

KIC 005305553

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})
005305553-01	OBS	No	0.557113	131.519656	101.7	1.396	9.8	6.1	1.22	6559	1.32	12192.28
005305553-02	OBS	No	0.557136	131.790631	180.0	1.640	9.9	10.8	1.22	6559	1.91	12191.62
005305553-03	OBS	No	0.557117	131.943205	171.6	1.294	9.8	8.5	1.22	6559	1.66	12192.17

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005305553-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005305553-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
005305553-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—SAME_NTL_PERIOD

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

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

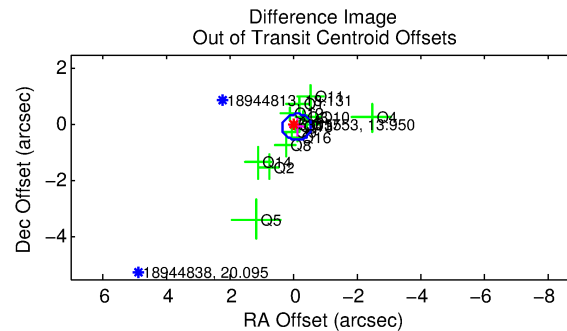
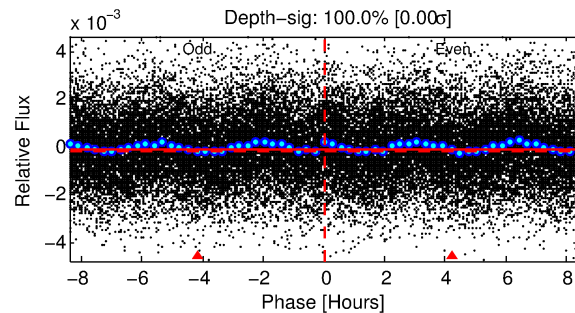
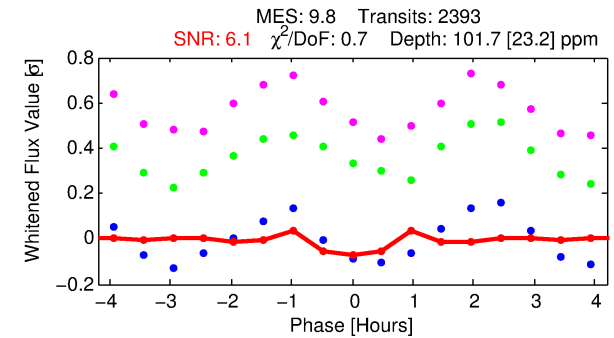
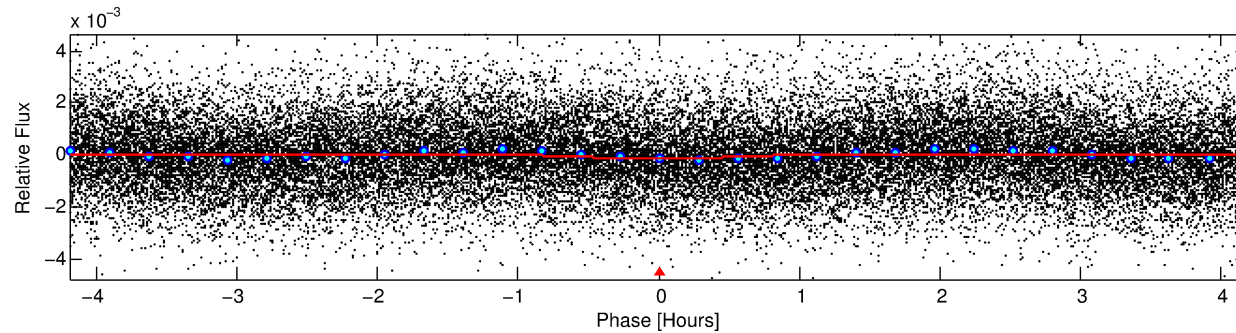
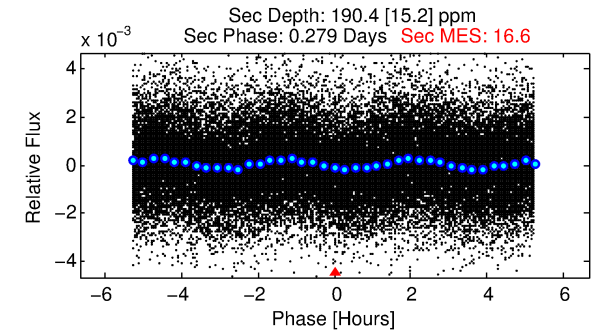
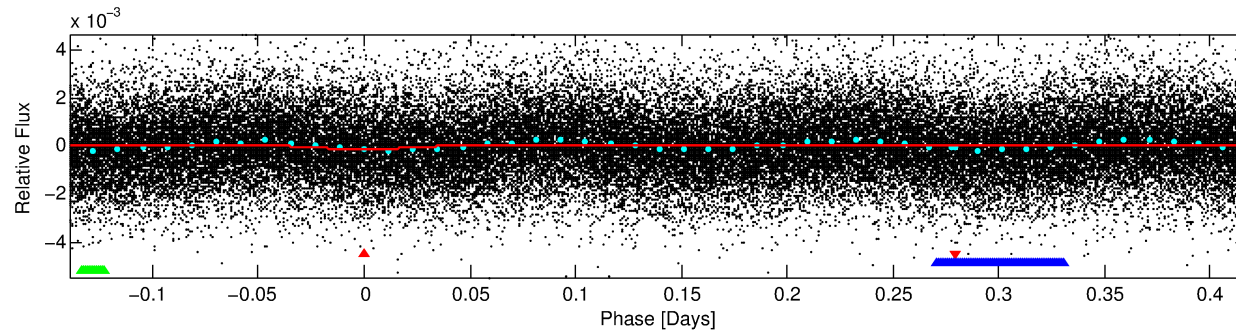
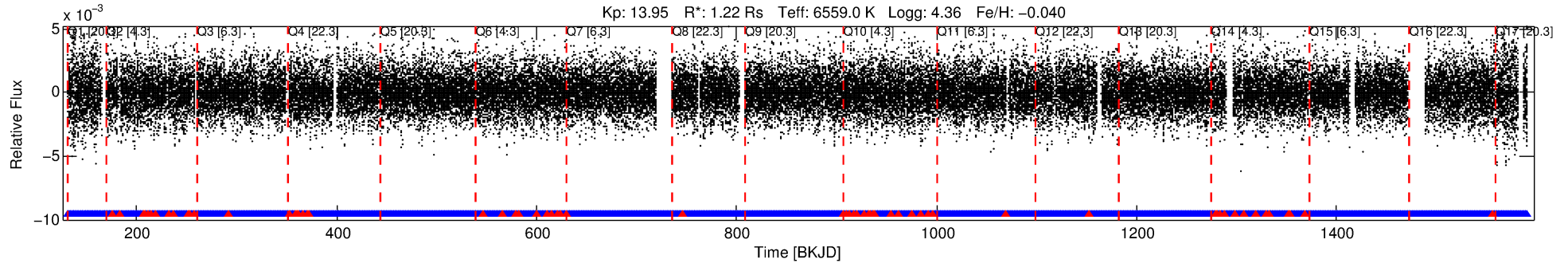
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005305553-01

No Significant Match Found

DV One-Page Summary

KIC: 5305553 Candidate: 1 of 3 Period: 0.557 d



DV Fit Results:

Period = 0.55711 [0.00002] d
Epoch = 131.5197 [0.0018] BKJD
Rp/R* = 0.0099 [0.0030]
a/R* = 2.37 [2.98]
b = 0.70 [1.13]
Seff = 12192.29 [5190.95]
Teq = 2679 [285] K
Rp = 1.32 [0.60] Re
a = 0.0142 [0.0040] AU
Ag = 12.14 [8.83] [1.26σ]
Teffp = 7732 [1218] K [4.04σ]

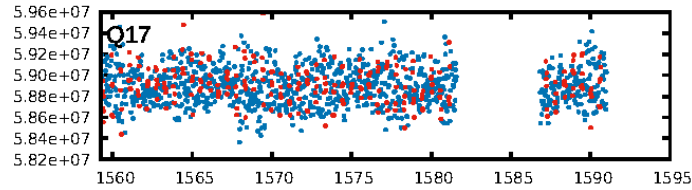
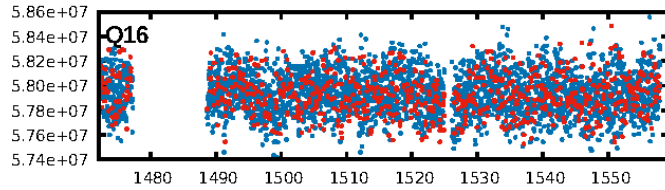
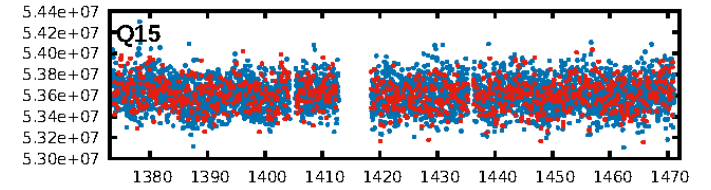
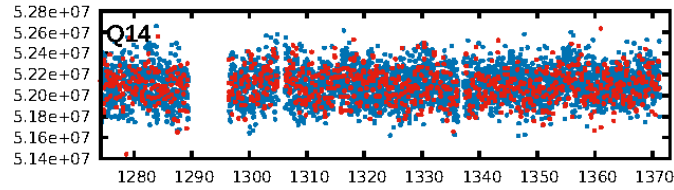
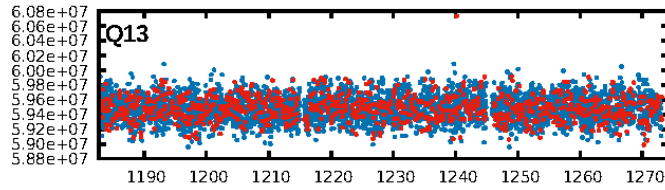
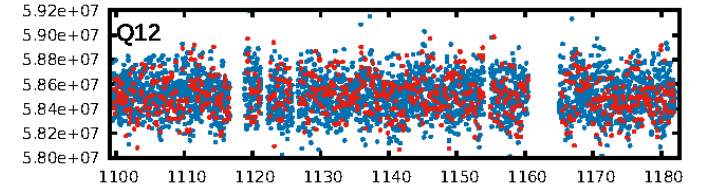
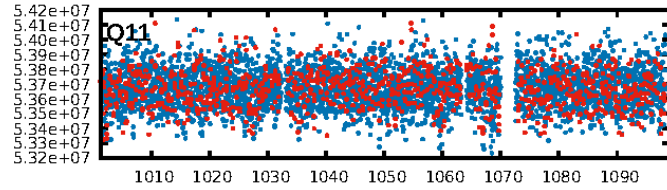
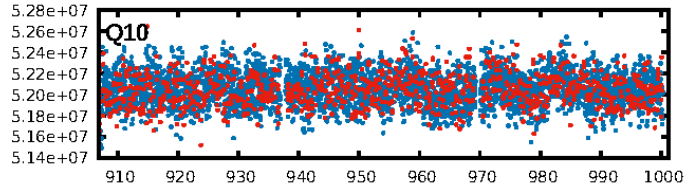
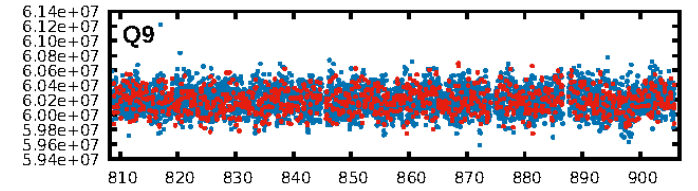
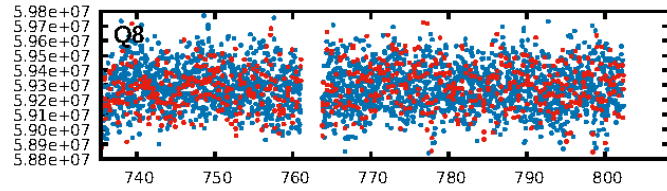
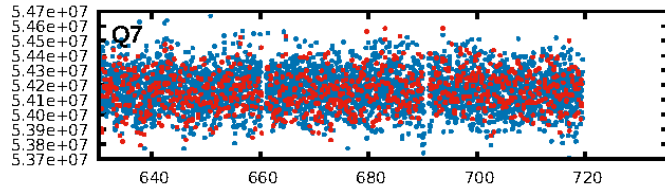
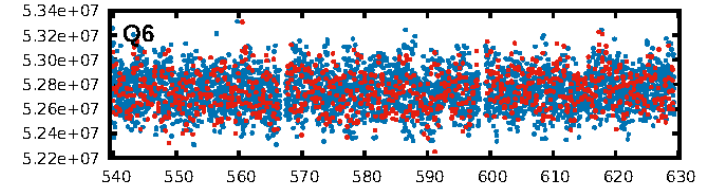
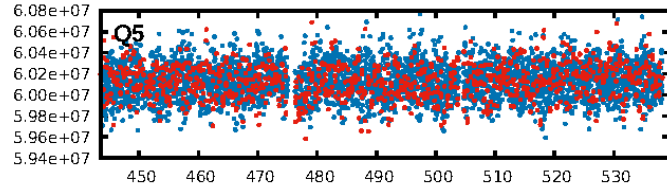
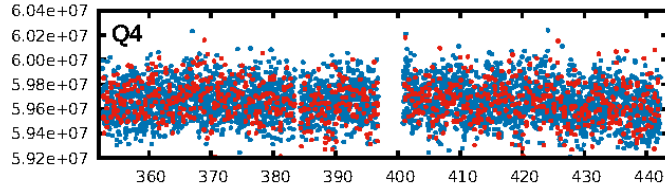
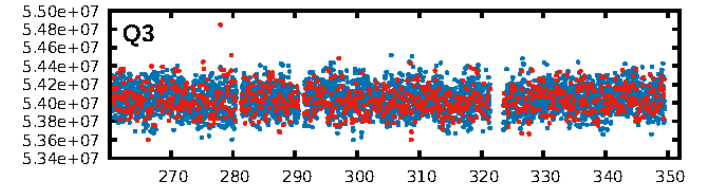
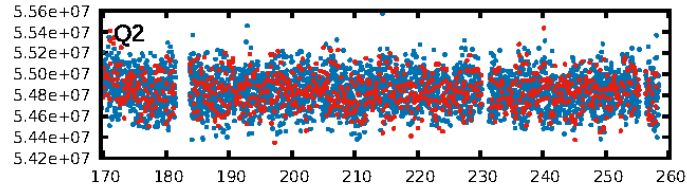
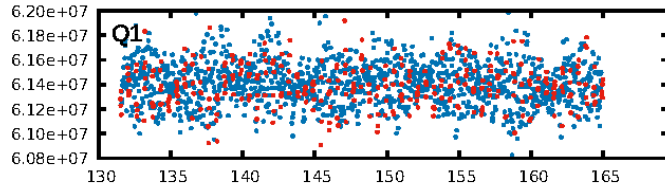
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.97 [2220/2285]
GhostDiagnostic-chr: 2.53
Centroid-sig: 2.8%
Centroid-so: 1.563 arcsec [2.65σ]
OotOffset-rm: 0.148 arcsec [0.96σ]
KicOffset-rm: 0.080 arcsec [0.31σ]
OotOffset-st: 3/3/4/5 [15]
KicOffset-st: 3/3/4/5 [15]
DiffImageQuality-fgm: 0.73 [11/15]
DiffImageOverlap-fno: 0.00 [0/17]

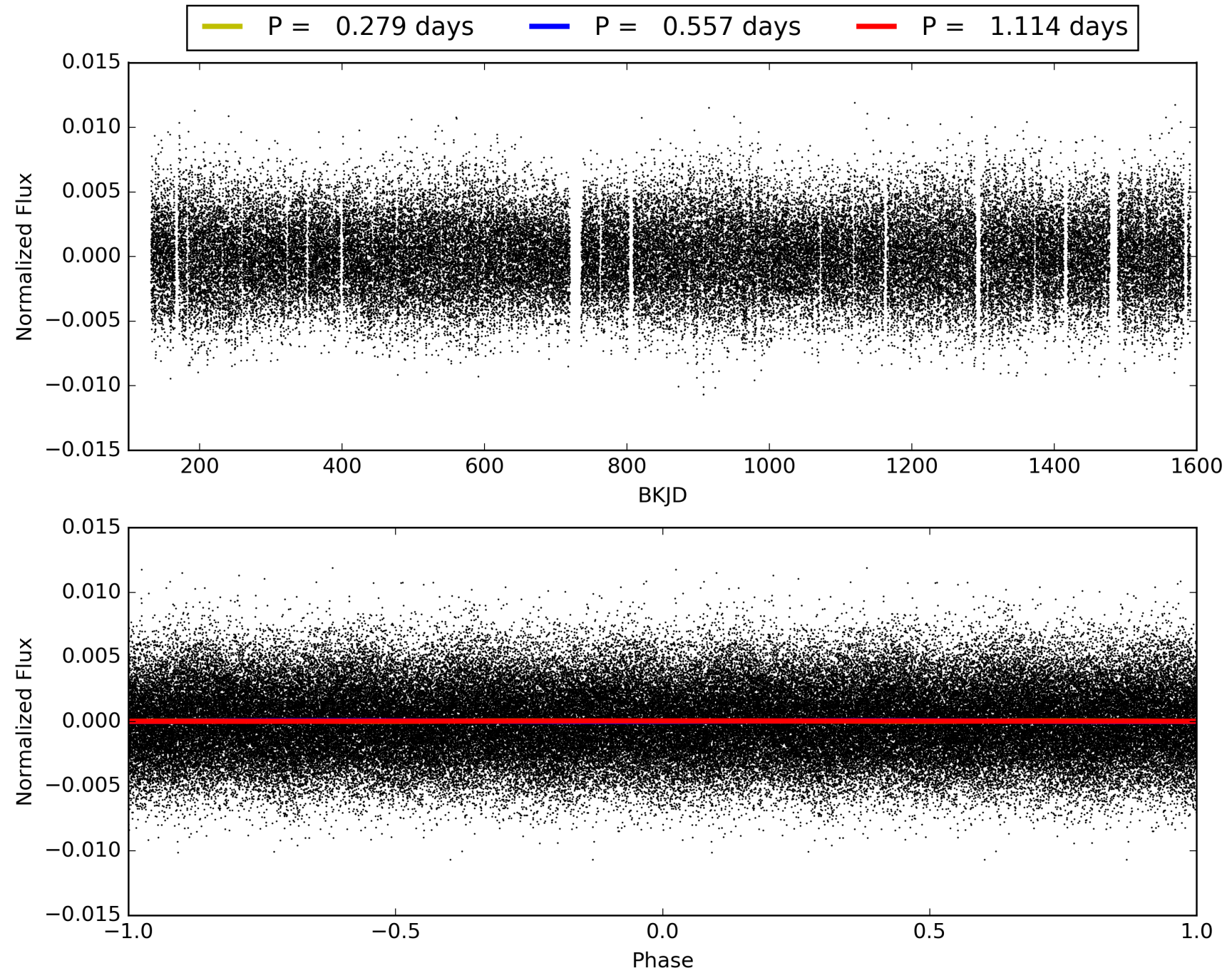
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:08:33 Z

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

TCE 005305553-01, PDC Light Curves

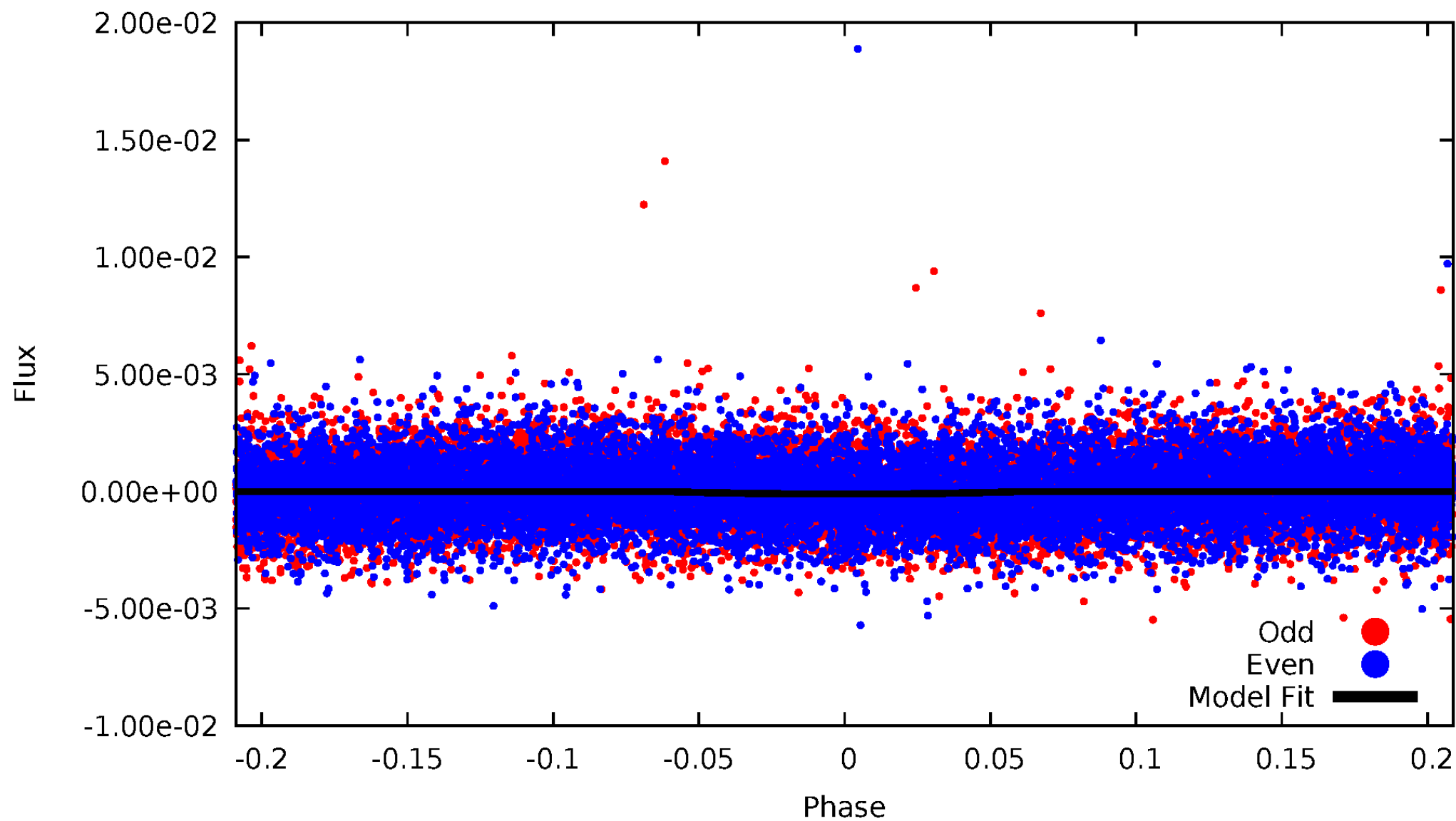


TCE 005305553-01



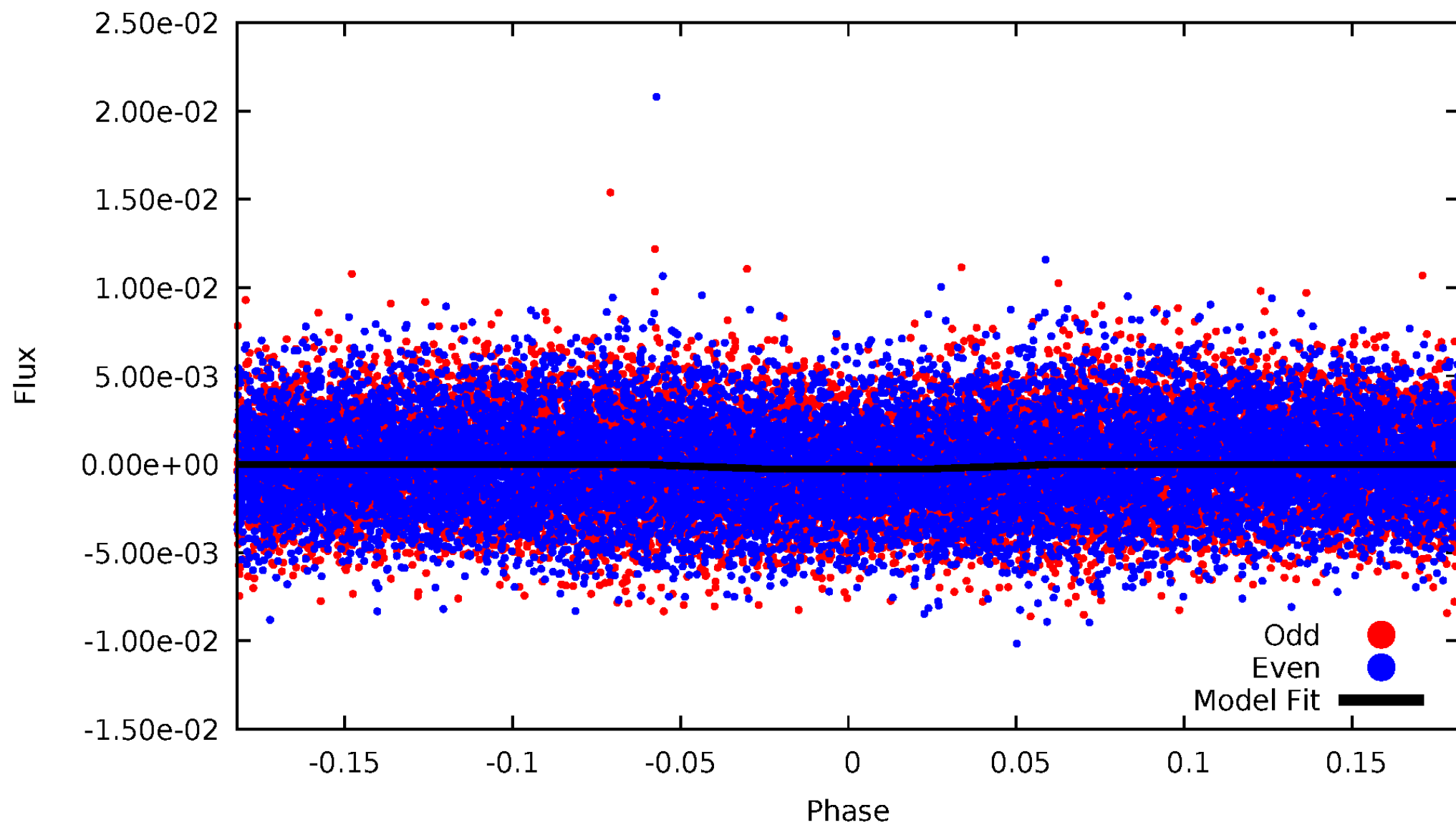
DV Odd/Even

TCE 005305553-01

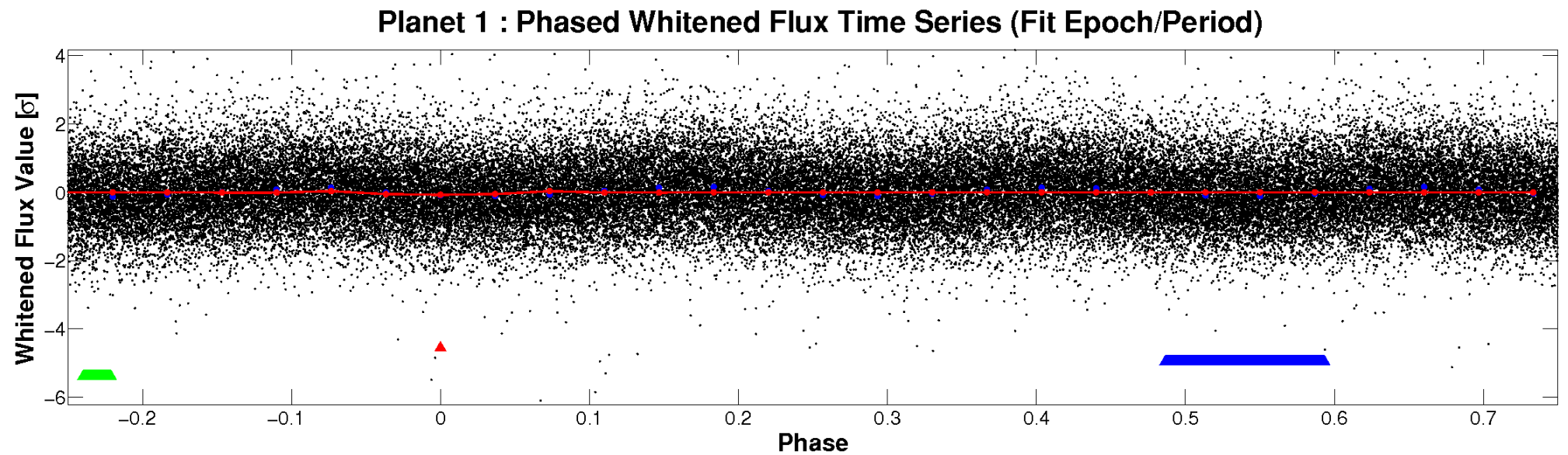
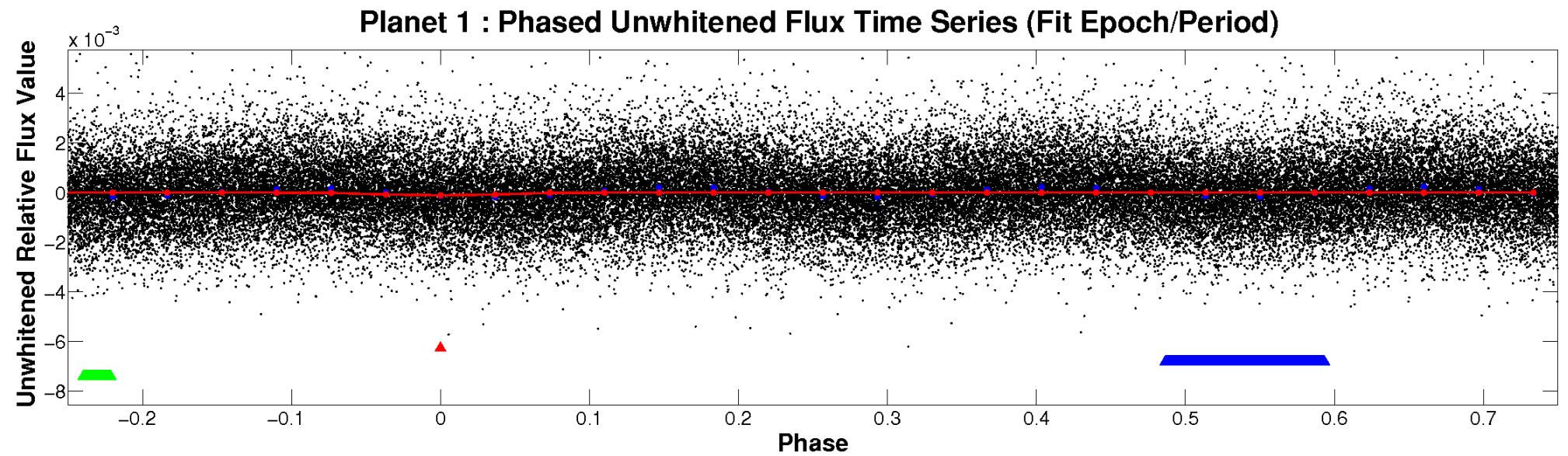


