

KIC 005219484

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})
005219484-01	OBS	No	0.784817	131.564070	42.0	5.016	7.9	8.1	0.70	5623	0.46	1959.51
005219484-02	OBS	No	146.148011	250.503689	1820.0	4.921	12.6	8.8	0.70	5623	3.06	1.84
005219484-03	OBS	No	115.195196	173.565061	1413.3	2.527	9.7	6.3	0.70	5623	2.61	2.53
005219484-04	OBS	No	82.545007	167.117071	1187.8	5.825	9.7	7.3	0.70	5623	2.51	3.95
005219484-06	OBS	No	83.371967	157.122305	797.7	3.712	8.1	5.2	0.70	5623	2.06	3.90

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005219484-01	OBS	FP	0.00	1	0	1	0	LPP_DV—MOD_NONUNIQ_DV—CENT_UNRESOLVED_OFFSET
005219484-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005219484-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005219484-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
005219484-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

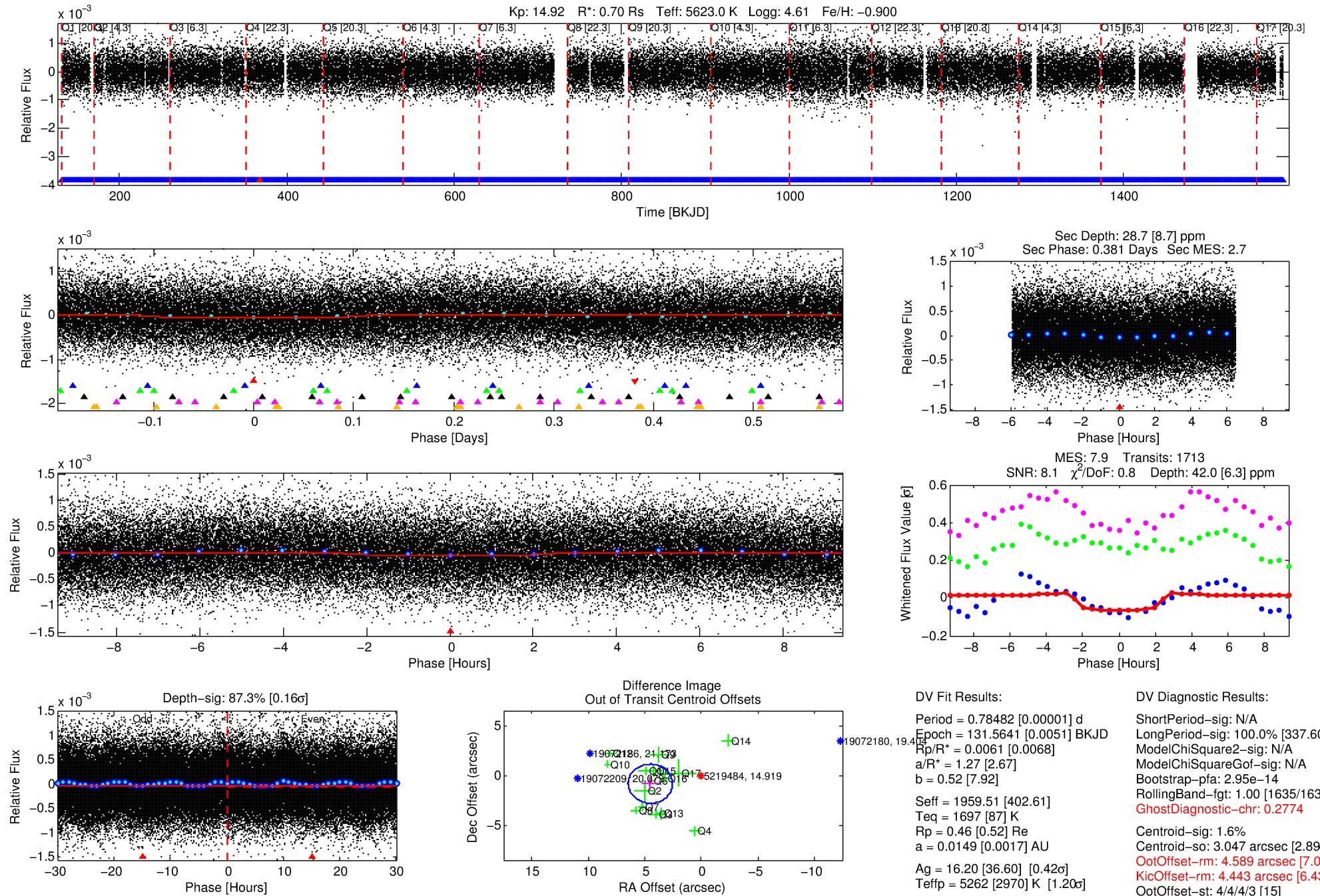
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005219484-01

No Significant Match Found

DV One-Page Summary

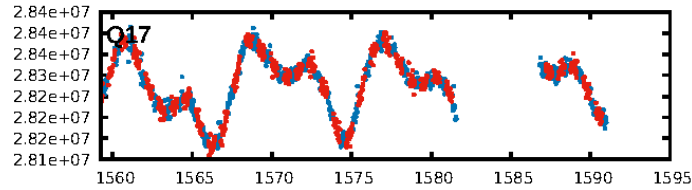
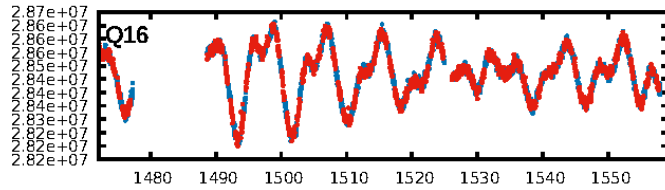
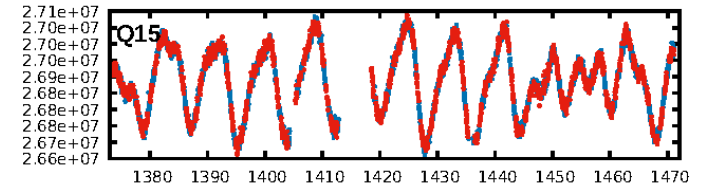
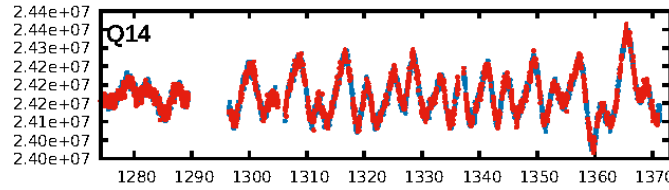
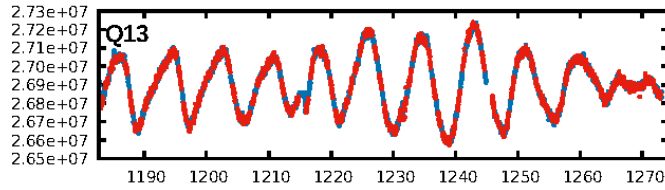
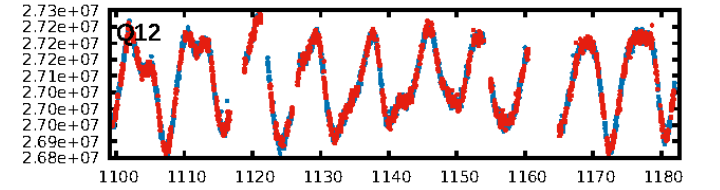
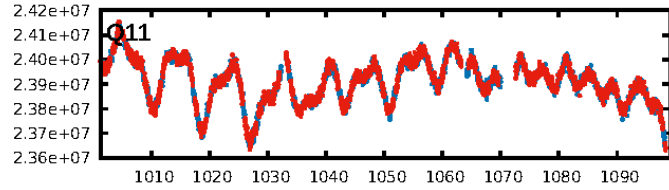
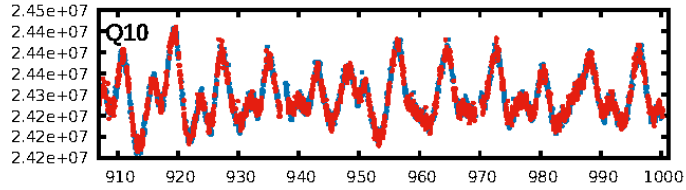
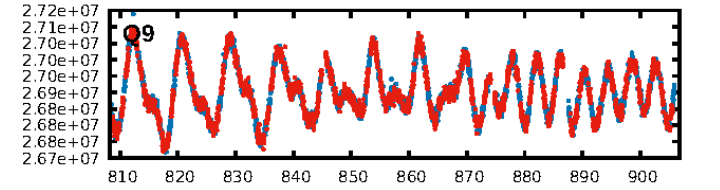
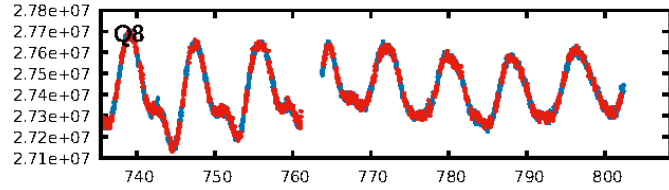
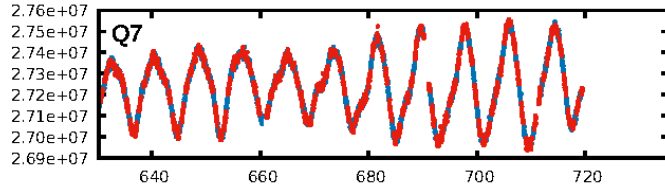
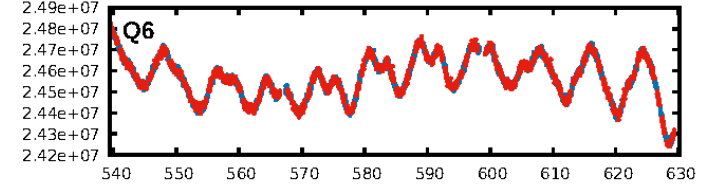
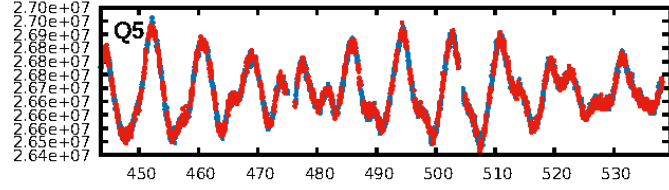
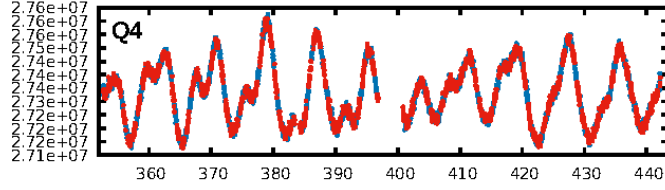
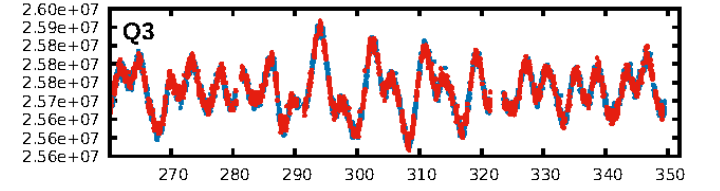
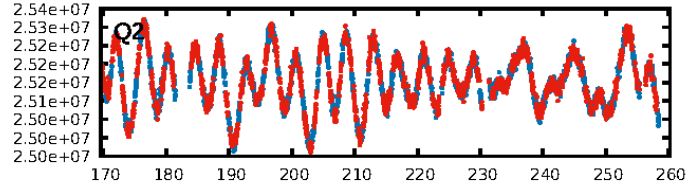
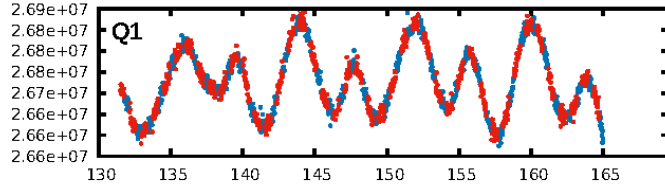
KIC: 5219484 Candidate: 1 of 6 Period: 0.785 d



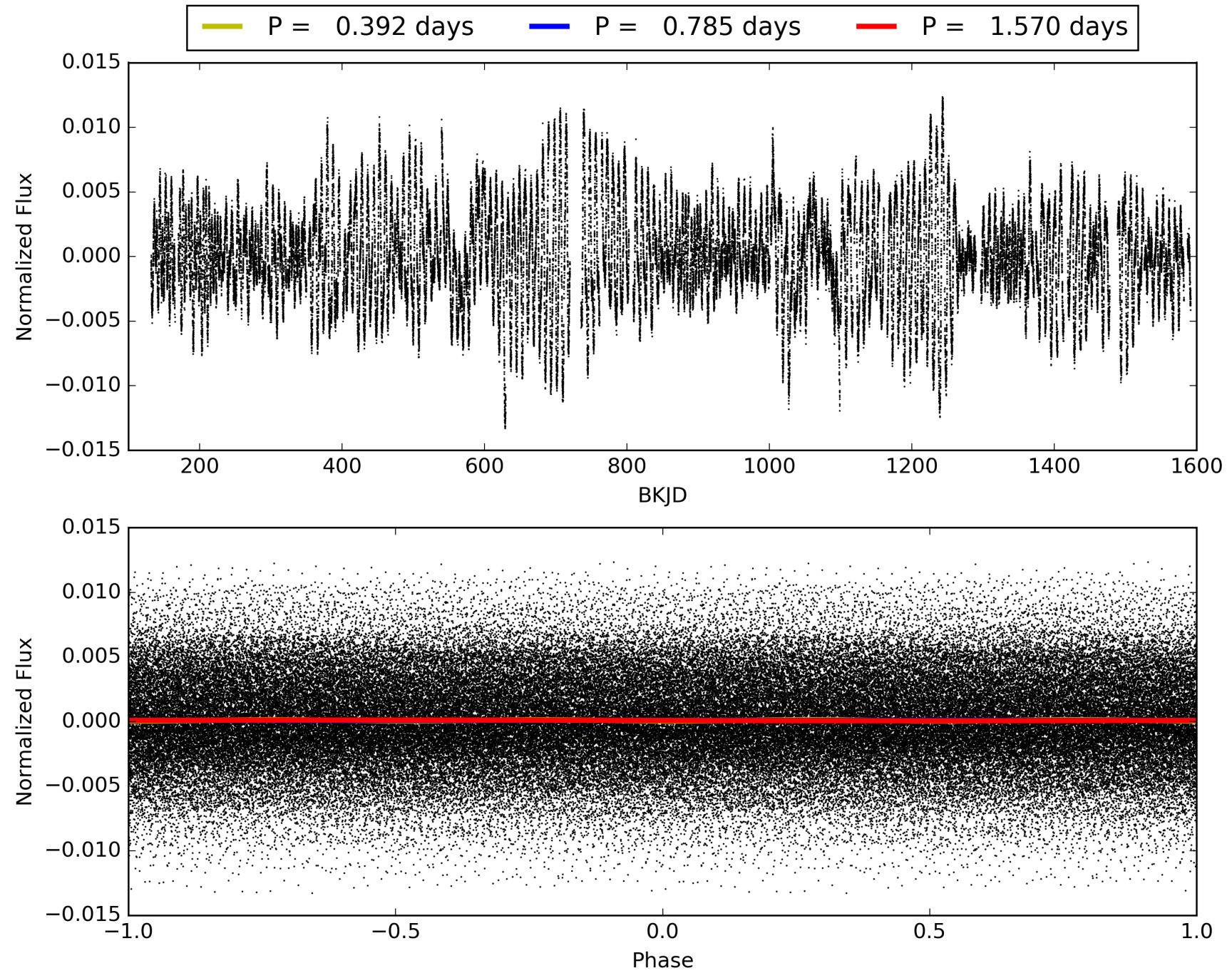
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 005219484-01, PDC Light Curves

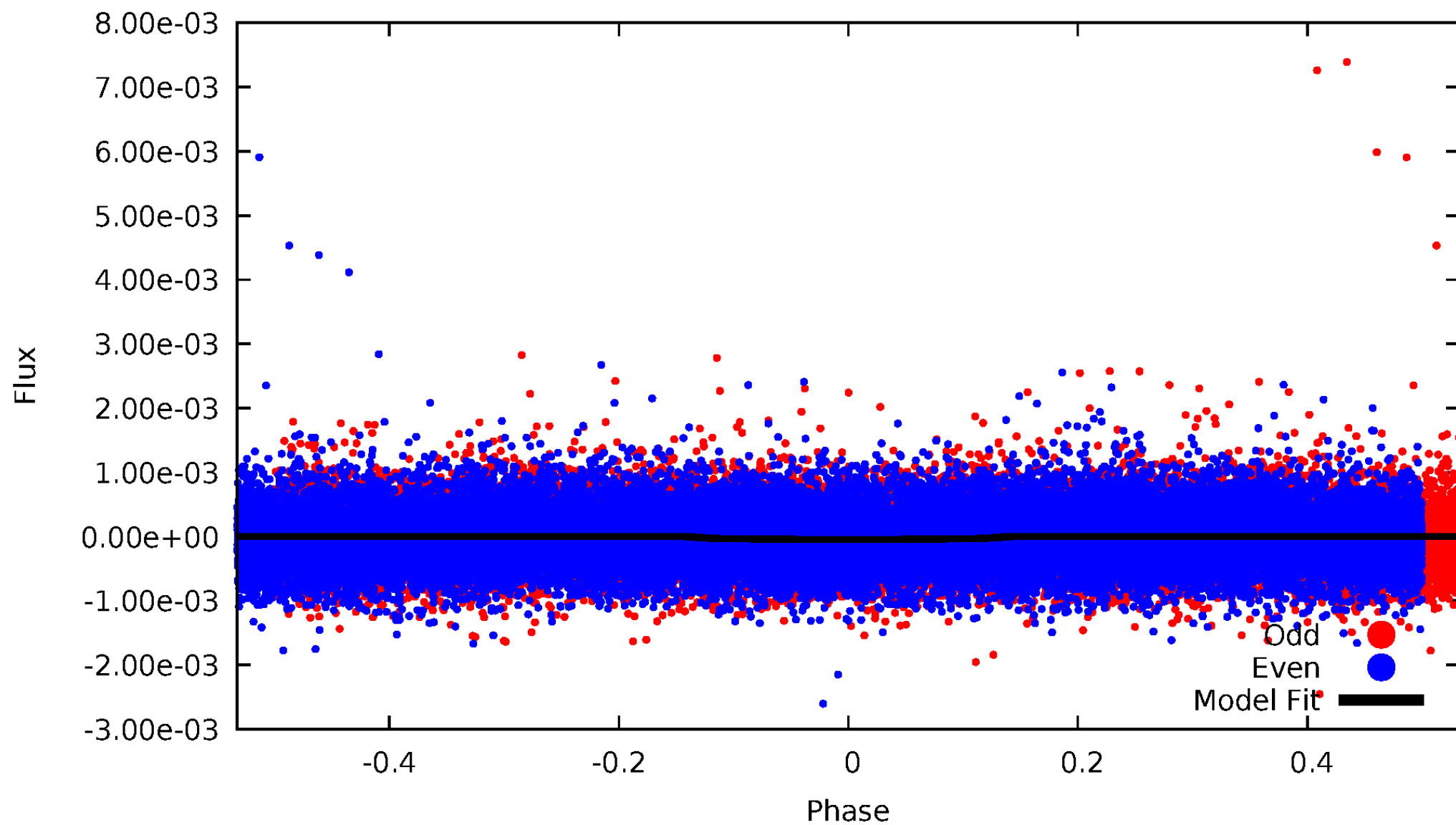


TCE 005219484-01



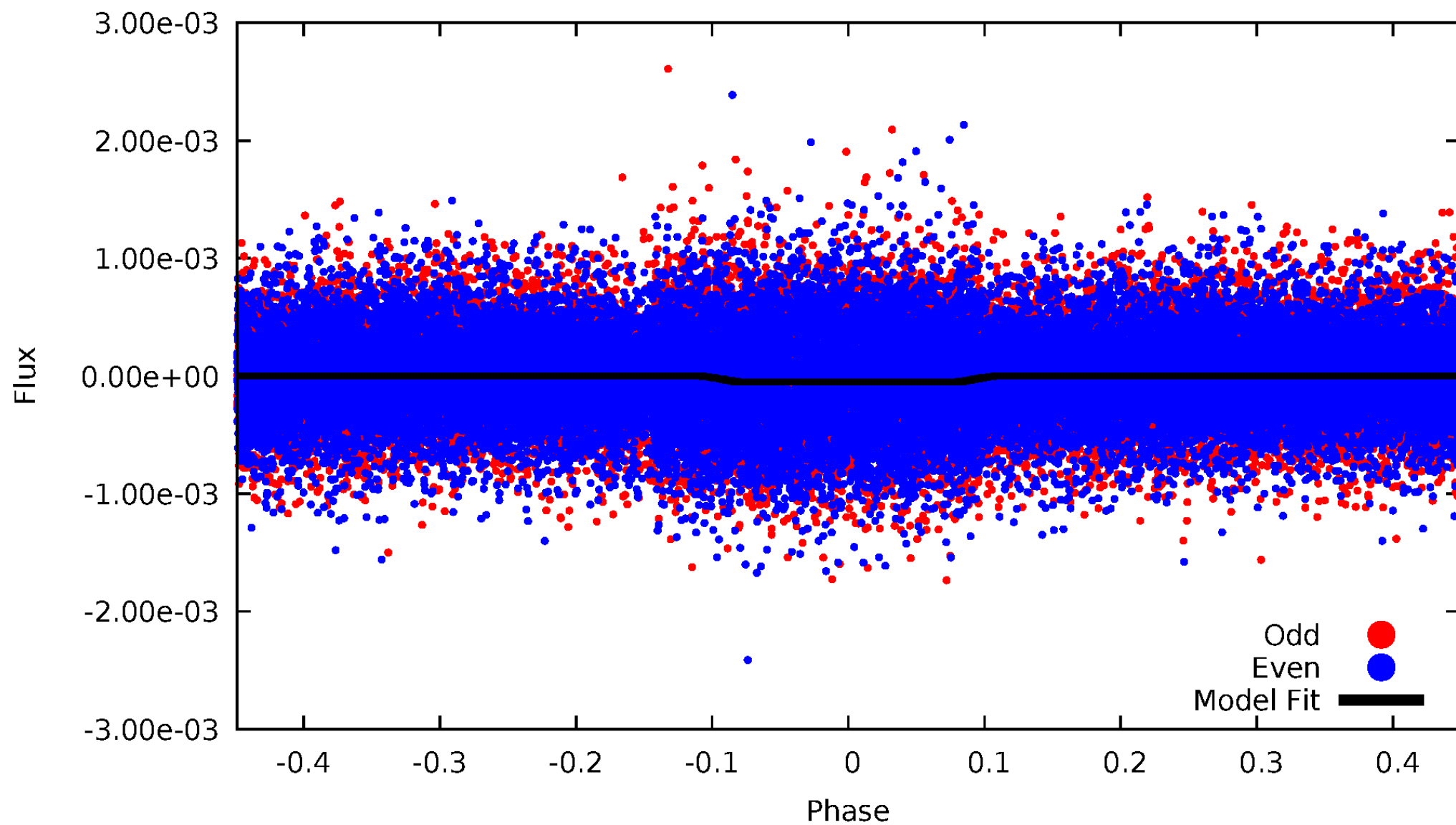
DV Odd/Even

TCE 005219484-01



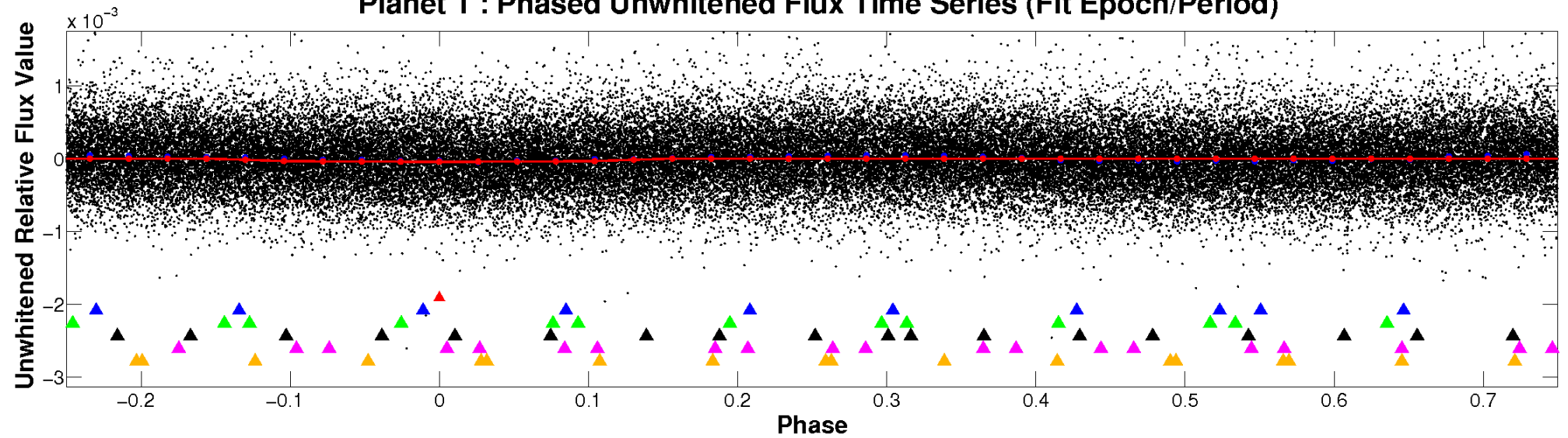
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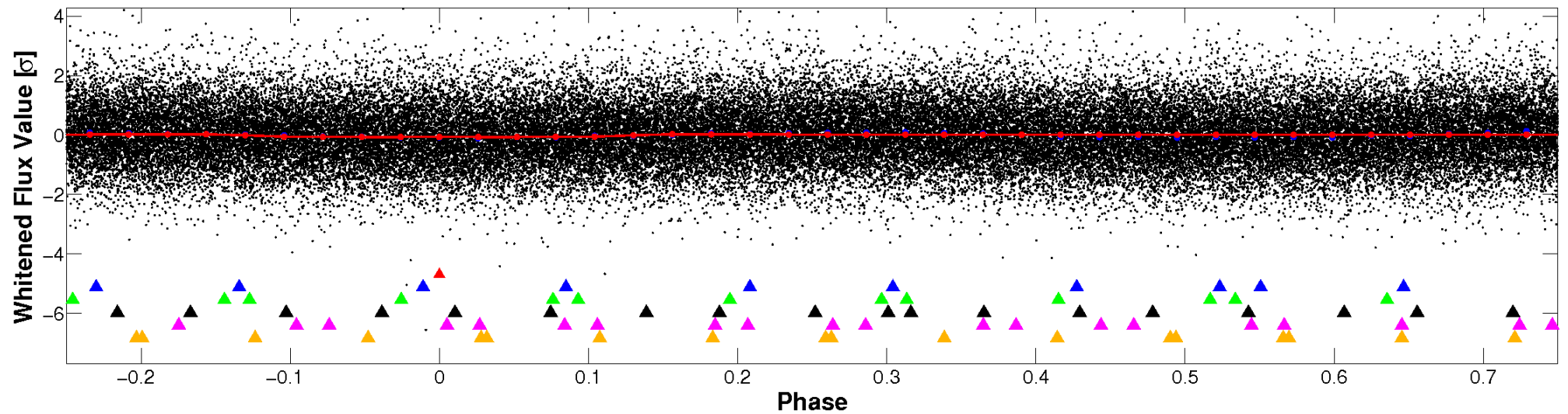


Non-Whitened Vs. Whitened Light Curve

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

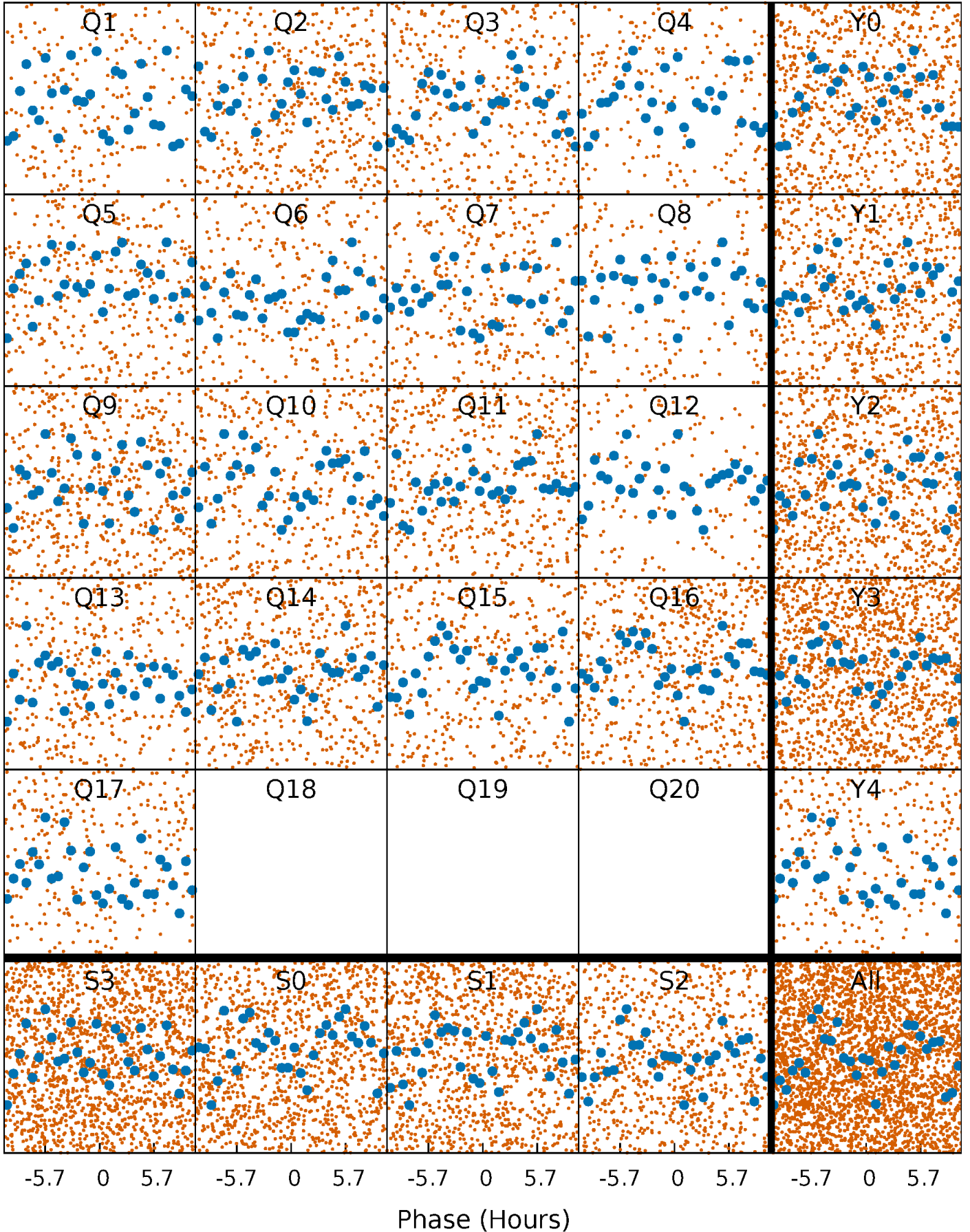


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



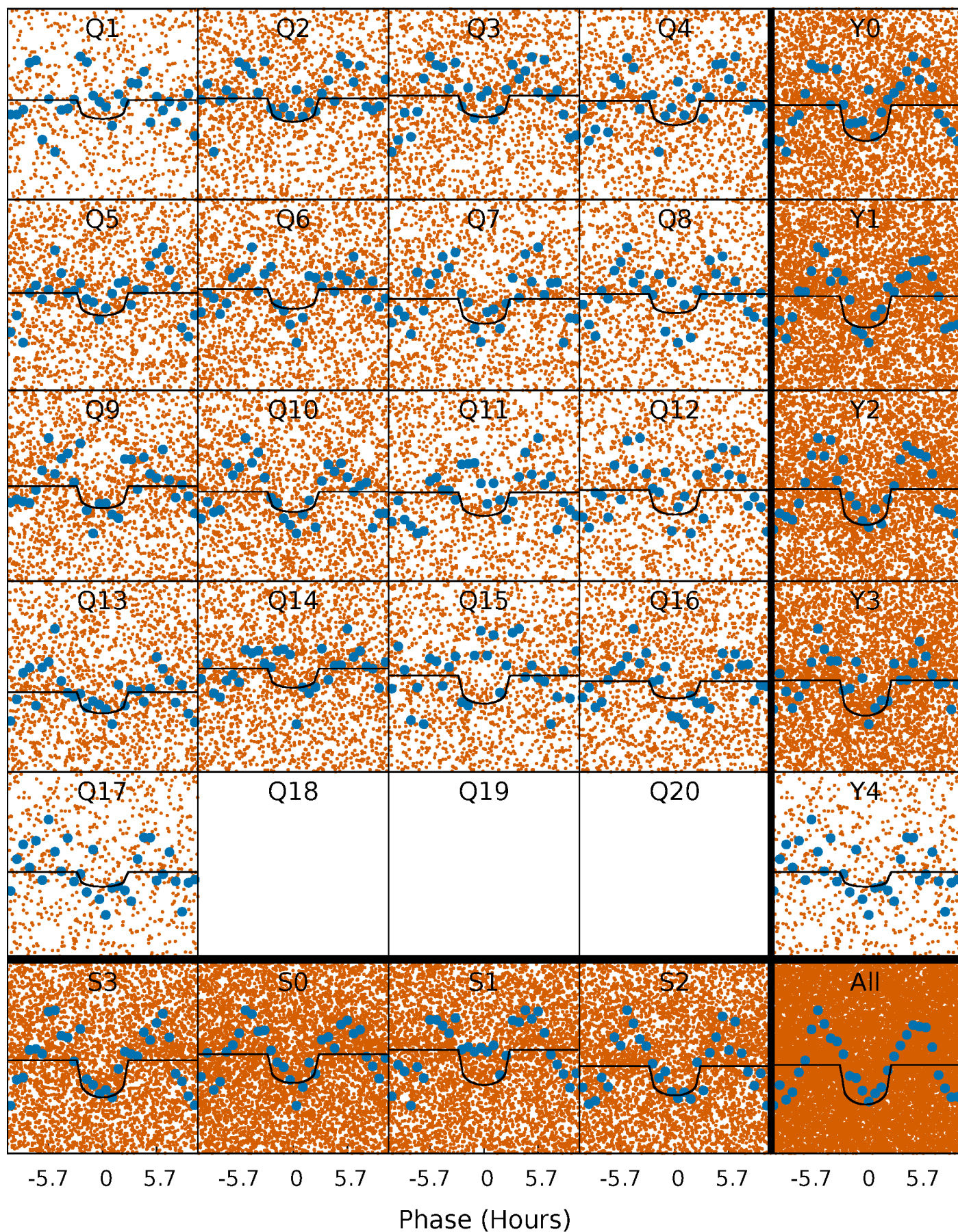
PDC Quarter-Phased Transit Curves

TCE 005219484-01 P= 0.784817 Days $T_0=131.564070$ (BKJD)



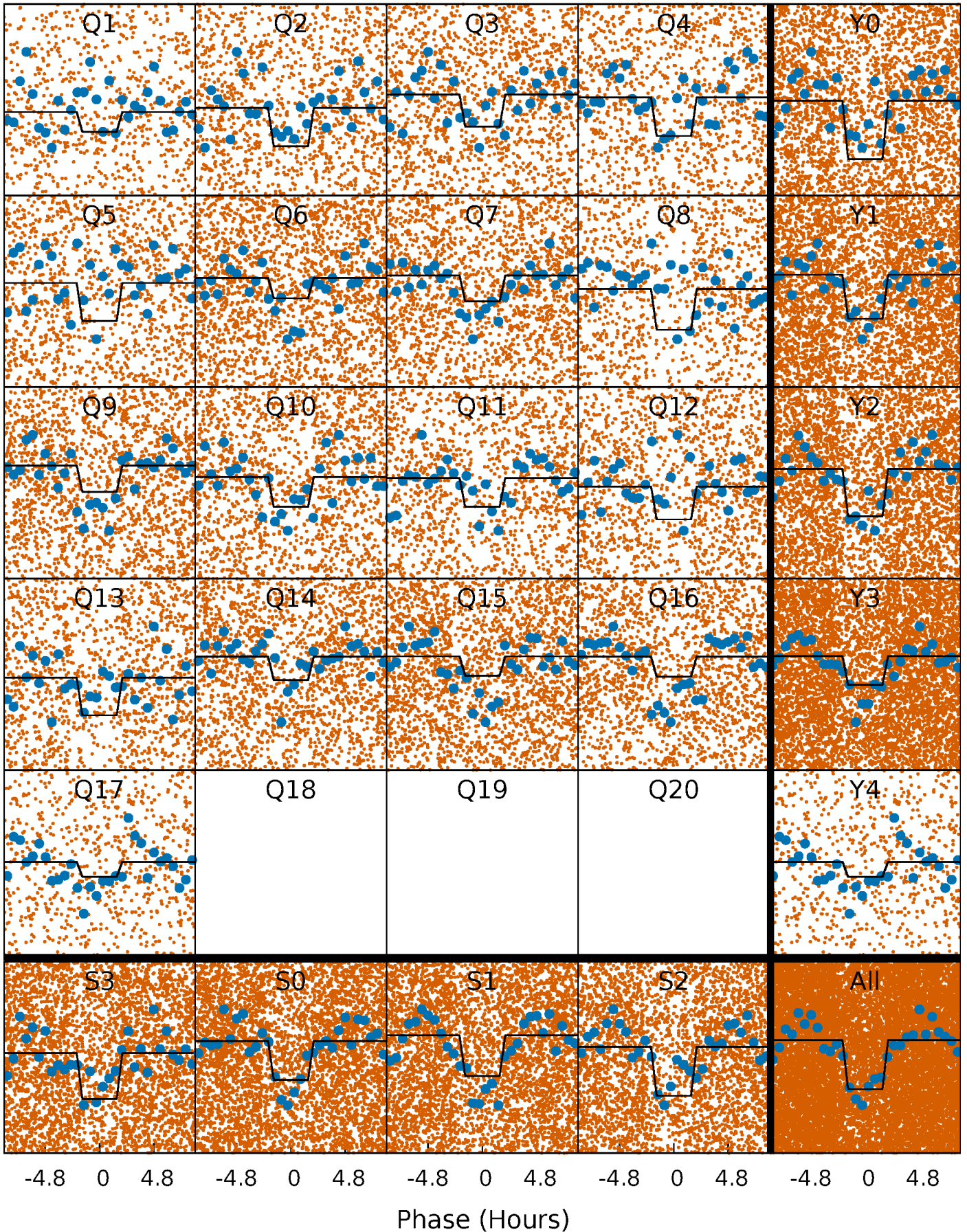
DV Quarter-Phased Transit Curves

TCE 005219484-01 P= 0.784817 Days $T_0=131.564070$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

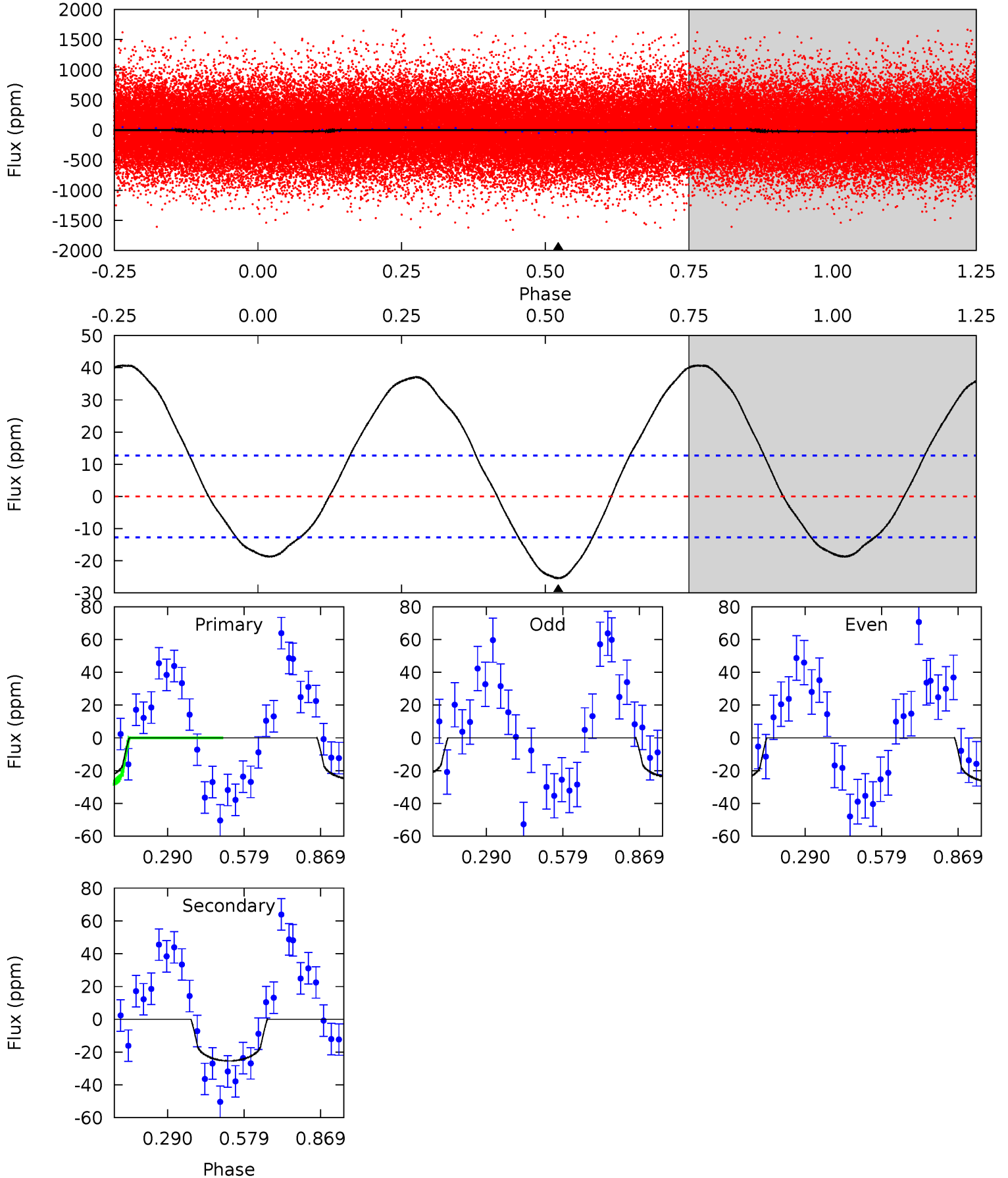
TCE 005219484-01 P= 0.784871 Days $T_0=131.529962$ (BKJD)



DV Model-Shift Uniqueness Test

005219484-01, P = 0.784817 Days, E = 130.779253 Days

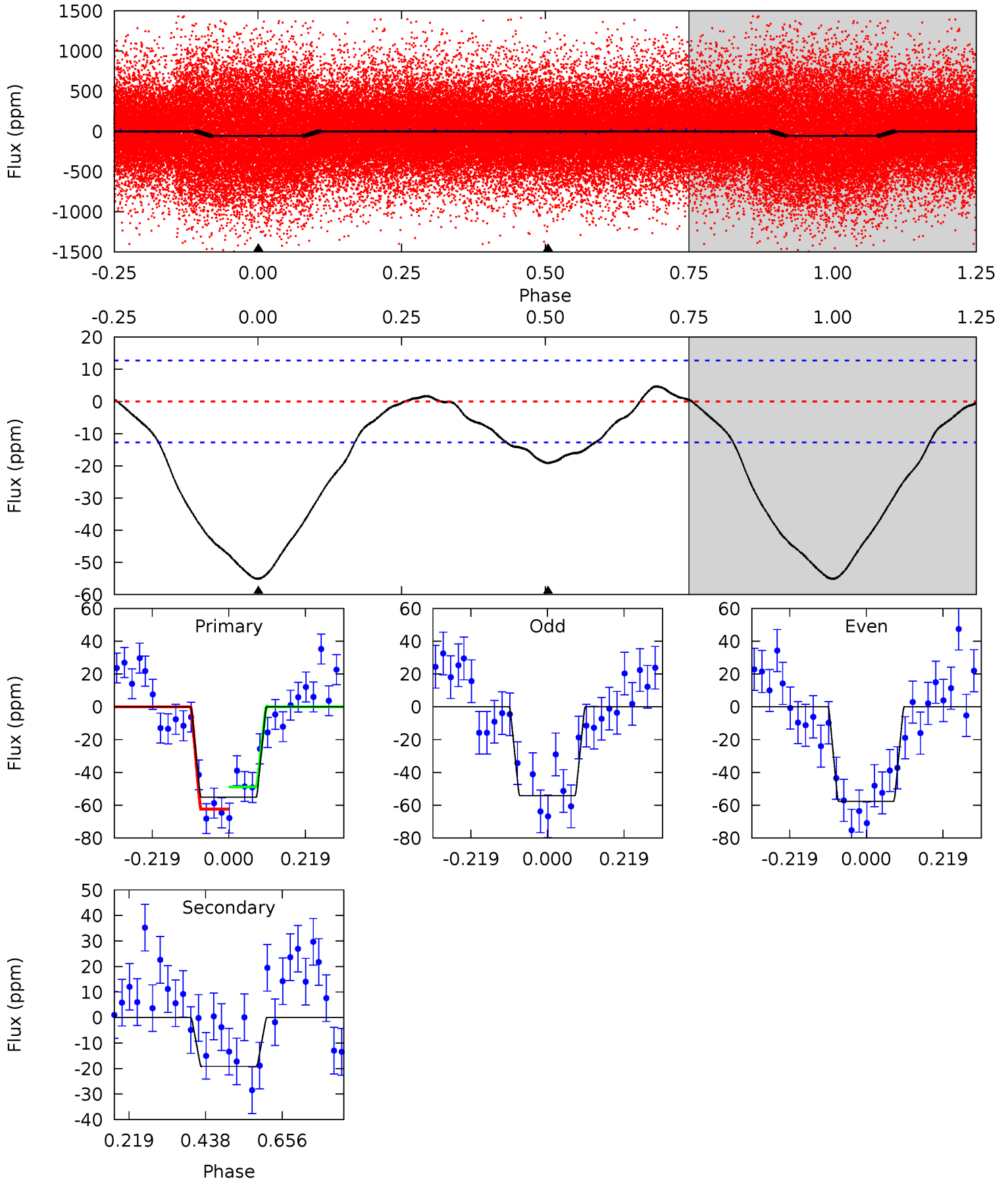
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.66	8.66	0	0	4.34	1.06	5.91	8.66	8.66	8.66	8.66	0.43	0.76	0.62	2.10



Alt Model-Shift Uniqueness Test

005219484-01, P = 0.784871 Days, E = 130.745091 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.1	6.63	0	0	4.40	1.23	0.54	19.1	19.1	6.63	6.63	0.58	0.99	0.08	2.34



Stellar Parameters For KIC 005219484

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5623^{+184}_{-167}	$4.606^{+0.052}_{-0.084}$	$-0.900^{+0.300}_{-0.300}$	$0.696^{+0.096}_{-0.052}$	$0.713^{+0.069}_{-0.040}$	$2.980^{+0.703}_{-0.811}$
	+3%/-3%	+1%/-2%	+33%/-33%	+14%/-7%	+10%/-6%	+24%/-27%
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 005219484-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-25 ± 3	$0.63^{+0.47}_{-0.40}$	2384^{+105}_{-85}	4553^{+2905}_{-885}	$8.217^{+55.967}_{-5.659}$
Alt.	-19 ± 3	$0.64^{+0.50}_{-0.38}$	2388^{+100}_{-96}	4223^{+2208}_{-806}	$5.625^{+29.759}_{-3.887}$

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

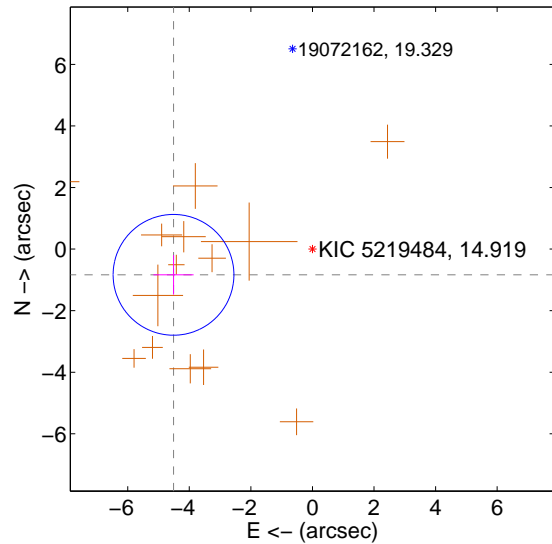
Supplemental centroid analysis for 005219484-01. Kepler magnitude: 14.92. Transit SNR 8.14

There are 0 quarters with good PRF difference image offsets

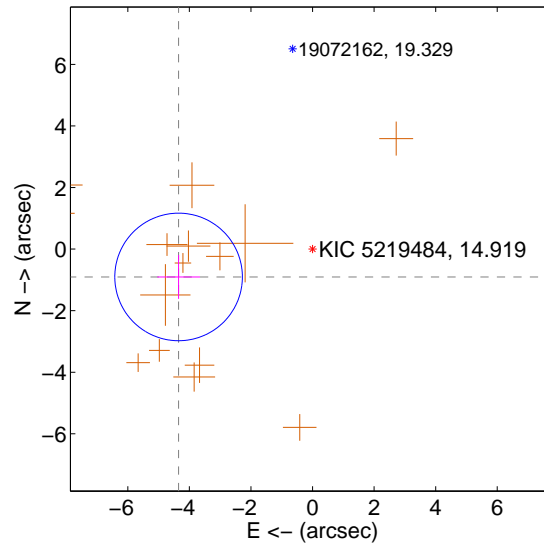
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.589 ± 0.654	7.02	4.512 ± 0.652	-0.836 ± 0.642
PRF-fit source offset from KIC position	4.443 ± 0.691	6.43	4.350 ± 0.694	-0.904 ± 0.712
photometric centroid source offset	3.05 ± 1.06	2.89	2.87 ± 1.06	-1.04 ± 1.04

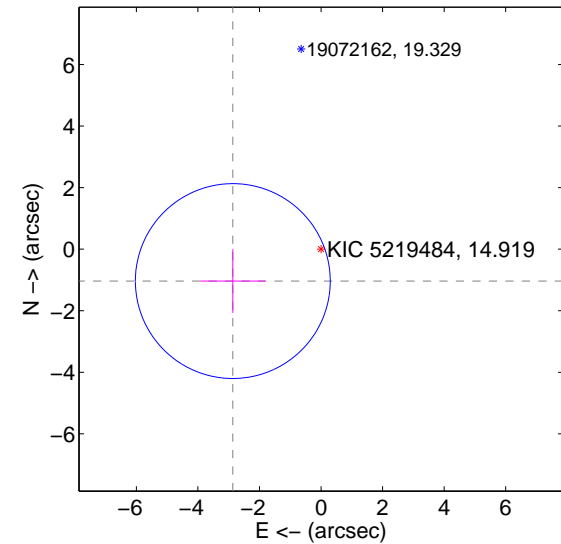
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

