

KIC 012689656

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})
012689656-01	OBS	No	0.538082	131.559873	158.0	6.457	19.2	14.9	2.40	5332	6.27	27685.48

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012689656-01	OBS	FP	0.00	1	0	1	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—HALO_GHOST

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

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

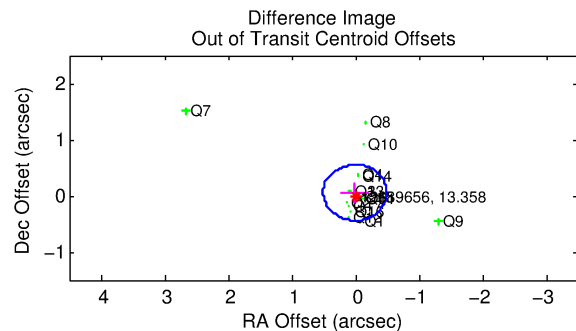
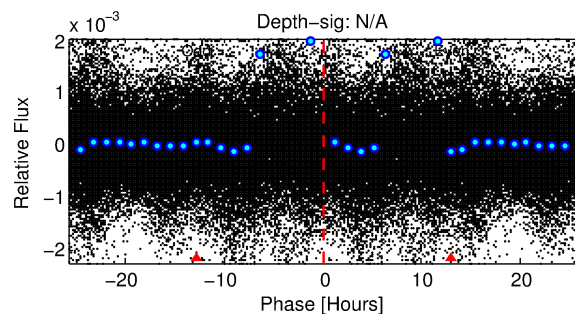
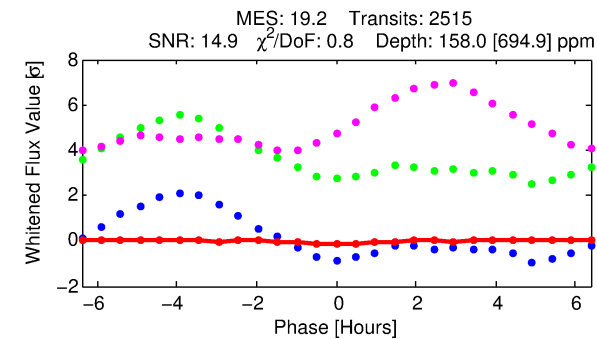
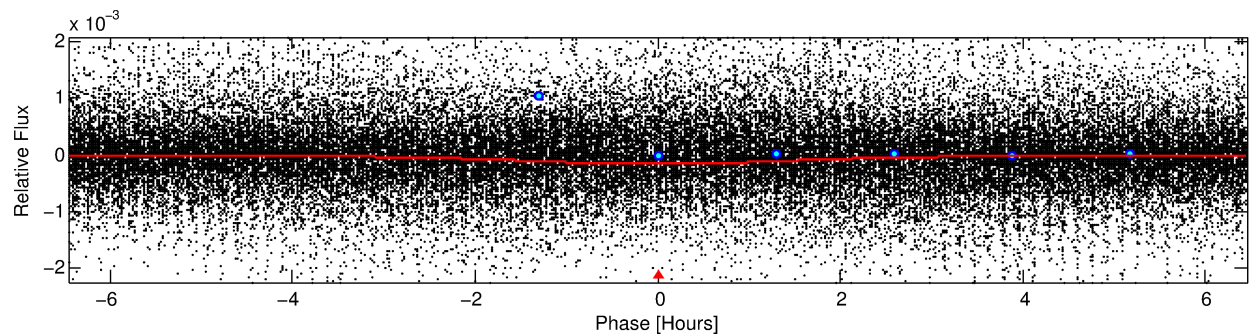
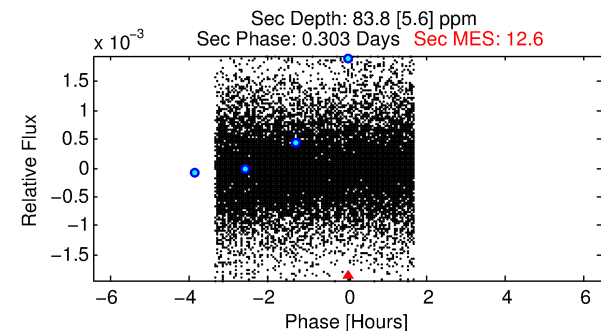
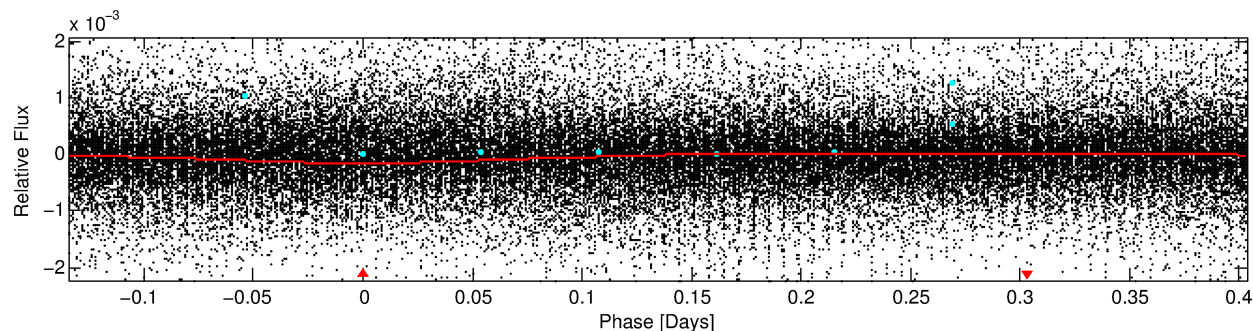
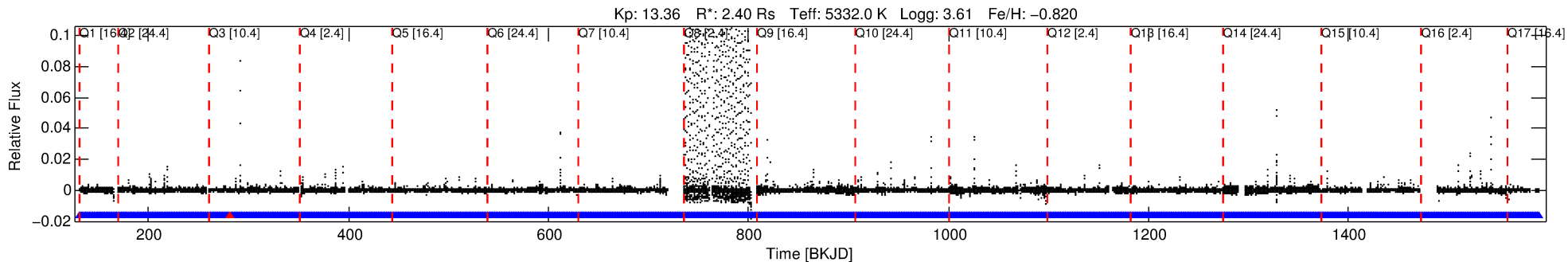
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012689656-01

No Significant Match Found

DV One-Page Summary

KIC: 12689656 Candidate: 1 of 1 Period: 0.538 d



DV Fit Results:

Period = 0.53808 [0.00001] d
Epoch = 131.5599 [0.0019] BKJD
Rp/R* = 0.0239 [0.0188]
a/R* = 1.02 [0.02]
b = 1.00 [0.05]
Seff = 27685.48 [44619.57]
Teff = 3289 [1325] K
Rp = 6.27 [6.47] Re
a = 0.0123 [0.0109] AU
Ag = 0.18 [0.40] [-2.07σ]
Teffp = 3299 [1301] K [0.01σ]

