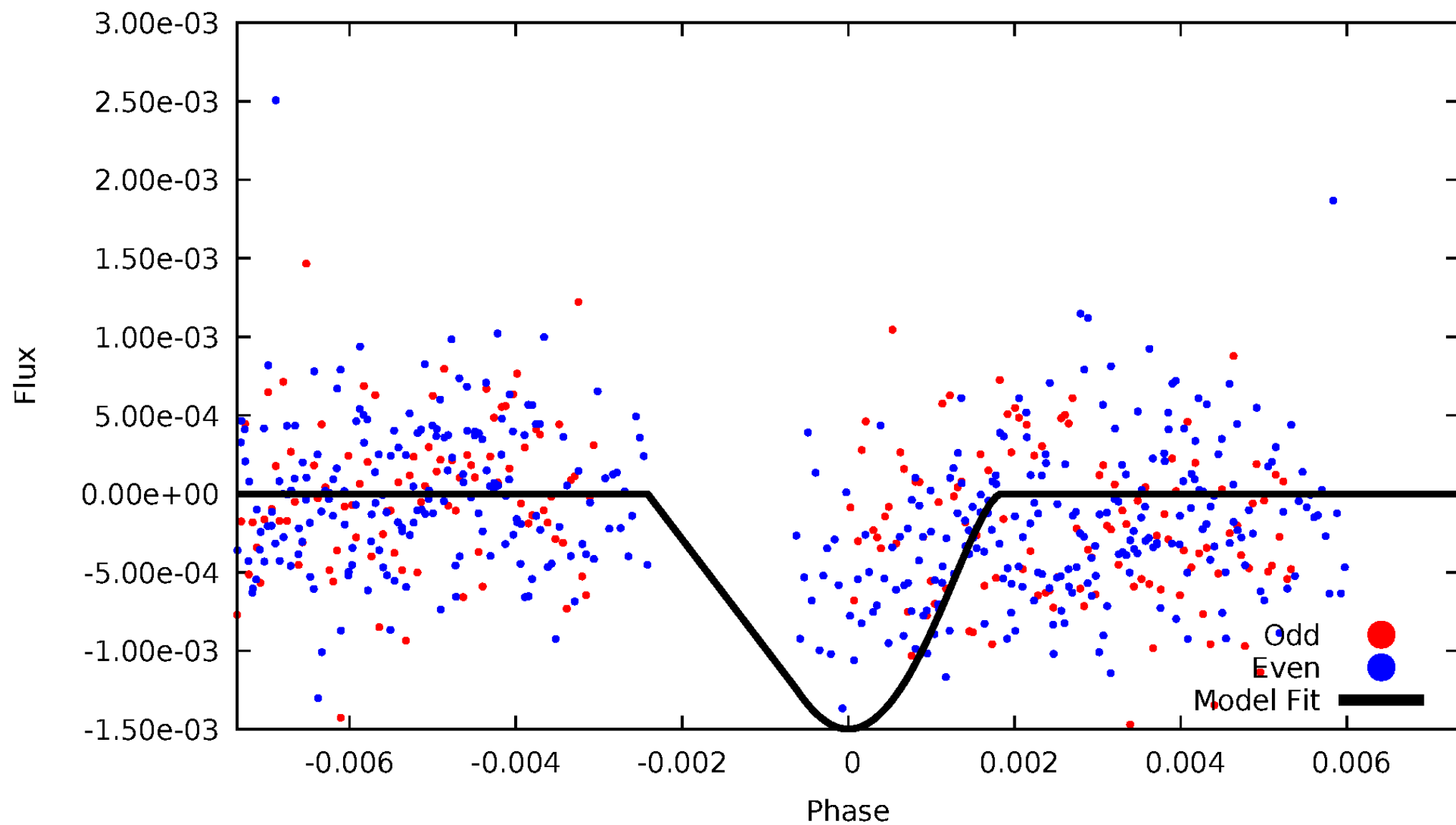


TCE 006205483-02



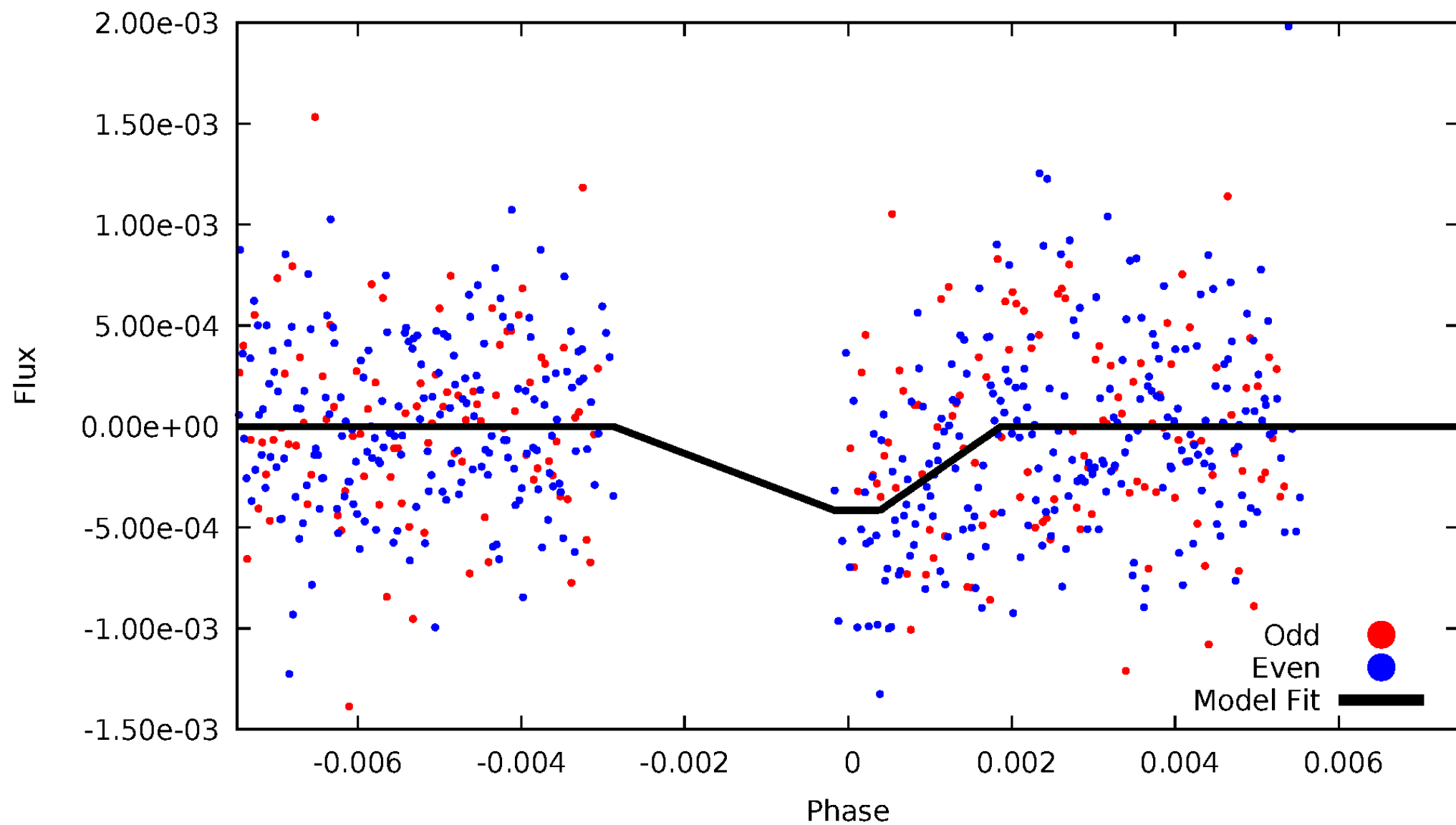
DV Odd/Even

TCE 006205483-02



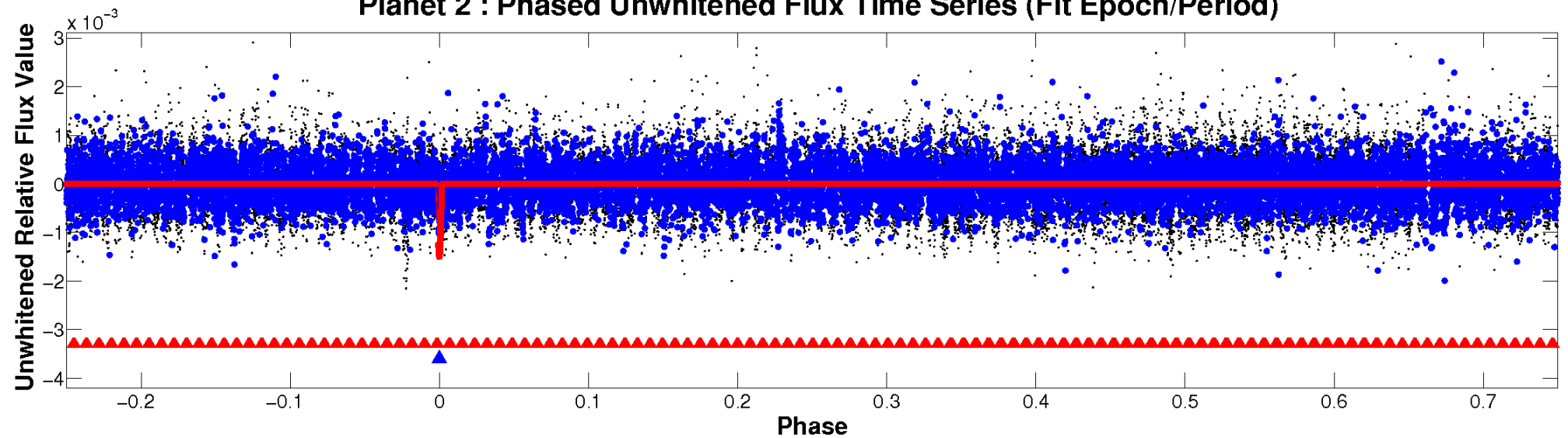
ALT Odd/Even

TCE 006205483-02