ALT Odd/Even

TCE 005305553-01

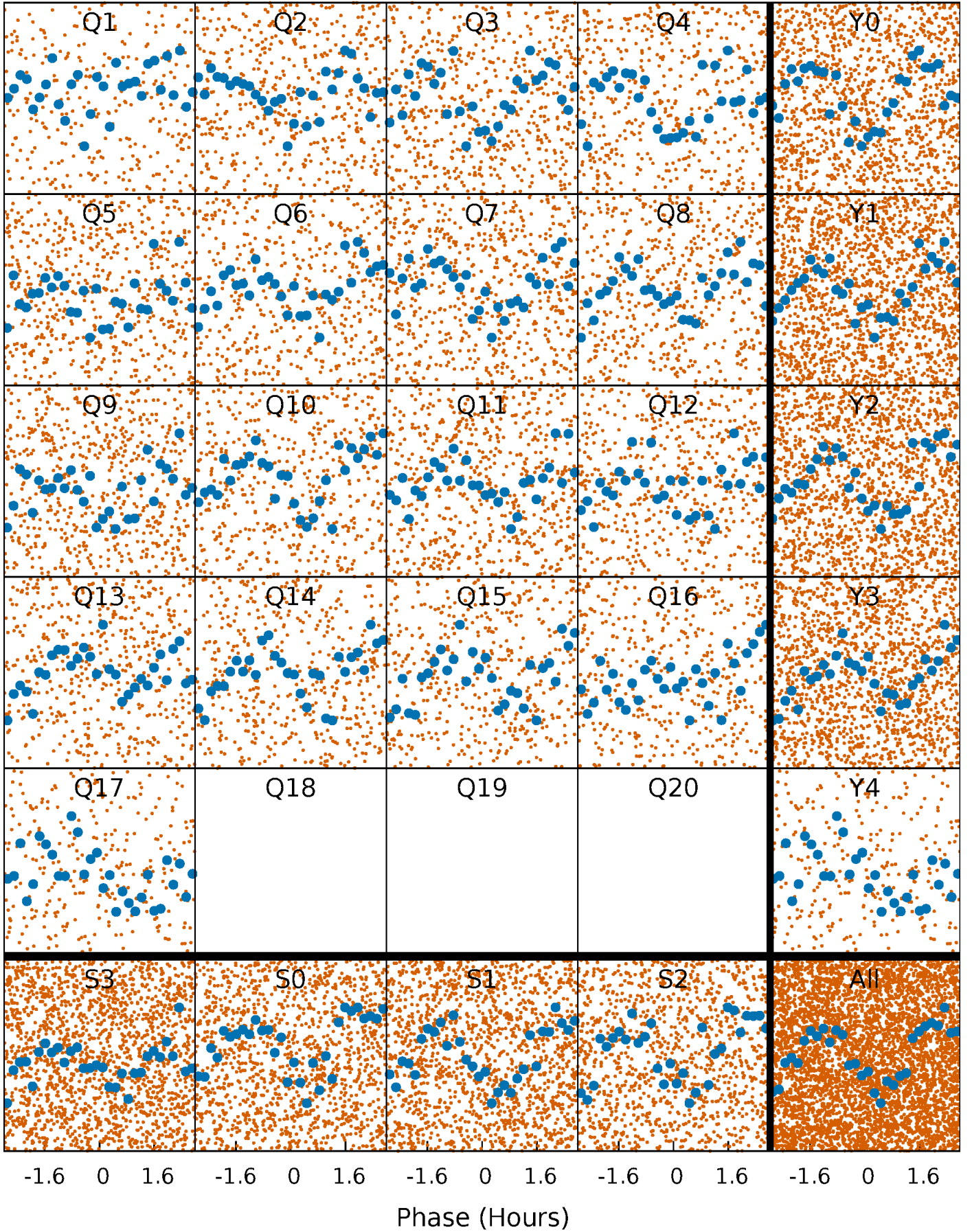


Non-Whitened Vs. Whitened Light Curve



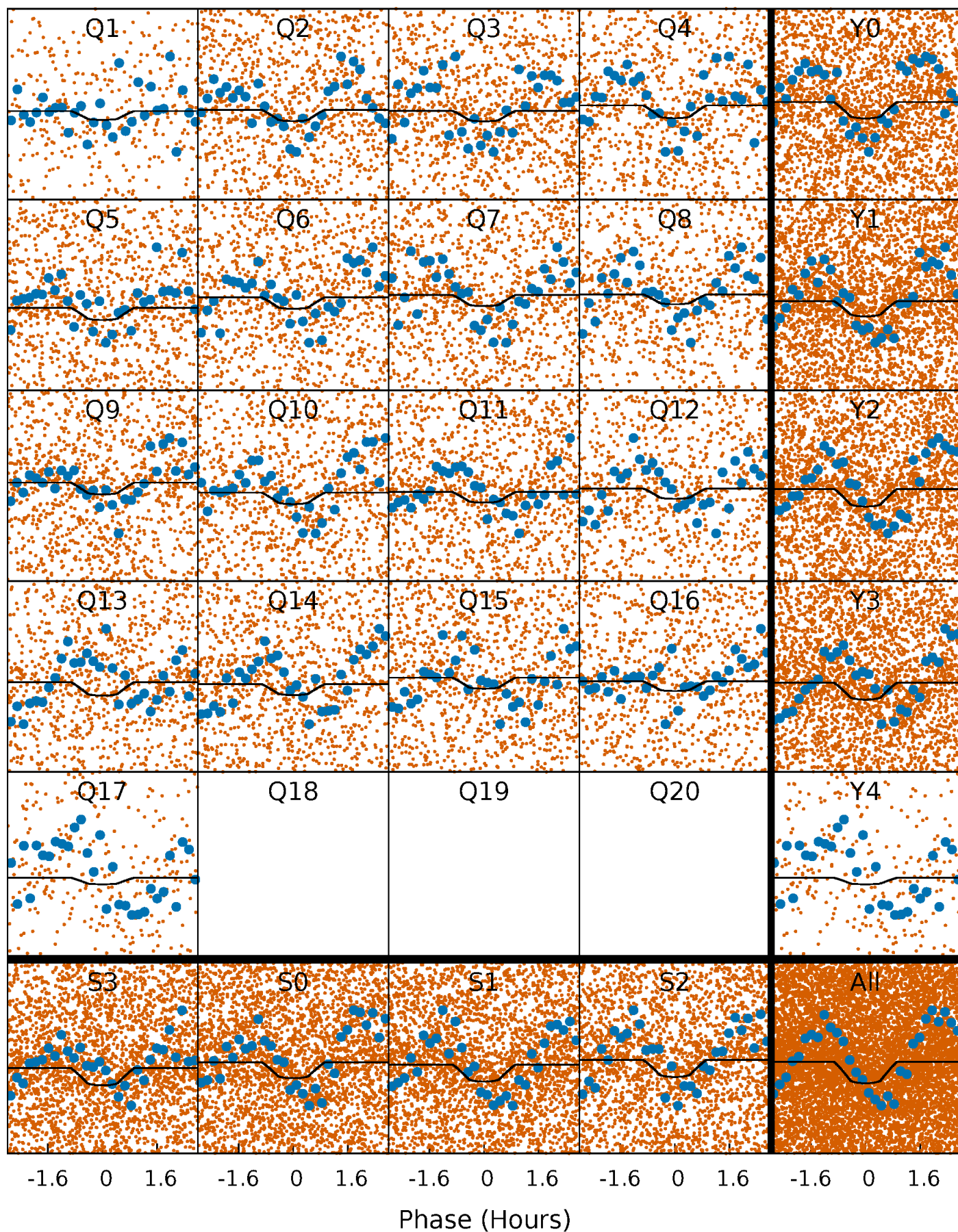
PDC Quarter-Phased Transit Curves

TCE 005305553-01 P= 0.557113 Days $T_0=131.519656$ (BKJD)



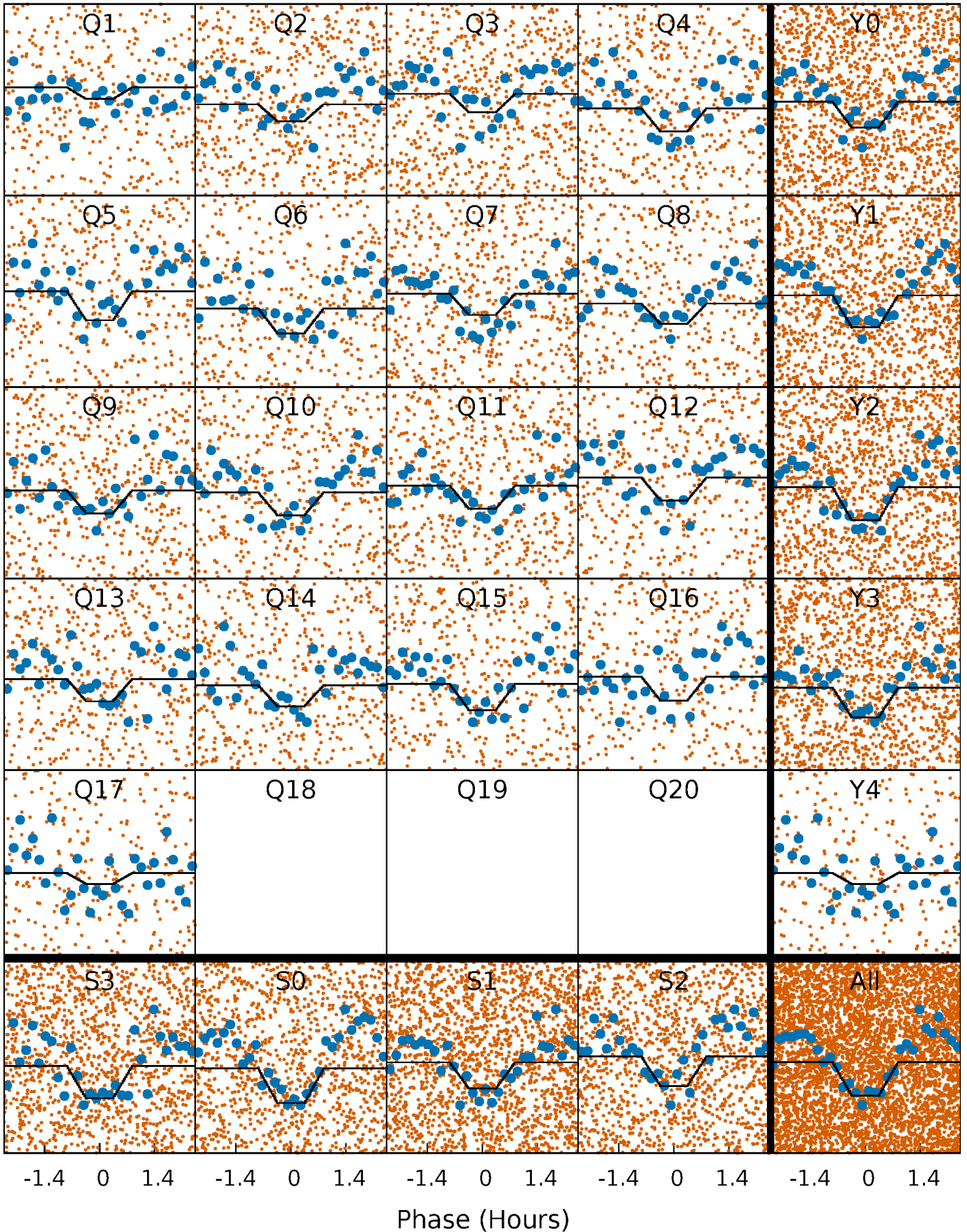
DV Quarter-Phased Transit Curves

TCE 005305553-01 P= 0.557113 Days $T_0=131.519656$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

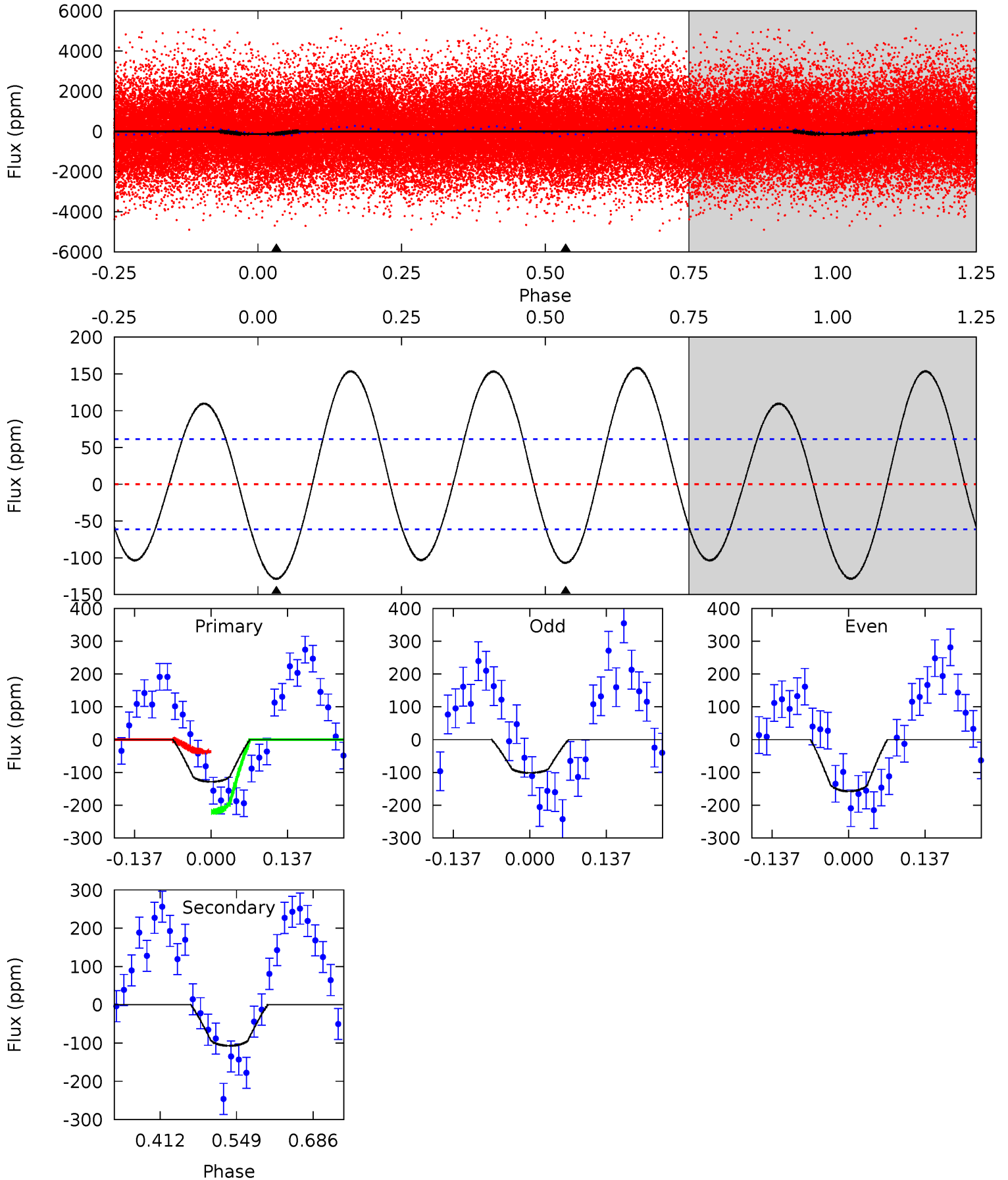
TCE 005305553-01 P= 0.557132 Days $T_0=131.515651$ (BKJD)



DV Model-Shift Uniqueness Test

005305553-01, P = 0.557113 Days, E = 130.962543 Days

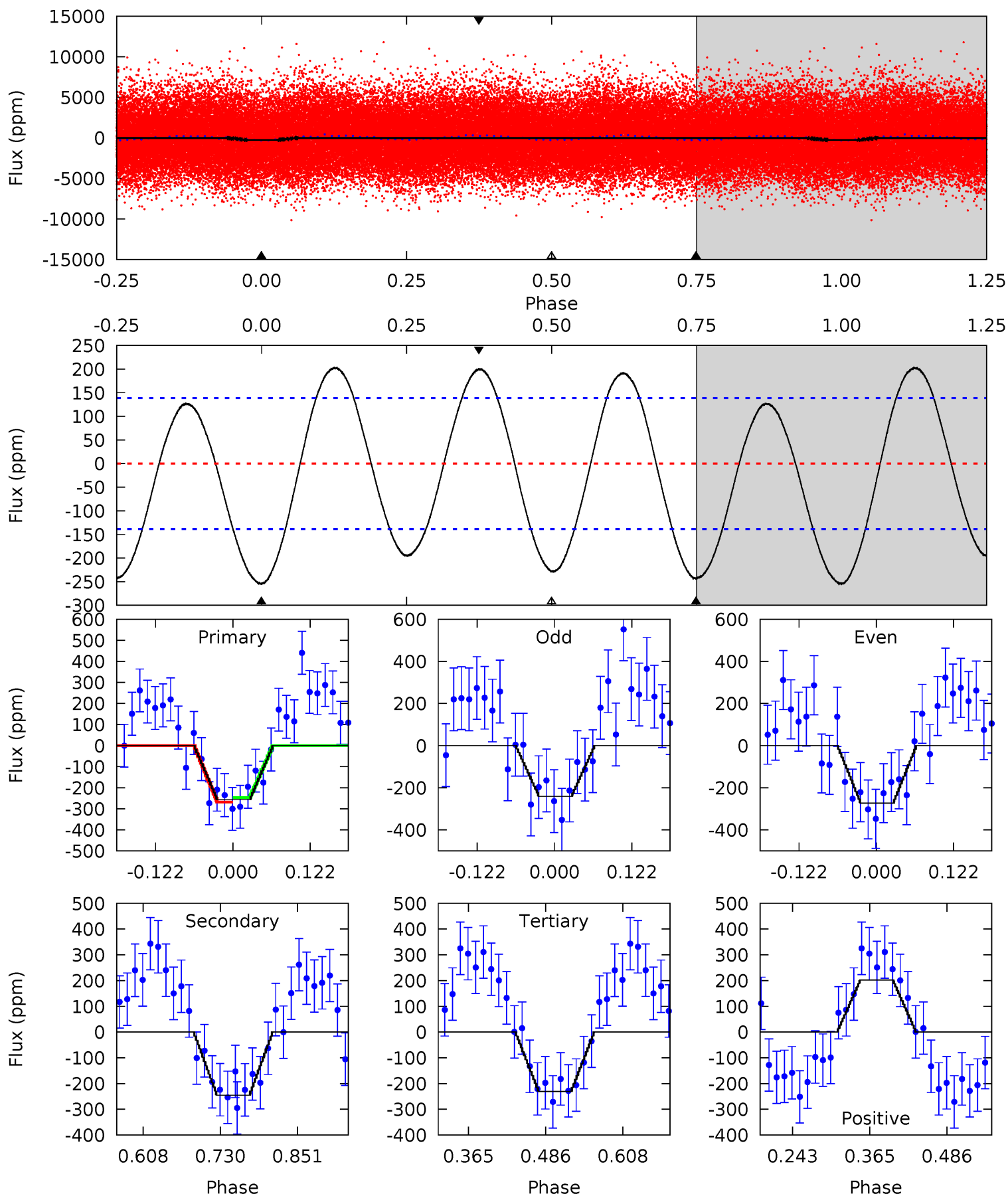
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.45	7.86	0	0	4.50	1.49	6.09	9.45	9.45	7.86	7.86	2.07	0.97	0.55	6.74



Alt Model-Shift Uniqueness Test

005305553-01, P = 0.557132 Days, E = 130.958519 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.38	8.01	7.52	6.59	4.52	1.55	4.76	0.87	1.79	0.49	1.42	0.52	0.82	0.44	0.35



Stellar Parameters For KIC 005305553

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6559^{+164}_{-258}	$4.357^{+0.070}_{-0.210}$	$-0.040^{+0.250}_{-0.300}$	$1.218^{+0.419}_{-0.168}$	$1.235^{+0.191}_{-0.174}$	$0.963^{+0.292}_{-0.527}$
	+3%/-4%	+2%/-5%	+625%/-750%	+34%/-14%	+15%/-14%	+30%/-55%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 005305553-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-107 ± 14	$1.40^{+0.50}_{-0.43}$	3803^{+304}_{-206}	6525^{+1522}_{-901}	$5.877^{+7.039}_{-2.650}$
Alt.	-245 ± 31	$2.25^{+0.55}_{-0.46}$	3801^{+261}_{-215}	6279^{+764}_{-623}	$5.171^{+3.093}_{-1.764}$

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

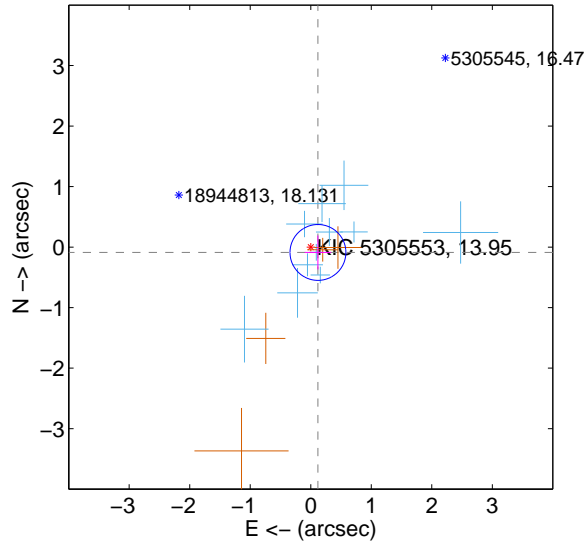
Supplemental centroid analysis for 005305553-01. Kepler magnitude: 13.95. Transit SNR 6.14

There are 11 quarters with good PRF difference image offsets

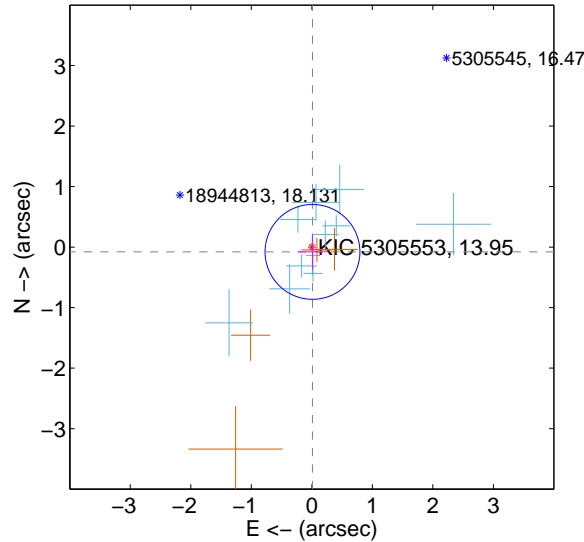
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.148 ± 0.154	0.96	-0.119 ± 0.218	-0.088 ± 0.280
PRF-fit source offset from KIC position	0.080 ± 0.261	0.31	-0.011 ± 0.245	-0.079 ± 0.284
photometric centroid source offset	1.56 ± 0.59	2.65	1.25 ± 0.66	-0.94 ± 0.43

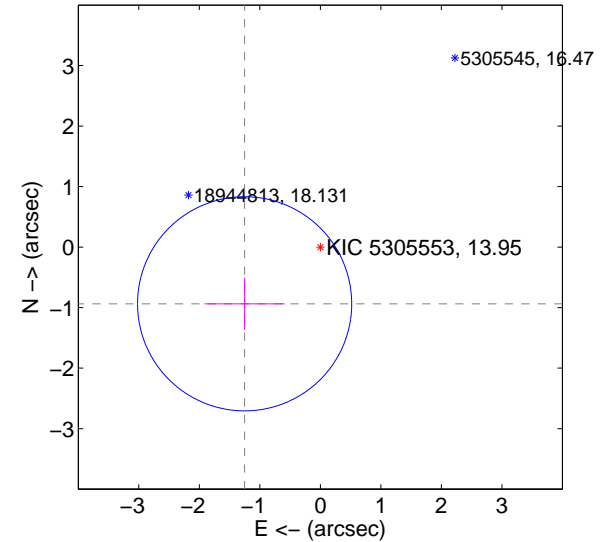
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

