

KIC 006142919

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})
006142919-01	OBS	No	1.135558	132.646227	78.0	5.646	10.4	14.0	1.98	7277	2.31	16013.77
006142919-02	OBS	No	6.905115	132.830640	184.0	6.717	10.8	10.7	1.98	7277	5.21	1442.82
006142919-03	OBS	No	177.609992	177.490048	116.4	1.516	9.4	1.5	1.98	7277	2.43	19.00
006142919-04	OBS	No	302.149263	209.121393	747.1	4.954	9.3	9.2	1.98	7277	8.18	9.36
006142919-05	OBS	No	74.161825	138.582123	608.1	4.811	8.5	9.5	1.98	7277	9.21	60.89
006142919-06	OBS	No	128.110499	139.854922	692.2	4.575	8.1	8.1	1.98	7277	9.73	29.38

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006142919-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_SATURATED
006142919-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006142919-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006142919-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
006142919-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006142919-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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

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

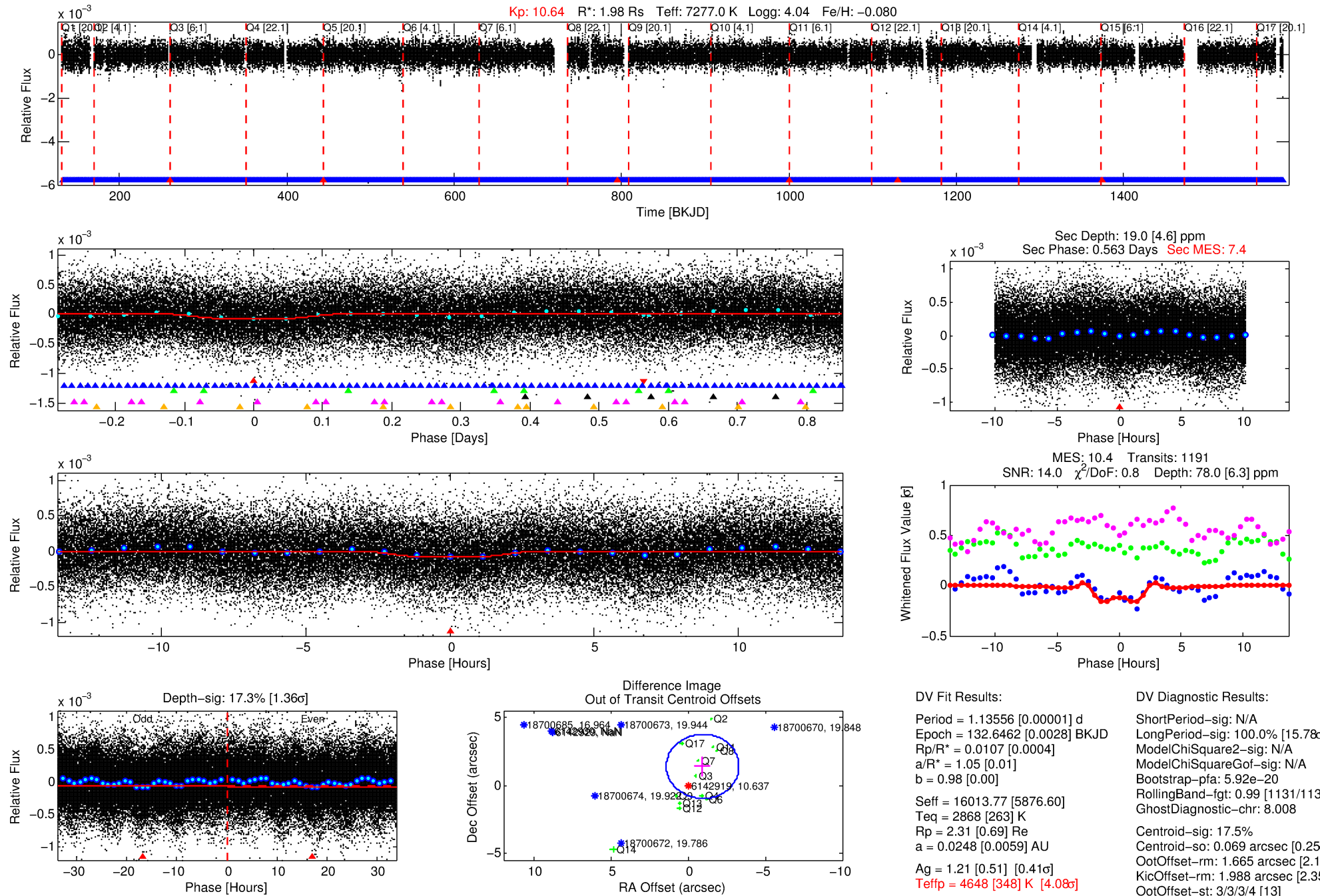
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006142919-01

No Significant Match Found

DV One-Page Summary

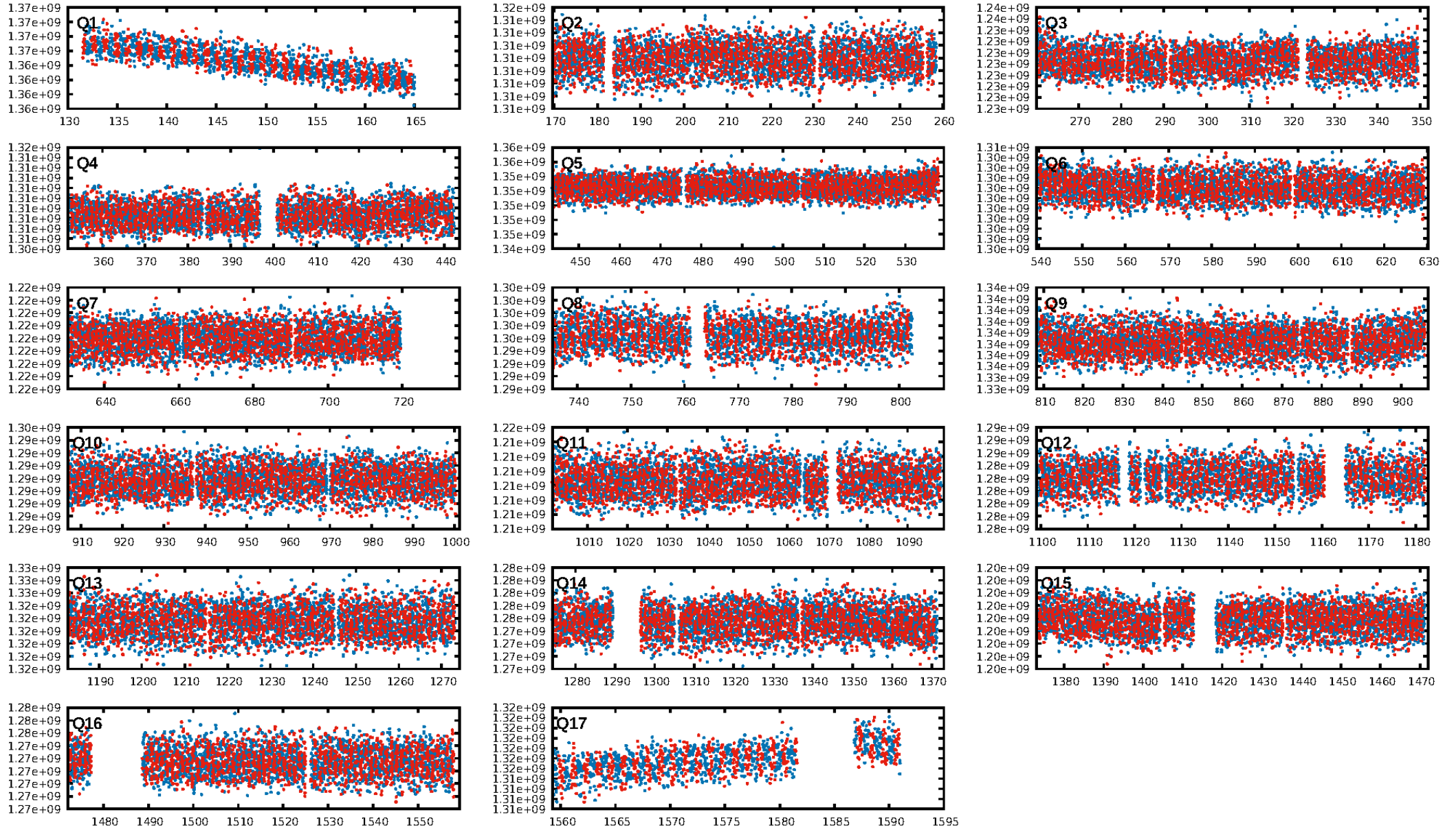
KIC: 6142919 Candidate: 1 of 6 Period: 1.136 d



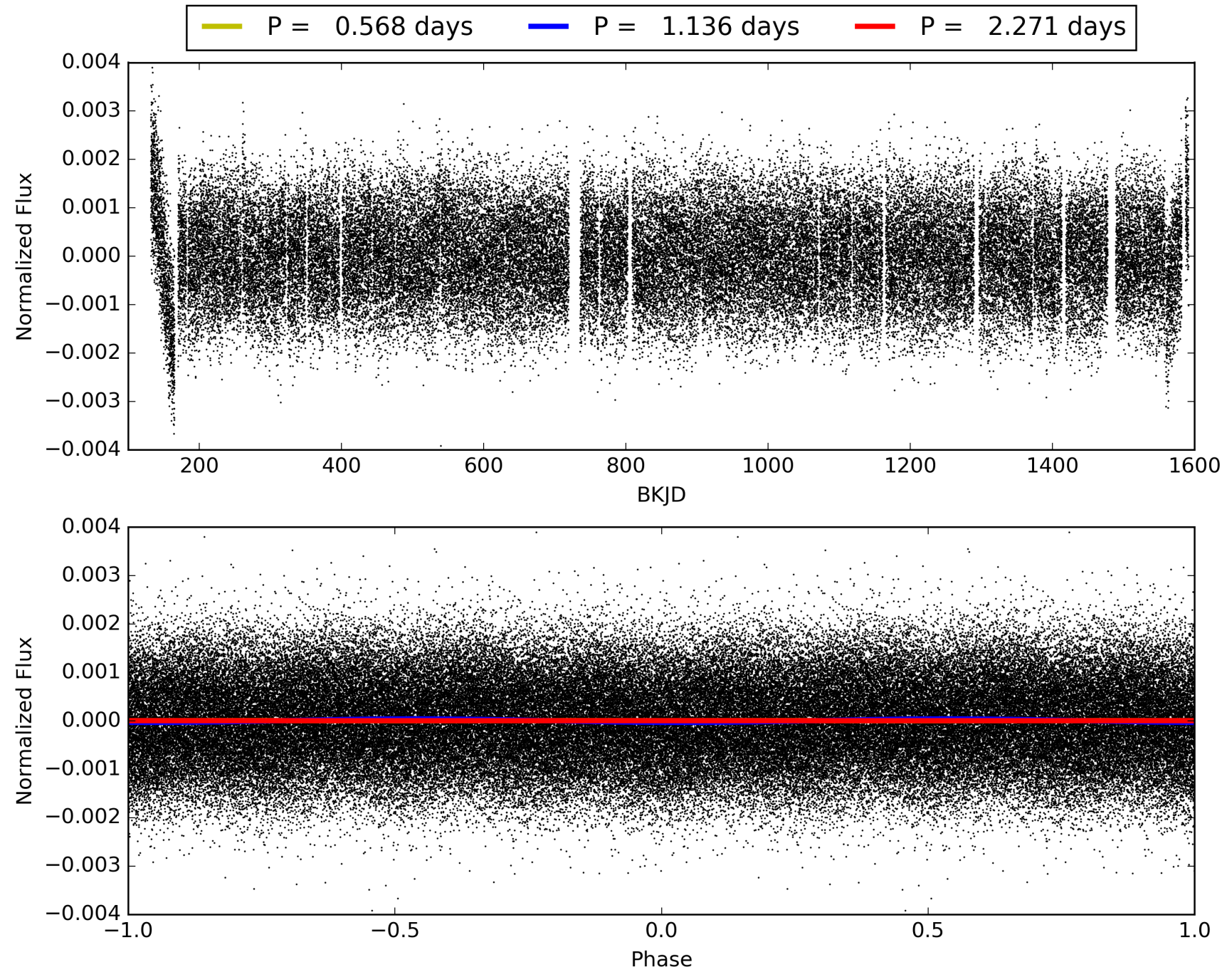
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 07:42:15 Z

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

TCE 006142919-01, PDC Light Curves

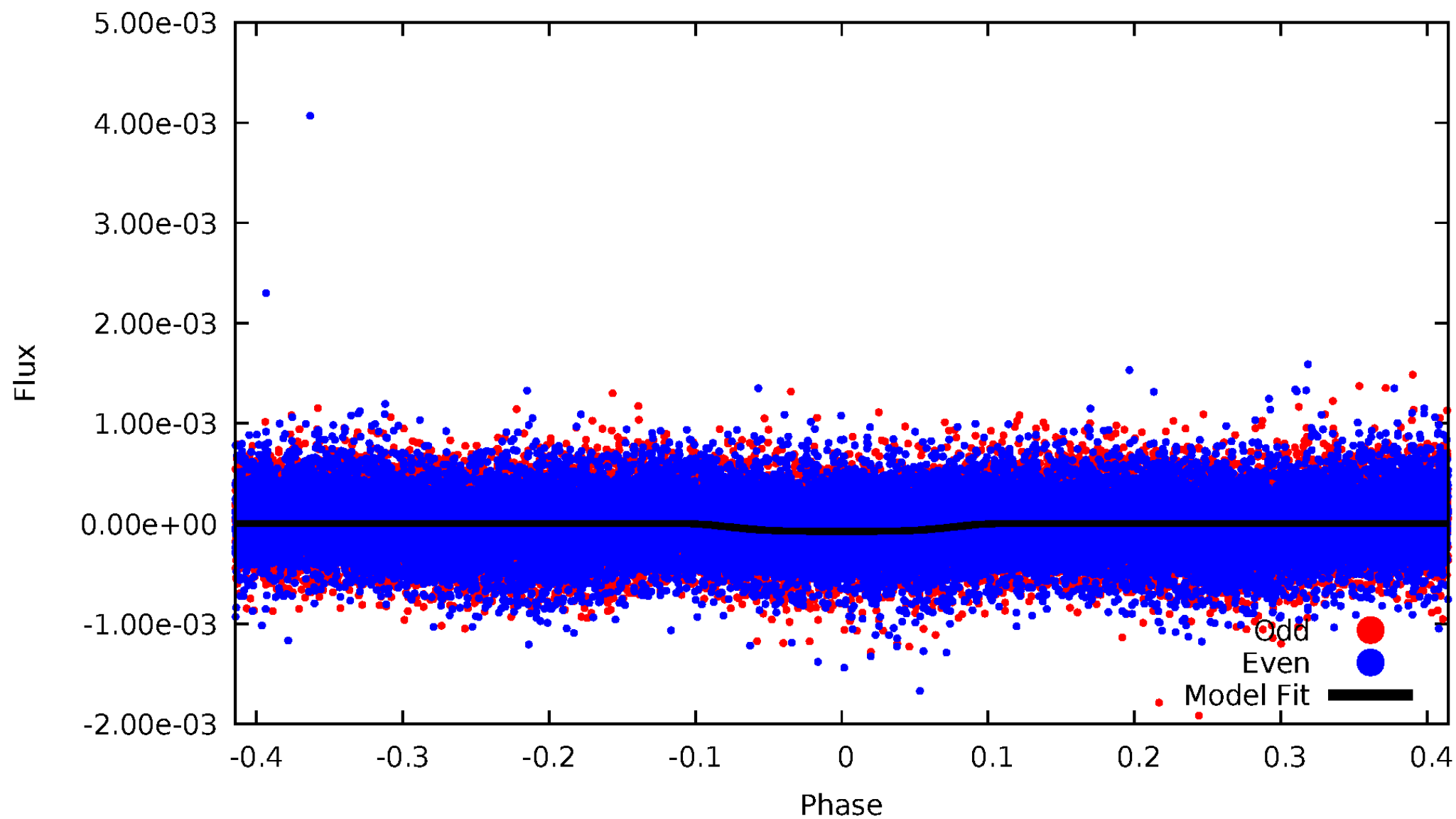


TCE 006142919-01



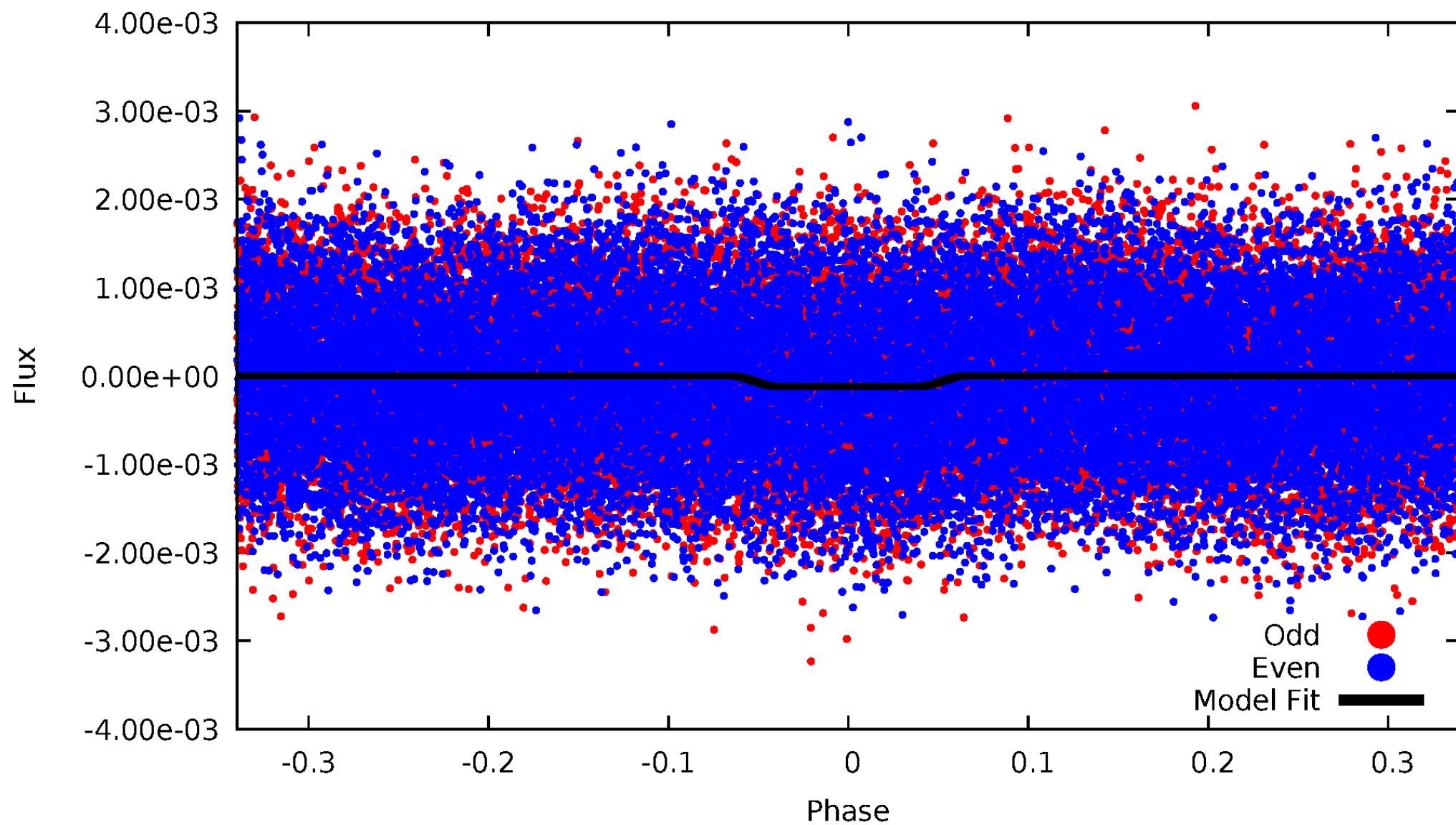
DV Odd/Even

TCE 006142919-01

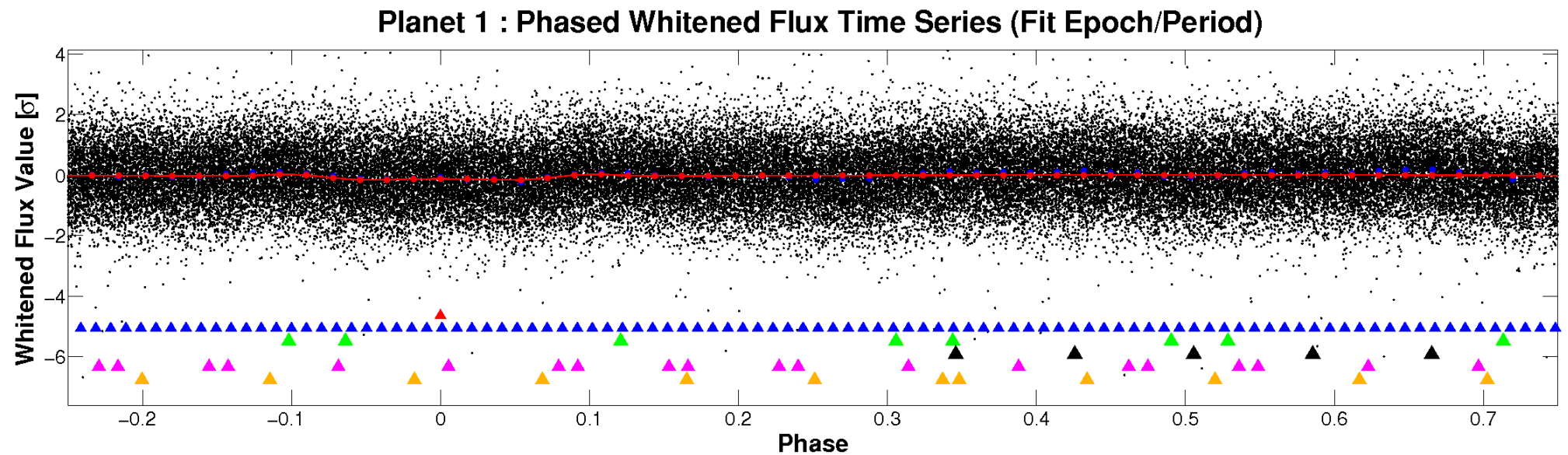
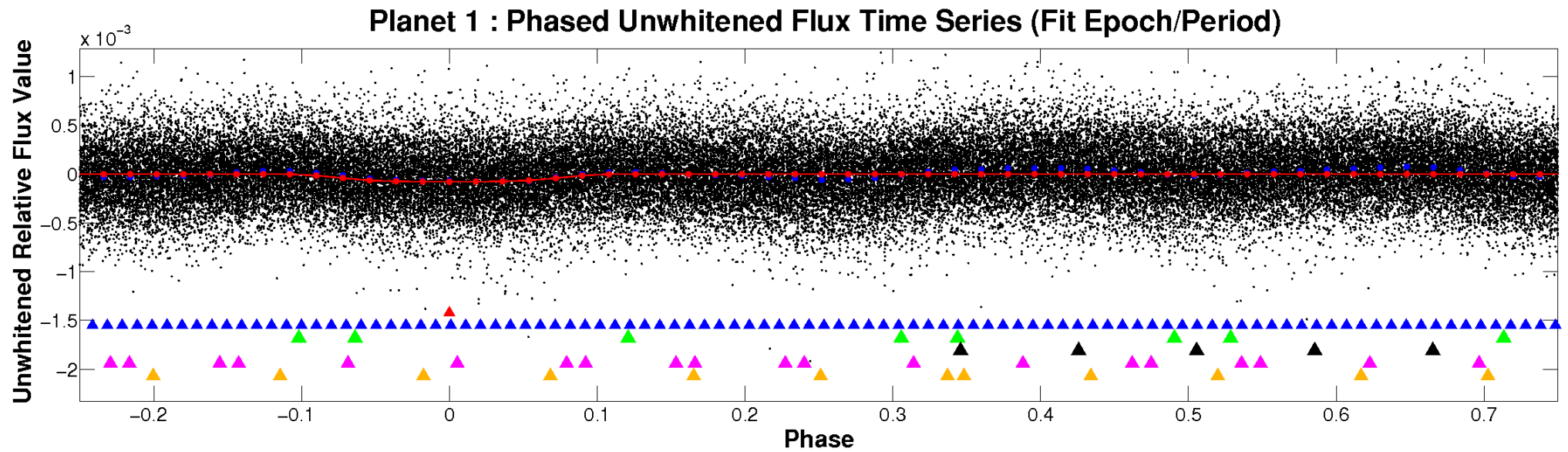


ALT Odd/Even

TCE 006142919-01

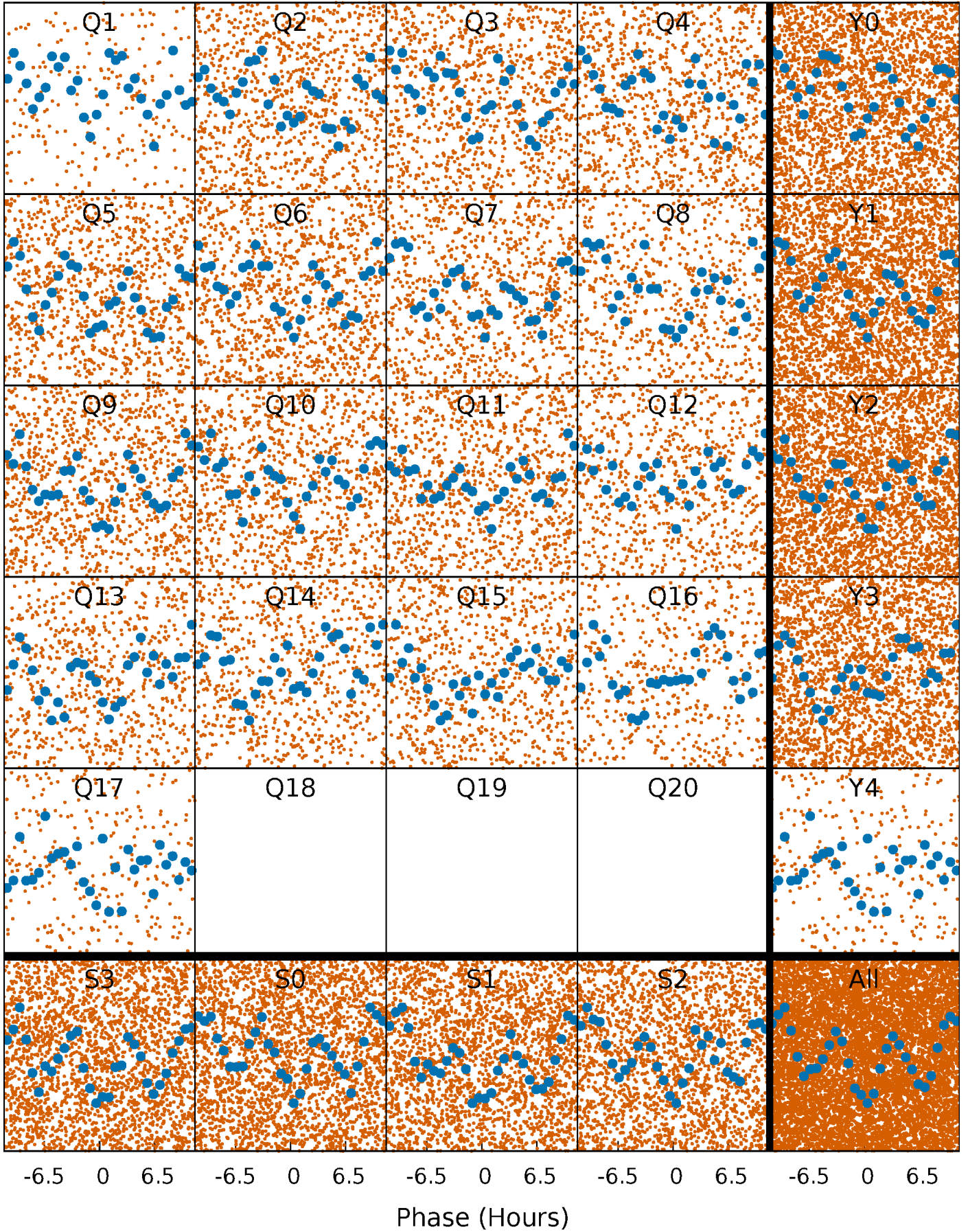


Non-Whitened Vs. Whitened Light Curve



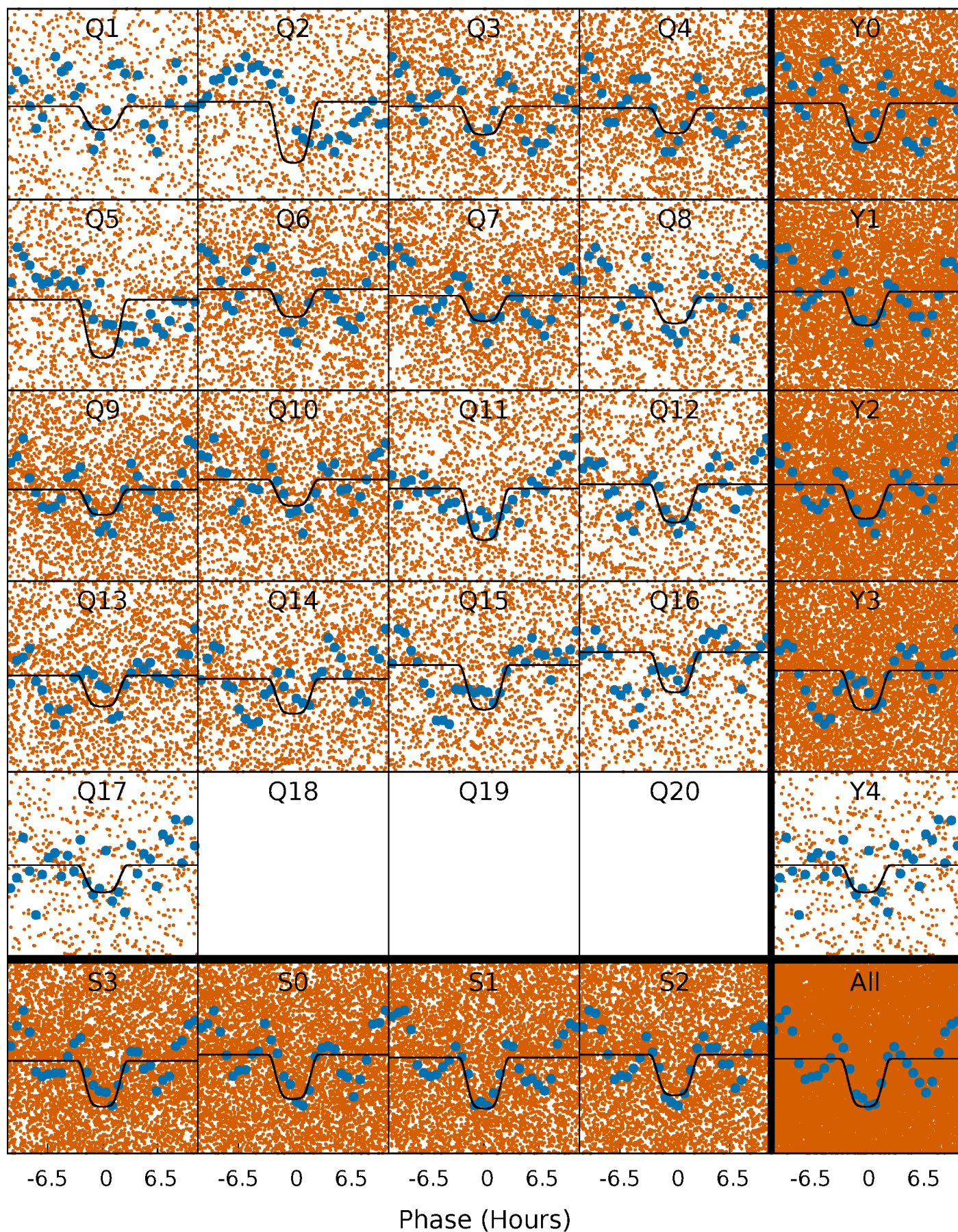
PDC Quarter-Phased Transit Curves

TCE 006142919-01 P= 1.135558 Days $T_0=132.646227$ (BKJD)



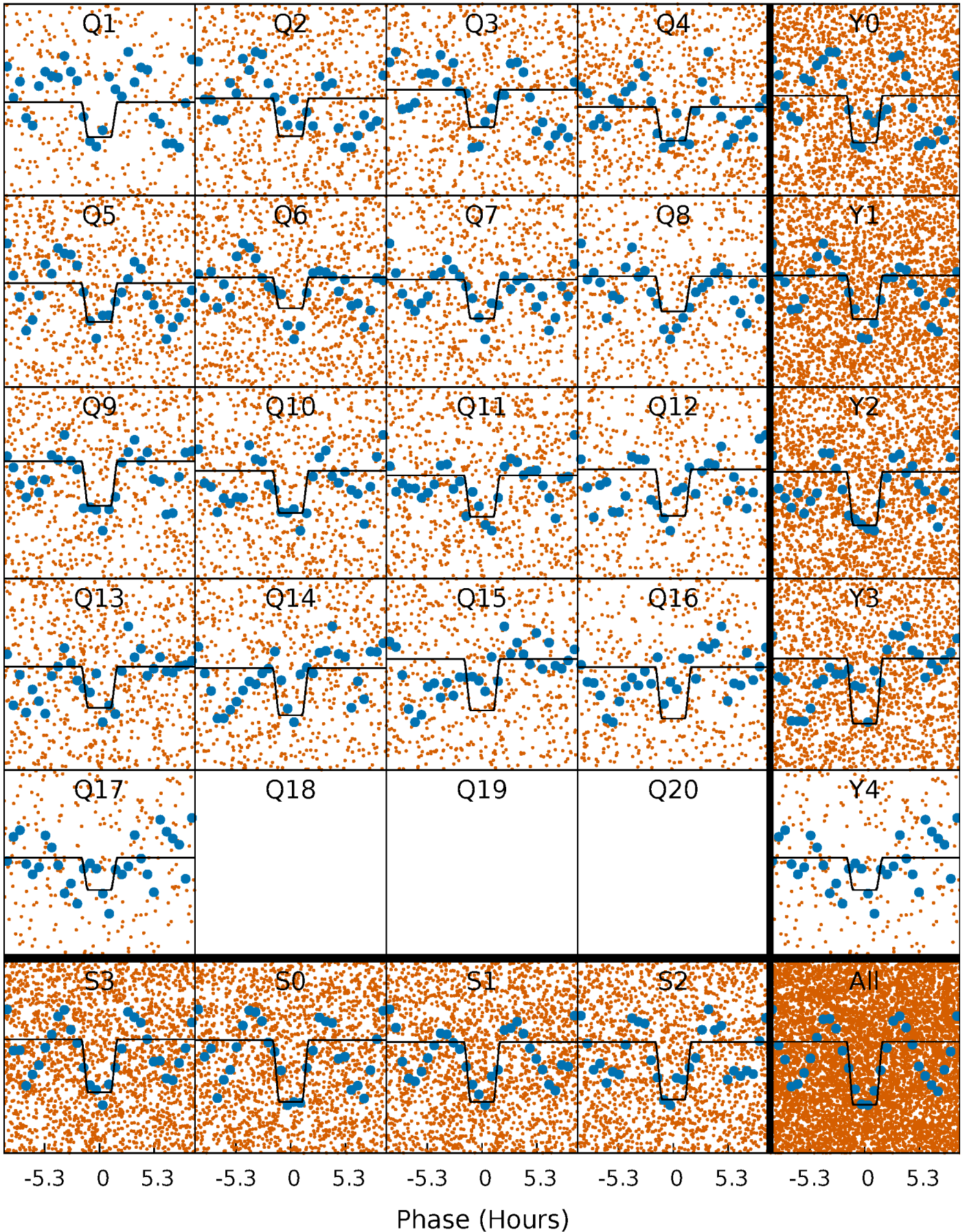
DV Quarter-Phased Transit Curves

TCE 006142919-01 P= 1.135558 Days $T_0=132.646227$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

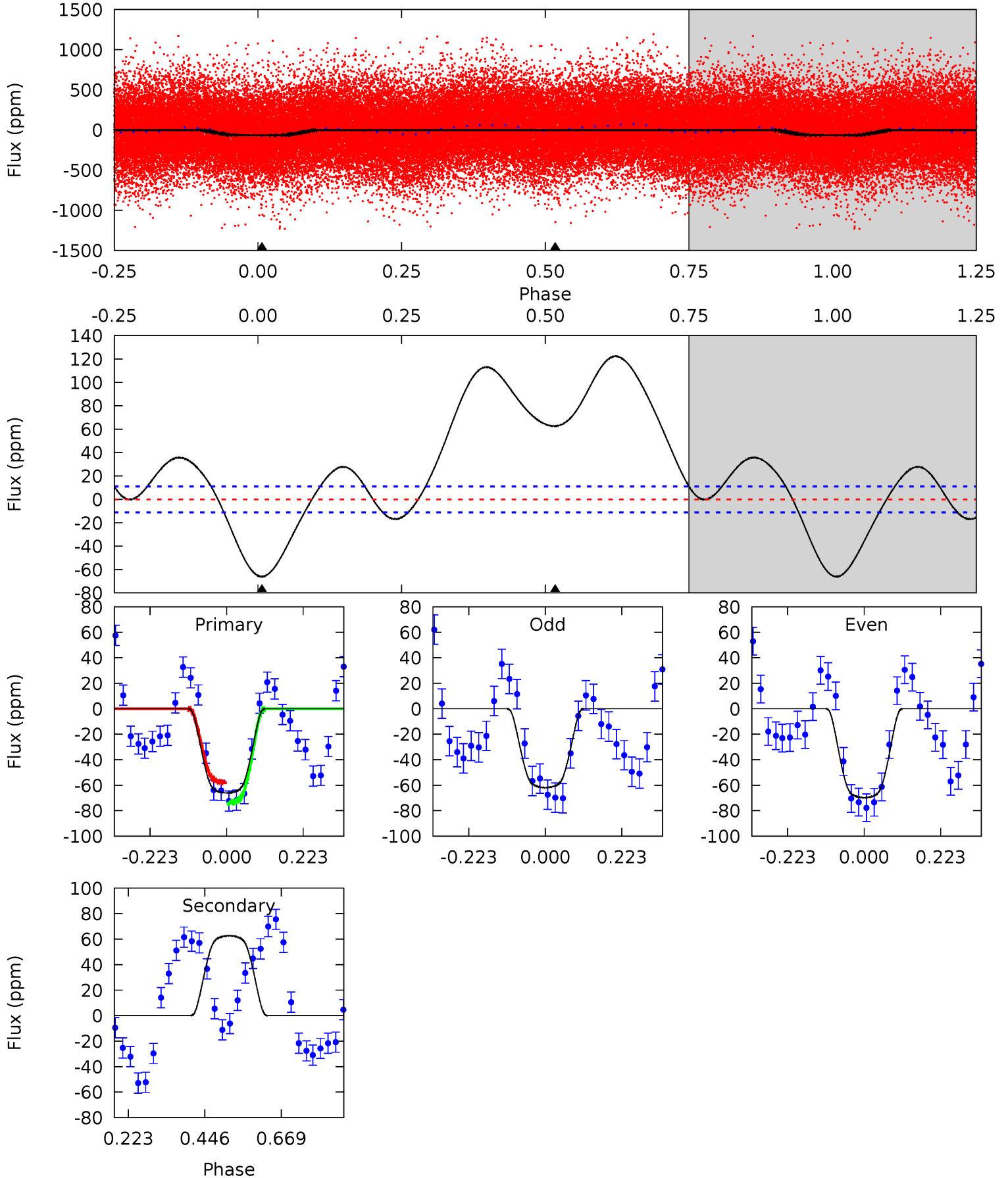
TCE 006142919-01 P= 1.135638 Days $T_0=132.611717$ (BKJD)



DV Model-Shift Uniqueness Test

006142919-01, P = 1.135558 Days, E = 131.510669 Days

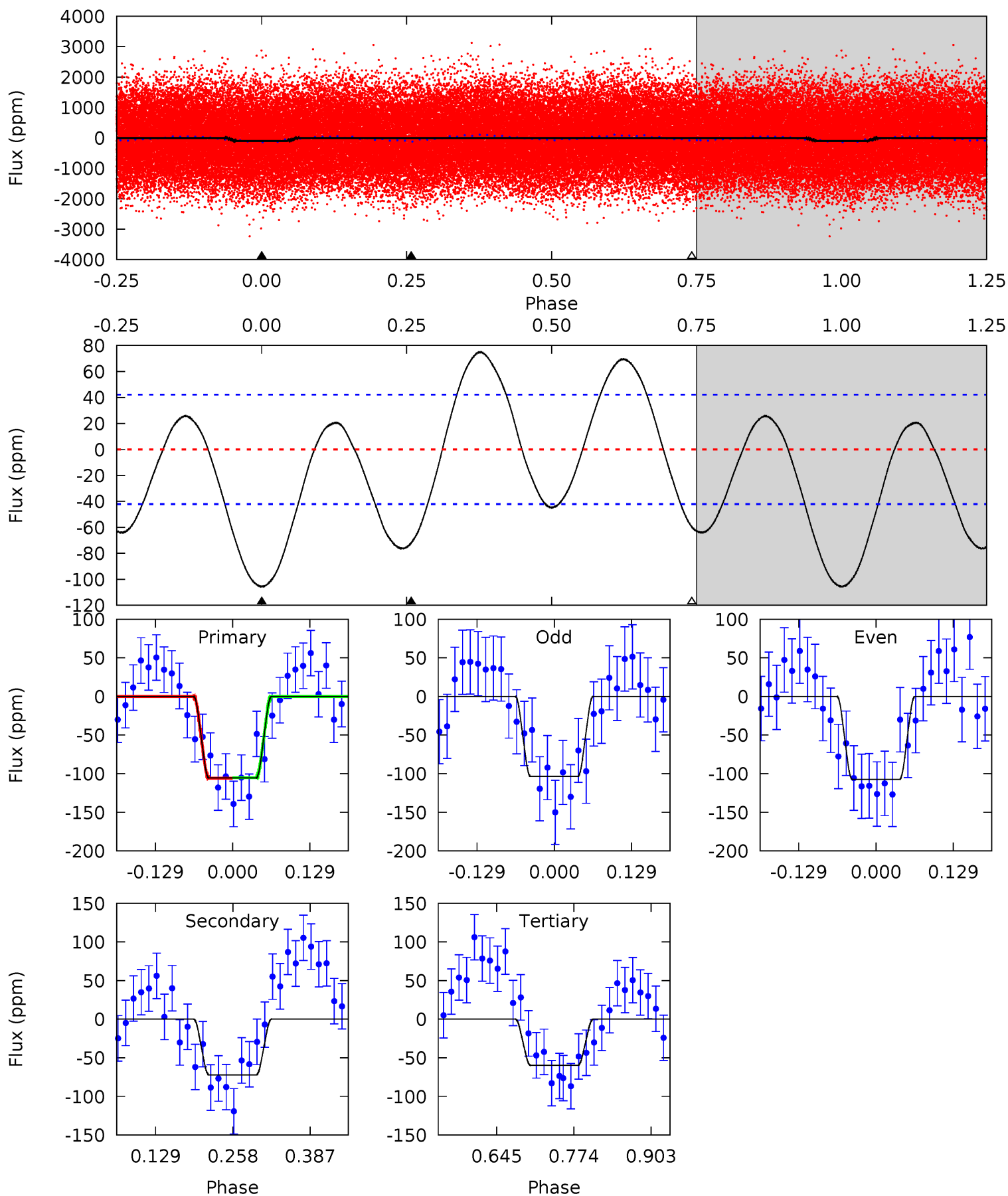
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.2	-24.8	0	0	4.39	1.22	4.12	26.2	26.2	-24.8	-24.8	1.56	1.00	0.65	3.19



Alt Model-Shift Uniqueness Test

006142919-01, P = 1.135638 Days, E = 131.476079 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.3	7.72	6.40	0	4.51	1.52	4.53	4.91	11.3	1.32	7.72	0.20	0.99	0.42	0.03



Stellar Parameters For KIC 006142919

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7277^{+228}_{-279}	$4.043^{+0.175}_{-0.175}$	$-0.080^{+0.250}_{-0.350}$	$1.982^{+0.587}_{-0.533}$	$1.581^{+0.211}_{-0.257}$	$0.286^{+0.286}_{-0.145}$
	+3%/-4%	+4%/-4%	+312%/-438%	+30%/-27%	+13%/-16%	+100%/-51%
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 006142919-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	63 ± 3	$2.32^{+0.39}_{-0.32}$	4006^{+328}_{-290}	-6304^{+250}_{-233}	$-3.922^{+0.989}_{-1.218}$
Alt.	-72 ± 9	$2.36^{+0.40}_{-0.34}$	4004^{+306}_{-302}	6211^{+332}_{-333}	$4.367^{+1.632}_{-1.313}$

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 $A_{obs} \gg 1.0$

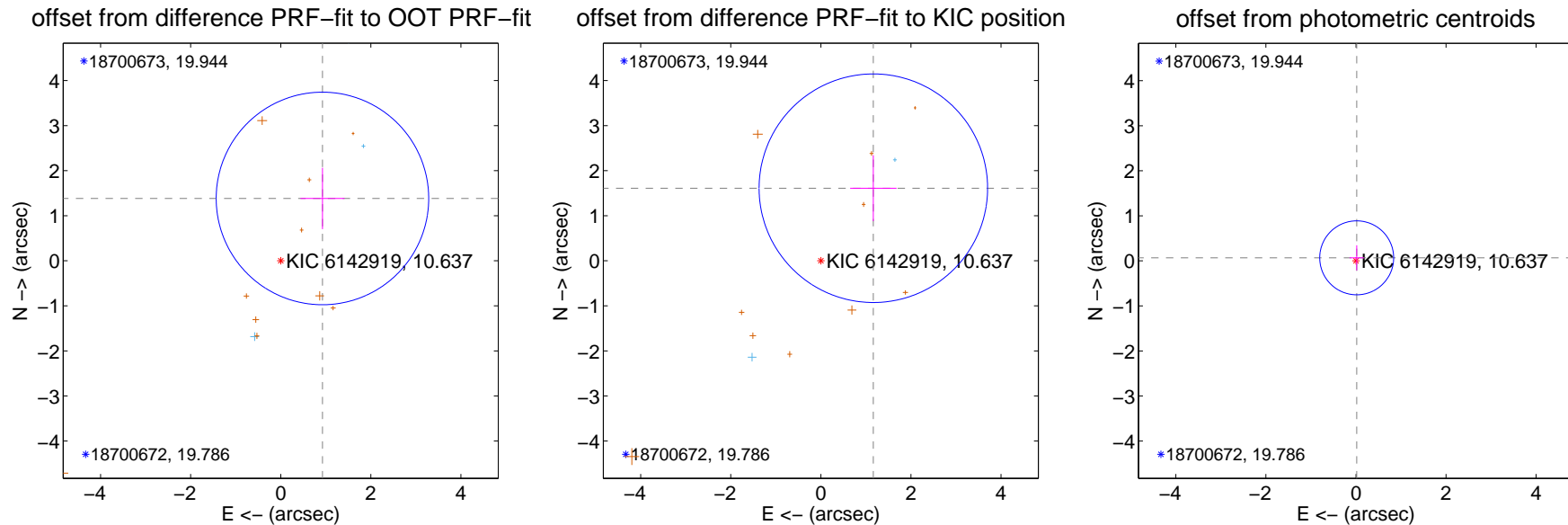
DV Centroid Data

Supplemental centroid analysis for 006142919-01. **Kepler magnitude: 10.64.** Transit SNR 13.98

There are 3 quarters with good PRF difference image offsets

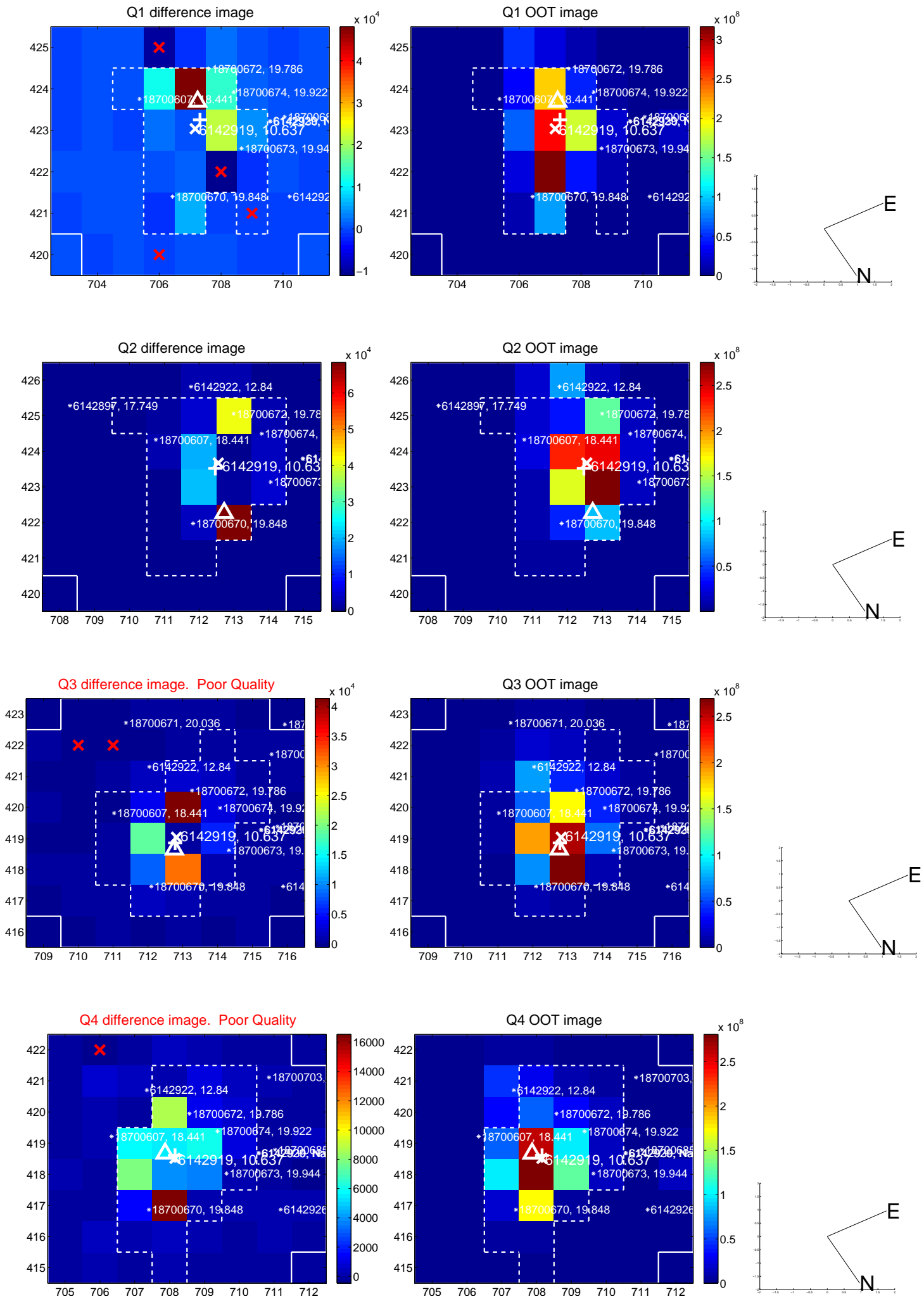
The direct PRF centroid is offset from the target star catalog position by about 1.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.665 ± 0.786	2.12	-0.926 ± 0.489	1.383 ± 0.681
PRF-fit source offset from KIC position	1.988 ± 0.846	2.35	-1.165 ± 0.516	1.611 ± 0.733
photometric centroid source offset	0.07 ± 0.27	0.25	-0.02 ± 0.16	0.07 ± 0.28