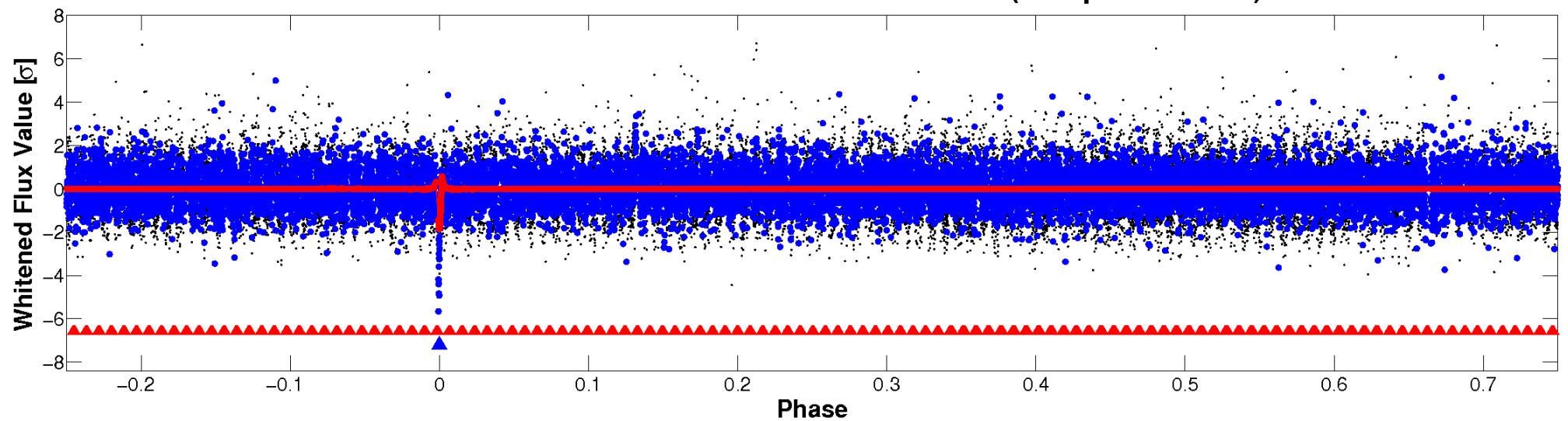


Non-Whitened Vs. Whitened Light Curve

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 006205483-02 P=443.310633 Days $T_0=425.394094$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 