

KIC 009468126

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})
009468126-01	OBS	No	1.436745	132.191634	42.3	8.379	11.1	11.1	1.74	7355	1.14	9725.65
009468126-02	OBS	No	165.543209	264.271278	403.6	1.910	13.3	4.7	1.74	7355	3.96	17.35
009468126-03	OBS	No	507.221426	242.808175	1557.2	118.662	13.4	7.8	1.74	7355	7.65	3.90
009468126-04	OBS	No	95.118570	201.221651	576.8	3.403	9.5	9.4	1.74	7355	7.94	36.31
009468126-05	OBS	No	45.309545	144.970442	286.7	5.402	9.2	9.0	1.74	7355	3.46	97.61
009468126-06	OBS	No	90.036983	132.028979	498.7	2.825	10.0	9.0	1.74	7355	4.51	39.07
009468126-07	OBS	No	99.782394	154.391230	472.5	4.279	9.7	9.4	1.74	7355	4.28	34.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009468126-01	OBS	FP	0.00	1	0	0	0	LPP_DV
009468126-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
009468126-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
009468126-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
009468126-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
009468126-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
009468126-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

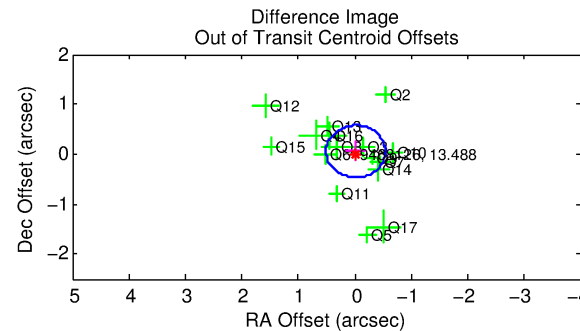
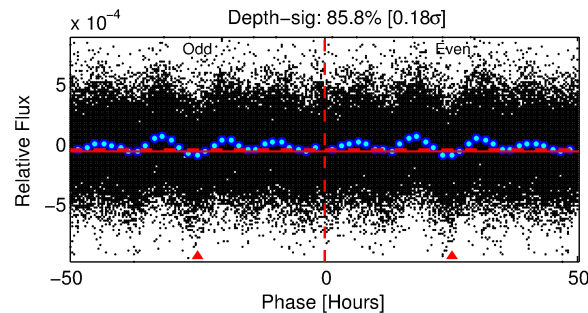
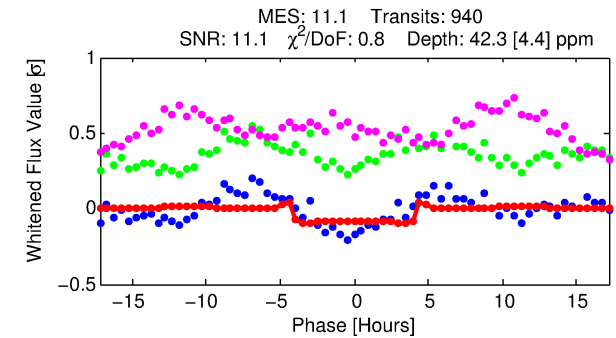
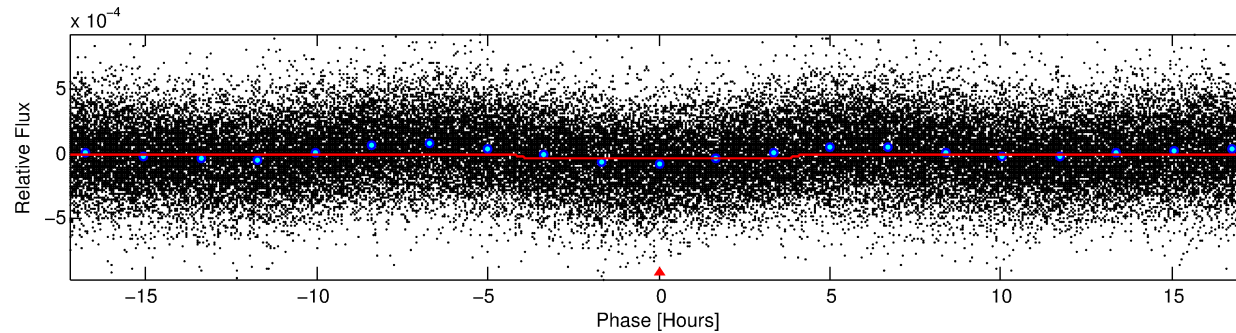
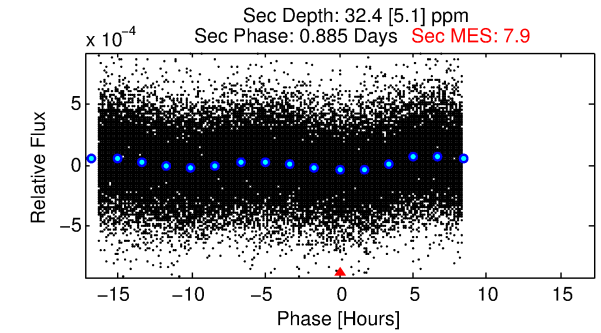
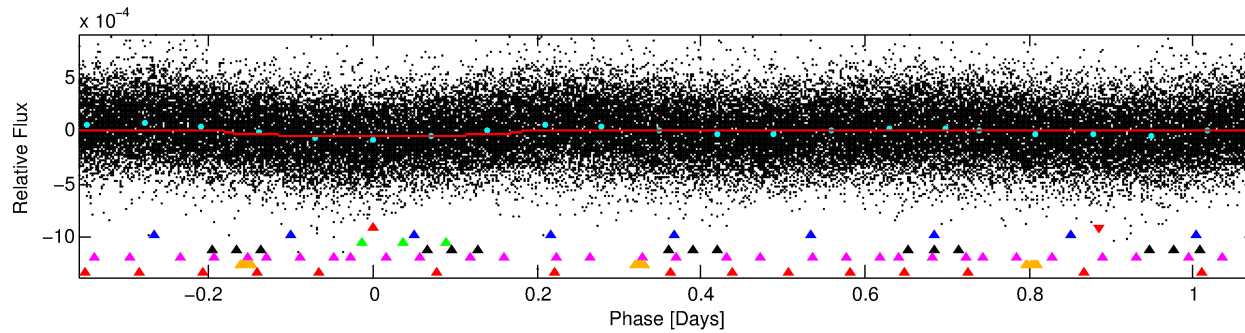
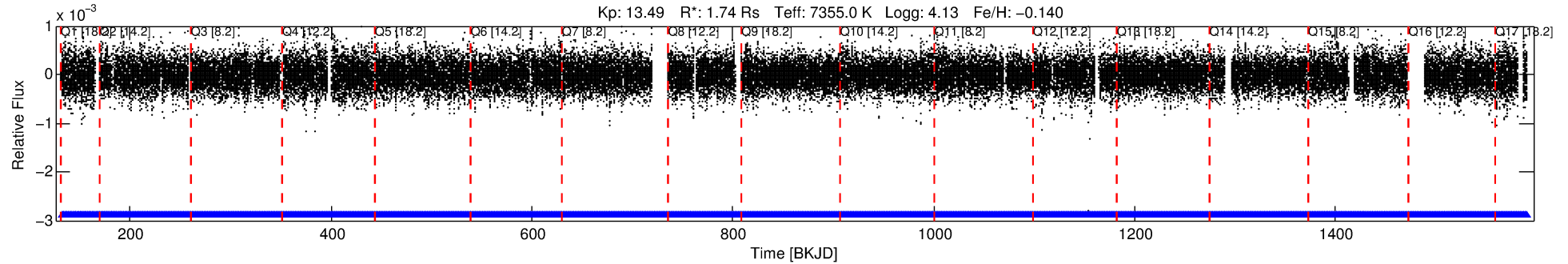
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009468126-01

No Significant Match Found

DV One-Page Summary

KIC: 9468126 Candidate: 1 of 7 Period: 1.437 d



DV Fit Results:

Period = 1.43675 [0.00001] d
Epoch = 132.1916 [0.0032] BKJD
Rp/R* = 0.0060 [0.0041]
a/R* = 1.45 [3.06]
b = 0.02 [192.60]
Seff = 9725.65 [3658.05]
Teq = 2532 [238] K
Rp = 1.14 [0.85] Re
a = 0.0285 [0.0069] AU
Ag = 11.12 [15.65] [0.65σ]
Teffp = 7149 [2461] K [1.87σ]

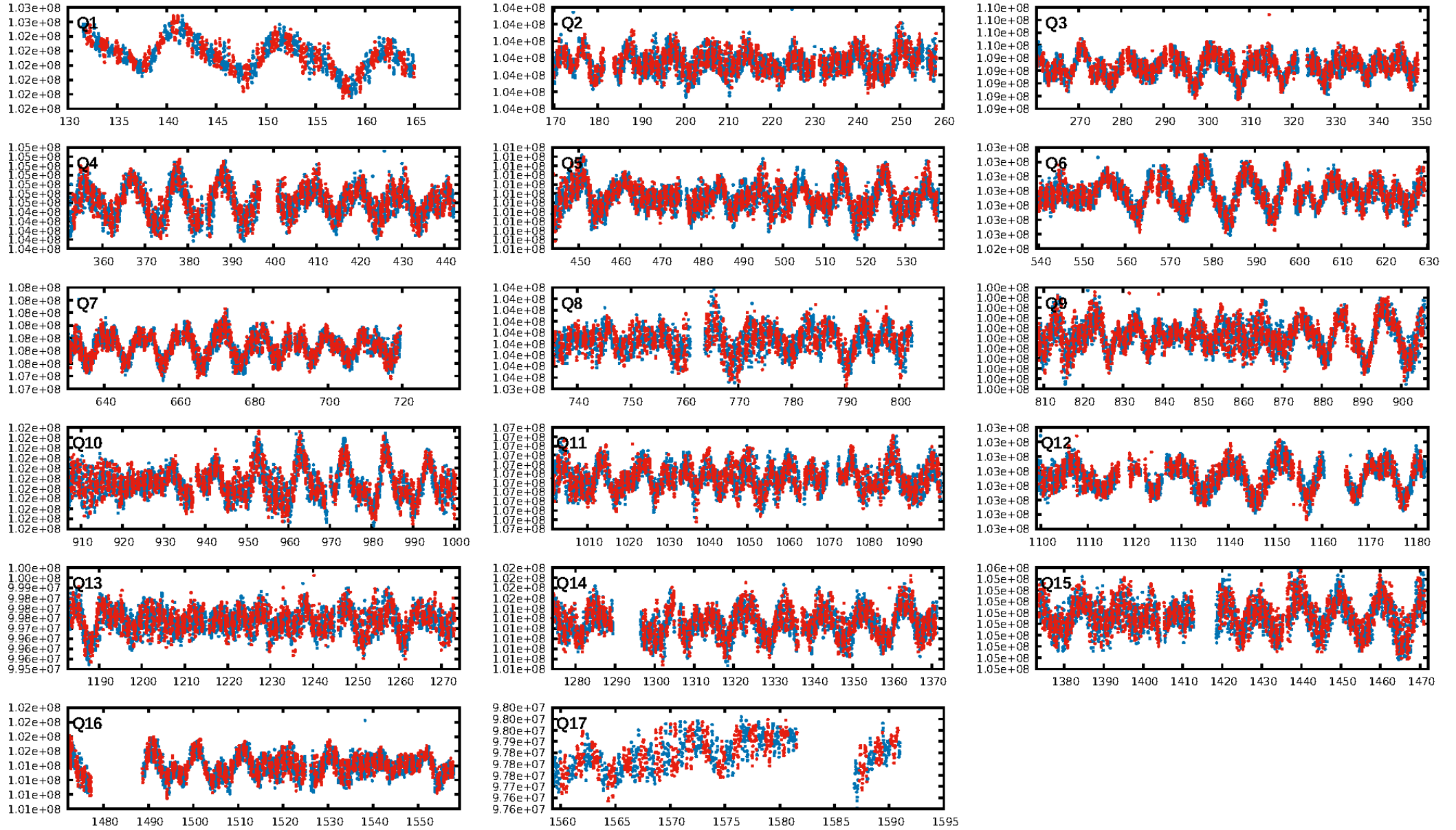
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [105.62σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [899/899]
GhostDiagnostic-chr: 2.1
Centroid-sig: 0.0%
Centroid-so: 0.771 arcsec [1.79σ]
OotOffset-rm: 0.057 arcsec [0.33σ]
KicOffset-rm: 0.144 arcsec [0.80σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 1.00 [16/16]
DiffImageOverlap-fno: 1.00 [17/17]

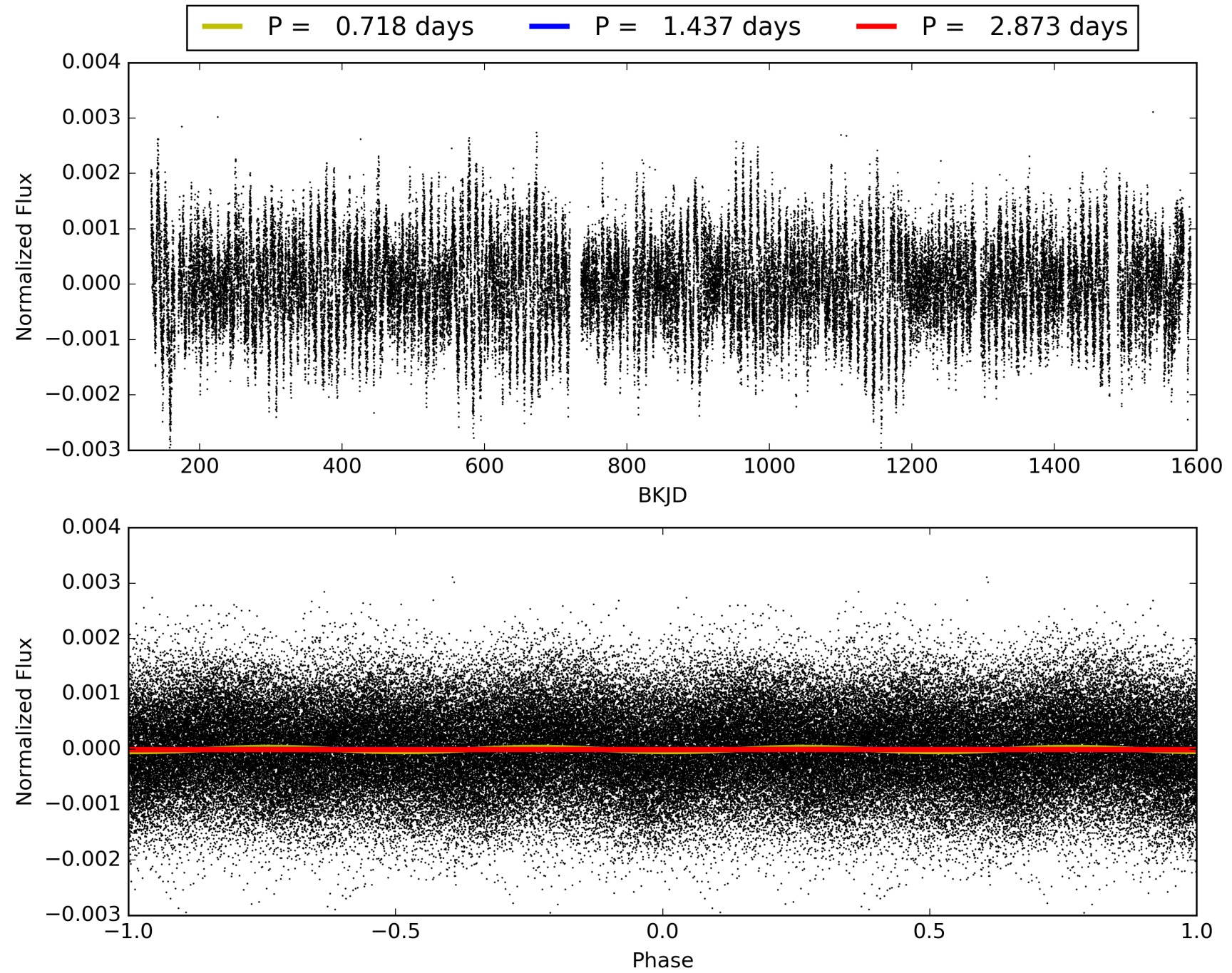
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:09:17 Z

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

TCE 009468126-01, PDC Light Curves

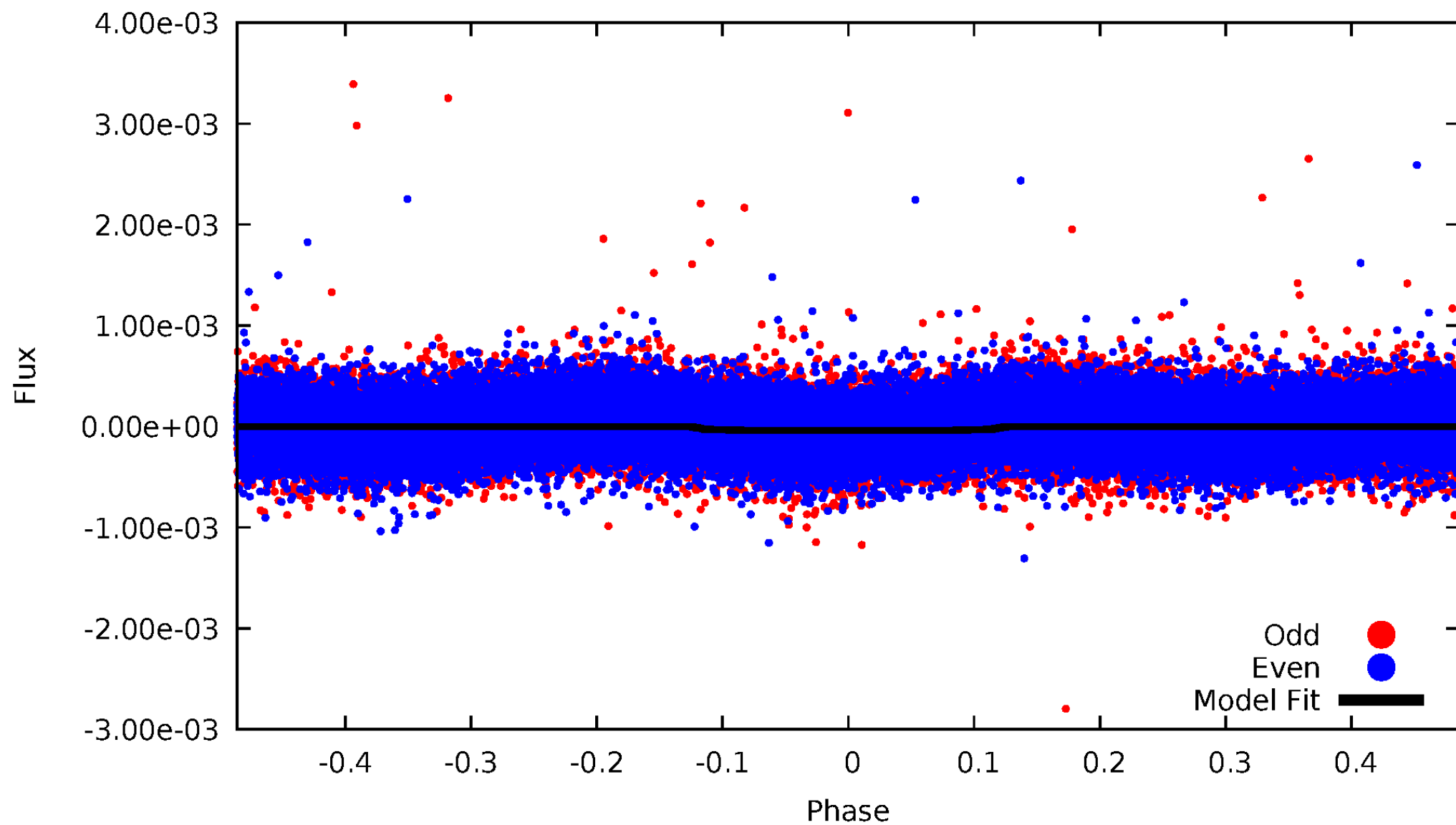


TCE 009468126-01



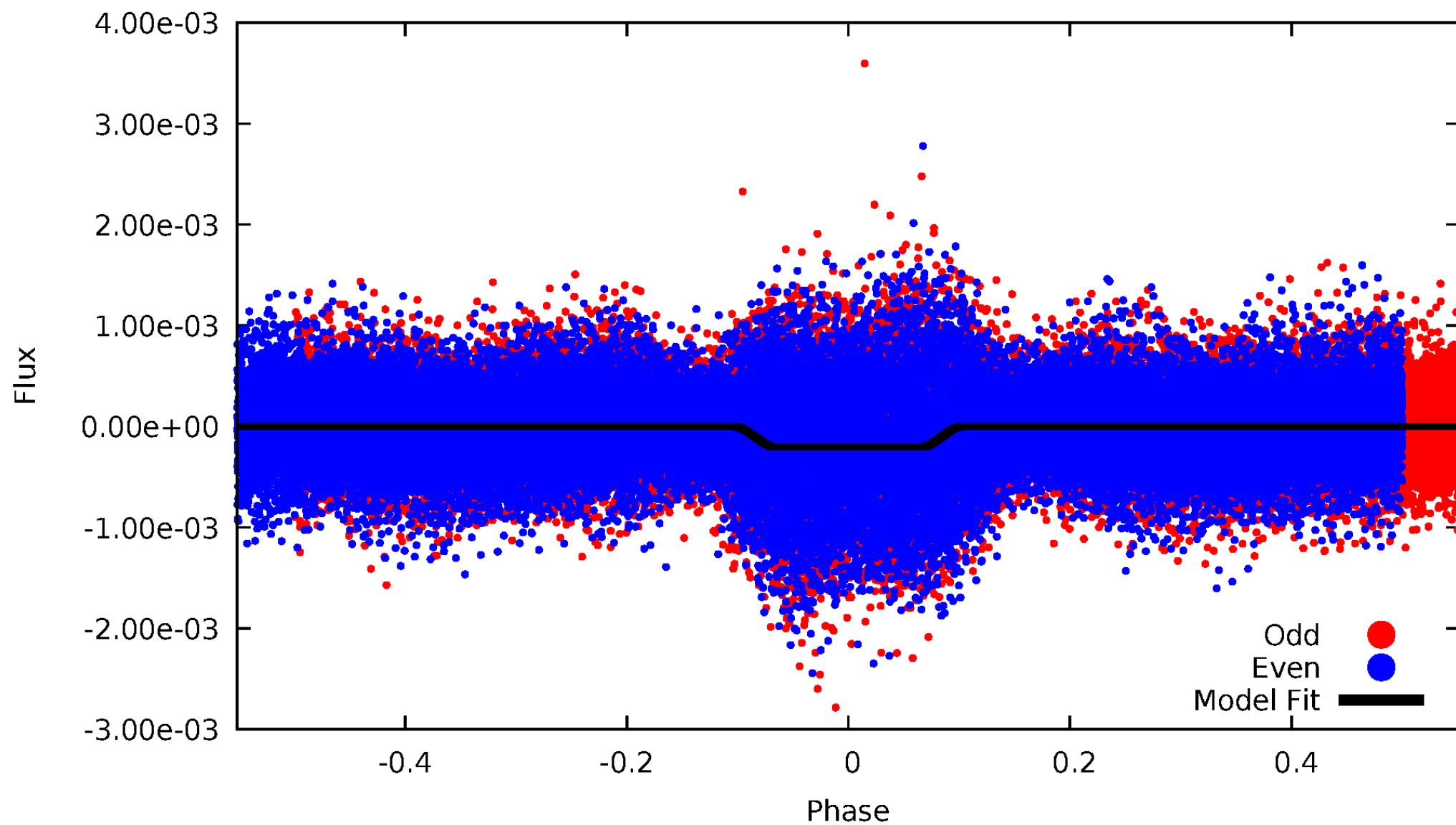
DV Odd/Even

TCE 009468126-01



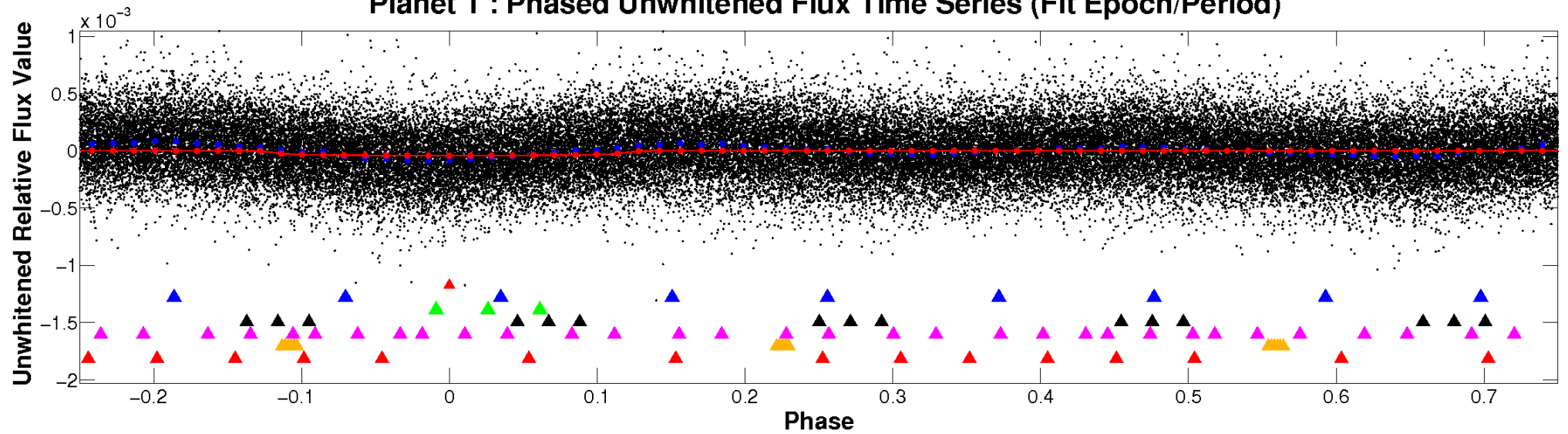
ALT Odd/Even

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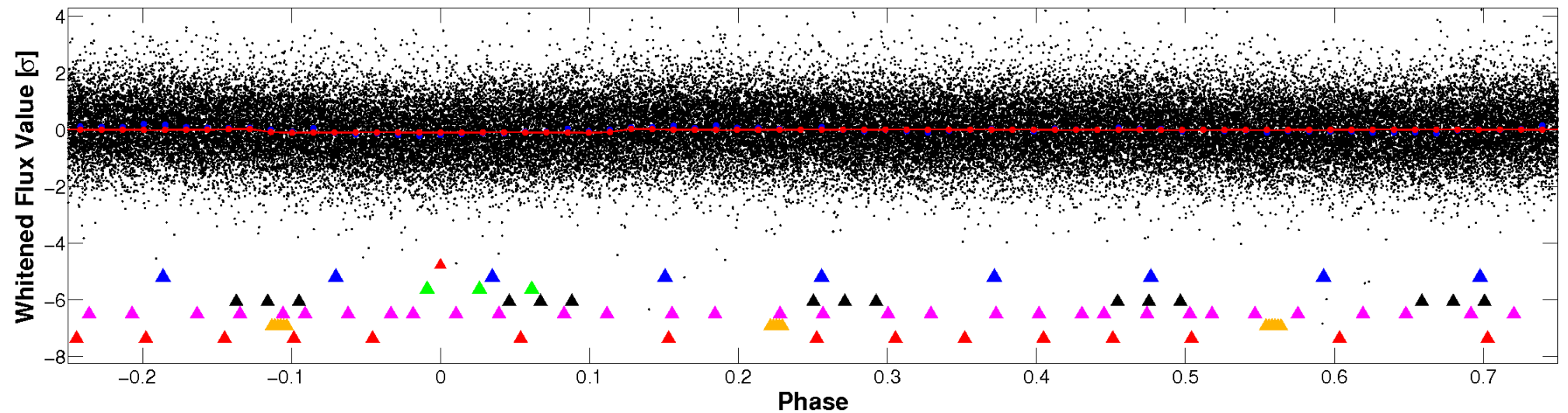


Non-Whitened Vs. Whitened Light Curve

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

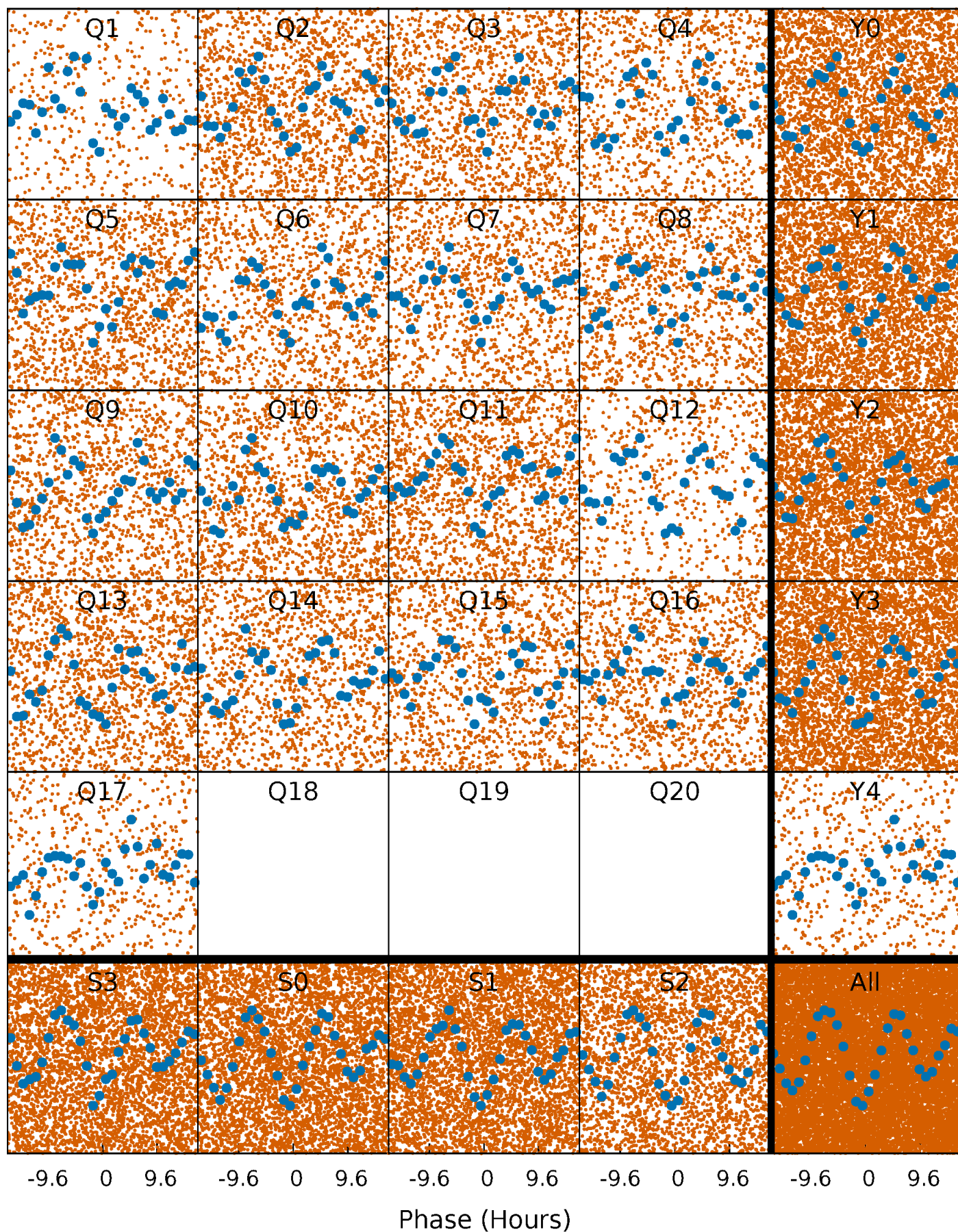


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



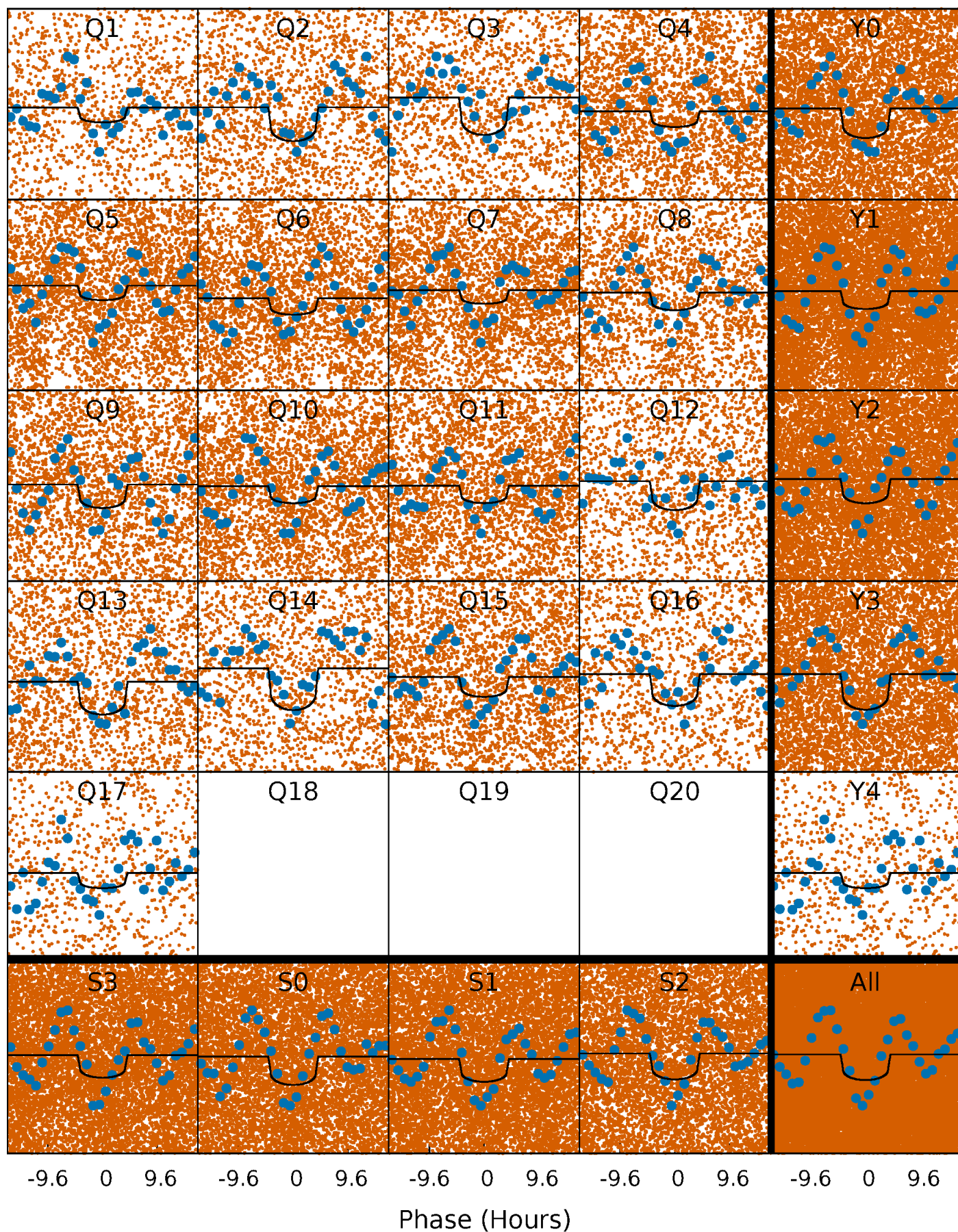
PDC Quarter-Phased Transit Curves

TCE 009468126-01 P= 1.436745 Days $T_0=132.191634$ (BKJD)



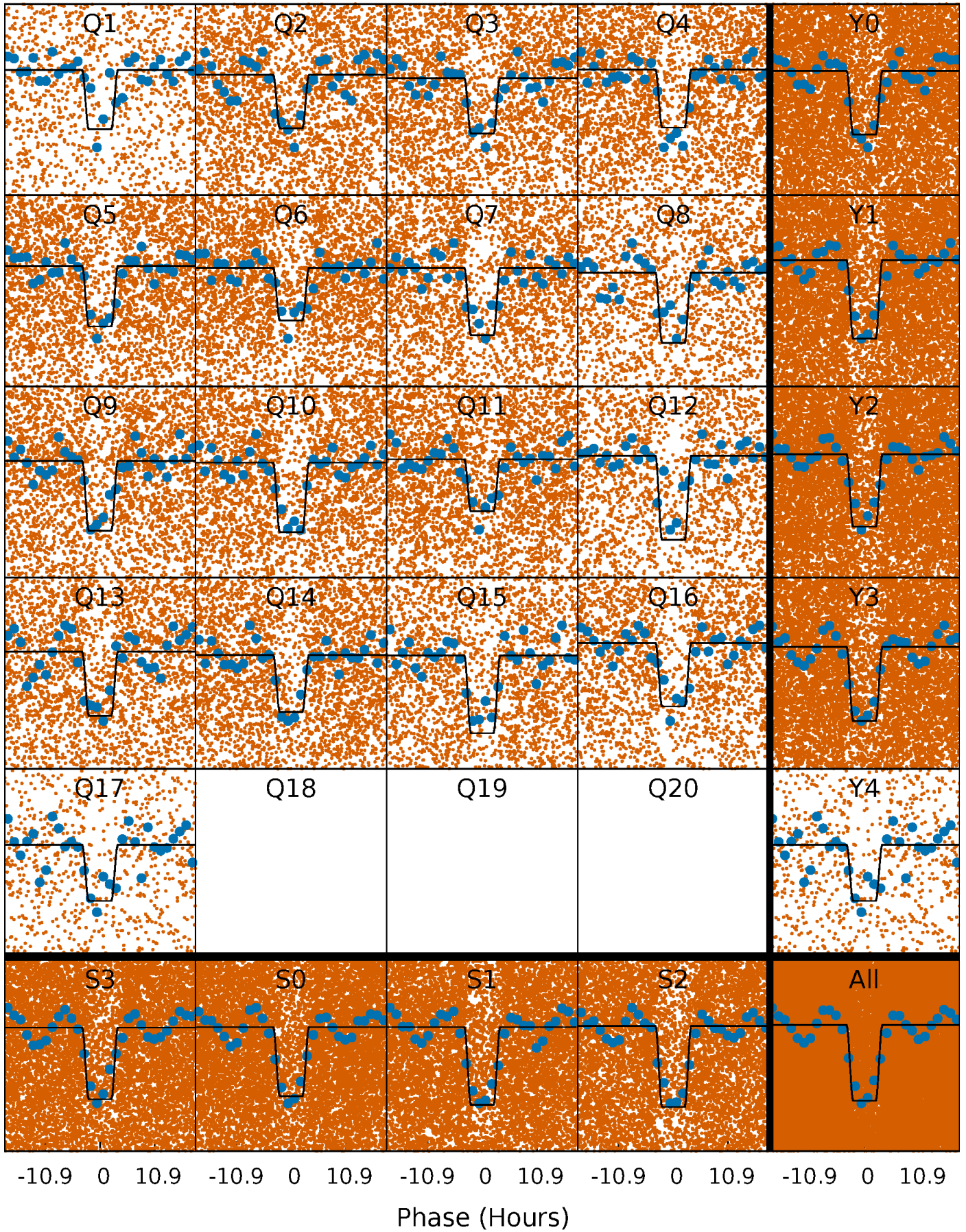
DV Quarter-Phased Transit Curves

TCE 009468126-01 P= 1.436745 Days $T_0=132.191634$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

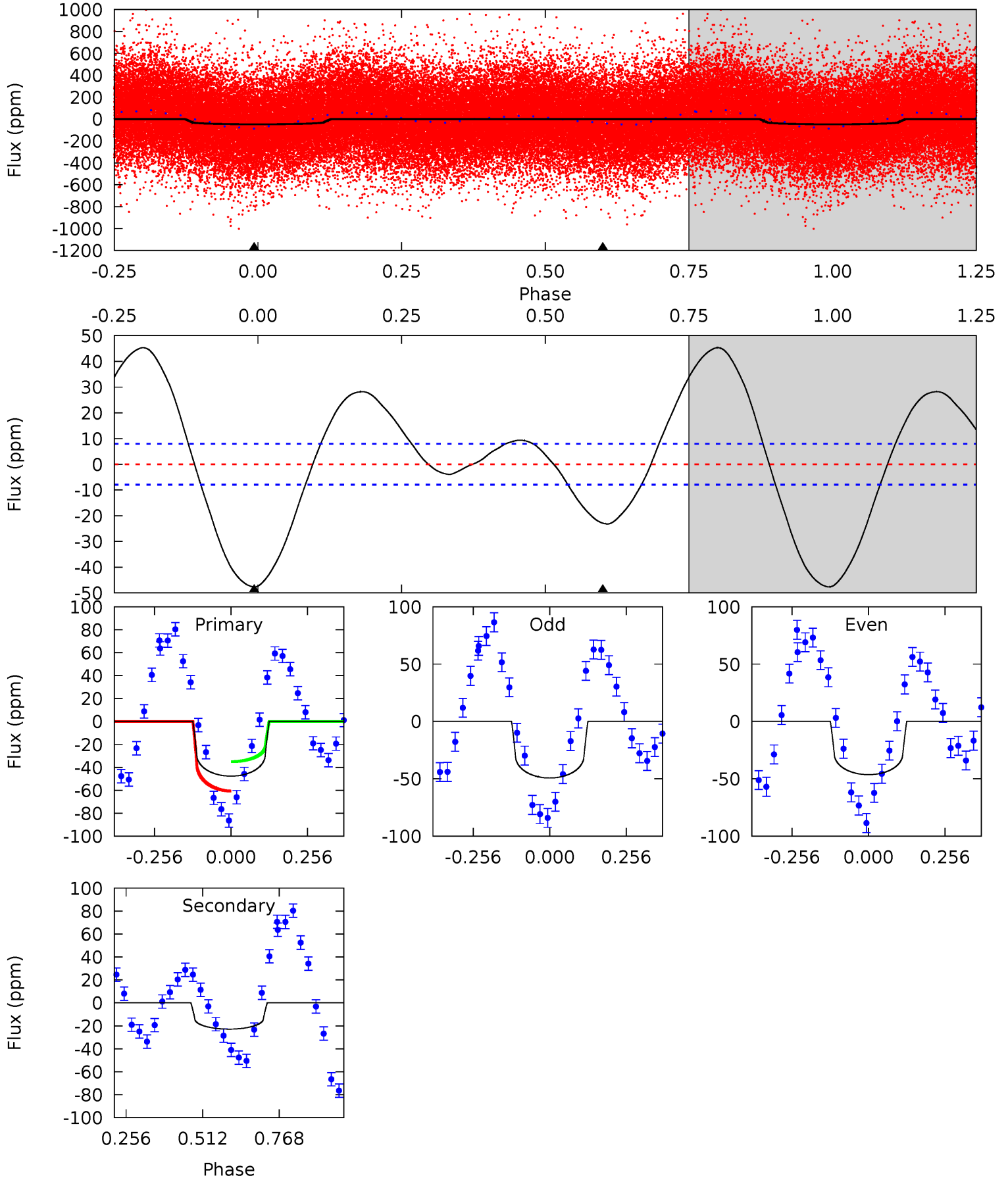
TCE 009468126-01 P= 1.436747 Days $T_0=132.169706$ (BKJD)



DV Model-Shift Uniqueness Test

009468126-01, P = 1.436745 Days, E = 130.754889 Days

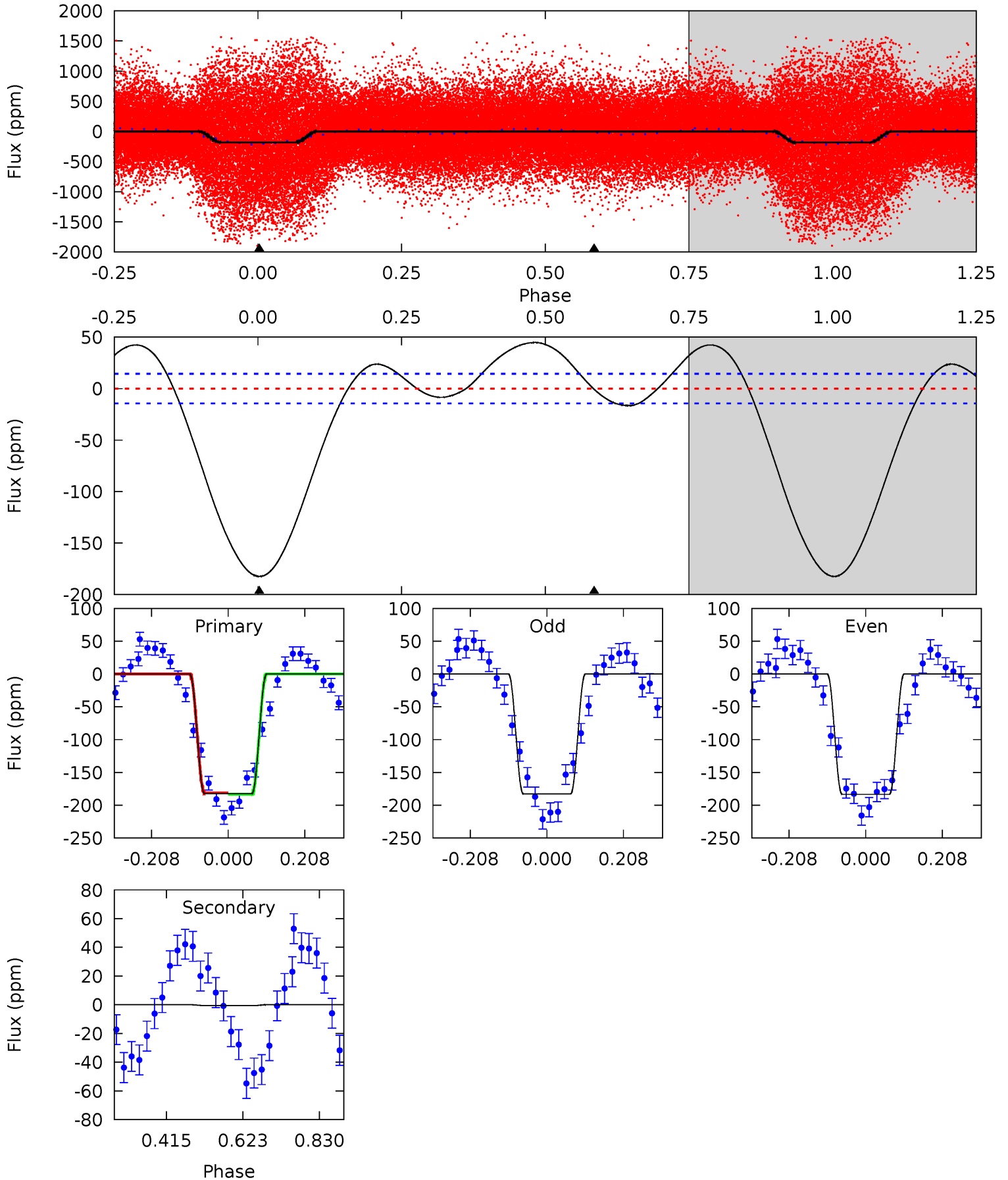
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.1	12.5	0	0	4.36	1.14	3.13	26.1	26.1	12.5	12.5	0.79	1.09	0.49	6.89



Alt Model-Shift Uniqueness Test

009468126-01, P = 1.436747 Days, E = 130.732959 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
56.0	0.18	0	0	4.41	1.26	3.47	56.0	56.0	0.18	0.18	0.10	1.26	0.20	0.32



Stellar Parameters For KIC 009468126

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7355^{+230}_{-307}	$4.134^{+0.144}_{-0.176}$	$-0.140^{+0.200}_{-0.350}$	$1.737^{+0.525}_{-0.393}$	$1.497^{+0.209}_{-0.232}$	$0.402^{+0.296}_{-0.196}$
	+3%/-4%	+3%/-4%	+143%/-250%	+30%/-23%	+14%/-15%	+74%/-49%
Source	KIC0	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 009468126-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-23 ± 2	$1.21^{+0.75}_{-0.65}$	3547^{+290}_{-232}	6172^{+3900}_{-1288}	$6.895^{+26.151}_{-4.277}$
Alt.	-1 ± 3	$2.79^{+0.97}_{-0.88}$	3539^{+263}_{-234}	-3306^{+802}_{-365}	$0.045^{+0.224}_{-0.205}$

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 $A_{obs} \gg 1.0$

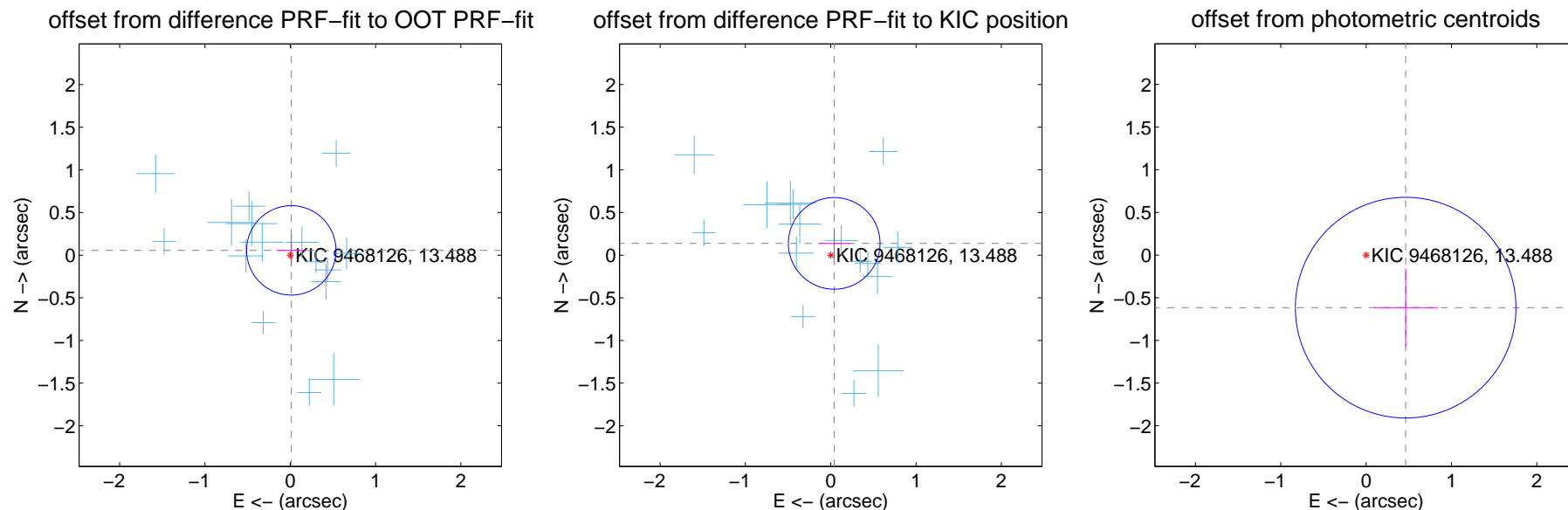
DV Centroid Data

Supplemental centroid analysis for 009468126-01. Kepler magnitude: 13.49. Transit SNR 11.13

There are 16 quarters with good PRF difference image offsets

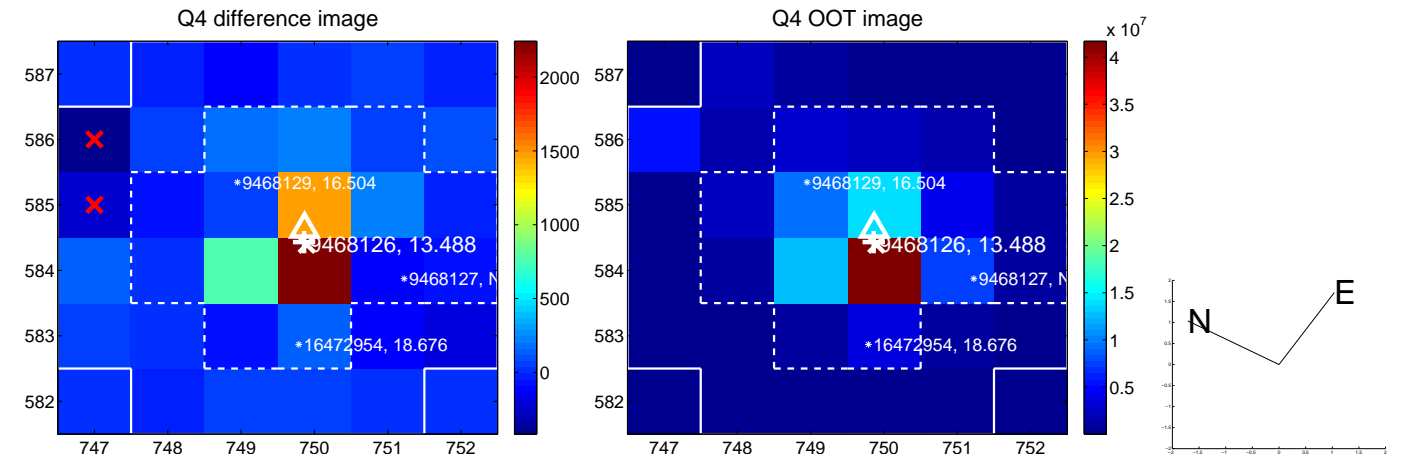
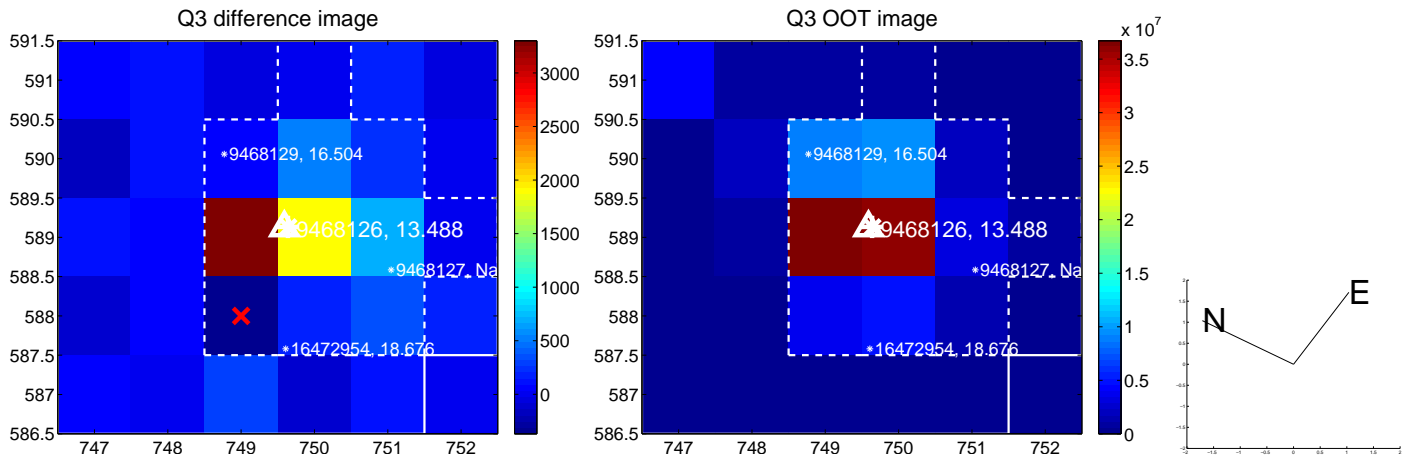
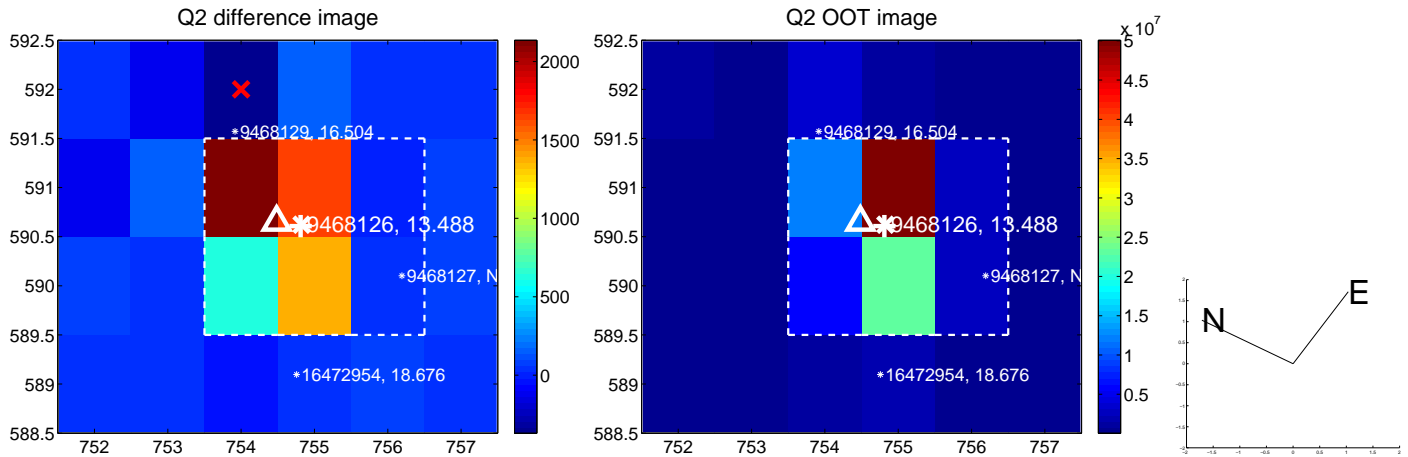
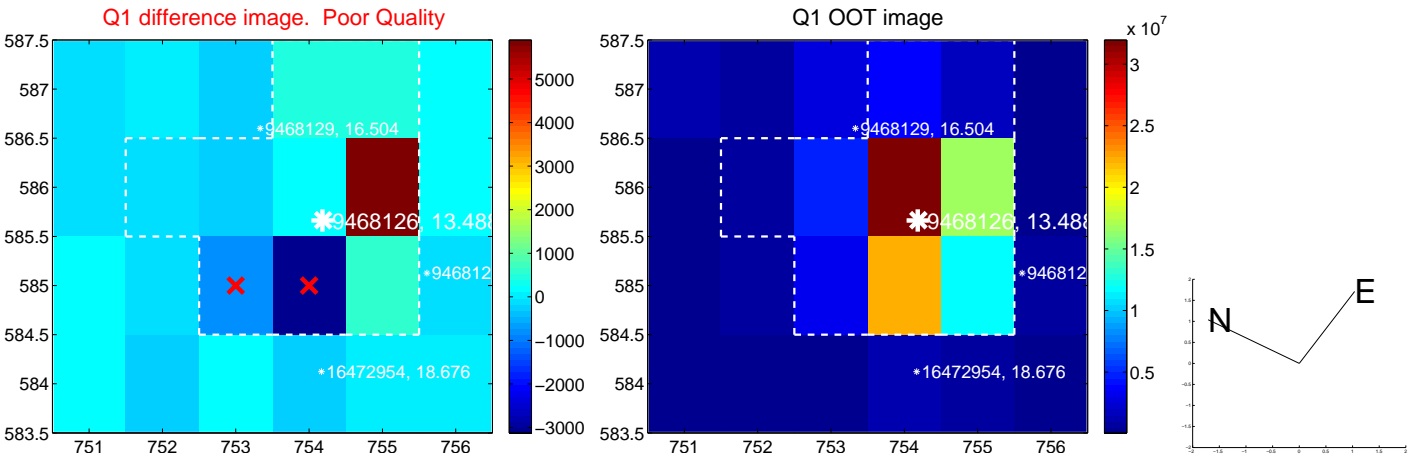
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.057 ± 0.175	0.33	-0.012 ± 0.174	0.056 ± 0.187
PRF-fit source offset from KIC position	0.144 ± 0.179	0.80	-0.041 ± 0.185	0.138 ± 0.179
photometric centroid source offset	0.77 ± 0.43	1.79	-0.46 ± 0.37	-0.62 ± 0.46

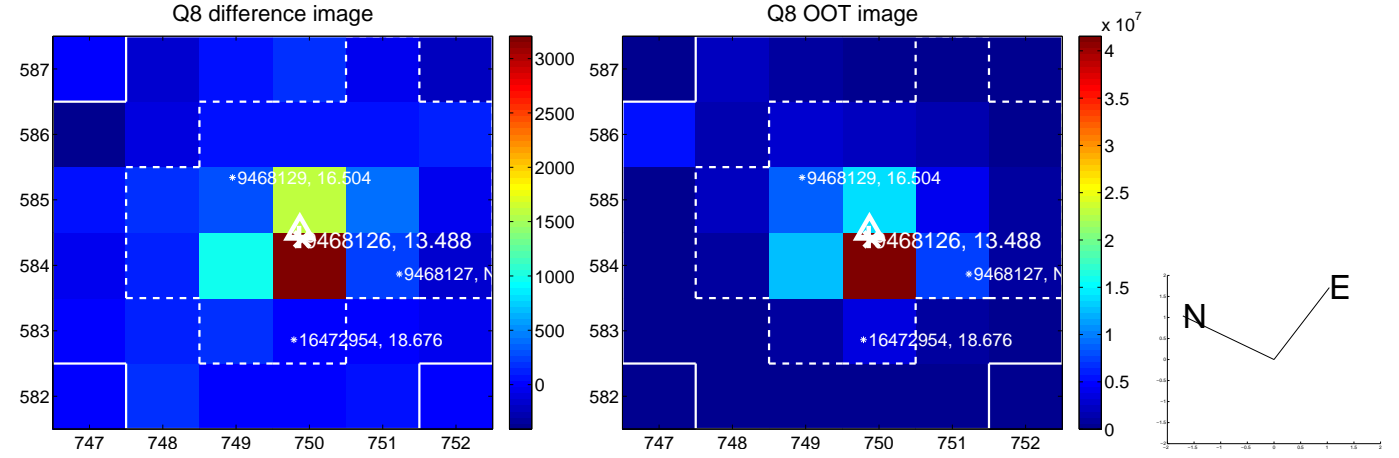
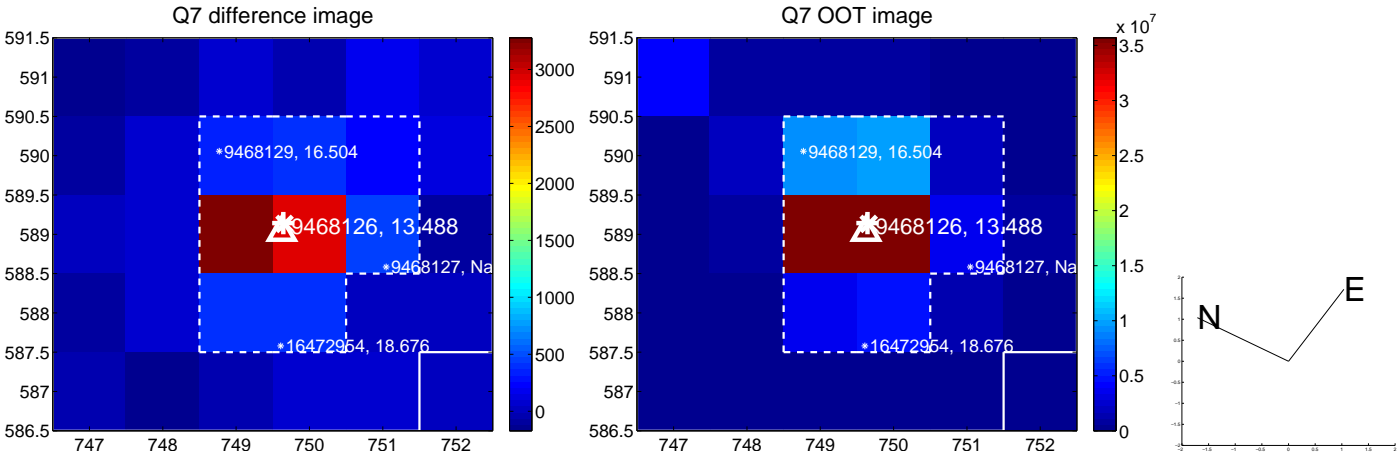
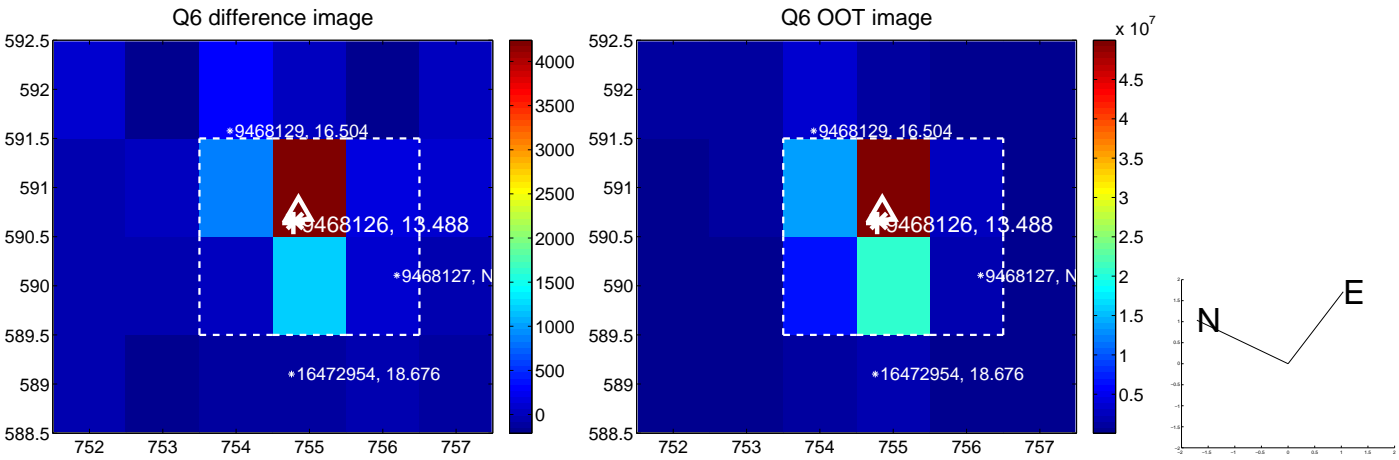
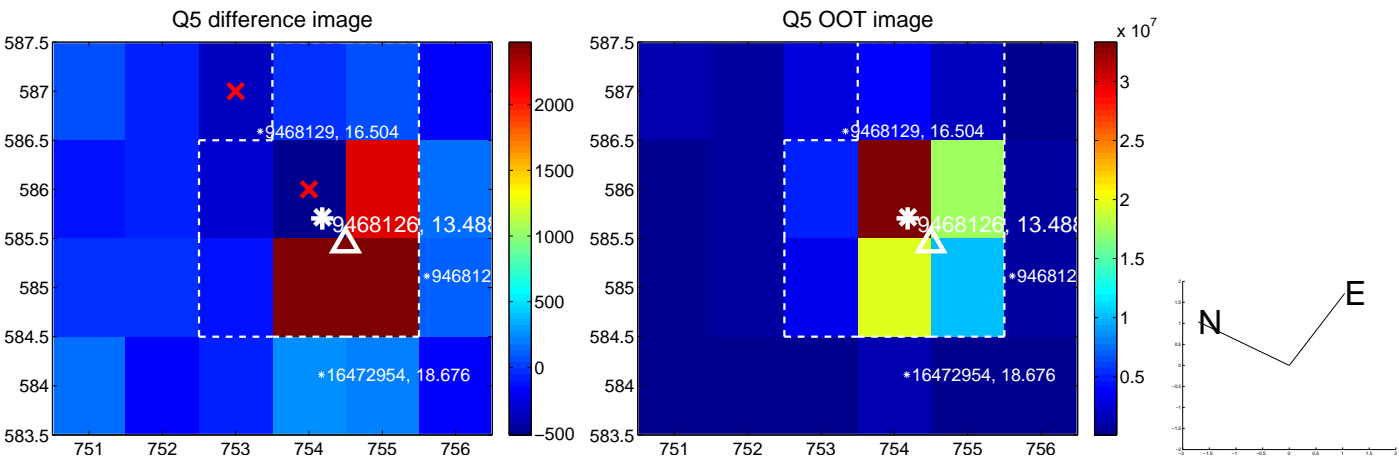