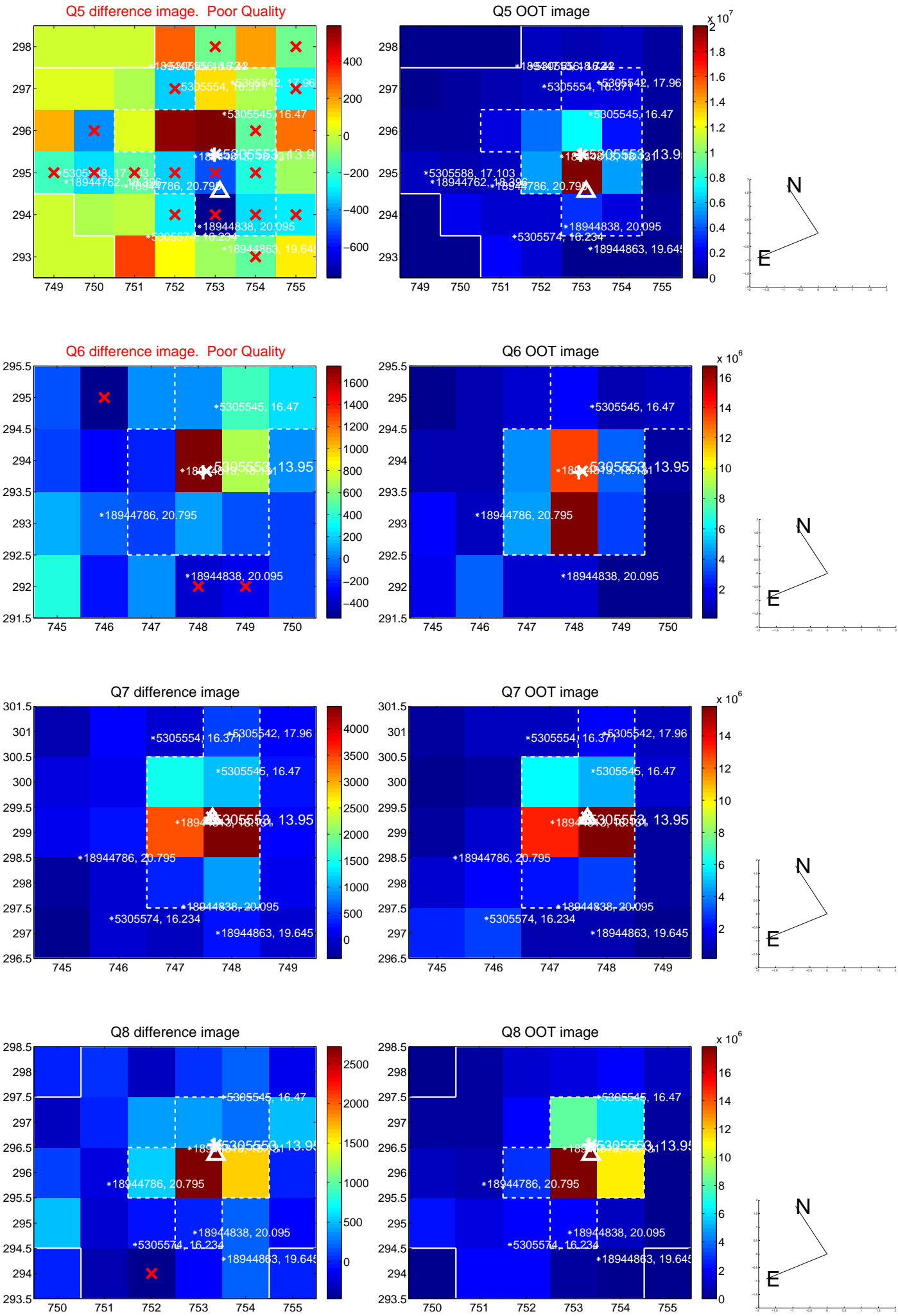


offset from photometric centroids

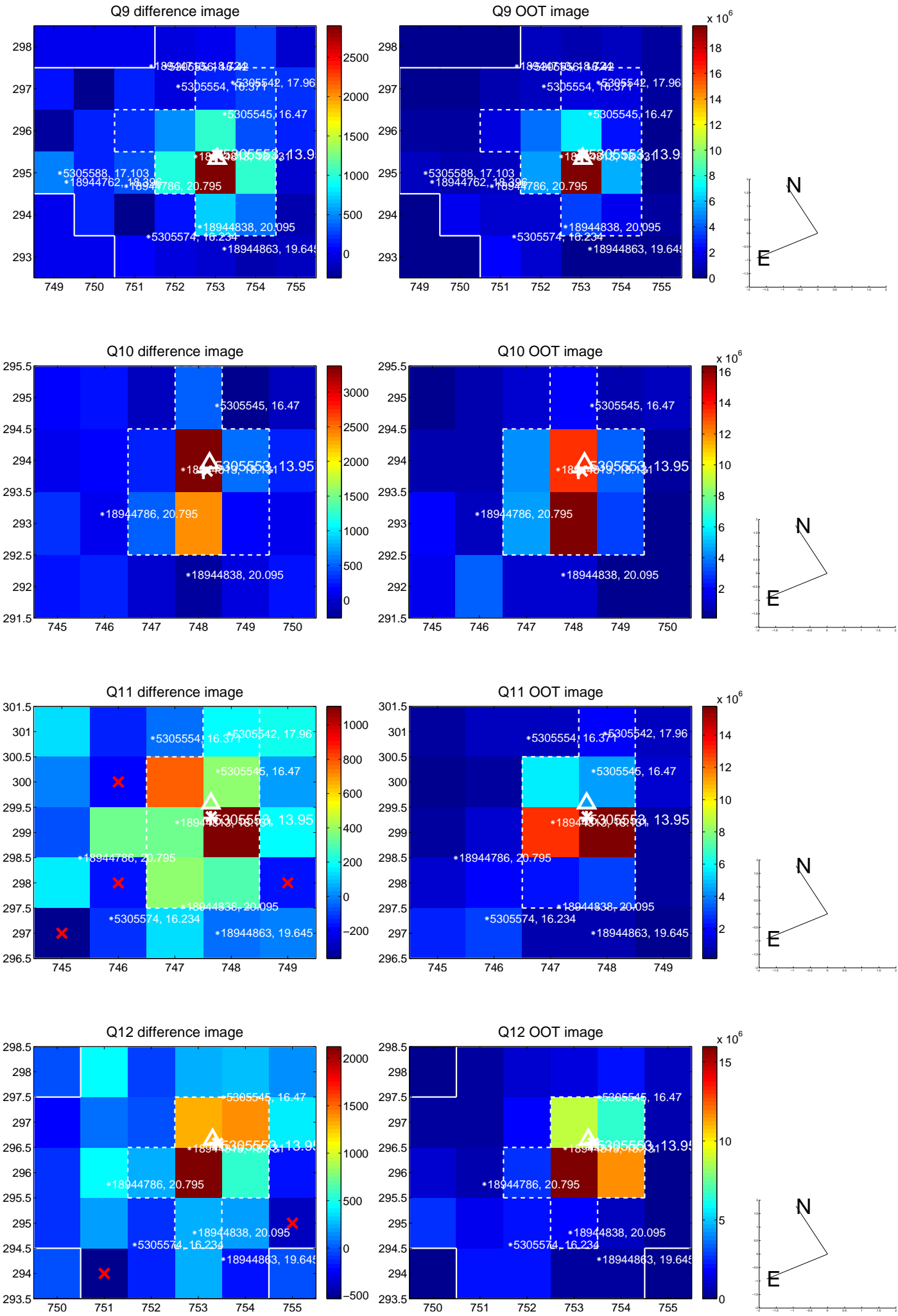


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

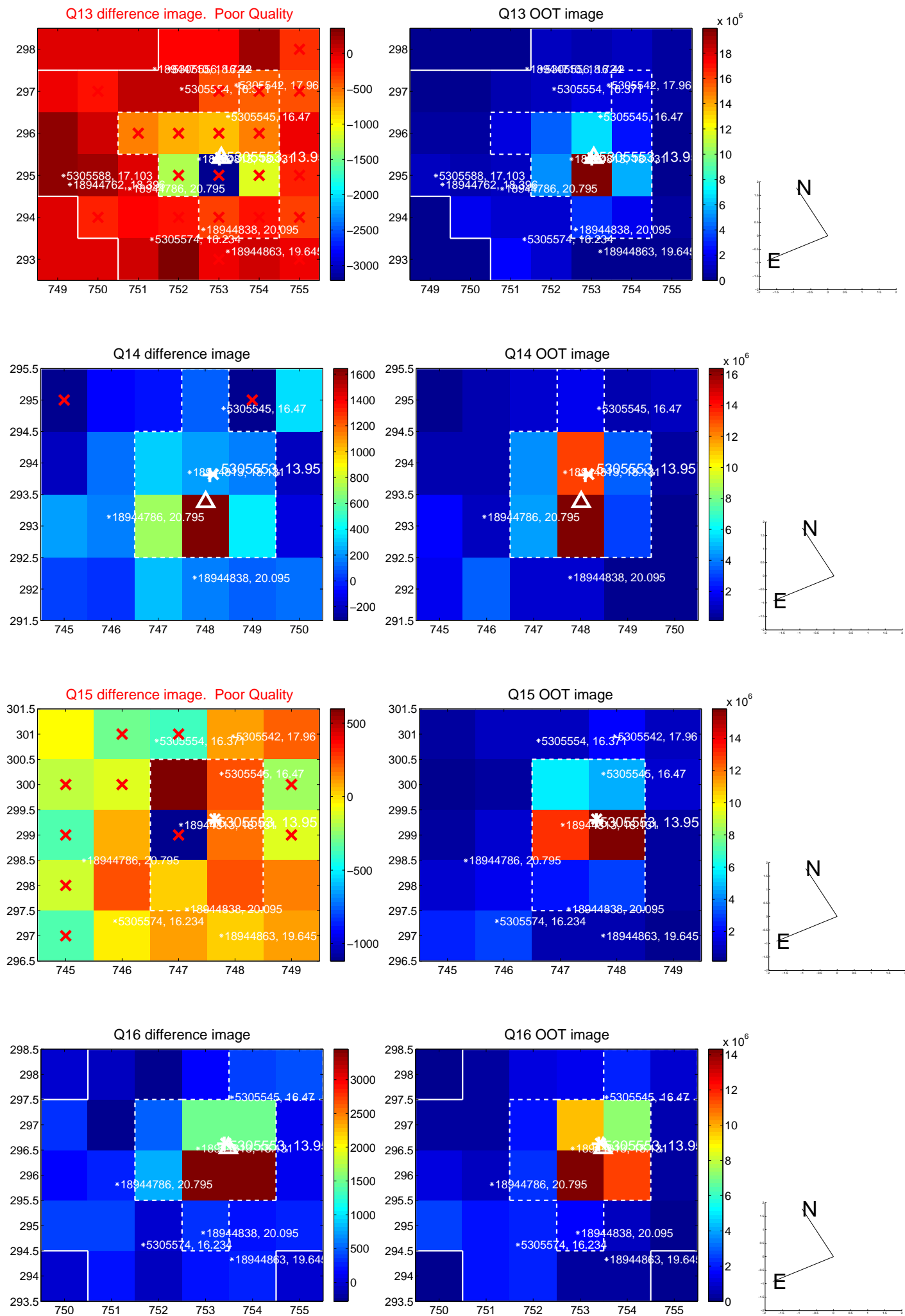
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



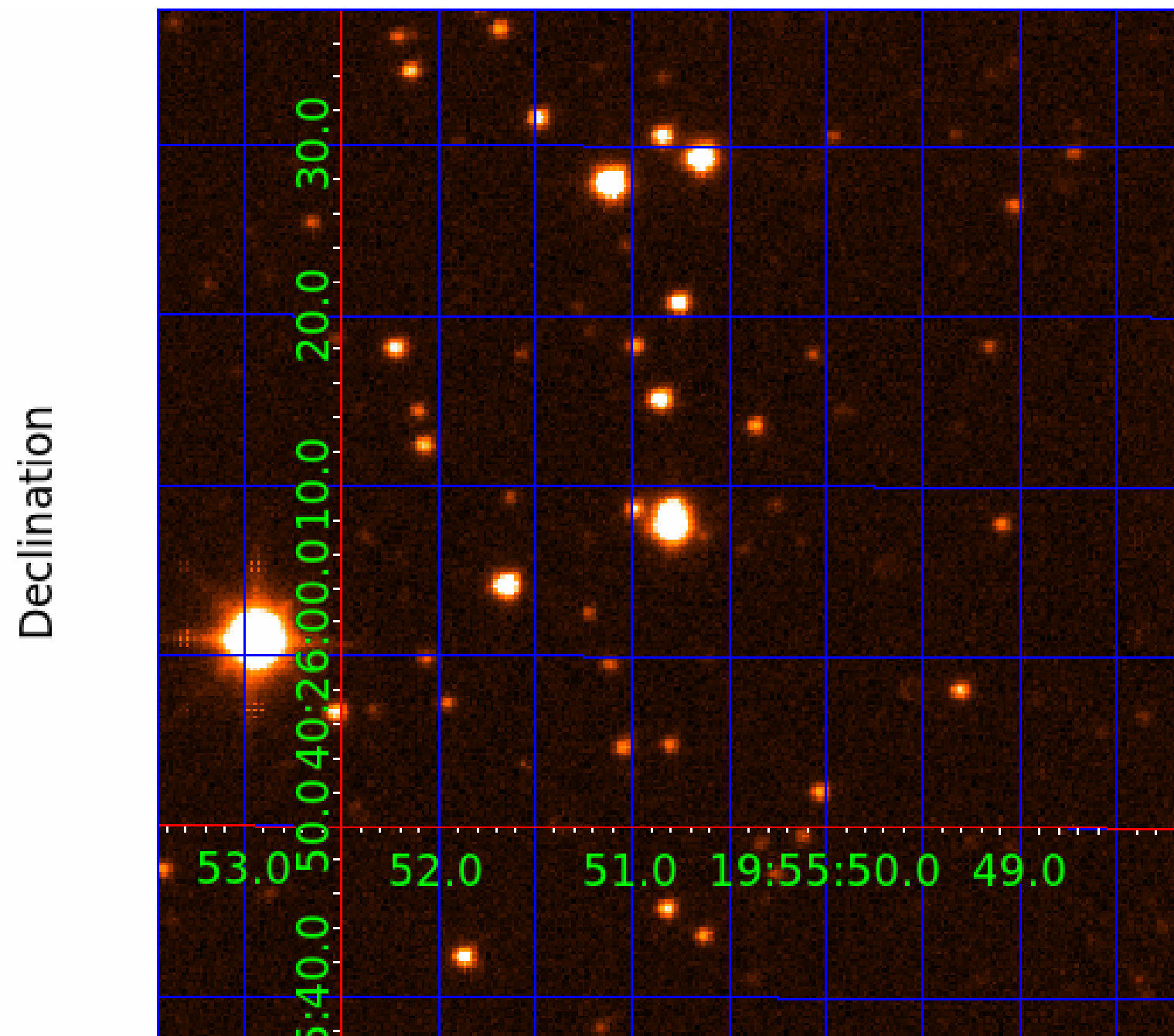
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 005305553

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})
005305553-01	OBS	No	0.557113	131.519656	101.7	1.396	9.8	6.1	1.22	6559	1.32	12192.28
005305553-02	OBS	No	0.557136	131.790631	180.0	1.640	9.9	10.8	1.22	6559	1.91	12191.62
005305553-03	OBS	No	0.557117	131.943205	171.6	1.294	9.8	8.5	1.22	6559	1.66	12192.17

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005305553-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005305553-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
005305553-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—SAME_NTL_PERIOD

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

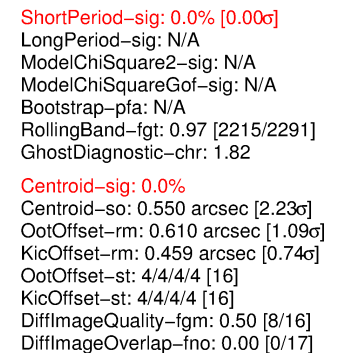
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

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

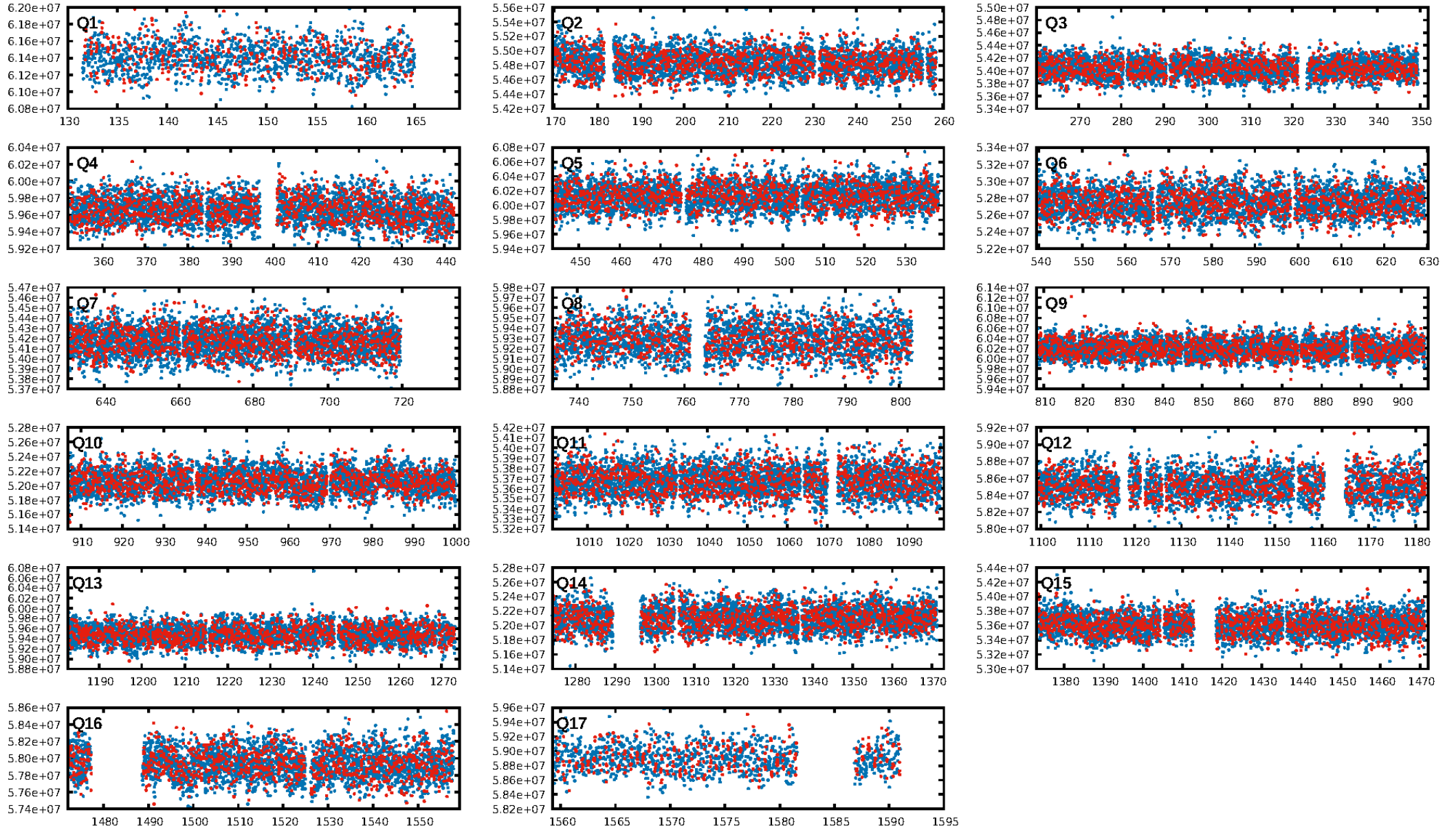
Ephemeris Match Information For 005305553-02

No Significant Match Found

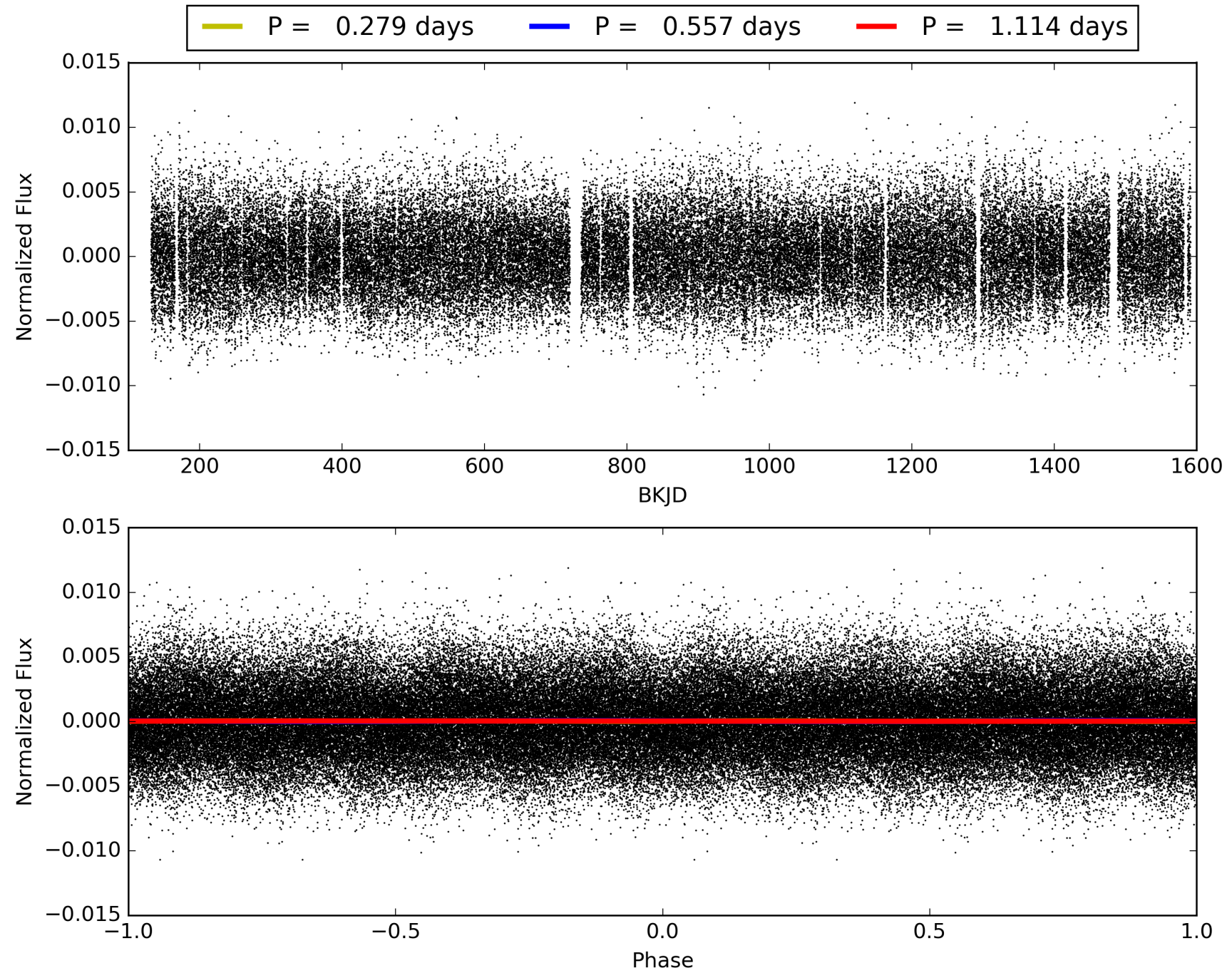
KIC: 5305553 Candidate: 2 of 3 Period: 0.557 d