006205483-02 $P=443.310633$ Days $T_0=425.394094$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

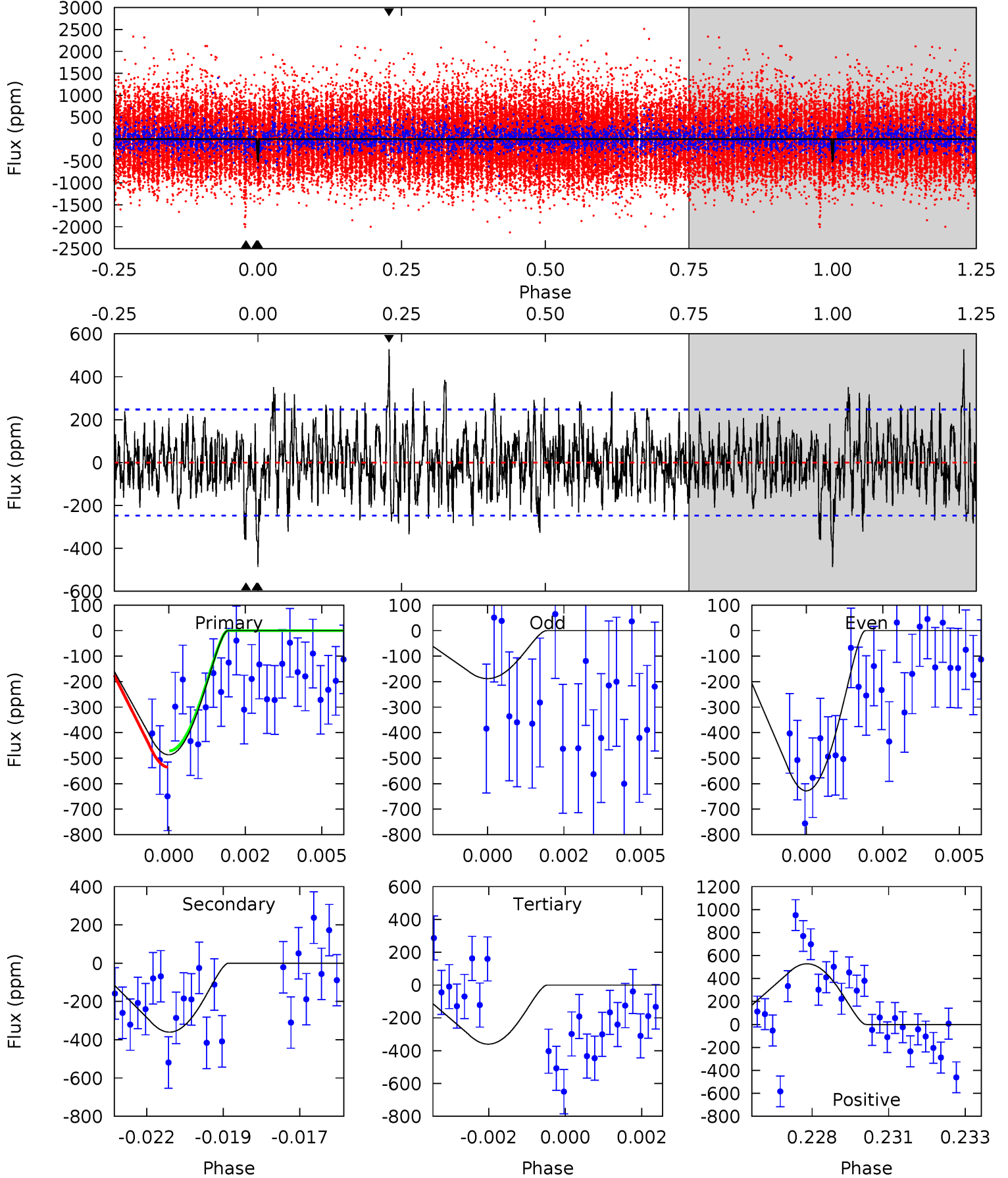
TCE 006205483-02 P=443.108560 Days $T_0=425.595243$ (BKJD)



