

KIC 007499407

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})
007499407-01	OBS	No	2.248867	131.538239	157.4	7.500	11.4	-1.0	1.54	7286	1.96	4184.29
007499407-02	OBS	No	374.075196	242.783080	973.1	18.019	14.8	7.9	1.54	7286	5.75	4.57
007499407-03	OBS	No	1.771691	132.557850	118.6	3.962	8.7	7.6	1.54	7286	1.96	5750.73
007499407-04	OBS	No	0.885804	132.277390	85.1	4.499	9.2	6.6	1.54	7286	1.47	14491.84
007499407-05	OBS	No	39.576382	138.226145	1374.6	5.646	7.6	6.8	1.54	7286	10.53	91.41

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007499407-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
007499407-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007499407-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
007499407-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
007499407-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT

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

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

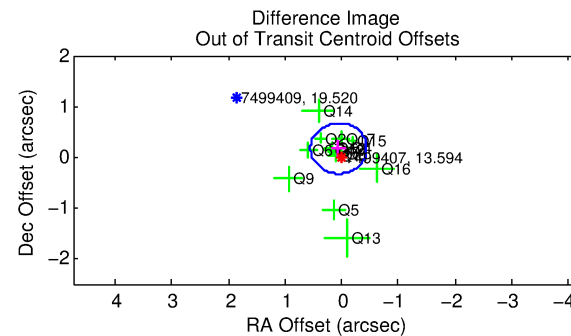
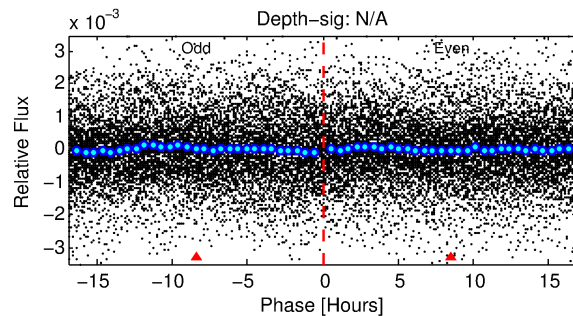
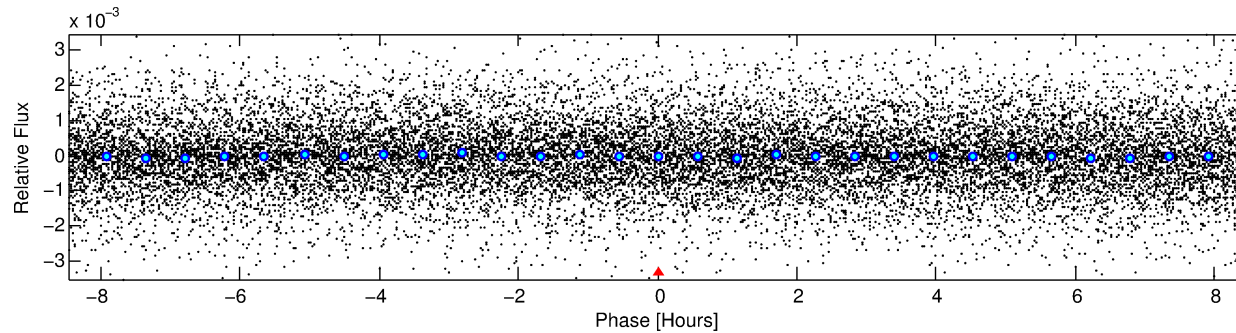
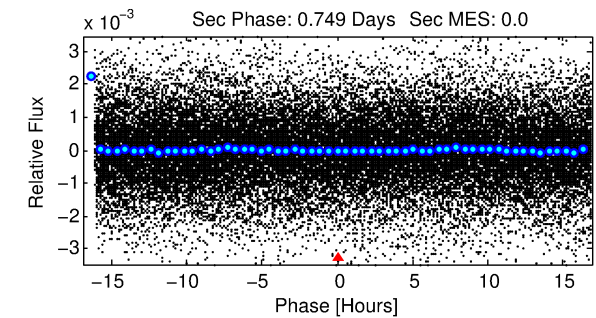
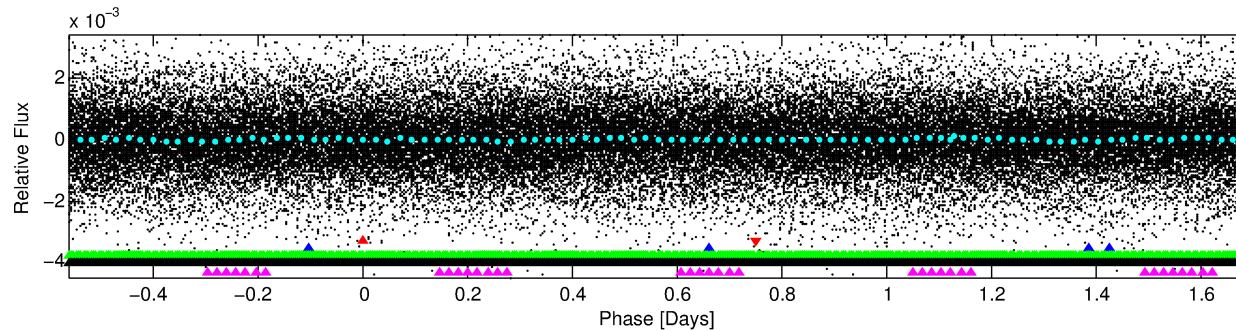
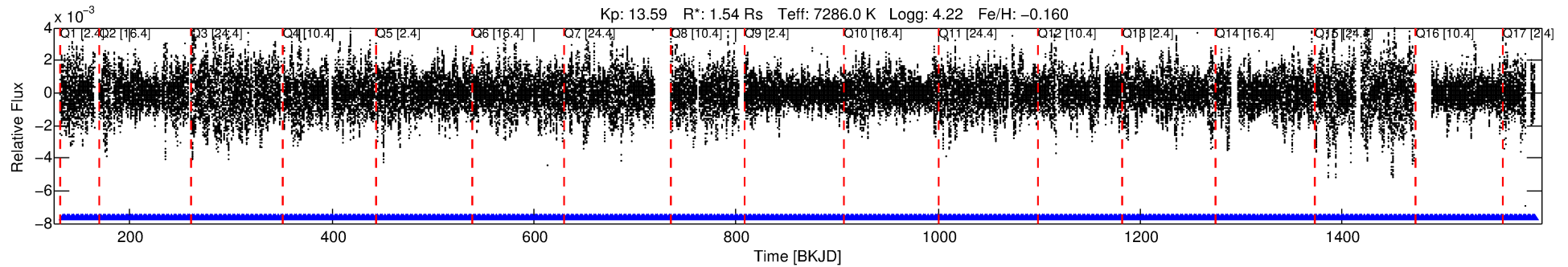
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007499407-01

No Significant Match Found

DV One-Page Summary

KIC: 7499407 Candidate: 1 of 5 Period: 2.249 d



TPS TCE Results:

Period = 2.24887 d
Epoch = 131.5382 BKJD

DV fit results are unavailable

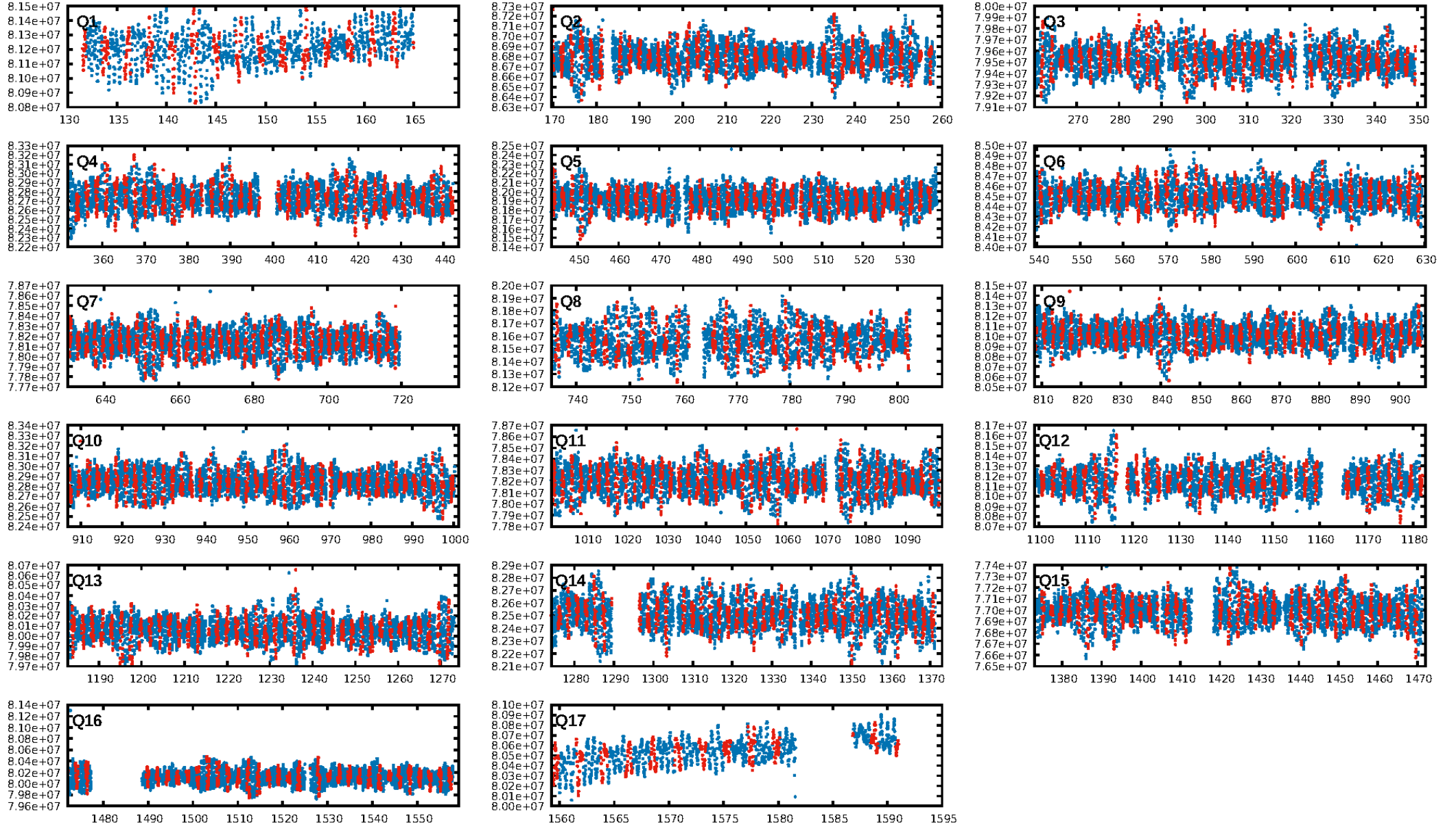
DV Diagnostic Results:

ShortPeriod-sig: 82.3% [1.35 σ]
LongPeriod-sig: 100.0% [95.43 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.89e-29
RollingBand-fgt: 1.00 [568/568]
GhostDiagnostic-chr: -1.143
Centroid-sig: 18.0%
Centroid-so: 0.998 arcsec [0.59 σ]
OotOffset-rm: 0.179 arcsec [1.08 σ]
KicOffset-rm: 0.101 arcsec [0.65 σ]
OotOffset-st: 4/4/3/4 [15]
KicOffset-st: 4/4/3/4 [15]
DiffImageQuality-fgm: 0.47 [7/15]
DiffImageOverlap-fno: 0.94 [16/17]

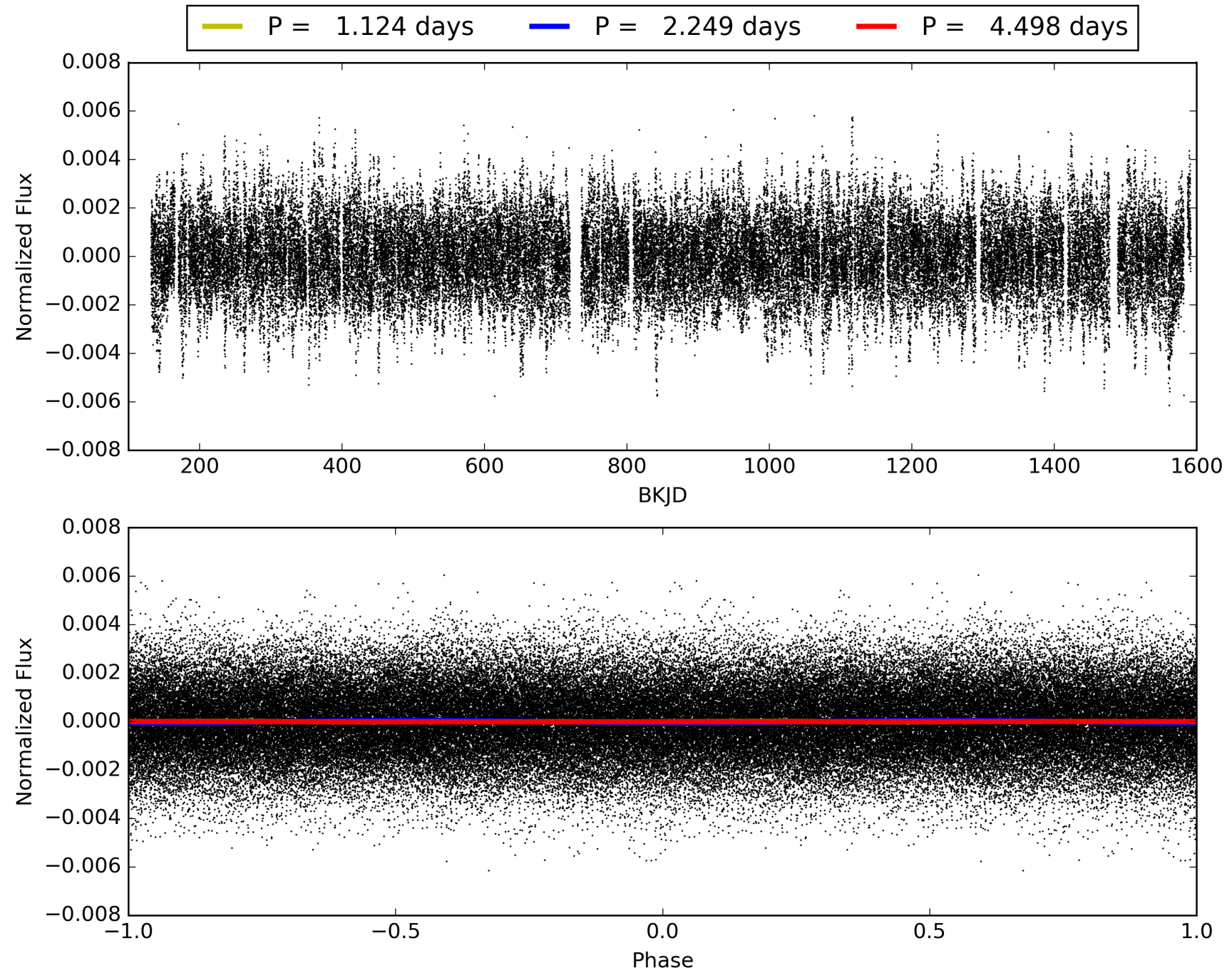
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 09:34:36 Z

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

TCE 007499407-01, PDC Light Curves

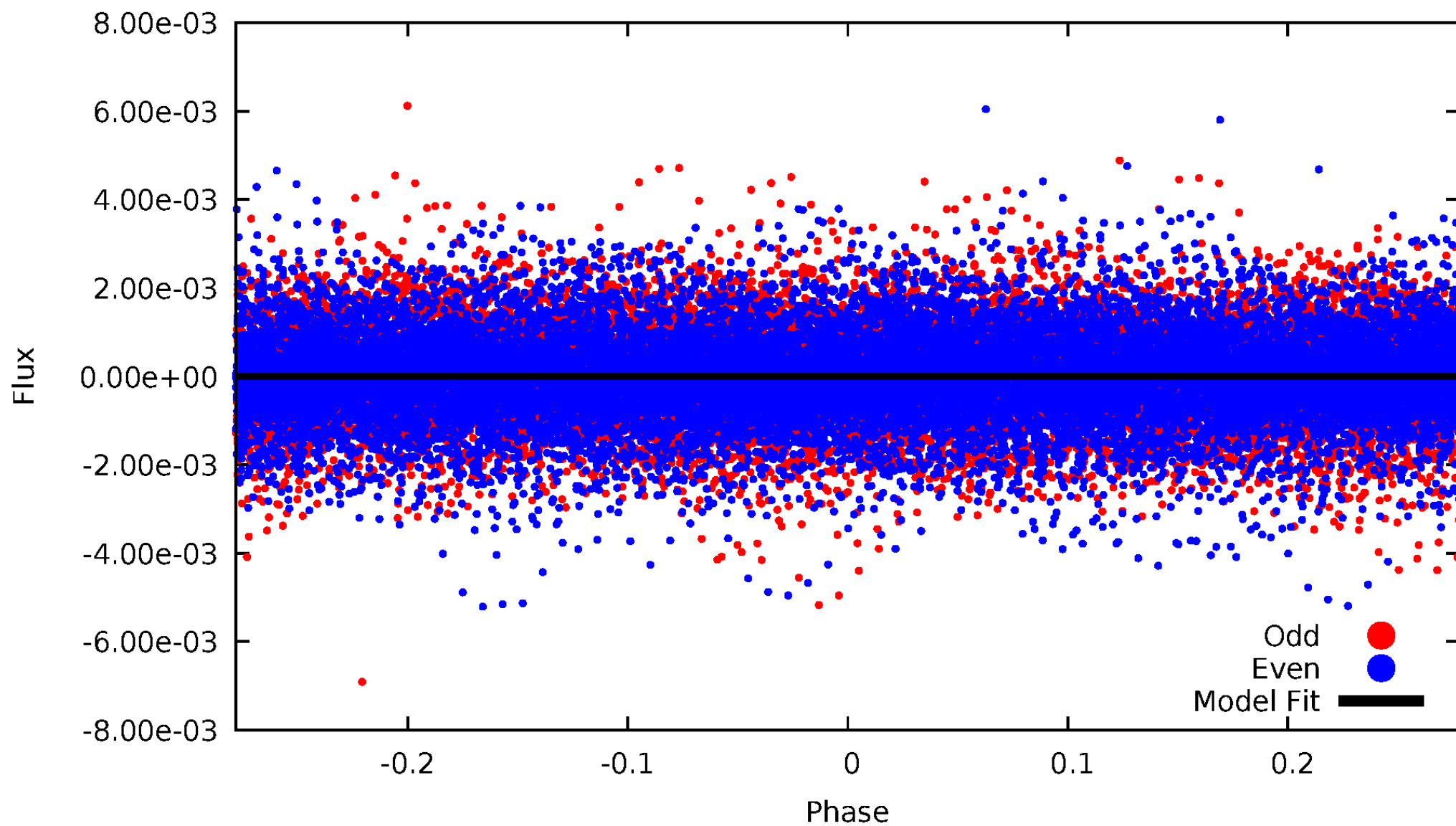


TCE 007499407-01



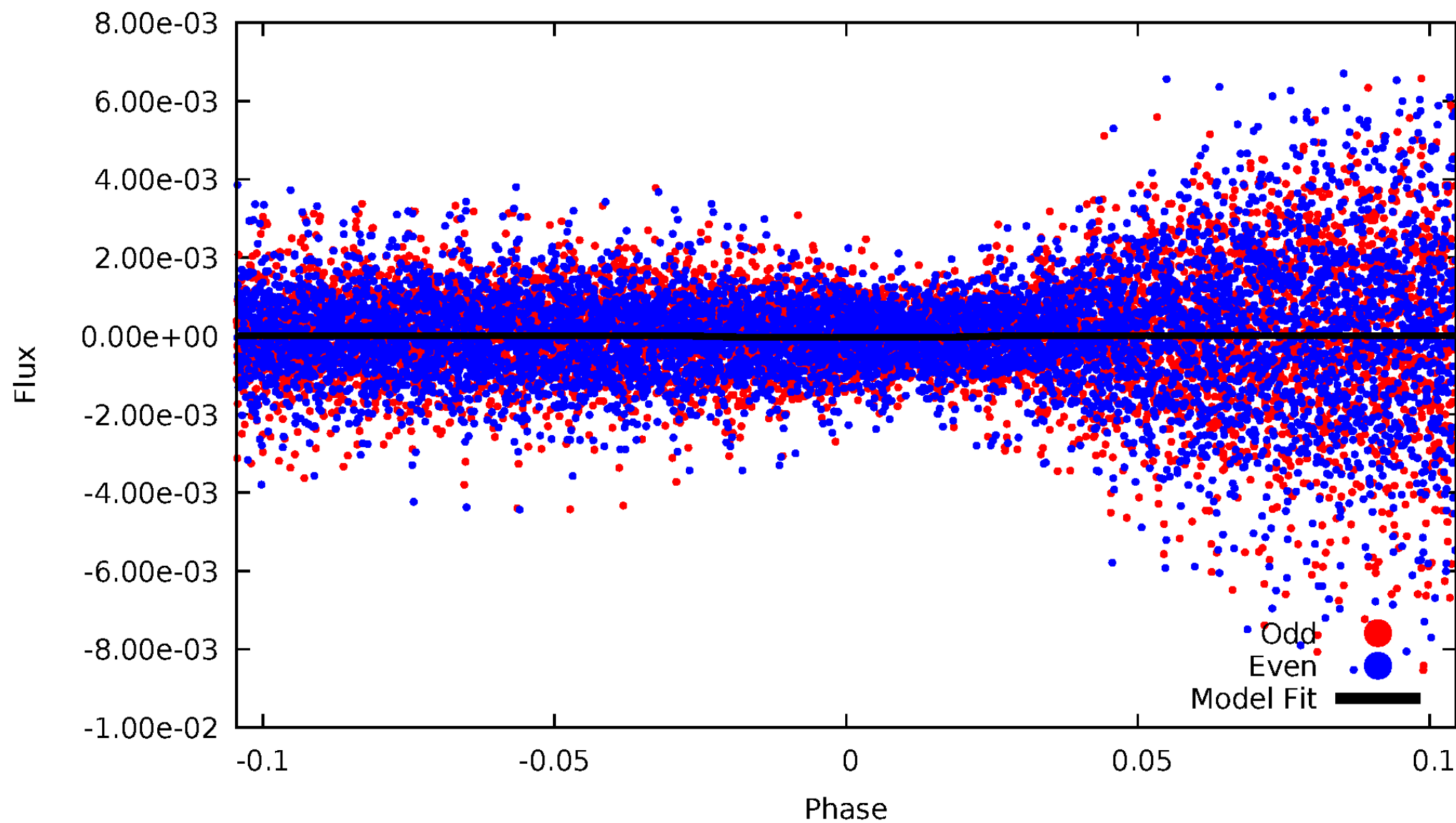
DV Odd/Even

TCE 007499407-01



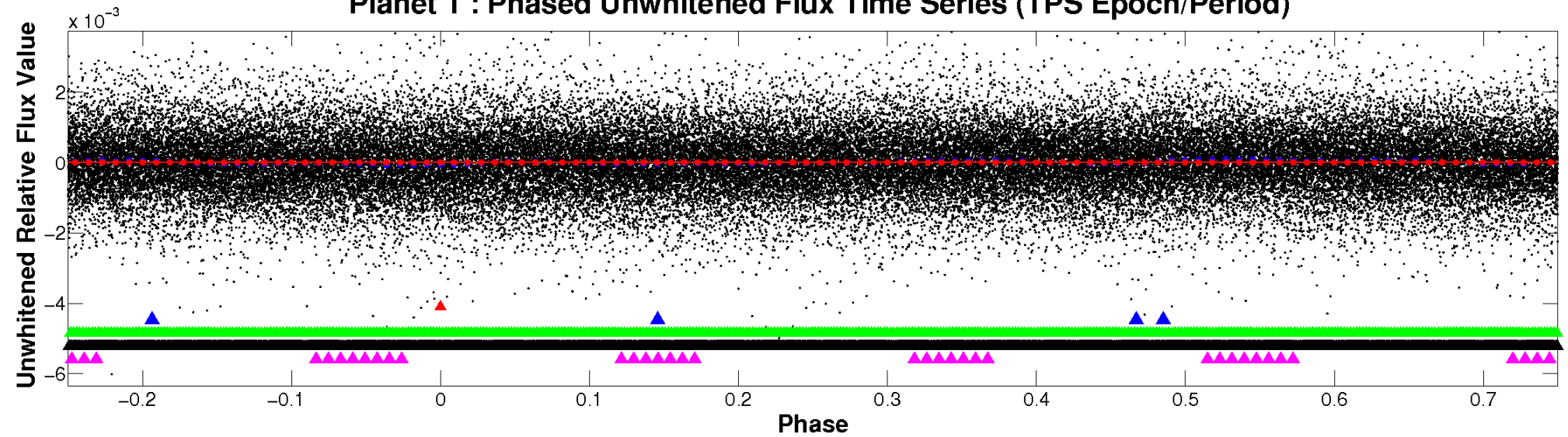
ALT Odd/Even

TCE 007499407-01



Non-Whitened Vs. Whitened Light Curve

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

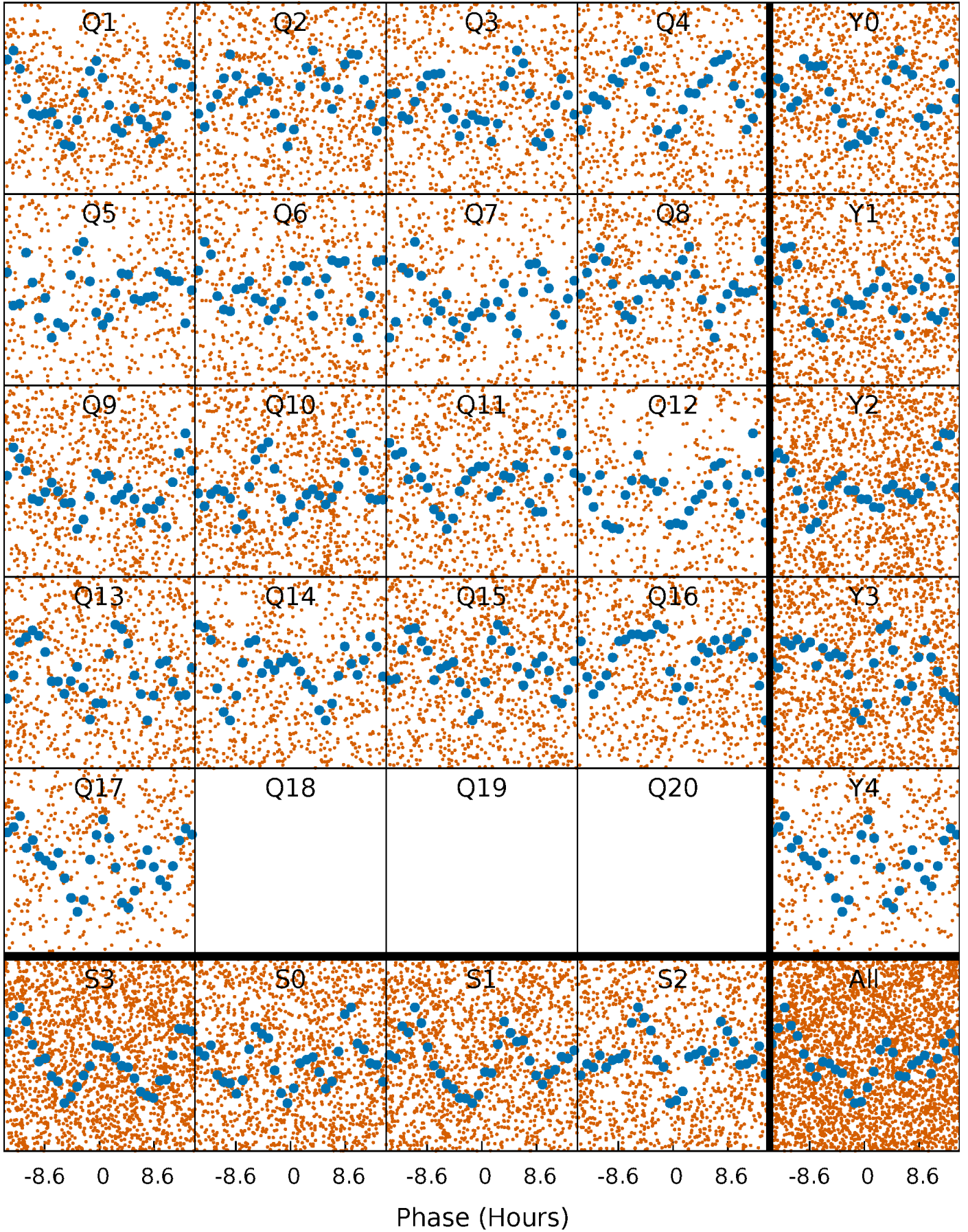


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



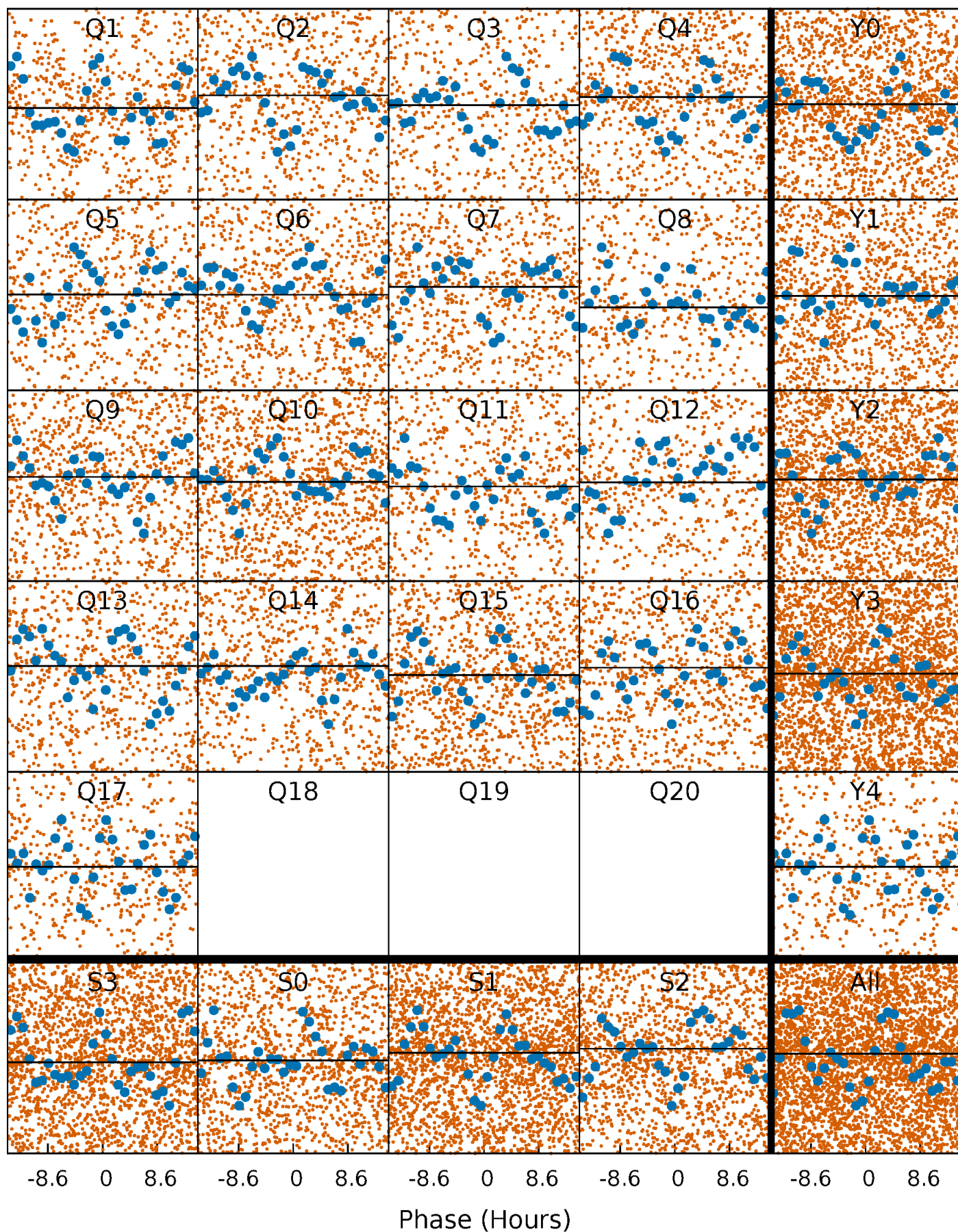
PDC Quarter-Phased Transit Curves

TCE 007499407-01 P= 2.248867 Days $T_0=131.538239$ (BKJD)



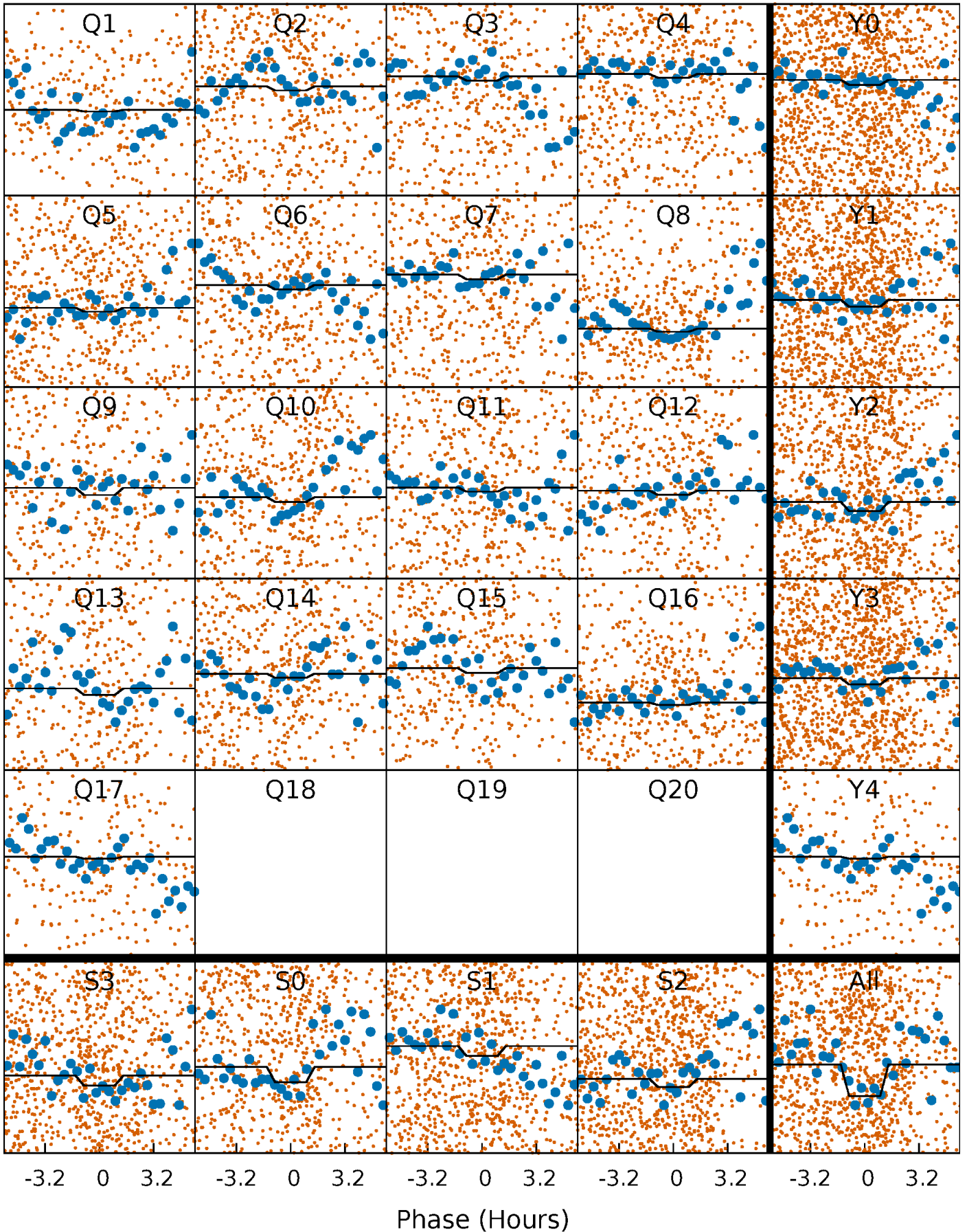
DV Quarter-Phased Transit Curves

TCE 007499407-01 P= 2.248867 Days $T_0=131.538239$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

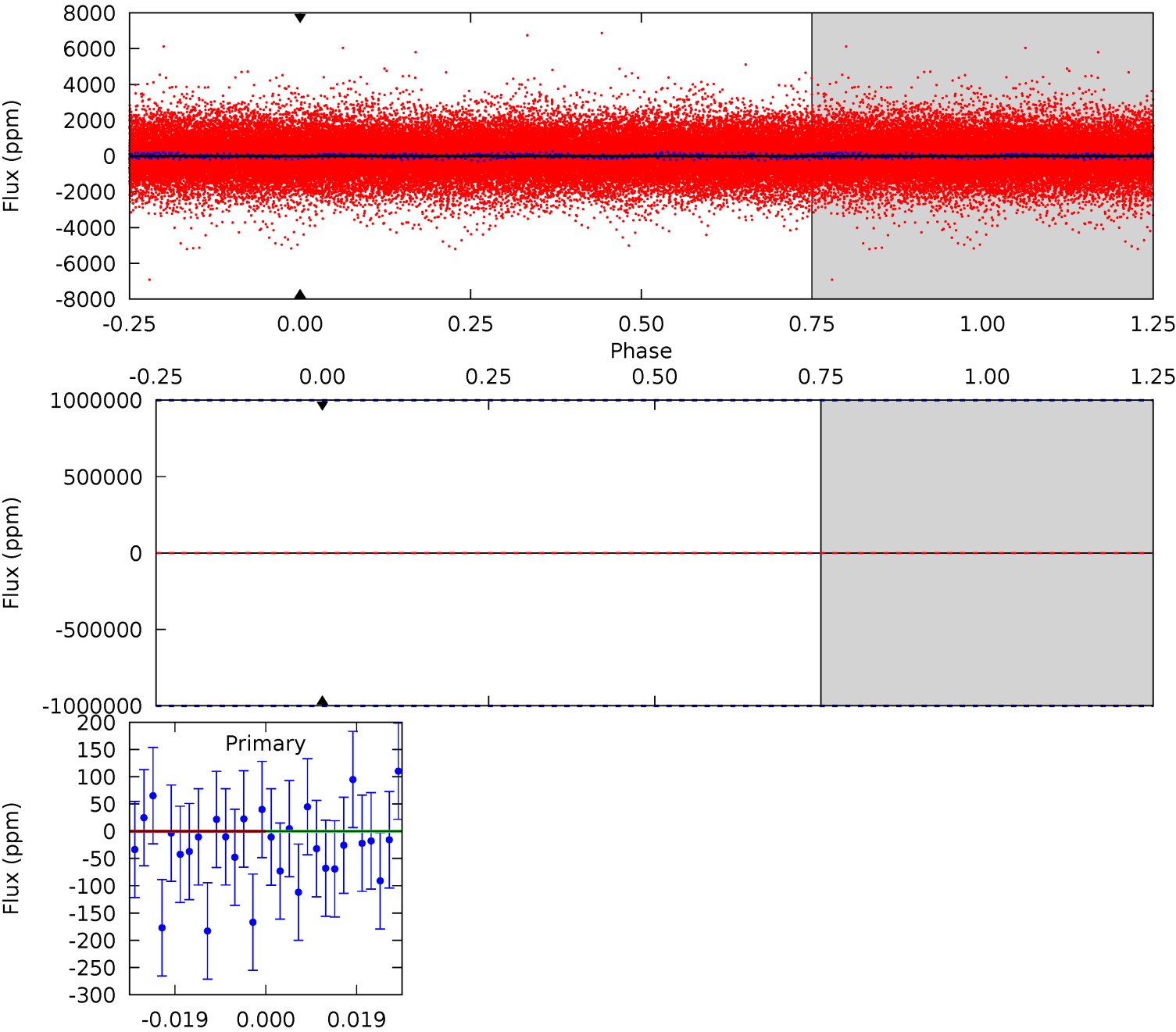
TCE 007499407-01 P= 2.248867 Days $T_0=133.454139$ (BKJD)



DV Model-Shift Uniqueness Test

007499407-01, P = 2.248867 Days, E = 129.289372 Days

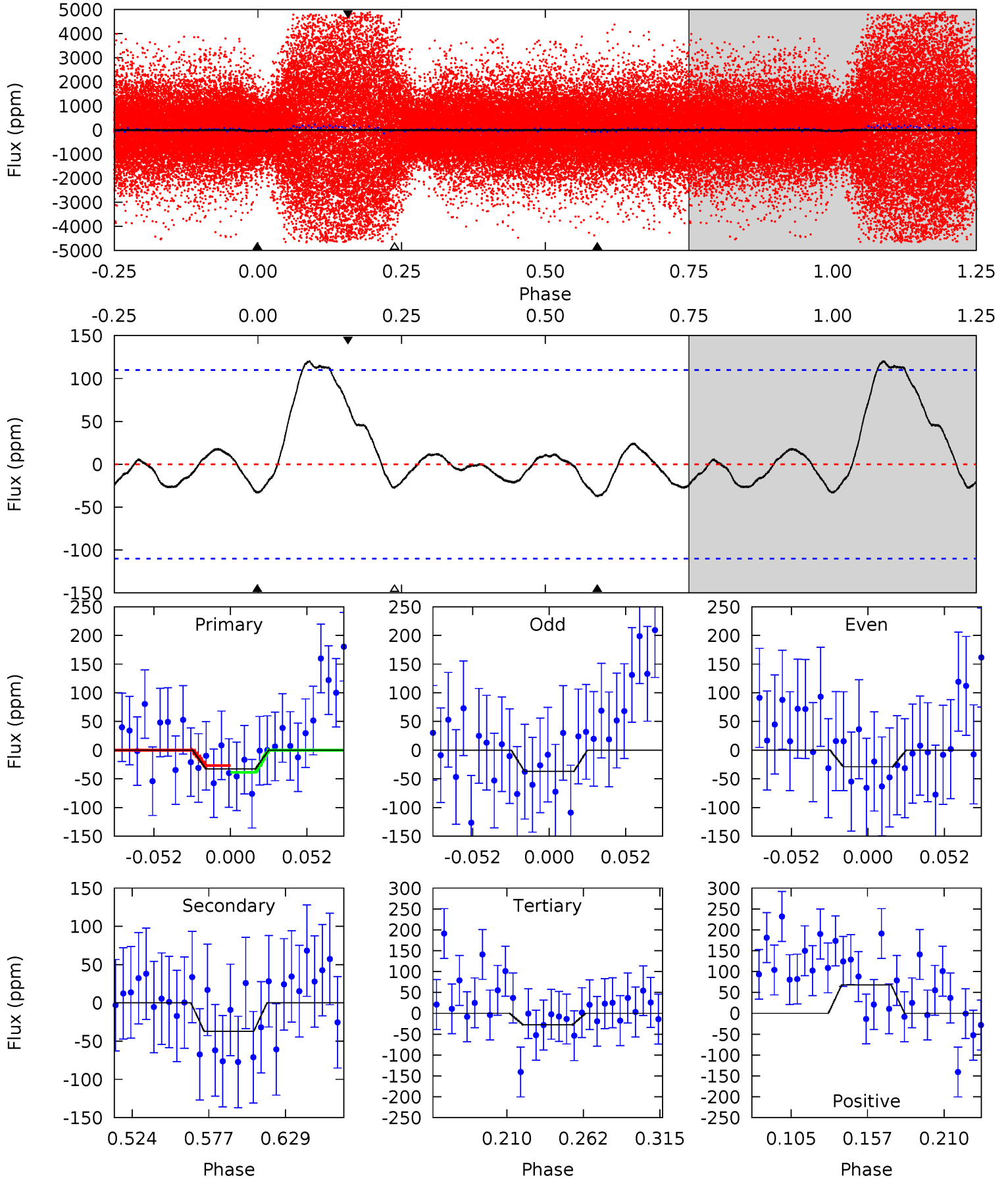
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

007499407-01, P = 2.248867 Days, E = 131.205272 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.40	1.59	1.17	2.91	4.70	1.94	1.61	0.23	-1.51	0.42	-1.32	0.18	-9.96	0.76	0.27



Stellar Parameters For KIC 007499407

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7286^{+232}_{-319}	$4.218^{+0.105}_{-0.195}$	$-0.160^{+0.250}_{-0.350}$	$1.542^{+0.508}_{-0.274}$	$1.434^{+0.219}_{-0.219}$	$0.551^{+0.288}_{-0.302}$
	+3%/-4%	+2%/-5%	+156%/-219%	+33%/-18%	+15%/-15%	+52%/-55%
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 007499407-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$11.79^{+14.32}_{-8.19}$	2894^{+248}_{-179}	-5876^{+47327}_{-33030}	$-9.536^{+958.578}_{-1009.523}$
Alt.	-37 ± 23	$11.74^{+15.44}_{-8.06}$	2898^{+249}_{-182}	-2637^{+6521}_{-385}	$0.188^{+1.614}_{-0.164}$

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

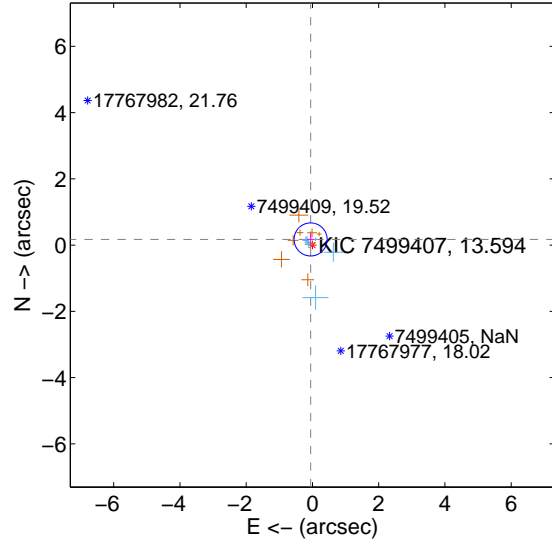
Supplemental centroid analysis for 007499407-01. Kepler magnitude: 13.59. Transit SNR -1.00

There are 7 quarters with good PRF difference image offsets

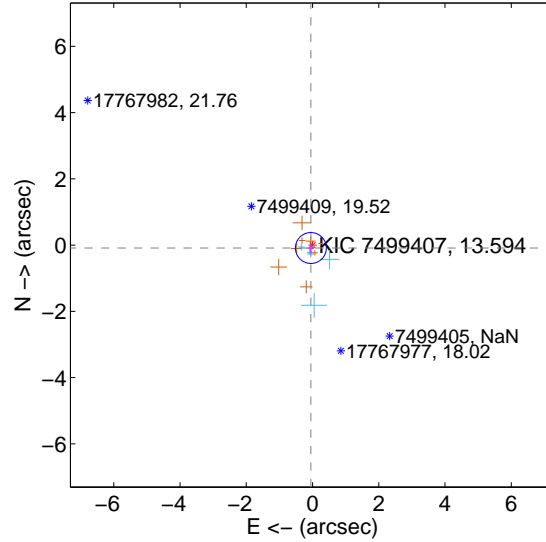
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.179 ± 0.166	1.08	0.055 ± 0.111	0.171 ± 0.166
PRF-fit source offset from KIC position	0.101 ± 0.156	0.65	0.049 ± 0.104	-0.088 ± 0.167
photometric centroid source offset	1.00 ± 1.70	0.59	0.08 ± 1.88	0.99 ± 1.70

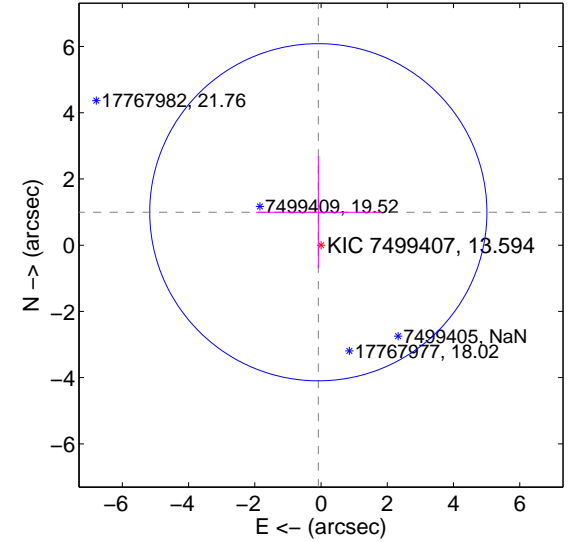
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

