

KIC 005389540

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})
005389540-01	OBS	1836.01	10.262339	133.207135	859.6	3.289	15.6	17.3	0.54	4316	1.95	15.92

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005389540-01	OBS	FP	0.00	0	0	1	0	CENT_RESOLVED_OFFSET

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.

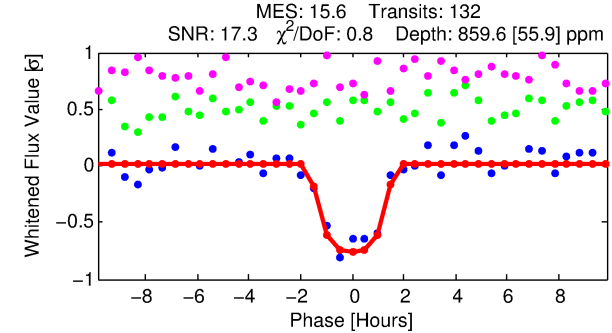
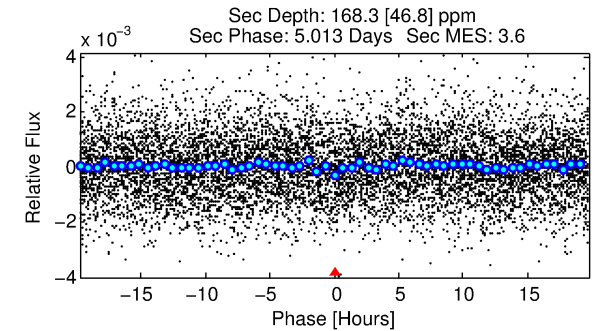
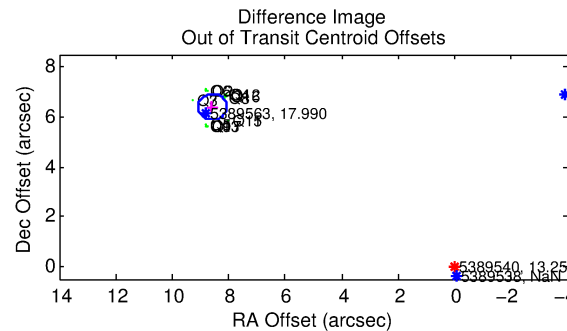
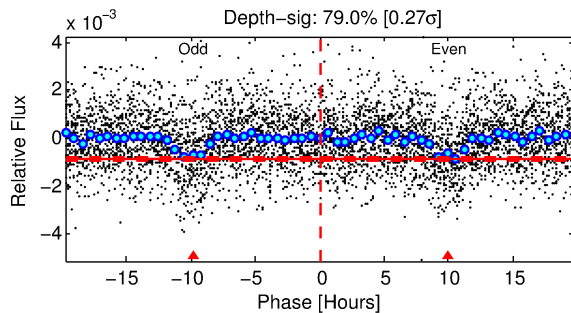
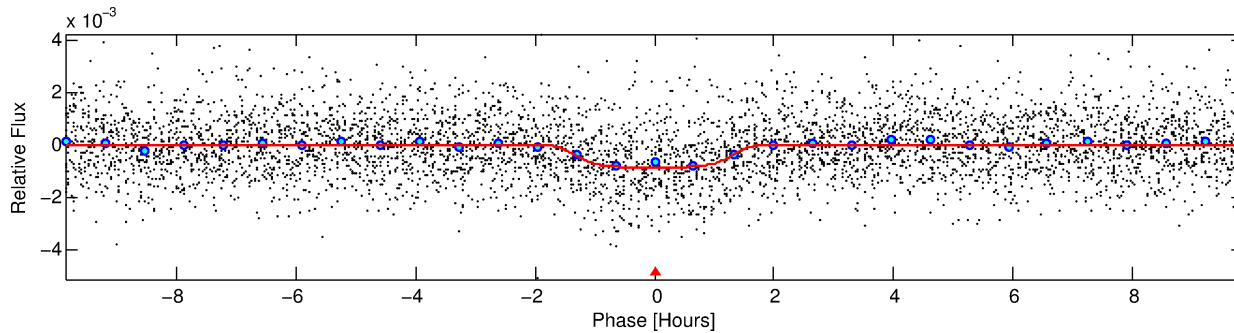
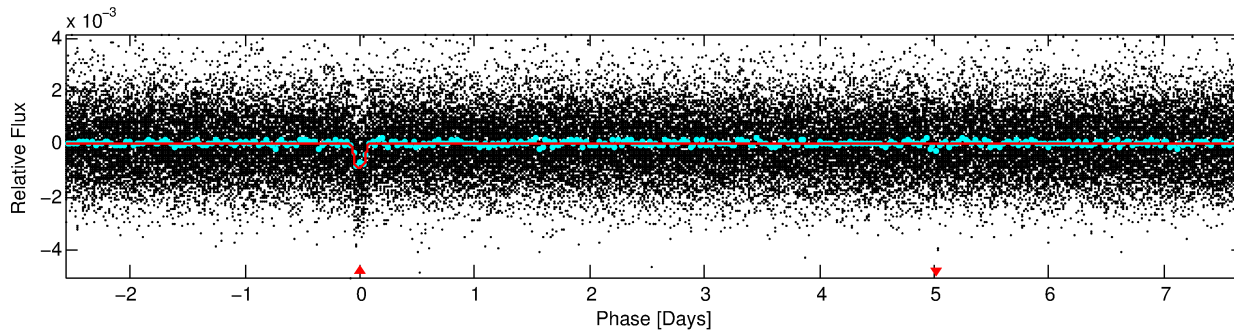
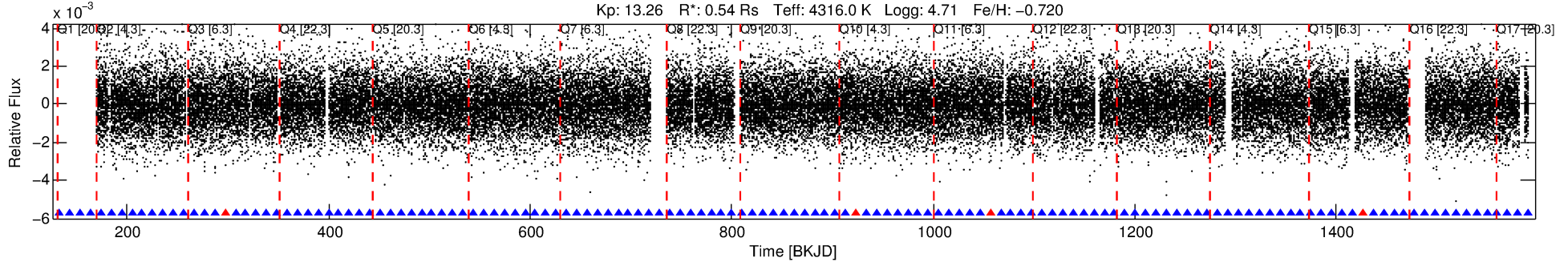
Ephemeris Match Information For 005389540-01

No Significant Match Found

DV One-Page Summary

KIC: 5389540 Candidate: 1 of 1 Period: 10.262 d
KOI: K01836.01 Corr: 0.810

Kp: 13.26 R*: 0.54 Rs Teff: 4316.0 K Logg: 4.71 Fe/H: -0.720



DV Fit Results:

Period = 10.26234 [0.00006] d
Epoch = 133.2071 [0.0047] BKJD
Rp/R* = 0.0331 [0.0034]
a/R* = 11.29 [4.43]
b = 0.92 [0.07]
Seff = 15.92 [3.04]
Teq = 509 [24] K
Rp = 1.95 [0.28] Re
a = 0.0755 [0.0062] AU
Ag = 138.76 [50.66] [2.72σ]
Teffp = 2703 [256] K [8.53σ]

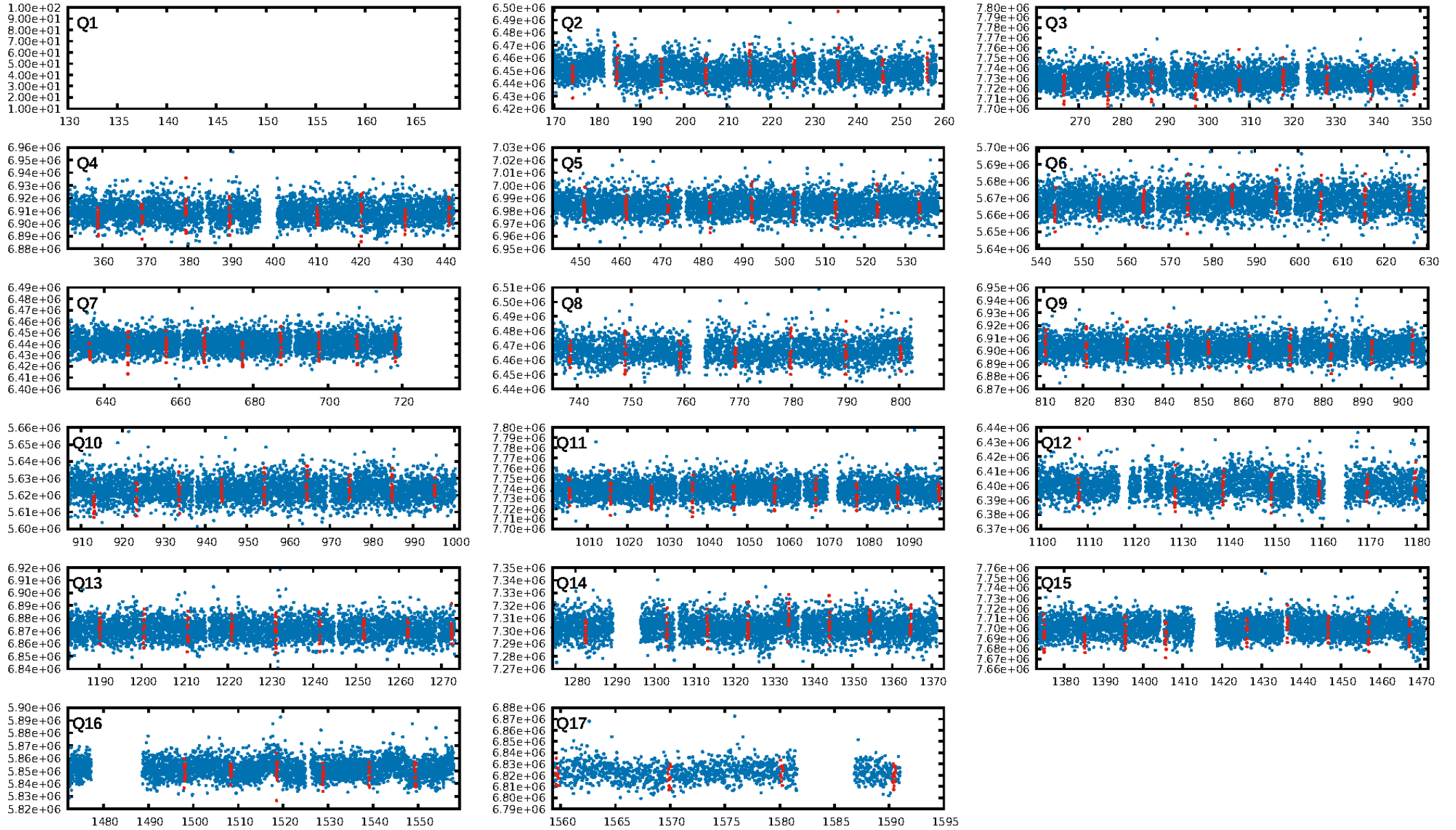
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.57e-53
RollingBand-fgt: 0.97 [124/128]
GhostDiagnostic-chr: -0.4129
Centroid-sig: 0.0%
Centroid-so: 38.124 arcsec [62.99σ]
OotOffset-rm: 10.699 arcsec [62.04σ]
KicOffset-rm: 10.755 arcsec [159.09σ]
OotOffset-st: 2/4/4/4 [14]
KicOffset-st: 2/4/4/4 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [16/16]