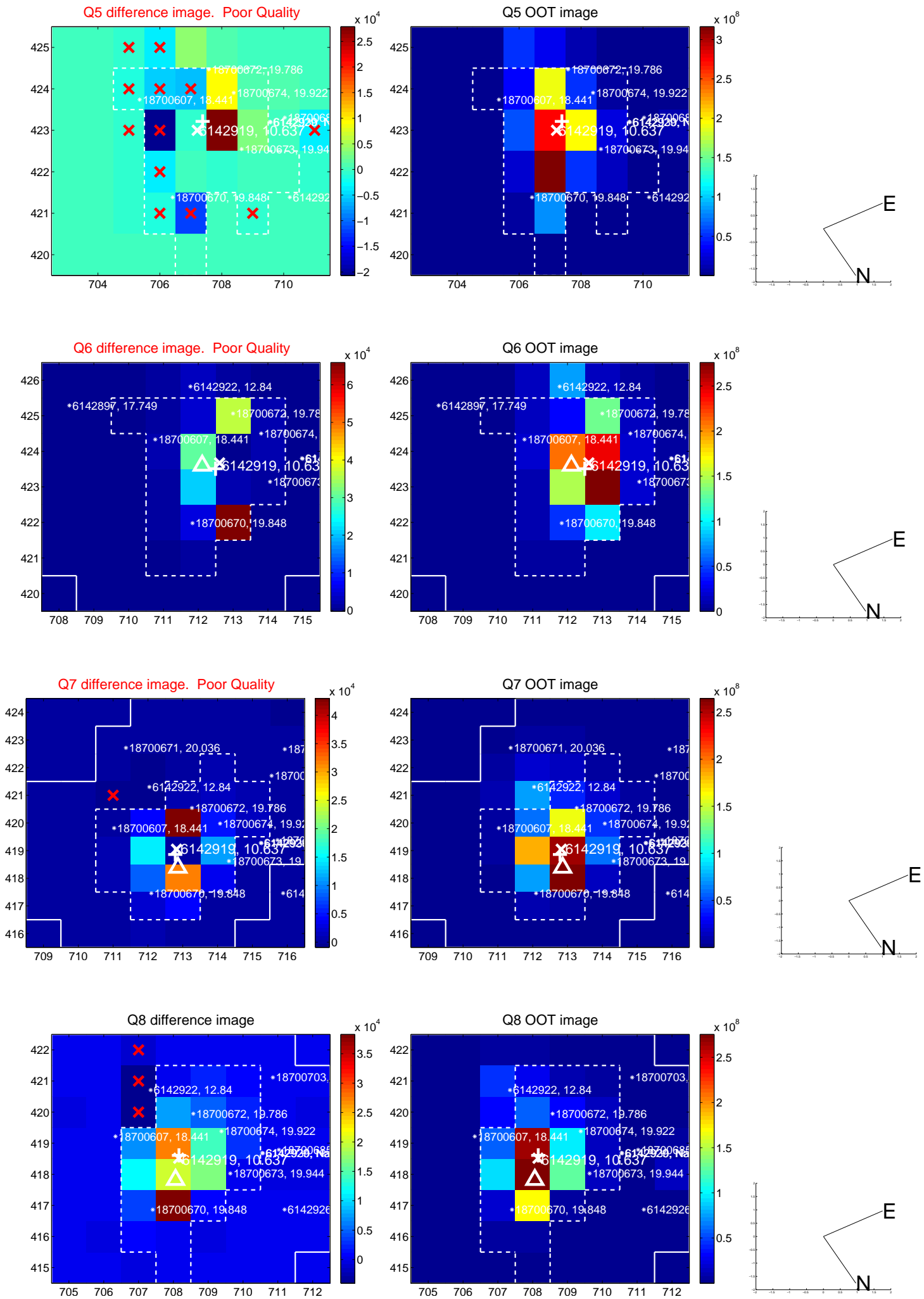


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

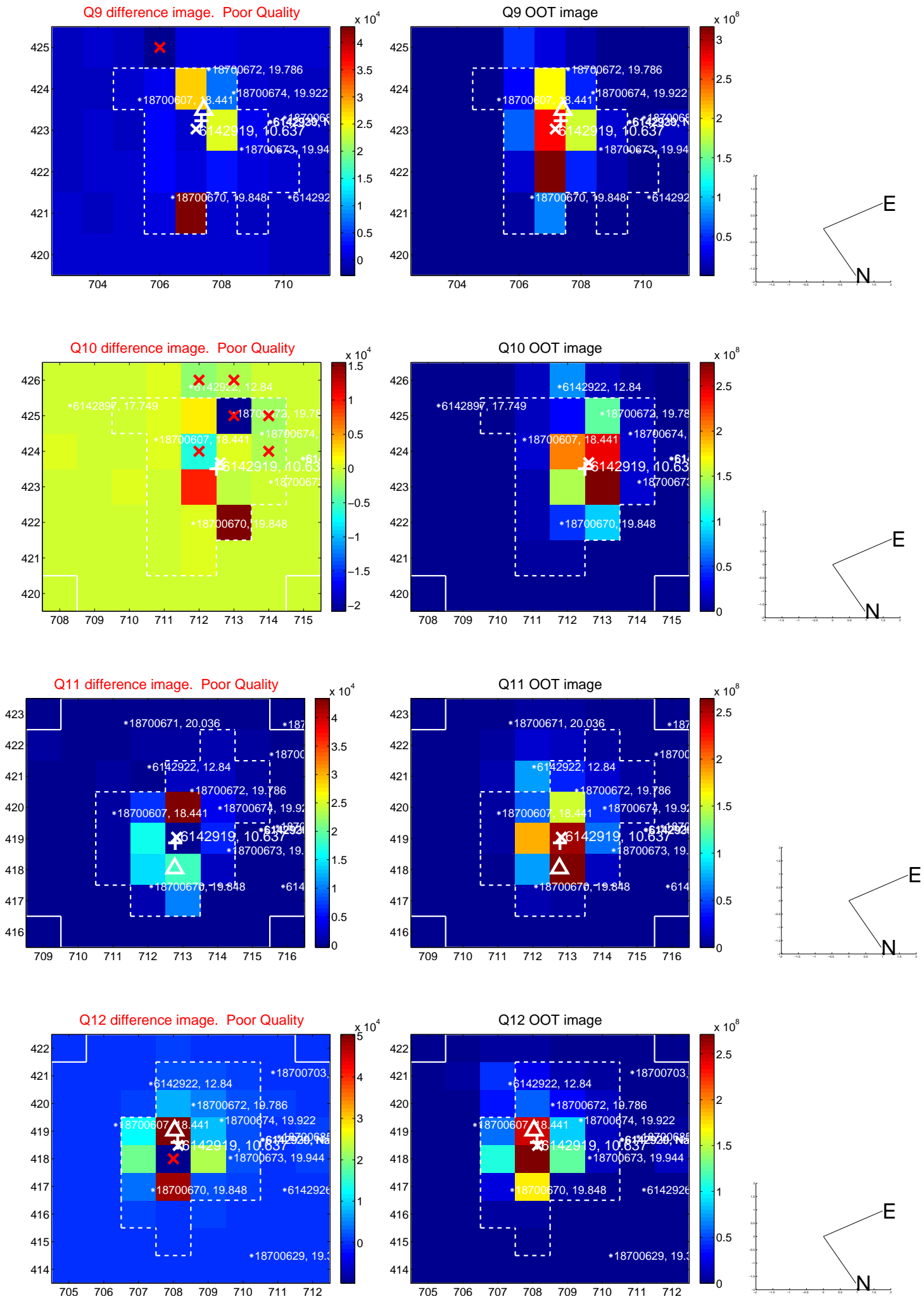
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



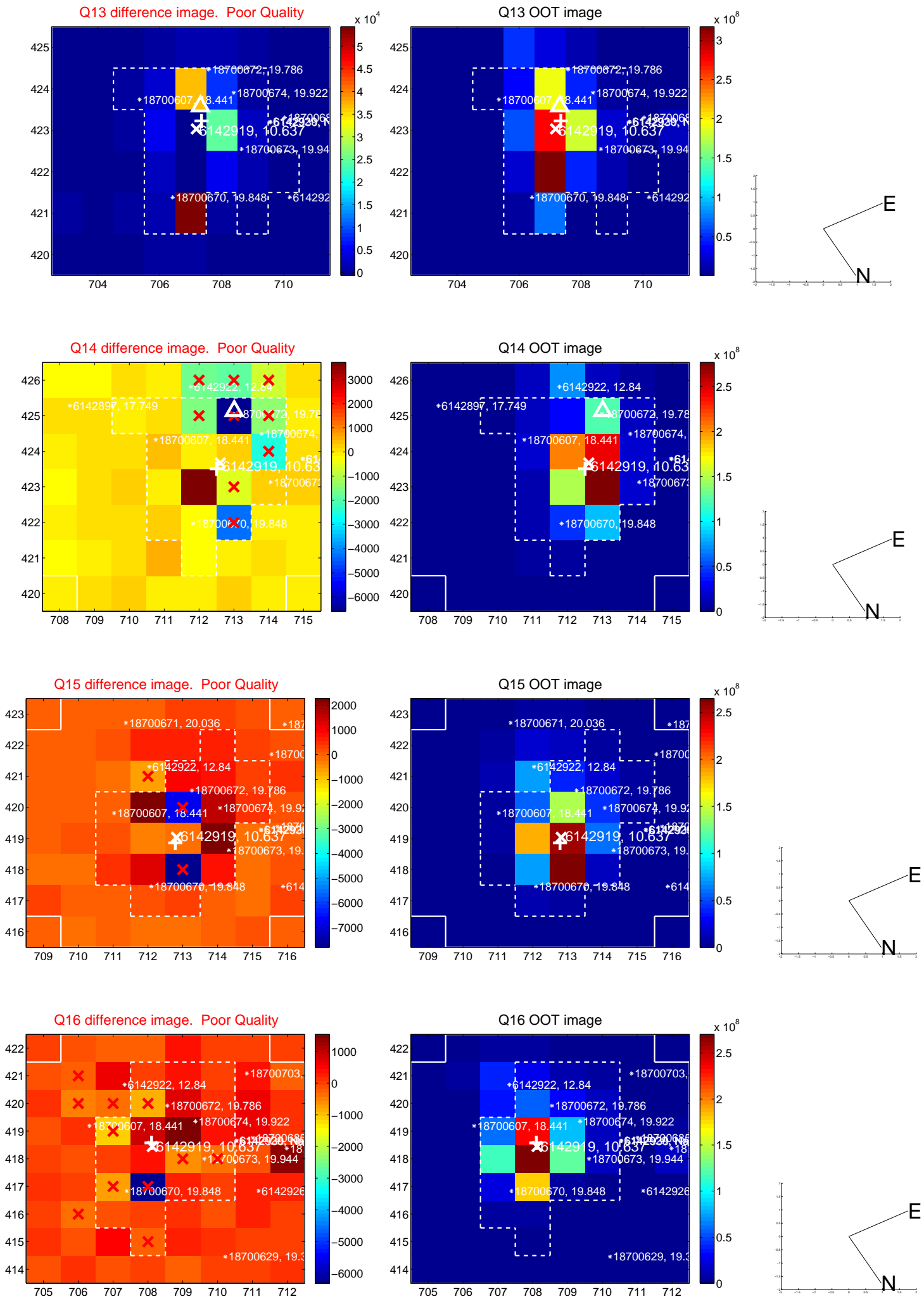
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



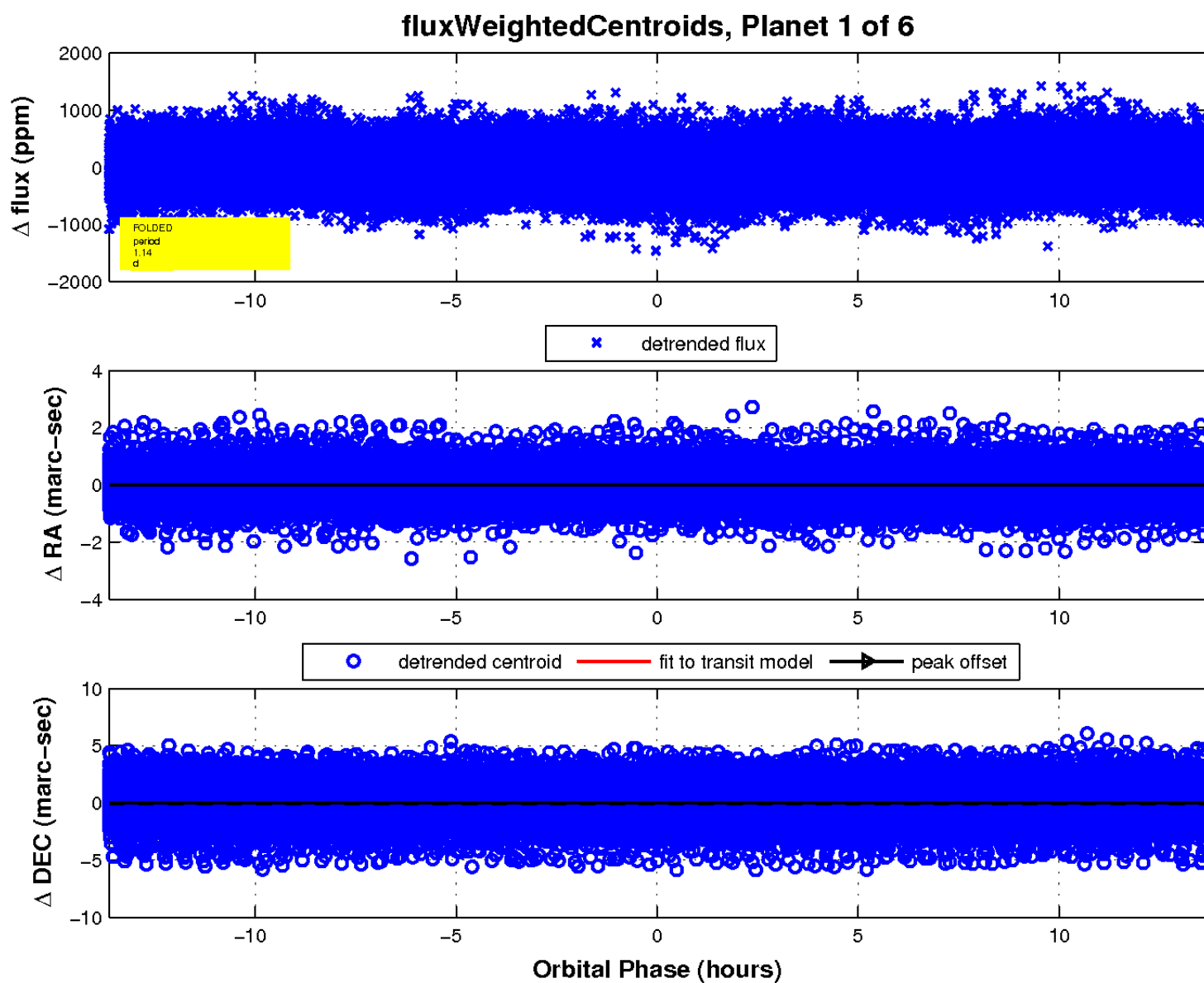
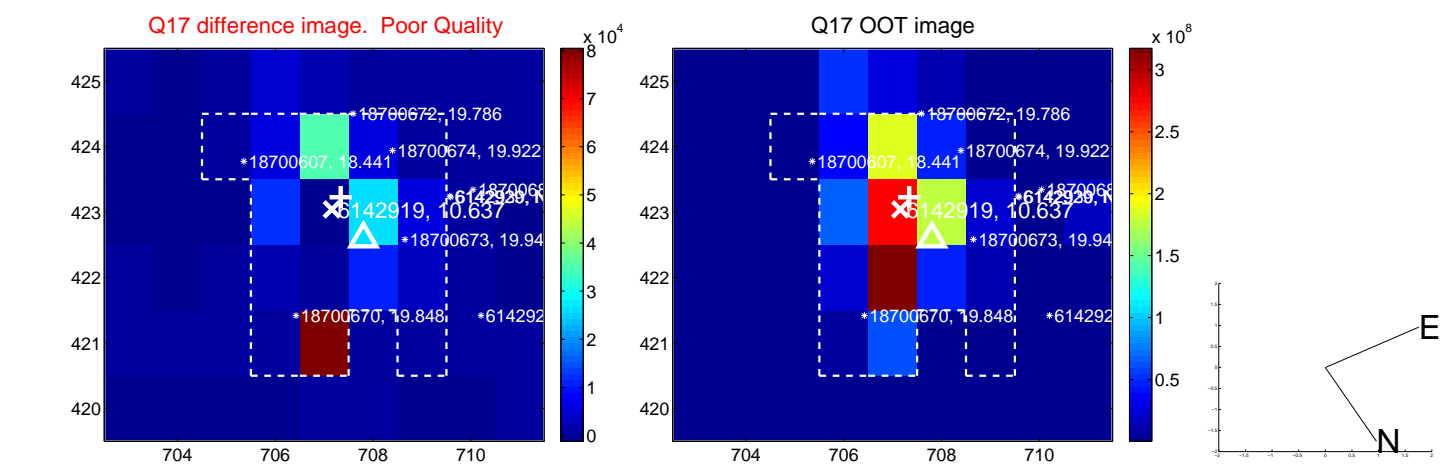
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



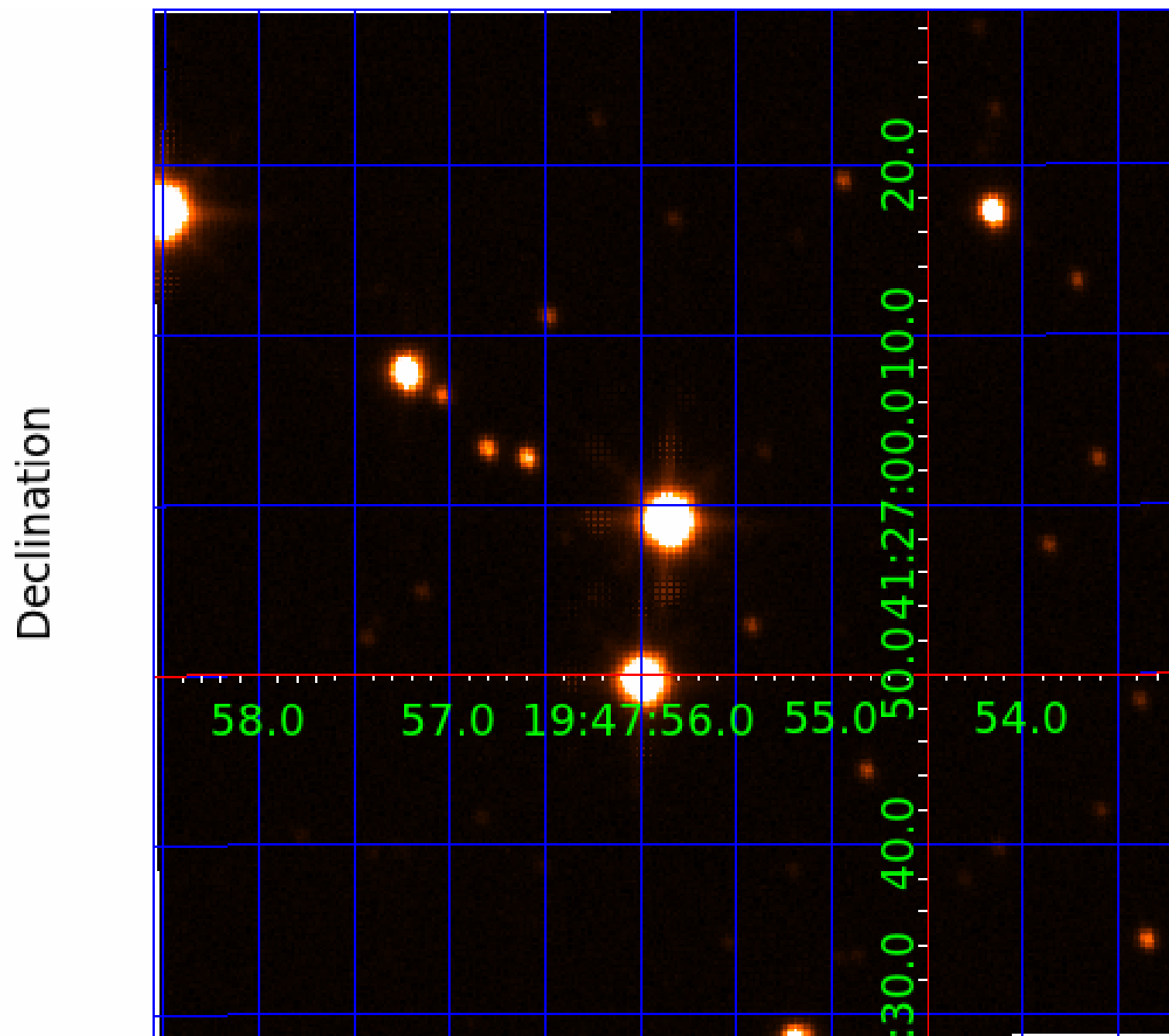
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 006142919

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})
006142919-01	OBS	No	1.135558	132.646227	78.0	5.646	10.4	14.0	1.98	7277	2.31	16013.77
006142919-02	OBS	No	6.905115	132.830640	184.0	6.717	10.8	10.7	1.98	7277	5.21	1442.82
006142919-03	OBS	No	177.609992	177.490048	116.4	1.516	9.4	1.5	1.98	7277	2.43	19.00
006142919-04	OBS	No	302.149263	209.121393	747.1	4.954	9.3	9.2	1.98	7277	8.18	9.36
006142919-05	OBS	No	74.161825	138.582123	608.1	4.811	8.5	9.5	1.98	7277	9.21	60.89
006142919-06	OBS	No	128.110499	139.854922	692.2	4.575	8.1	8.1	1.98	7277	9.73	29.38

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006142919-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_SATURATED
006142919-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006142919-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006142919-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
006142919-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006142919-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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

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

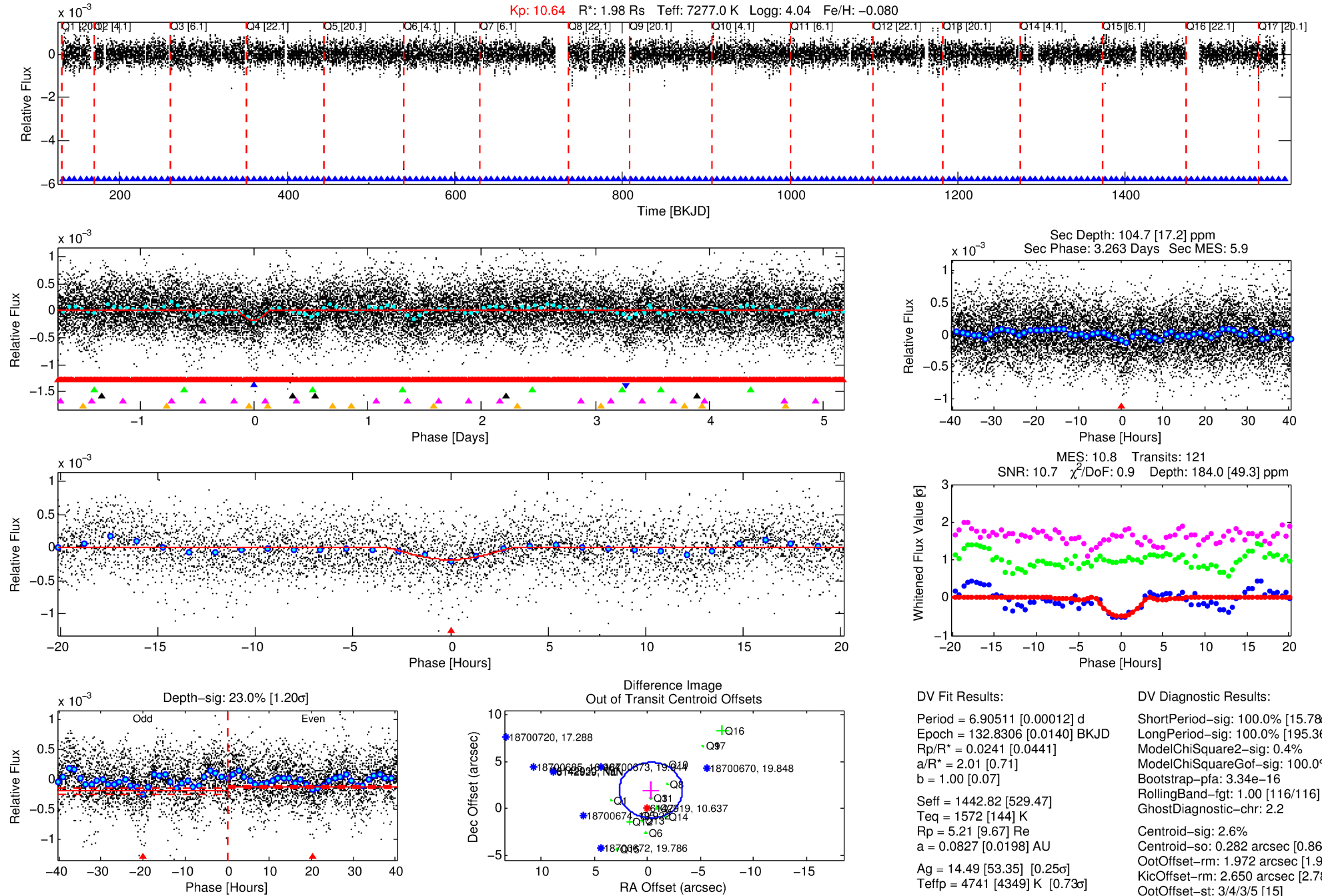
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006142919-02

No Significant Match Found

DV One-Page Summary

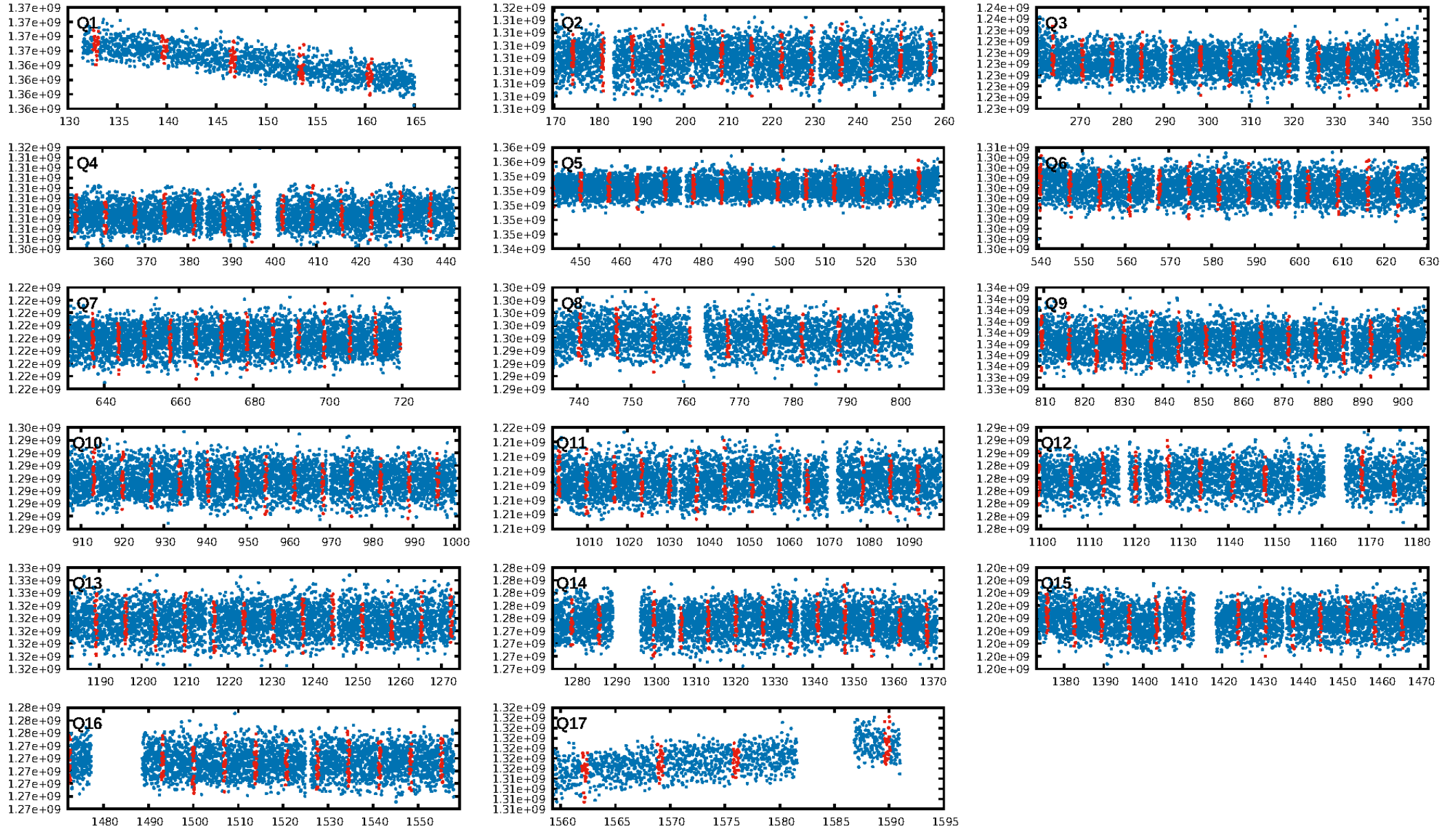
KIC: 6142919 Candidate: 2 of 6 Period: 6.905 d



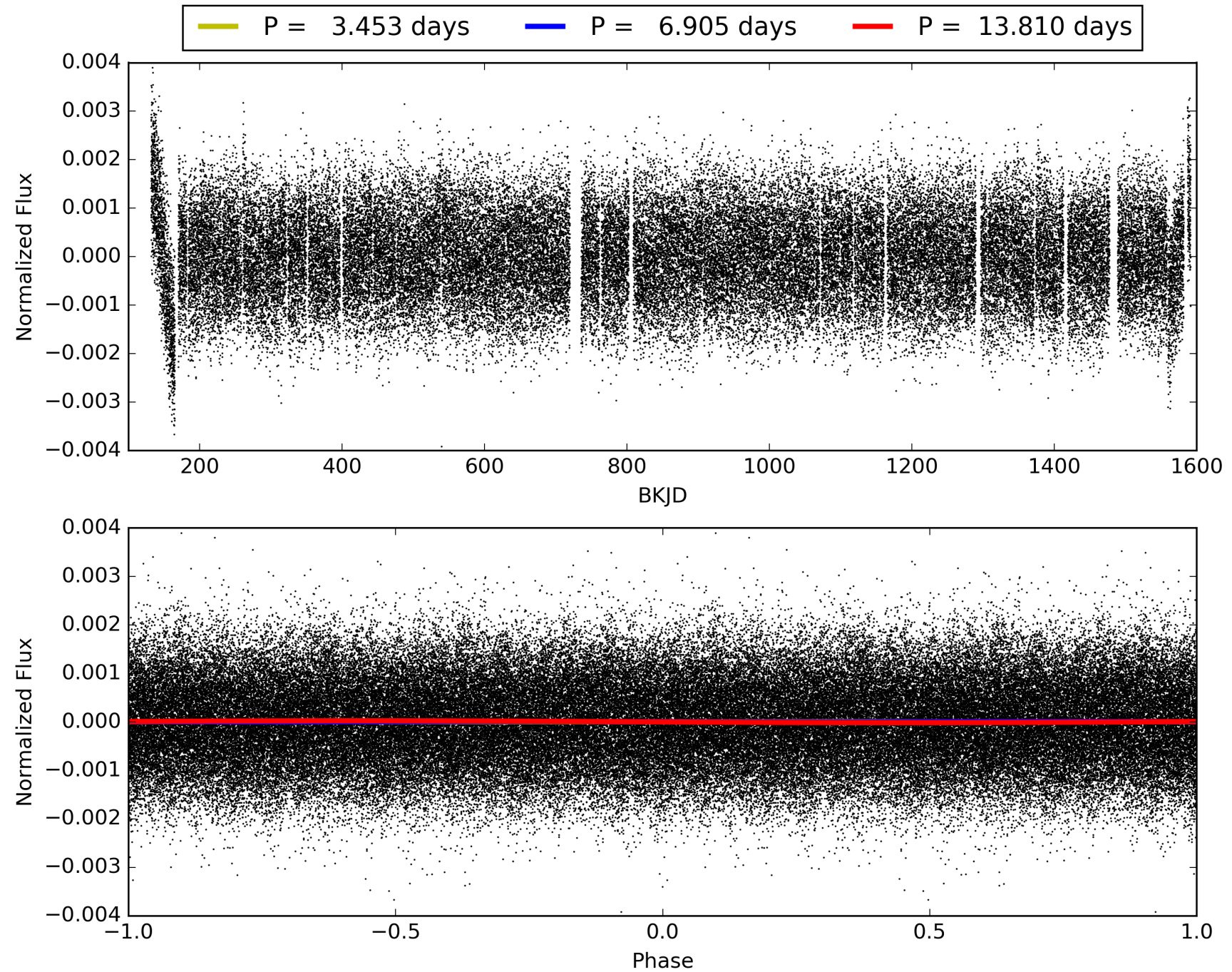
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 07:42:26 Z

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

TCE 006142919-02, PDC Light Curves

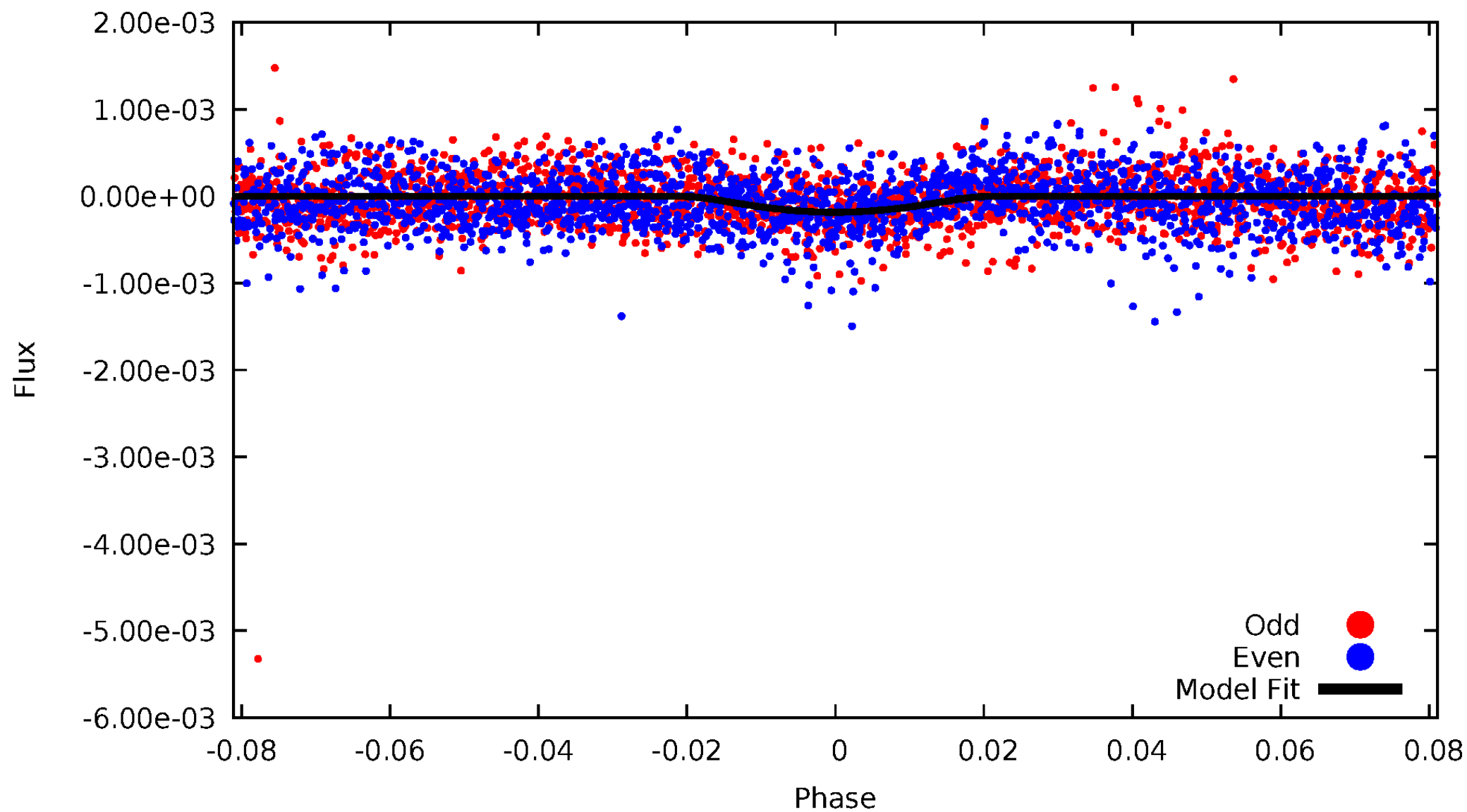


TCE 006142919-02



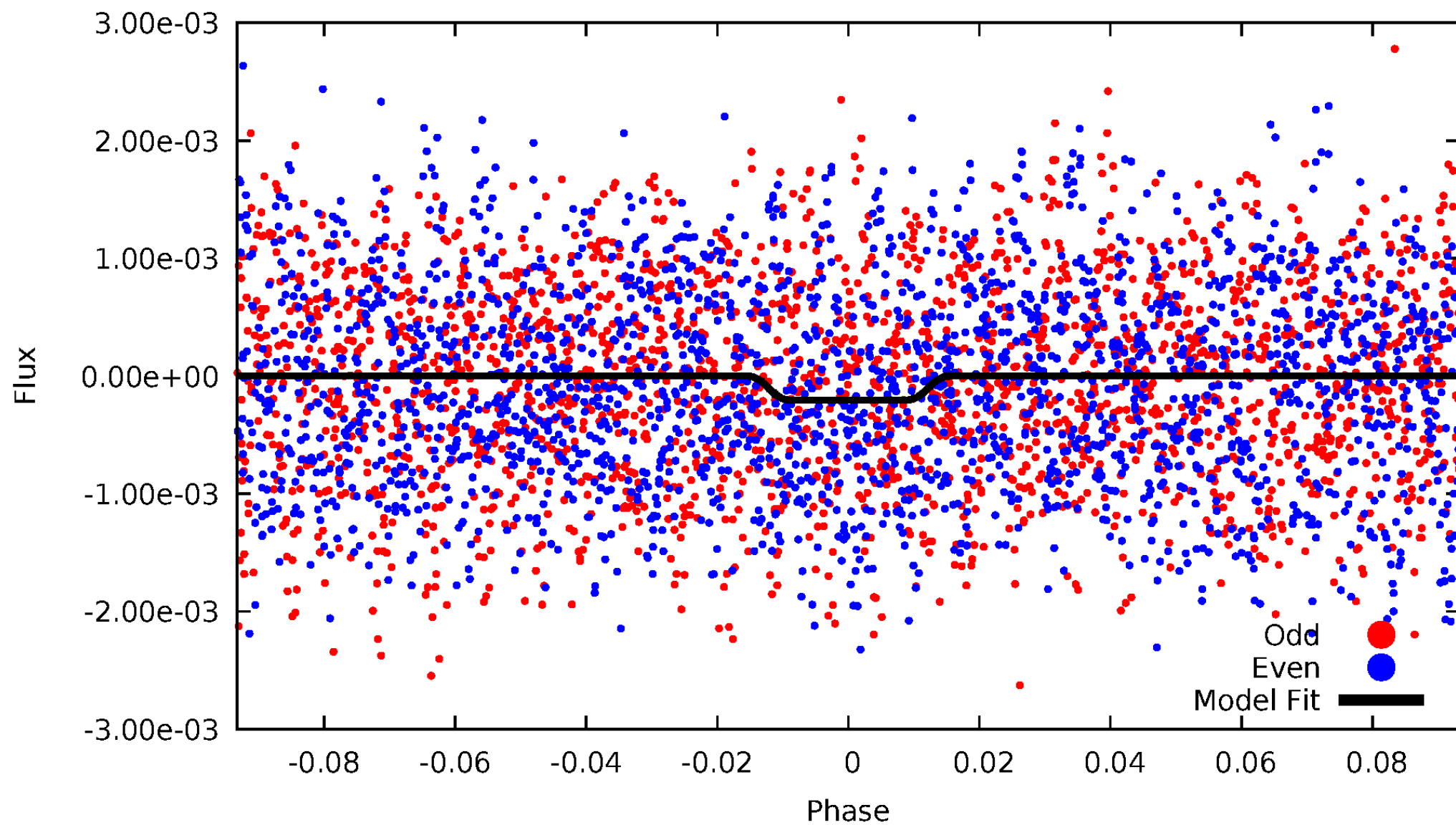
DV Odd/Even

TCE 006142919-02



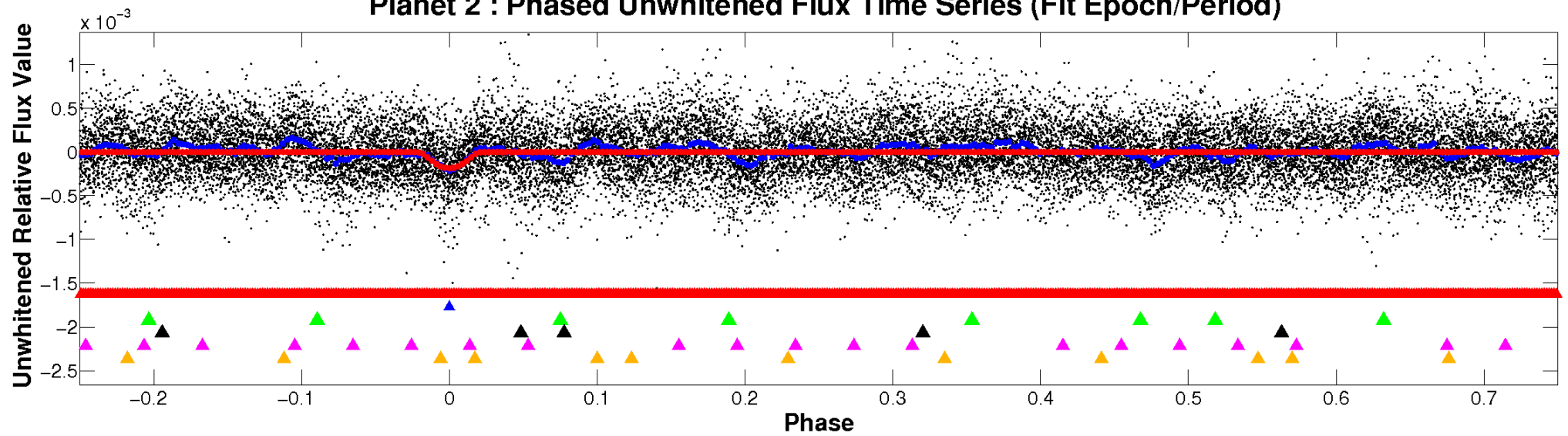
ALT Odd/Even

TCE 006142919-02

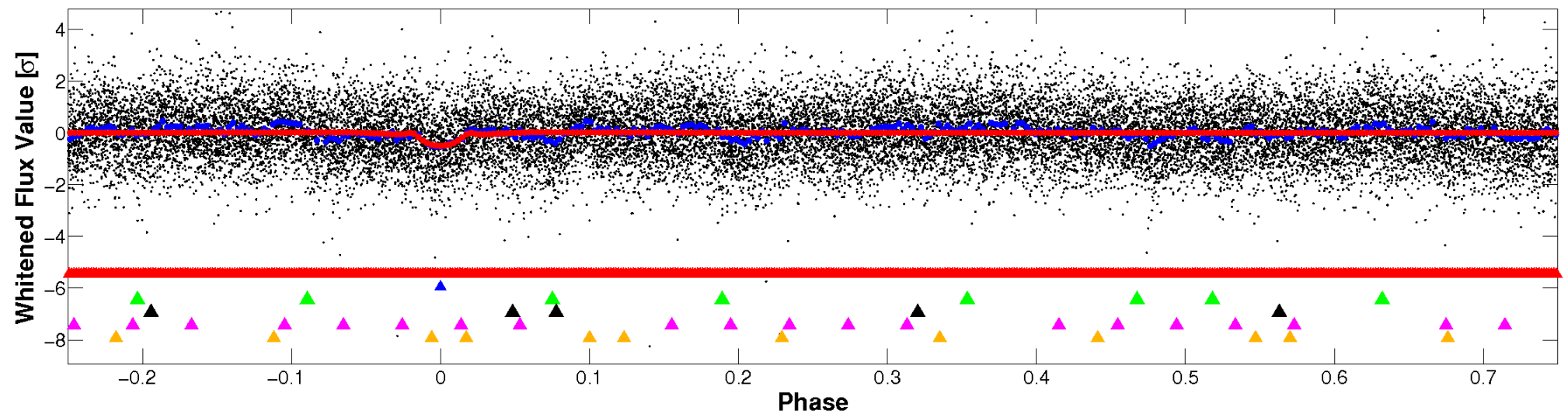


Non-Whitened Vs. Whitened Light Curve

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

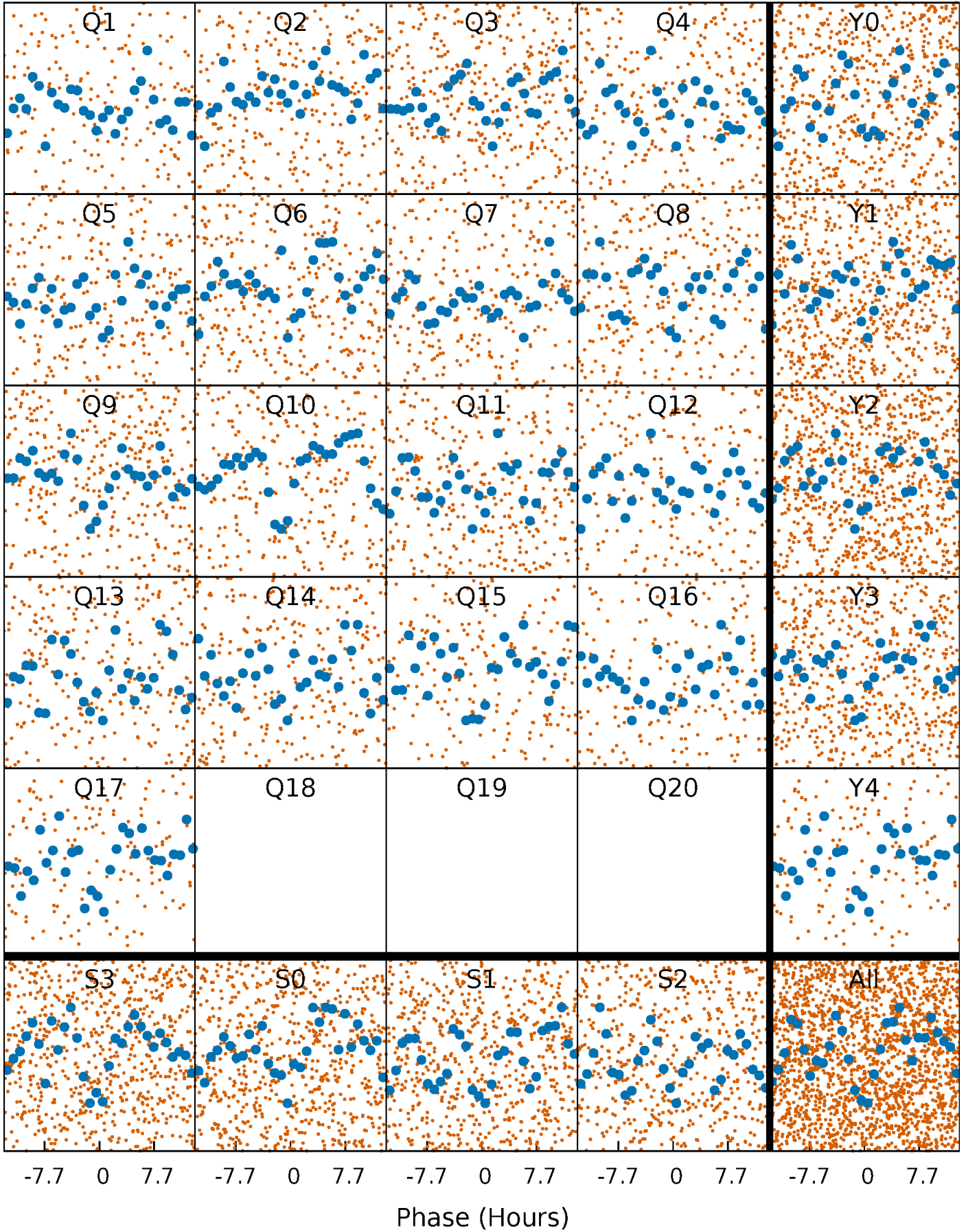


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



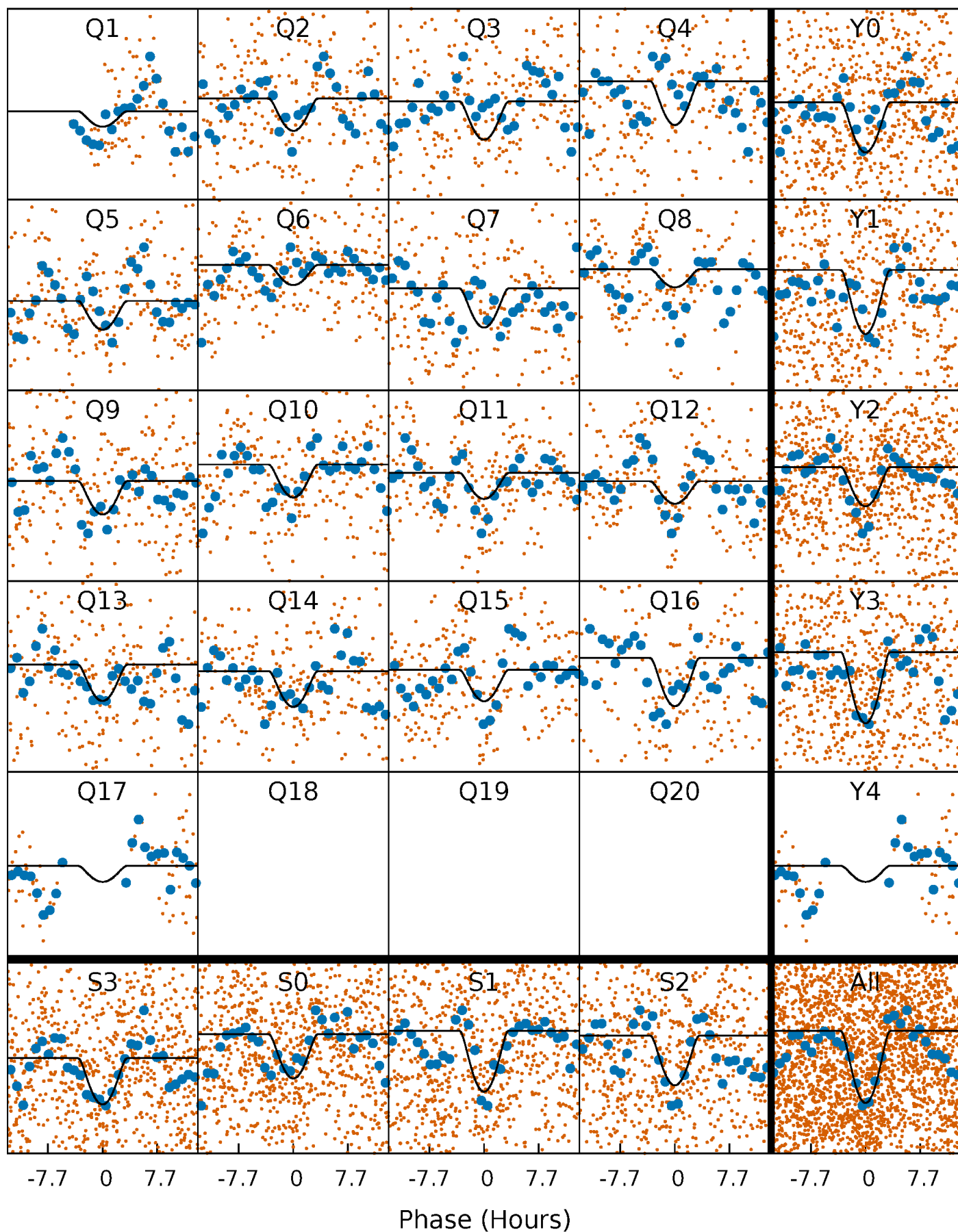
PDC Quarter-Phased Transit Curves

TCE 006142919-02 P= 6.905115 Days $T_0=132.830640$ (BKJD)



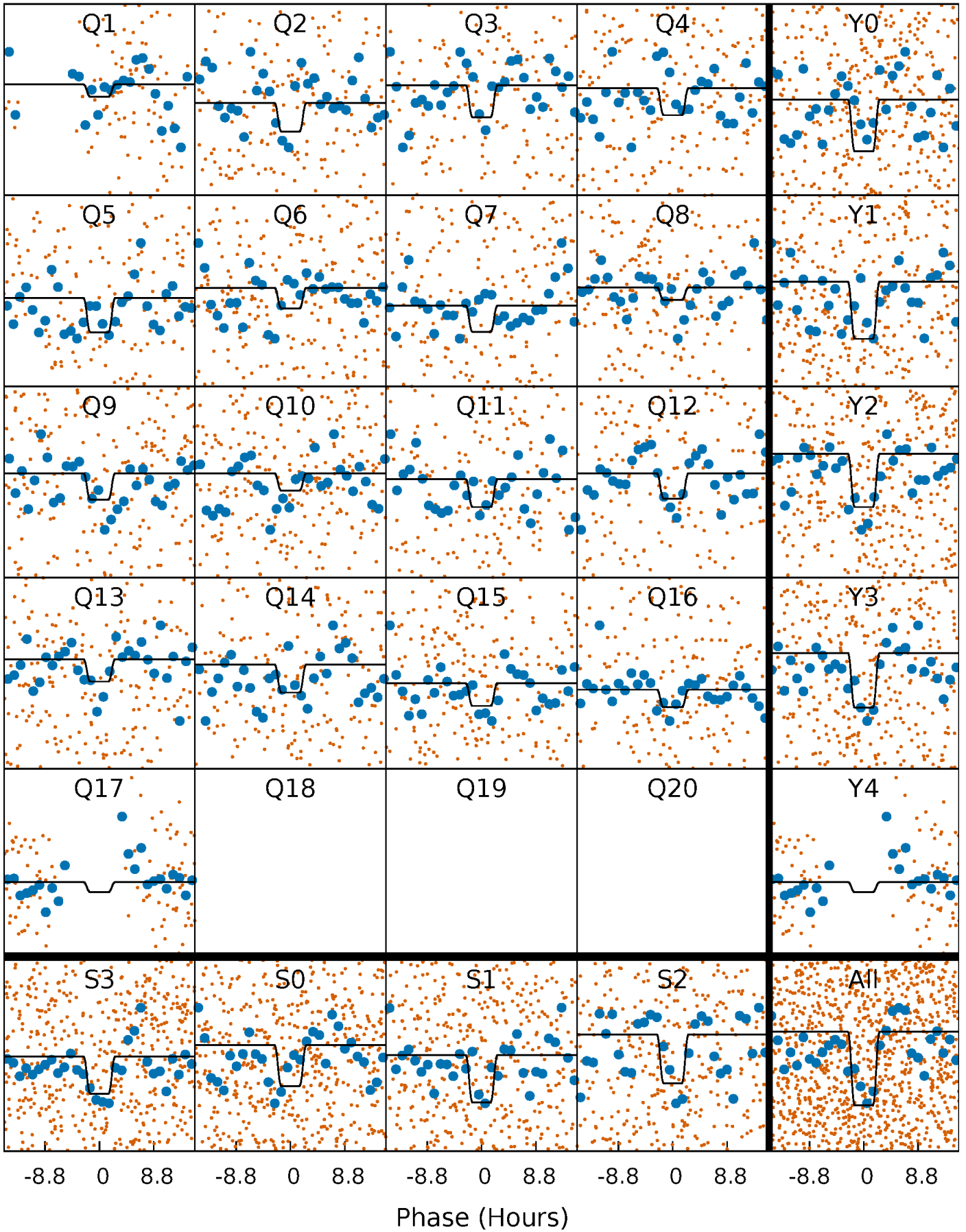
DV Quarter-Phased Transit Curves

TCE 006142919-02 P= 6.905115 Days $T_0=132.830640$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

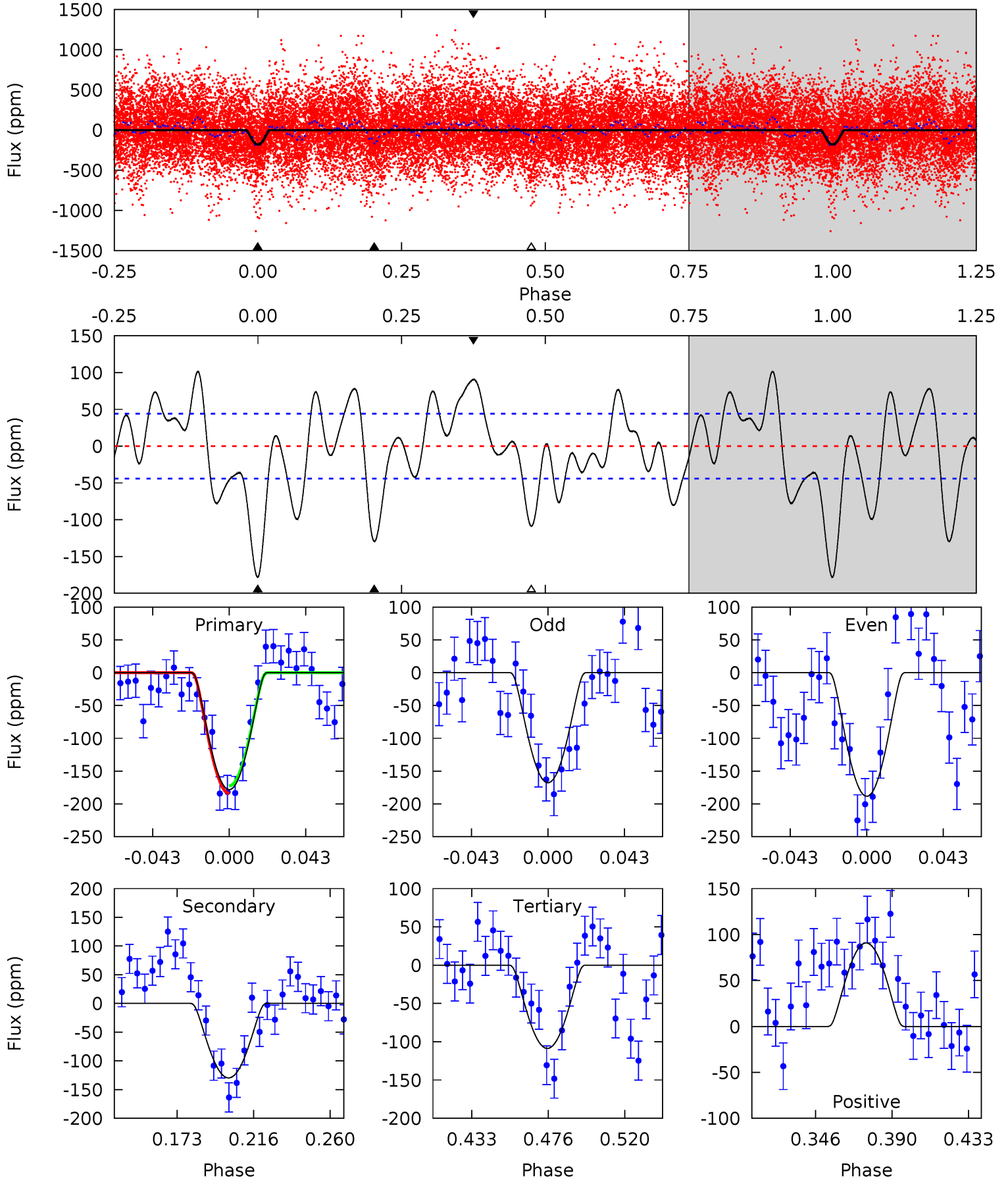
TCE 006142919-02 P= 6.905046 Days $T_0=132.817329$ (BKJD)