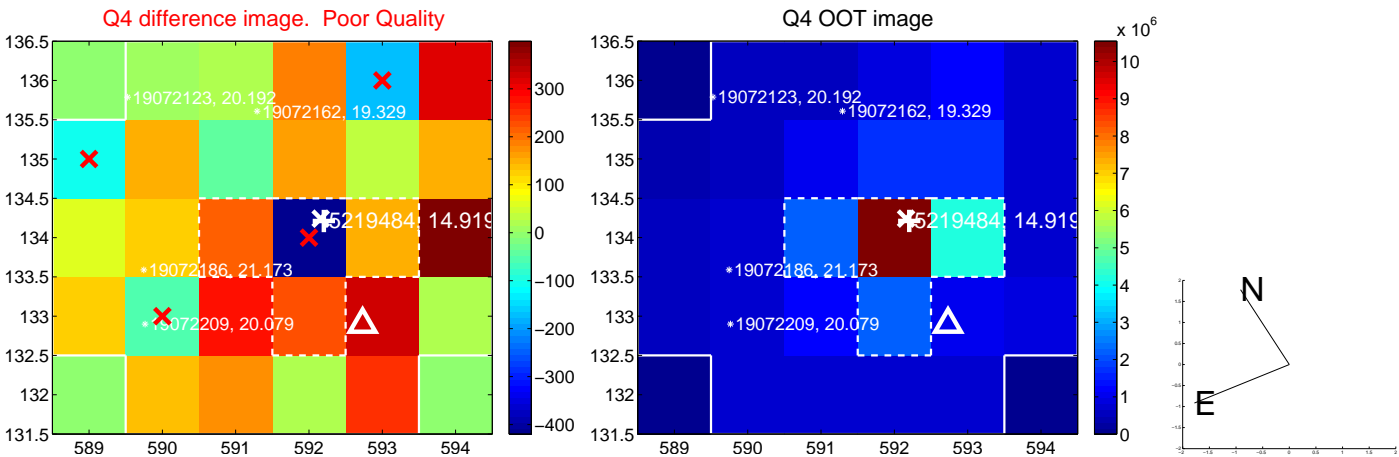
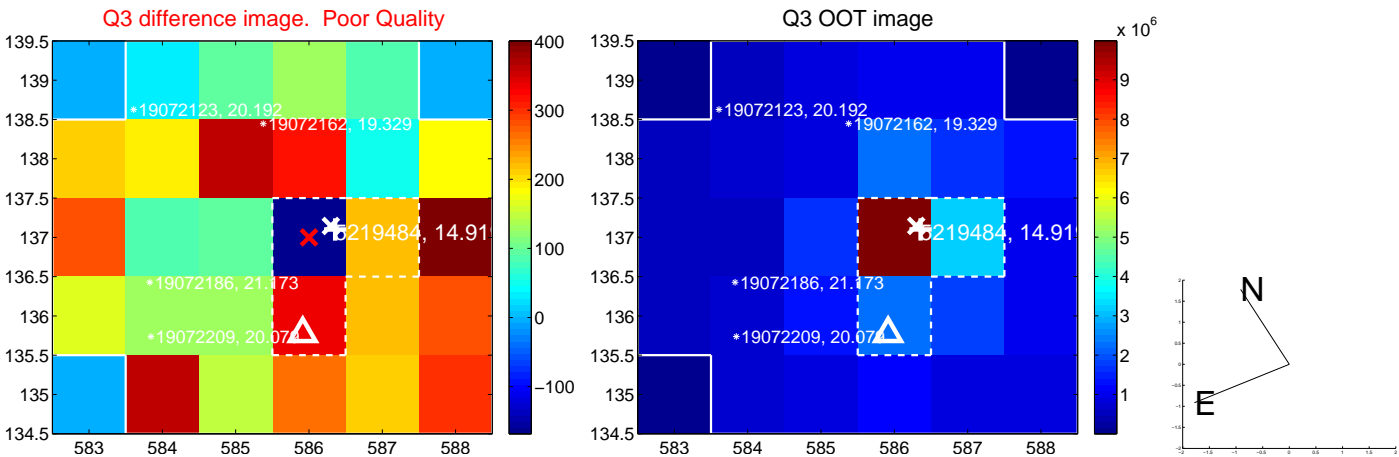
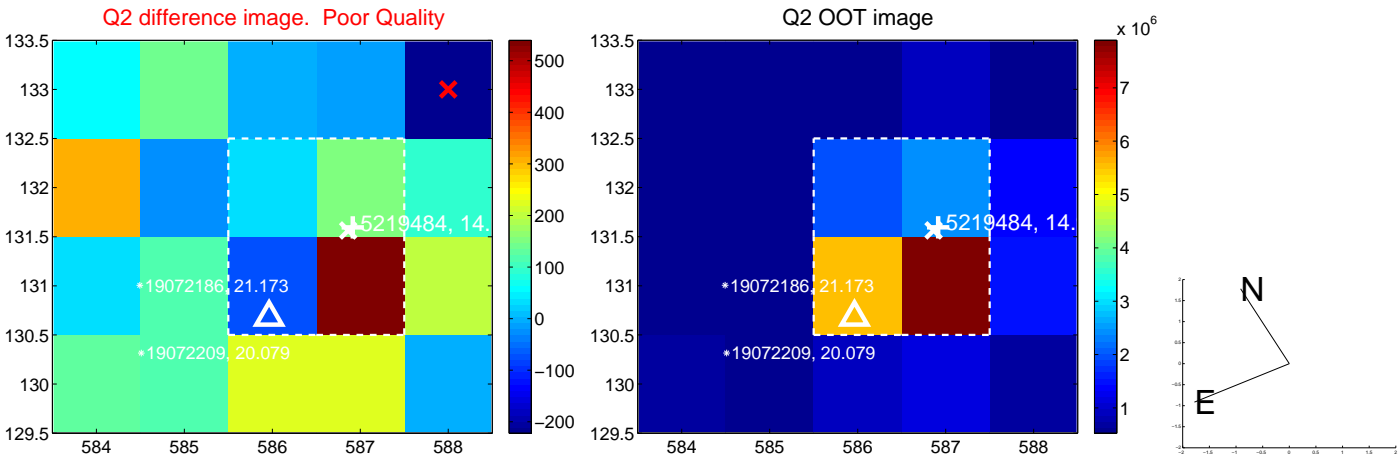
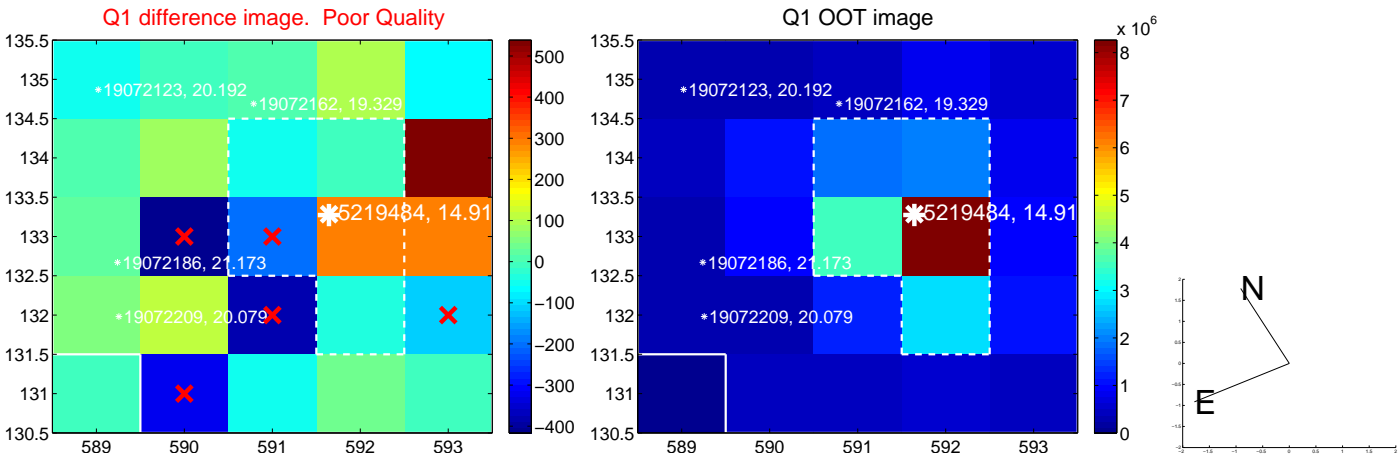


offset from photometric centroids

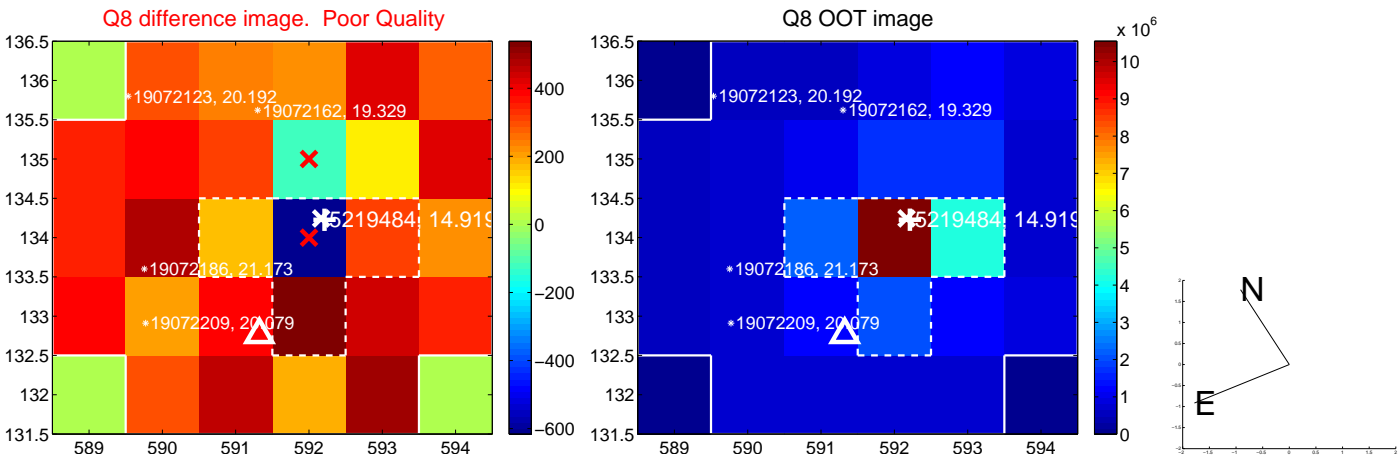
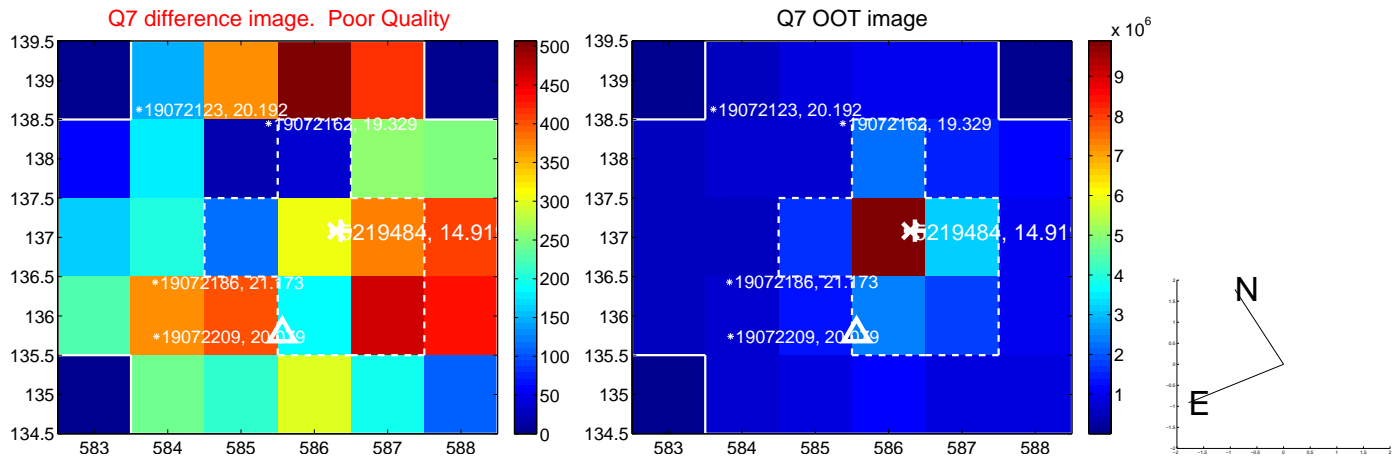
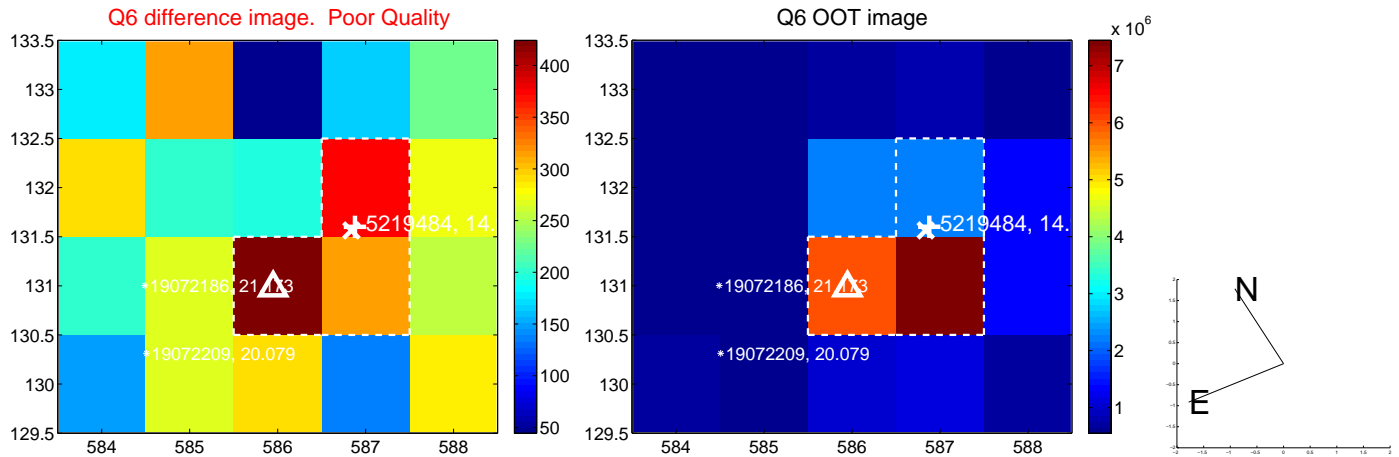
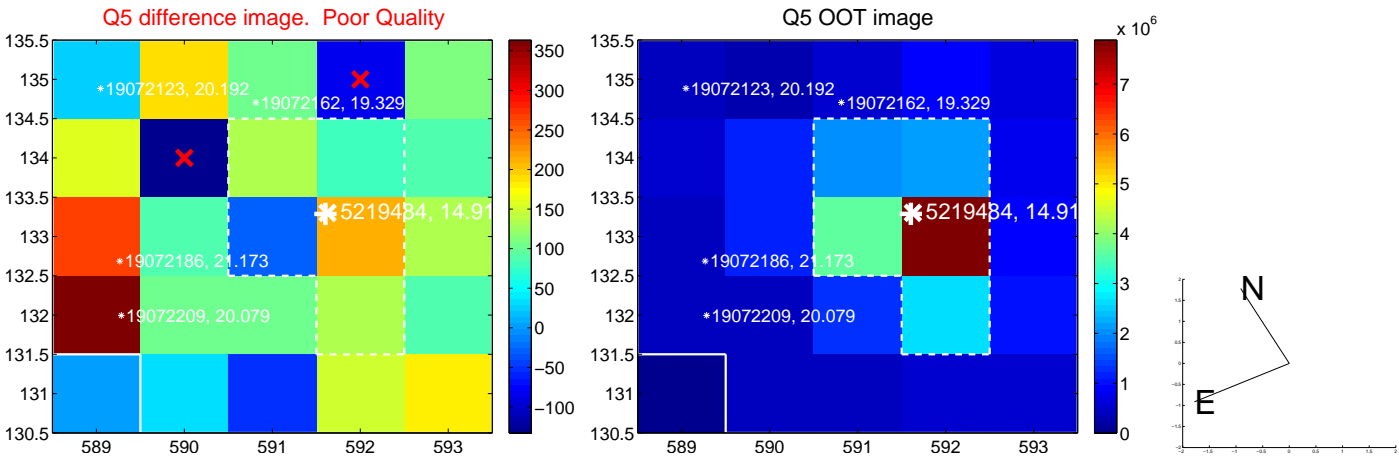


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

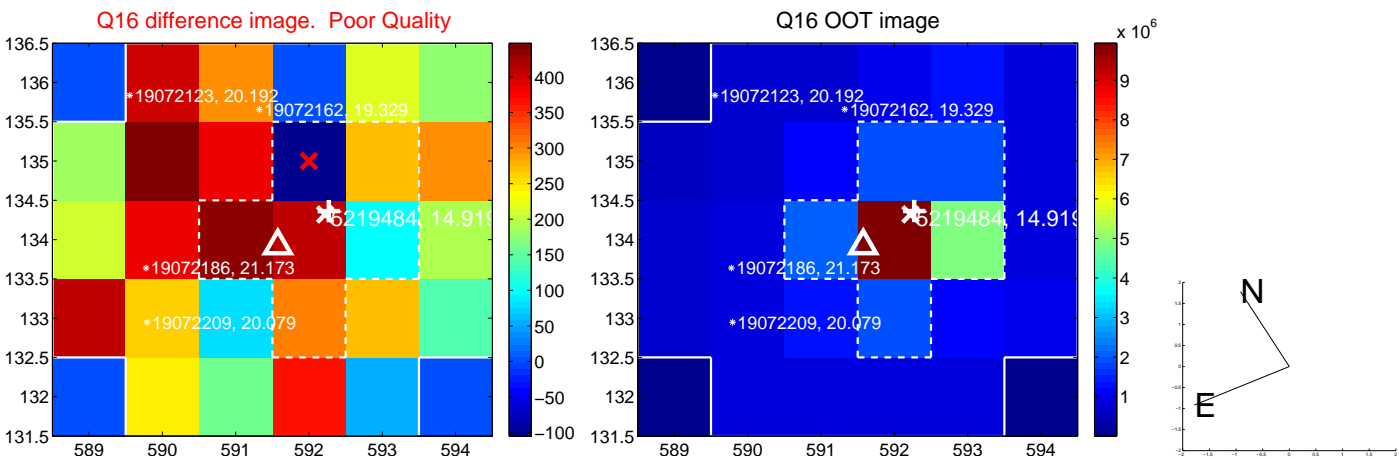
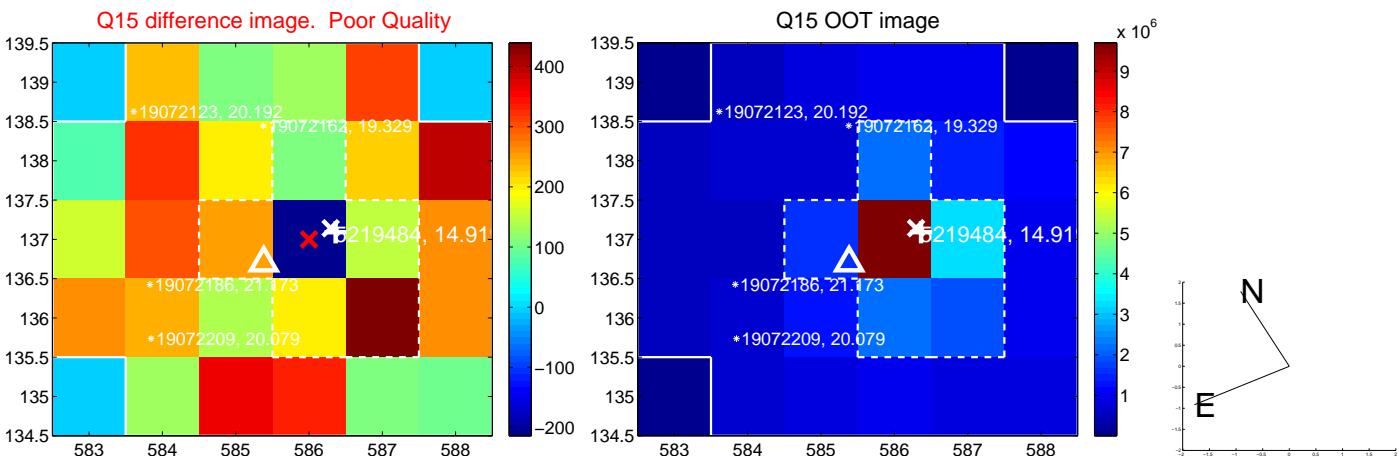
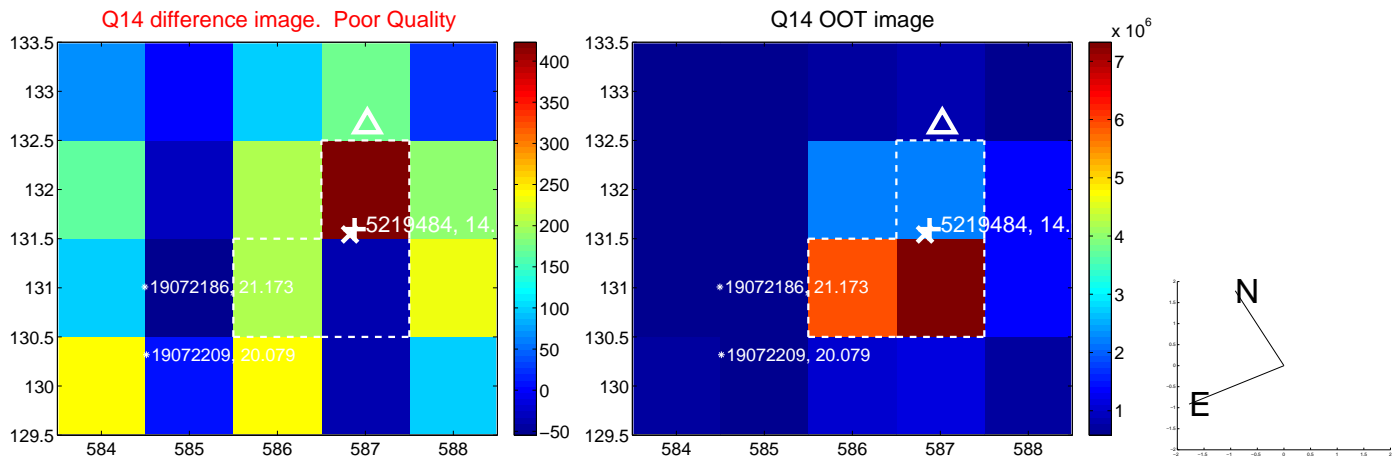
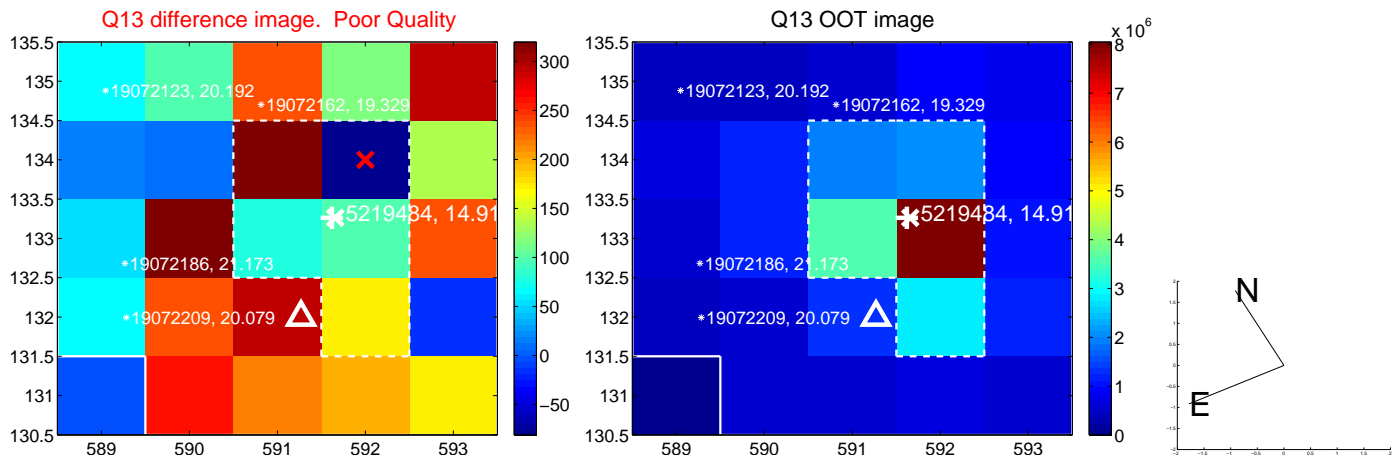
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



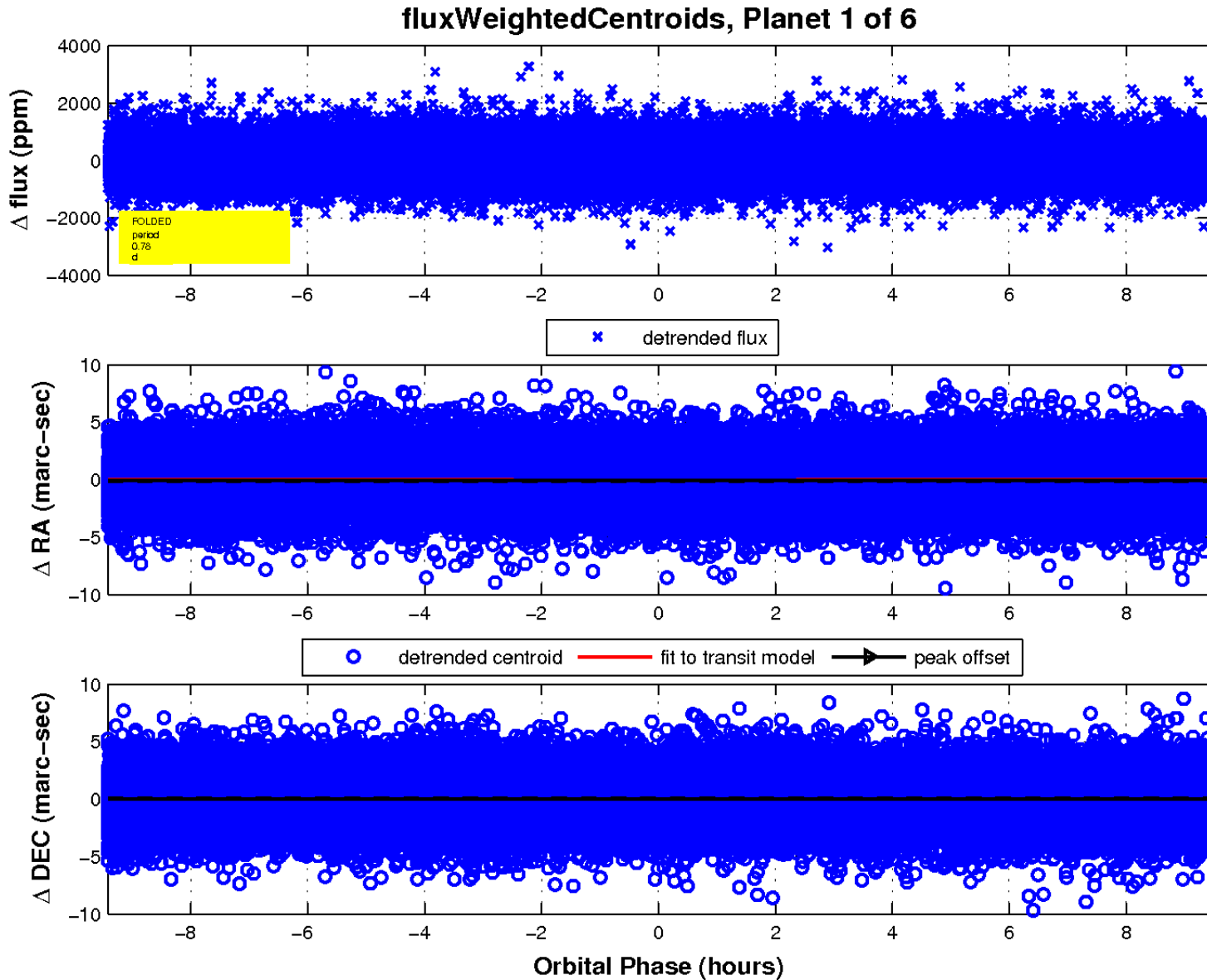
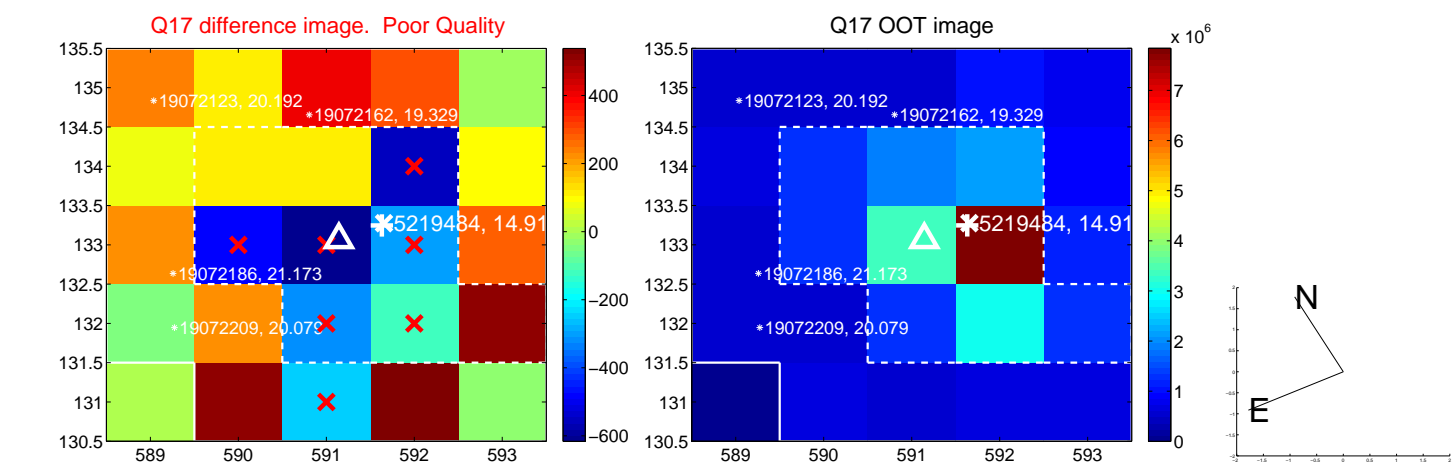
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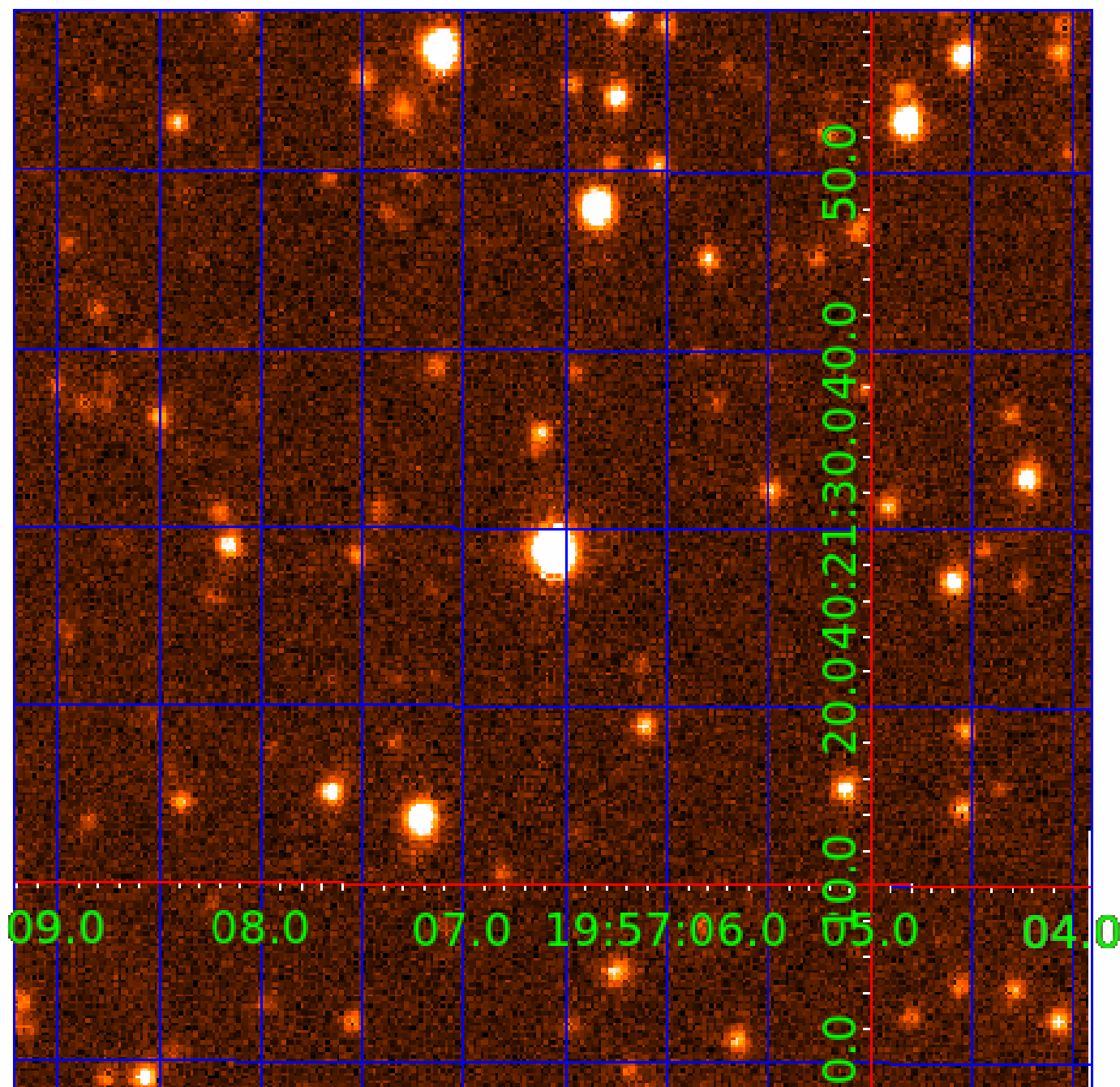


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005219484

Q1-17 DR25 TCE Parameters

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005219484-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005219484-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
005219484-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

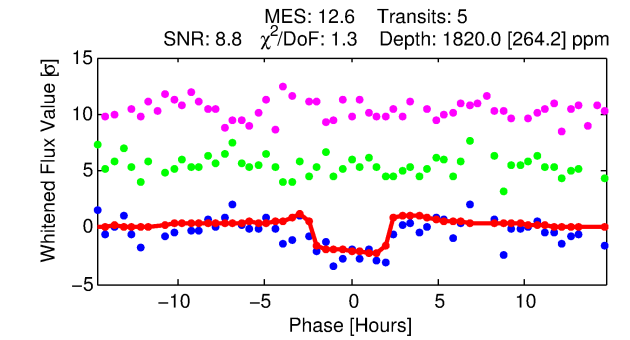
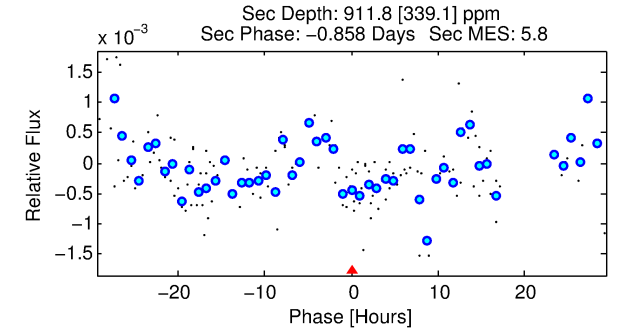
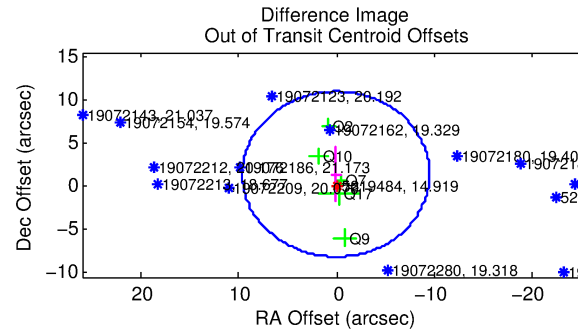
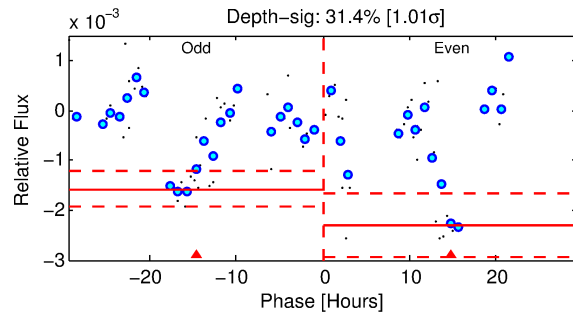
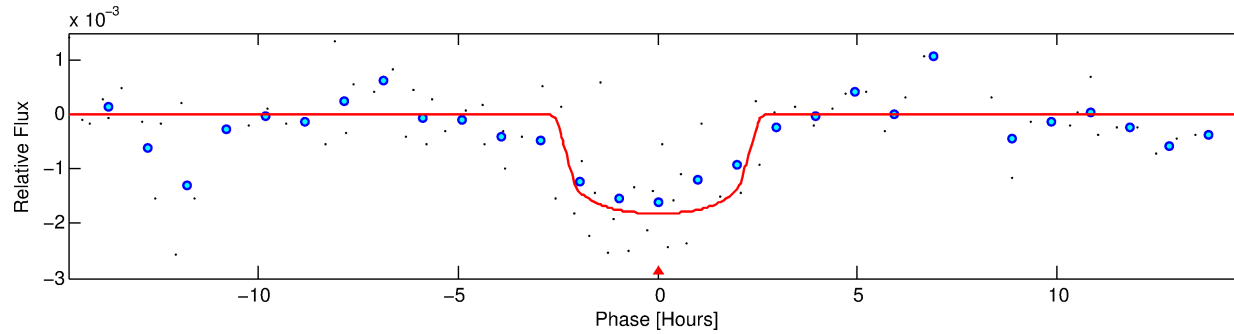
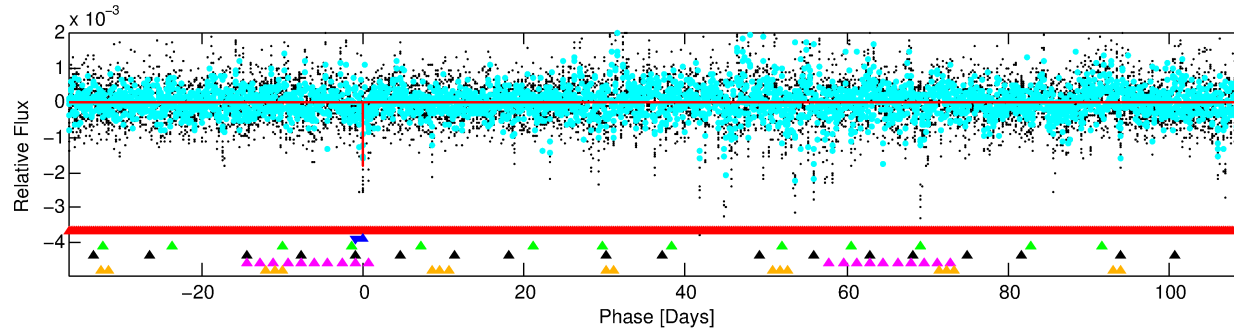
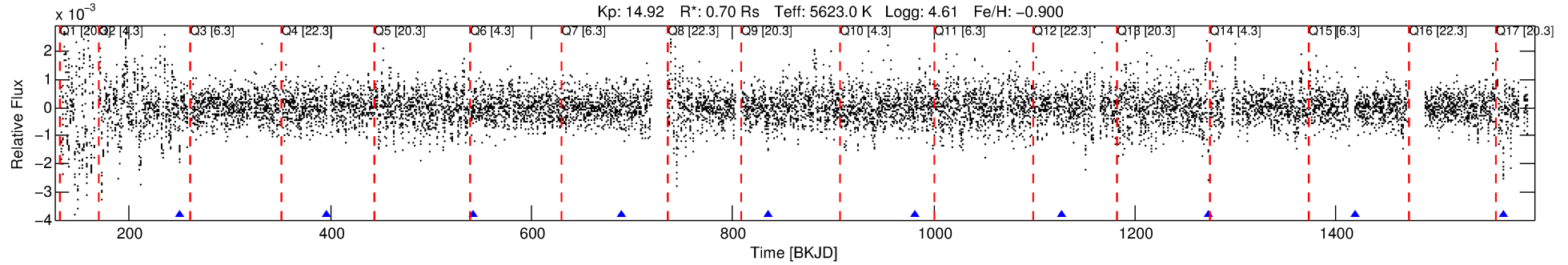
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005219484-02

No Significant Match Found

DV One-Page Summary

KIC: 5219484 Candidate: 2 of 6 Period: 146.148 d



DV Fit Results:

Period = 146.14801 [0.00241] d
Epoch = 250.5037 [0.0132] BKJD
Bp/R* = 0.0403 [0.0229]
a/R* = 203.53 [546.21]
b = 0.53 [3.72]
Seff = 1.84 [0.38]
Teq = 297 [15] K
Rp = 3.06 [1.79] Re
a = 0.4852 [0.0545] AU
Ag = 12582.94 [15175.18] [0.83 σ]
Teffp = 4865 [1463] K [3.12 σ]

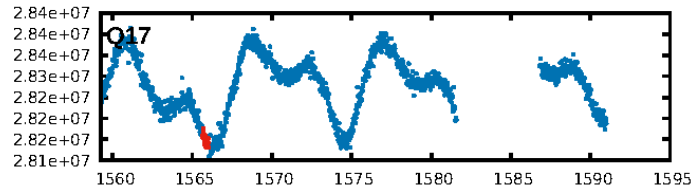
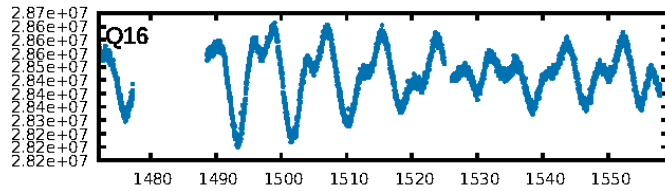
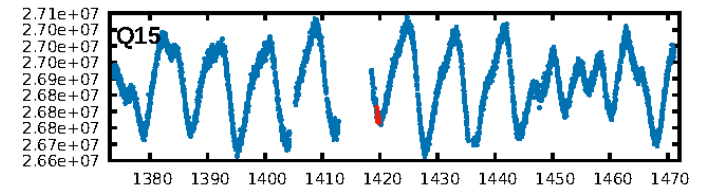
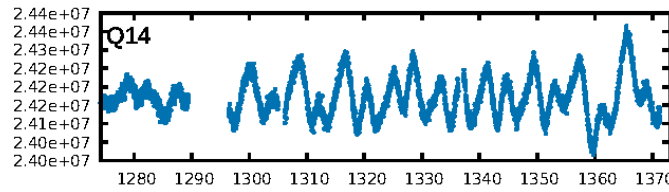
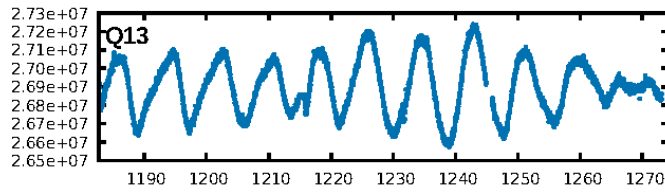
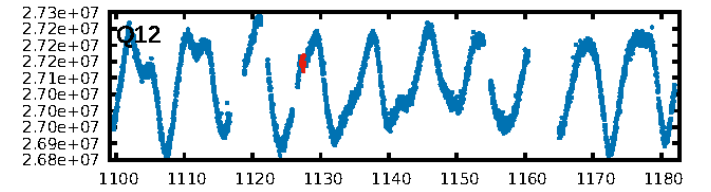
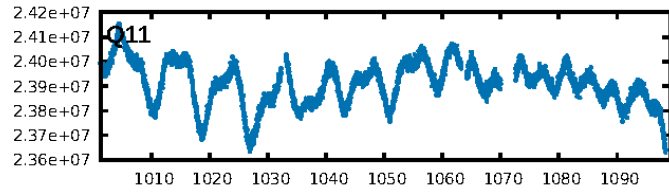
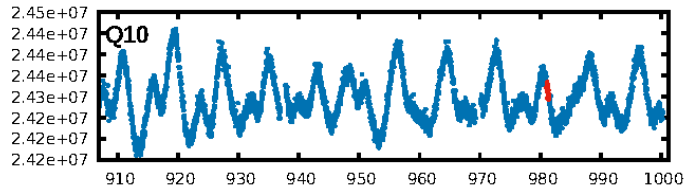
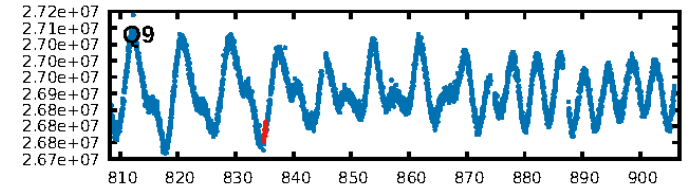
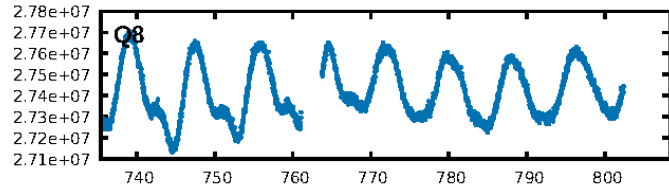
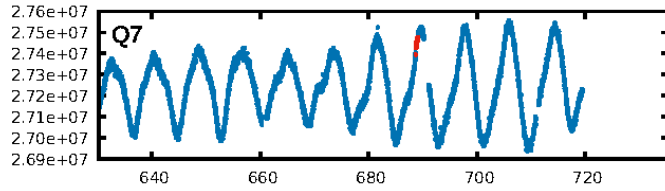
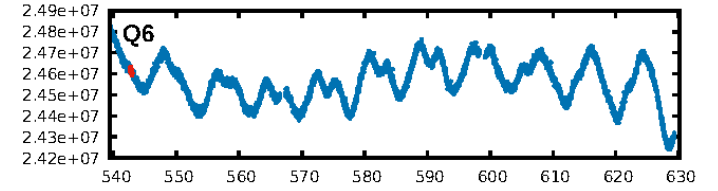
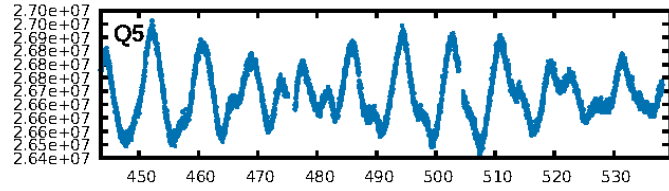
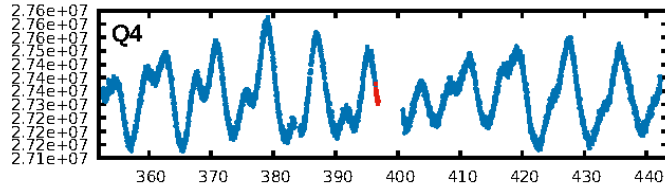
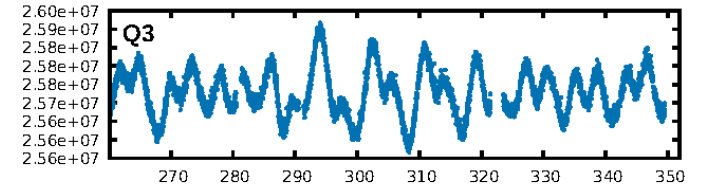
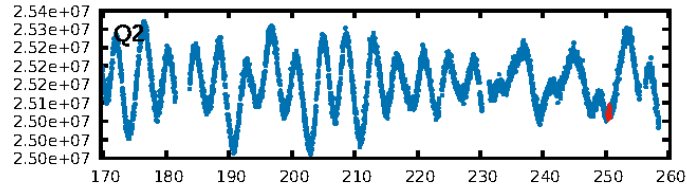
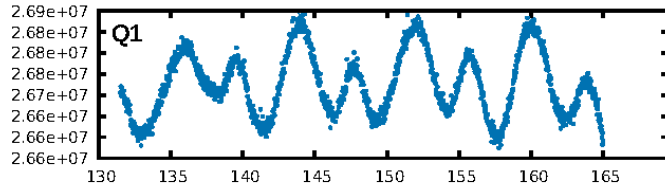
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [134.29 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 7.82e-22
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.4888
Centroid-sig: 4.6%
Centroid-so: 1.491 arcsec [4.10 σ]
OotOffset-rm: 1.399 arcsec [0.44 σ]
KicOffset-rm: 1.259 arcsec [0.40 σ]
OotOffset-st: 2/1/0/2 [5]
KicOffset-st: 2/1/0/2 [5]
DiffImageQuality-fgm: 0.00 [0/5]
DiffImageOverlap-fno: 0.00 [0/6]

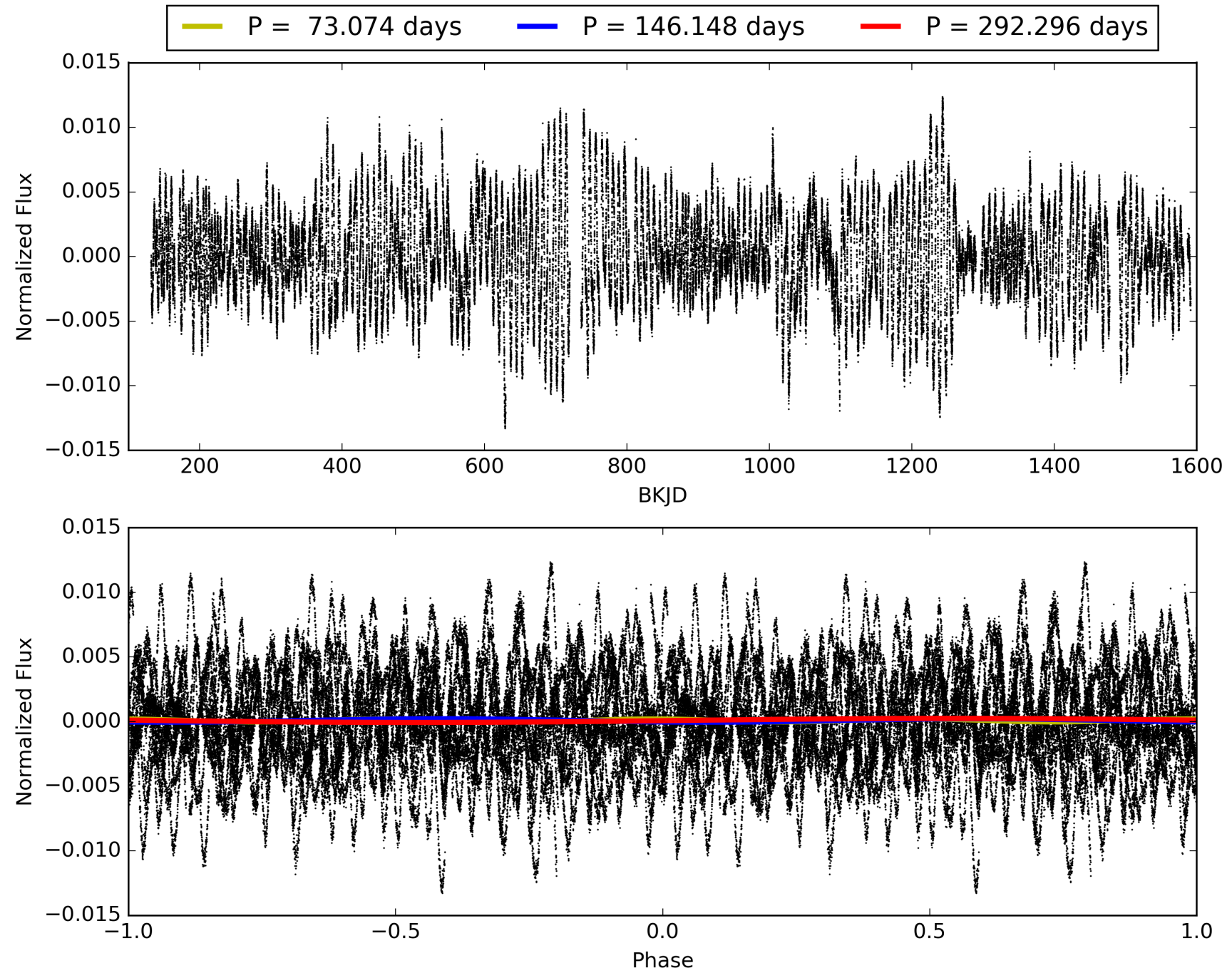
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 08:23:00 Z

