

KIC 008590149

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})
008590149-01	OBS	6182.01	19.239548	138.758424	274.5	2.509	7.1	7.5	0.85	5031	1.85	24.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008590149-01	OBS	PC	0.56	0	0	0	0	NO_COMMENT

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 008590149-01

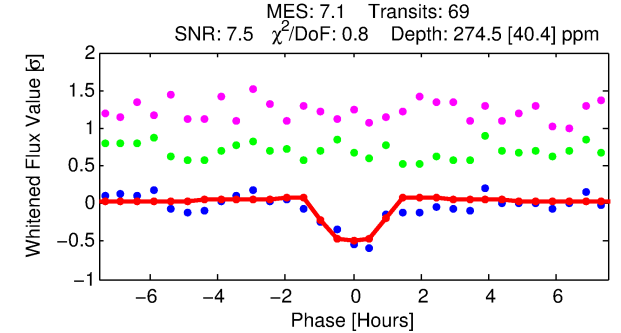
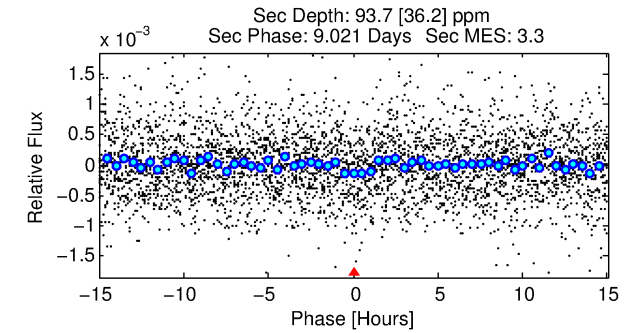
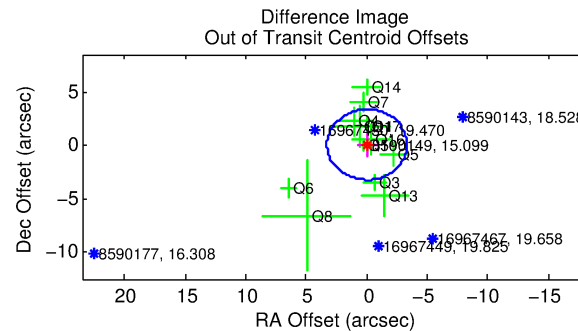
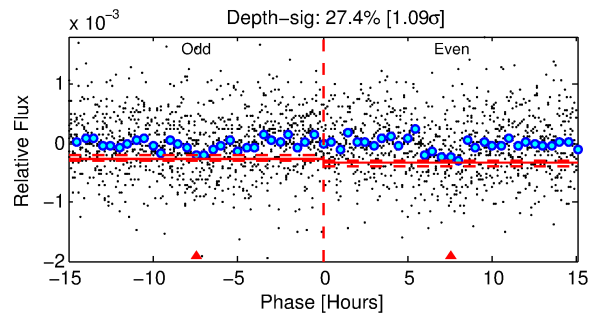
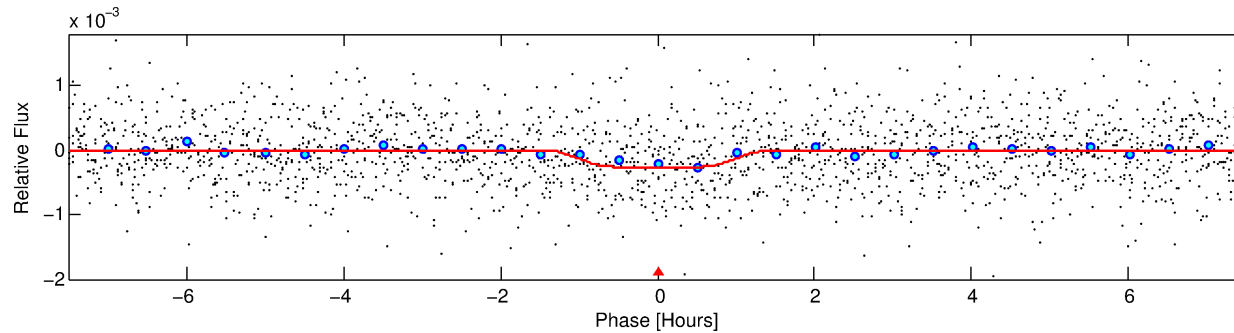
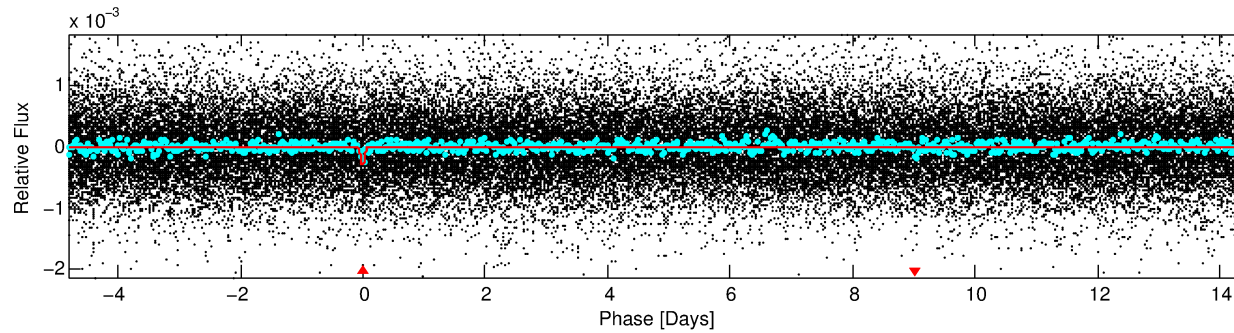
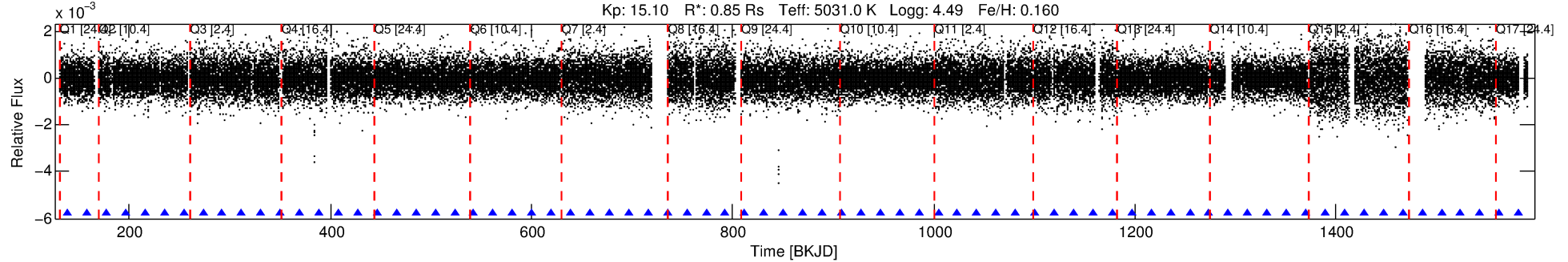
No Significant Match Found

DV One-Page Summary

KIC: 8590149 Candidate: 1 of 1 Period: 19.240 d

KOI: K06182.01 Corr: 0.818

Kp: 15.10 R*: 0.85 Rs Teff: 5031.0 K Logg: 4.49 Fe/H: 0.160



DV Fit Results:

Period = 19.23955 [0.00018] d
Epoch = 138.7584 [0.0073] BKJD
Rp/R* = 0.0200 [0.0058]
a/R* = 22.00 [24.99]
b = 0.95 [0.12]
Seff = 24.22 [3.60]
Teq = 566 [21] K
Rp = 1.85 [0.55] Re
a = 0.1305 [0.0105] AU
Ag = 257.41 [181.98] [1.41σ]
Teffp = 3503 [611] K [4.81σ]

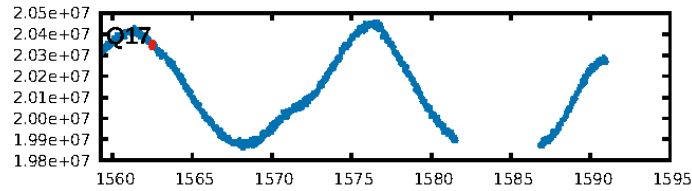
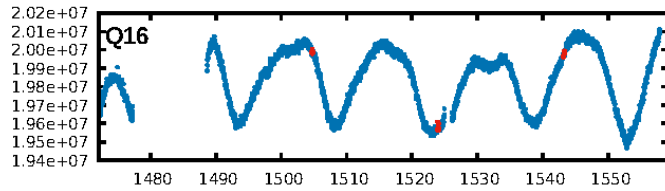
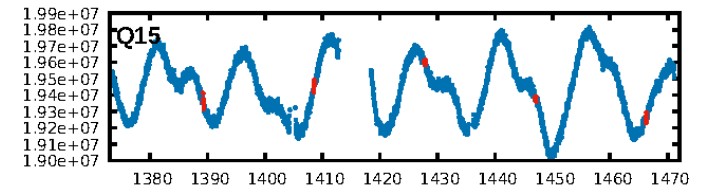
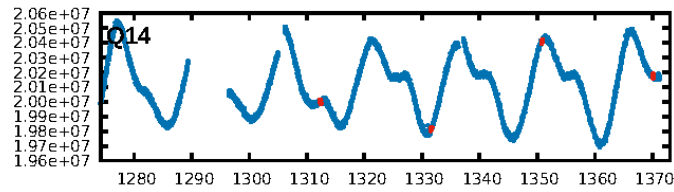
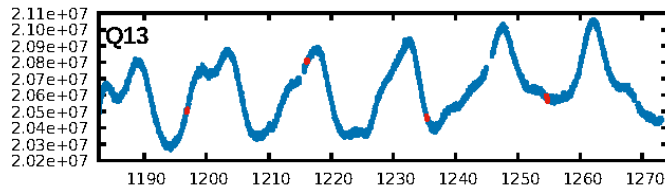
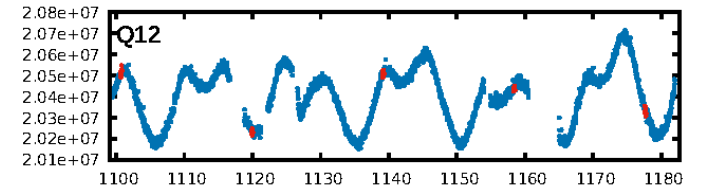
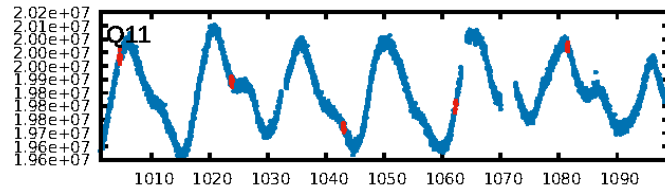
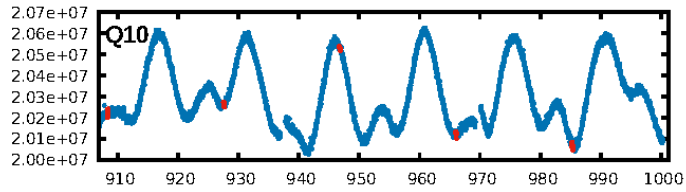
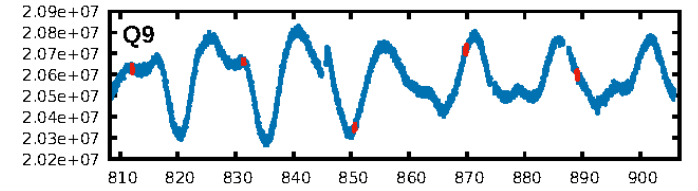
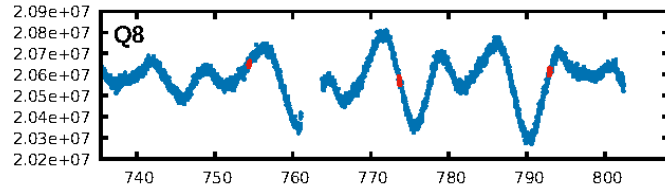
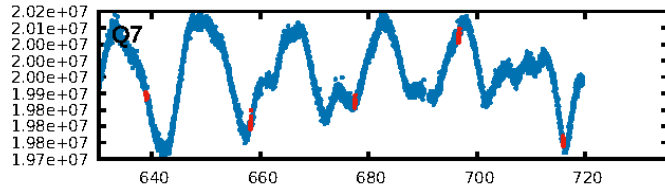
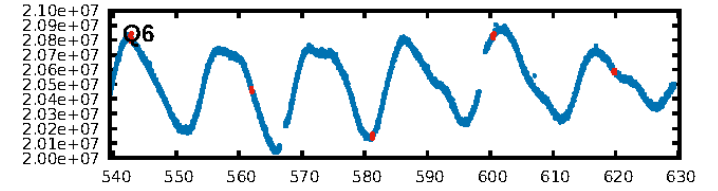
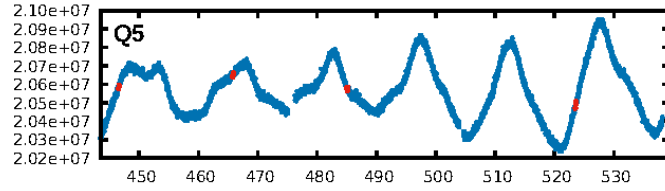
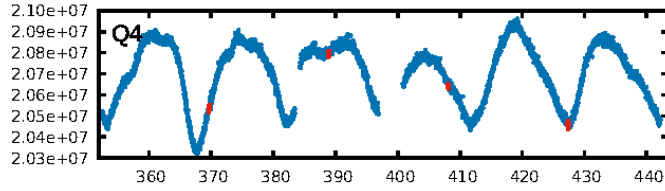
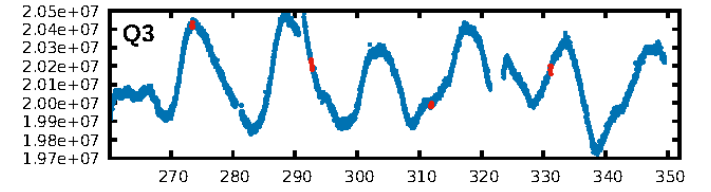
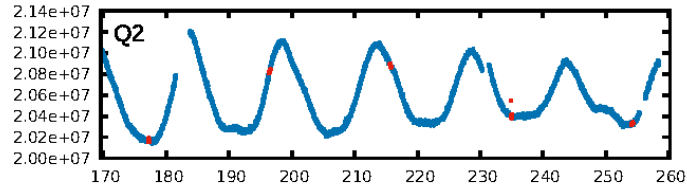
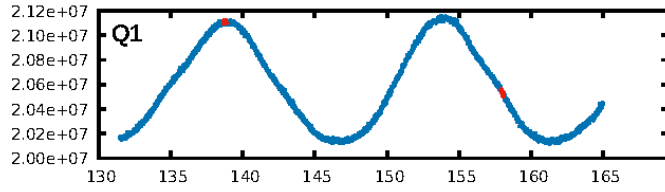
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 9.19e-13
RollingBand-fgt: 1.00 [66/66]
GhostDiagnostic-chr: 0.7125
Centroid-sig: 0.1%
Centroid-so: 3.780 arcsec [2.05σ]
OotOffset-rm: 0.055 arcsec [0.05σ]
KicOffset-rm: 0.199 arcsec [0.19σ]
OotOffset-st: 3/3/3/3 [12]
KicOffset-st: 3/3/3/3 [12]
DiffImageQuality-fgm: 0.25 [3/12]
DiffImageOverlap-fno: 1.00 [17/17]