DV Model-Shift Uniqueness Test

006205483-02, P = 443.310633 Days, E = 425.394094 Days

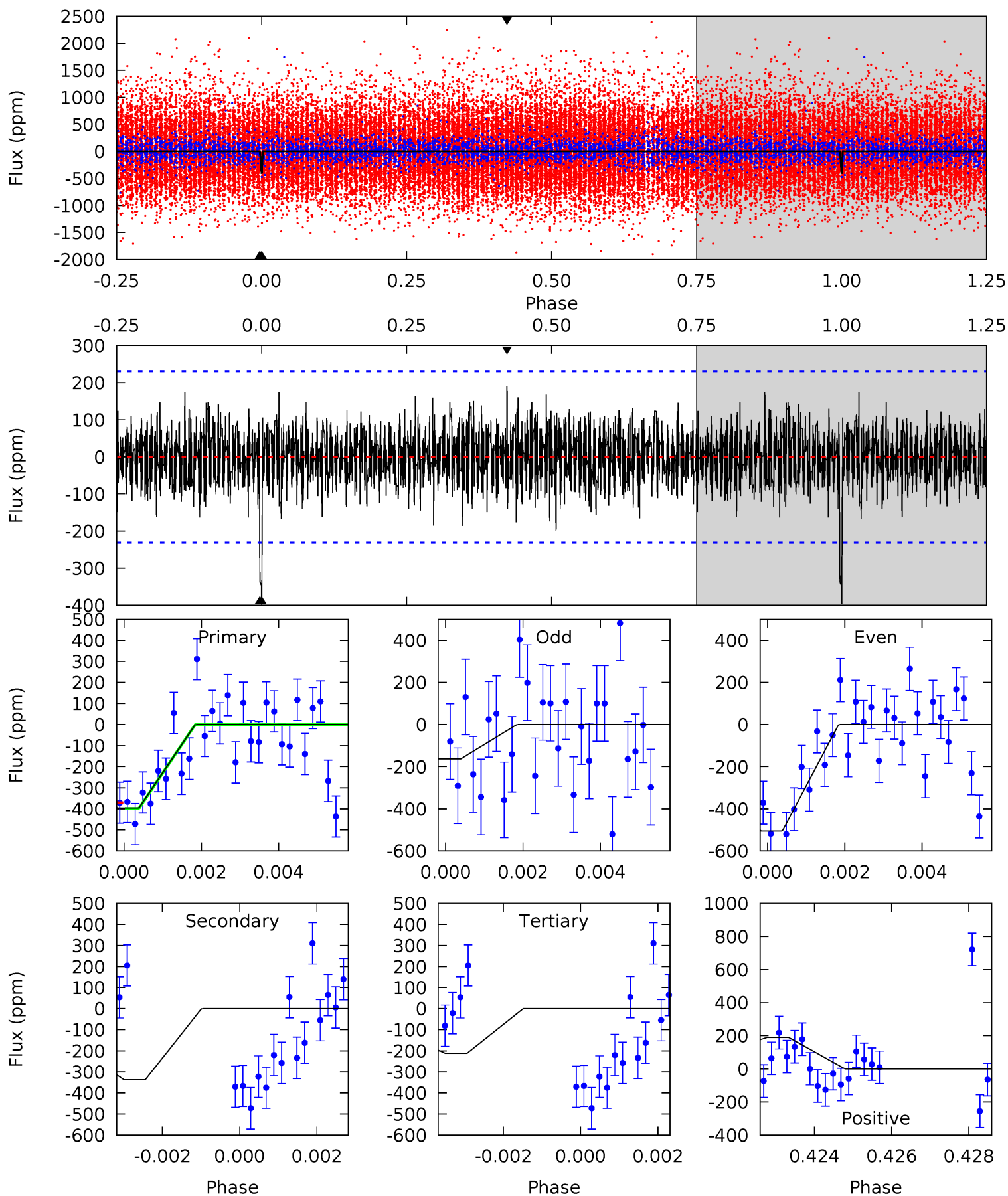
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.4	7.71	7.70	11.3	5.29	3.04	2.40	2.71	-0.88	0.01	-3.58	4.44	0.87	0.52	0.41



Alt Model-Shift Uniqueness Test

006205483-02, P = 443.108560 Days, E = 425.595243 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.12	7.78	4.90	4.38	5.32	3.09	1.20	4.22	4.73	2.88	3.39	3.72	0.88	0.32	0.08



Stellar Parameters For KIC 006205483

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6468^{+177}_{-278}	$4.363^{+0.065}_{-0.195}$	$0.210^{+0.200}_{-0.350}$	$1.250^{+0.400}_{-0.160}$	$1.313^{+0.163}_{-0.200}$	$0.948^{+0.278}_{-0.514}$
	+3%/-4%	+1%/-4%	+95%/-167%	+32%/-13%	+12%/-15%	+29%/-54%
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 006205483-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-360 ± 47	$17.11^{+17.78}_{-11.35}$	406^{+30}_{-23}	3149^{+1437}_{-547}	1015^{+8196}_{-773}
Alt.	-338 ± 43	$15.38^{+16.53}_{-10.90}$	405^{+27}_{-22}	3219^{+1698}_{-561}	1174^{+12286}_{-904}