DV Model-Shift Uniqueness Test

006142919-02, P = 6.905115 Days, E = 125.925525 Days

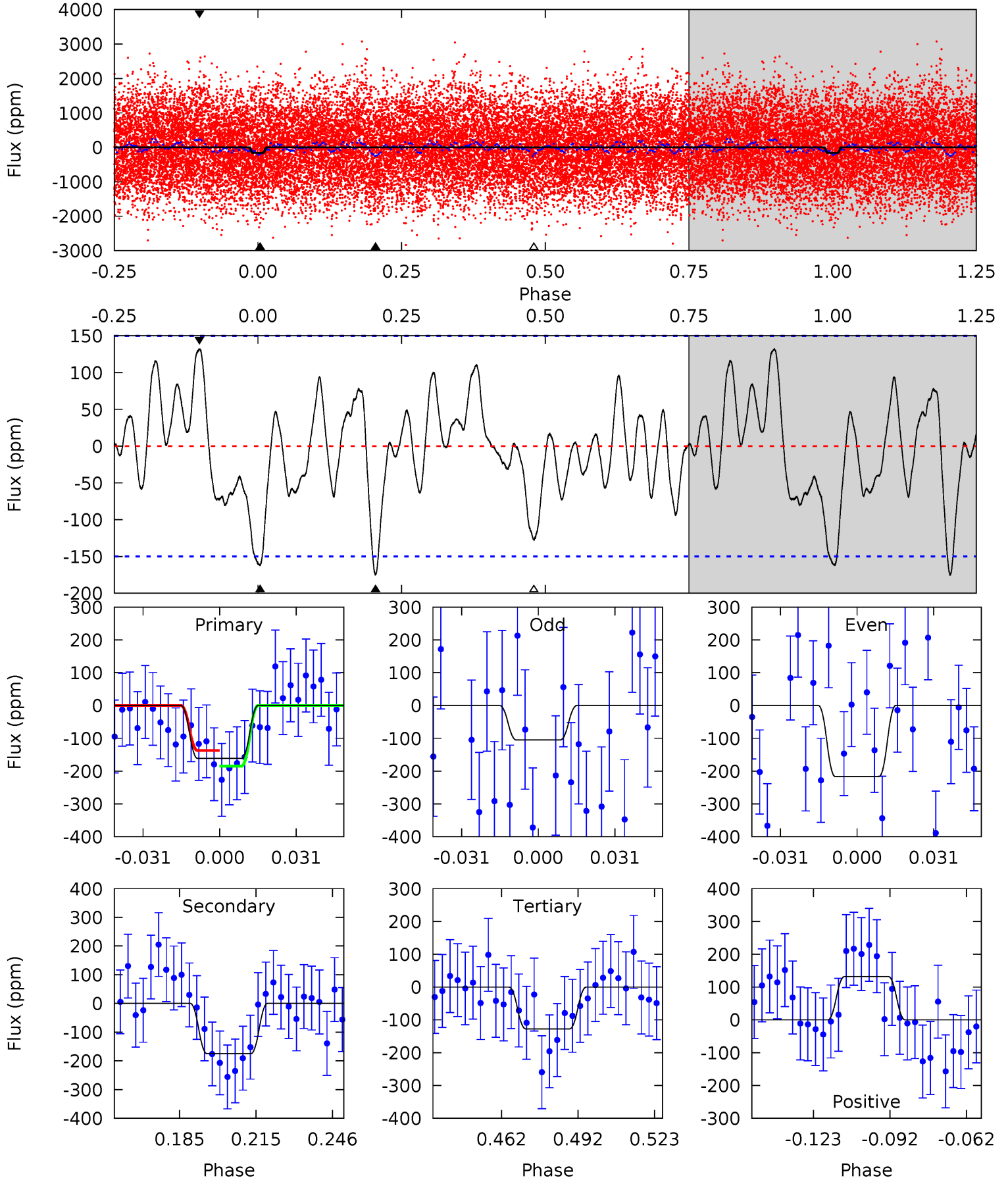
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.2	13.9	11.7	9.76	4.74	2.02	5.18	7.47	9.39	2.25	4.18	1.10	1.44	0.36	0.62



Alt Model-Shift Uniqueness Test

006142919-02, P = 6.905046 Days, E = 125.912283 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.18	5.60	4.08	4.23	4.81	2.16	1.70	1.10	0.95	1.52	1.37	1.78	1.07	0.43	0.76



Stellar Parameters For KIC 006142919

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7277^{+228}_{-279}	$4.043^{+0.175}_{-0.175}$	$-0.080^{+0.250}_{-0.350}$	$1.982^{+0.587}_{-0.533}$	$1.581^{+0.211}_{-0.257}$	$0.286^{+0.286}_{-0.145}$
	+3%/-4%	+4%/-4%	+312%/-438%	+30%/-27%	+13%/-16%	+100%/-51%
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 006142919-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-130 ± 9	$9.00^{+7.91}_{-6.20}$	2194^{+172}_{-172}	4024^{+2753}_{-825}	$5.929^{+54.636}_{-4.183}$
Alt.	-175 ± 31	$7.53^{+7.71}_{-5.16}$	2198^{+162}_{-153}	4540^{+3518}_{-1083}	11^{+91}_{-9}

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 $A_{obs} \gg 1.0$

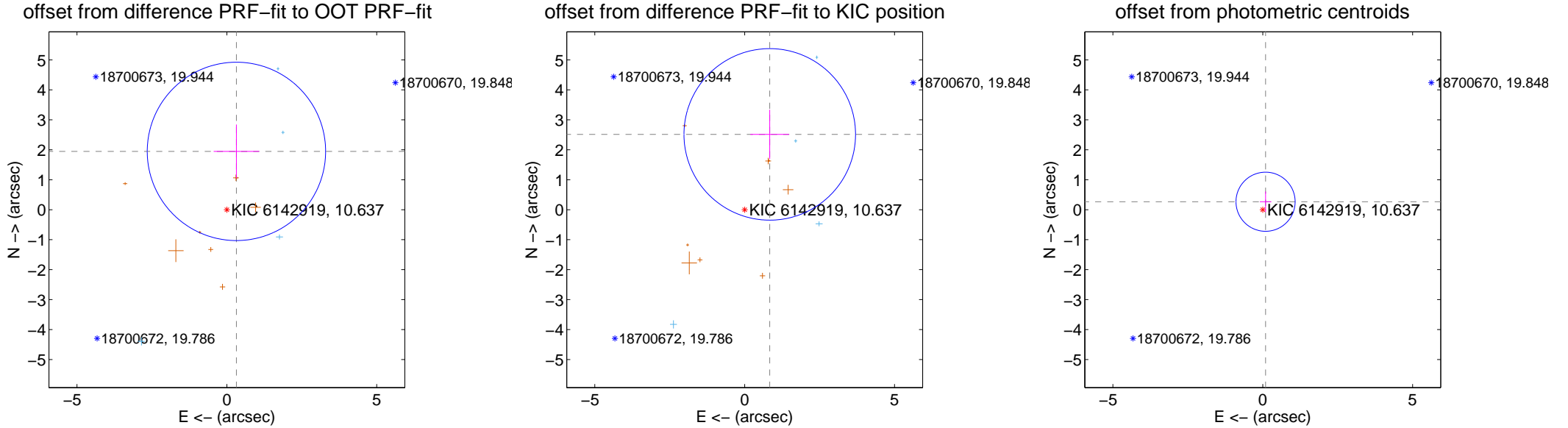
DV Centroid Data

Supplemental centroid analysis for 006142919-02. **Kepler magnitude: 10.64.** Transit SNR 10.74

There are 6 quarters with good PRF difference image offsets

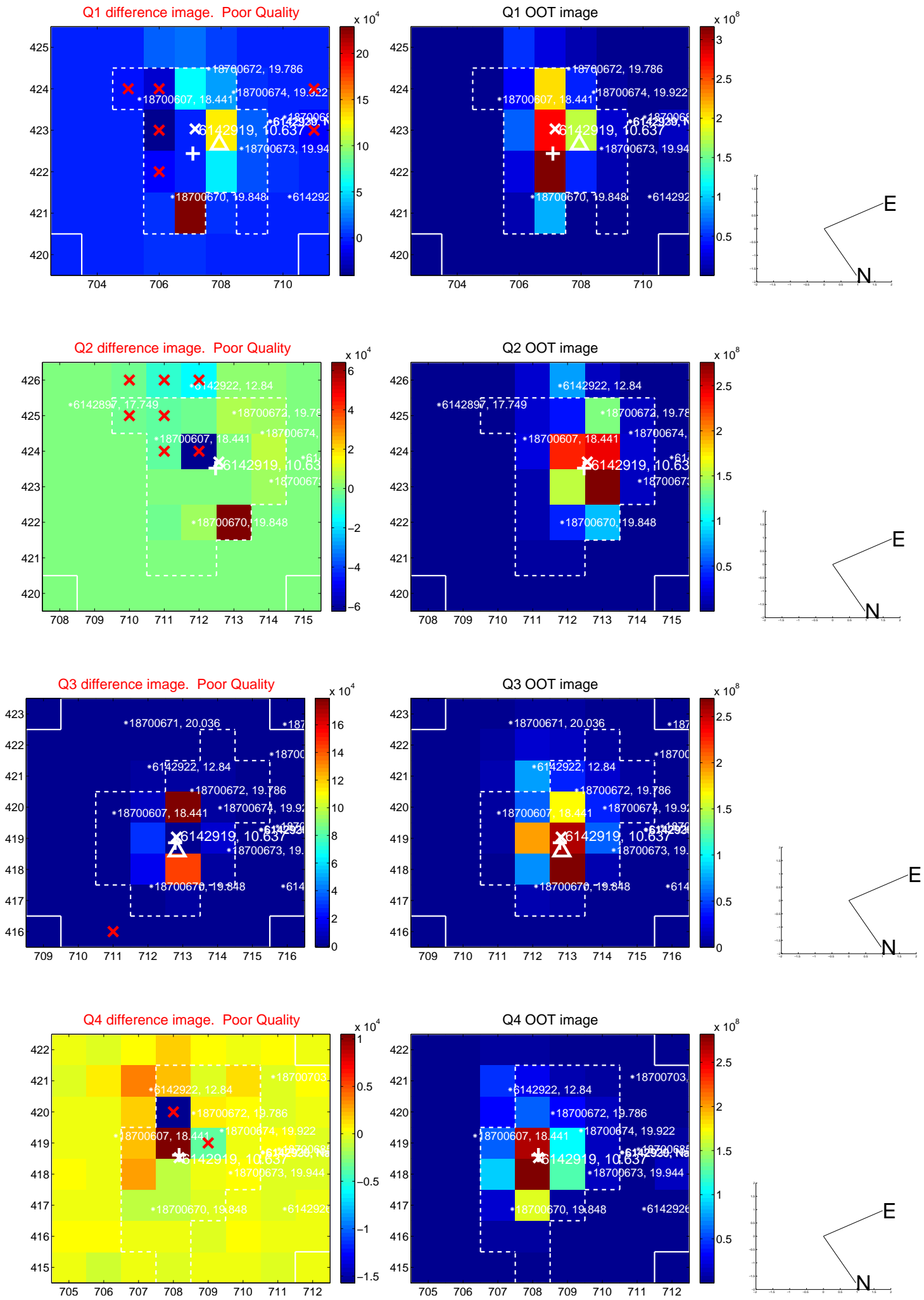
The direct PRF centroid is offset from the target star catalog position by about 1.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.972 ± 0.992	1.99	-0.320 ± 0.760	1.946 ± 0.897
PRF-fit source offset from KIC position	2.650 ± 0.954	2.78	-0.837 ± 0.648	2.514 ± 0.823
photometric centroid source offset	0.28 ± 0.33	0.86	-0.09 ± 0.19	0.27 ± 0.34

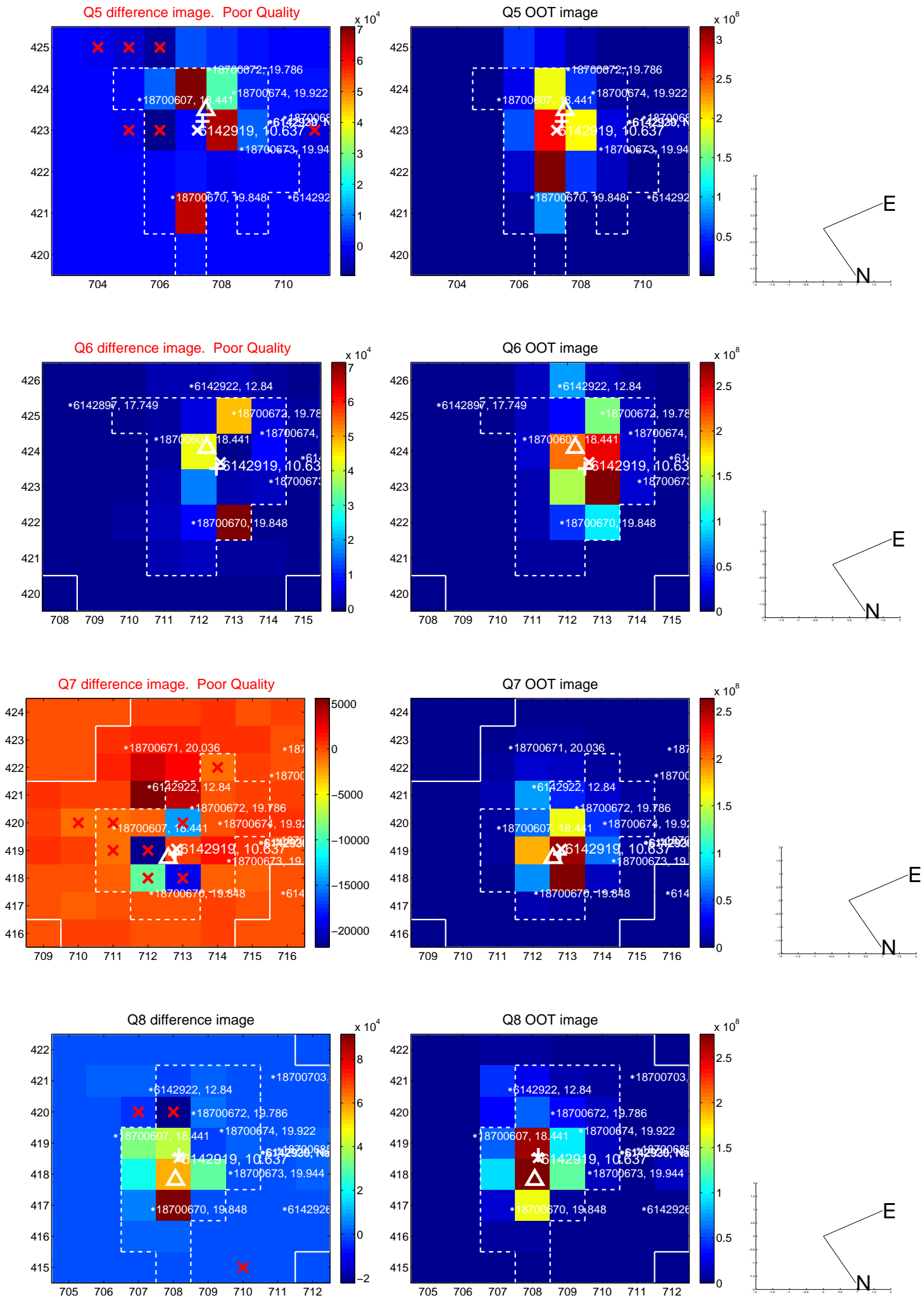


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

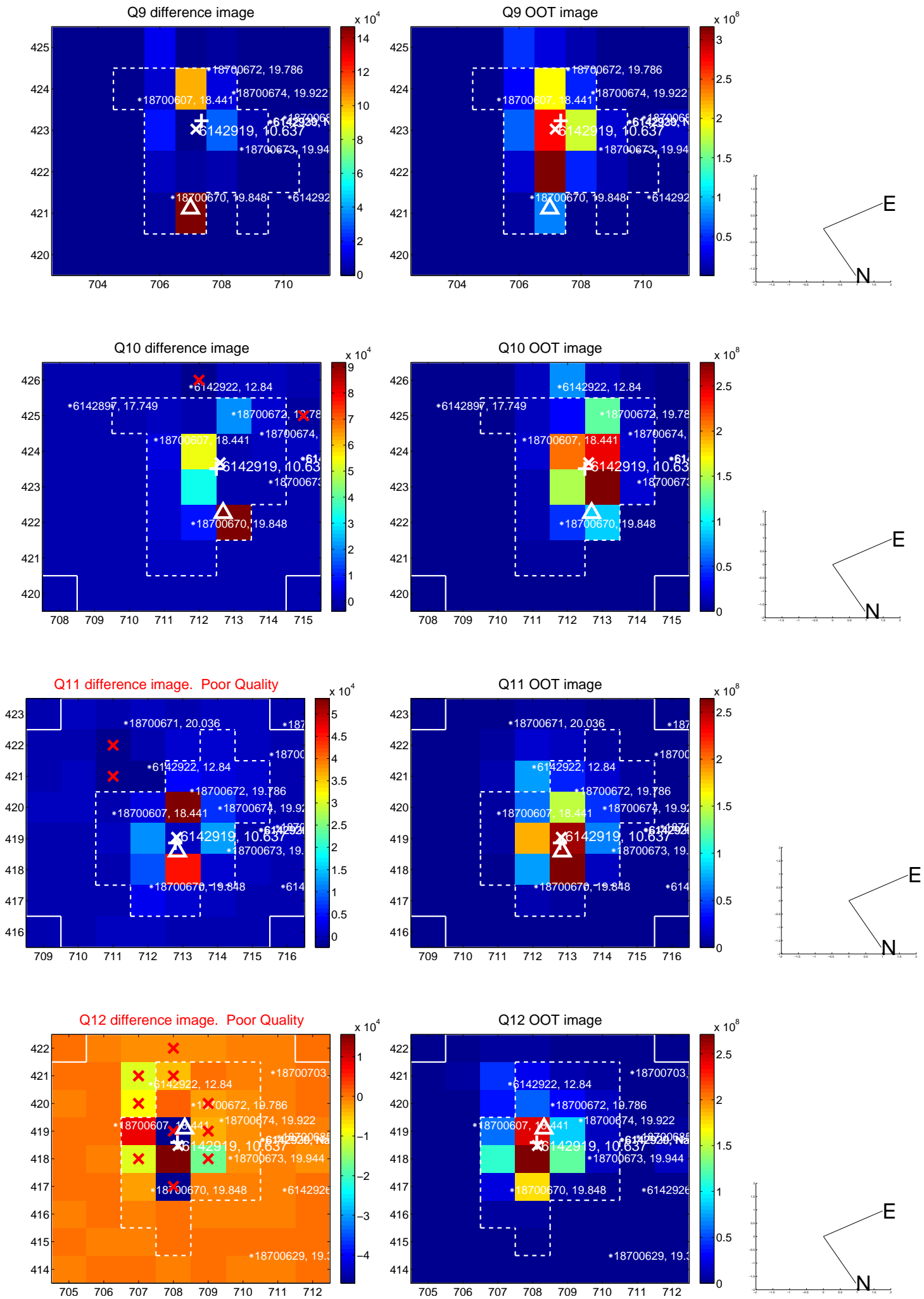
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



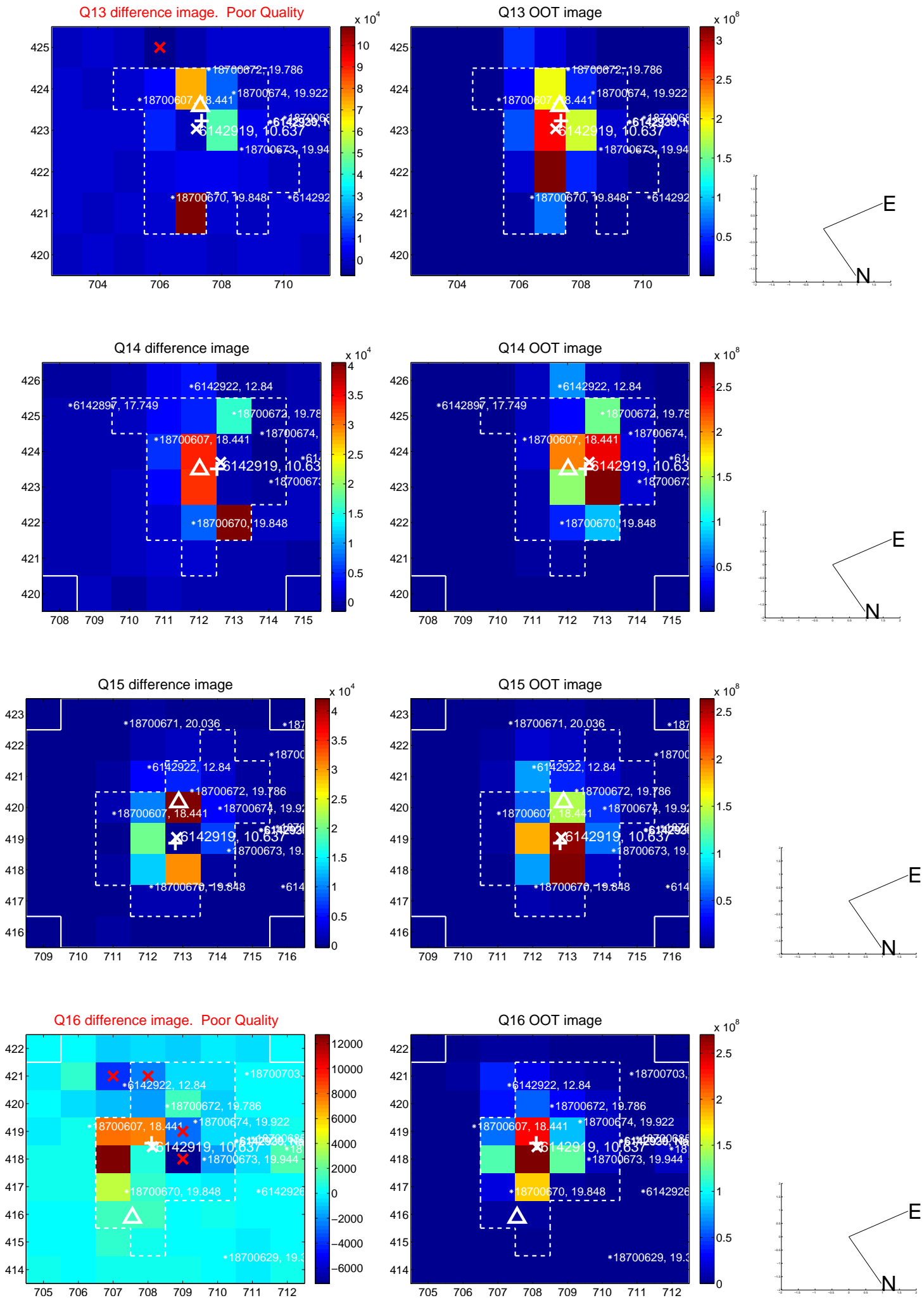
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



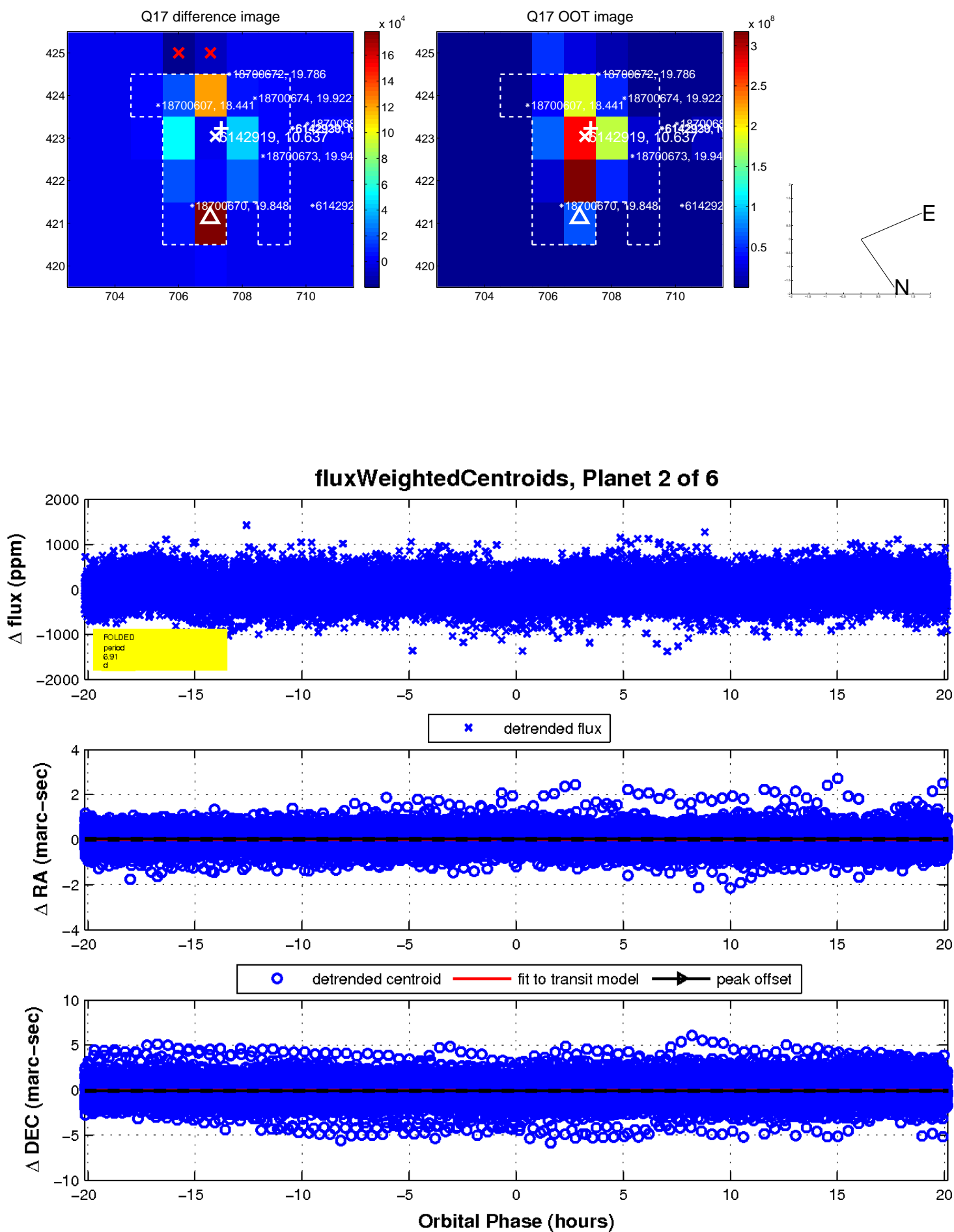
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



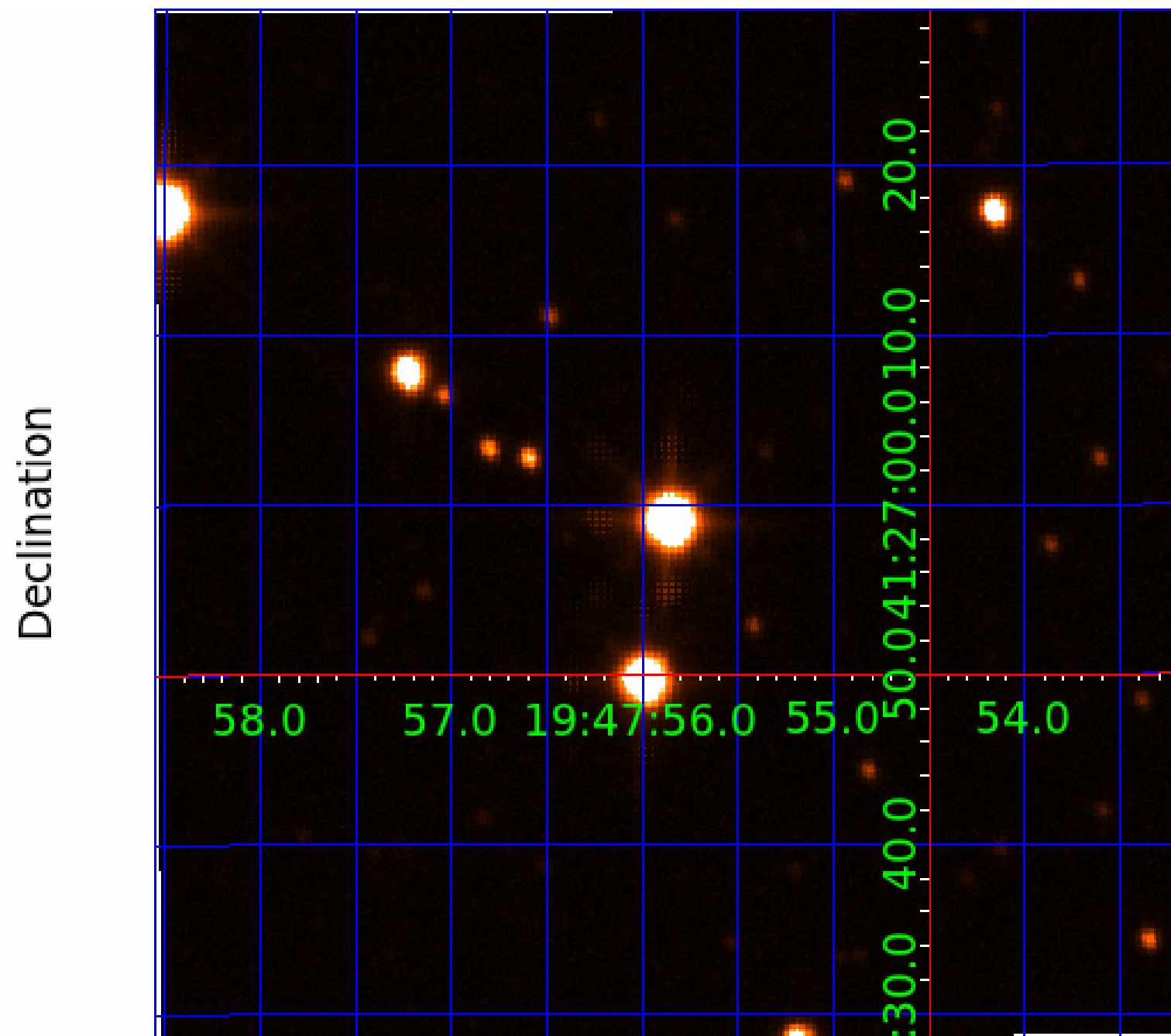
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 006142919

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})
006142919-01	OBS	No	1.135558	132.646227	78.0	5.646	10.4	14.0	1.98	7277	2.31	16013.77
006142919-02	OBS	No	6.905115	132.830640	184.0	6.717	10.8	10.7	1.98	7277	5.21	1442.82
006142919-03	OBS	No	177.609992	177.490048	116.4	1.516	9.4	1.5	1.98	7277	2.43	19.00
006142919-04	OBS	No	302.149263	209.121393	747.1	4.954	9.3	9.2	1.98	7277	8.18	9.36
006142919-05	OBS	No	74.161825	138.582123	608.1	4.811	8.5	9.5	1.98	7277	9.21	60.89
006142919-06	OBS	No	128.110499	139.854922	692.2	4.575	8.1	8.1	1.98	7277	9.73	29.38

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006142919-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_SATURATED
006142919-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006142919-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006142919-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
006142919-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006142919-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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

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

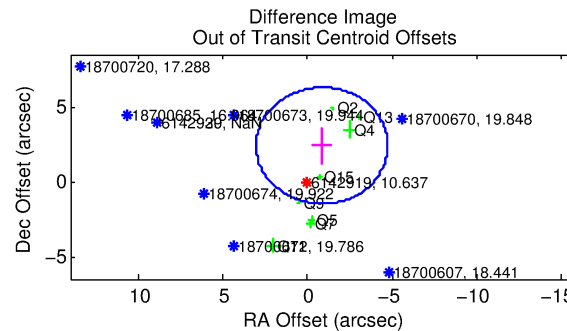
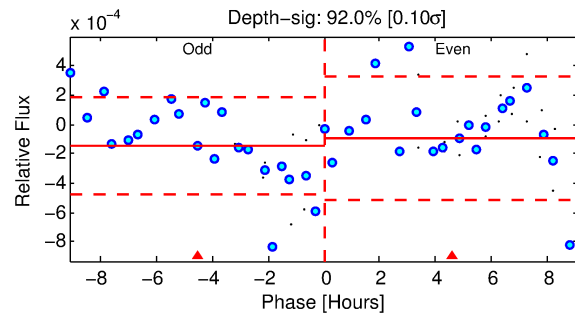
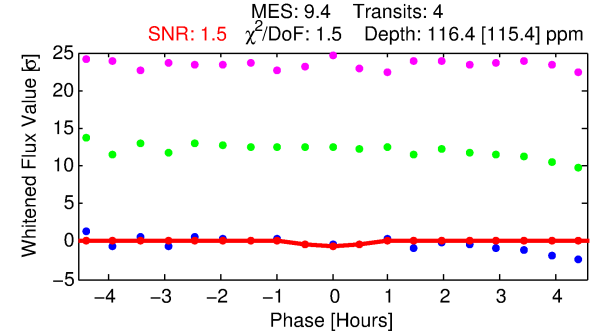
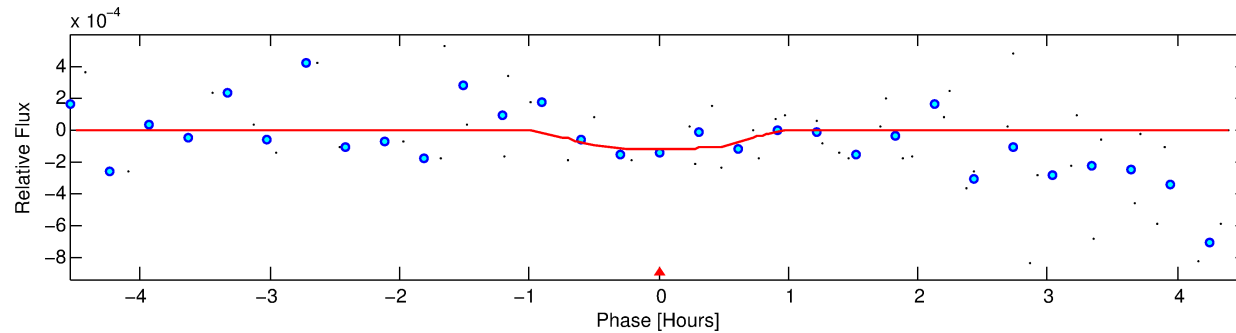
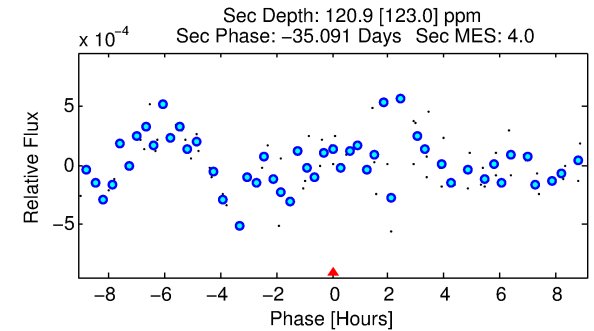
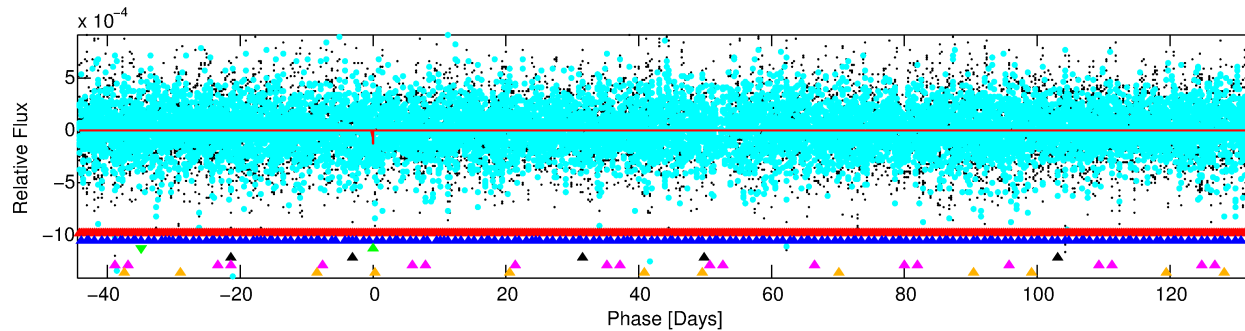
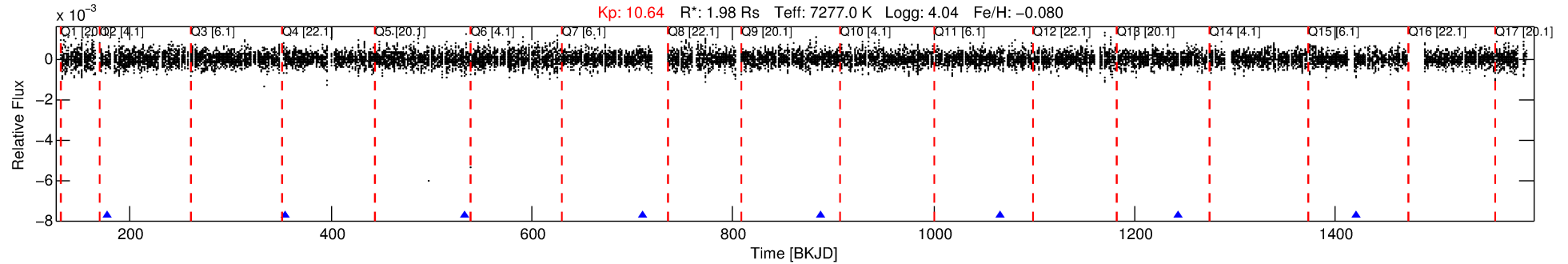
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006142919-03

No Significant Match Found

DV One-Page Summary

KIC: 6142919 Candidate: 3 of 6 Period: 177.610 d



DV Fit Results:

Period = 177.60999 [0.00698] d
Epoch = 177.4900 [0.0306] BKJD
Rp/R* = 0.0112 [0.0447]
a/R* = 467.06 [11488.32]
b = 0.87 [7.17]
Seff = 19.00 [6.97]
Teq = 532 [49] K
Rp = 2.43 [9.69] Re
a = 0.7207 [0.1721] AU
Ag = 5839.60 [46815.23] [0.12σ]
Teffp = 7196 [14412] K [0.46σ]

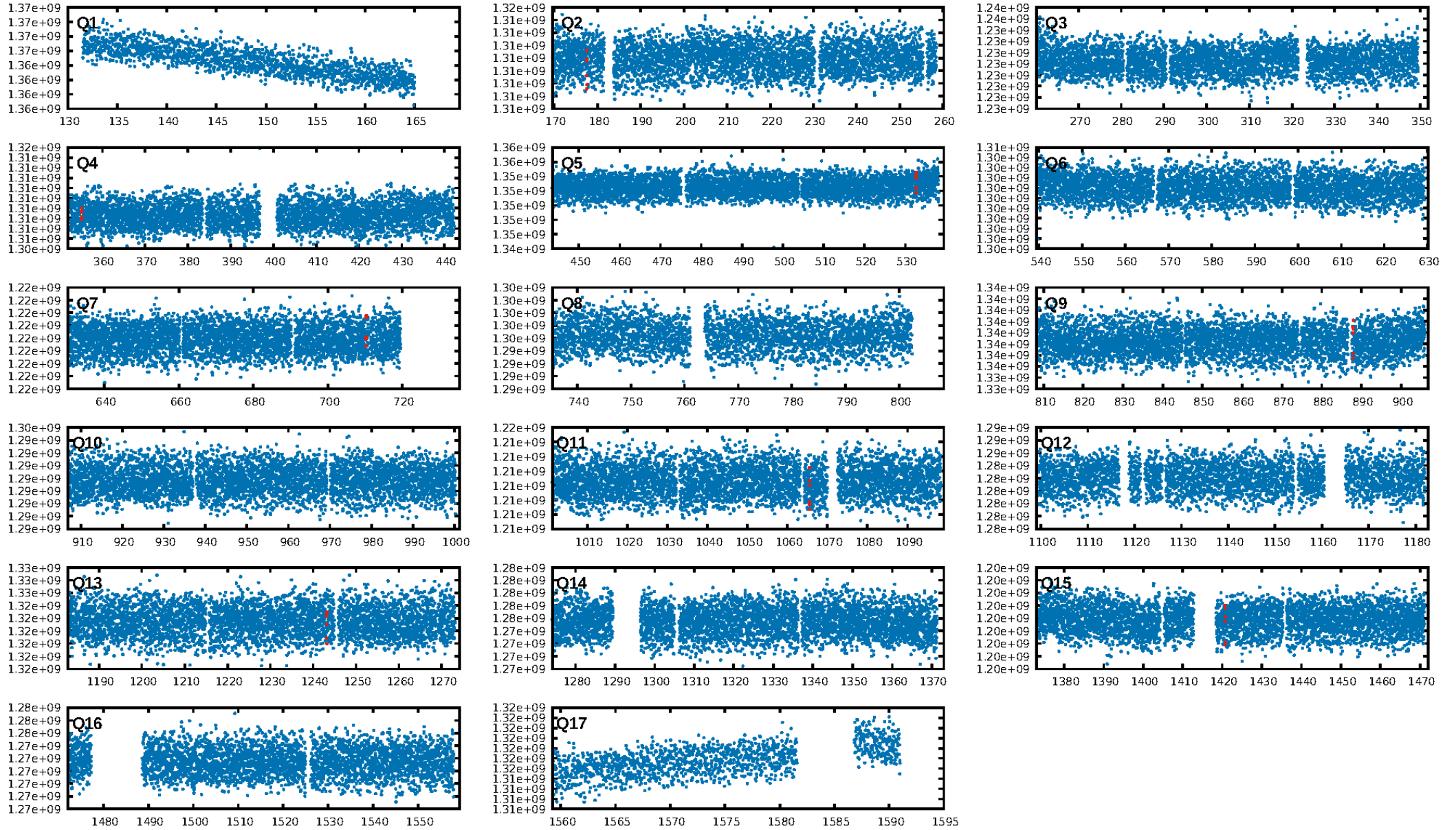
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [246.50σ]
LongPeriod-sig: 100.0% [576.92σ]
ModelChiSquare2-sig: 60.9%
ModelChiSquareGof-sig: 98.1%
Bootstrap-pfa: 8.43e-12
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -4.366
Centroid-sig: 74.5%
Centroid-so: 0.665 arcsec [0.44σ]
OotOffset-rm: 2.544 arcsec [1.96σ]
KicOffset-rm: 3.223 arcsec [2.17σ]
OotOffset-st: 1/3/1/3 [8]
KicOffset-st: 1/3/1/3 [8]
DiffImageQuality-fgm: 0.38 [3/8]
DiffImageOverlap-fno: 0.38 [3/8]

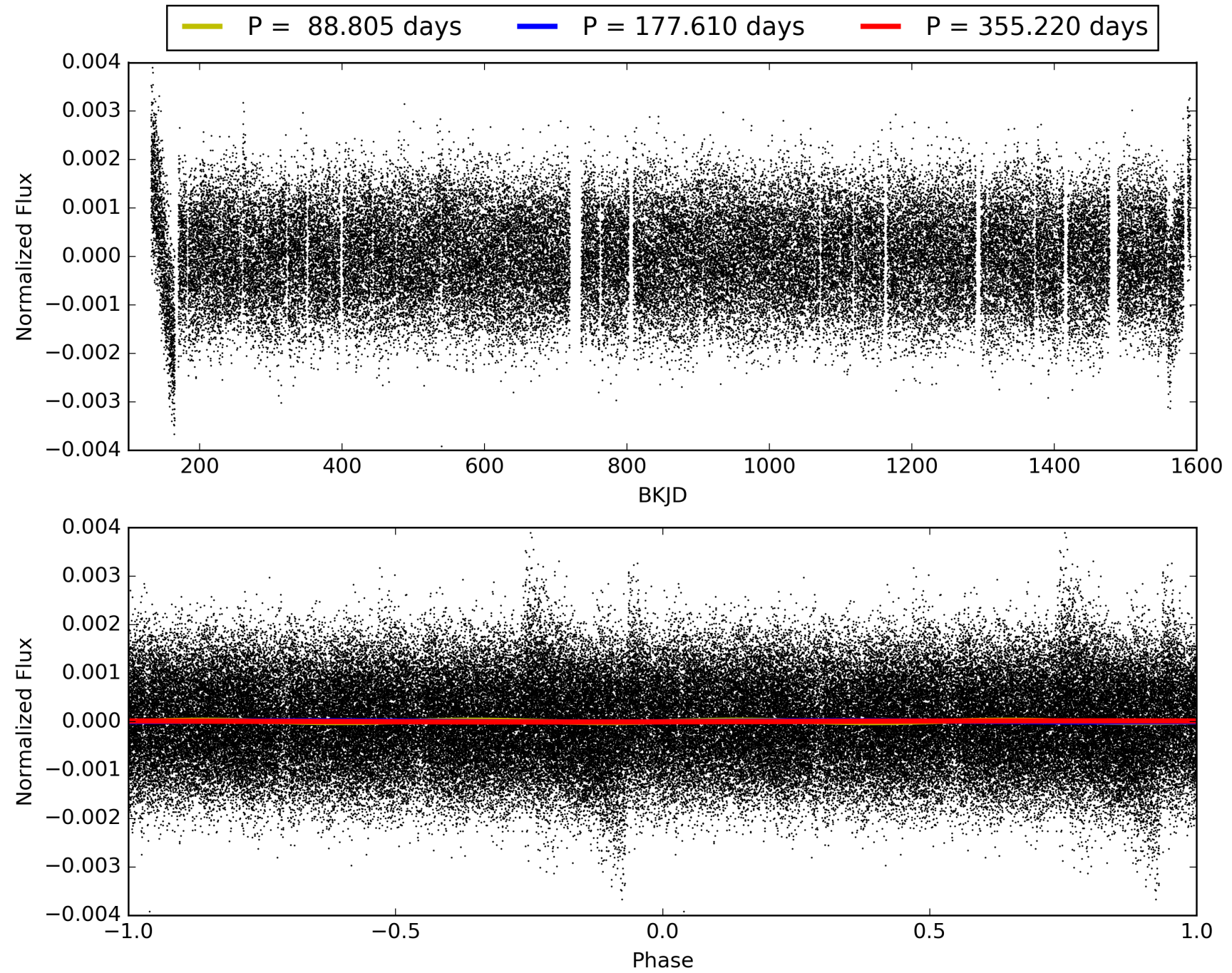
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 07:42:34 Z