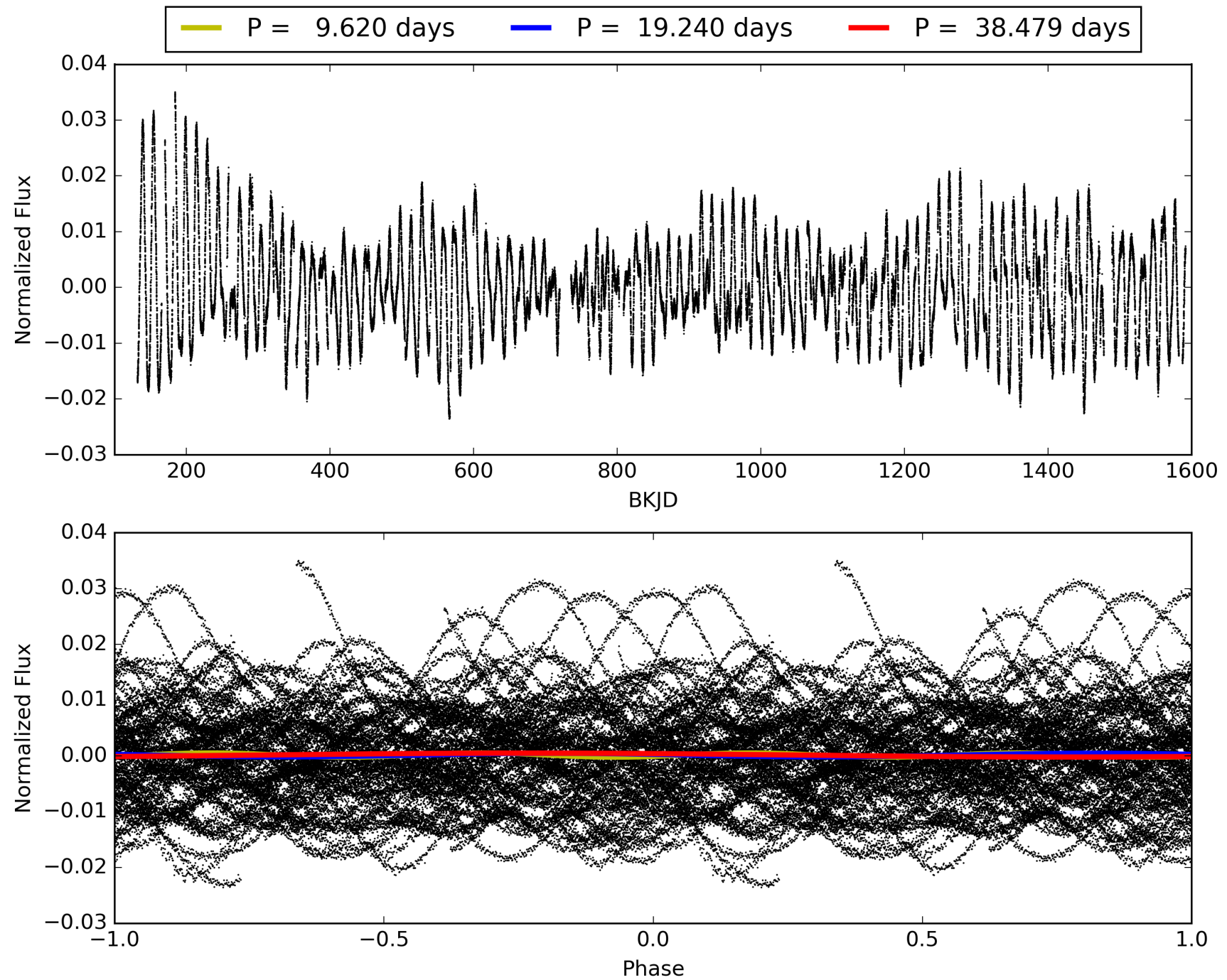
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 20:33:04 Z