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

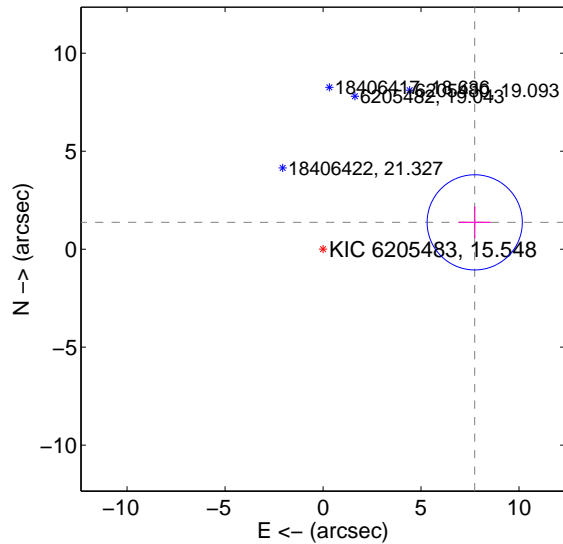
Supplemental centroid analysis for 006205483-02. Kepler magnitude: 15.55. Transit SNR 12.06

There are 0 quarters with good PRF difference image offsets

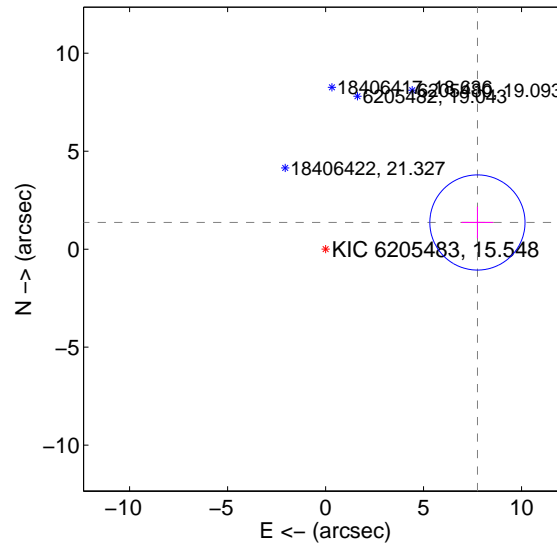
The direct PRF centroid is offset from the target star catalog position by about 0.01 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.859 \pm 0.809	9.71	-7.738 \pm 0.809	1.368 \pm 0.809
PRF-fit source offset from KIC position	7.865 \pm 0.809	9.72	-7.746 \pm 0.809	1.362 \pm 0.809
photometric centroid source offset	0.54 \pm 0.56	0.97	-0.54 \pm 0.56	0.03 \pm 0.49

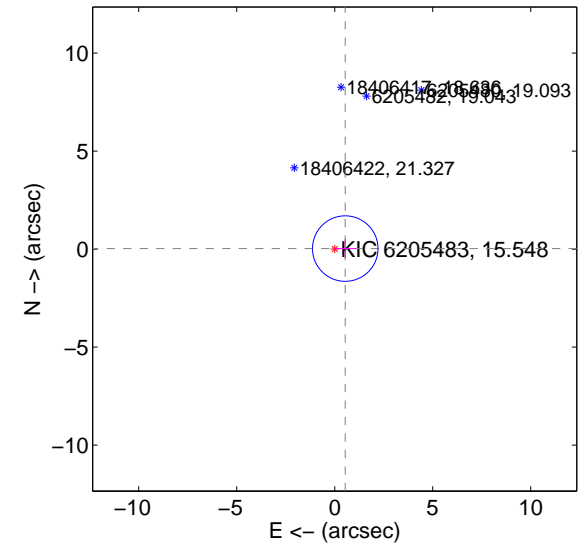
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