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

TCE 005219484-02, PDC Light Curves

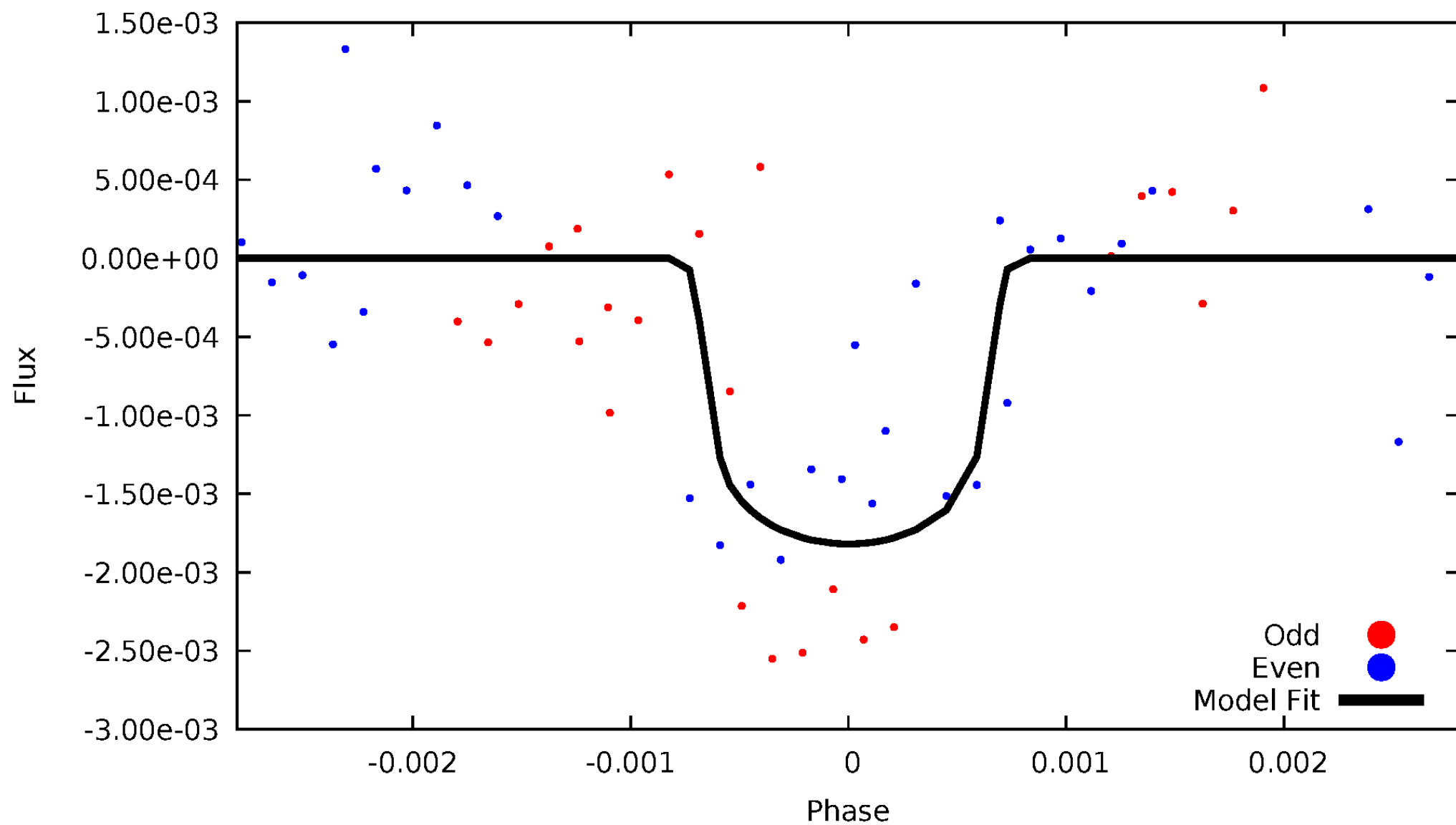


TCE 005219484-02



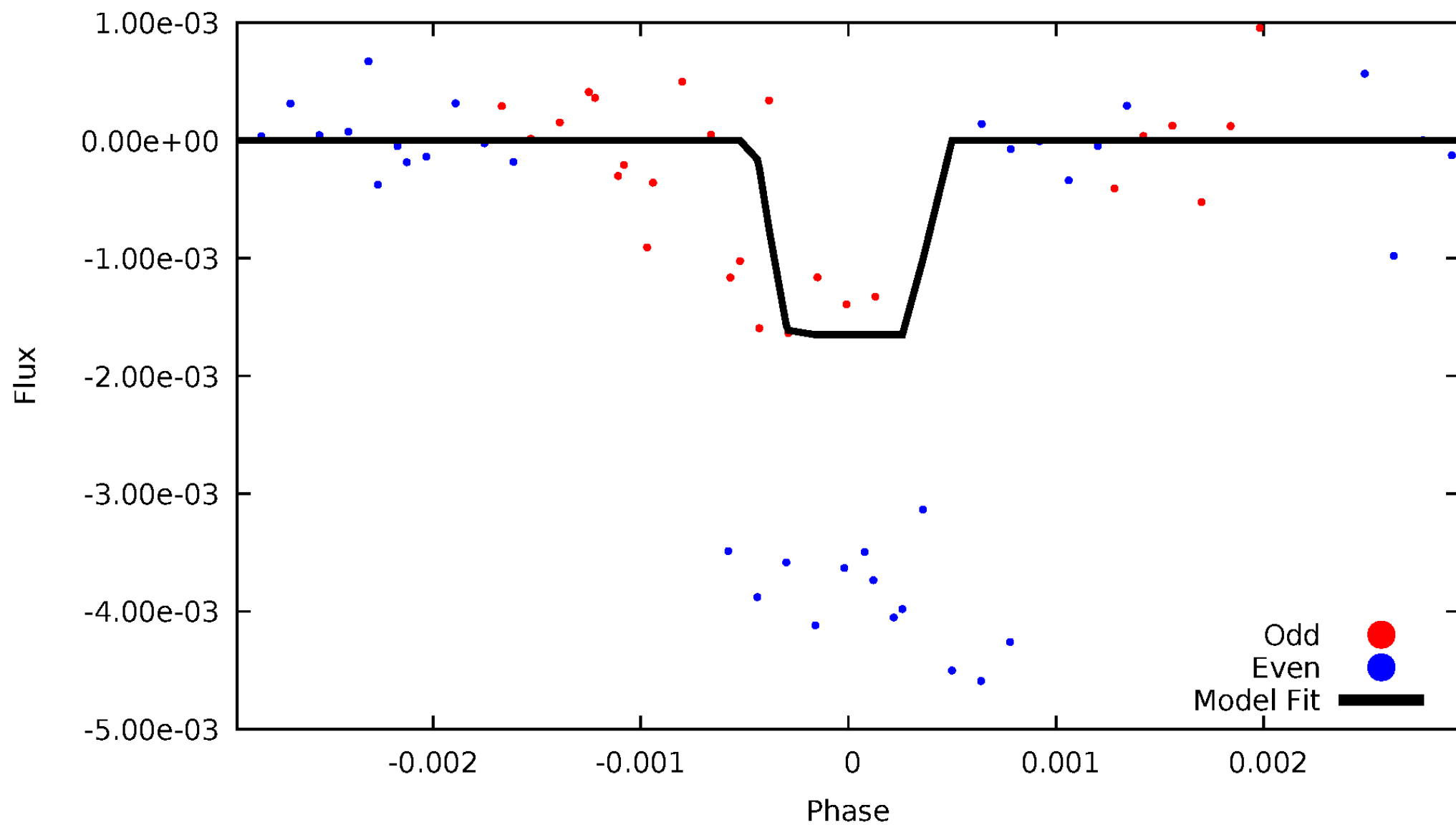
DV Odd/Even

TCE 005219484-02



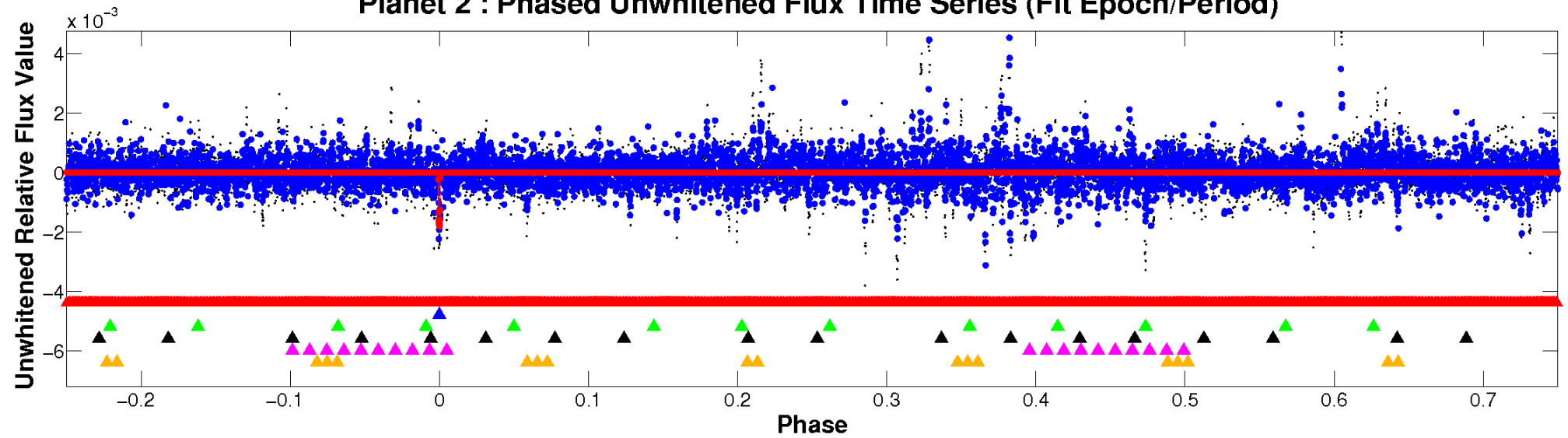
ALT Odd/Even

TCE 005219484-02

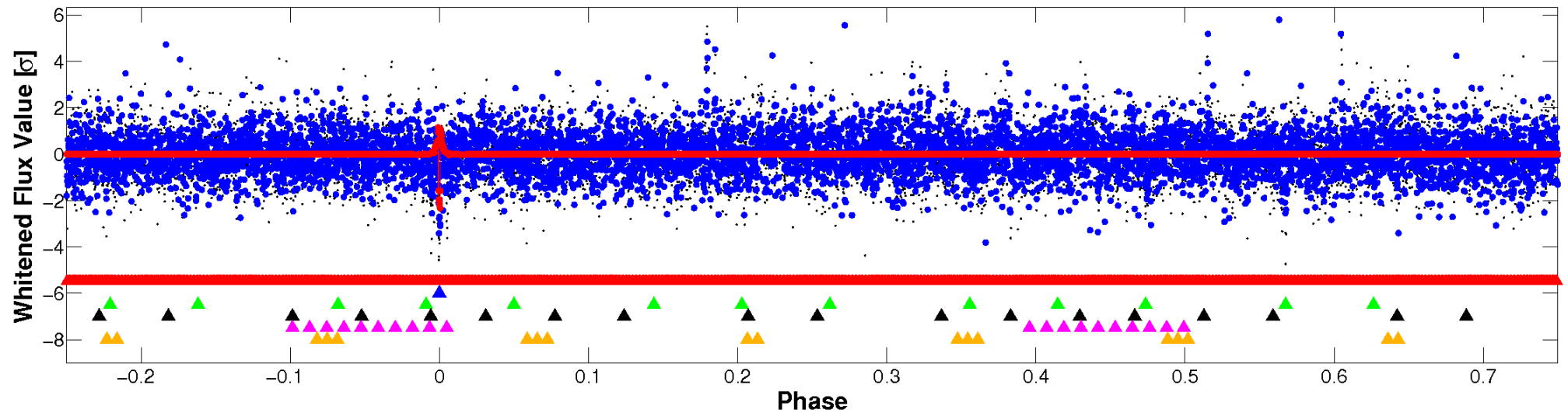


Non-Whitened Vs. Whitened Light Curve

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

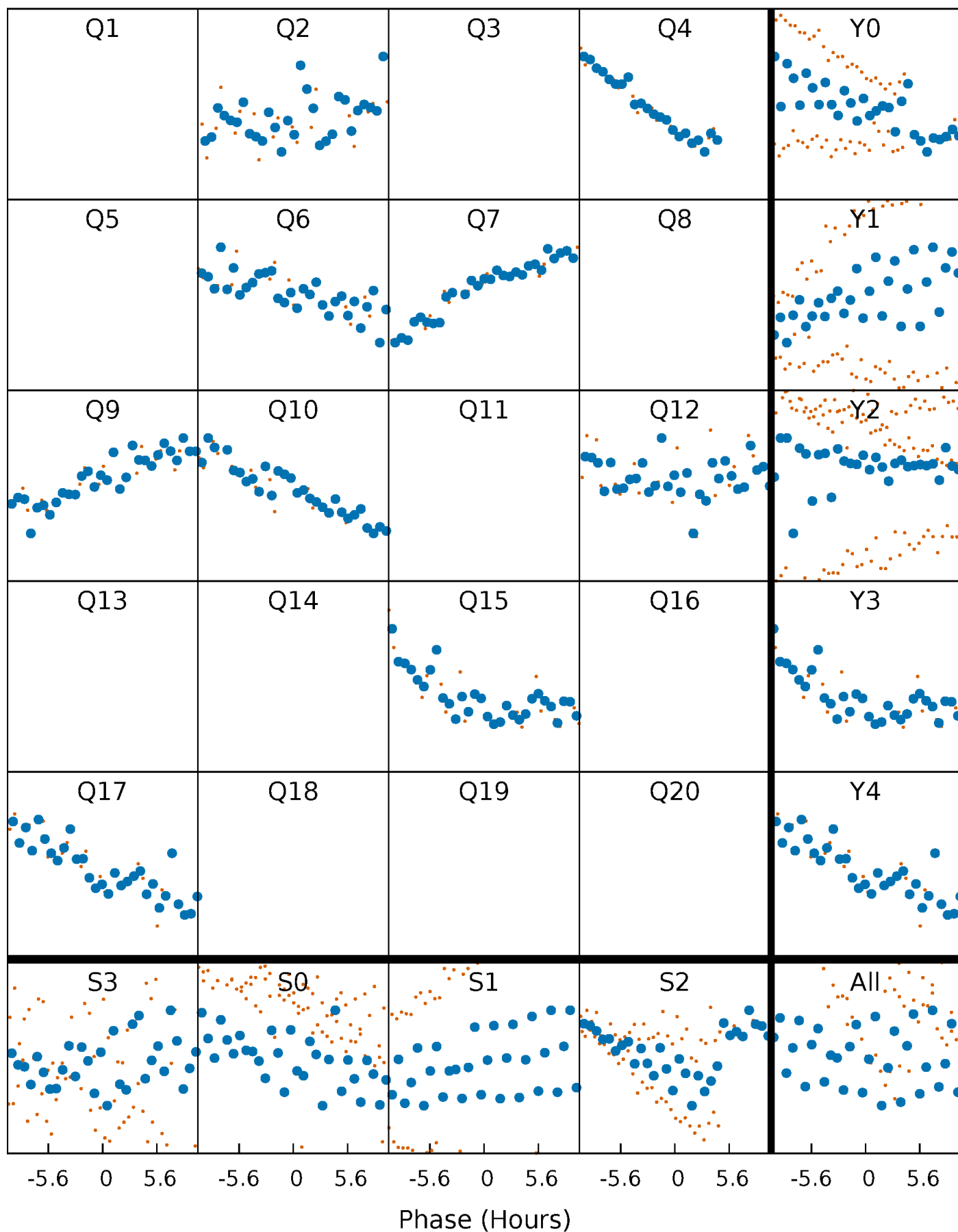


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



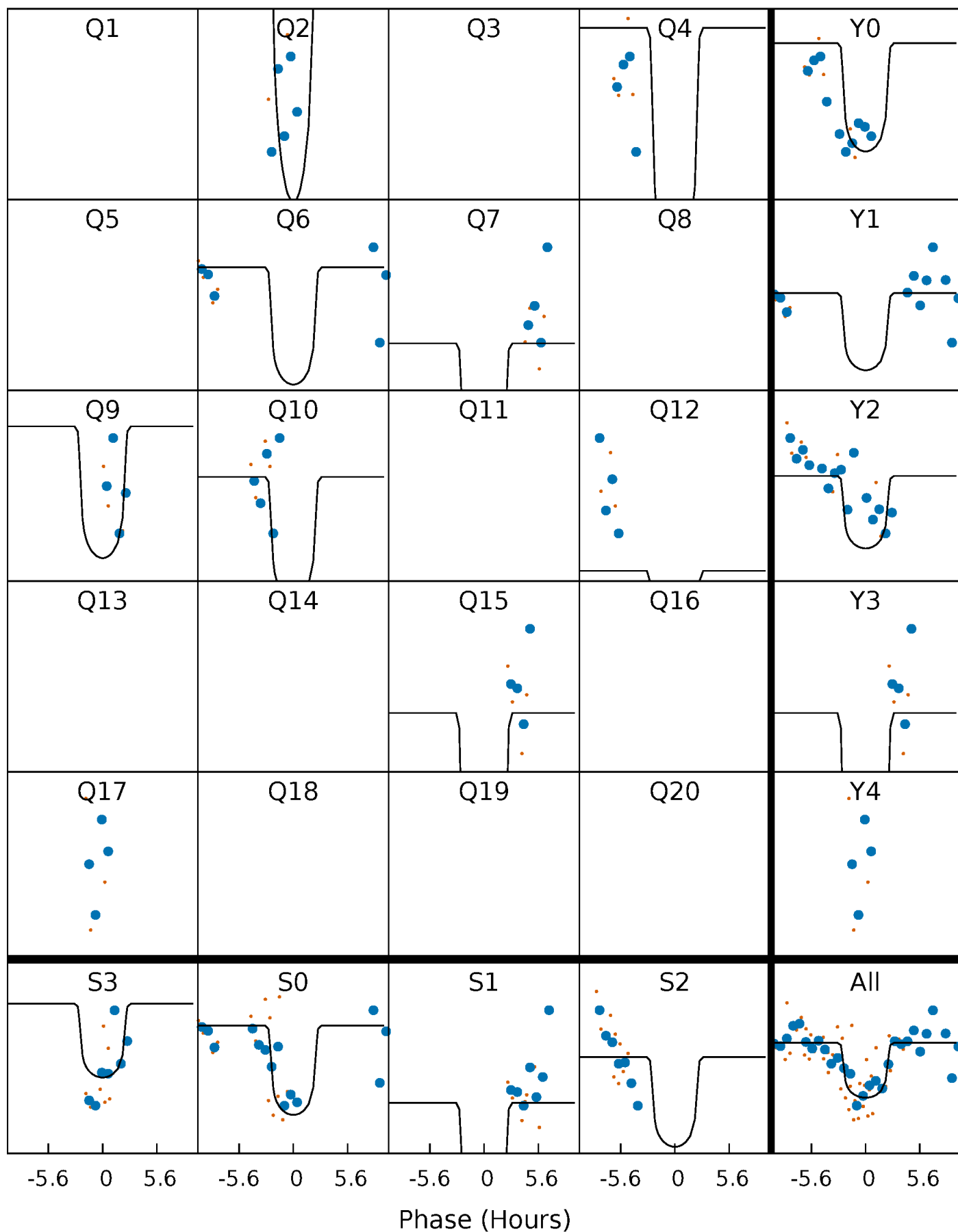
PDC Quarter-Phased Transit Curves

TCE 005219484-02 P=146.148011 Days $T_0=250.503689$ (BKJD)



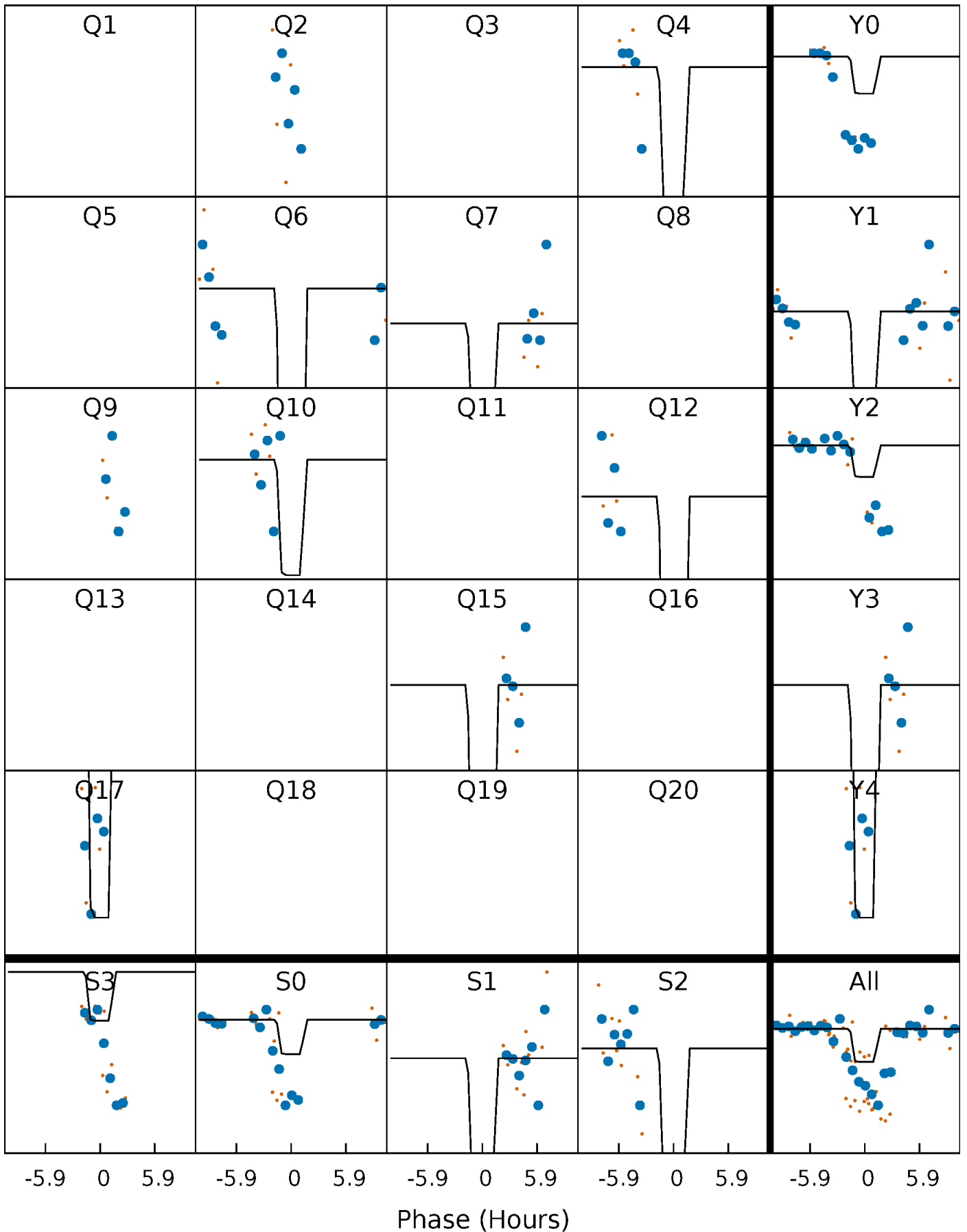
DV Quarter-Phased Transit Curves

TCE 005219484-02 P=146.148011 Days $T_0=250.503689$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

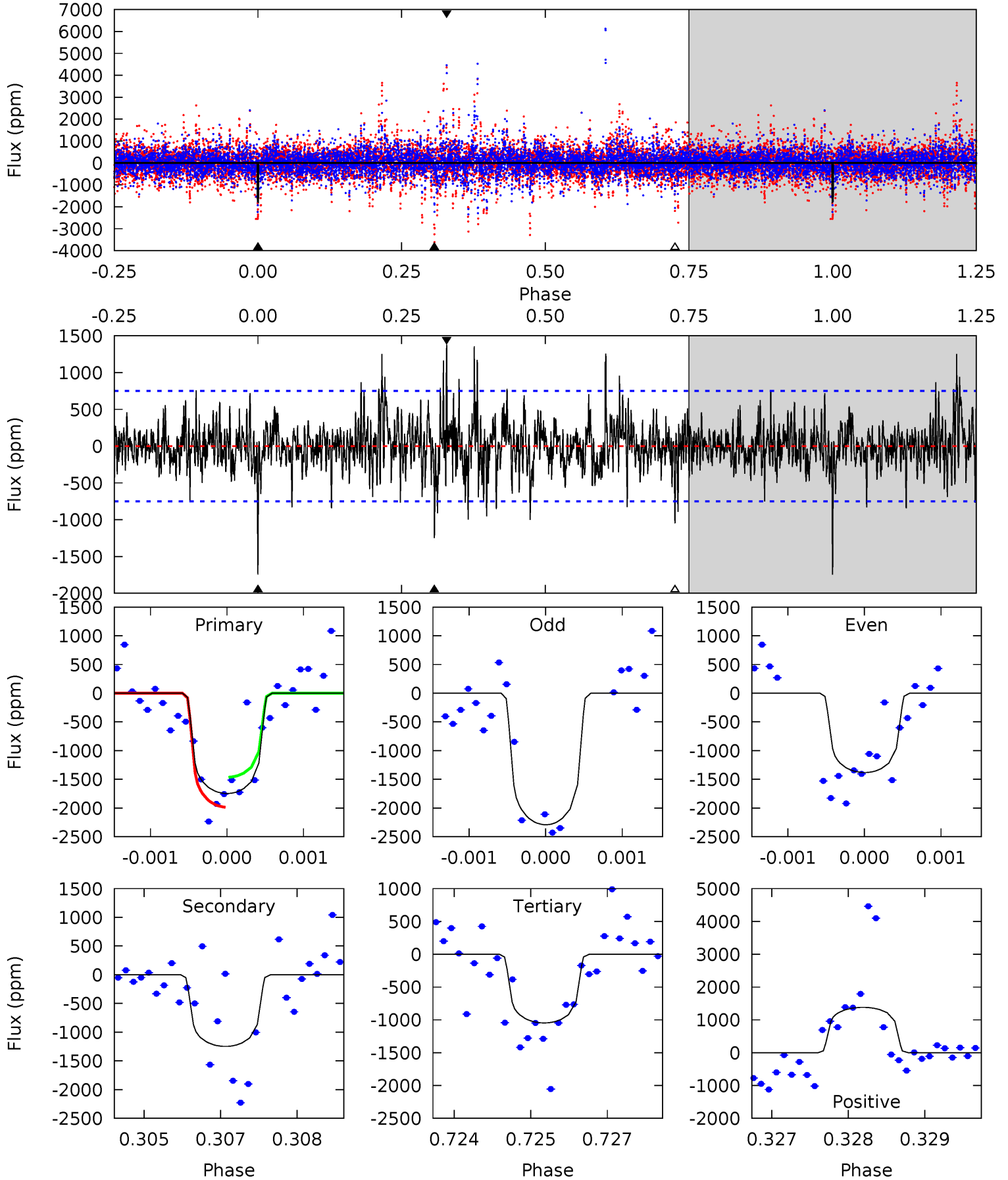
TCE 005219484-02 P=146.151742 Days $T_0=250.481668$ (BKJD)



DV Model-Shift Uniqueness Test

005219484-02, P = 146.148011 Days, E = 104.355678 Days

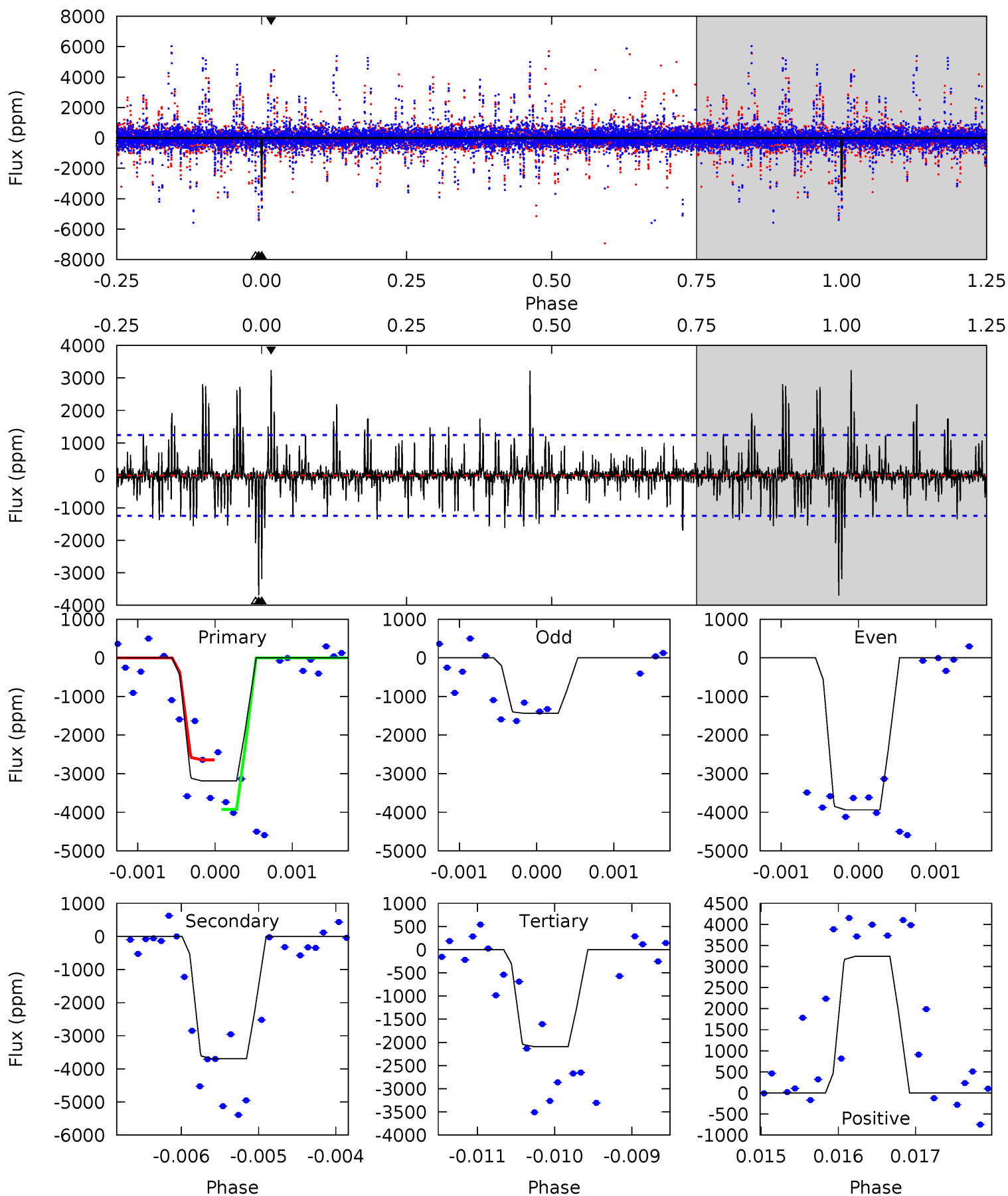
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.6	8.96	7.52	9.92	5.39	3.19	2.00	5.03	2.63	1.45	-0.96	3.02	0.97	0.44	1.87



Alt Model-Shift Uniqueness Test

005219484-02, P = 146.151742 Days, E = 104.329926 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	16.2	9.20	14.3	5.46	3.31	1.86	4.82	-0.23	7.05	2.00	5.25	0.79	0.47	2.80



Stellar Parameters For KIC 005219484

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5623^{+184}_{-167}	$4.606^{+0.052}_{-0.084}$	$-0.900^{+0.300}_{-0.300}$	$0.696^{+0.096}_{-0.052}$	$0.713^{+0.069}_{-0.040}$	$2.980^{+0.703}_{-0.811}$
	+3%/-3%	+1%/-2%	+33%/-33%	+14%/-7%	+10%/-6%	+24%/-27%
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 005219484-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1248 ± 139	$3.15^{+1.79}_{-1.49}$	418^{+18}_{-16}	5255^{+2036}_{-851}	16004^{+42066}_{-9278}
Alt.	-3697 ± 228	$3.21^{+1.81}_{-1.74}$	418^{+17}_{-17}	6846^{+4387}_{-1414}	$47050^{+174421}_{-28043}$

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 $A_{obs} \gg 1.0$

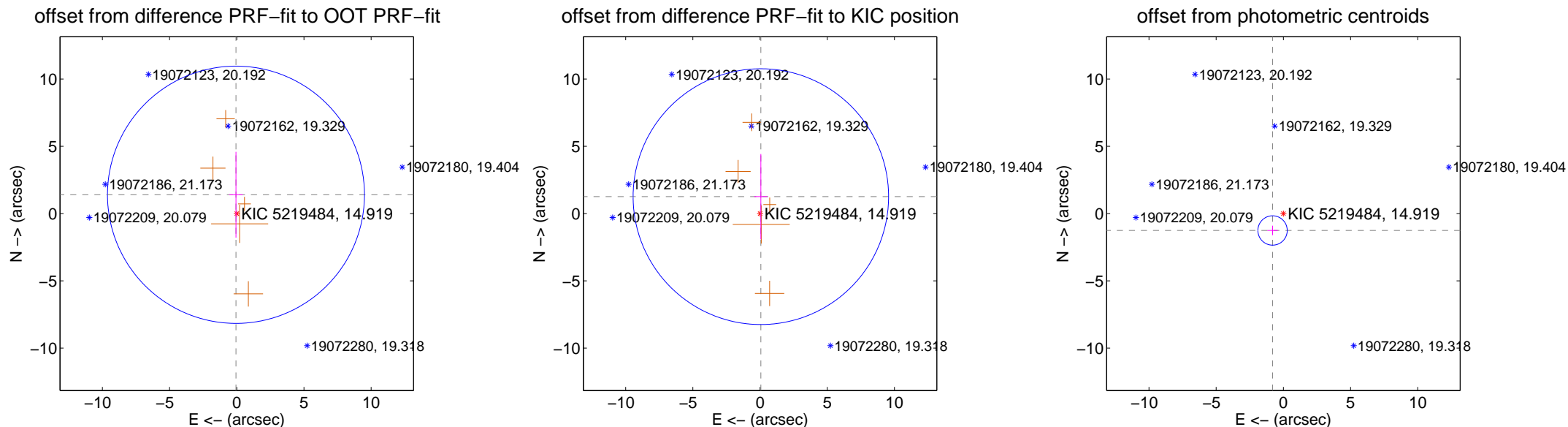
DV Centroid Data

Supplemental centroid analysis for 005219484-02. Kepler magnitude: 14.92. Transit SNR 8.80

There are 0 quarters with good PRF difference image offsets

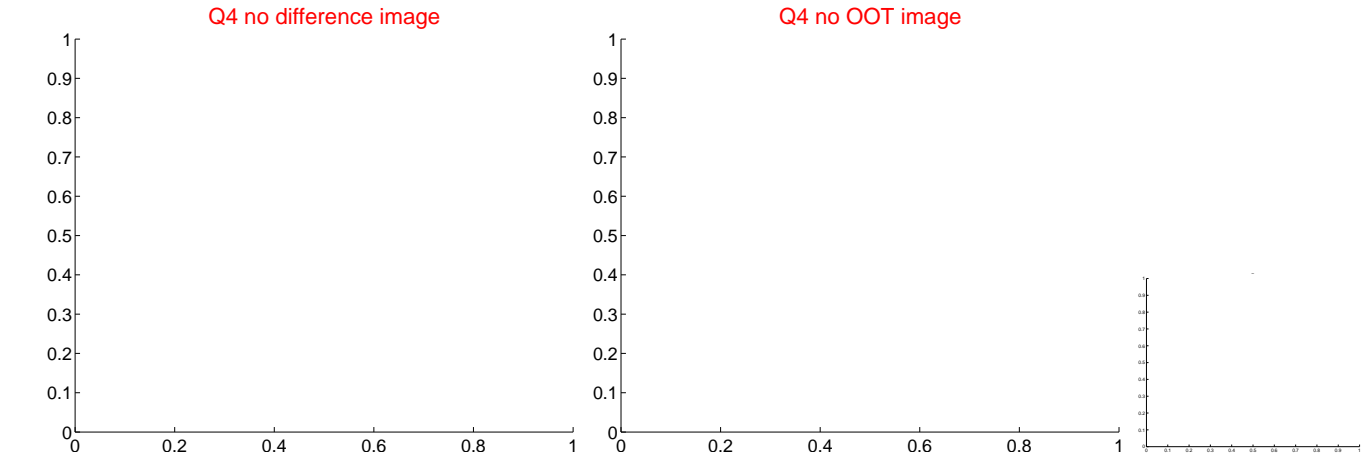
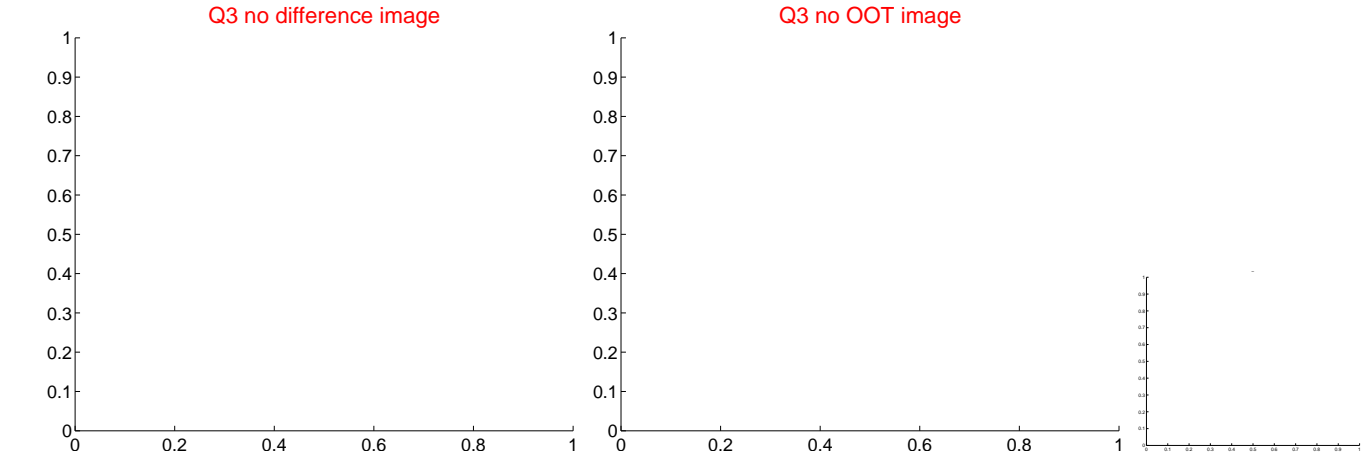
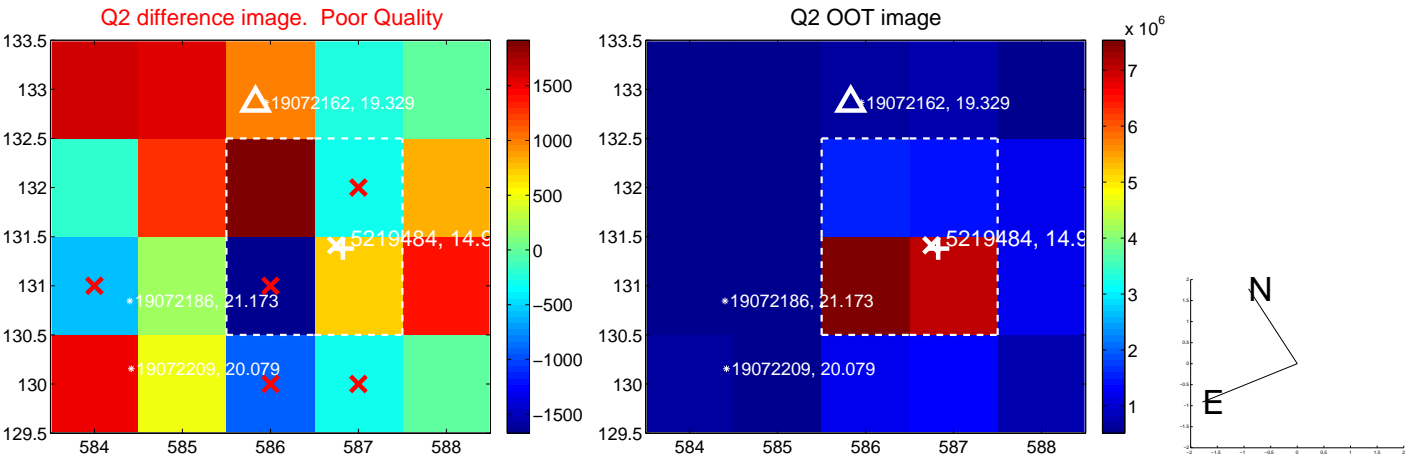
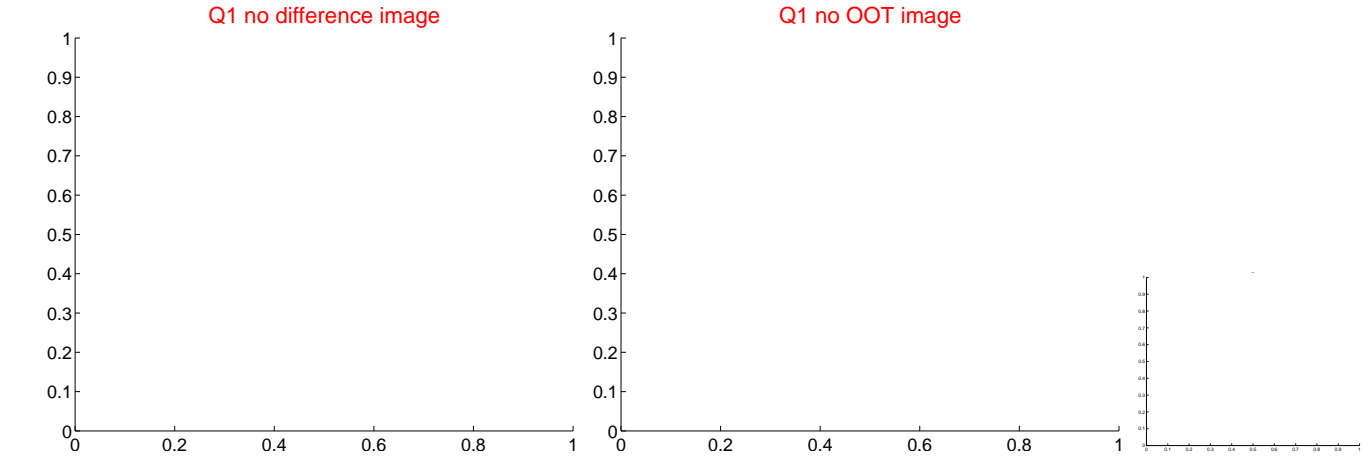
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.399 ± 3.187	0.44	0.059 ± 0.507	1.398 ± 3.190
PRF-fit source offset from KIC position	1.259 ± 3.169	0.40	-0.058 ± 0.493	1.258 ± 3.172
photometric centroid source offset	1.49 ± 0.36	4.10	0.80 ± 0.39	-1.26 ± 0.35

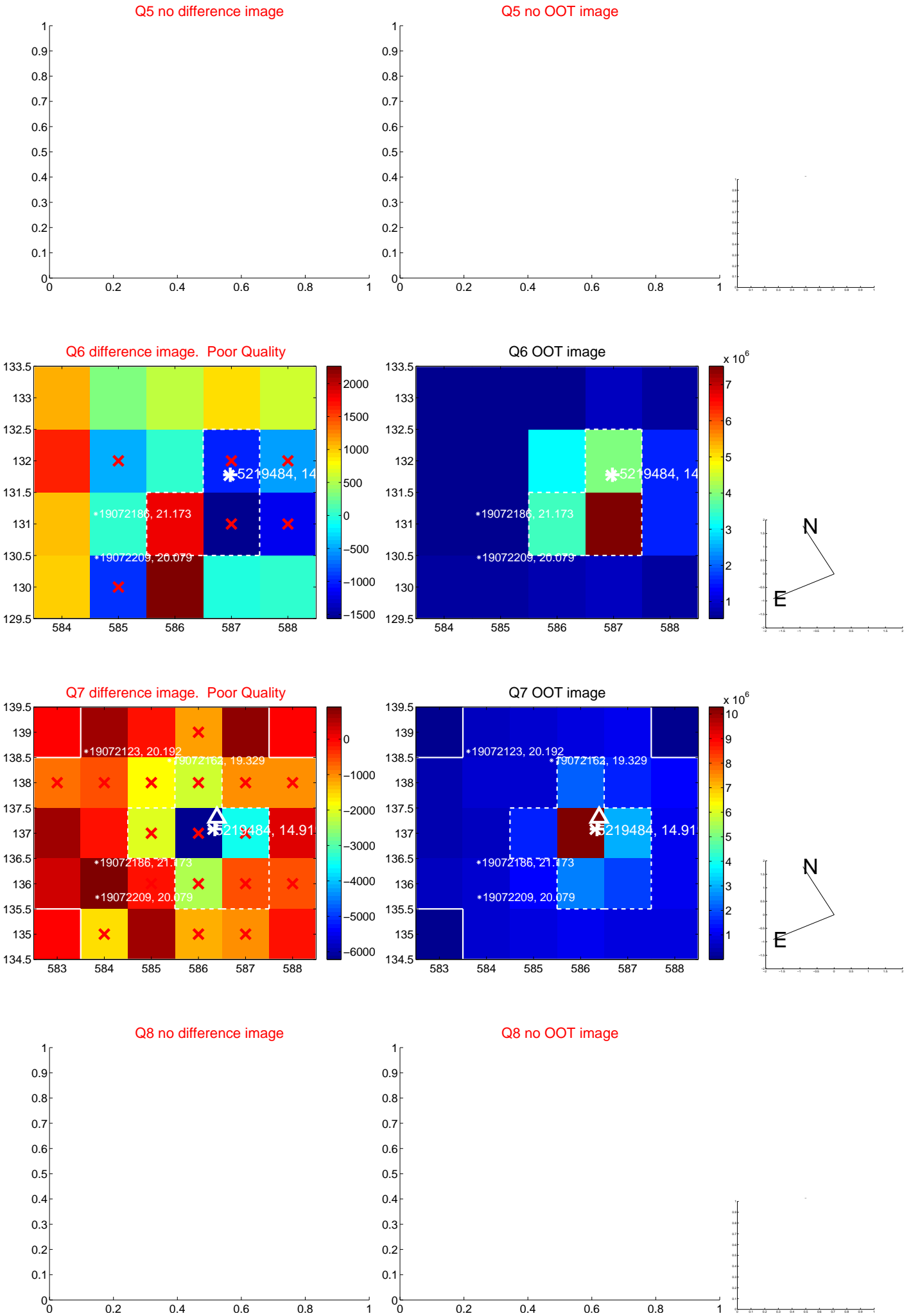


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

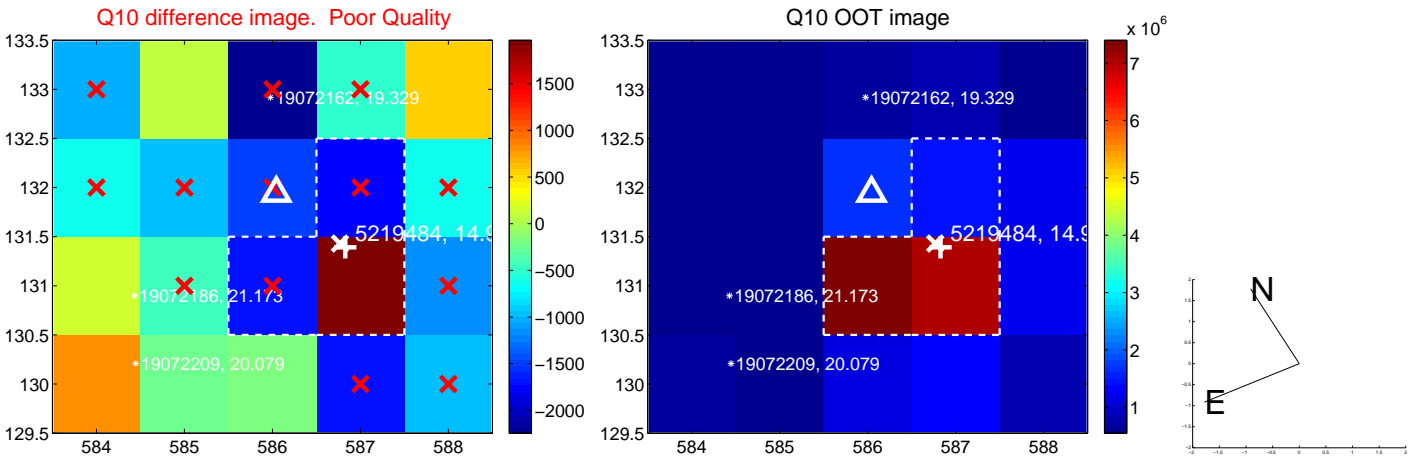
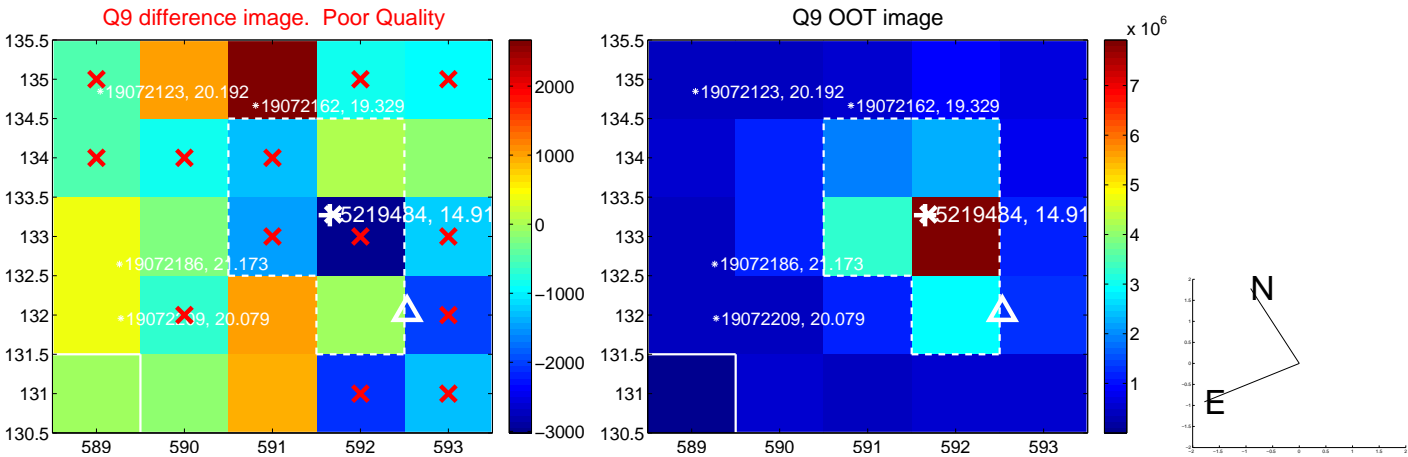
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



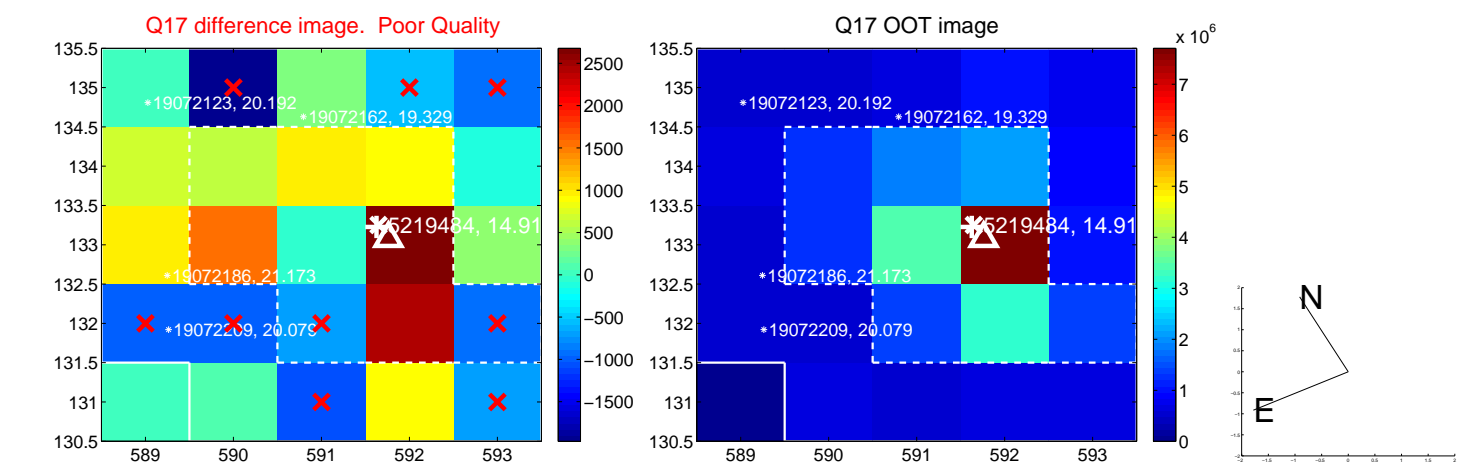
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



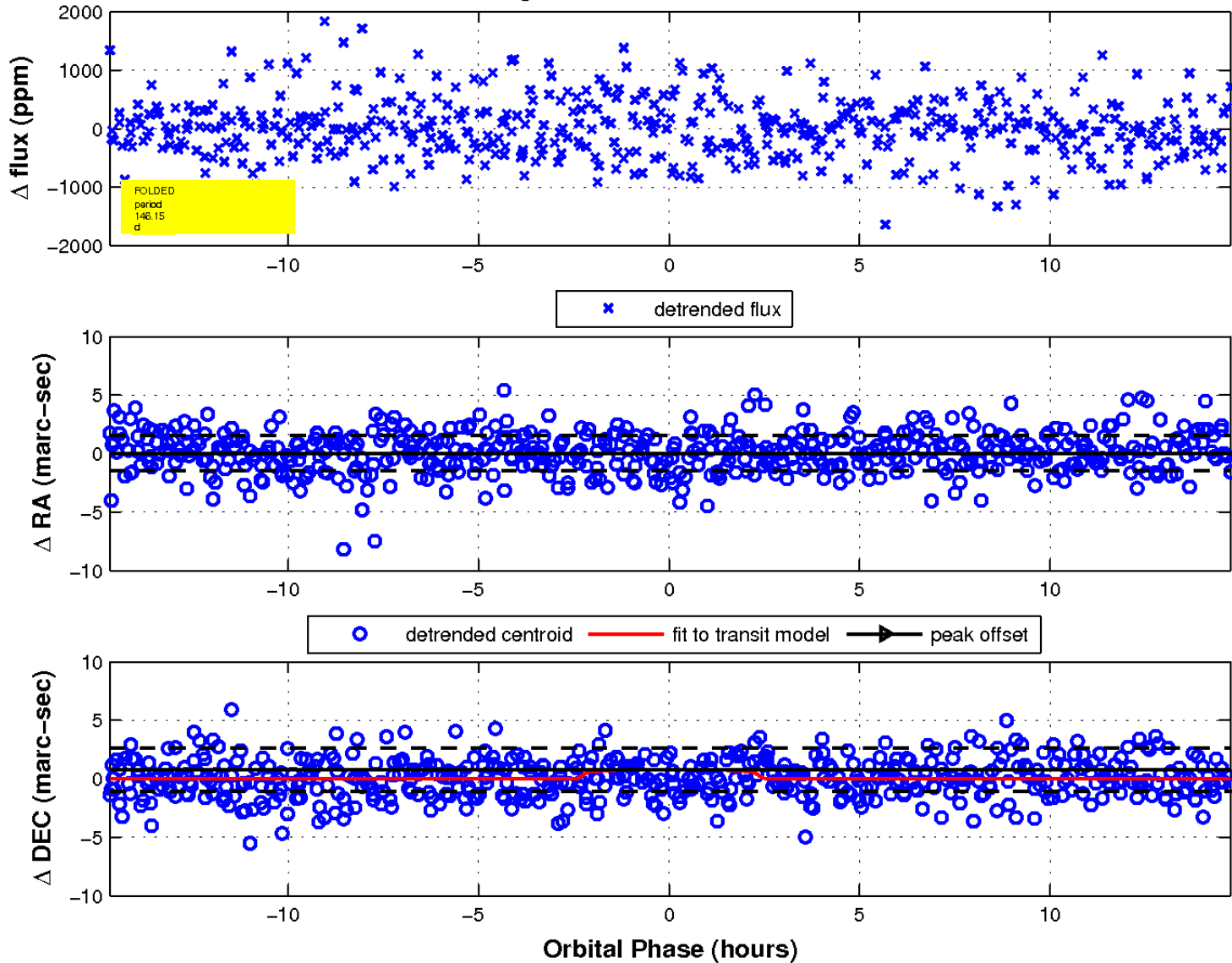
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

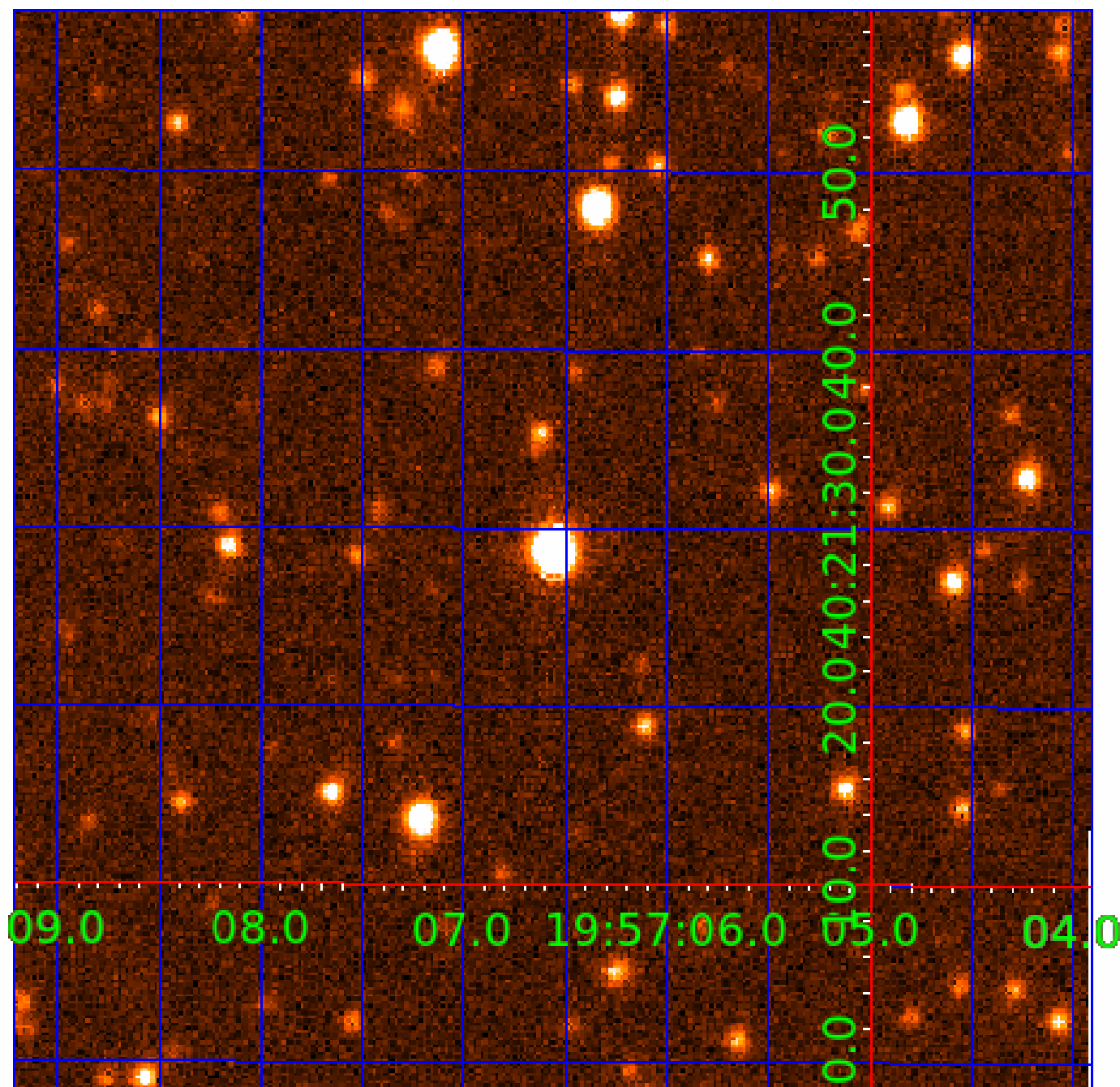


fluxWeightedCentroids, Planet 2 of 6



UKIRT Image

Declination



KIC 005219484

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})
005219484-01	OBS	No	0.784817	131.564070	42.0	5.016	7.9	8.1	0.70	5623	0.46	1959.51
005219484-02	OBS	No	146.148011	250.503689	1820.0	4.921	12.6	8.8	0.70	5623	3.06	1.84
005219484-03	OBS	No	115.195196	173.565061	1413.3	2.527	9.7	6.3	0.70	5623	2.61	2.53
005219484-04	OBS	No	82.545007	167.117071	1187.8	5.825	9.7	7.3	0.70	5623	2.51	3.95
005219484-06	OBS	No	83.371967	157.122305	797.7	3.712	8.1	5.2	0.70	5623	2.06	3.90