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

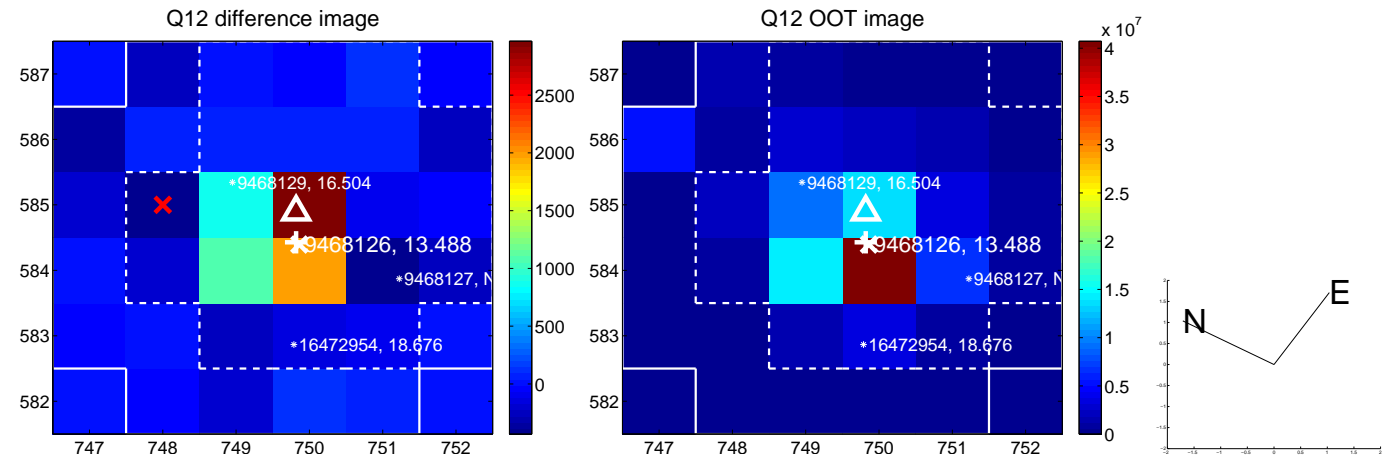
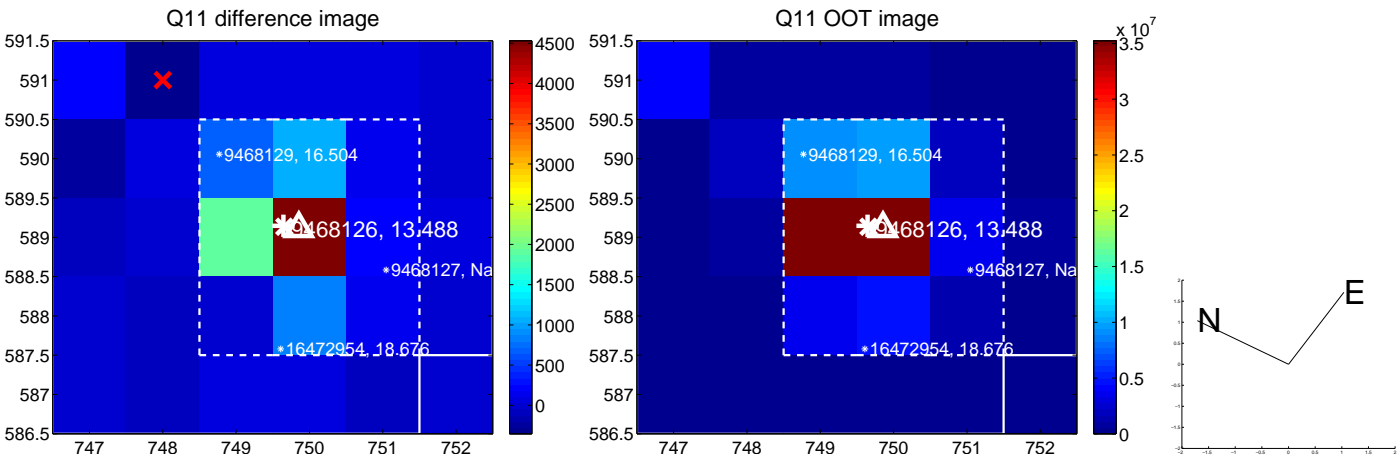
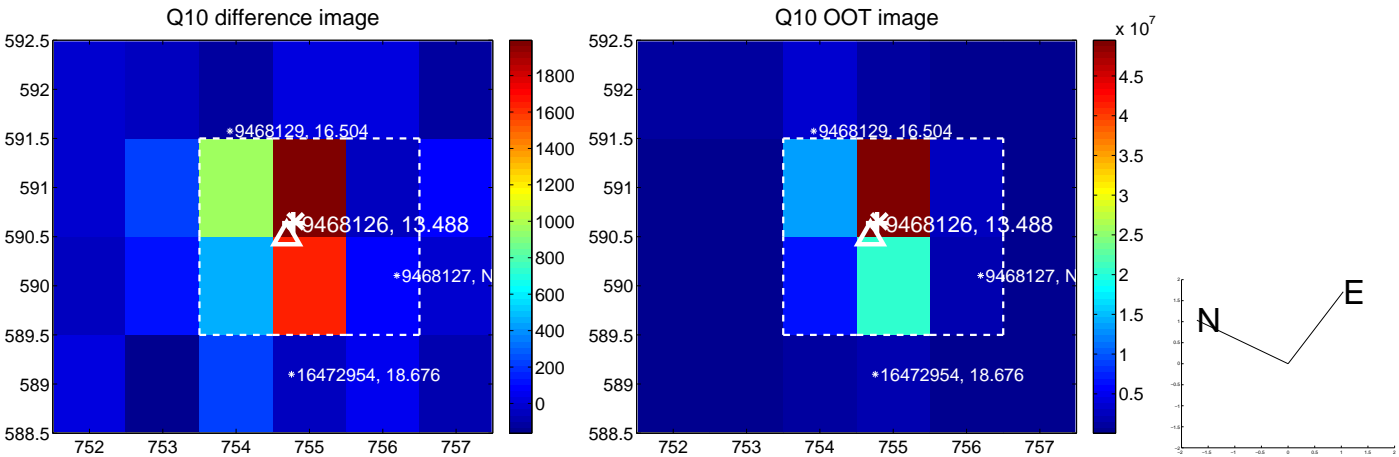
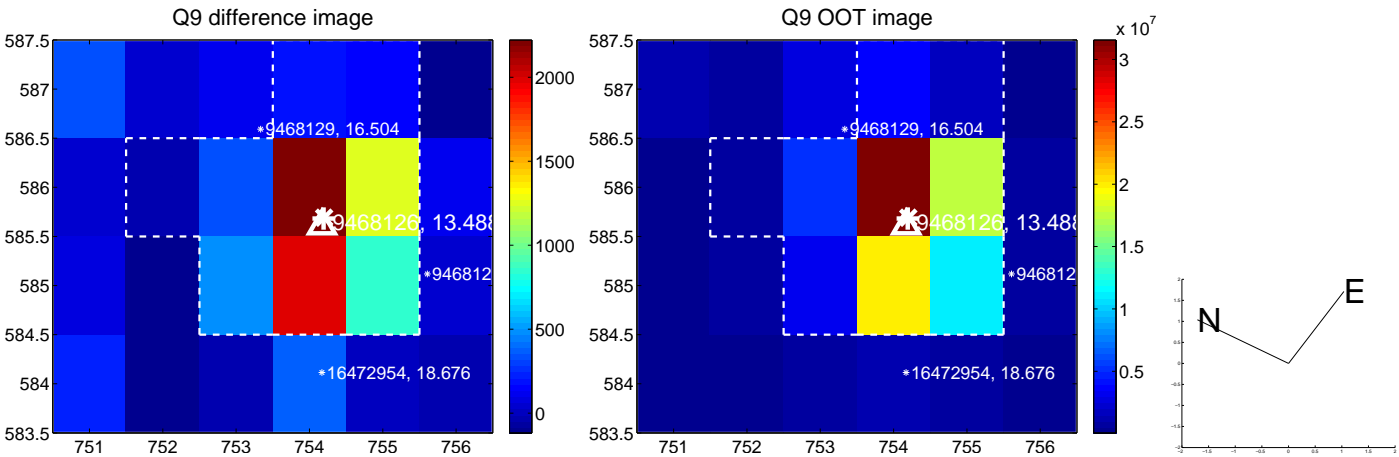
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



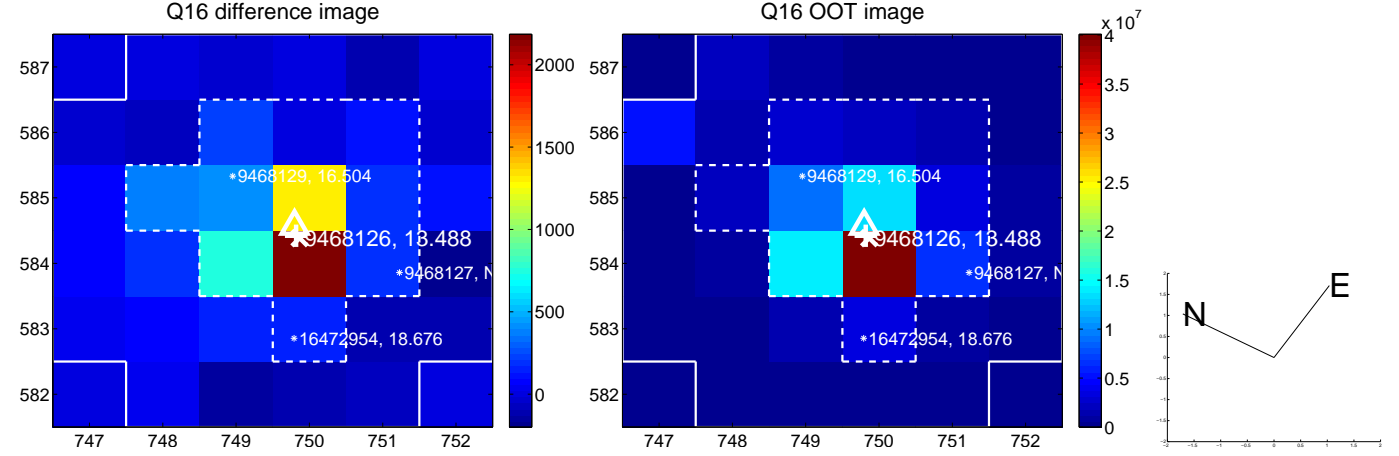
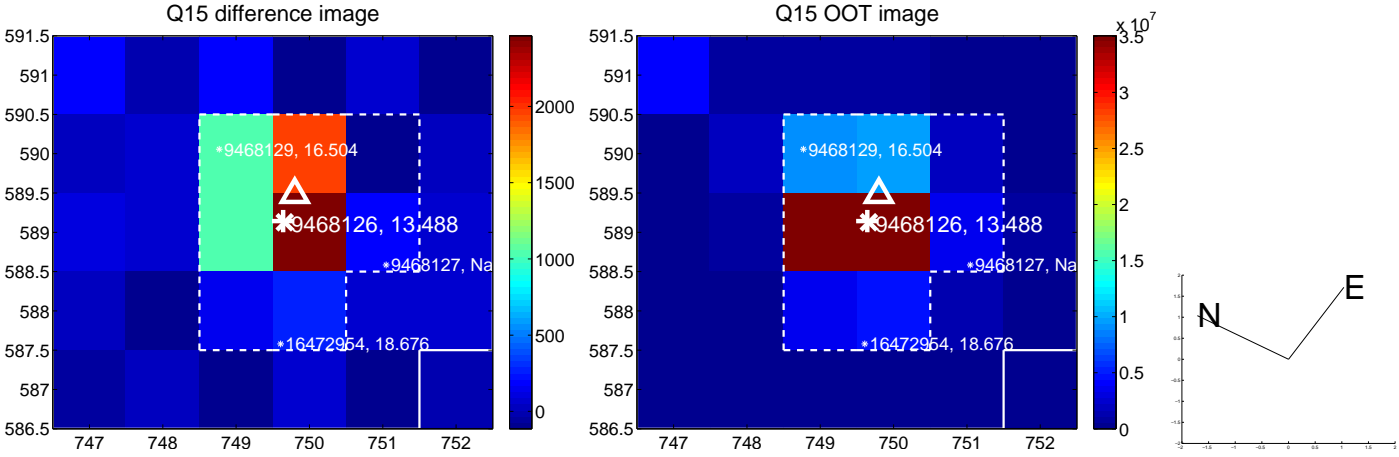
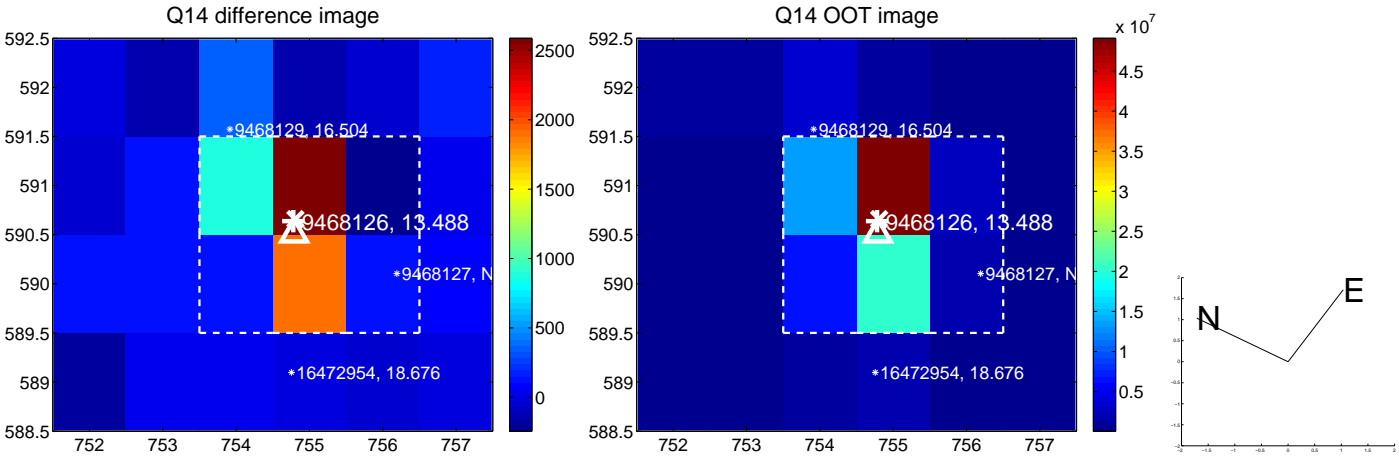
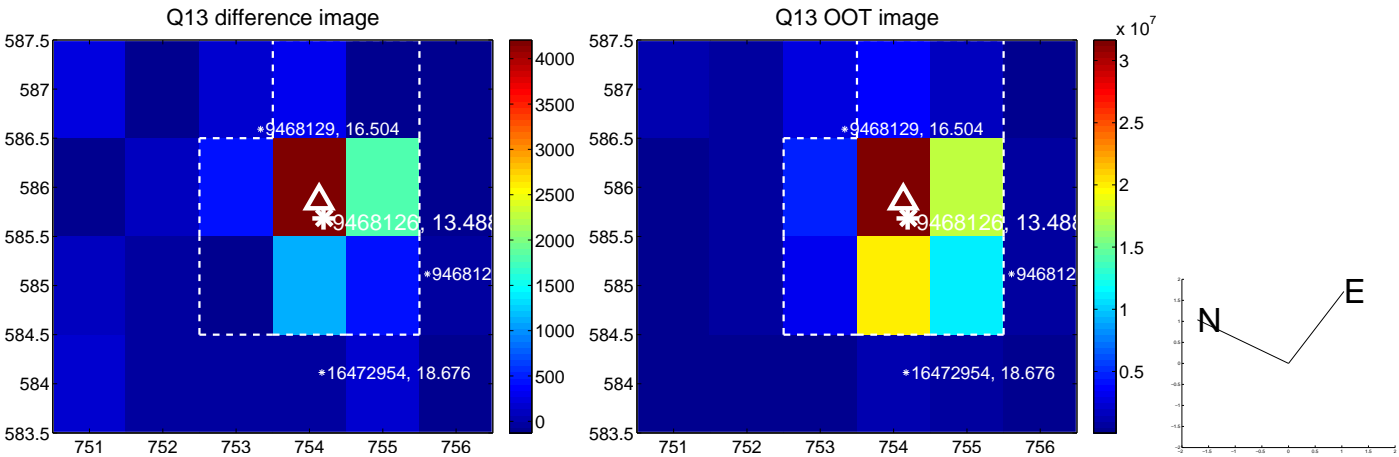
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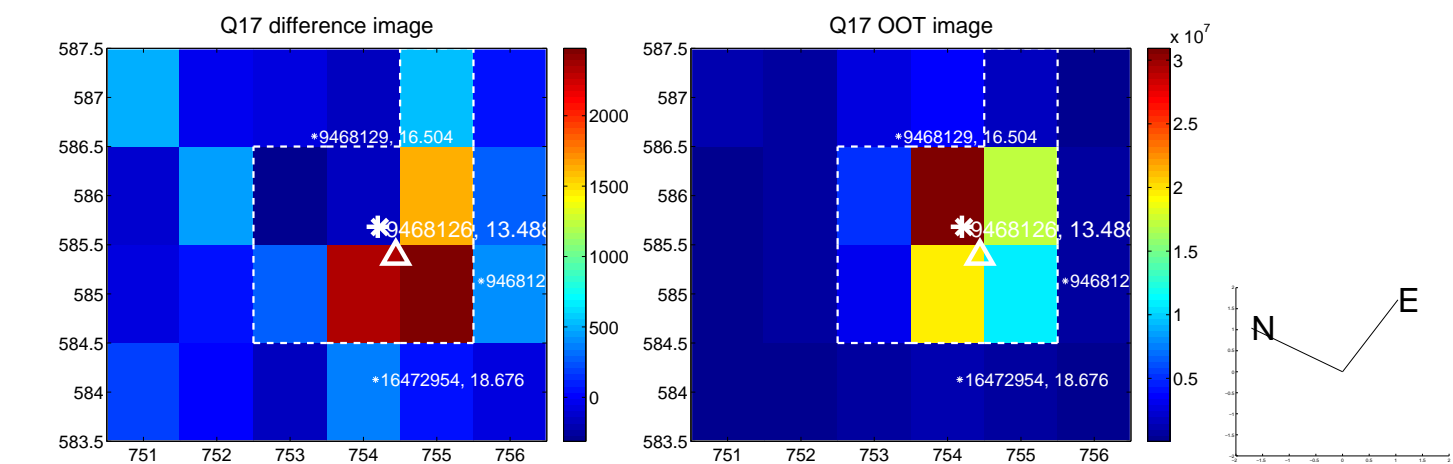
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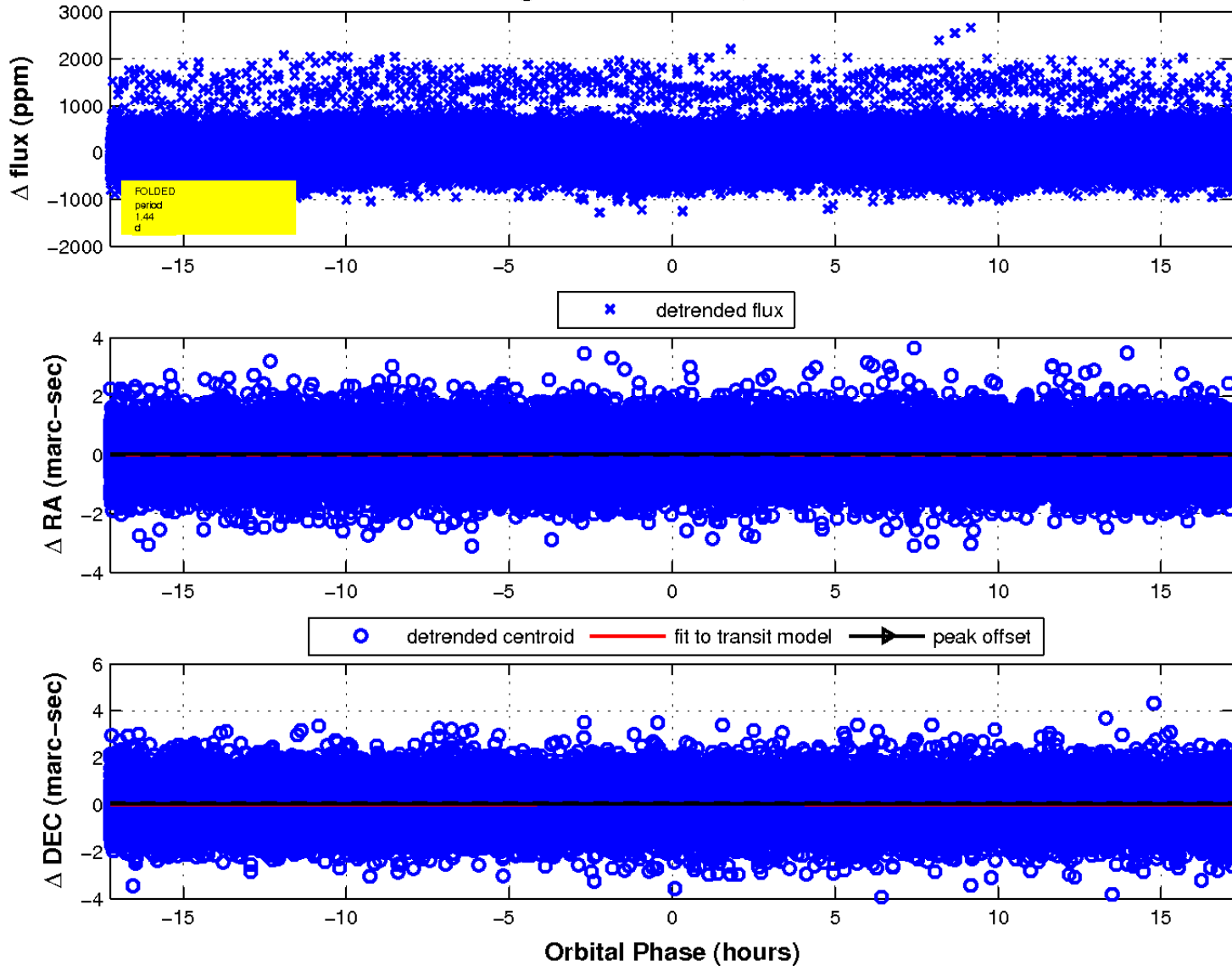
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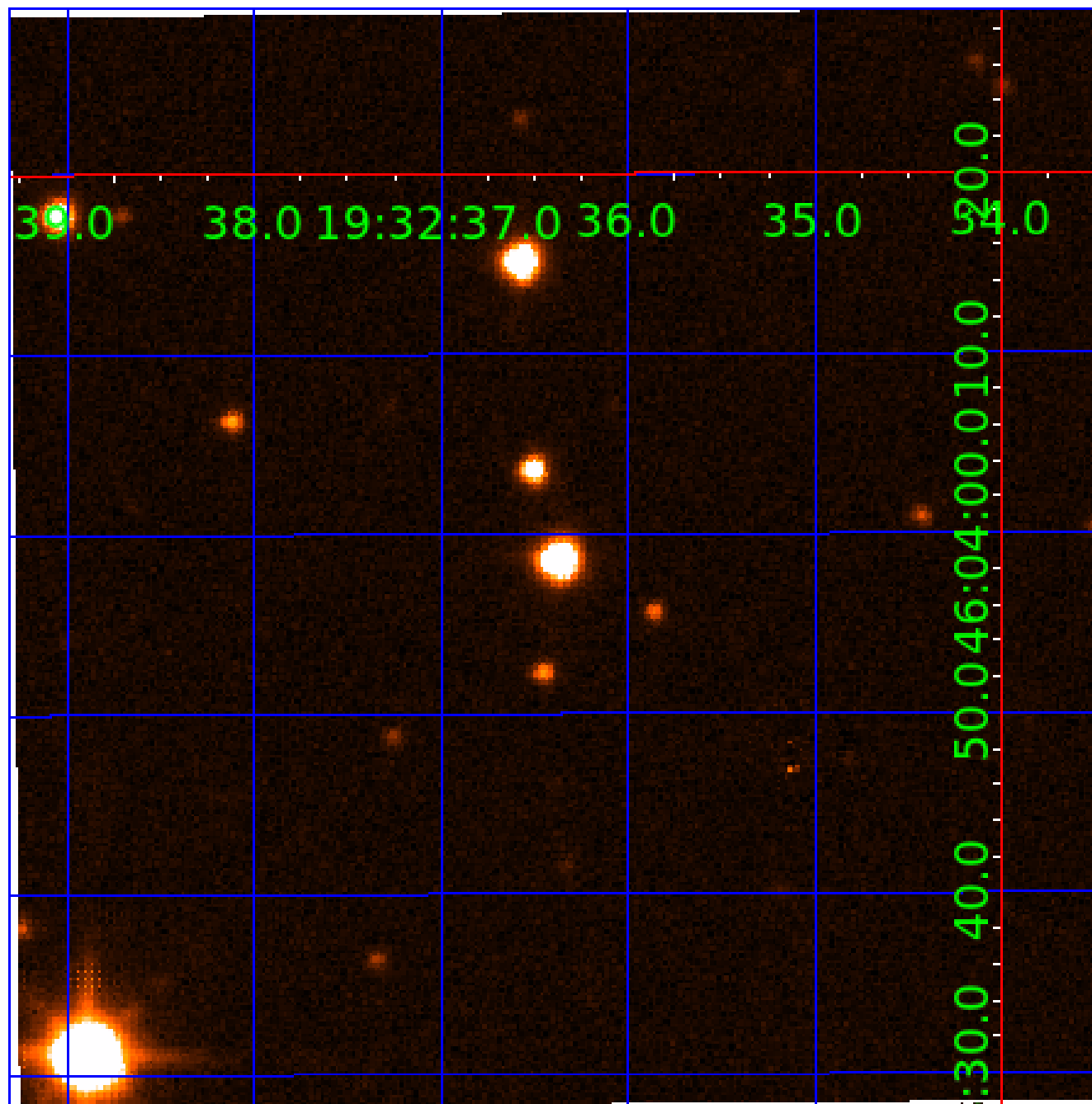


fluxWeightedCentroids, Planet 1 of 7



UKIRT Image

Declination



KIC 009468126

Q1-17 DR25 TCE Parameters

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009468126-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
009468126-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
009468126-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
009468126-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
009468126-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

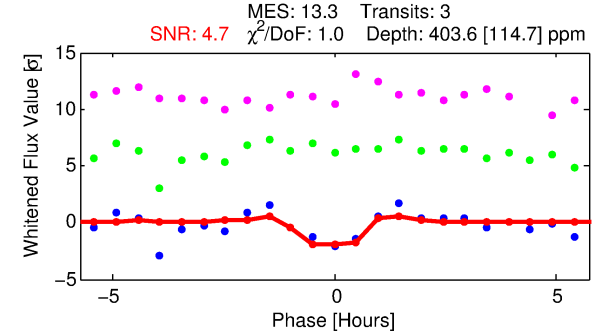
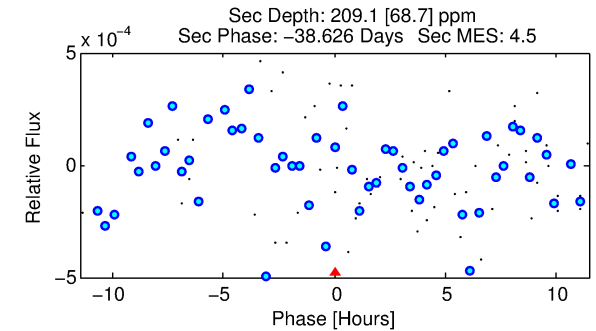
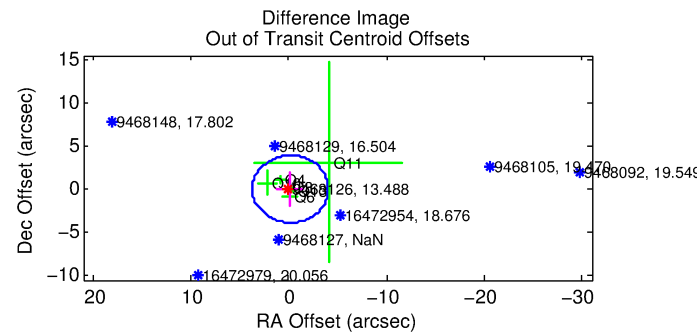
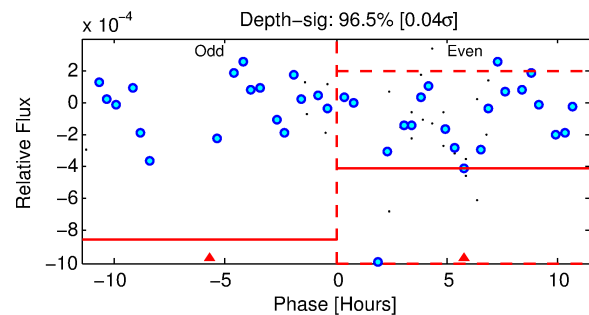
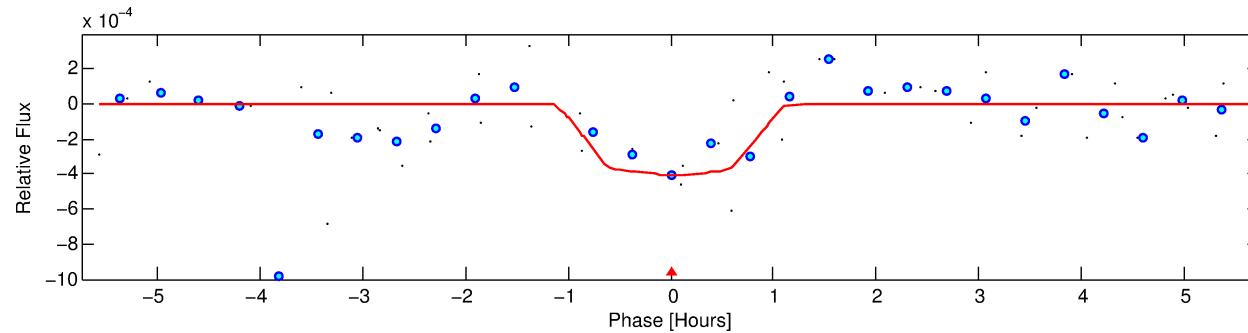
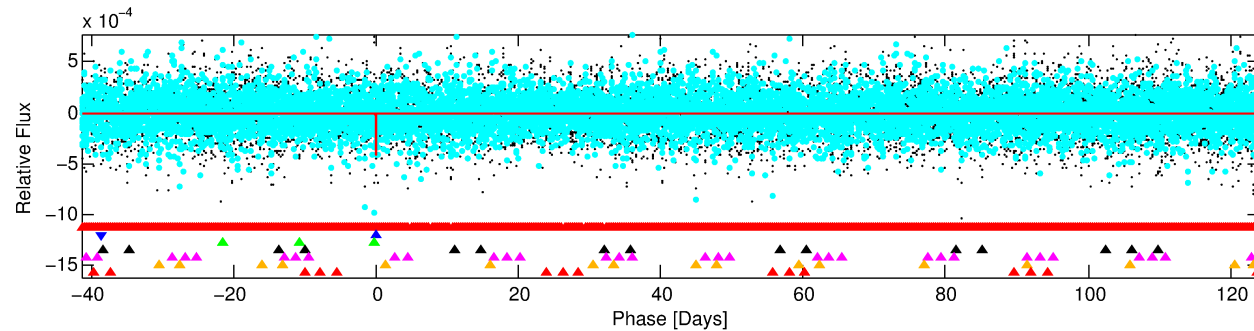
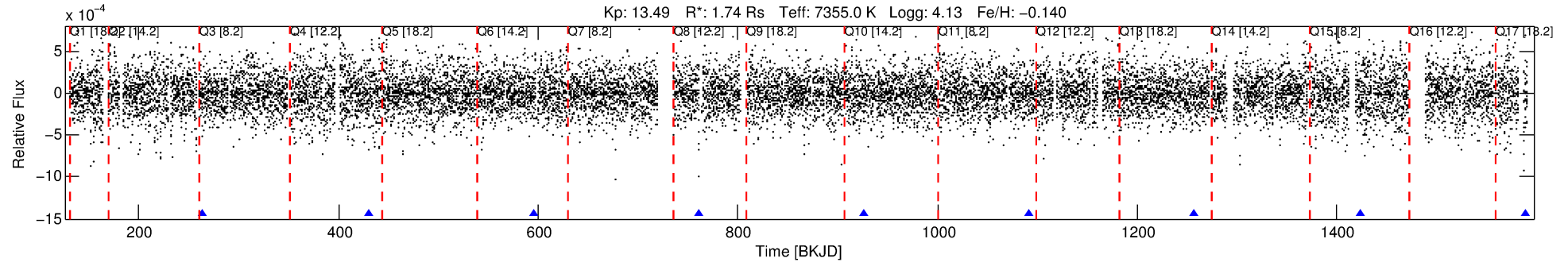
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009468126-02

No Significant Match Found

DV One-Page Summary

KIC: 9468126 Candidate: 2 of 7 Period: 165.543 d



DV Fit Results:

Period = 165.54321 [0.00265] d
Epoch = 264.2713 [0.0123] BKJD
Rp/R* = 0.0209 [0.0204]
a/R* = 360.81 [2045.57]
b = 0.86 [1.69]
Seff = 17.35 [6.52]
Teq = 520 [49] K
Rp = 3.97 [4.04] Re
a = 0.6753 [0.1638] AU
Ag = 3336.34 [6688.30] [0.50 σ]
Teffp = 6115 [3032] K [1.85 σ]

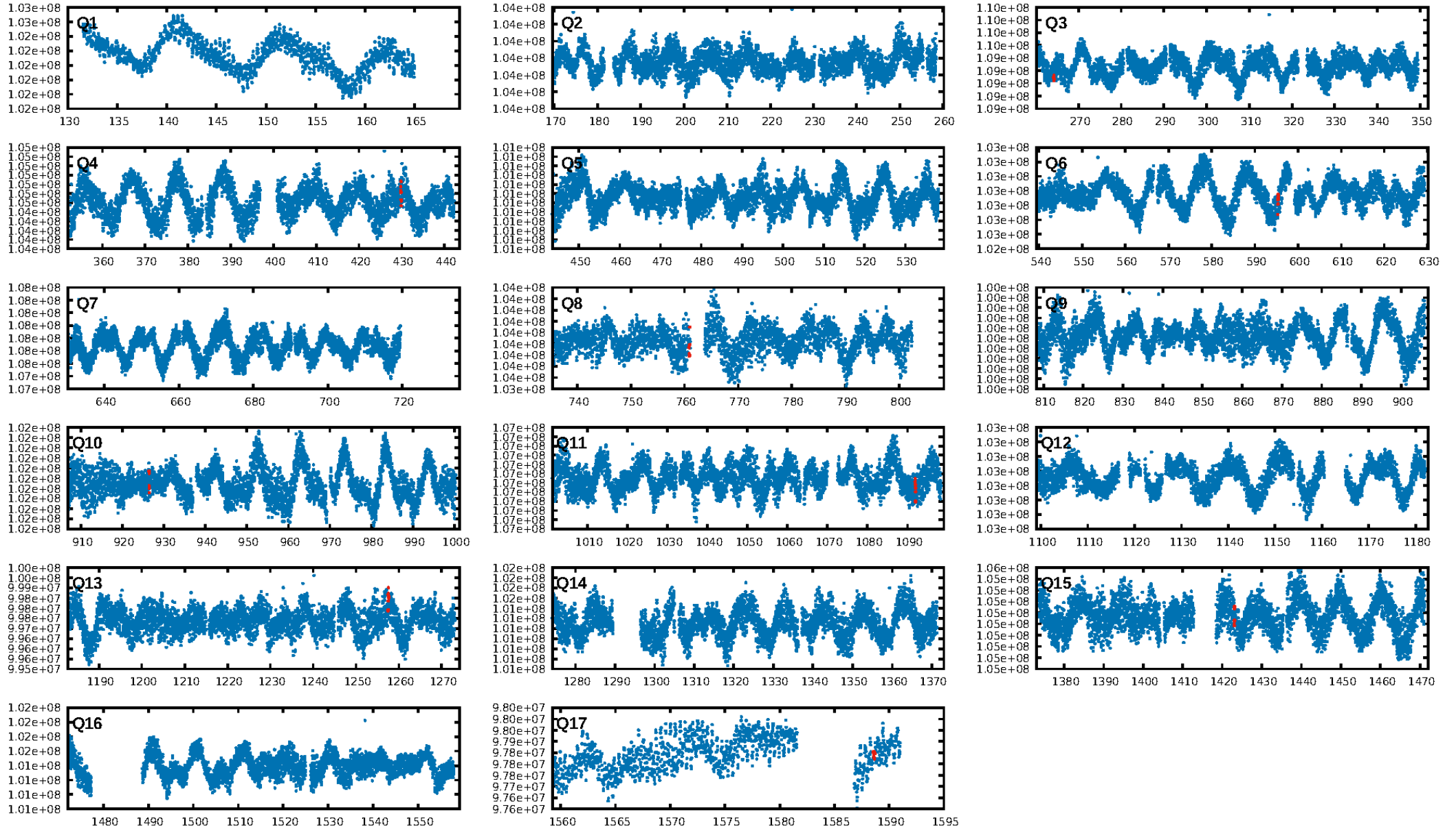
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [336.78 σ]
LongPeriod-sig: 100.0% [69.10 σ]
ModelChiSquare2-sig: 55.5%
ModelChiSquareGof-sig: 98.9%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.354
Centroid-sig: 35.2%
Centroid-so: 1.167 arcsec [1.29 σ]
OotOffset-rm: 0.147 arcsec [0.11 σ]
KicOffset-rm: 0.174 arcsec [0.13 σ]
OotOffset-st: 2/2/1/1 [6]
KicOffset-st: 2/2/1/1 [6]
DiffImageQuality-fgm: 0.33 [2/6]
DiffImageOverlap-fno: 0.38 [3/8]

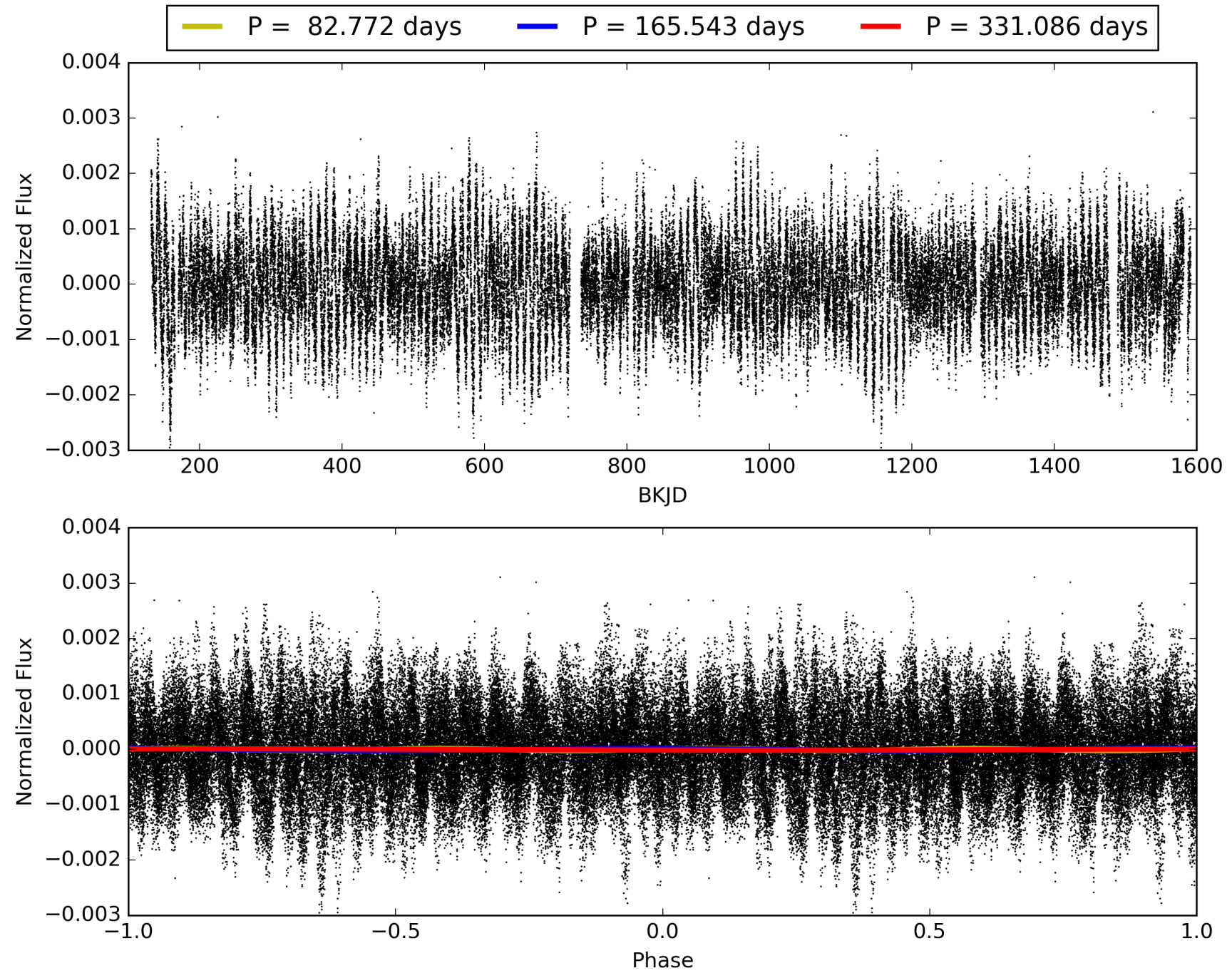
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:09:30 Z

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

TCE 009468126-02, PDC Light Curves

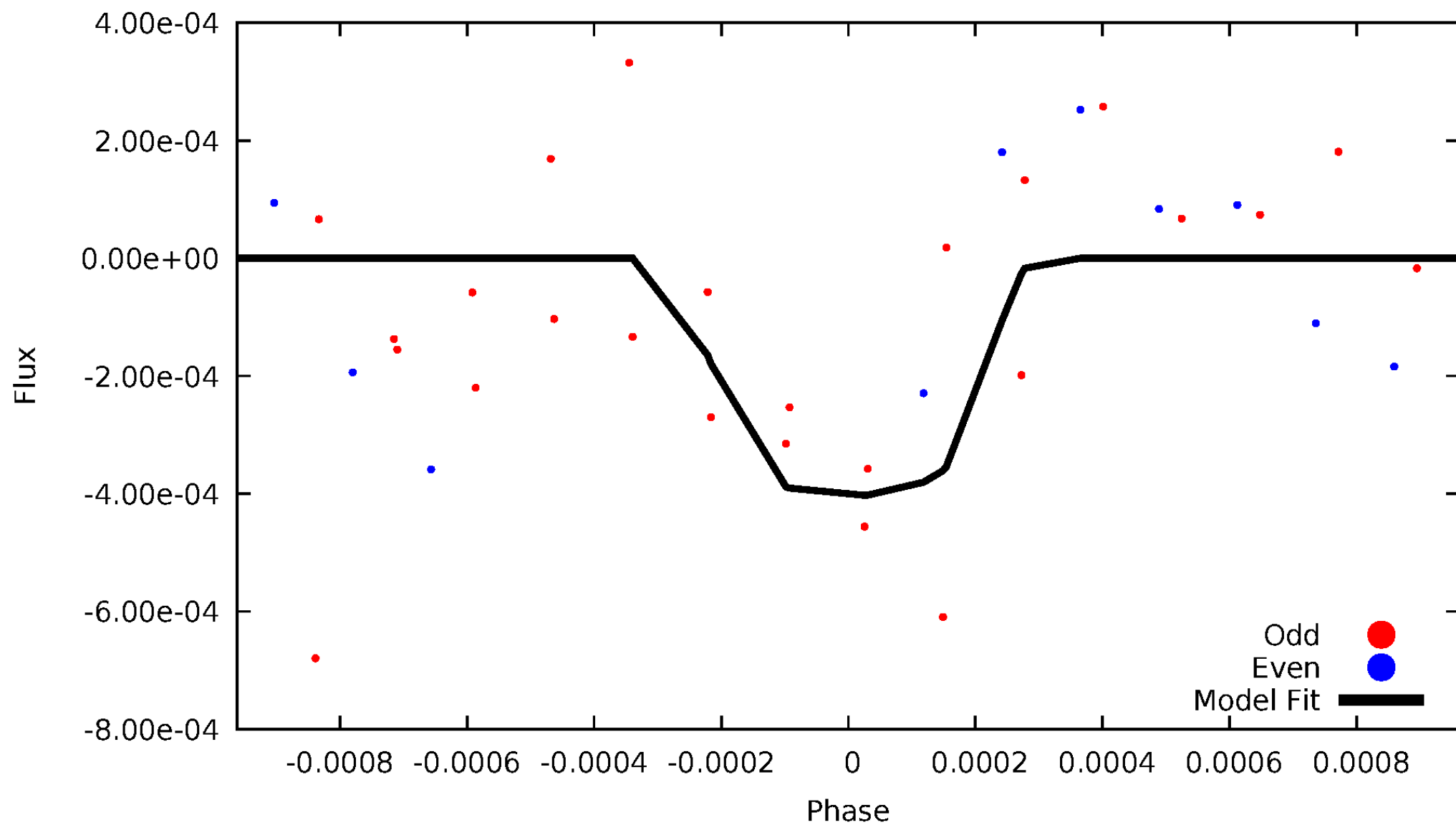


TCE 009468126-02



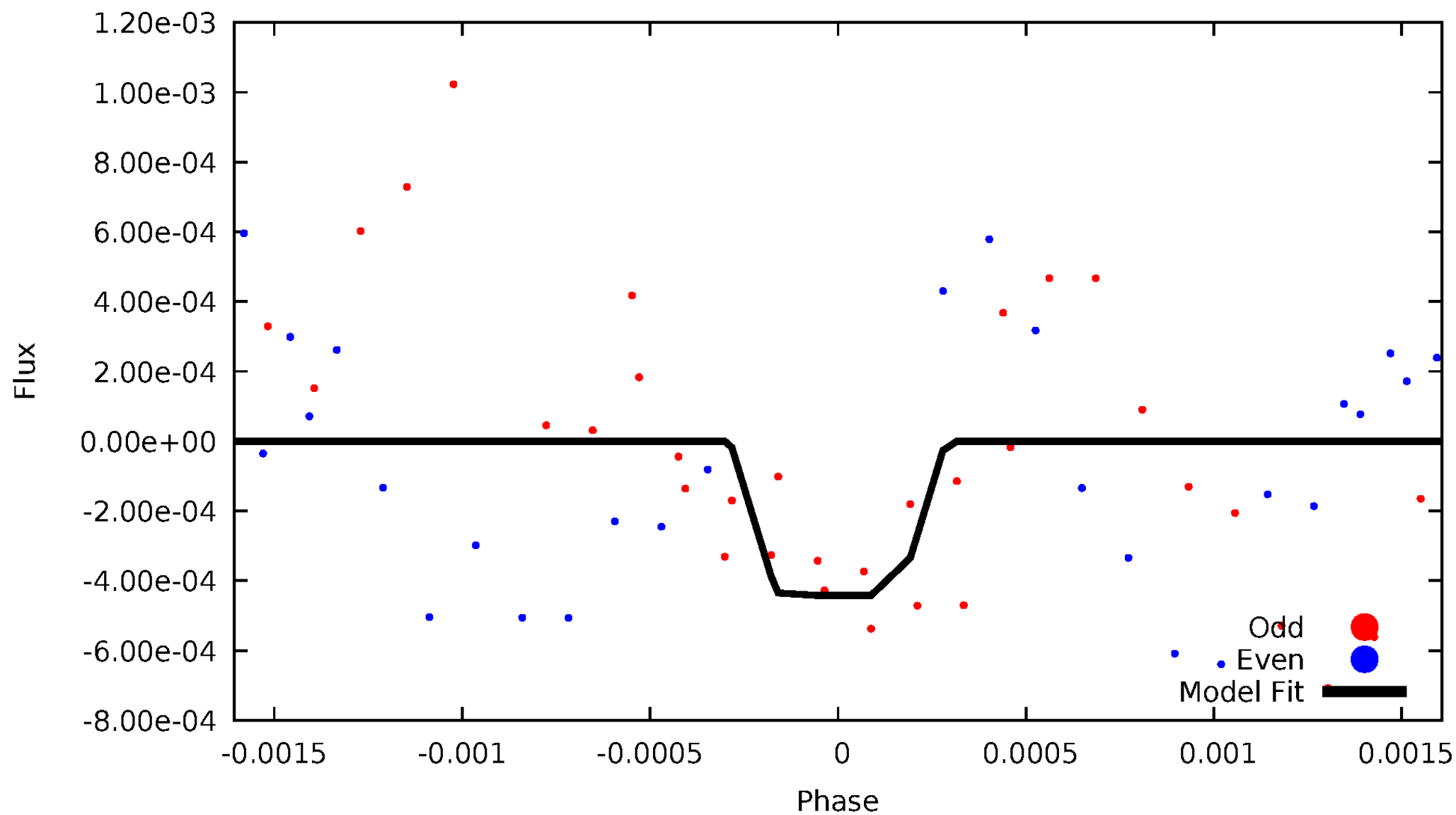
DV Odd/Even

TCE 009468126-02



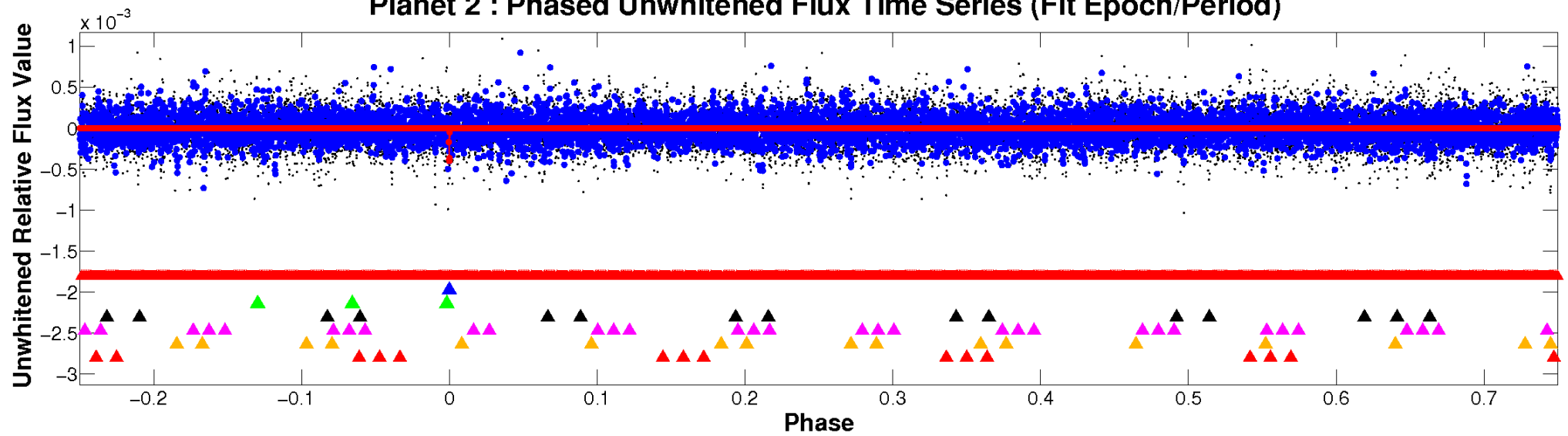
ALT Odd/Even

TCE 009468126-02

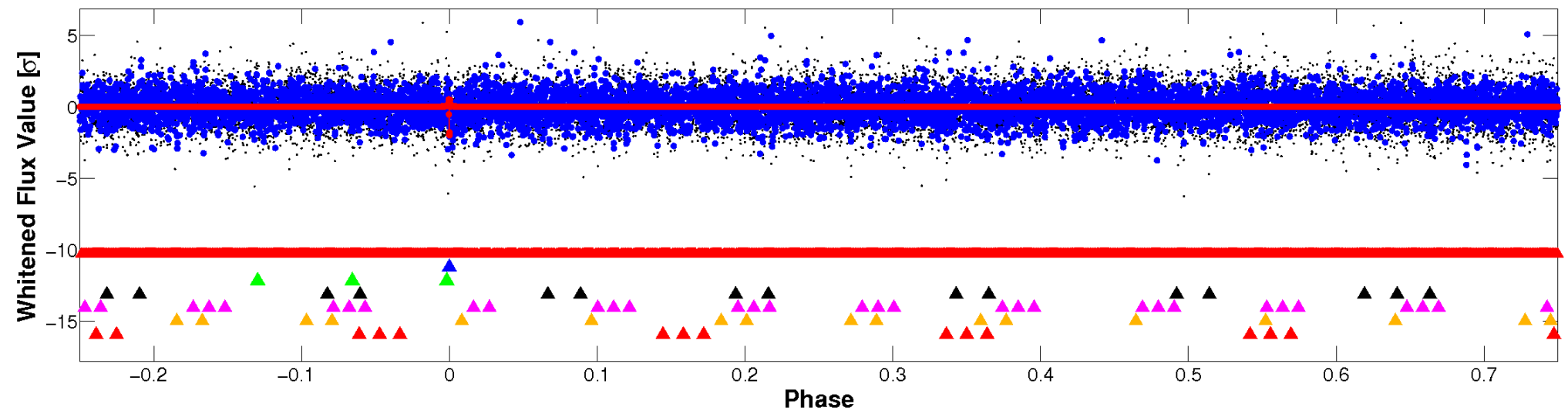


Non-Whitened Vs. Whitened Light Curve

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

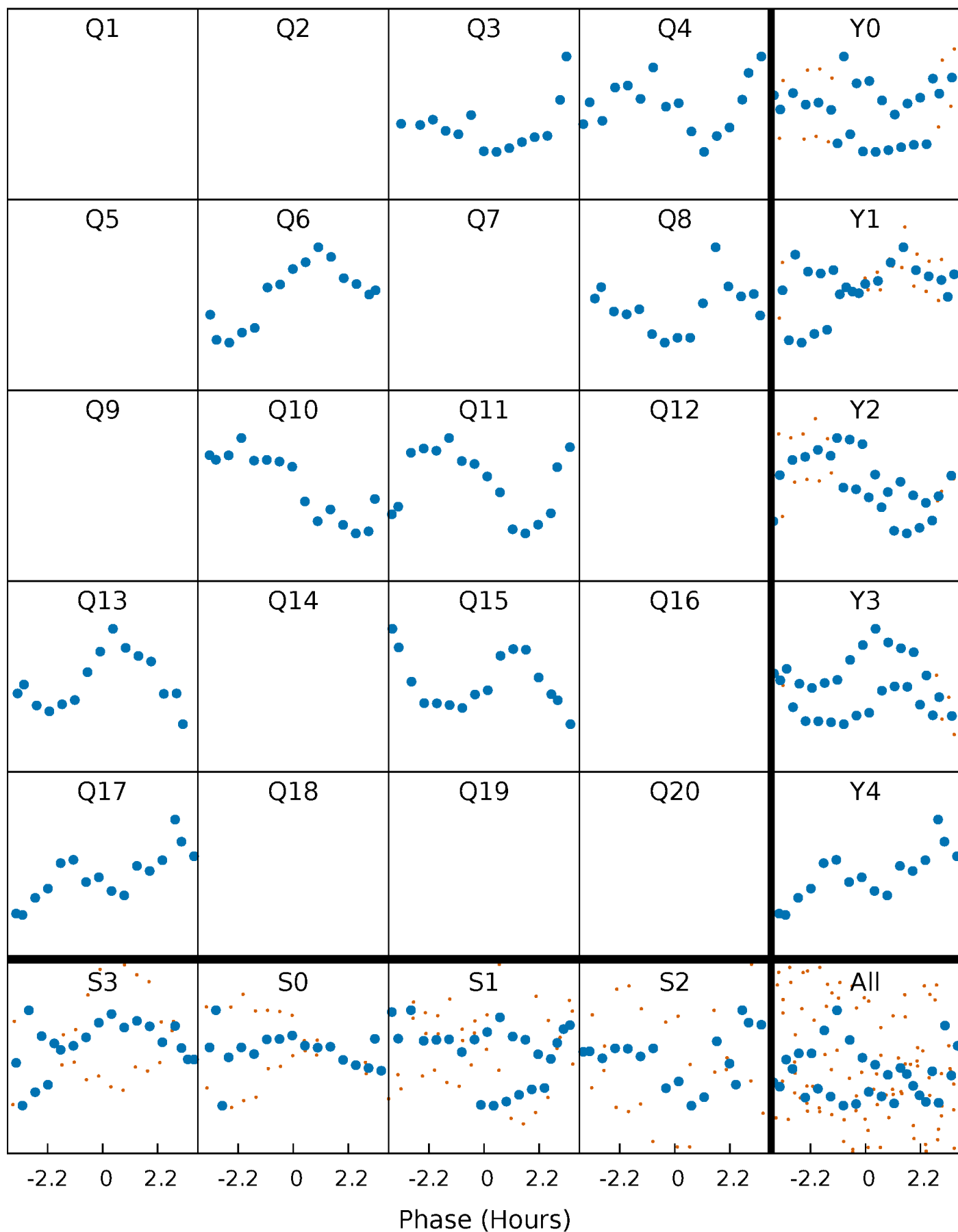


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



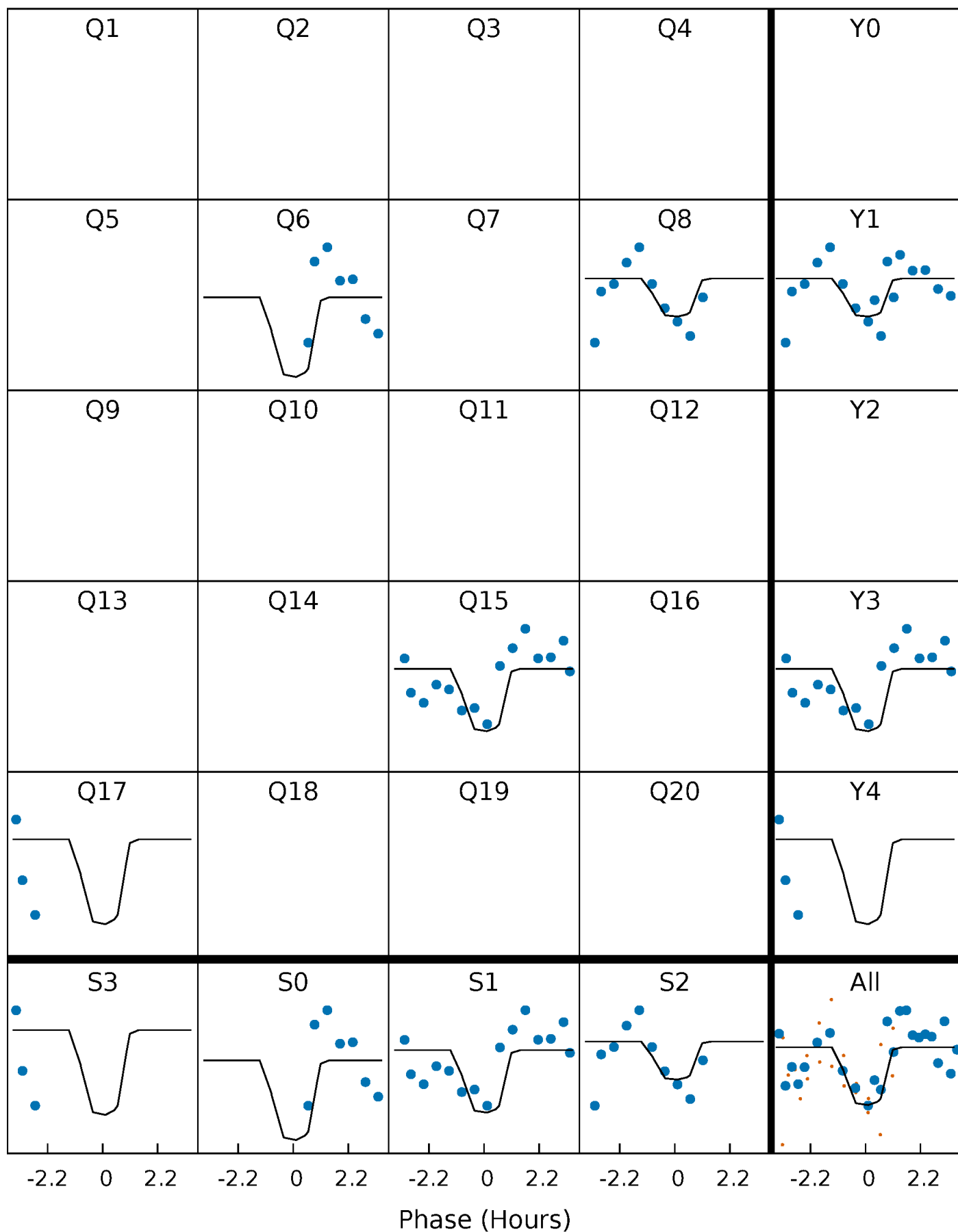
PDC Quarter-Phased Transit Curves

TCE 009468126-02 P=165.543209 Days $T_0=264.271278$ (BKJD)



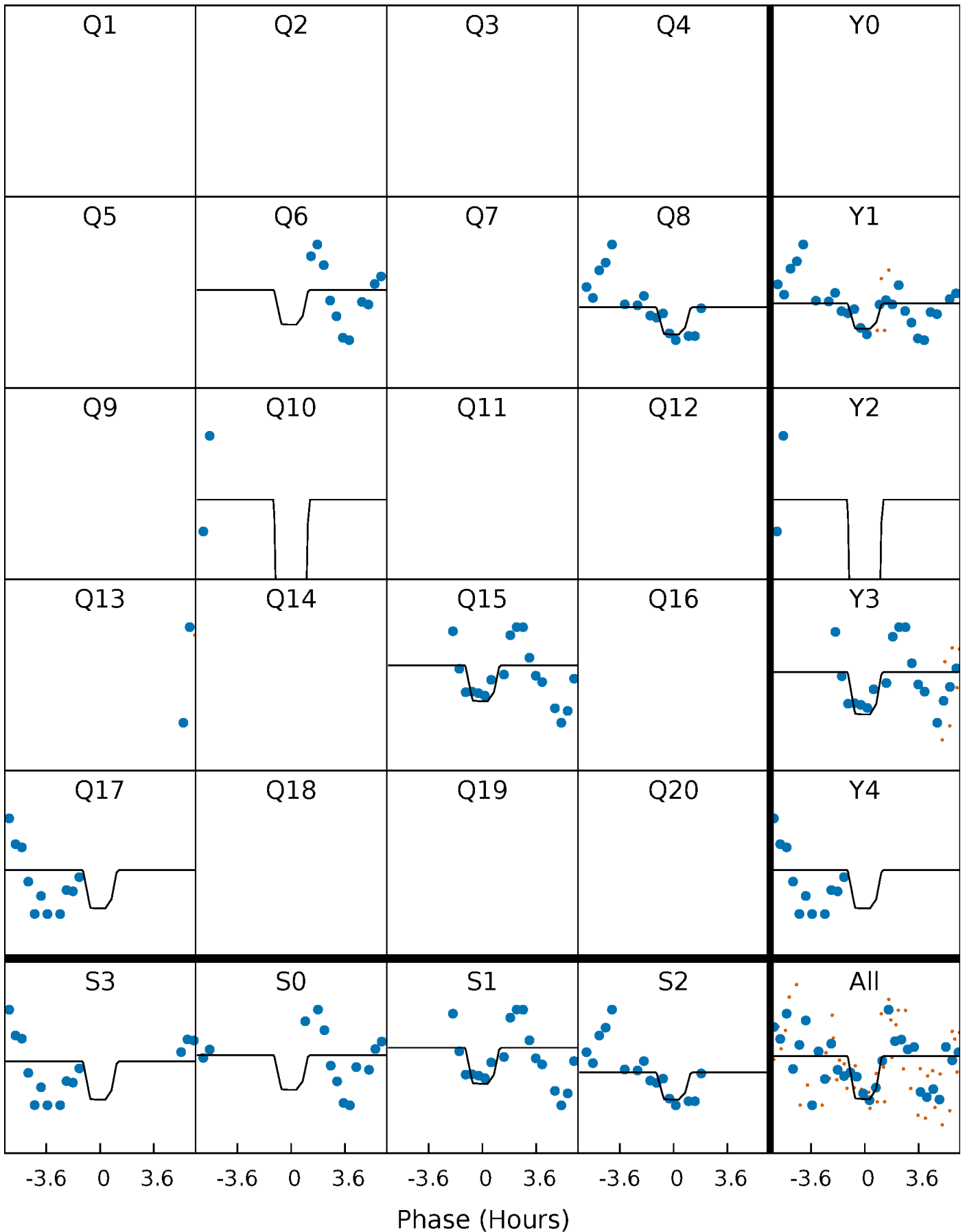
DV Quarter-Phased Transit Curves

TCE 009468126-02 P=165.543209 Days $T_0=264.271278$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

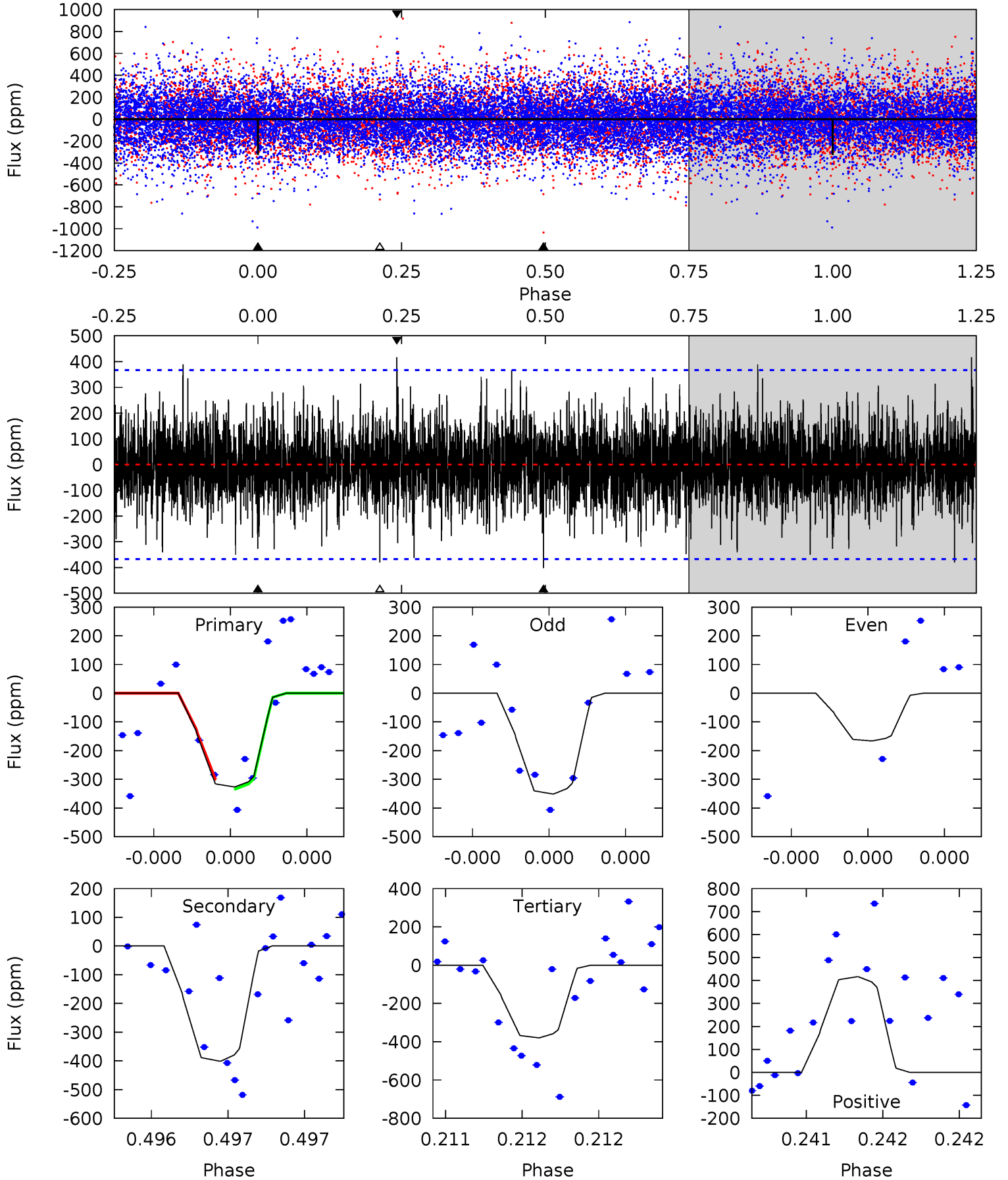
TCE 009468126-02 P=165.539081 Days $T_0=264.252963$ (BKJD)



DV Model-Shift Uniqueness Test

009468126-02, P = 165.543209 Days, E = 98.728069 Days

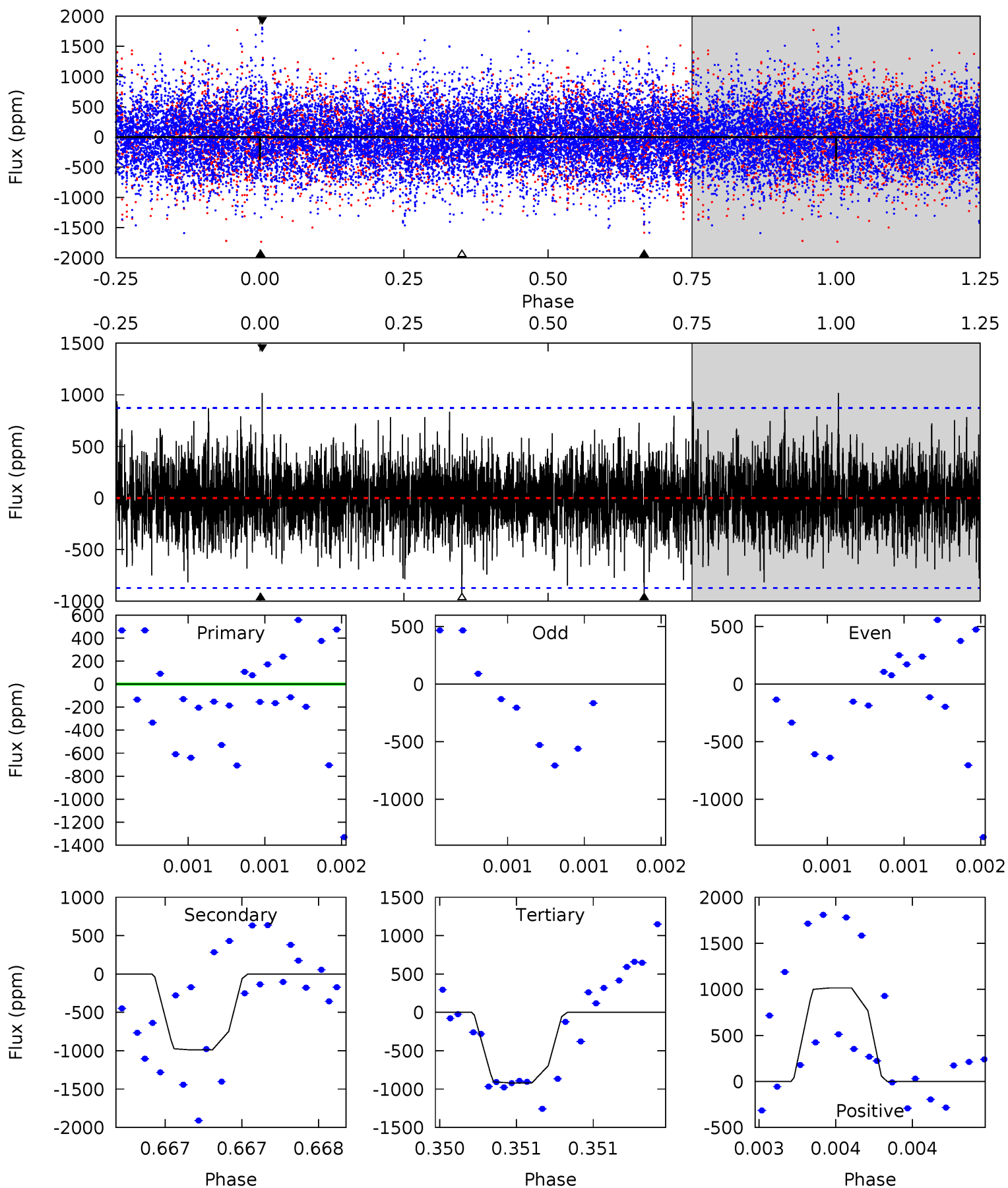
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.96	6.09	5.76	6.32	5.57	3.48	1.53	-0.80	-1.37	0.33	-0.23	1.14	1.22	0.51	0.24



Alt Model-Shift Uniqueness Test

009468126-02, P = 165.539081 Days, E = 98.713882 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.36	6.32	5.88	6.49	5.58	3.48	1.56	-3.52	-4.13	0.44	-0.17	0.12	1.00	0.51	0.41



Stellar Parameters For KIC 009468126

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7355^{+230}_{-307}	$4.134^{+0.144}_{-0.176}$	$-0.140^{+0.200}_{-0.350}$	$1.737^{+0.525}_{-0.393}$	$1.497^{+0.209}_{-0.232}$	$0.402^{+0.296}_{-0.196}$
	+3%/-4%	+3%/-4%	+143%/-250%	+30%/-23%	+14%/-15%	+74%/-49%
Source	KIC0	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 009468126-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-401 ± 66	$4.54^{+4.00}_{-2.71}$	730^{+56}_{-54}	6748^{+5977}_{-1807}	4964^{+26267}_{-3598}
Alt.	-989 ± 156	$4.73^{+3.64}_{-3.05}$	730^{+56}_{-52}	8439^{+11435}_{-2360}	10801^{+70909}_{-7499}

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 $A_{obs} \gg 1.0$

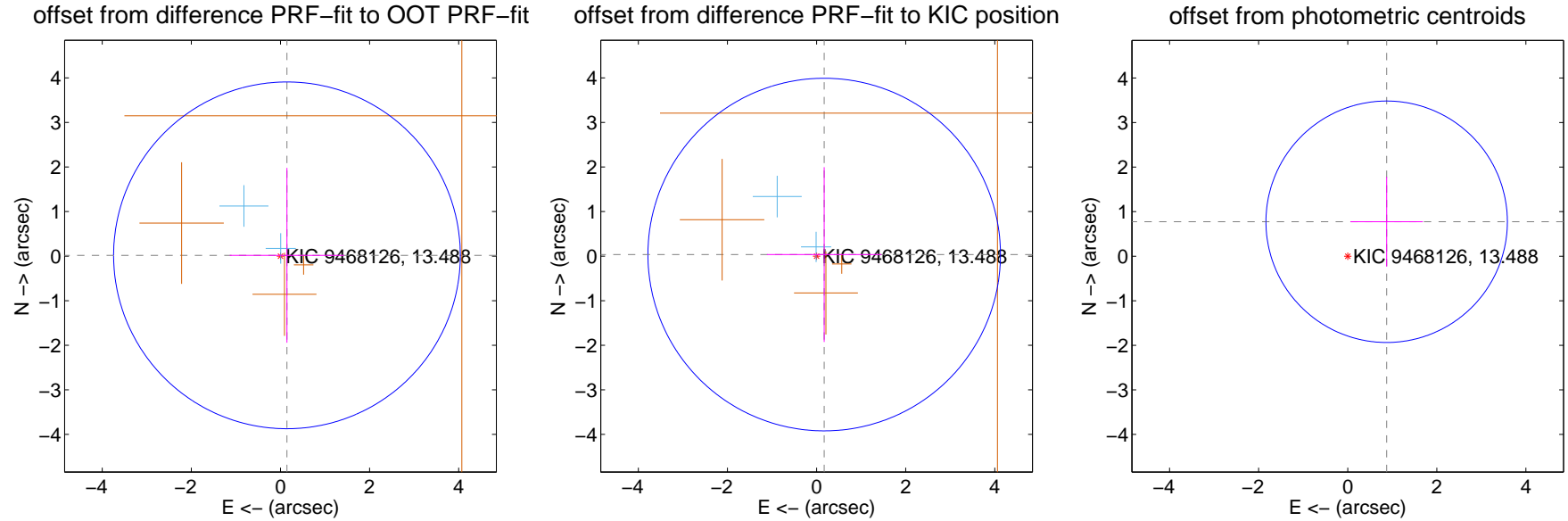
DV Centroid Data

Supplemental centroid analysis for 009468126-02. Kepler magnitude: 13.49. Transit SNR 4.68

There are 2 quarters with good PRF difference image offsets

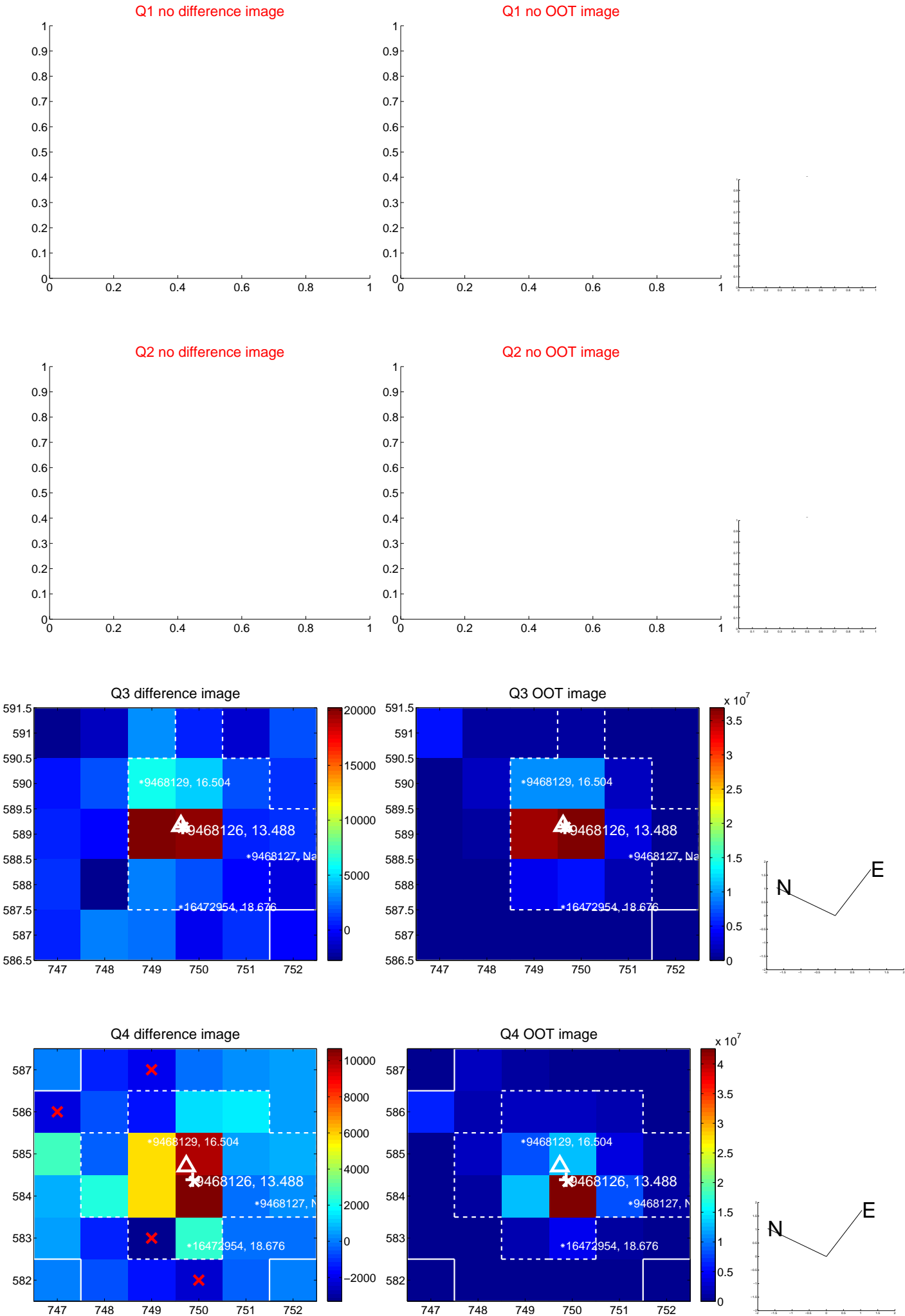
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.147 ± 1.297	0.11	-0.146 ± 1.284	0.018 ± 1.961
PRF-fit source offset from KIC position	0.174 ± 1.318	0.13	-0.171 ± 1.284	0.035 ± 1.961
photometric centroid source offset	1.17 ± 0.90	1.29	-0.87 ± 0.81	0.77 ± 1.01



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.