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

TCE 006142919-03, PDC Light Curves

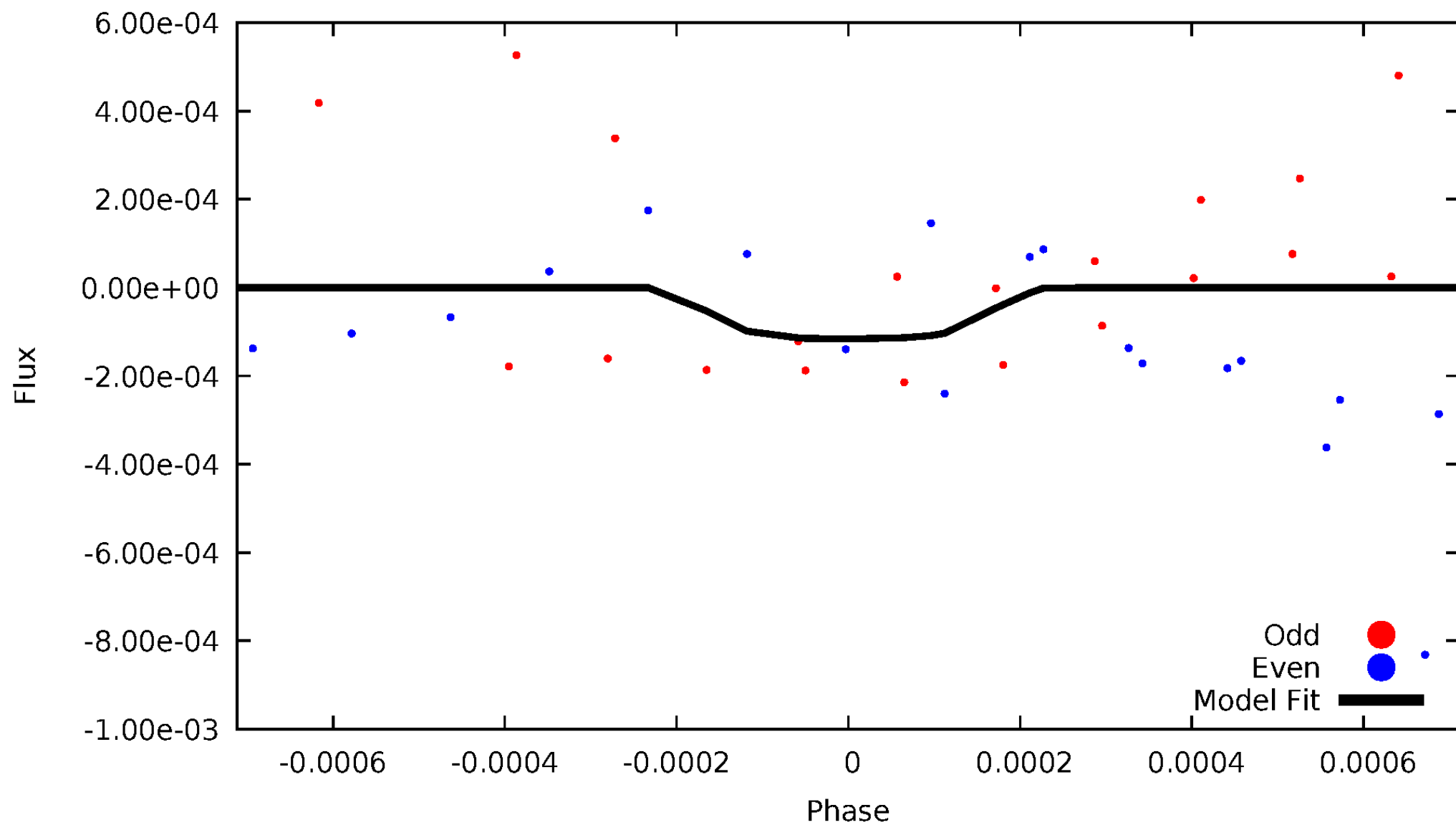


TCE 006142919-03



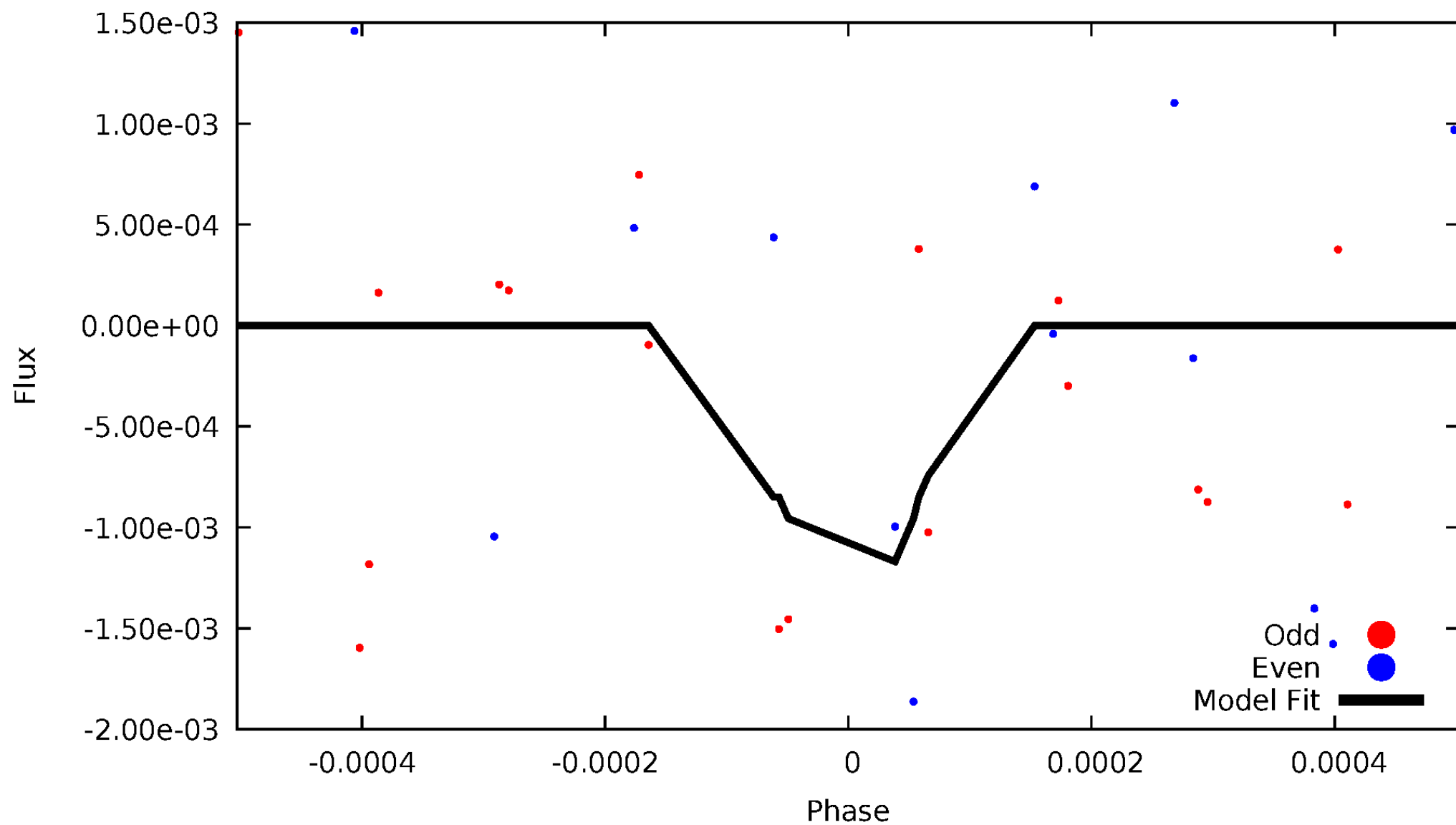
DV Odd/Even

TCE 006142919-03



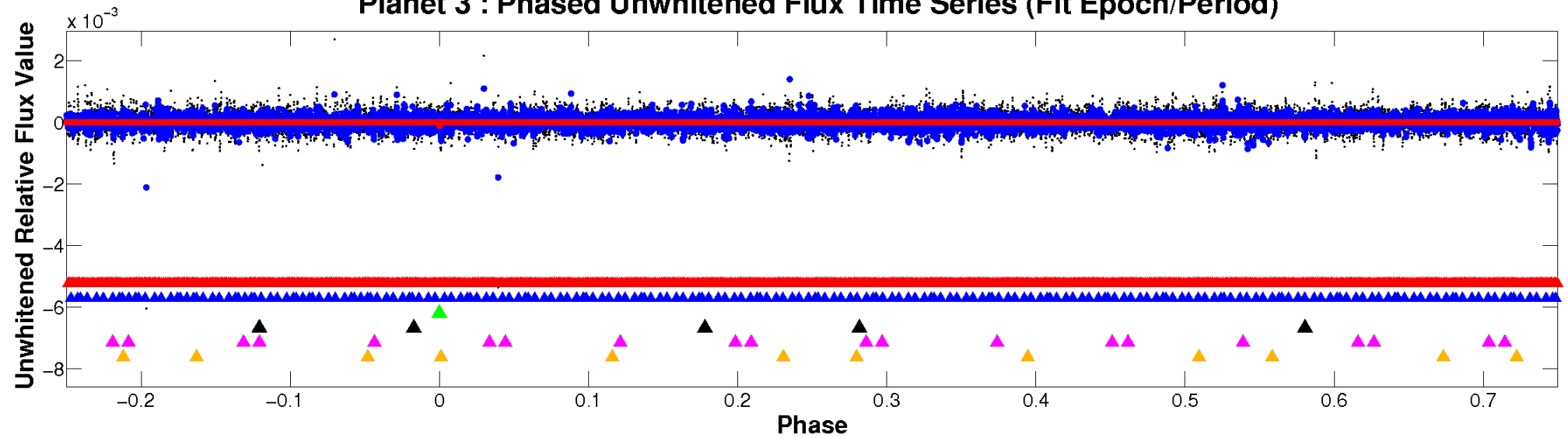
ALT Odd/Even

TCE 006142919-03

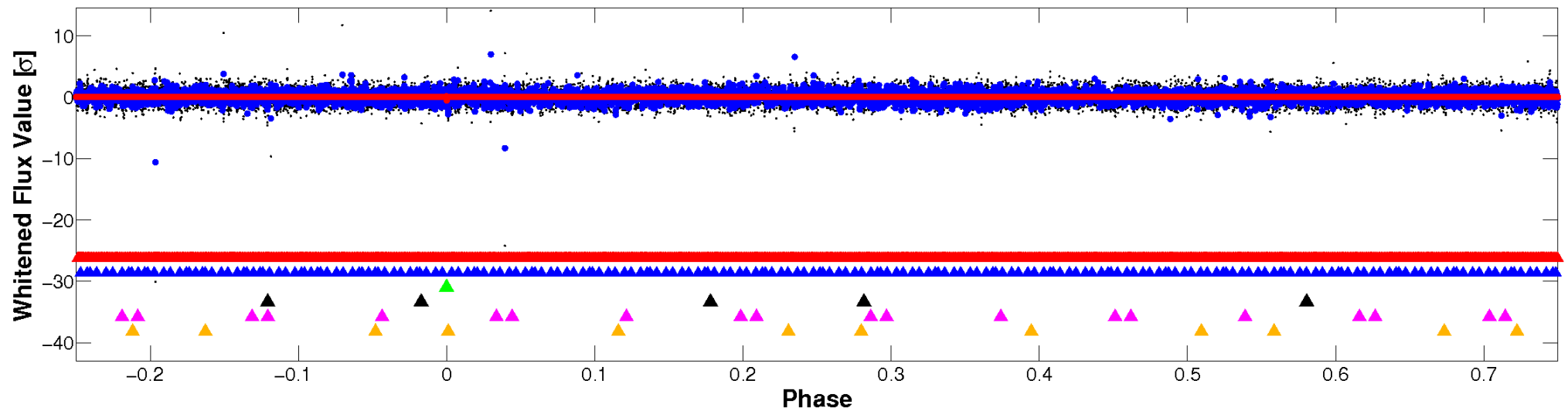


Non-Whitened Vs. Whitened Light Curve

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

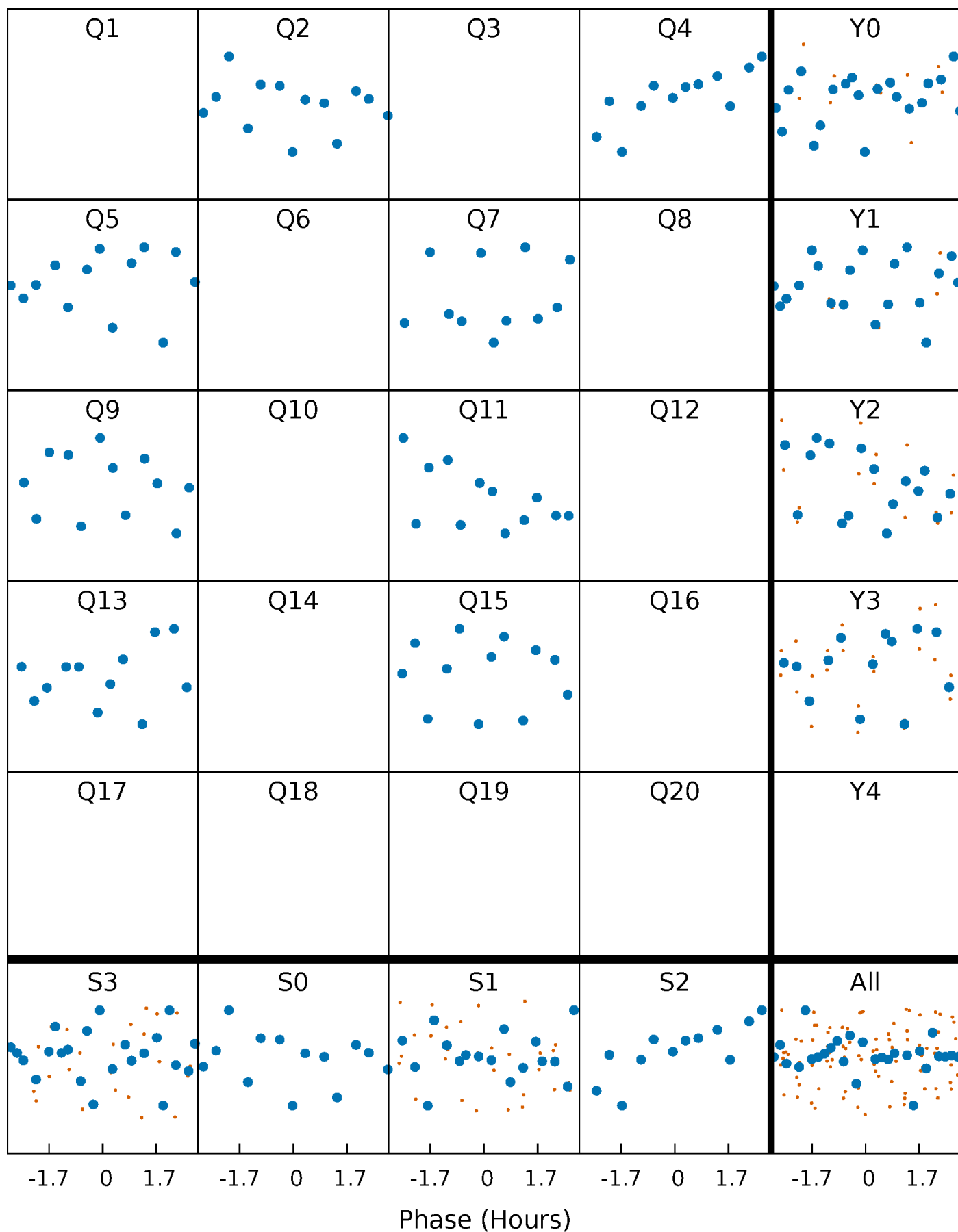


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



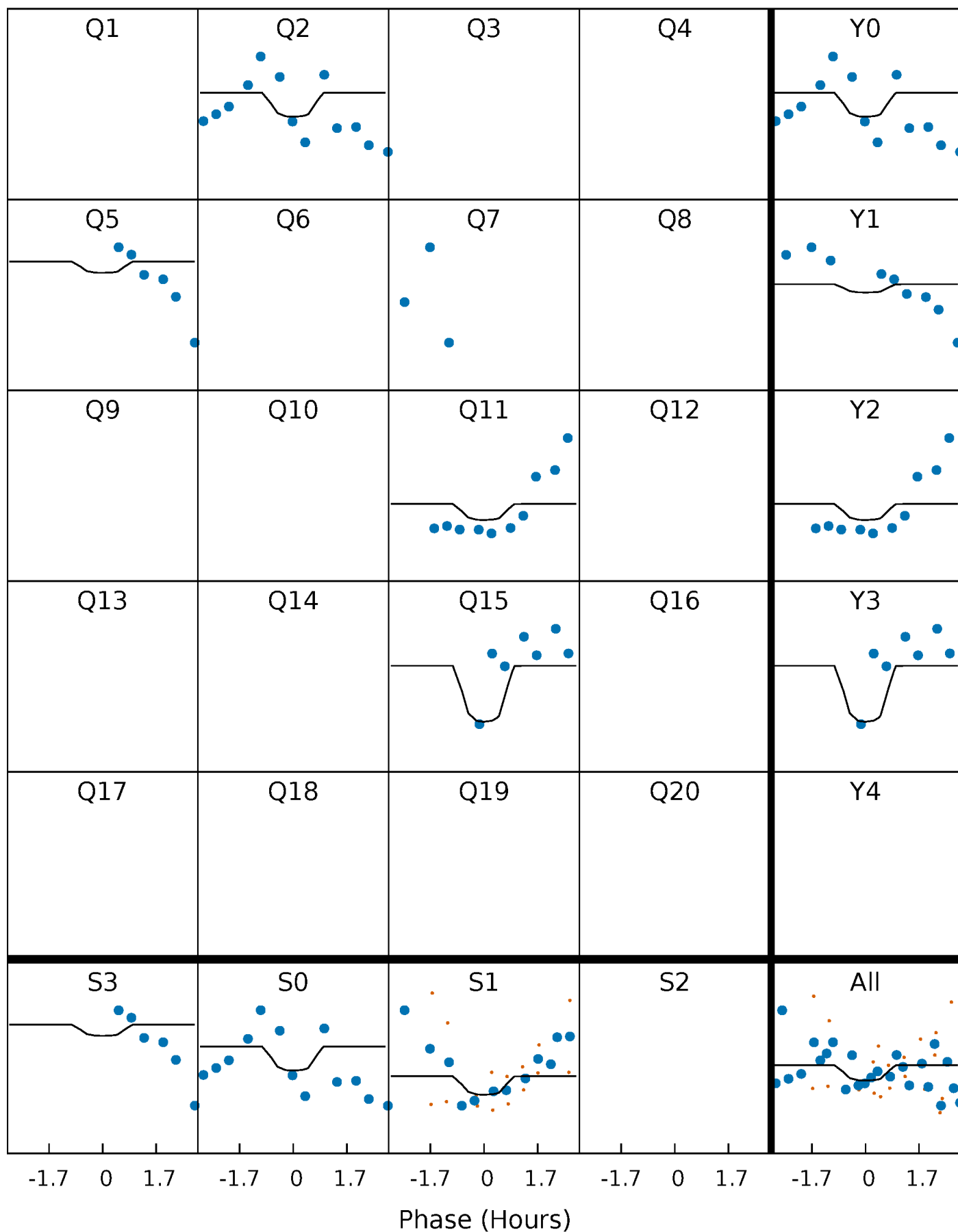
PDC Quarter-Phased Transit Curves

TCE 006142919-03 P=177.609992 Days $T_0=177.490048$ (BKJD)



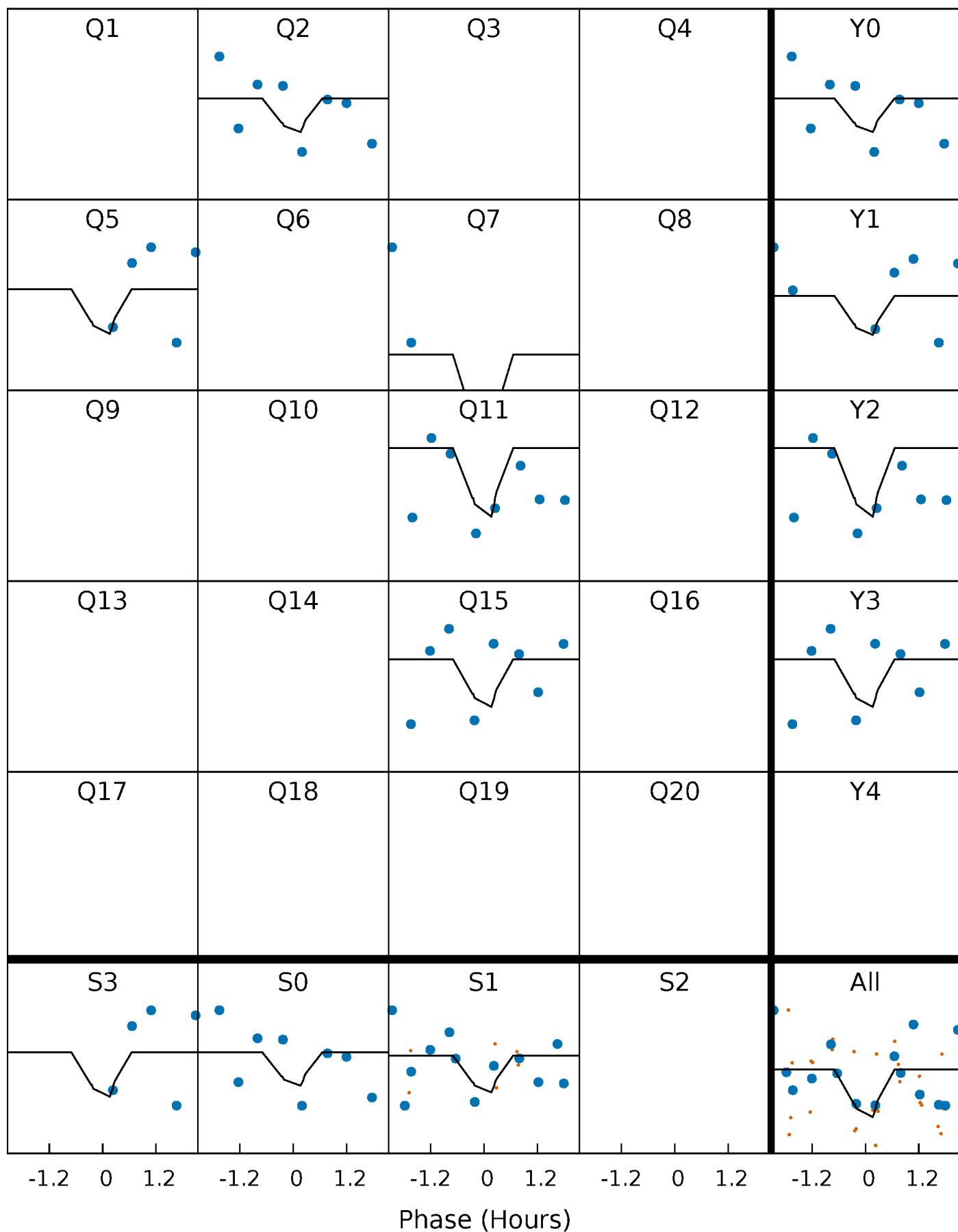
DV Quarter-Phased Transit Curves

TCE 006142919-03 P=177.609992 Days $T_0=177.490048$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

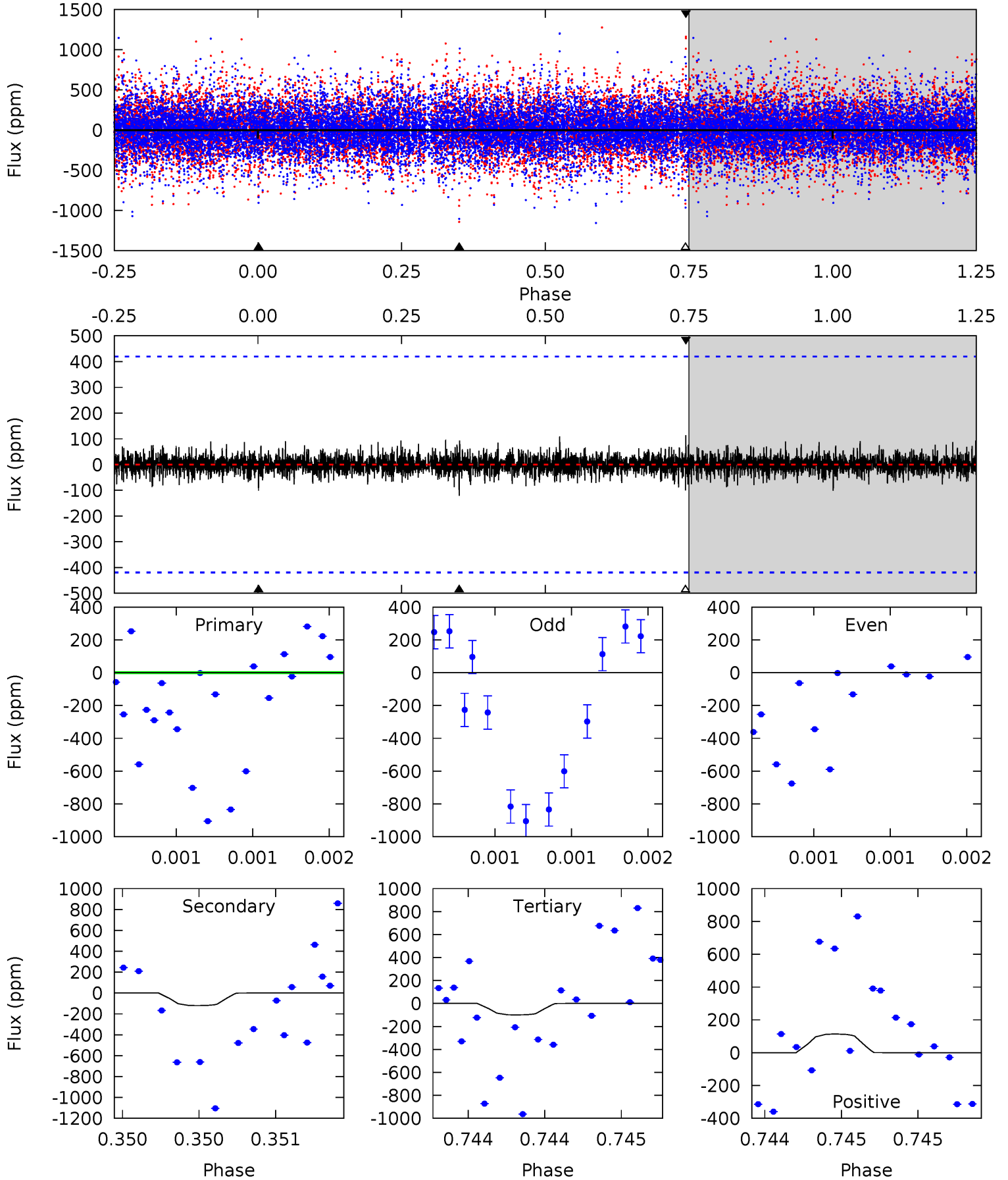
TCE 006142919-03 P=177.620158 Days $T_0=177.479997$ (BKJD)



DV Model-Shift Uniqueness Test

006142919-03, P = 177.609992 Days, E = 177.490048 Days

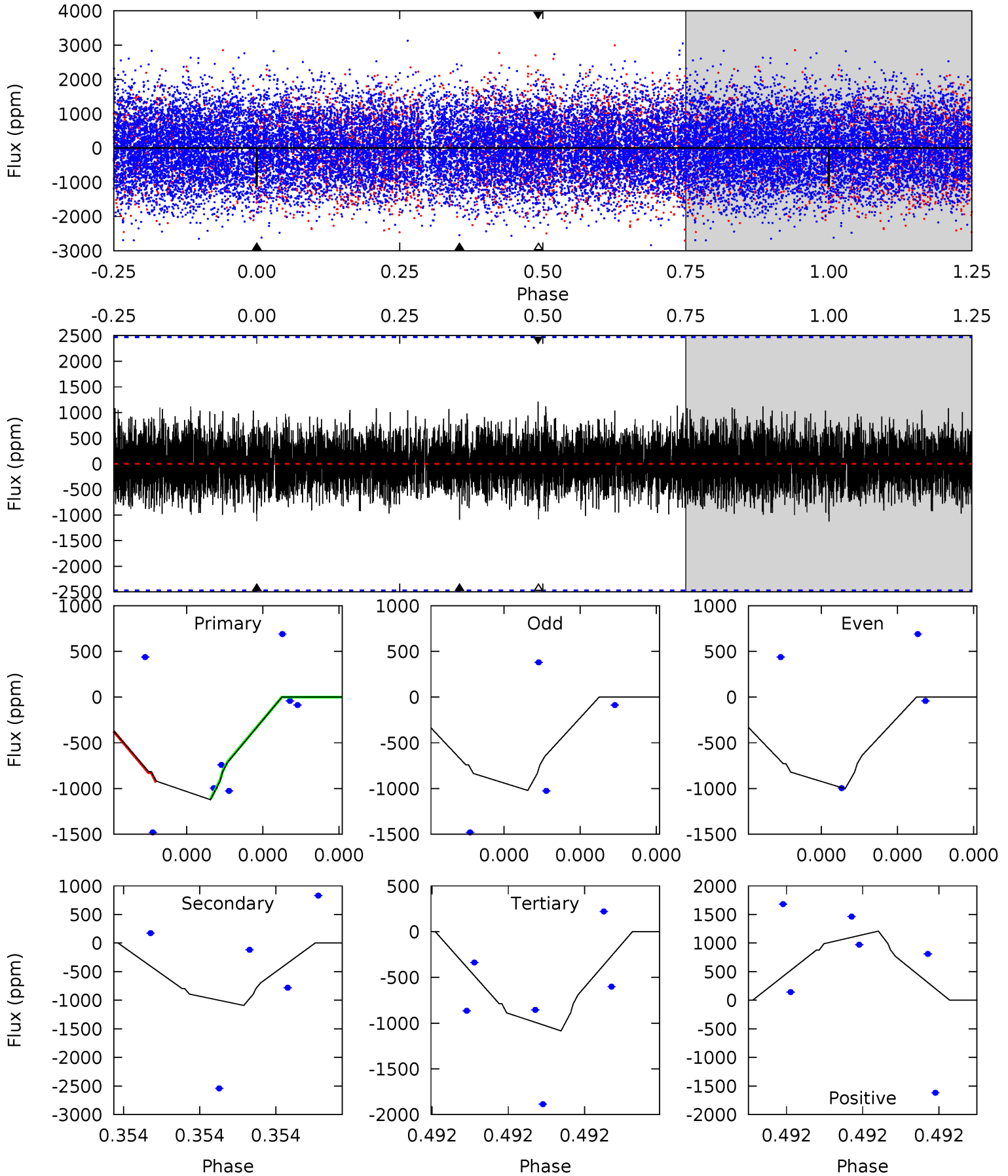
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.34	1.61	1.33	1.52	5.59	3.51	0.35	0.01	-0.18	0.28	0.09	0.67	0.74	0.49	0.26



Alt Model-Shift Uniqueness Test

006142919-03, P = 177.620158 Days, E = 177.479997 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.64	2.57	2.55	2.84	5.81	3.84	0.77	0.09	-0.20	0.01	-0.28	0.02	1.16	0.52	0.18



Stellar Parameters For KIC 006142919

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7277^{+228}_{-279}	$4.043^{+0.175}_{-0.175}$	$-0.080^{+0.250}_{-0.350}$	$1.982^{+0.587}_{-0.533}$	$1.581^{+0.211}_{-0.257}$	$0.286^{+0.286}_{-0.145}$
	+3%/-4%	+4%/-4%	+312%/-438%	+30%/-27%	+13%/-16%	+100%/-51%
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 006142919-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-121 ± 75	$7.53^{+7.72}_{-5.19}$	740^{+57}_{-54}	4086^{+3076}_{-955}	500^{+5949}_{-403}
Alt.	-1091 ± 425	$10.95^{+8.79}_{-6.71}$	745^{+58}_{-57}	5788^{+4345}_{-1426}	2549^{+14227}_{-1873}

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

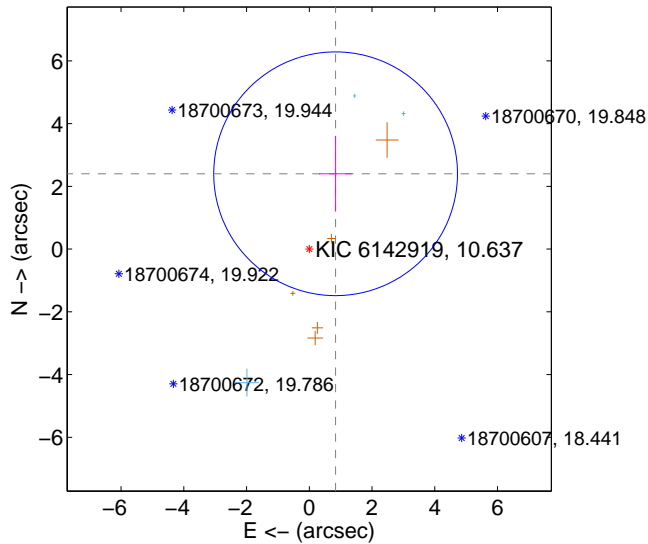
Supplemental centroid analysis for 006142919-03. **Kepler magnitude: 10.64.** Transit SNR 1.49

There are 3 quarters with good PRF difference image offsets

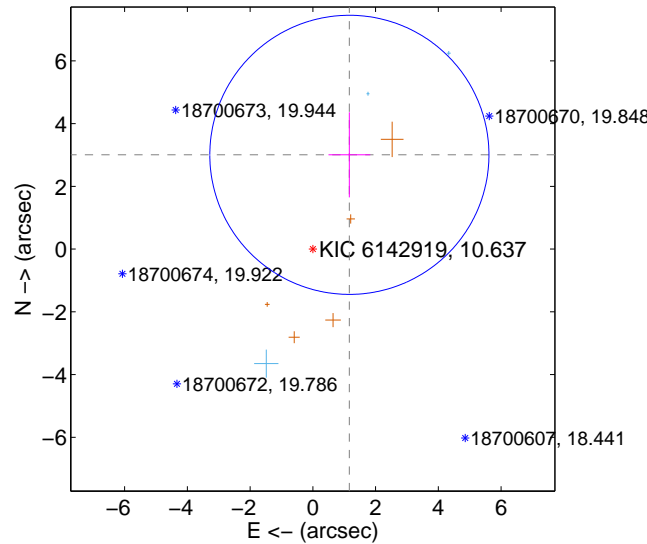
The direct PRF centroid is offset from the target star catalog position by about 0.80 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.544 ± 1.295	1.96	-0.839 ± 0.531	2.402 ± 1.206
PRF-fit source offset from KIC position	3.223 ± 1.483	2.17	-1.165 ± 0.668	3.005 ± 1.356
photometric centroid source offset	0.66 ± 1.53	0.44	0.66 ± 1.53	0.00 ± 2.19

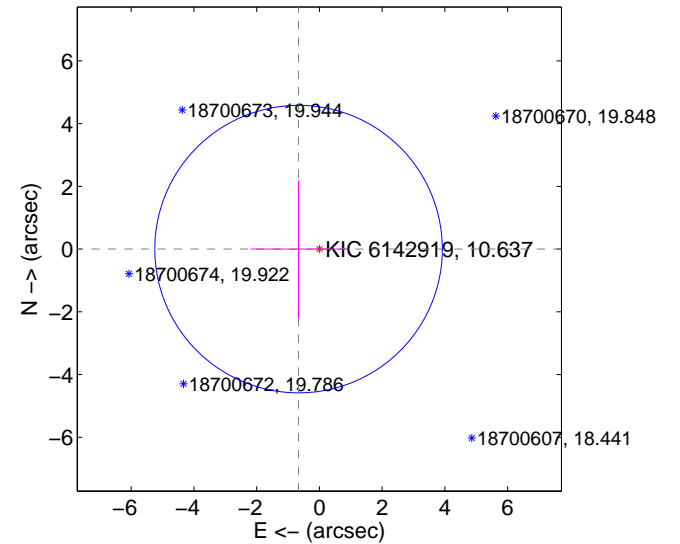
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

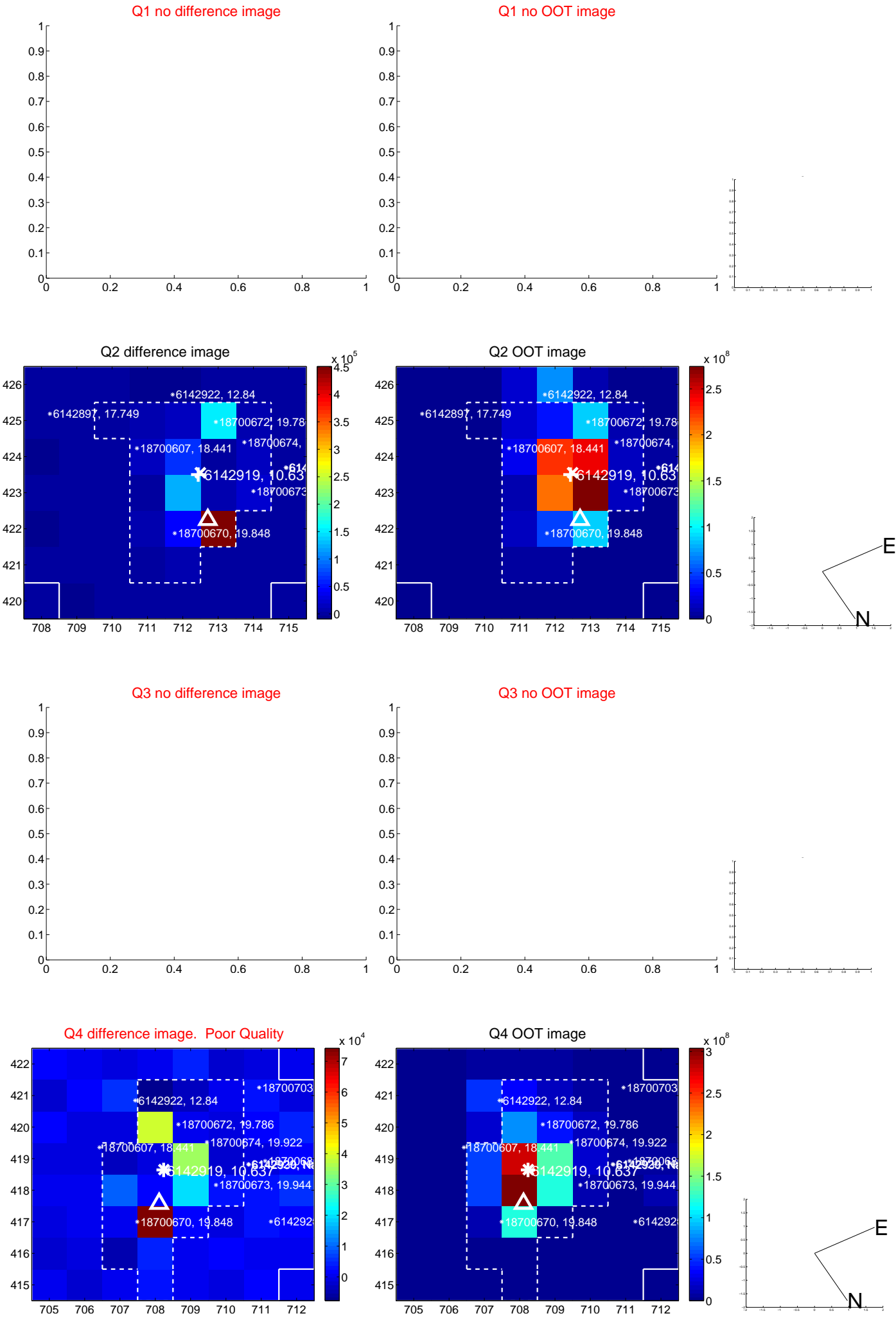


offset from photometric centroids

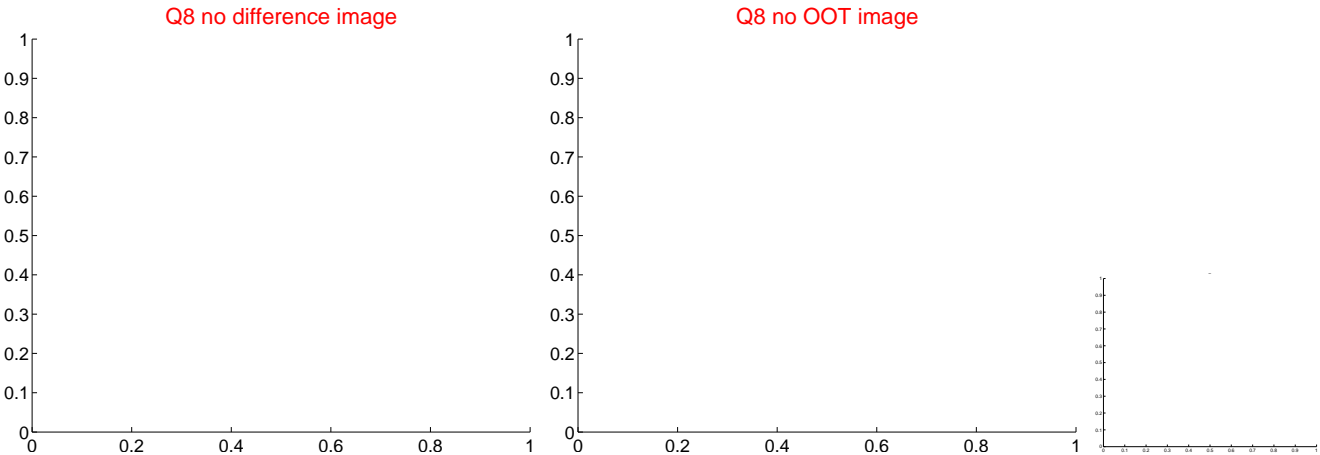
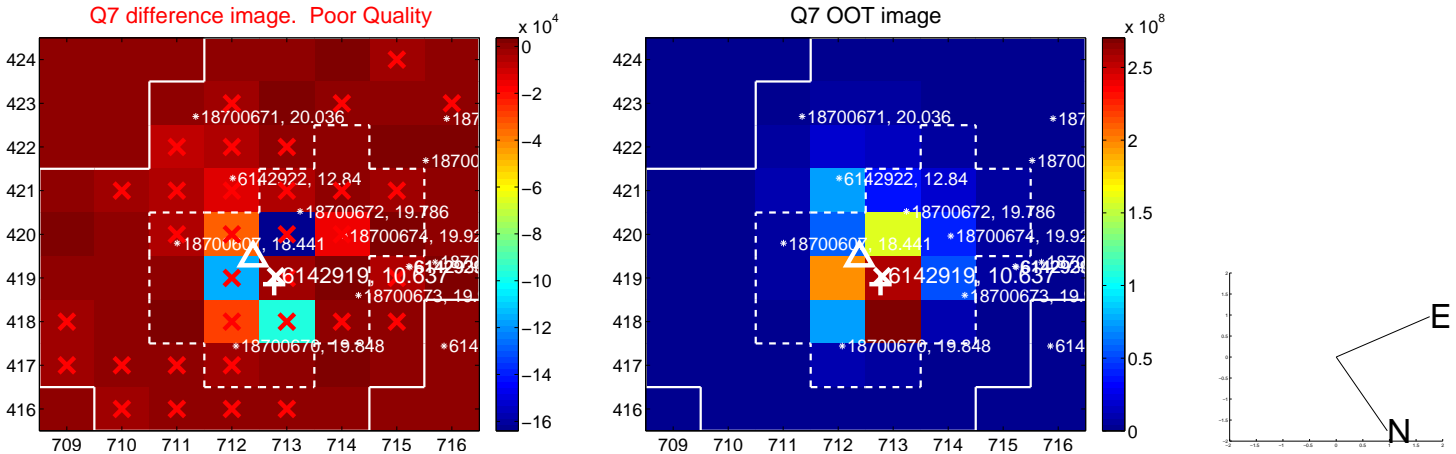
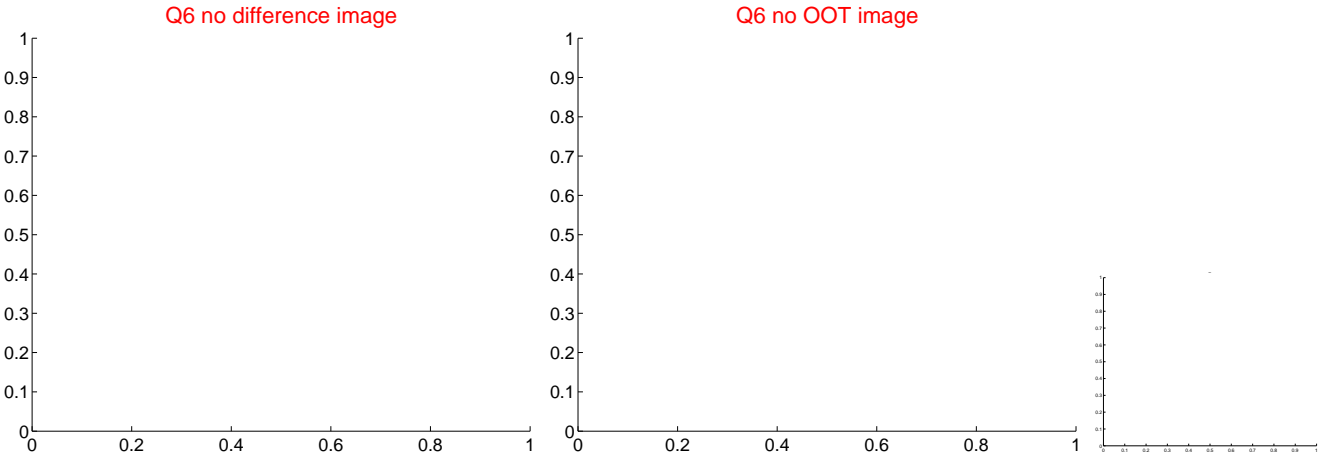
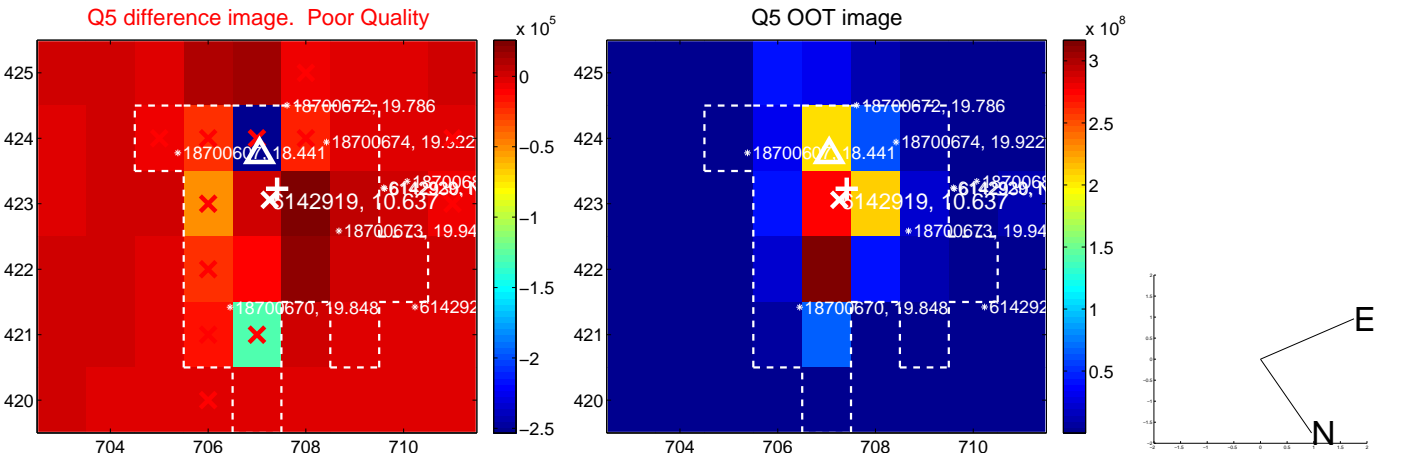


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

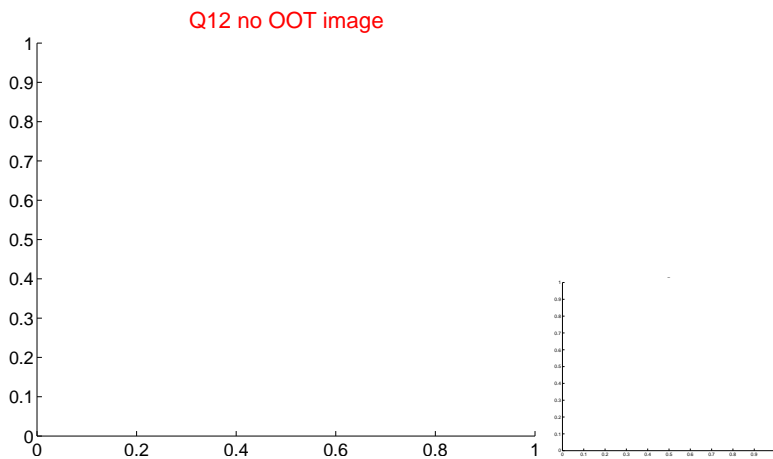
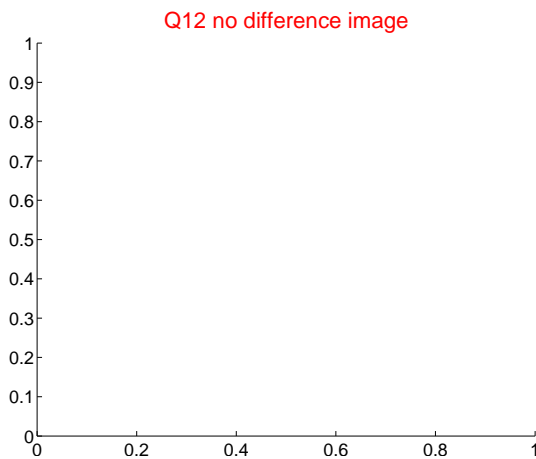
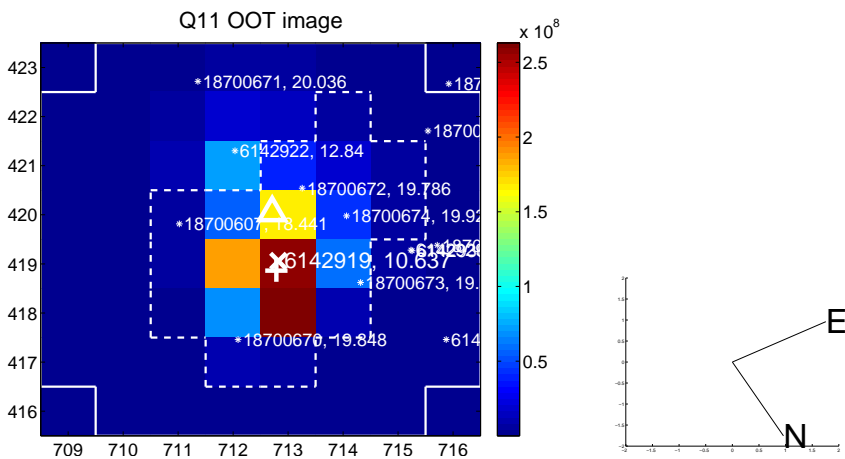
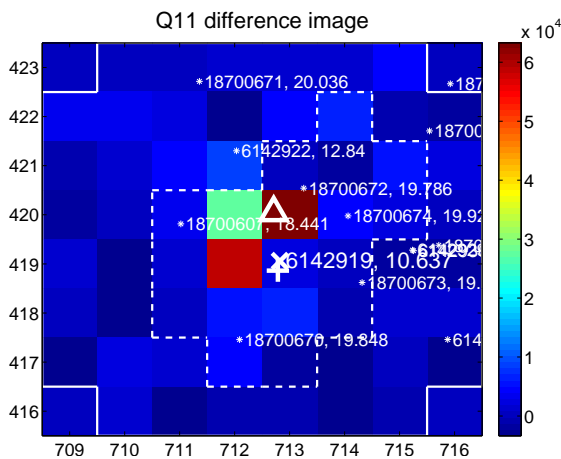
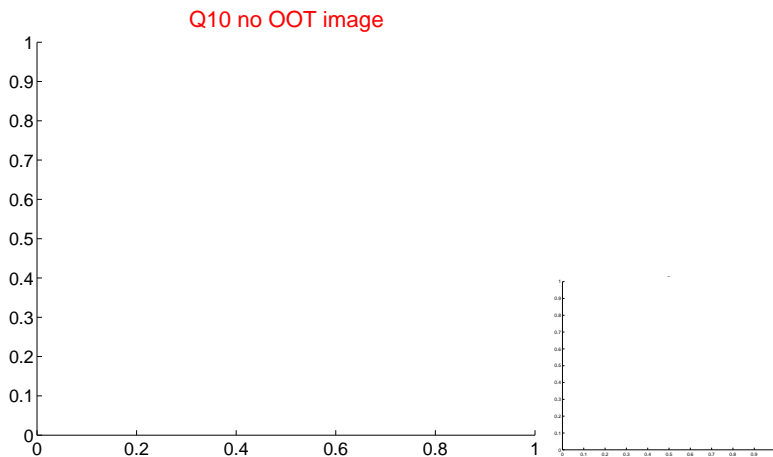
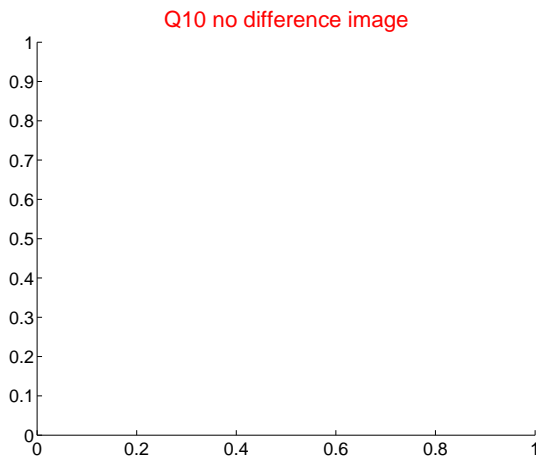
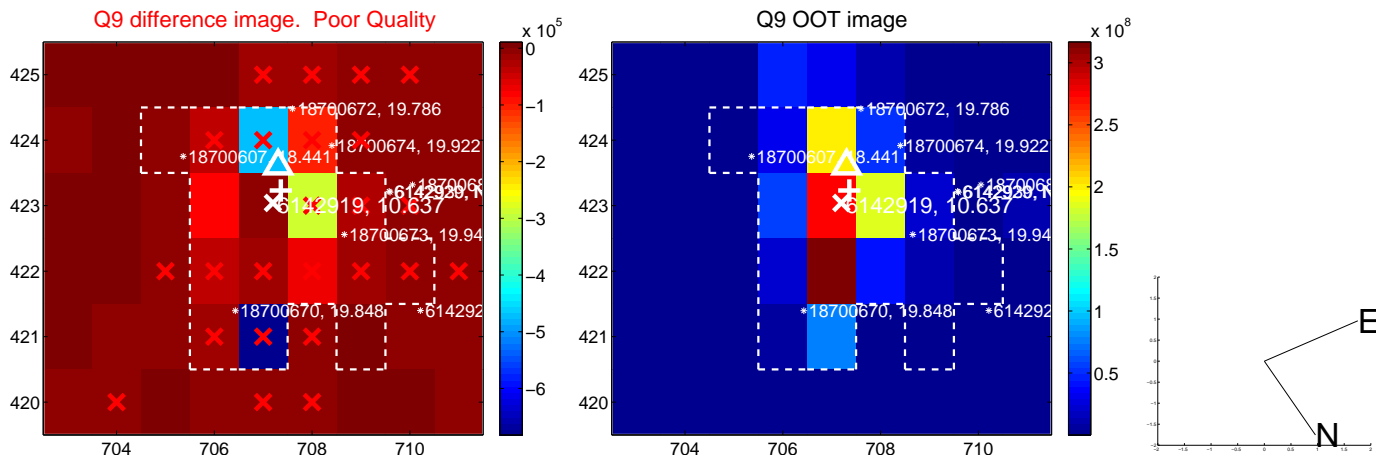
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



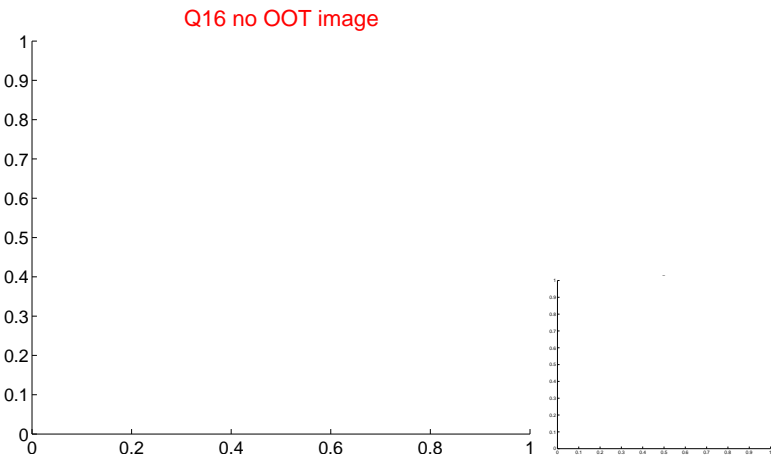
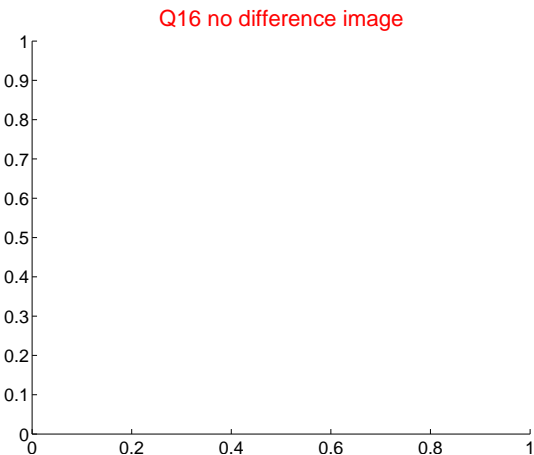
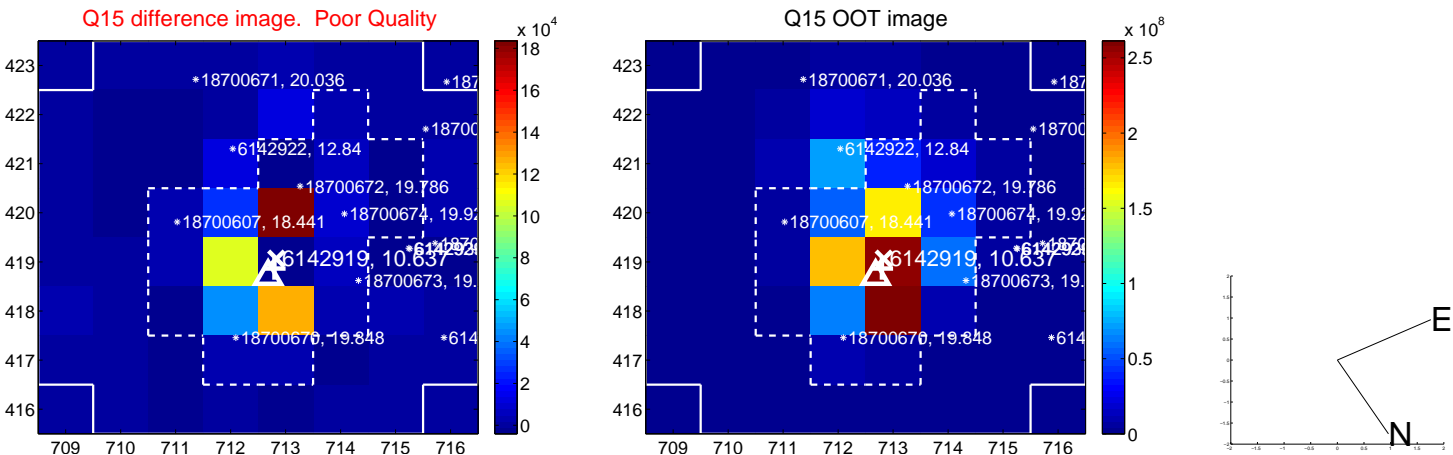
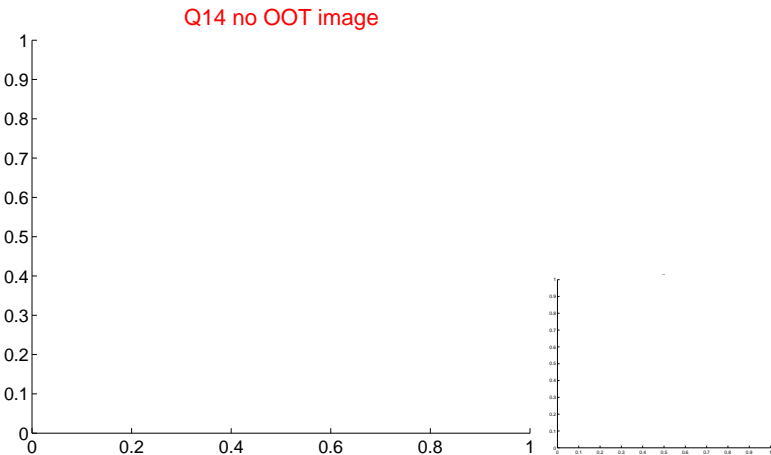
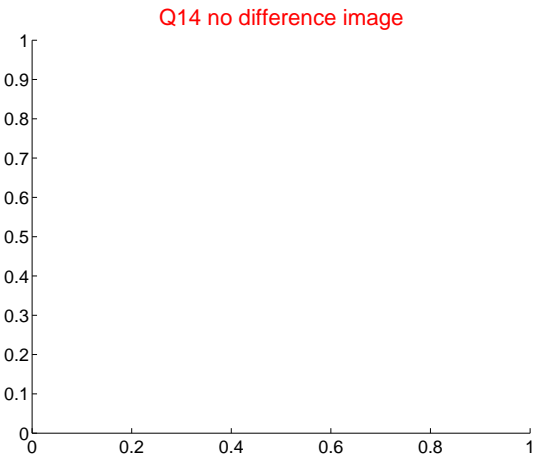
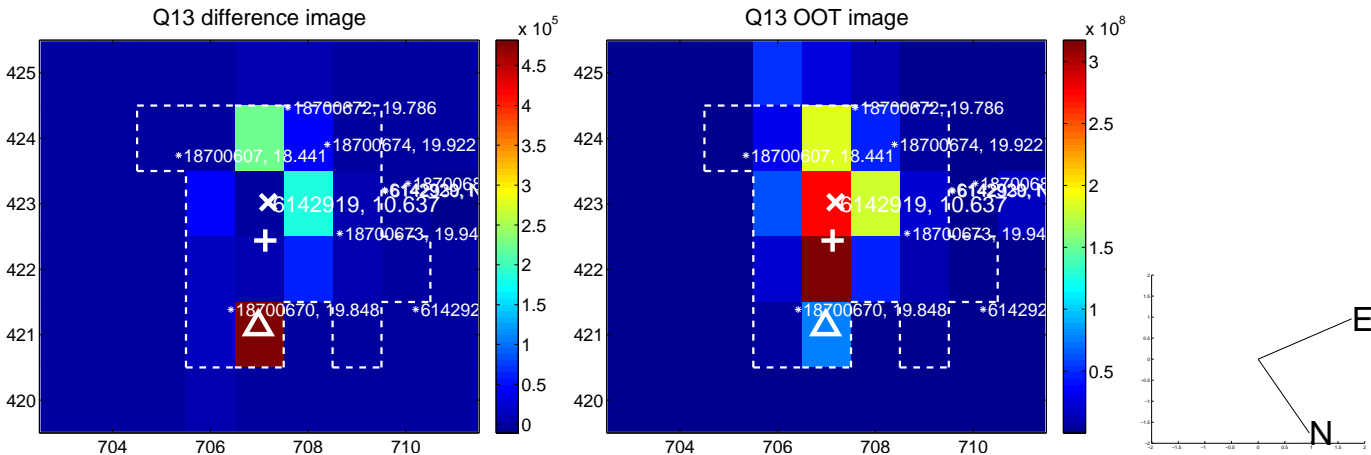
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