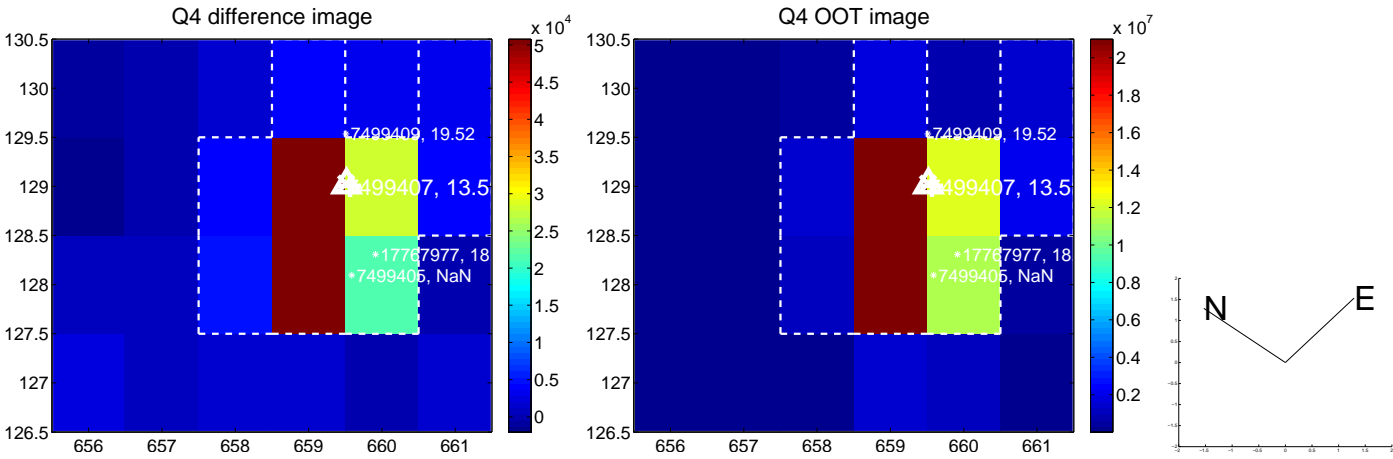
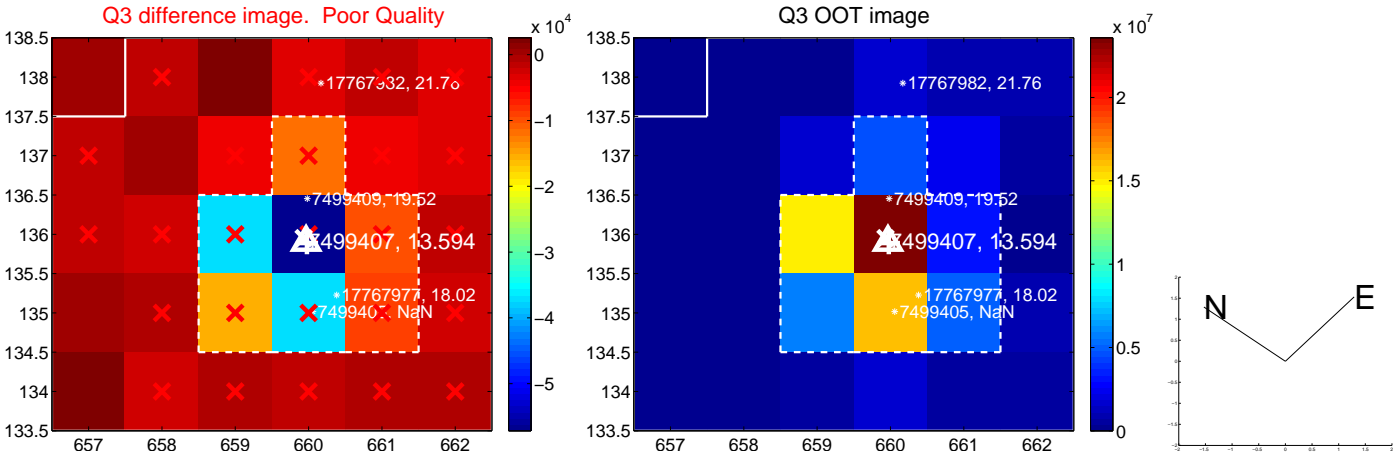
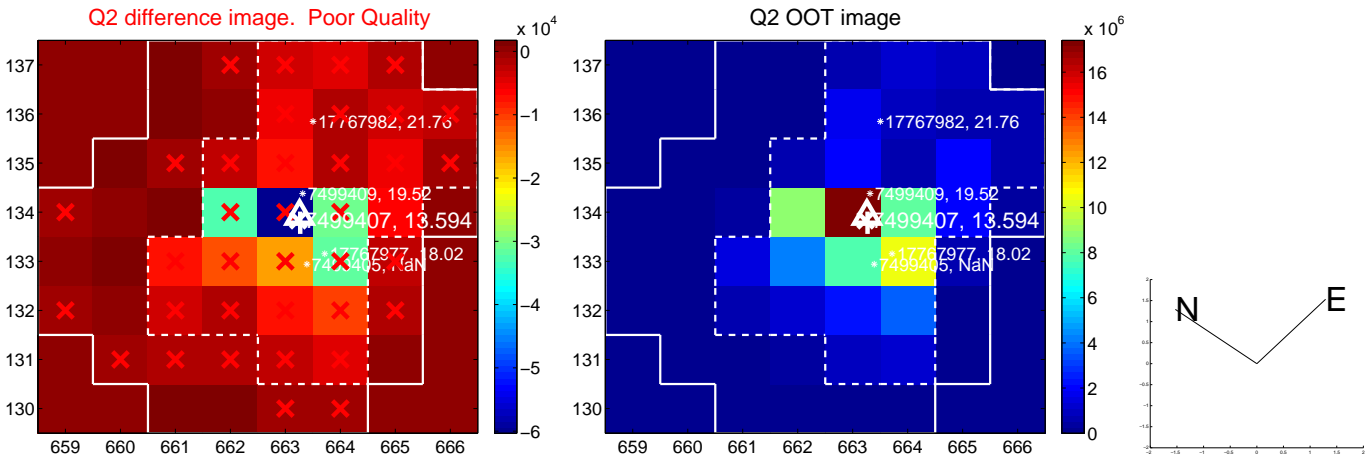
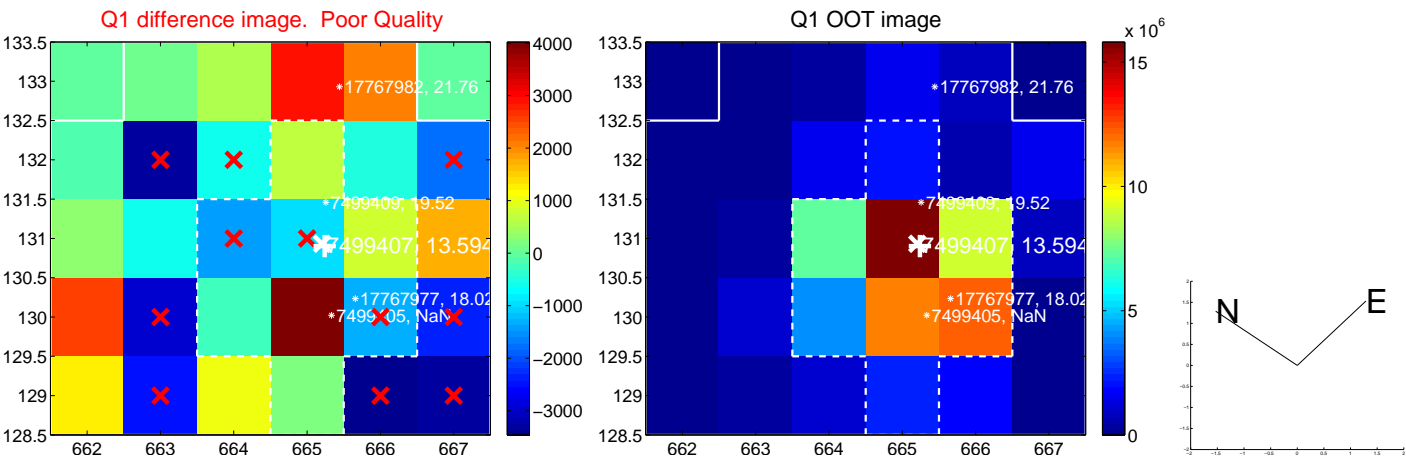


offset from photometric centroids

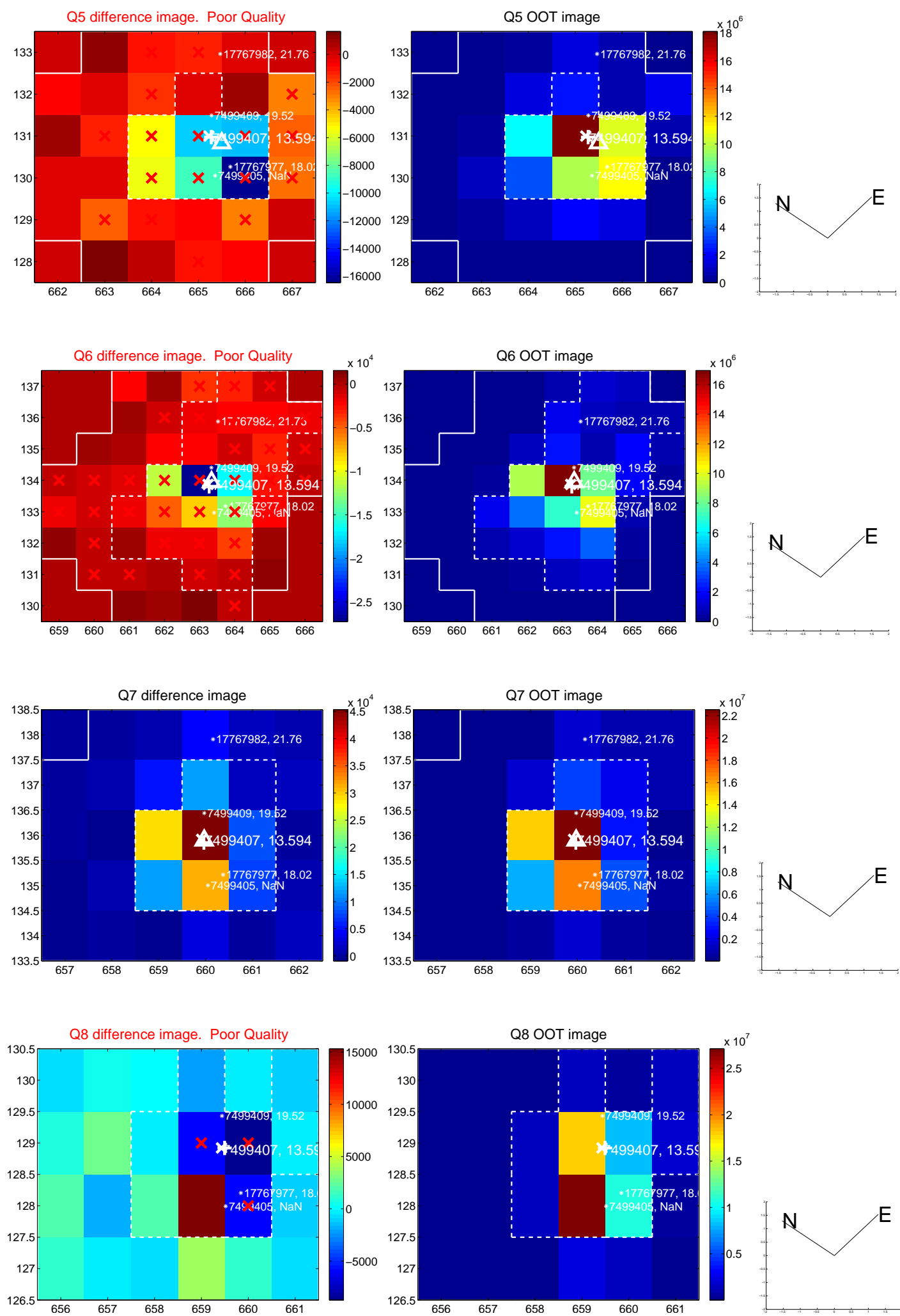


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

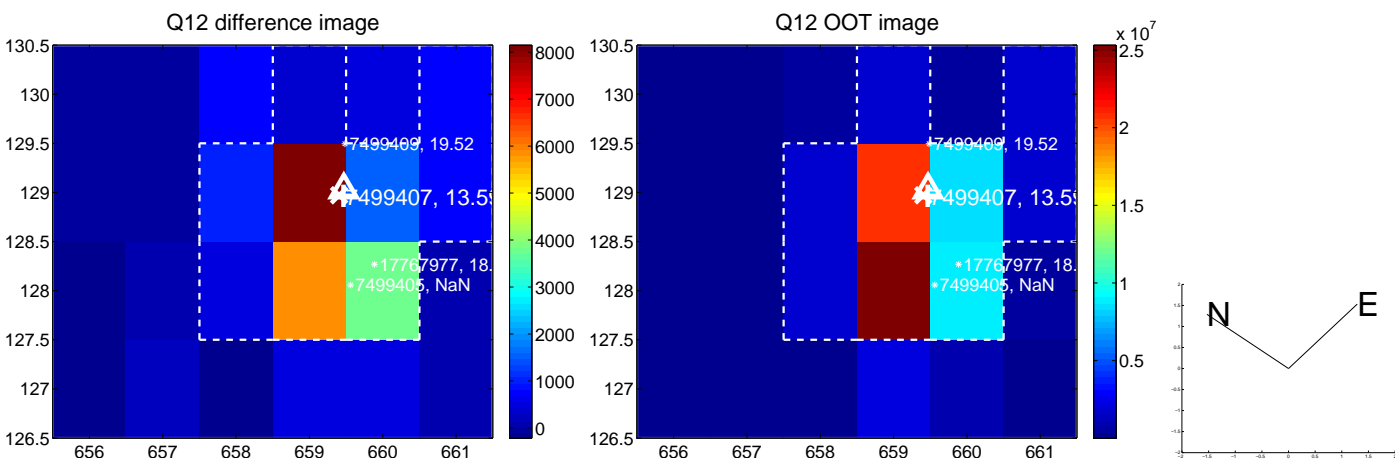
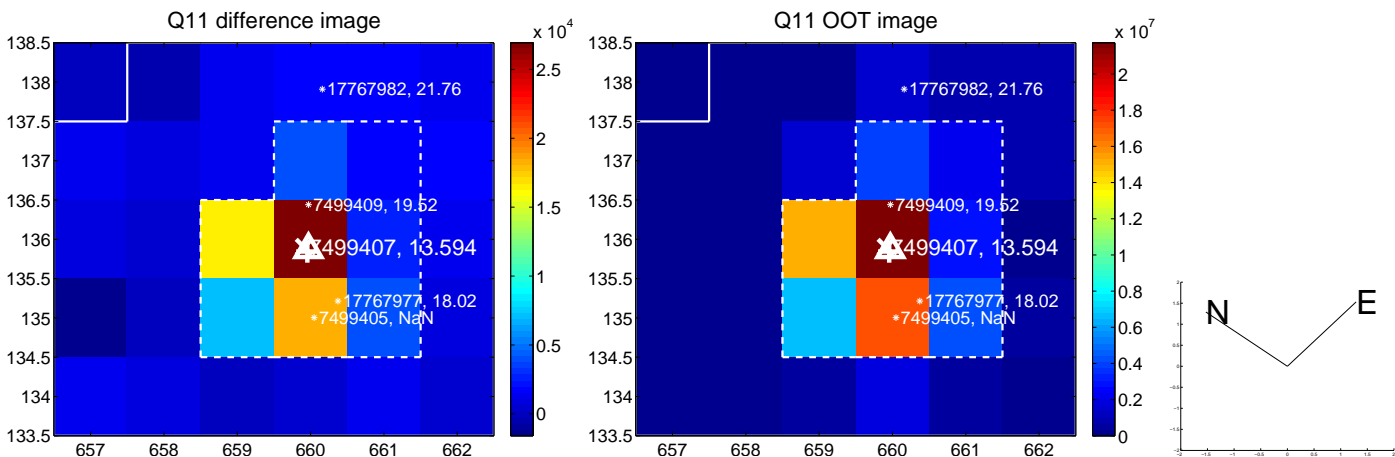
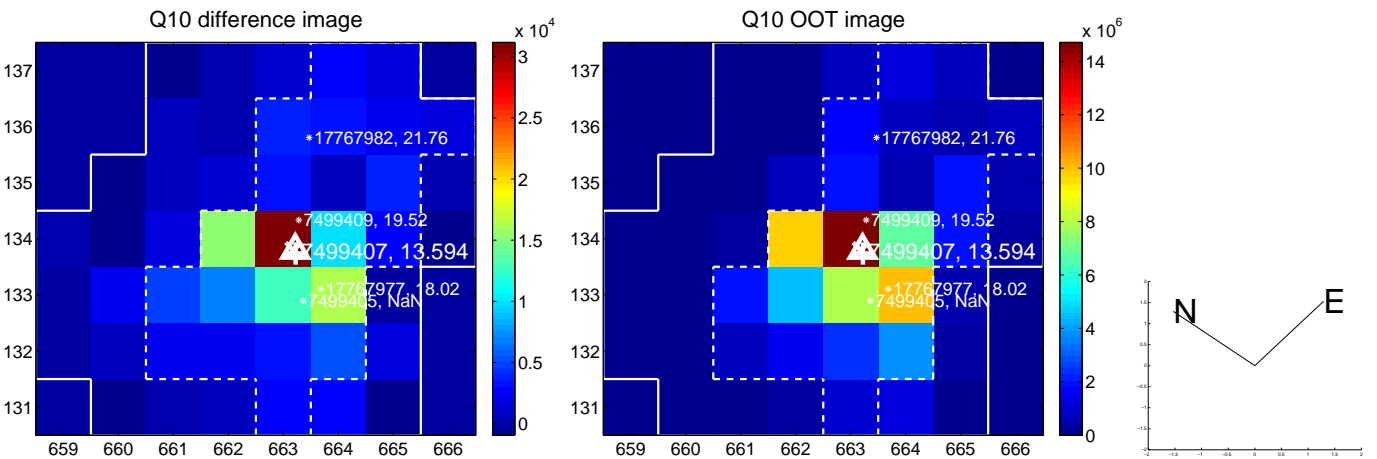
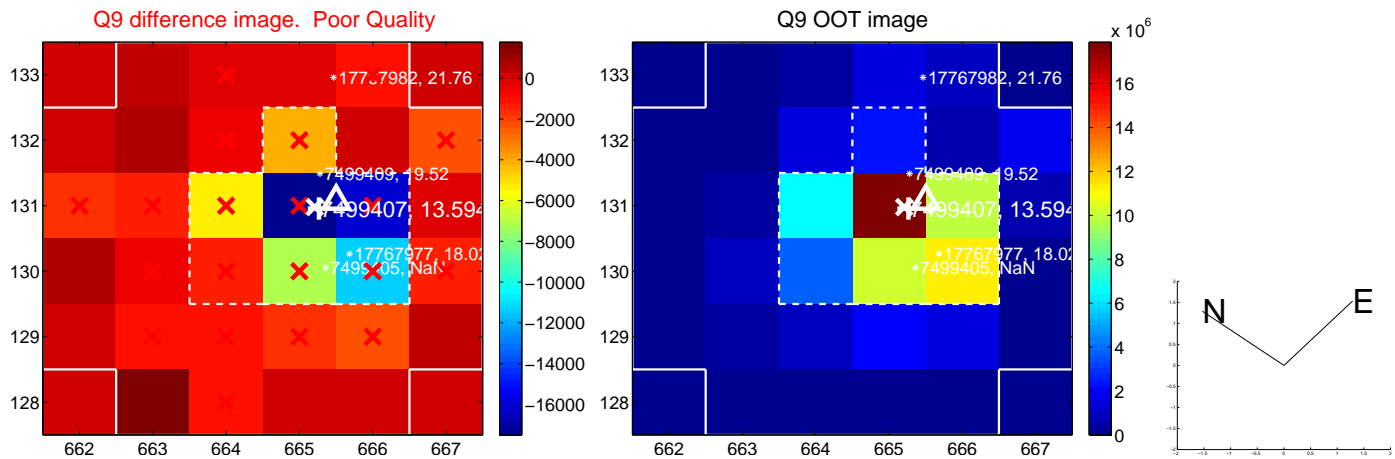
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



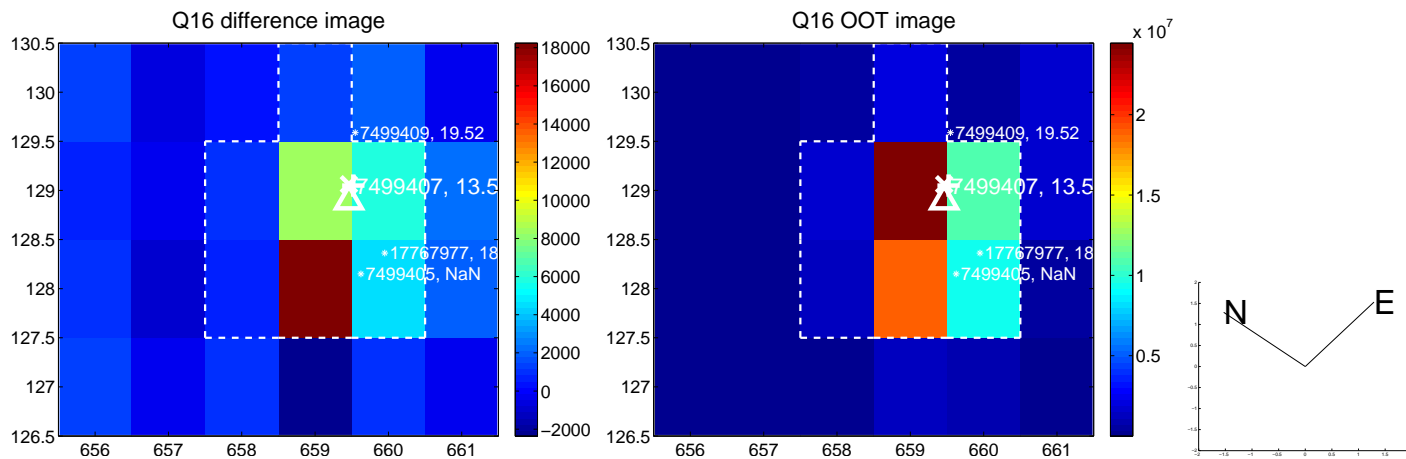
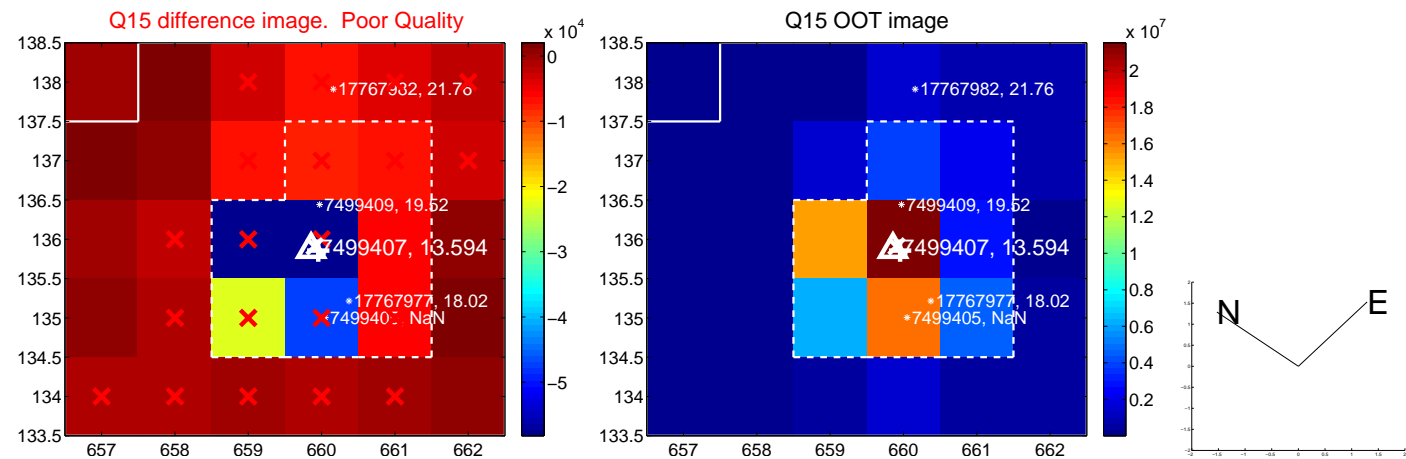
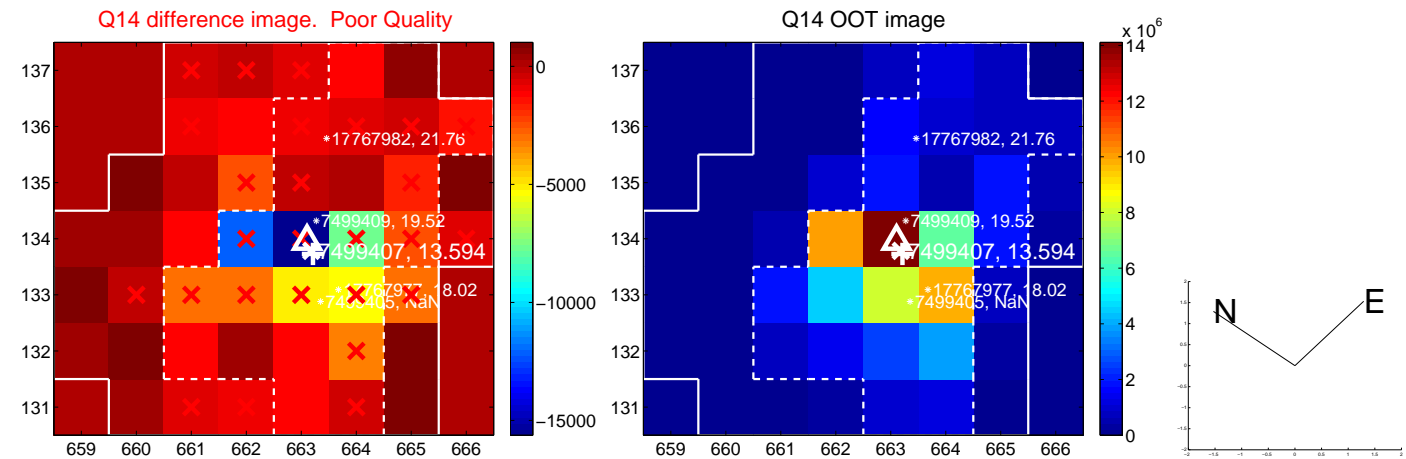
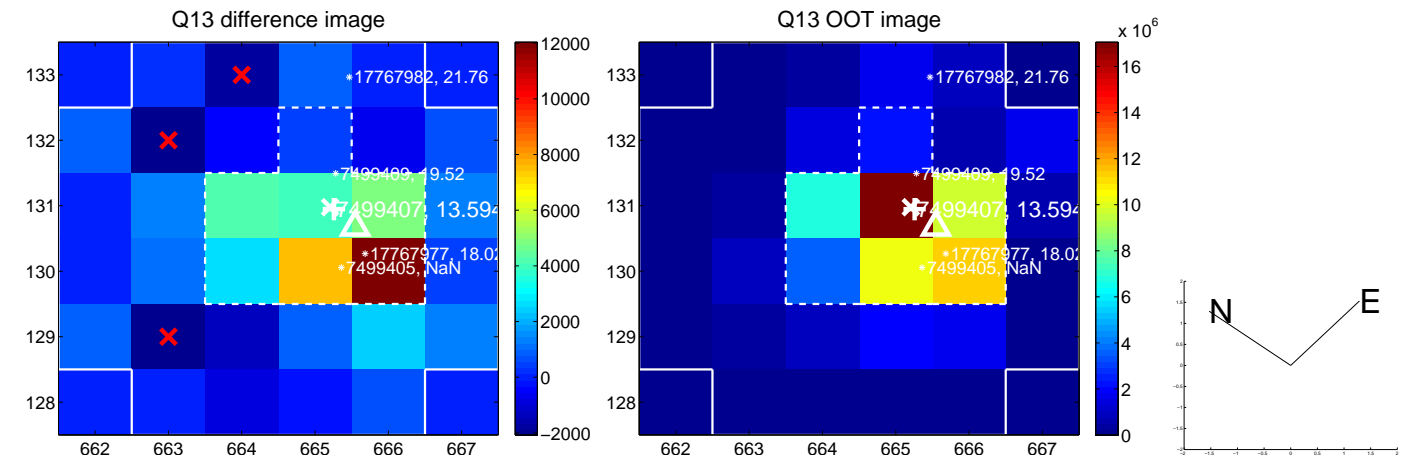
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



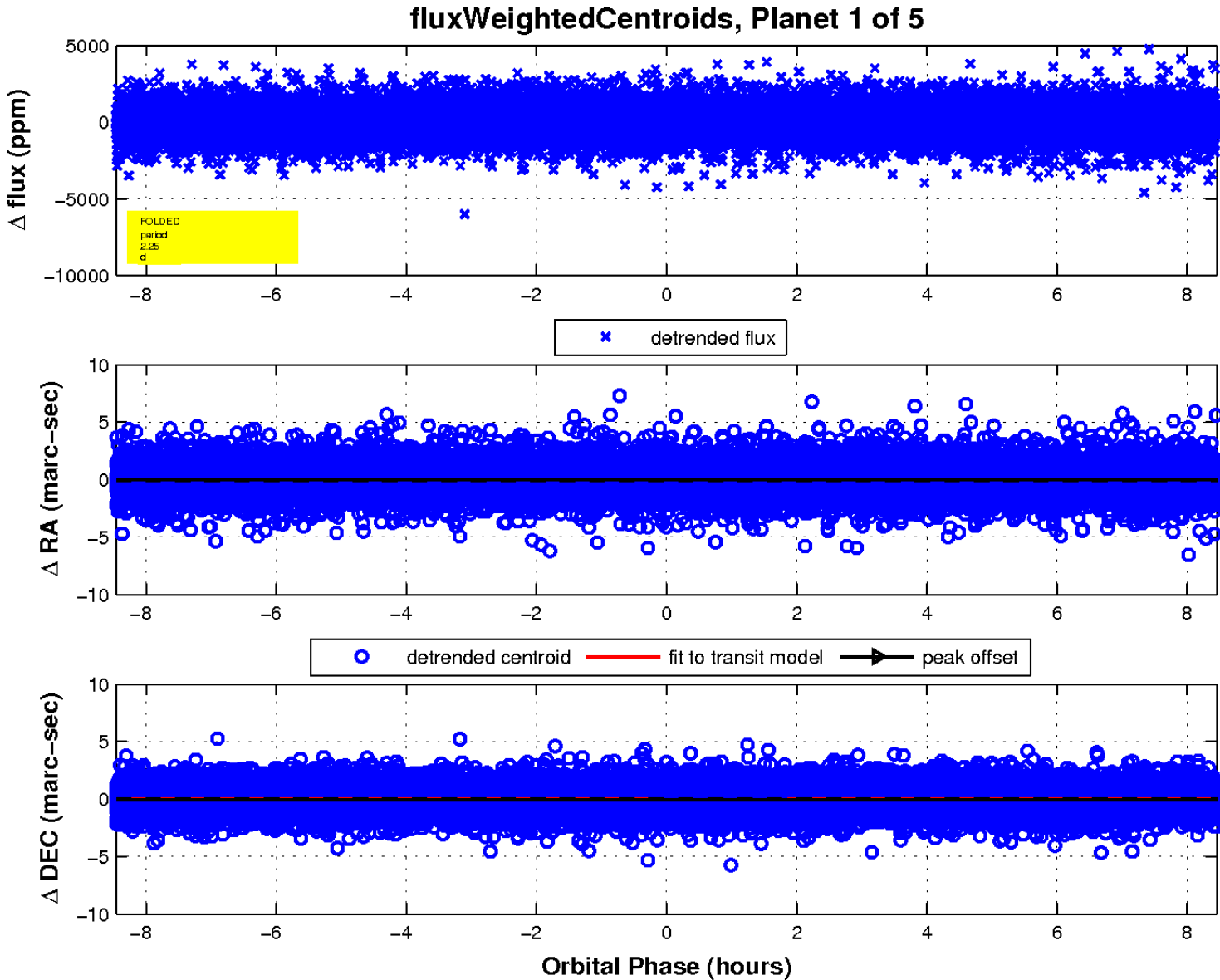
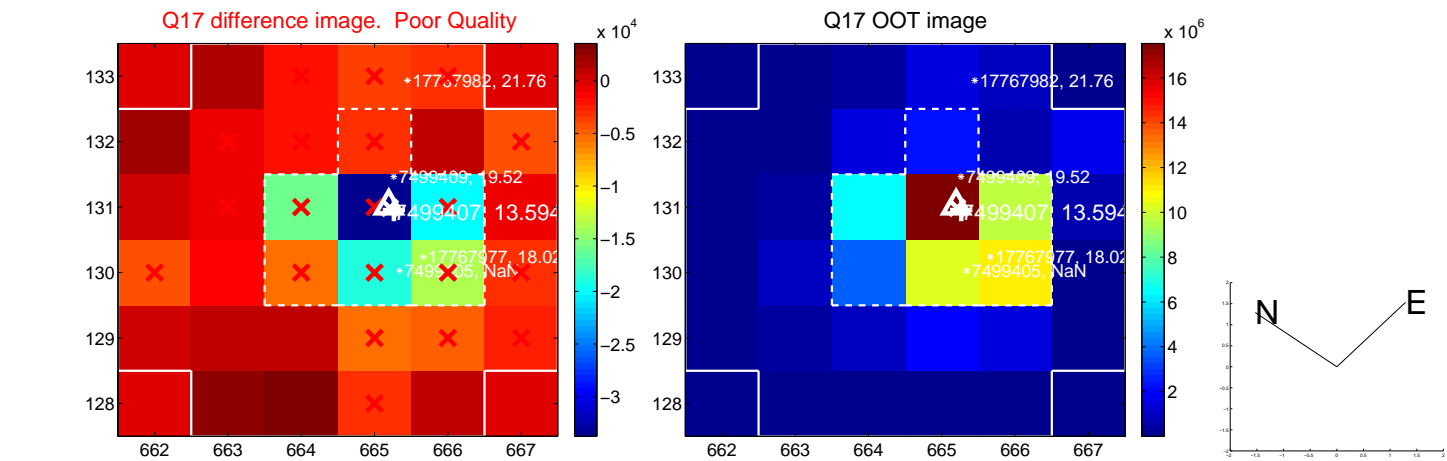
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white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

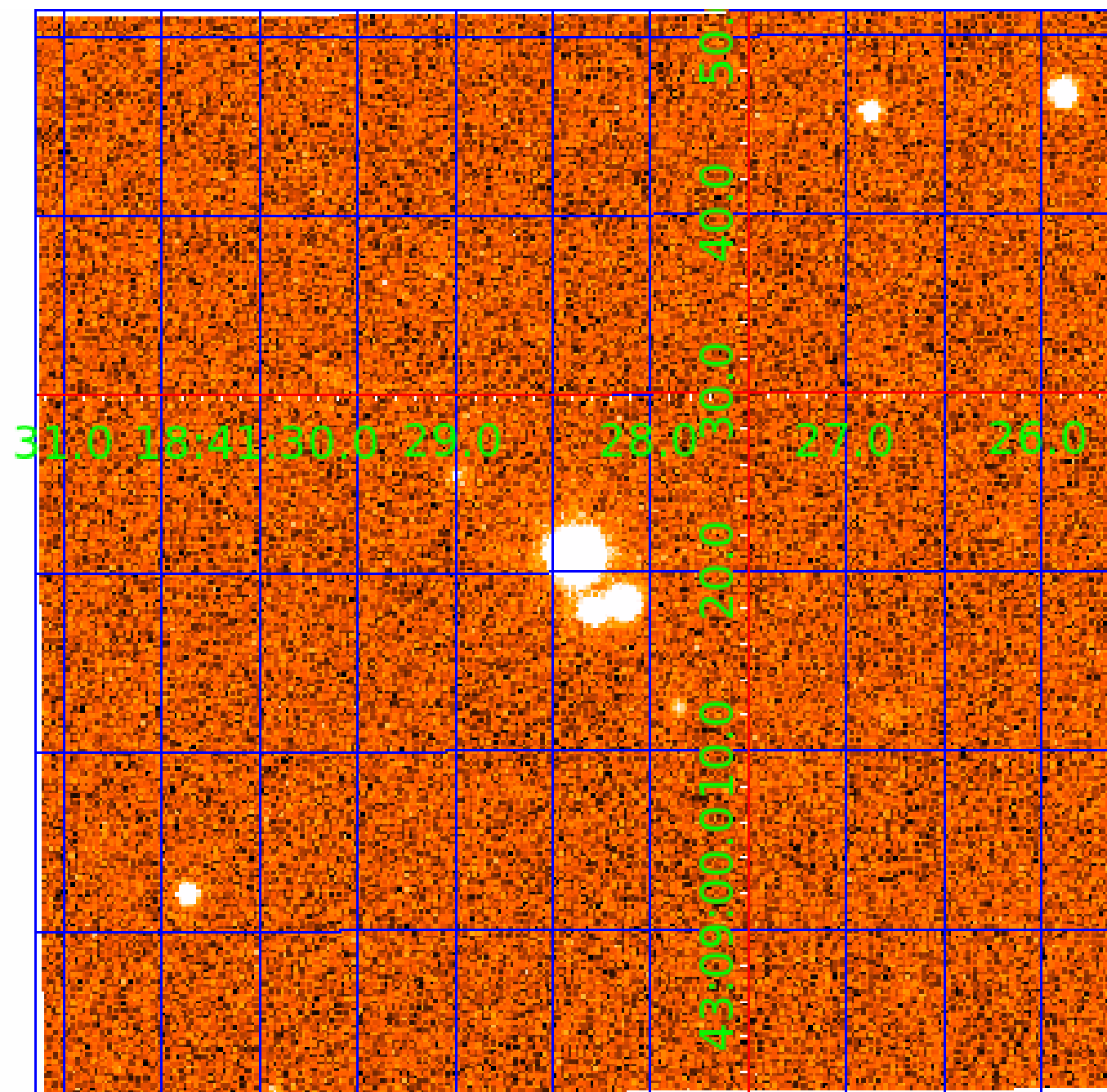


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007499407

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})
007499407-01	OBS	No	2.248867	131.538239	157.4	7.500	11.4	-1.0	1.54	7286	1.96	4184.29
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
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007499407-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007499407-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
007499407-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
007499407-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT

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

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

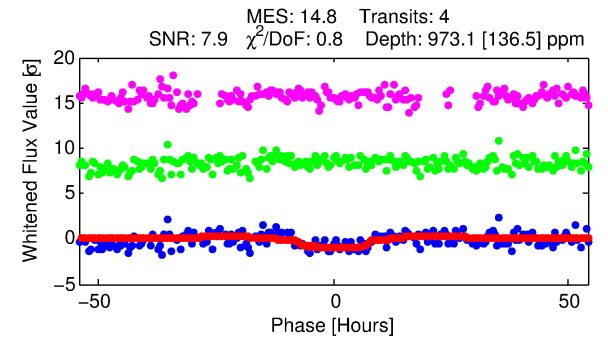
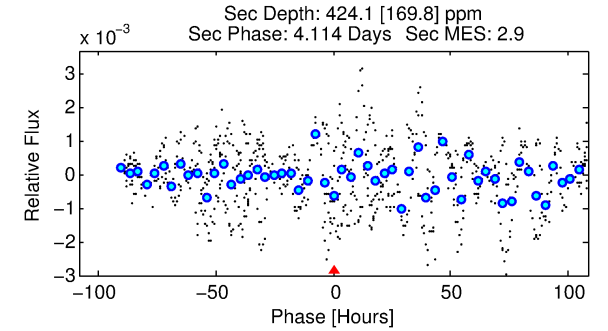
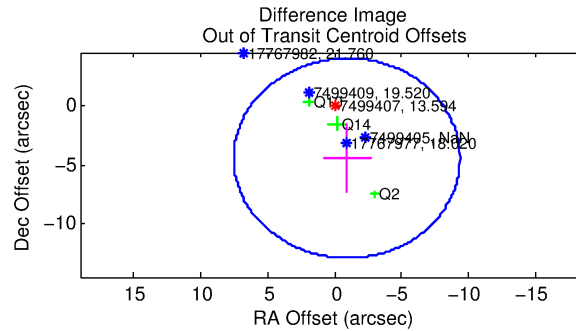
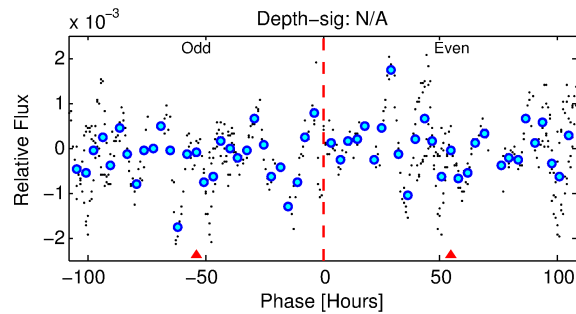
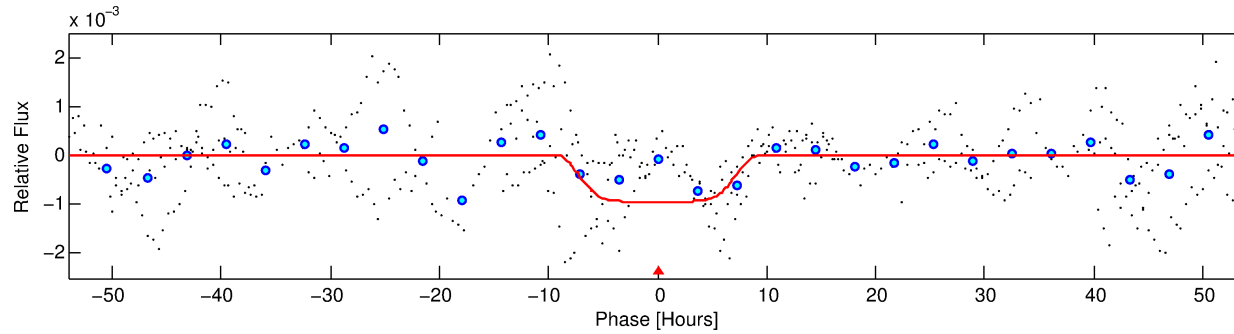
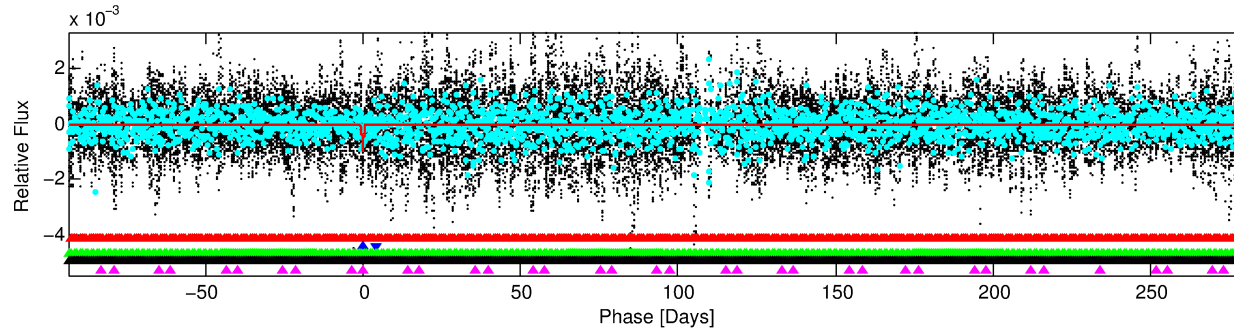
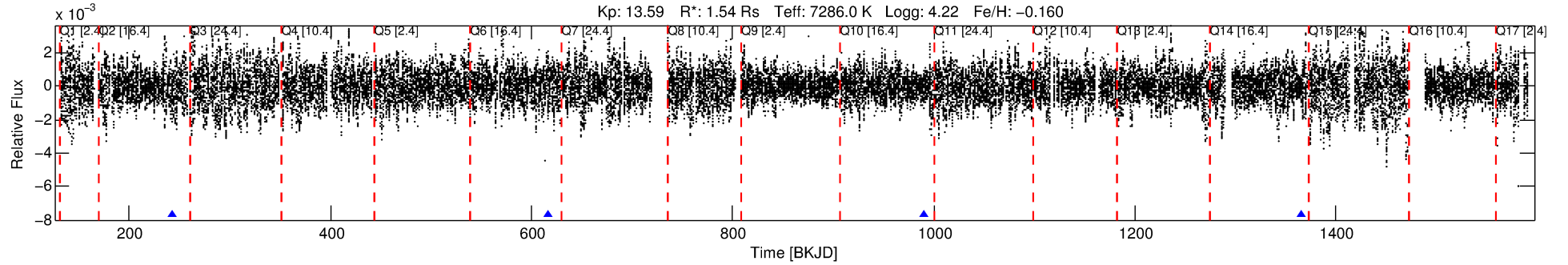
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007499407-02

No Significant Match Found

DV One-Page Summary

KIC: 7499407 Candidate: 2 of 5 Period: 374.075 d



DV Fit Results:

Period = 374.07520 [0.01908] d
 Epoch = 242.7831 [0.0387] BKJD
 Rp/R* = 0.0341 [0.0029]
 a/R* = 70.89 [13.28]
 b = 0.93 [0.03]
 Seff = 4.57 [1.88]
 Teq = 373 [38] K
 Rp = 5.75 [1.95] Re
 a = 1.1457 [0.3045] AU
 Ag = 9277.26 [5301.44] [1.75σ]
 Tefp = 5658 [663] K [7.96σ]

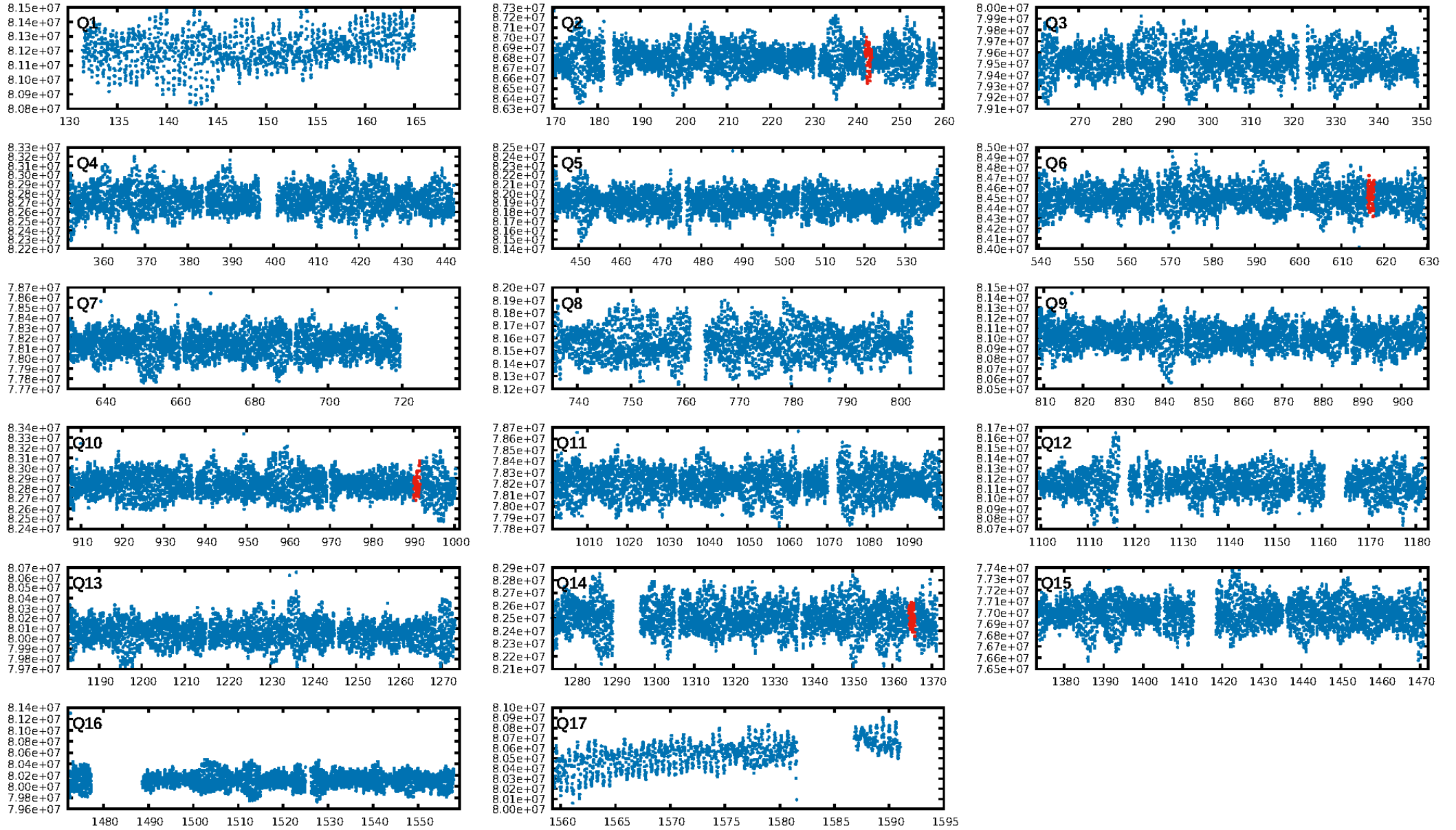
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [425.15σ]
 LongPeriod-sig: N/A
 ModelChiSquare2-sig: 0.0%
 ModelChiSquareGof-sig: 100.0%
 Bootstrap-pfa: 2.04e-17
 RollingBand-fgt: 1.00 [4/4]
 GhostDiagnostic-chr: 0.5139
 Centroid-sig: 7.2%
 Centroid-so: 1.191 arcsec [1.86σ]
 OotOffset-rm: 4.548 arcsec [1.62σ]
 KicOffset-rm: 4.754 arcsec [1.69σ]
 OotOffset-st: 3/0/0/0 [3]
 KicOffset-st: 3/0/0/0 [3]
 DiffImageQuality-fgm: 0.33 [1/3]
 DiffImageOverlap-fno: 0.00 [0/4]

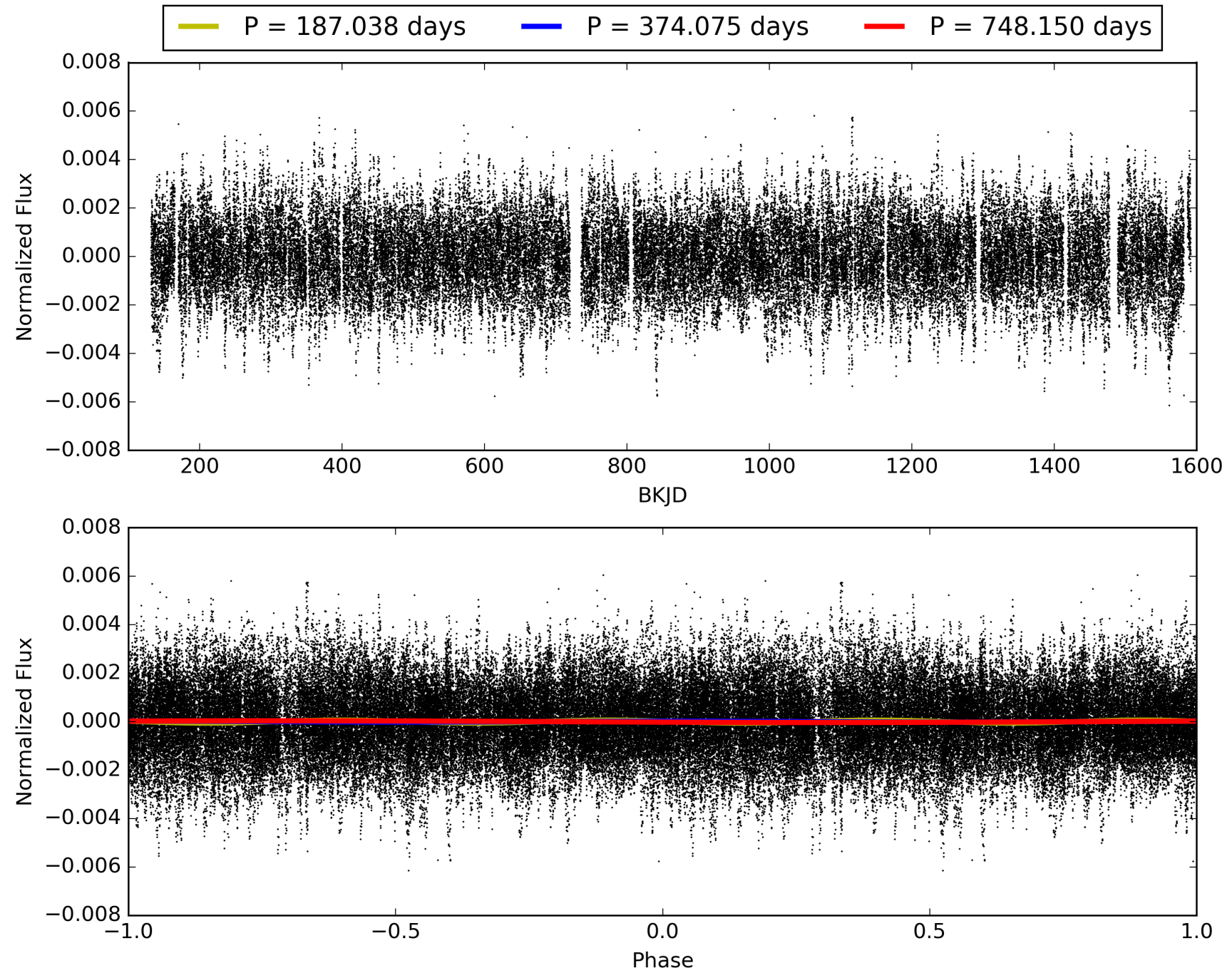
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 09:34:45 Z