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005219484-01	OBS	FP	0.00	1	0	1	0	LPP_DV—MOD_NONUNIQ_DV—CENT_UNRESOLVED_OFFSET
005219484-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005219484-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005219484-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
005219484-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

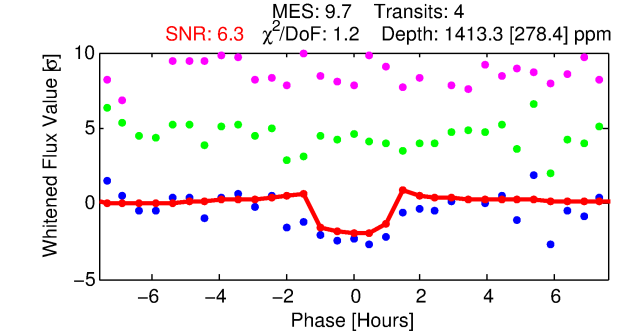
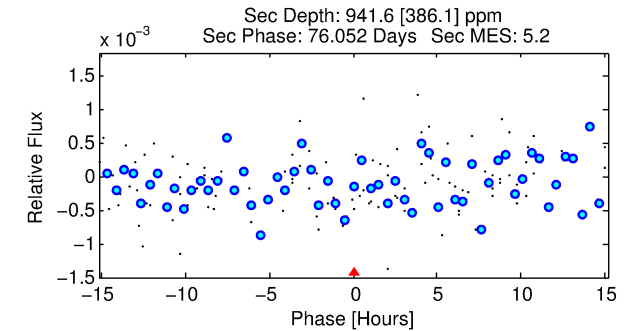
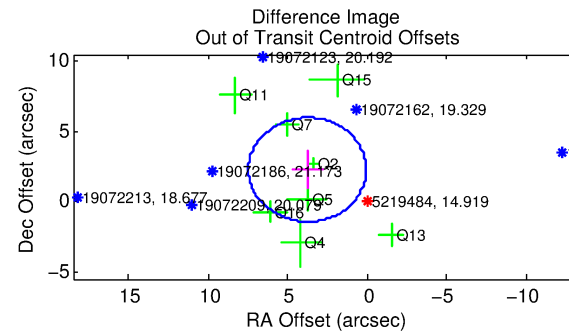
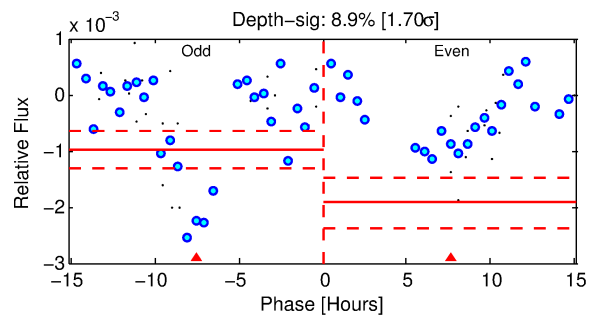
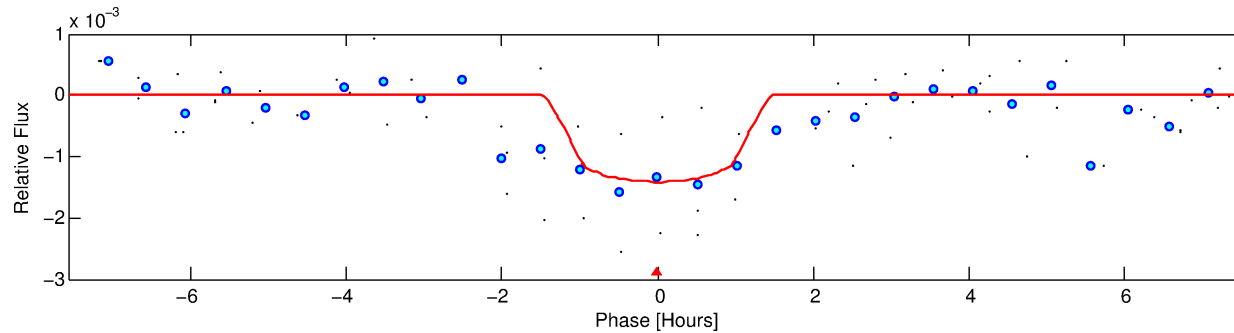
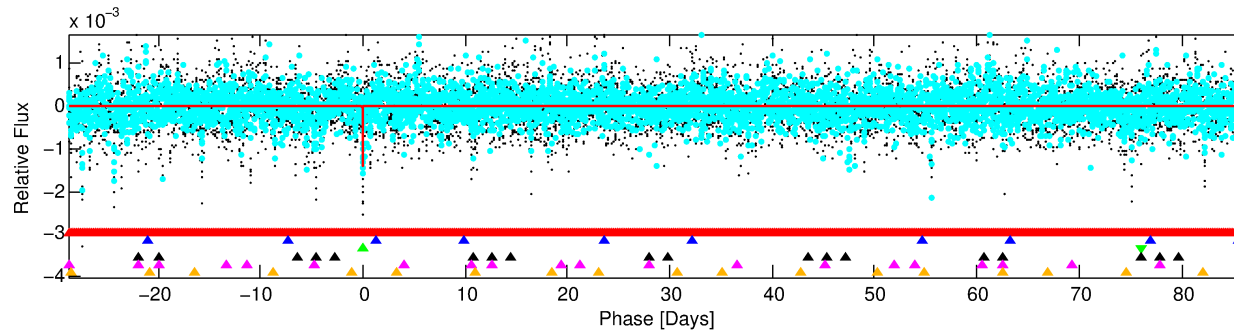
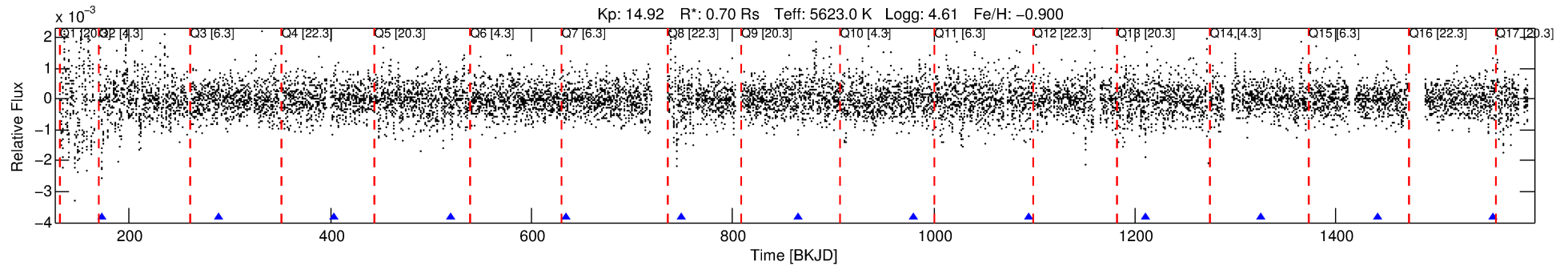
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005219484-03

No Significant Match Found

DV One-Page Summary

KIC: 5219484 Candidate: 3 of 6 Period: 115.195 d



DV Fit Results:

Period = 115.19520 [0.00140] d
Epoch = 173.5651 [0.0079] BKJD
Rp/R* = 0.0344 [0.1002]
a/R* = 360.11 [5015.34]
b = 0.02 [671.18]
Seff = 2.53 [0.52]
Teq = 322 [17] K
Rp = 2.61 [7.62] Re
a = 0.4141 [0.0465] AU
Ag = 12998.64 [75897.16] [0.17 σ]
Teffp = 5310 [7749] K [0.64 σ]

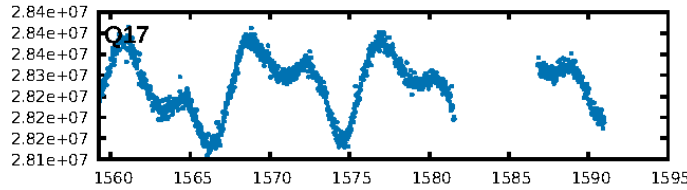
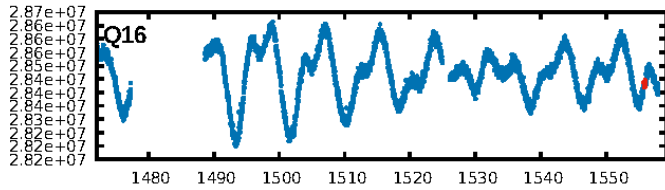
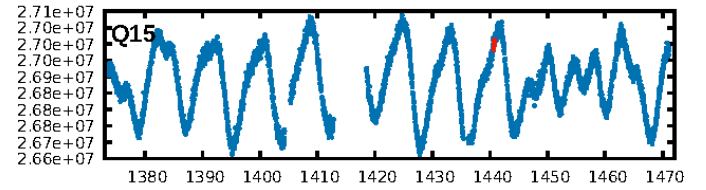
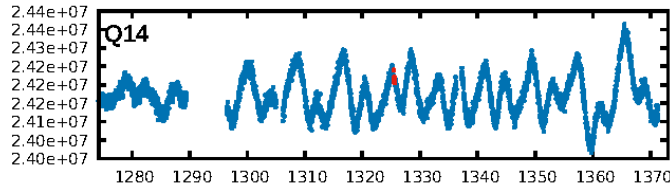
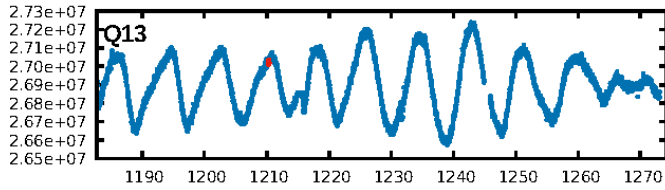
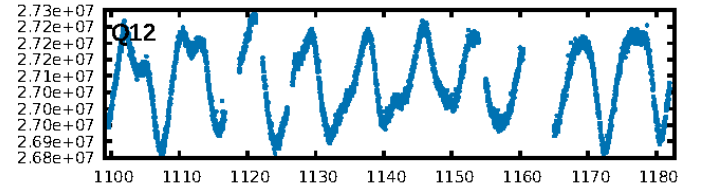
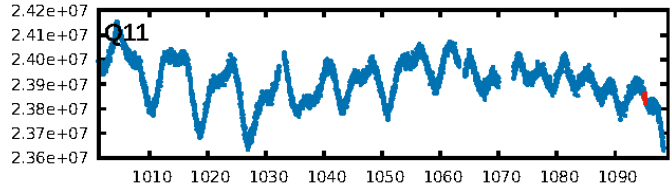
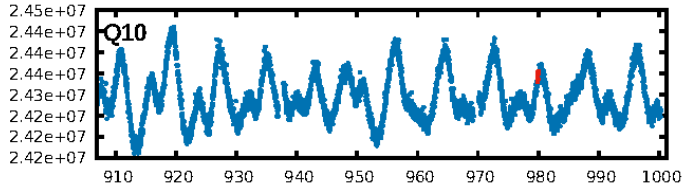
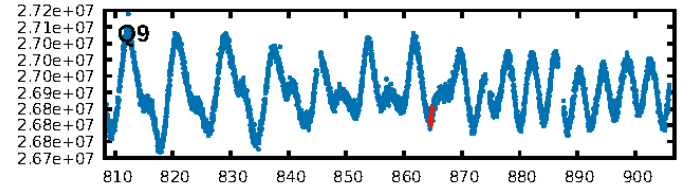
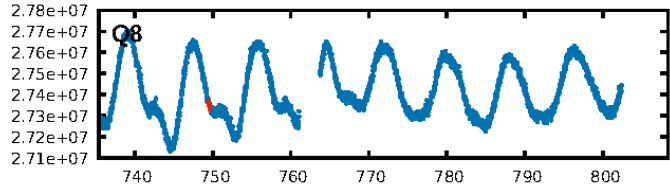
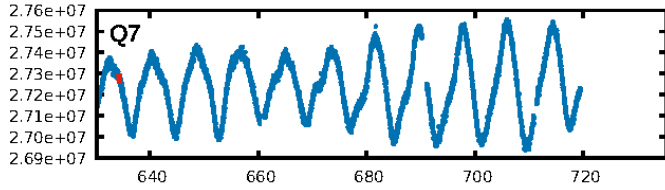
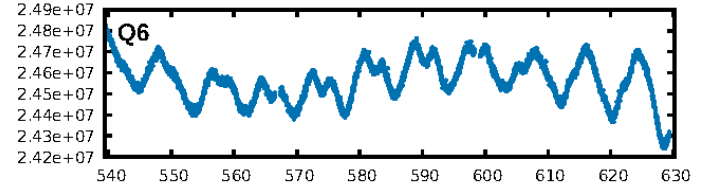
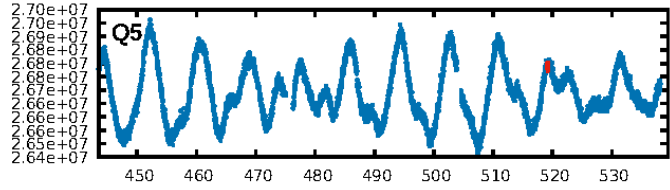
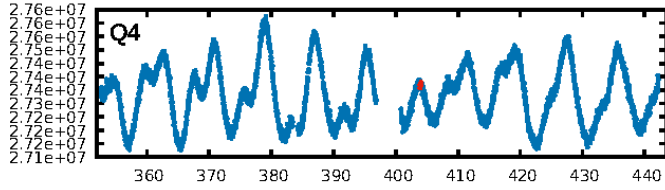
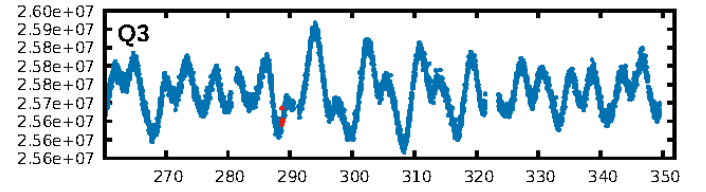
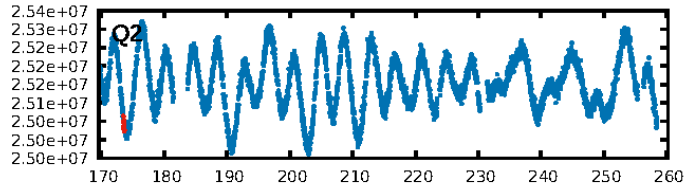
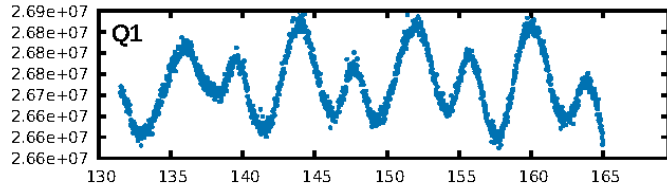
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [170.08 σ]
LongPeriod-sig: 100.0% [134.29 σ]
ModelChiSquare2-sig: 1.4%
ModelChiSquareGof-sig: 90.8%
Bootstrap-pfa: 1.30e-14
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -47.74
Centroid-sig: 98.5%
Centroid-so: 1.191 arcsec [2.34 σ]
OotOffset-rm: 4.411 arcsec [3.57 σ]
KicOffset-rm: 4.282 arcsec [3.55 σ]
OotOffset-st: 1/3/2/2 [8]
KicOffset-st: 1/3/2/2 [8]
DiffImageQuality-fgm: 0.00 [0/8]
DiffImageOverlap-fno: 0.00 [0/13]

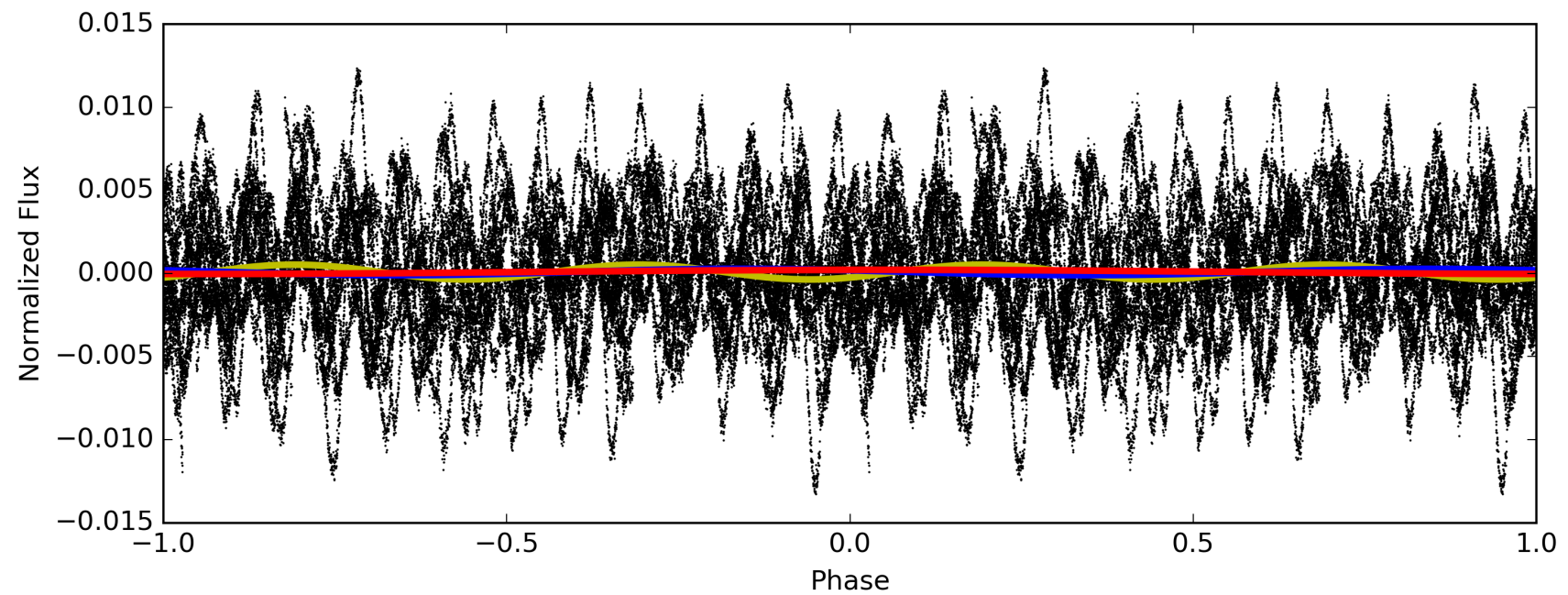
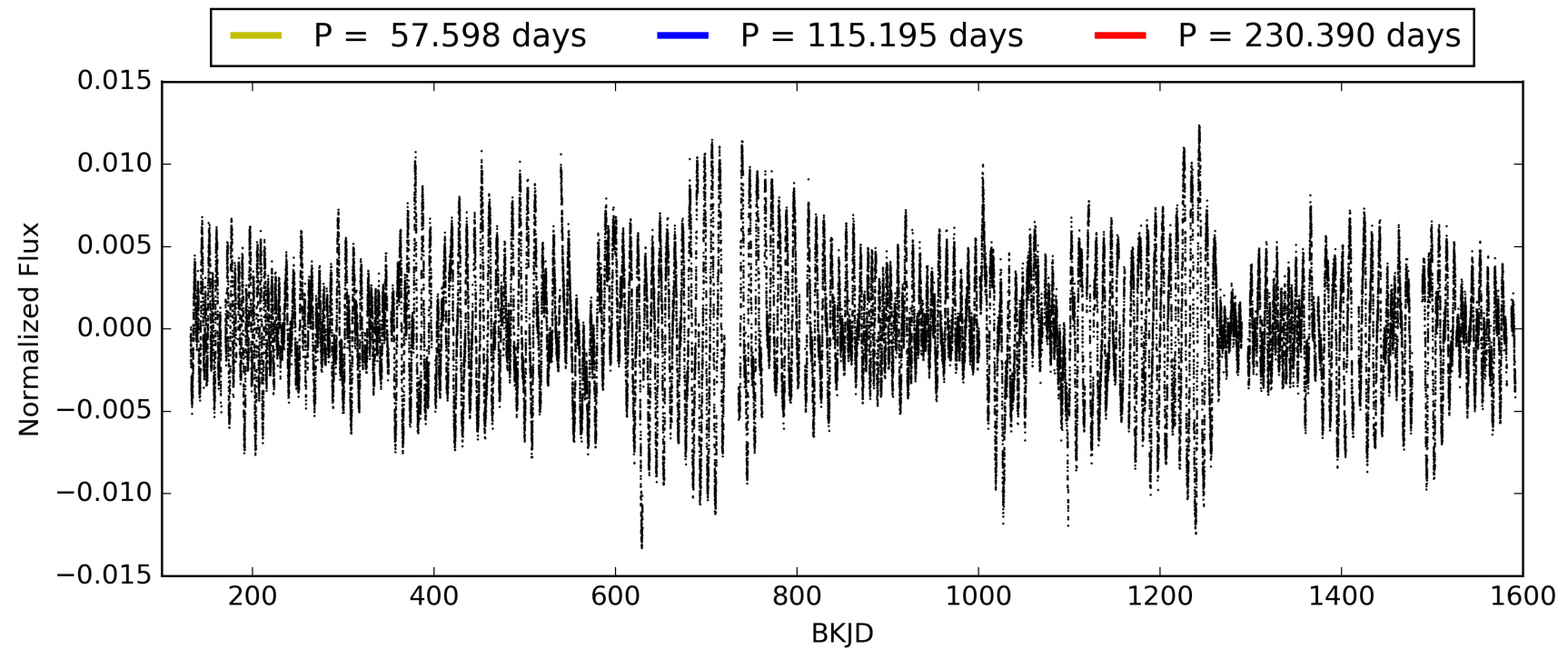
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 08:23:04 Z

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

TCE 005219484-03, PDC Light Curves

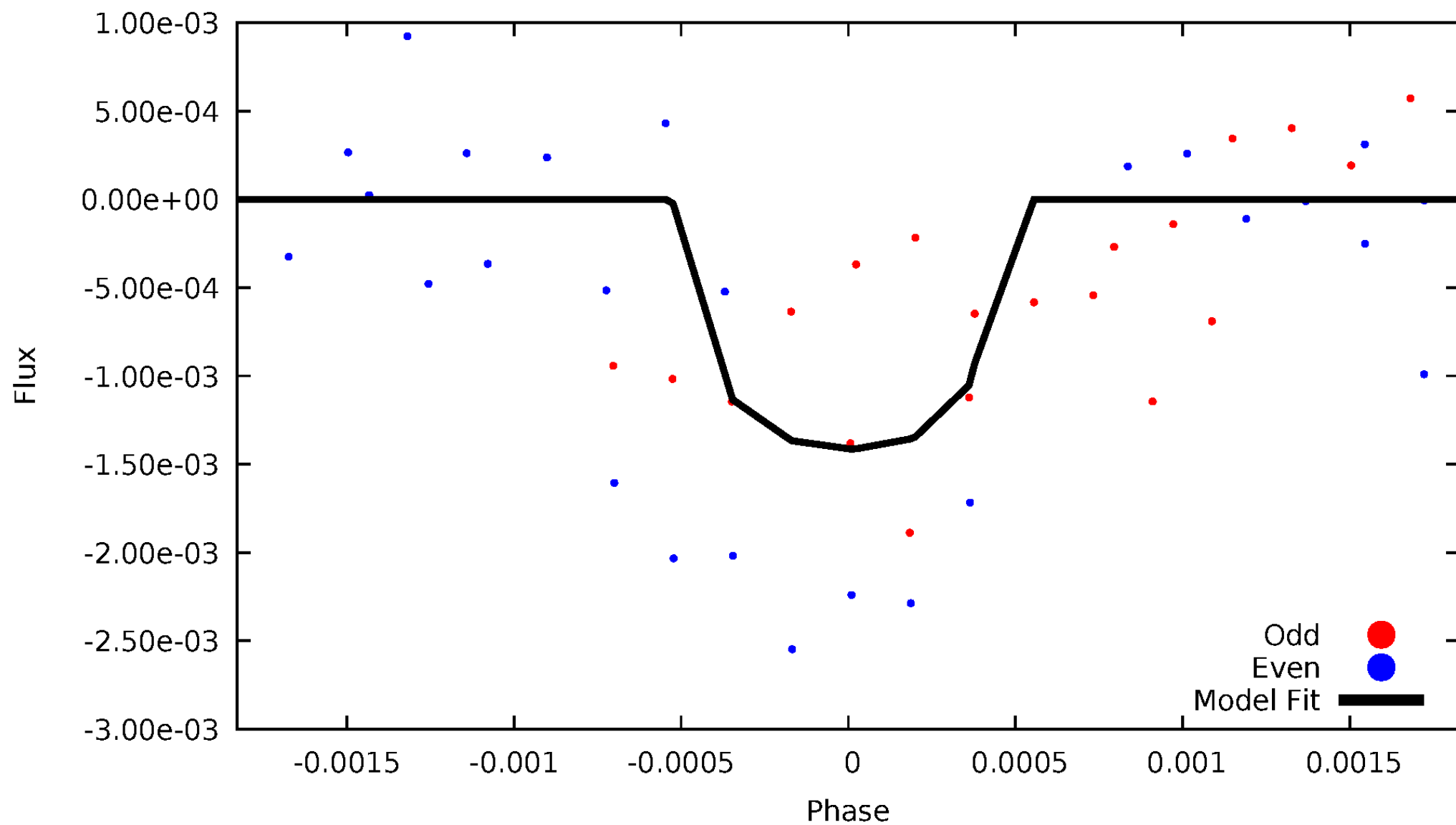


TCE 005219484-03



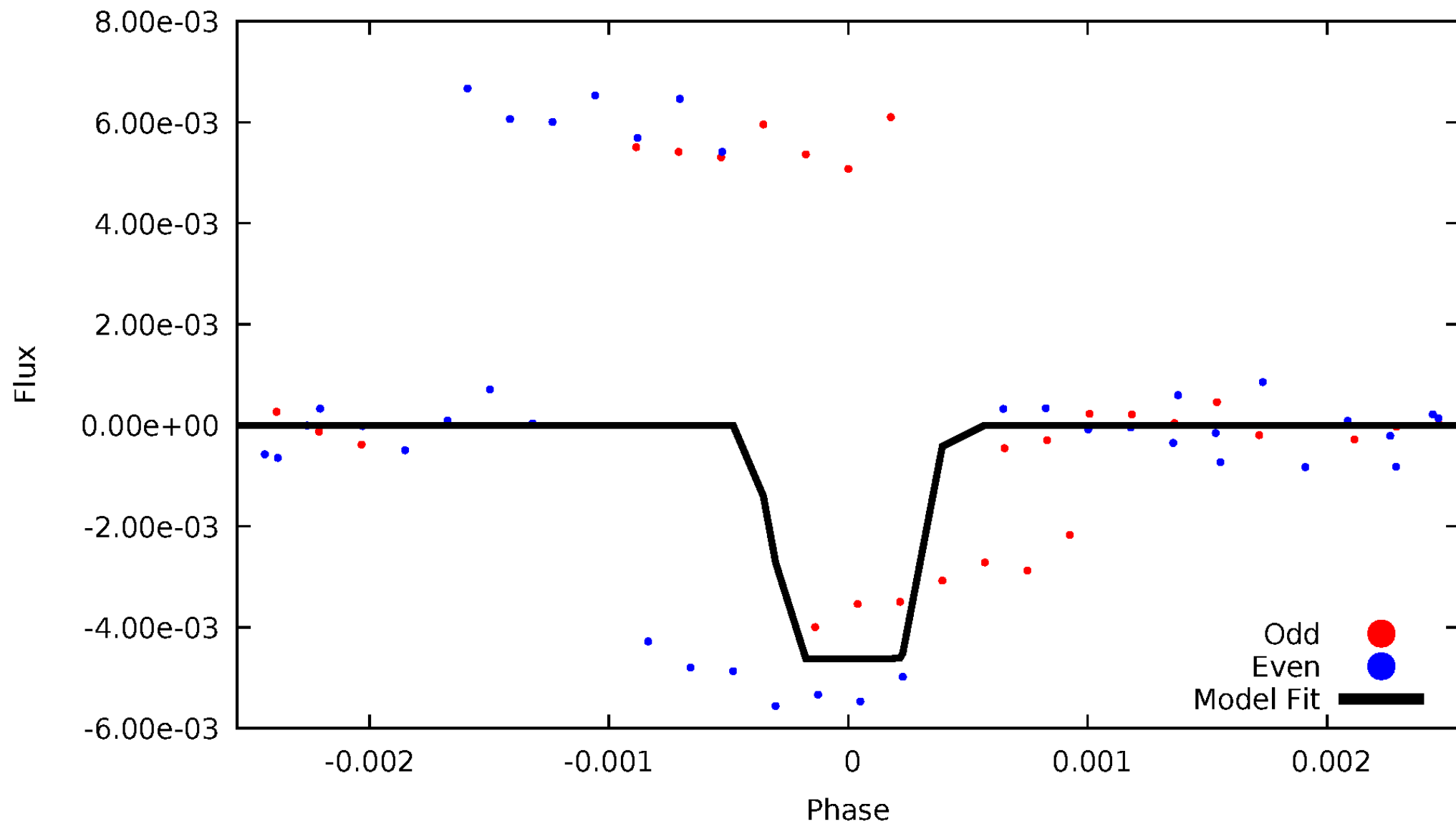
DV Odd/Even

TCE 005219484-03



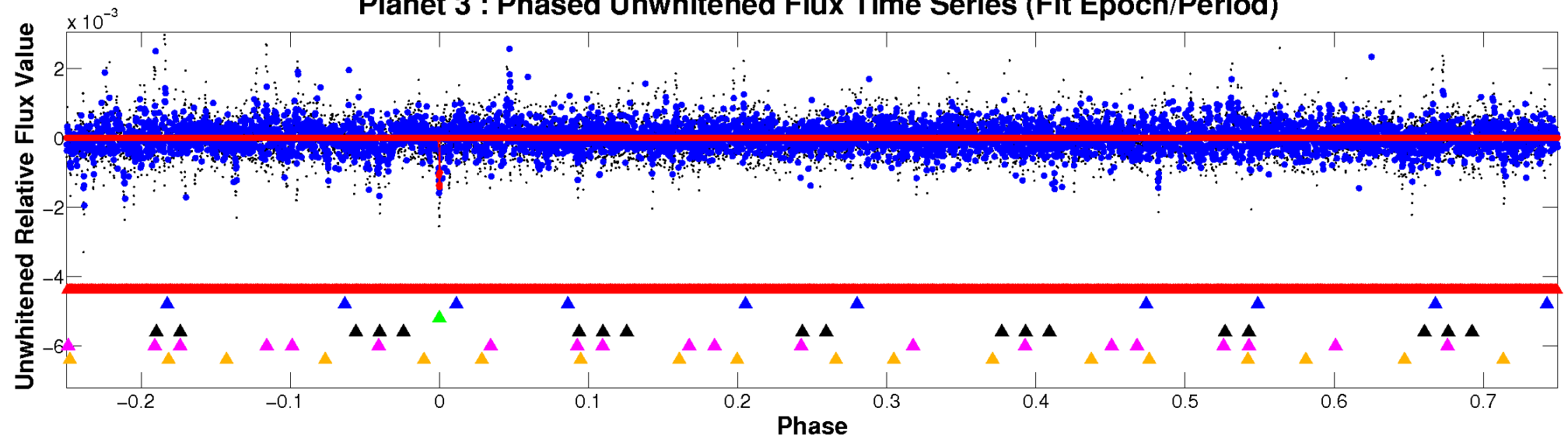
ALT Odd/Even

TCE 005219484-03

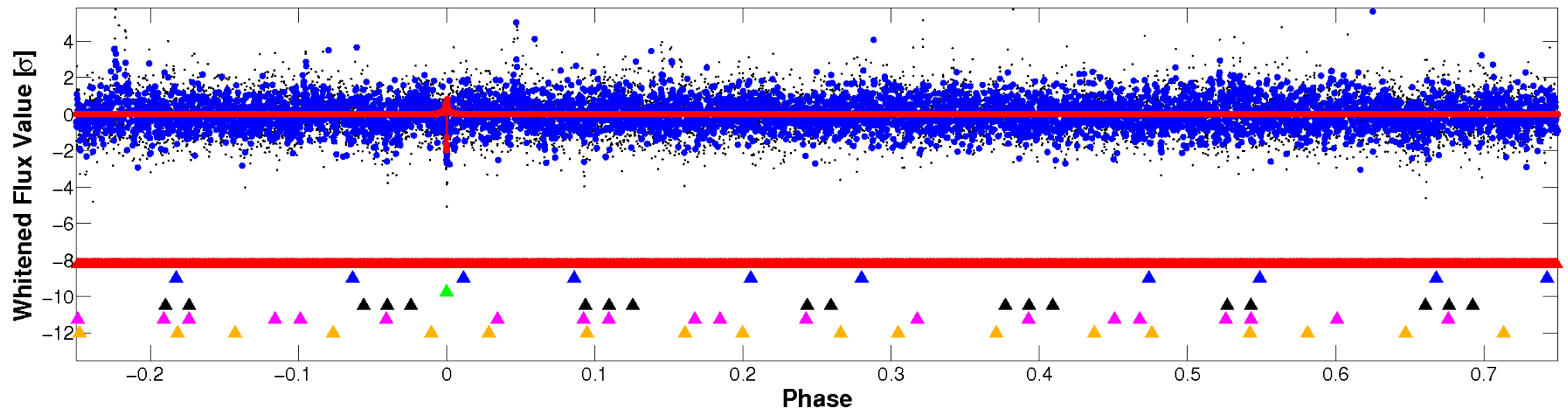


Non-Whitened Vs. Whitened Light Curve

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

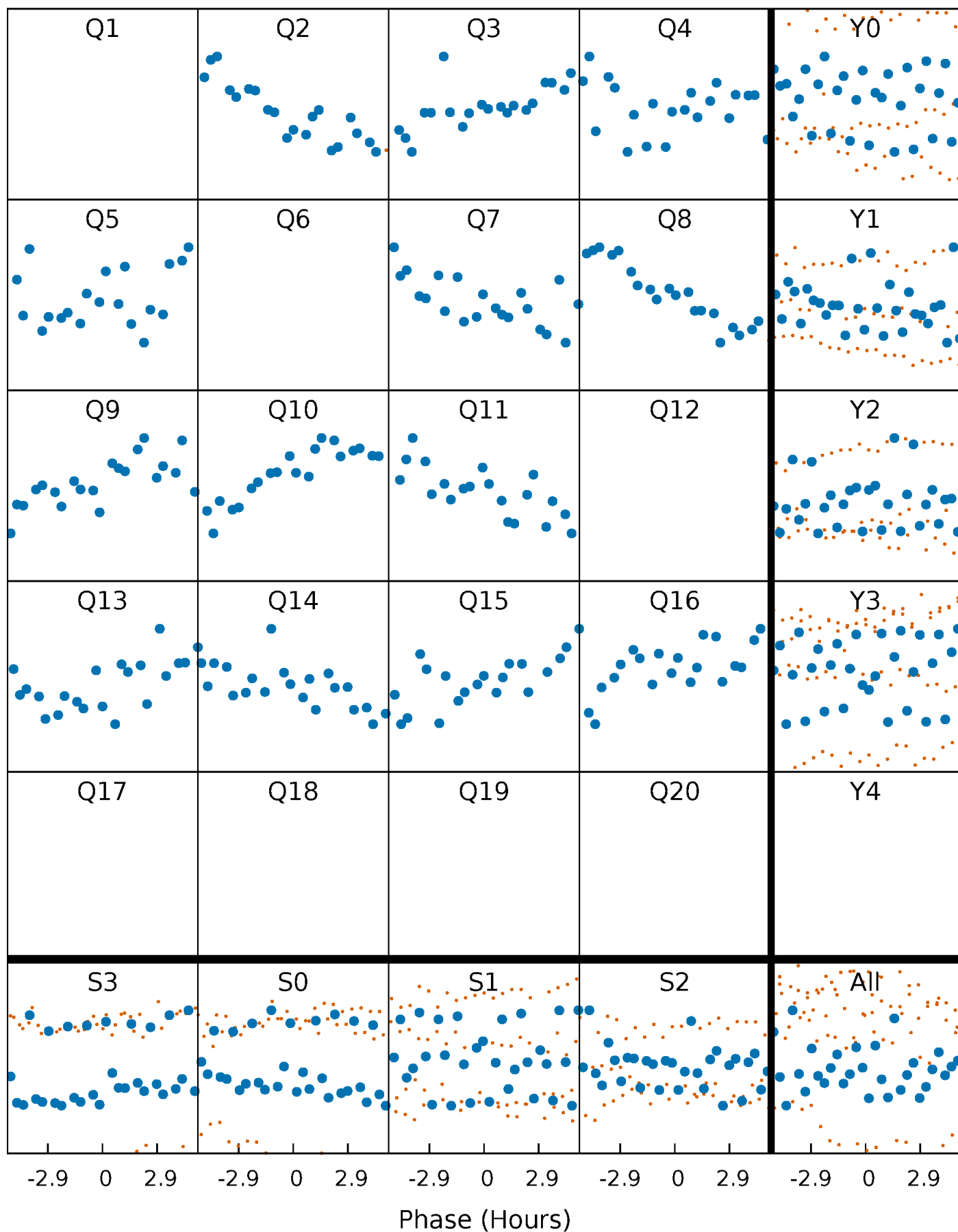


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



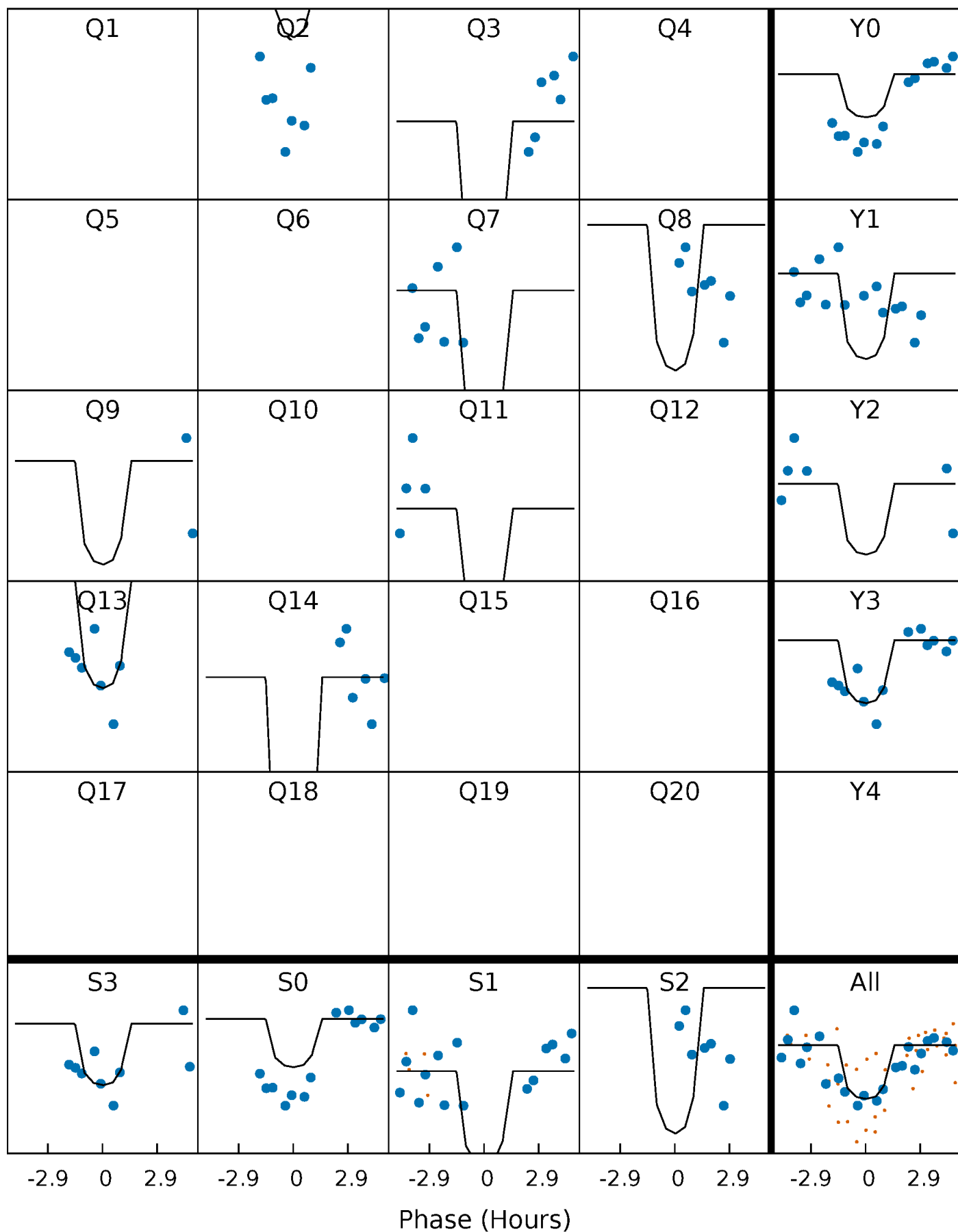
PDC Quarter-Phased Transit Curves

TCE 005219484-03 P=115.195196 Days $T_0=173.565061$ (BKJD)



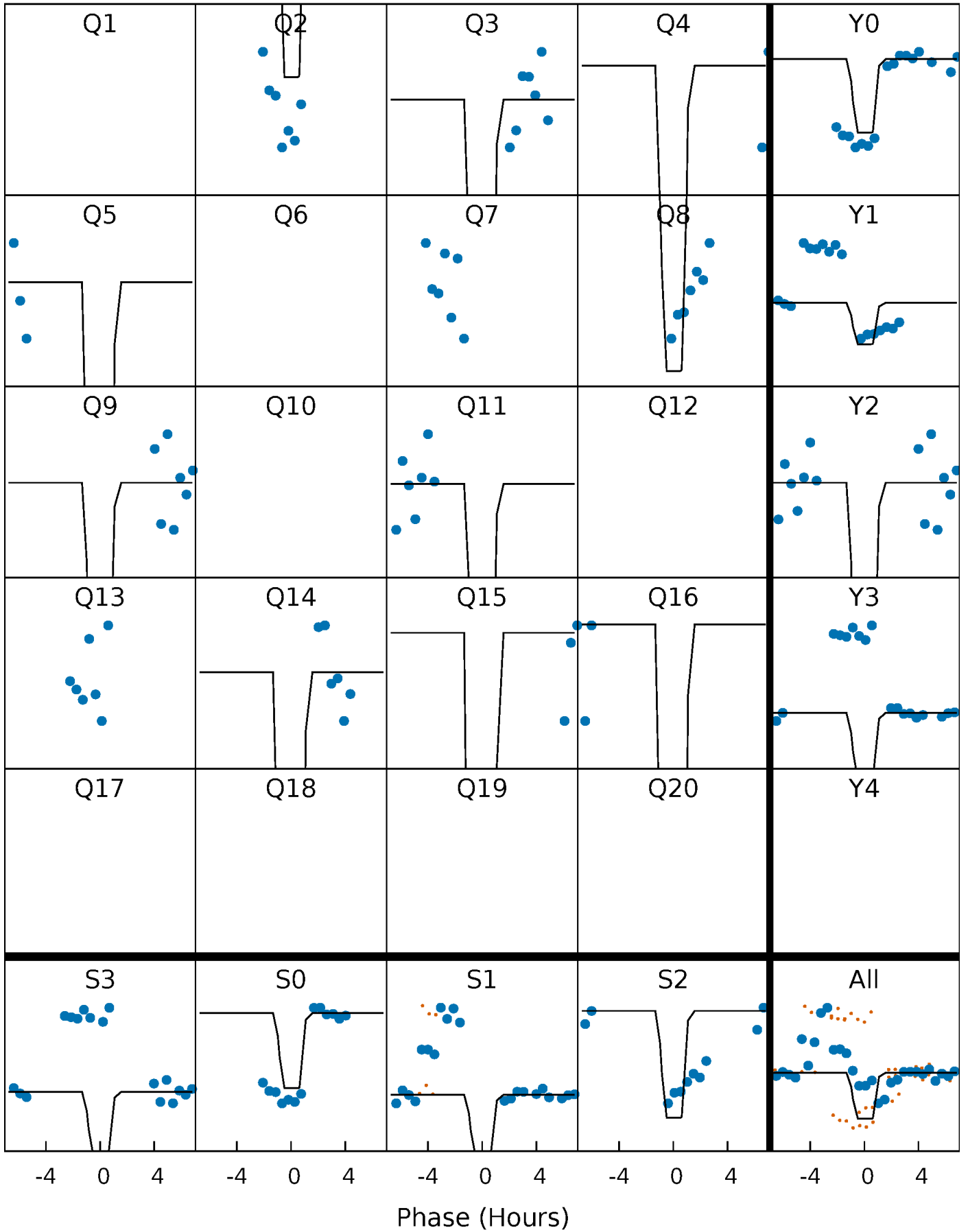
DV Quarter-Phased Transit Curves

TCE 005219484-03 P=115.195196 Days $T_0=173.565061$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

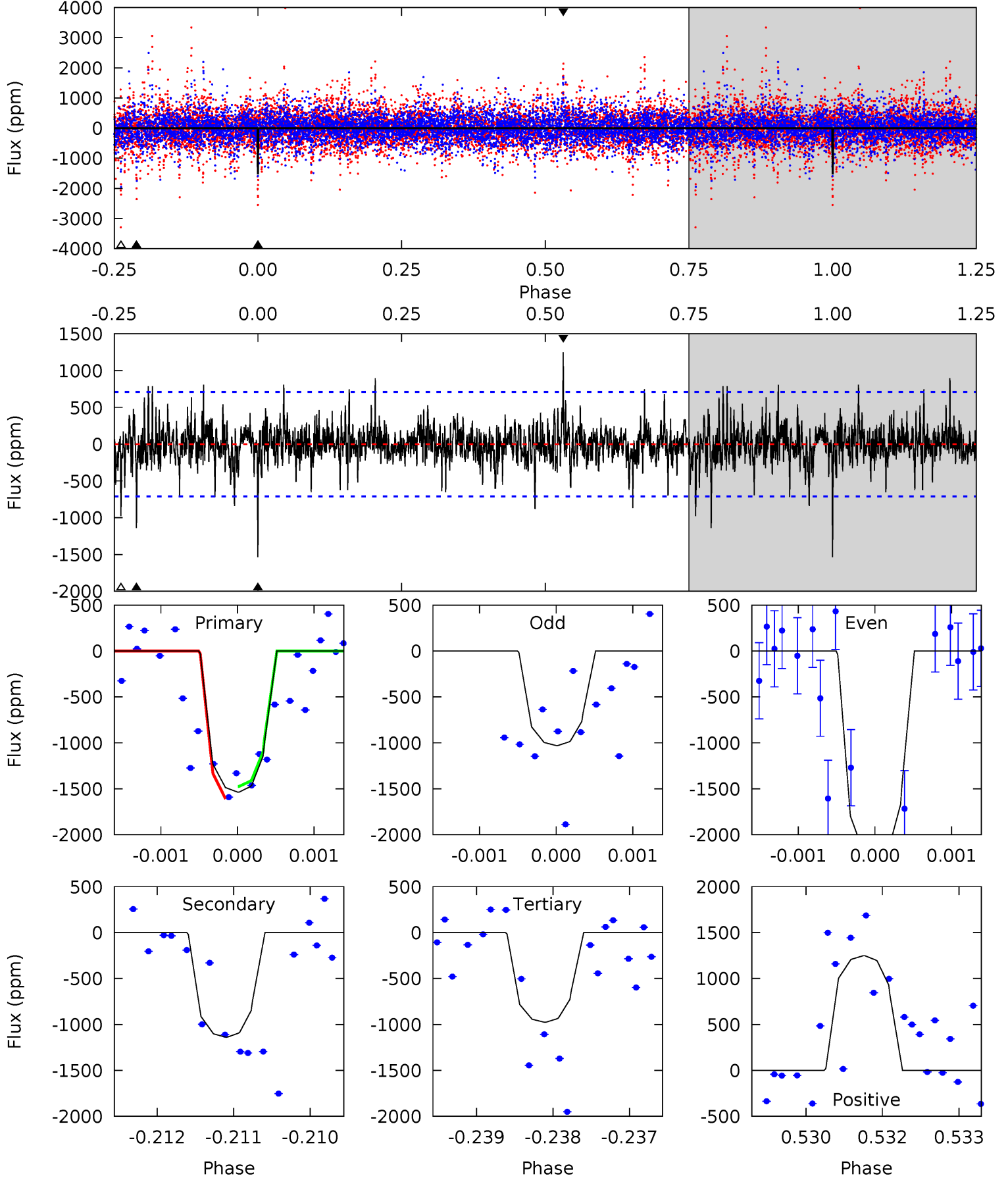
TCE 005219484-03 P=115.195794 Days $T_0=173.580788$ (BKJD)



DV Model-Shift Uniqueness Test

005219484-03, P = 115.195196 Days, E = 58.369865 Days

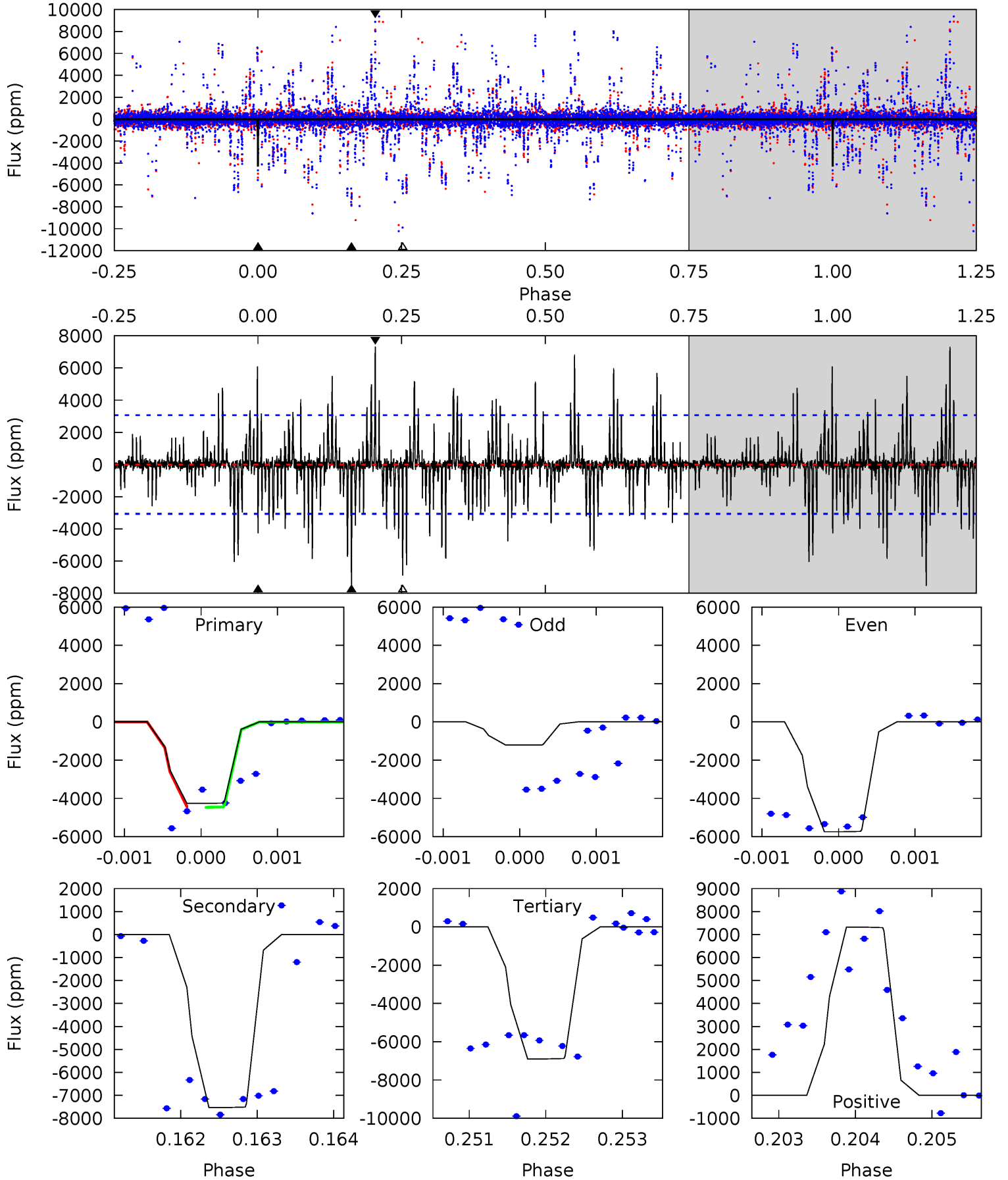
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.8	8.74	7.49	9.57	5.44	3.27	1.53	4.30	2.21	1.25	-0.84	4.45	1.03	0.45	0.48



Alt Model-Shift Uniqueness Test

005219484-03, P = 115.195794 Days, E = 58.384994 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.64	13.5	12.4	13.1	5.50	3.37	1.89	-4.73	-5.50	1.14	0.37	3.81	0.32	0.49	0.03



