

KIC 005564325

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})
005564325-01	OBS	No	0.744837	132.226689	17.9	5.200	10.4	11.3	3.17	6552	1.35	46935.19
005564325-02	OBS	No	43.372843	156.373760	280.1	3.250	10.5	10.9	3.17	6552	6.11	207.95
005564325-03	OBS	No	22.751523	143.553319	215.4	1.624	10.8	10.7	3.17	6552	5.44	491.55
005564325-04	OBS	No	57.885677	173.463522	261.3	2.294	9.2	11.2	3.17	6552	5.49	141.52
005564325-05	OBS	No	25.267305	148.962650	111.3	5.690	10.0	8.5	3.17	6552	3.77	427.40
005564325-06	OBS	No	38.901833	169.144273	290.7	2.992	9.1	11.4	3.17	6552	6.99	240.41
005564325-07	OBS	No	20.788375	149.346674	324.0	1.238	9.7	9.5	3.17	6552	9.35	554.39

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005564325-01	OBS	FP	0.00	1	0	0	0	LPP_DV
005564325-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005564325-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_MEAS
005564325-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005564325-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005564325-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
005564325-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

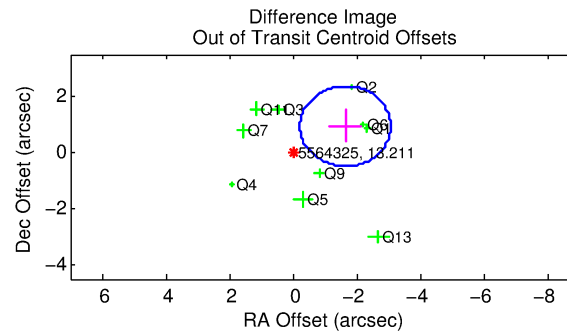
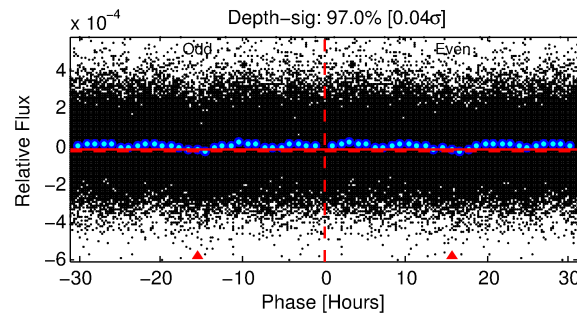
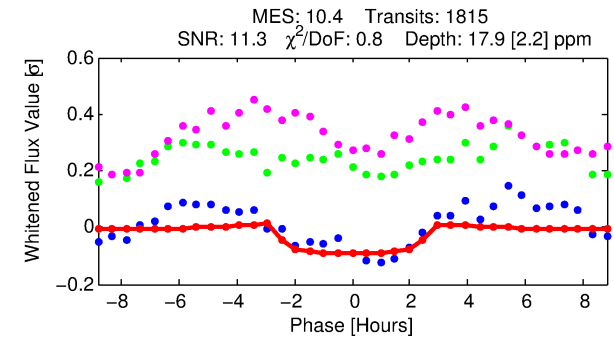
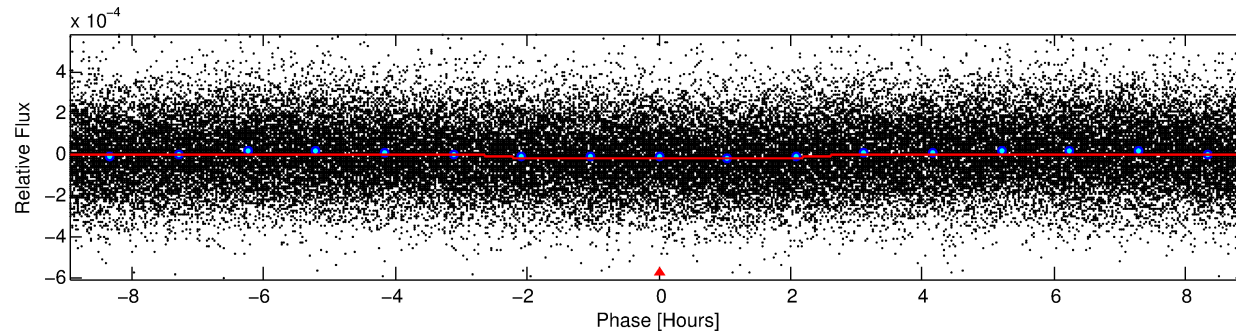
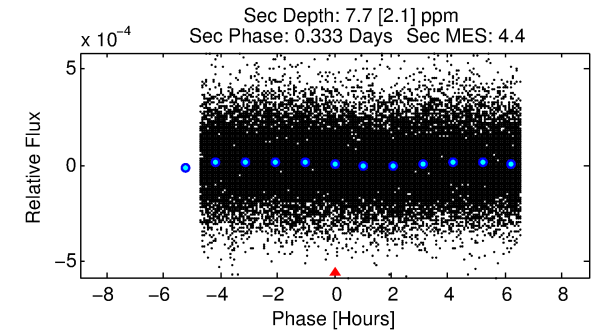
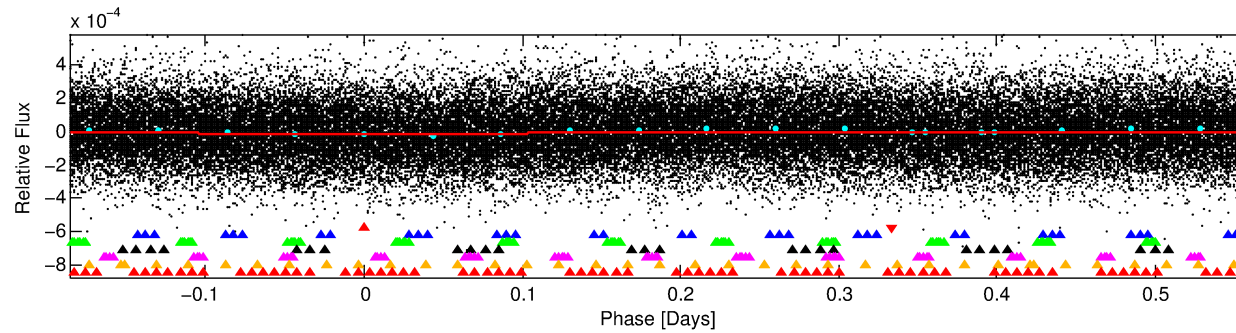
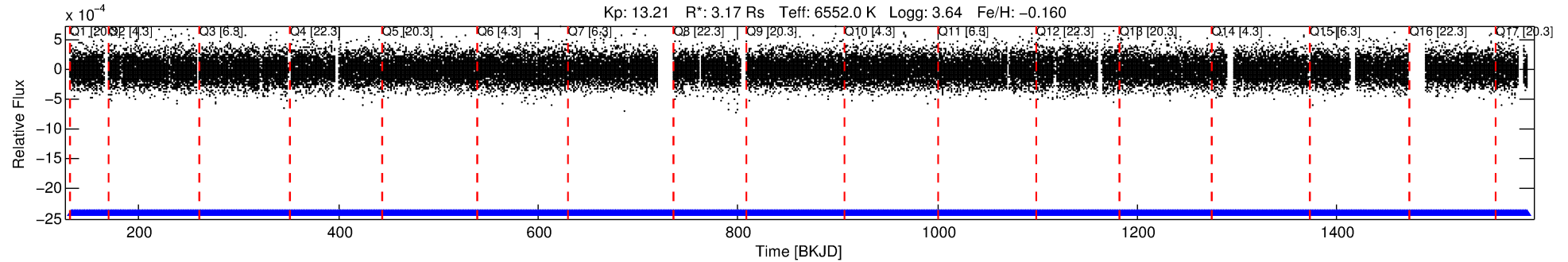
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005564325-01

No Significant Match Found

DV One-Page Summary

KIC: 5564325 Candidate: 1 of 7 Period: 0.745 d



DV Fit Results:

Period = 0.74484 [0.00001] d
Epoch = 132.2267 [0.0043] BKJD
Rp/R* = 0.0039 [0.0030]
a/R* = 1.26 [1.86]
b = 0.20 [19.45]
Seff = 46935.19 [25641.33]
Teq = 3753 [513] K
Rp = 1.35 [1.13] Re
a = 0.0188 [0.0063] AU
Ag = 0.82 [1.33] [-0.14σ]
Teffp = 5515 [2124] K [0.81σ]

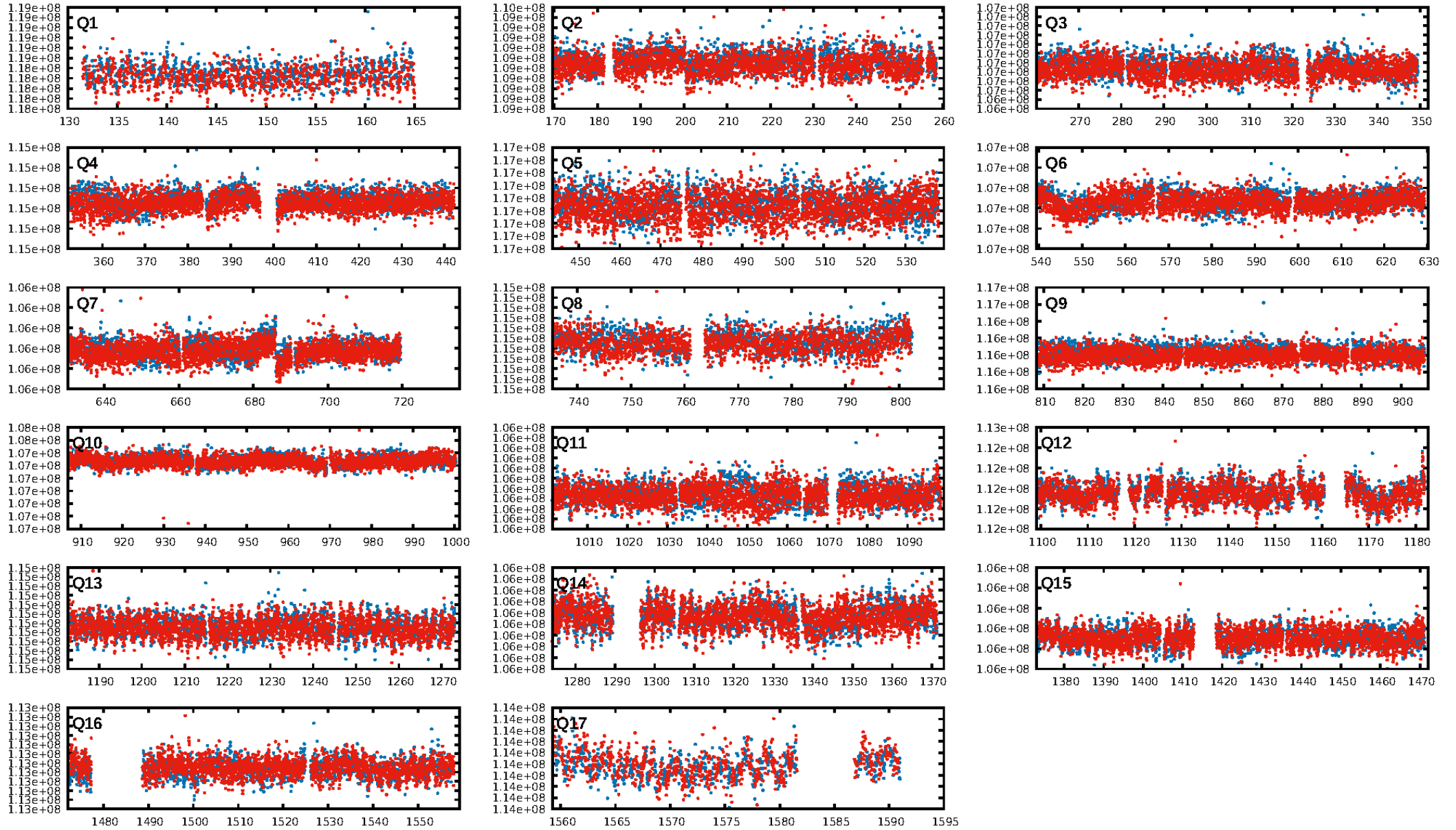
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [89.99σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.37e-12
RollingBand-fgt: 1.00 [1732/1732]
GhostDiagnostic-chr: 0.9403
Centroid-sig: 3.2%
Centroid-so: 1.914 arcsec [1.95σ]
OotOffset-rm: 1.897 arcsec [3.99σ]
KicOffset-rm: 2.012 arcsec [4.06σ]
OotOffset-st: 2/3/1/4 [10]
KicOffset-st: 2/3/1/4 [10]
DiffImageQuality-fgm: 0.80 [8/10]
DiffImageOverlap-fno: 1.00 [17/17]

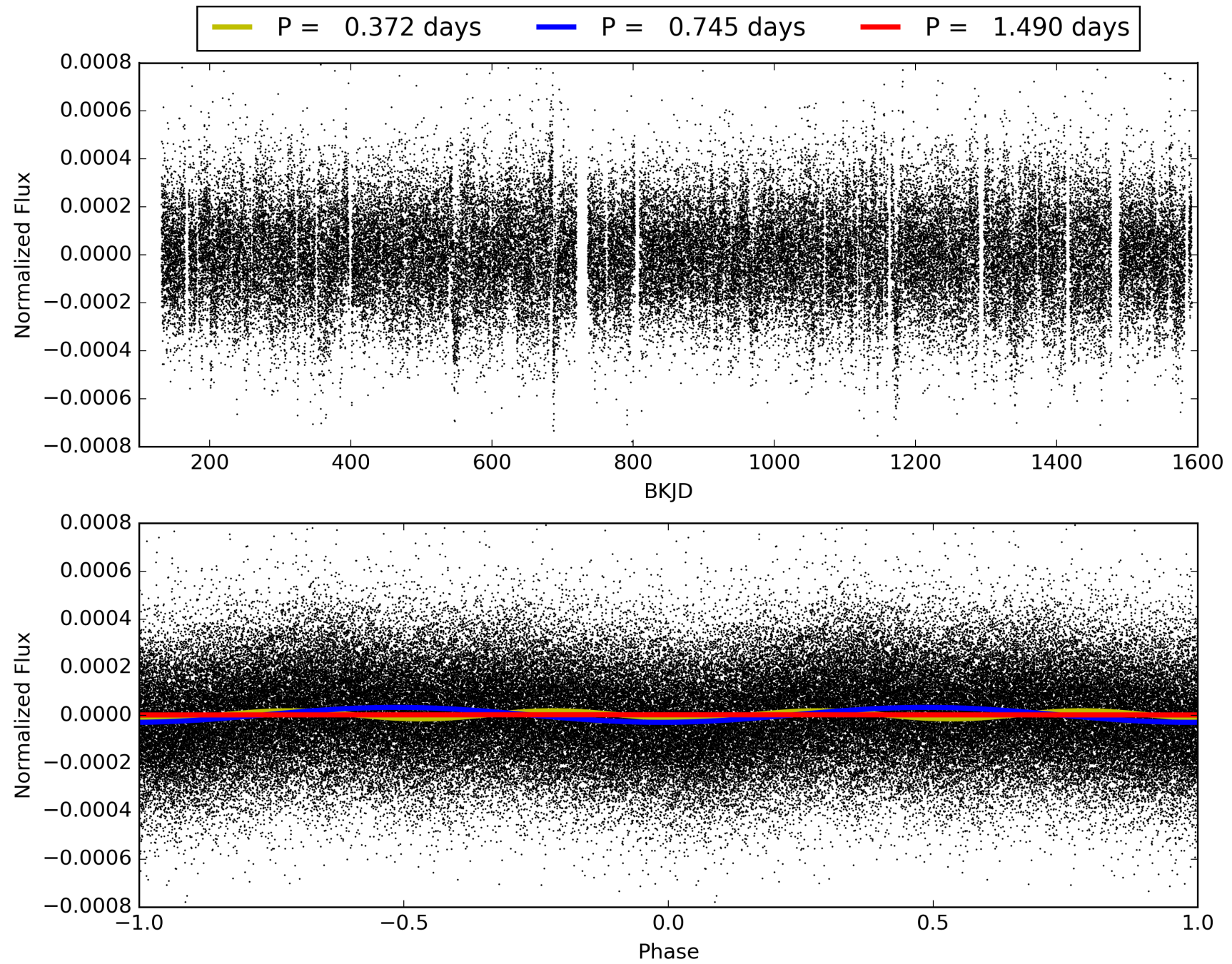
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 005564325-01, PDC Light Curves

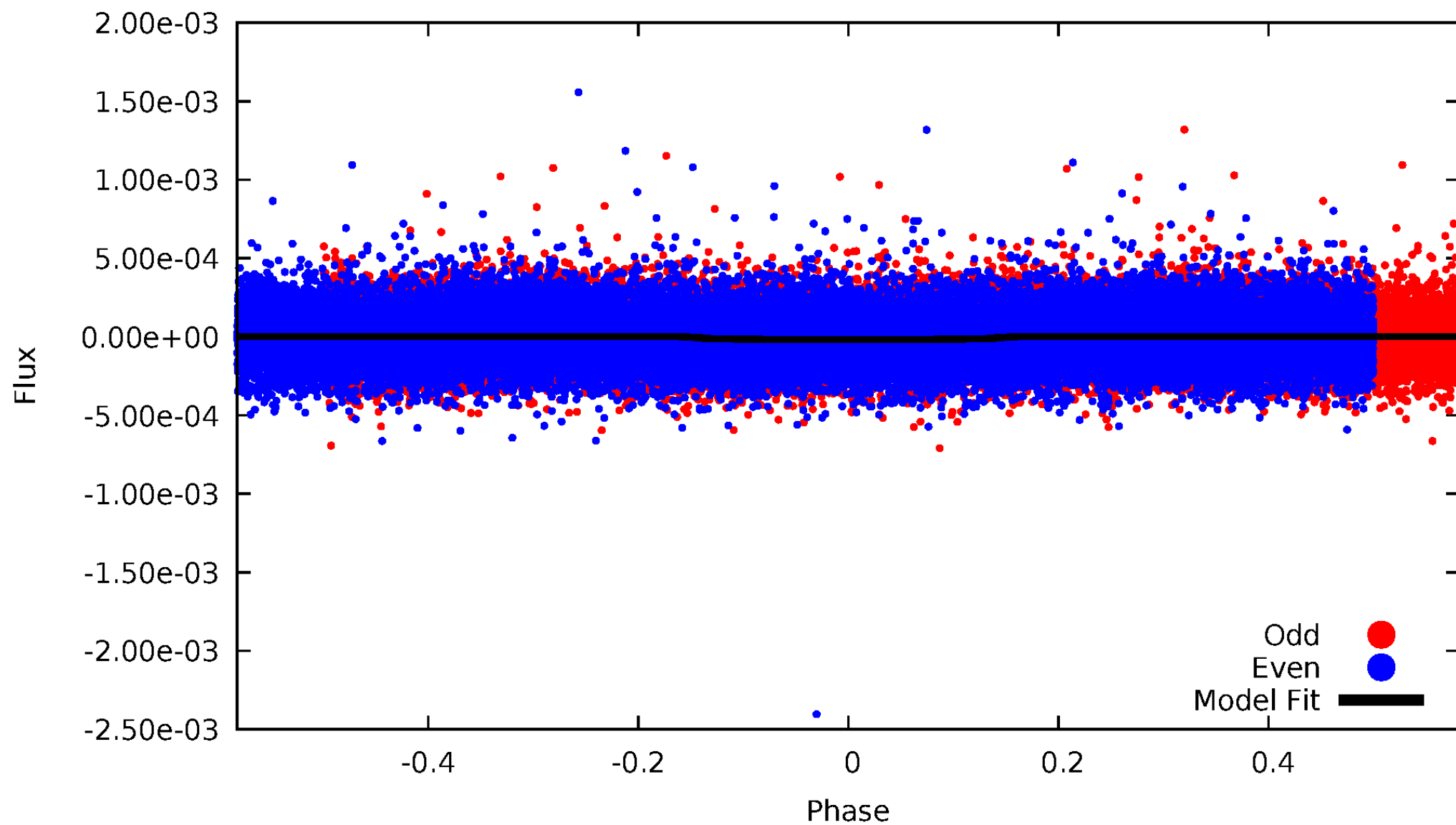


TCE 005564325-01



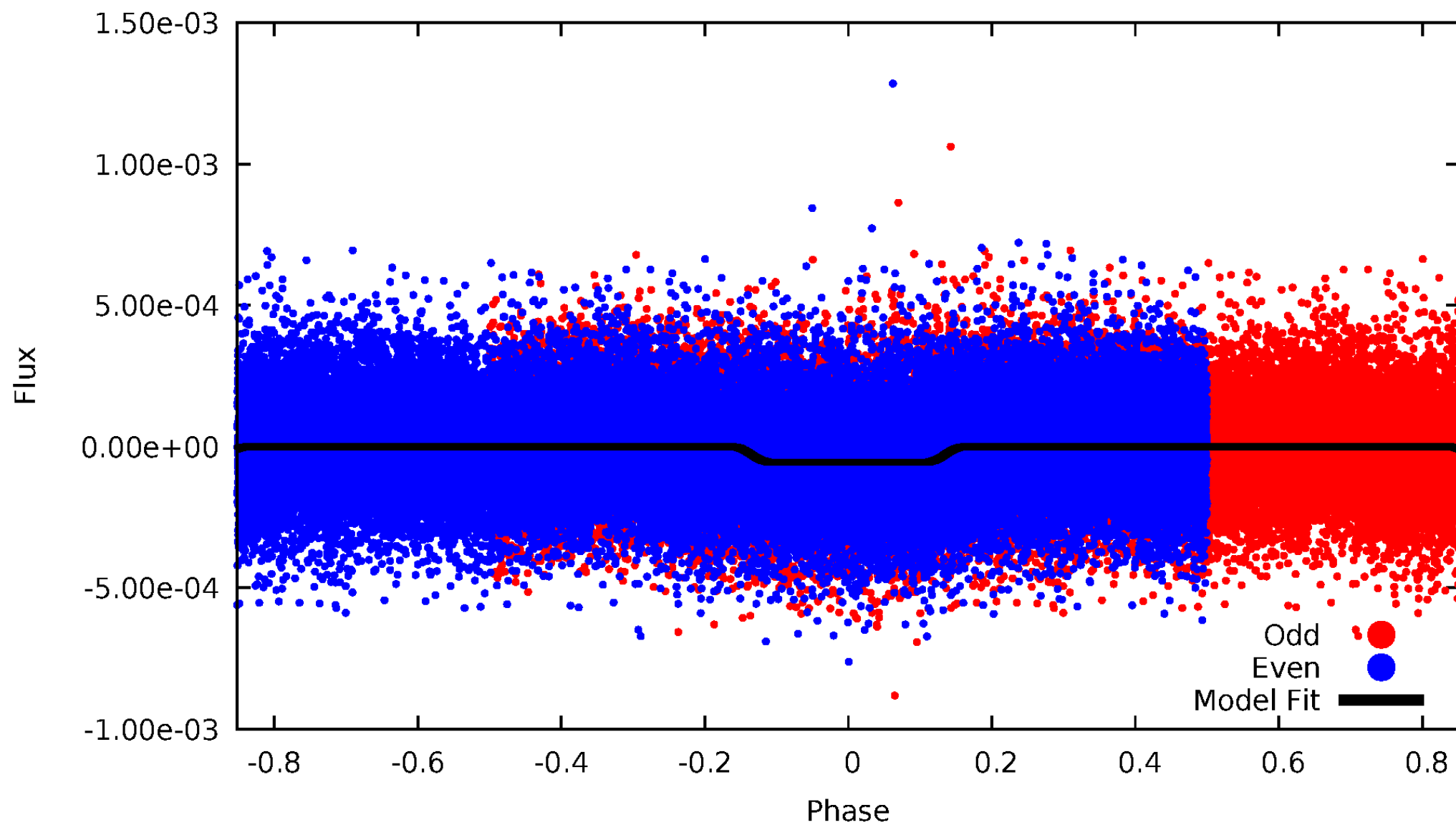
DV Odd/Even

TCE 005564325-01

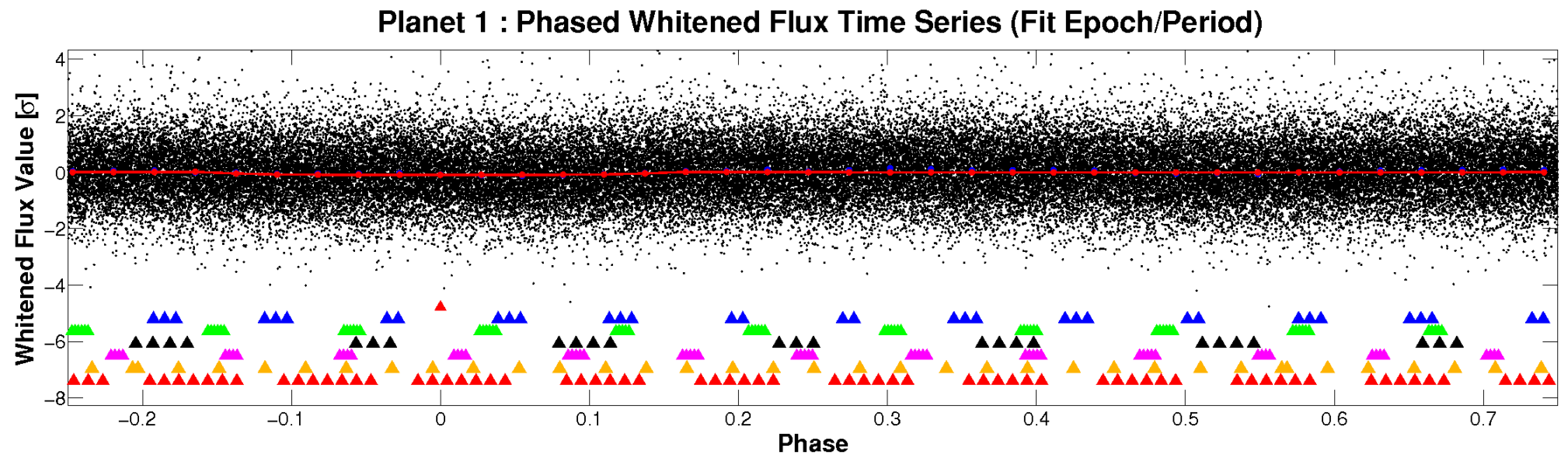
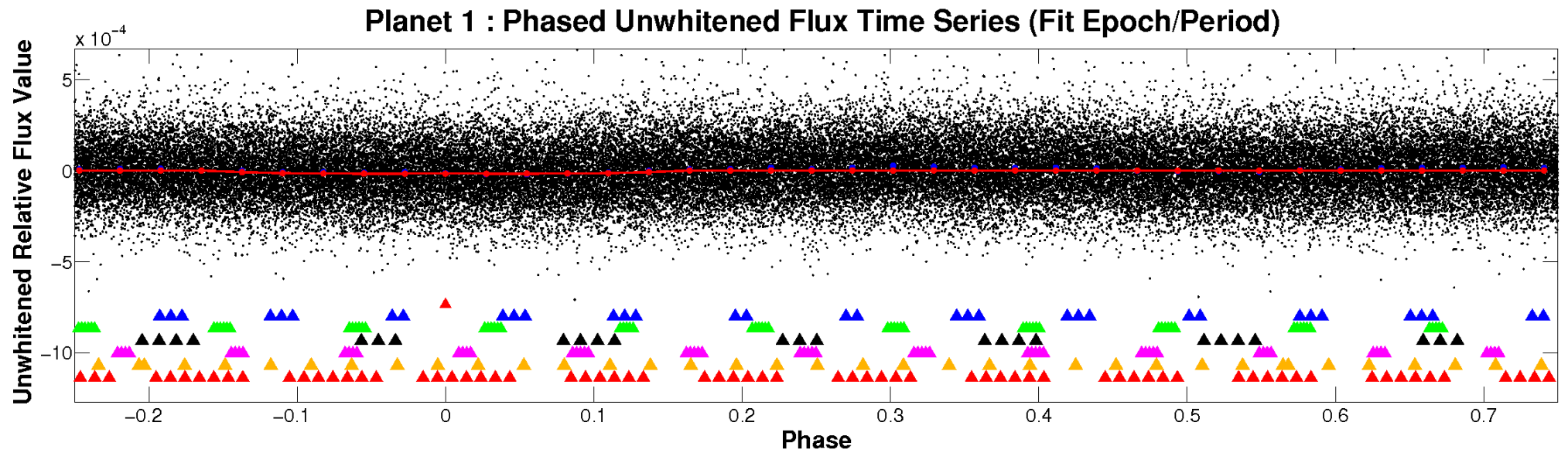


ALT Odd/Even

TCE 005564325-01

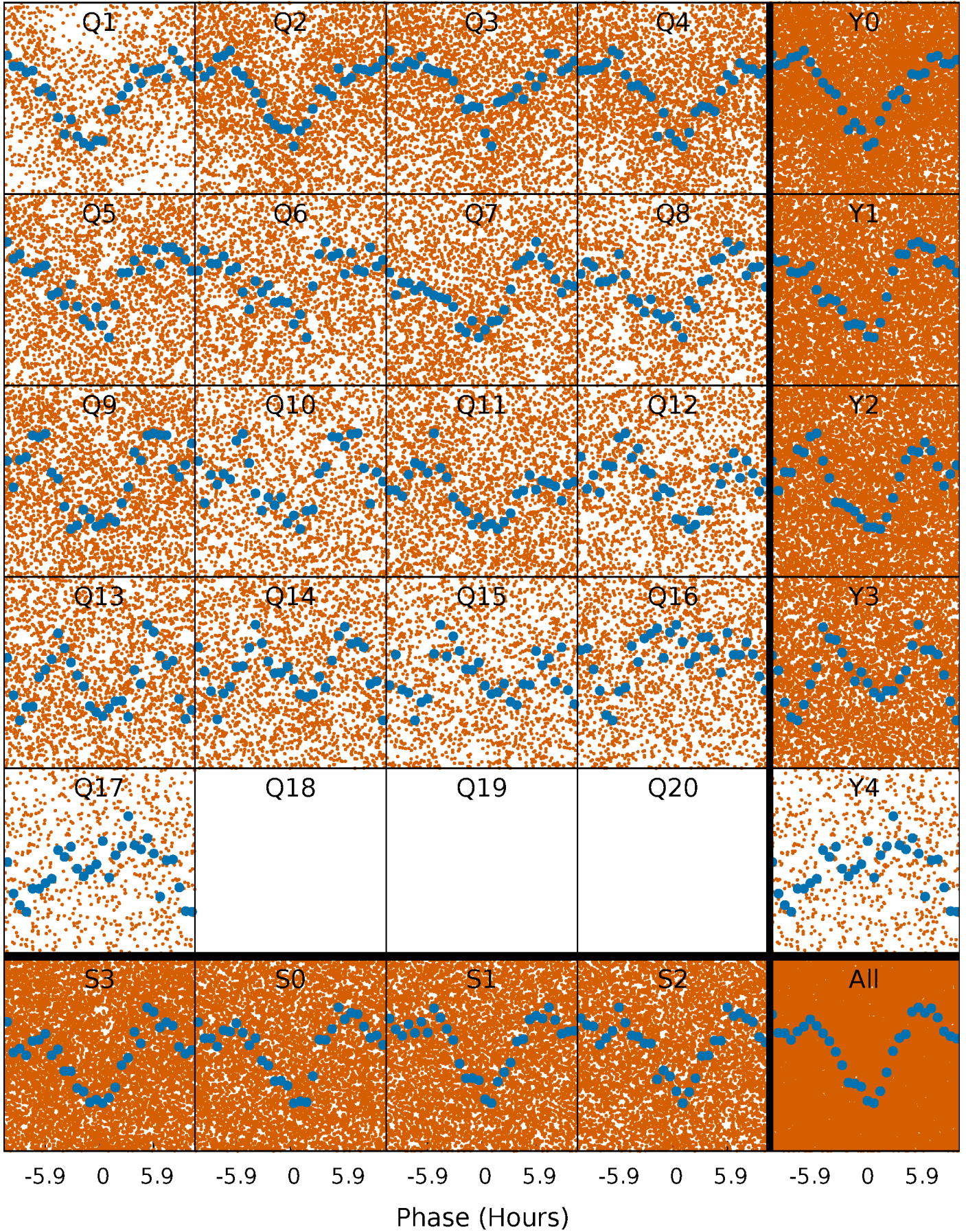


Non-Whitened Vs. Whitened Light Curve



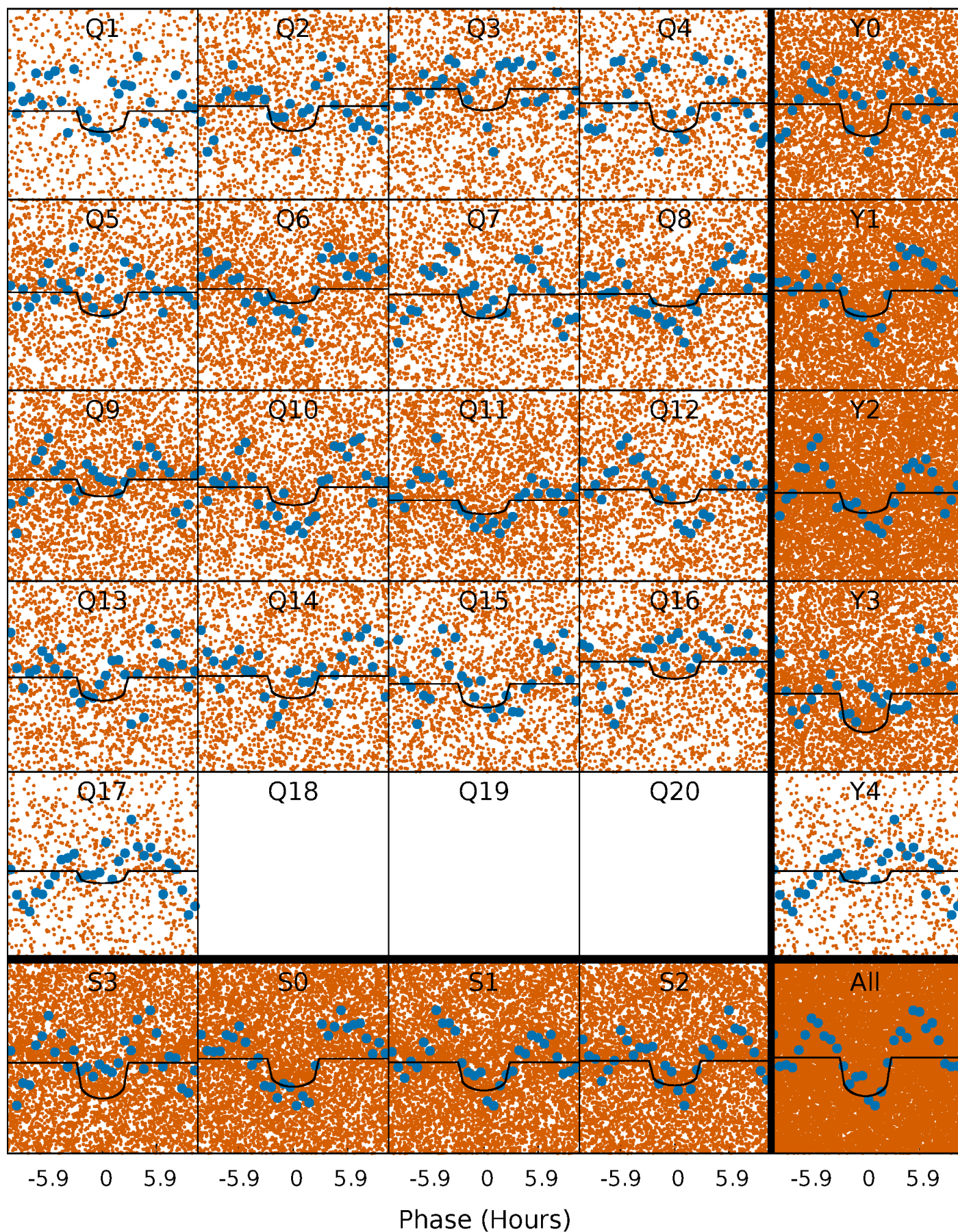
PDC Quarter-Phased Transit Curves

TCE 005564325-01 P= 0.744837 Days $T_0=132.226689$ (BKJD)



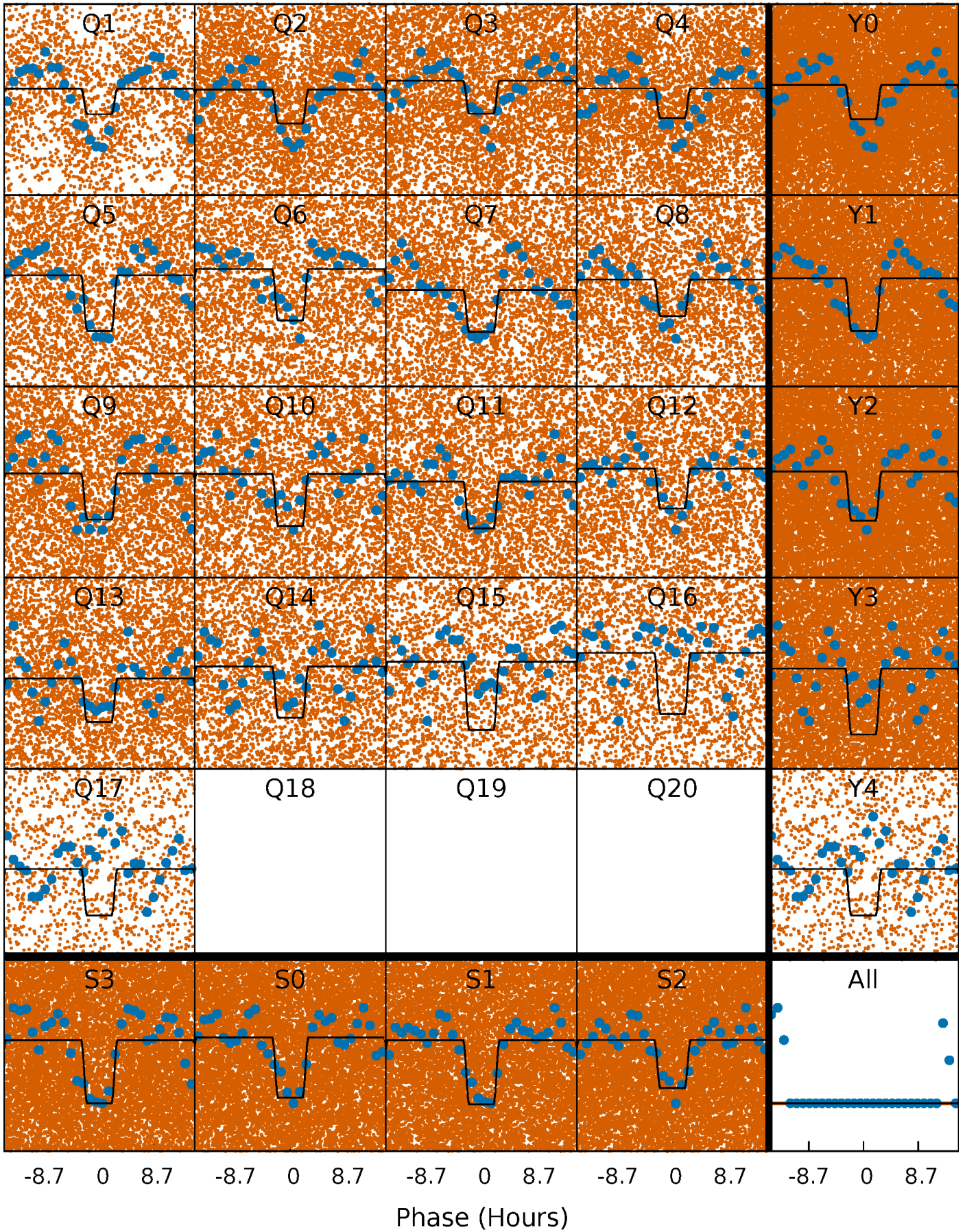
DV Quarter-Phased Transit Curves

TCE 005564325-01 P= 0.744837 Days $T_0=132.226689$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

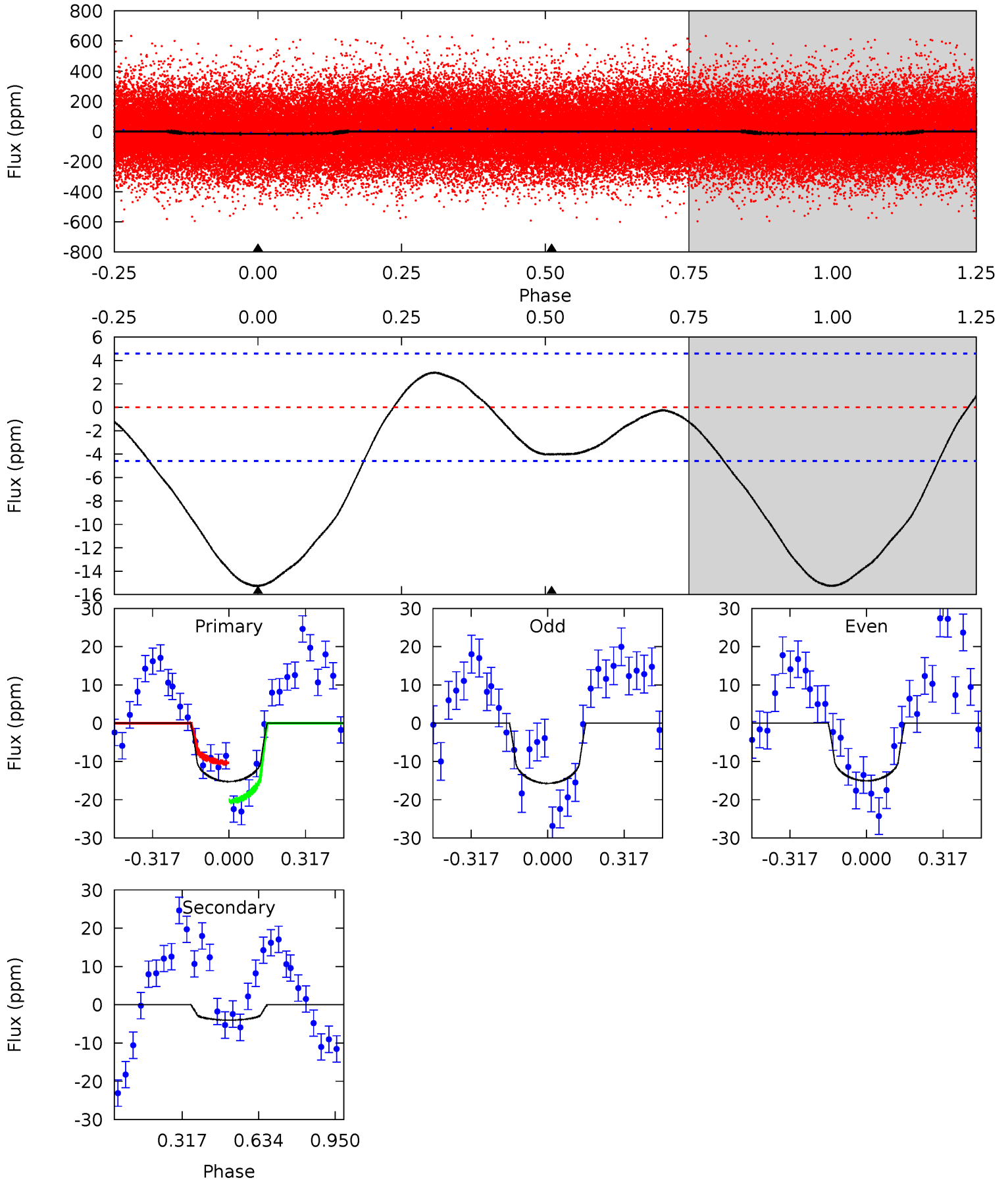
TCE 005564325-01 P= 0.744897 Days $T_0=132.189219$ (BKJD)



DV Model-Shift Uniqueness Test

005564325-01, P = 0.744837 Days, E = 131.481852 Days

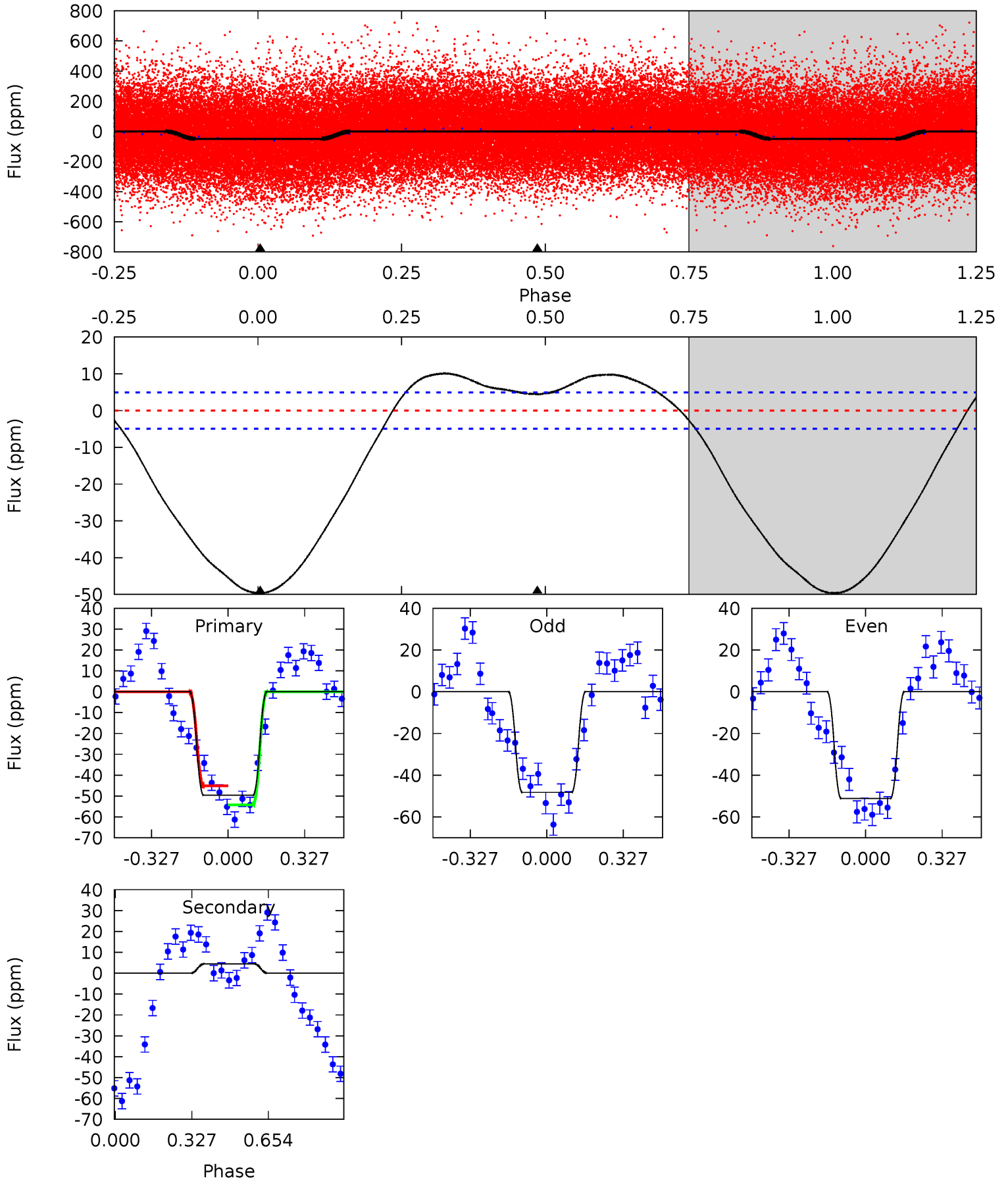
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.3	3.78	0	0	4.32	1.00	1.47	14.3	14.3	3.78	3.78	0.31	1.15	0.16	4.72



Alt Model-Shift Uniqueness Test

005564325-01, P = 0.744897 Days, E = 131.444322 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
43.4	-3.91	0	0	4.31	0.98	3.37	43.4	43.4	-3.91	-3.91	1.26	0.97	0.17	3.82



Stellar Parameters For KIC 005564325

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6552^{+177}_{-196}	$3.639^{+0.312}_{-0.059}$	$-0.160^{+0.300}_{-0.250}$	$3.168^{+0.477}_{-1.112}$	$1.595^{+0.216}_{-0.325}$	$0.071^{+0.164}_{-0.019}$
	+3%/-3%	+9%/-2%	+188%/-156%	+15%/-35%	+14%/-20%	+232%/-26%
Source	PHO1	FLK73	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 005564325-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-4 ± 1	$1.32^{+0.92}_{-0.75}$	5077^{+304}_{-481}	3683^{+2702}_{-7549}	$0.434^{+2.091}_{-0.294}$
Alt.	4 ± 1	$2.36^{+1.15}_{-0.95}$	5096^{+291}_{-416}	-4768^{+279}_{-405}	$-0.151^{+0.081}_{-0.257}$

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 $A_{obs} \gg 1.0$

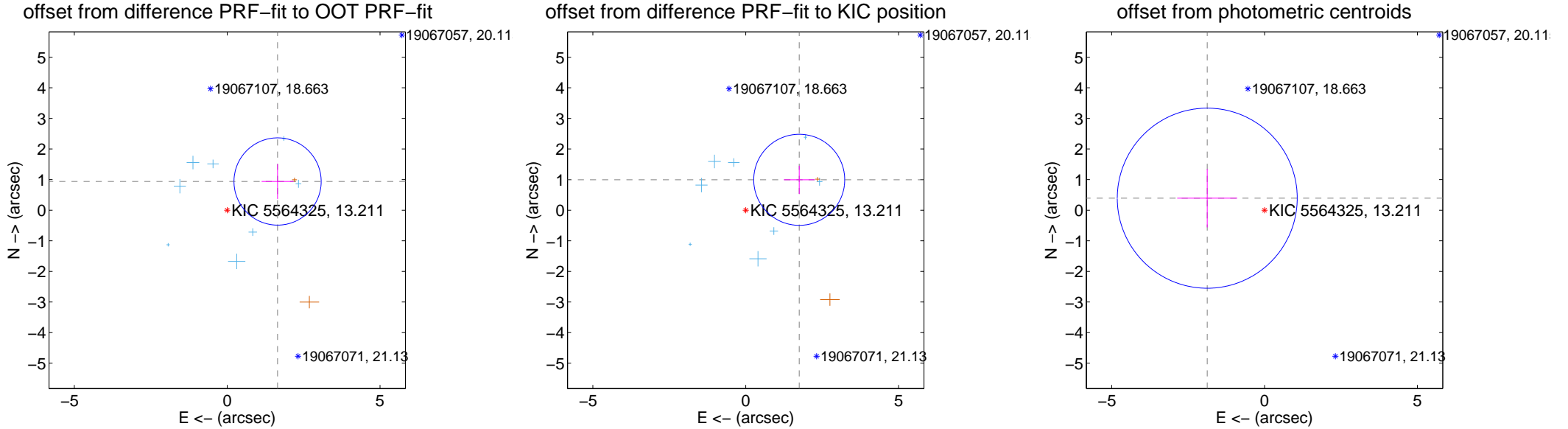
DV Centroid Data

Supplemental centroid analysis for 005564325-01. Kepler magnitude: 13.21. Transit SNR 11.31

There are 8 quarters with good PRF difference image offsets

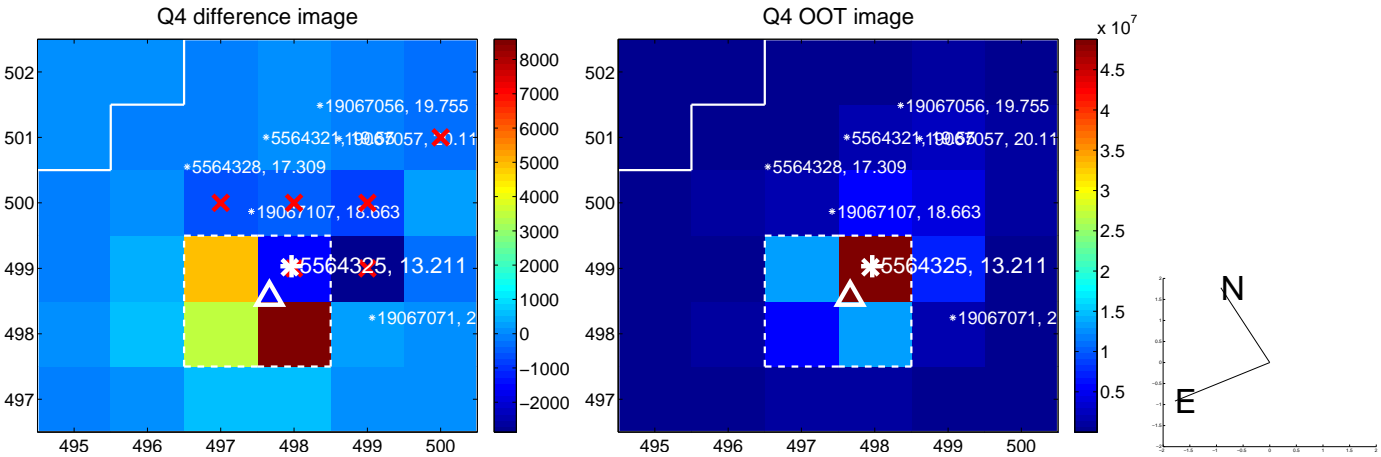
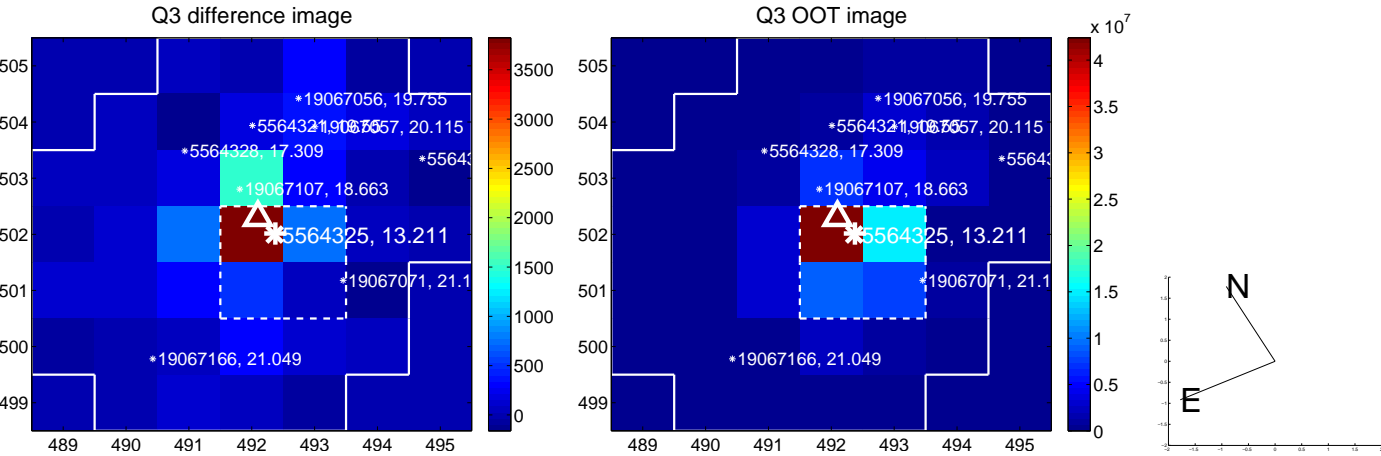
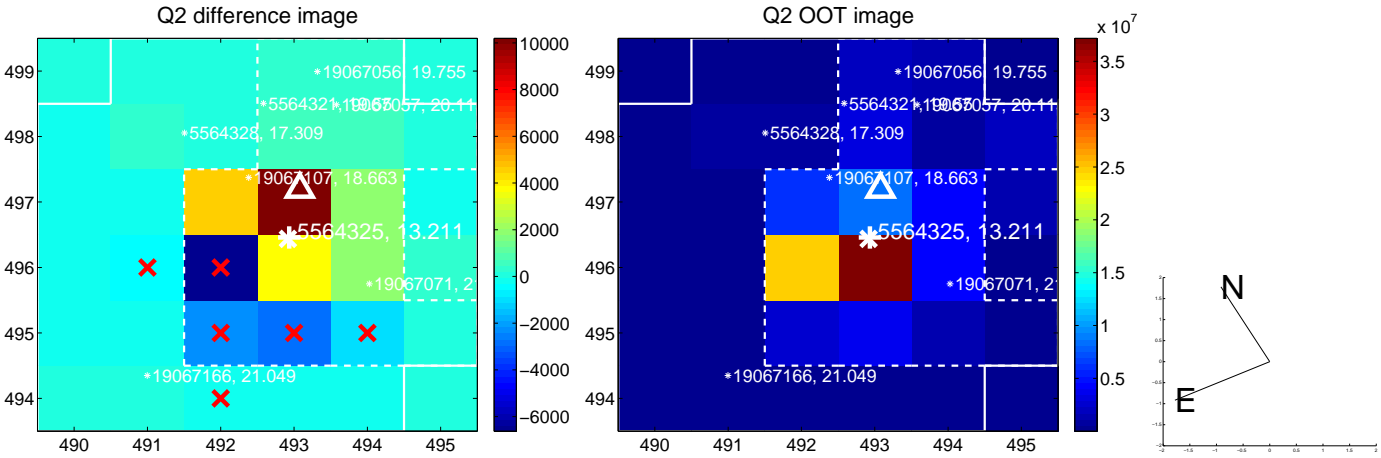
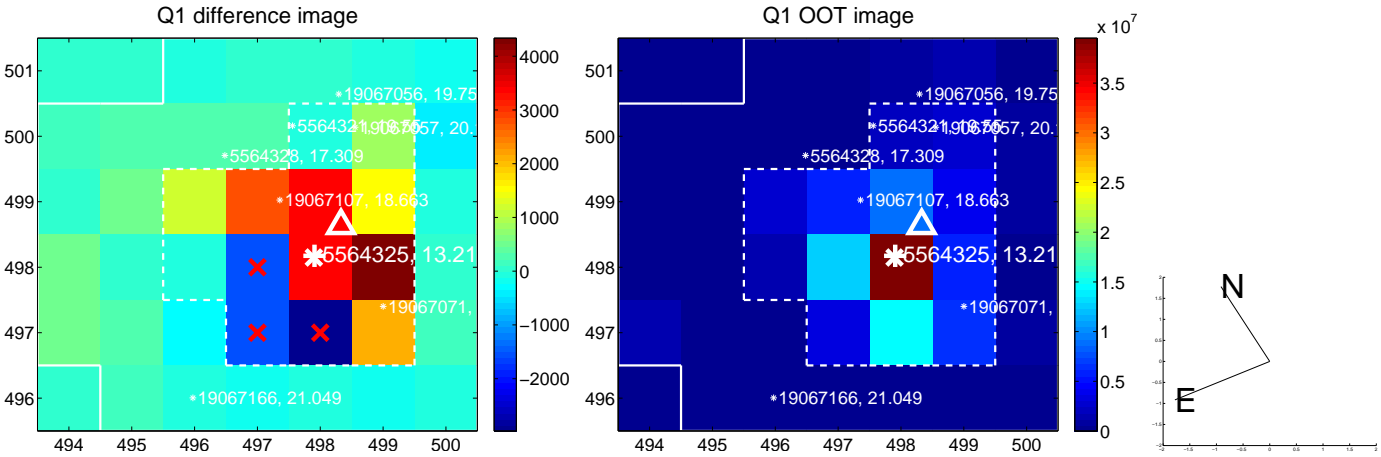
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.897 ± 0.475	3.99	-1.648 ± 0.521	0.938 ± 0.569
PRF-fit source offset from KIC position	2.012 ± 0.496	4.06	-1.750 ± 0.504	0.993 ± 0.459
photometric centroid source offset	1.91 ± 0.98	1.95	1.87 ± 0.98	0.39 ± 0.95

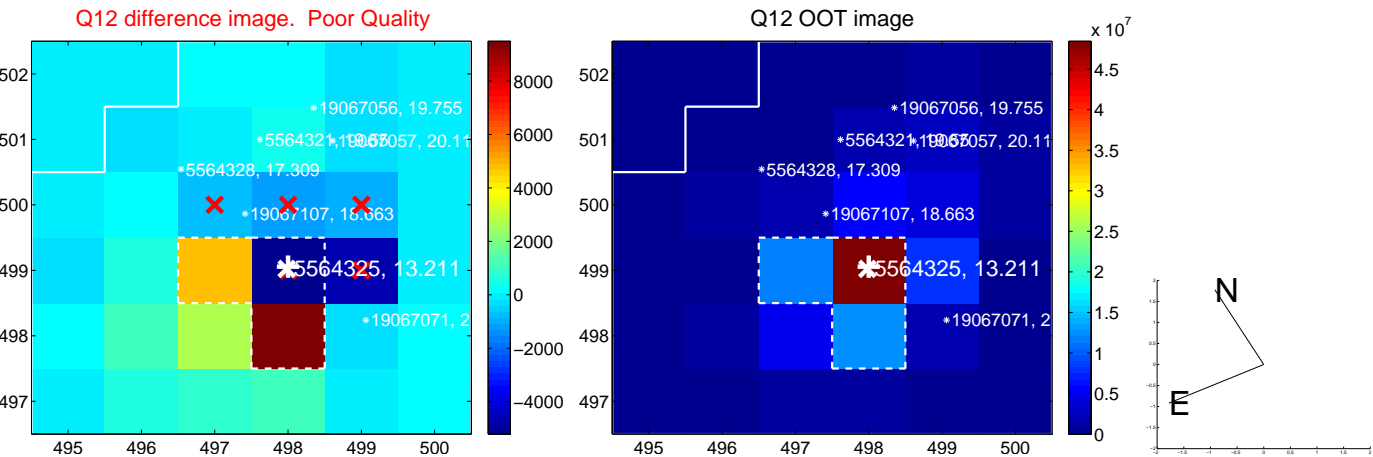
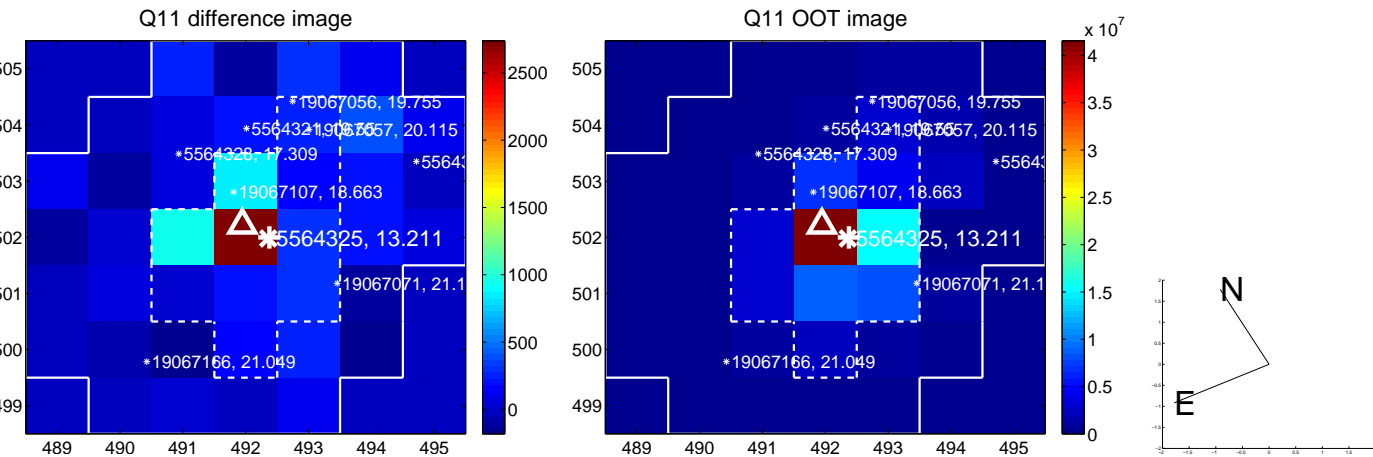
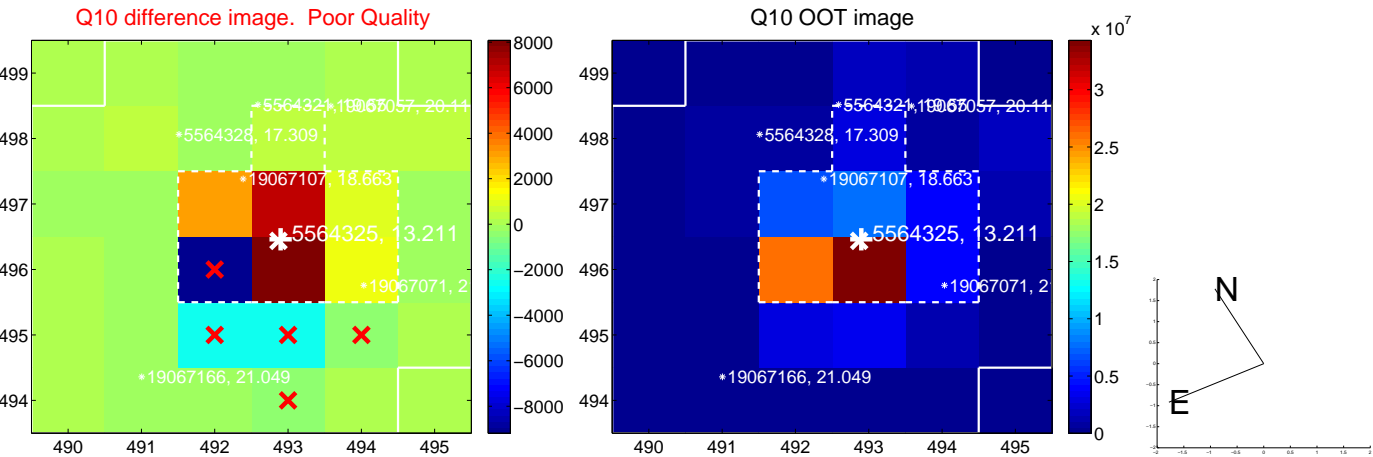
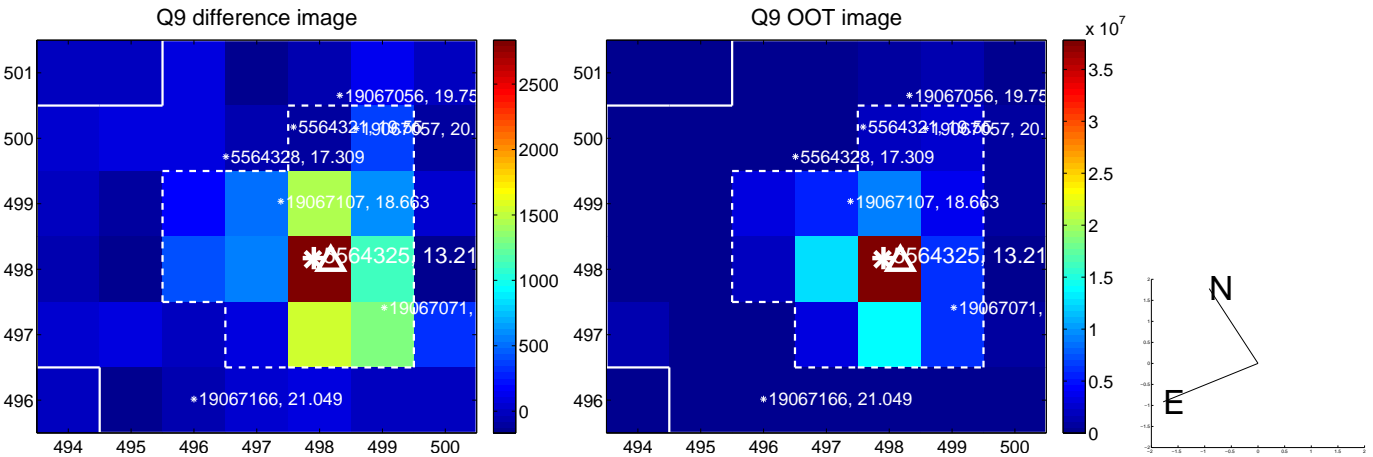


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

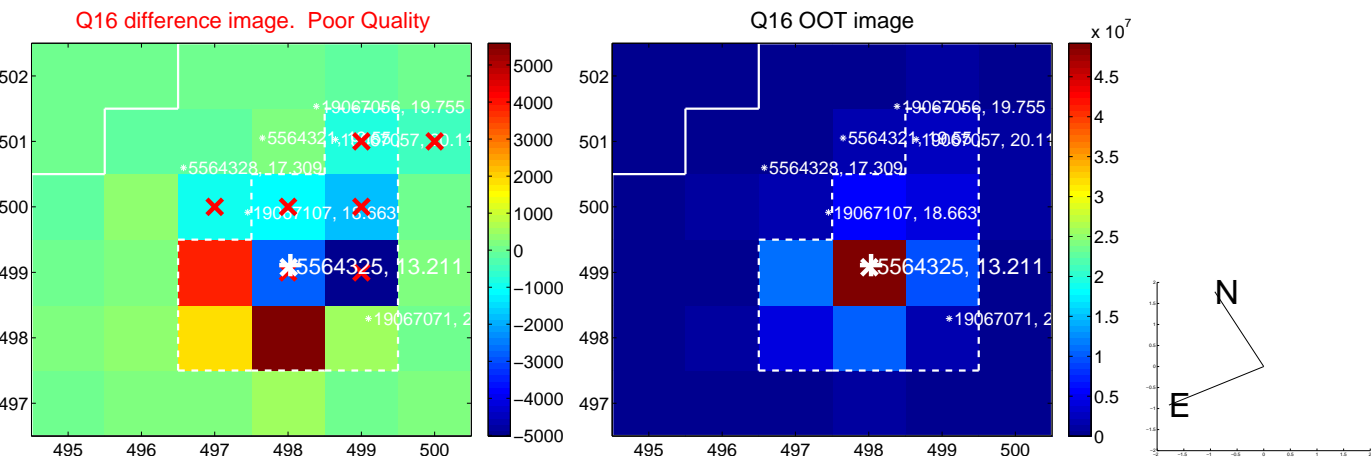
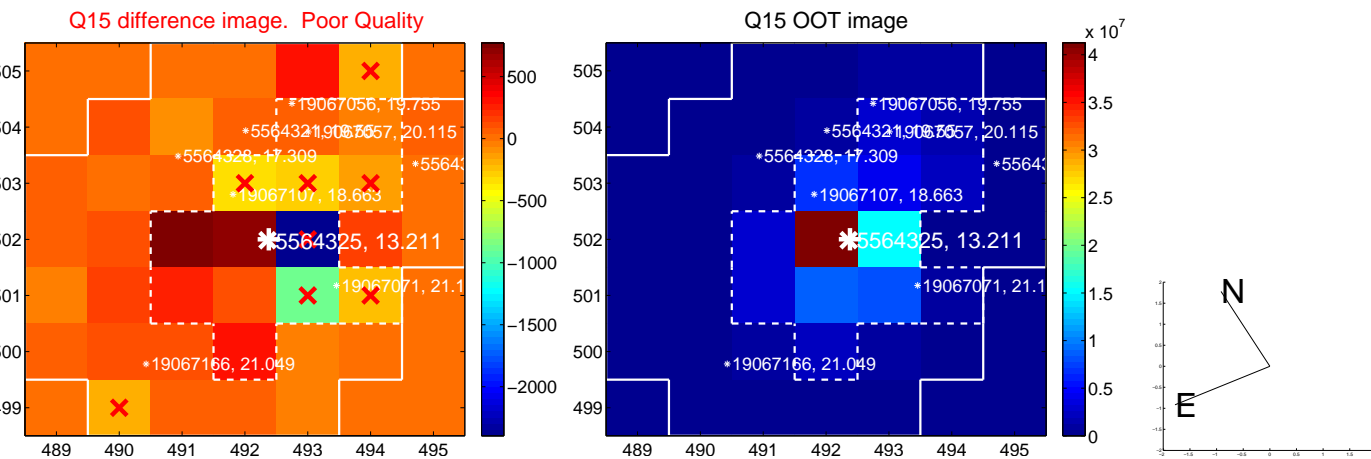
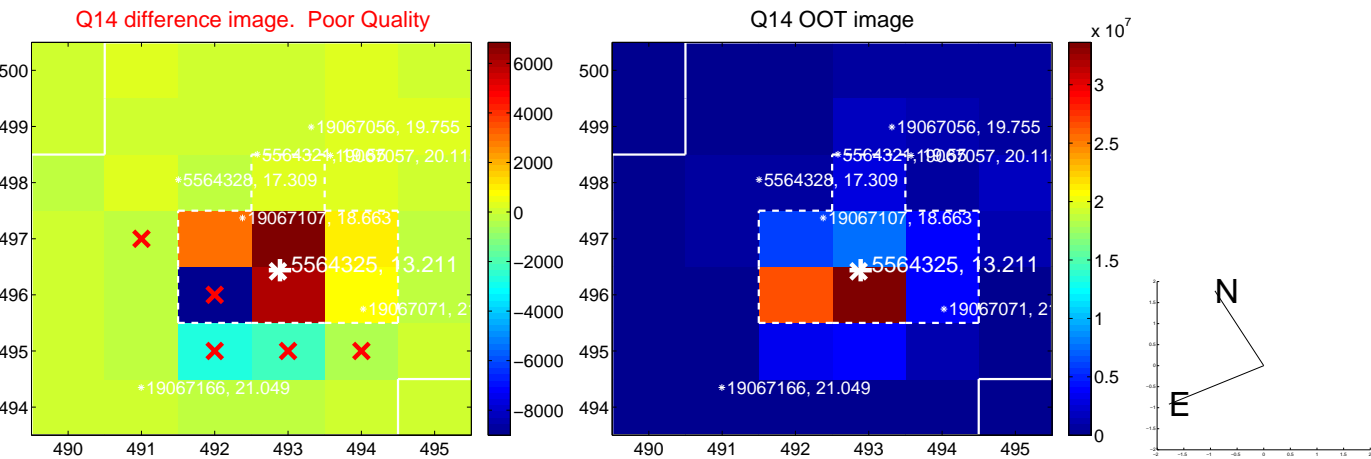
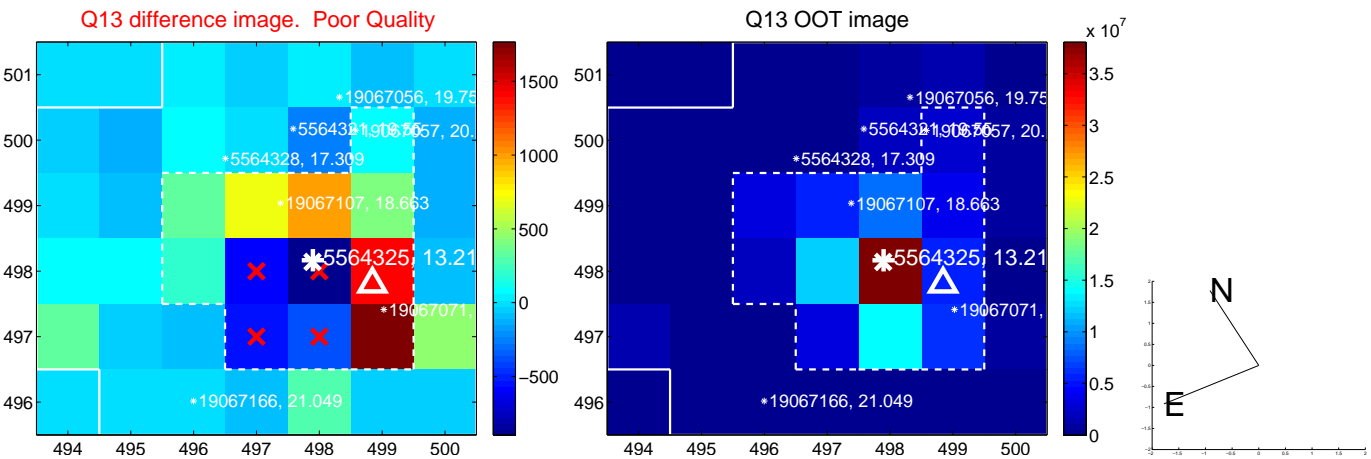
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