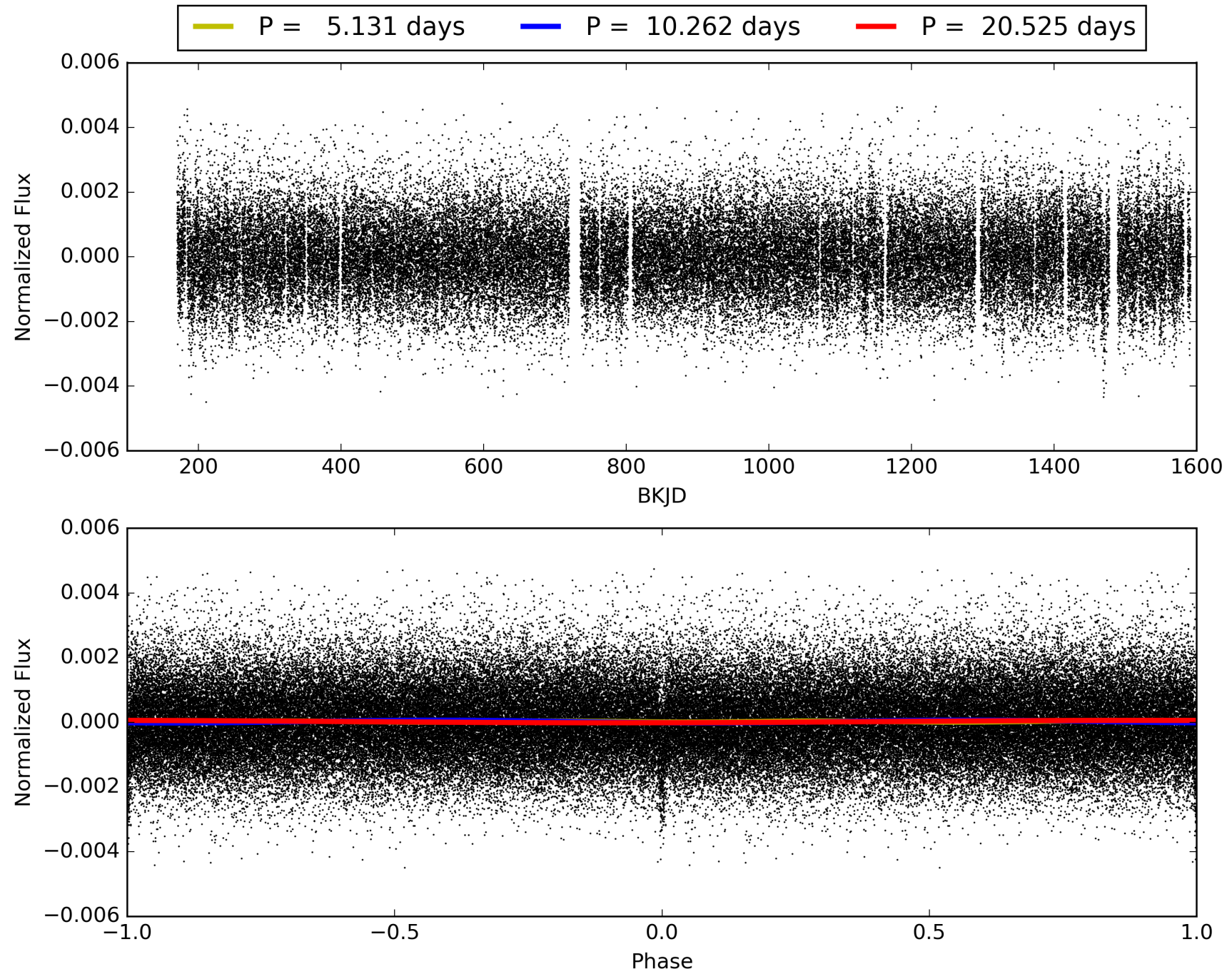
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 06:59:22 Z