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

TCE 008590149-01, PDC Light Curves

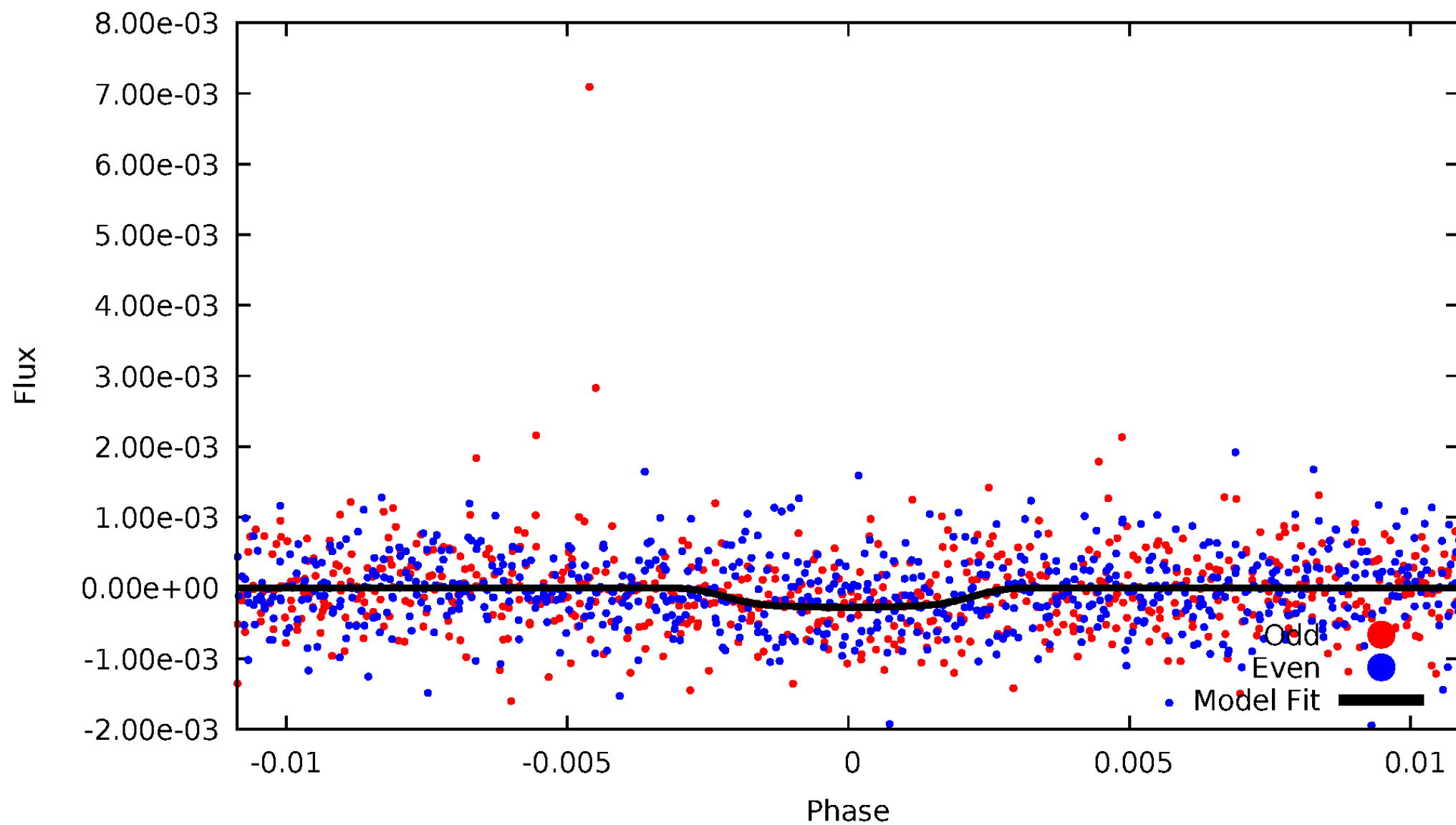


TCE 008590149-01



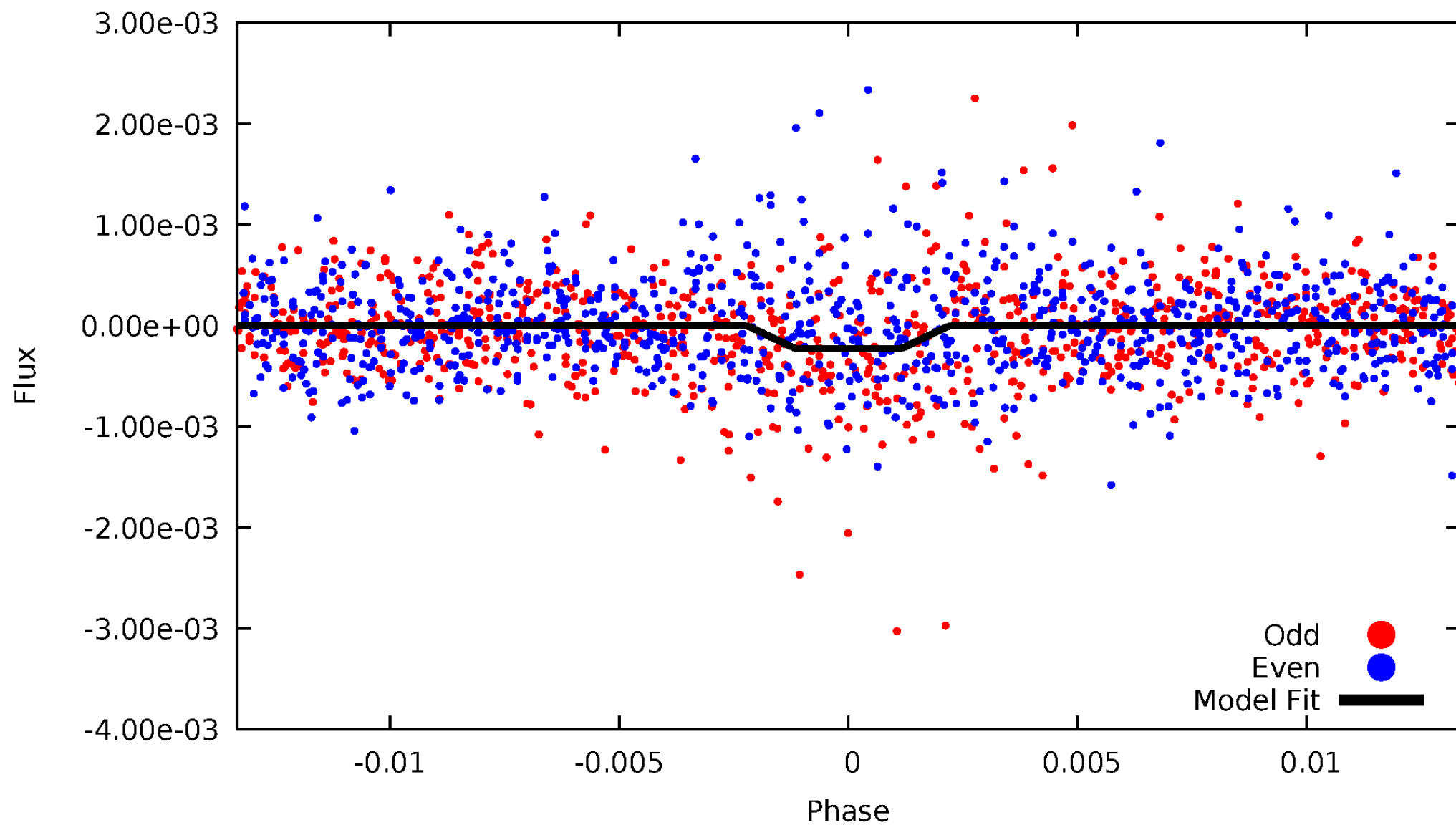
DV Odd/Even

TCE 008590149-01



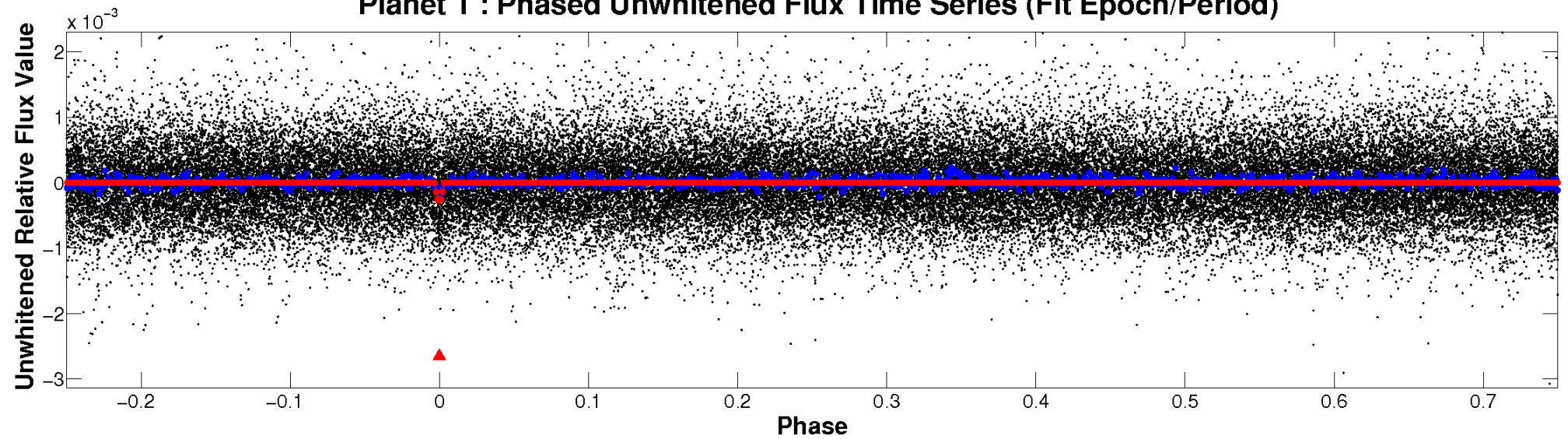
ALT Odd/Even

TCE 008590149-01

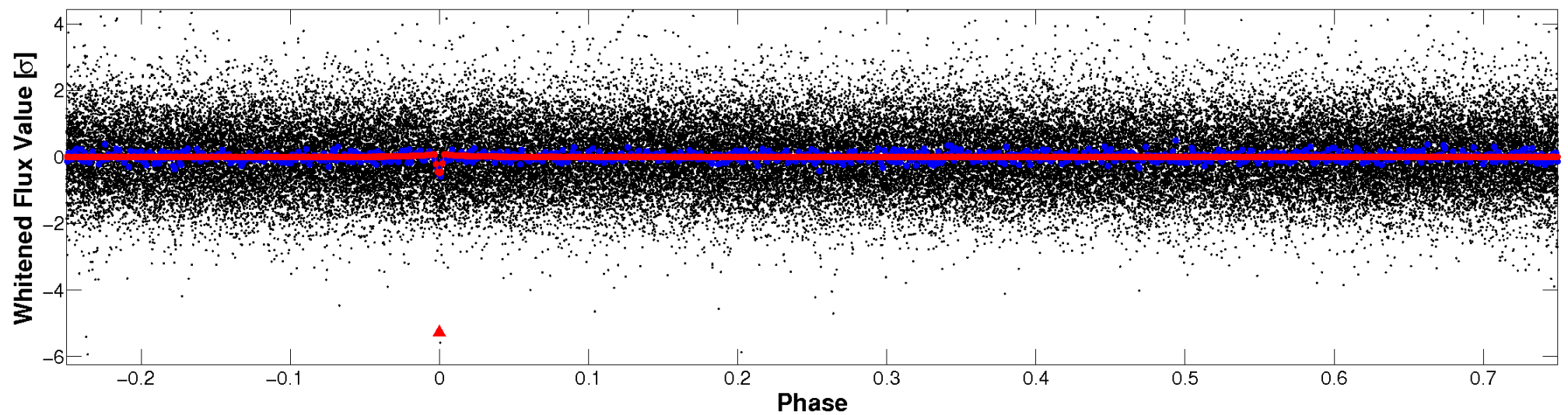


Non-Whitened Vs. Whitened Light Curve

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

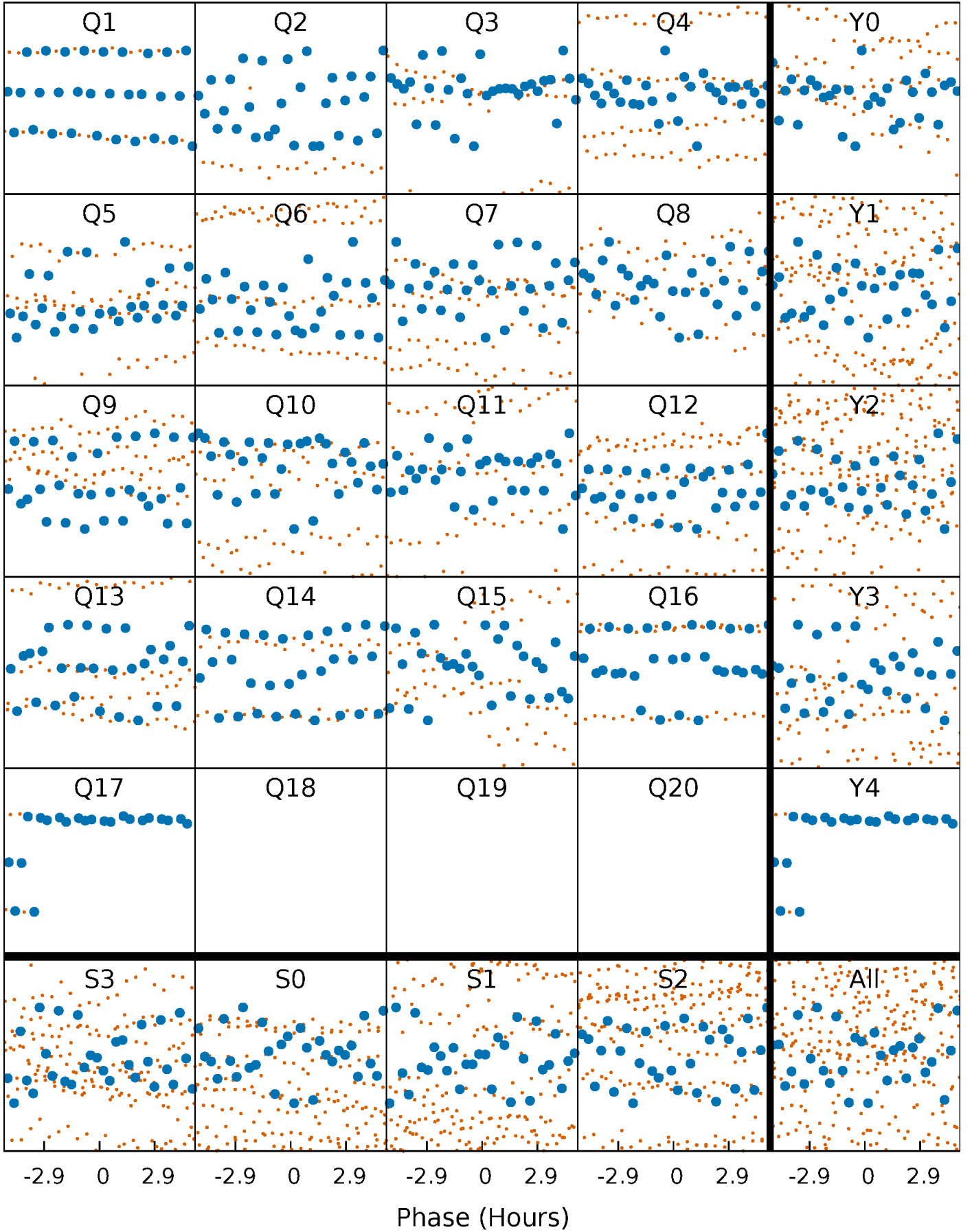