Stellar Parameters For KIC 005219484

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5623^{+184}_{-167}	$4.606^{+0.052}_{-0.084}$	$-0.900^{+0.300}_{-0.300}$	$0.696^{+0.096}_{-0.052}$	$0.713^{+0.069}_{-0.040}$	$2.980^{+0.703}_{-0.811}$
	+3%/-3%	+1%/-2%	+33%/-33%	+14%/-7%	+10%/-6%	+24%/-27%
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 005219484-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1140 ± 130	$6.08^{+6.72}_{-4.14}$	453^{+19}_{-18}	3997^{+2544}_{-843}	2845^{+25873}_{-2198}
Alt.	-7532 ± 557	$7.79^{+6.38}_{-5.20}$	453^{+19}_{-18}	5262^{+4542}_{-1102}	12043^{+94618}_{-8433}

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

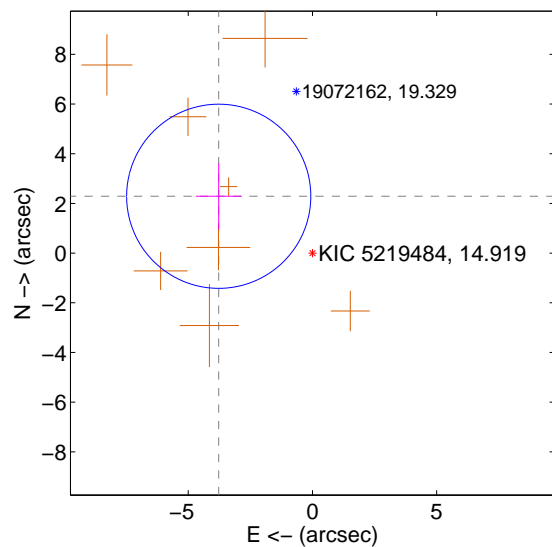
Supplemental centroid analysis for 005219484-03. Kepler magnitude: 14.92. Transit SNR 6.31

There are 0 quarters with good PRF difference image offsets

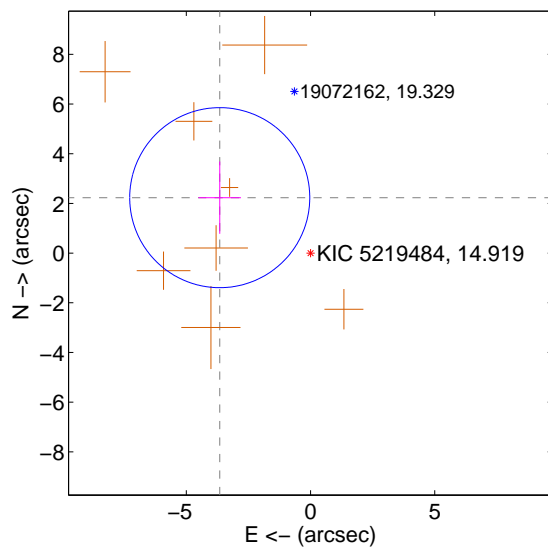
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.411 \pm 1.235	3.57	3.772 \pm 0.923	2.287 \pm 1.326
PRF-fit source offset from KIC position	4.282 \pm 1.208	3.55	3.654 \pm 0.855	2.231 \pm 1.455
photometric centroid source offset	1.19 \pm 0.51	2.34	0.88 \pm 0.51	-0.81 \pm 0.51

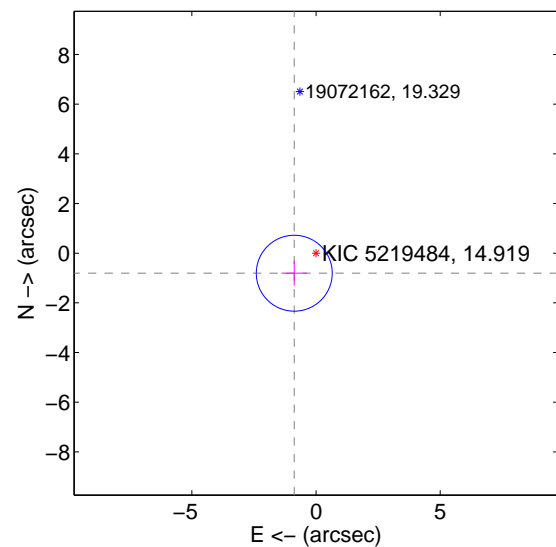
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

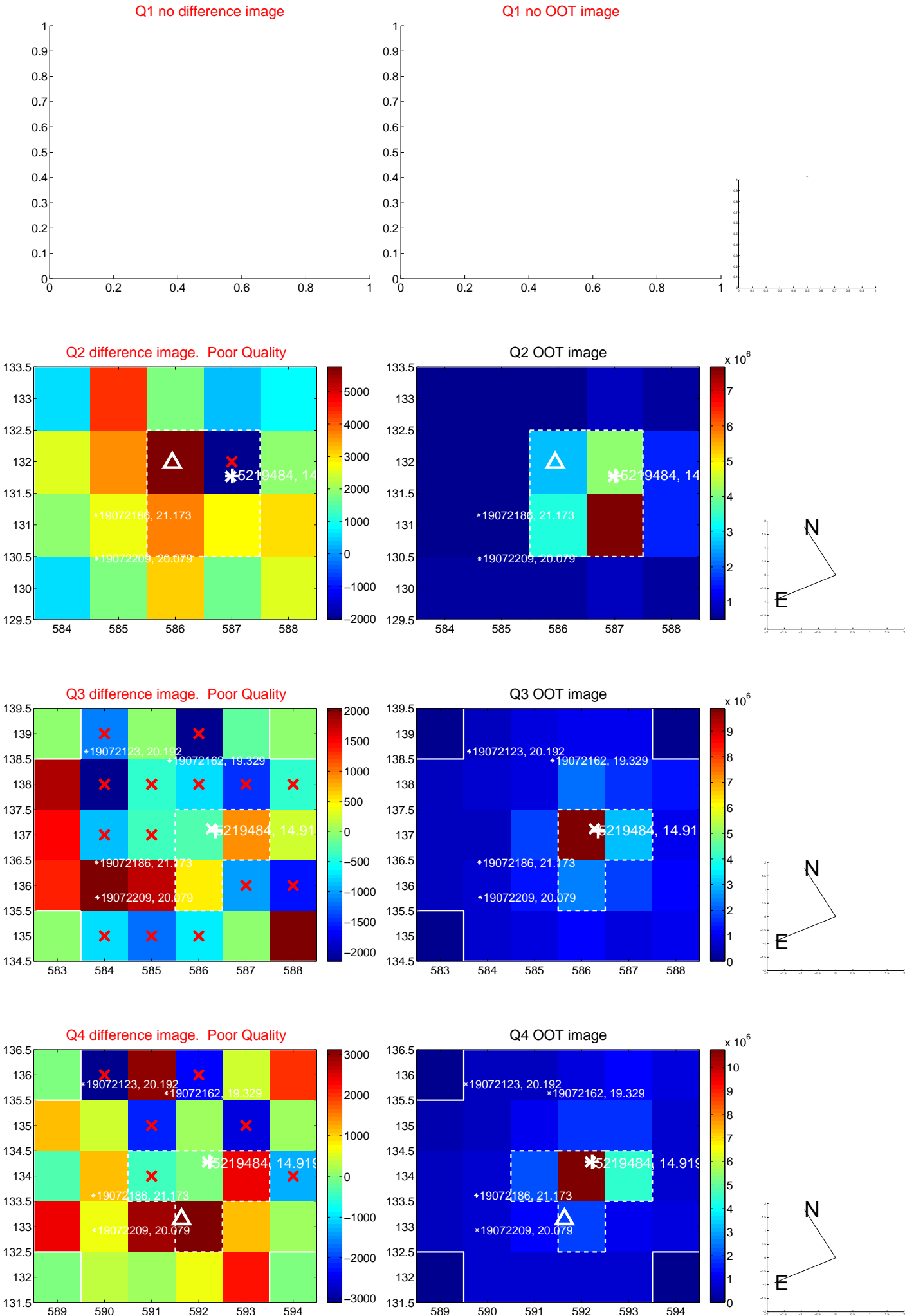


offset from photometric centroids

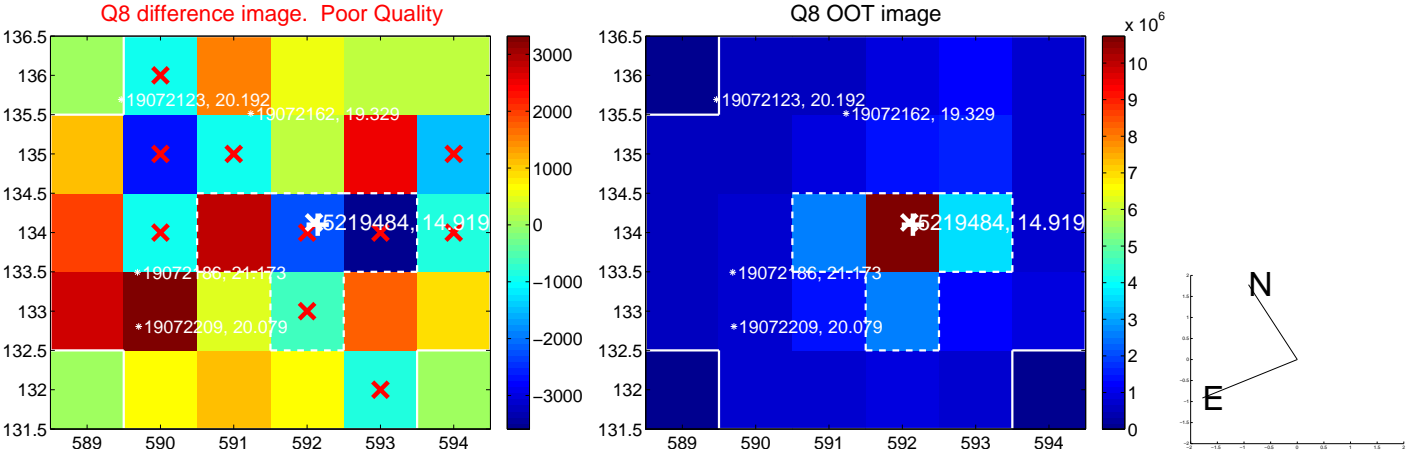
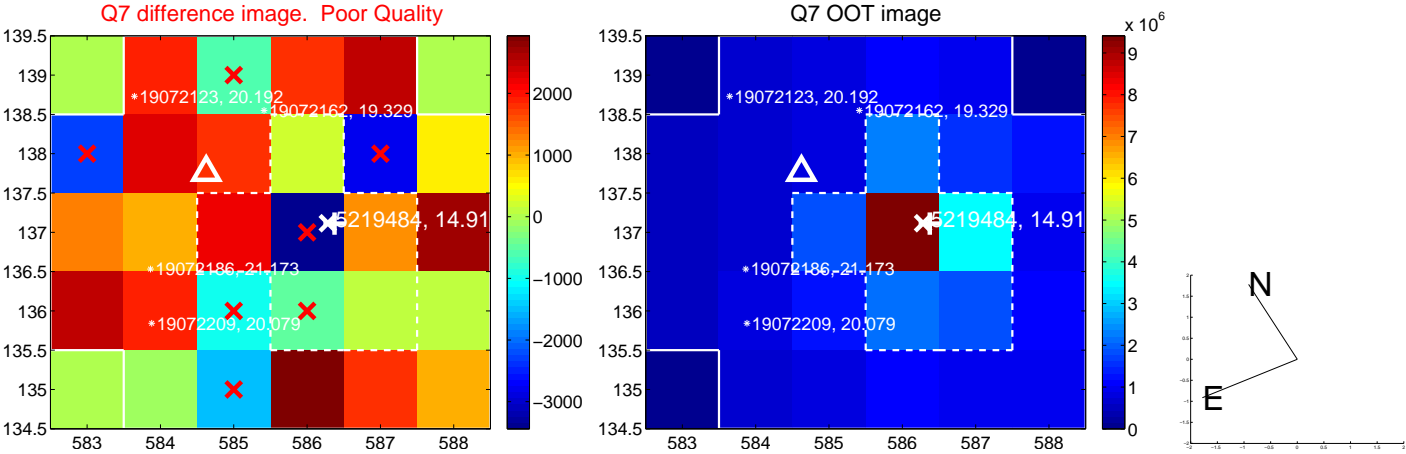
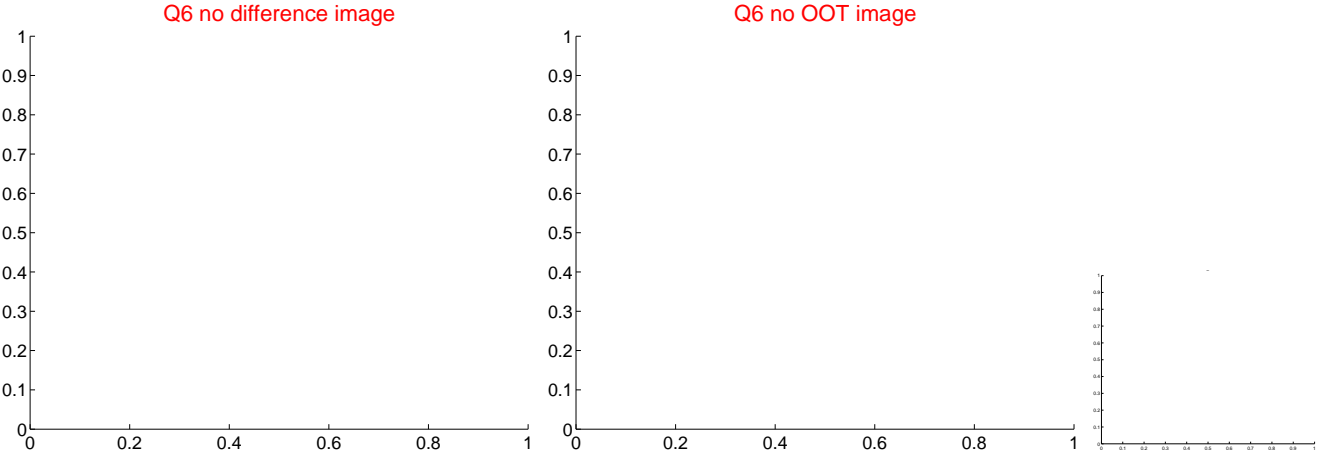
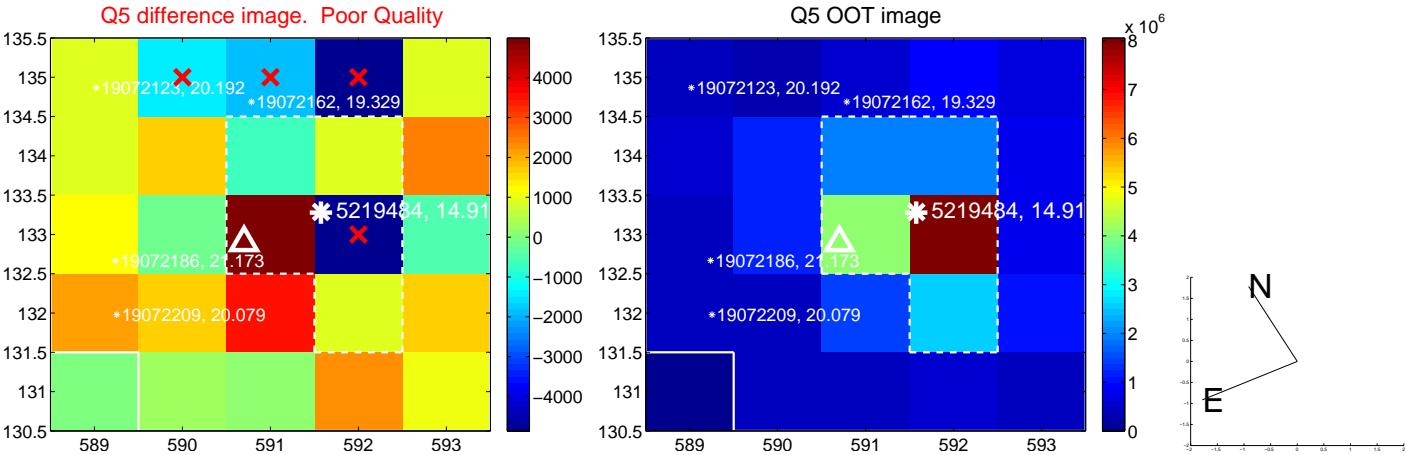


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

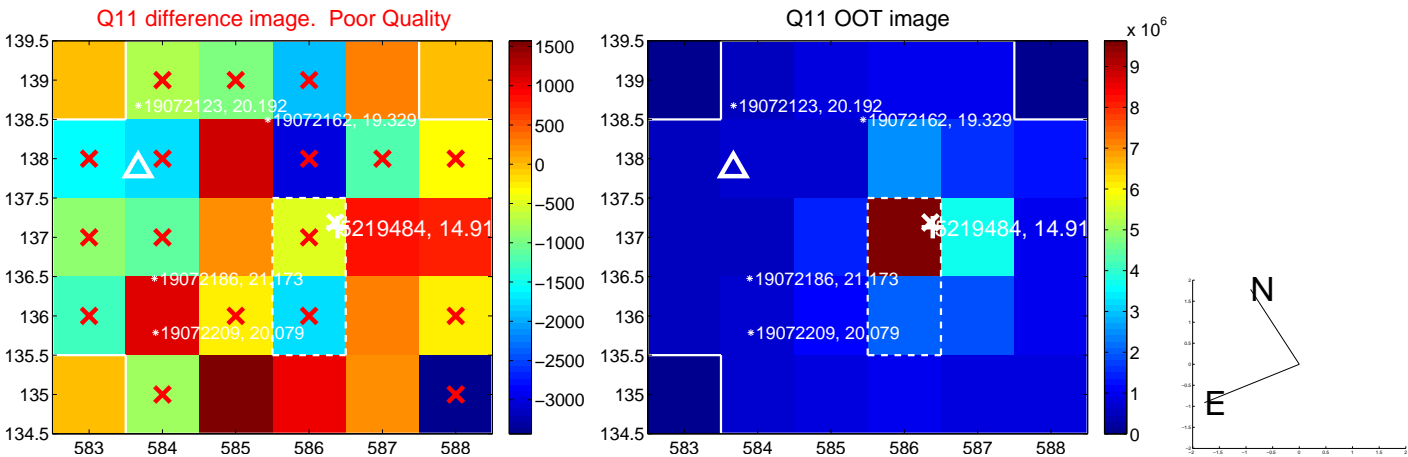
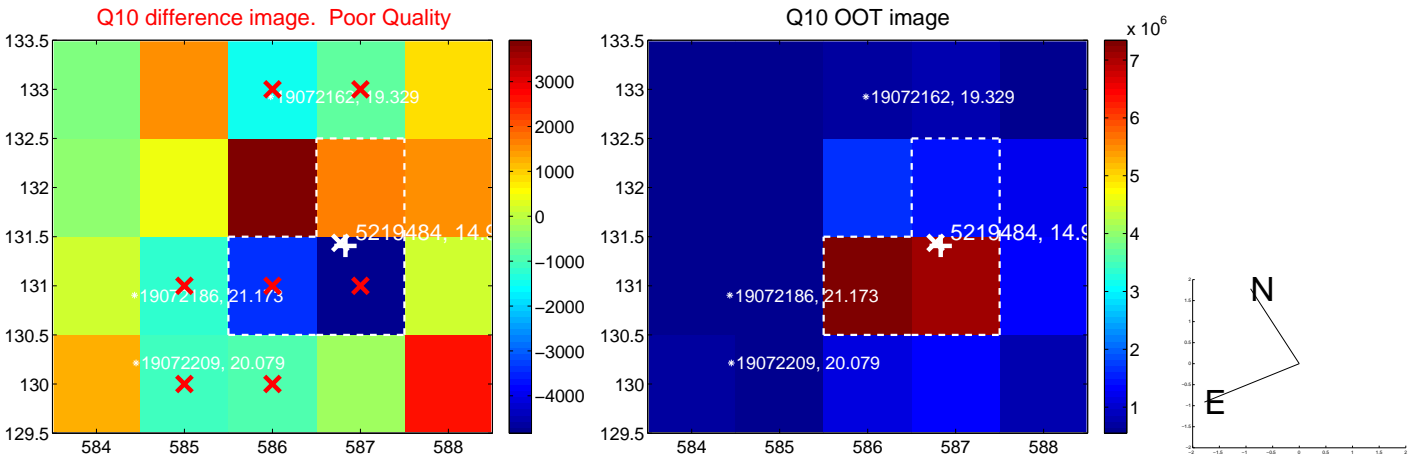
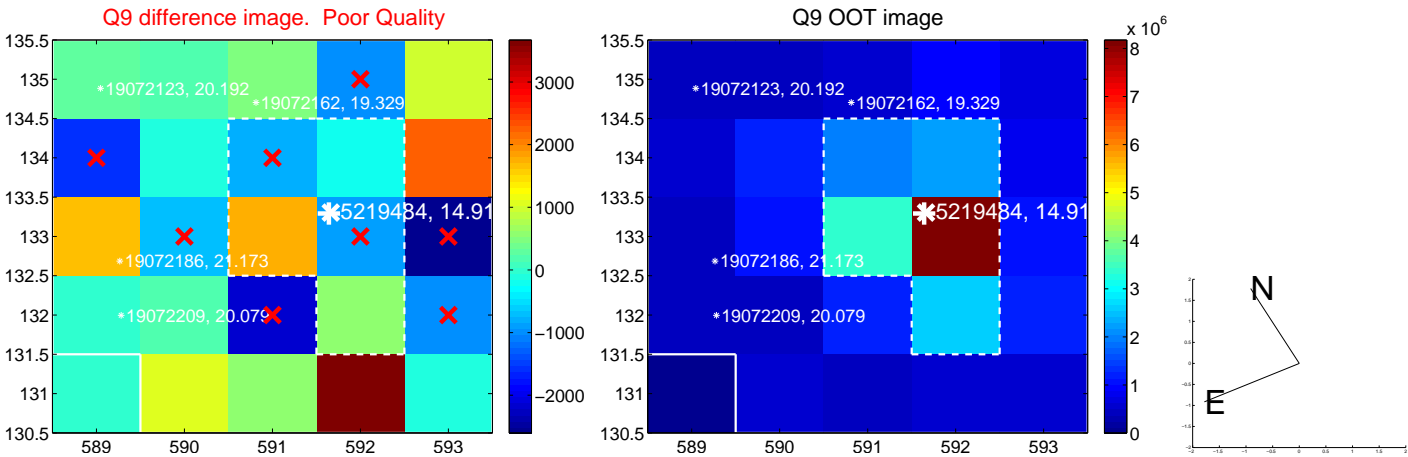
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



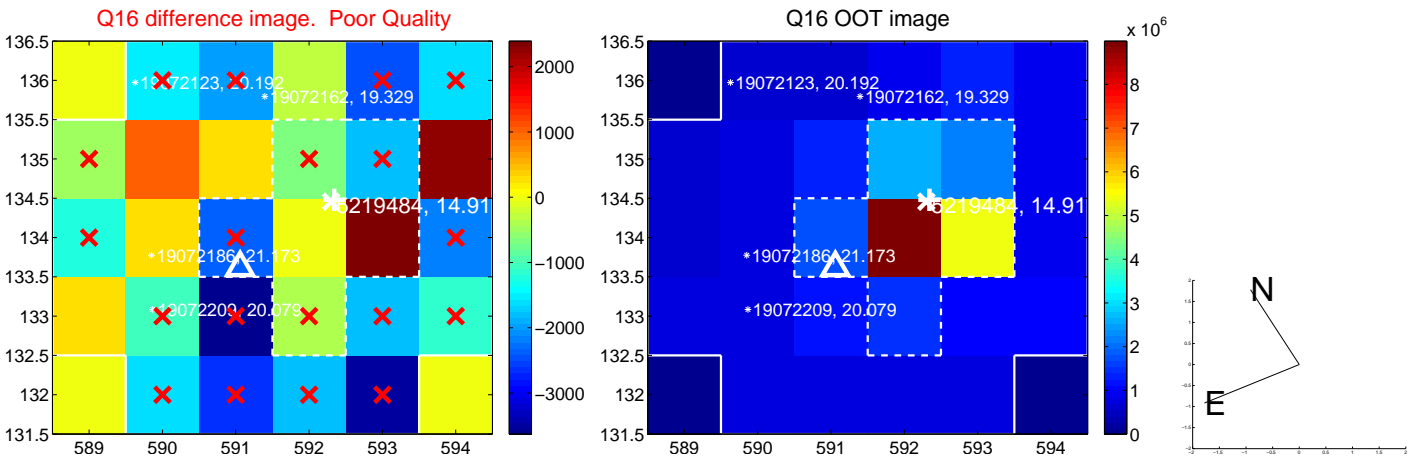
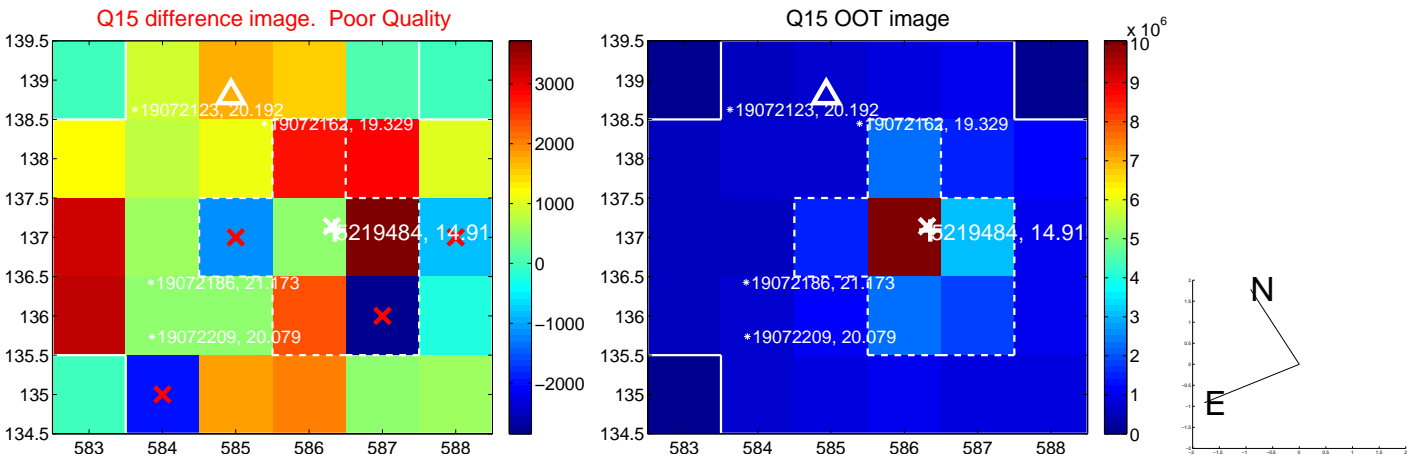
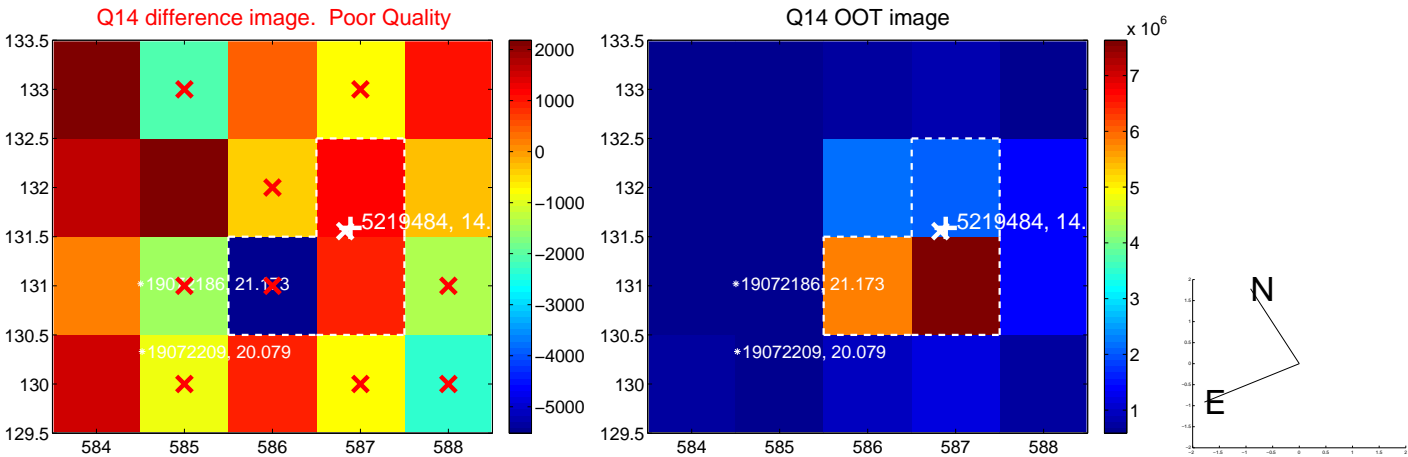
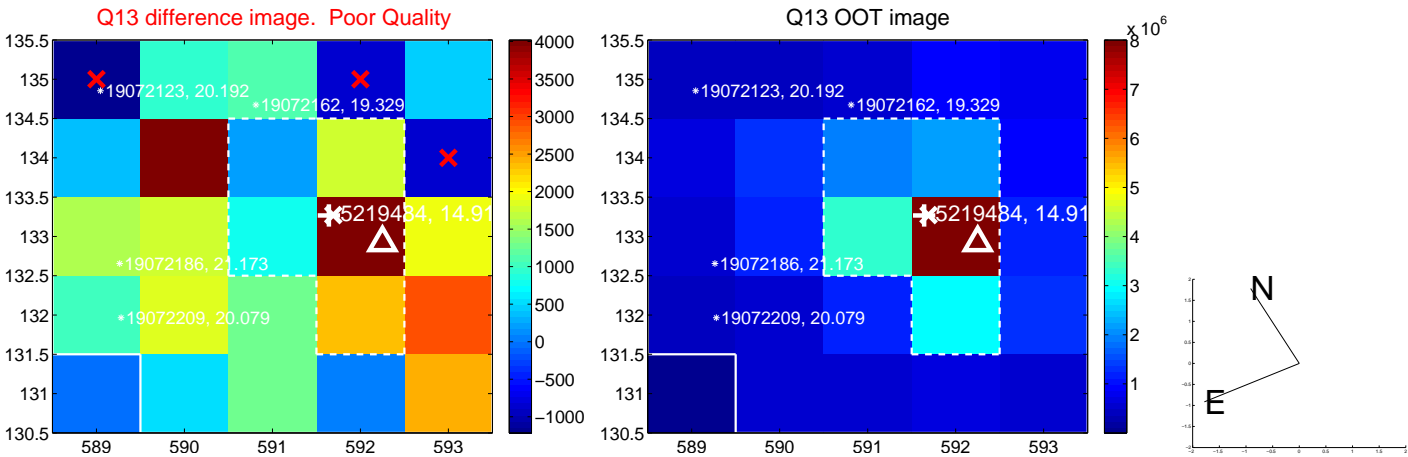
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



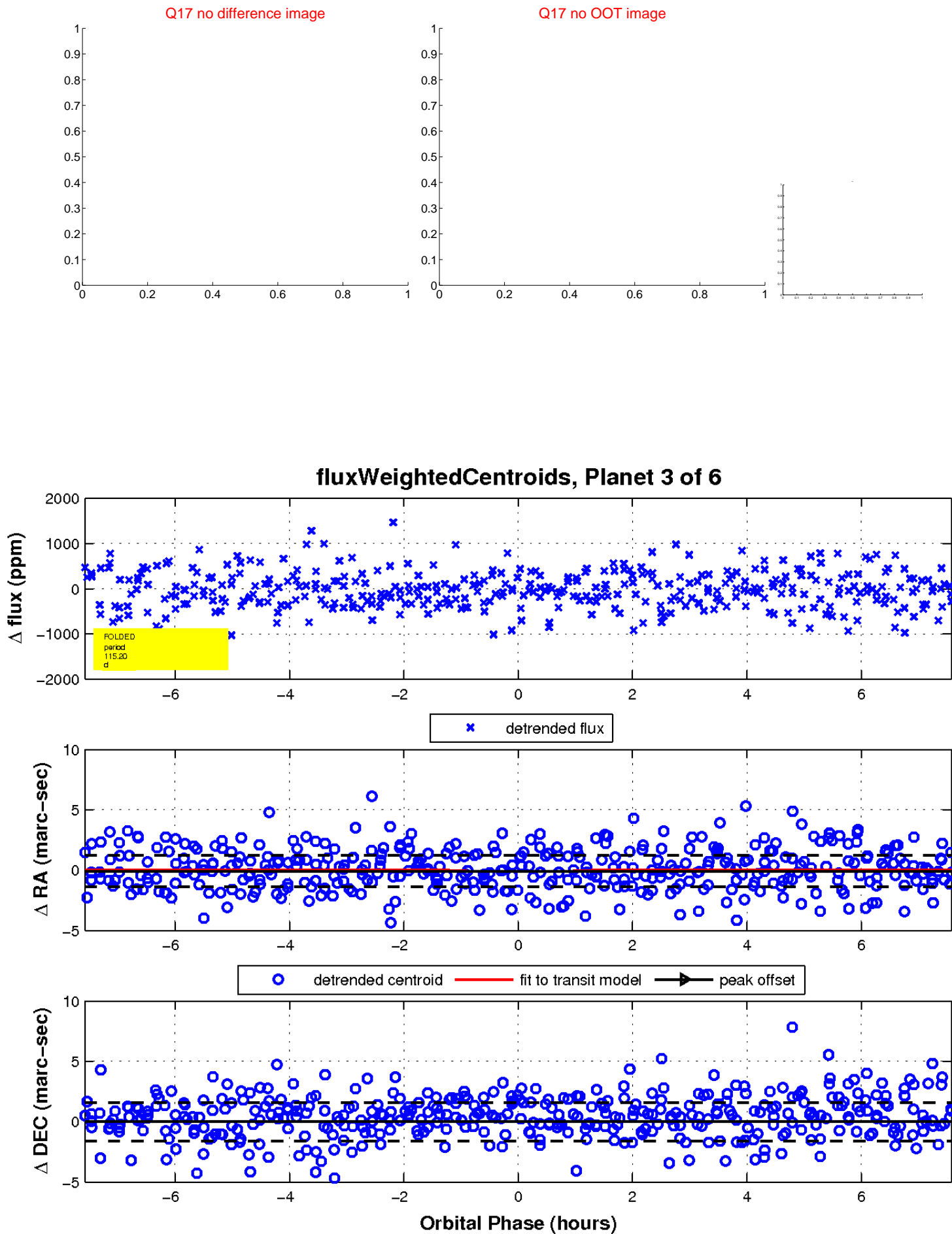
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

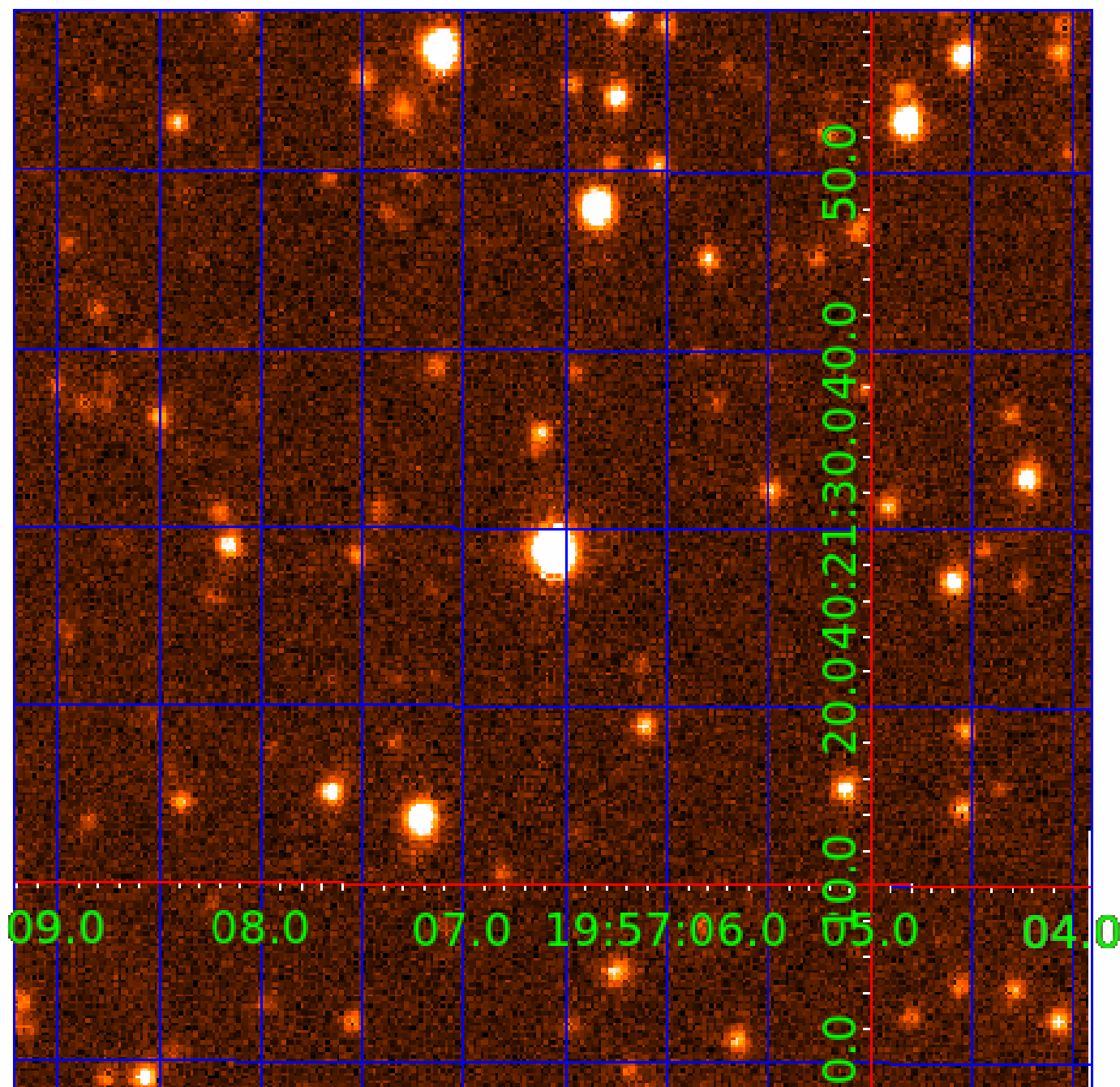


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005219484

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})
005219484-01	OBS	No	0.784817	131.564070	42.0	5.016	7.9	8.1	0.70	5623	0.46	1959.51
005219484-02	OBS	No	146.148011	250.503689	1820.0	4.921	12.6	8.8	0.70	5623	3.06	1.84
005219484-03	OBS	No	115.195196	173.565061	1413.3	2.527	9.7	6.3	0.70	5623	2.61	2.53
005219484-04	OBS	No	82.545007	167.117071	1187.8	5.825	9.7	7.3	0.70	5623	2.51	3.95
005219484-06	OBS	No	83.371967	157.122305	797.7	3.712	8.1	5.2	0.70	5623	2.06	3.90

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005219484-01	OBS	FP	0.00	1	0	1	0	LPP_DV—MOD_NONUNIQ_DV—CENT_UNRESOLVED_OFFSET
005219484-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005219484-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005219484-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
005219484-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

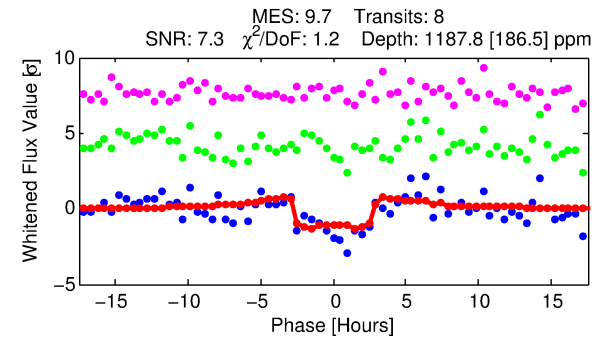
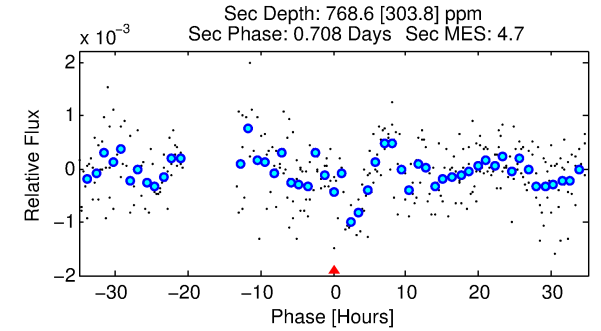
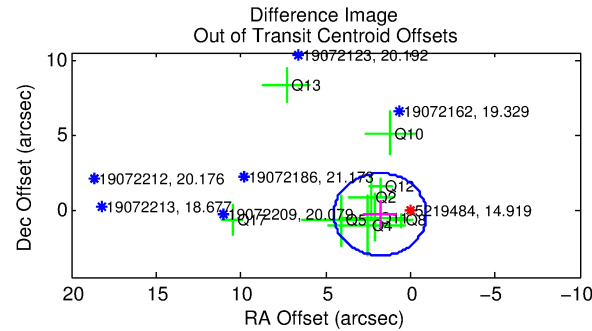
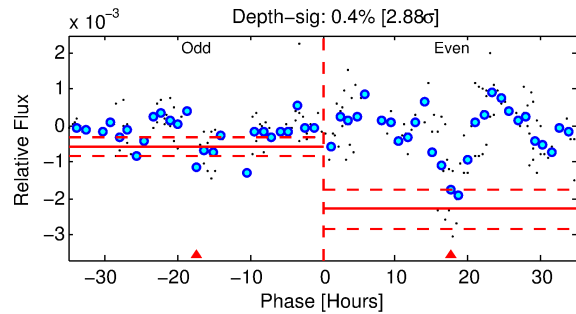
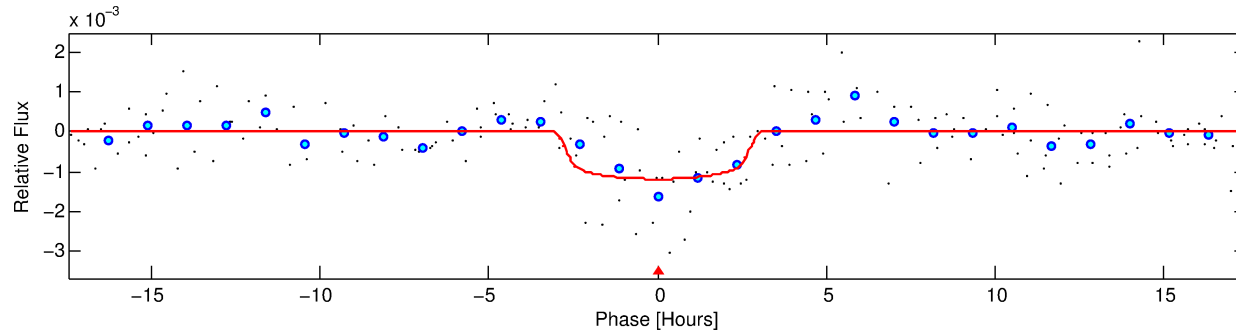
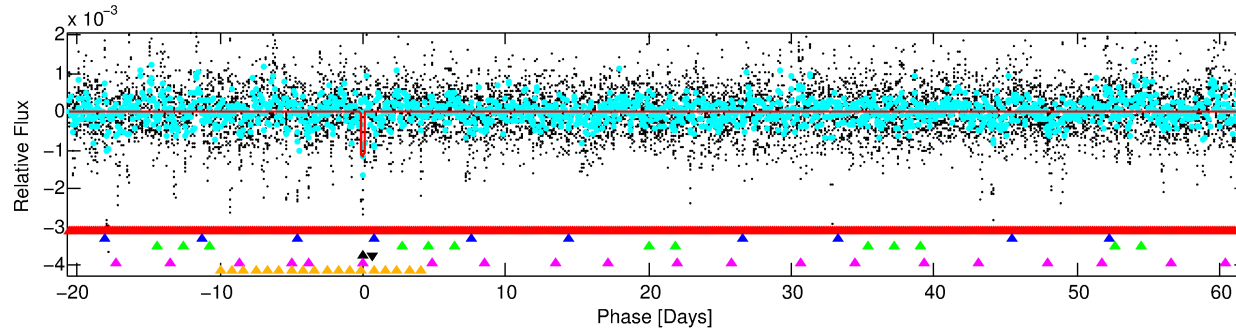
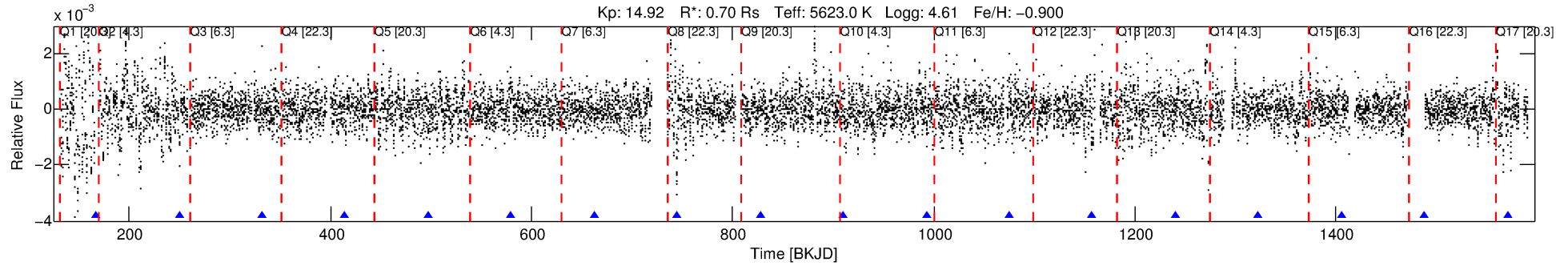
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005219484-04

No Significant Match Found

DV One-Page Summary

KIC: 5219484 Candidate: 4 of 6 Period: 82.545 d



DV Fit Results:

Period = 82.54501 [0.00127] d
Epoch = 167.1171 [0.0131] BKJD
Rp/R* = 0.0331 [0.0181]
a/R* = 89.70 [231.13]
b = 0.62 [2.61]
Seff = 3.95 [0.81]
Teq = 359 [18] K
Rp = 2.51 [1.42] Re
a = 0.3316 [0.0372] AU
Ag = 7356.21 [8622.00] [0.85 σ]
Teffp = 5146 [1504] K [3.18 σ]

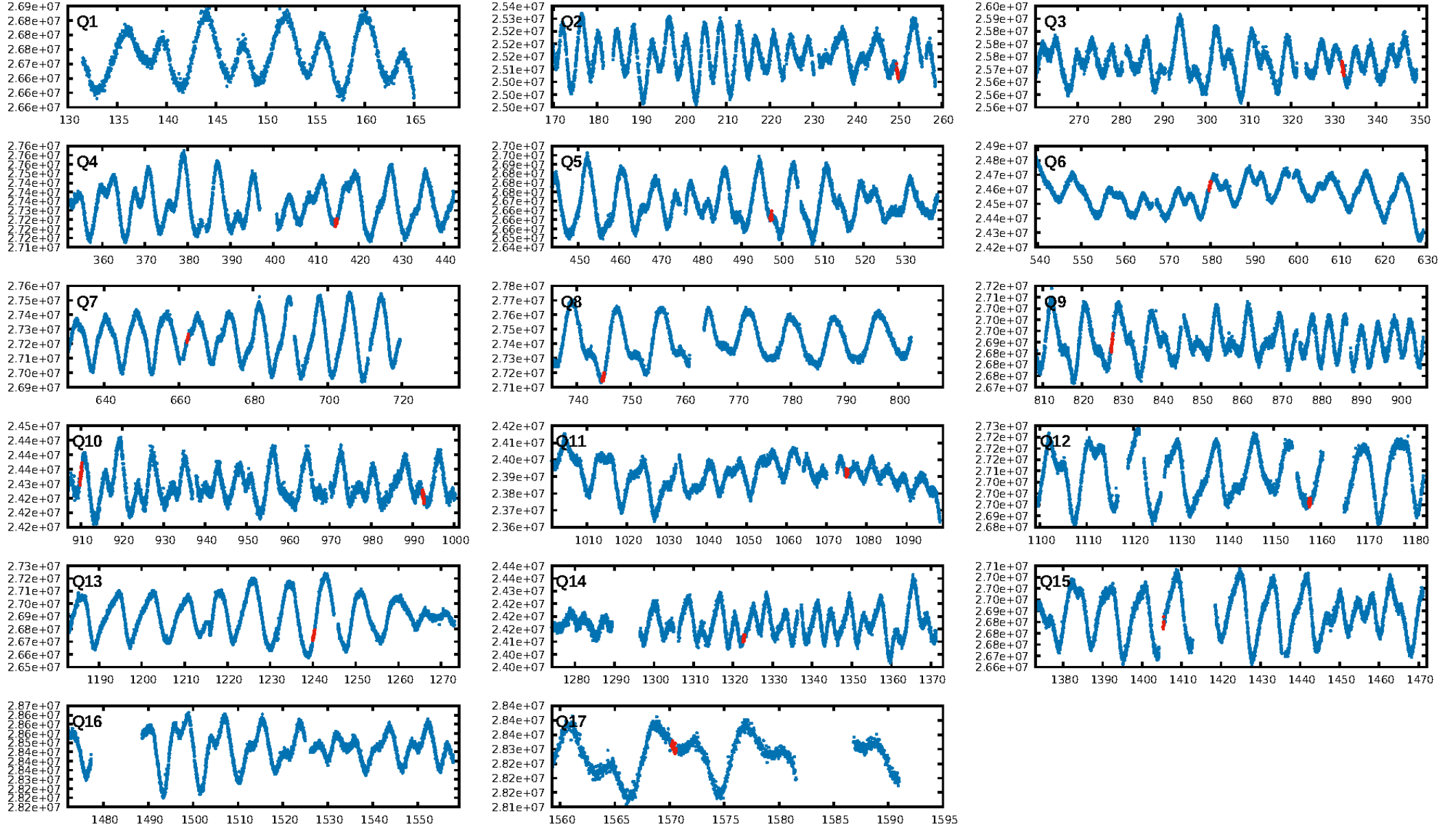
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [34.62 σ]
LongPeriod-sig: 99.6% [2.87 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.23e-14
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: 0.8574
Centroid-sig: 8.1%
Centroid-so: 1.573 arcsec [3.94 σ]
OotOffset-rm: 1.819 arcsec [1.99 σ]
KicOffset-rm: 1.562 arcsec [1.67 σ]
OotOffset-st: 2/1/3/3 [9]
KicOffset-st: 2/1/3/3 [9]
DiffImageQuality-fgm: 0.11 [1/9]
DiffImageOverlap-fno: 0.00 [0/13]

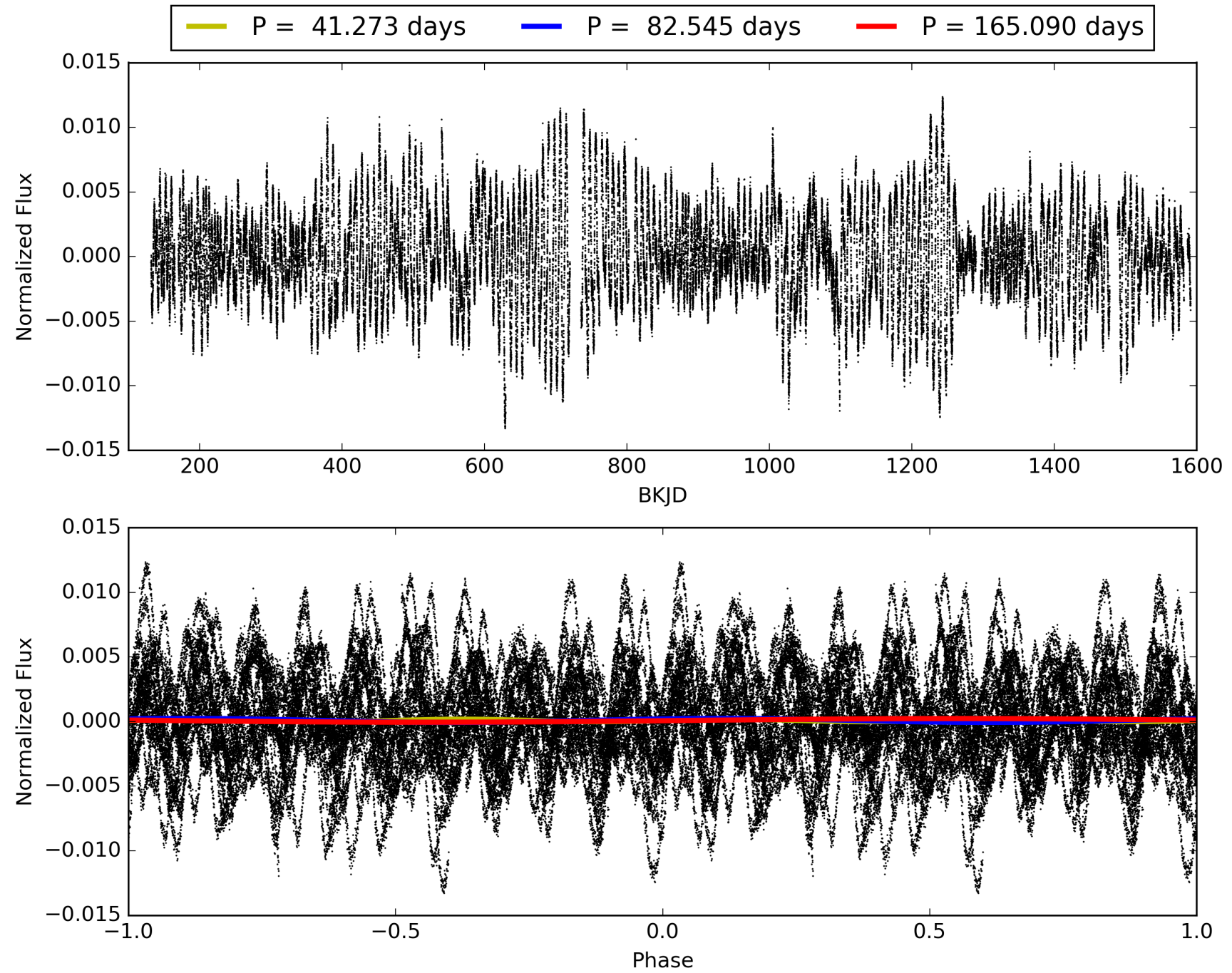
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 08:23:08 Z