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

TCE 007499407-02, PDC Light Curves

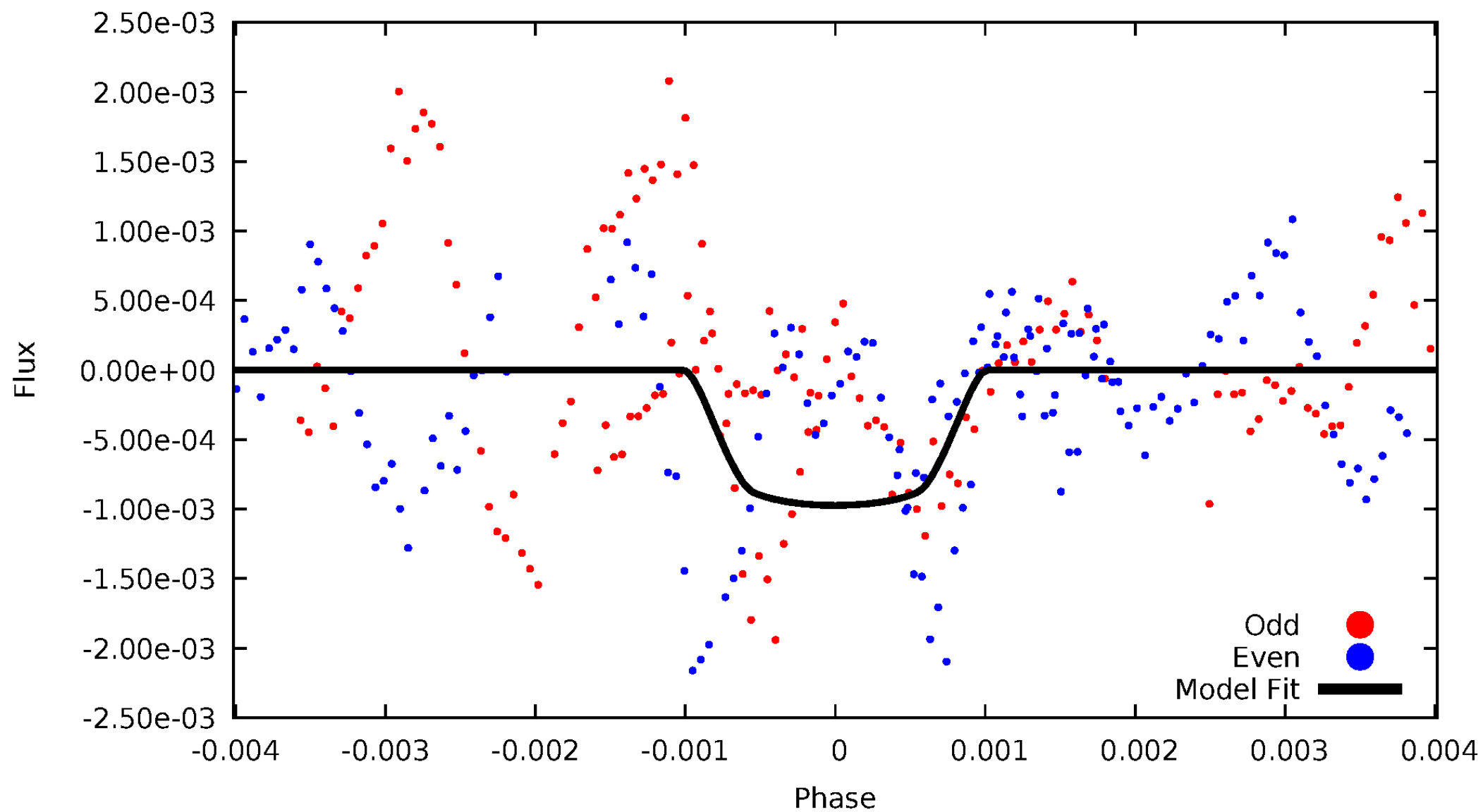


TCE 007499407-02



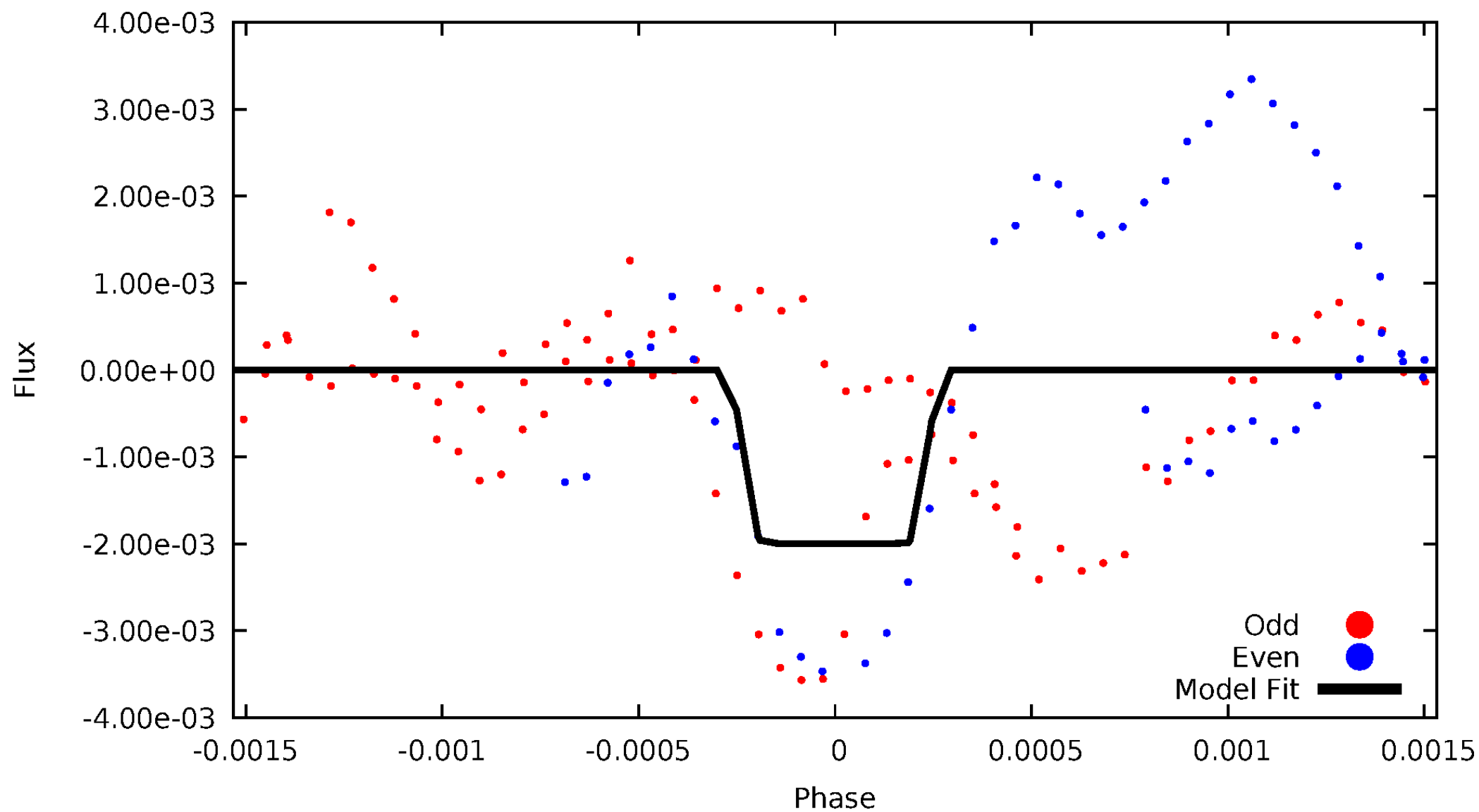
DV Odd/Even

TCE 007499407-02



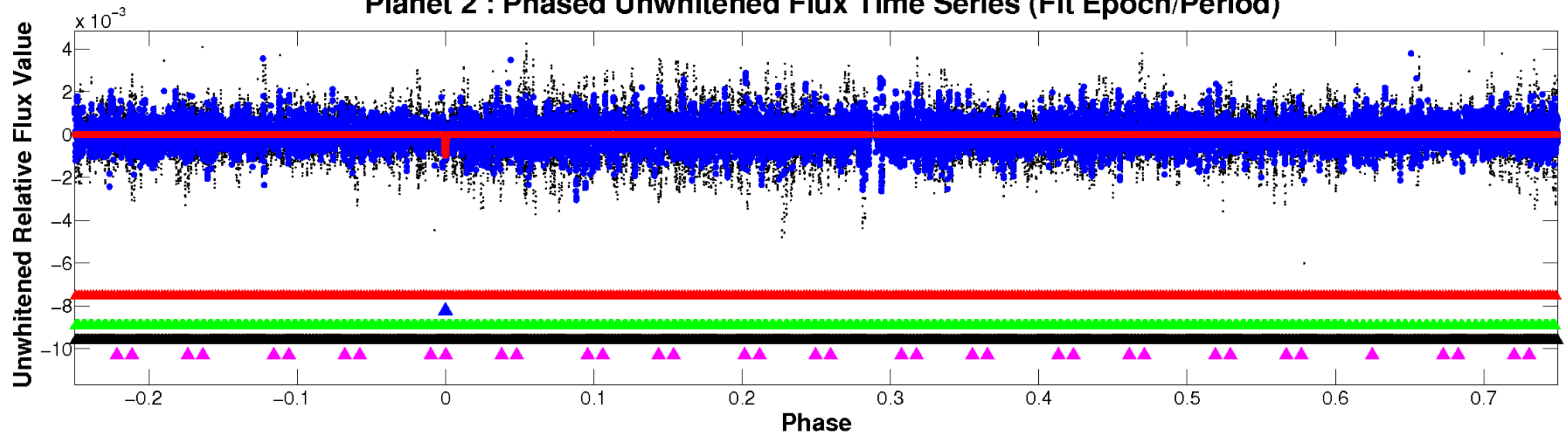
ALT Odd/Even

TCE 007499407-02

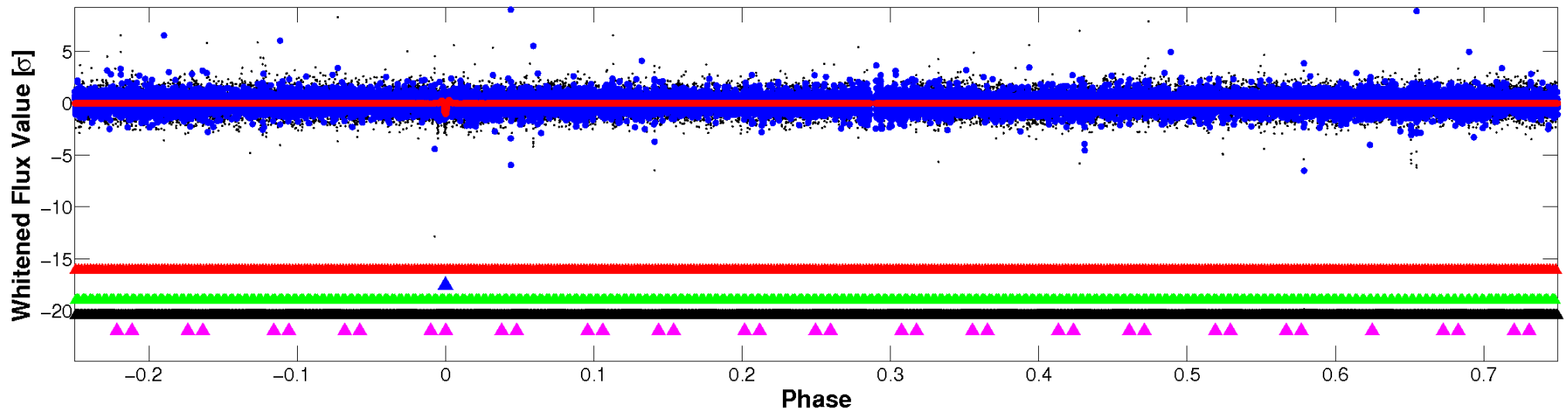


Non-Whitened Vs. Whitened Light Curve

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

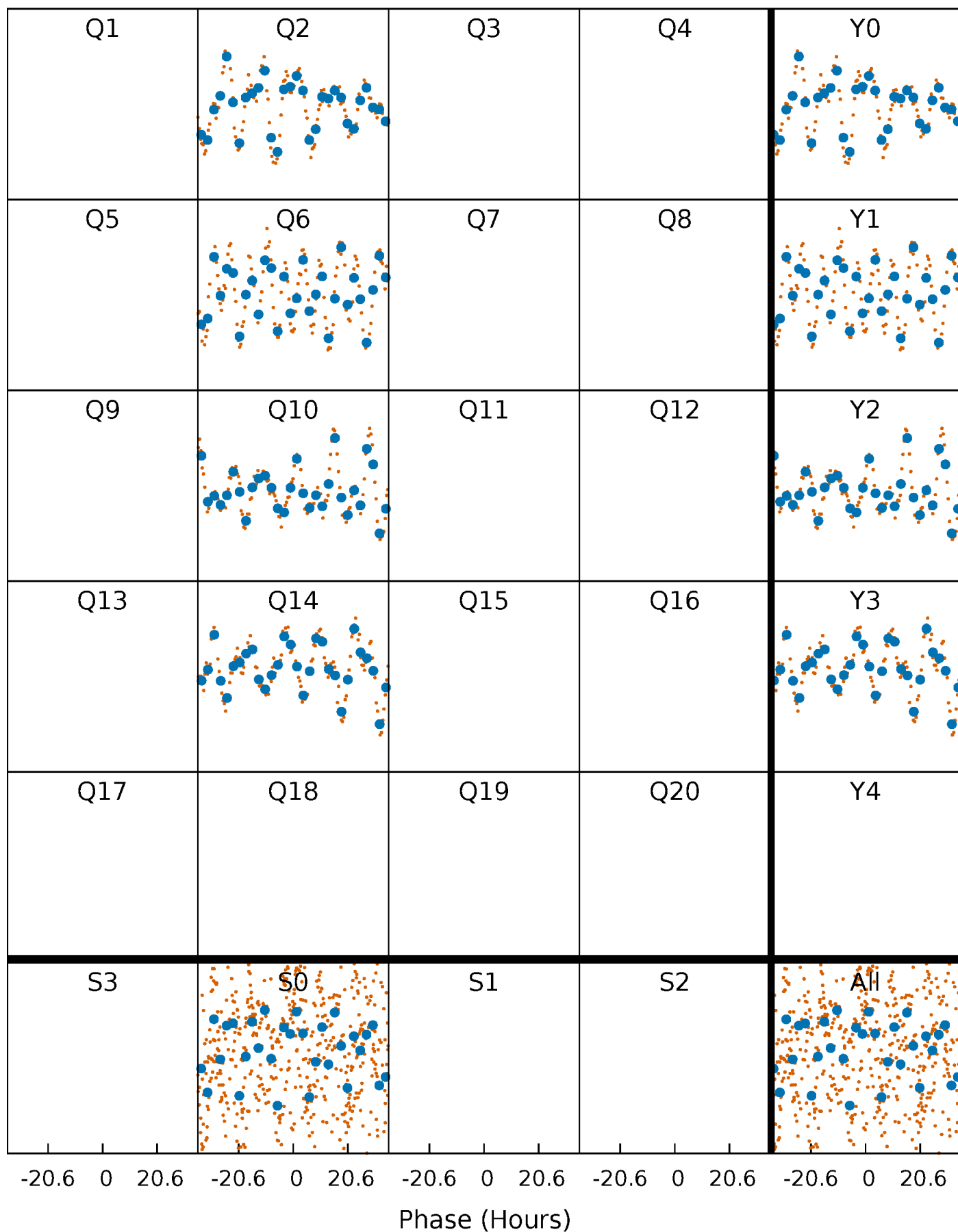


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



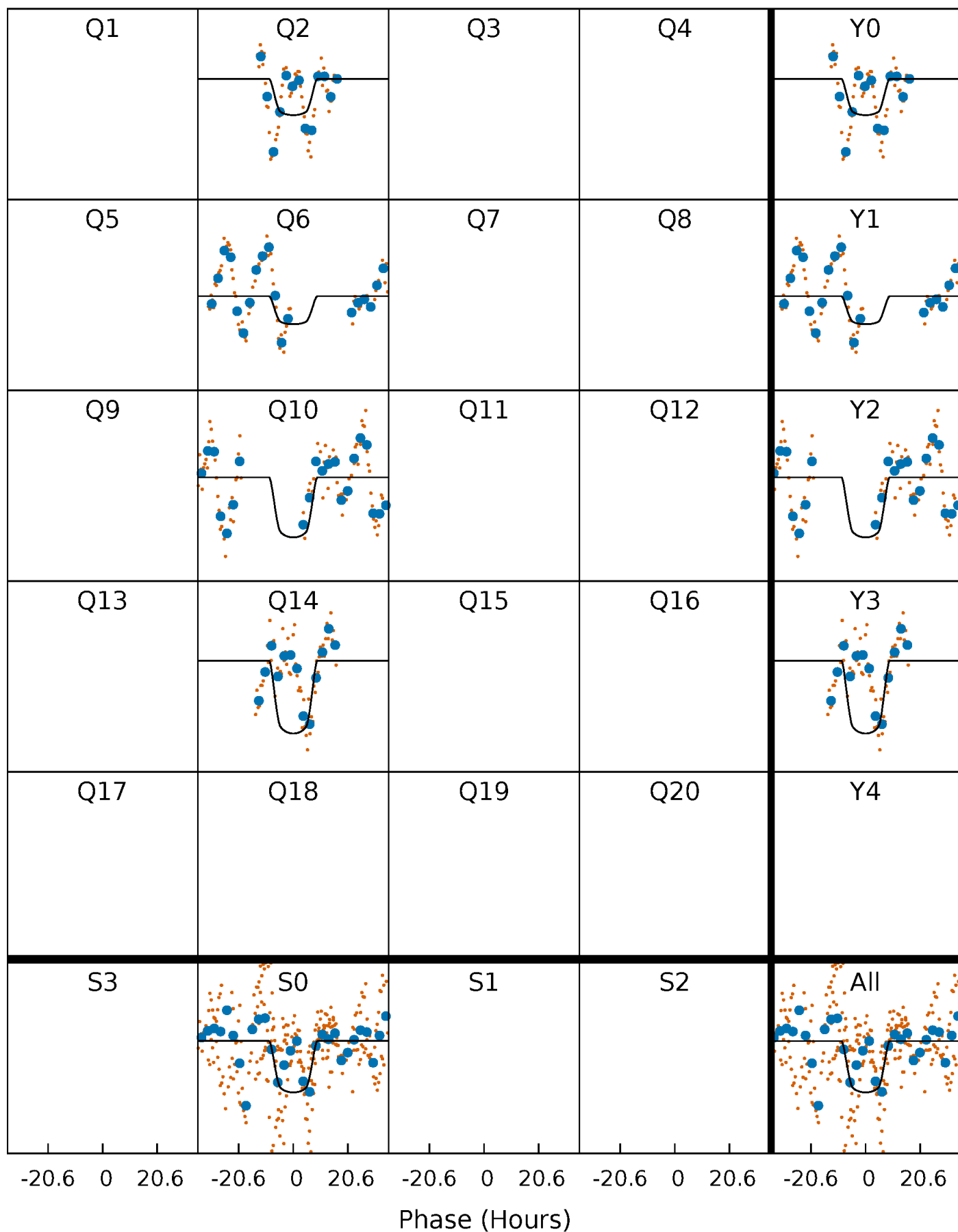
PDC Quarter-Phased Transit Curves

TCE 007499407-02 P=374.075196 Days $T_0=242.783080$ (BKJD)



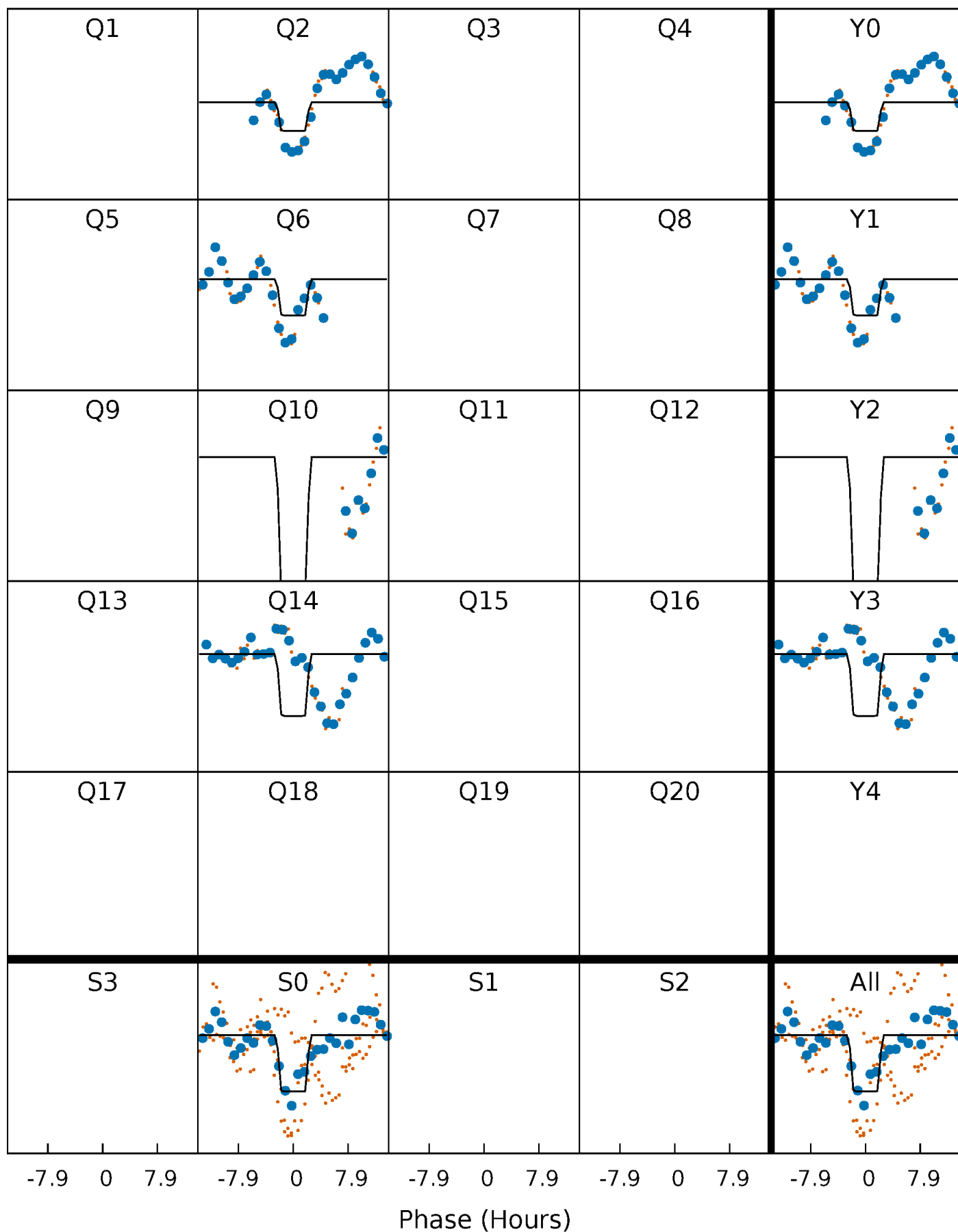
DV Quarter-Phased Transit Curves

TCE 007499407-02 P=374.075196 Days $T_0=242.783080$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

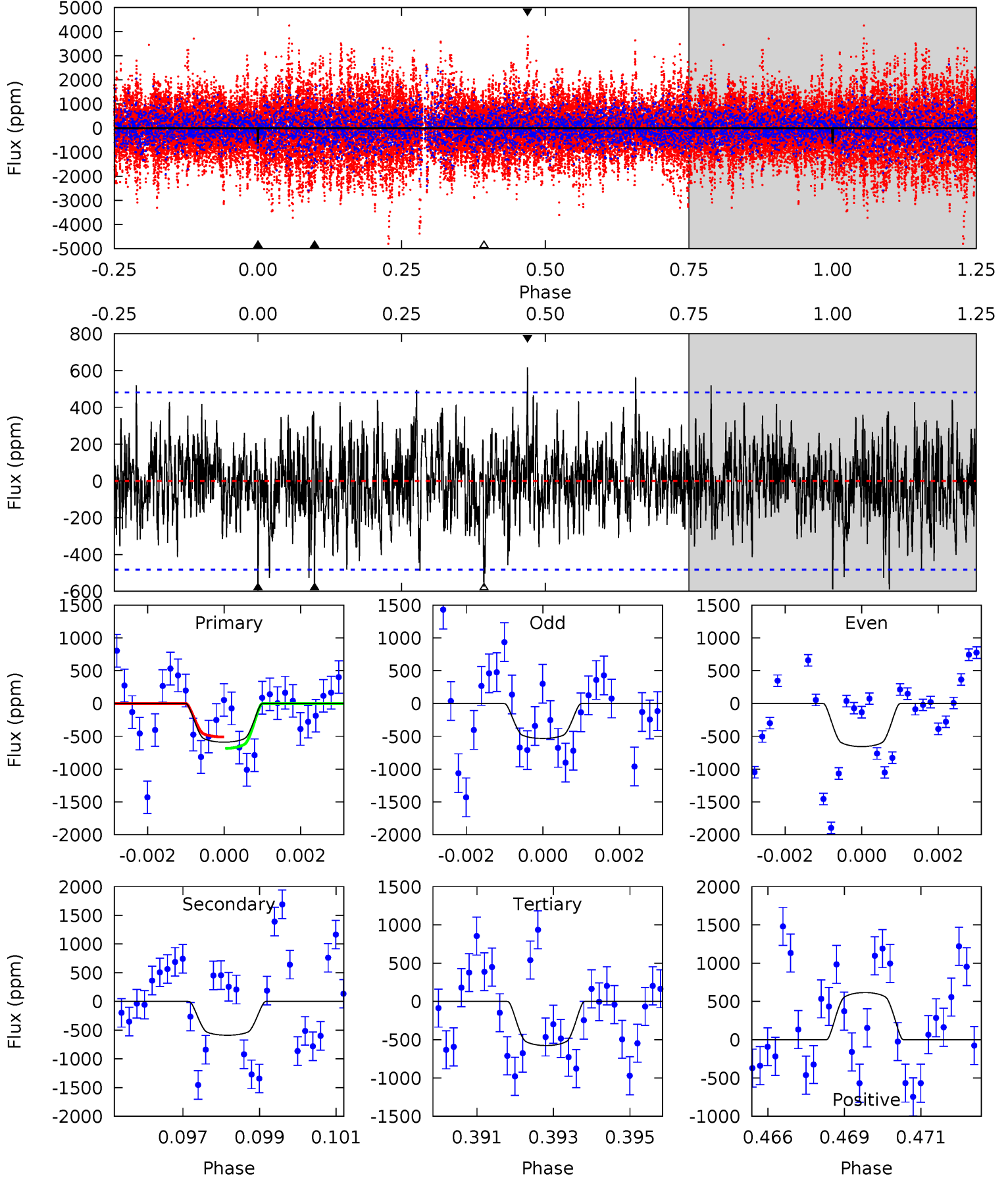
TCE 007499407-02 P=374.158917 Days $T_0=242.480000$ (BKJD)



DV Model-Shift Uniqueness Test

007499407-02, P = 374.075196 Days, E = 242.783080 Days

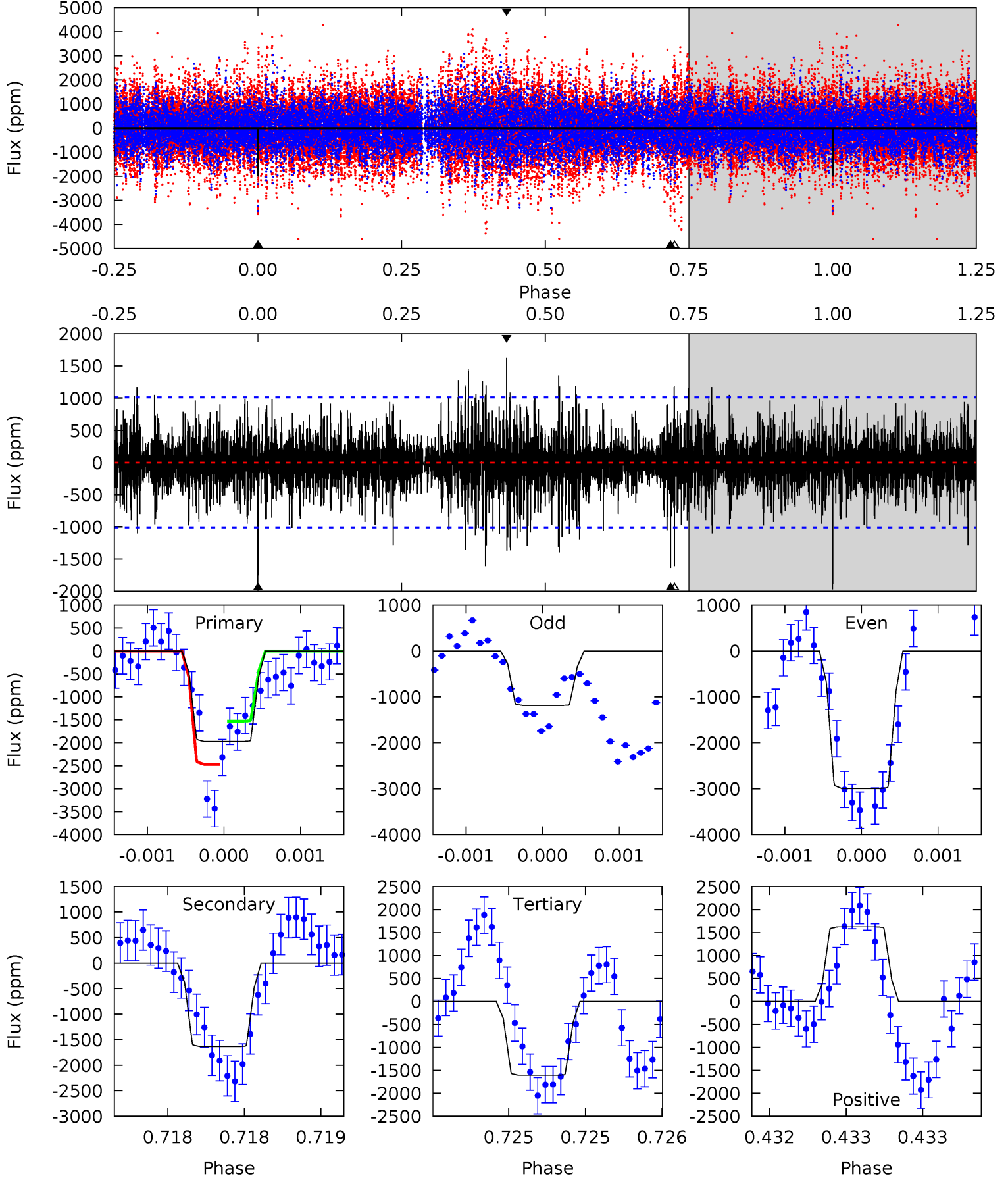
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.51	6.50	6.36	6.81	5.32	3.09	1.69	0.15	-0.30	0.14	-0.31	0.69	1.03	0.51	0.96



Alt Model-Shift Uniqueness Test

007499407-02, P = 374.158917 Days, E = 242.480000 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.8	8.96	8.81	8.90	5.56	3.46	1.86	1.99	1.90	0.15	0.06	4.64	0.69	0.45	2.58



Stellar Parameters For KIC 007499407

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7286^{+232}_{-319}	$4.218^{+0.105}_{-0.195}$	$-0.160^{+0.250}_{-0.350}$	$1.542^{+0.508}_{-0.274}$	$1.434^{+0.219}_{-0.219}$	$0.551^{+0.288}_{-0.302}$
	+3%/-4%	+2%/-5%	+156%/-219%	+33%/-18%	+15%/-15%	+52%/-55%
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 007499407-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-588 ± 90	$5.79^{+1.06}_{-0.75}$	524^{+42}_{-31}	6055^{+385}_{-361}	12379^{+4148}_{-3665}
Alt.	-1635 ± 182	$7.62^{+1.37}_{-0.87}$	524^{+39}_{-33}	6823^{+424}_{-402}	19756^{+6007}_{-4963}

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 $A_{obs} \gg 1.0$

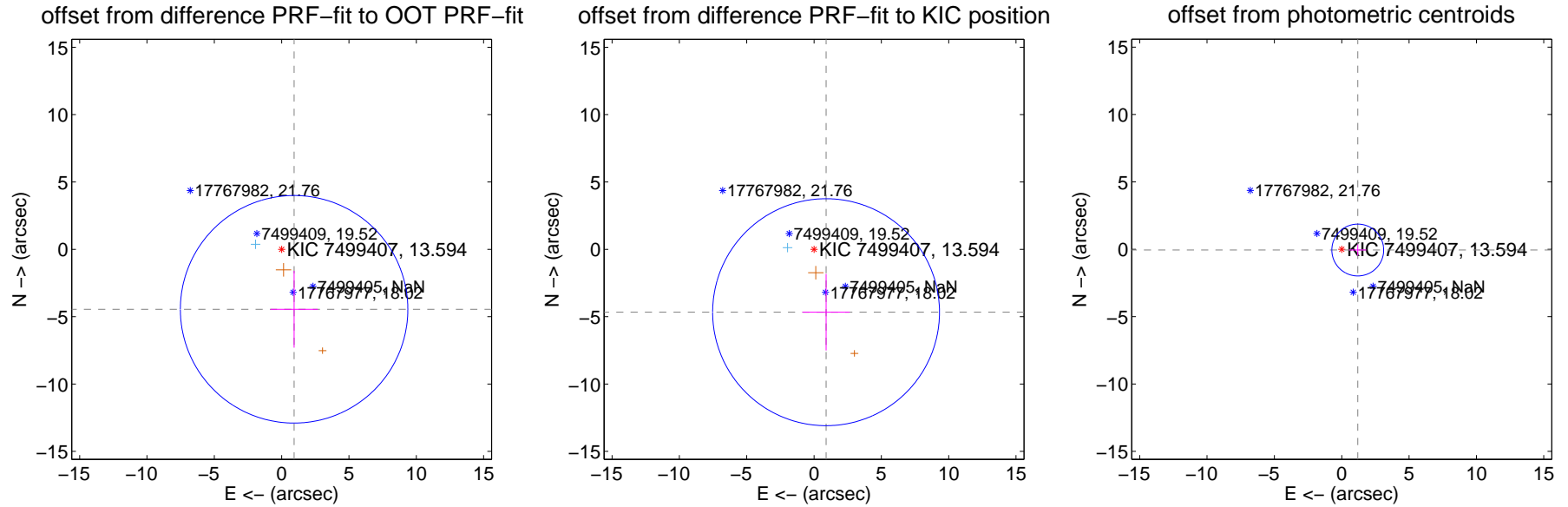
DV Centroid Data

Supplemental centroid analysis for 007499407-02. Kepler magnitude: 13.59. Transit SNR 7.86

There are 1 quarters with good PRF difference image offsets

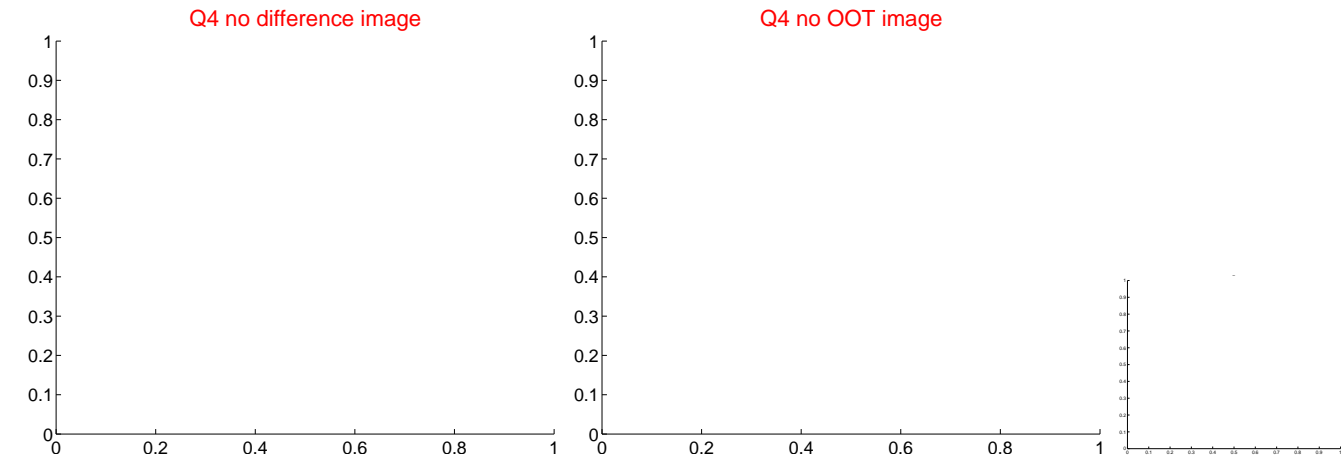
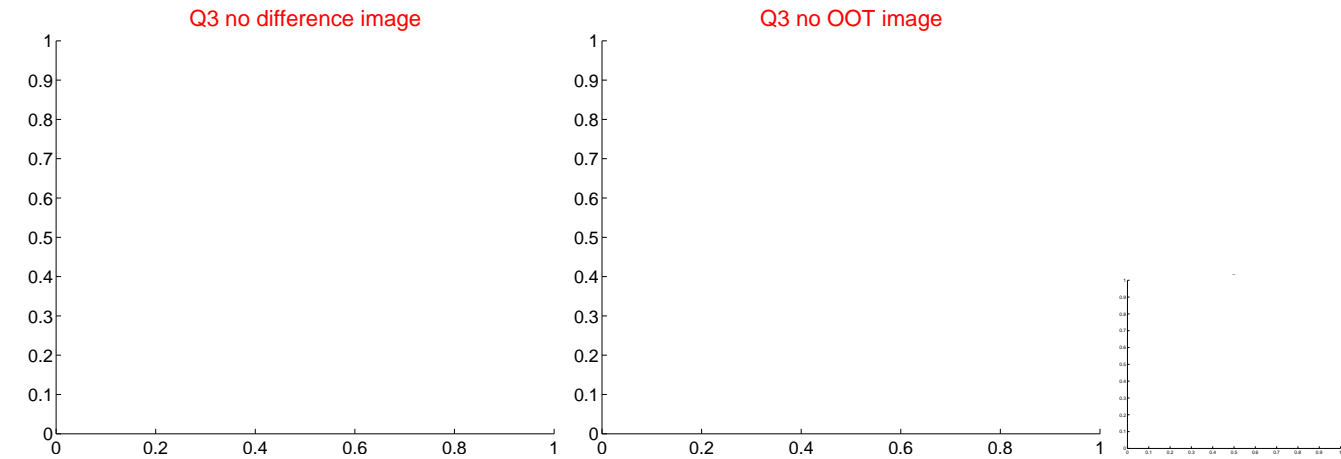
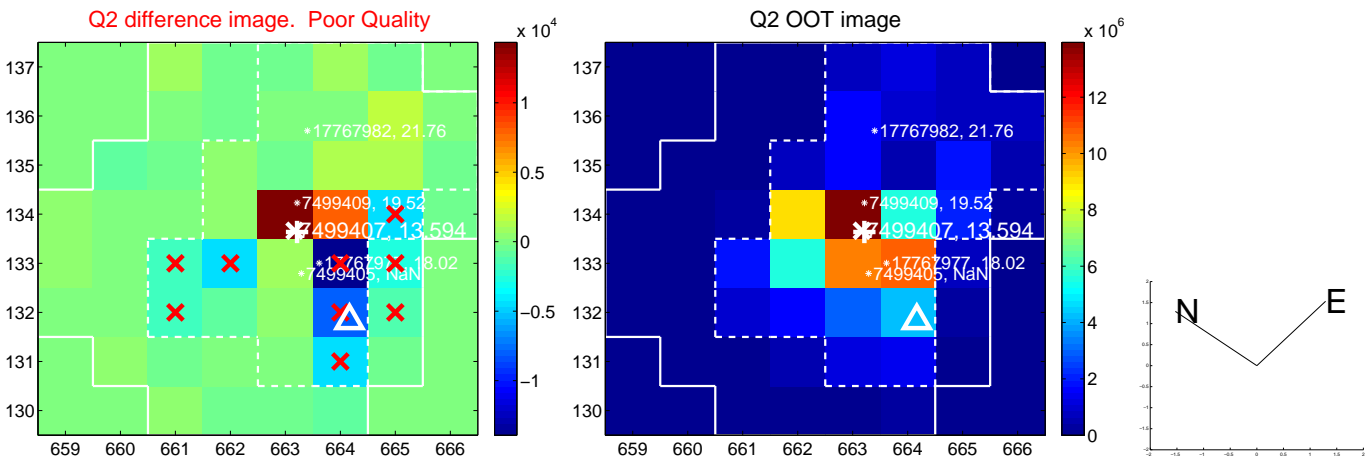
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.548 ± 2.816	1.62	-0.925 ± 1.755	-4.453 ± 2.853
PRF-fit source offset from KIC position	4.754 ± 2.808	1.69	-0.894 ± 1.752	-4.669 ± 2.839
photometric centroid source offset	1.19 ± 0.64	1.86	-1.19 ± 0.64	-0.06 ± 0.42

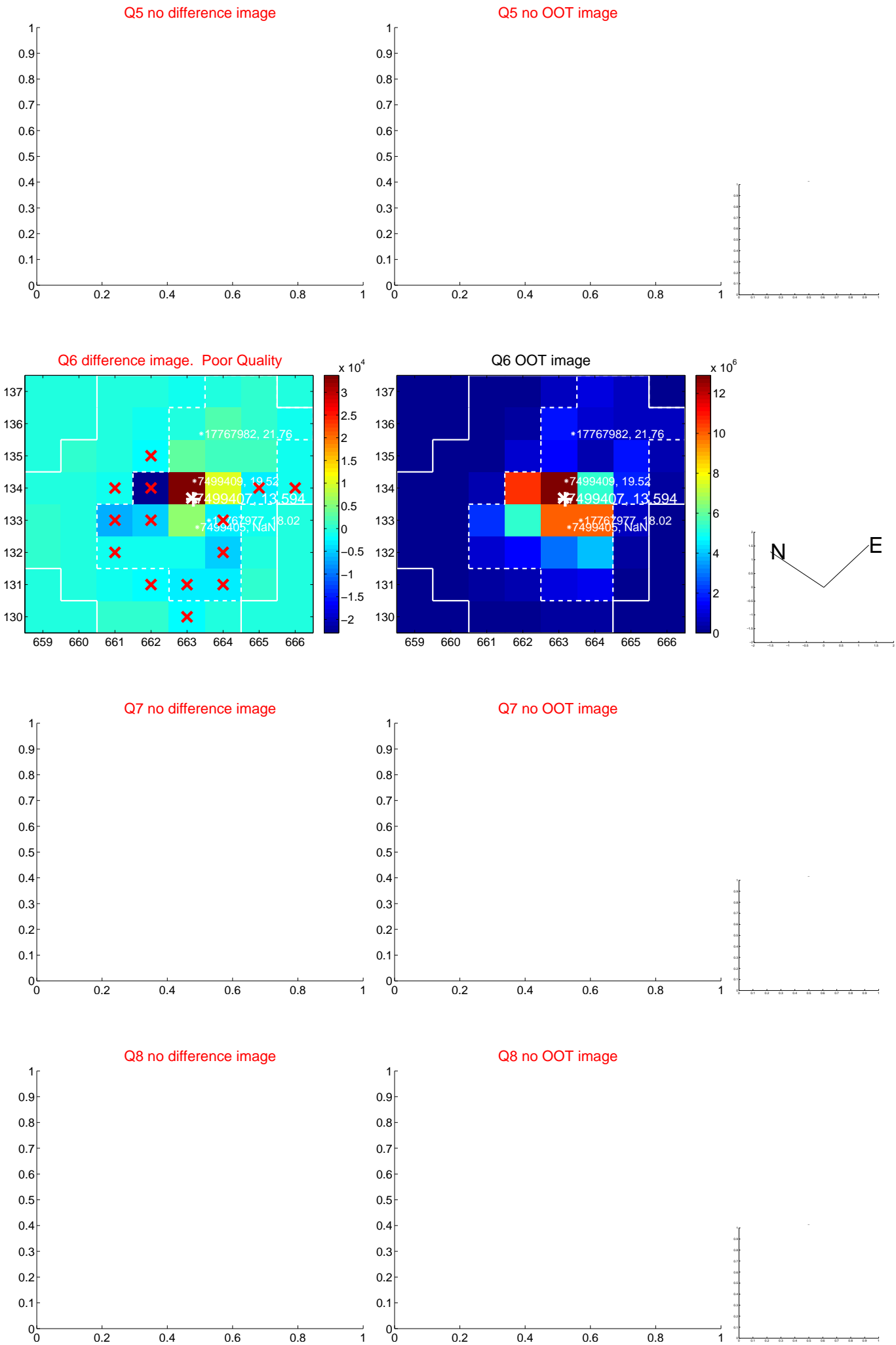


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

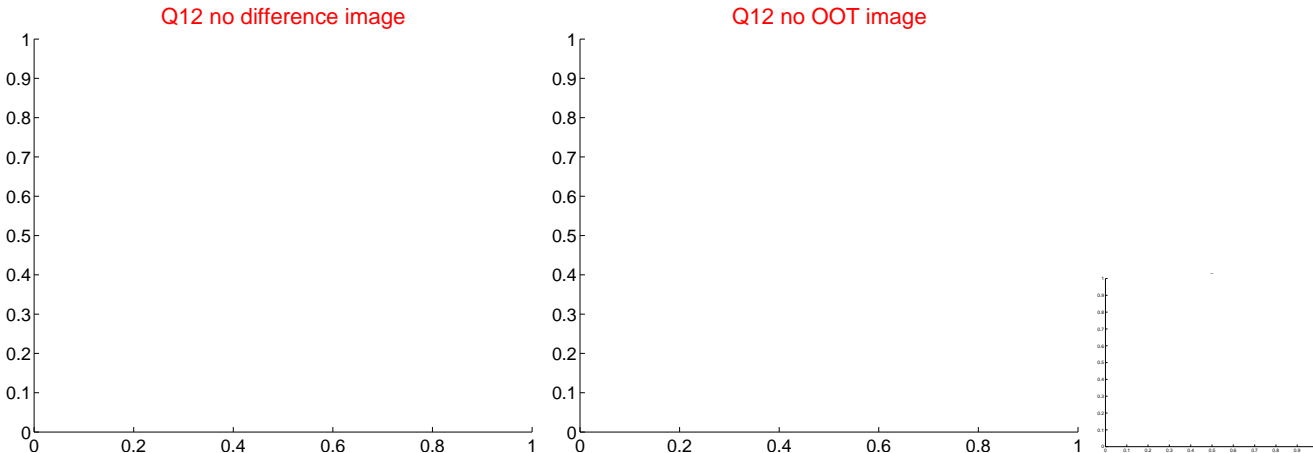
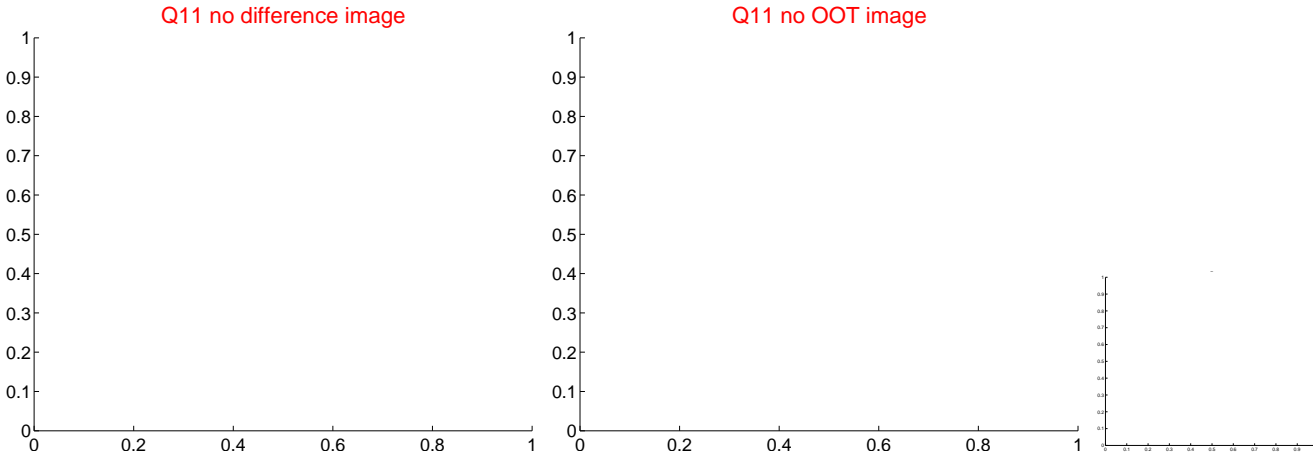
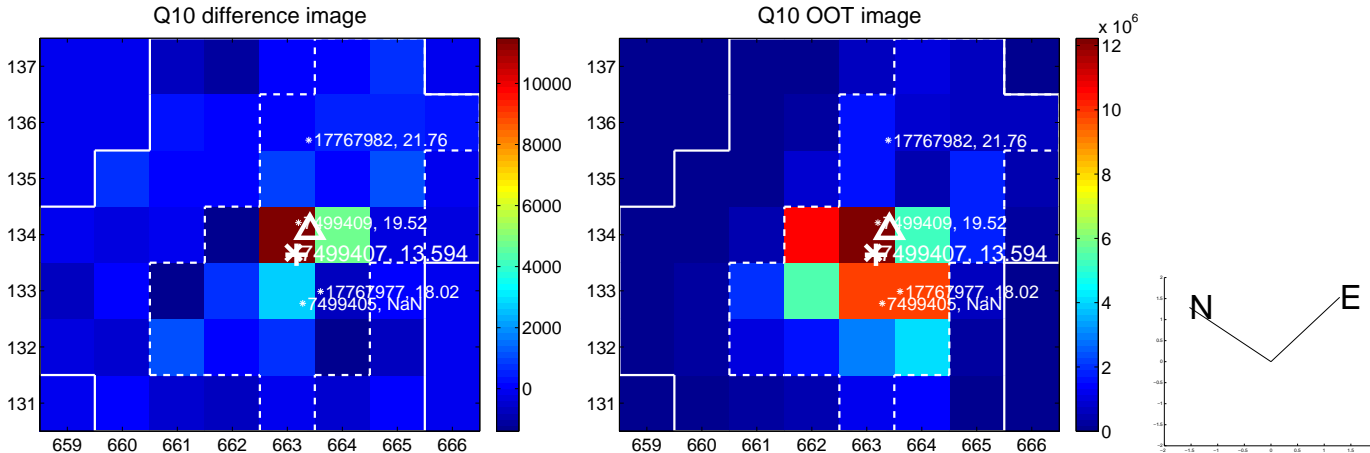
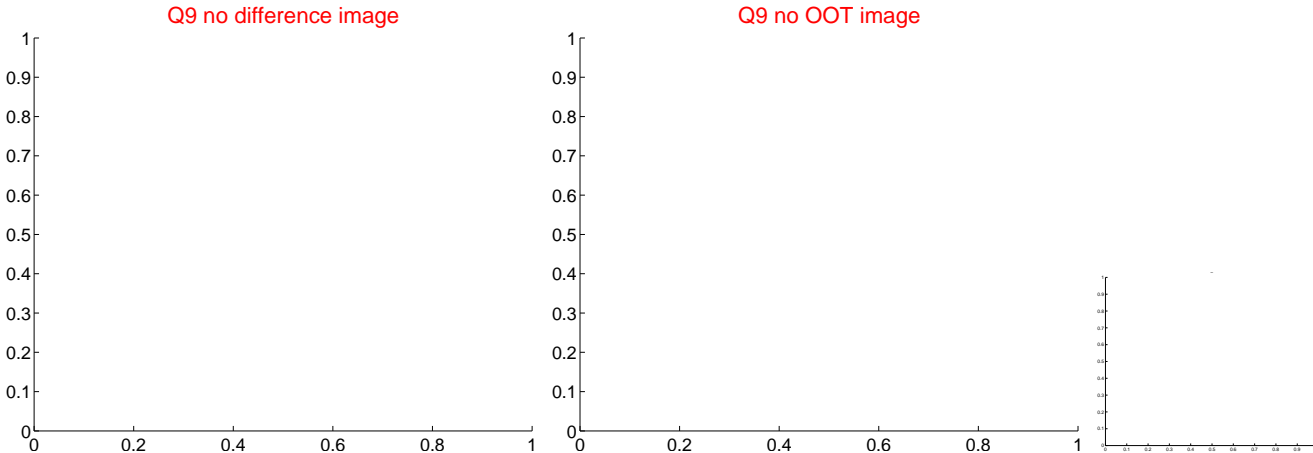
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