TCE 005305553-02, PDC Light Curves

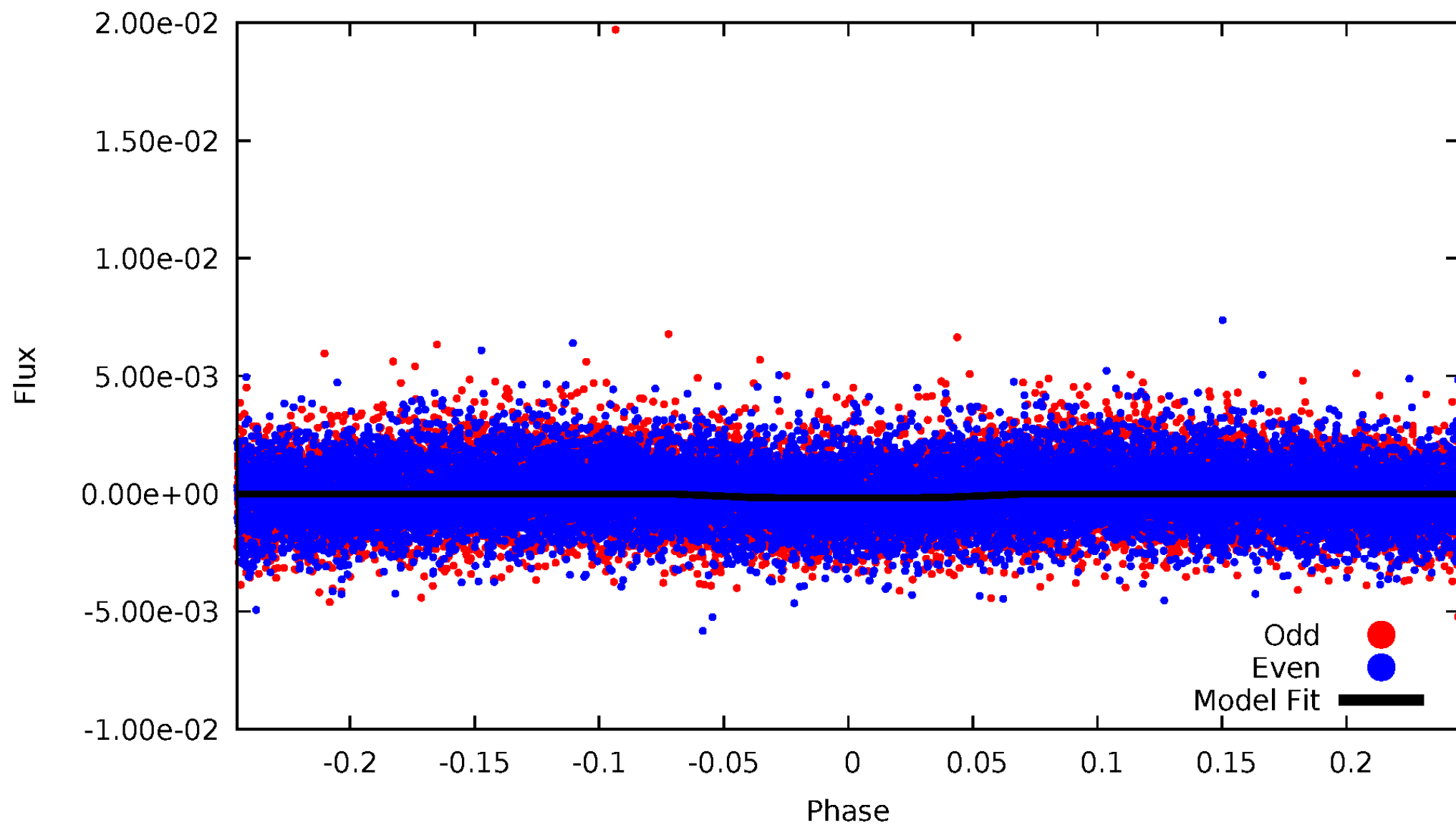


TCE 005305553-02



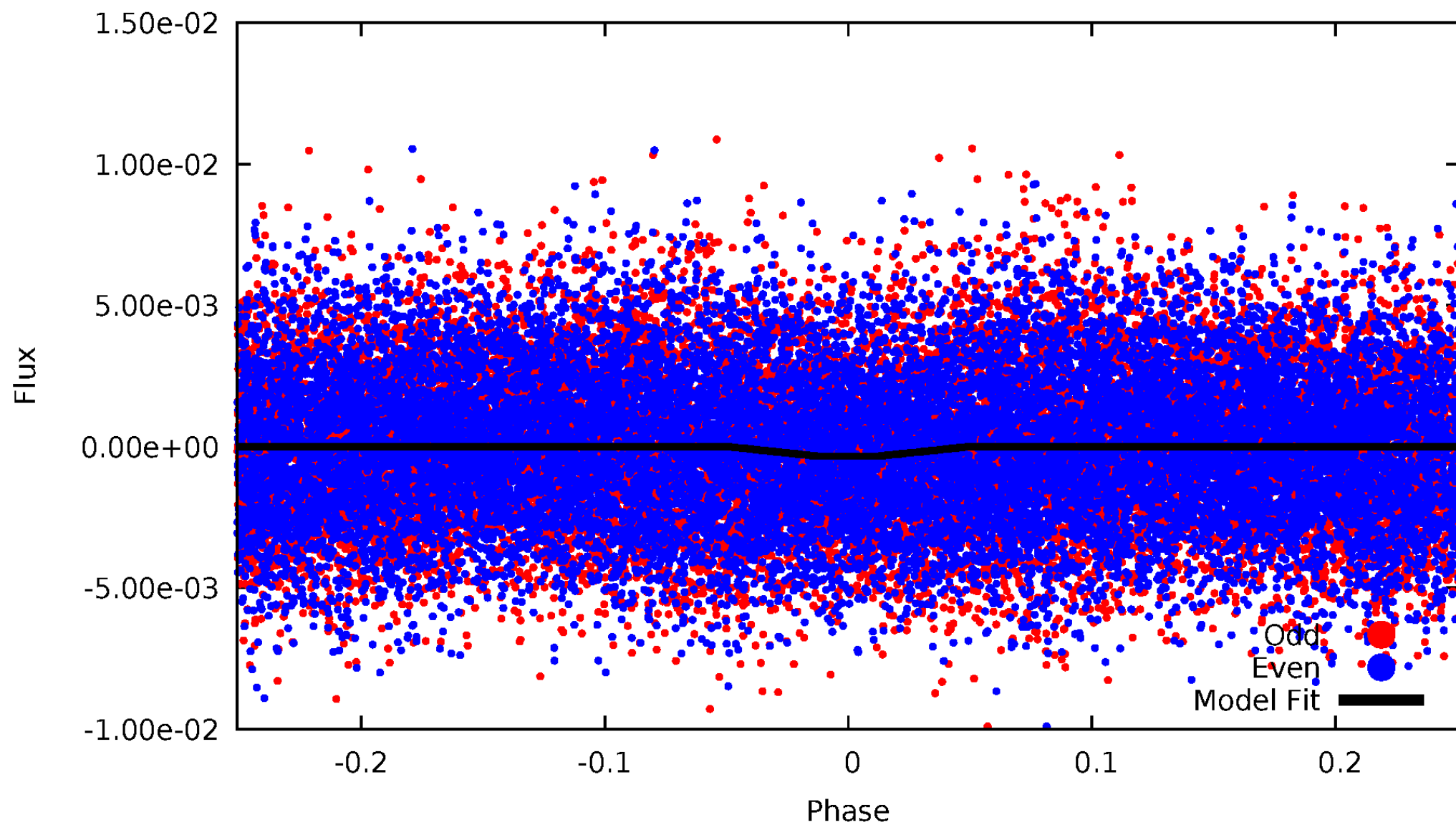
DV Odd/Even

TCE 005305553-02



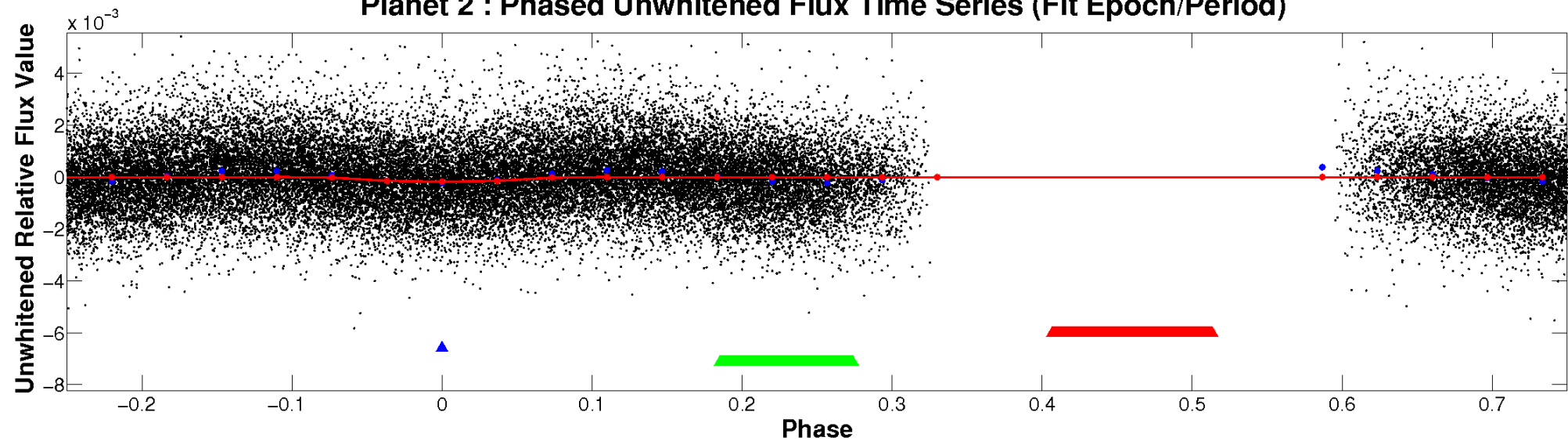
ALT Odd/Even

TCE 005305553-02

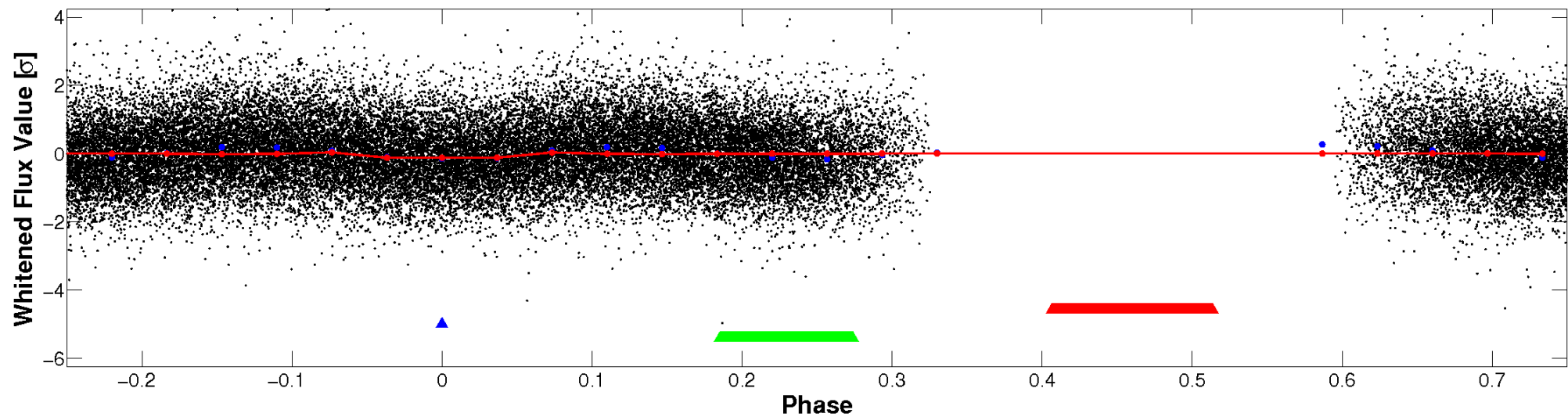


Non-Whitened Vs. Whitened Light Curve

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

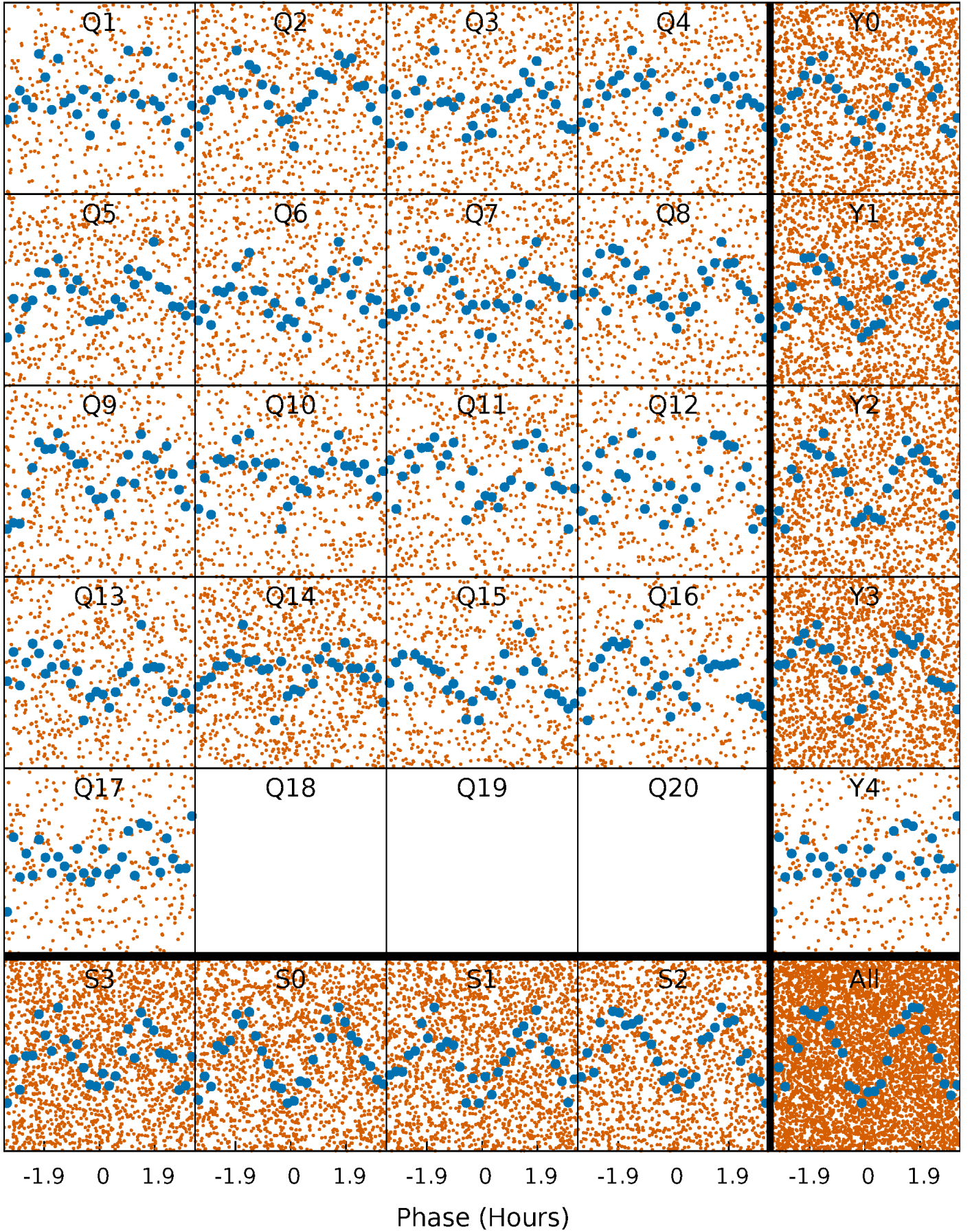


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



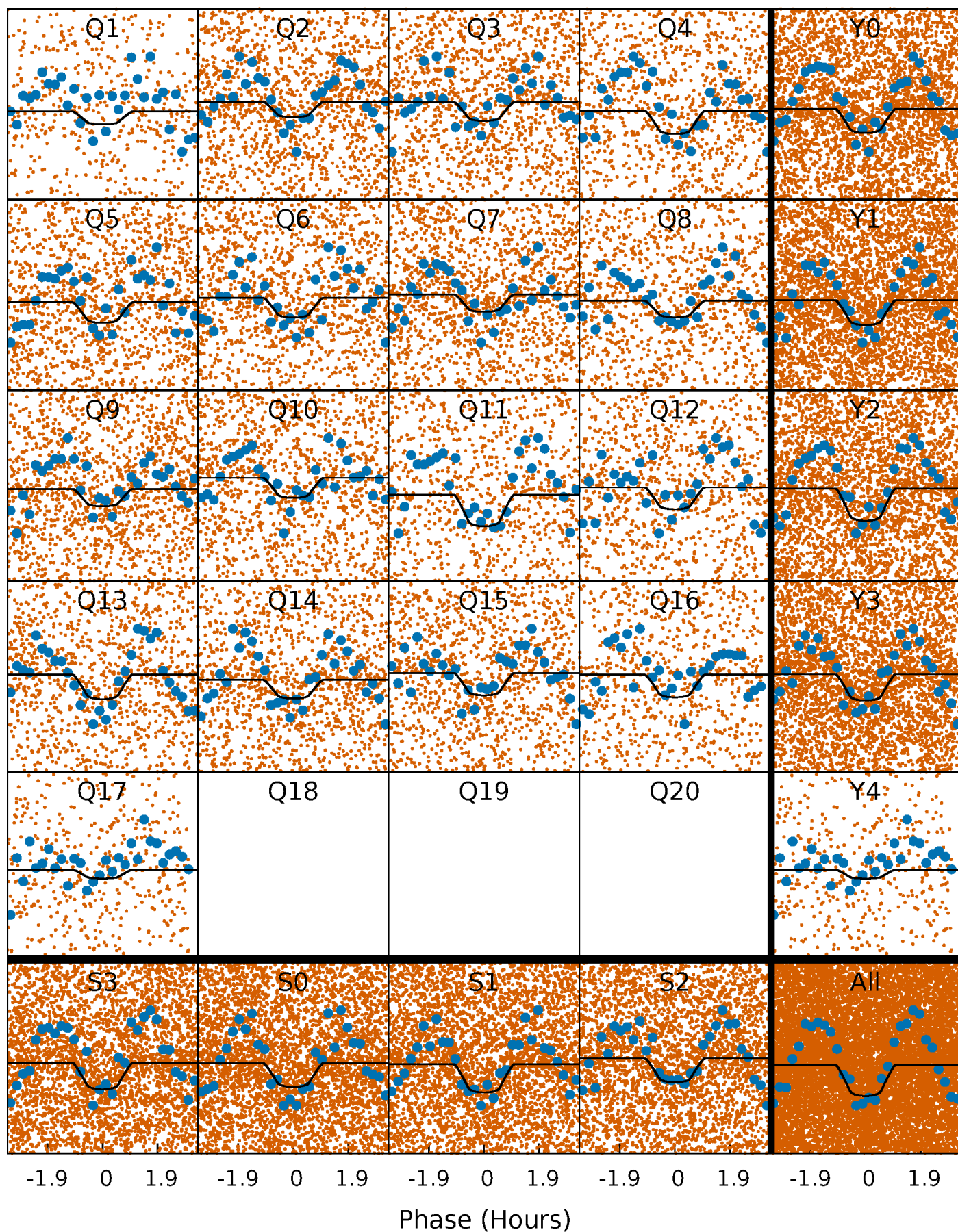
PDC Quarter-Phased Transit Curves

TCE 005305553-02 P= 0.557136 Days $T_0=131.790631$ (BKJD)



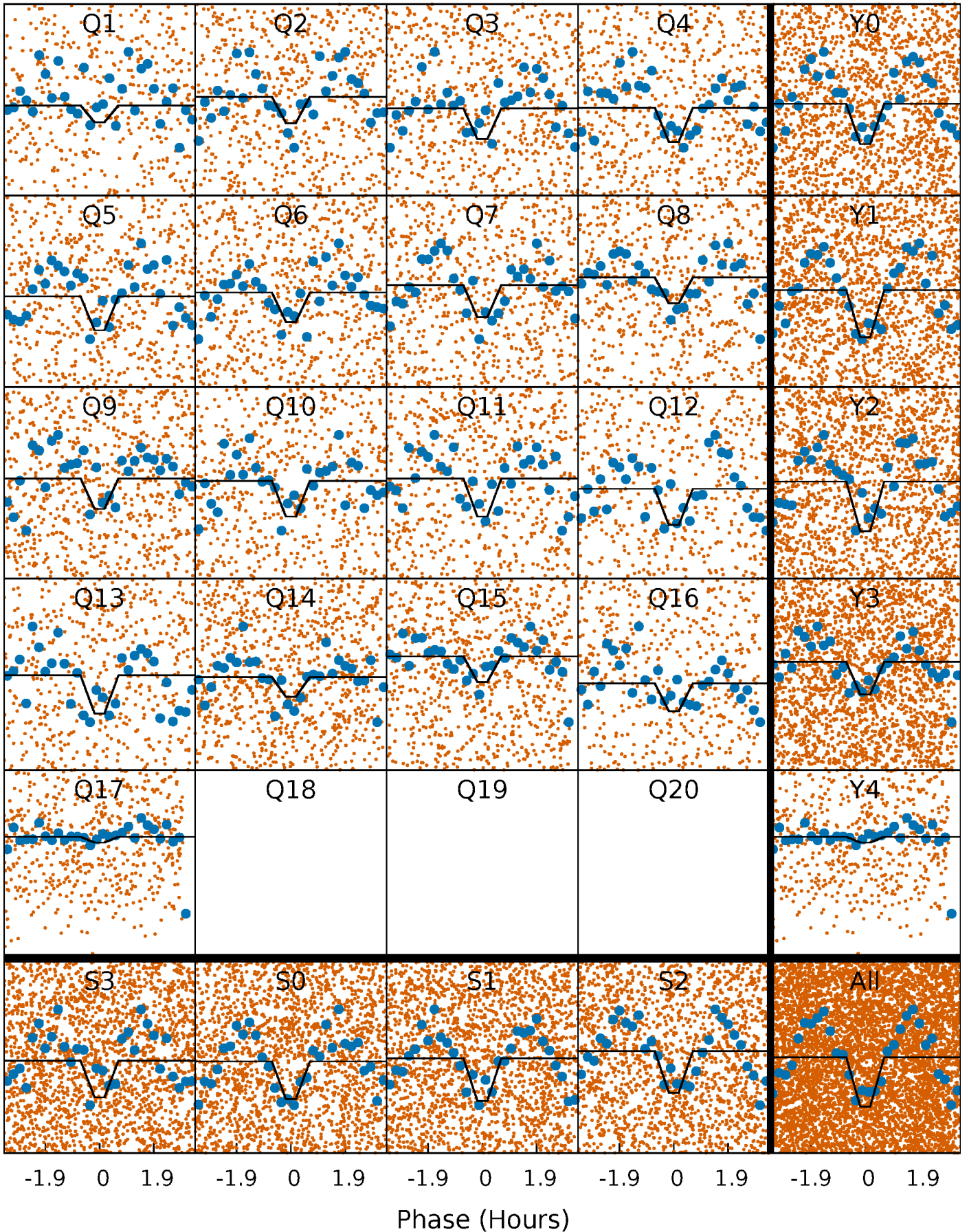
DV Quarter-Phased Transit Curves

TCE 005305553-02 P= 0.557136 Days $T_0=131.790631$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

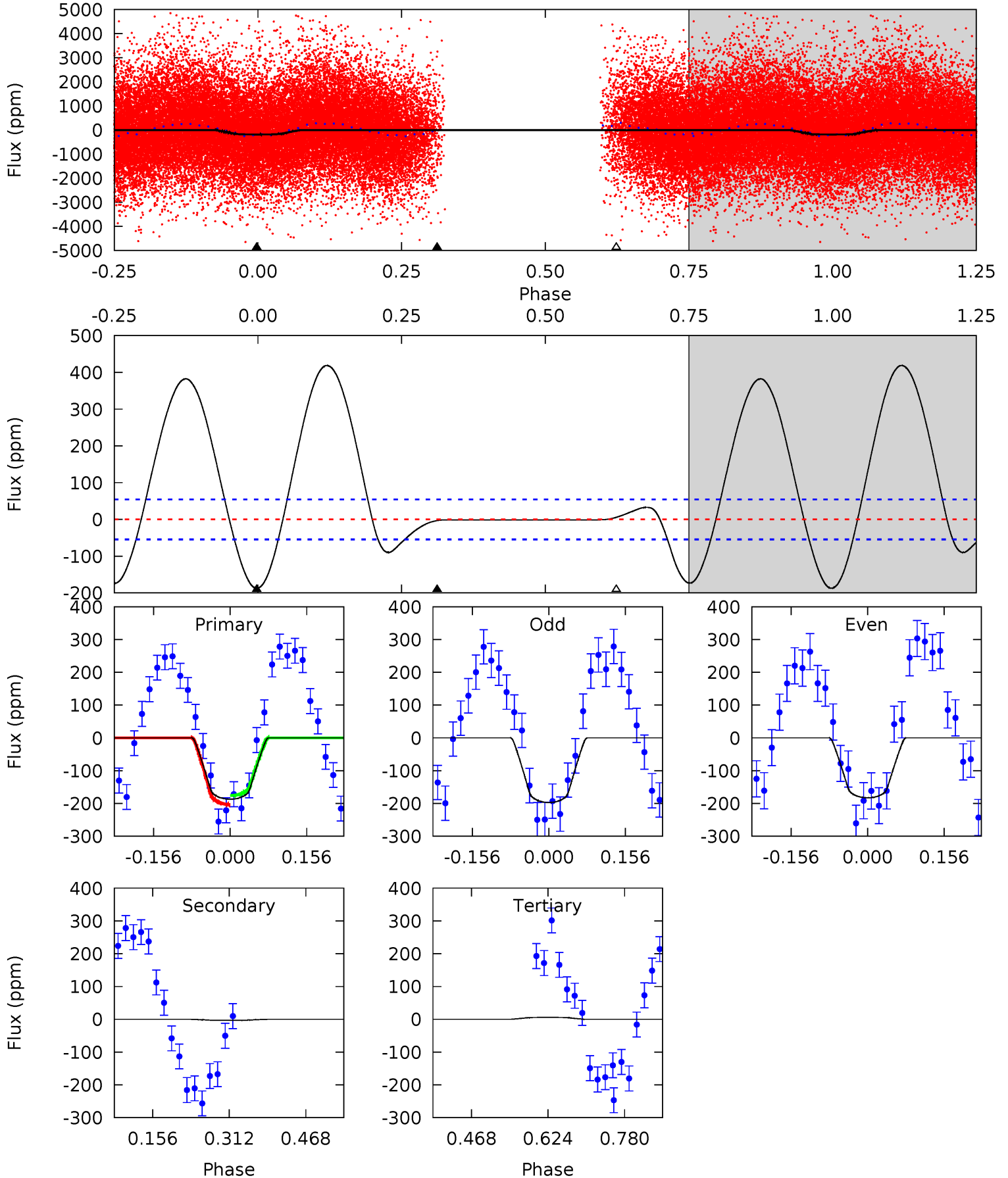
TCE 005305553-02 P= 0.557136 Days $T_0=131.791542$ (BKJD)



DV Model-Shift Uniqueness Test

005305553-02, P = 0.557136 Days, E = 131.233495 Days

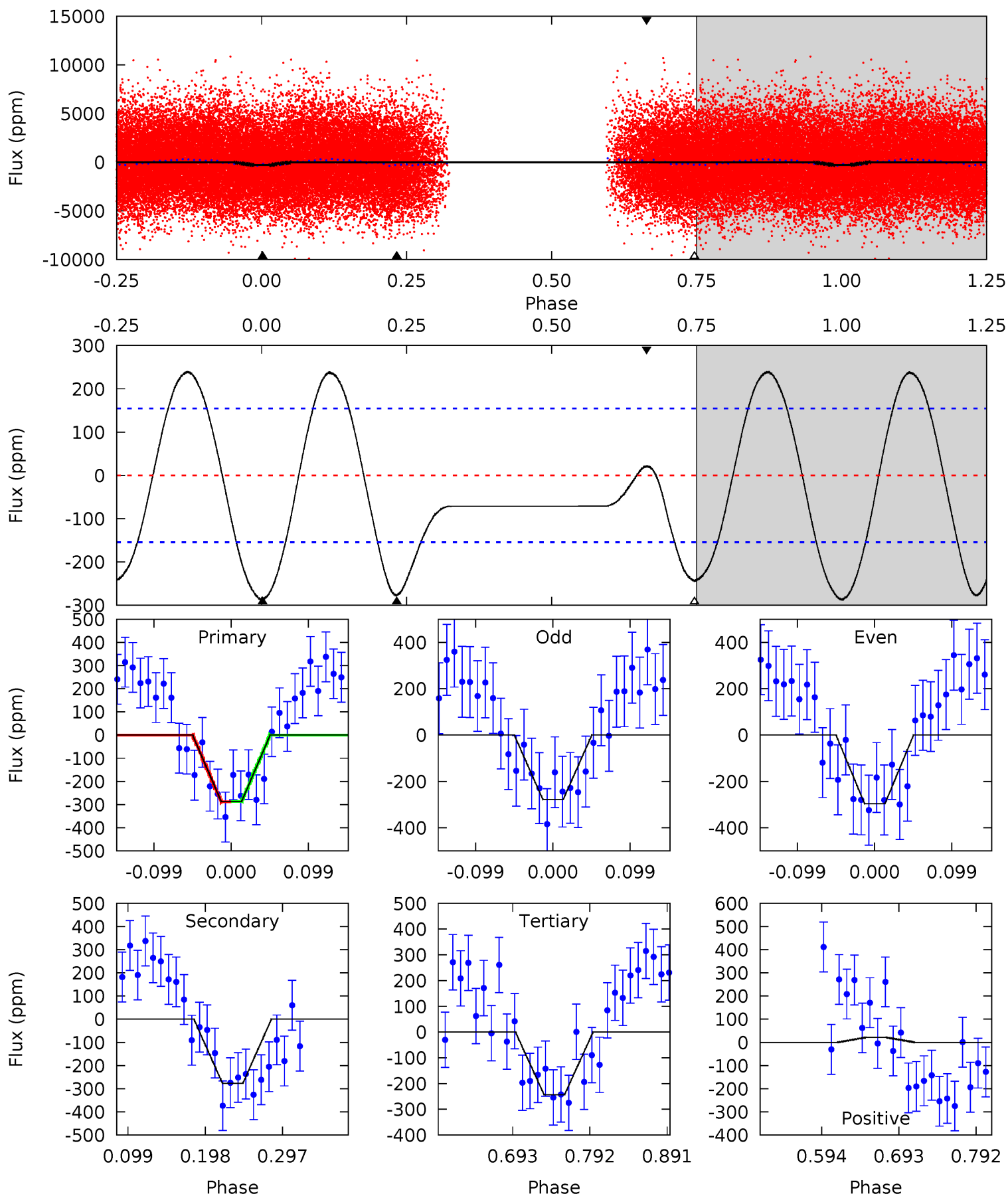
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.4	0.26	-0.47	0	4.47	1.42	10.1	15.8	15.4	0.73	0.26	0.59	0.89	0.69	1.15



Alt Model-Shift Uniqueness Test

005305553-02, P = 0.557136 Days, E = 131.234406 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.49	8.20	7.21	0.62	4.57	1.65	5.12	1.28	7.87	0.98	7.57	0.27	0.92	0.45	0.03