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

TCE 005389540-01, PDC Light Curves

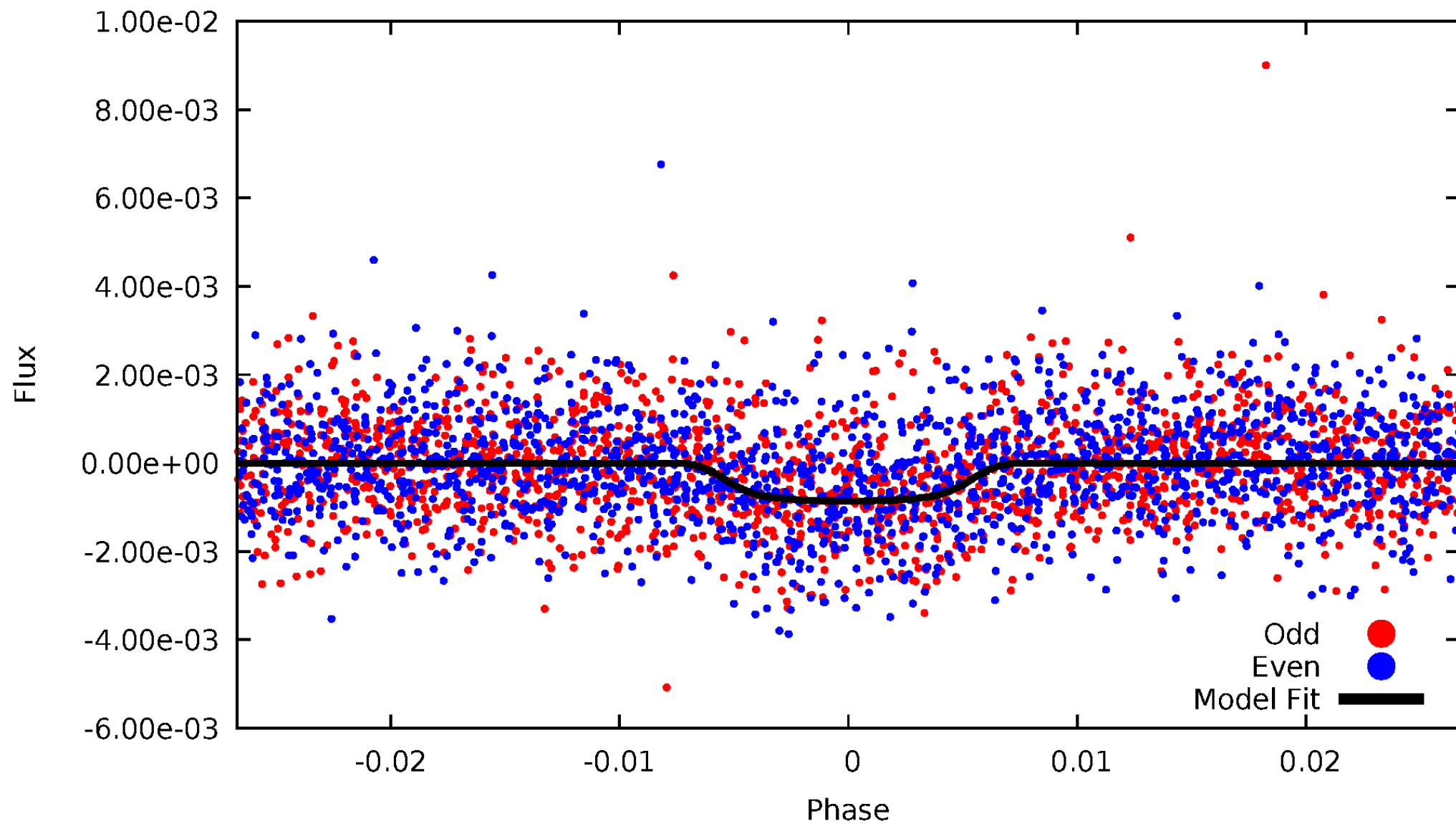


TCE 005389540-01



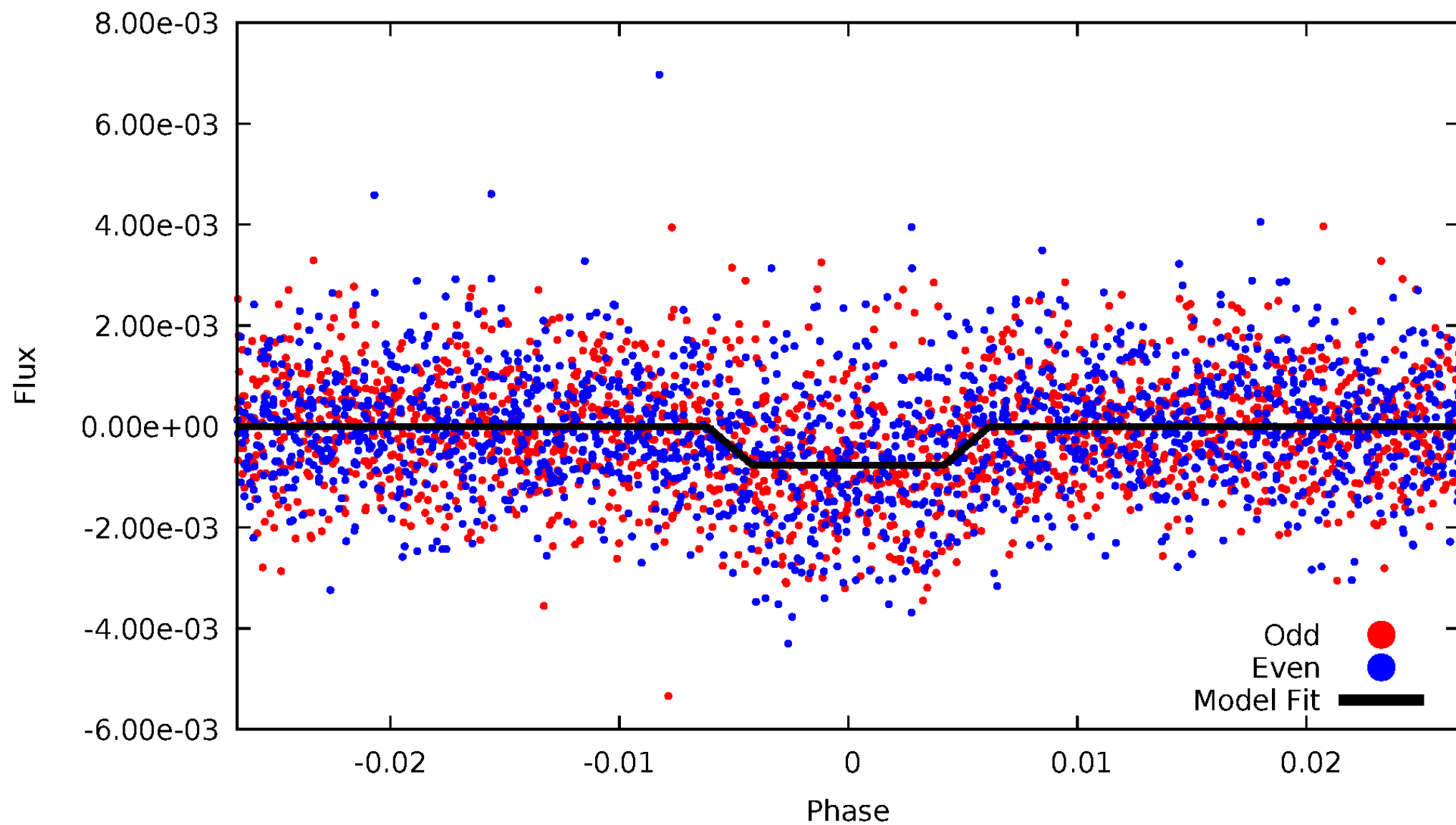
DV Odd/Even

TCE 005389540-01

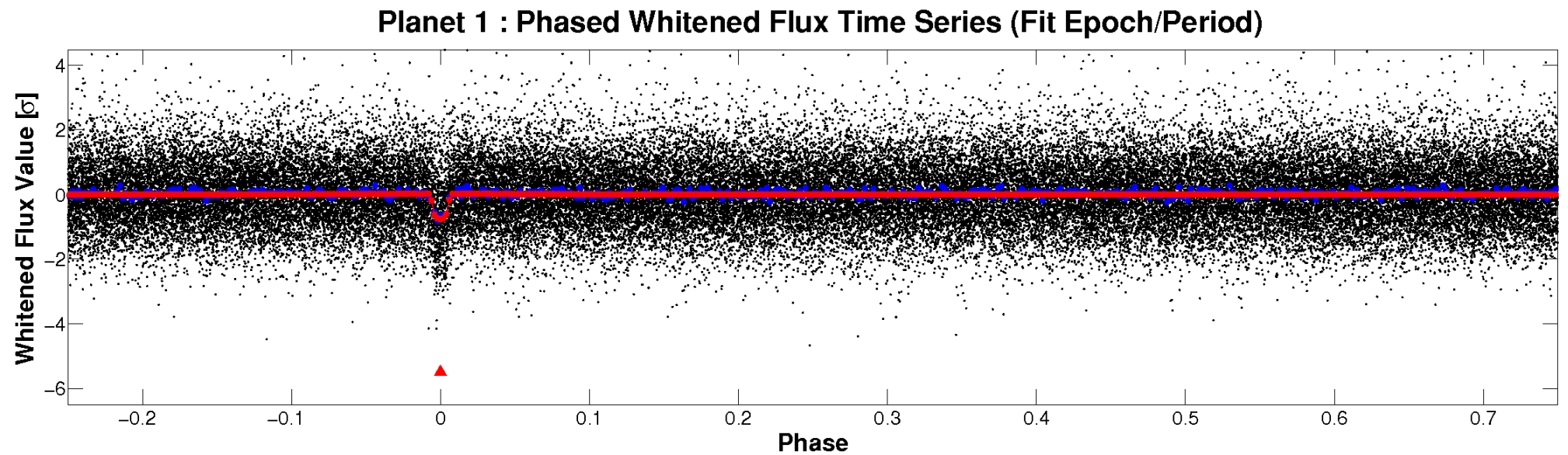
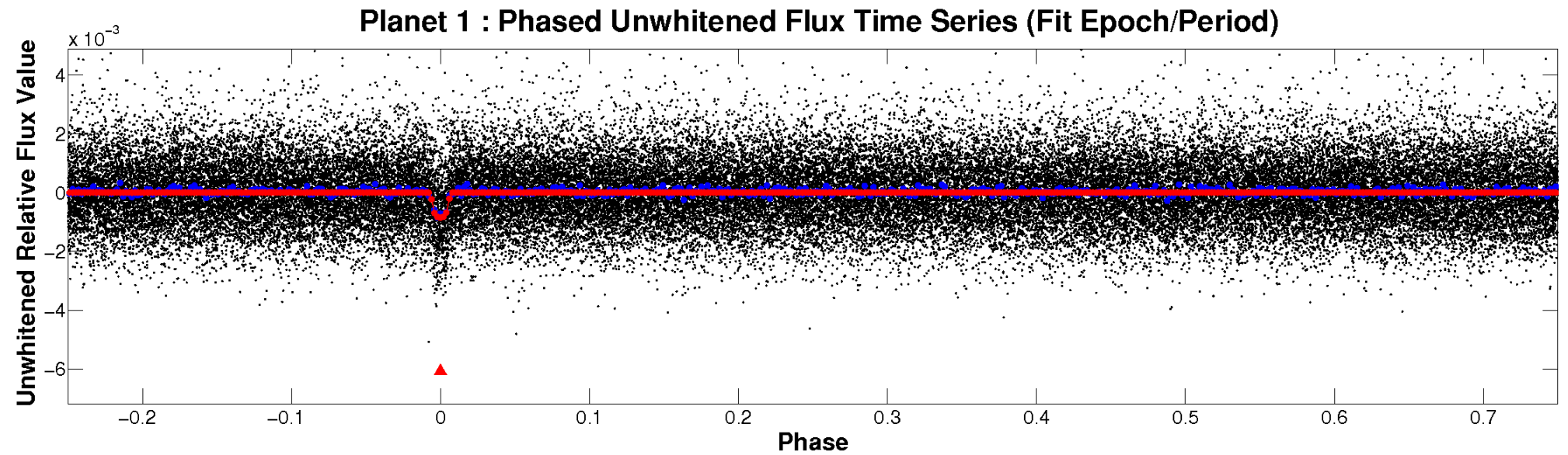