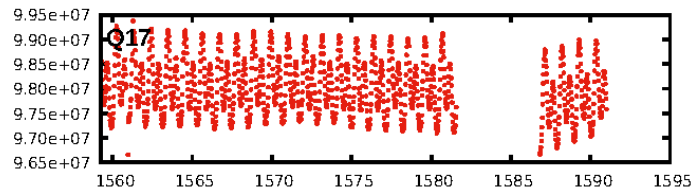
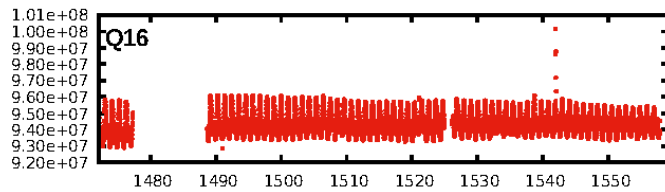
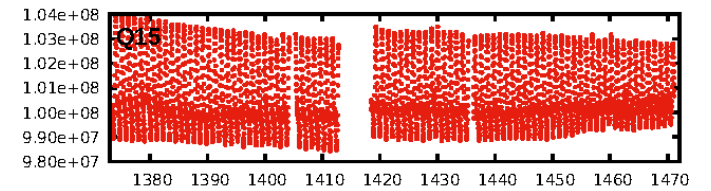
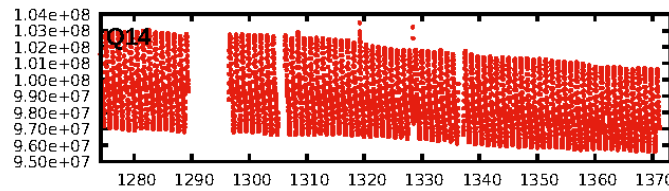
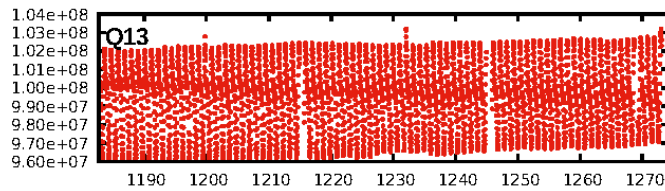
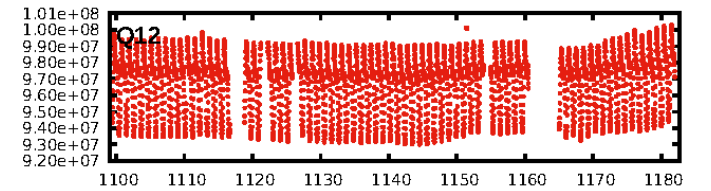
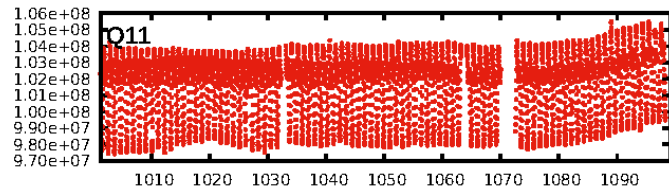
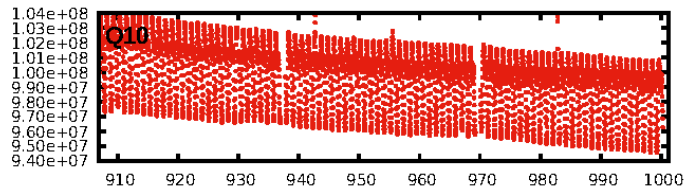
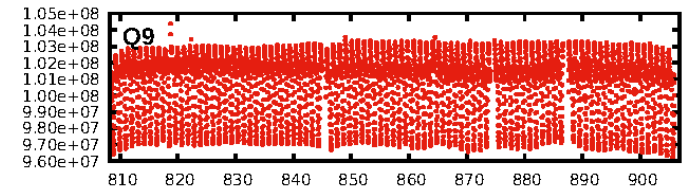
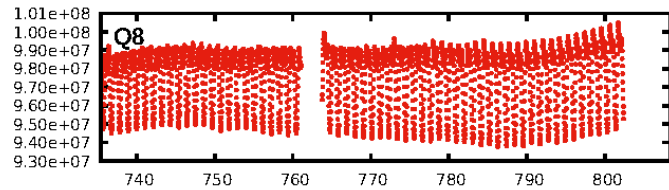
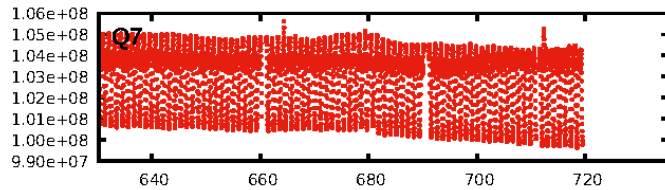
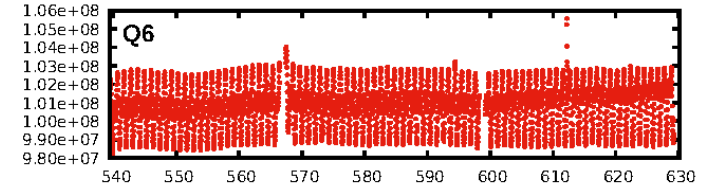
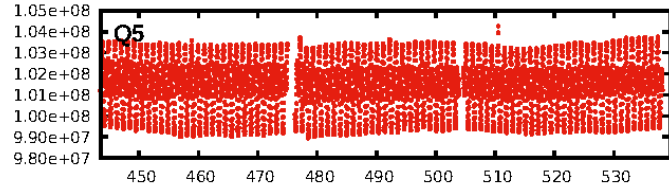
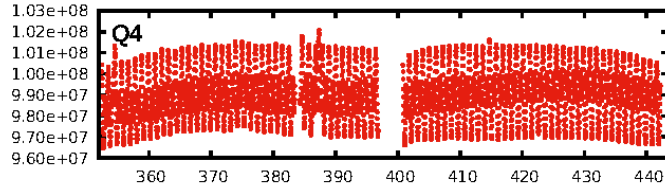
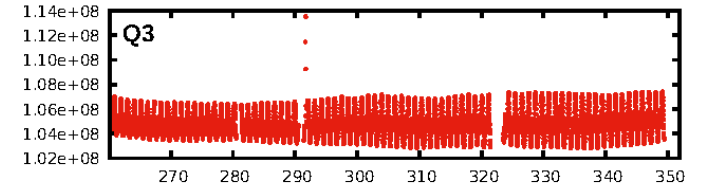
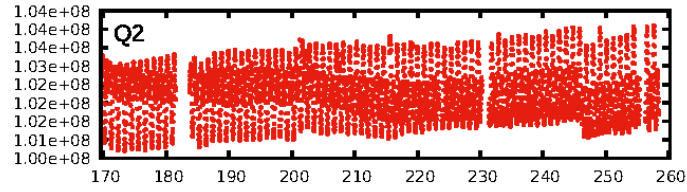
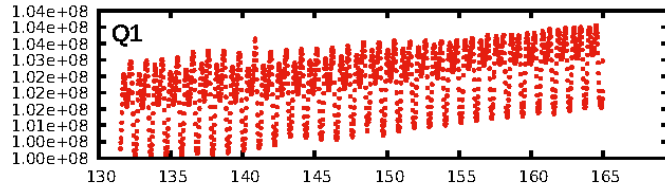
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2401/2402]
GhostDiagnostic-chr: -0.0797
Centroid-sig: N/A
Centroid-so: 0.348 arcsec [2.38σ]
OotOffset-rm: 0.054 arcsec [0.33σ]
KicOffset-rm: 0.157 arcsec [1.23σ]
OotOffset-st: 3/4/4/5 [16]
KicOffset-st: 3/4/4/5 [16]
DiffImageQuality-fgm: 0.50 [8/16]
DiffImageOverlap-fno: 1.00 [17/17]

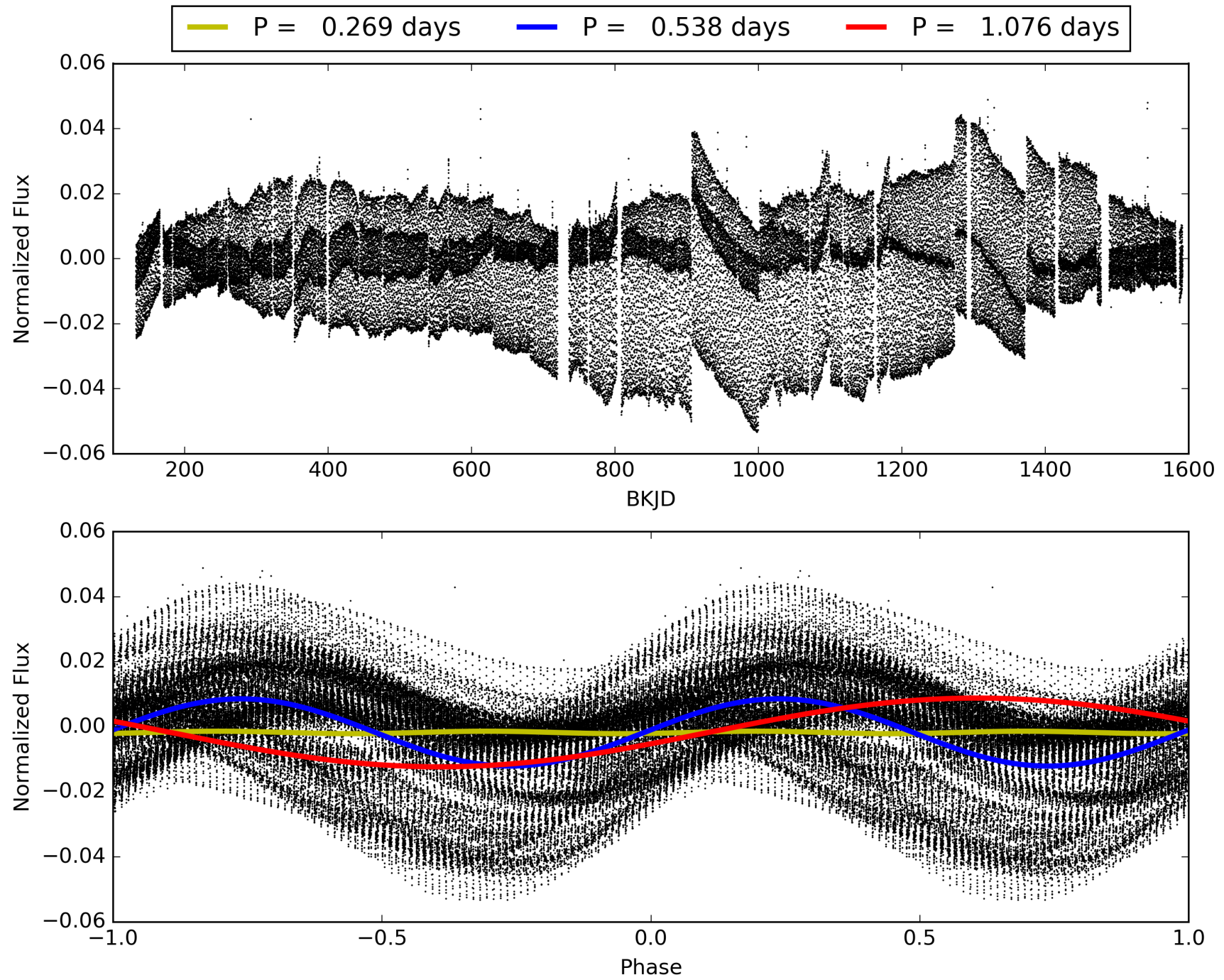
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:17:12 Z