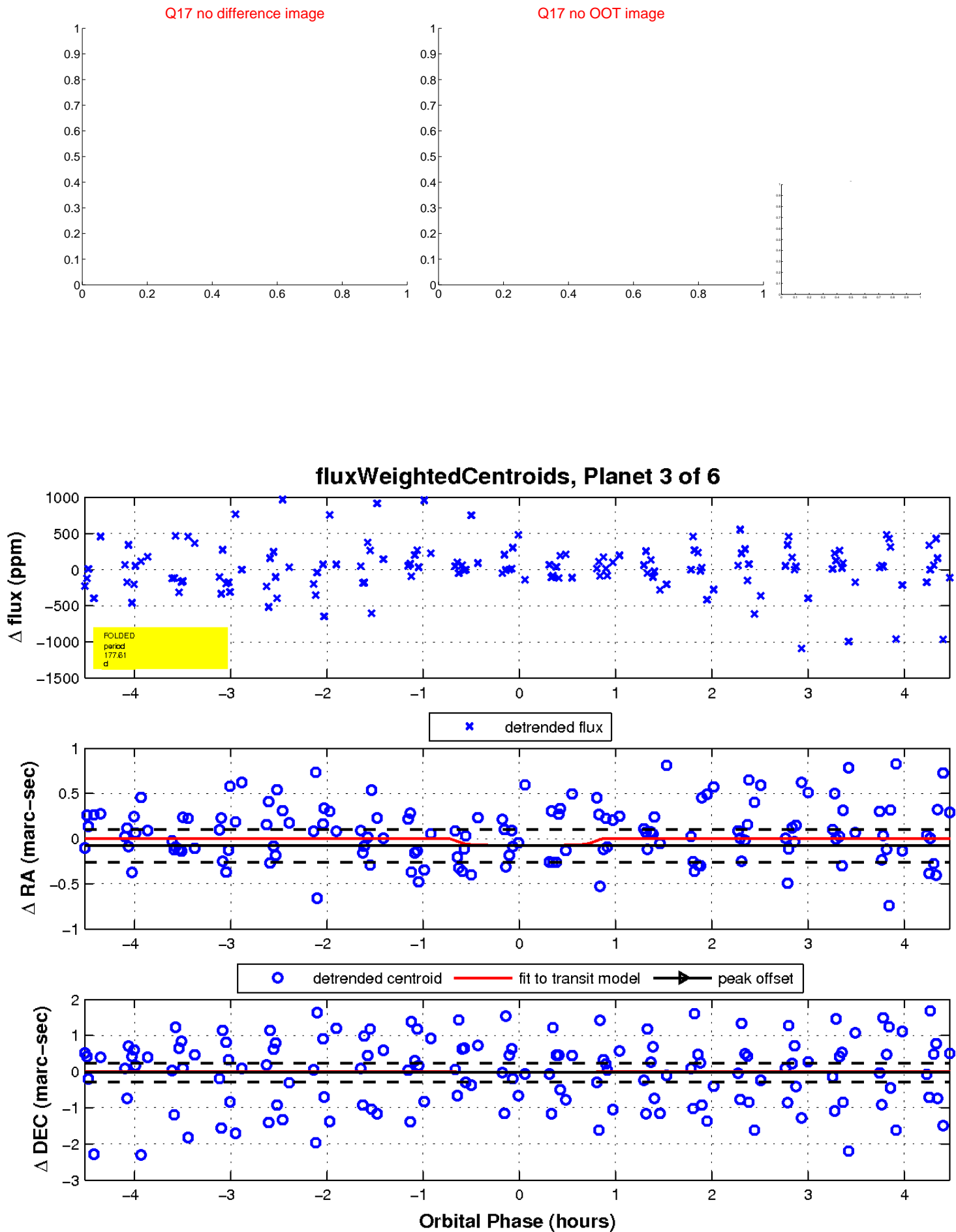
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



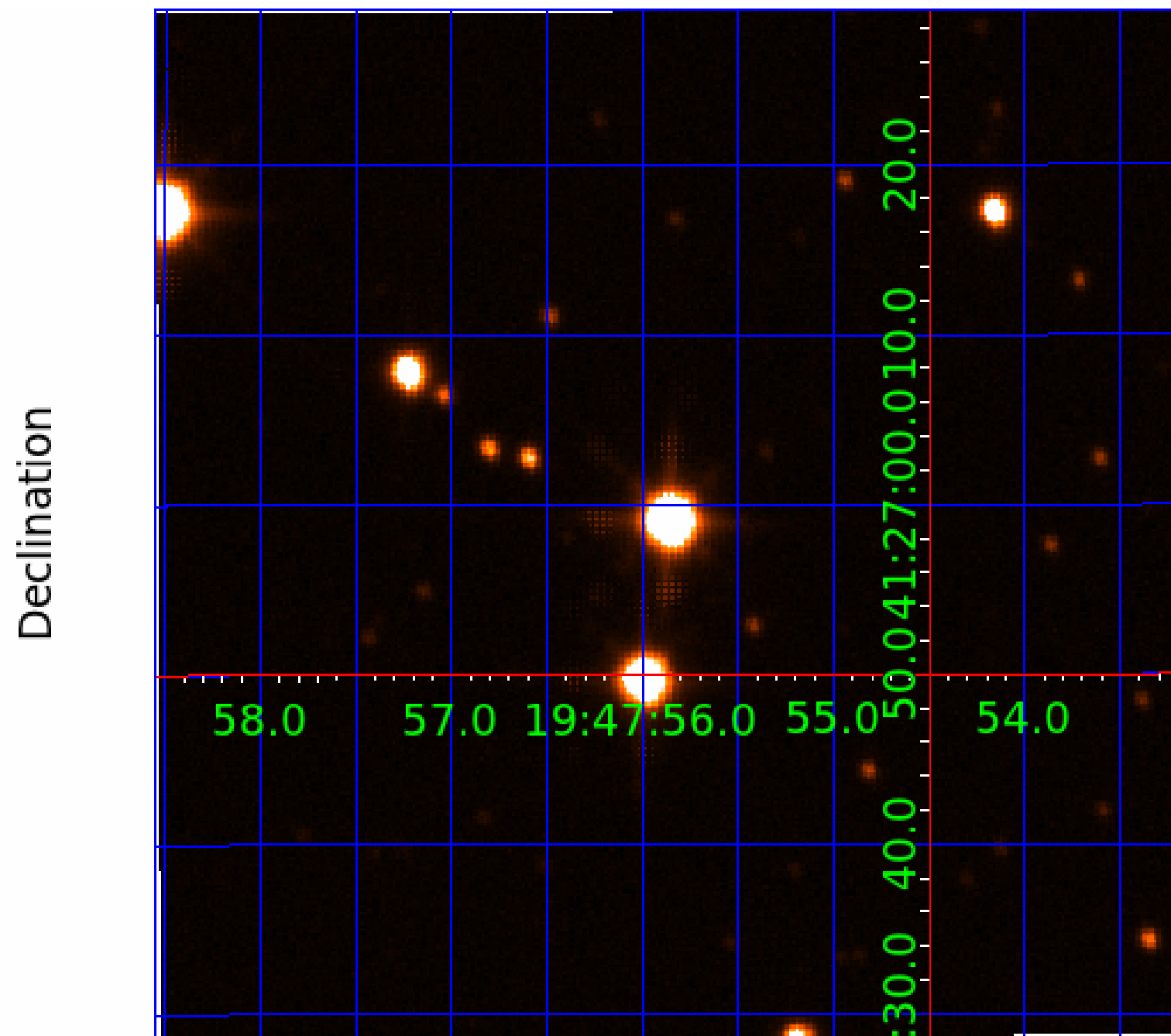
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



UKIRT Image



KIC 006142919

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})
006142919-01	OBS	No	1.135558	132.646227	78.0	5.646	10.4	14.0	1.98	7277	2.31	16013.77
006142919-02	OBS	No	6.905115	132.830640	184.0	6.717	10.8	10.7	1.98	7277	5.21	1442.82
006142919-03	OBS	No	177.609992	177.490048	116.4	1.516	9.4	1.5	1.98	7277	2.43	19.00
006142919-04	OBS	No	302.149263	209.121393	747.1	4.954	9.3	9.2	1.98	7277	8.18	9.36
006142919-05	OBS	No	74.161825	138.582123	608.1	4.811	8.5	9.5	1.98	7277	9.21	60.89
006142919-06	OBS	No	128.110499	139.854922	692.2	4.575	8.1	8.1	1.98	7277	9.73	29.38

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006142919-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_SATURATED
006142919-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006142919-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006142919-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
006142919-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006142919-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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

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

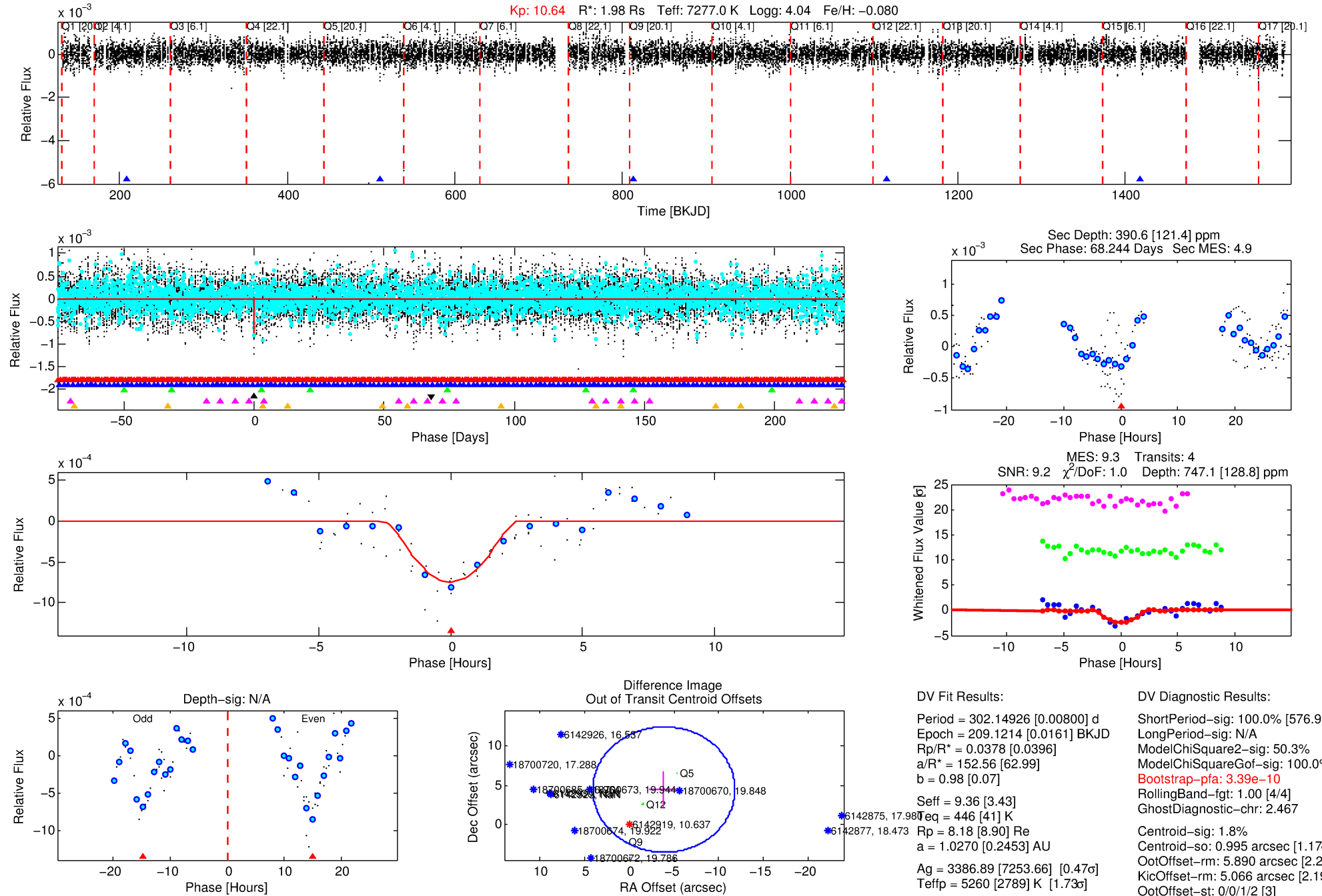
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006142919-04

No Significant Match Found

DV One-Page Summary

KIC: 6142919 Candidate: 4 of 6 Period: 302.149 d



DV Fit Results:

Period = 302.14926 [0.00800] d
Epoch = 209.1214 [0.0161] BKJD
 $R_p/R^* = 0.0378$ [0.0396]
 $a/R^* = 152.56$ [62.99]
 $b = 0.98$ [0.07]
 $\text{Seff} = 9.36$ [3.43]
 $T_{\text{eq}} = 446$ [41] K
 $R_p = 8.18$ [8.90] R_e
 $a = 1.0270$ [0.2453] AU
 $A_g = 3386.89$ [7253.66] [0.47 σ]
 $T_{\text{eff}} = 5260$ [2789] K [1.73 σ]

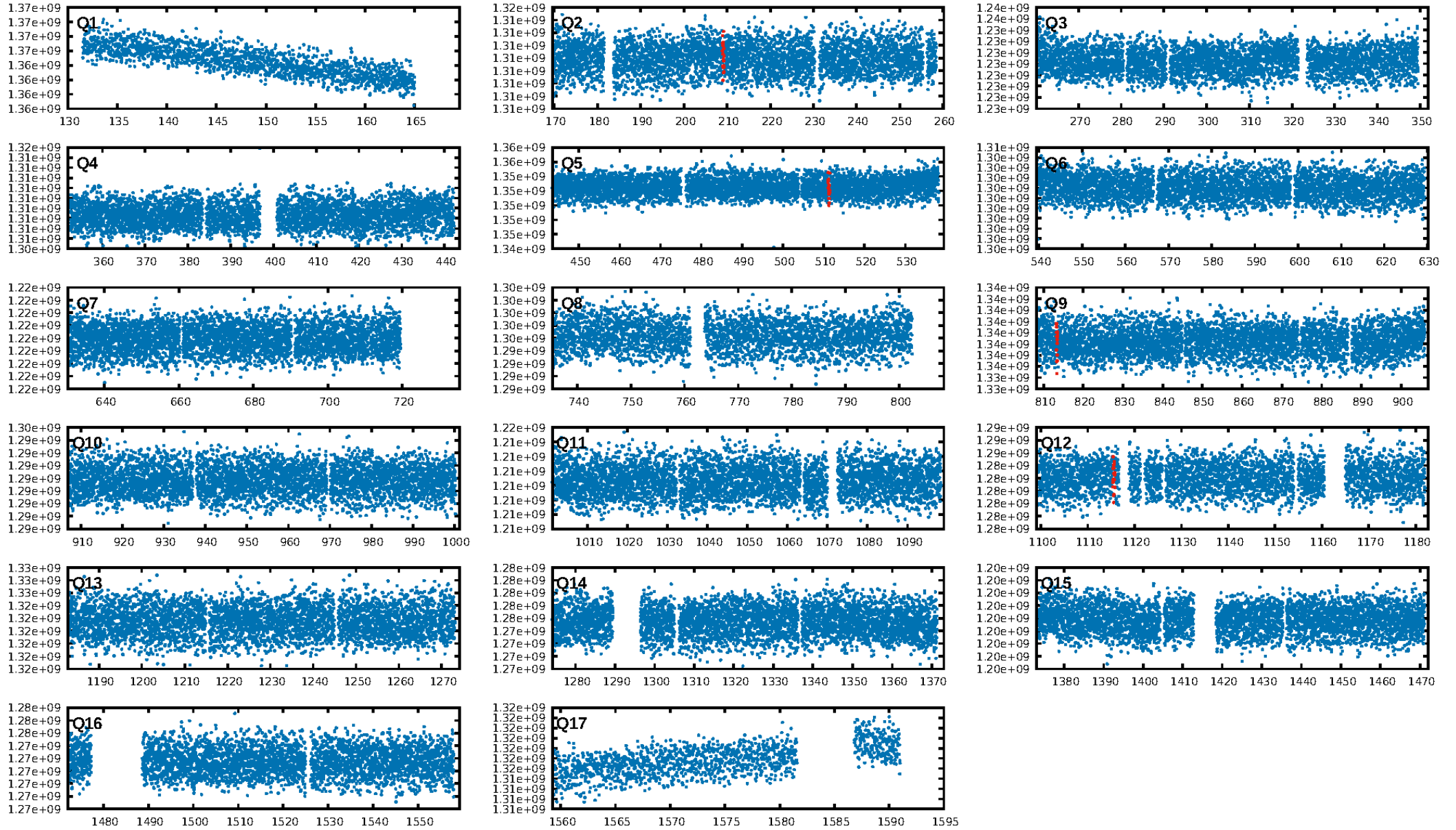
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [576.92 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 50.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.39e-10
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 2.467
Centroid-sig: 1.8%
Centroid-so: 0.995 arcsec [1.17 σ]
OotOffset-rm: 5.890 arcsec [2.22 σ]
KicOffset-rm: 5.066 arcsec [2.19 σ]
OotOffset-st: 0/0/1/2 [3]
KicOffset-st: 0/0/1/2 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 0.25 [1/4]

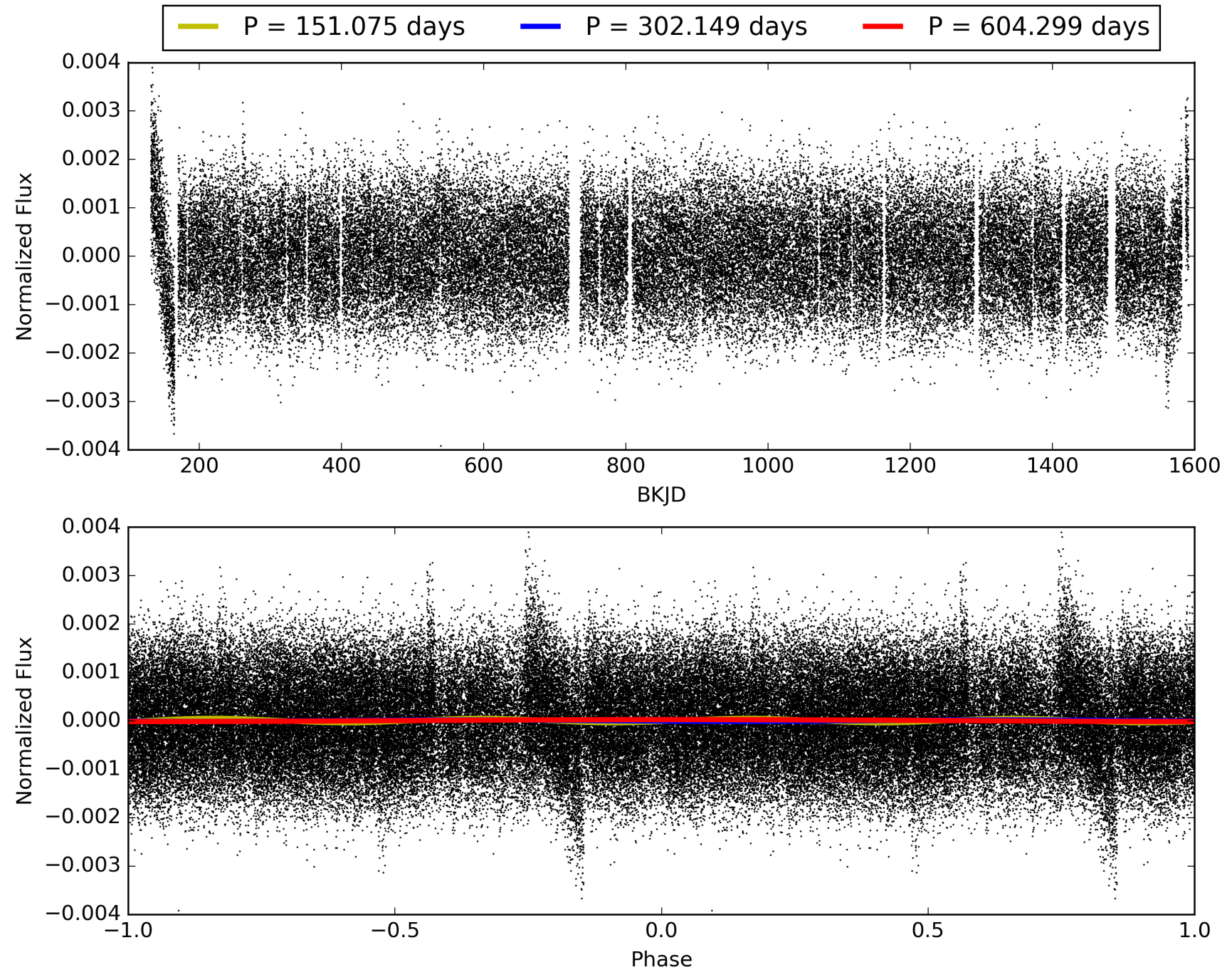
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 07:42:41 Z

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

TCE 006142919-04, PDC Light Curves

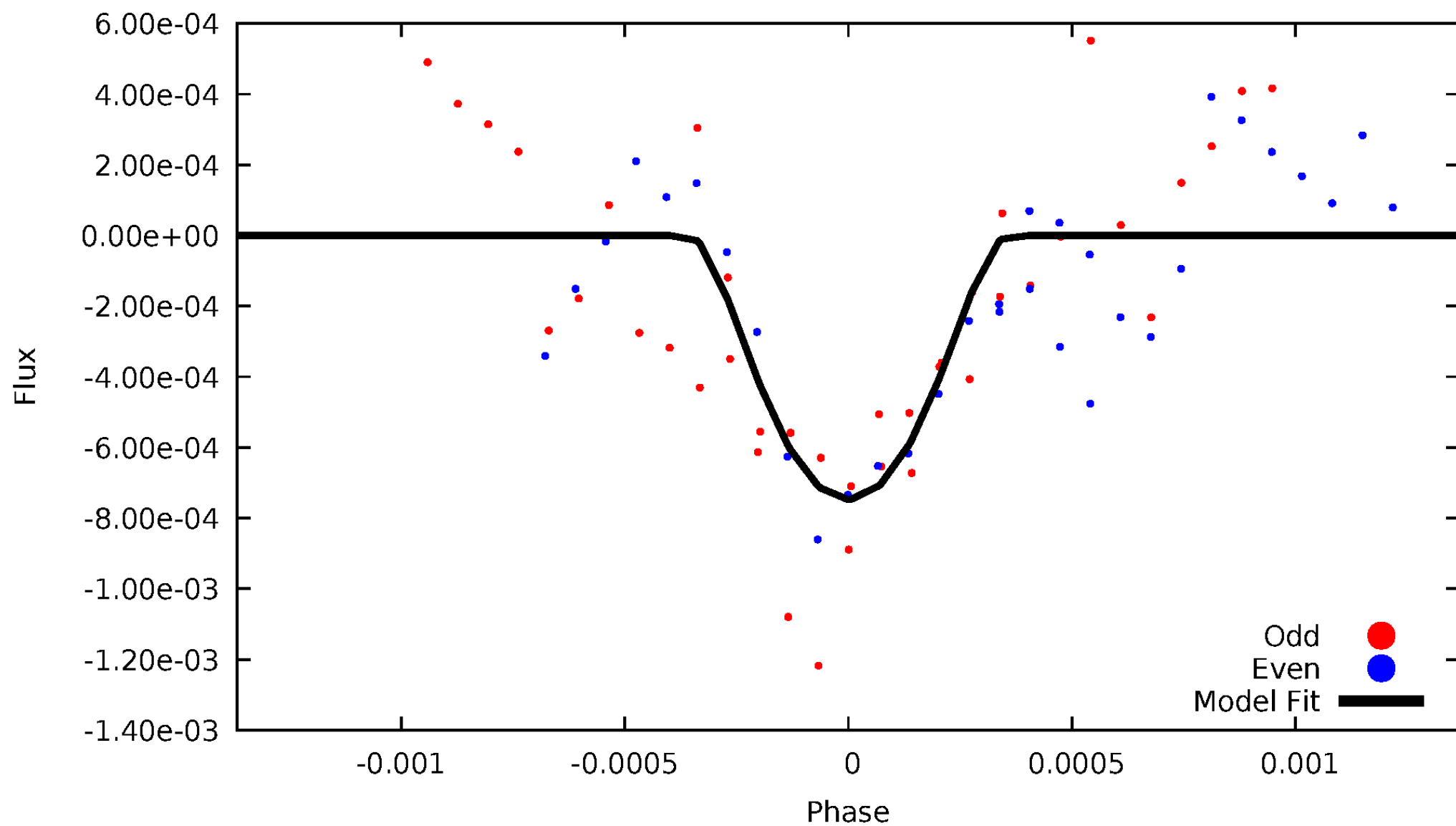


TCE 006142919-04



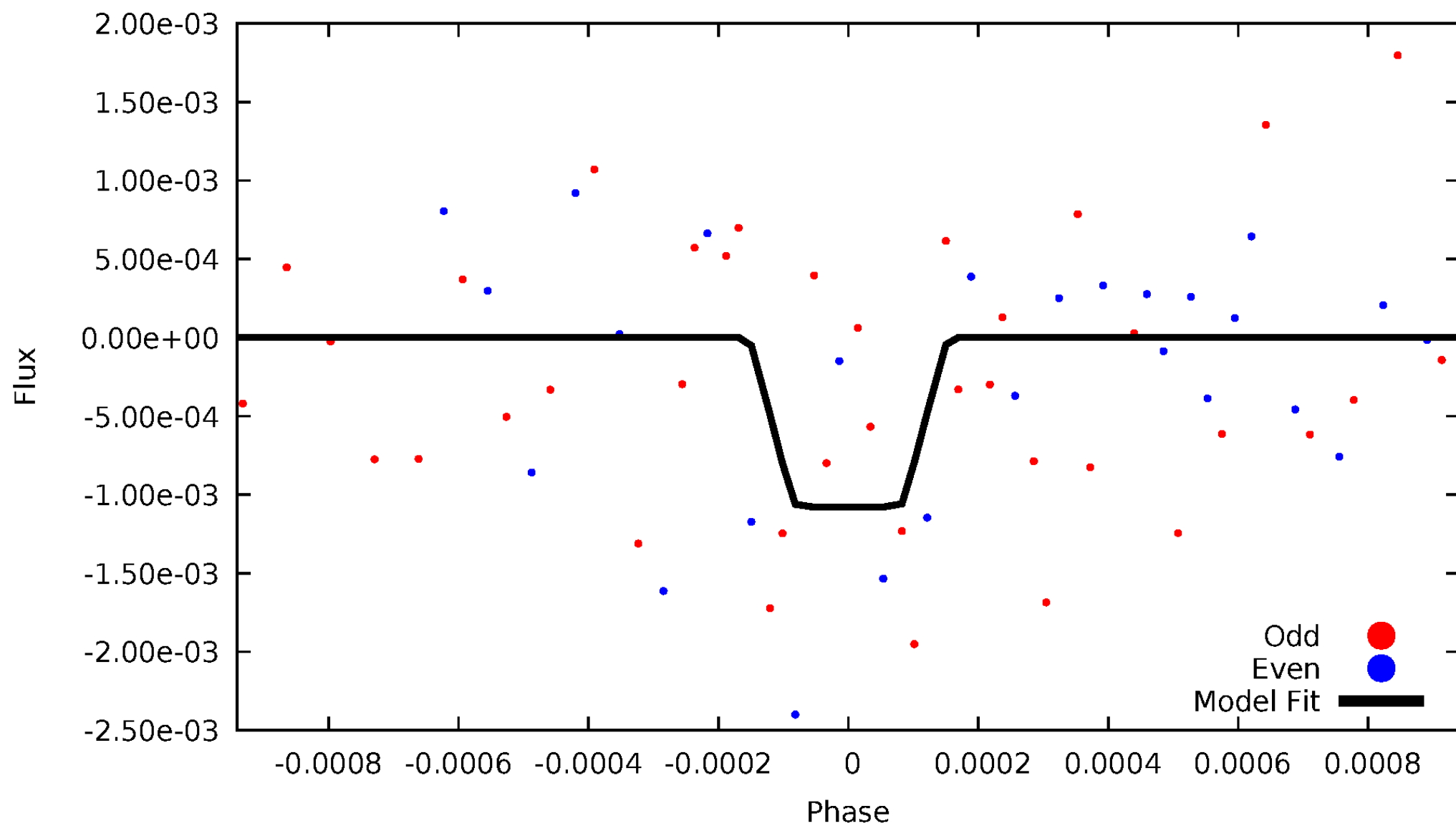
DV Odd/Even

TCE 006142919-04



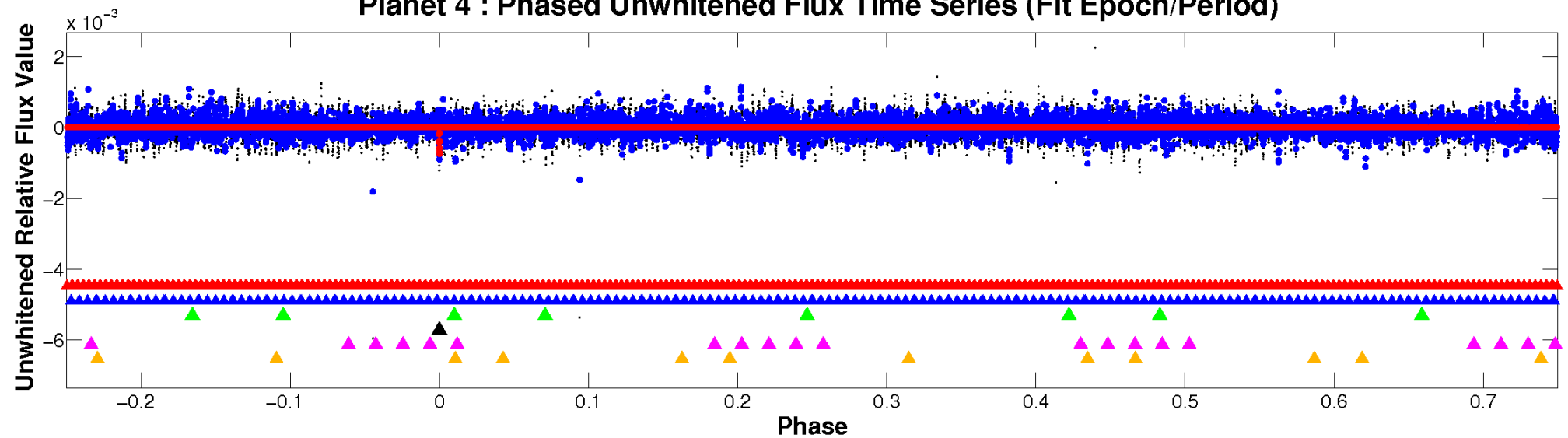
ALT Odd/Even

TCE 006142919-04

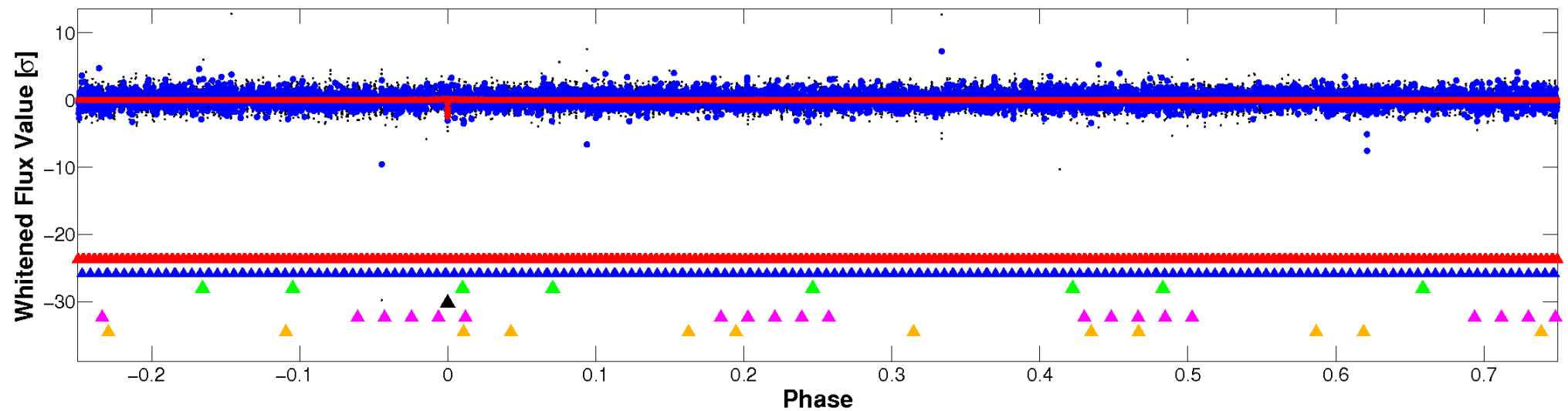


Non-Whitened Vs. Whitened Light Curve

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

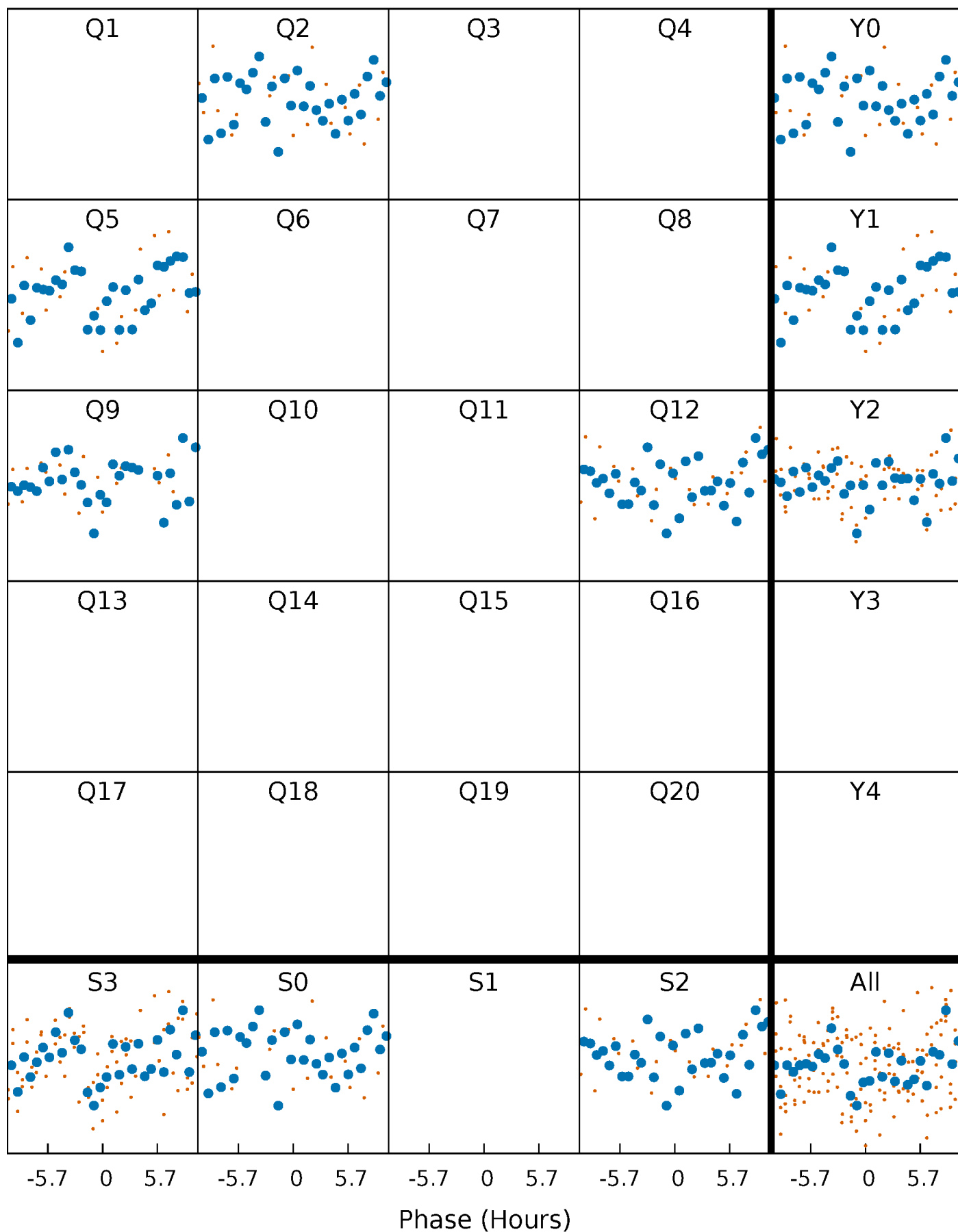


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



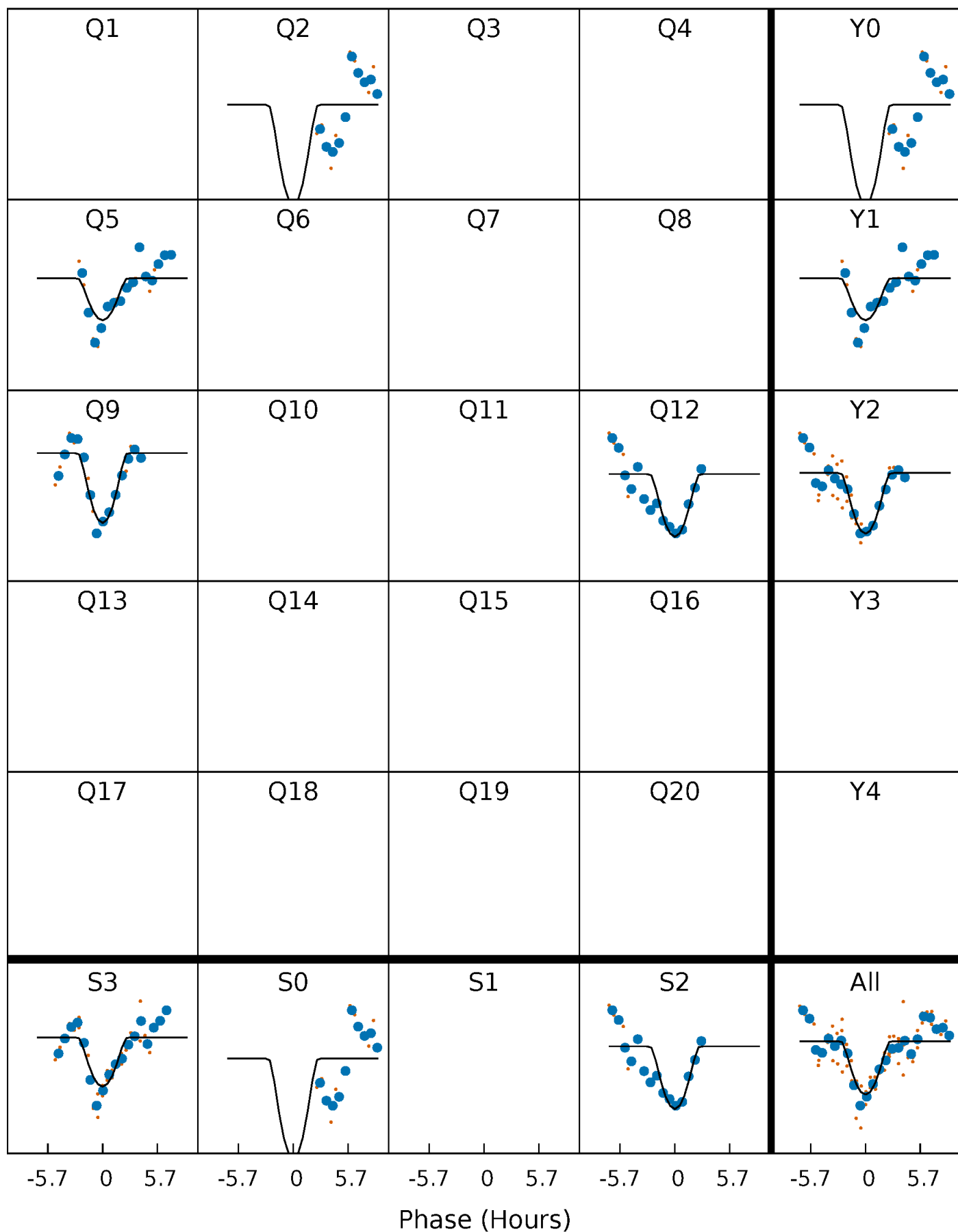
PDC Quarter-Phased Transit Curves

TCE 006142919-04 P=302.149263 Days $T_0=209.121393$ (BKJD)



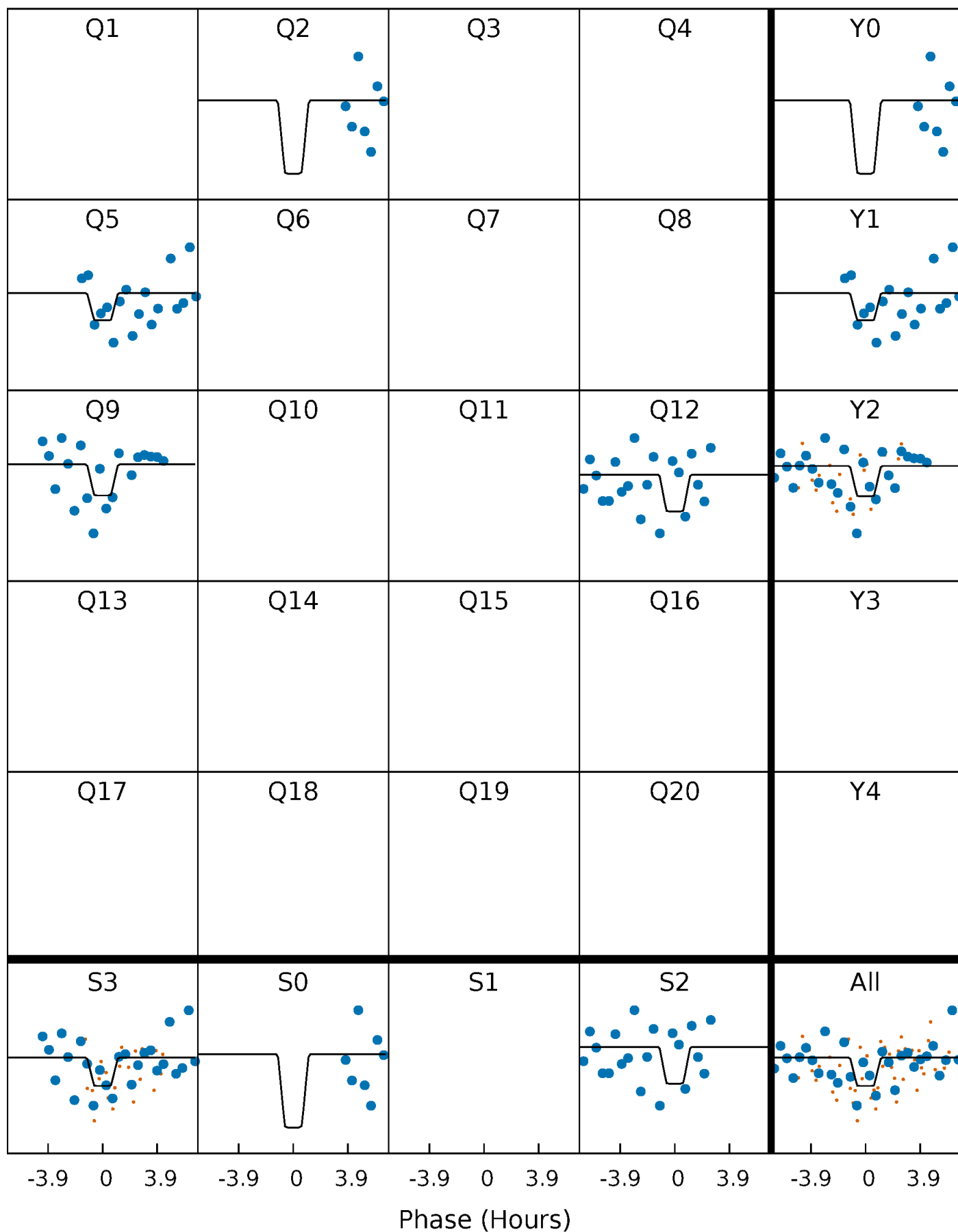
DV Quarter-Phased Transit Curves

TCE 006142919-04 P=302.149263 Days $T_0=209.121393$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

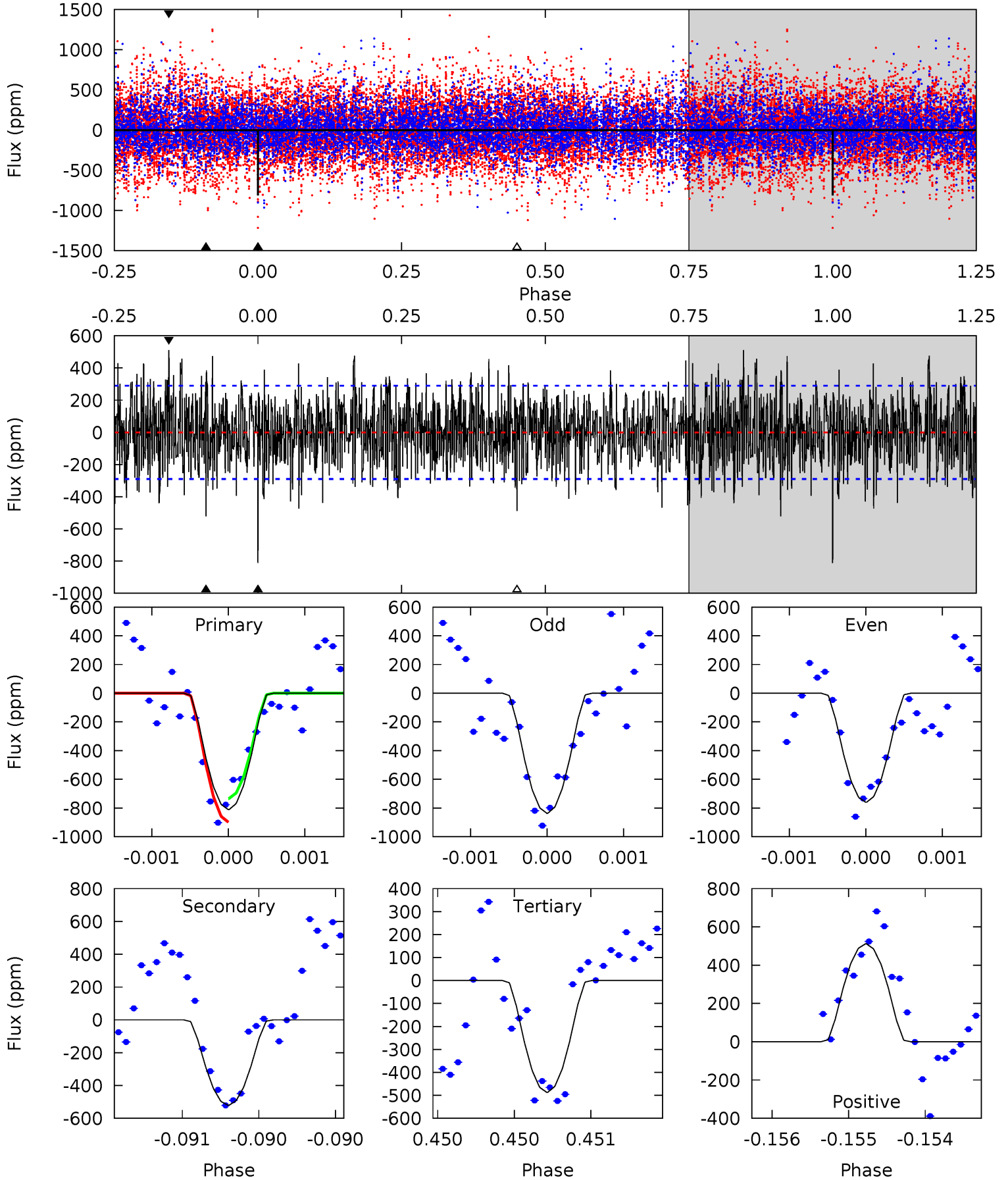
TCE 006142919-04 P=302.163172 Days $T_0=209.077022$ (BKJD)



DV Model-Shift Uniqueness Test

006142919-04, P = 302.149263 Days, E = 209.121393 Days

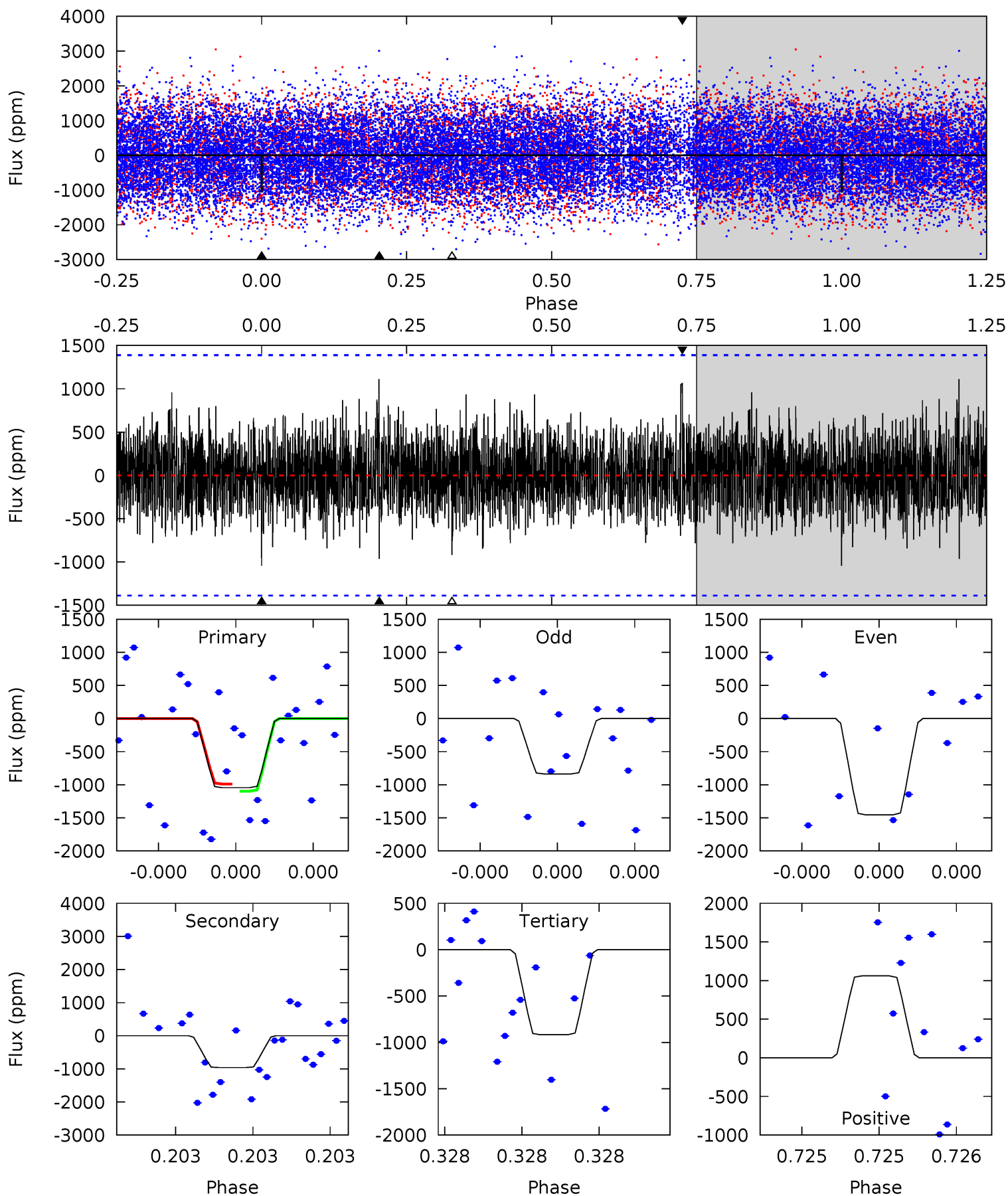
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.5	9.92	9.28	9.75	5.52	3.40	2.81	6.18	5.72	0.64	0.17	0.70	1.07	0.39	1.56



Alt Model-Shift Uniqueness Test

006142919-04, P = 302.163172 Days, E = 209.077022 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.26	3.92	3.74	4.32	5.66	3.62	1.08	0.52	-0.07	0.18	-0.40	1.19	0.87	0.52	0.22



Stellar Parameters For KIC 006142919

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7277^{+228}_{-279}	$4.043^{+0.175}_{-0.175}$	$-0.080^{+0.250}_{-0.350}$	$1.982^{+0.587}_{-0.533}$	$1.581^{+0.211}_{-0.257}$	$0.286^{+0.286}_{-0.145}$
	+3%/-4%	+4%/-4%	+312%/-438%	+30%/-27%	+13%/-16%	+100%/-51%
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 006142919-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-521 ± 52	$9.69^{+8.42}_{-6.15}$	624^{+50}_{-48}	5112^{+3730}_{-1033}	3121^{+19549}_{-2181}
Alt.	-961 ± 245	$9.05^{+7.91}_{-5.98}$	624^{+51}_{-46}	6168^{+6110}_{-1535}	6825^{+50965}_{-4971}

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

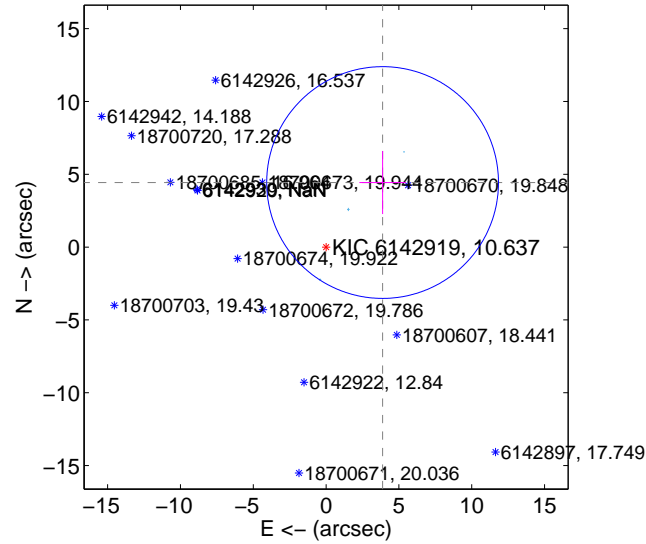
Supplemental centroid analysis for 006142919-04. **Kepler magnitude: 10.64.** Transit SNR 9.22