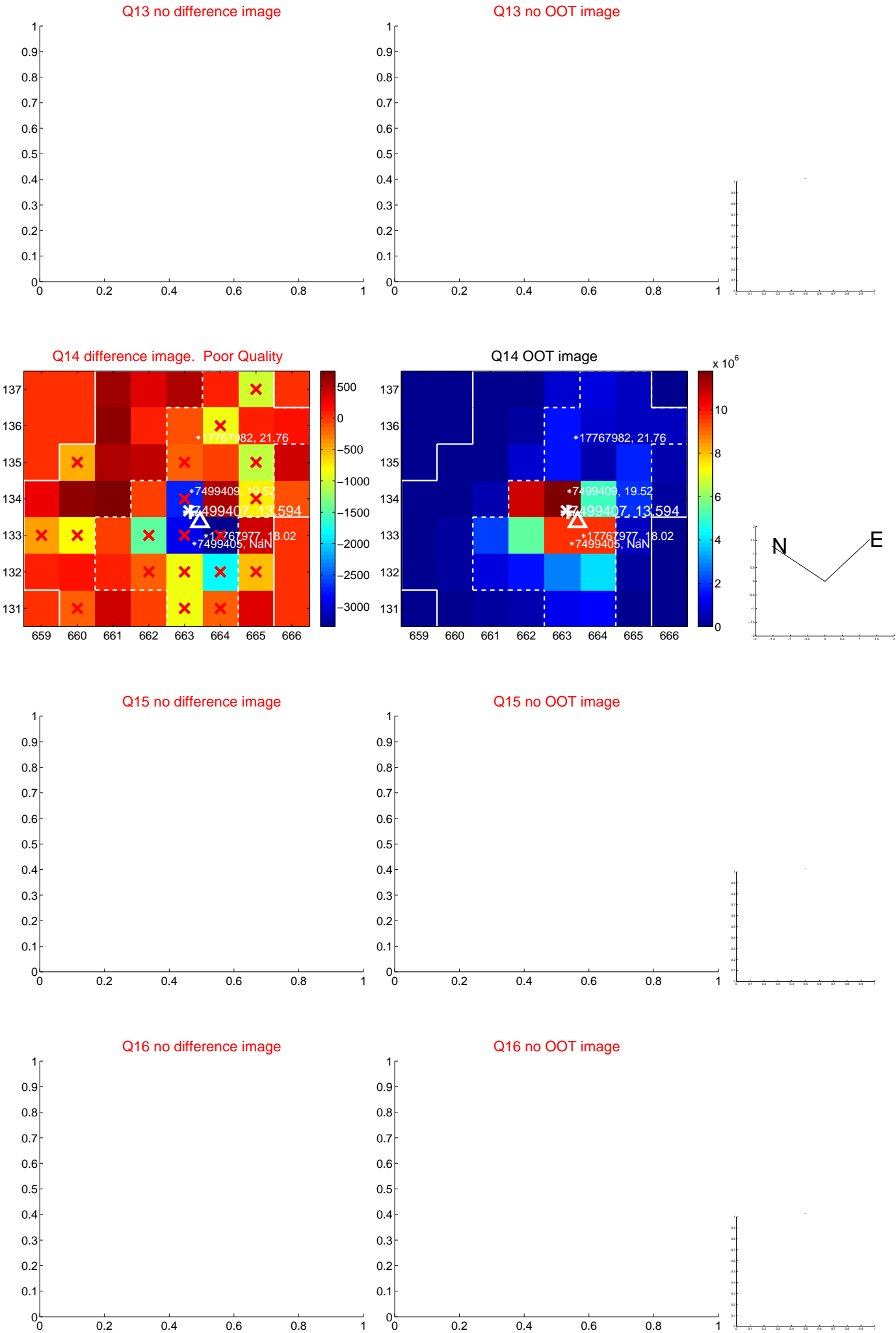
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



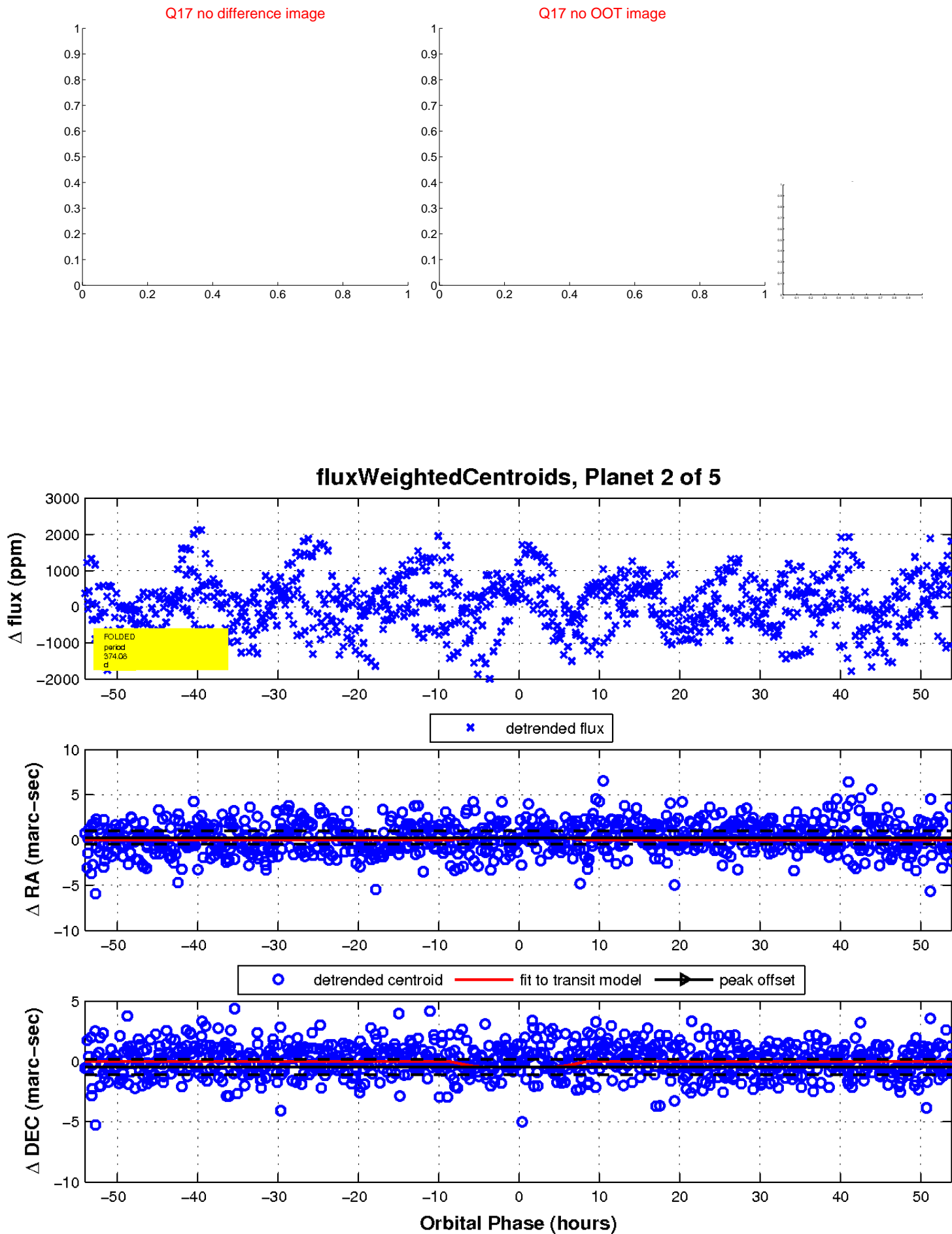
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

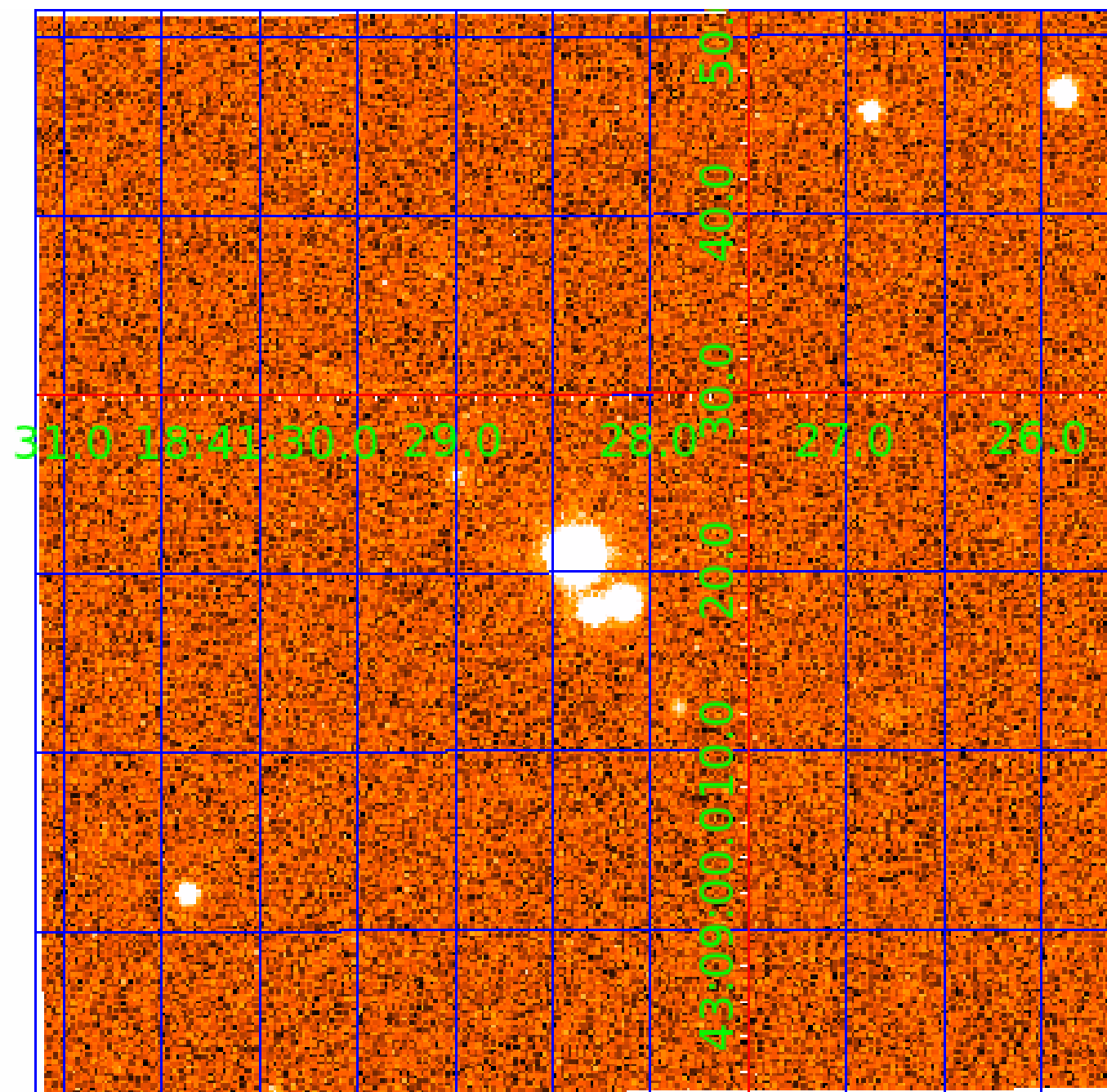


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007499407

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})
007499407-01	OBS	No	2.248867	131.538239	157.4	7.500	11.4	-1.0	1.54	7286	1.96	4184.29
007499407-02	OBS	No	374.075196	242.783080	973.1	18.019	14.8	7.9	1.54	7286	5.75	4.57
007499407-03	OBS	No	1.771691	132.557850	118.6	3.962	8.7	7.6	1.54	7286	1.96	5750.73
007499407-04	OBS	No	0.885804	132.277390	85.1	4.499	9.2	6.6	1.54	7286	1.47	14491.84
007499407-05	OBS	No	39.576382	138.226145	1374.6	5.646	7.6	6.8	1.54	7286	10.53	91.41

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007499407-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
007499407-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007499407-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
007499407-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
007499407-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT

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

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

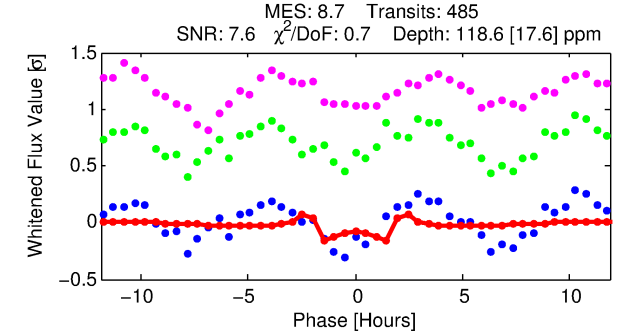
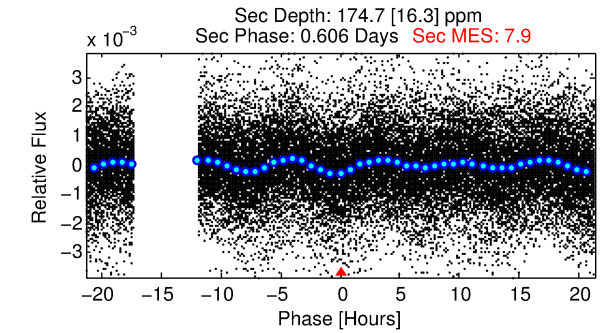
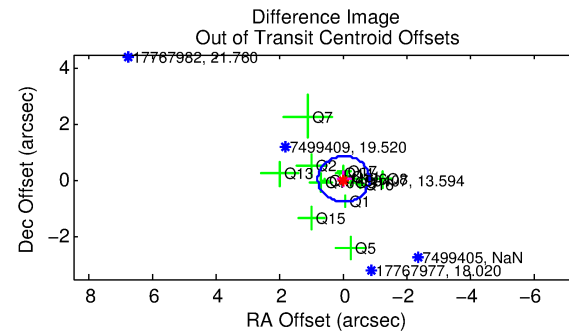
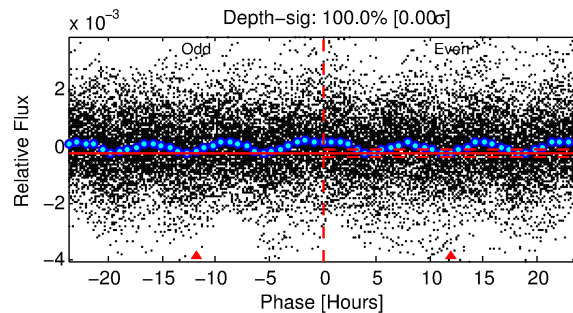
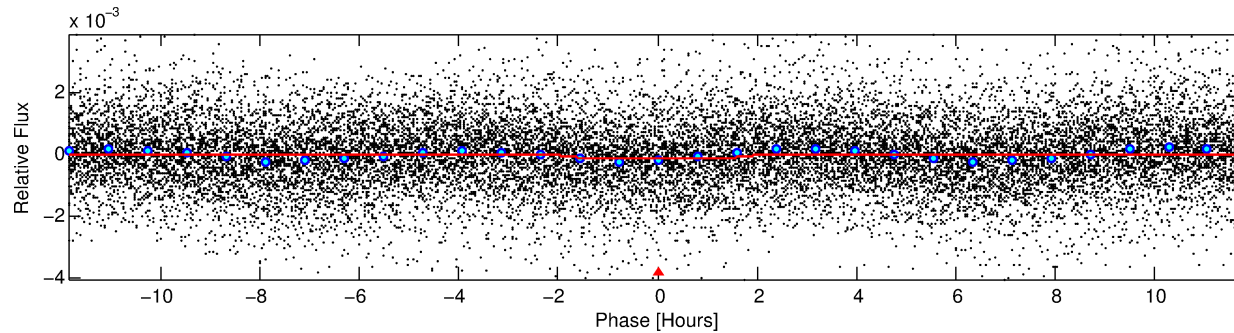
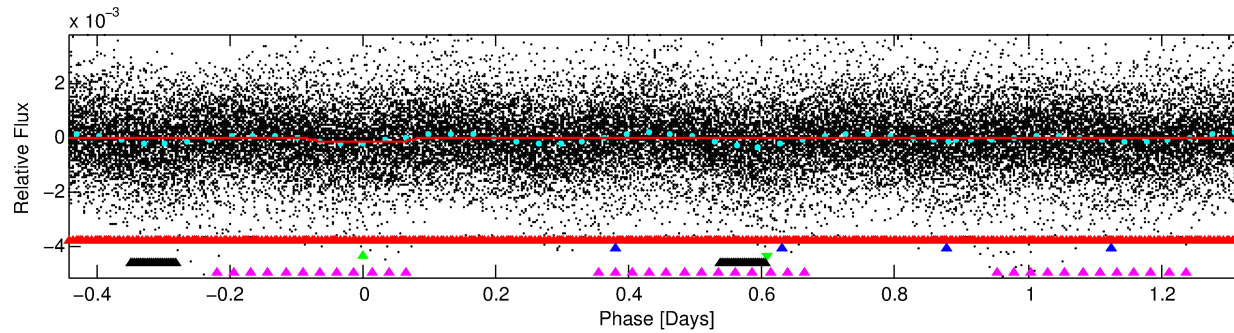
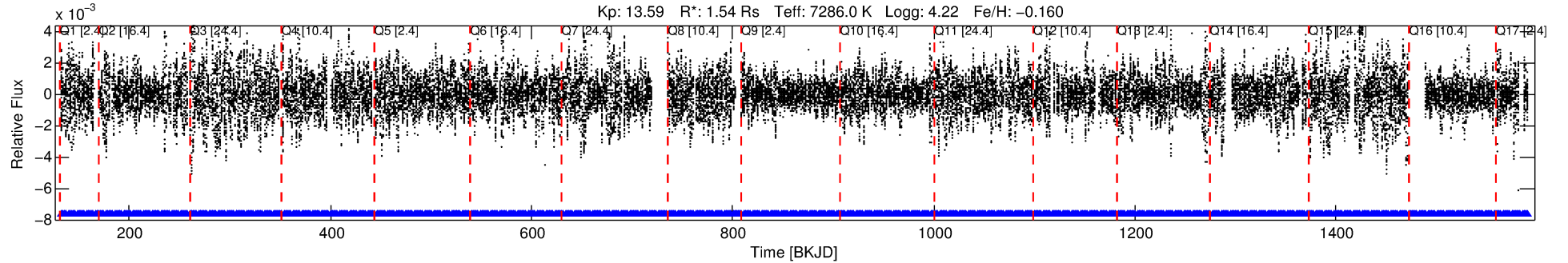
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007499407-03

No Significant Match Found

DV One-Page Summary

KIC: 7499407 Candidate: 3 of 5 Period: 1.772 d



DV Fit Results:

Period = 1.77169 [0.00001] d
Epoch = 132.5578 [0.0022] BKJD
Rp/R* = 0.0117 [0.0019]
a/R* = 1.77 [1.03]
b = 0.91 [0.16]
Seff = 5750.74 [2360.67]
Teq = 2221 [228] K
Rp = 1.96 [0.72] Re
a = 0.0323 [0.0086] AU
Ag = 26.03 [13.08] [1.91σ]
Teffp = 7755 [739] K [7.16σ]

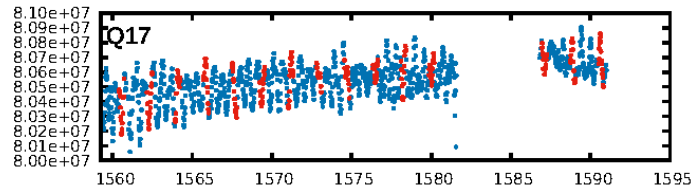
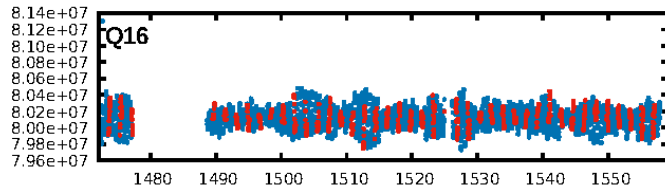
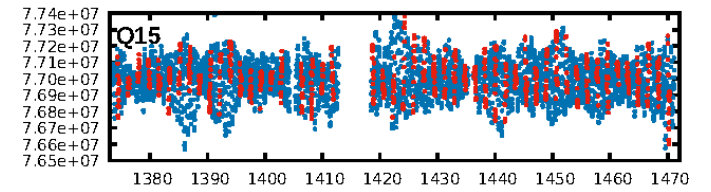
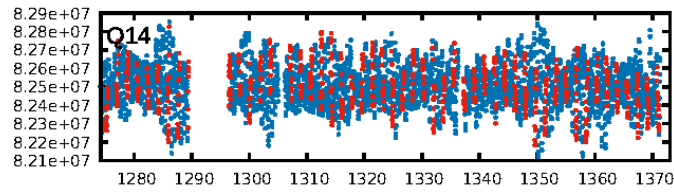
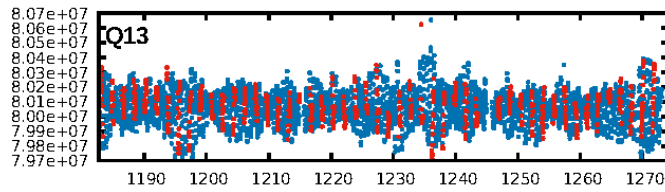
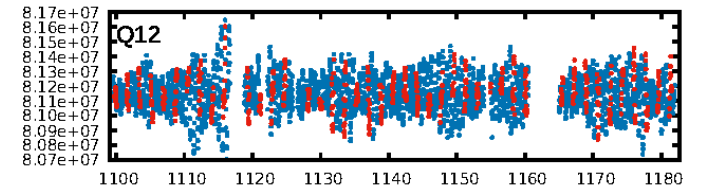
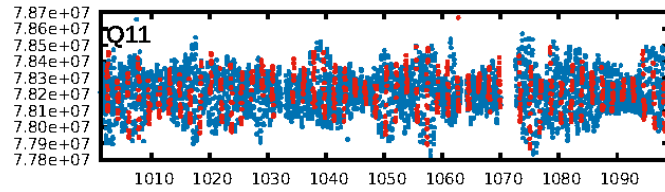
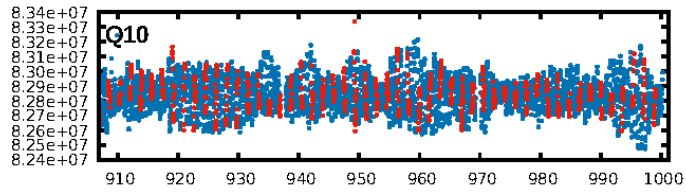
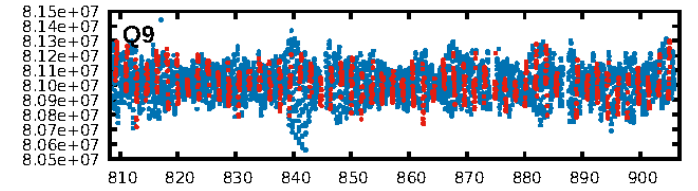
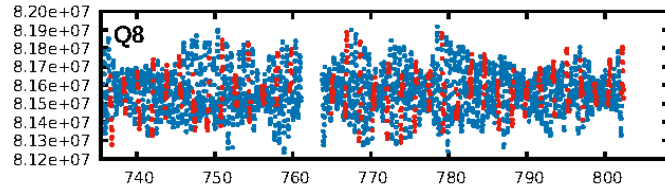
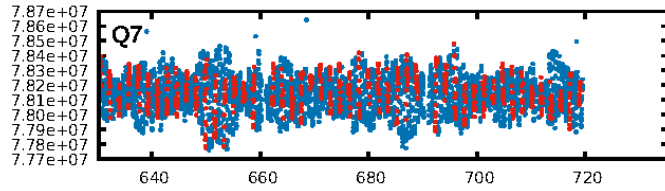
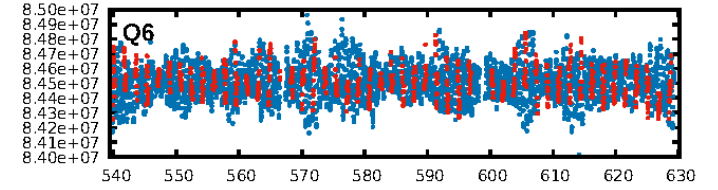
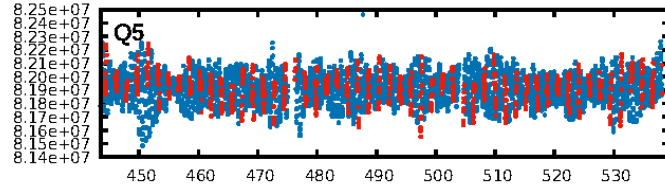
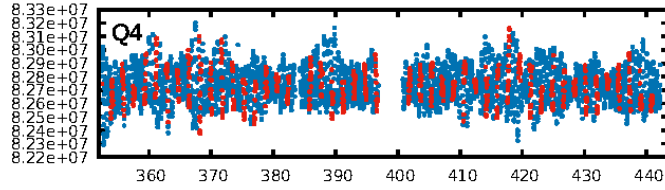
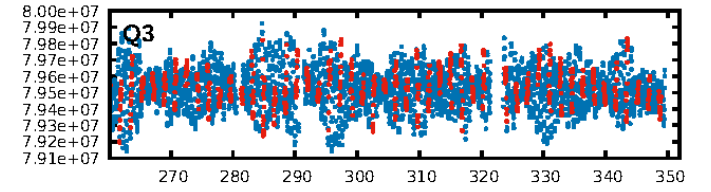
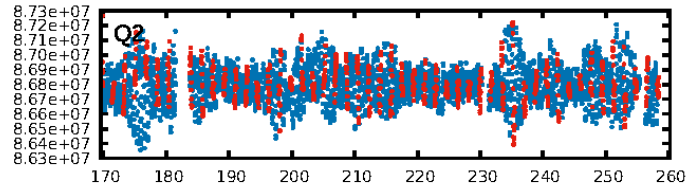
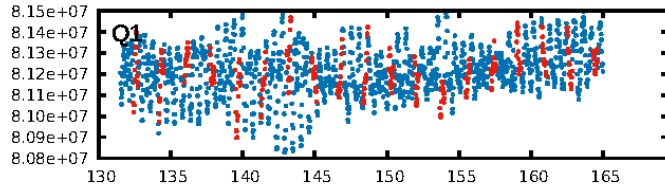
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [3.55σ]
LongPeriod-sig: 82.3% [1.35σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.76e-14
RollingBand-fgt: 1.00 [462/462]
GhostDiagnostic-chr: 1.545
Centroid-sig: 23.8%
Centroid-so: 1.370 arcsec [3.40σ]
OotOffset-rm: 0.057 arcsec [0.21σ]
KicOffset-rm: 0.194 arcsec [0.75σ]
OotOffset-st: 4/3/3/5 [15]
KicOffset-st: 4/3/3/5 [15]
DiffImageQuality-fgm: 0.80 [12/15]
DiffImageOverlap-fno: 0.00 [0/17]

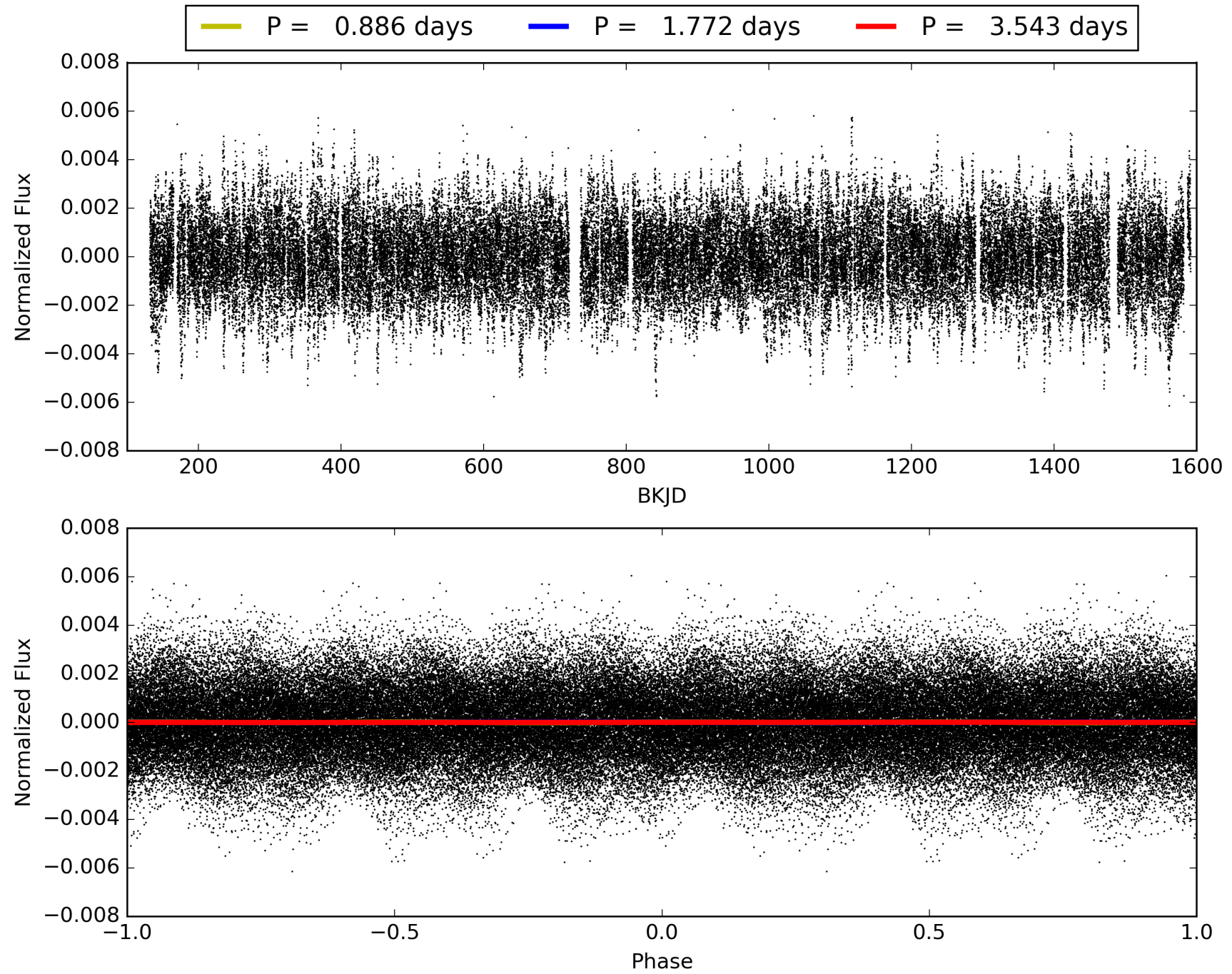
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 09:34:52 Z

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

TCE 007499407-03, PDC Light Curves

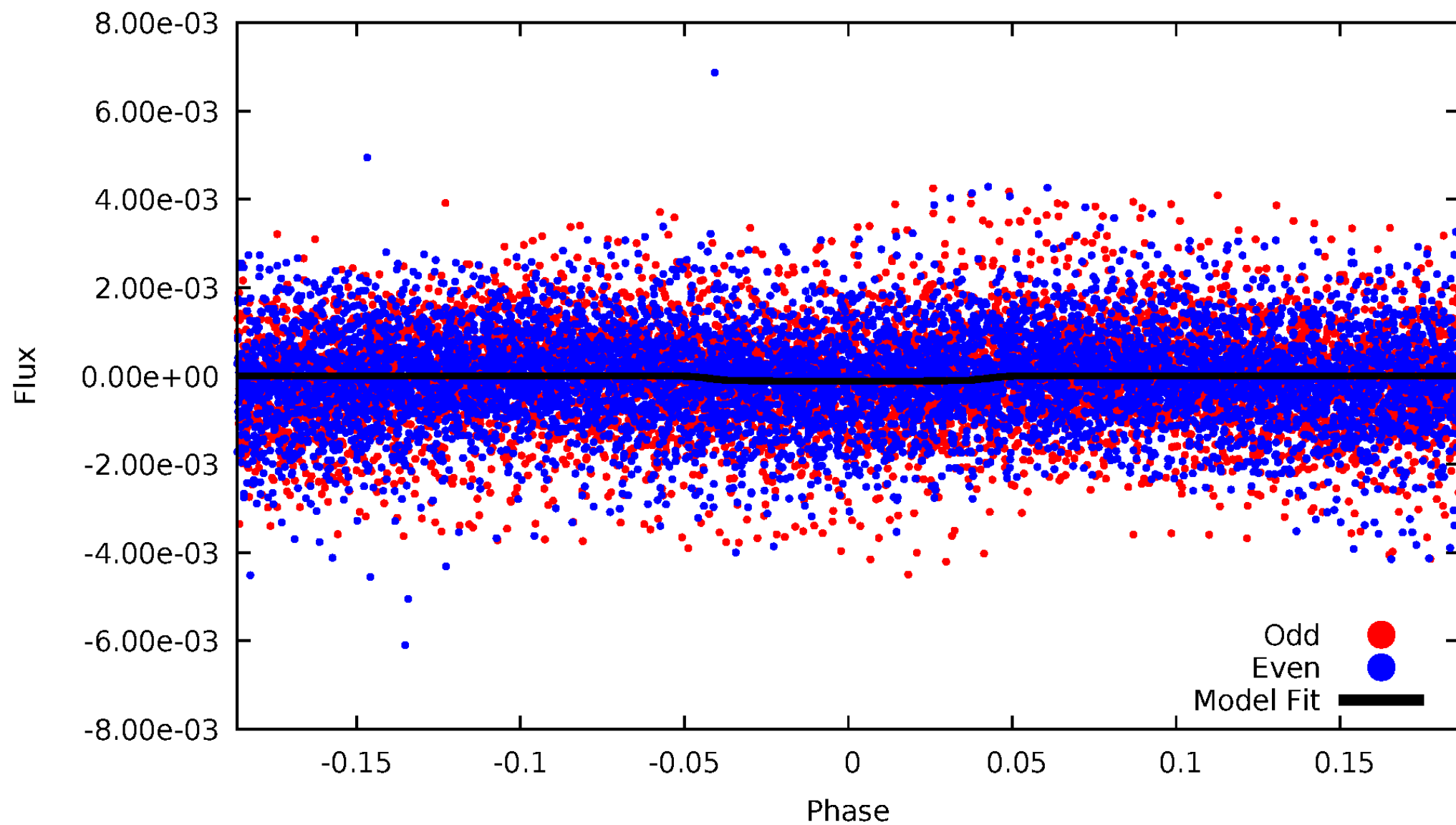


TCE 007499407-03



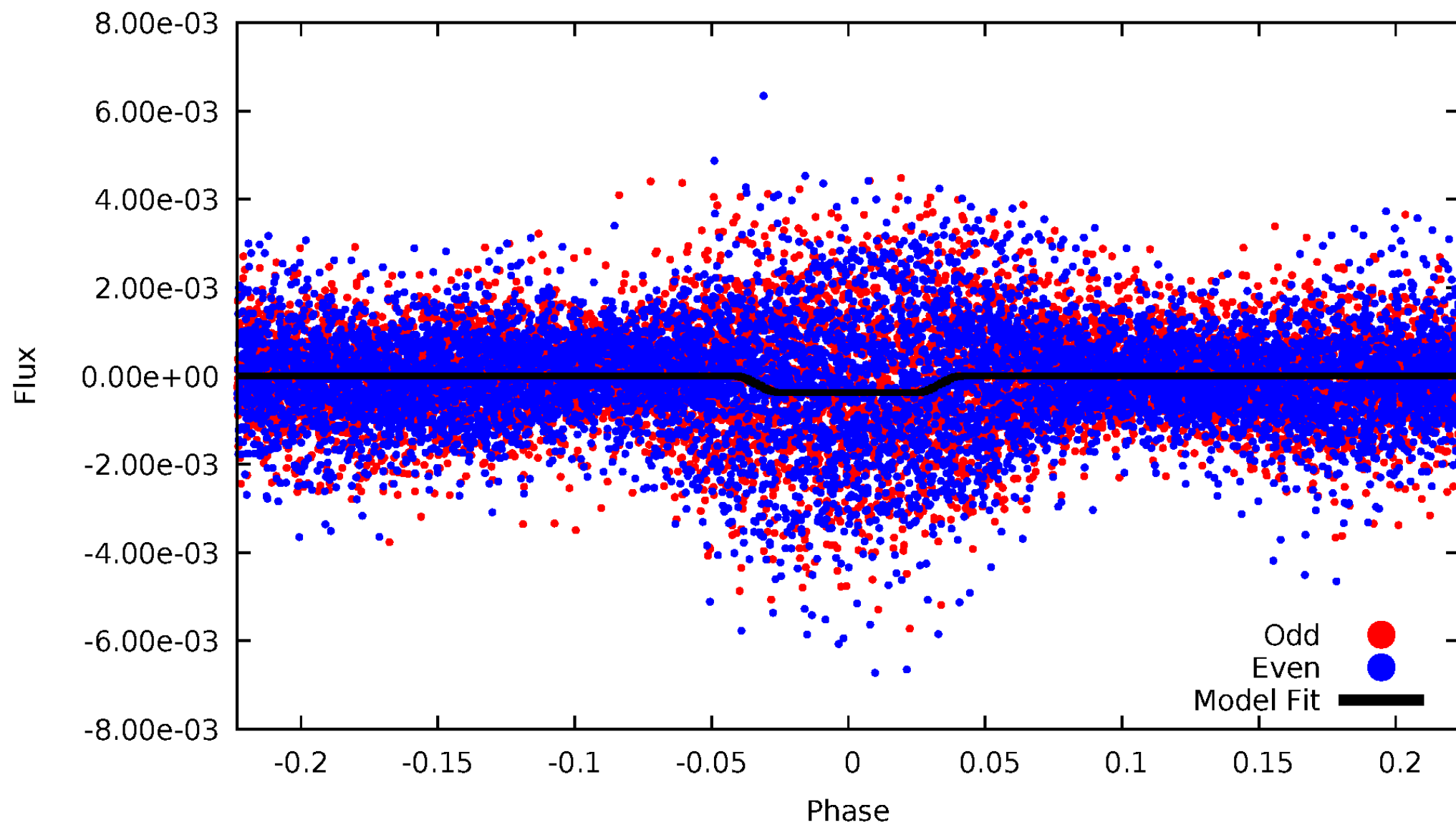
DV Odd/Even

TCE 007499407-03

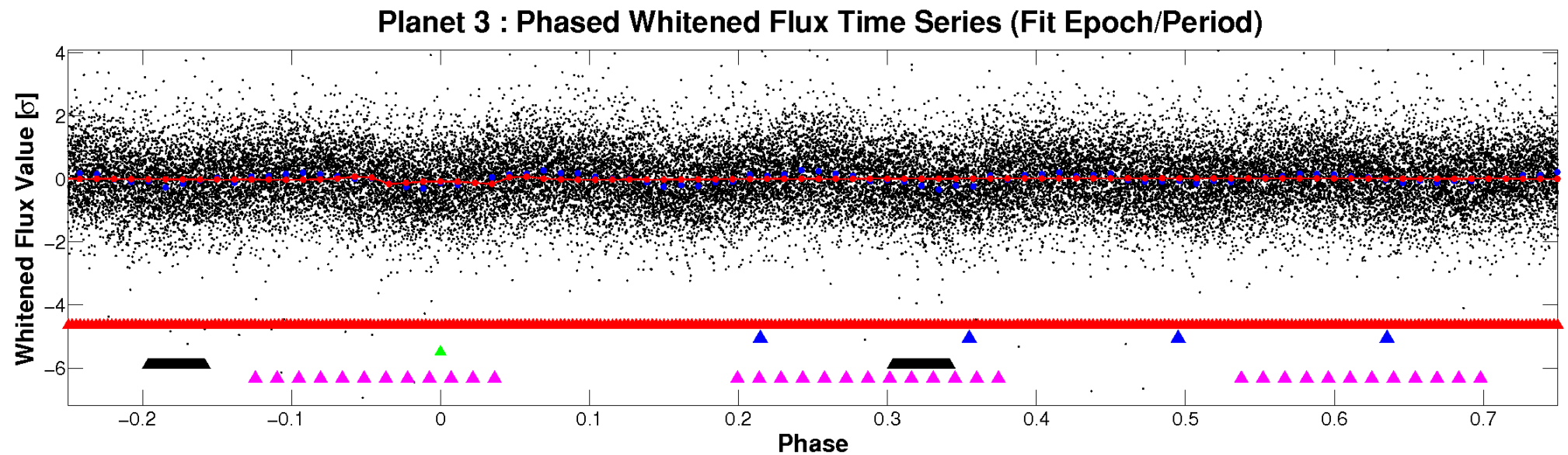
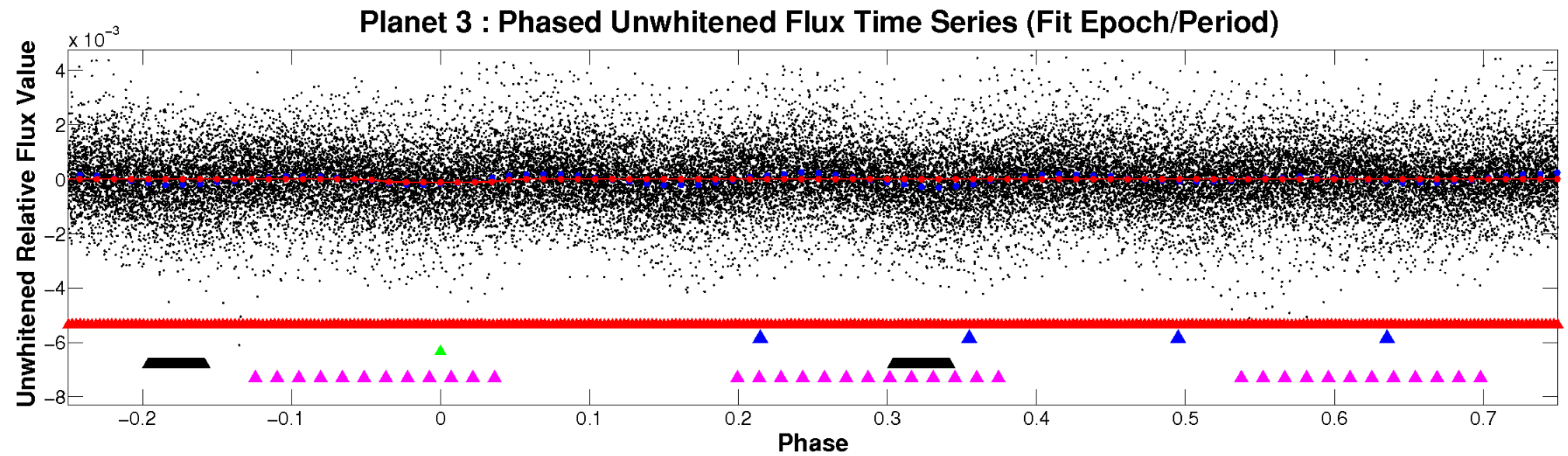


ALT Odd/Even

TCE 007499407-03

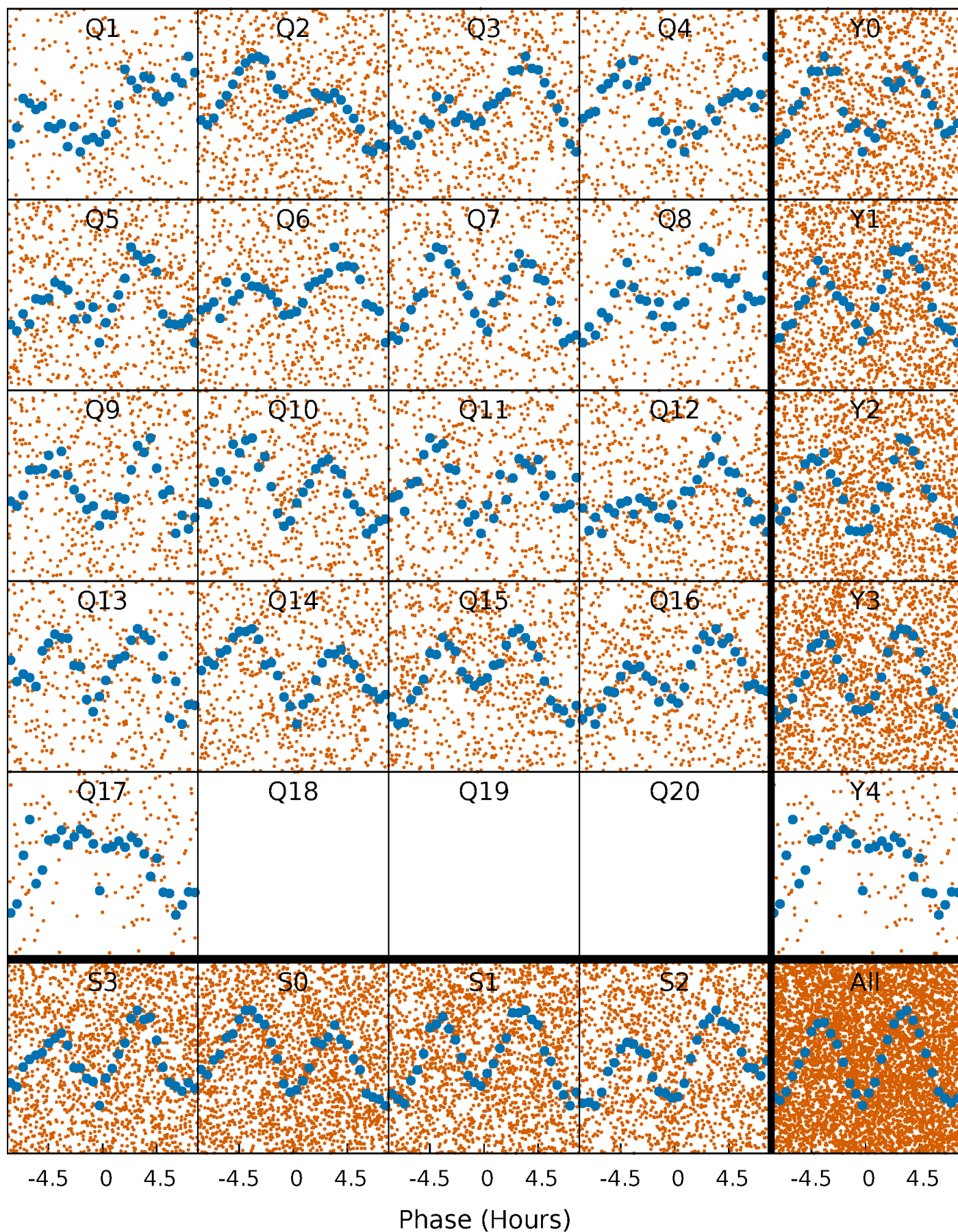


Non-Whitened Vs. Whitened Light Curve



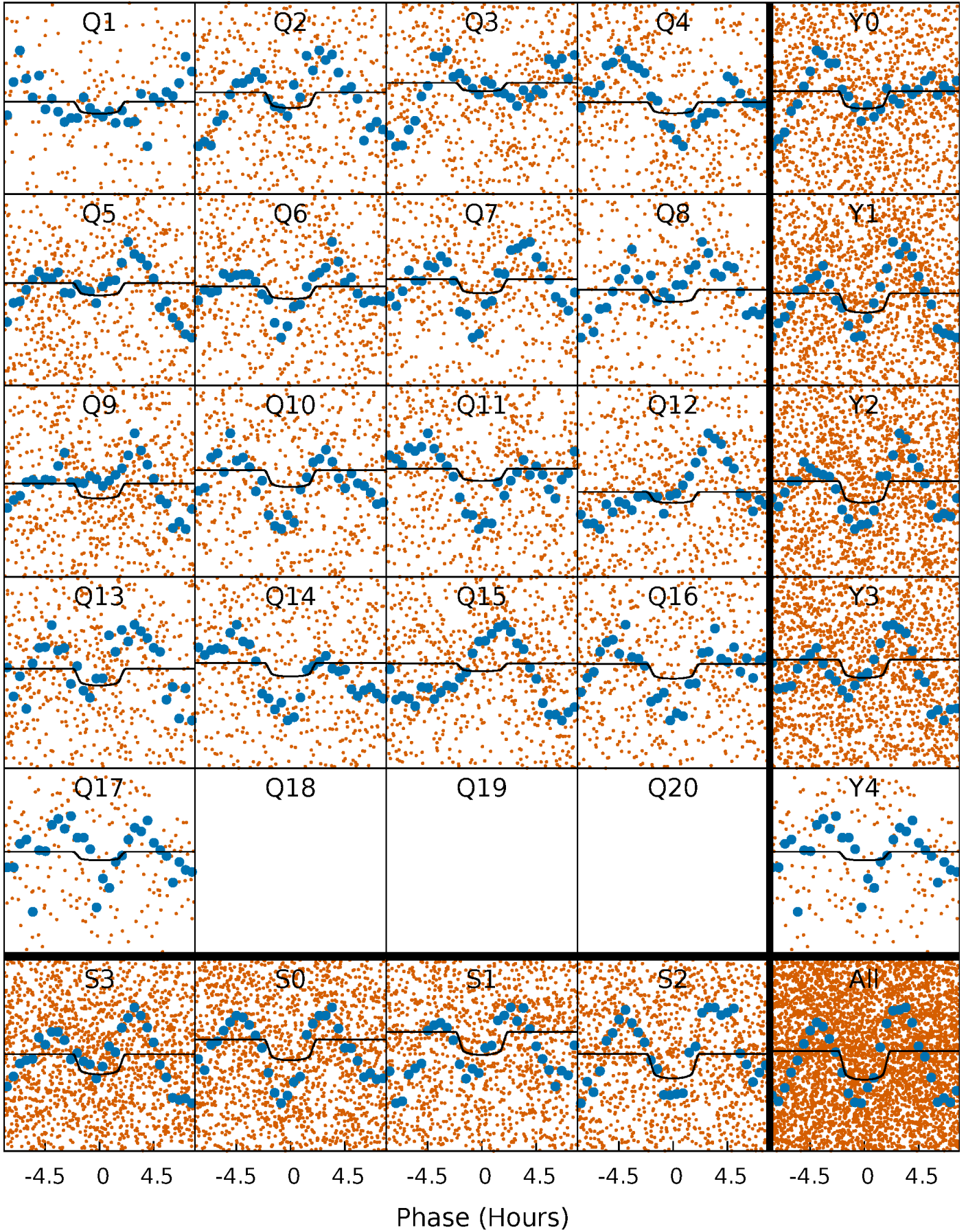
PDC Quarter-Phased Transit Curves

TCE 007499407-03 P= 1.771691 Days $T_0=132.557850$ (BKJD)