Stellar Parameters For KIC 005305553

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6559^{+164}_{-258}	$4.357^{+0.070}_{-0.210}$	$-0.040^{+0.250}_{-0.300}$	$1.218^{+0.419}_{-0.168}$	$1.235^{+0.191}_{-0.174}$	$0.963^{+0.292}_{-0.527}$
	+3%/-4%	+2%/-5%	+625%/-750%	+34%/-14%	+15%/-14%	+30%/-55%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 005305553-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-3 ± 12	$2.02^{+0.71}_{-0.58}$	3815^{+279}_{-198}	-3495^{+6590}_{-547}	$0.049^{+0.359}_{-0.321}$
Alt.	-277 ± 34	$2.56^{+0.72}_{-0.62}$	3806^{+299}_{-187}	6101^{+1046}_{-635}	$4.624^{+3.533}_{-1.790}$

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 $A_{obs} \gg 1.0$

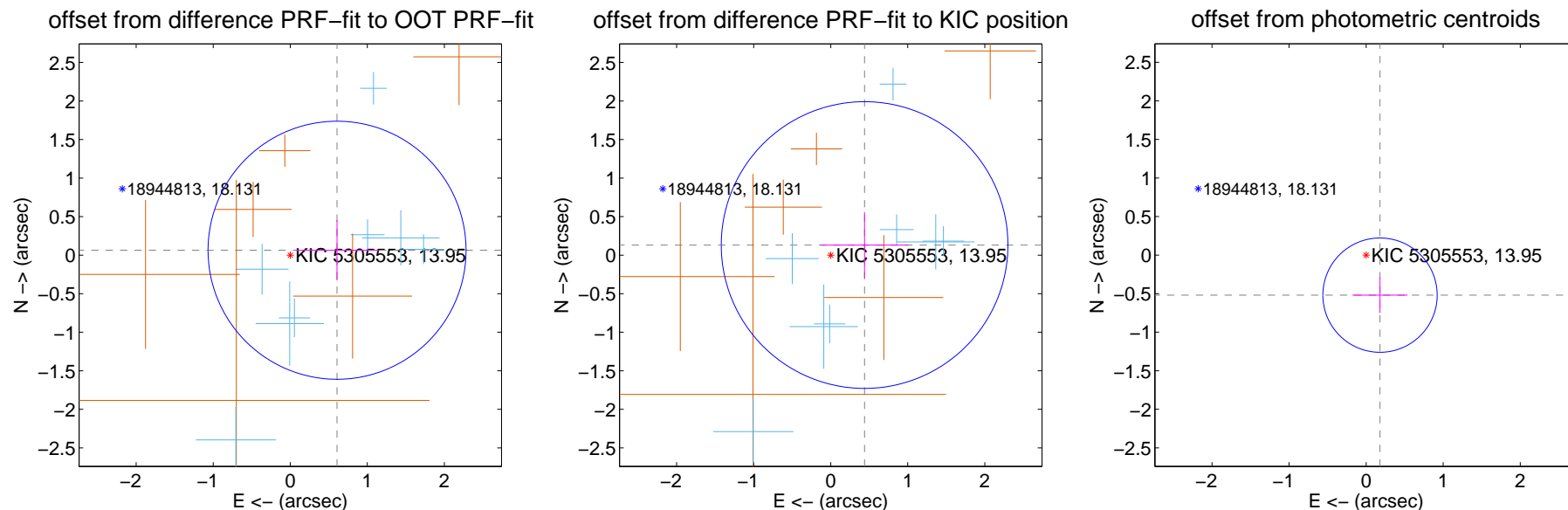
DV Centroid Data

Supplemental centroid analysis for 005305553-02. Kepler magnitude: 13.95. Transit SNR 10.83

There are 8 quarters with good PRF difference image offsets

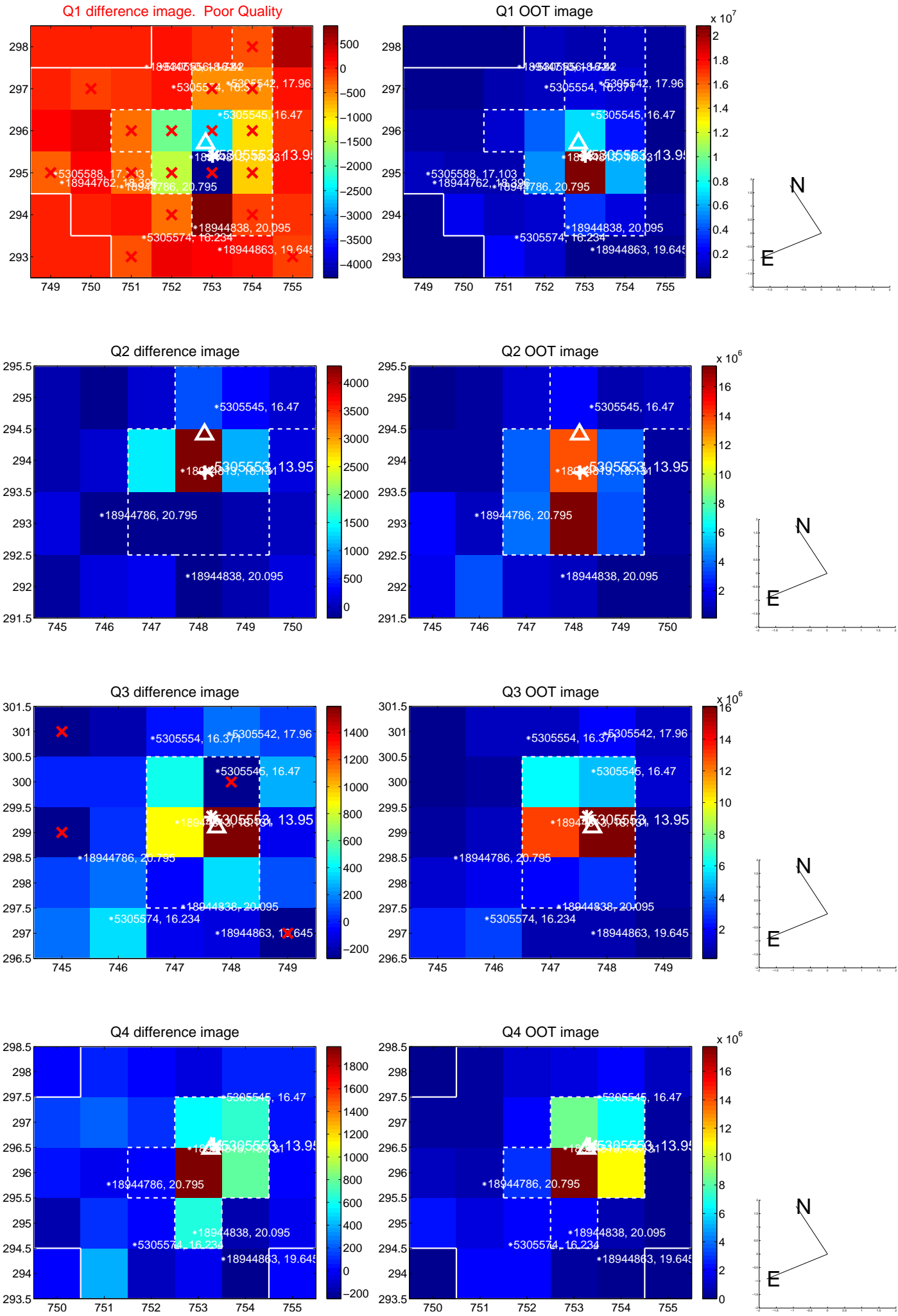
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.610 ± 0.558	1.09	-0.607 ± 0.539	0.064 ± 0.391
PRF-fit source offset from KIC position	0.459 ± 0.620	0.74	-0.440 ± 0.568	0.131 ± 0.428
photometric centroid source offset	0.55 ± 0.25	2.23	-0.18 ± 0.36	-0.52 ± 0.23

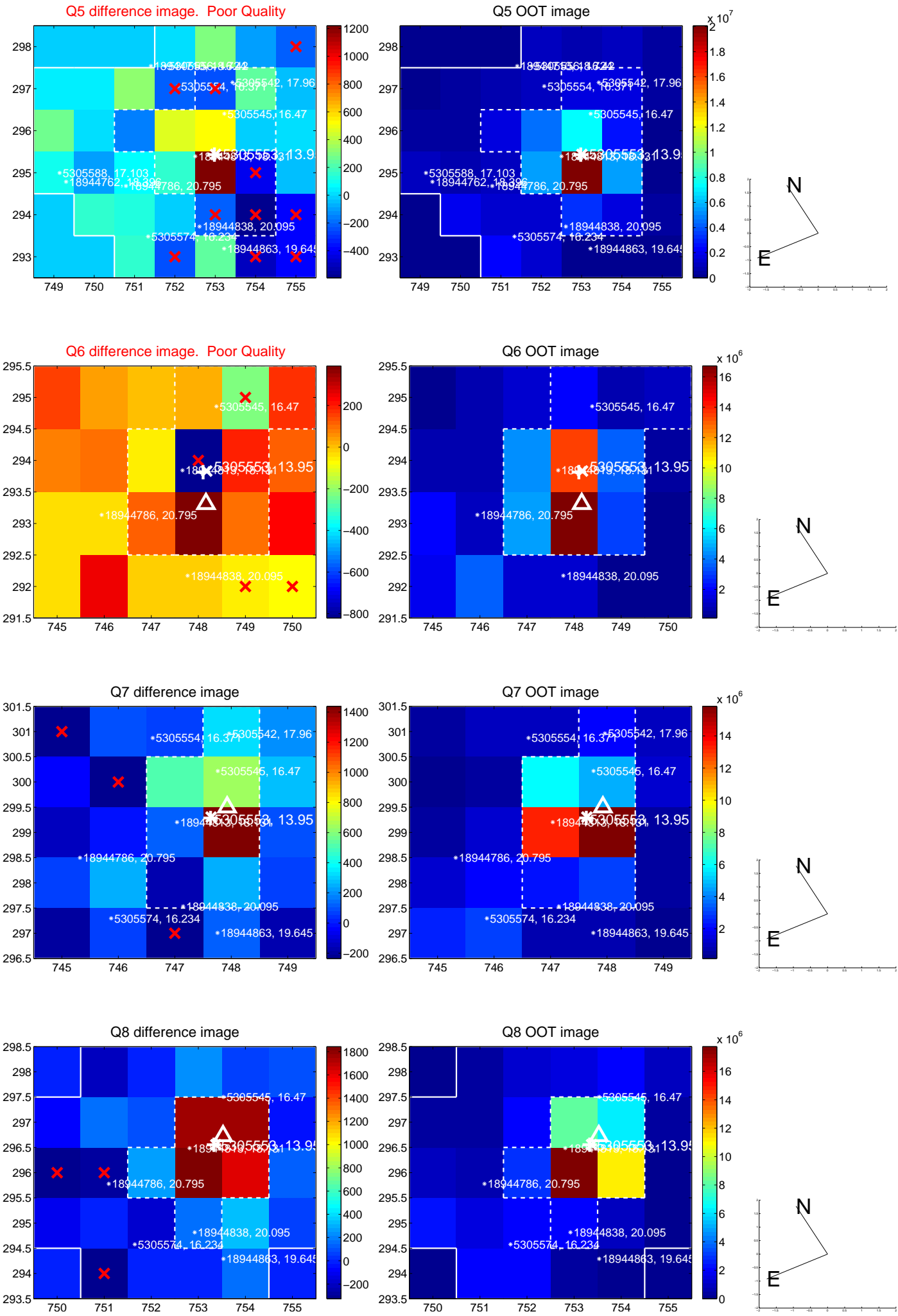


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

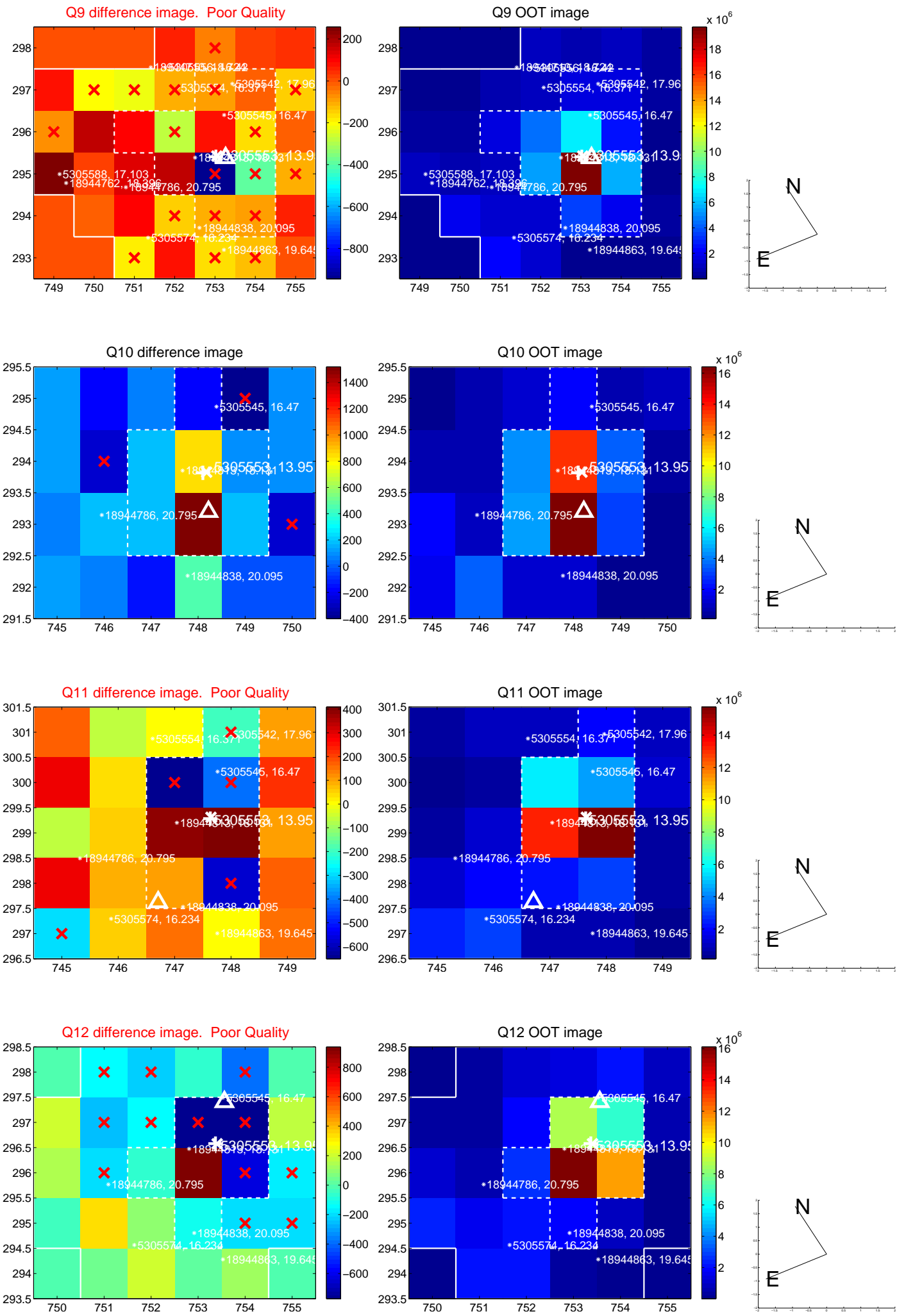
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



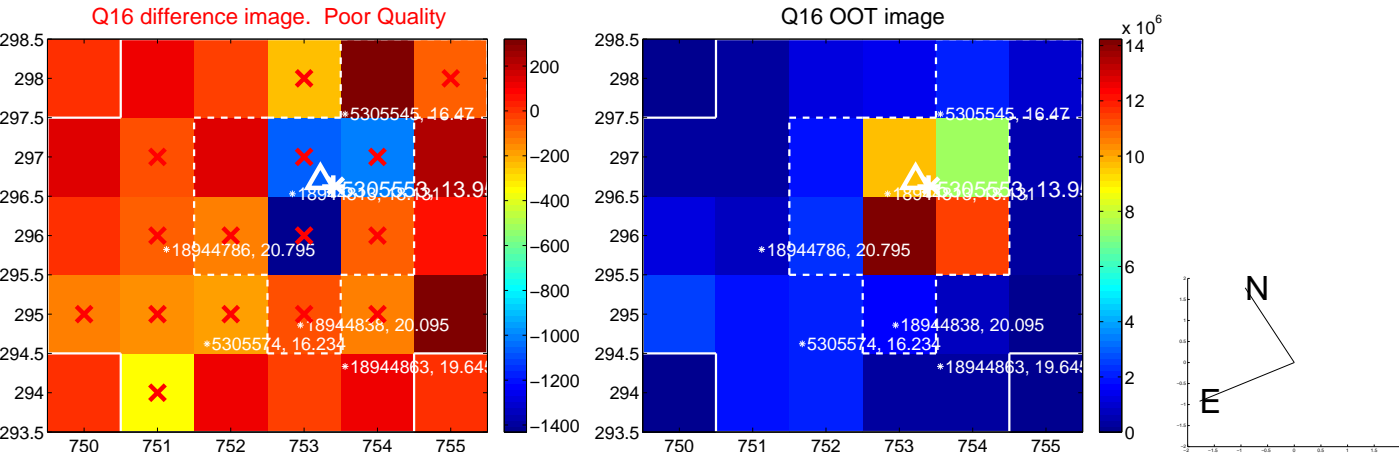
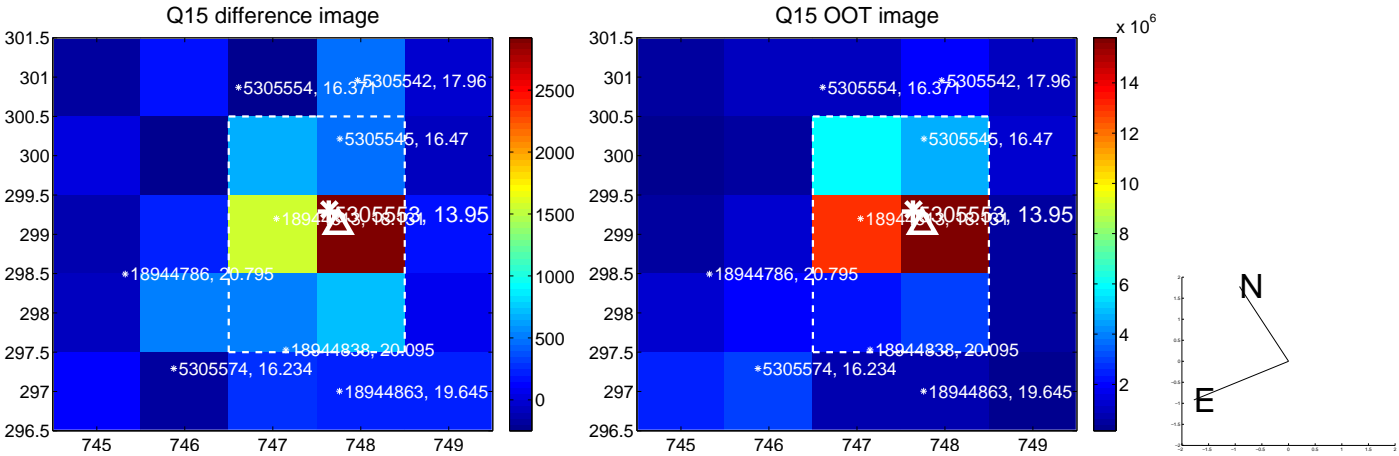
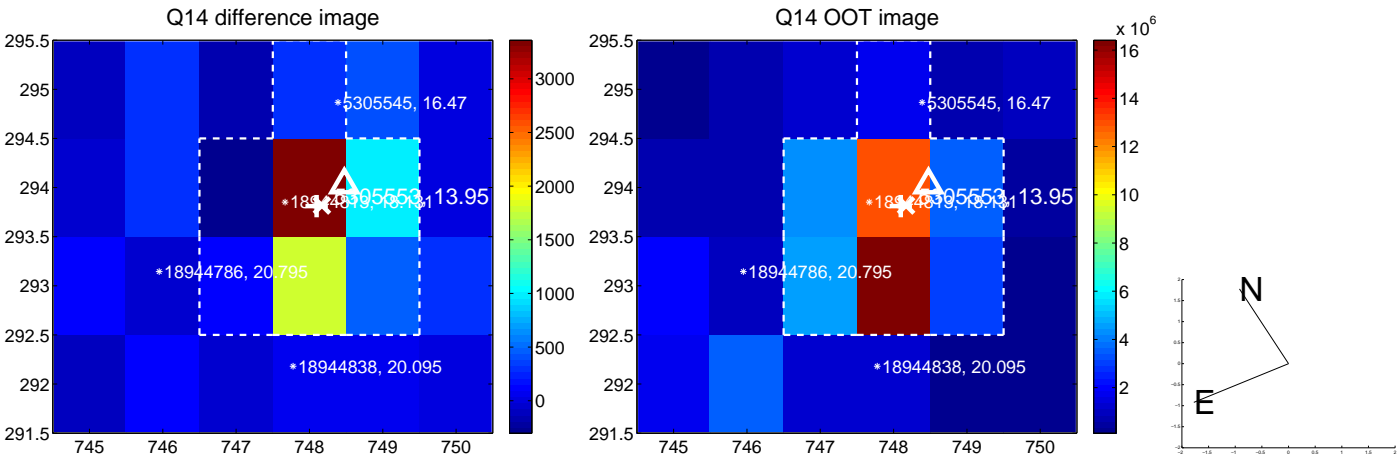
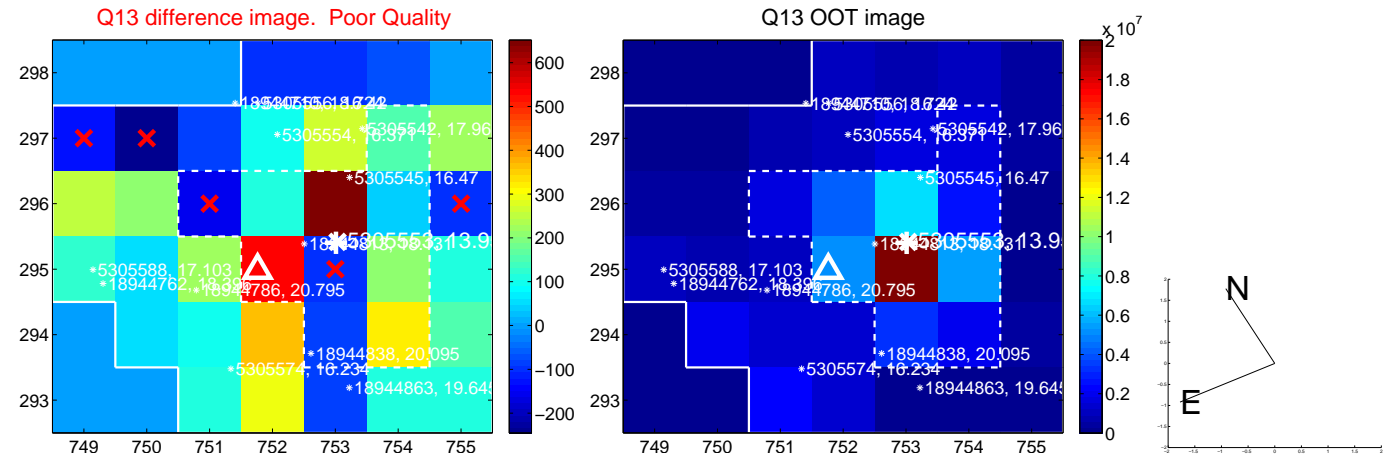
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



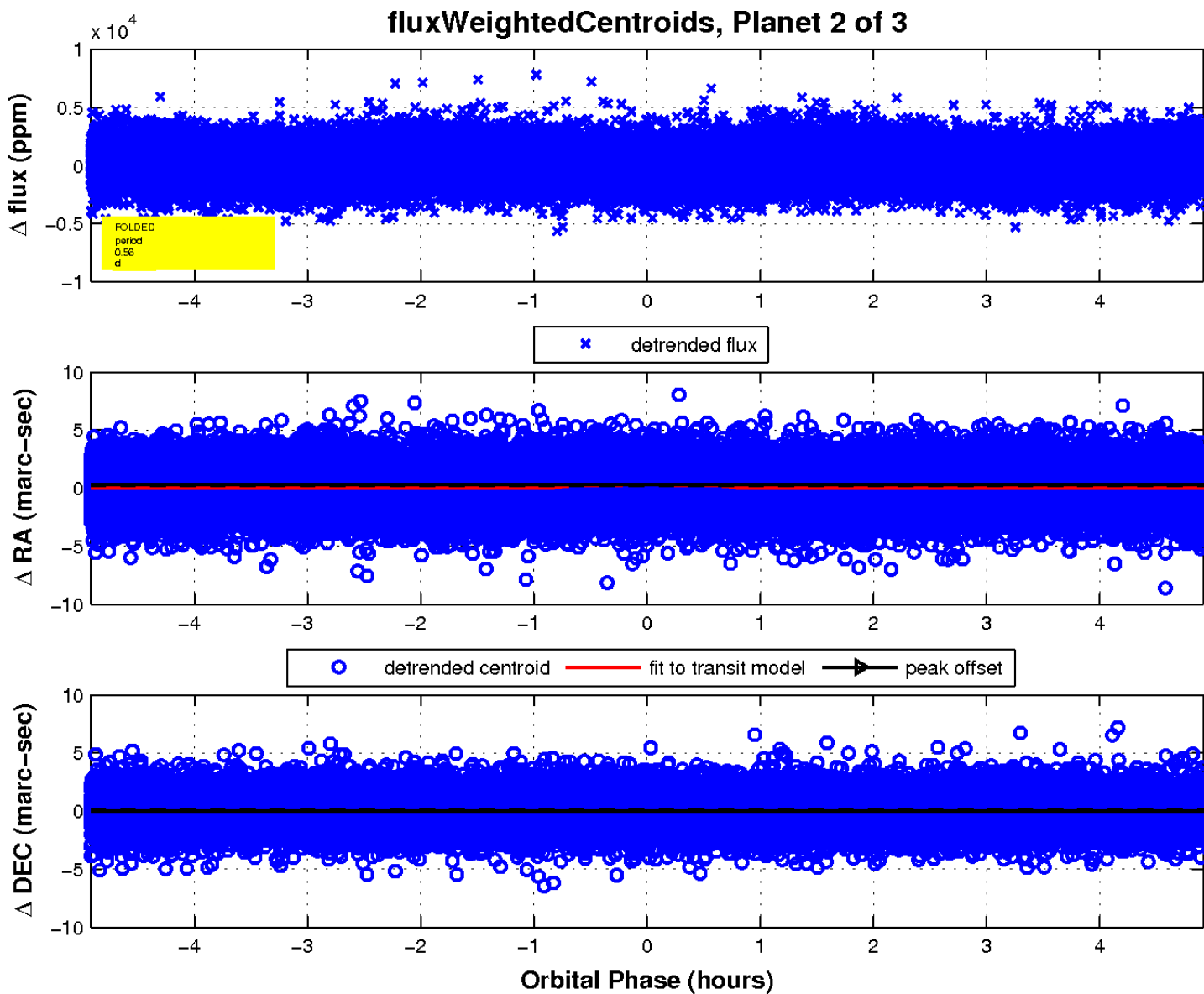
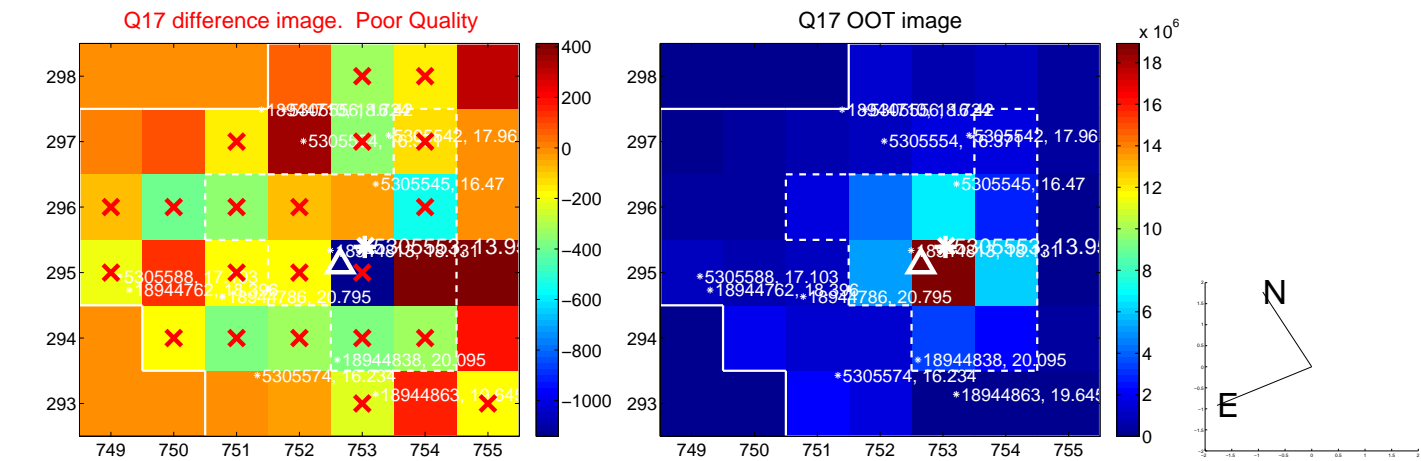
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