ALT Odd/Even

TCE 005389540-01

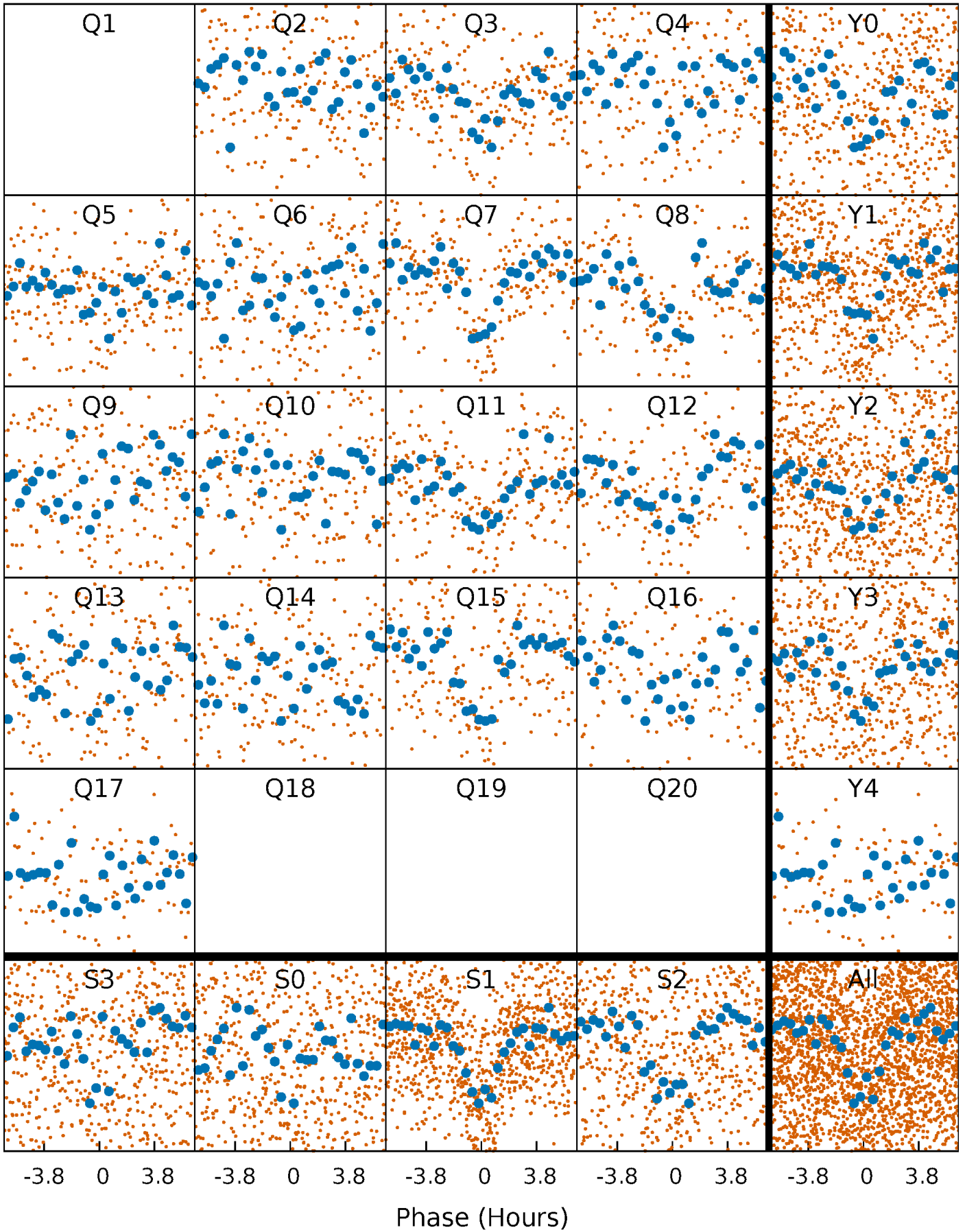


Non-Whitened Vs. Whitened Light Curve



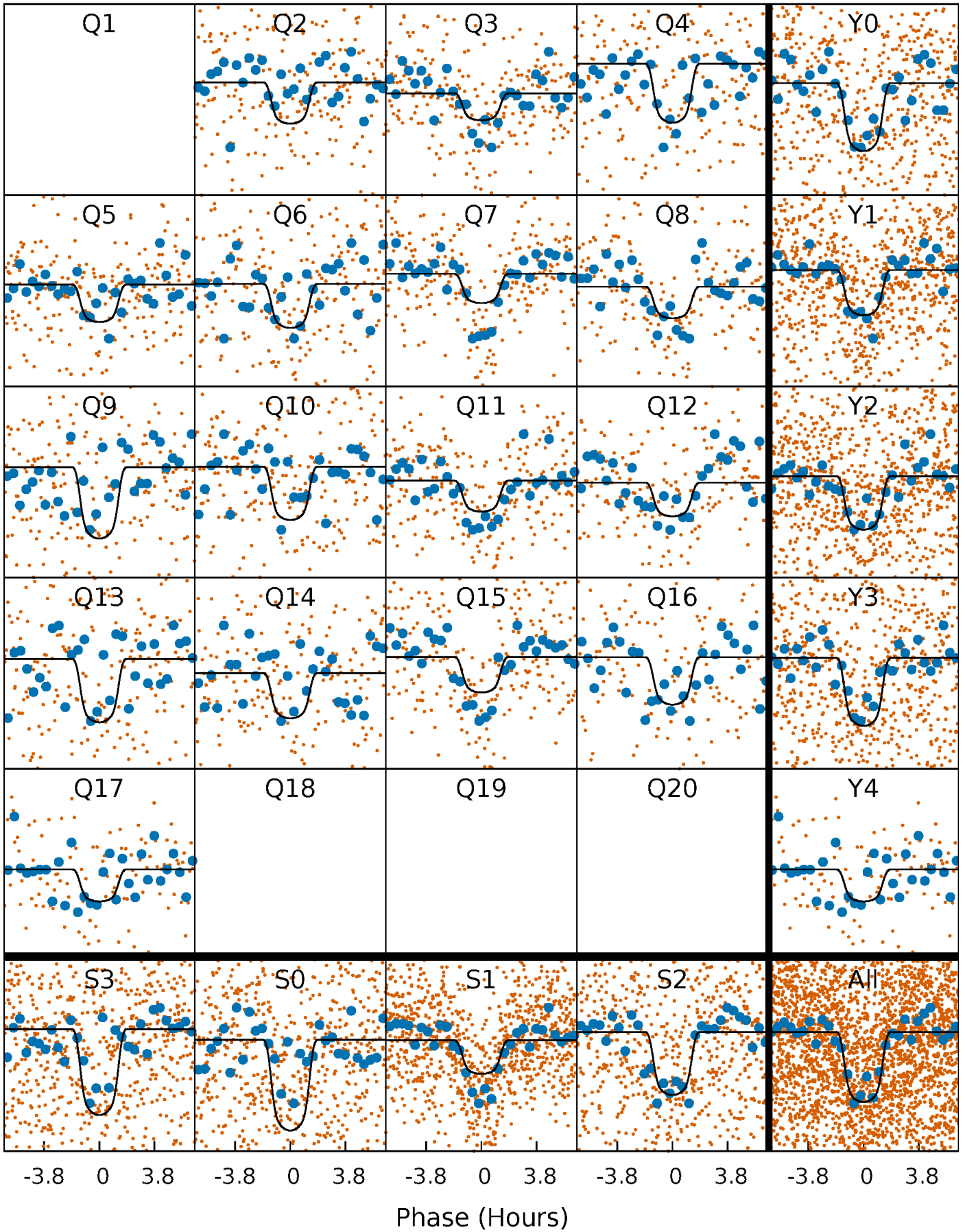
PDC Quarter-Phased Transit Curves

TCE 005389540-01 P= 10.262339 Days $T_0=133.207135$ (BKJD)



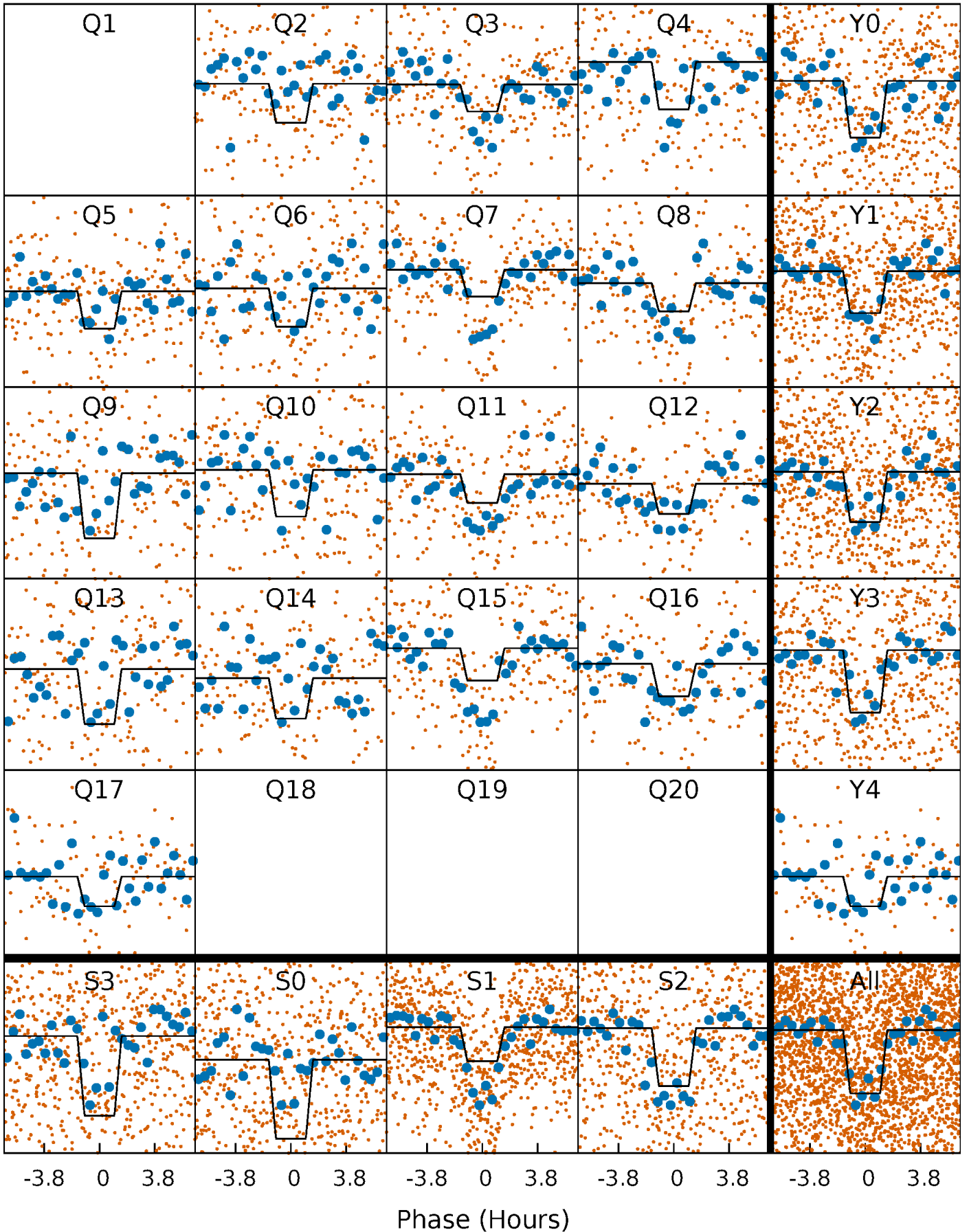
DV Quarter-Phased Transit Curves

TCE 005389540-01 P= 10.262339 Days $T_0=133.207135$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

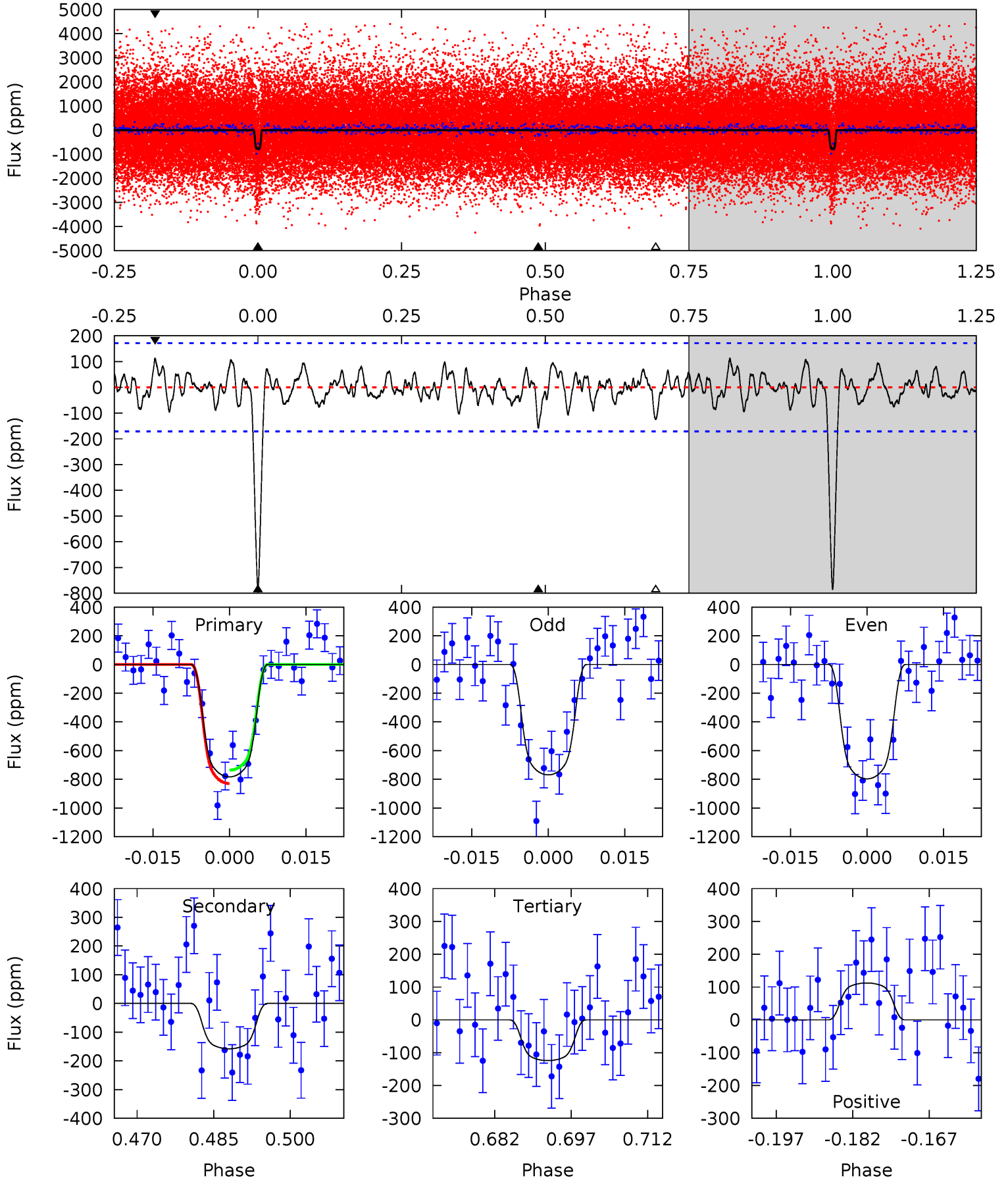
TCE 005389540-01 P= 10.262327 Days $T_0=133.207921$ (BKJD)



