

KIC 010982373

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})
010982373-01	OBS	7395.01	2.002769	132.075962	44.2	1.493	12.8	17.4	3.41	9453	2.62	42453.49
010982373-02	OBS	No	2.002816	132.745453	17.8	4.363	11.5	8.7	3.41	9453	1.65	42452.15
010982373-03	OBS	No	2.001713	132.845395	0.0	11.833	10.4	0.0	3.41	9453	0.01	42483.35
010982373-04	OBS	No	153.595656	252.452623	100.8	7.592	16.5	6.2	3.41	9453	3.59	130.29
010982373-05	OBS	No	1.001650	132.200146	59.6	0.934	15.7	8.9	3.41	9453	3.00	106938.28
010982373-06	OBS	No	1.001505	132.197002	30.5	1.174	15.2	7.8	3.41	9453	2.35	106958.89
010982373-07	OBS	No	2.007581	131.987777	81.2	3.500	12.4	-1.0	3.41	9453	3.14	42317.84

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010982373-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_ZUMA_TRACKER—SWEET_NTL—CENT_FEW_DIFFS
010982373-02	OBS	FP	0.00	1	0	1	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—HALO_GHOST
010982373-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
010982373-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—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
010982373-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
010982373-06	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_UNRESOLVED_OFFSET
010982373-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—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 010982373-01

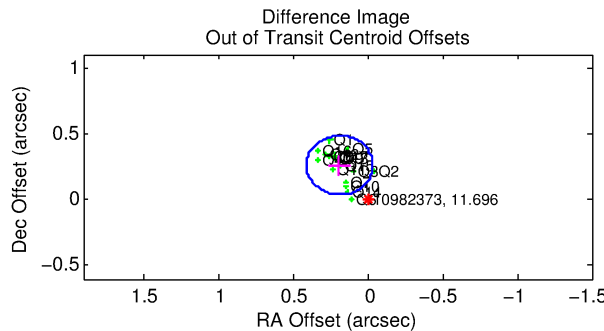
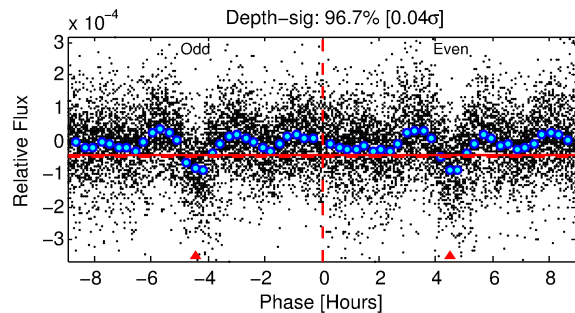
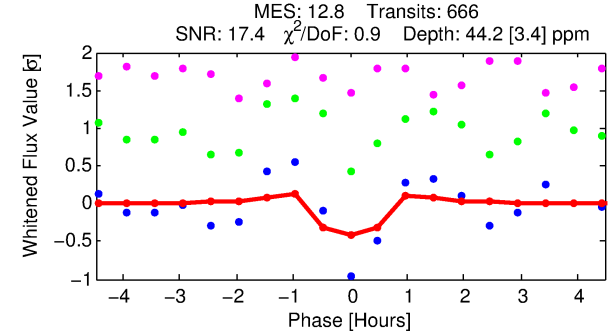
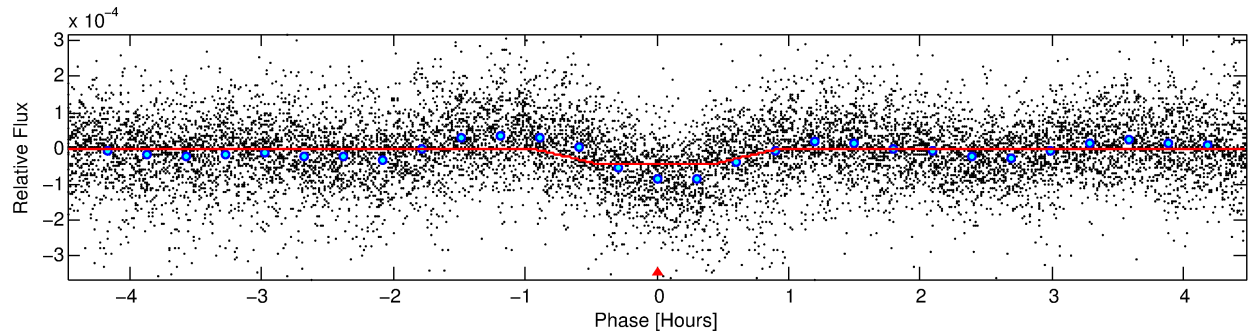
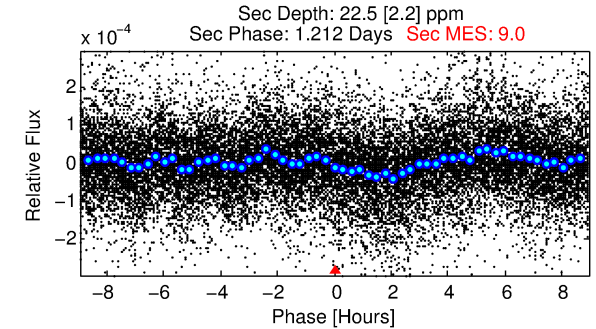
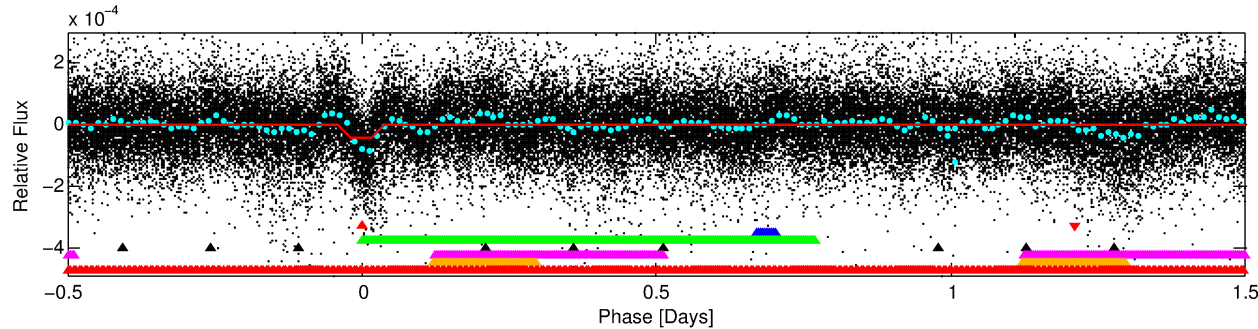
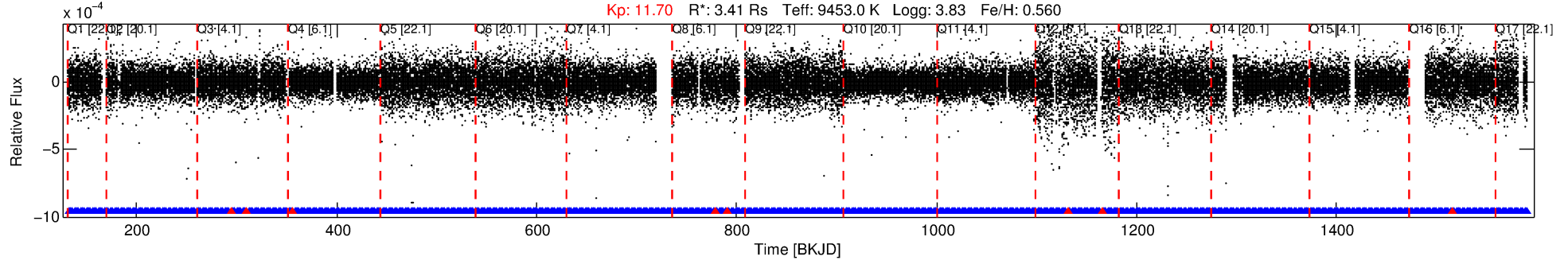
No Significant Match Found

DV One-Page Summary

KIC: 10982373 Candidate: 1 of 7 Period: 2.003 d

KOI: K07395 Corr: No Ephemeris Match

Kp: 11.70 R*: 3.41 Rs Teff: 9453.0 K Logg: 3.83 Fe/H: 0.560



DV Fit Results:

Period = 2.00277 [0.00001] d
Epoch = 132.0760 [0.0011] BKJD
Rp/R* = 0.0070 [0.0009]
a/R* = 4.68 [4.36]
b = 0.90 [0.20]
Seff = 42453.49 [20157.49]
Teq = 3660 [434] K
Rp = 2.62 [0.87] Re
a = 0.0442 [0.0113] AU
Ag = 3.54 [1.66] [1.53σ]
Teffp = 7765 [798] K [4.52σ]

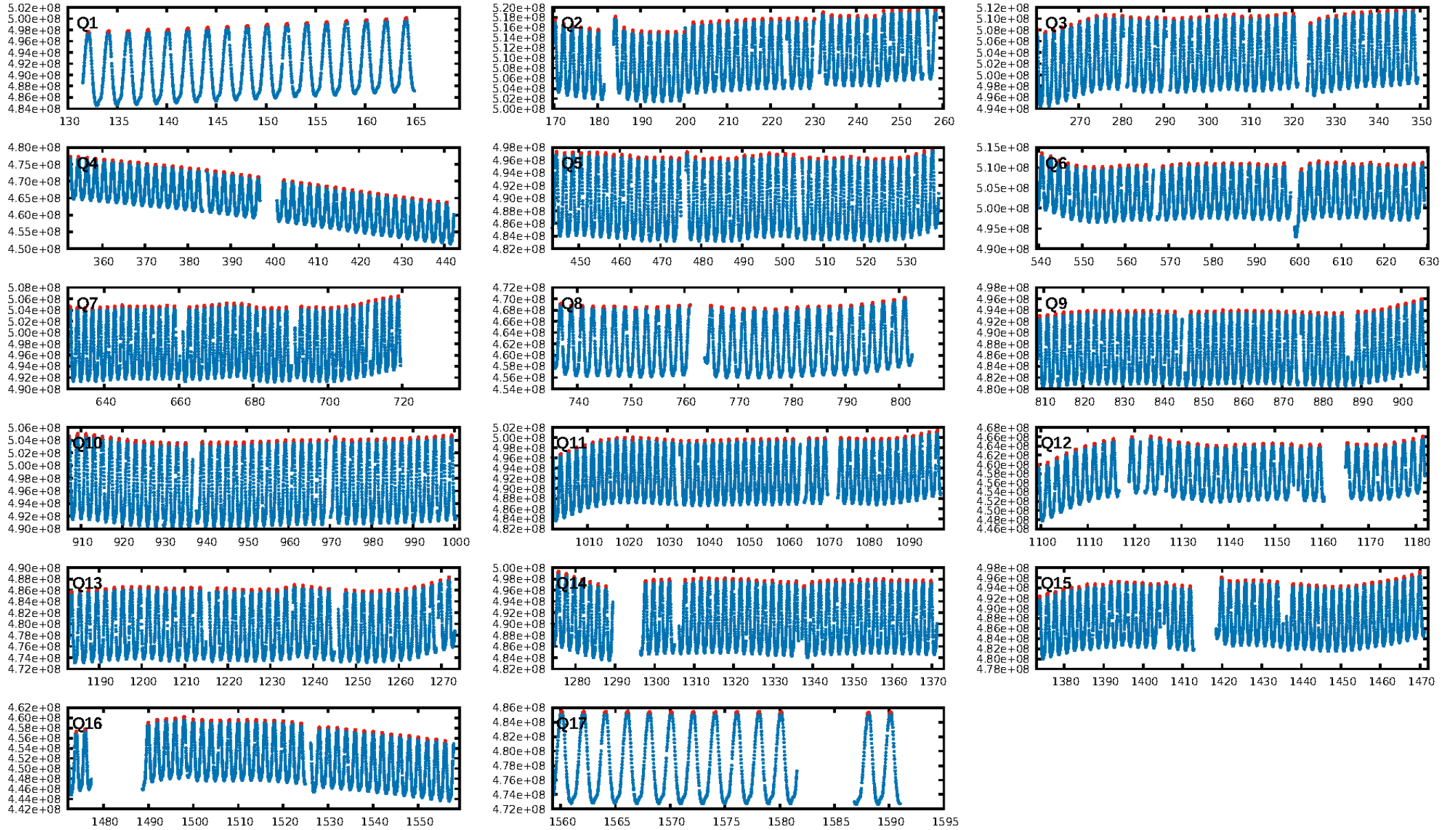
DV Diagnostic Results:

ShortPeriod-sig: 0.2% [0.00σ]
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.99 [628/636]
GhostDiagnostic-chr: 1.59
Centroid-sig: 0.0%
Centroid-so: 1.371 arcsec [3.36σ]
OotOffset-rm: 0.321 arcsec [4.33σ]
KicOffset-rm: 0.250 arcsec [3.58σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.00 [0/17]
DiffImageOverlap-fno: 0.00 [0/17]

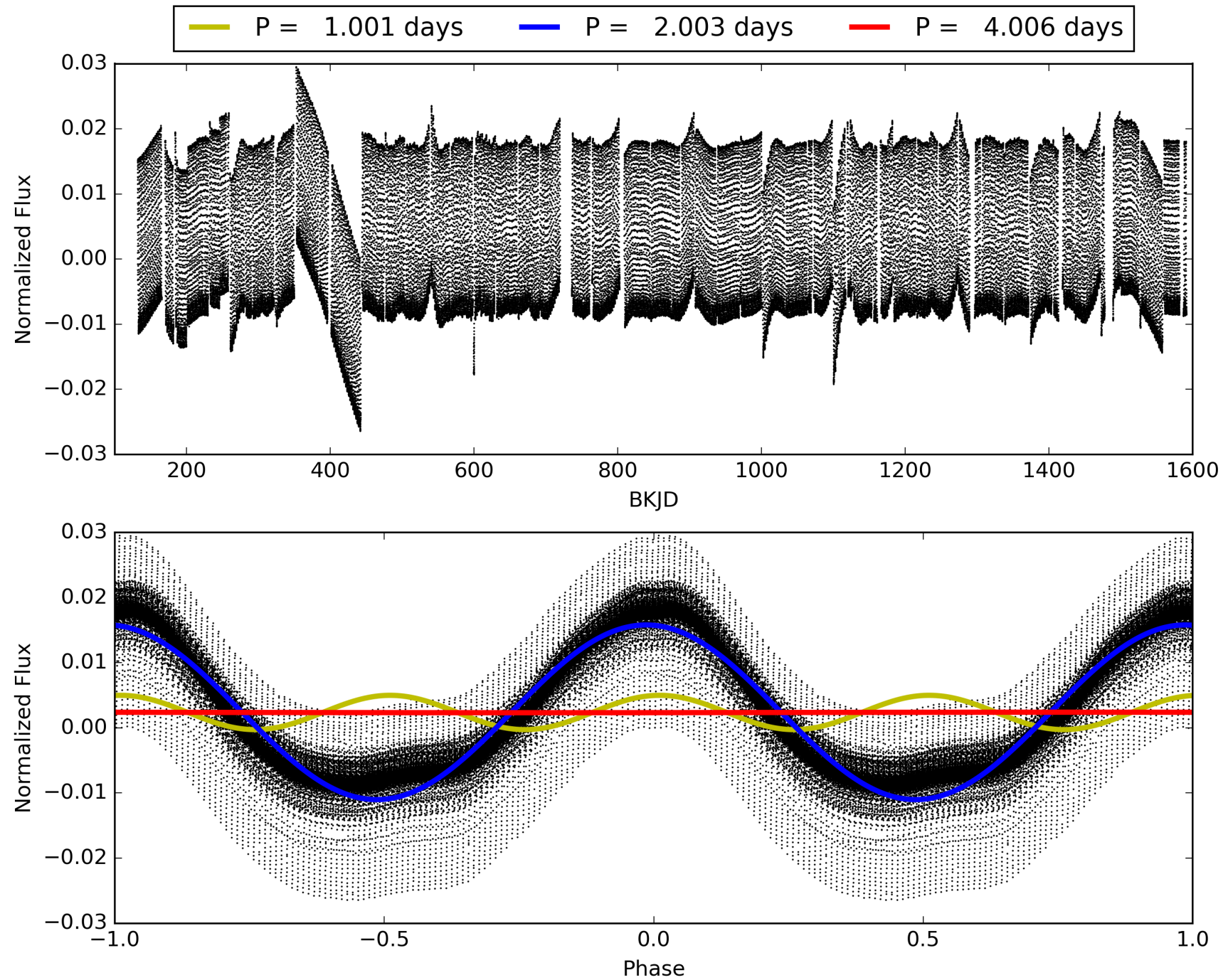
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:32:53 Z

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

TCE 010982373-01, PDC Light Curves

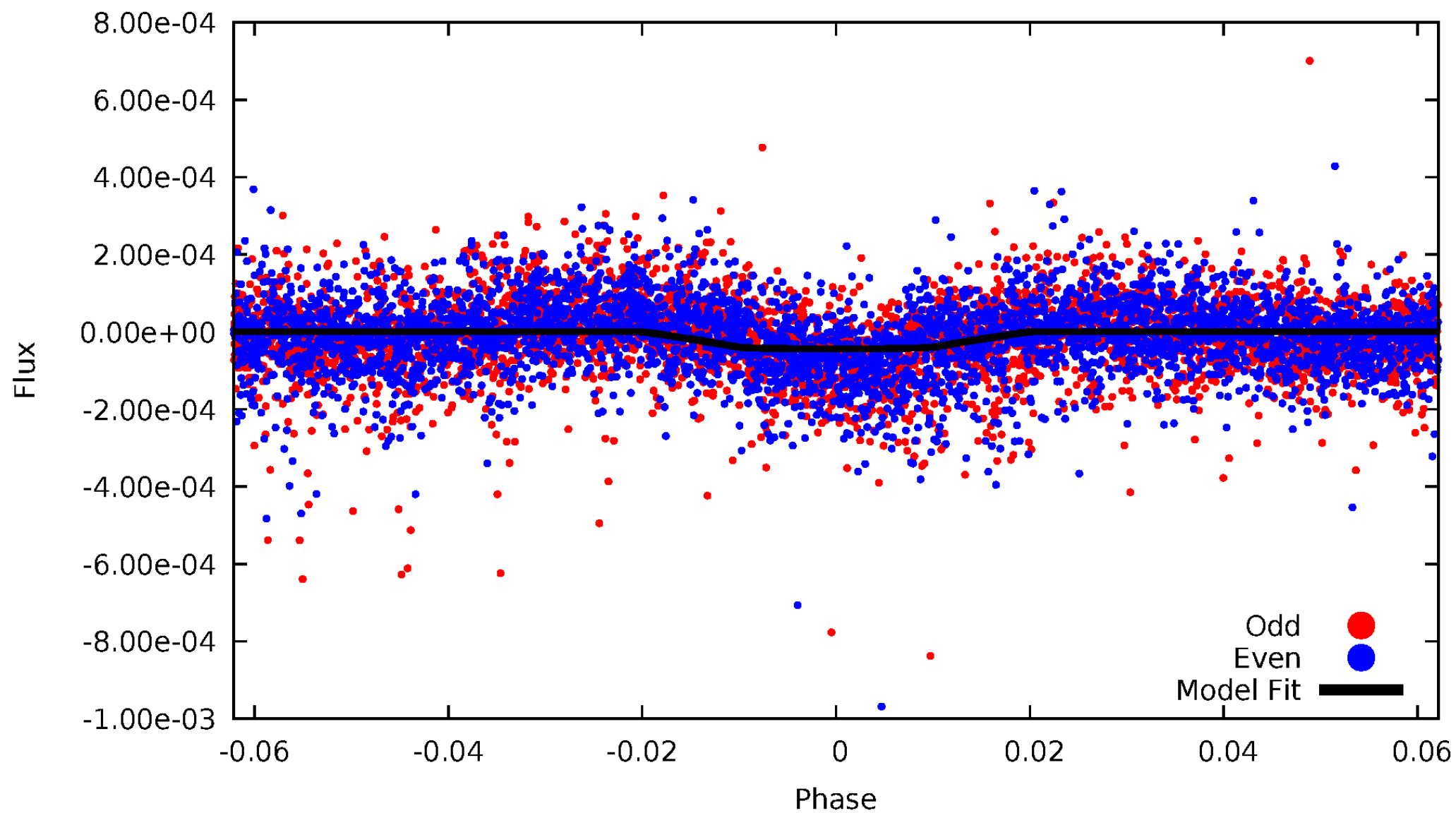


TCE 010982373-01



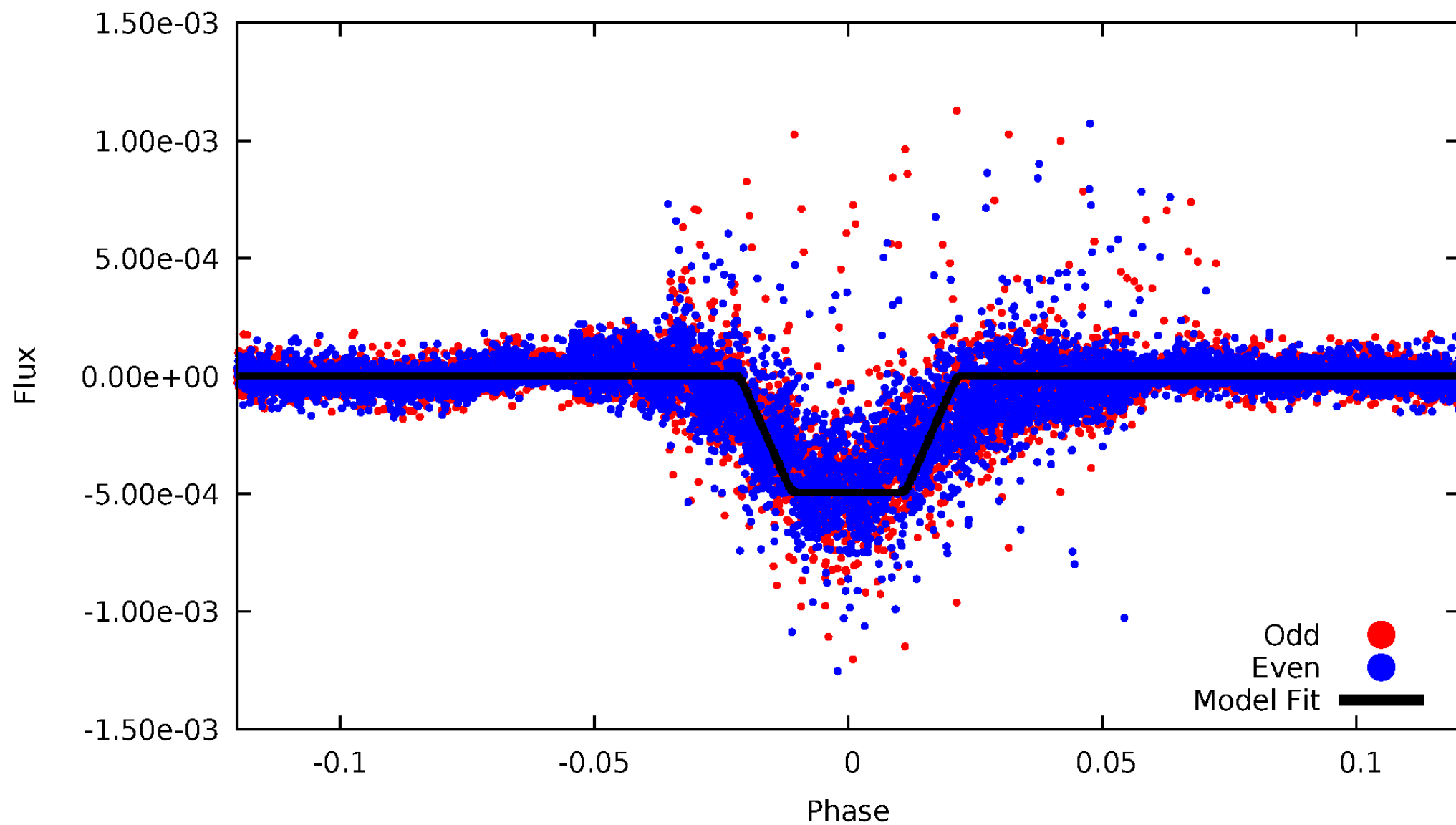
DV Odd/Even

TCE 010982373-01

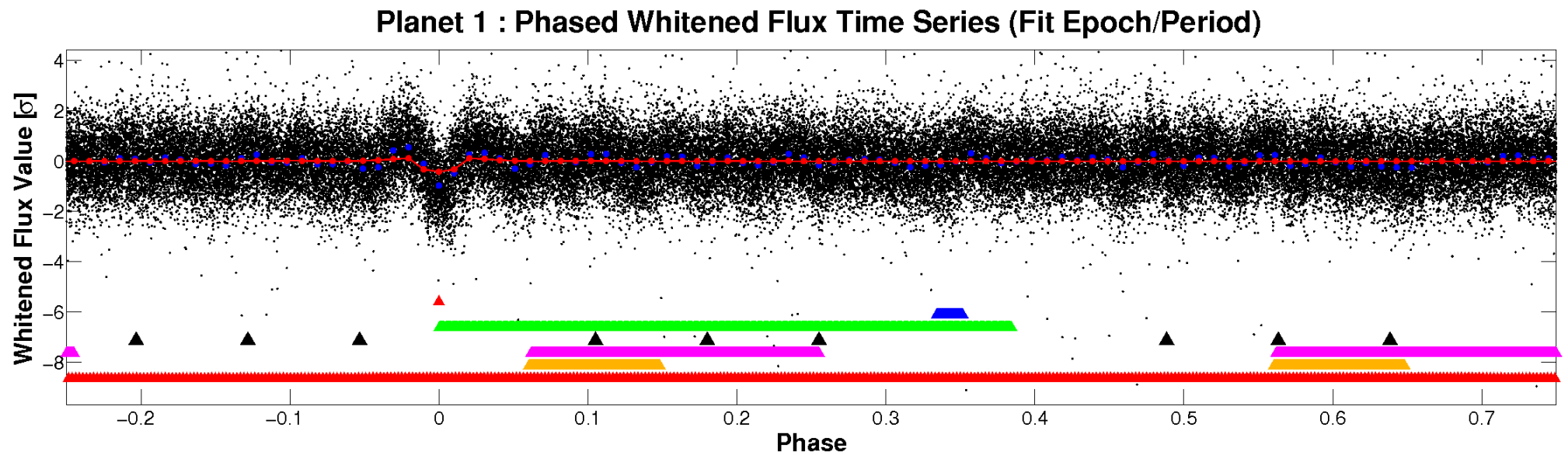
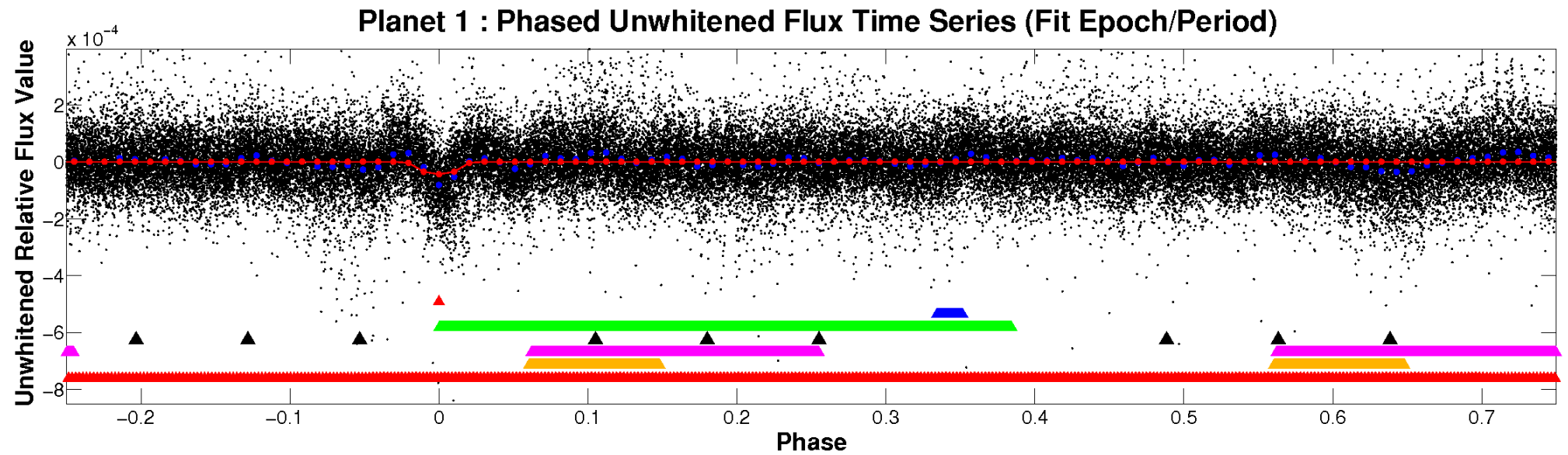


ALT Odd/Even

TCE 010982373-01

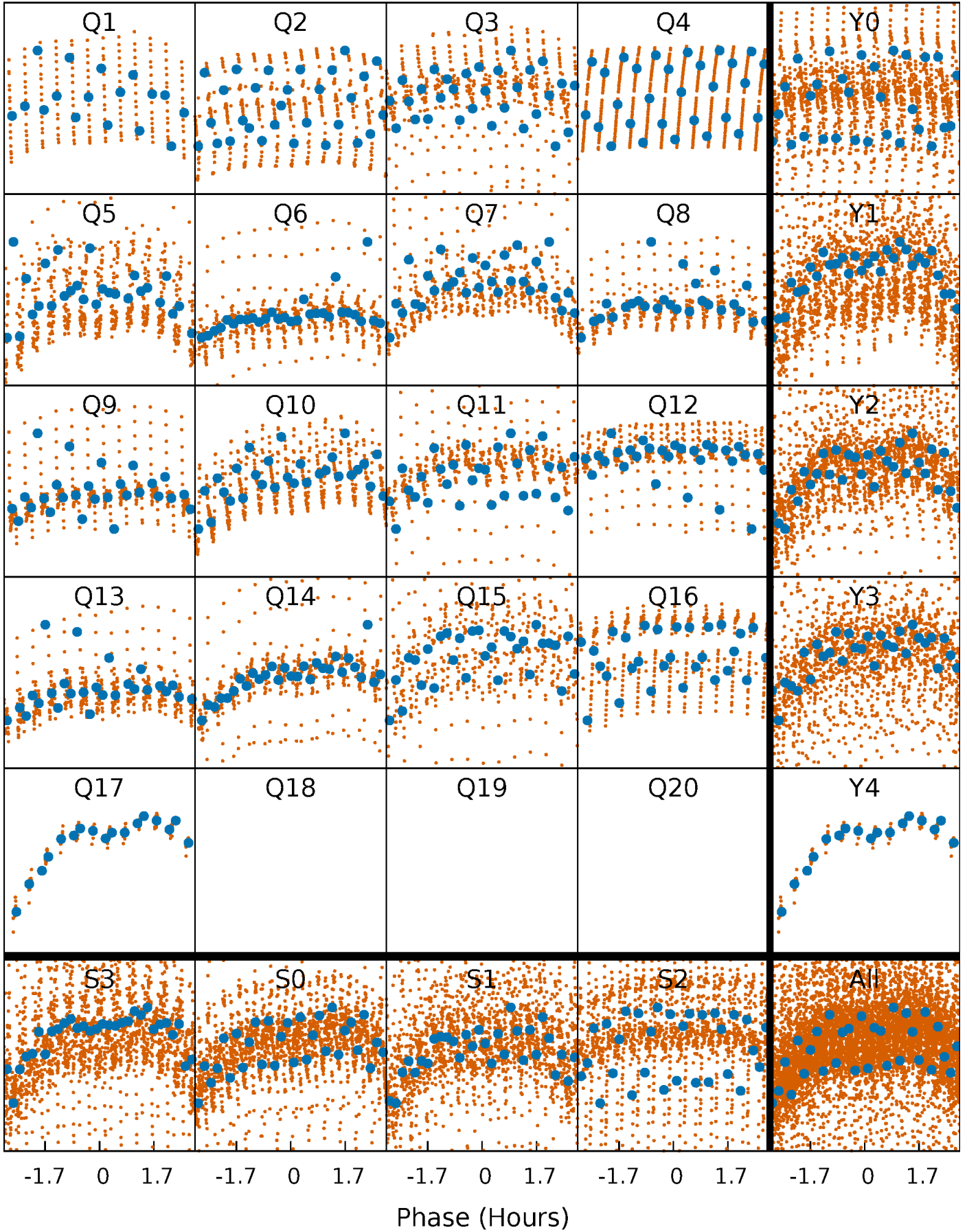


Non-Whitened Vs. Whitened Light Curve



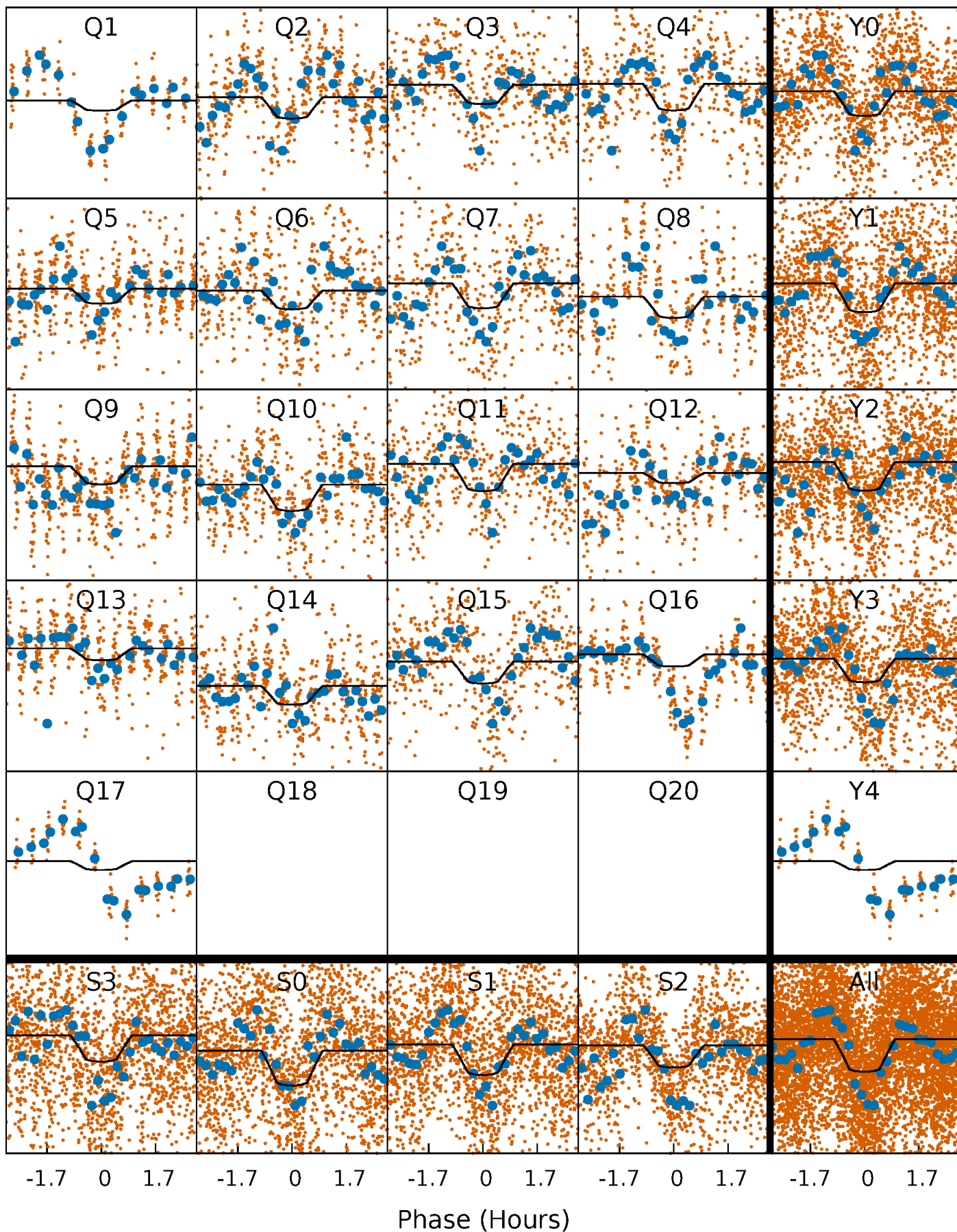
PDC Quarter-Phased Transit Curves

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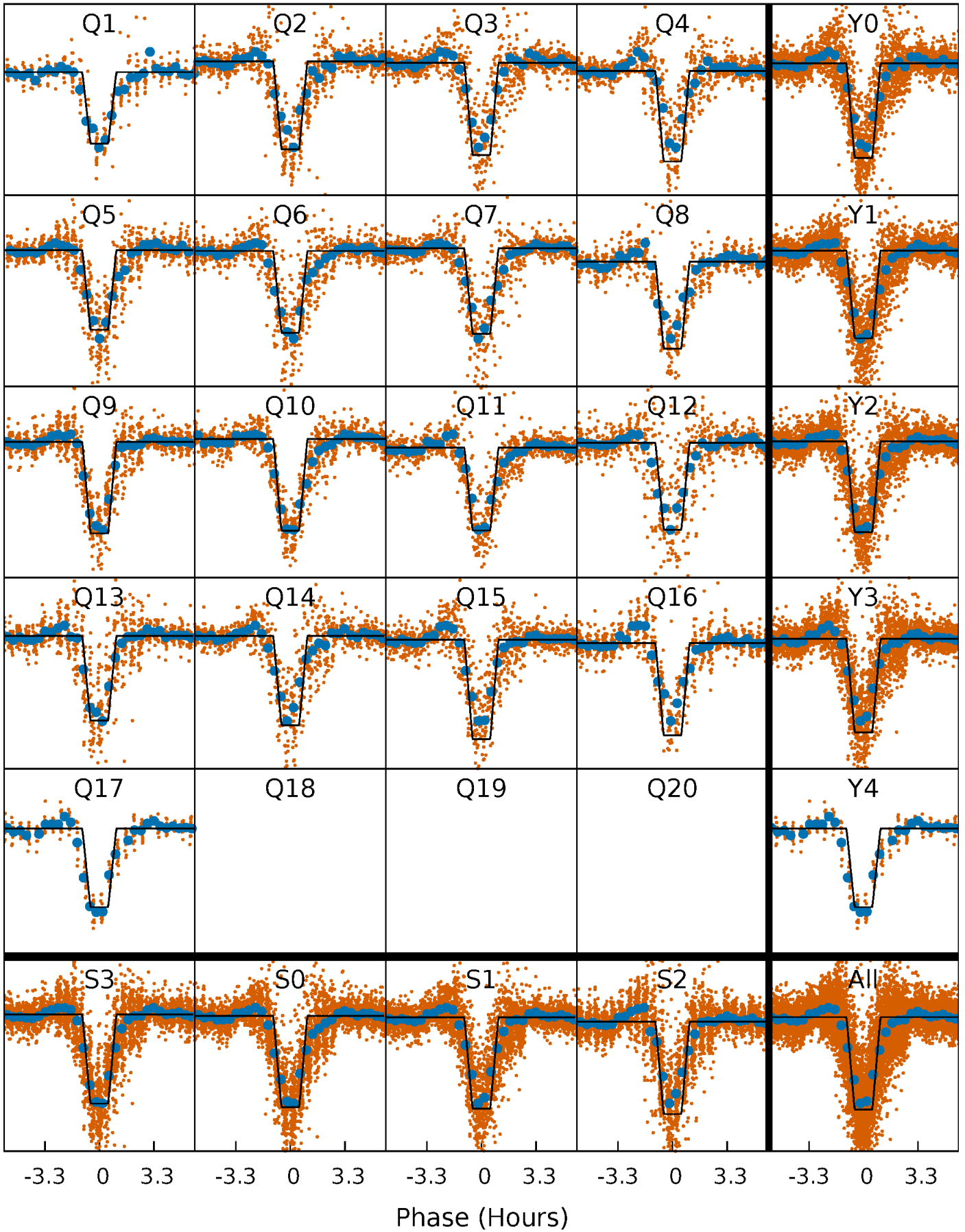
DV Quarter-Phased Transit Curves

TCE 010982373-01 P= 2.002769 Days $T_0=132.075962$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

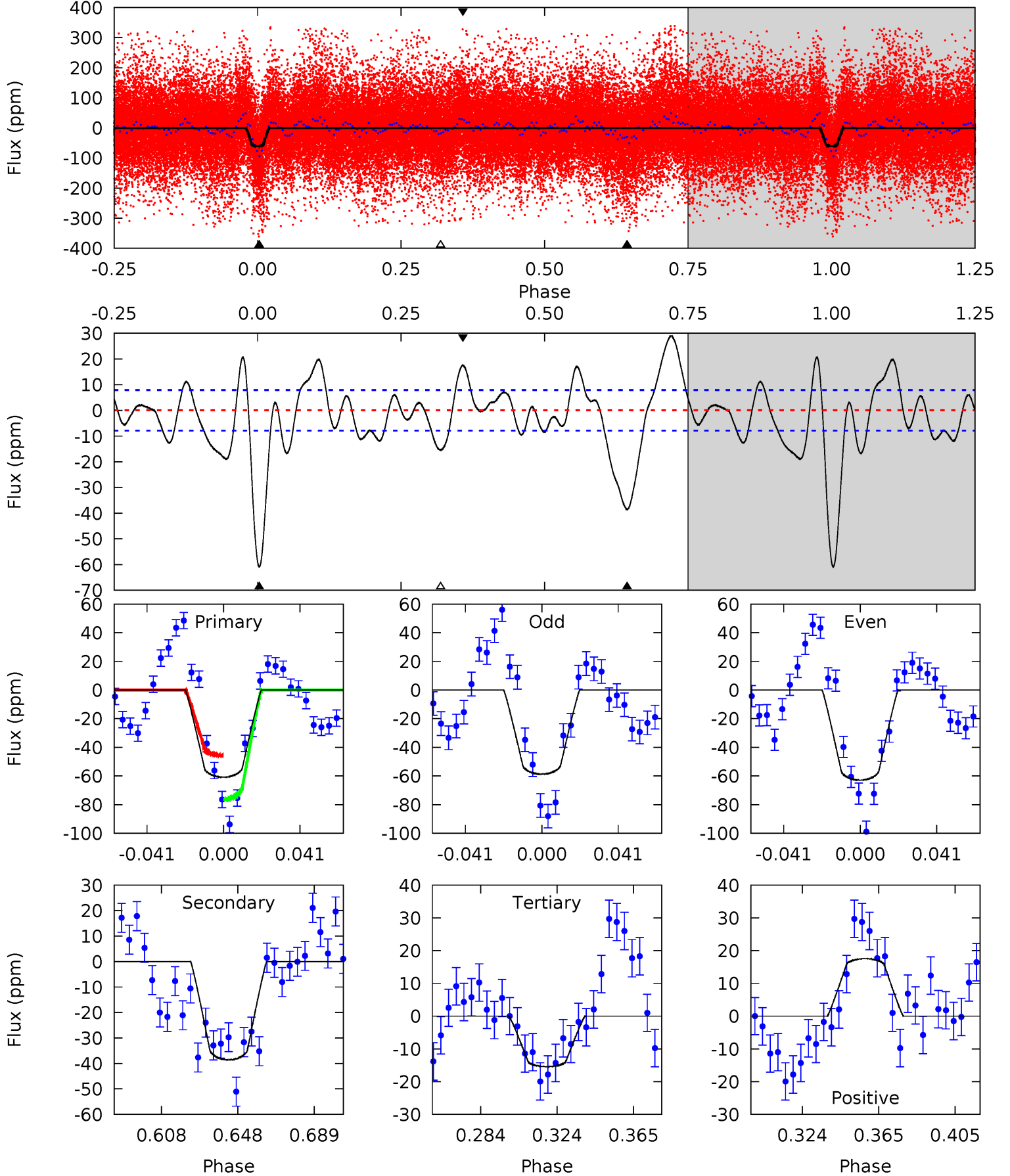
TCE 010982373-01 P= 2.002817 Days $T_0=132.068301$ (BKJD)



DV Model-Shift Uniqueness Test

010982373-01, P = 2.002769 Days, E = 130.073193 Days

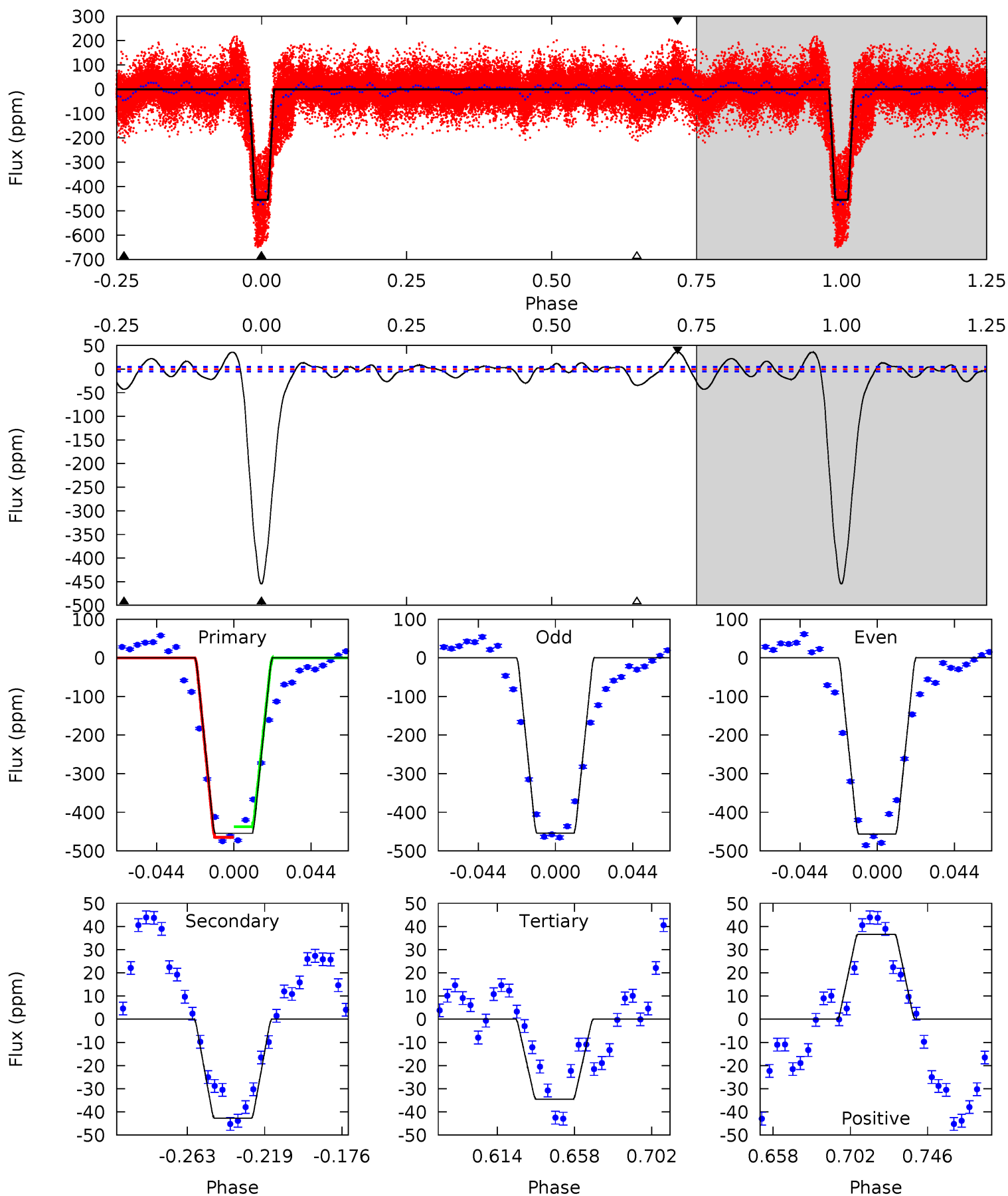
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
36.5	23.2	9.27	10.5	4.75	2.05	5.98	27.3	26.0	13.9	12.6	1.27	1.15	0.32	9.15



Alt Model-Shift Uniqueness Test

010982373-01, P = 2.002817 Days, E = 130.065484 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
445.2	41.8	33.9	35.8	4.73	2.02	13.6	411.4	409.4	7.98	6.01	1.18	0.97	0.07	0



Stellar Parameters For KIC 010982373

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	9453^{+399}_{-699}	$3.832^{+0.185}_{-0.203}$	$0.560^{+0.050}_{-0.200}$	$3.407^{+1.033}_{-0.845}$	$2.872^{+0.281}_{-0.422}$	$0.102^{+0.103}_{-0.051}$
	+4%/-7%	+5%/-5%	+9%/-36%	+30%/-25%	+10%/-15%	+101%/-50%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 010982373-01 / KOI 7395.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-39 ± 2	$2.60^{+0.56}_{-0.44}$	5092^{+452}_{-464}	8452^{+983}_{-809}	$6.101^{+2.819}_{-1.972}$
Alt.	-43 ± 1	$8.30^{+1.27}_{-1.17}$	5097^{+477}_{-500}	4310^{+231}_{-319}	$0.660^{+0.220}_{-0.164}$

T_{max} = Theoretical Maximum Planetary Temperature

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

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

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

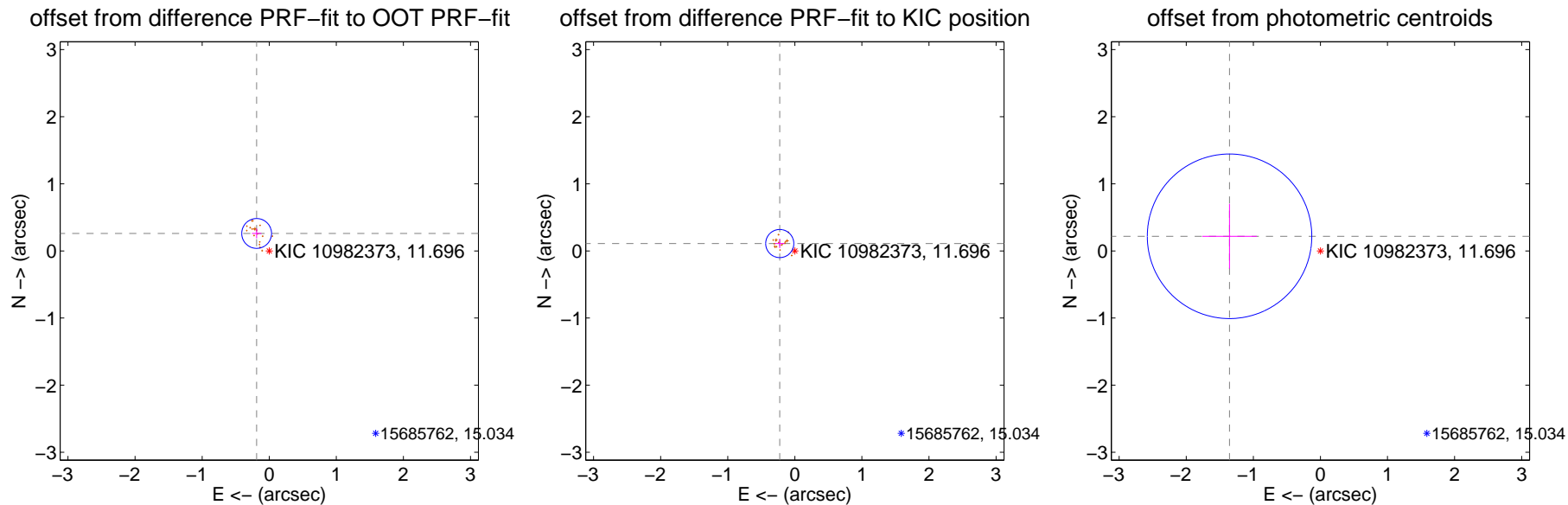
DV Centroid Data

Supplemental centroid analysis for 010982373-01. **Kepler magnitude: 11.70.** Transit SNR 17.41

There are 0 quarters with good PRF difference image offsets

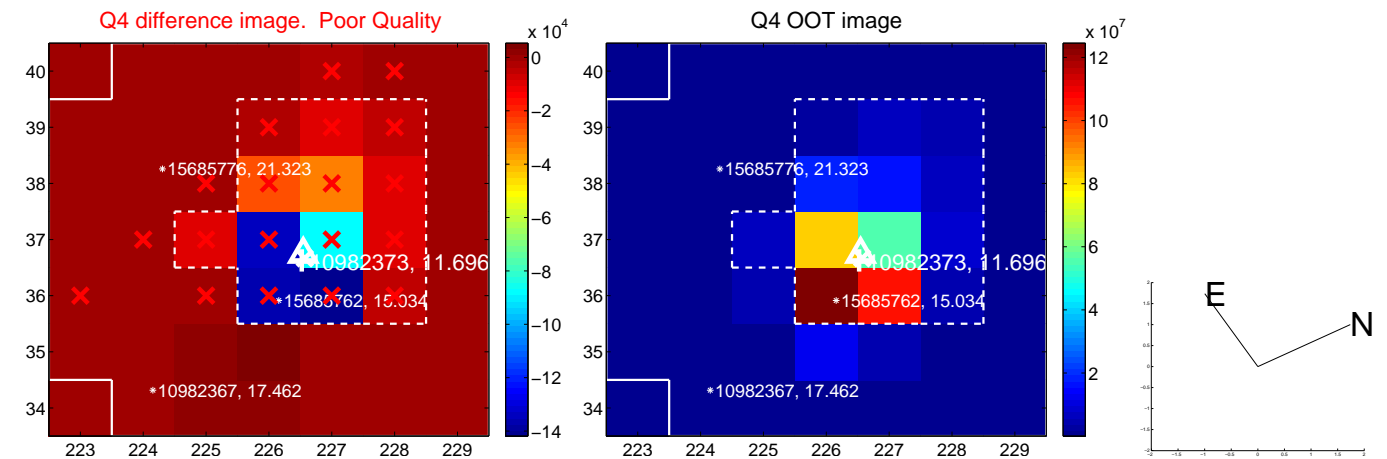
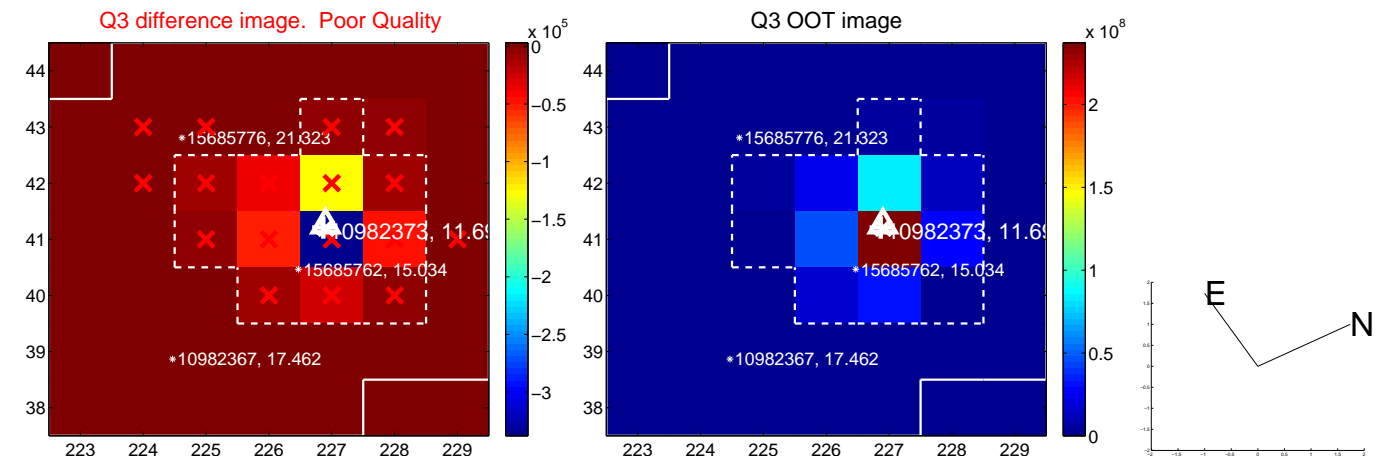
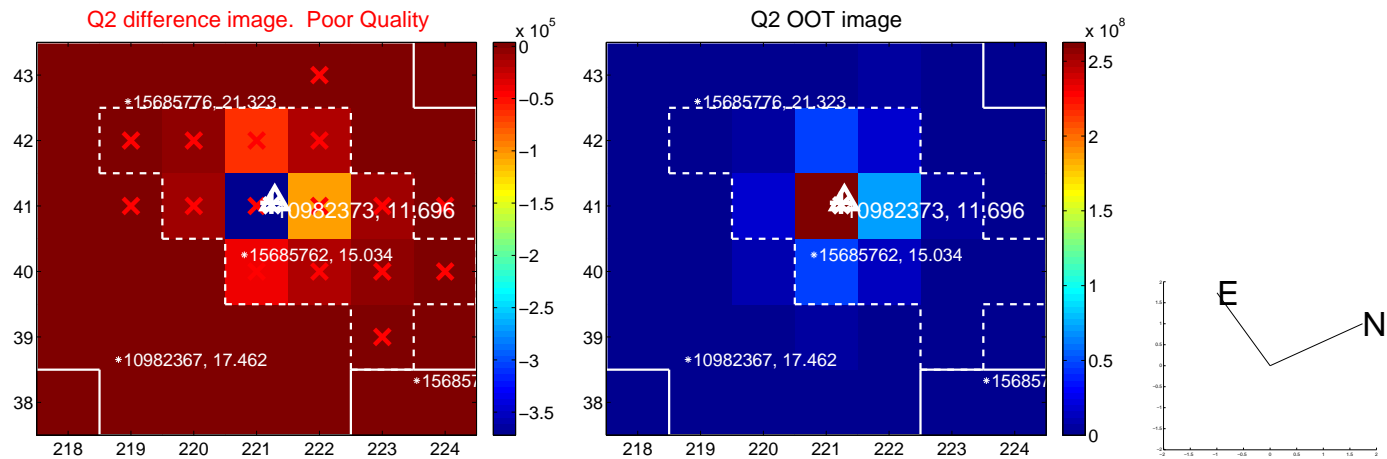
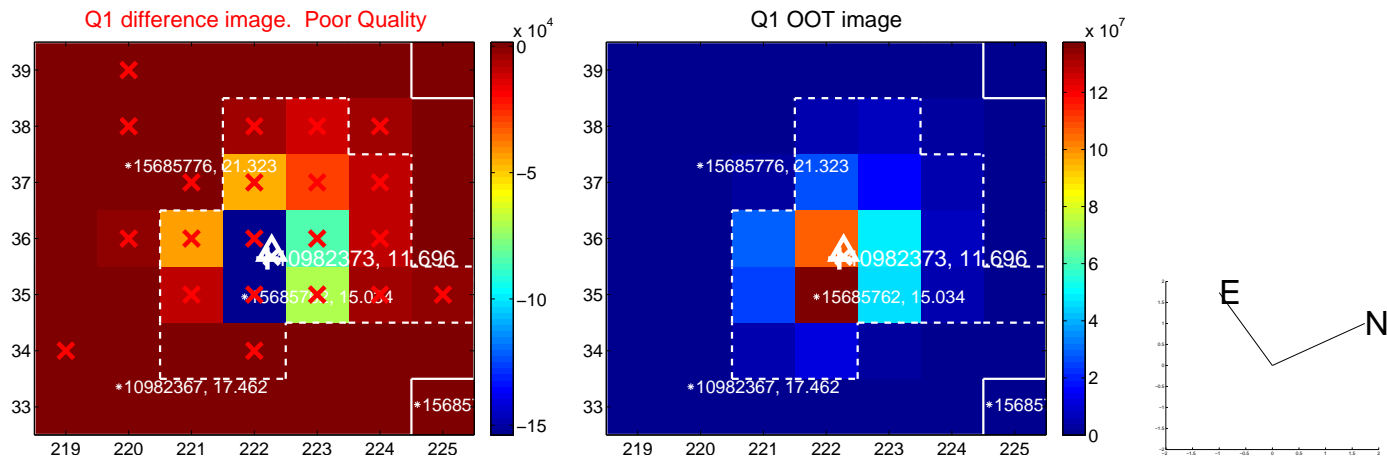
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.321 ± 0.074	4.33	0.188 ± 0.070	0.260 ± 0.073
PRF-fit source offset from KIC position	0.250 ± 0.070	3.58	0.225 ± 0.070	0.110 ± 0.070
photometric centroid source offset	1.37 ± 0.41	3.36	1.35 ± 0.41	0.22 ± 0.48

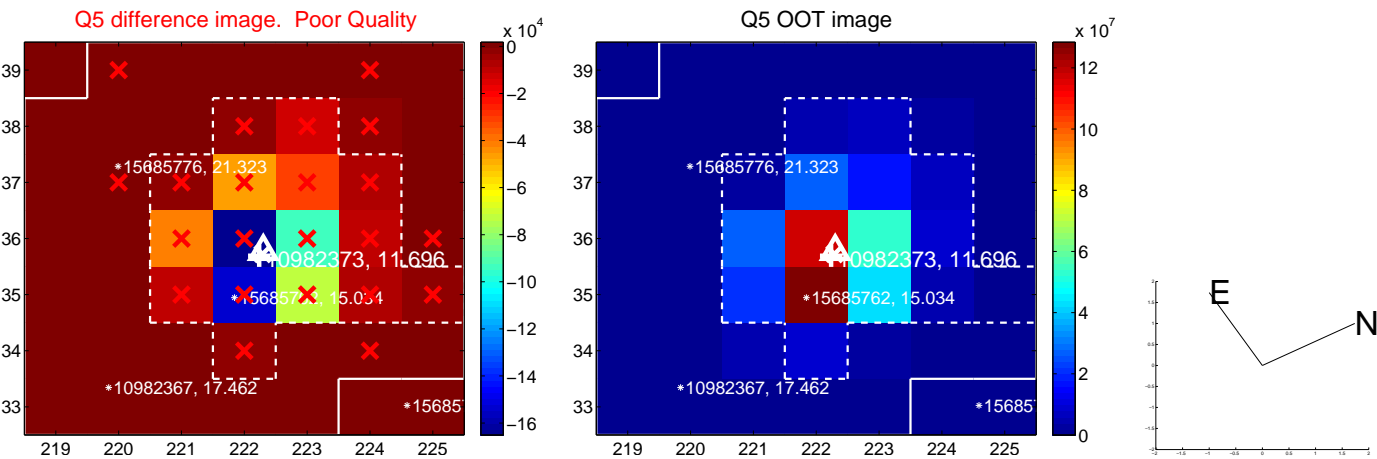


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

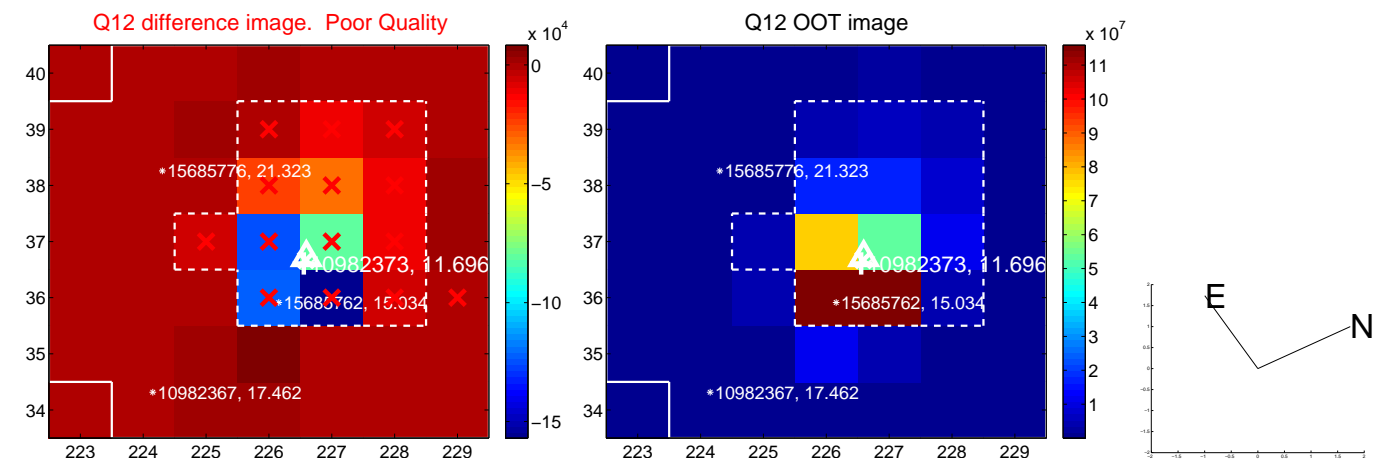
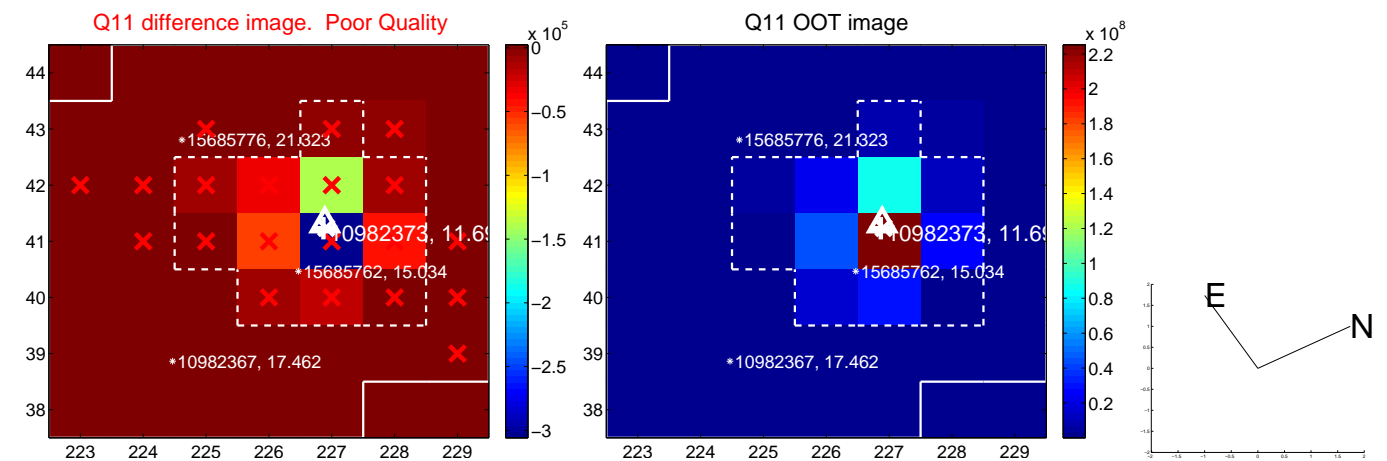
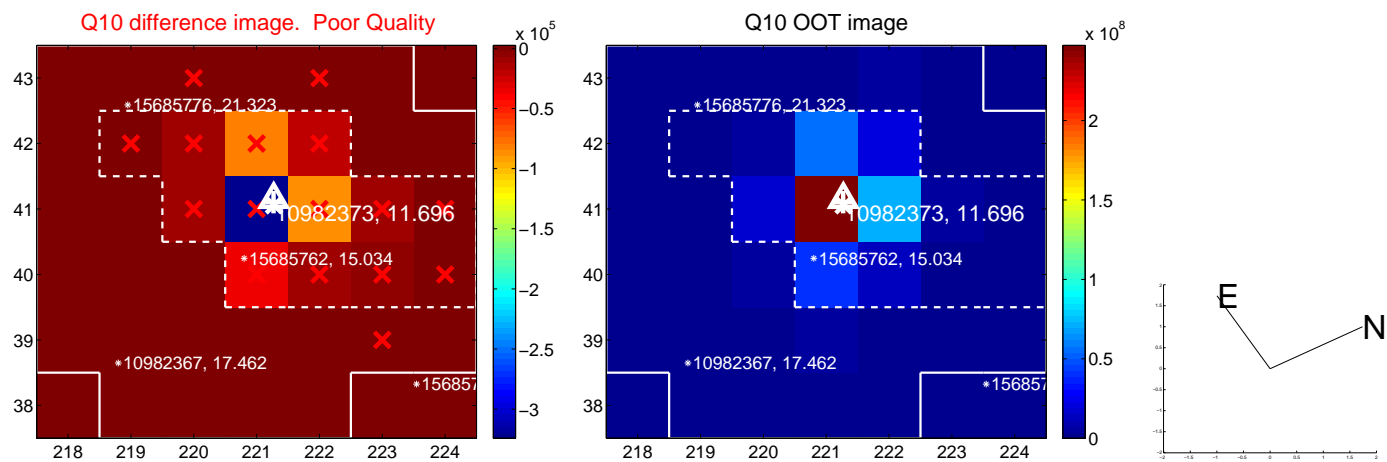
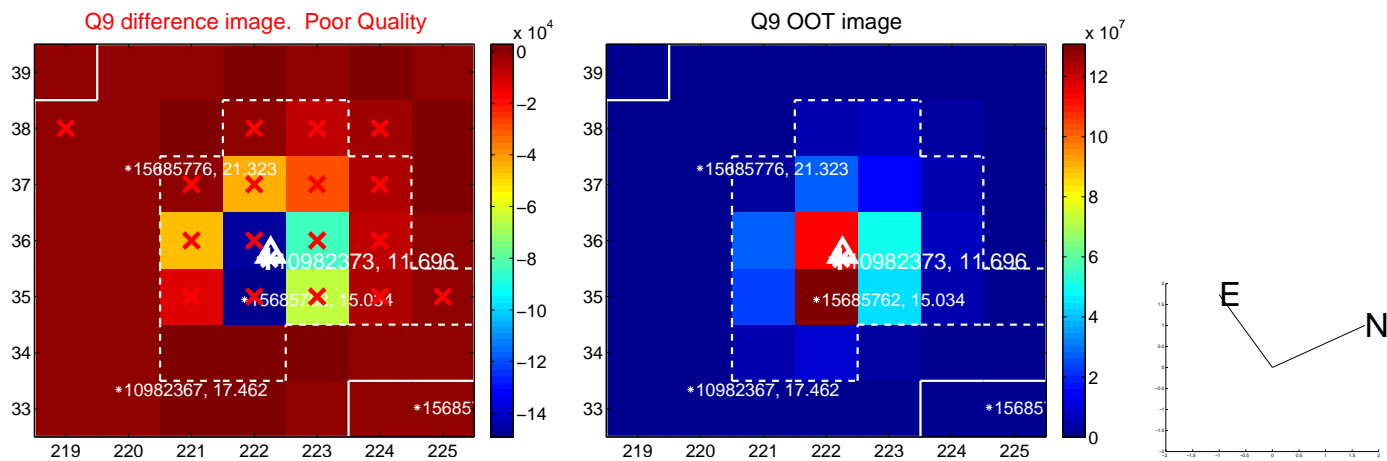
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