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

TCE 005219484-04, PDC Light Curves

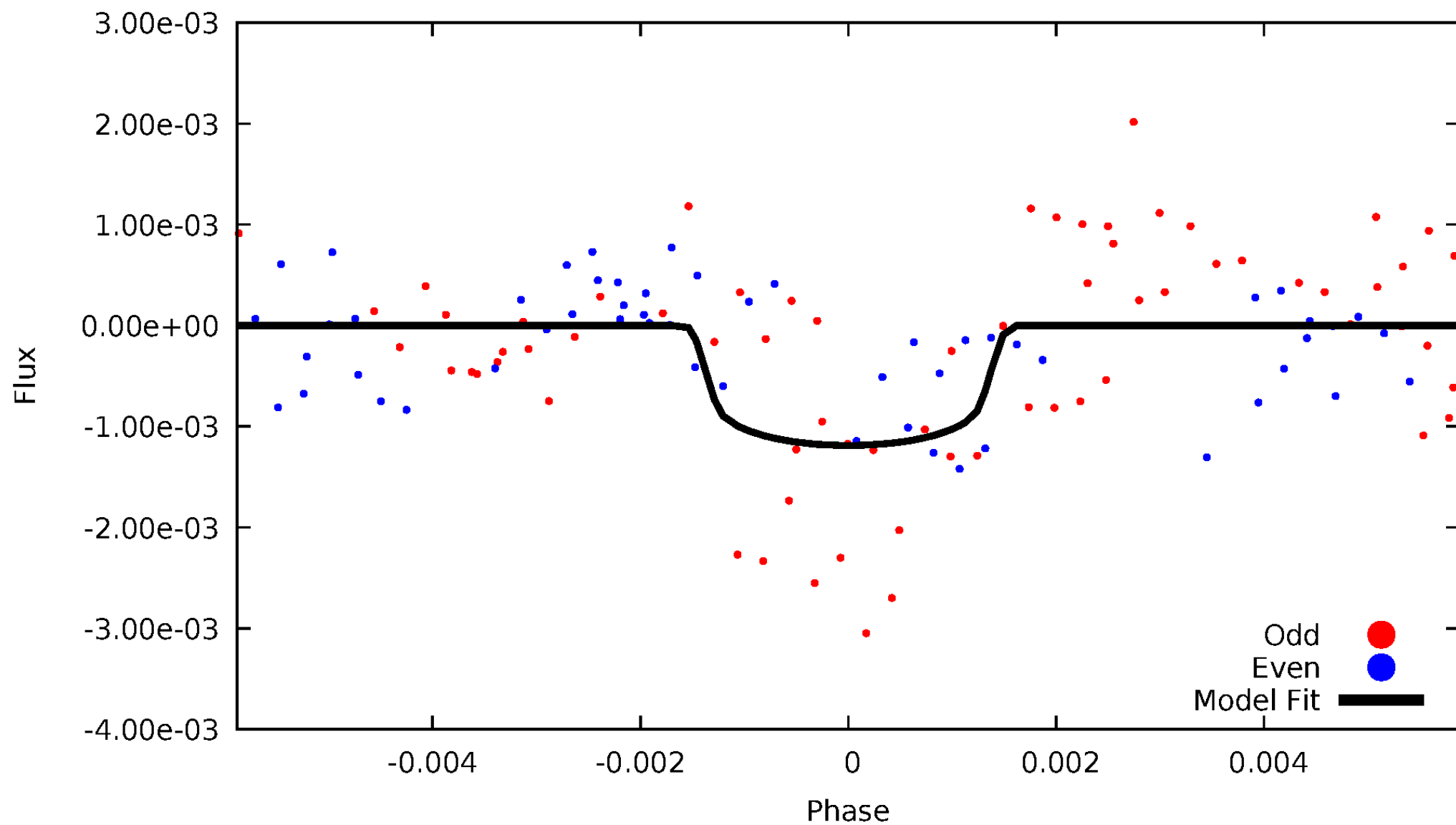


TCE 005219484-04



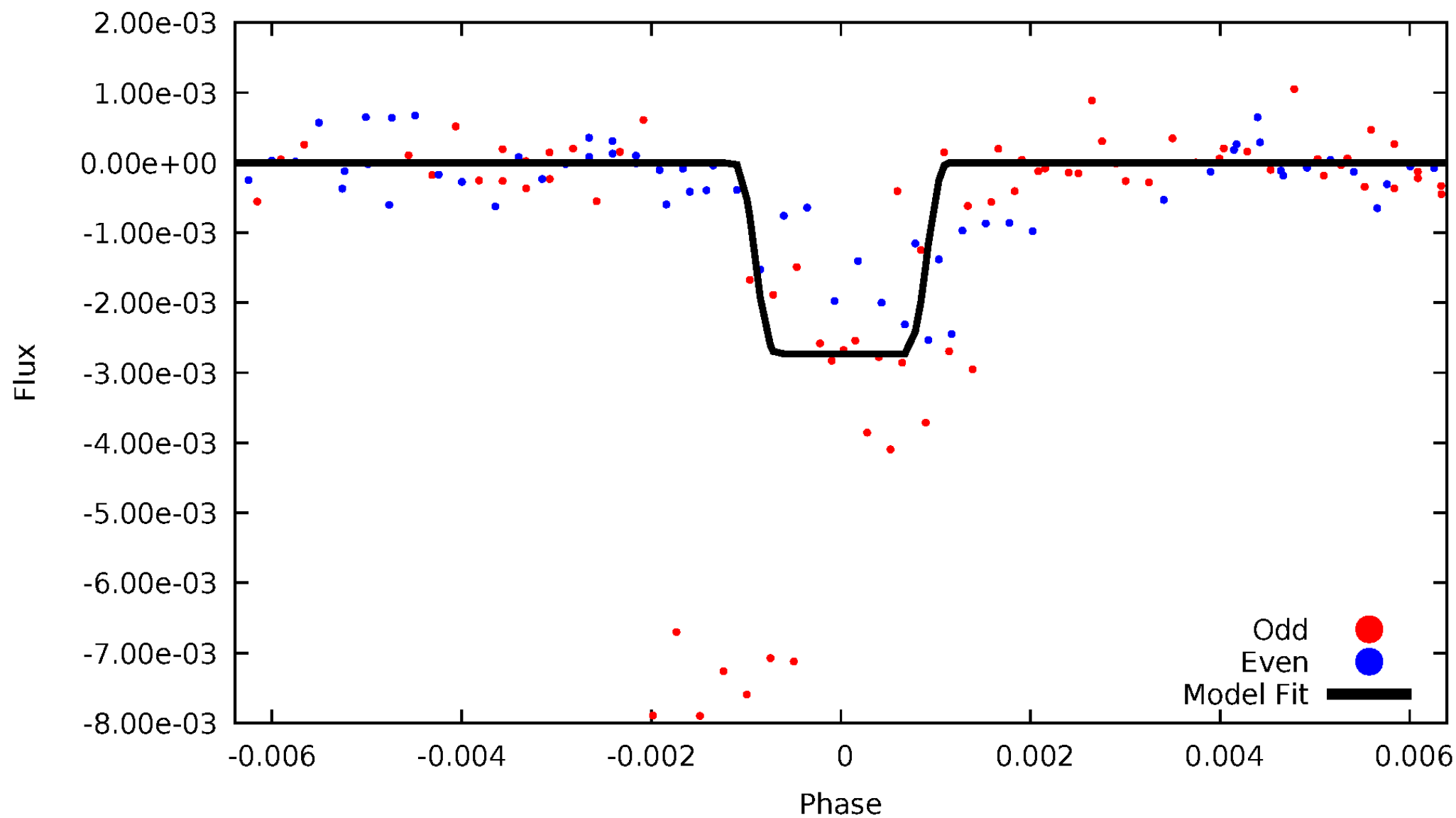
DV Odd/Even

TCE 005219484-04



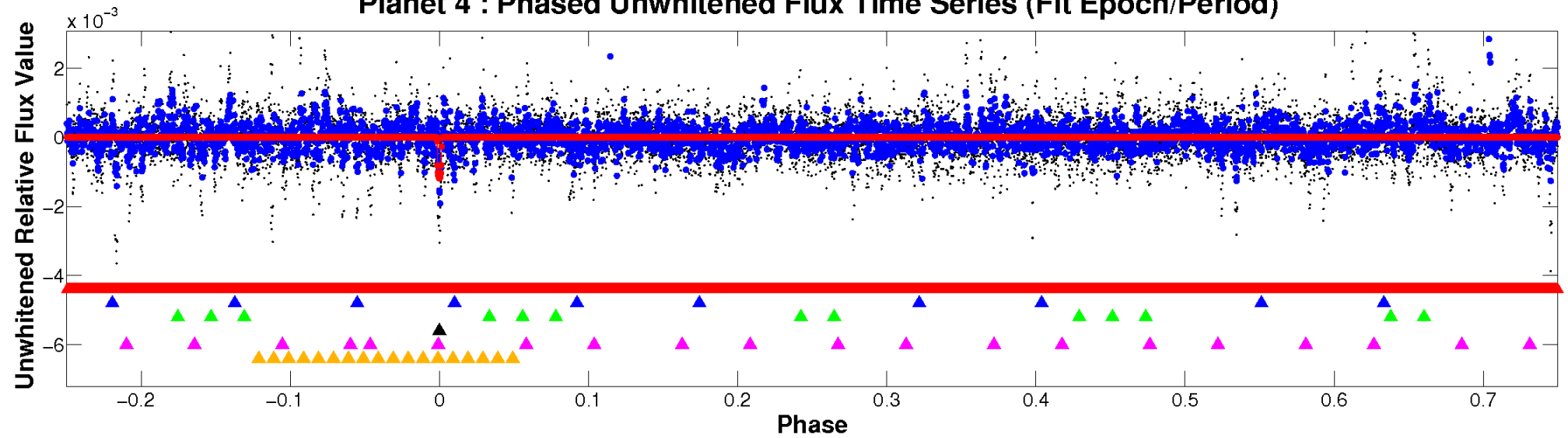
ALT Odd/Even

TCE 005219484-04

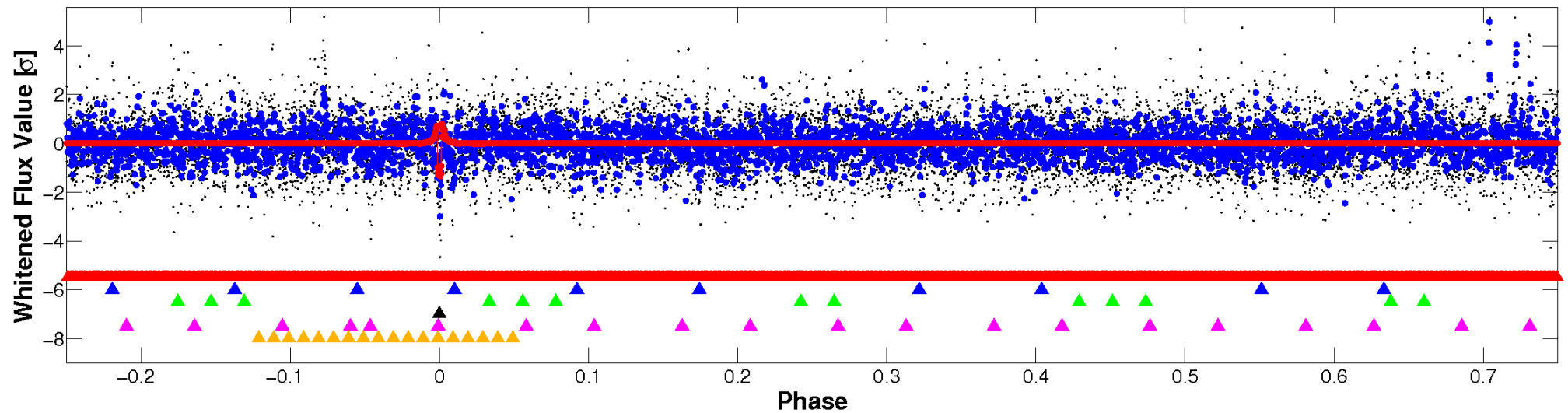


Non-Whitened Vs. Whitened Light Curve

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

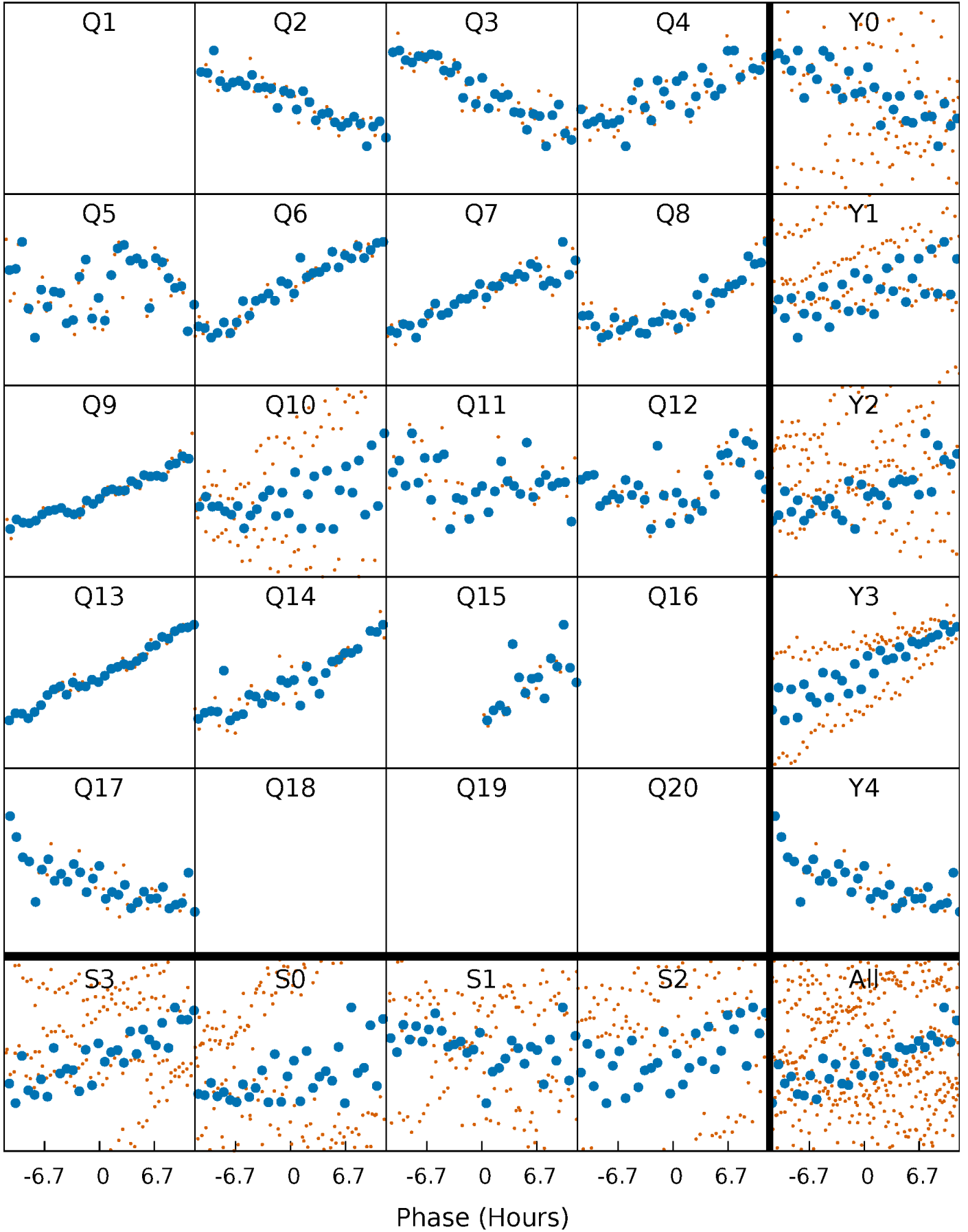


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



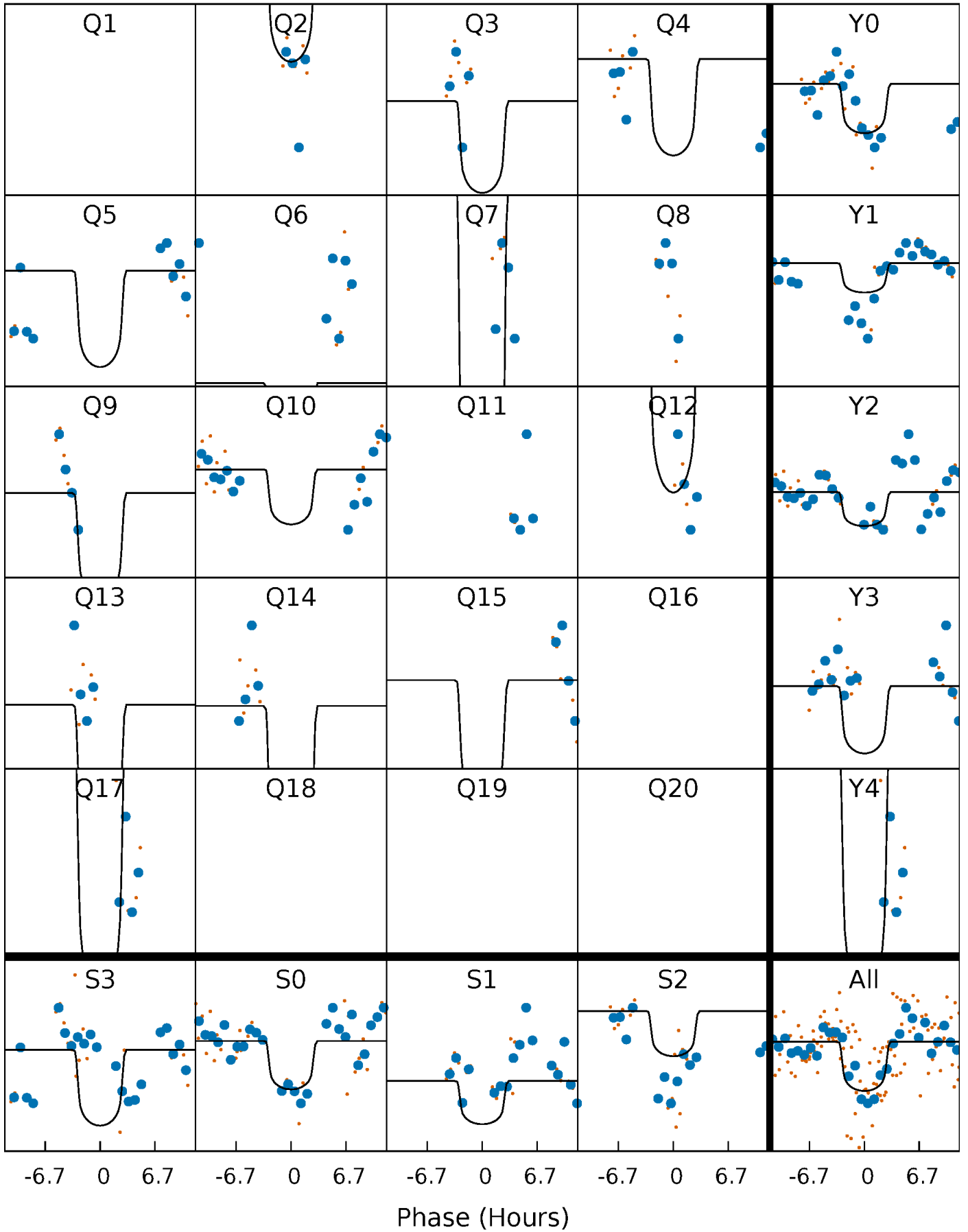
PDC Quarter-Phased Transit Curves

TCE 005219484-04 P= 82.545007 Days $T_0=167.117071$ (BKJD)



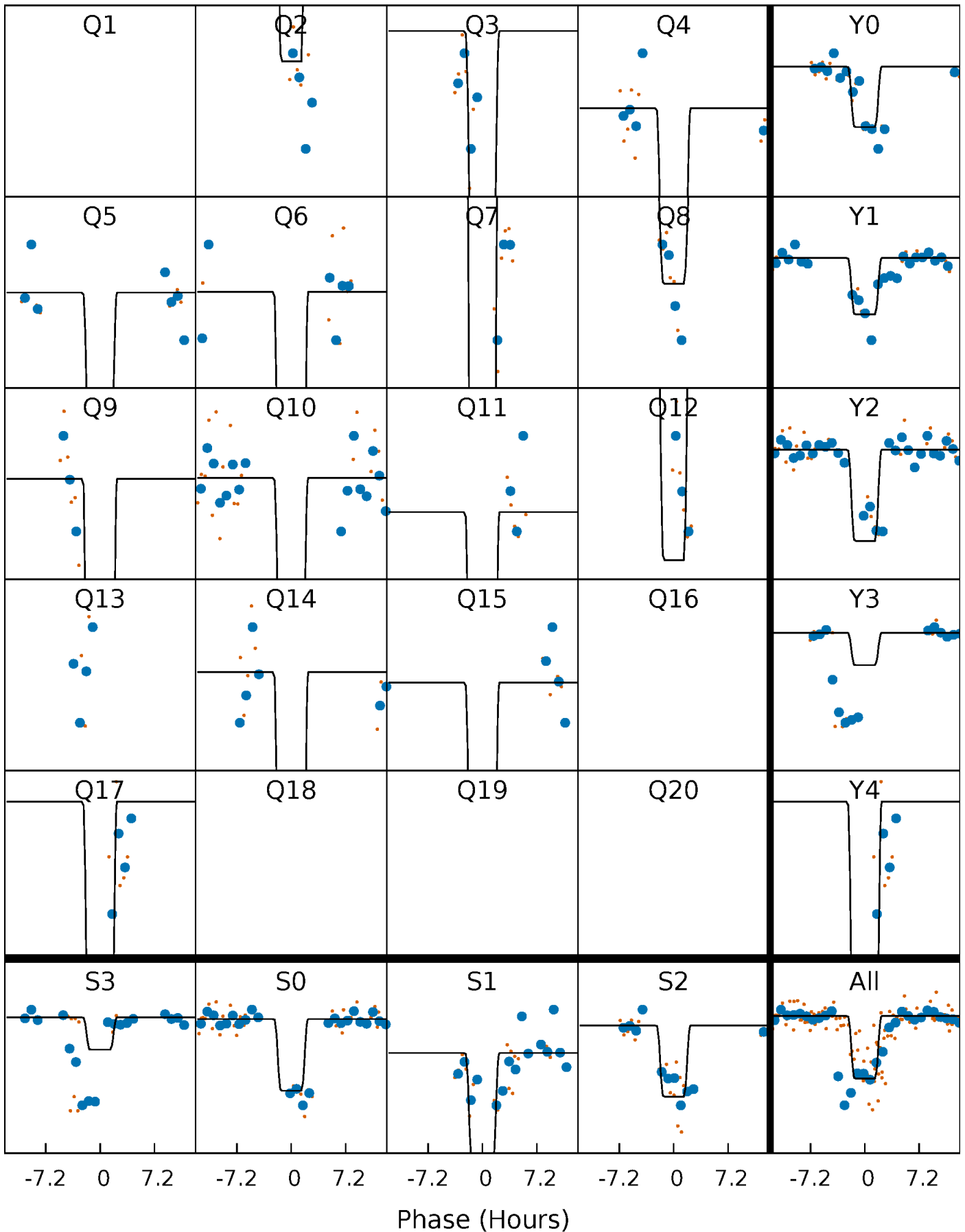
DV Quarter-Phased Transit Curves

TCE 005219484-04 P= 82.545007 Days $T_0=167.117071$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

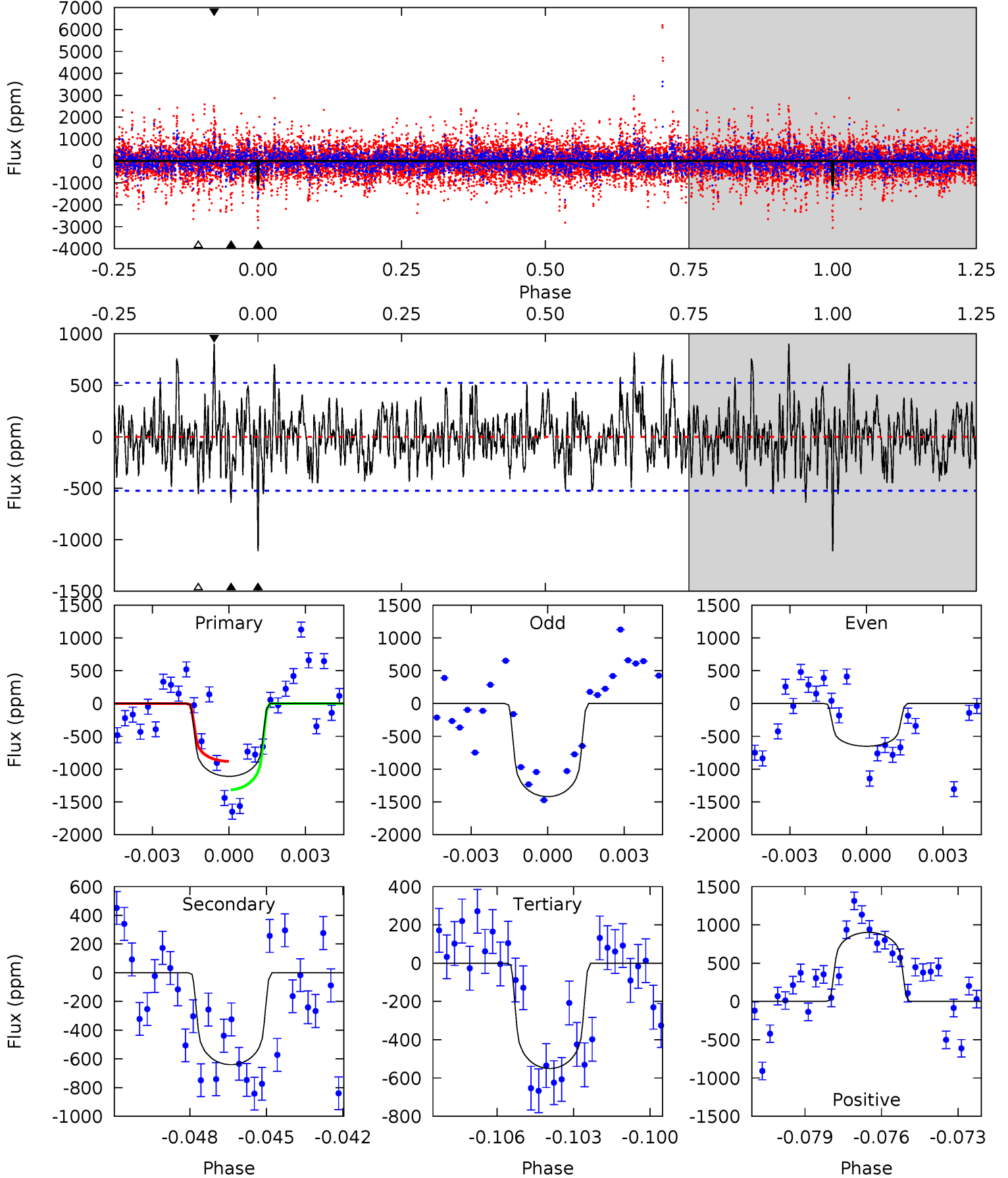
TCE 005219484-04 P= 82.549148 Days $T_0=167.079469$ (BKJD)



DV Model-Shift Uniqueness Test

005219484-04, P = 82.545007 Days, E = 84.572064 Days

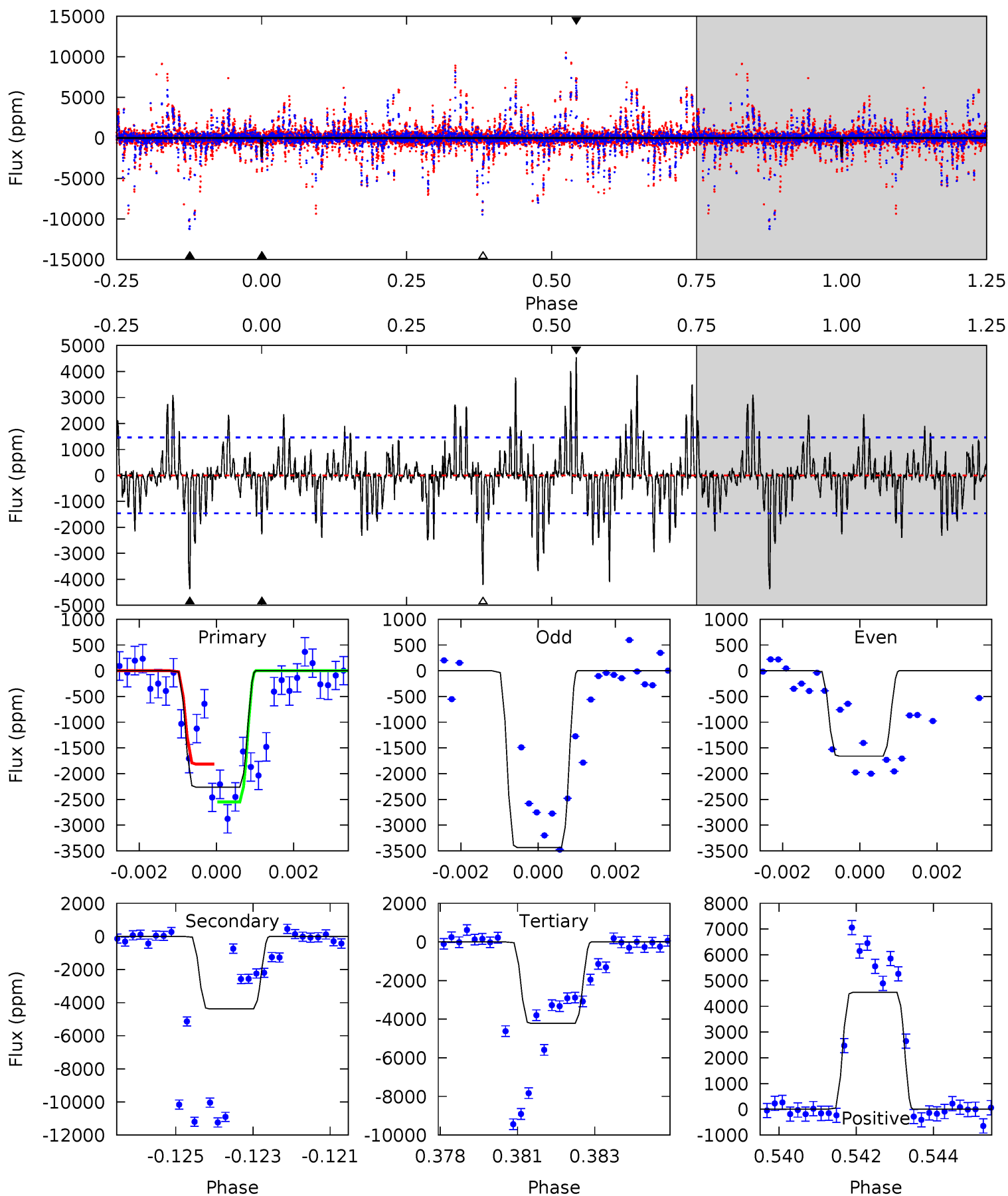
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.1	6.41	5.51	9.04	5.25	2.97	2.16	5.61	2.09	0.90	-2.63	3.59	0.96	0.45	2.18



Alt Model-Shift Uniqueness Test

005219484-04, P = 82.549148 Days, E = 84.530321 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.22	15.9	15.3	16.5	5.31	3.06	2.91	-7.12	-8.30	0.59	-0.59	2.26	1.30	0.51	1.29



Stellar Parameters For KIC 005219484

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5623^{+184}_{-167}	$4.606^{+0.052}_{-0.084}$	$-0.900^{+0.300}_{-0.300}$	$0.696^{+0.096}_{-0.052}$	$0.713^{+0.069}_{-0.040}$	$2.980^{+0.703}_{-0.811}$
	+3%/-3%	+1%/-2%	+33%/-33%	+14%/-7%	+10%/-6%	+24%/-27%
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 005219484-04 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-640 ± 100	$2.66^{+1.31}_{-1.30}$	505^{+21}_{-20}	4900^{+1903}_{-751}	5547^{+16047}_{-3157}
Alt.	-4380 ± 275	$4.07^{+1.32}_{-1.44}$	505^{+21}_{-19}	6328^{+1719}_{-886}	16124^{+22506}_{-6882}

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 $A_{obs} \gg 1.0$

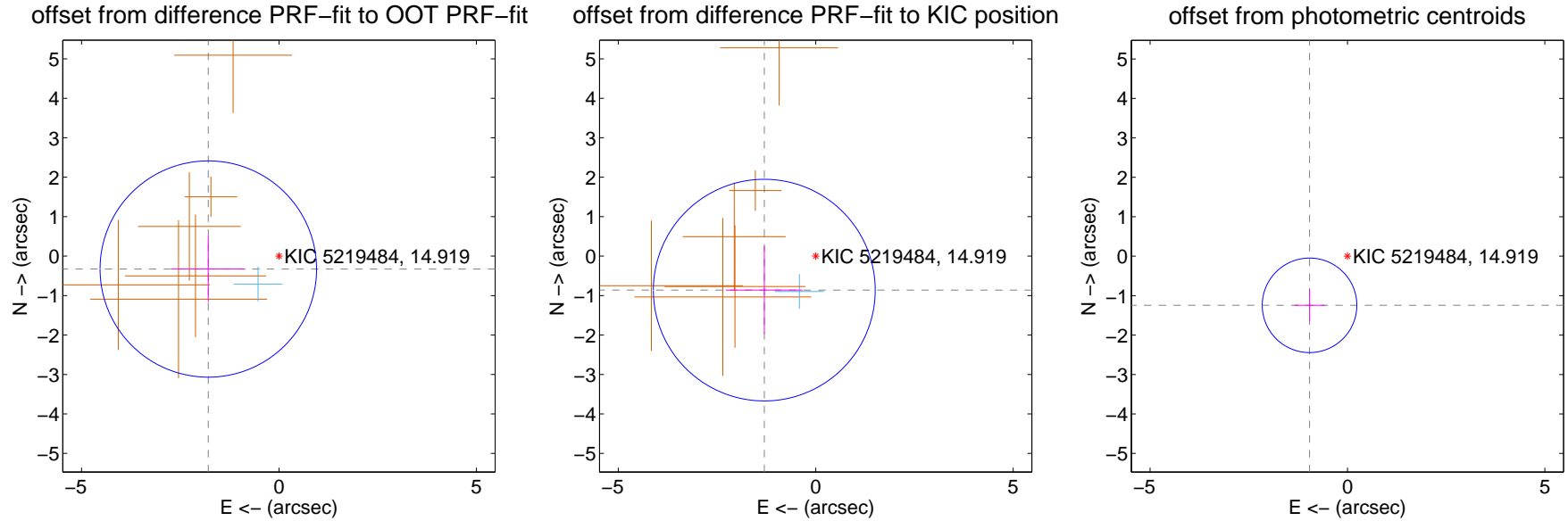
DV Centroid Data

Supplemental centroid analysis for 005219484-04. Kepler magnitude: 14.92. Transit SNR 7.34

There are 1 quarters with good PRF difference image offsets

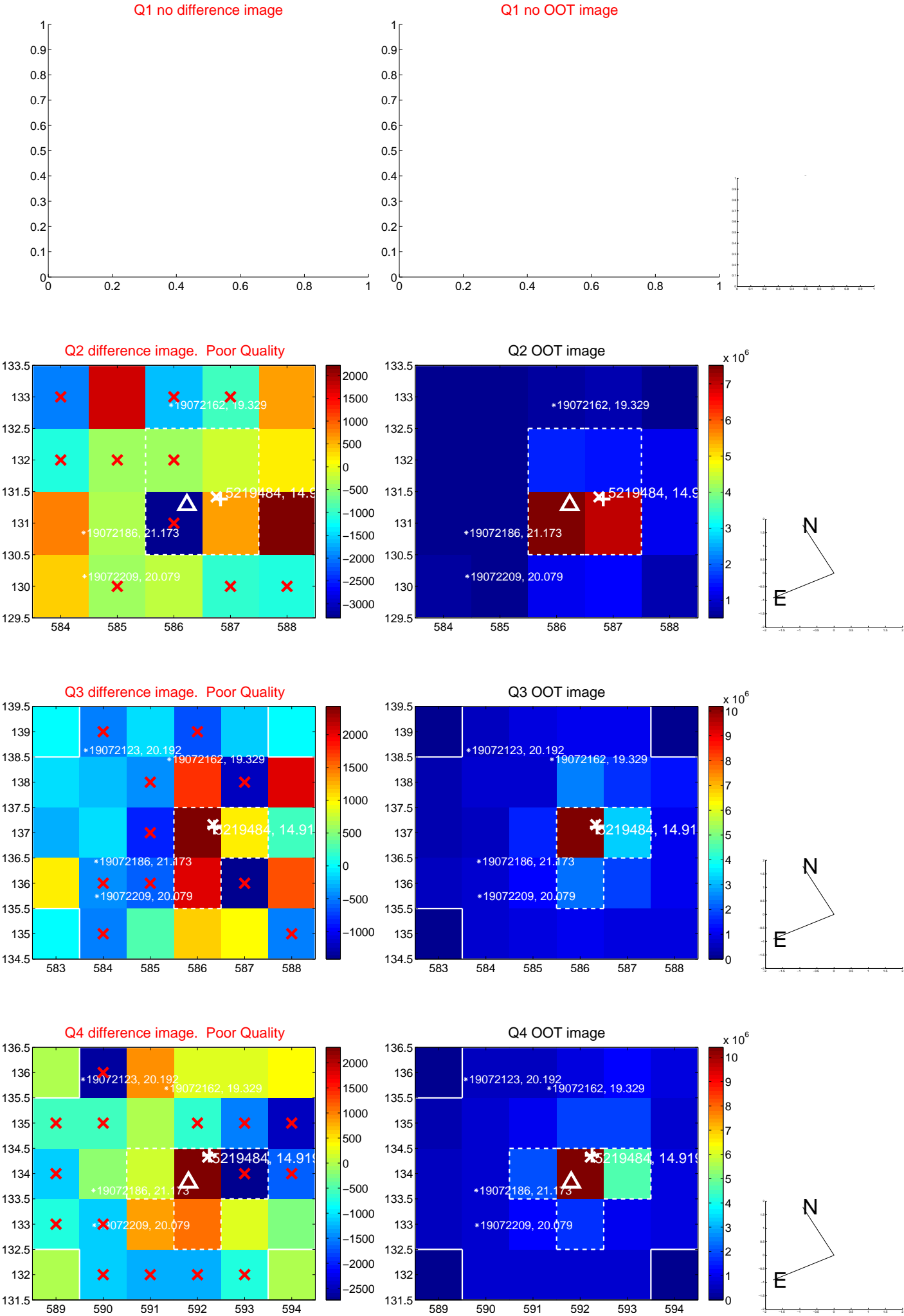
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.819 ± 0.914	1.99	1.790 ± 0.933	-0.327 ± 0.837
PRF-fit source offset from KIC position	1.562 ± 0.936	1.67	1.302 ± 0.974	-0.862 ± 1.110
photometric centroid source offset	1.57 ± 0.40	3.94	0.96 ± 0.39	-1.25 ± 0.40

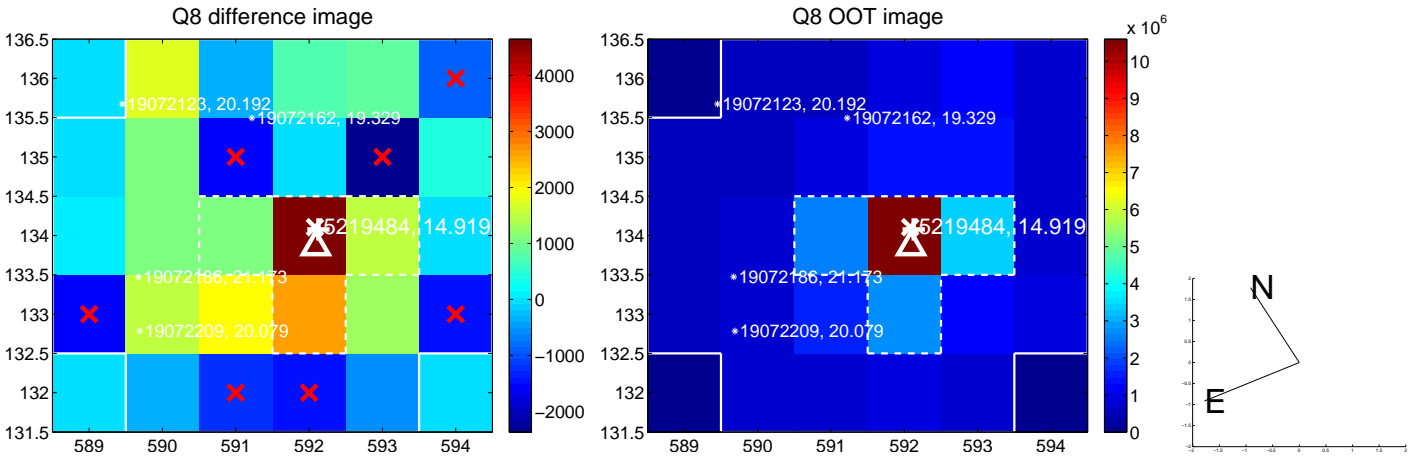
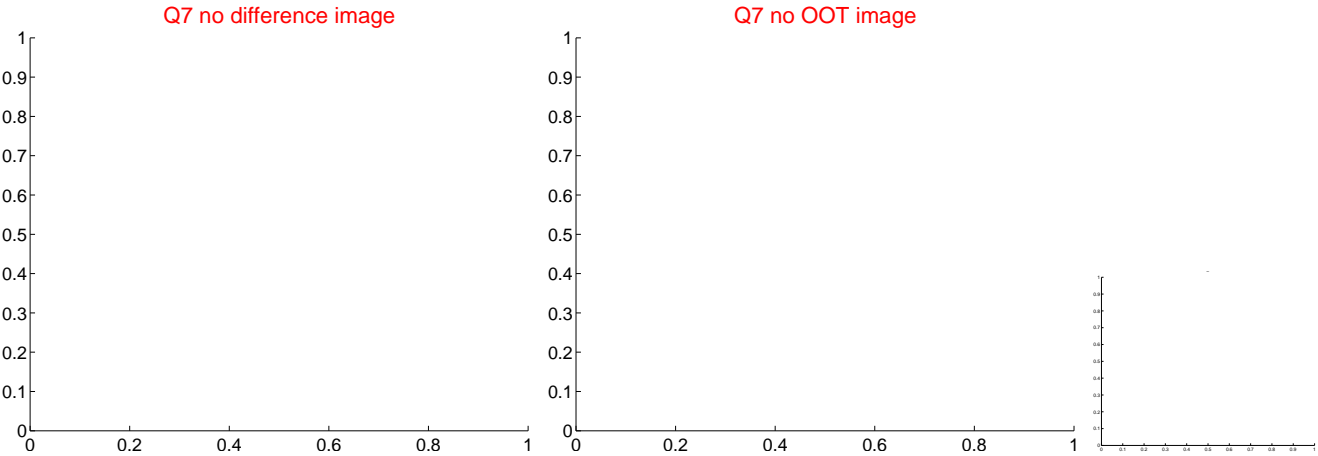
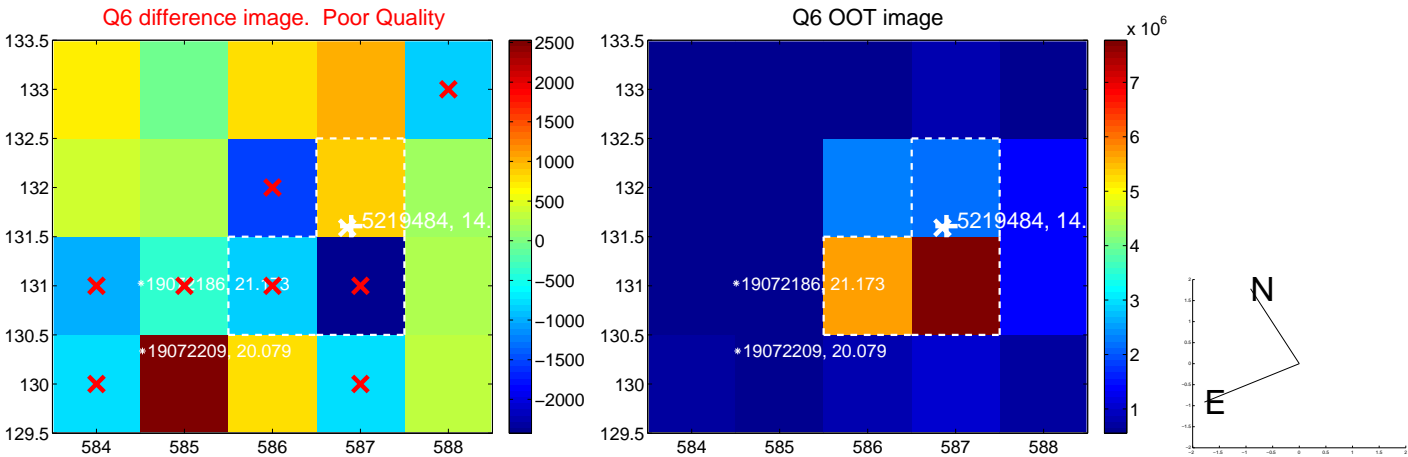
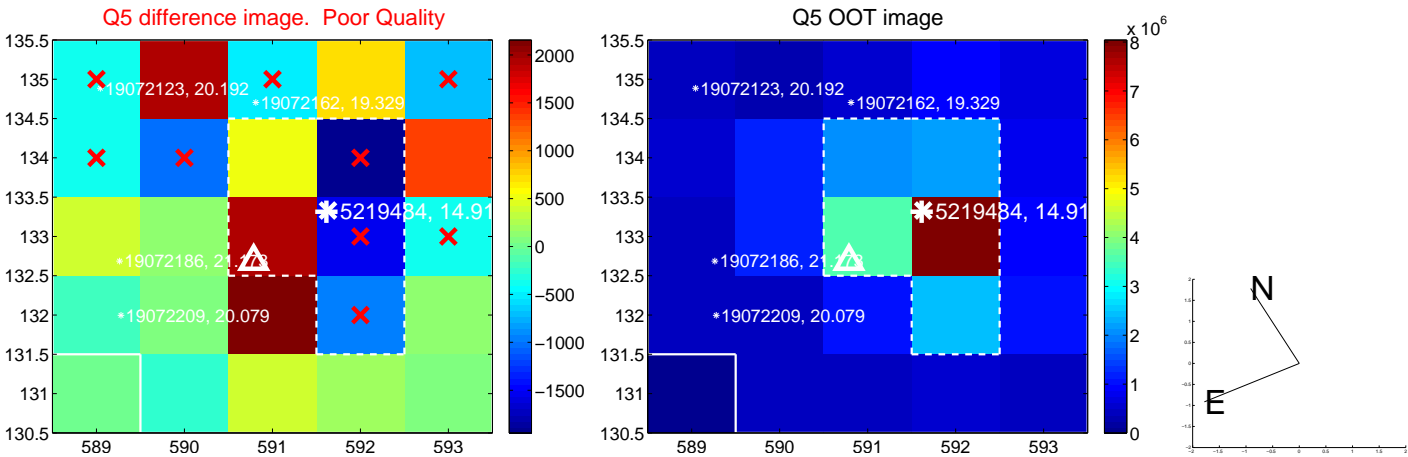


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

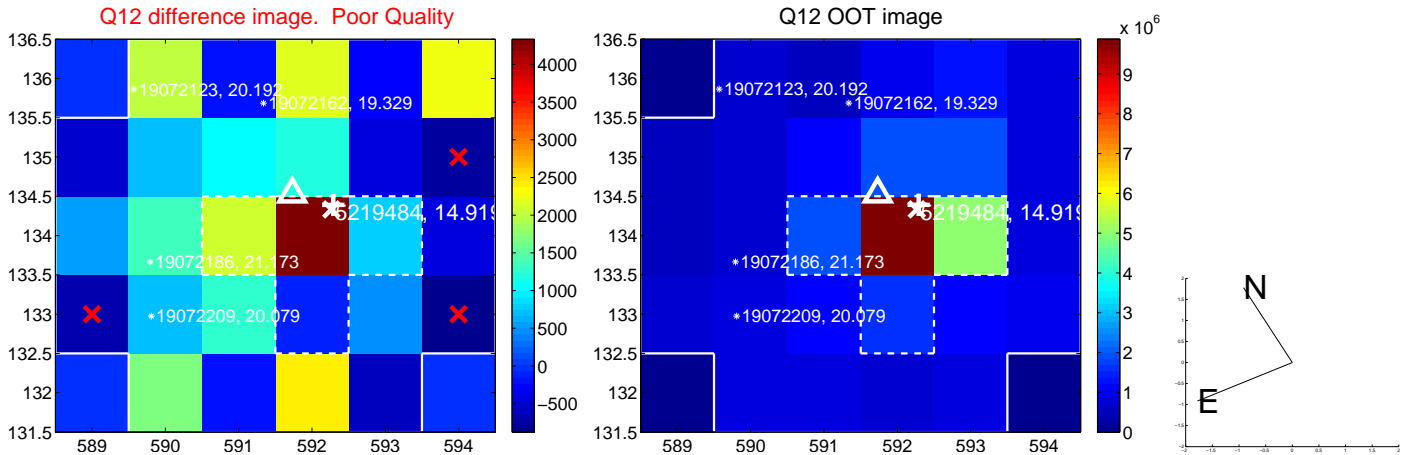
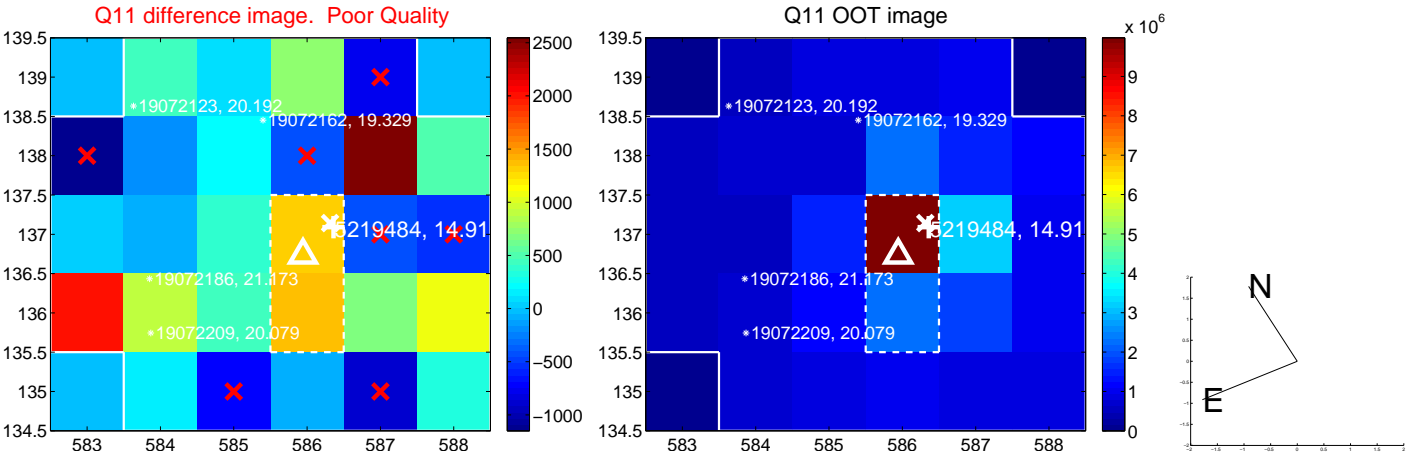
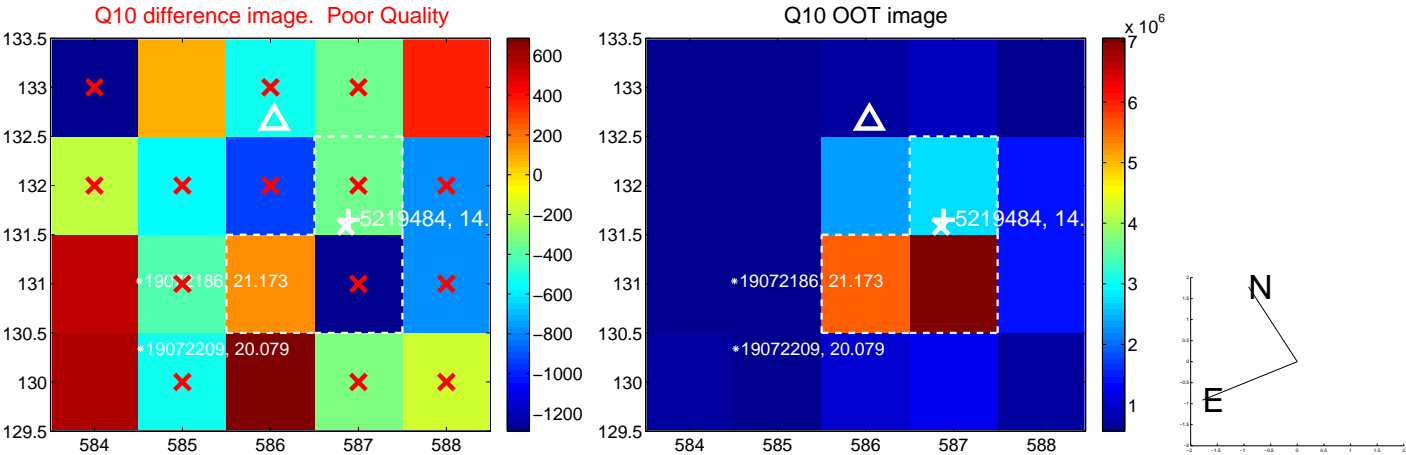
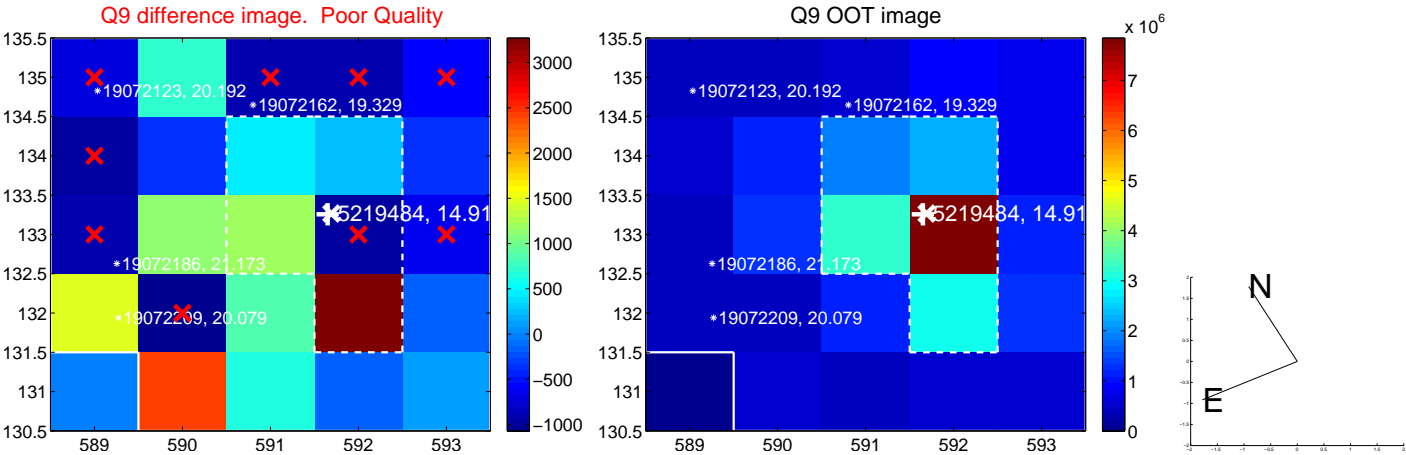
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