DV Model-Shift Uniqueness Test

005389540-01, P = 10.262339 Days, E = 133.207135 Days

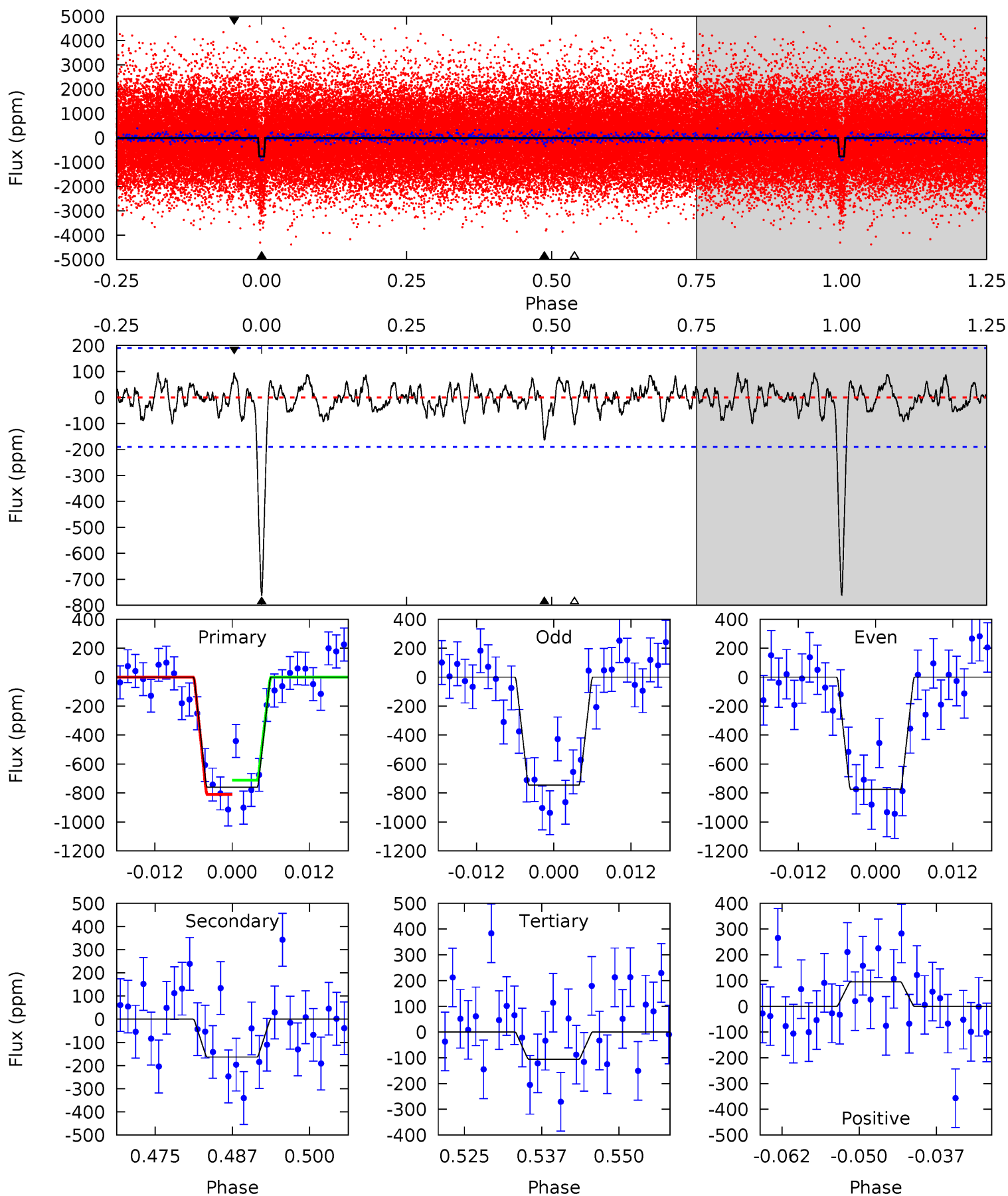
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.6	4.56	3.58	3.24	4.95	2.43	1.23	19.0	19.4	0.97	1.31	0.40	1.03	0.13	1.35



Alt Model-Shift Uniqueness Test

005389540-01, P = 10.262327 Days, E = 133.207921 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.9	4.29	2.77	2.49	4.98	2.50	1.04	17.2	17.5	1.52	1.80	0.37	1.15	0.11	1.30



Stellar Parameters For KIC 005389540

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4316^{+150}_{-165}	$4.709^{+0.060}_{-0.035}$	$-0.720^{+0.300}_{-0.300}$	$0.540^{+0.049}_{-0.055}$	$0.543^{+0.050}_{-0.050}$	$4.859^{+1.299}_{-0.792}$
	+3%/-4%	+1%/-1%	+42%/-42%	+9%/-10%	+9%/-9%	+27%/-16%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 005389540-01 / KOI 1836.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-158 ± 35	$1.92^{+0.24}_{-0.22}$	707^{+27}_{-27}	3129^{+167}_{-171}	132^{+49}_{-38}
Alt.	-163 ± 38	$1.61^{+0.22}_{-0.20}$	707^{+29}_{-27}	3327^{+175}_{-194}	197^{+75}_{-60}

T_{max} = Theoretical Maximum Planetary Temperature

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

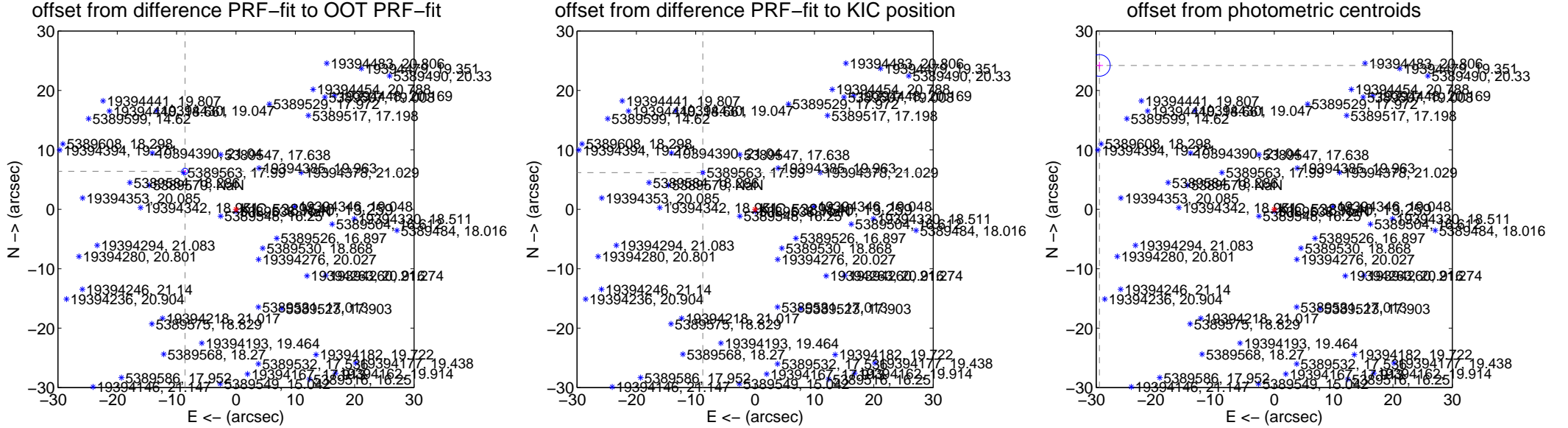
A_{obs} = Observed Albedo (Assuming $T=0$)

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 005389540-01. Kepler magnitude: 13.26. Transit SNR 17.33
 There are 14 quarters with good PRF difference image offsets
 The direct PRF centroid is offset from the target star catalog position by about 0.63 arcsec

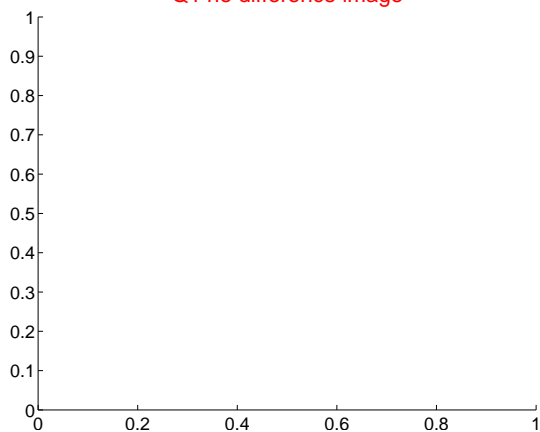
	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	10.699 \pm 0.172	62.04	8.579 \pm 0.158	6.393 \pm 0.196
PRF-fit source offset from KIC position	10.755 \pm 0.068	159.09	8.814 \pm 0.068	6.162 \pm 0.068
photometric centroid source offset	38.12 \pm 0.61	62.99	29.45 \pm 0.61	24.21 \pm 0.60



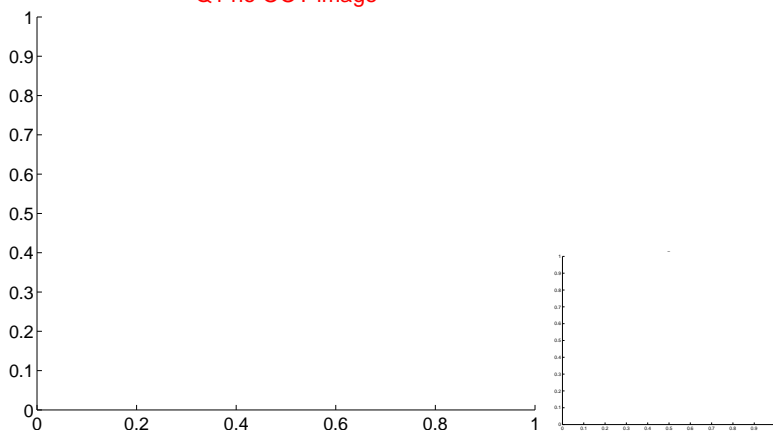
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