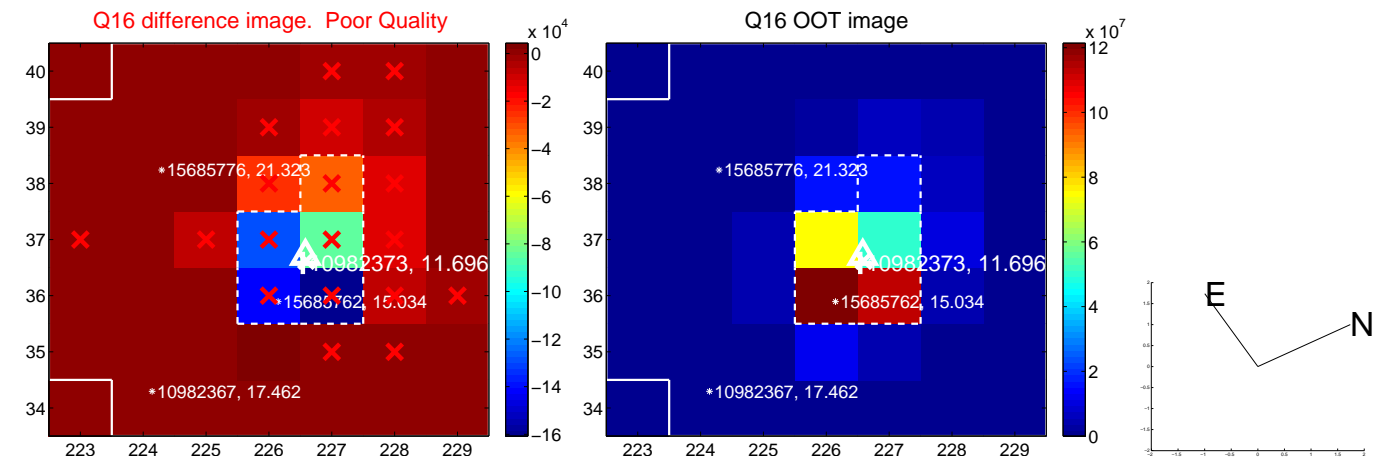
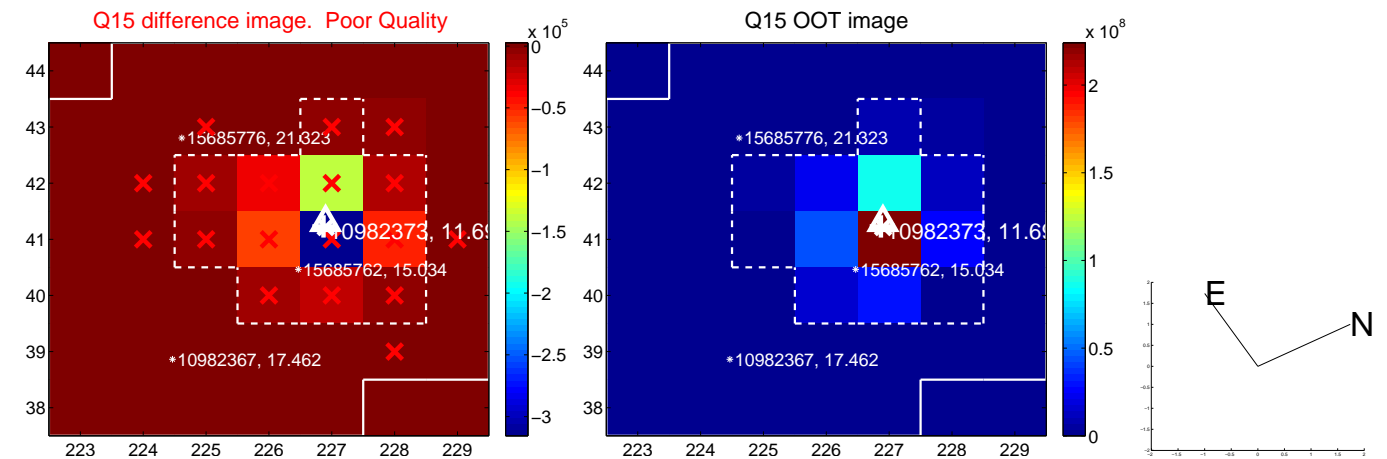
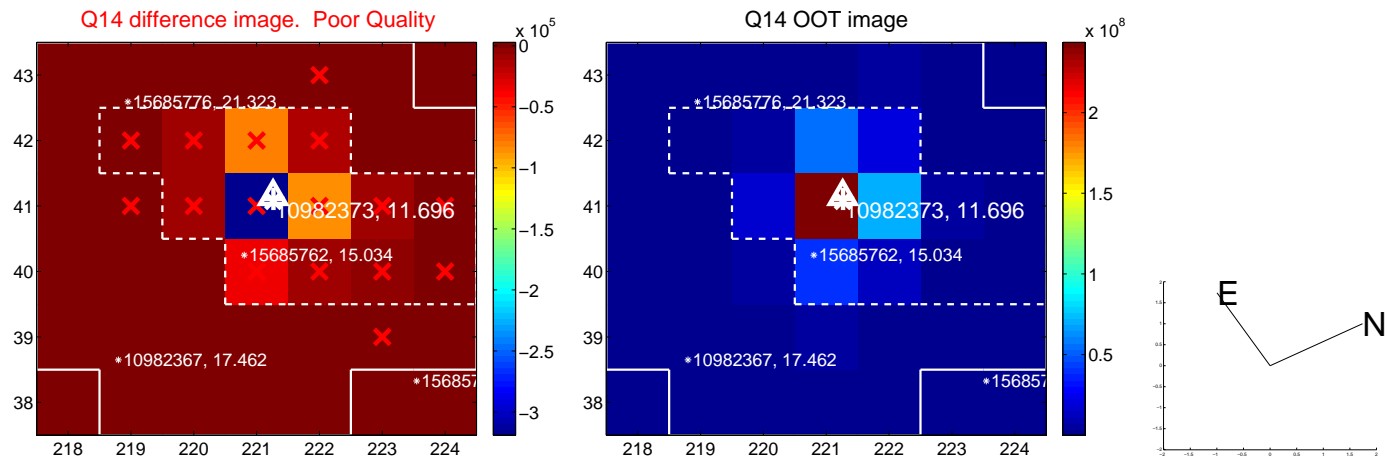
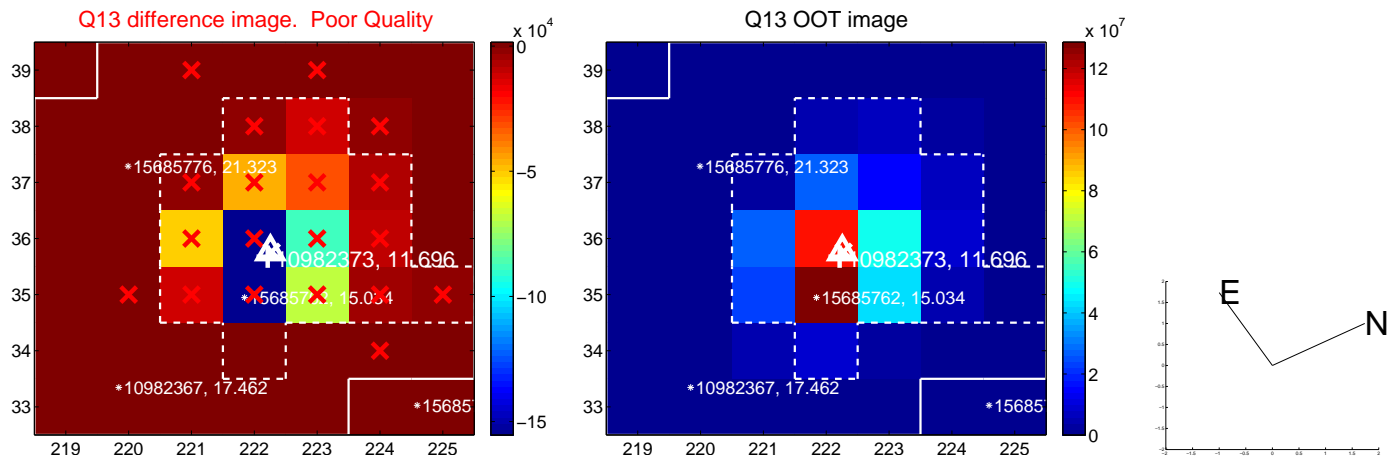
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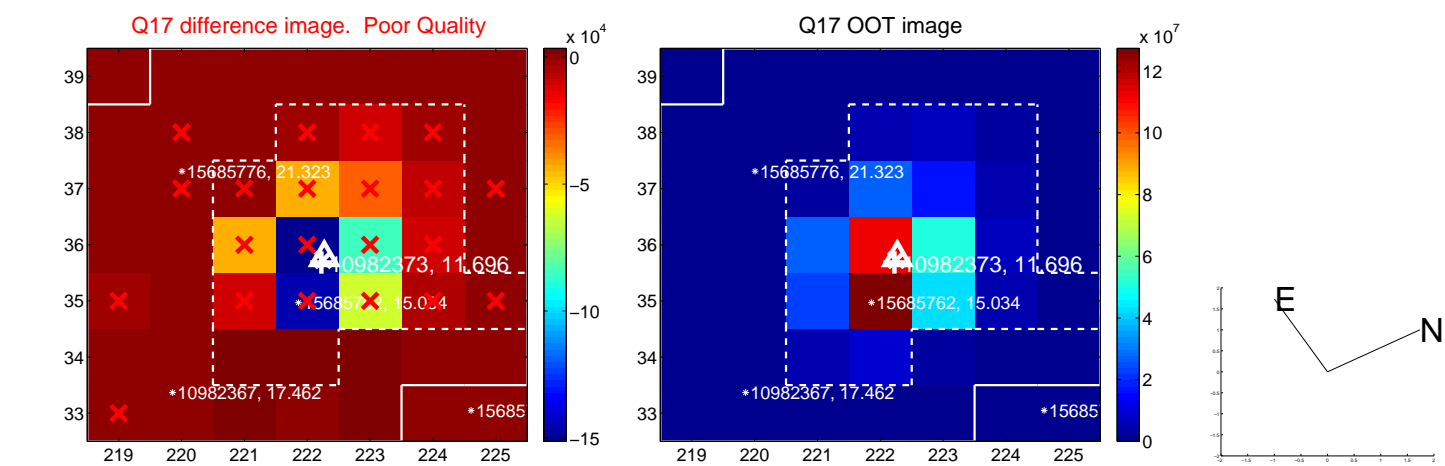
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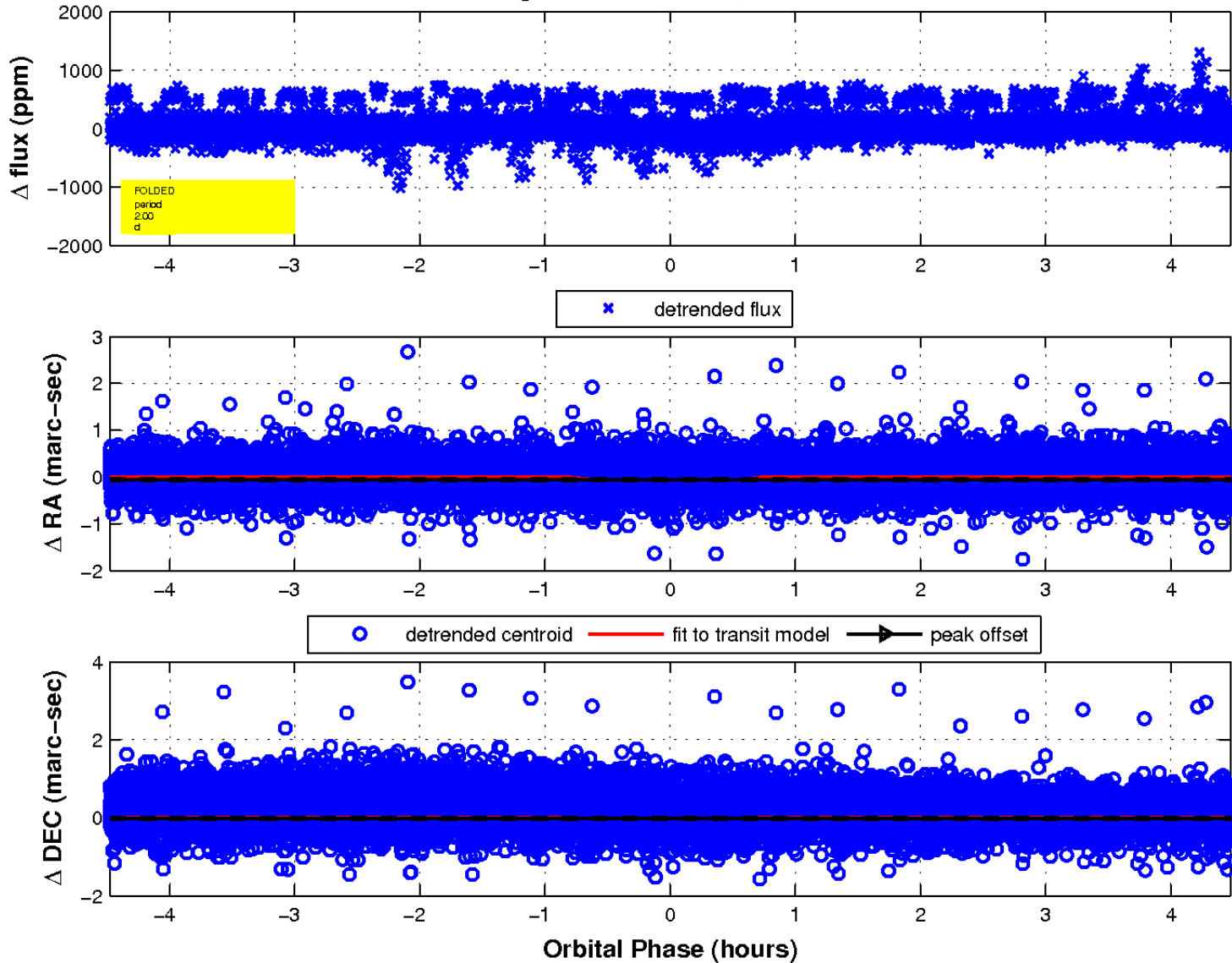
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

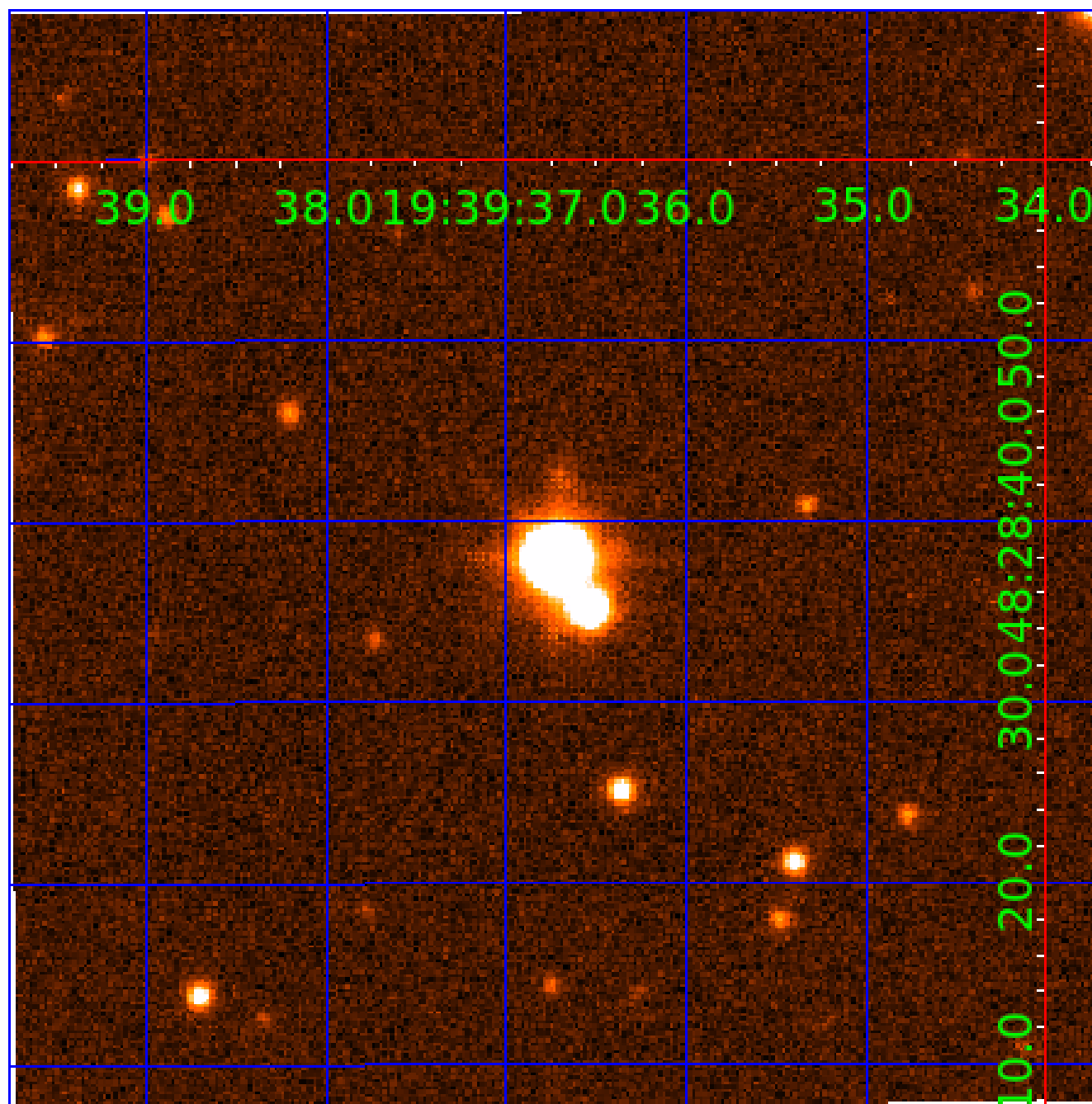


fluxWeightedCentroids, Planet 1 of 7



UKIRT Image

Declination



KIC 010982373

Q1-17 DR25 TCE Parameters

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Robovetter Results

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010982373-02	OBS	FP	0.00	1	0	1	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—HALO_GHOST
010982373-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
010982373-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—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
010982373-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
010982373-06	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_UNRESOLVED_OFFSET
010982373-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—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 010982373-02

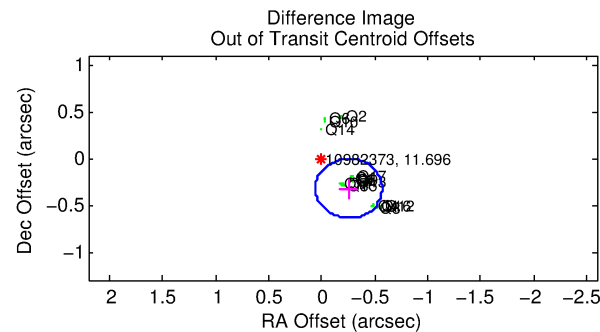
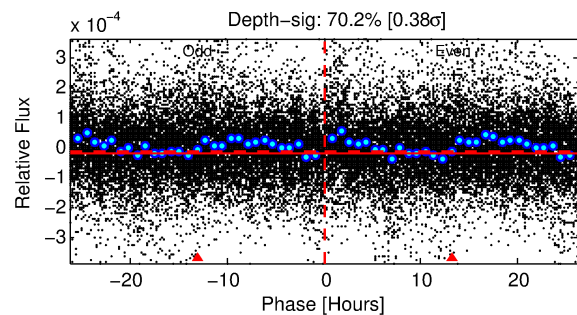
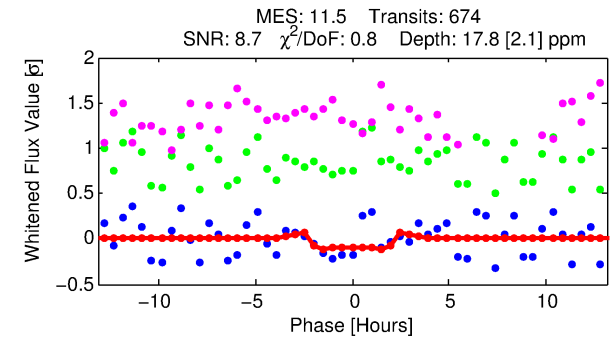
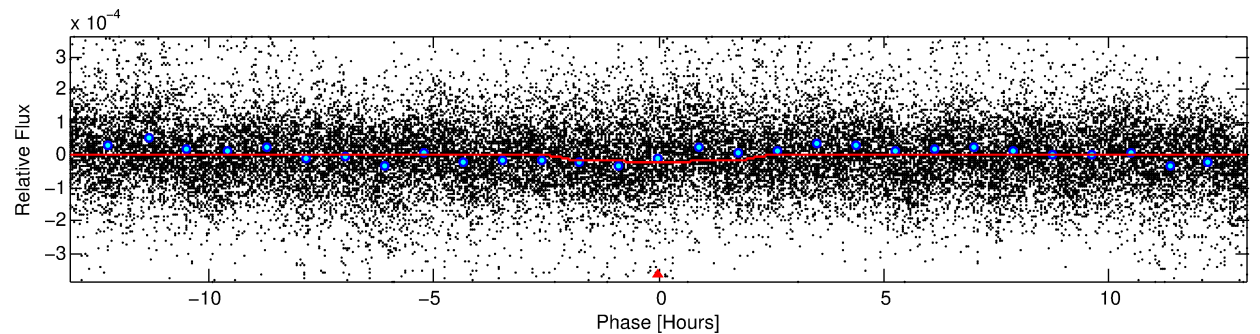
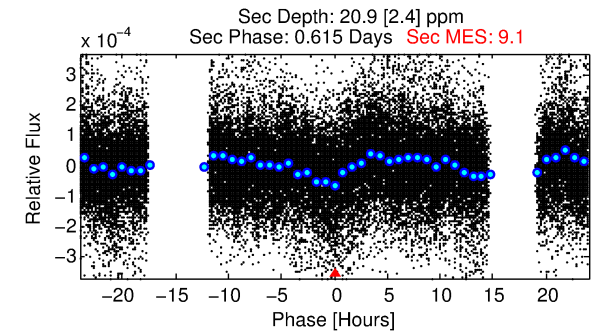
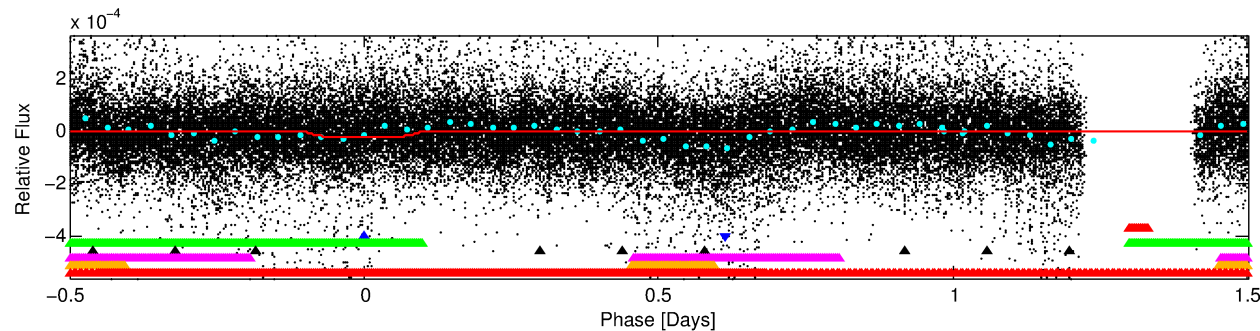
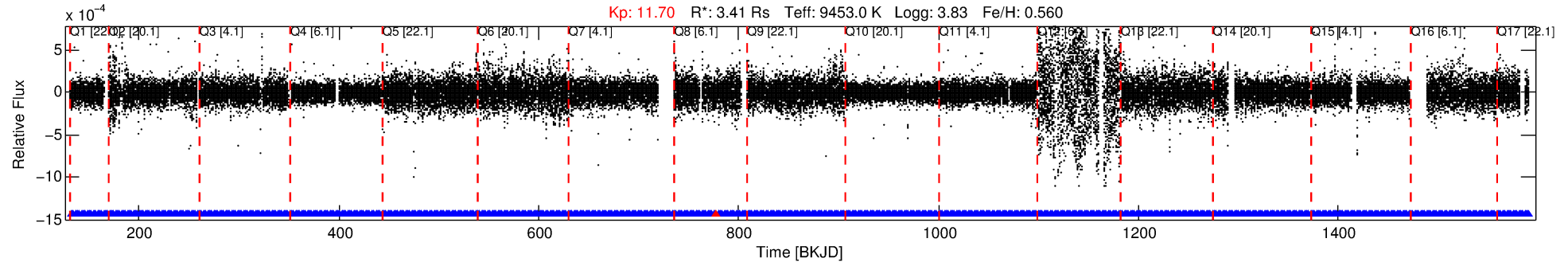
No Significant Match Found

DV One-Page Summary

KIC: 10982373 Candidate: 2 of 7 Period: 2.003 d

KOI: K07395 Corr: No Ephemeris Match

Kp: 11.70 R*: 3.41 Rs Teff: 9453.0 K Logg: 3.83 Fe/H: 0.560



DV Fit Results:

Period = 2.00282 [0.00002] d
Epoch = 132.7455 [0.0029] BKJD
Rp/R* = 0.0044 [0.0007]
a/R* = 1.82 [1.31]
b = 0.90 [0.22]
Seff = 42452.15 [20156.85]
Teq = 3660 [434] K
Rp = 1.65 [0.56] Re
a = 0.0442 [0.0113] AU
Ag = 8.23 [4.03] [1.80σ]
Teffp = 9585 [1042] K [5.25σ]

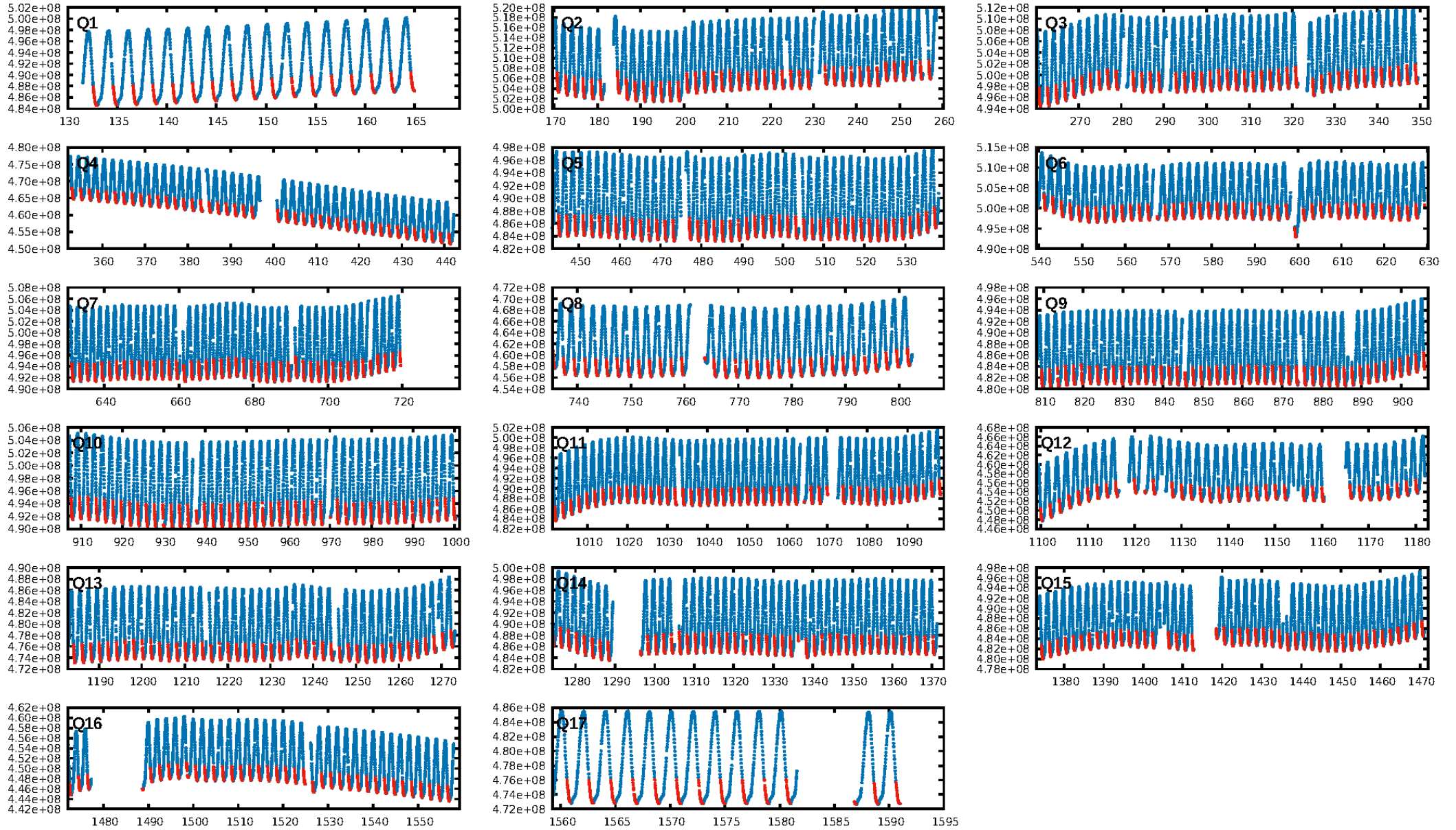
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 1.6% [0.02σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [642/643]
GhostDiagnostic-chr: 0.2499
Centroid-sig: 0.0%
Centroid-so: 2.084 arcsec [2.48σ]
OotOffset-rm: 0.412 arcsec [3.90σ]
KicOffset-rm: 0.364 arcsec [2.55σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

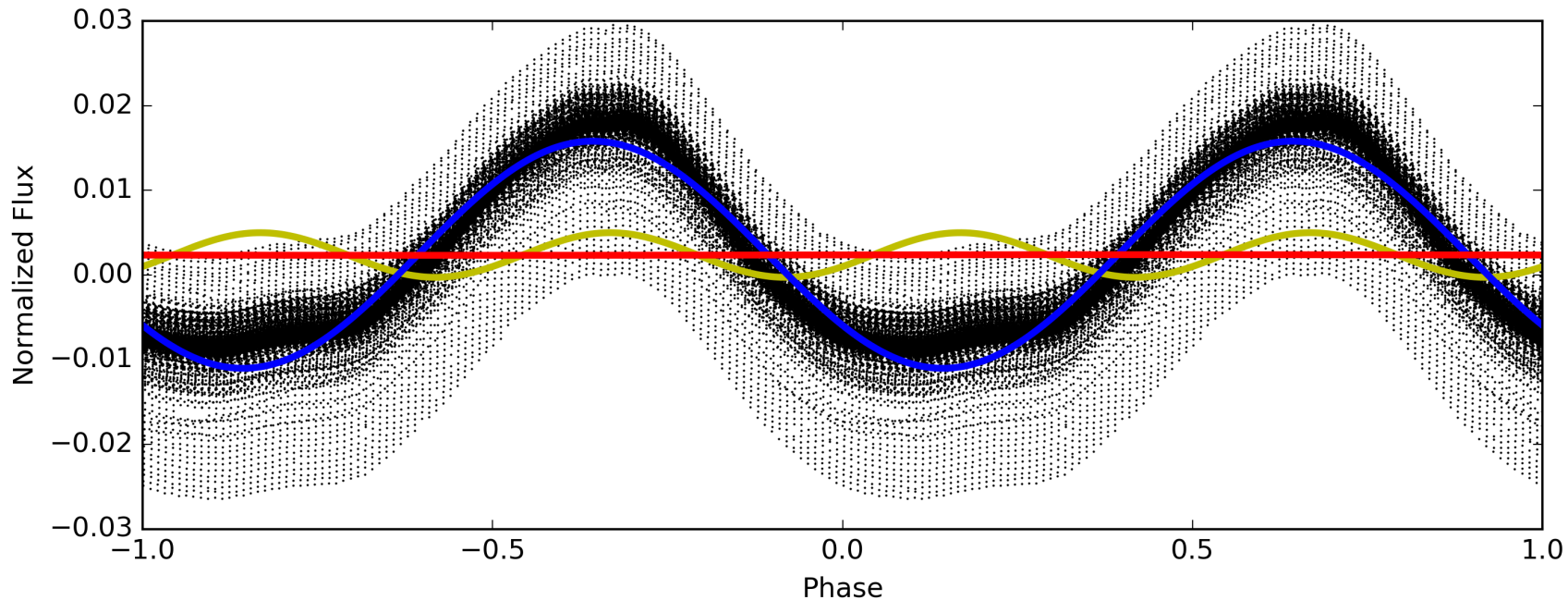
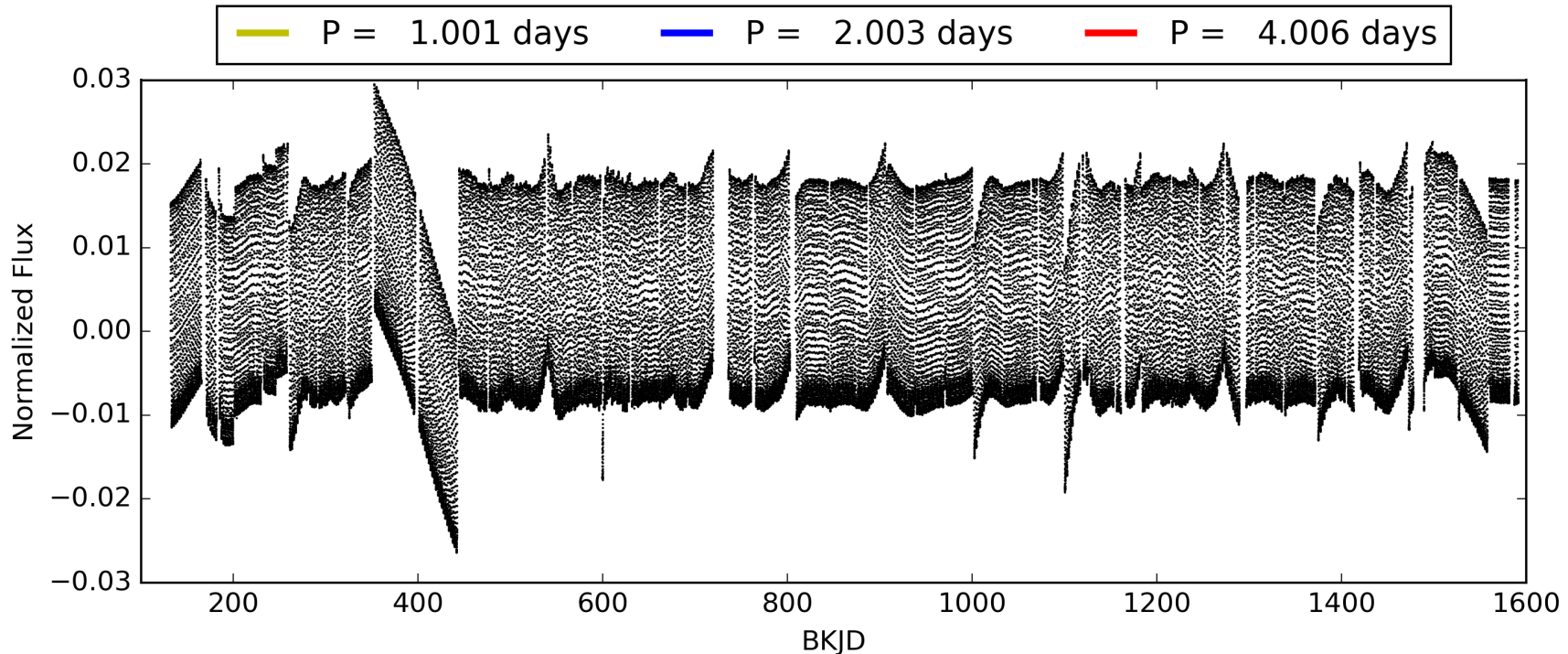
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:33:01 Z

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

TCE 010982373-02, PDC Light Curves

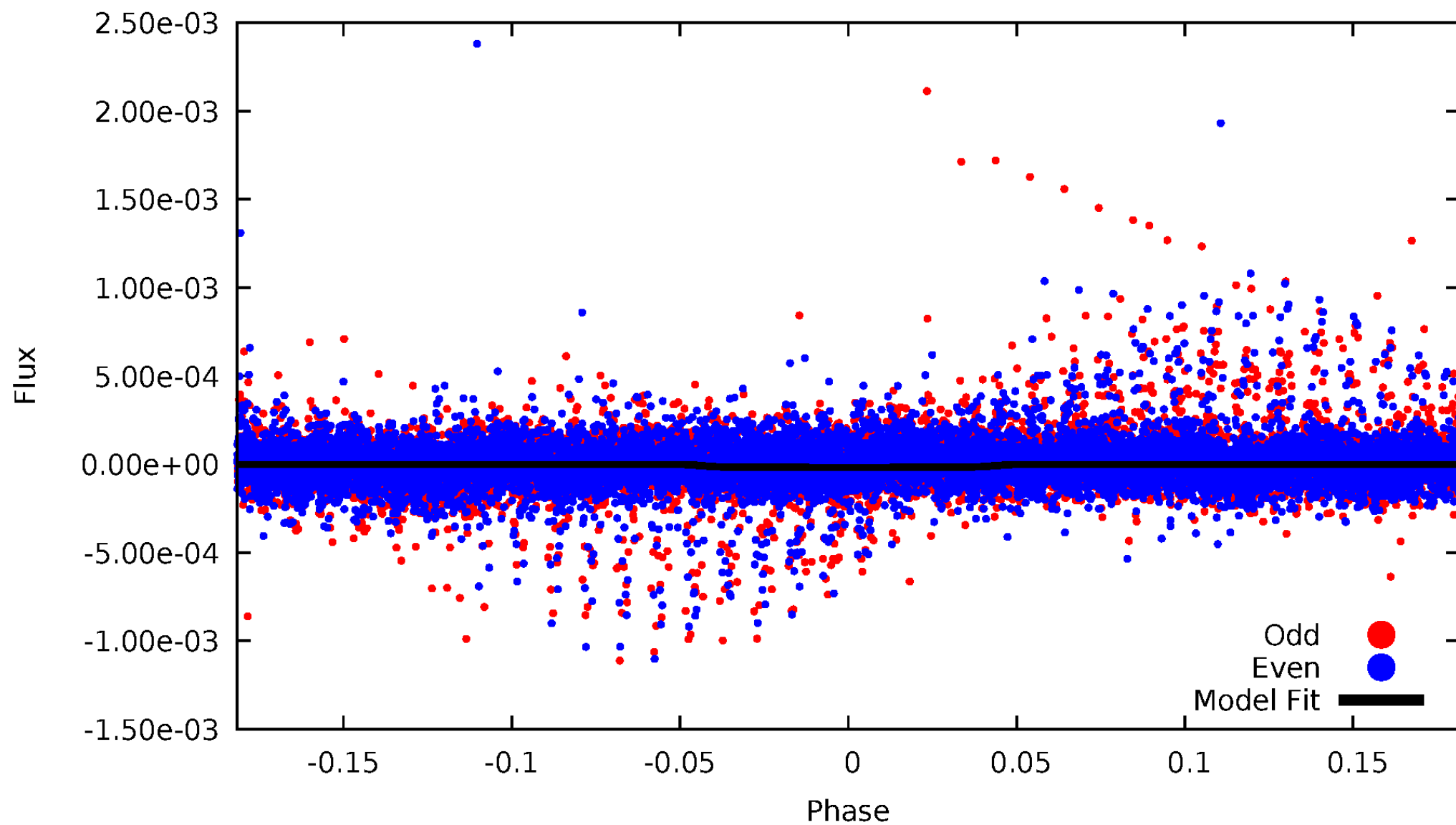


TCE 010982373-02



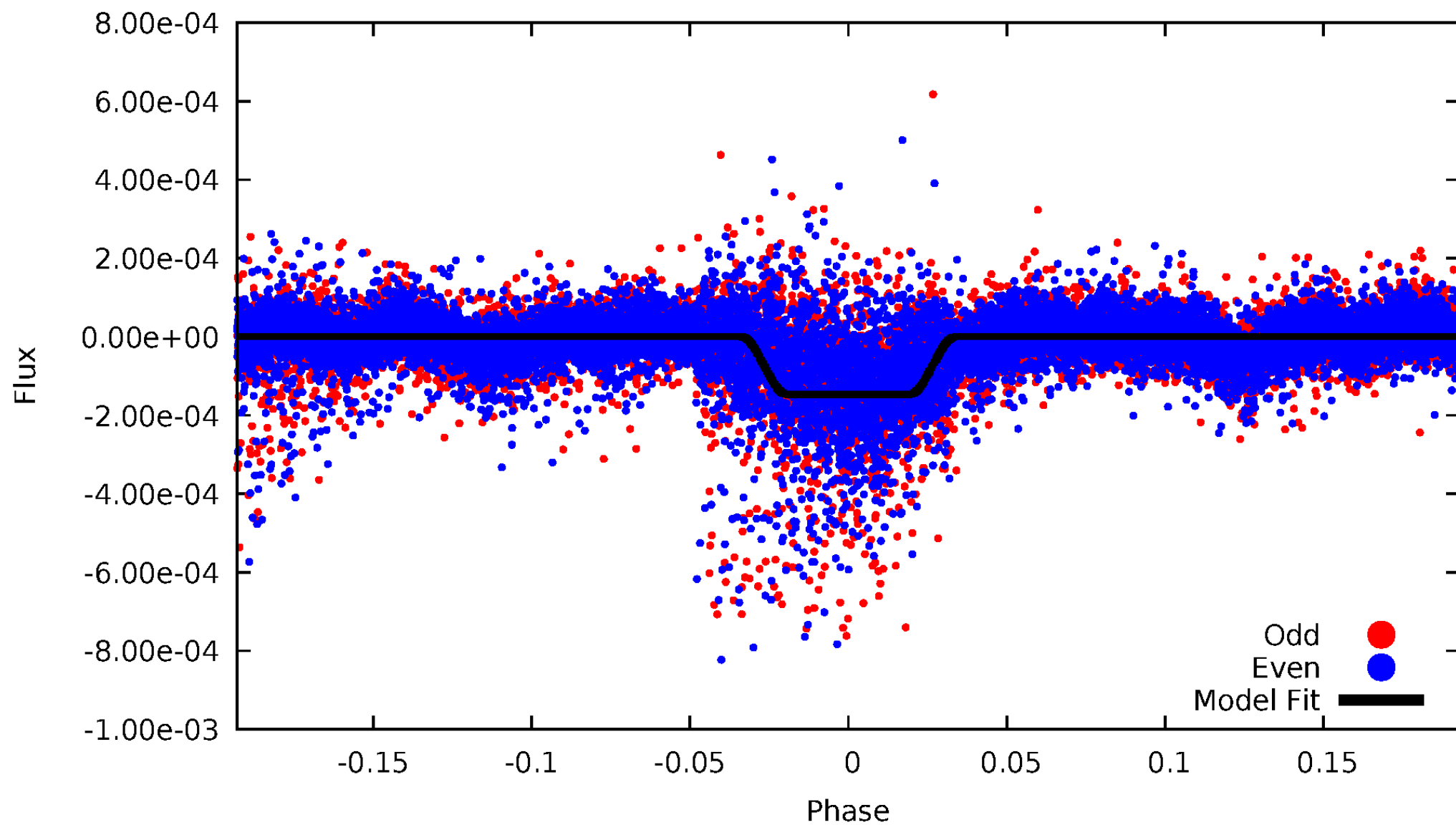
DV Odd/Even

TCE 010982373-02



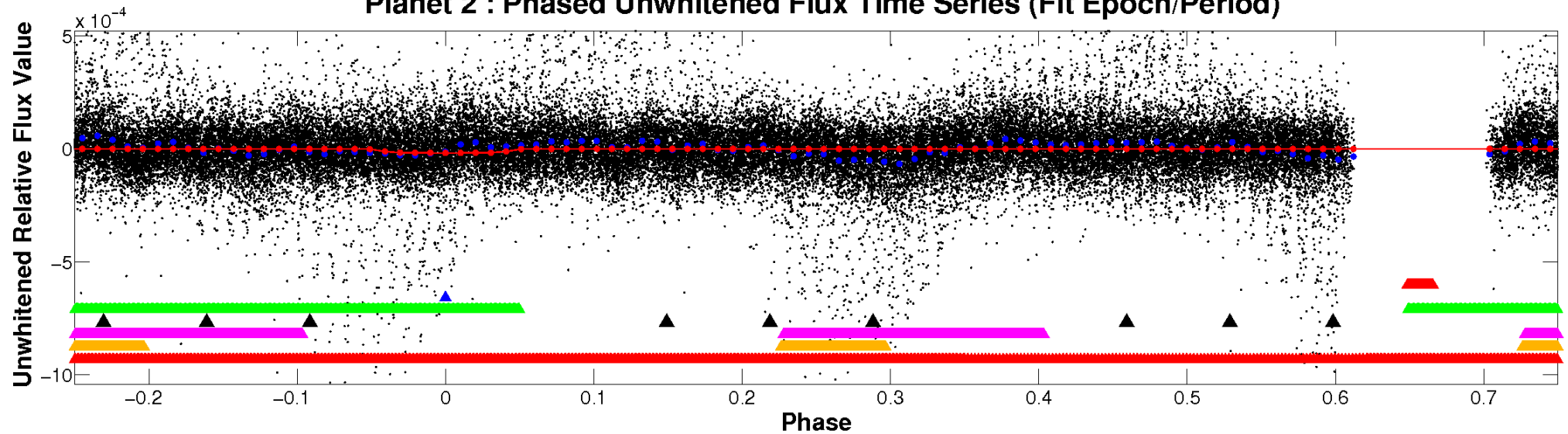
ALT Odd/Even

TCE 010982373-02

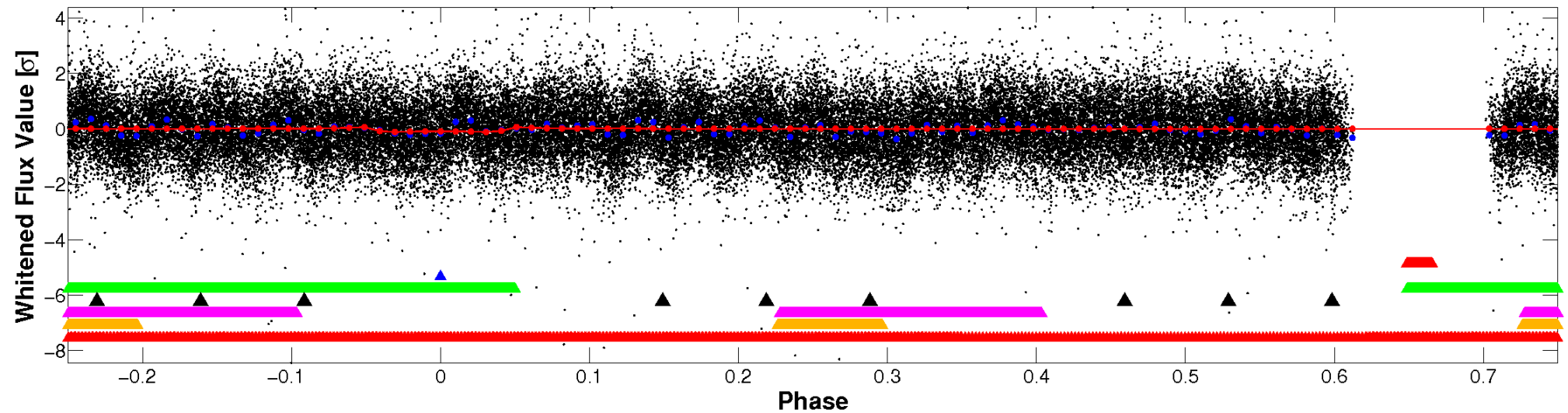


Non-Whitened Vs. Whitened Light Curve

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

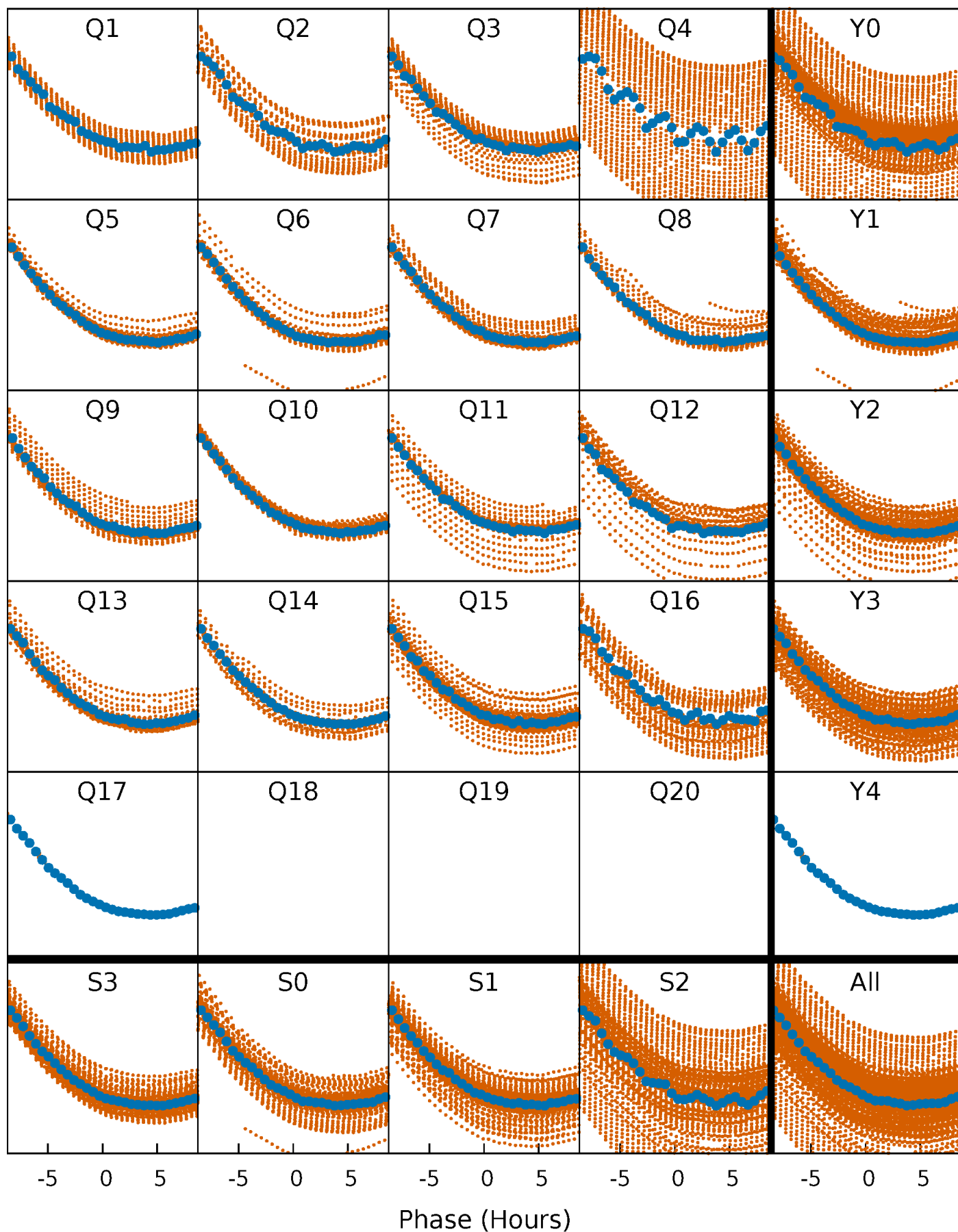


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



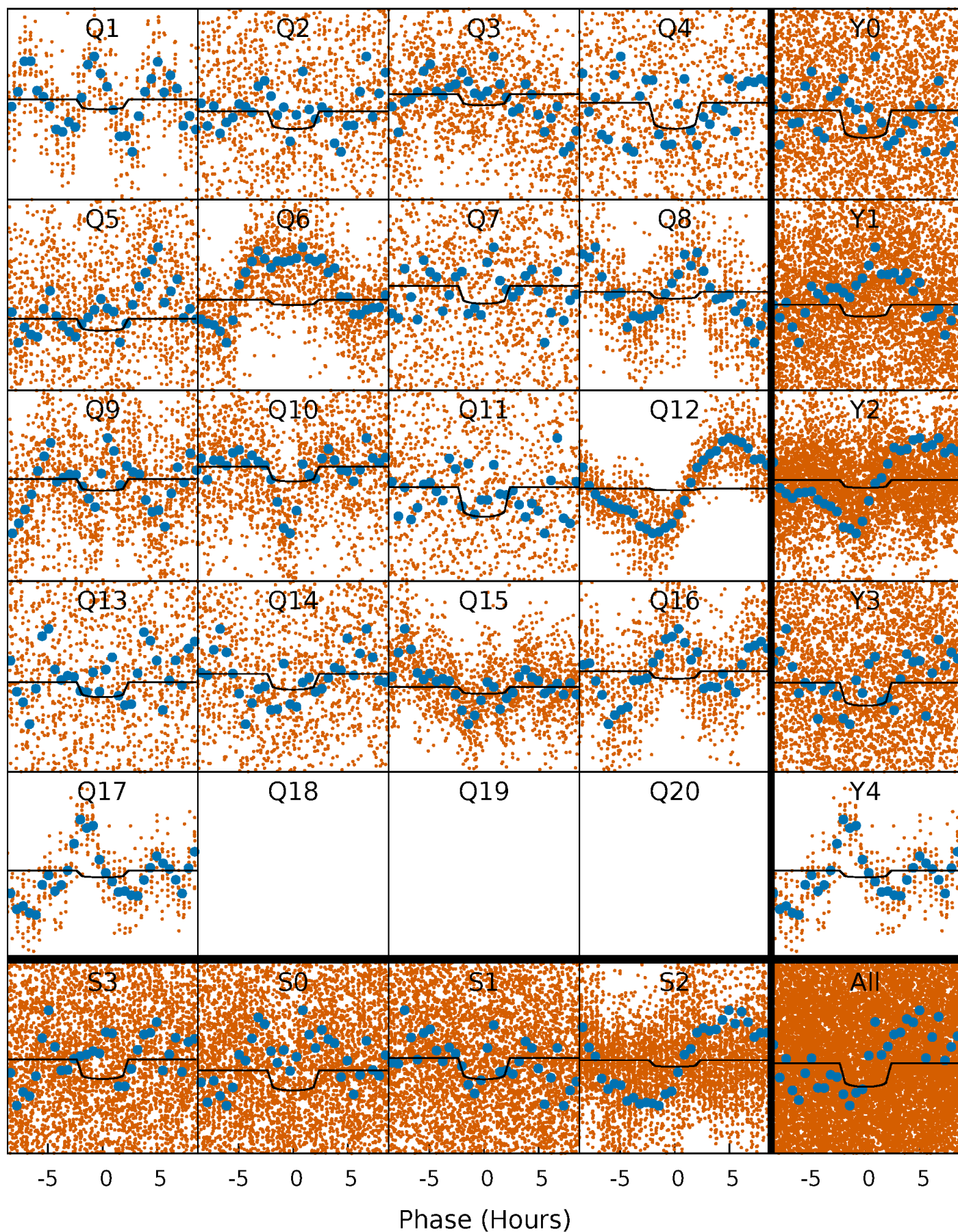
PDC Quarter-Phased Transit Curves

TCE 010982373-02 P= 2.002816 Days $T_0=132.745453$ (BKJD)



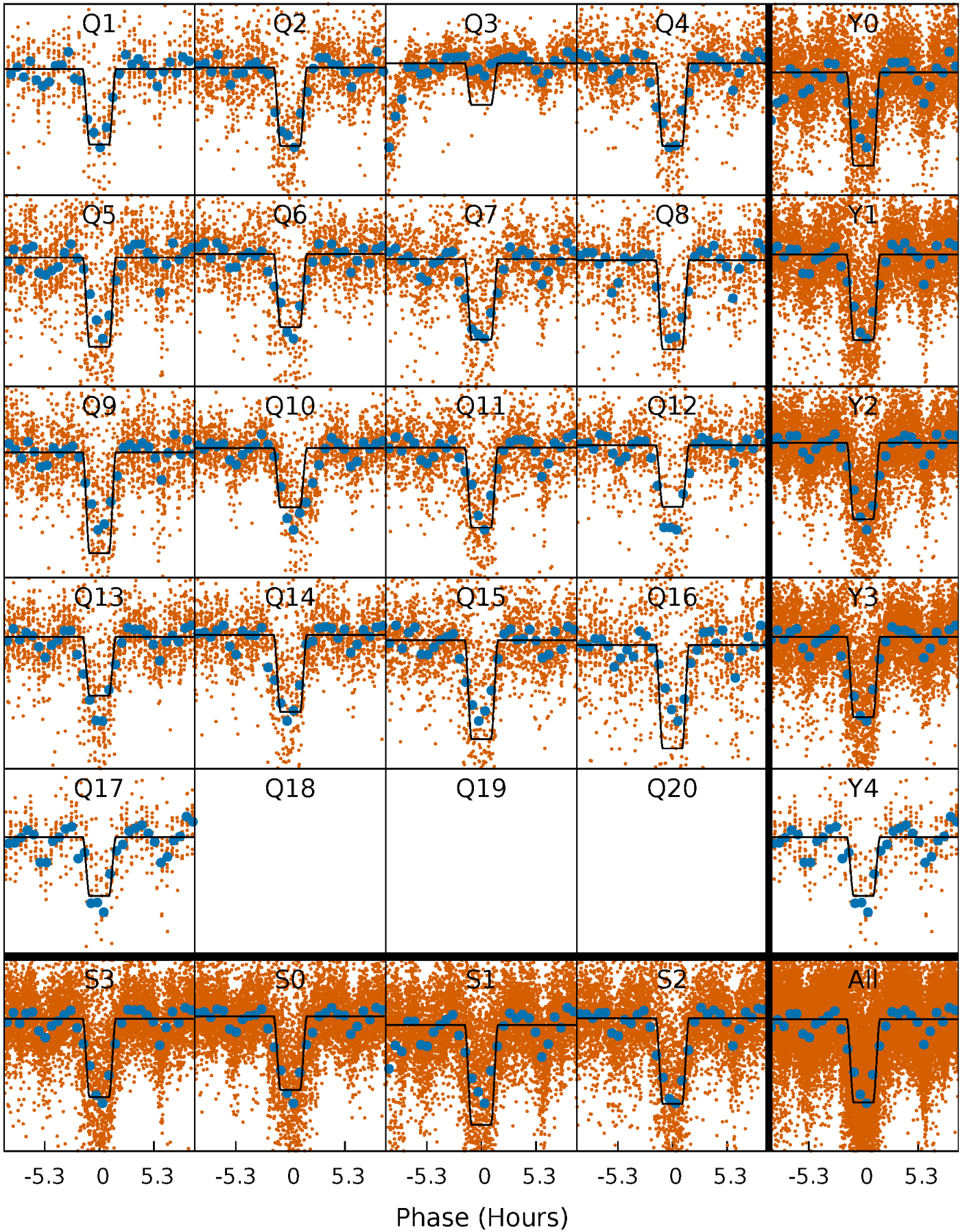
DV Quarter-Phased Transit Curves

TCE 010982373-02 P= 2.002816 Days $T_0=132.745453$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

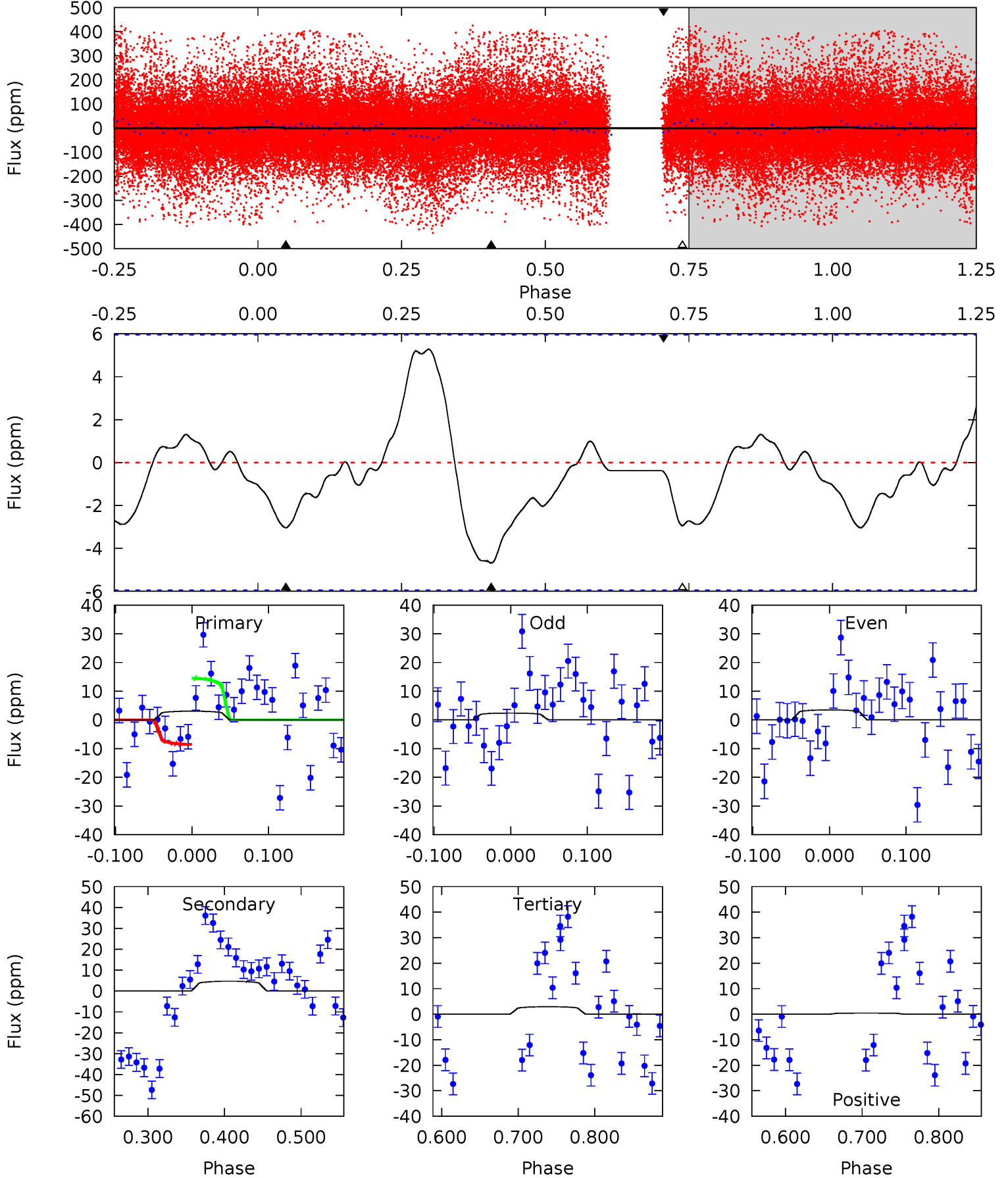
TCE 010982373-02 $P = 2.002792$ Days $T_0 = 132.736707$ (BKJD)



DV Model-Shift Uniqueness Test

010982373-02, P = 2.002816 Days, E = 130.742637 Days

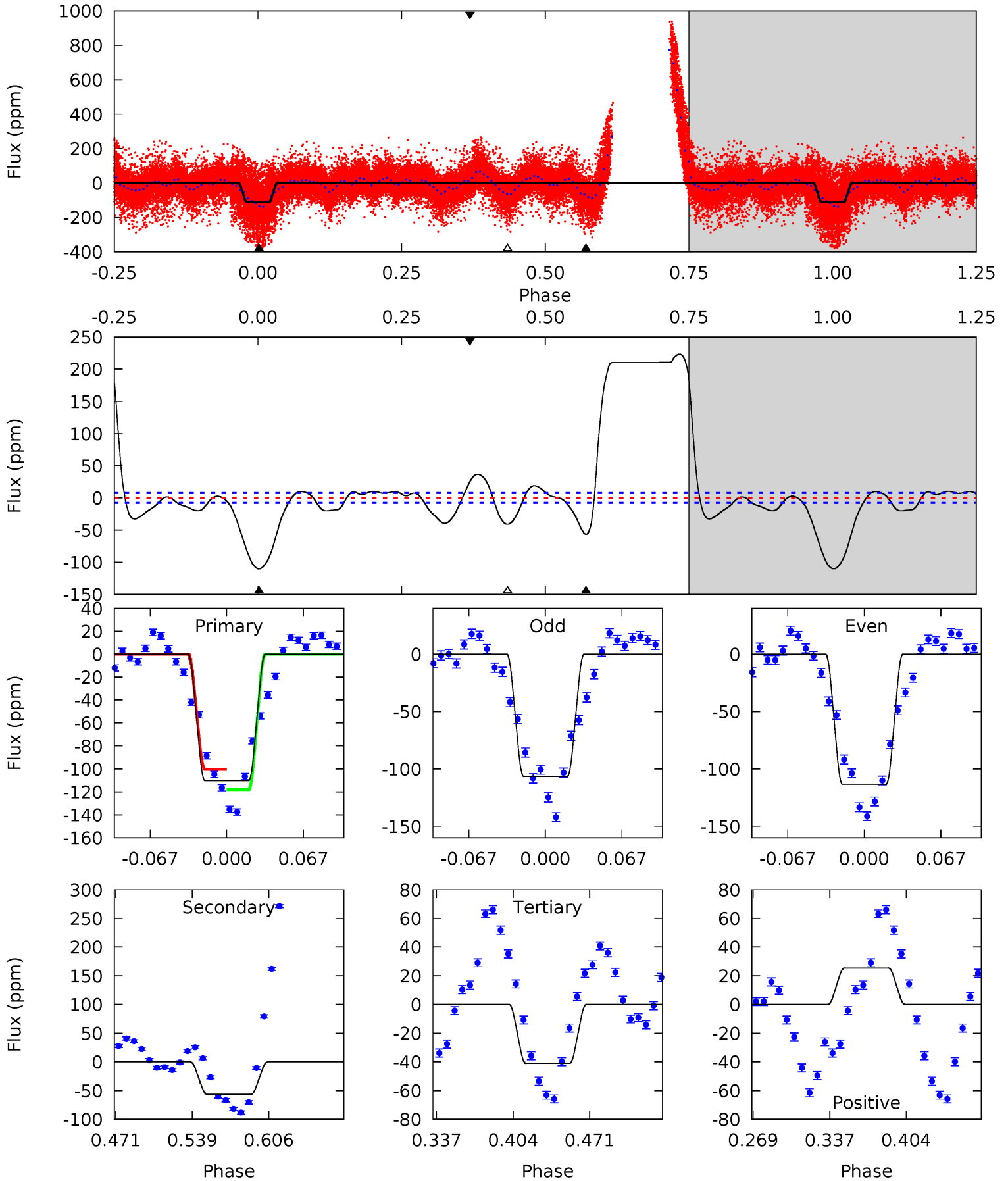
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.33	3.59	2.25	-0.32	4.56	1.64	1.53	0.08	2.65	1.33	3.91	0.43	0.55	0.53	2.32



Alt Model-Shift Uniqueness Test

010982373-02, P = 2.002792 Days, E = 130.733915 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
67.6	34.7	25.2	15.6	4.65	1.83	29.2	42.4	52.0	9.55	19.1	2.09	1.14	0.67	4.58



Stellar Parameters For KIC 010982373

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	9453^{+399}_{-699}	$3.832^{+0.185}_{-0.203}$	$0.560^{+0.050}_{-0.200}$	$3.407^{+1.033}_{-0.845}$	$2.872^{+0.281}_{-0.422}$	$0.102^{+0.103}_{-0.051}$
	+4%/-7%	+5%/-5%	+9%/-36%	+30%/-25%	+10%/-15%	+101%/-50%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 010982373-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-5 ± 1	$1.66^{+0.39}_{-0.31}$	5134^{+453}_{-506}	5820^{+865}_{-773}	$1.766^{+1.177}_{-0.712}$
Alt.	-57 ± 2	$4.53^{+0.85}_{-0.63}$	5117^{+457}_{-463}	6768^{+359}_{-431}	$2.920^{+1.003}_{-0.803}$

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

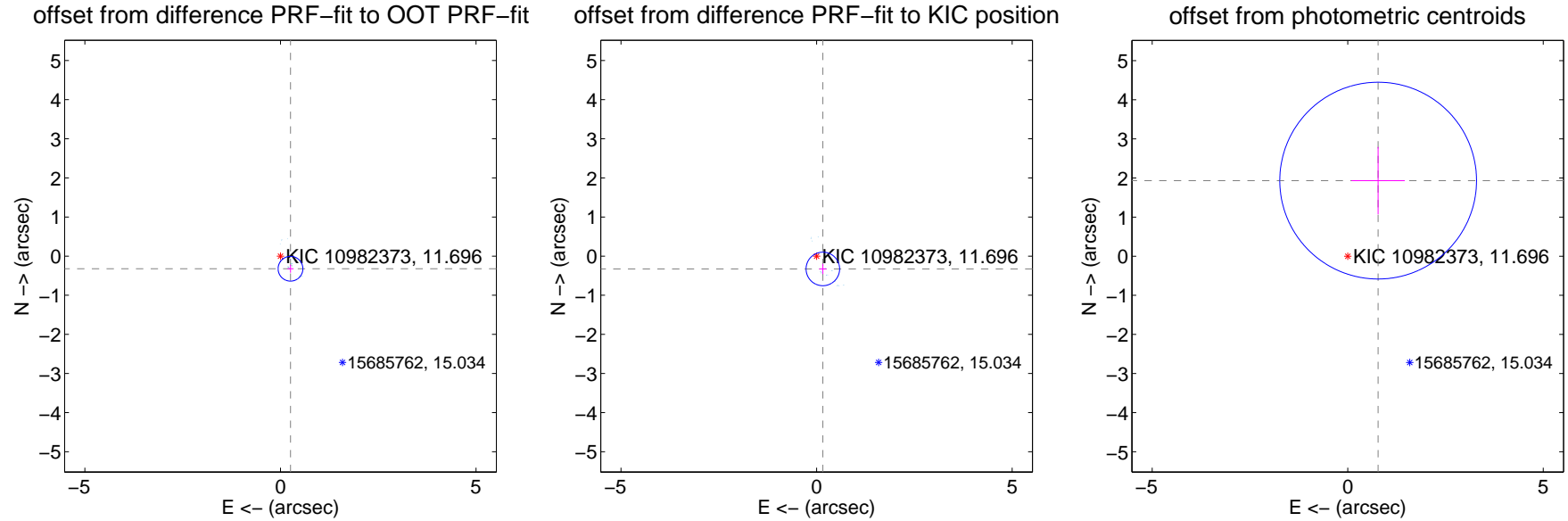
DV Centroid Data

Supplemental centroid analysis for 010982373-02. **Kepler magnitude: 11.70.** Transit SNR 8.75

There are 17 quarters with good PRF difference image offsets

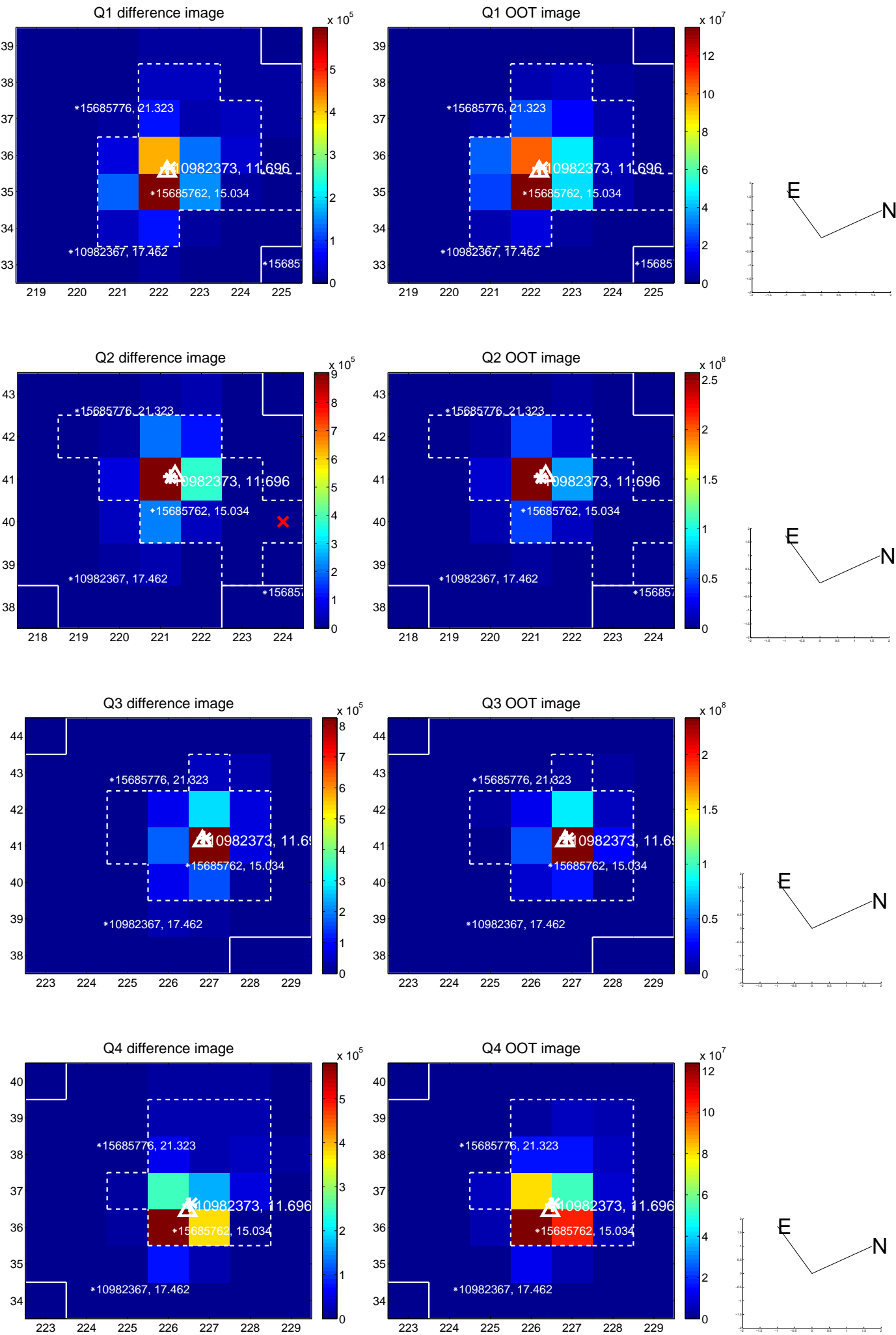
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.412 ± 0.106	3.90	-0.257 ± 0.078	-0.322 ± 0.101
PRF-fit source offset from KIC position	0.364 ± 0.143	2.55	-0.160 ± 0.092	-0.327 ± 0.130
photometric centroid source offset	2.08 ± 0.84	2.48	-0.78 ± 0.68	1.93 ± 0.86