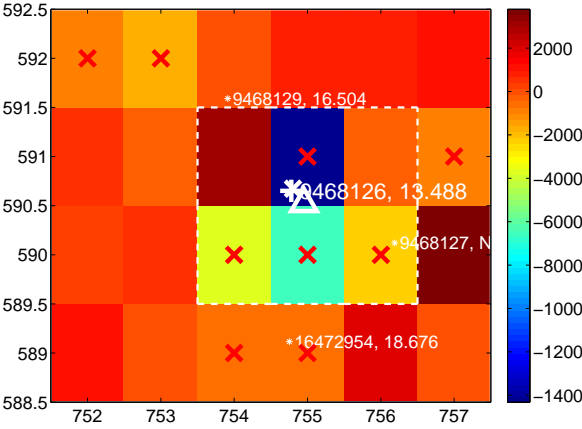
Q5 no difference image



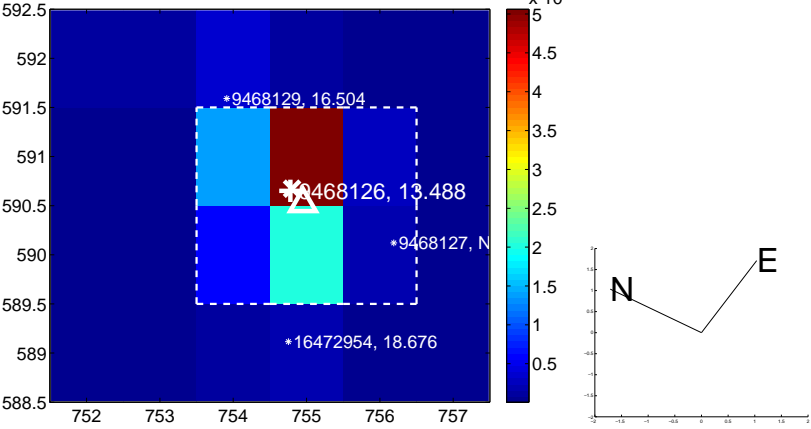
Q5 no OOT image



Q6 difference image. Poor Quality



Q6 OOT image



Q7 no difference image



Q7 no OOT image



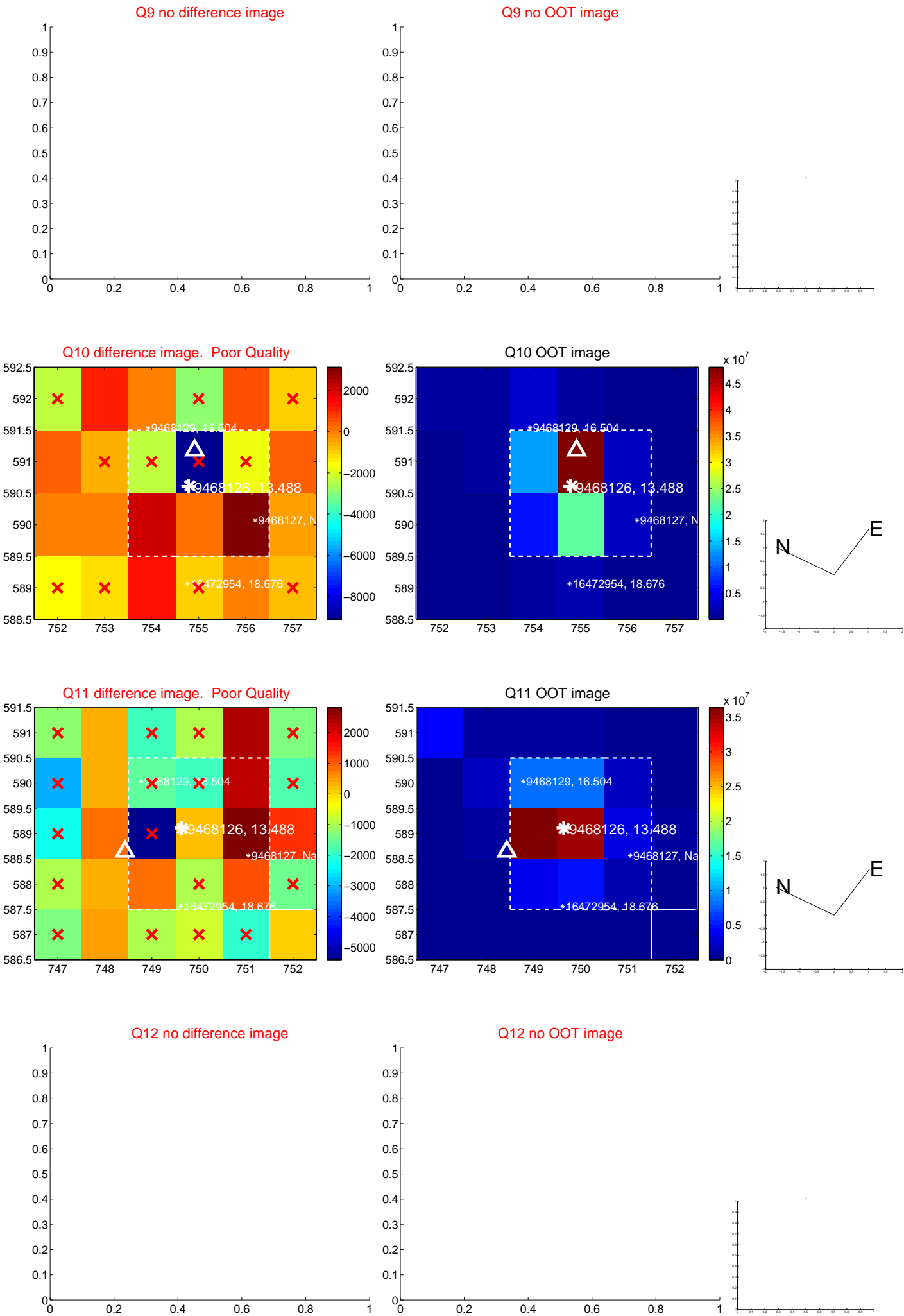
Q8 no difference image



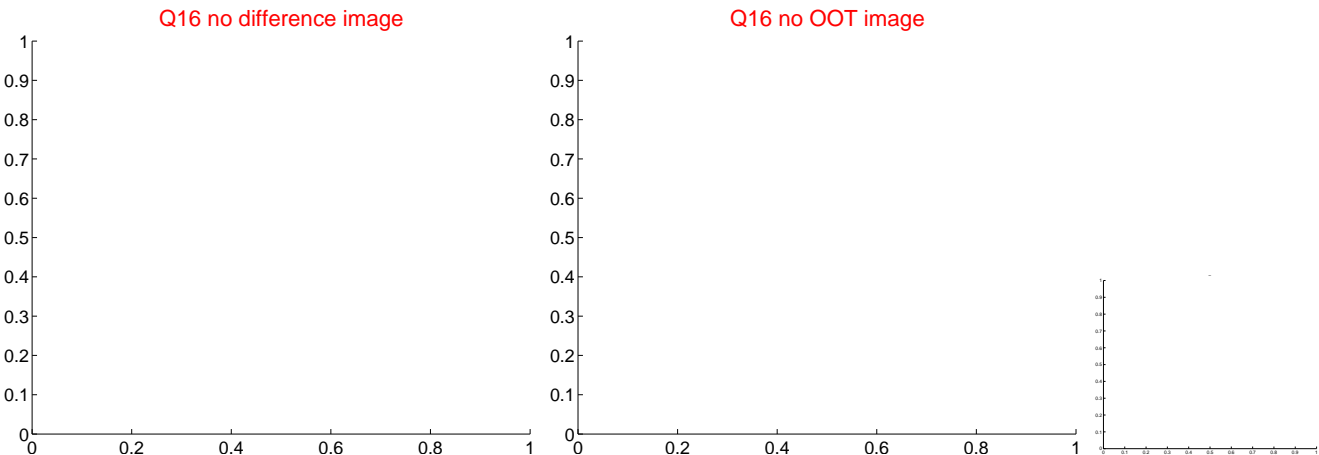
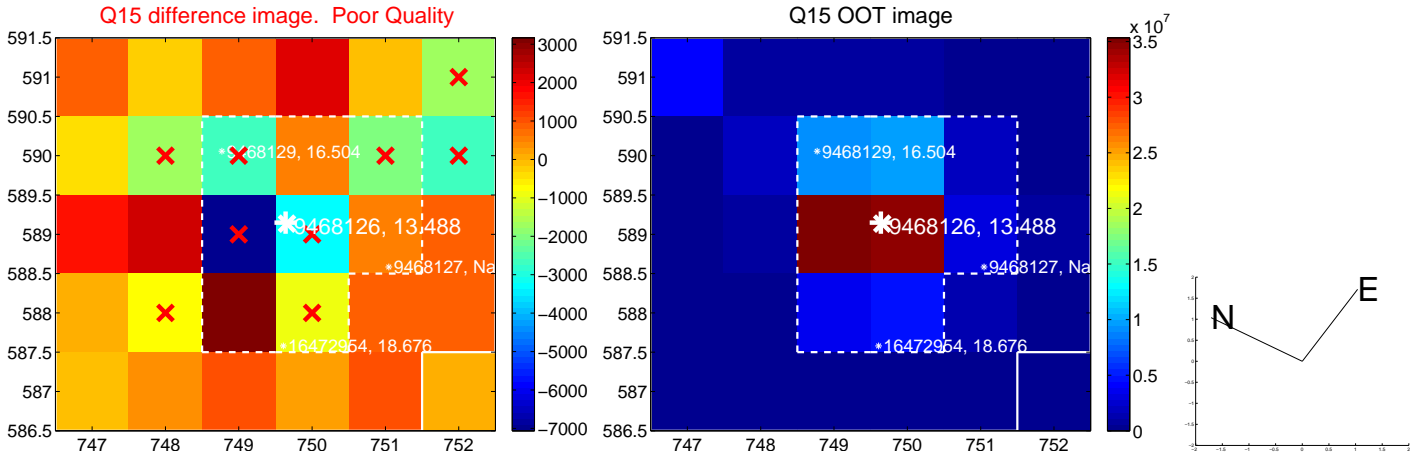
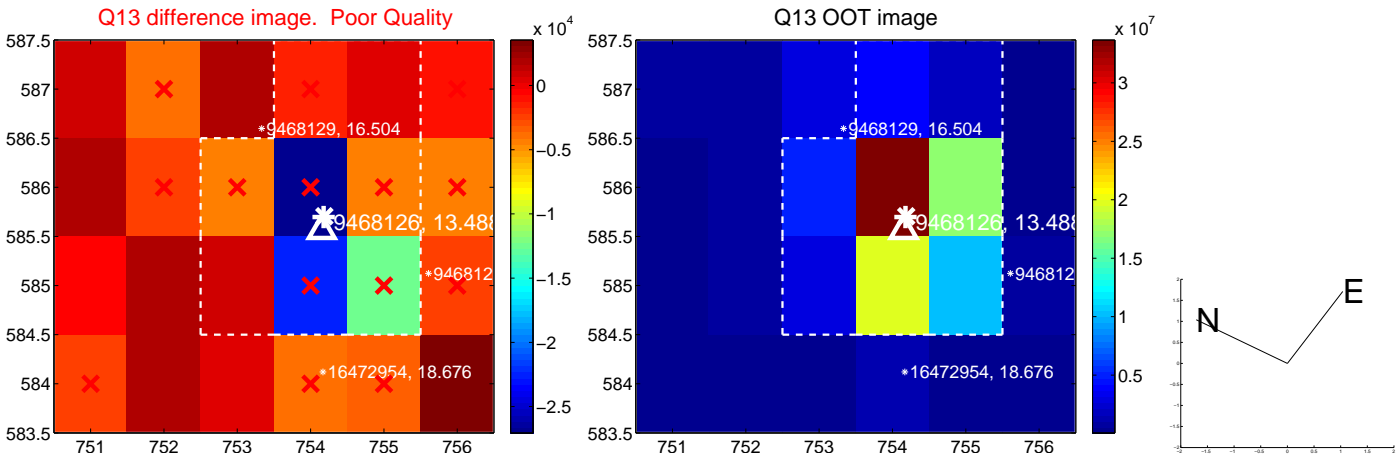
Q8 no OOT image



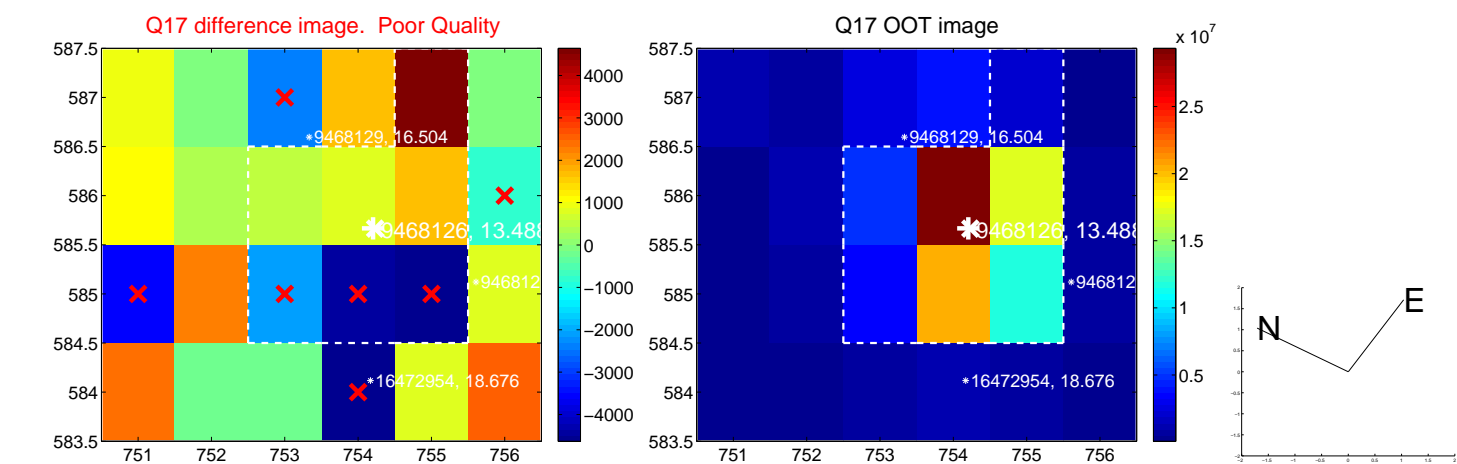
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



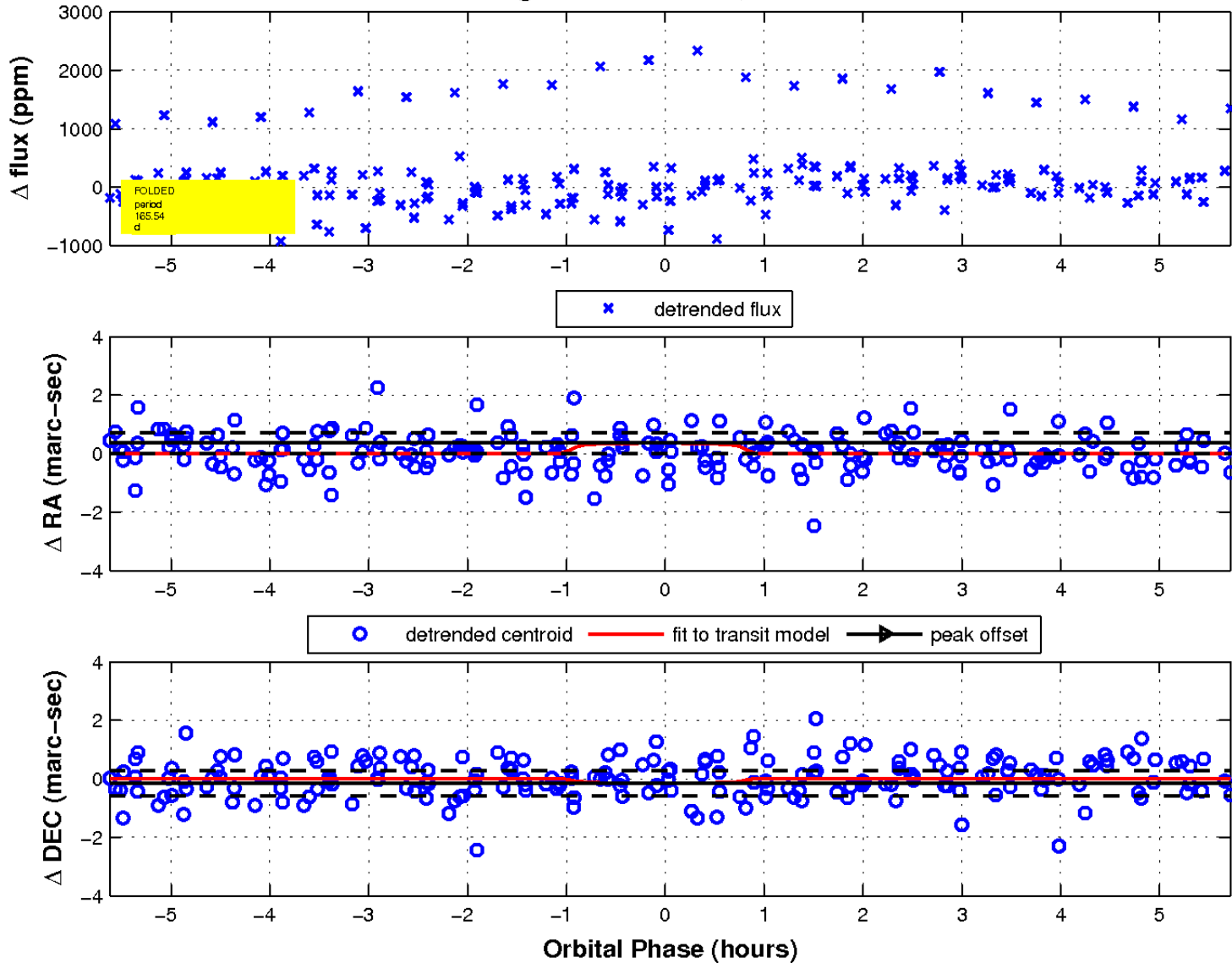
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

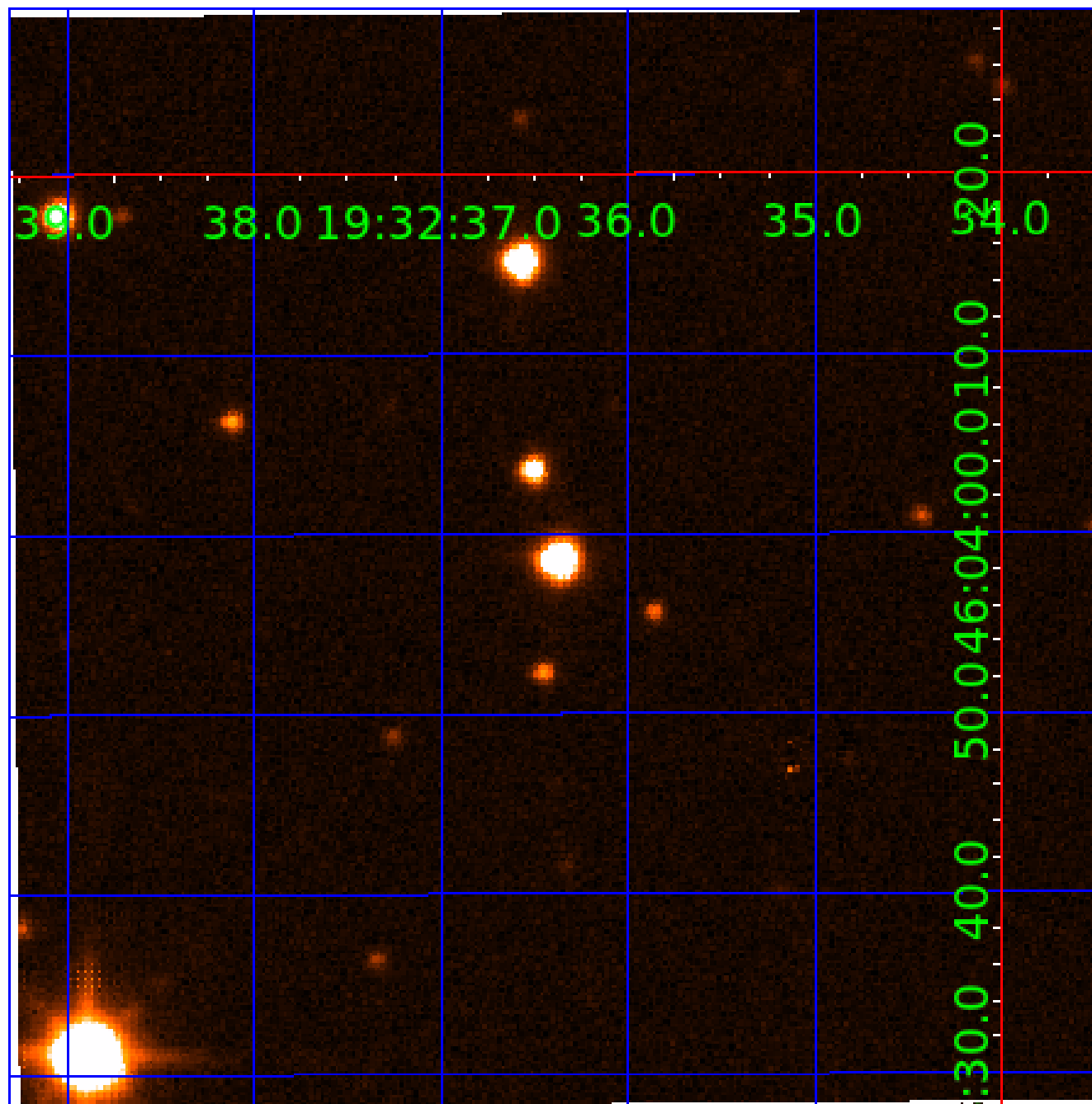


fluxWeightedCentroids, Planet 2 of 7



UKIRT Image

Declination



KIC 009468126

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})
009468126-01	OBS	No	1.436745	132.191634	42.3	8.379	11.1	11.1	1.74	7355	1.14	9725.65
009468126-02	OBS	No	165.543209	264.271278	403.6	1.910	13.3	4.7	1.74	7355	3.96	17.35
009468126-03	OBS	No	507.221426	242.808175	1557.2	118.662	13.4	7.8	1.74	7355	7.65	3.90
009468126-04	OBS	No	95.118570	201.221651	576.8	3.403	9.5	9.4	1.74	7355	7.94	36.31
009468126-05	OBS	No	45.309545	144.970442	286.7	5.402	9.2	9.0	1.74	7355	3.46	97.61
009468126-06	OBS	No	90.036983	132.028979	498.7	2.825	10.0	9.0	1.74	7355	4.51	39.07
009468126-07	OBS	No	99.782394	154.391230	472.5	4.279	9.7	9.4	1.74	7355	4.28	34.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009468126-01	OBS	FP	0.00	1	0	0	0	LPP_DV
009468126-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
009468126-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS—CENT_FEW_DIFFS
009468126-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
009468126-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
009468126-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
009468126-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

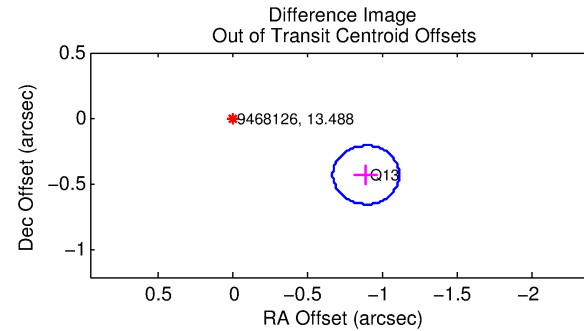
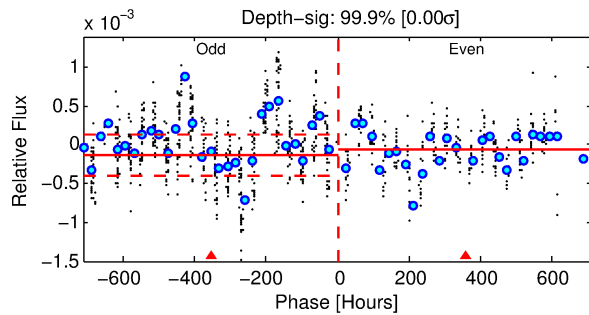
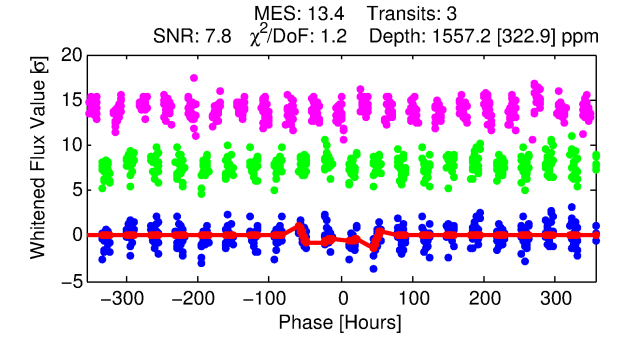
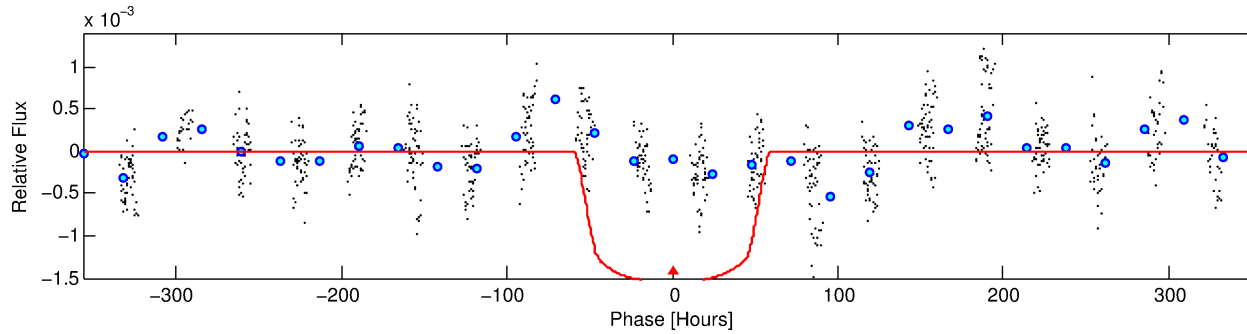
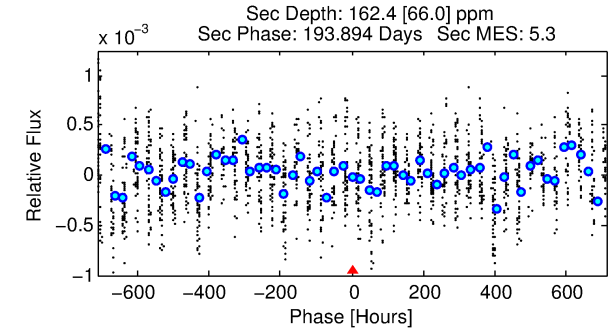
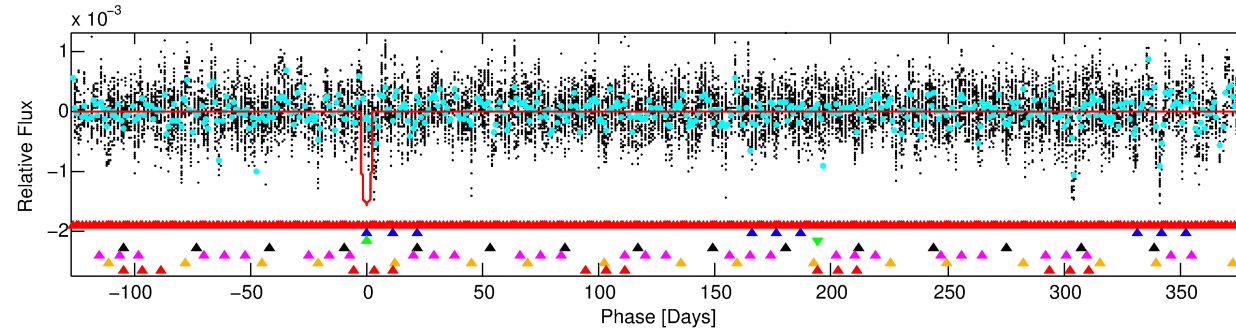
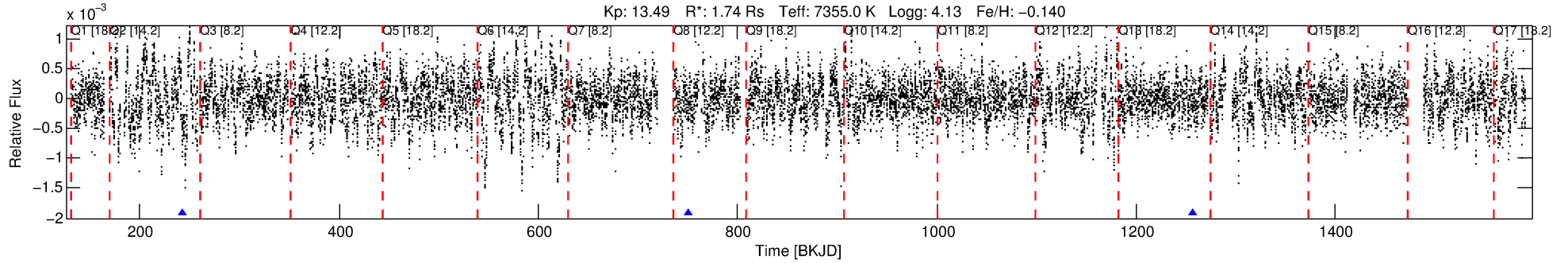
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009468126-03

No Significant Match Found

DV One-Page Summary

KIC: 9468126 Candidate: 3 of 7 Period: 507.221 d



DV Fit Results:

Period = 507.22143 [0.03662] d
Epoch = 242.8082 [0.0521] BKJD
Rp/R* = 0.0404 [0.0044]
a/R* = 20.51 [1.72]
b = 0.83 [0.03]
Seff = 3.90 [1.47]
Teq = 358 [34] K
Rp = 7.65 [2.46] Re
a = 1.4246 [0.3456] AU
Ag = 3098.08 [1769.40] [1.75σ]
Teffp = 4133 [507] K [7.43σ]

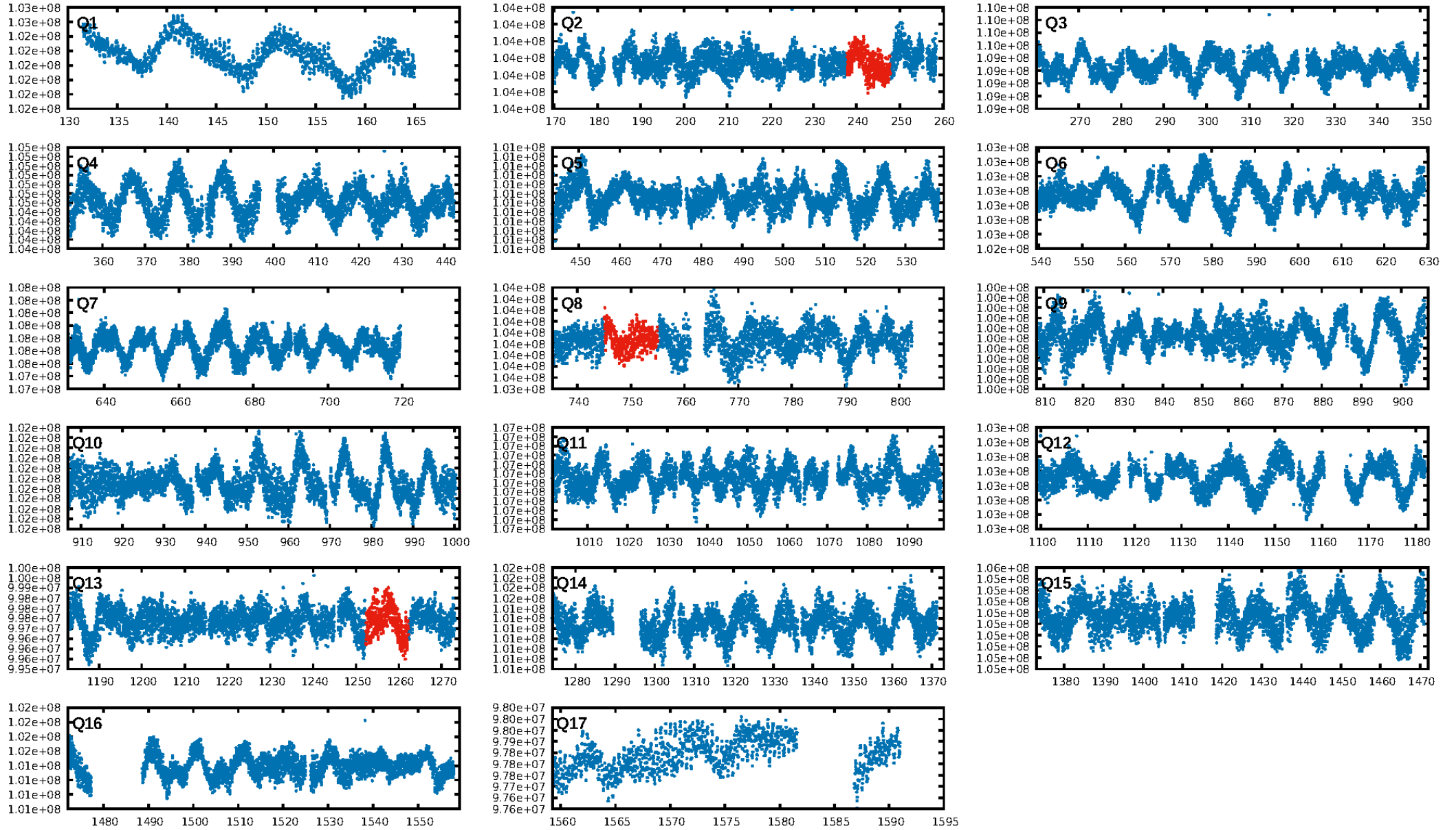
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [69.10σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 25.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -3.862
Centroid-sig: 95.9%
Centroid-so: 0.398 arcsec [4.79σ]
OotOffset-rm: 0.992 arcsec [13.43σ]
KicOffset-rm: 1.025 arcsec [13.87σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 0.00 [0/2]

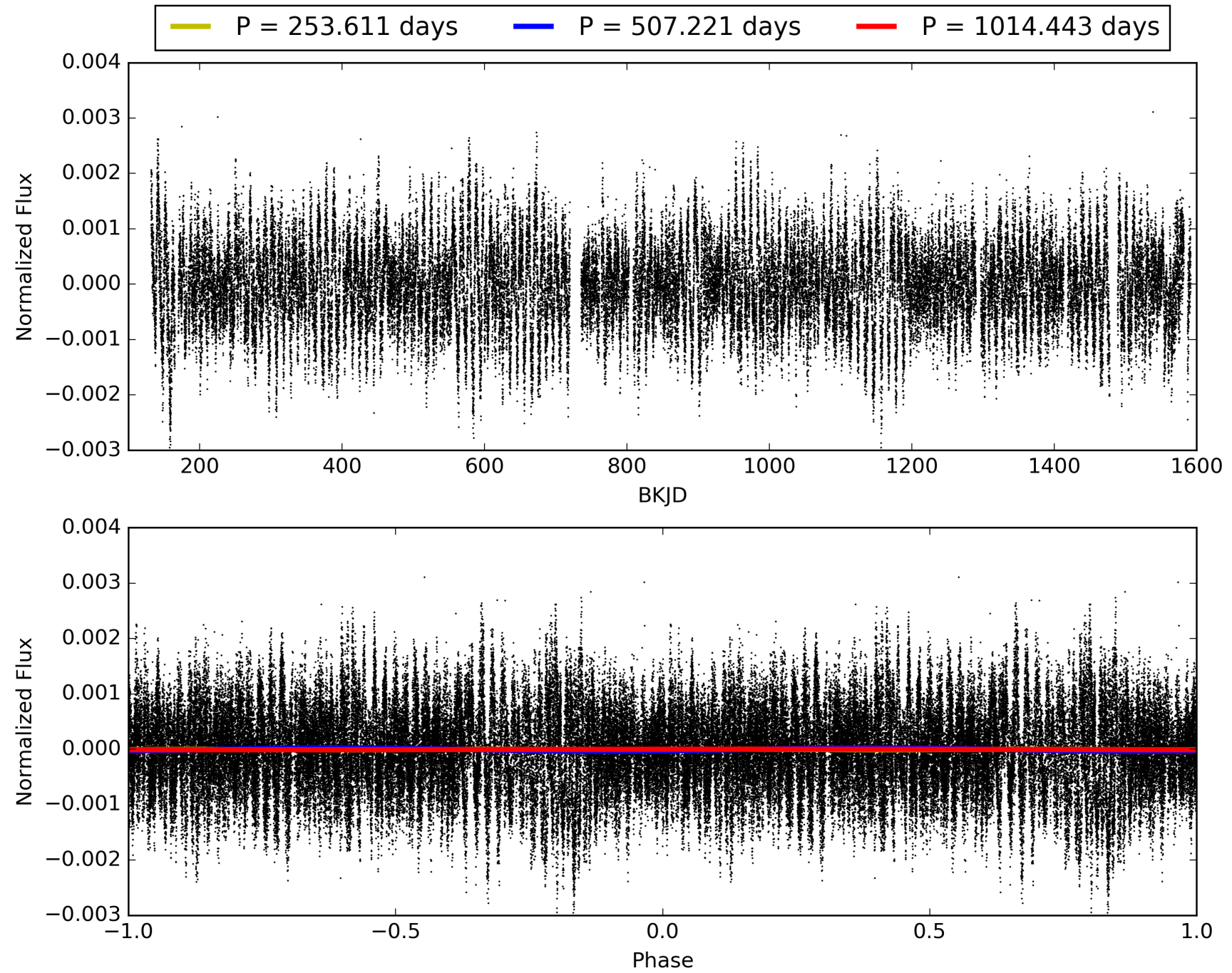
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:09:39 Z

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

TCE 009468126-03, PDC Light Curves

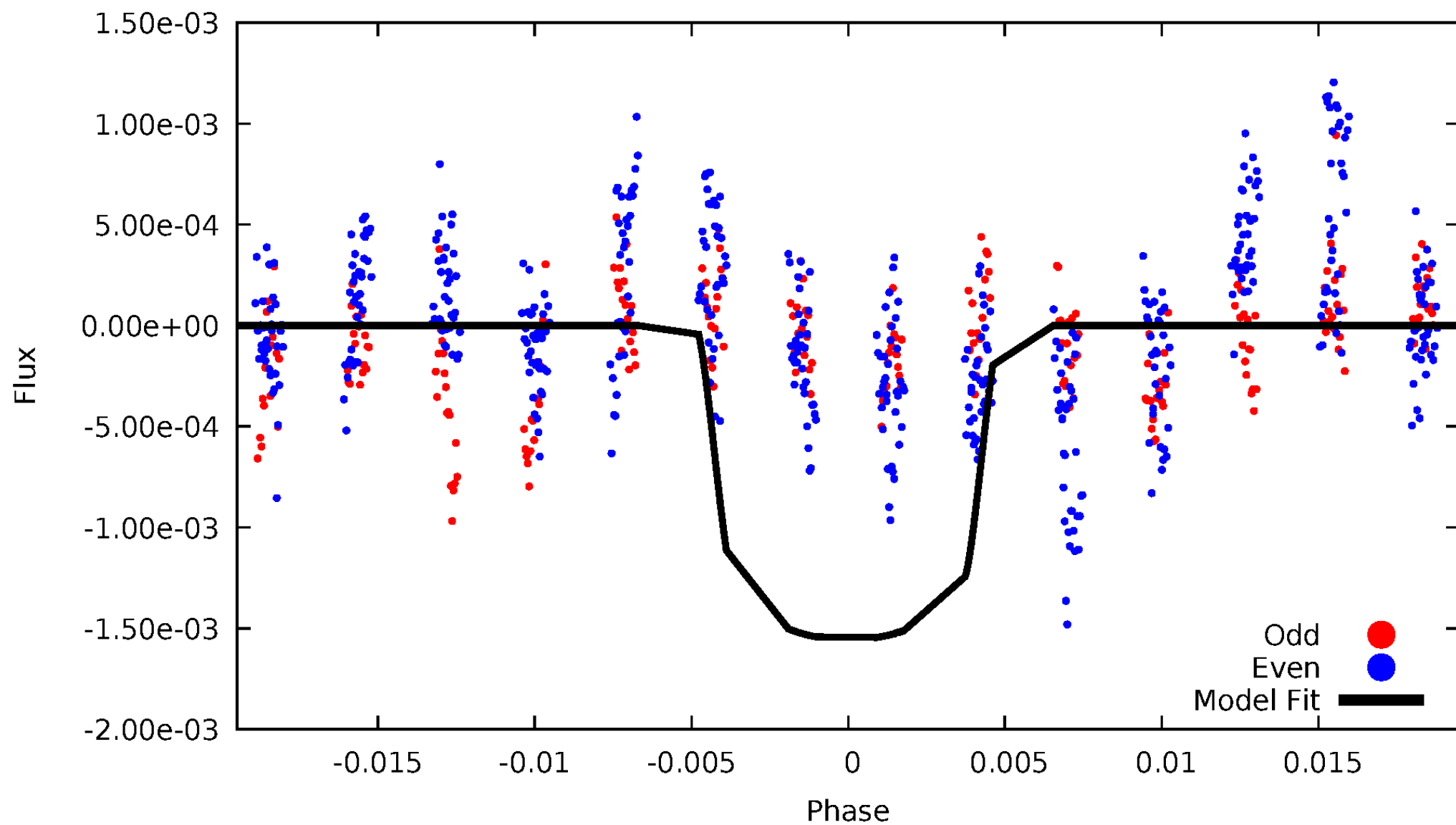


TCE 009468126-03



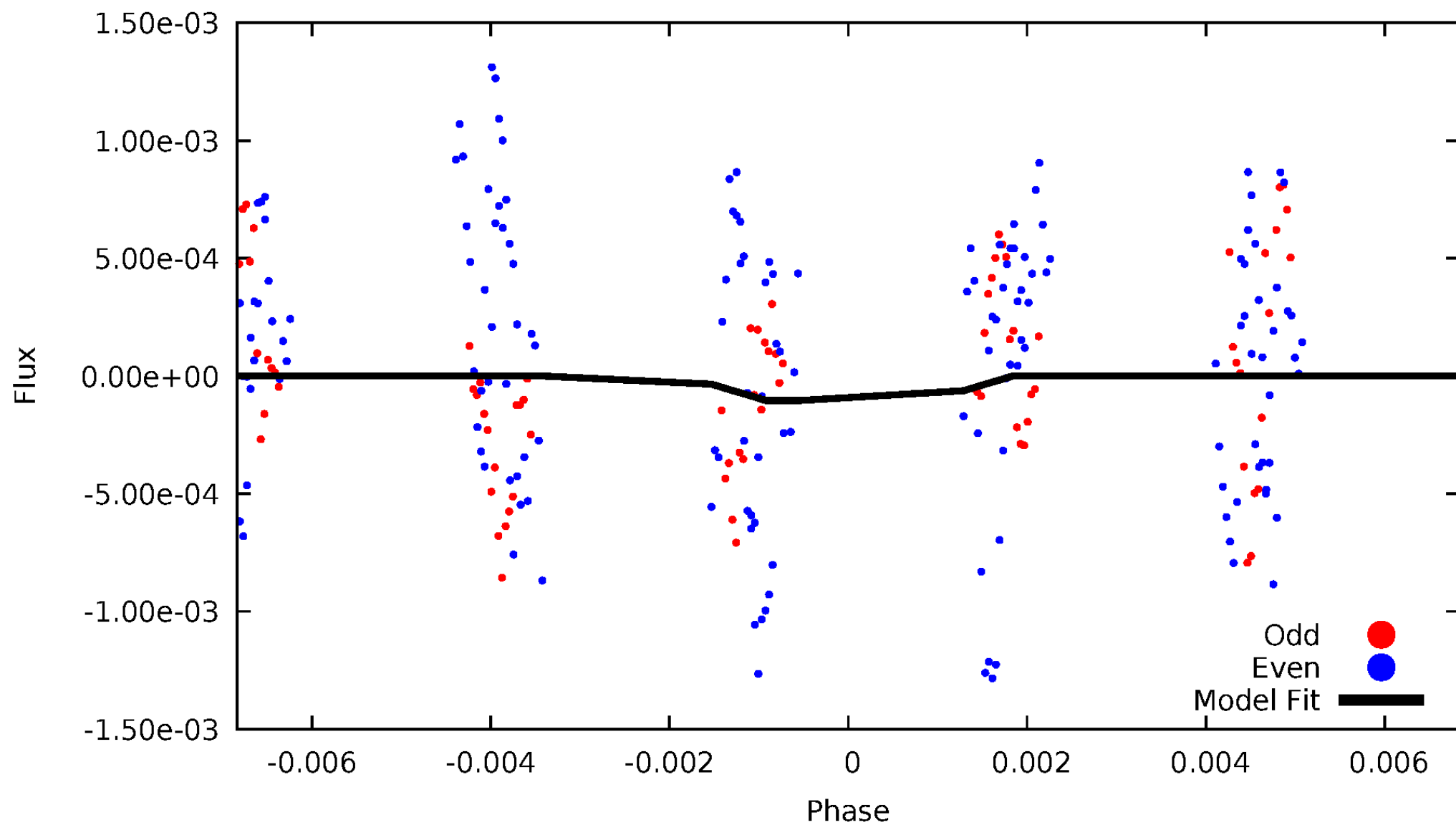
DV Odd/Even

TCE 009468126-03



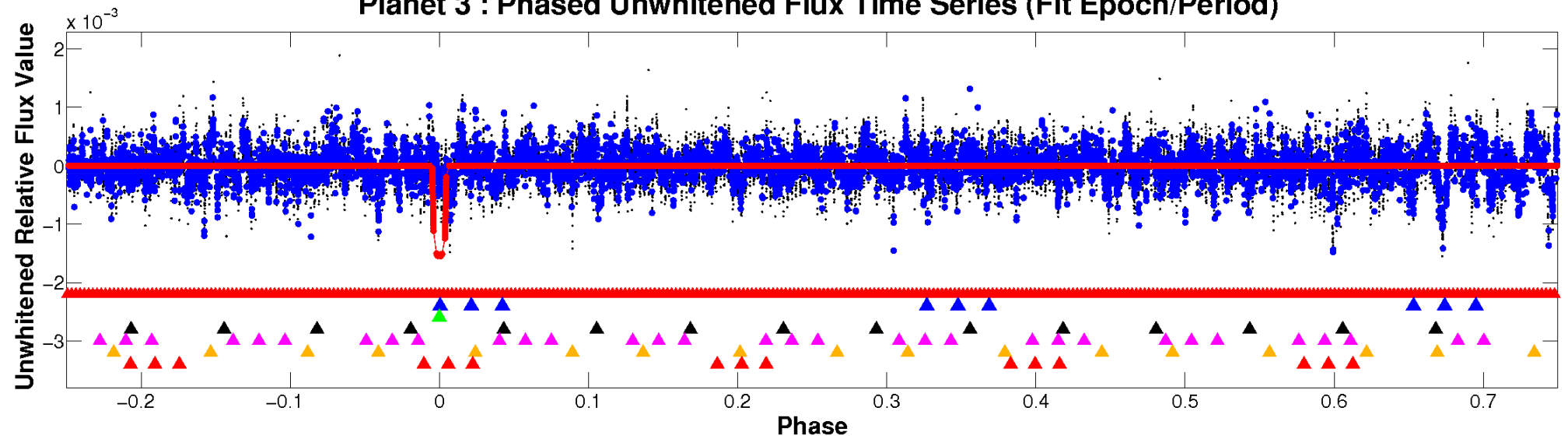
ALT Odd/Even

TCE 009468126-03

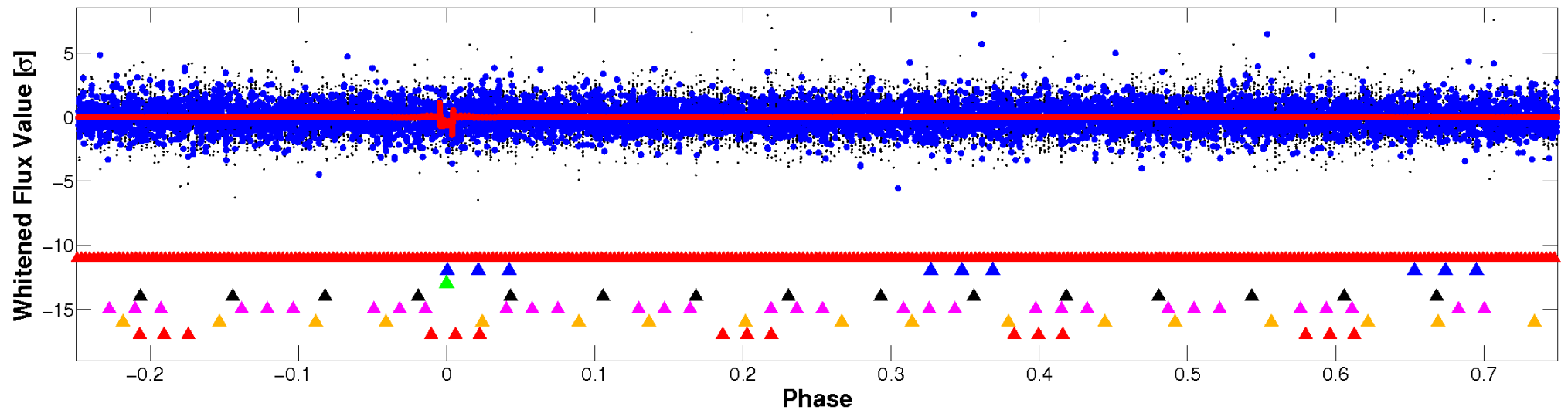


Non-Whitened Vs. Whitened Light Curve

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

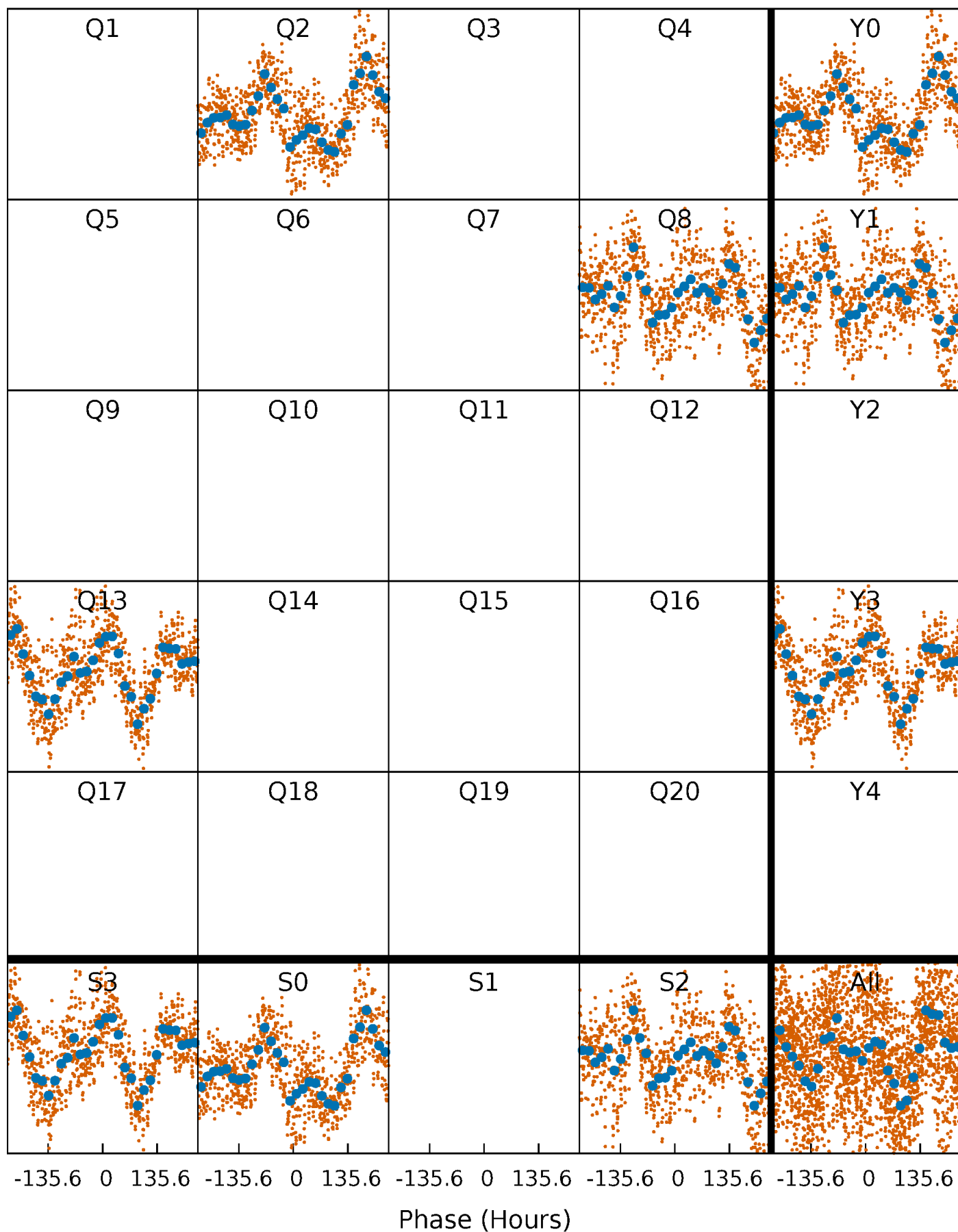


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



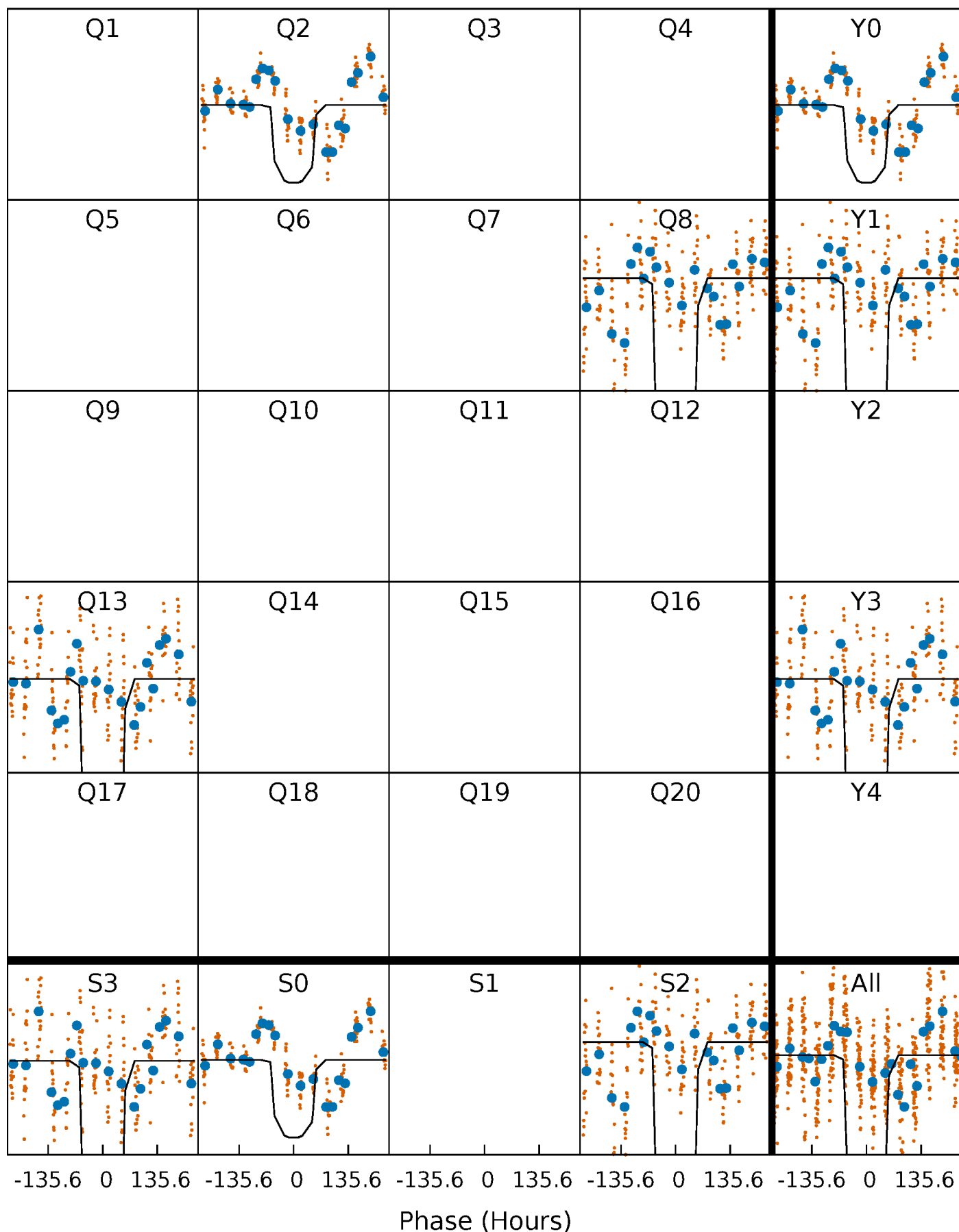
PDC Quarter-Phased Transit Curves

TCE 009468126-03 P=507.221426 Days $T_0=242.808175$ (BKJD)



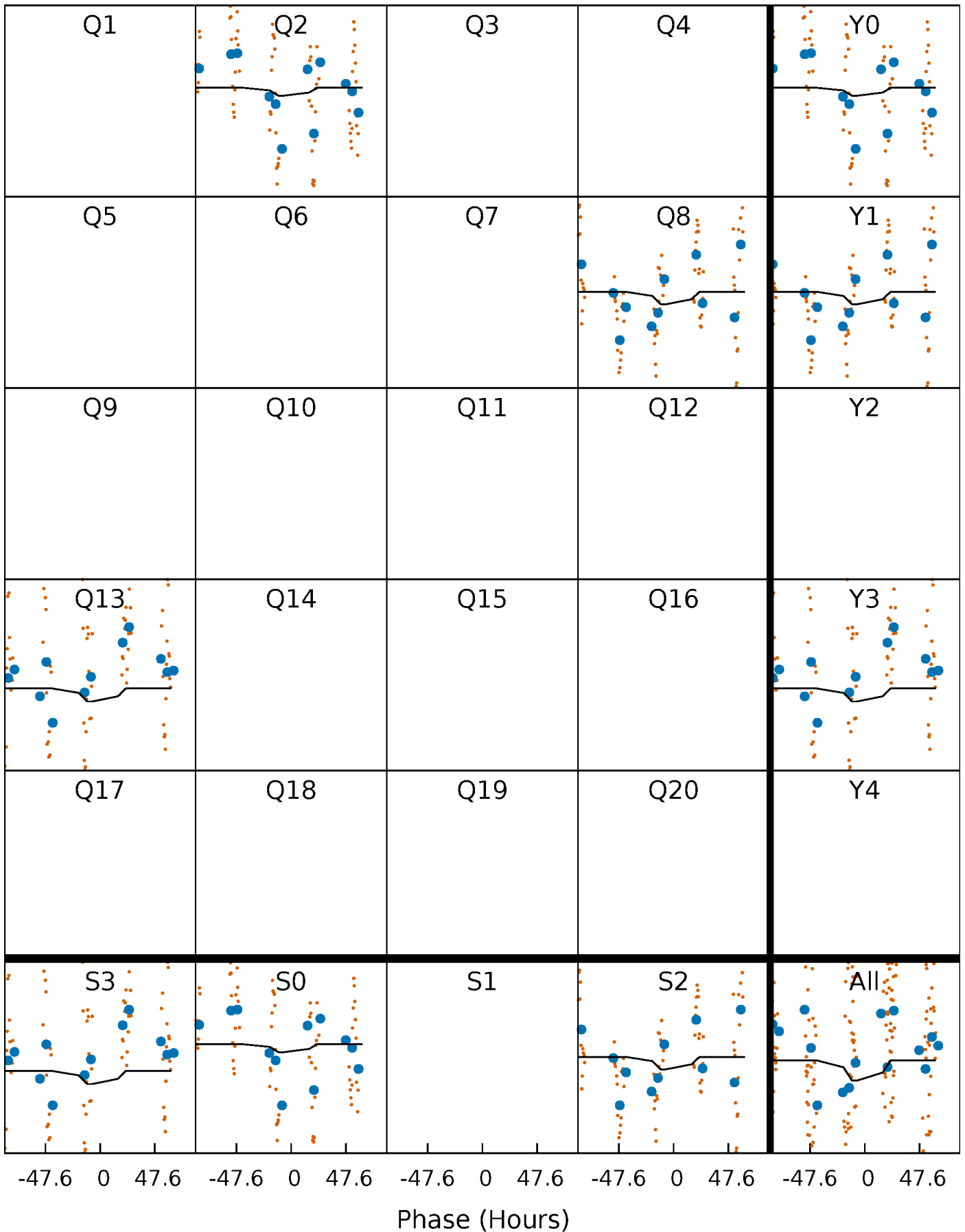
DV Quarter-Phased Transit Curves

TCE 009468126-03 P=507.221426 Days $T_0=242.808175$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