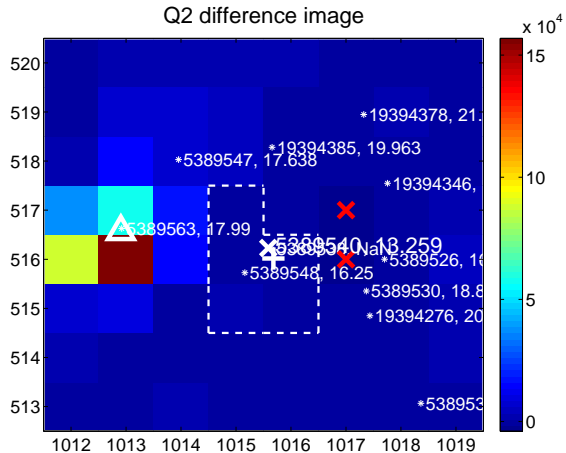
Q1 no difference image



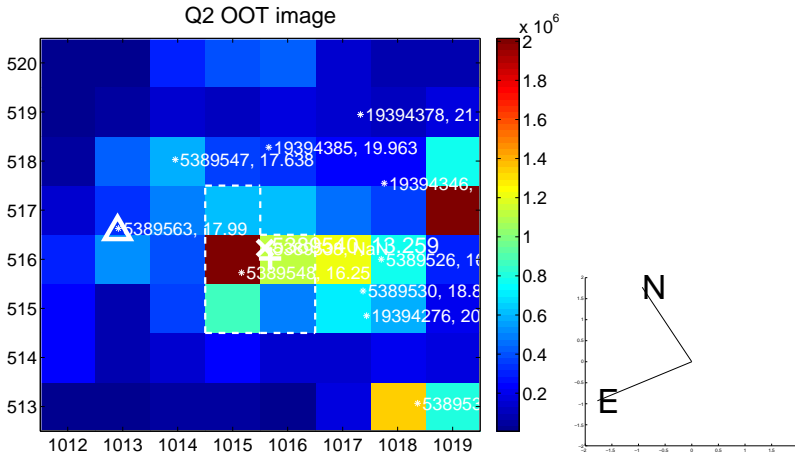
Q1 no OOT image



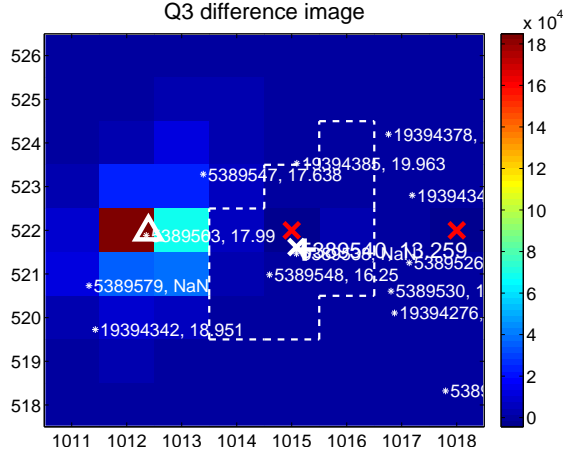
Q2 difference image



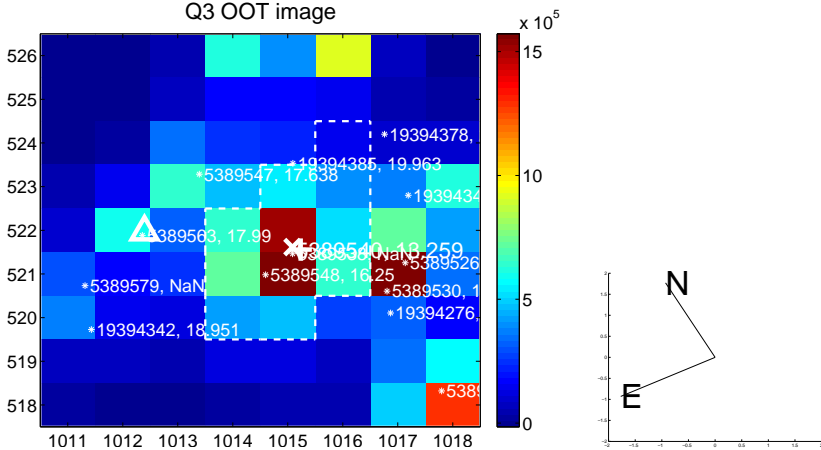
Q2 OOT image



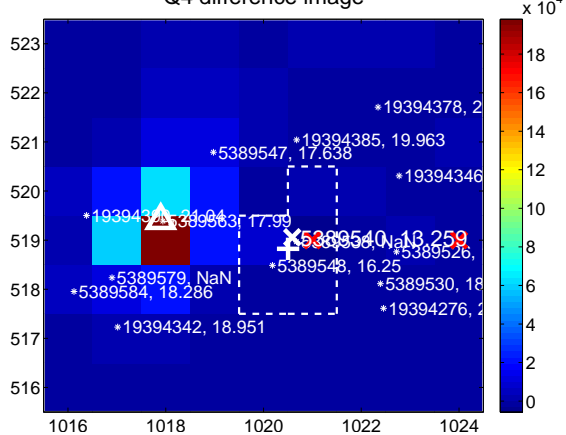
Q3 difference image