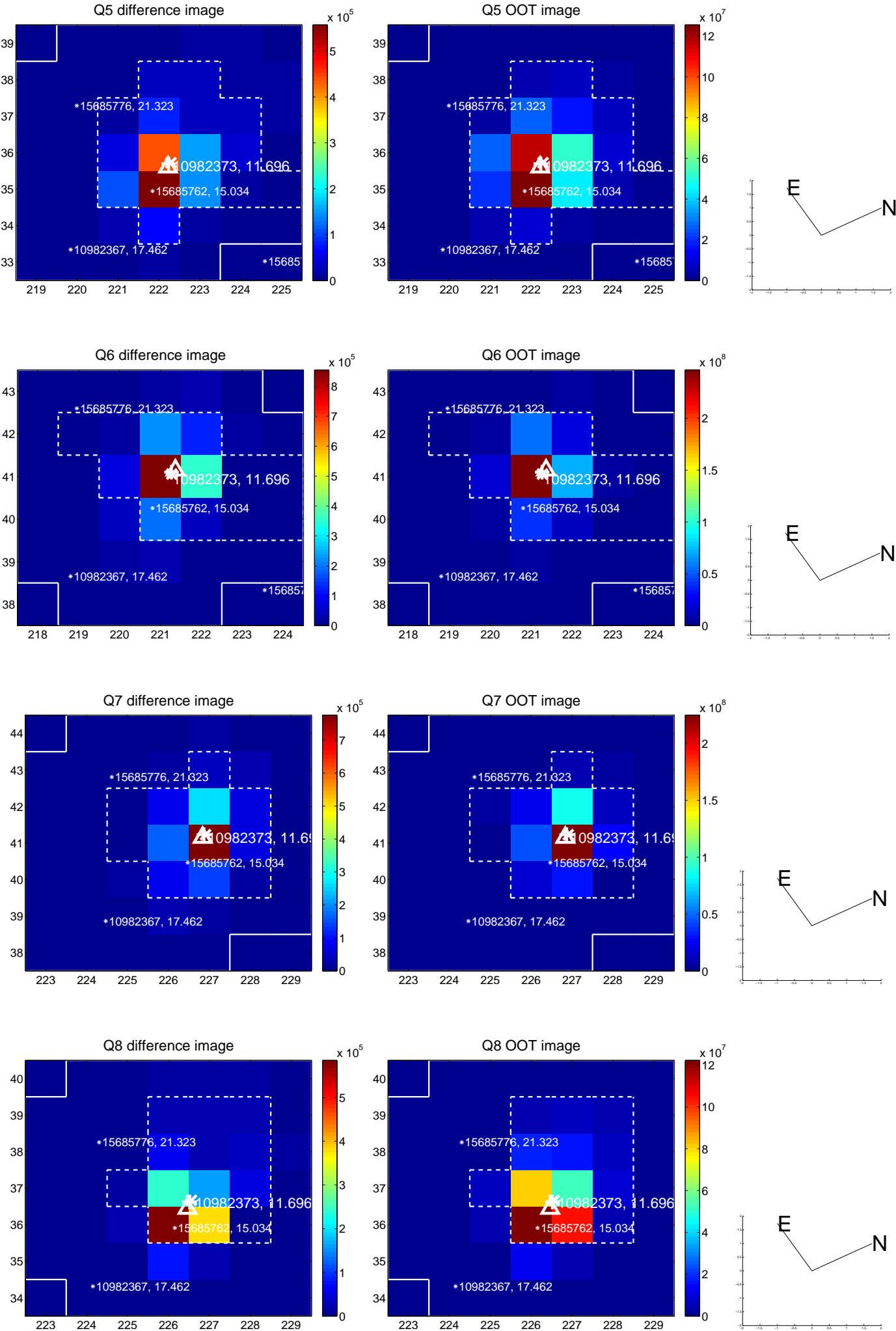


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

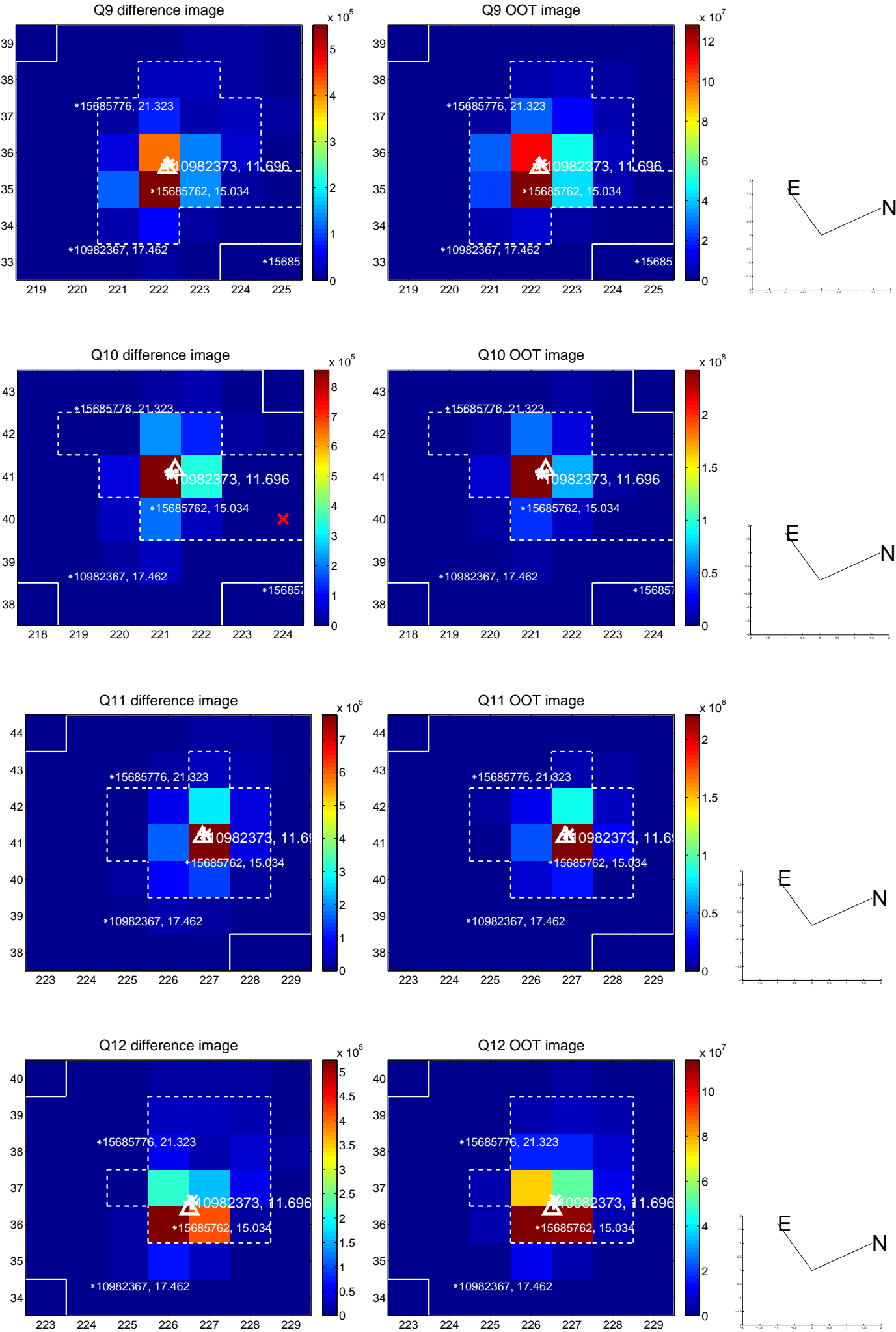
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



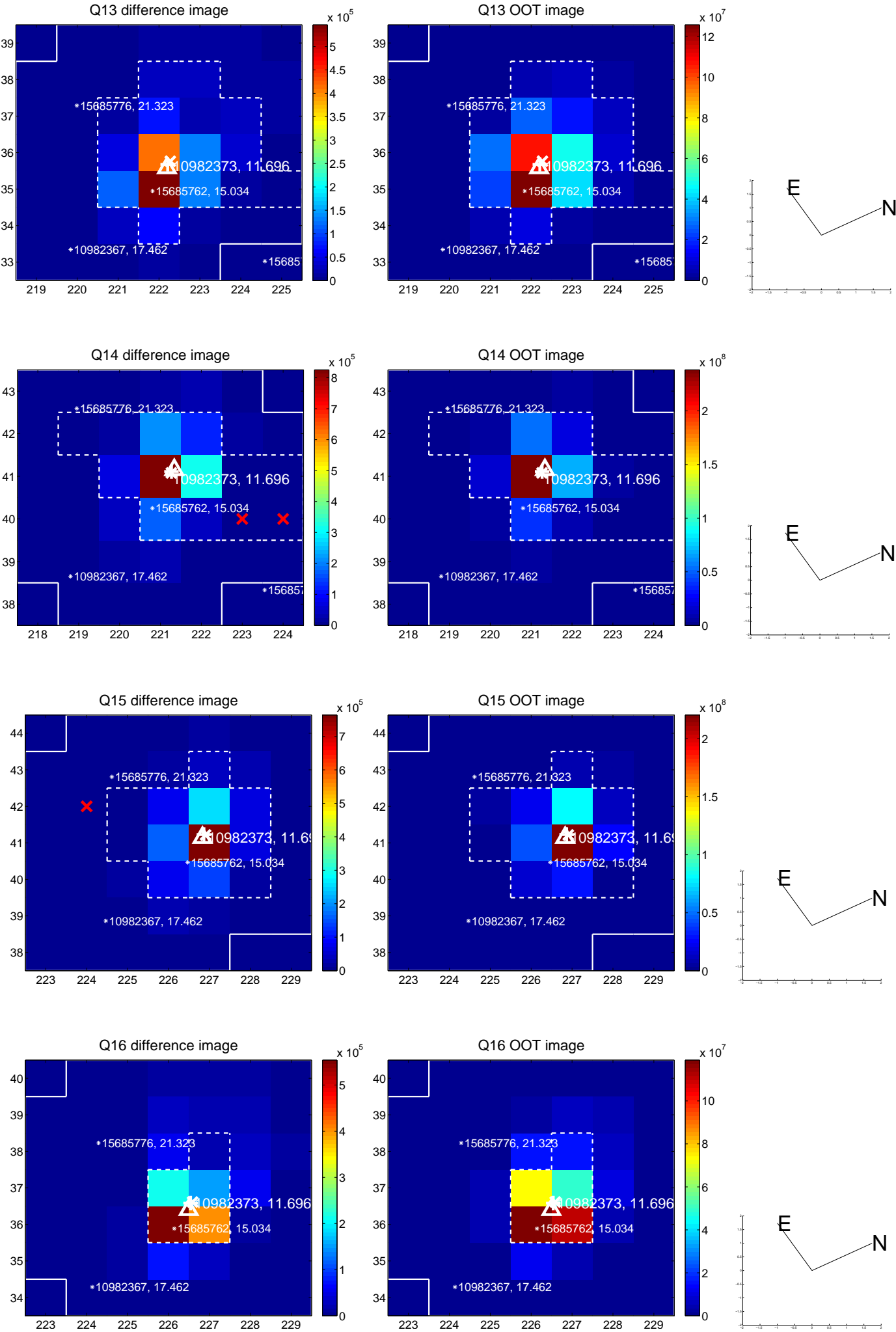
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



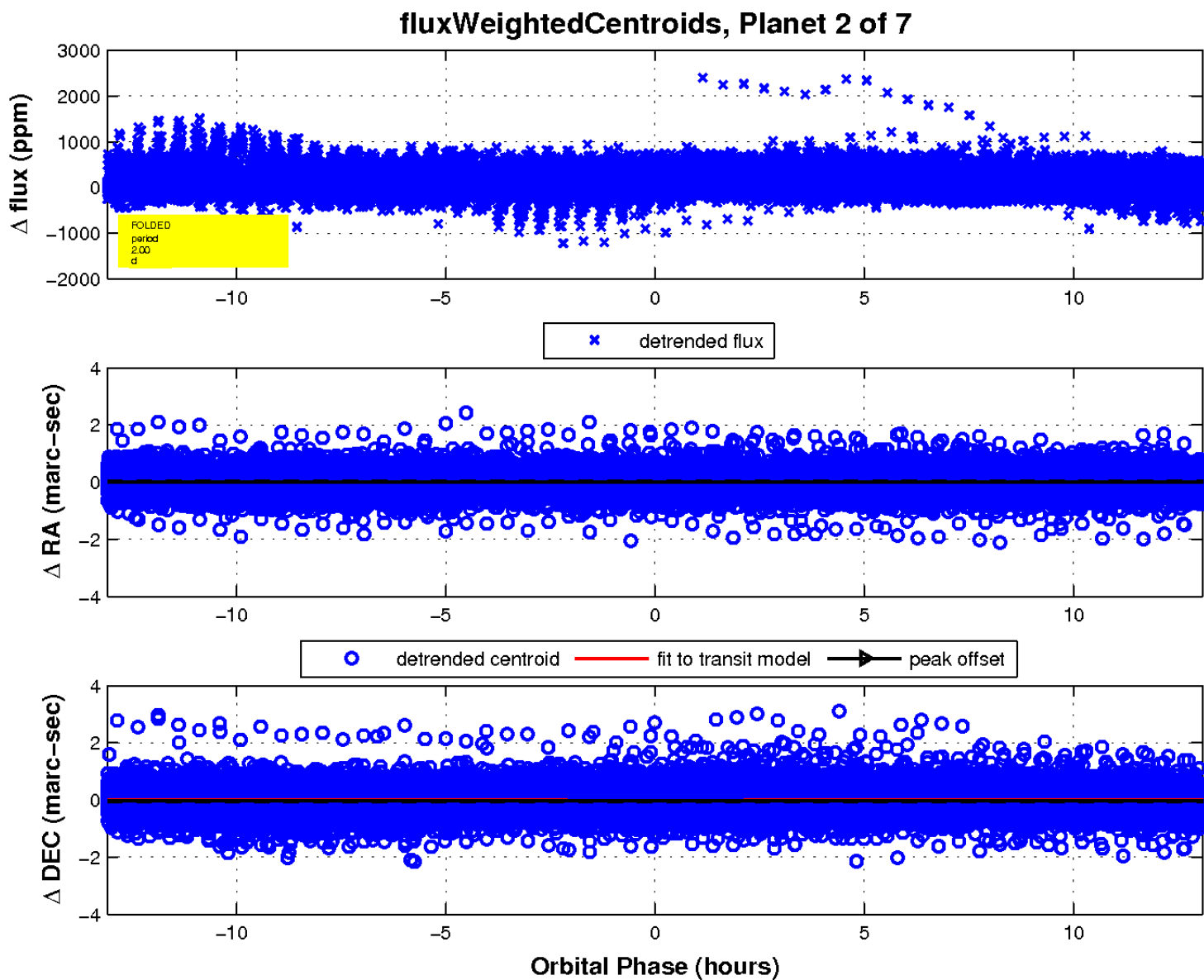
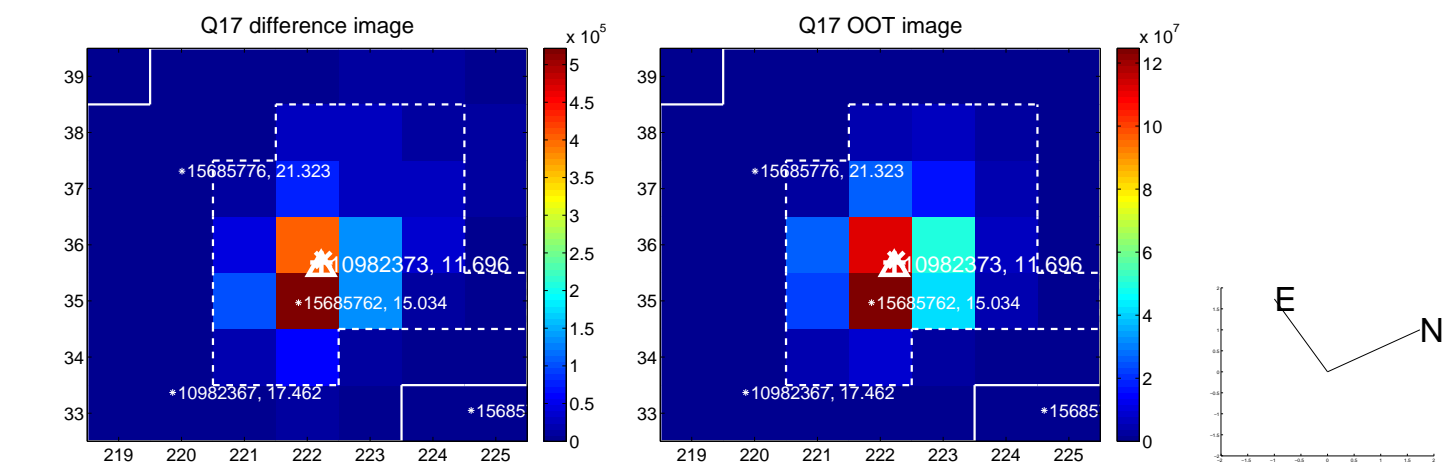
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

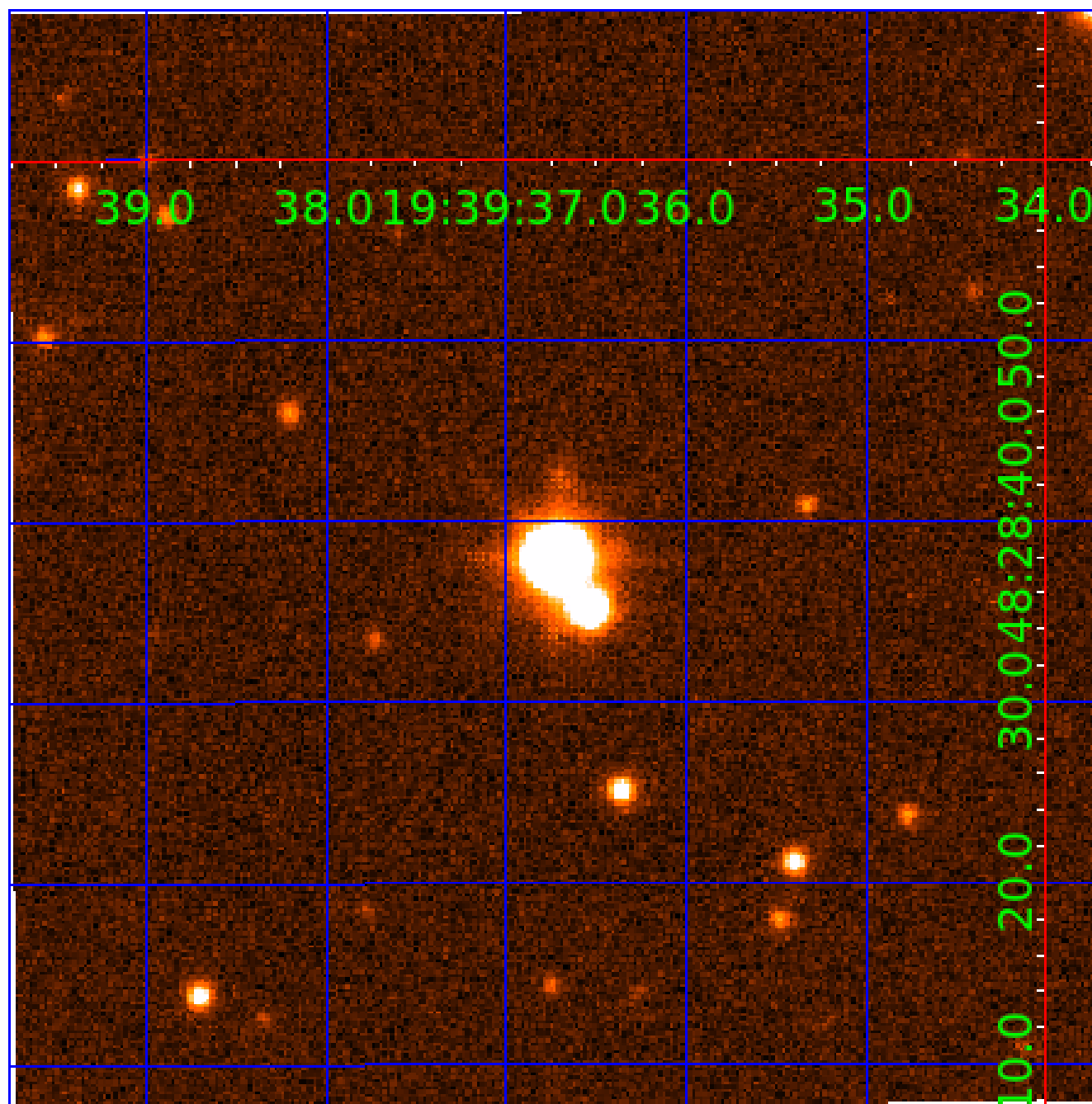


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010982373

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})
010982373-01	OBS	7395.01	2.002769	132.075962	44.2	1.493	12.8	17.4	3.41	9453	2.62	42453.49
010982373-02	OBS	No	2.002816	132.745453	17.8	4.363	11.5	8.7	3.41	9453	1.65	42452.15
010982373-03	OBS	No	2.001713	132.845395	0.0	11.833	10.4	0.0	3.41	9453	0.01	42483.35
010982373-04	OBS	No	153.595656	252.452623	100.8	7.592	16.5	6.2	3.41	9453	3.59	130.29
010982373-05	OBS	No	1.001650	132.200146	59.6	0.934	15.7	8.9	3.41	9453	3.00	106938.28
010982373-06	OBS	No	1.001505	132.197002	30.5	1.174	15.2	7.8	3.41	9453	2.35	106958.89
010982373-07	OBS	No	2.007581	131.987777	81.2	3.500	12.4	-1.0	3.41	9453	3.14	42317.84

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010982373-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_ZUMA_TRACKER—SWEET_NTL—CENT_FEW_DIFFS
010982373-02	OBS	FP	0.00	1	0	1	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—HALO_GHOST
010982373-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
010982373-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—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
010982373-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
010982373-06	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_UNRESOLVED_OFFSET
010982373-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—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.

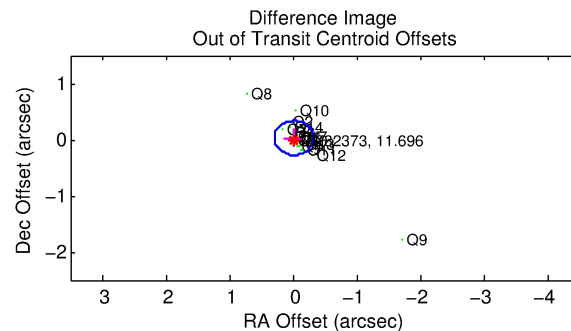
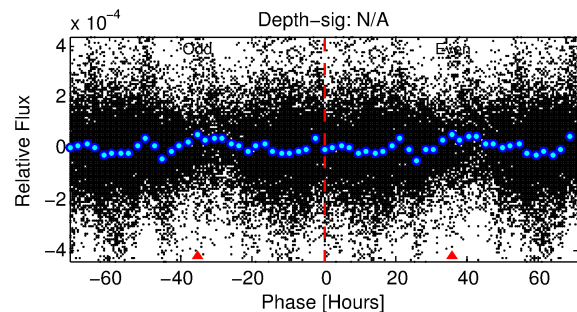
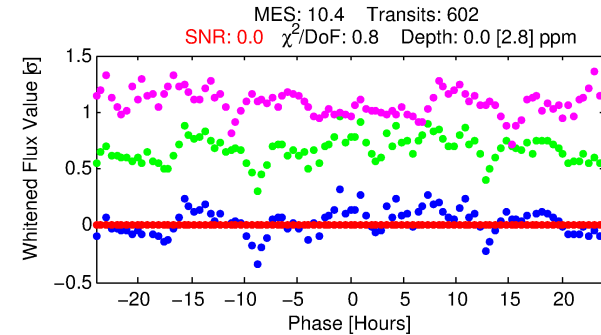
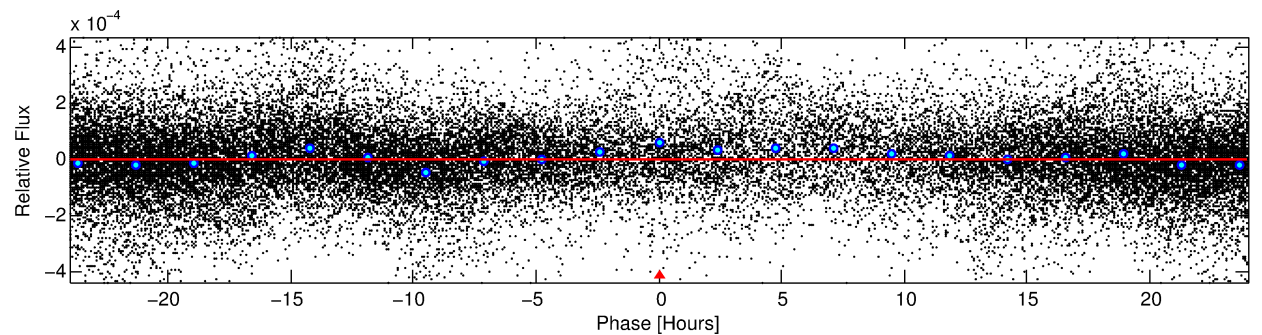
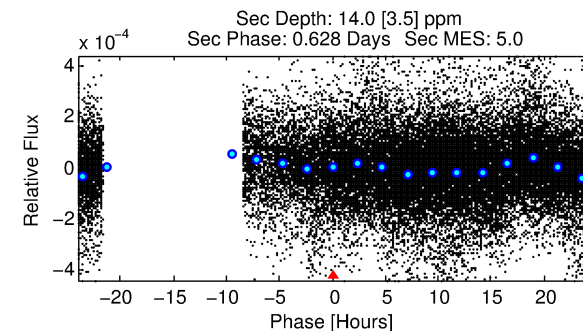
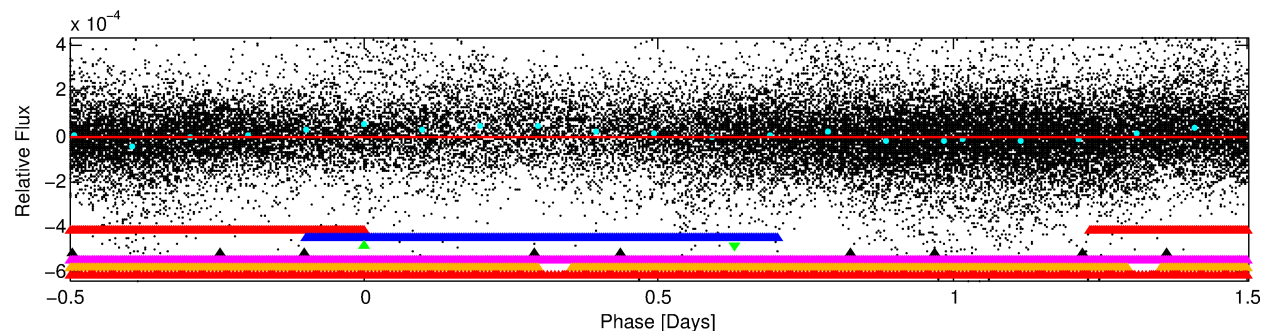
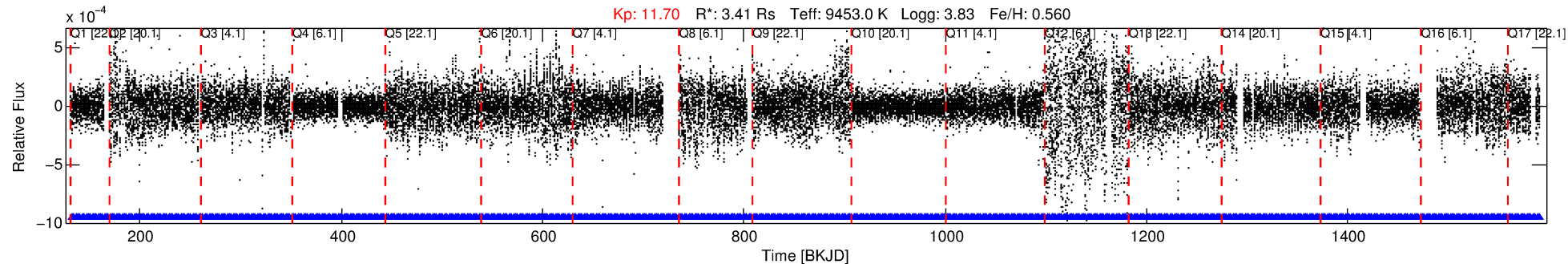
Ephemeris Match Information For 010982373-03

No Significant Match Found

DV One-Page Summary

KIC: 10982373 Candidate: 3 of 7 Period: 2.002 d
KOI: K07395 Corr: No Ephemeris Match

Kp: 11.70 R*: 3.41 Rs Teff: 9453.0 K Logg: 3.83 Fe/H: 0.560



DV Fit Results:

Period = 2.00171 [0.38901] d
Epoch = 132.8454 [79.6495] BKJD
Rp/R* = 0.0000 [0.0376]
a/R* = 1.27 [49.74]
b = 0.65 [165.76]
Seff = 42483.35 [22979.96]
Teff = 3661 [495] K
Rp = 0.01 [13.97] Re
a = 0.0442 [0.0127] AU
Ag = 86216.69 [182407360.35] [0.00sigma]
Teffp = 96988 [51301231] K [0.00sigma]

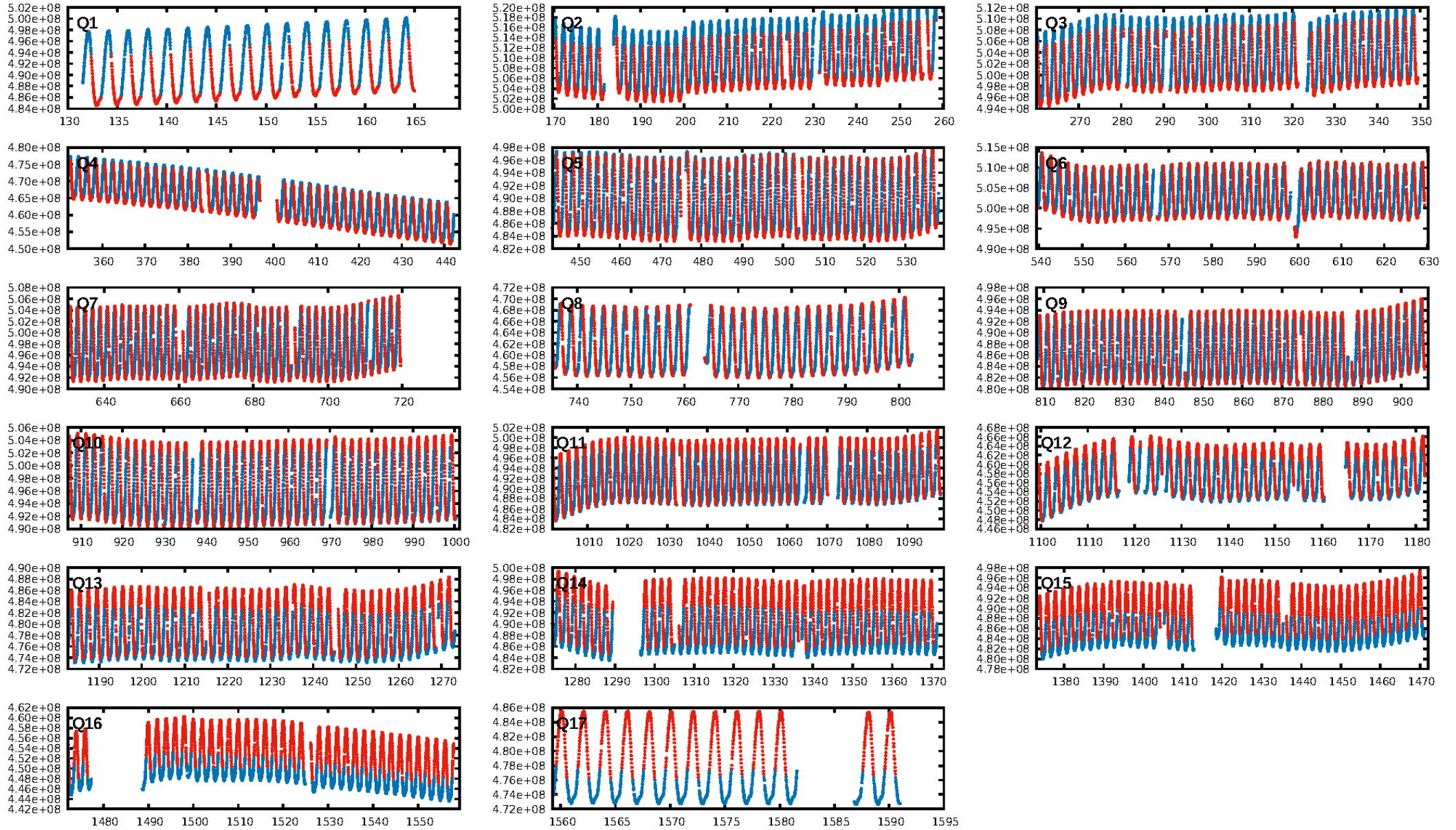
DV Diagnostic Results:

ShortPeriod-sig: 95.7% [2.02sigma]
LongPeriod-sig: 0.2% [0.00sigma]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [573/573]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
QotOffset-rm: 0.032 arcsec [0.31sigma]
KicOffset-rm: 0.131 arcsec [1.08sigma]
QotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.47 [8/17]
DiffImageOverlap-fno: 0.00 [0/17]

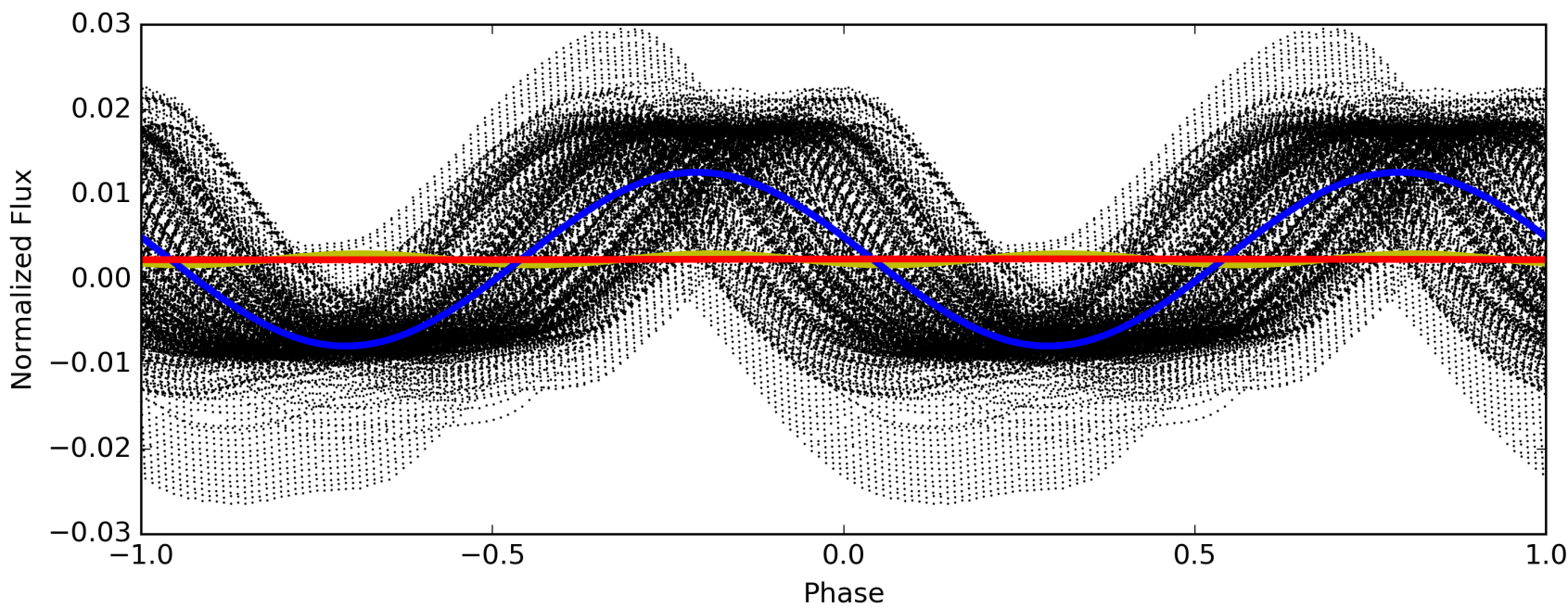
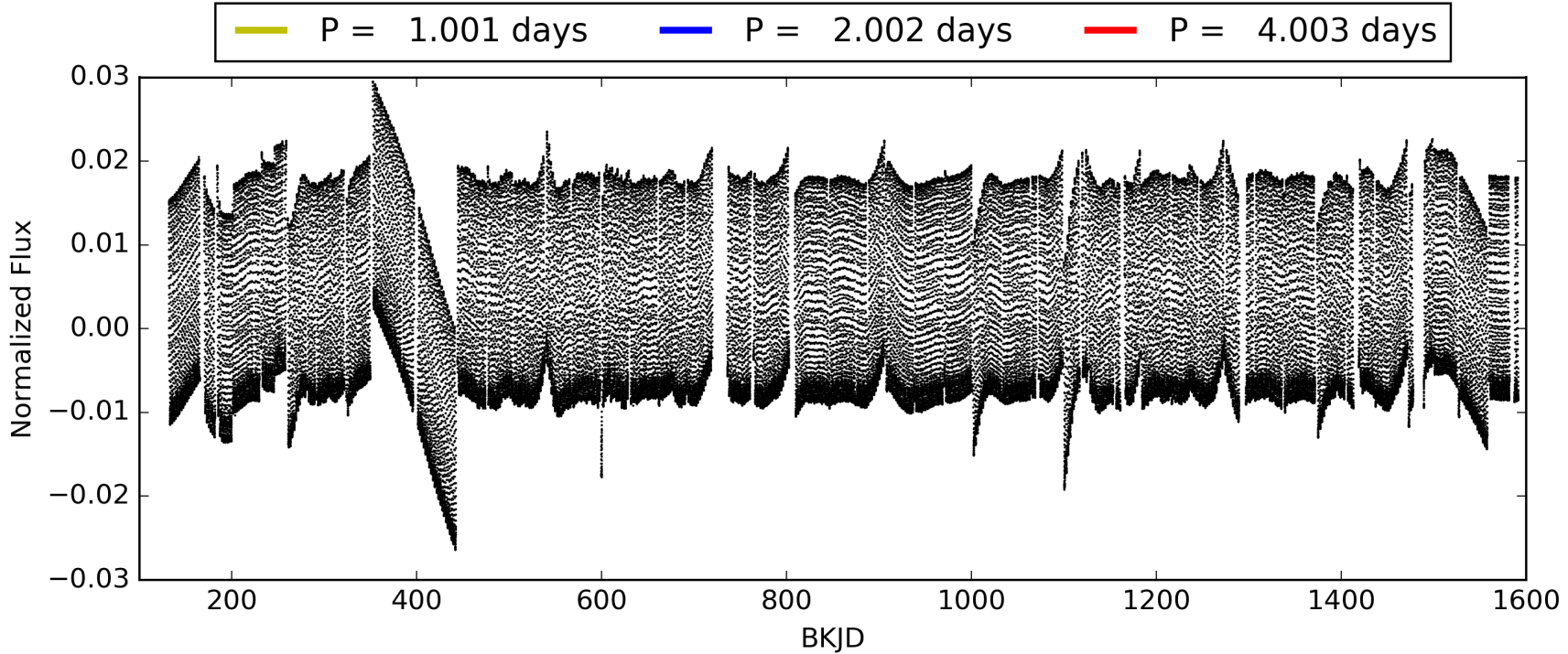
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:33:13 Z

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

TCE 010982373-03, PDC Light Curves

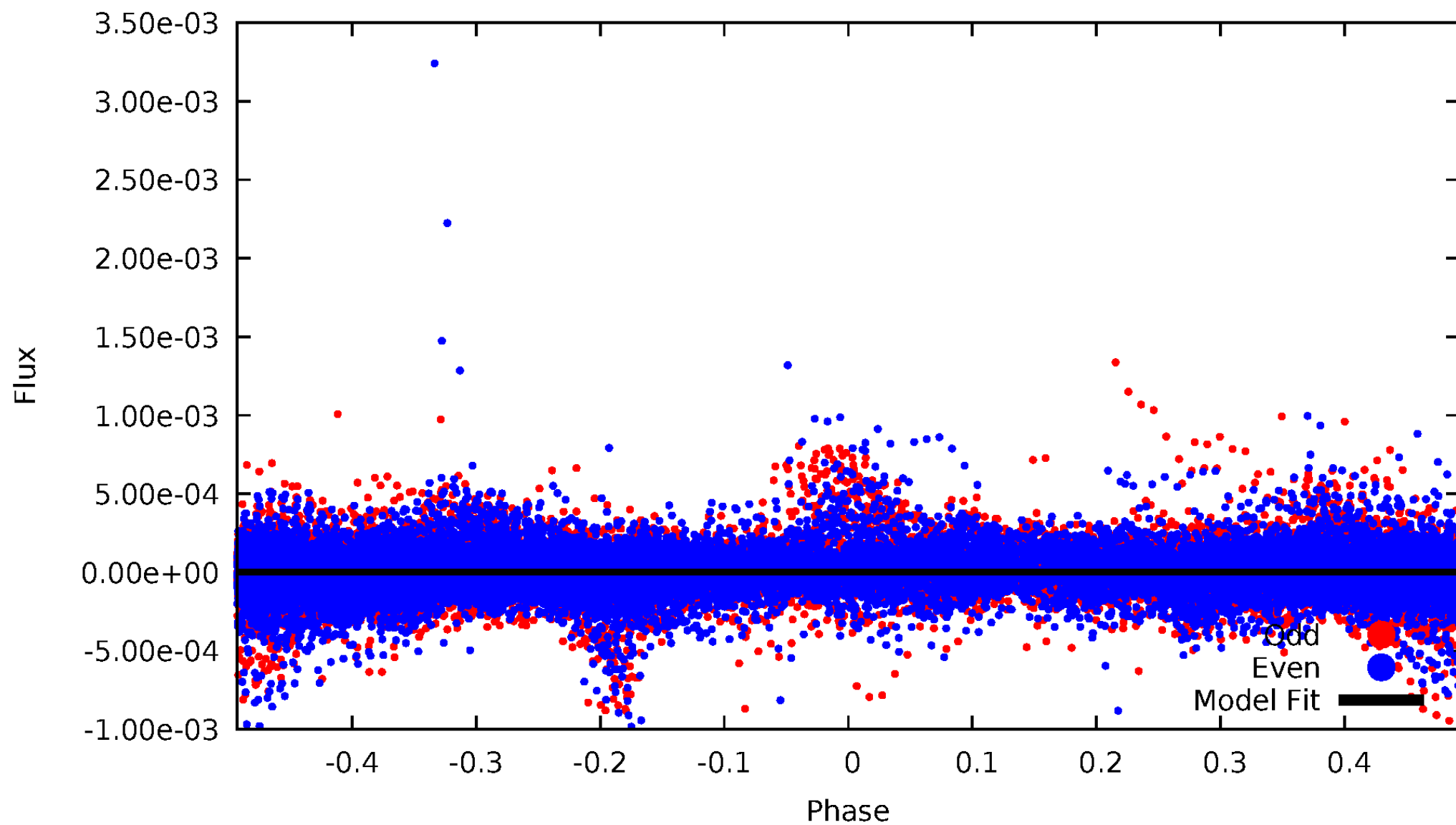


TCE 010982373-03



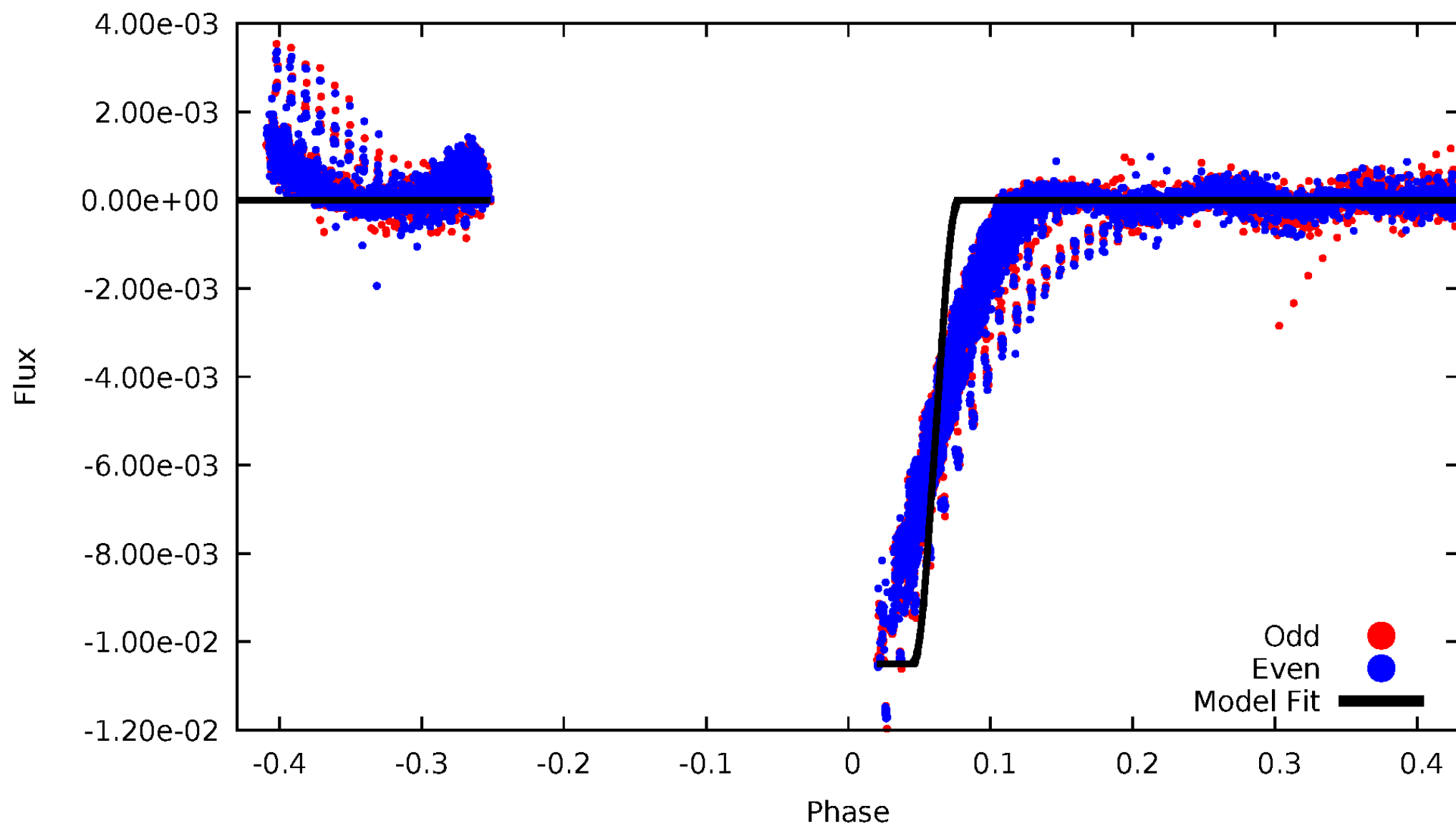
DV Odd/Even

TCE 010982373-03

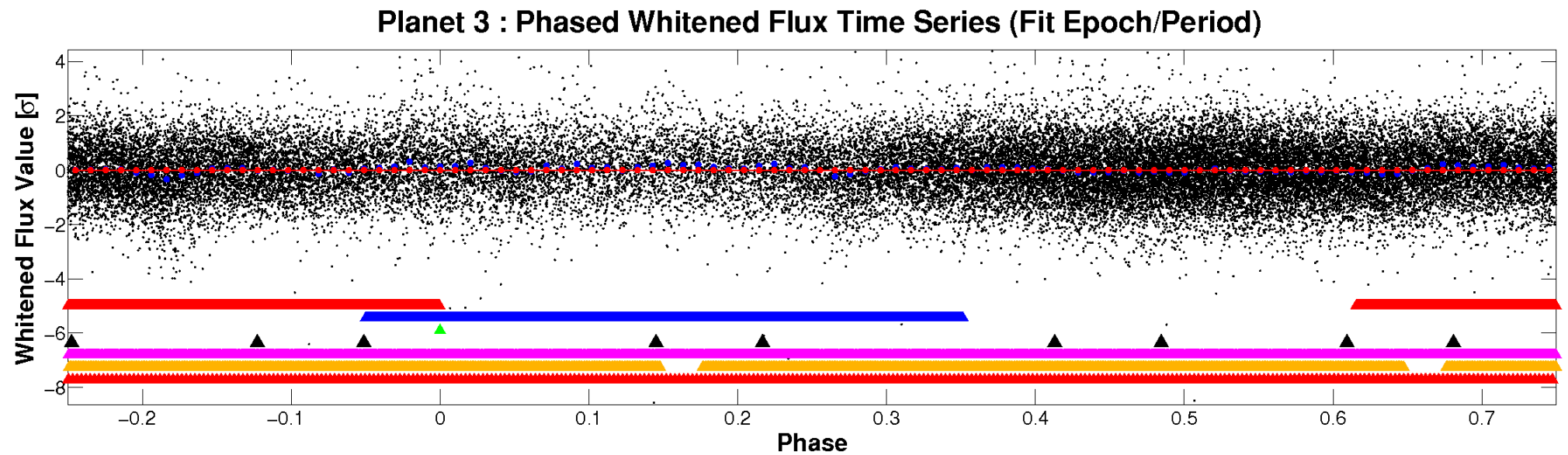
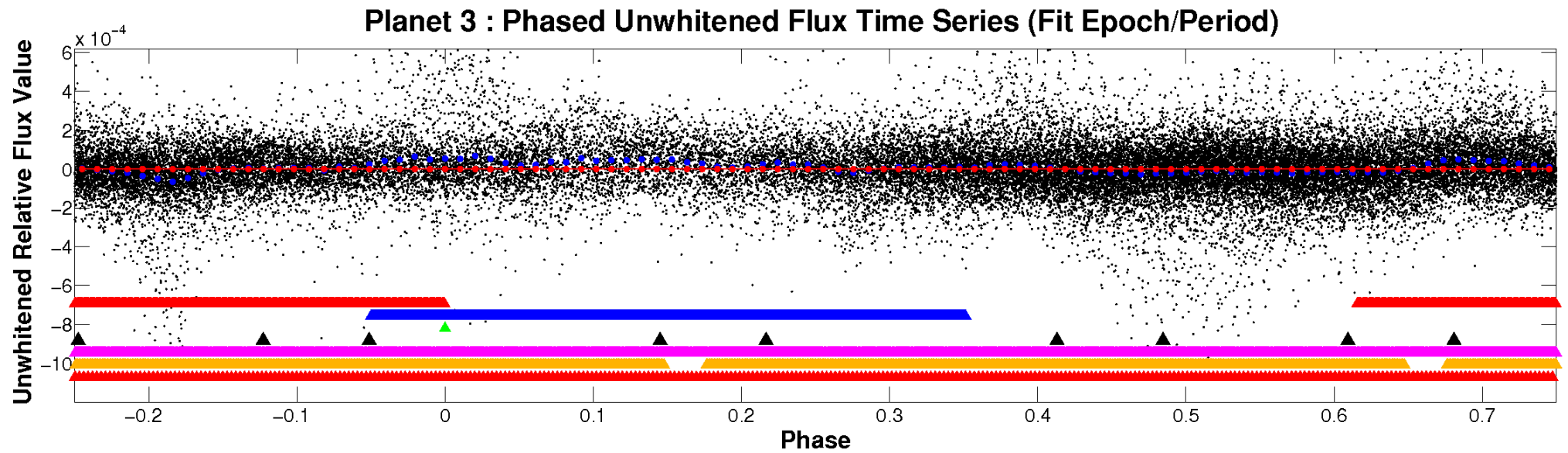


ALT Odd/Even

TCE 010982373-03

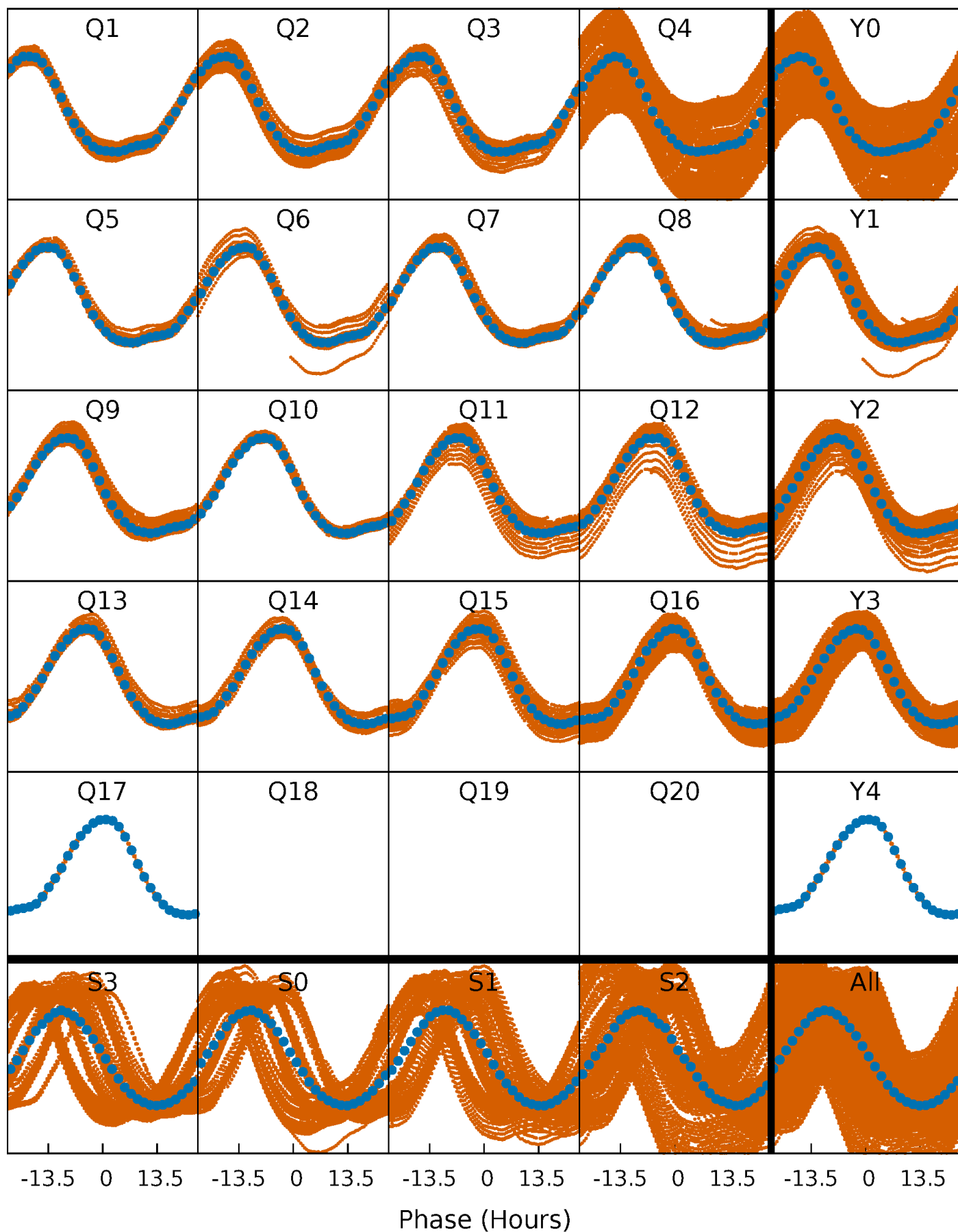


Non-Whitened Vs. Whitened Light Curve



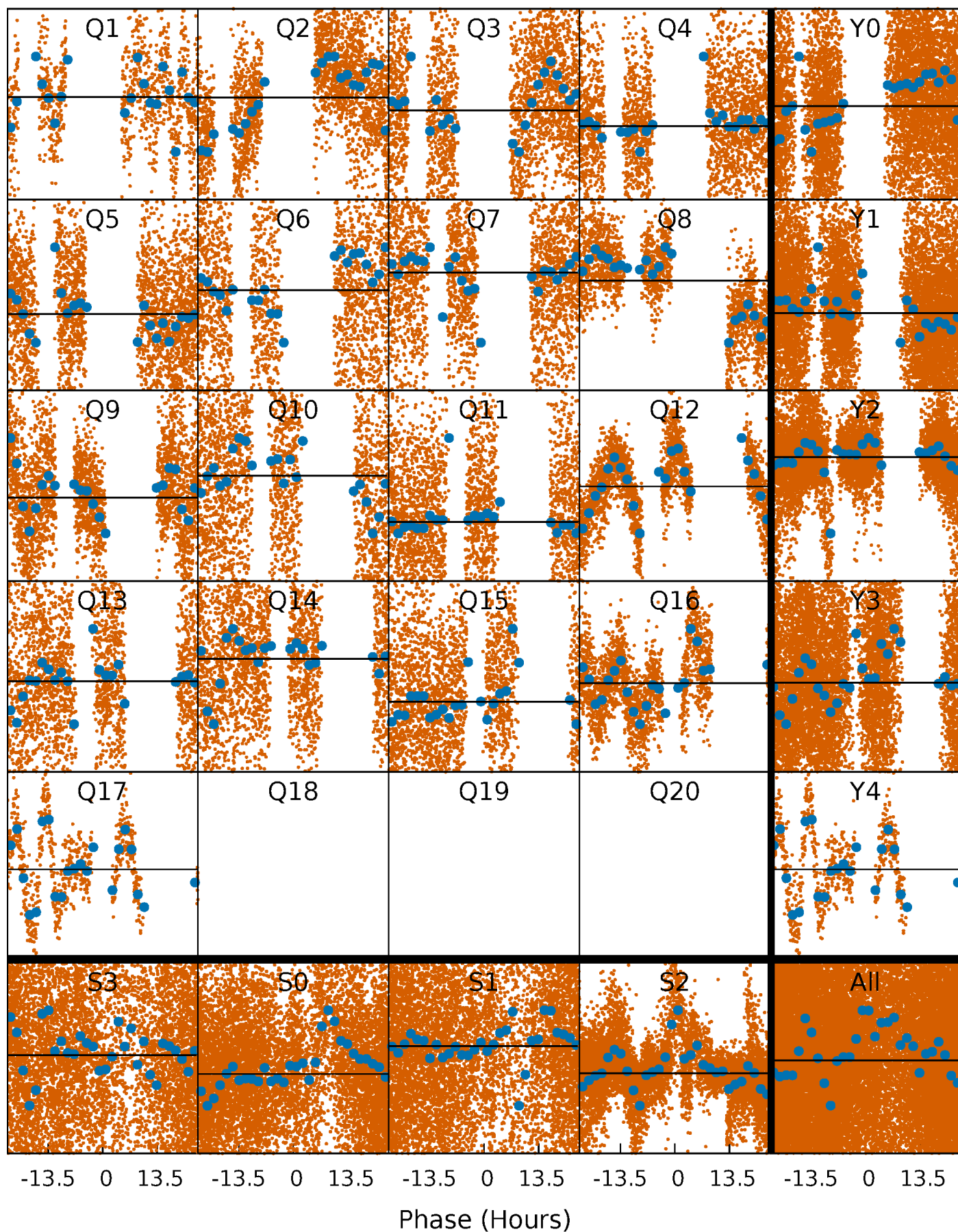
PDC Quarter-Phased Transit Curves

TCE 010982373-03 P= 2.001713 Days $T_0=132.845395$ (BKJD)



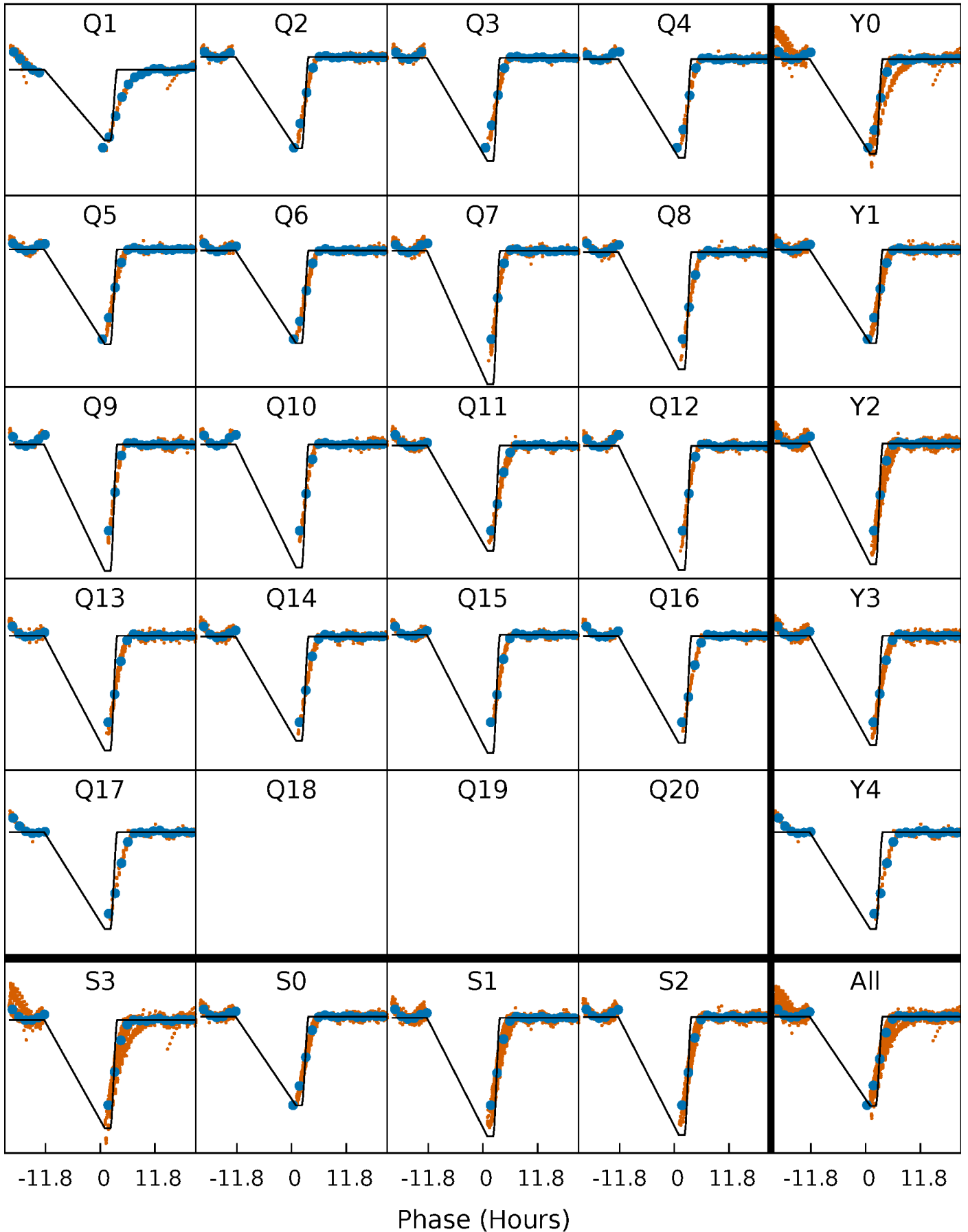
DV Quarter-Phased Transit Curves

TCE 010982373-03 $P = 2.001713$ Days $T_0 = 132.845395$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

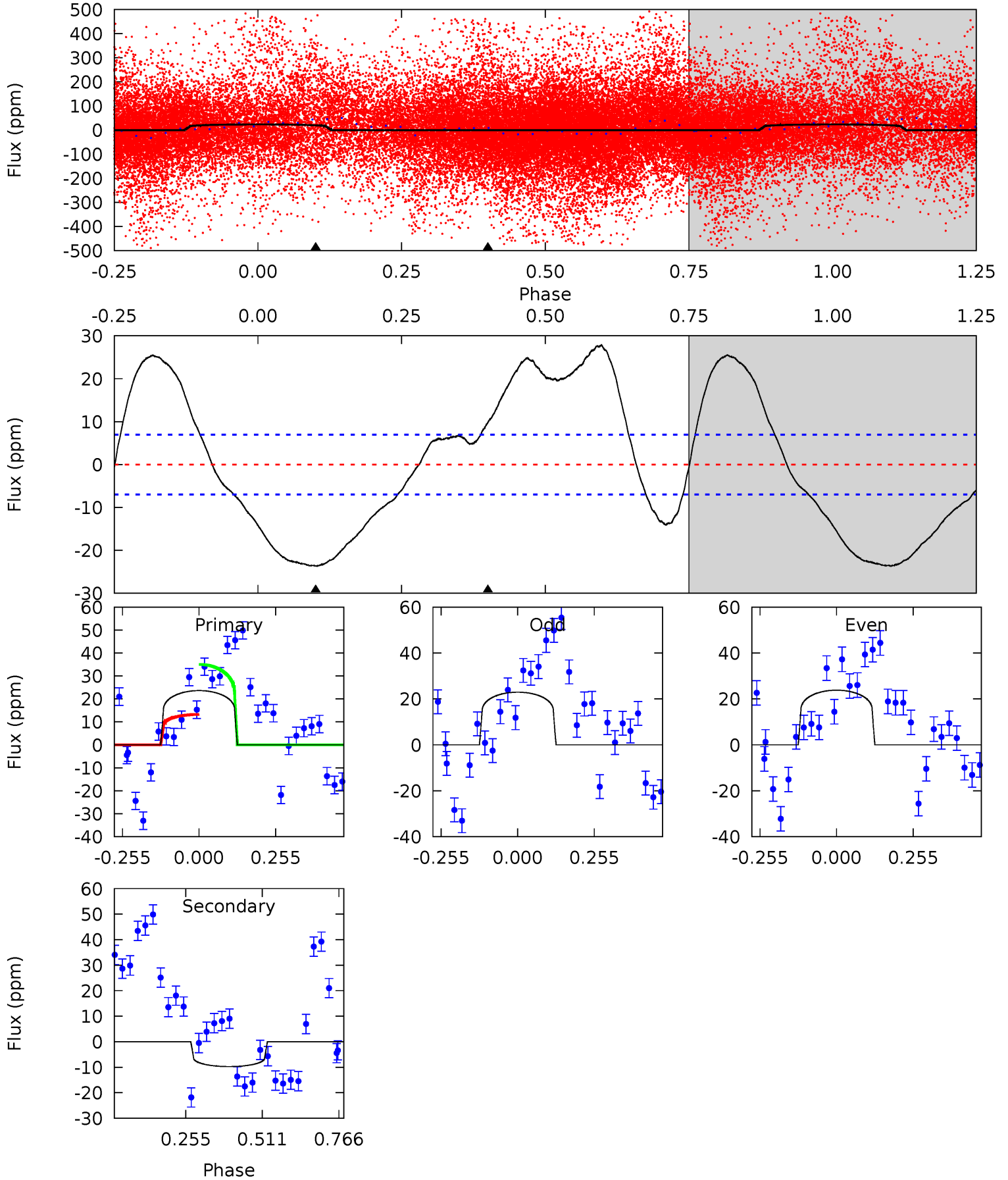
TCE 010982373-03 $P = 2.002783$ Days $T_0 = 132.989724$ (BKJD)



DV Model-Shift Uniqueness Test

010982373-03, P = 2.001713 Days, E = 130.843682 Days

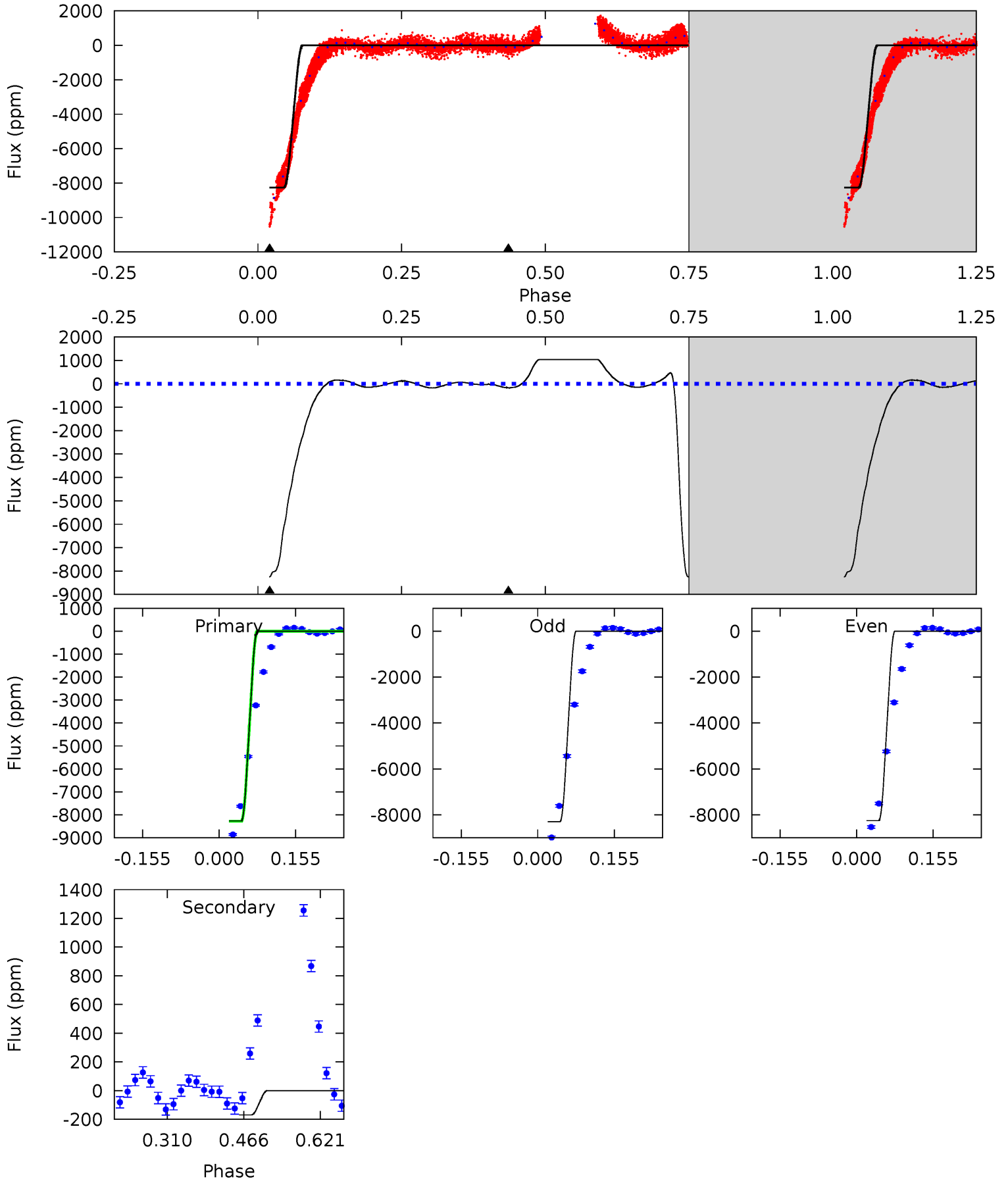
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.8	-6.09	0	0	4.36	1.14	9.49	14.8	14.8	-6.09	-6.09	0.27	1.52	0.54	6.90



Alt Model-Shift Uniqueness Test

010982373-03, P = 2.002783 Days, E = 130.986941 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
938.9	19.2	0	0	4.47	1.42	139.3	938.9	938.9	19.2	19.2	2.30	1.03	0.11	0



Stellar Parameters For KIC 010982373

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	9453^{+399}_{-699}	$3.832^{+0.185}_{-0.203}$	$0.560^{+0.050}_{-0.200}$	$3.407^{+1.033}_{-0.845}$	$2.872^{+0.281}_{-0.422}$	$0.102^{+0.103}_{-0.051}$
	+4%/-7%	+5%/-5%	+9%/-36%	+30%/-25%	+10%/-15%	+101%/-50%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 010982373-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	10 ± 2	$9.73^{+11.58}_{-6.87}$	5139^{+597}_{-595}	-4591^{+431}_{-1387}	$-0.110^{+0.089}_{-1.142}$
Alt.	-169 ± 9	$37.93^{+14.39}_{-14.01}$	5063^{+659}_{-529}	-3714^{+6485}_{-561}	$0.126^{+0.198}_{-0.066}$