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



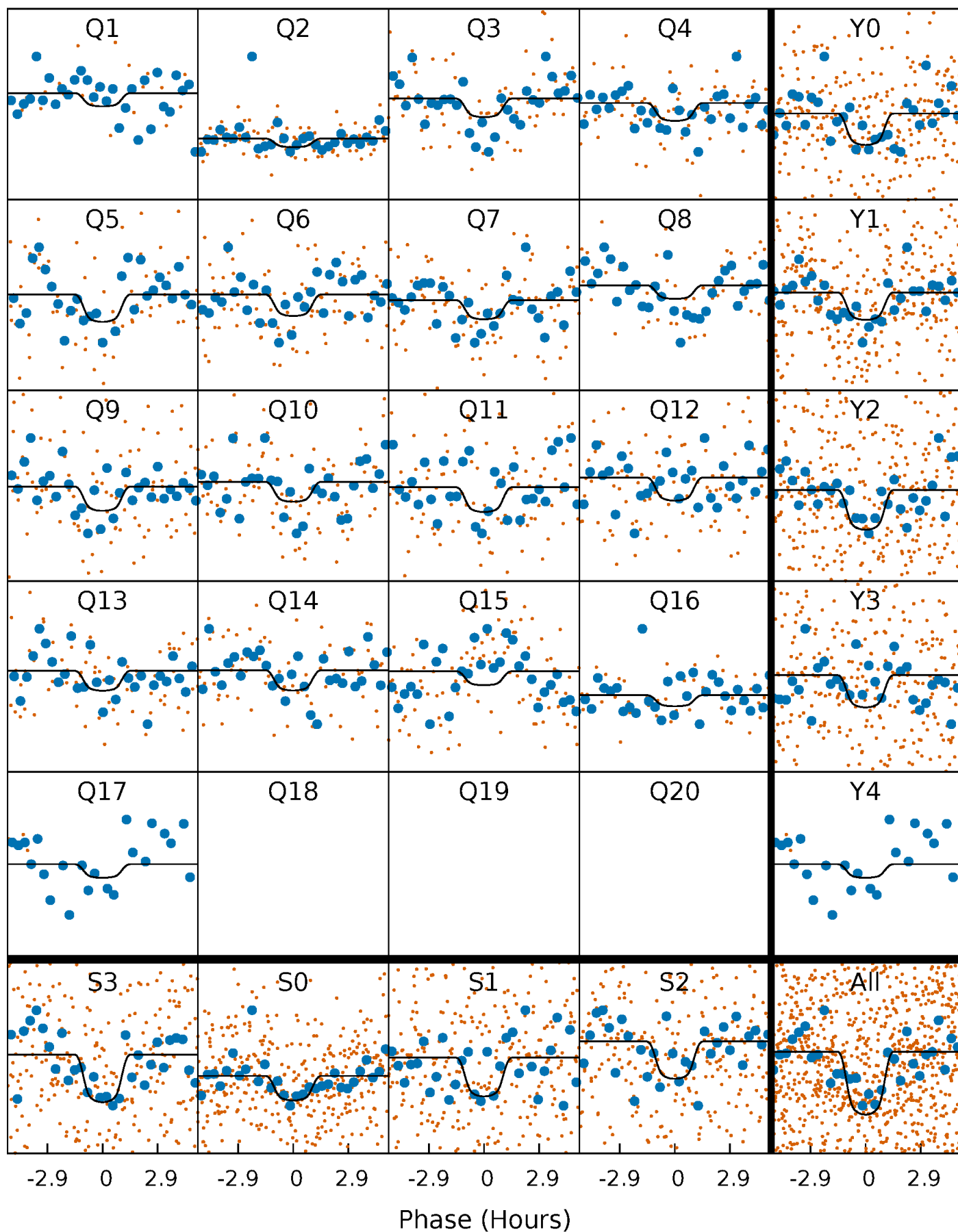
PDC Quarter-Phased Transit Curves

TCE 008590149-01 P= 19.239548 Days $T_0=138.758424$ (BKJD)



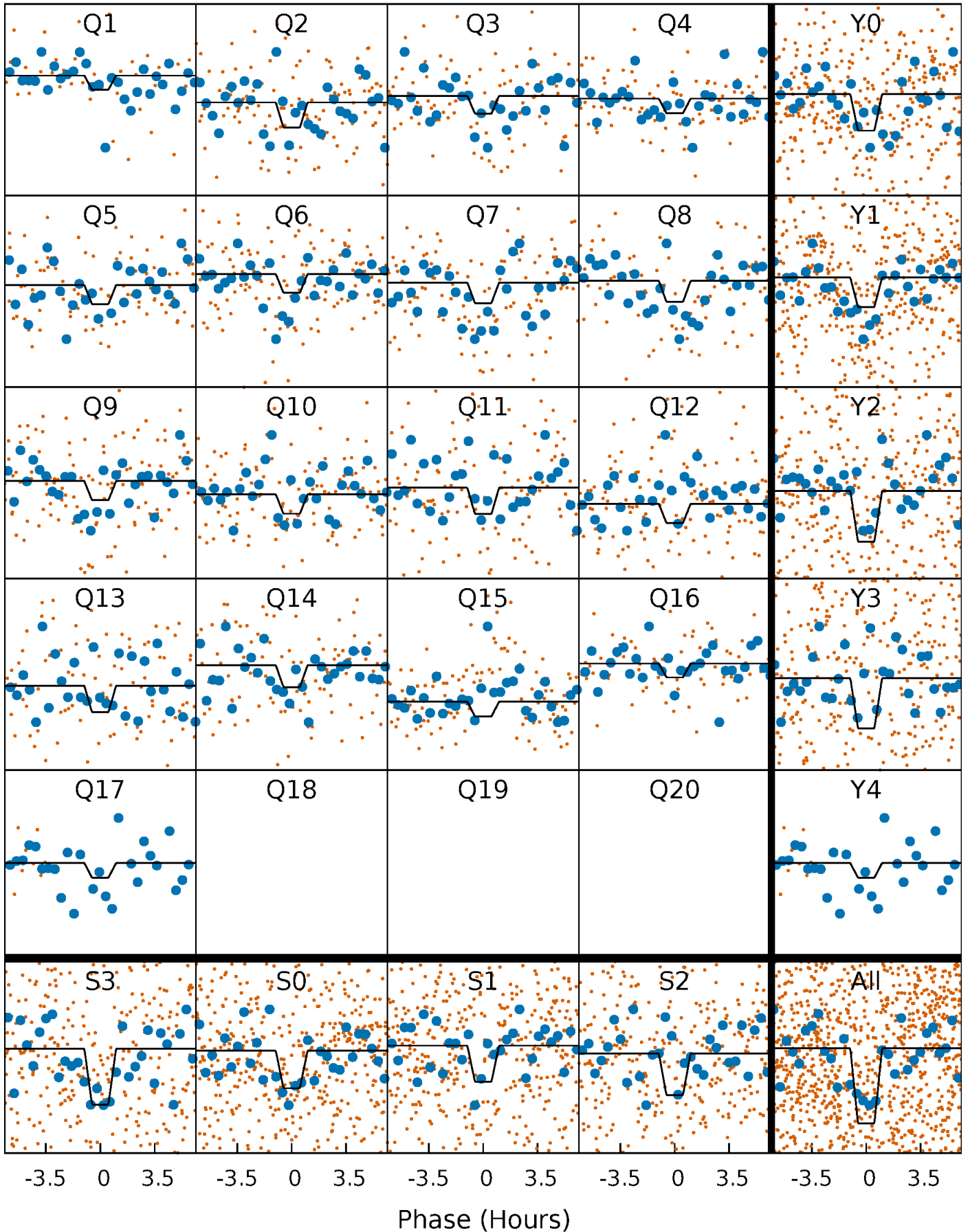
DV Quarter-Phased Transit Curves

TCE 008590149-01 P= 19.239548 Days $T_0=138.758424$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

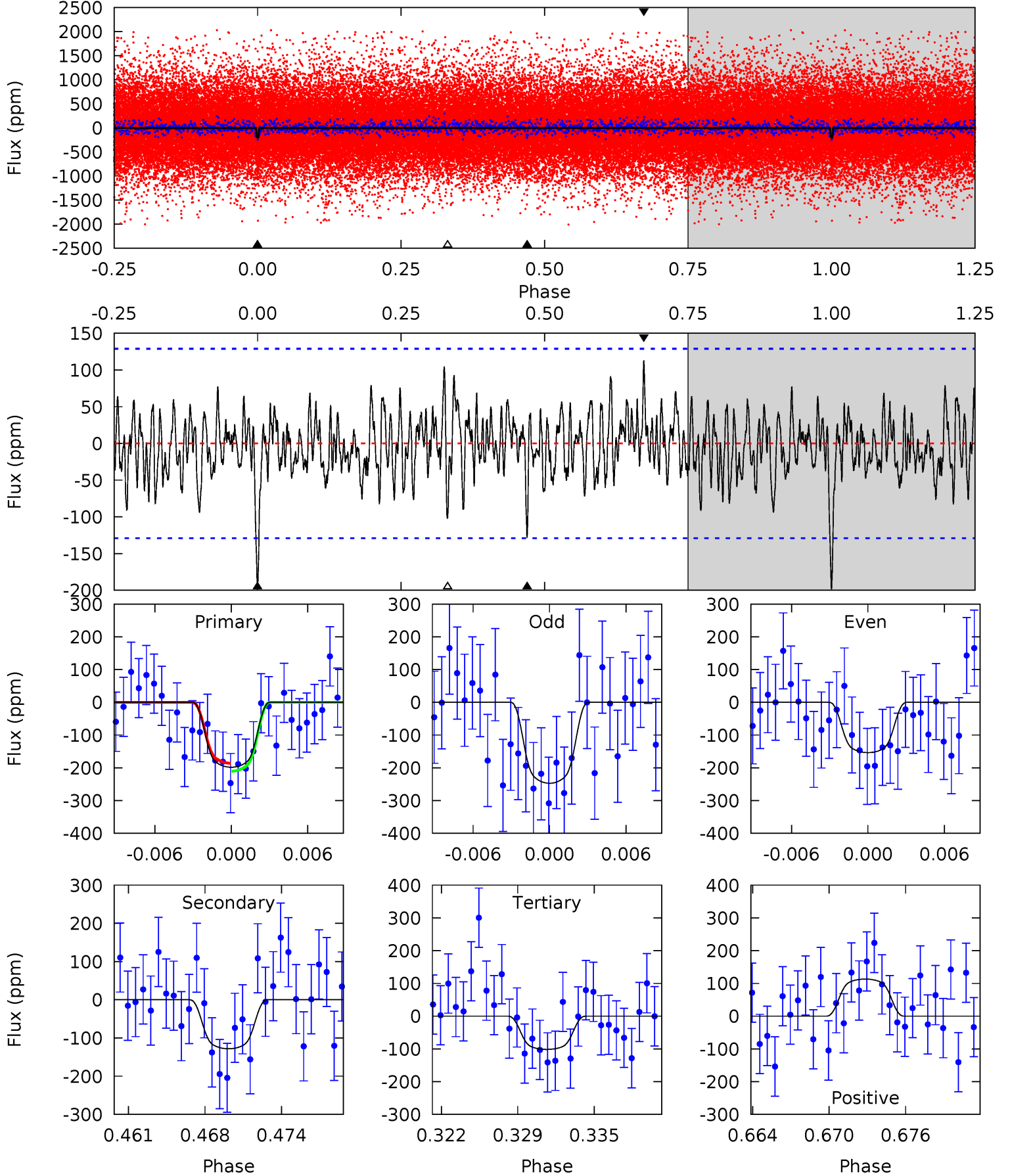
TCE 008590149-01 P= 19.239430 Days $T_0=138.761479$ (BKJD)