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

TCE 012689656-01, PDC Light Curves

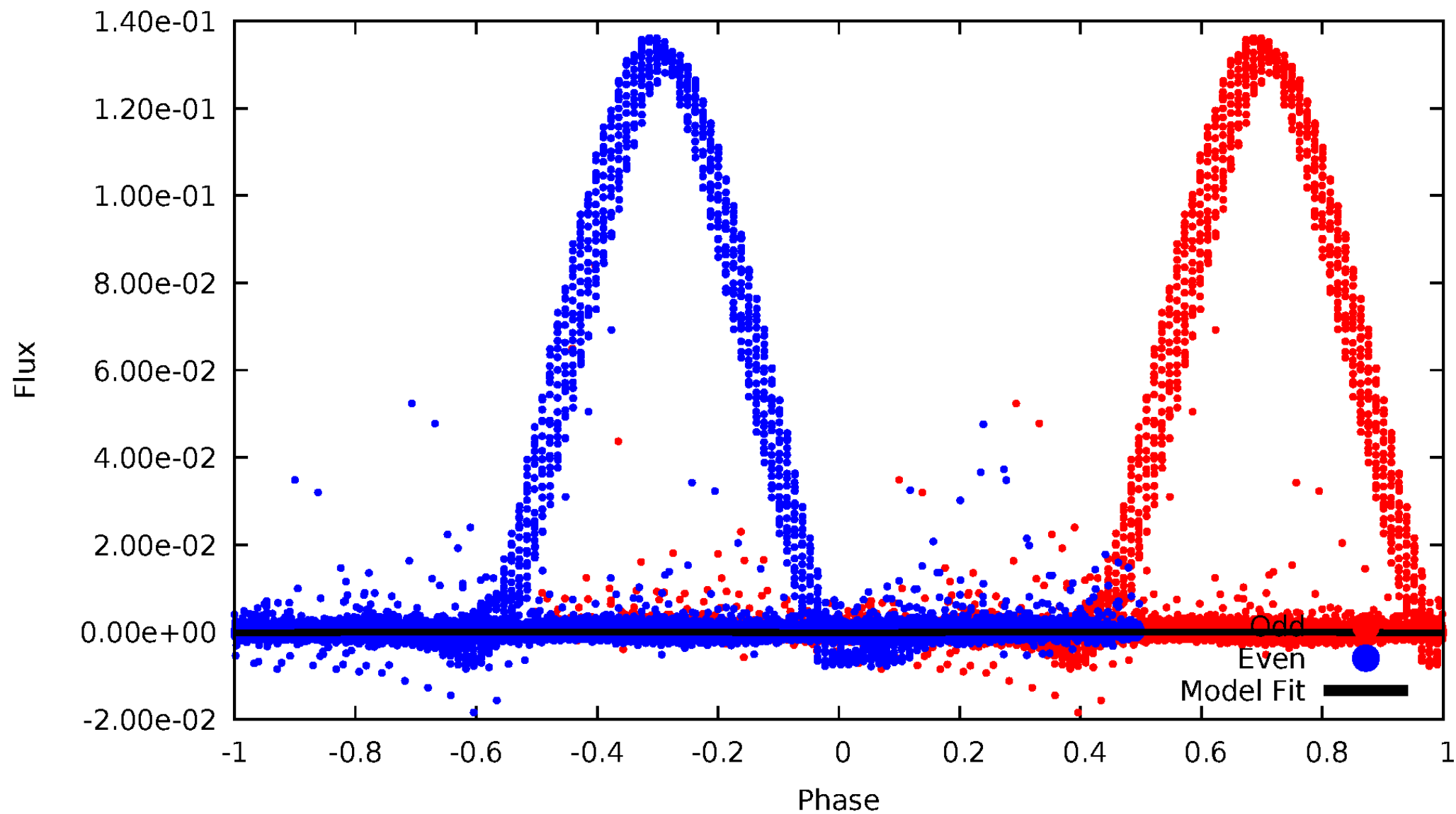


TCE 012689656-01



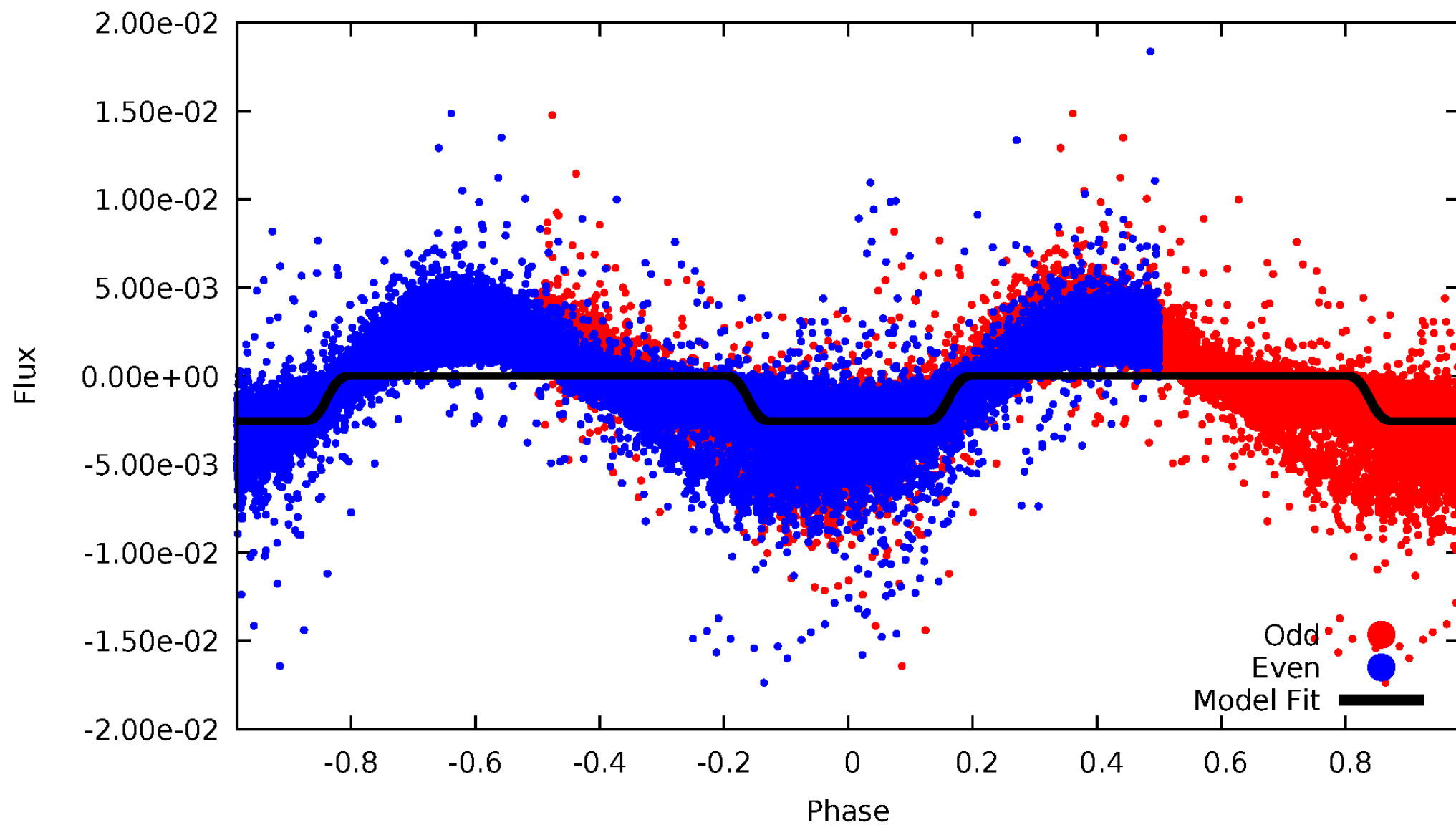
DV Odd/Even

TCE 012689656-01



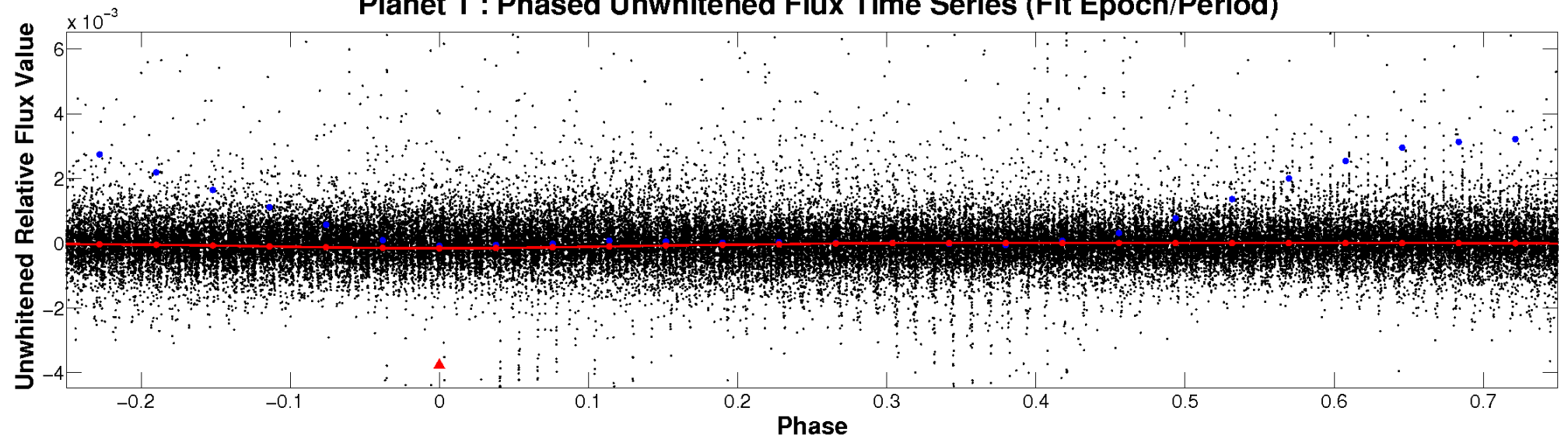
ALT Odd/Even

TCE 012689656-01

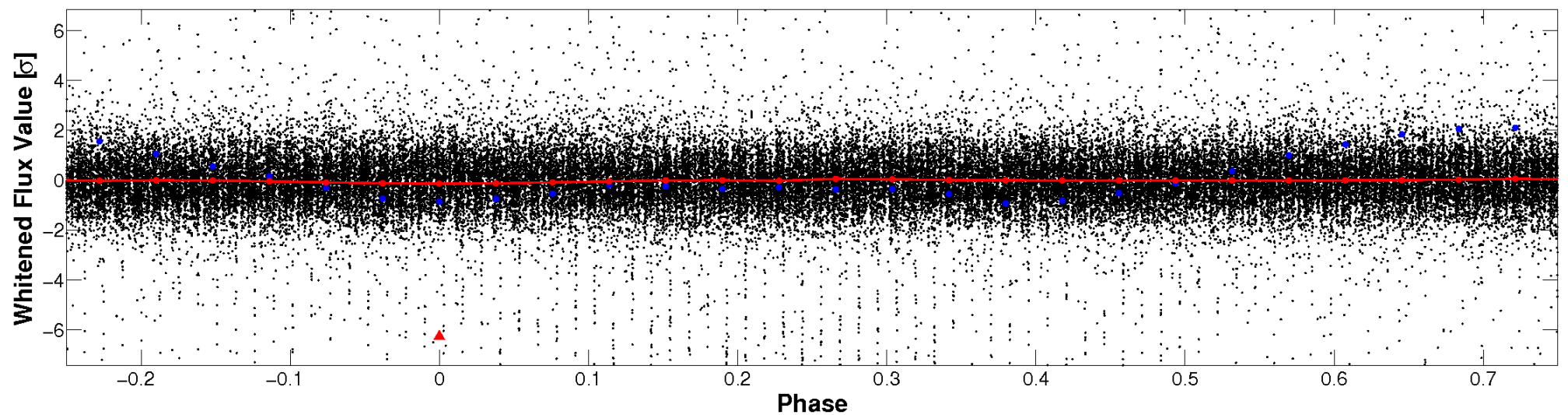


Non-Whitened Vs. Whitened Light Curve

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