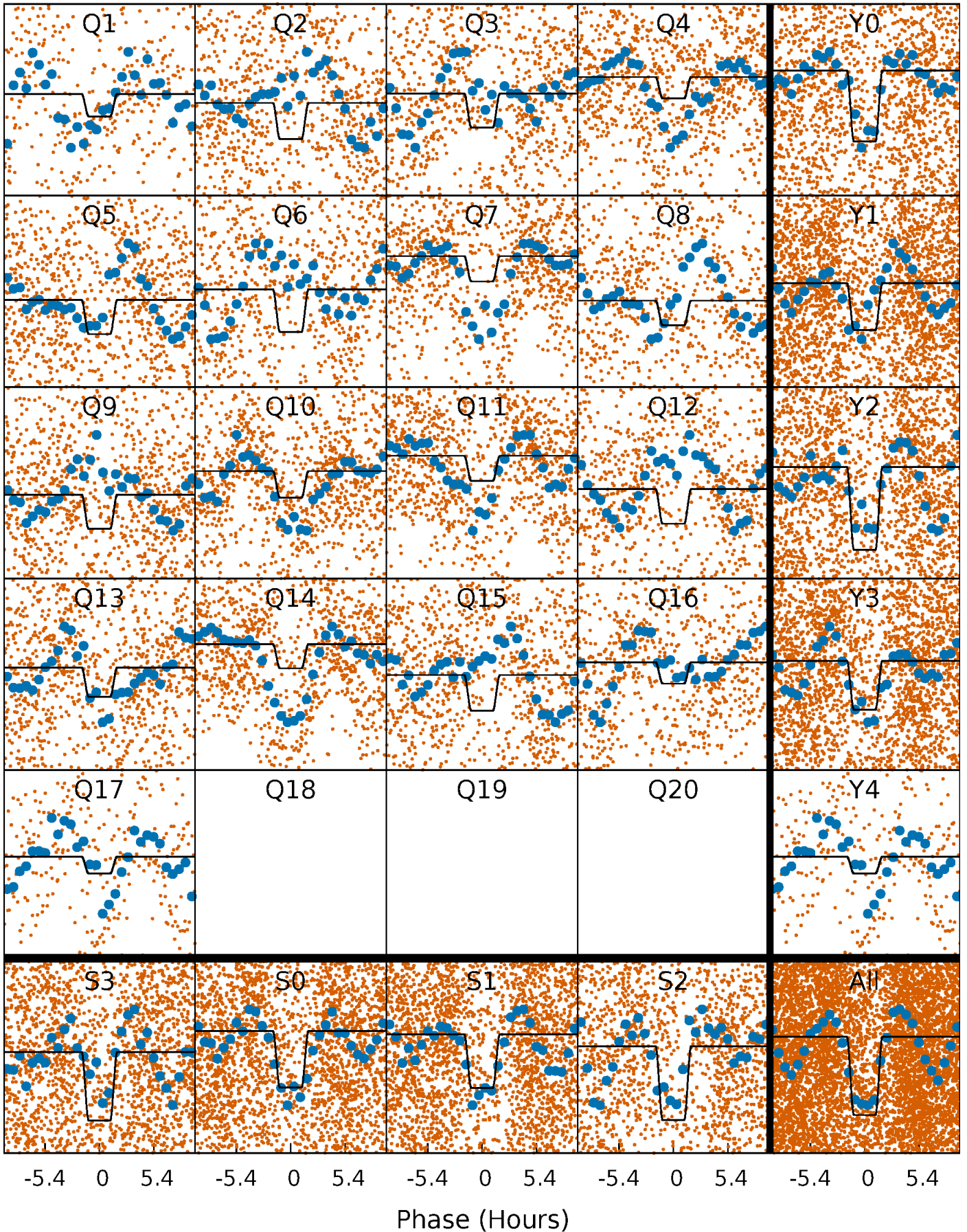
DV Quarter-Phased Transit Curves

TCE 007499407-03 P= 1.771691 Days $T_0=132.557850$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

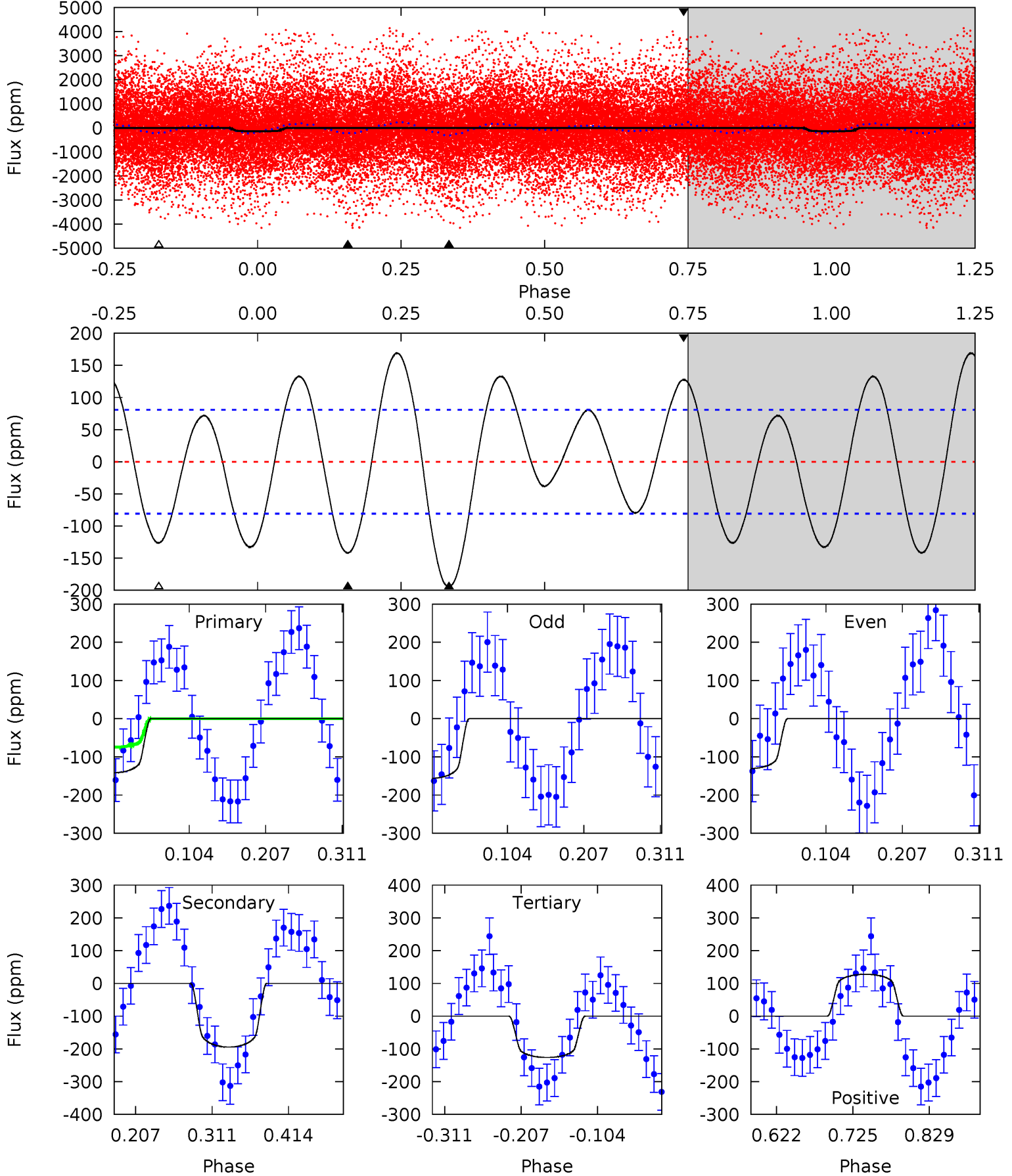
TCE 007499407-03 P= 1.771690 Days $T_0=132.541395$ (BKJD)



DV Model-Shift Uniqueness Test

007499407-03, P = 1.771691 Days, E = 130.786159 Days

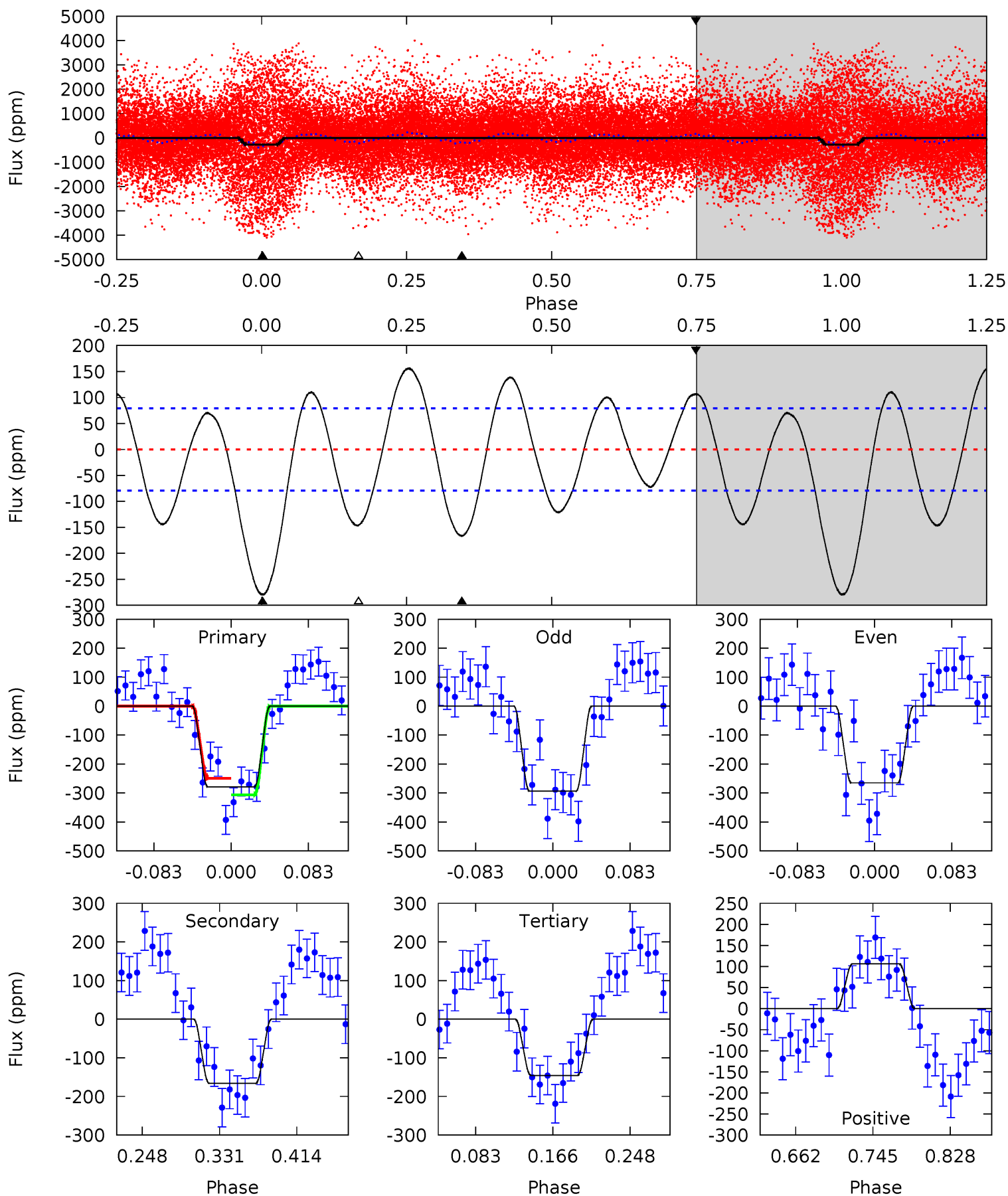
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.00	11.0	7.12	7.20	4.56	1.63	4.07	0.88	0.79	3.85	3.77	0.73	1.04	0.47	3.78



Alt Model-Shift Uniqueness Test

007499407-03, P = 1.771690 Days, E = 130.769705 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.2	9.66	8.46	6.18	4.60	1.73	5.00	7.77	10.0	1.19	3.47	0.84	1.05	0.36	1.68



Stellar Parameters For KIC 007499407

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7286^{+232}_{-319}	$4.218^{+0.105}_{-0.195}$	$-0.160^{+0.250}_{-0.350}$	$1.542^{+0.508}_{-0.274}$	$1.434^{+0.219}_{-0.219}$	$0.551^{+0.288}_{-0.302}$
	+3%/-4%	+2%/-5%	+156%/-219%	+33%/-18%	+15%/-15%	+52%/-55%
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 007499407-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-194 ± 18	$2.00^{+0.49}_{-0.37}$	3143^{+256}_{-200}	8034^{+1128}_{-821}	27^{+14}_{-9}
Alt.	-166 ± 17	$3.32^{+0.64}_{-0.47}$	3118^{+246}_{-181}	5826^{+369}_{-383}	$8.554^{+3.181}_{-2.449}$

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 $A_{obs} \gg 1.0$

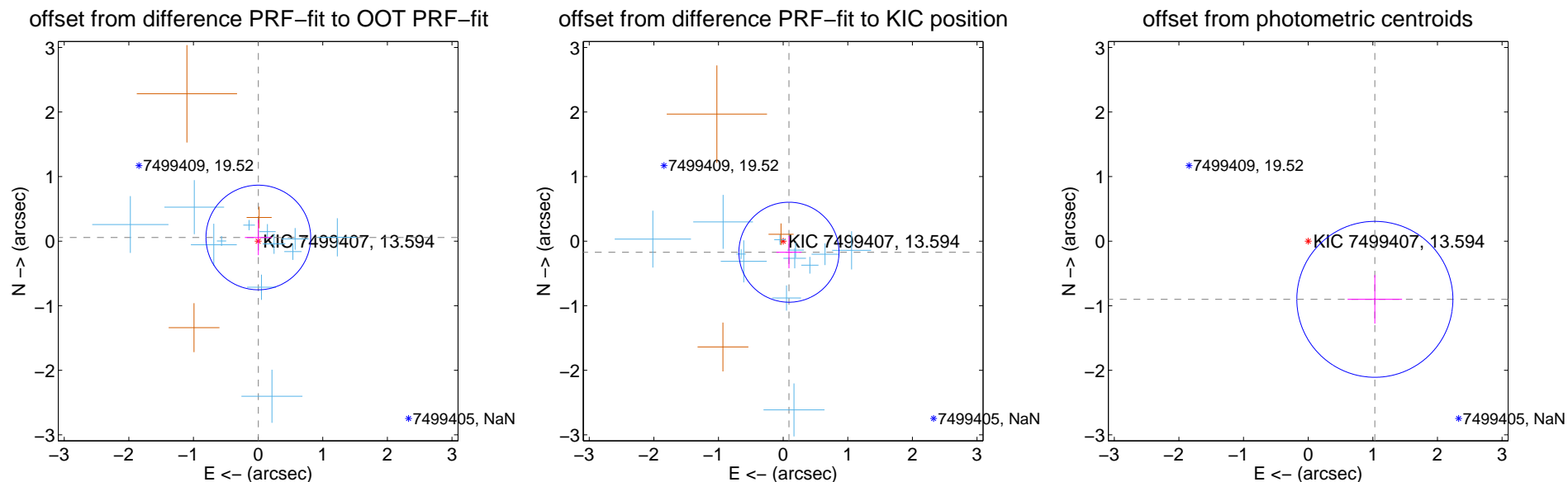
DV Centroid Data

Supplemental centroid analysis for 007499407-03. Kepler magnitude: 13.59. Transit SNR 7.59

There are 12 quarters with good PRF difference image offsets

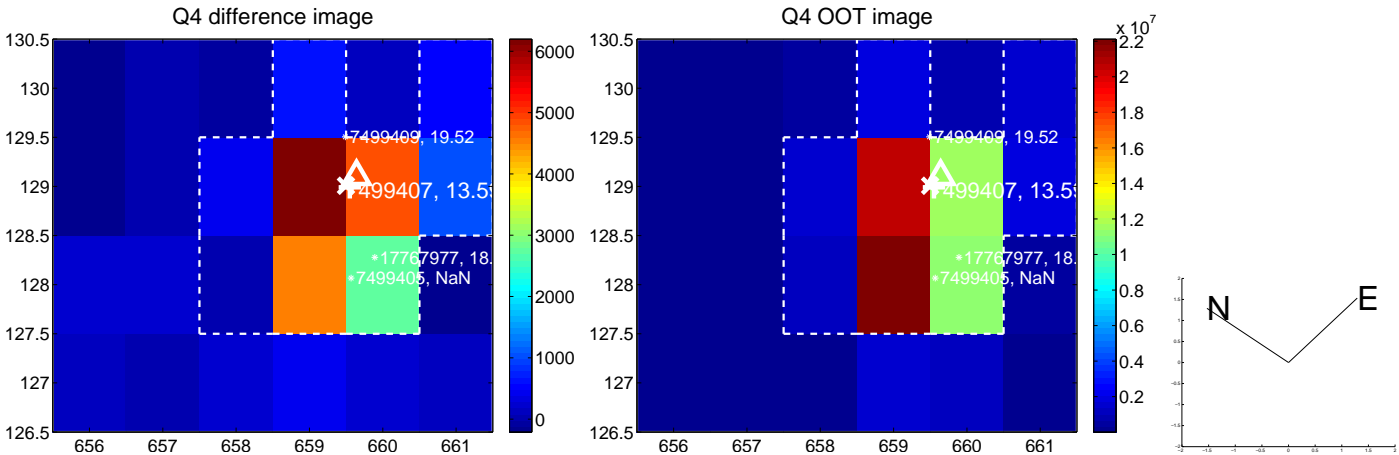
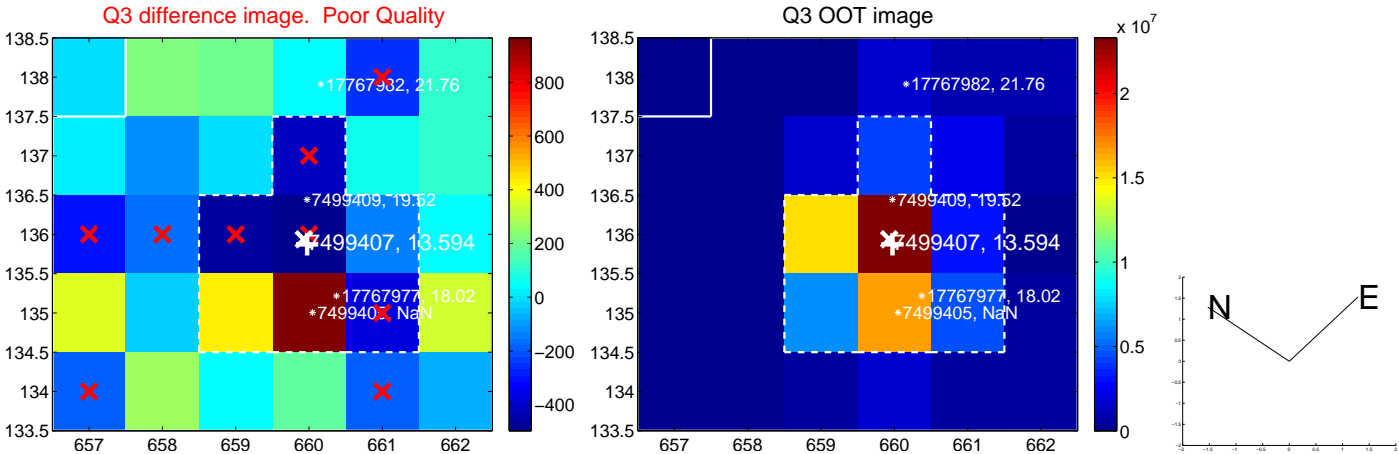
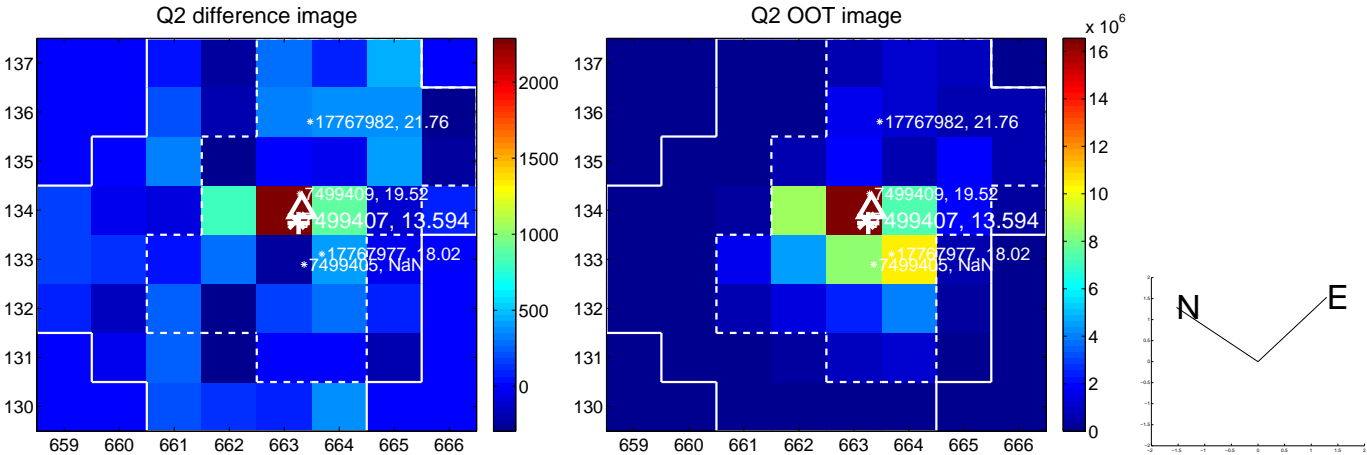
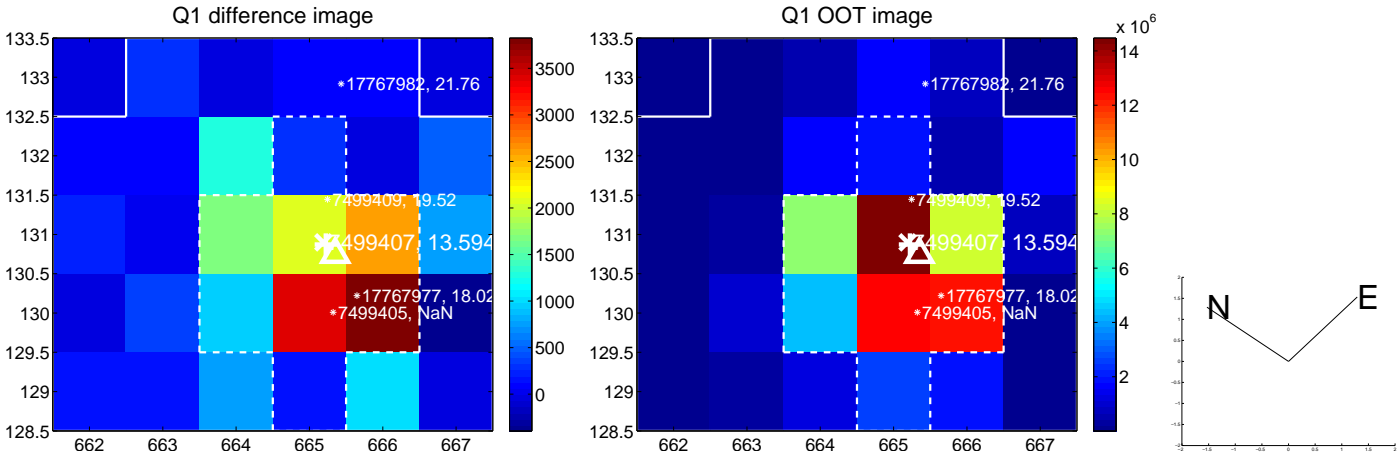
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.057 ± 0.270	0.21	-0.004 ± 0.208	0.057 ± 0.274
PRF-fit source offset from KIC position	0.194 ± 0.258	0.75	-0.090 ± 0.195	-0.172 ± 0.250
photometric centroid source offset	1.37 ± 0.40	3.40	-1.03 ± 0.42	-0.90 ± 0.38

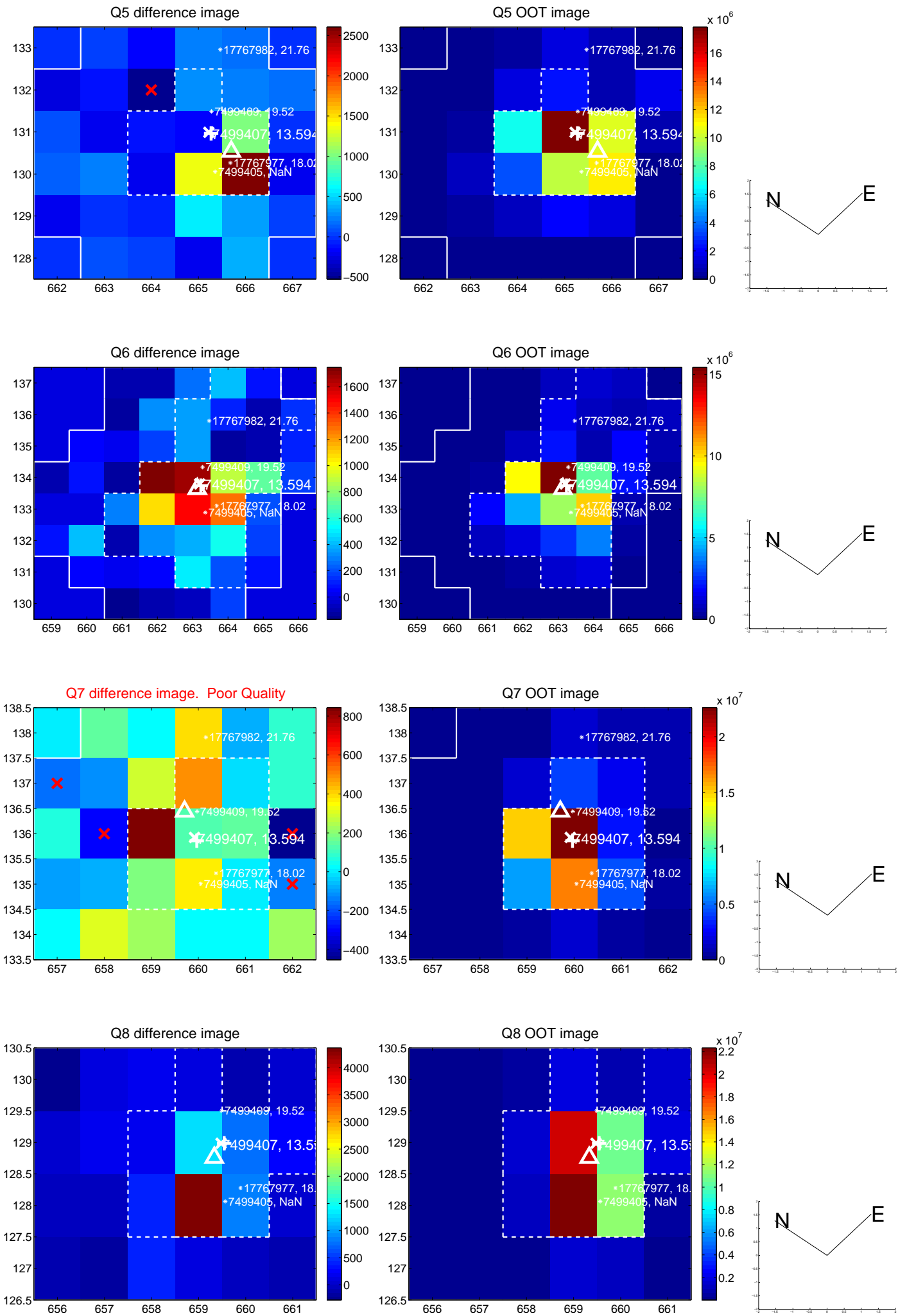


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

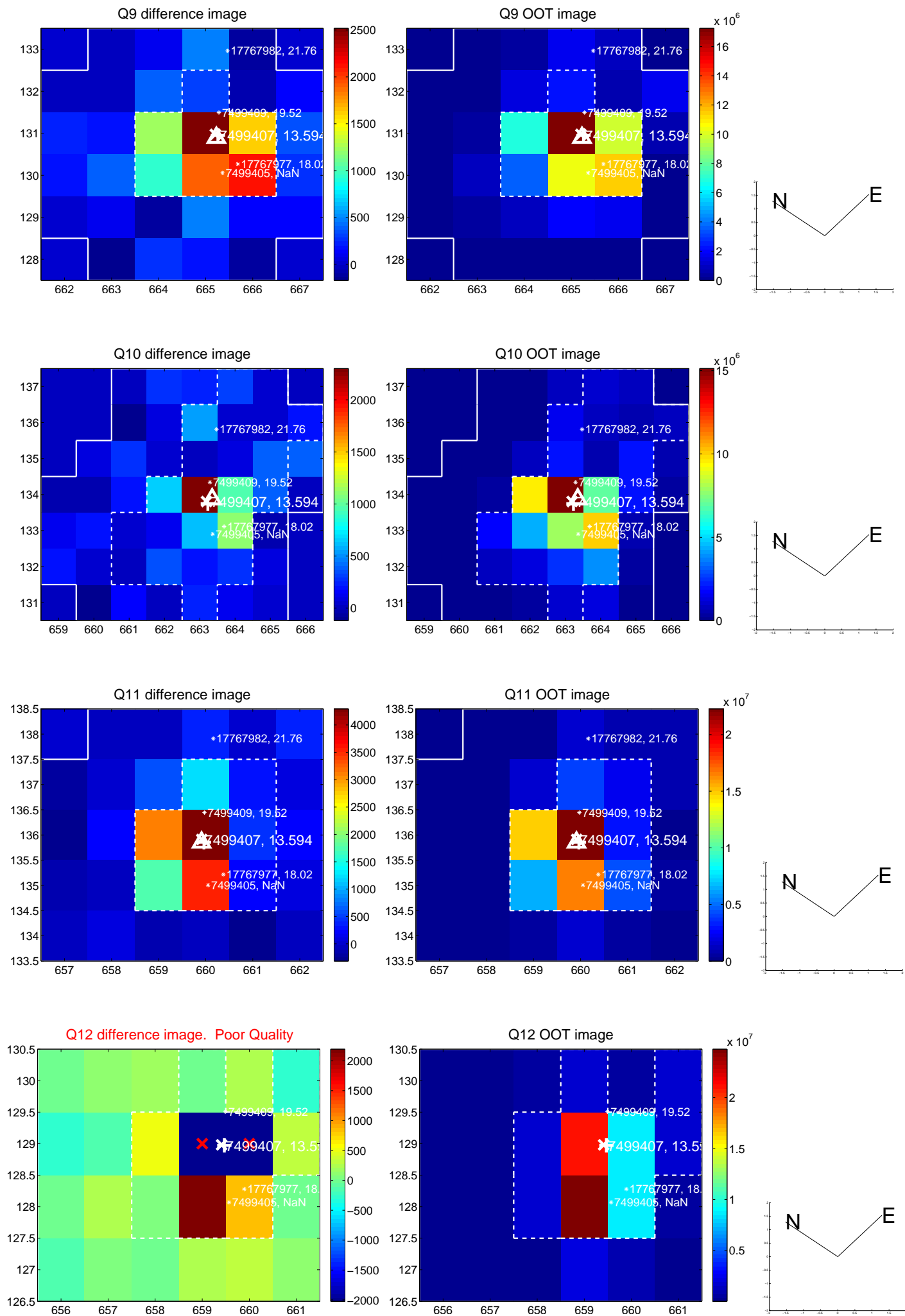
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



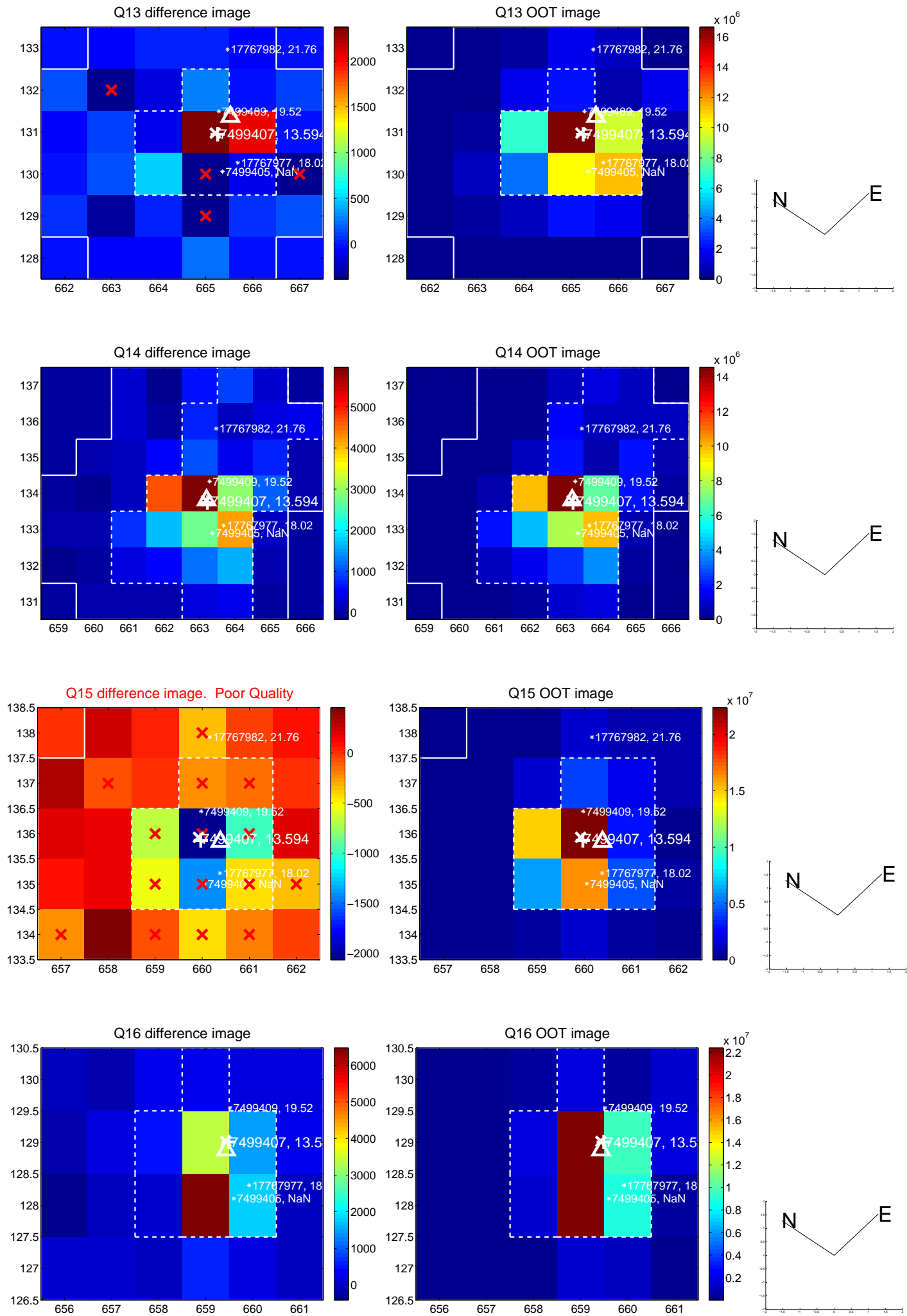
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



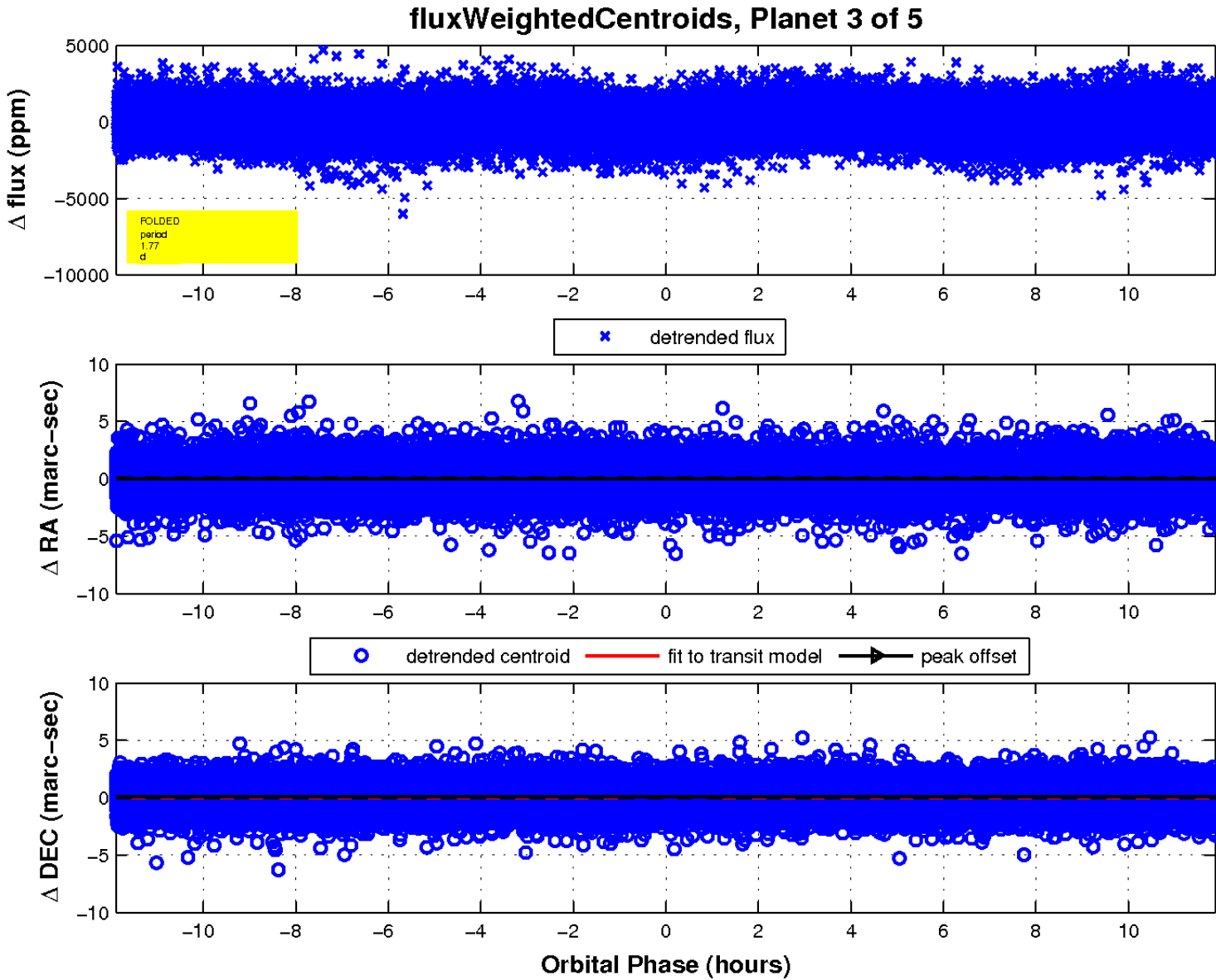
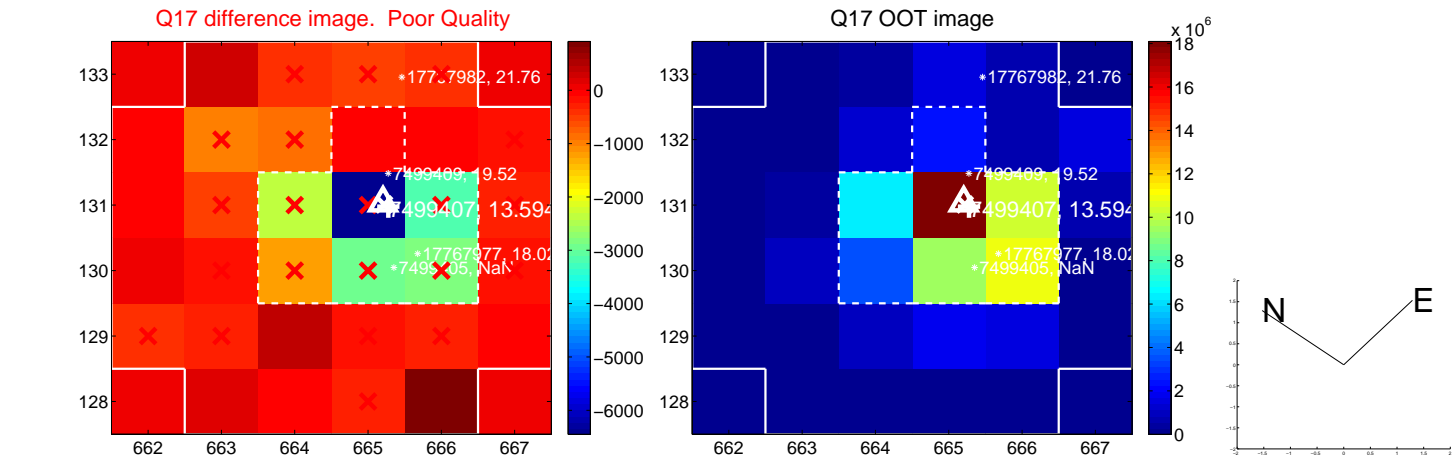
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

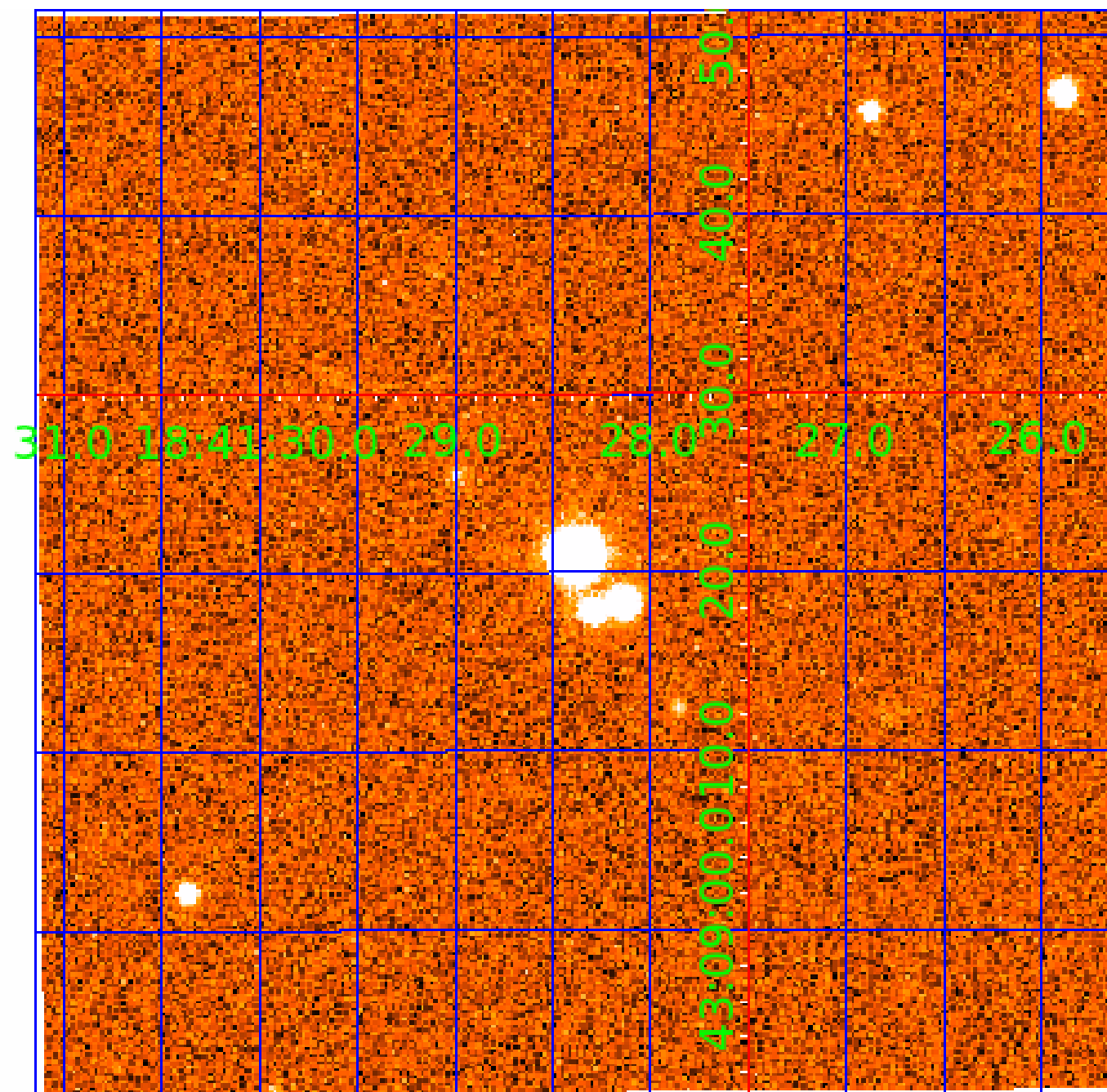


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007499407

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})
007499407-01	OBS	No	2.248867	131.538239	157.4	7.500	11.4	-1.0	1.54	7286	1.96	4184.29
007499407-02	OBS	No	374.075196	242.783080	973.1	18.019	14.8	7.9	1.54	7286	5.75	4.57
007499407-03	OBS	No	1.771691	132.557850	118.6	3.962	8.7	7.6	1.54	7286	1.96	5750.73
007499407-04	OBS	No	0.885804	132.277390	85.1	4.499	9.2	6.6	1.54	7286	1.47	14491.84
007499407-05	OBS	No	39.576382	138.226145	1374.6	5.646	7.6	6.8	1.54	7286	10.53	91.41

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007499407-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
007499407-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007499407-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
007499407-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
007499407-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT

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

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

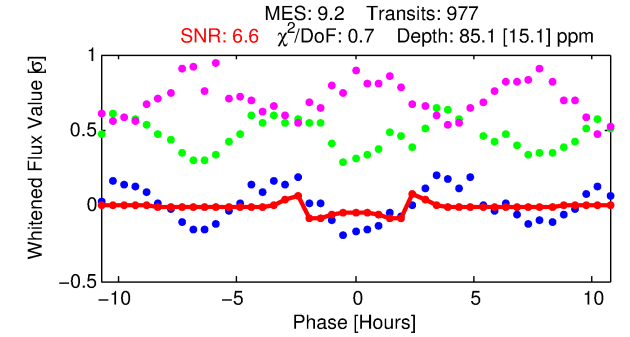
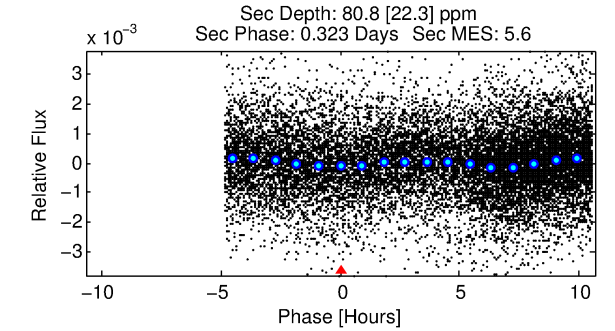
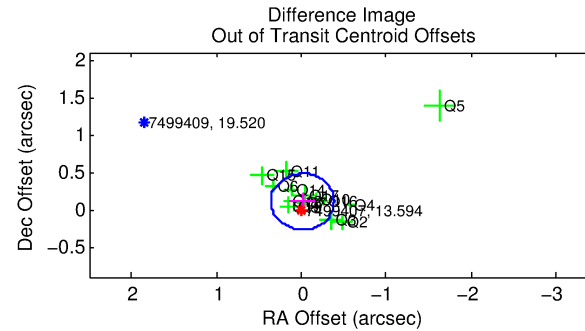
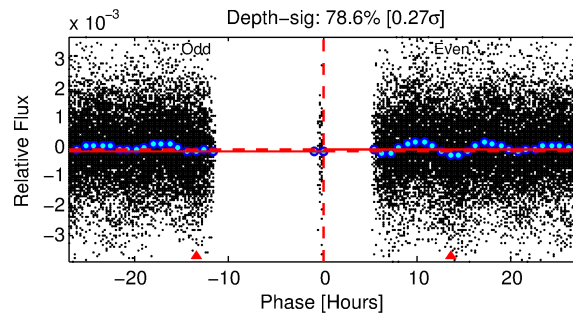
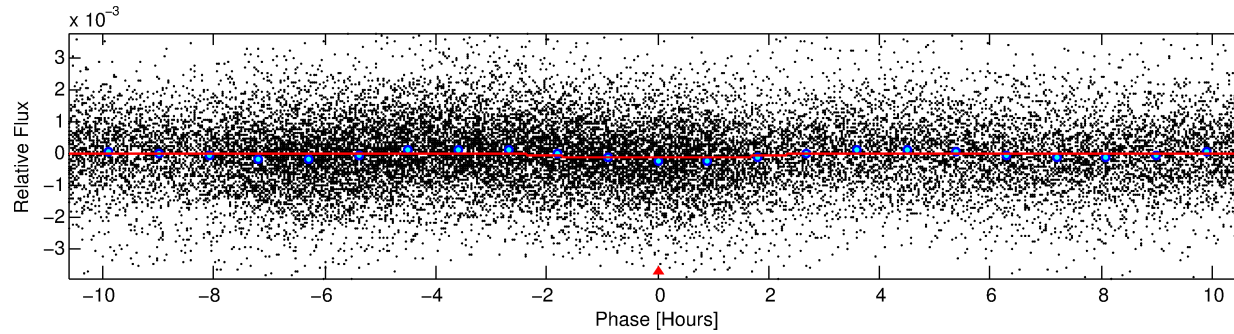
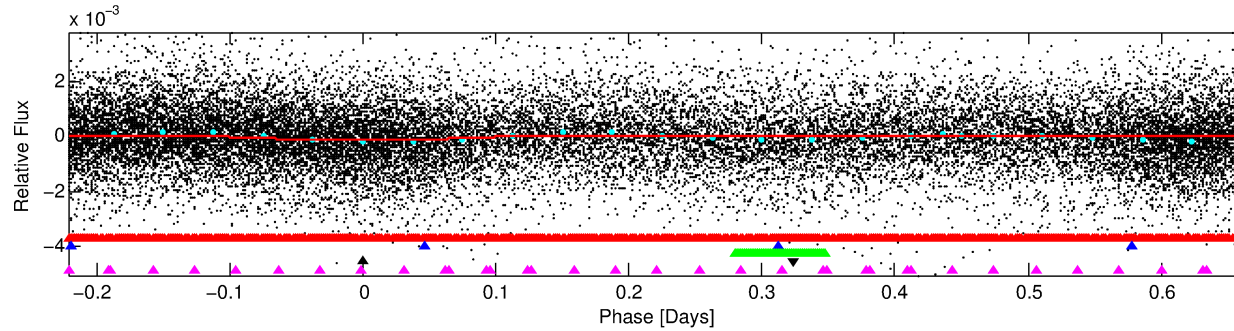
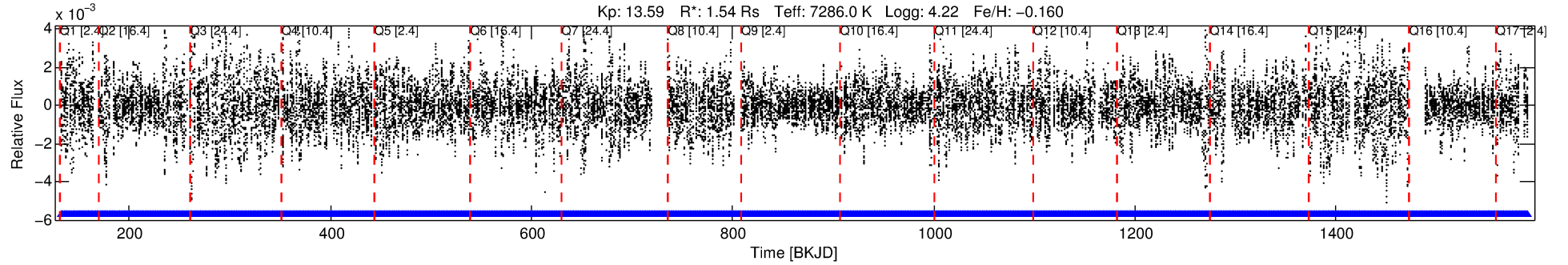
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007499407-04