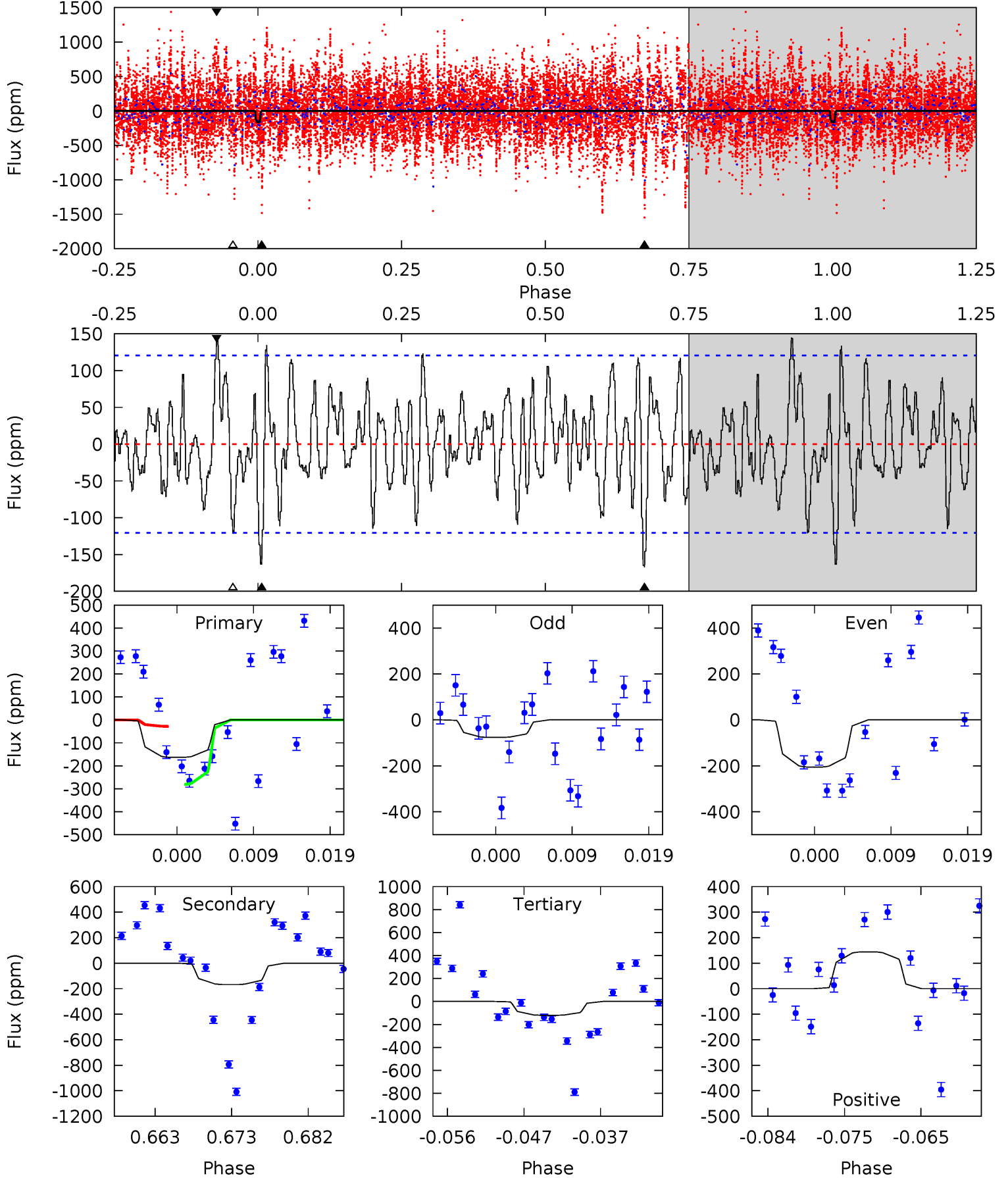
TCE 009468126-03 P=507.099658 Days $T_0=242.713718$ (BKJD)



DV Model-Shift Uniqueness Test

009468126-03, P = 507.221426 Days, E = 242.808175 Days

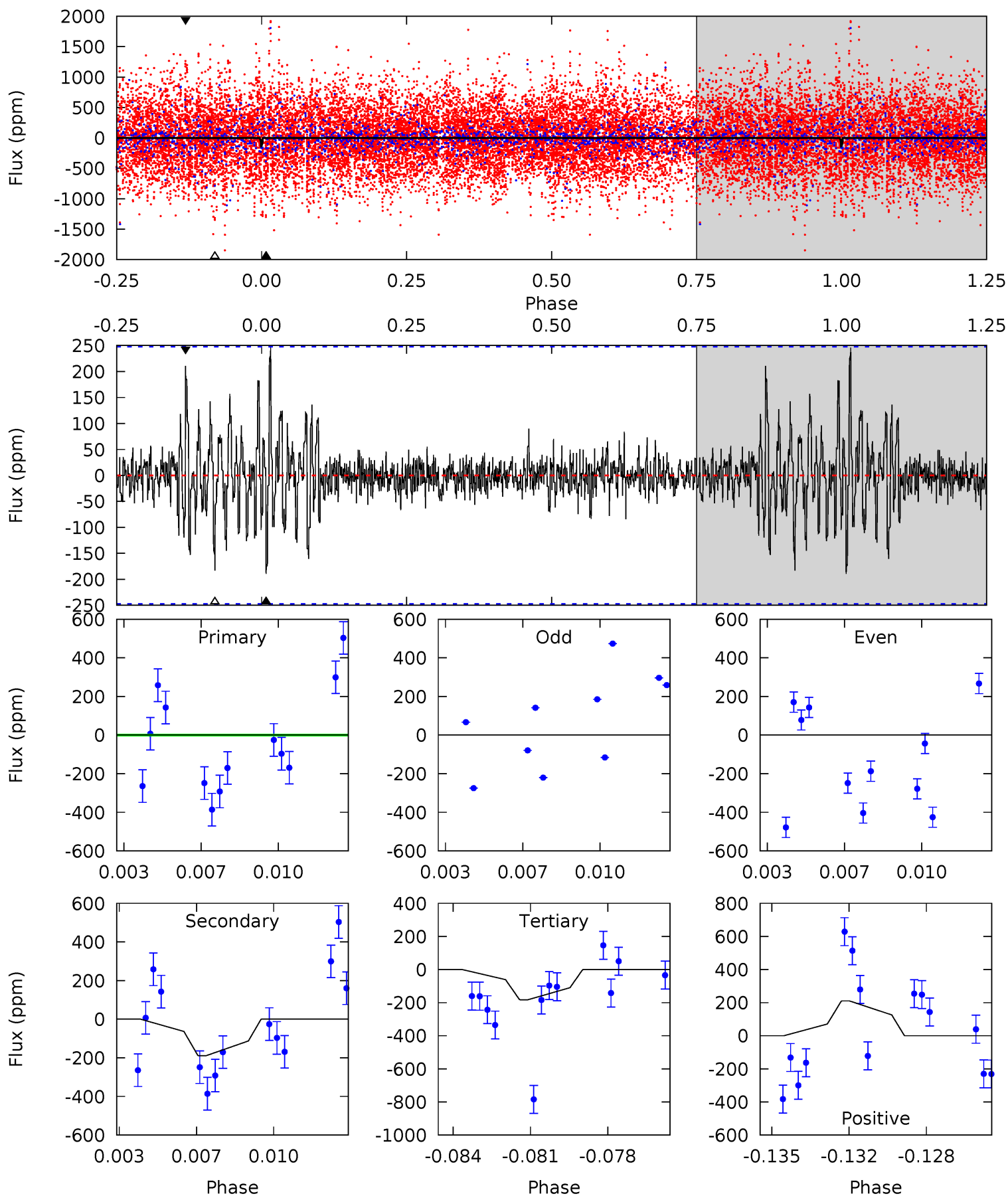
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.82	7.00	5.04	6.03	5.04	2.60	2.08	1.78	0.79	1.96	0.97	2.52	1.80	0.46	5.29



Alt Model-Shift Uniqueness Test

009468126-03, P = 507.099658 Days, E = 242.713718 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.01	3.99	3.87	4.44	5.23	2.93	0.92	-0.85	-1.43	0.13	-0.45	1.60	4.59	0.57	0.35



Stellar Parameters For KIC 009468126

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7355^{+230}_{-307}	$4.134^{+0.144}_{-0.176}$	$-0.140^{+0.200}_{-0.350}$	$1.737^{+0.525}_{-0.393}$	$1.497^{+0.209}_{-0.232}$	$0.402^{+0.296}_{-0.196}$
	+3%/-4%	+3%/-4%	+143%/-250%	+30%/-23%	+14%/-15%	+74%/-49%
Source	KIC0	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 009468126-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-167 ± 24	$7.70^{+1.46}_{-1.27}$	503^{+38}_{-35}	4326^{+262}_{-222}	3095^{+1347}_{-958}
Alt.	-189 ± 47	$1.95^{+0.95}_{-0.82}$	501^{+38}_{-35}	8734^{+4414}_{-1840}	$54161^{+123280}_{-31092}$

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 $A_{obs} \gg 1.0$

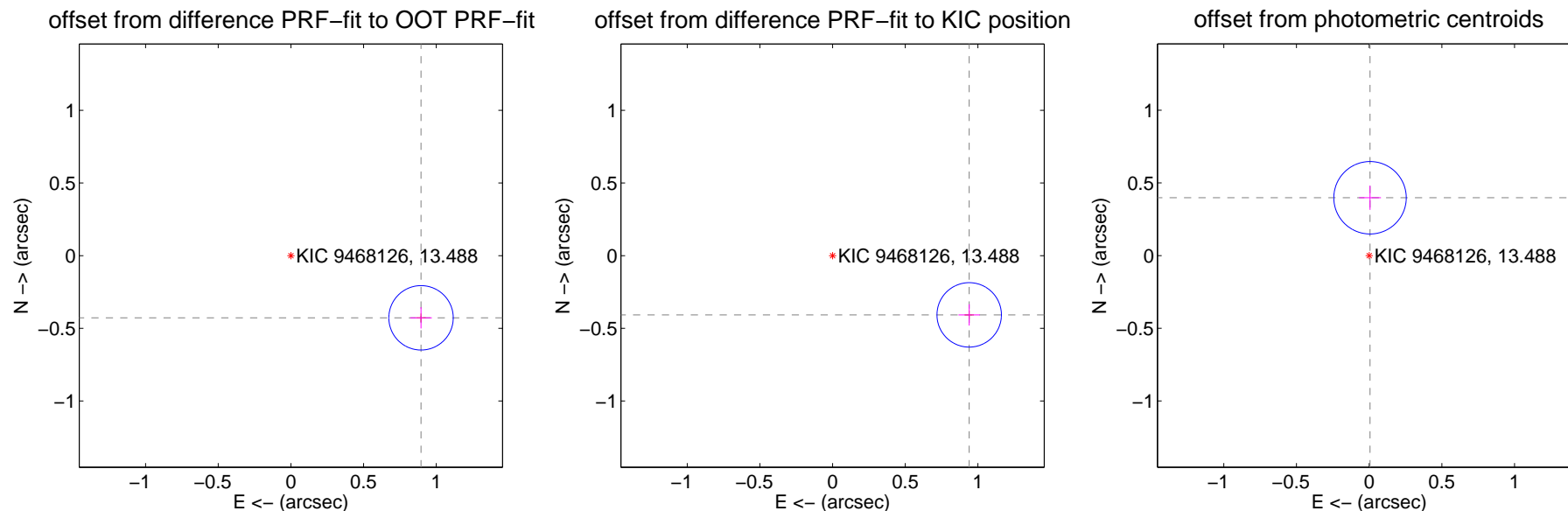
DV Centroid Data

Supplemental centroid analysis for 009468126-03. Kepler magnitude: 13.49. Transit SNR 7.83

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.992 ± 0.074	13.43	-0.895 ± 0.074	-0.428 ± 0.073
PRF-fit source offset from KIC position	1.025 ± 0.074	13.87	-0.940 ± 0.074	-0.408 ± 0.073
photometric centroid source offset	0.40 ± 0.08	4.79	-0.01 ± 0.08	0.40 ± 0.08

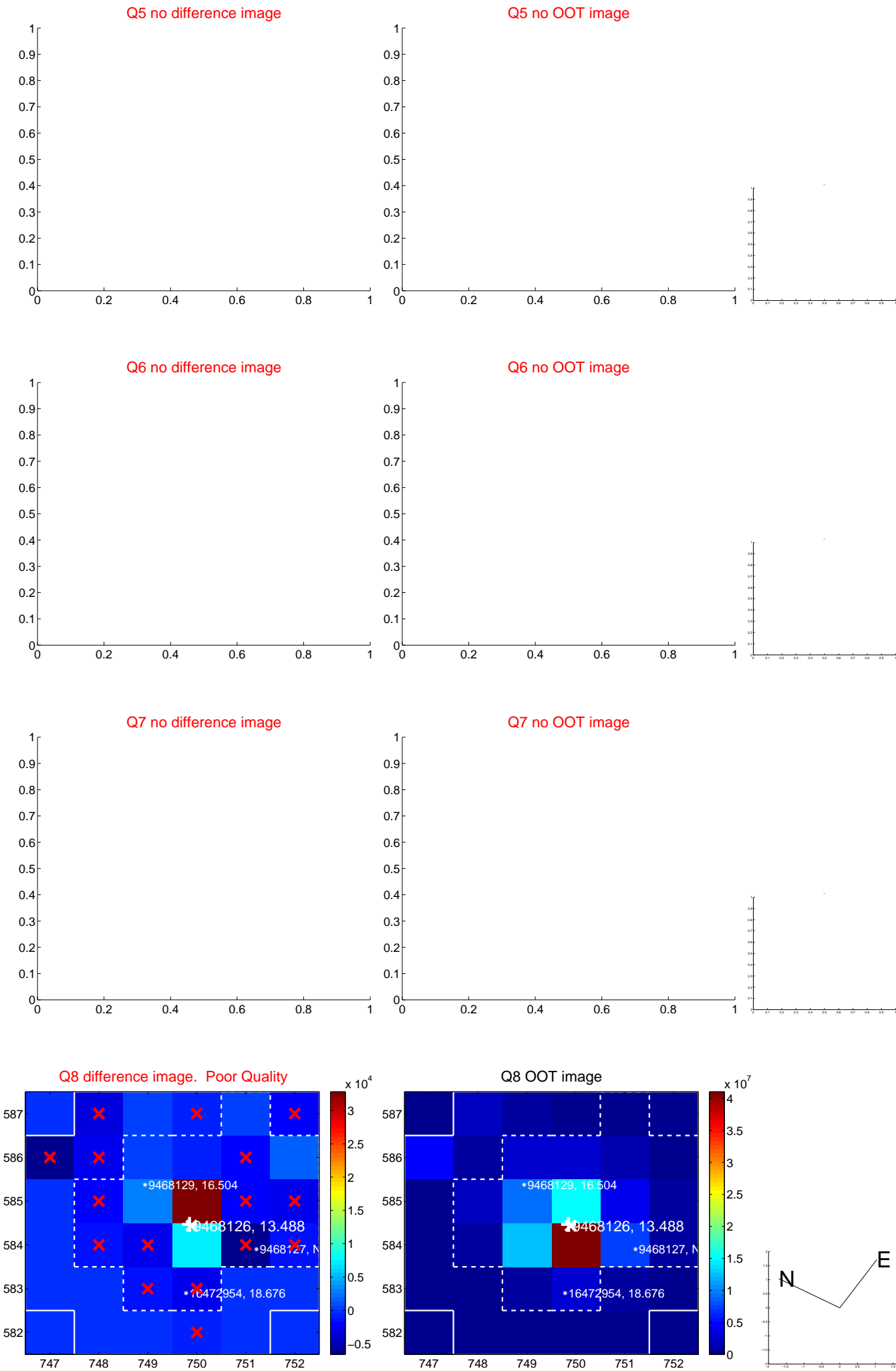


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



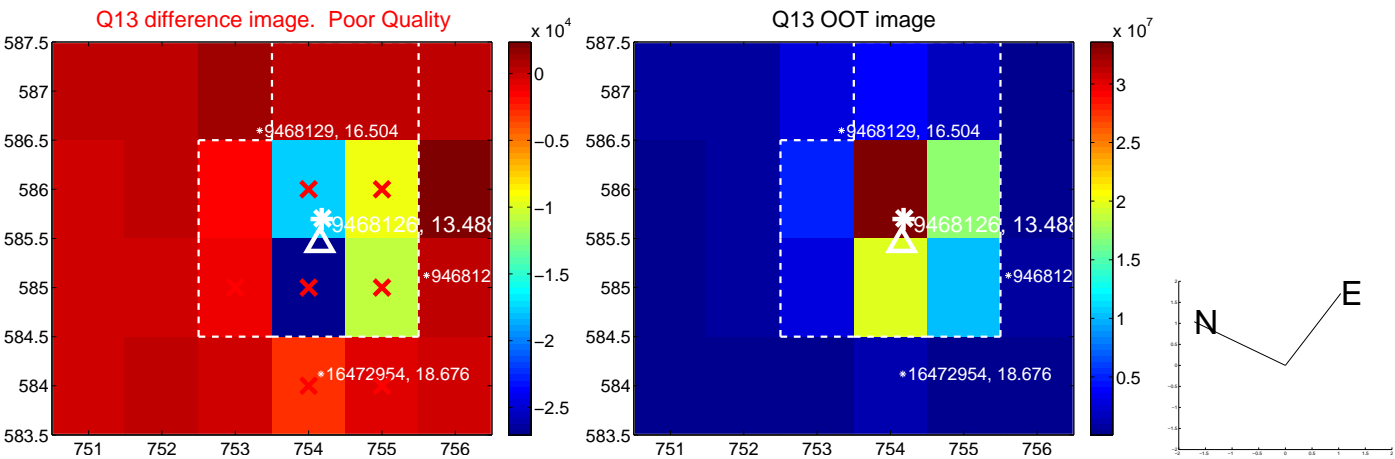
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



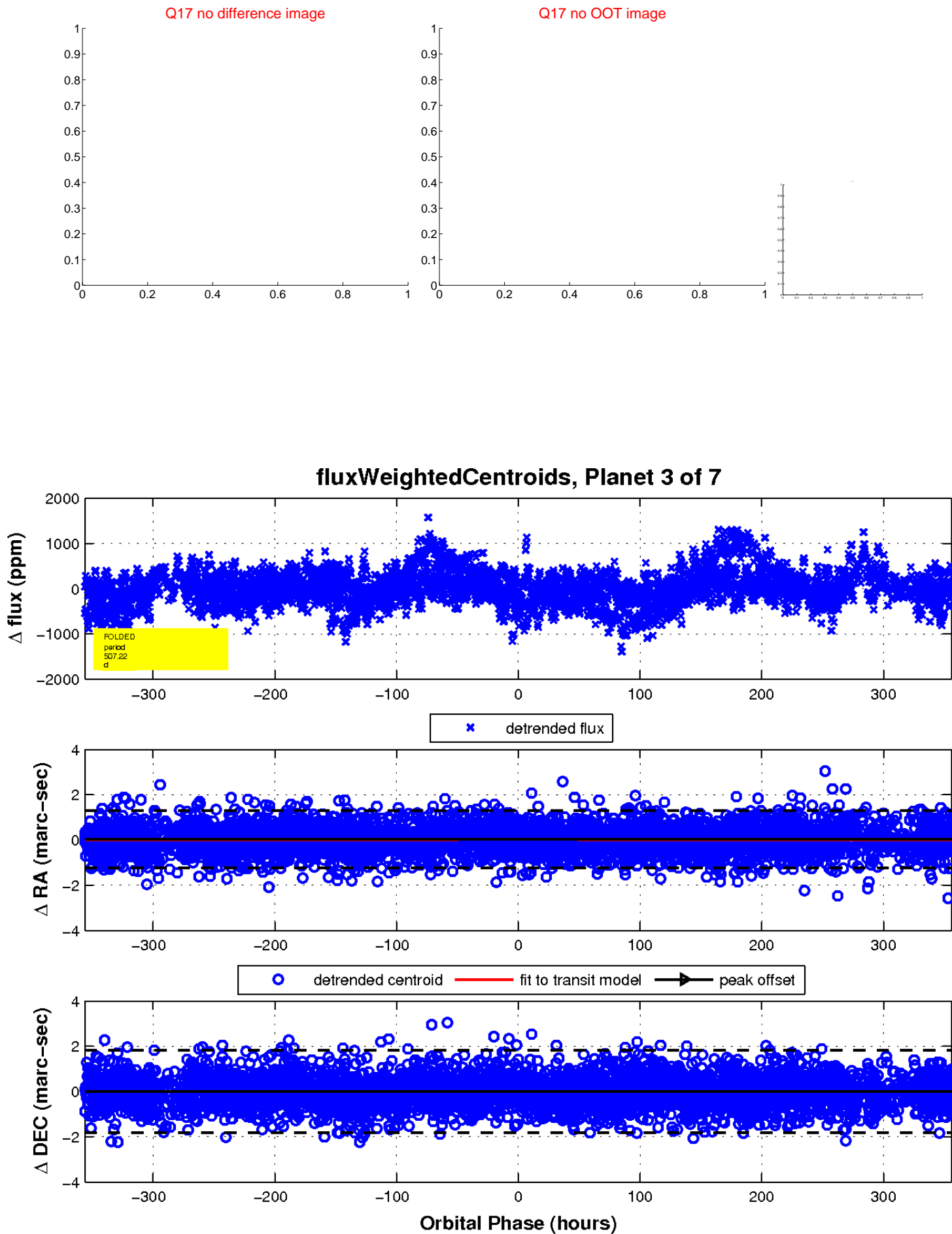
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

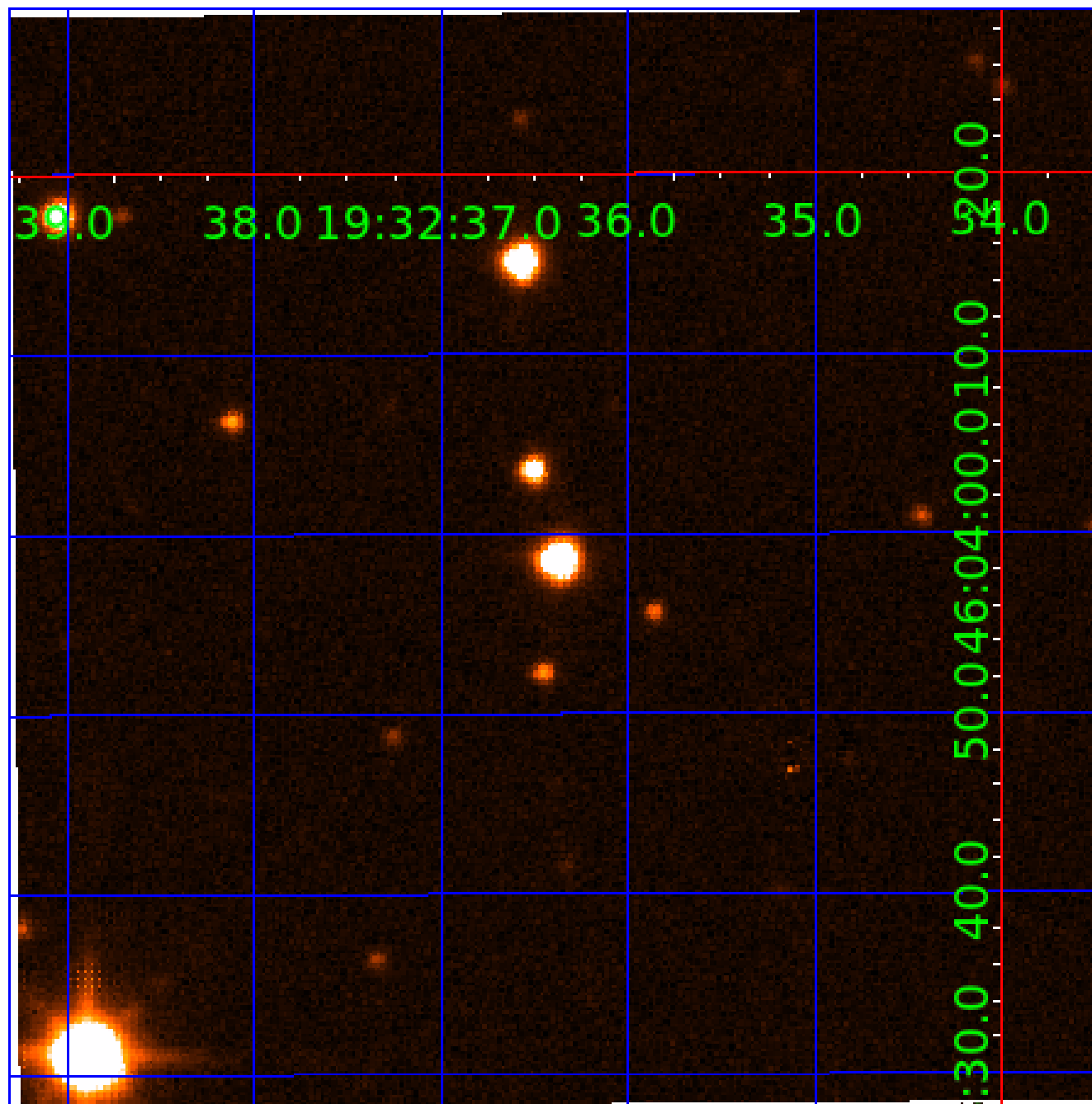


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 009468126

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})
009468126-01	OBS	No	1.436745	132.191634	42.3	8.379	11.1	11.1	1.74	7355	1.14	9725.65
009468126-02	OBS	No	165.543209	264.271278	403.6	1.910	13.3	4.7	1.74	7355	3.96	17.35
009468126-03	OBS	No	507.221426	242.808175	1557.2	118.662	13.4	7.8	1.74	7355	7.65	3.90
009468126-04	OBS	No	95.118570	201.221651	576.8	3.403	9.5	9.4	1.74	7355	7.94	36.31
009468126-05	OBS	No	45.309545	144.970442	286.7	5.402	9.2	9.0	1.74	7355	3.46	97.61
009468126-06	OBS	No	90.036983	132.028979	498.7	2.825	10.0	9.0	1.74	7355	4.51	39.07
009468126-07	OBS	No	99.782394	154.391230	472.5	4.279	9.7	9.4	1.74	7355	4.28	34.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009468126-01	OBS	FP	0.00	1	0	0	0	LPP_DV
009468126-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
009468126-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS—CENT_FEW_DIFFS
009468126-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
009468126-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
009468126-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
009468126-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

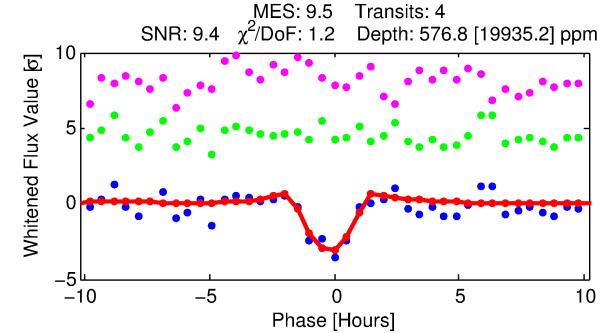
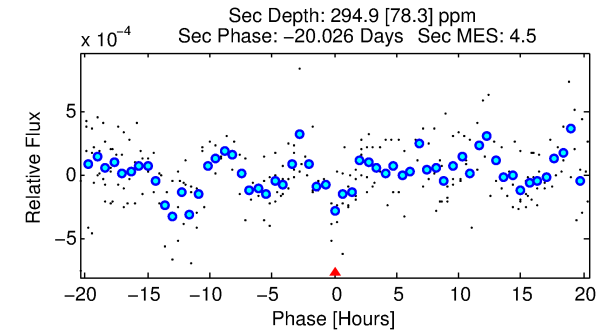
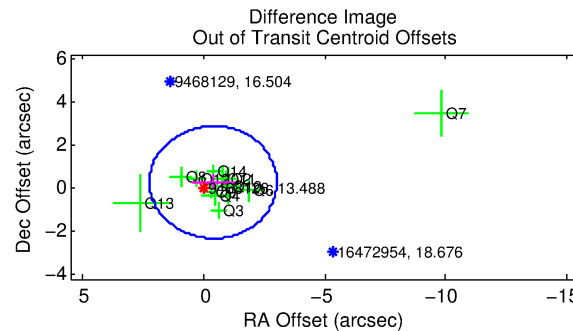
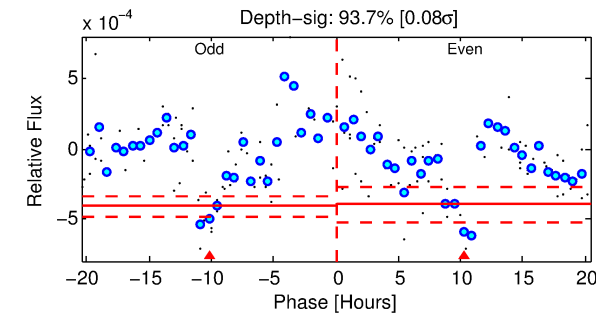
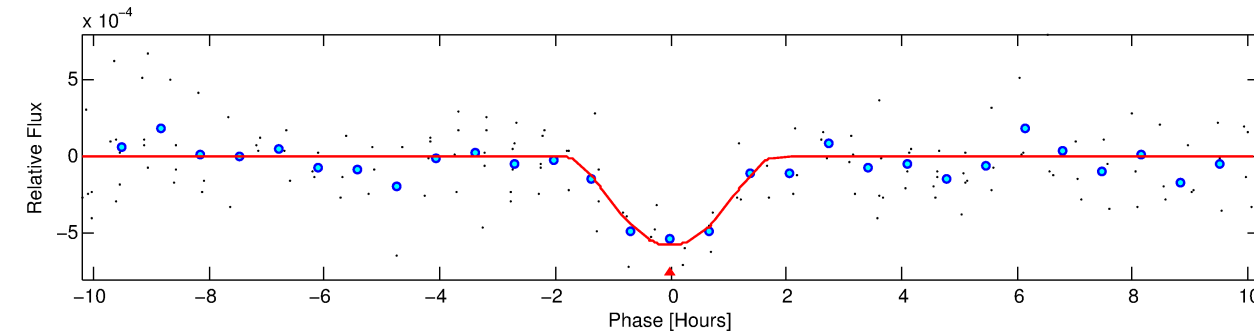
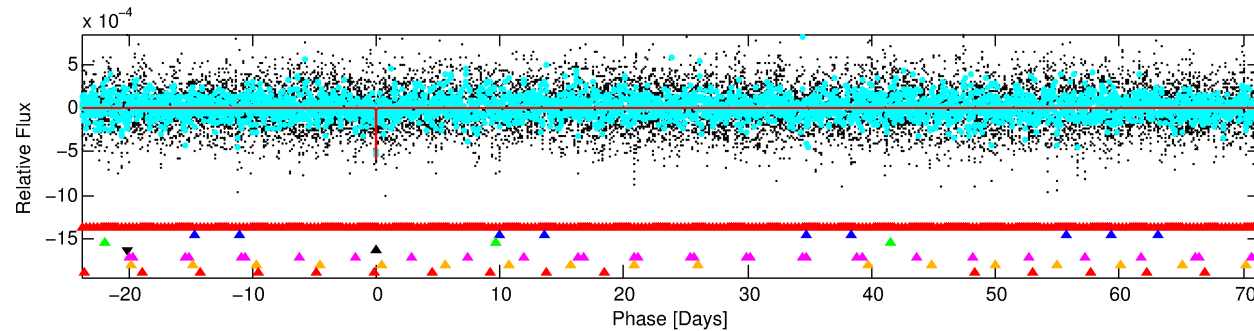
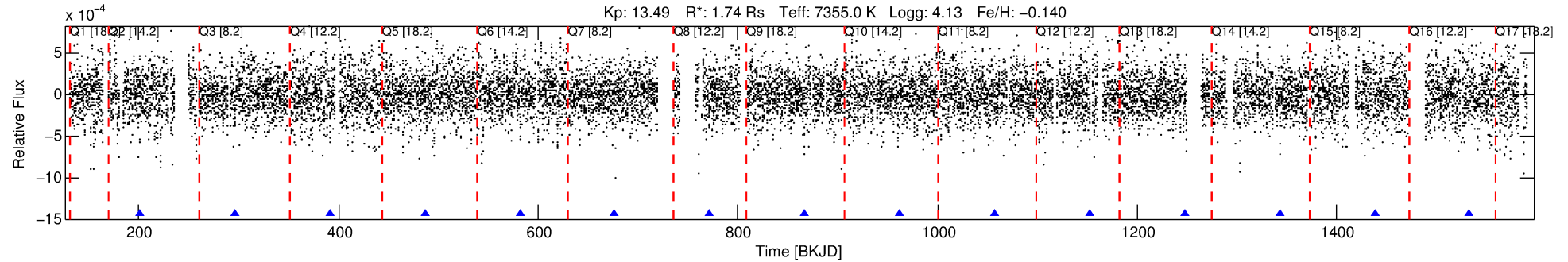
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009468126-04

No Significant Match Found

DV One-Page Summary

KIC: 9468126 Candidate: 4 of 7 Period: 95.119 d



DV Fit Results:

Period = 95.11857 [0.00105] d
Epoch = 201.2217 [0.0083] BKJD
Rp/R* = 0.0419 [0.2162]
a/R* = 62.45 [83.88]
b = 1.00 [1.30]
Seff = 36.31 [13.66]
Teq = 626 [59] K
Rp = 7.94 [41.06] Re
a = 0.4667 [0.1132] AU
Ag = 561.25 [5802.33] [0.10 σ]
Teffp = 4711 [12170] K [0.34 σ]

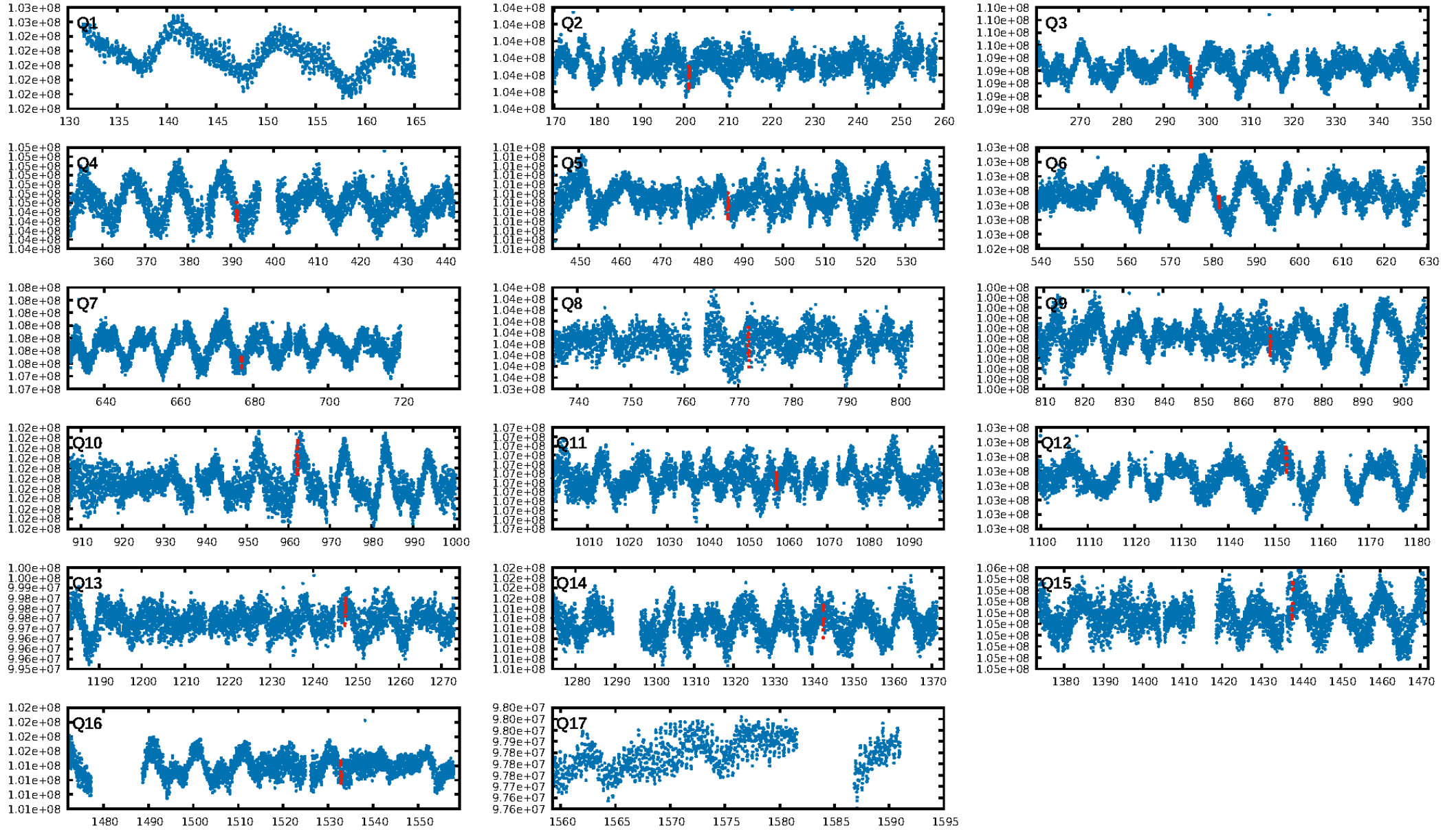
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [27.58 σ]
LongPeriod-sig: 100.0% [20.47 σ]
ModelChiSquare2-sig: 80.7%
ModelChiSquareGof-sig: 97.7%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -0.9463
Centroid-sig: 2.9%
Centroid-so: 1.080 arcsec [2.12 σ]
OotOffset-rm: 0.479 arcsec [0.55 σ]
KicOffset-rm: 0.545 arcsec [0.71 σ]
OotOffset-st: 4/3/3/2 [12]
KicOffset-st: 4/3/3/2 [12]
DiffImageQuality-fgm: 0.67 [8/12]
DiffImageOverlap-fno: 0.20 [3/15]

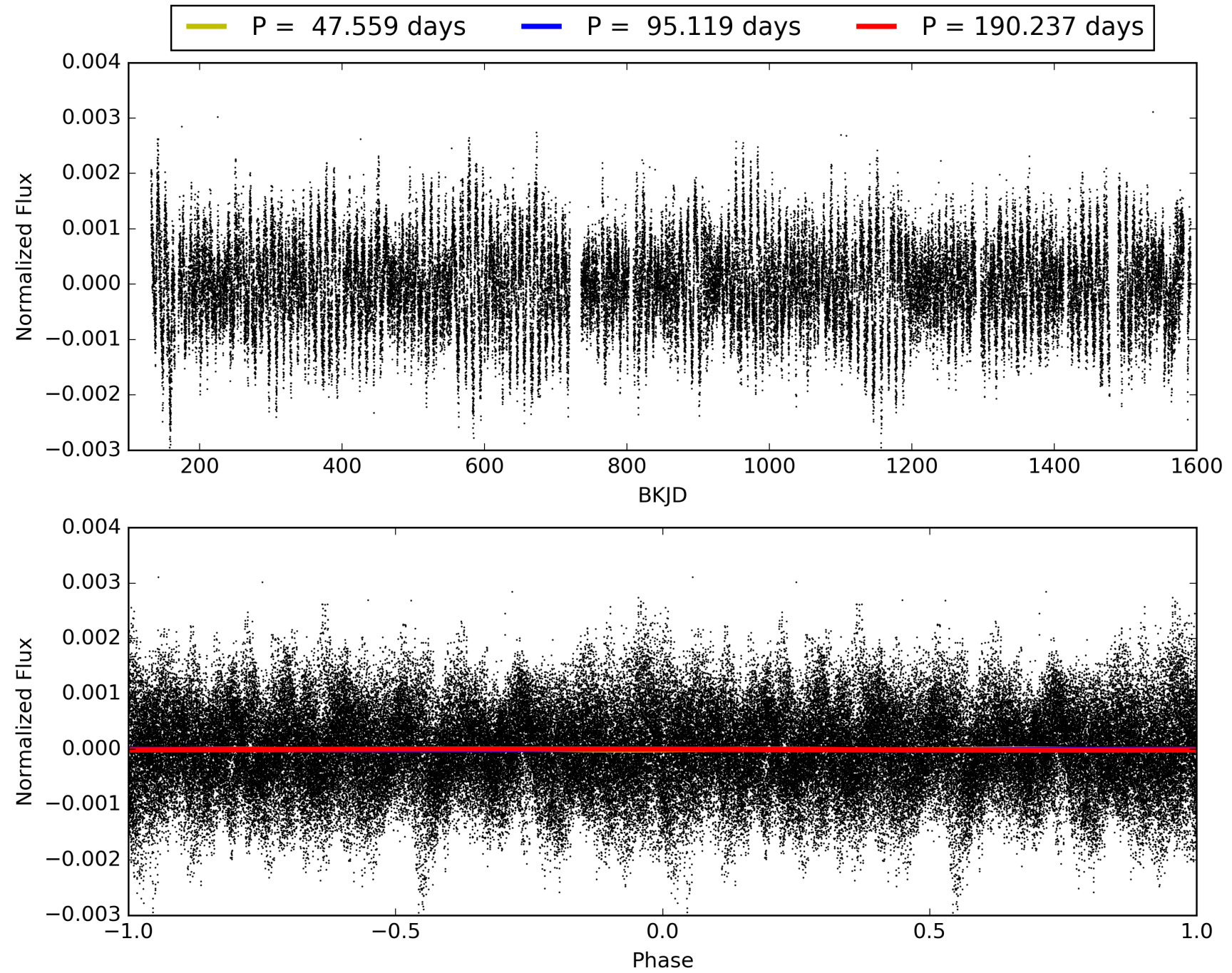
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:09:43 Z

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

TCE 009468126-04, PDC Light Curves

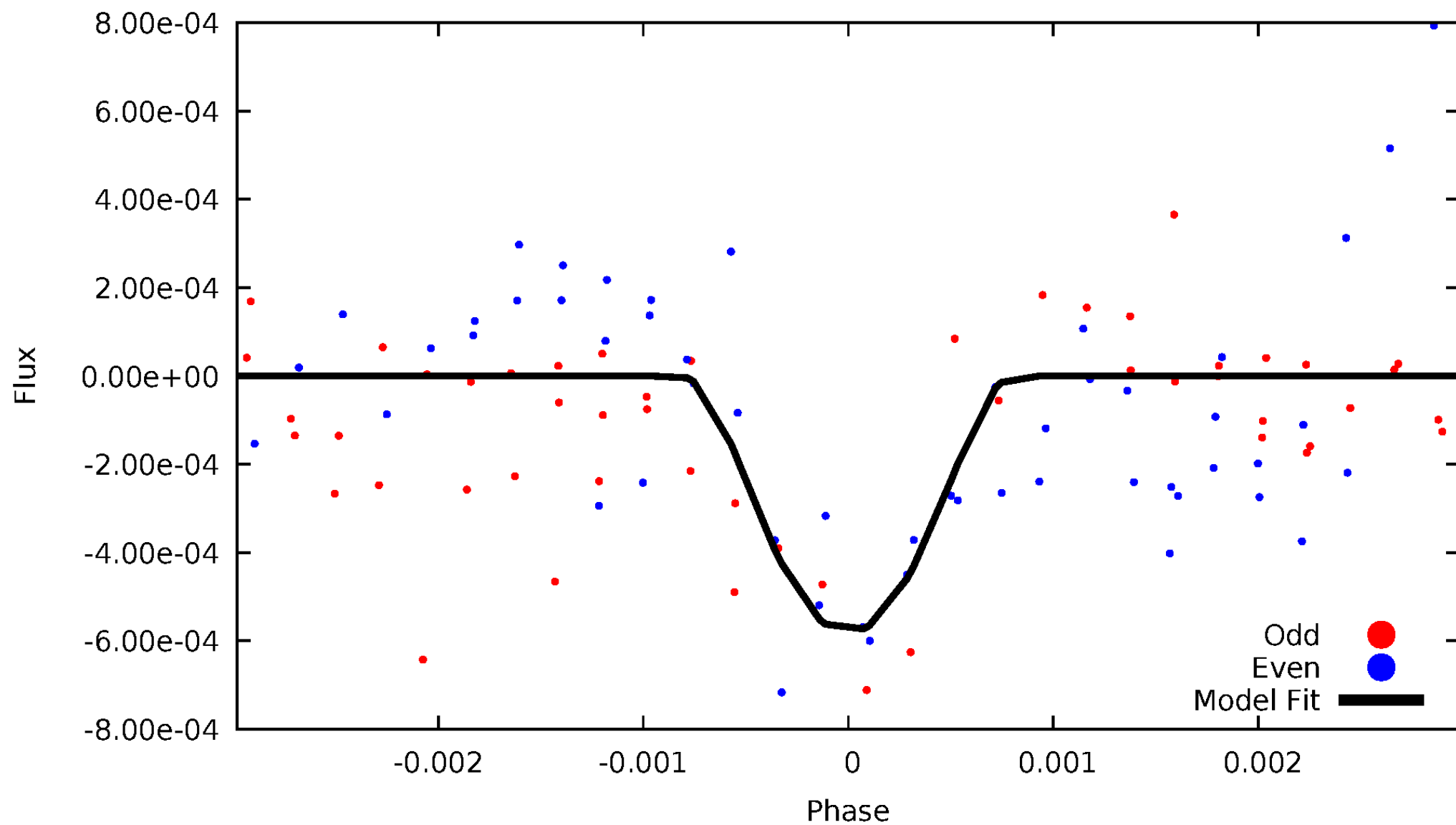


TCE 009468126-04



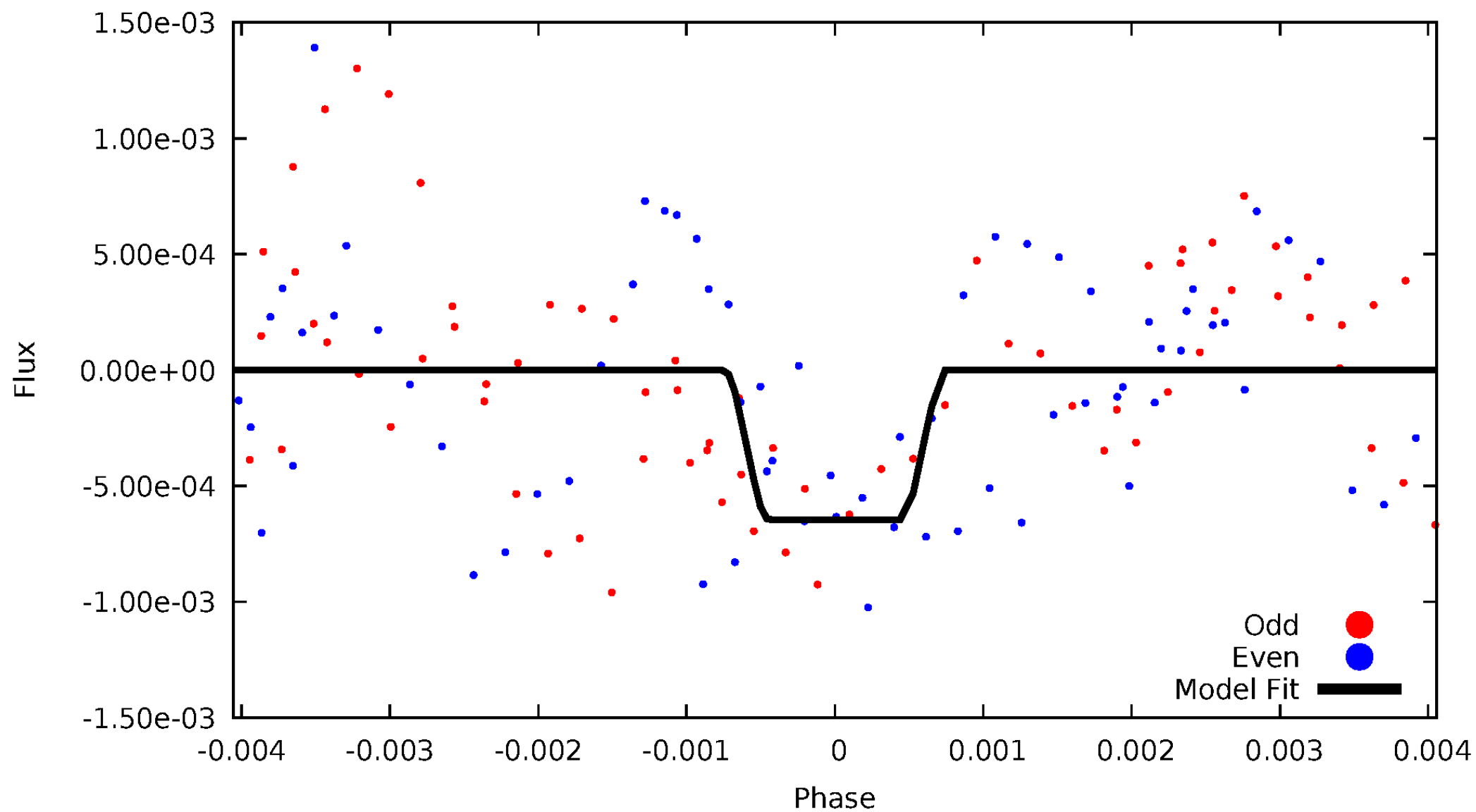
DV Odd/Even

TCE 009468126-04



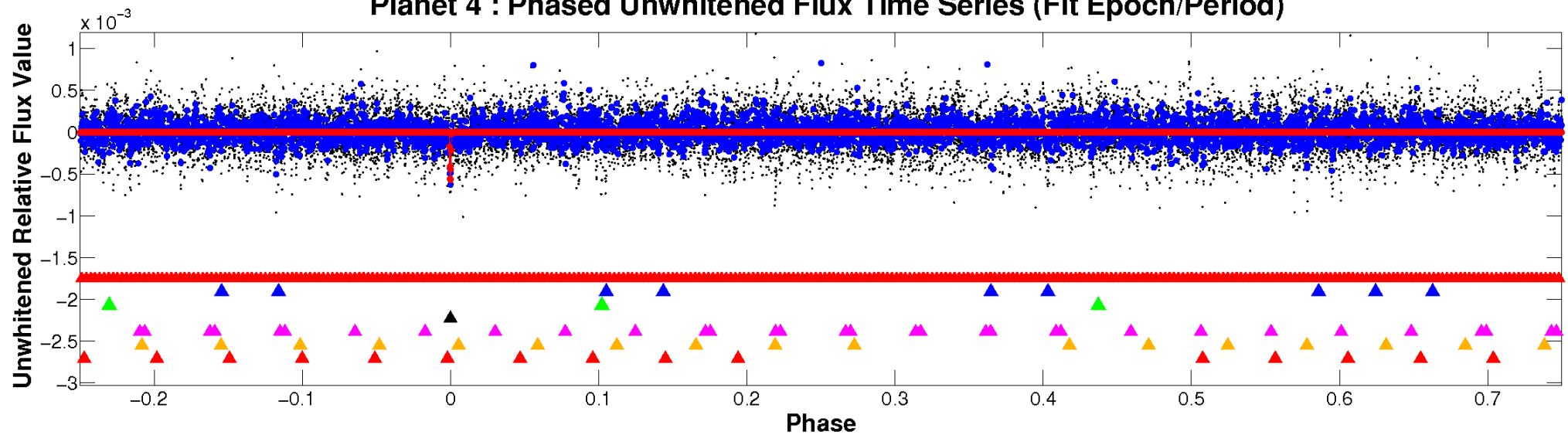
ALT Odd/Even

TCE 009468126-04

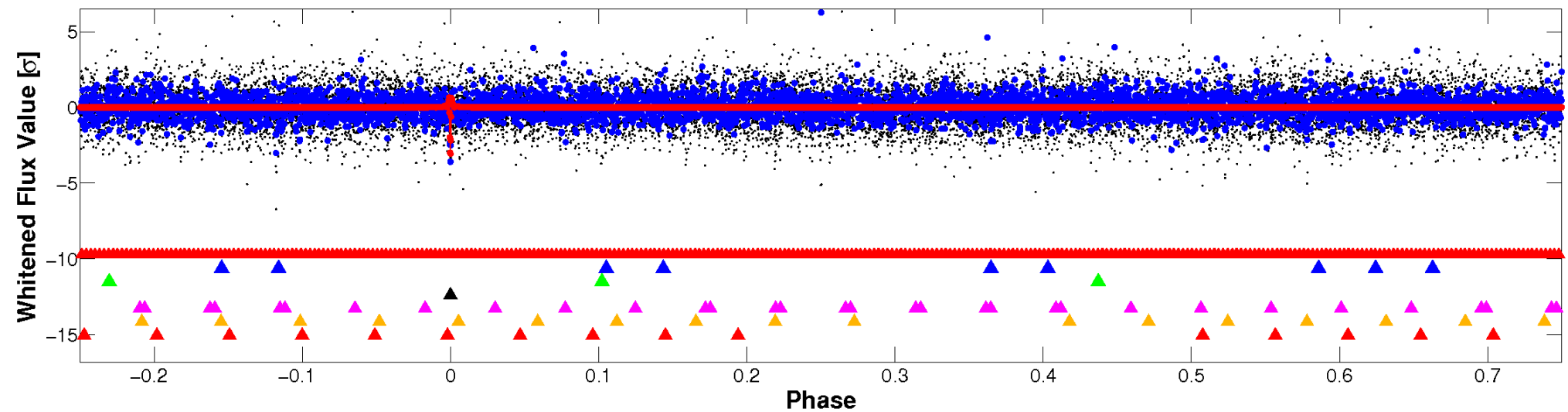


Non-Whitened Vs. Whitened Light Curve

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

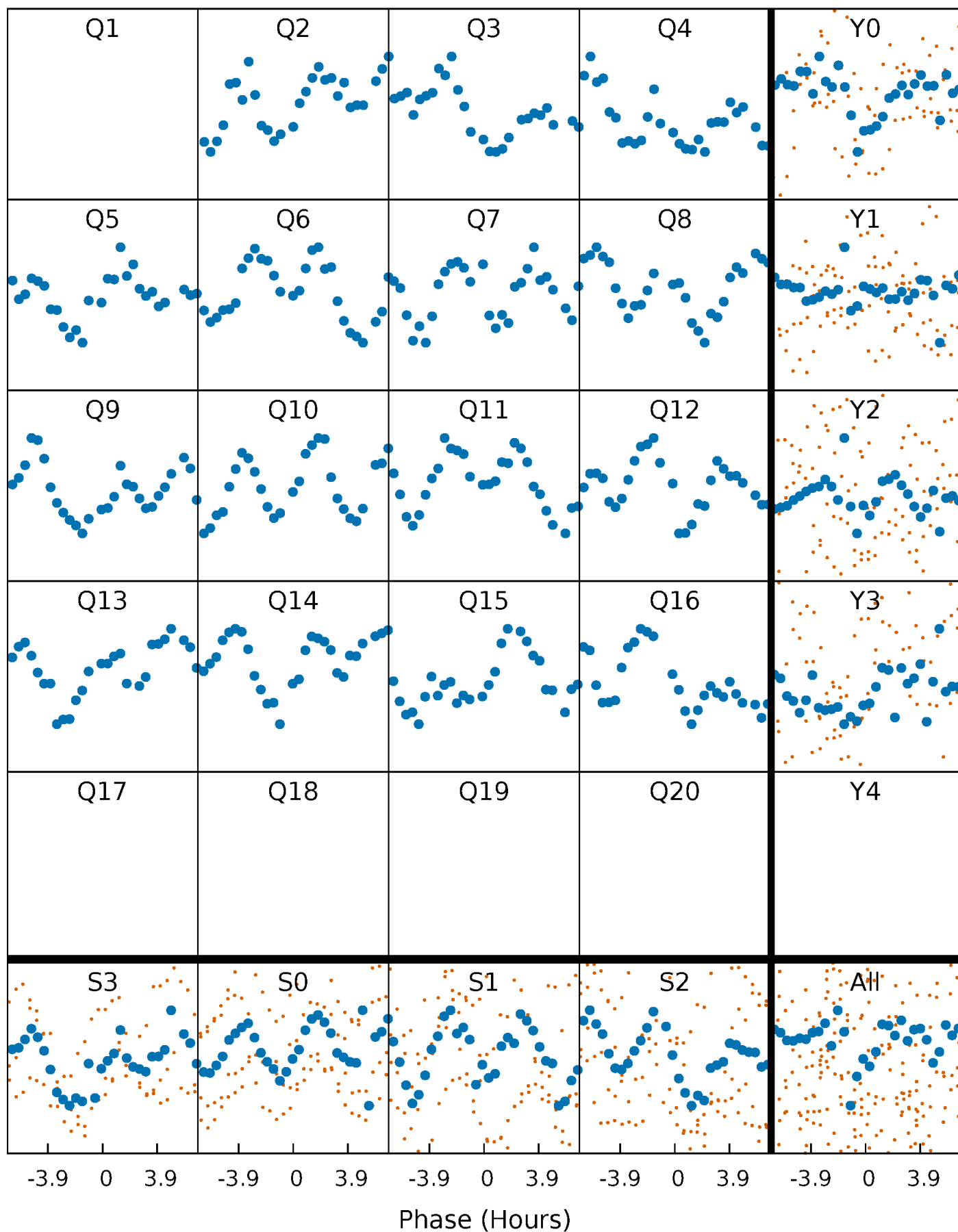


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



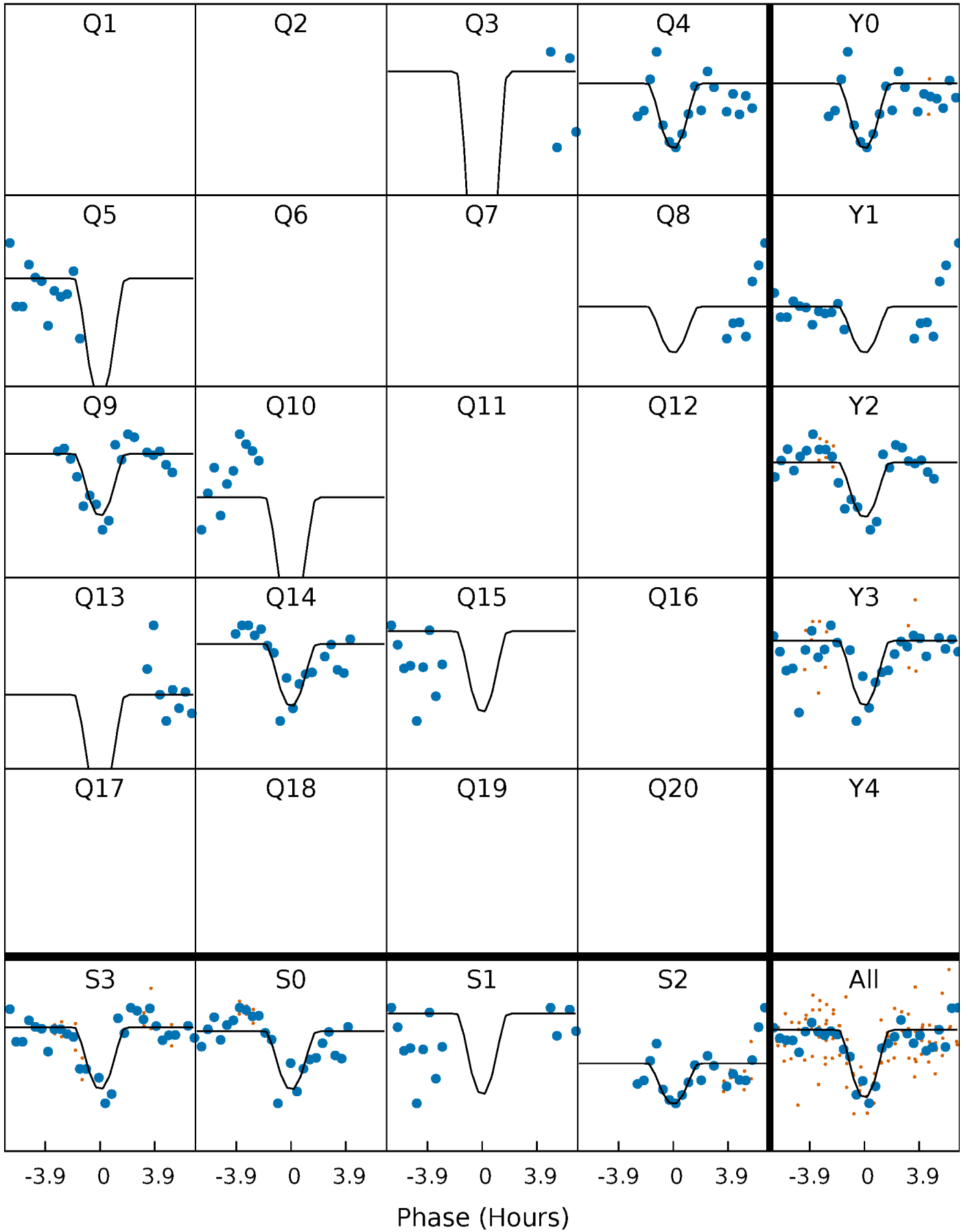
PDC Quarter-Phased Transit Curves

TCE 009468126-04 P= 95.118570 Days $T_0=201.221651$ (BKJD)



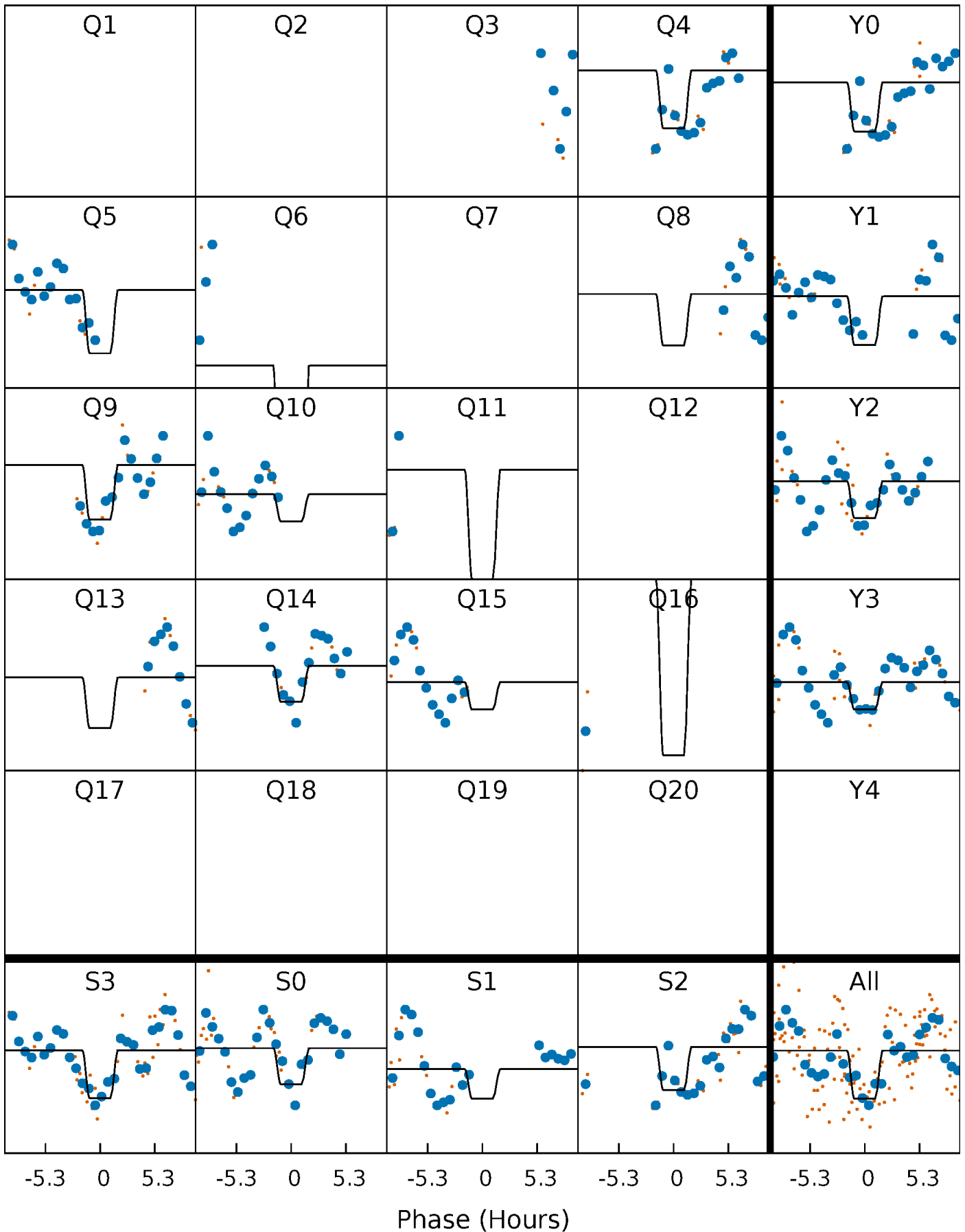
DV Quarter-Phased Transit Curves

TCE 009468126-04 P= 95.118570 Days $T_0=201.221651$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

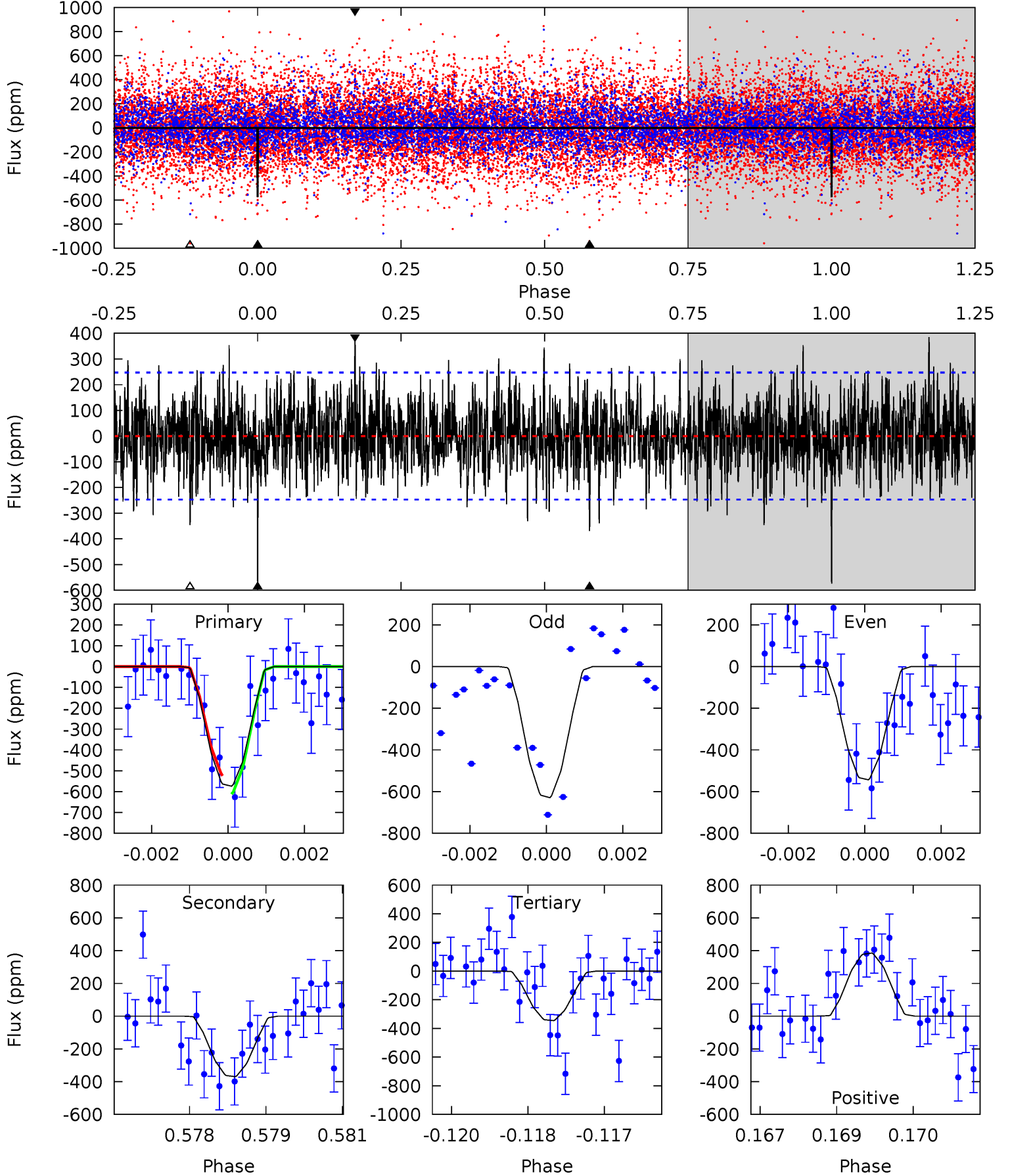
TCE 009468126-04 P= 95.116473 Days $T_0=201.194677$ (BKJD)