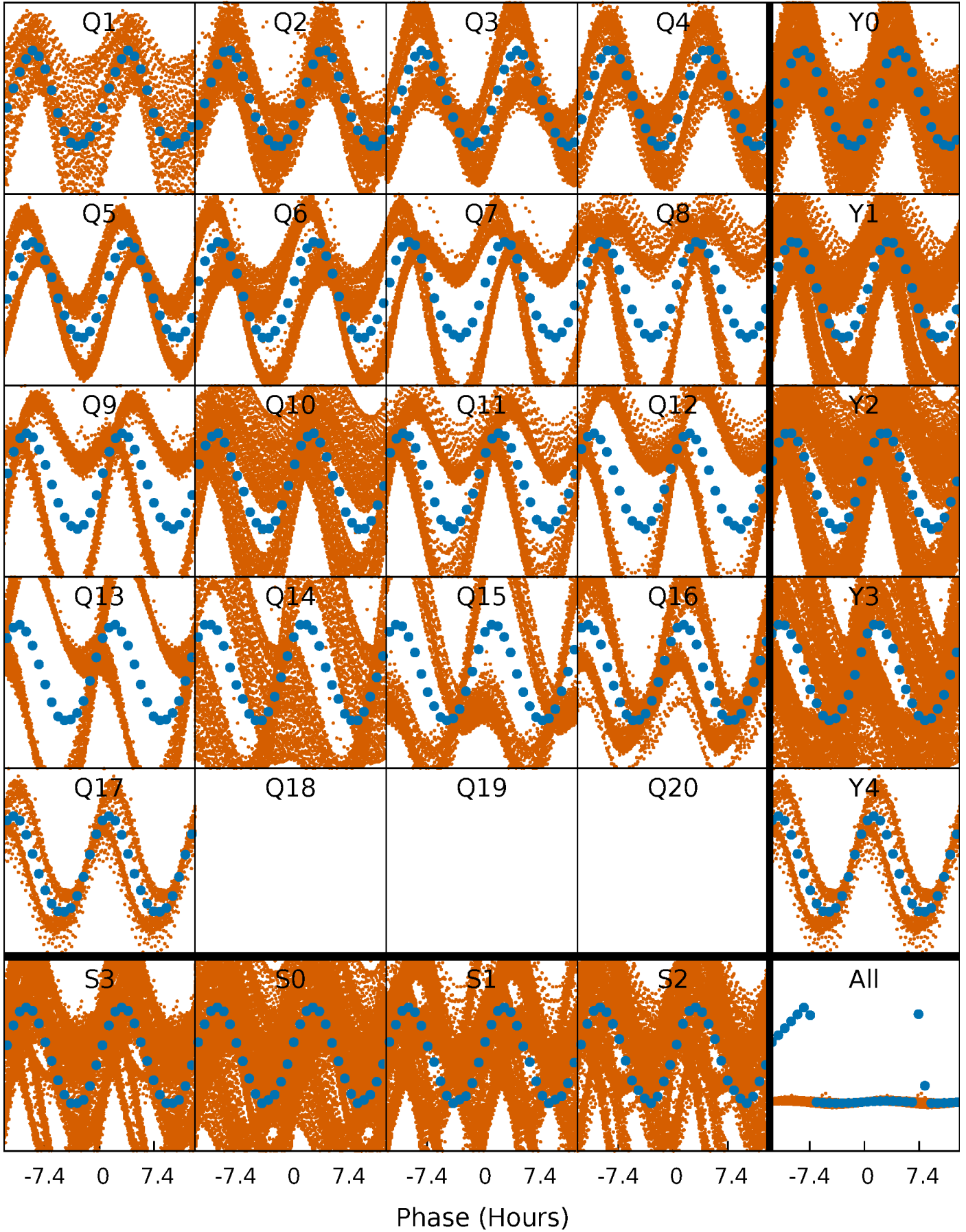


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



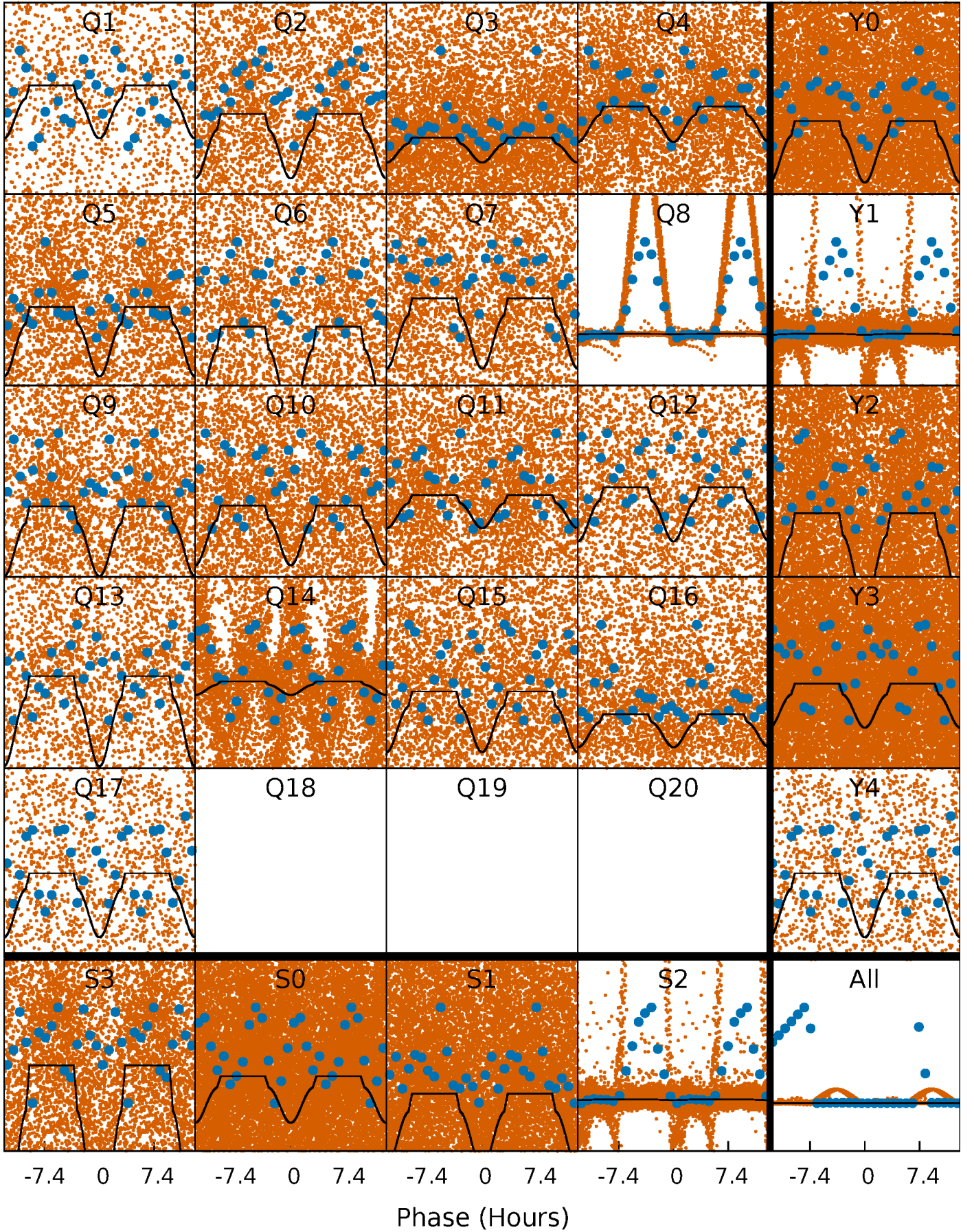
PDC Quarter-Phased Transit Curves

TCE 012689656-01 P= 0.538082 Days $T_0=131.559873$ (BKJD)



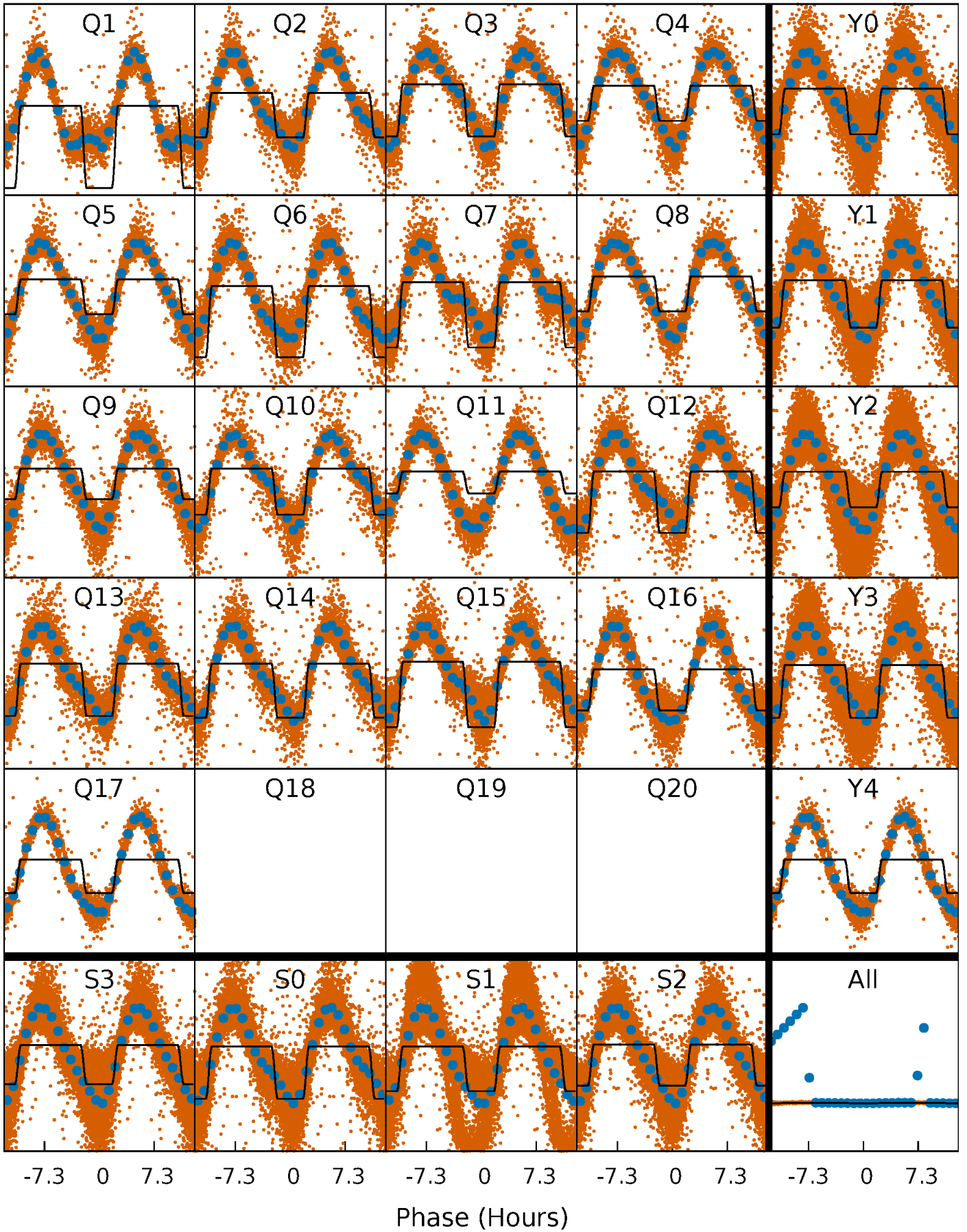
DV Quarter-Phased Transit Curves

TCE 012689656-01 P= 0.538082 Days $T_0=131.559873$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