No Significant Match Found

DV One-Page Summary

KIC: 7499407 Candidate: 4 of 5 Period: 0.886 d



DV Fit Results:

Period = 0.88580 [0.00001] d
Epoch = 132.2774 [0.0025] BKJD
Rp/R* = 0.0087 [0.0038]
a/R* = 1.54 [2.31]
b = 0.43 [4.95]
Seff = 14491.84 [5948.88]
Teq = 2798 [287] K
Rp = 1.47 [0.79] Re
a = 0.0204 [0.0054] AU
Ag = 8.56 [8.37] [0.90 σ]
Teffp = 7400 [1703] K [2.66 σ]

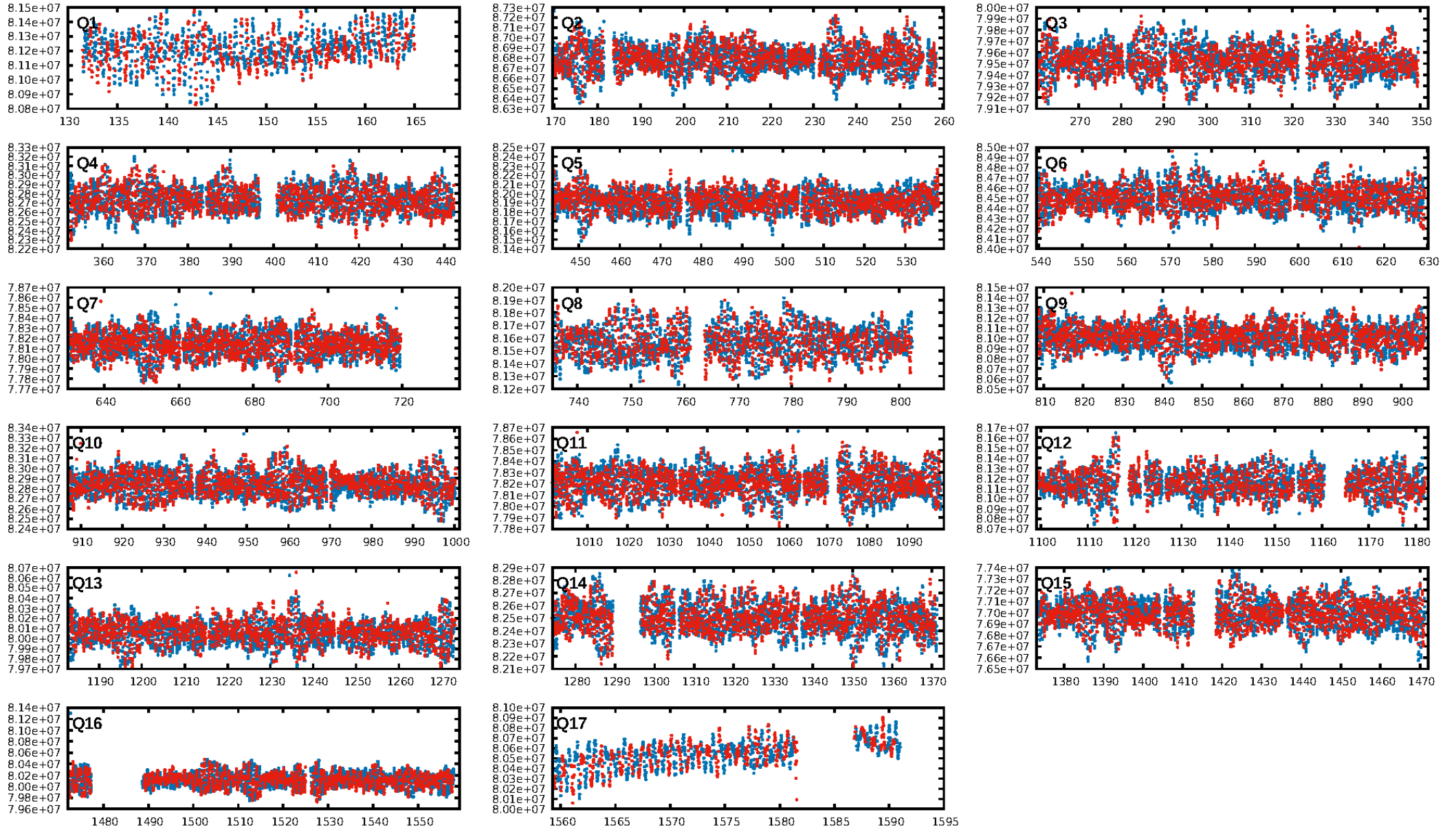
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [3.55 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.53e-17
RollingBand-fgt: 1.00 [932/932]
GhostDiagnostic-chr: 0.7439
Centroid-sig: 89.1%
Centroid-so: 1.173 arcsec [3.14 σ]
OotOffset-rm: 0.107 arcsec [0.86 σ]
KicOffset-rm: 0.137 arcsec [1.32 σ]
OotOffset-st: 4/4/3/4 [15]
KicOffset-st: 4/4/3/4 [15]
DiffImageQuality-fgm: 0.60 [9/15]
DiffImageOverlap-fno: 1.00 [17/17]

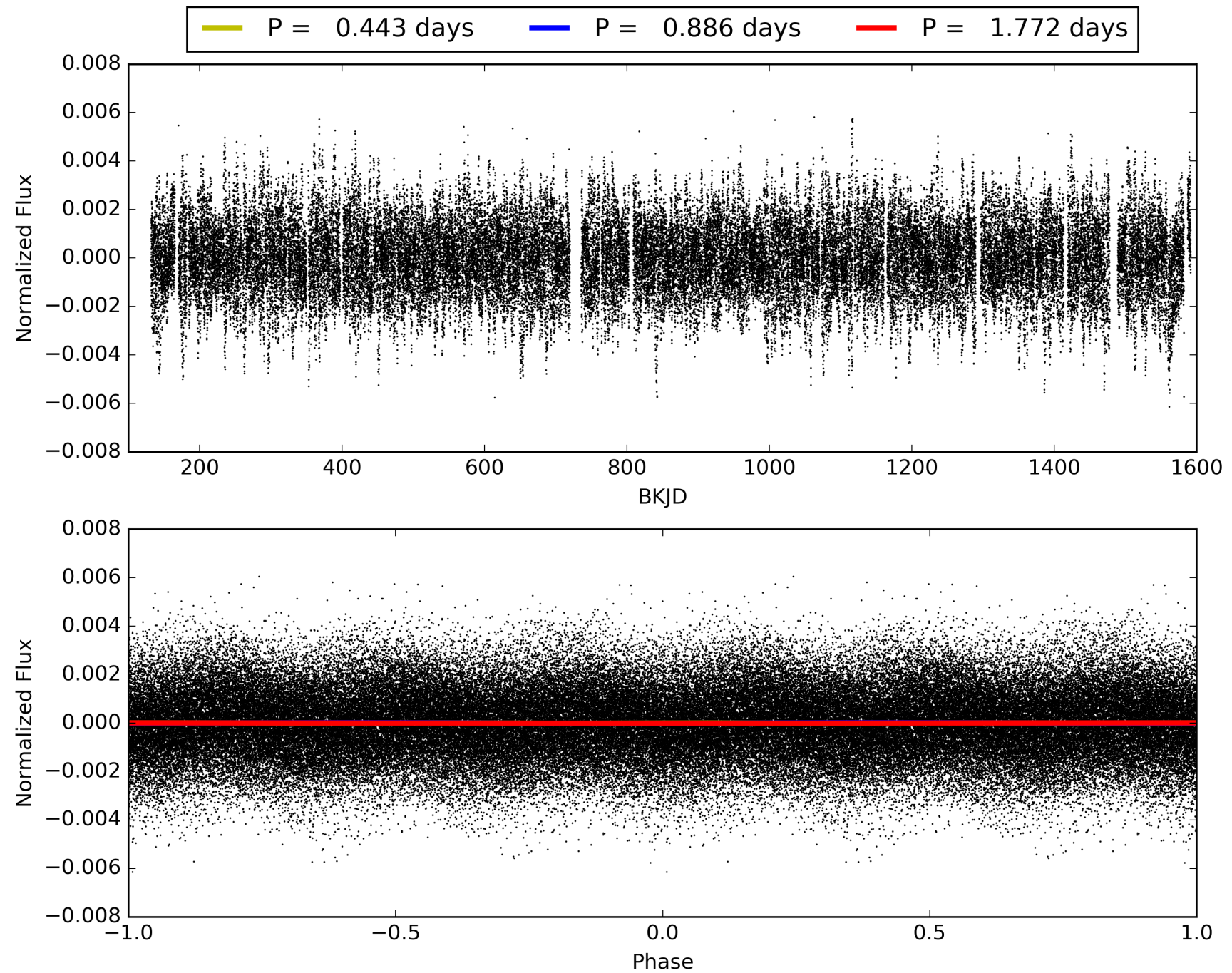
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 09:35:02 Z

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

TCE 007499407-04, PDC Light Curves

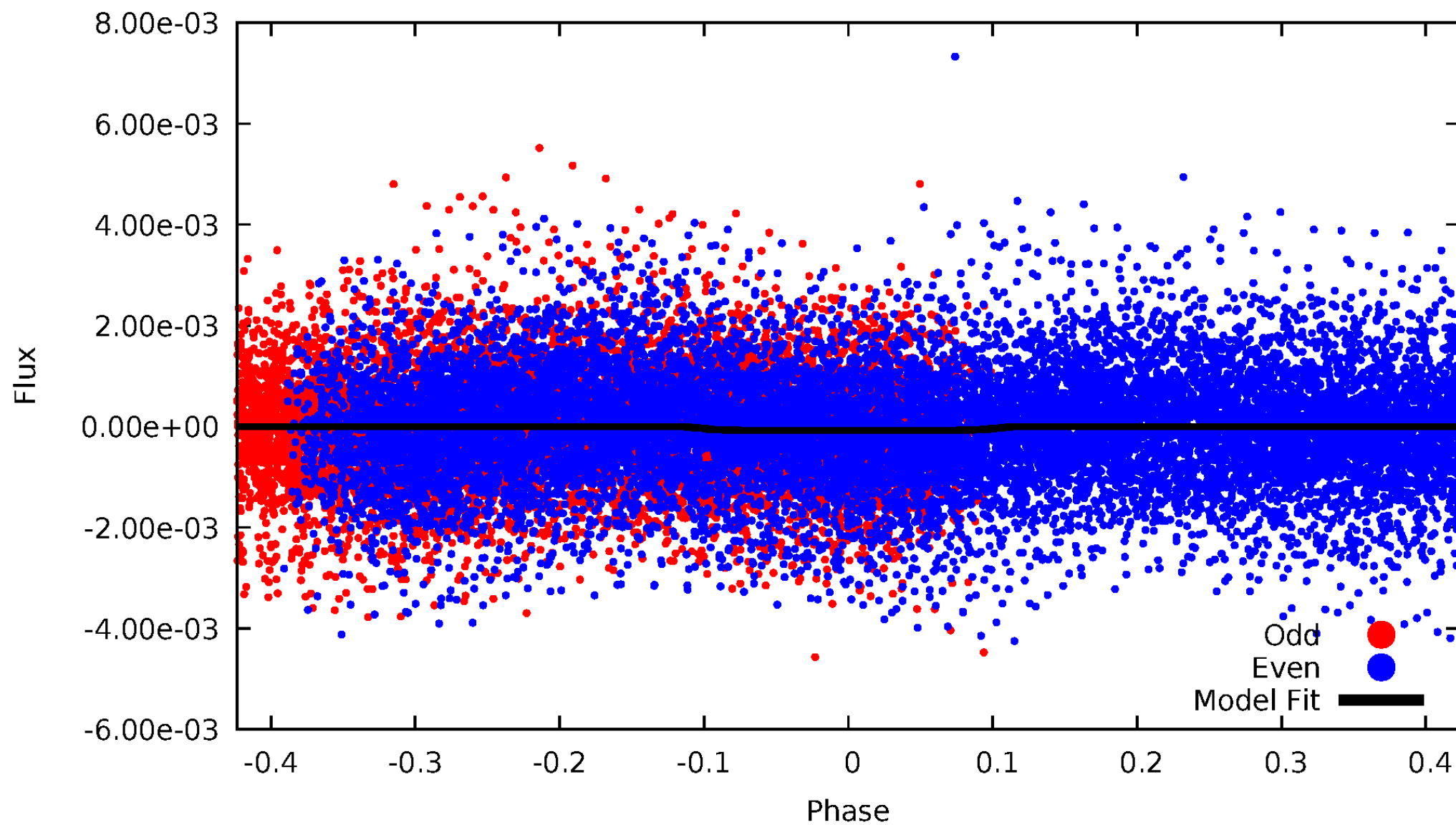


TCE 007499407-04



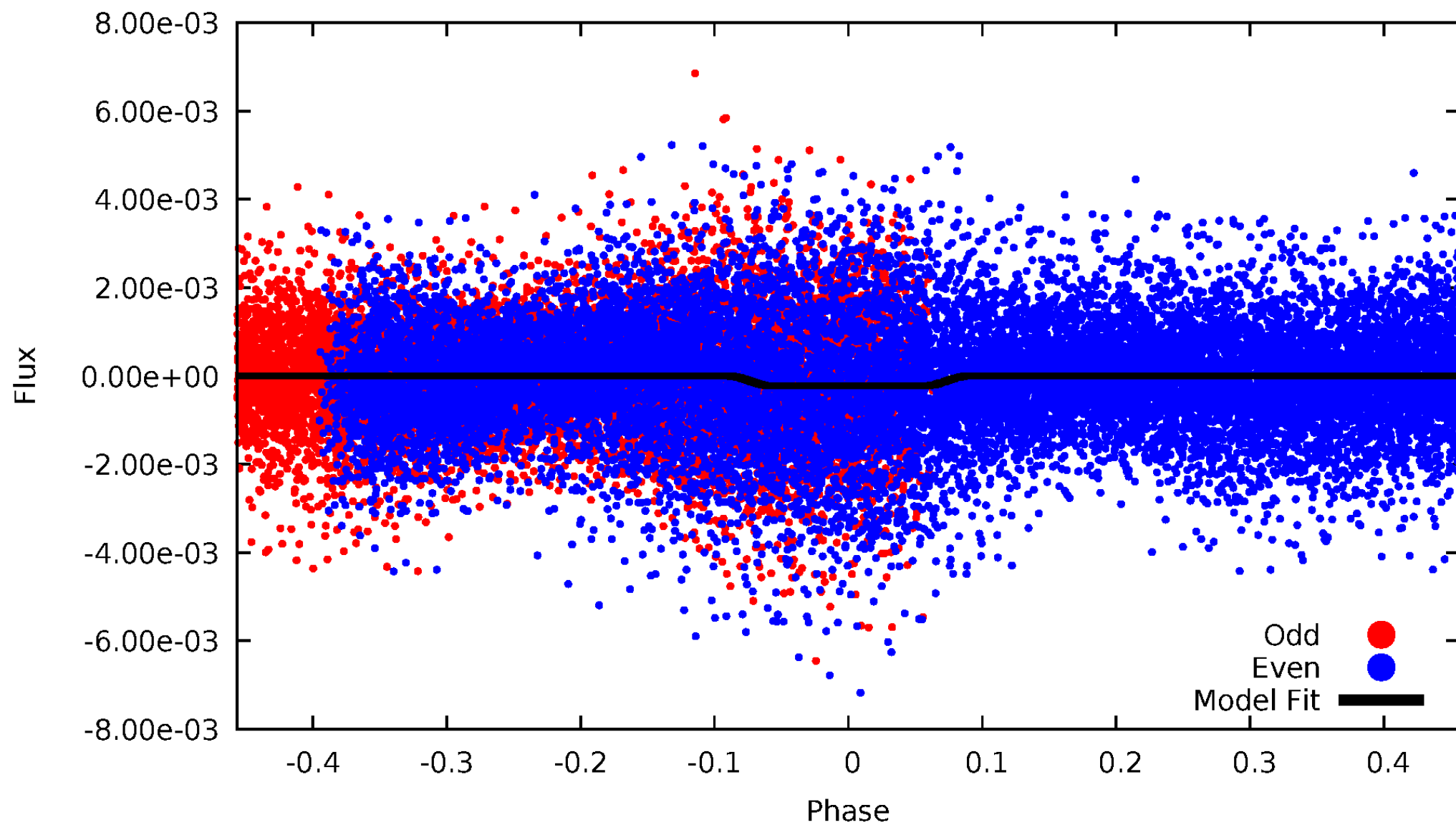
DV Odd/Even

TCE 007499407-04



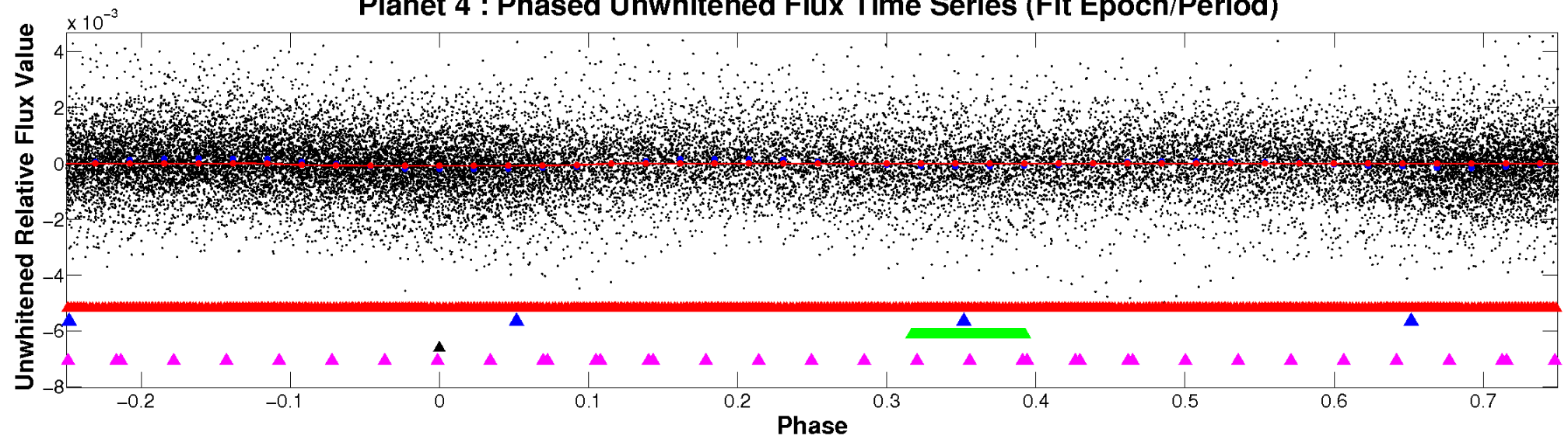
ALT Odd/Even

TCE 007499407-04

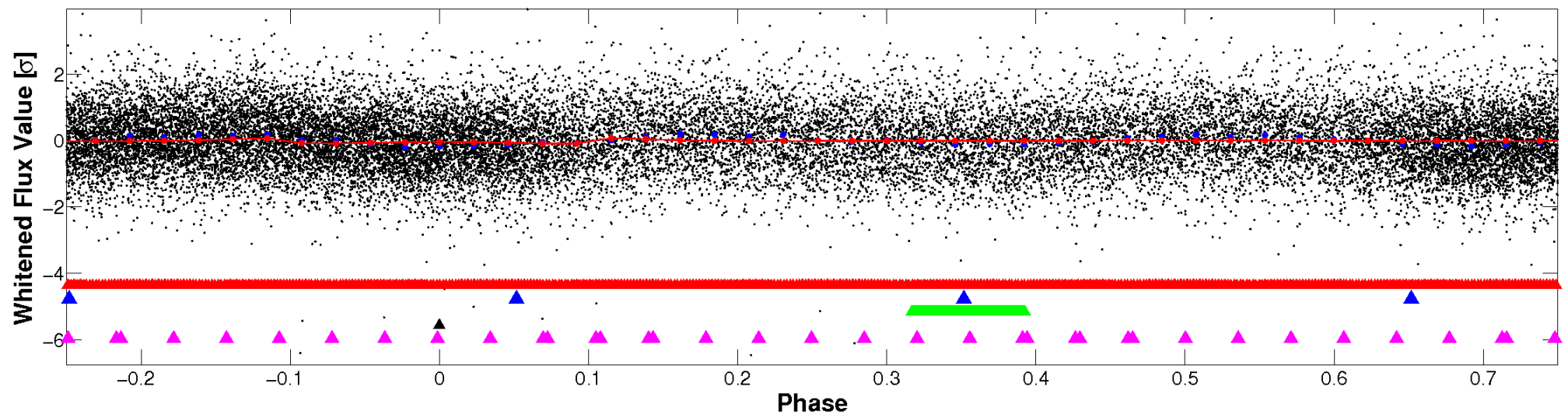


Non-Whitened Vs. Whitened Light Curve

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

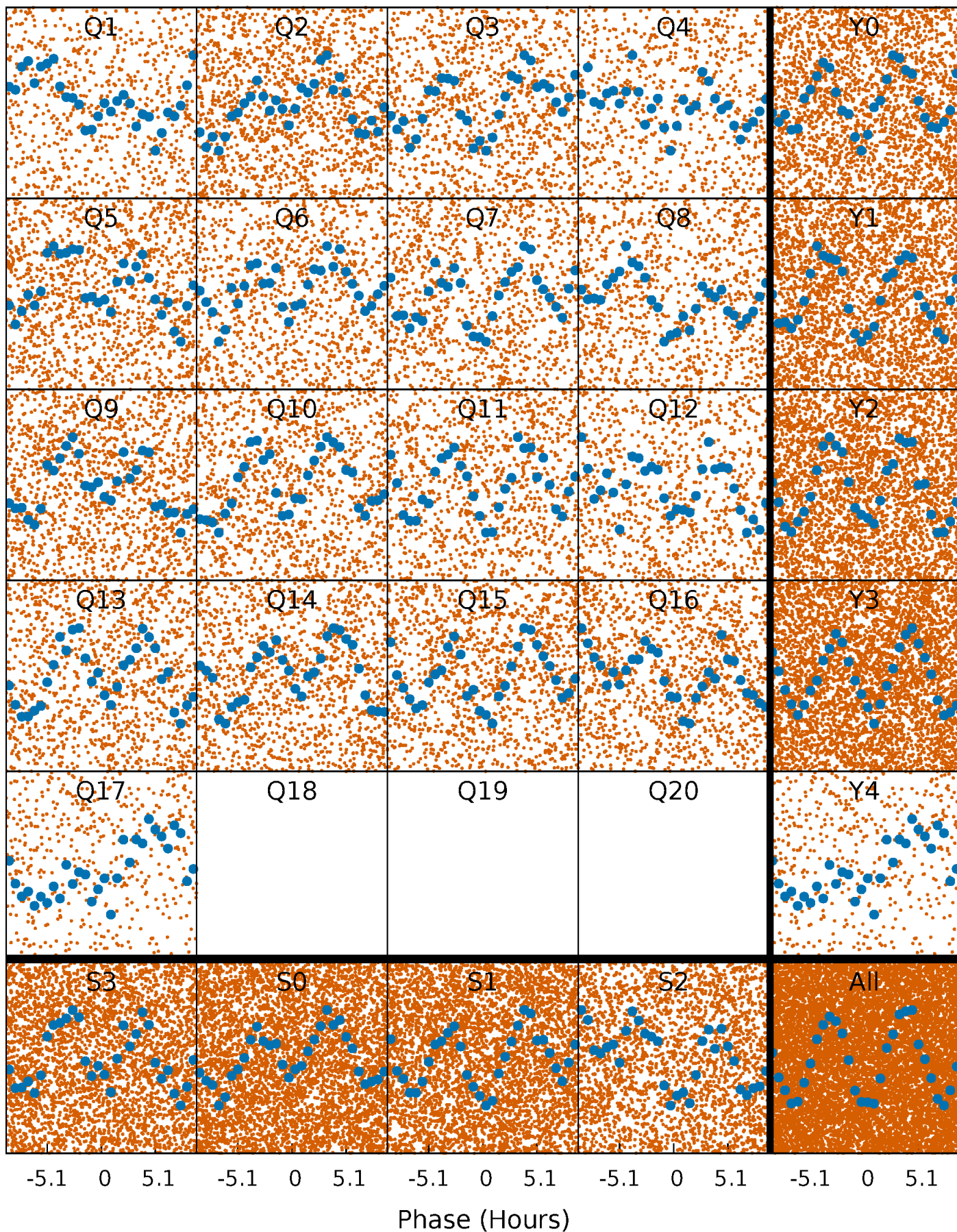


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



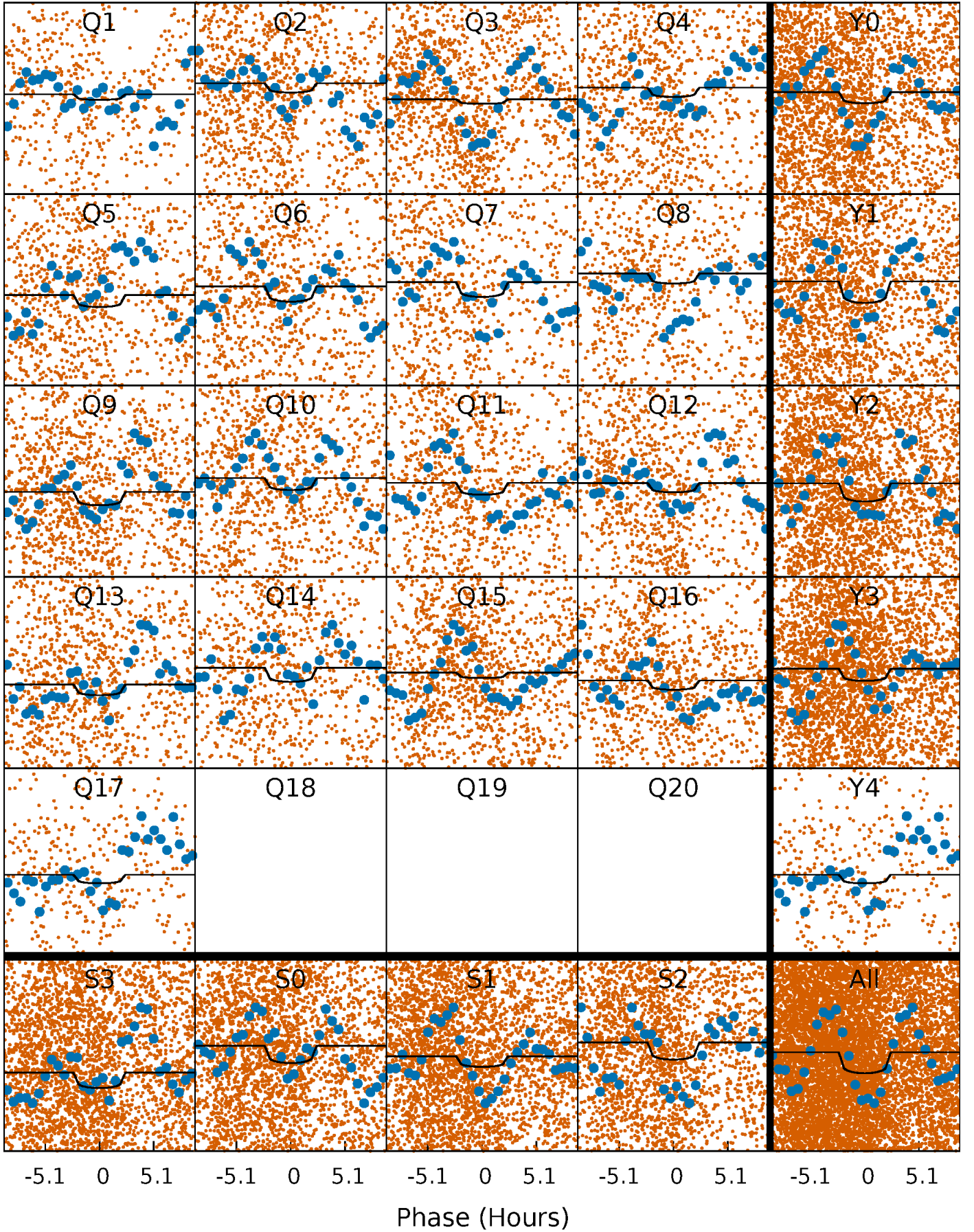
PDC Quarter-Phased Transit Curves

TCE 007499407-04 P= 0.885804 Days $T_0=132.277390$ (BKJD)



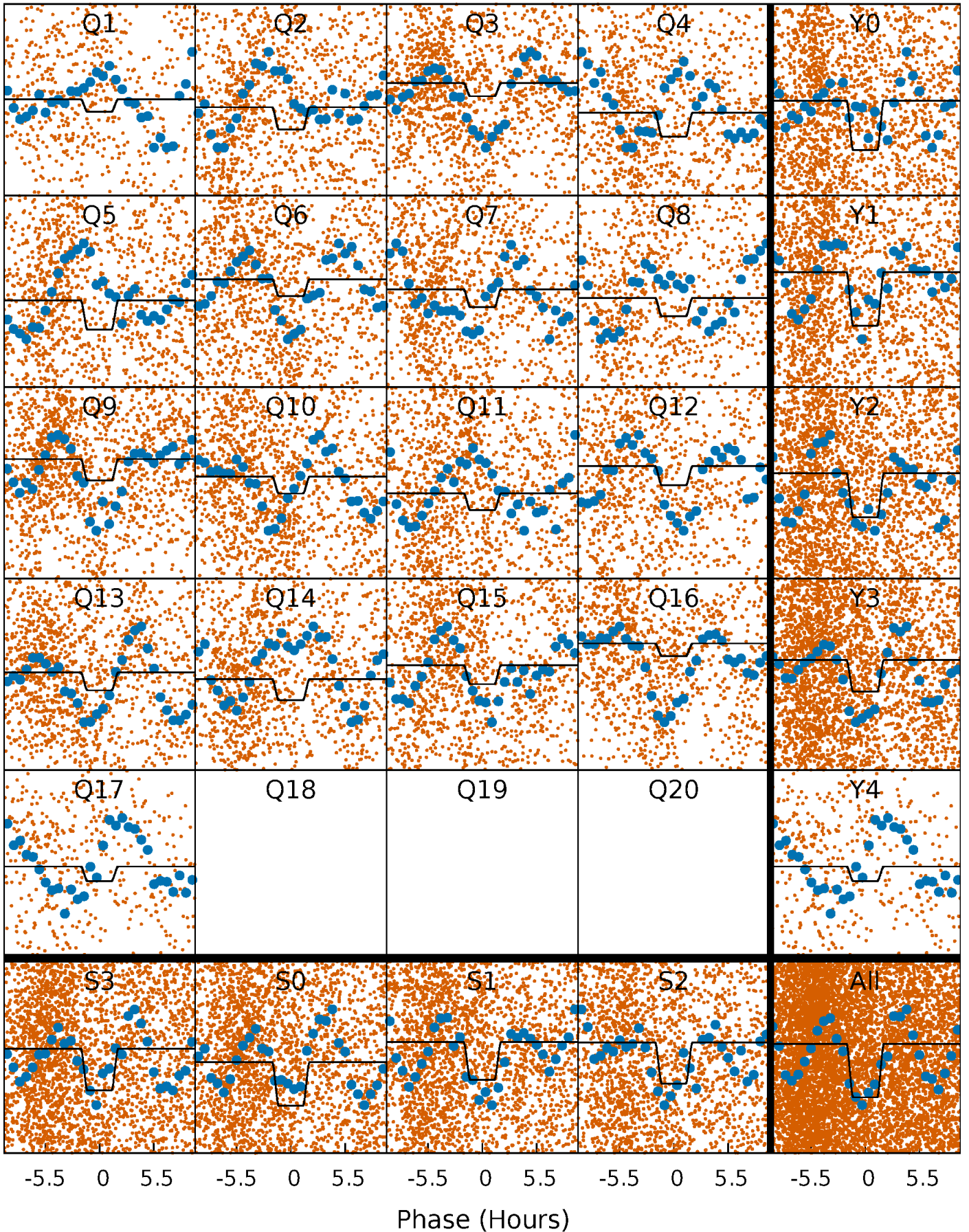
DV Quarter-Phased Transit Curves

TCE 007499407-04 $P = 0.885804$ Days $T_0 = 132.277390$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

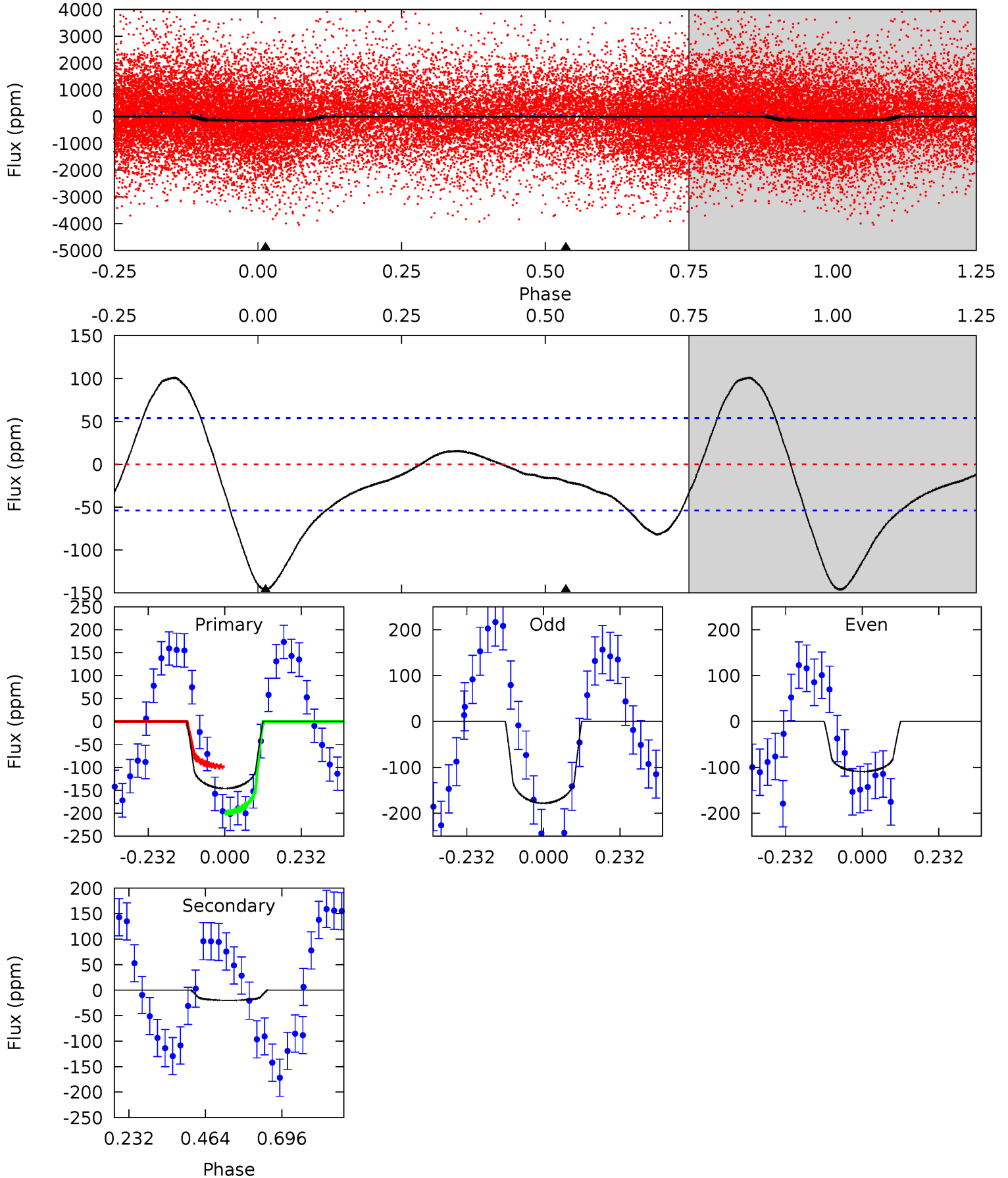
TCE 007499407-04 P= 0.885869 Days $T_0=132.243557$ (BKJD)



DV Model-Shift Uniqueness Test

007499407-04, P = 0.885804 Days, E = 131.391586 Days

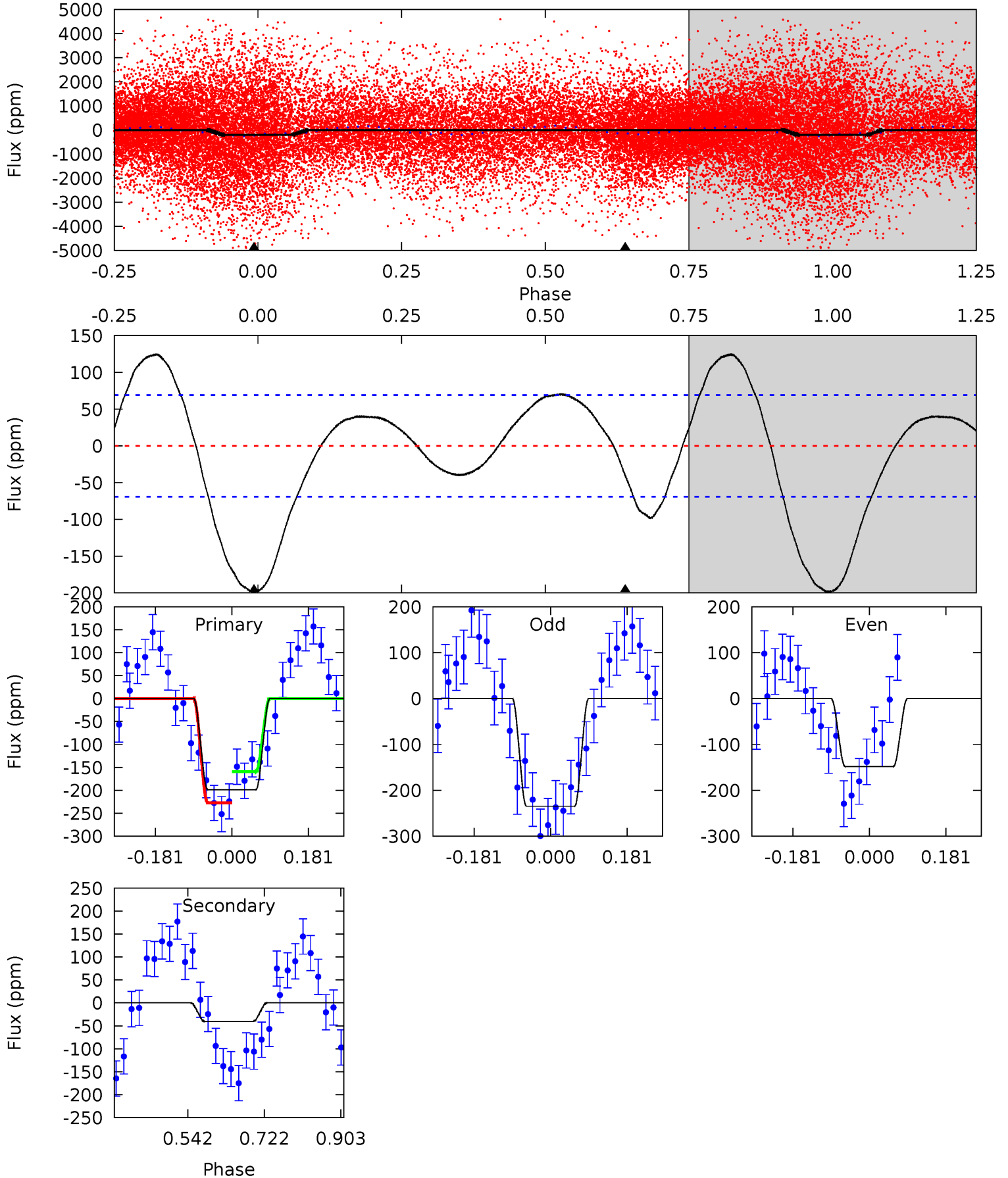
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.9	1.63	0	0	4.38	1.20	1.20	11.9	11.9	1.63	1.63	2.79	1.46	0.41	4.10



Alt Model-Shift Uniqueness Test

007499407-04, P = 0.885869 Days, E = 131.357688 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.8	2.60	0	0	4.44	1.34	1.86	12.8	12.8	2.60	2.60	3.21	1.10	0.38	1.91



Stellar Parameters For KIC 007499407

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7286^{+232}_{-319}	$4.218^{+0.105}_{-0.195}$	$-0.160^{+0.250}_{-0.350}$	$1.542^{+0.508}_{-0.274}$	$1.434^{+0.219}_{-0.219}$	$0.551^{+0.288}_{-0.302}$
	+3%/-4%	+2%/-5%	+156%/-219%	+33%/-18%	+15%/-15%	+52%/-55%
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 007499407-04 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-20 ± 12	$1.54^{+0.71}_{-0.71}$	3974^{+310}_{-273}	4917^{+2035}_{-1294}	$1.822^{+4.721}_{-1.235}$
Alt.	-41 ± 16	$2.62^{+0.77}_{-0.69}$	3960^{+303}_{-258}	4513^{+851}_{-760}	$1.323^{+1.342}_{-0.683}$

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 $A_{obs} \gg 1.0$

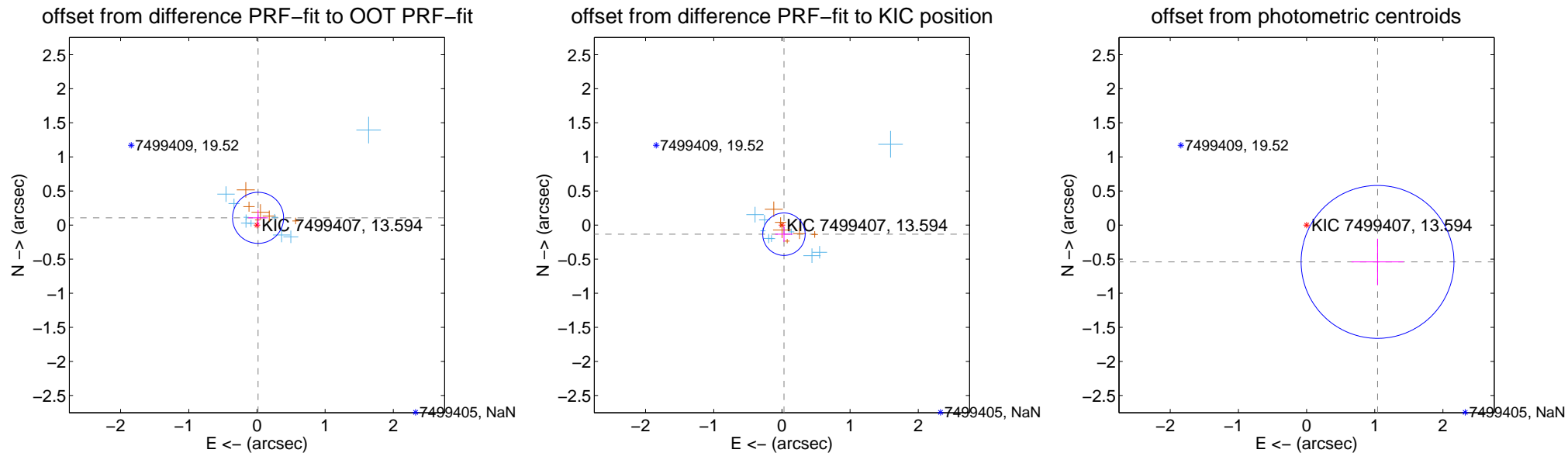
DV Centroid Data

Supplemental centroid analysis for 007499407-04. Kepler magnitude: 13.59. Transit SNR 6.62

There are 9 quarters with good PRF difference image offsets

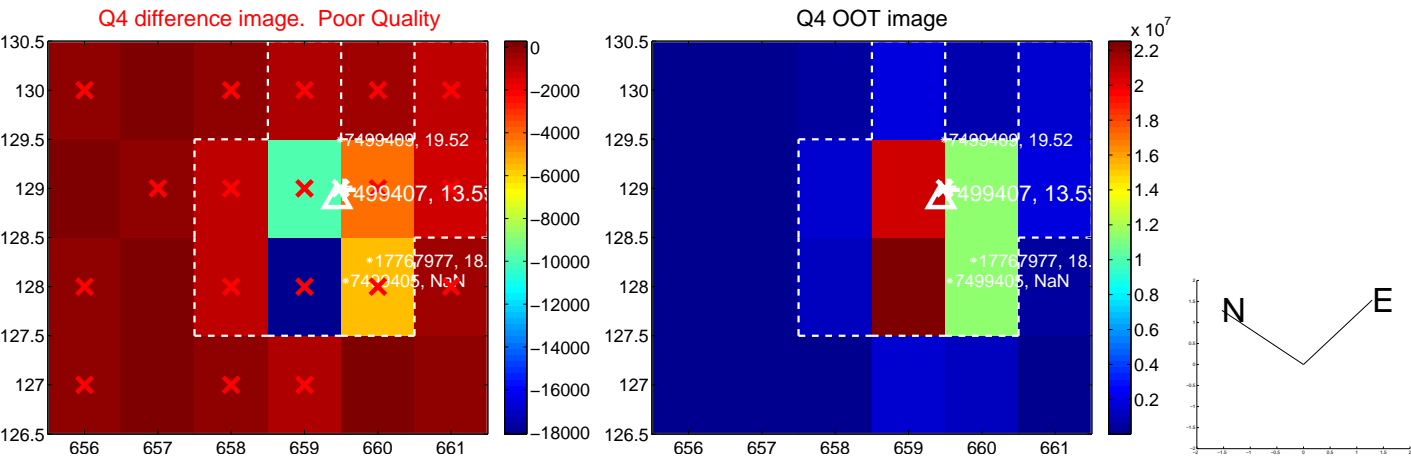
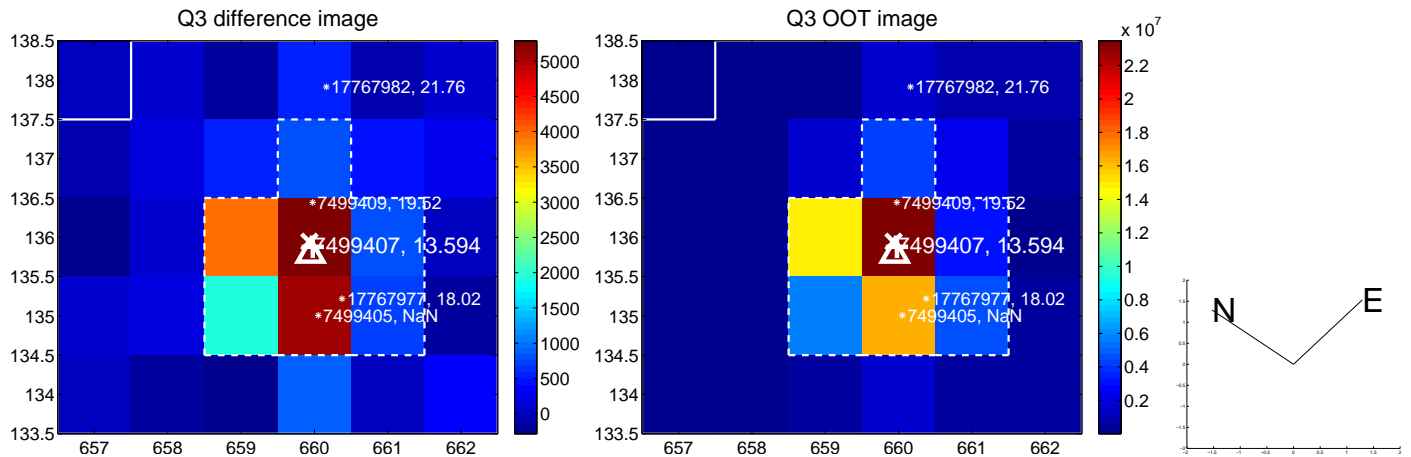
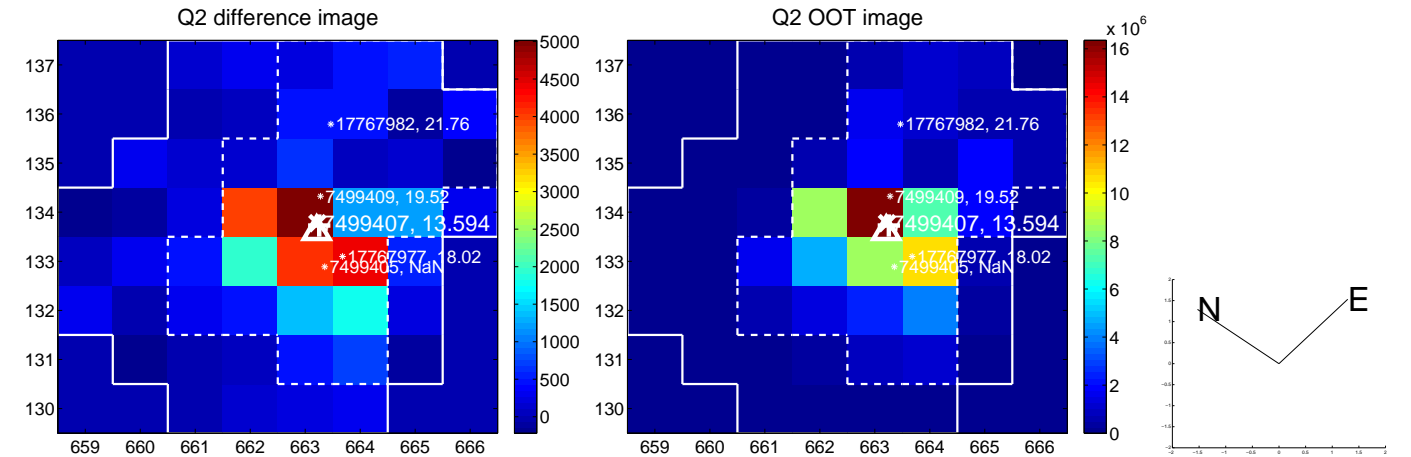
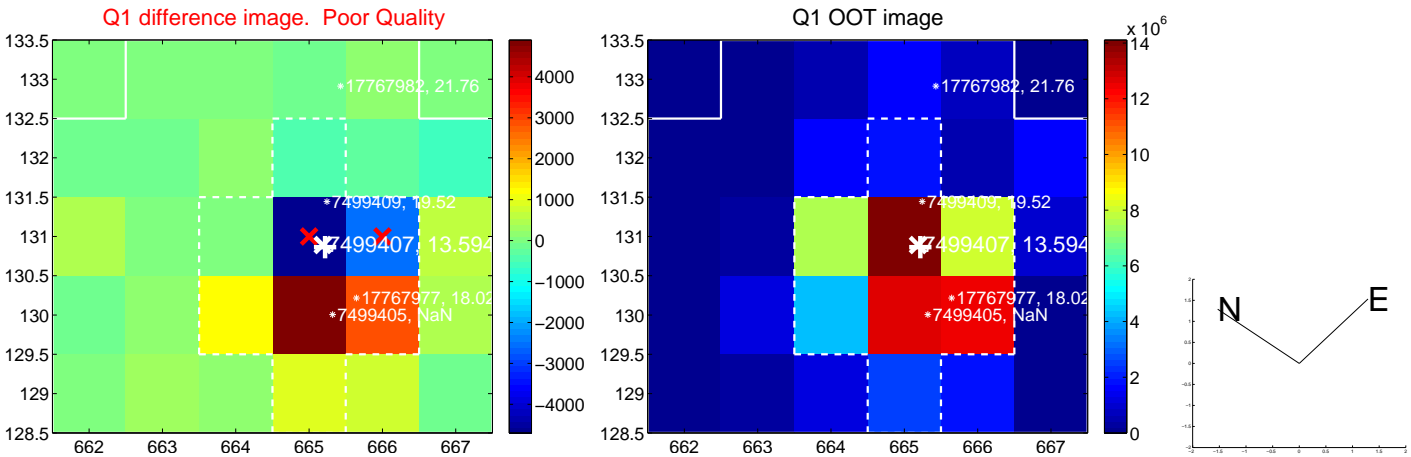
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.107 ± 0.125	0.86	-0.016 ± 0.143	0.106 ± 0.117
PRF-fit source offset from KIC position	0.137 ± 0.104	1.32	-0.030 ± 0.130	-0.134 ± 0.114
photometric centroid source offset	1.17 ± 0.37	3.14	-1.04 ± 0.38	-0.54 ± 0.34