There are 3 quarters with good PRF difference image offsets

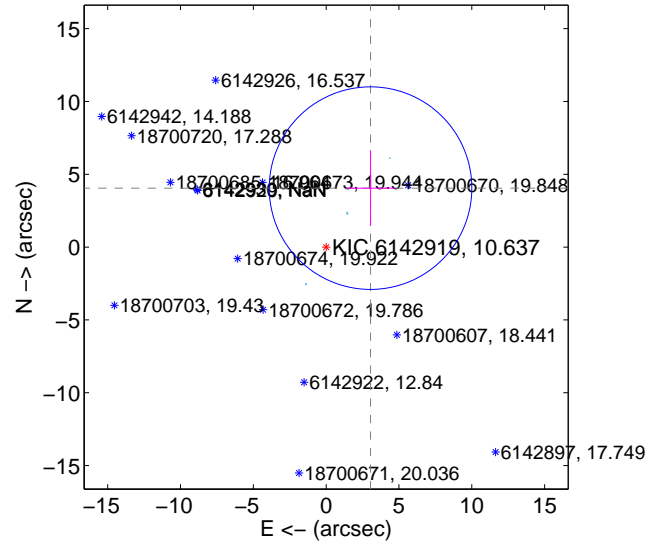
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.890 ± 2.651	2.22	-3.879 ± 1.598	4.432 ± 2.167
PRF-fit source offset from KIC position	5.066 ± 2.318	2.19	-3.047 ± 1.686	4.048 ± 2.609
photometric centroid source offset	1.00 ± 0.85	1.17	-0.11 ± 0.48	0.99 ± 0.86

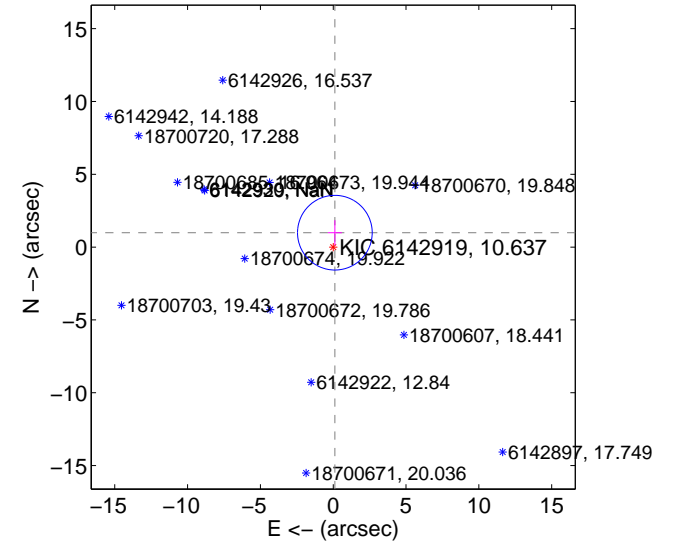
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

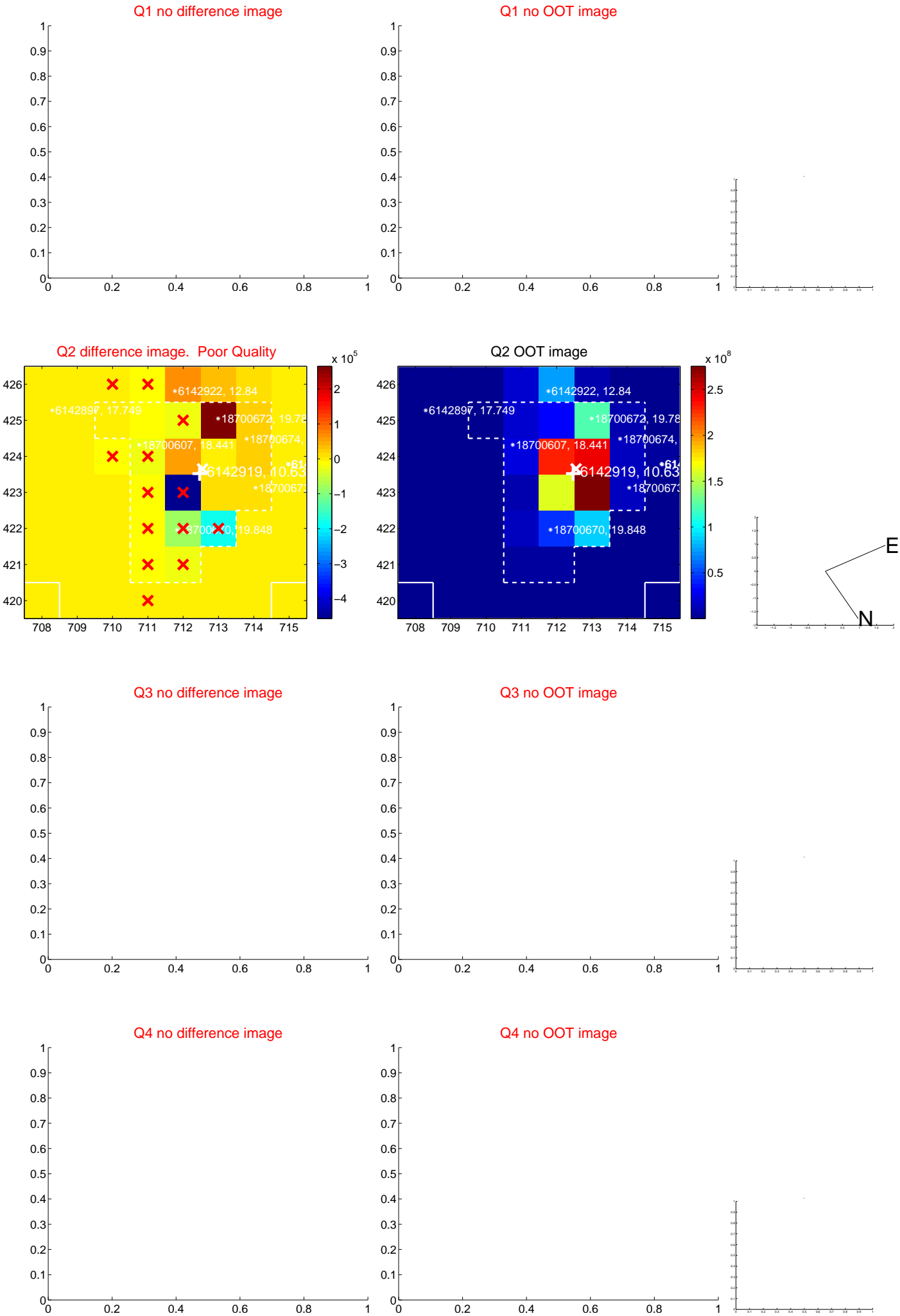


offset from photometric centroids

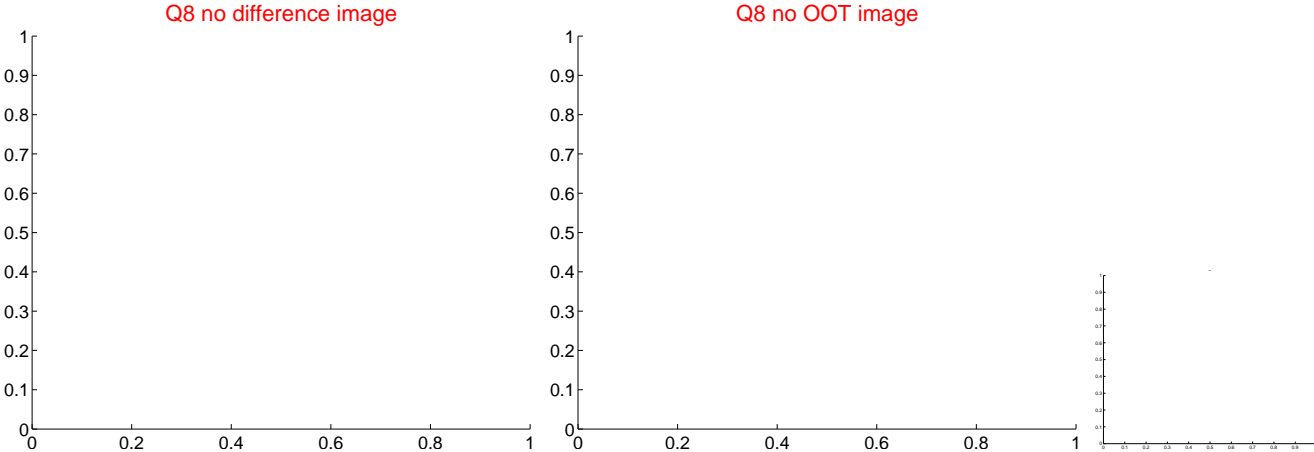
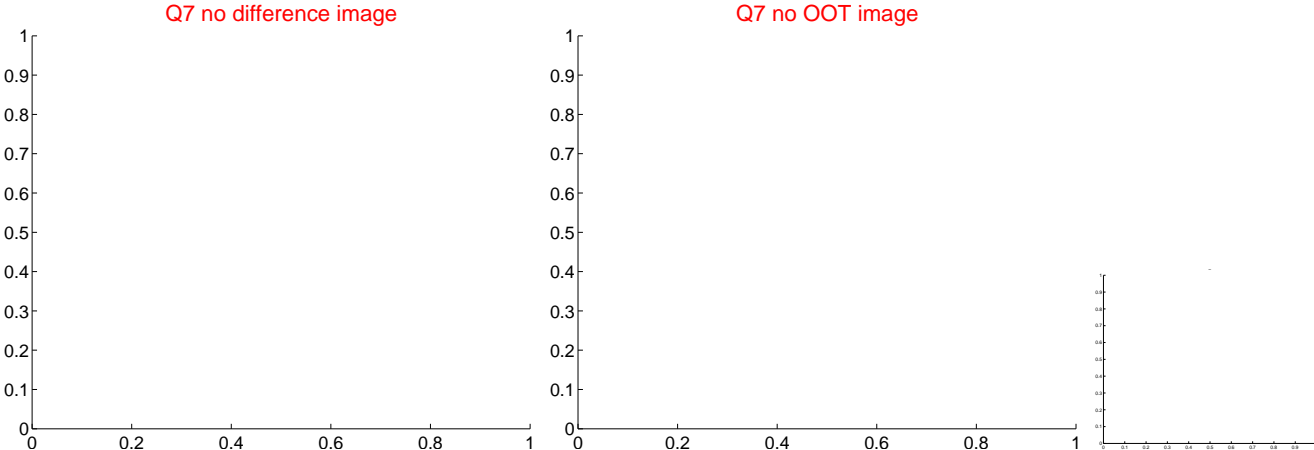
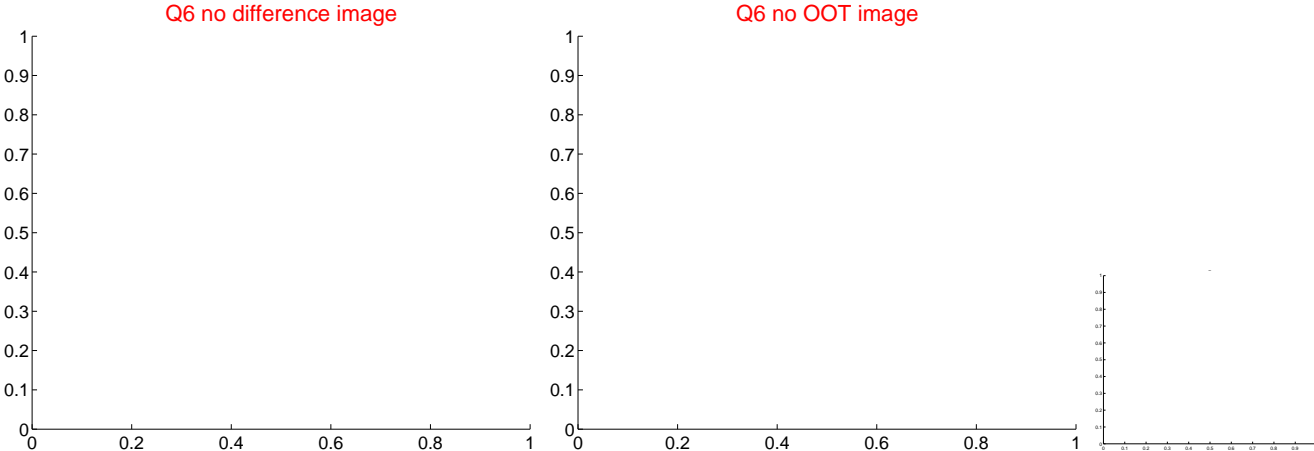
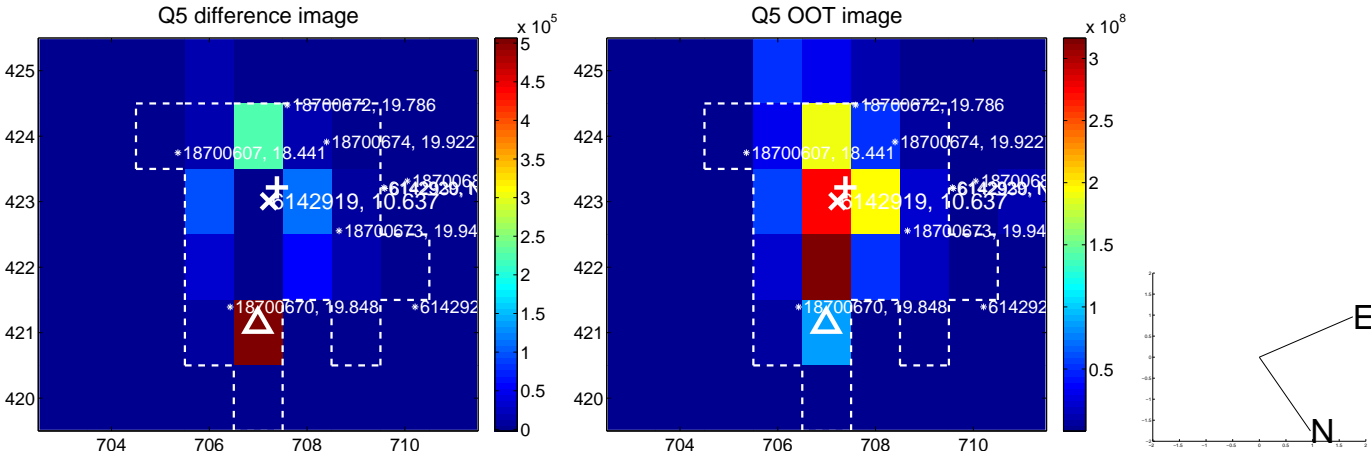


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

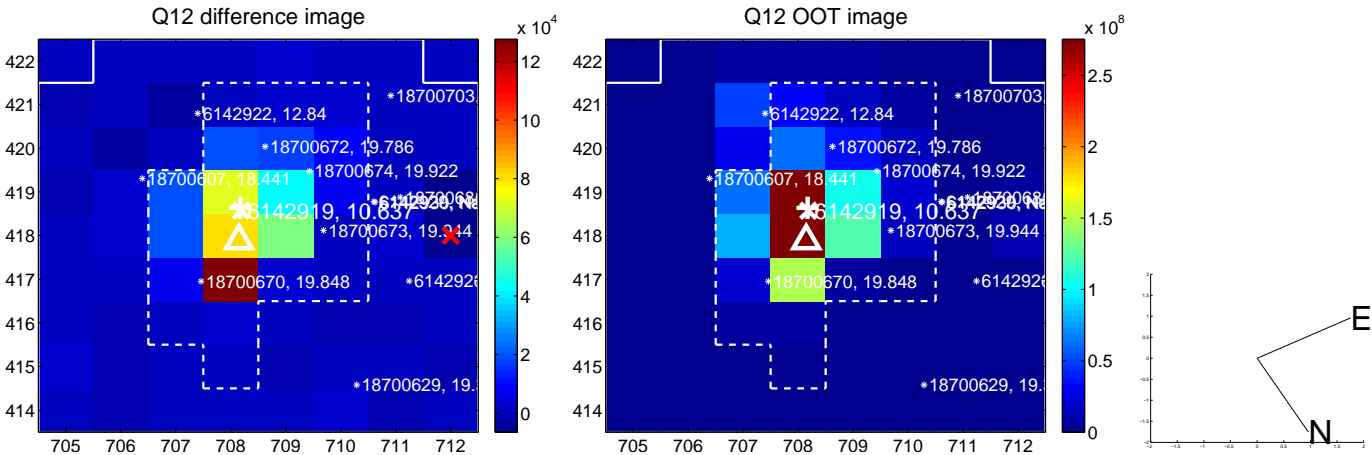
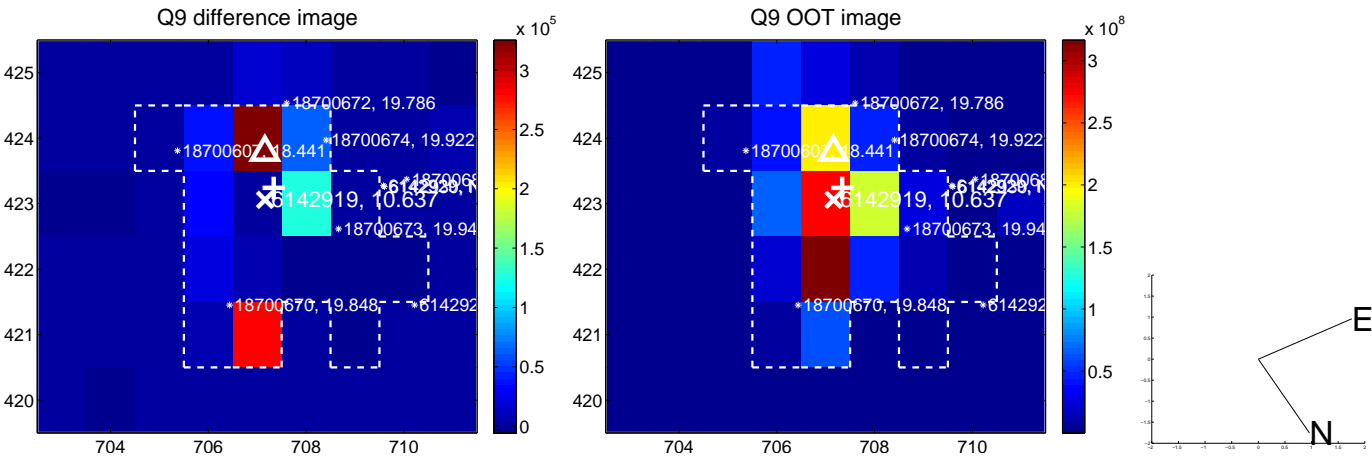
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



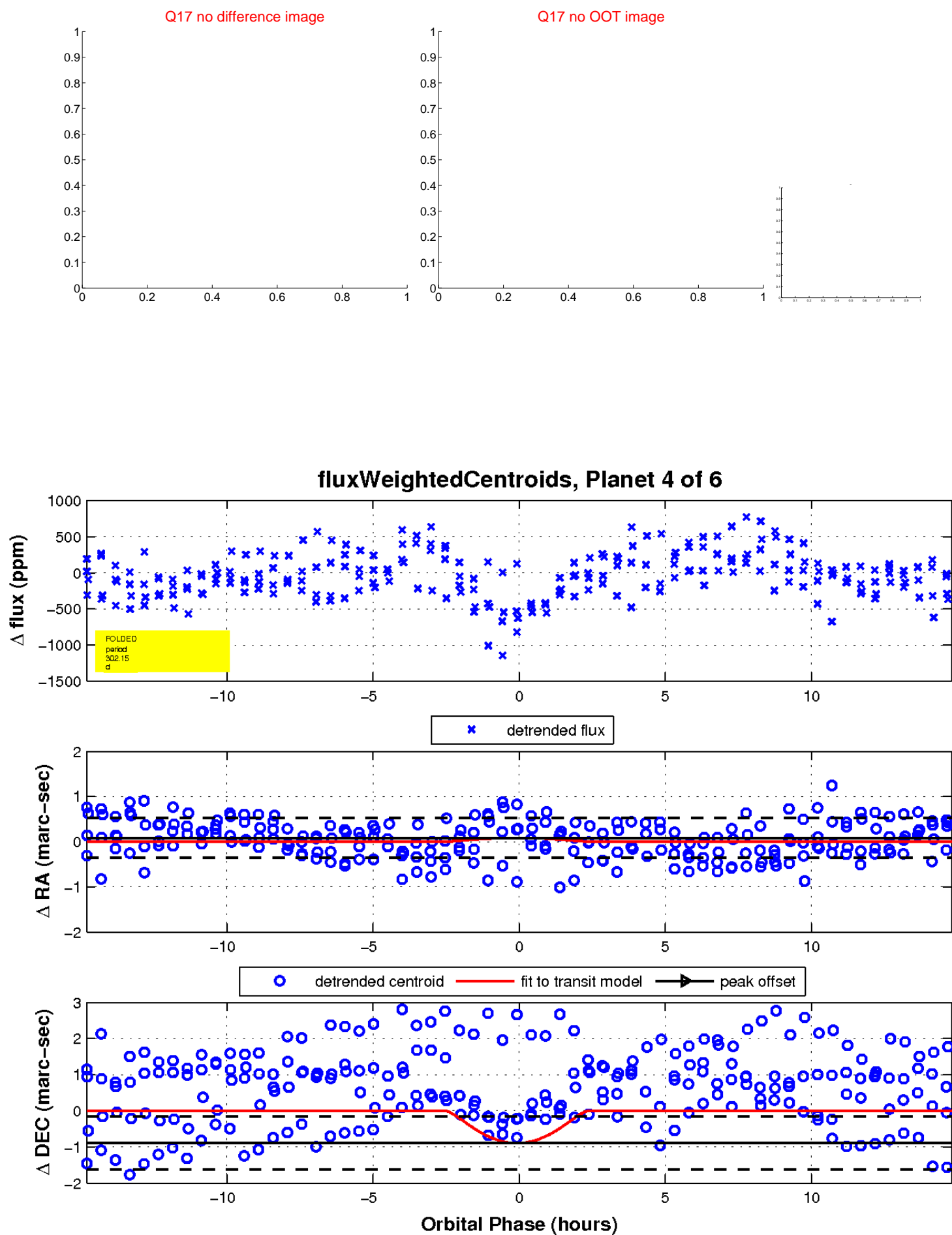
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



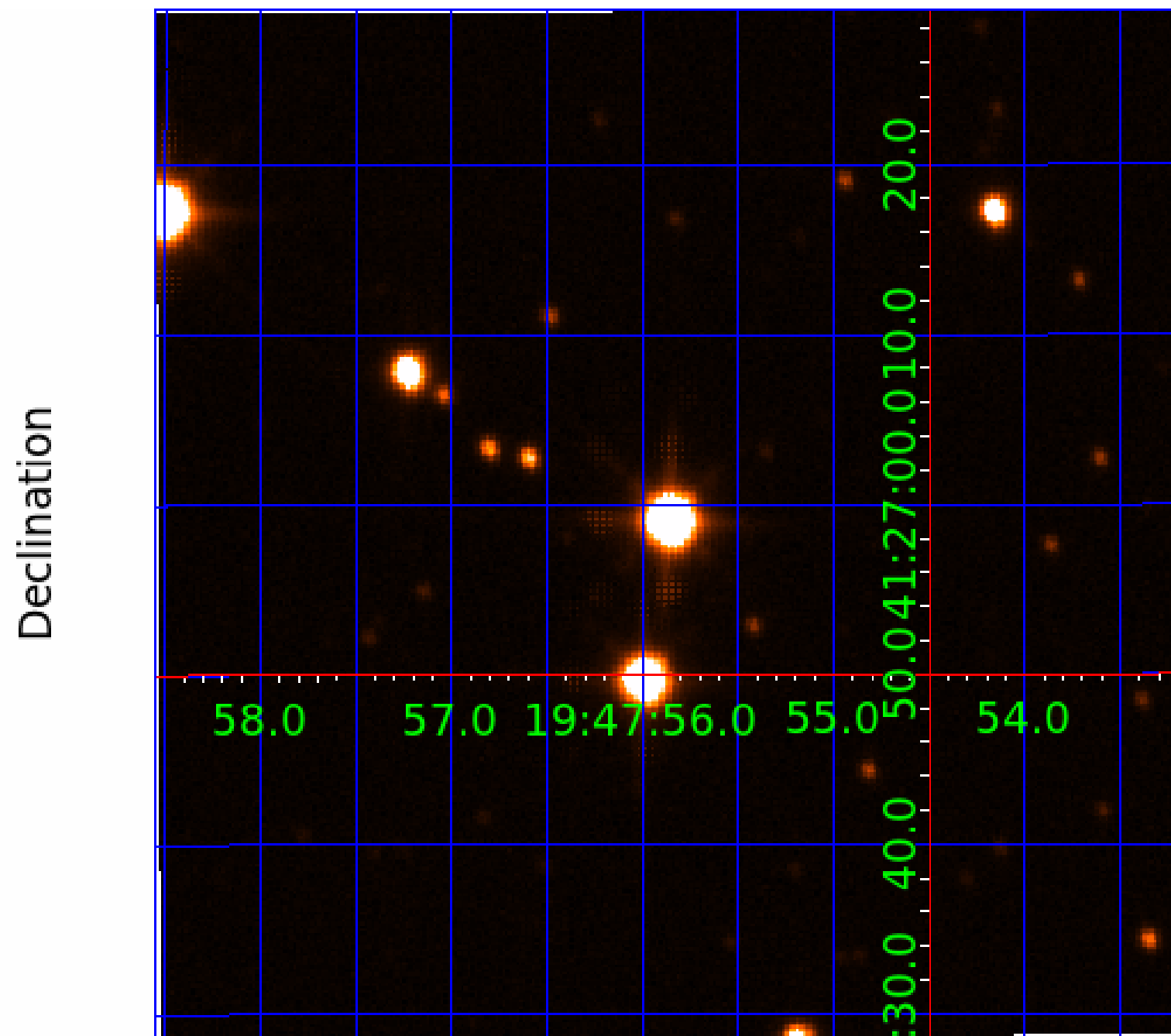
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 006142919

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})
006142919-01	OBS	No	1.135558	132.646227	78.0	5.646	10.4	14.0	1.98	7277	2.31	16013.77
006142919-02	OBS	No	6.905115	132.830640	184.0	6.717	10.8	10.7	1.98	7277	5.21	1442.82
006142919-03	OBS	No	177.609992	177.490048	116.4	1.516	9.4	1.5	1.98	7277	2.43	19.00
006142919-04	OBS	No	302.149263	209.121393	747.1	4.954	9.3	9.2	1.98	7277	8.18	9.36
006142919-05	OBS	No	74.161825	138.582123	608.1	4.811	8.5	9.5	1.98	7277	9.21	60.89
006142919-06	OBS	No	128.110499	139.854922	692.2	4.575	8.1	8.1	1.98	7277	9.73	29.38

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006142919-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_SATURATED
006142919-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006142919-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006142919-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
006142919-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006142919-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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

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

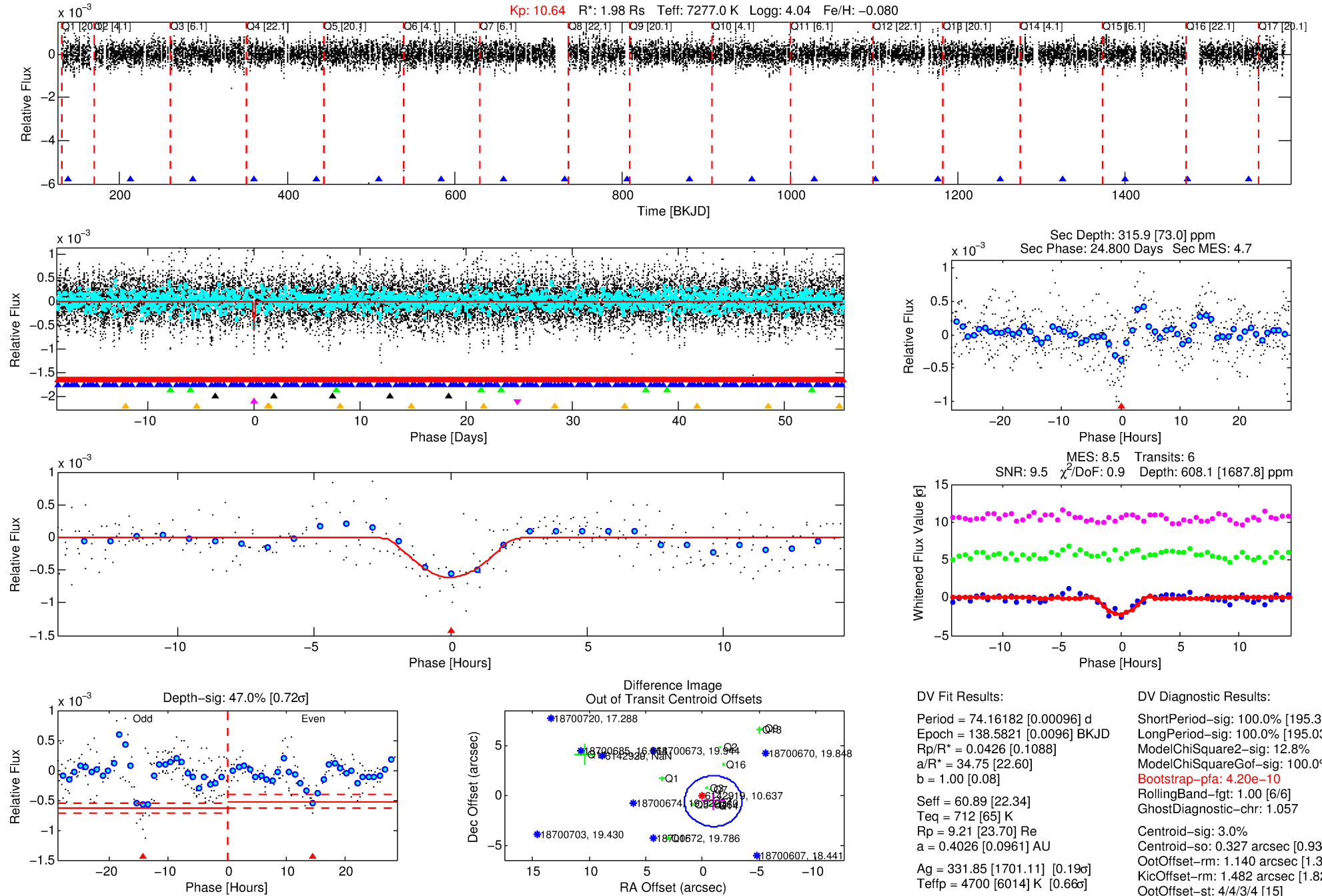
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006142919-05

No Significant Match Found

DV One-Page Summary

KIC: 6142919 Candidate: 5 of 6 Period: 74.162 d



DV Fit Results:

Period = 74.16182 [0.00096] d
Epoch = 138.5821 [0.0096] BKJD
Rp/R* = 0.0426 [0.1088]
a/R* = 34.75 [22.60]
b = 1.00 [0.08]
Seff = 60.89 [22.34]
Teq = 712 [65] K
Rp = 9.21 [23.70] Re
a = 0.4026 [0.0961] AU
Ag = 331.85 [1701.11] [0.19 σ]
Teff = 4700 [6014] K [0.66 σ]

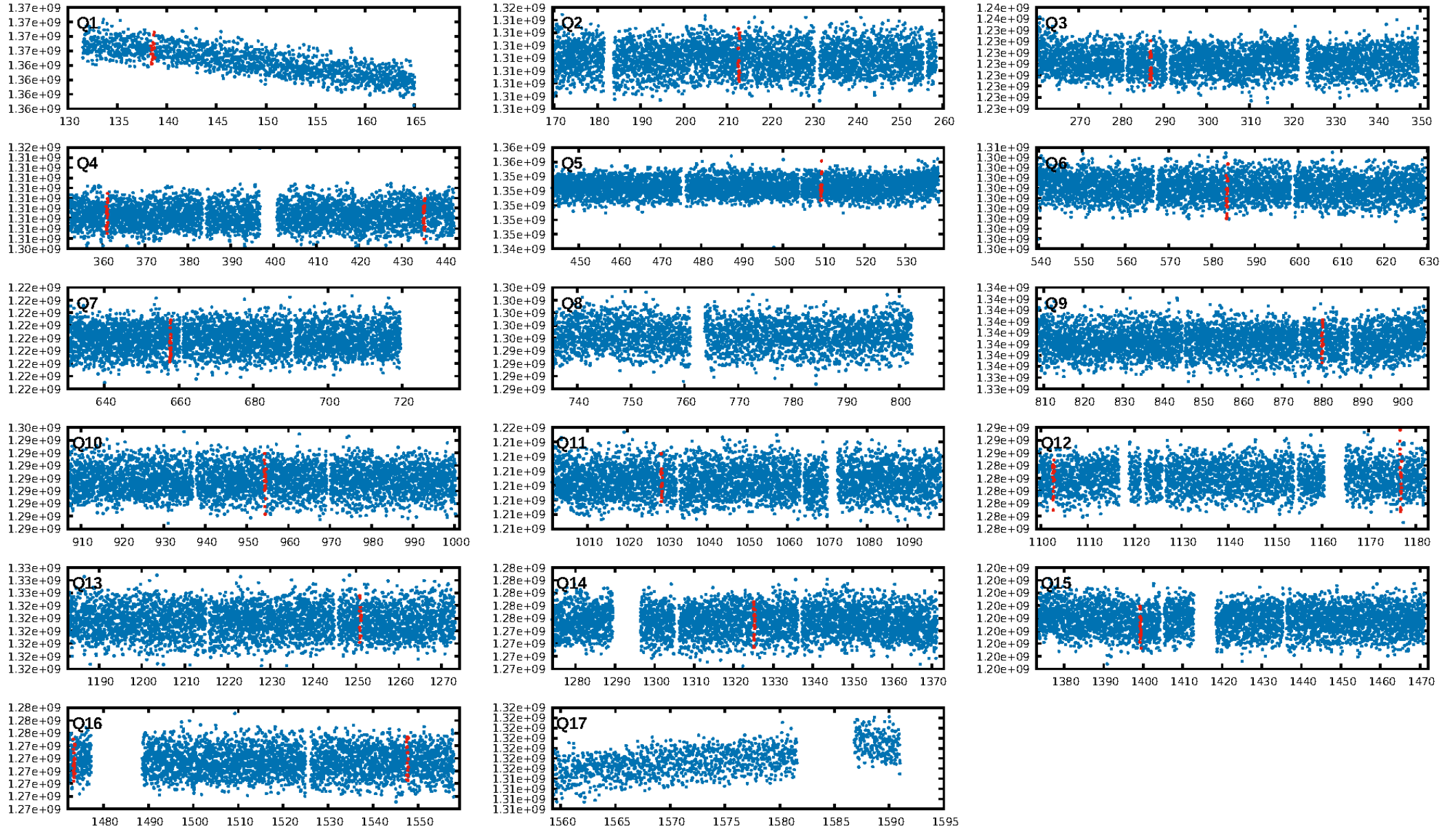
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [195.36 σ]
LongPeriod-sig: 100.0% [195.03 σ]
ModelChiSquare2-sig: 12.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.20e-10
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: 1.057
Centroid-sig: 3.0%
Centroid-so: 0.327 arcsec [0.93 σ]
OotOffset-rm: 1.140 arcsec [1.35 σ]
KicOffset-rm: 1.482 arcsec [1.82 σ]
OotOffset-st: 4/4/3/4 [15]
KicOffset-st: 4/4/3/4 [15]
DiffImageQuality-fgm: 0.20 [3/15]
DiffImageOverlap-fno: 0.00 [0/15]

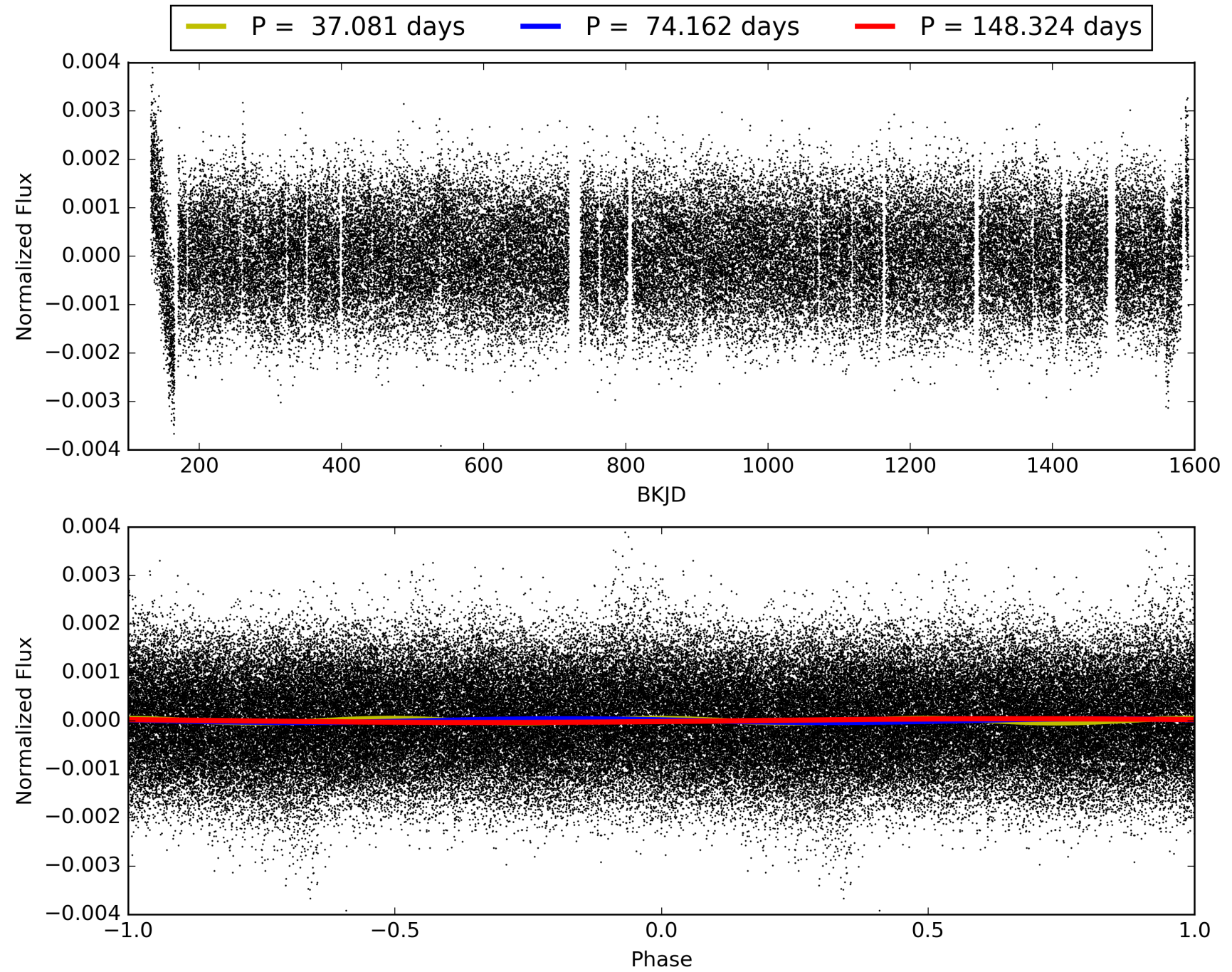
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 07:42:45 Z

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

TCE 006142919-05, PDC Light Curves

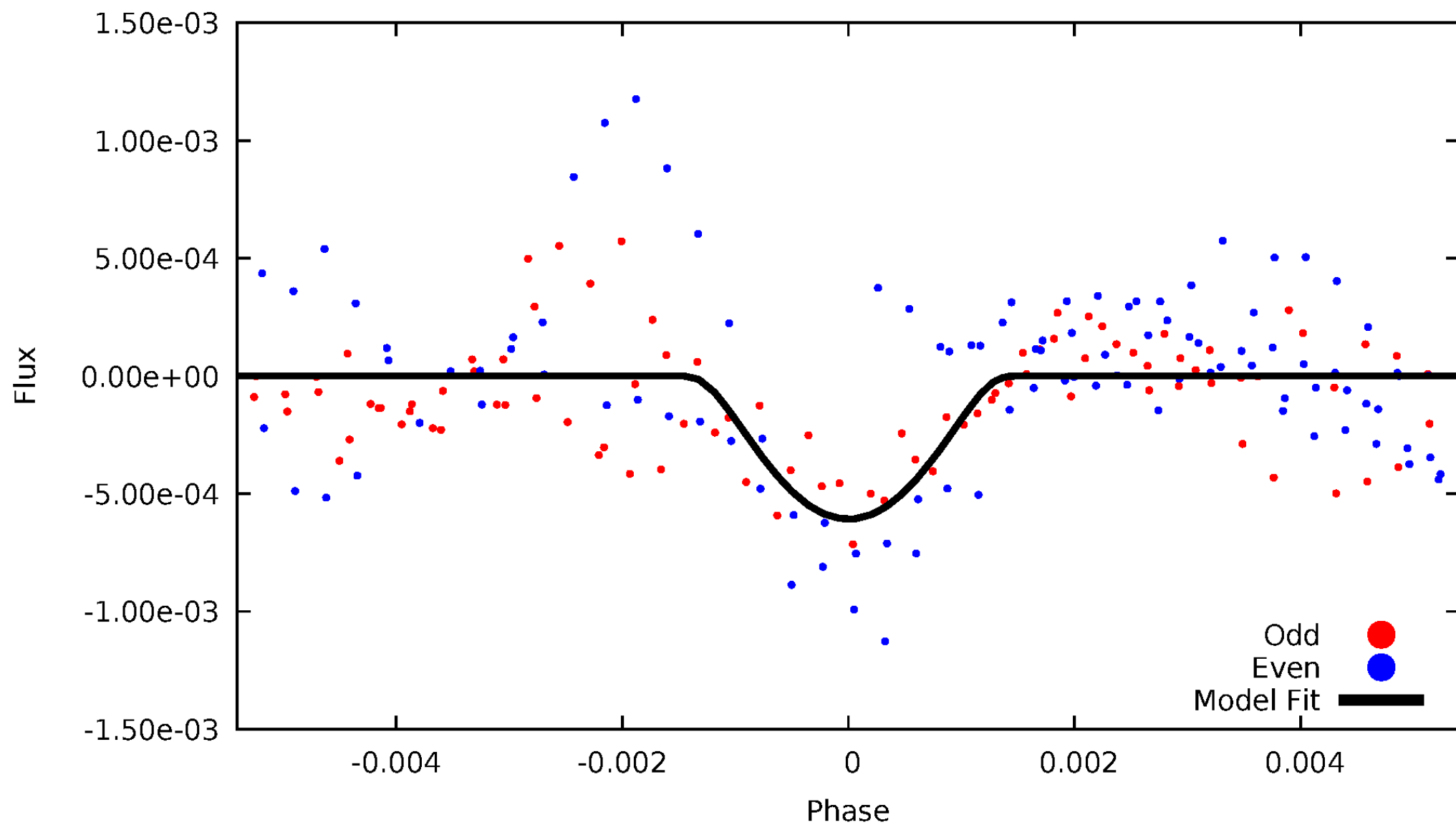


TCE 006142919-05



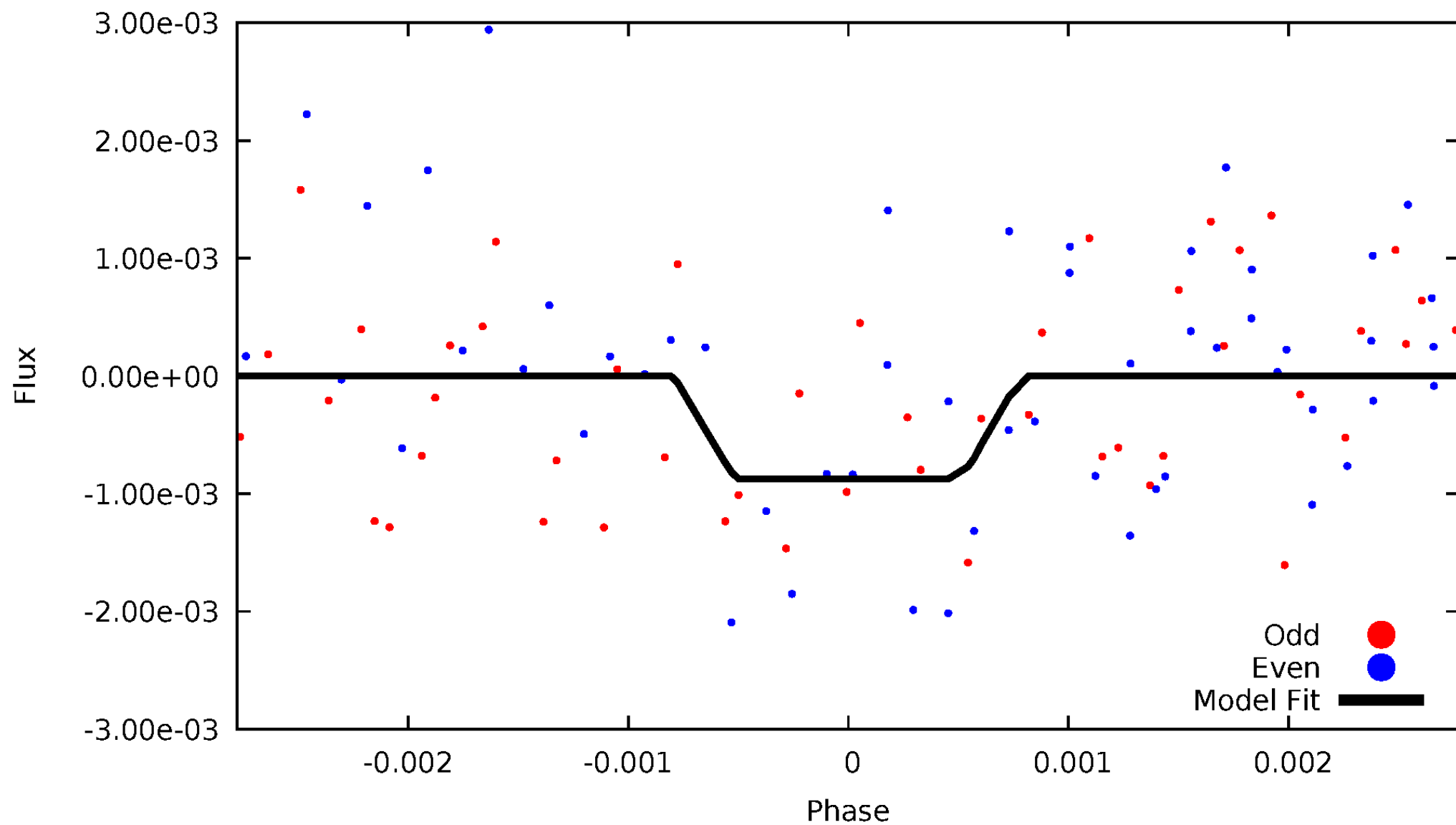
DV Odd/Even

TCE 006142919-05



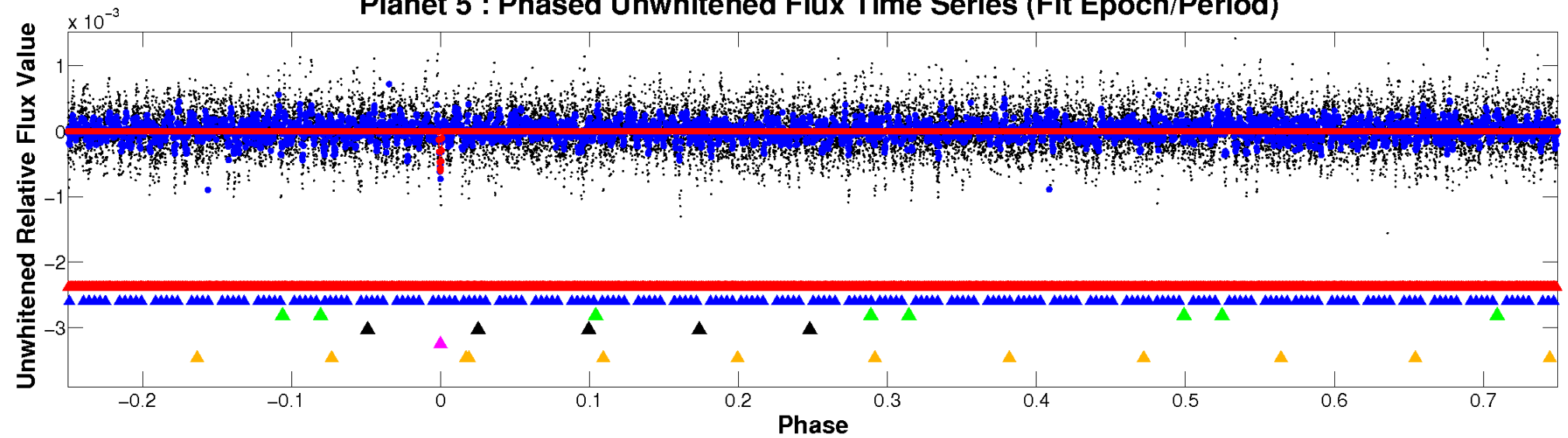
ALT Odd/Even

TCE 006142919-05

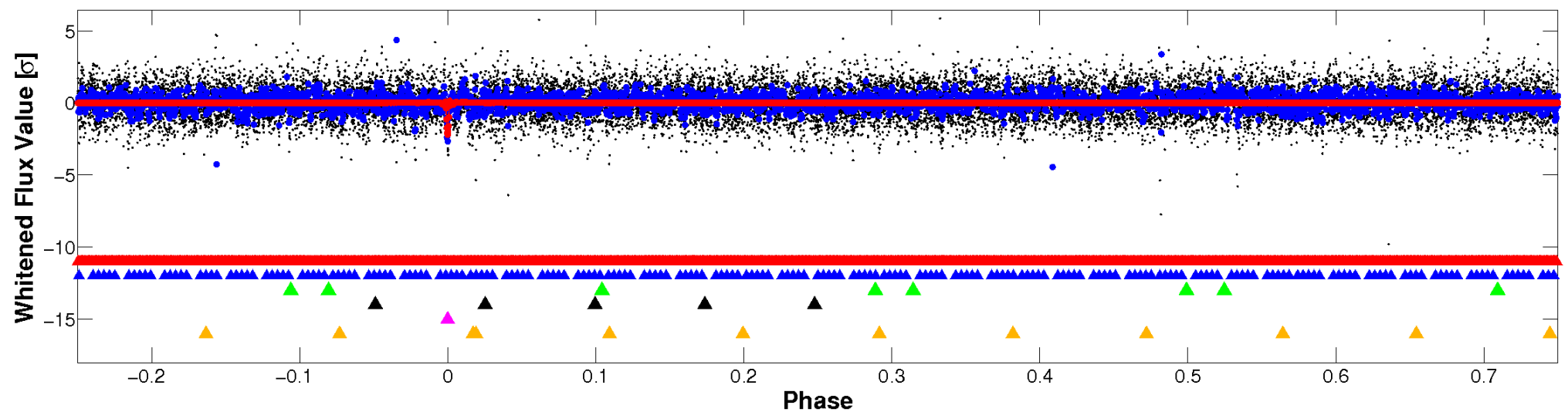


Non-Whitened Vs. Whitened Light Curve

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

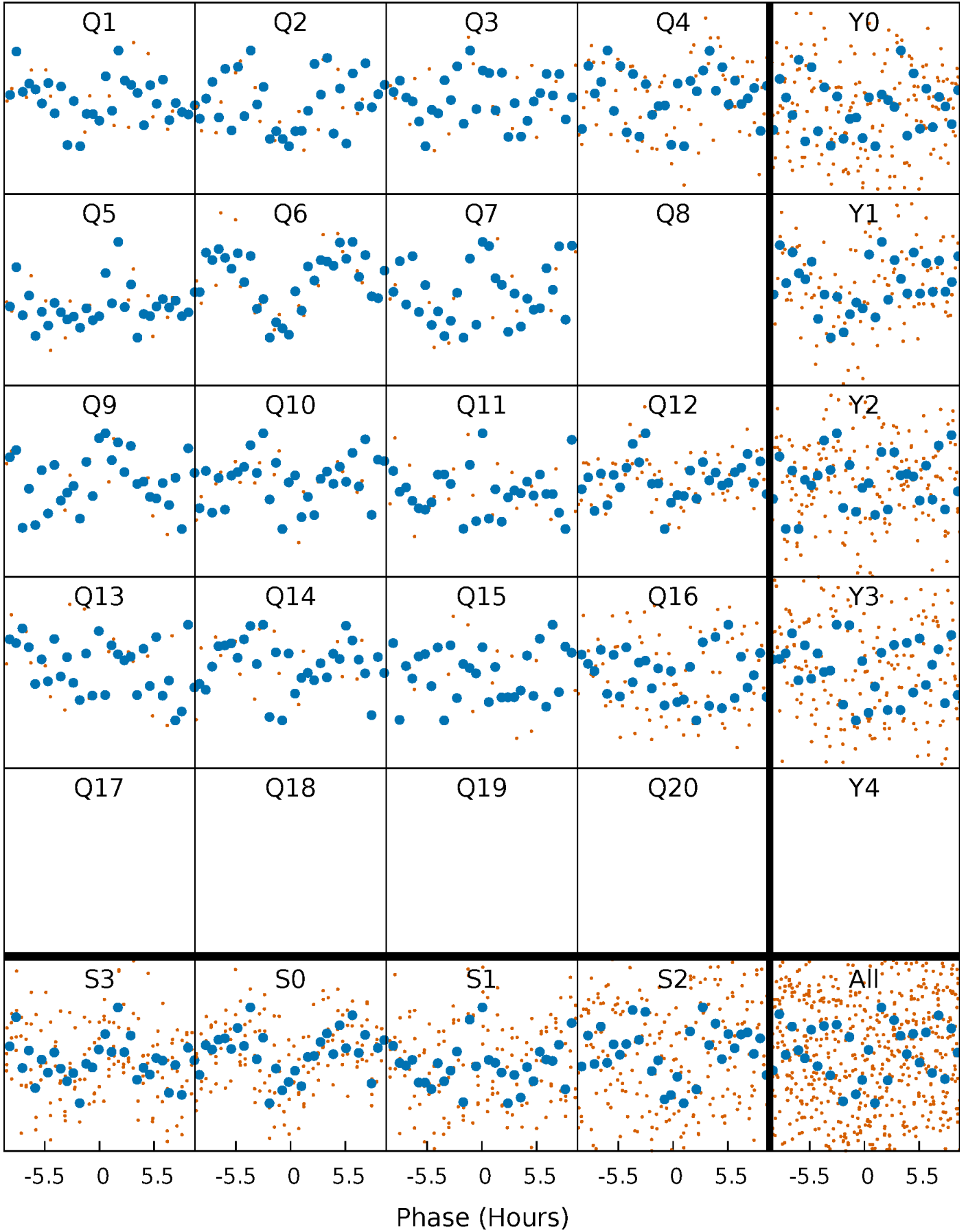


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



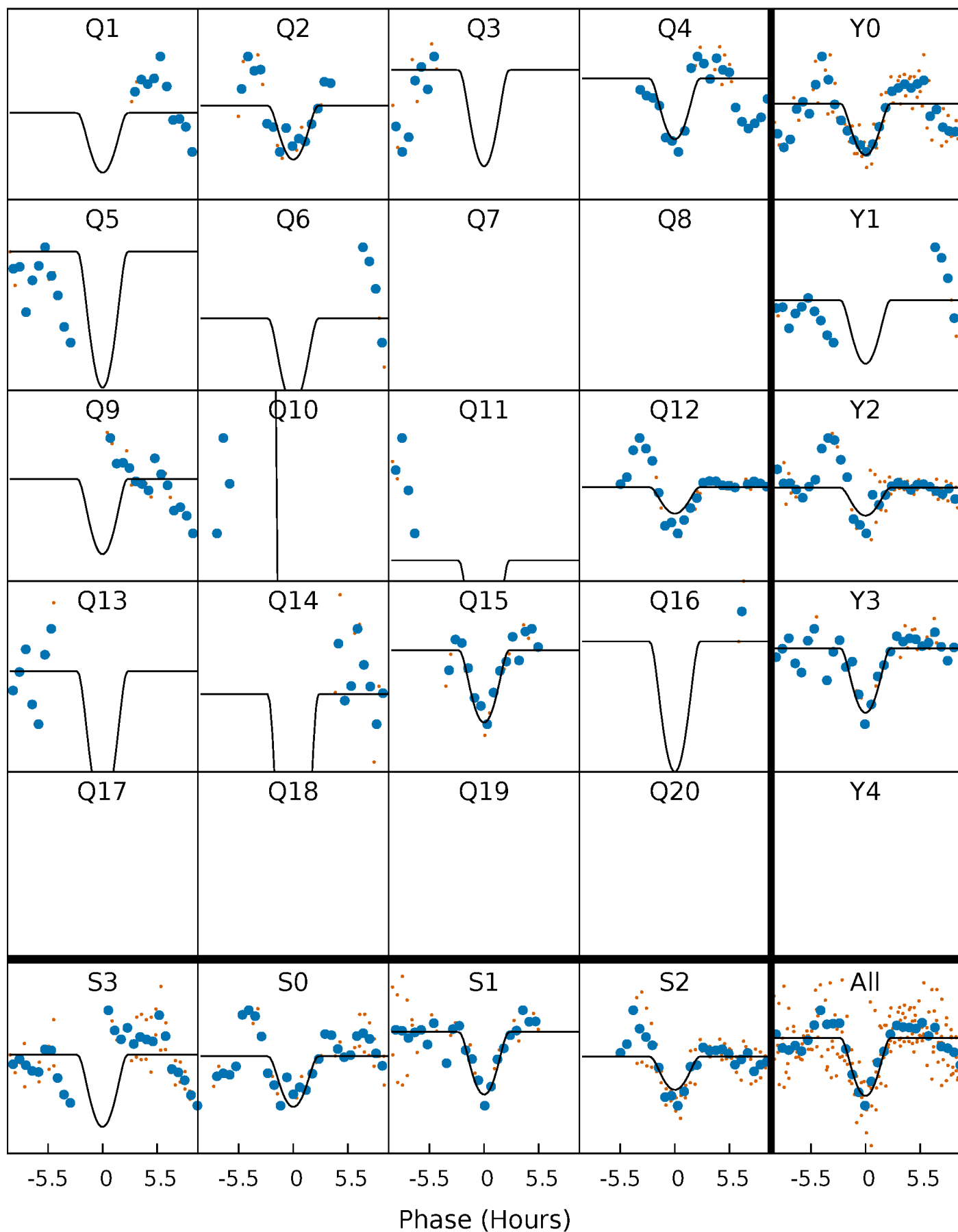
PDC Quarter-Phased Transit Curves

TCE 006142919-05 P= 74.161825 Days $T_0=138.582123$ (BKJD)