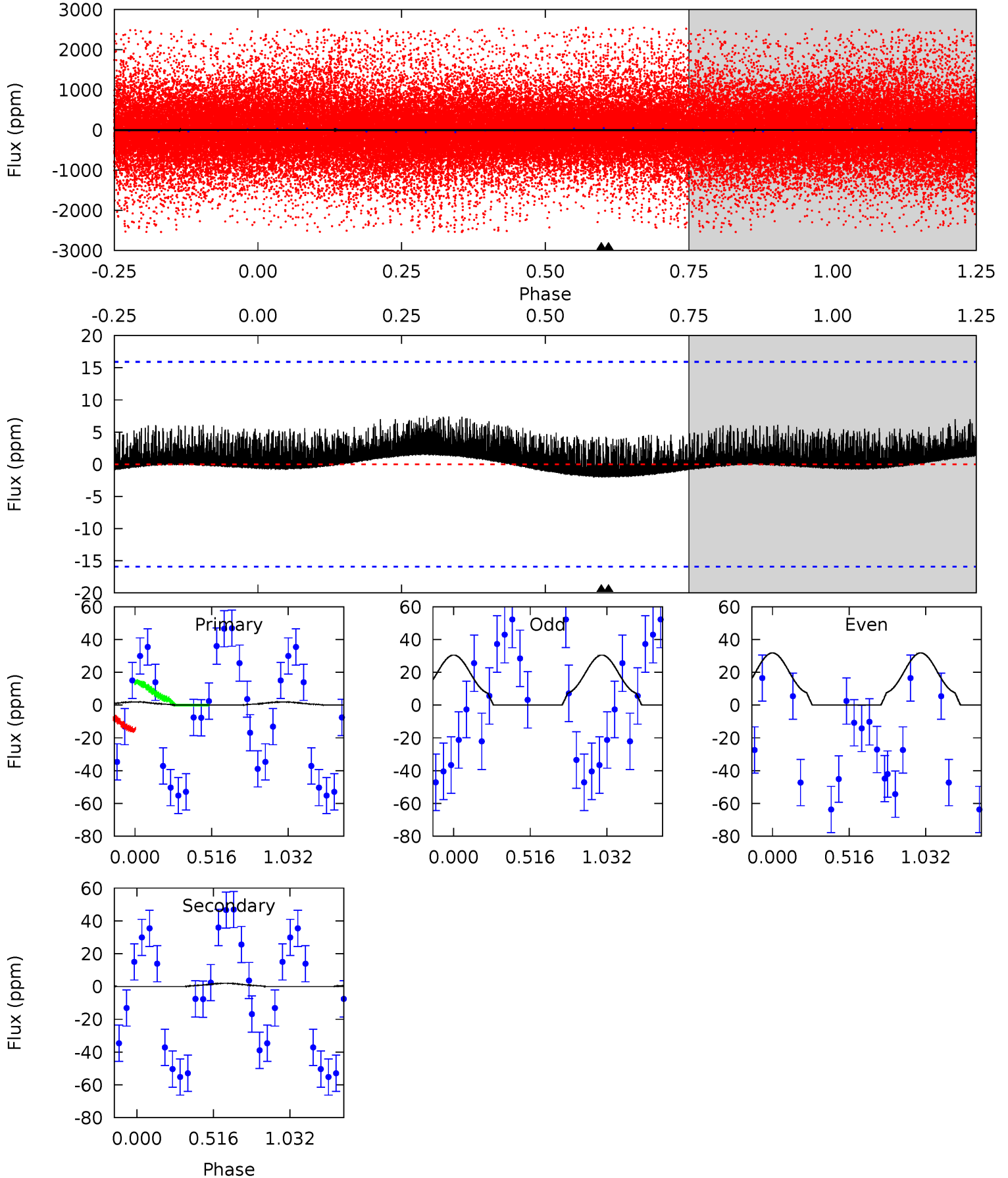
TCE 012689656-01 P= 0.538026 Days $T_0=131.540265$ (BKJD)



DV Model-Shift Uniqueness Test

012689656-01, P = 0.538082 Days, E = 131.021791 Days

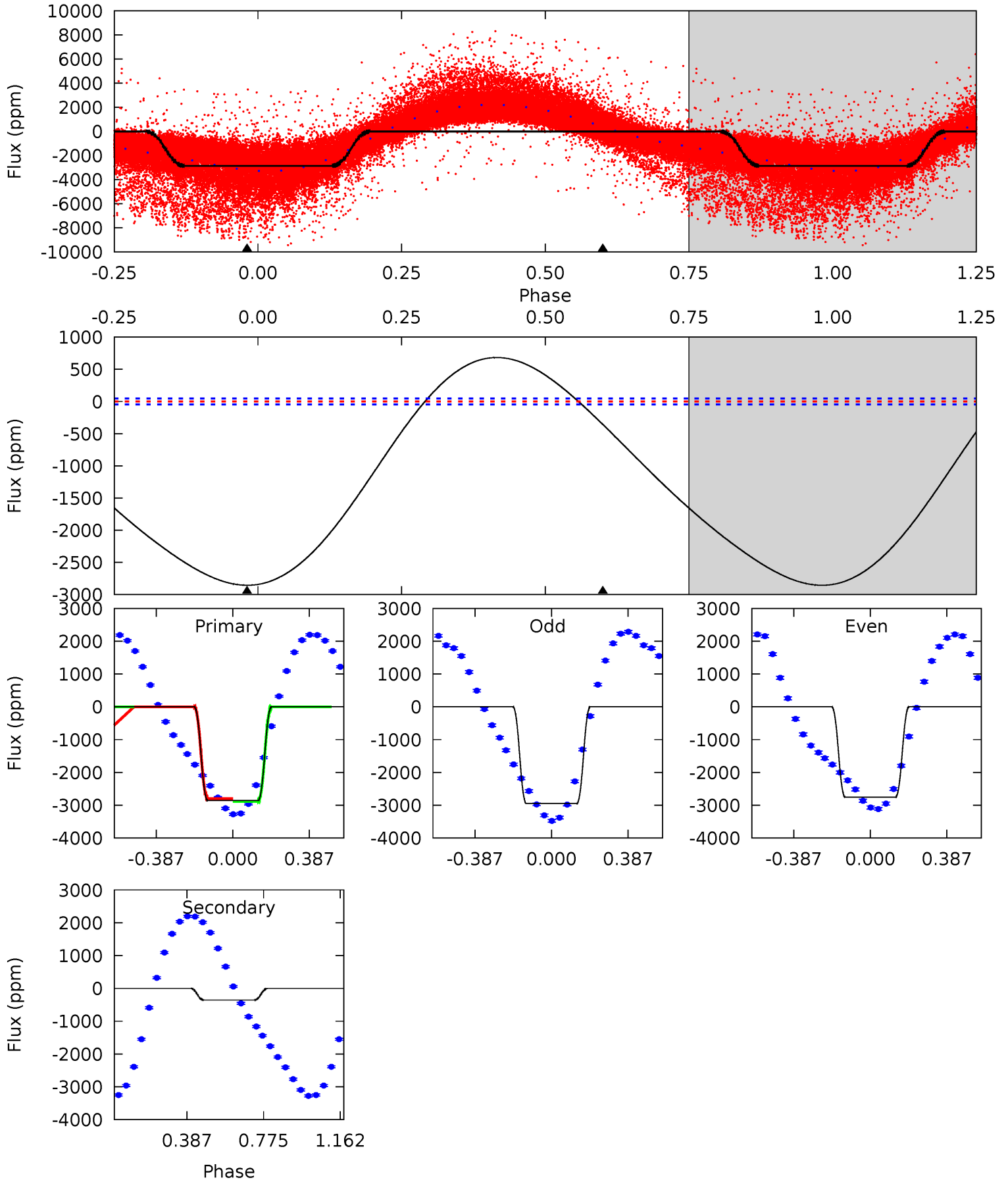
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.51	0.51	0	0	4.21	0.65	0.20	0.51	0.51	0.51	0.51	0.17	19.4	0.79	0.15



Alt Model-Shift Uniqueness Test

012689656-01, P = 0.538026 Days, E = 131.540265 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
268.8	33.4	0	0	4.27	0.86	29.2	268.8	268.8	33.4	33.4	9.27	1.14	0.19	4.98



Stellar Parameters For KIC 012689656

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5332^{+178}_{-146}	$3.608^{+1.005}_{-0.335}$	$-0.820^{+0.350}_{-0.250}$	$2.401^{+1.448}_{-1.609}$	$0.852^{+0.275}_{-0.148}$	$0.087^{+3.140}_{-0.061}$
	+3%/-3%	+28%/-9%	+43%/-30%	+60%/-67%	+32%/-17%	+3621%/-70%
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 012689656-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-2 ± 4	$5.98^{+5.93}_{-3.72}$	4462^{+750}_{-942}	-3928^{+649}_{-517}	$0.003^{+0.030}_{-0.008}$
Alt.	-355 ± 11	$11.70^{+8.03}_{-5.78}$	4480^{+777}_{-904}	-3141^{+6974}_{-973}	$0.225^{+0.661}_{-0.144}$

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 $A_{obs} \gg 1.0$

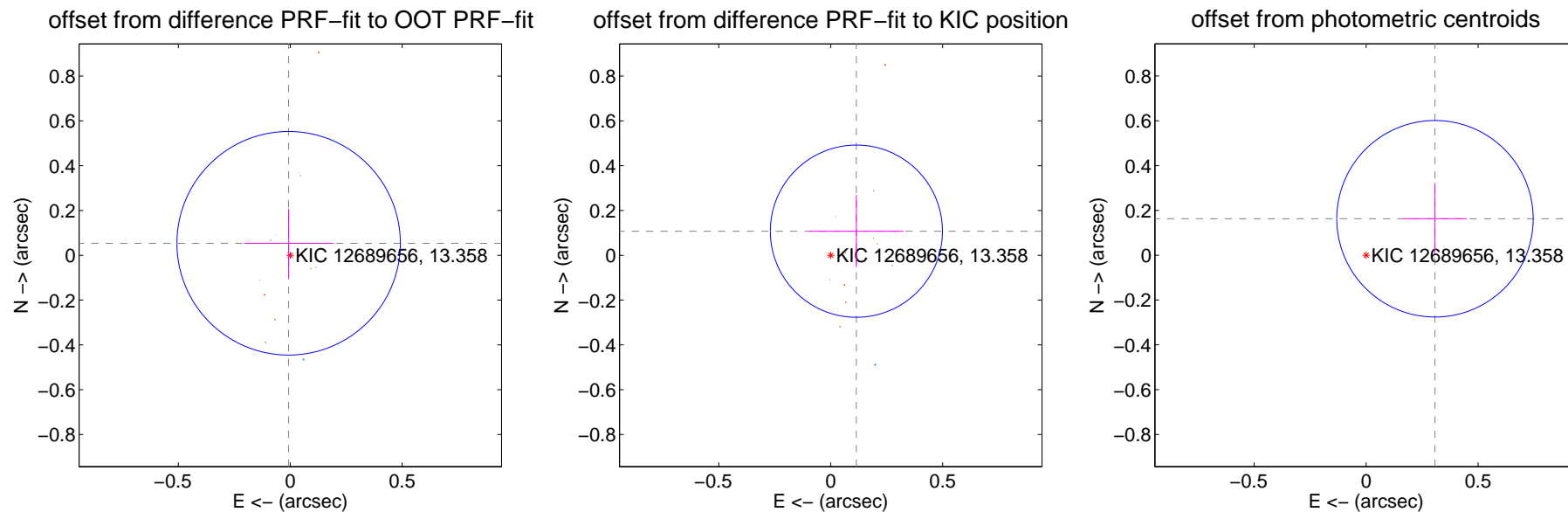
DV Centroid Data

Supplemental centroid analysis for 012689656-01. Kepler magnitude: 13.36. Transit SNR 14.90