DV Model-Shift Uniqueness Test

009468126-04, P = 95.118570 Days, E = 106.103081 Days

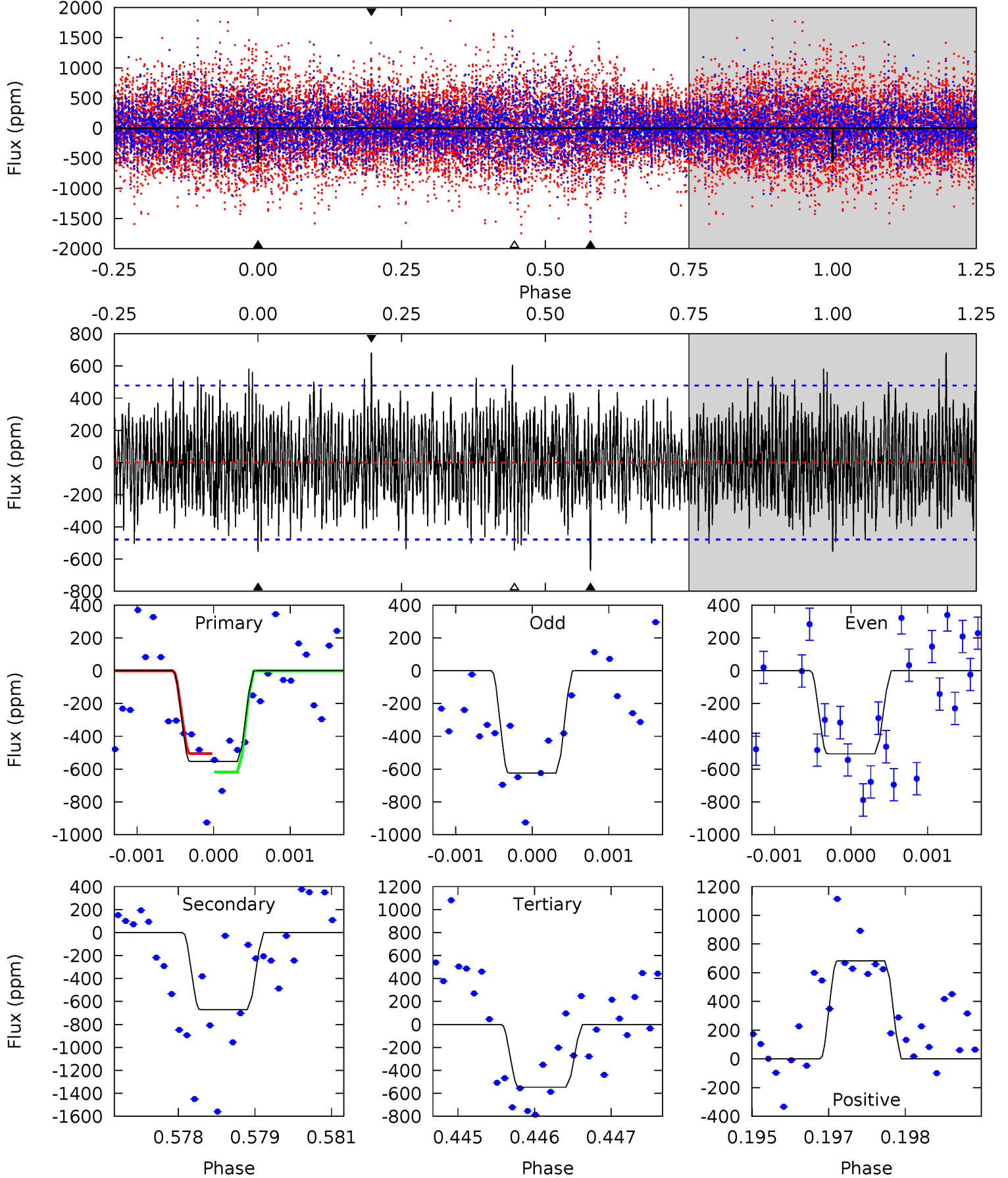
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.5	8.04	7.52	8.38	5.37	3.17	2.19	4.97	4.11	0.52	-0.34	0.92	1.11	0.40	0.95



Alt Model-Shift Uniqueness Test

009468126-04, P = 95.116473 Days, E = 106.078204 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.24	7.57	6.16	7.70	5.39	3.19	2.18	0.08	-1.46	1.41	-0.14	0.66	0.95	0.50	0.63



Stellar Parameters For KIC 009468126

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7355^{+230}_{-307}	$4.134^{+0.144}_{-0.176}$	$-0.140^{+0.200}_{-0.350}$	$1.737^{+0.525}_{-0.393}$	$1.497^{+0.209}_{-0.232}$	$0.402^{+0.296}_{-0.196}$
	+3%/-4%	+3%/-4%	+143%/-250%	+30%/-23%	+14%/-15%	+74%/-49%
Source	KIC0	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 009468126-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-370 ± 46	$30.87^{+30.21}_{-21.22}$	871^{+74}_{-56}	3113^{+1477}_{-553}	46^{+446}_{-35}
Alt.	-671 ± 89	$29.01^{+30.55}_{-20.44}$	874^{+65}_{-57}	3454^{+2059}_{-629}	94^{+1003}_{-71}

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

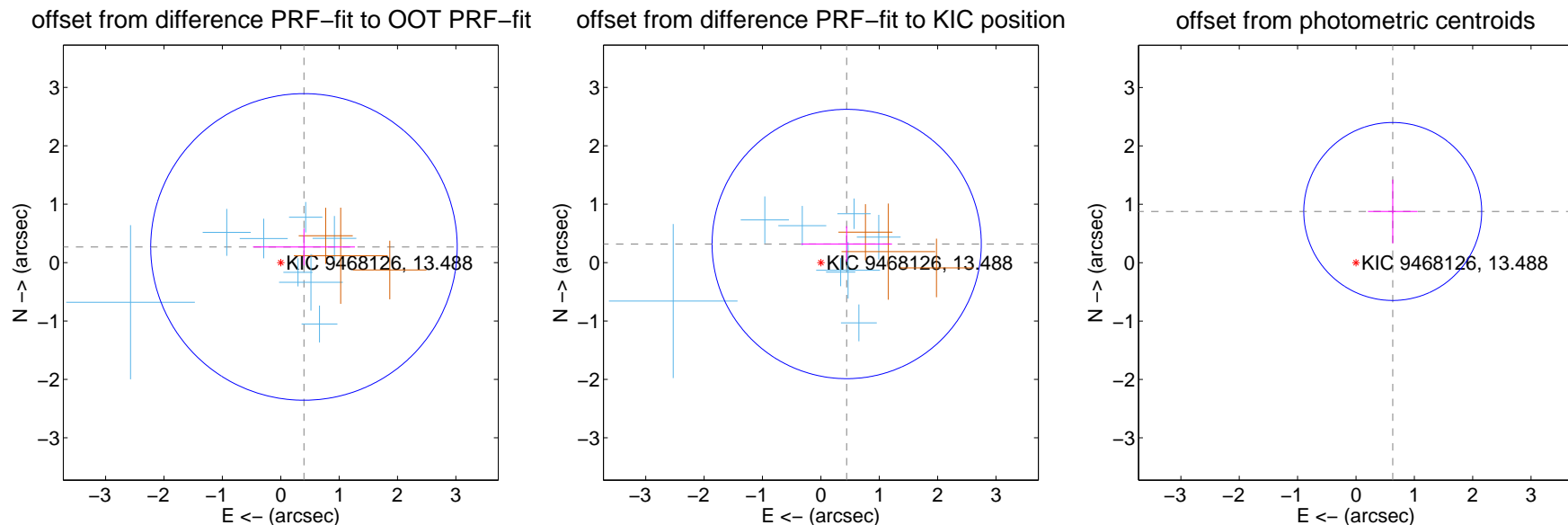
DV Centroid Data

Supplemental centroid analysis for 009468126-04. Kepler magnitude: 13.49. Transit SNR 9.36

There are 8 quarters with good PRF difference image offsets

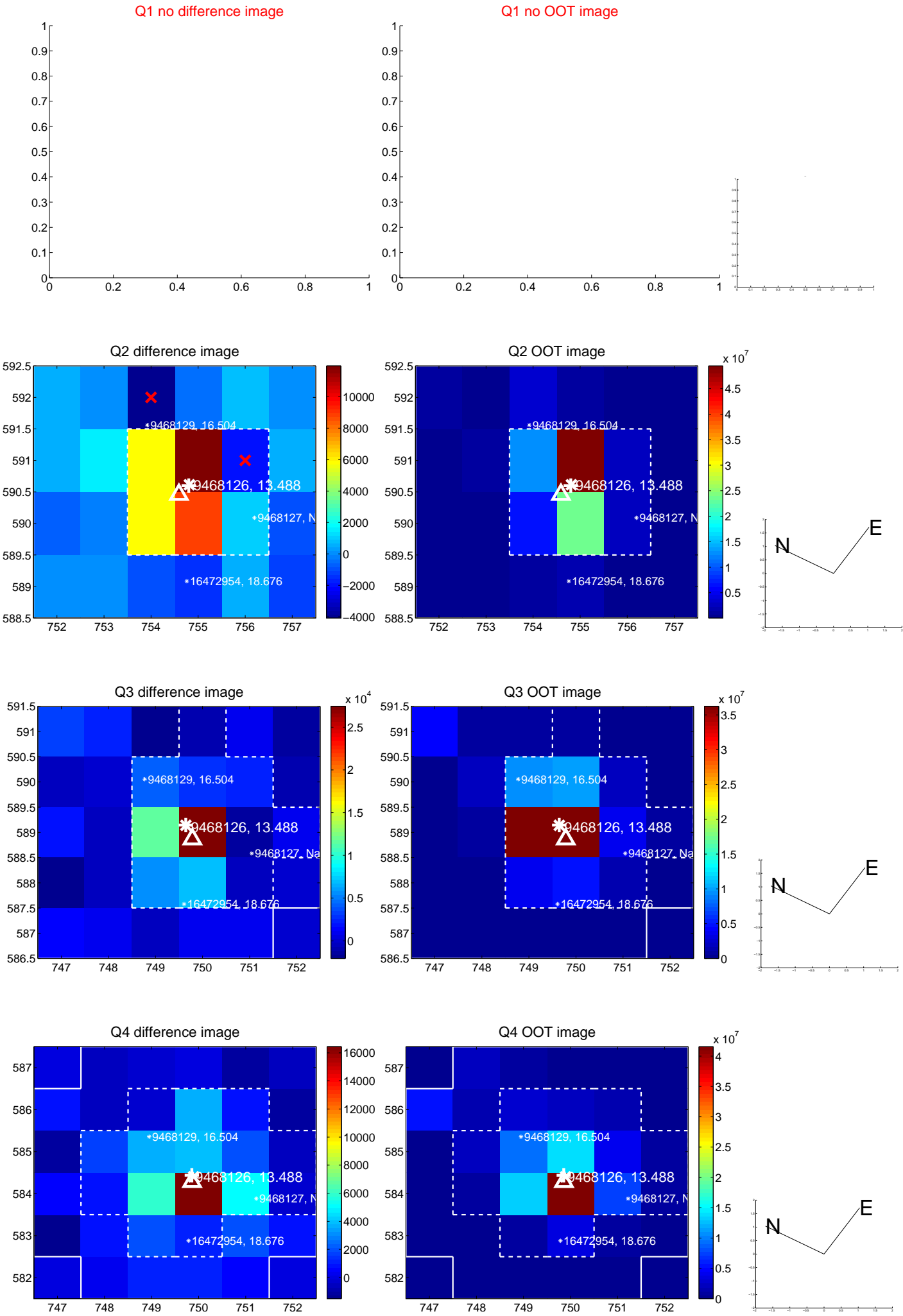
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.479 ± 0.875	0.55	-0.398 ± 0.873	0.268 ± 0.314
PRF-fit source offset from KIC position	0.545 ± 0.769	0.71	-0.442 ± 0.777	0.318 ± 0.304
photometric centroid source offset	1.08 ± 0.51	2.12	-0.63 ± 0.42	0.88 ± 0.55

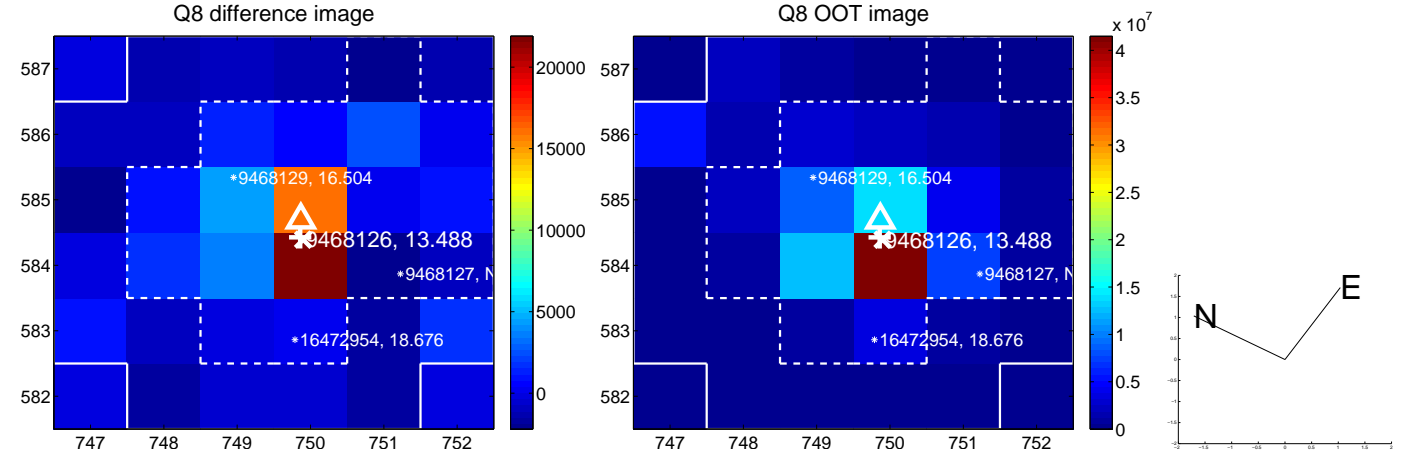
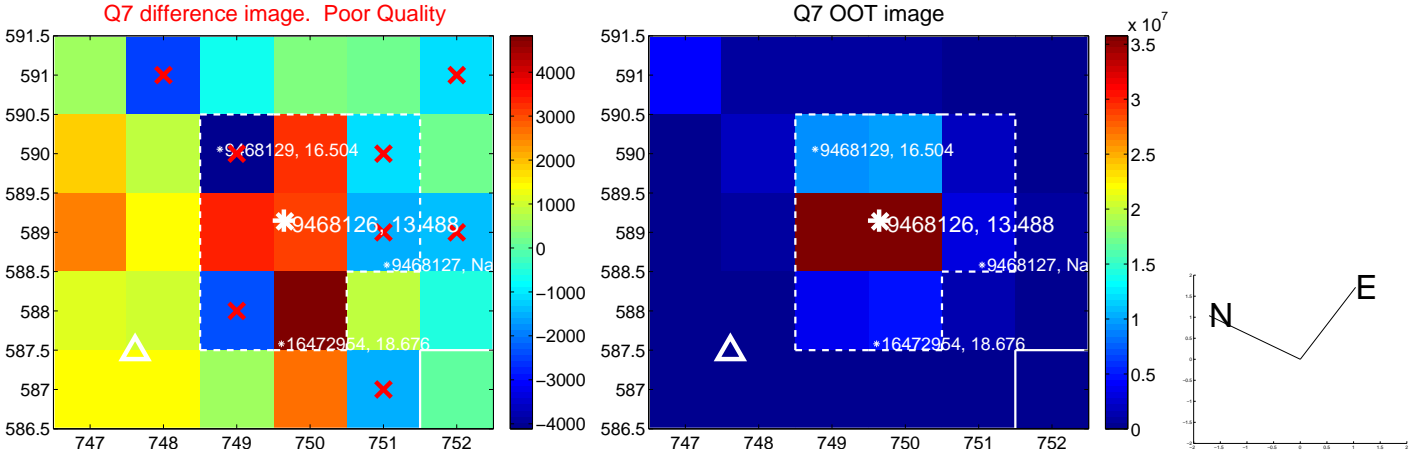
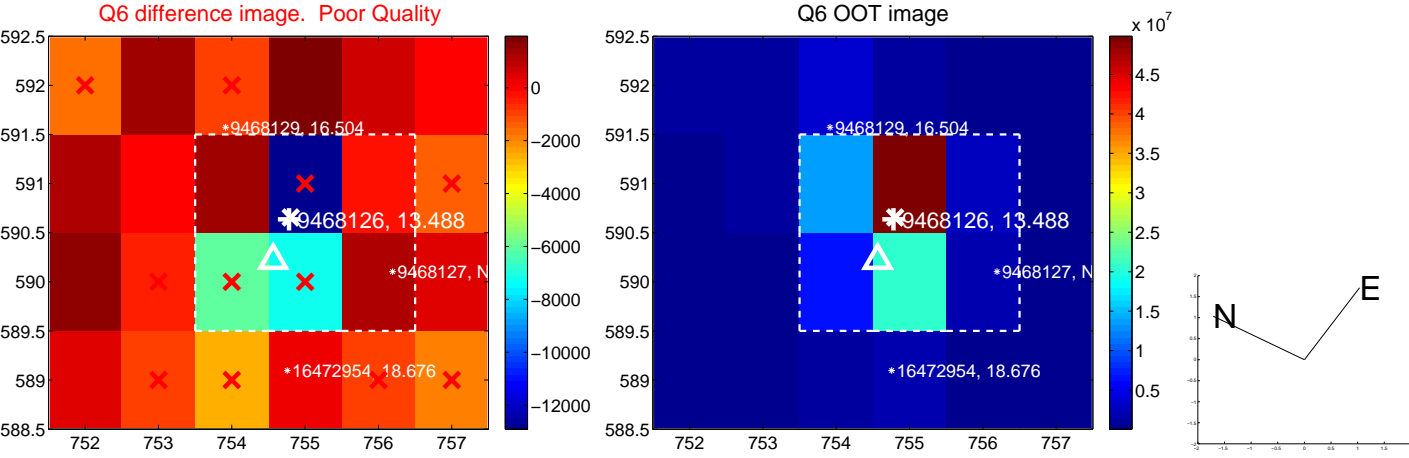
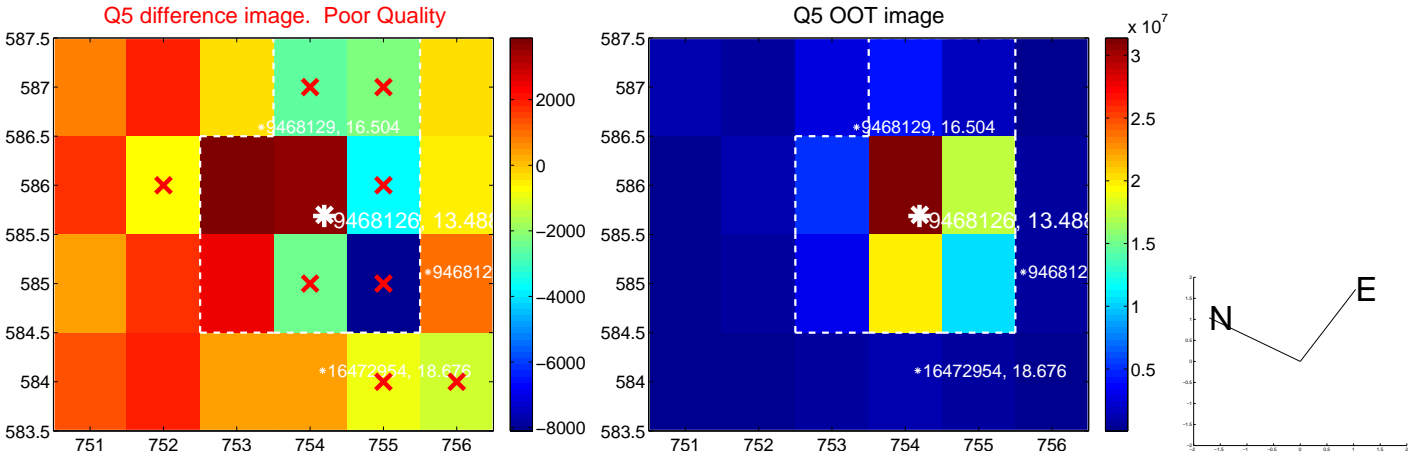


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

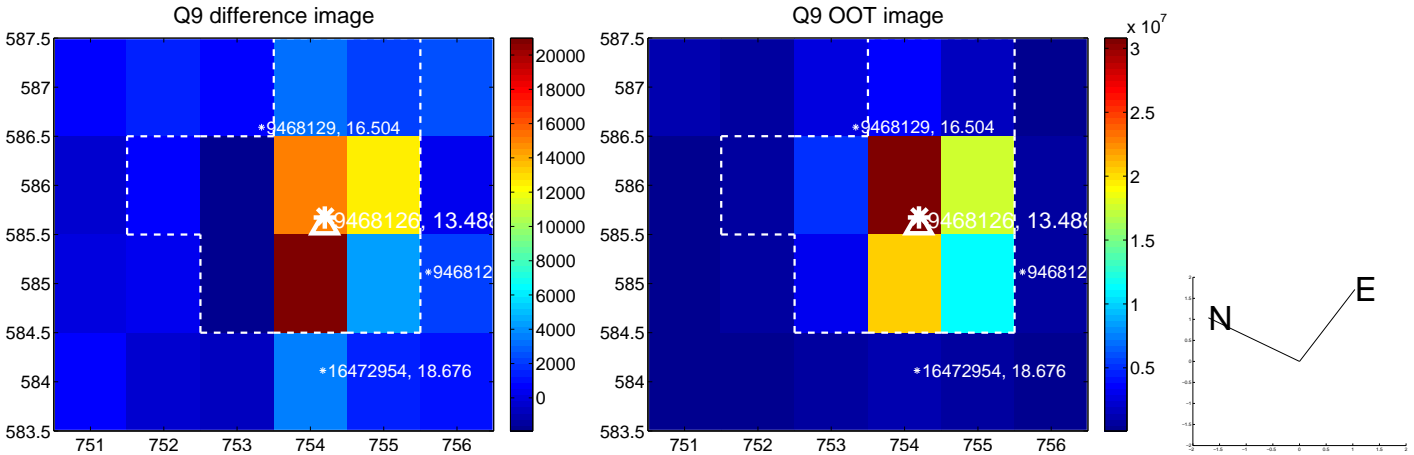
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



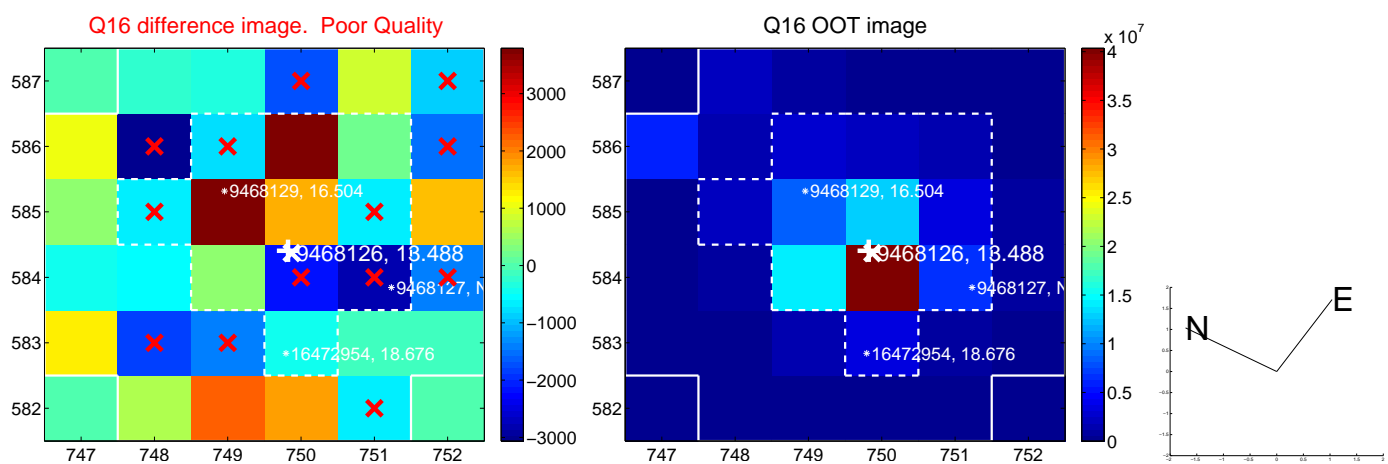
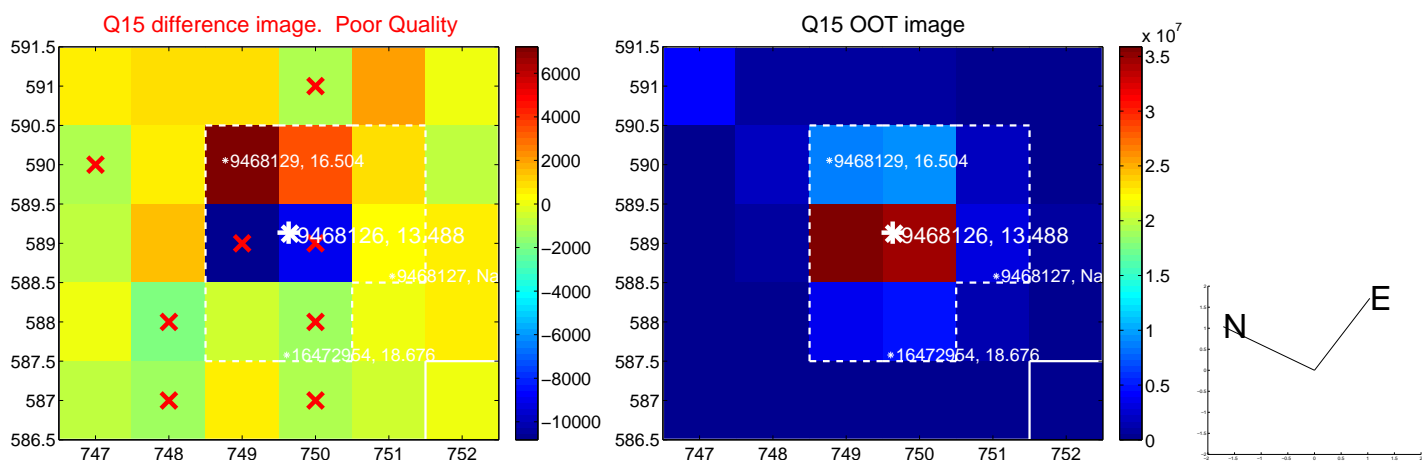
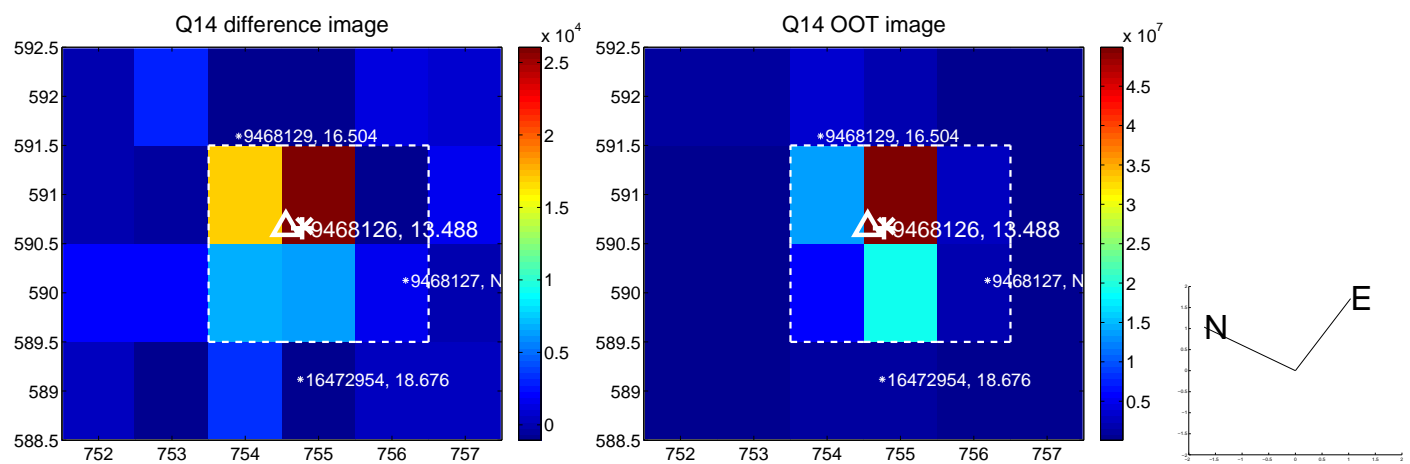
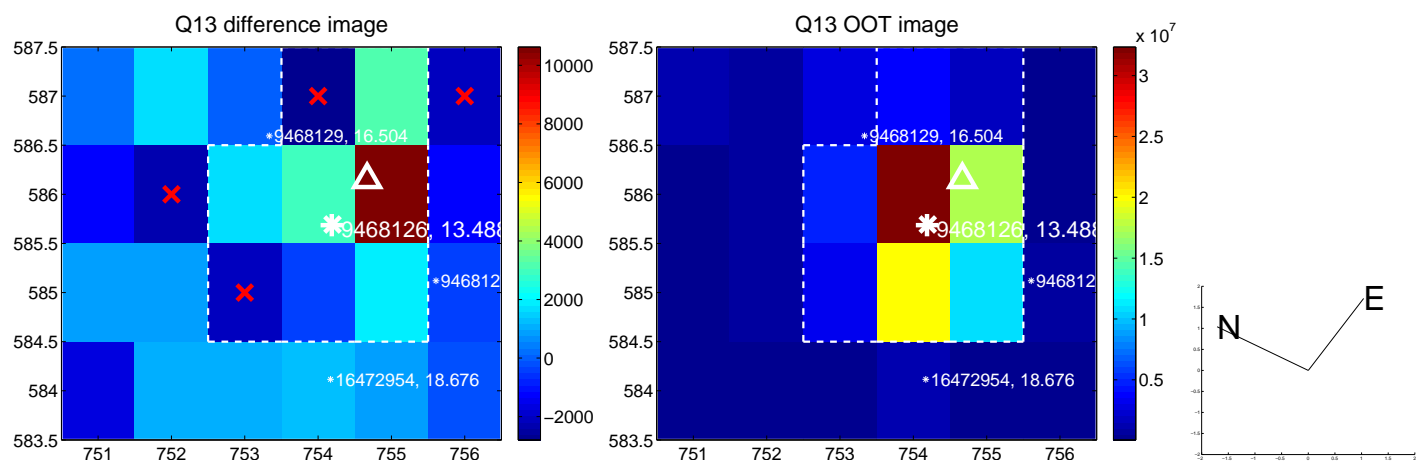
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



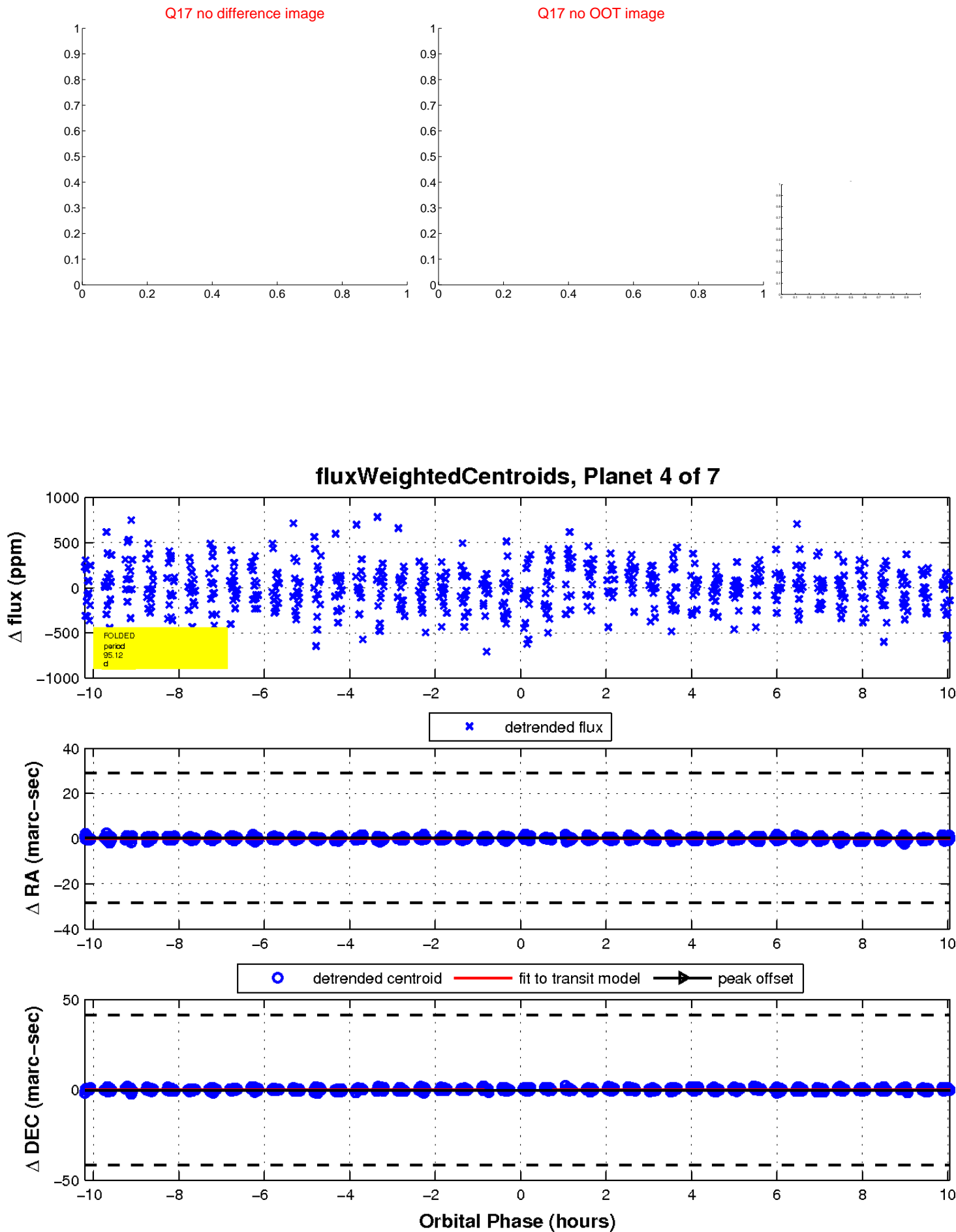
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

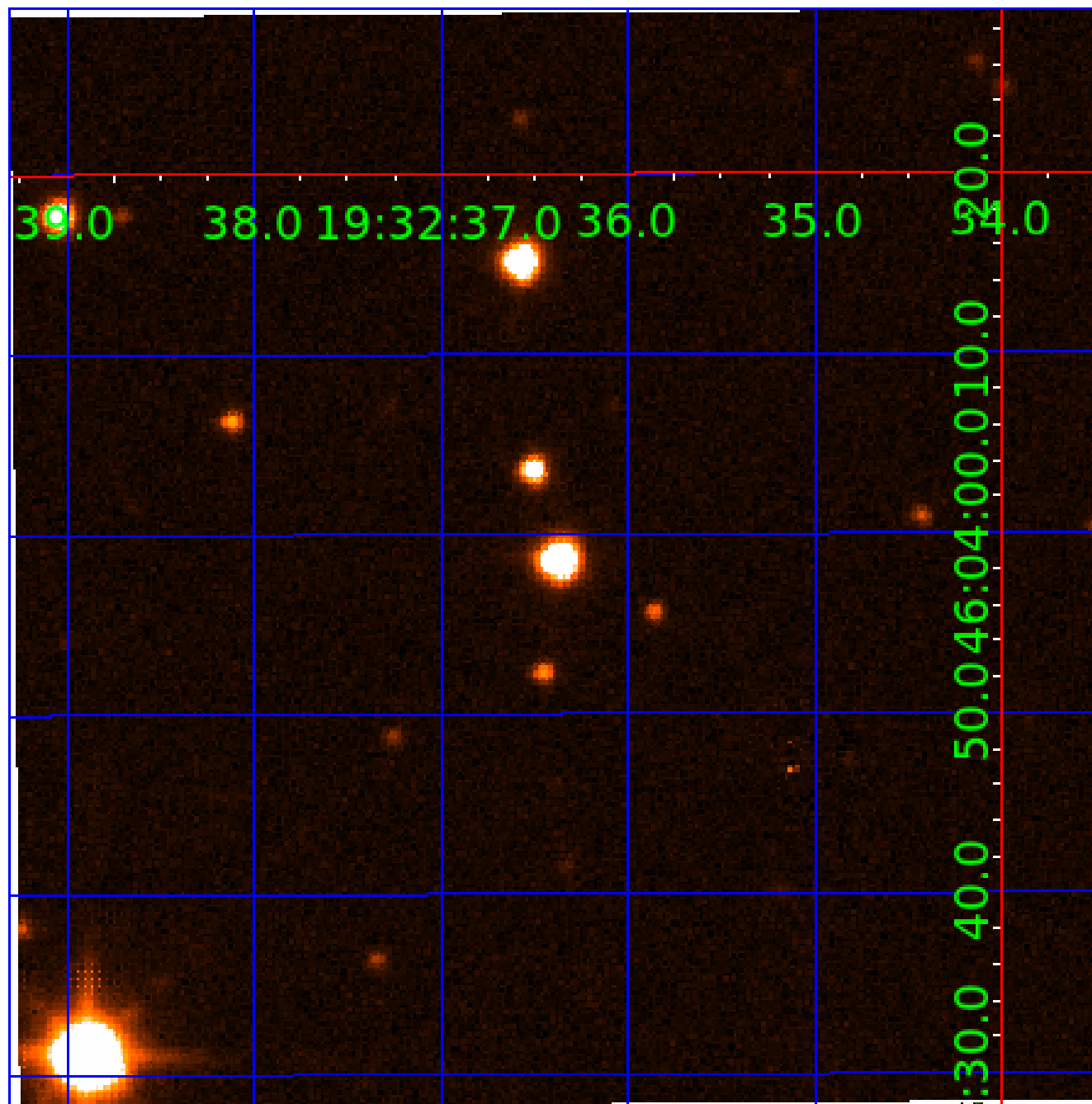


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 009468126

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})
009468126-01	OBS	No	1.436745	132.191634	42.3	8.379	11.1	11.1	1.74	7355	1.14	9725.65
009468126-02	OBS	No	165.543209	264.271278	403.6	1.910	13.3	4.7	1.74	7355	3.96	17.35
009468126-03	OBS	No	507.221426	242.808175	1557.2	118.662	13.4	7.8	1.74	7355	7.65	3.90
009468126-04	OBS	No	95.118570	201.221651	576.8	3.403	9.5	9.4	1.74	7355	7.94	36.31
009468126-05	OBS	No	45.309545	144.970442	286.7	5.402	9.2	9.0	1.74	7355	3.46	97.61
009468126-06	OBS	No	90.036983	132.028979	498.7	2.825	10.0	9.0	1.74	7355	4.51	39.07
009468126-07	OBS	No	99.782394	154.391230	472.5	4.279	9.7	9.4	1.74	7355	4.28	34.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009468126-01	OBS	FP	0.00	1	0	0	0	LPP_DV
009468126-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
009468126-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS—CENT_FEW_DIFFS
009468126-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
009468126-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
009468126-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
009468126-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

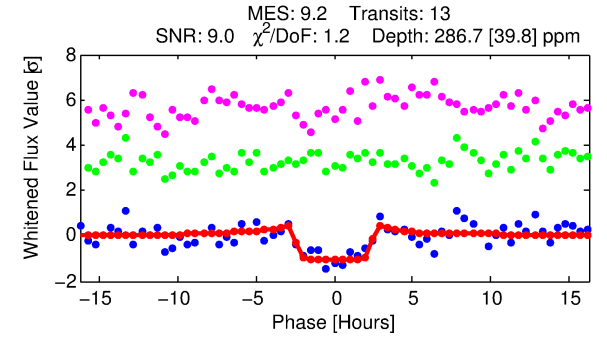
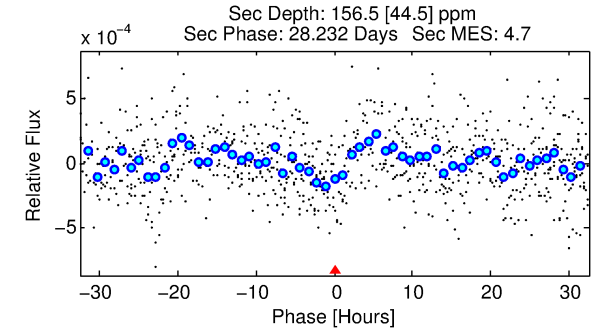
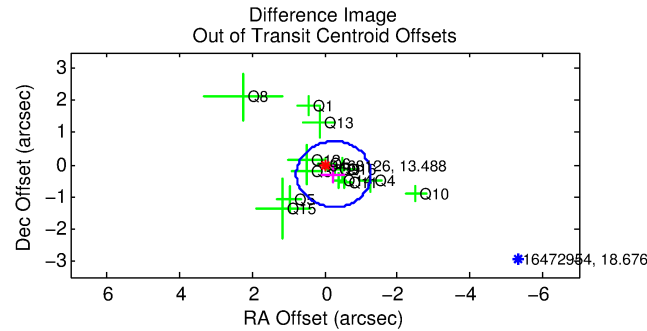
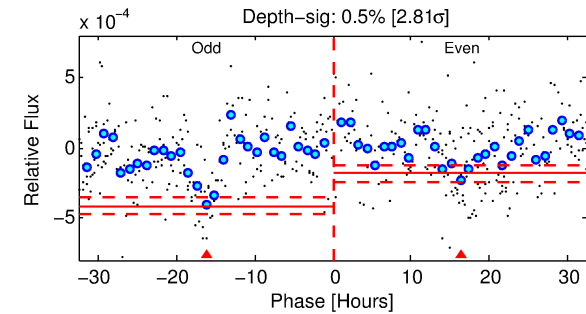
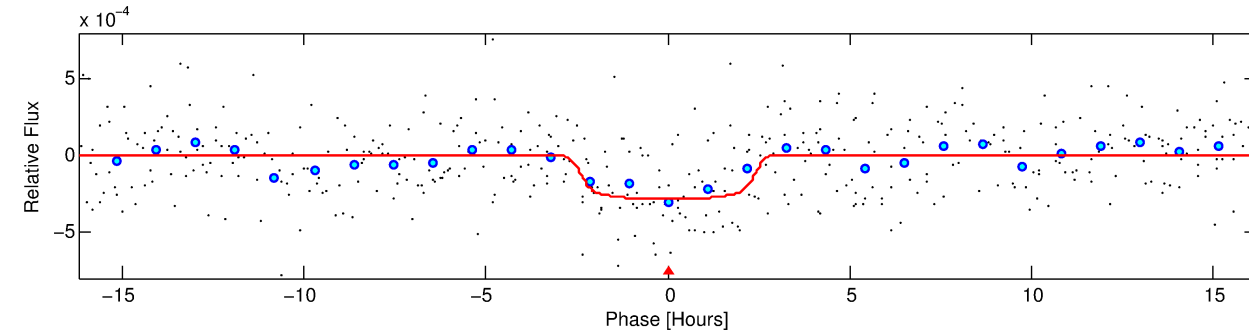
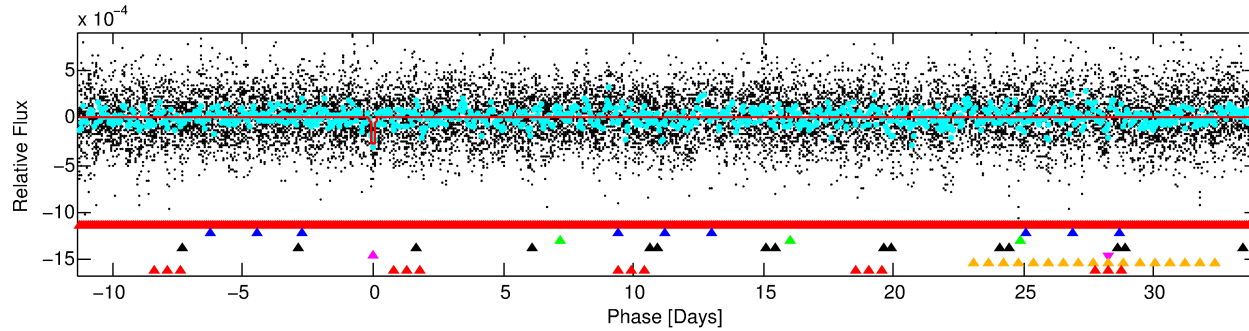
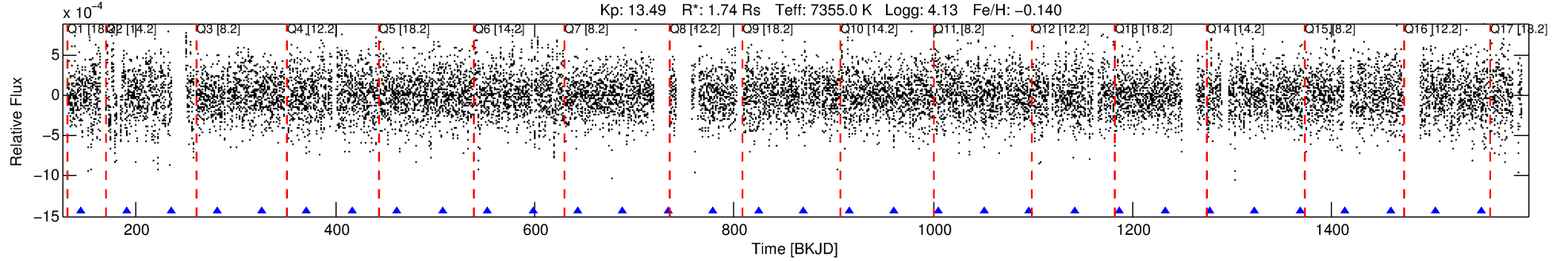
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009468126-05

No Significant Match Found

DV One-Page Summary

KIC: 9468126 Candidate: 5 of 7 Period: 45.310 d



DV Fit Results:

Period = 45.30954 [0.00062] d
Epoch = 144.9704 [0.0120] BKJD
Rp/R* = 0.0183 [0.0028]
a/R* = 28.32 [21.91]
b = 0.92 [0.13]
Seff = 97.61 [36.71]
Teq = 801 [75] K
Rp = 3.46 [1.17] Re
a = 0.2847 [0.0691] AU
Ag = 581.56 [310.71] [1.87 σ]
Teffp = 6085 [680] K [7.72 σ]

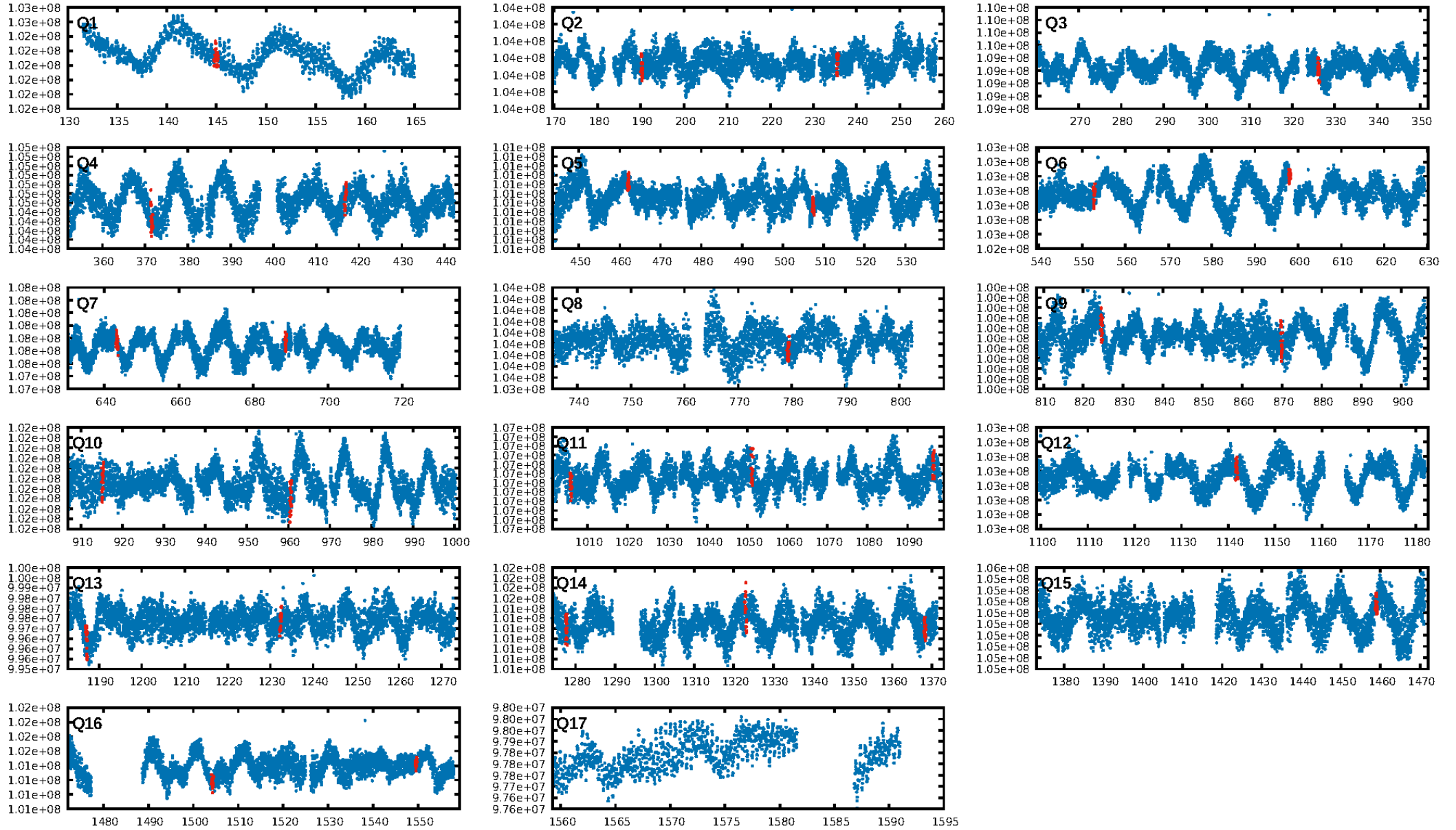
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [105.62 σ]
LongPeriod-sig: 100.0% [176.10 σ]
ModelChiSquare2-sig: 0.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [13/13]
GhostDiagnostic-chr: -9.013
Centroid-sig: 1.0%
Centroid-so: 0.447 arcsec [0.87 σ]
OotOffset-rm: 0.387 arcsec [1.13 σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-rm: 0.364 arcsec [1.06 σ]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 0.57 [8/14]
DiffImageOverlap-fno: 0.12 [2/16]

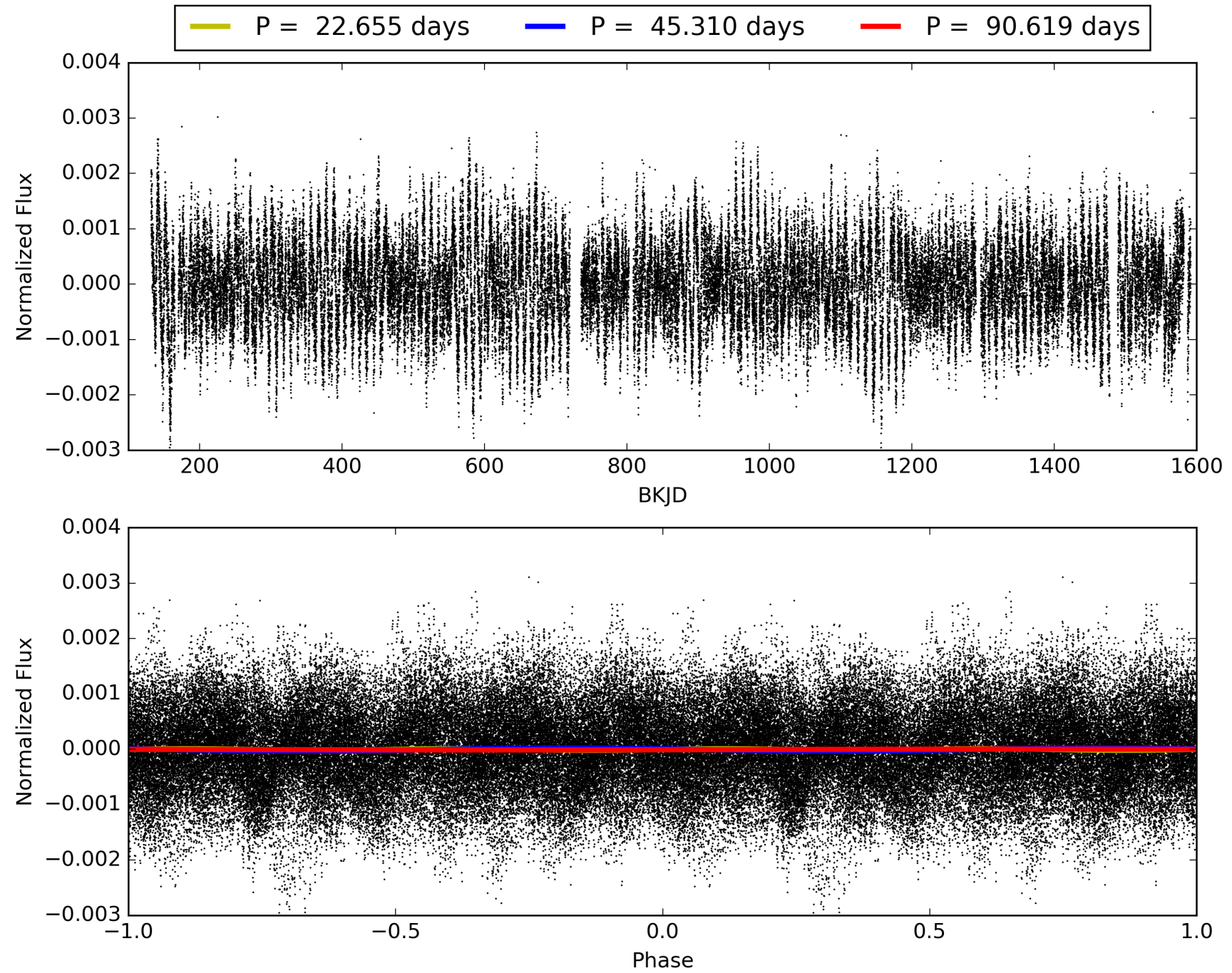
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:09:48 Z

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

TCE 009468126-05, PDC Light Curves

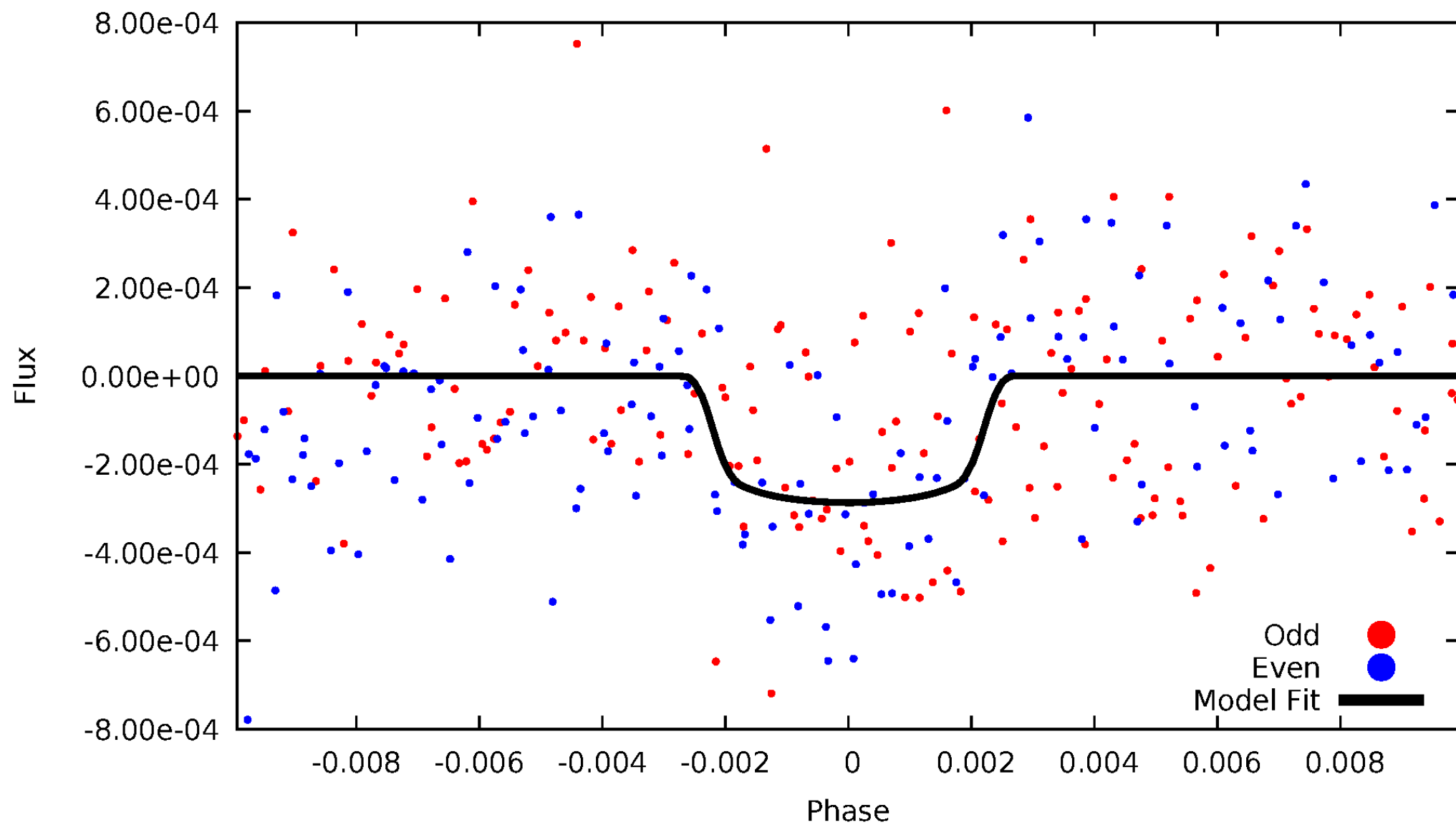


TCE 009468126-05



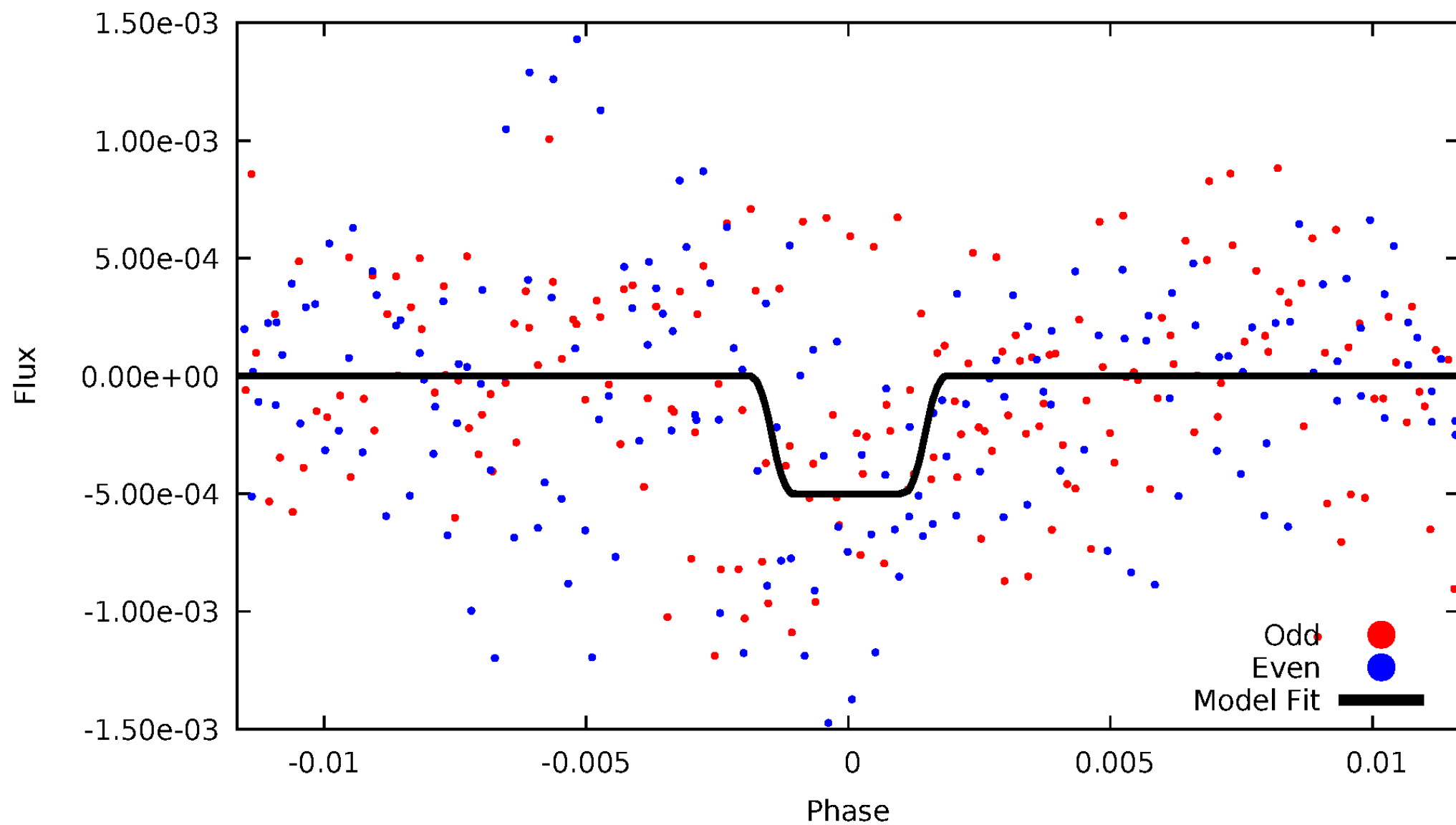
DV Odd/Even

TCE 009468126-05



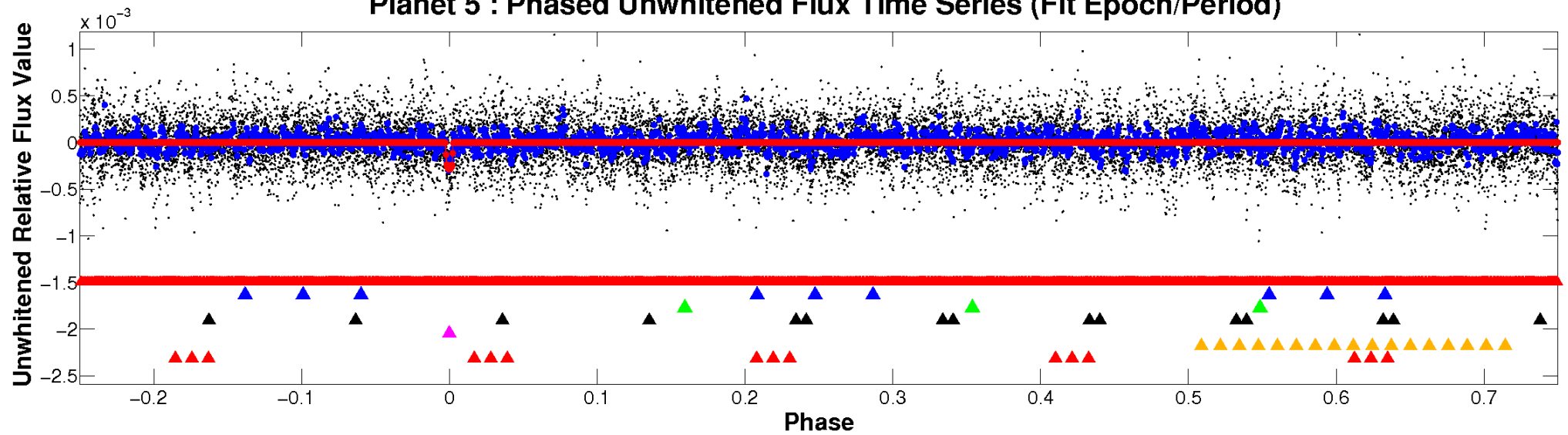
ALT Odd/Even

TCE 009468126-05

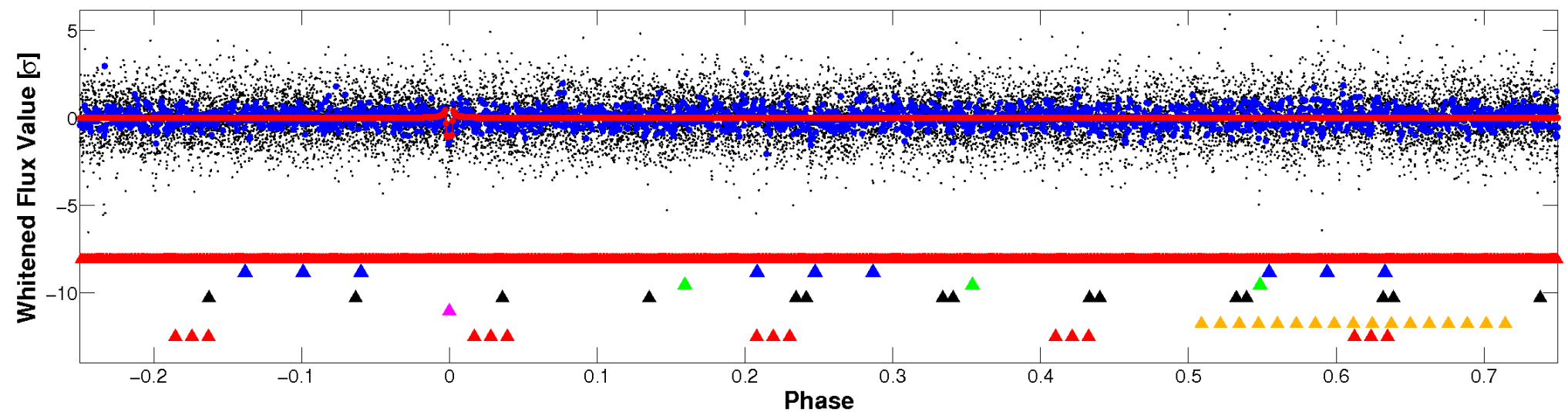


Non-Whitened Vs. Whitened Light Curve

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

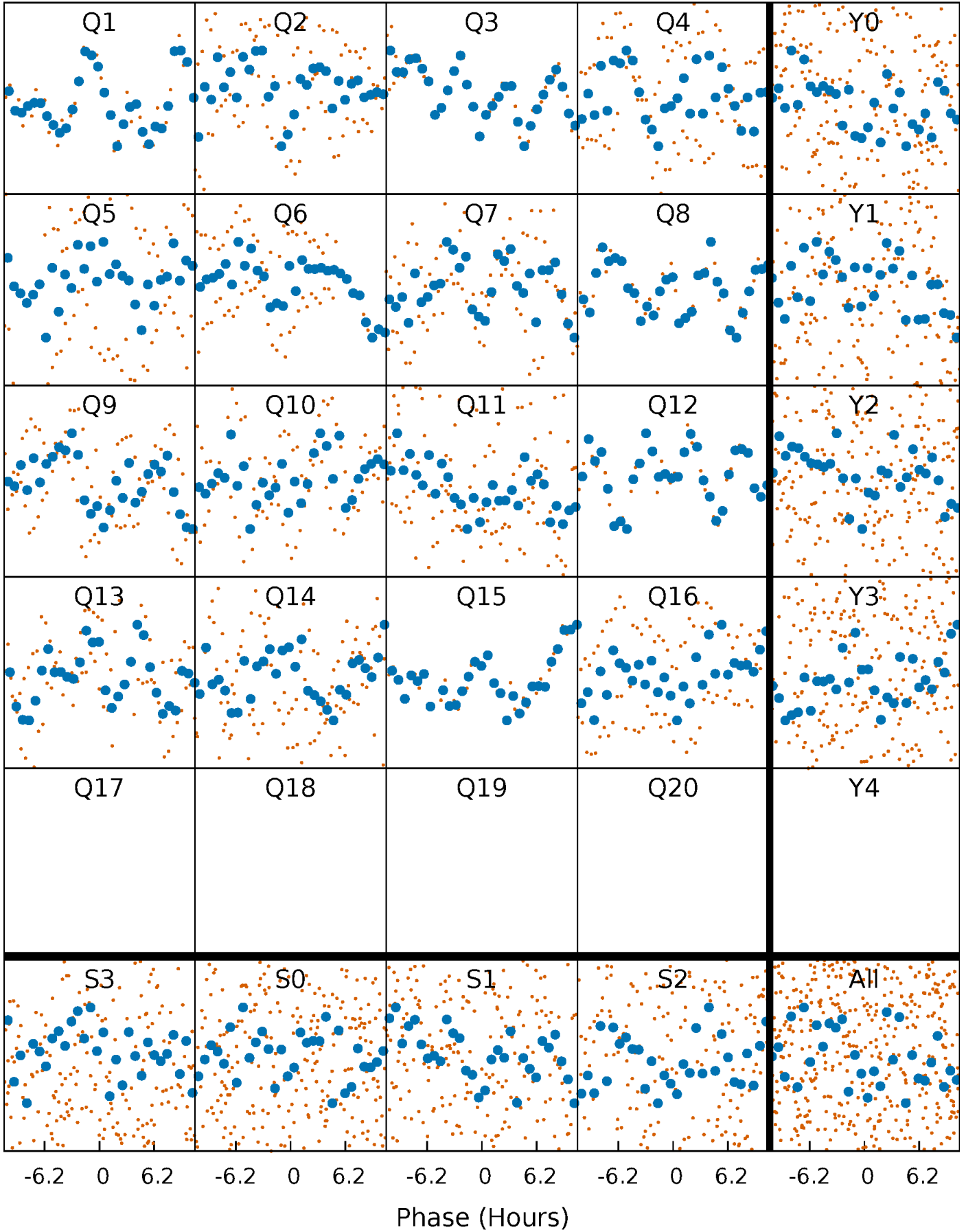


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



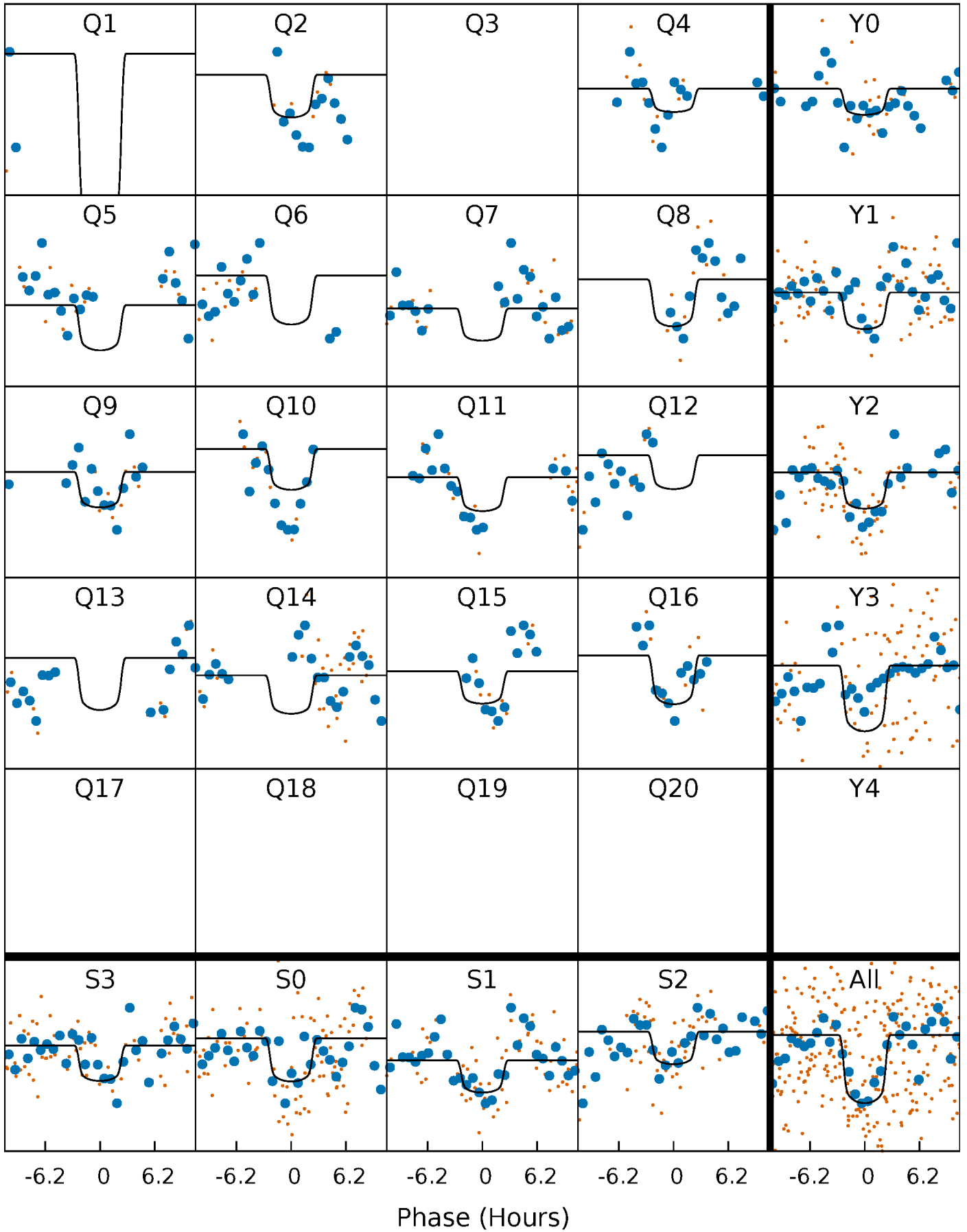
PDC Quarter-Phased Transit Curves

TCE 009468126-05 $P = 45.309545$ Days $T_0 = 144.970442$ (BKJD)