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

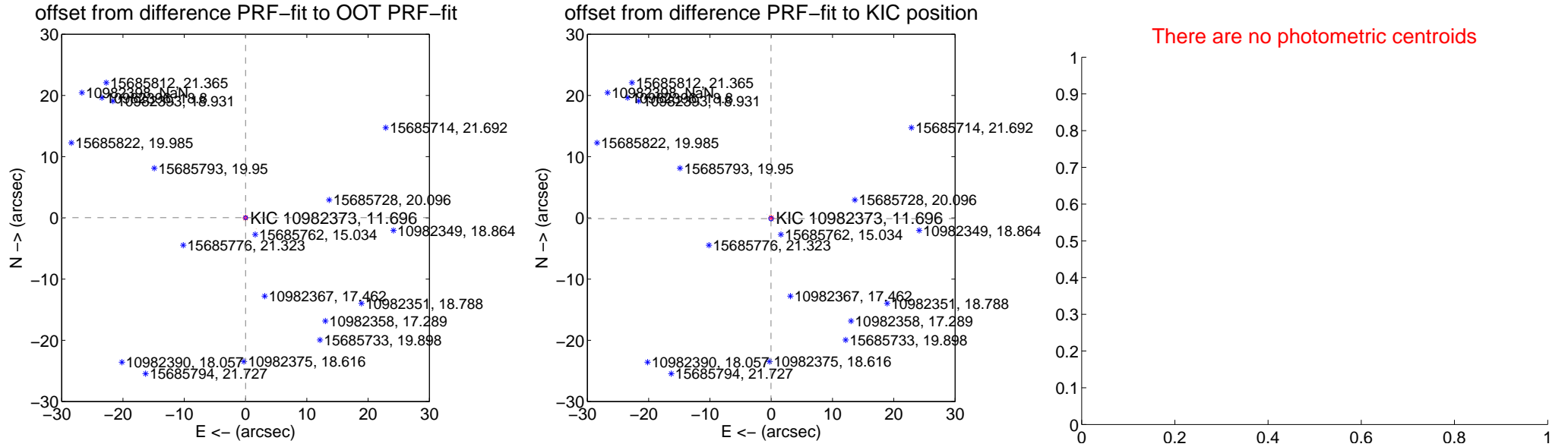
DV Centroid Data

Supplemental centroid analysis for 010982373-03. **Kepler magnitude: 11.70.** Transit SNR 0.00

There are 8 quarters with good PRF difference image offsets

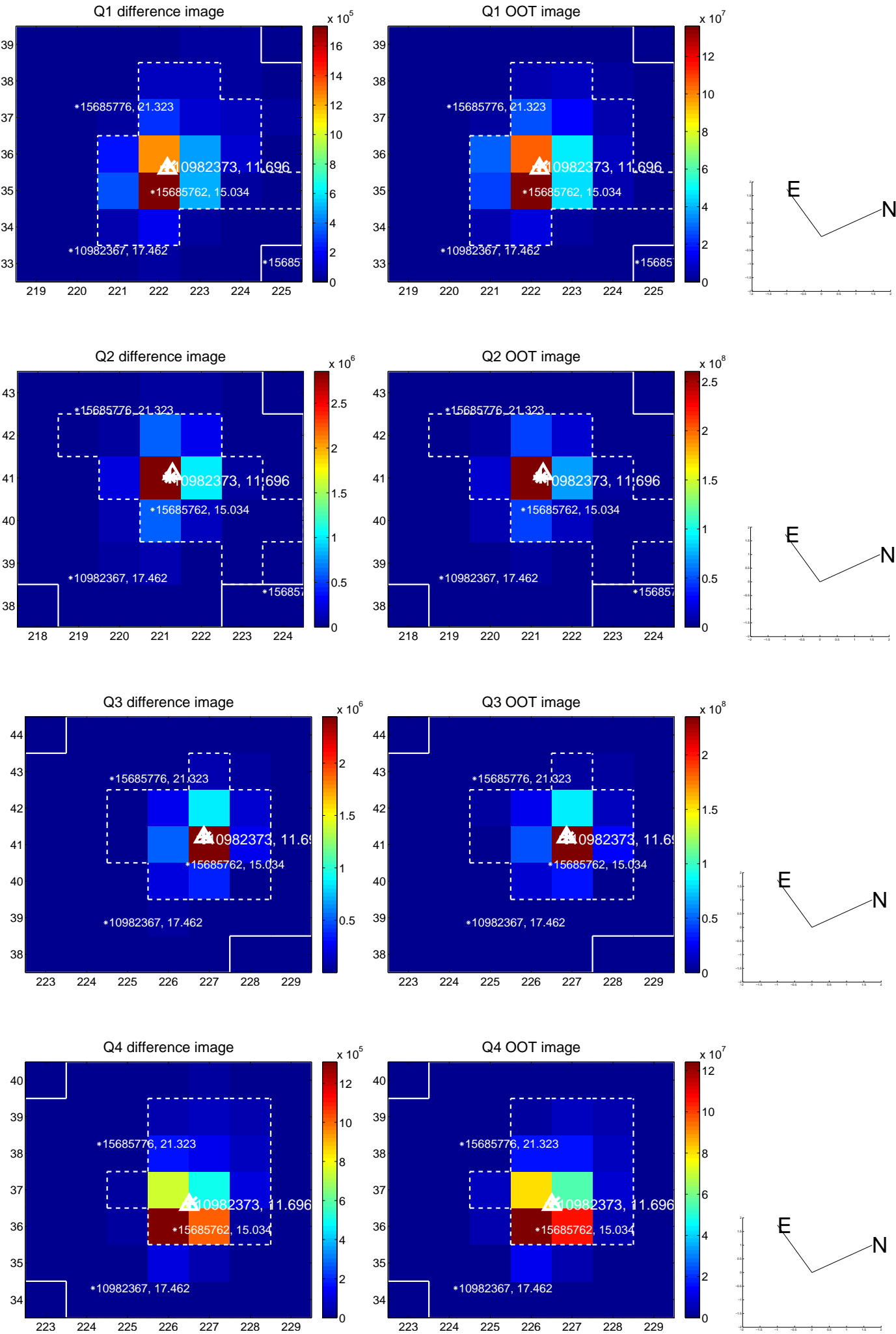
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.032 ± 0.102	0.31	-0.012 ± 0.134	0.029 ± 0.147
PRF-fit source offset from KIC position	0.131 ± 0.121	1.08	0.034 ± 0.137	-0.126 ± 0.150
photometric centroid source offset	—	—	—	—

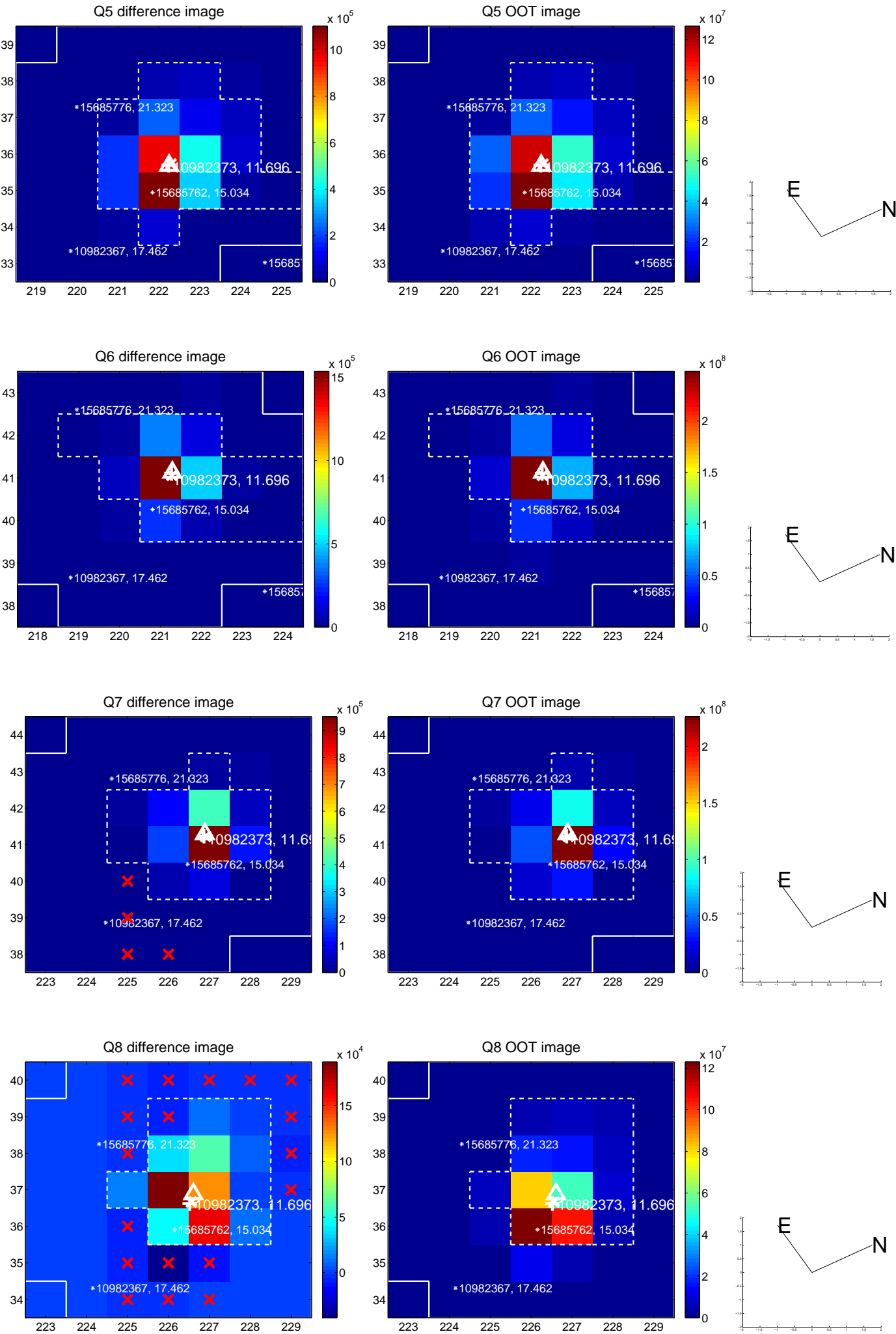


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

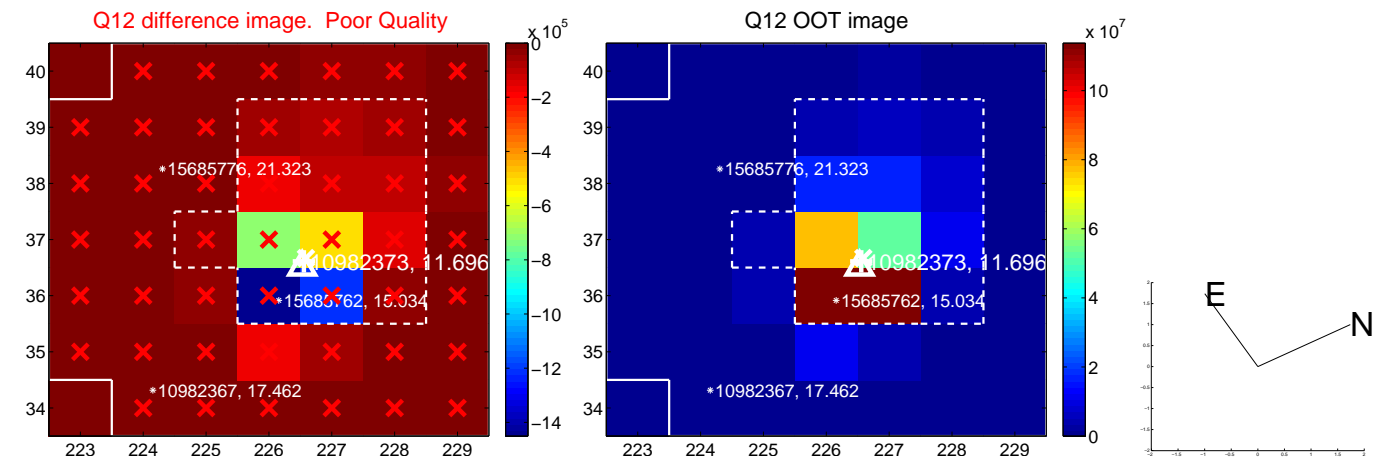
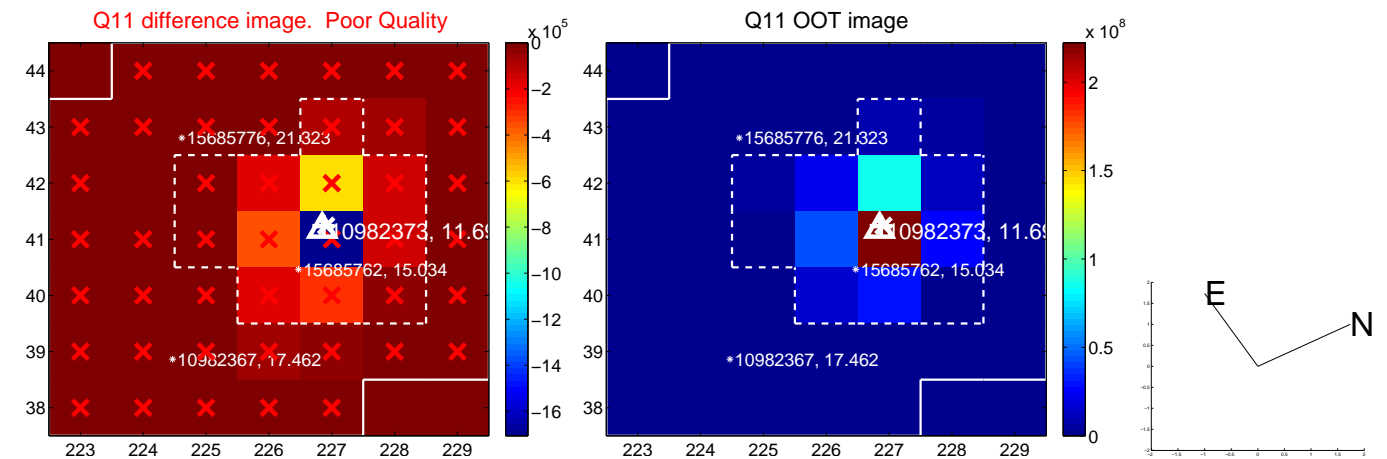
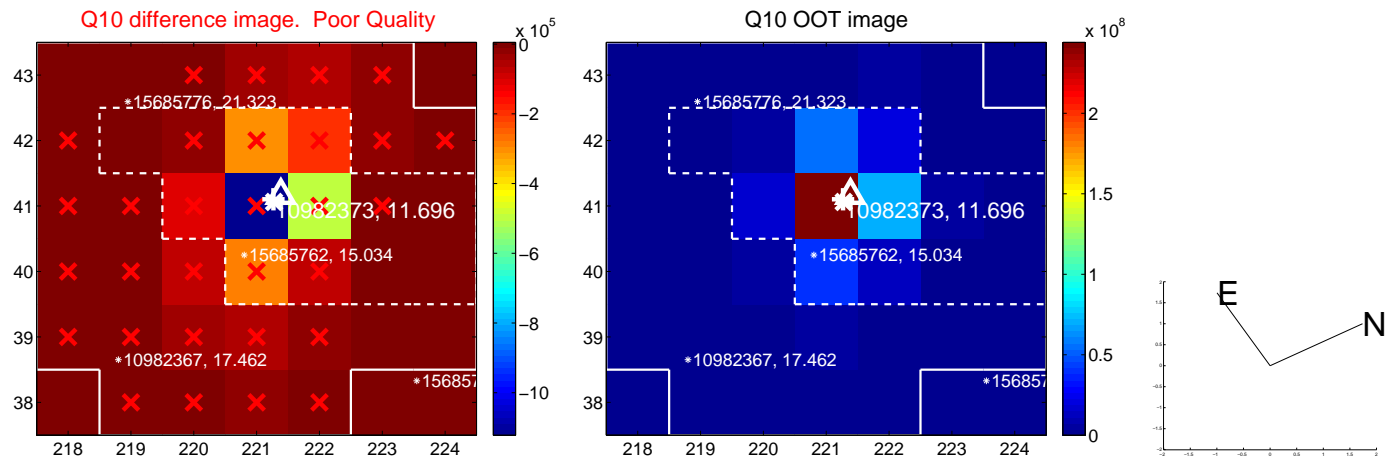
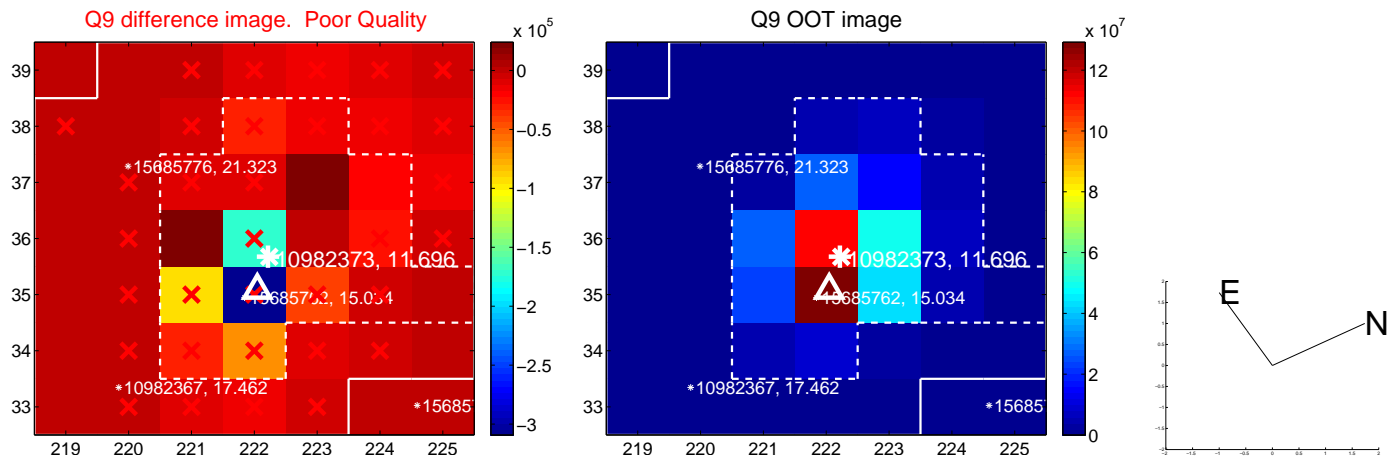
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



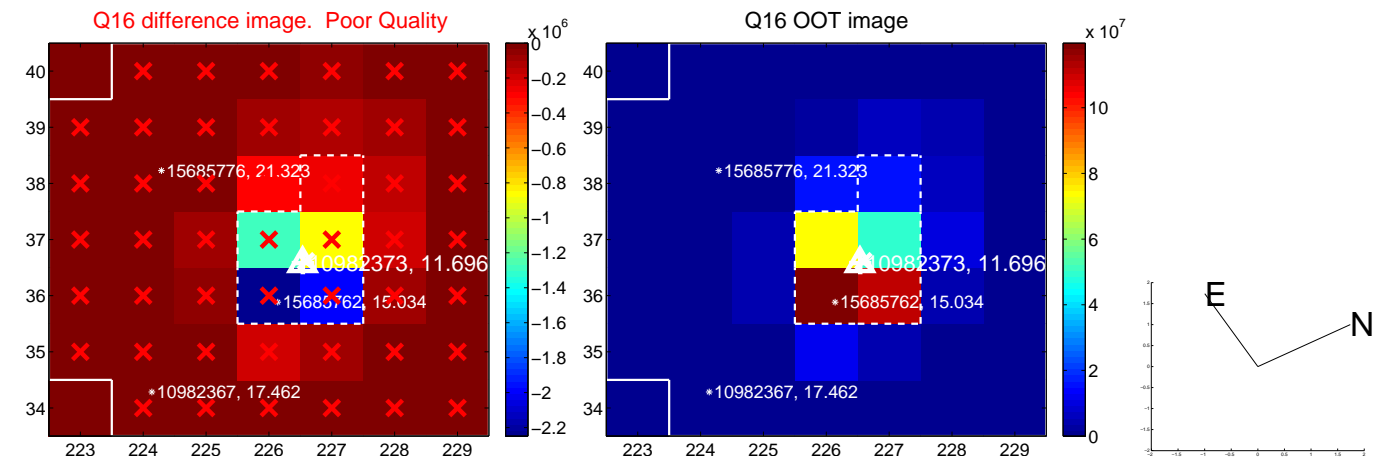
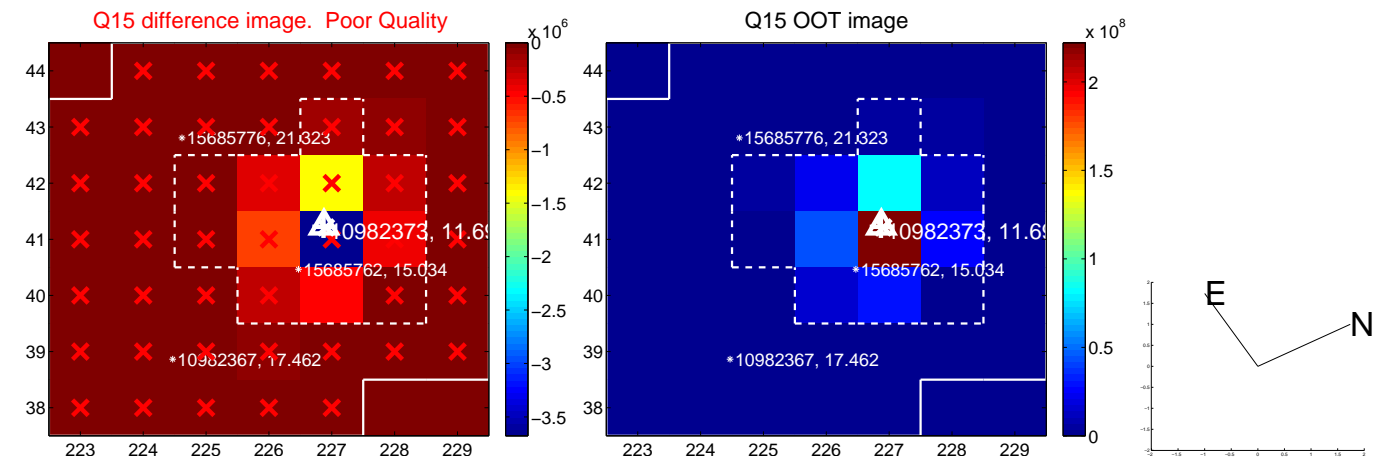
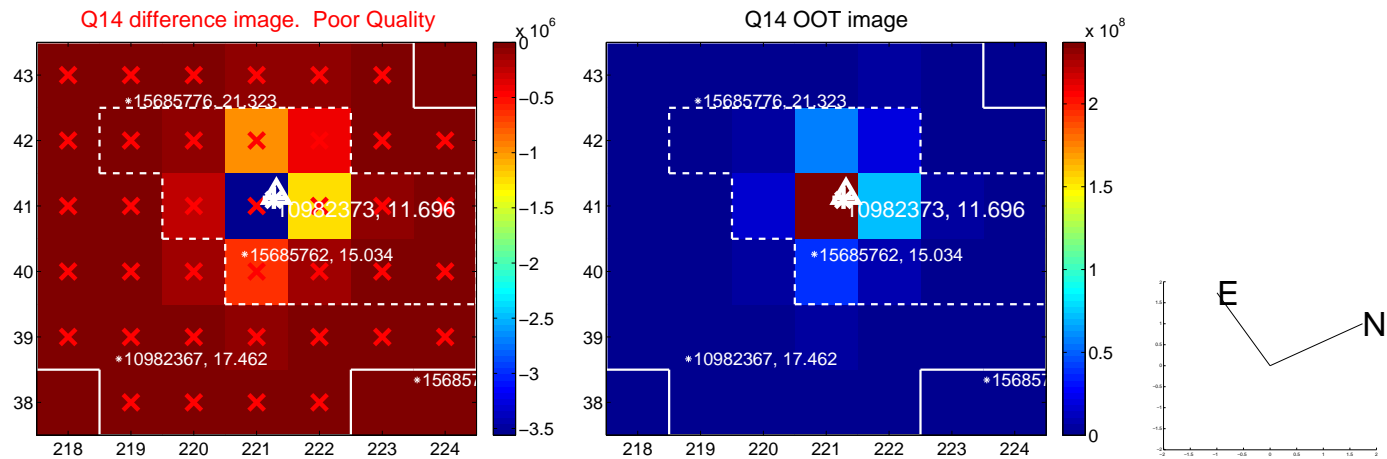
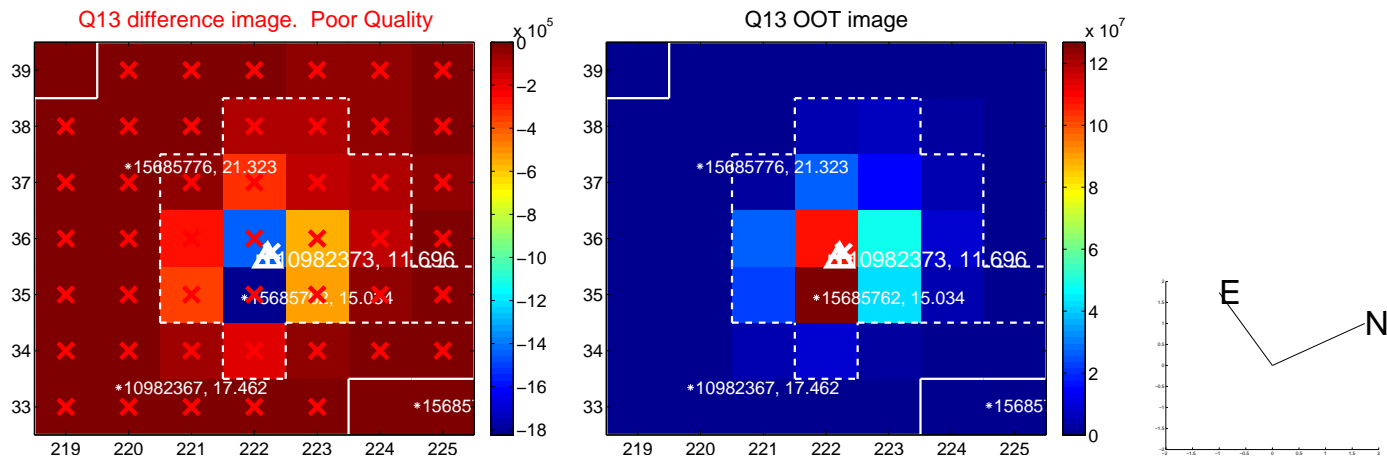
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



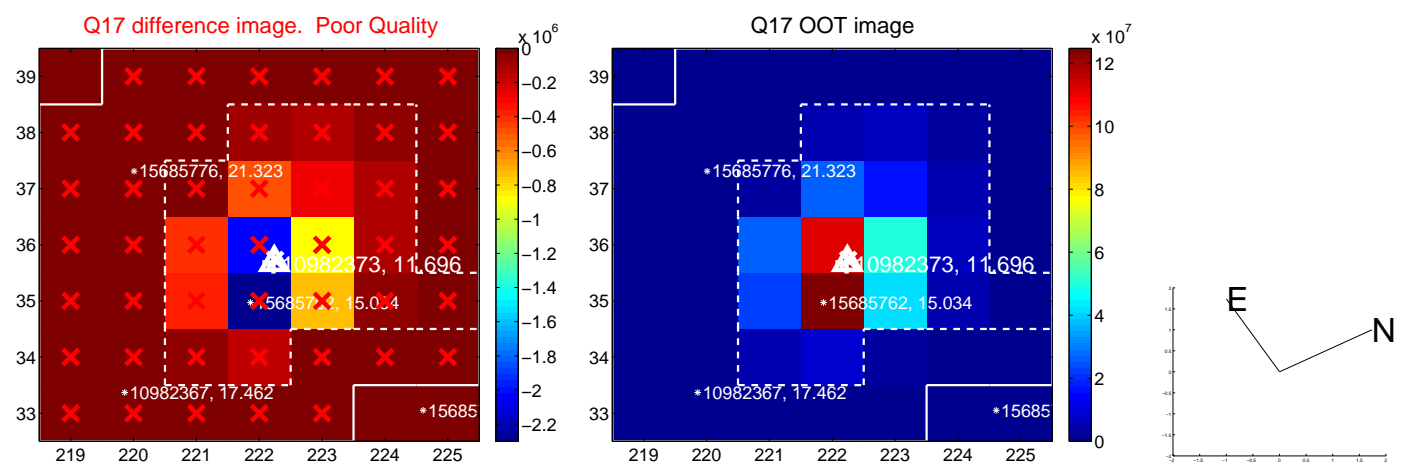
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



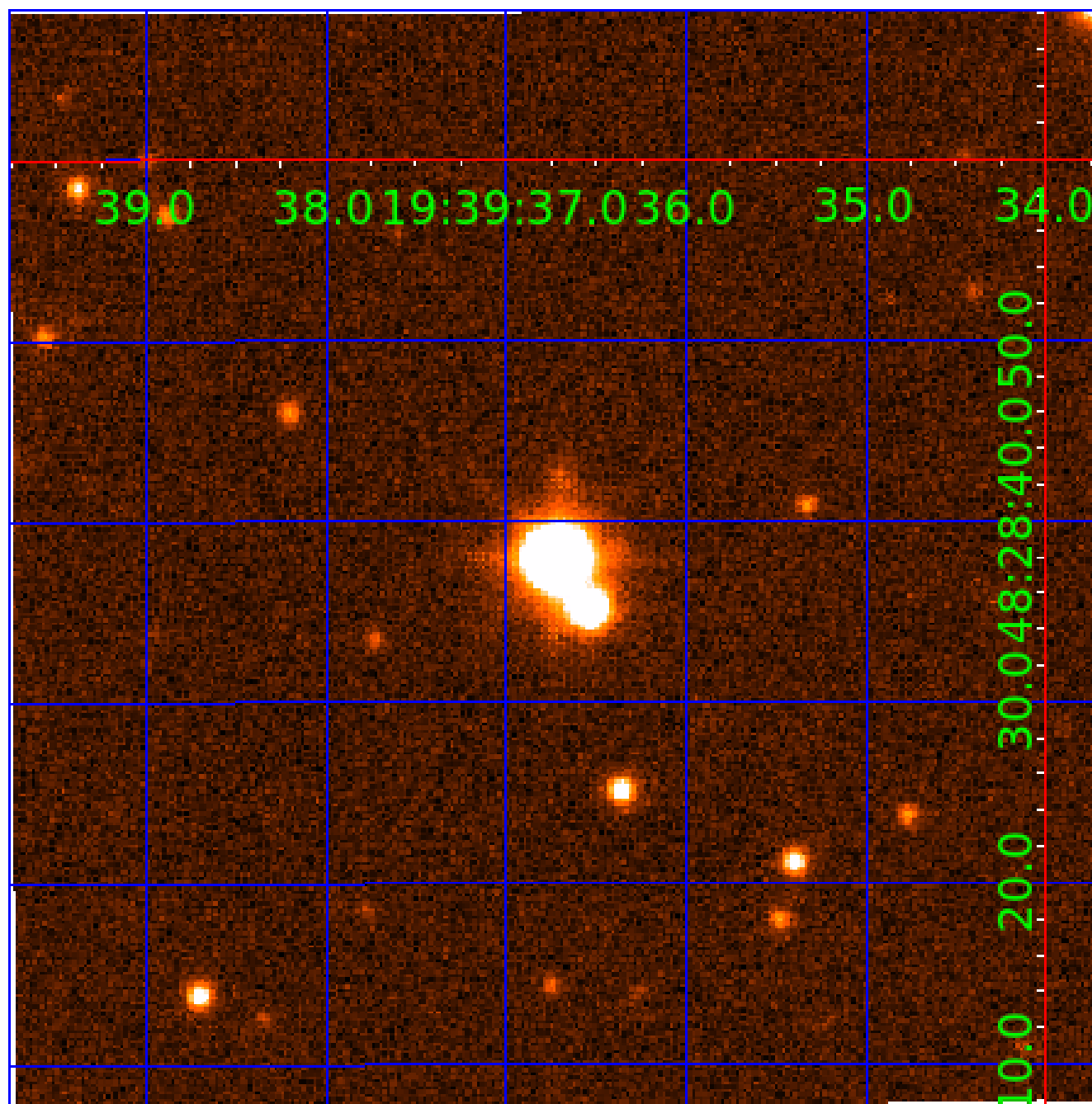
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 010982373

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})
010982373-01	OBS	7395.01	2.002769	132.075962	44.2	1.493	12.8	17.4	3.41	9453	2.62	42453.49
010982373-02	OBS	No	2.002816	132.745453	17.8	4.363	11.5	8.7	3.41	9453	1.65	42452.15
010982373-03	OBS	No	2.001713	132.845395	0.0	11.833	10.4	0.0	3.41	9453	0.01	42483.35
010982373-04	OBS	No	153.595656	252.452623	100.8	7.592	16.5	6.2	3.41	9453	3.59	130.29
010982373-05	OBS	No	1.001650	132.200146	59.6	0.934	15.7	8.9	3.41	9453	3.00	106938.28
010982373-06	OBS	No	1.001505	132.197002	30.5	1.174	15.2	7.8	3.41	9453	2.35	106958.89
010982373-07	OBS	No	2.007581	131.987777	81.2	3.500	12.4	-1.0	3.41	9453	3.14	42317.84

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010982373-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_ZUMA_TRACKER—SWEET_NTL—CENT_FEW_DIFFS
010982373-02	OBS	FP	0.00	1	0	1	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—HALO_GHOST
010982373-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
010982373-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—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
010982373-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
010982373-06	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_UNRESOLVED_OFFSET
010982373-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—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.

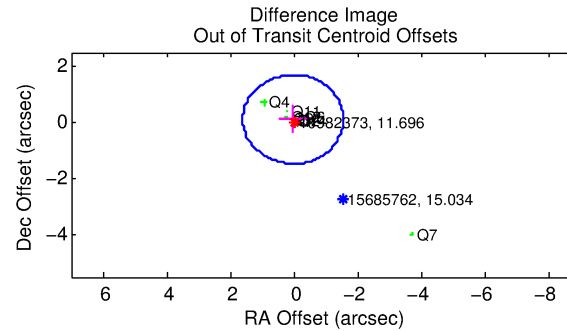
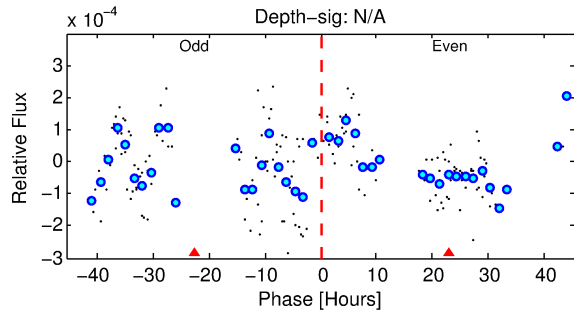
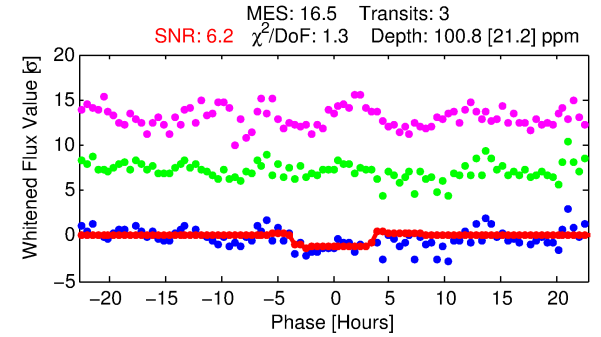
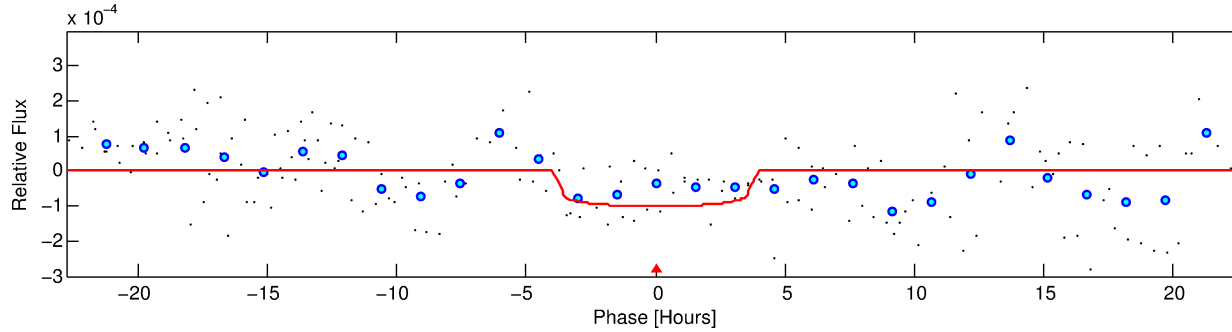
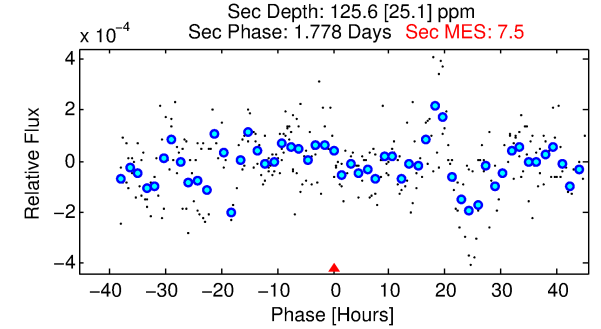
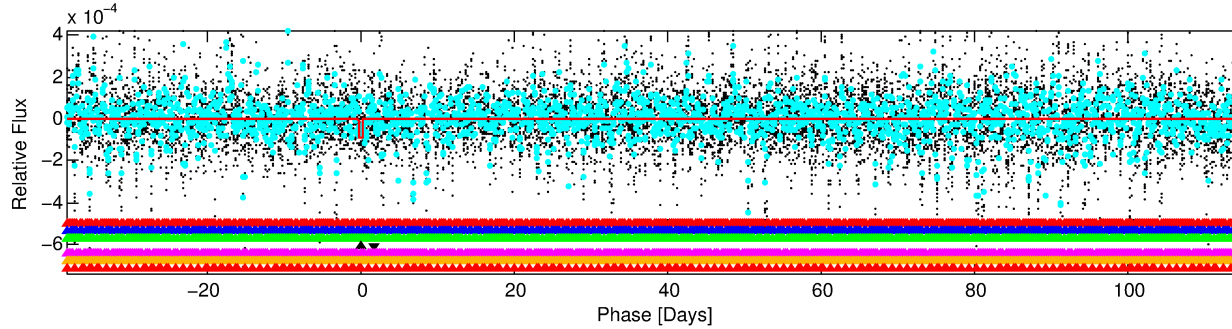
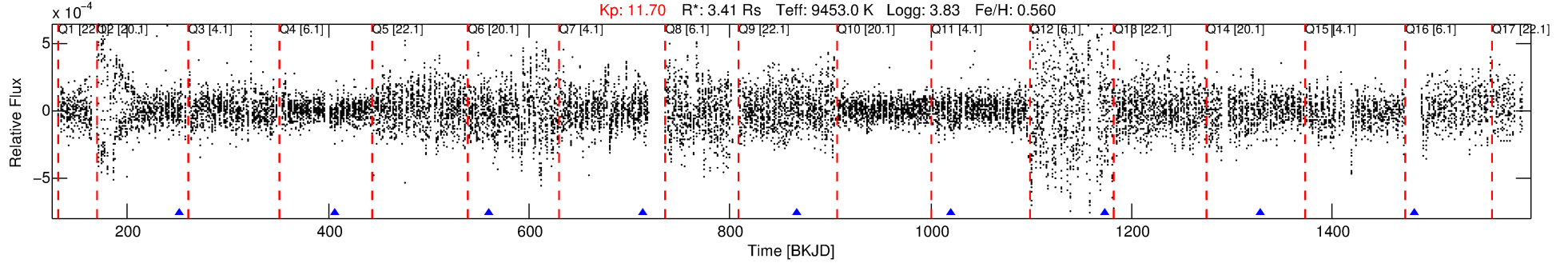
Ephemeris Match Information For 010982373-04

No Significant Match Found

DV One-Page Summary

KIC: 10982373 Candidate: 4 of 7 Period: 153.596 d
KOI: K07395 Corr: No Ephemeris Match

Kp: 11.70 R*: 3.41 Rs Teff: 9453.0 K Logg: 3.83 Fe/H: 0.560



DV Fit Results:

Period = 153.59566 [0.00435] d
Epoch = 252.4526 [0.0158] BKJD
Rp/R* = 0.0096 [0.0144]
a/R* = 131.91 [1355.19]
b = 0.54 [13.57]
Seff = 130.29 [61.86]
Teq = 861 [102] K
Rp = 3.59 [5.48] Re
a = 0.7984 [0.2038] AU
Ag = 3426.49 [10366.18] [0.33σ]
Teffp = 10191 [7686] K [1.2σ]

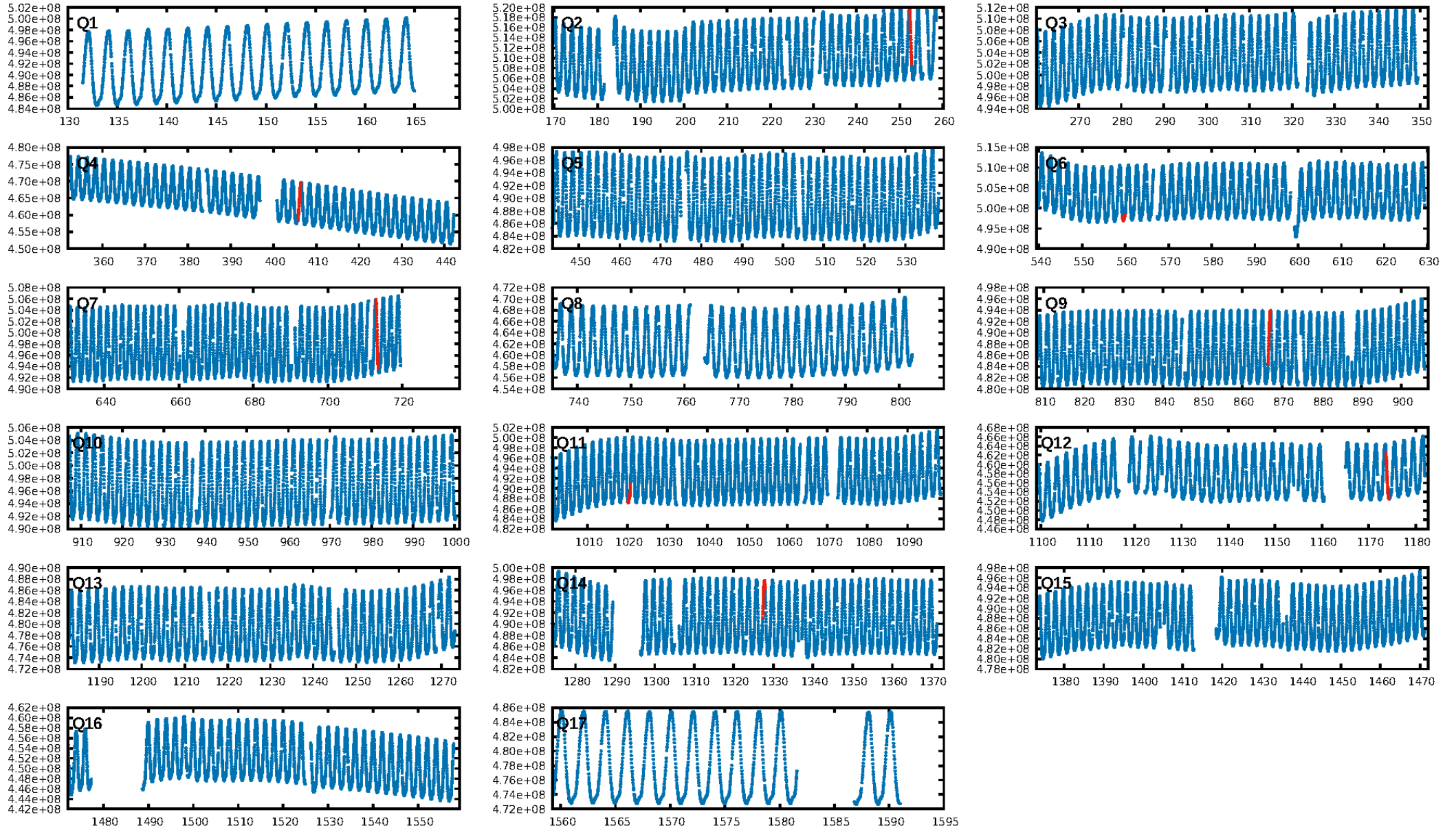
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [435.19σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 24.2%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.05
Centroid-sig: 29.1%
Centroid-so: 1.138 arcsec [0.95σ]
OotOffset-rm: 0.116 arcsec [0.22σ]
KicOffset-rm: 0.178 arcsec [0.28σ]
OotOffset-st: 3/2/2/1 [8]
KicOffset-st: 3/2/2/1 [8]
DiffImageQuality-fgm: 0.38 [3/8]
DiffImageOverlap-fno: 0.00 [0/8]

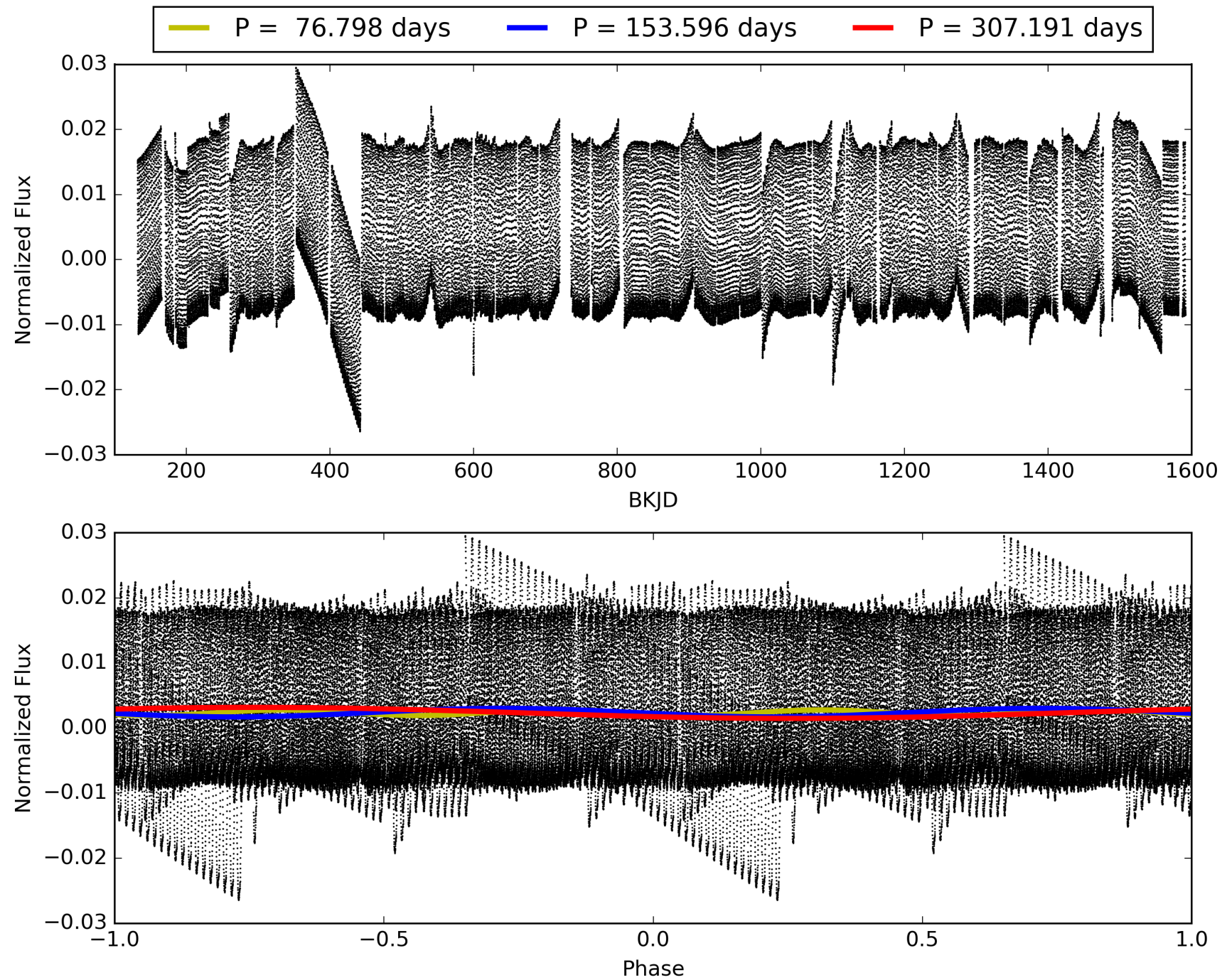
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:33:22 Z

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

TCE 010982373-04, PDC Light Curves

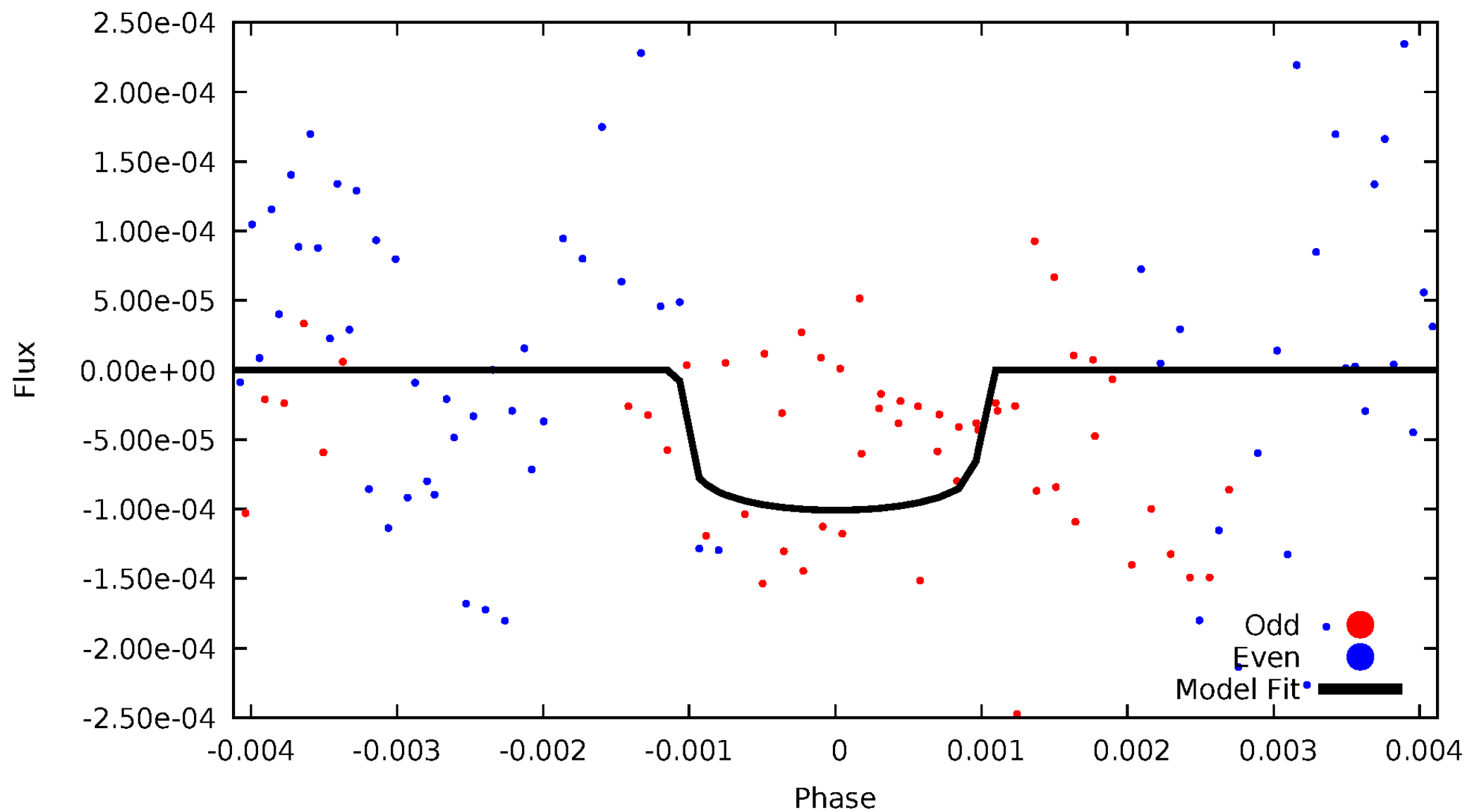


TCE 010982373-04



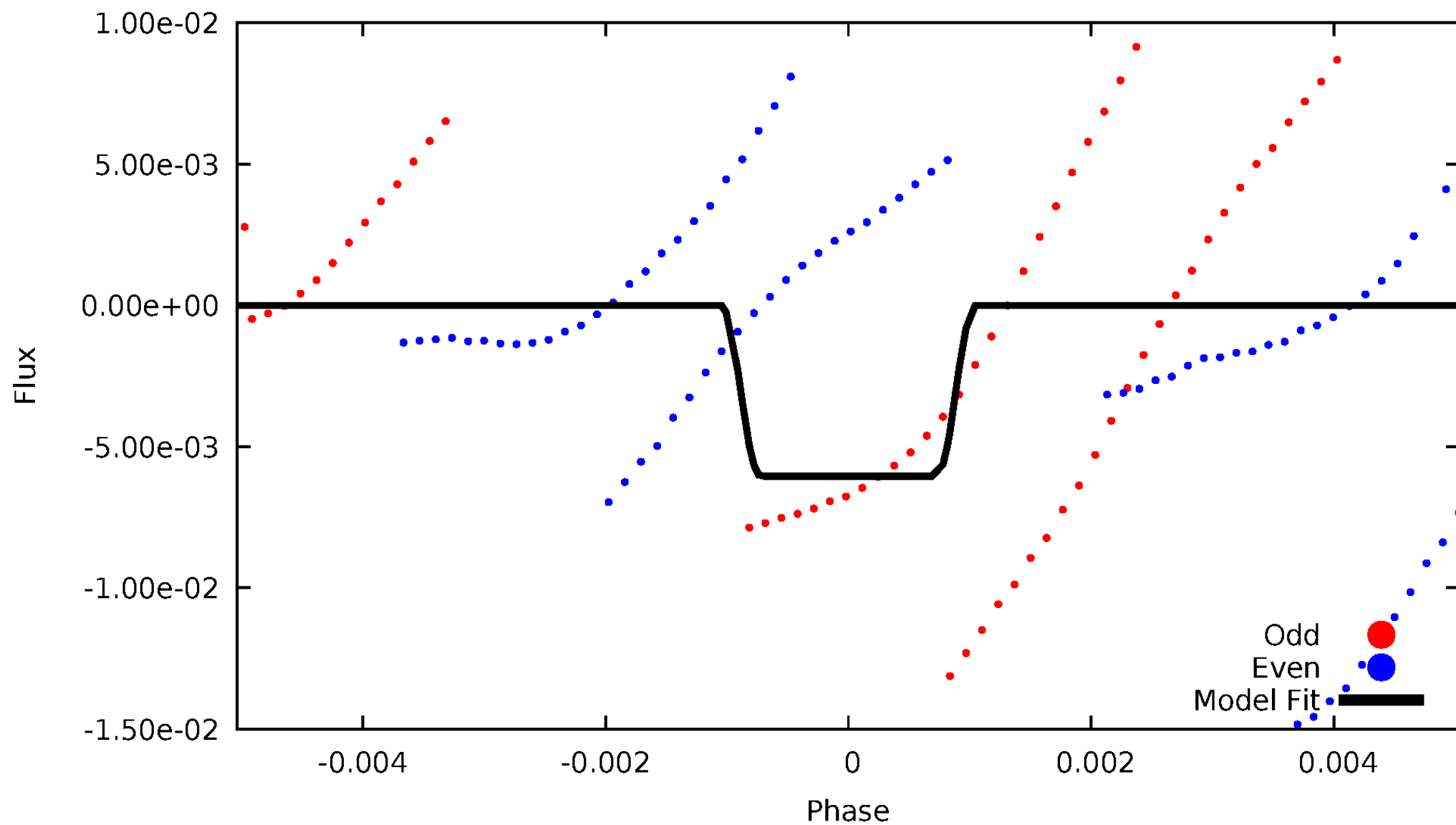
DV Odd/Even

TCE 010982373-04



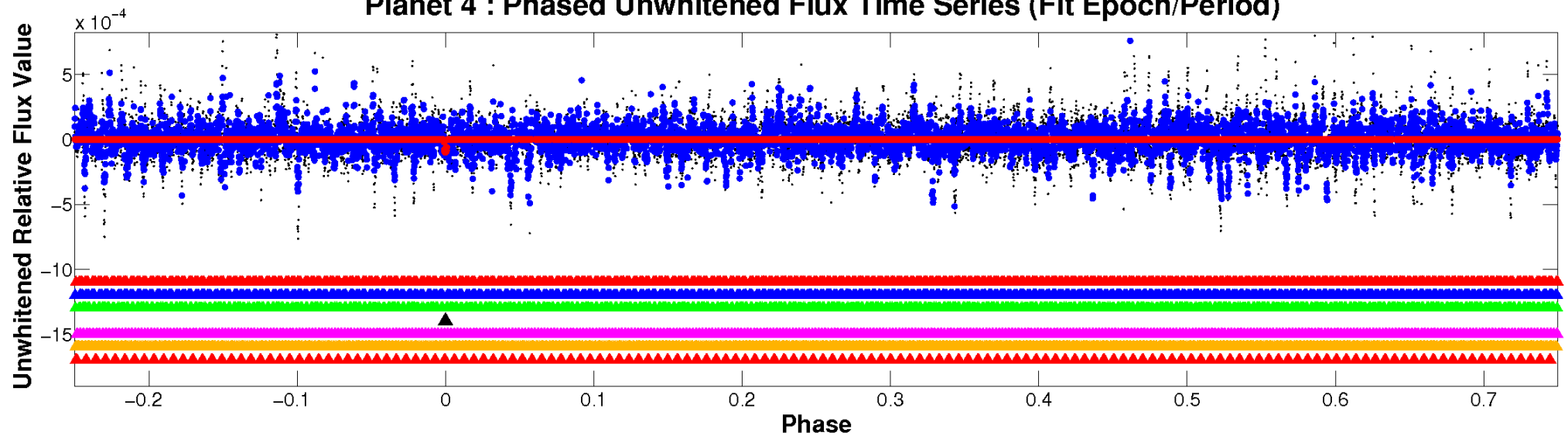
ALT Odd/Even

TCE 010982373-04

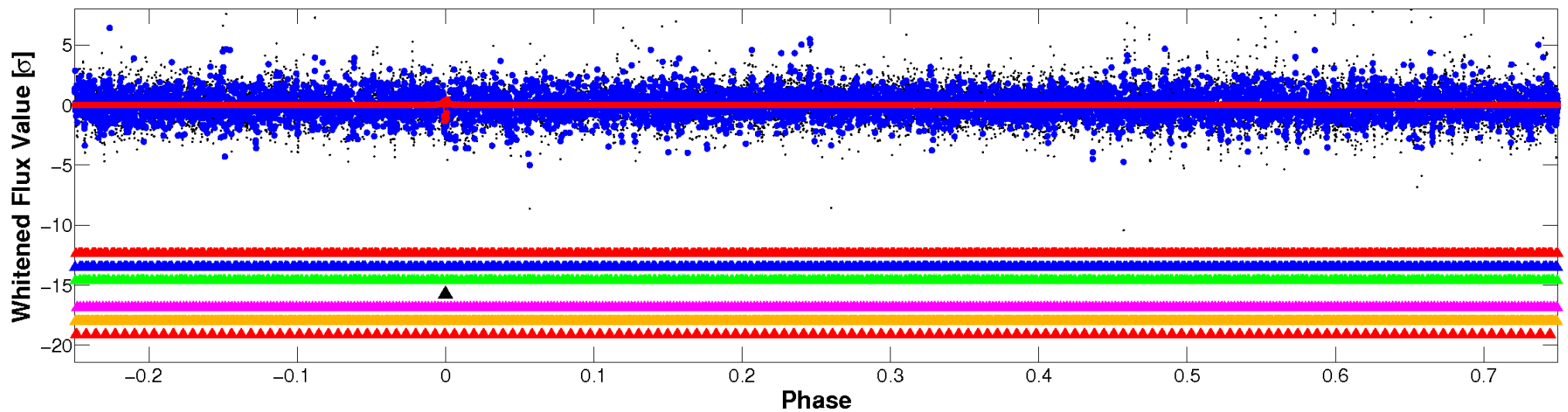


Non-Whitened Vs. Whitened Light Curve

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

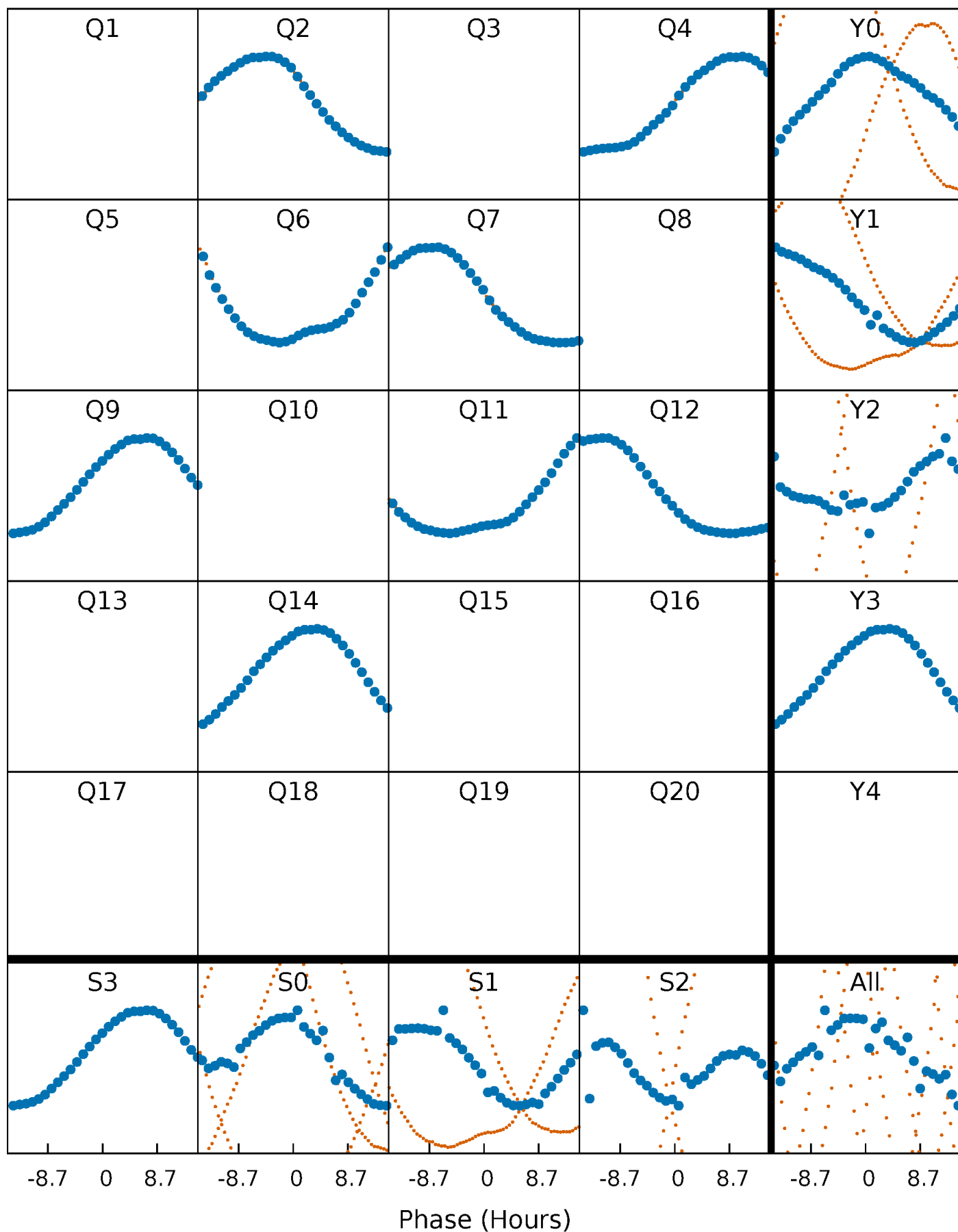


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



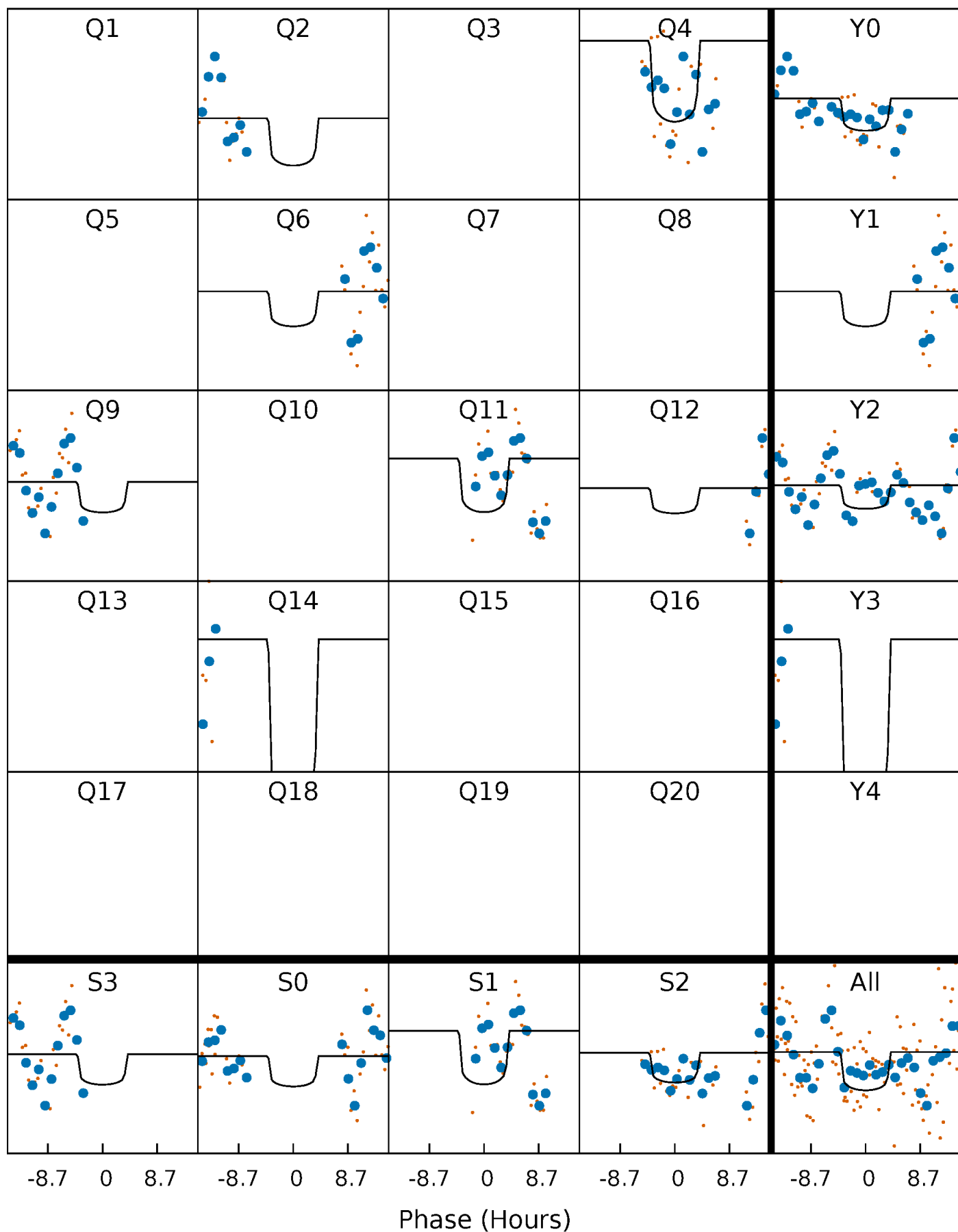
PDC Quarter-Phased Transit Curves

TCE 010982373-04 P=153.595656 Days $T_0=252.452623$ (BKJD)



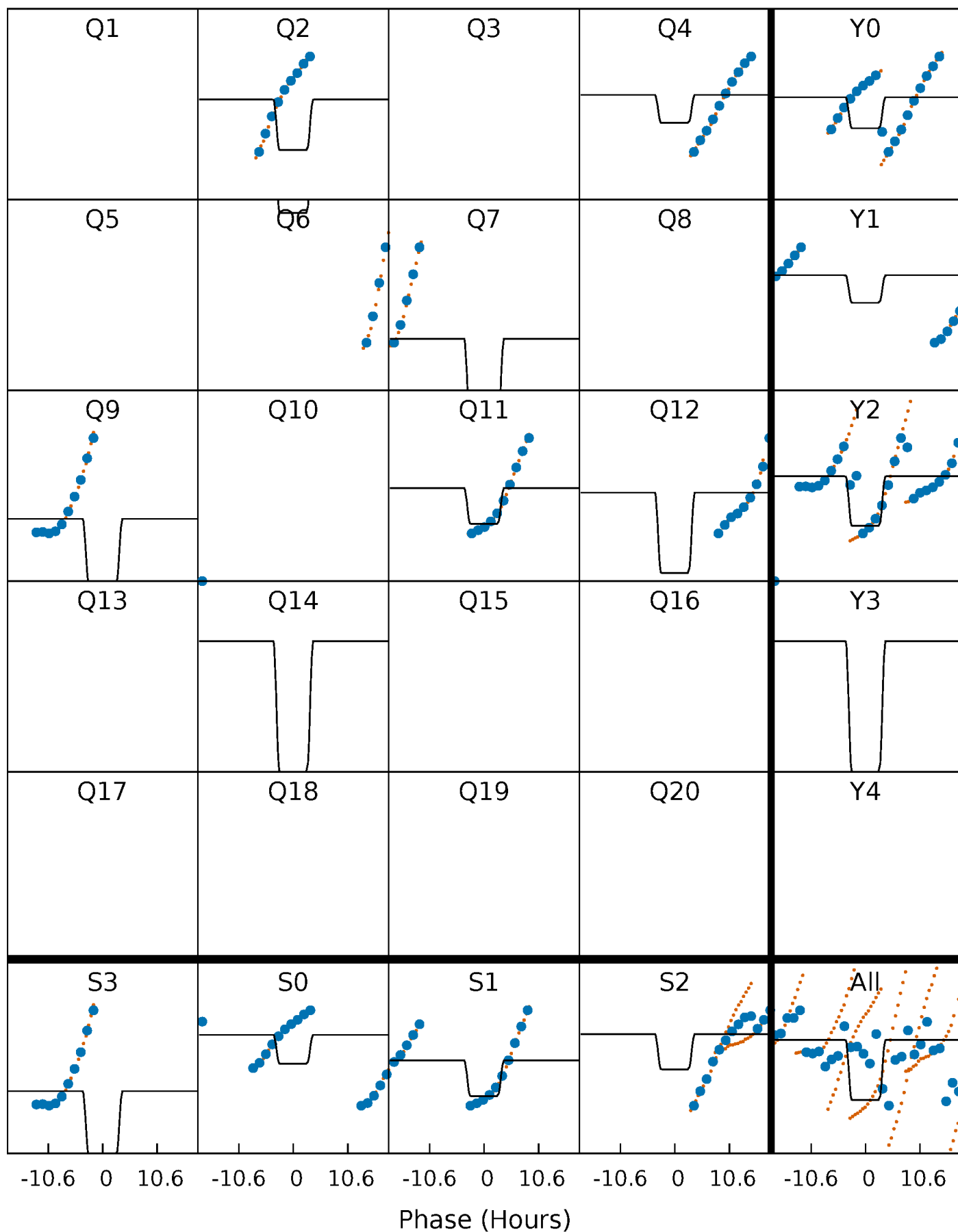
DV Quarter-Phased Transit Curves

TCE 010982373-04 $P=153.595656$ Days $T_0=252.452623$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