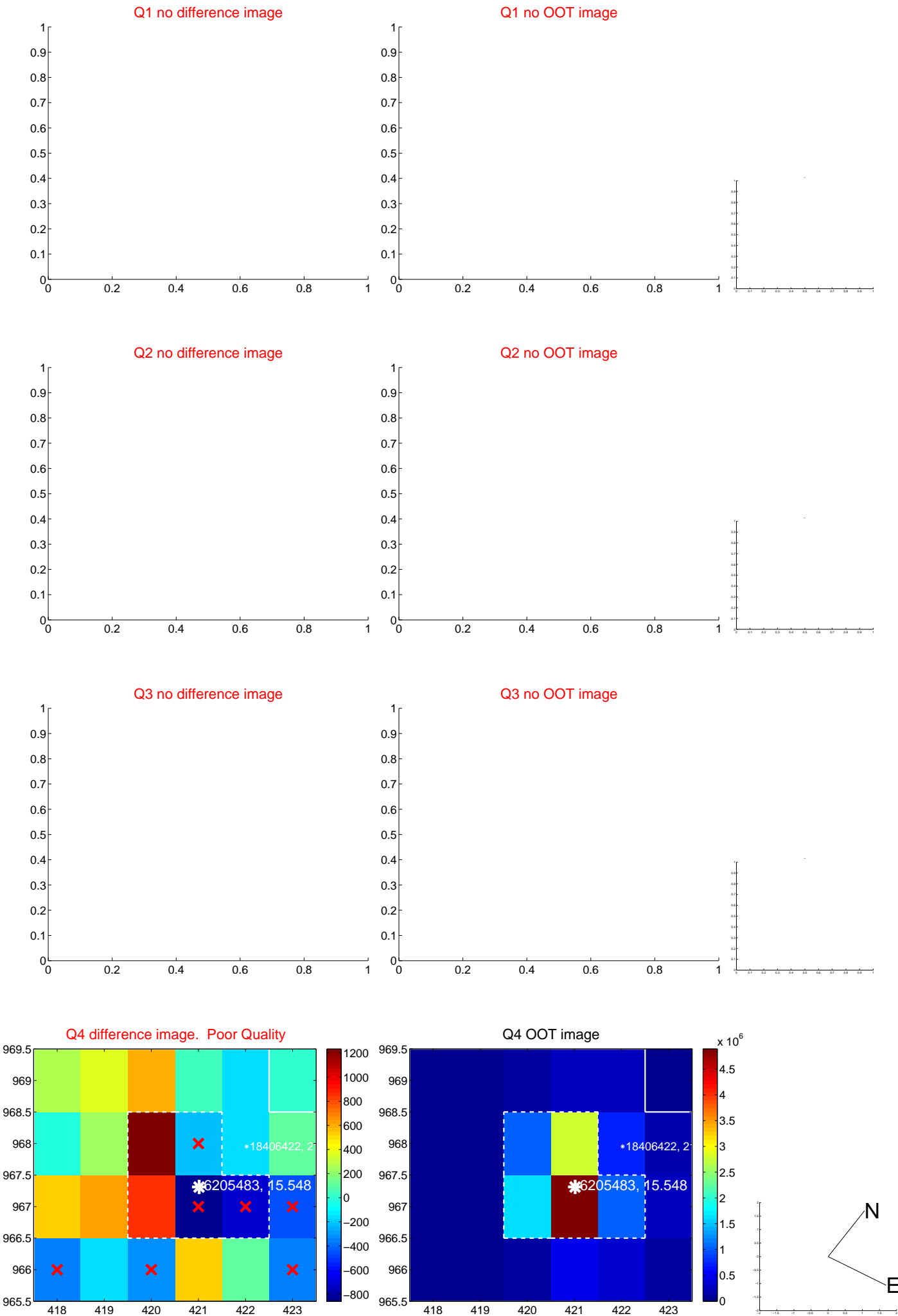


offset from photometric centroids



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.

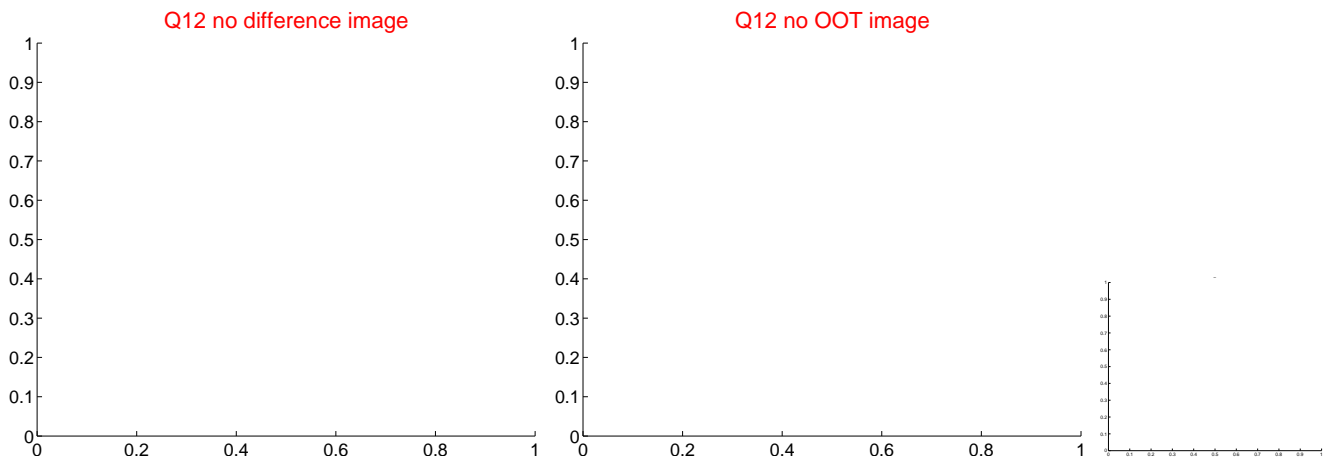
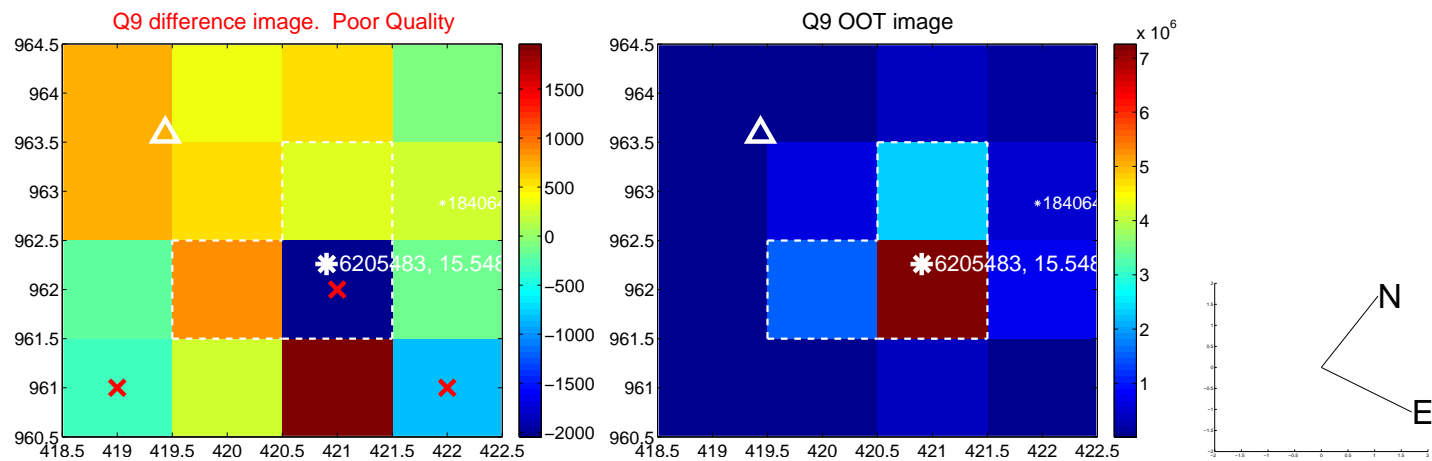
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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