DV Model-Shift Uniqueness Test

008590149-01, $P = 19.239548$ Days, $E = 119.518876$ Days

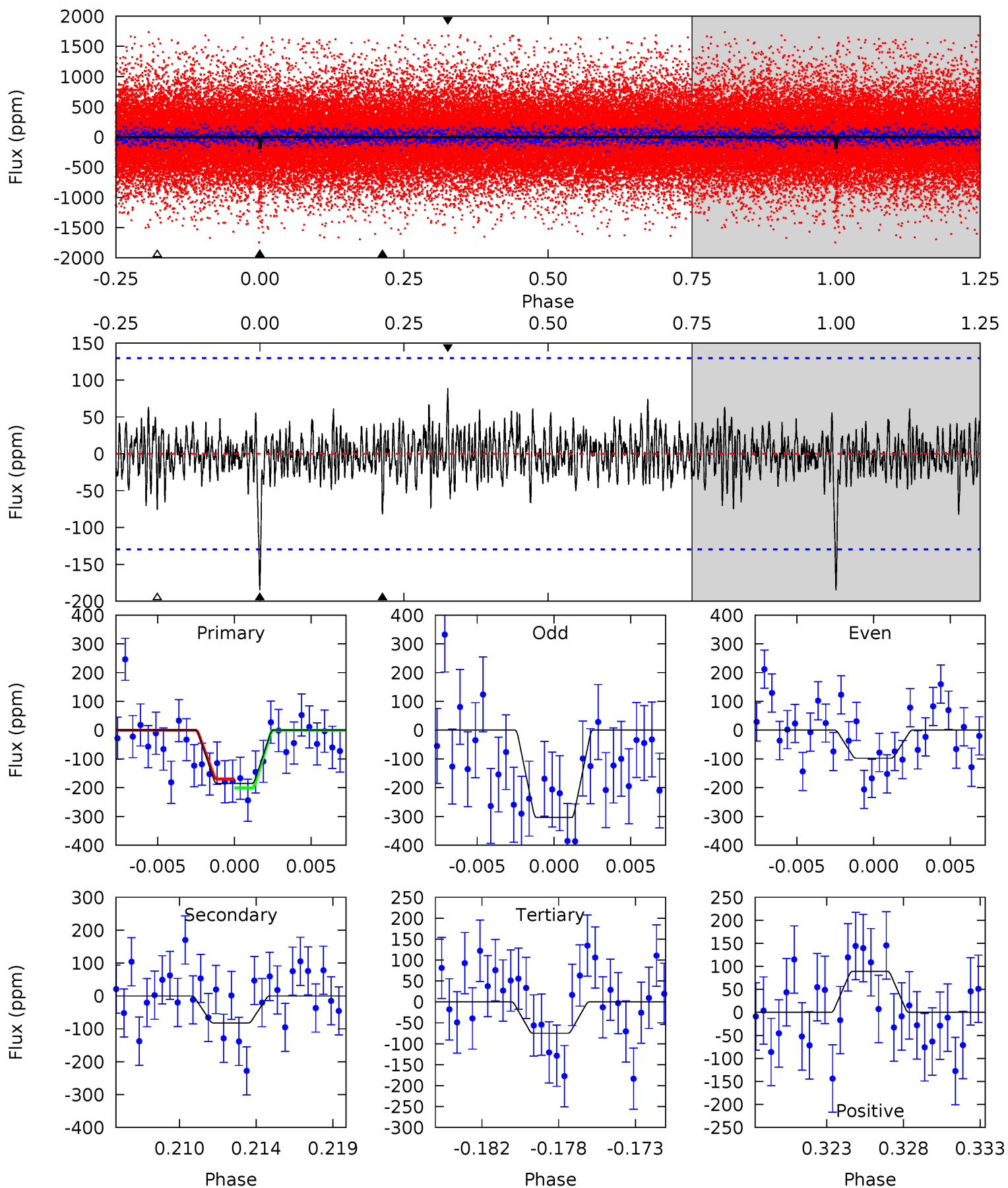
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.86	5.09	4.03	4.49	5.11	2.73	1.38	3.83	3.37	1.06	0.60	1.86	0.86	0.36	0.48



Alt Model-Shift Uniqueness Test

008590149-01, P = 19.239430 Days, E = 119.522049 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.39	3.27	2.99	3.55	5.18	2.84	0.91	4.40	3.84	0.29	-0.27	4.10	0.83	0.32	0.63



Stellar Parameters For KIC 008590149

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5031^{+83}_{-75}	$4.485^{+0.080}_{-0.025}$	$0.160^{+0.150}_{-0.150}$	$0.848^{+0.038}_{-0.066}$	$0.801^{+0.052}_{-0.030}$	$1.852^{+0.545}_{-0.194}$
	+2%/-1%	+2%/-1%	+94%/-94%	+4%/-8%	+6%/-4%	+29%/-10%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 008590149-01 / KOI 6182.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-128 ± 25	$1.85^{+0.54}_{-0.57}$	785^{+18}_{-20}	4027^{+555}_{-349}	359^{+384}_{-147}
Alt.	-82 ± 25	$1.41^{+0.50}_{-0.52}$	786^{+16}_{-20}	4101^{+844}_{-486}	392^{+646}_{-202}

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 $A_{obs} \gg 1.0$

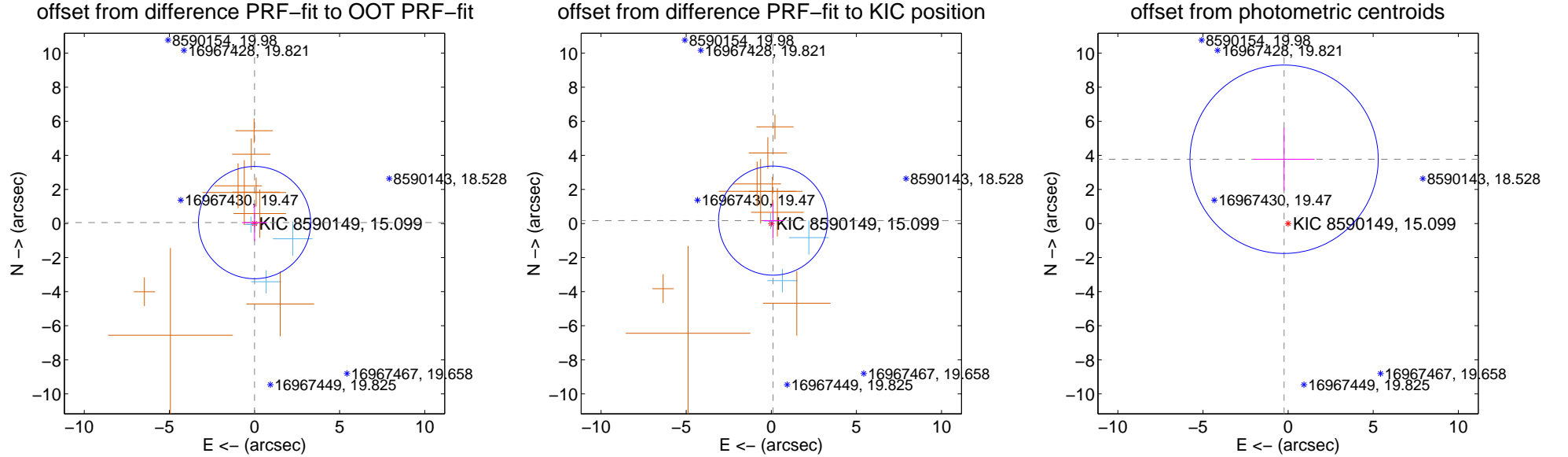
DV Centroid Data

Supplemental centroid analysis for 008590149-01. Kepler magnitude: 15.10. Transit SNR 7.48

There are 3 quarters with good PRF difference image offsets

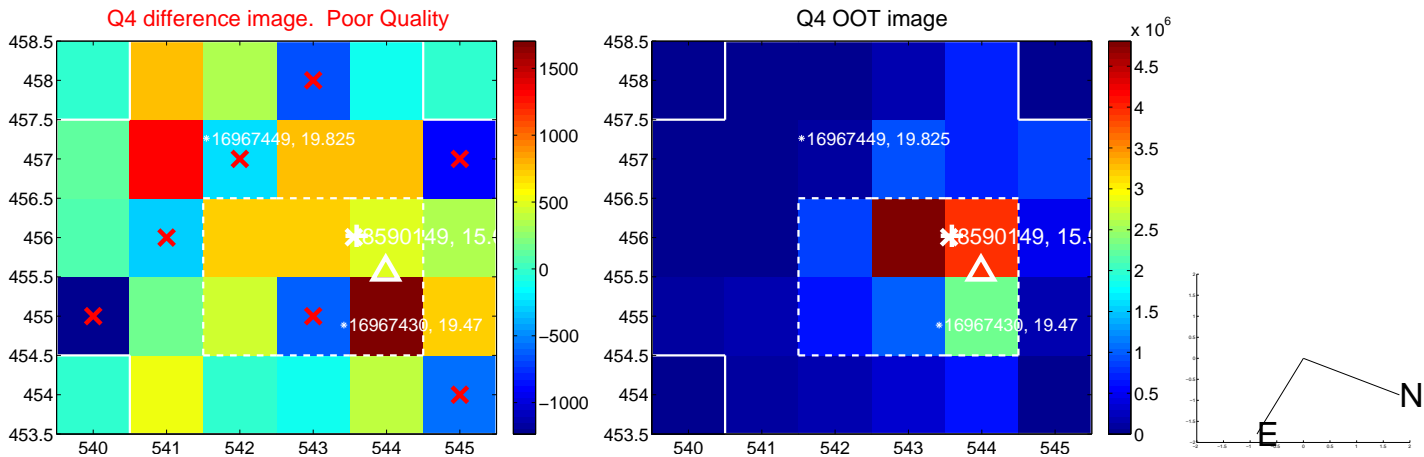
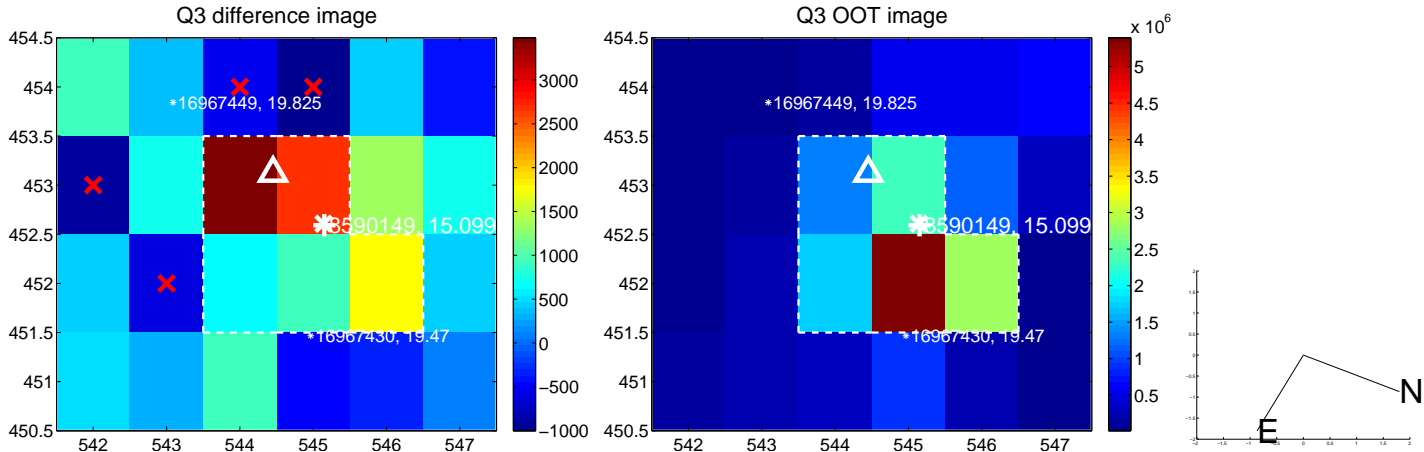
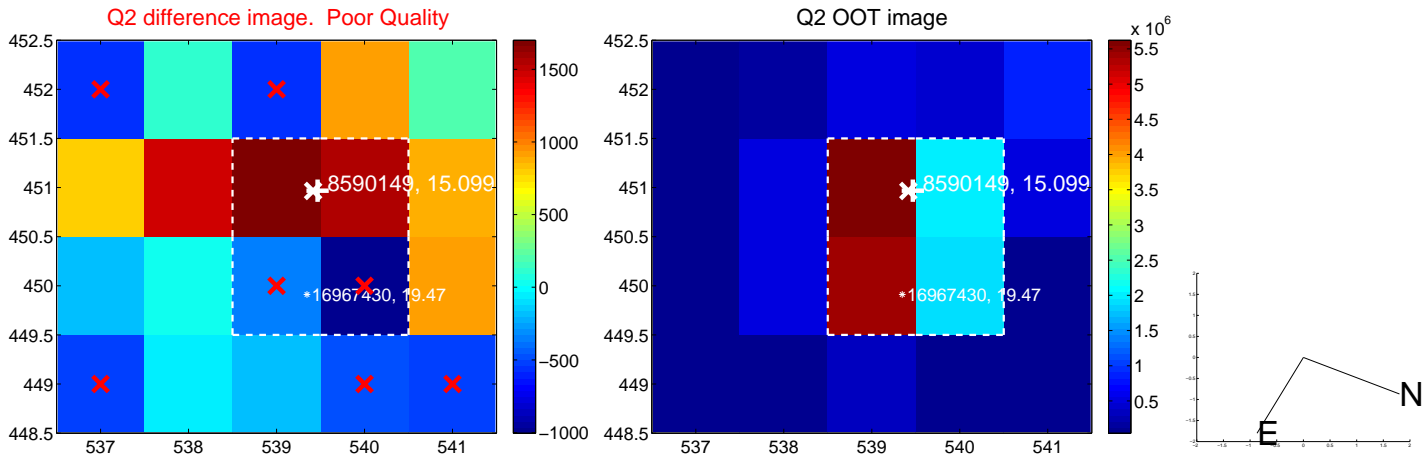
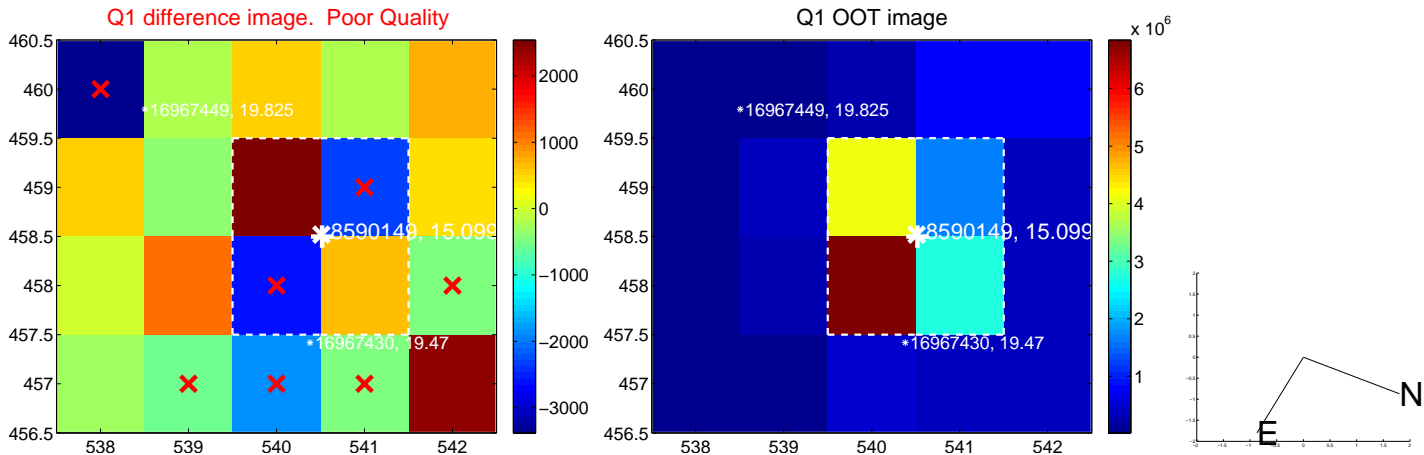
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.055 ± 1.098	0.05	-0.002 ± 0.743	0.055 ± 1.090
PRF-fit source offset from KIC position	0.199 ± 1.067	0.19	-0.103 ± 0.637	0.170 ± 1.043
photometric centroid source offset	3.78 ± 1.84	2.05	0.23 ± 1.78	3.77 ± 1.84