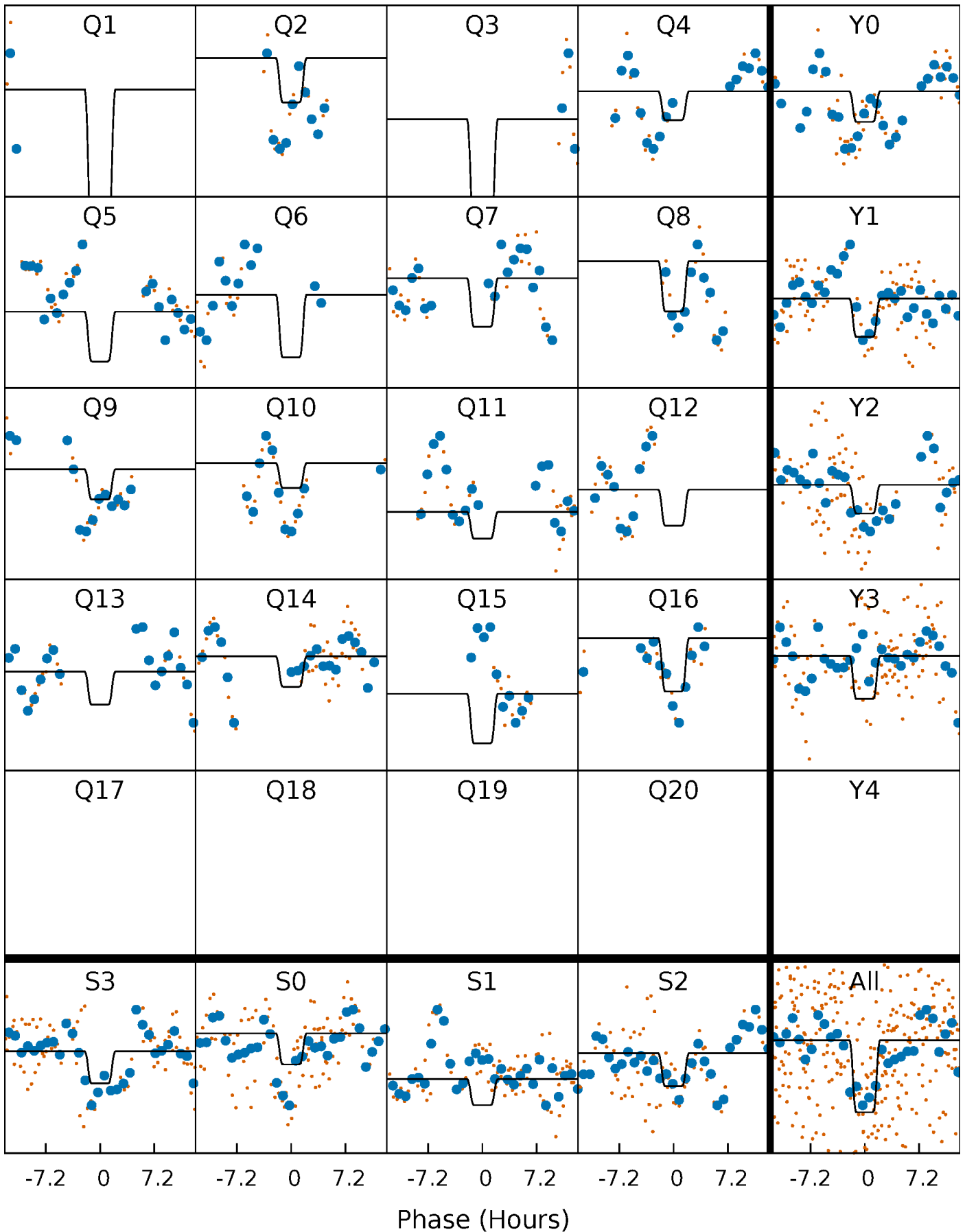
DV Quarter-Phased Transit Curves

TCE 009468126-05 $P = 45.309545$ Days $T_0 = 144.970442$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

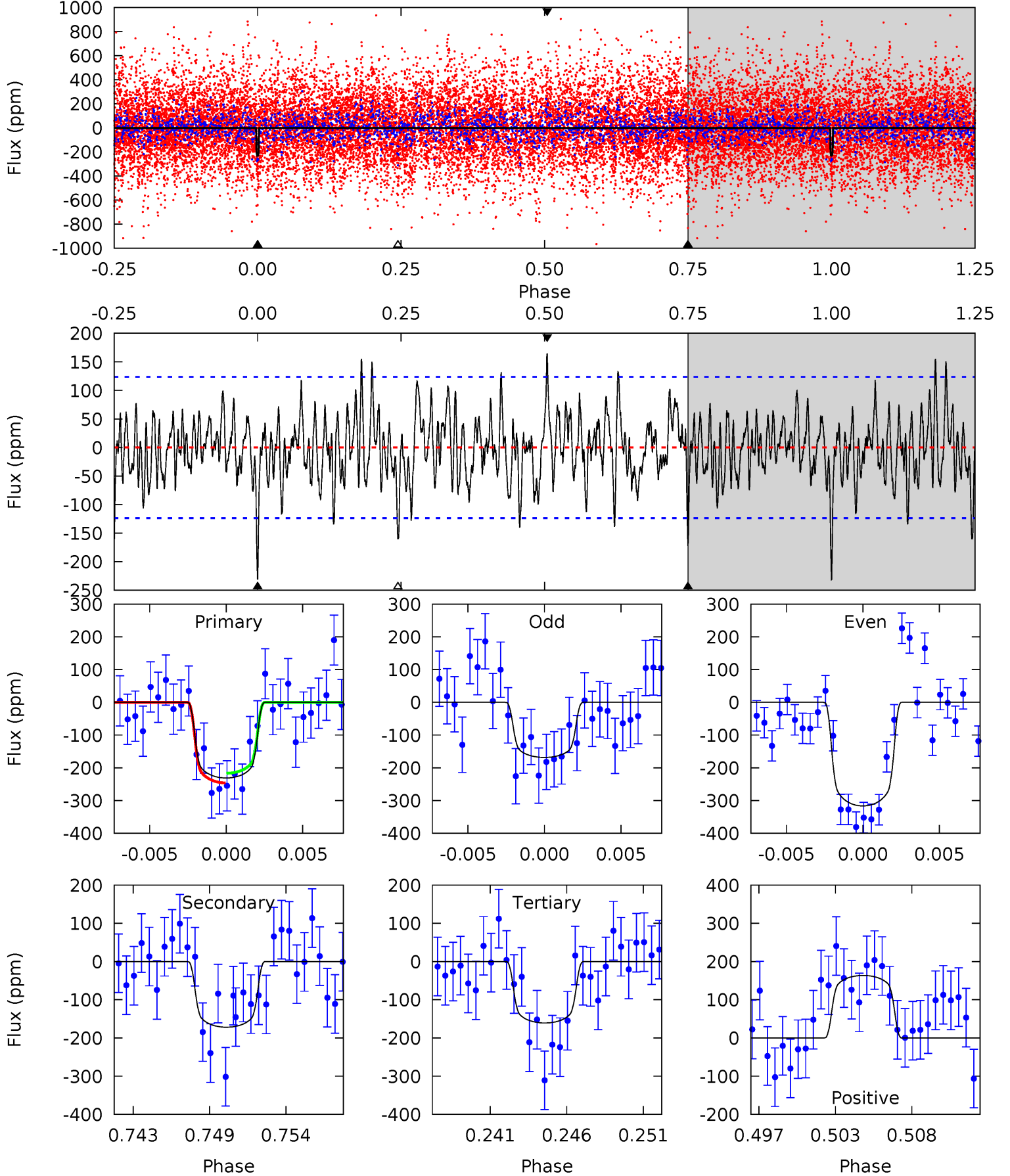
TCE 009468126-05 $P = 45.306664$ Days $T_0 = 145.043521$ (BKJD)



DV Model-Shift Uniqueness Test

009468126-05, P = 45.309545 Days, E = 99.660897 Days

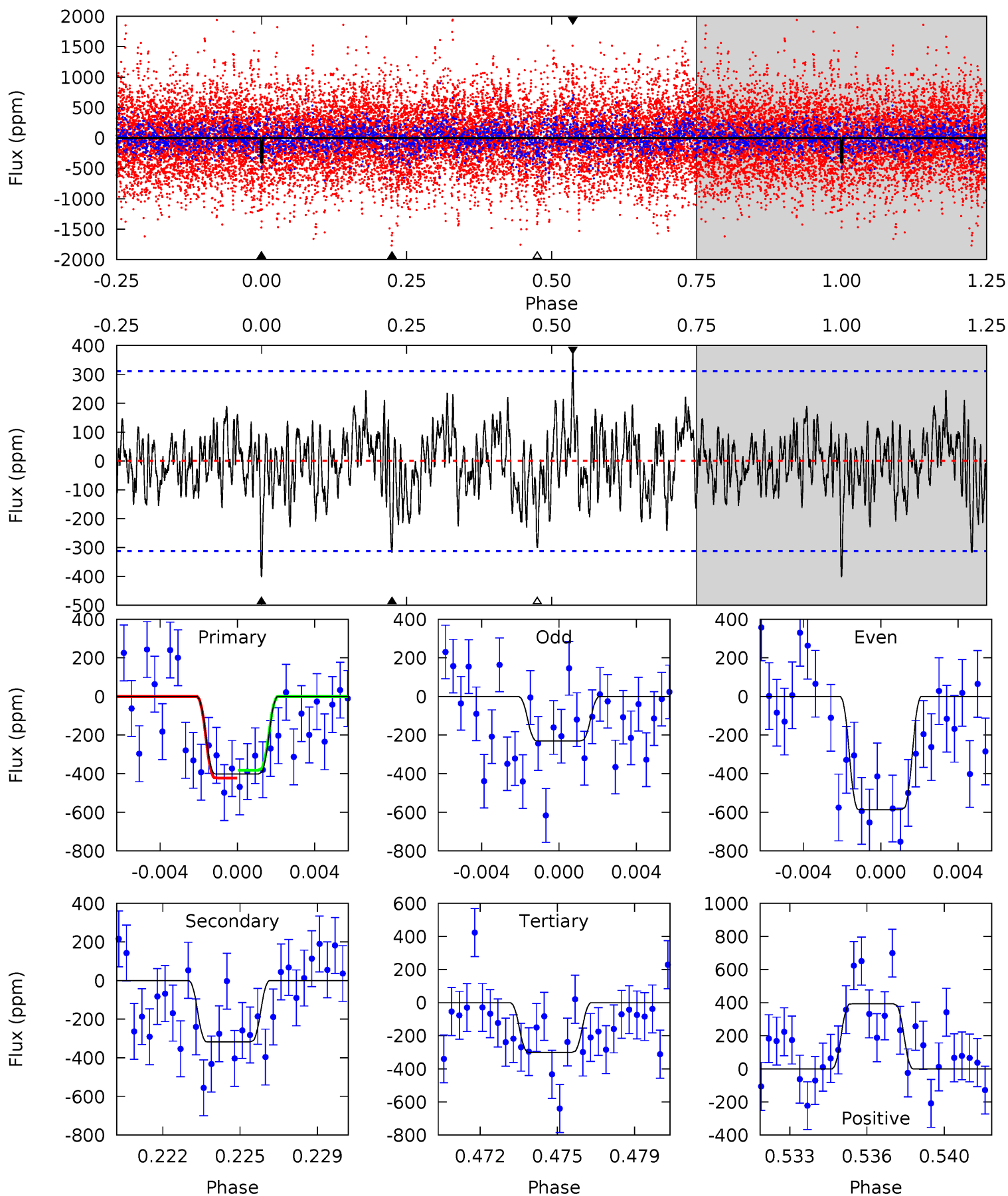
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.61	7.15	6.69	6.80	5.15	2.79	2.04	2.93	2.81	0.46	0.34	3.06	0.60	0.41	0.62



Alt Model-Shift Uniqueness Test

009468126-05, P = 45.306664 Days, E = 99.736857 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.73	5.32	5.04	6.58	5.22	2.91	1.60	1.70	0.16	0.29	-1.25	2.98	0.81	0.49	0.34



Stellar Parameters For KIC 009468126

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7355^{+230}_{-307}	$4.134^{+0.144}_{-0.176}$	$-0.140^{+0.200}_{-0.350}$	$1.737^{+0.525}_{-0.393}$	$1.497^{+0.209}_{-0.232}$	$0.402^{+0.296}_{-0.196}$
	+3%/-4%	+3%/-4%	+143%/-250%	+30%/-23%	+14%/-15%	+74%/-49%
Source	KIC0	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 009468126-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-172 ± 24	$3.51^{+0.73}_{-0.73}$	1125^{+83}_{-76}	6171^{+645}_{-511}	626^{+380}_{-206}
Alt.	-318 ± 60	$4.30^{+0.85}_{-0.74}$	1121^{+85}_{-74}	6429^{+550}_{-507}	745^{+351}_{-246}

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 $A_{obs} \gg 1.0$

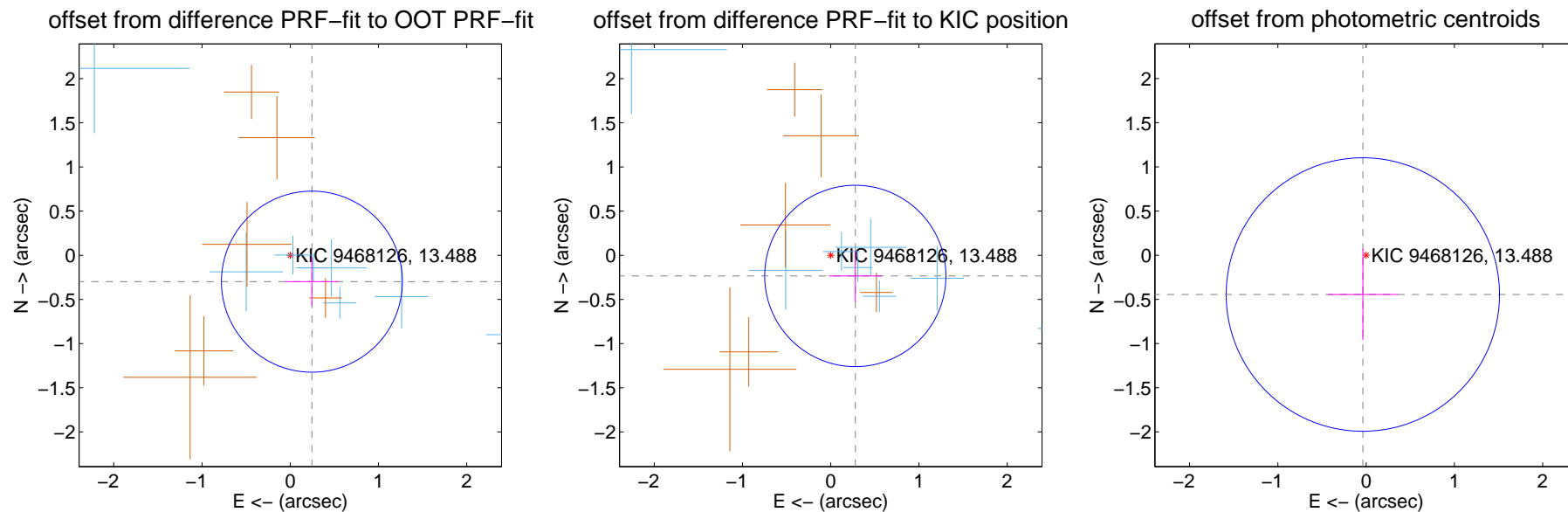
DV Centroid Data

Supplemental centroid analysis for 009468126-05. Kepler magnitude: 13.49. Transit SNR 9.02

There are 8 quarters with good PRF difference image offsets

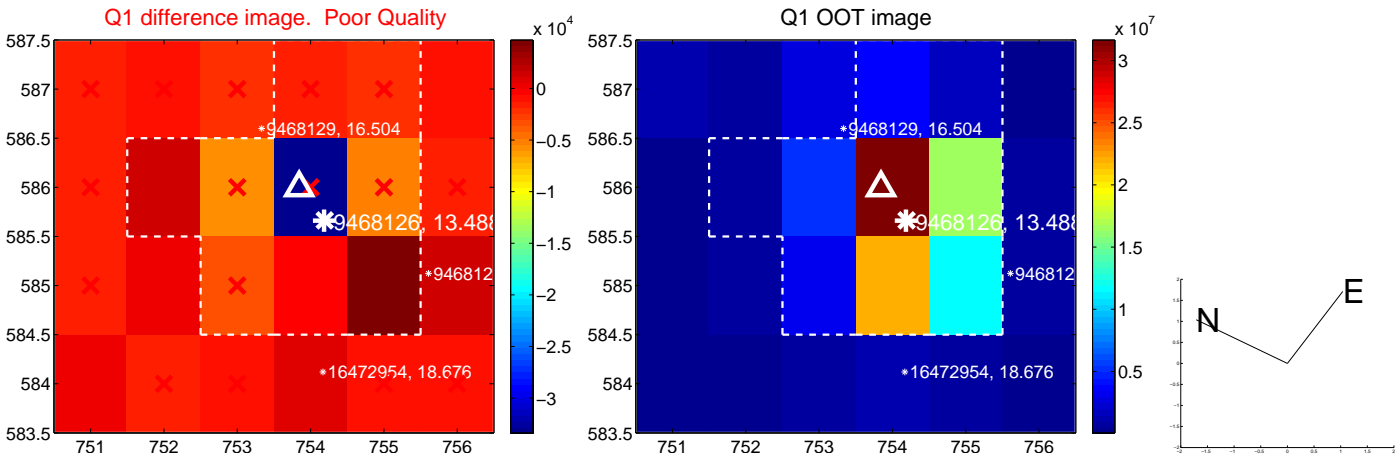
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.387 ± 0.342	1.13	-0.245 ± 0.301	-0.299 ± 0.274
PRF-fit source offset from KIC position	0.364 ± 0.342	1.06	-0.279 ± 0.298	-0.234 ± 0.294
photometric centroid source offset	0.45 ± 0.52	0.87	0.04 ± 0.40	-0.45 ± 0.52

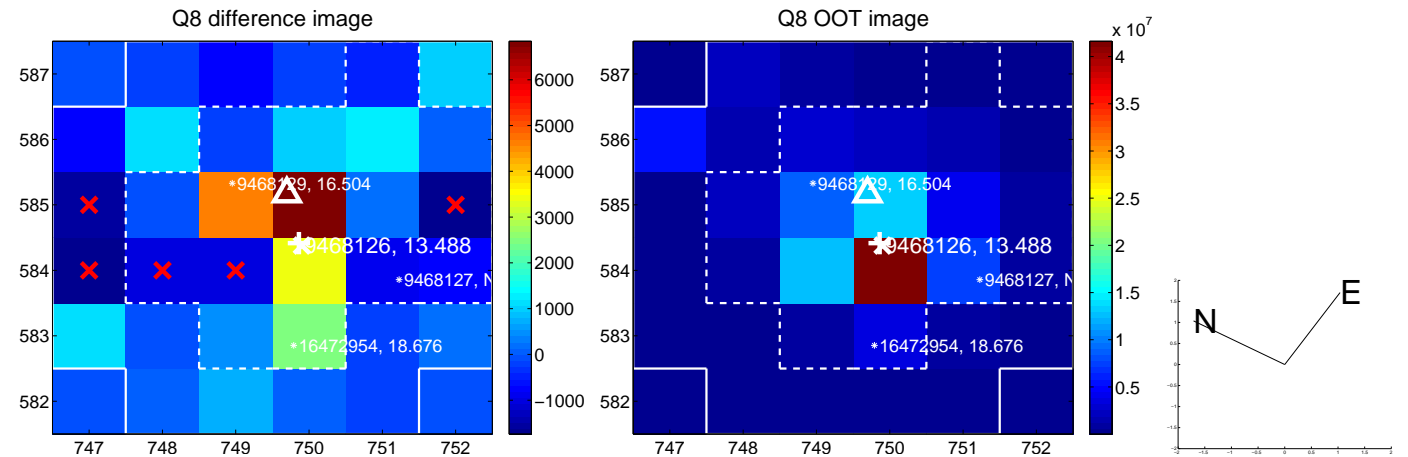
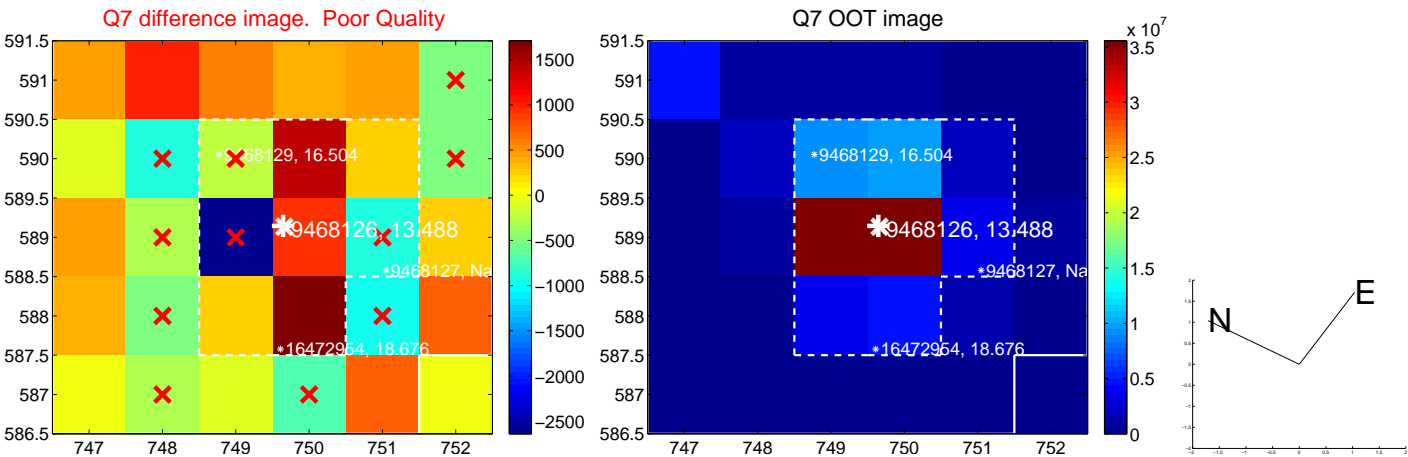
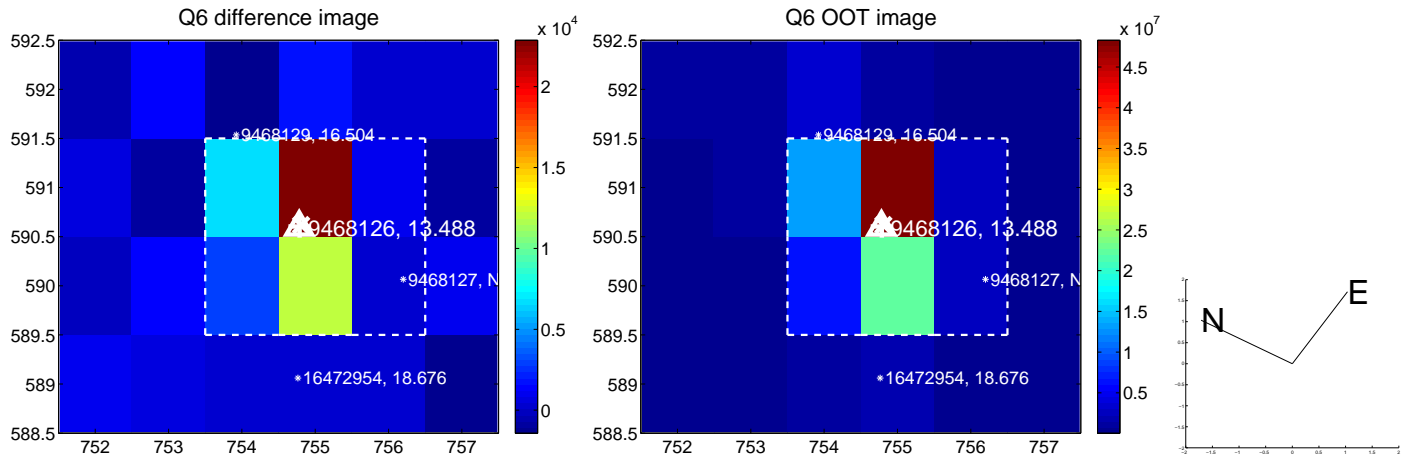
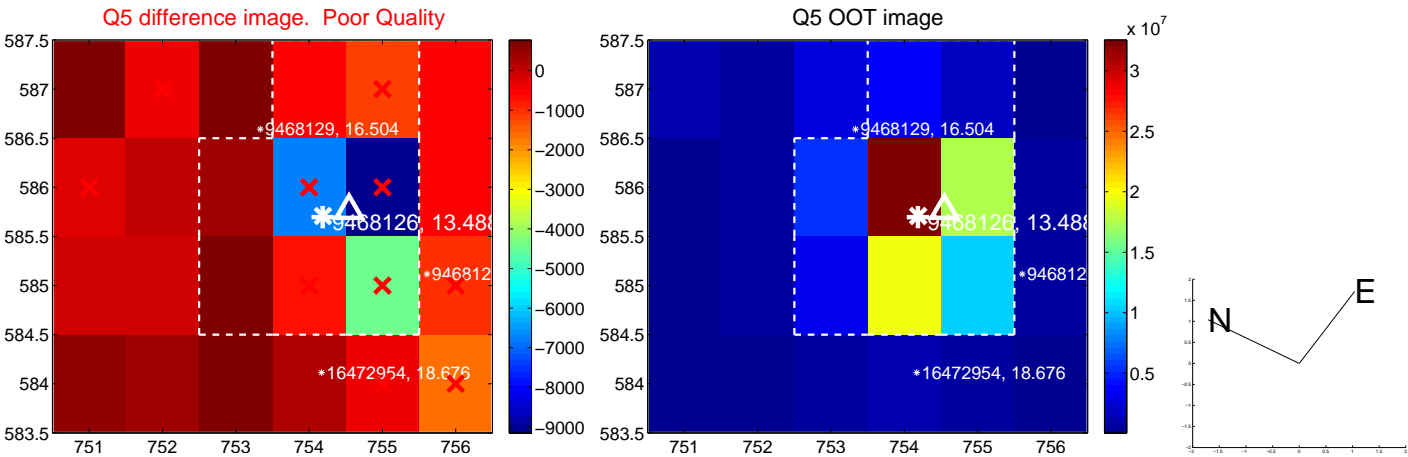


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

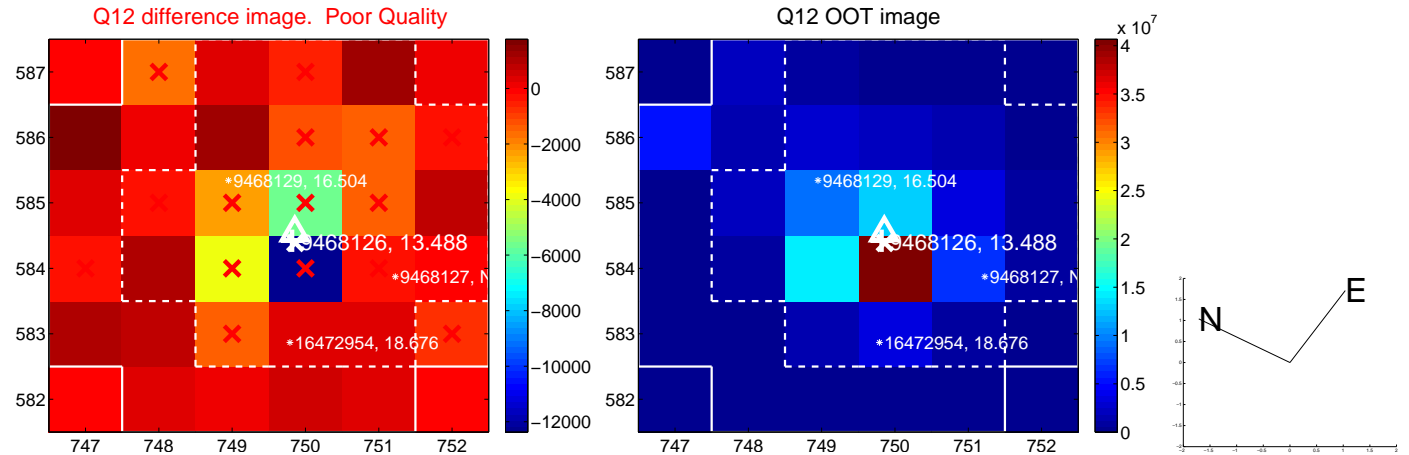
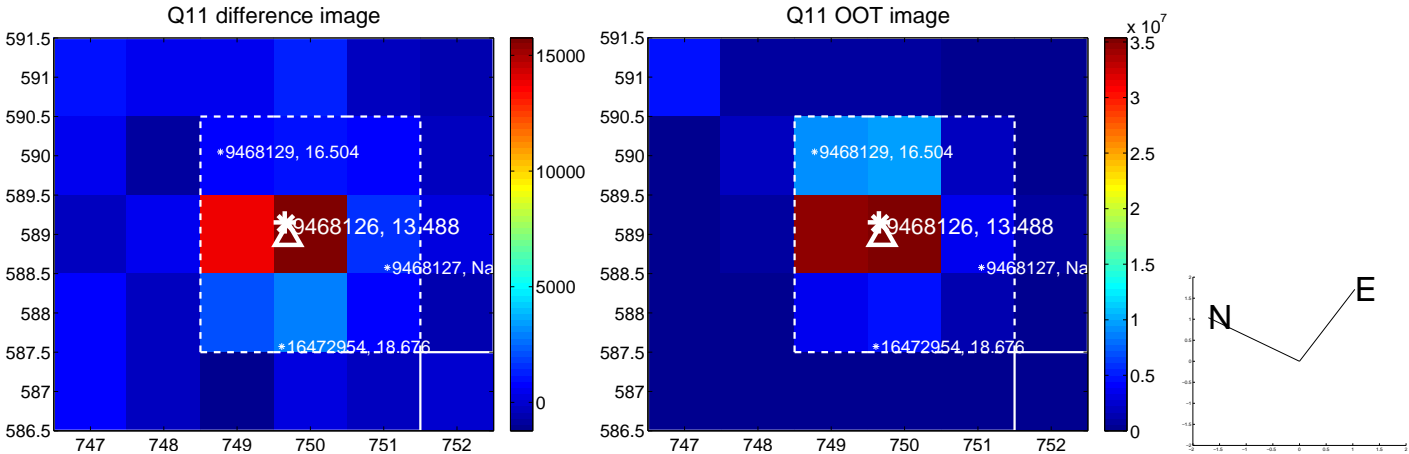
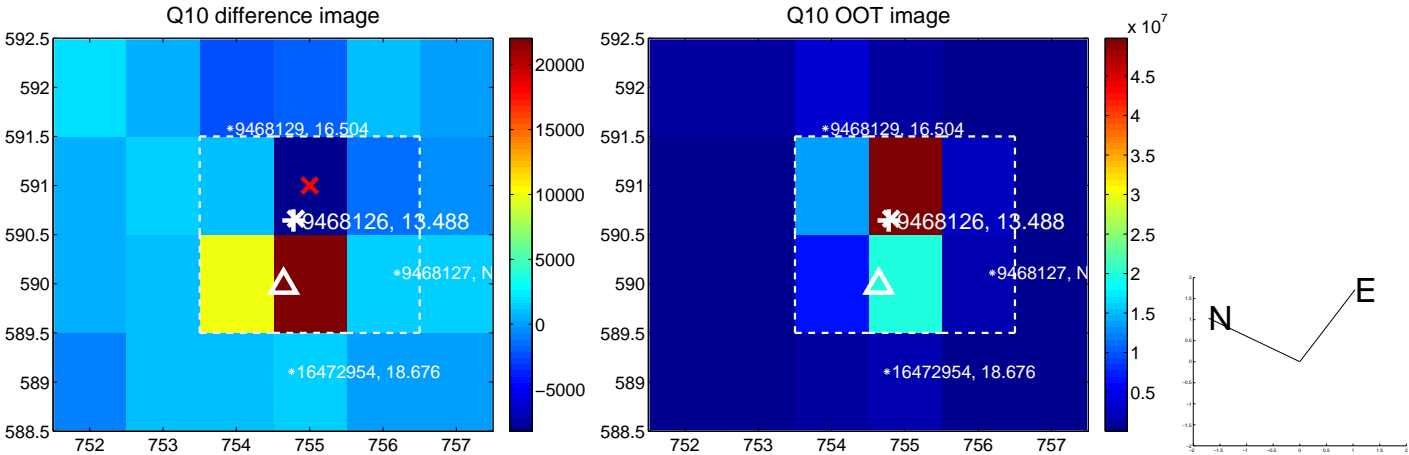
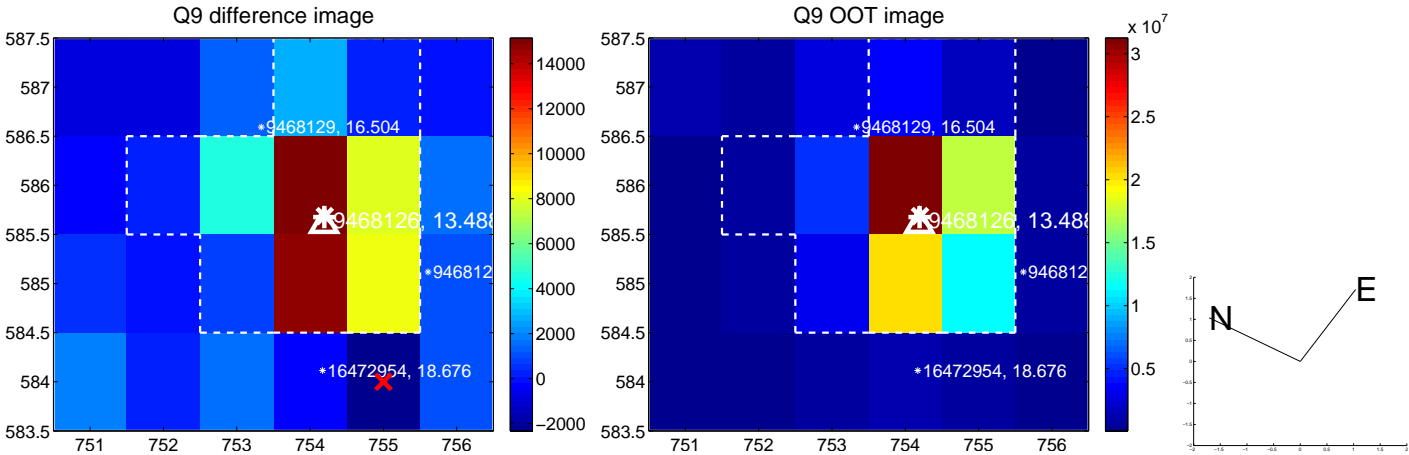
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



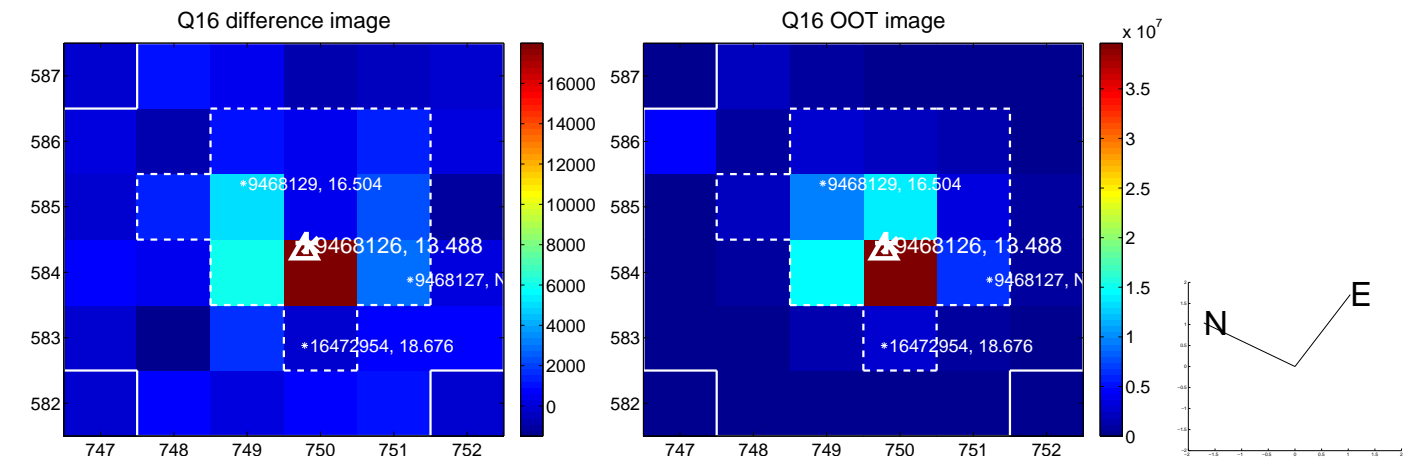
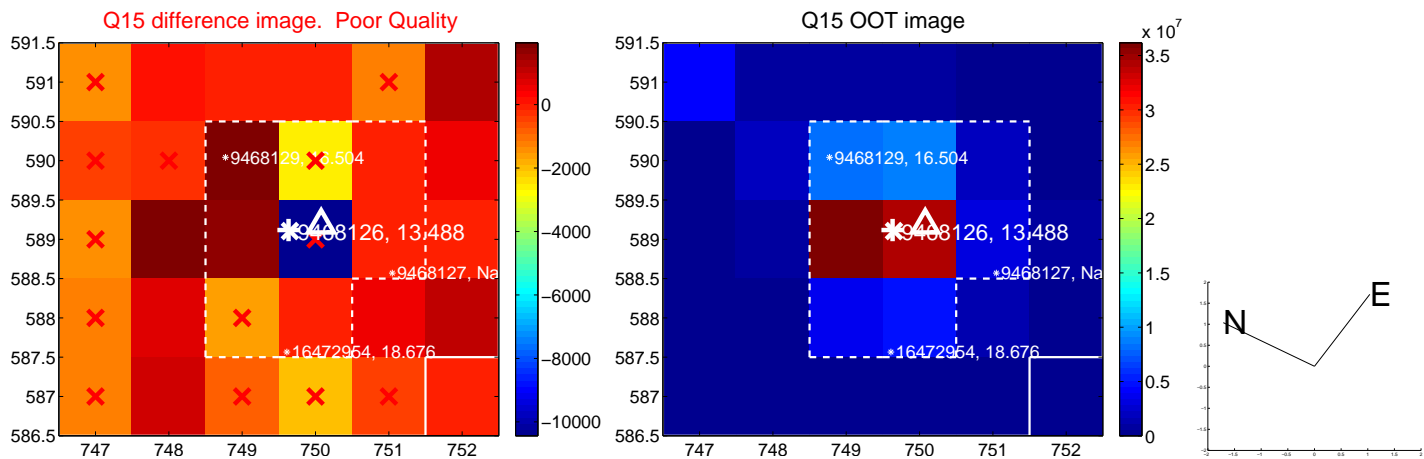
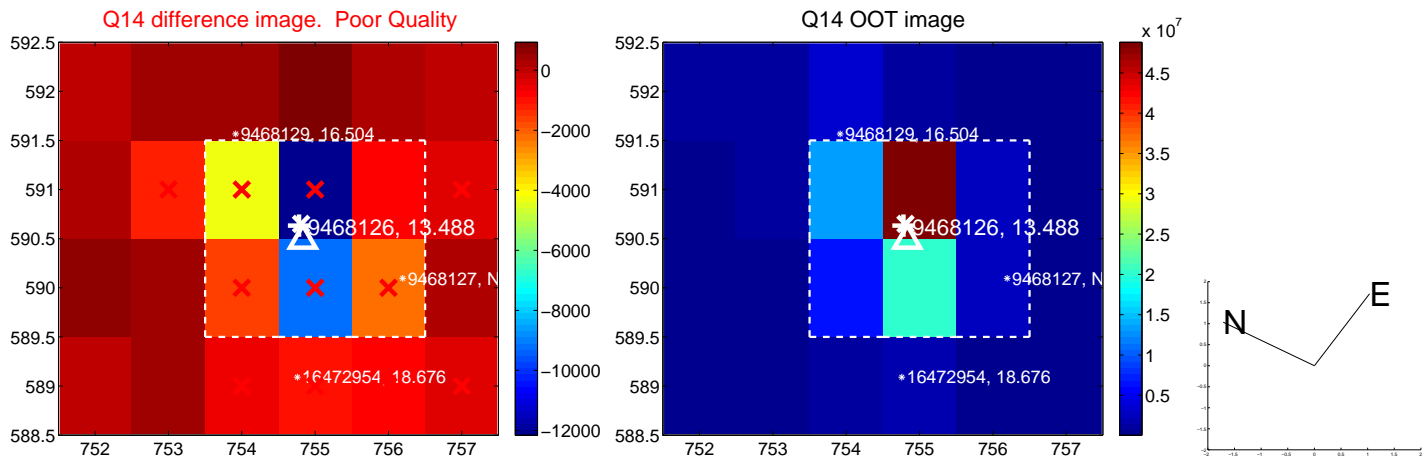
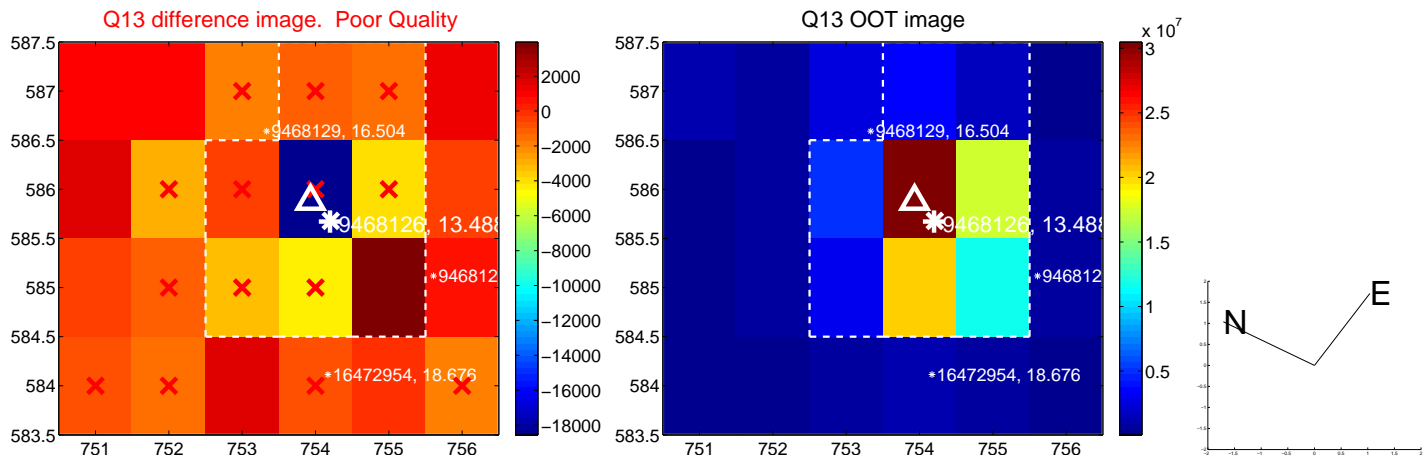
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



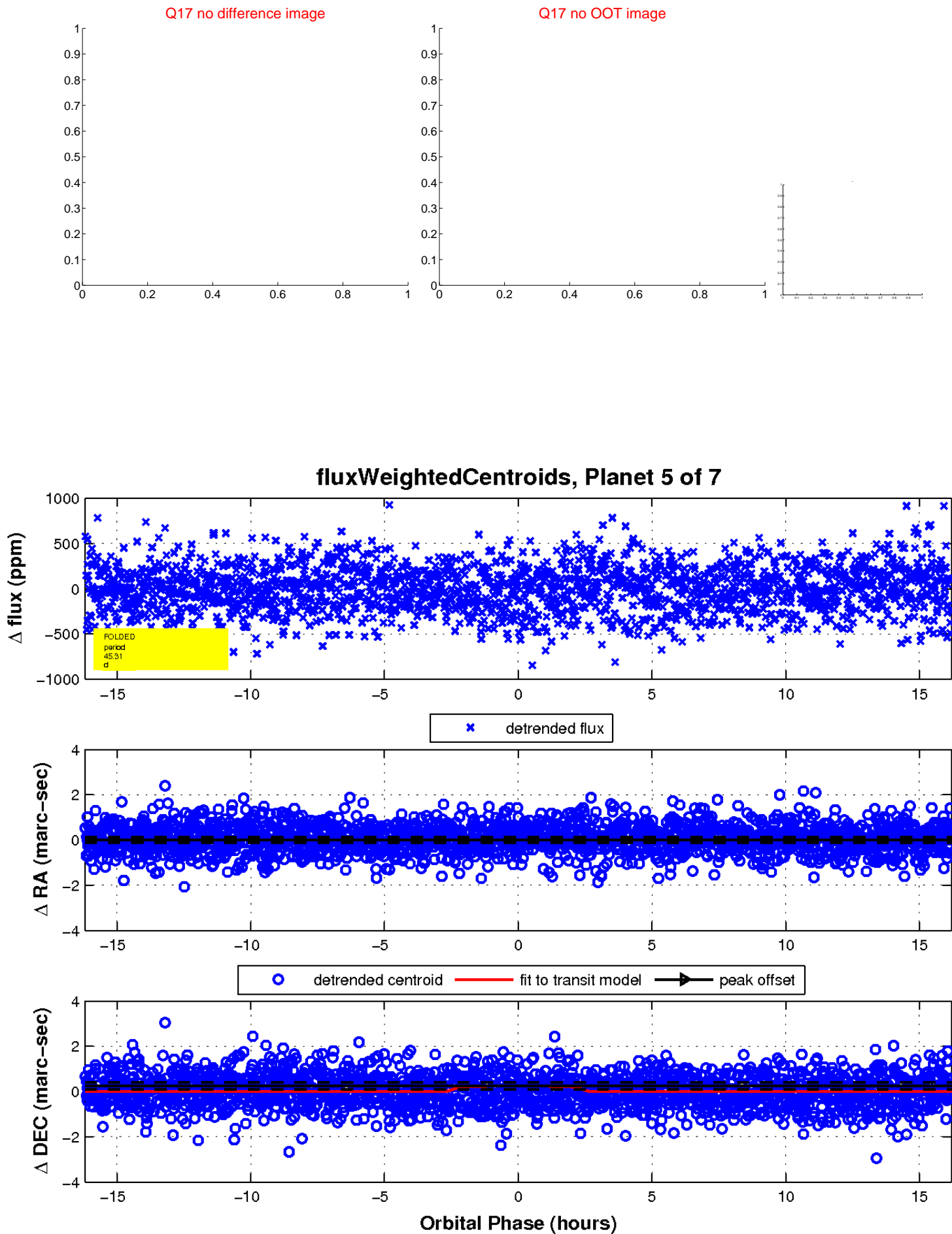
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

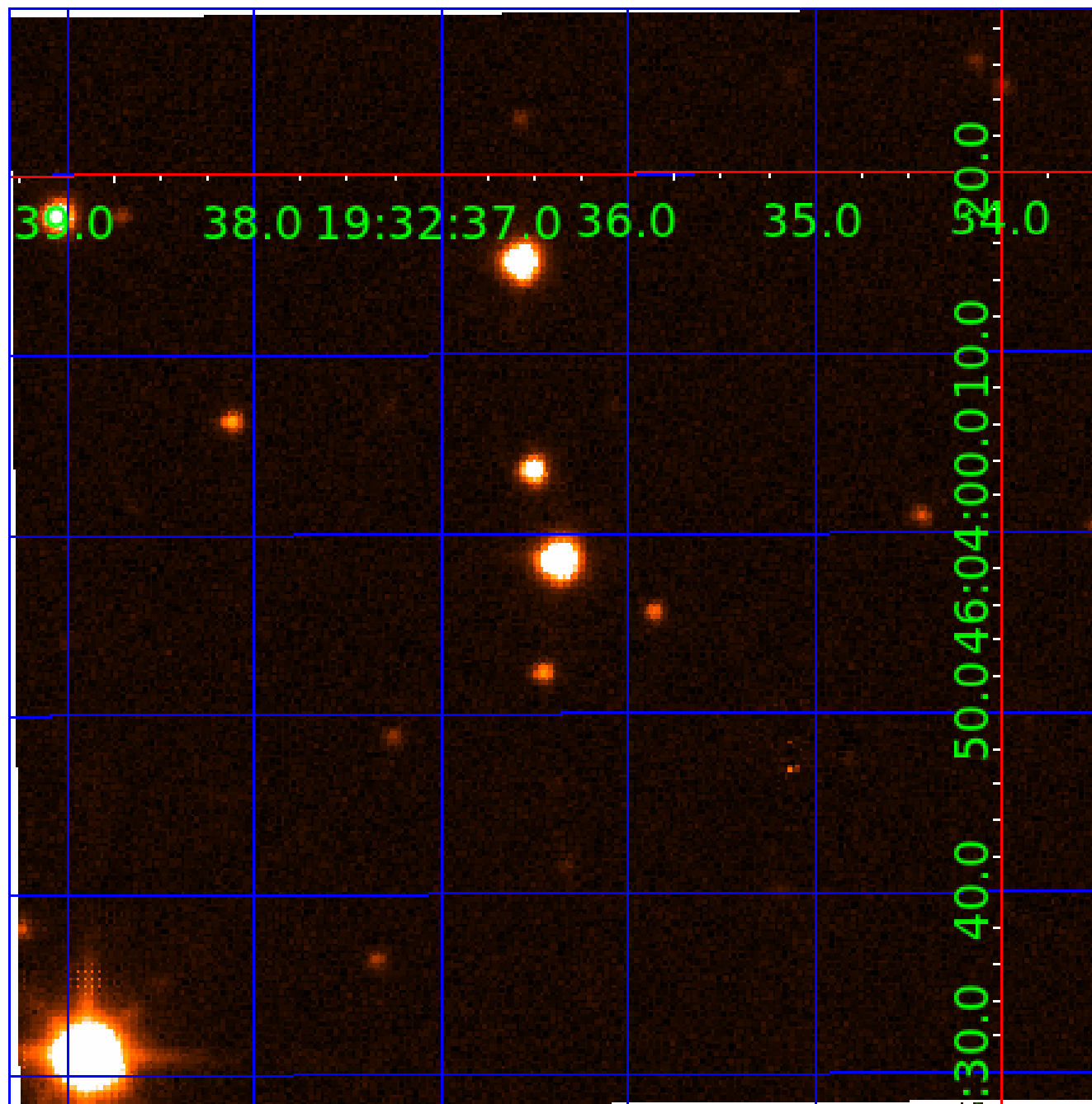


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 009468126

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})
009468126-01	OBS	No	1.436745	132.191634	42.3	8.379	11.1	11.1	1.74	7355	1.14	9725.65
009468126-02	OBS	No	165.543209	264.271278	403.6	1.910	13.3	4.7	1.74	7355	3.96	17.35
009468126-03	OBS	No	507.221426	242.808175	1557.2	118.662	13.4	7.8	1.74	7355	7.65	3.90
009468126-04	OBS	No	95.118570	201.221651	576.8	3.403	9.5	9.4	1.74	7355	7.94	36.31
009468126-05	OBS	No	45.309545	144.970442	286.7	5.402	9.2	9.0	1.74	7355	3.46	97.61
009468126-06	OBS	No	90.036983	132.028979	498.7	2.825	10.0	9.0	1.74	7355	4.51	39.07
009468126-07	OBS	No	99.782394	154.391230	472.5	4.279	9.7	9.4	1.74	7355	4.28	34.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009468126-01	OBS	FP	0.00	1	0	0	0	LPP_DV
009468126-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
009468126-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS—CENT_FEW_DIFFS
009468126-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
009468126-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
009468126-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
009468126-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

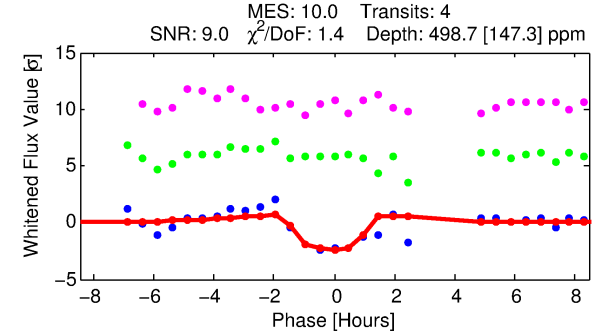
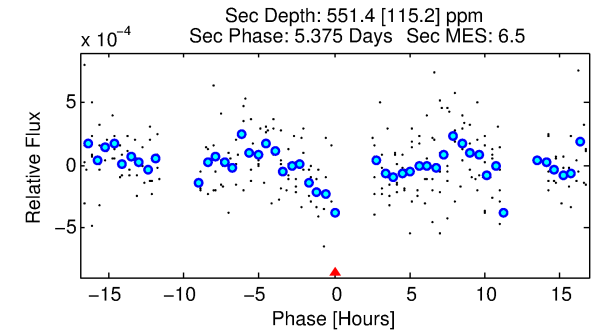
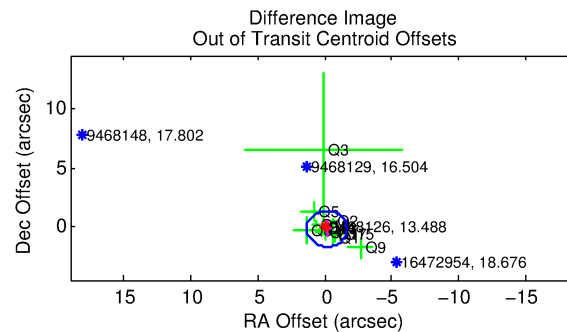
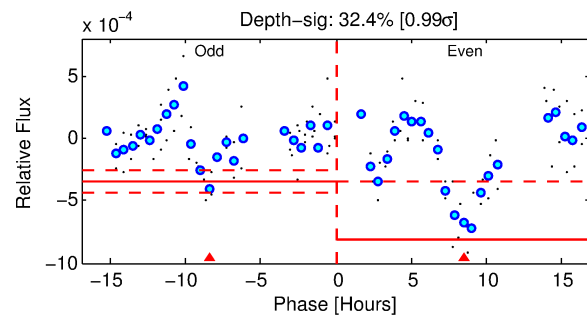
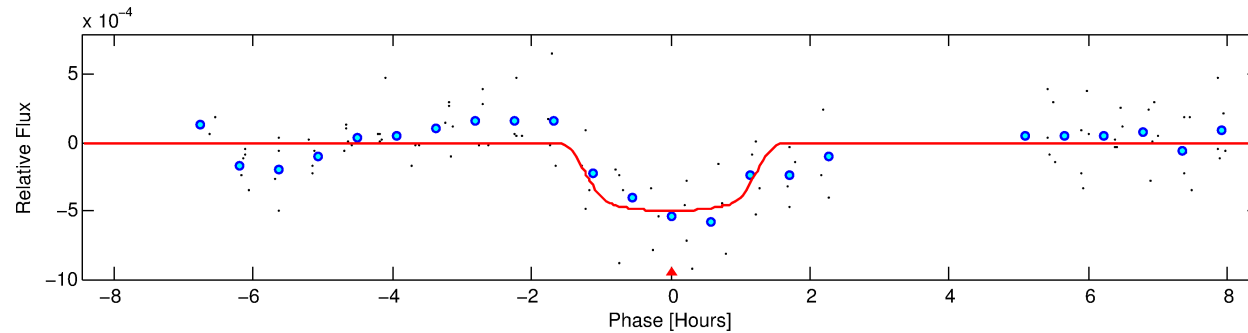
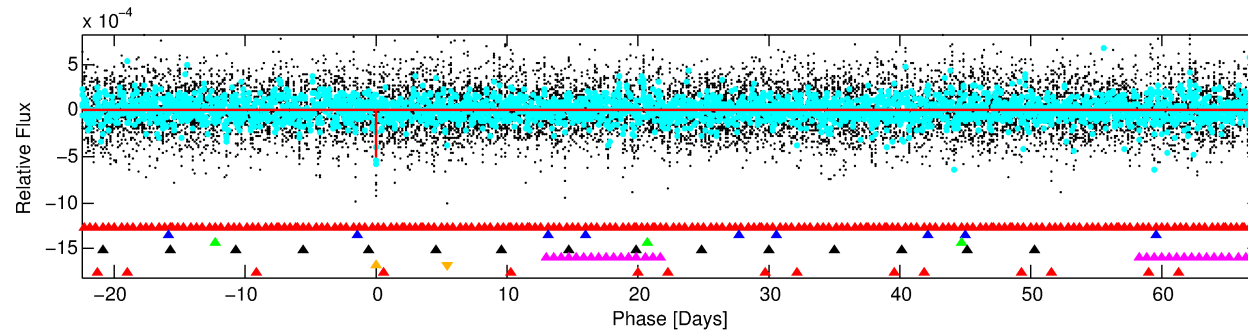
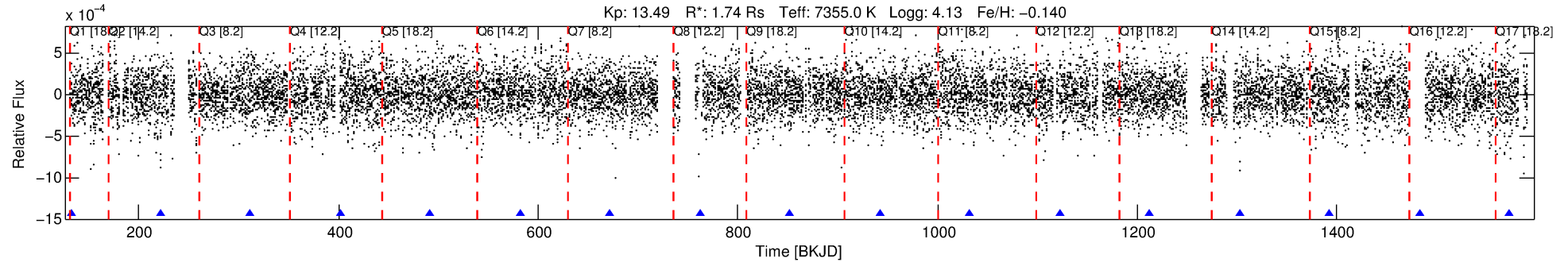
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009468126-06

No Significant Match Found

DV One-Page Summary

KIC: 9468126 Candidate: 6 of 7 Period: 90.037 d



DV Fit Results:

Period = 90.03698 [0.00060] d
Epoch = 132.0290 [0.0067] BKJD
Rp/R* = 0.0238 [0.0989]
a/R* = 118.23 [3059.08]
b = 0.90 [5.46]
Seff = 39.07 [14.70]
Teq = 638 [60] K
Rp = 4.51 [18.80] Re
a = 0.4500 [0.1092] AU
Ag = 3017.06 [25098.86] [0.12 σ]
Teffp = 7305 [15183] K [0.44 σ]

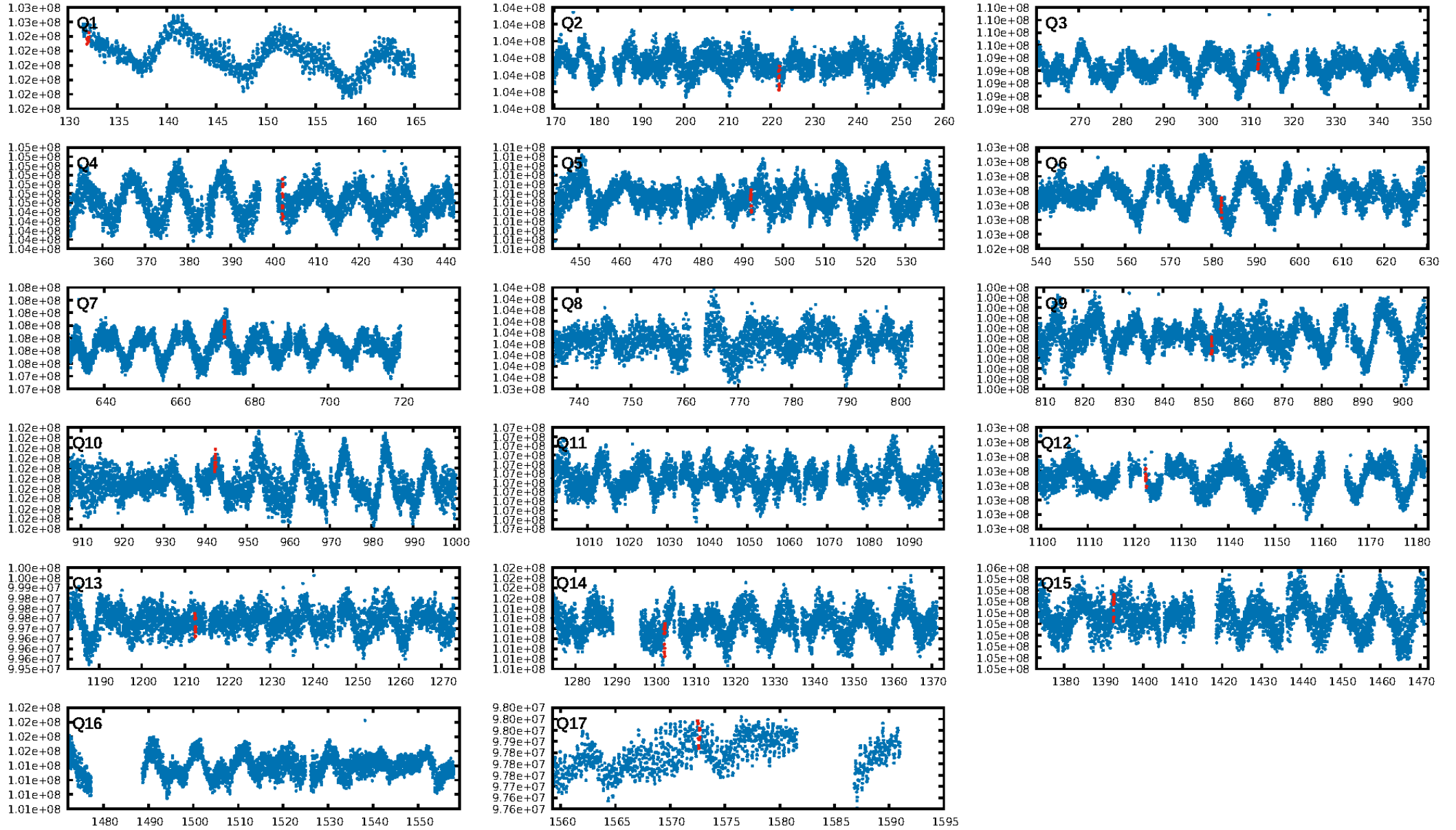
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [176.10 σ]
LongPeriod-sig: 100.0% [27.58 σ]
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 24.1%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -8.913
Centroid-sig: 12.5%
Centroid-so: 0.932 arcsec [1.85 σ]
OotOffset-rm: 0.229 arcsec [0.45 σ]
KicOffset-rm: 0.204 arcsec [0.42 σ]
OotOffset-st: 4/3/1/5 [13]
KicOffset-st: 4/3/1/5 [13]
DiffImageQuality-fgm: 0.38 [5/13]
DiffImageOverlap-fno: 0.31 [4/13]

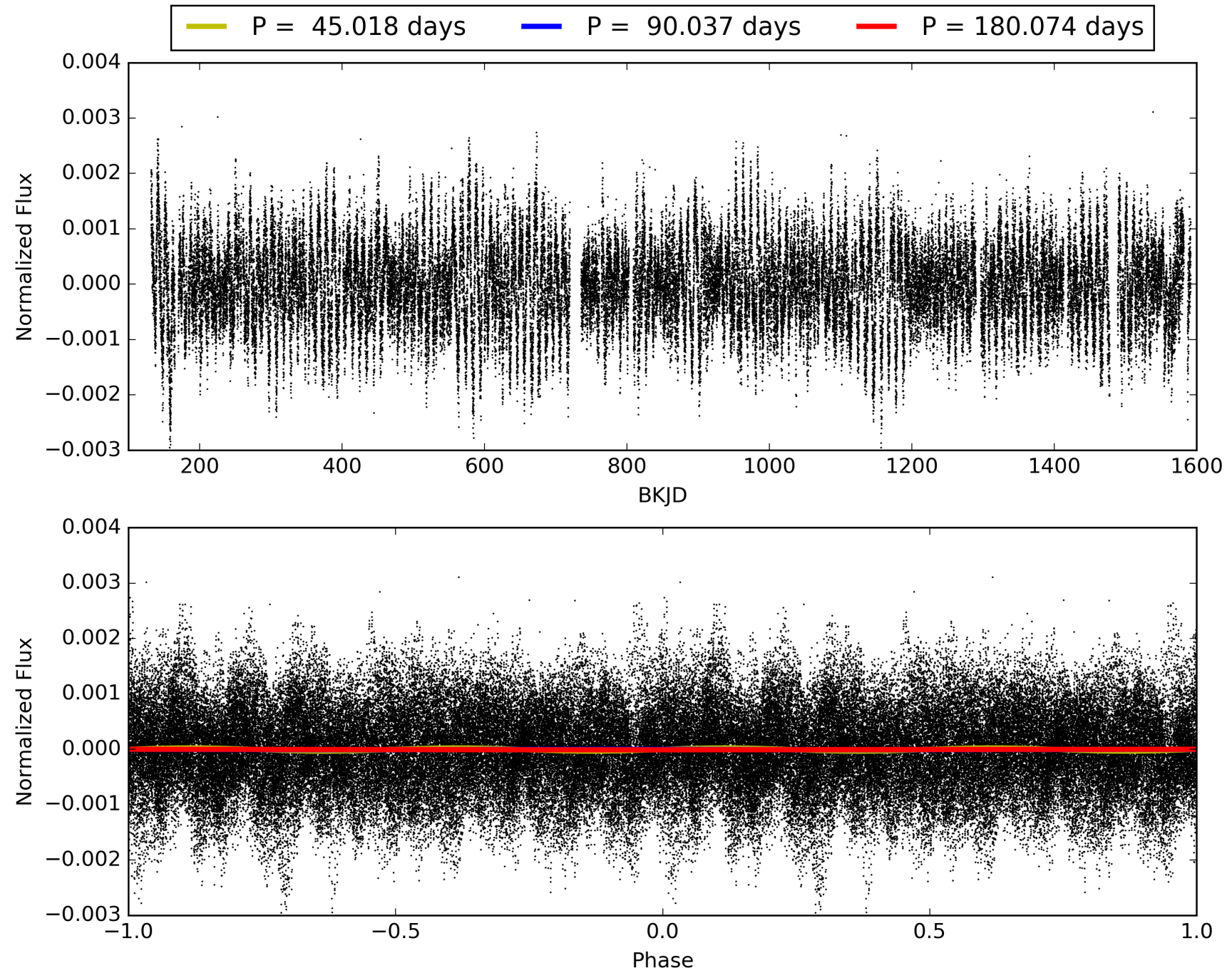
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:09:52 Z