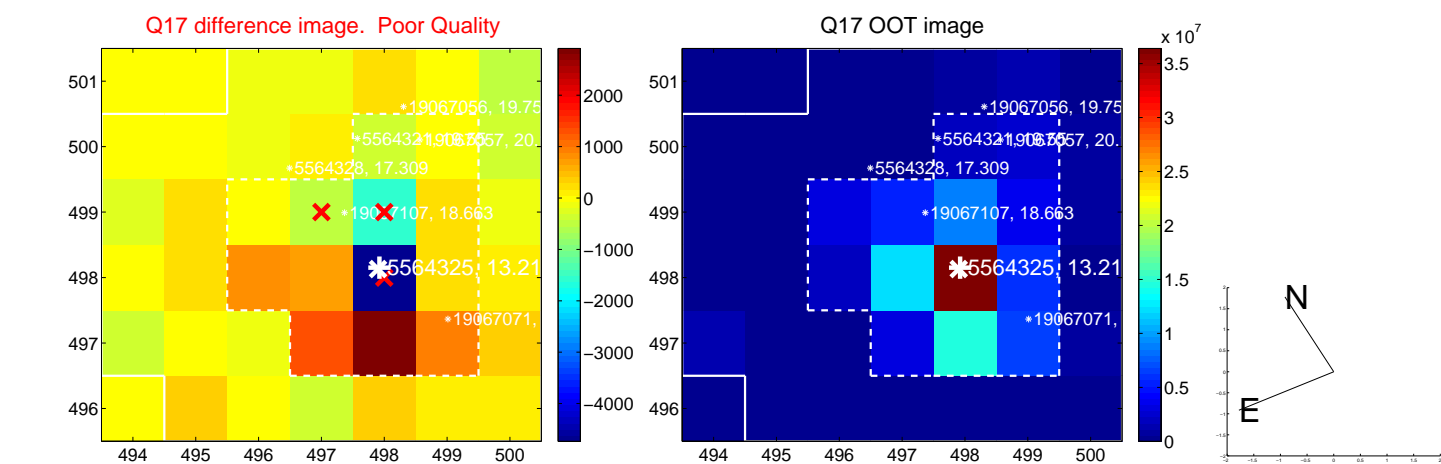
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



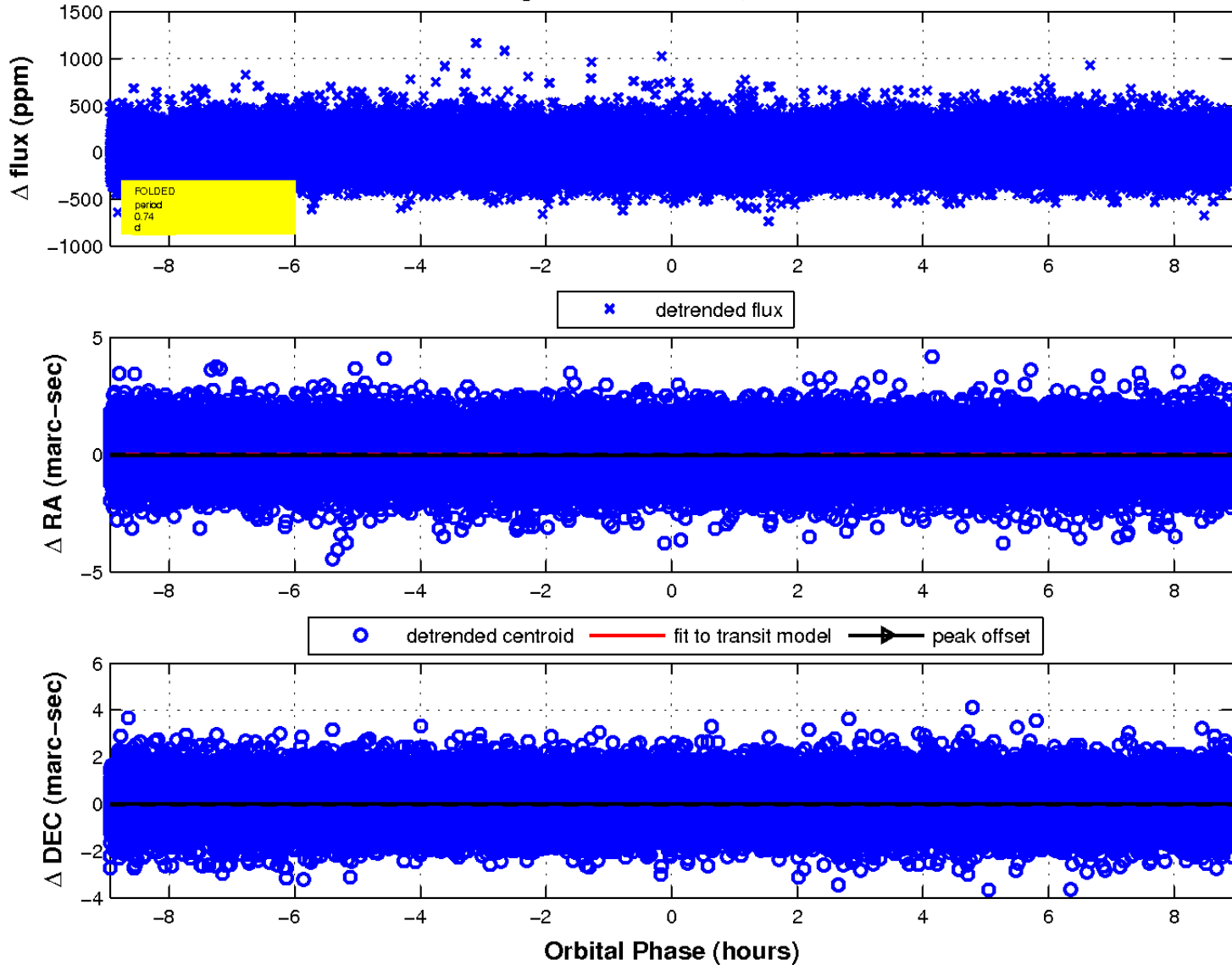
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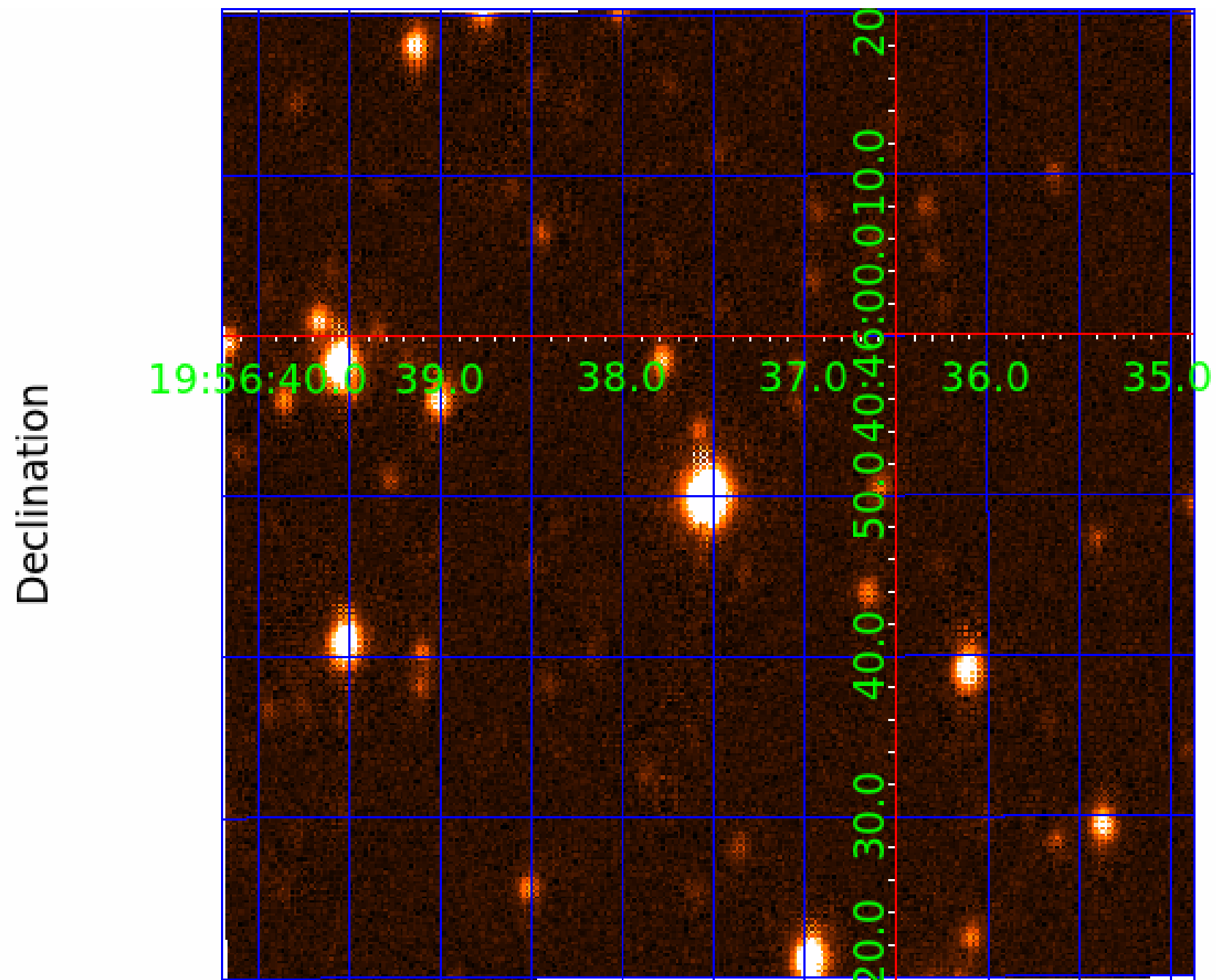
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 7



UKIRT Image



KIC 005564325

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})
005564325-01	OBS	No	0.744837	132.226689	17.9	5.200	10.4	11.3	3.17	6552	1.35	46935.19
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005564325-06	OBS	No	38.901833	169.144273	290.7	2.992	9.1	11.4	3.17	6552	6.99	240.41
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
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005564325-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005564325-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_MEAS
005564325-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005564325-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005564325-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
005564325-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

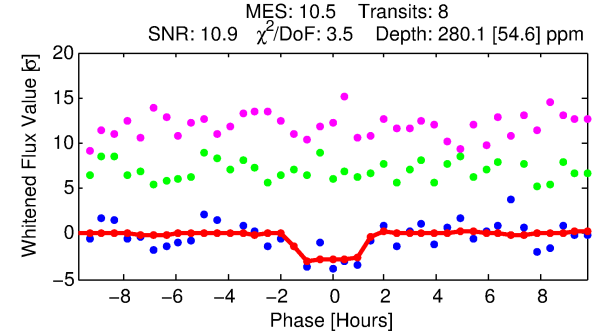
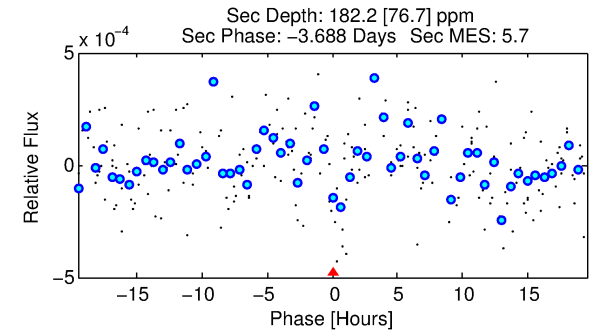
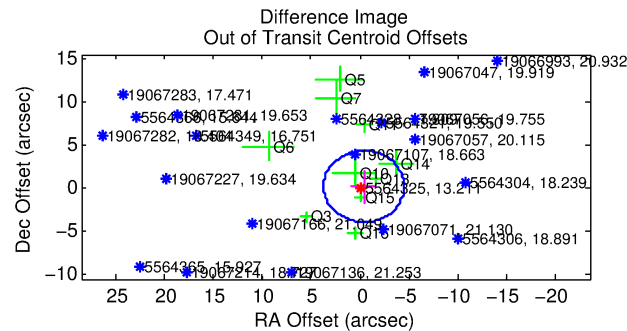
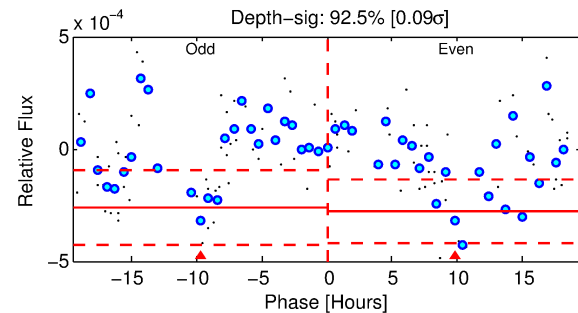
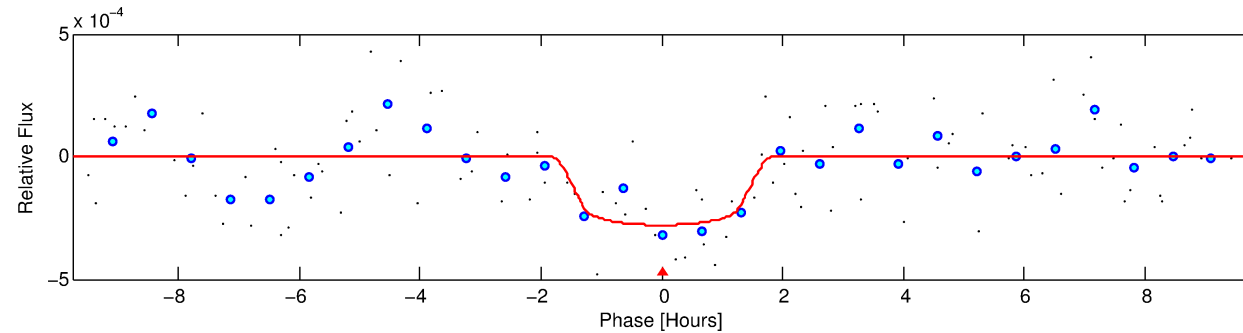
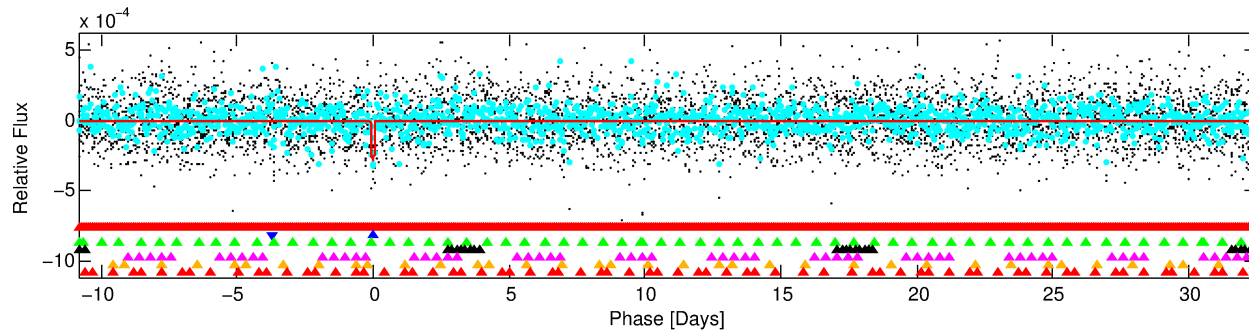
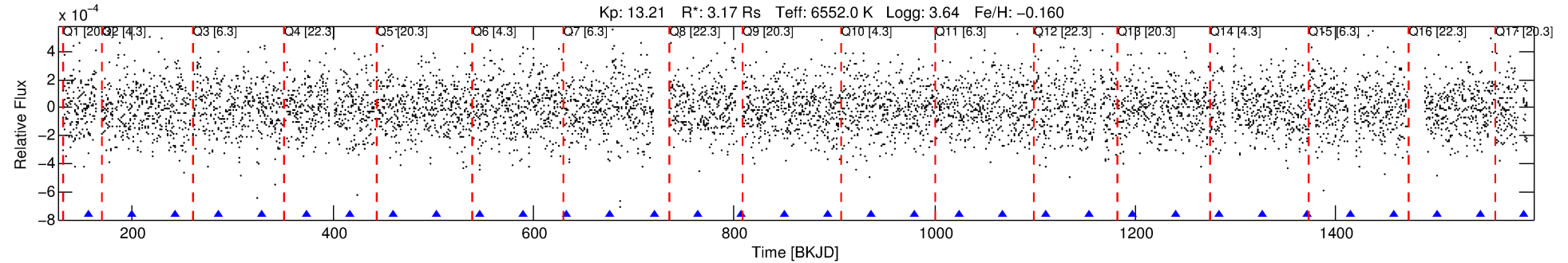
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005564325-02

No Significant Match Found

DV One-Page Summary

KIC: 5564325 Candidate: 2 of 7 Period: 43.373 d



DV Fit Results:

Period = 43.37284 [0.00053] d
Epoch = 156.3738 [0.0111] BKJD
Rp/R* = 0.0177 [0.0262]
a/R* = 51.91 [449.21]
b = 0.88 [2.23]
Seff = 207.95 [113.61]
Teq = 968 [132] K
Rp = 6.11 [9.29] Re
a = 0.2823 [0.0945] AU
Ag = 214.26 [651.04] [0.33 σ]
Teffp = 5728 [4287] K [1.11 σ]

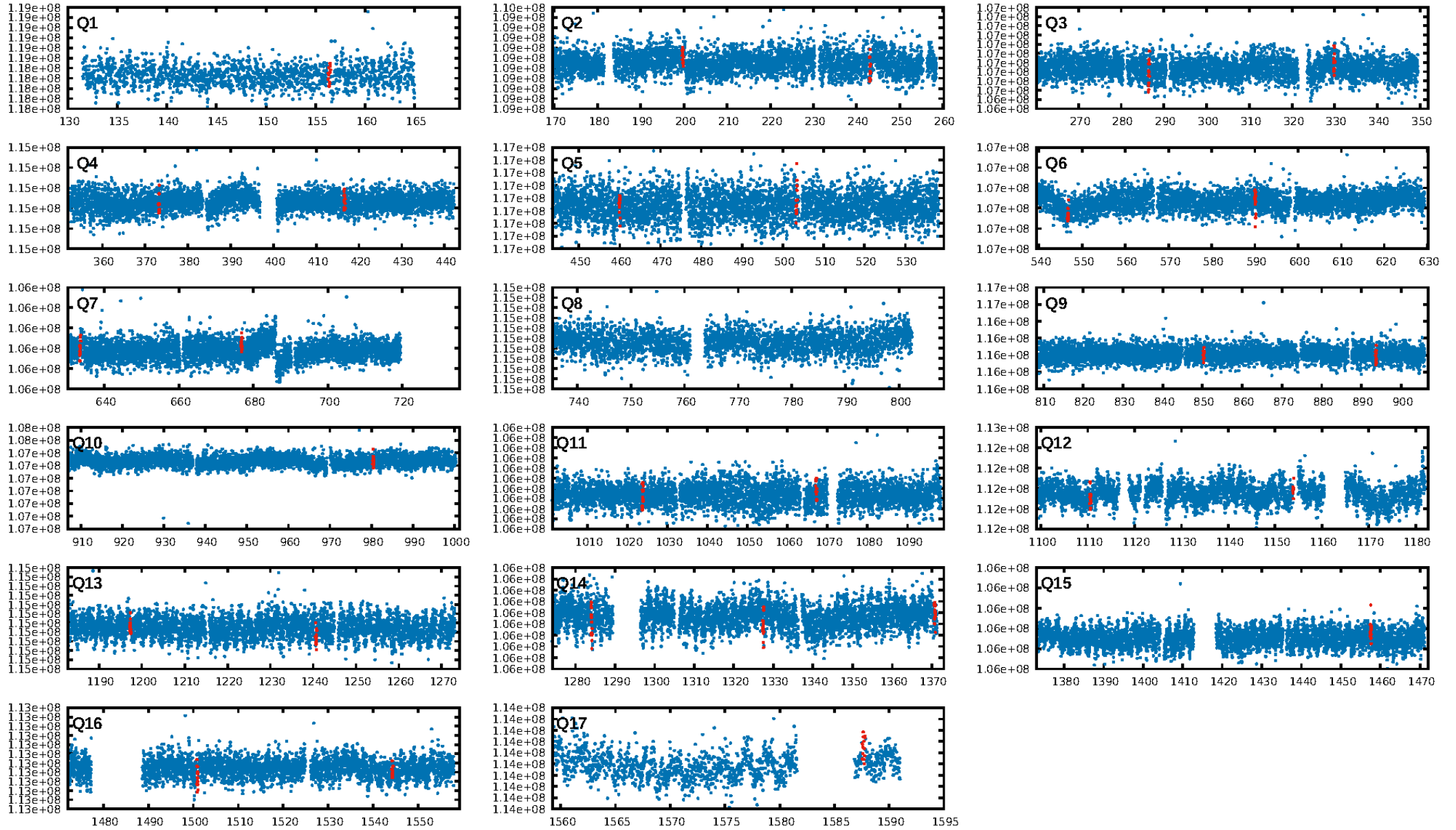
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [24.29 σ]
LongPeriod-sig: 100.0% [87.57 σ]
ModelChiSquare2-sig: 0.3%
ModelChiSquareGof-sig: 99.7%
Bootstrap-pfa: 3.58e-12
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: -0.9969
Centroid-sig: 7.5%
Centroid-so: 0.948 arcsec [1.51 σ]
OotOffset-rm: 0.430 arcsec [0.31 σ]
KicOffset-rm: 0.532 arcsec [0.45 σ]
OotOffset-st: 3/4/1/2 [10]
KicOffset-st: 3/4/1/2 [10]
DiffImageQuality-fgm: 0.10 [1/10]
DiffImageOverlap-fno: 0.00 [0/14]

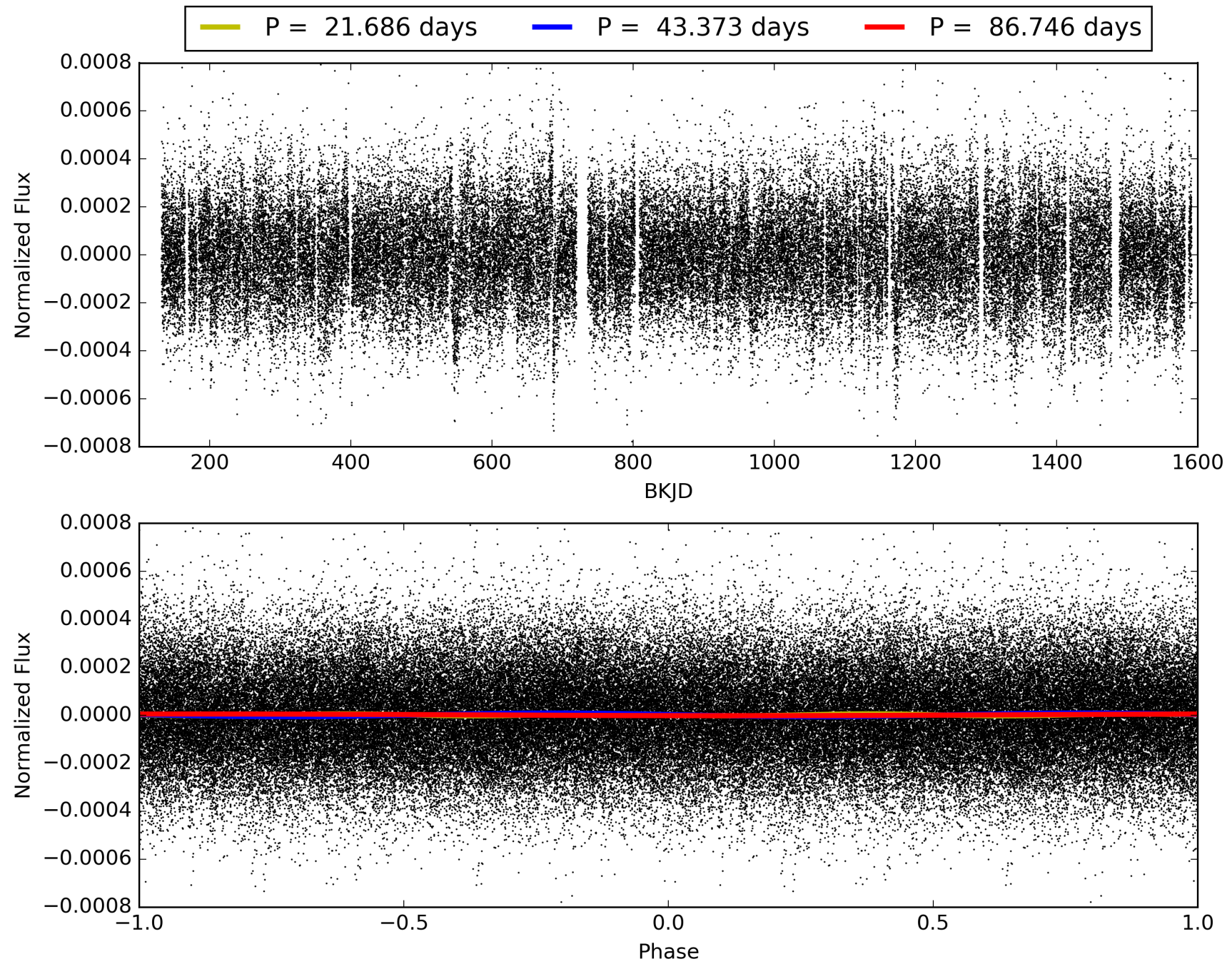
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 08:24:08 Z

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

TCE 005564325-02, PDC Light Curves

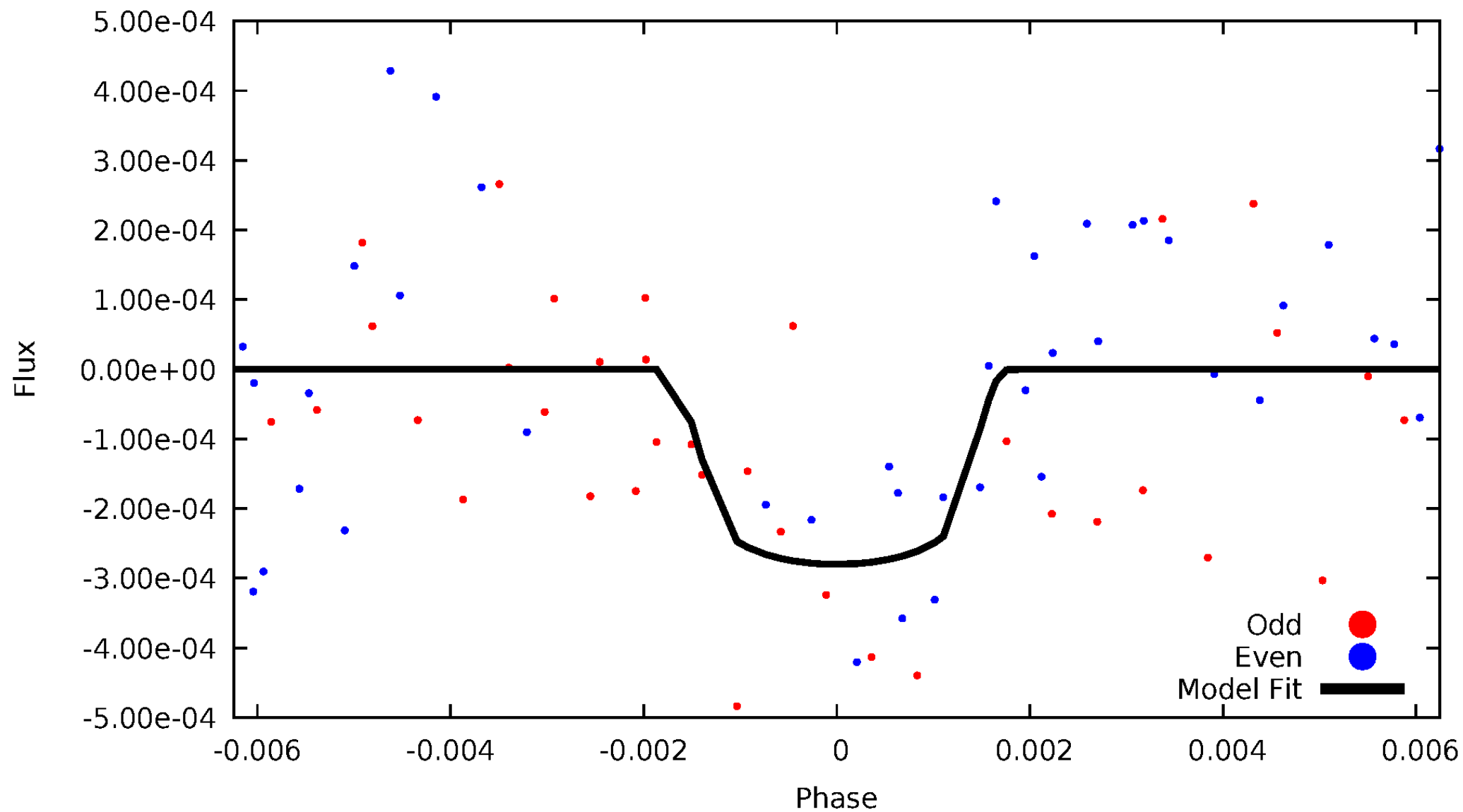


TCE 005564325-02



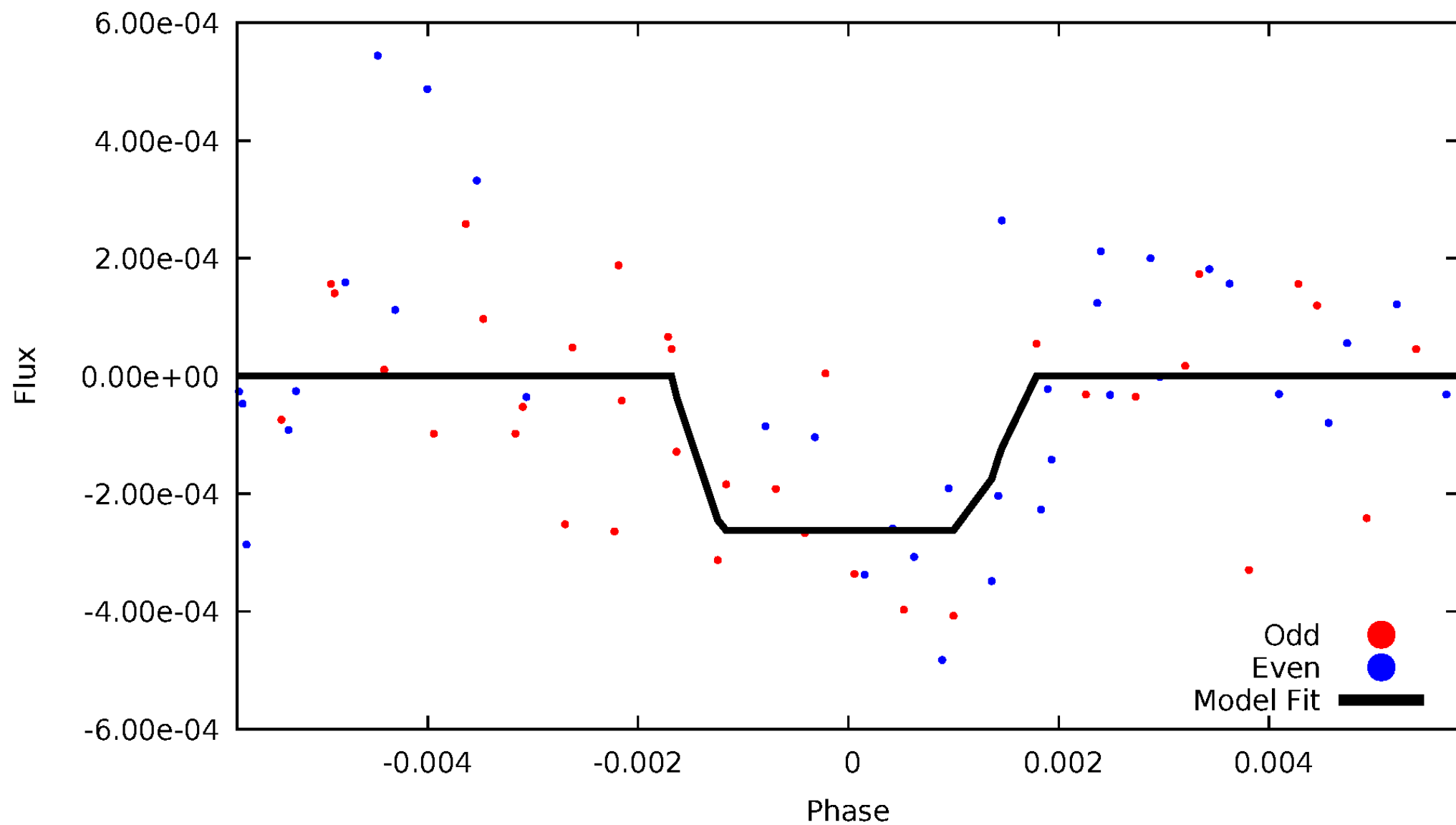
DV Odd/Even

TCE 005564325-02



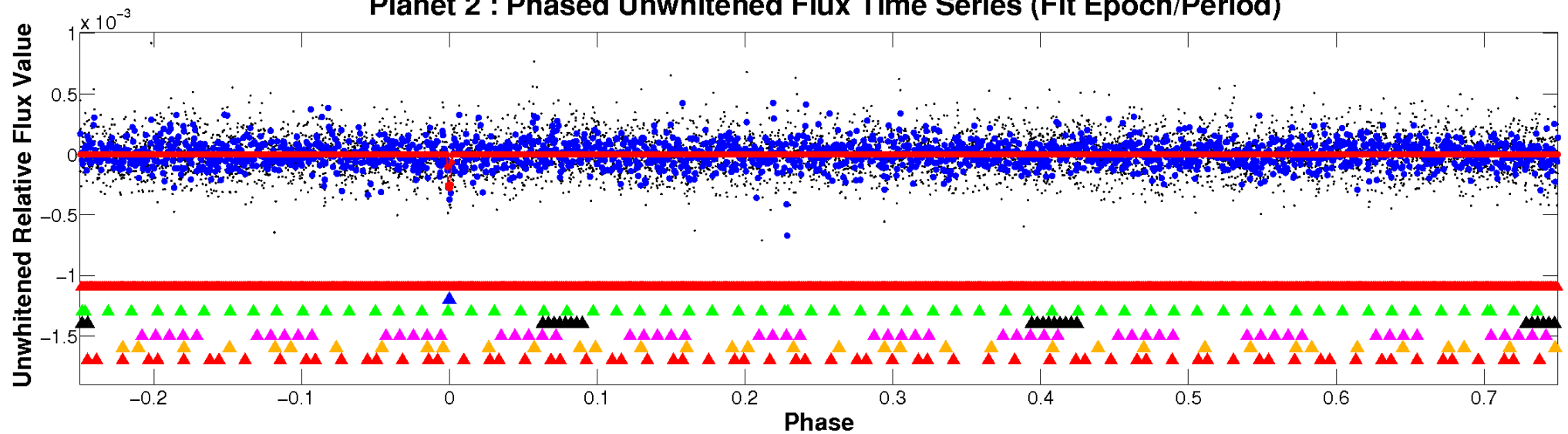
ALT Odd/Even

TCE 005564325-02

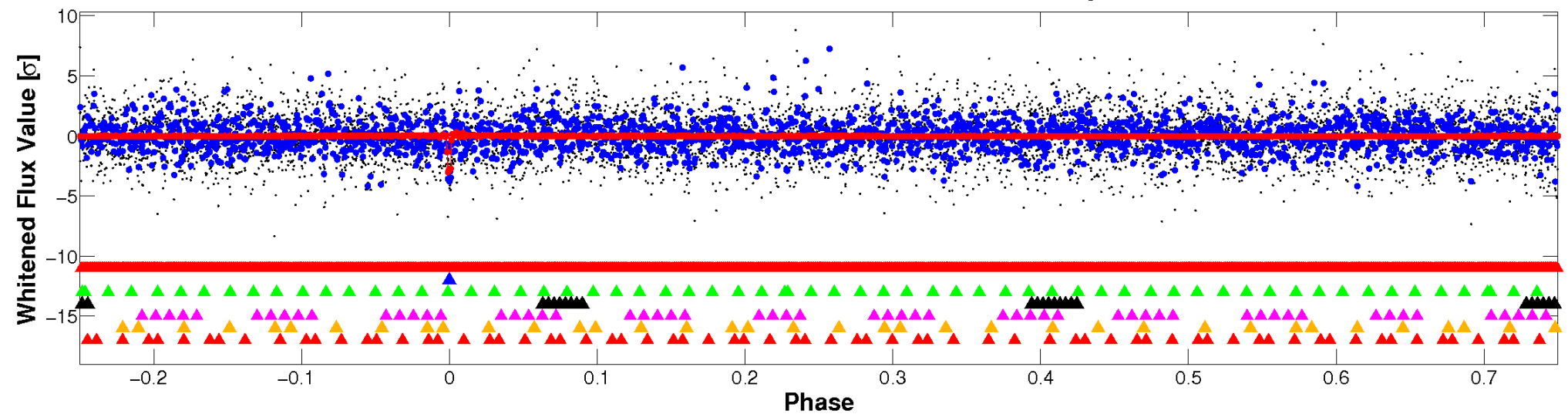


Non-Whitened Vs. Whitened Light Curve

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

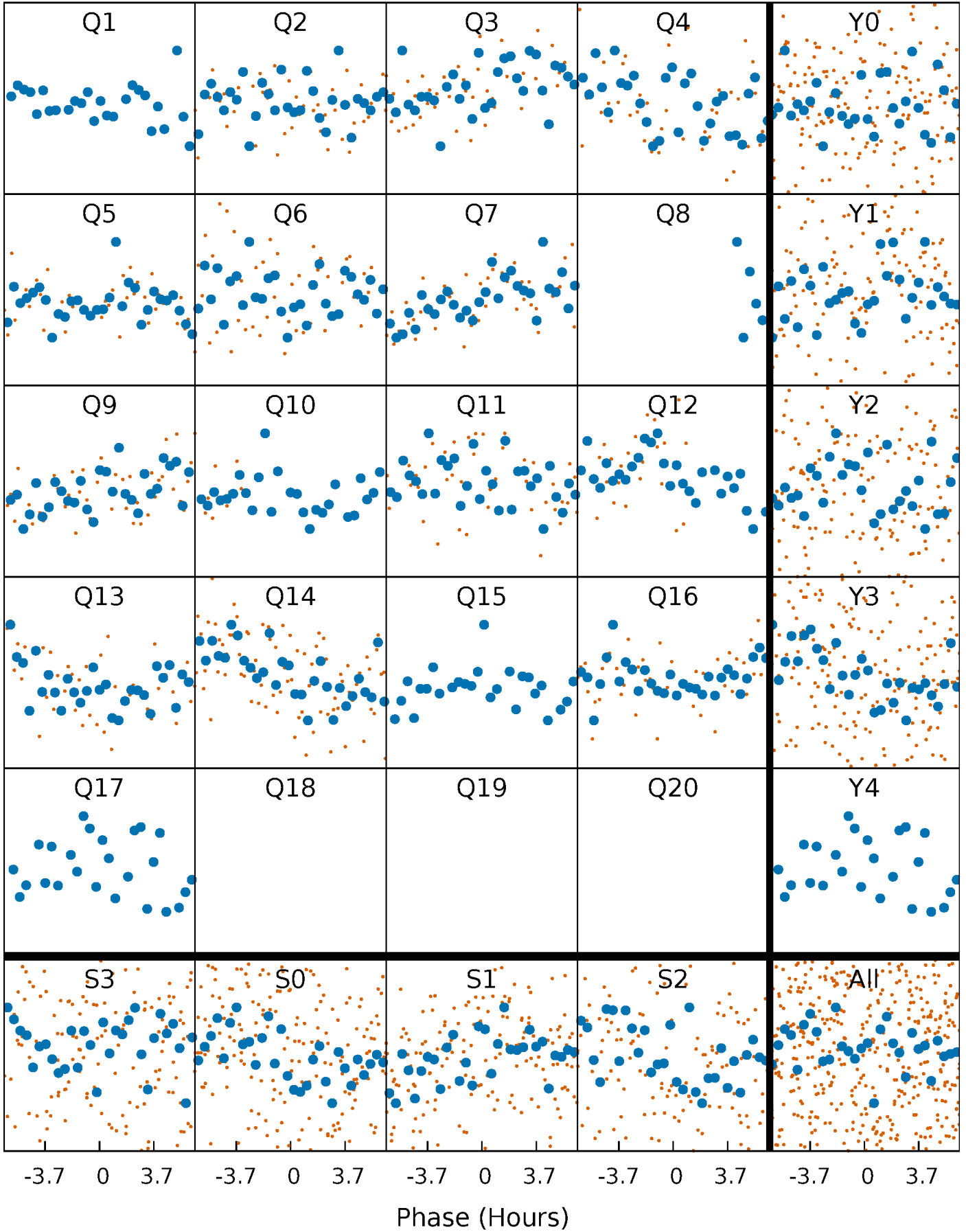


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



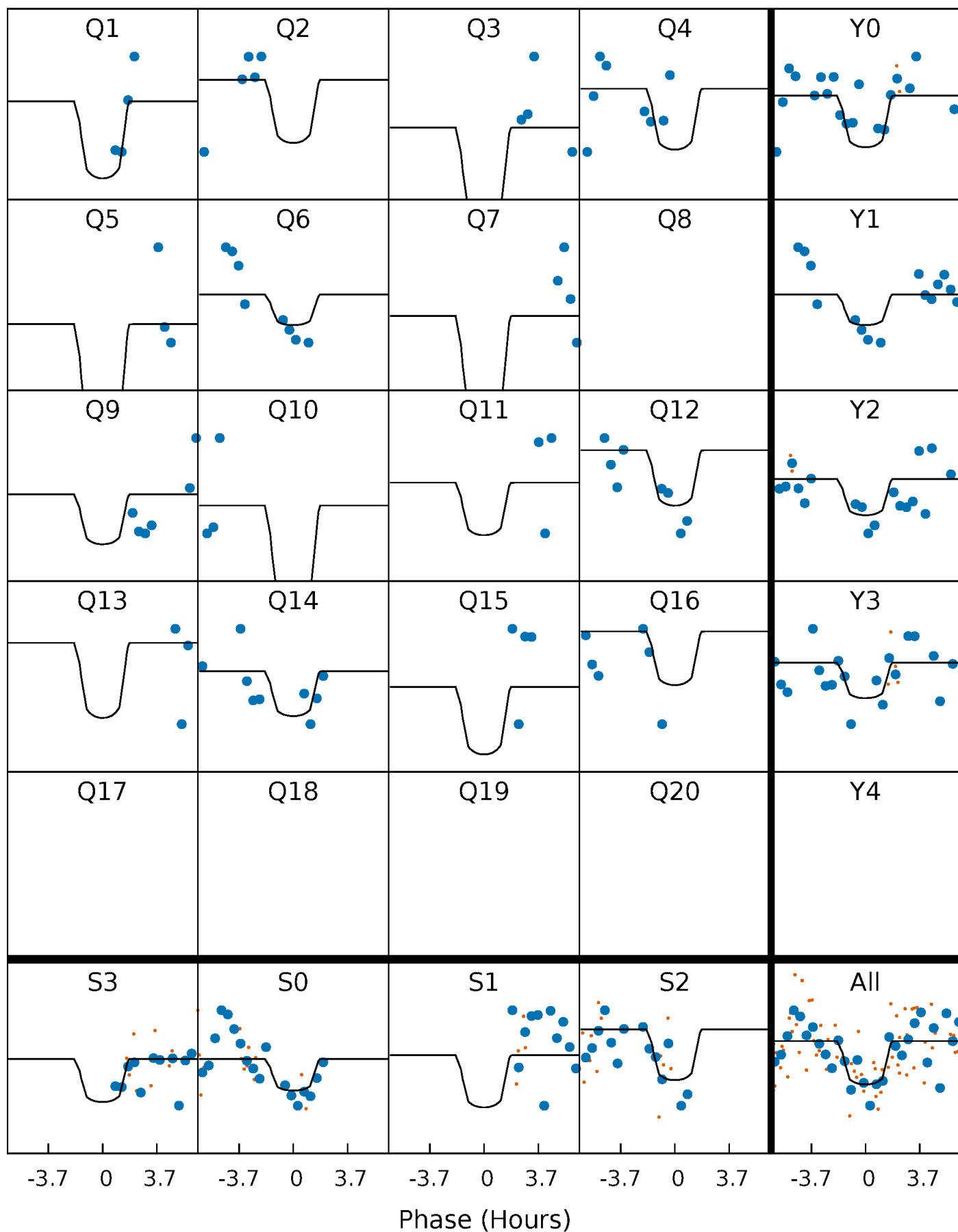
PDC Quarter-Phased Transit Curves

TCE 005564325-02 P= 43.372843 Days $T_0=156.373760$ (BKJD)



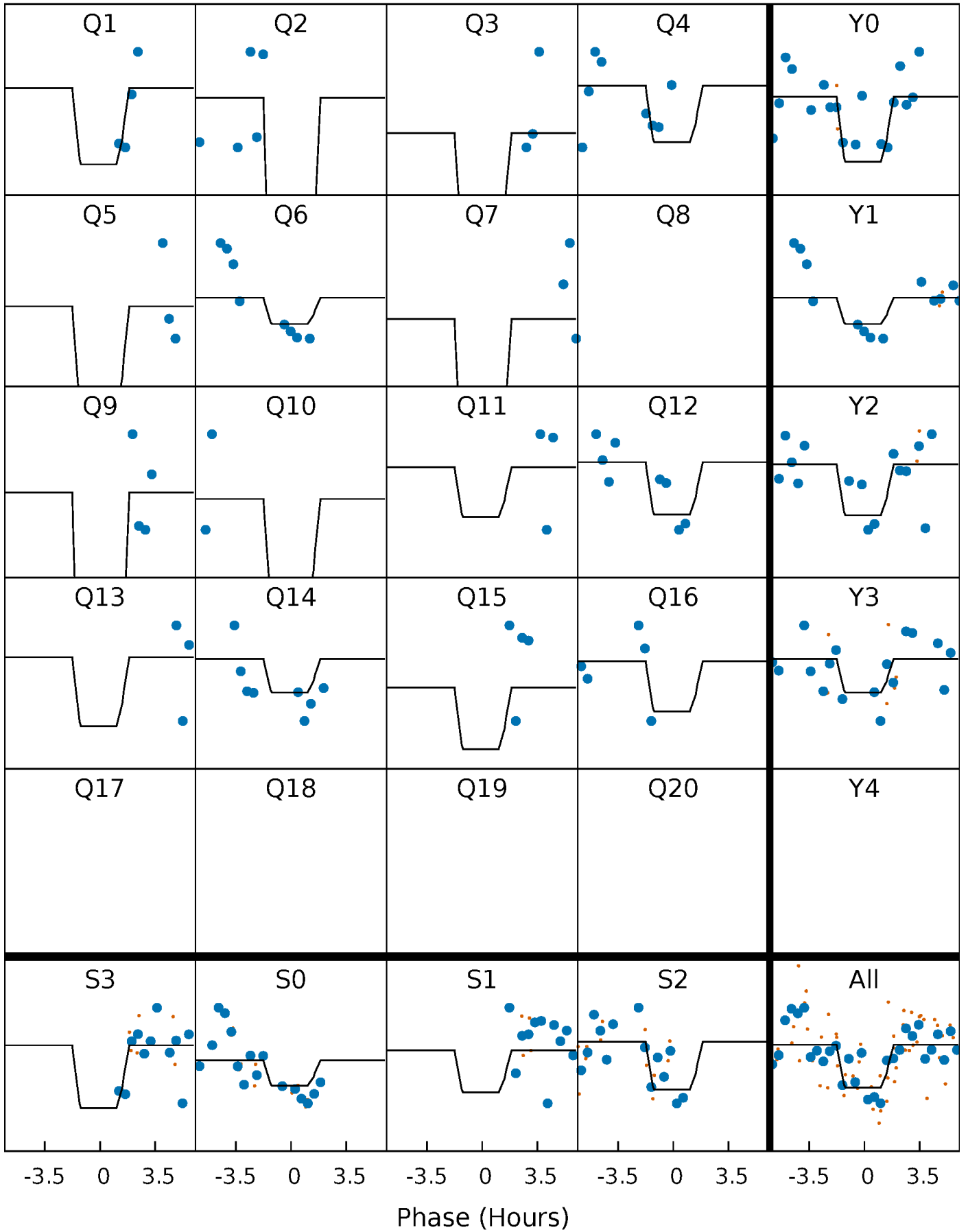
DV Quarter-Phased Transit Curves

TCE 005564325-02 P= 43.372843 Days $T_0=156.373760$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

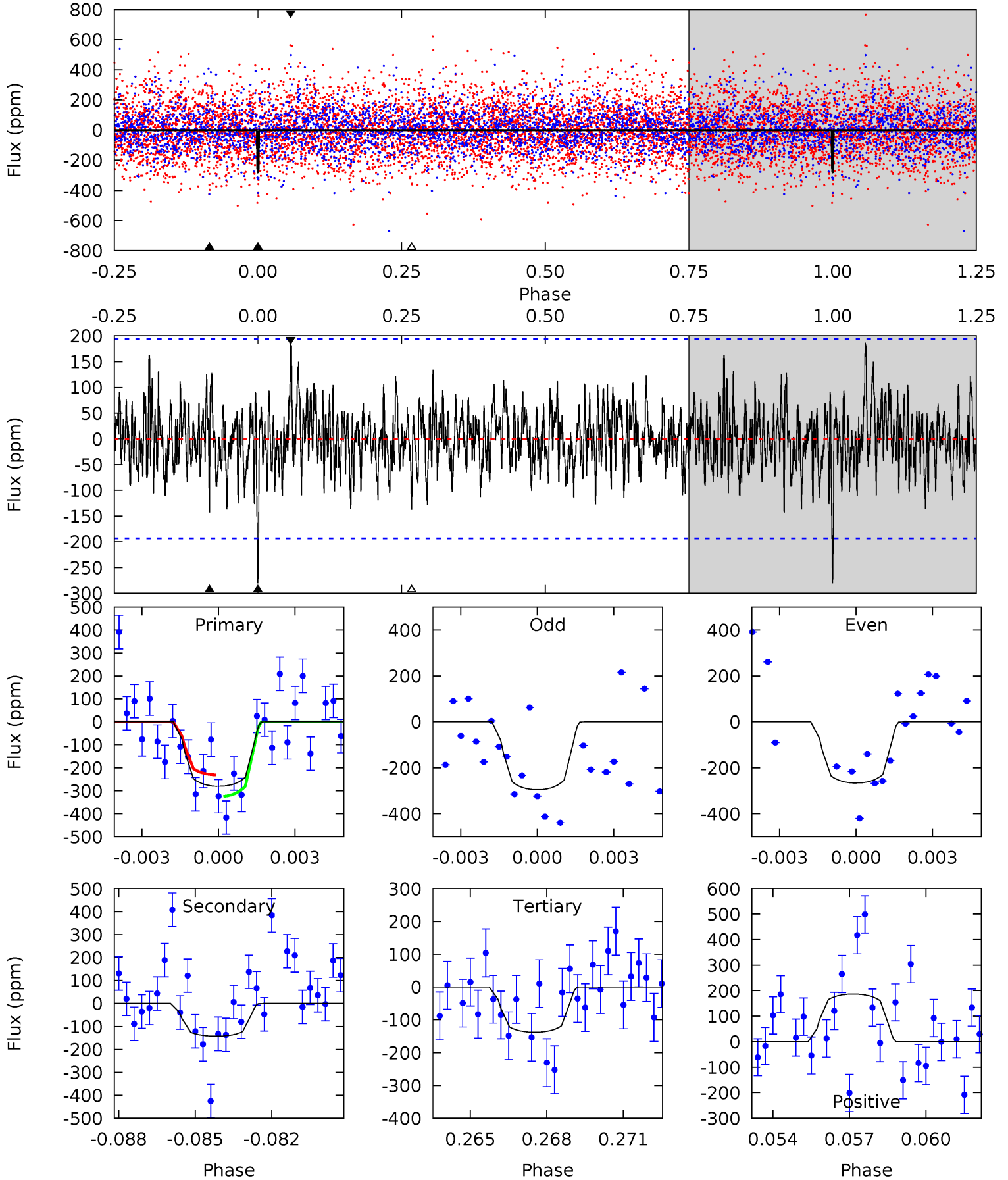
TCE 005564325-02 P= 43.373581 Days $T_0=156.359888$ (BKJD)



DV Model-Shift Uniqueness Test

005564325-02, P = 43.372843 Days, E = 113.000917 Days

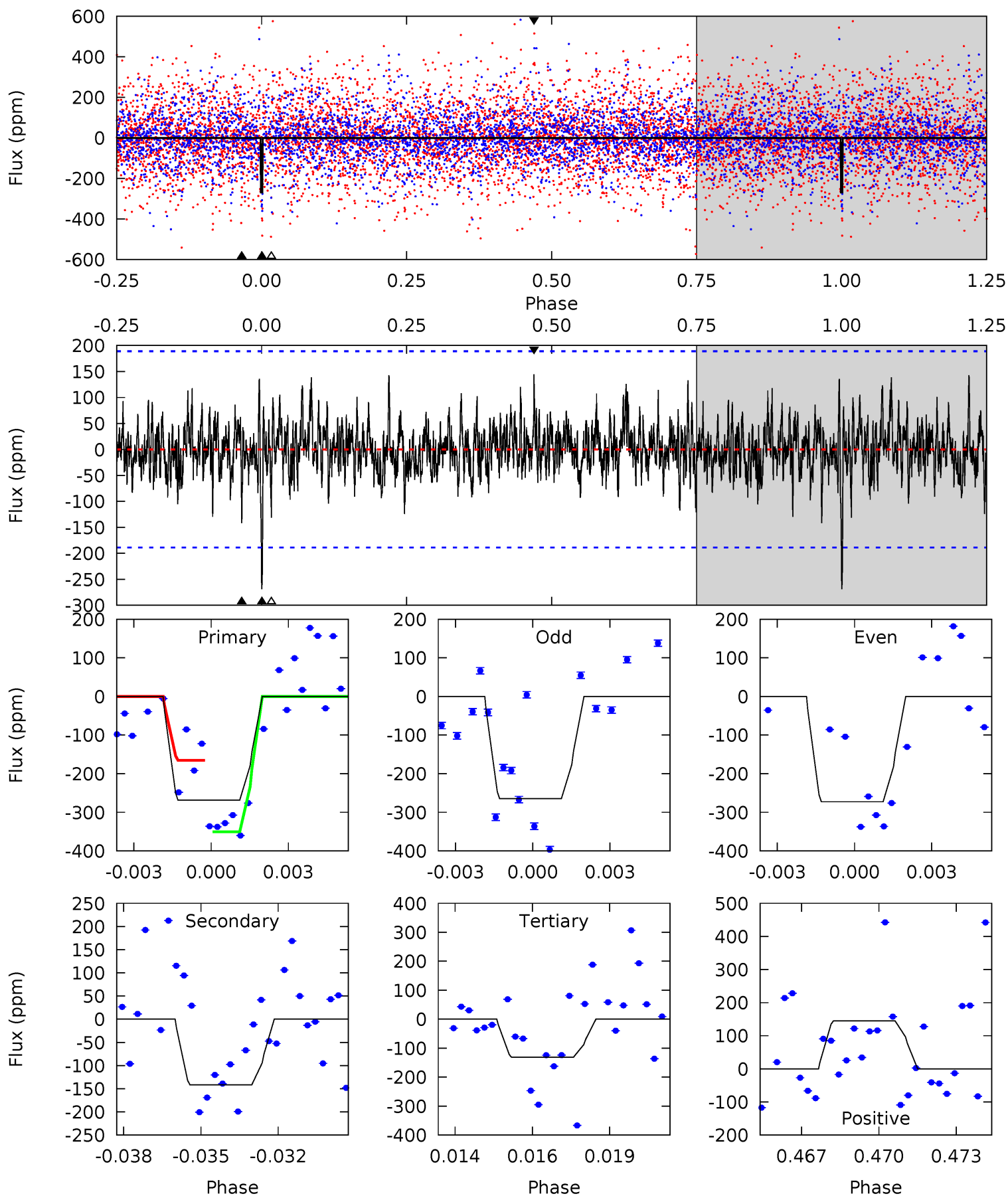
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.60	3.86	3.73	5.06	5.24	2.95	1.32	3.87	2.54	0.13	-1.20	0.39	1.01	0.40	1.24



Alt Model-Shift Uniqueness Test

005564325-02, P = 43.373581 Days, E = 112.986307 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.50	3.96	3.67	4.04	5.27	3.00	1.08	3.83	3.46	0.29	-0.08	0.11	1.13	0.35	2.52



Stellar Parameters For KIC 005564325

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6552^{+177}_{-196}	$3.639^{+0.312}_{-0.059}$	$-0.160^{+0.300}_{-0.250}$	$3.168^{+0.477}_{-1.112}$	$1.595^{+0.216}_{-0.325}$	$0.071^{+0.164}_{-0.019}$
	+3%/-3%	+9%/-2%	+188%/-156%	+15%/-35%	+14%/-20%	+232%/-26%
Source	PHO1	FLK73	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 005564325-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-143 ± 37	$8.29^{+7.56}_{-5.58}$	1309^{+77}_{-109}	4593^{+3070}_{-987}	94^{+706}_{-71}
Alt.	-142 ± 36	$7.98^{+6.68}_{-5.38}$	1311^{+71}_{-119}	4628^{+3532}_{-955}	97^{+872}_{-70}

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 $A_{obs} \gg 1.0$

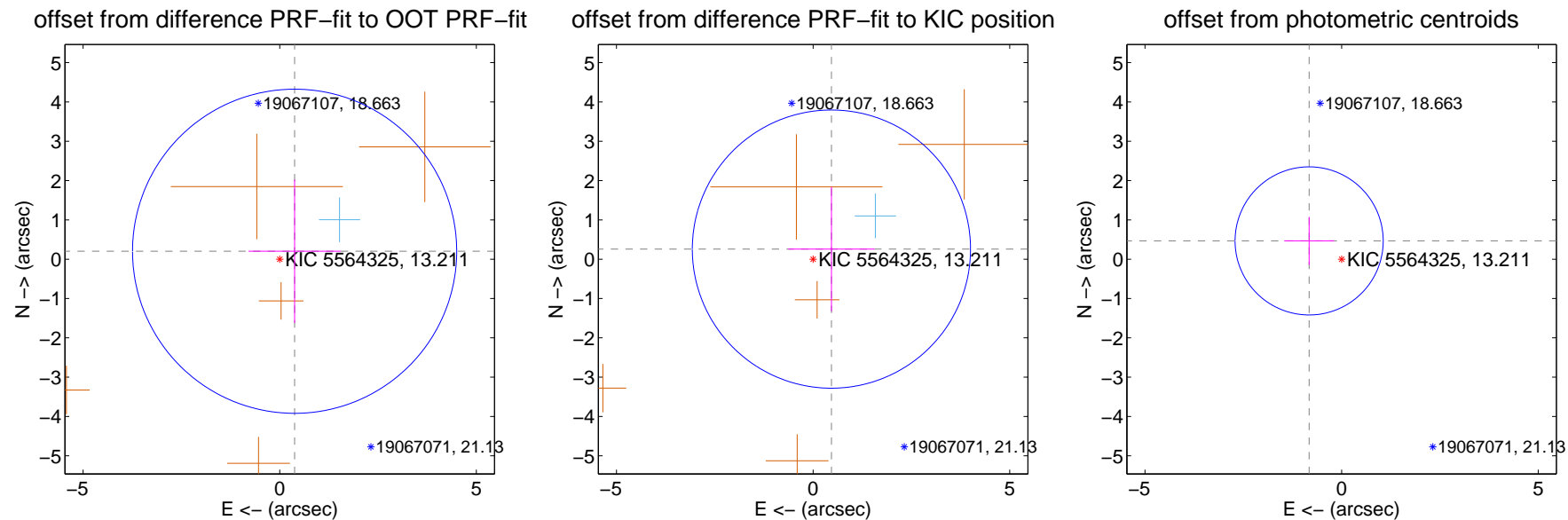
DV Centroid Data

Supplemental centroid analysis for 005564325-02. Kepler magnitude: 13.21. Transit SNR 10.91

There are 1 quarters with good PRF difference image offsets

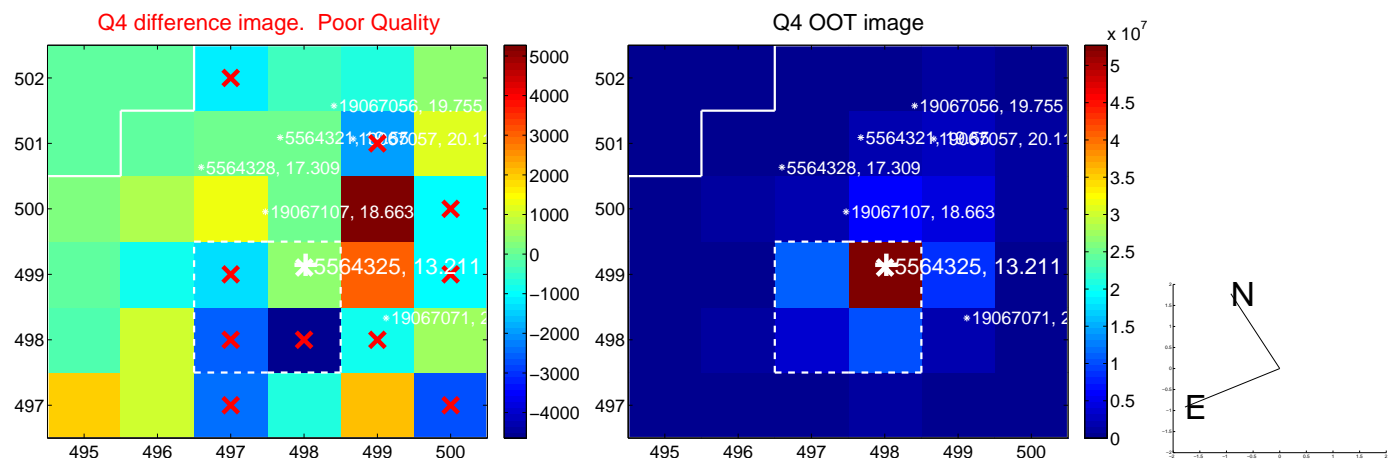
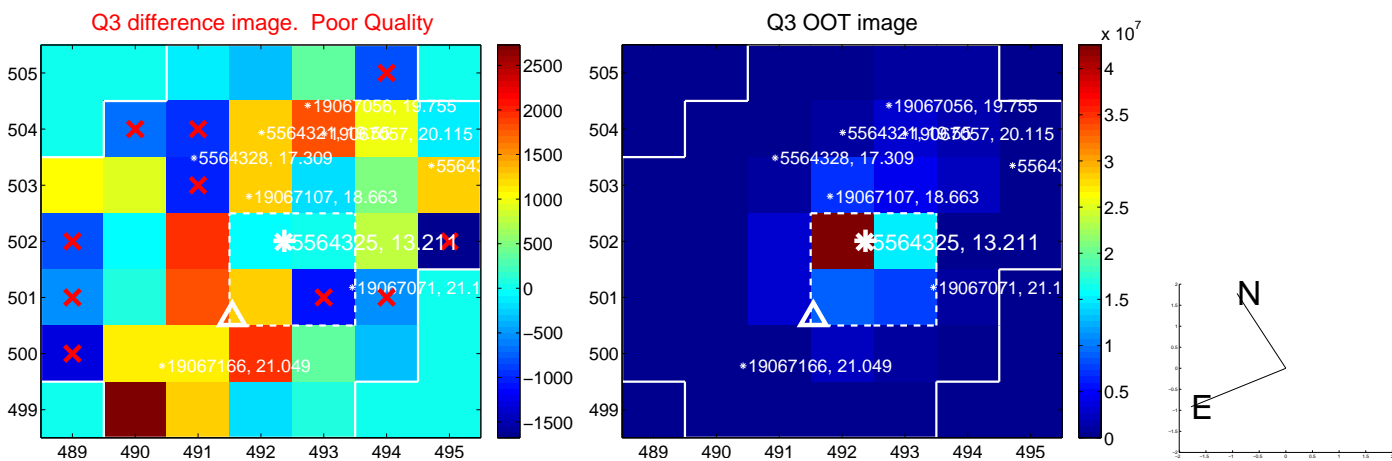
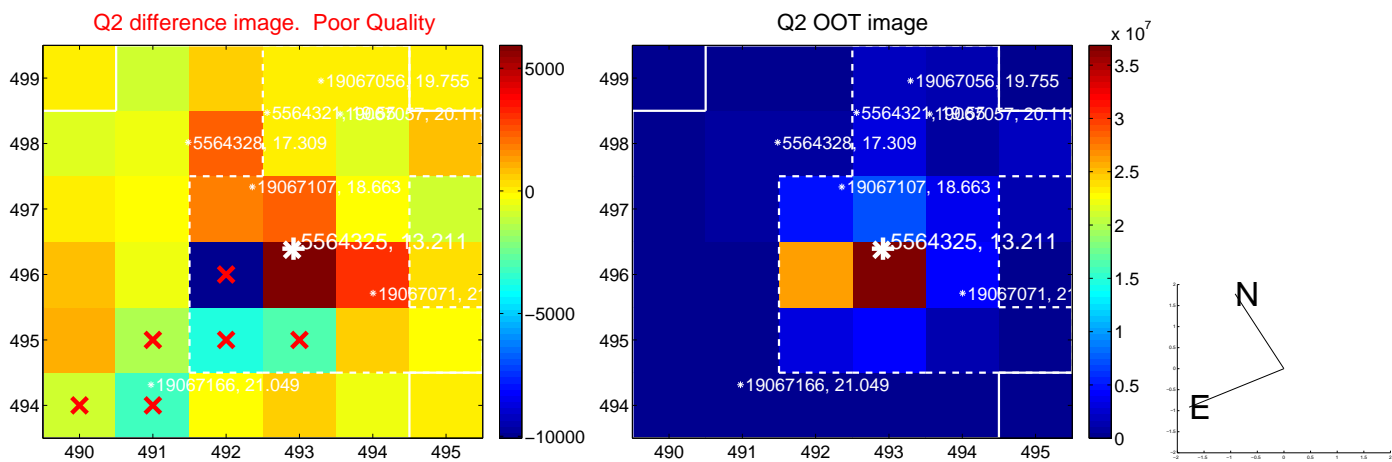
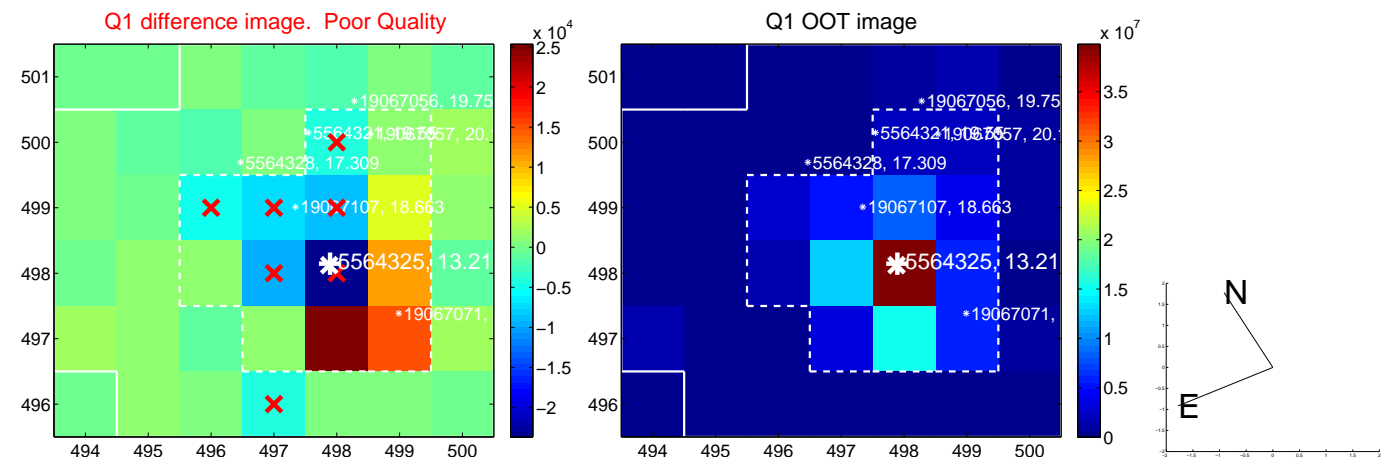
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.430 ± 1.374	0.31	-0.379 ± 1.173	0.202 ± 1.820
PRF-fit source offset from KIC position	0.532 ± 1.179	0.45	-0.466 ± 1.096	0.257 ± 1.583
photometric centroid source offset	0.95 ± 0.63	1.51	0.83 ± 0.63	0.47 ± 0.61

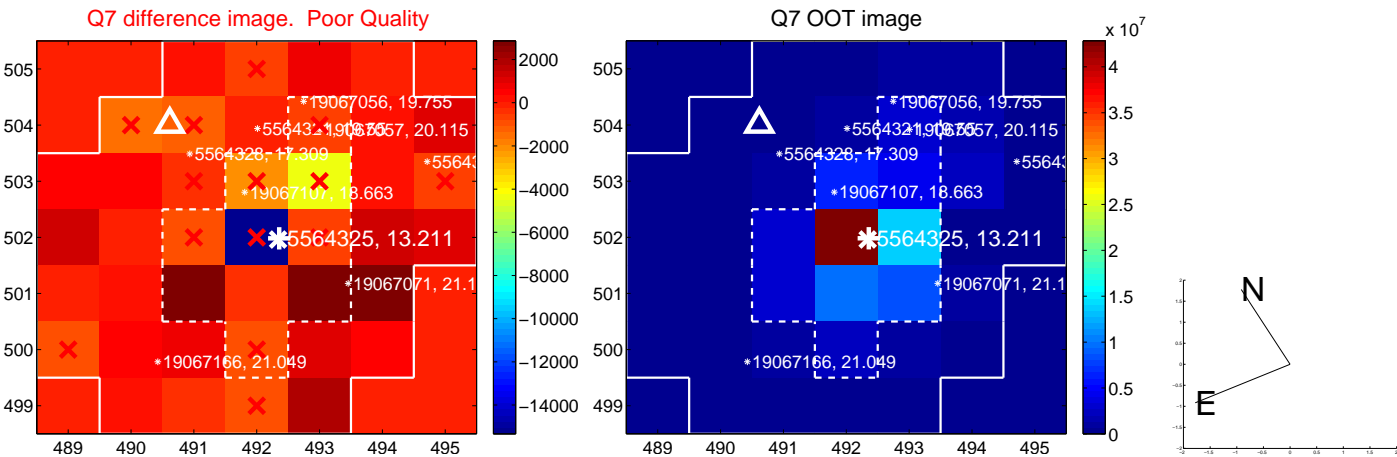
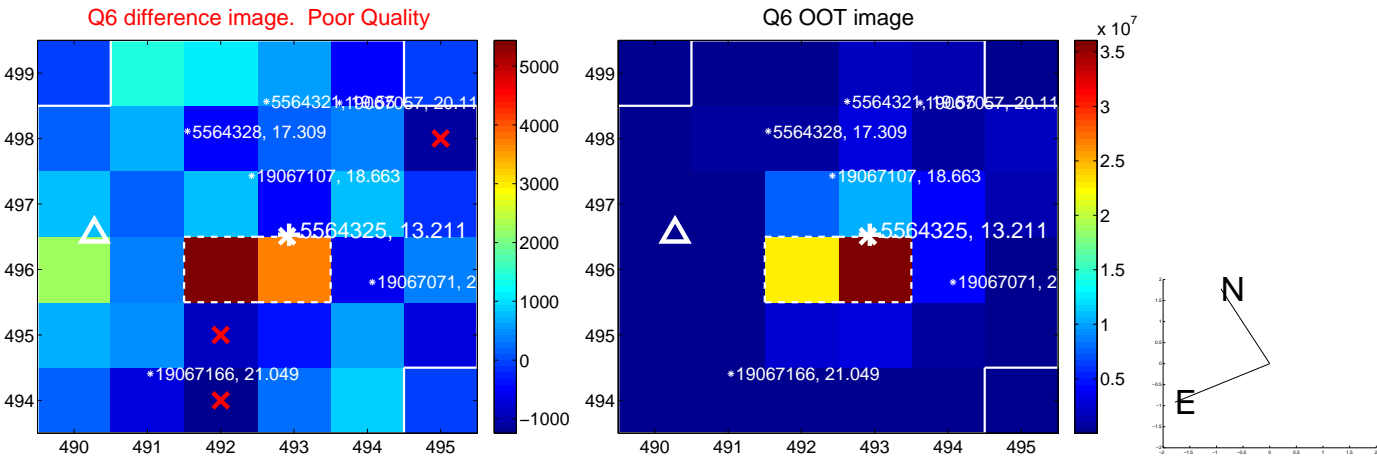
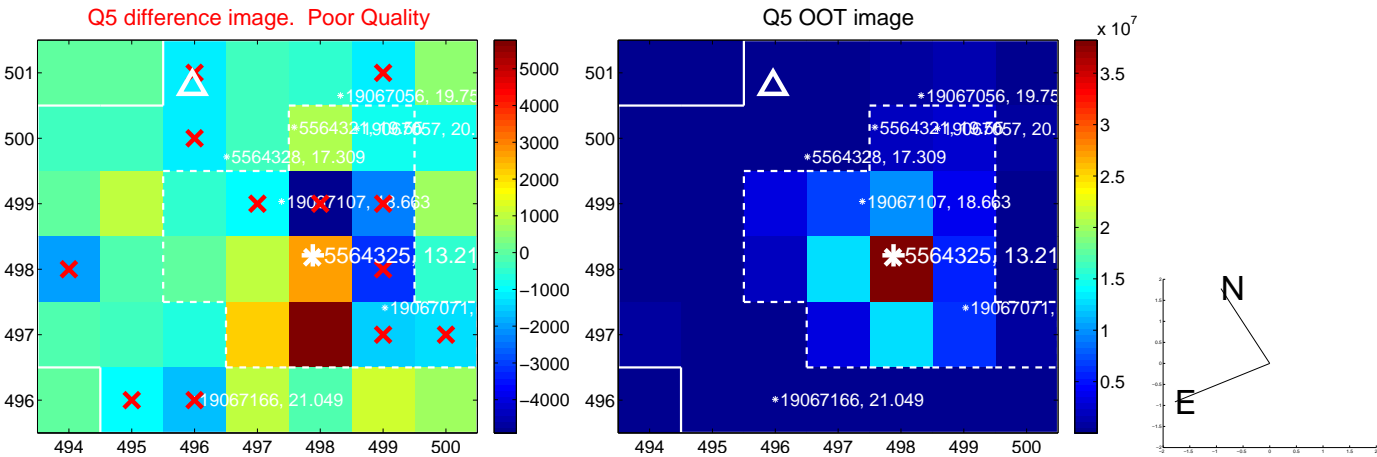