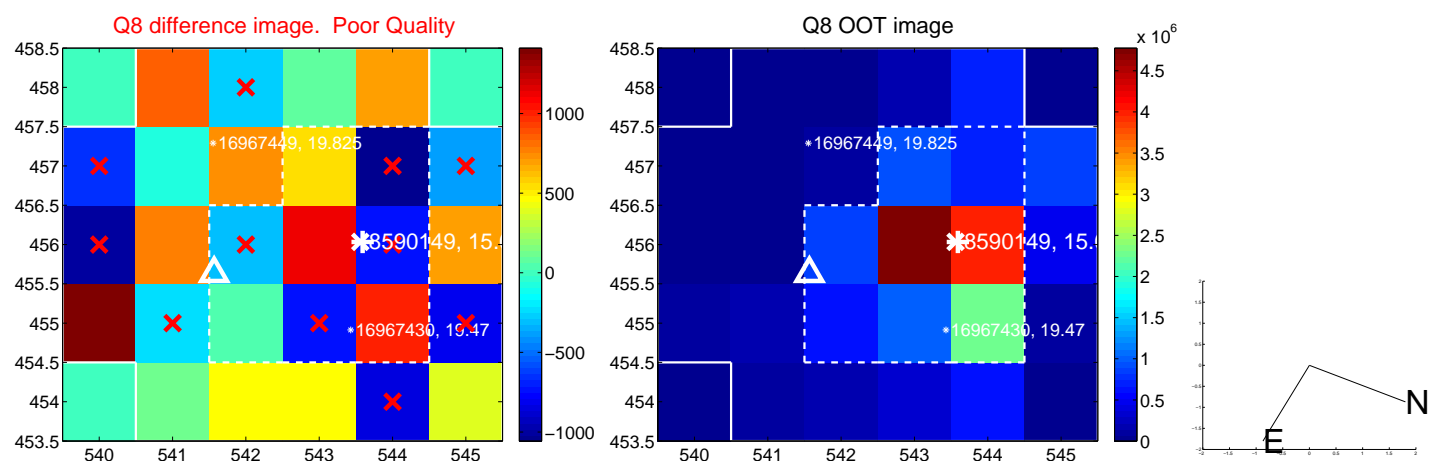
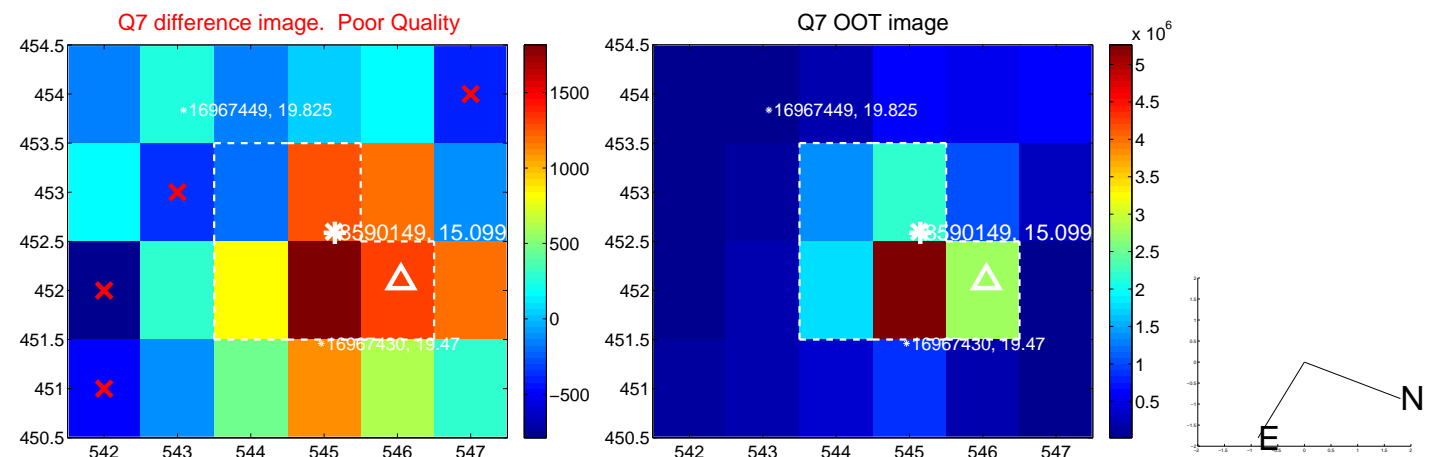
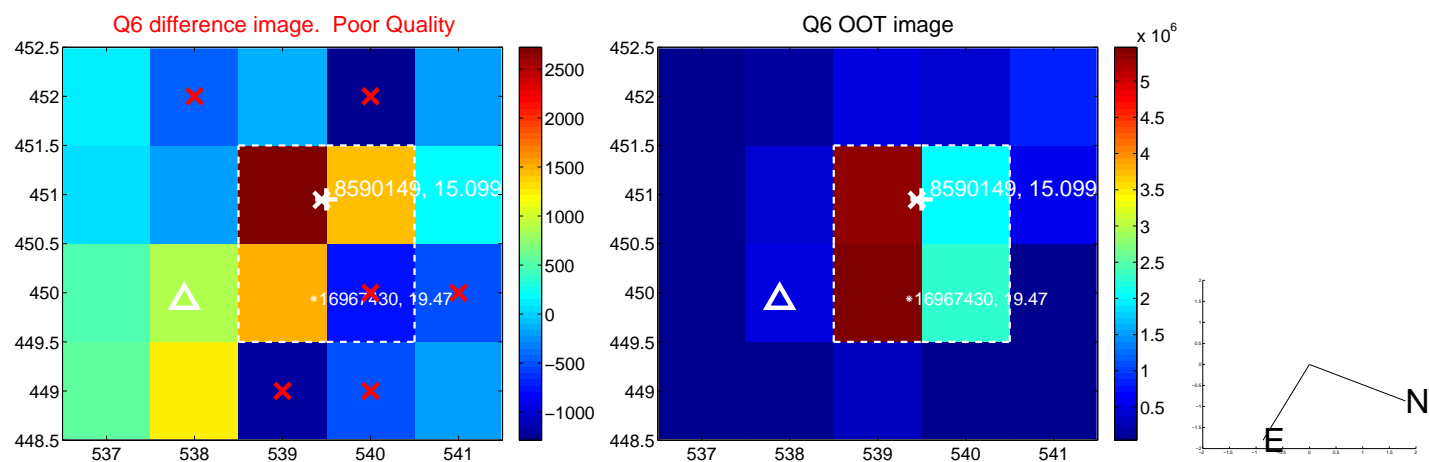
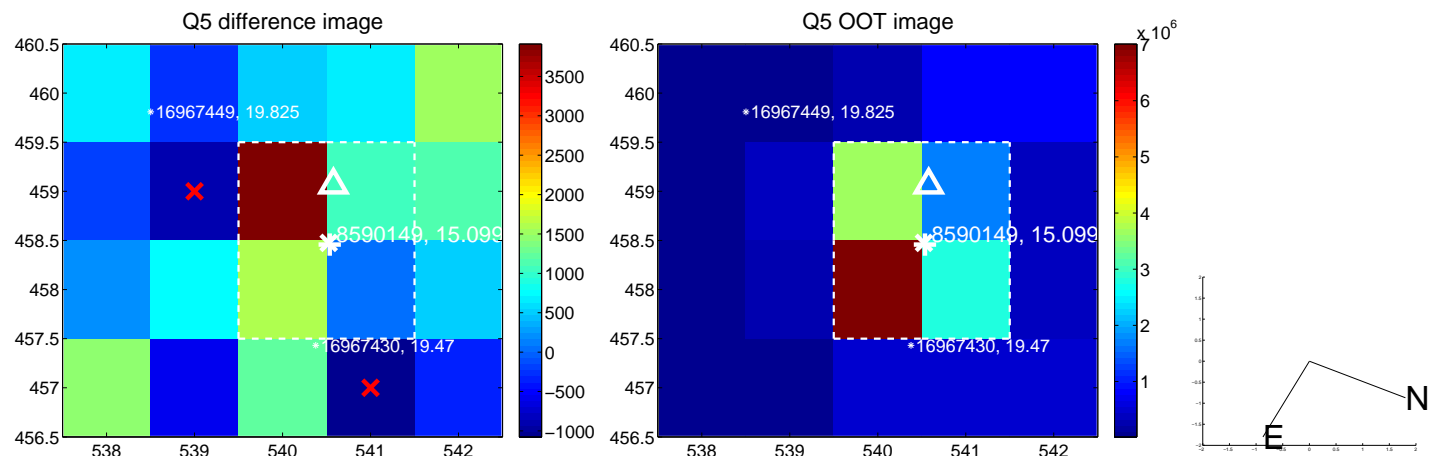