There are 8 quarters with good PRF difference image offsets

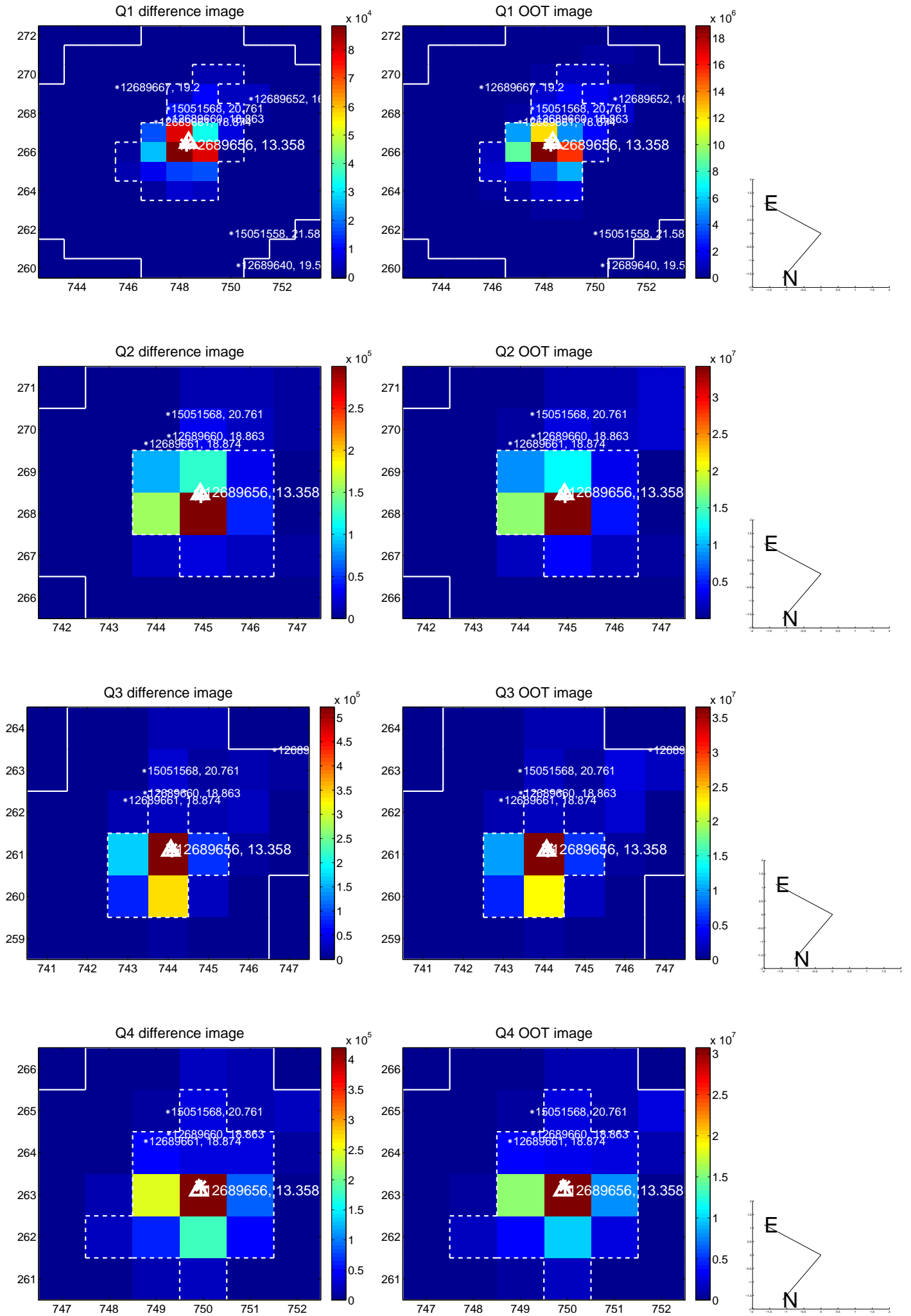
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.054 ± 0.166	0.33	0.007 ± 0.199	0.054 ± 0.154
PRF-fit source offset from KIC position	0.157 ± 0.128	1.23	-0.115 ± 0.211	0.108 ± 0.161
photometric centroid source offset	0.35 ± 0.15	2.38	-0.31 ± 0.14	0.16 ± 0.16