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

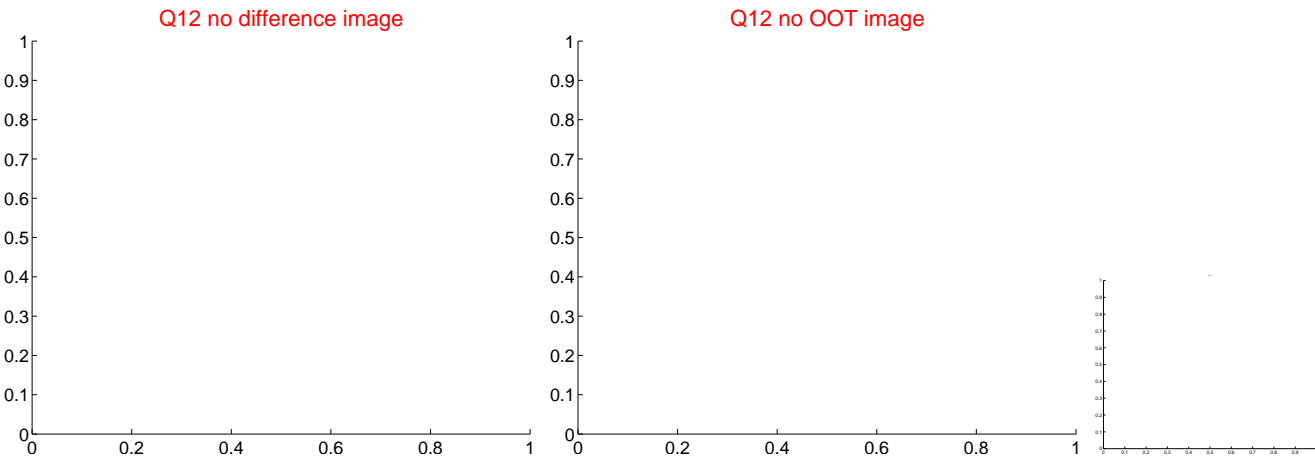
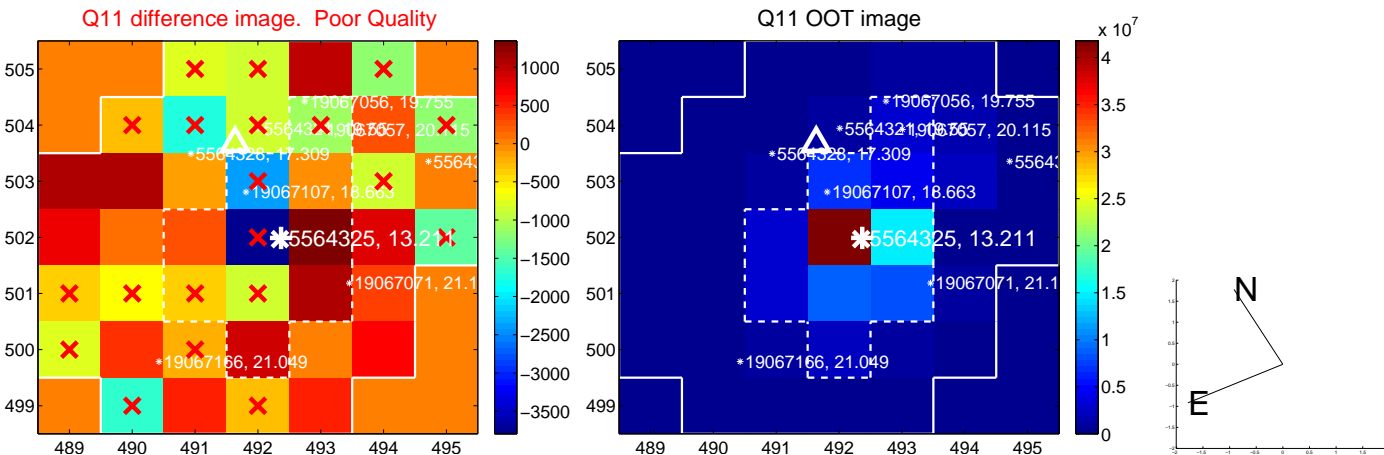
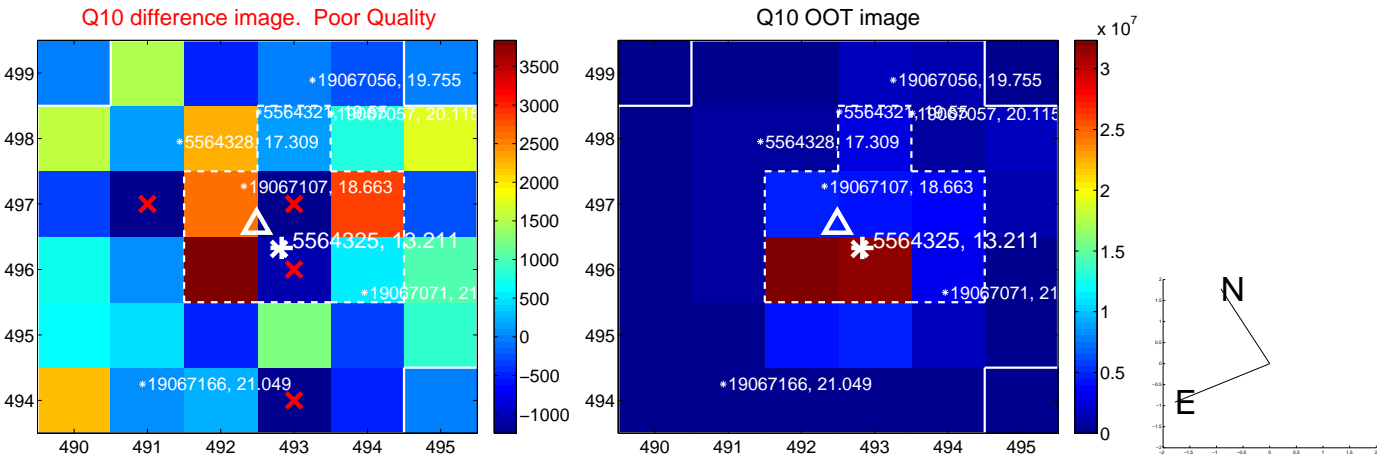
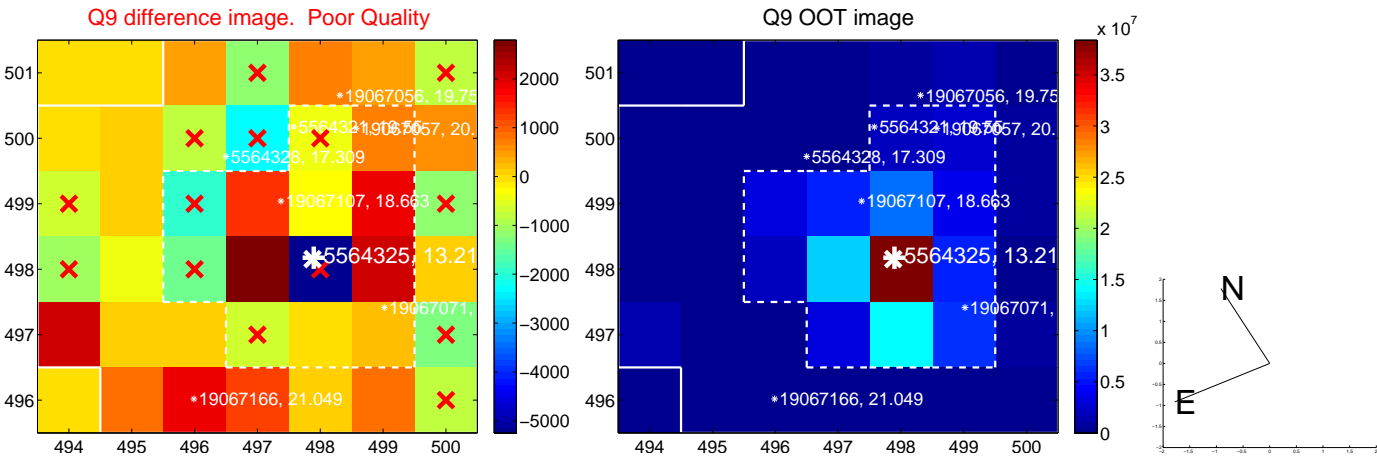
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



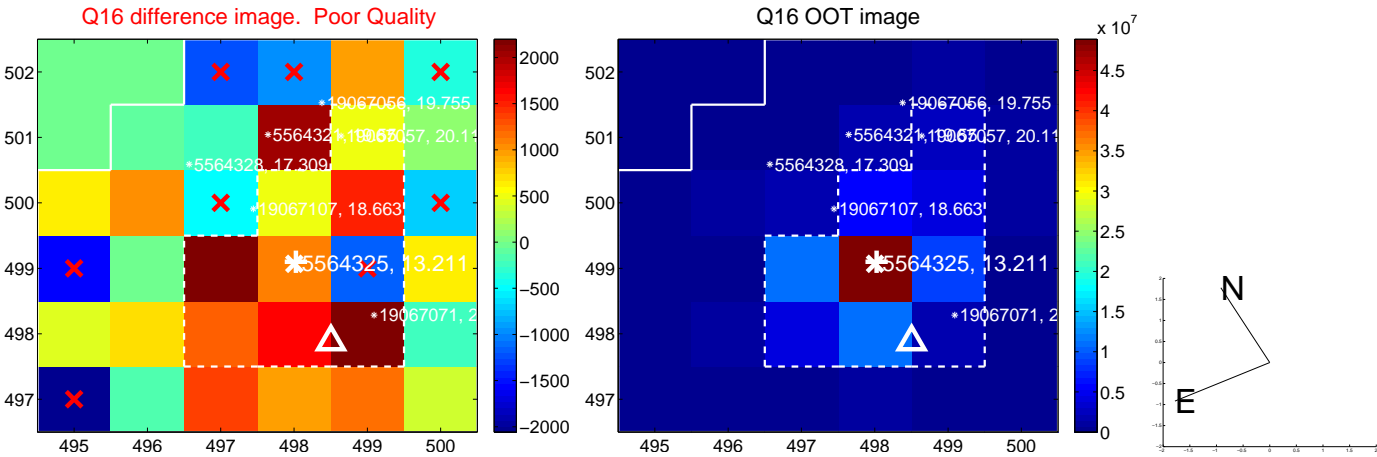
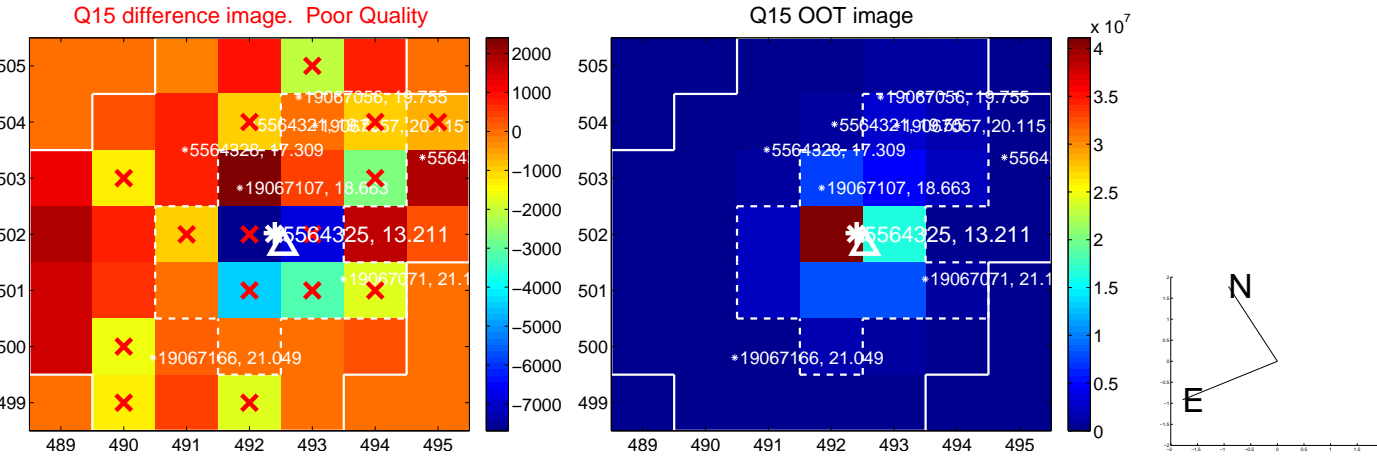
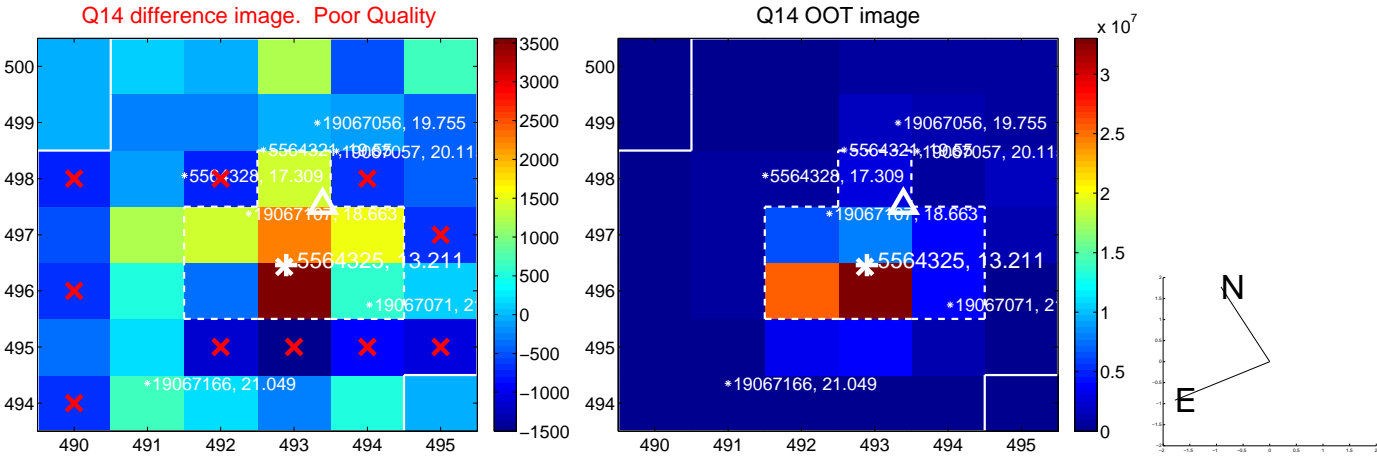
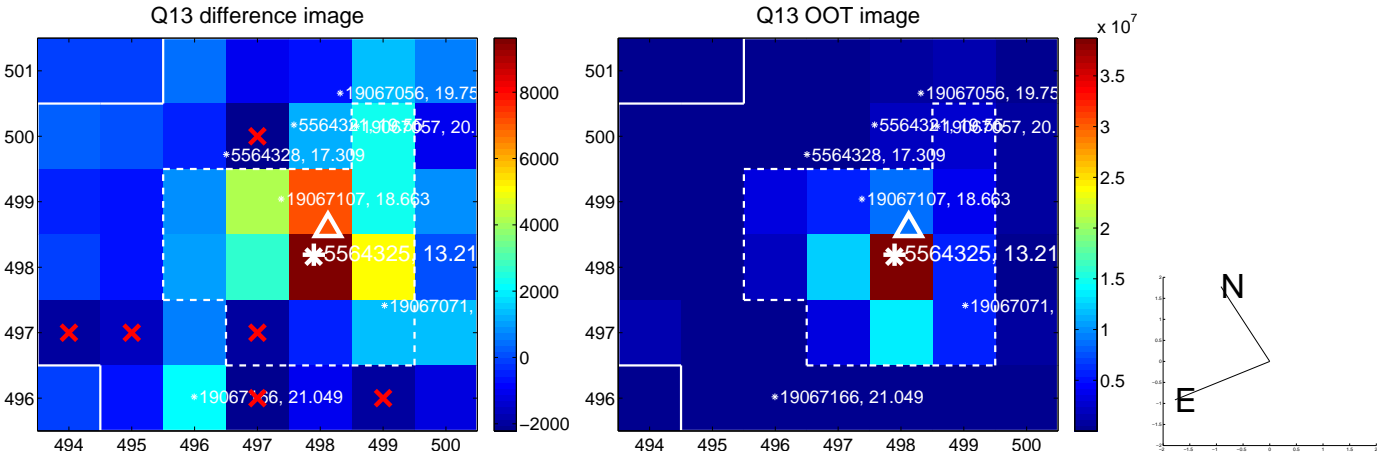
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



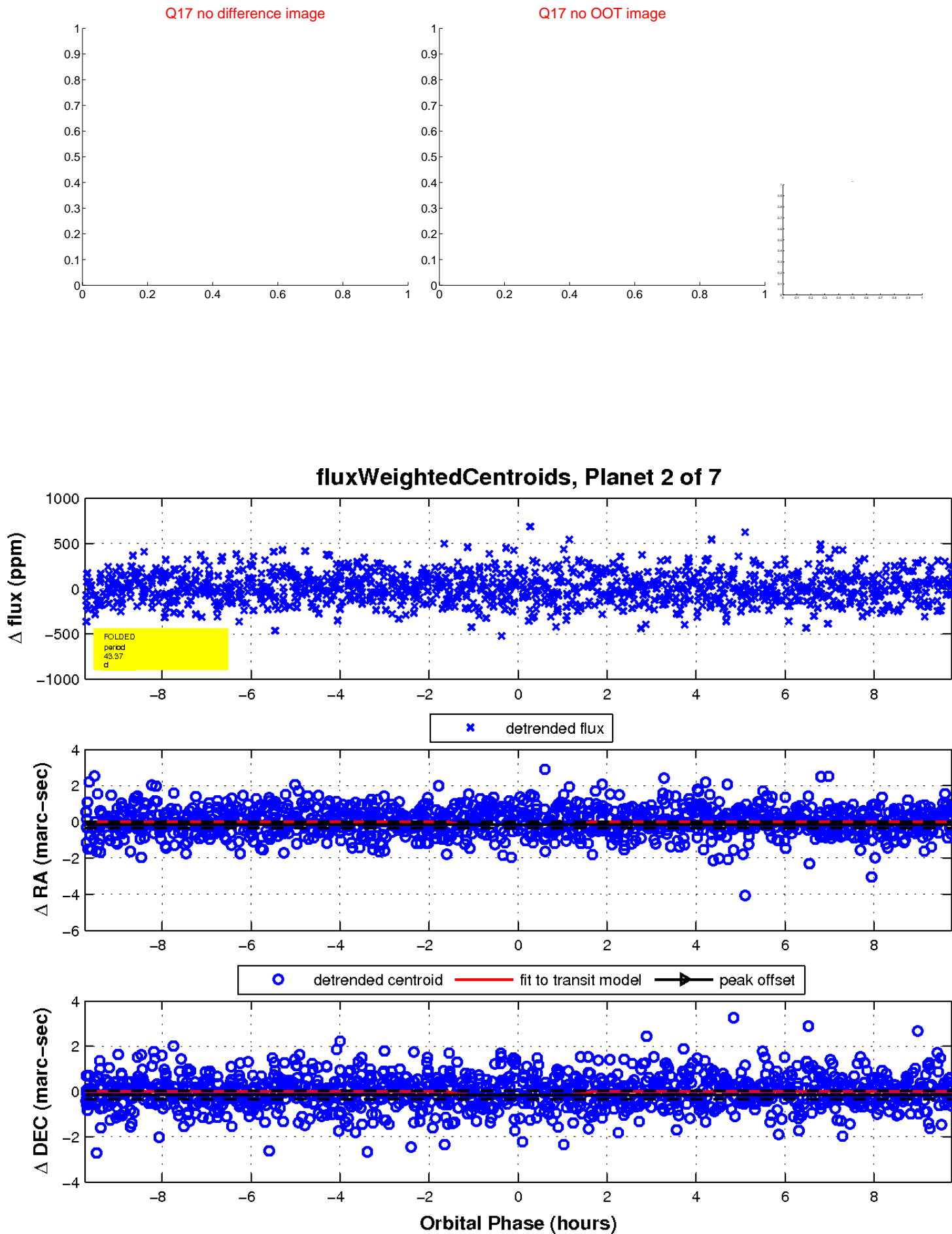
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



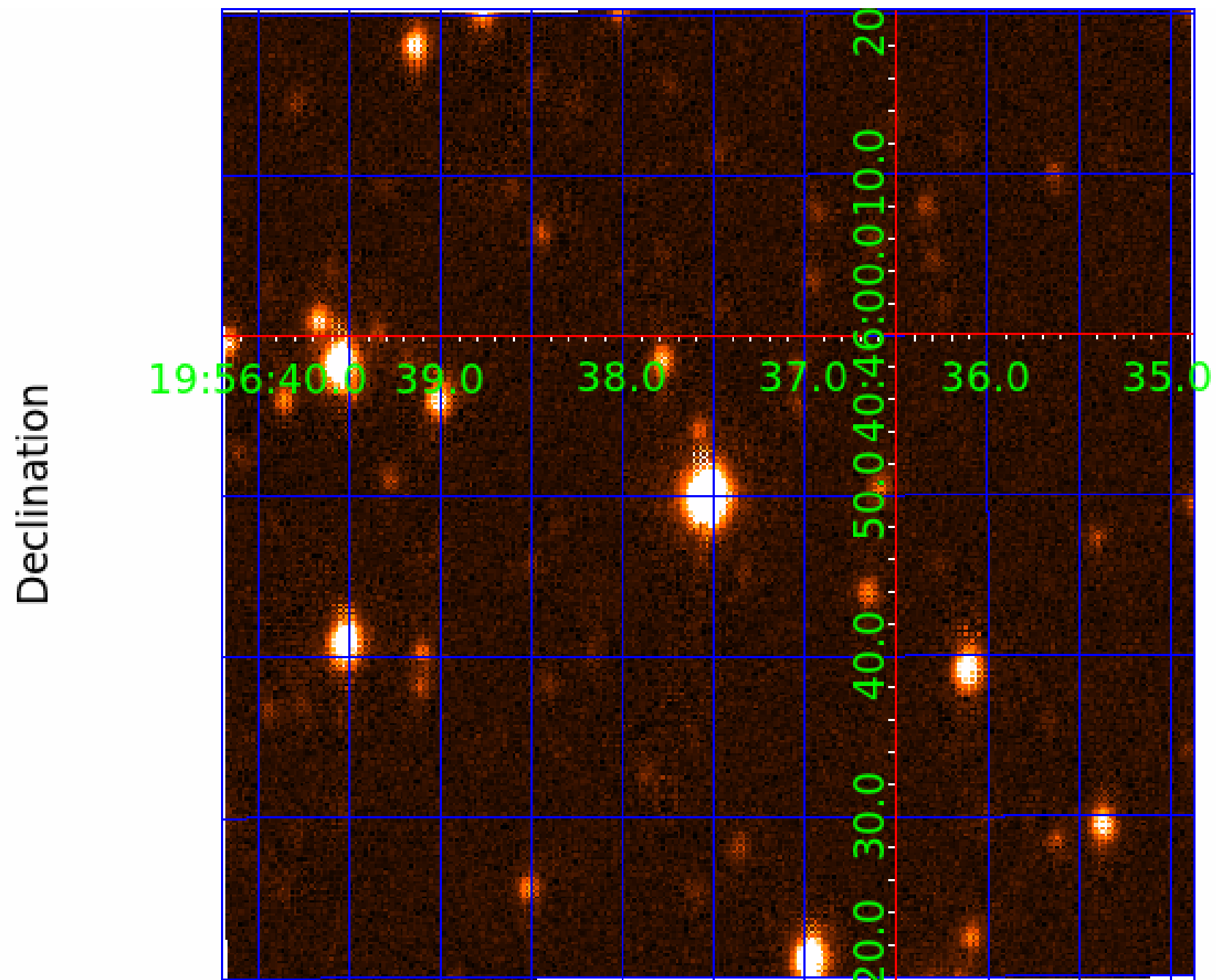
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 005564325

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})
005564325-01	OBS	No	0.744837	132.226689	17.9	5.200	10.4	11.3	3.17	6552	1.35	46935.19
005564325-02	OBS	No	43.372843	156.373760	280.1	3.250	10.5	10.9	3.17	6552	6.11	207.95
005564325-03	OBS	No	22.751523	143.553319	215.4	1.624	10.8	10.7	3.17	6552	5.44	491.55
005564325-04	OBS	No	57.885677	173.463522	261.3	2.294	9.2	11.2	3.17	6552	5.49	141.52
005564325-05	OBS	No	25.267305	148.962650	111.3	5.690	10.0	8.5	3.17	6552	3.77	427.40
005564325-06	OBS	No	38.901833	169.144273	290.7	2.992	9.1	11.4	3.17	6552	6.99	240.41
005564325-07	OBS	No	20.788375	149.346674	324.0	1.238	9.7	9.5	3.17	6552	9.35	554.39

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005564325-01	OBS	FP	0.00	1	0	0	0	LPP_DV
005564325-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005564325-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_MEAS
005564325-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005564325-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005564325-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
005564325-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

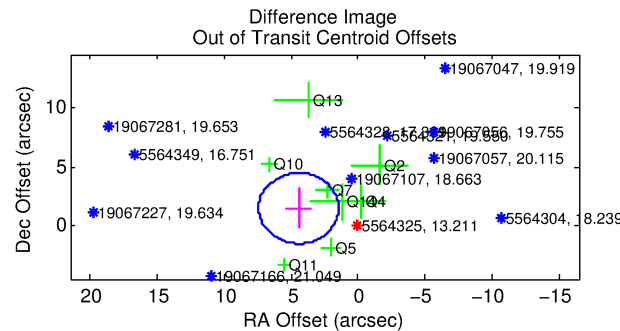
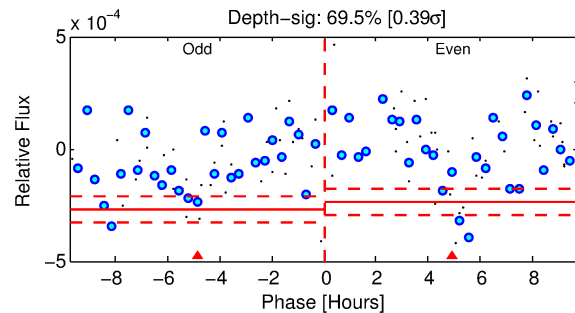
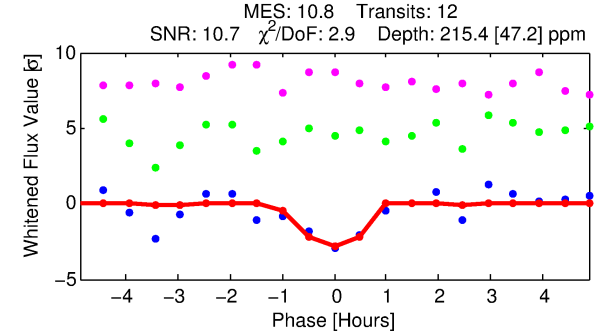
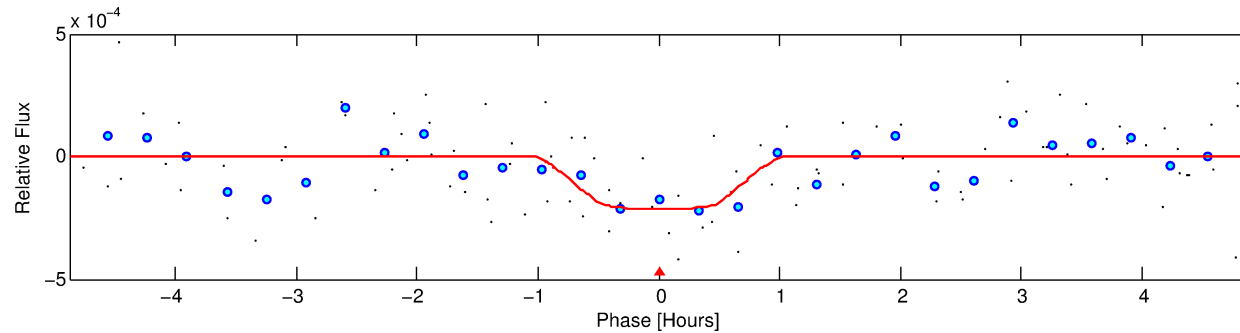
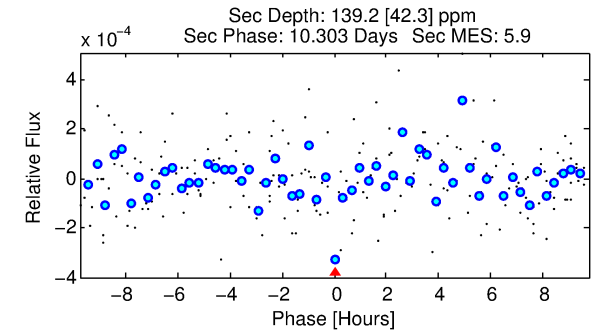
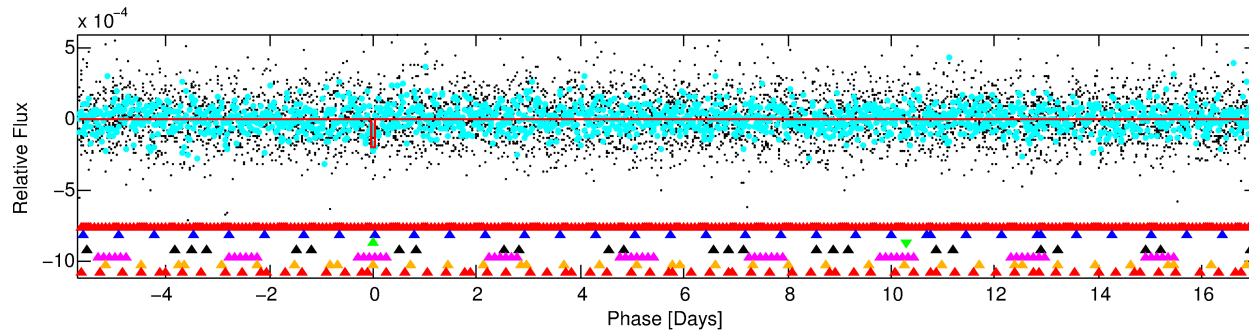
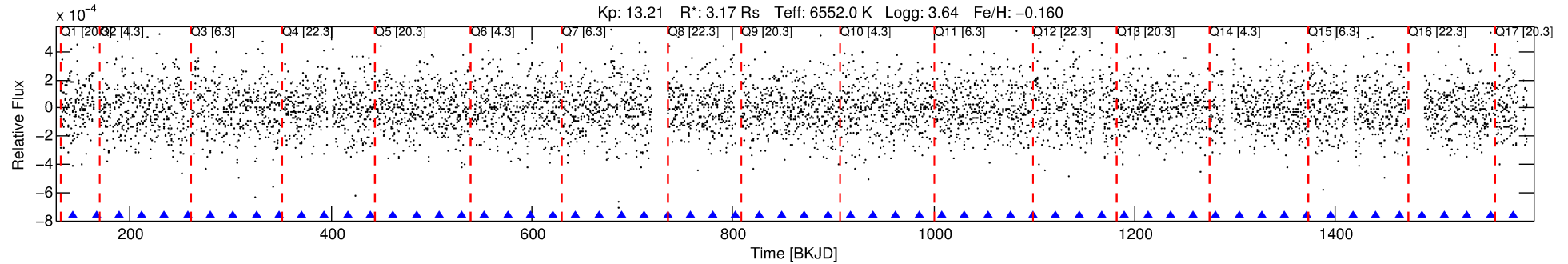
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005564325-03

No Significant Match Found

DV One-Page Summary

KIC: 5564325 Candidate: 3 of 7 Period: 22.752 d



DV Fit Results:

Period = 22.75152 [0.00029] d
Epoch = 143.5533 [0.0106] BKJD
Rp/R* = 0.0157 [0.0266]
a/R* = 50.59 [502.00]
b = 0.90 [2.14]
Seff = 491.55 [268.54]
Teq = 1201 [164] K
Rp = 5.44 [9.40] Re
a = 0.1836 [0.0615] AU
Ag = 87.36 [300.73] [0.29σ]
Teffp = 5675 [4828] K [0.93σ]

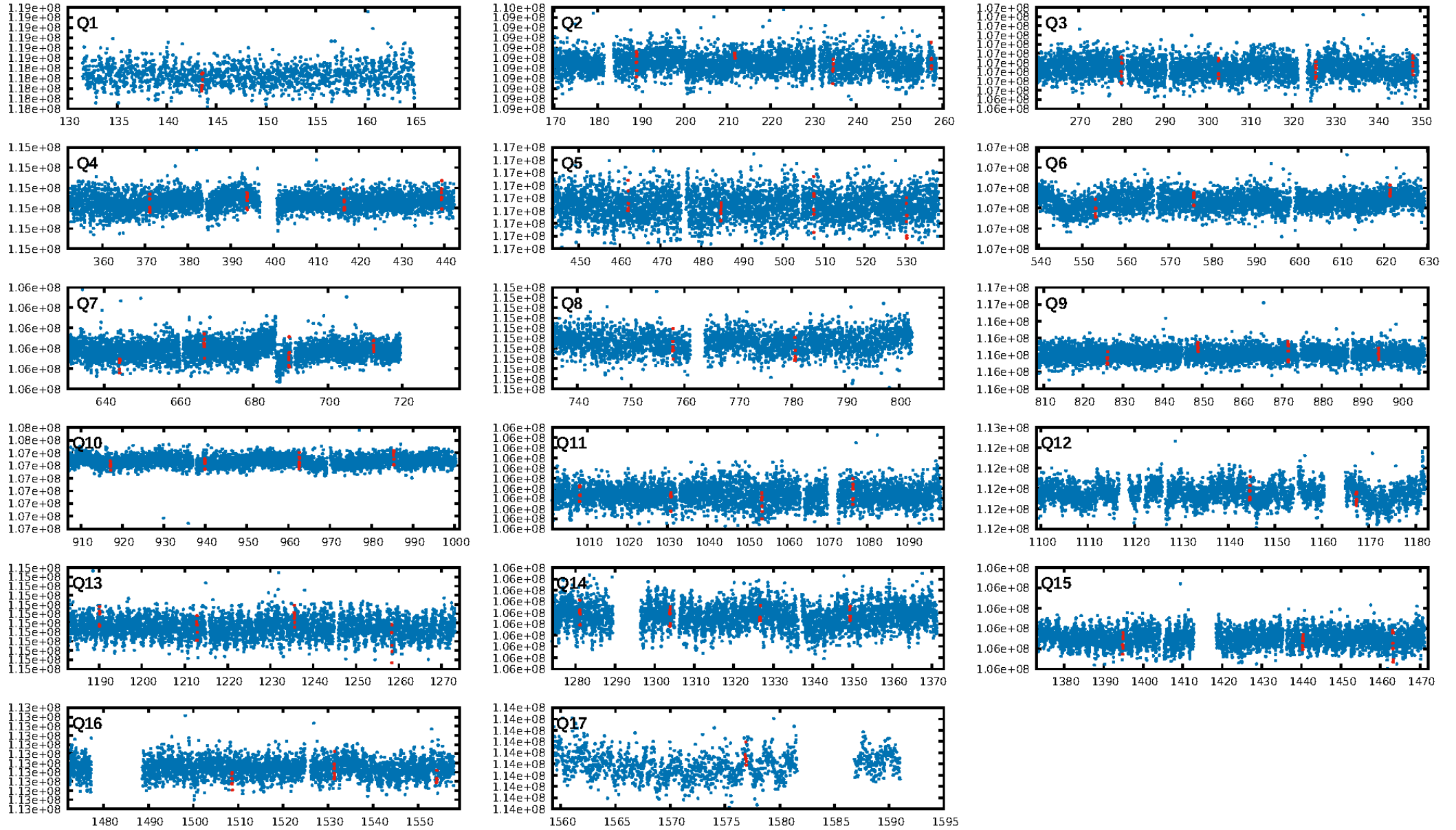
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [23.07σ]
LongPeriod-sig: 100.0% [10.20σ]
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 33.2%
Bootstrap-pfa: 1.32e-10
RollingBand-fgt: 1.00 [11/11]
GhostDiagnostic-chr: 1.076
Centroid-sig: 84.3%
Centroid-so: 0.566 arcsec [0.67σ]
OotOffset-rm: 4.690 arcsec [4.71σ]
KicOffset-rm: 4.595 arcsec [4.55σ]
OotOffset-st: 3/2/1/2 [8]
KicOffset-st: 3/2/1/2 [8]
DiffImageQuality-fgm: 0.12 [1/8]
DiffImageOverlap-fno: 0.29 [5/17]

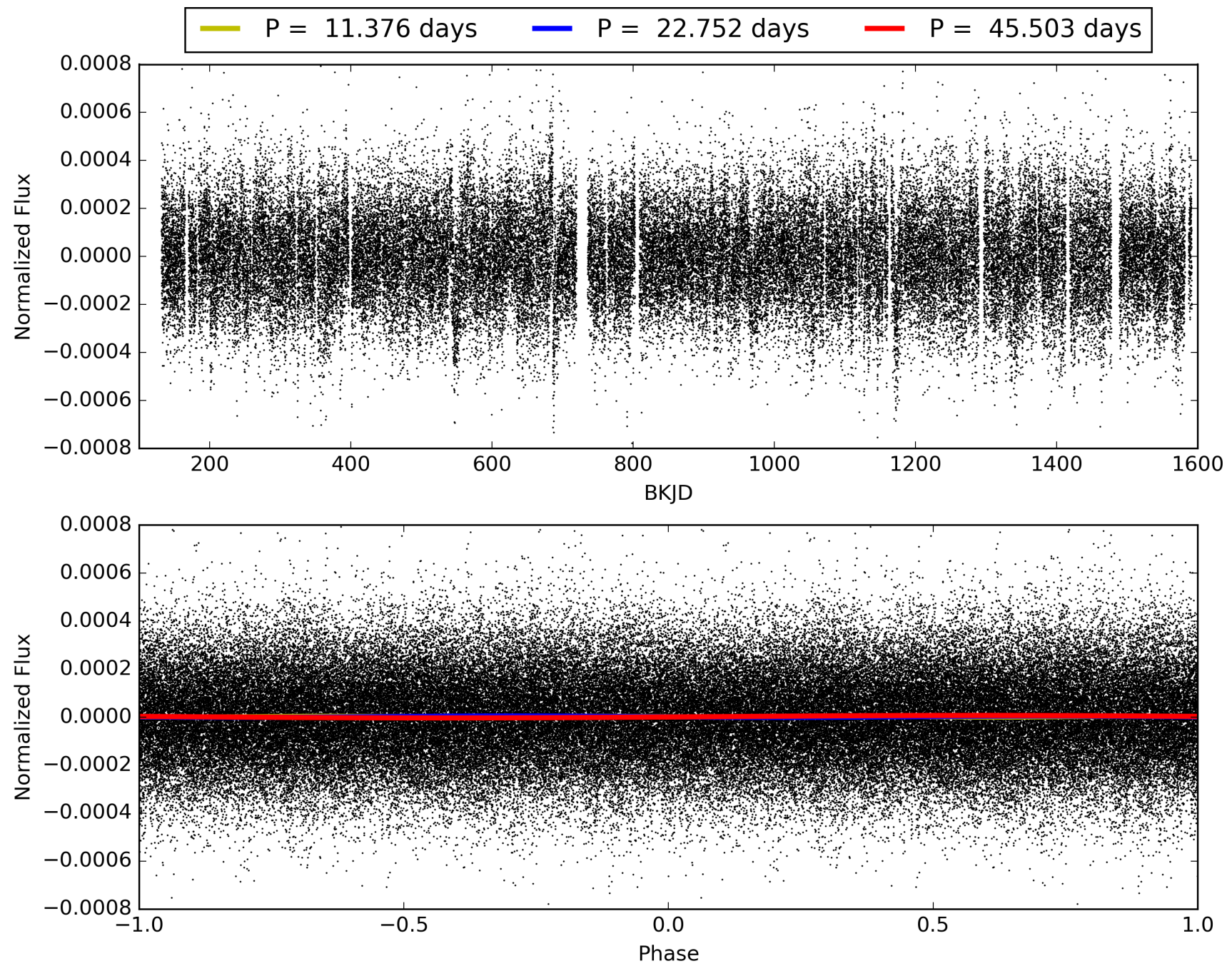
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 08:24:11 Z

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

TCE 005564325-03, PDC Light Curves

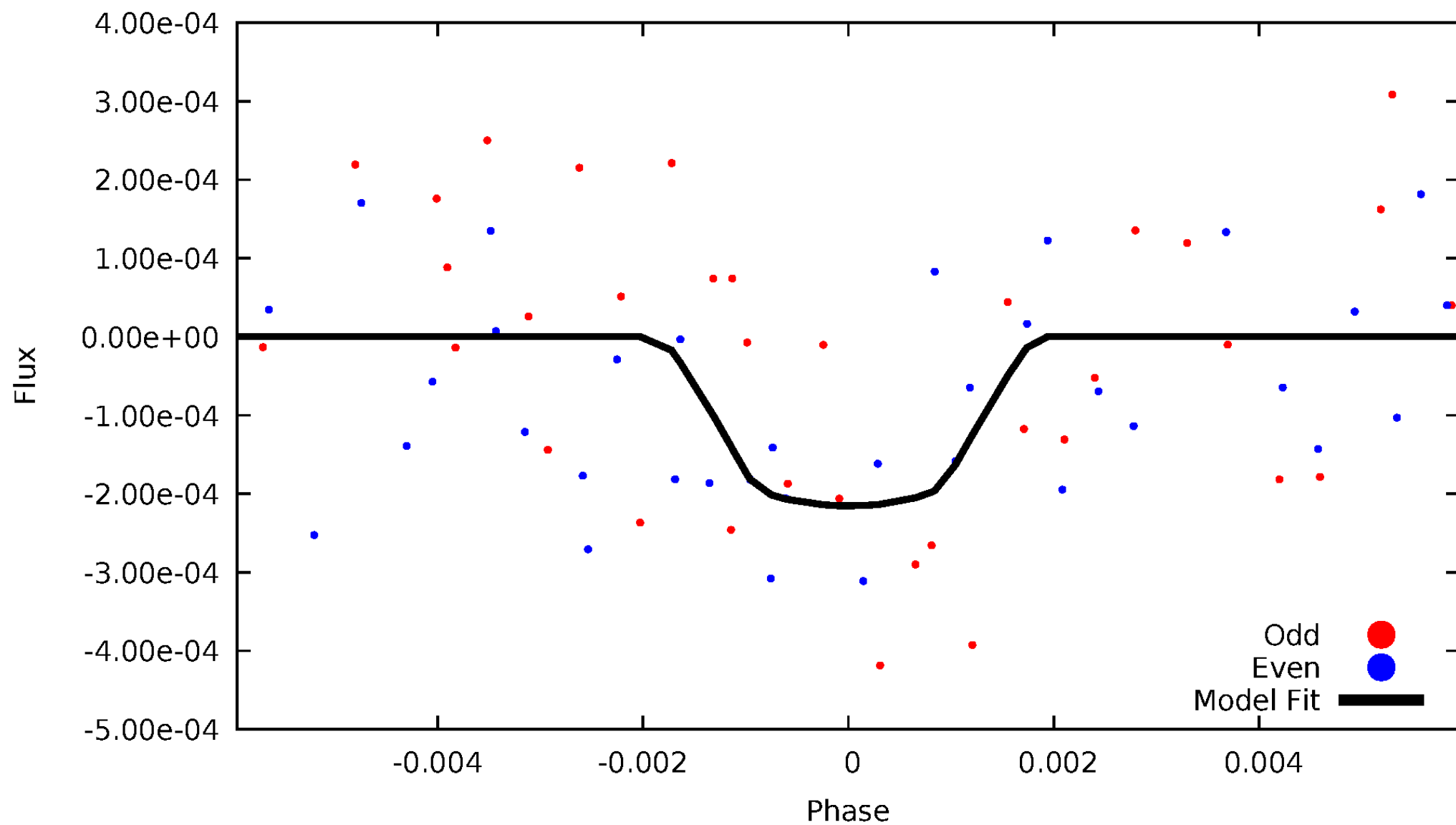


TCE 005564325-03



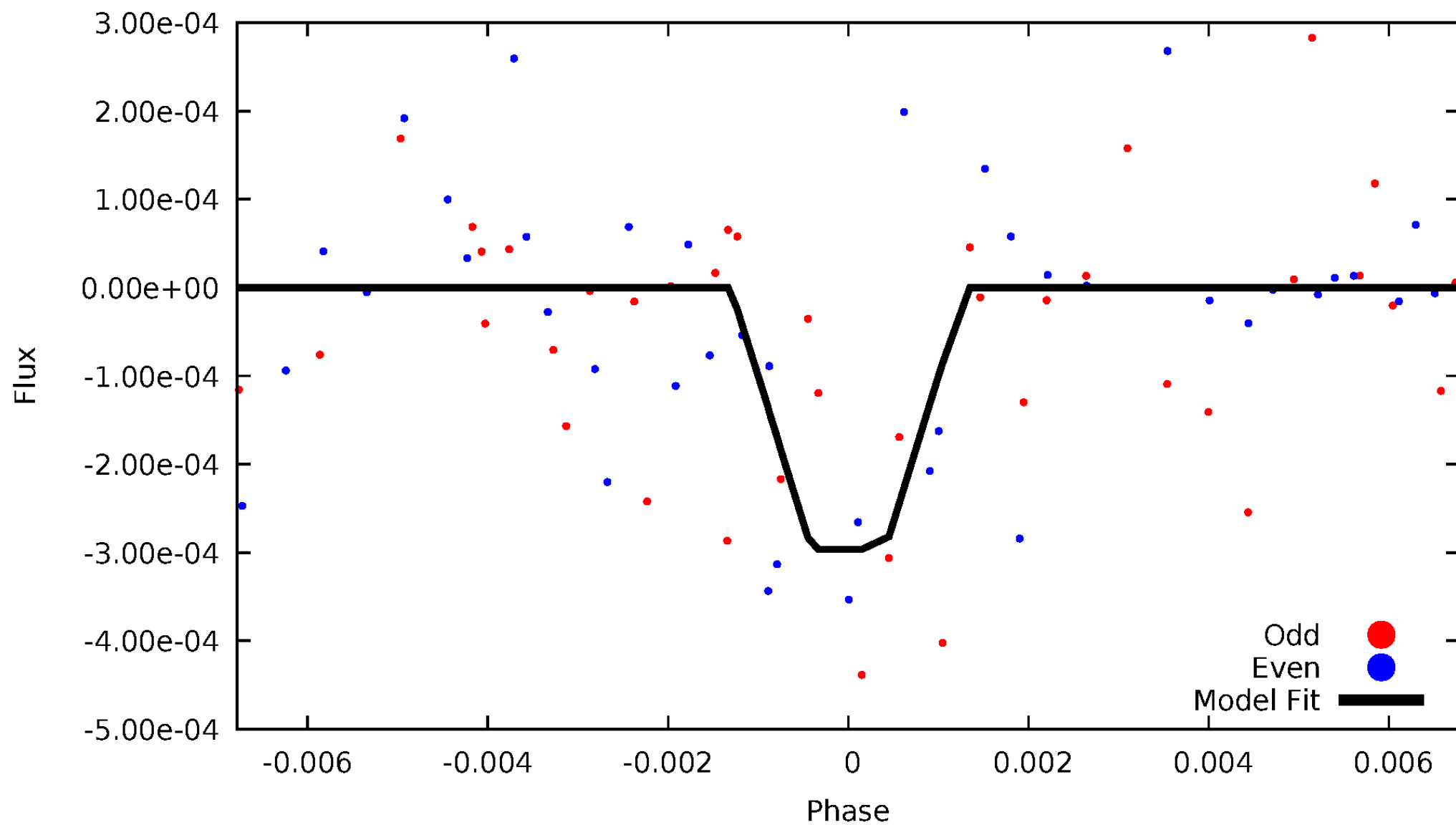
DV Odd/Even

TCE 005564325-03



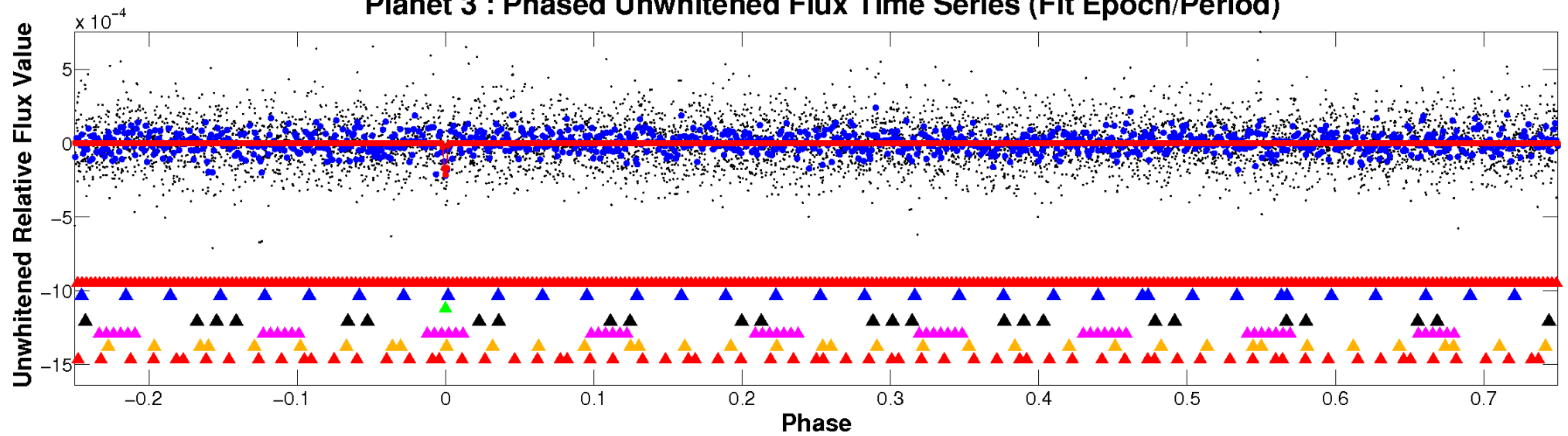
ALT Odd/Even

TCE 005564325-03

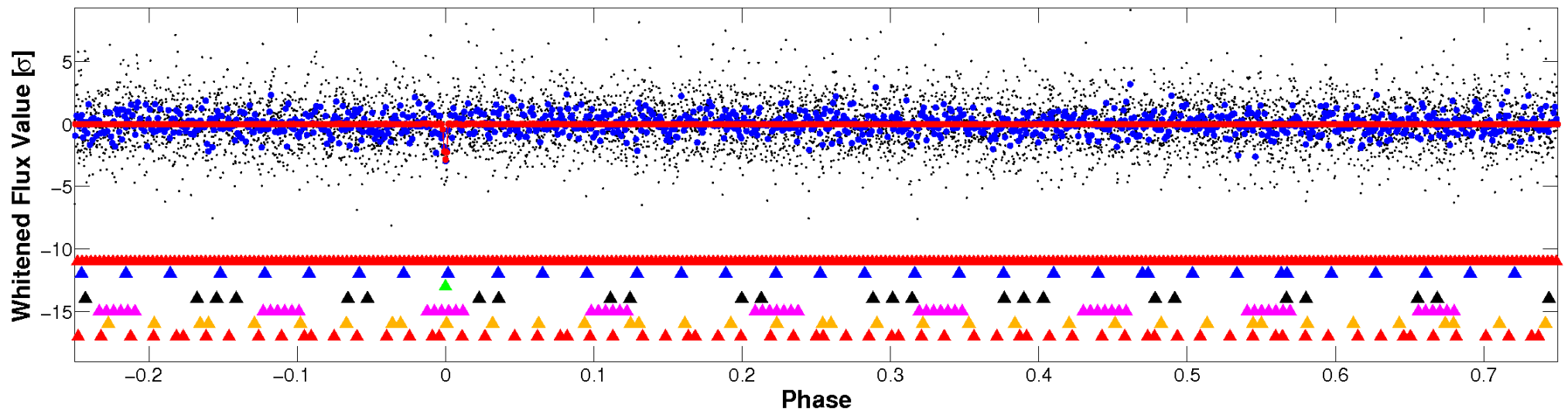


Non-Whitened Vs. Whitened Light Curve

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

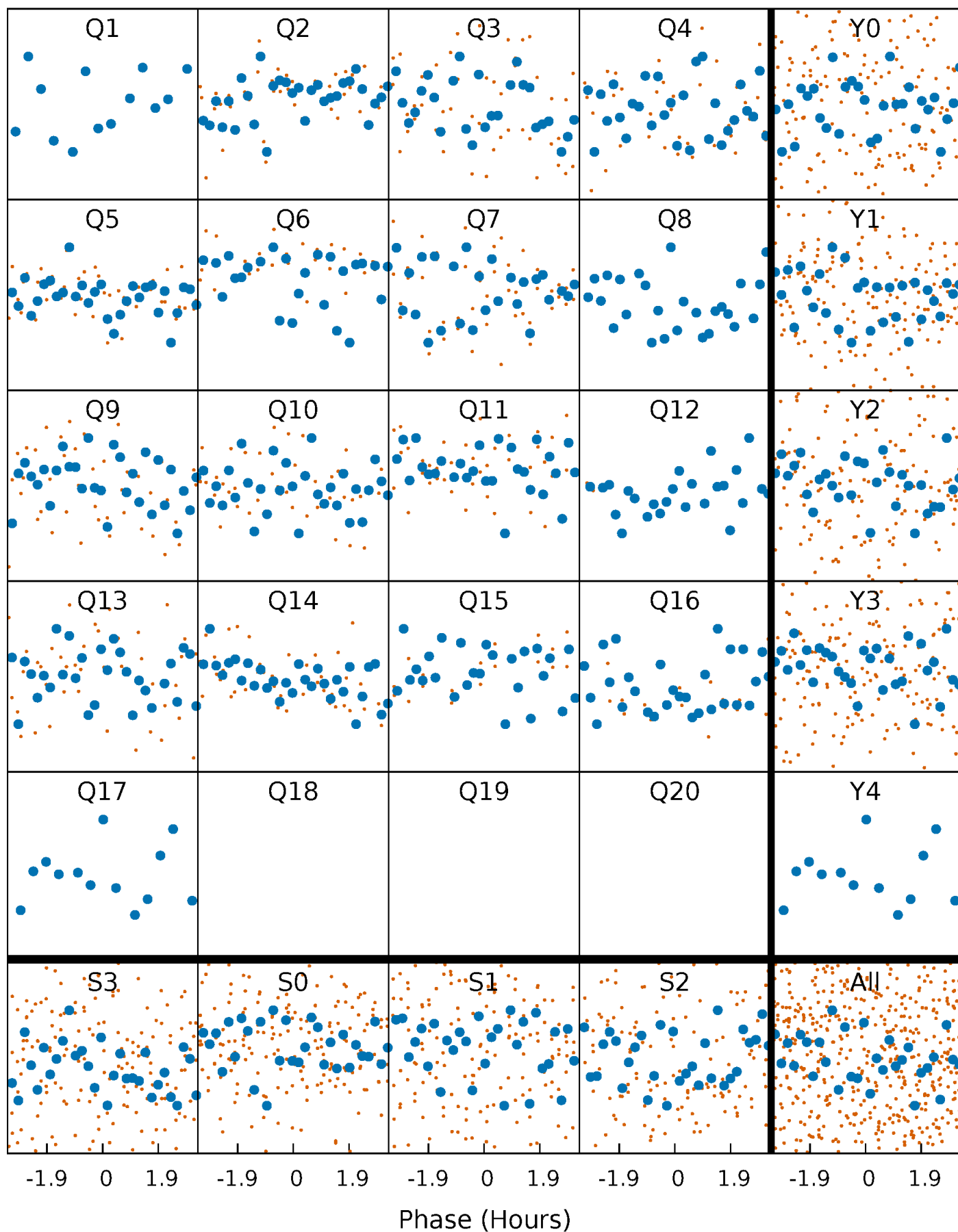


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



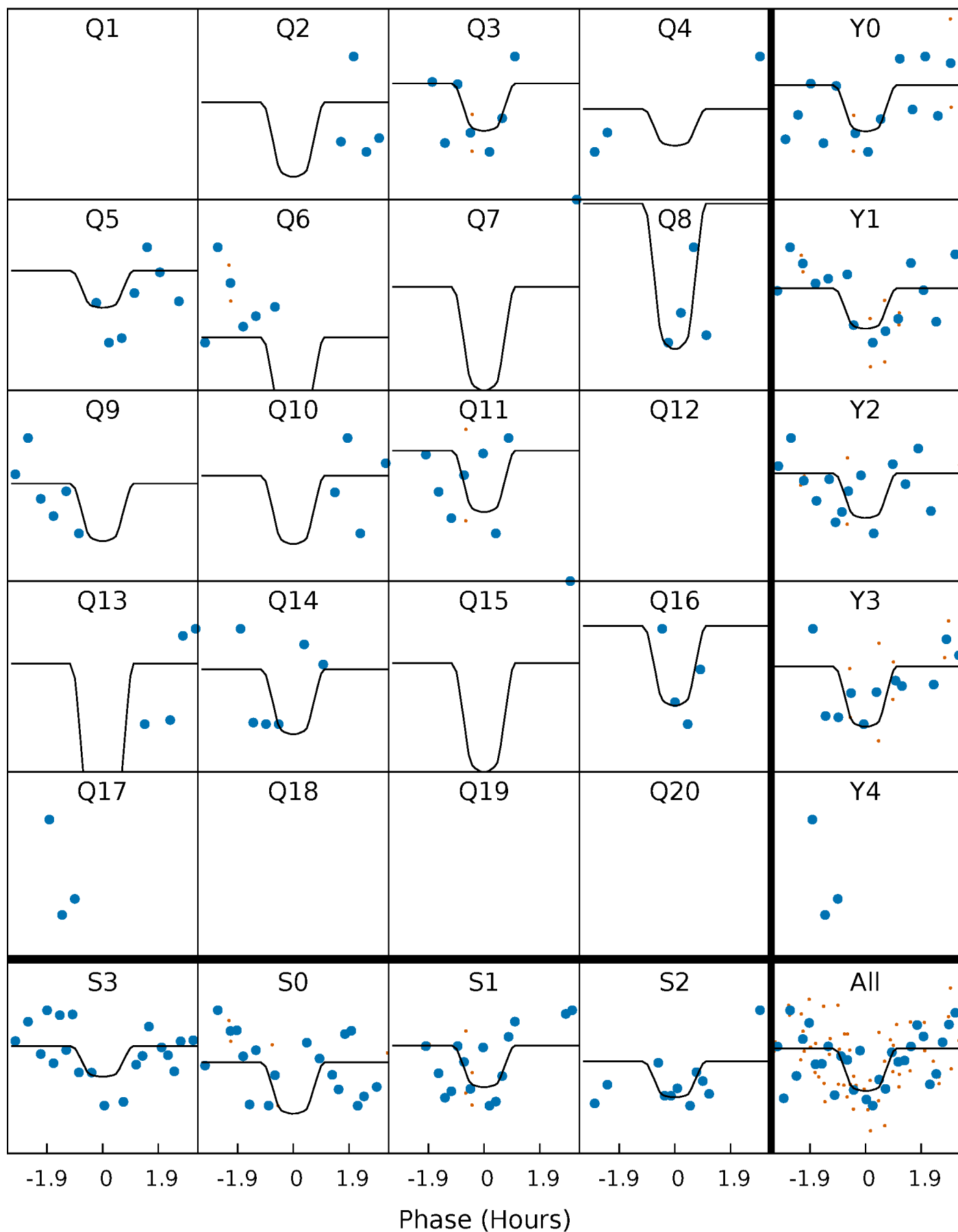
PDC Quarter-Phased Transit Curves

TCE 005564325-03 P= 22.751523 Days $T_0=143.553319$ (BKJD)



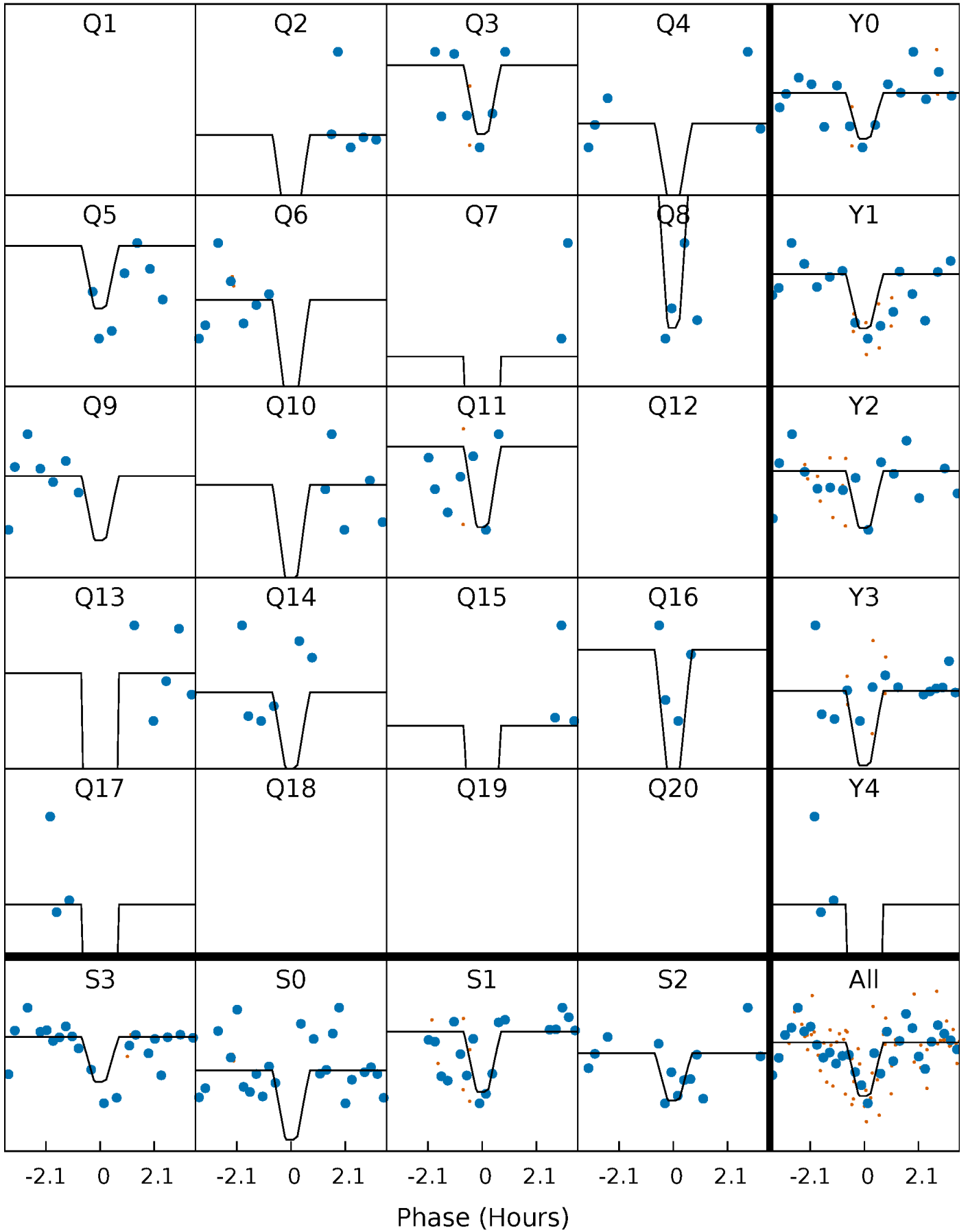
DV Quarter-Phased Transit Curves

TCE 005564325-03 P= 22.751523 Days $T_0=143.553319$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

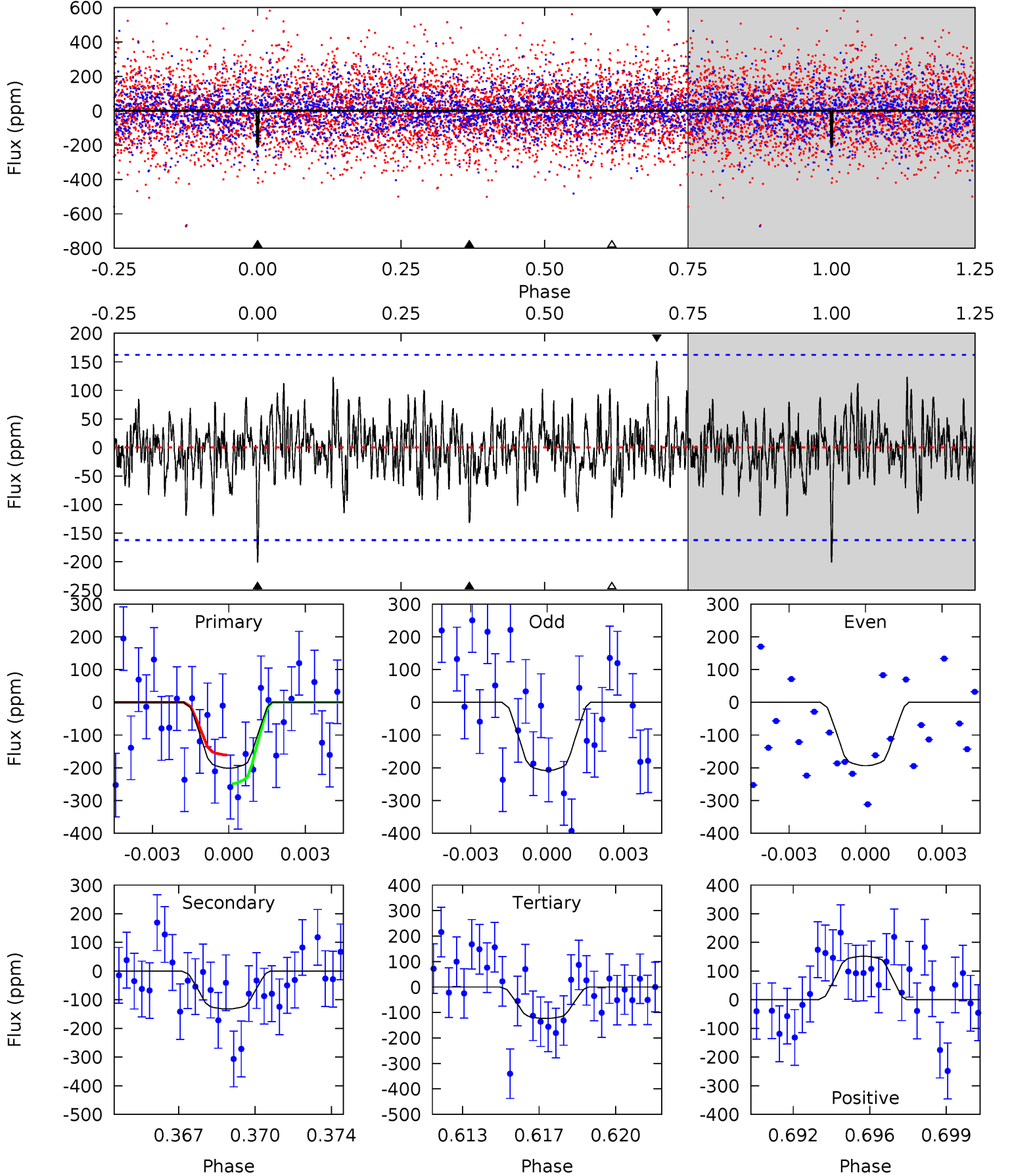
TCE 005564325-03 P= 22.751568 Days $T_0=143.556170$ (BKJD)



DV Model-Shift Uniqueness Test

005564325-03, P = 22.751523 Days, E = 120.801796 Days

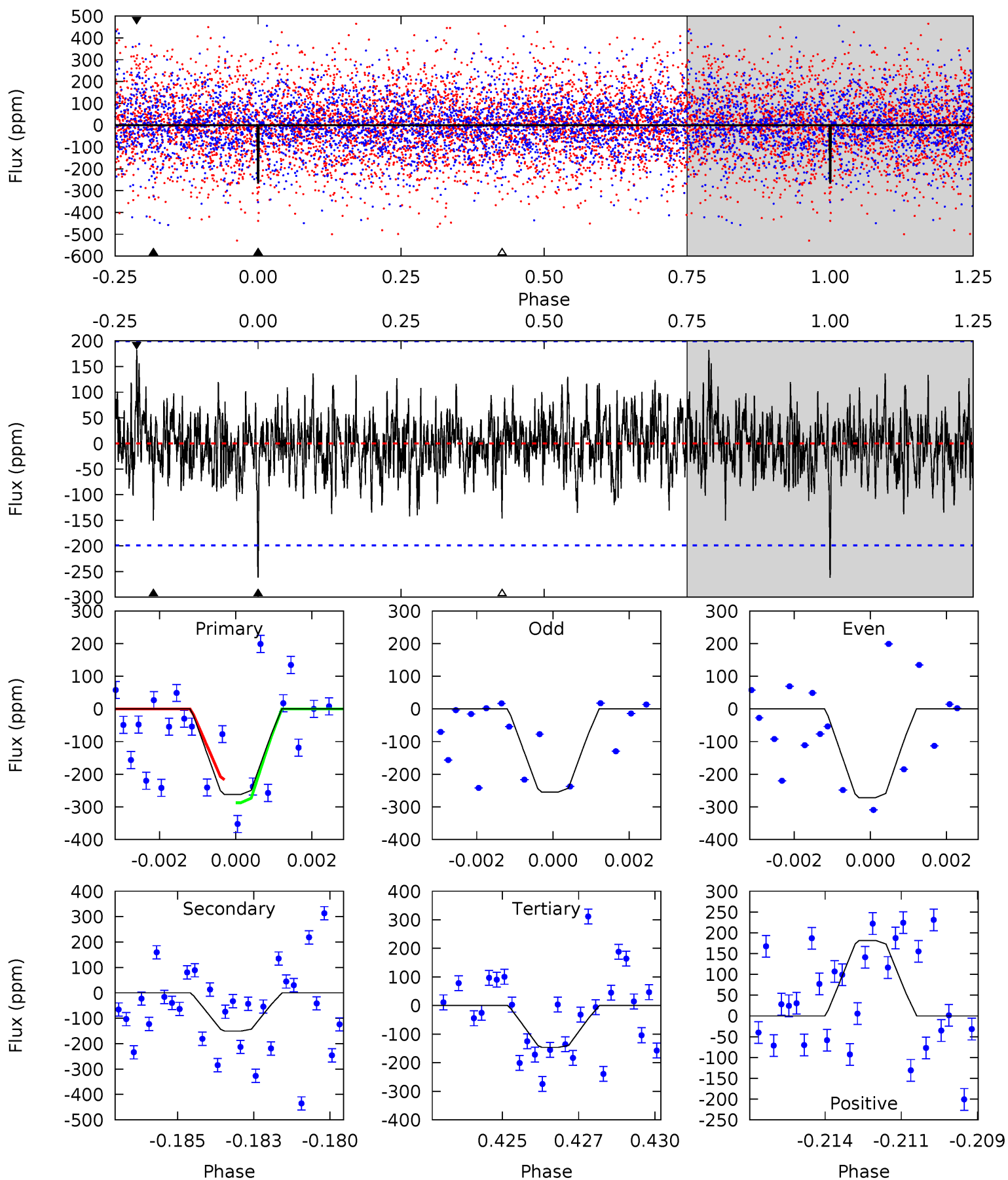
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.49	4.26	3.97	4.89	5.23	2.93	1.27	2.51	1.59	0.28	-0.64	0.25	1.09	0.43	1.42



Alt Model-Shift Uniqueness Test

005564325-03, P = 22.751568 Days, E = 120.804602 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.99	4.01	3.90	4.84	5.31	3.06	1.26	3.09	2.15	0.11	-0.83	0.22	0.85	0.41	0.94



Stellar Parameters For KIC 005564325

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6552^{+177}_{-196}	$3.639^{+0.312}_{-0.059}$	$-0.160^{+0.300}_{-0.250}$	$3.168^{+0.477}_{-1.112}$	$1.595^{+0.216}_{-0.325}$	$0.071^{+0.164}_{-0.019}$
	+3%/-3%	+9%/-2%	+188%/-156%	+15%/-35%	+14%/-20%	+232%/-26%
Source	PHO1	FLK73	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 005564325-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-132 ± 31	$7.93^{+7.14}_{-5.39}$	1630^{+94}_{-146}	4571^{+3329}_{-956}	37^{+319}_{-27}
Alt.	-150 ± 38	$7.92^{+7.77}_{-5.49}$	1629^{+95}_{-147}	4679^{+3694}_{-1017}	45^{+409}_{-33}

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

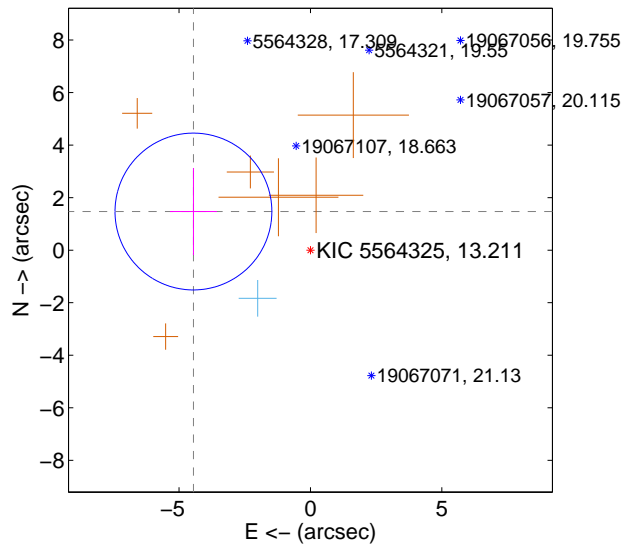
Supplemental centroid analysis for 005564325-03. Kepler magnitude: 13.21. Transit SNR 10.67