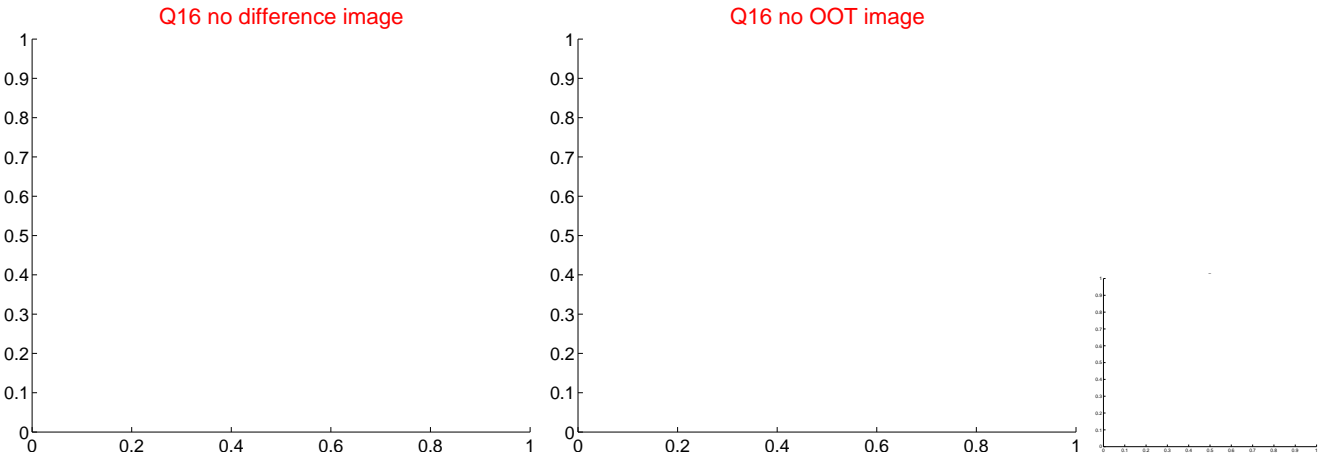
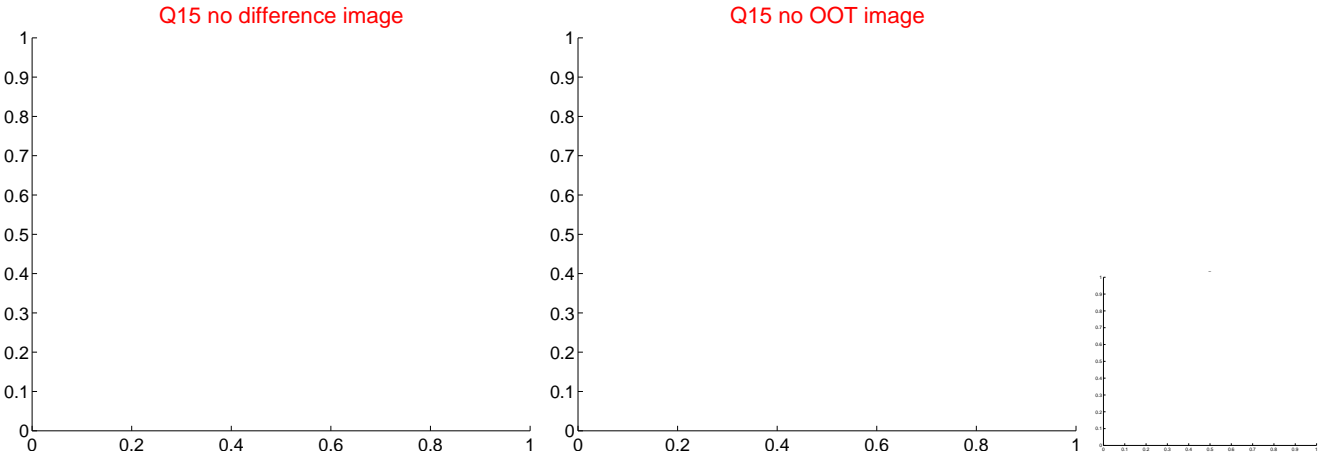
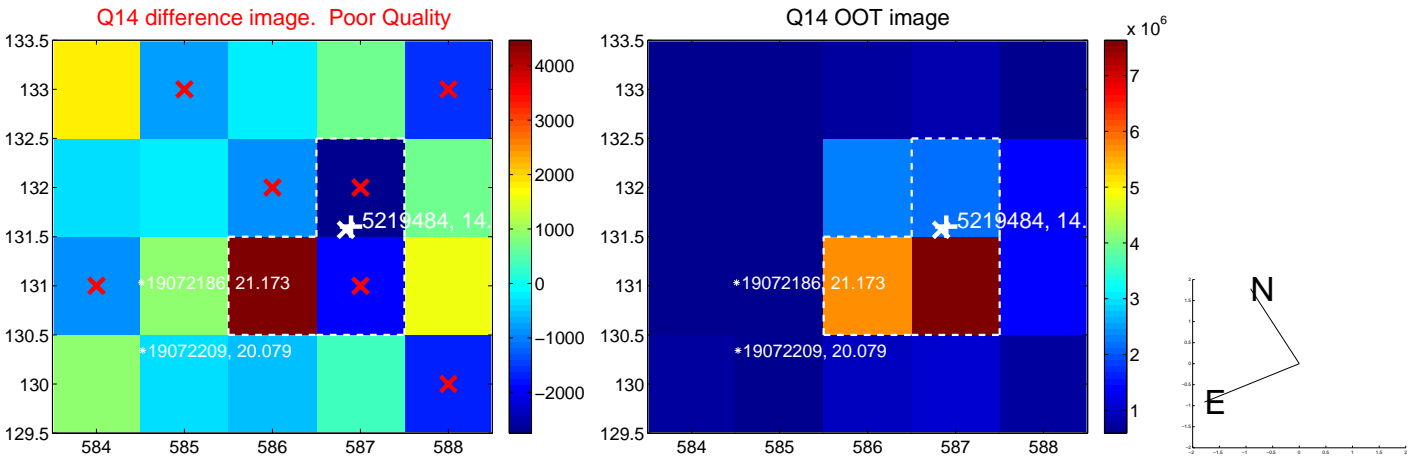
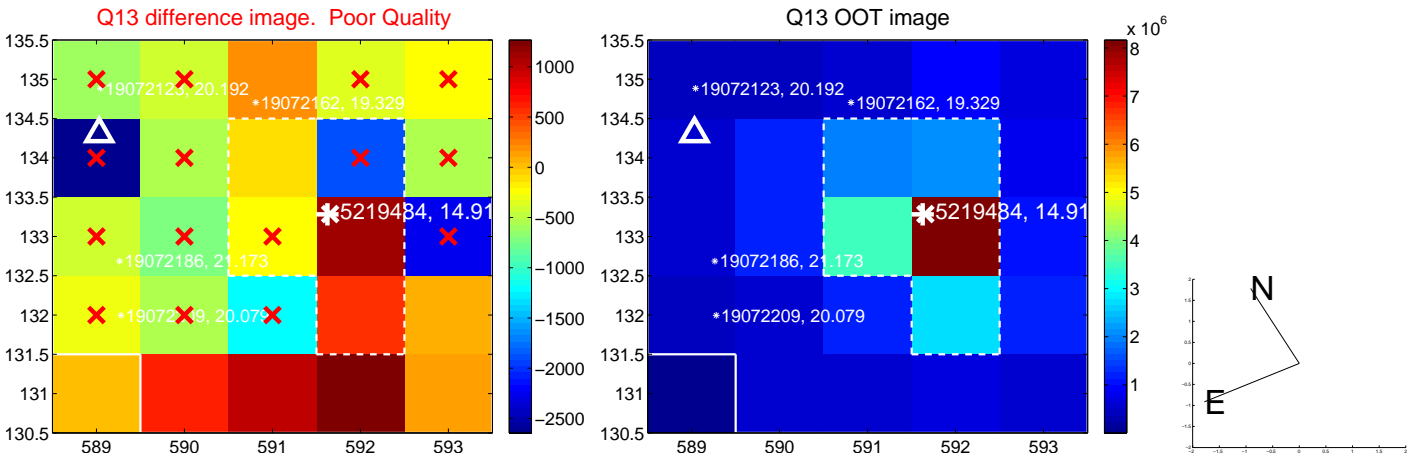
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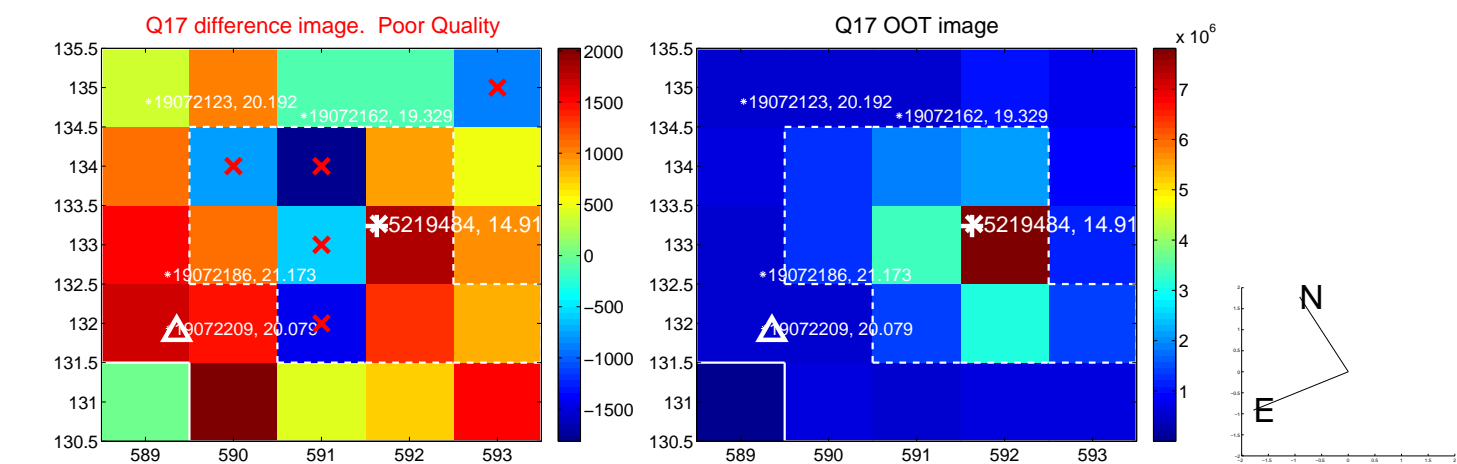
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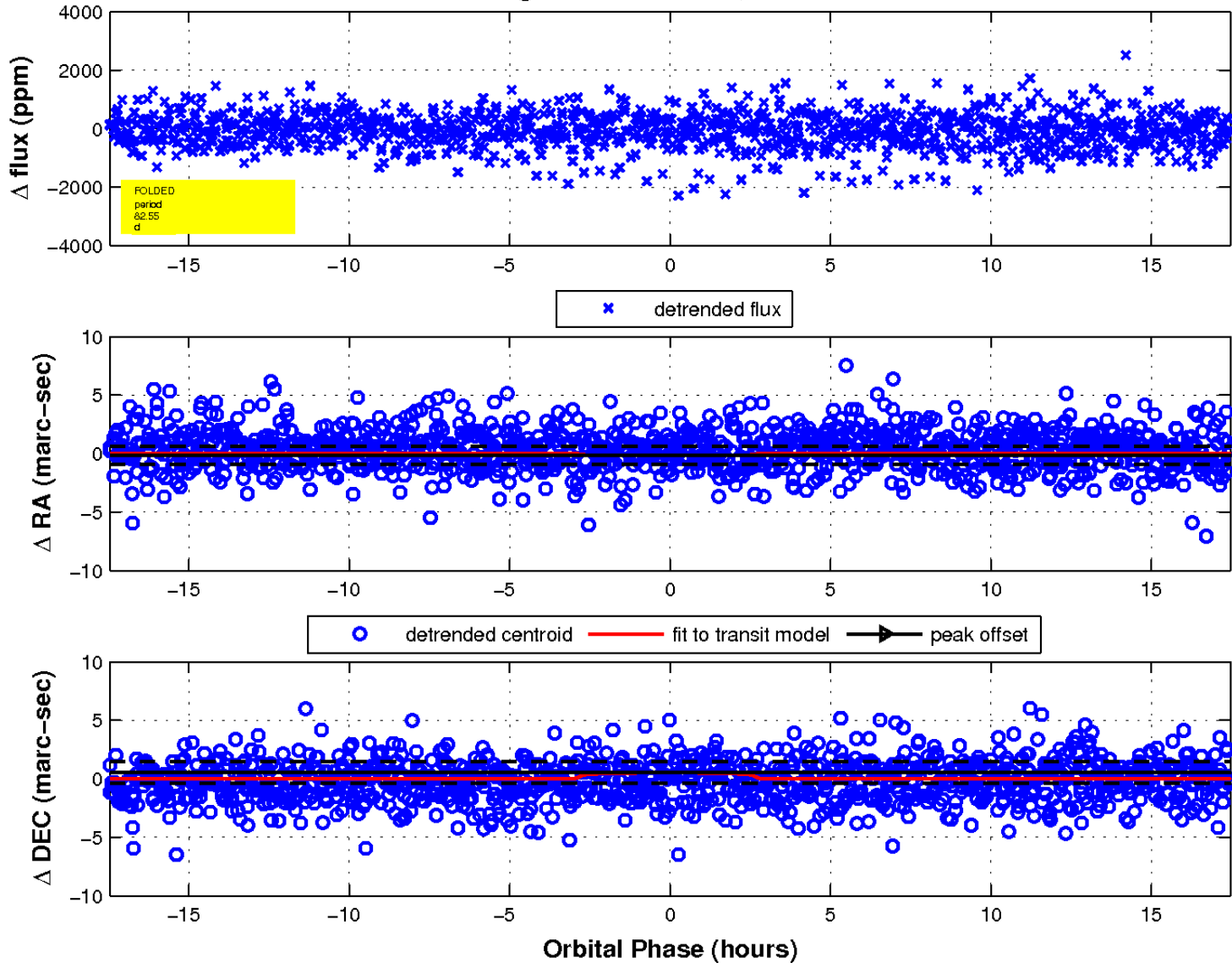
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

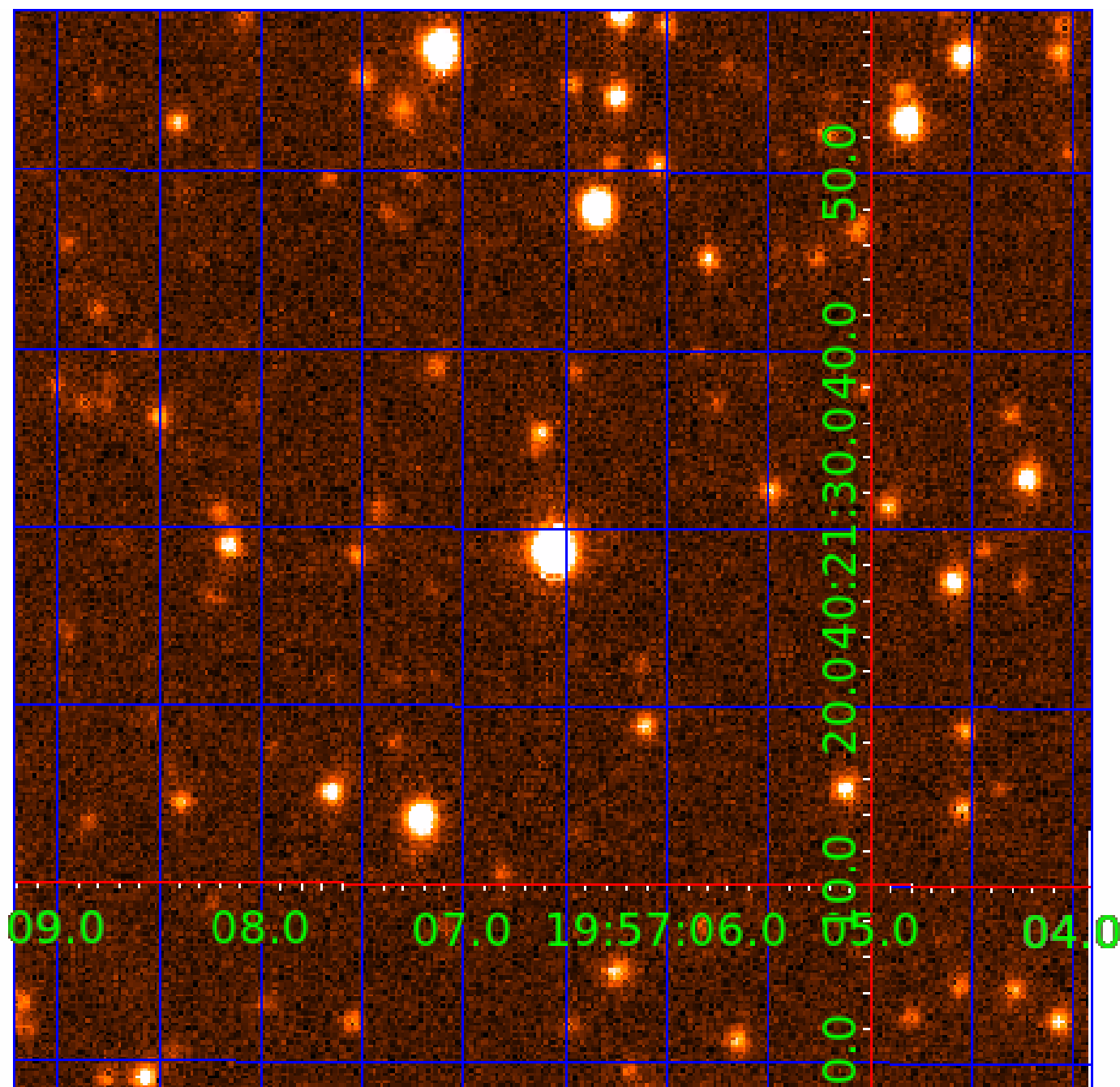


fluxWeightedCentroids, Planet 4 of 6



UKIRT Image

Declination



KIC 005219484

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})
005219484-01	OBS	No	0.784817	131.564070	42.0	5.016	7.9	8.1	0.70	5623	0.46	1959.51
005219484-02	OBS	No	146.148011	250.503689	1820.0	4.921	12.6	8.8	0.70	5623	3.06	1.84
005219484-03	OBS	No	115.195196	173.565061	1413.3	2.527	9.7	6.3	0.70	5623	2.61	2.53
005219484-04	OBS	No	82.545007	167.117071	1187.8	5.825	9.7	7.3	0.70	5623	2.51	3.95
005219484-06	OBS	No	83.371967	157.122305	797.7	3.712	8.1	5.2	0.70	5623	2.06	3.90

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005219484-01	OBS	FP	0.00	1	0	1	0	LPP_DV—MOD_NONUNIQ_DV—CENT_UNRESOLVED_OFFSET
005219484-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005219484-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005219484-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
005219484-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

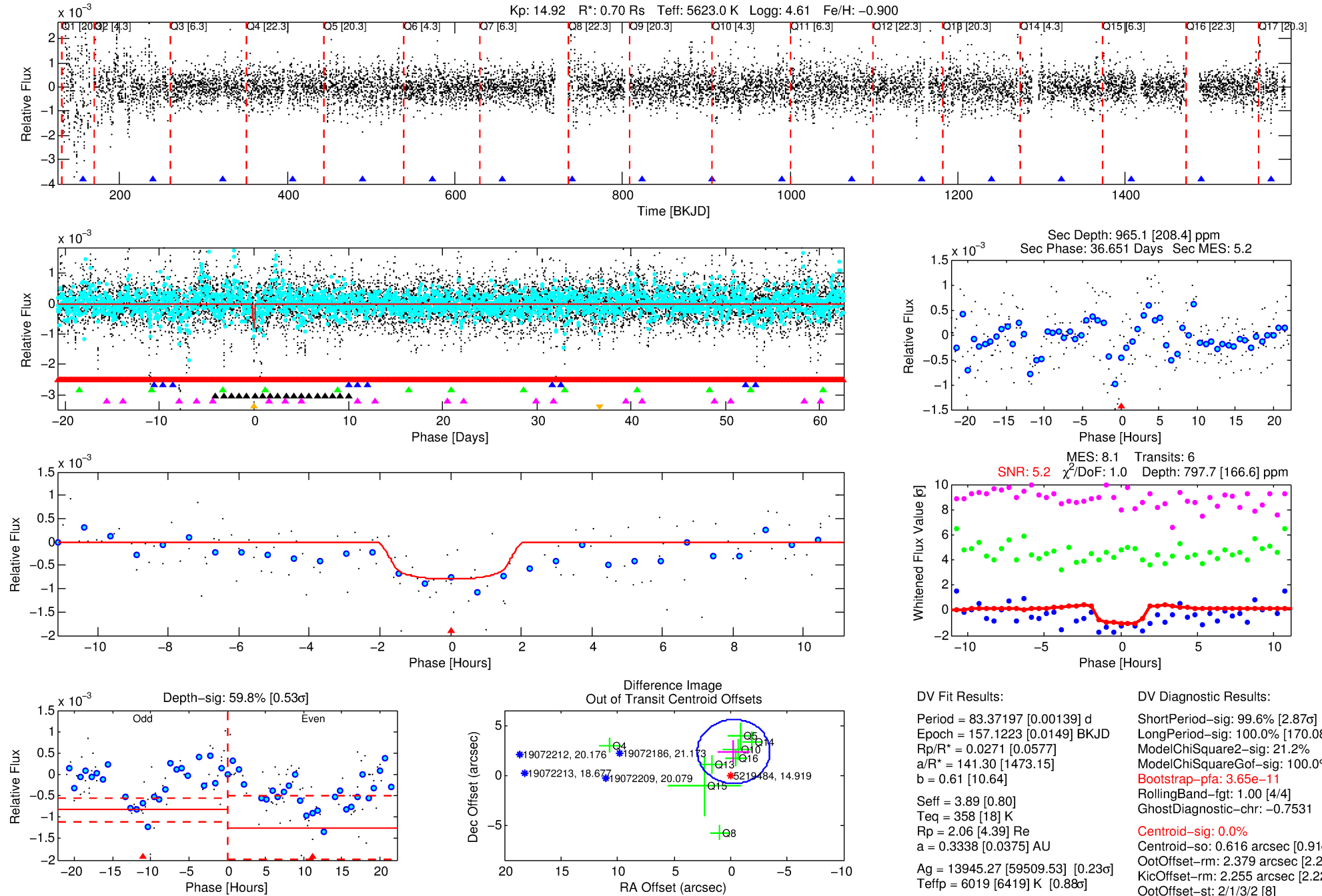
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005219484-06

No Significant Match Found

DV One-Page Summary

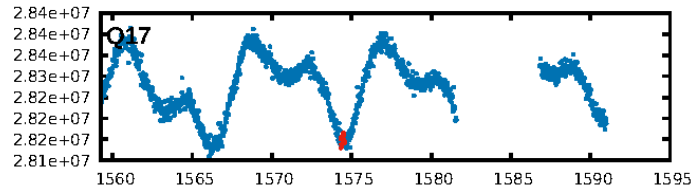
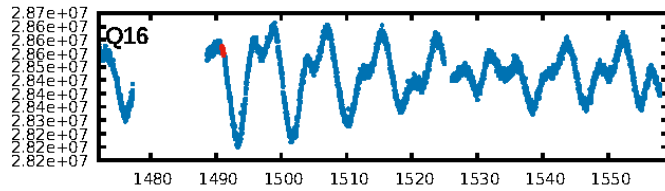
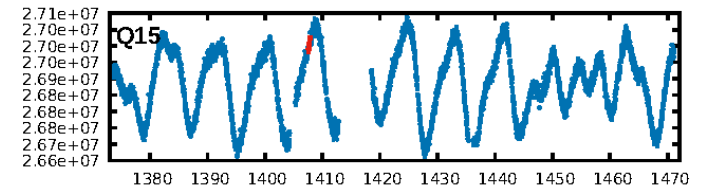
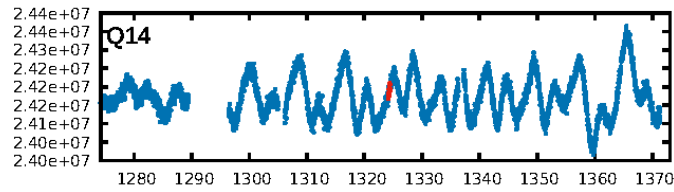
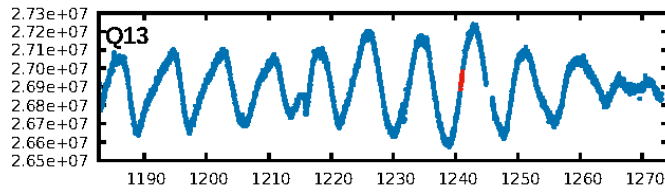
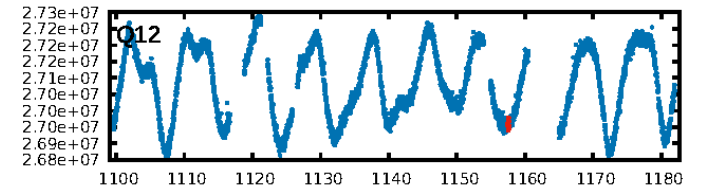
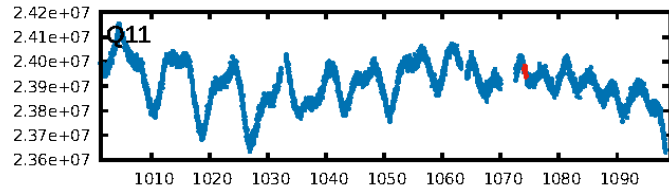
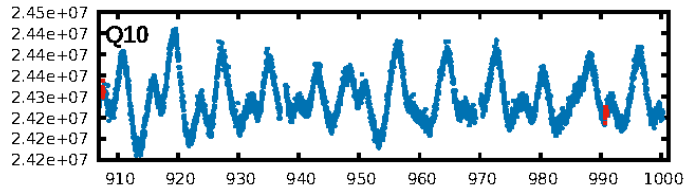
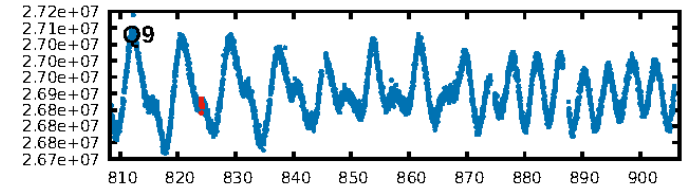
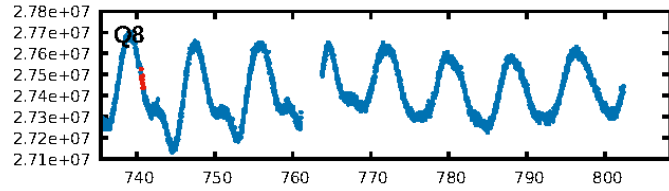
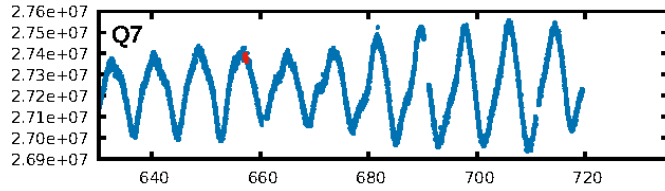
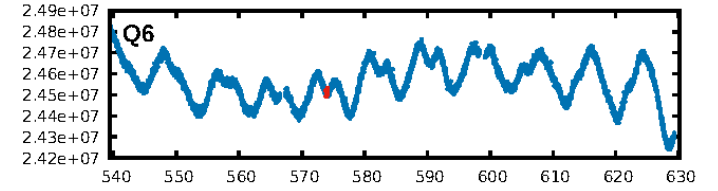
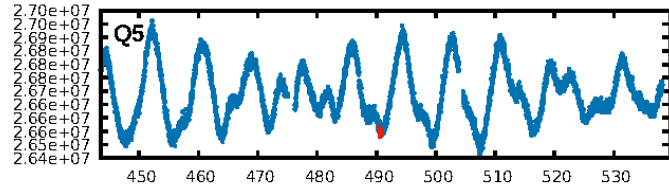
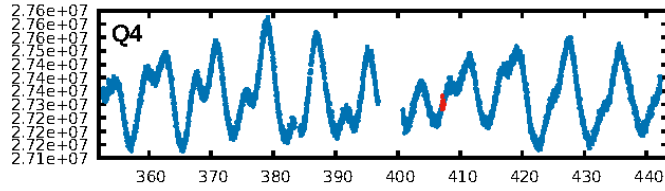
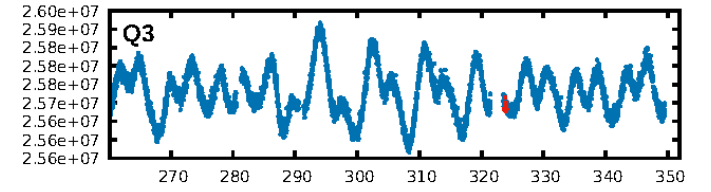
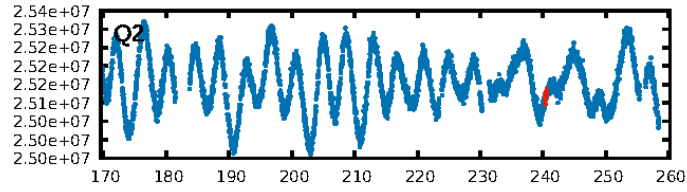
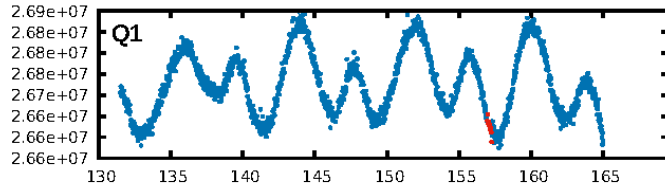
KIC: 5219484 Candidate: 6 of 6 Period: 83.372 d



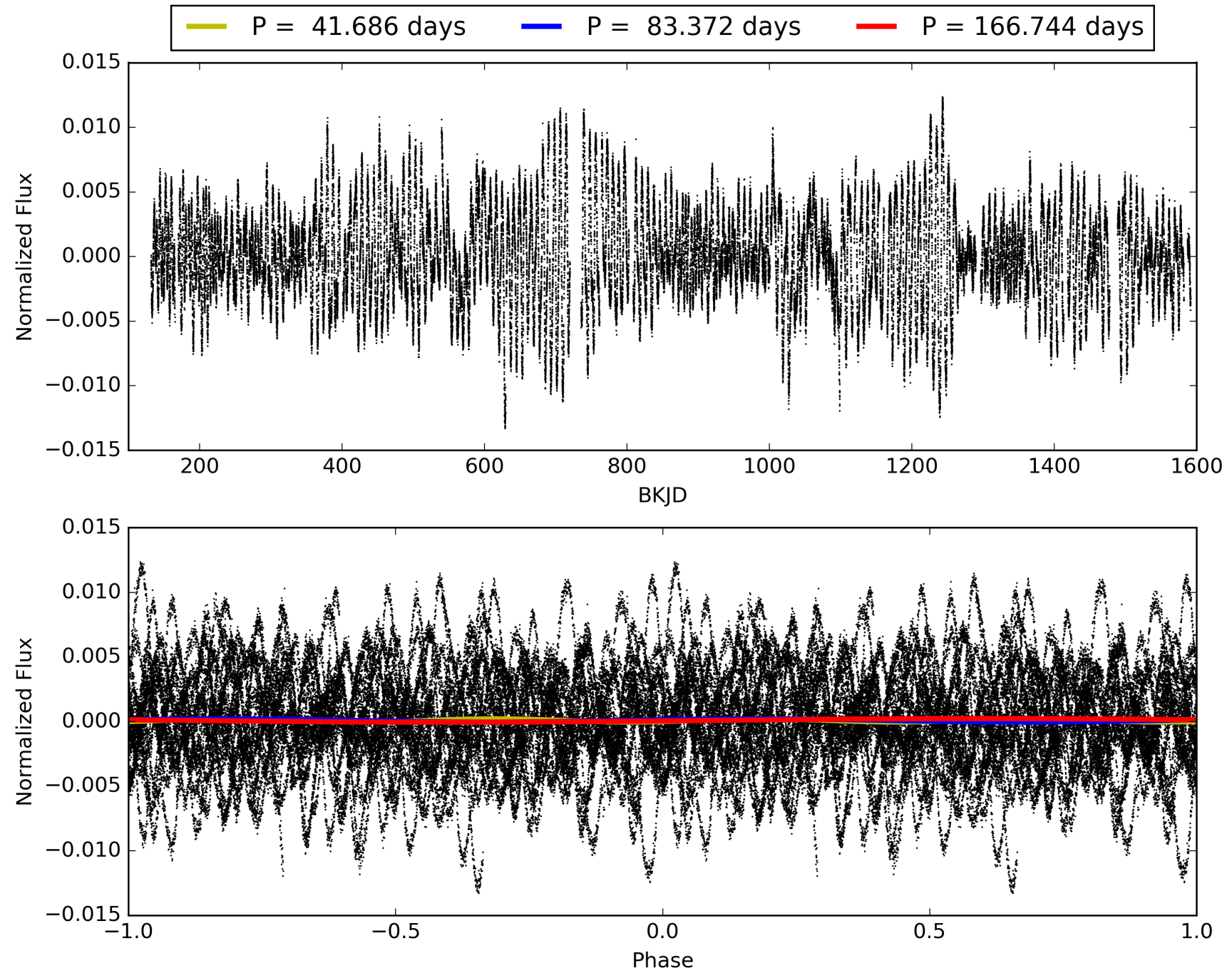
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 08:23:17 Z

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

TCE 005219484-06, PDC Light Curves

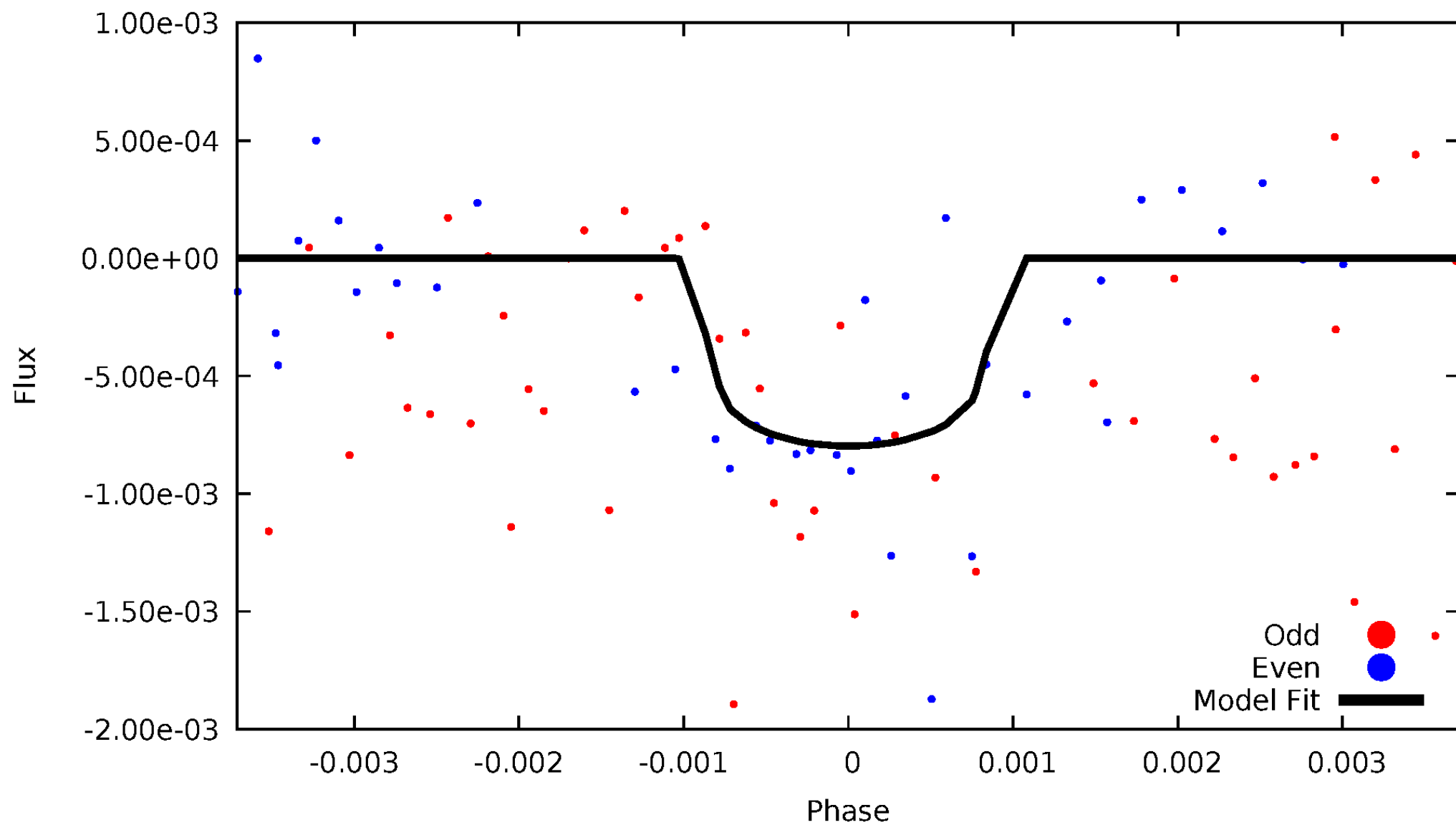


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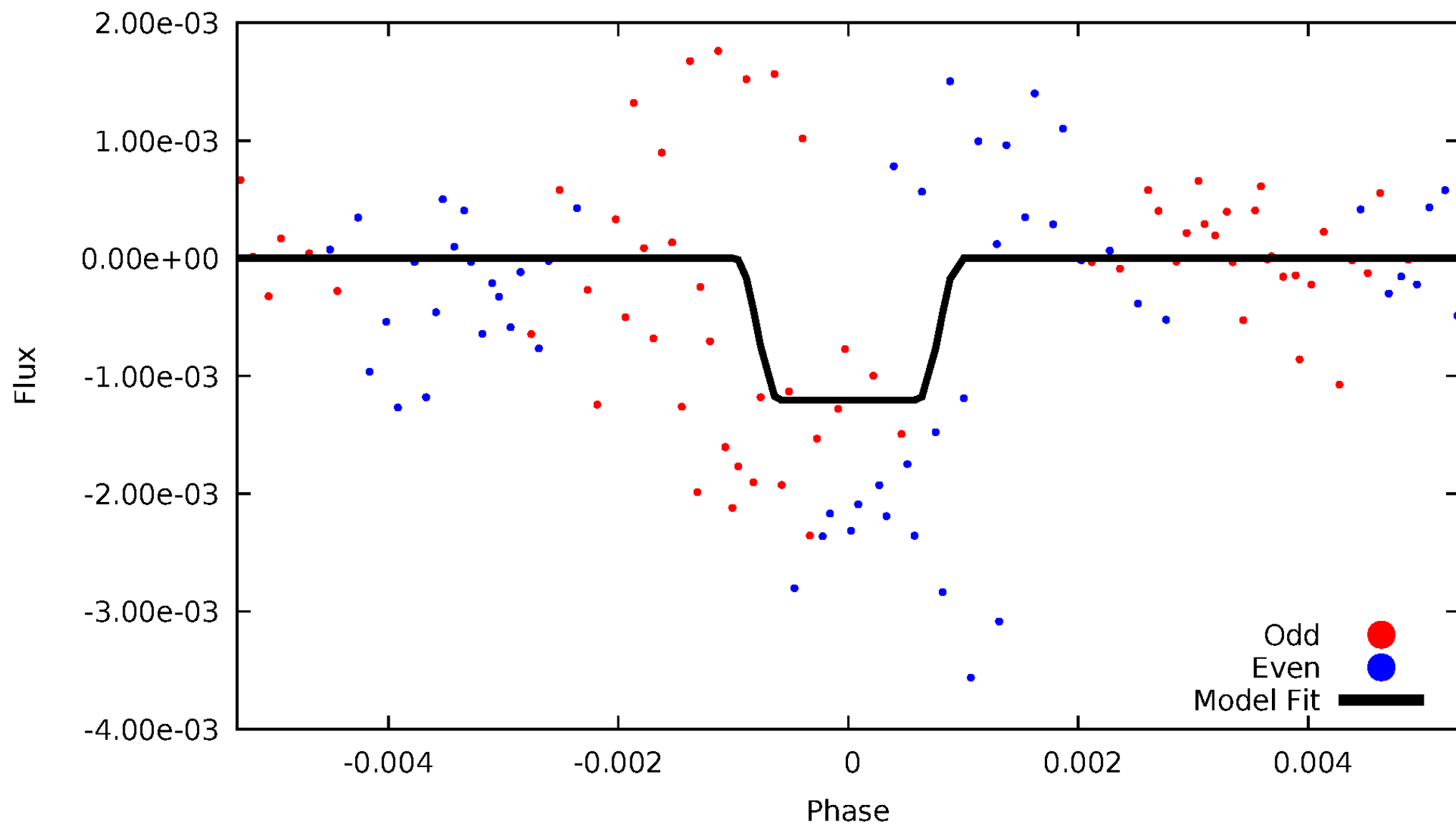
DV Odd/Even

TCE 005219484-06



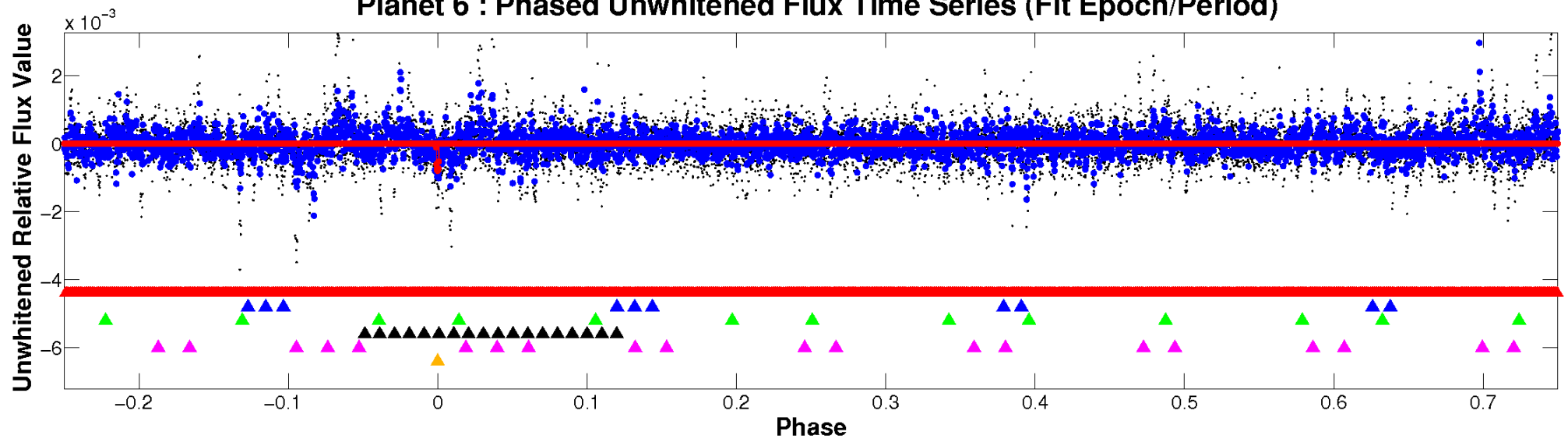
ALT Odd/Even

TCE 005219484-06

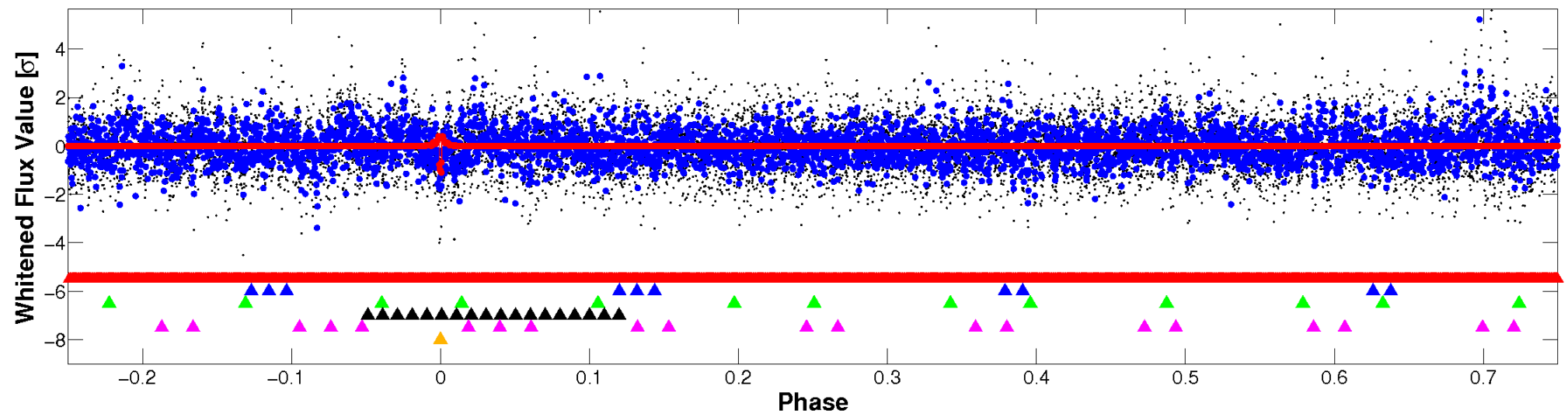


Non-Whitened Vs. Whitened Light Curve

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

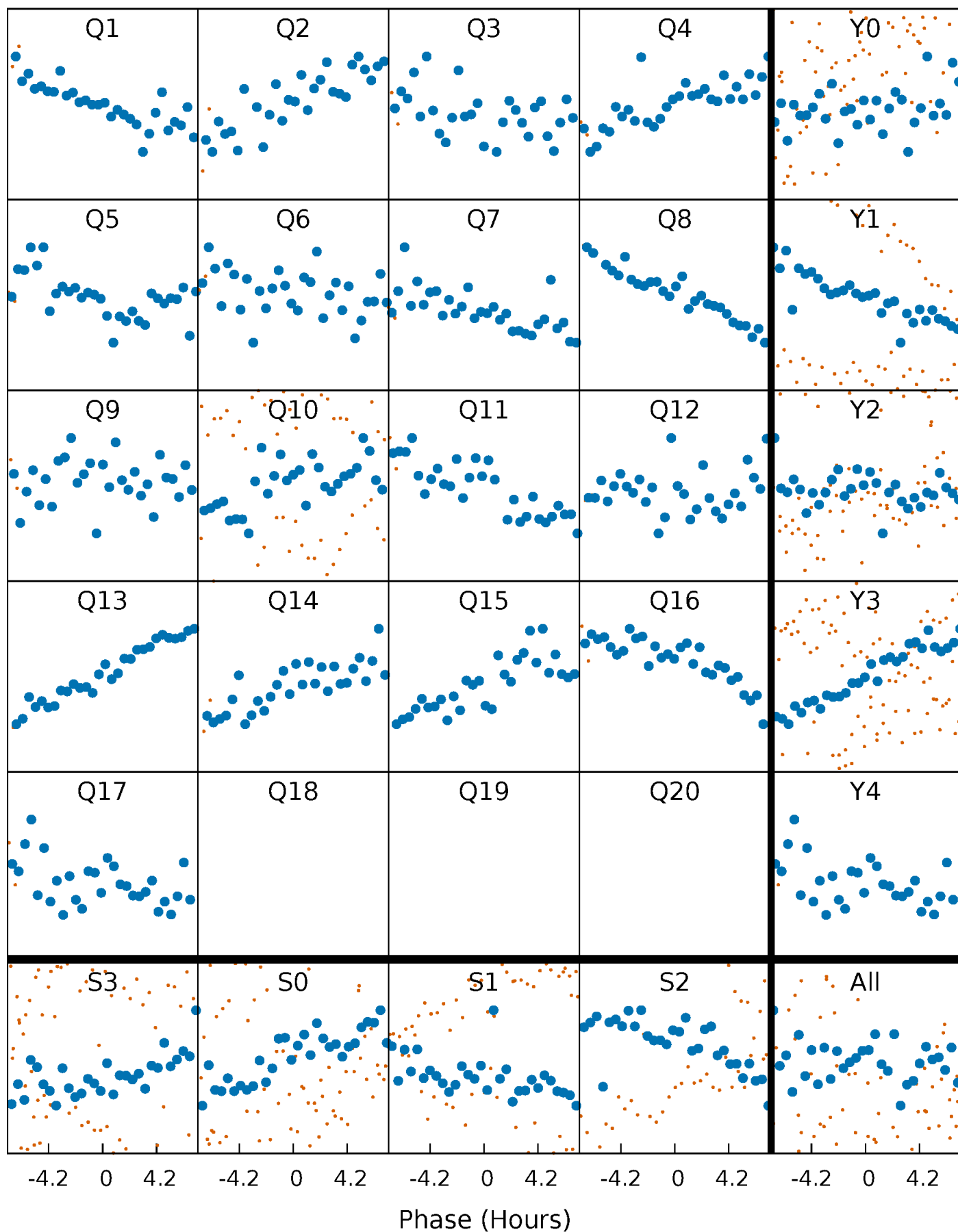


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



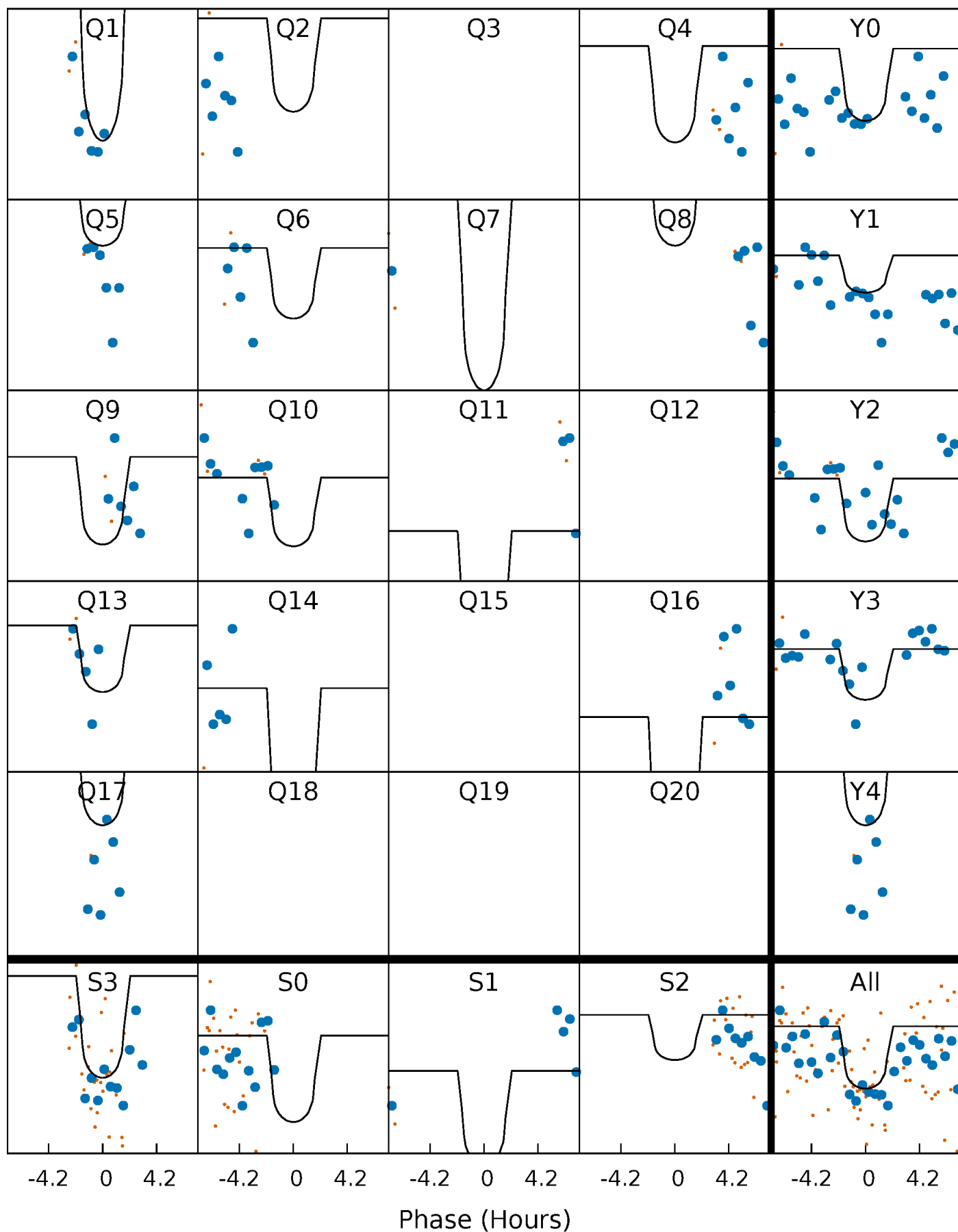
PDC Quarter-Phased Transit Curves

TCE 005219484-06 P= 83.371967 Days $T_0=157.122305$ (BKJD)