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

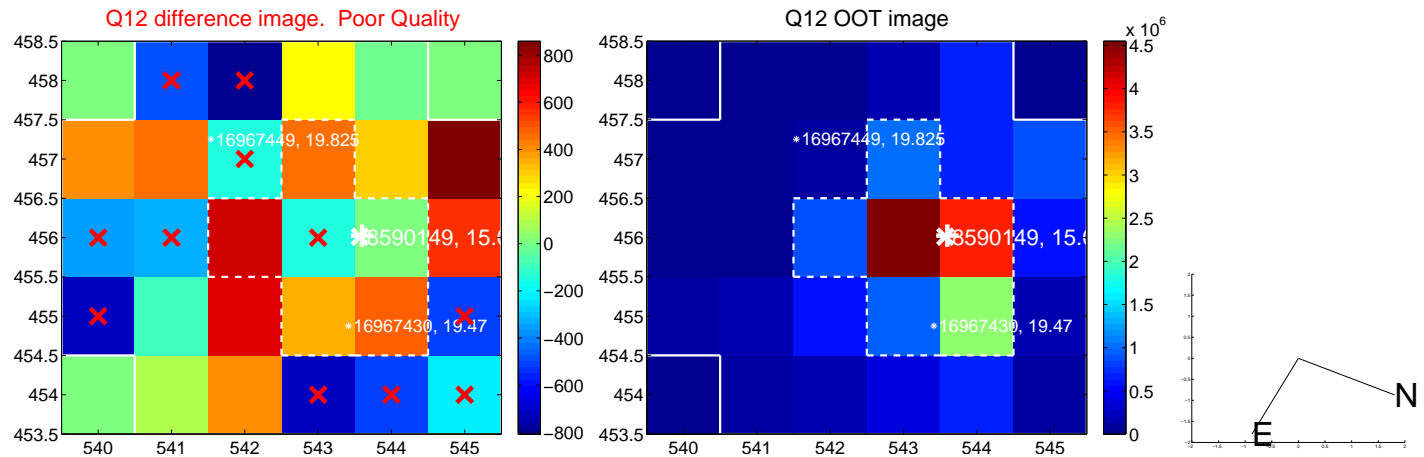
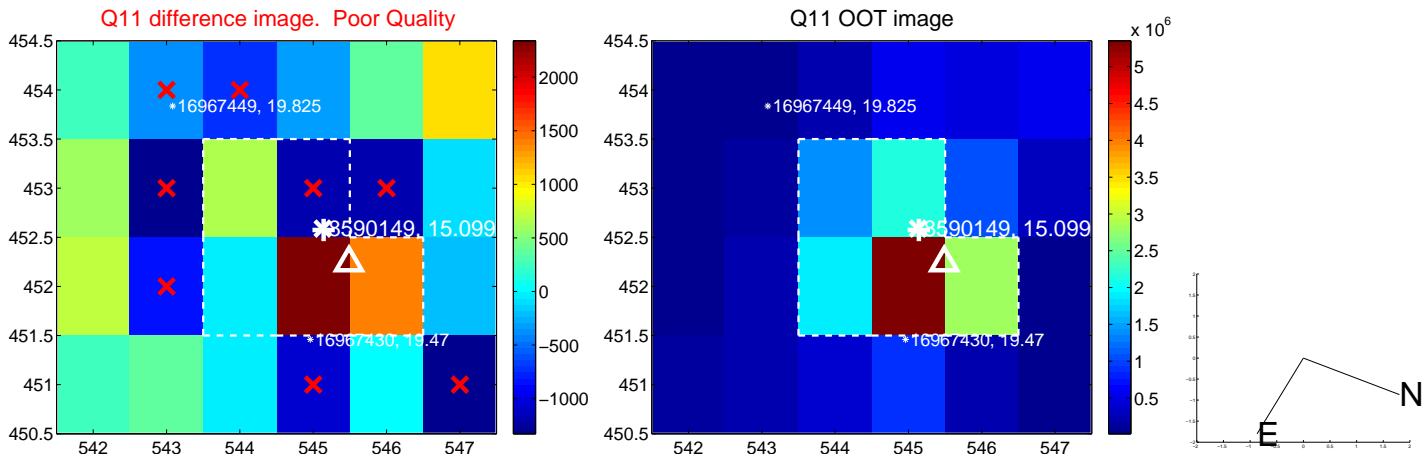
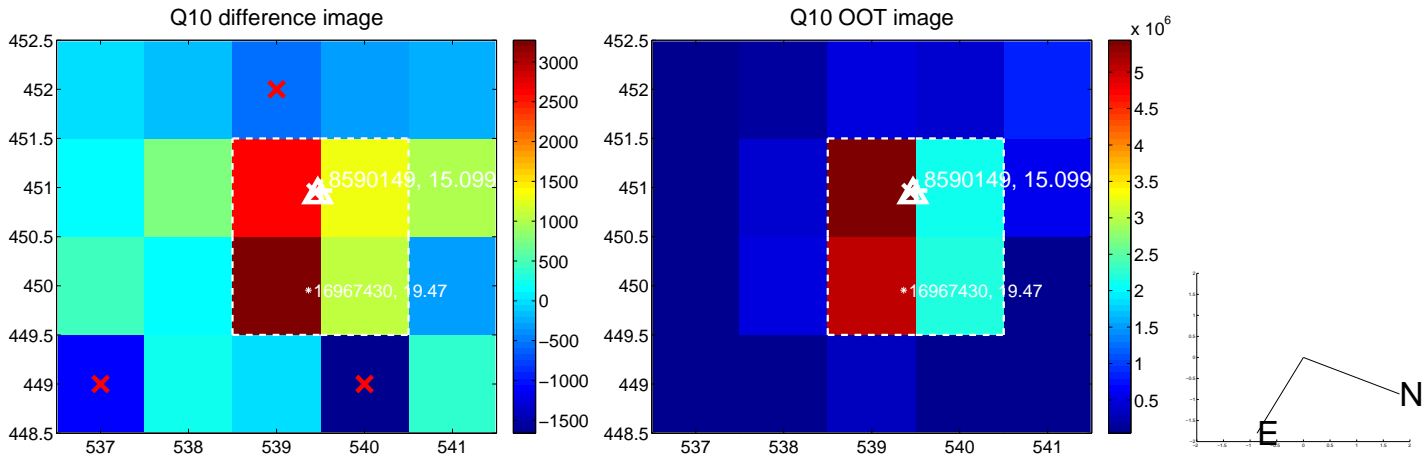
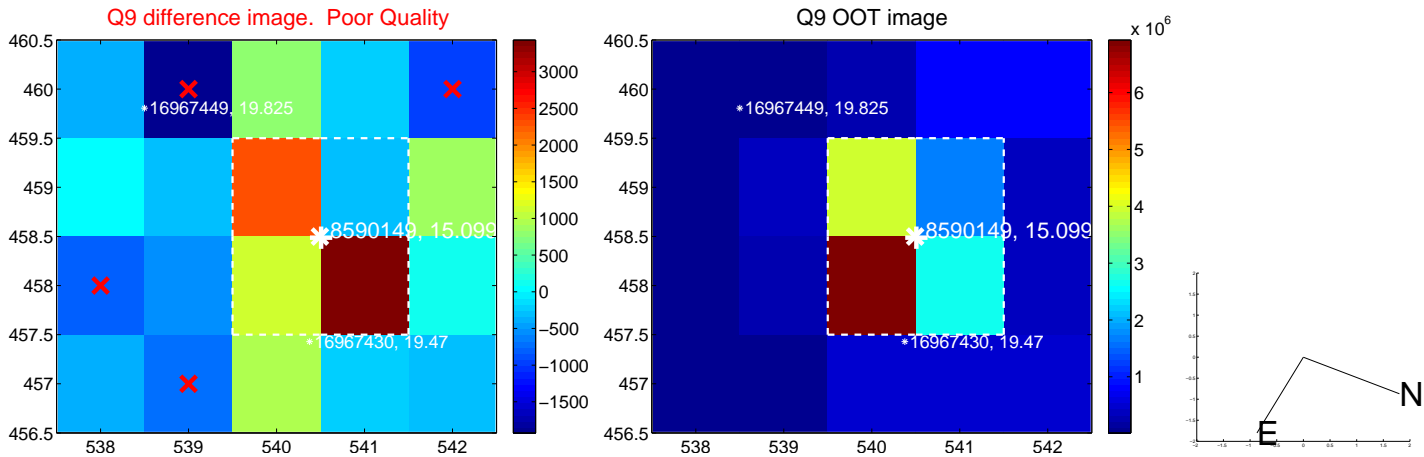
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