There are 1 quarters with good PRF difference image offsets

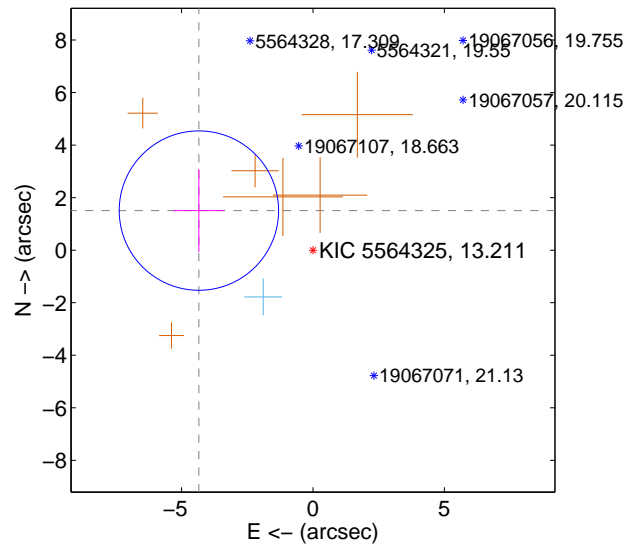
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.690 ± 0.995	4.71	4.453 ± 0.893	1.471 ± 1.658
PRF-fit source offset from KIC position	4.595 ± 1.011	4.55	4.341 ± 0.972	1.506 ± 1.583
photometric centroid source offset	0.57 ± 0.85	0.67	0.57 ± 0.85	-0.04 ± 0.83

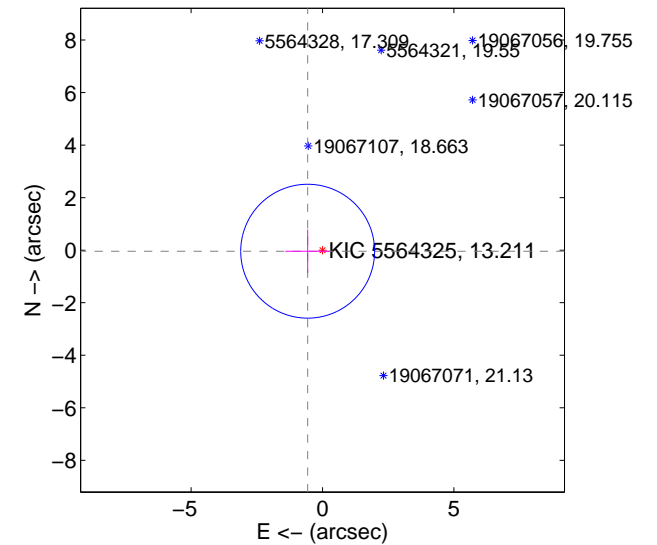
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

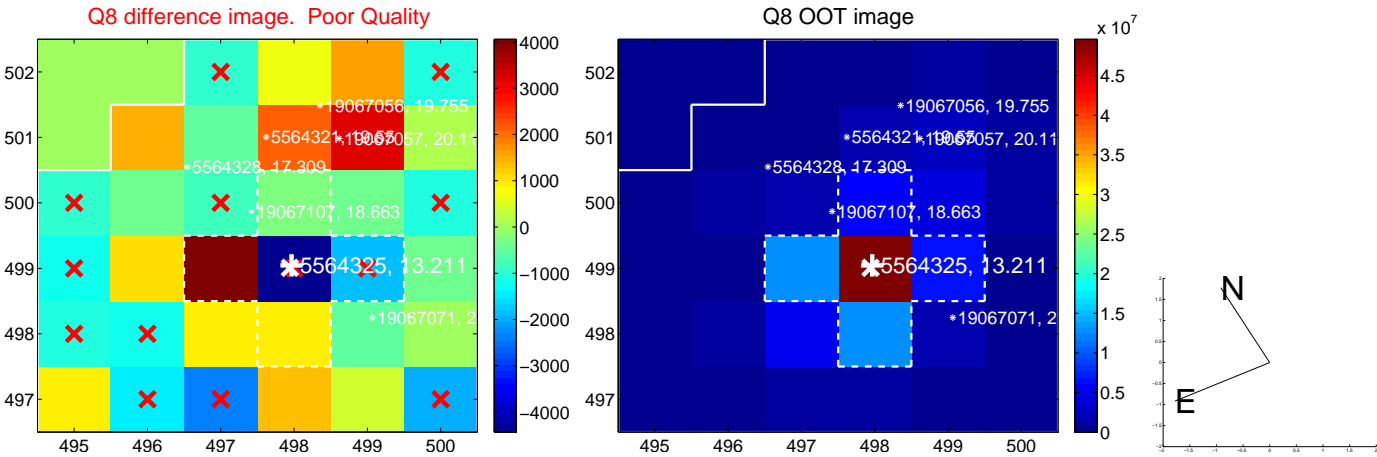
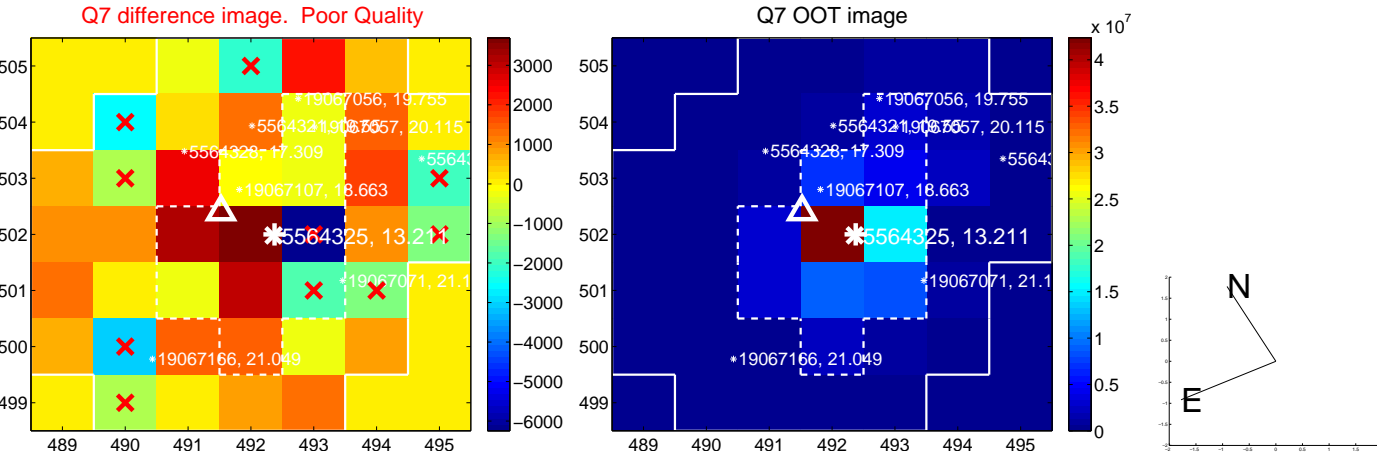
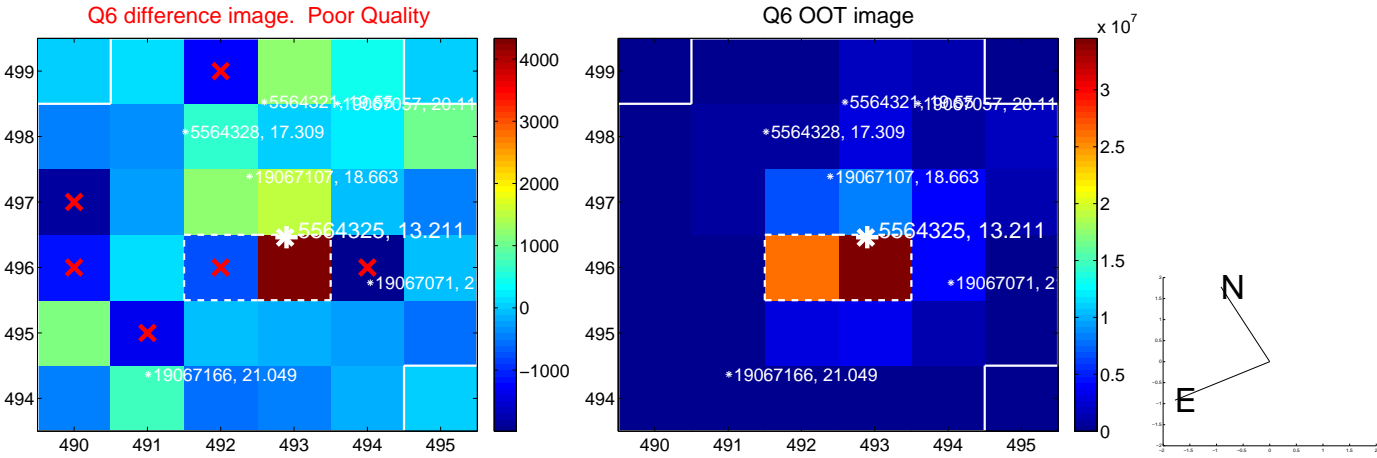
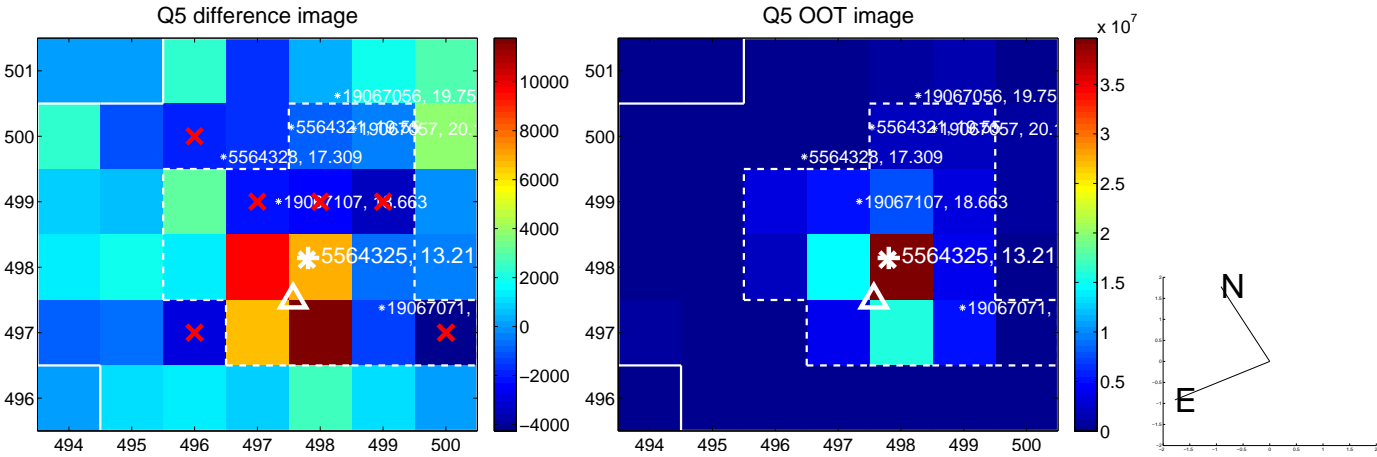


offset from photometric centroids

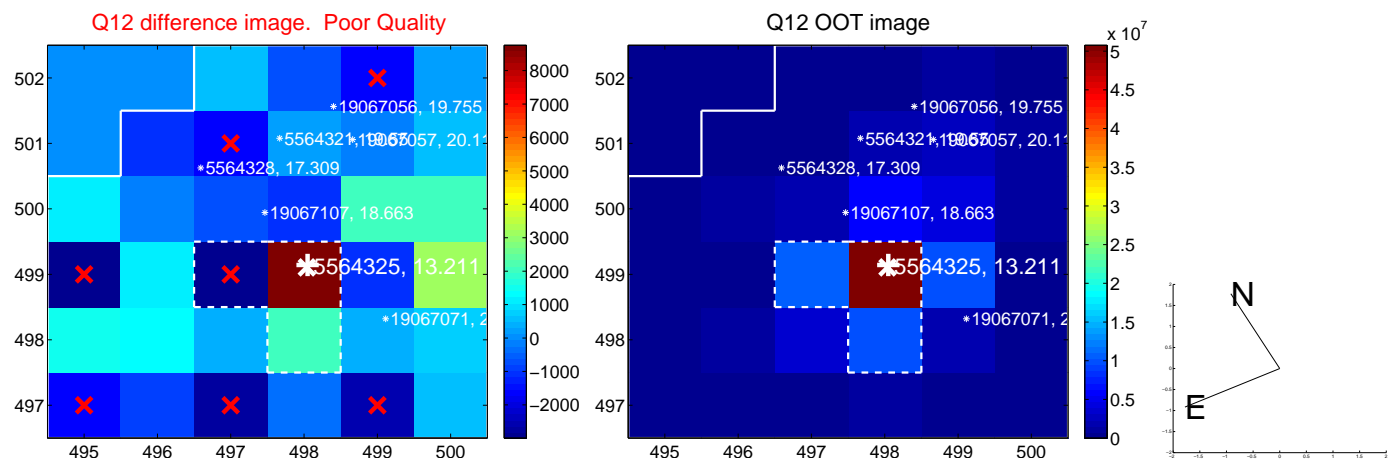
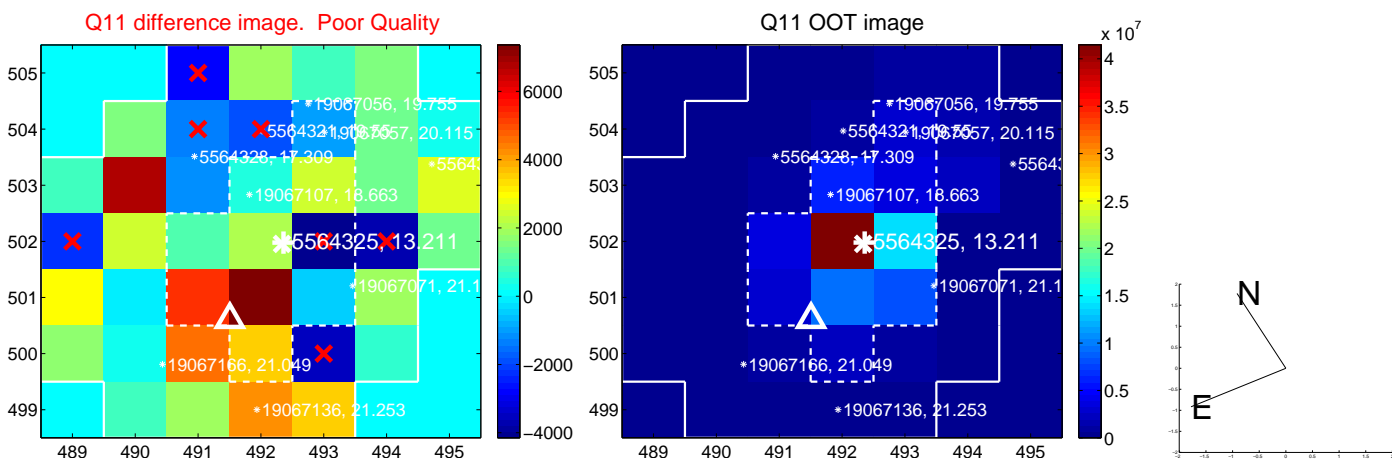
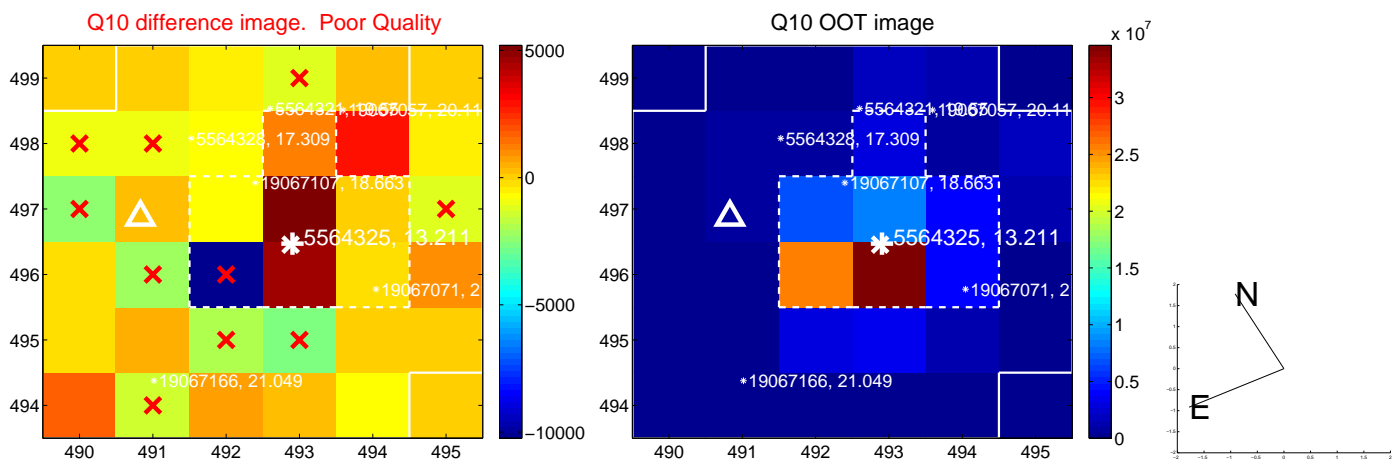
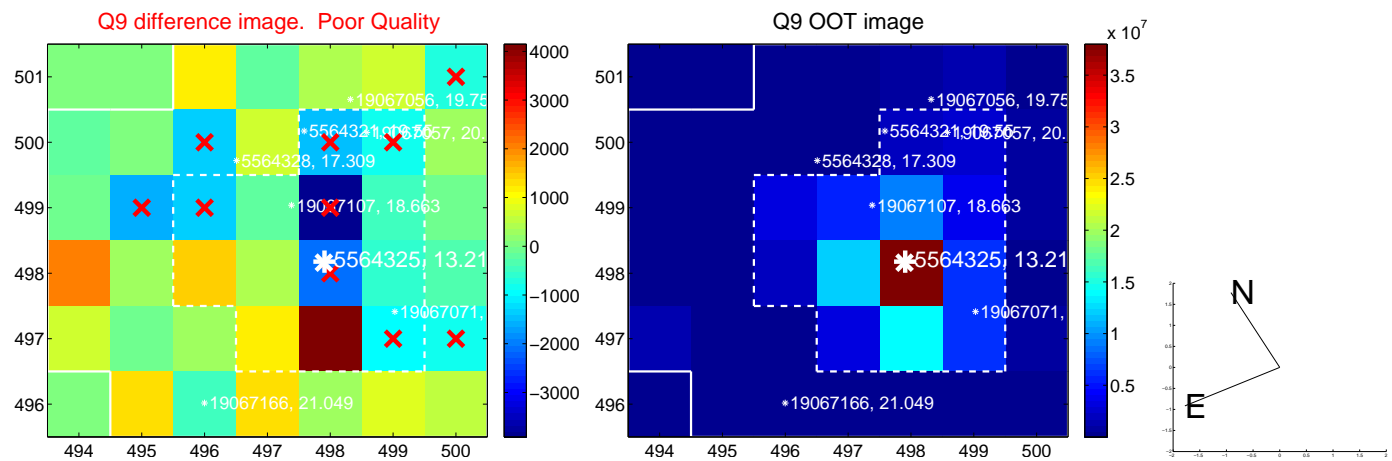


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

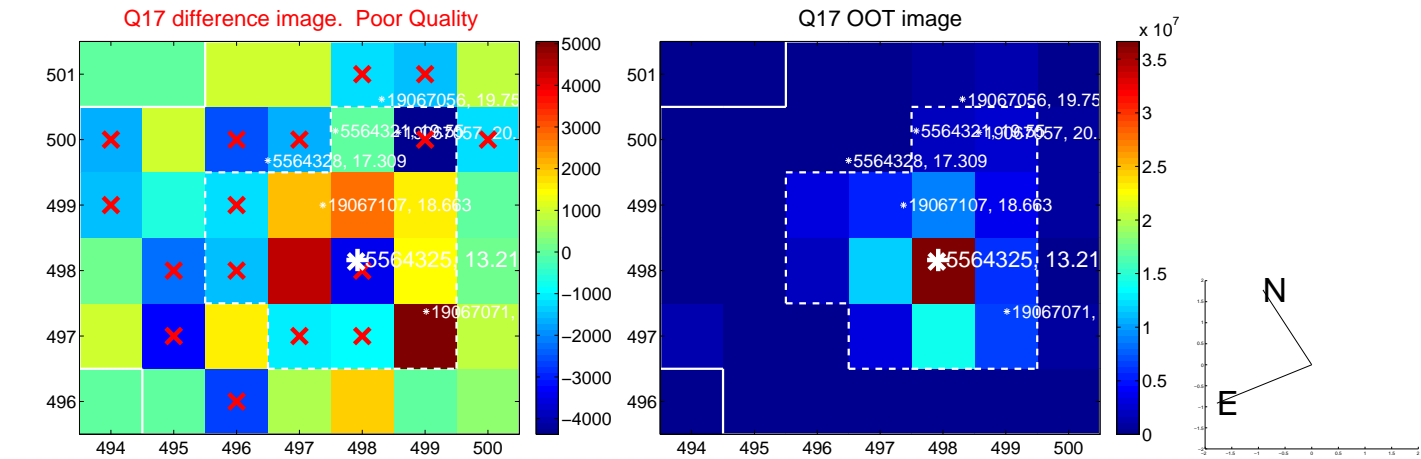
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



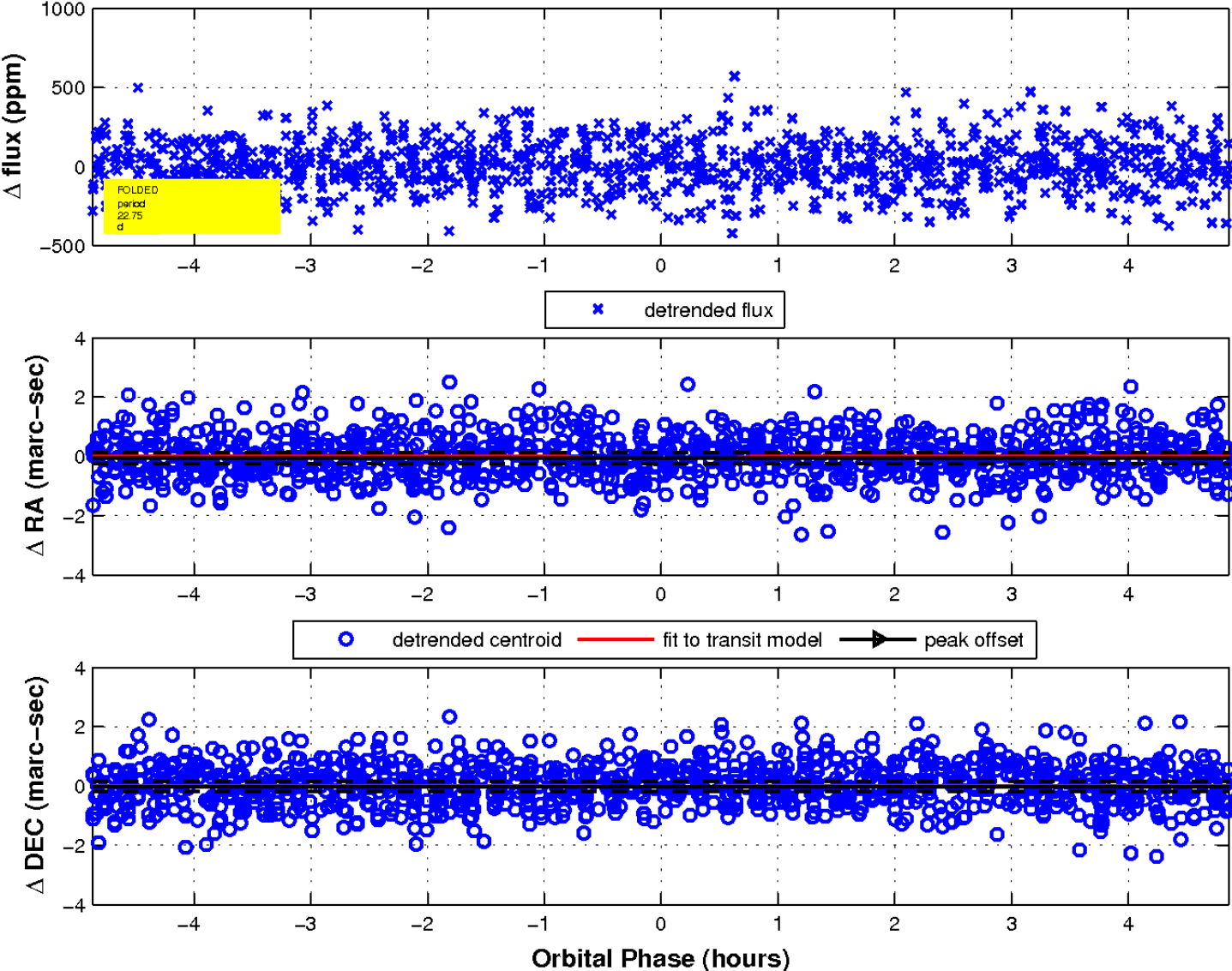
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



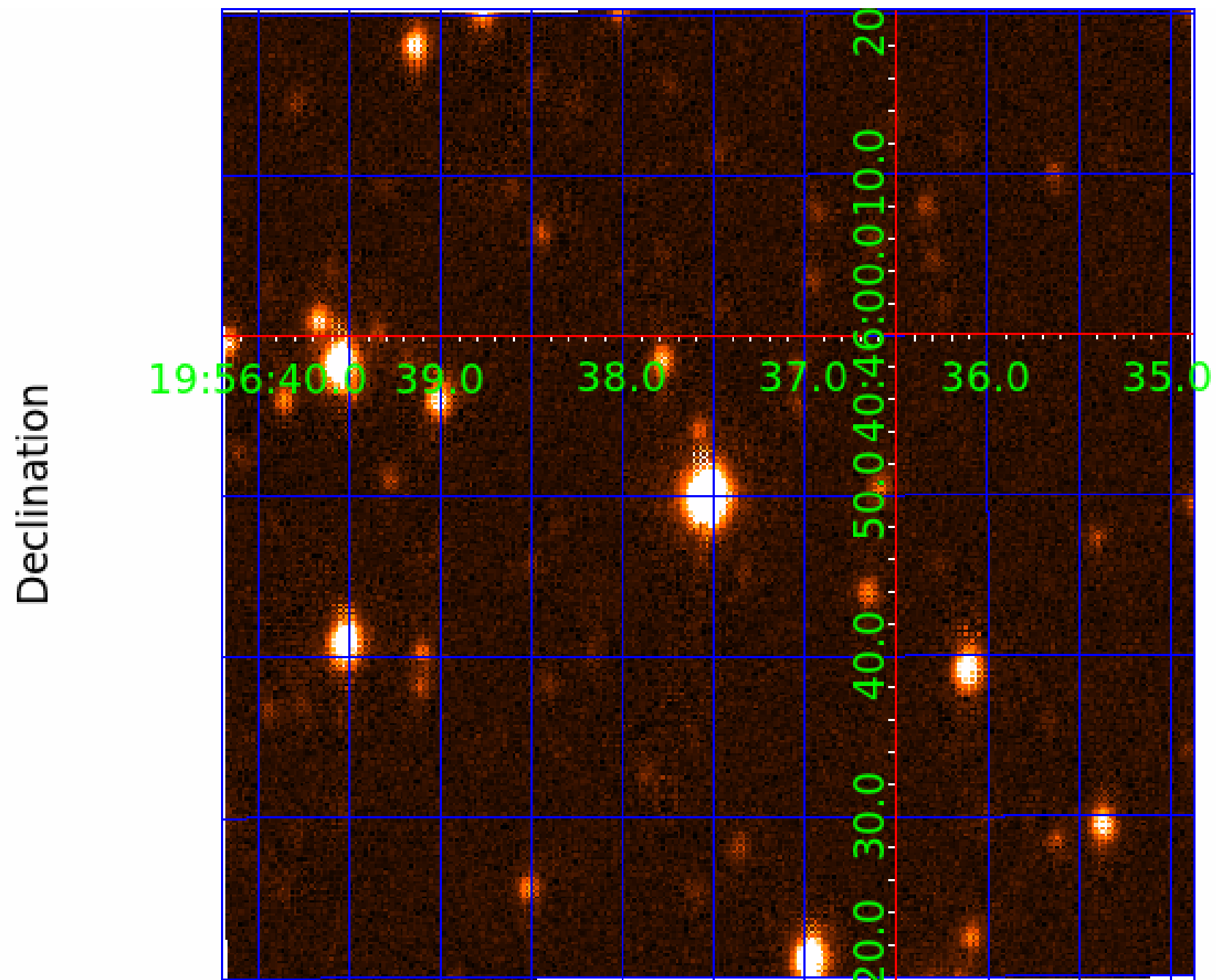
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 3 of 7



UKIRT Image



KIC 005564325

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})
005564325-01	OBS	No	0.744837	132.226689	17.9	5.200	10.4	11.3	3.17	6552	1.35	46935.19
005564325-02	OBS	No	43.372843	156.373760	280.1	3.250	10.5	10.9	3.17	6552	6.11	207.95
005564325-03	OBS	No	22.751523	143.553319	215.4	1.624	10.8	10.7	3.17	6552	5.44	491.55
005564325-04	OBS	No	57.885677	173.463522	261.3	2.294	9.2	11.2	3.17	6552	5.49	141.52
005564325-05	OBS	No	25.267305	148.962650	111.3	5.690	10.0	8.5	3.17	6552	3.77	427.40
005564325-06	OBS	No	38.901833	169.144273	290.7	2.992	9.1	11.4	3.17	6552	6.99	240.41
005564325-07	OBS	No	20.788375	149.346674	324.0	1.238	9.7	9.5	3.17	6552	9.35	554.39

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005564325-01	OBS	FP	0.00	1	0	0	0	LPP_DV
005564325-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005564325-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_MEAS
005564325-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005564325-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005564325-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
005564325-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

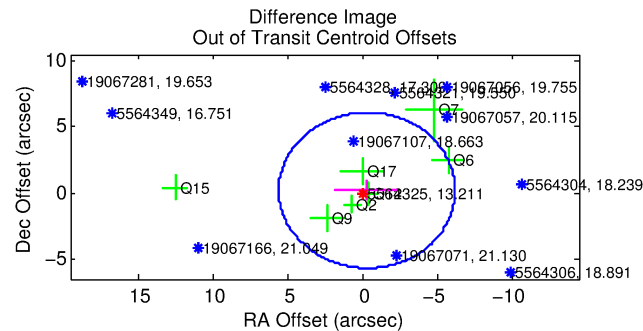
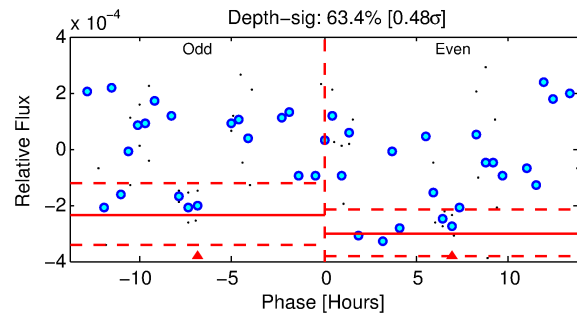
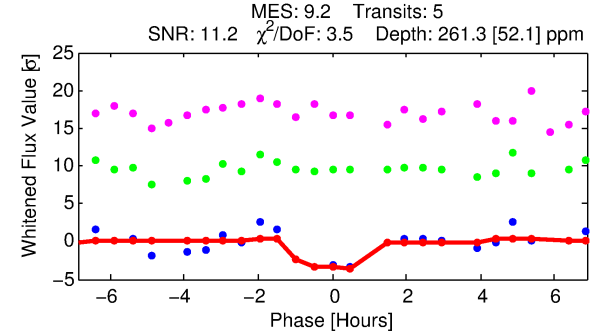
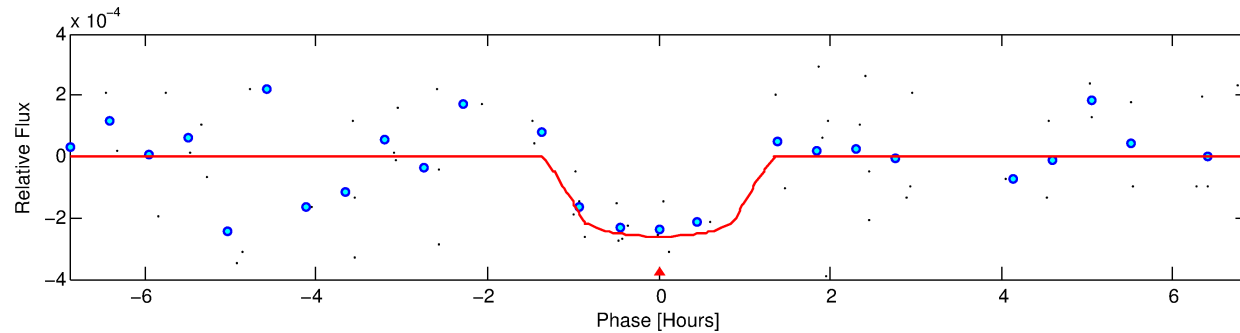
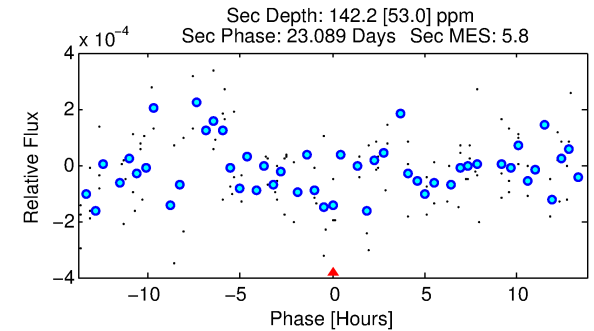
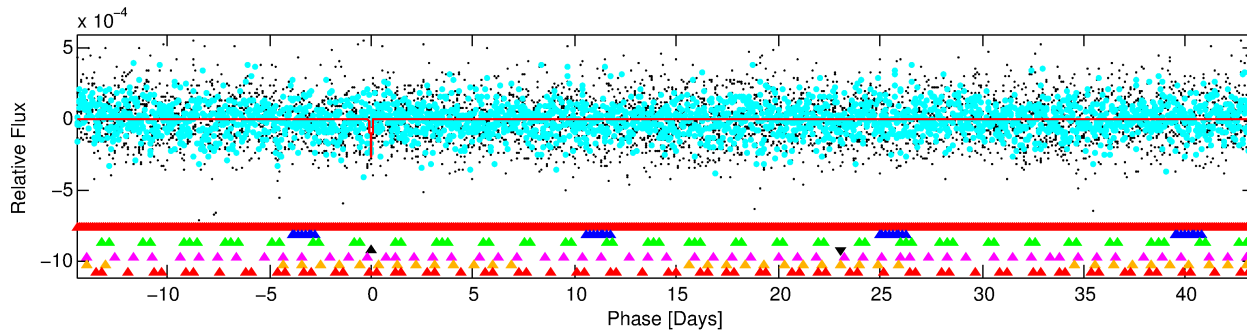
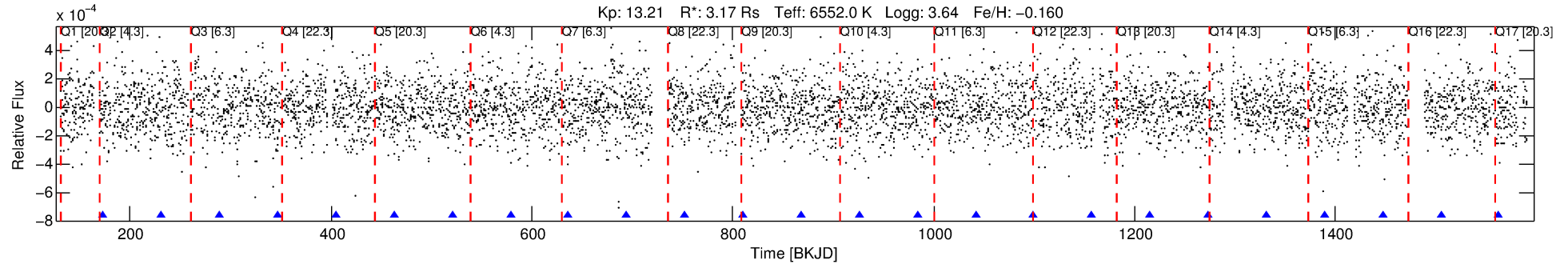
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005564325-04

No Significant Match Found

DV One-Page Summary

KIC: 5564325 Candidate: 4 of 7 Period: 57.886 d



DV Fit Results:

Period = 57.88568 [0.00073] d
Epoch = 173.4635 [0.0210] BKJD
Rp/R* = 0.0159 [0.0228]
a/R* = 141.95 [1074.92]
b = 0.70 [5.76]
Seff = 141.52 [77.31]
Teff = 879 [120] K
Rp = 5.49 [8.12] Re
a = 0.3422 [0.1146] AU
Ag = 304.03 [895.55] [0.34σ]
Teffp = 5678 [4116] K [1.17σ]

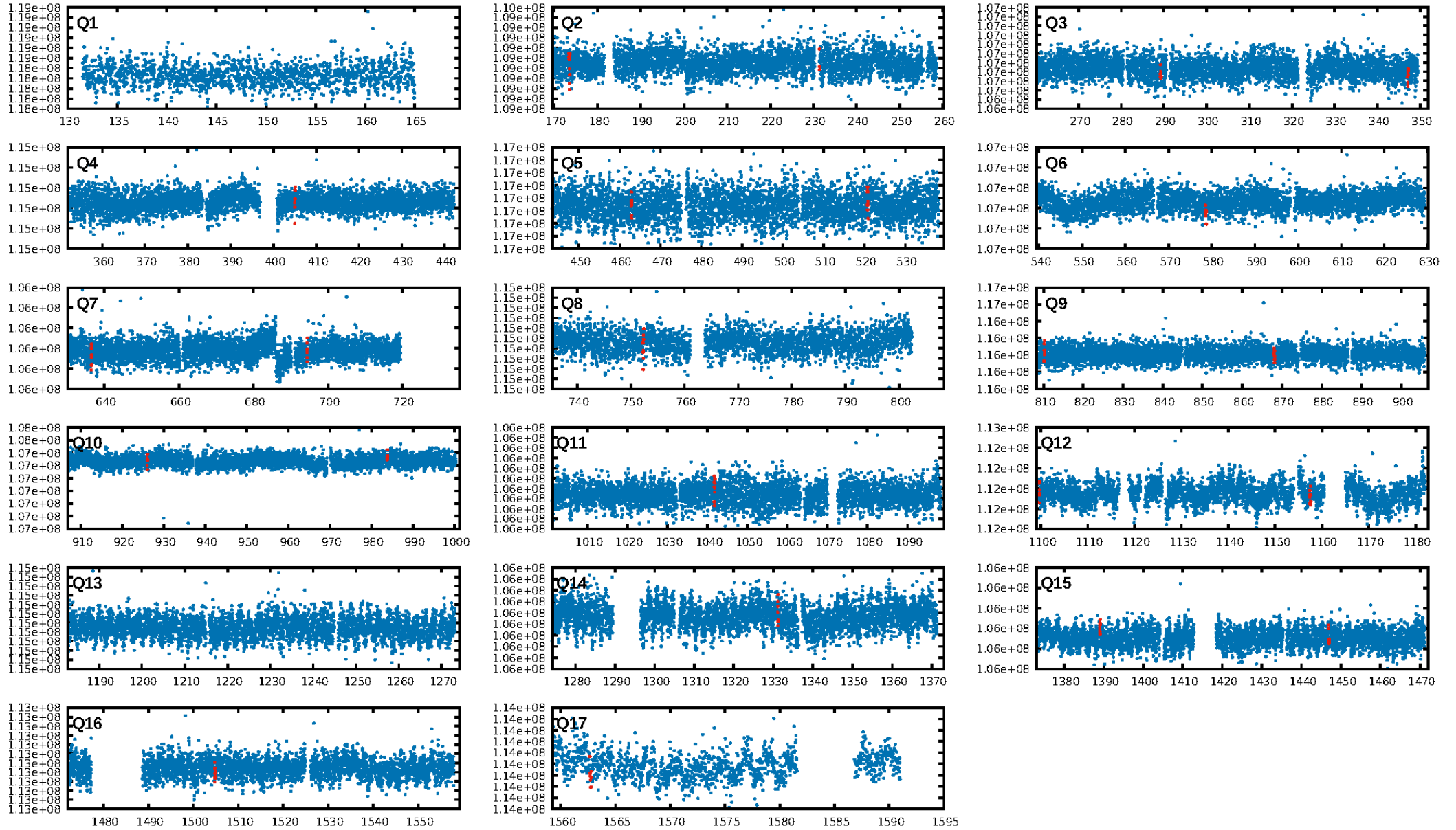
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [87.57σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 66.0%
ModelChiSquareGof-sig: 95.5%
Bootstrap-pfa: 1.01e-08
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -1.723
Centroid-sig: 86.5%
Centroid-so: 0.477 arcsec [0.53σ]
OotOffset-rm: 0.384 arcsec [0.20σ]
OotOffset-st: 2/2/1/2 [7]
KicOffset-rm: 0.487 arcsec [0.25σ]
KicOffset-st: 2/2/1/2 [7]
DiffImageQuality-fgm: 0.43 [3/7]
DiffImageOverlap-fno: 0.00 [0/15]

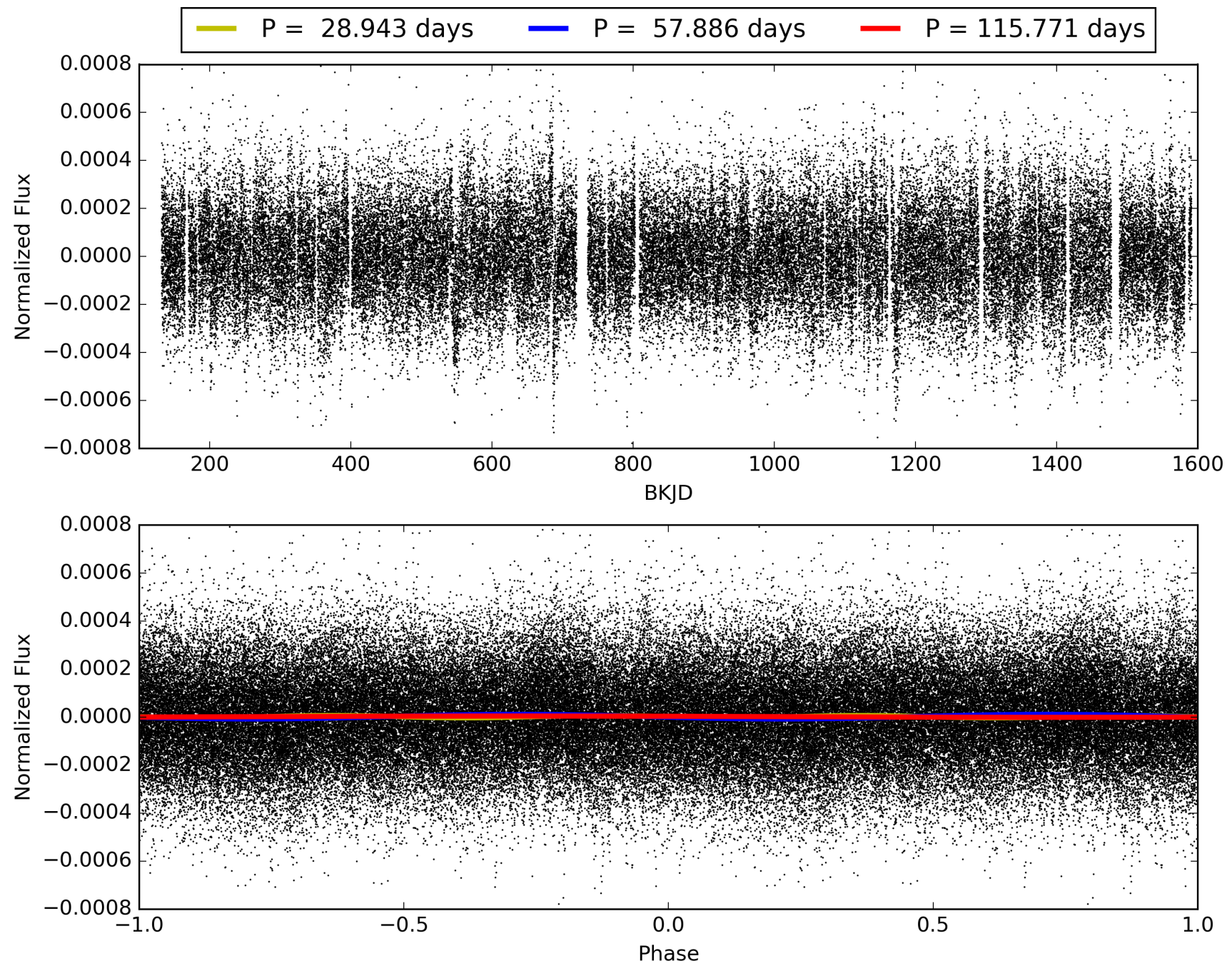
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 08:24:15 Z

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

TCE 005564325-04, PDC Light Curves

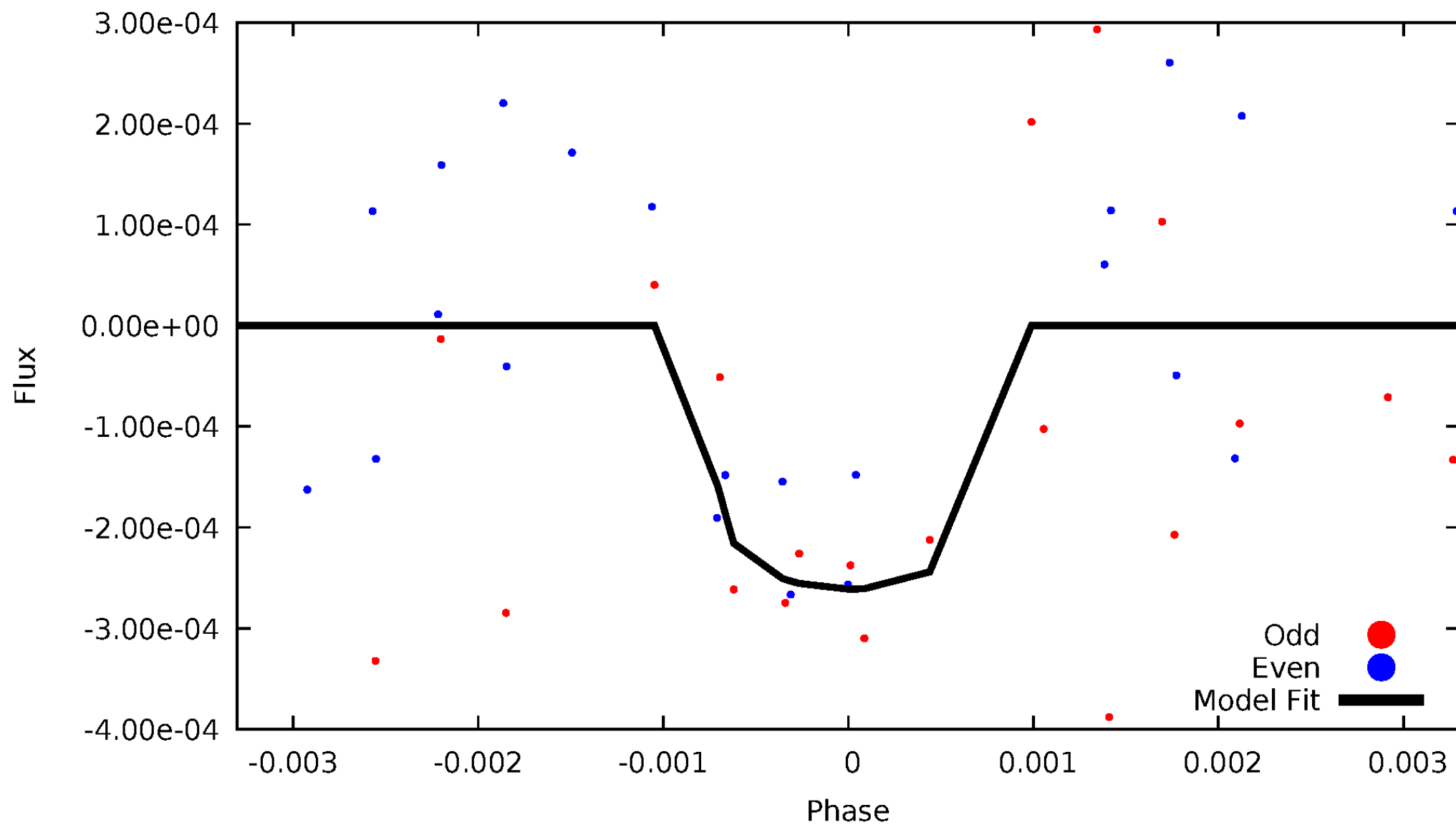


TCE 005564325-04



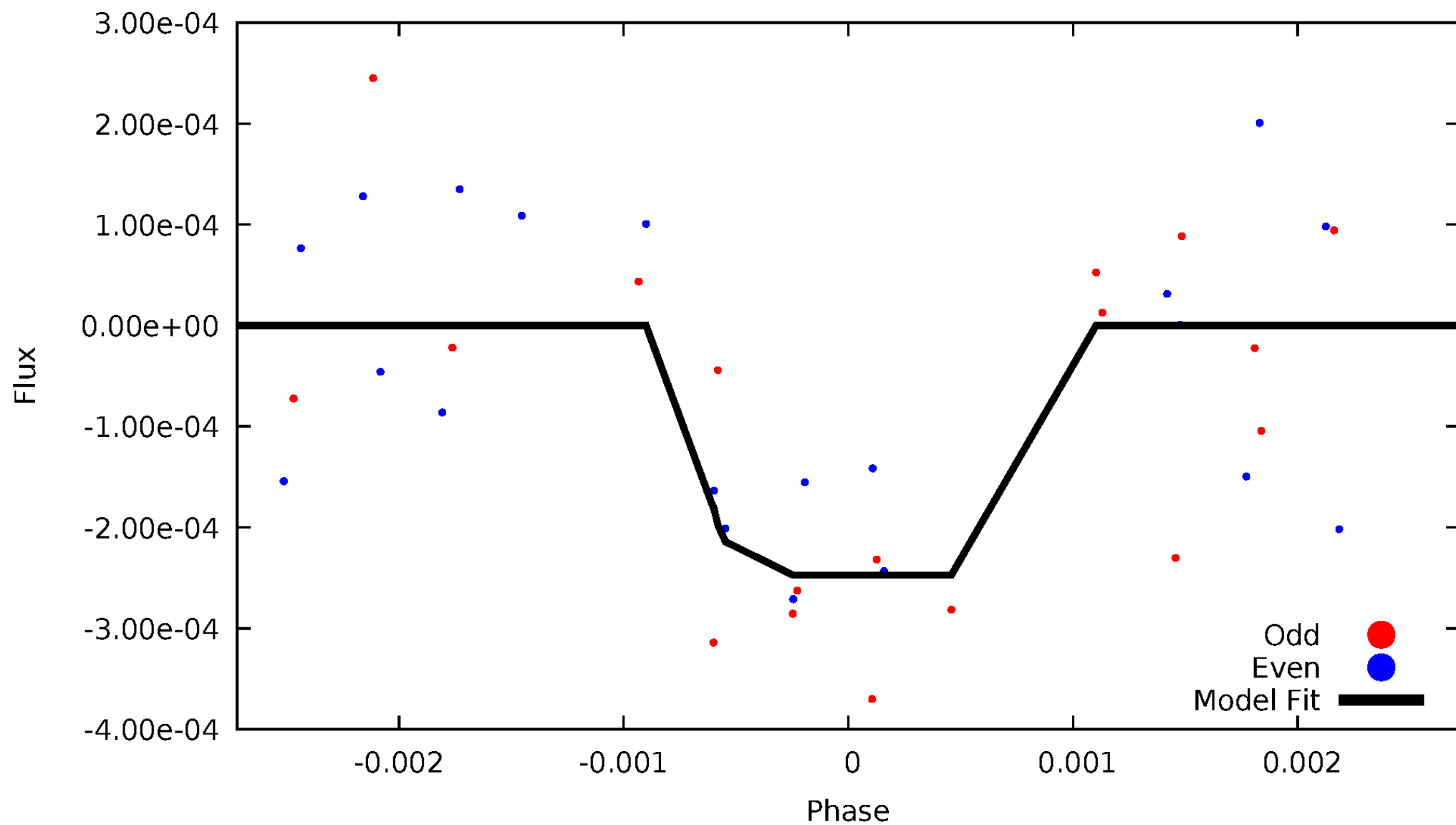
DV Odd/Even

TCE 005564325-04



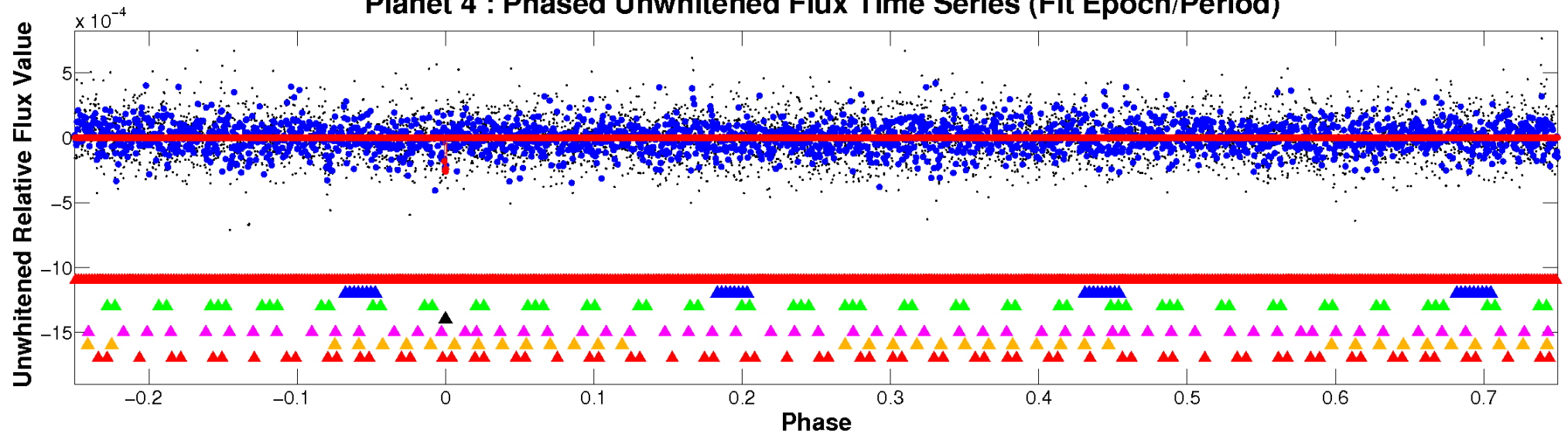
ALT Odd/Even

TCE 005564325-04

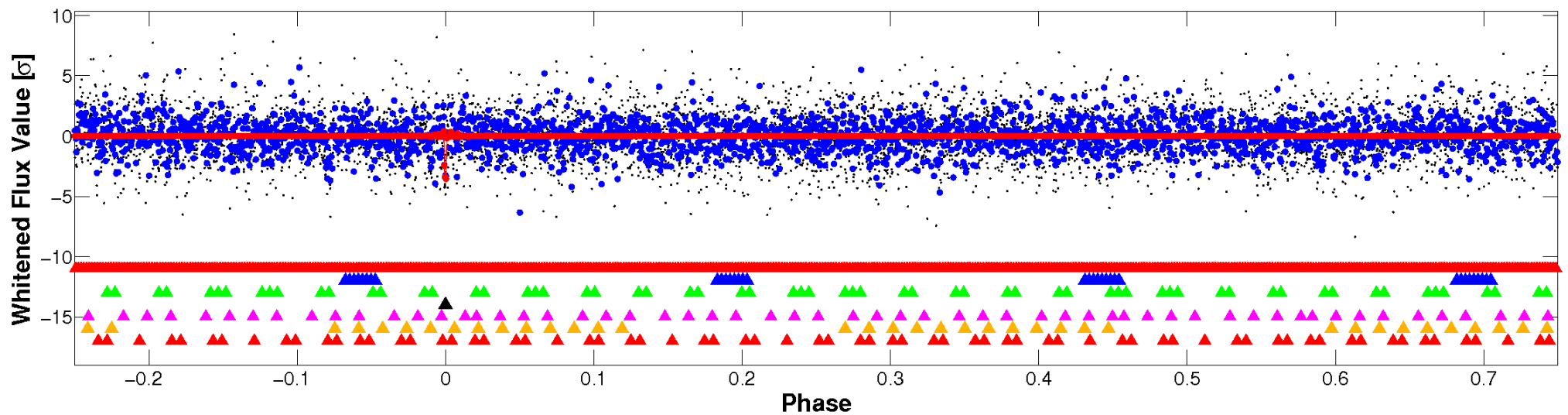


Non-Whitened Vs. Whitened Light Curve

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

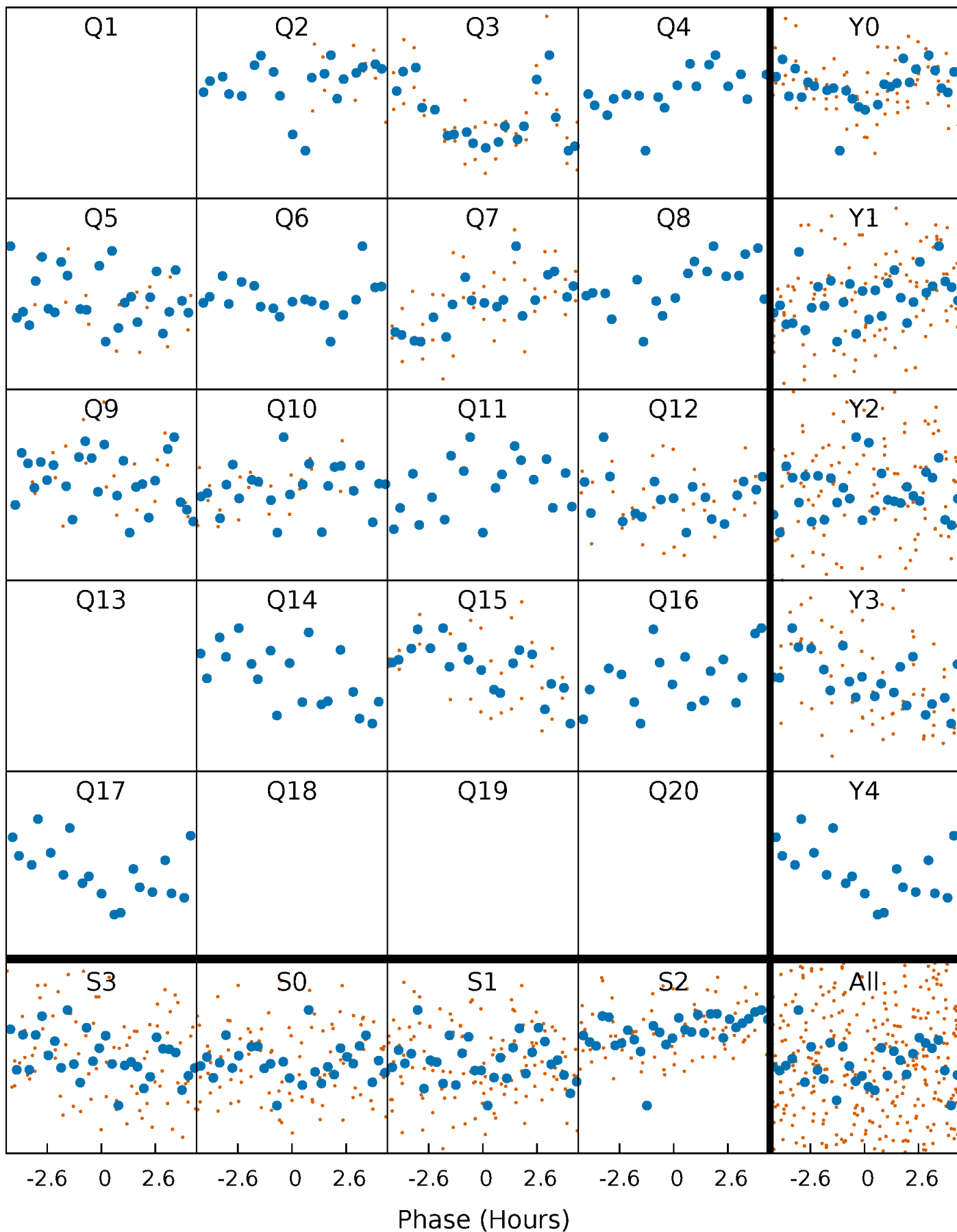


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



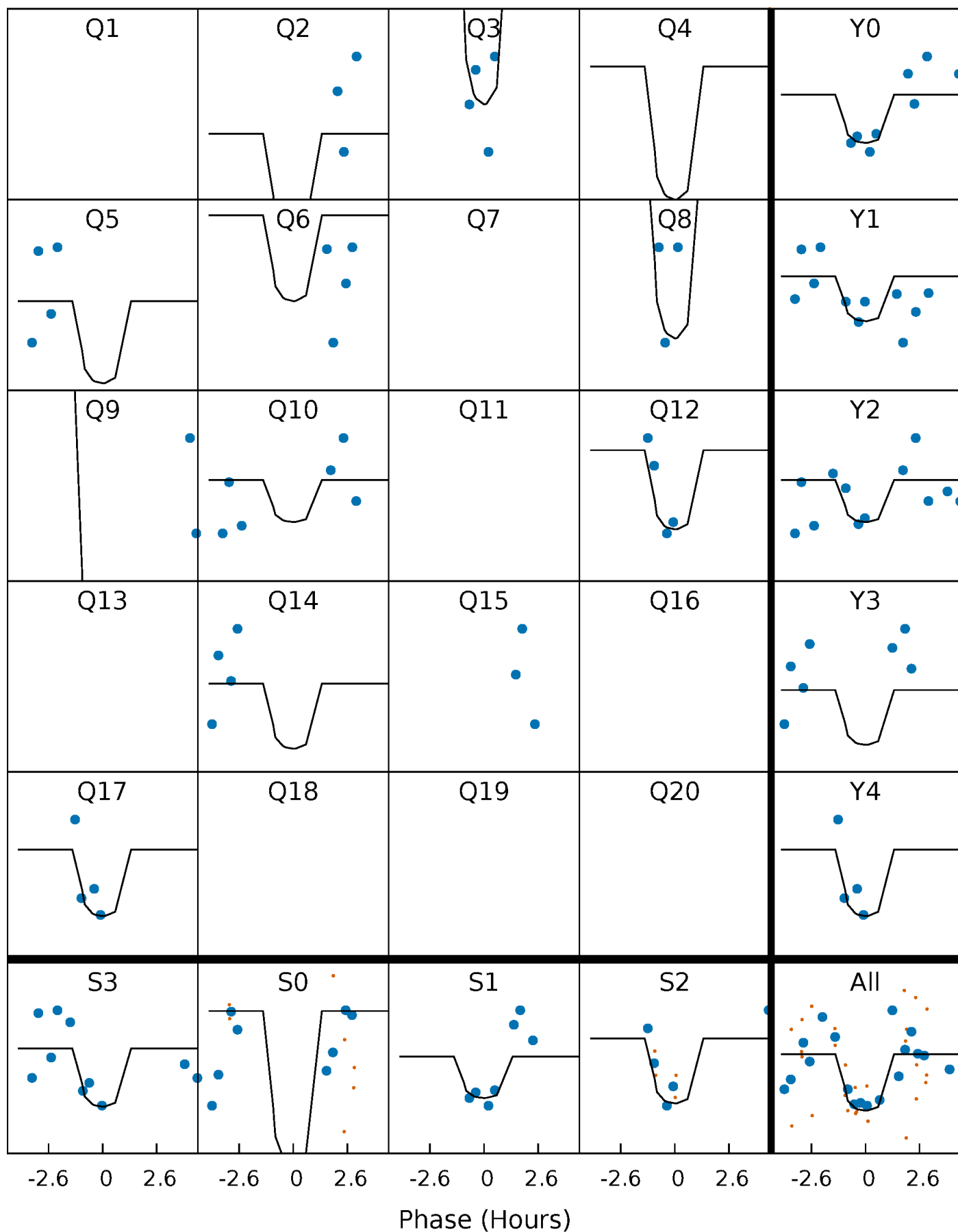
PDC Quarter-Phased Transit Curves

TCE 005564325-04 P= 57.885677 Days $T_0=173.463522$ (BKJD)



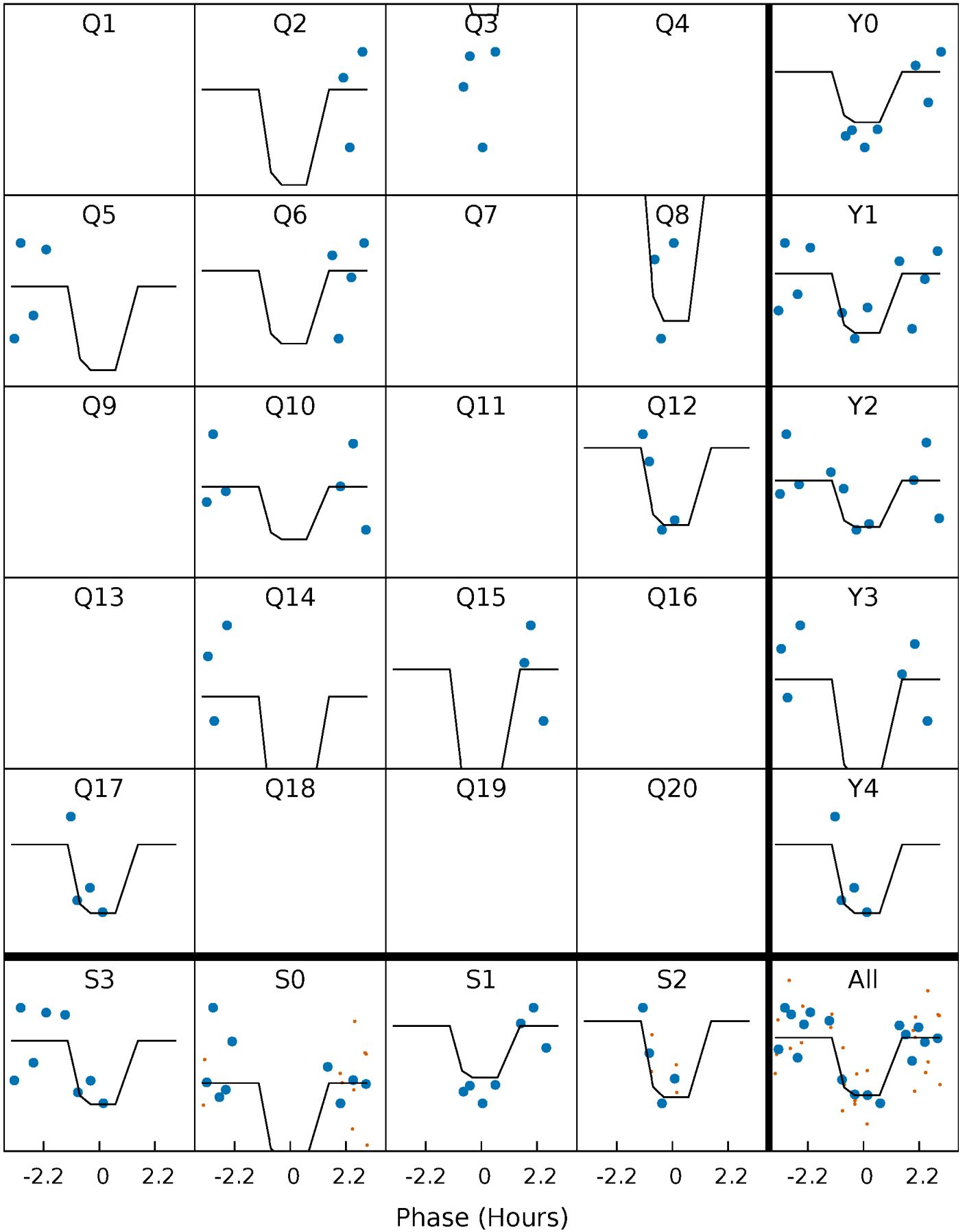
DV Quarter-Phased Transit Curves

TCE 005564325-04 P= 57.885677 Days $T_0=173.463522$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

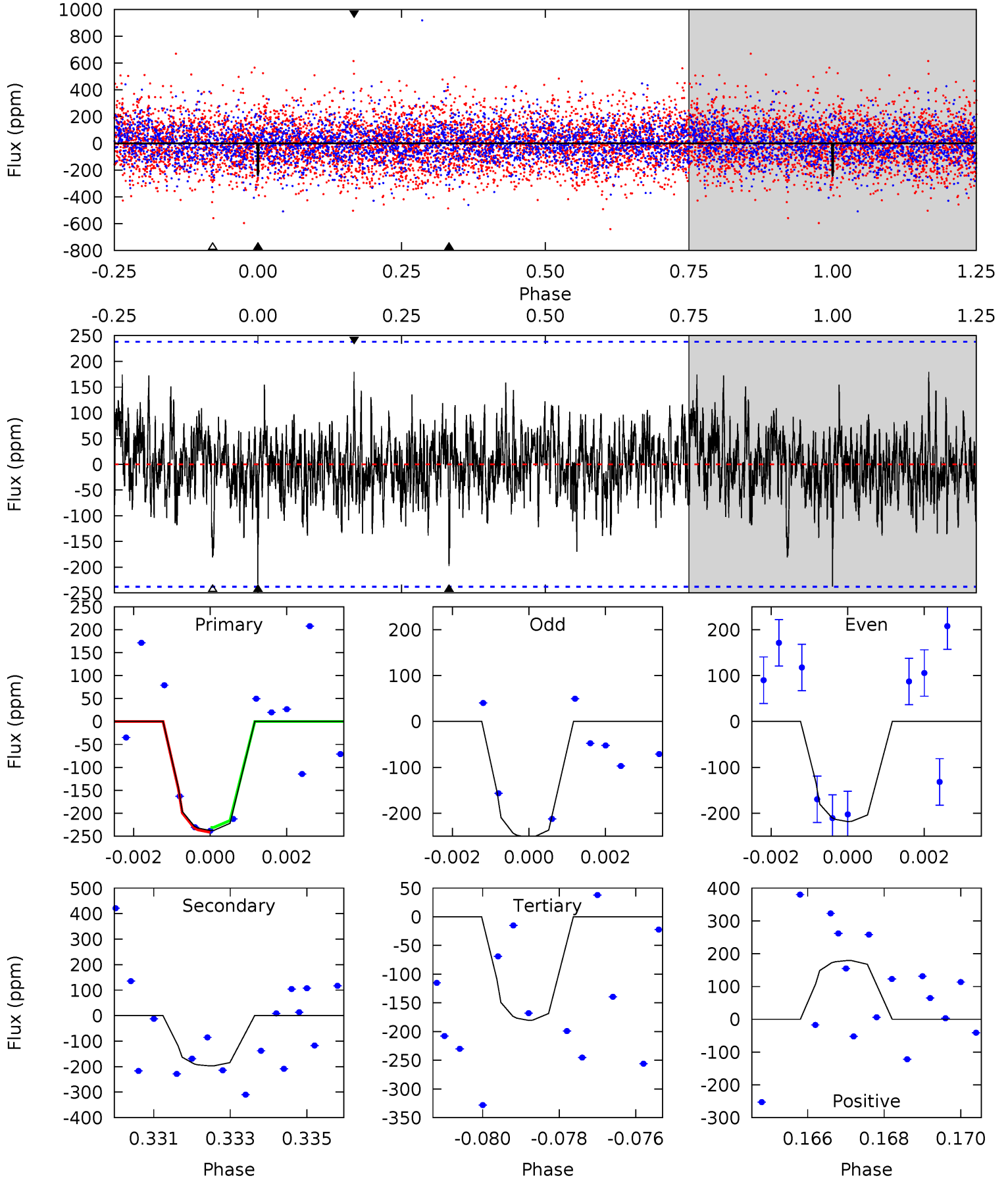
TCE 005564325-04 P= 57.885283 Days $T_0=173.463592$ (BKJD)



DV Model-Shift Uniqueness Test

005564325-04, P = 57.885677 Days, E = 115.577845 Days

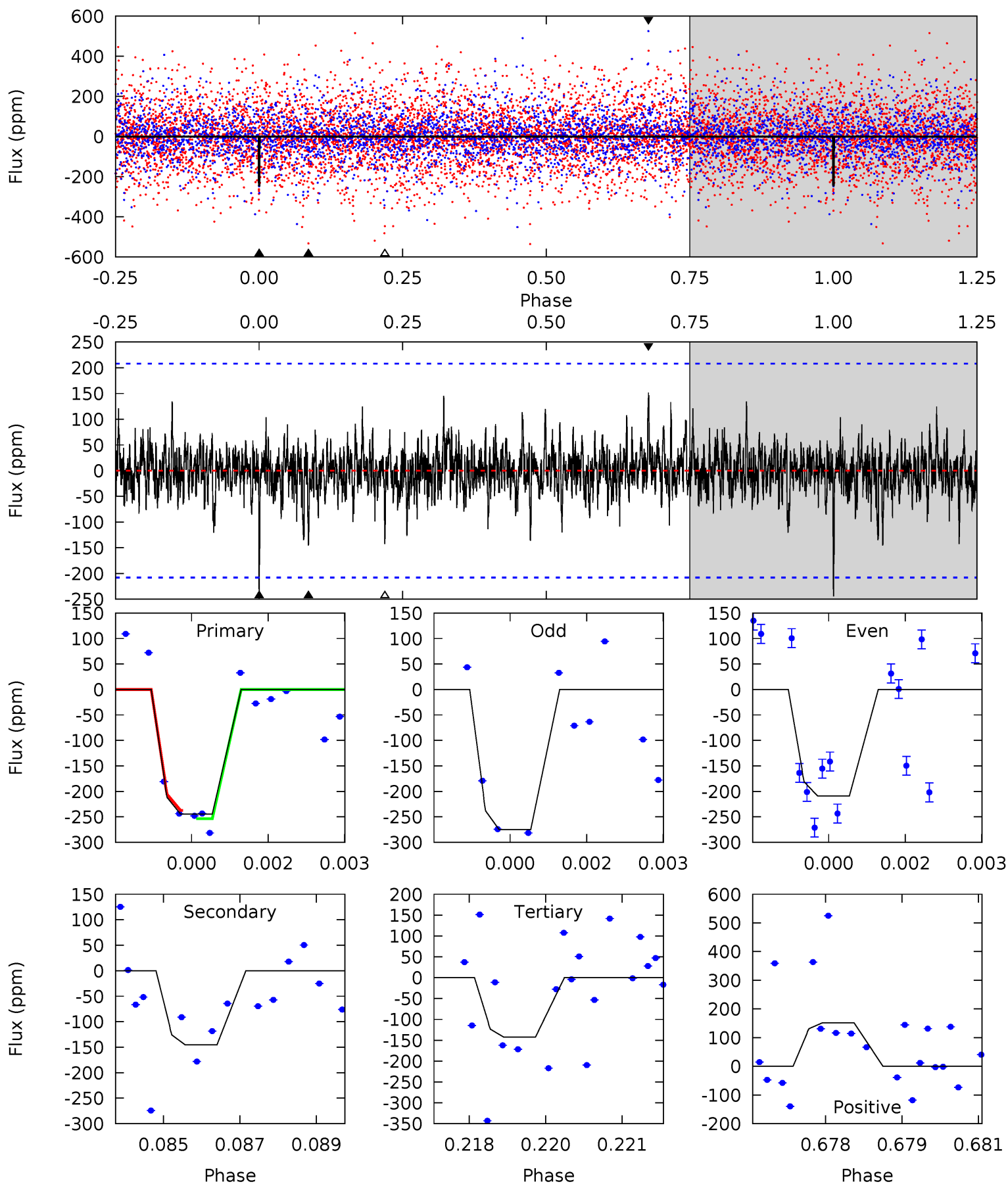
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.34	4.44	4.06	4.03	5.36	3.14	1.14	1.28	1.31	0.38	0.40	0.39	1.02	0.43	0.11