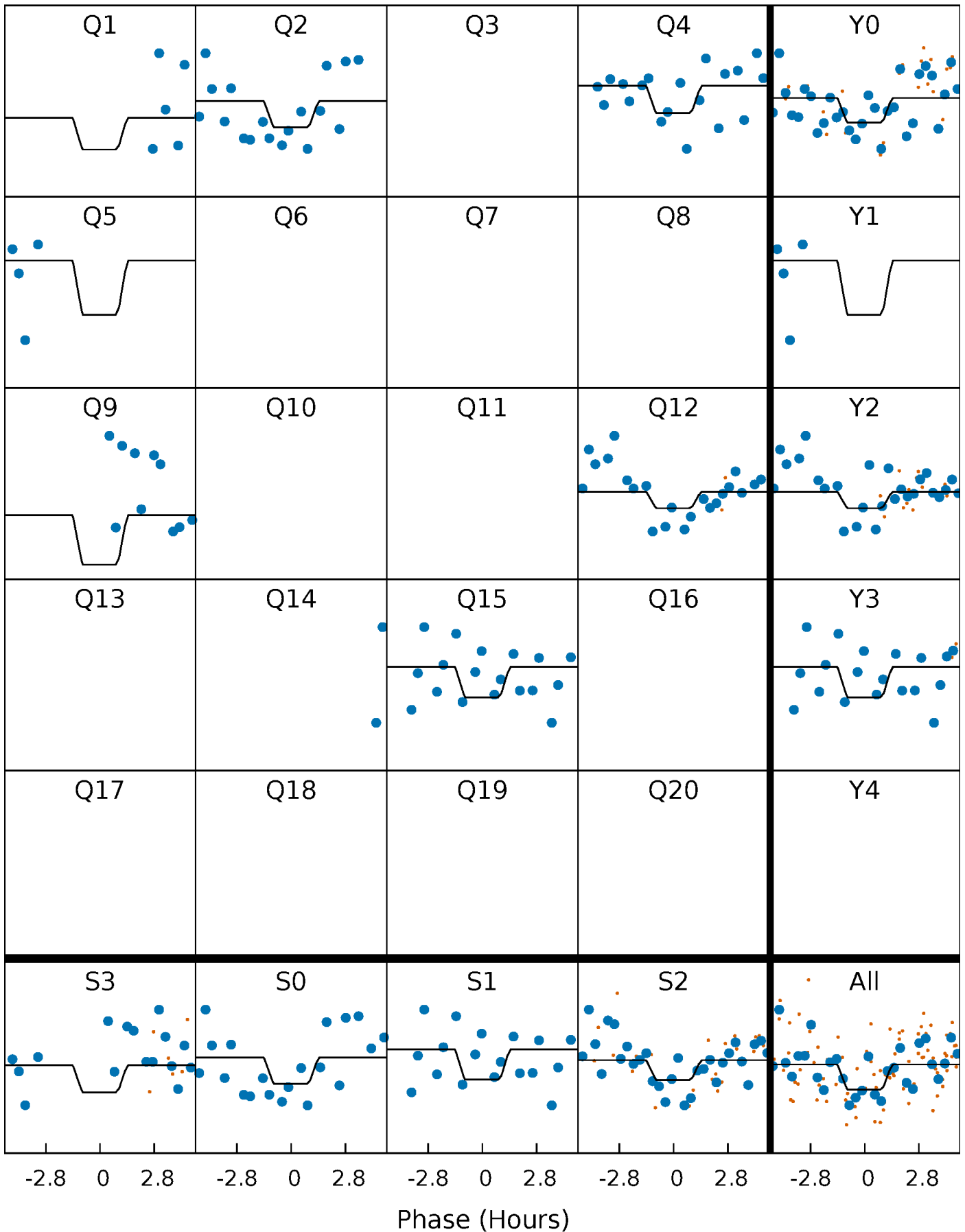
DV Quarter-Phased Transit Curves

TCE 006142919-05 P= 74.161825 Days $T_0=138.582123$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

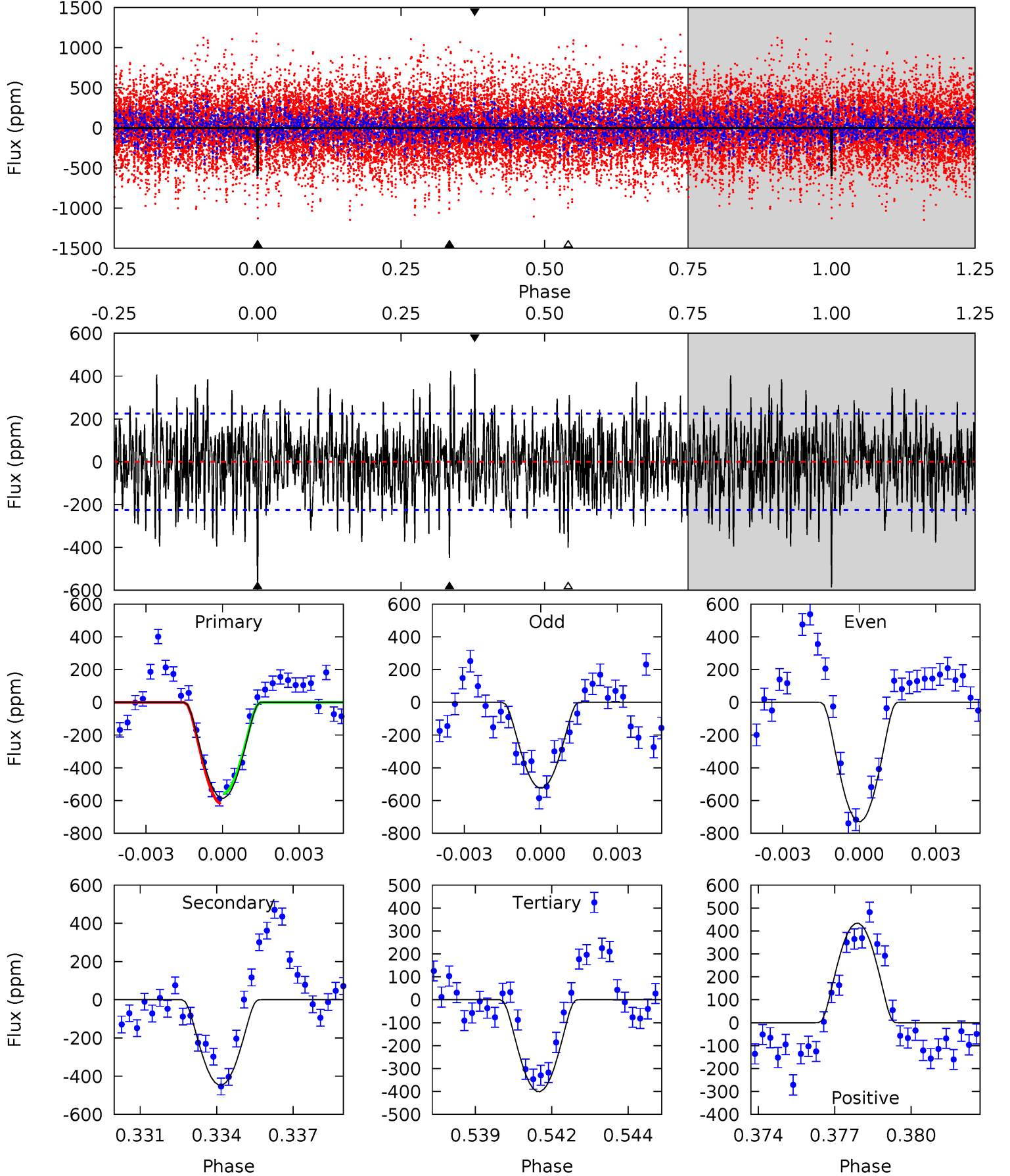
TCE 006142919-05 P= 74.160825 Days $T_0=138.598320$ (BKJD)



DV Model-Shift Uniqueness Test

006142919-05, P = 74.161825 Days, E = 64.420298 Days

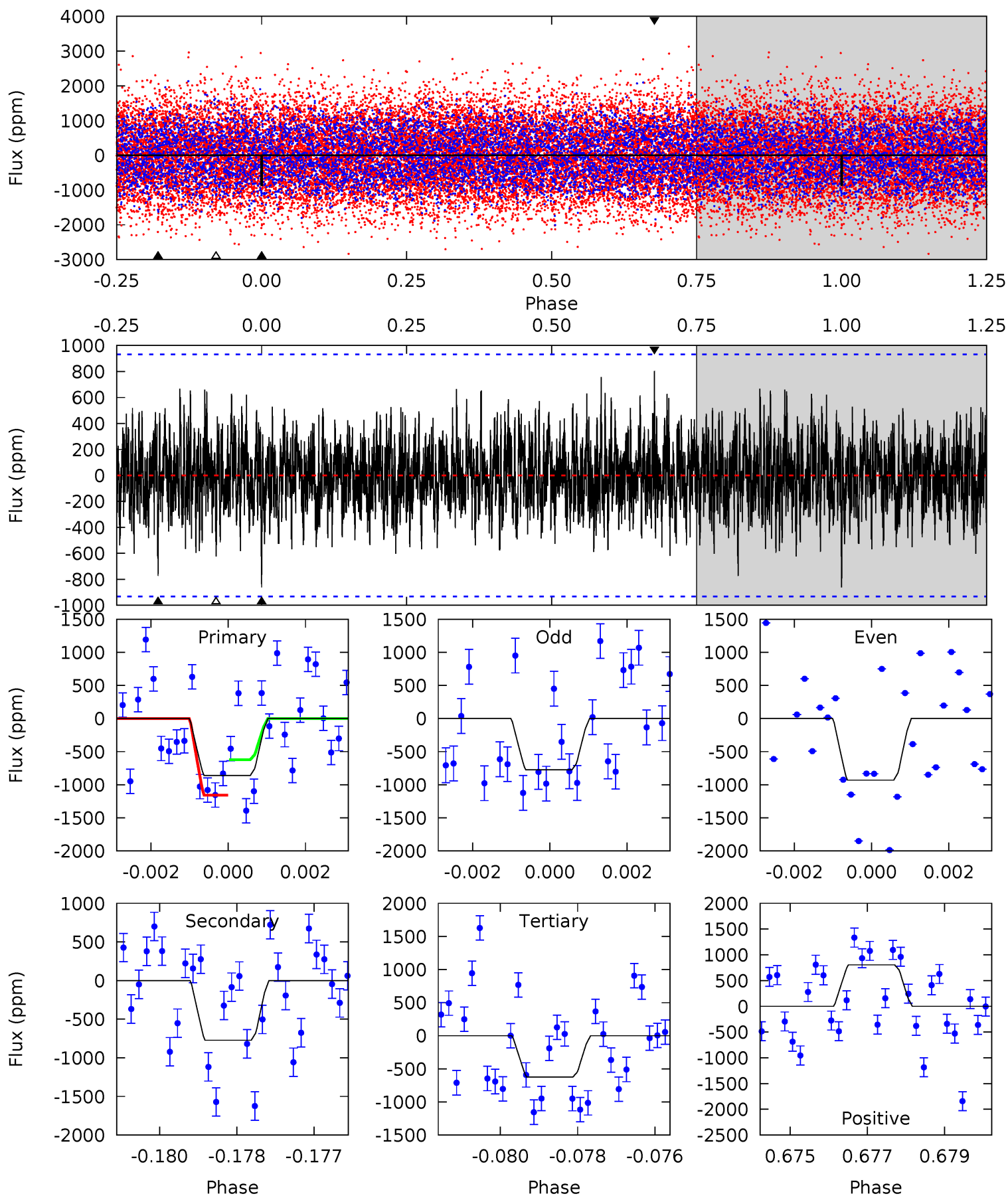
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.7	10.4	9.35	10.1	5.26	2.98	3.11	4.31	3.54	1.09	0.32	2.35	0.87	0.43	0.72



Alt Model-Shift Uniqueness Test

006142919-05, P = 74.160825 Days, E = 64.437495 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.96	4.45	3.59	4.63	5.37	3.16	1.24	1.36	0.33	0.86	-0.18	0.44	0.77	0.48	1.52



Stellar Parameters For KIC 006142919

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7277^{+228}_{-279}	$4.043^{+0.175}_{-0.175}$	$-0.080^{+0.250}_{-0.350}$	$1.982^{+0.587}_{-0.533}$	$1.581^{+0.211}_{-0.257}$	$0.286^{+0.286}_{-0.145}$
	+3%/-4%	+4%/-4%	+312%/-438%	+30%/-27%	+13%/-16%	+100%/-51%
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 006142919-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-447 ± 43	$19.42^{+18.25}_{-12.98}$	1000^{+72}_{-74}	3841^{+2230}_{-728}	103^{+875}_{-75}
Alt.	-773 ± 174	$18.32^{+17.94}_{-12.35}$	993^{+74}_{-74}	4290^{+2700}_{-888}	199^{+1582}_{-149}

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

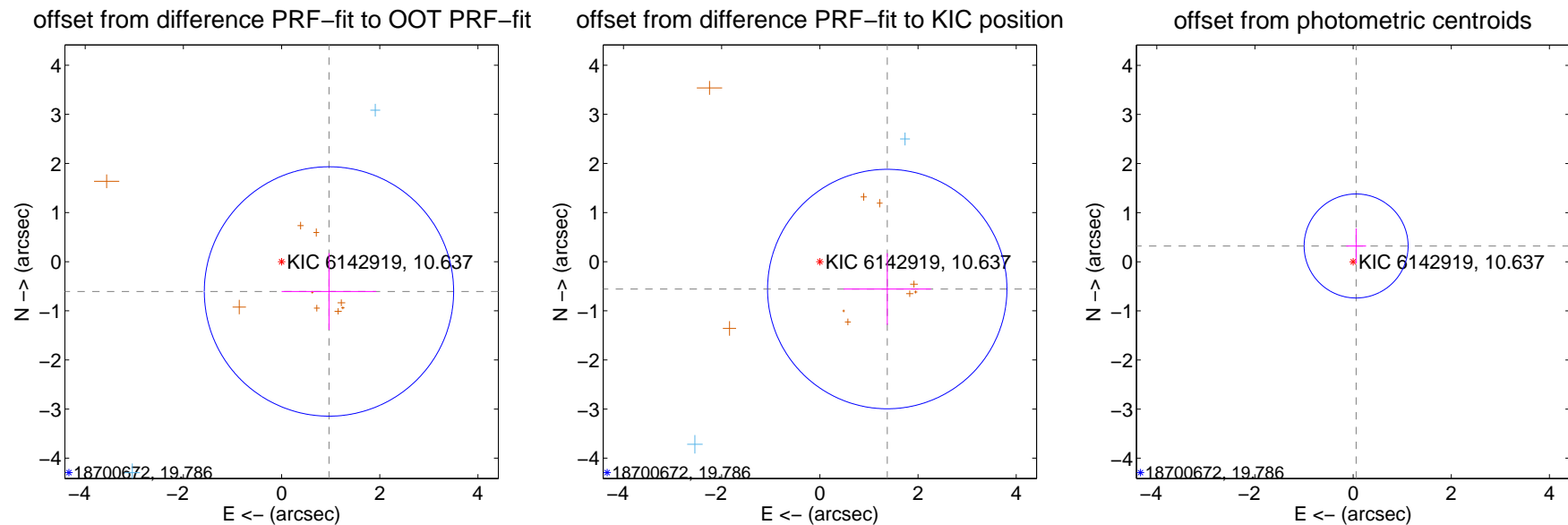
DV Centroid Data

Supplemental centroid analysis for 006142919-05. **Kepler magnitude: 10.64.** Transit SNR 9.47

There are 3 quarters with good PRF difference image offsets

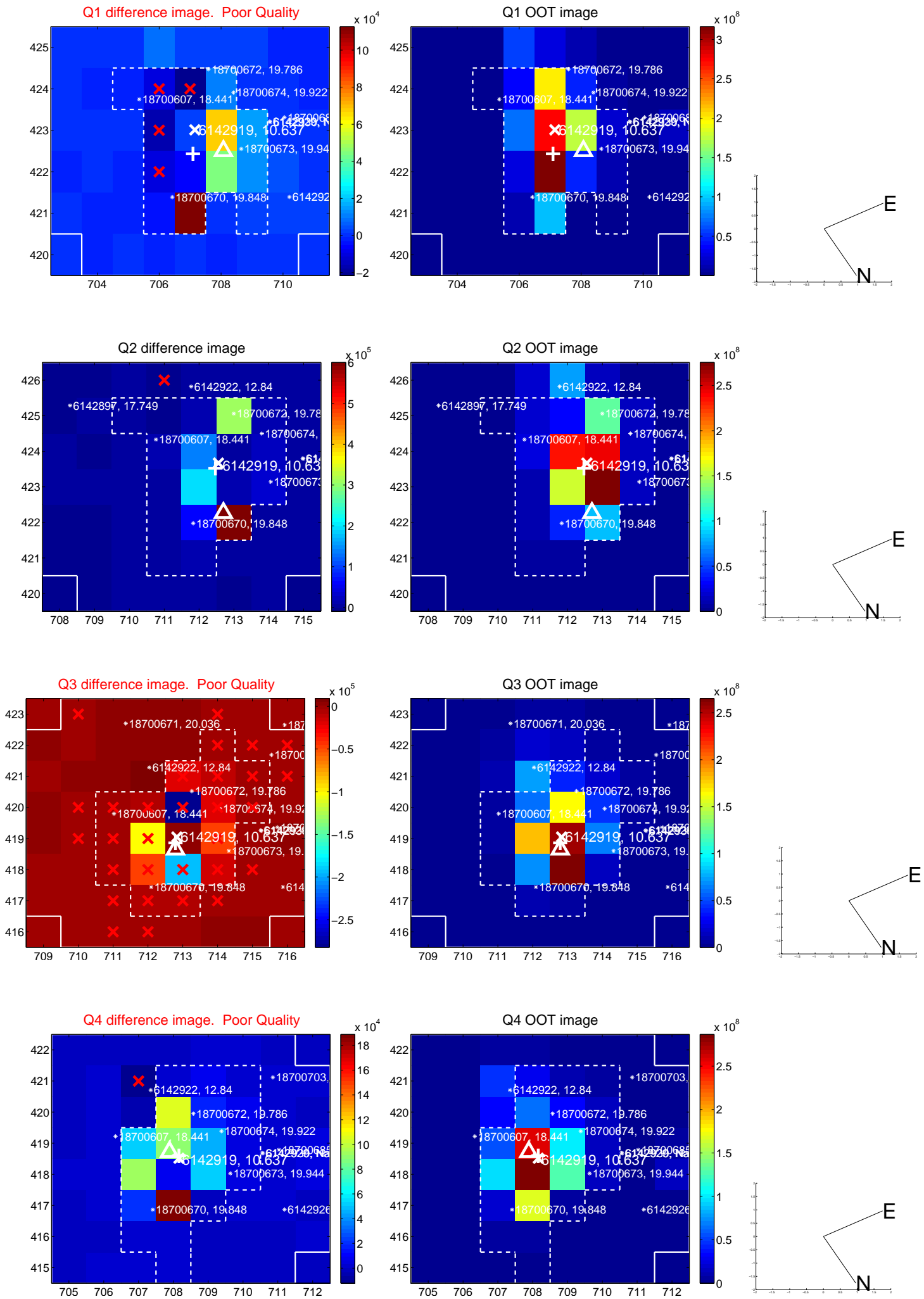
The direct PRF centroid is offset from the target star catalog position by about 0.61 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.140 ± 0.846	1.35	-0.965 ± 0.963	-0.606 ± 0.781
PRF-fit source offset from KIC position	1.482 ± 0.813	1.82	-1.373 ± 0.889	-0.557 ± 0.729
photometric centroid source offset	0.33 ± 0.35	0.93	-0.06 ± 0.20	0.32 ± 0.36

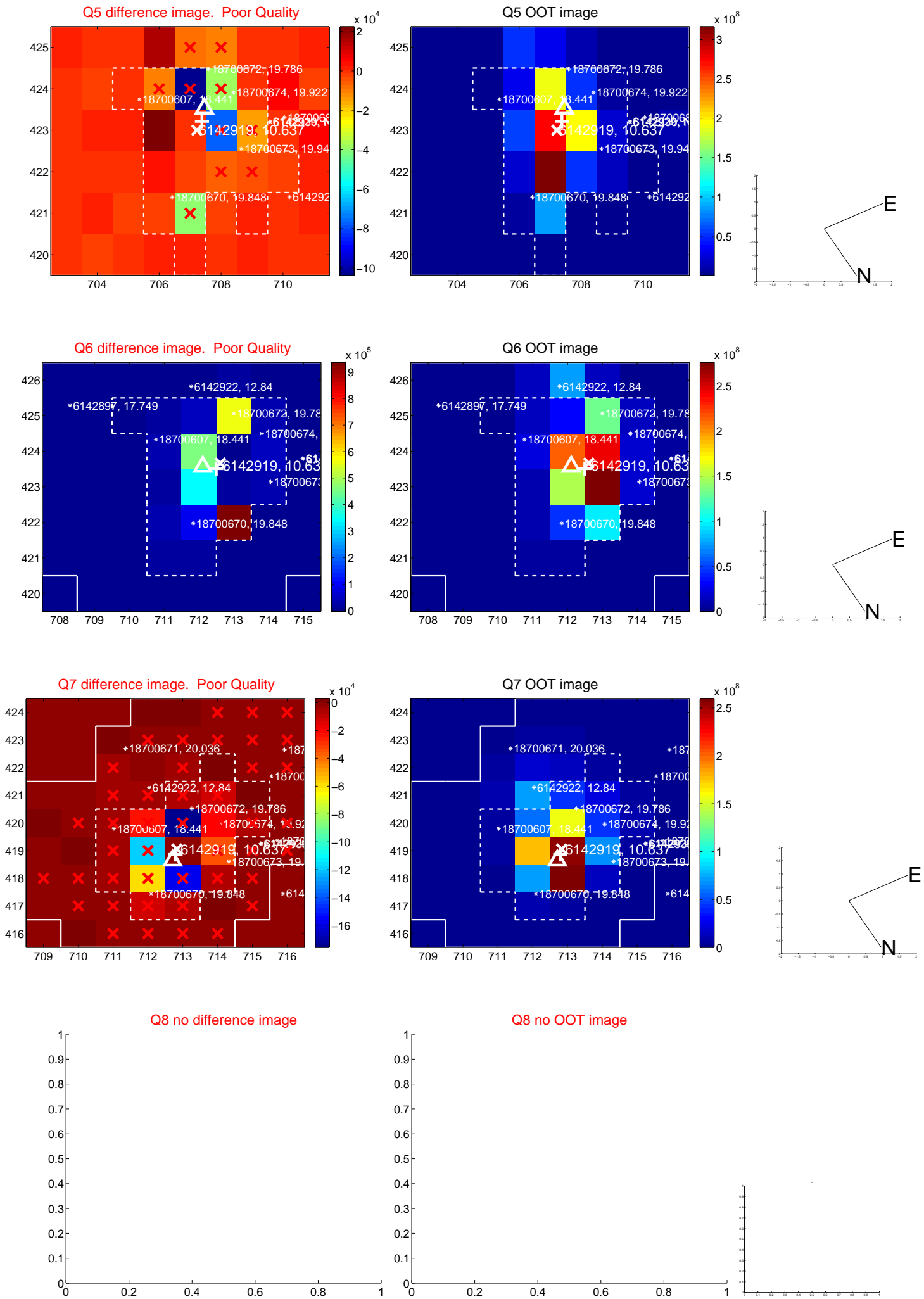


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

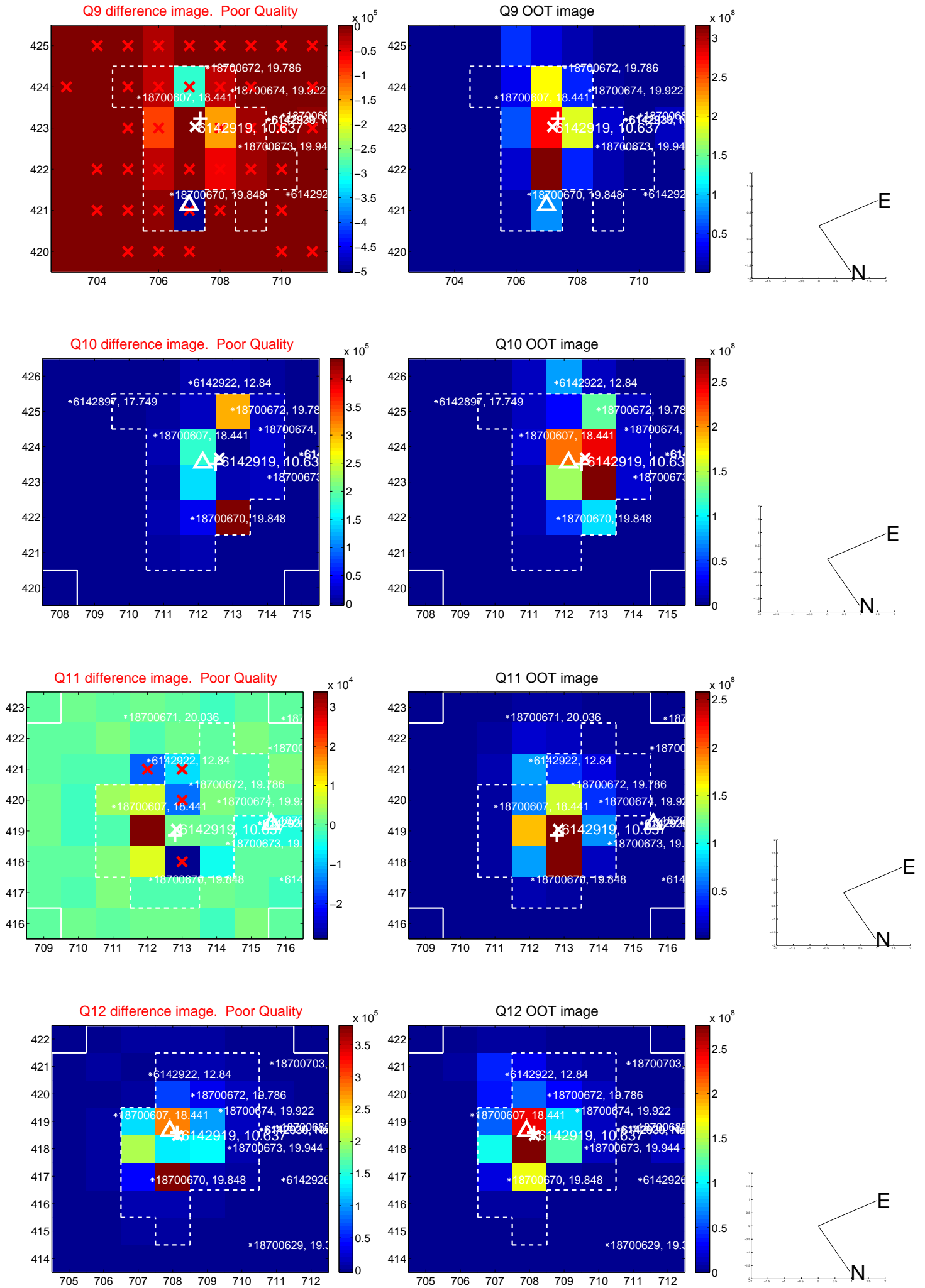
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



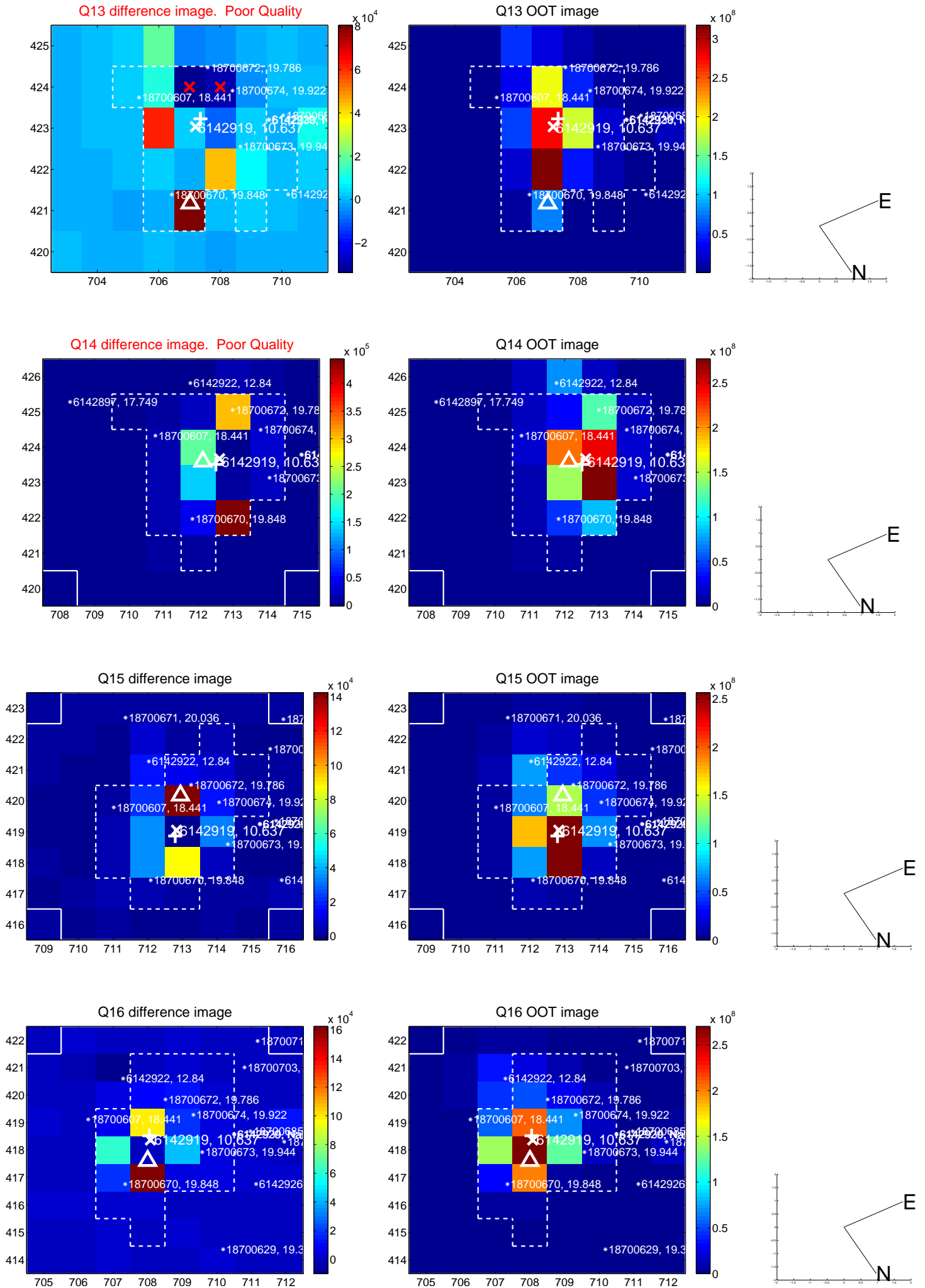
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



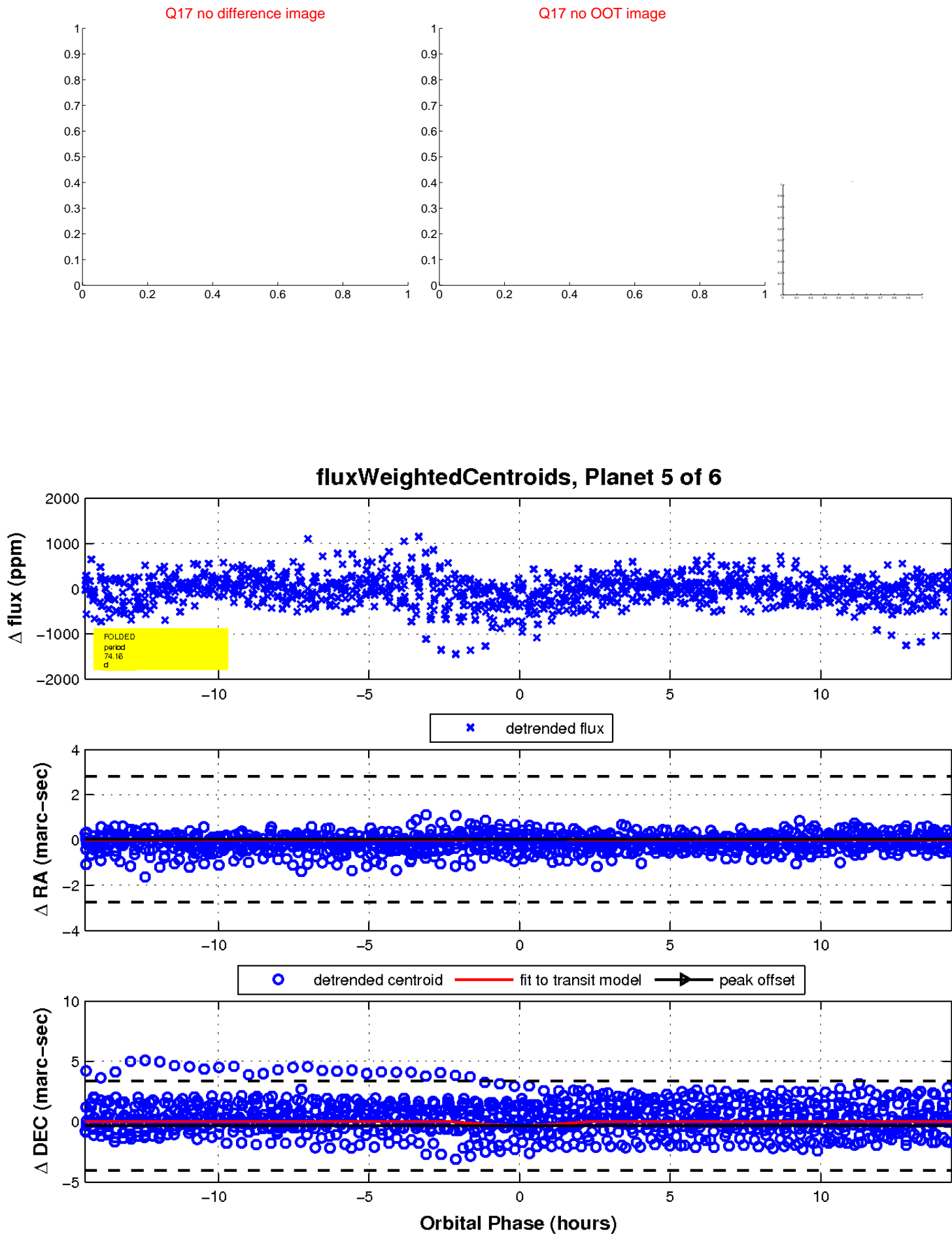
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



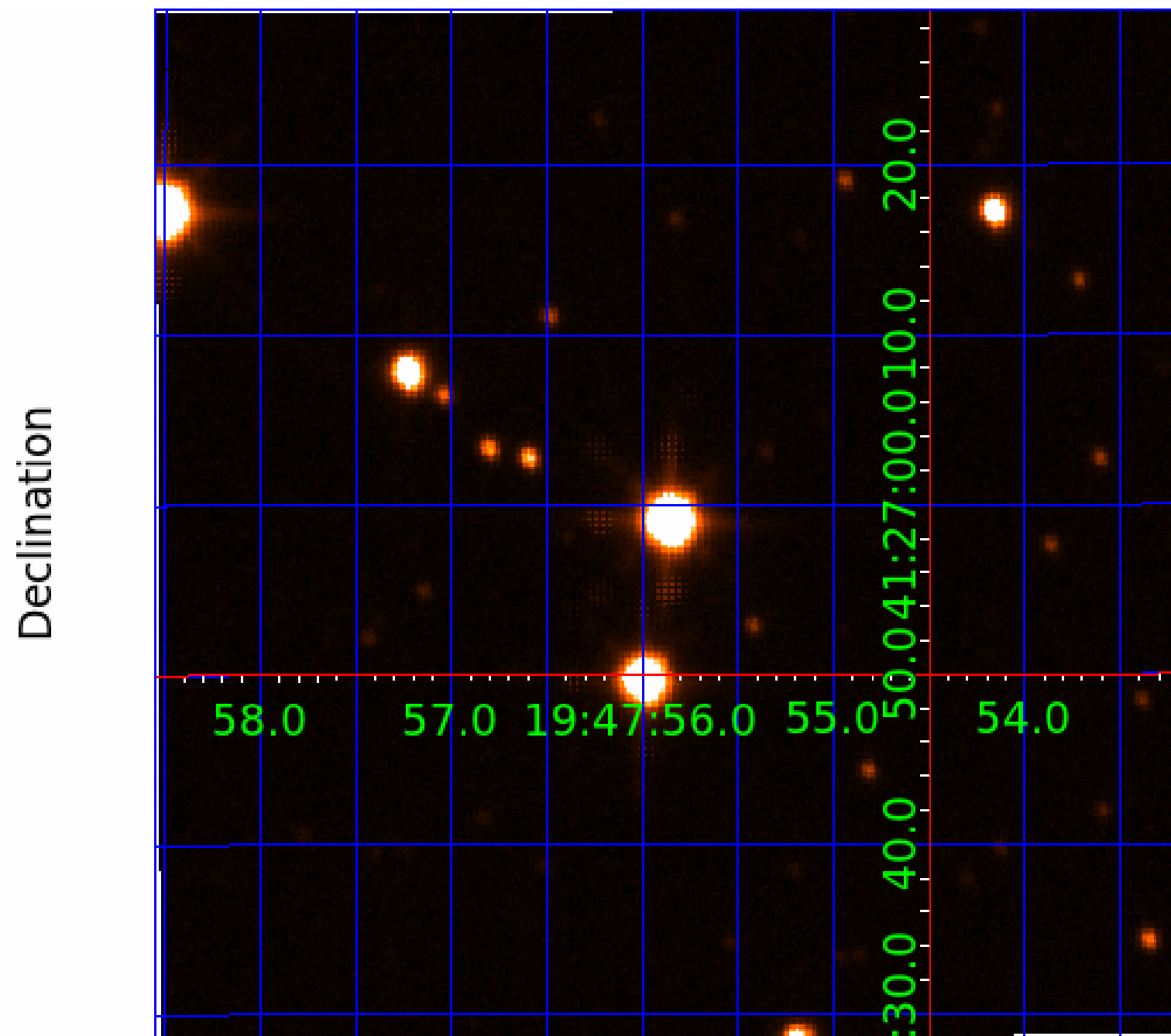
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 006142919

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})
006142919-01	OBS	No	1.135558	132.646227	78.0	5.646	10.4	14.0	1.98	7277	2.31	16013.77
006142919-02	OBS	No	6.905115	132.830640	184.0	6.717	10.8	10.7	1.98	7277	5.21	1442.82
006142919-03	OBS	No	177.609992	177.490048	116.4	1.516	9.4	1.5	1.98	7277	2.43	19.00
006142919-04	OBS	No	302.149263	209.121393	747.1	4.954	9.3	9.2	1.98	7277	8.18	9.36
006142919-05	OBS	No	74.161825	138.582123	608.1	4.811	8.5	9.5	1.98	7277	9.21	60.89
006142919-06	OBS	No	128.110499	139.854922	692.2	4.575	8.1	8.1	1.98	7277	9.73	29.38

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006142919-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_SATURATED
006142919-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006142919-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006142919-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
006142919-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
006142919-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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

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

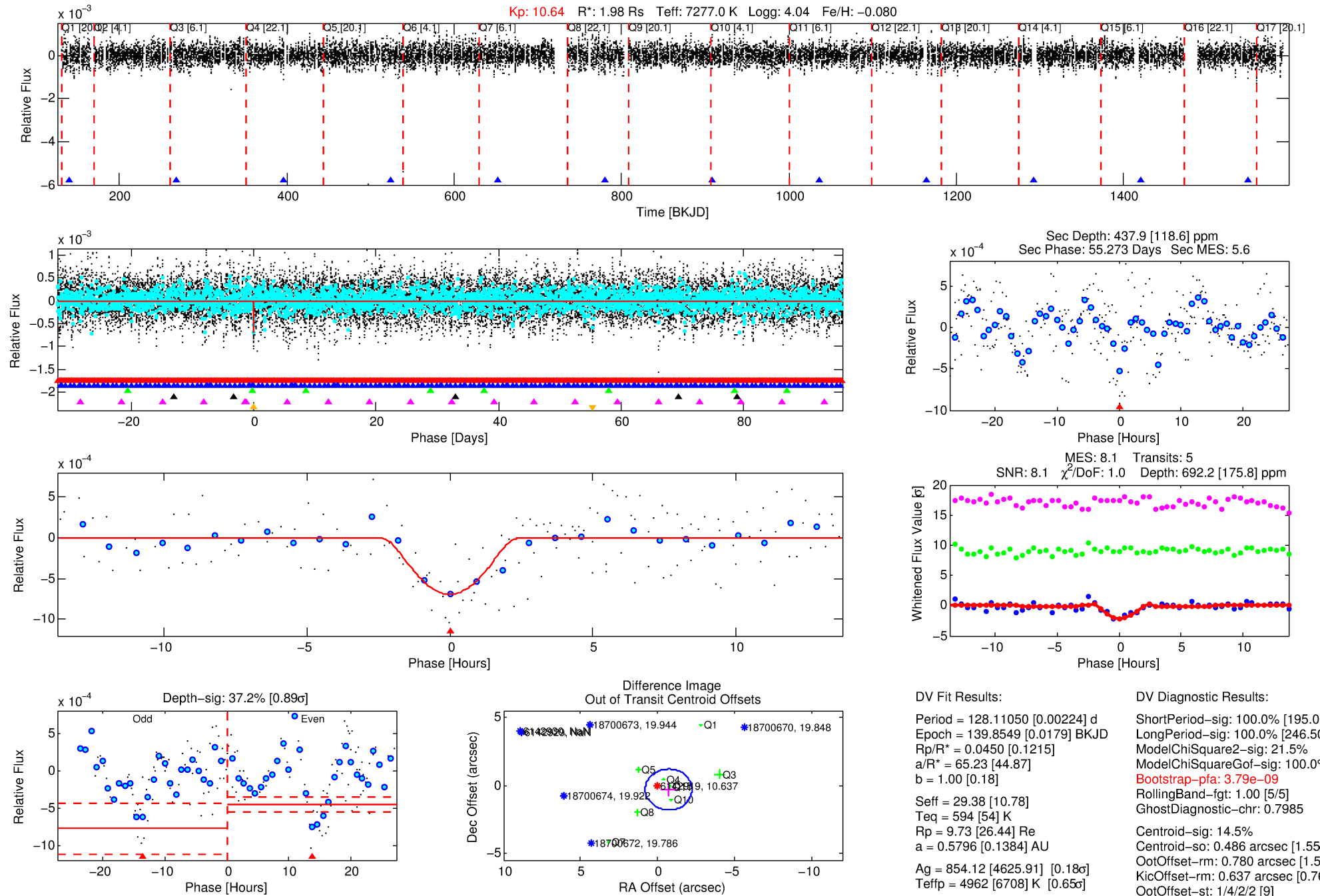
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006142919-06

No Significant Match Found

DV One-Page Summary

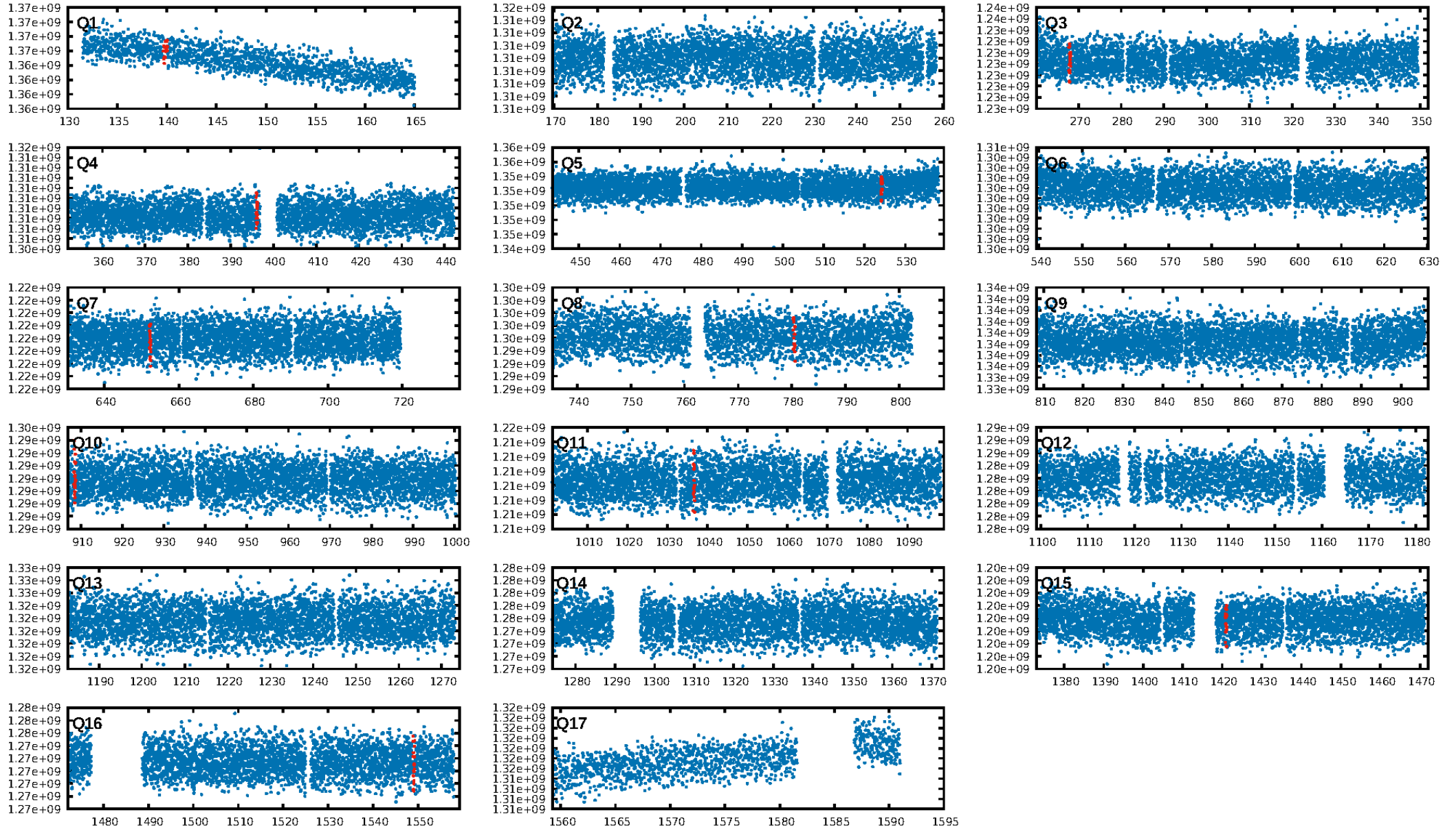
KIC: 6142919 Candidate: 6 of 6 Period: 128.110 d



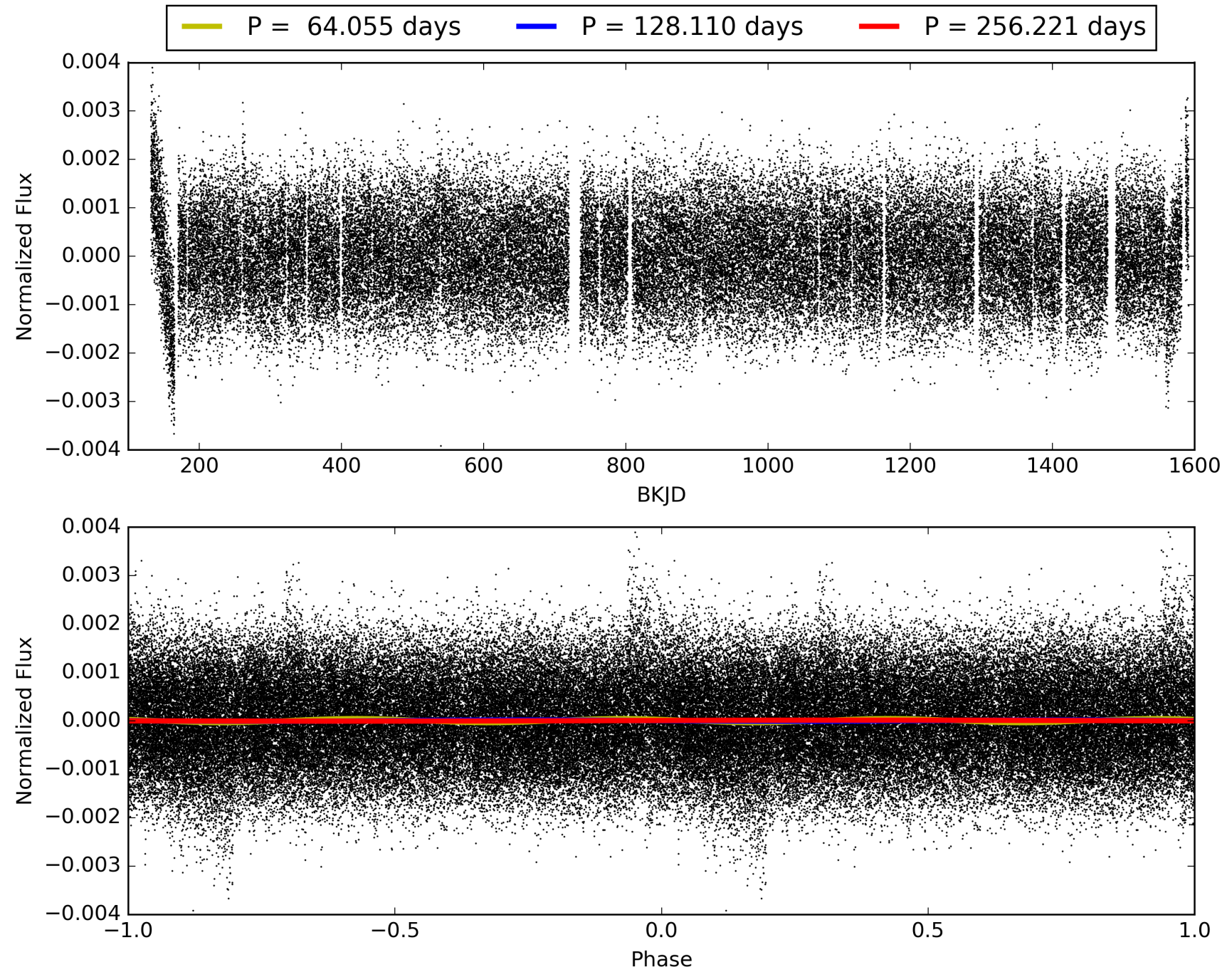
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 07:42:50 Z