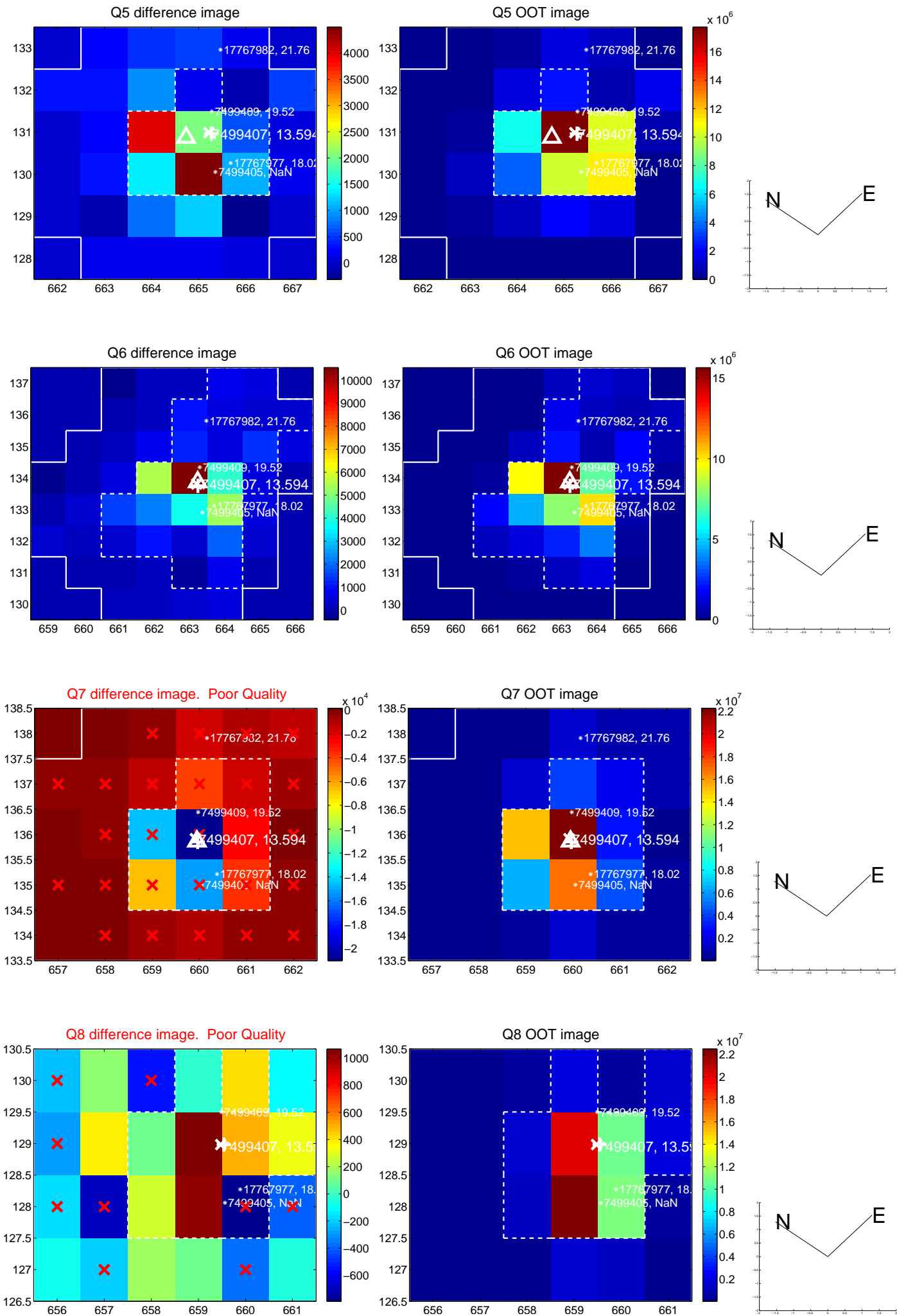


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

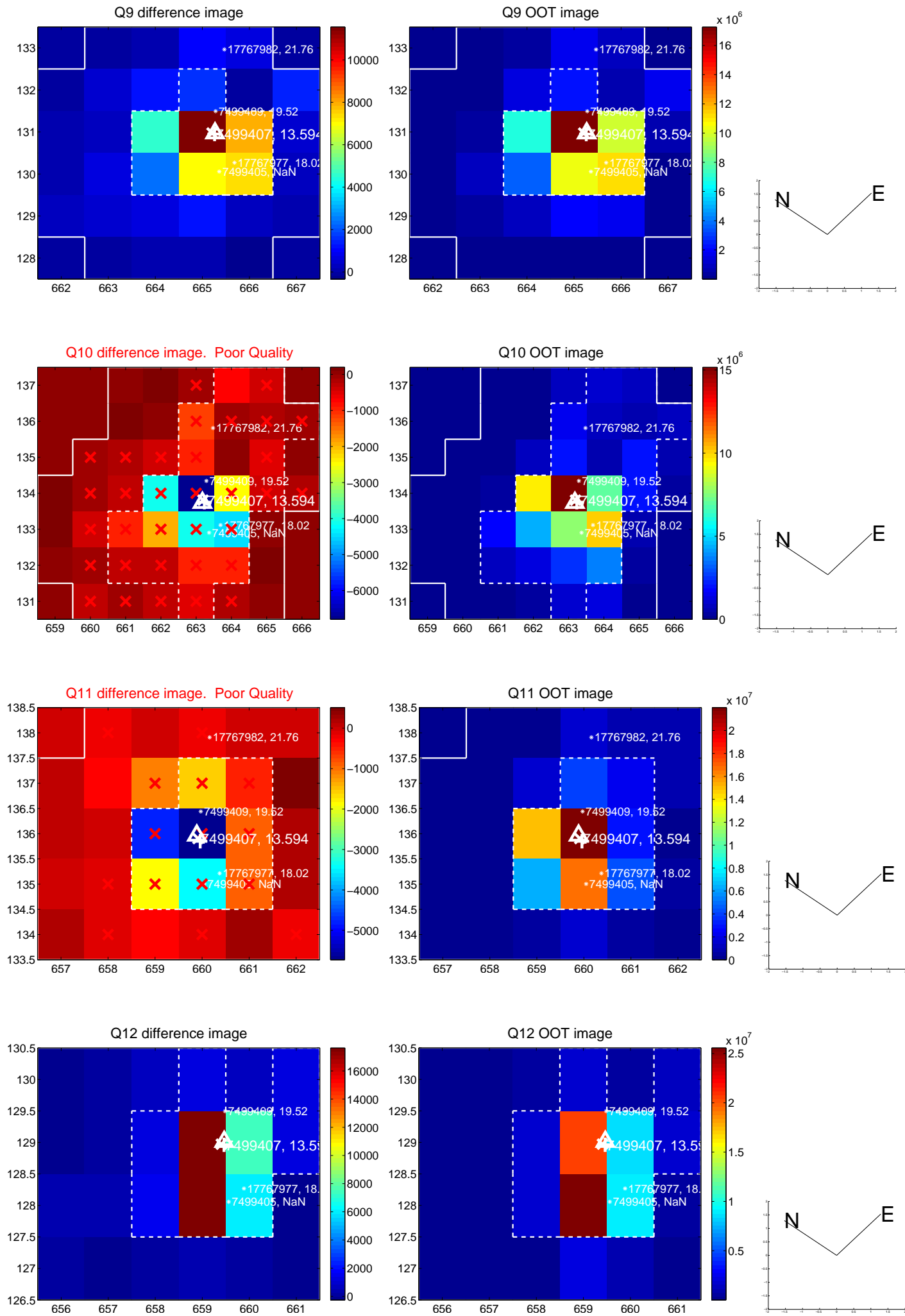
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



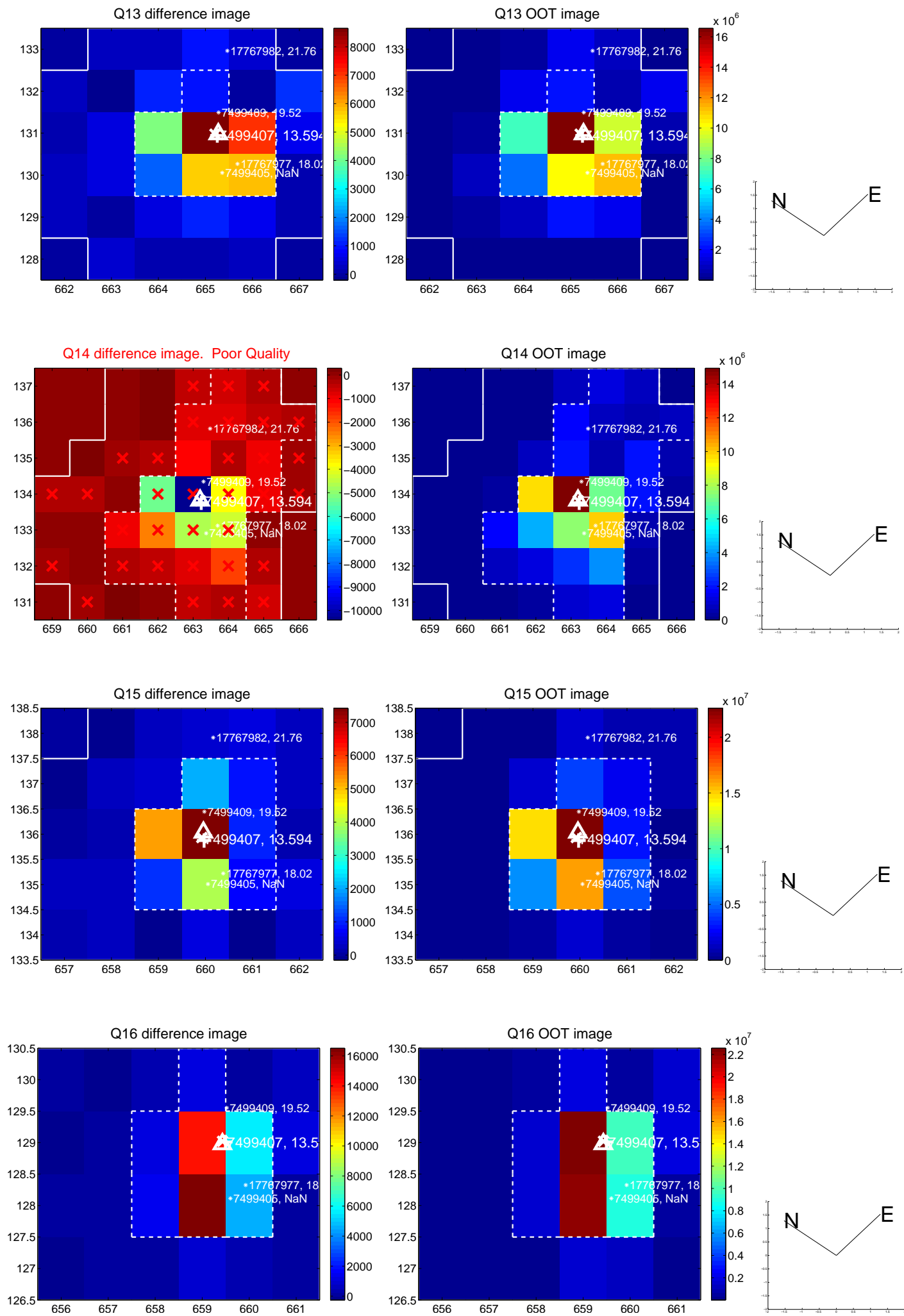
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



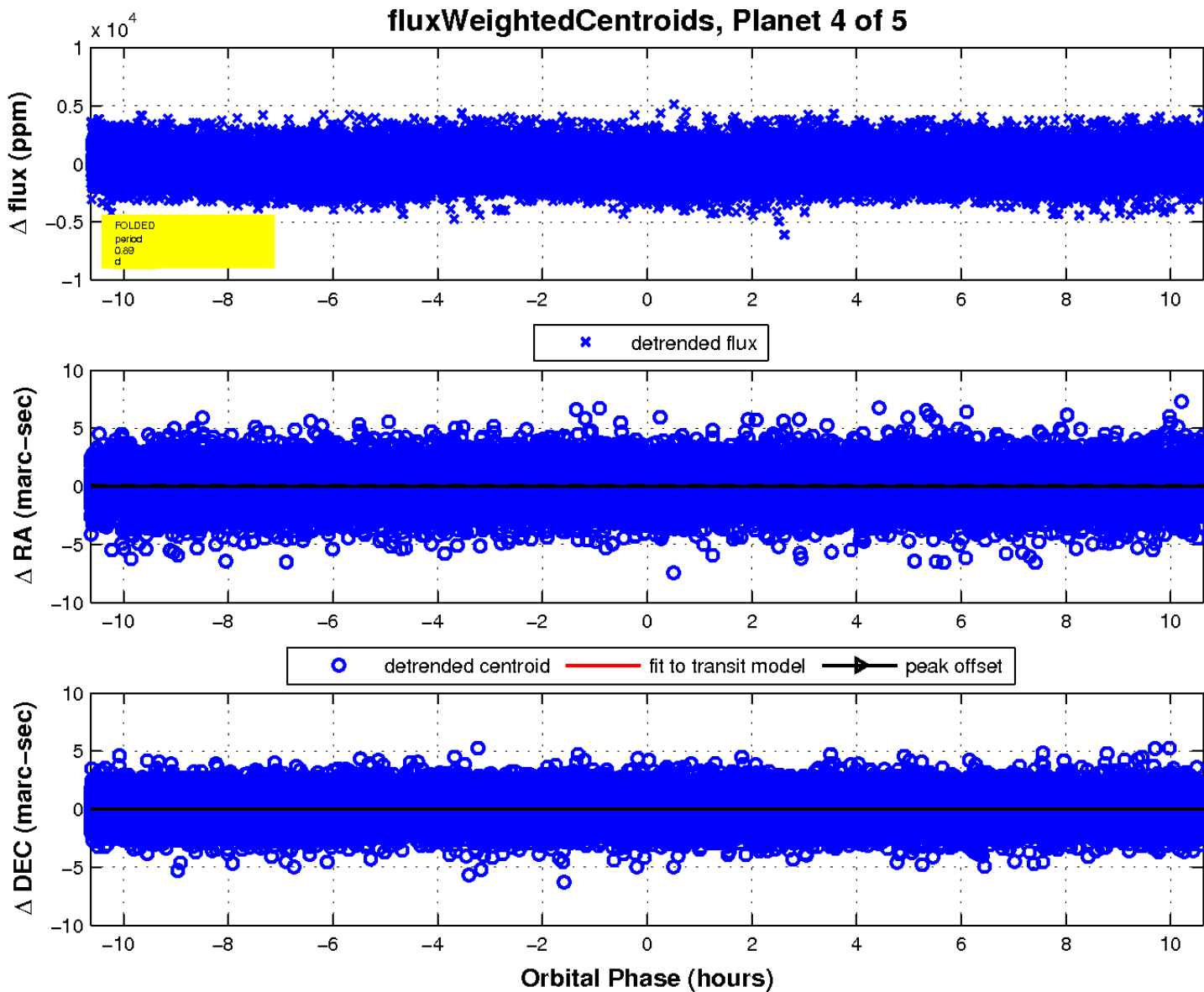
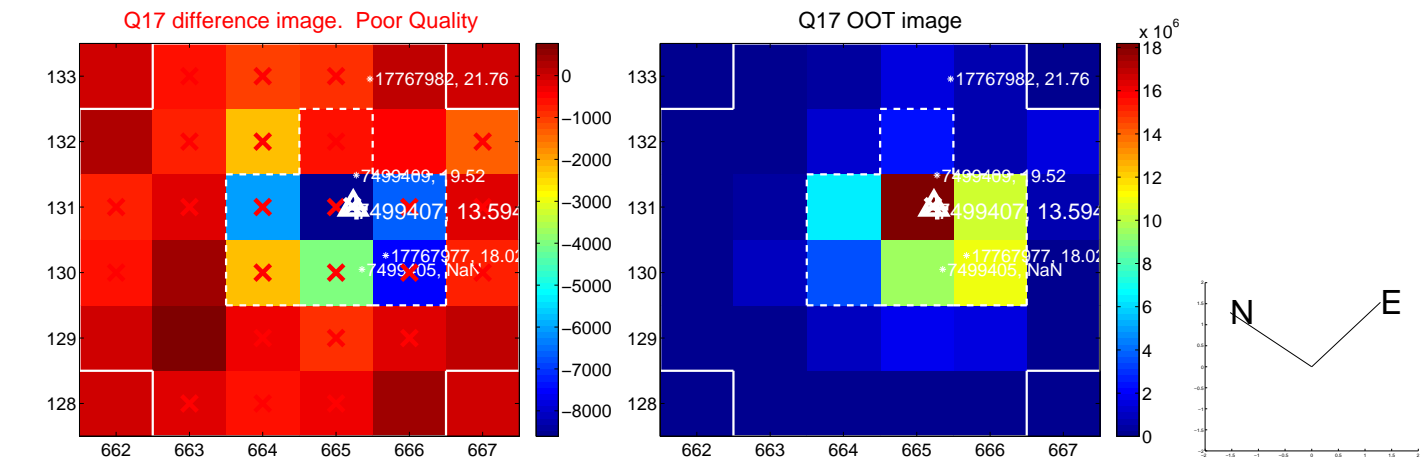
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

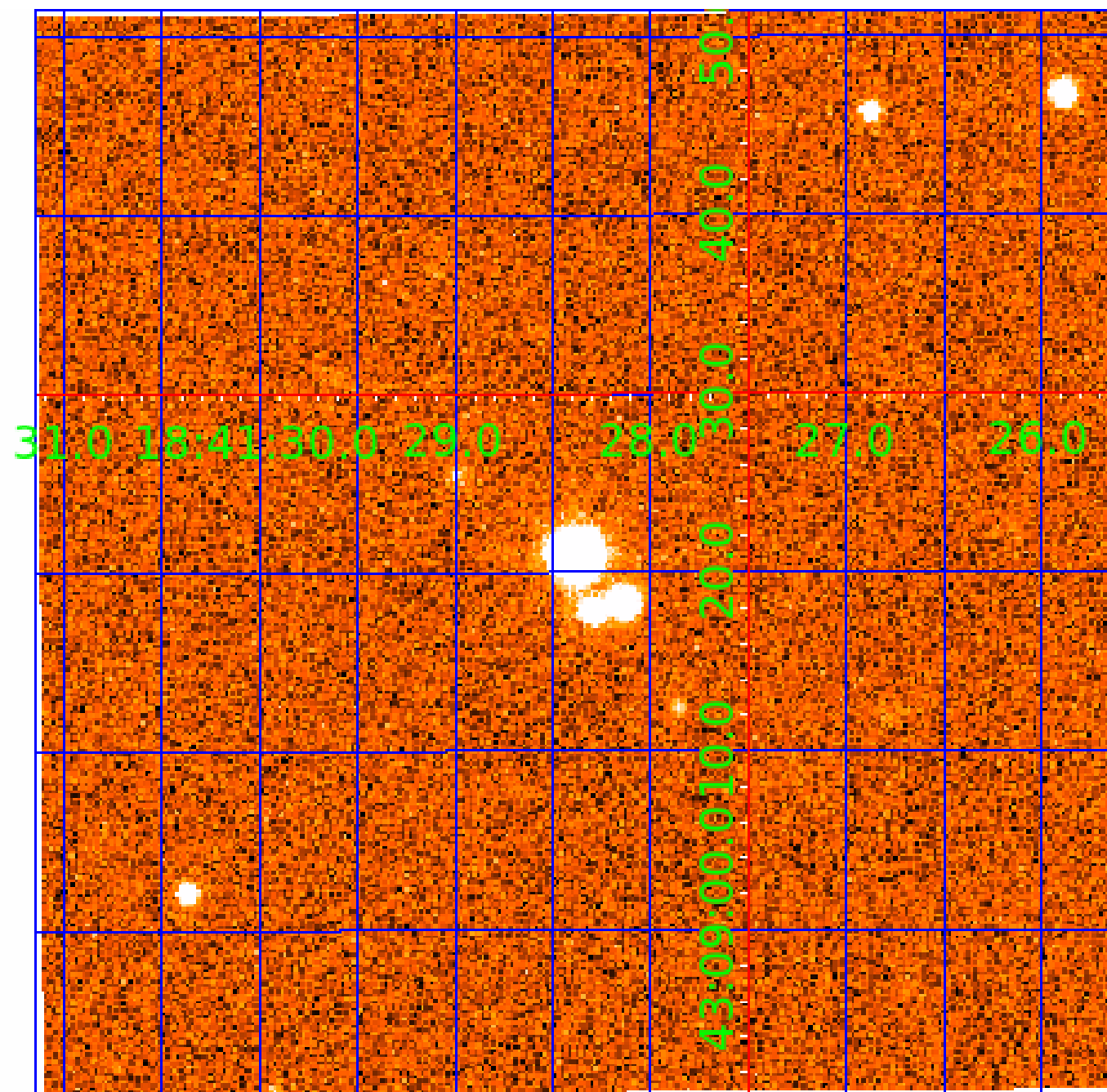


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007499407

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})
007499407-01	OBS	No	2.248867	131.538239	157.4	7.500	11.4	-1.0	1.54	7286	1.96	4184.29
007499407-02	OBS	No	374.075196	242.783080	973.1	18.019	14.8	7.9	1.54	7286	5.75	4.57
007499407-03	OBS	No	1.771691	132.557850	118.6	3.962	8.7	7.6	1.54	7286	1.96	5750.73
007499407-04	OBS	No	0.885804	132.277390	85.1	4.499	9.2	6.6	1.54	7286	1.47	14491.84
007499407-05	OBS	No	39.576382	138.226145	1374.6	5.646	7.6	6.8	1.54	7286	10.53	91.41

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007499407-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
007499407-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007499407-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
007499407-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
007499407-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT

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

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

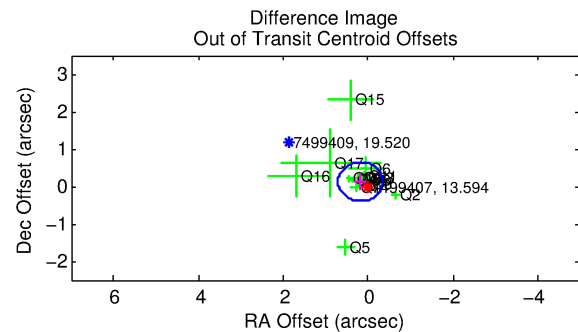
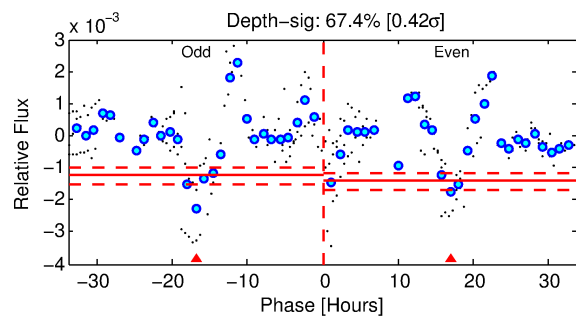
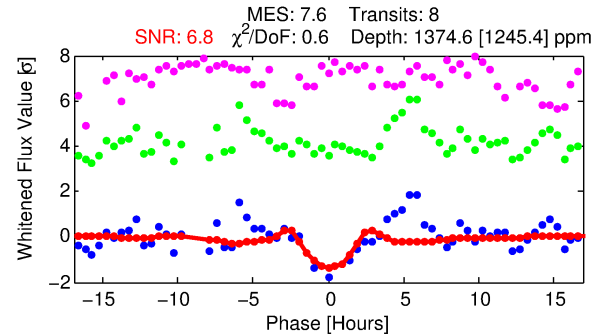
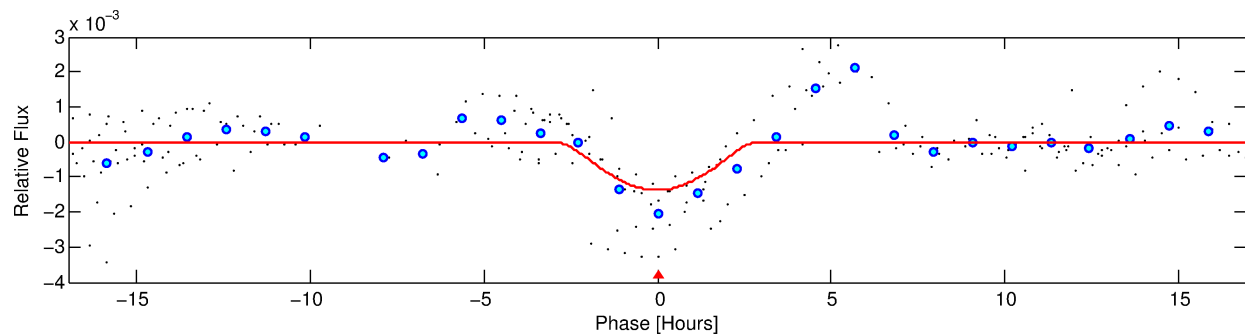
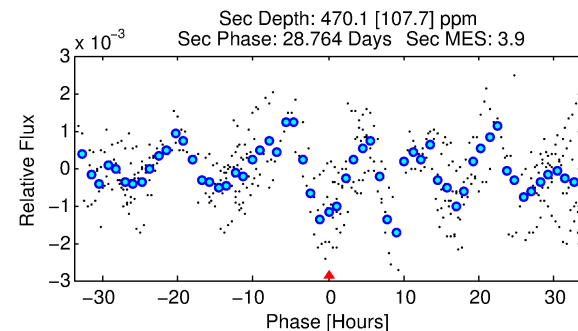
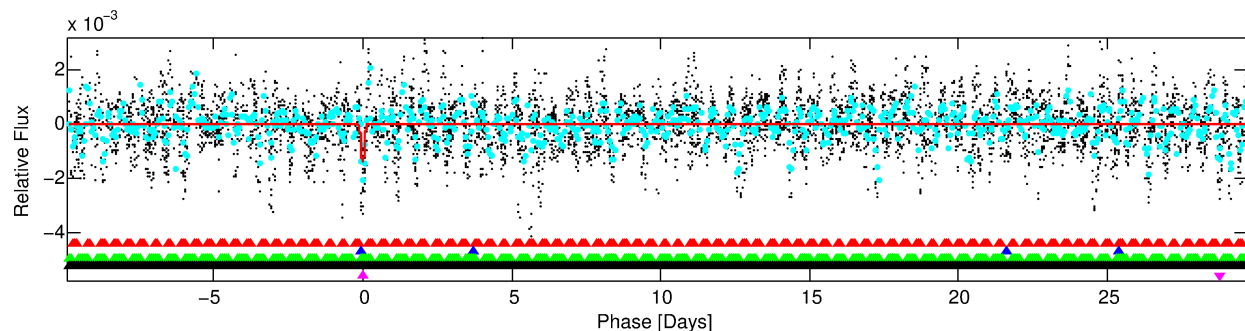
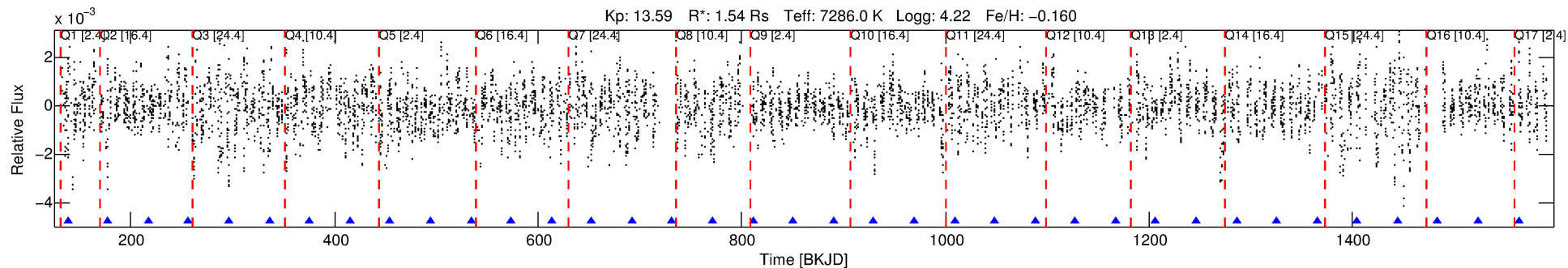
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007499407-05

No Significant Match Found

DV One-Page Summary

KIC: 7499407 Candidate: 5 of 5 Period: 39.576 d



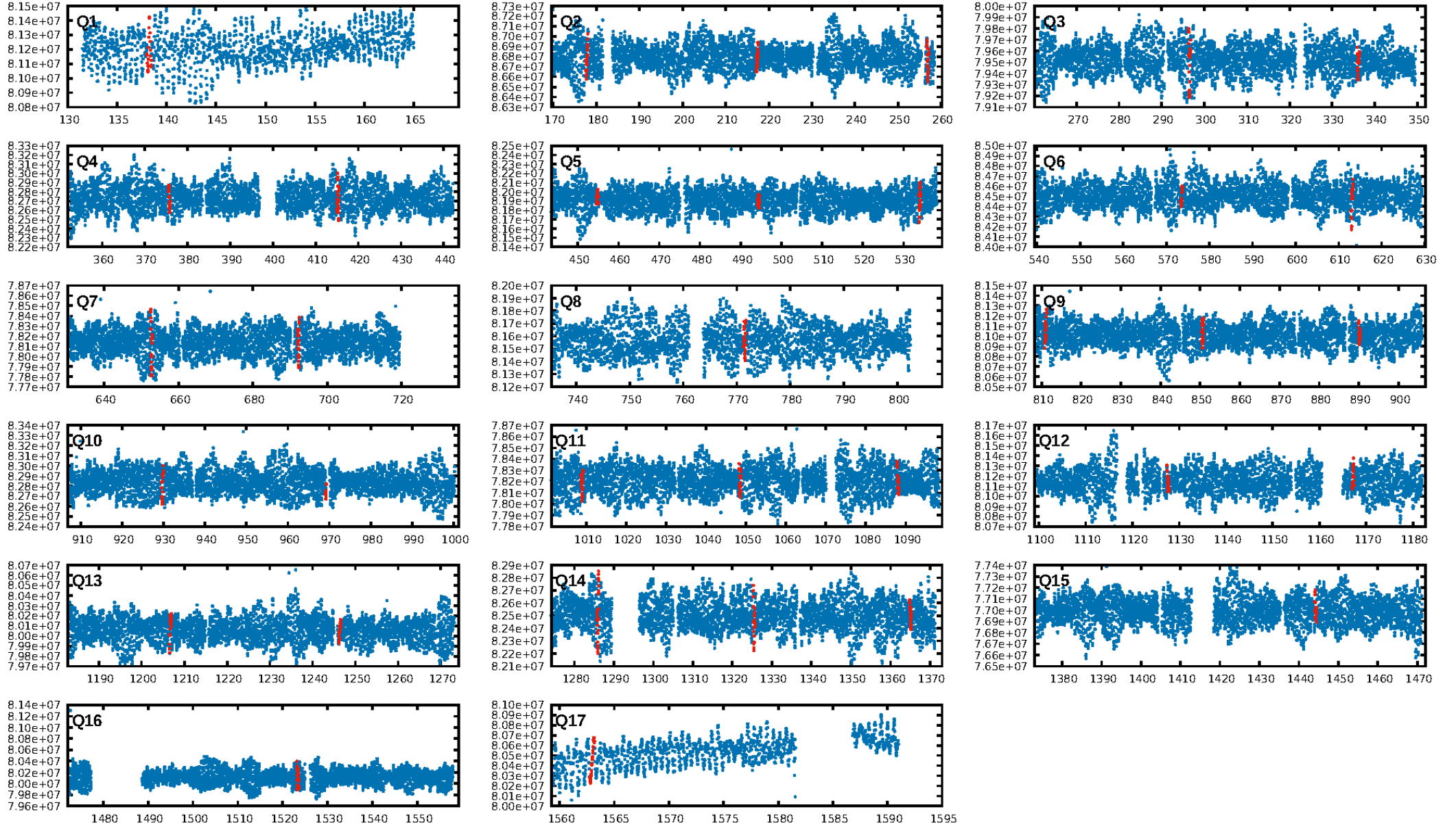
DV Fit Results:

Period = 39.57638 [0.00085] d
Epoch = 138.2261 [0.0131] BKJD
Rp/R* = 0.0626 [0.1355]
a/R* = 19.27 [10.04]
b = 1.00 [0.16]
Seff = 91.41 [37.52]
Teq = 788 [81] K
Rp = 10.53 [23.07] Re
a = 0.2563 [0.0681] AU
Ag = 153.16 [666.71] [0.23σ]
Teffp = 4288 [4654] K [0.75σ]

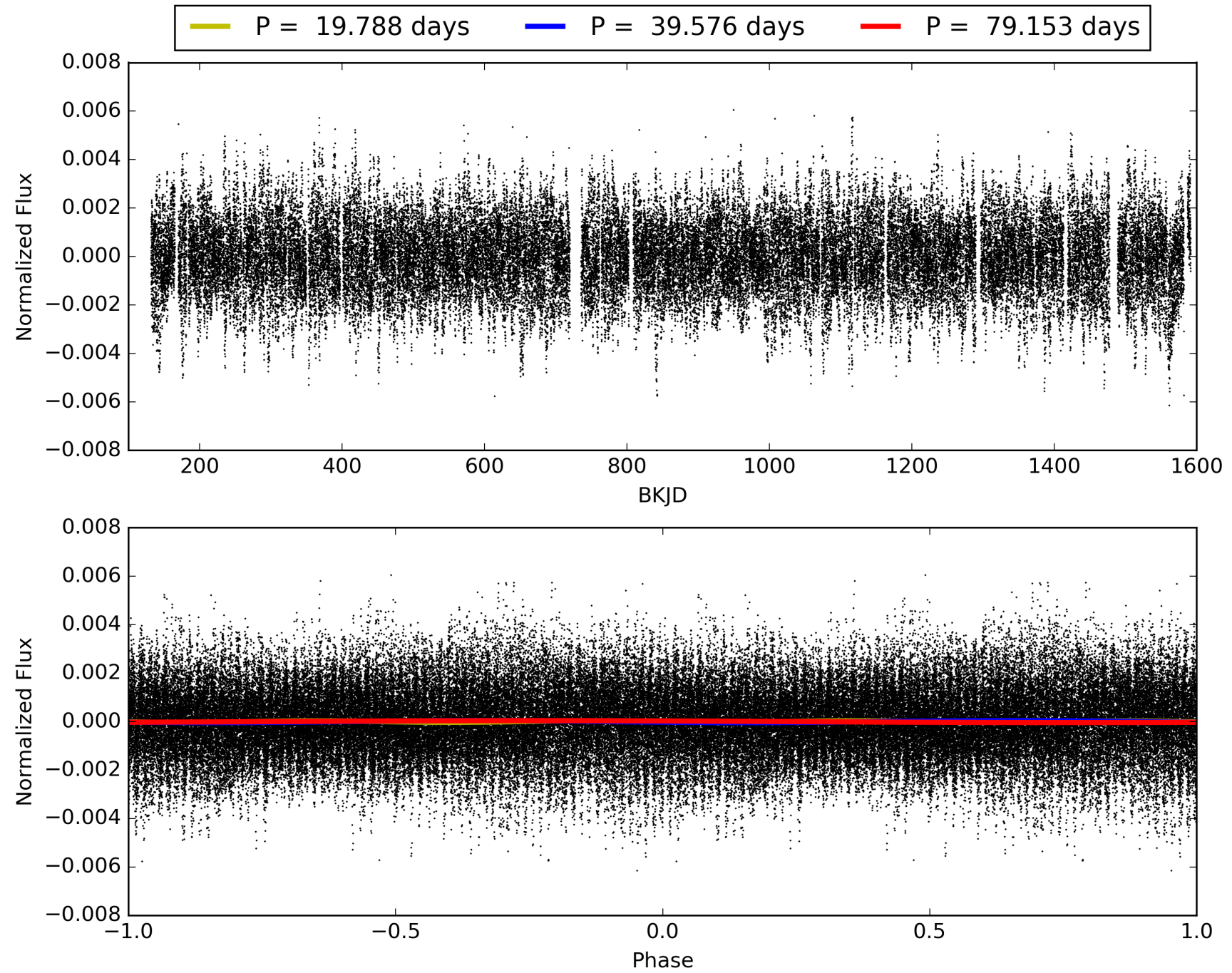
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [95.43σ]
LongPeriod-sig: 100.0% [425.15σ]
ModelChiSquare2-sig: 83.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 9.71e-10
RollingBand-fgt: 1.00 [8/8]
GhostDiagnostic-chr: 1.89
Centroid-sig: 1.1%
Centroid-so: 0.978 arcsec [5.22σ]
OotOffset-rm: 0.223 arcsec [1.28σ]
KicOffset-rm: 0.244 arcsec [1.43σ]
OotOffset-st: 3/4/3/5 [15]
KicOffset-st: 3/4/3/5 [15]
DiffImageQuality-fgm: 0.60 [9/15]
DiffImageOverlap-fno: 0.00 [0/16]

TCE 007499407-05, PDC Light Curves

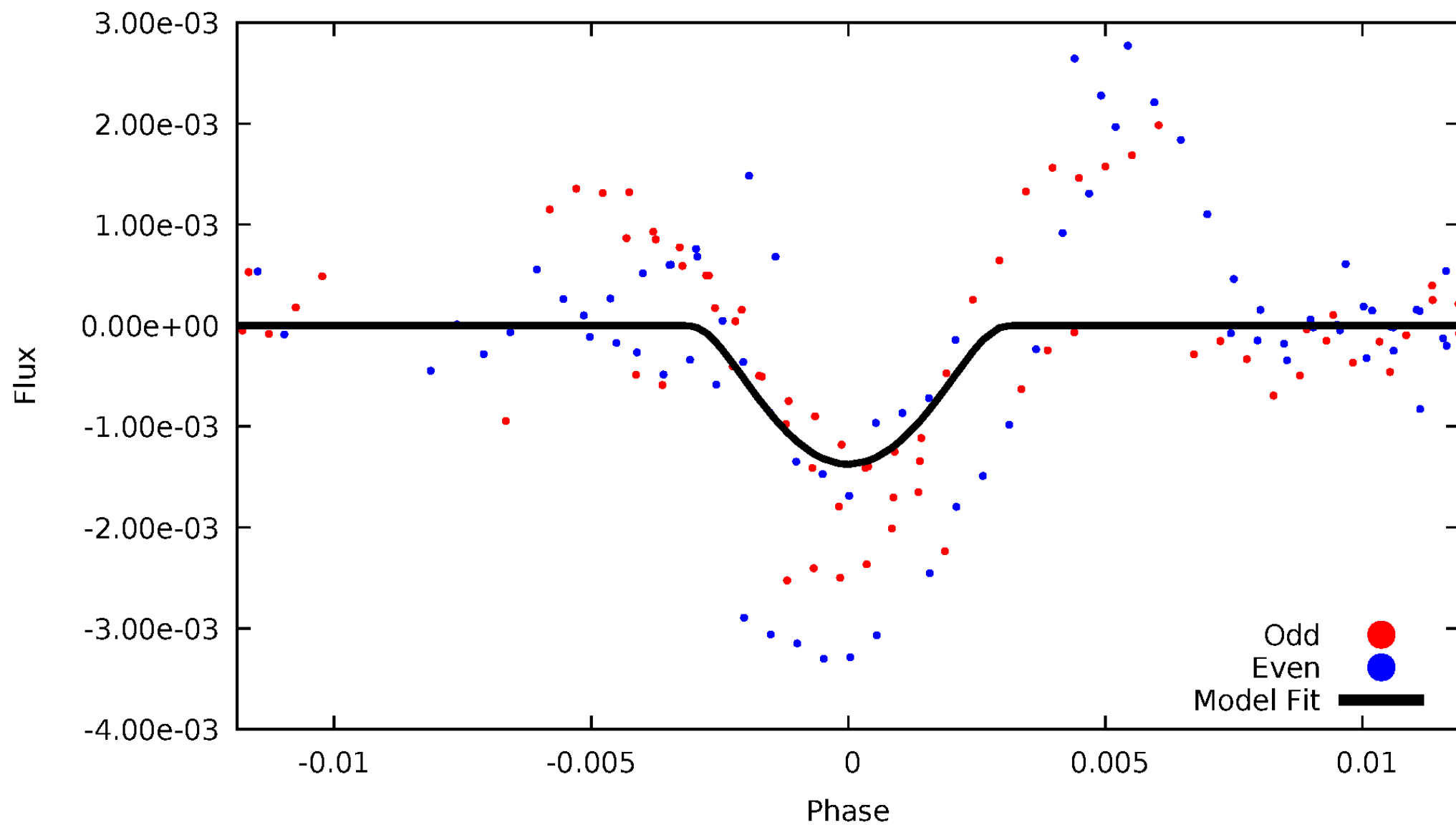


TCE 007499407-05



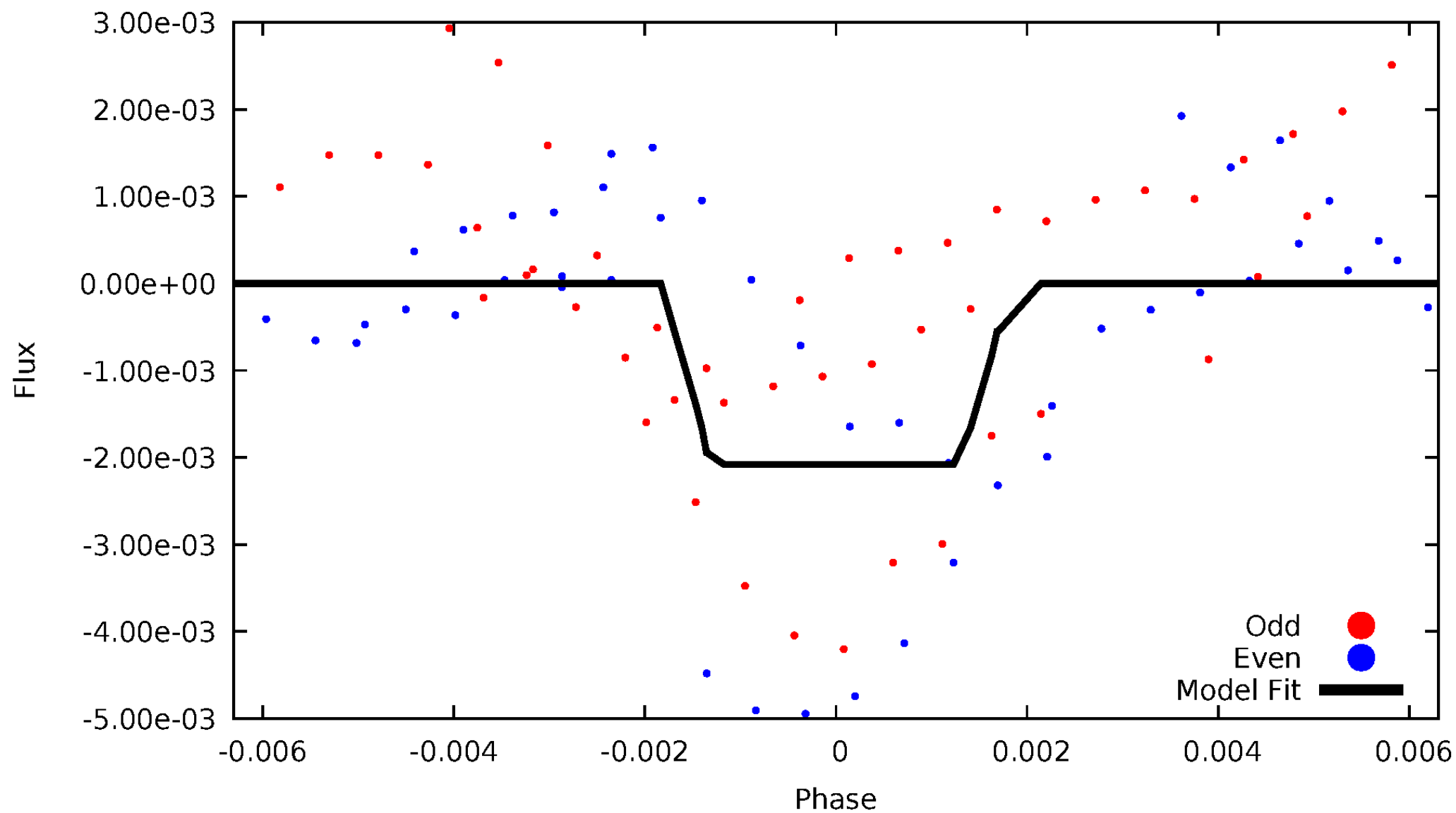
DV Odd/Even

TCE 007499407-05



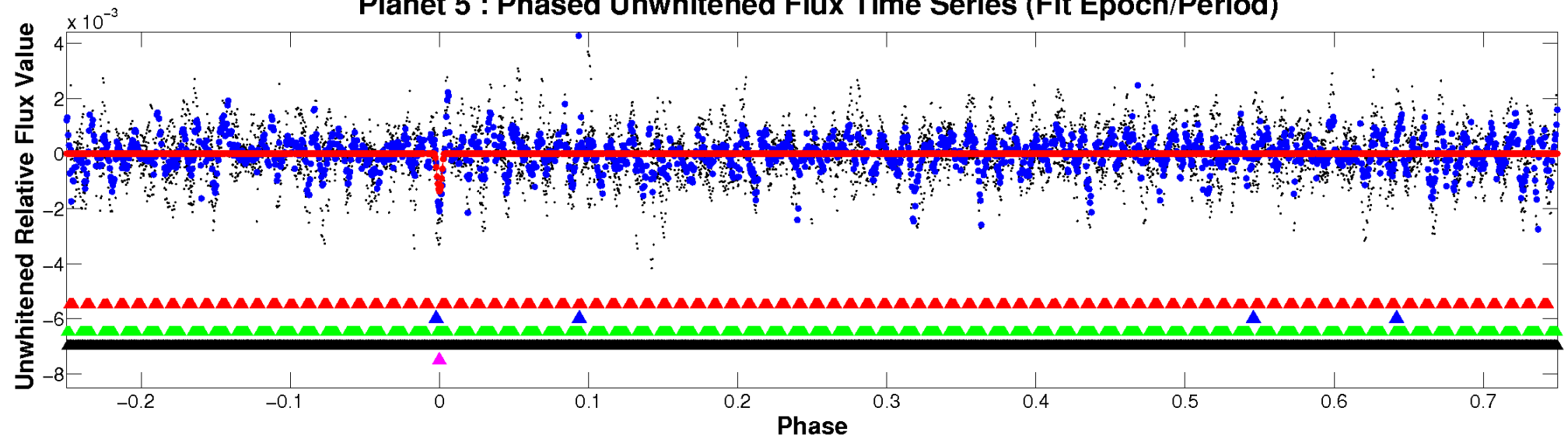
ALT Odd/Even

TCE 007499407-05

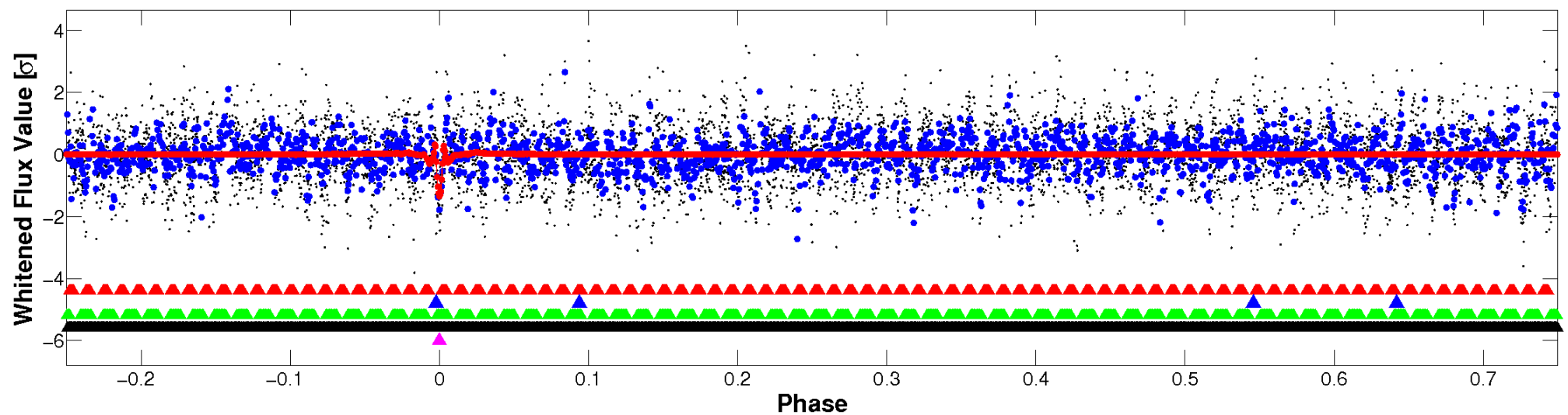


Non-Whitened Vs. Whitened Light Curve

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

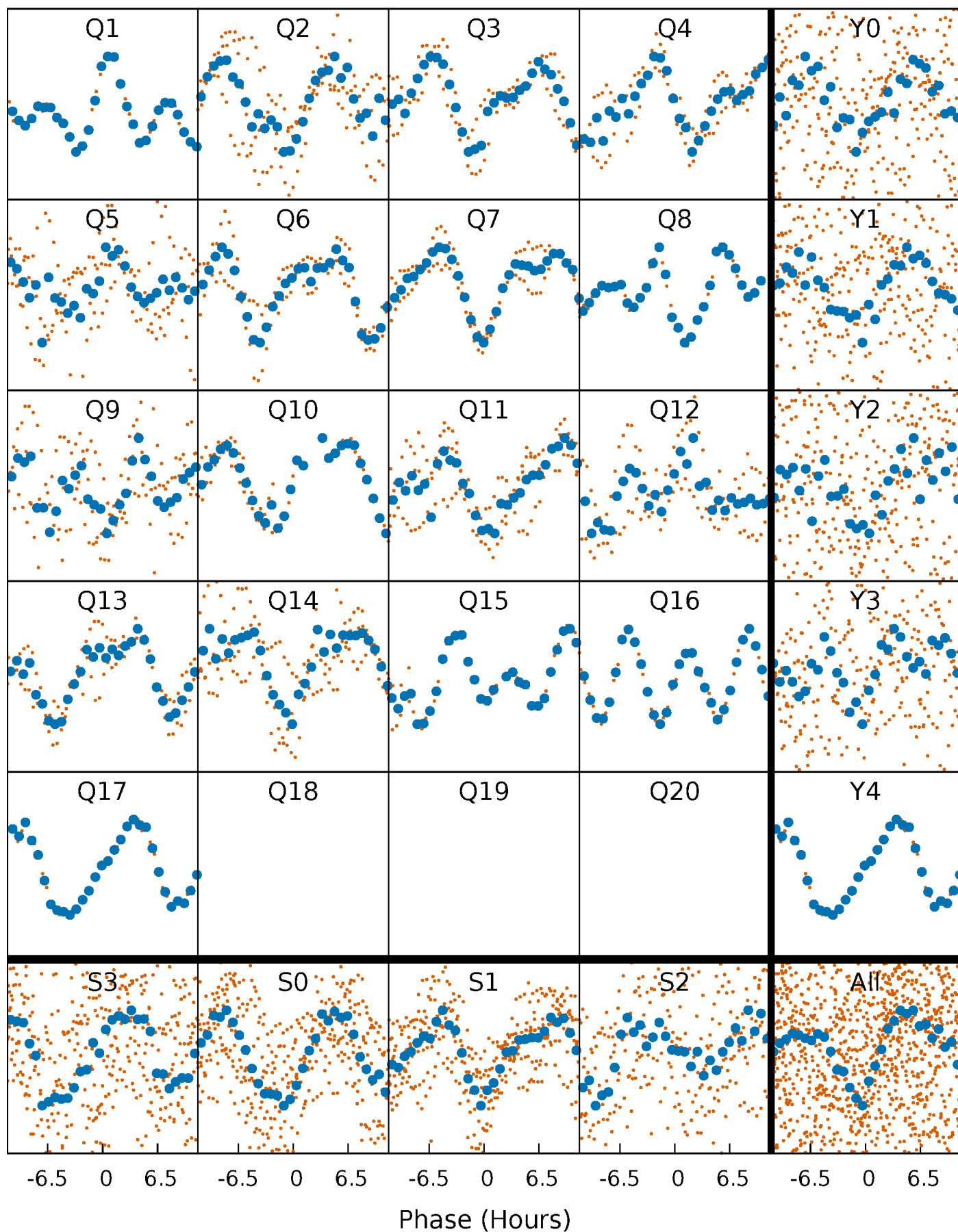


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



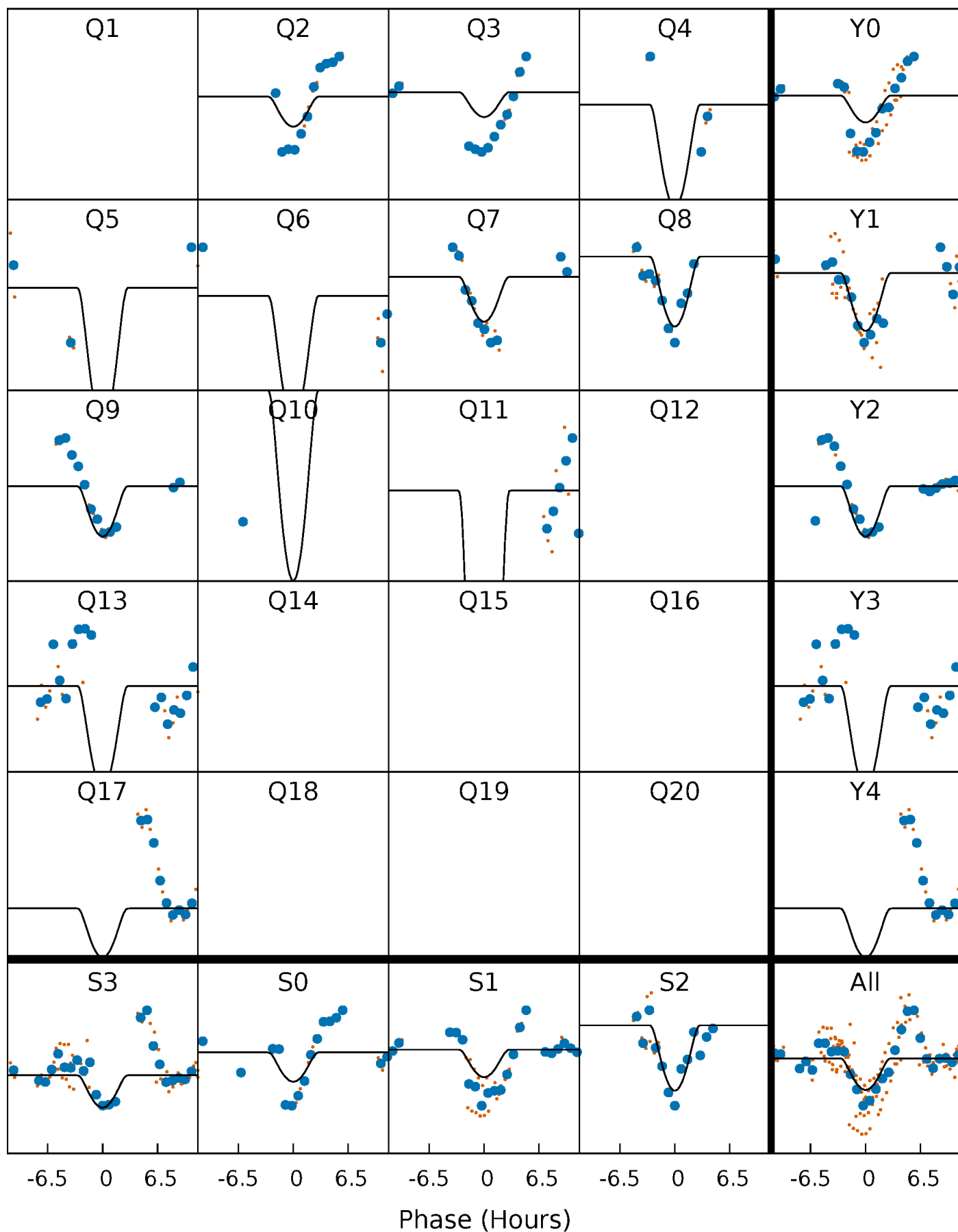
PDC Quarter-Phased Transit Curves

TCE 007499407-05 $P = 39.576382$ Days $T_0 = 138.226145$ (BKJD)