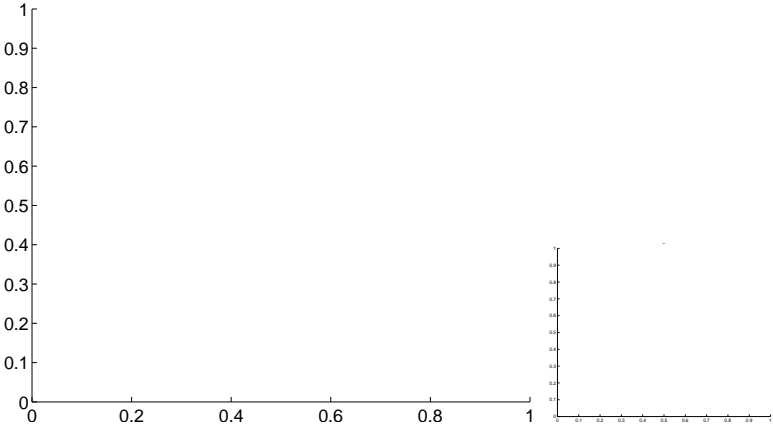


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

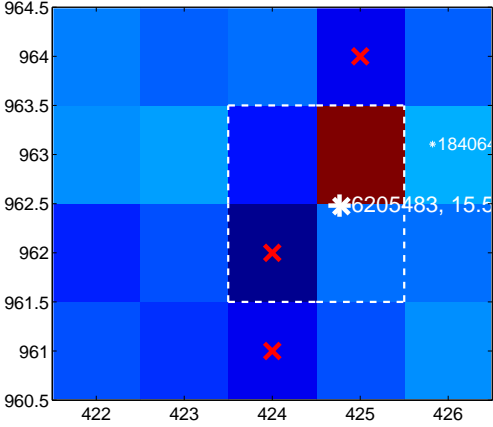
Q13 no difference image



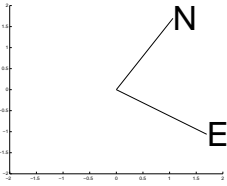
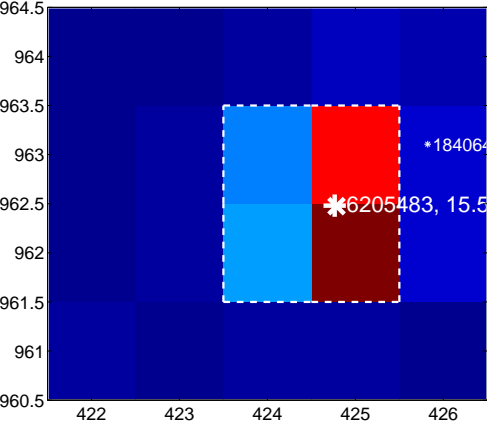
Q13 no OOT image