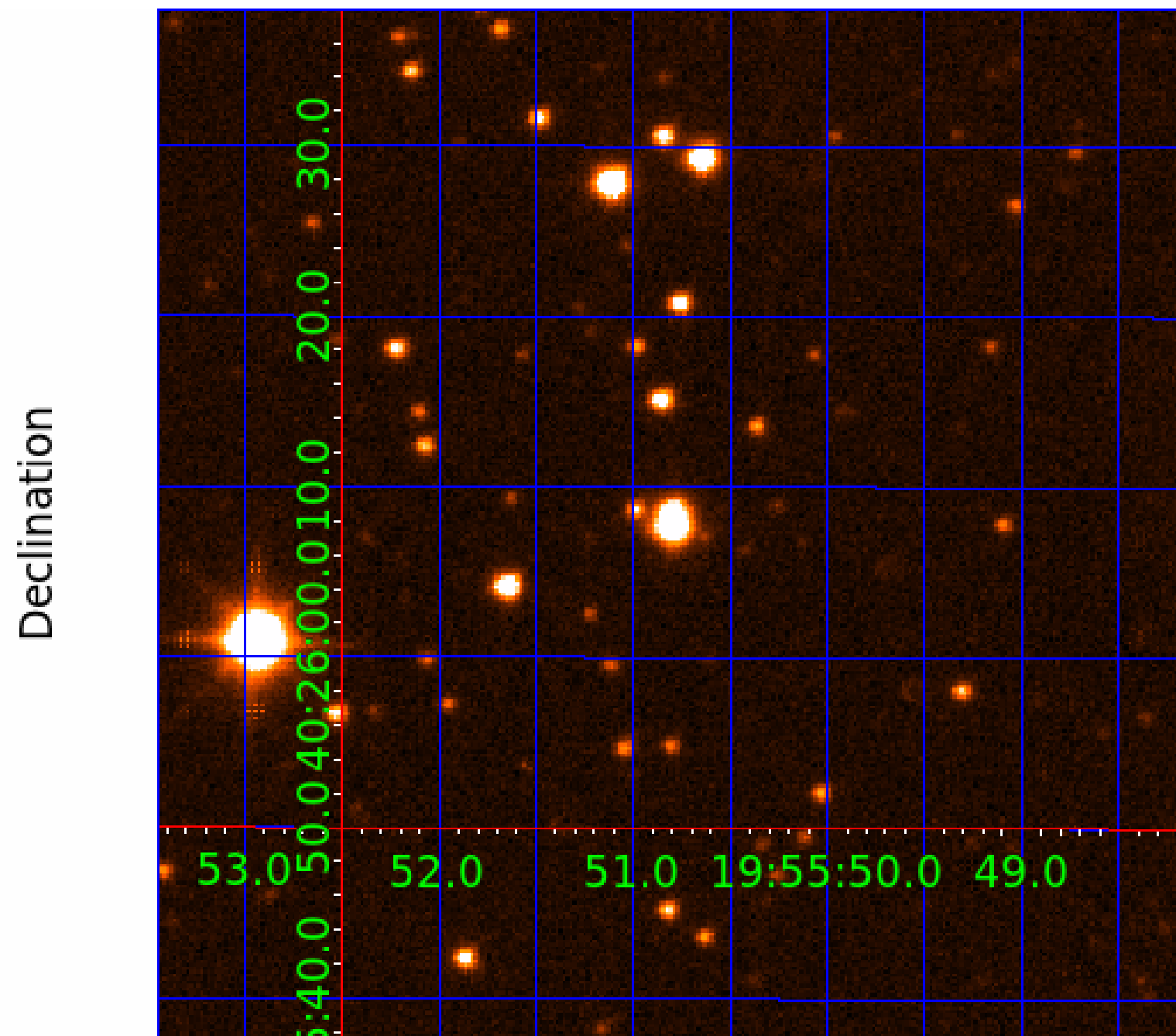
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 005305553

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})
005305553-01	OBS	No	0.557113	131.519656	101.7	1.396	9.8	6.1	1.22	6559	1.32	12192.28
005305553-02	OBS	No	0.557136	131.790631	180.0	1.640	9.9	10.8	1.22	6559	1.91	12191.62
005305553-03	OBS	No	0.557117	131.943205	171.6	1.294	9.8	8.5	1.22	6559	1.66	12192.17

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005305553-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005305553-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
005305553-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—SAME_NTL_PERIOD

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

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

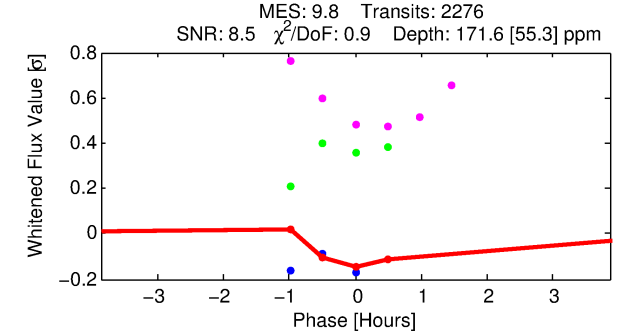
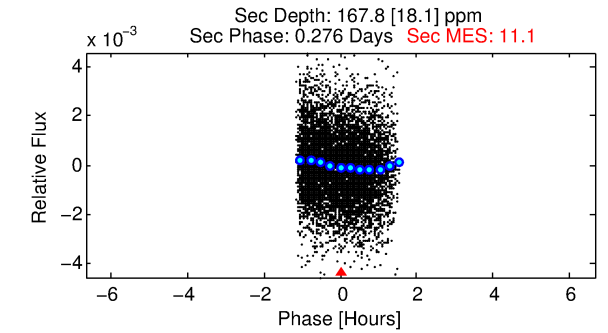
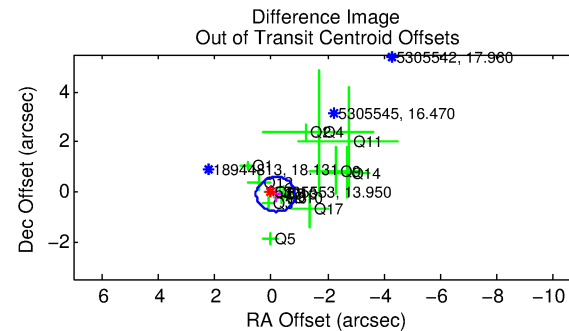
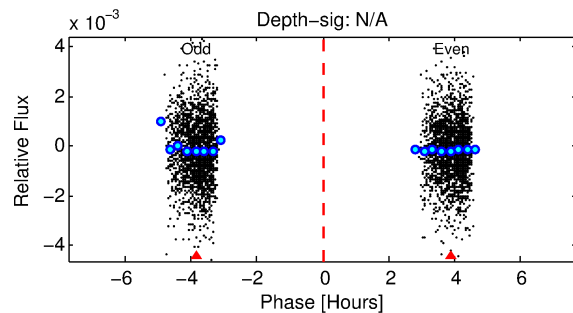
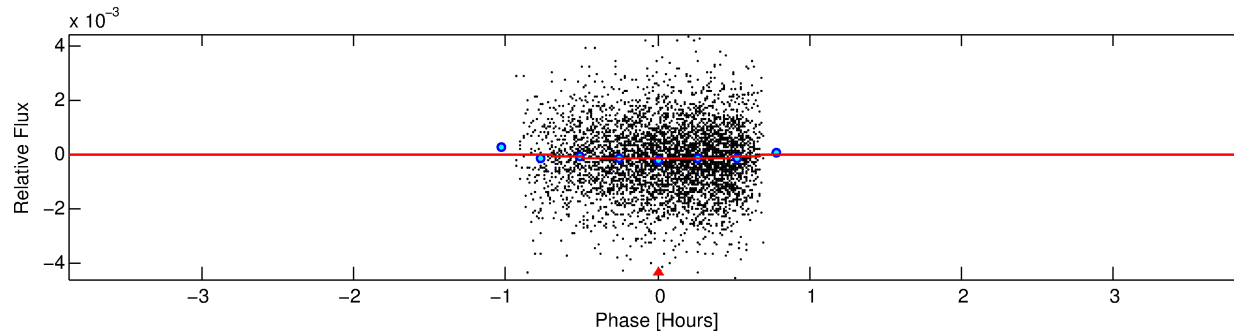
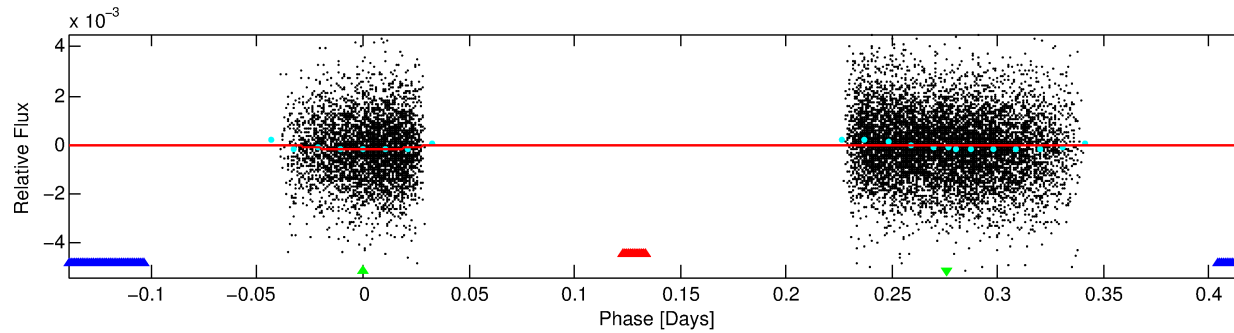
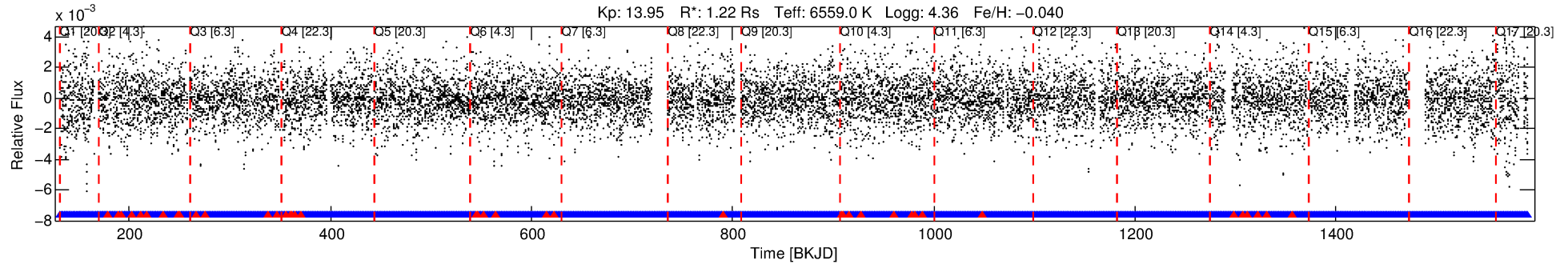
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005305553-03

No Significant Match Found

DV One-Page Summary

KIC: 5305553 Candidate: 3 of 3 Period: 0.557 d



DV Fit Results:

Period = 0.55712 [0.00003] d
Epoch = 131.9432 [0.0030] BKJD
Rp/R* = 0.0125 [0.0107]
a/R* = 2.98 [11.97]
b = 0.50 [6.84]
Seff = 12192.17 [5190.90]
Teq = 2679 [285] K
Rp = 1.65 [1.53] Re
a = 0.0142 [0.0040] AU
Ag = 6.80 [12.02] [0.48σ]
Teffp = 6690 [2893] K [1.38σ]

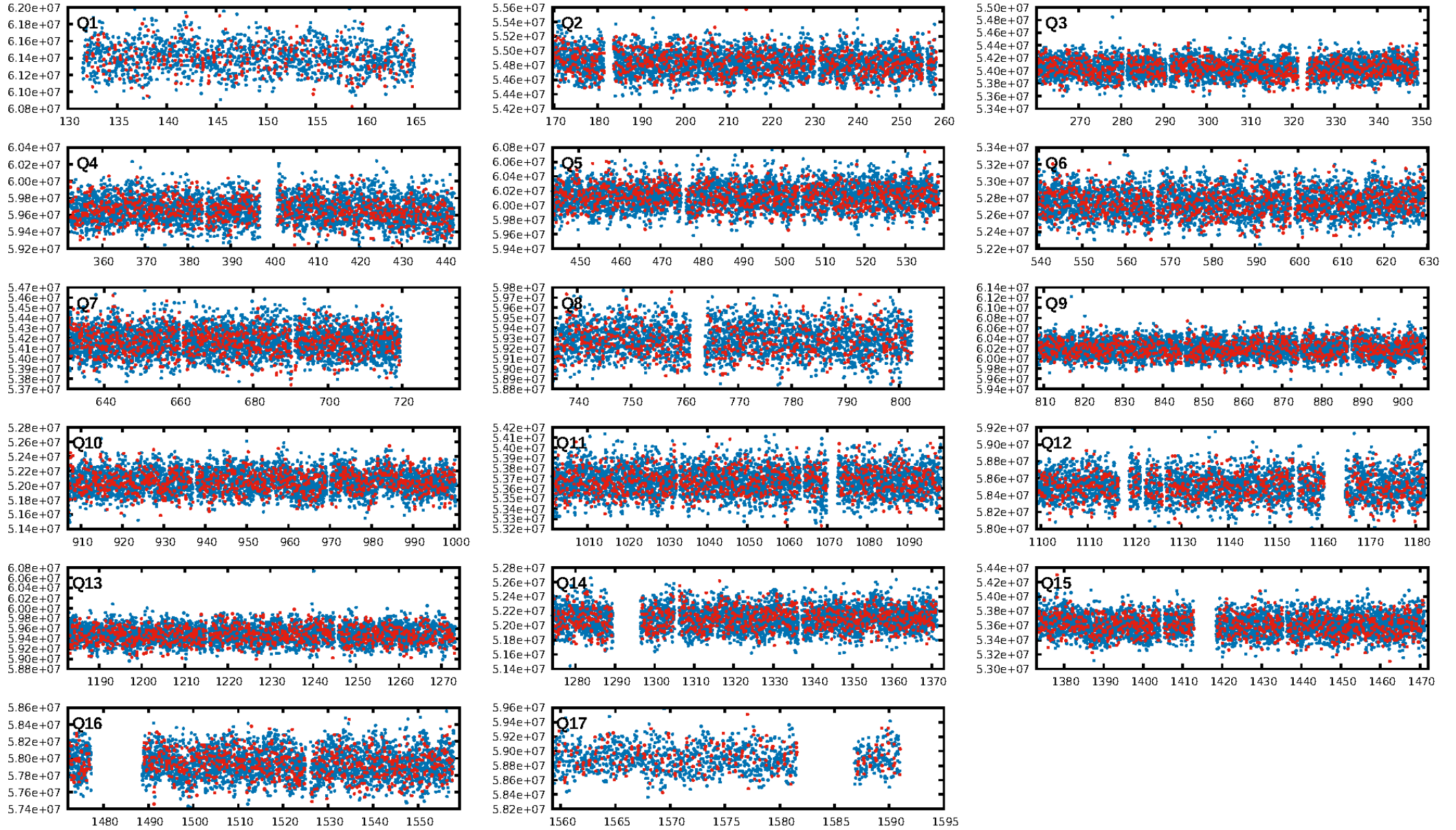
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.98 [2149/2192]
GhostDiagnostic-chr: 57.19
Centroid-sig: 3.9%
Centroid-so: 1.576 arcsec [4.11σ]
OotOffset-rm: 0.198 arcsec [0.86σ]
KicOffset-rm: 0.073 arcsec [0.25σ]
OotOffset-st: 4/3/3/5 [15]
KicOffset-st: 4/3/3/5 [15]
DiffImageQuality-fgm: 0.47 [7/15]
DiffImageOverlap-fno: 0.00 [0/17]

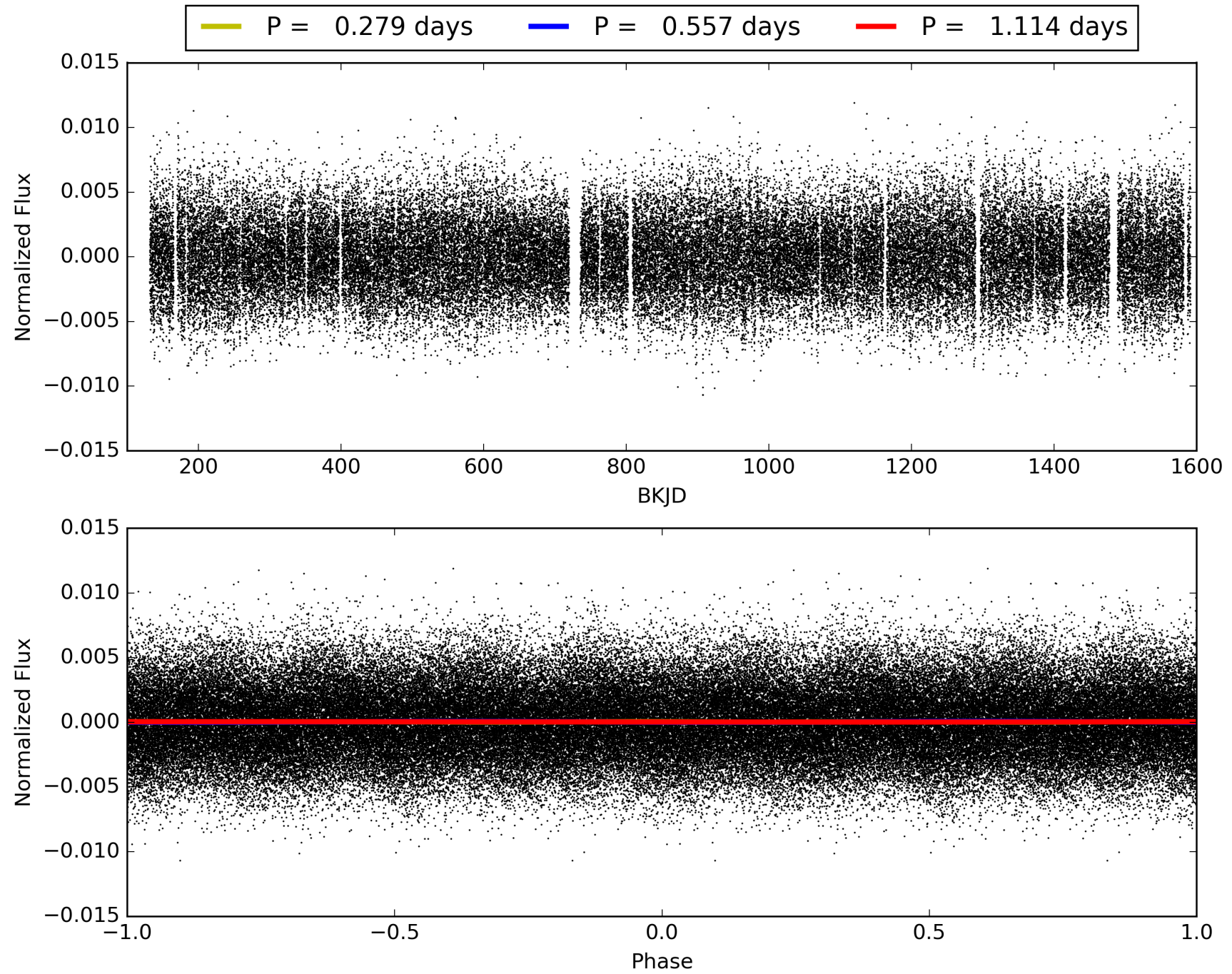
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:08:53 Z