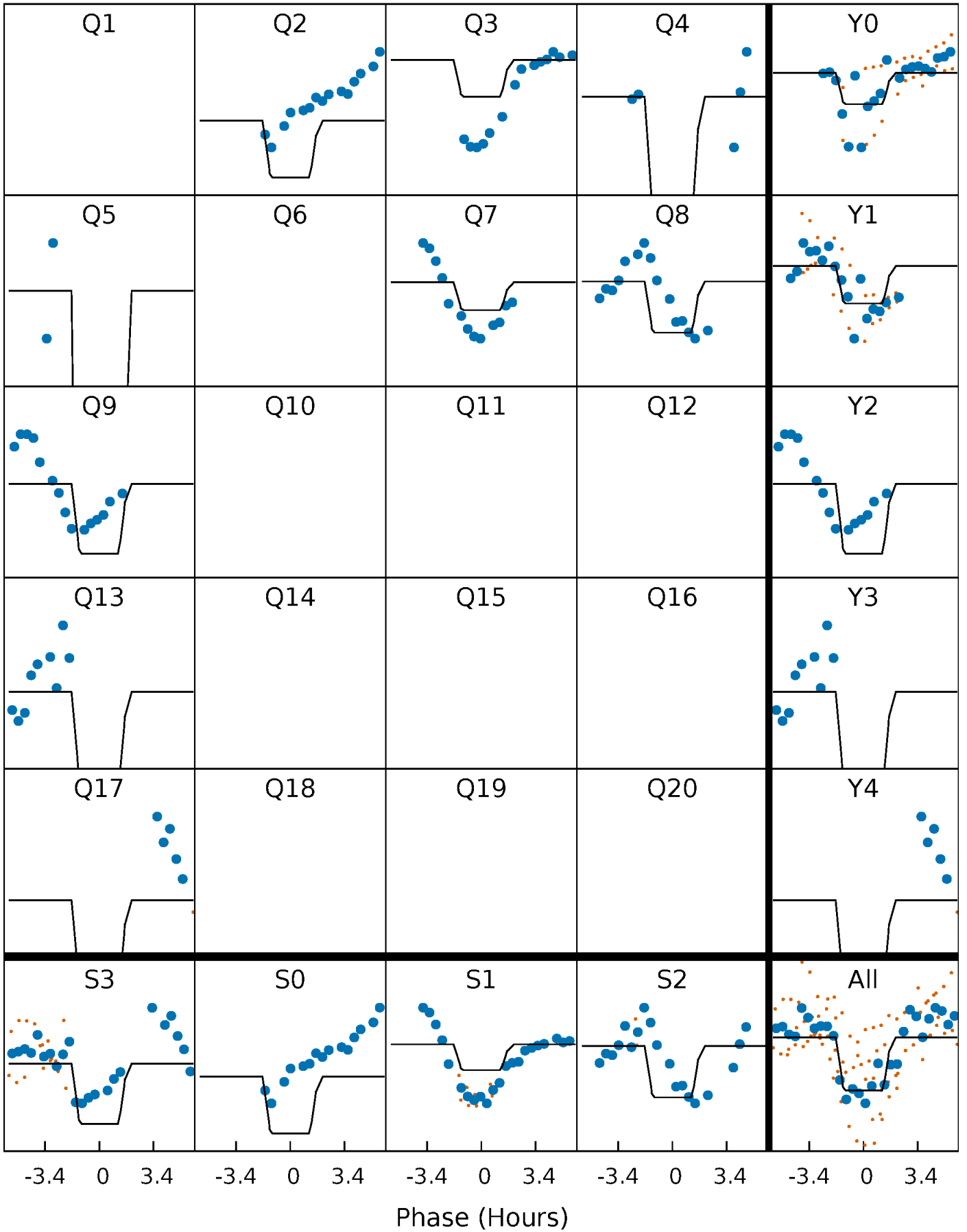
DV Quarter-Phased Transit Curves

TCE 007499407-05 $P = 39.576382$ Days $T_0 = 138.226145$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

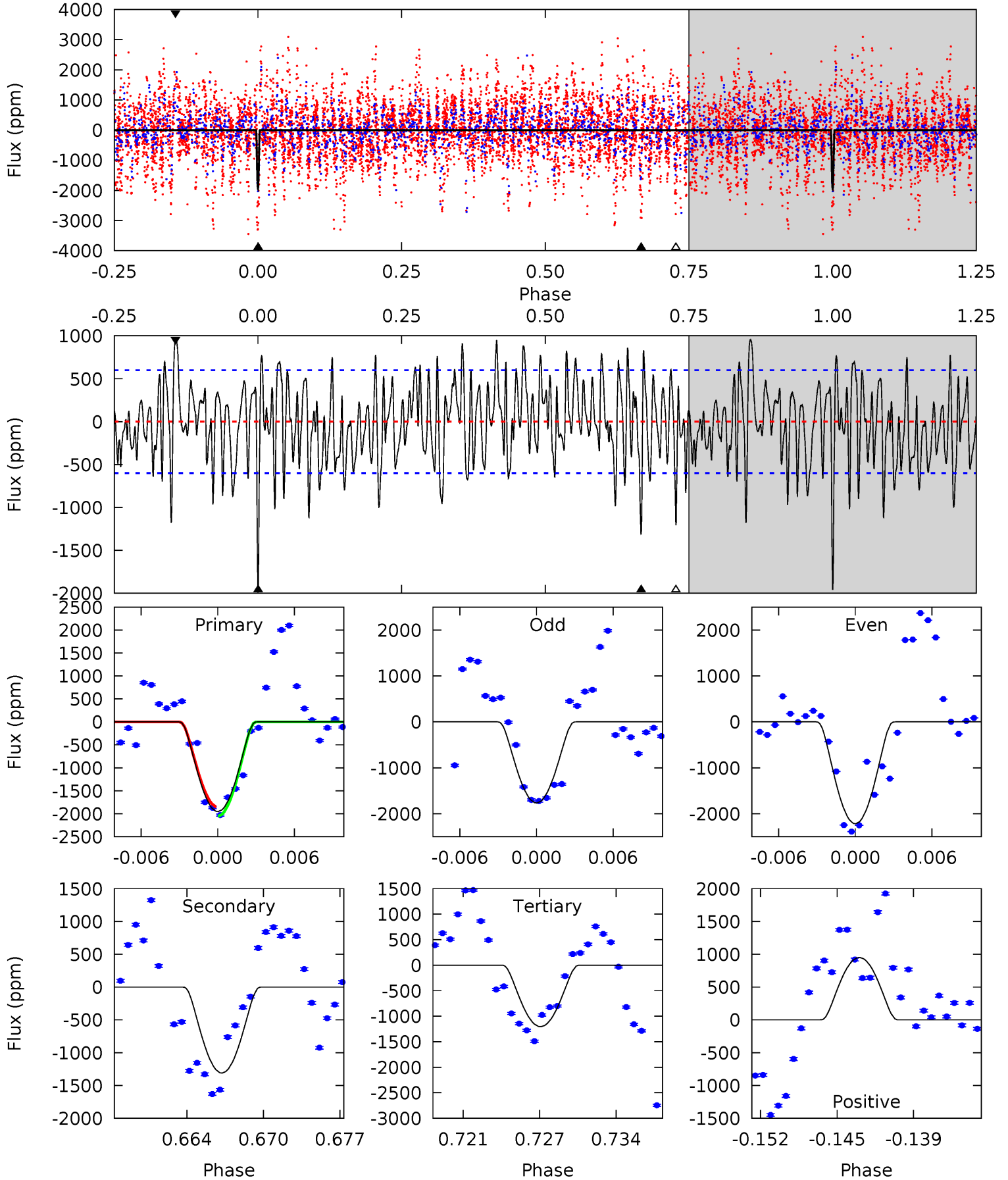
TCE 007499407-05 $P = 39.578190$ Days $T_0 = 138.192194$ (BKJD)



DV Model-Shift Uniqueness Test

007499407-05, P = 39.576382 Days, E = 98.649763 Days

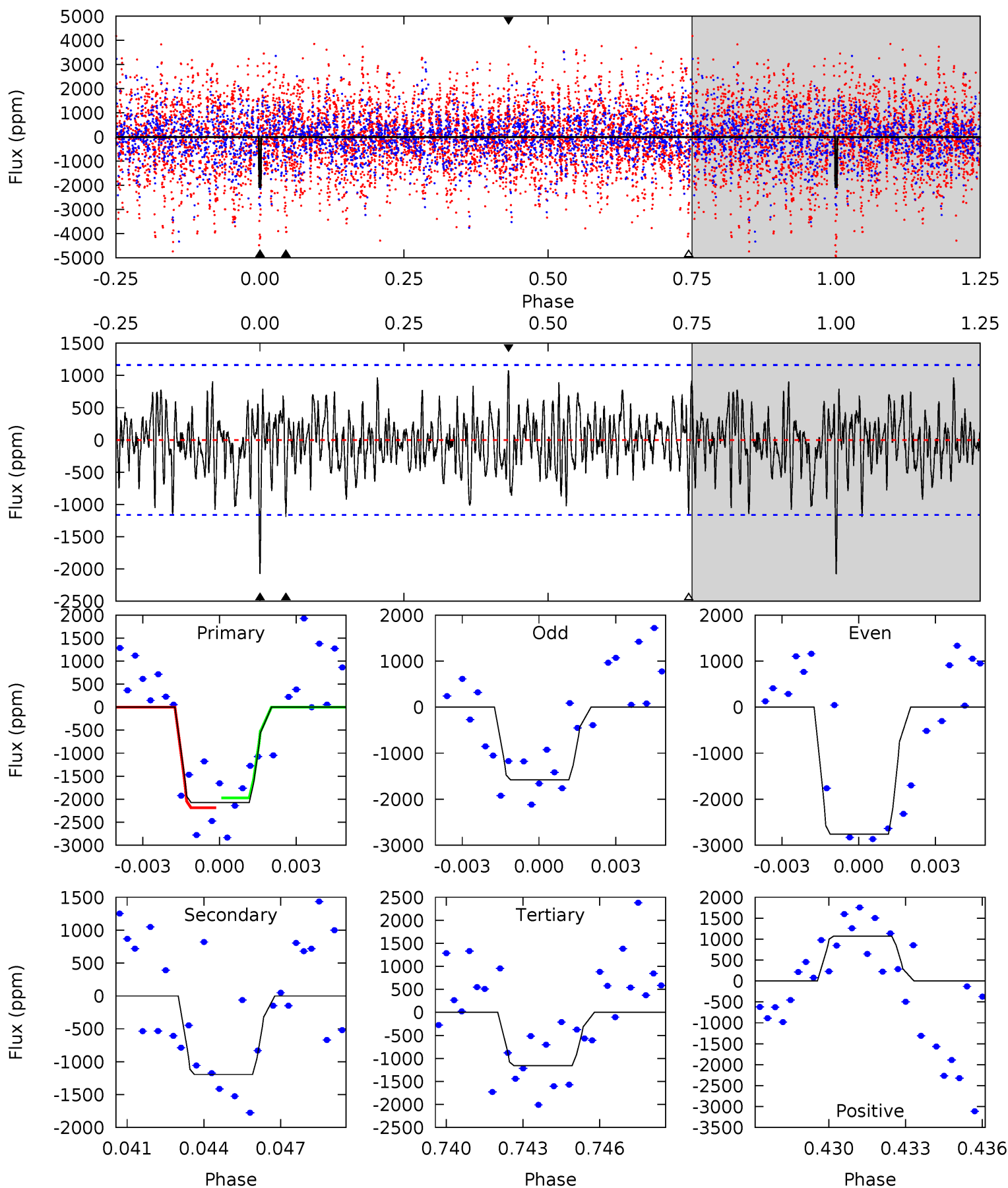
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.7	11.2	10.3	8.11	5.11	2.73	3.47	6.38	8.55	0.90	3.07	1.93	0.88	0.33	0.85



Alt Model-Shift Uniqueness Test

007499407-05, P = 39.578190 Days, E = 98.614004 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.34	5.38	5.21	4.83	5.24	2.95	1.64	4.13	4.52	0.17	0.56	2.62	1.92	0.34	0.48



Stellar Parameters For KIC 007499407

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7286^{+232}_{-319}	$4.218^{+0.105}_{-0.195}$	$-0.160^{+0.250}_{-0.350}$	$1.542^{+0.508}_{-0.274}$	$1.434^{+0.219}_{-0.219}$	$0.551^{+0.288}_{-0.302}$
	+3%/-4%	+2%/-5%	+156%/-219%	+33%/-18%	+15%/-15%	+52%/-55%
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 007499407-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1311±117	$20.04^{+19.66}_{-13.98}$	1113^{+82}_{-74}	4264^{+3186}_{-879}	115^{+1193}_{-85}
Alt.	-1193±222	$19.19^{+18.57}_{-13.26}$	1110^{+87}_{-69}	4252^{+3132}_{-877}	113^{+1112}_{-84}

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 $A_{obs} \gg 1.0$

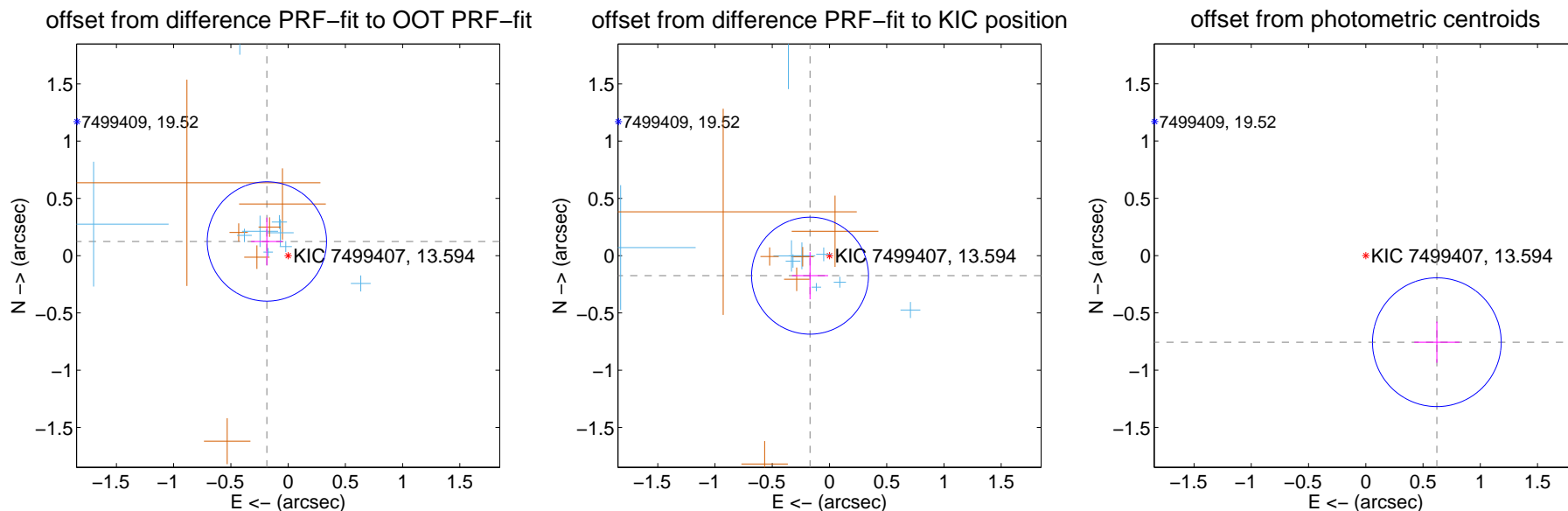
DV Centroid Data

Supplemental centroid analysis for 007499407-05. Kepler magnitude: 13.59. Transit SNR 6.76

There are 9 quarters with good PRF difference image offsets

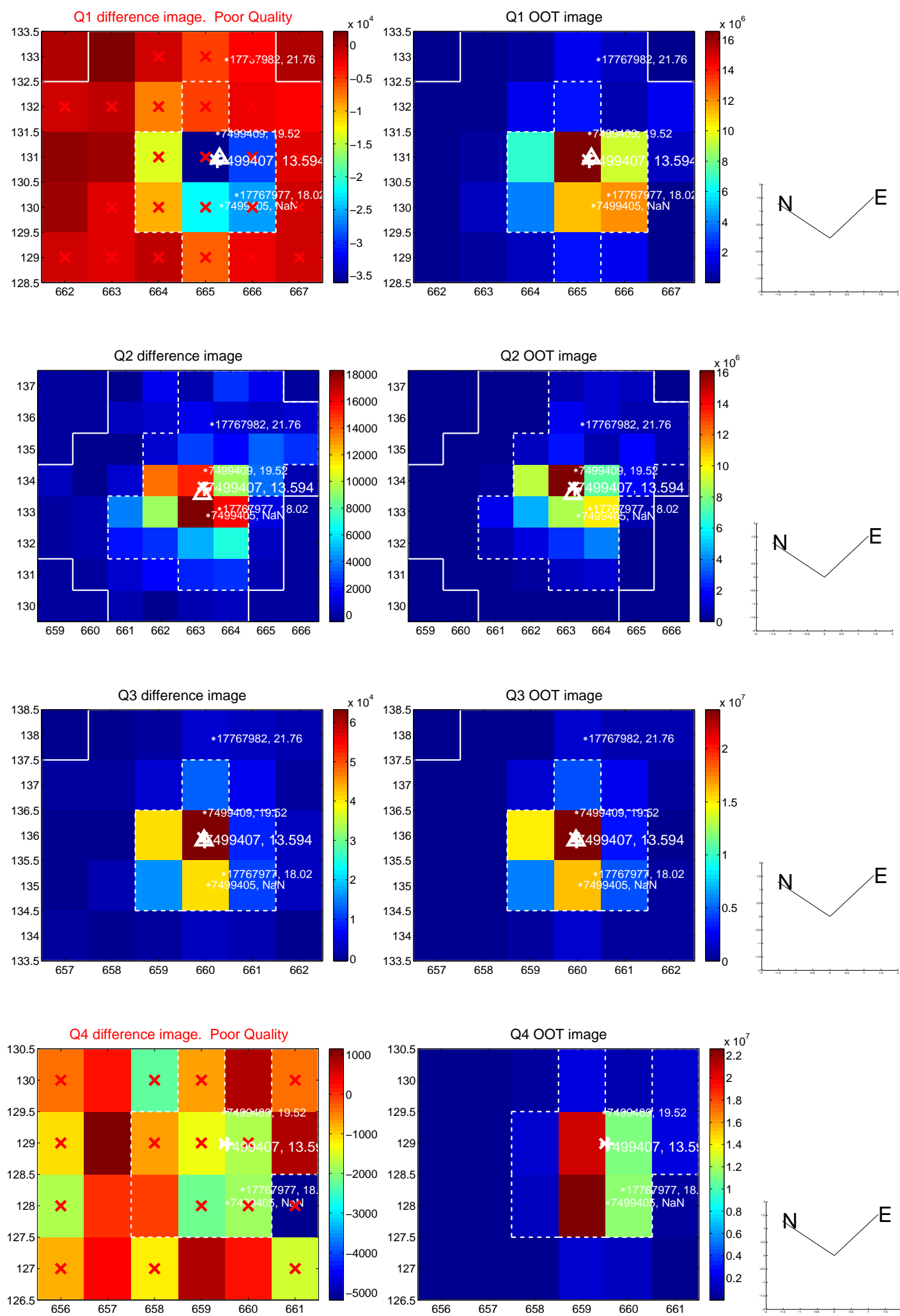
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.223 ± 0.174	1.28	0.186 ± 0.138	0.124 ± 0.208
PRF-fit source offset from KIC position	0.244 ± 0.170	1.43	0.170 ± 0.158	-0.175 ± 0.206
photometric centroid source offset	0.98 ± 0.19	5.22	-0.62 ± 0.20	-0.76 ± 0.18

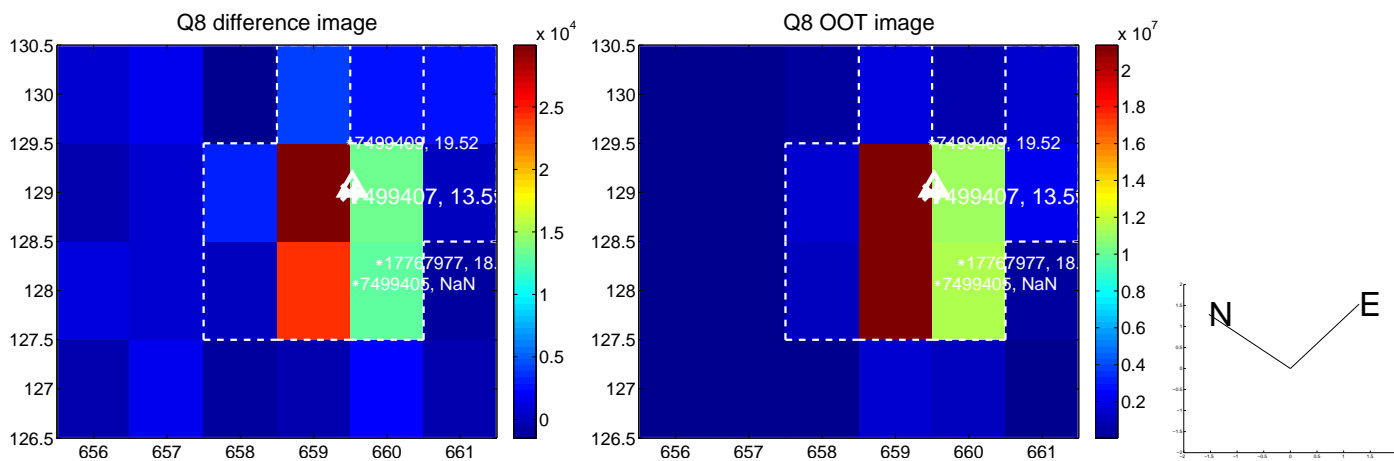
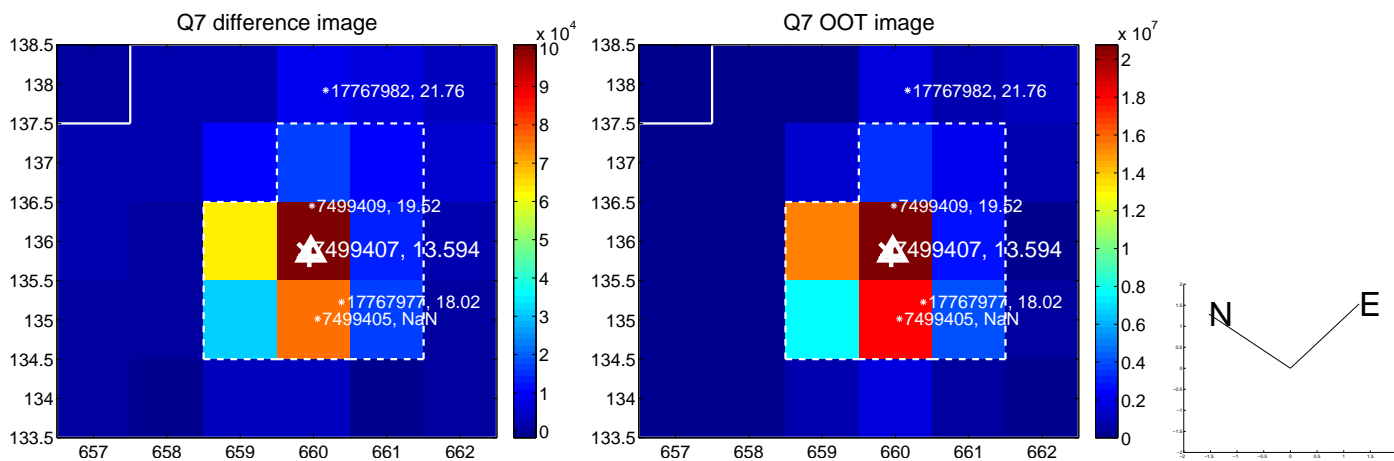
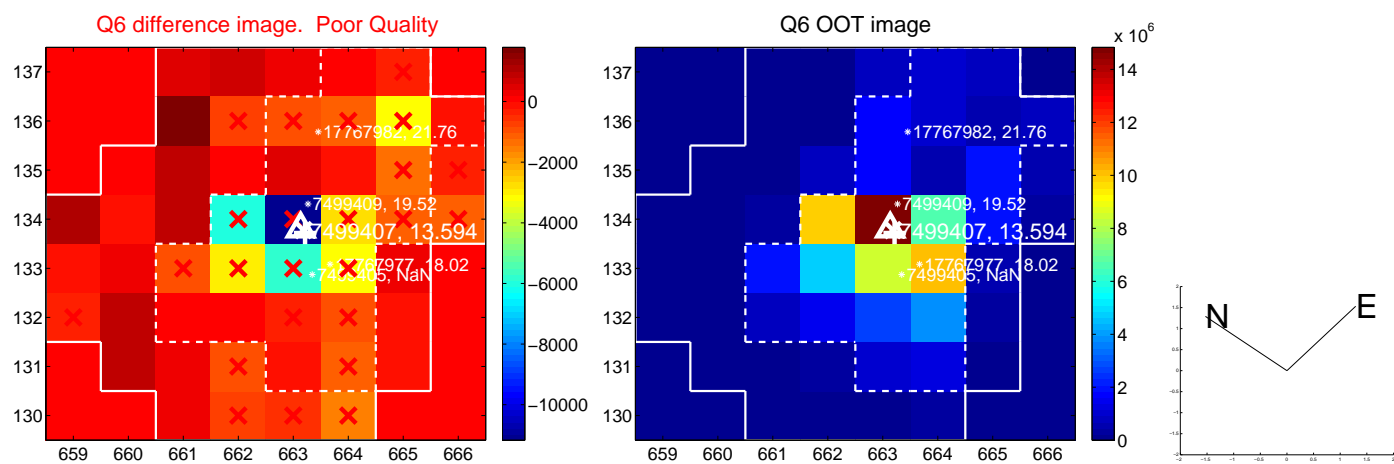
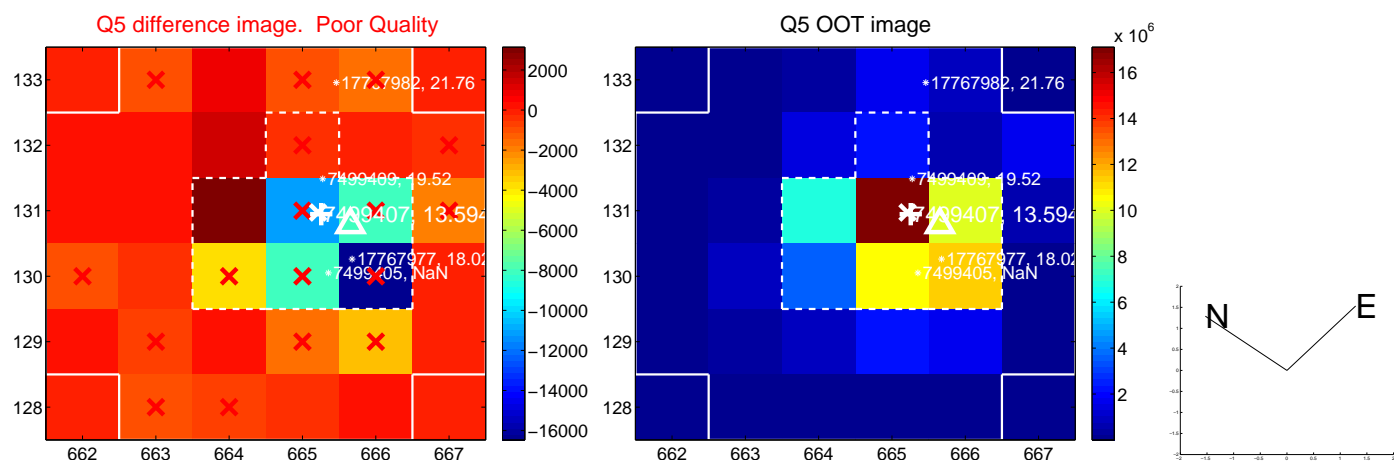


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

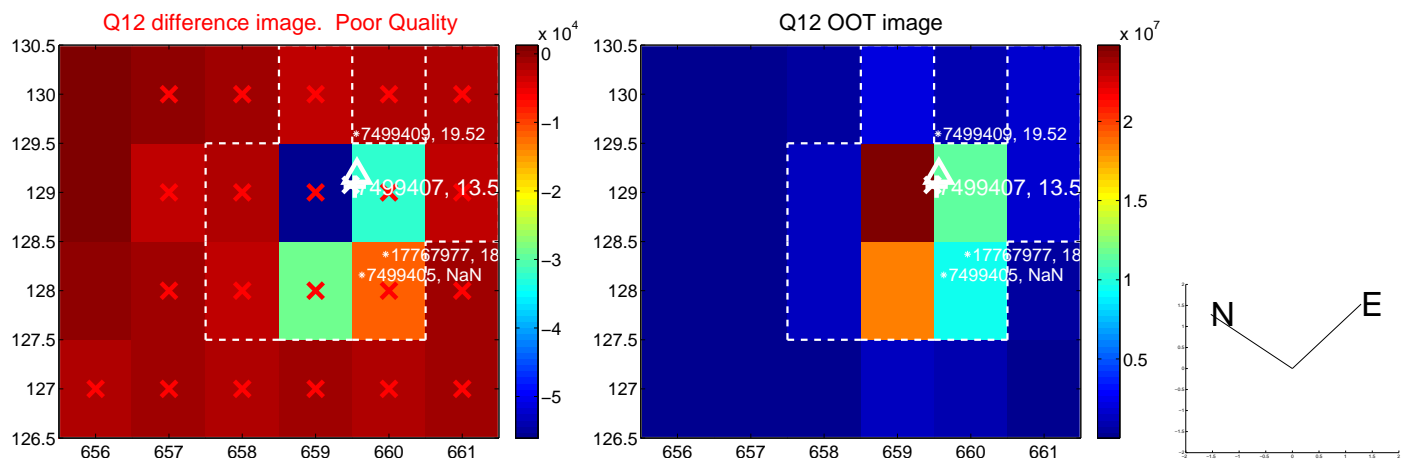
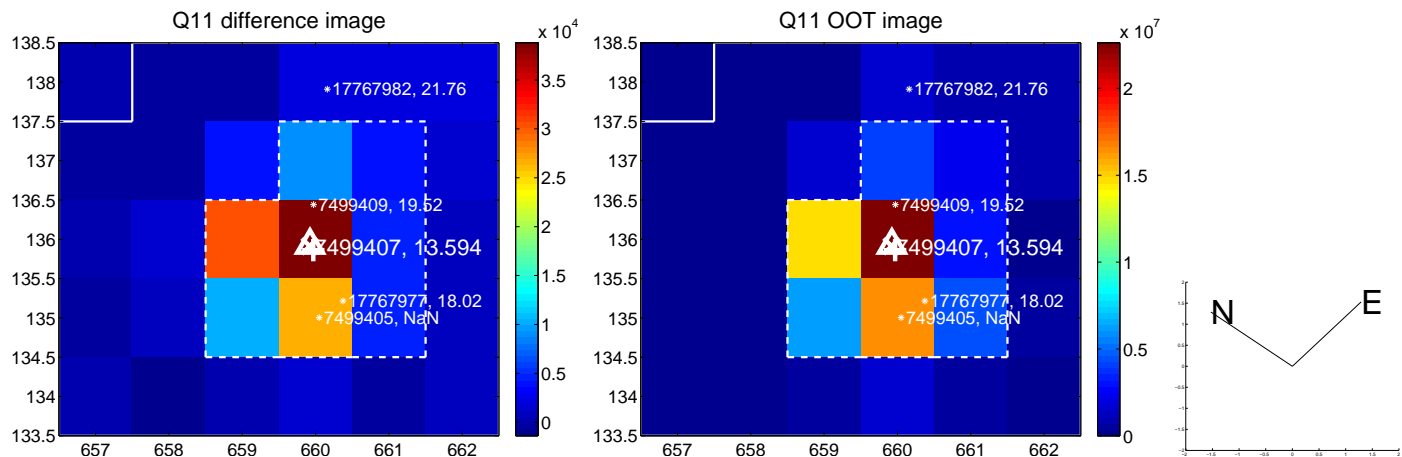
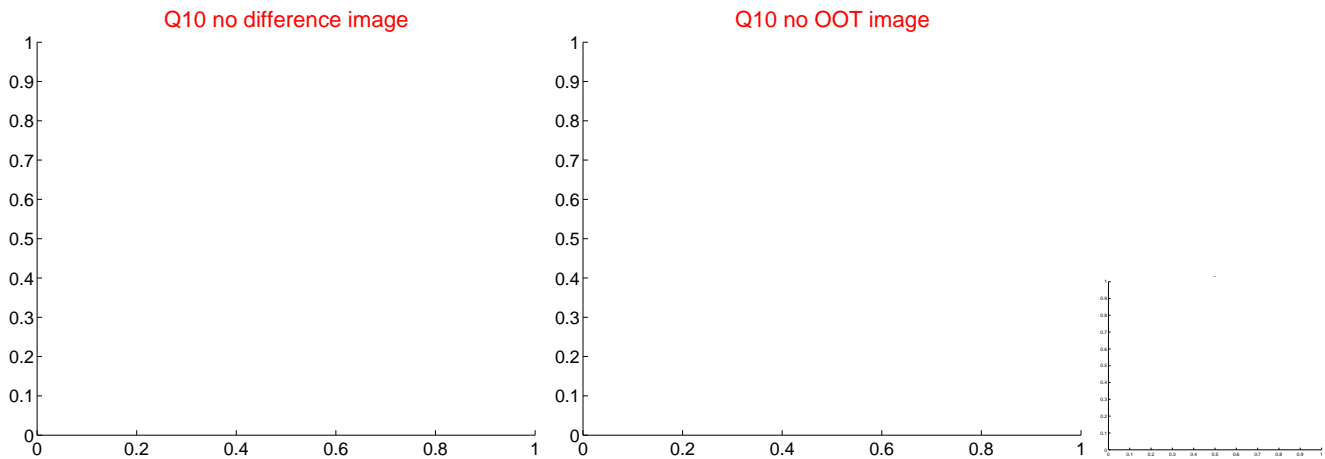
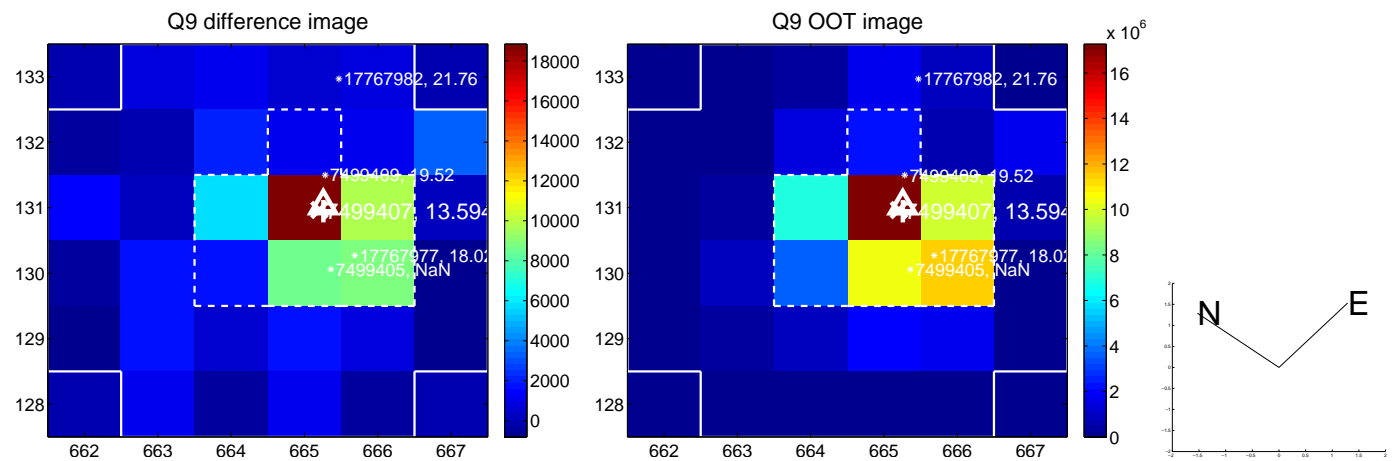
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



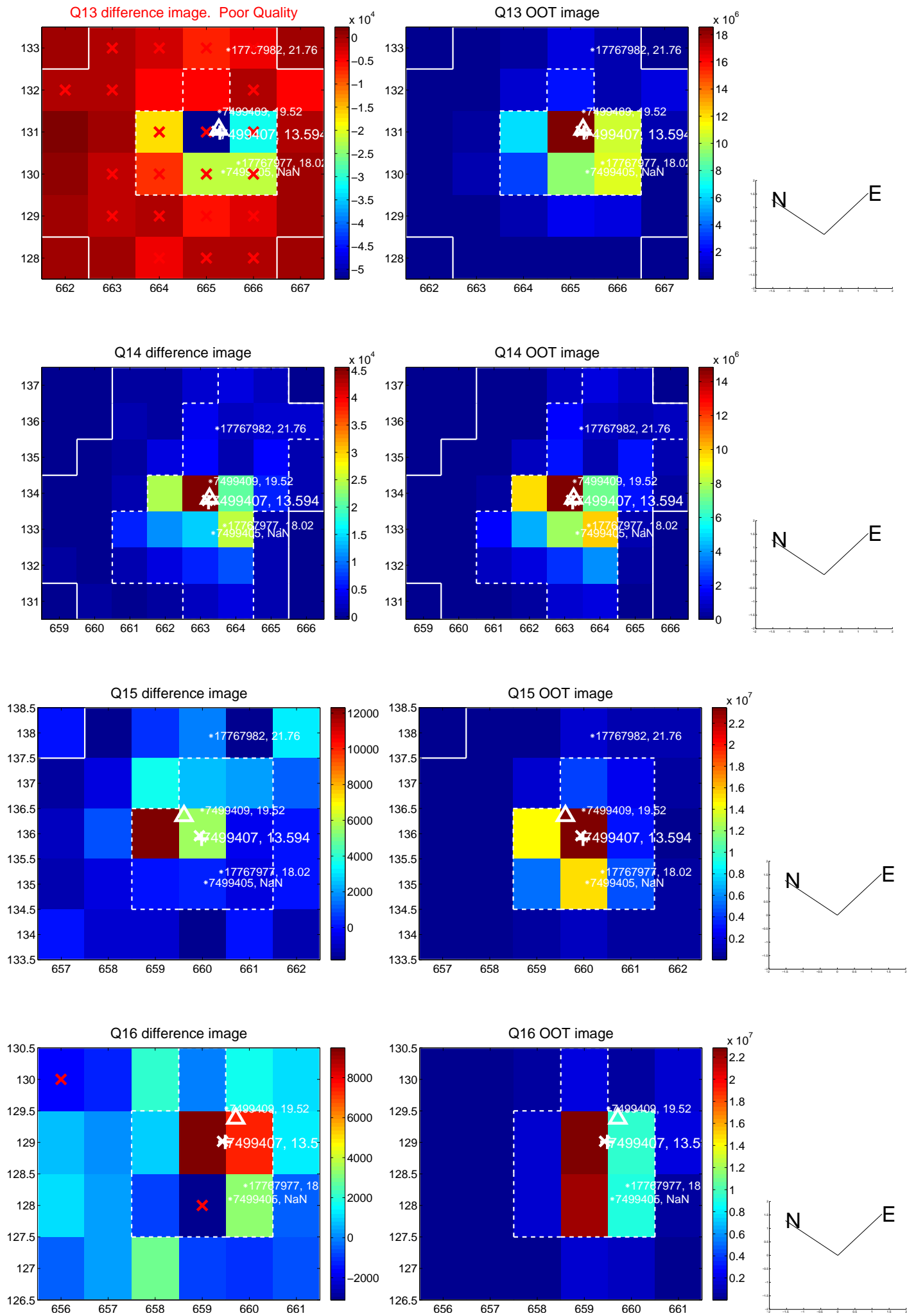
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



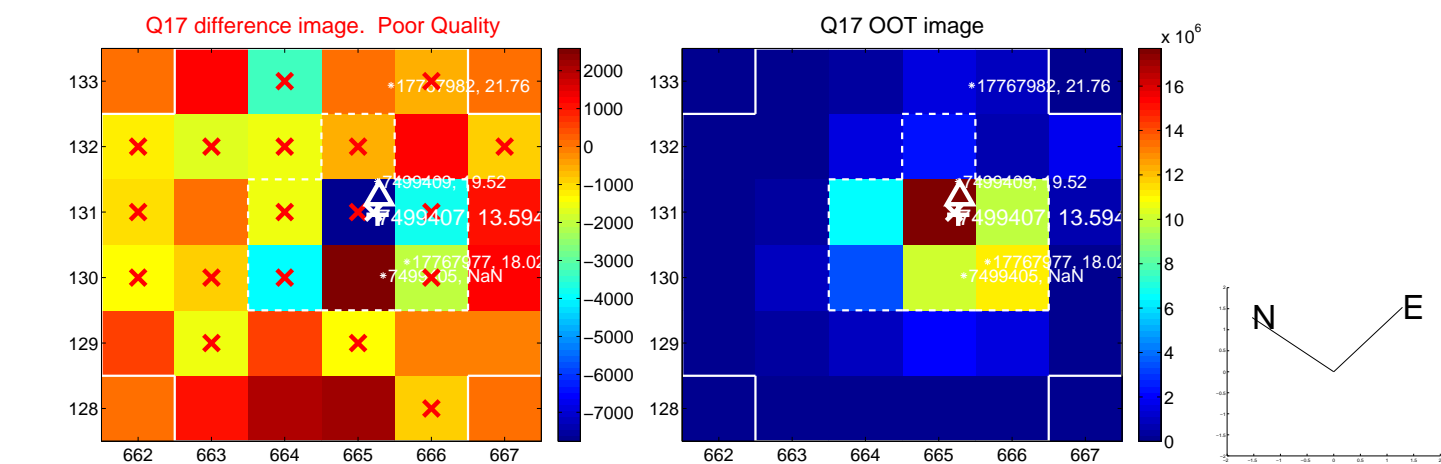
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



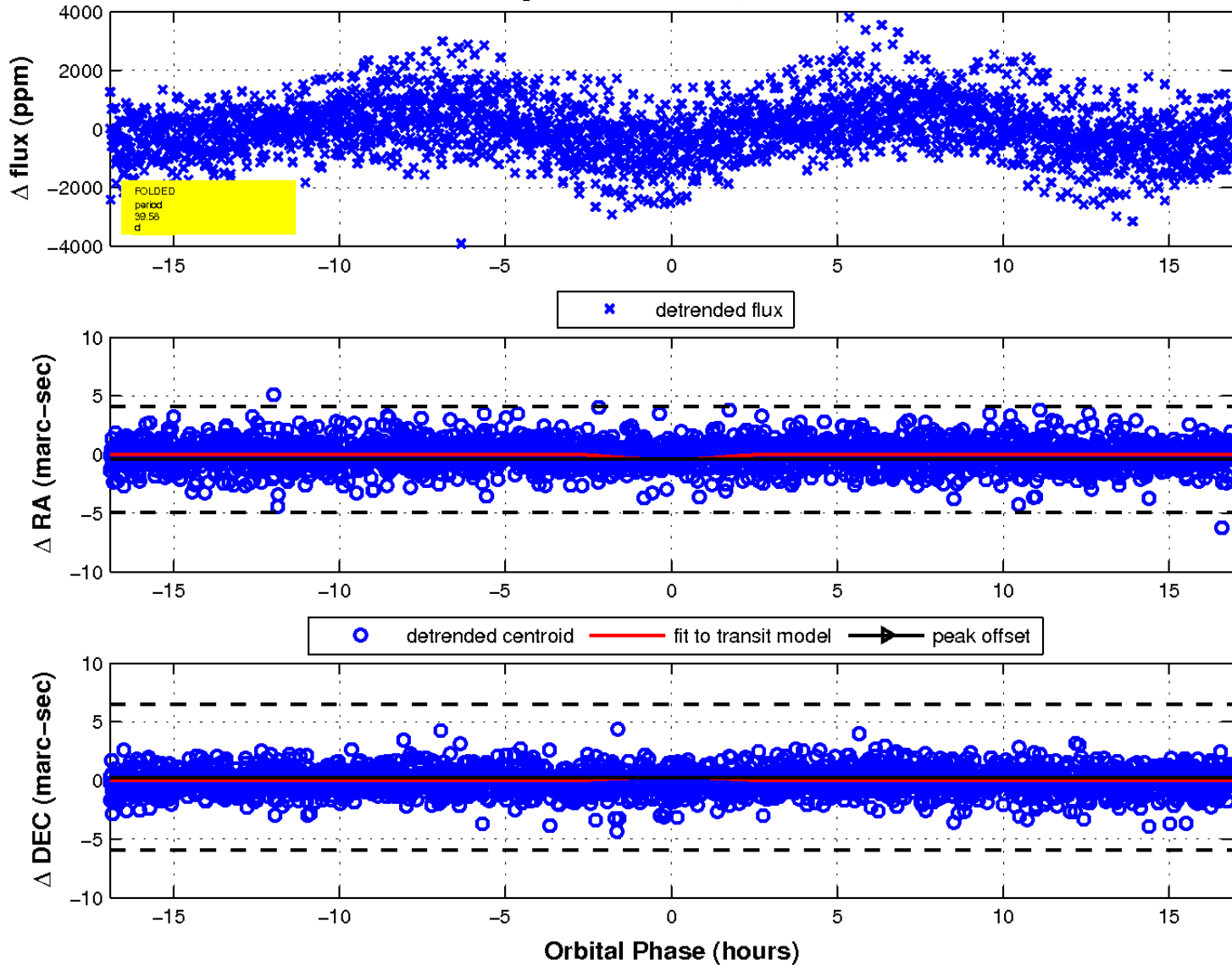
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 5 of 5



UKIRT Image

Declination