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

TCE 006142919-06, PDC Light Curves

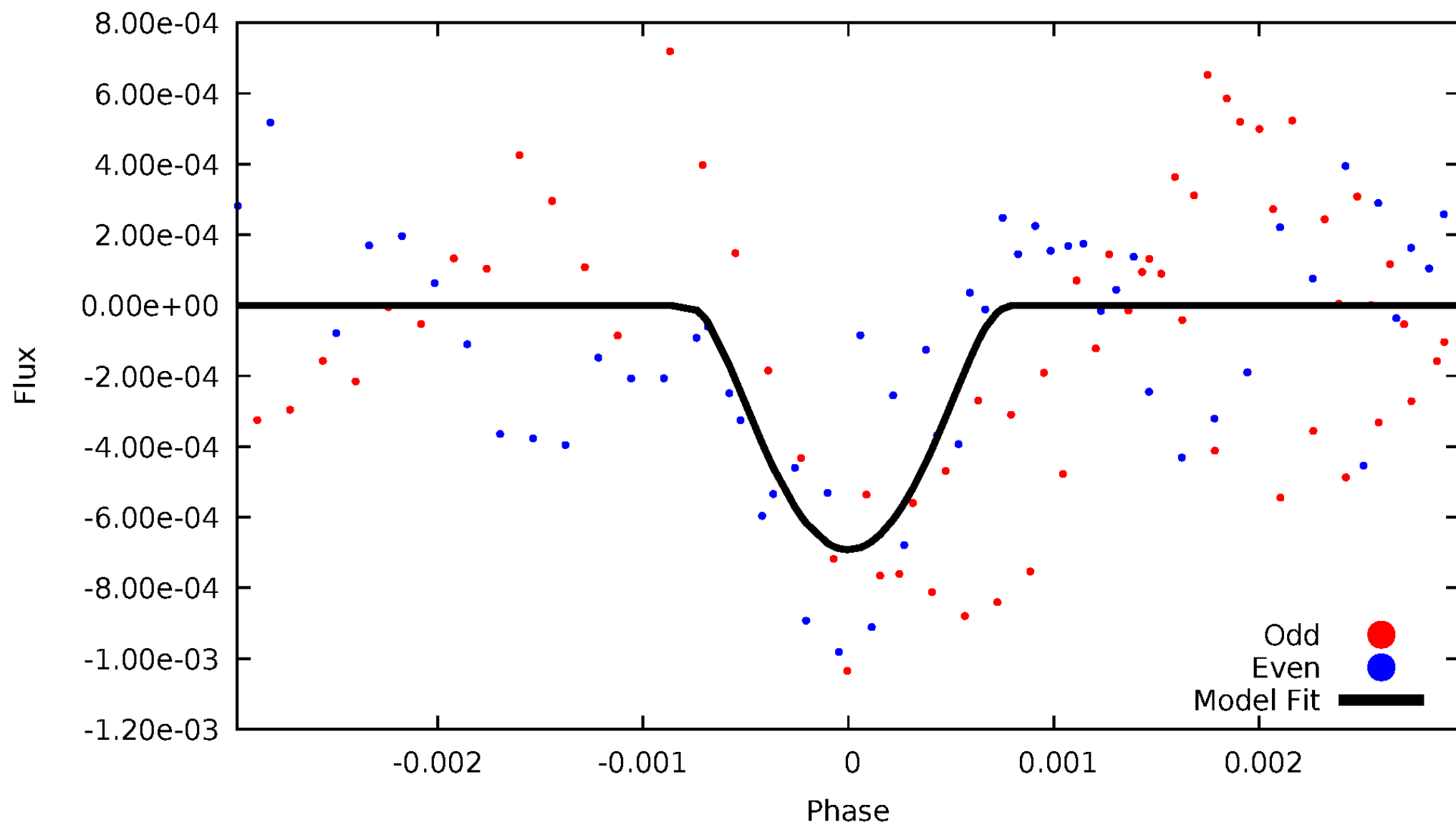


TCE 006142919-06



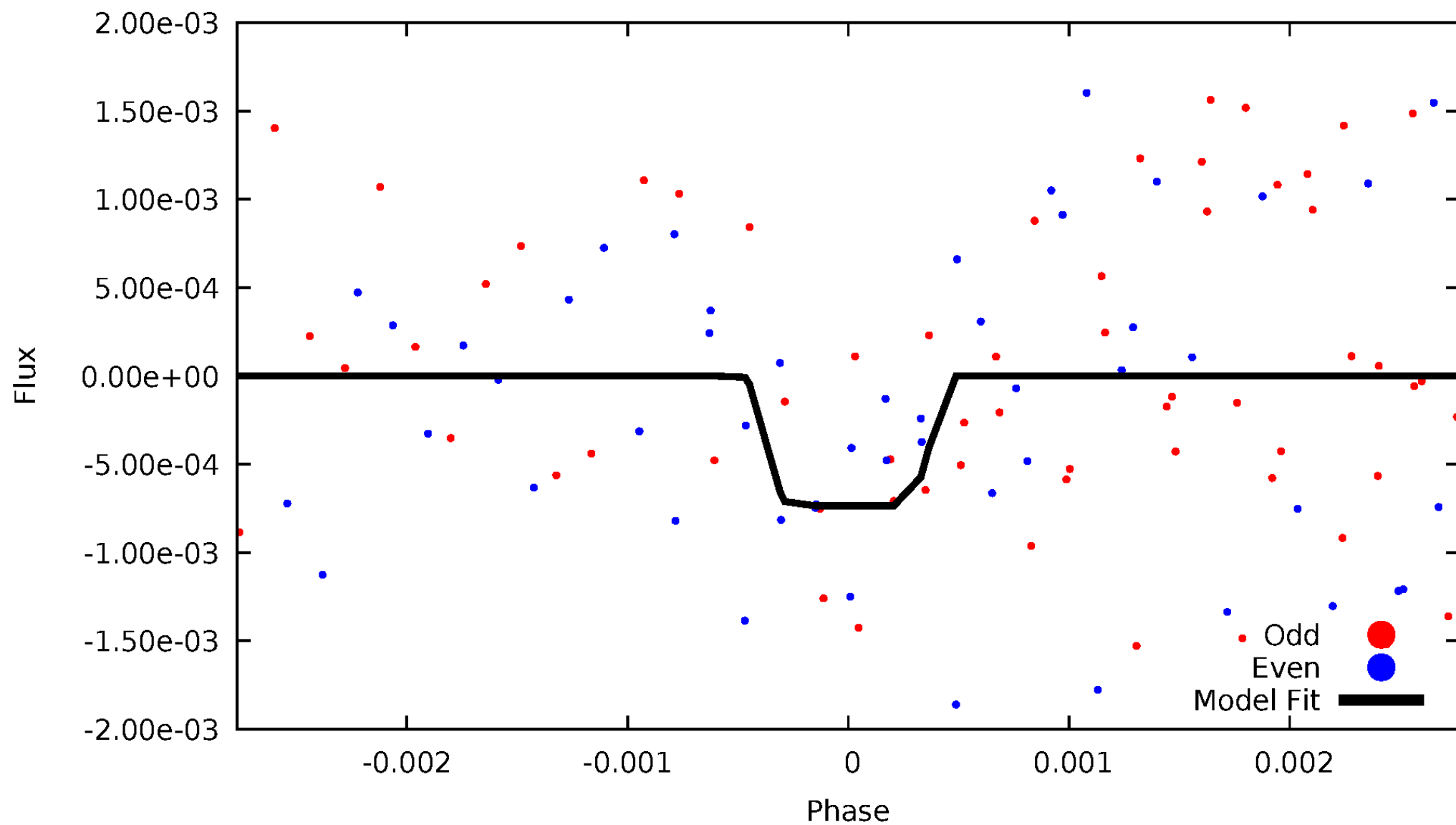
DV Odd/Even

TCE 006142919-06



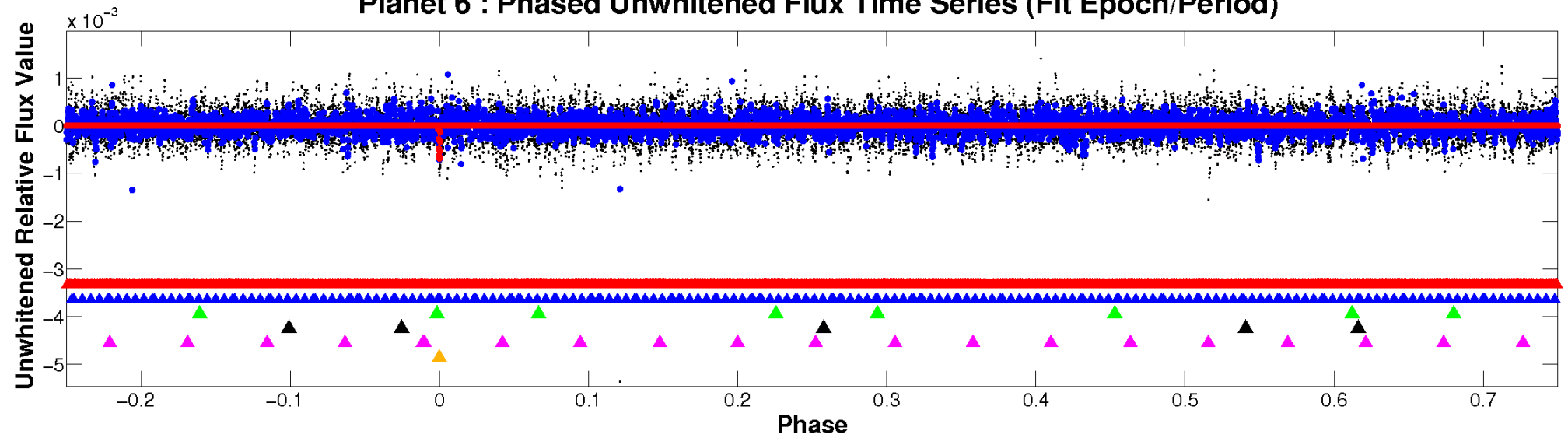
ALT Odd/Even

TCE 006142919-06

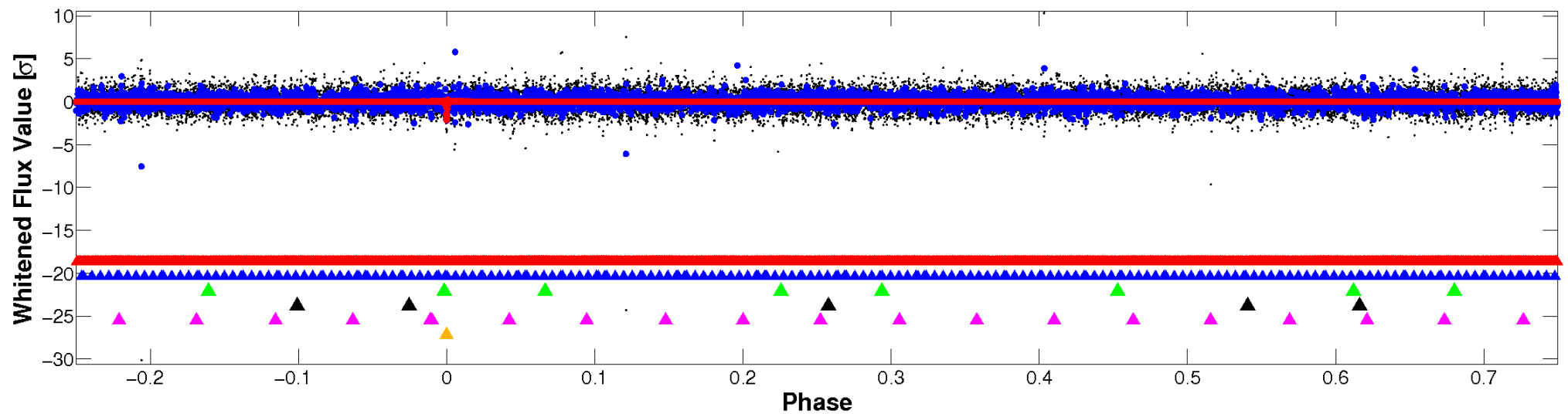


Non-Whitened Vs. Whitened Light Curve

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

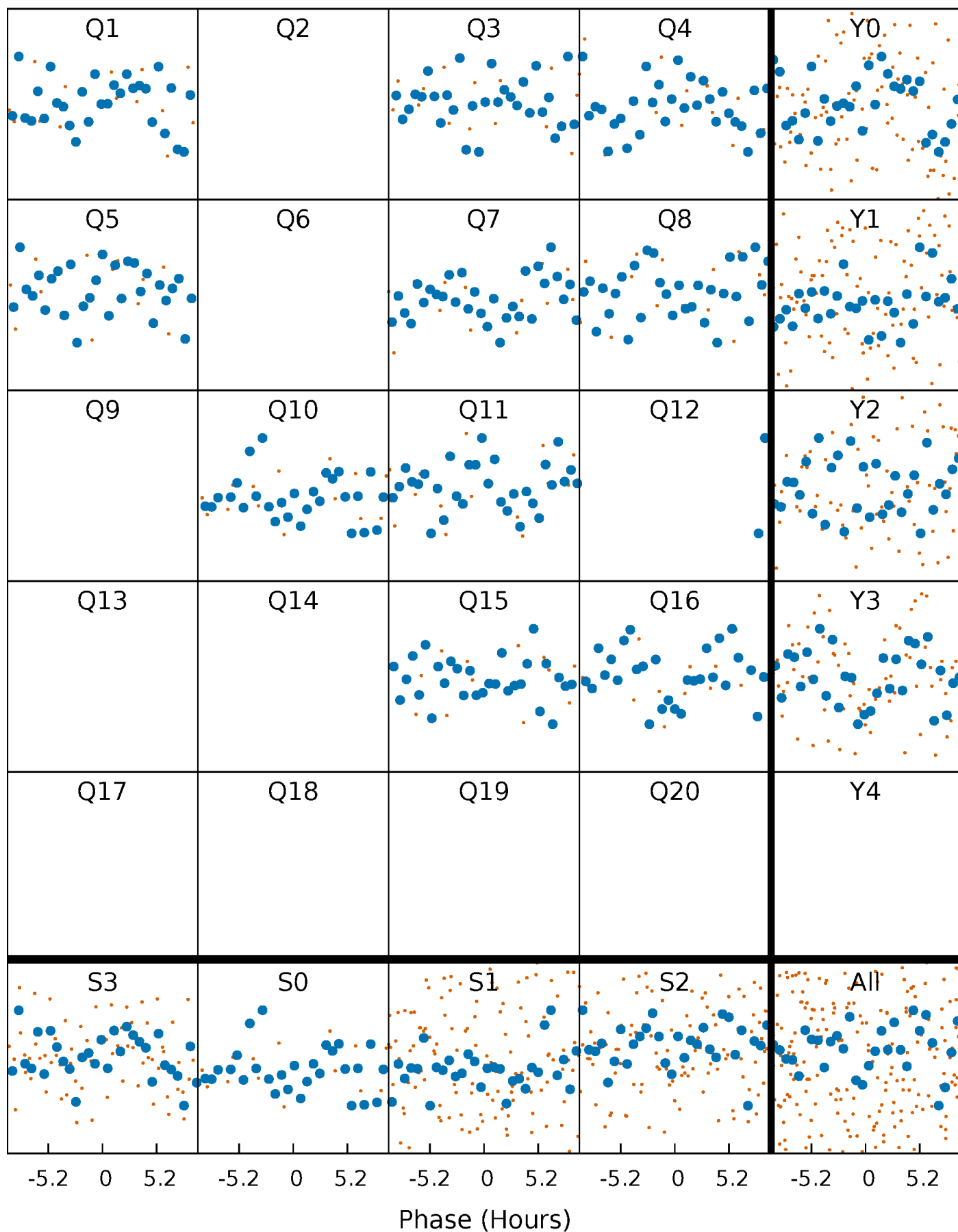


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



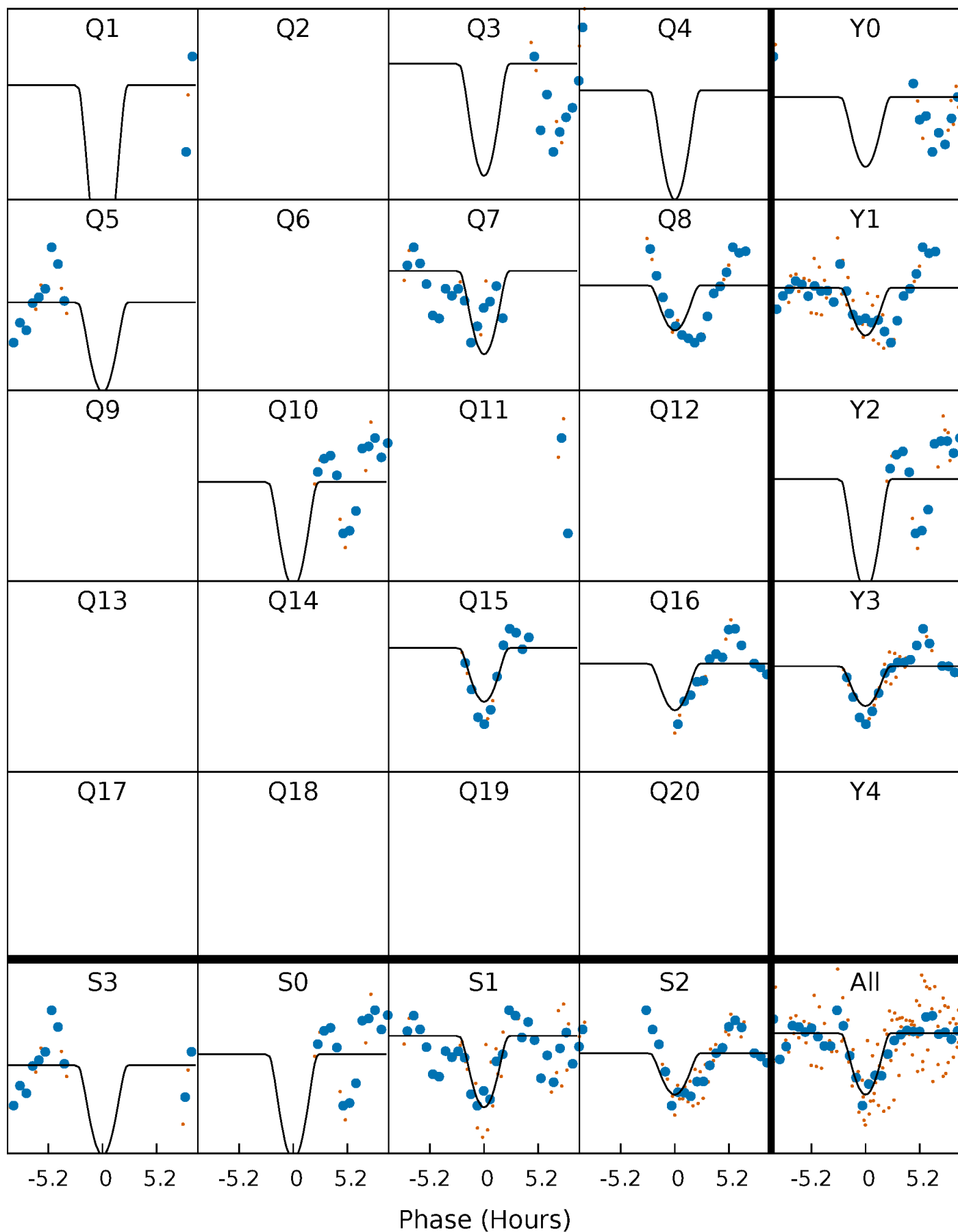
PDC Quarter-Phased Transit Curves

TCE 006142919-06 P=128.110499 Days $T_0=139.854922$ (BKJD)



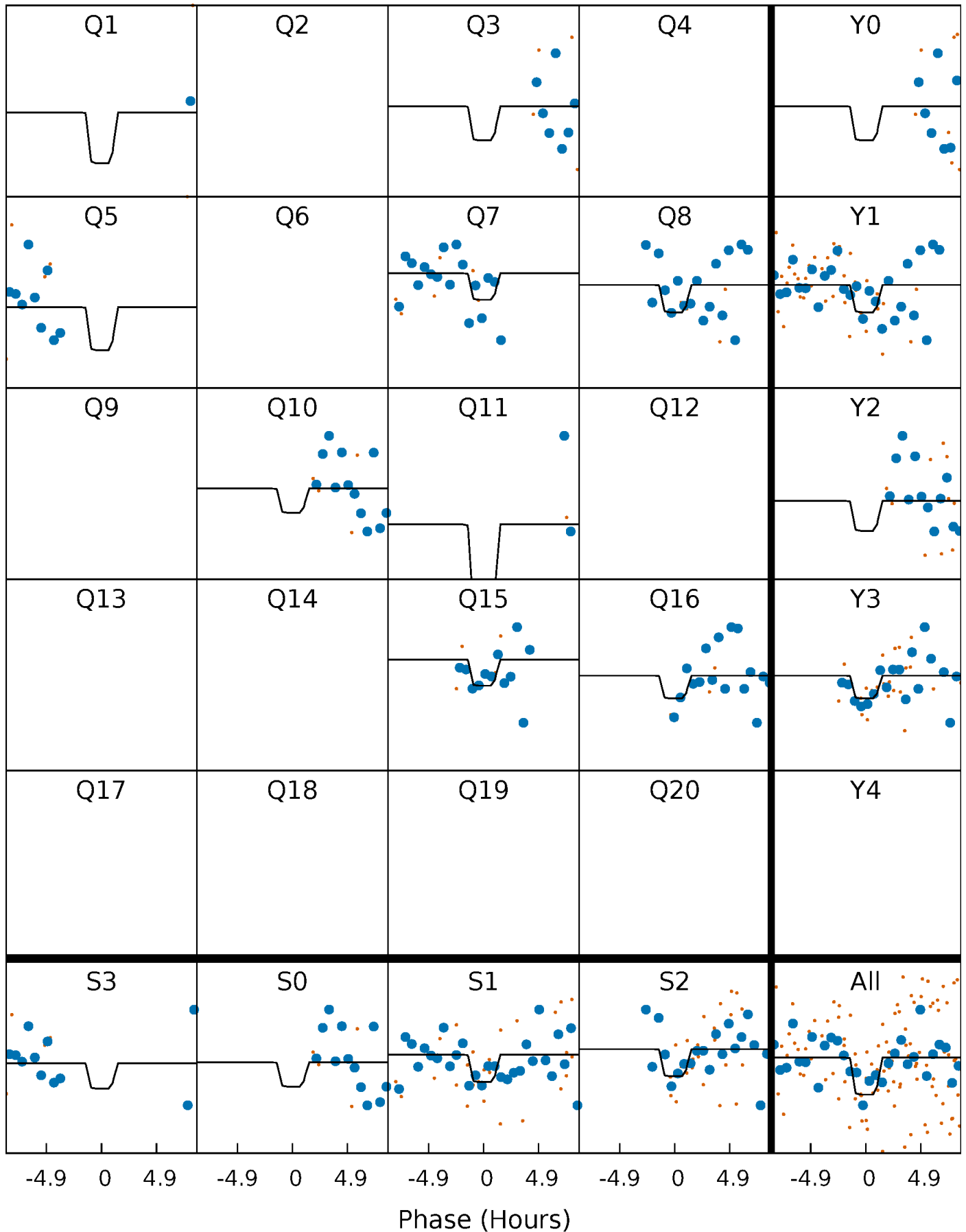
DV Quarter-Phased Transit Curves

TCE 006142919-06 P=128.110499 Days $T_0=139.854922$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

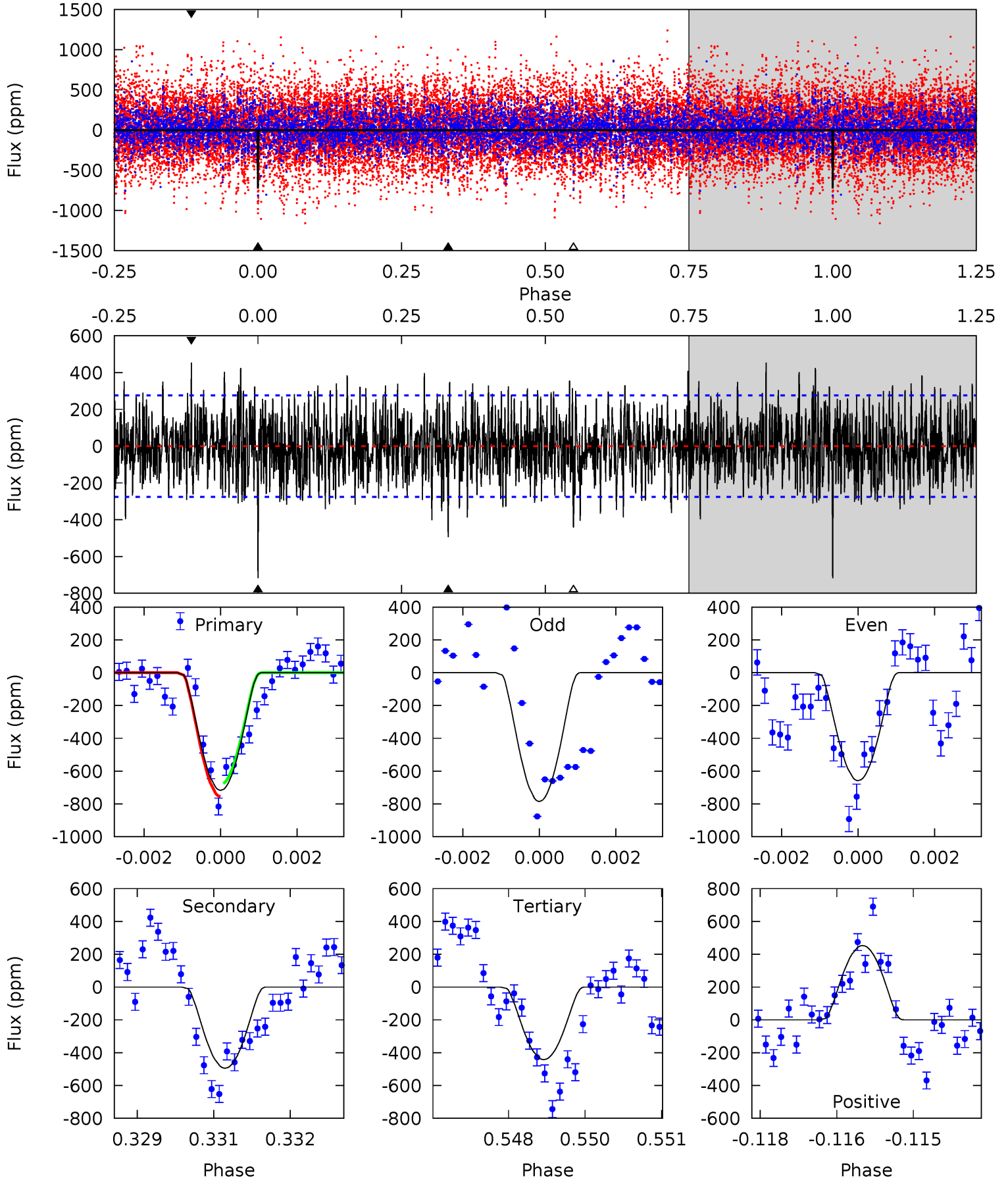
TCE 006142919-06 P=128.111571 Days $T_0=139.856926$ (BKJD)



DV Model-Shift Uniqueness Test

006142919-06, $P = 128.110499$ Days, $E = 11.744423$ Days

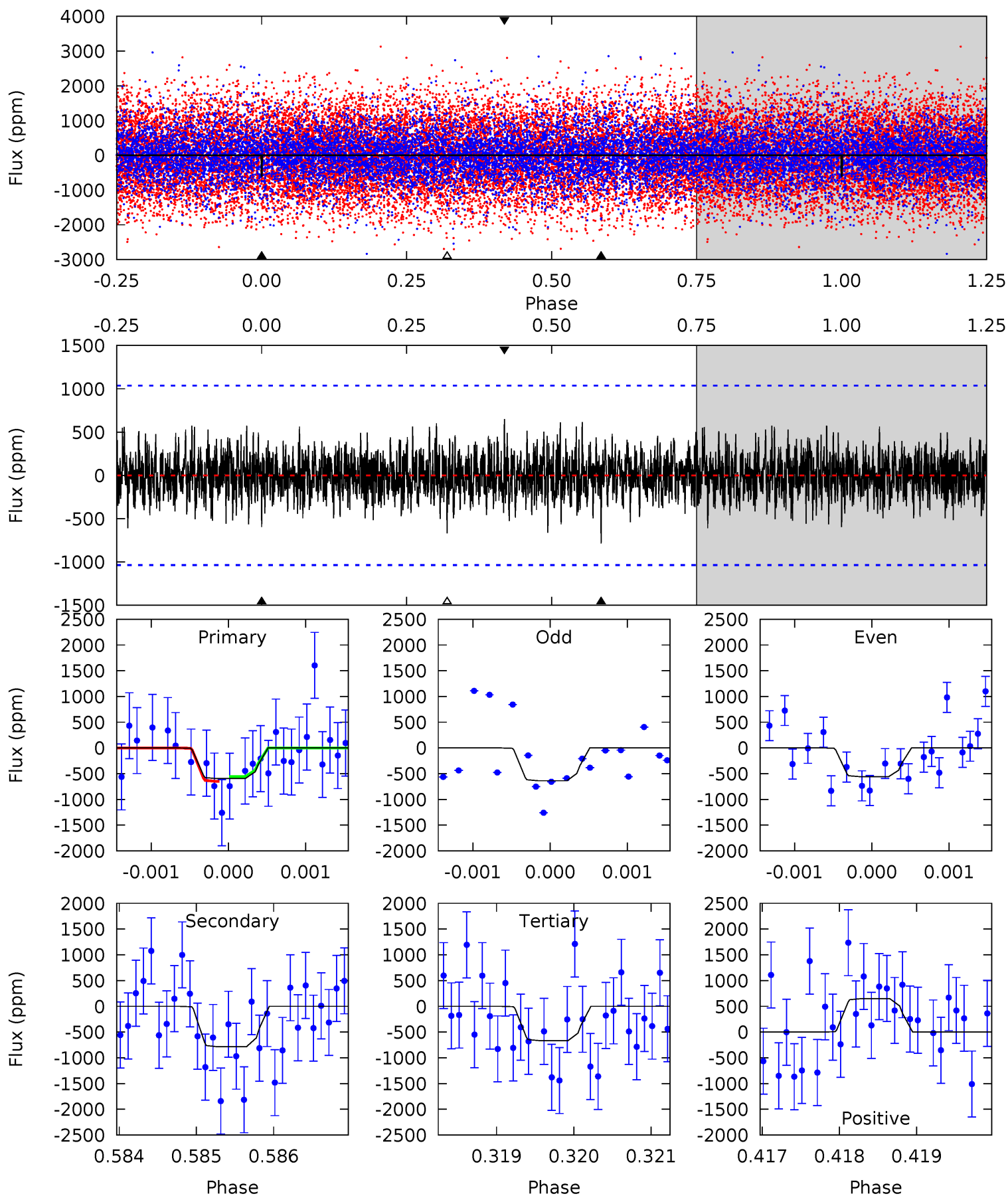
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.0	9.64	8.62	8.83	5.38	3.17	2.64	5.36	5.15	1.02	0.81	1.23	0.91	0.39	0.77



Alt Model-Shift Uniqueness Test

006142919-06, P = 128.111571 Days, E = 11.745355 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.13	4.14	3.51	3.41	5.46	3.30	0.99	-0.38	-0.28	0.63	0.73	0.22	1.11	0.45	0.24



Stellar Parameters For KIC 006142919

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7277^{+228}_{-279}	$4.043^{+0.175}_{-0.175}$	$-0.080^{+0.250}_{-0.350}$	$1.982^{+0.587}_{-0.533}$	$1.581^{+0.211}_{-0.257}$	$0.286^{+0.286}_{-0.145}$
	+3%/-4%	+4%/-4%	+312%/-438%	+30%/-27%	+13%/-16%	+100%/-51%
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 006142919-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-495 ± 51	$22.91^{+20.28}_{-15.26}$	830^{+62}_{-61}	3711^{+1967}_{-685}	172^{+1377}_{-123}
Alt.	-786 ± 190	$18.72^{+22.14}_{-12.83}$	828^{+63}_{-61}	4298^{+2880}_{-1030}	388^{+3753}_{-306}

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

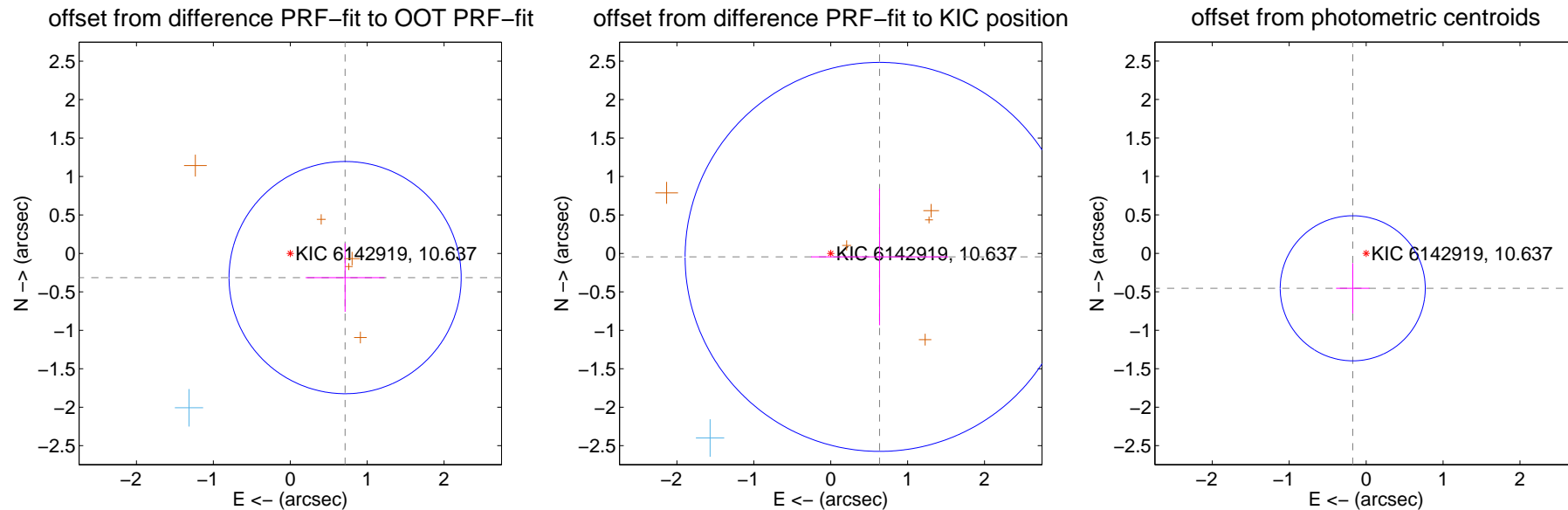
DV Centroid Data

Supplemental centroid analysis for 006142919-06. **Kepler magnitude: 10.64.** Transit SNR 8.08

There are 2 quarters with good PRF difference image offsets

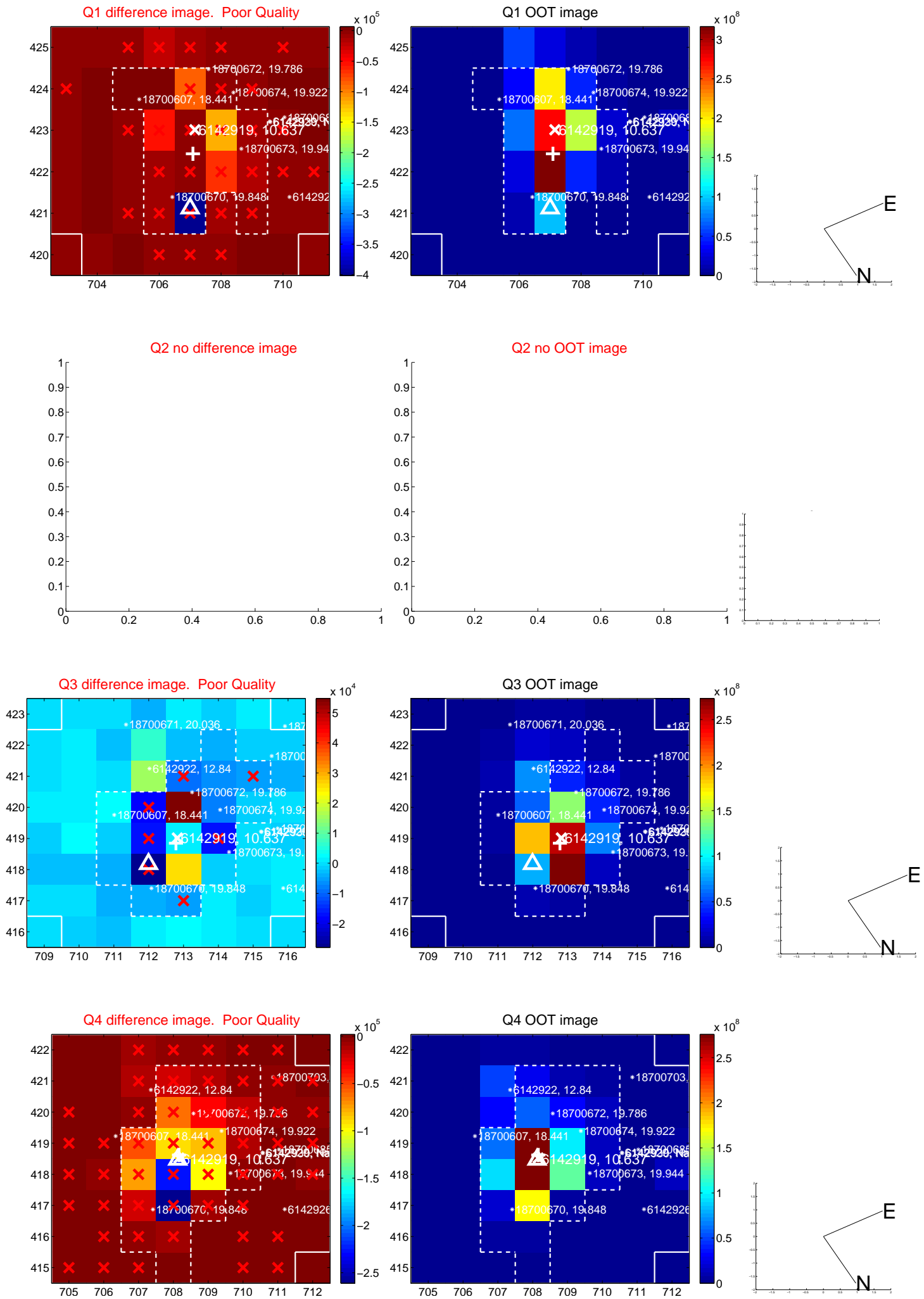
The direct PRF centroid is offset from the target star catalog position by about 0.80 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.780 ± 0.503	1.55	-0.713 ± 0.514	-0.315 ± 0.446
PRF-fit source offset from KIC position	0.637 ± 0.843	0.76	-0.635 ± 0.891	-0.045 ± 0.889
photometric centroid source offset	0.49 ± 0.31	1.55	0.17 ± 0.22	-0.45 ± 0.33

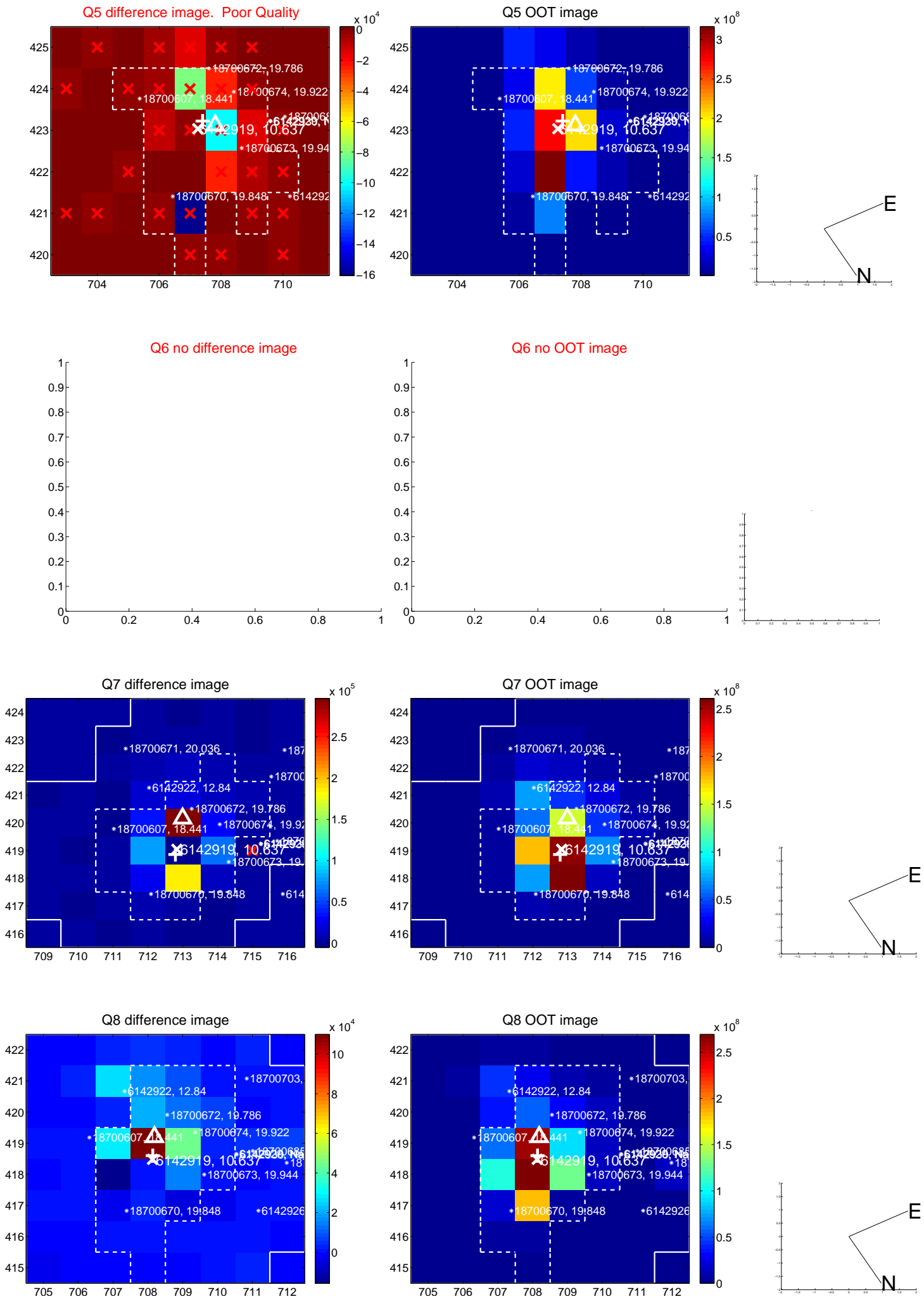


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

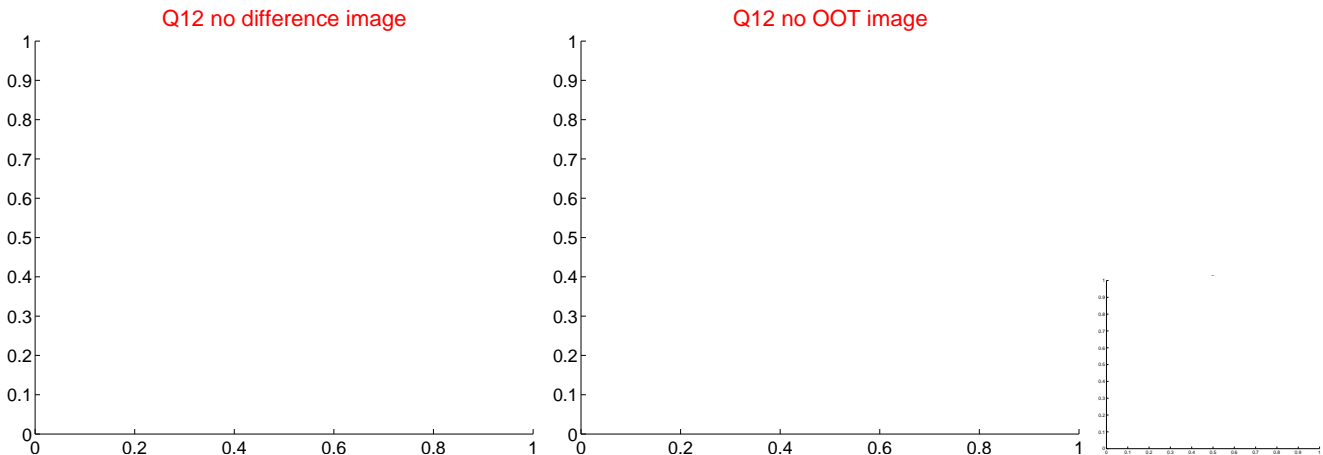
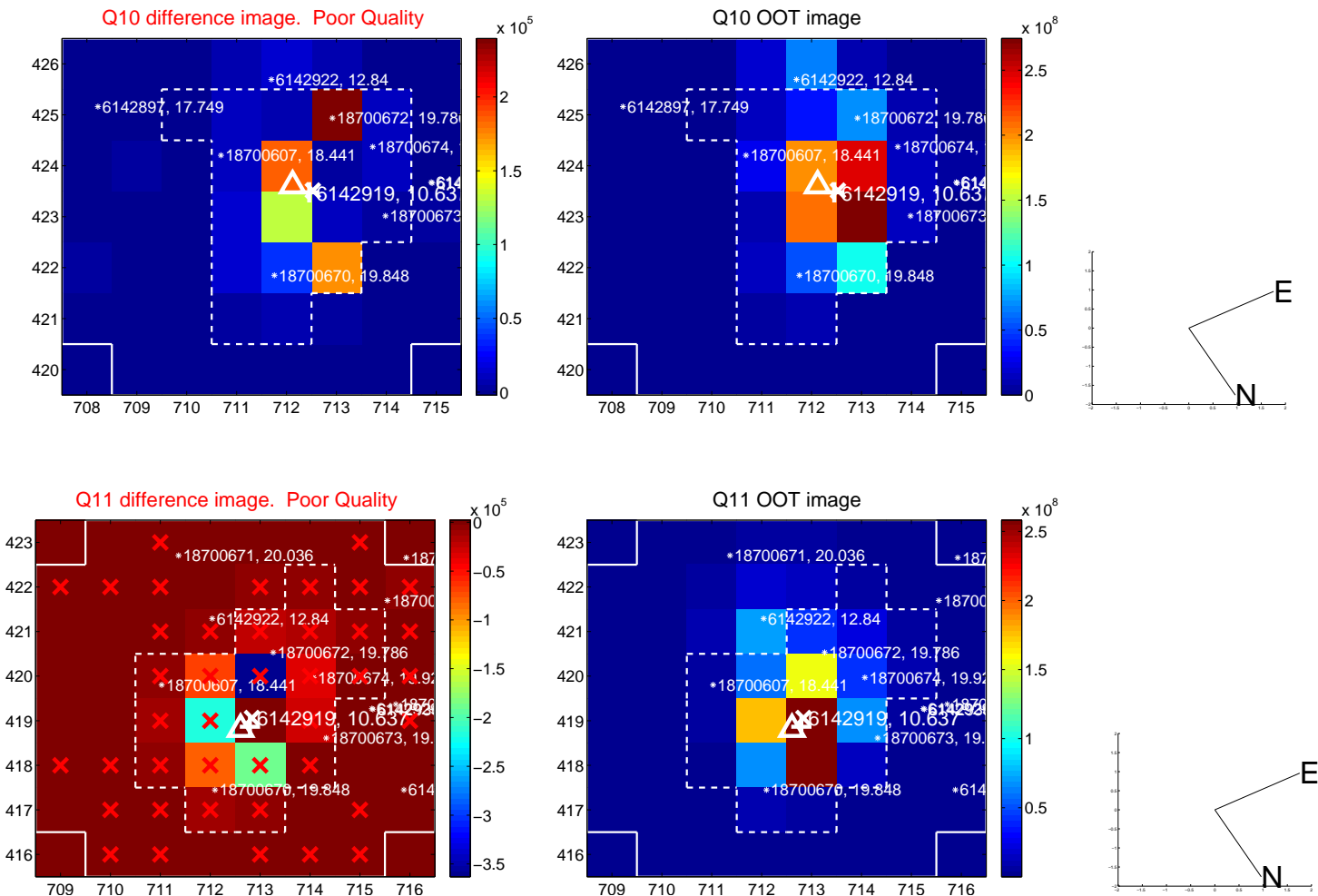
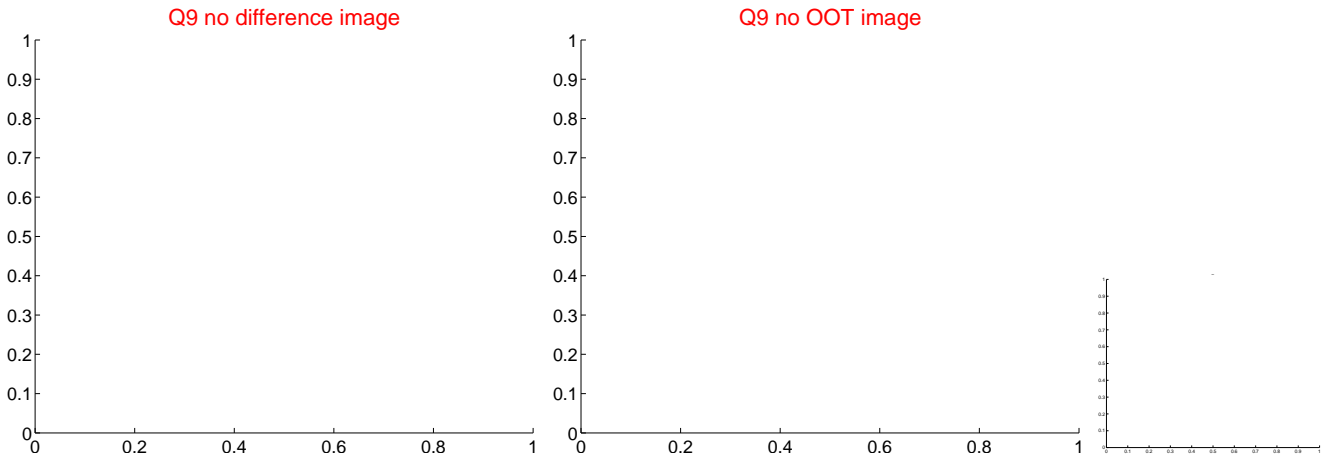
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.

Q13 no difference image



Q13 no OOT image



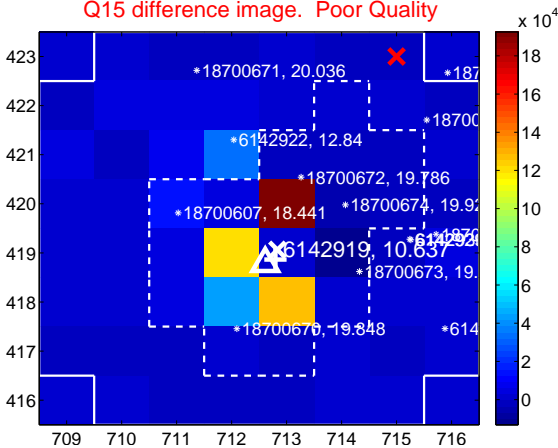
Q14 no difference image



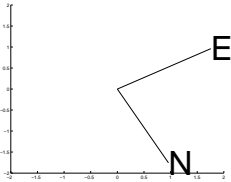
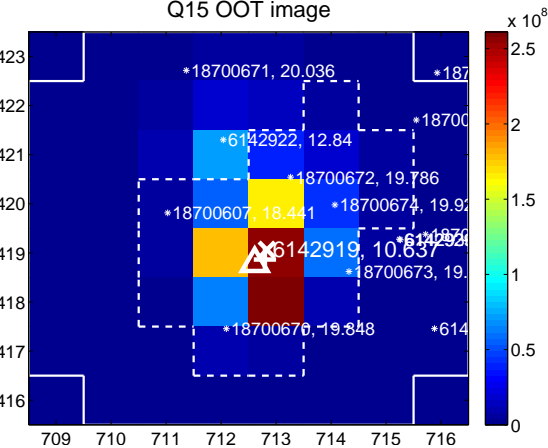
Q14 no OOT image



Q15 difference image. Poor Quality



Q15 OOT image



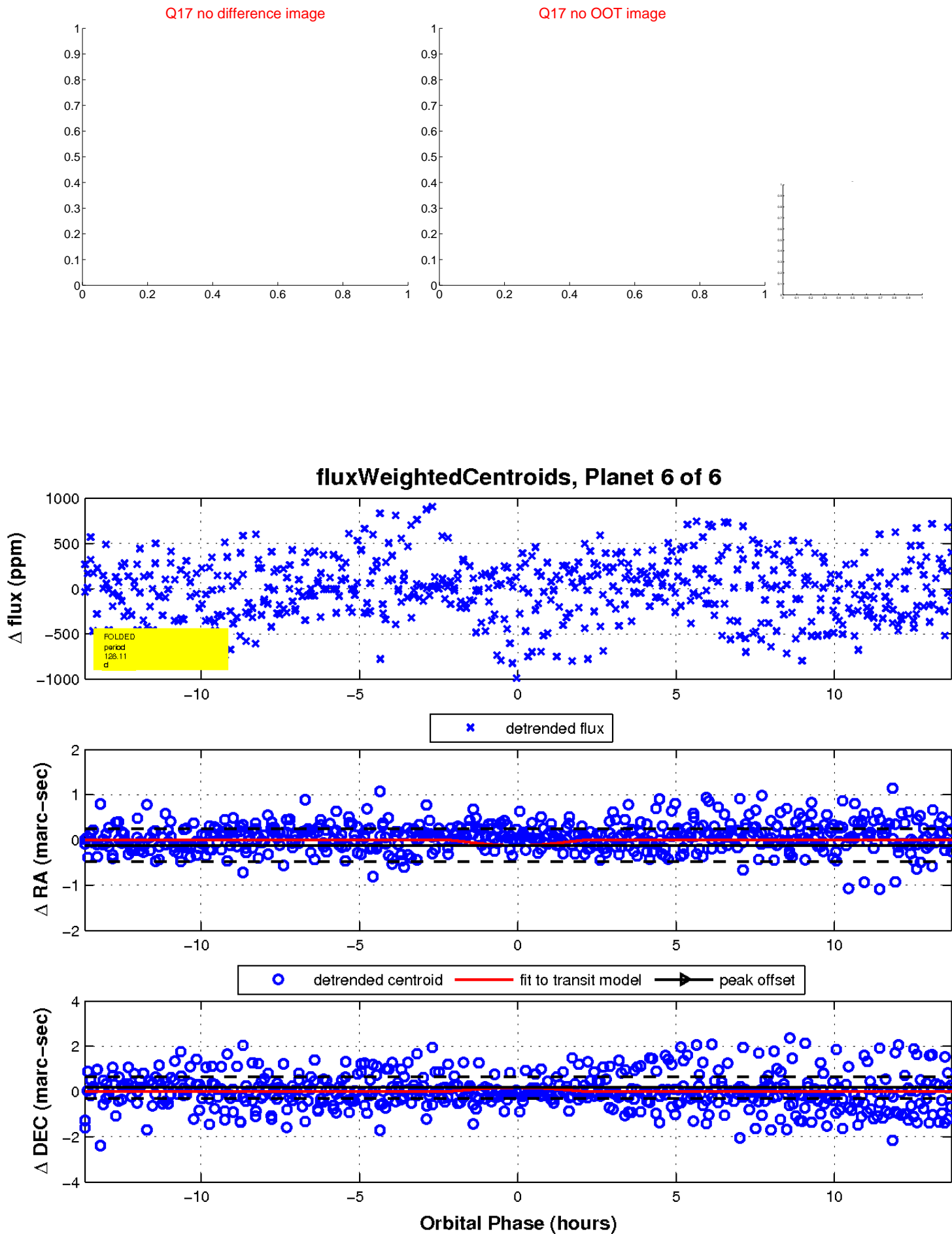
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