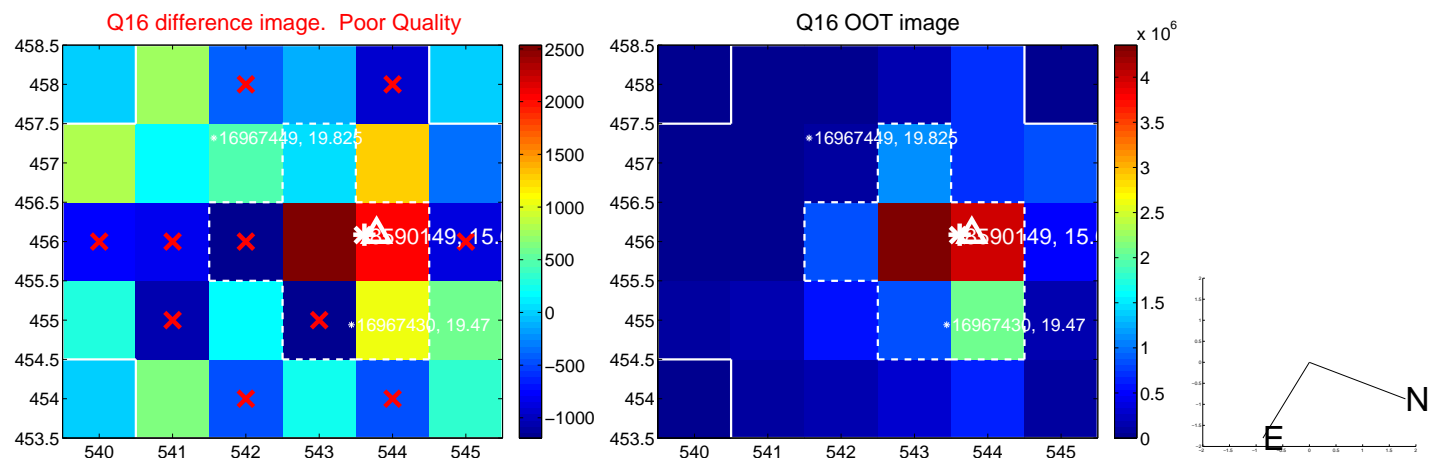
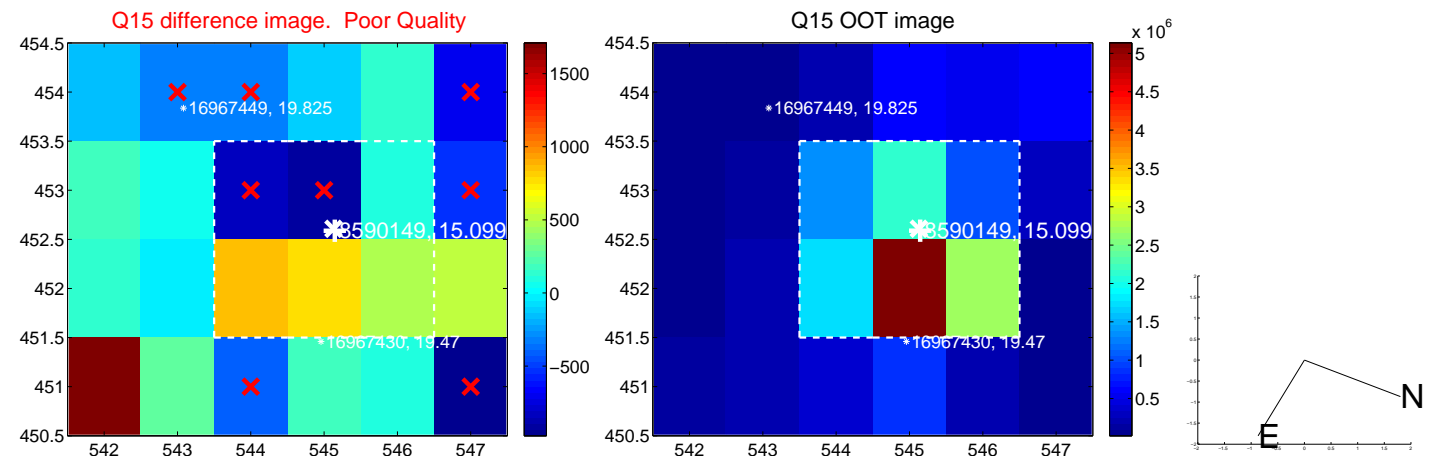
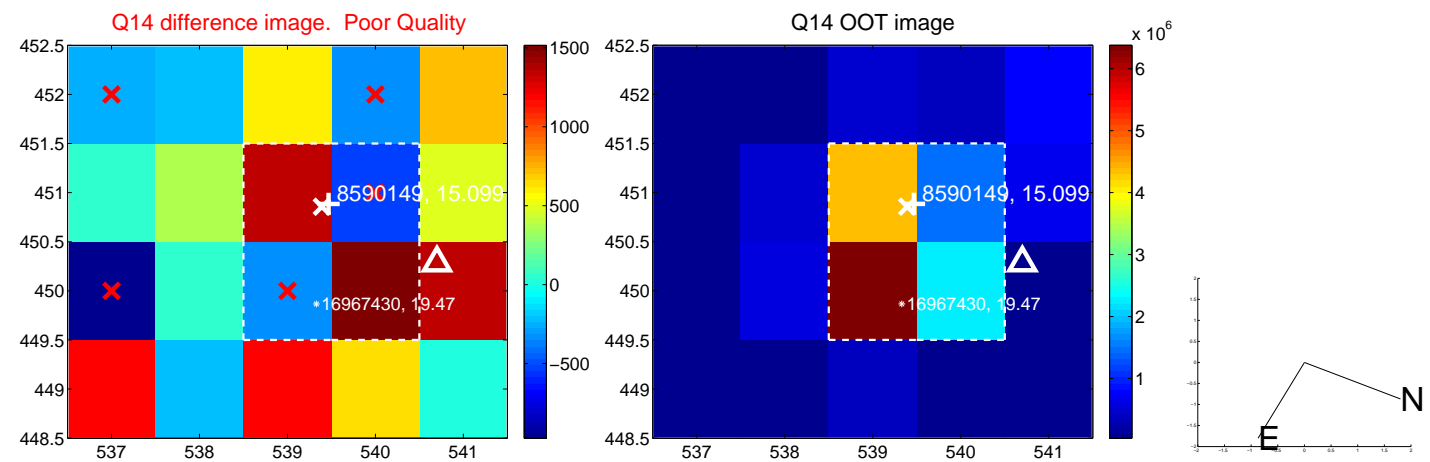
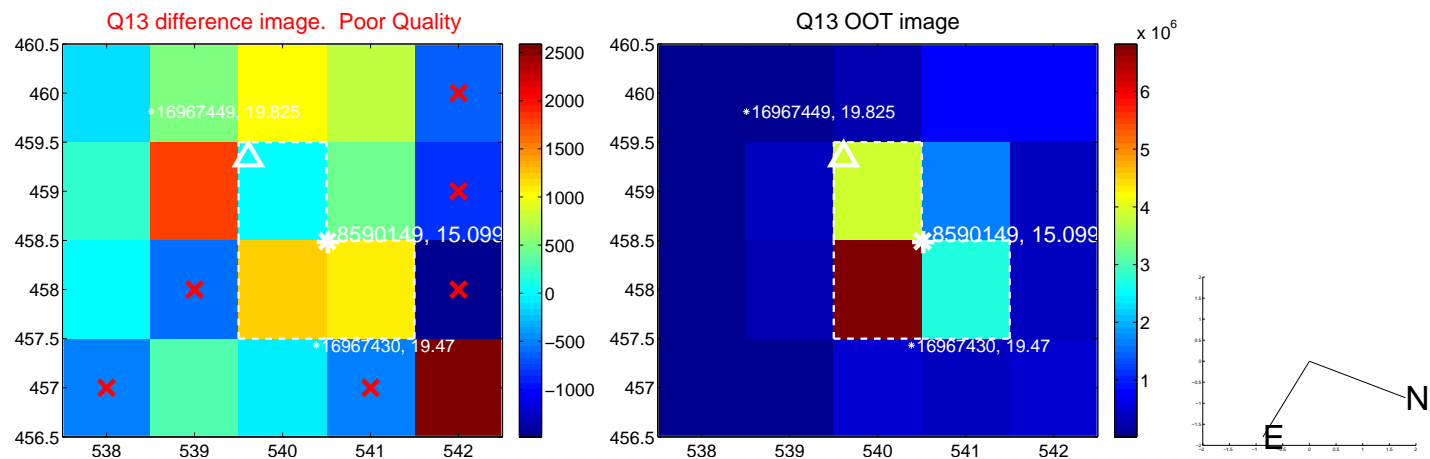
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



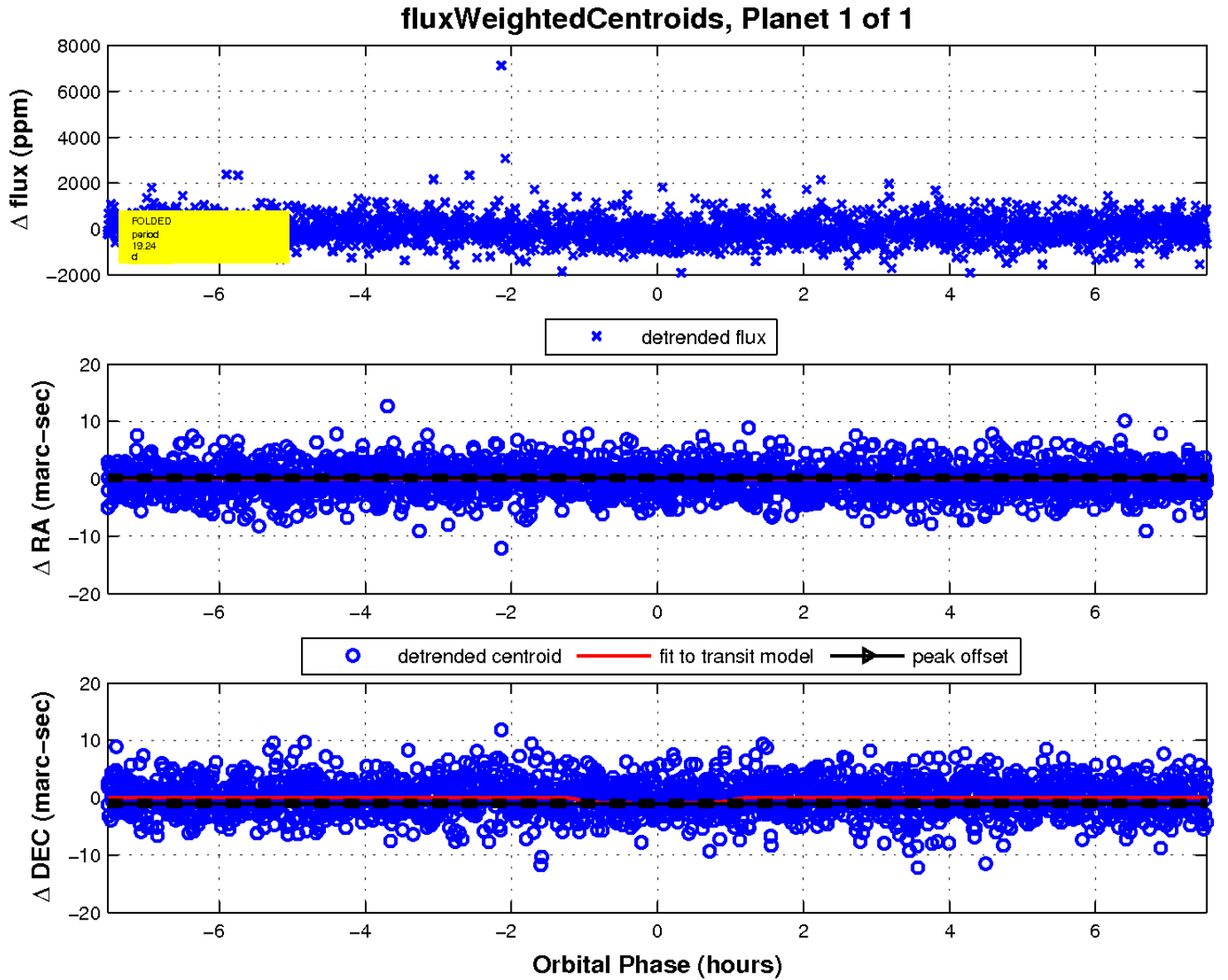
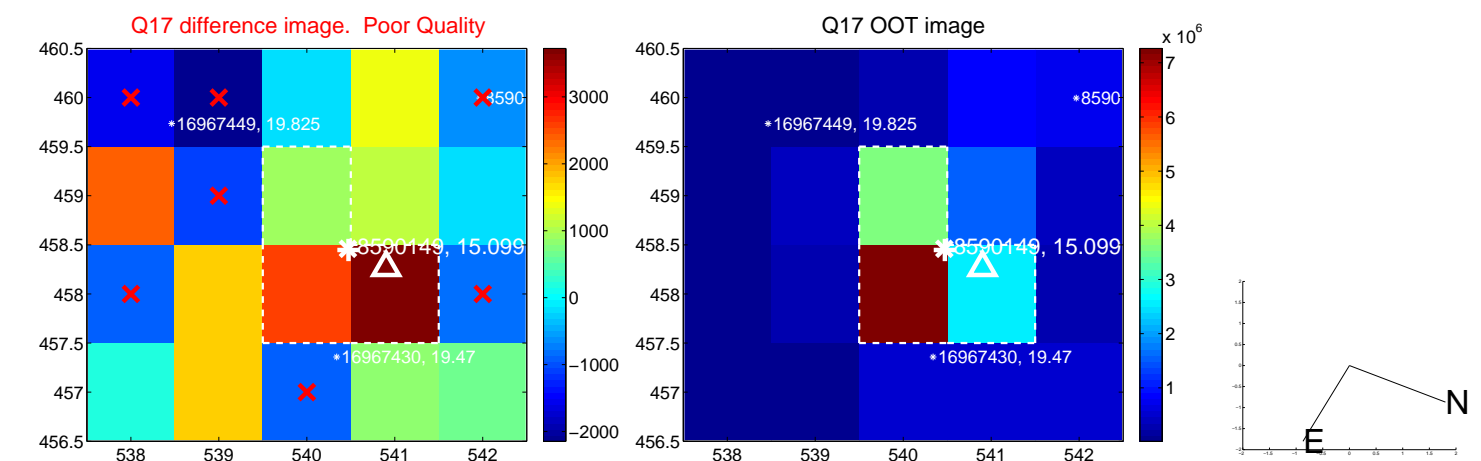
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