Alt Model-Shift Uniqueness Test

005564325-04, P = 57.885283 Days, E = 115.578309 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.30	3.75	3.67	3.90	5.36	3.14	0.95	2.63	2.39	0.07	-0.16	0.84	1.13	0.38	0.21



Stellar Parameters For KIC 005564325

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6552^{+177}_{-196}	$3.639^{+0.312}_{-0.059}$	$-0.160^{+0.300}_{-0.250}$	$3.168^{+0.477}_{-1.112}$	$1.595^{+0.216}_{-0.325}$	$0.071^{+0.164}_{-0.019}$
	+3%/-3%	+9%/-2%	+188%/-156%	+15%/-35%	+14%/-20%	+232%/-26%
Source	PHO1	FLK73	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 005564325-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-197 ± 44	$7.00^{+6.76}_{-4.52}$	1192^{+68}_{-102}	5142^{+4301}_{-1137}	238^{+1839}_{-175}
Alt.	-145 ± 39	$7.62^{+6.91}_{-5.20}$	1187^{+71}_{-105}	4739^{+3639}_{-958}	168^{+1280}_{-123}

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

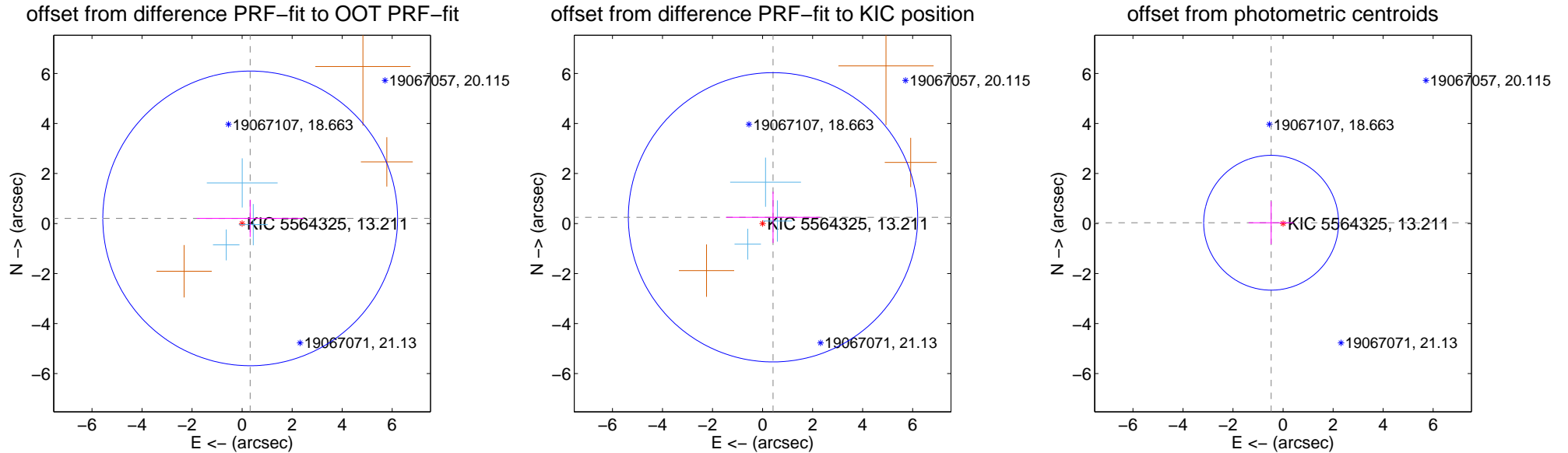
DV Centroid Data

Supplemental centroid analysis for 005564325-04. Kepler magnitude: 13.21. Transit SNR 11.25

There are 3 quarters with good PRF difference image offsets

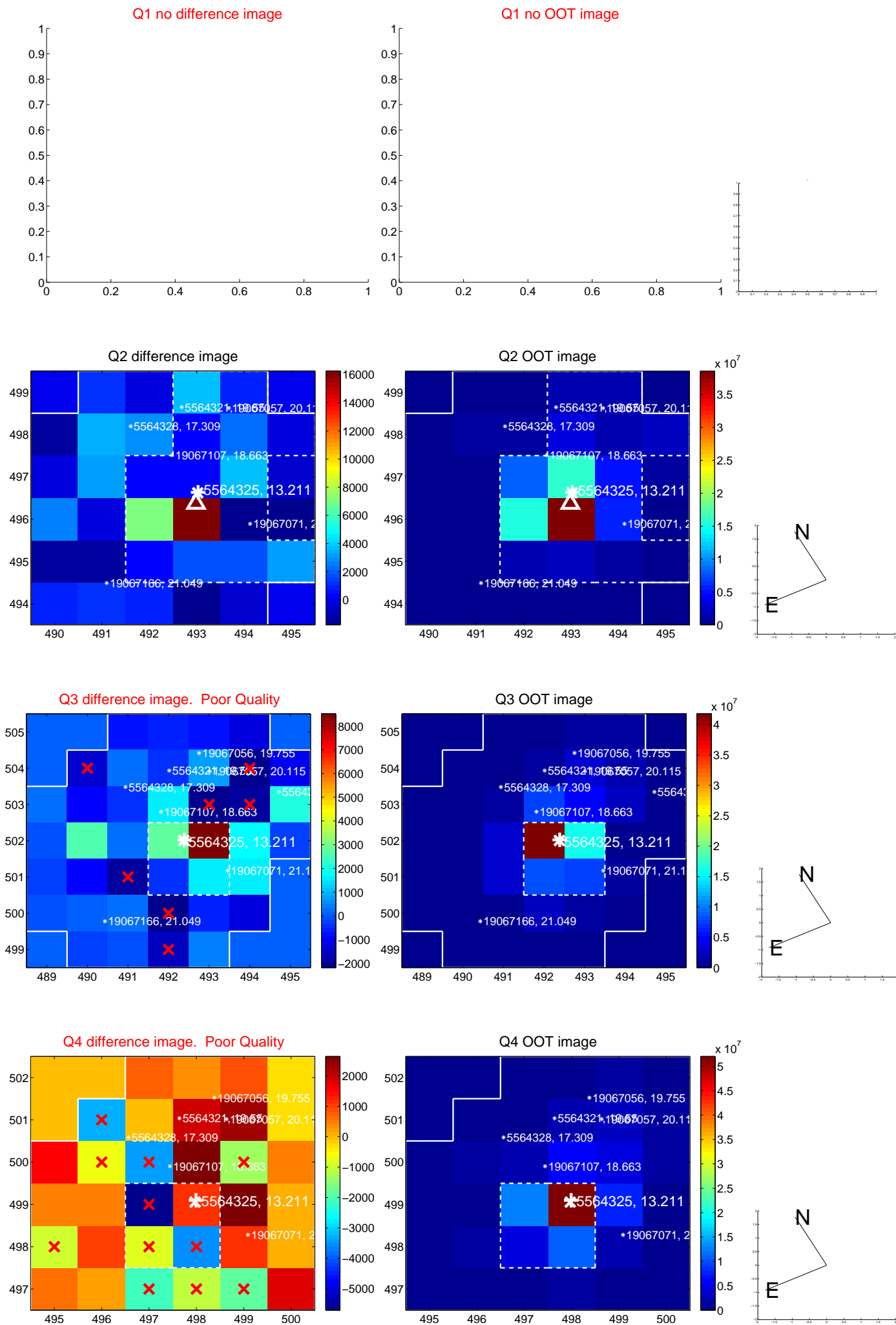
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.384 ± 1.963	0.20	-0.324 ± 2.137	0.205 ± 0.744
PRF-fit source offset from KIC position	0.487 ± 1.927	0.25	-0.418 ± 1.879	0.249 ± 1.024
photometric centroid source offset	0.48 ± 0.90	0.53	0.48 ± 0.90	0.03 ± 0.86

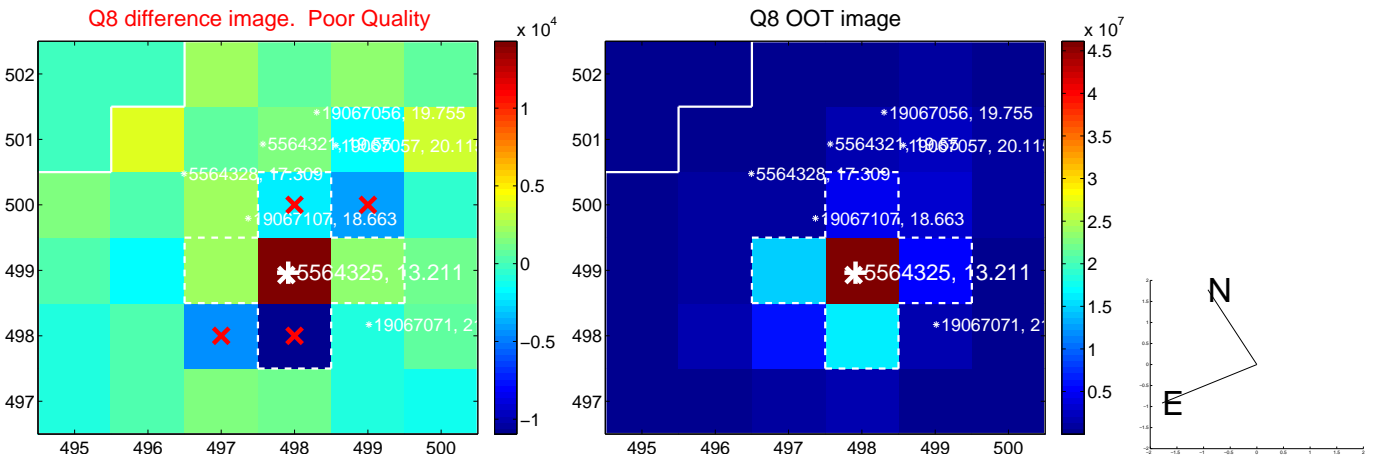
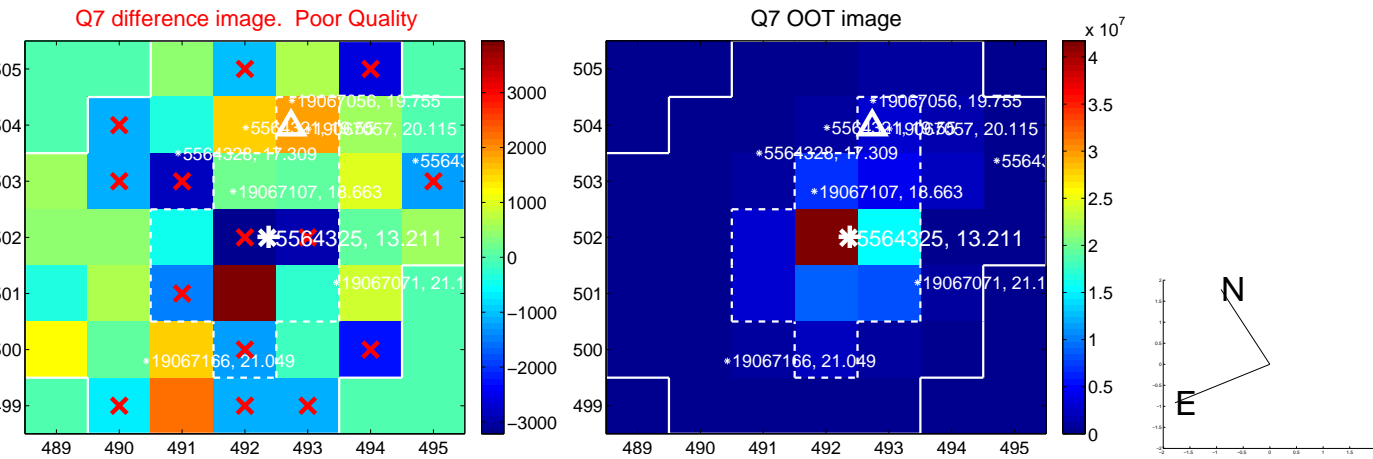
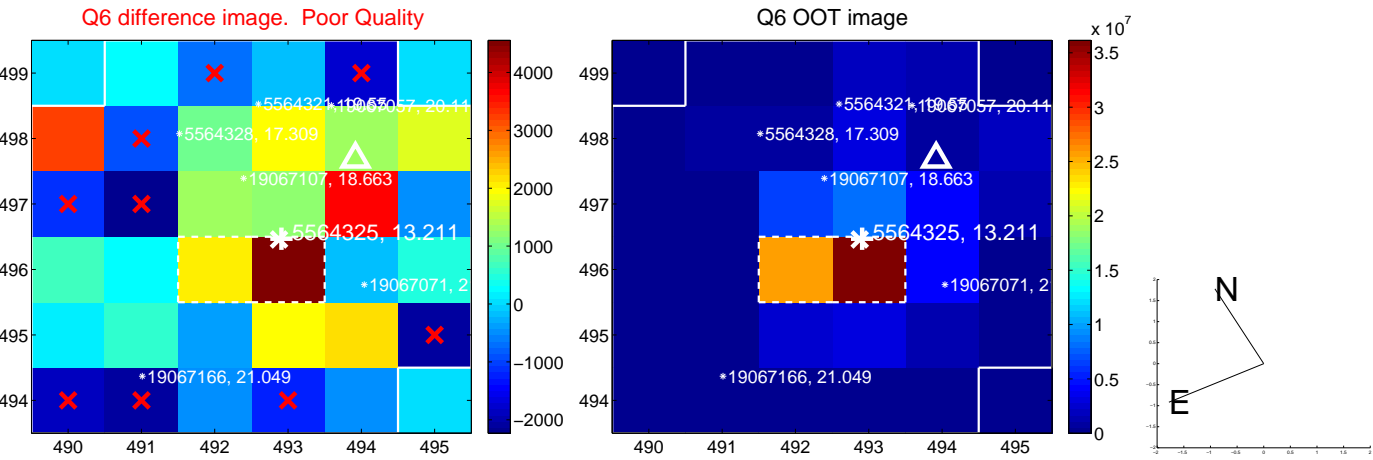
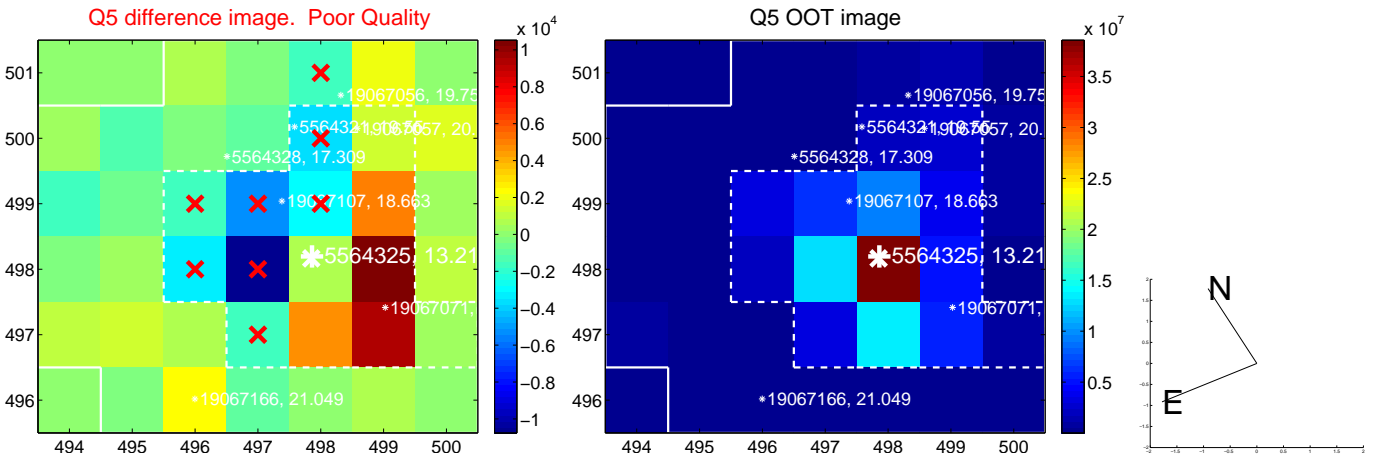


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

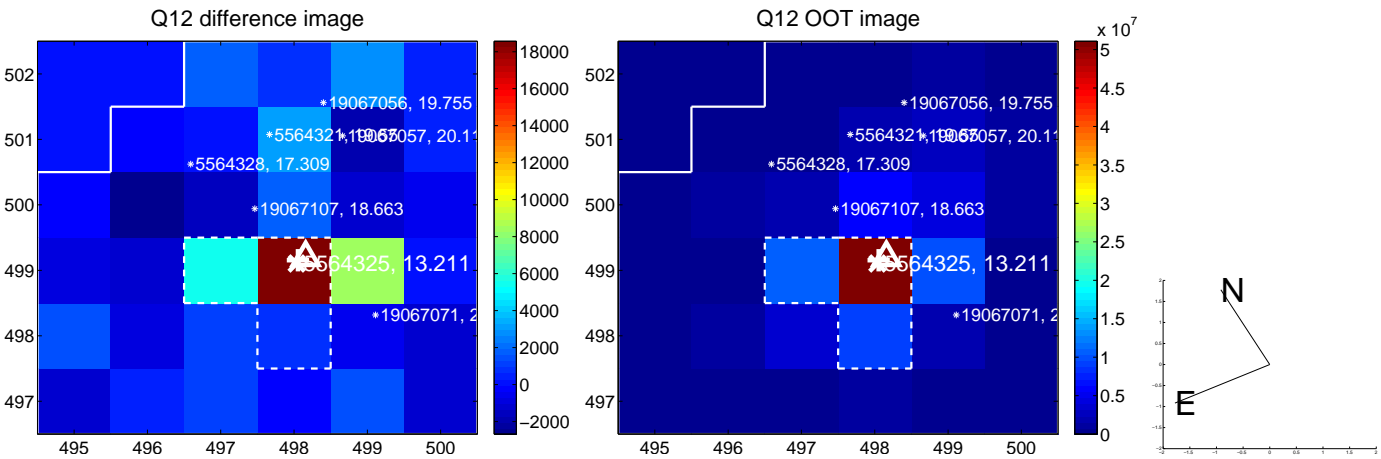
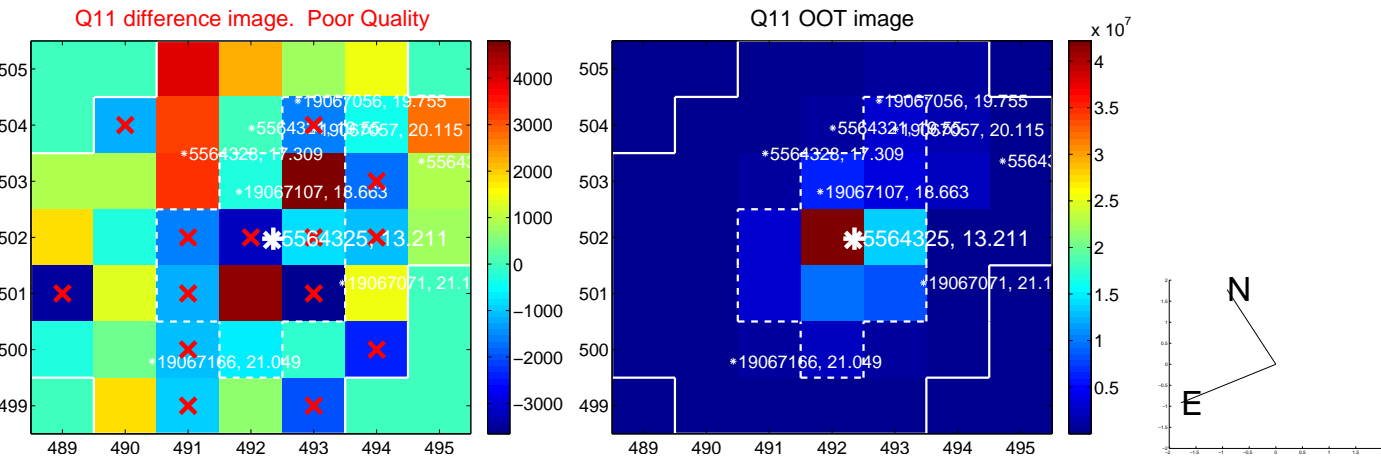
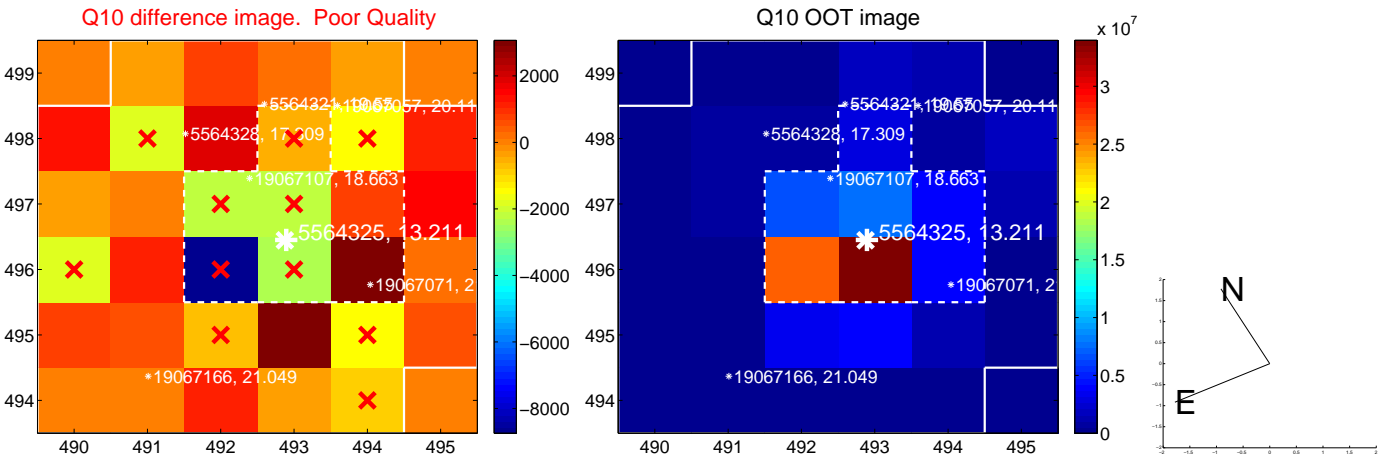
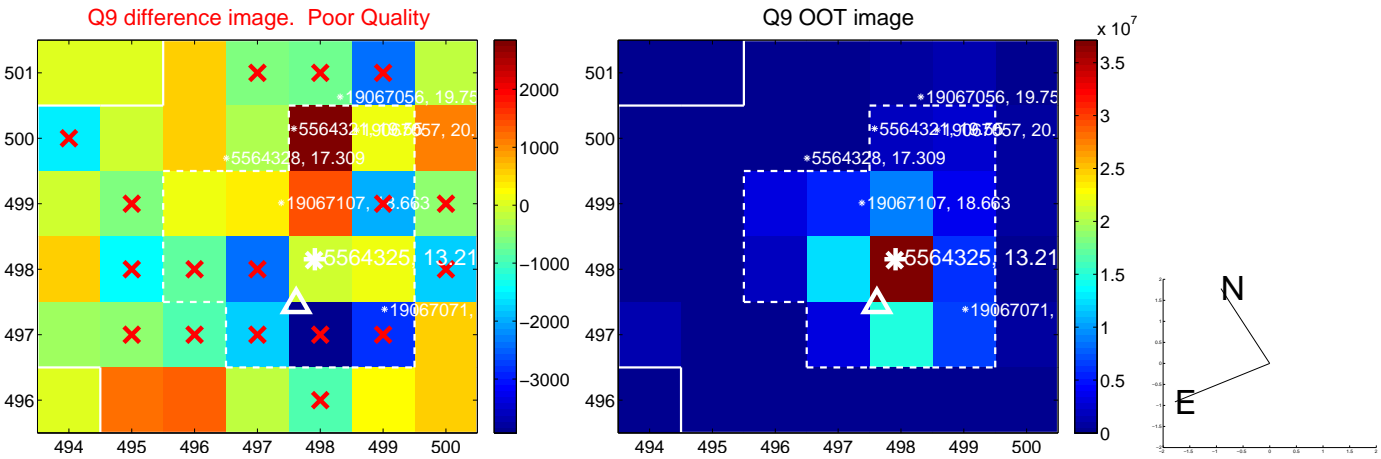
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



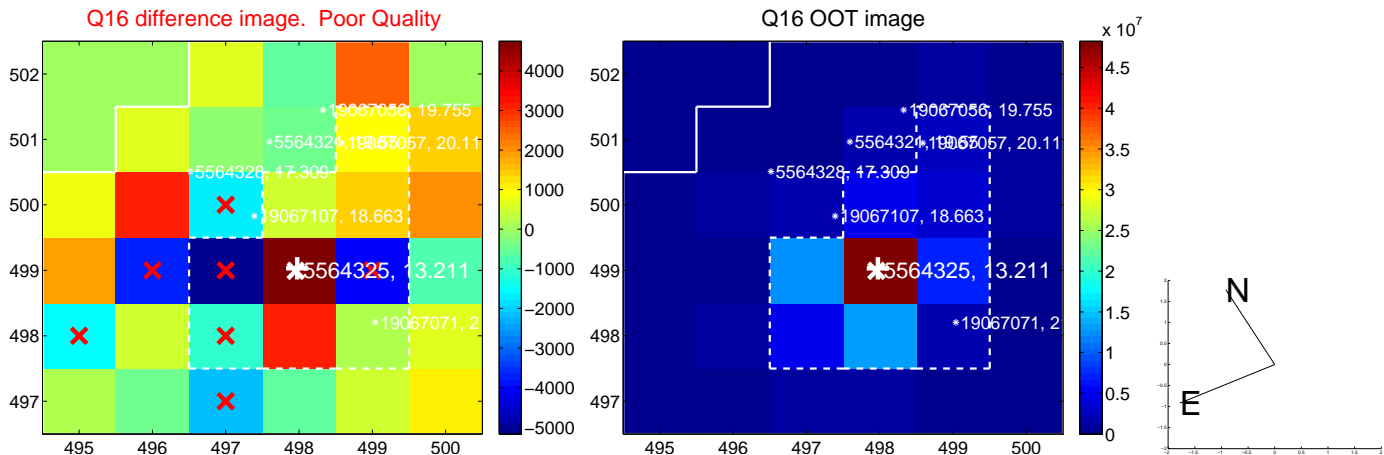
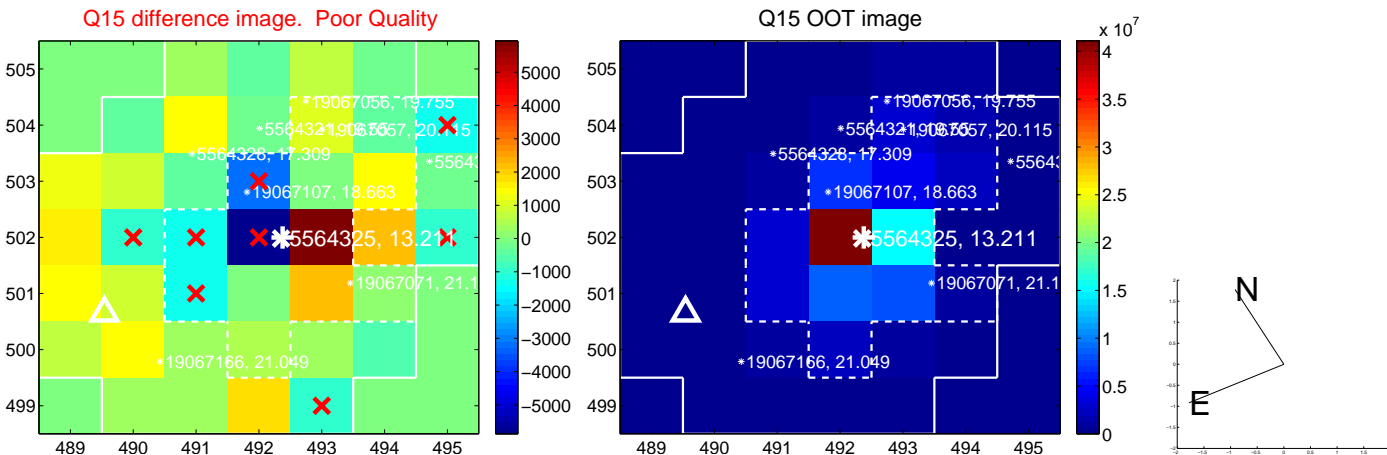
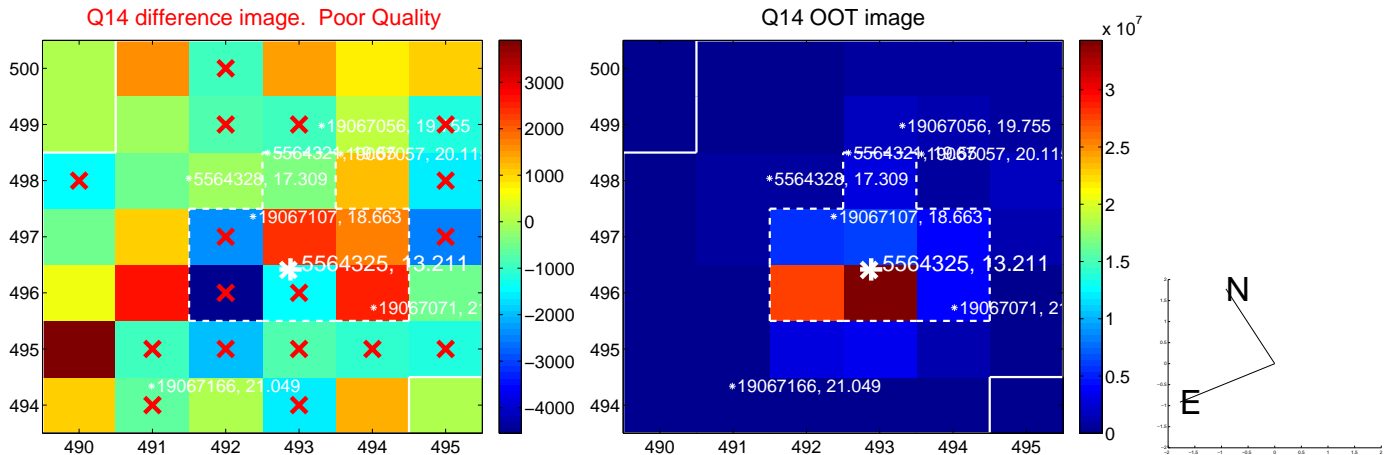
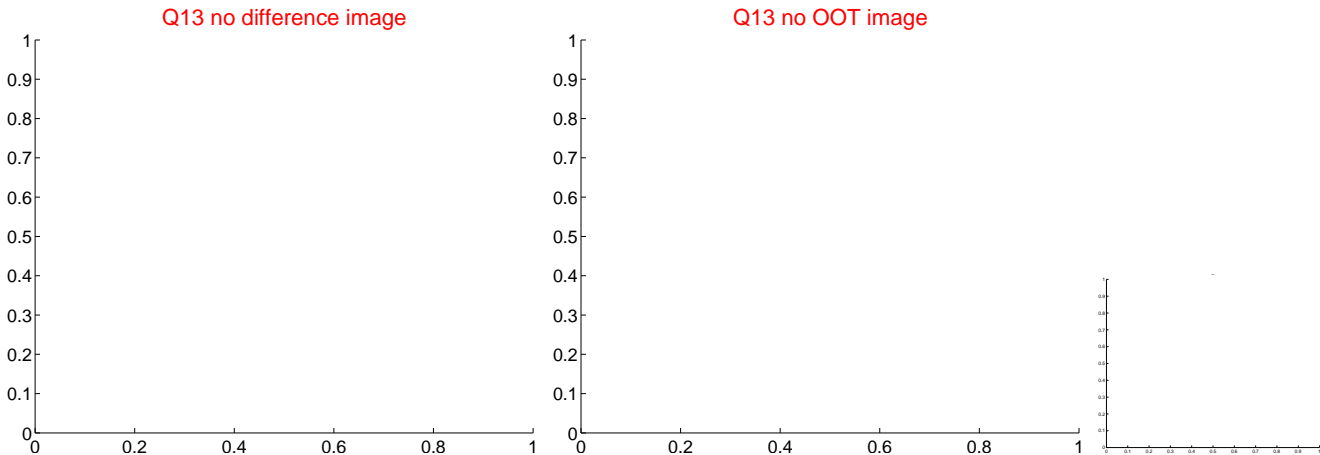
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



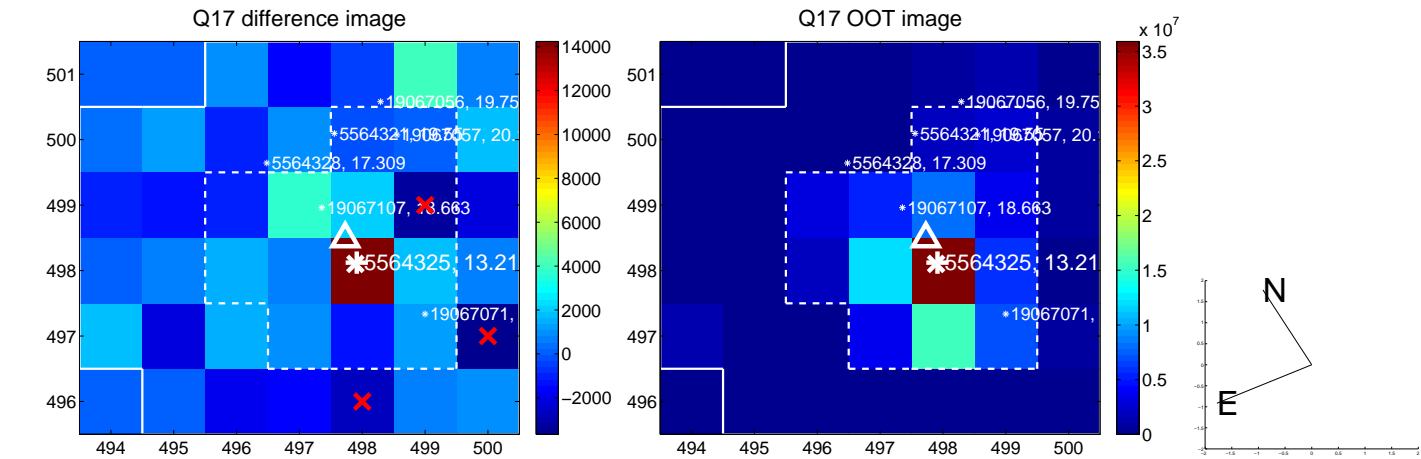
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



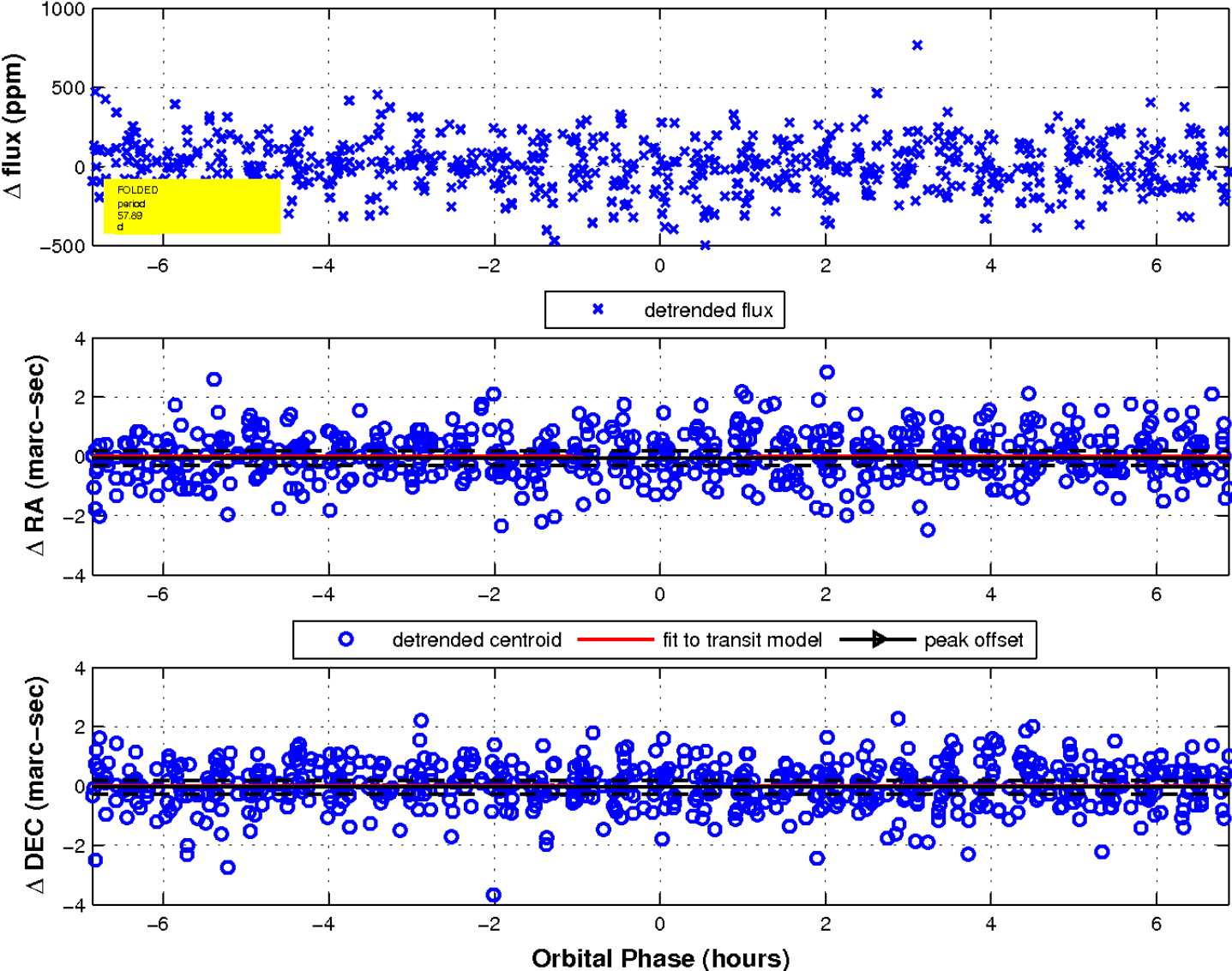
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



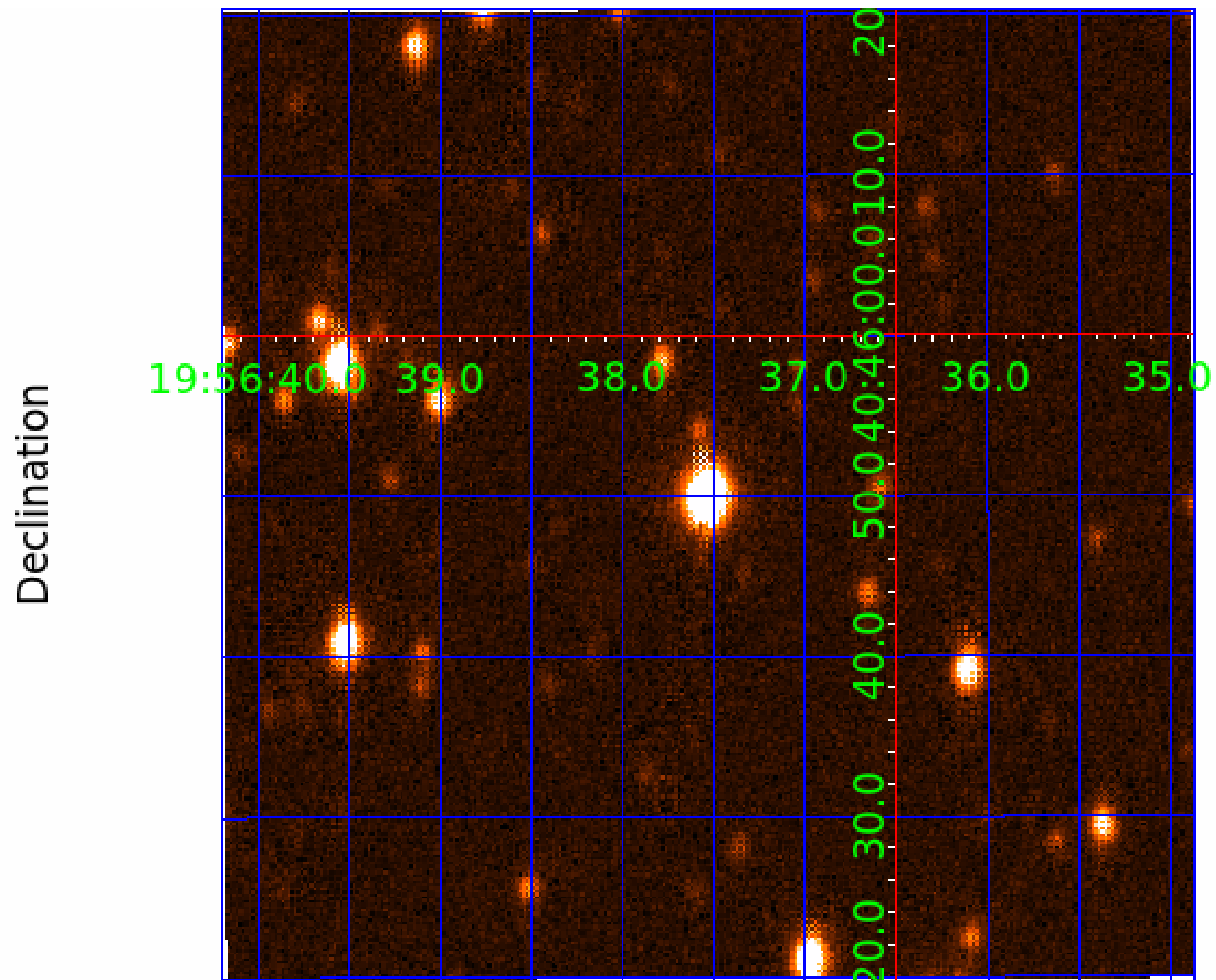
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 4 of 7



UKIRT Image



KIC 005564325

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})
005564325-01	OBS	No	0.744837	132.226689	17.9	5.200	10.4	11.3	3.17	6552	1.35	46935.19
005564325-02	OBS	No	43.372843	156.373760	280.1	3.250	10.5	10.9	3.17	6552	6.11	207.95
005564325-03	OBS	No	22.751523	143.553319	215.4	1.624	10.8	10.7	3.17	6552	5.44	491.55
005564325-04	OBS	No	57.885677	173.463522	261.3	2.294	9.2	11.2	3.17	6552	5.49	141.52
005564325-05	OBS	No	25.267305	148.962650	111.3	5.690	10.0	8.5	3.17	6552	3.77	427.40
005564325-06	OBS	No	38.901833	169.144273	290.7	2.992	9.1	11.4	3.17	6552	6.99	240.41
005564325-07	OBS	No	20.788375	149.346674	324.0	1.238	9.7	9.5	3.17	6552	9.35	554.39

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005564325-01	OBS	FP	0.00	1	0	0	0	LPP_DV
005564325-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005564325-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_MEAS
005564325-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005564325-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005564325-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
005564325-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

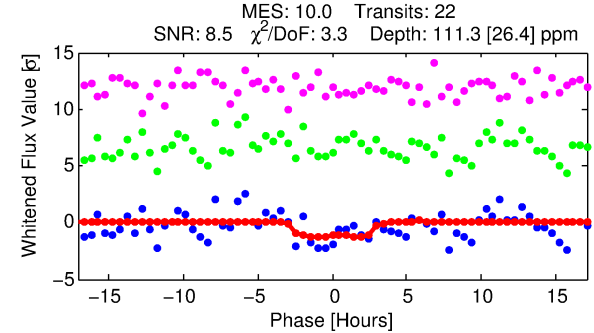
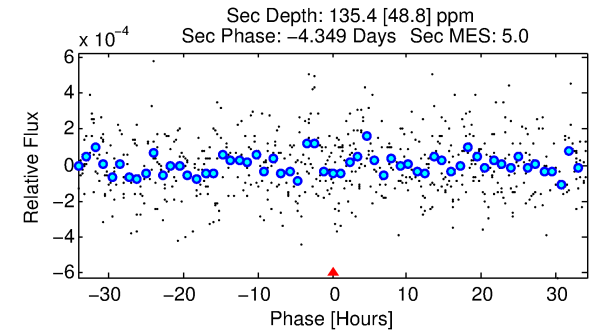
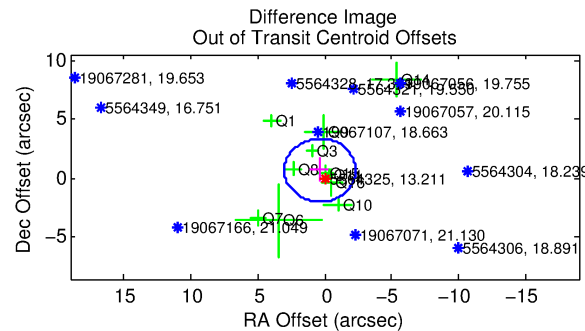
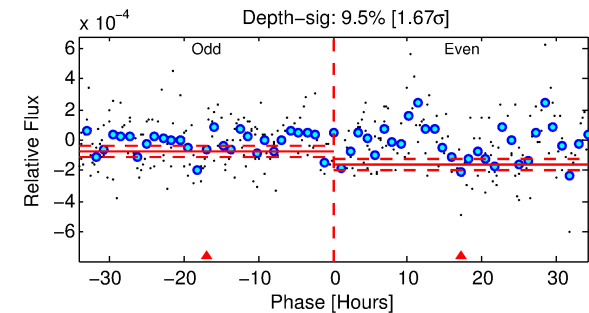
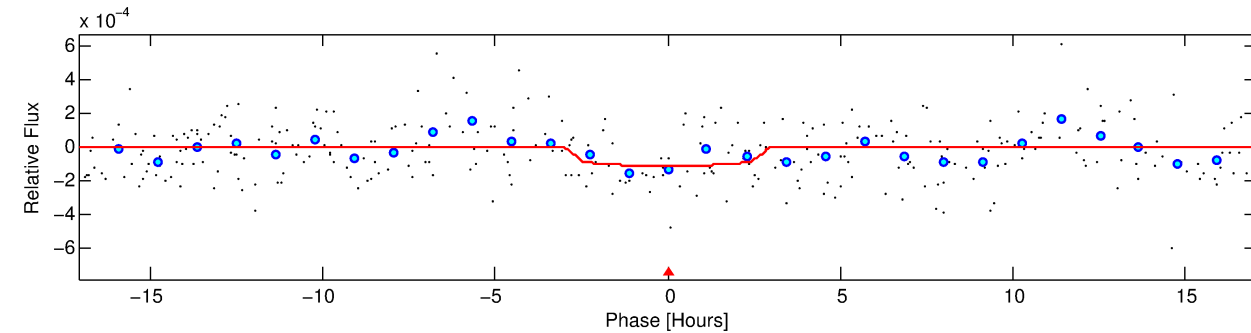
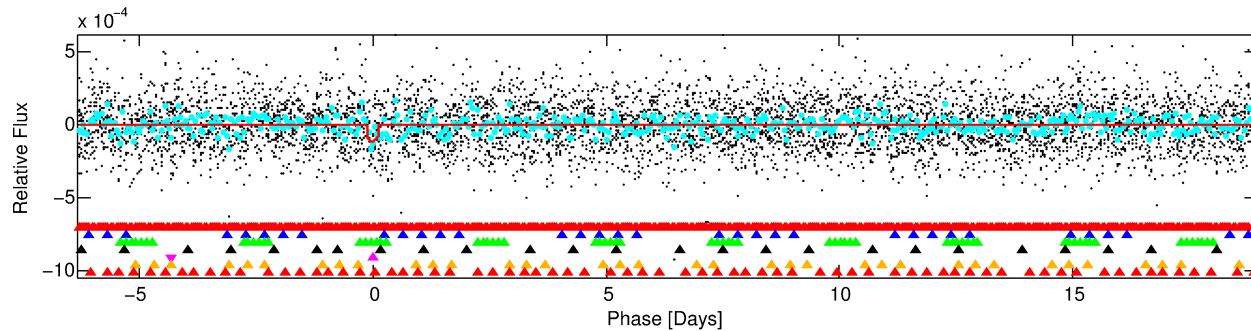
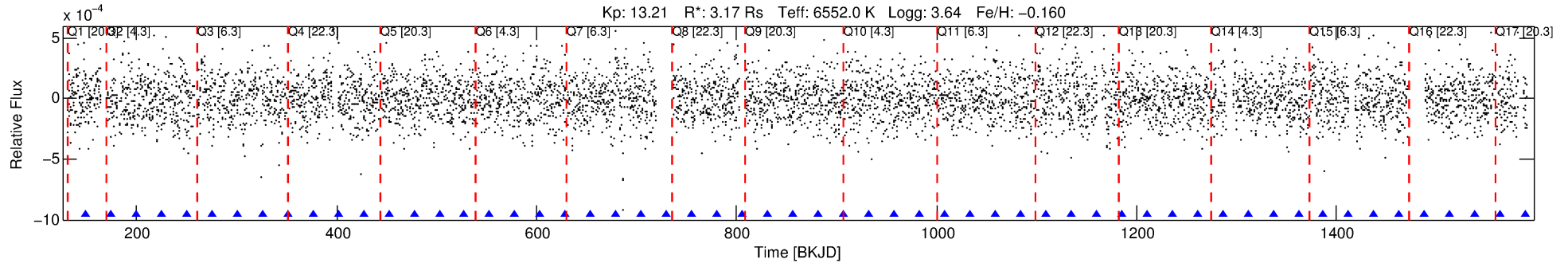
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005564325-05

No Significant Match Found

DV One-Page Summary

KIC: 5564325 Candidate: 5 of 7 Period: 25.267 d



DV Fit Results:

Period = 25.26730 [0.00066] d
Epoch = 148.9627 [0.0201] BKJD
Rp/R* = 0.0109 [0.0098]
a/R* = 18.65 [96.69]
b = 0.85 [1.73]
Seff = 427.40 [233.49]
Teq = 1159 [158] K
Rp = 3.77 [3.65] Re
a = 0.1969 [0.0659] AU
Ag = 202.96 [388.15] [0.52 σ]
Teffp = 6766 [3113] K [1.80 σ]

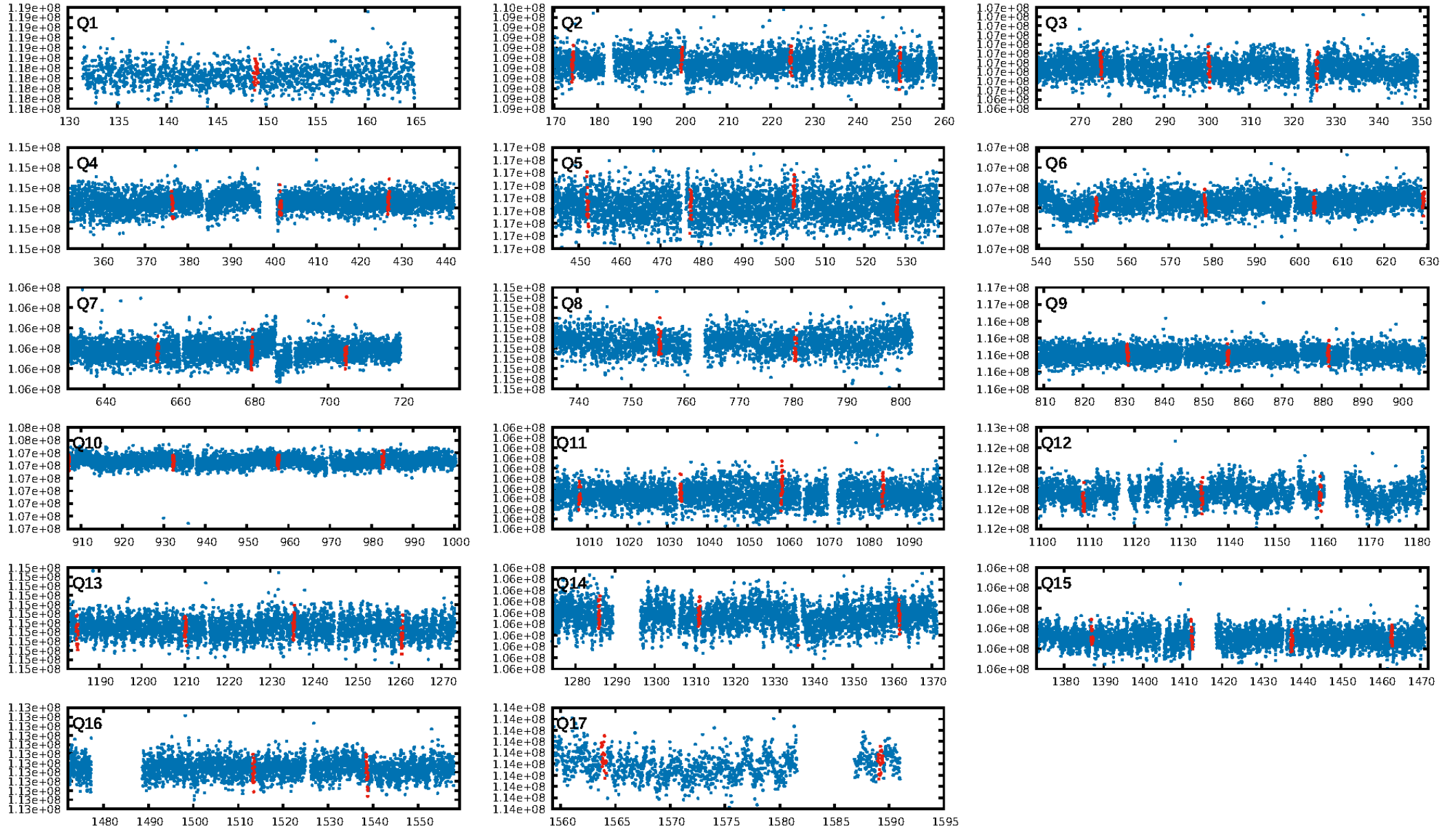
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [10.20 σ]
LongPeriod-sig: 100.0% [50.90 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.88e-11
RollingBand-fgt: 1.00 [21/21]
GhostDiagnostic-chr: -6.327
Centroid-sig: 21.5%
Centroid-so: 0.845 arcsec [0.94 σ]
OotOffset-rm: 0.777 arcsec [0.88 σ]
KicOffset-rm: 0.831 arcsec [0.93 σ]
OotOffset-st: 3/4/2/2 [11]
KicOffset-st: 3/4/2/2 [11]
DiffImageQuality-fgm: 0.36 [4/11]
DiffImageOverlap-fno: 0.00 [0/17]

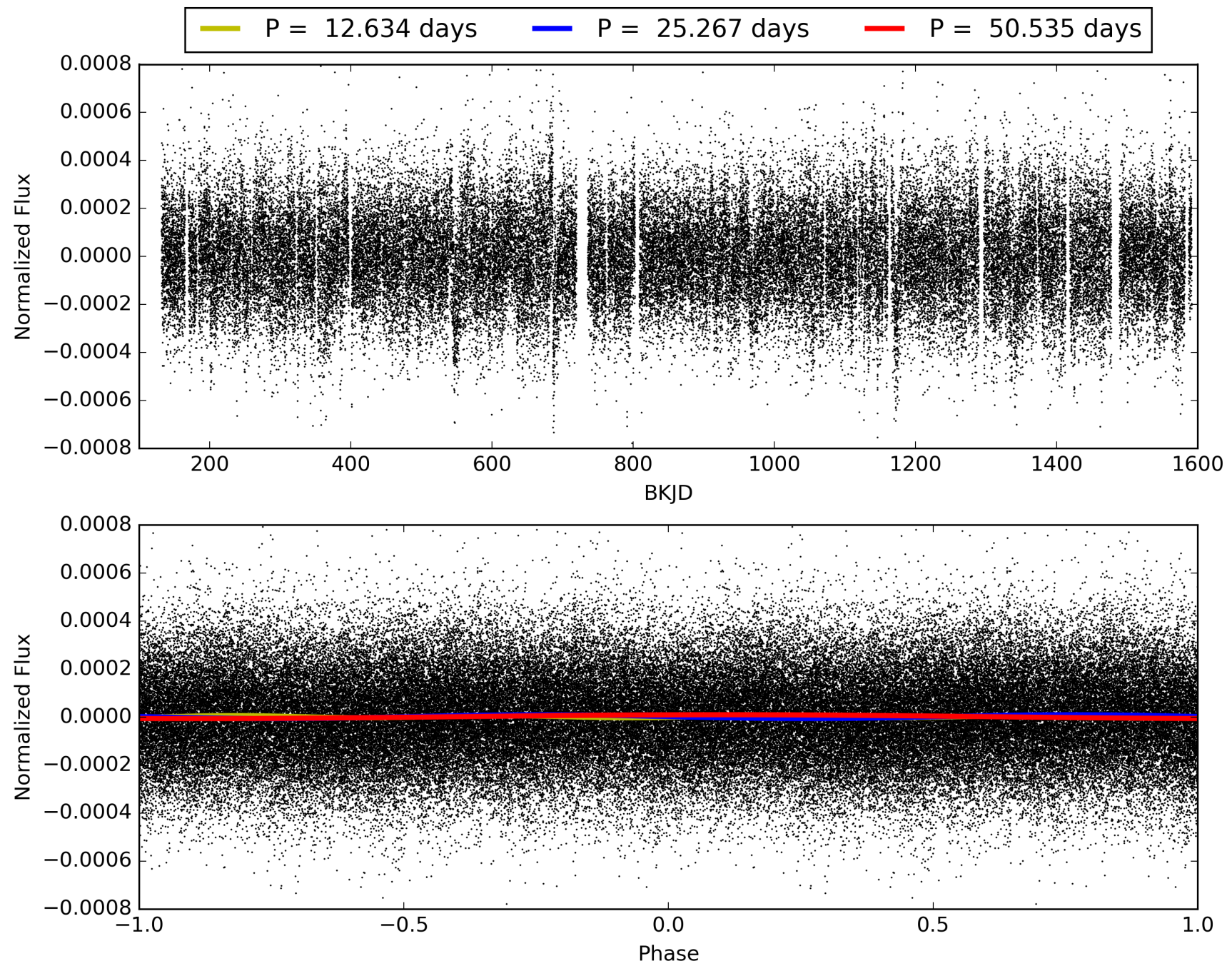
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 08:24:18 Z

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

TCE 005564325-05, PDC Light Curves

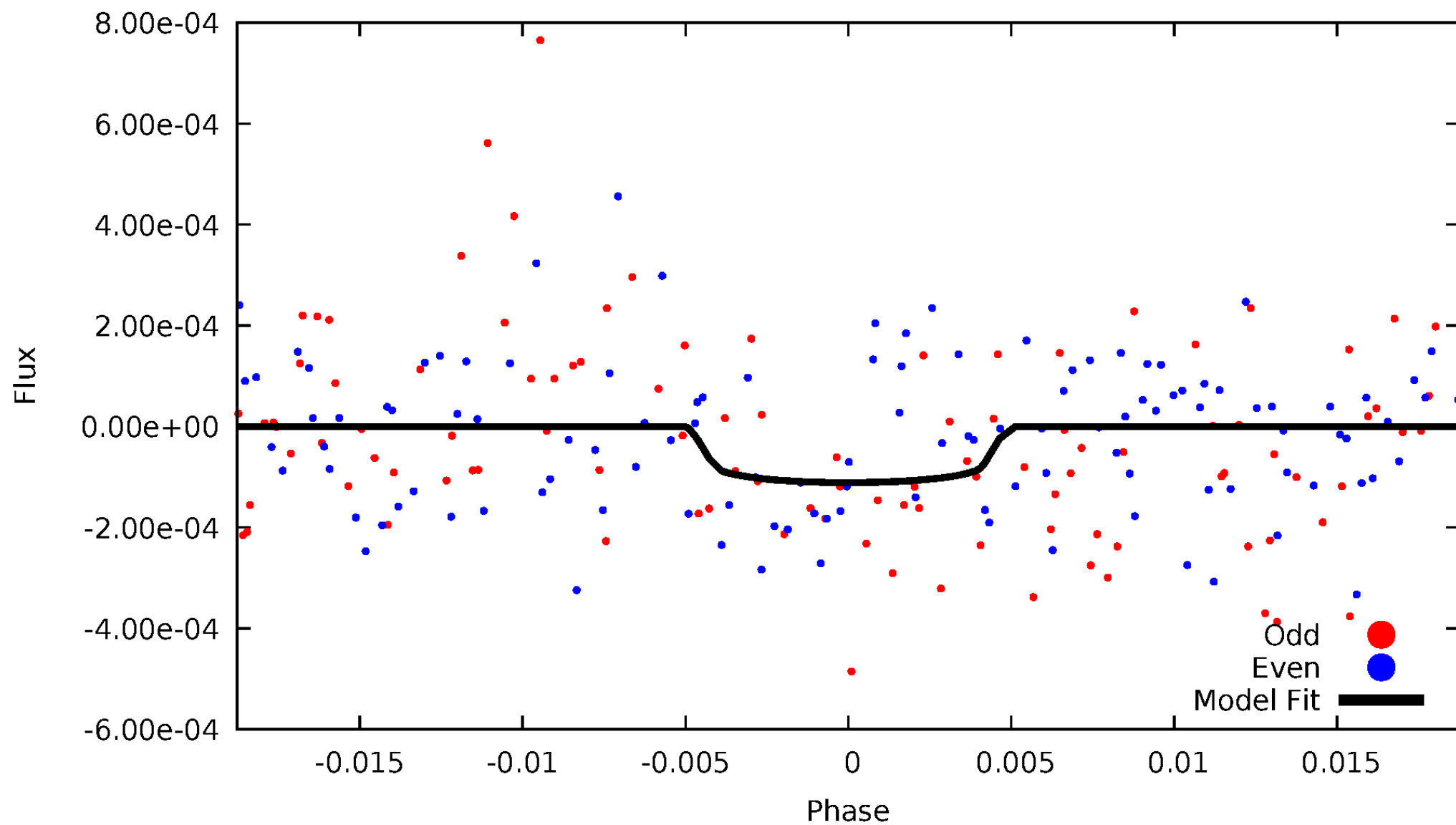


TCE 005564325-05



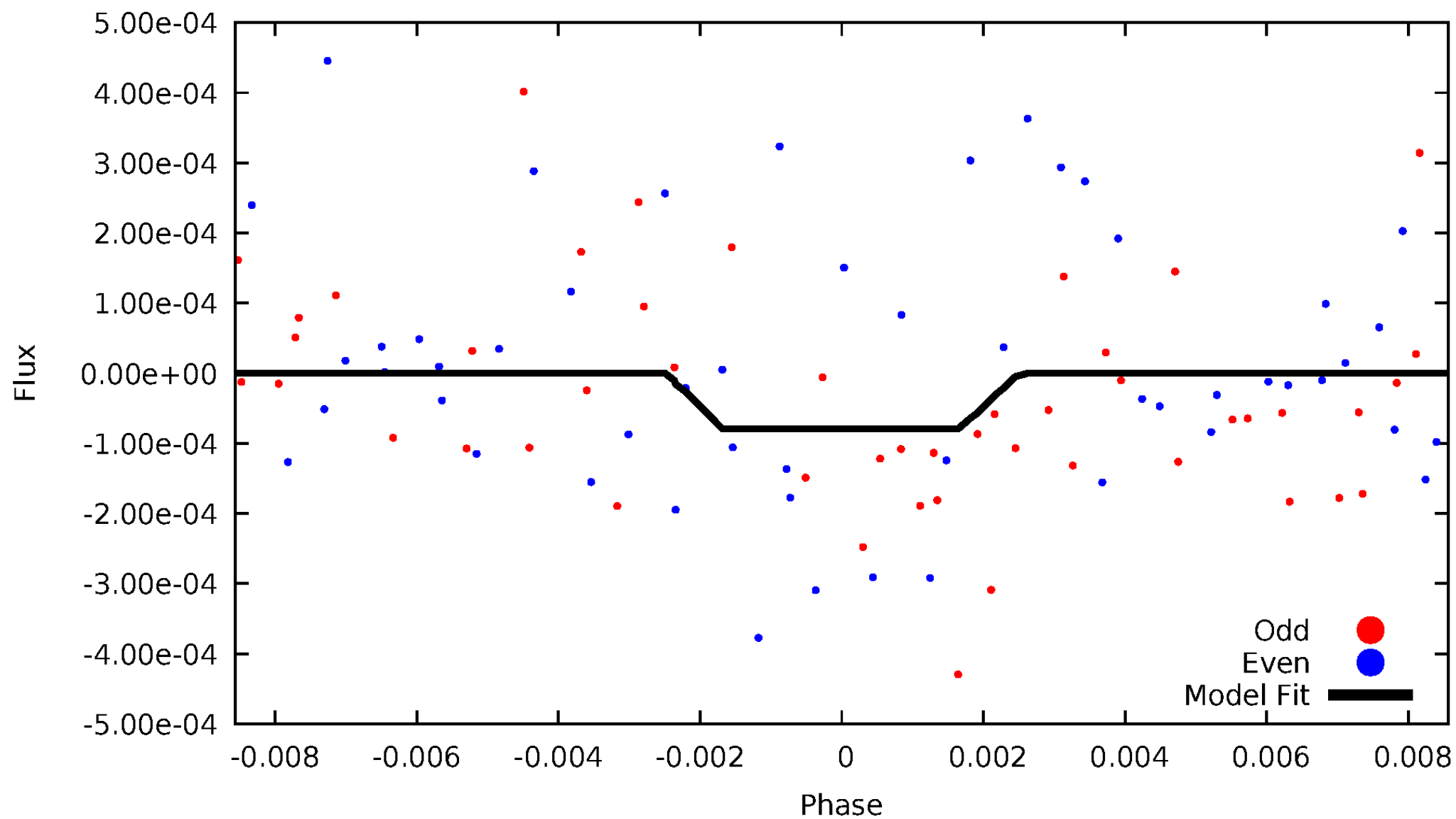
DV Odd/Even

TCE 005564325-05



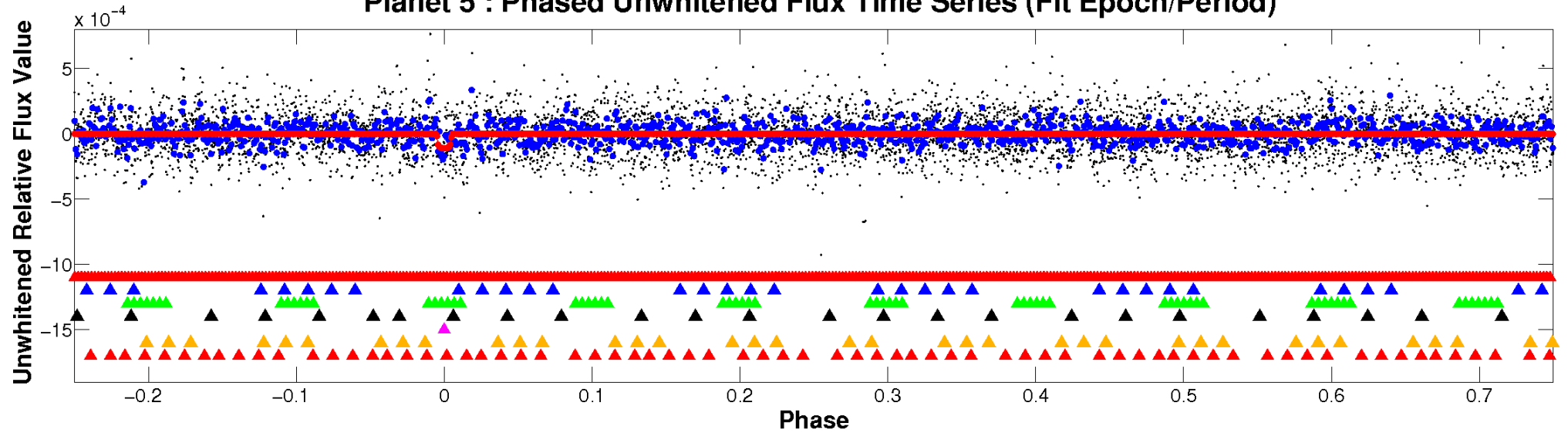
ALT Odd/Even

TCE 005564325-05

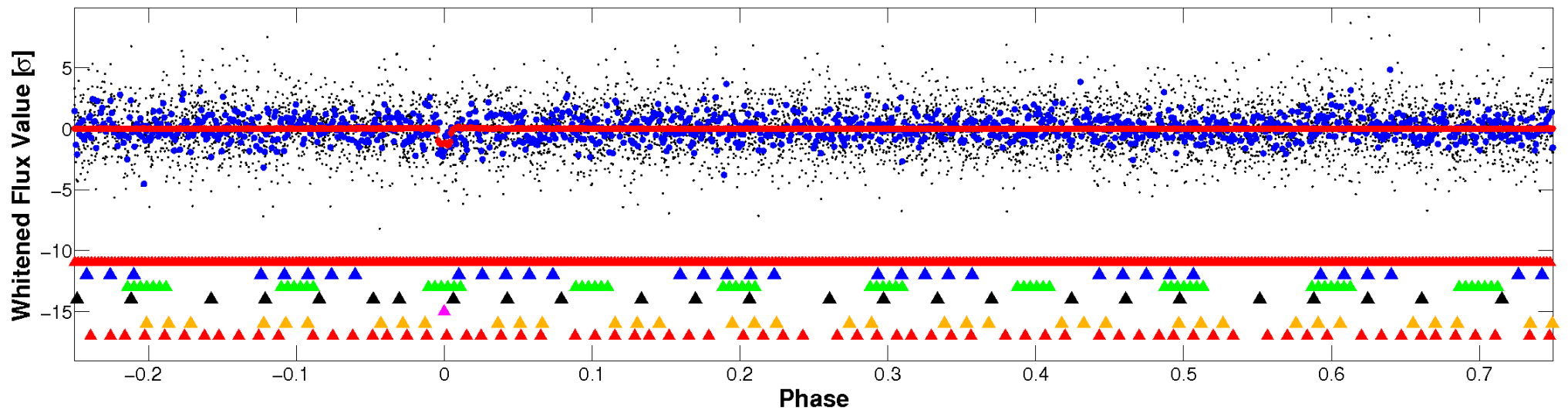


Non-Whitened Vs. Whitened Light Curve

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

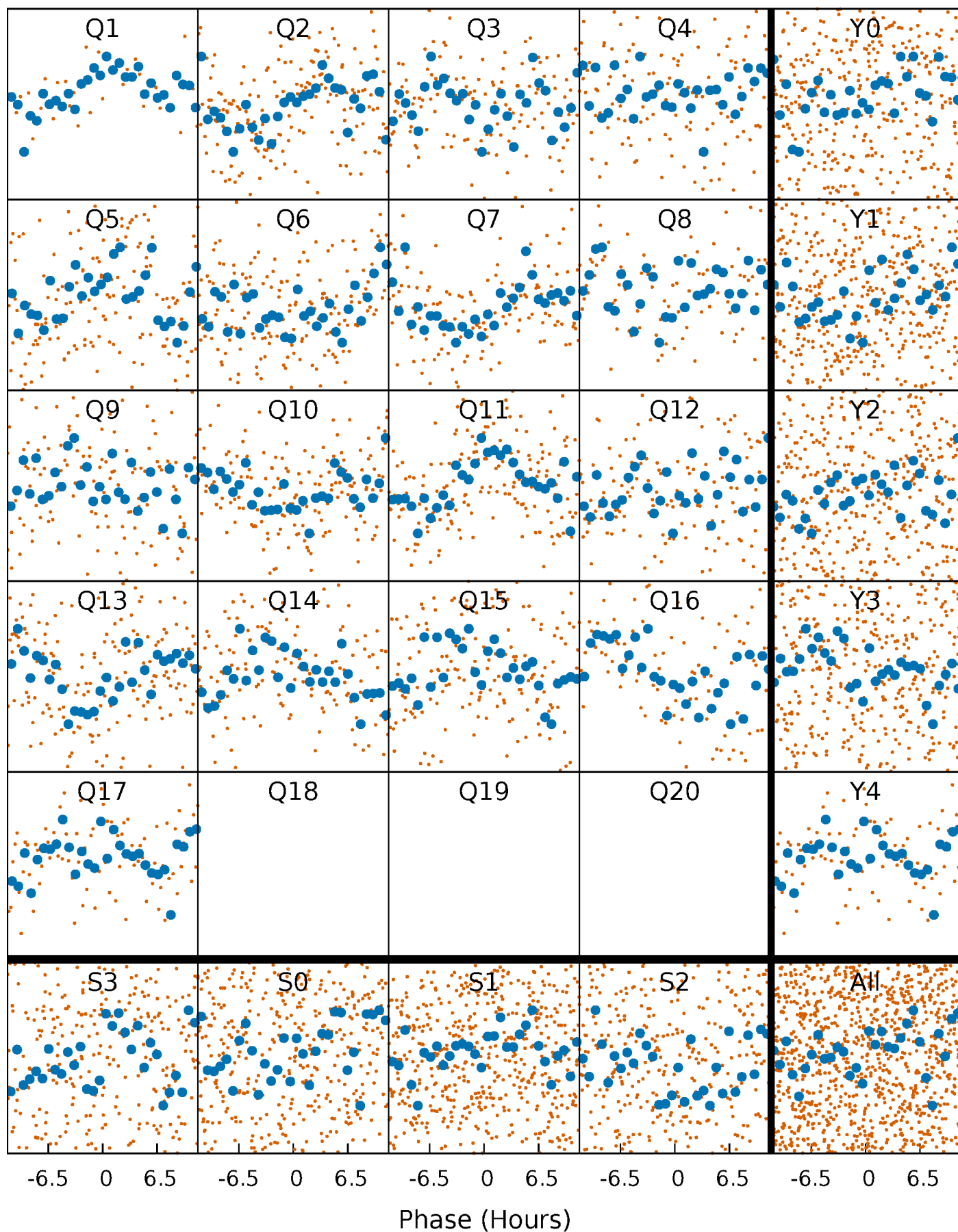


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



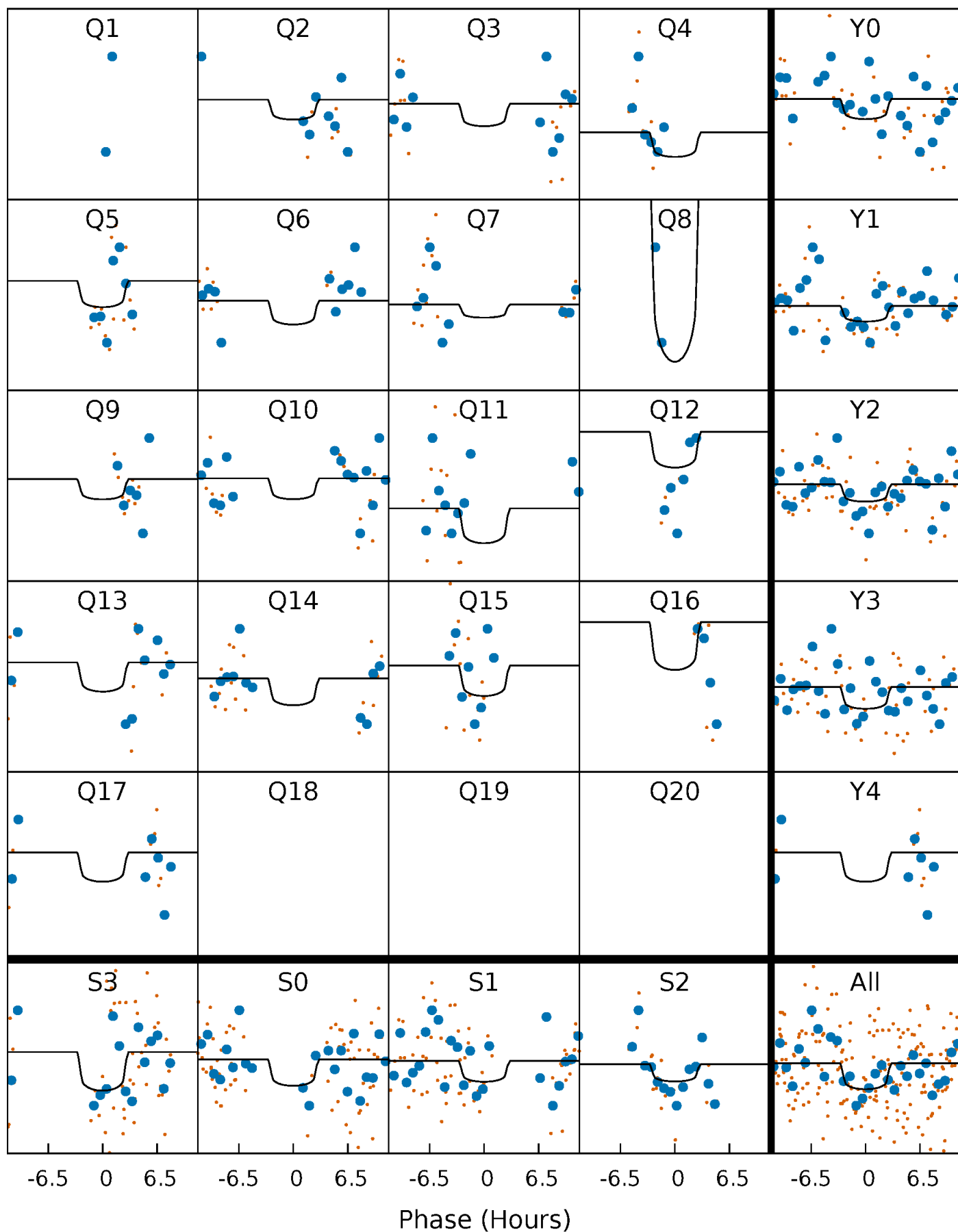
PDC Quarter-Phased Transit Curves

TCE 005564325-05 P= 25.267305 Days $T_0=148.962650$ (BKJD)