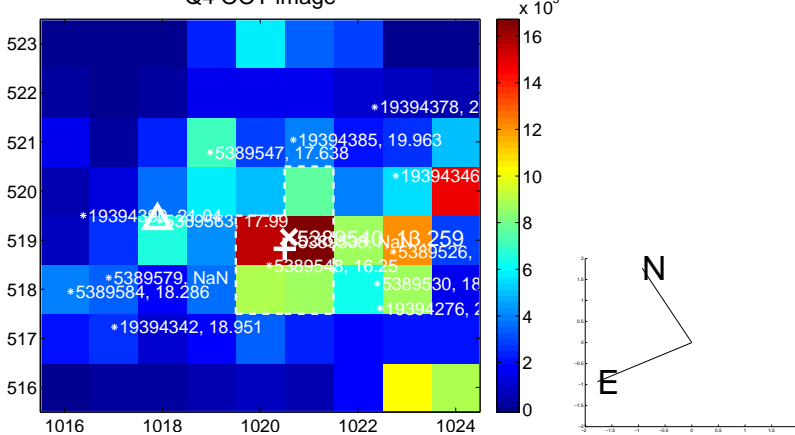
Q3 OOT image



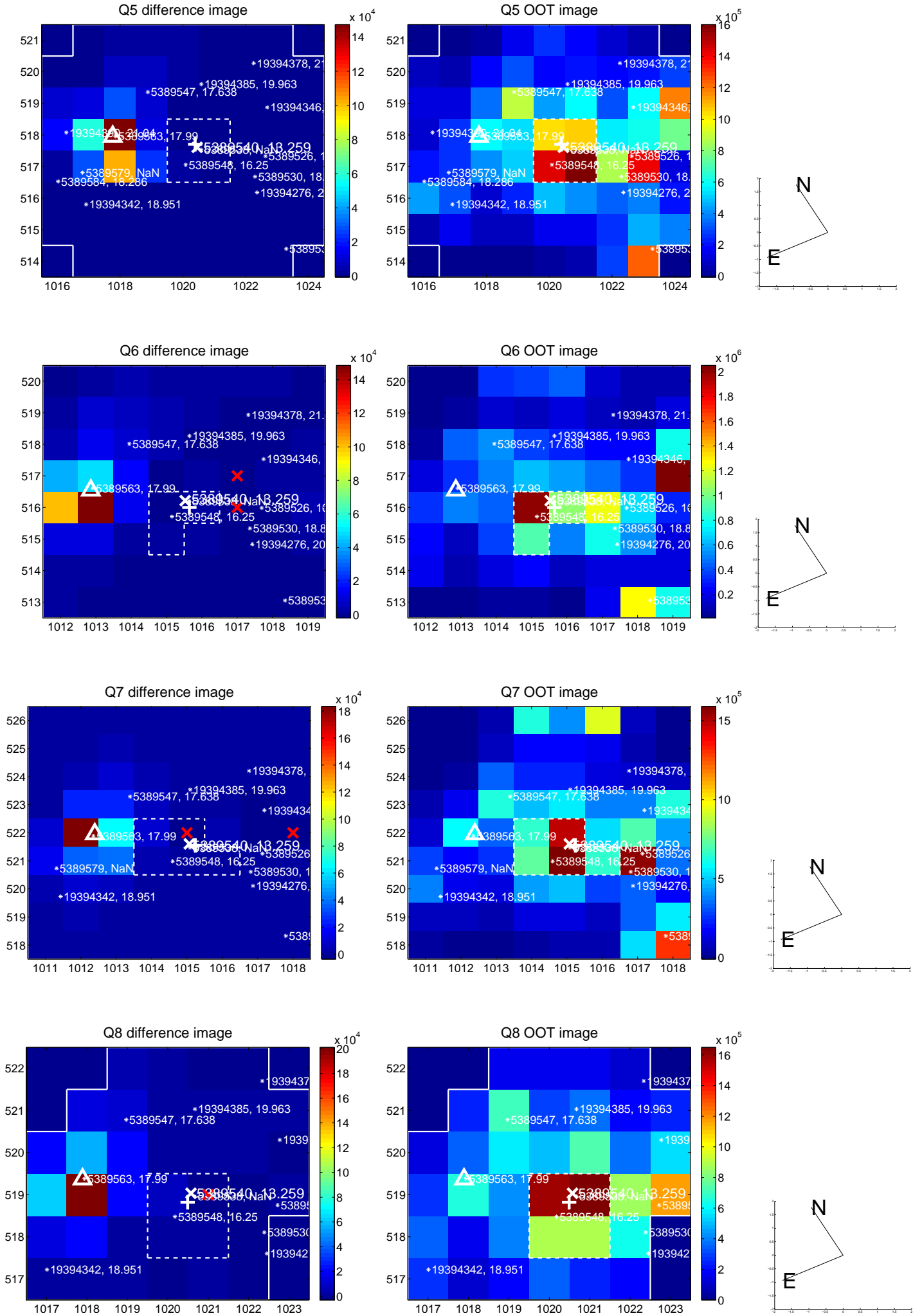
Q4 difference image



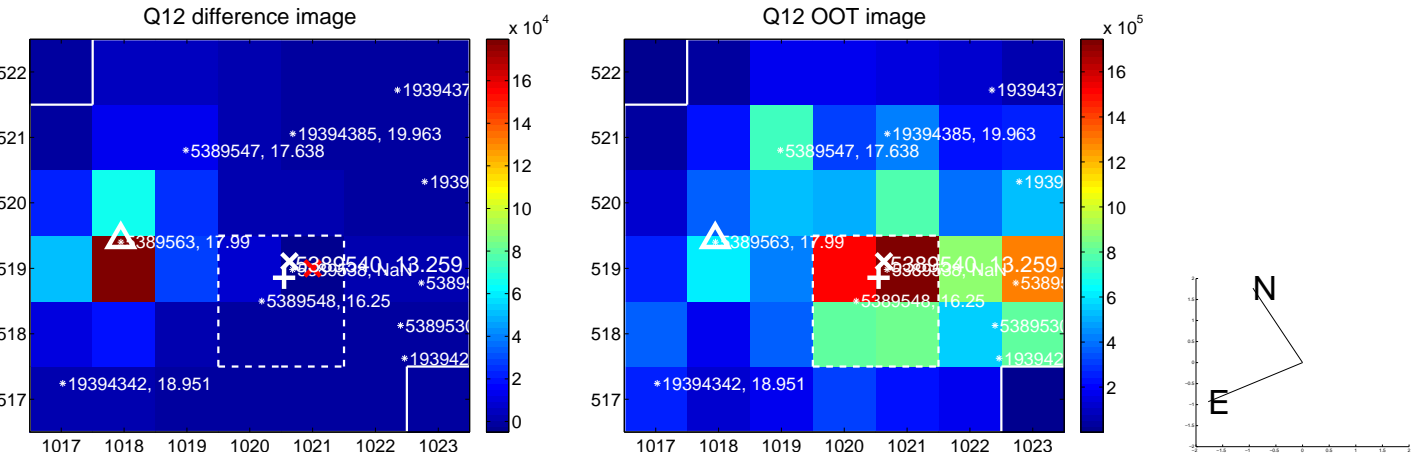
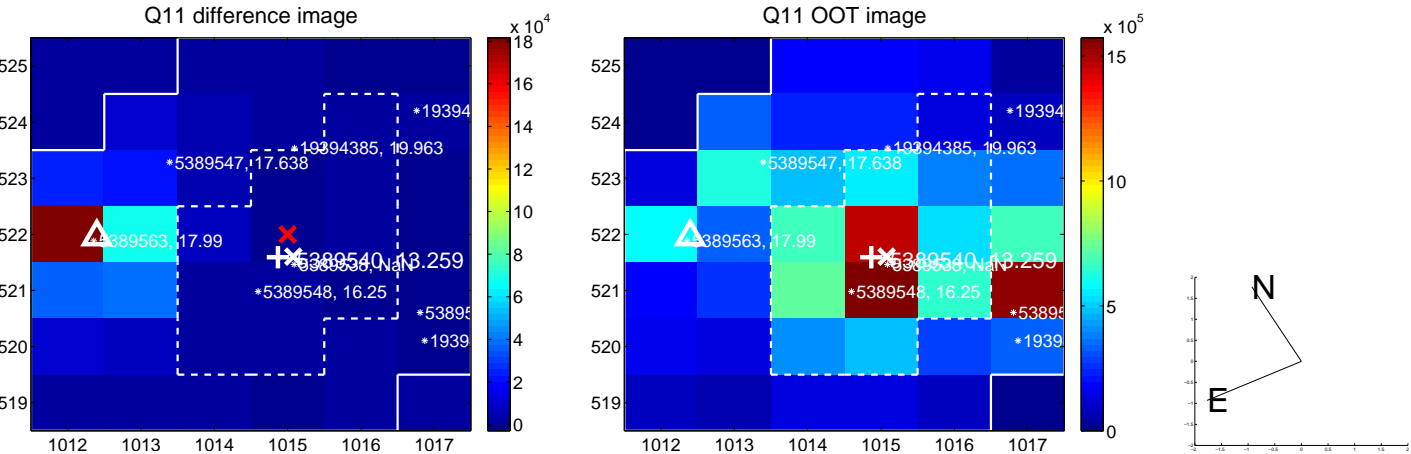
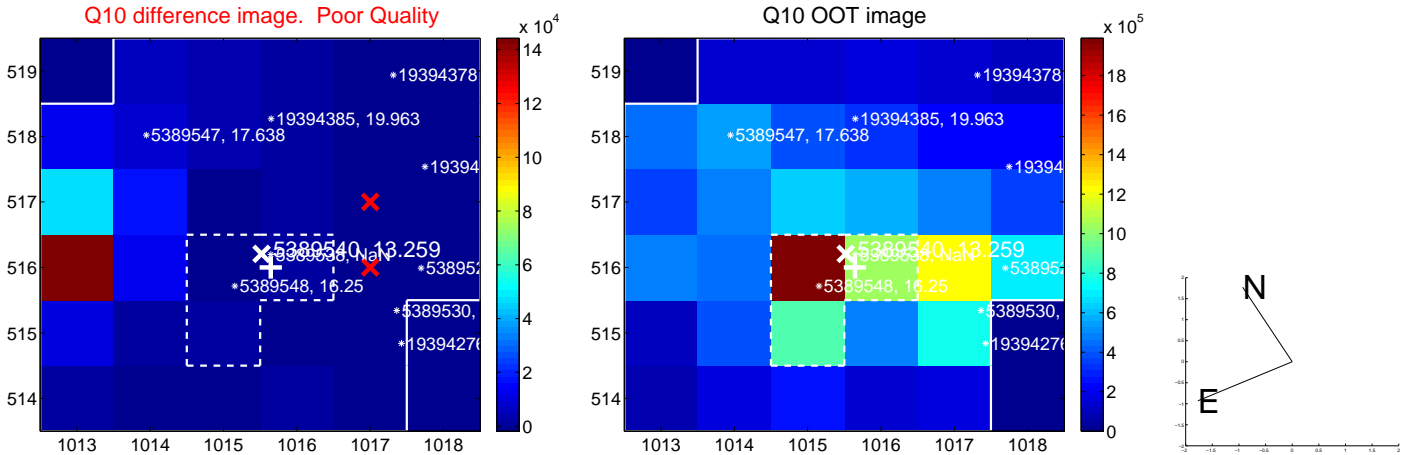
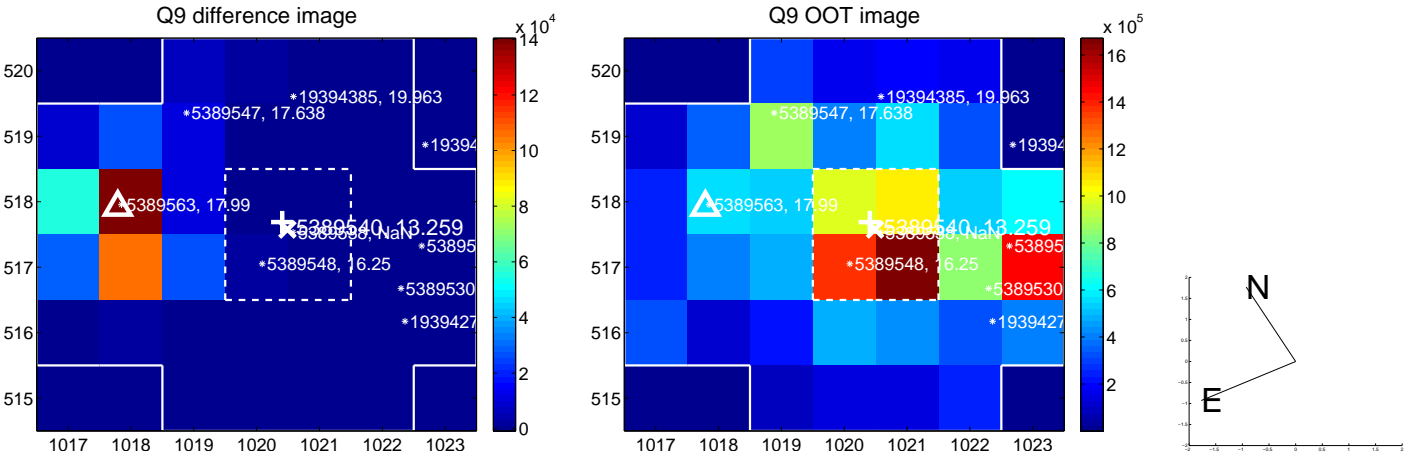
Q4 OOT image