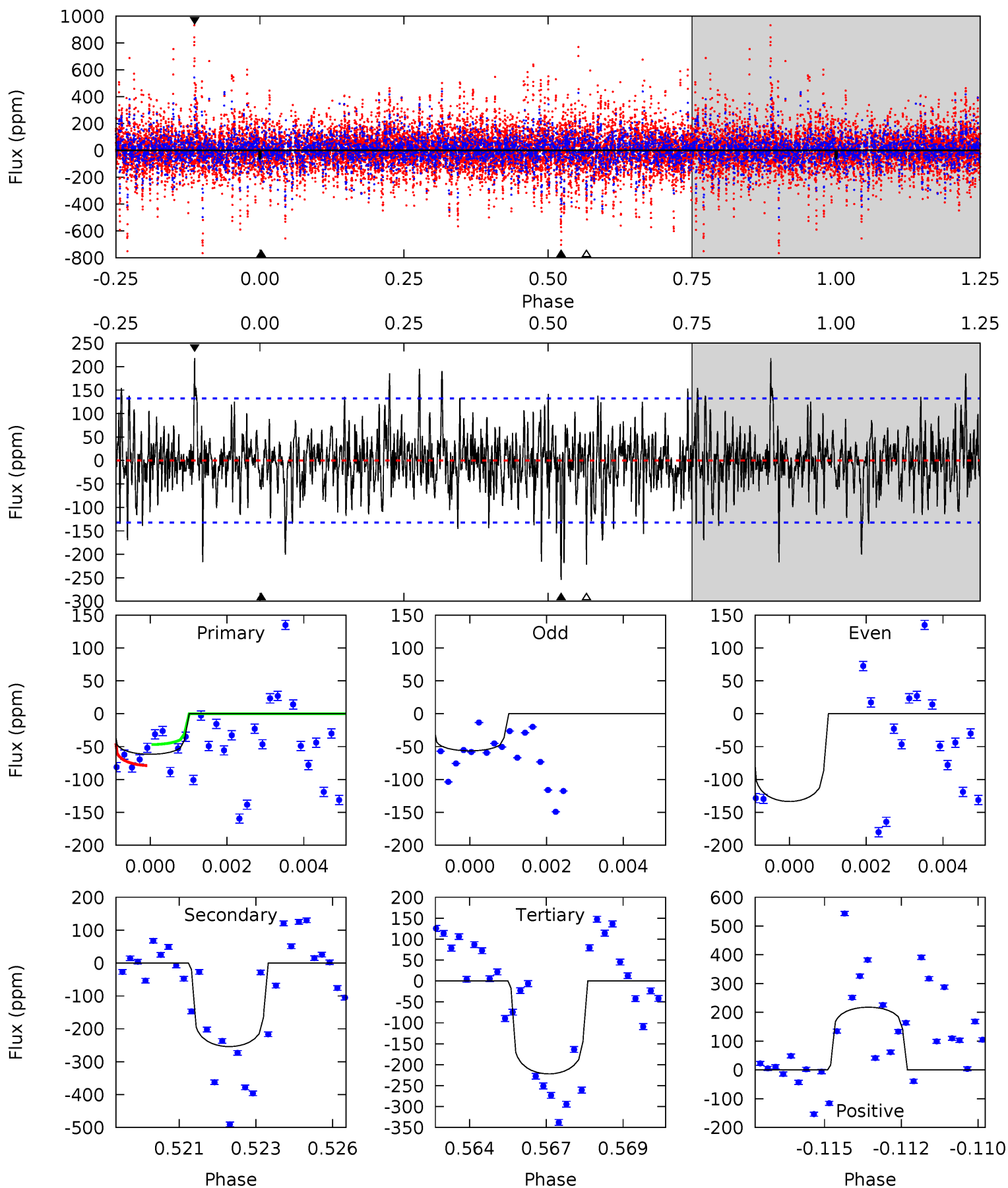
TCE 010982373-04 P=153.694427 Days $T_0=252.007626$ (BKJD)



DV Model-Shift Uniqueness Test

010982373-04, P = 153.595656 Days, E = 98.856967 Days

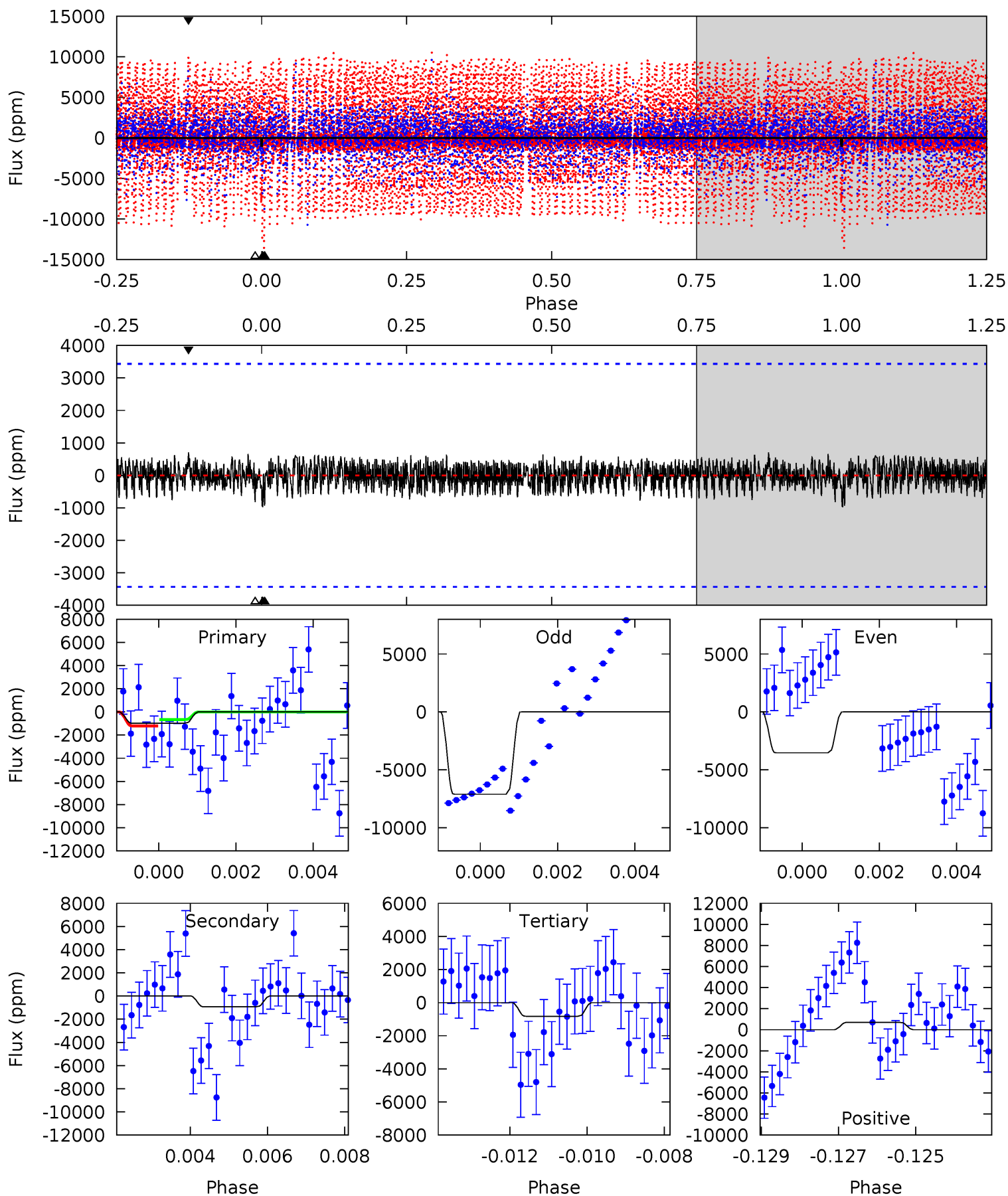
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.48	10.2	8.91	8.75	5.31	3.07	2.04	-6.43	-6.27	1.29	1.45	0.65	1.12	0.46	0.64



Alt Model-Shift Uniqueness Test

010982373-04, P = 153.694427 Days, E = 98.313199 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.51	1.44	1.27	1.08	5.32	3.08	0.46	0.24	0.43	0.17	0.36	2.75	2.08	0.42	0.42



Stellar Parameters For KIC 010982373

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	9453^{+399}_{-699}	$3.832^{+0.185}_{-0.203}$	$0.560^{+0.050}_{-0.200}$	$3.407^{+1.033}_{-0.845}$	$2.872^{+0.281}_{-0.422}$	$0.102^{+0.103}_{-0.051}$
	+4%/-7%	+5%/-5%	+9%/-36%	+30%/-25%	+10%/-15%	+101%/-50%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 010982373-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-254 ± 25	$5.26^{+4.92}_{-3.46}$	1209^{+115}_{-115}	10043^{+19139}_{-3300}	3124^{+22773}_{-2296}
Alt.	-930 ± 646	$29.16^{+7.49}_{-6.49}$	1202^{+109}_{-107}	5471^{+976}_{-1092}	371^{+383}_{-255}

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

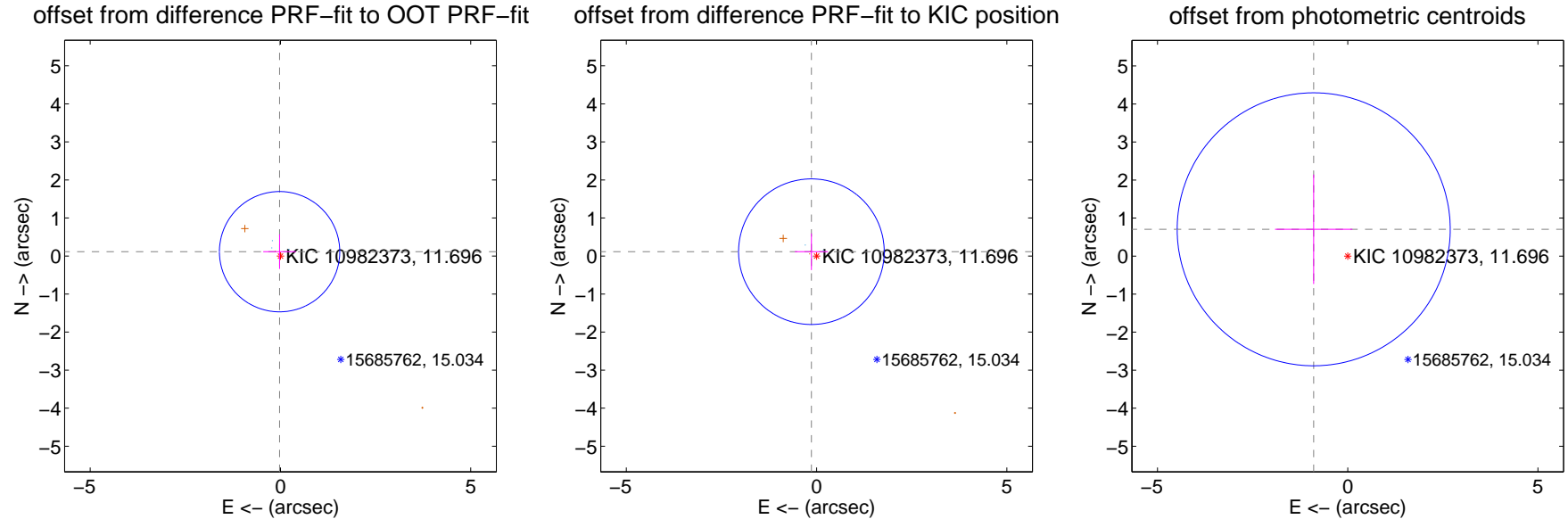
DV Centroid Data

Supplemental centroid analysis for 010982373-04. **Kepler magnitude: 11.70.** Transit SNR 6.22

There are 3 quarters with good PRF difference image offsets

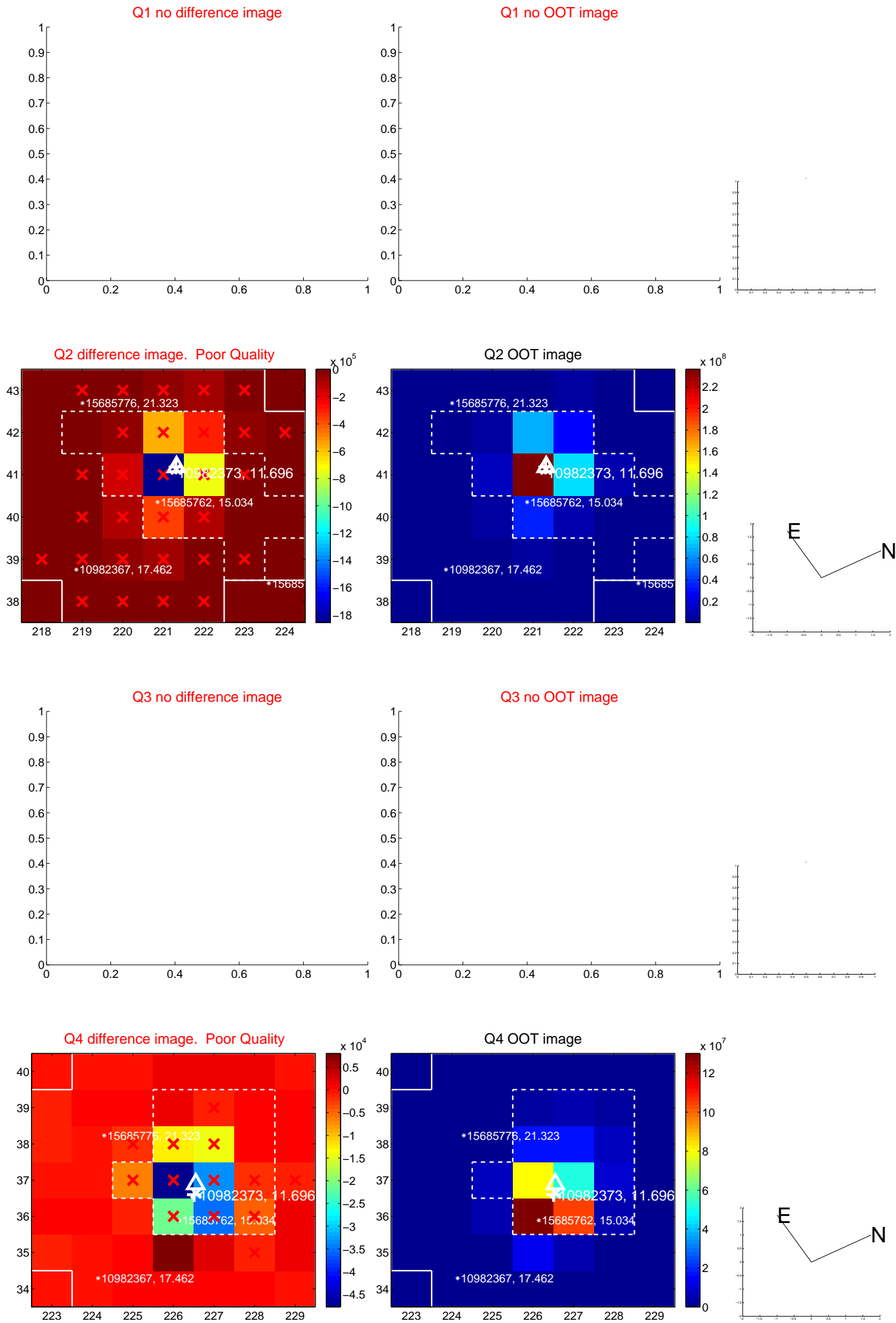
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.116 ± 0.527	0.22	0.023 ± 0.430	0.114 ± 0.454
PRF-fit source offset from KIC position	0.178 ± 0.638	0.28	0.136 ± 0.435	0.114 ± 0.482
photometric centroid source offset	1.14 ± 1.20	0.95	0.89 ± 1.02	0.70 ± 1.44

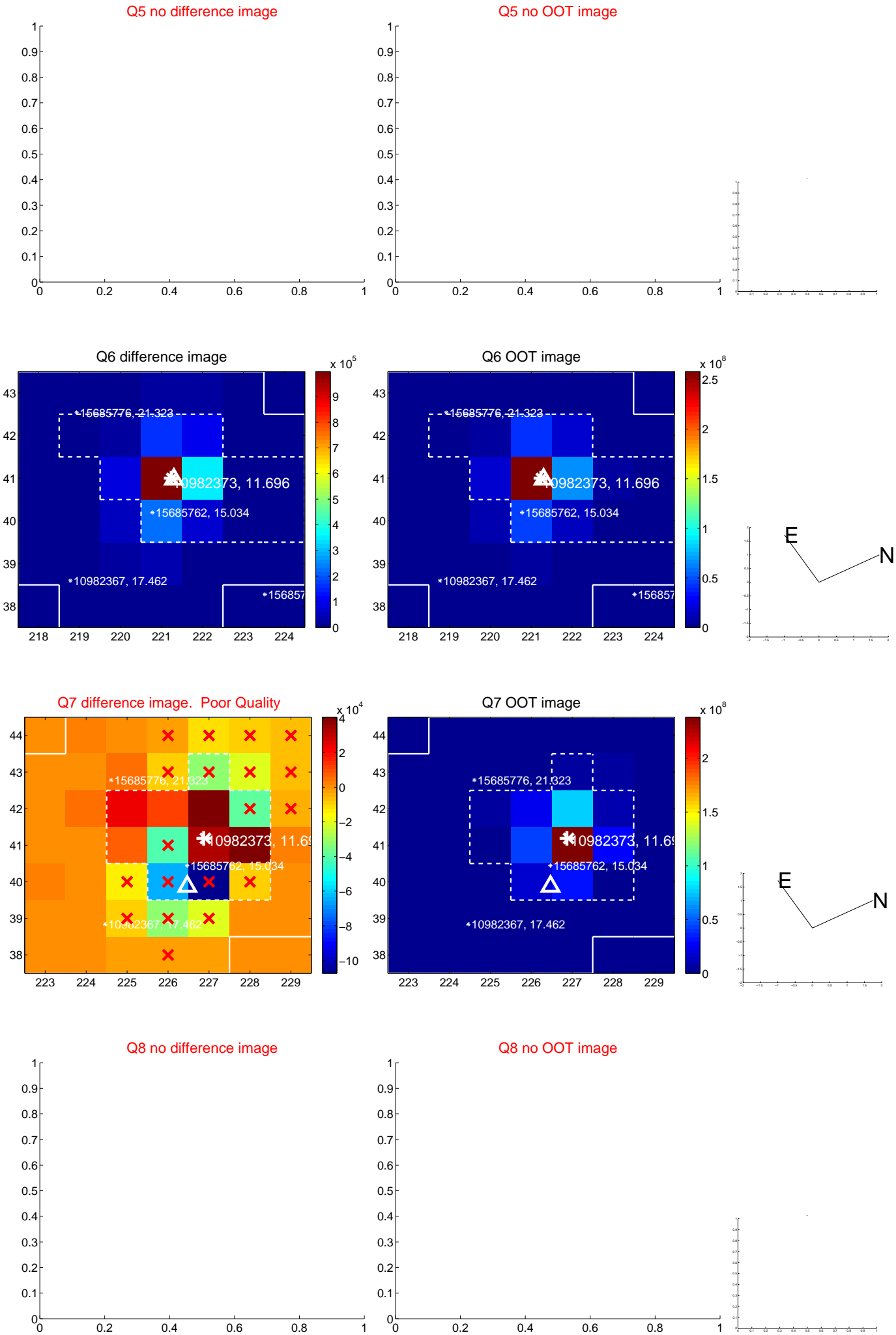


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

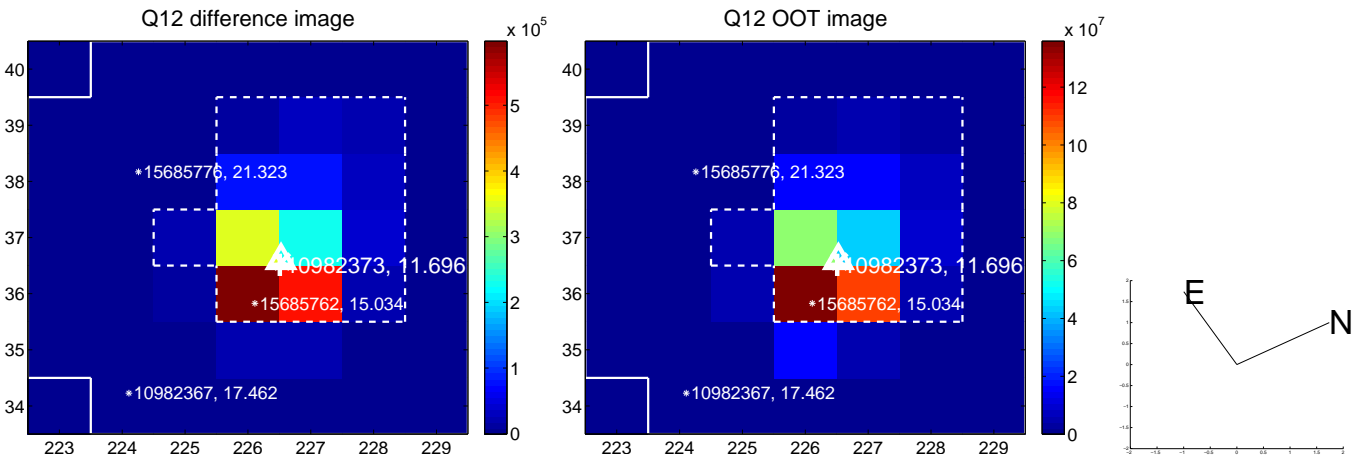
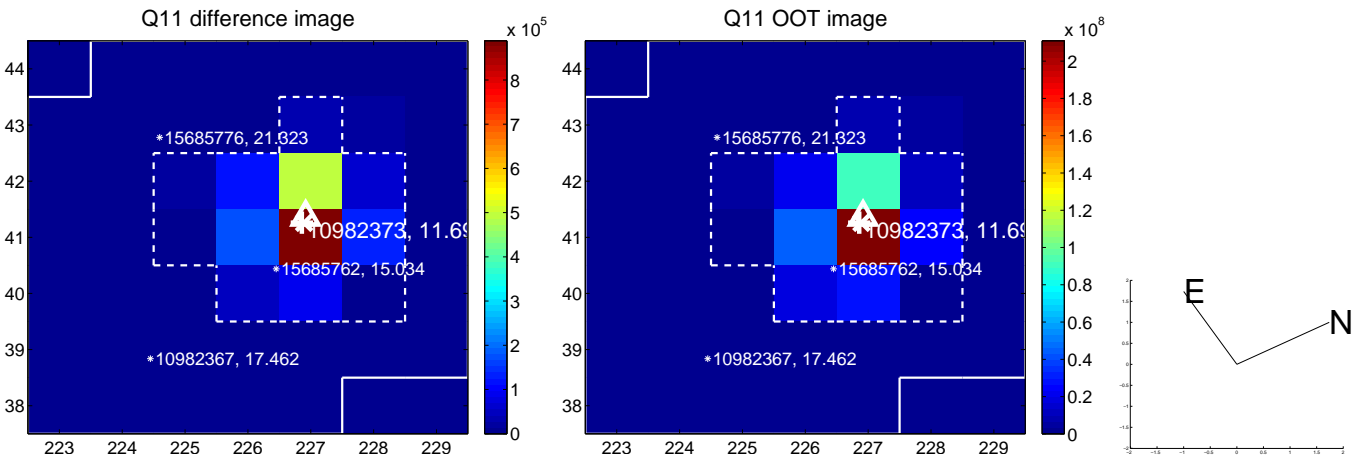
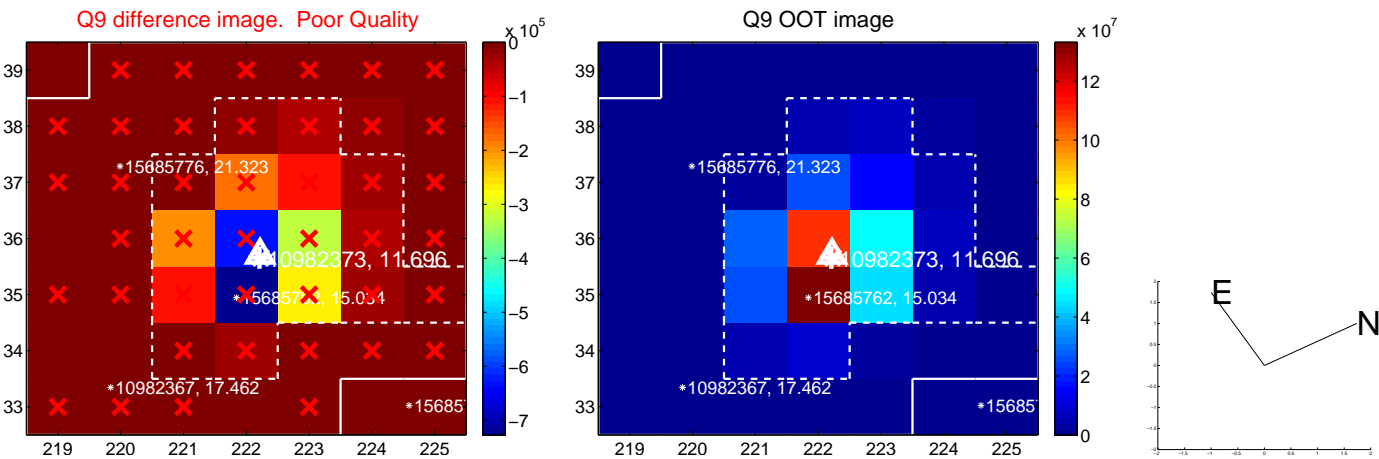
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

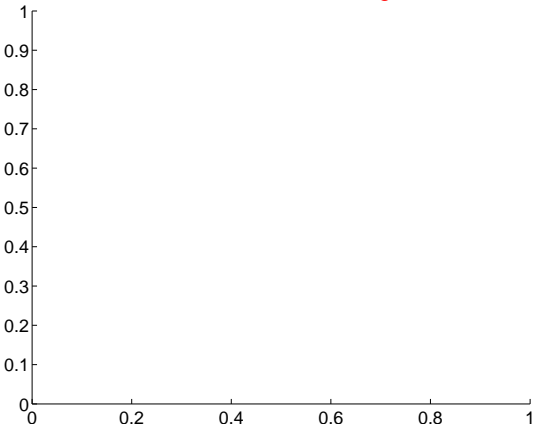


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

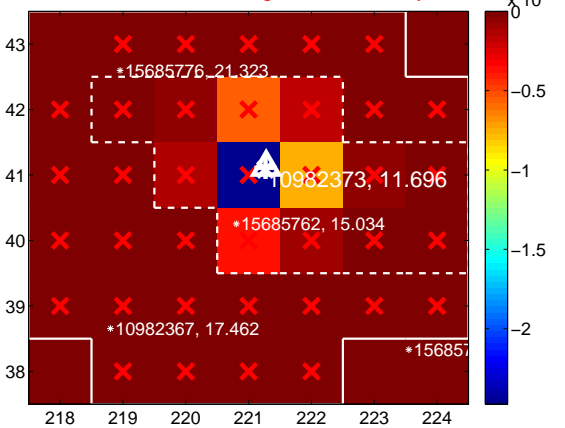
Q13 no difference image



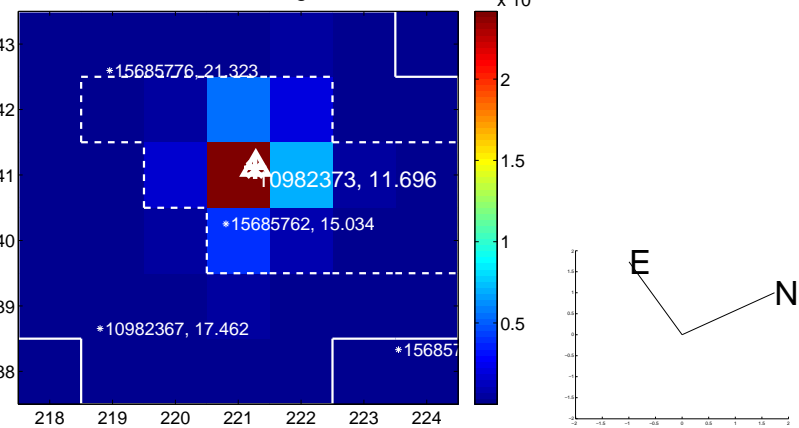
Q13 no OOT image



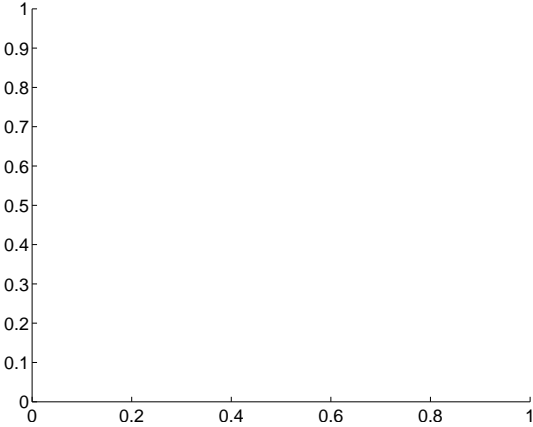
Q14 difference image. Poor Quality



Q14 OOT image



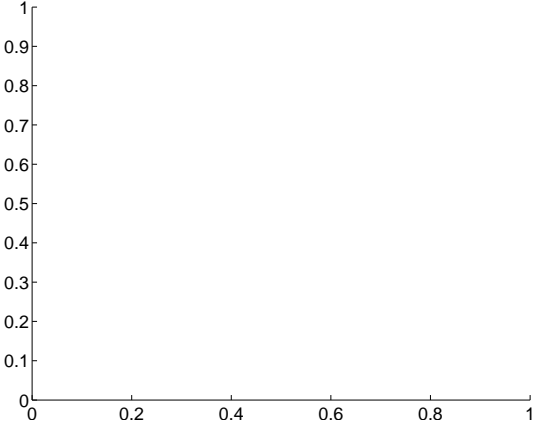
Q15 no difference image



Q15 no OOT image



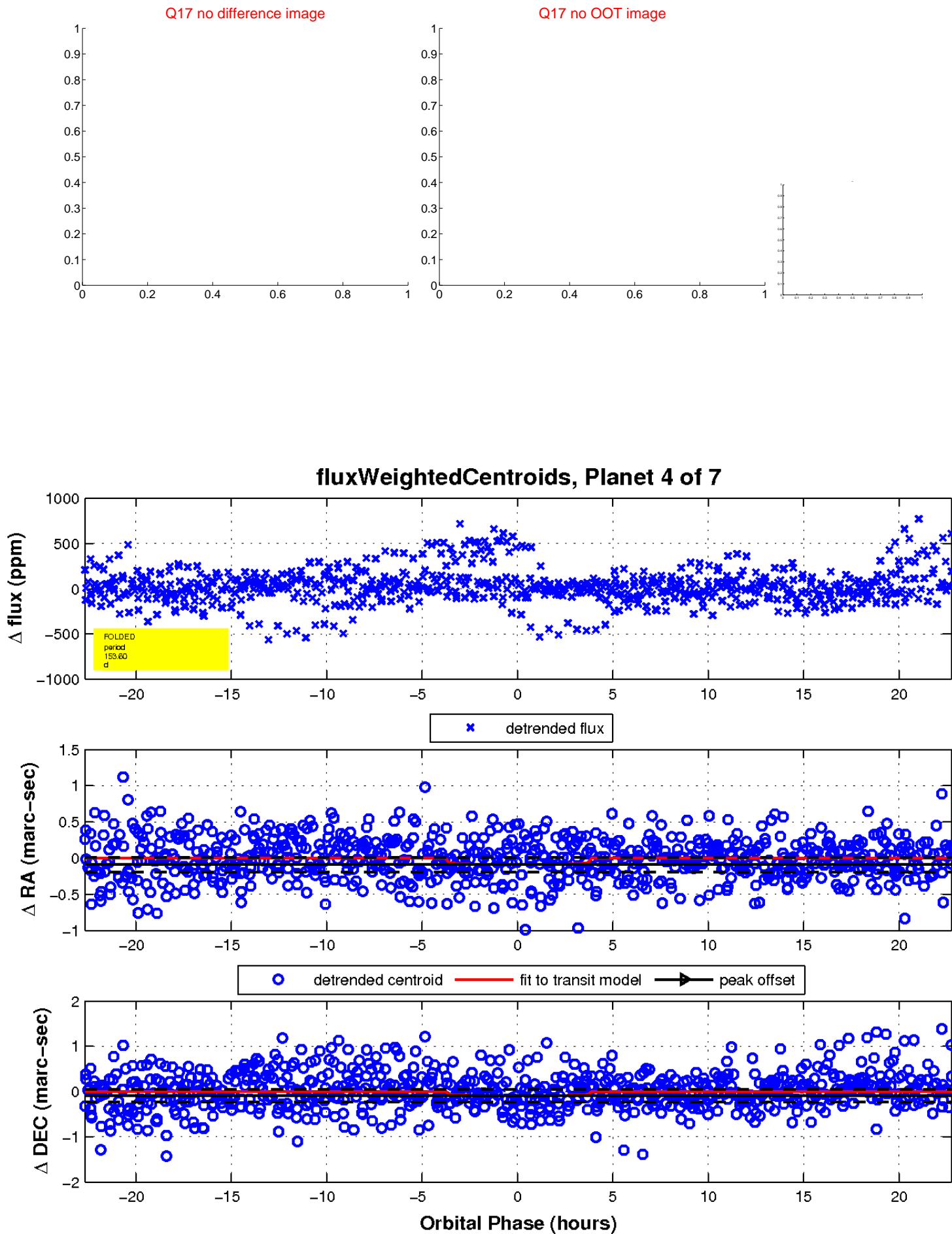
Q16 no difference image



Q16 no OOT image

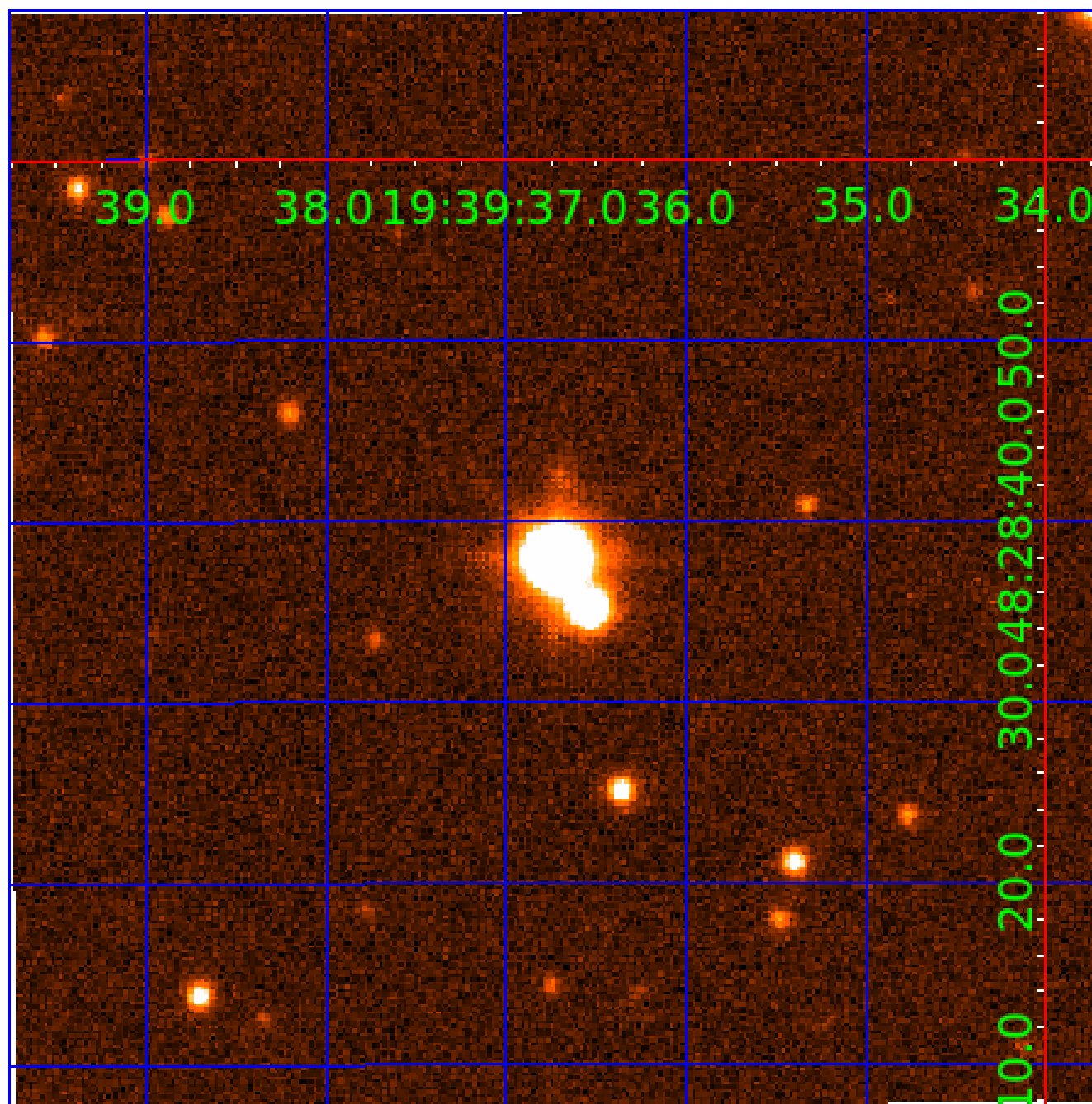


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010982373

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})
010982373-01	OBS	7395.01	2.002769	132.075962	44.2	1.493	12.8	17.4	3.41	9453	2.62	42453.49
010982373-02	OBS	No	2.002816	132.745453	17.8	4.363	11.5	8.7	3.41	9453	1.65	42452.15
010982373-03	OBS	No	2.001713	132.845395	0.0	11.833	10.4	0.0	3.41	9453	0.01	42483.35
010982373-04	OBS	No	153.595656	252.452623	100.8	7.592	16.5	6.2	3.41	9453	3.59	130.29
010982373-05	OBS	No	1.001650	132.200146	59.6	0.934	15.7	8.9	3.41	9453	3.00	106938.28
010982373-06	OBS	No	1.001505	132.197002	30.5	1.174	15.2	7.8	3.41	9453	2.35	106958.89
010982373-07	OBS	No	2.007581	131.987777	81.2	3.500	12.4	-1.0	3.41	9453	3.14	42317.84

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010982373-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_ZUMA_TRACKER—SWEET_NTL—CENT_FEW_DIFFS
010982373-02	OBS	FP	0.00	1	0	1	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—HALO_GHOST
010982373-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
010982373-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—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
010982373-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
010982373-06	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_UNRESOLVED_OFFSET
010982373-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—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 010982373-05

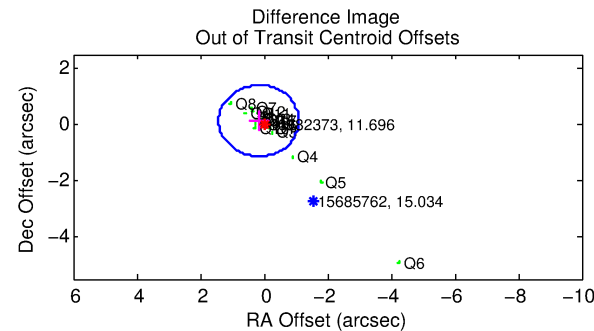
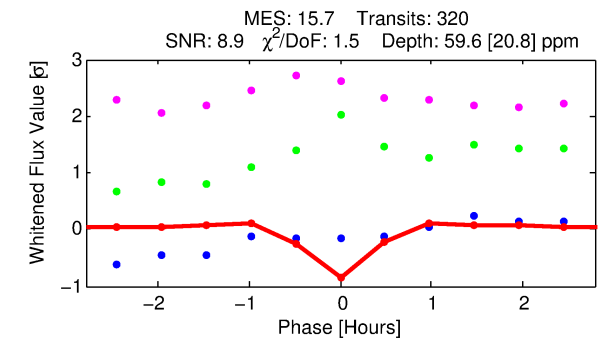
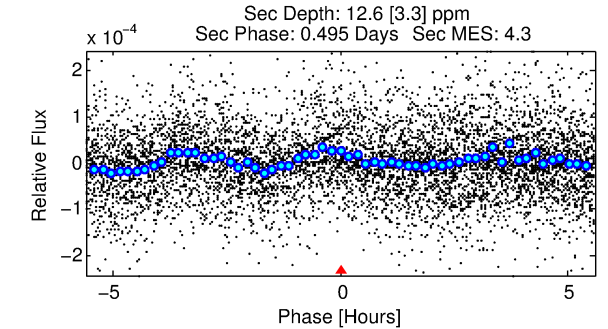
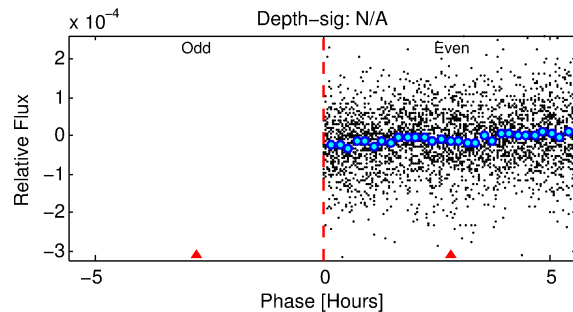
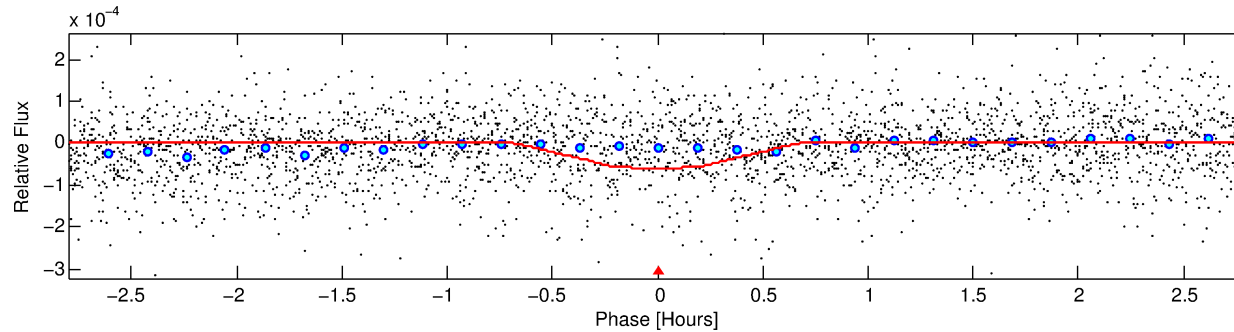
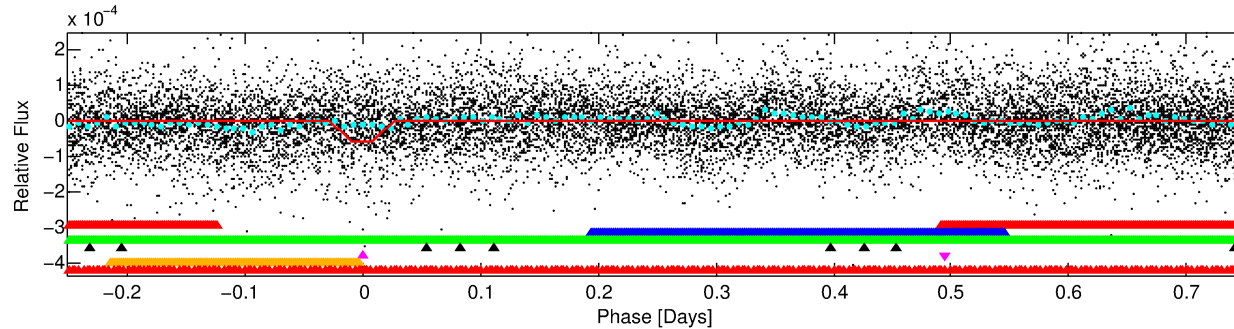
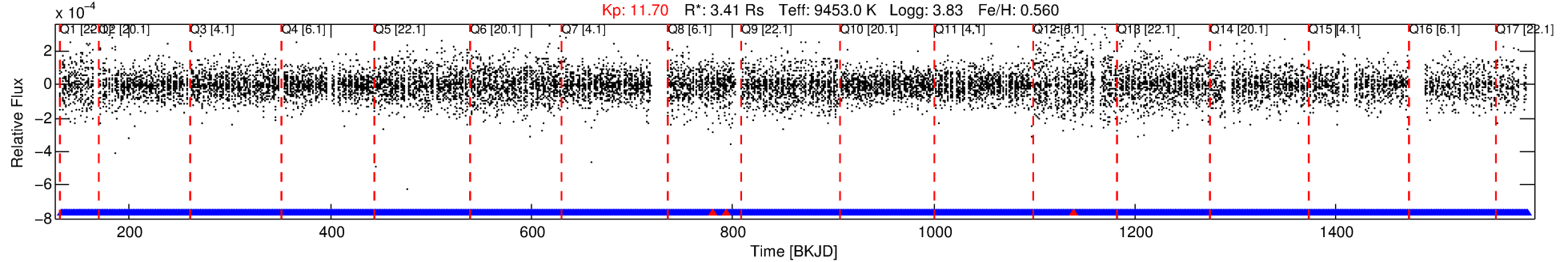
No Significant Match Found

DV One-Page Summary

KIC: 10982373 Candidate: 5 of 7 Period: 1.002 d

KOI: K07395 Corr: No Ephemeris Match

Kp: 11.70 R*: 3.41 Rs Teff: 9453.0 K Logg: 3.83 Fe/H: 0.560



DV Fit Results:

Period = 1.00165 [0.00003] d
Epoch = 132.2001 [0.0022] BKJD
Rp/R* = 0.0081 [0.0023]
a/R* = 4.24 [6.91]
b = 0.87 [0.48]
Seff = 106938.28 [50775.74]
Teq = 4611 [547] K
Rp = 3.00 [1.26] Re
a = 0.0279 [0.0071] AU
Ag = 0.60 [0.44] [-0.92σ]
Teffp = 6267 [1101] K [1.35σ]

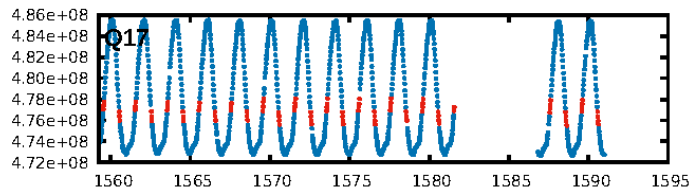
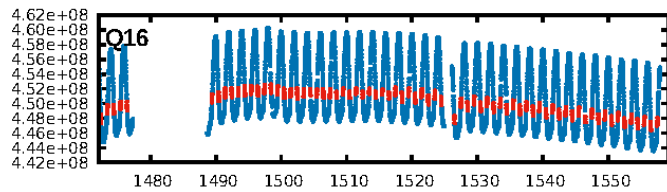
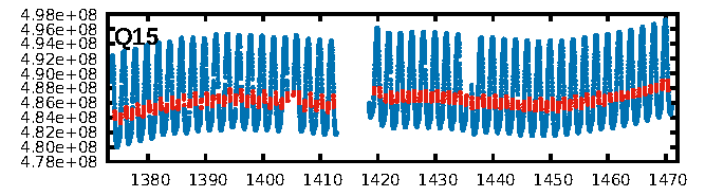
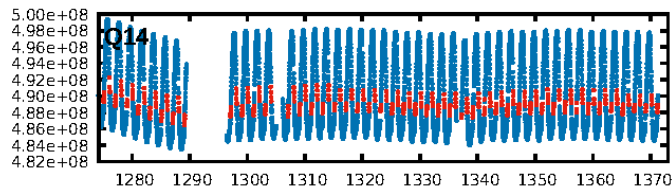
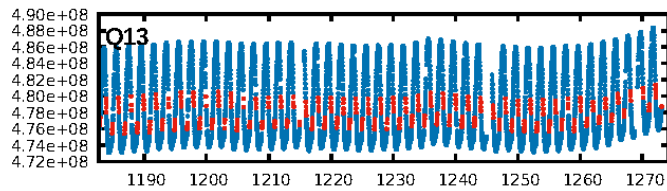
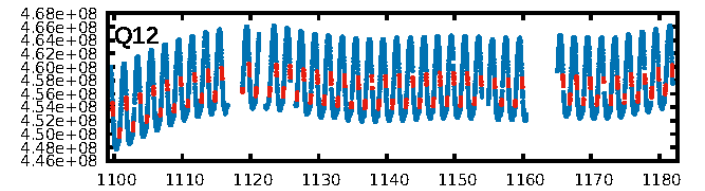
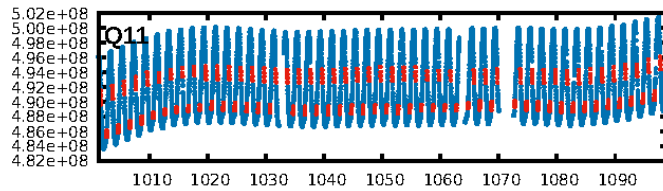
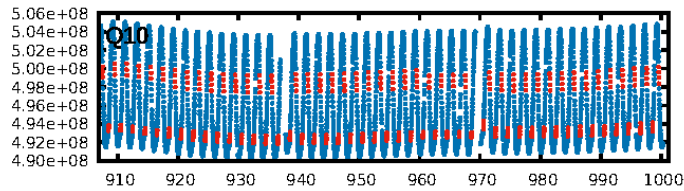
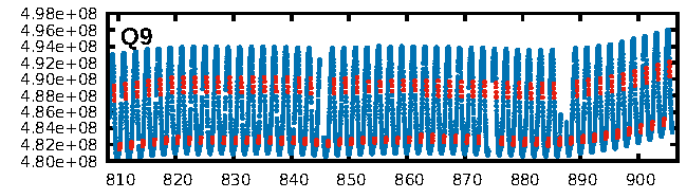
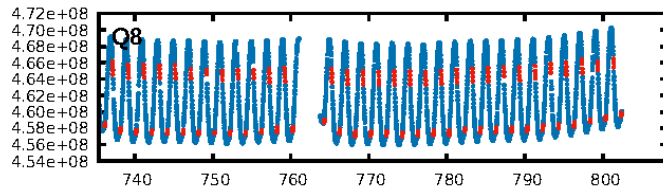
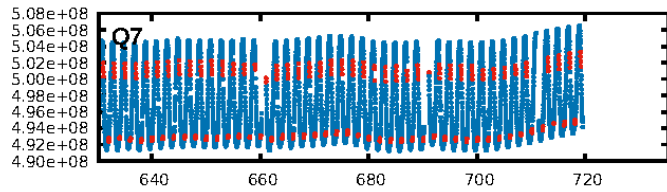
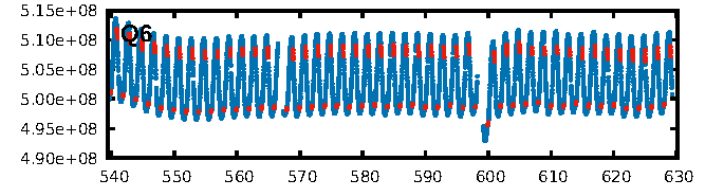
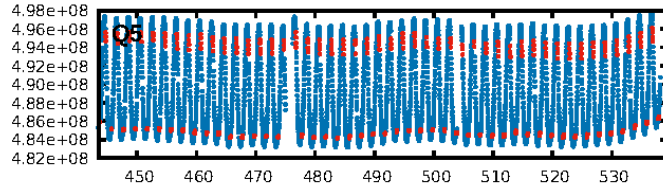
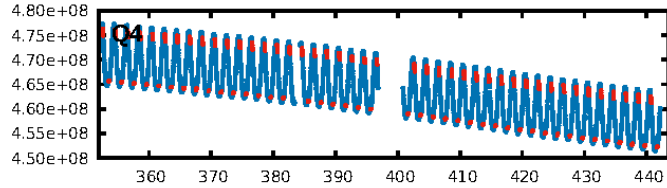
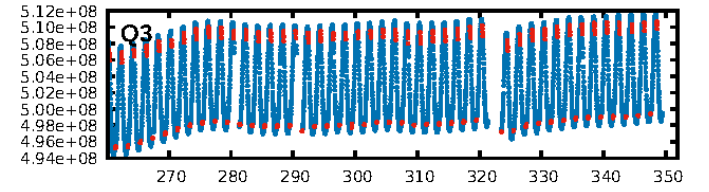
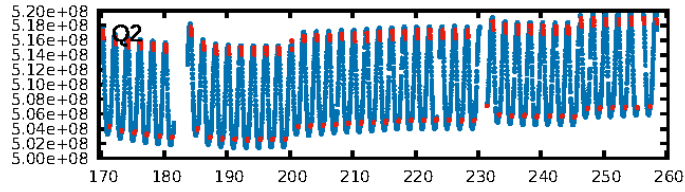
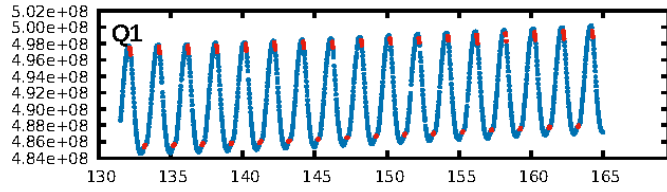
DV Diagnostic Results:

ShortPeriod-sig: 0.2% [0.00σ]
LongPeriod-sig: 95.7% [2.02σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 0.99 [317/320]
GhostDiagnostic-chr: -10.22
Centroid-sig: 47.9%
Centroid-so: 0.415 arcsec [1.36σ]
OotOffset-rm: 0.211 arcsec [0.50σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.206 arcsec [0.66σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.65 [11/17]
DiffImageOverlap-fno: 0.00 [0/17]

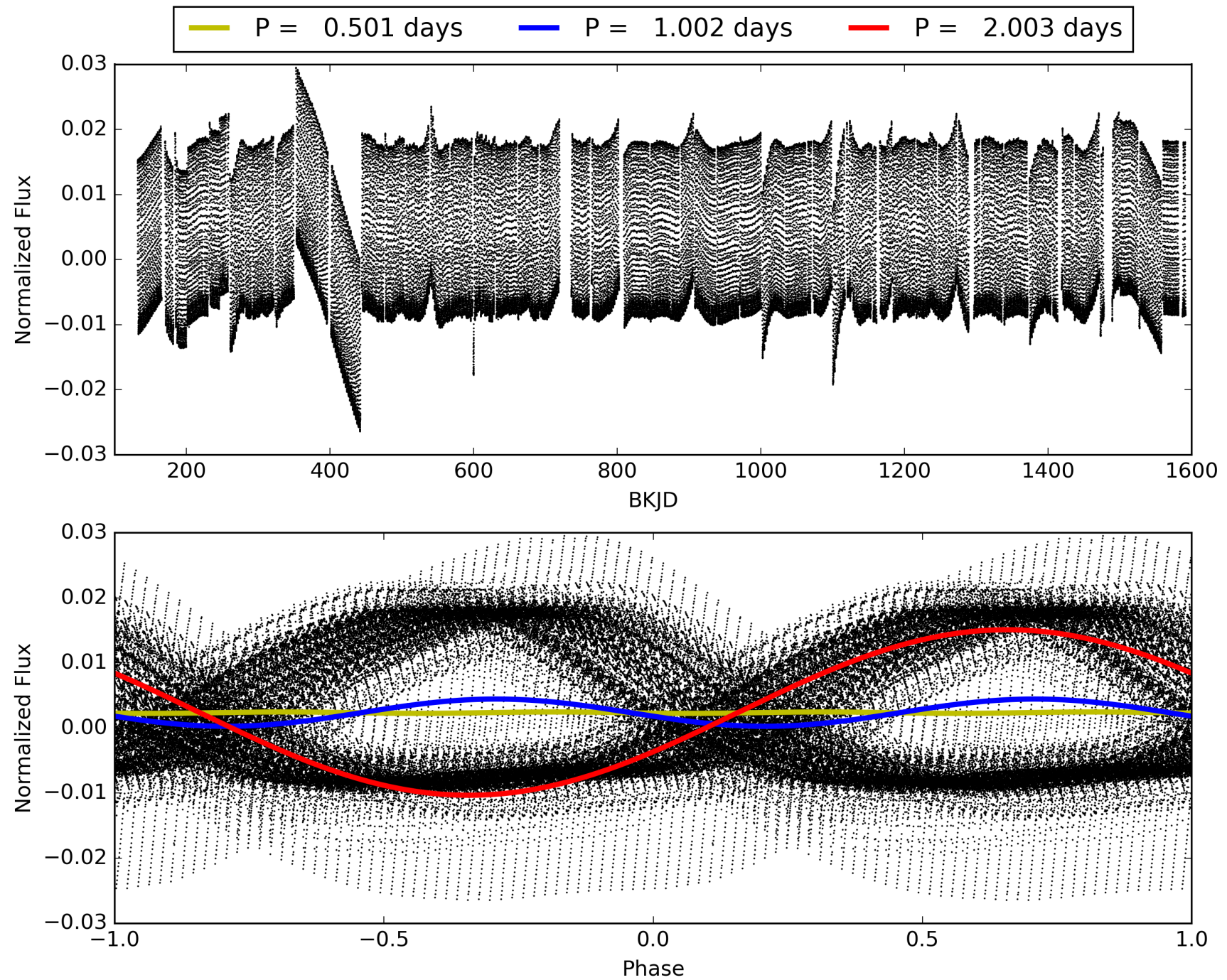
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:33:27 Z

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

TCE 010982373-05, PDC Light Curves

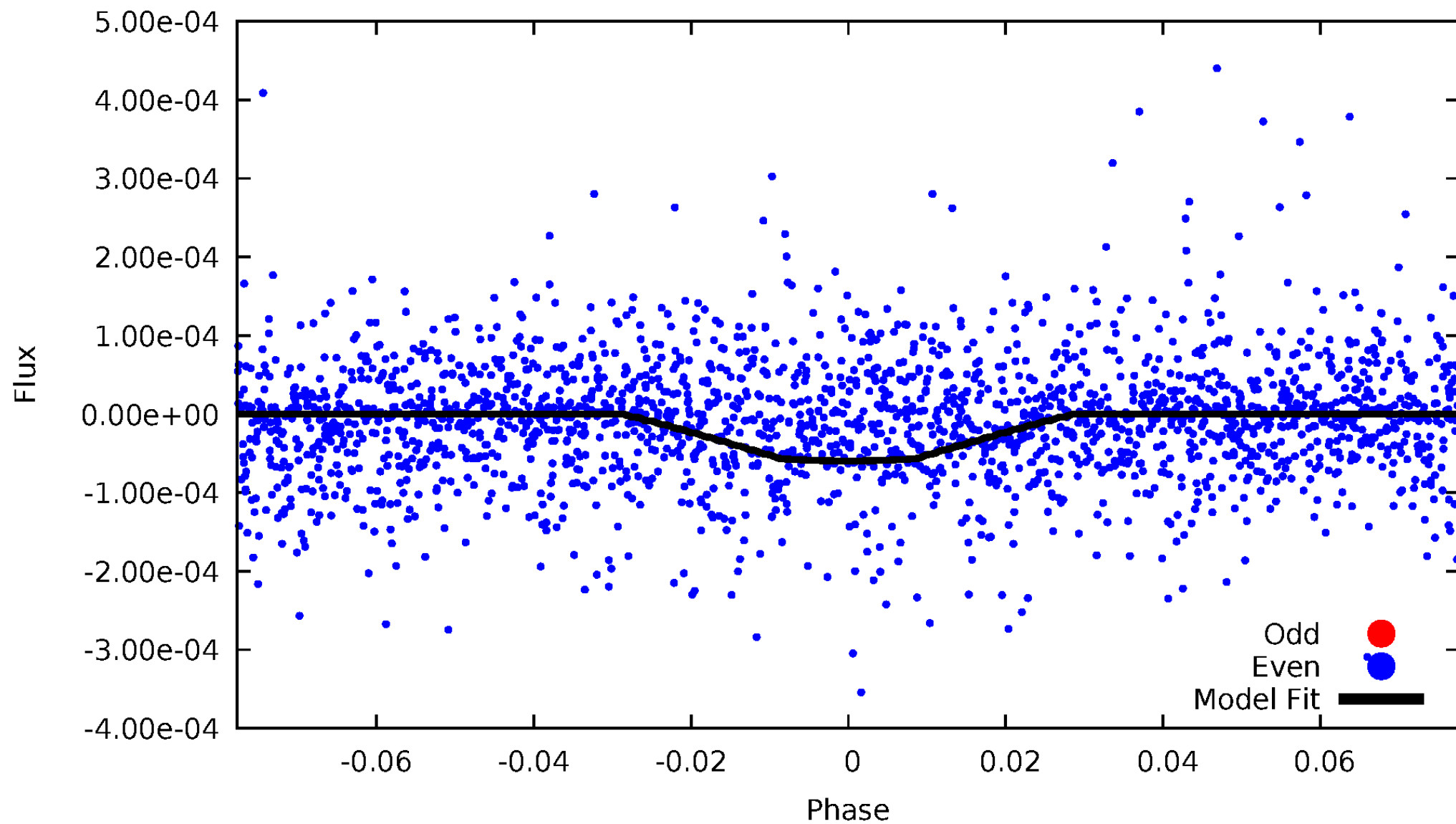


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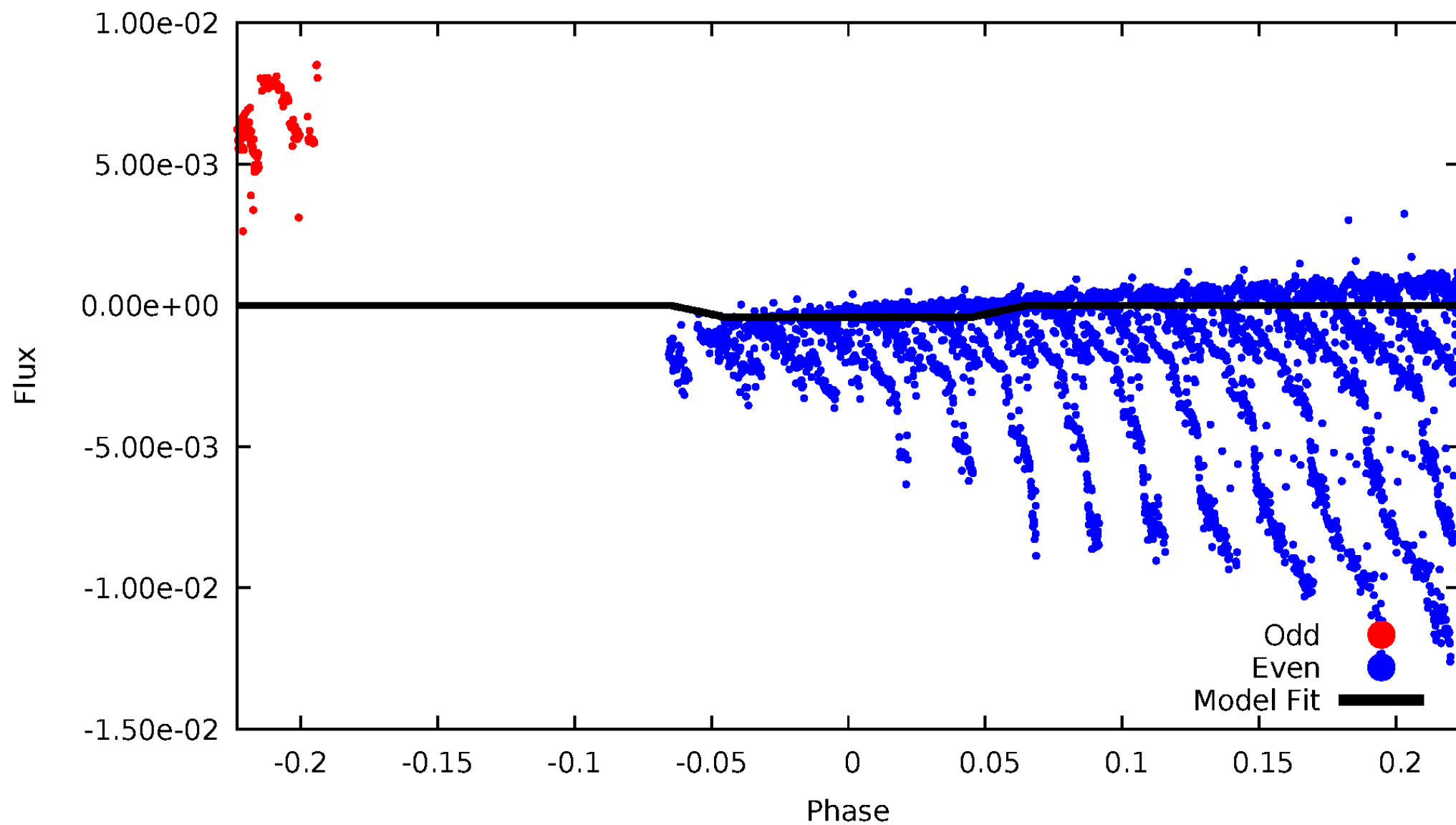
DV Odd/Even

TCE 010982373-05



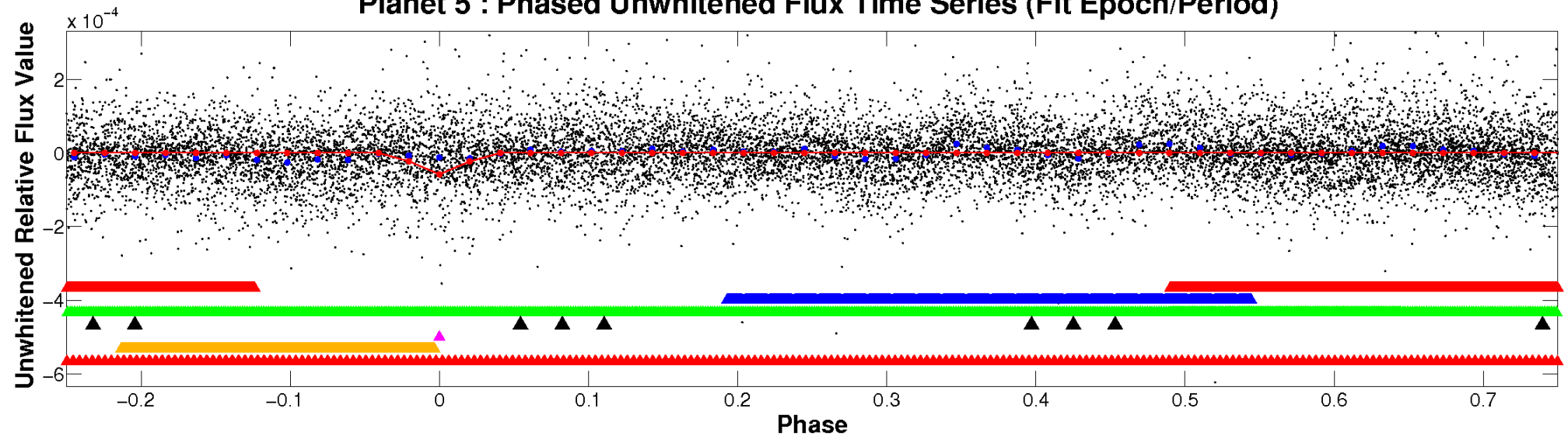
ALT Odd/Even

TCE 010982373-05

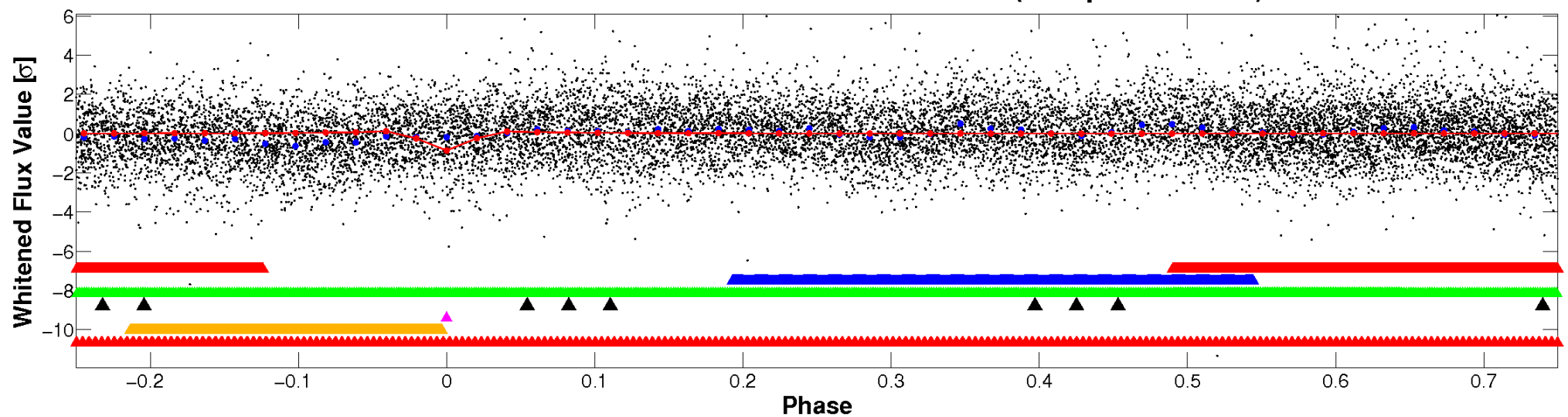


Non-Whitened Vs. Whitened Light Curve

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

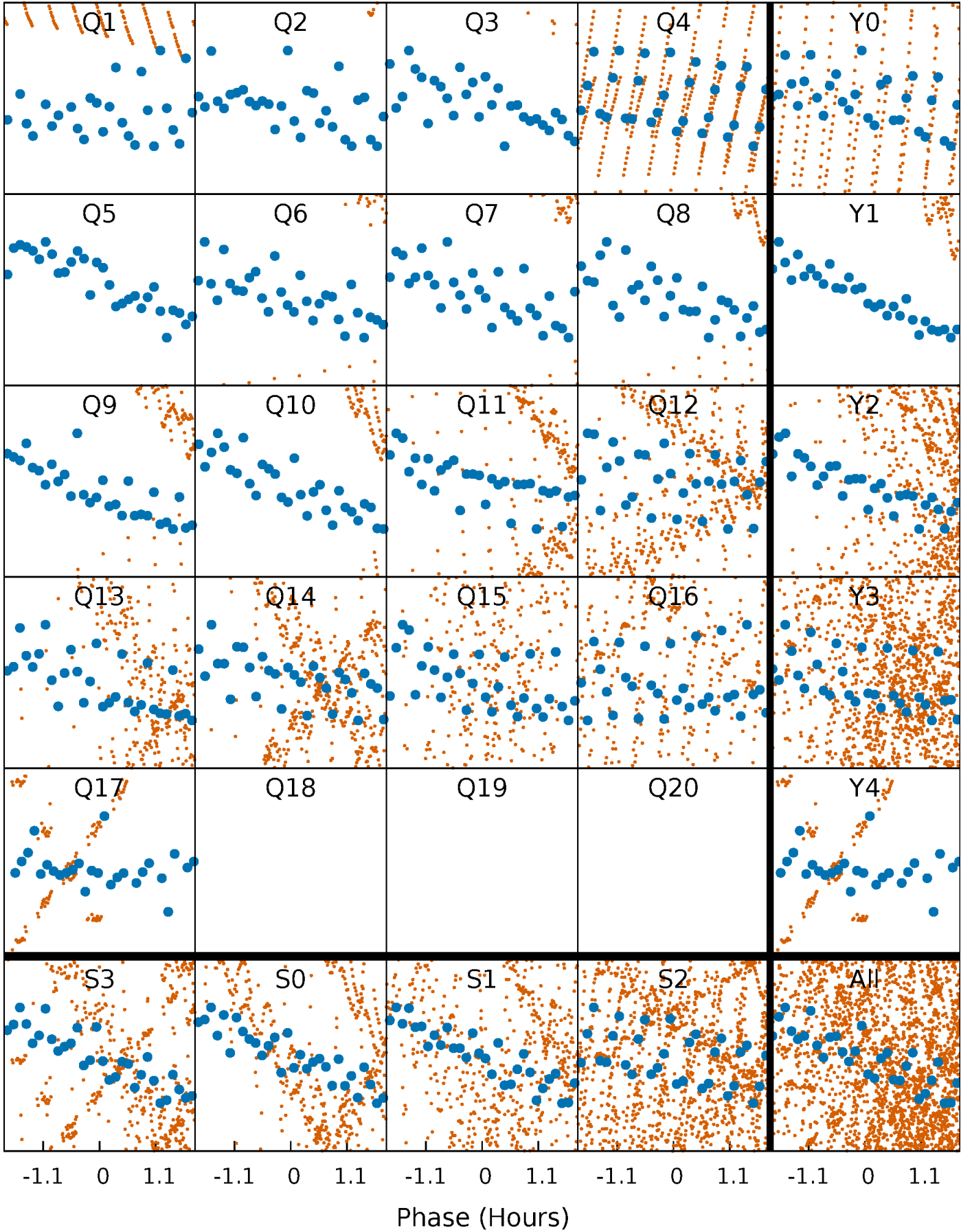


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



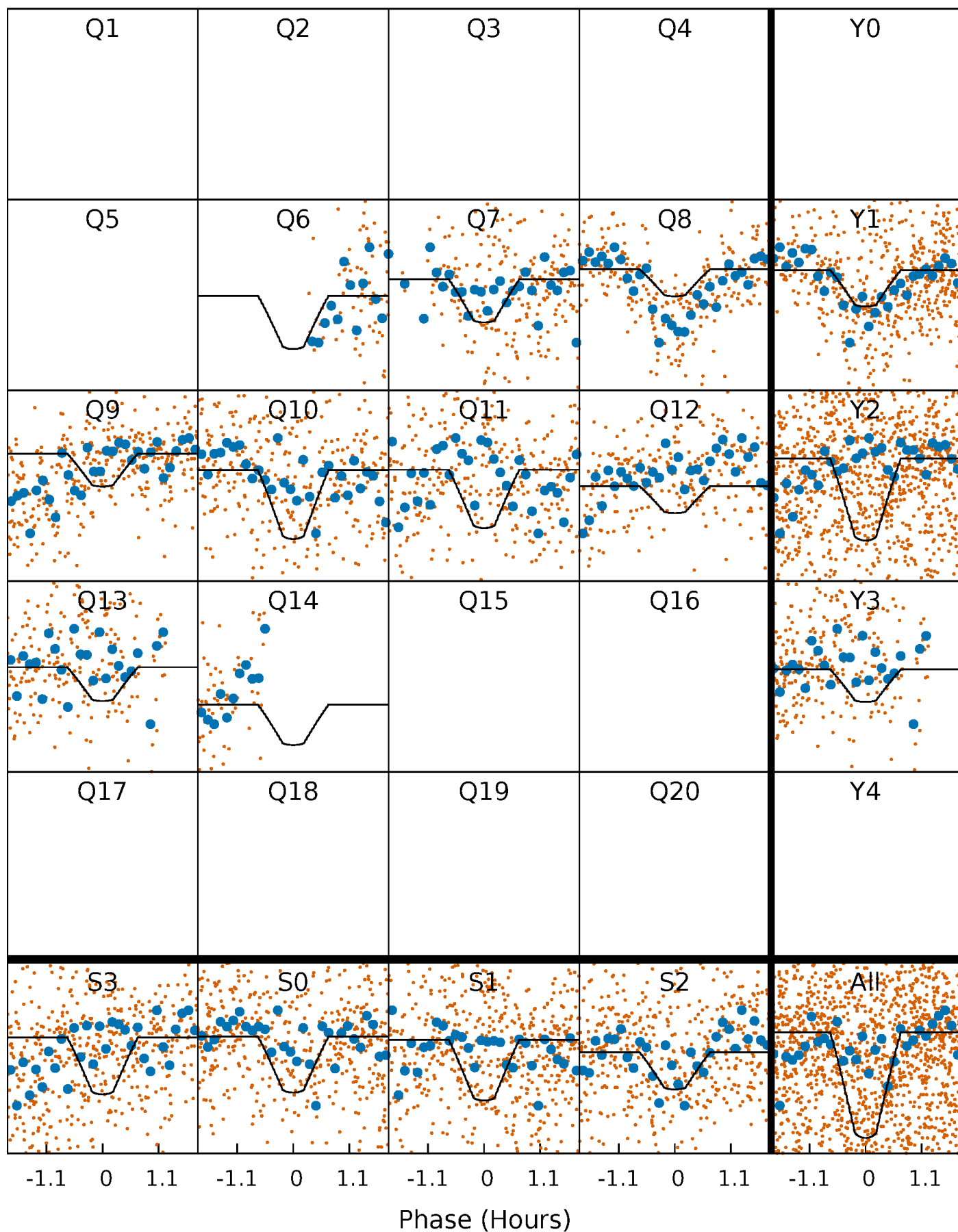
PDC Quarter-Phased Transit Curves

TCE 010982373-05 $P = 1.001650$ Days $T_0 = 132.200146$ (BKJD)