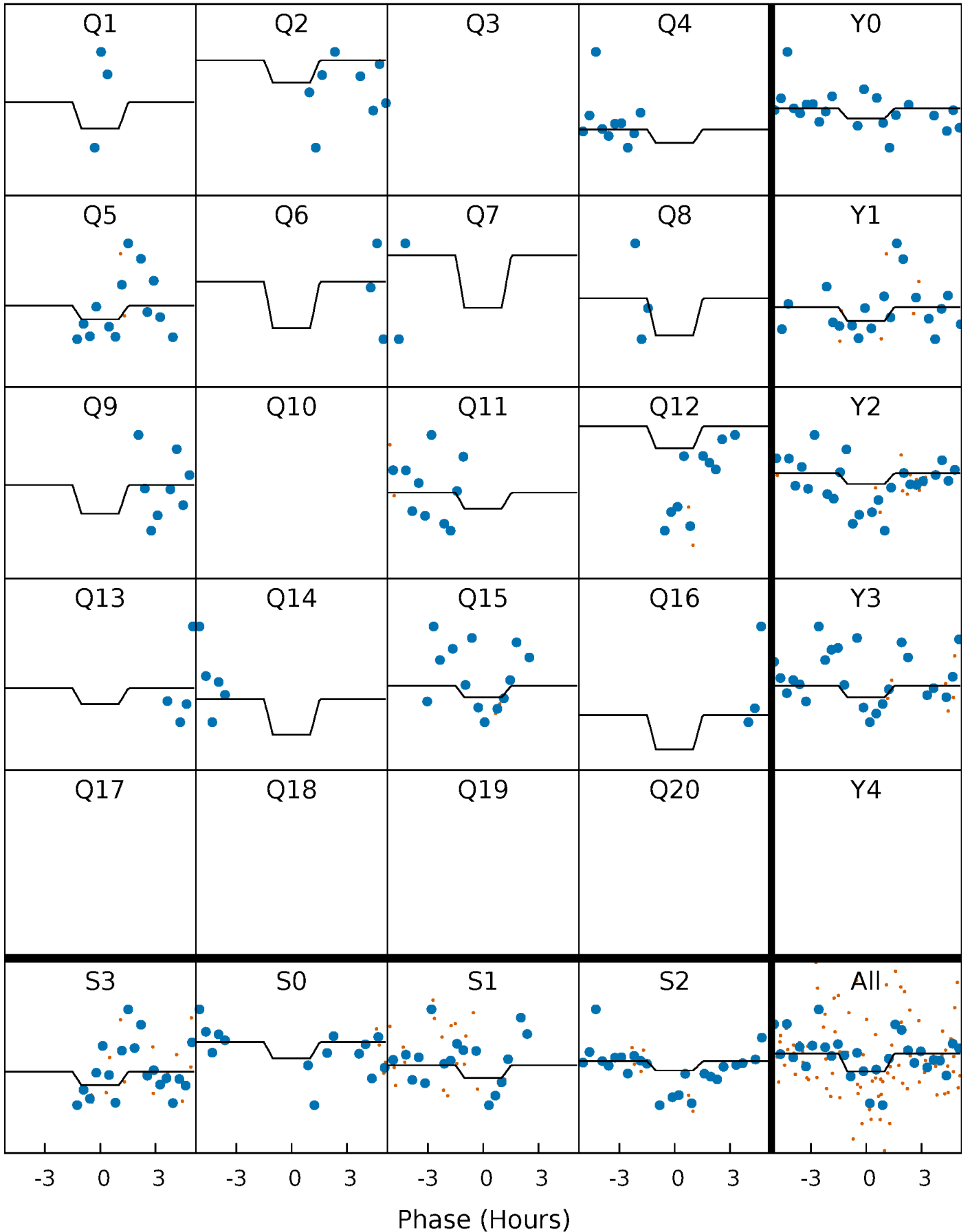
DV Quarter-Phased Transit Curves

TCE 005564325-05 P= 25.267305 Days $T_0=148.962650$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

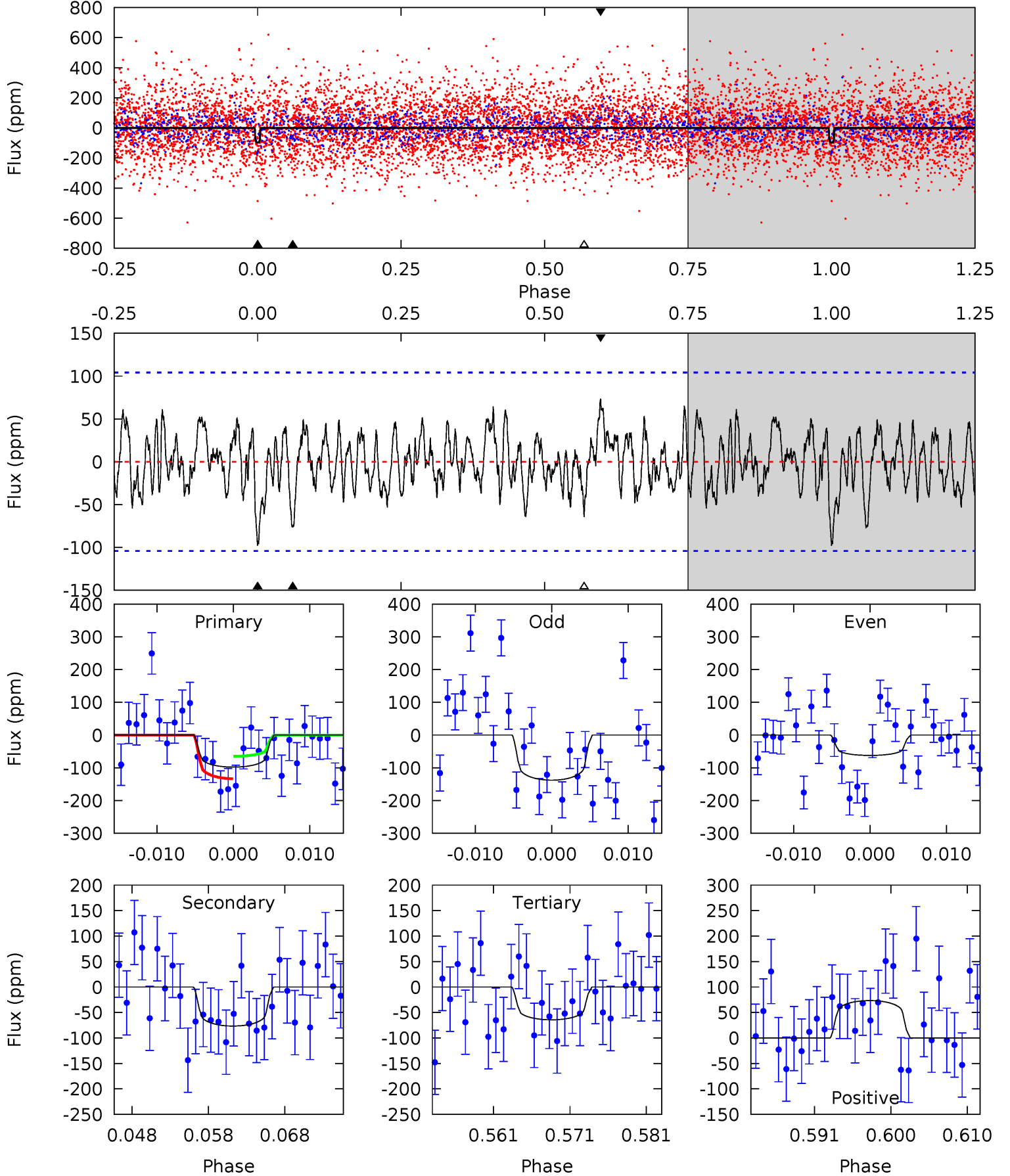
TCE 005564325-05 P= 25.265787 Days $T_0=148.982695$ (BKJD)



DV Model-Shift Uniqueness Test

005564325-05, P = 25.267305 Days, E = 123.695345 Days

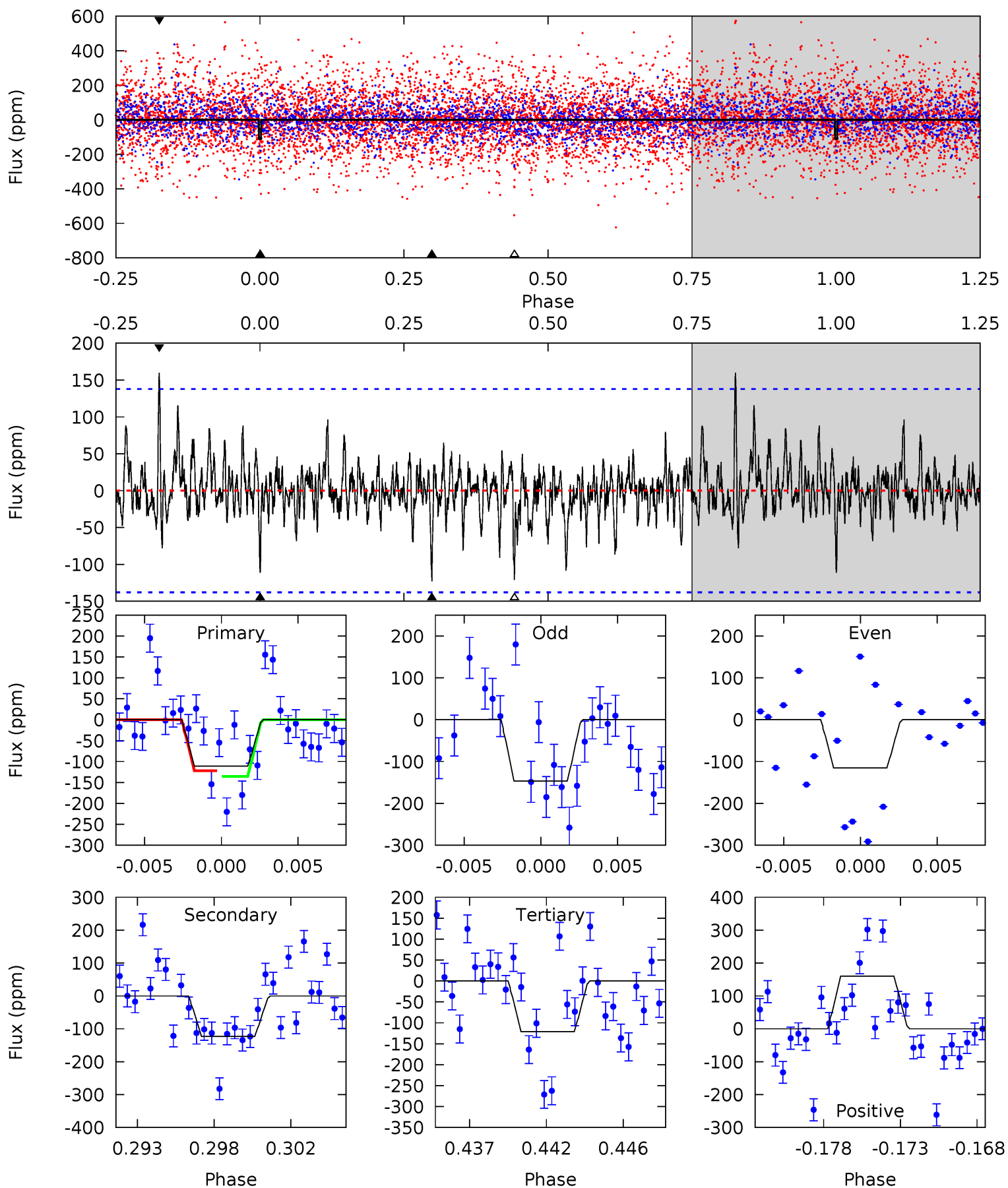
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.73	3.70	3.11	3.55	5.03	2.59	1.29	1.62	1.18	0.59	0.16	1.83	1.03	0.43	1.67



Alt Model-Shift Uniqueness Test

005564325-05, P = 25.265787 Days, E = 123.716908 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.16	4.60	4.53	5.99	5.17	2.82	1.13	-0.37	-1.83	0.07	-1.39	0.59	0.74	0.57	0.24



Stellar Parameters For KIC 005564325

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6552^{+177}_{-196}	$3.639^{+0.312}_{-0.059}$	$-0.160^{+0.300}_{-0.250}$	$3.168^{+0.477}_{-1.112}$	$1.595^{+0.216}_{-0.325}$	$0.071^{+0.164}_{-0.019}$
	+3%/-3%	+9%/-2%	+188%/-156%	+15%/-35%	+14%/-20%	+232%/-26%
Source	PHO1	FLK73	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 005564325-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-77 ± 21	$3.86^{+3.23}_{-2.33}$	1570^{+92}_{-142}	5455^{+3559}_{-1185}	104^{+552}_{-72}
Alt.	-123 ± 27	$3.46^{+2.87}_{-2.23}$	1579^{+81}_{-135}	6637^{+6330}_{-1703}	217^{+1510}_{-152}

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 $A_{obs} \gg 1.0$

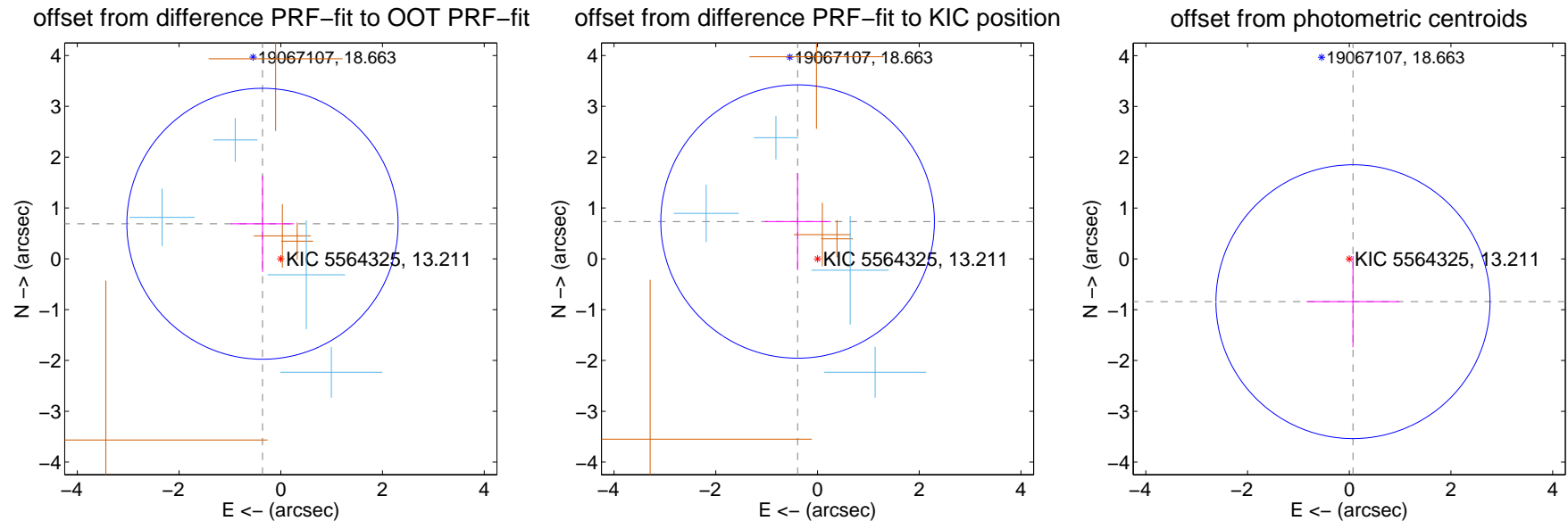
DV Centroid Data

Supplemental centroid analysis for 005564325-05. Kepler magnitude: 13.21. Transit SNR 8.45

There are 4 quarters with good PRF difference image offsets

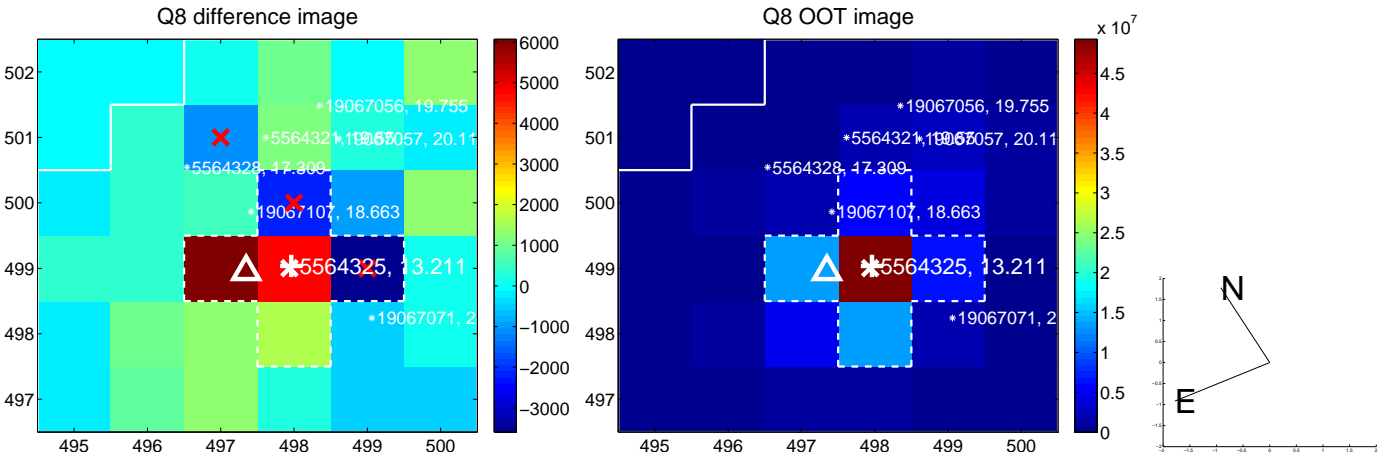
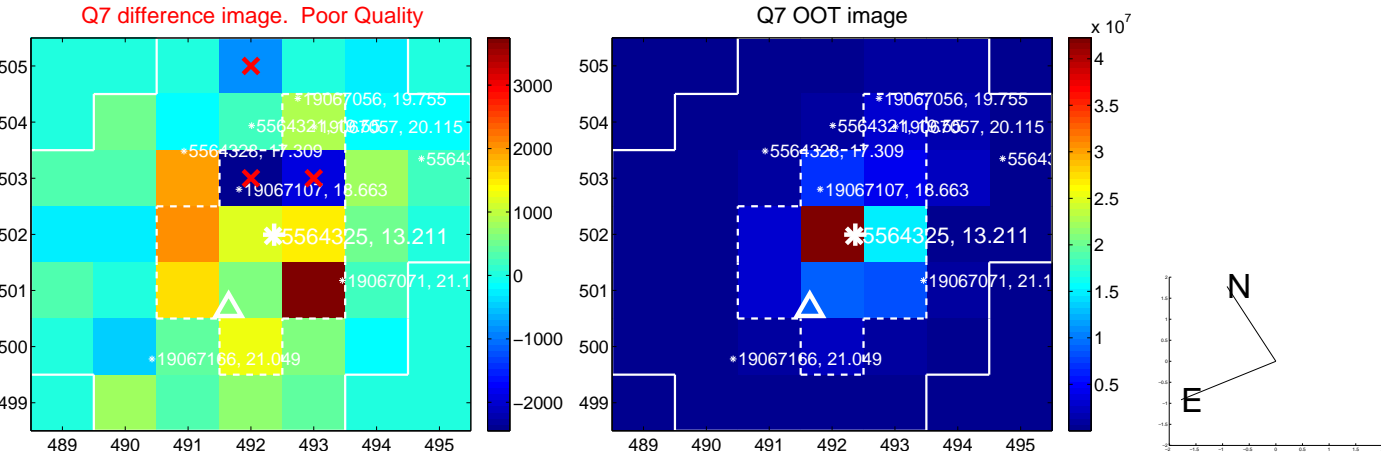
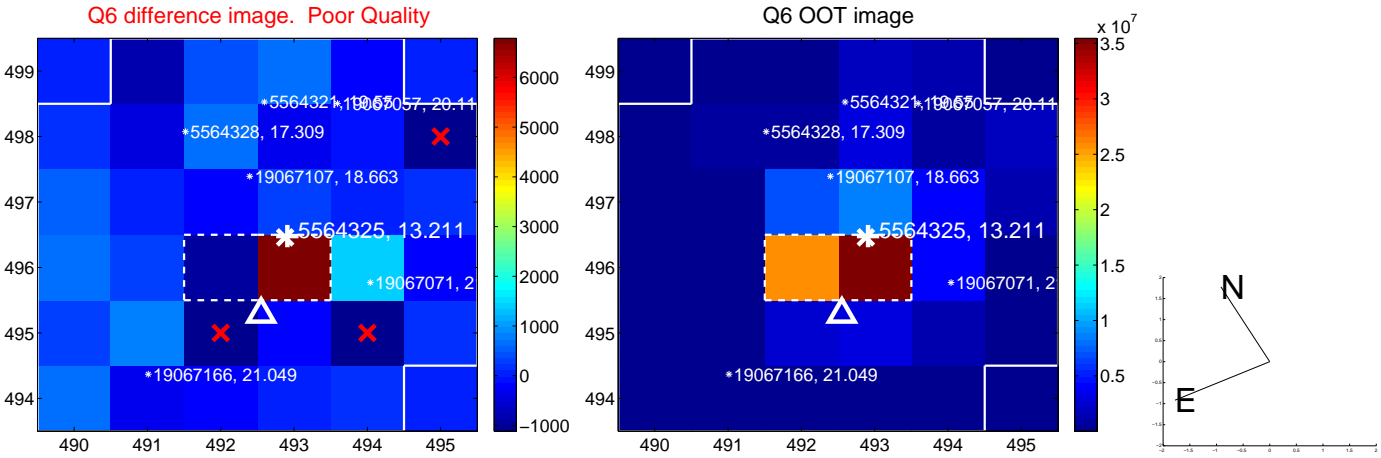
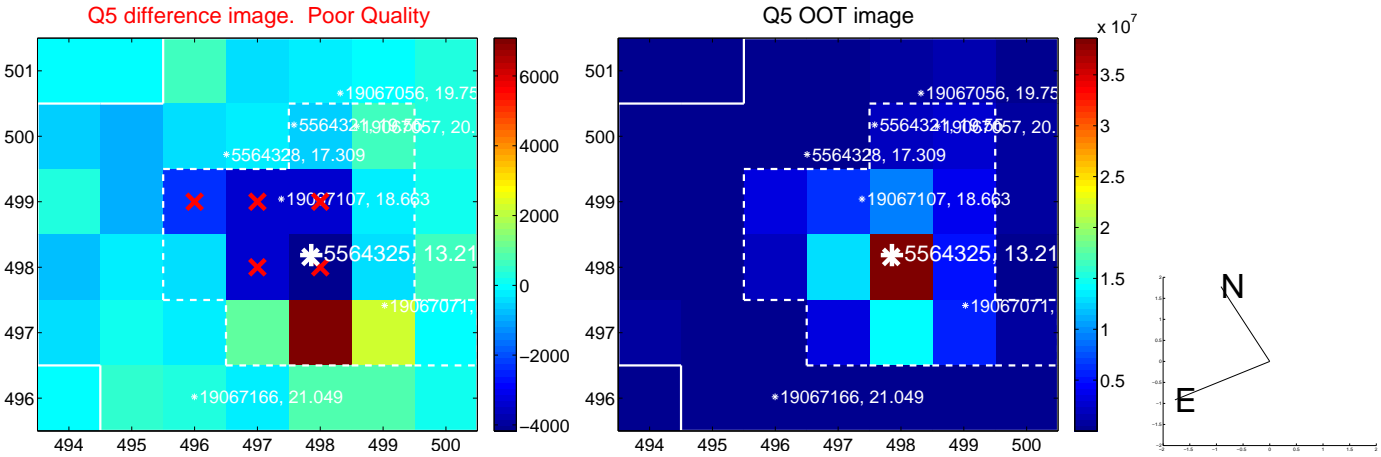
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.777 ± 0.888	0.88	0.360 ± 0.620	0.689 ± 0.948
PRF-fit source offset from KIC position	0.831 ± 0.896	0.93	0.391 ± 0.651	0.733 ± 0.955
photometric centroid source offset	0.85 ± 0.90	0.94	-0.07 ± 0.91	-0.84 ± 0.90

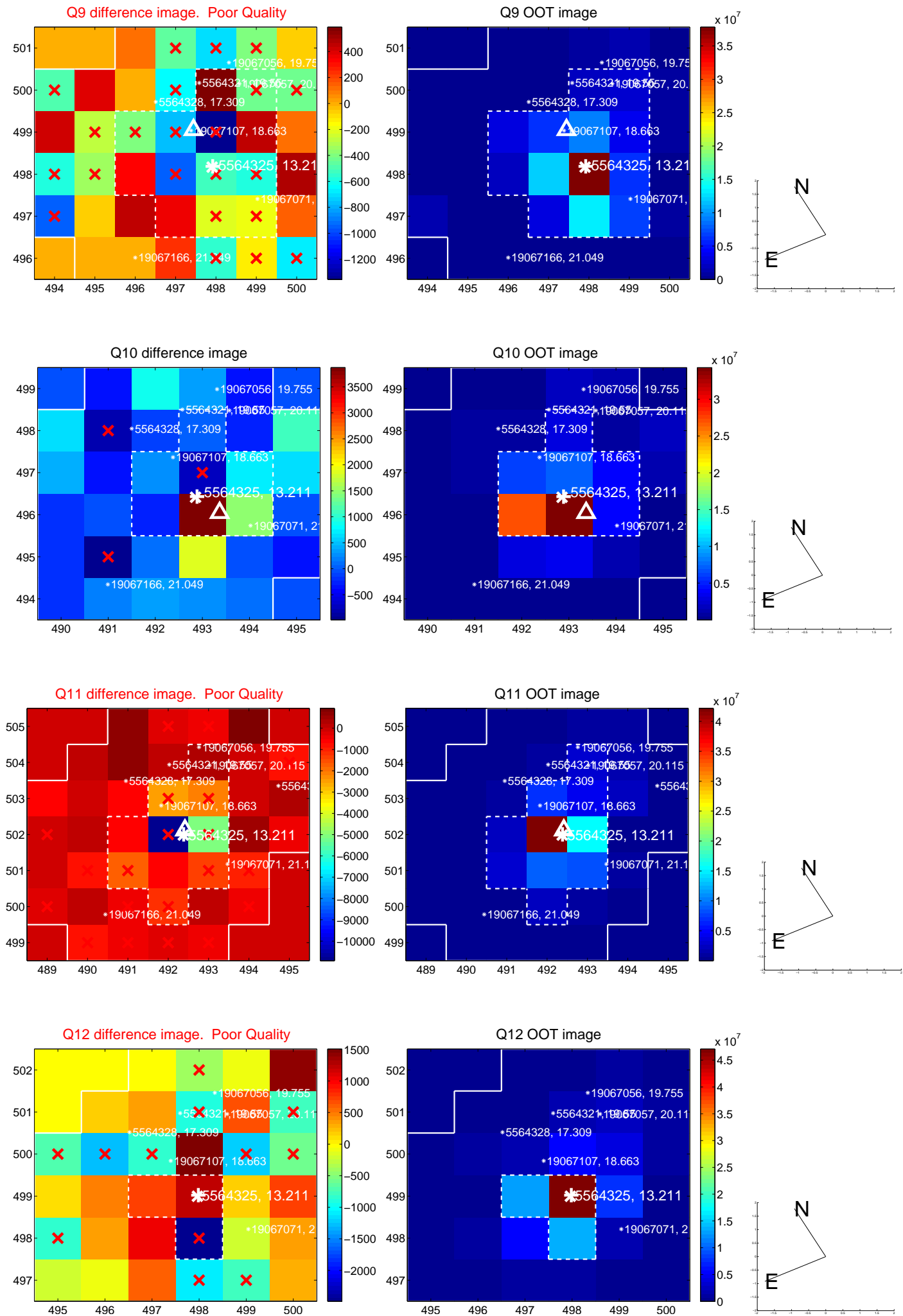


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

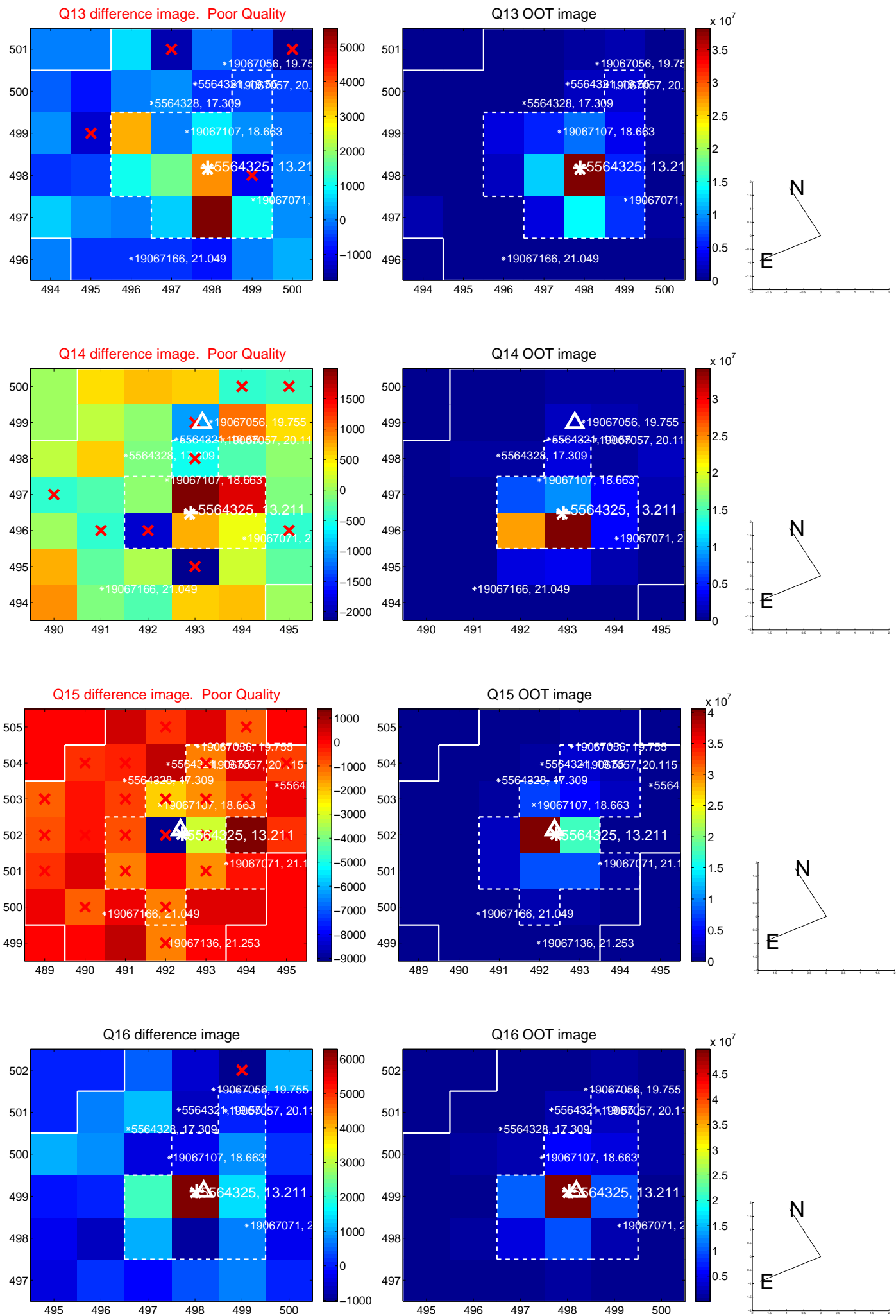
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



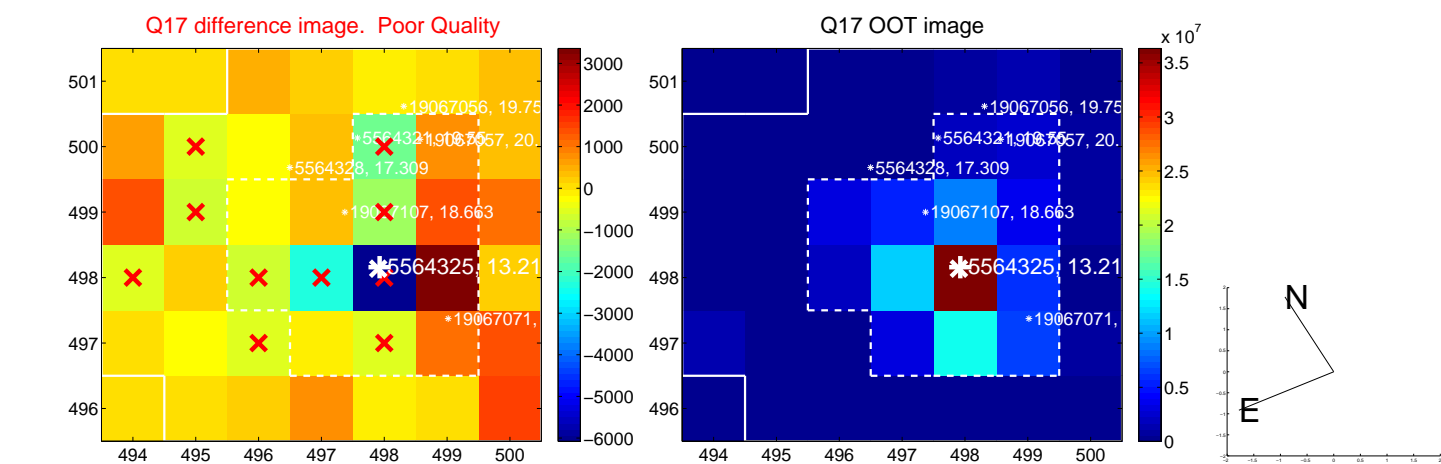
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



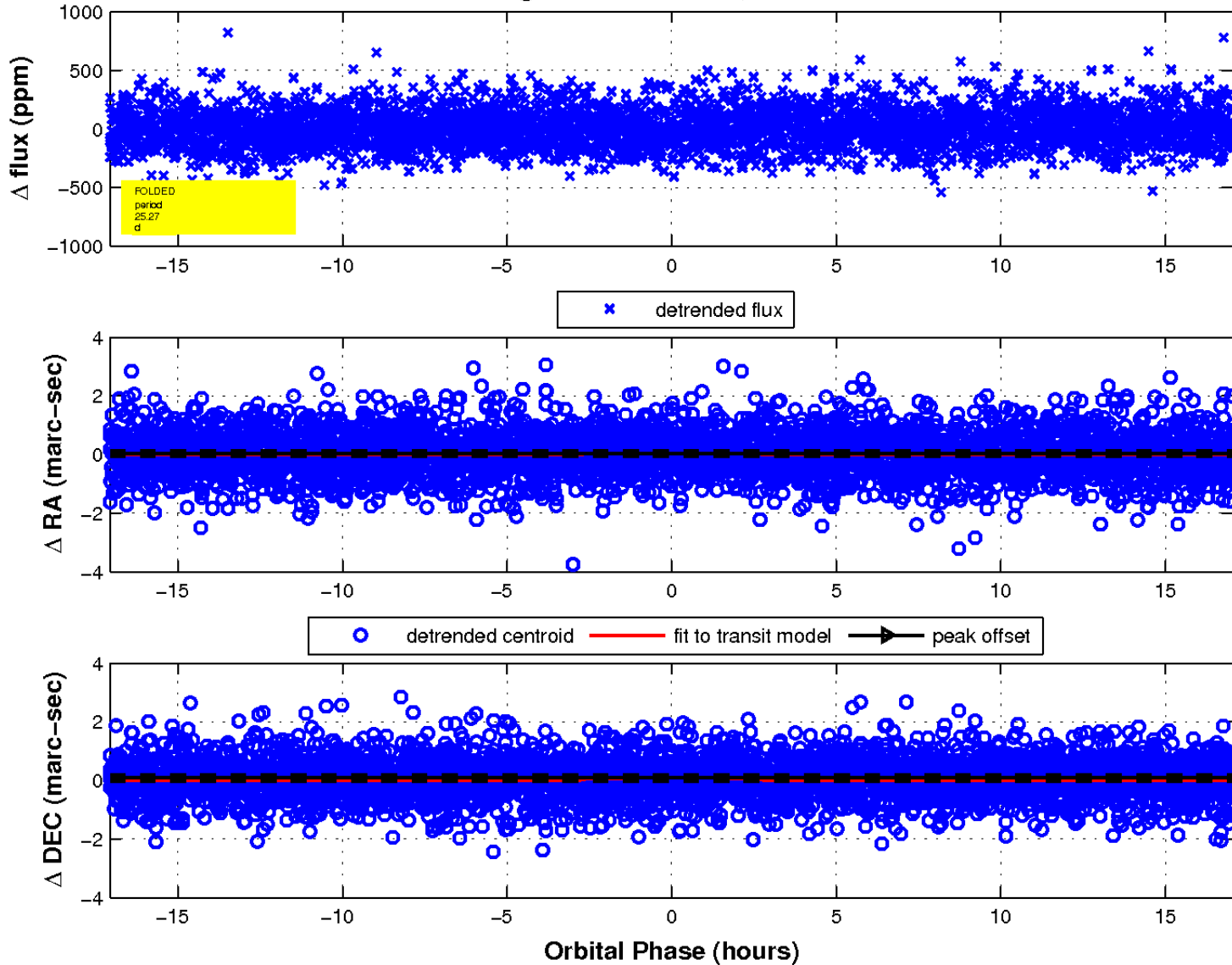
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



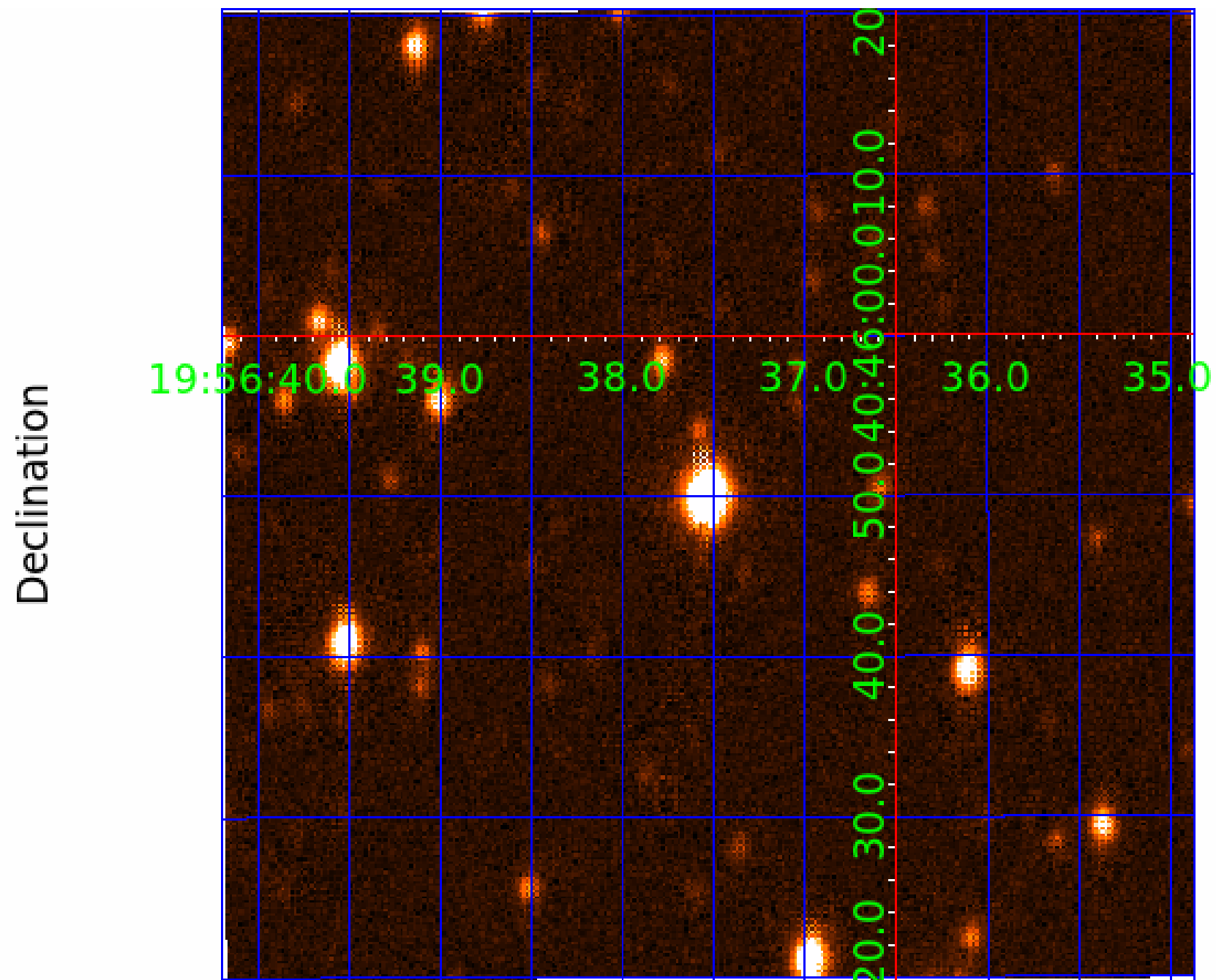
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 5 of 7



UKIRT Image



KIC 005564325

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})
005564325-01	OBS	No	0.744837	132.226689	17.9	5.200	10.4	11.3	3.17	6552	1.35	46935.19
005564325-02	OBS	No	43.372843	156.373760	280.1	3.250	10.5	10.9	3.17	6552	6.11	207.95
005564325-03	OBS	No	22.751523	143.553319	215.4	1.624	10.8	10.7	3.17	6552	5.44	491.55
005564325-04	OBS	No	57.885677	173.463522	261.3	2.294	9.2	11.2	3.17	6552	5.49	141.52
005564325-05	OBS	No	25.267305	148.962650	111.3	5.690	10.0	8.5	3.17	6552	3.77	427.40
005564325-06	OBS	No	38.901833	169.144273	290.7	2.992	9.1	11.4	3.17	6552	6.99	240.41
005564325-07	OBS	No	20.788375	149.346674	324.0	1.238	9.7	9.5	3.17	6552	9.35	554.39

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005564325-01	OBS	FP	0.00	1	0	0	0	LPP_DV
005564325-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005564325-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_MEAS
005564325-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005564325-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005564325-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
005564325-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

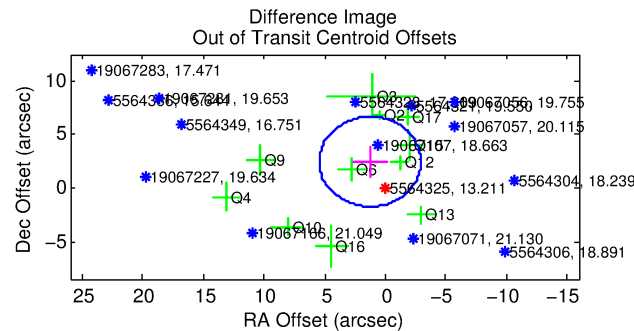
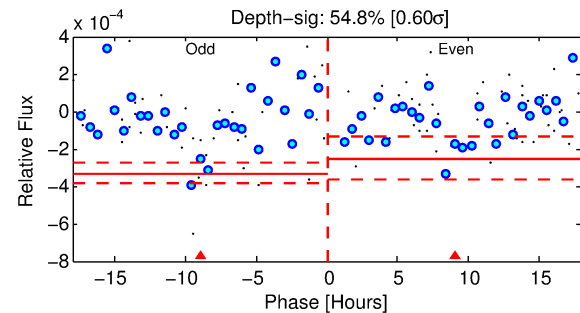
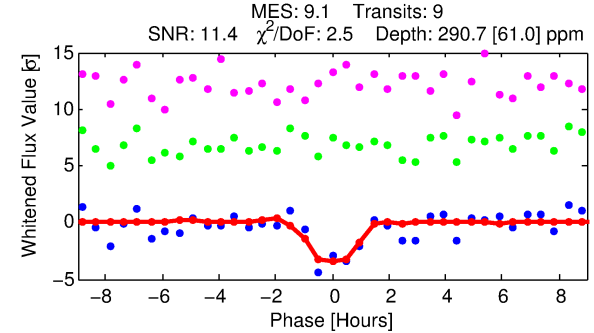
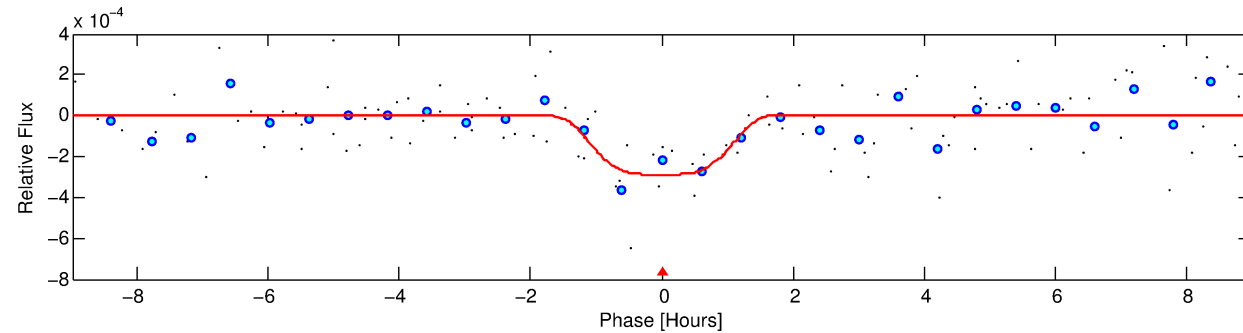
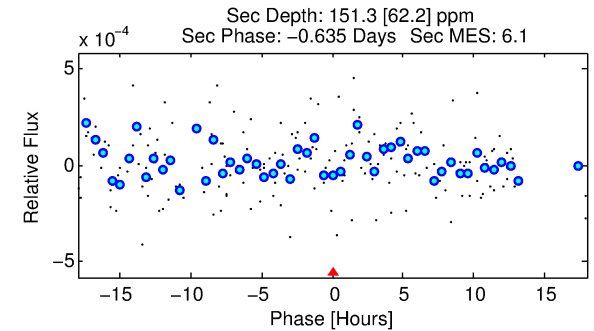
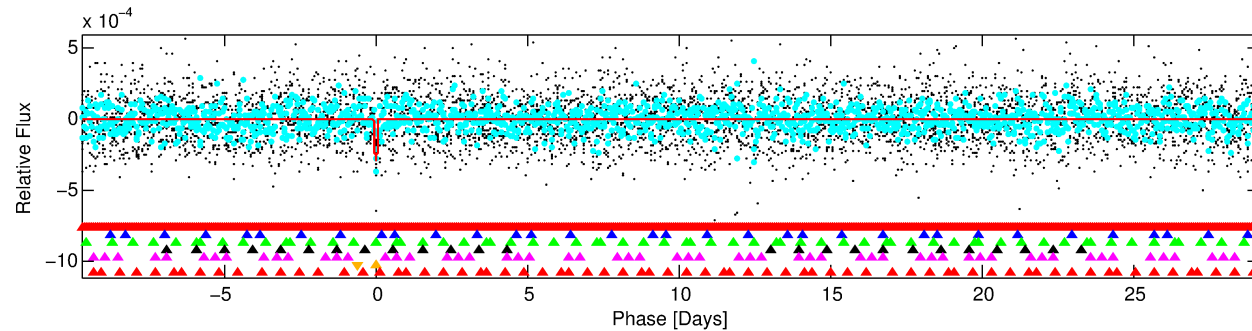
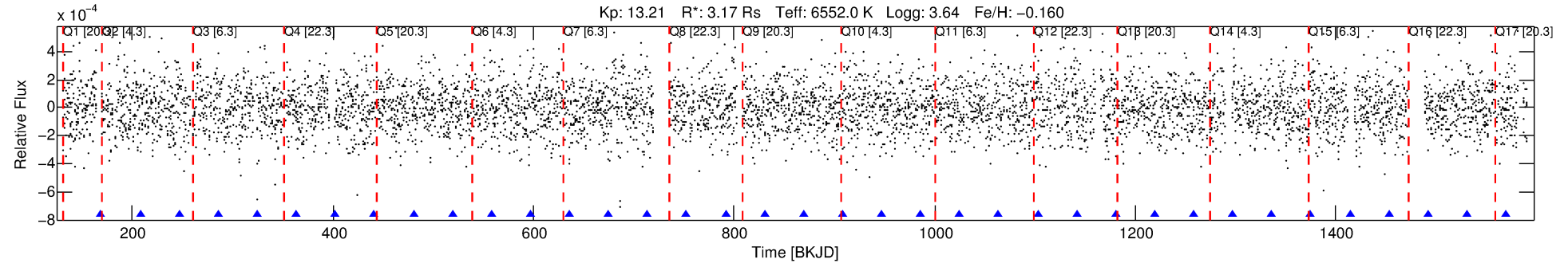
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005564325-06

No Significant Match Found

DV One-Page Summary

KIC: 5564325 Candidate: 6 of 7 Period: 38.902 d



DV Fit Results:

Period = 38.90183 [0.00069] d
Epoch = 169.1443 [0.0134] BKJD
Rp/R* = 0.0202 [0.0036]
a/R* = 30.70 [15.48]
b = 0.97 [0.03]
Seff = 240.41 [131.34]
Teq = 1004 [137] K
Rp = 6.99 [2.75] Re
a = 0.2625 [0.0879] AU
Ag = 117.36 [89.16] [1.31σ]
Teffp = 5110 [708] K [5.69σ]

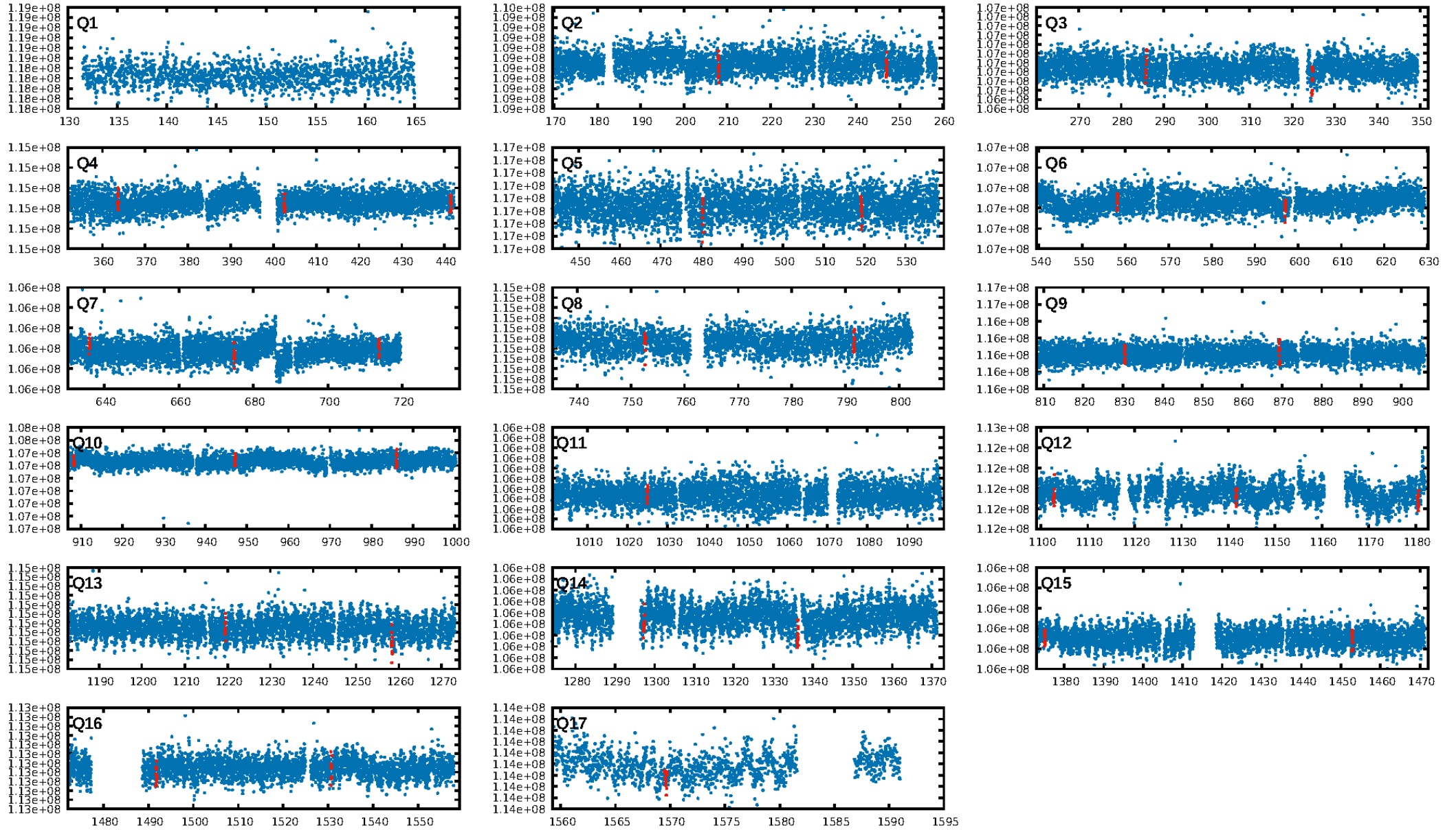
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [50.90σ]
LongPeriod-sig: 100.0% [24.29σ]
ModelChiSquare2-sig: 22.9%
ModelChiSquareGof-sig: 99.8%
Bootstrap-pfa: 2.01e-09
RollingBand-fgt: 1.00 [9/9]
GhostDiagnostic-chr: -2.14
Centroid-sig: 90.2%
Centroid-so: 0.320 arcsec [0.51σ]
OotOffset-rm: 2.768 arcsec [1.98σ]
KicOffset-rm: 2.802 arcsec [2.01σ]
OotOffset-st: 3/2/3/3 [11]
KicOffset-st: 3/2/3/3 [11]
DiffImageQuality-fgm: 0.09 [1/11]
DiffImageOverlap-fno: 0.00 [0/16]

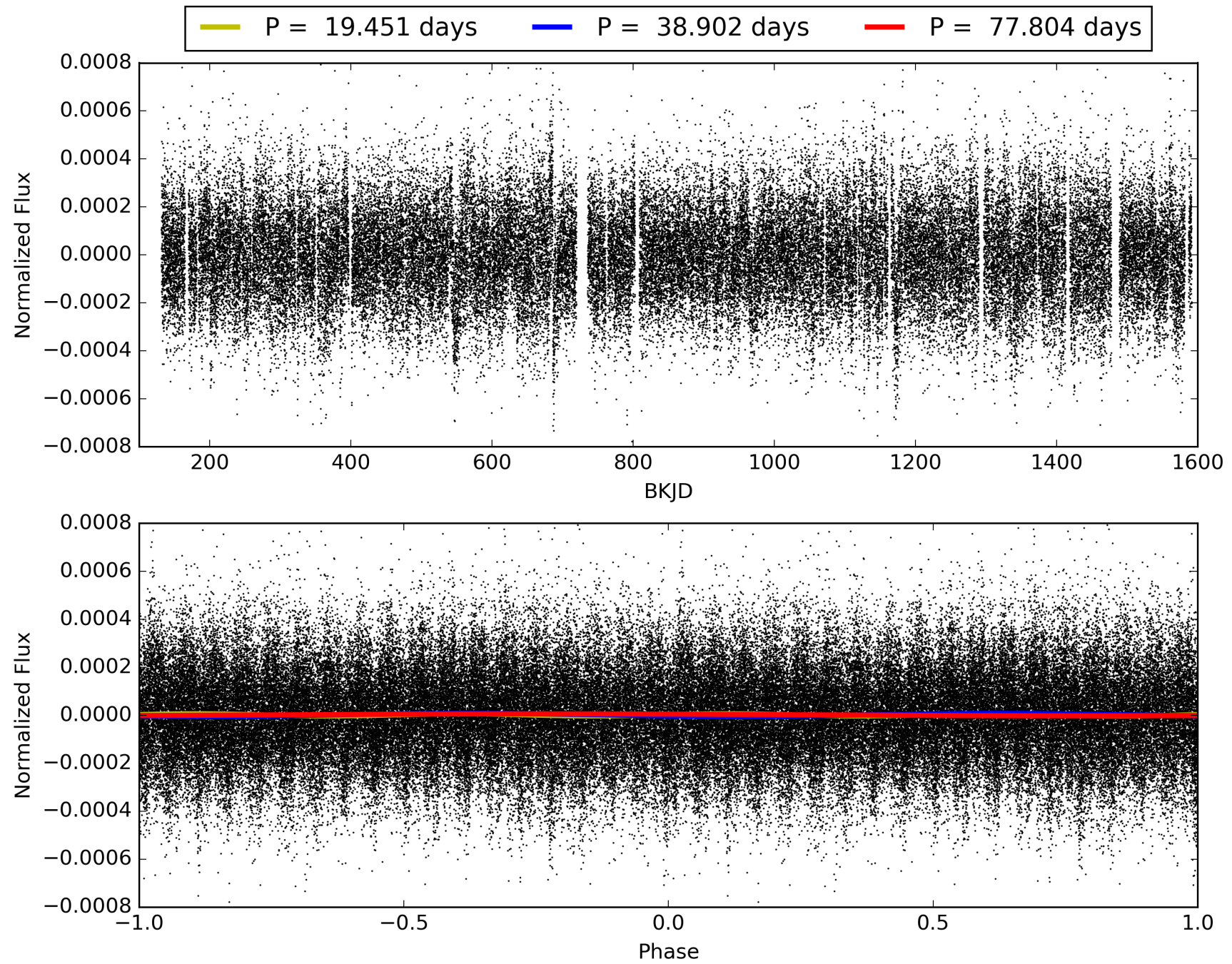
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 08:24:21 Z

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

TCE 005564325-06, PDC Light Curves

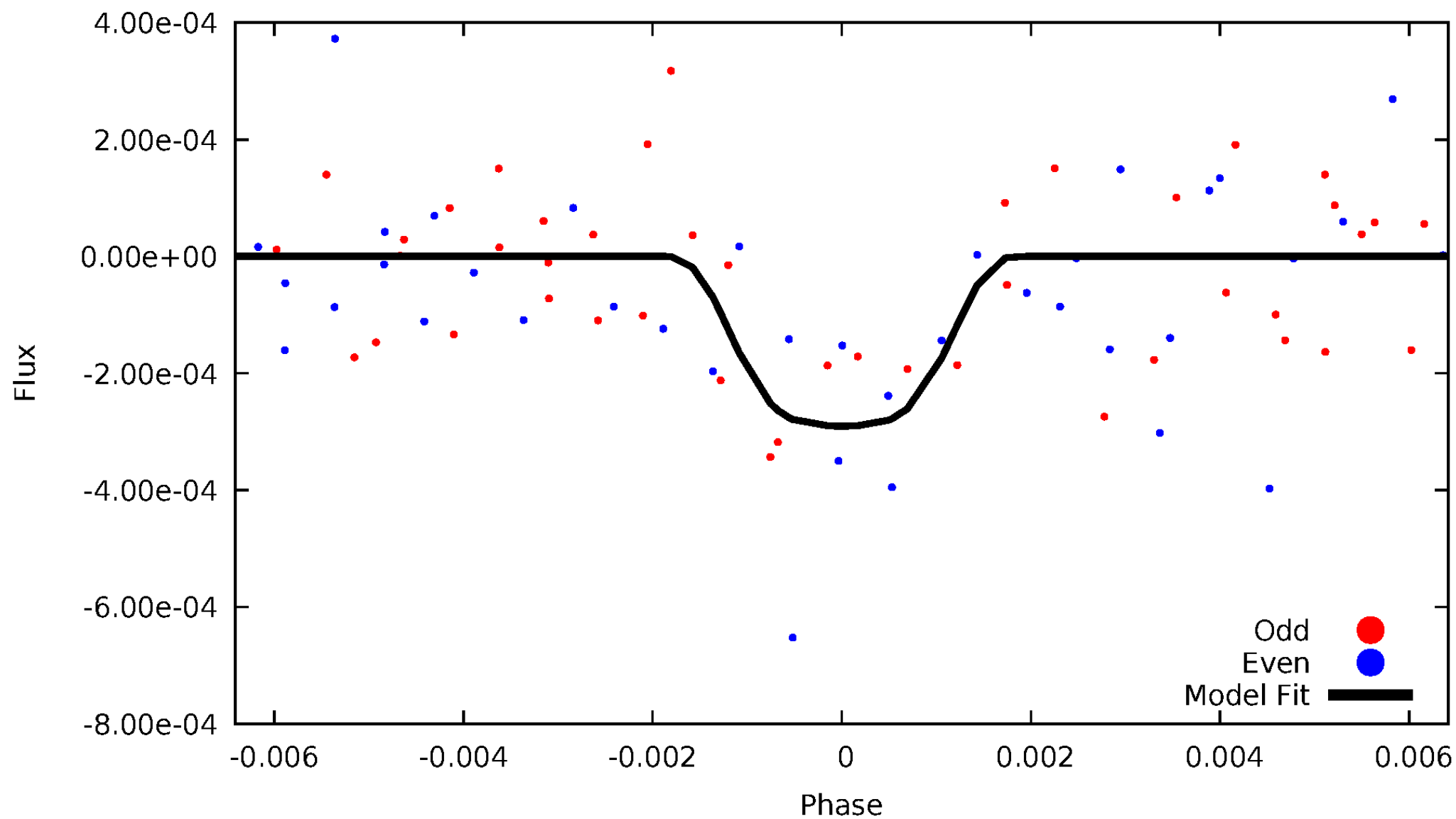


TCE 005564325-06



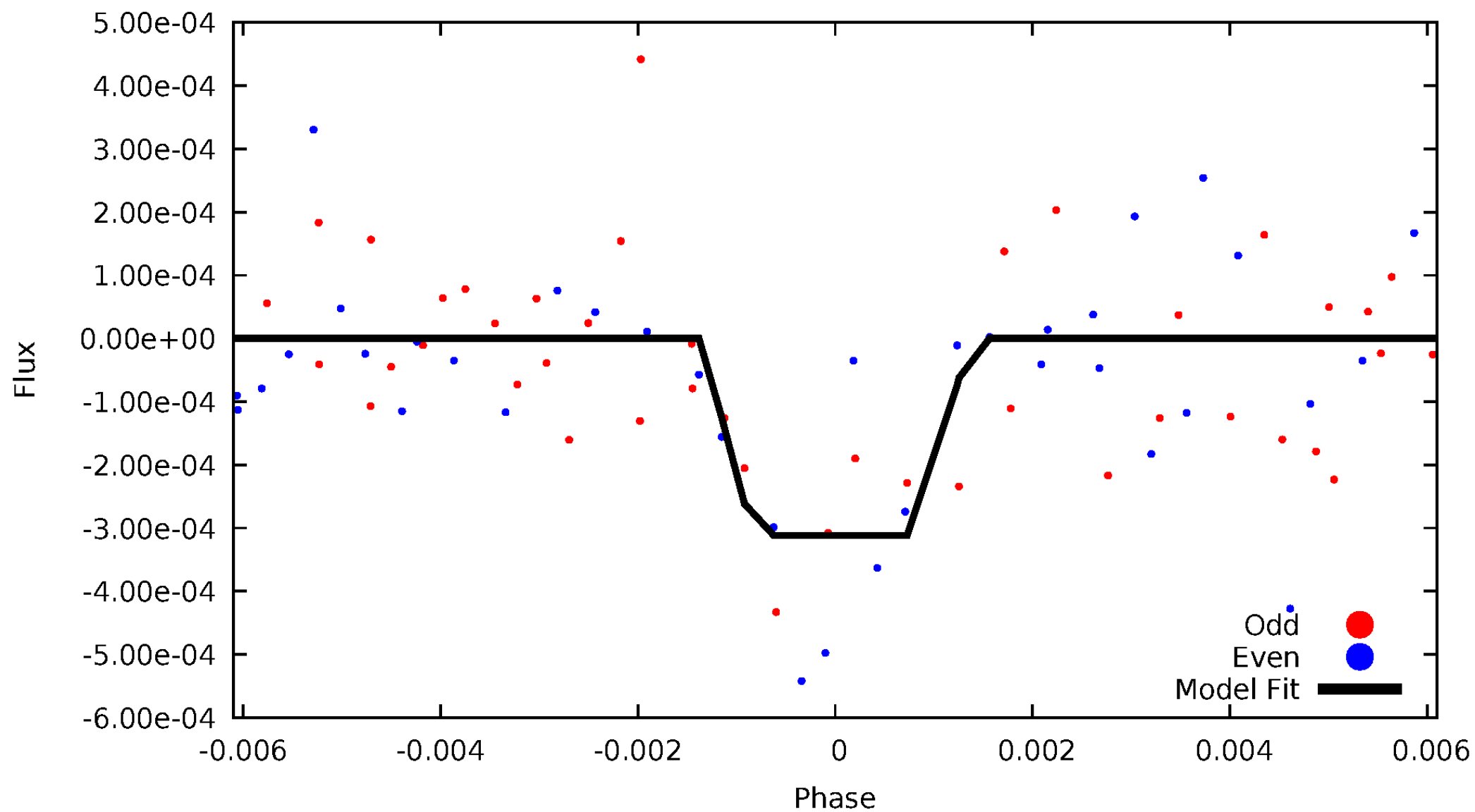
DV Odd/Even

TCE 005564325-06



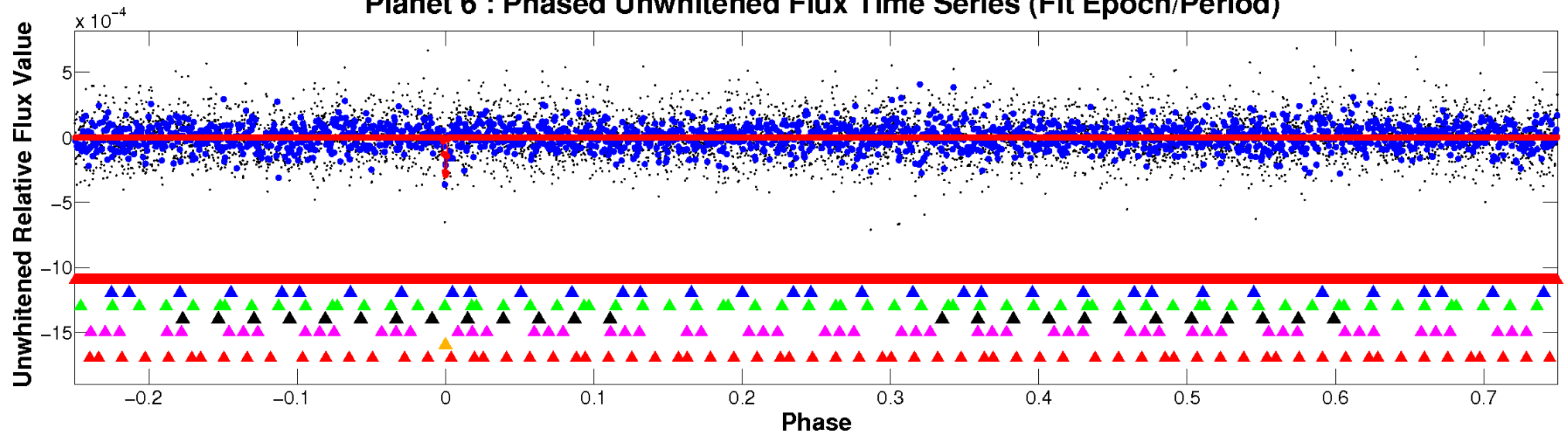
ALT Odd/Even

TCE 005564325-06

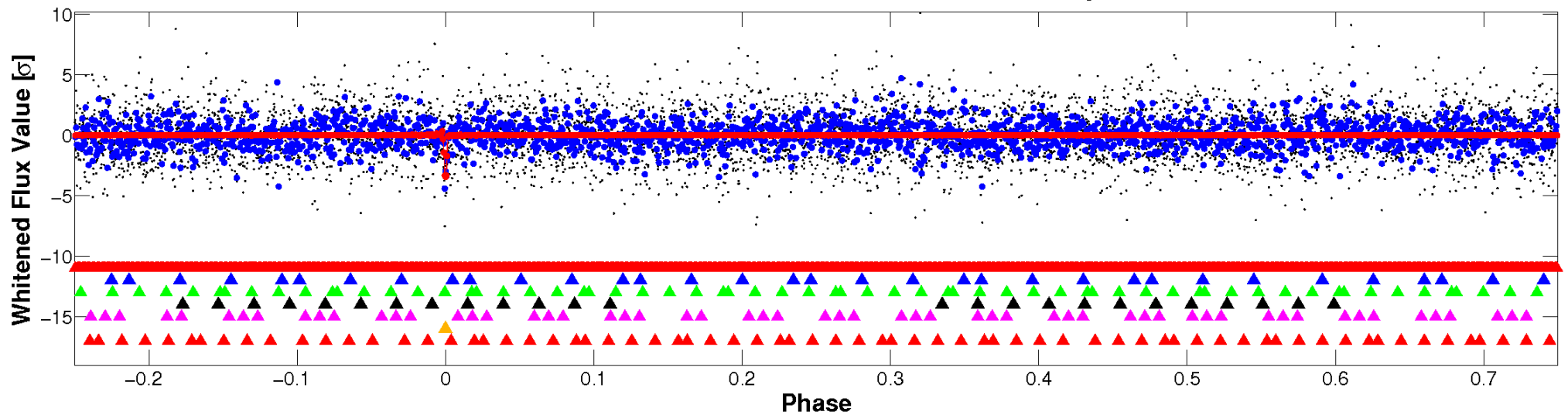


Non-Whitened Vs. Whitened Light Curve

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

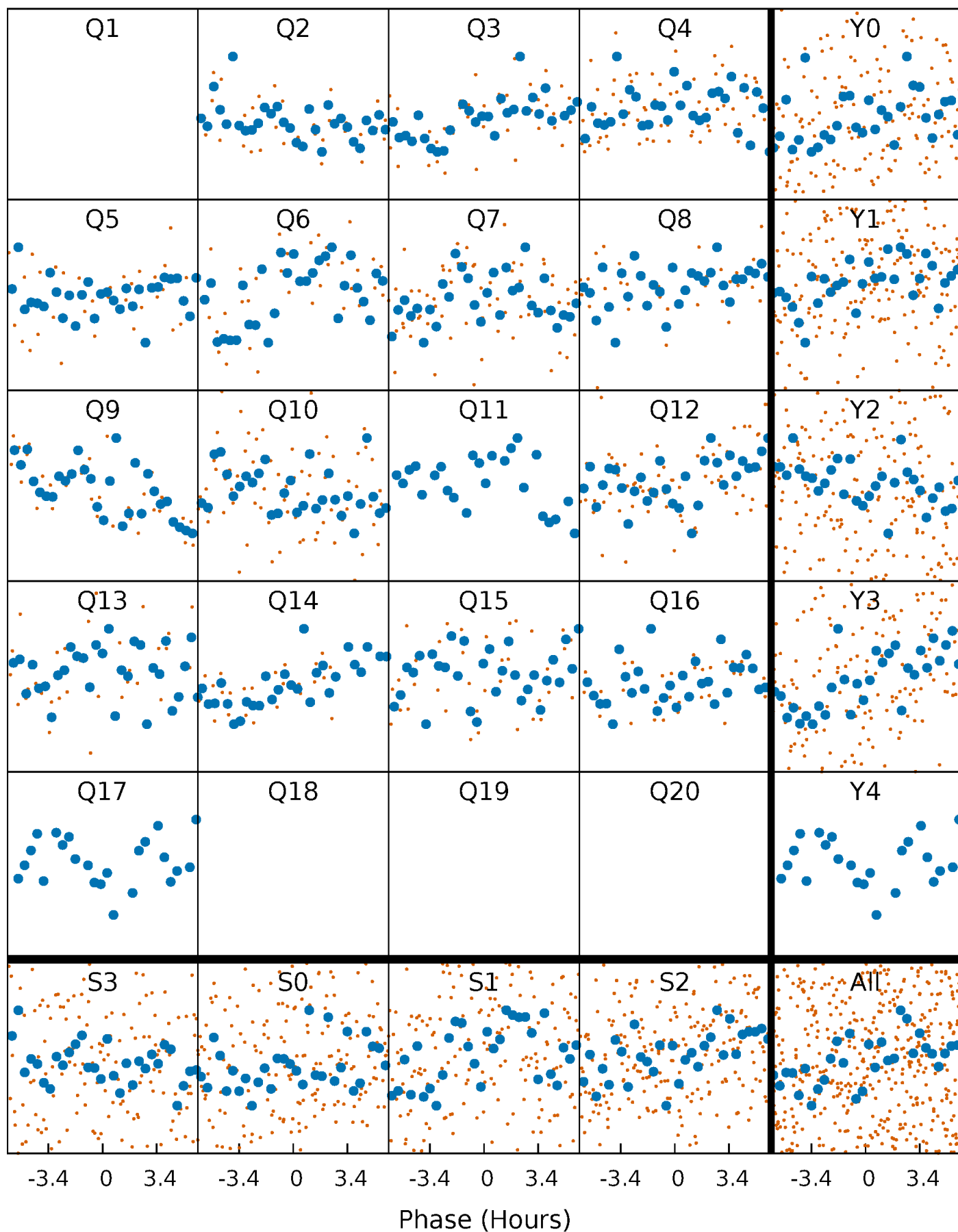


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



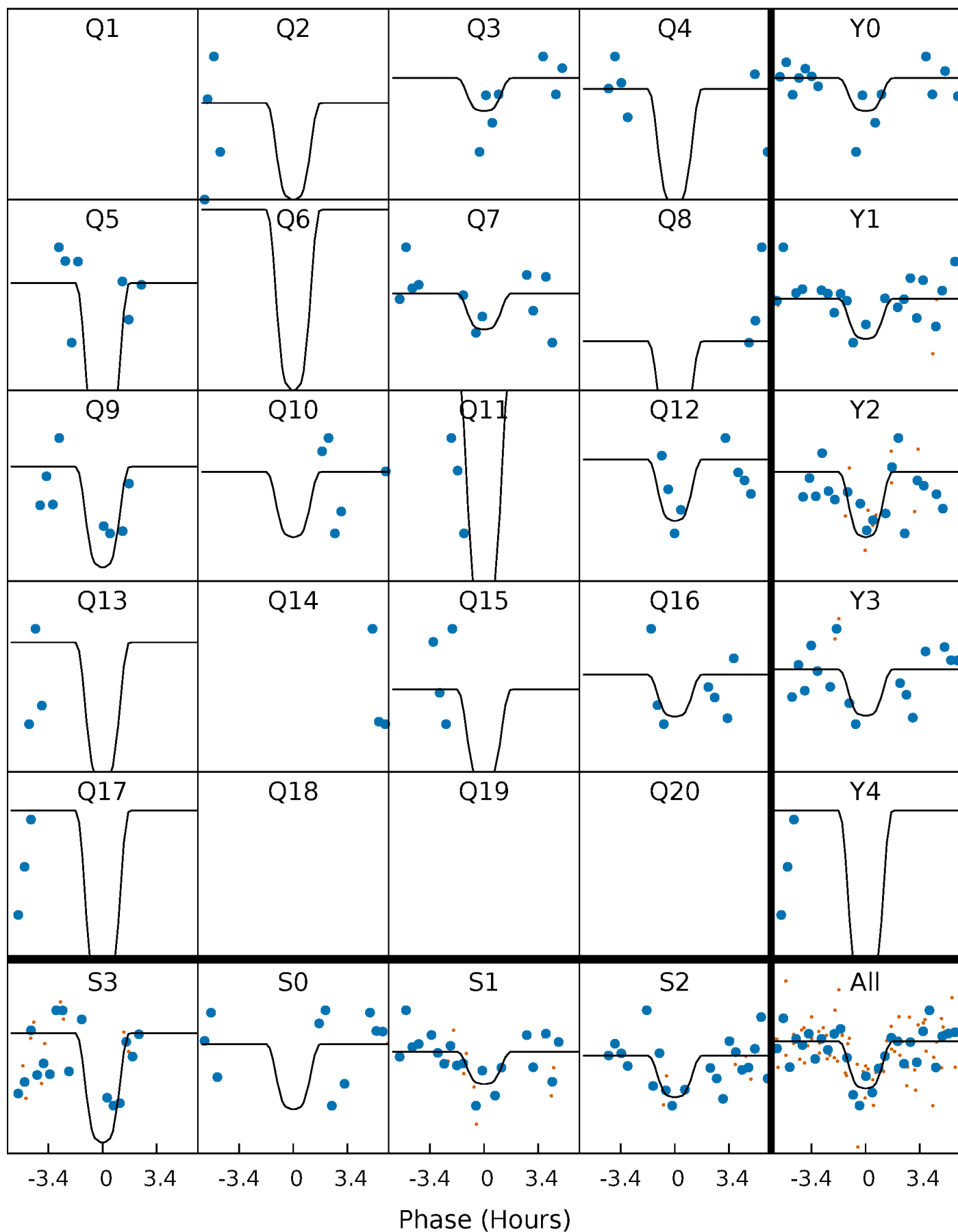
PDC Quarter-Phased Transit Curves

TCE 005564325-06 P= 38.901833 Days $T_0=169.144273$ (BKJD)