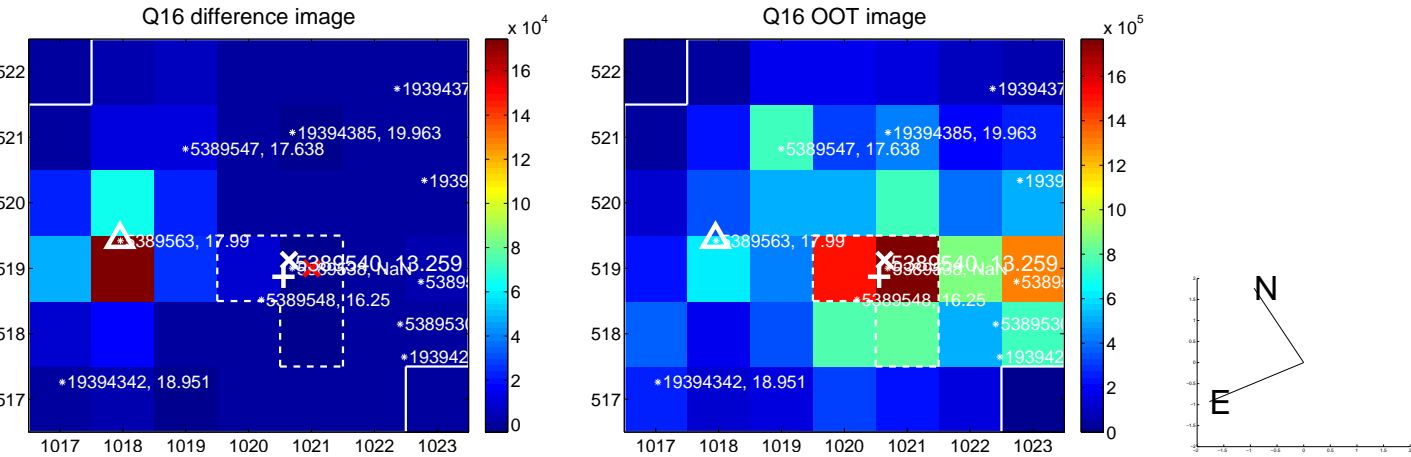
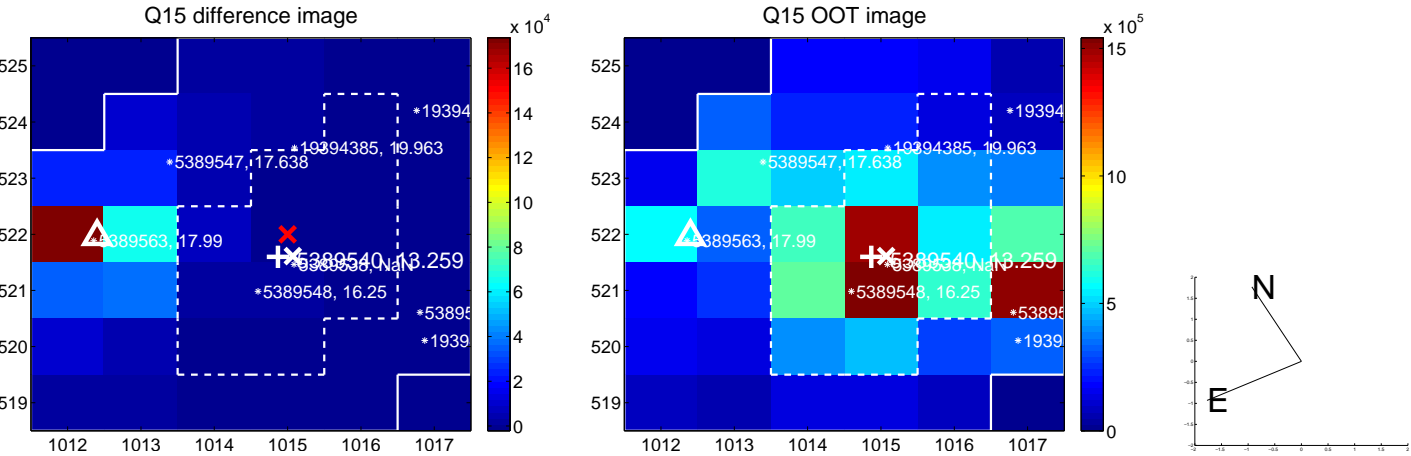
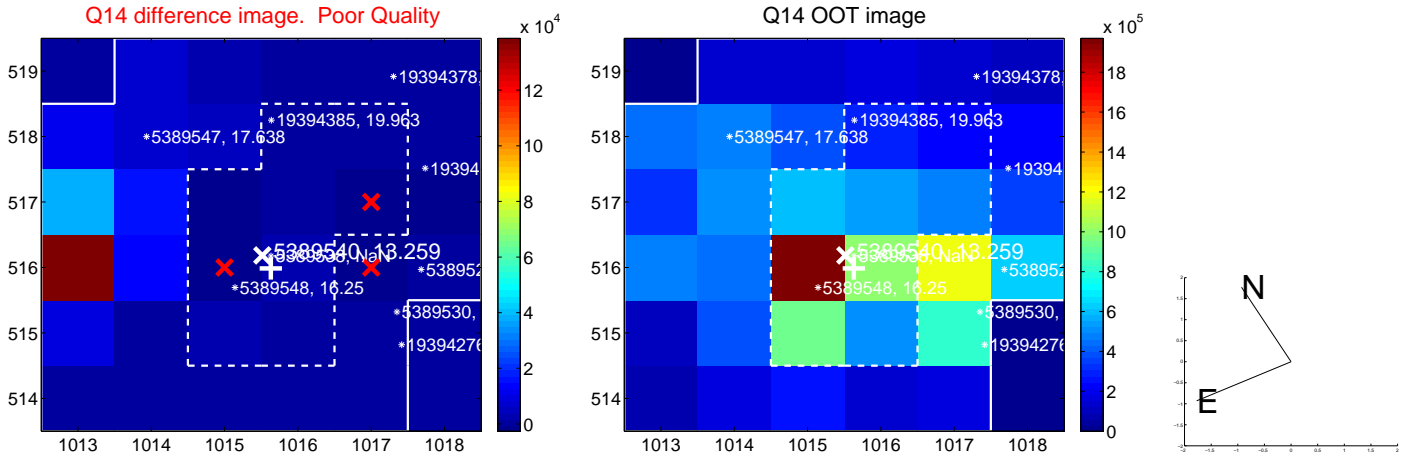
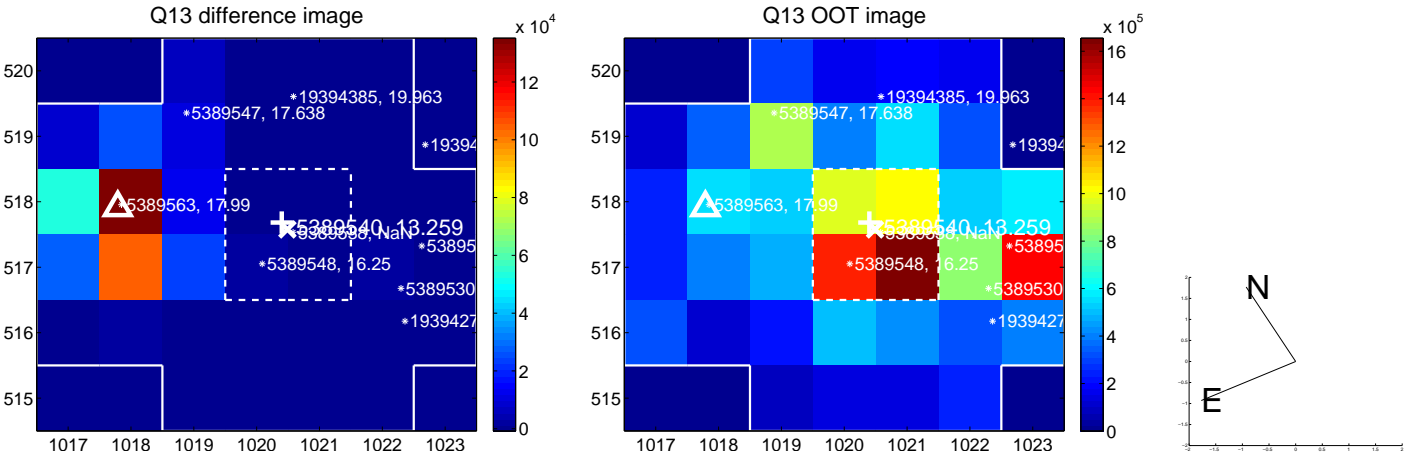
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



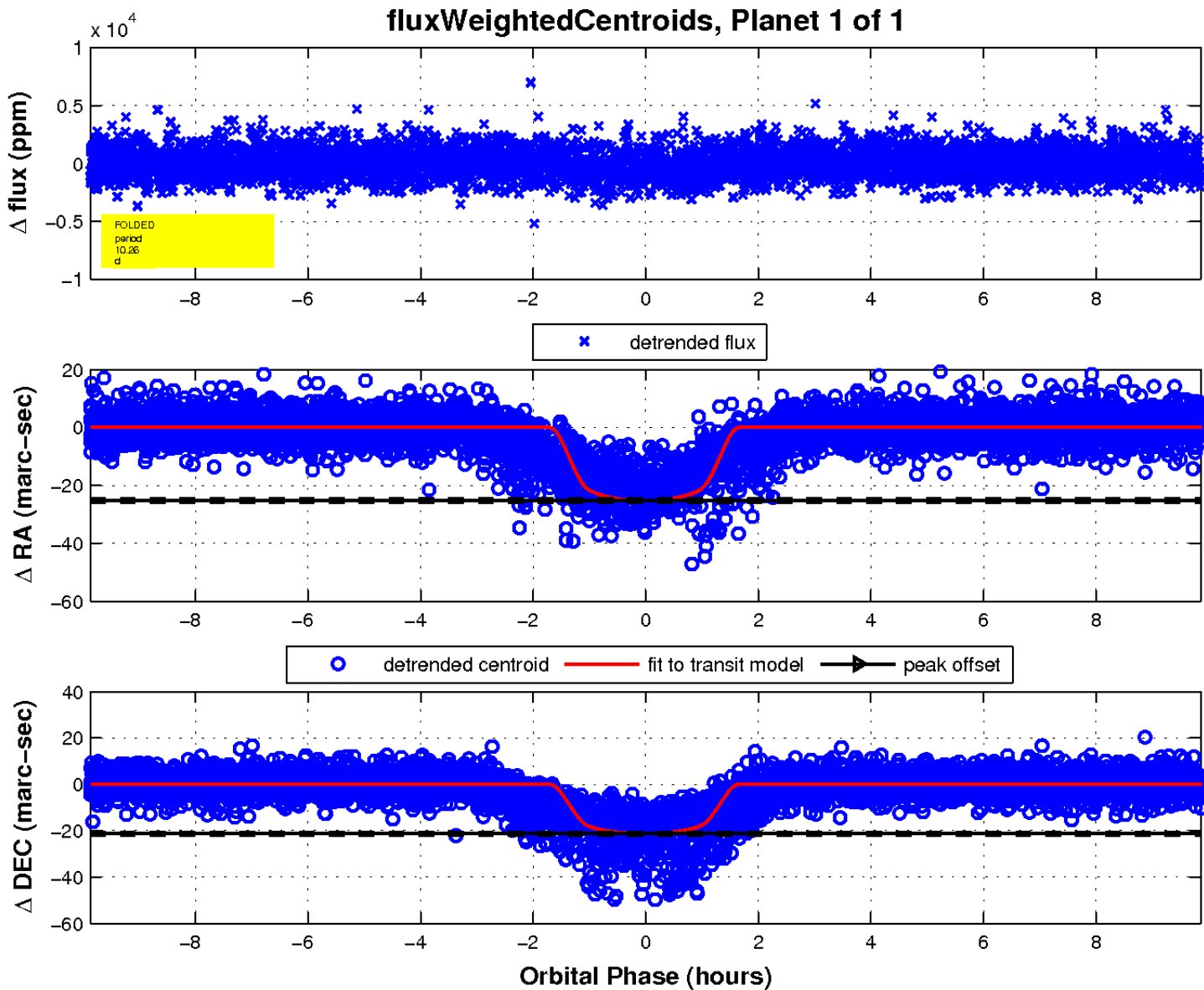
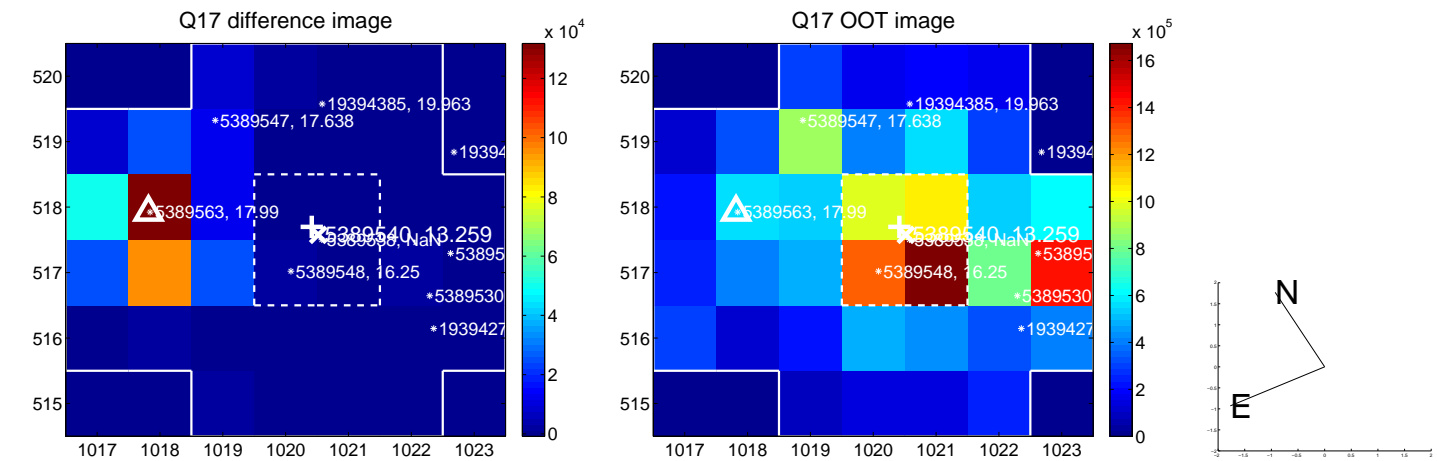
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