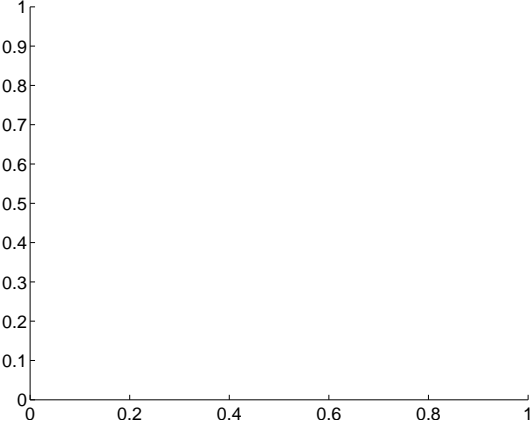
Q14 difference image. Poor Quality



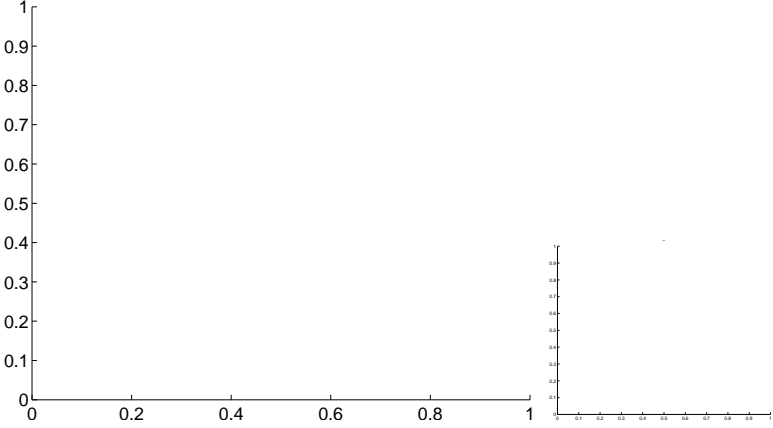
Q14 OOT image



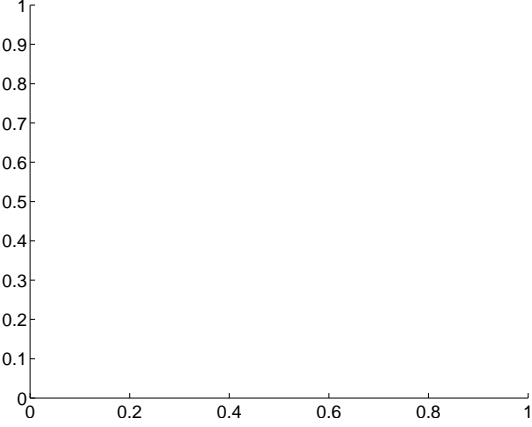
Q15 no difference image



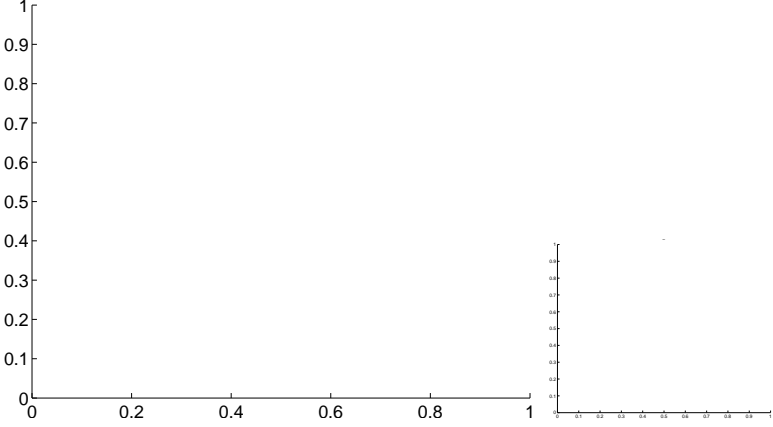
Q15 no OOT image



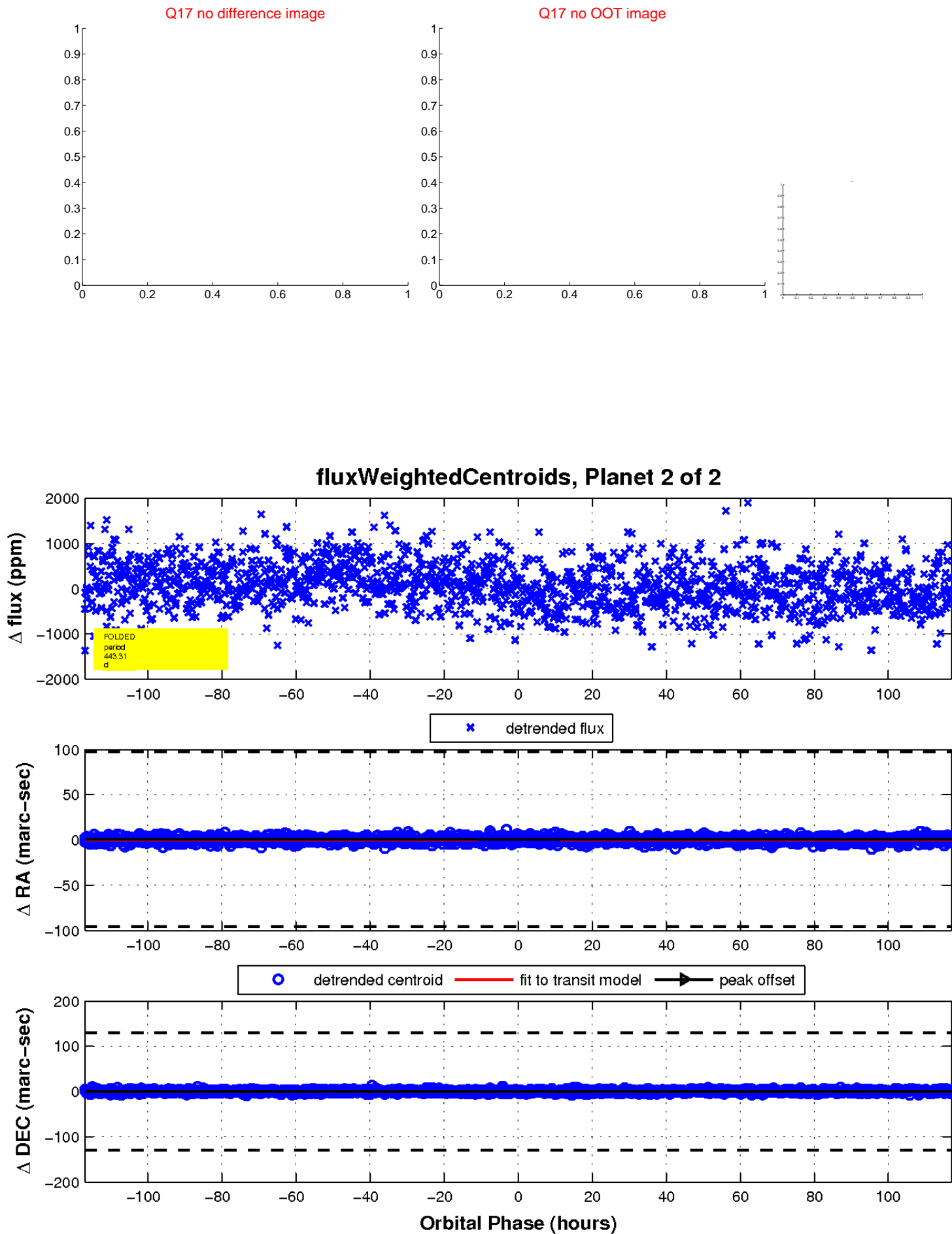
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