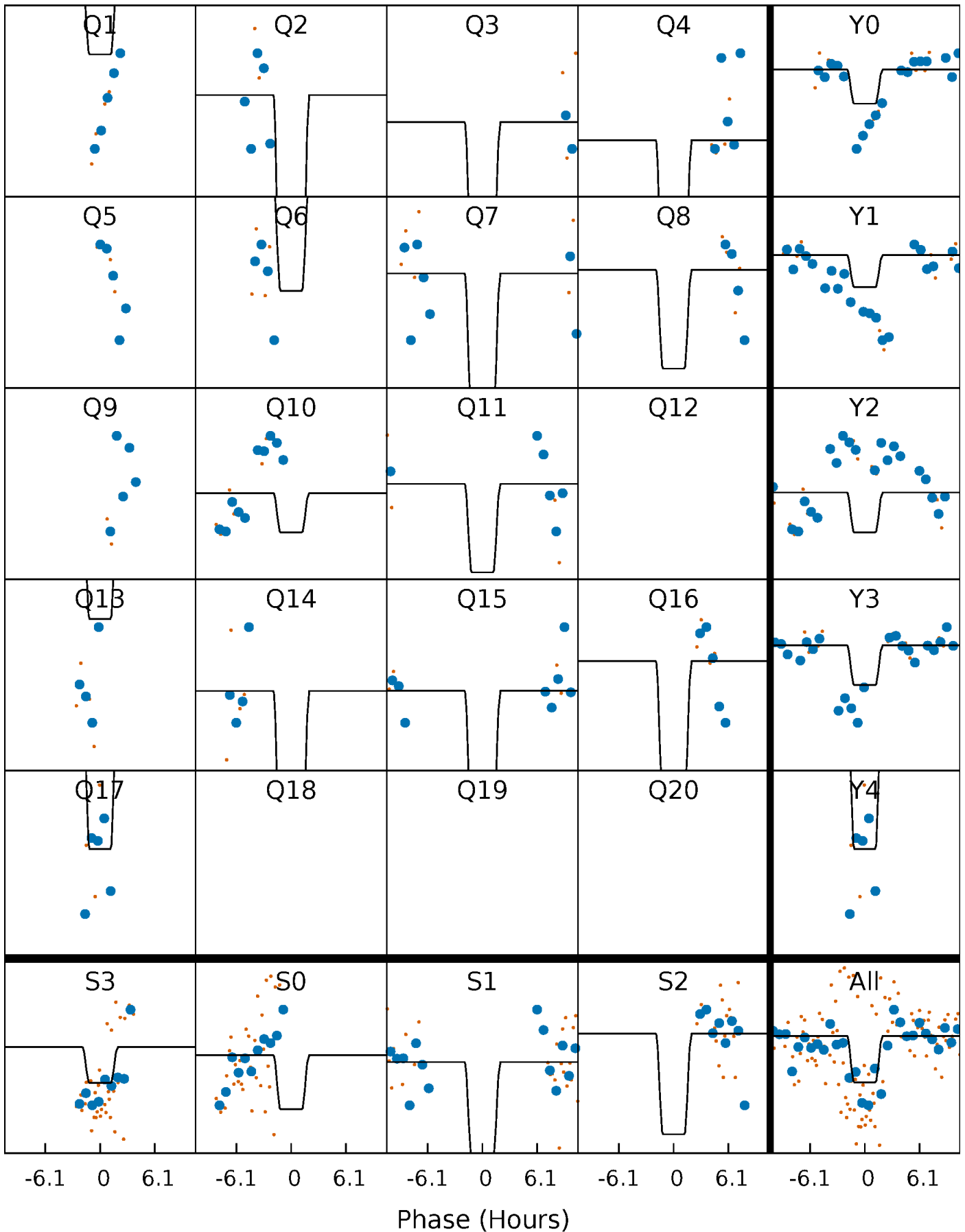
DV Quarter-Phased Transit Curves

TCE 005219484-06 P= 83.371967 Days $T_0=157.122305$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

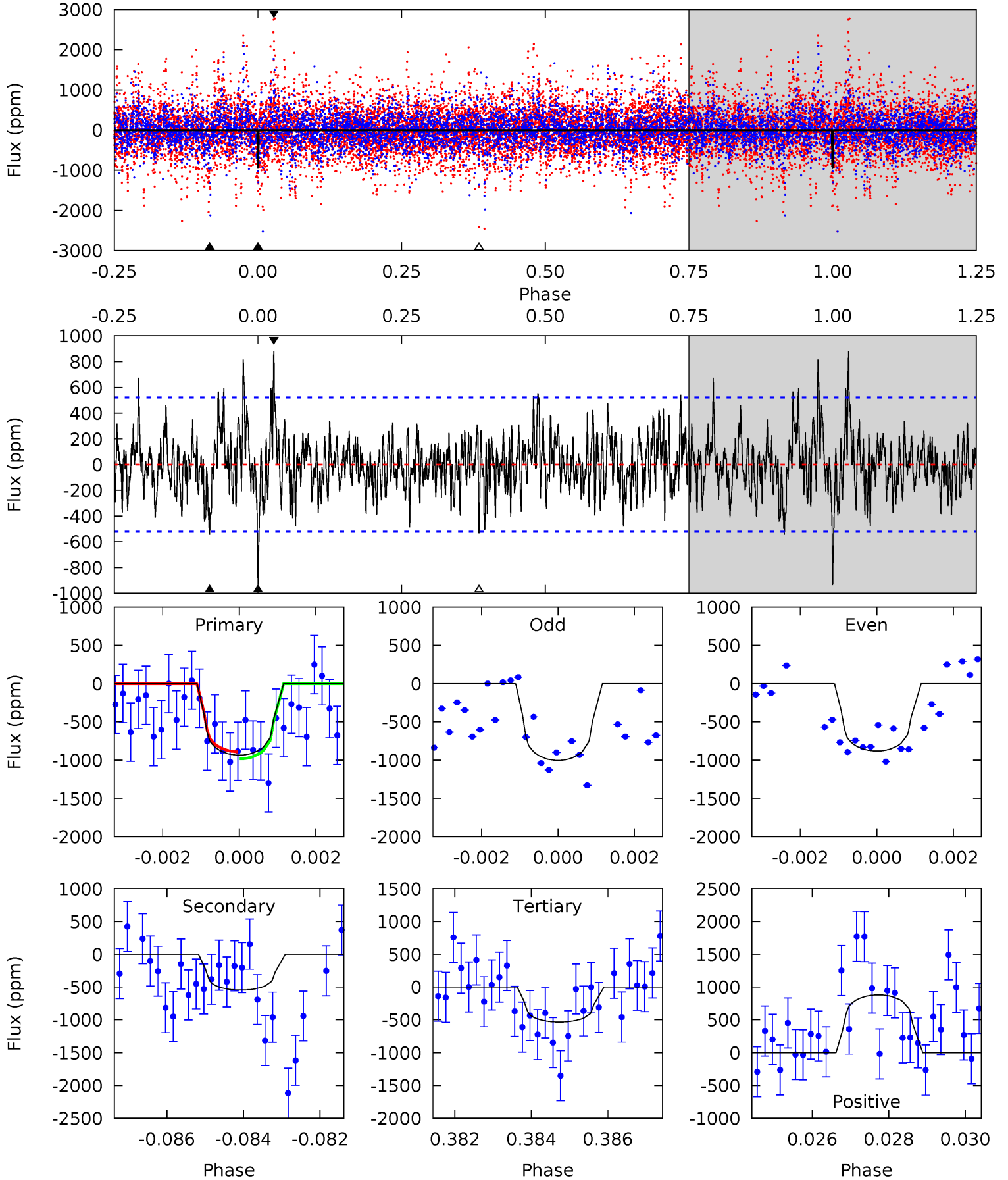
TCE 005219484-06 P= 83.377548 Days $T_0=157.053266$ (BKJD)



DV Model-Shift Uniqueness Test

005219484-06, P = 83.371967 Days, E = 73.750338 Days

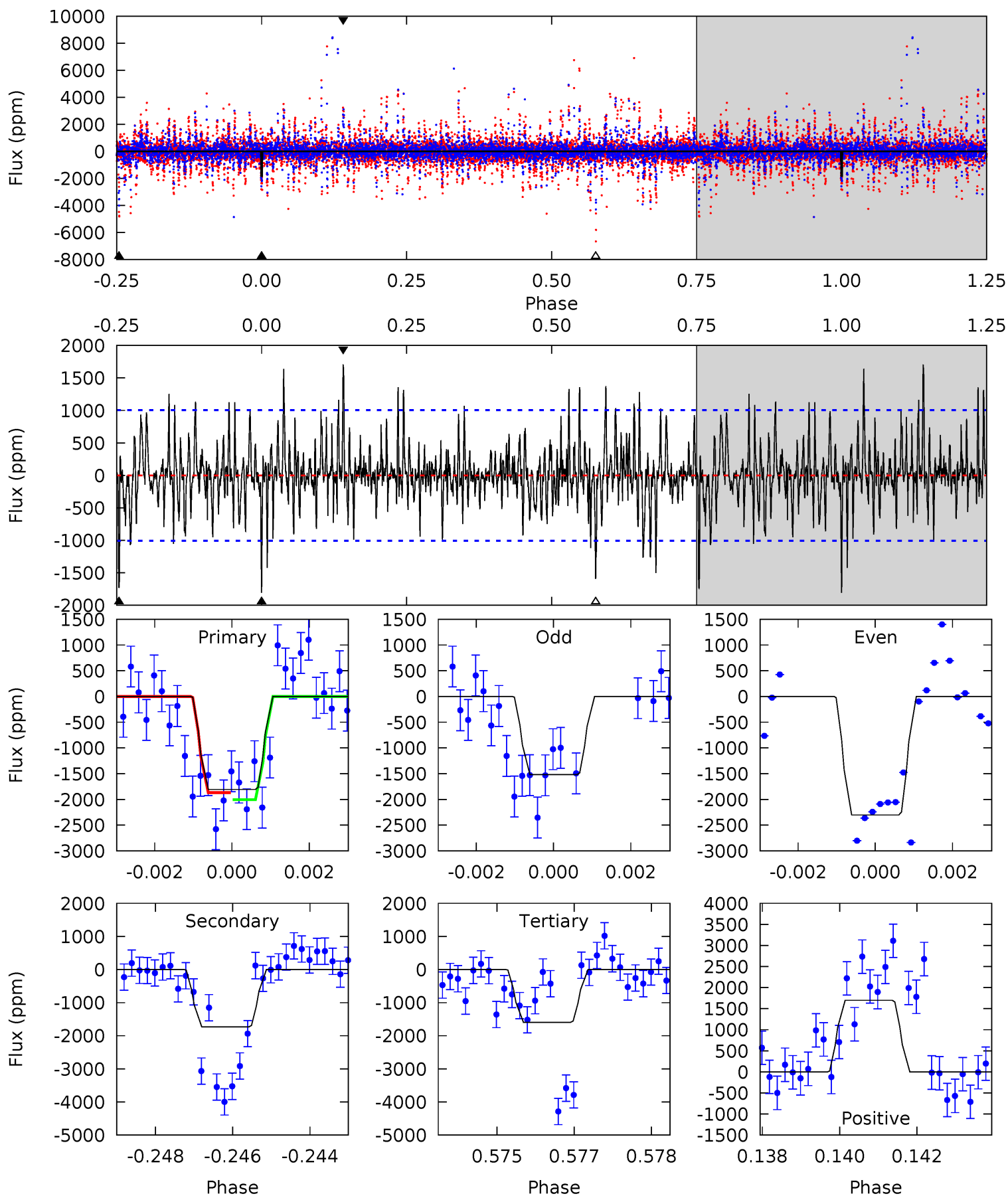
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.57	5.58	5.46	9.01	5.34	3.11	1.94	4.10	0.56	0.12	-3.43	0.59	0.99	0.49	0.47



Alt Model-Shift Uniqueness Test

005219484-06, P = 83.377548 Days, E = 73.675718 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.59	9.19	8.46	9.00	5.34	3.11	1.98	1.13	0.58	0.73	0.19	1.78	0.58	0.48	0.36



Stellar Parameters For KIC 005219484

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5623^{+184}_{-167}	$4.606^{+0.052}_{-0.084}$	$-0.900^{+0.300}_{-0.300}$	$0.696^{+0.096}_{-0.052}$	$0.713^{+0.069}_{-0.040}$	$2.980^{+0.703}_{-0.811}$
	+3%/-3%	+1%/-2%	+33%/-33%	+14%/-7%	+10%/-6%	+24%/-27%
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 005219484-06 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-545 ± 98	$4.00^{+3.61}_{-2.67}$	504^{+21}_{-19}	4077^{+2543}_{-804}	2083^{+18792}_{-1524}
Alt.	-1732 ± 188	$4.20^{+3.93}_{-2.74}$	503^{+22}_{-19}	5031^{+3794}_{-1170}	6209^{+43597}_{-4580}

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 $A_{obs} \gg 1.0$

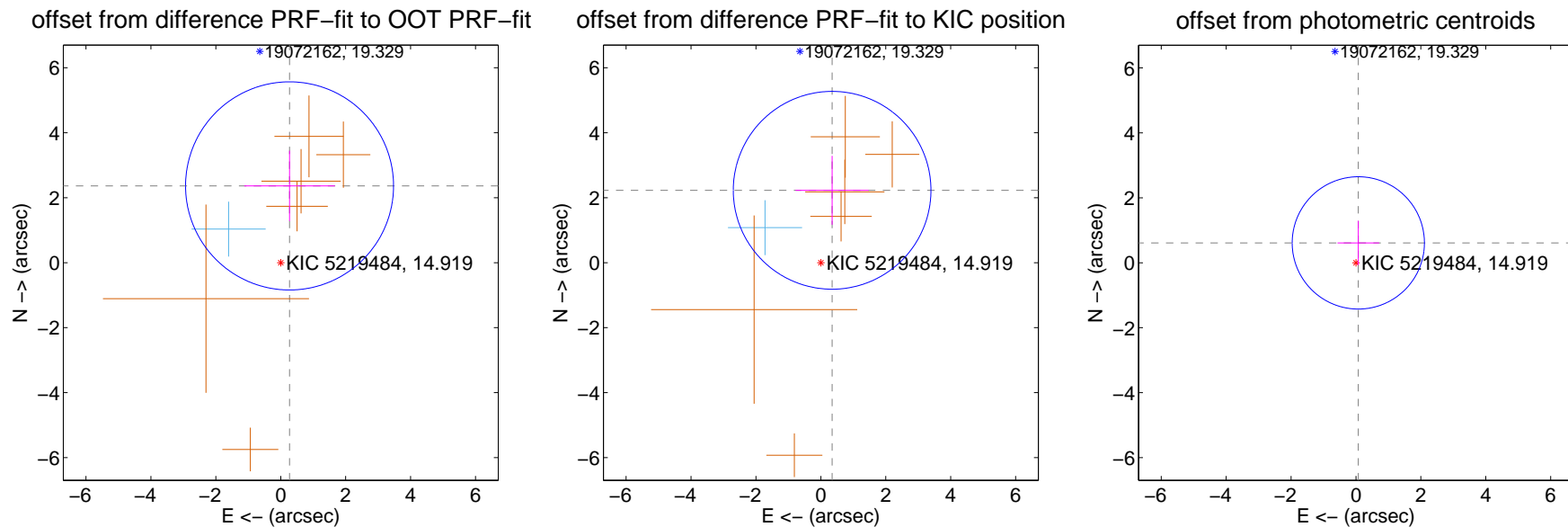
DV Centroid Data

Supplemental centroid analysis for 005219484-06. Kepler magnitude: 14.92. Transit SNR 5.22

There are 1 quarters with good PRF difference image offsets

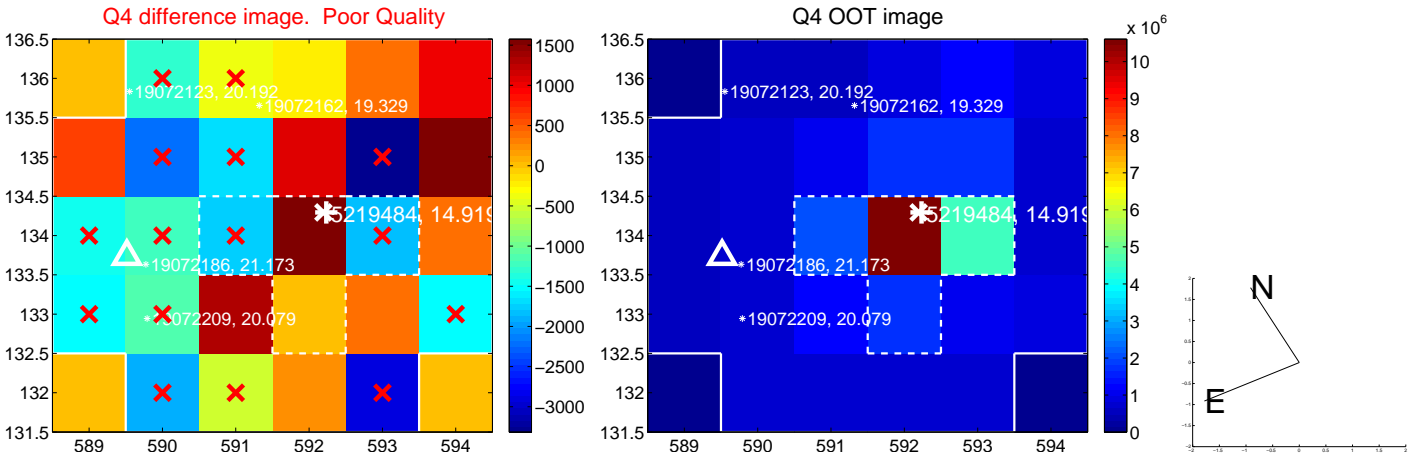
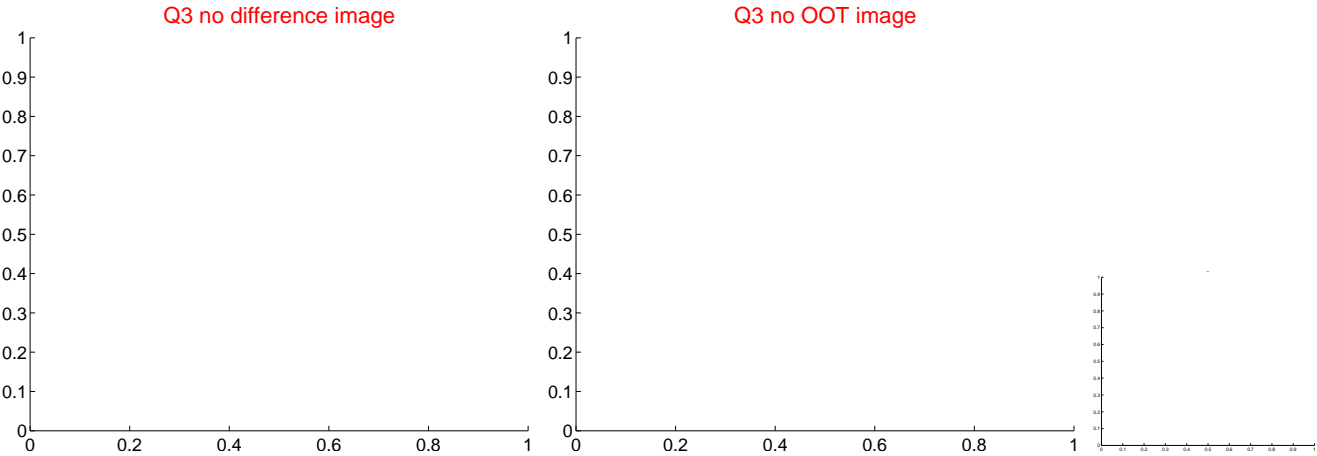
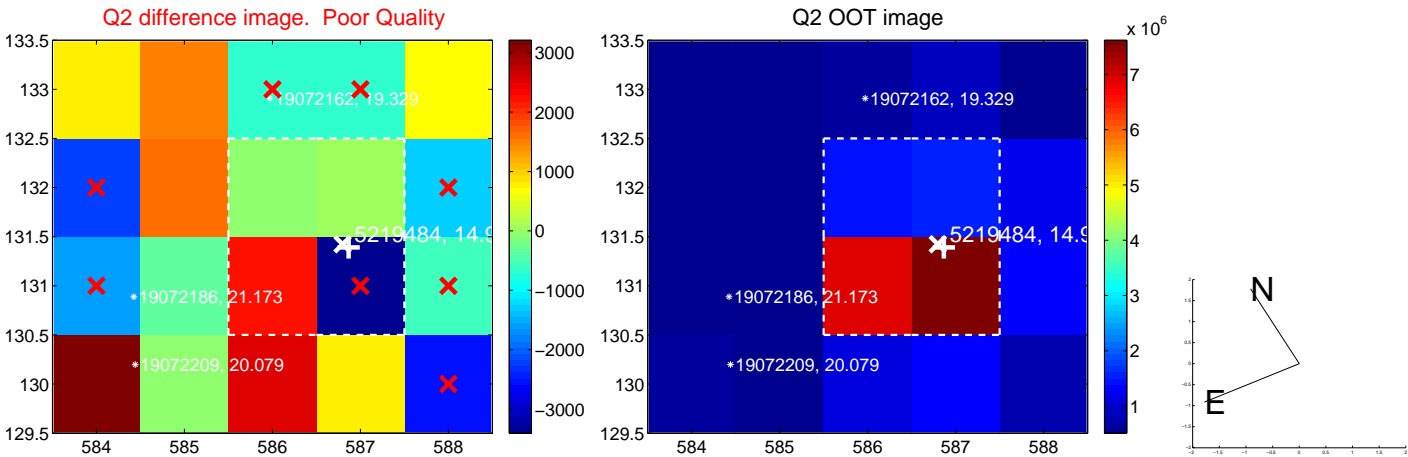
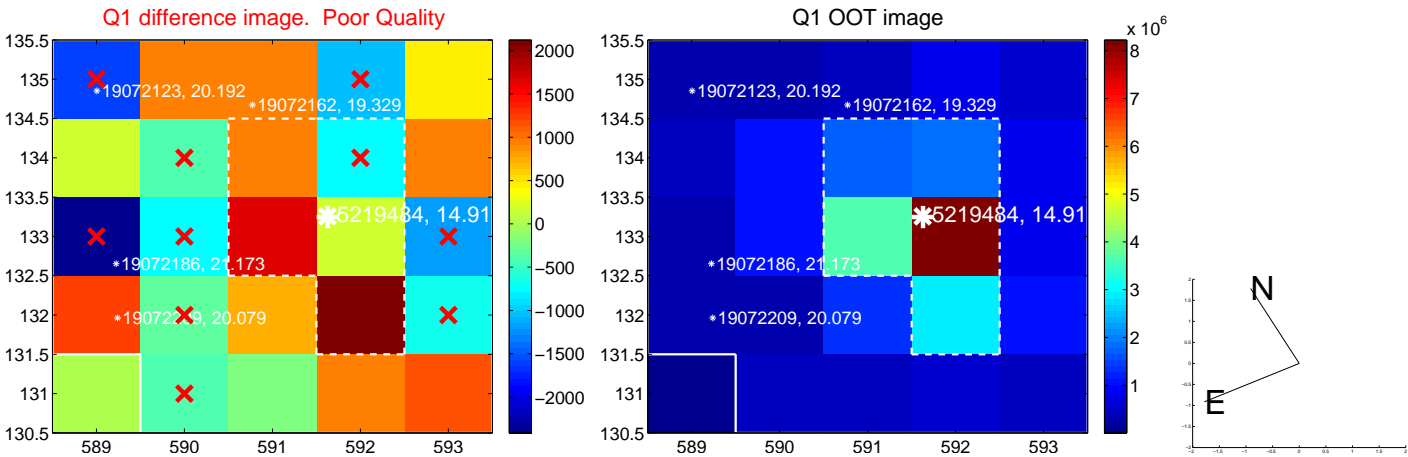
The direct PRF centroid is offset from the target star catalog position by about 0.33 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.379 ± 1.068	2.23	-0.271 ± 1.396	2.364 ± 1.086
PRF-fit source offset from KIC position	2.255 ± 1.015	2.22	-0.347 ± 1.126	2.229 ± 1.060
photometric centroid source offset	0.62 ± 0.68	0.91	-0.07 ± 0.64	0.61 ± 0.68

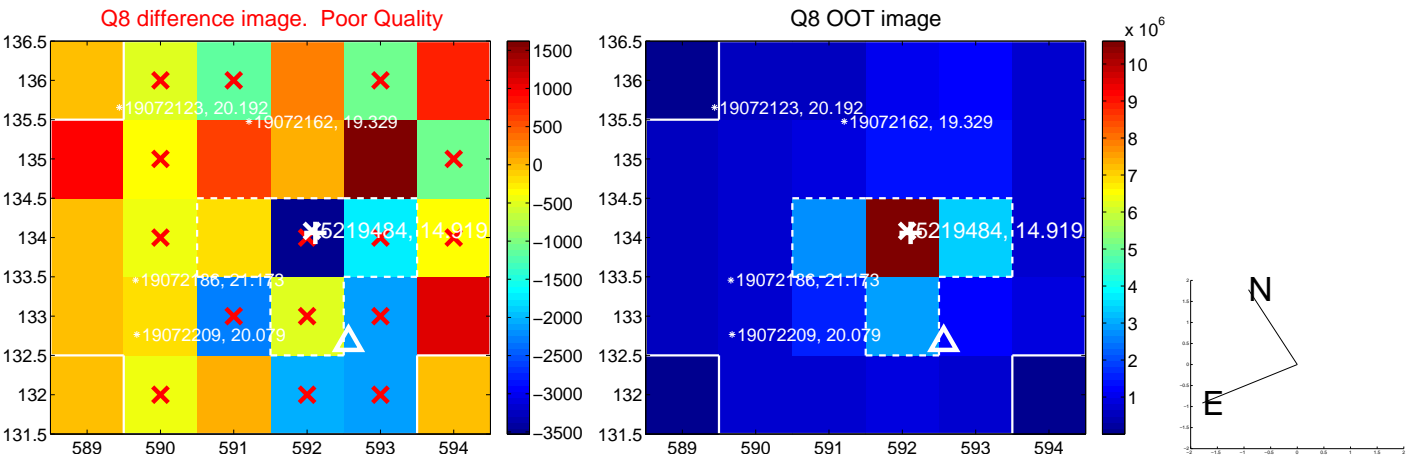
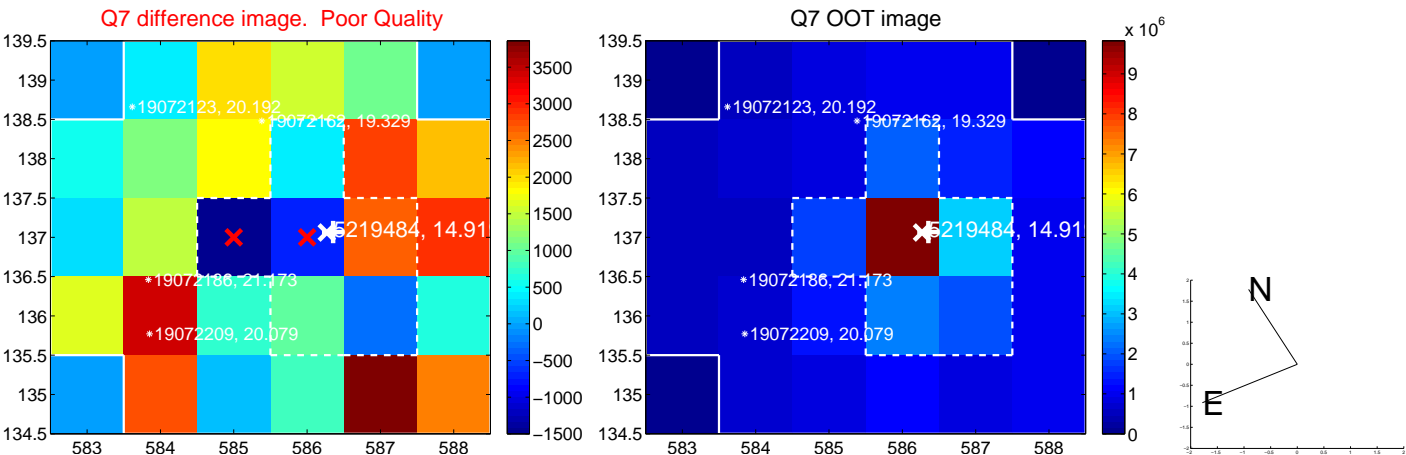
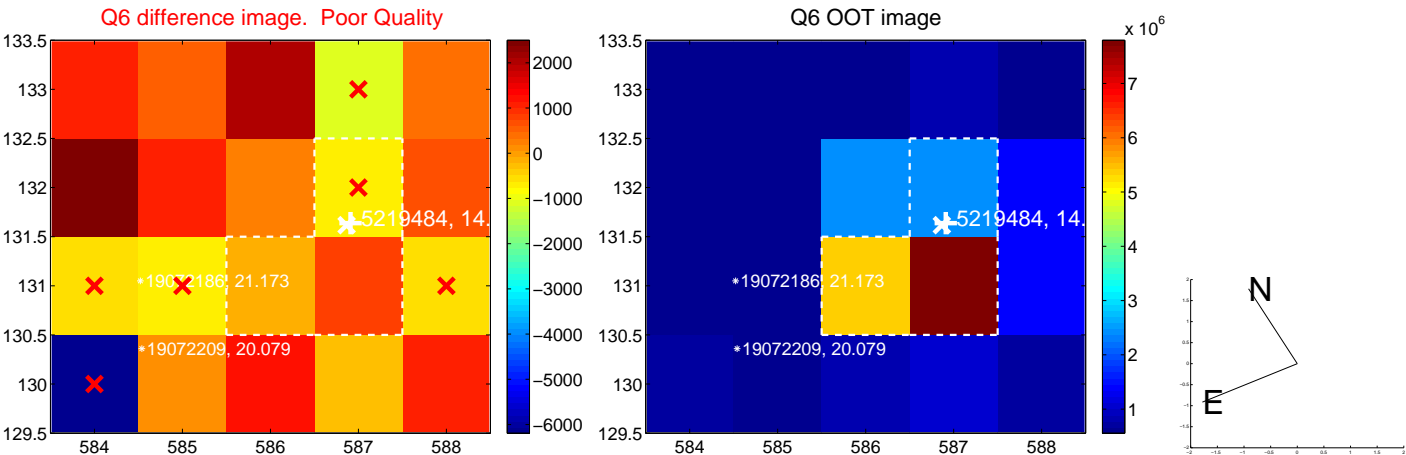
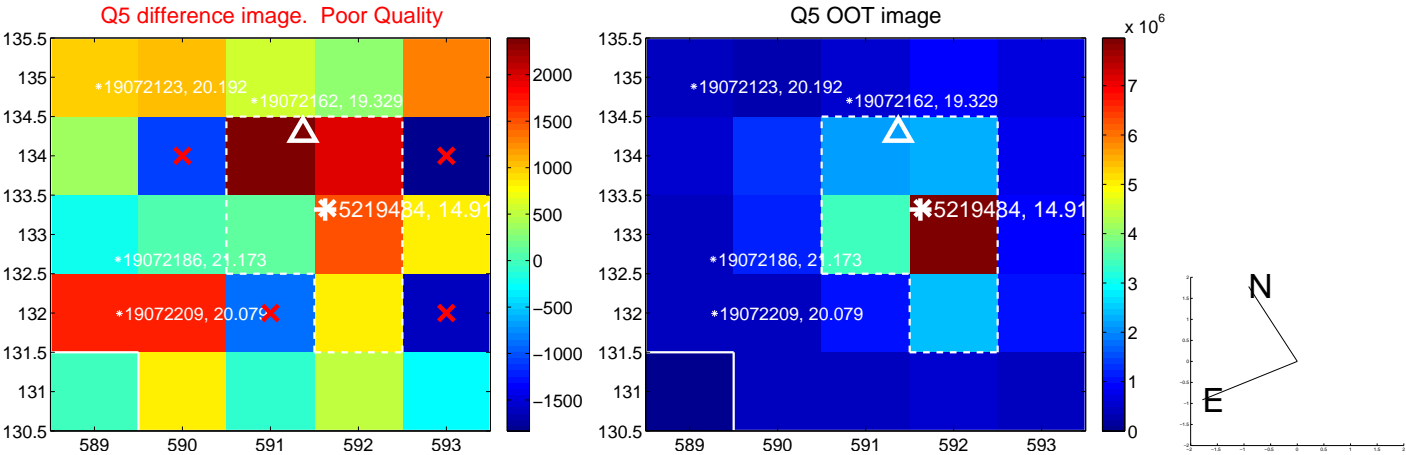


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

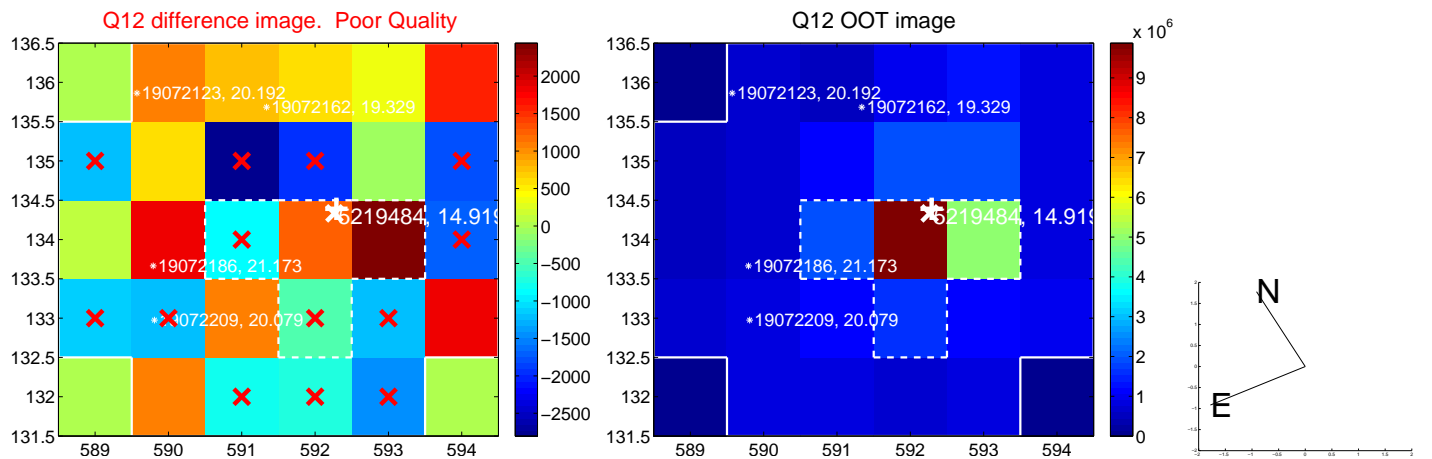
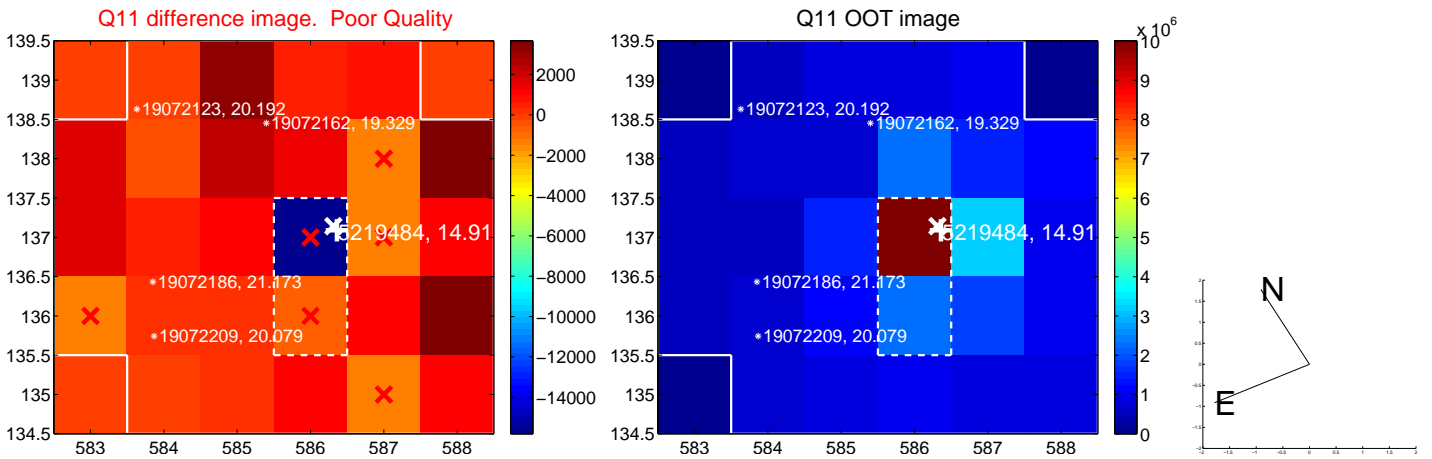
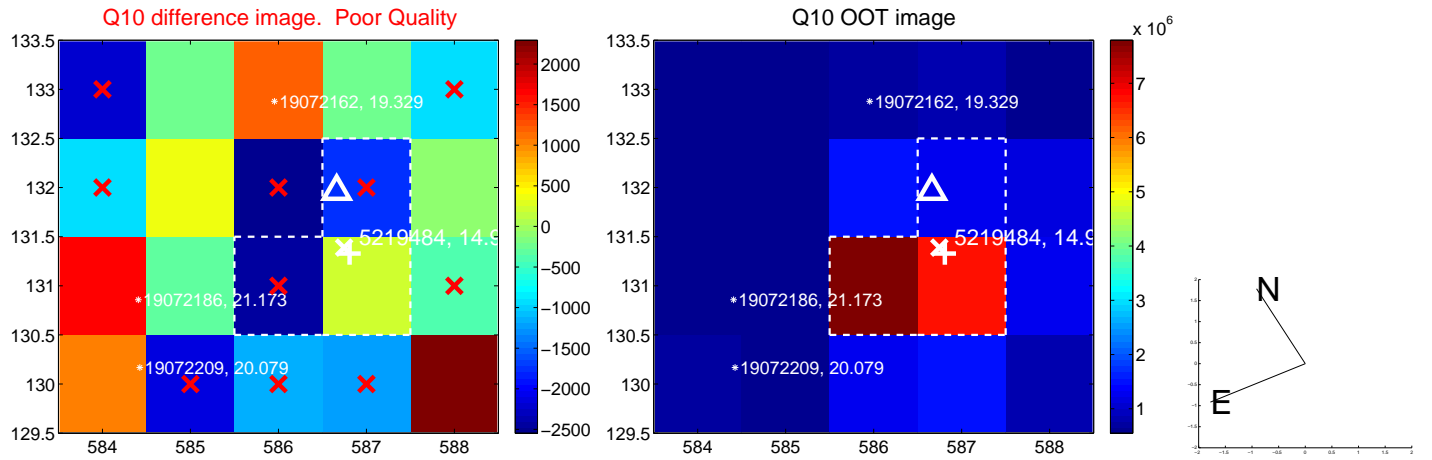
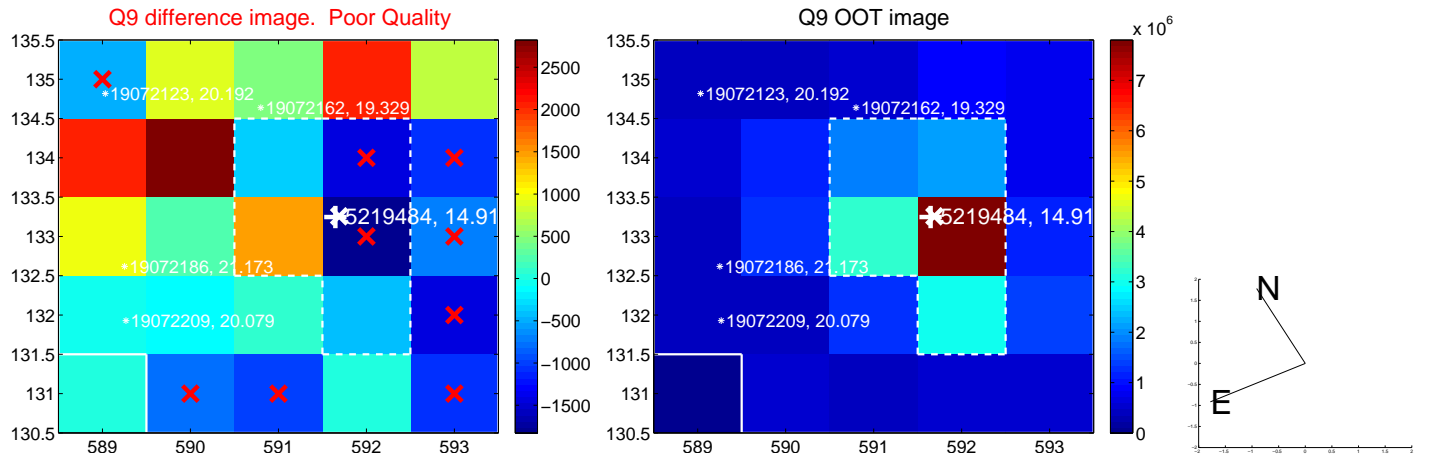
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



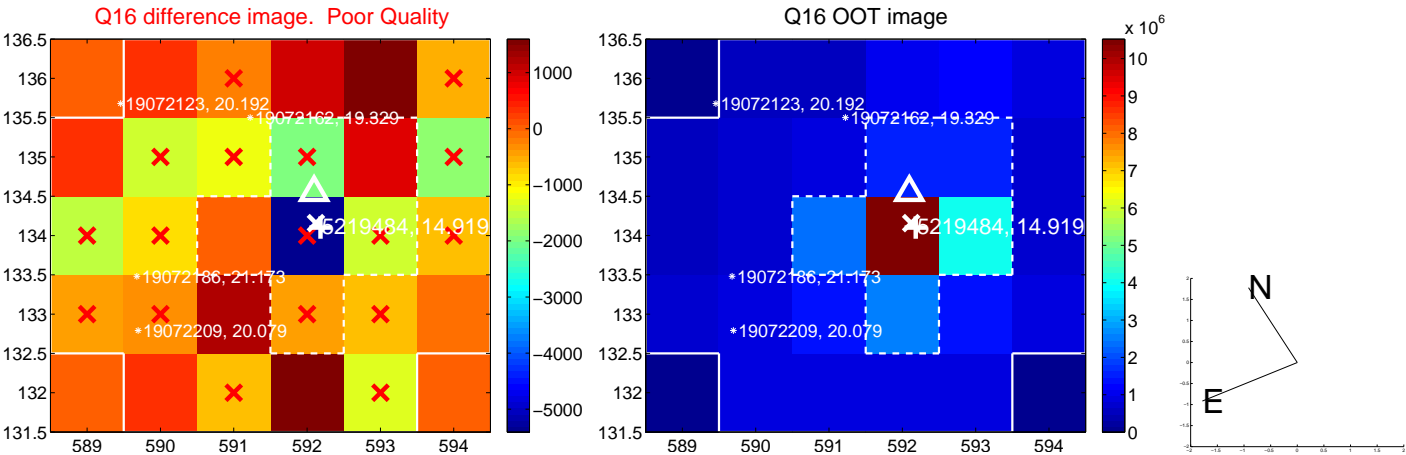
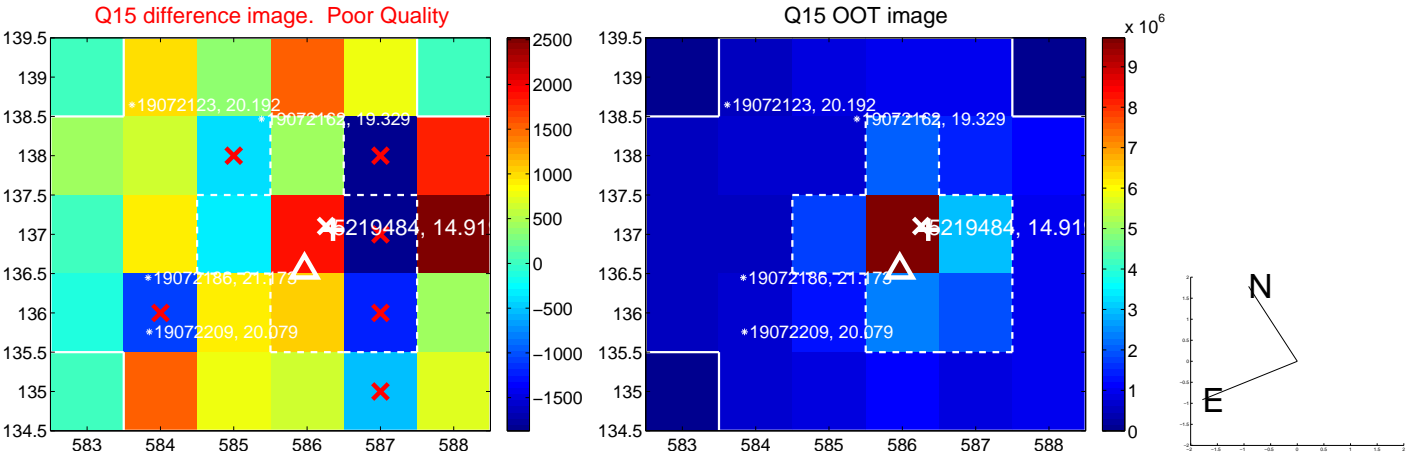
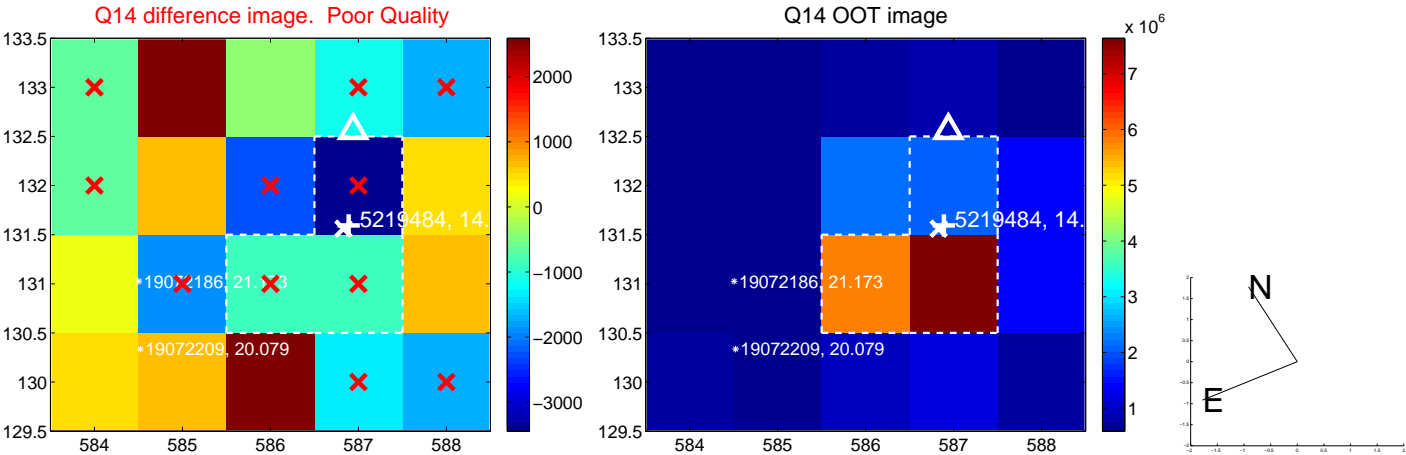
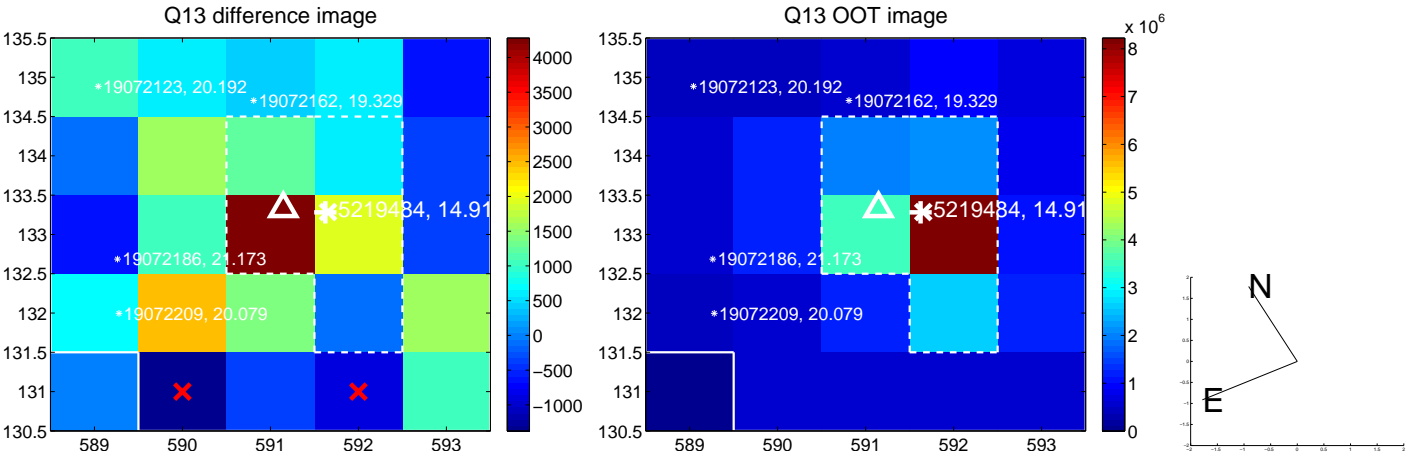
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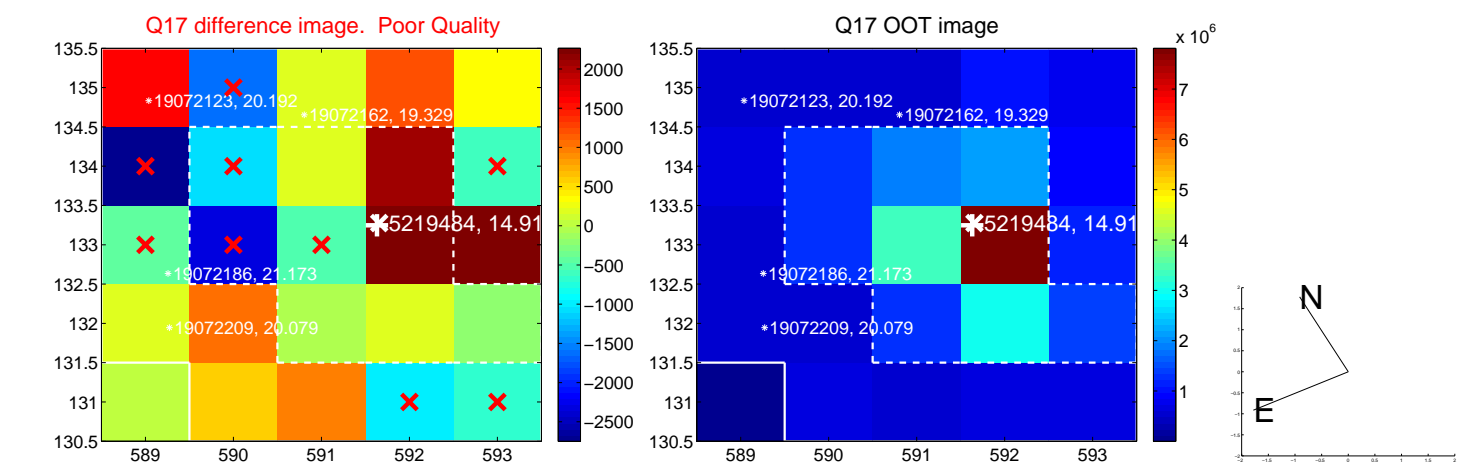
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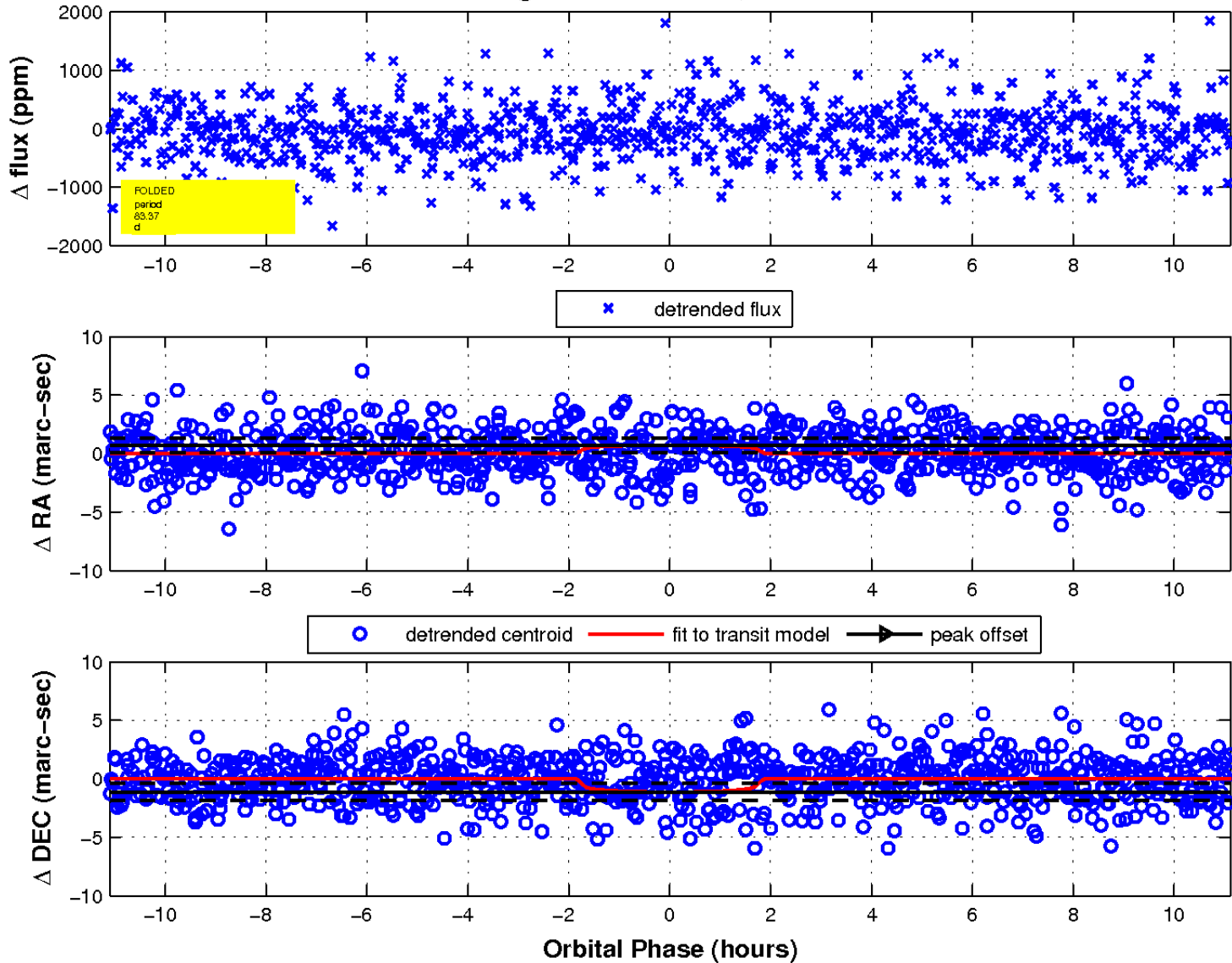
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 6 of 6



UKIRT Image

Declination