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

TCE 005305553-03, PDC Light Curves

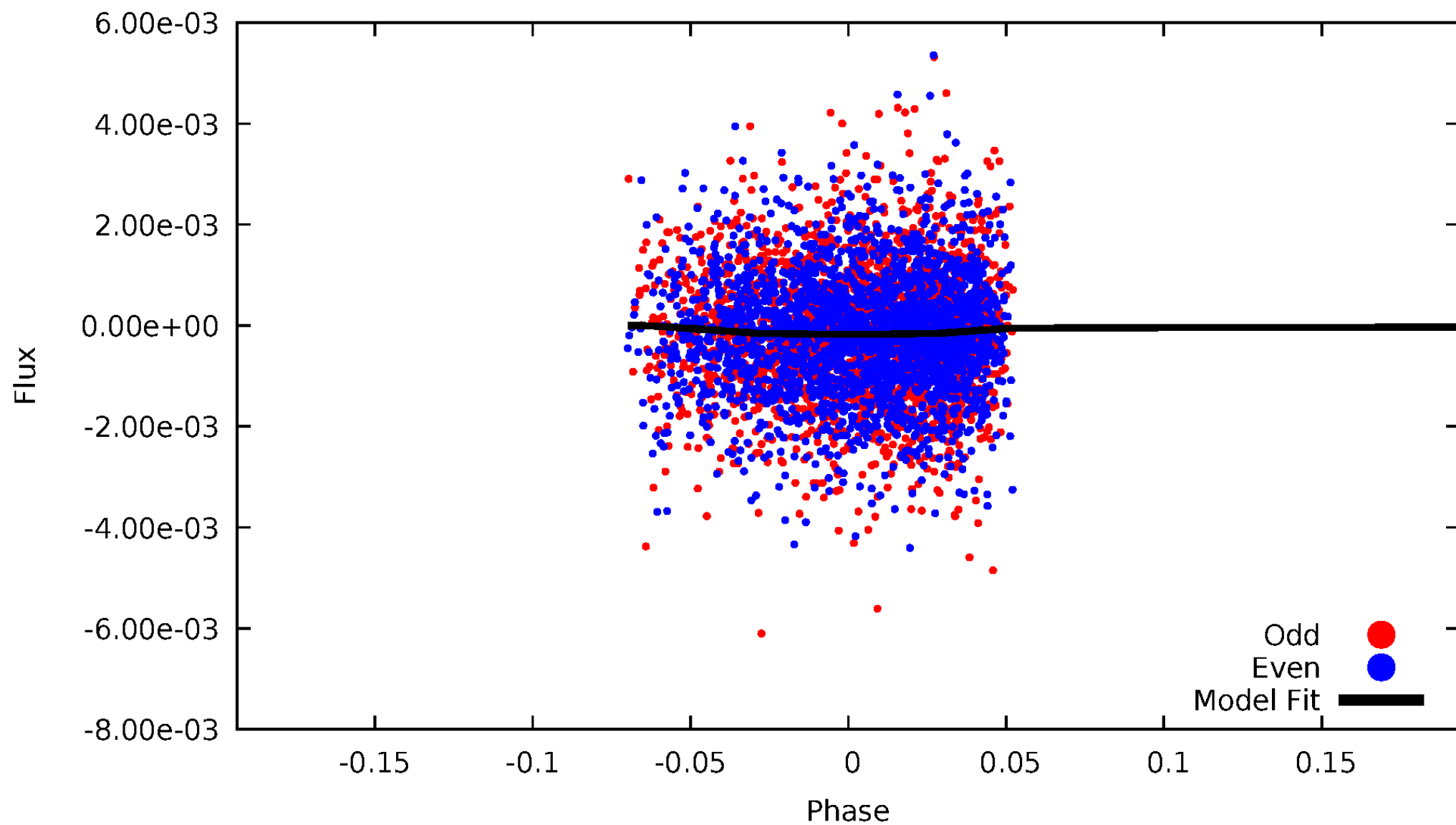


TCE 005305553-03



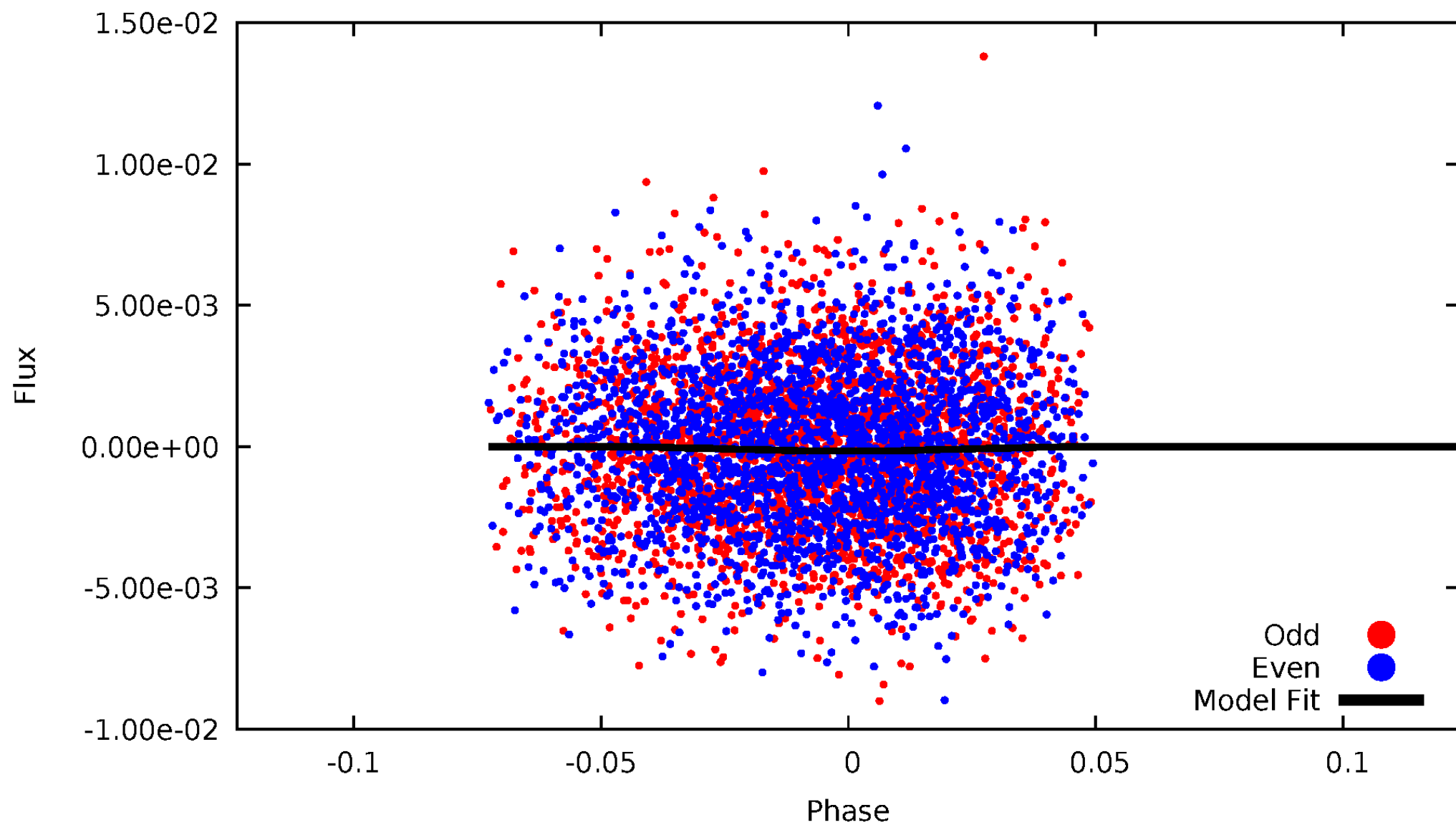
DV Odd/Even

TCE 005305553-03



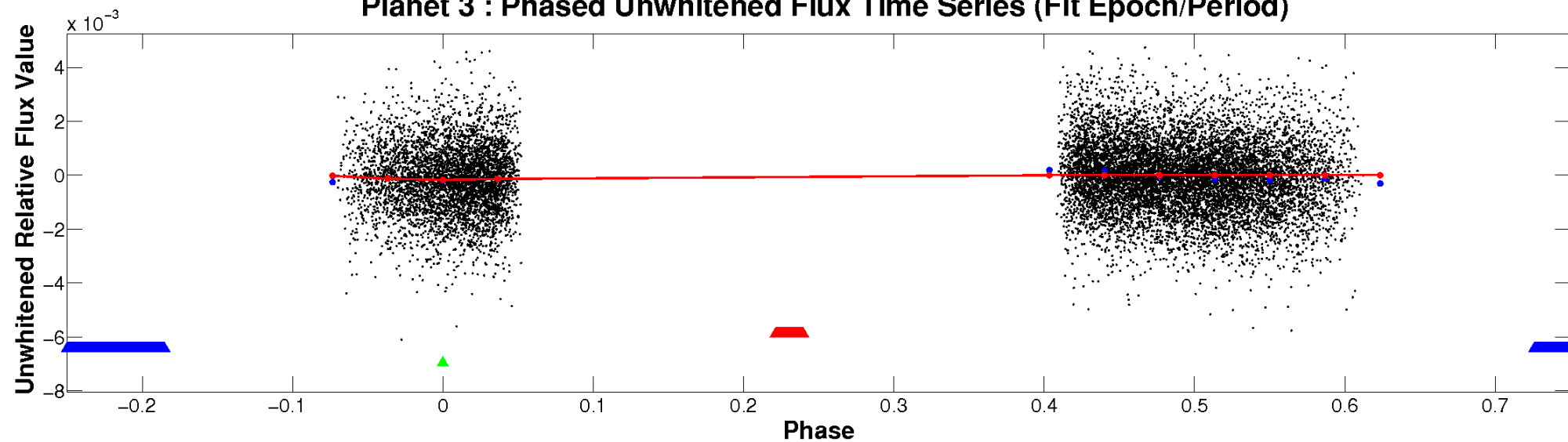
ALT Odd/Even

TCE 005305553-03

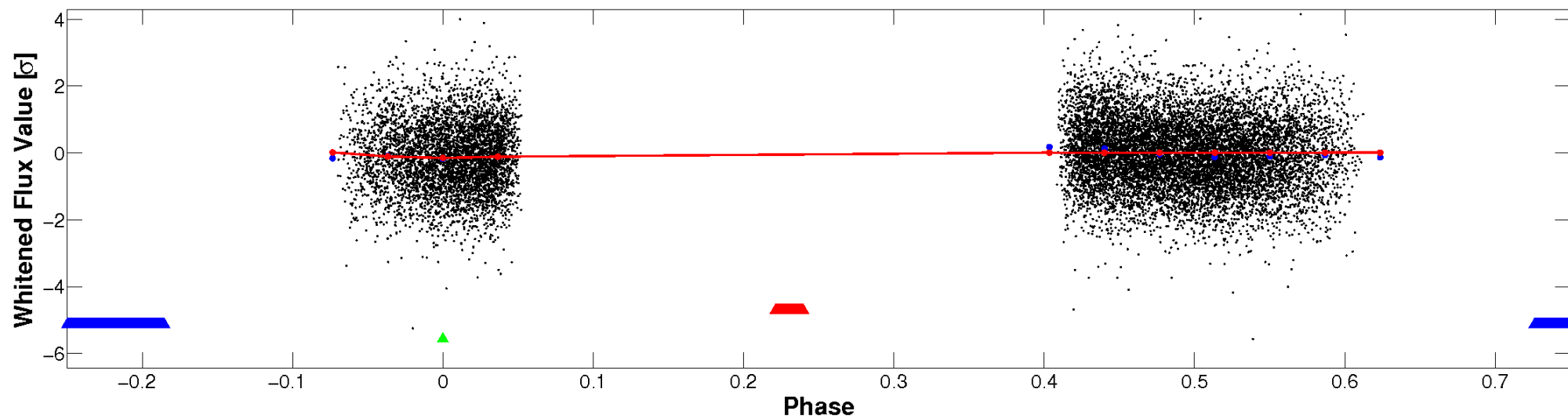


Non-Whitened Vs. Whitened Light Curve

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

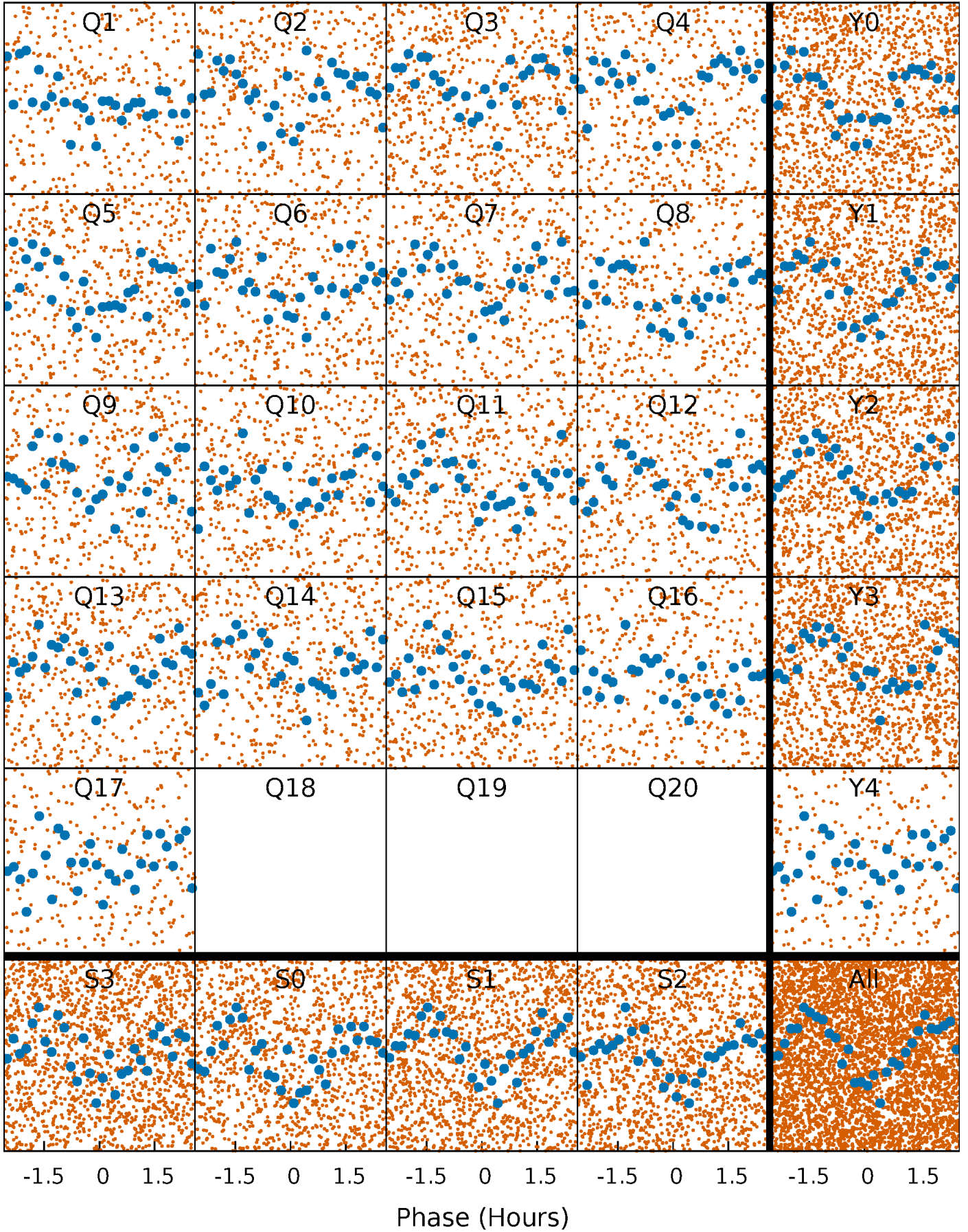


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



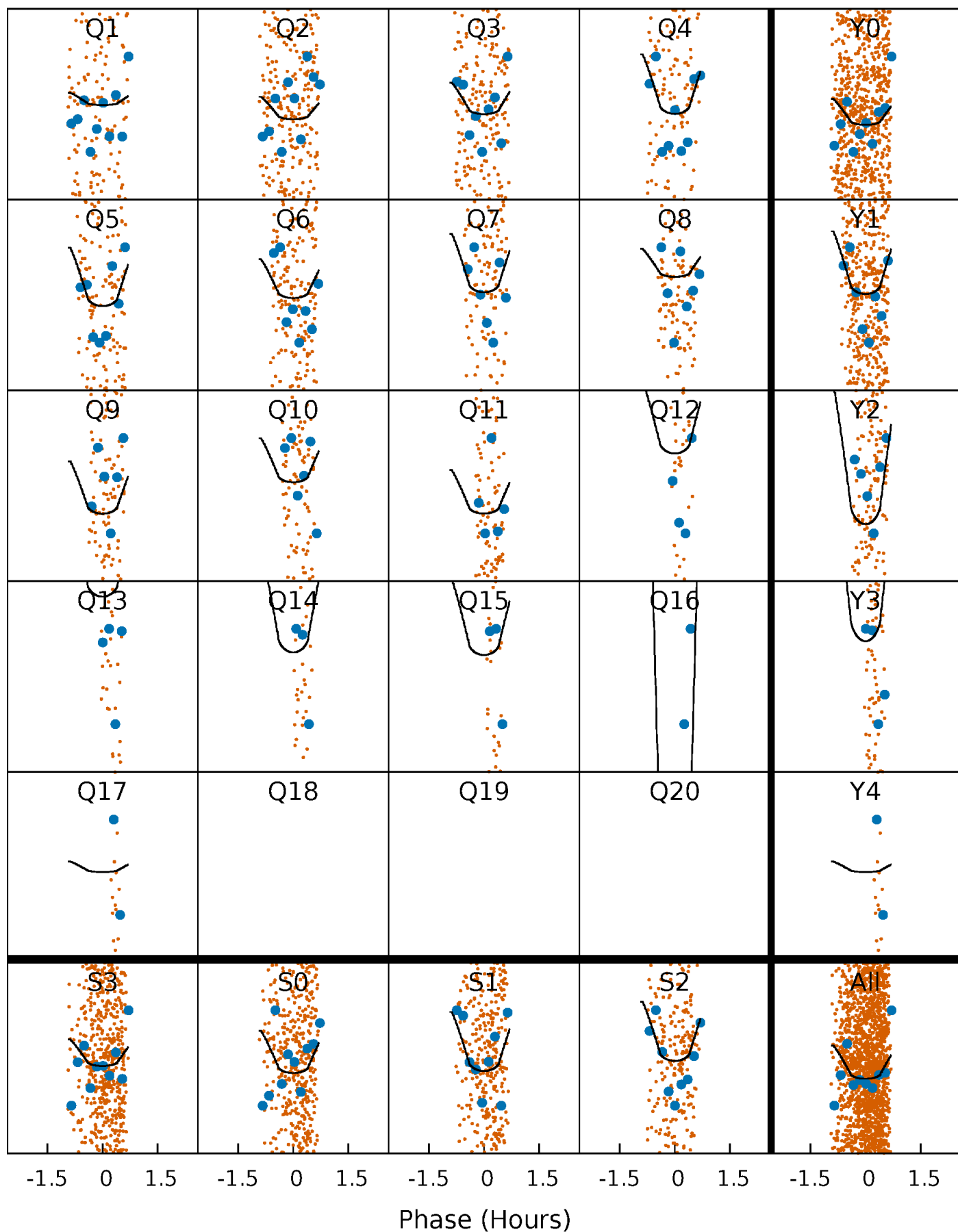
PDC Quarter-Phased Transit Curves

TCE 005305553-03 P= 0.557117 Days $T_0=131.943205$ (BKJD)



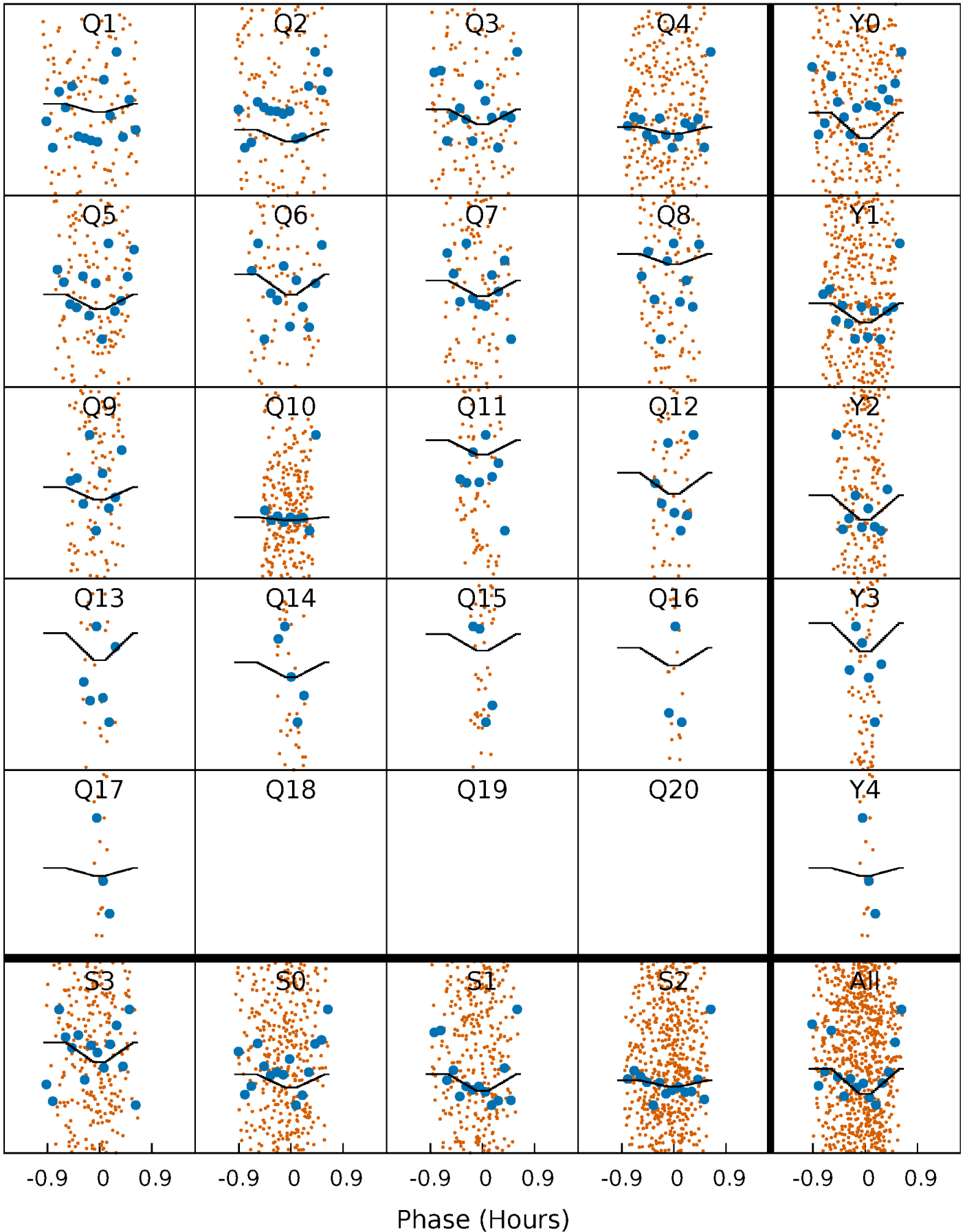
DV Quarter-Phased Transit Curves

TCE 005305553-03 $P = 0.557117$ Days $T_0 = 131.943205$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

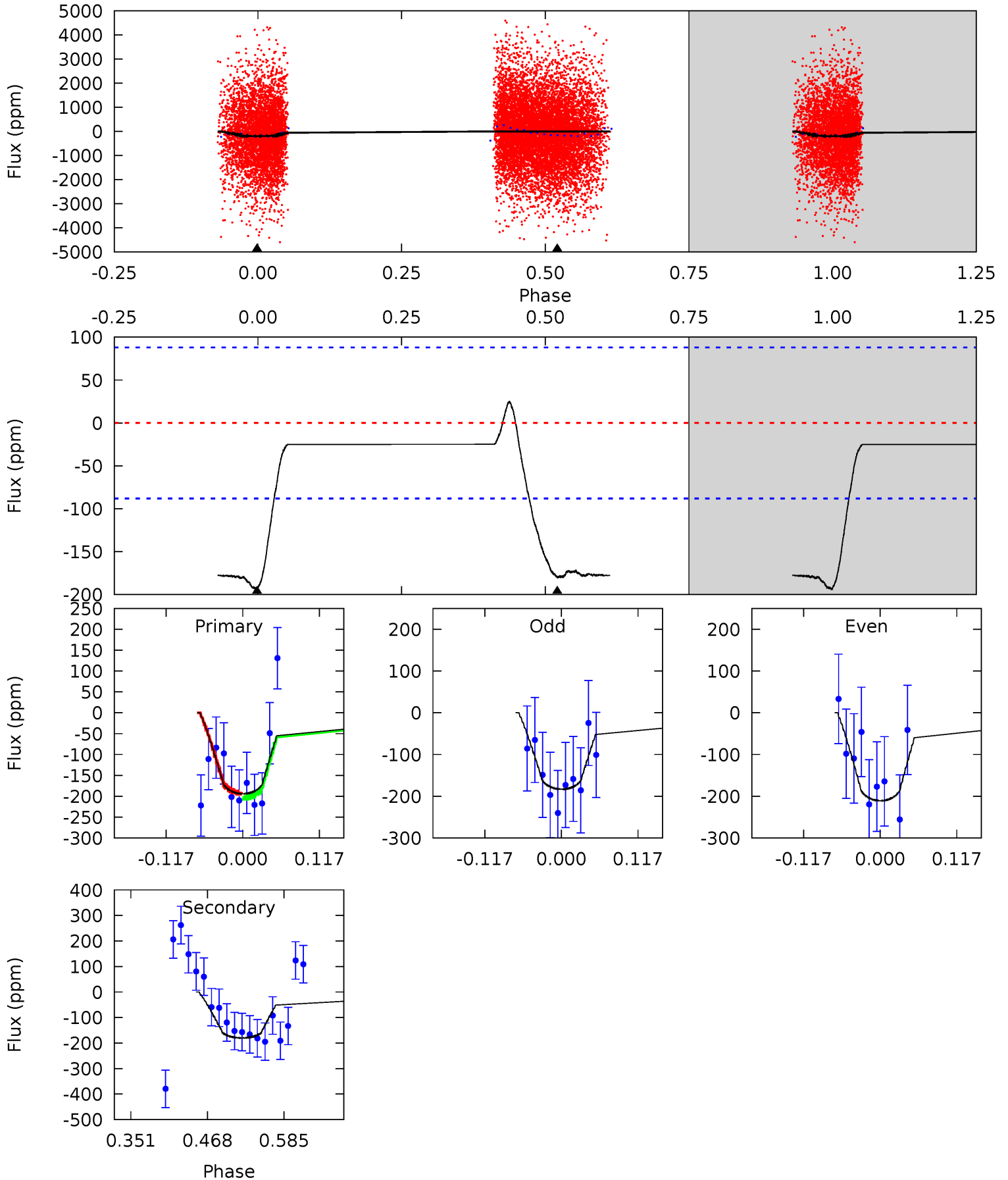
TCE 005305553-03 P= 0.557122 Days $T_0=131.944580$ (BKJD)



DV Model-Shift Uniqueness Test

005305553-03, P = 0.557117 Days, E = 131.386088 Days

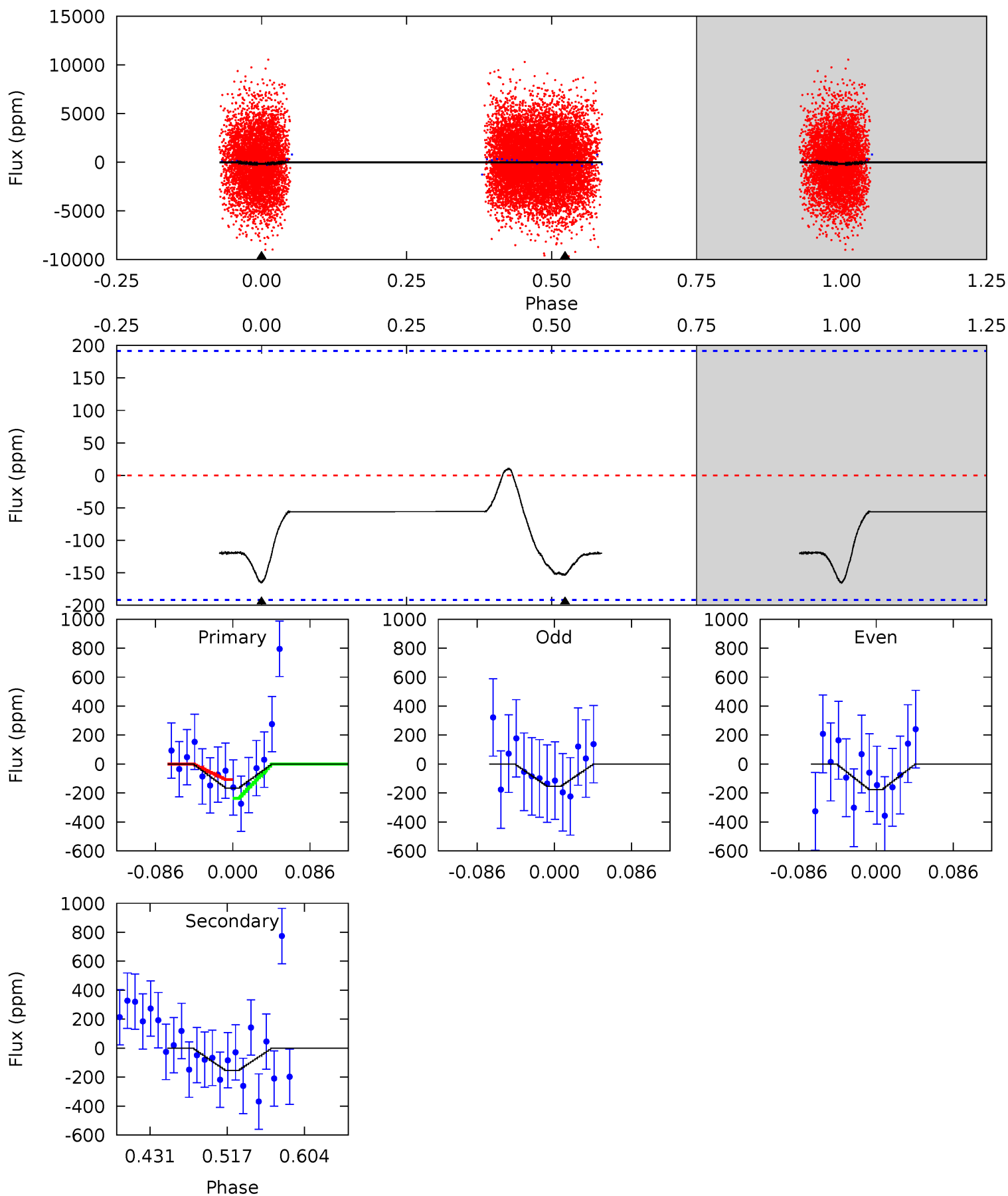
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.99	9.28	0	0	4.53	1.57	3.37	9.99	9.99	9.28	9.28	0.74	1.06	0.11	0.29



Alt Model-Shift Uniqueness Test

005305553-03, P = 0.557122 Days, E = 131.387458 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.97	3.70	0	0	4.60	1.72	0.44	3.97	3.97	3.70	3.70	0.26	0.78	0.06	1.50



Stellar Parameters For KIC 005305553

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6559^{+164}_{-258}	$4.357^{+0.070}_{-0.210}$	$-0.040^{+0.250}_{-0.300}$	$1.218^{+0.419}_{-0.168}$	$1.235^{+0.191}_{-0.174}$	$0.963^{+0.292}_{-0.527}$
	+3%/-4%	+2%/-5%	+625%/-750%	+34%/-14%	+15%/-14%	+30%/-55%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 005305553-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-180 ± 19	$1.92^{+1.45}_{-1.19}$	3789^{+299}_{-219}	6346^{+5416}_{-1557}	$5.305^{+30.674}_{-3.590}$
Alt.	-154 ± 42	$1.93^{+1.44}_{-1.19}$	3811^{+288}_{-228}	6022^{+4956}_{-1539}	$4.576^{+23.009}_{-3.210}$

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

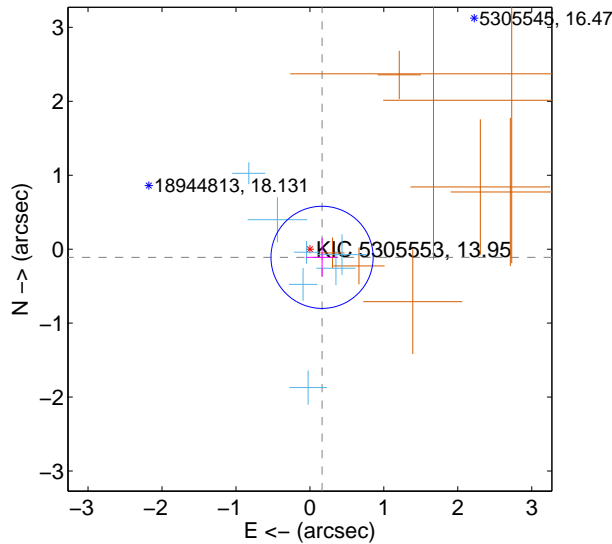
Supplemental centroid analysis for 005305553-03. Kepler magnitude: 13.95. Transit SNR 8.52

There are 7 quarters with good PRF difference image offsets

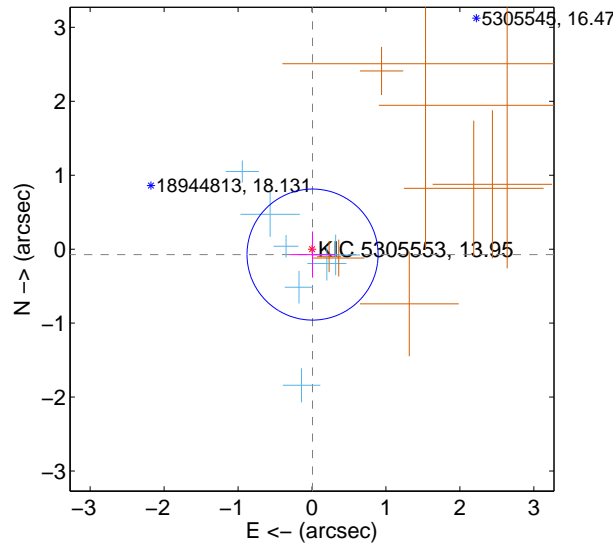
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.198 ± 0.230	0.86	-0.165 ± 0.216	-0.110 ± 0.259
PRF-fit source offset from KIC position	0.073 ± 0.295	0.25	-0.008 ± 0.304	-0.073 ± 0.312
photometric centroid source offset	1.58 ± 0.38	4.11	1.42 ± 0.41	-0.68 ± 0.27