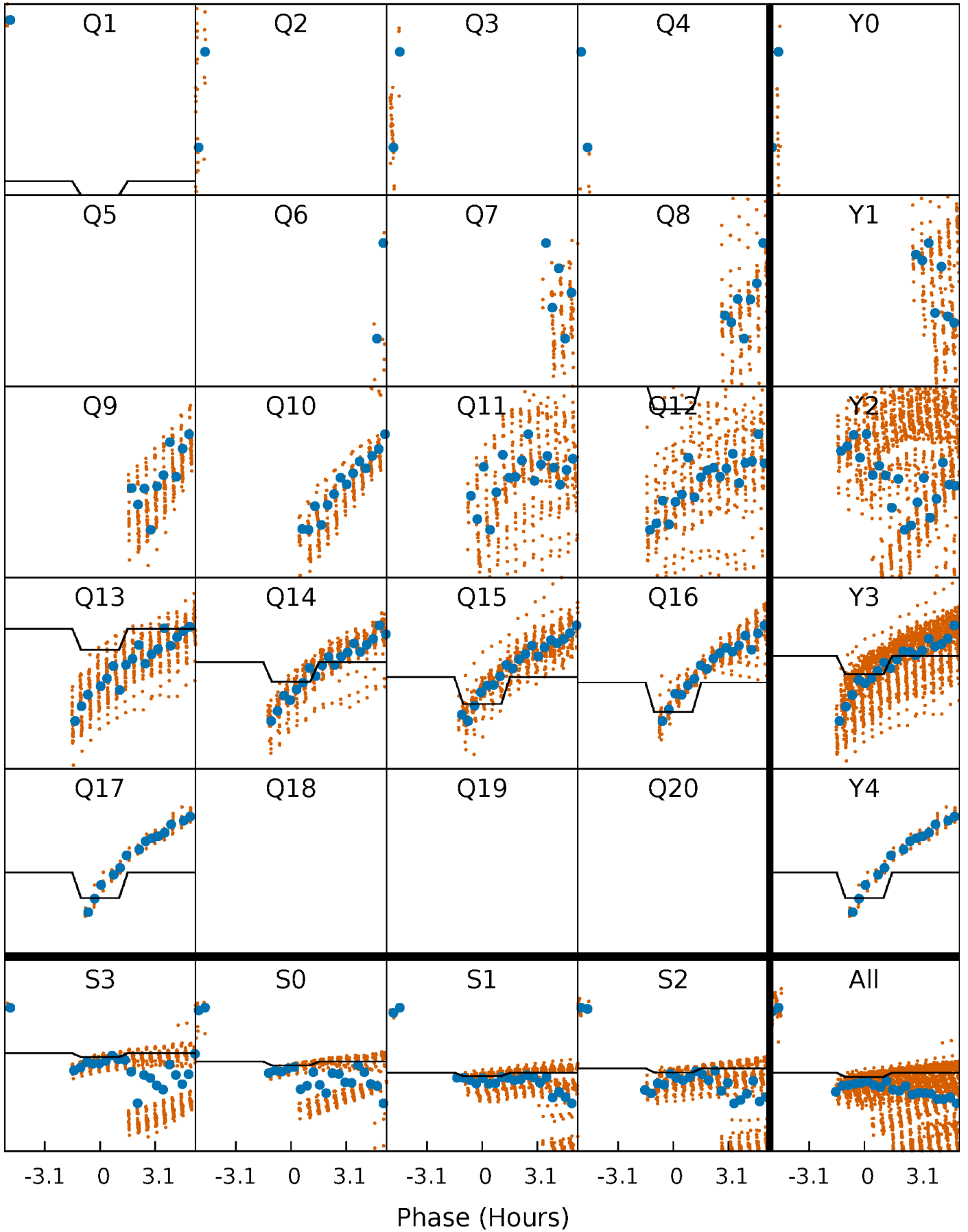
DV Quarter-Phased Transit Curves

TCE 010982373-05 $P = 1.001650$ Days $T_0 = 132.200146$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

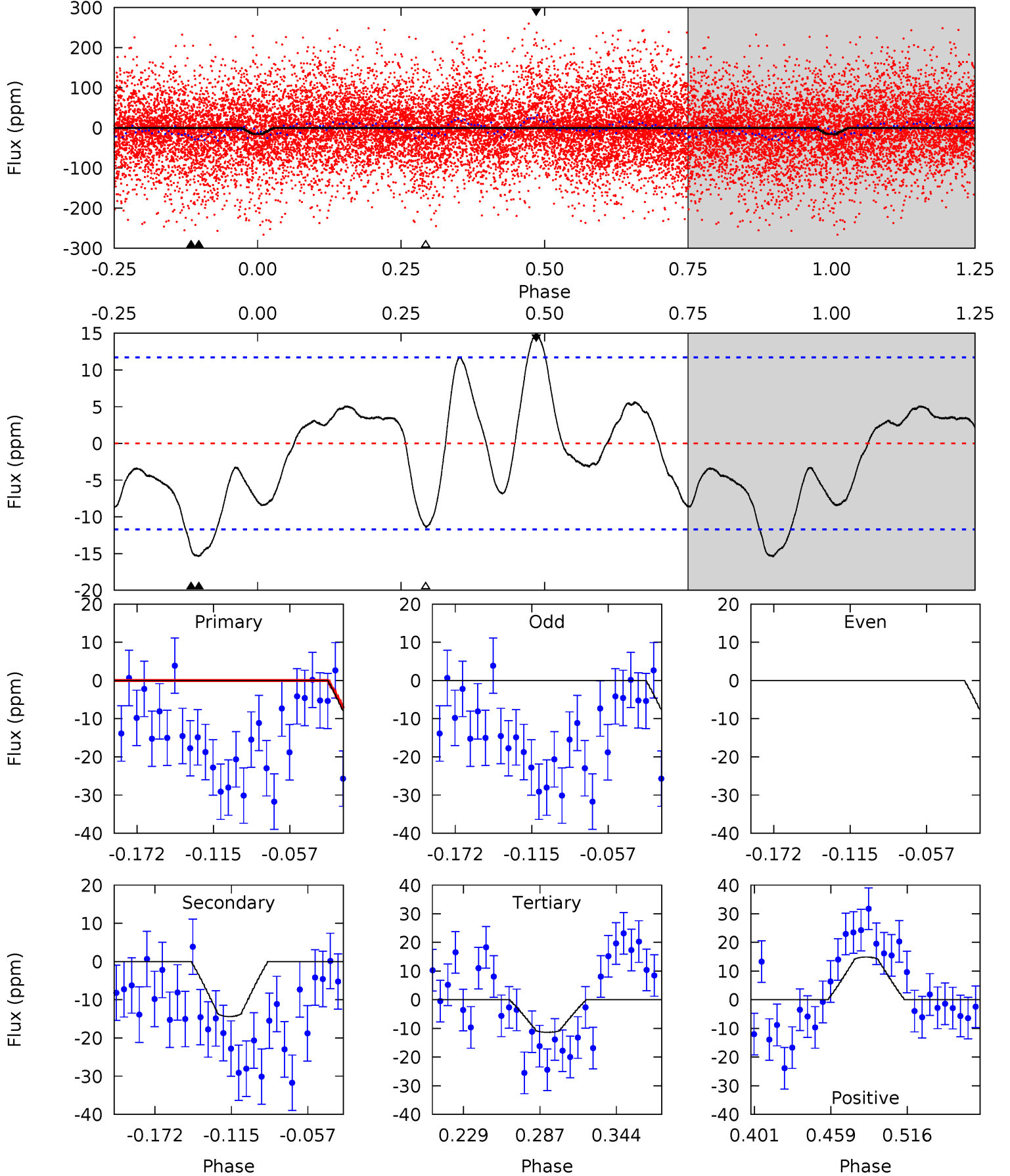
TCE 010982373-05 $P = 1.001332$ Days $T_0 = 132.177060$ (BKJD)



DV Model-Shift Uniqueness Test

010982373-05, P = 1.001650 Days, E = 131.198496 Days

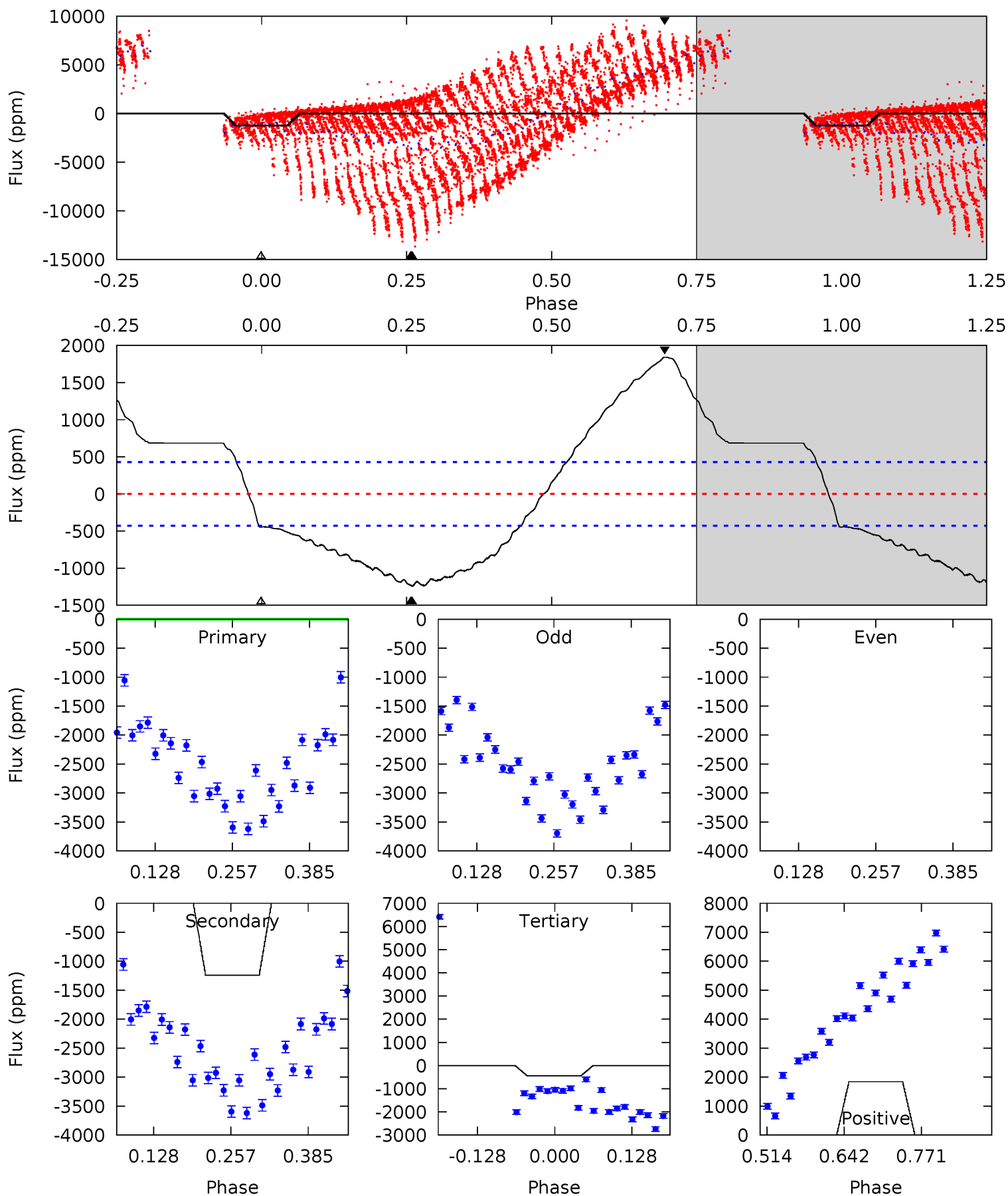
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.14	5.75	4.54	5.96	4.68	1.90	2.26	1.60	0.18	1.21	-0.20	0	1.24	0.49	0.62



Alt Model-Shift Uniqueness Test

010982373-05, P = 1.001332 Days, E = 131.175728 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.0	13.0	4.69	19.4	4.51	1.52	9.02	8.26	-6.41	8.34	-6.33	0	1.61	0.60	0.34



Stellar Parameters For KIC 010982373

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	9453^{+399}_{-699}	$3.832^{+0.185}_{-0.203}$	$0.560^{+0.050}_{-0.200}$	$3.407^{+1.033}_{-0.845}$	$2.872^{+0.281}_{-0.422}$	$0.102^{+0.103}_{-0.051}$
	+4%/-7%	+5%/-5%	+9%/-36%	+30%/-25%	+10%/-15%	+101%/-50%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 010982373-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-14 ± 3	$3.00^{+1.06}_{-0.97}$	6429^{+573}_{-609}	5255^{+1414}_{-1489}	$0.679^{+0.745}_{-0.320}$
Alt.	-1240 ± 95	$7.68^{+1.60}_{-1.29}$	6428^{+573}_{-614}	14133^{+2174}_{-1841}	$8.744^{+4.052}_{-2.732}$

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 $A_{obs} \gg 1.0$

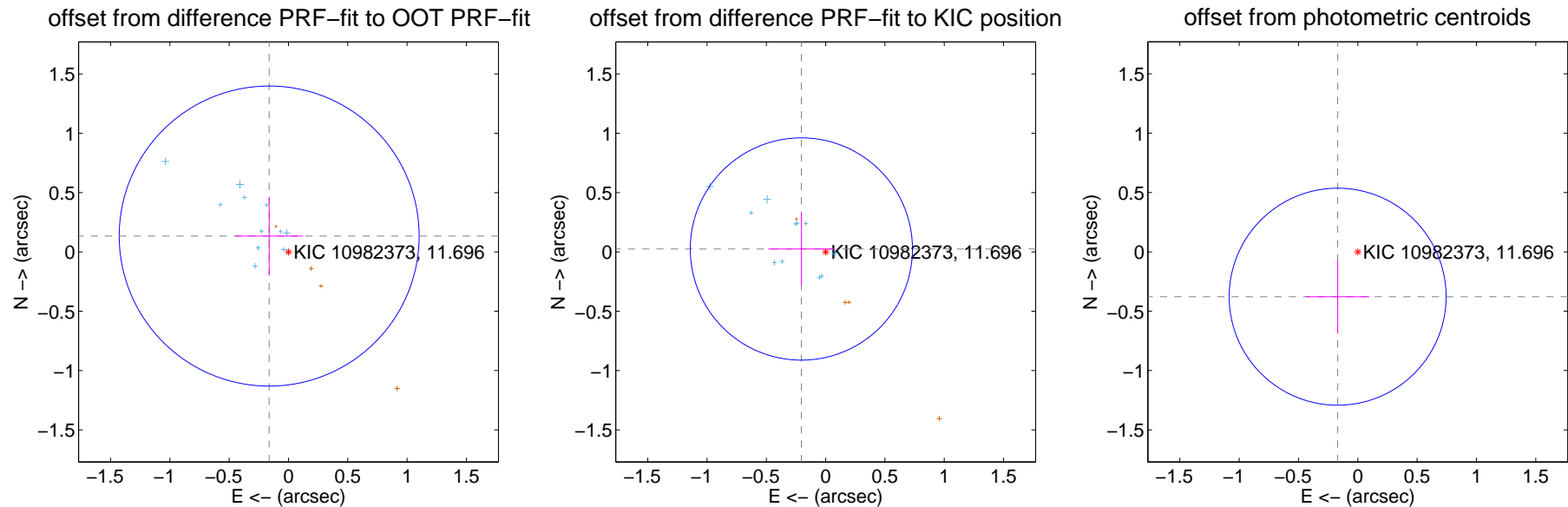
DV Centroid Data

Supplemental centroid analysis for 010982373-05. **Kepler magnitude: 11.70.** Transit SNR 8.87

There are 11 quarters with good PRF difference image offsets

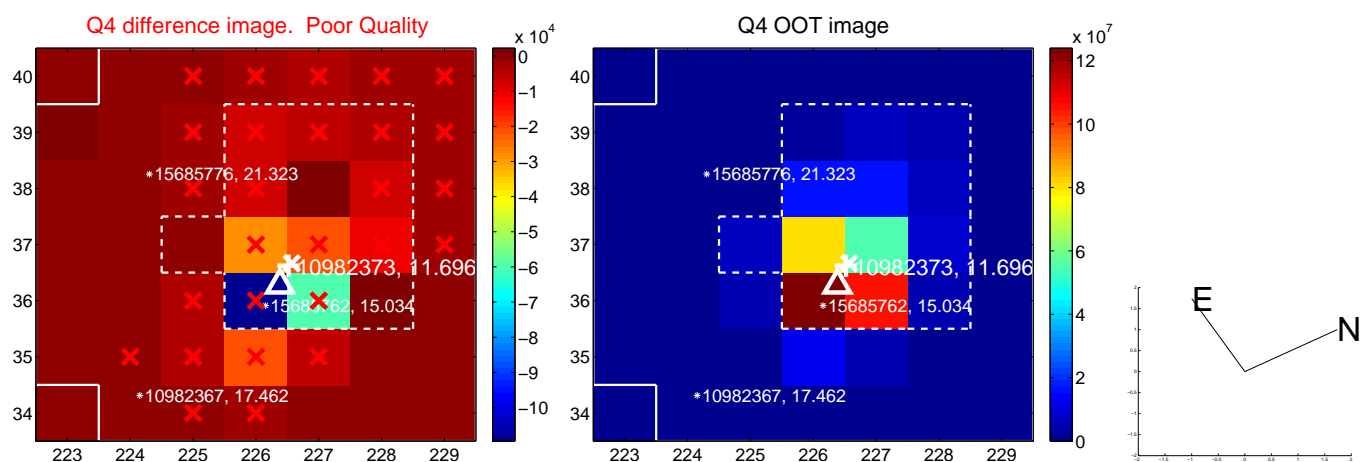
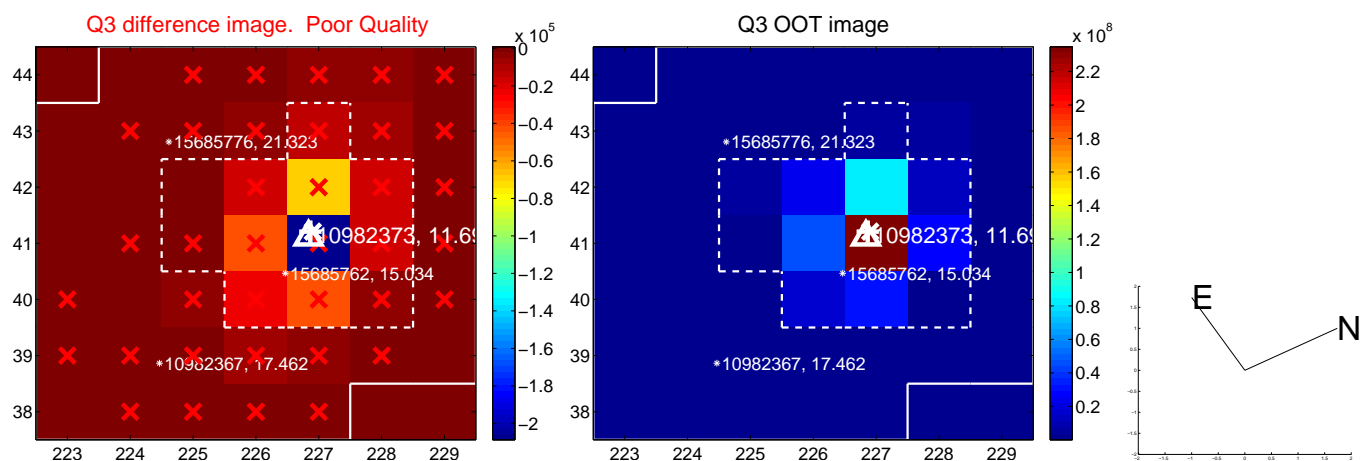
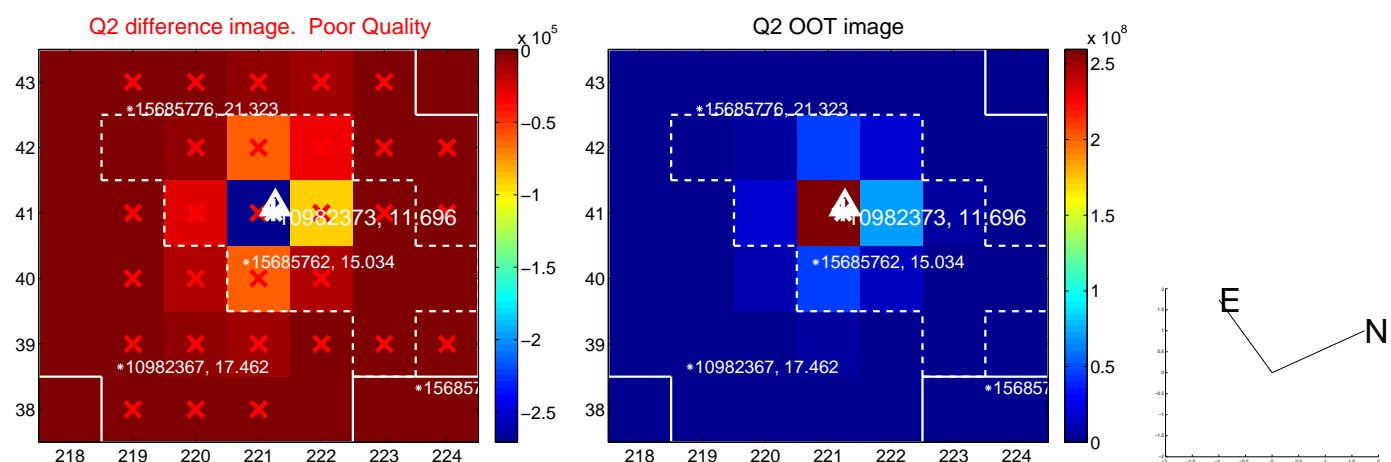
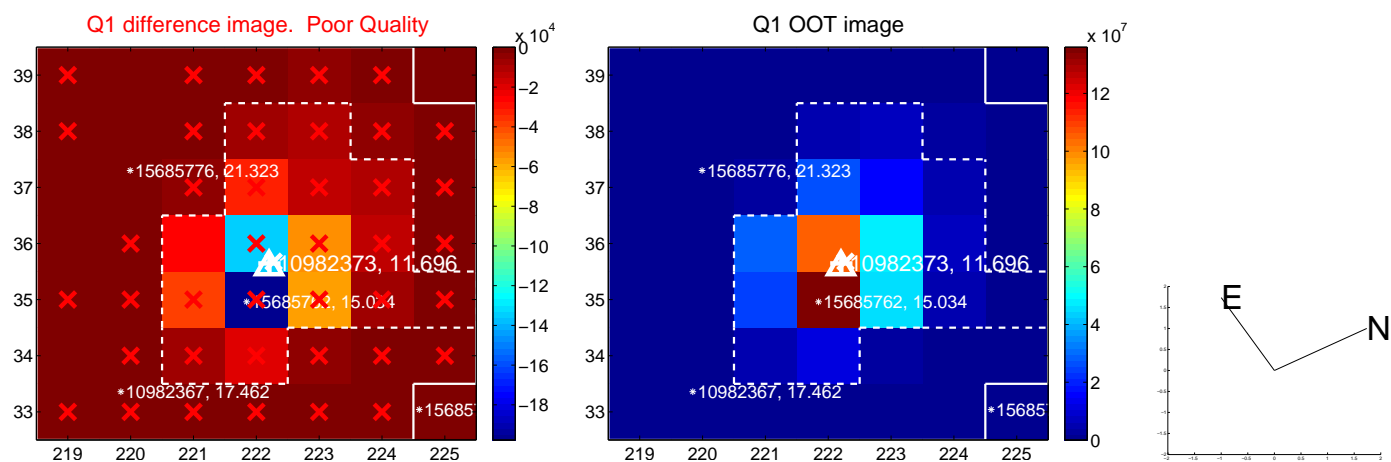
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.211 ± 0.422	0.50	0.163 ± 0.286	0.134 ± 0.325
PRF-fit source offset from KIC position	0.206 ± 0.312	0.66	0.205 ± 0.279	0.025 ± 0.311
photometric centroid source offset	0.41 ± 0.30	1.36	0.17 ± 0.27	-0.38 ± 0.31

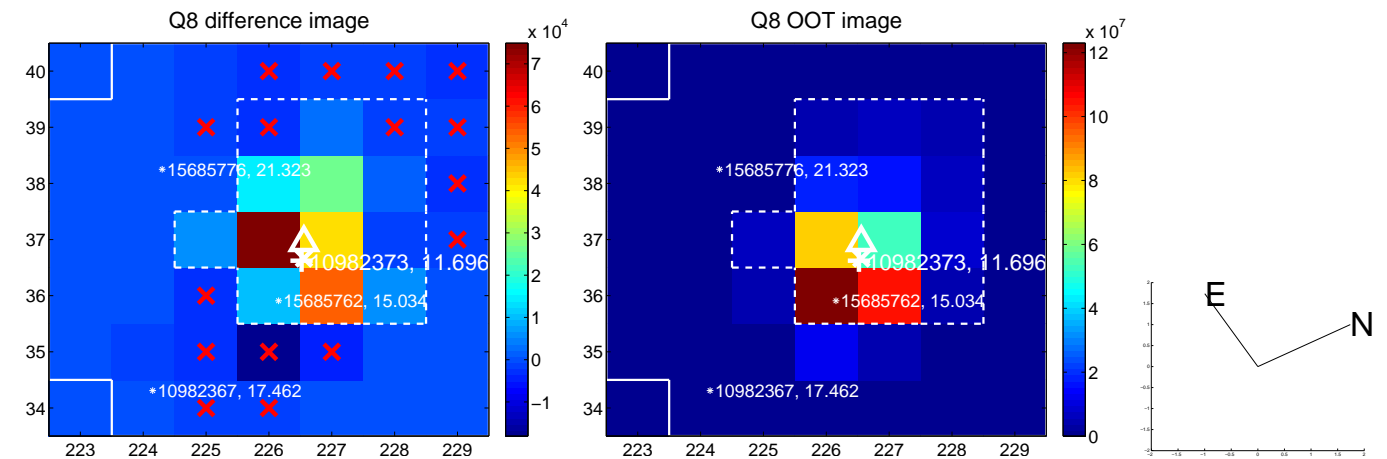
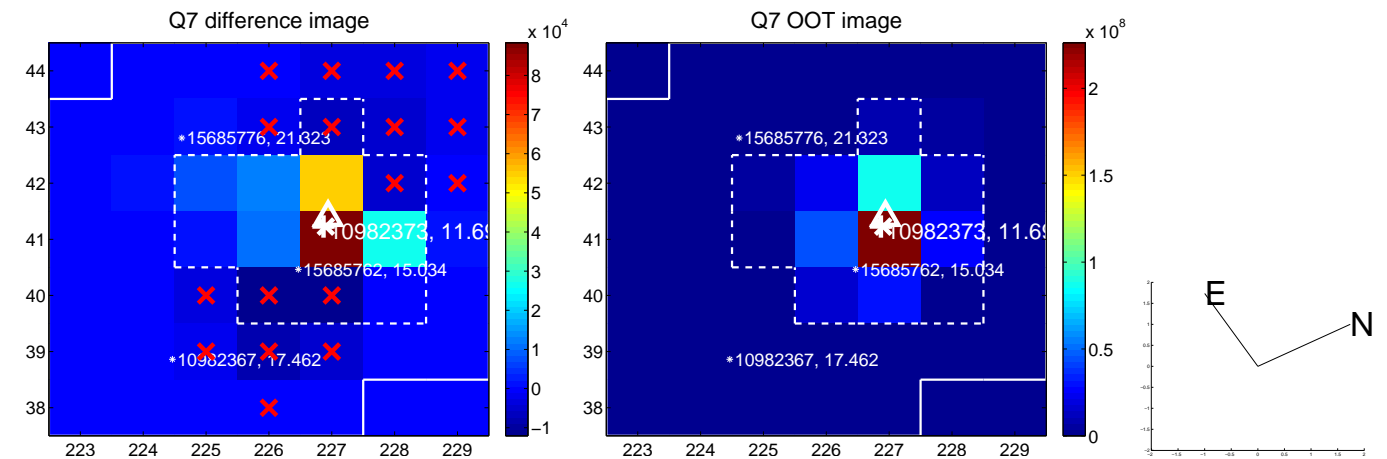
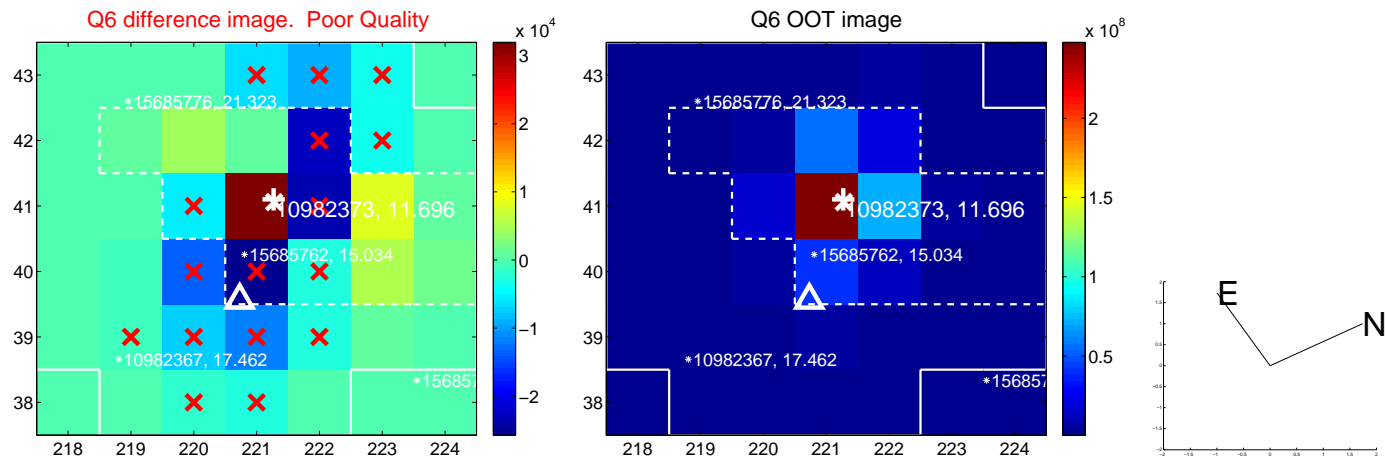
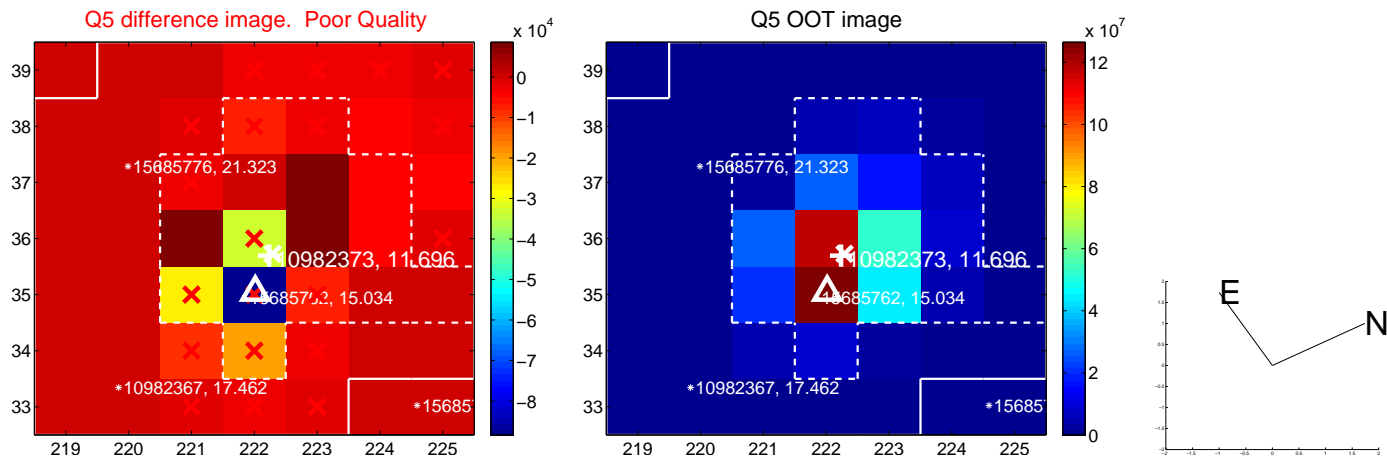


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

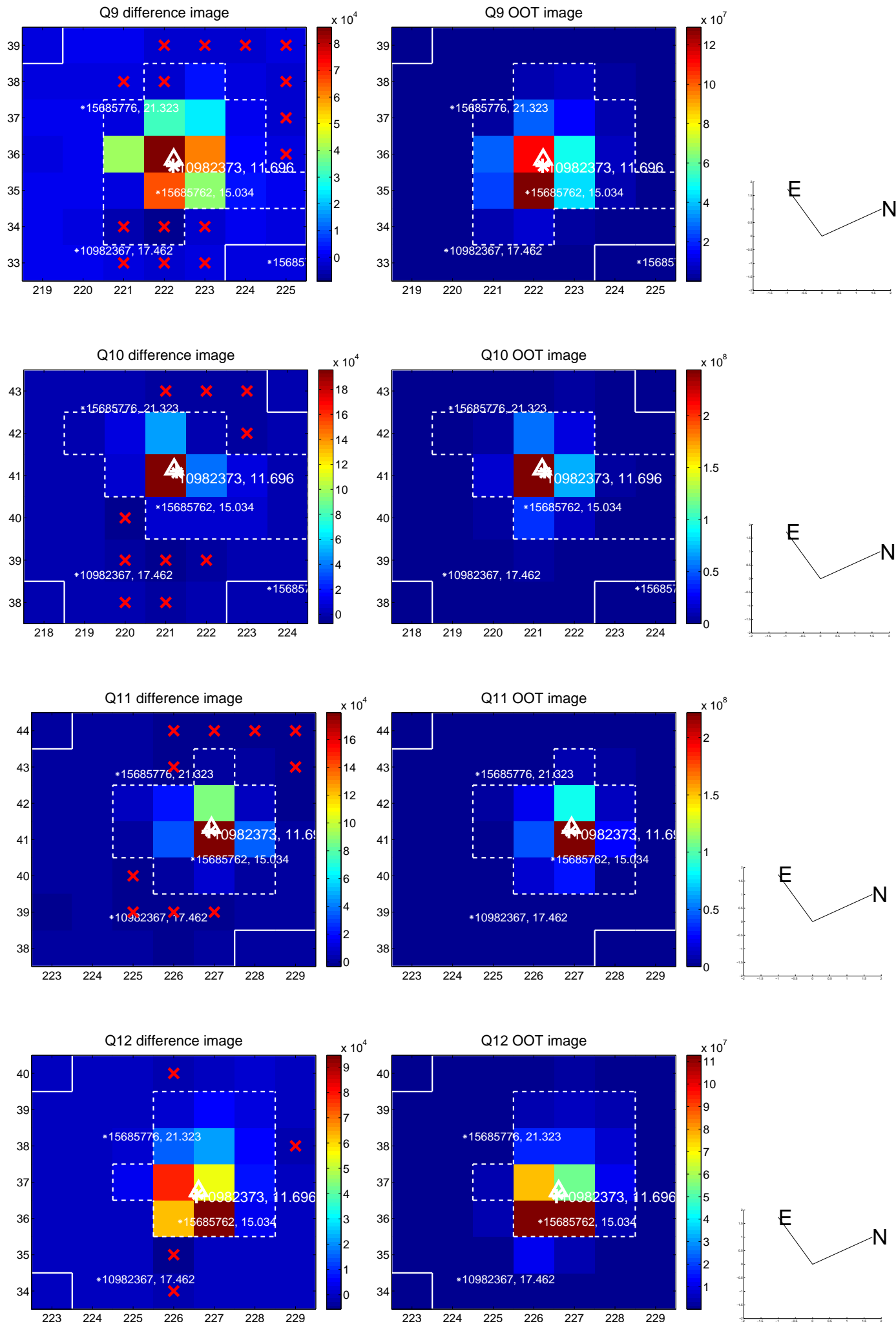
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



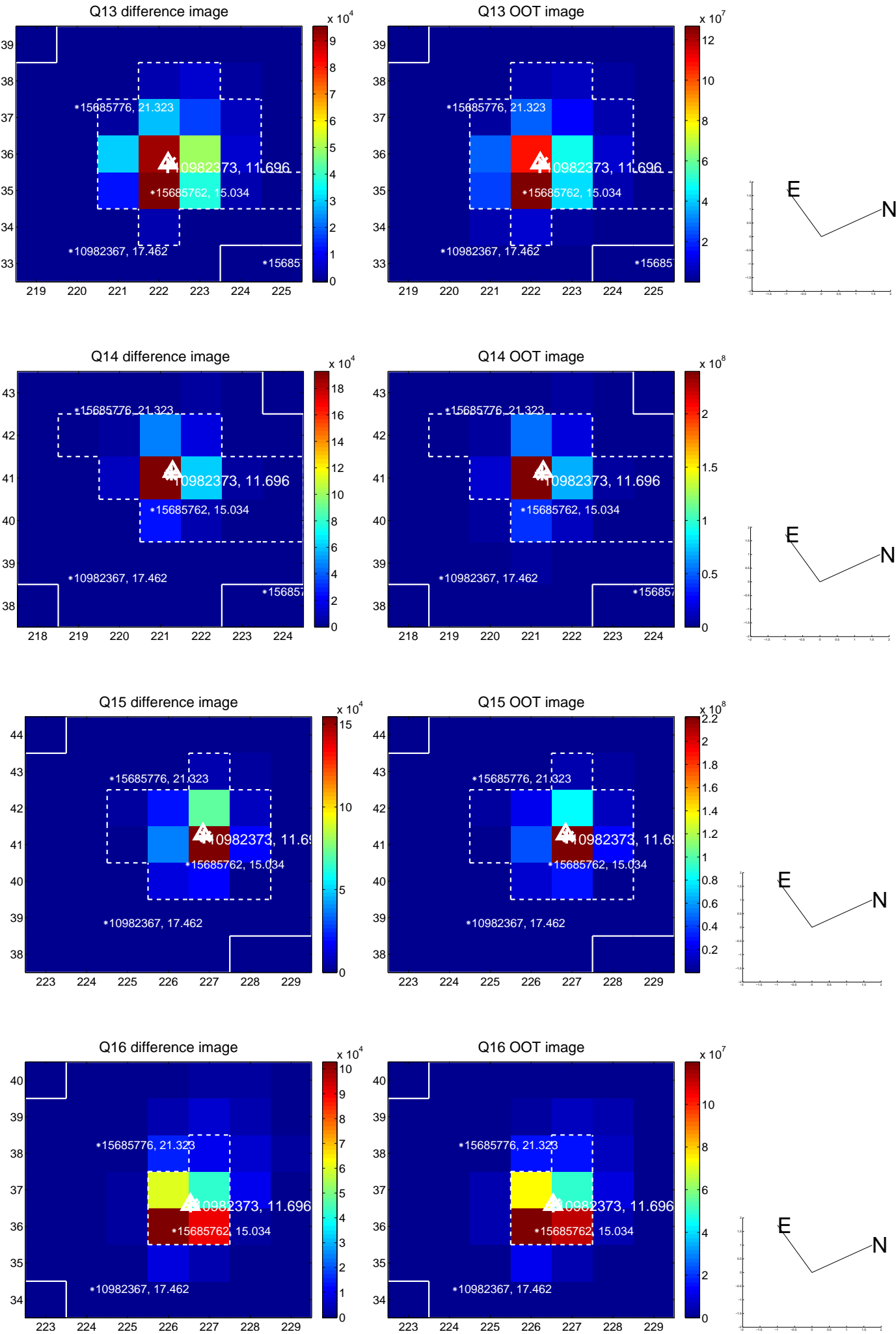
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



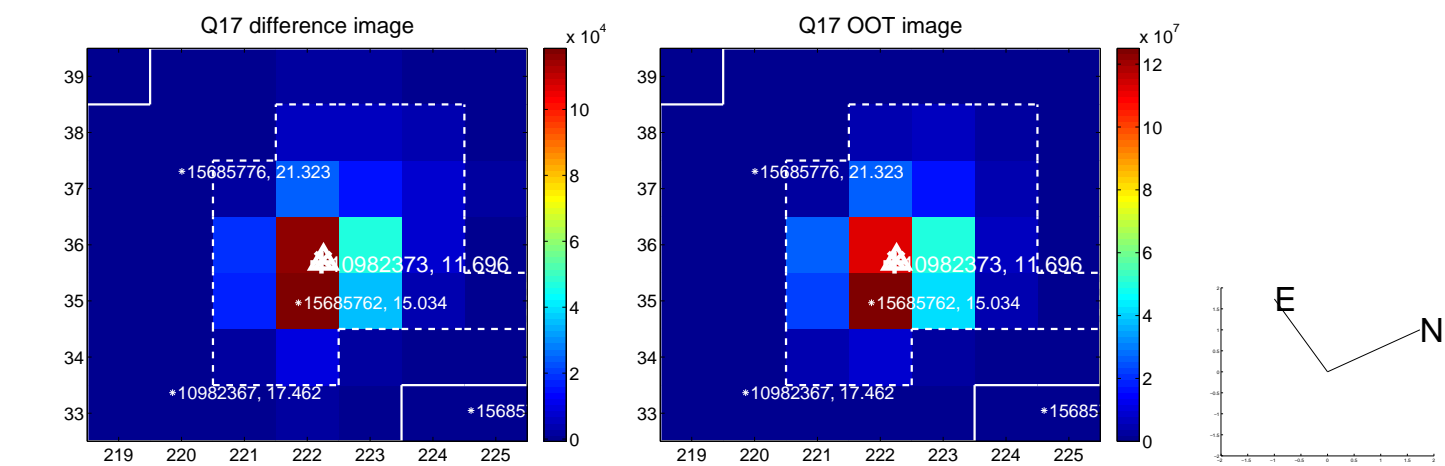
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



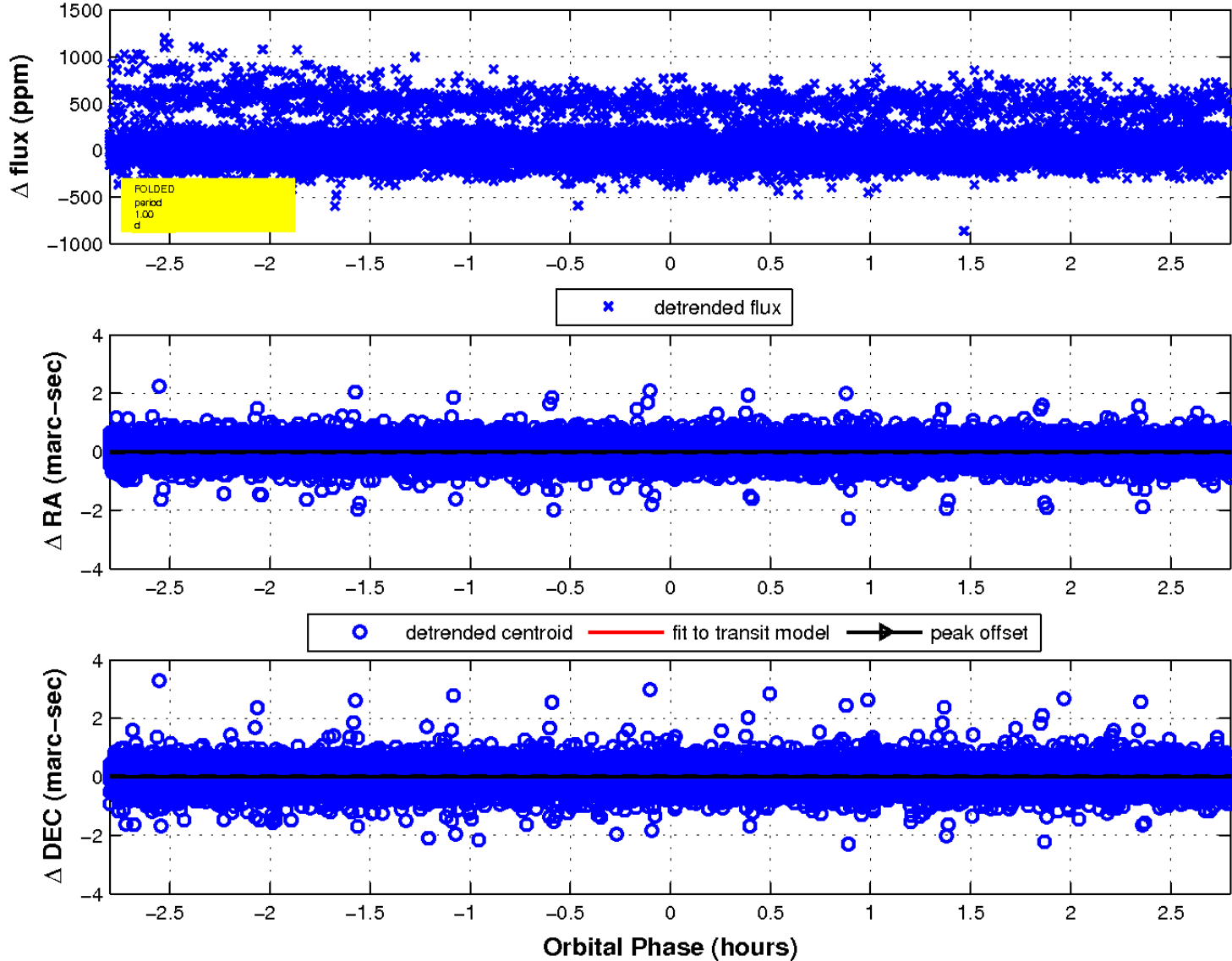
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

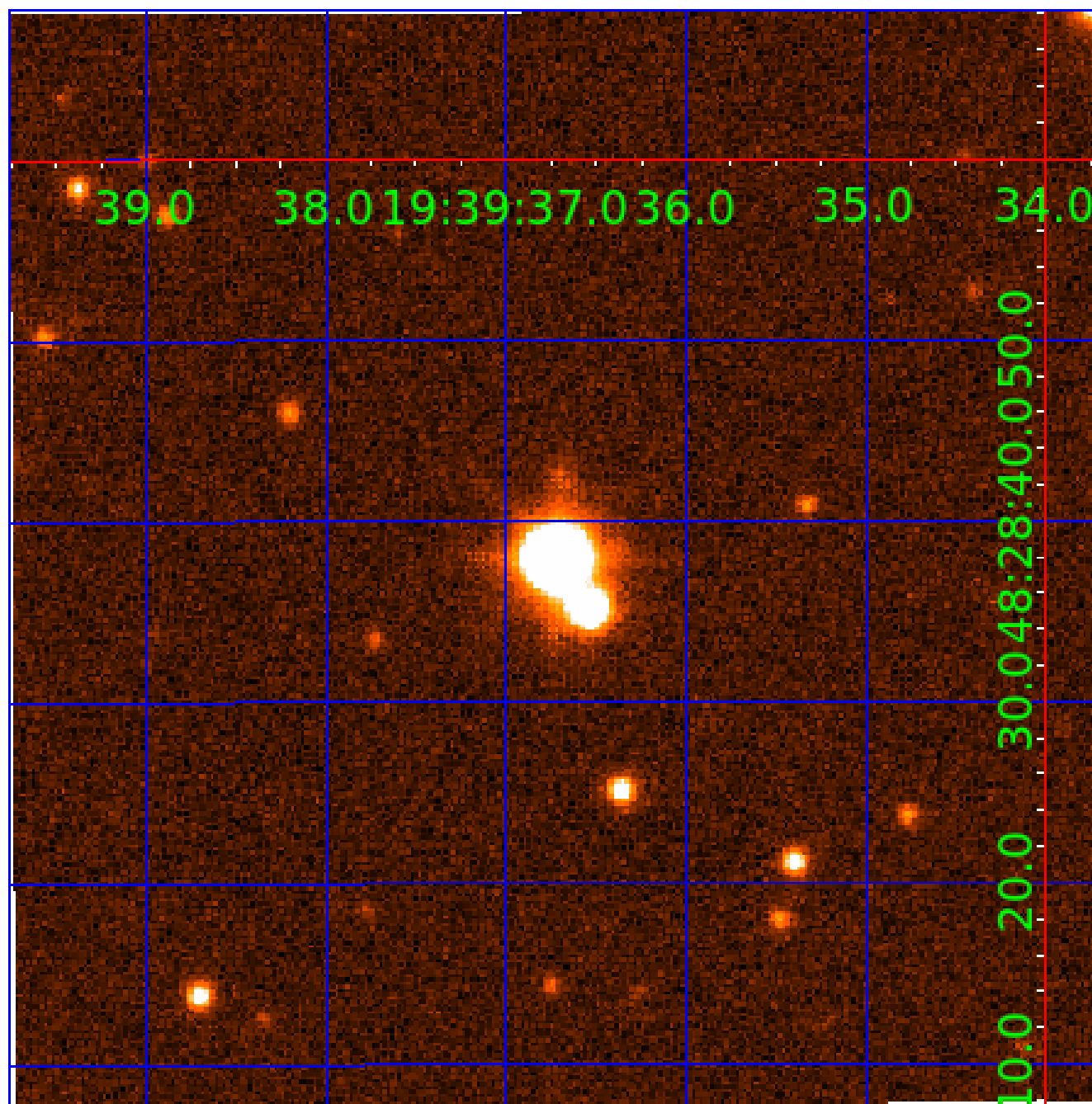


fluxWeightedCentroids, Planet 5 of 7



UKIRT Image

Declination



KIC 010982373

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})
010982373-01	OBS	7395.01	2.002769	132.075962	44.2	1.493	12.8	17.4	3.41	9453	2.62	42453.49
010982373-02	OBS	No	2.002816	132.745453	17.8	4.363	11.5	8.7	3.41	9453	1.65	42452.15
010982373-03	OBS	No	2.001713	132.845395	0.0	11.833	10.4	0.0	3.41	9453	0.01	42483.35
010982373-04	OBS	No	153.595656	252.452623	100.8	7.592	16.5	6.2	3.41	9453	3.59	130.29
010982373-05	OBS	No	1.001650	132.200146	59.6	0.934	15.7	8.9	3.41	9453	3.00	106938.28
010982373-06	OBS	No	1.001505	132.197002	30.5	1.174	15.2	7.8	3.41	9453	2.35	106958.89
010982373-07	OBS	No	2.007581	131.987777	81.2	3.500	12.4	-1.0	3.41	9453	3.14	42317.84

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010982373-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_ZUMA_TRACKER—SWEET_NTL—CENT_FEW_DIFFS
010982373-02	OBS	FP	0.00	1	0	1	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—HALO_GHOST
010982373-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
010982373-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—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
010982373-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
010982373-06	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_UNRESOLVED_OFFSET
010982373-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—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.

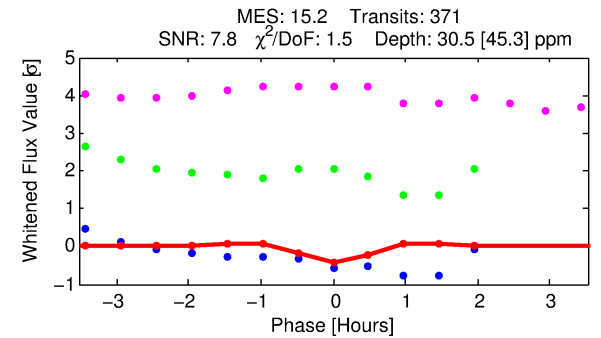
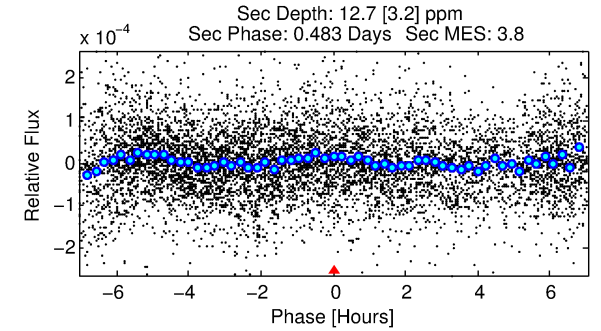
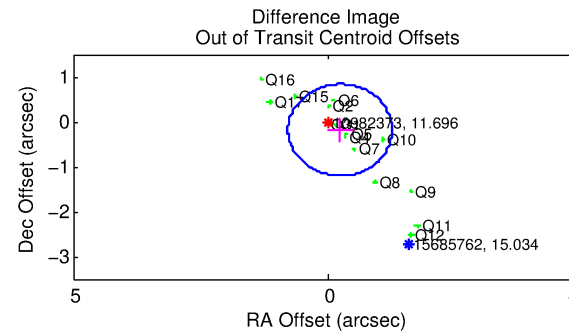
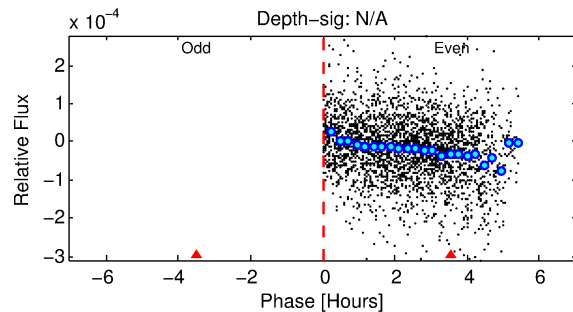
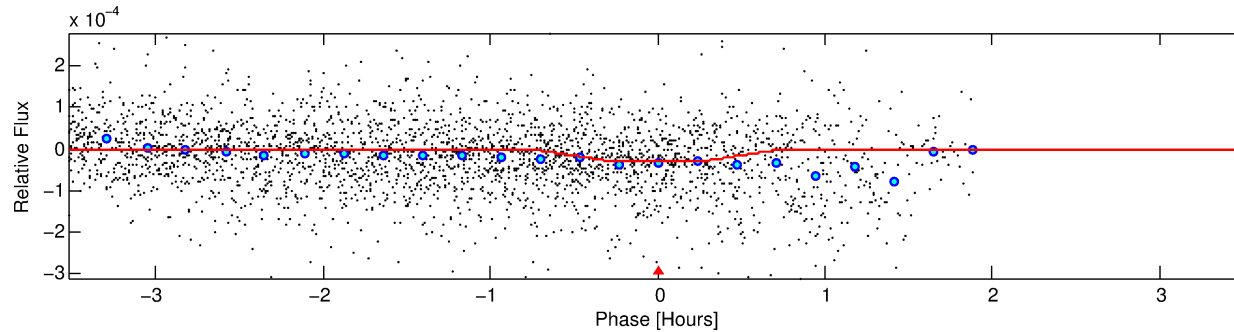
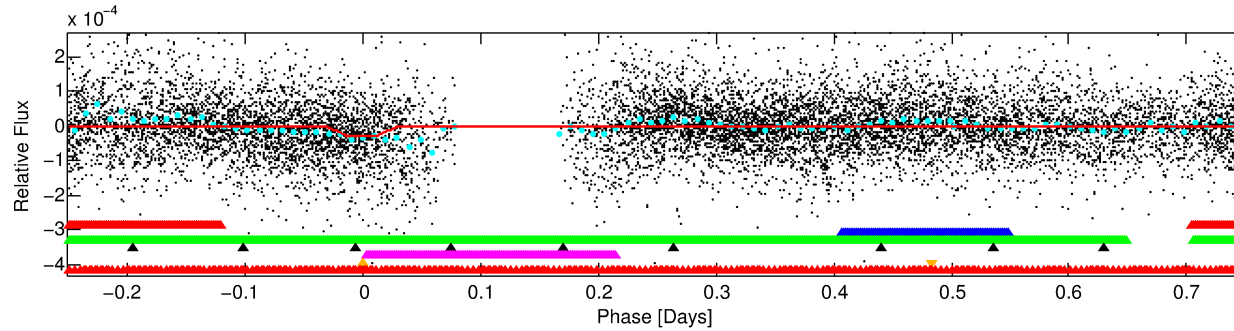
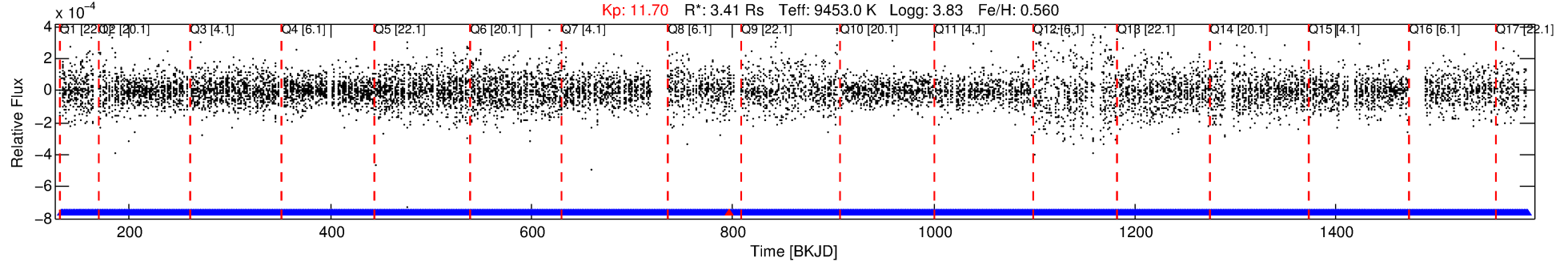
Ephemeris Match Information For 010982373-06

No Significant Match Found

DV One-Page Summary

KIC: 10982373 Candidate: 6 of 7 Period: 1.002 d
KOI: K07395 Corr: No Ephemeris Match

Kp: 11.70 R*: 3.41 Rs Teff: 9453.0 K Logg: 3.83 Fe/H: 0.560



DV Fit Results:

Period = 1.00151 [0.00014] d
Epoch = 132.1970 [0.0035] BKJD
Rp/R* = 0.0063 [0.0056]
a/R* = 1.93 [5.51]
b = 0.97 [0.21]
Seff = 106958.89 [50785.53]
Teq = 4611 [547] K
Rp = 2.35 [2.19] Re
a = 0.0279 [0.0071] AU
Ag = 0.98 [1.79] [-0.01σ]
Teffp = 7099 [3203] K [0.77σ]

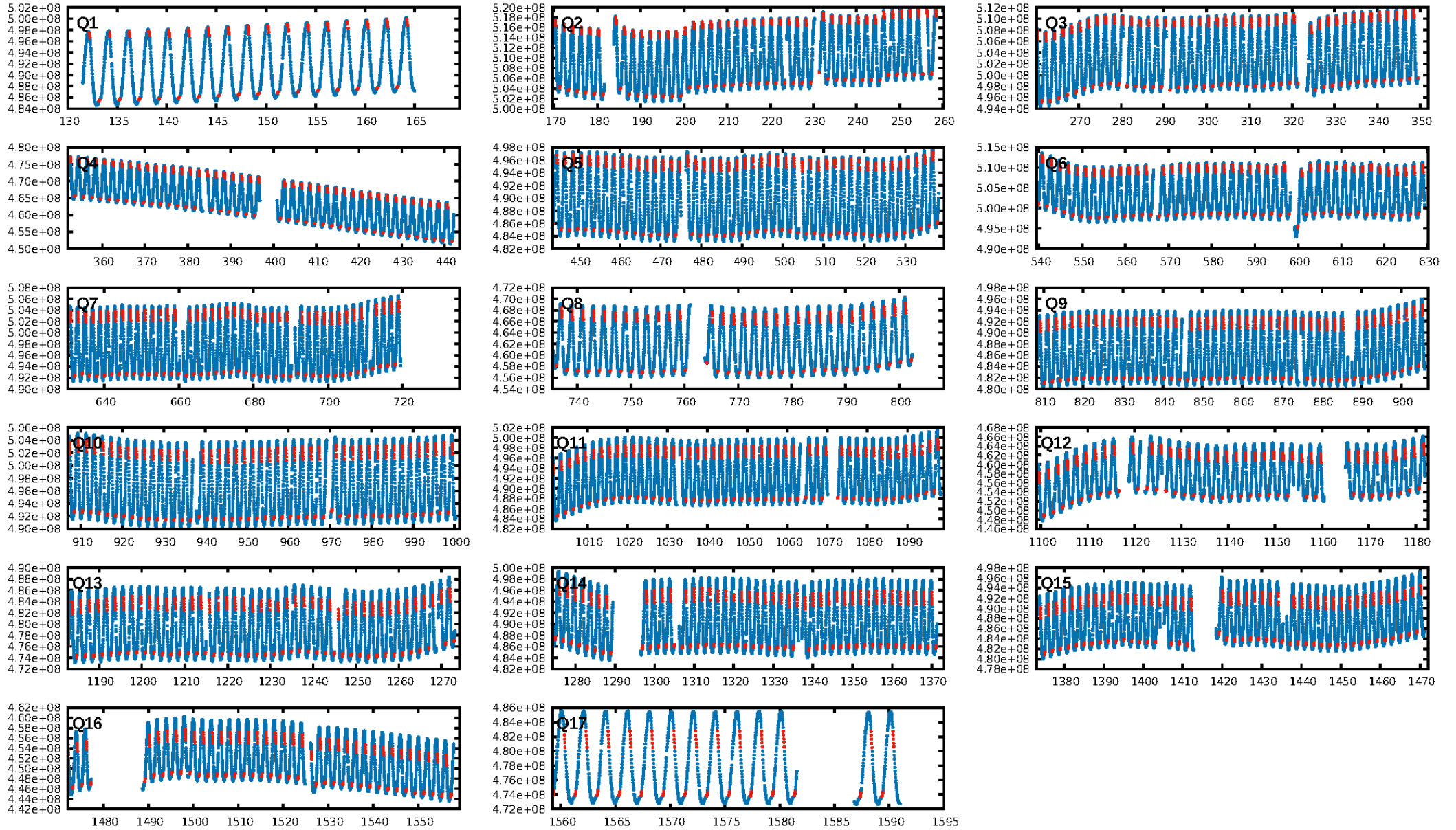
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.2% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [359/360]
GhostDiagnostic-chr: 0.8588
Centroid-sig: 57.7%
Centroid-so: 0.107 arcsec [0.19σ]
OotOffset-rm: 0.307 arcsec [0.90σ]
KicOffset-rm: 0.405 arcsec [1.16σ]
OotOffset-st: 3/4/4/4 [15]
KicOffset-st: 3/4/4/4 [15]
DiffImageQuality-fgm: 0.20 [3/15]
DiffImageOverlap-fno: 0.00 [0/17]

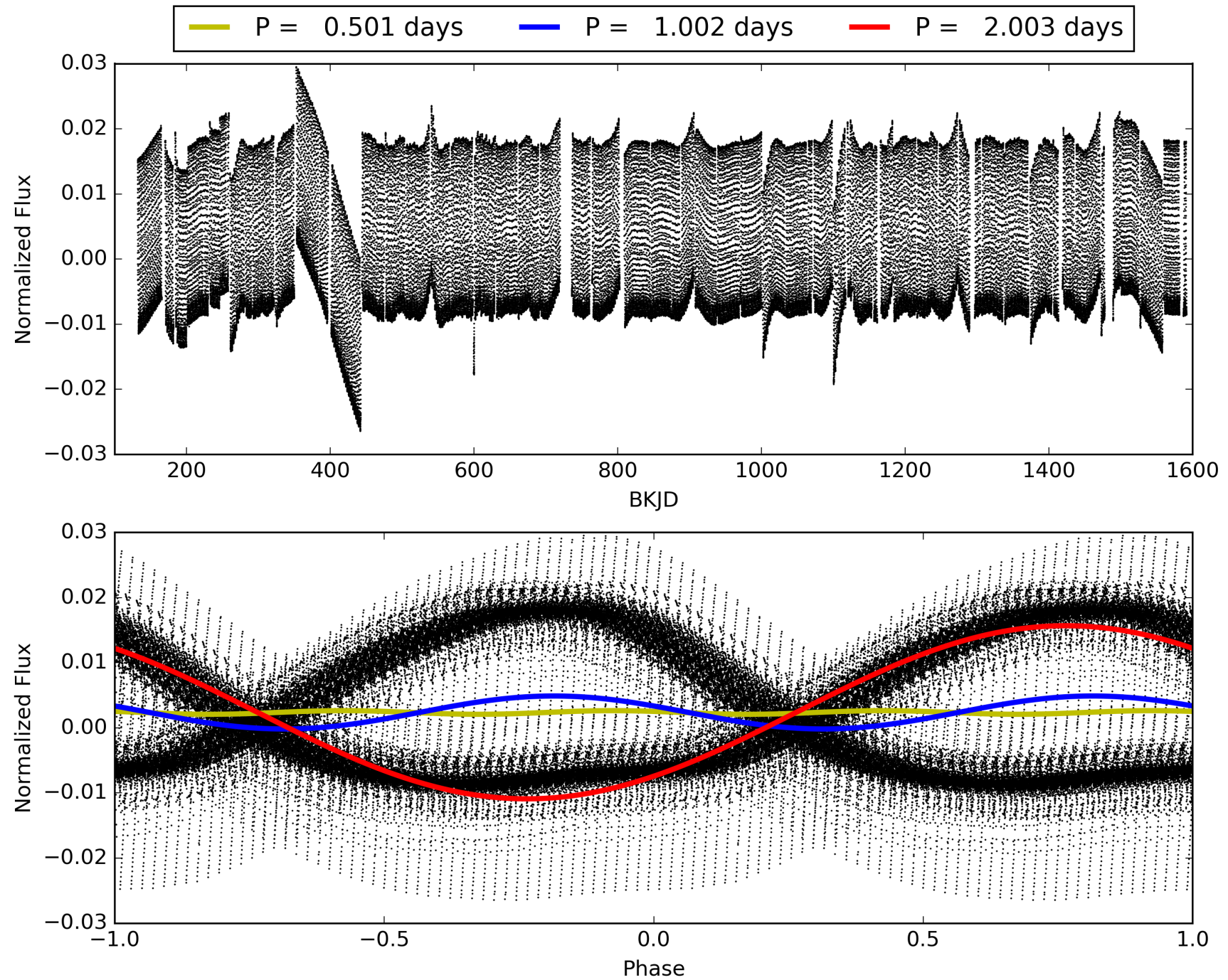
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:33:31 Z