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

TCE 009468126-06, PDC Light Curves

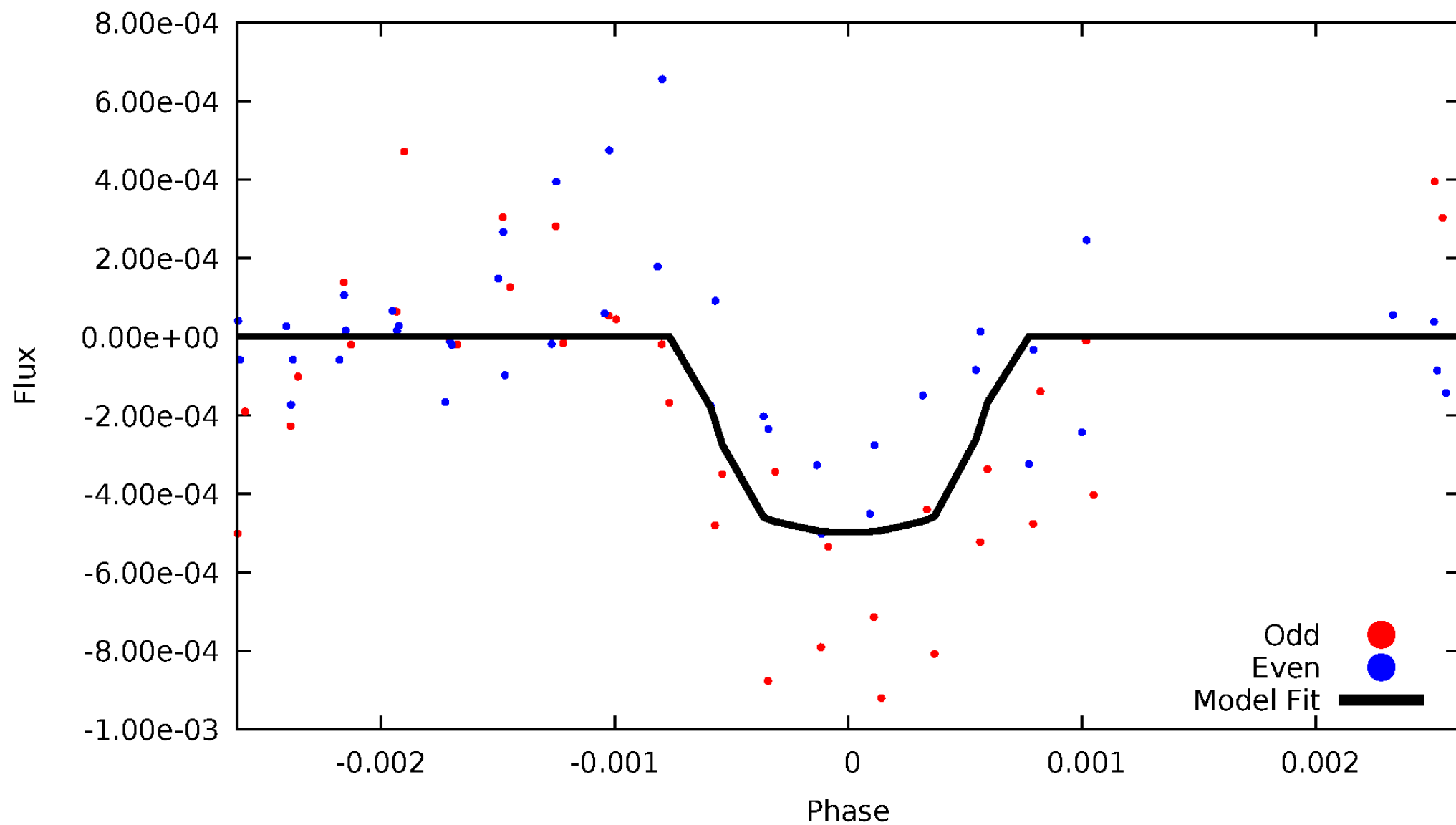


TCE 009468126-06



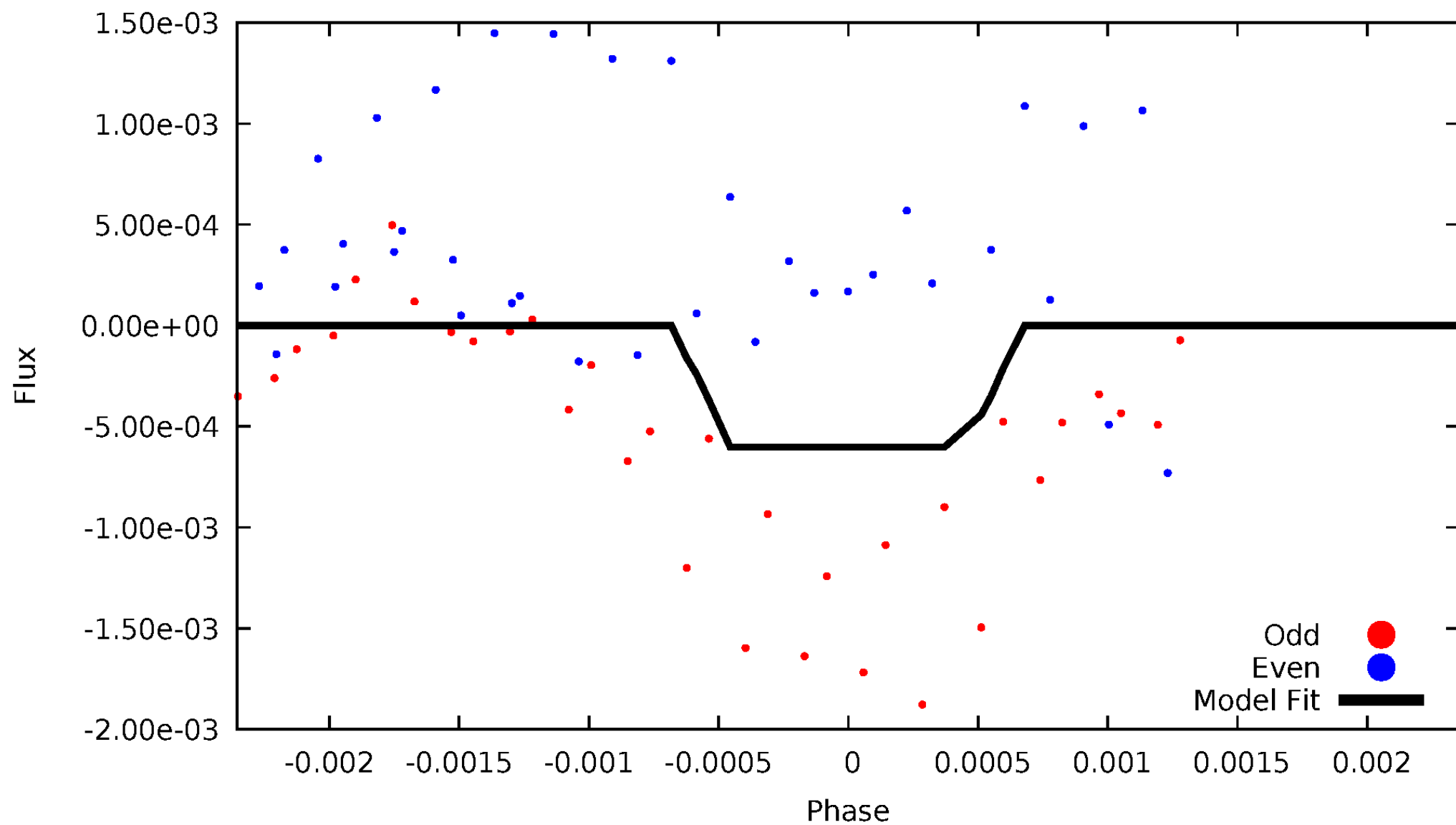
DV Odd/Even

TCE 009468126-06



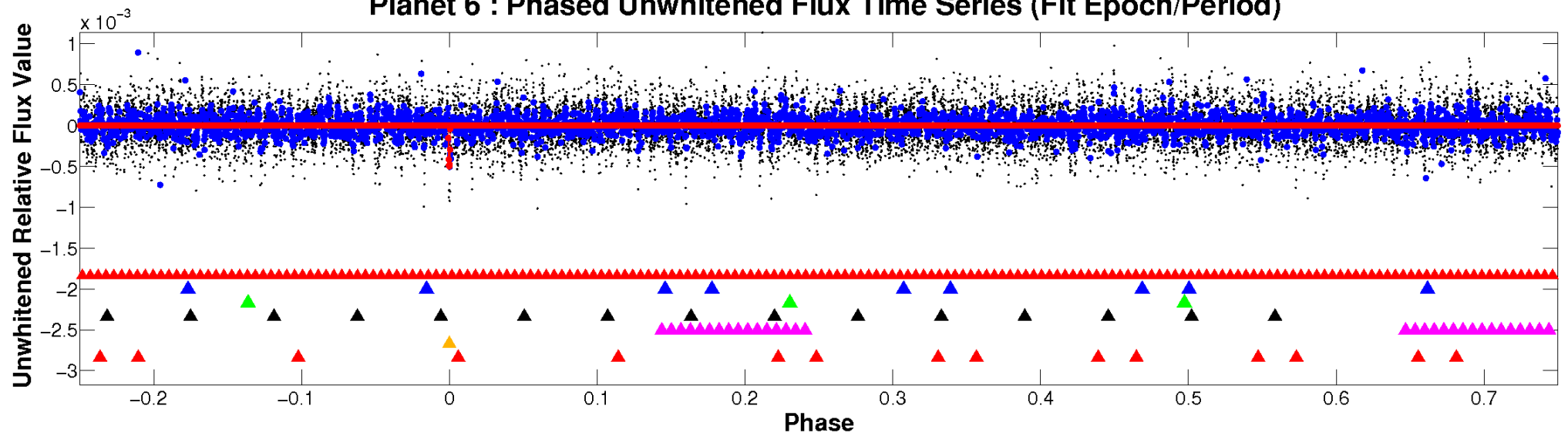
ALT Odd/Even

TCE 009468126-06

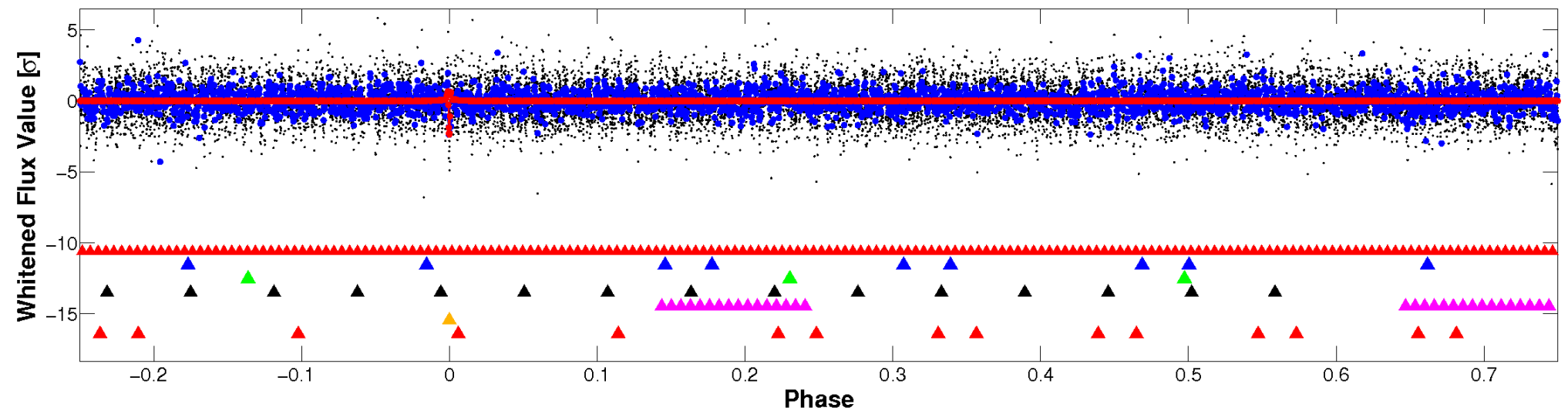


Non-Whitened Vs. Whitened Light Curve

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

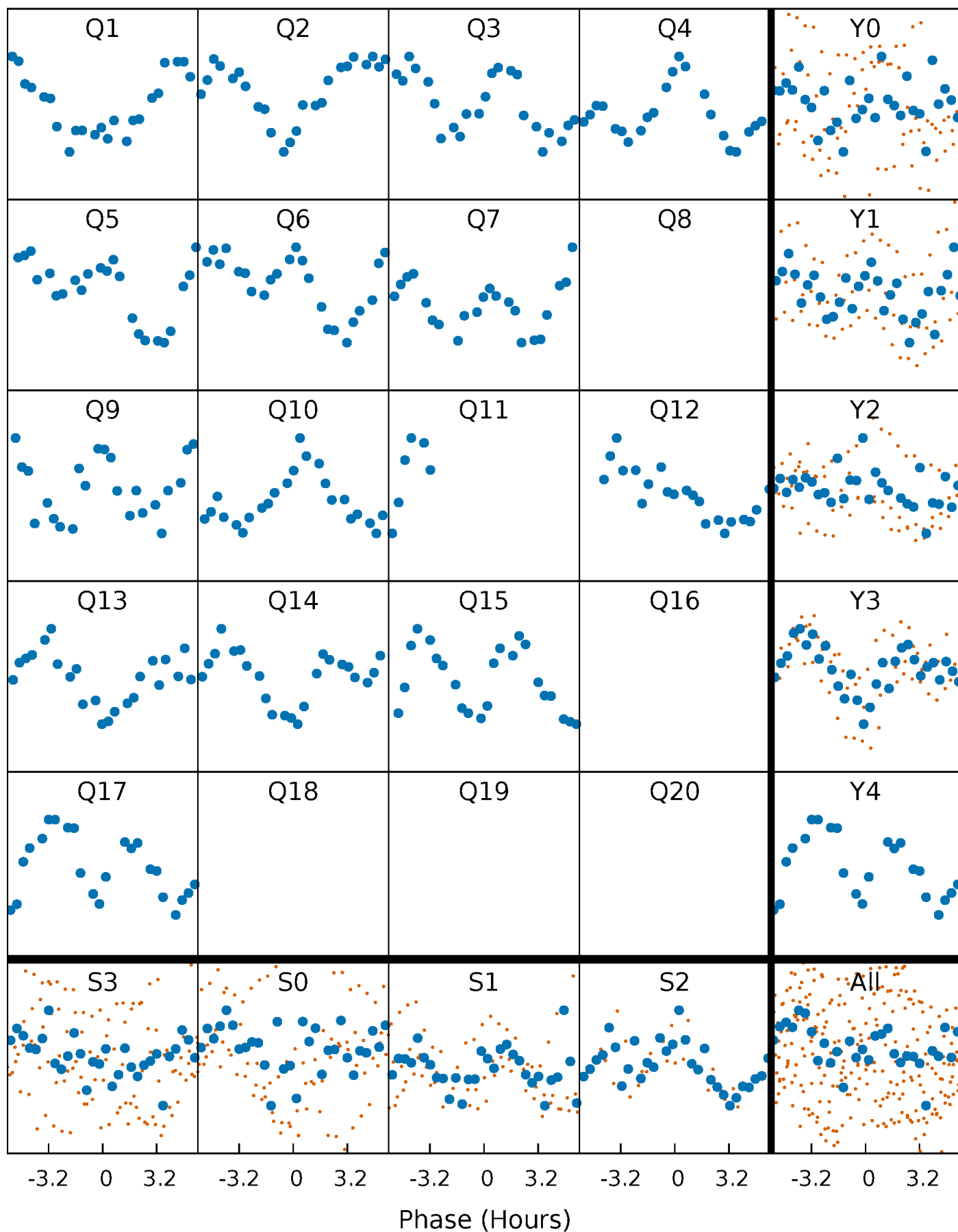


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



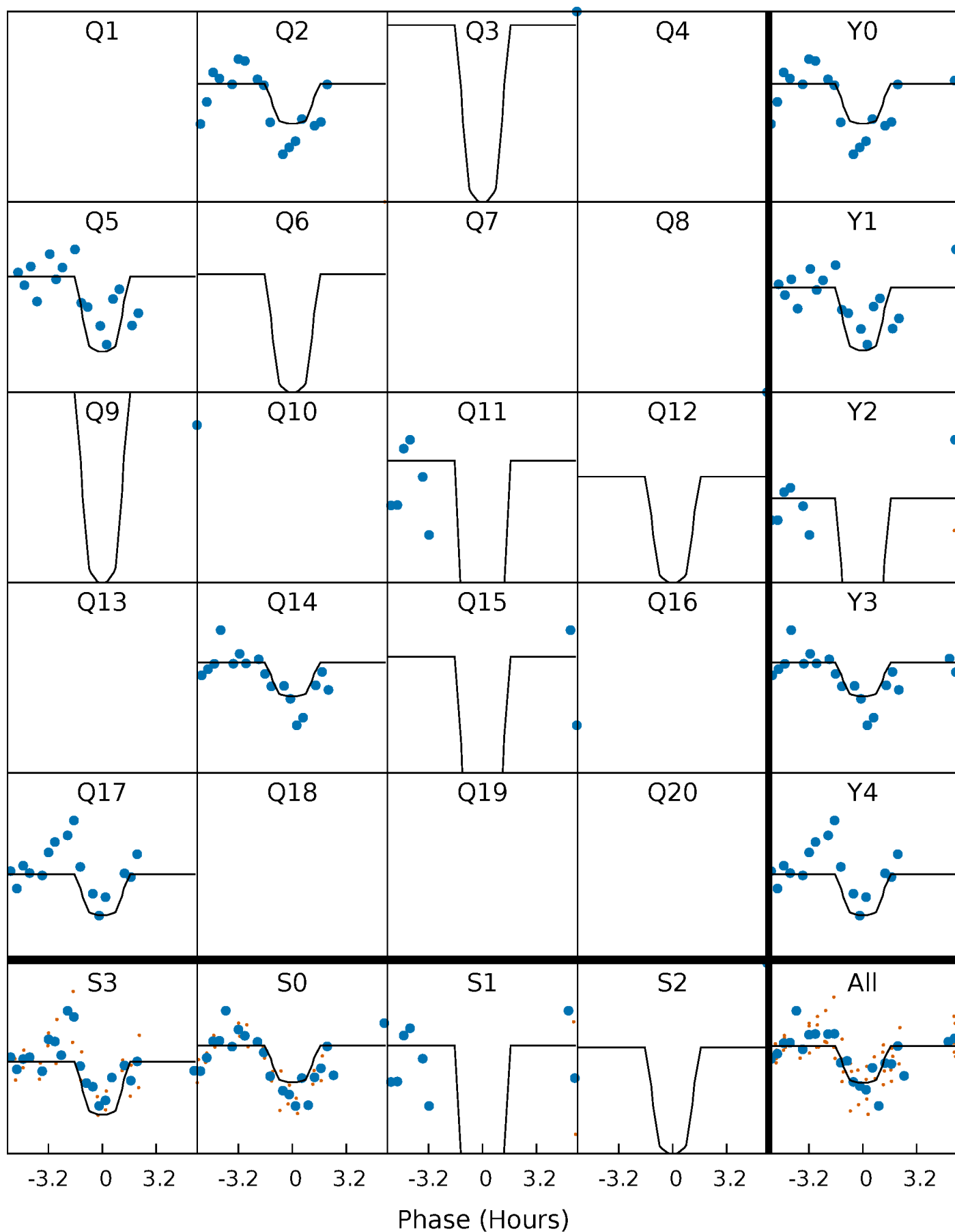
PDC Quarter-Phased Transit Curves

TCE 009468126-06 P= 90.036983 Days $T_0=132.028979$ (BKJD)



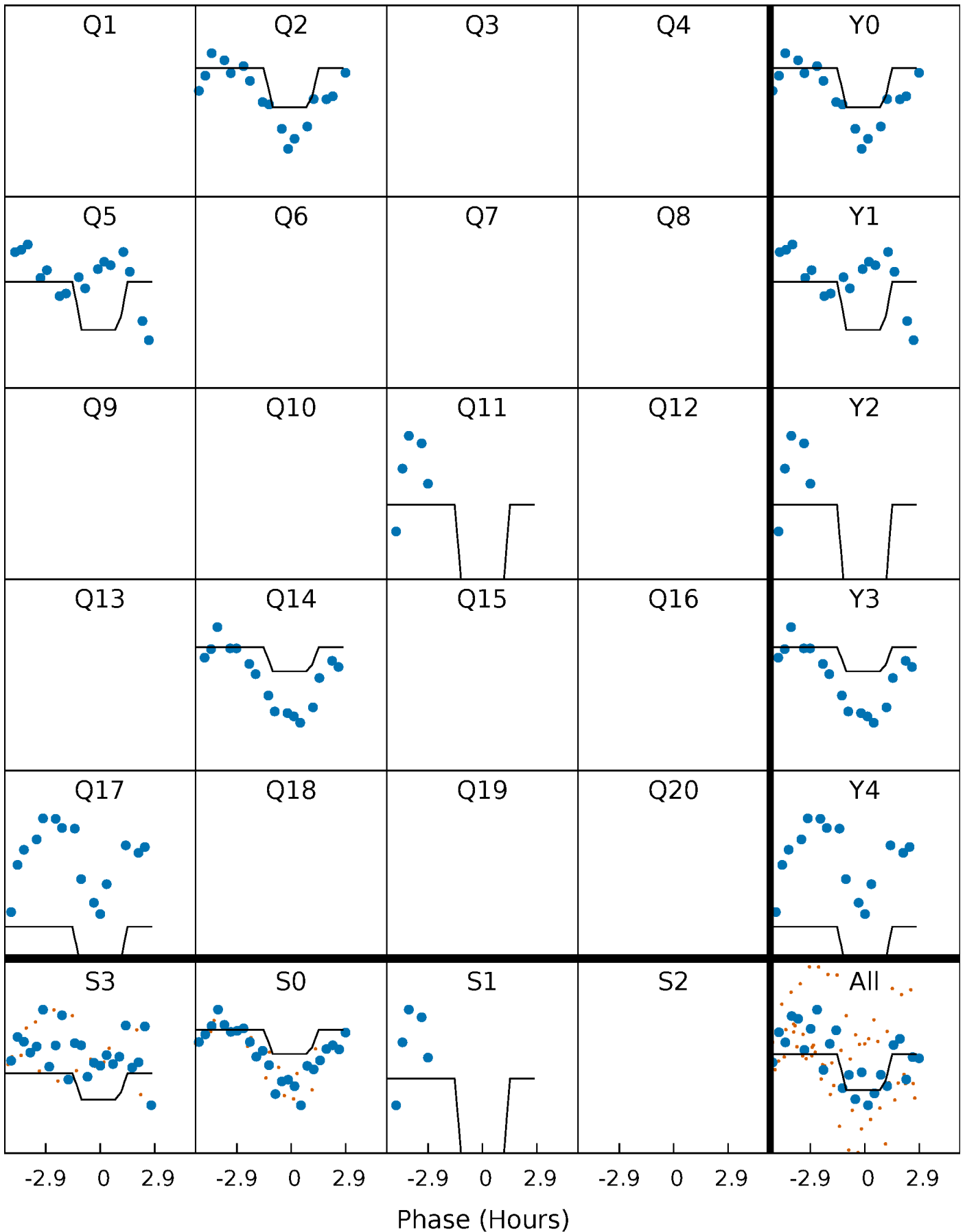
DV Quarter-Phased Transit Curves

TCE 009468126-06 P= 90.036983 Days $T_0=132.028979$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

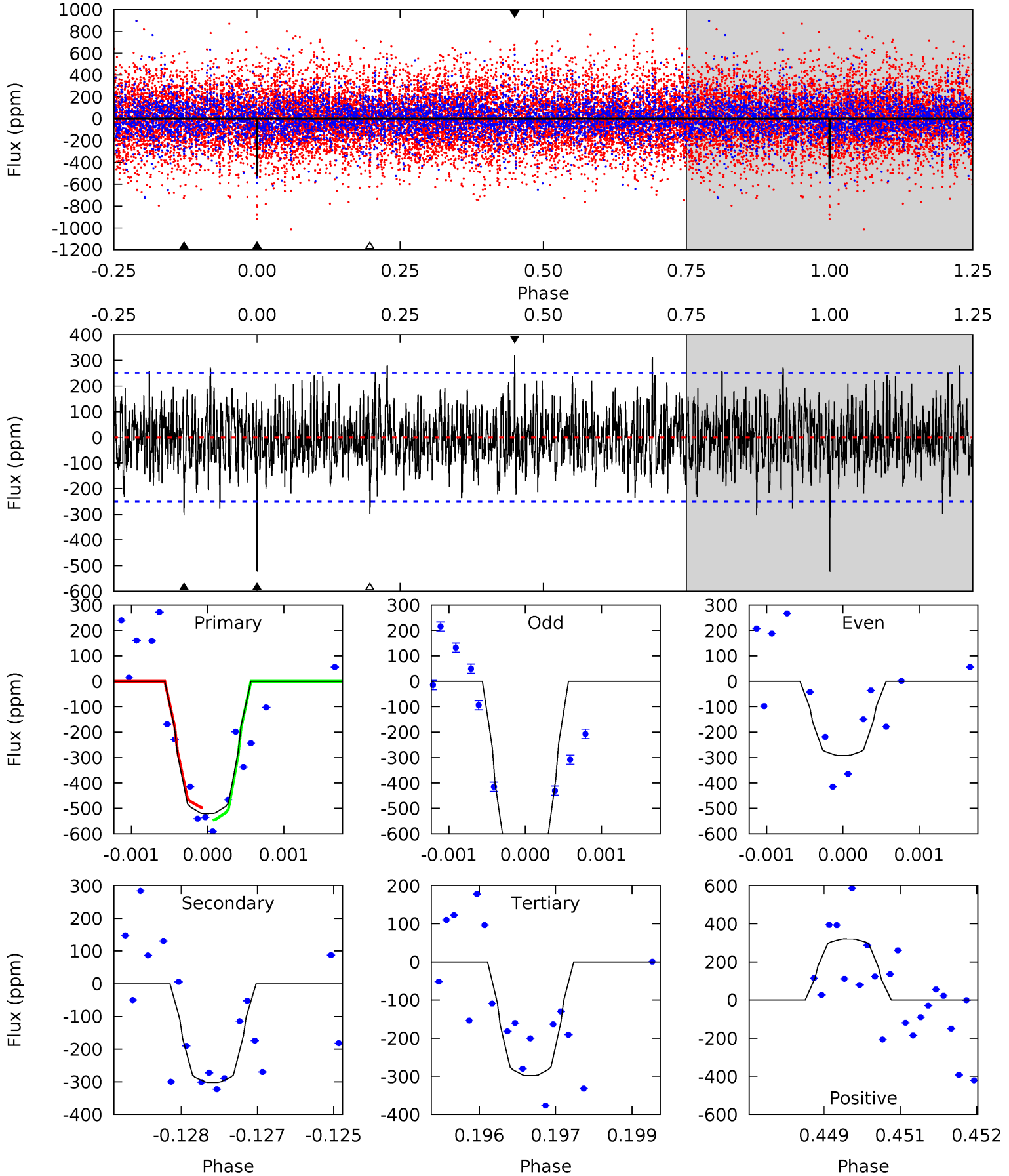
TCE 009468126-06 P= 90.037865 Days $T_0=132.004629$ (BKJD)



DV Model-Shift Uniqueness Test

009468126-06, P = 90.036983 Days, E = 41.991996 Days

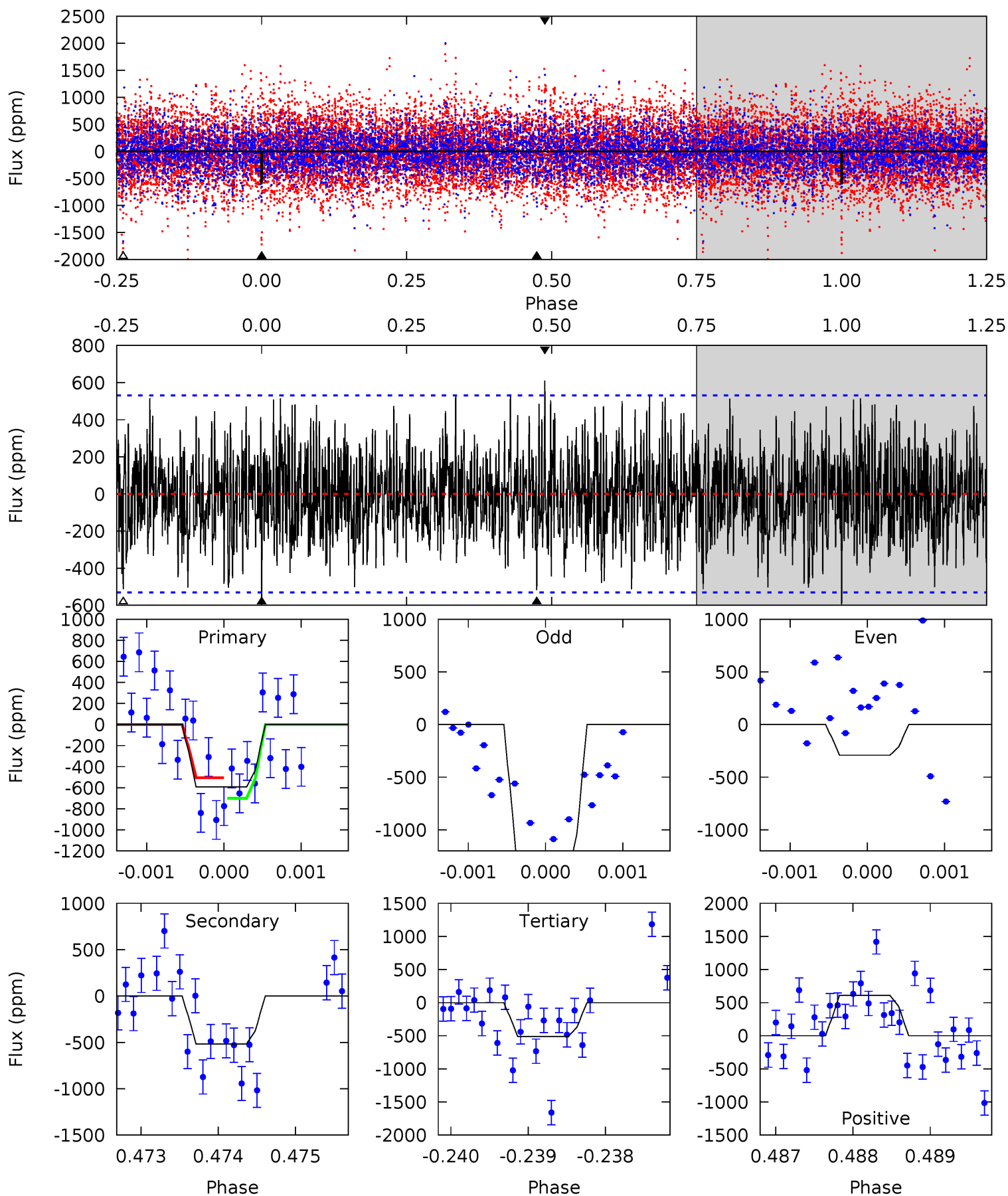
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.2	6.49	6.41	6.89	5.40	3.20	1.89	4.78	4.30	0.08	-0.40	4.63	1.05	0.38	0.52



Alt Model-Shift Uniqueness Test

009468126-06, P = 90.037865 Days, E = 41.966764 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.05	5.27	5.22	6.22	5.41	3.22	1.91	0.82	-0.18	0.05	-0.95	5.89	1.29	0.51	1.00



Stellar Parameters For KIC 009468126

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7355^{+230}_{-307}	$4.134^{+0.144}_{-0.176}$	$-0.140^{+0.200}_{-0.350}$	$1.737^{+0.525}_{-0.393}$	$1.497^{+0.209}_{-0.232}$	$0.402^{+0.296}_{-0.196}$
	+3%/-4%	+3%/-4%	+143%/-250%	+30%/-23%	+14%/-15%	+74%/-49%
Source	KIC0	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 009468126-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-302 ± 46	$14.40^{+15.63}_{-9.97}$	892^{+69}_{-62}	3847^{+2281}_{-783}	164^{+1581}_{-128}
Alt.	-517 ± 98	$14.55^{+14.96}_{-9.90}$	894^{+63}_{-58}	4196^{+2708}_{-847}	266^{+2406}_{-201}

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 $A_{obs} \gg 1.0$

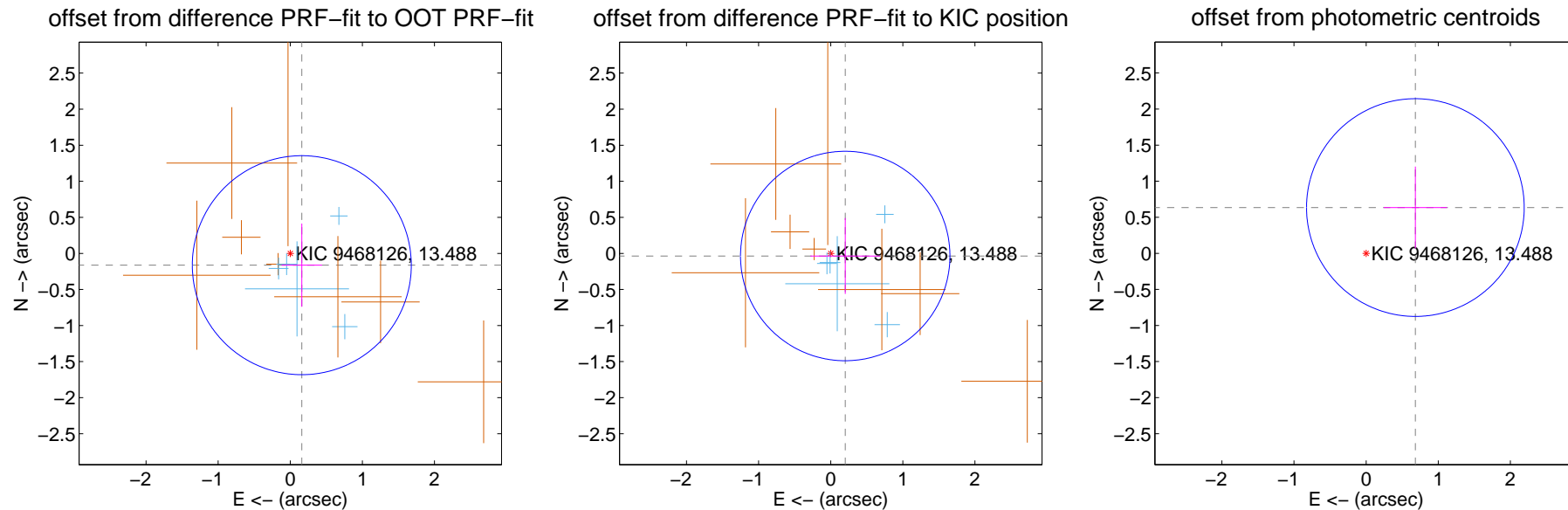
DV Centroid Data

Supplemental centroid analysis for 009468126-06. Kepler magnitude: 13.49. Transit SNR 9.03

There are 5 quarters with good PRF difference image offsets

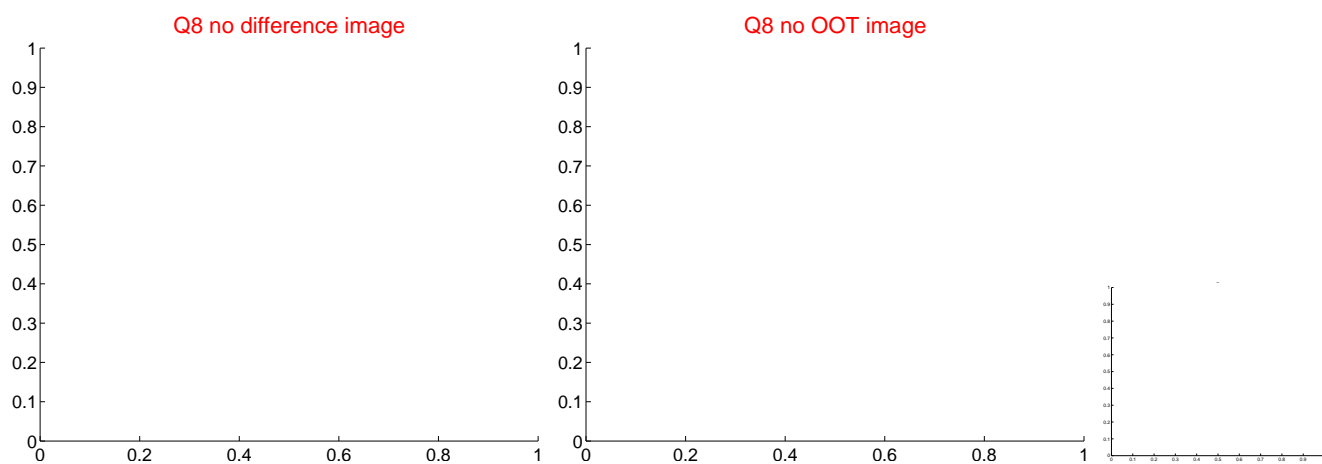
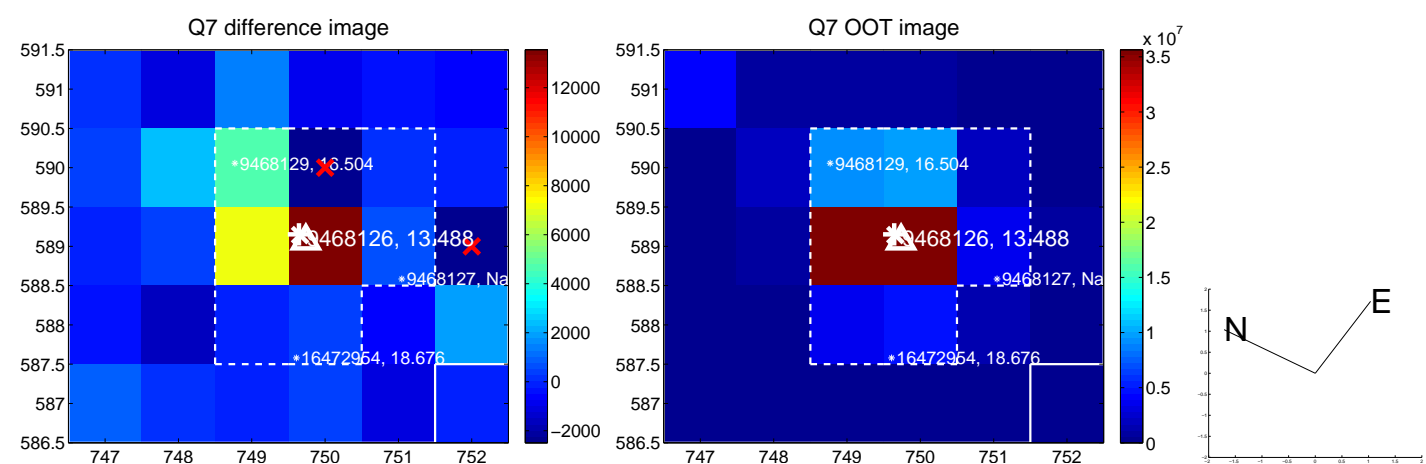
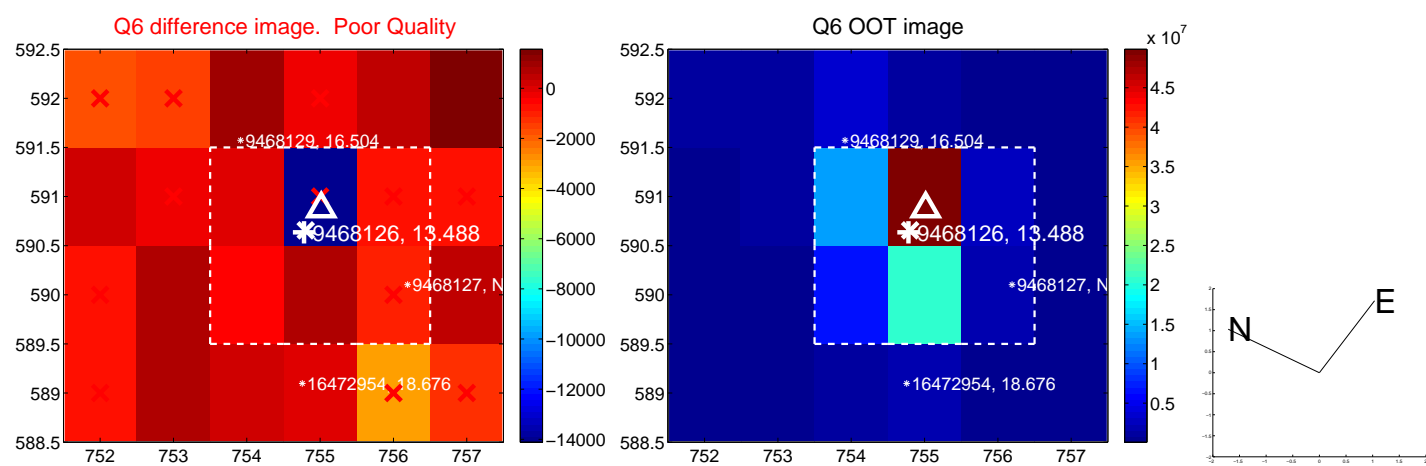
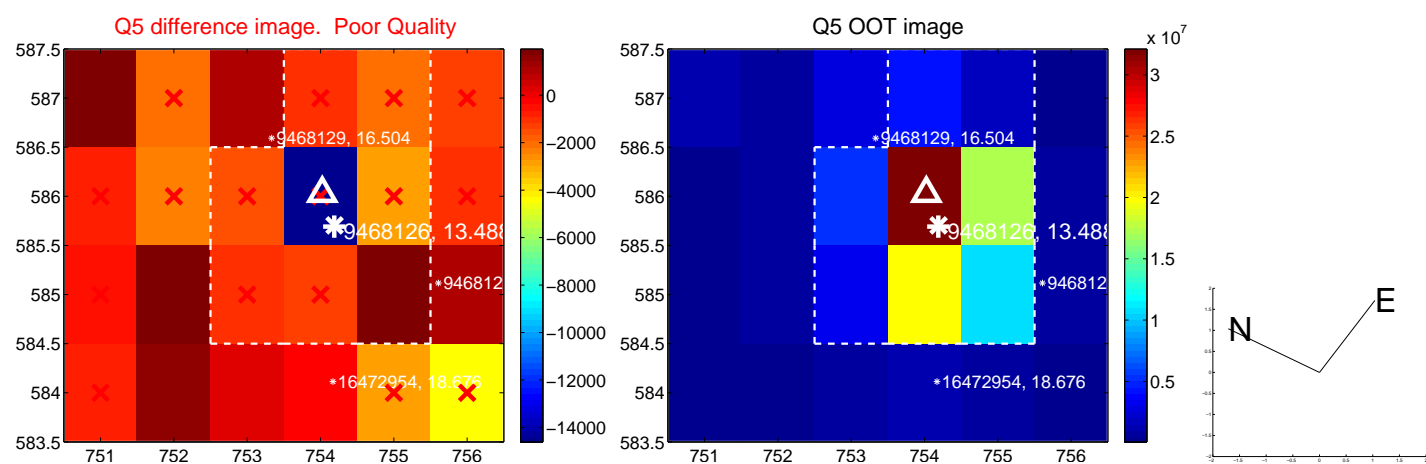
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.229 ± 0.506	0.45	-0.160 ± 0.281	-0.163 ± 0.577
PRF-fit source offset from KIC position	0.204 ± 0.484	0.42	-0.201 ± 0.483	-0.036 ± 0.526
photometric centroid source offset	0.93 ± 0.50	1.85	-0.68 ± 0.44	0.63 ± 0.57

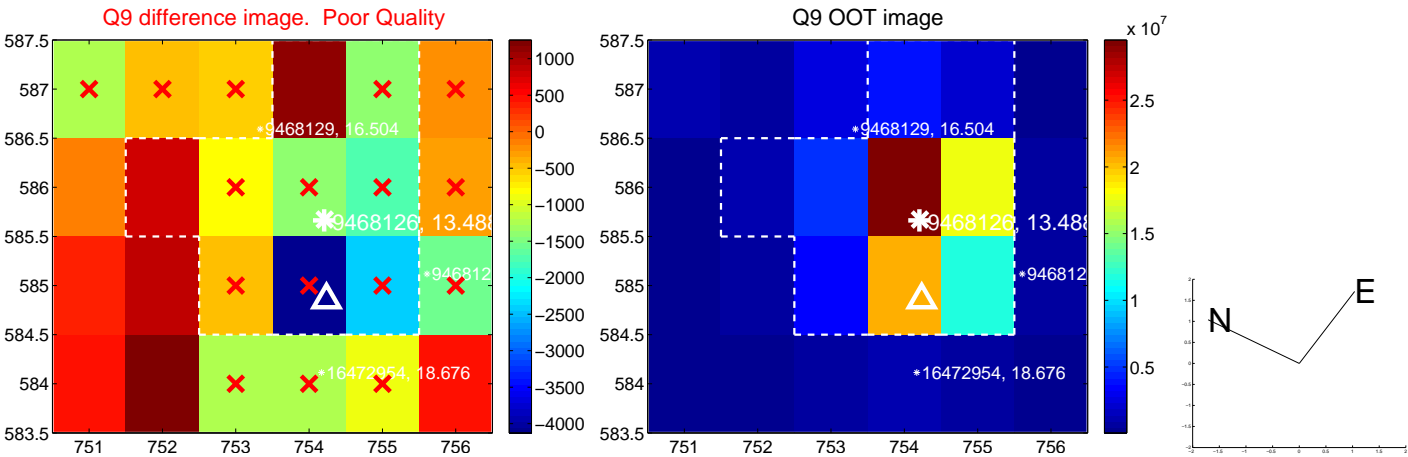


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

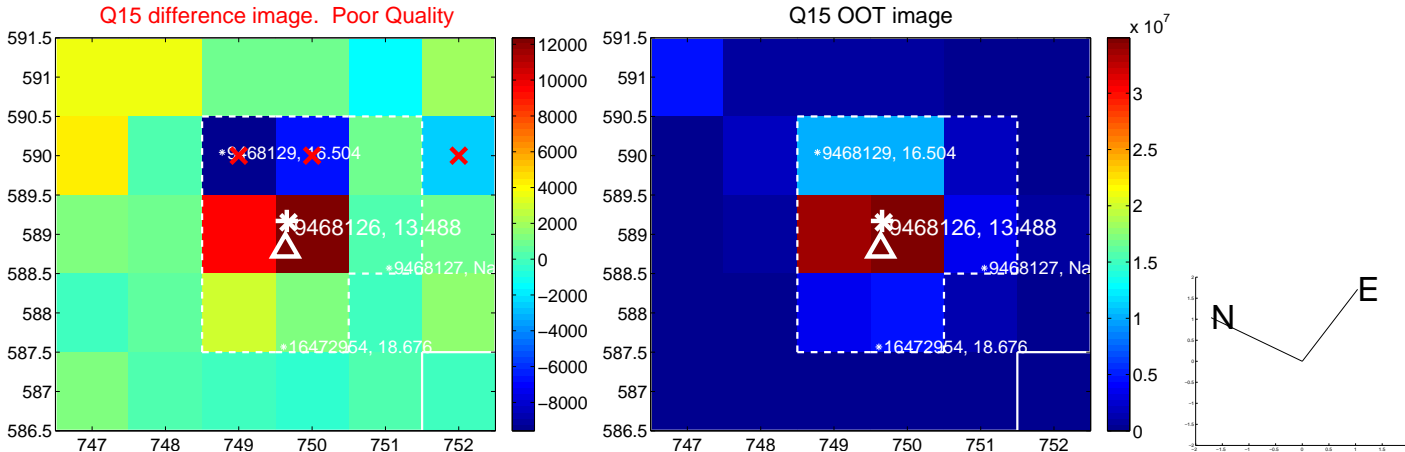
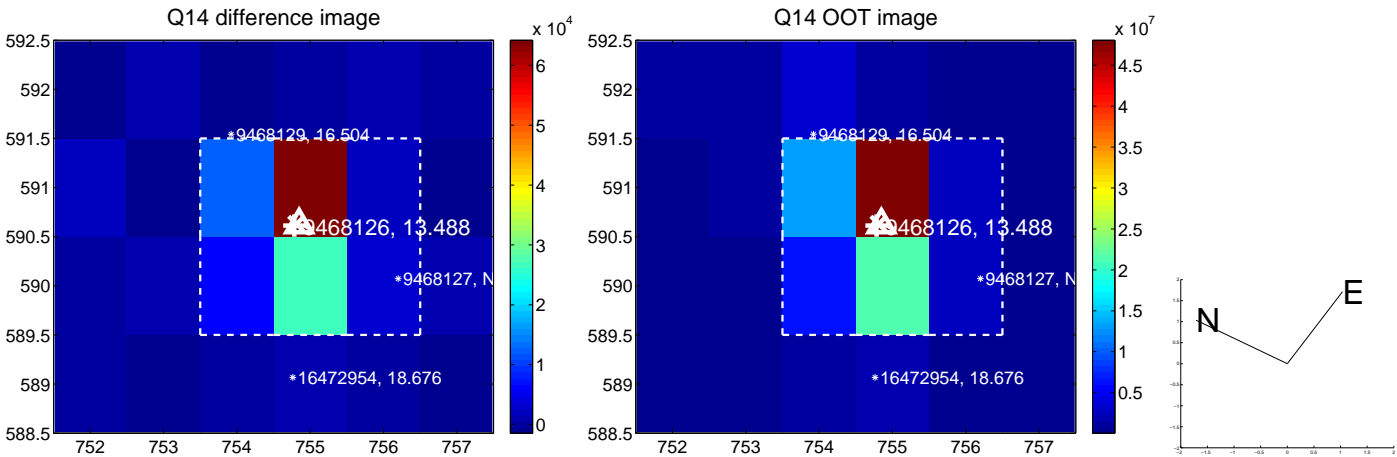
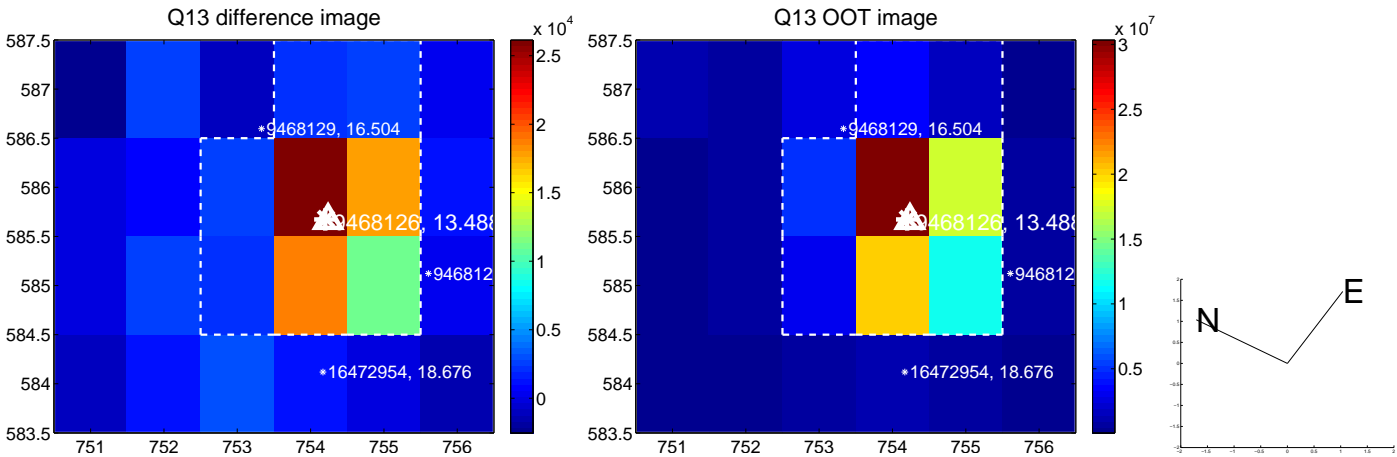
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



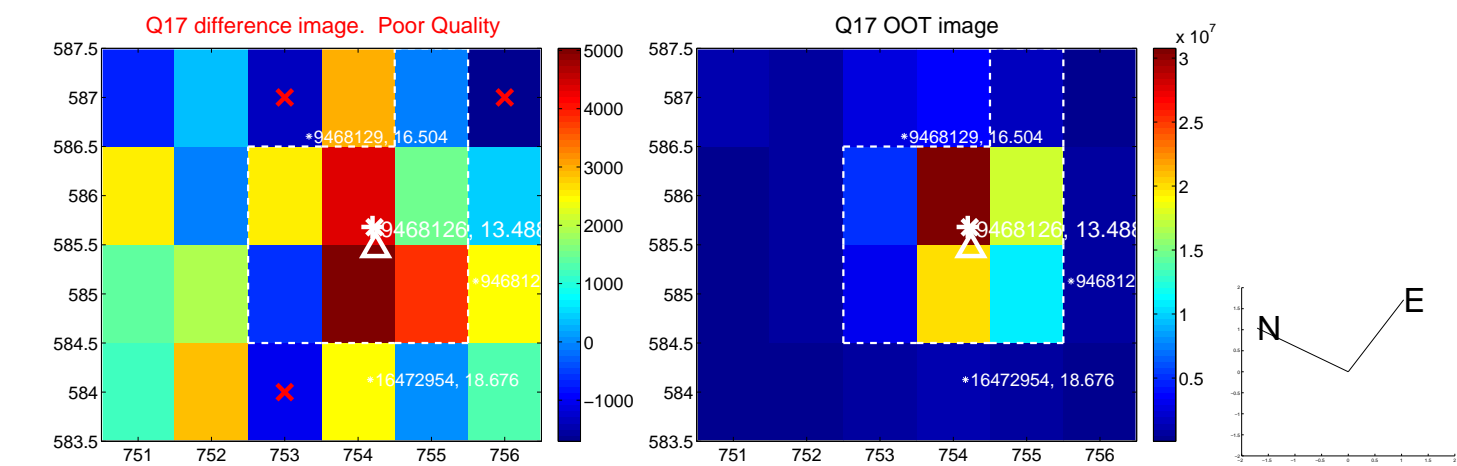
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



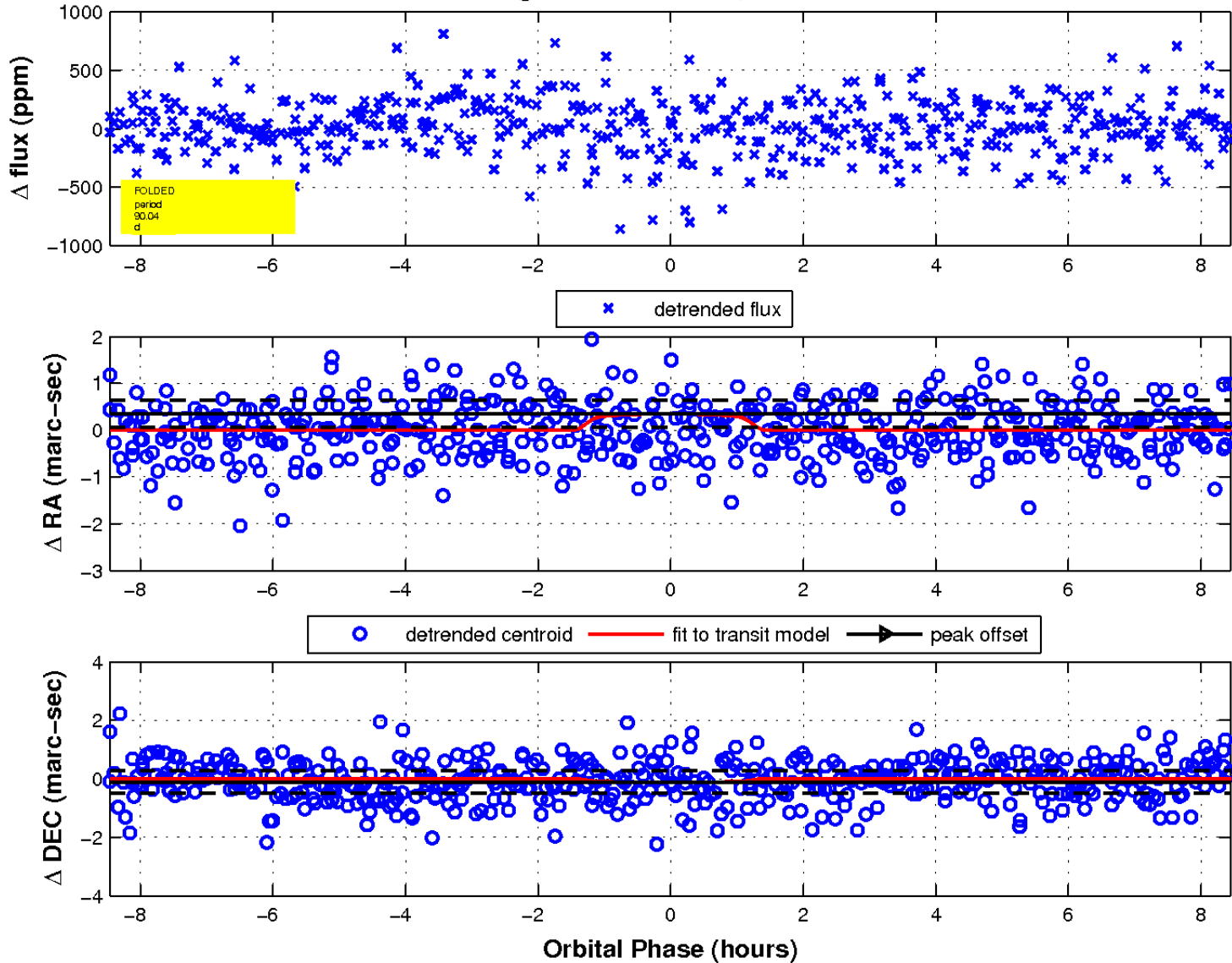
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

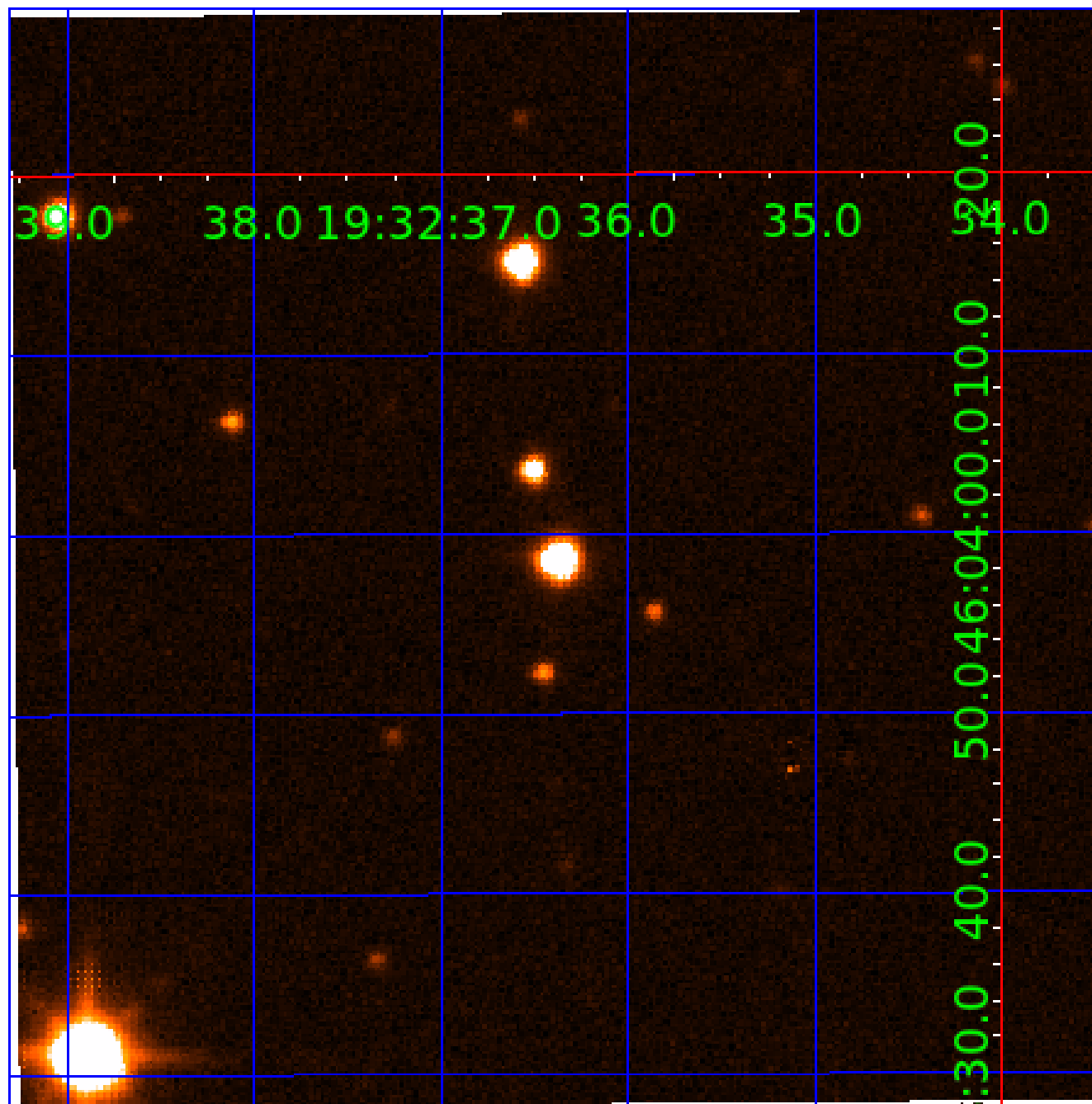


fluxWeightedCentroids, Planet 6 of 7



UKIRT Image

Declination



KIC 009468126

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})
009468126-01	OBS	No	1.436745	132.191634	42.3	8.379	11.1	11.1	1.74	7355	1.14	9725.65
009468126-02	OBS	No	165.543209	264.271278	403.6	1.910	13.3	4.7	1.74	7355	3.96	17.35
009468126-03	OBS	No	507.221426	242.808175	1557.2	118.662	13.4	7.8	1.74	7355	7.65	3.90
009468126-04	OBS	No	95.118570	201.221651	576.8	3.403	9.5	9.4	1.74	7355	7.94	36.31
009468126-05	OBS	No	45.309545	144.970442	286.7	5.402	9.2	9.0	1.74	7355	3.46	97.61
009468126-06	OBS	No	90.036983	132.028979	498.7	2.825	10.0	9.0	1.74	7355	4.51	39.07
009468126-07	OBS	No	99.782394	154.391230	472.5	4.279	9.7	9.4	1.74	7355	4.28	34.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009468126-01	OBS	FP	0.00	1	0	0	0	LPP_DV
009468126-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
009468126-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS—CENT_FEW_DIFFS
009468126-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
009468126-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
009468126-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
009468126-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

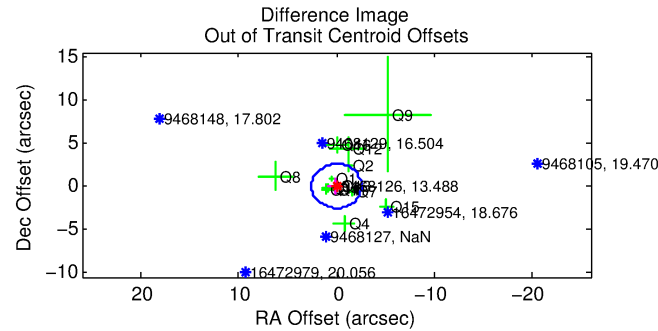
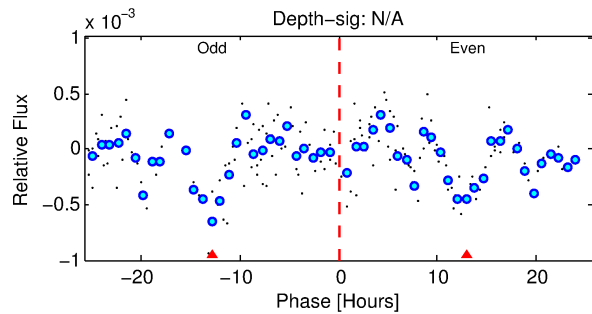
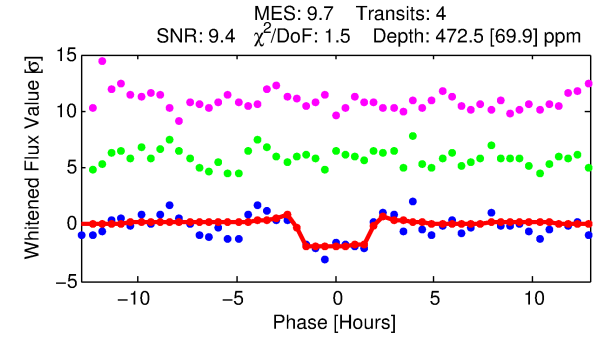
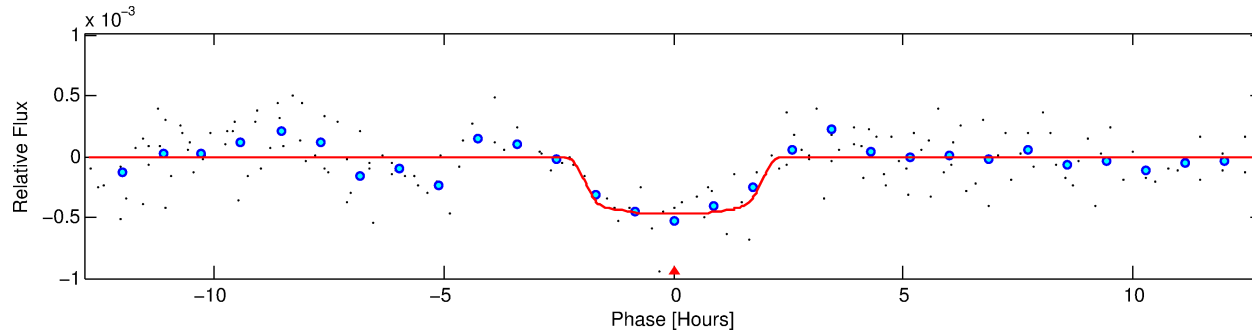
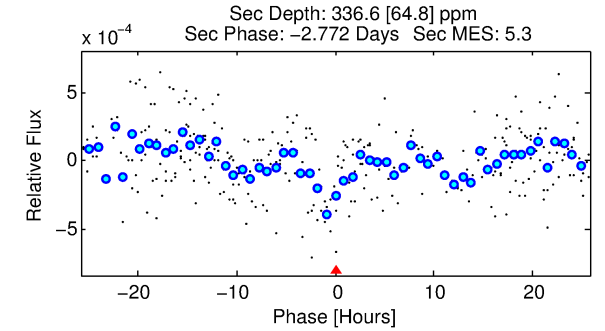
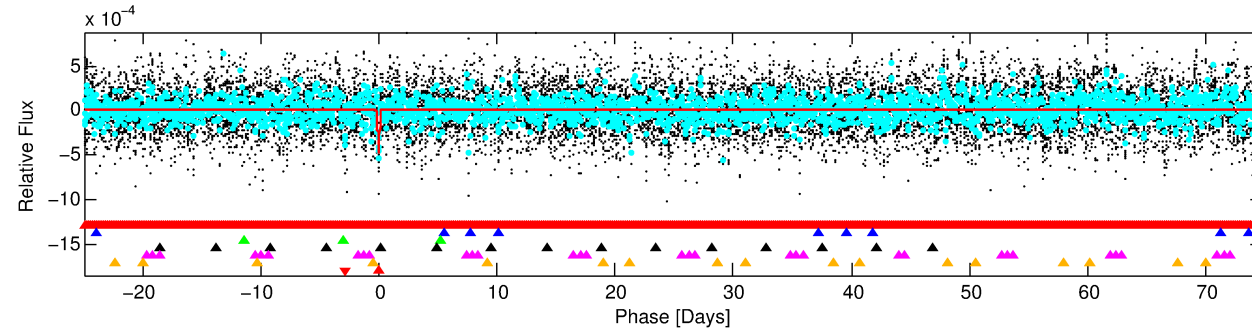
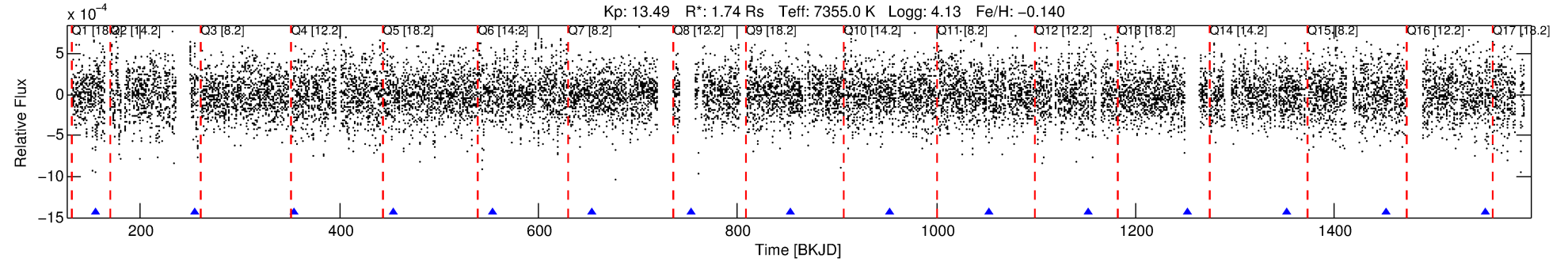
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009468126-07

No Significant Match Found

DV One-Page Summary

KIC: 9468126 Candidate: 7 of 7 Period: 99.782 d



DV Fit Results:

Period = 99.78239 [0.00116] d
Epoch = 154.3912 [0.0081] BKJD
Rp/R* = 0.0226 [0.0060]
a/R* = 98.16 [146.73]
b = 0.86 [0.45]
Seff = 34.07 [12.81]
Teff = 616 [58] K
Rp = 4.28 [1.73] Re
a = 0.4819 [0.1169] AU
Ag = 2348.60 [1552.90] [1.51] σ
Teffp = 6631 [983] K [6.11] σ