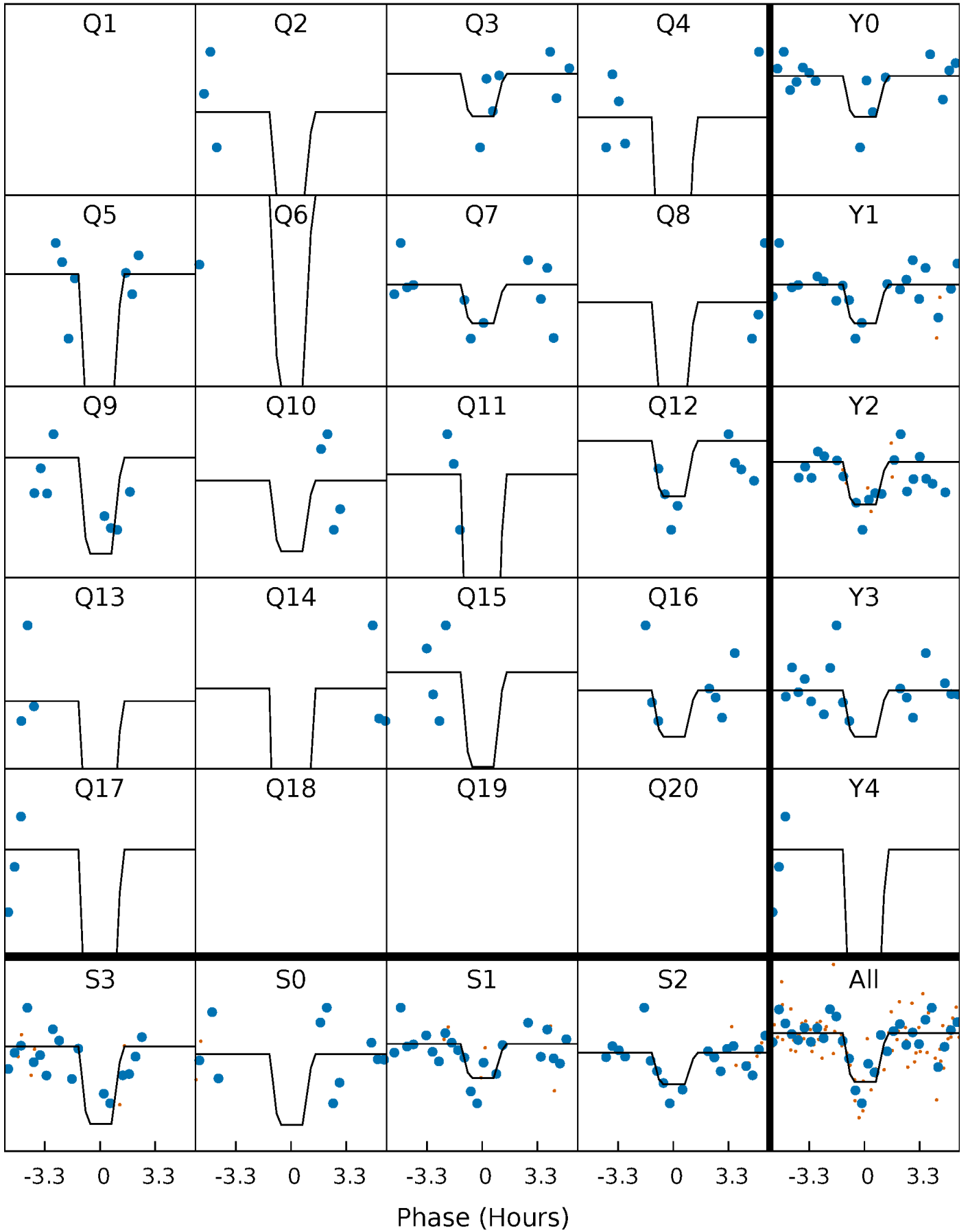
DV Quarter-Phased Transit Curves

TCE 005564325-06 P= 38.901833 Days $T_0=169.144273$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

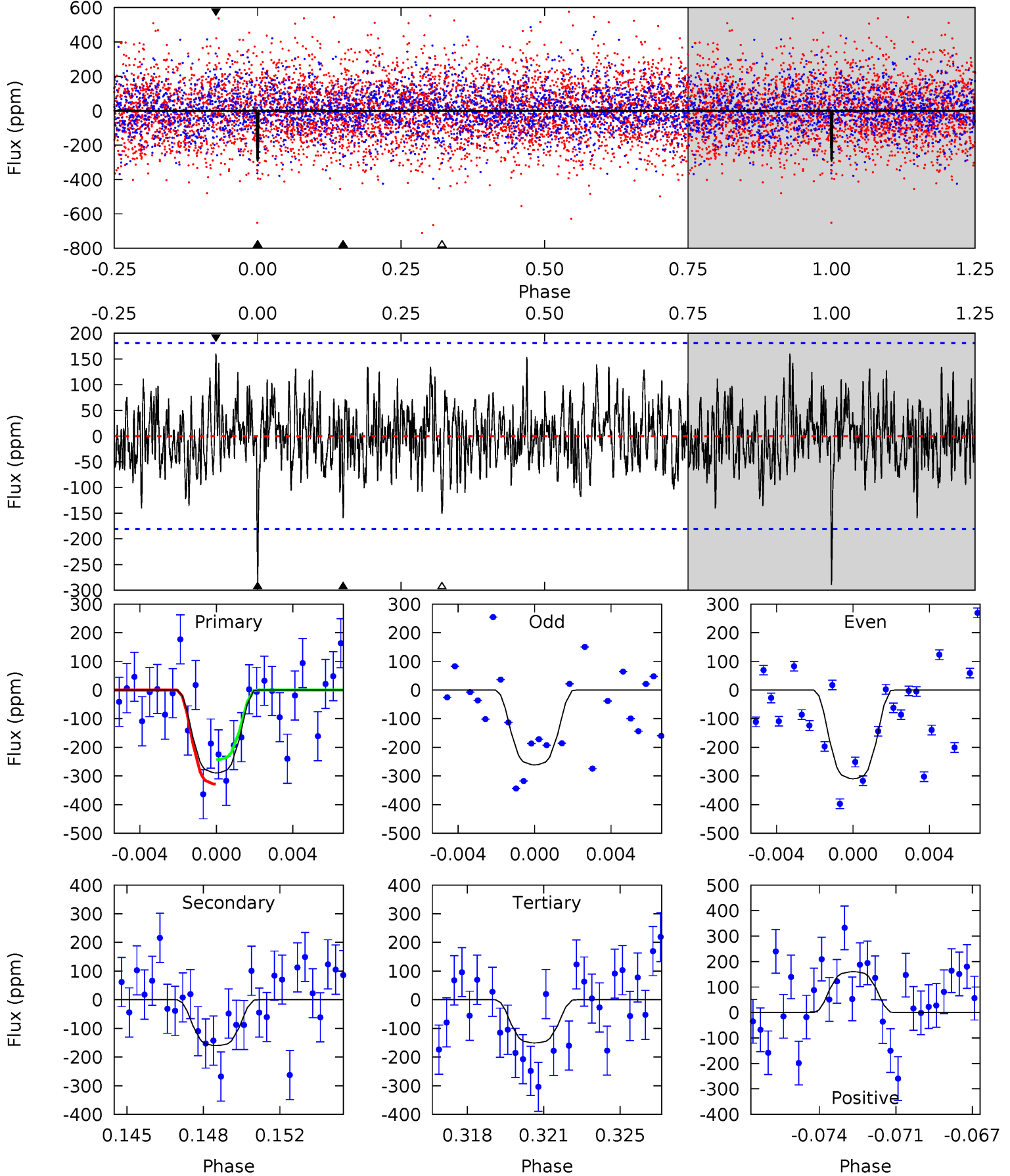
TCE 005564325-06 P= 38.902265 Days $T_0=169.135604$ (BKJD)



DV Model-Shift Uniqueness Test

005564325-06, P = 38.901833 Days, E = 130.242440 Days

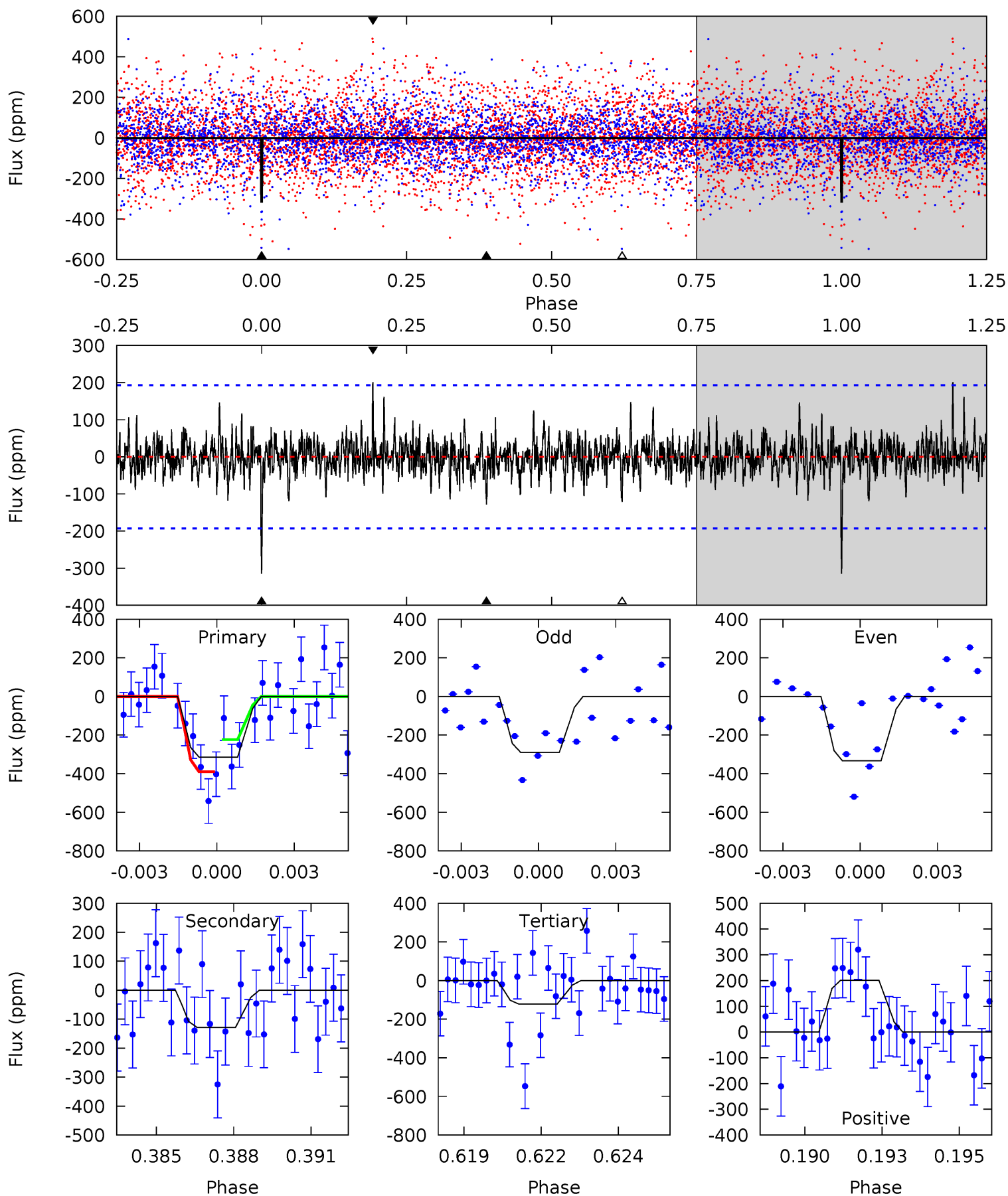
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.35	4.62	4.35	4.62	5.22	2.92	1.42	4.00	3.73	0.27	-0.00	0.70	1.24	0.36	1.24



Alt Model-Shift Uniqueness Test

005564325-06, P = 38.902265 Days, E = 130.233339 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.59	3.51	3.32	5.49	5.27	3.00	1.04	5.27	3.10	0.19	-1.98	0.62	0.98	0.39	2.29



Stellar Parameters For KIC 005564325

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6552^{+177}_{-196}	$3.639^{+0.312}_{-0.059}$	$-0.160^{+0.300}_{-0.250}$	$3.168^{+0.477}_{-1.112}$	$1.595^{+0.216}_{-0.325}$	$0.071^{+0.164}_{-0.019}$
	+3%/-3%	+9%/-2%	+188%/-156%	+15%/-35%	+14%/-20%	+232%/-26%
Source	PHO1	FLK73	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 005564325-06 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-160 ± 35	$6.44^{+1.58}_{-1.55}$	1357^{+82}_{-114}	5218^{+562}_{-431}	149^{+108}_{-60}
Alt.	-128 ± 37	$5.68^{+1.38}_{-1.48}$	1362^{+79}_{-117}	5280^{+701}_{-566}	155^{+134}_{-69}

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 $A_{obs} \gg 1.0$

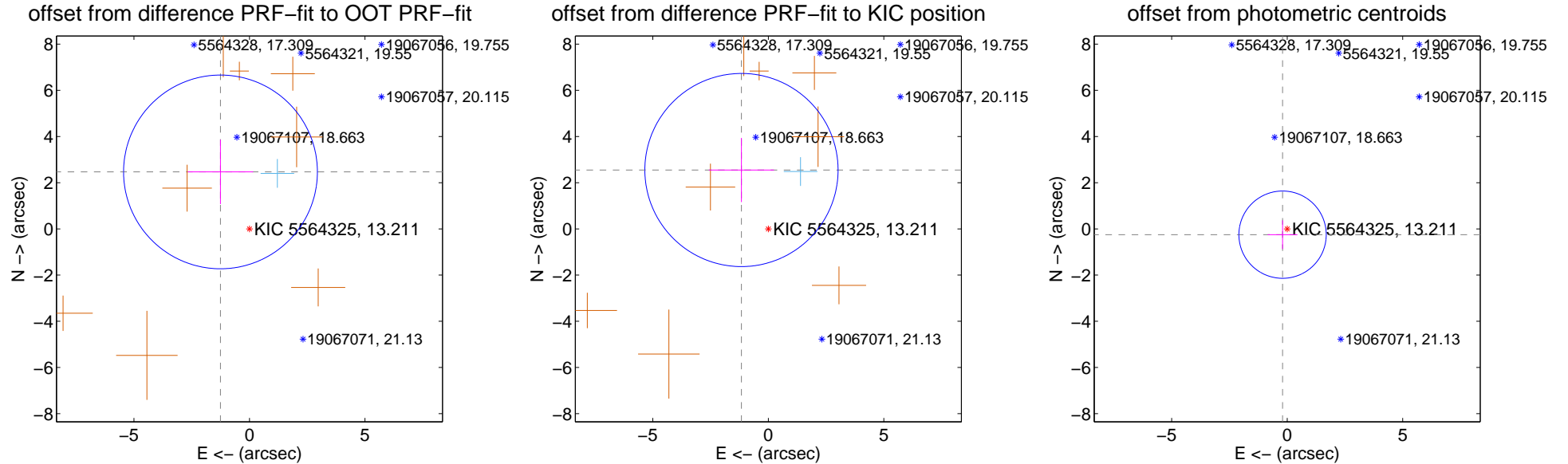
DV Centroid Data

Supplemental centroid analysis for 005564325-06. Kepler magnitude: 13.21. Transit SNR 11.39

There are 1 quarters with good PRF difference image offsets

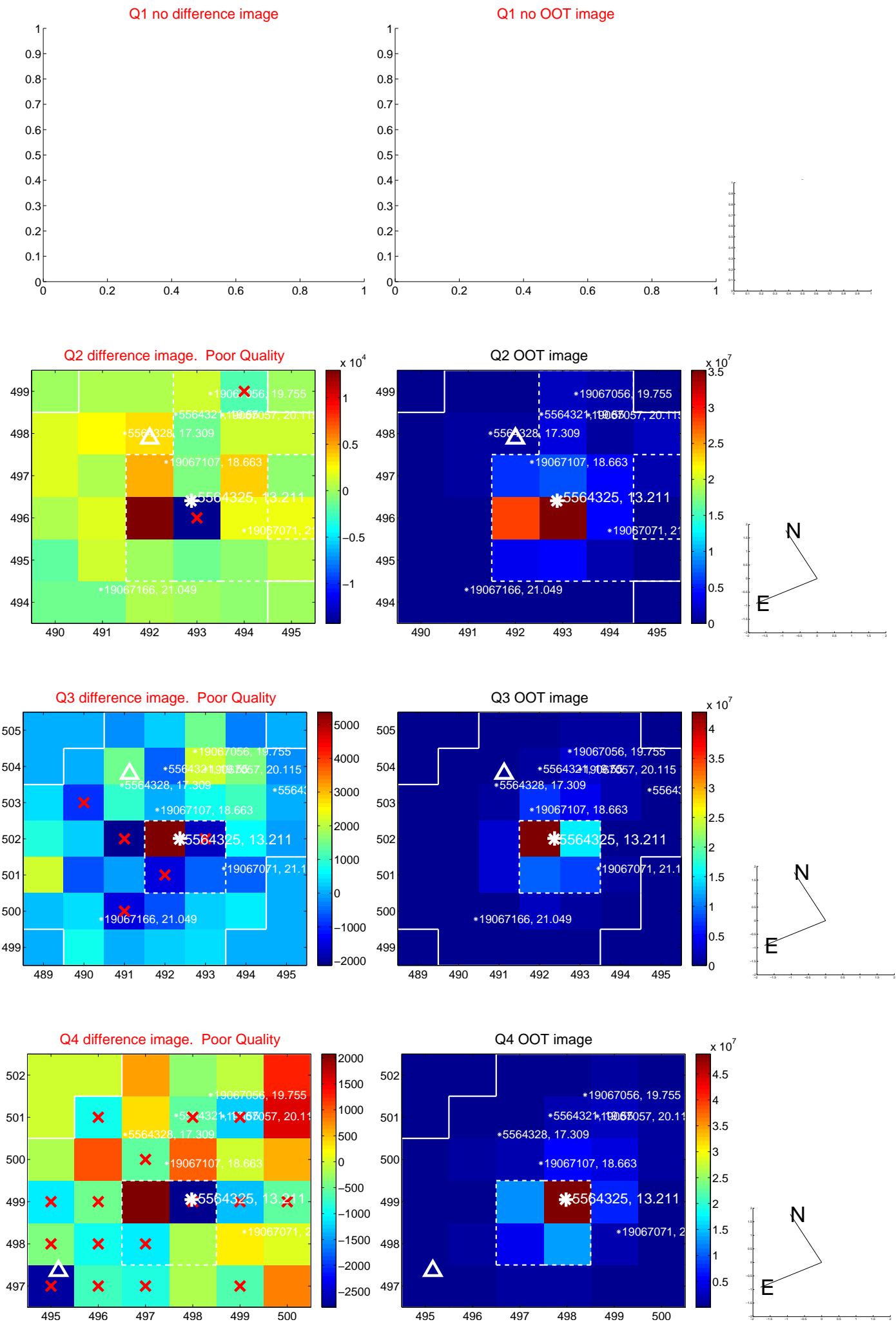
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.768 ± 1.398	1.98	1.254 ± 1.415	2.467 ± 1.394
PRF-fit source offset from KIC position	2.802 ± 1.394	2.01	1.163 ± 1.410	2.549 ± 1.390
photometric centroid source offset	0.32 ± 0.63	0.51	0.20 ± 0.64	-0.25 ± 0.62

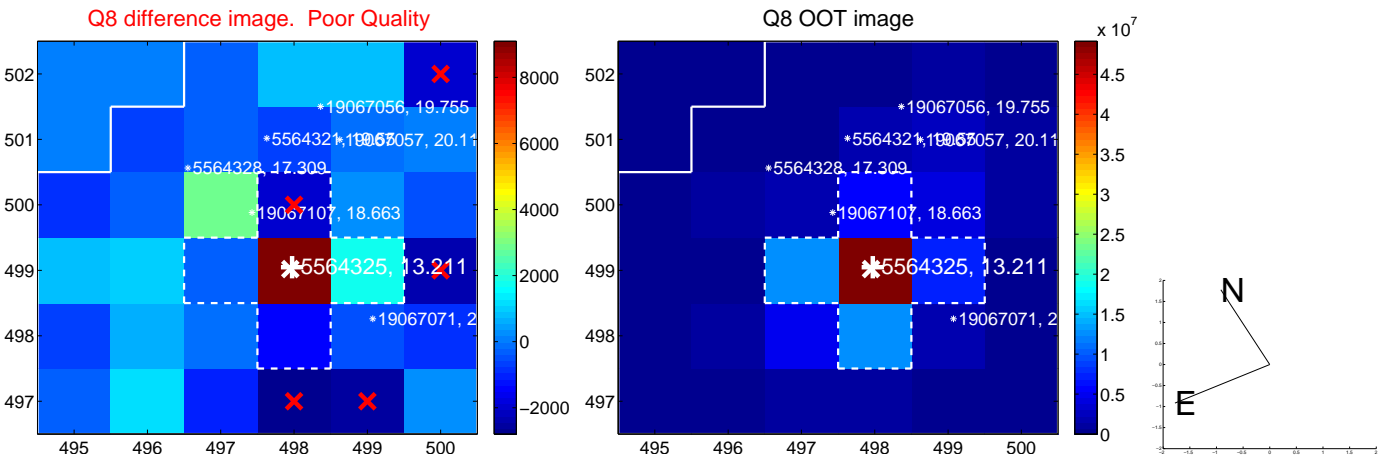
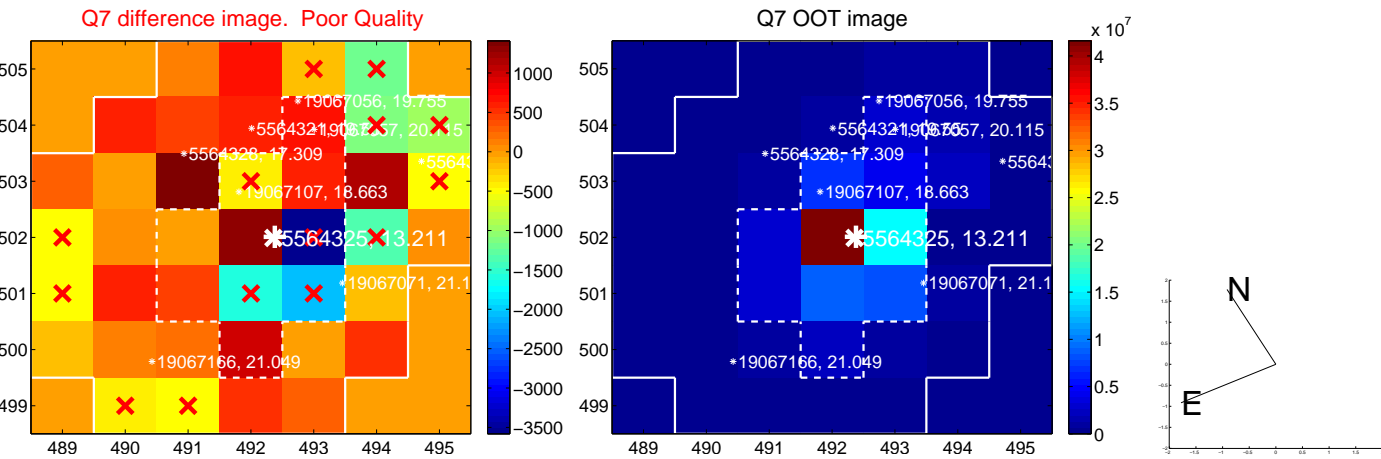
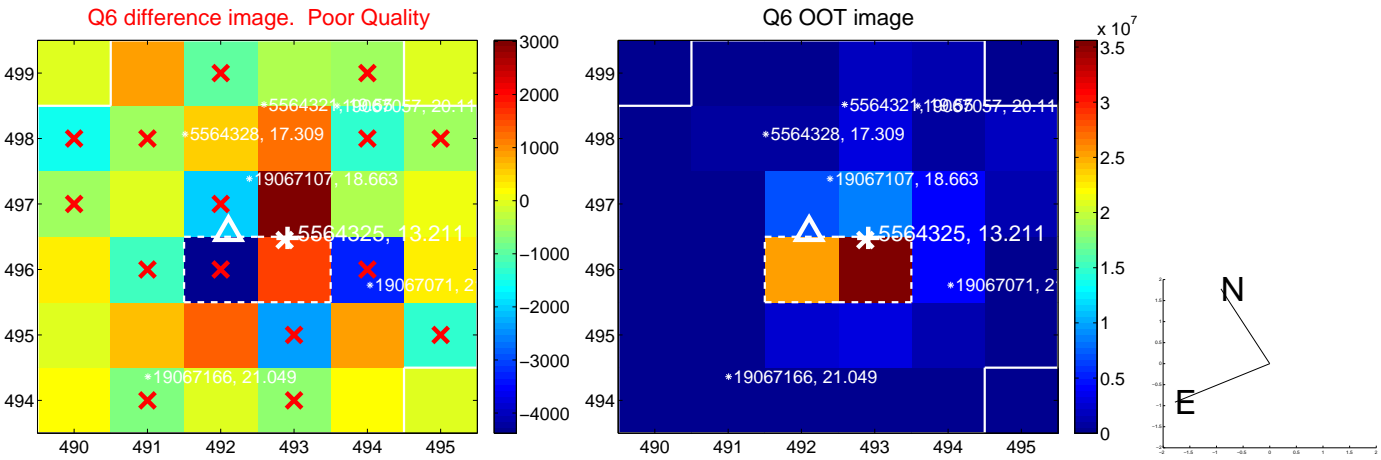
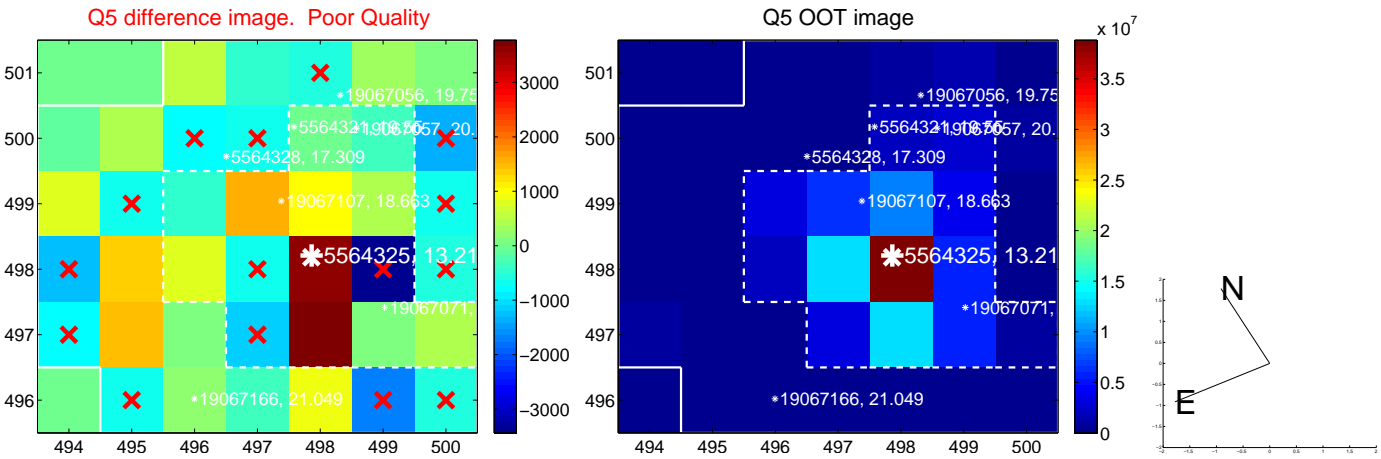


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

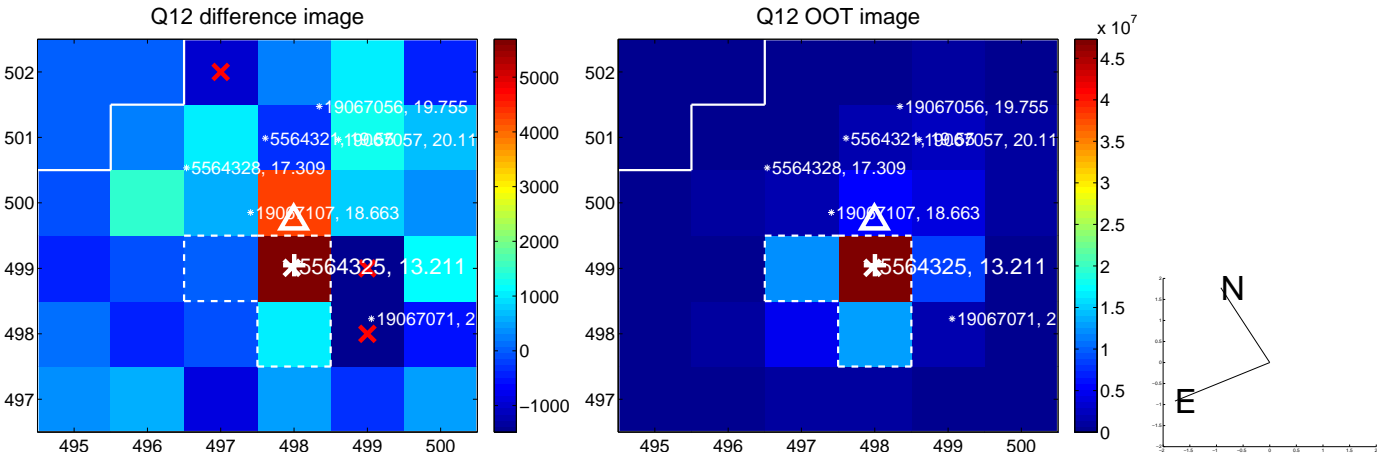
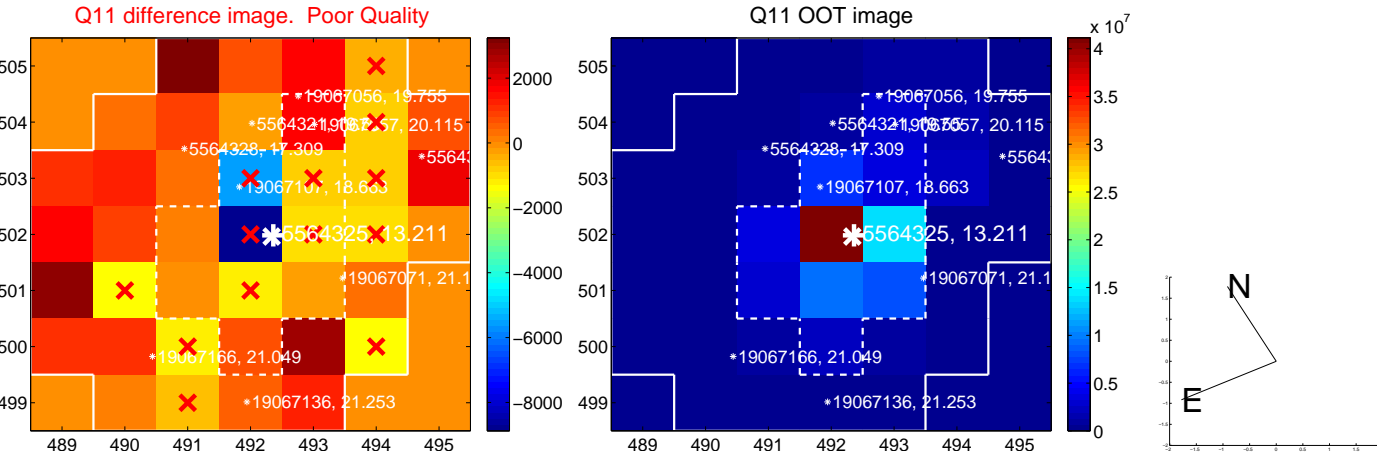
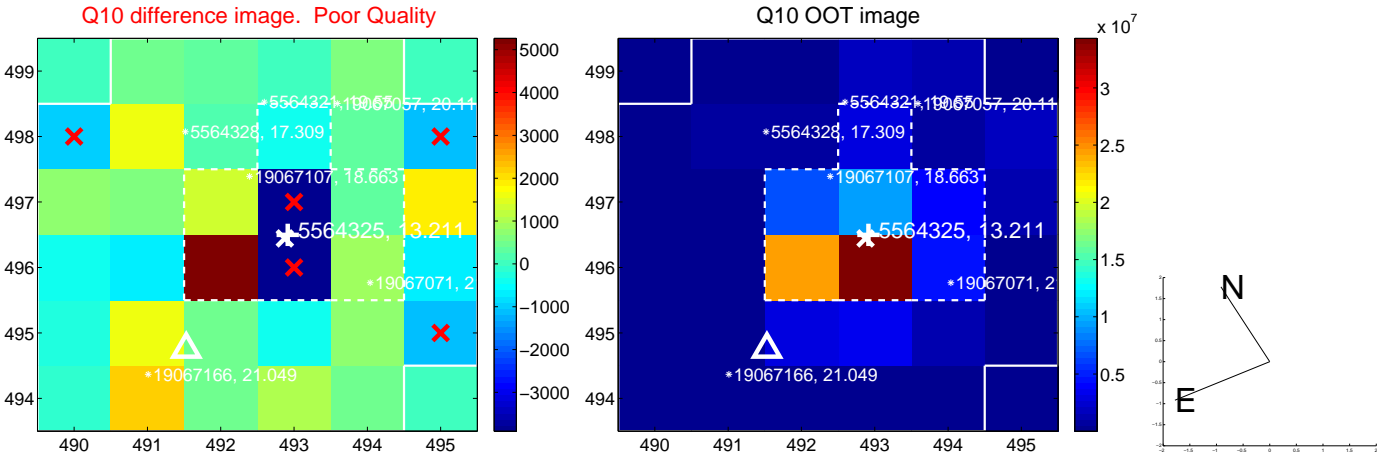
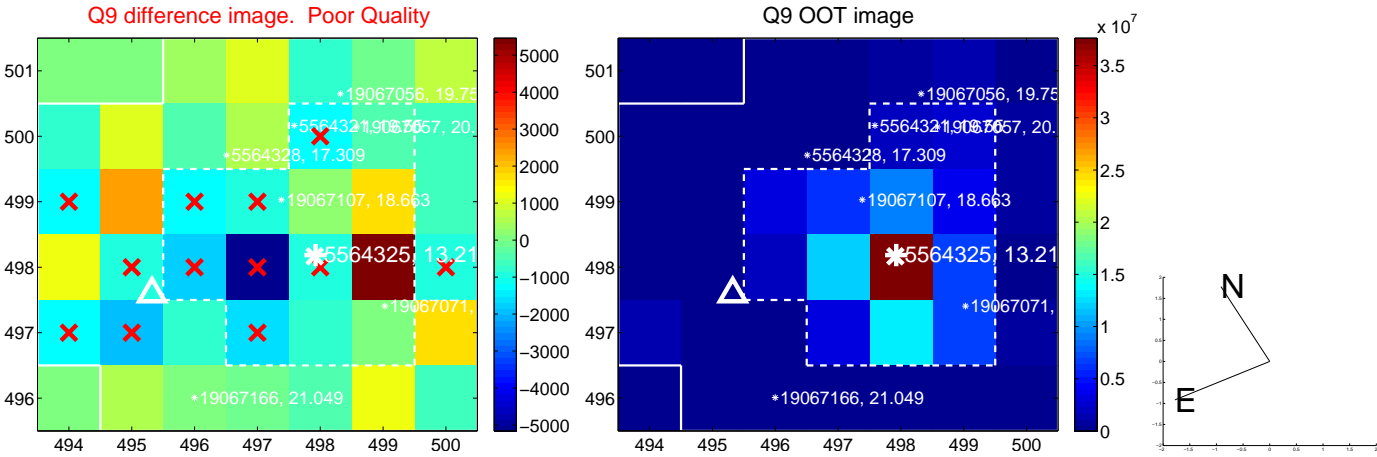
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



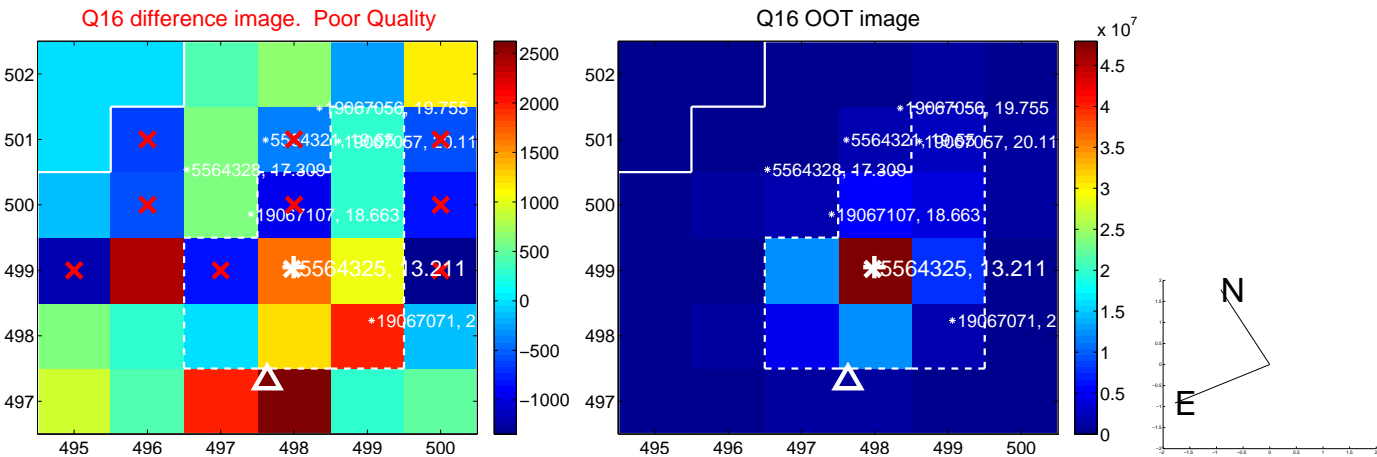
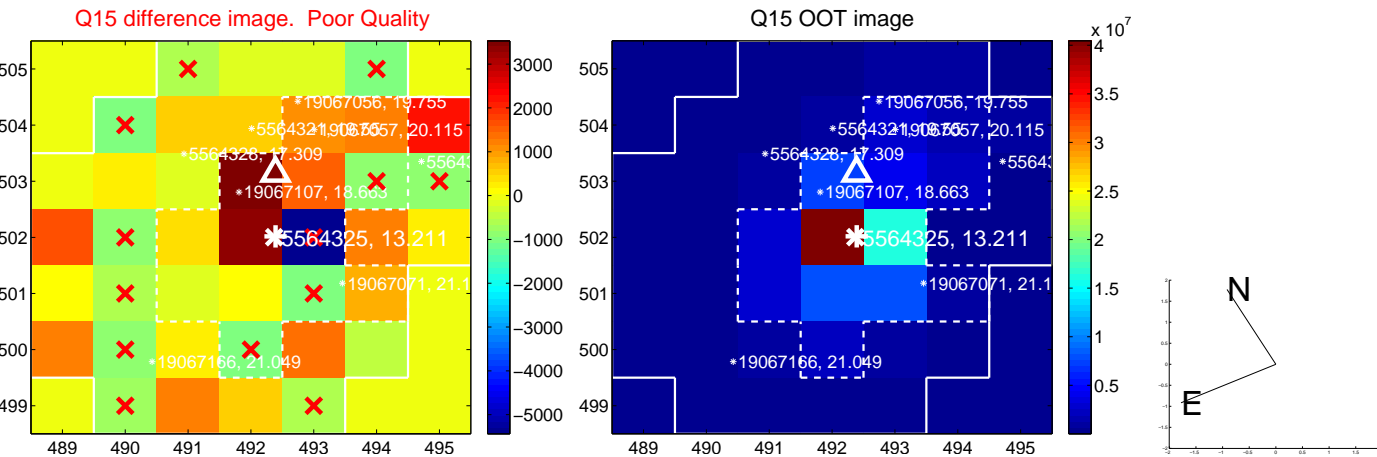
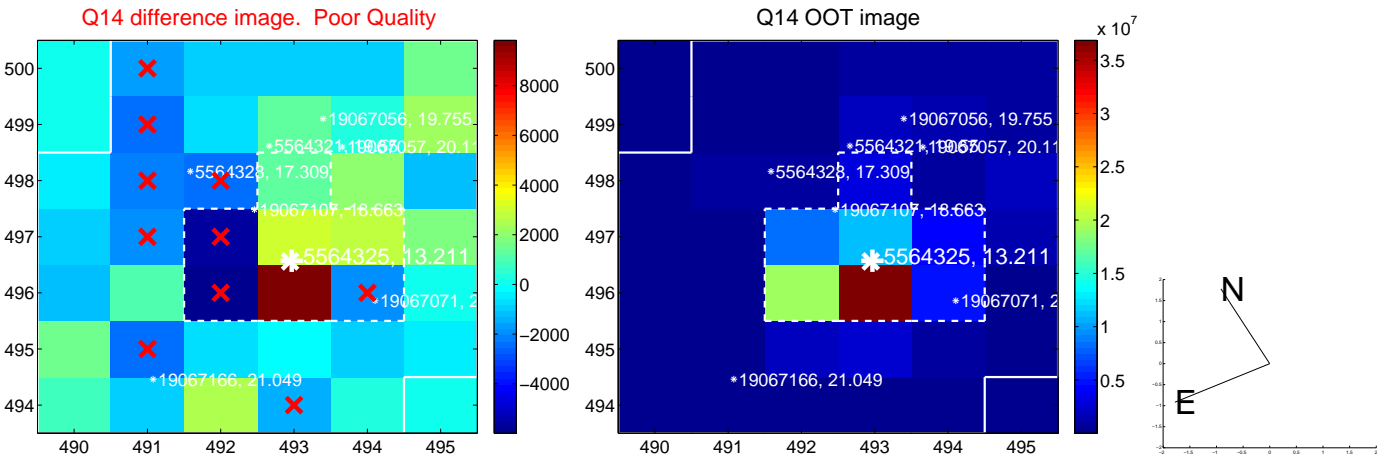
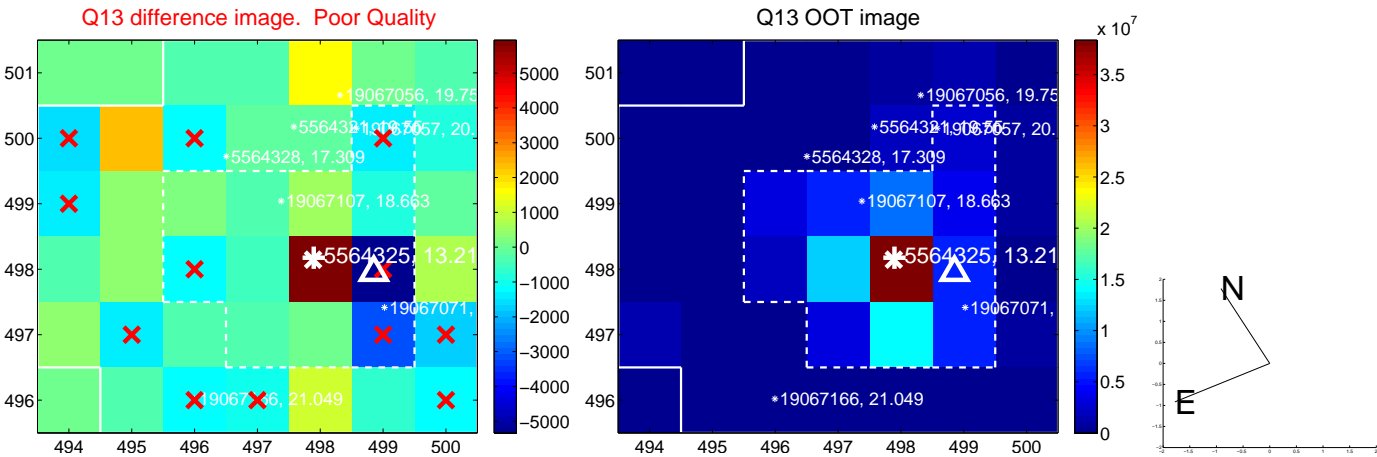
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



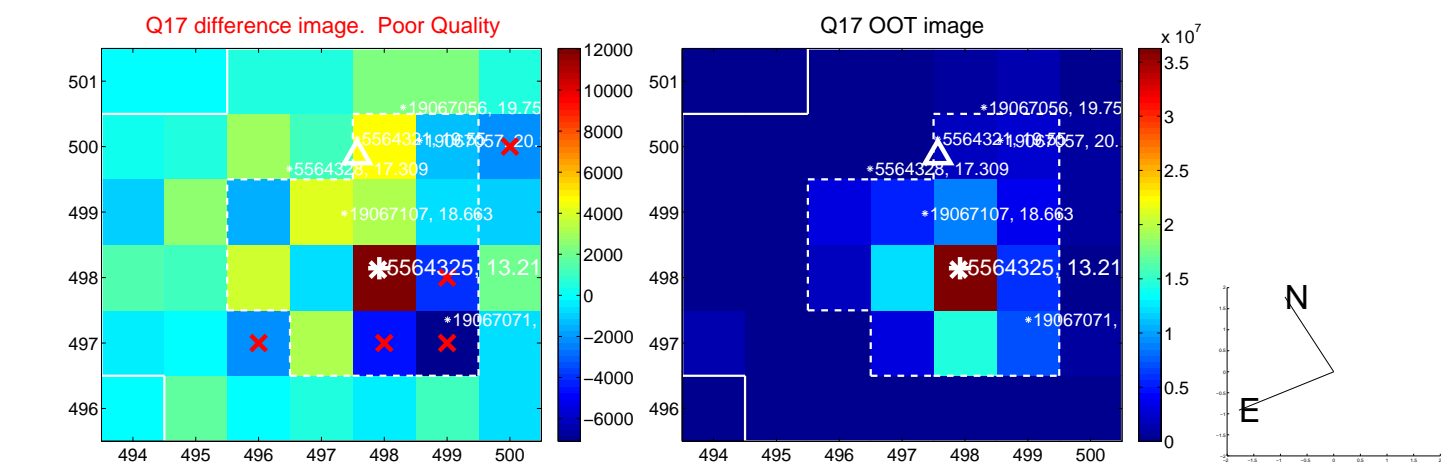
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



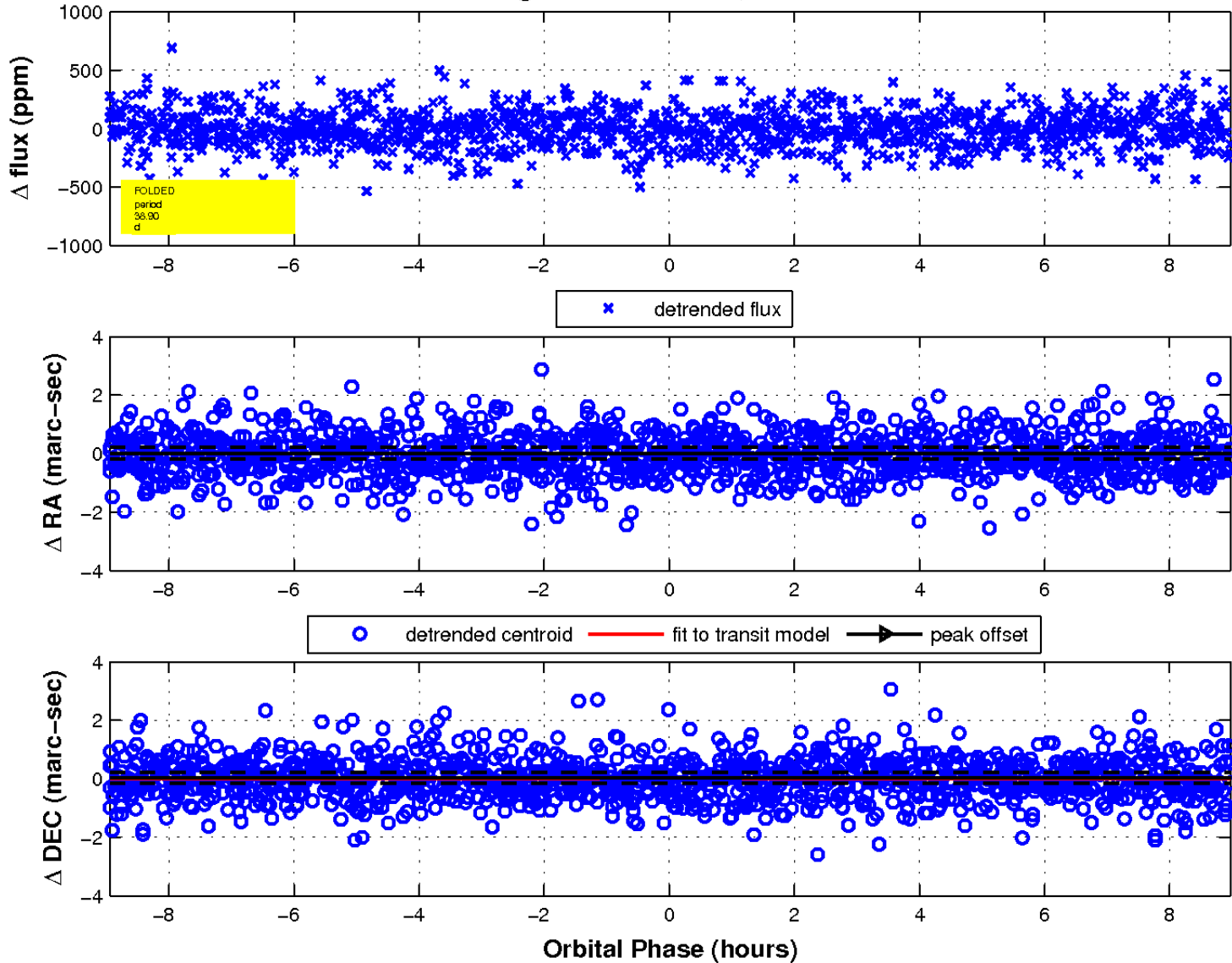
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



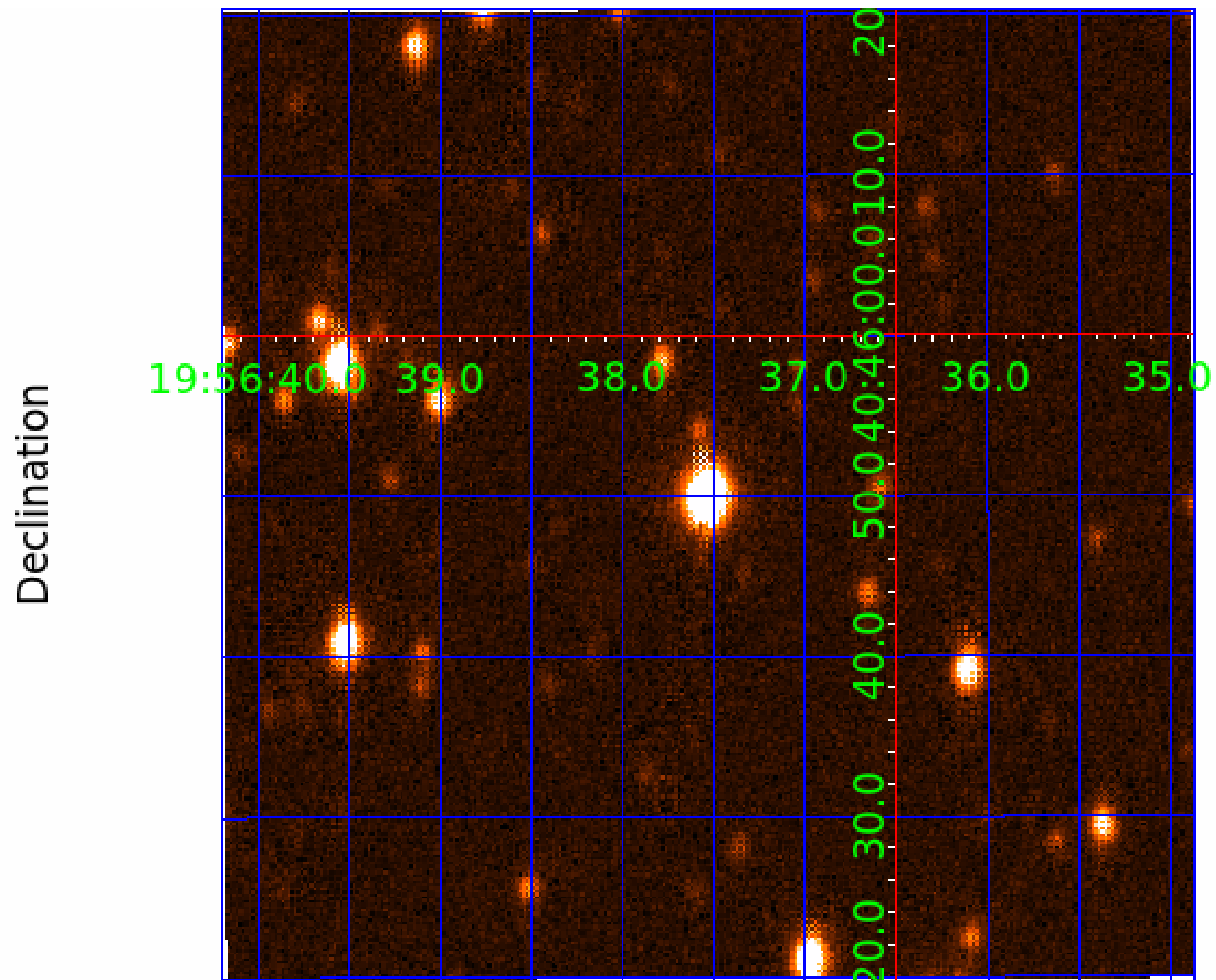
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 6 of 7



UKIRT Image



KIC 005564325

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})
005564325-01	OBS	No	0.744837	132.226689	17.9	5.200	10.4	11.3	3.17	6552	1.35	46935.19
005564325-02	OBS	No	43.372843	156.373760	280.1	3.250	10.5	10.9	3.17	6552	6.11	207.95
005564325-03	OBS	No	22.751523	143.553319	215.4	1.624	10.8	10.7	3.17	6552	5.44	491.55
005564325-04	OBS	No	57.885677	173.463522	261.3	2.294	9.2	11.2	3.17	6552	5.49	141.52
005564325-05	OBS	No	25.267305	148.962650	111.3	5.690	10.0	8.5	3.17	6552	3.77	427.40
005564325-06	OBS	No	38.901833	169.144273	290.7	2.992	9.1	11.4	3.17	6552	6.99	240.41
005564325-07	OBS	No	20.788375	149.346674	324.0	1.238	9.7	9.5	3.17	6552	9.35	554.39

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005564325-01	OBS	FP	0.00	1	0	0	0	LPP_DV
005564325-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005564325-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_MEAS
005564325-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005564325-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005564325-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
005564325-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

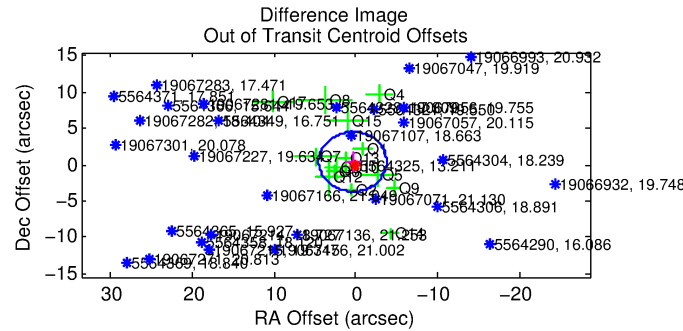
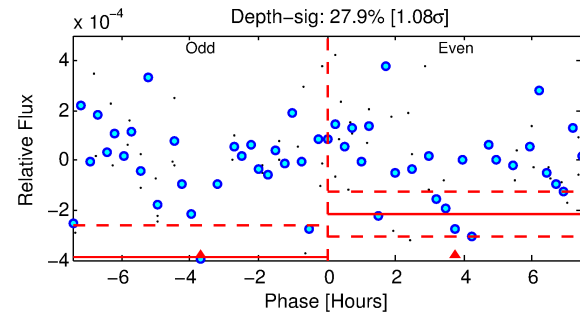
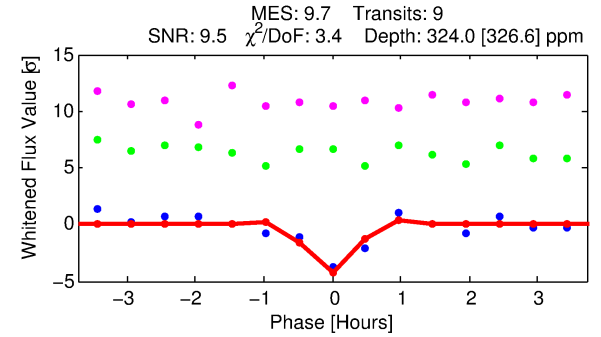
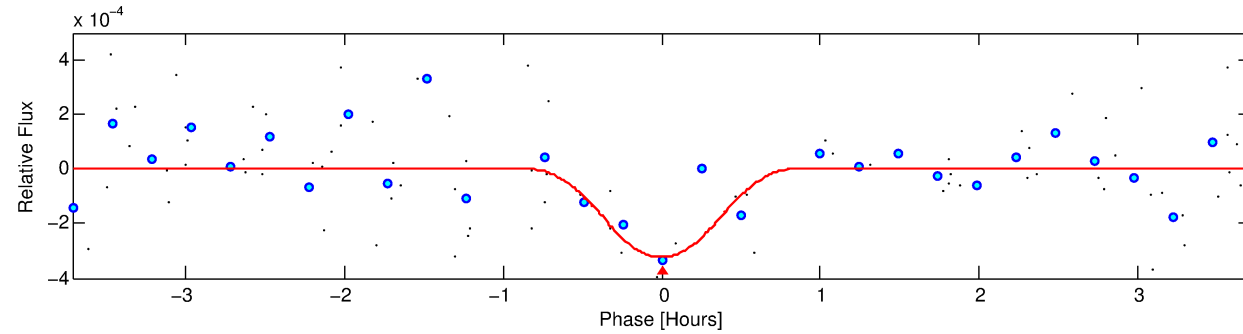
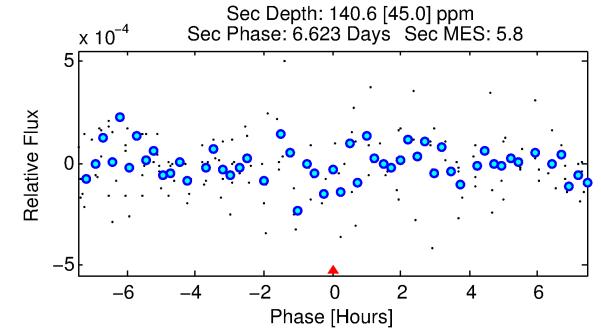
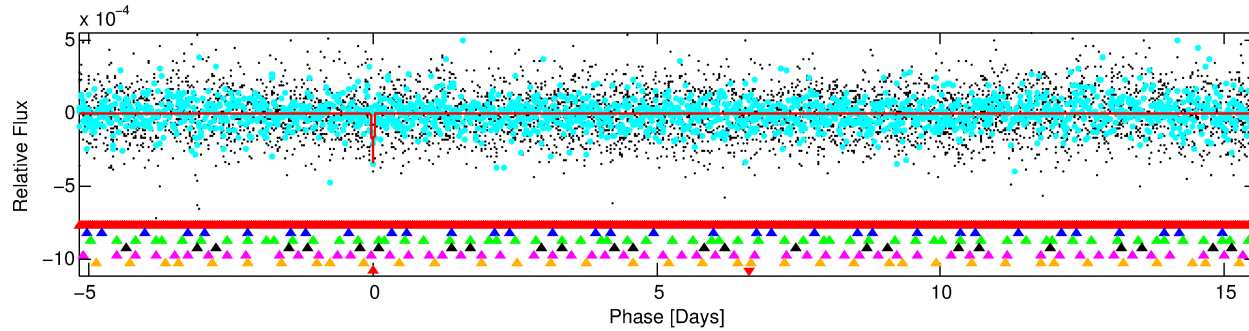
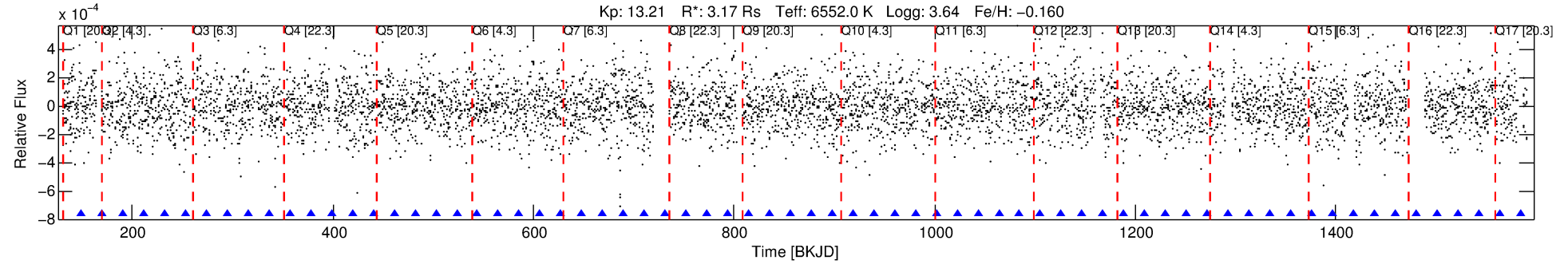
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005564325-07

No Significant Match Found

DV One-Page Summary

KIC: 5564325 Candidate: 7 of 7 Period: 20.788 d



DV Fit Results:

Period = 20.78838 [0.00019] d
Epoch = 149.3467 [0.0073] BKJD
Rp/R* = 0.0270 [0.3269]
a/R* = 35.15 [165.44]
b = 0.99 [0.61]
Seff = 554.39 [302.87]
Teq = 1237 [169] K
Rp = 9.35 [113.06] Re
a = 0.1729 [0.0579] AU
Ag = 26.45 [639.75] [0.04σ]
Teffp = 4338 [26227] K [0.12σ]

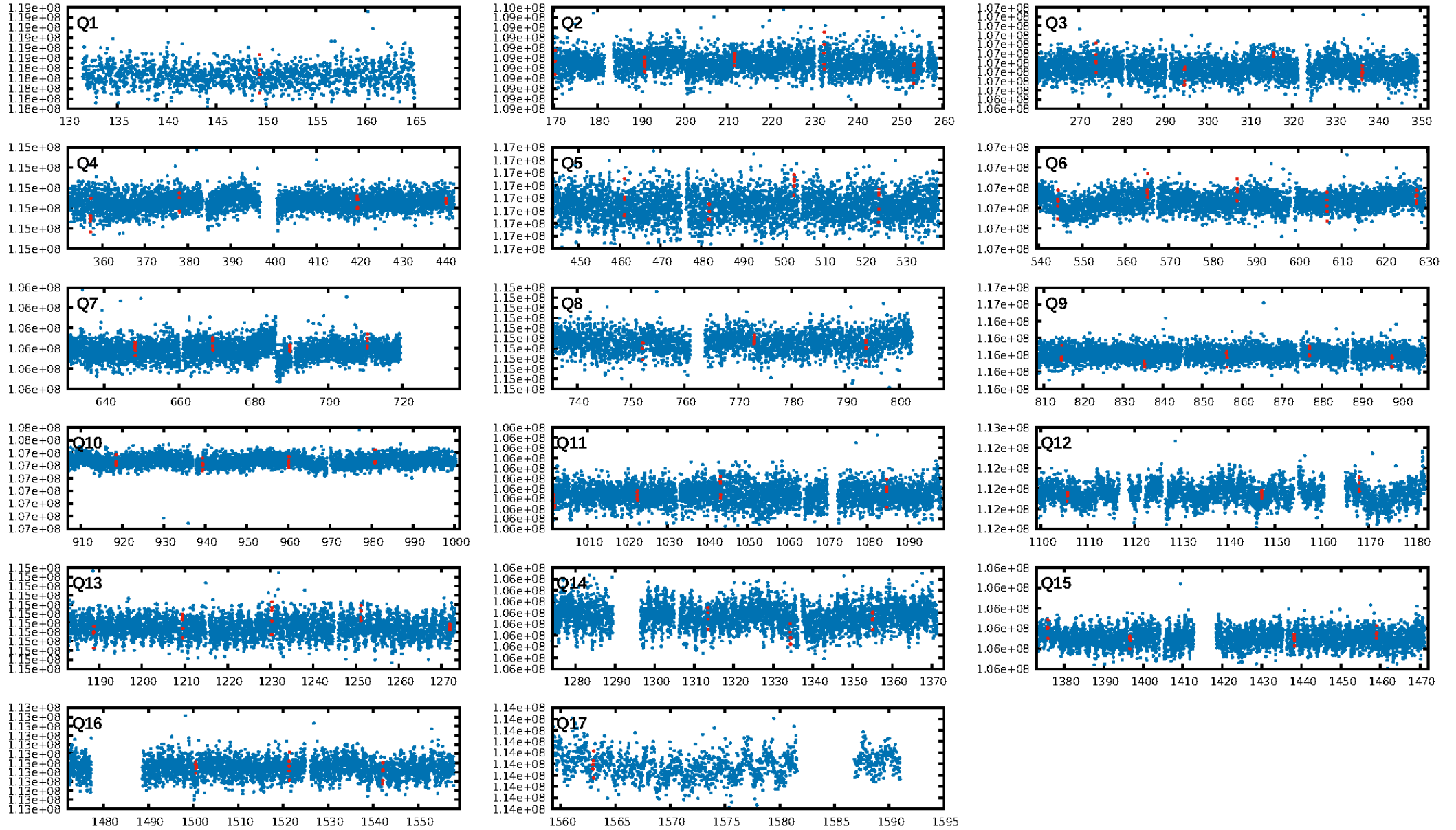
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [89.99σ]
LongPeriod-sig: 100.0% [23.07σ]
ModelChiSquare2-sig: 3.1%
ModelChiSquareGof-sig: 58.7%
Bootstrap-pfa: 6.23e-09
RollingBand-fgt: 1.00 [9/9]
GhostDiagnostic-chr: -1.043
Centroid-sig: 5.1%
Centroid-so: 0.953 arcsec [1.34σ]
OotOffset-rm: 0.609 arcsec [0.44σ]
KicOffset-rm: 0.574 arcsec [0.38σ]
OotOffset-st: 4/3/3/5 [15]
KicOffset-st: 4/3/3/5 [15]
DiffImageQuality-fgm: 0.13 [2/15]
DiffImageOverlap-fno: 0.29 [5/17]

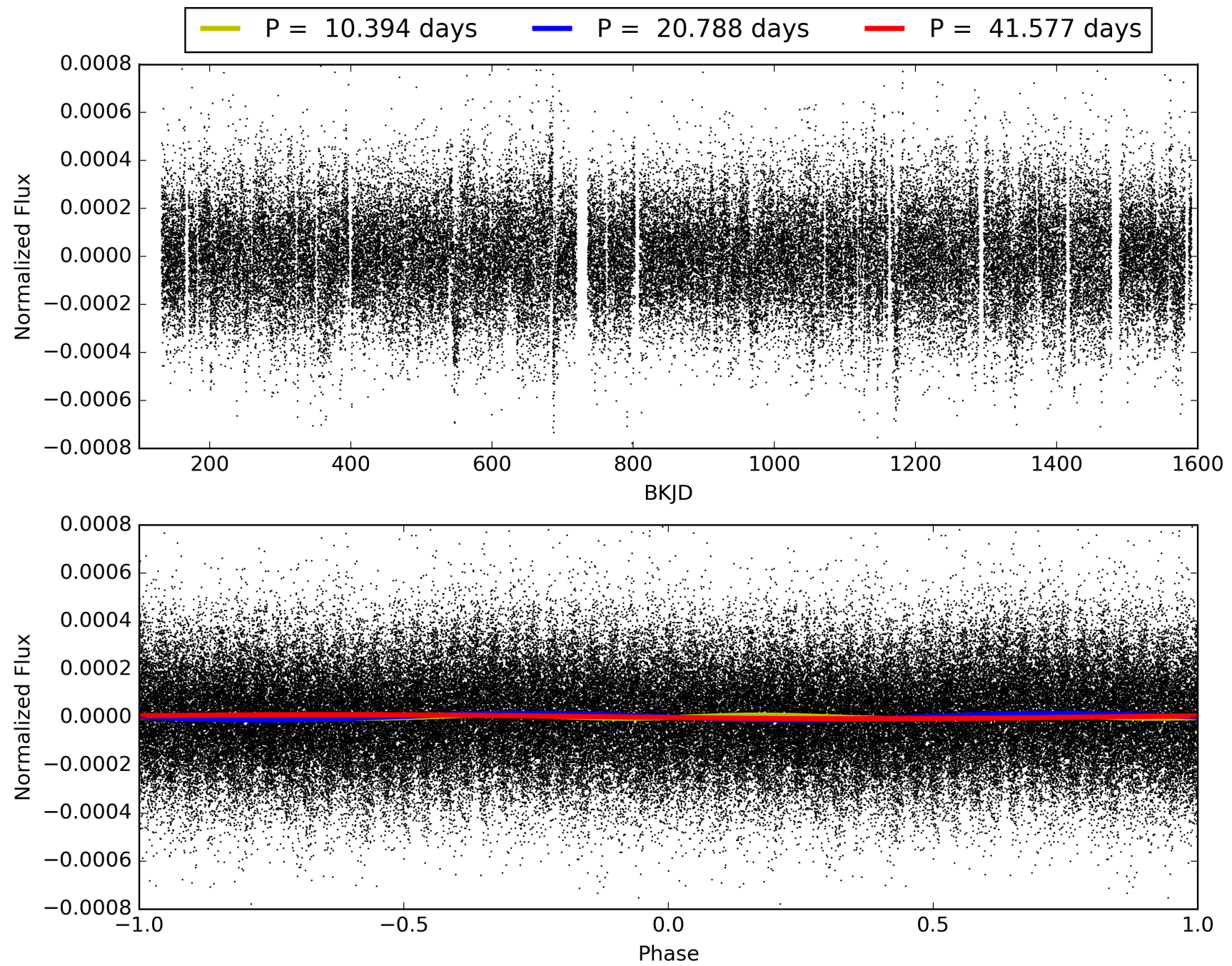
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 08:24:25 Z