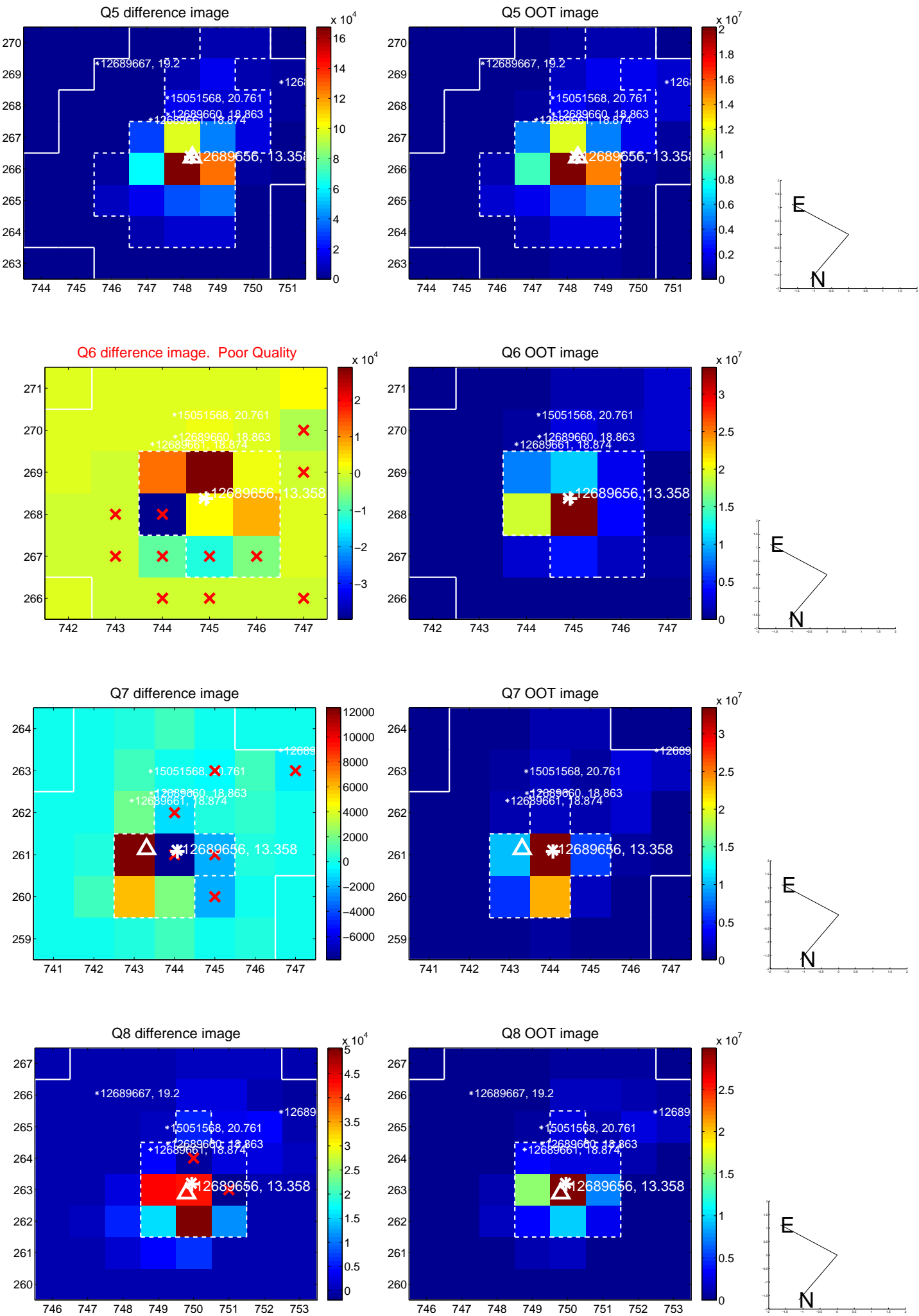


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

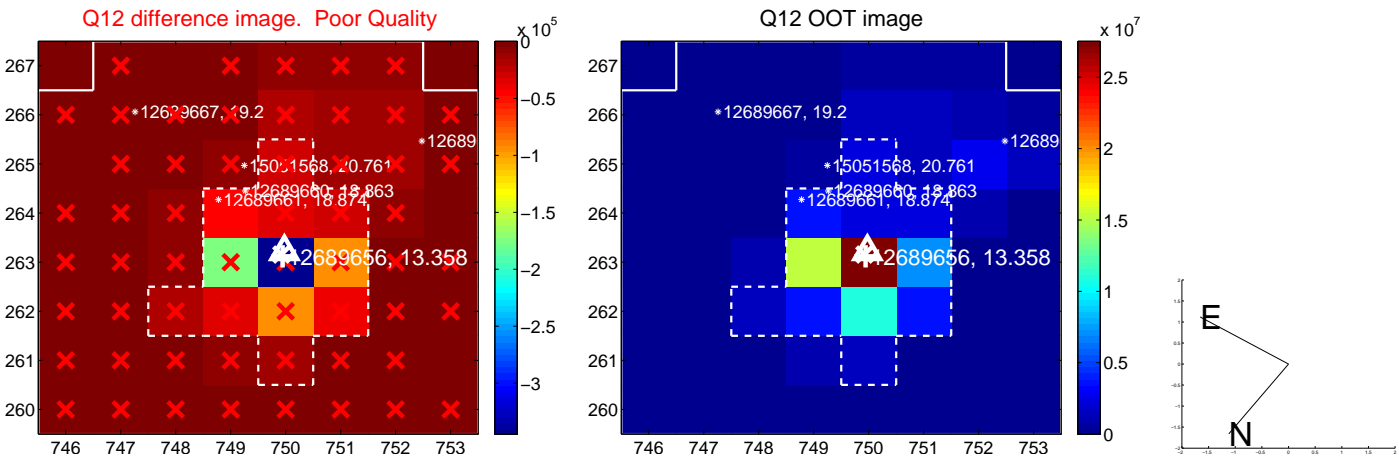
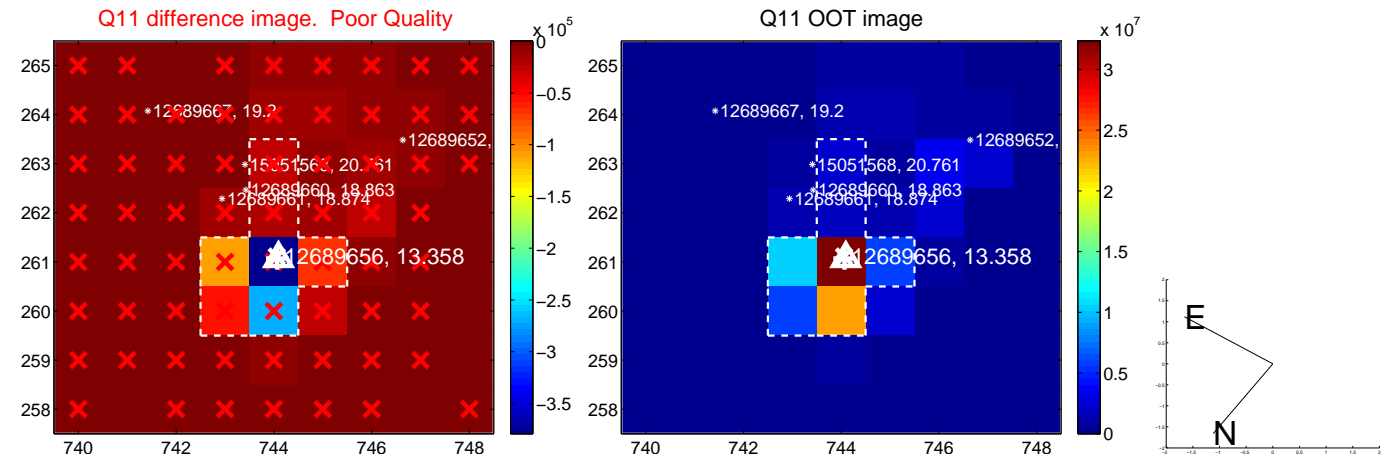
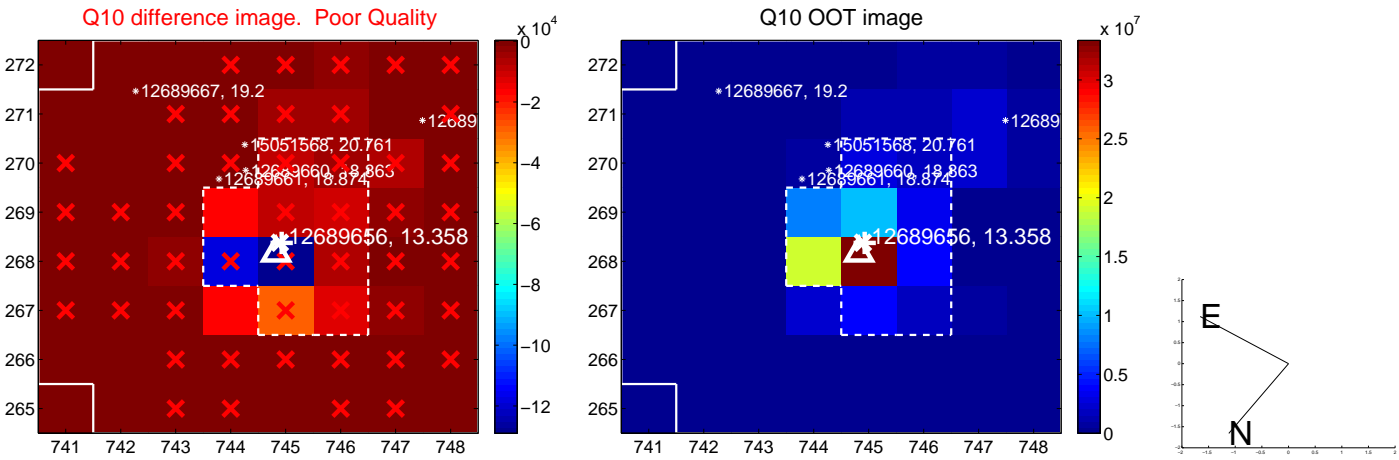
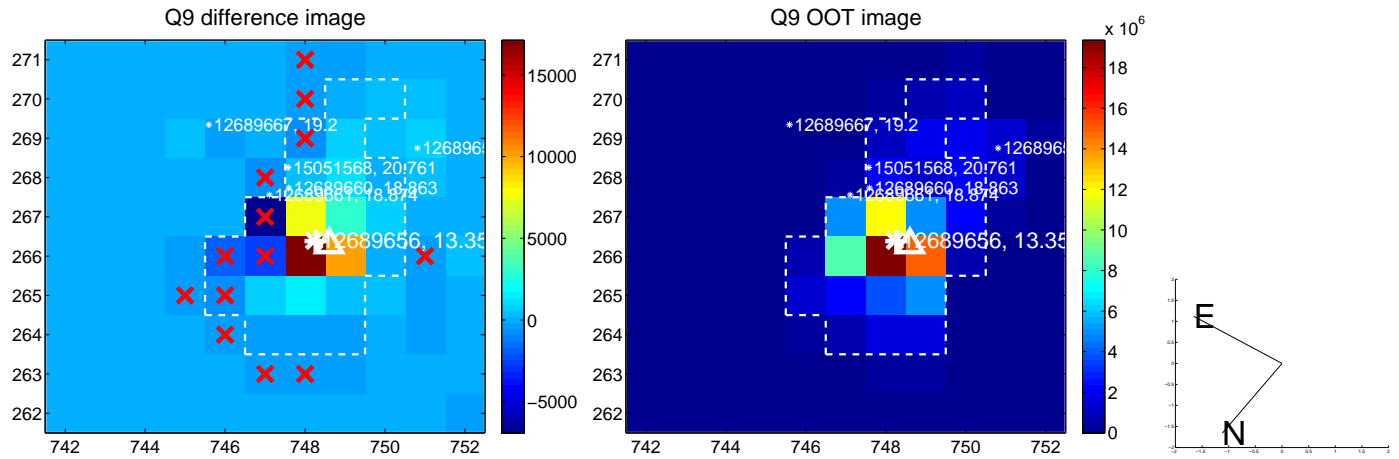
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