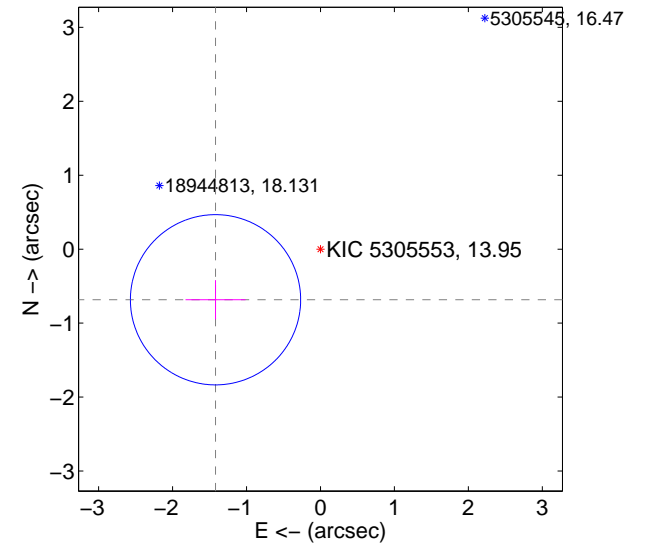
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

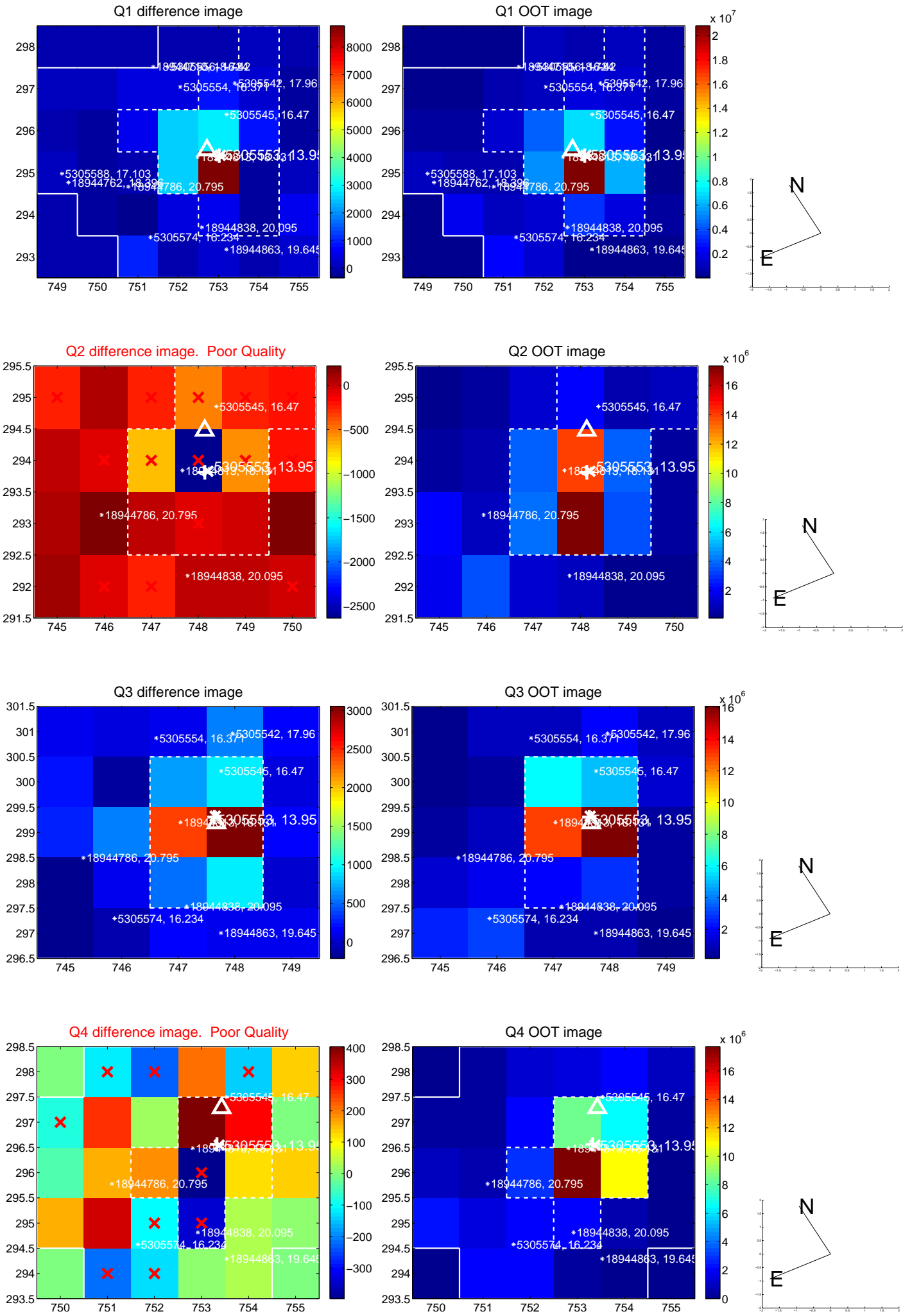


offset from photometric centroids

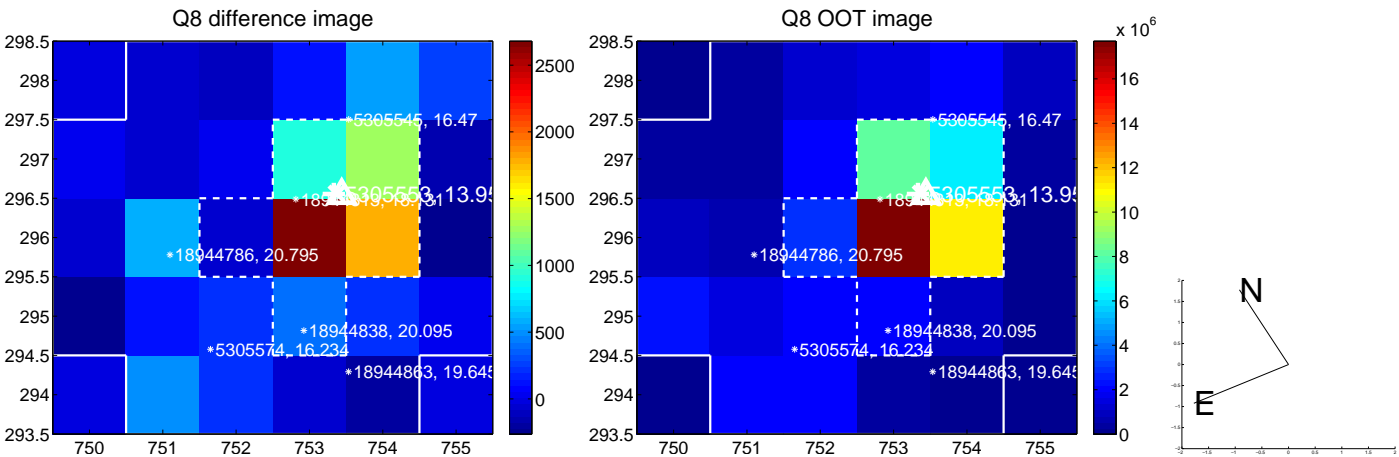
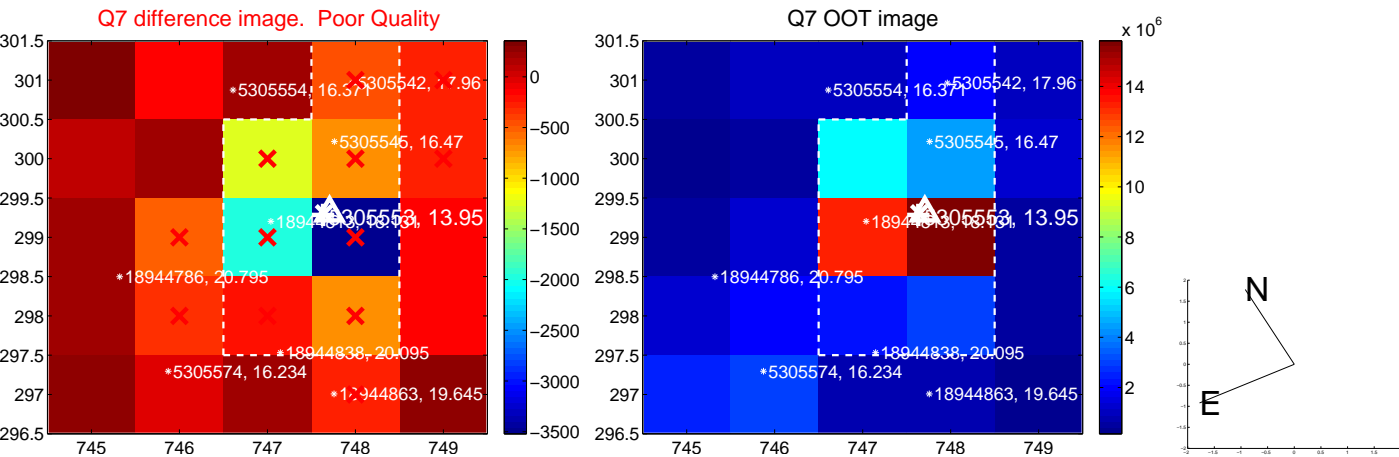
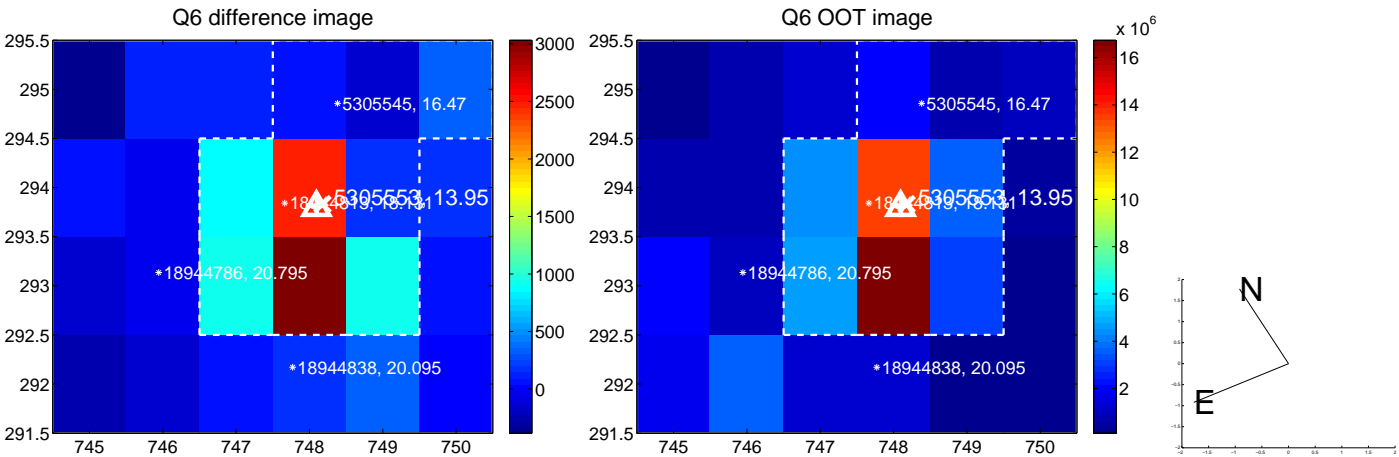
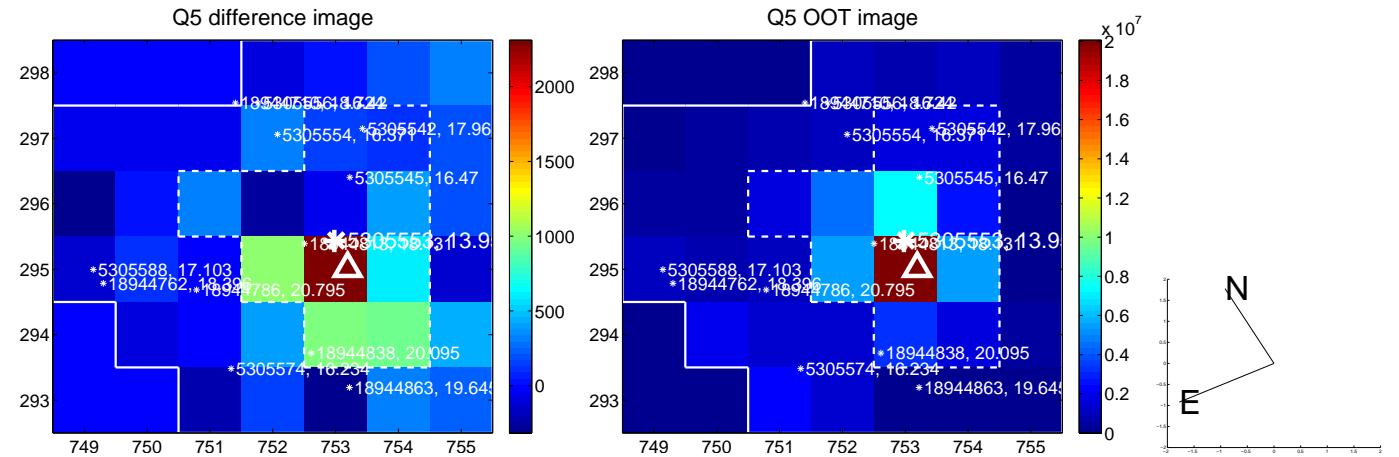


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

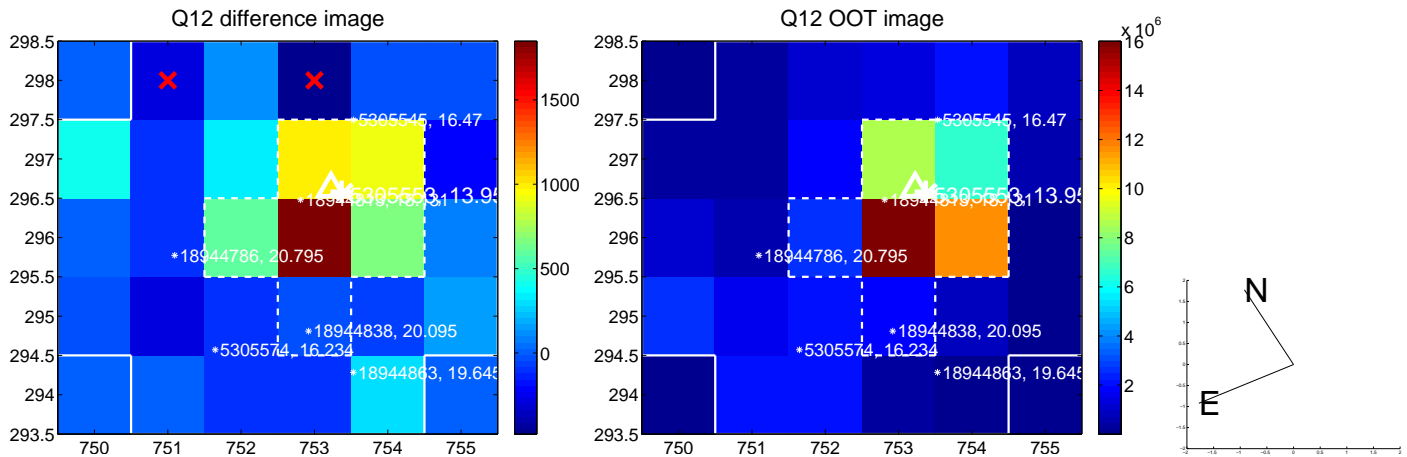
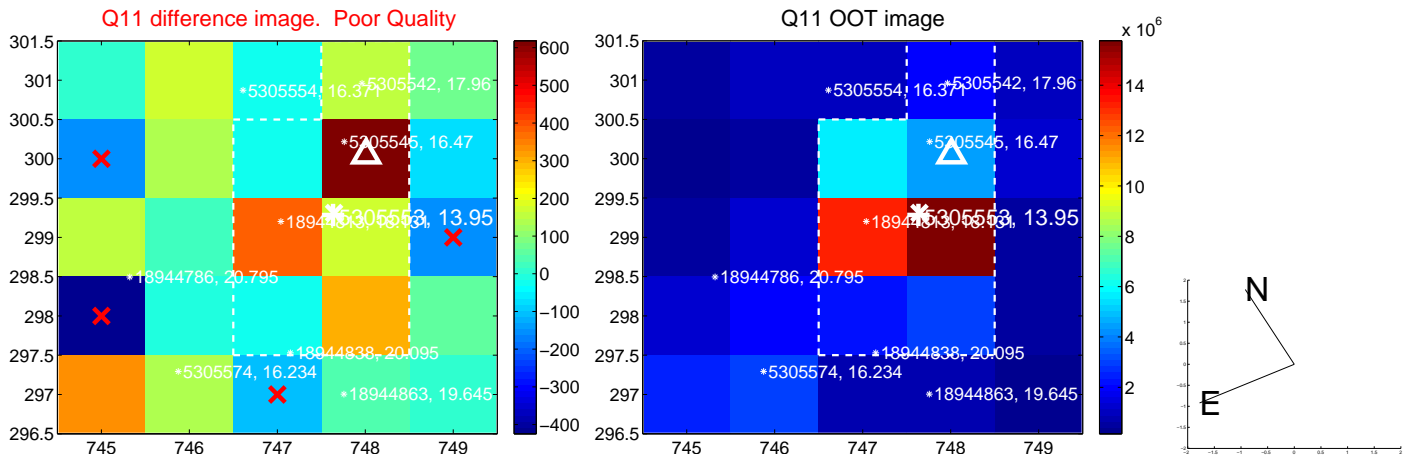
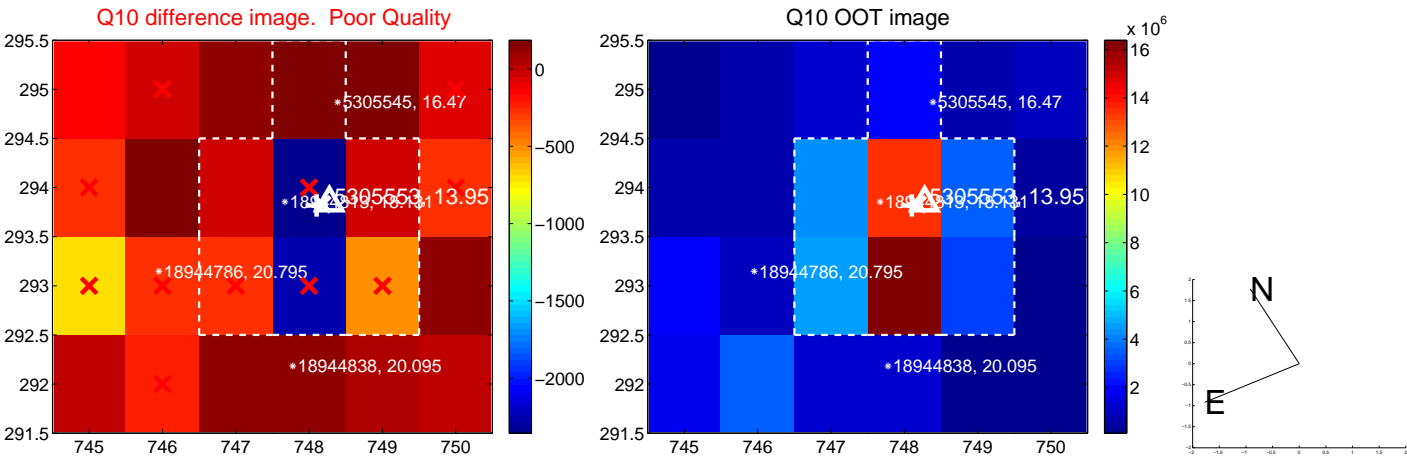
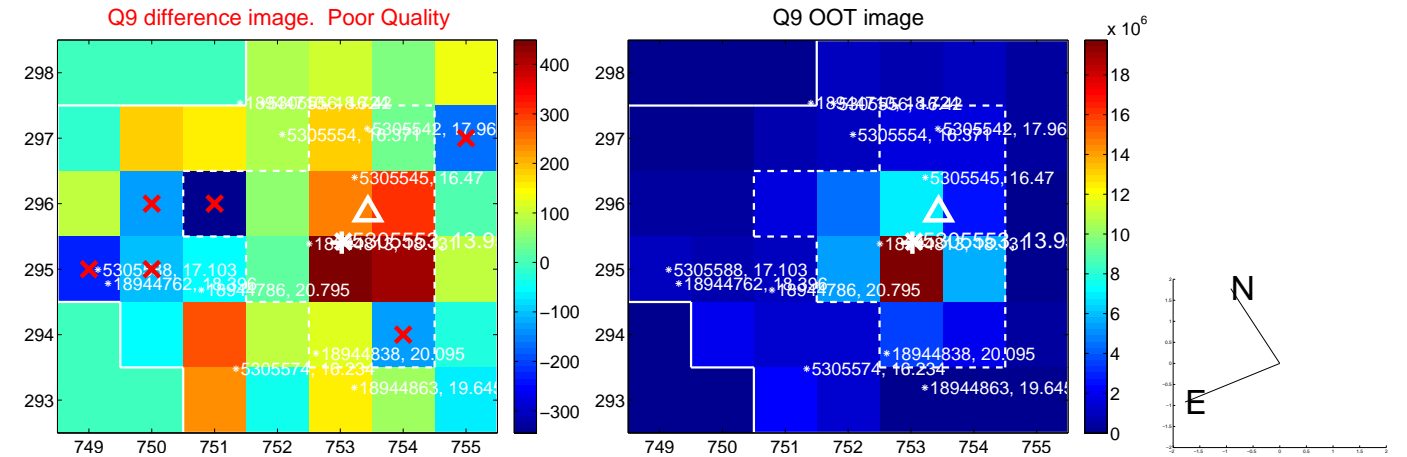
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



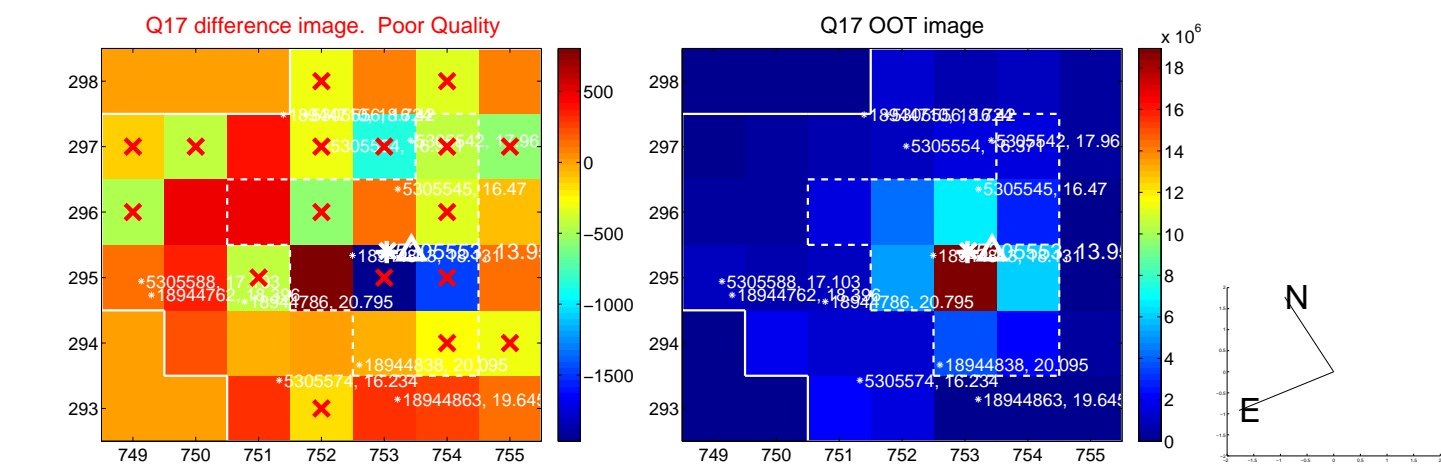
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



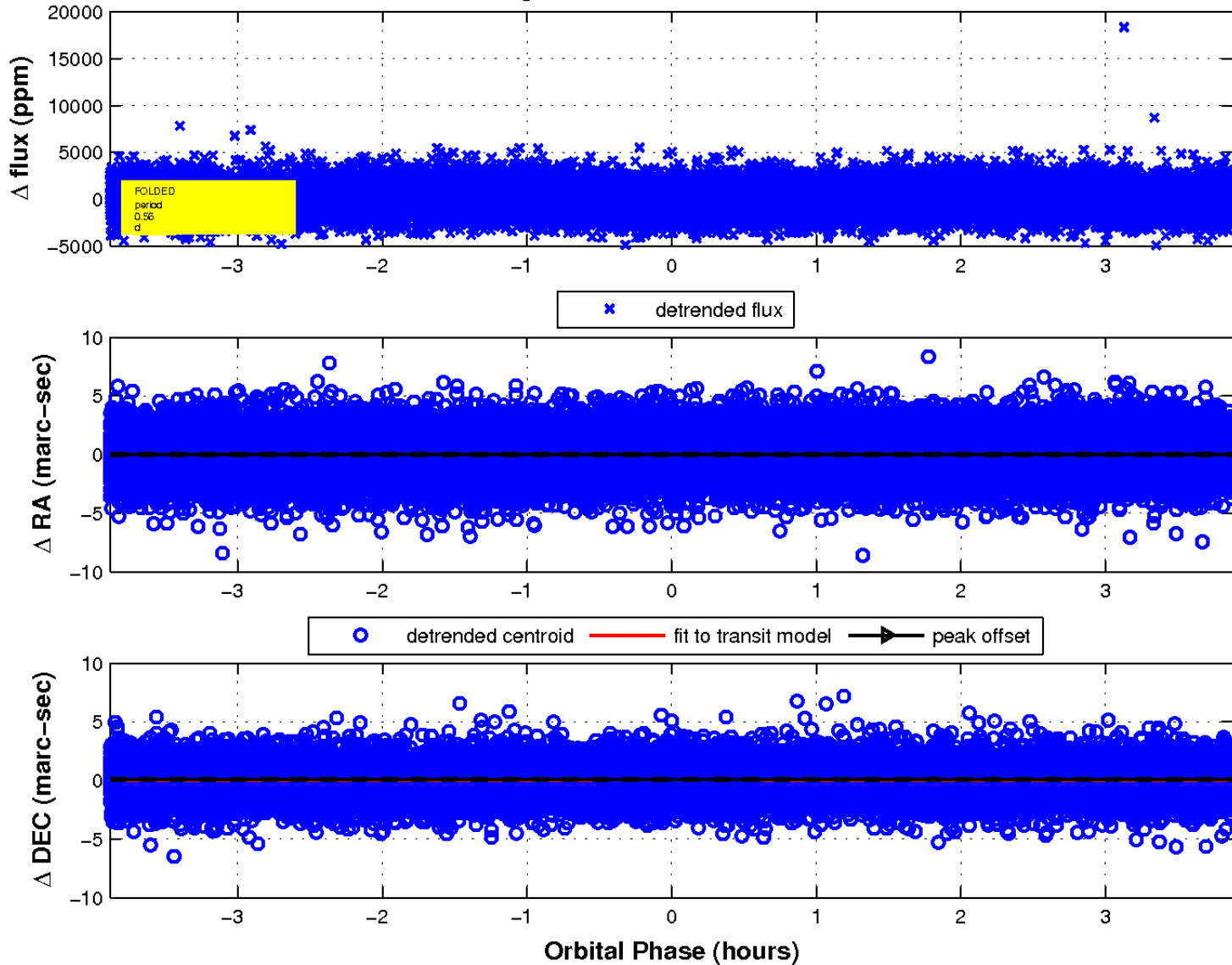
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 3 of 3



UKIRT Image