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

TCE 010982373-06, PDC Light Curves

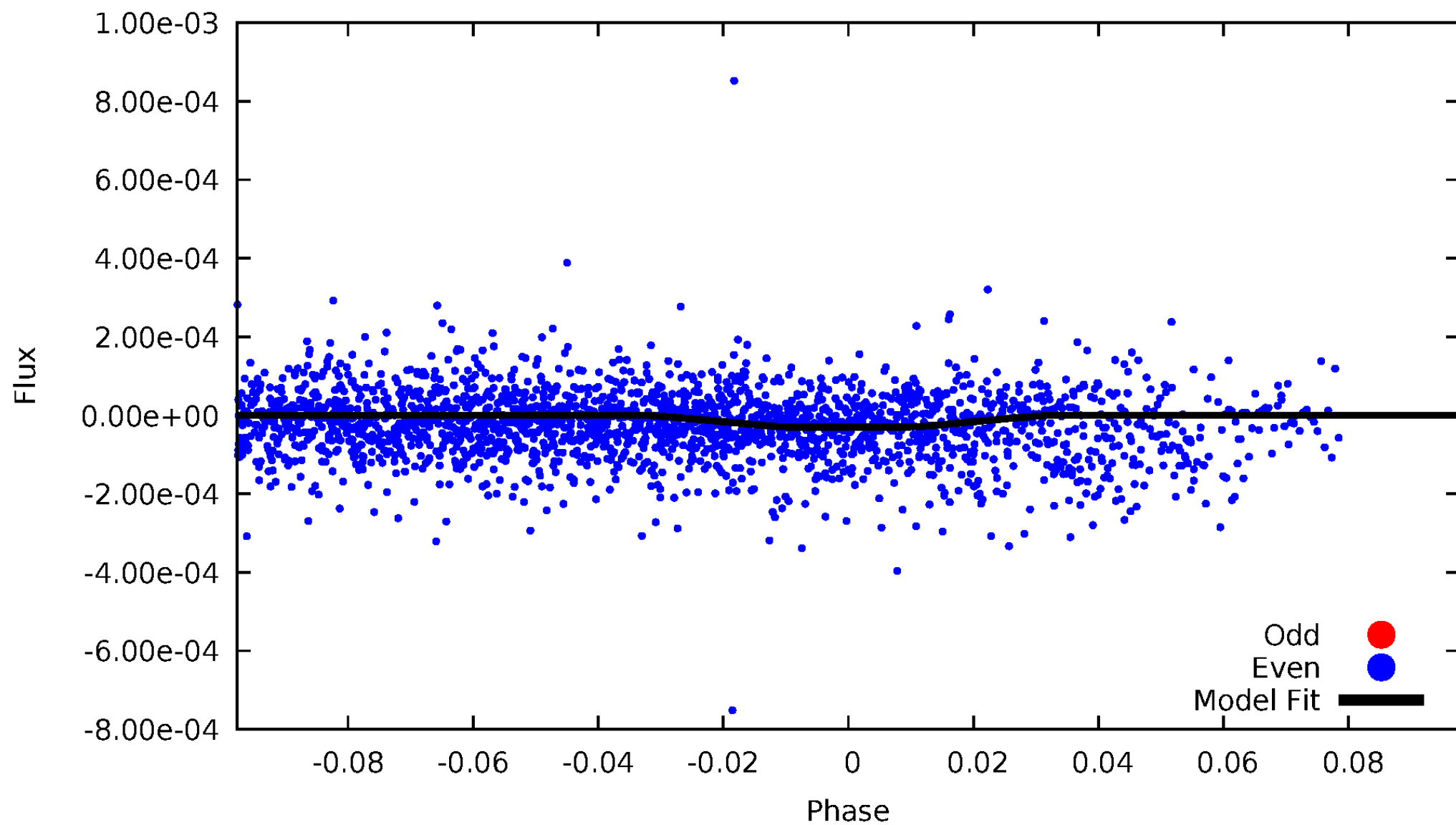


TCE 010982373-06



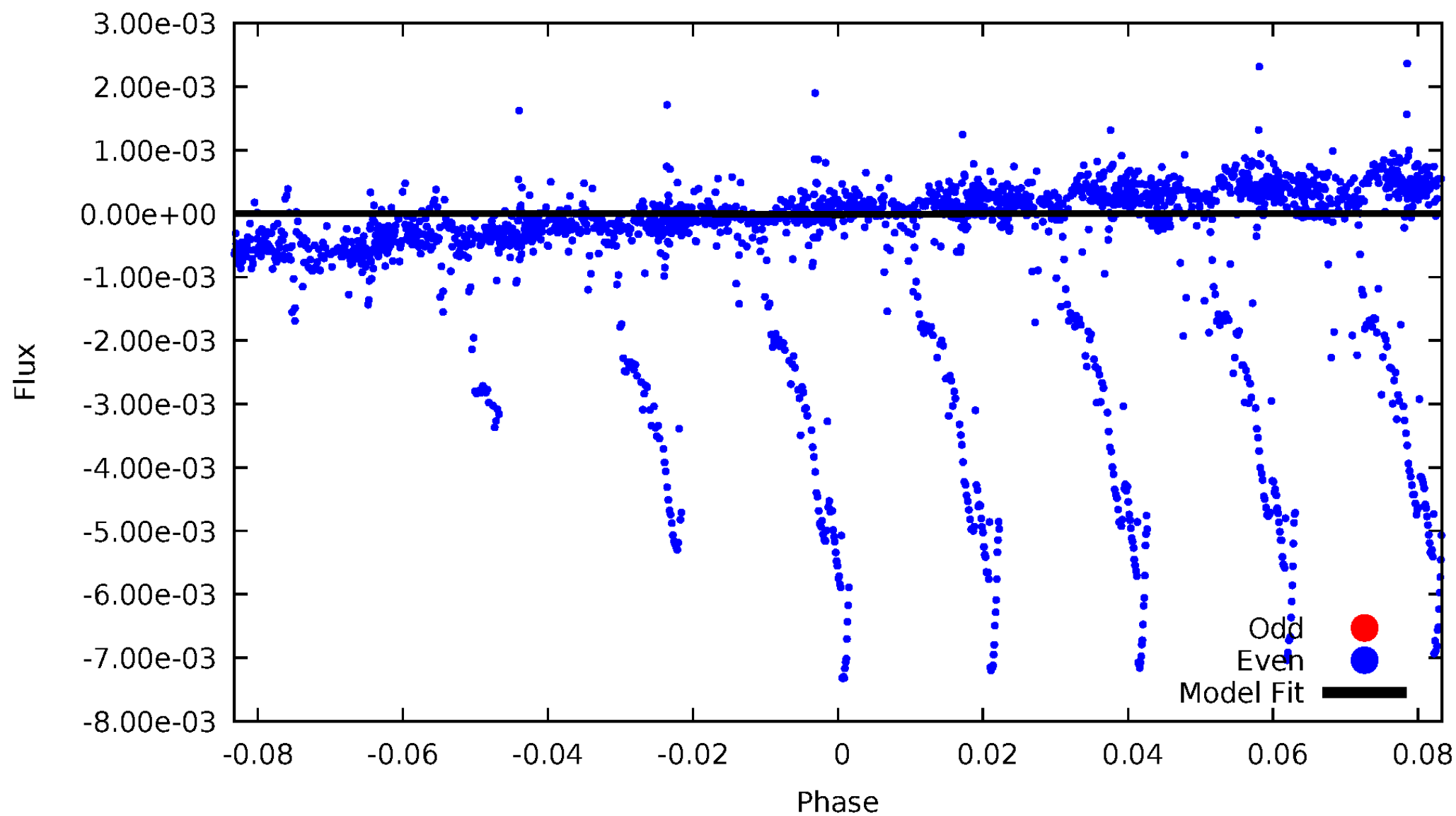
DV Odd/Even

TCE 010982373-06



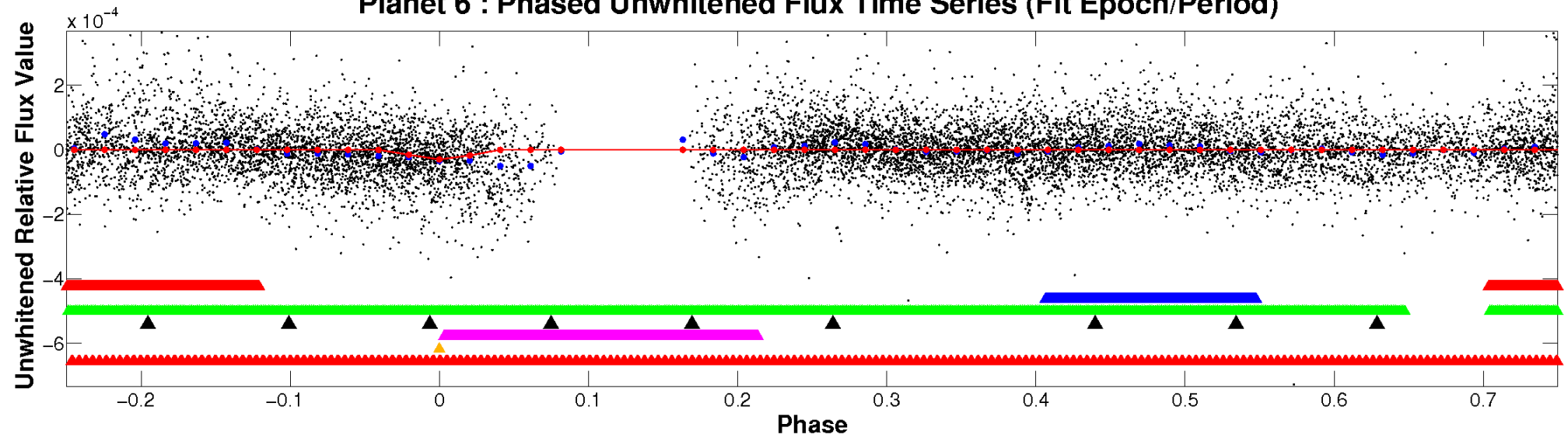
ALT Odd/Even

TCE 010982373-06

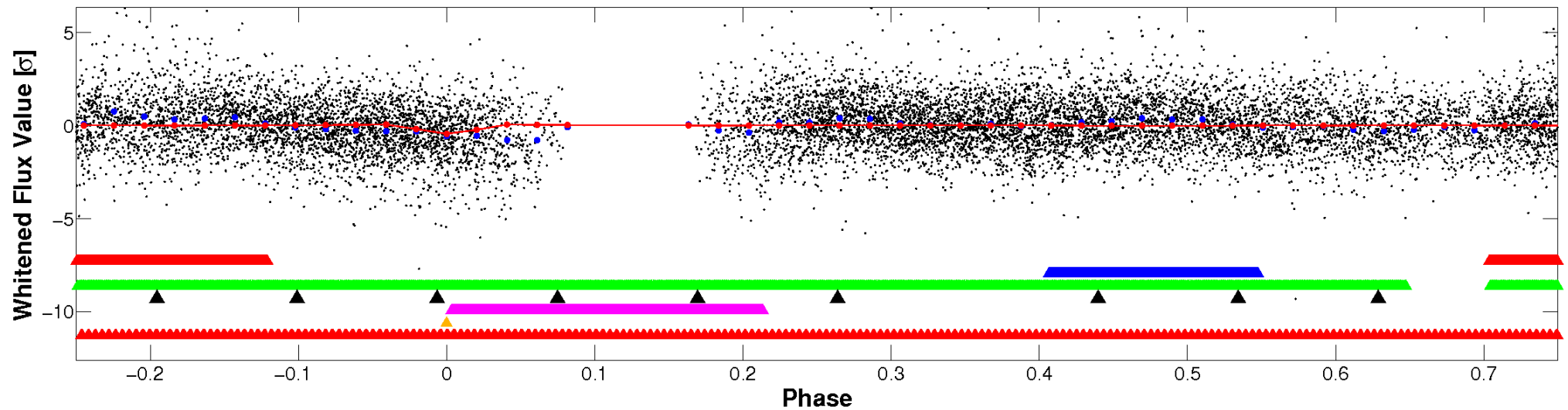


Non-Whitened Vs. Whitened Light Curve

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

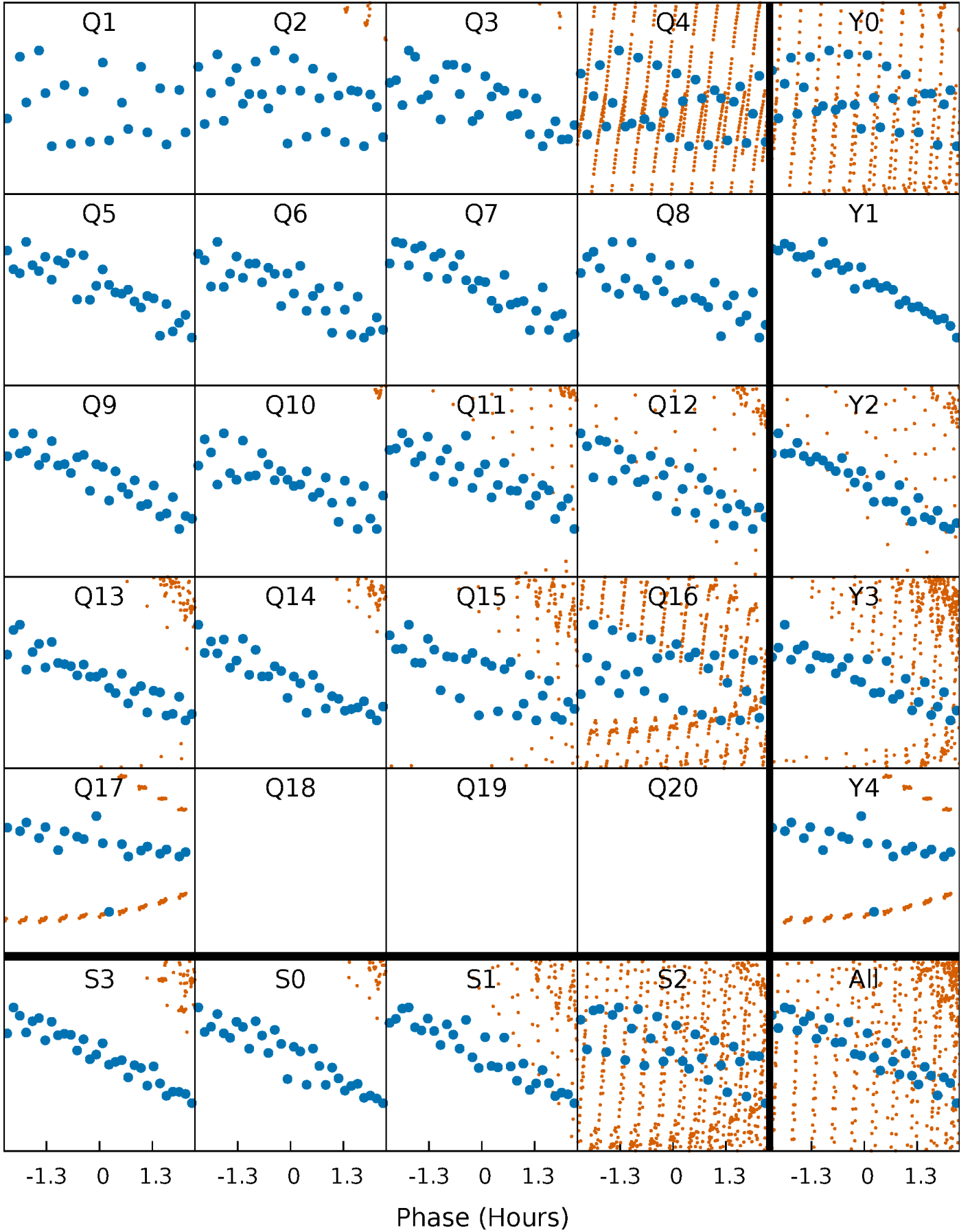


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



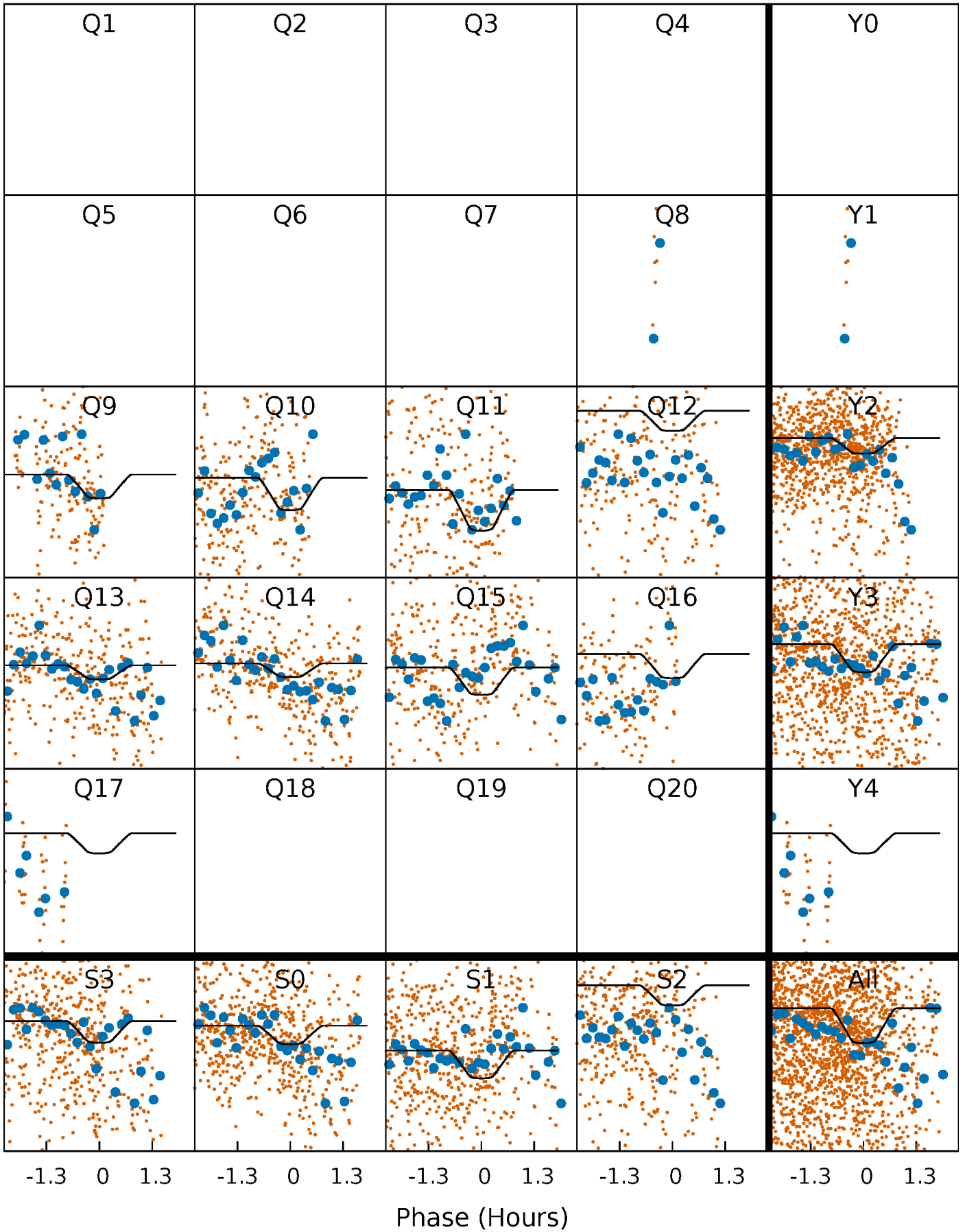
PDC Quarter-Phased Transit Curves

TCE 010982373-06 P= 1.001505 Days $T_0=132.197002$ (BKJD)



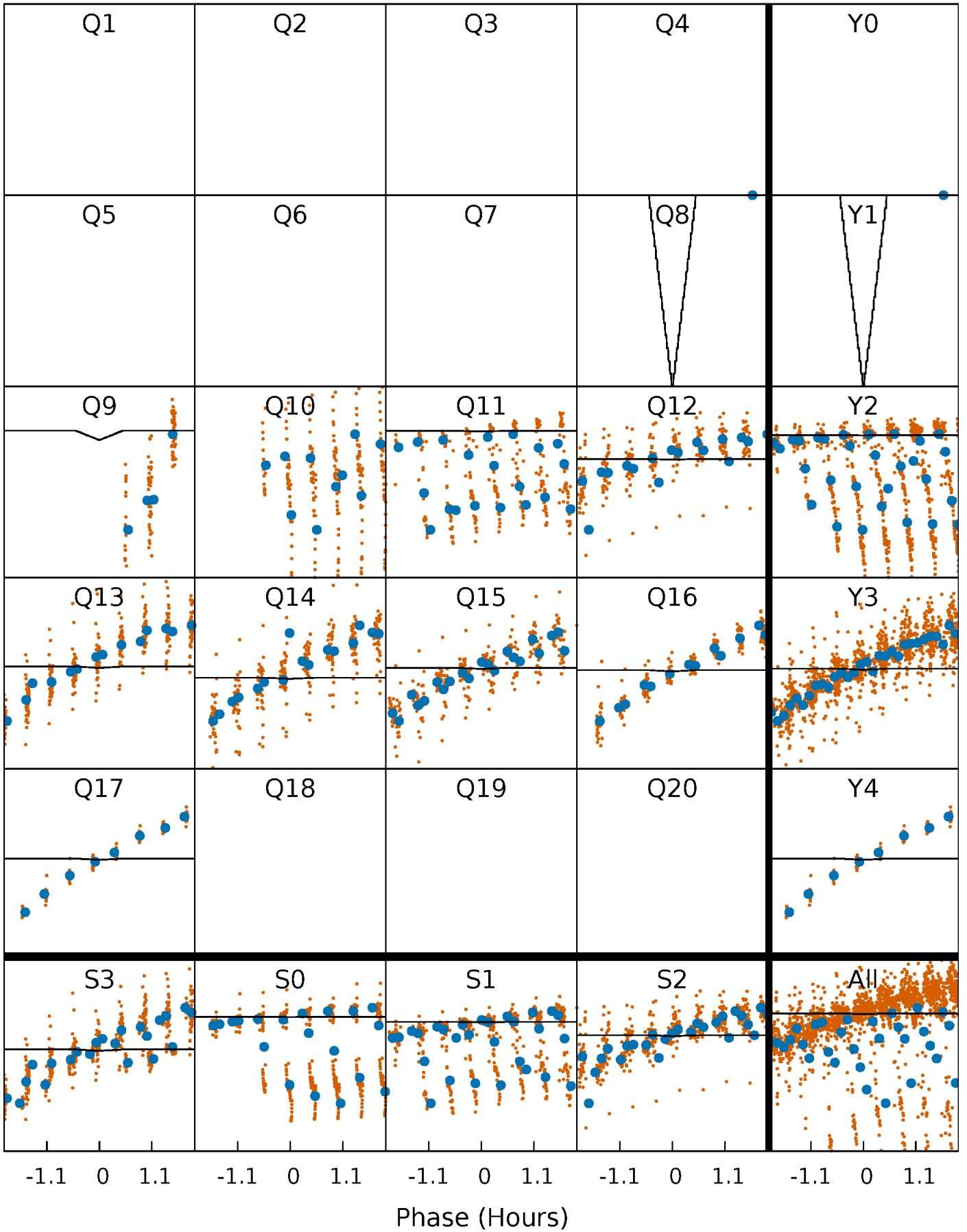
DV Quarter-Phased Transit Curves

TCE 010982373-06 P= 1.001505 Days $T_0=132.197002$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

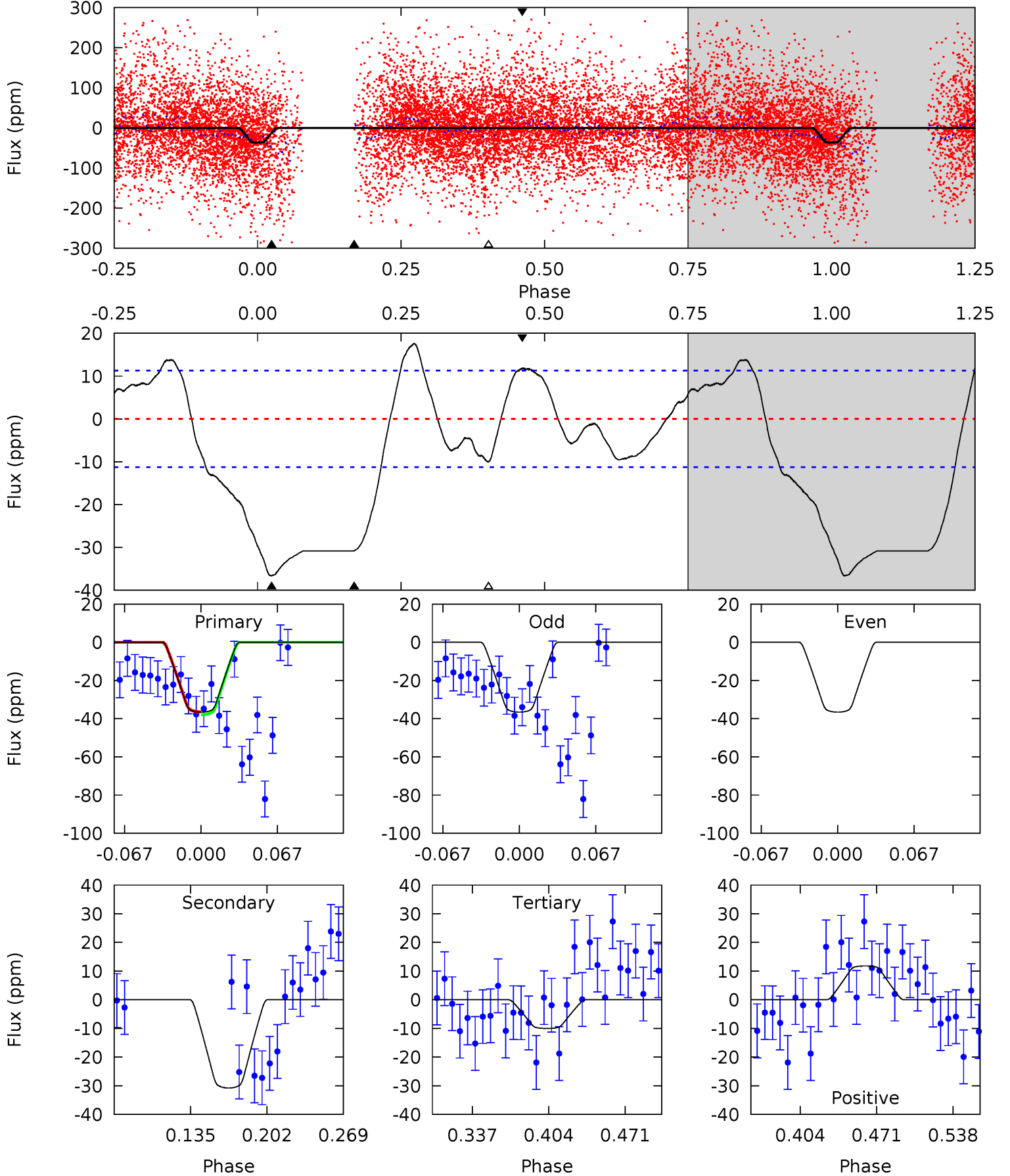
TCE 010982373-06 P= 1.001315 Days $T_0=132.234626$ (BKJD)



DV Model-Shift Uniqueness Test

010982373-06, P = 1.001505 Days, E = 131.195497 Days

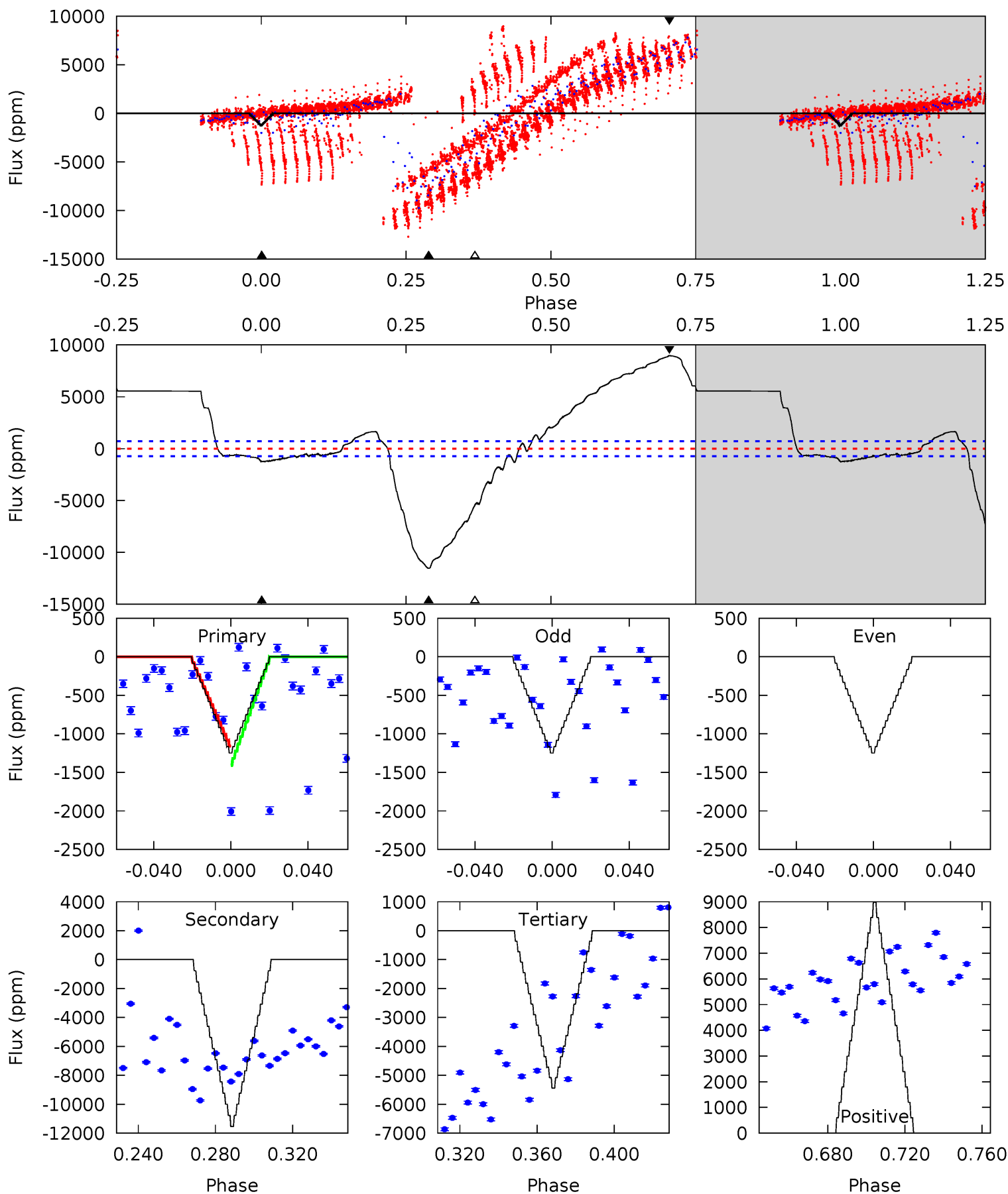
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.1	12.7	4.12	4.87	4.65	1.83	3.67	11.0	10.2	8.57	7.83	0	1.27	0.32	0.30



Alt Model-Shift Uniqueness Test

010982373-06, P = 1.001315 Days, E = 131.233311 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.22	75.9	35.8	59.1	4.75	2.05	27.6	-27.6	-50.9	40.1	16.8	0	50.8	0.44	0.78



Stellar Parameters For KIC 010982373

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	9453^{+399}_{-699}	$3.832^{+0.185}_{-0.203}$	$0.560^{+0.050}_{-0.200}$	$3.407^{+1.033}_{-0.845}$	$2.872^{+0.281}_{-0.422}$	$0.102^{+0.103}_{-0.051}$
	+4%/-7%	+5%/-5%	+9%/-36%	+30%/-25%	+10%/-15%	+101%/-50%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 010982373-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-31 ± 2	$2.61^{+1.89}_{-1.65}$	6438^{+565}_{-637}	7542^{+9414}_{-2445}	$1.902^{+12.140}_{-1.267}$
Alt.	-11536 ± 152	$2.12^{+1.73}_{-1.37}$	6395^{+658}_{-587}	$628912^{+4527963}_{-427721}$	1106^{+7675}_{-772}

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

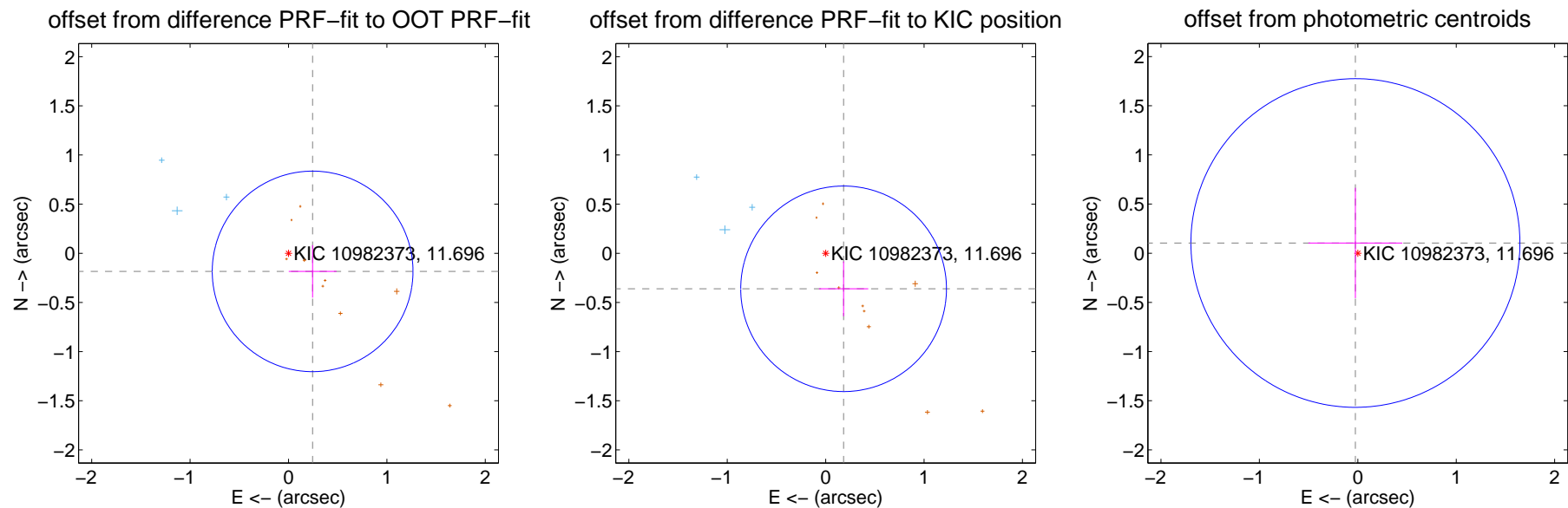
DV Centroid Data

Supplemental centroid analysis for 010982373-06. **Kepler magnitude: 11.70.** Transit SNR 7.83

There are 3 quarters with good PRF difference image offsets

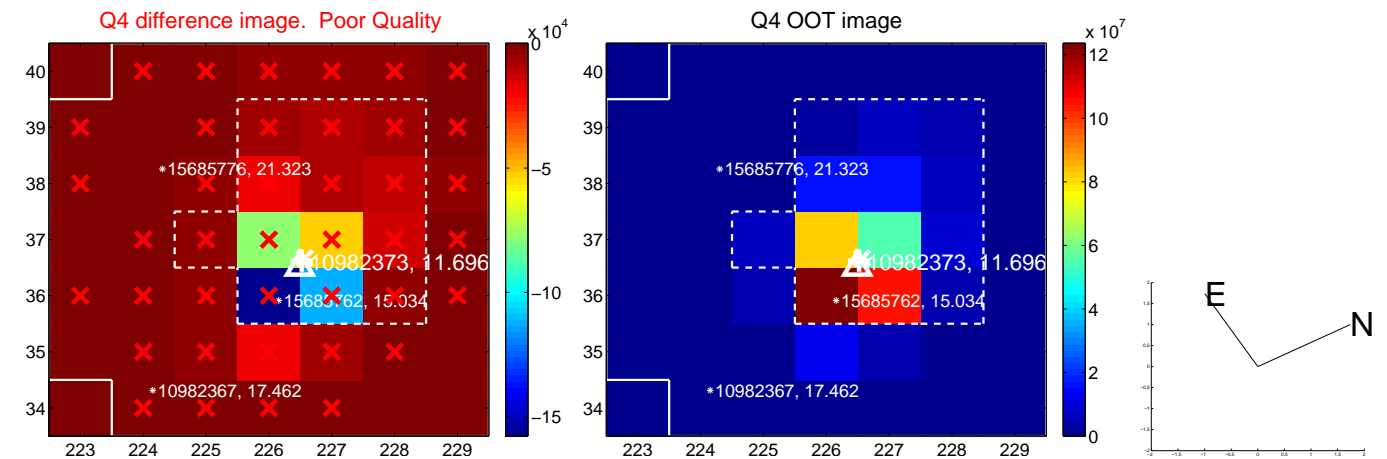
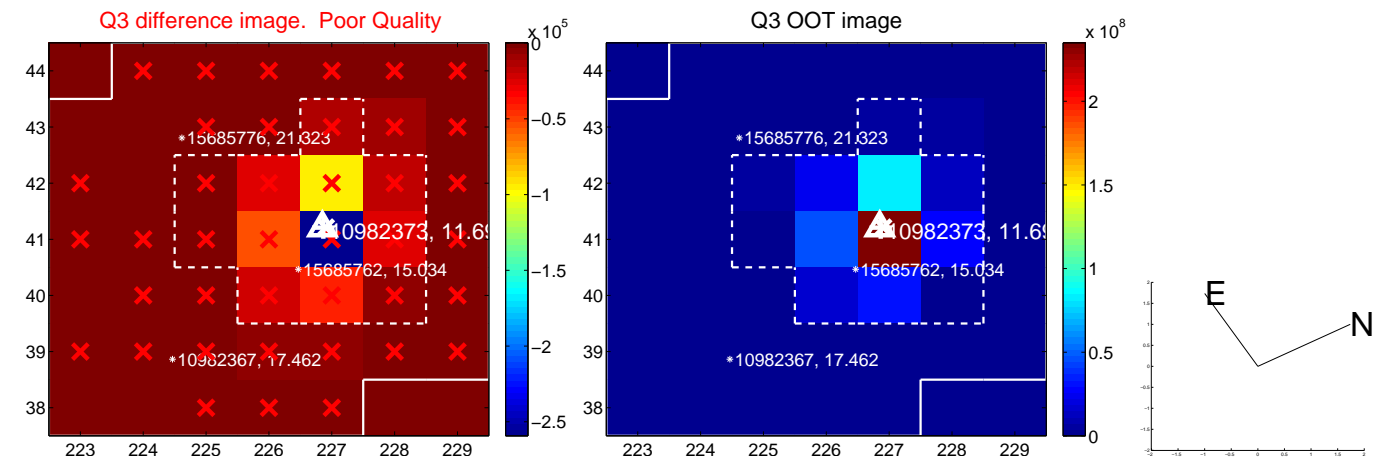
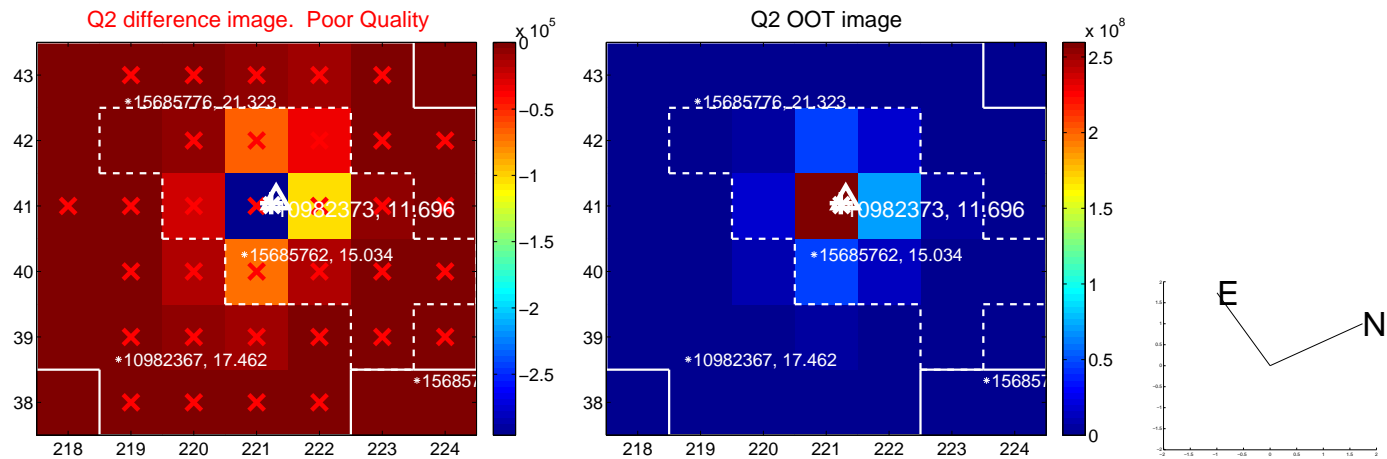
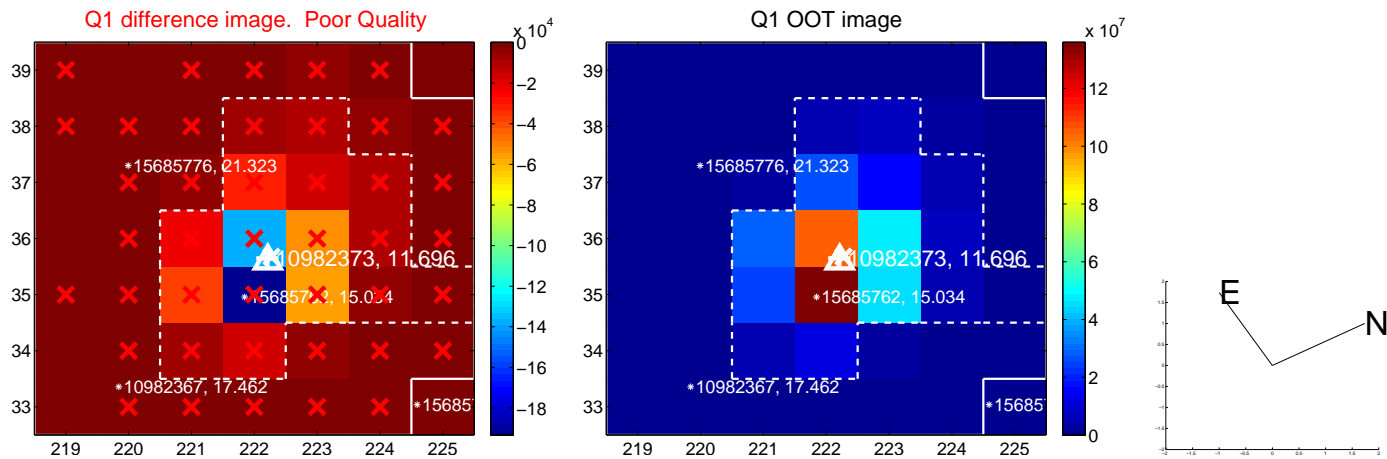
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.307 ± 0.340	0.90	-0.245 ± 0.243	-0.184 ± 0.267
PRF-fit source offset from KIC position	0.405 ± 0.348	1.16	-0.182 ± 0.250	-0.361 ± 0.278
photometric centroid source offset	0.11 ± 0.56	0.19	0.02 ± 0.48	0.10 ± 0.56

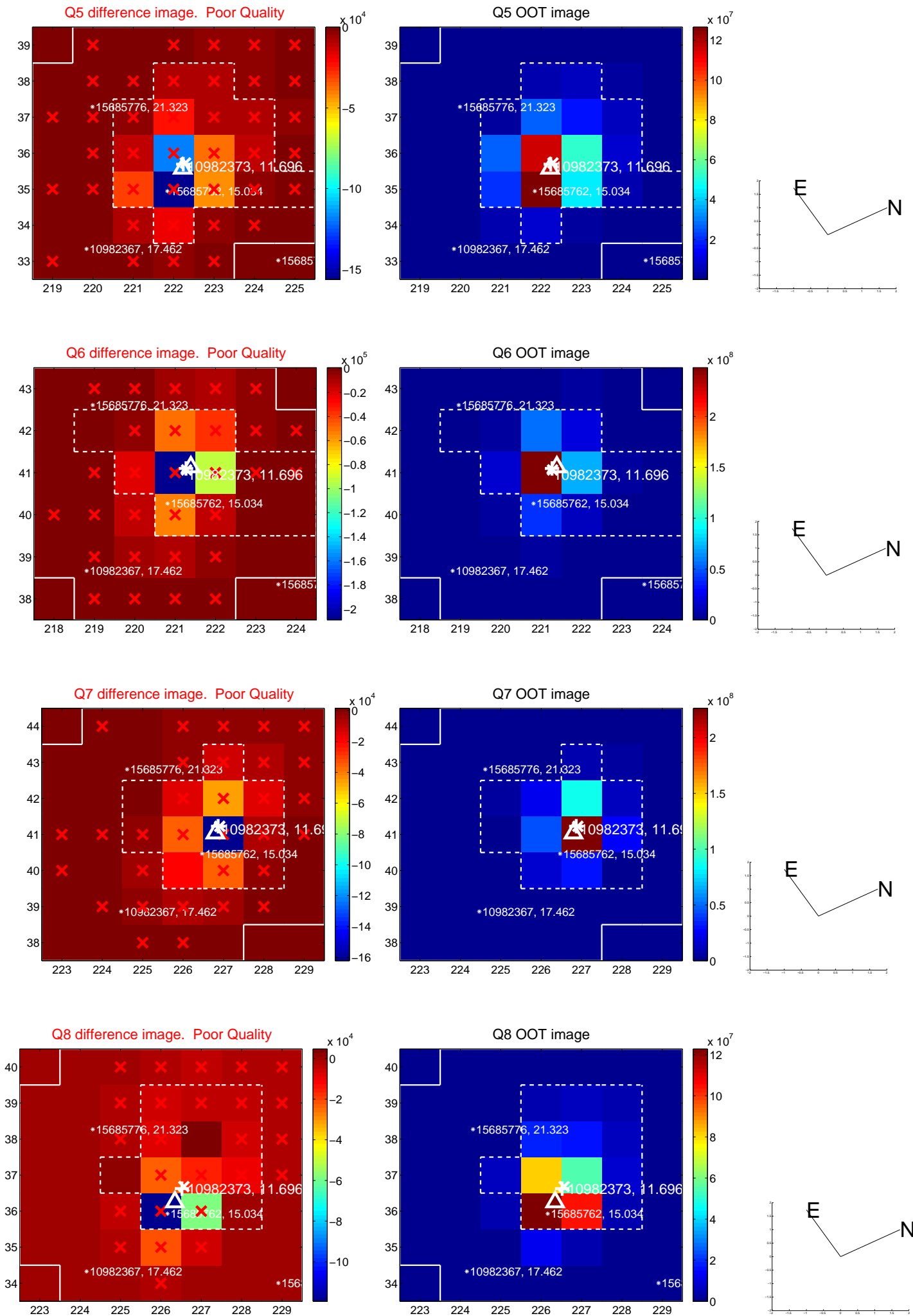


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

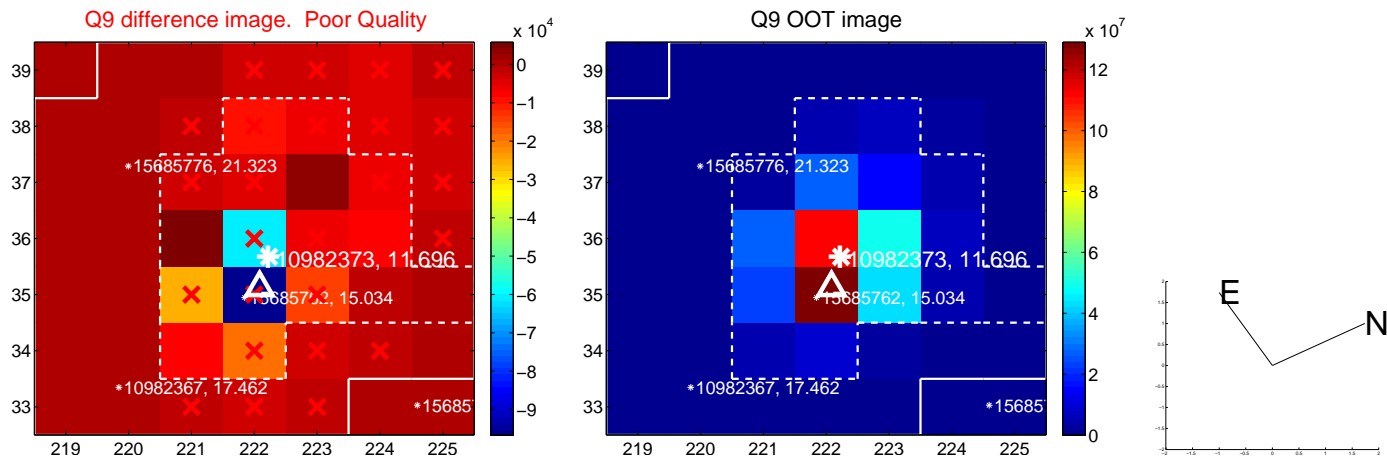
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



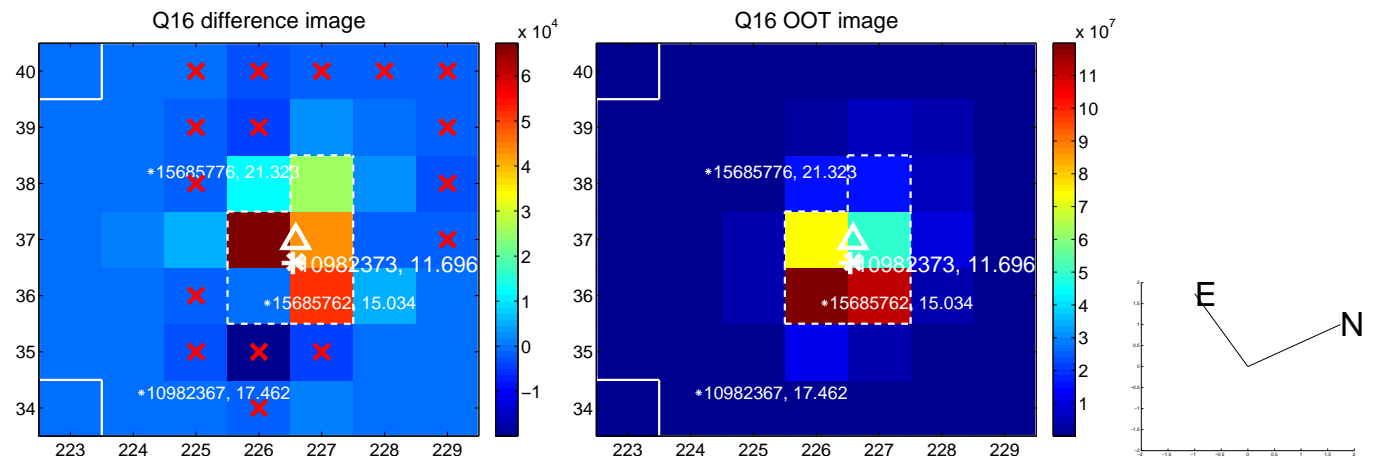
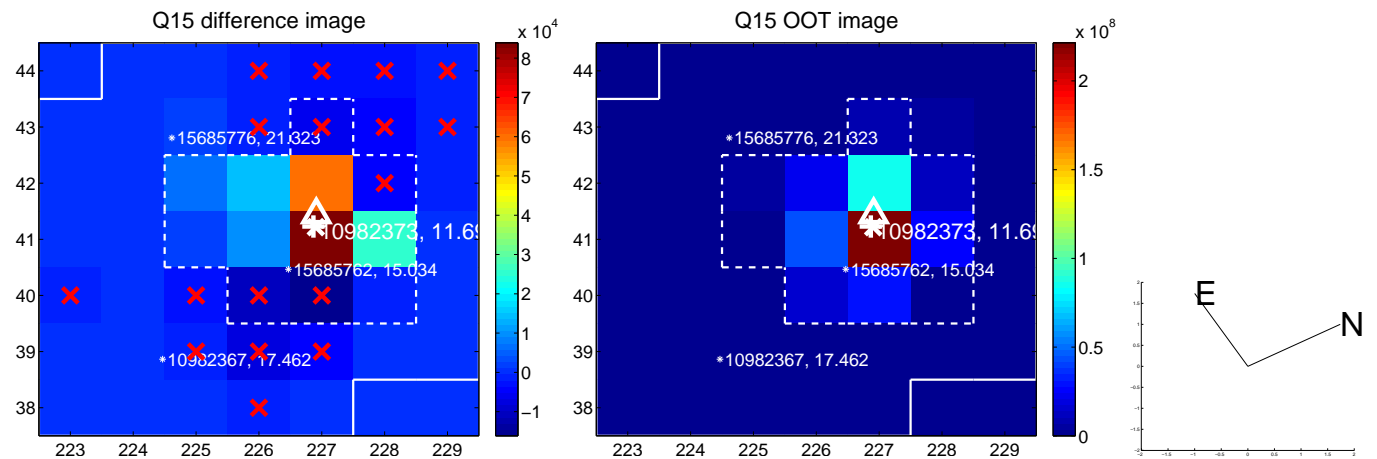
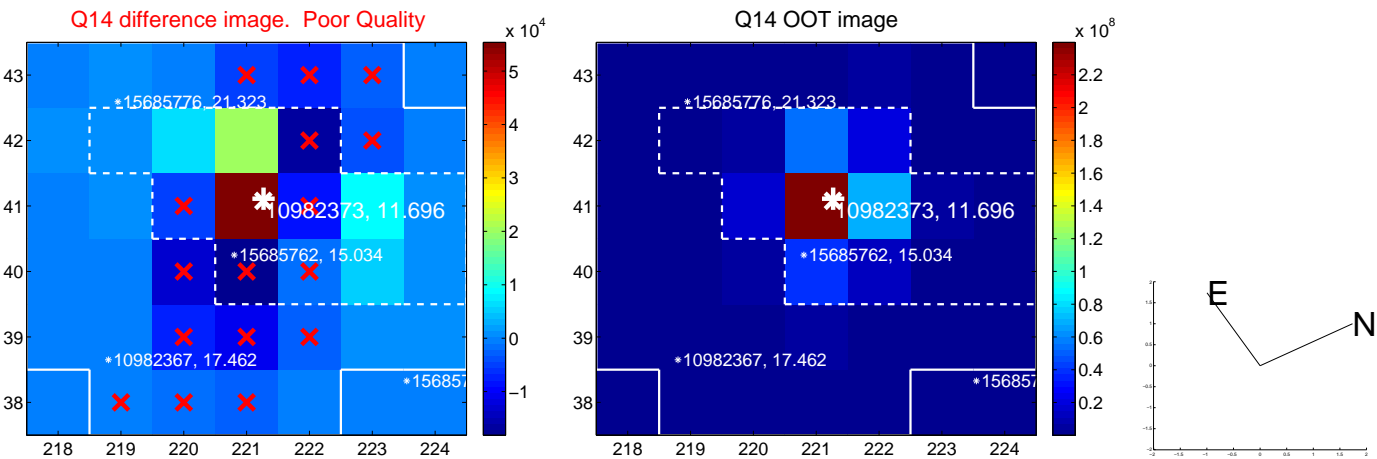
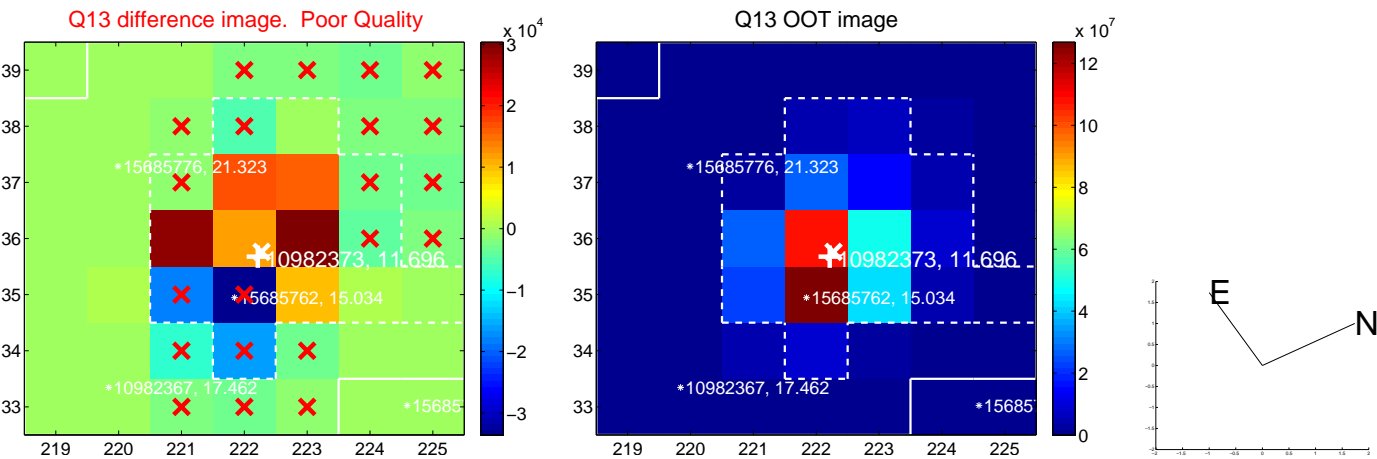
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



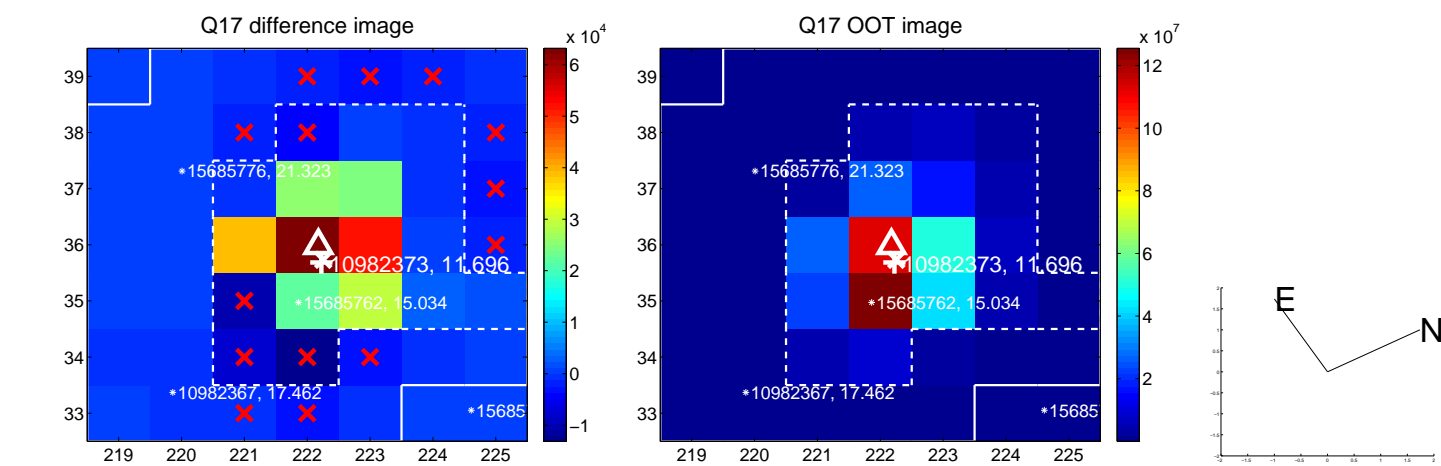
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



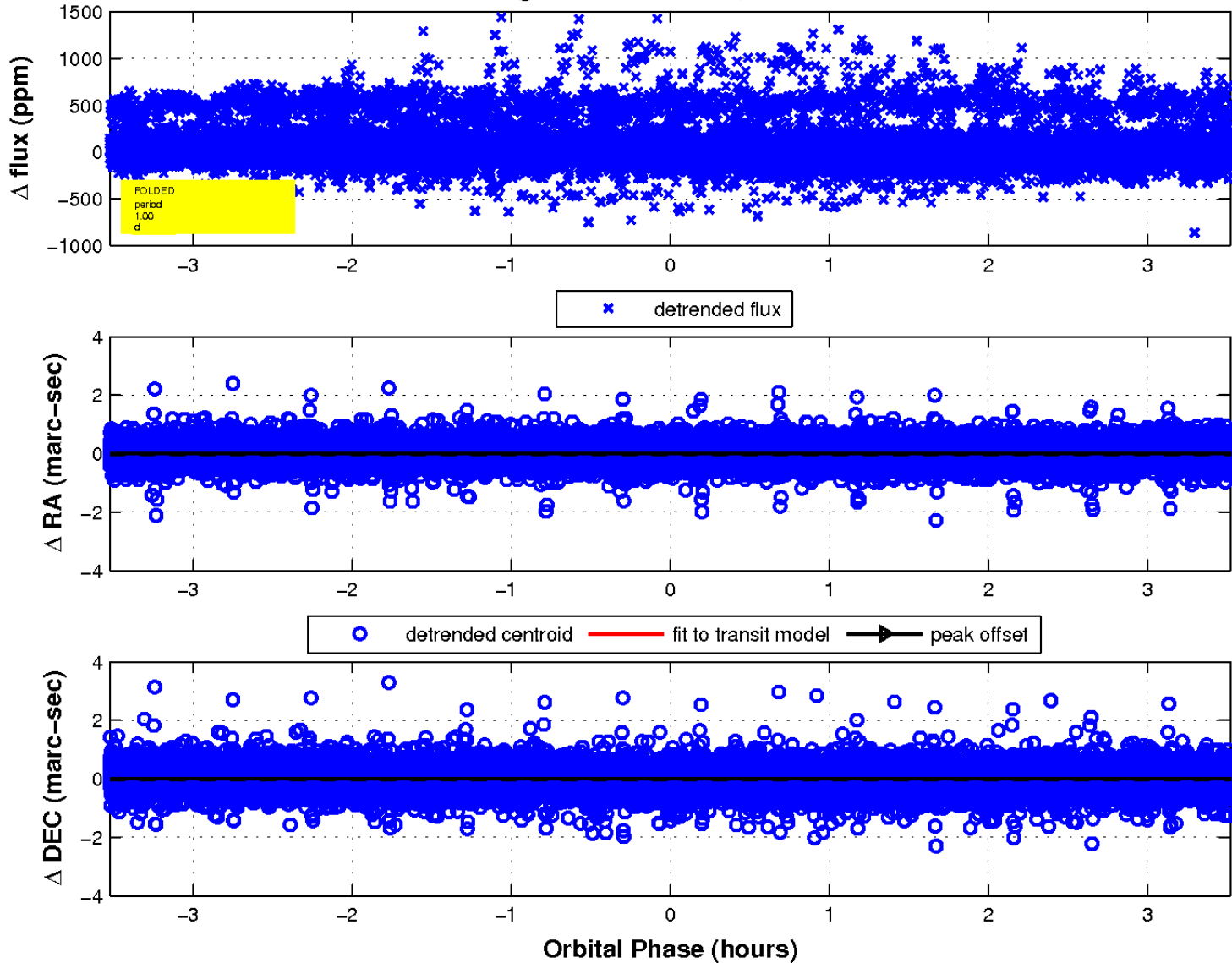
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

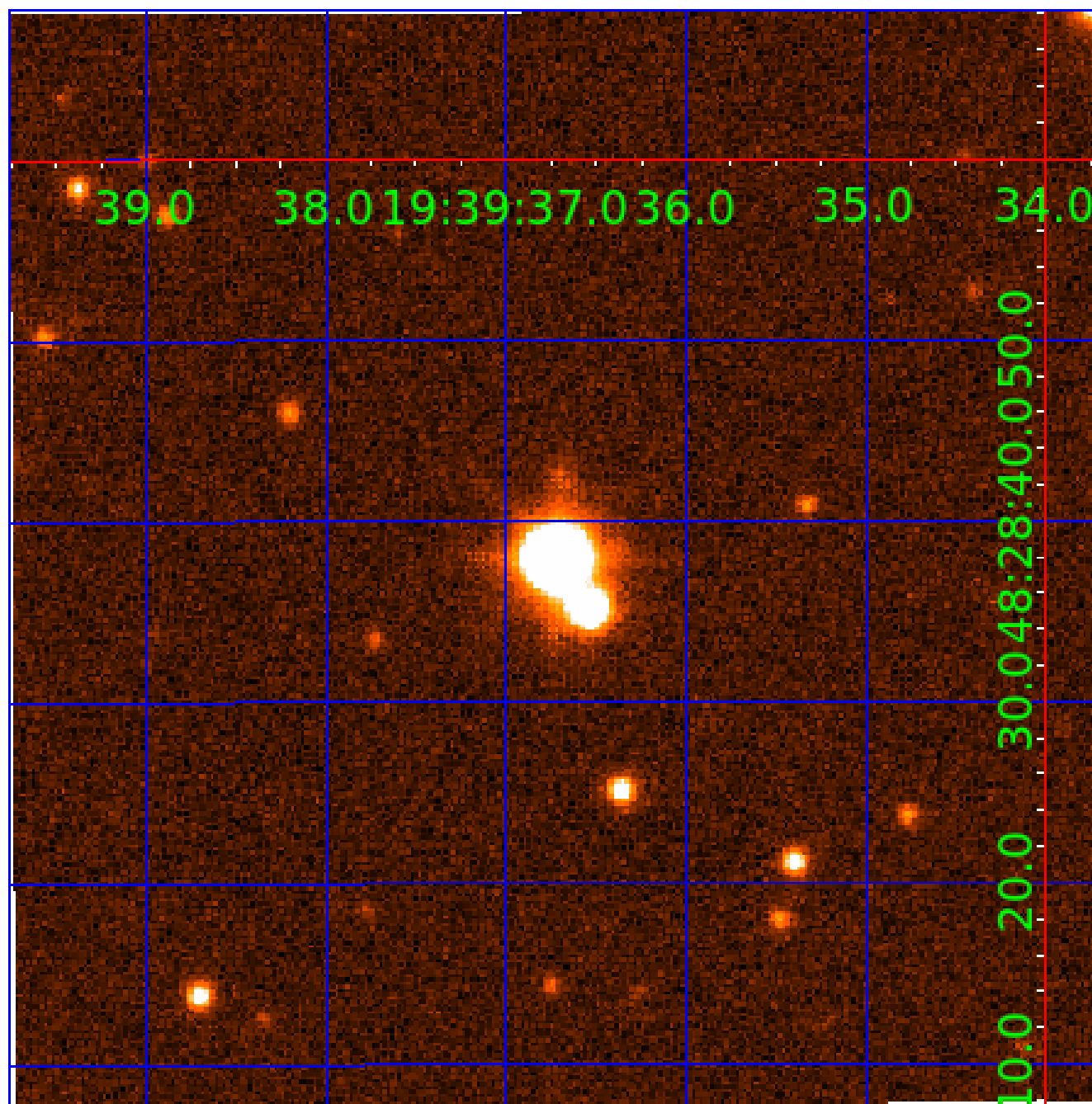


fluxWeightedCentroids, Planet 6 of 7



UKIRT Image

Declination



KIC 010982373

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})
010982373-01	OBS	7395.01	2.002769	132.075962	44.2	1.493	12.8	17.4	3.41	9453	2.62	42453.49
010982373-02	OBS	No	2.002816	132.745453	17.8	4.363	11.5	8.7	3.41	9453	1.65	42452.15
010982373-03	OBS	No	2.001713	132.845395	0.0	11.833	10.4	0.0	3.41	9453	0.01	42483.35
010982373-04	OBS	No	153.595656	252.452623	100.8	7.592	16.5	6.2	3.41	9453	3.59	130.29
010982373-05	OBS	No	1.001650	132.200146	59.6	0.934	15.7	8.9	3.41	9453	3.00	106938.28
010982373-06	OBS	No	1.001505	132.197002	30.5	1.174	15.2	7.8	3.41	9453	2.35	106958.89
010982373-07	OBS	No	2.007581	131.987777	81.2	3.500	12.4	-1.0	3.41	9453	3.14	42317.84

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010982373-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_ZUMA_TRACKER—SWEET_NTL—CENT_FEW_DIFFS
010982373-02	OBS	FP	0.00	1	0	1	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—HALO_GHOST
010982373-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
010982373-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—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
010982373-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
010982373-06	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_UNRESOLVED_OFFSET
010982373-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—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 010982373-07

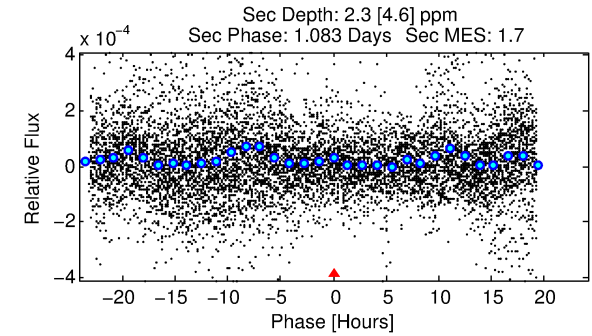
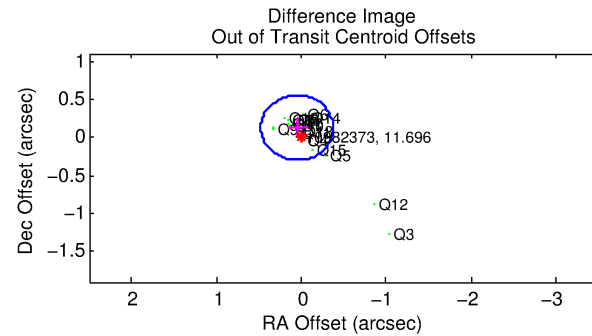
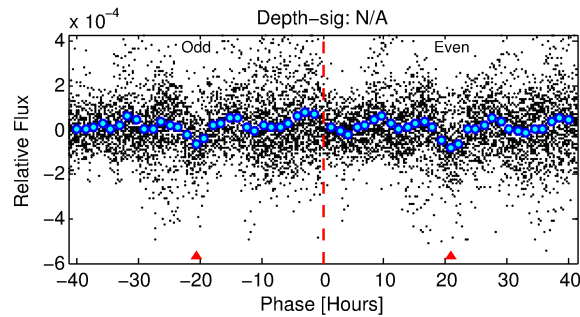
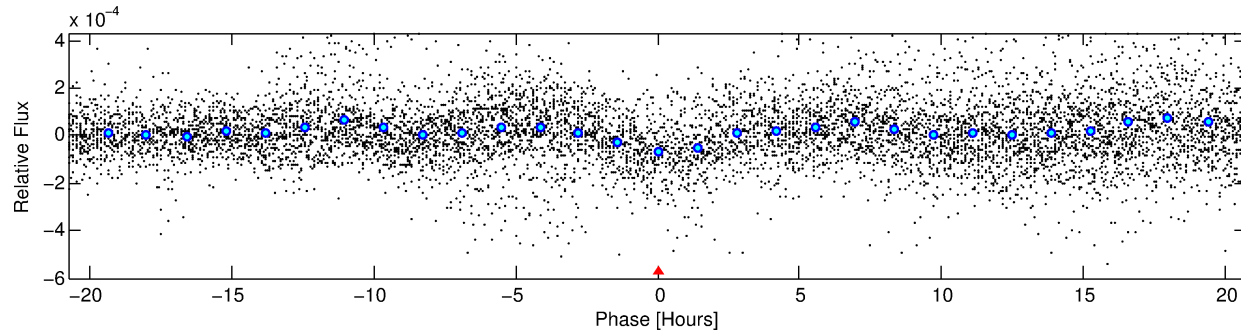
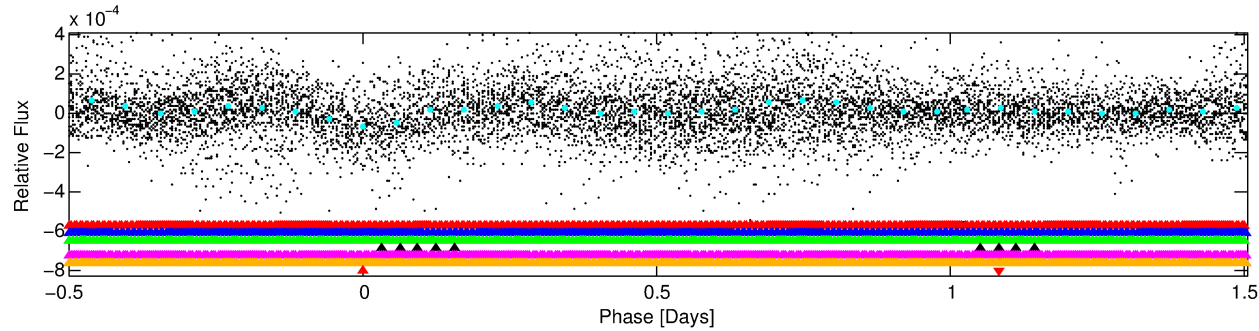
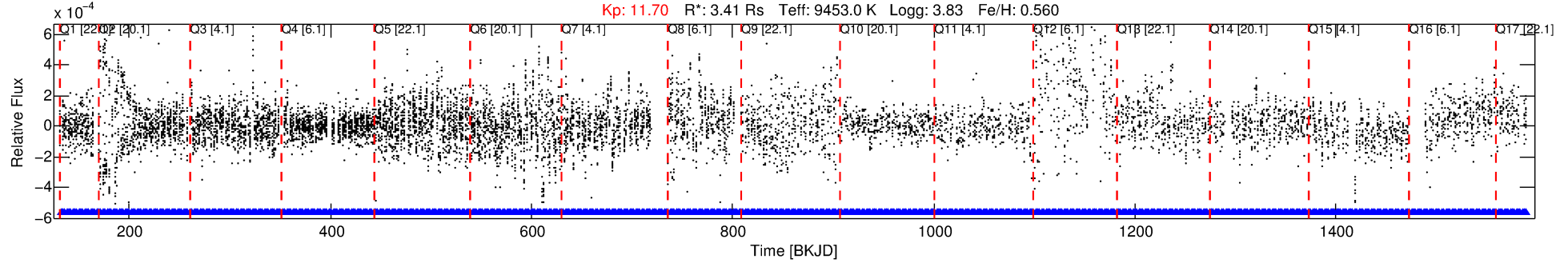
No Significant Match Found

DV One-Page Summary

KIC: 10982373 Candidate: 7 of 7 Period: 2.008 d

KOI: K07395 Corr: No Ephemeris Match

Kp: 11.70 R*: 3.41 Rs Teff: 9453.0 K Logg: 3.83 Fe/H: 0.560



TPS TCE Results:

Period = 2.00758 d
Epoch = 131.9878 BKJD

DV fit results are unavailable

DV Diagnostic Results:

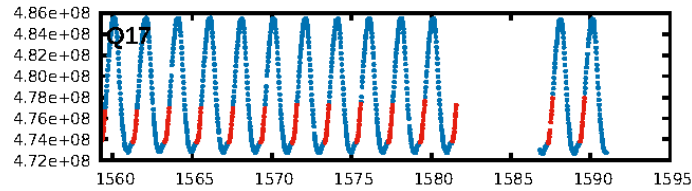
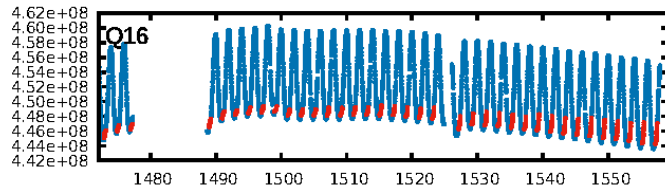
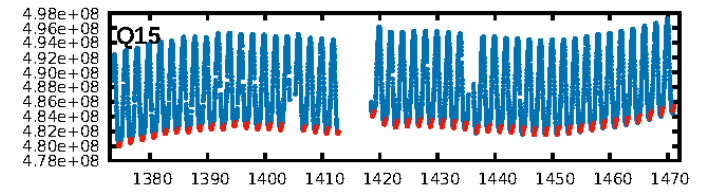
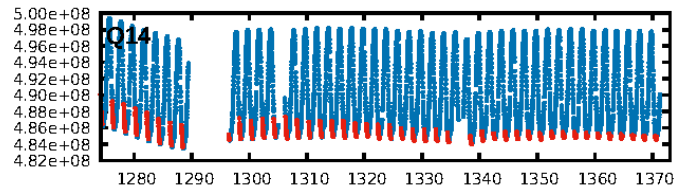
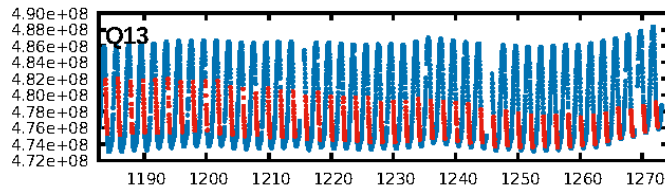
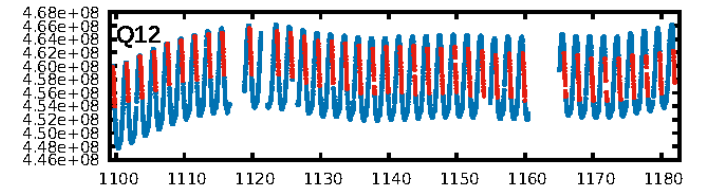
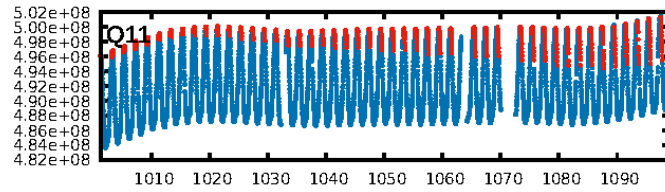
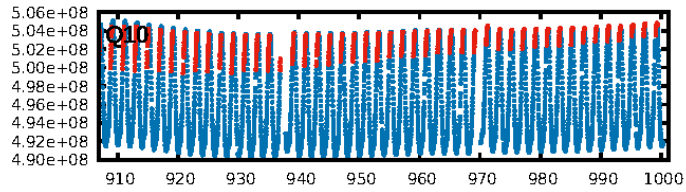
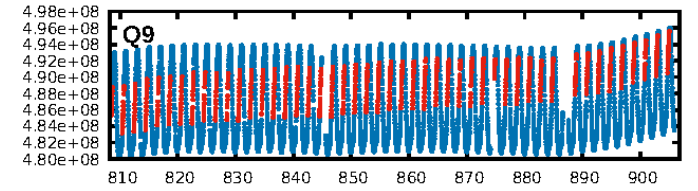
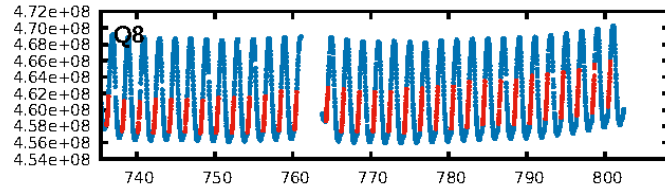
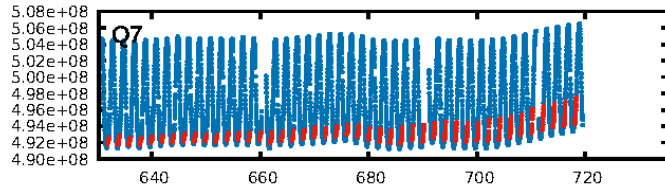
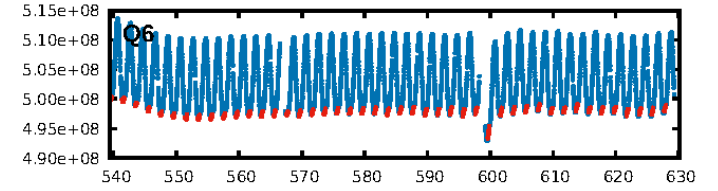
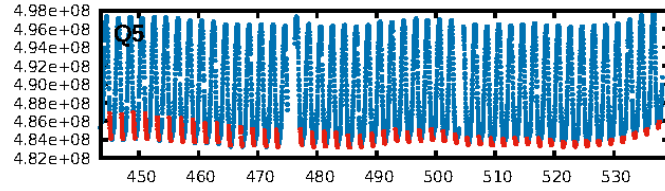
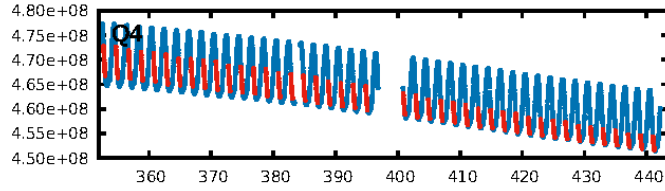
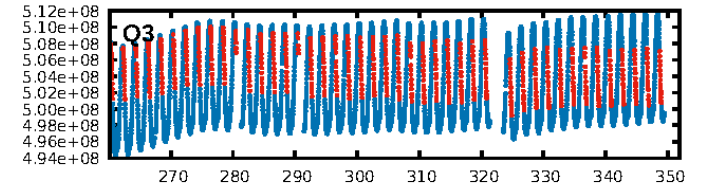
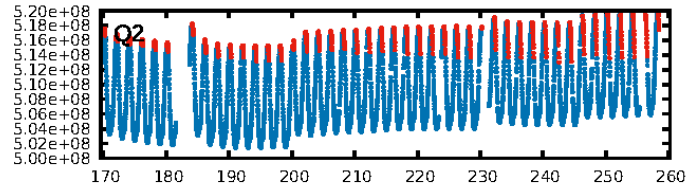
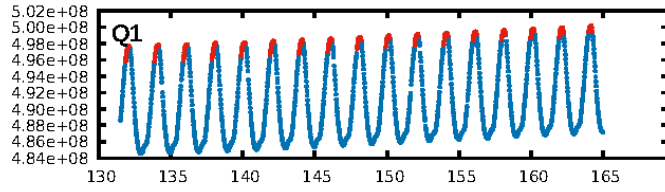
ShortPeriod-sig: 1.6% [0.02 σ]
LongPeriod-sig: 100.0% [435.19 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [188/188]
GhostDiagnostic-chr: 9.402

Centroid-sig: 3.2%
Centroid-so: 0.264 arcsec [9.39 σ]
OotOffset-rm: 0.135 arcsec [0.95 σ]
KicOffset-rm: 0.117 arcsec [1.36 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
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DiffImageOverlap-fno: 0.00 [0/17]

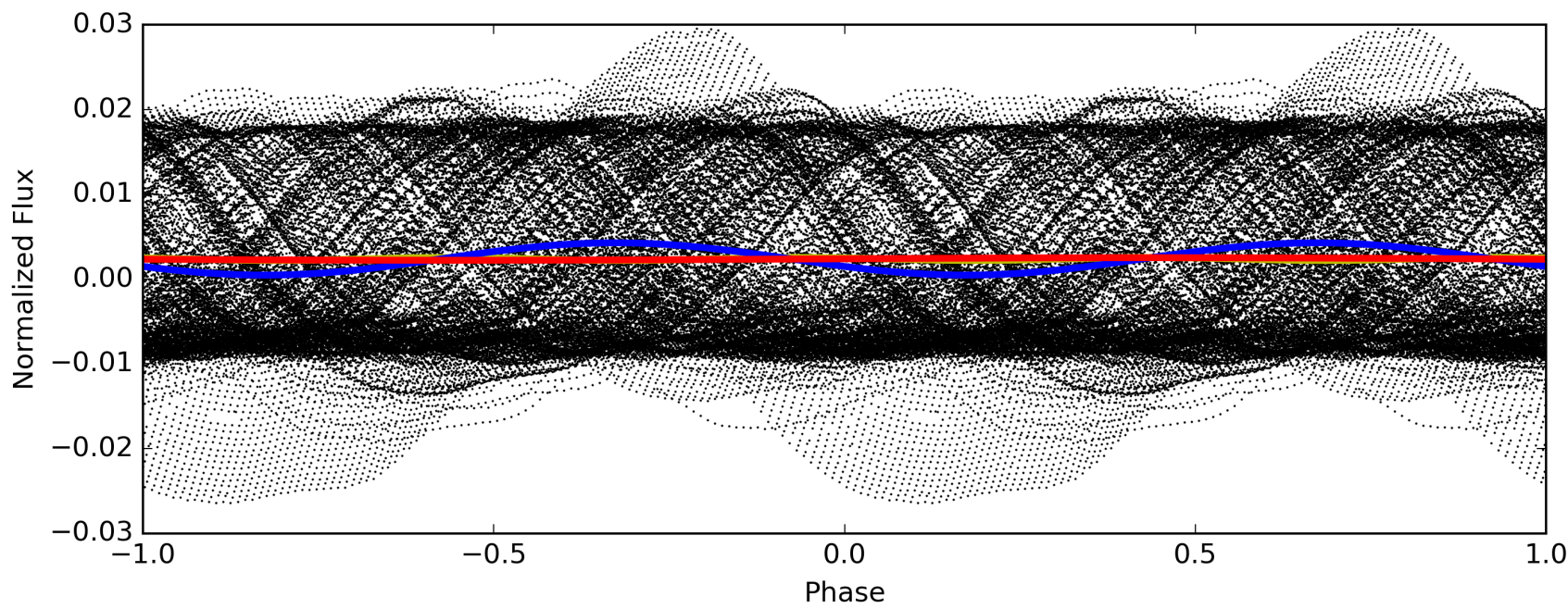
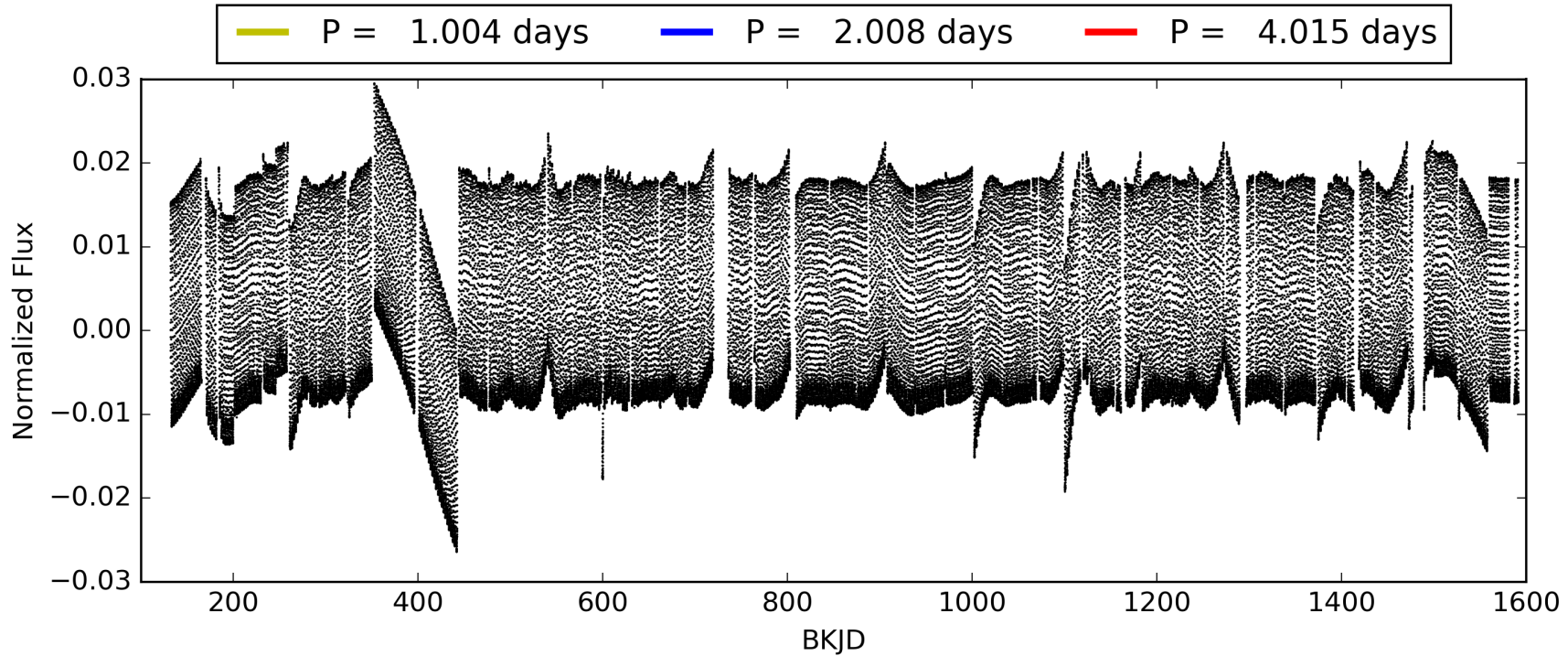
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:33:37 Z

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

TCE 010982373-07, PDC Light Curves

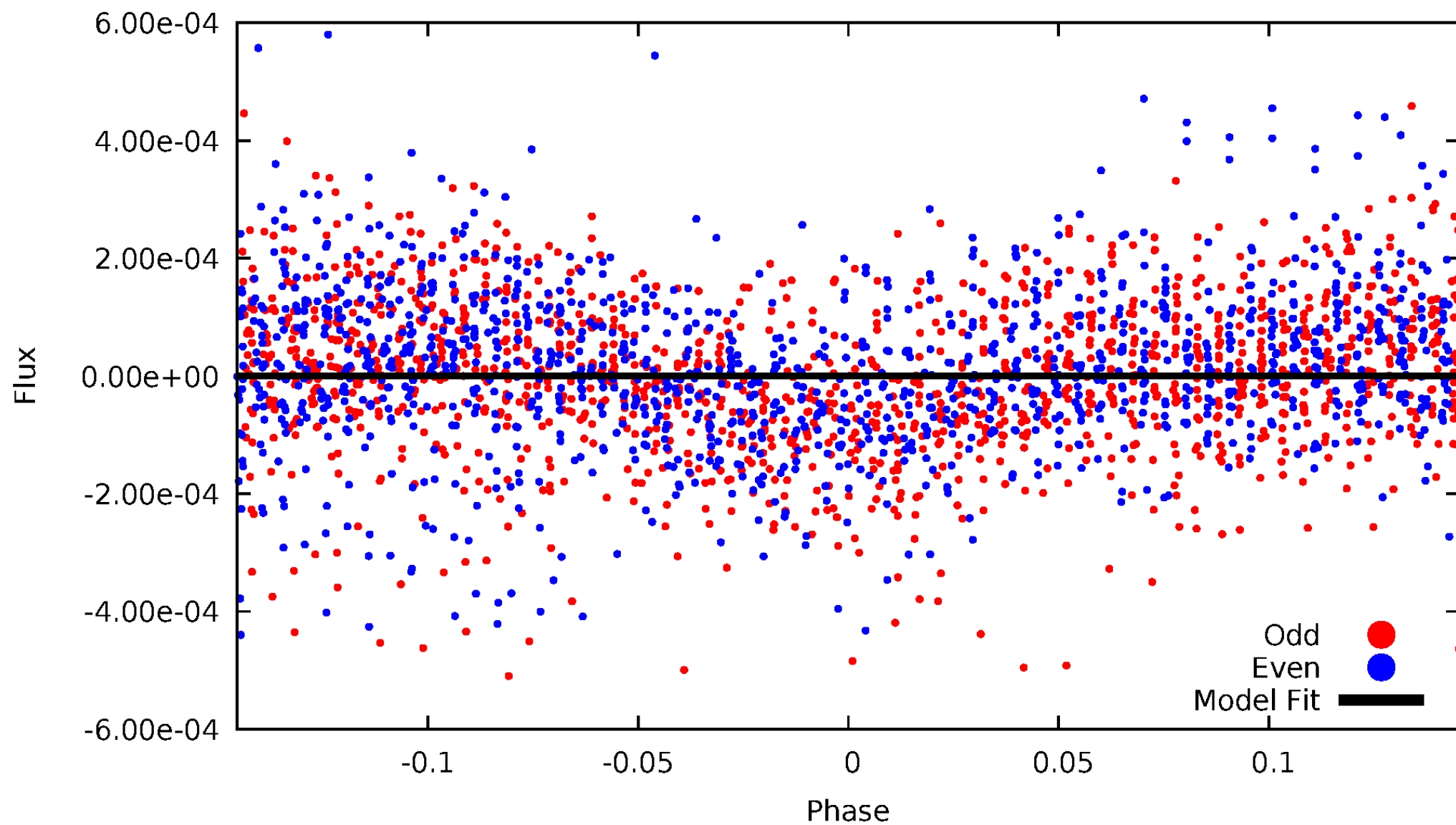


TCE 010982373-07



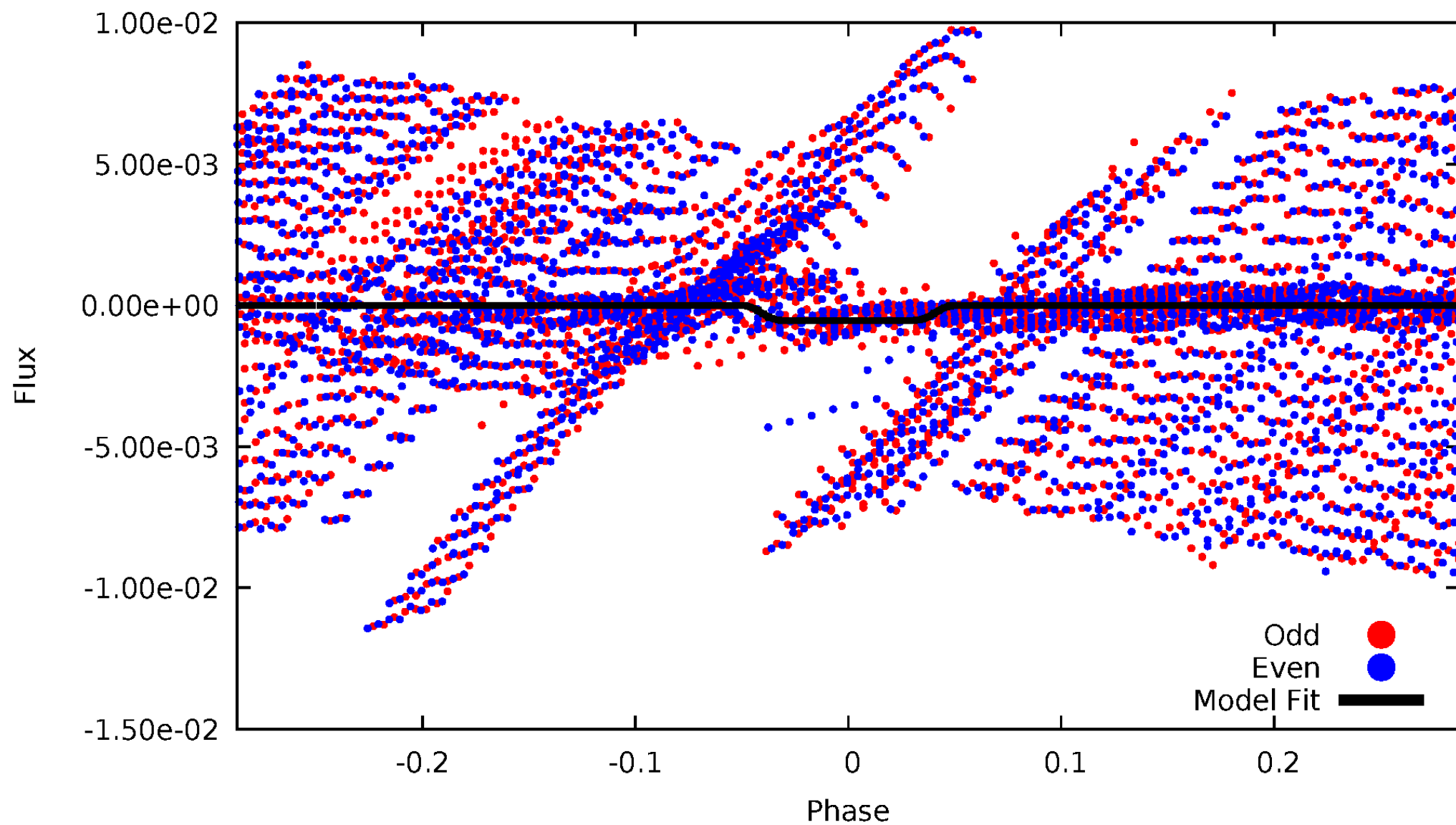
DV Odd/Even

TCE 010982373-07



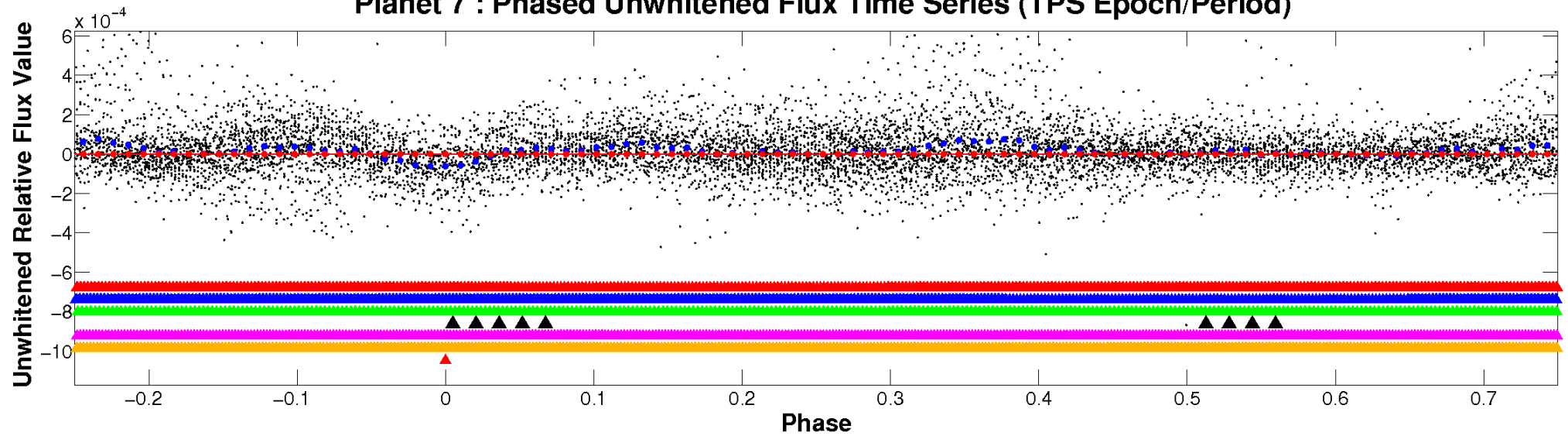
ALT Odd/Even

TCE 010982373-07

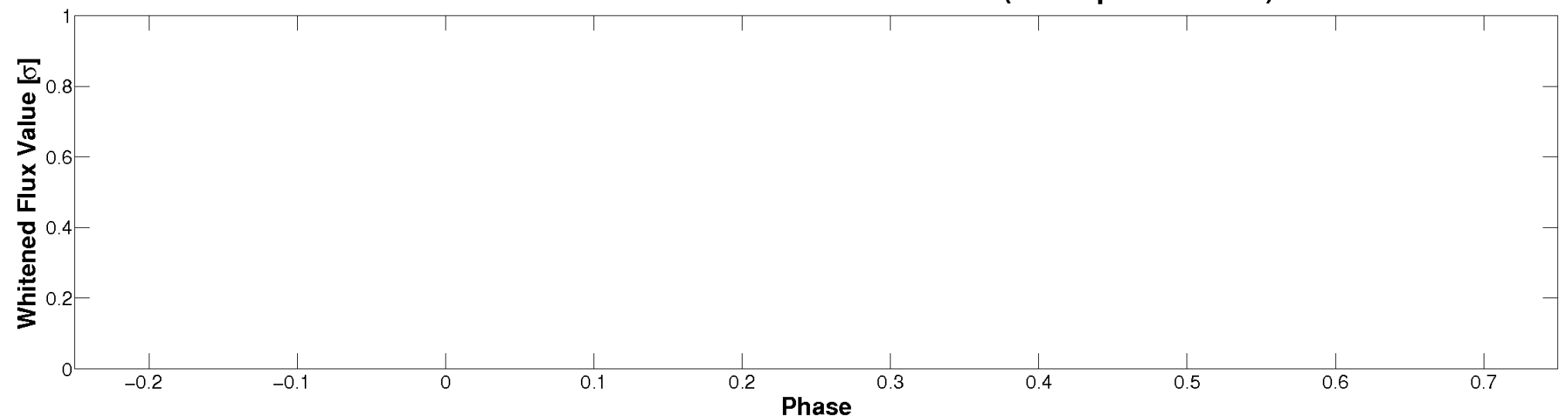


Non-Whitened Vs. Whitened Light Curve

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

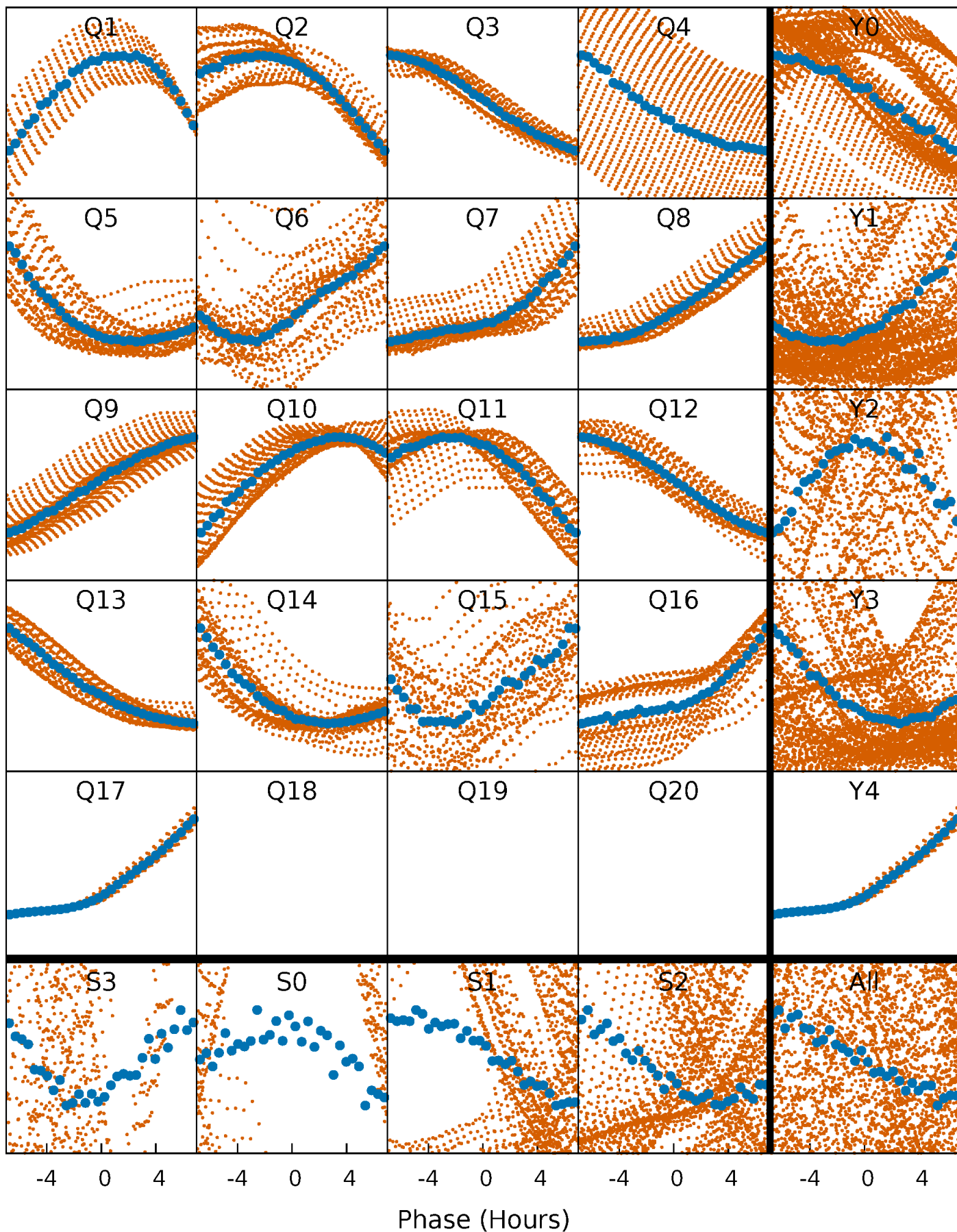


Planet 7 : Phased Whitened Flux Time Series (TPS Epoch/Period)



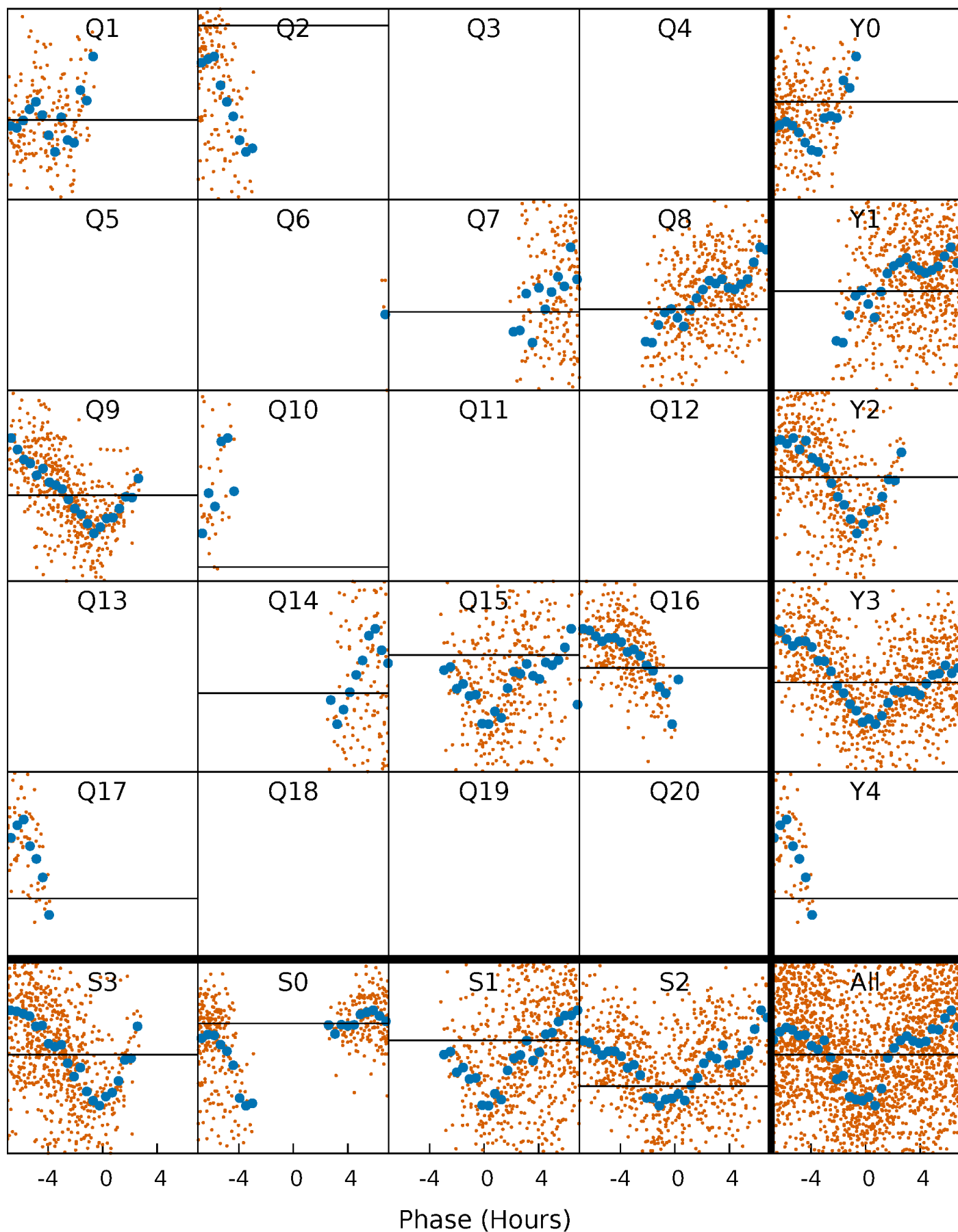
PDC Quarter-Phased Transit Curves

TCE 010982373-07 P= 2.007581 Days $T_0=131.987777$ (BKJD)



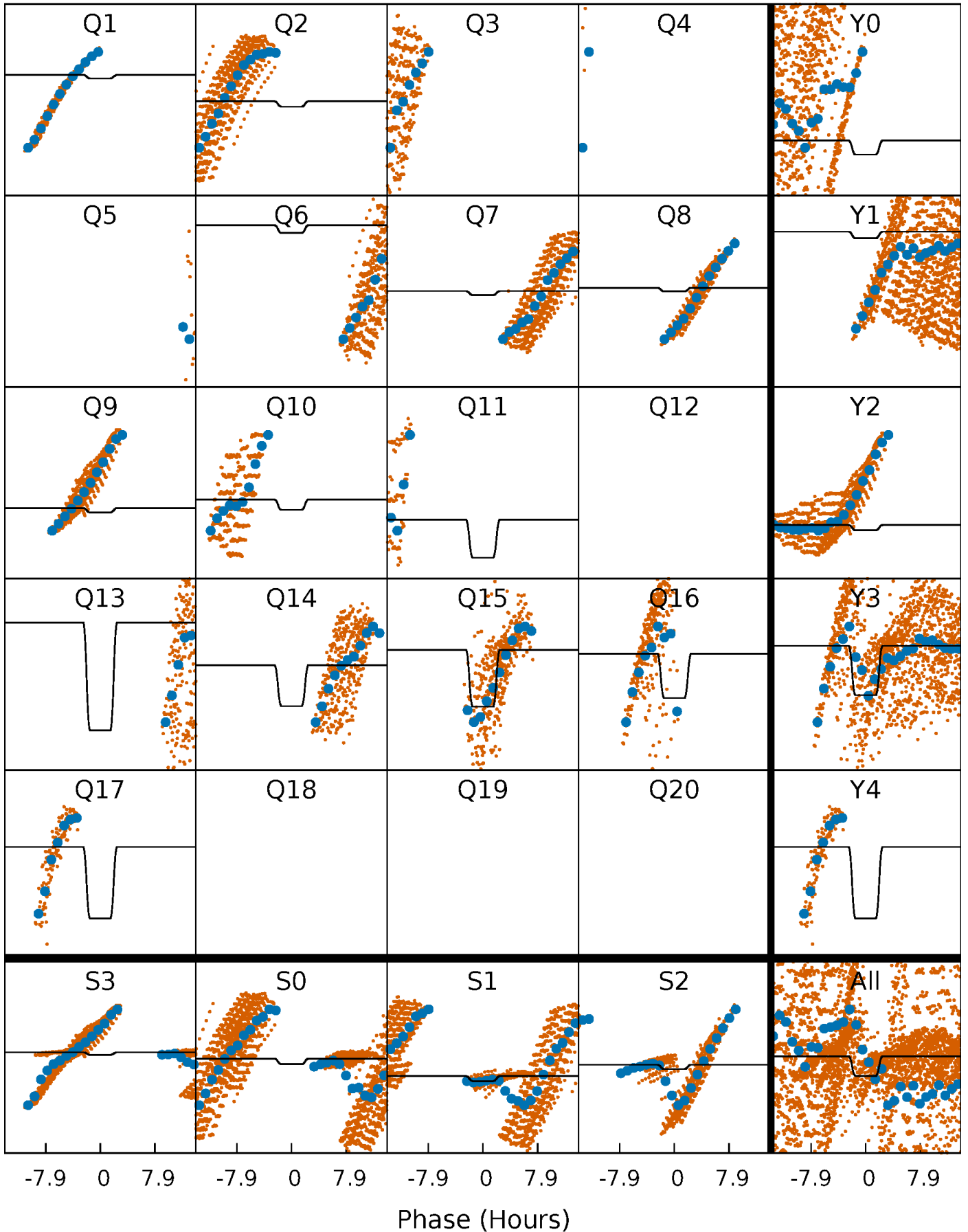
DV Quarter-Phased Transit Curves

TCE 010982373-07 $P = 2.007581$ Days $T_0 = 131.987777$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

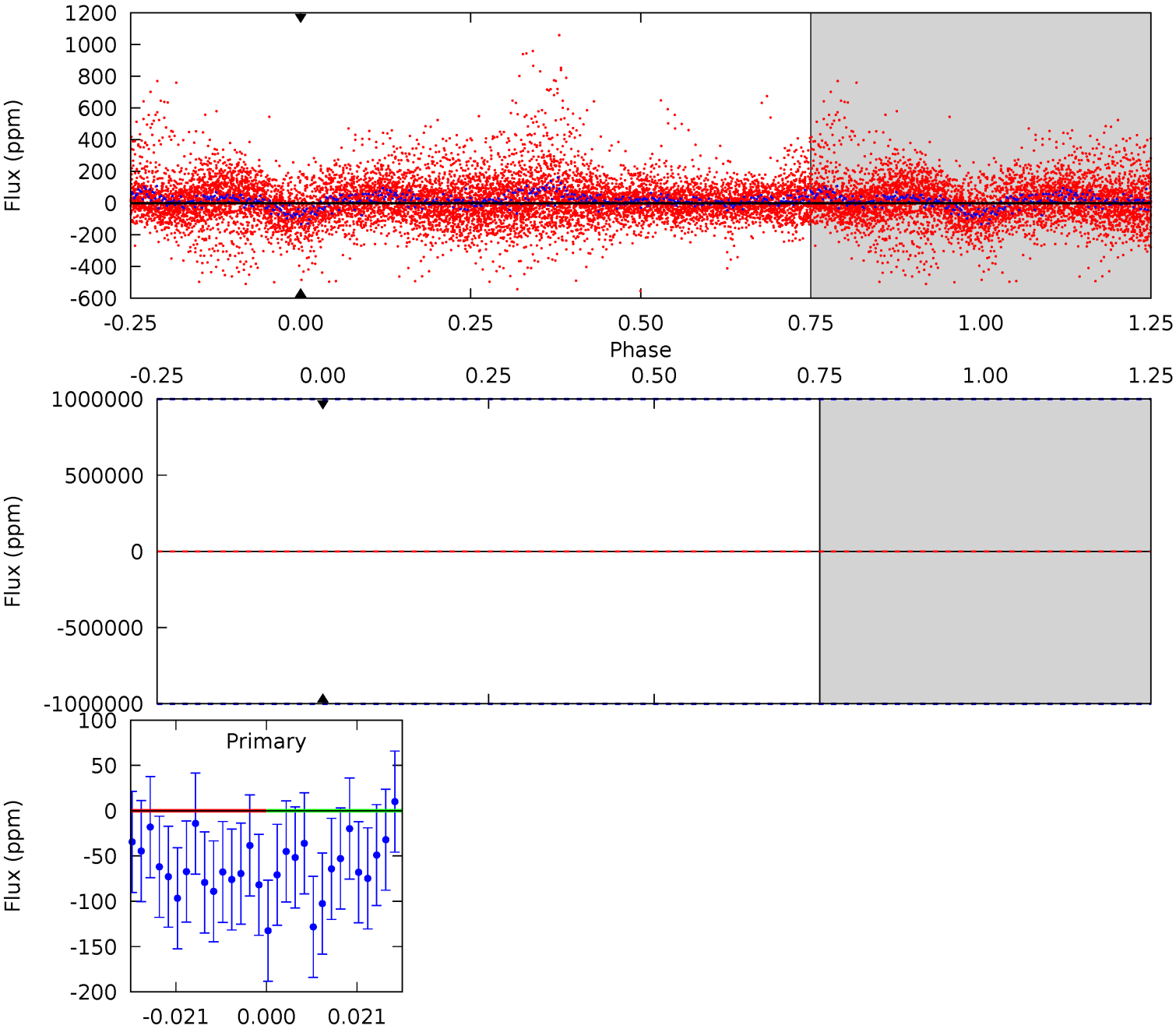
TCE 010982373-07 $P = 2.007581$ Days $T_0 = 131.966489$ (BKJD)



DV Model-Shift Uniqueness Test

010982373-07, P = 2.007581 Days, E = 129.980196 Days

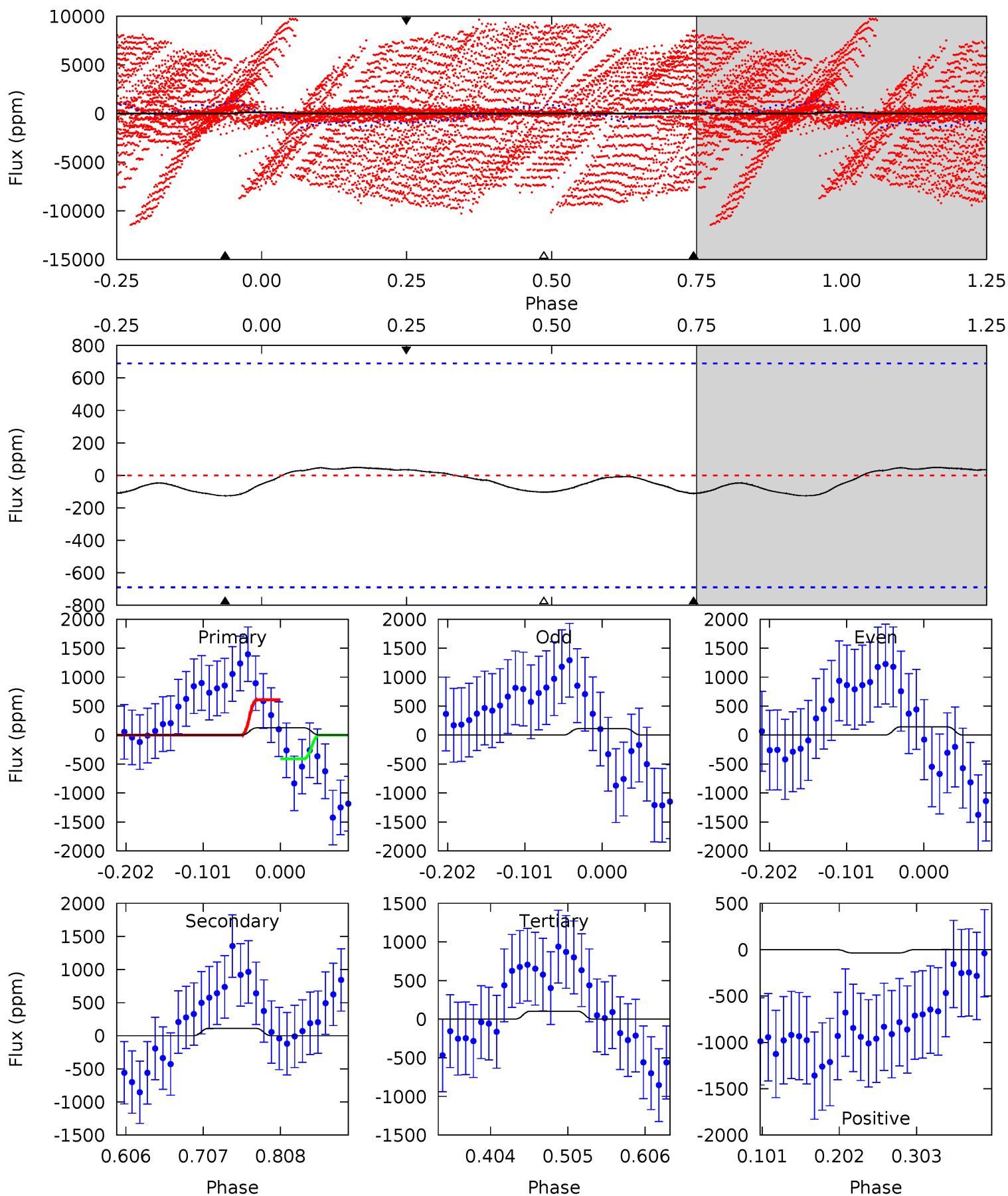
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

010982373-07, P = 2.007581 Days, E = 129.958908 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.83	0.74	0.69	0.24	4.56	1.64	0.33	0.15	0.60	0.06	0.51	0.10	0.65	0.28	0.62



Stellar Parameters For KIC 010982373

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	9453^{+399}_{-699}	$3.832^{+0.185}_{-0.203}$	$0.560^{+0.050}_{-0.200}$	$3.407^{+1.033}_{-0.845}$	$2.872^{+0.281}_{-0.422}$	$0.102^{+0.103}_{-0.051}$
	+4%/-7%	+5%/-5%	+9%/-36%	+30%/-25%	+10%/-15%	+101%/-50%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 010982373-07 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$24.68^{+31.42}_{-17.72}$	5109^{+468}_{-444}	$-5407^{+101041}_{-61102}$	$-0.210^{+352.871}_{-233.587}$
Alt.	-112 ± 151	$29.70^{+28.60}_{-20.79}$	5089^{+490}_{-465}	-3844^{+8978}_{-601}	$0.086^{+1.009}_{-0.122}$

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

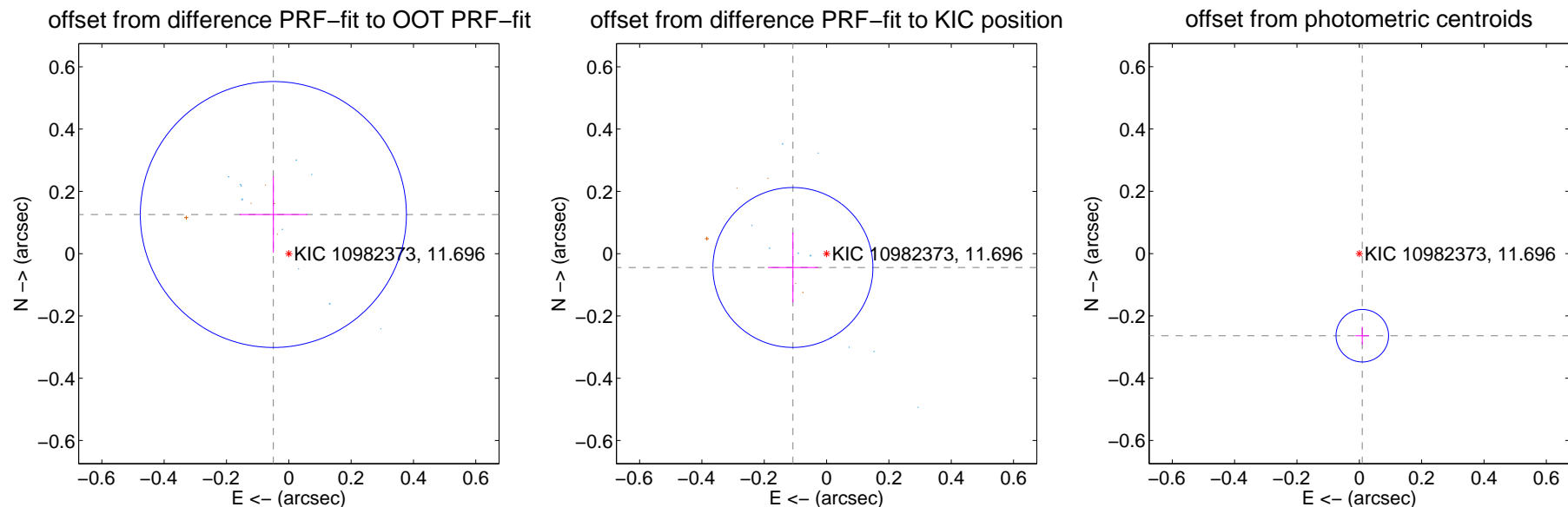
DV Centroid Data

Supplemental centroid analysis for 010982373-07. **Kepler magnitude: 11.70.** Transit SNR -1.00

There are 10 quarters with good PRF difference image offsets

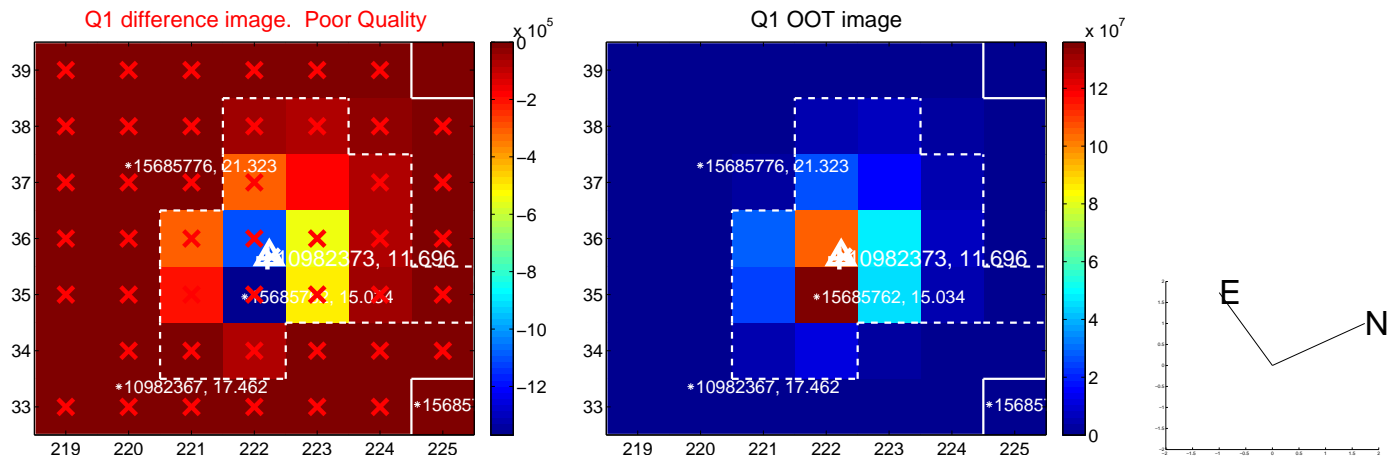
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.135 ± 0.142	0.95	0.050 ± 0.109	0.126 ± 0.122
PRF-fit source offset from KIC position	0.117 ± 0.086	1.36	0.108 ± 0.080	-0.044 ± 0.112
photometric centroid source offset	0.26 ± 0.03	9.39	-0.01 ± 0.02	-0.26 ± 0.03

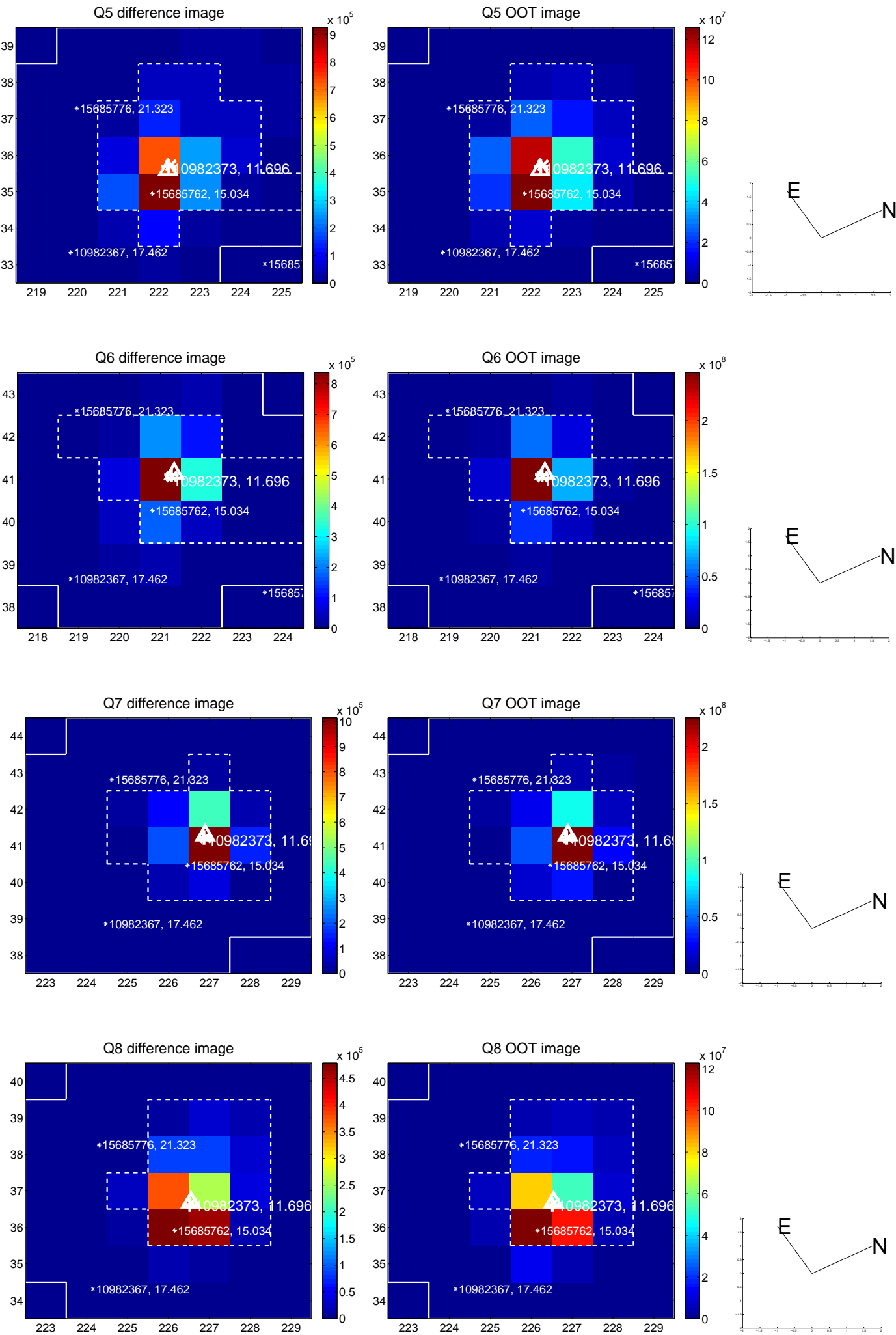


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

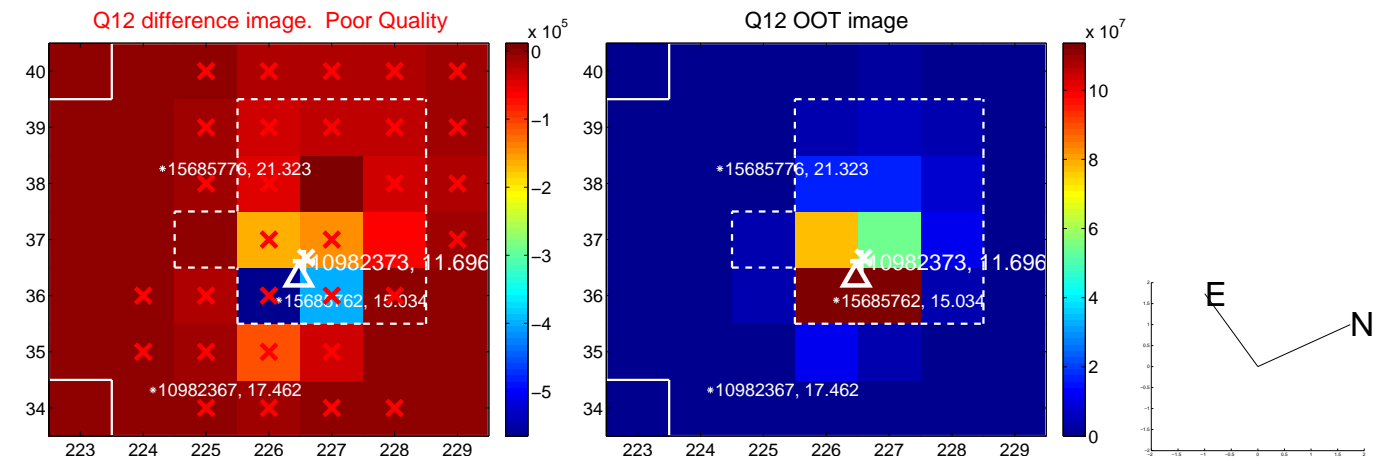
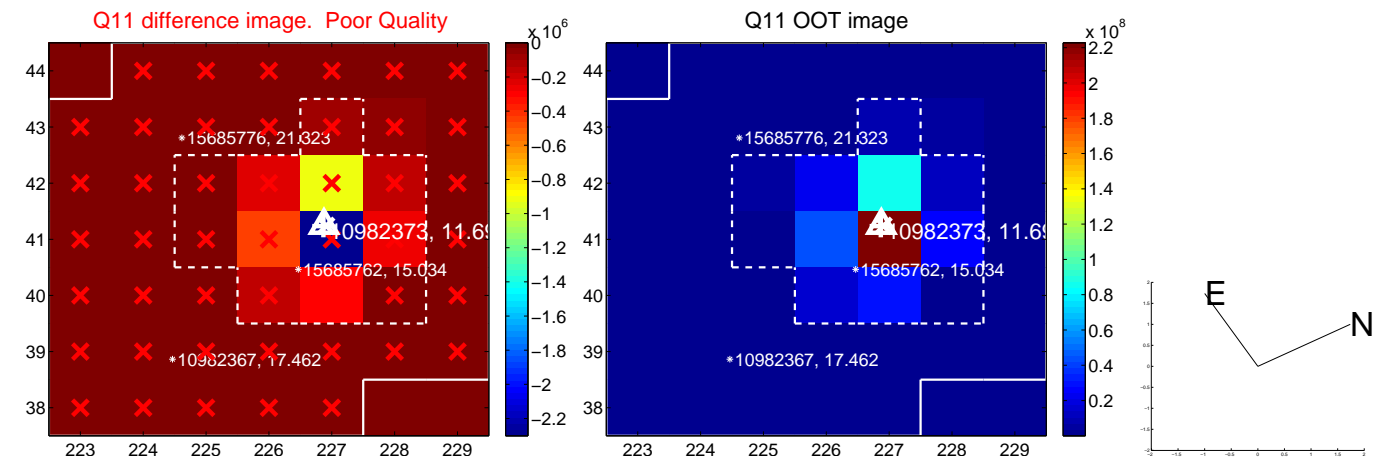
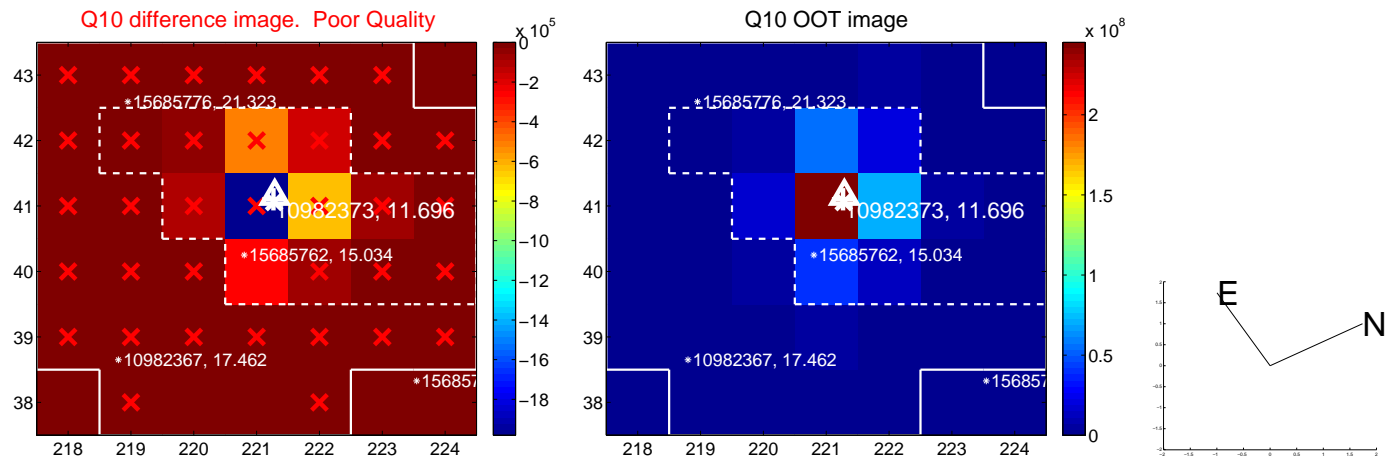
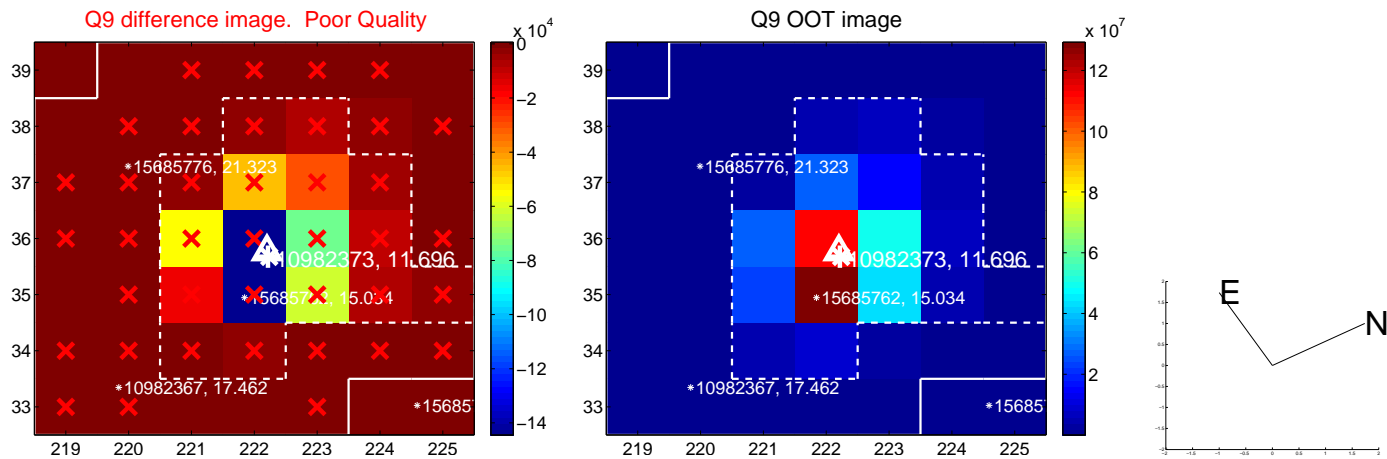
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



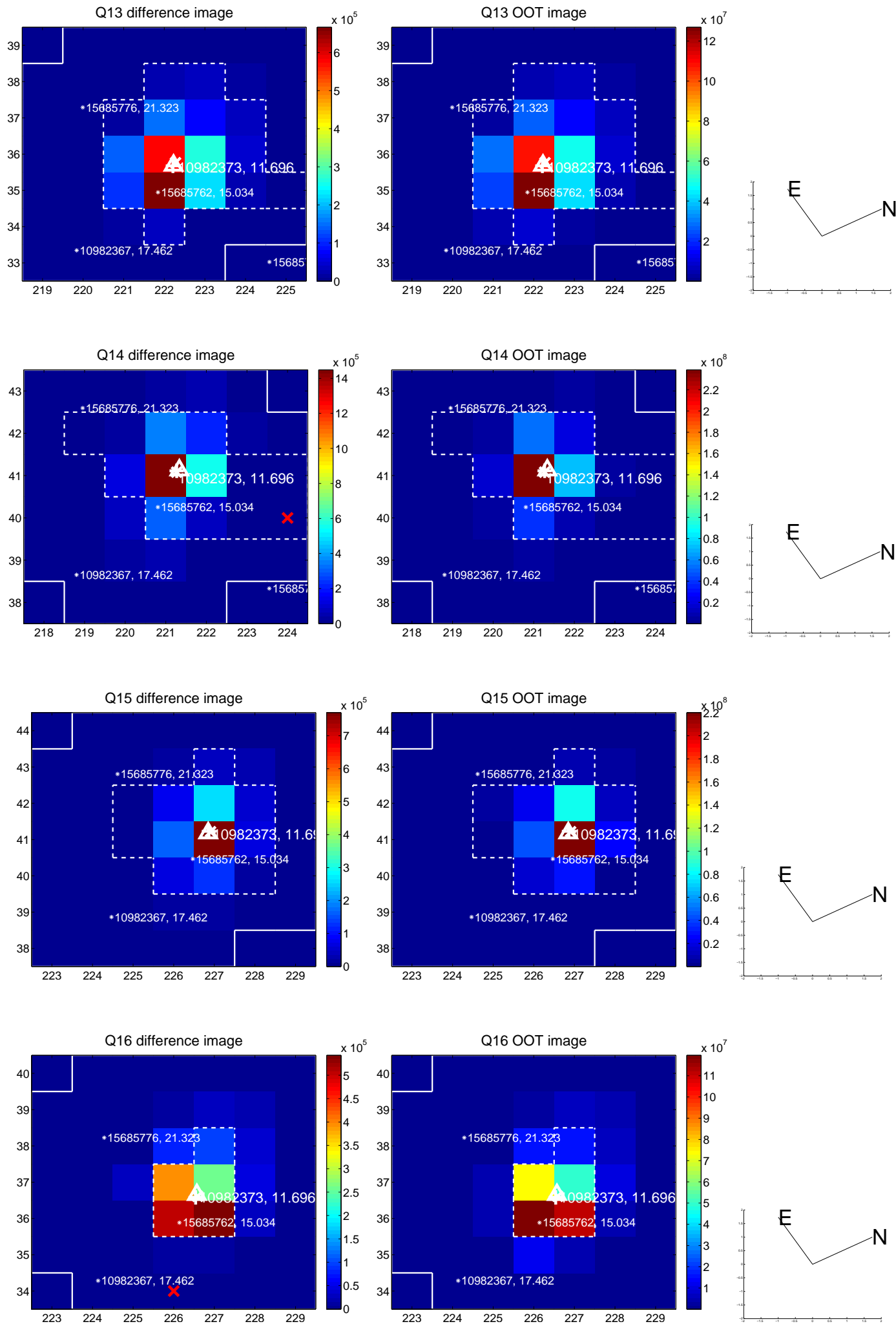
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



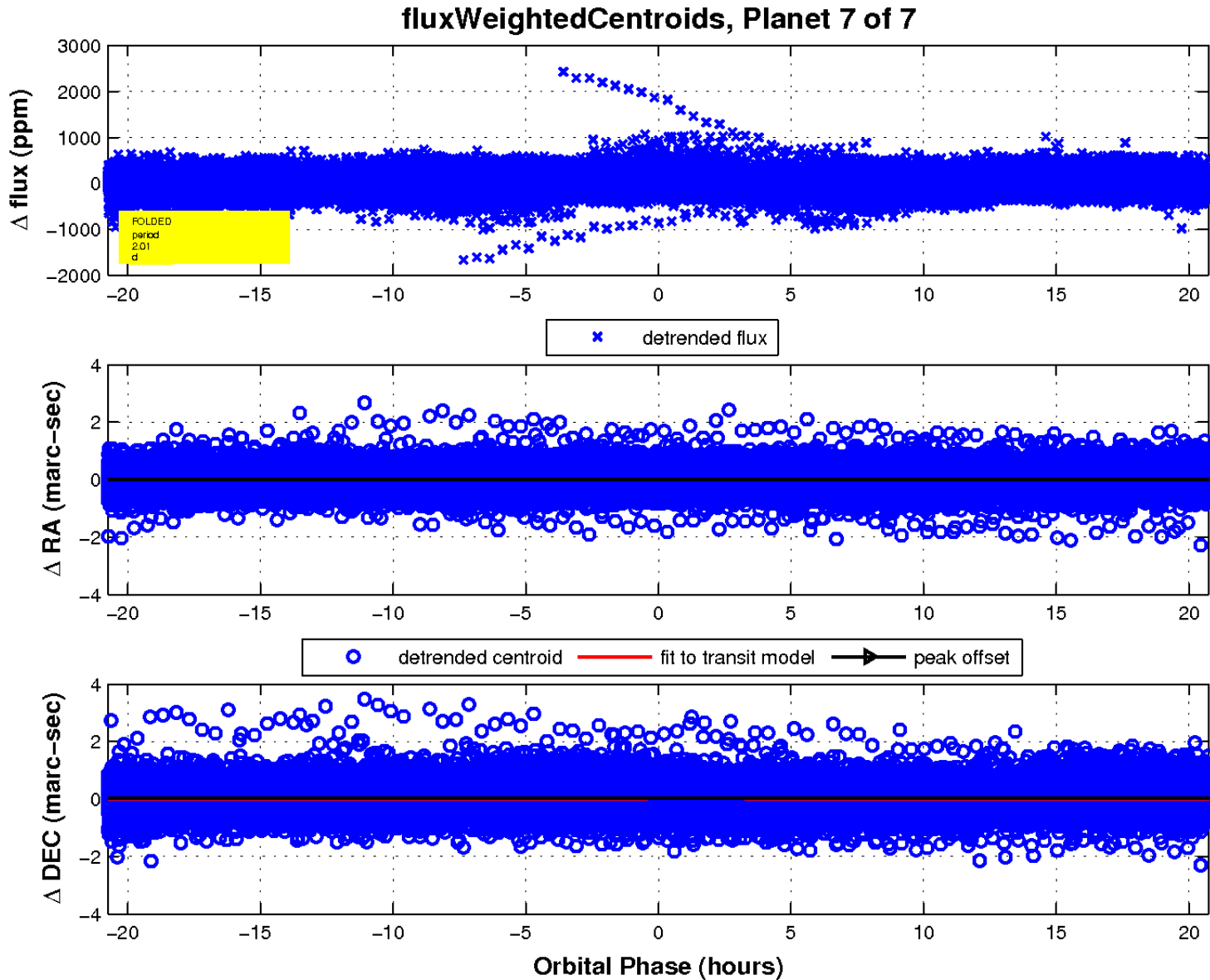
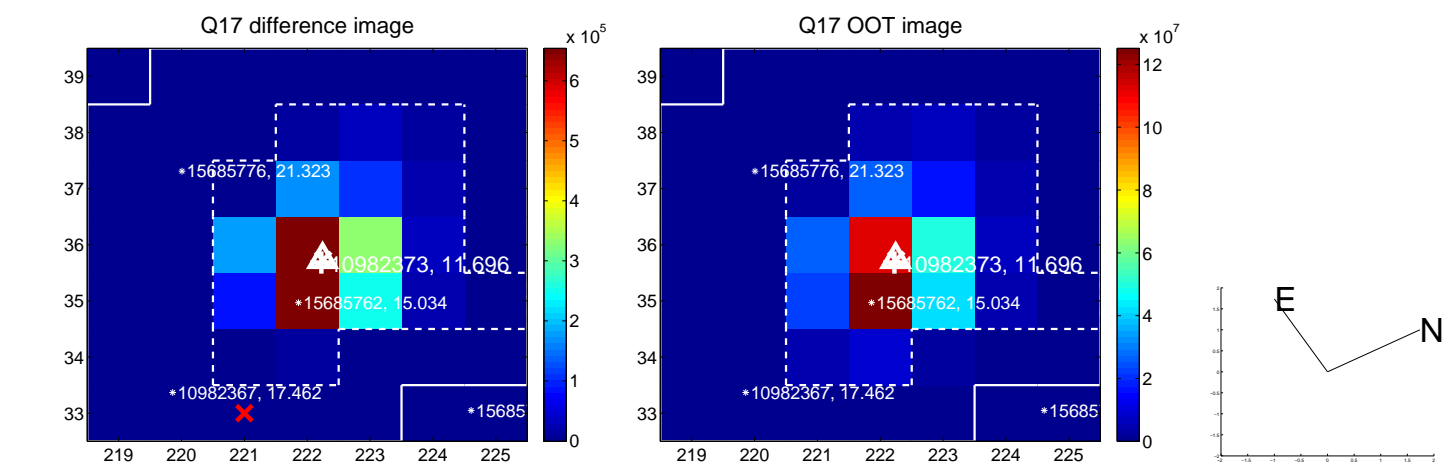
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