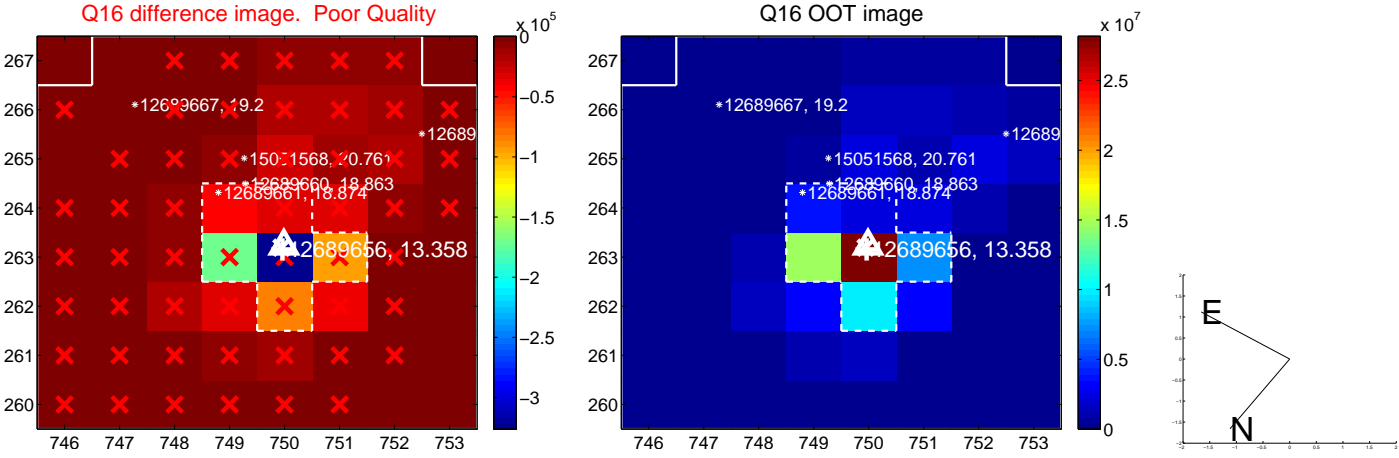
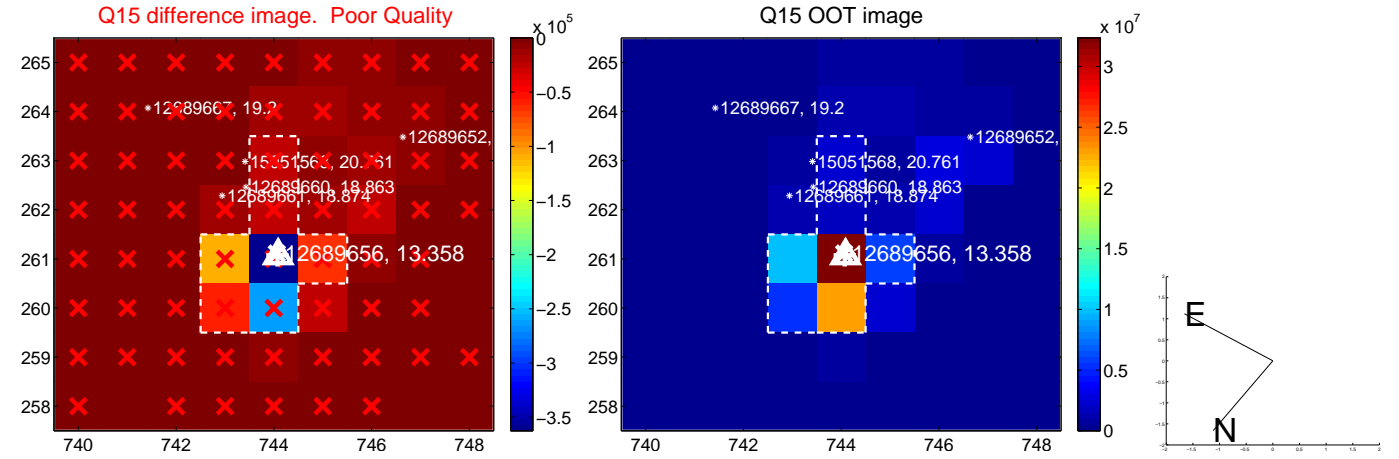
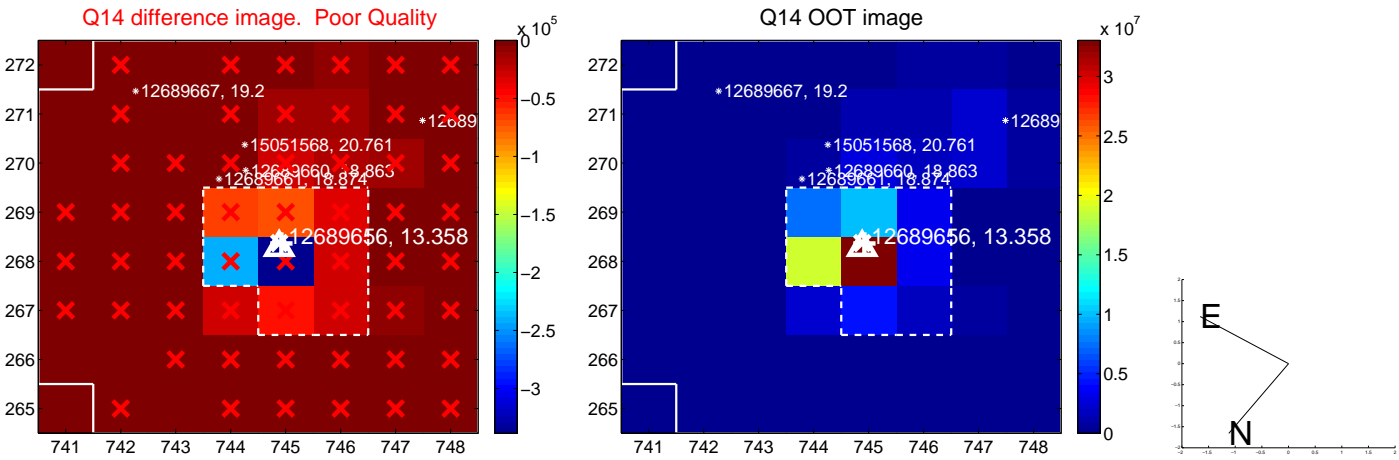
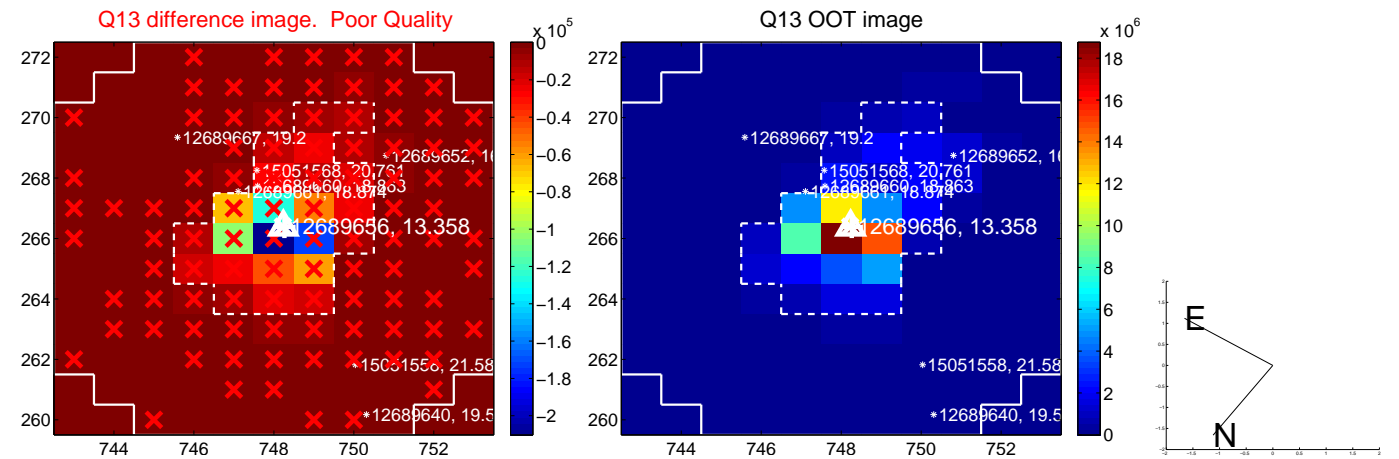
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



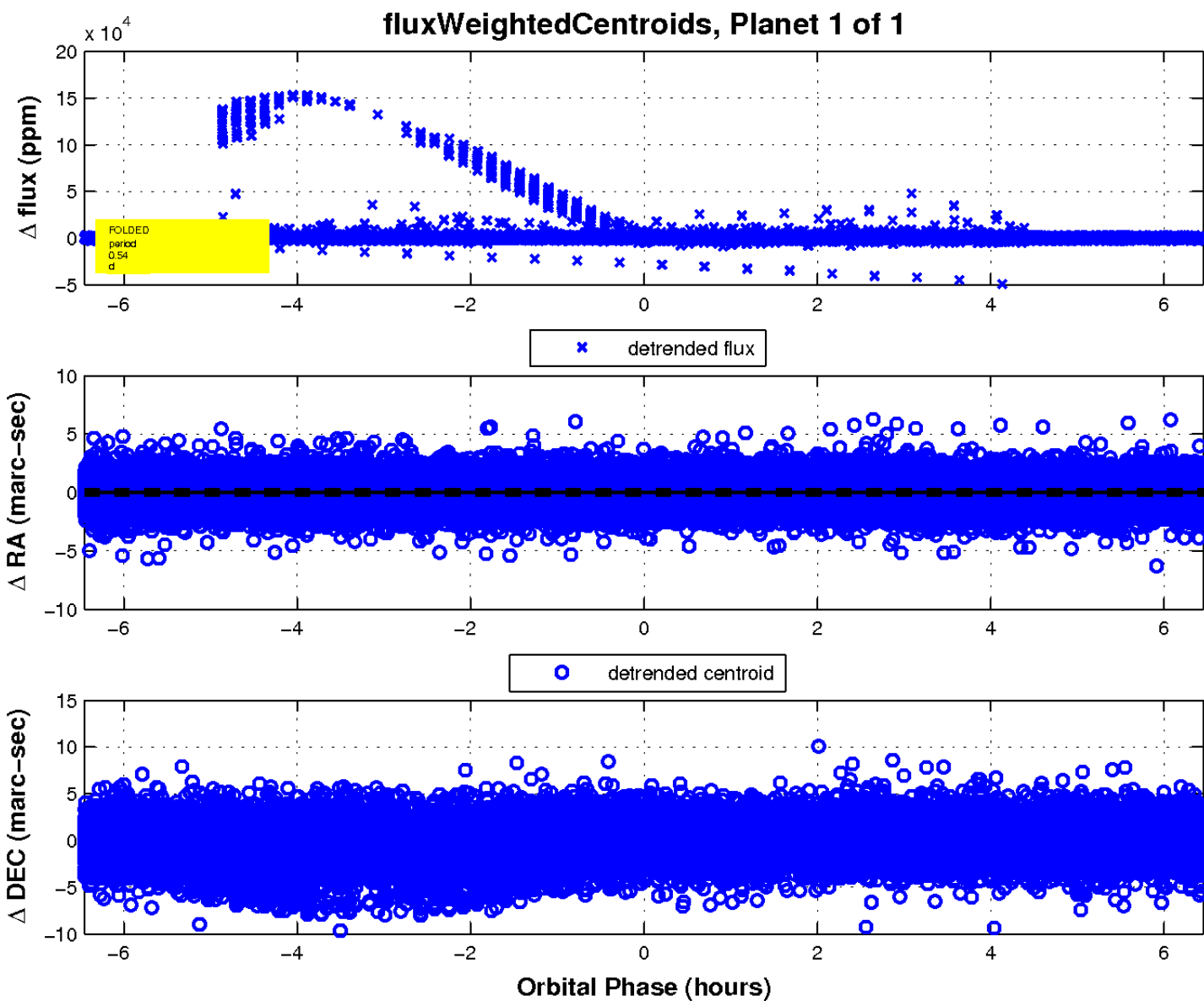
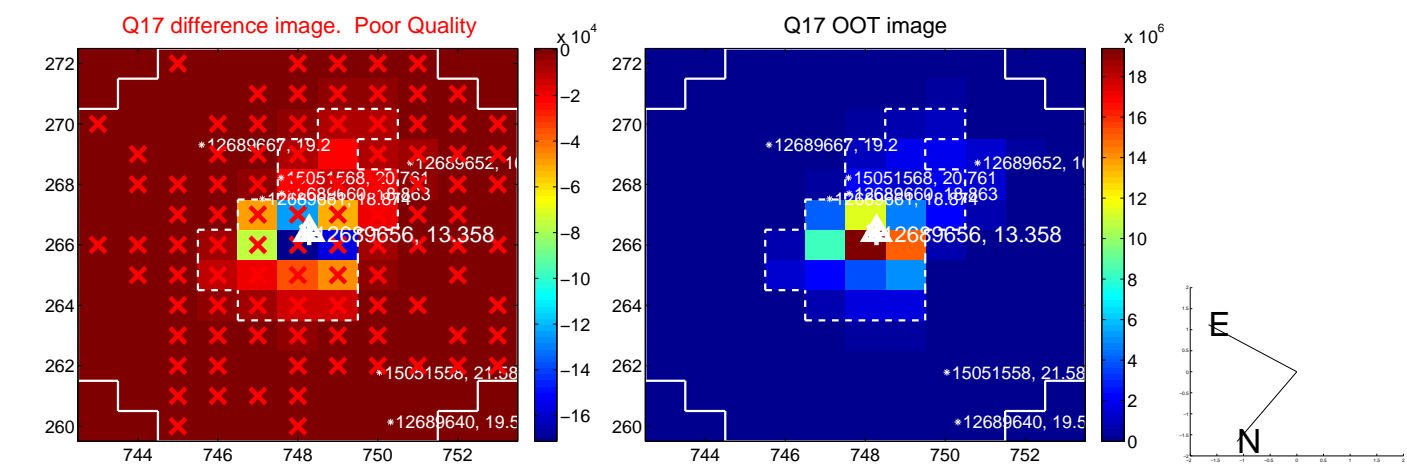
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