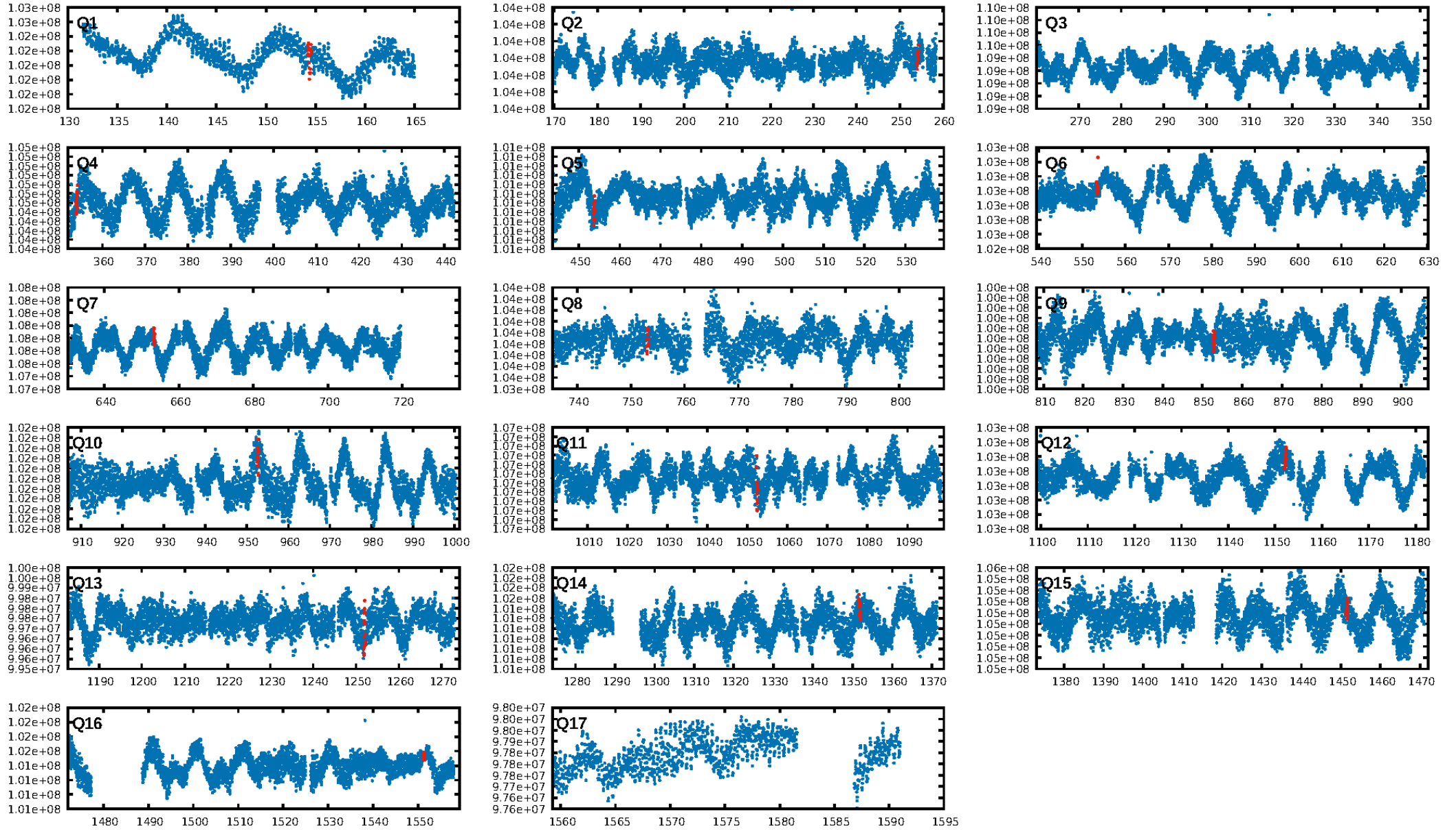
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [20.47] σ
LongPeriod-sig: 100.0% [336.78] σ
ModelChiSquare2-sig: 32.3%
ModelChiSquareGof-sig: 99.7%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.2815
Centroid-sig: 0.0%
Centroid-so: 0.743 arcsec [1.63] σ
OotOffset-rm: 0.024 arcsec [0.03] σ
KicOffset-rm: 0.067 arcsec [0.08] σ
OotOffset-st: 3/3/4/3 [13]
KicOffset-st: 3/3/4/3 [13]
DiffImageQuality-fgm: 0.23 [3/13]
DiffImageOverlap-fno: 0.13 [2/15]

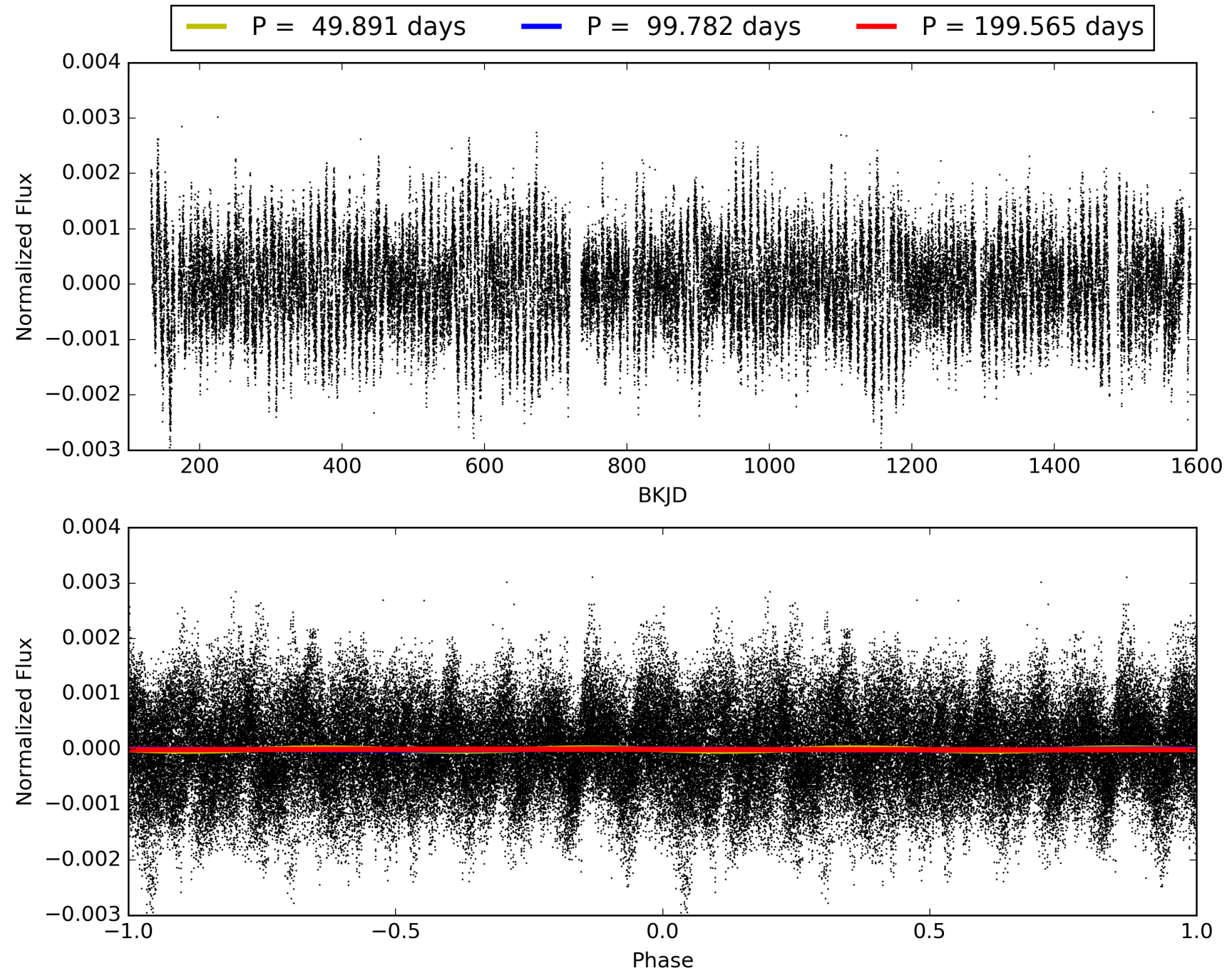
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:09:56 Z

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

TCE 009468126-07, PDC Light Curves

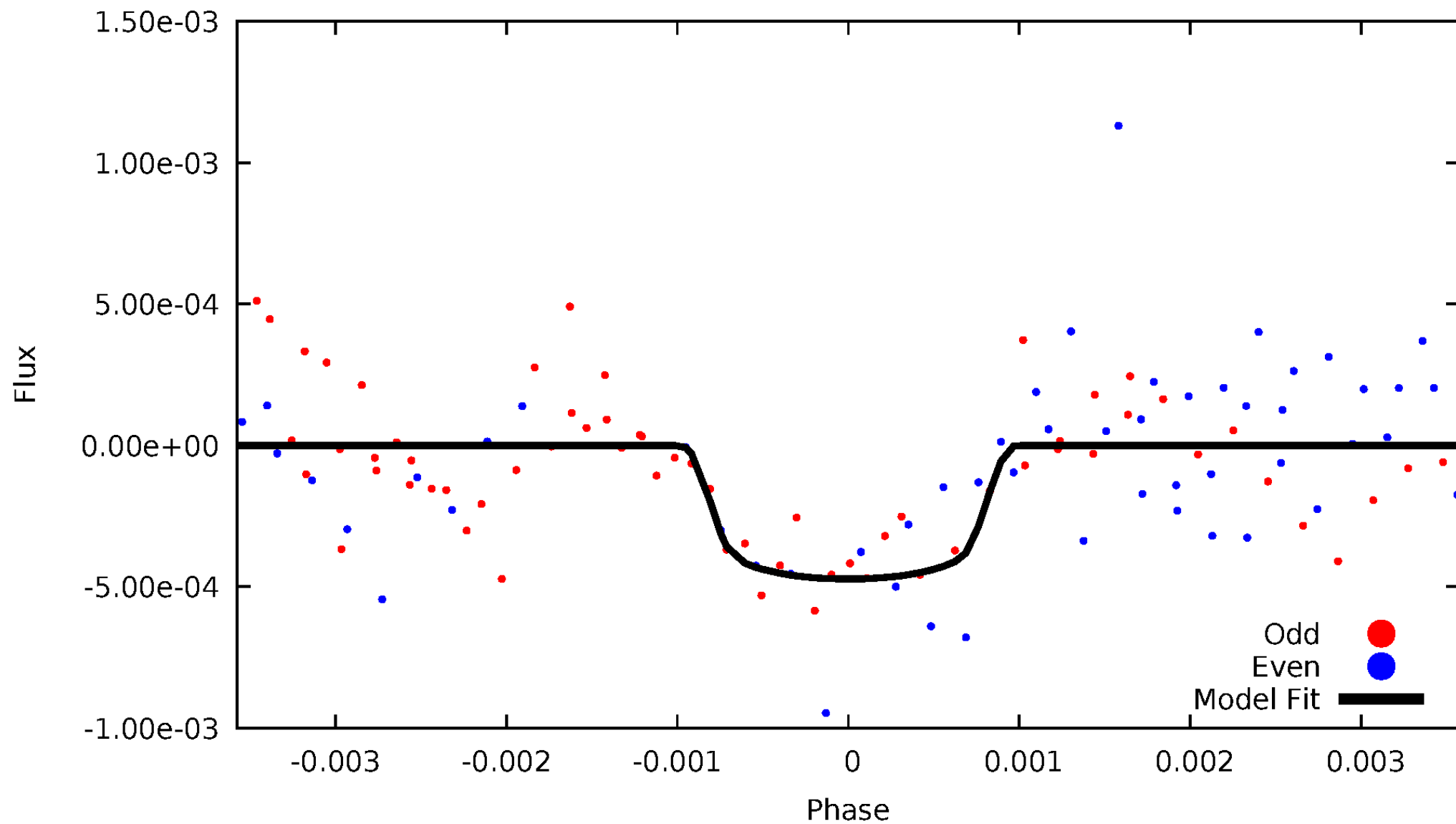


TCE 009468126-07



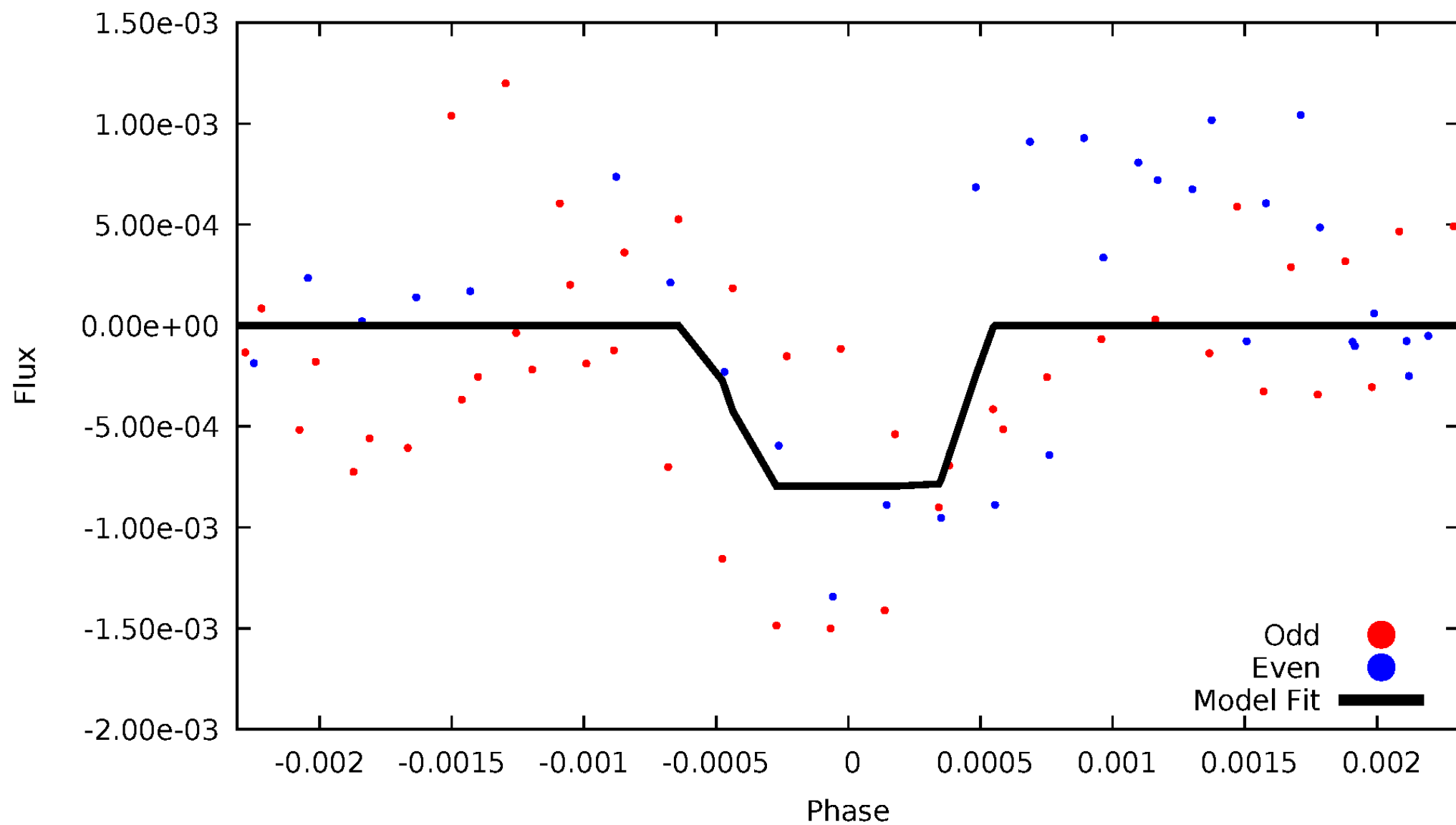
DV Odd/Even

TCE 009468126-07



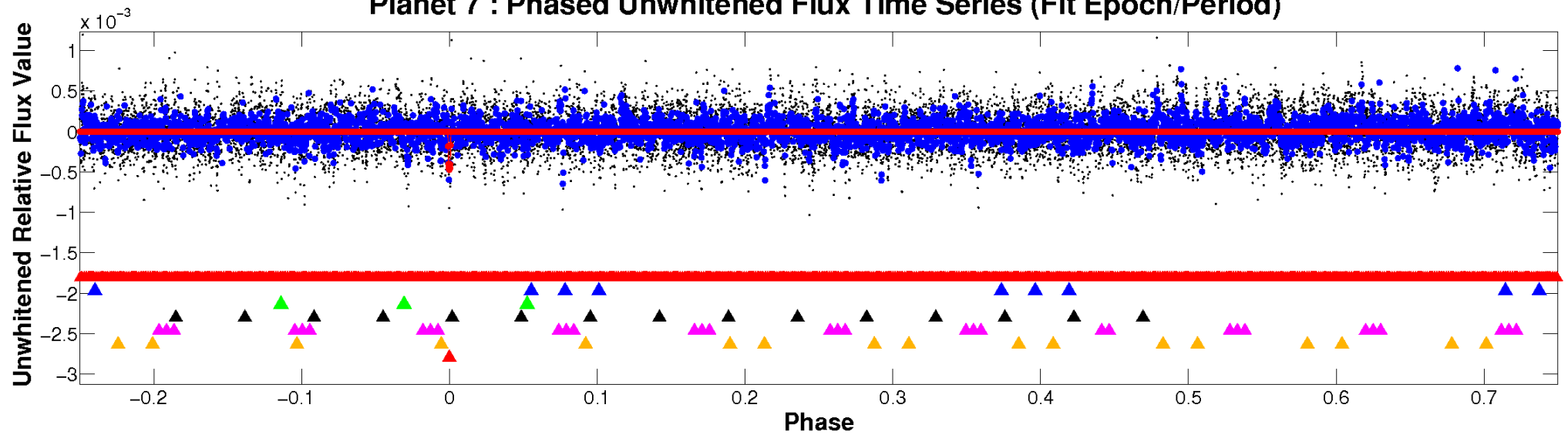
ALT Odd/Even

TCE 009468126-07

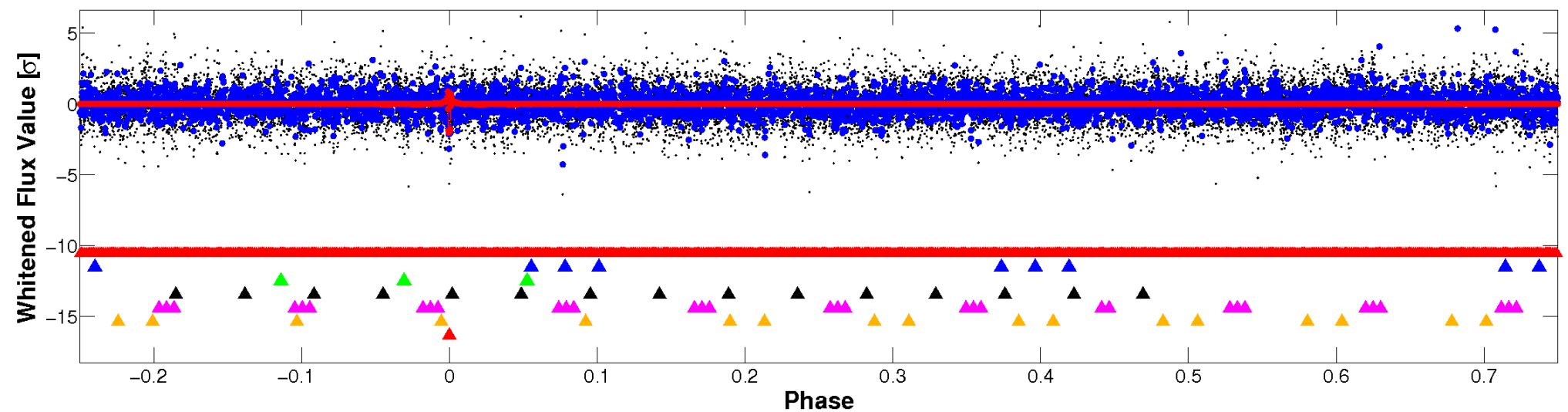


Non-Whitened Vs. Whitened Light Curve

Planet 7 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

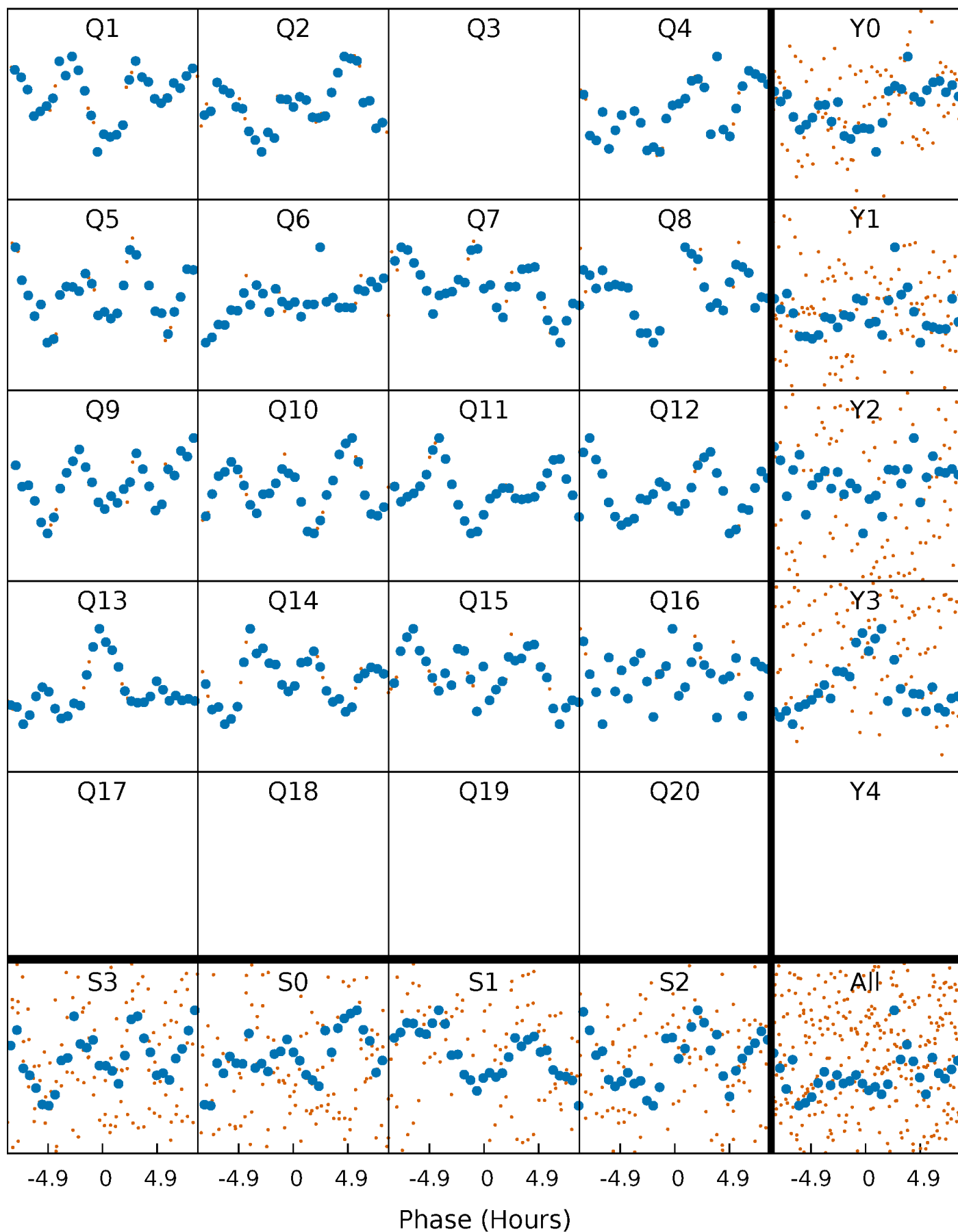


Planet 7 : Phased Whitened Flux Time Series (Fit Epoch/Period)



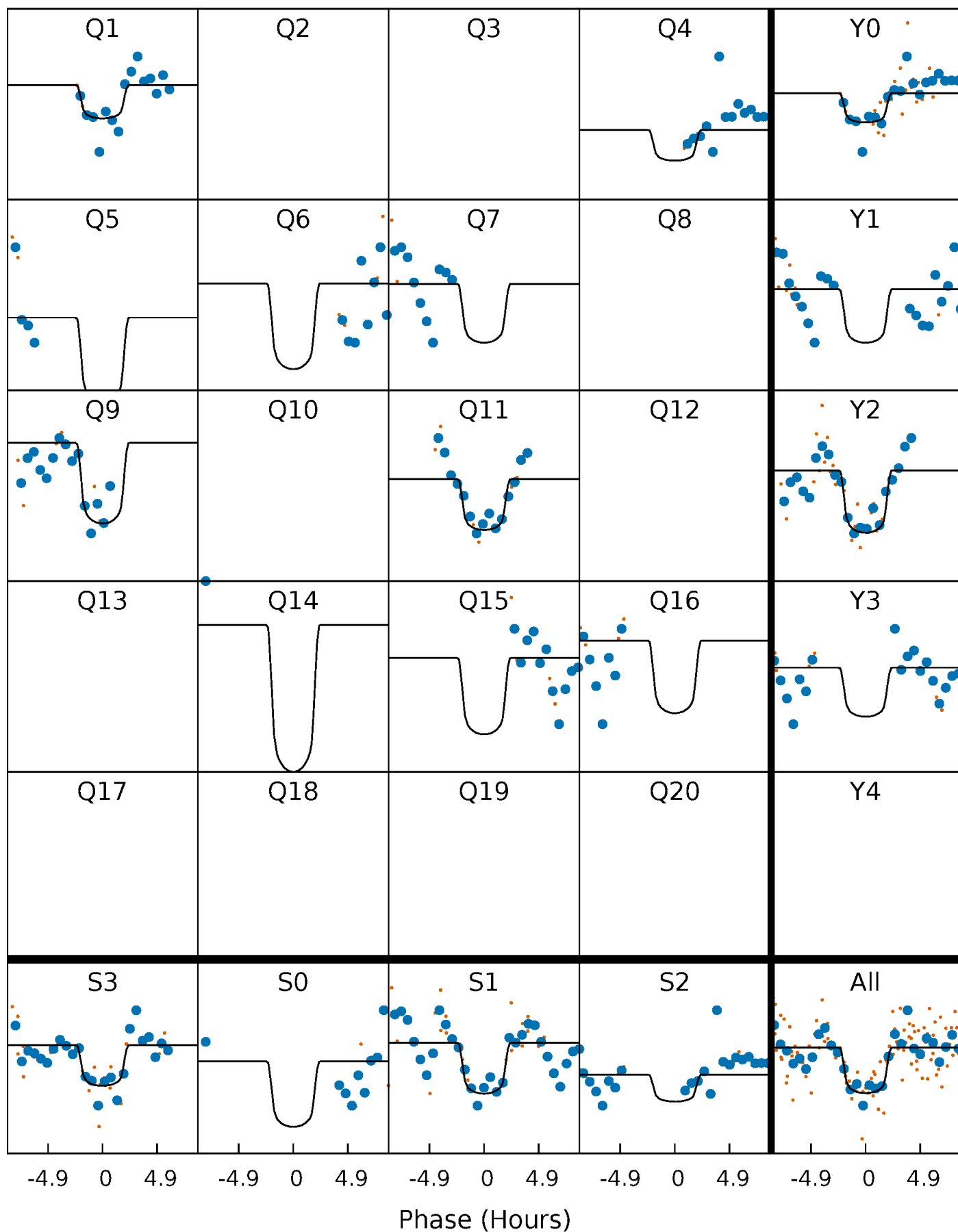
PDC Quarter-Phased Transit Curves

TCE 009468126-07 P= 99.782394 Days $T_0=154.391230$ (BKJD)



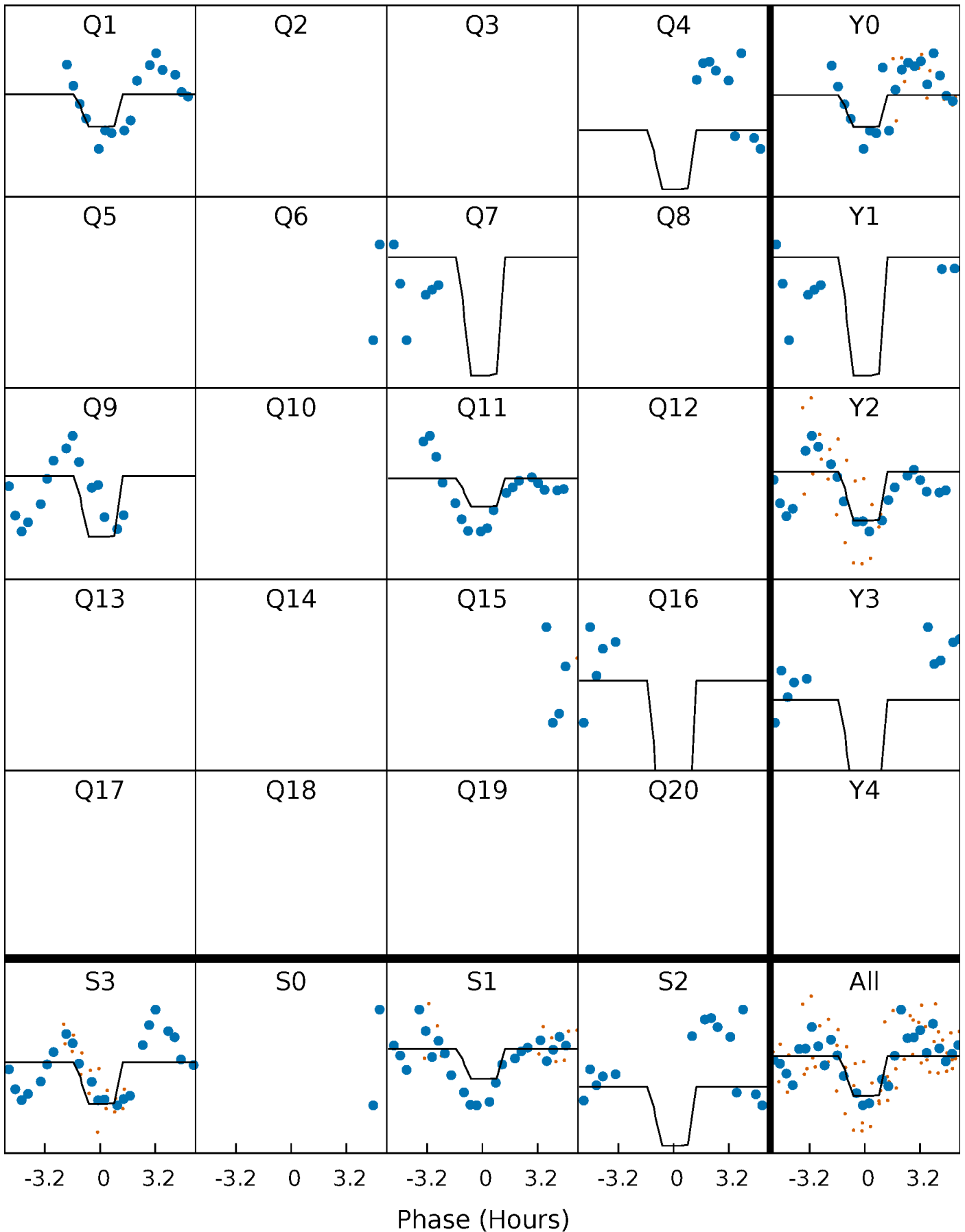
DV Quarter-Phased Transit Curves

TCE 009468126-07 P= 99.782394 Days $T_0=154.391230$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

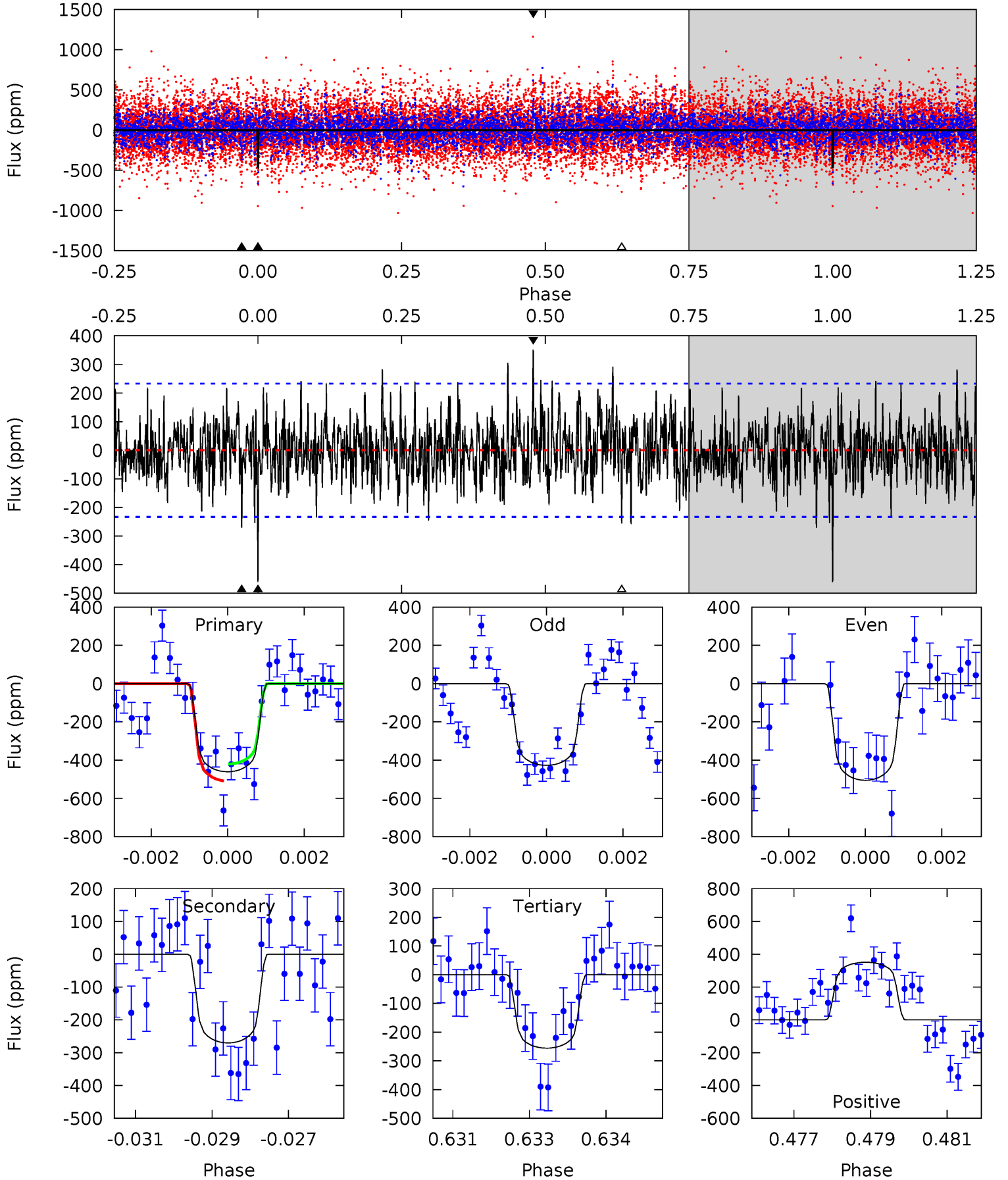
TCE 009468126-07 $P = 99.779508$ Days $T_0 = 154.384023$ (BKJD)



DV Model-Shift Uniqueness Test

009468126-07, P = 99.782394 Days, E = 54.608836 Days

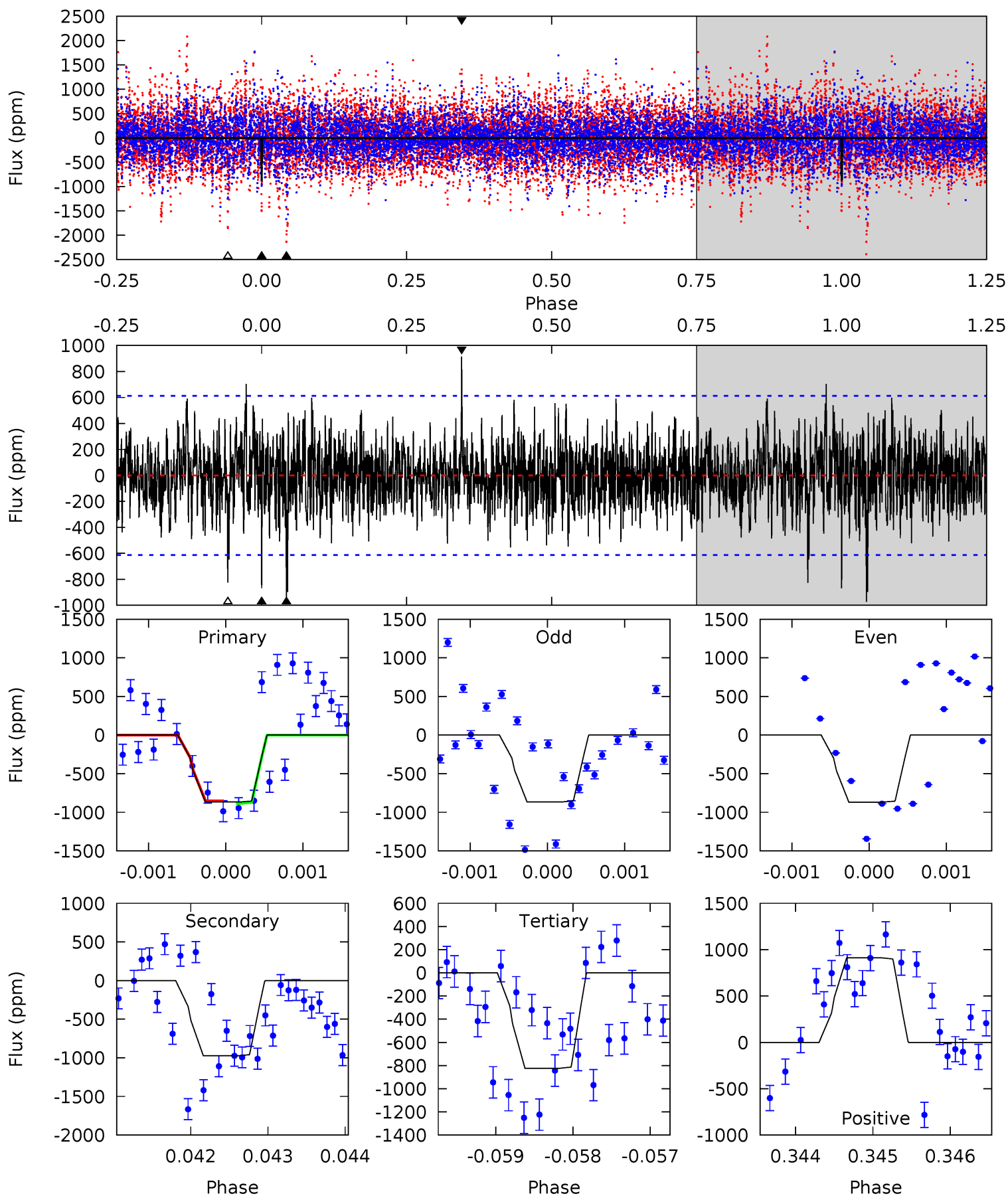
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.5	6.19	5.85	8.04	5.33	3.10	1.92	4.69	2.51	0.34	-1.85	0.91	0.98	0.43	1.01



Alt Model-Shift Uniqueness Test

009468126-07, P = 99.779508 Days, E = 54.604515 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.71	8.66	7.33	8.12	5.45	3.28	1.73	0.38	-0.41	1.32	0.54	0.01	0.94	0.48	0.14



Stellar Parameters For KIC 009468126

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7355^{+230}_{-307}	$4.134^{+0.144}_{-0.176}$	$-0.140^{+0.200}_{-0.350}$	$1.737^{+0.525}_{-0.393}$	$1.497^{+0.209}_{-0.232}$	$0.402^{+0.296}_{-0.196}$
	+3%/-4%	+3%/-4%	+143%/-250%	+30%/-23%	+14%/-15%	+74%/-49%
Source	KIC0	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 009468126-07 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-270 ± 44	$4.33^{+1.37}_{-1.33}$	861^{+66}_{-60}	6152^{+1291}_{-727}	1833^{+2036}_{-807}
Alt.	-974 ± 113	$5.35^{+1.49}_{-1.15}$	864^{+66}_{-62}	7789^{+1325}_{-945}	4317^{+2729}_{-1716}

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming A=0.3)

A_{obs} = Observed Albedo (Assuming T=0)

If a secondary eclipse is present, the system is likely an EB if $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

DV Centroid Data

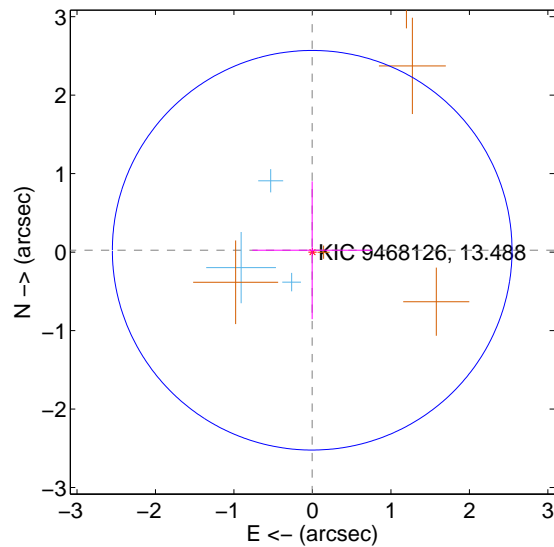
Supplemental centroid analysis for 009468126-07. Kepler magnitude: 13.49. Transit SNR 9.40

There are 3 quarters with good PRF difference image offsets

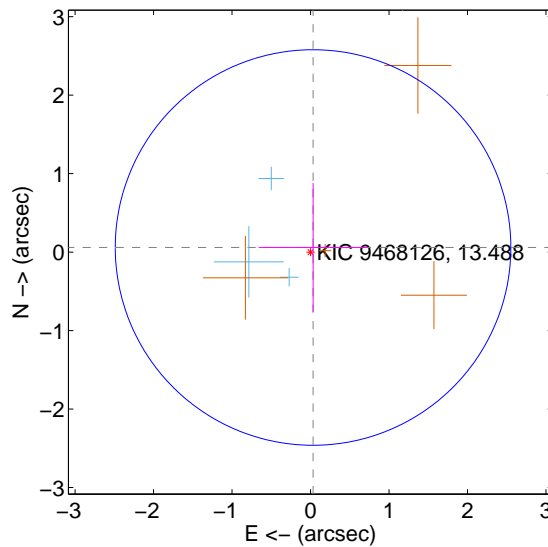
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.024 ± 0.849	0.03	0.003 ± 0.764	0.024 ± 0.878
PRF-fit source offset from KIC position	0.067 ± 0.840	0.08	-0.032 ± 0.692	0.058 ± 0.822
photometric centroid source offset	0.74 ± 0.46	1.63	0.41 ± 0.37	-0.62 ± 0.49

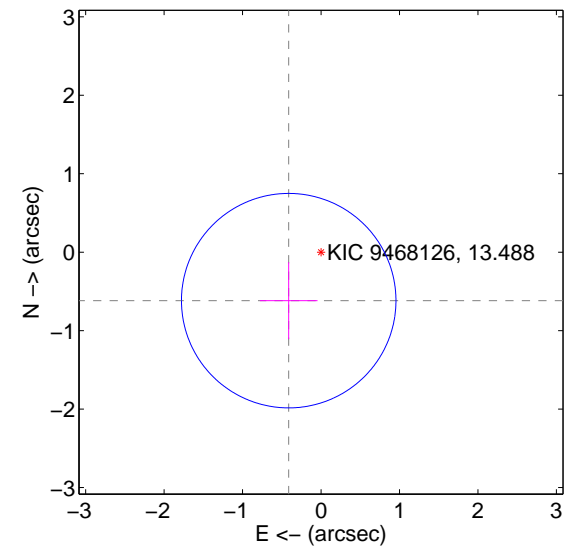
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

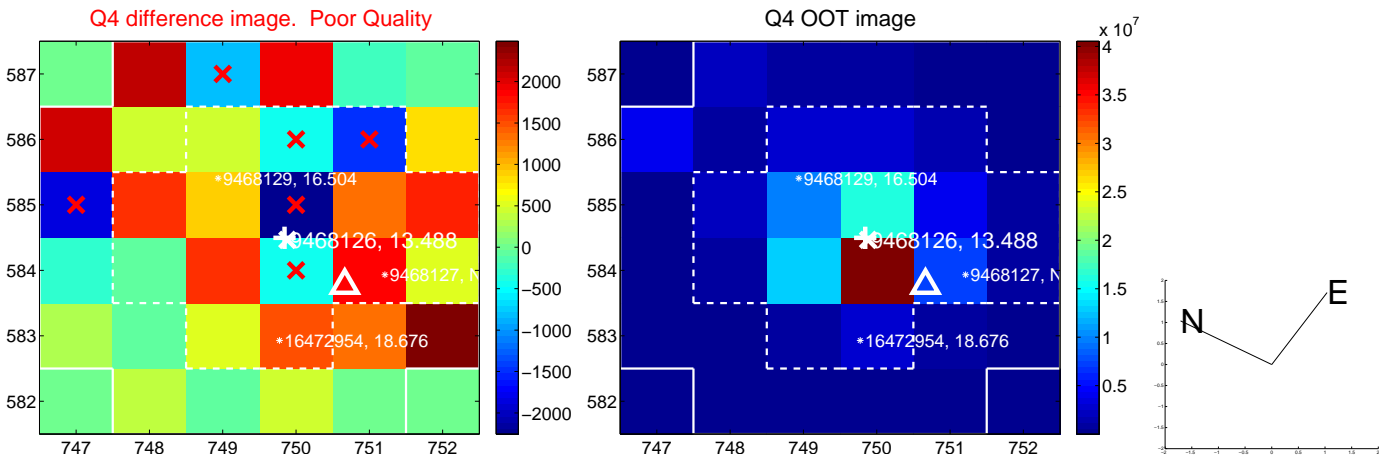
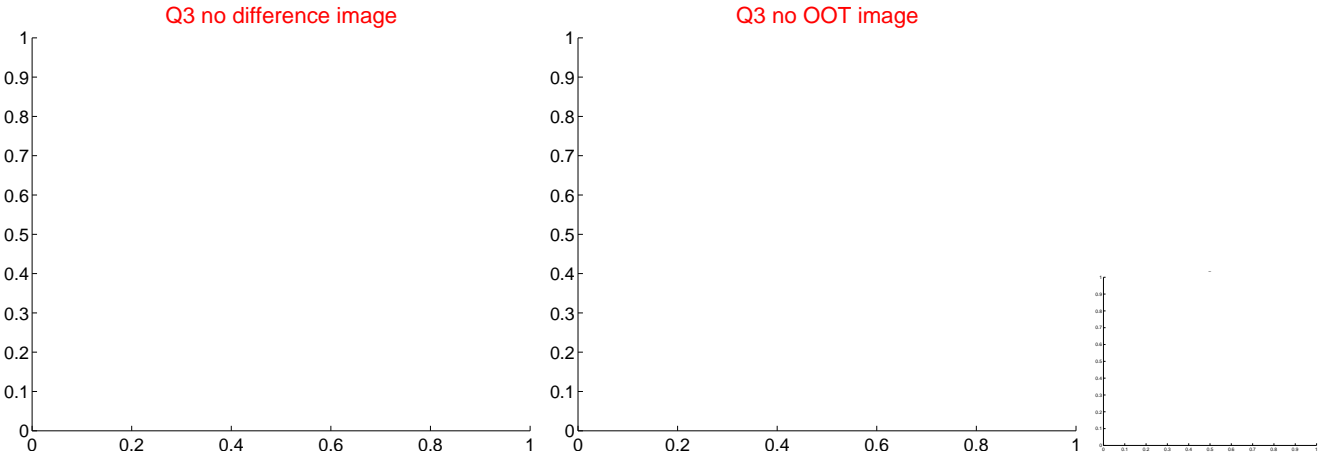
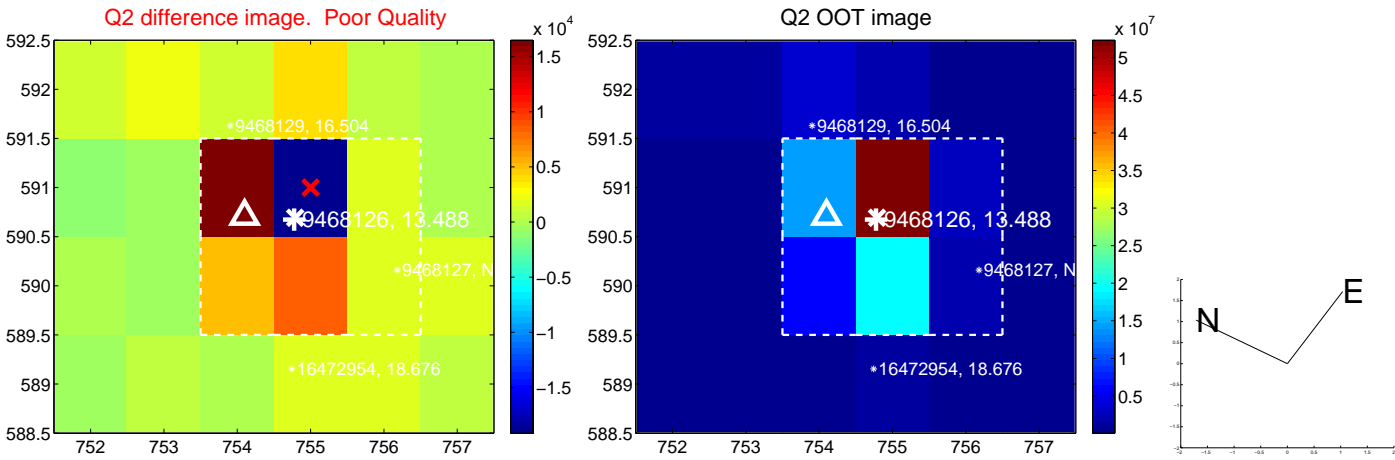
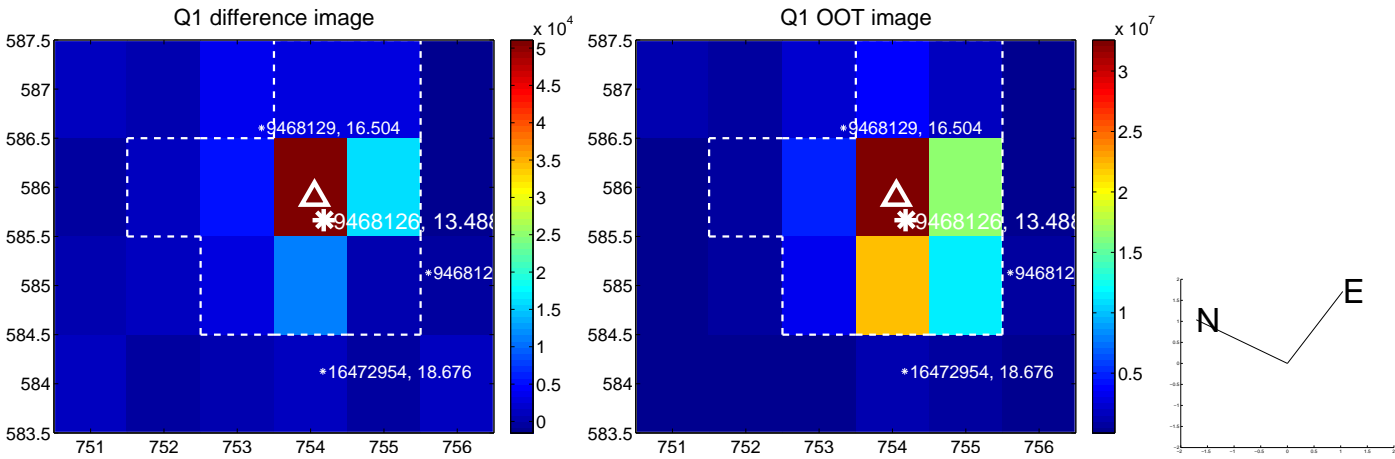


offset from photometric centroids

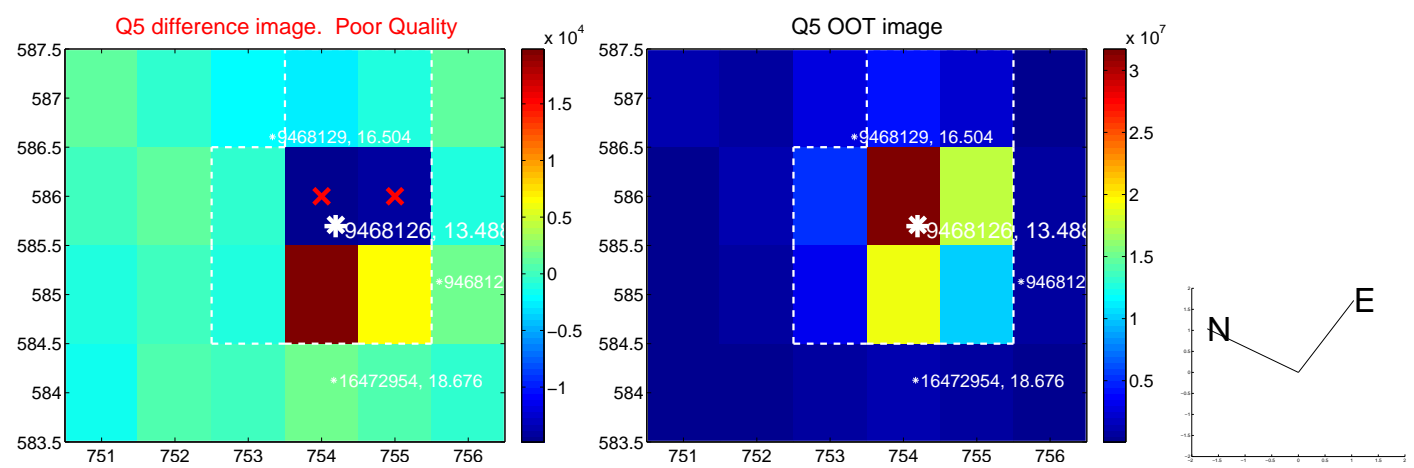


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

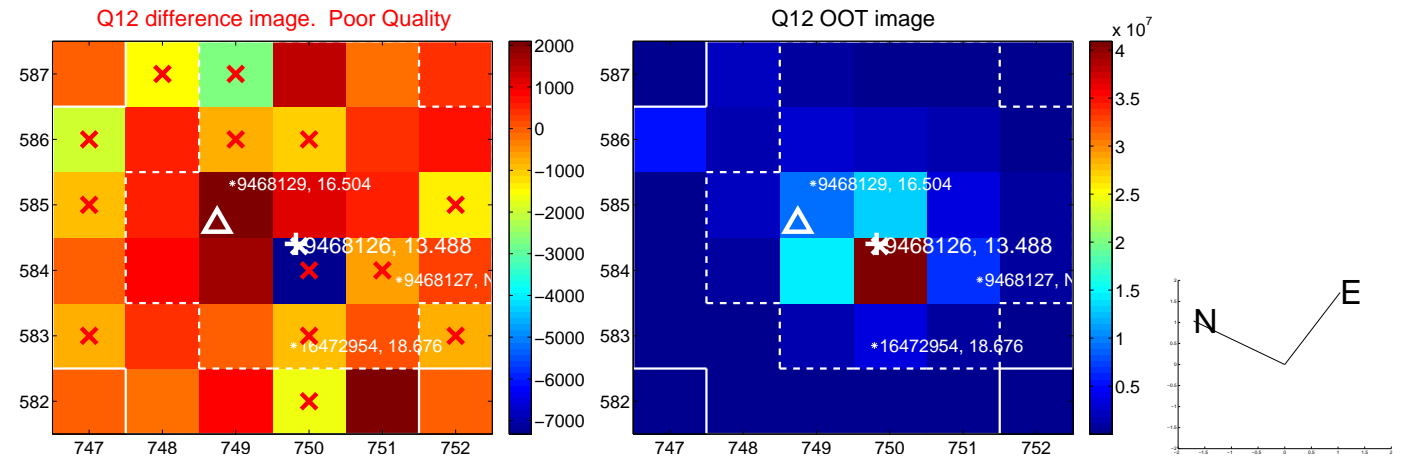
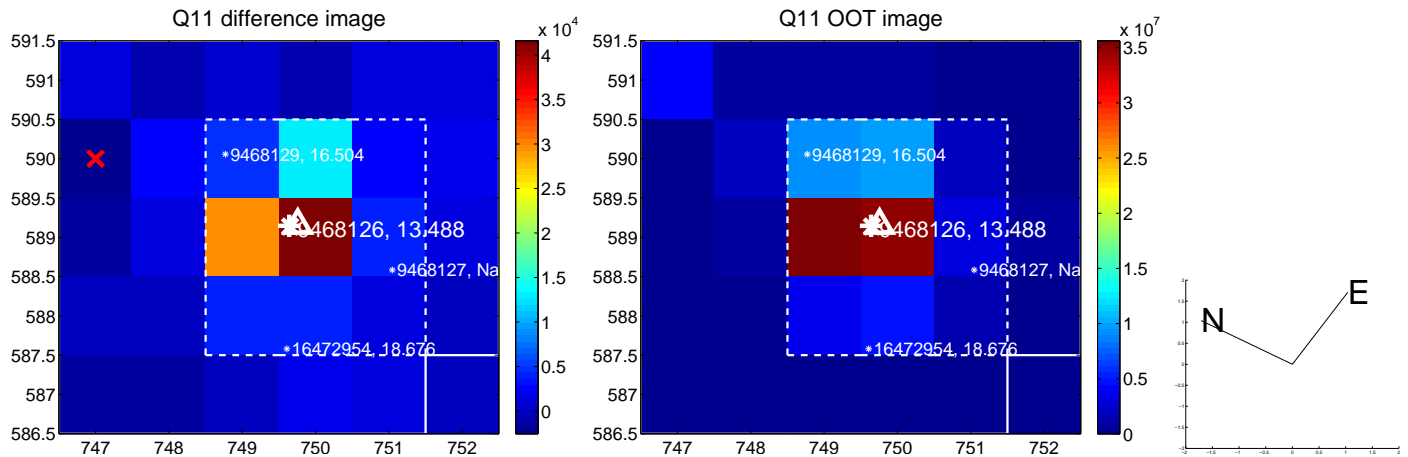
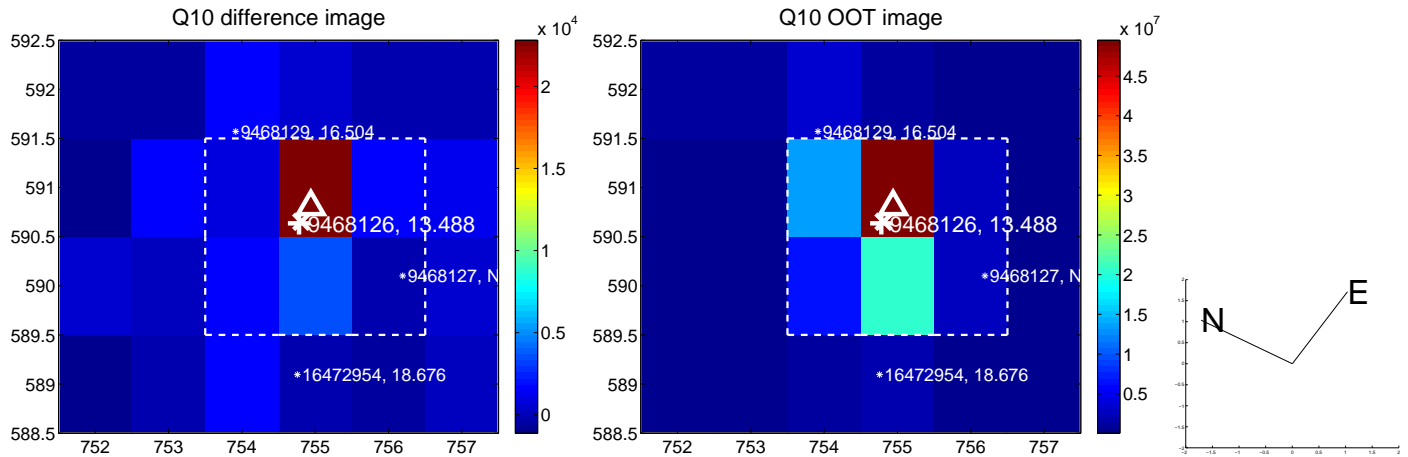
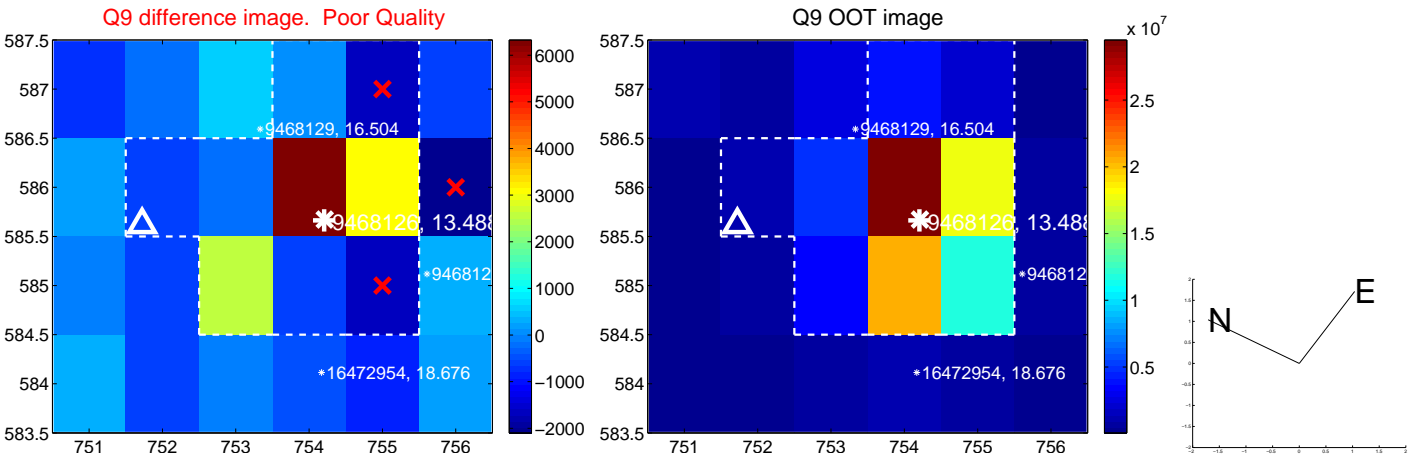
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



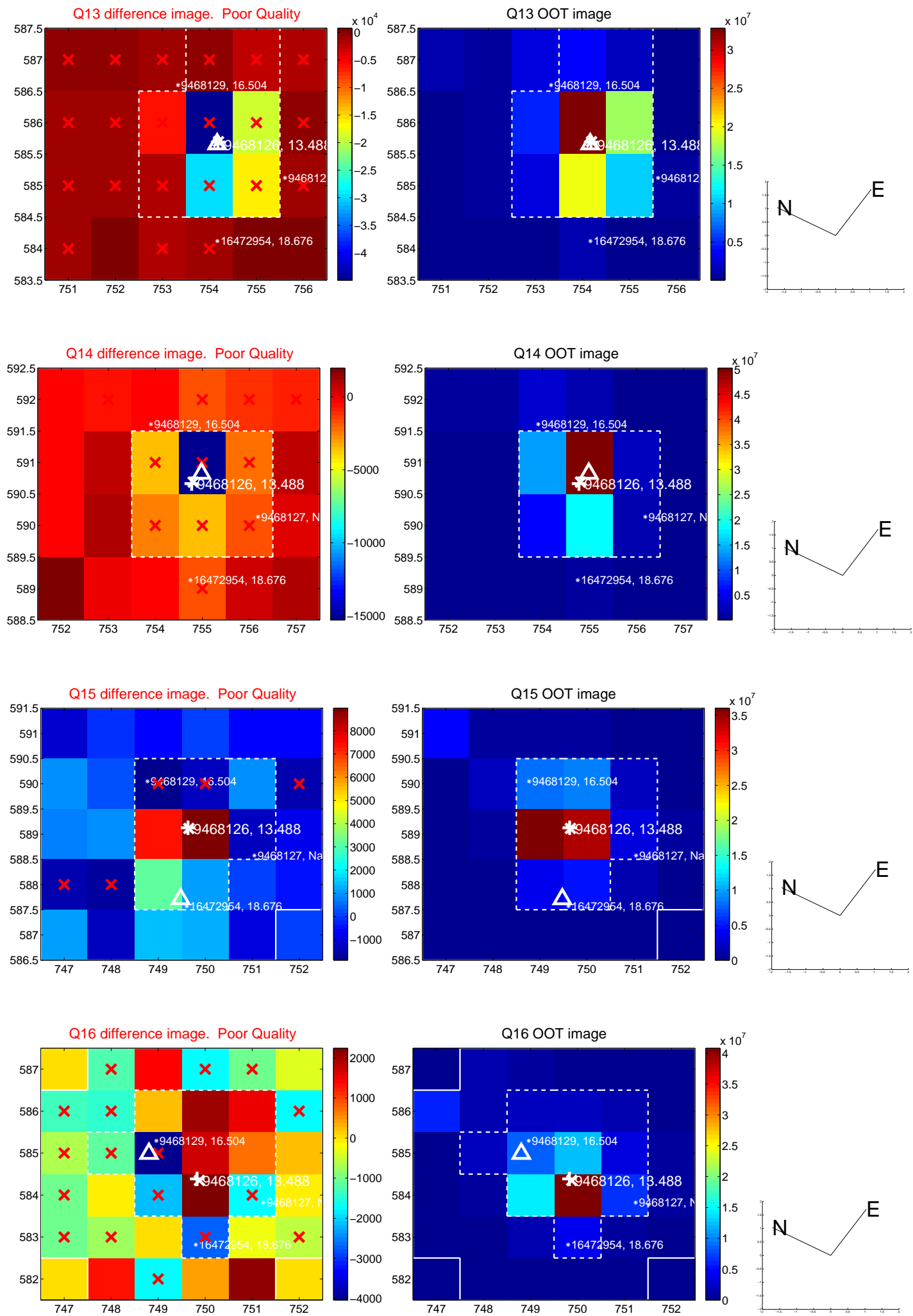
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



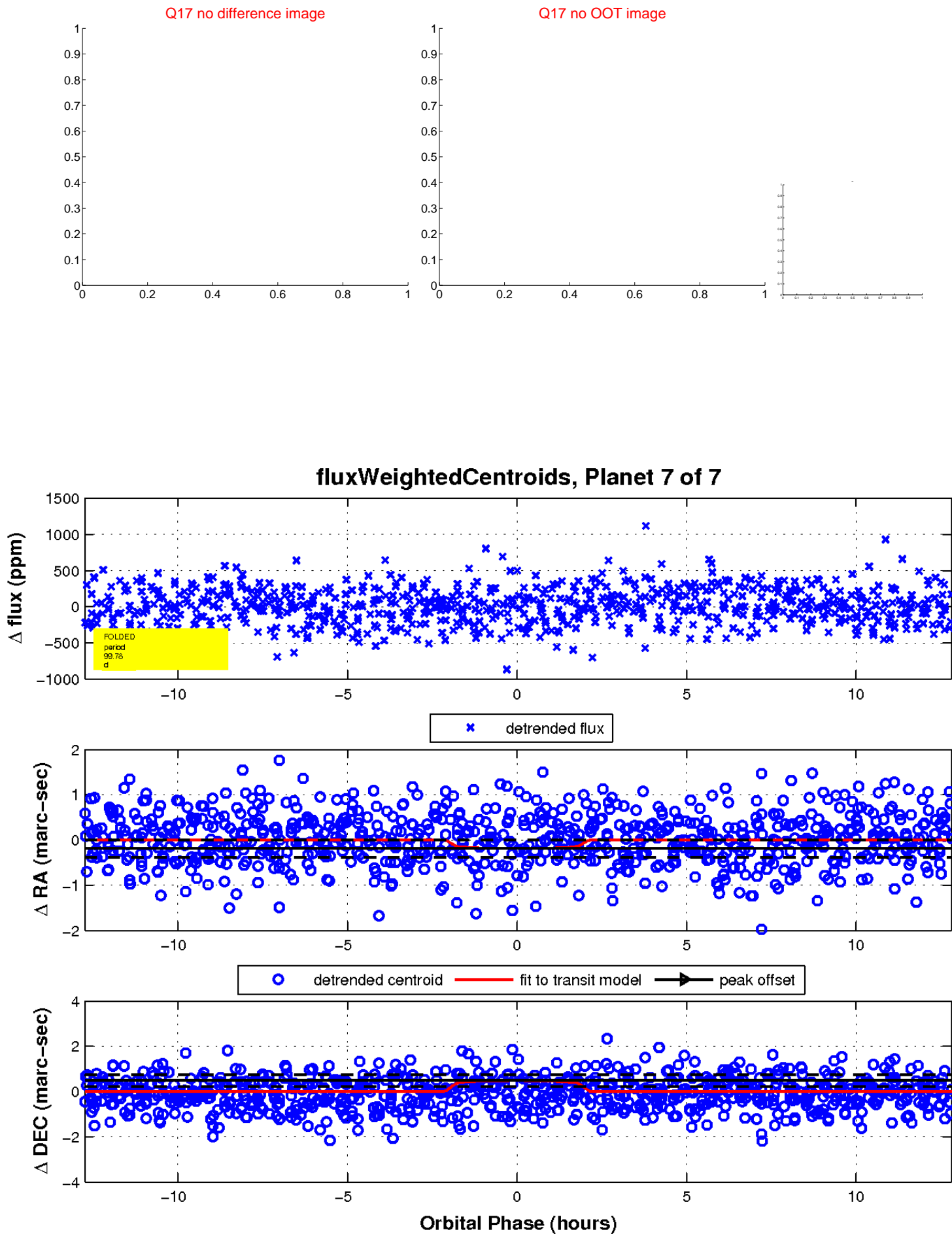
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