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

TCE 005564325-07, PDC Light Curves

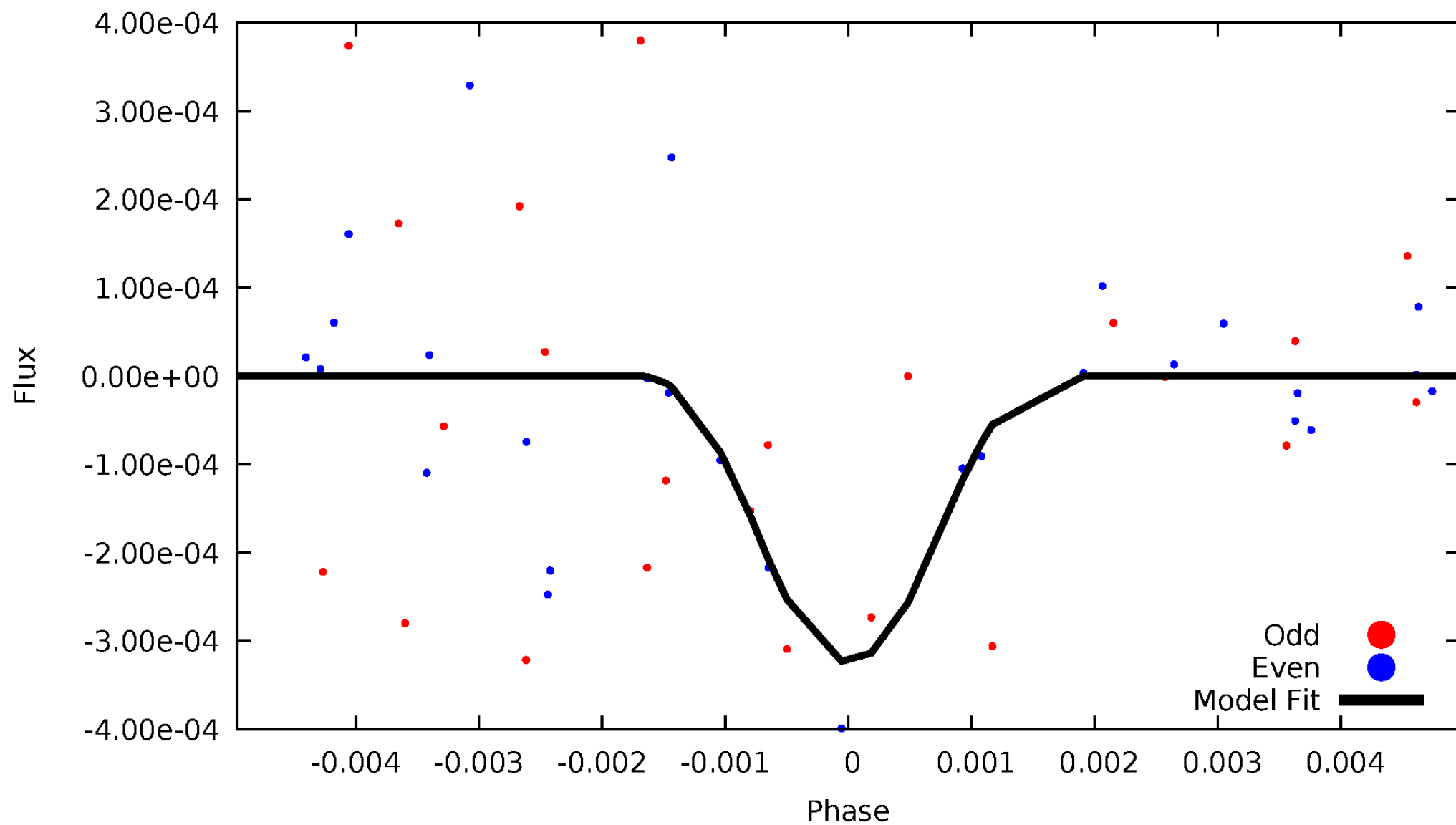


TCE 005564325-07



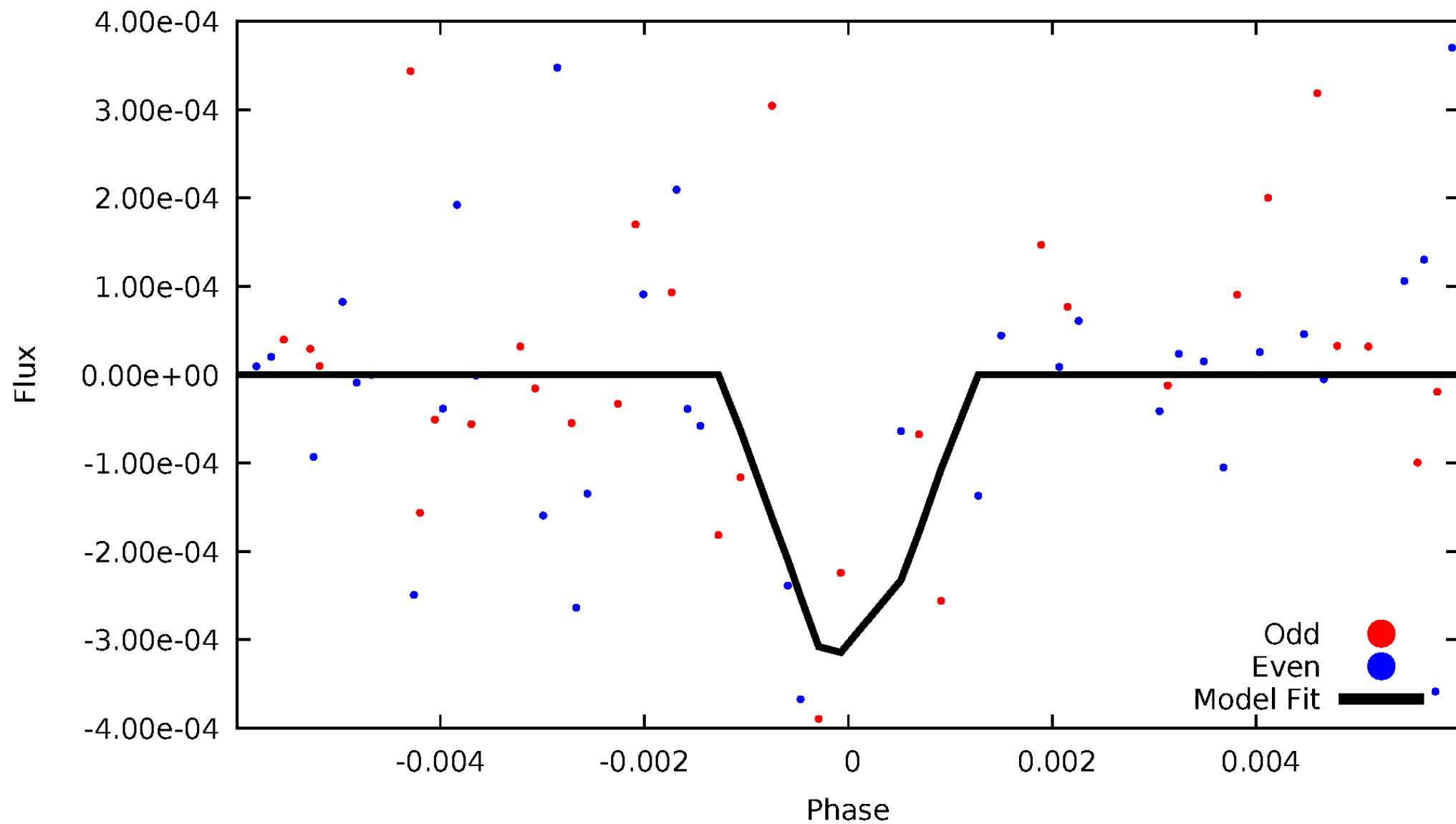
DV Odd/Even

TCE 005564325-07



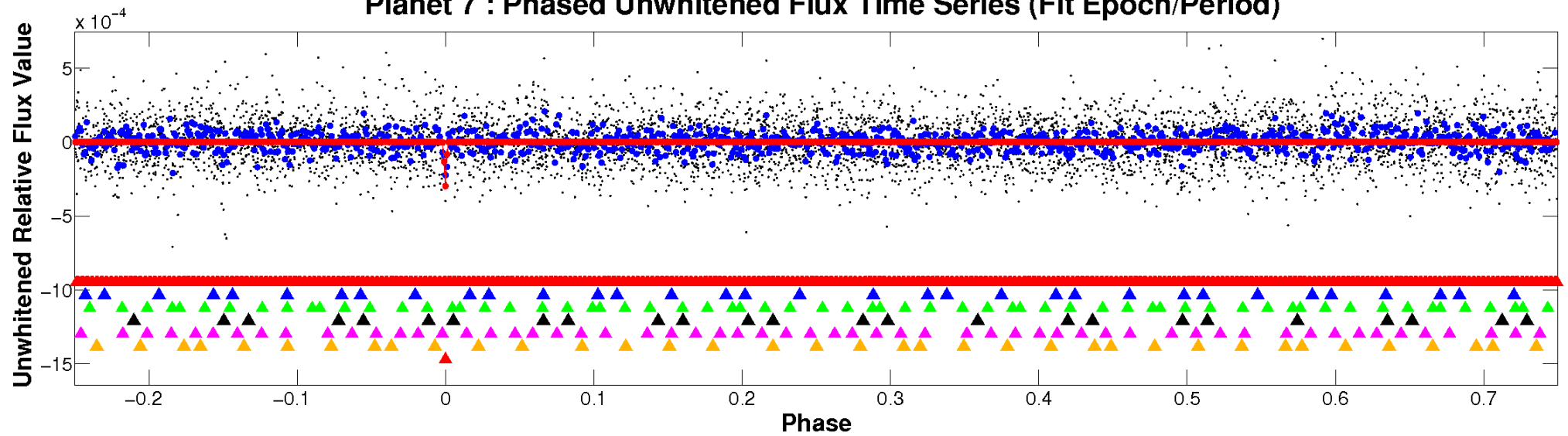
ALT Odd/Even

TCE 005564325-07

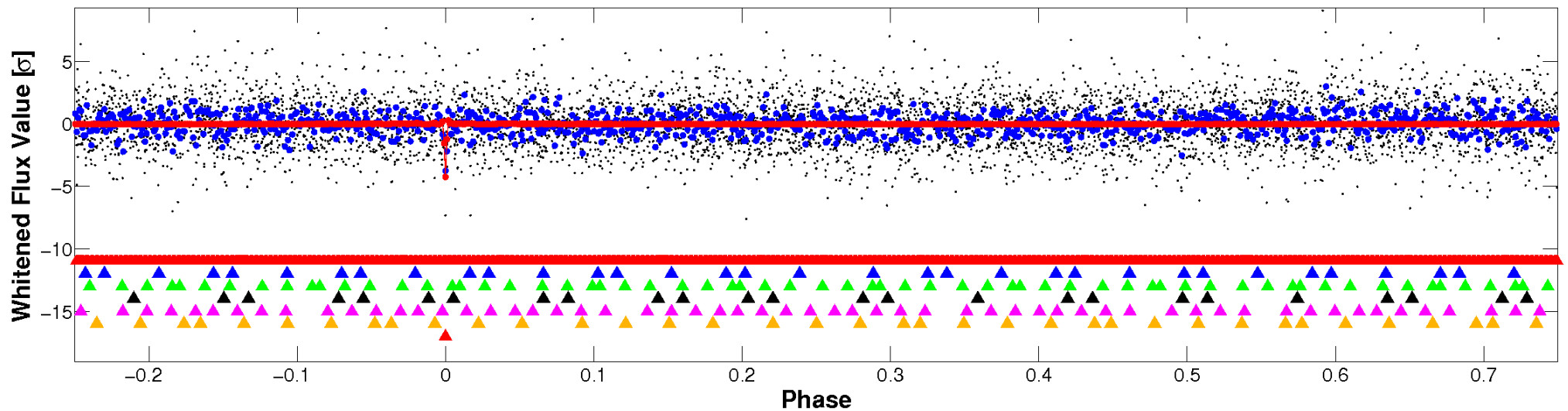


Non-Whitened Vs. Whitened Light Curve

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

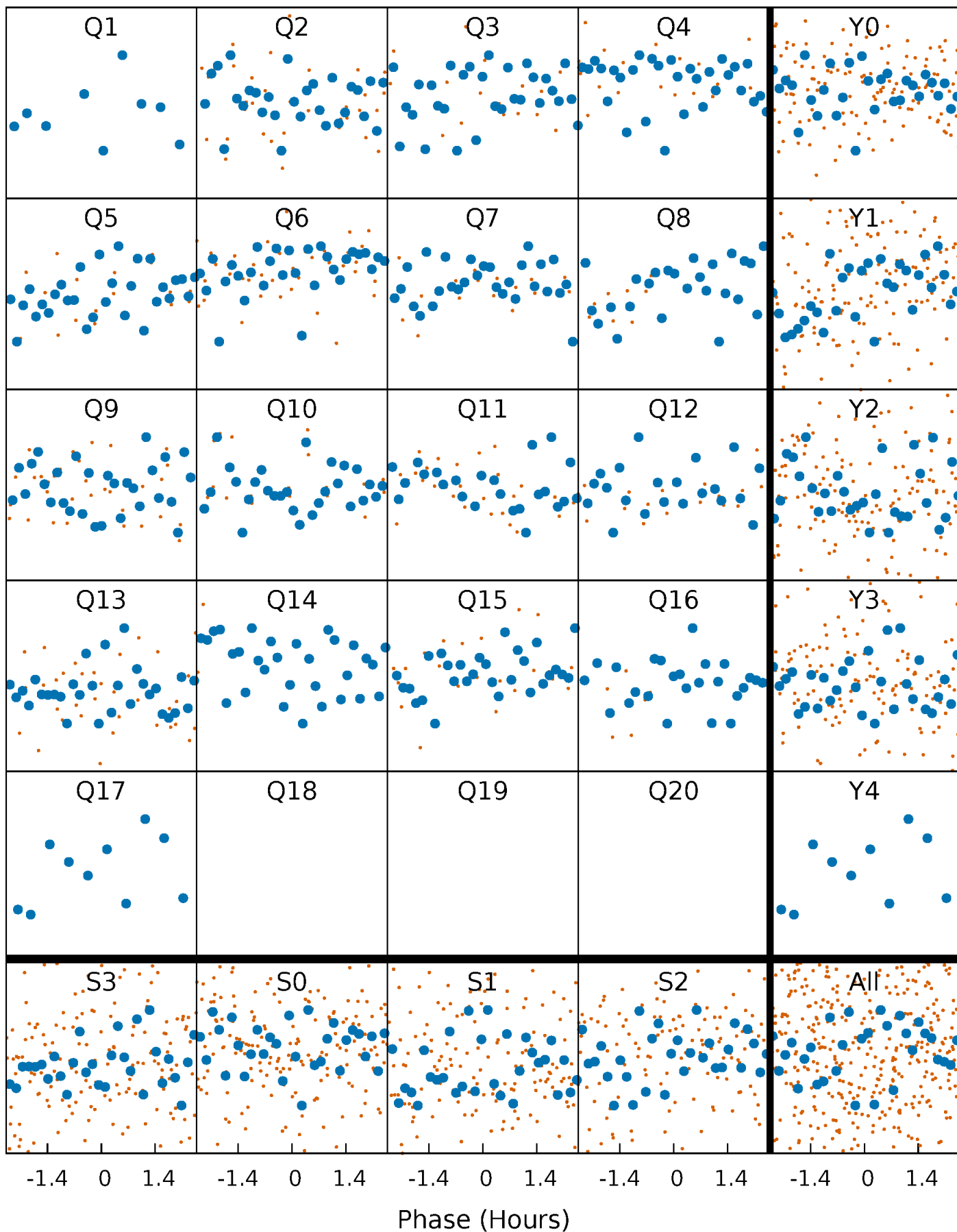


Planet 7 : Phased Whitened Flux Time Series (Fit Epoch/Period)



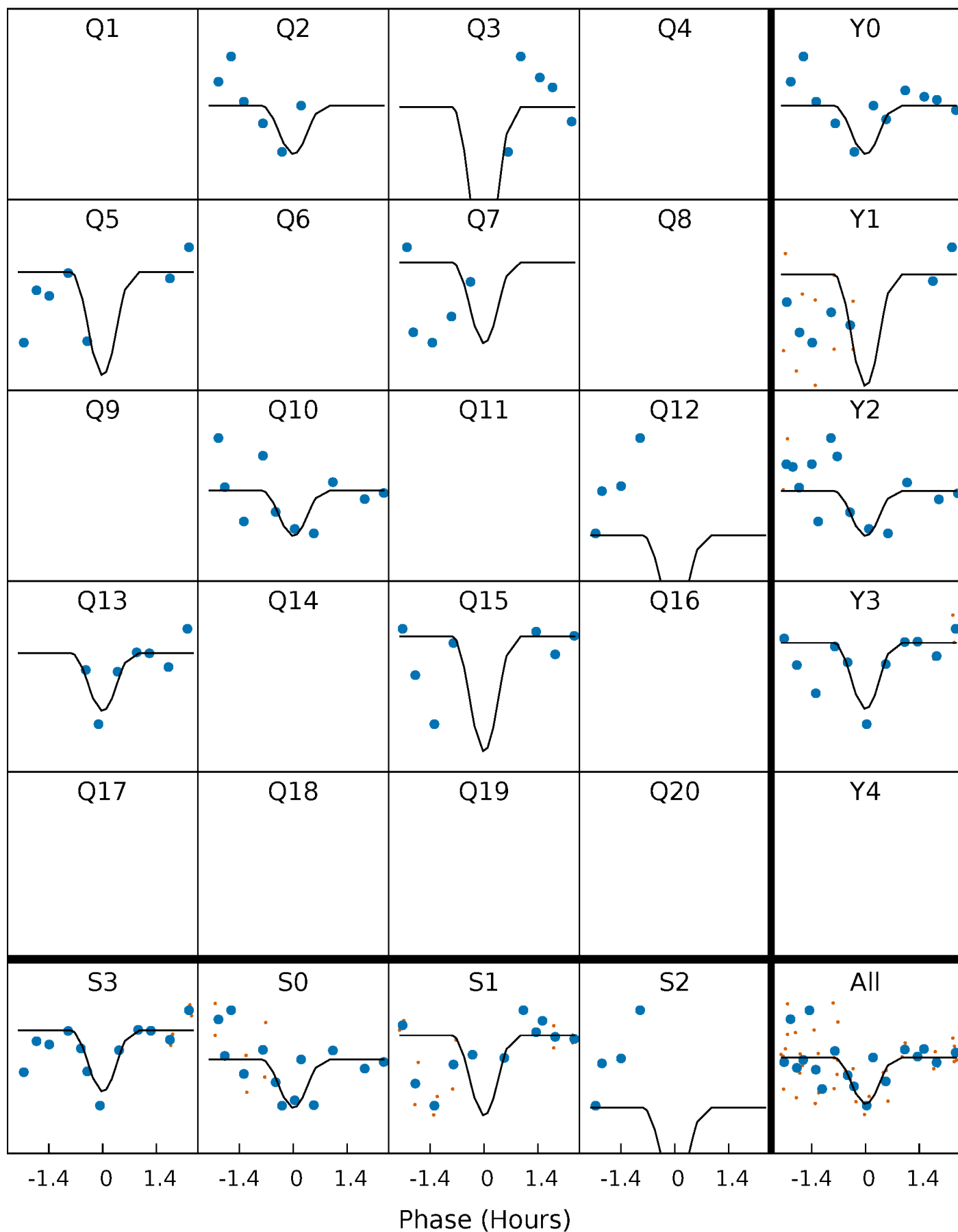
PDC Quarter-Phased Transit Curves

TCE 005564325-07 P= 20.788375 Days $T_0=149.346674$ (BKJD)



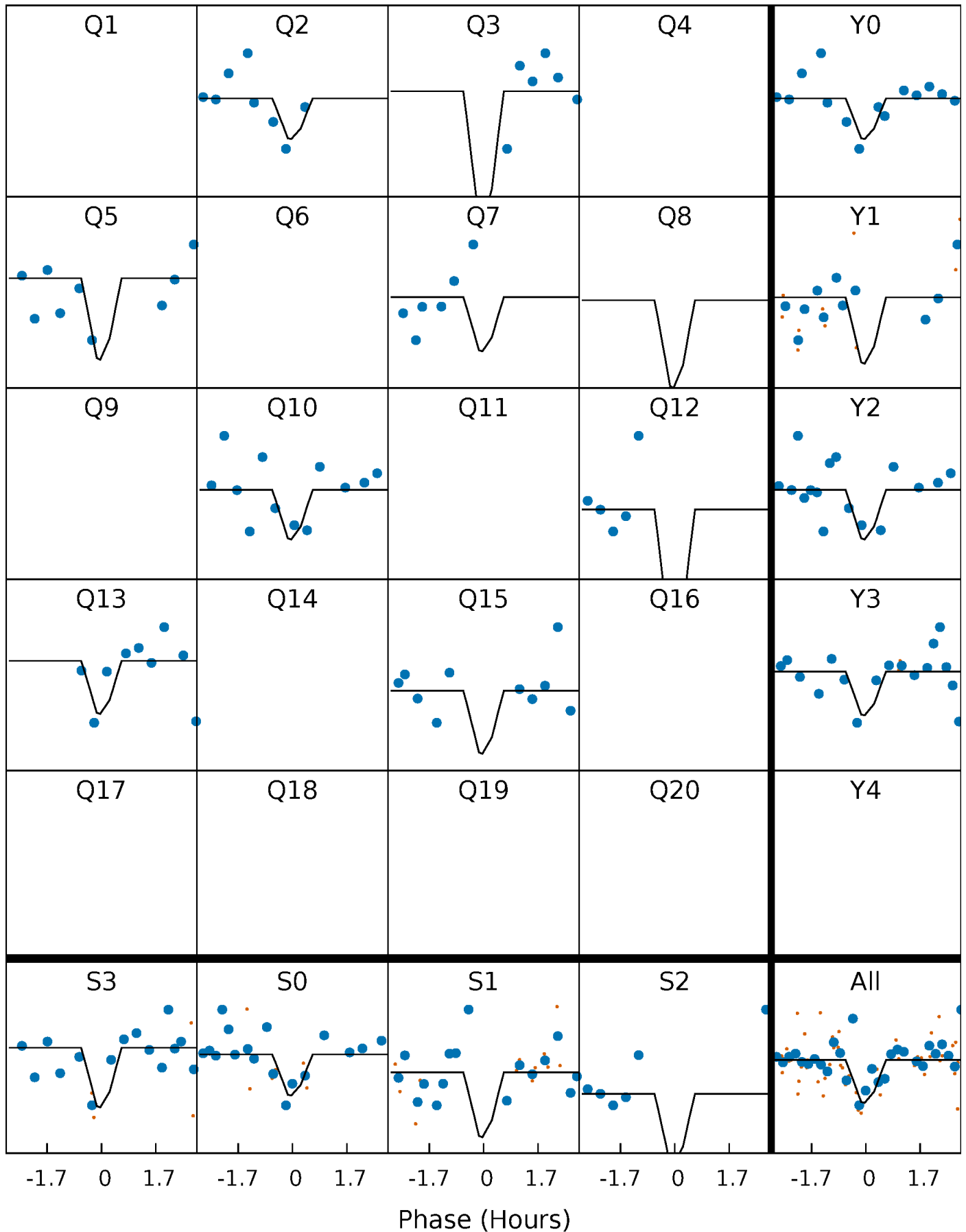
DV Quarter-Phased Transit Curves

TCE 005564325-07 P= 20.788375 Days $T_0=149.346674$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

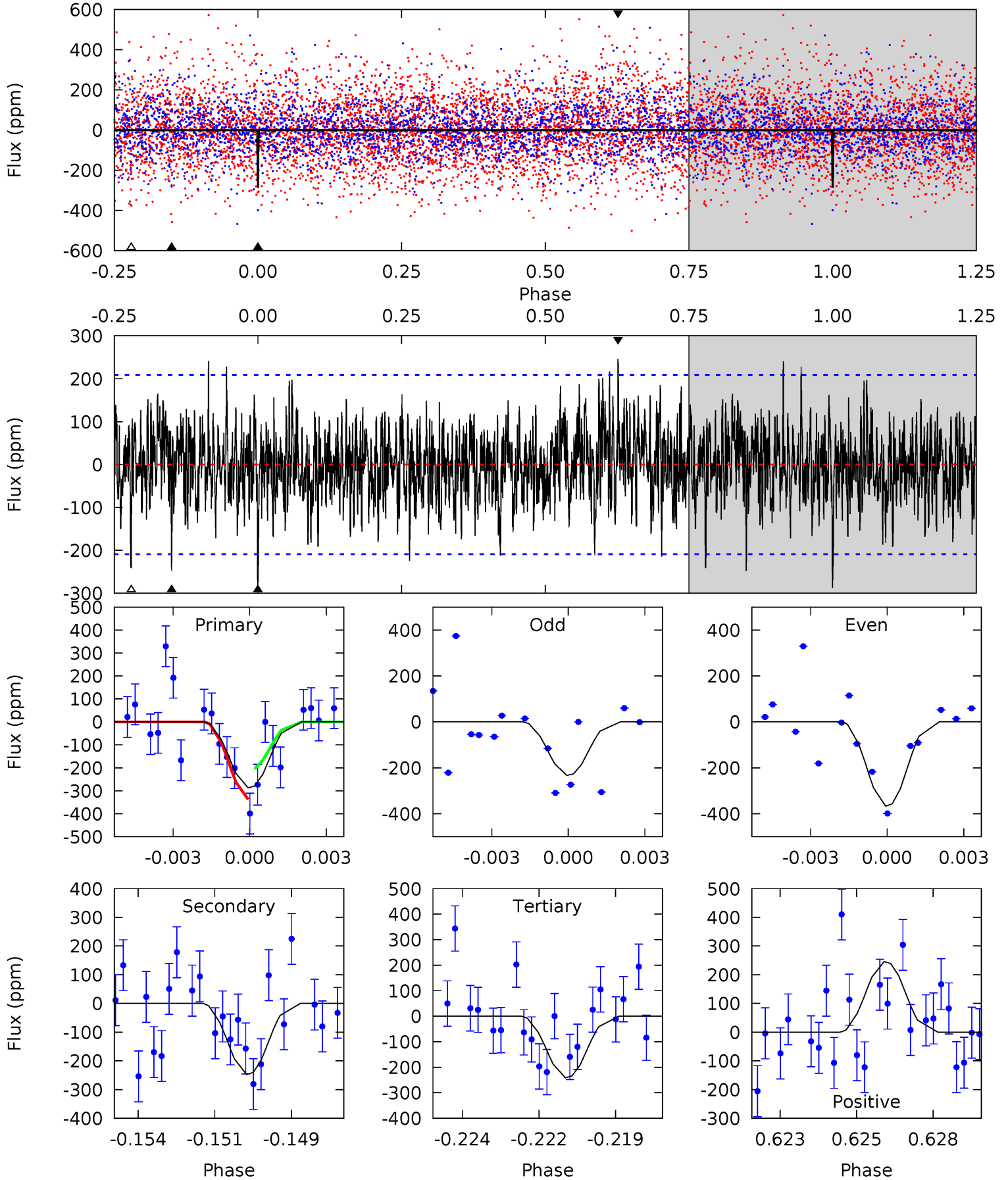
TCE 005564325-07 $P = 20.788661$ Days $T_0 = 149.340934$ (BKJD)



DV Model-Shift Uniqueness Test

005564325-07, $P = 20.788375$ Days, $E = 128.558299$ Days

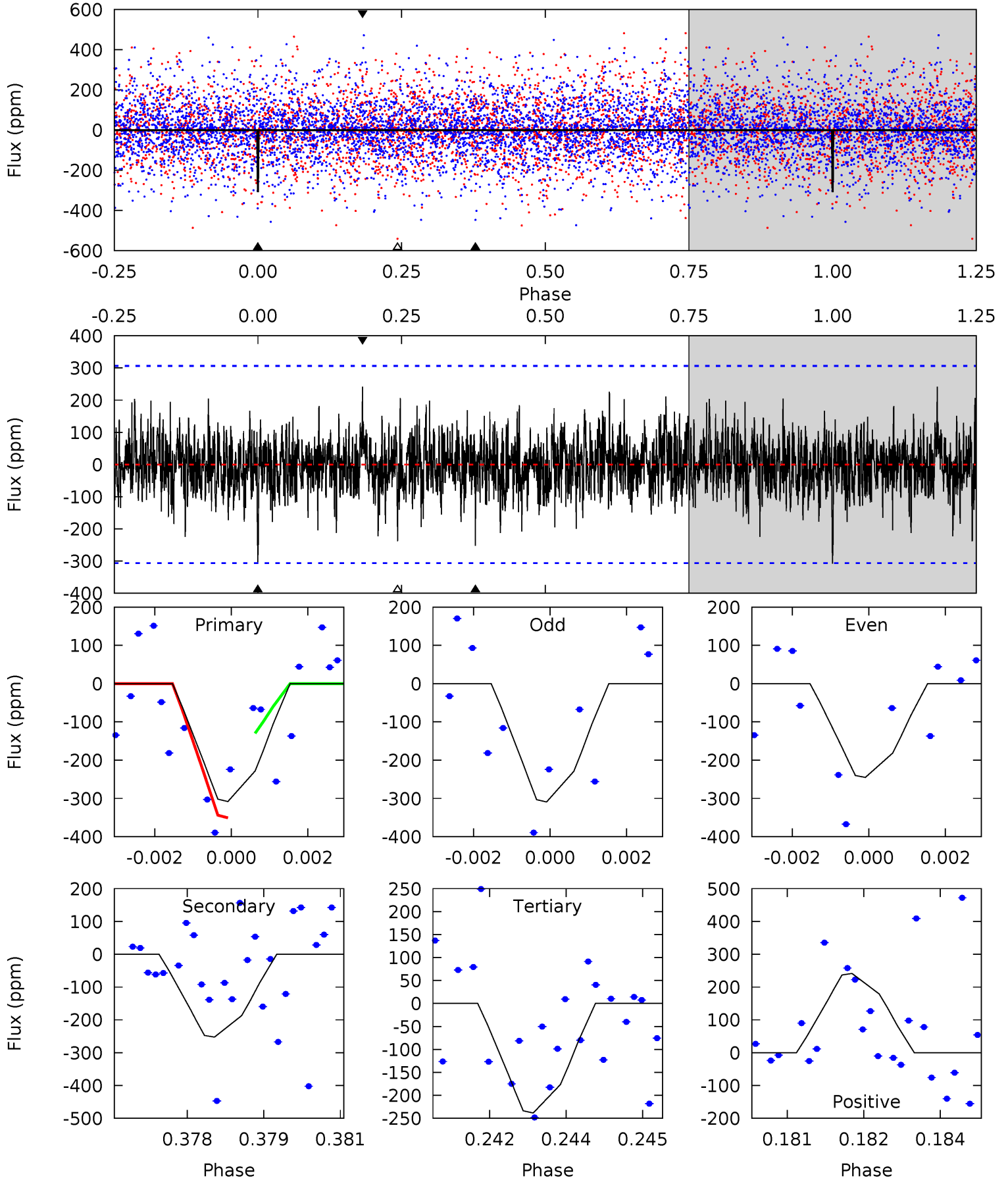
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.23	6.23	6.07	6.20	5.26	2.99	1.77	1.16	1.04	0.16	0.04	1.67	0.84	0.46	1.53



Alt Model-Shift Uniqueness Test

005564325-07, P = 20.788661 Days, E = 128.552273 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.39	4.42	4.17	4.23	5.36	3.15	1.17	1.22	1.16	0.25	0.19	0.56	1.04	0.44	1.85



Stellar Parameters For KIC 005564325

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6552^{+177}_{-196}	$3.639^{+0.312}_{-0.059}$	$-0.160^{+0.300}_{-0.250}$	$3.168^{+0.477}_{-1.112}$	$1.595^{+0.216}_{-0.325}$	$0.071^{+0.164}_{-0.019}$
	+3%/-3%	+9%/-2%	+188%/-156%	+15%/-35%	+14%/-20%	+232%/-26%
Source	PHO1	FLK73	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 005564325-07 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-247 ± 40	$77.29^{+72.41}_{-52.87}$	1680^{+98}_{-150}	2344^{+1068}_{-4422}	$0.688^{+5.884}_{-0.514}$
Alt.	-253 ± 57	$72.50^{+81.47}_{-51.65}$	1675^{+95}_{-154}	2389^{+1188}_{-4480}	$0.747^{+8.018}_{-0.576}$

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

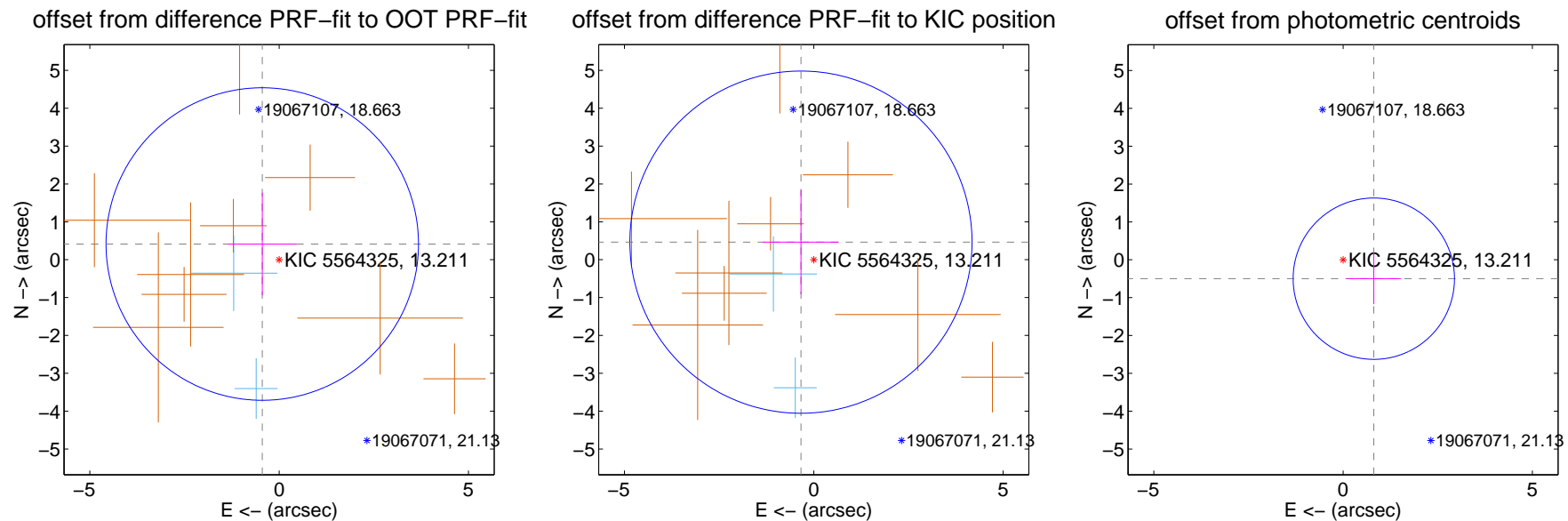
DV Centroid Data

Supplemental centroid analysis for 005564325-07. Kepler magnitude: 13.21. Transit SNR 9.46

There are 2 quarters with good PRF difference image offsets

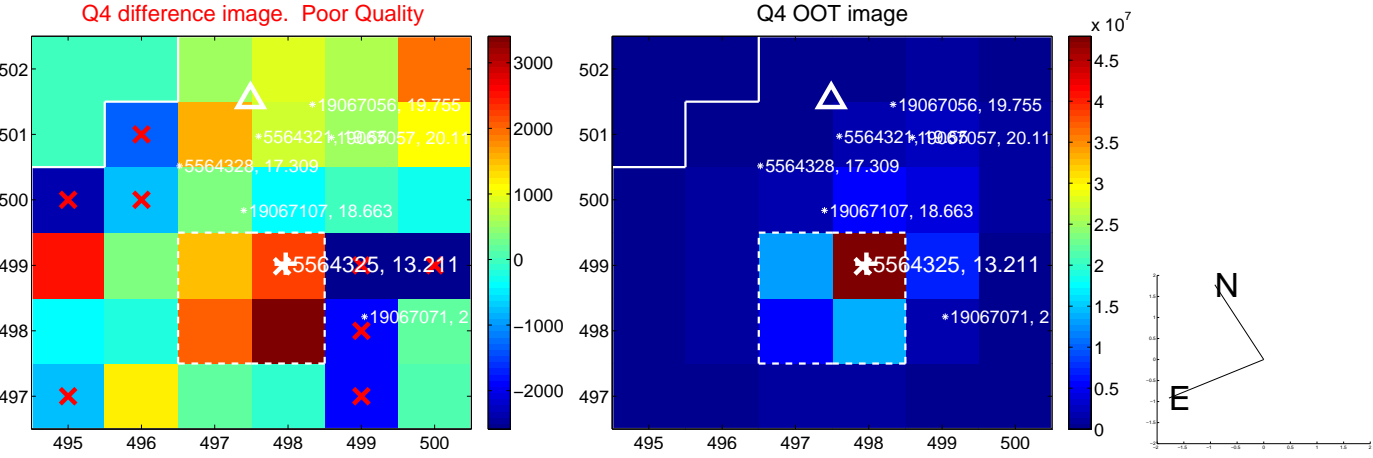
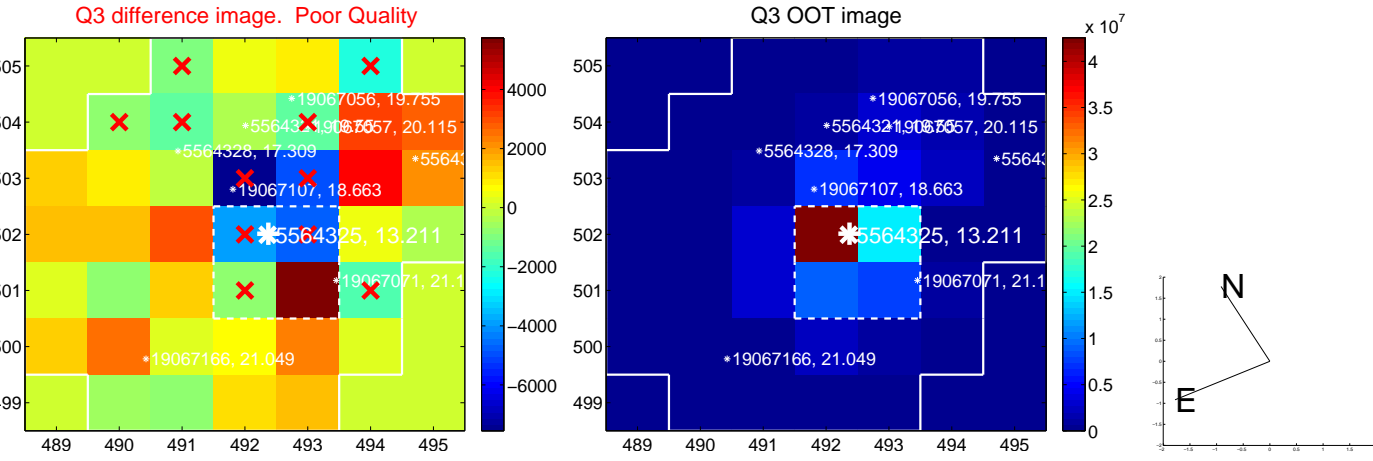
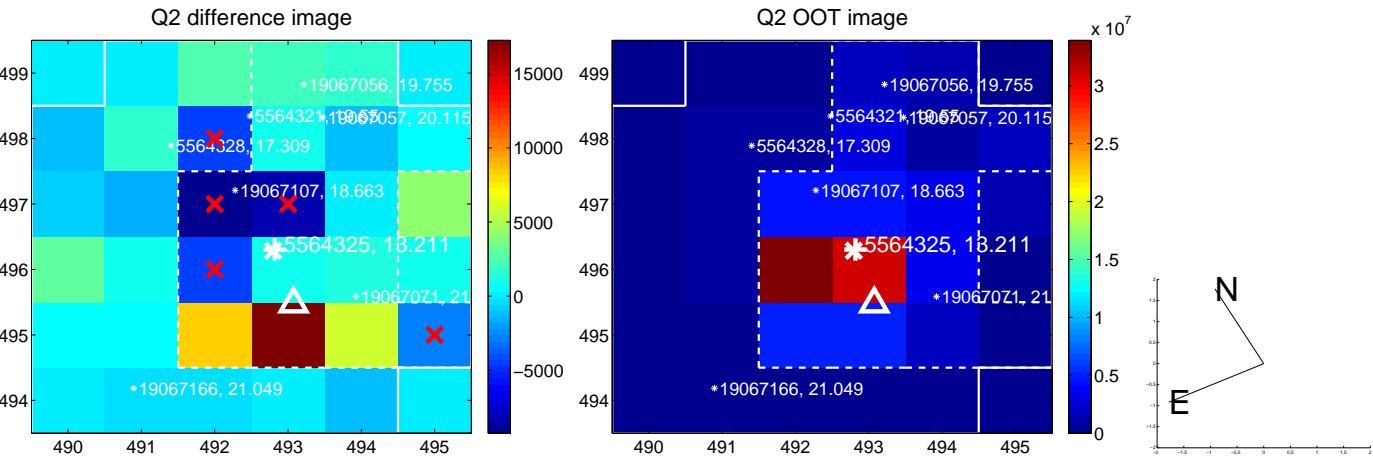
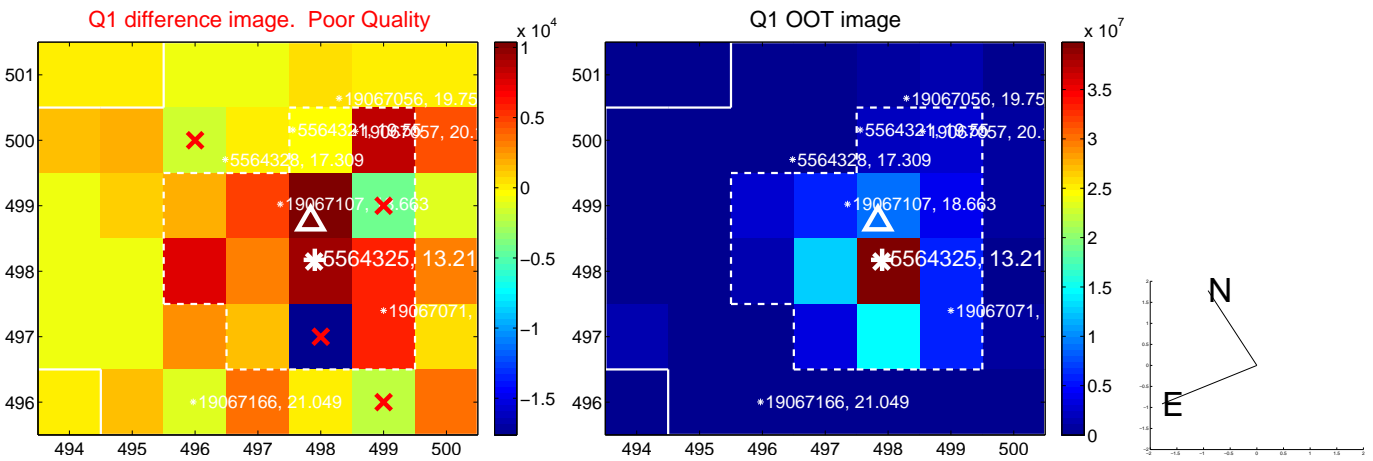
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.609 ± 1.376	0.44	0.446 ± 0.909	0.414 ± 1.351
PRF-fit source offset from KIC position	0.574 ± 1.506	0.38	0.339 ± 0.997	0.463 ± 1.375
photometric centroid source offset	0.95 ± 0.71	1.34	-0.81 ± 0.72	-0.50 ± 0.67

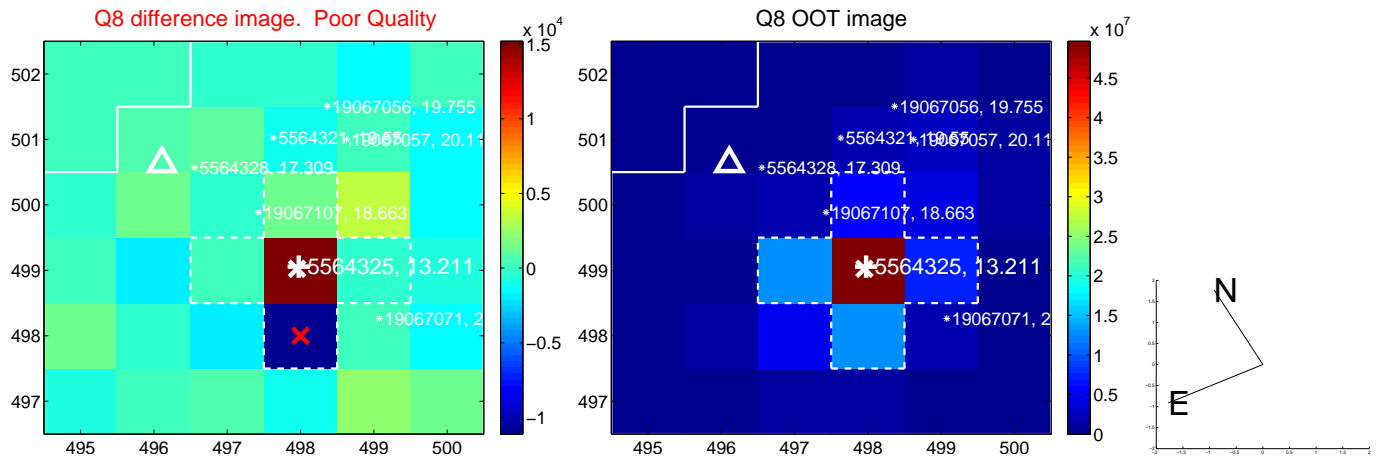
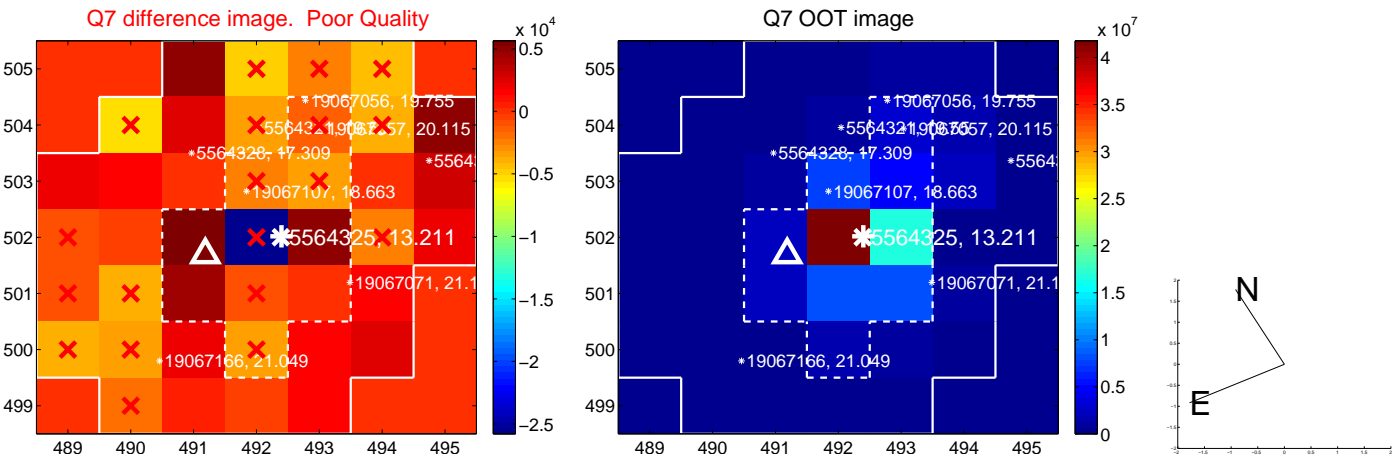
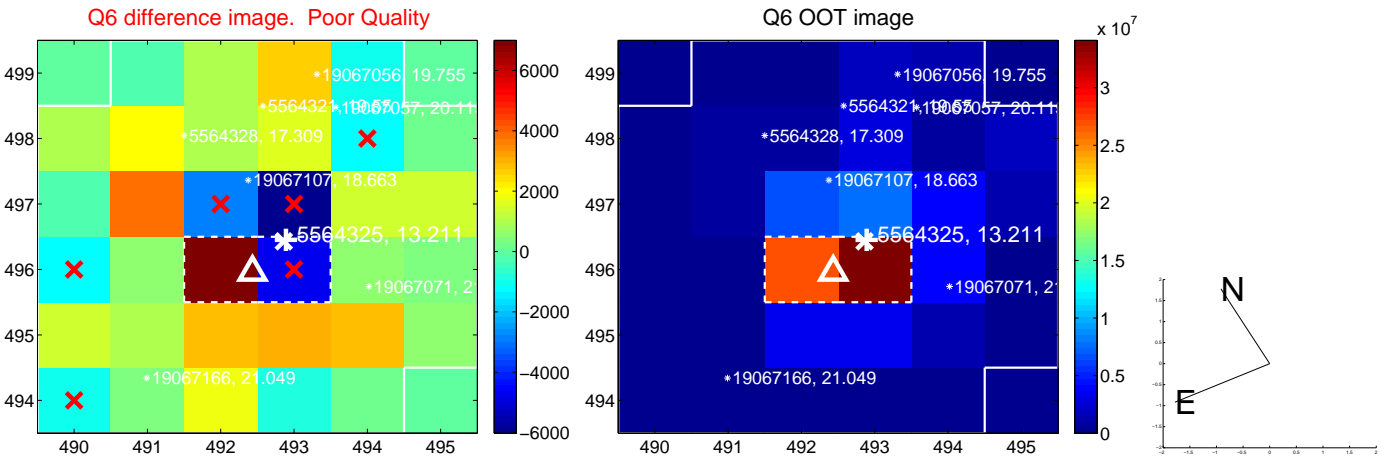
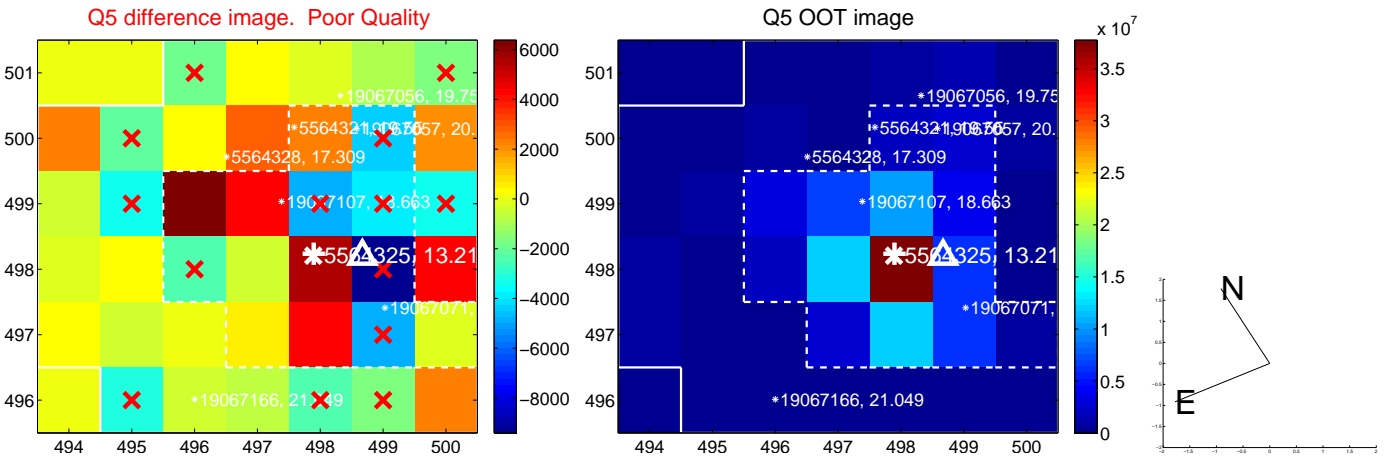


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

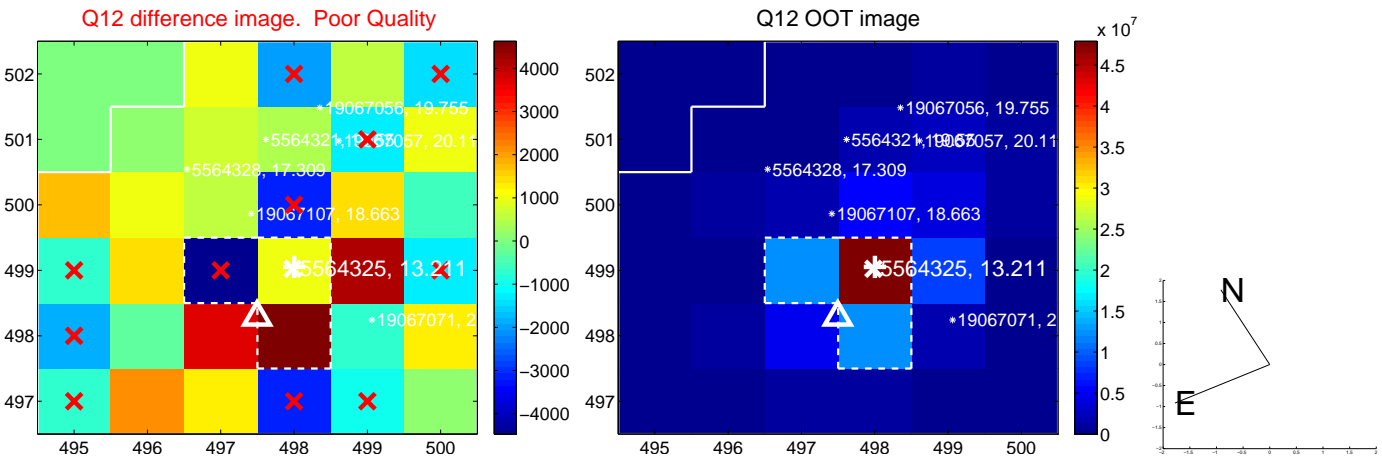
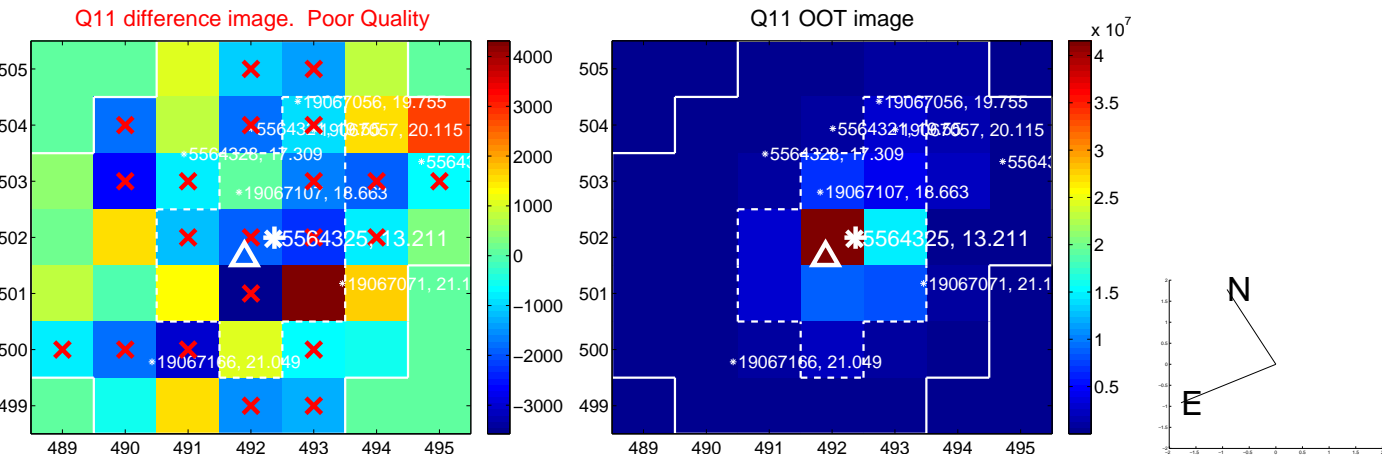
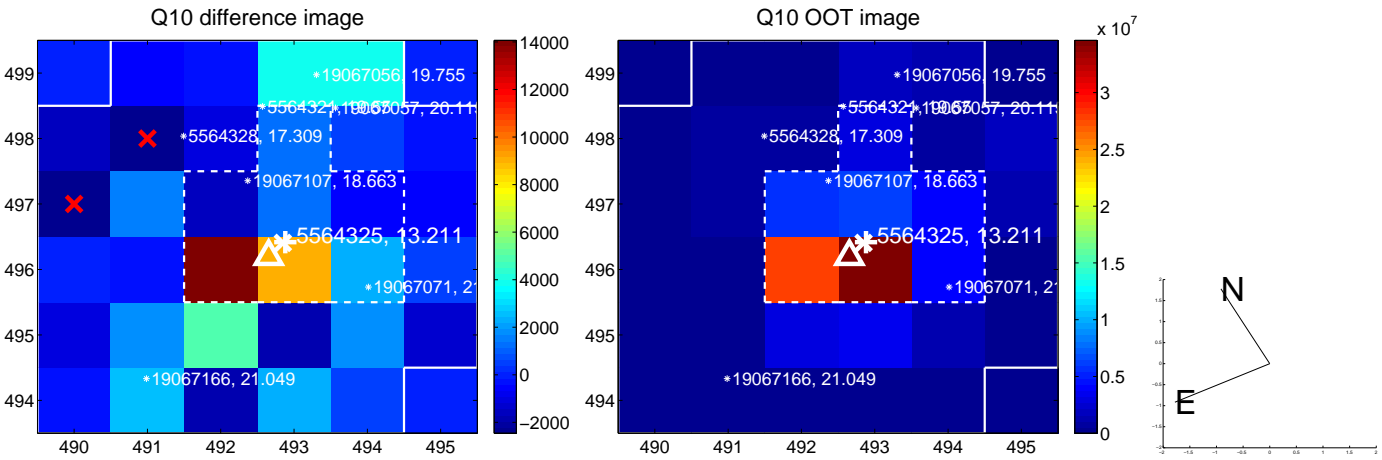
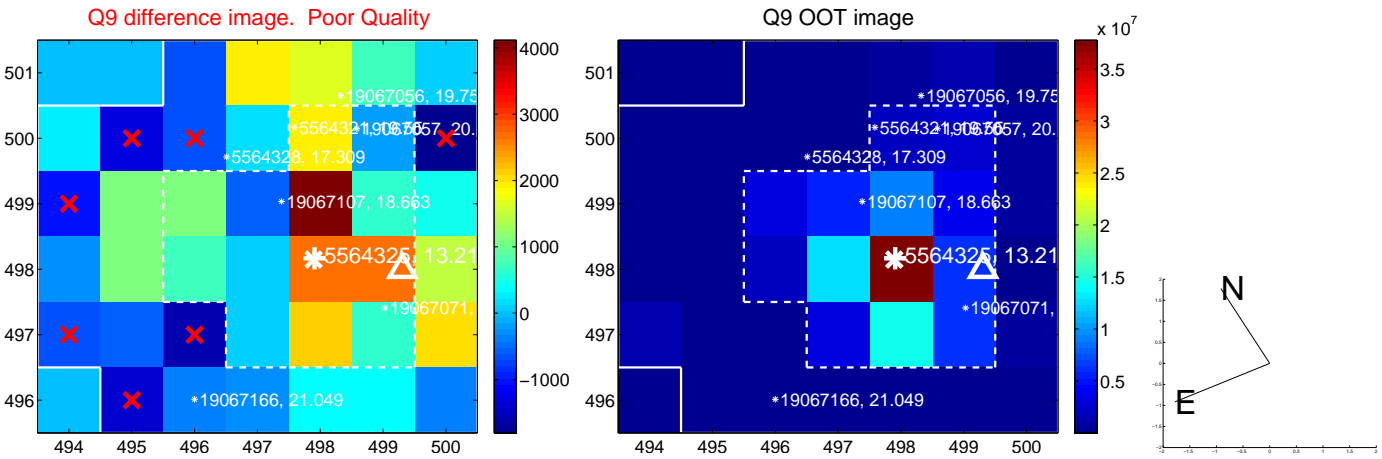
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



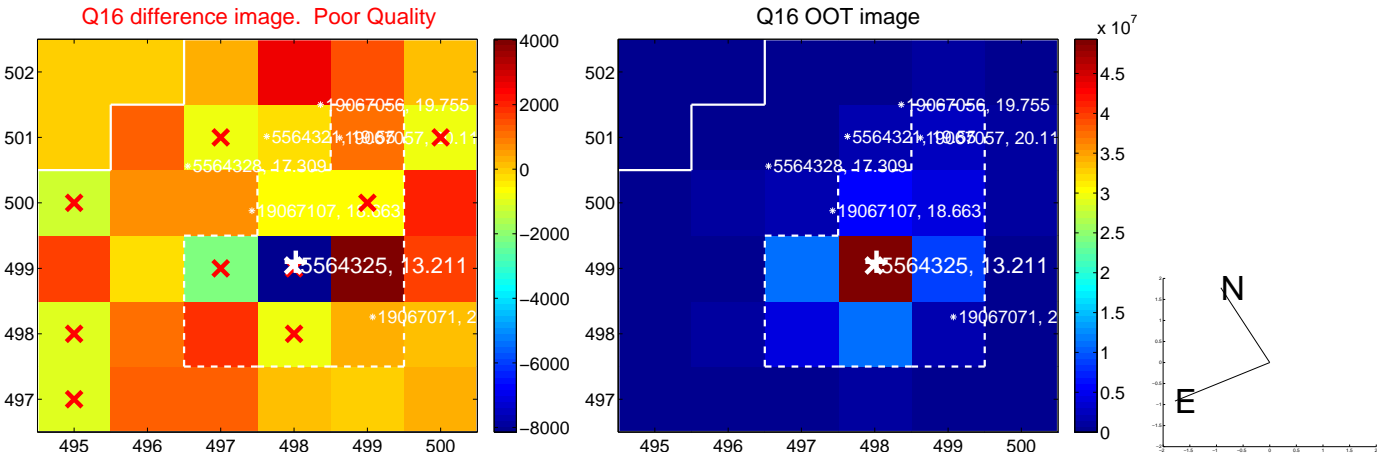
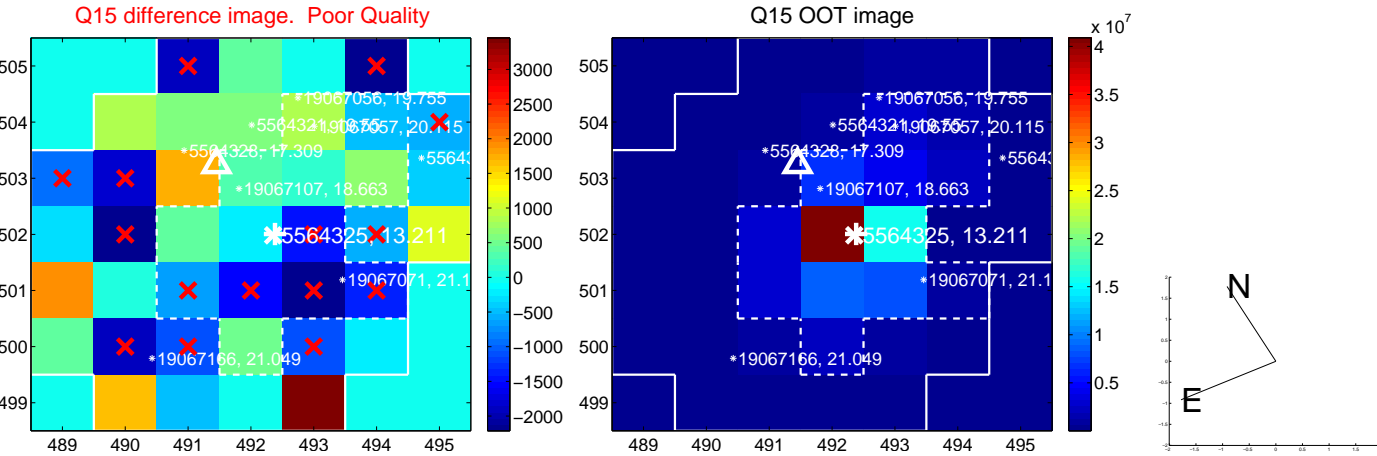
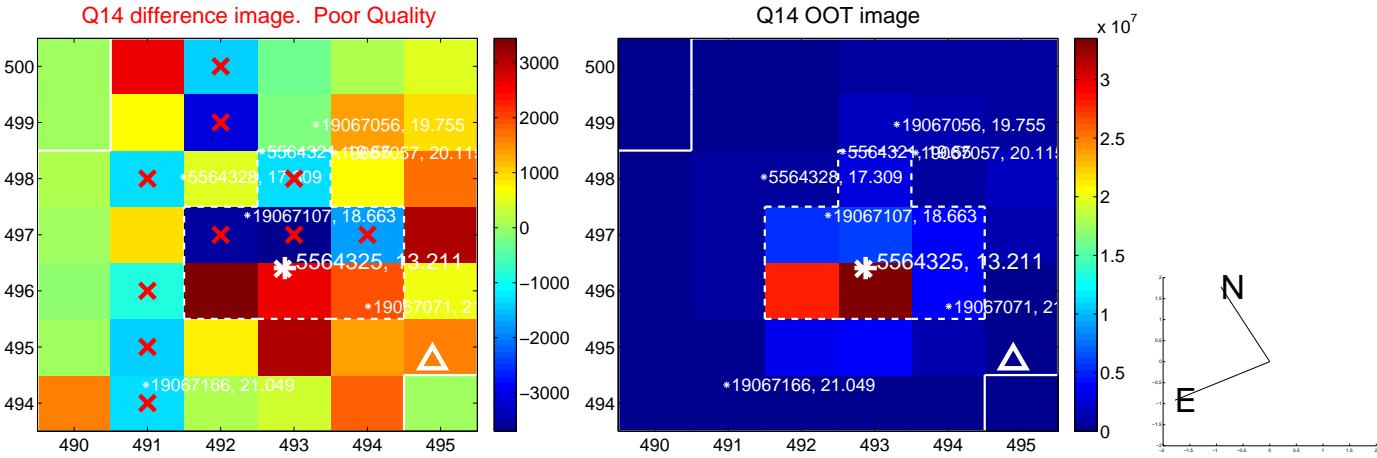
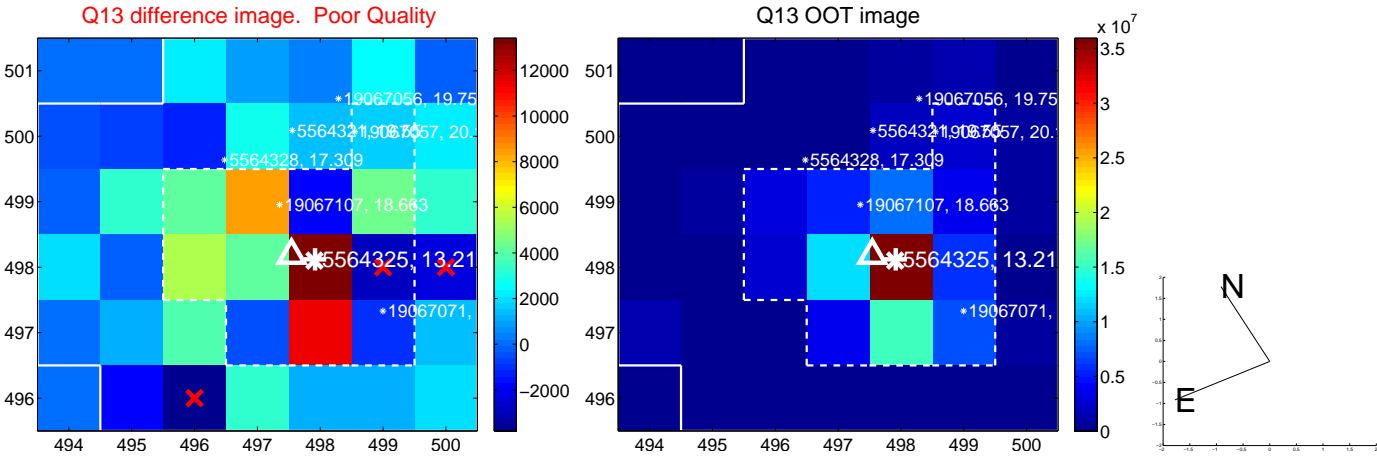
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



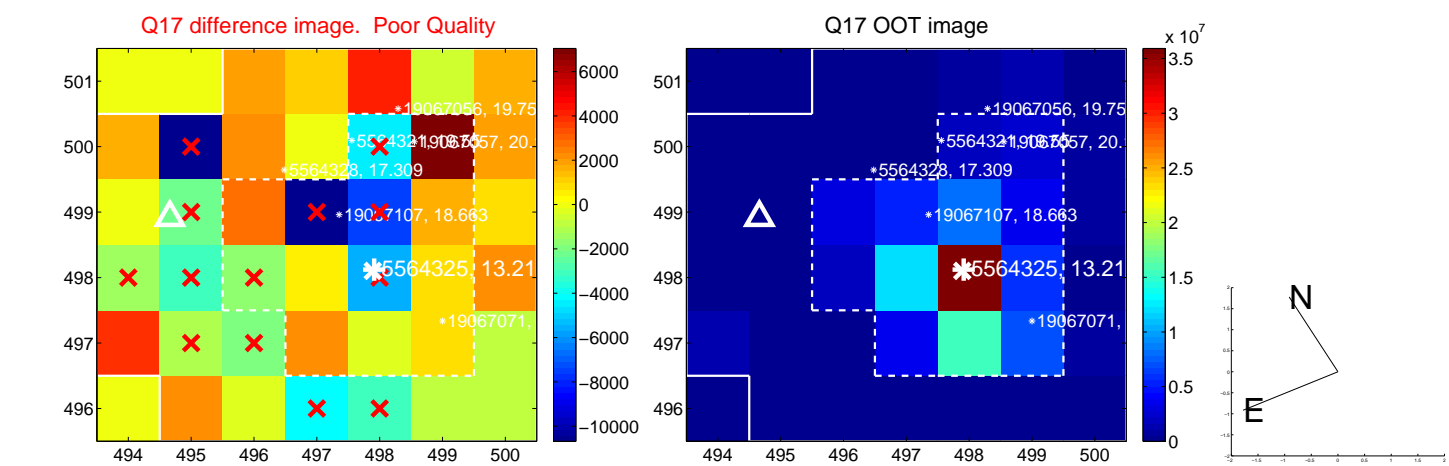
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



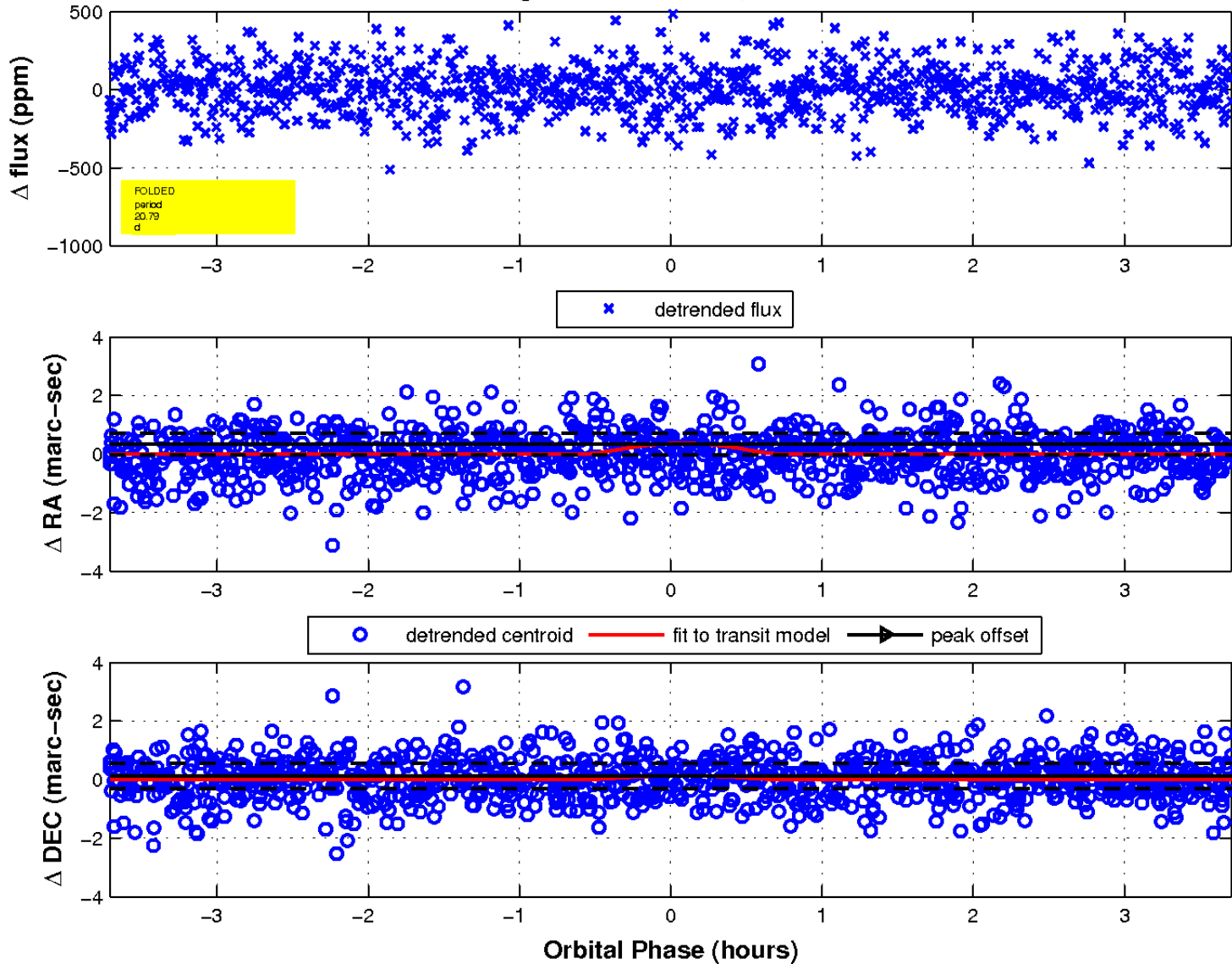
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 7 of 7



UKIRT Image

