

KIC 004679988

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})
004679988-01	OBS	No	5.386658	135.716385	40.8	31.456	11.2	8.9	1.62	6435	1.06	1136.43

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004679988-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS

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

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

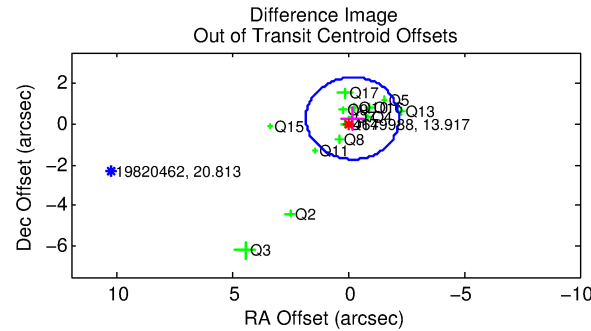
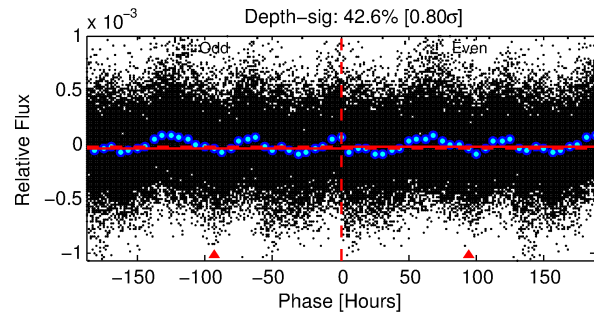
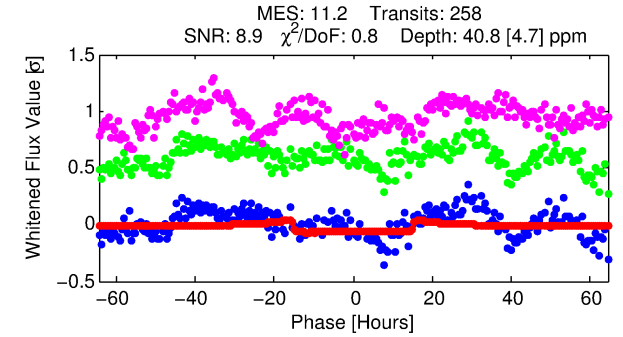
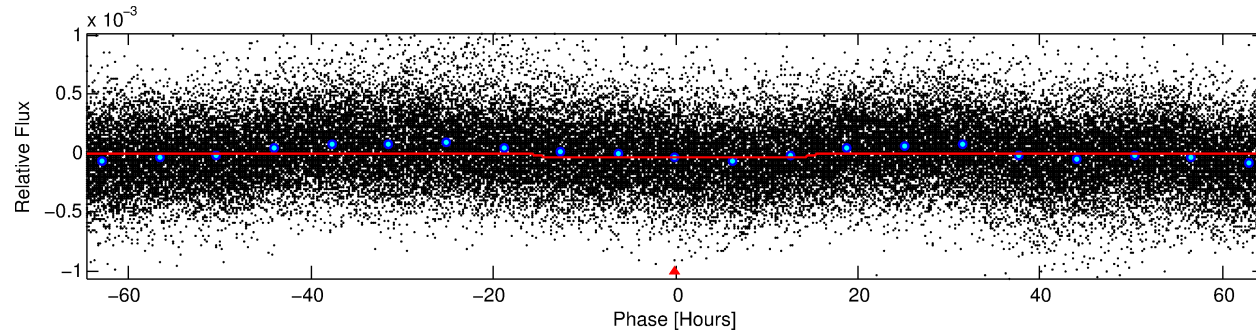
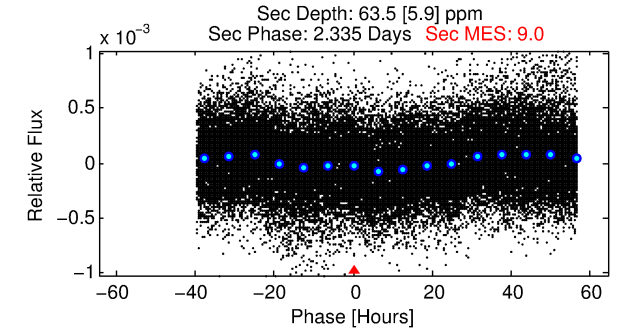
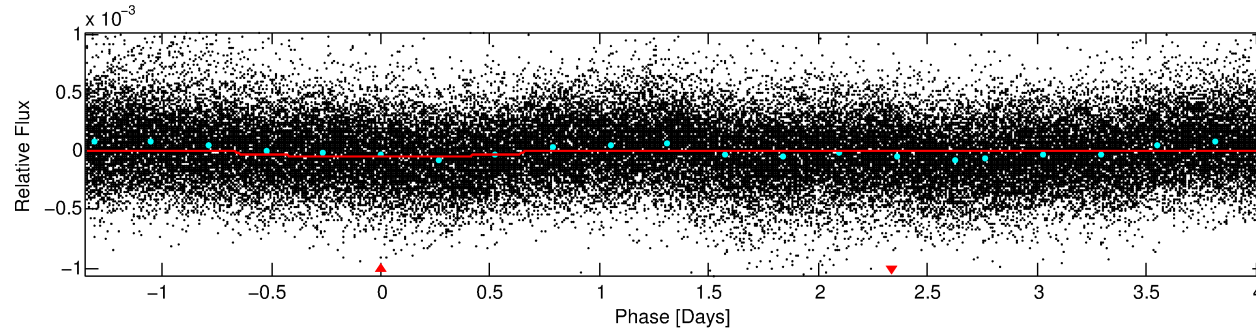
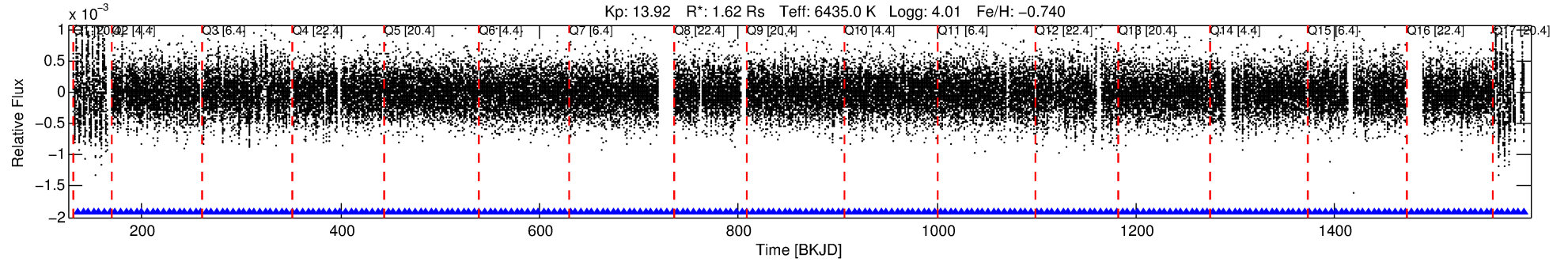
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004679988-01

No Significant Match Found

DV One-Page Summary

KIC: 4679988 Candidate: 1 of 1 Period: 5.387 d



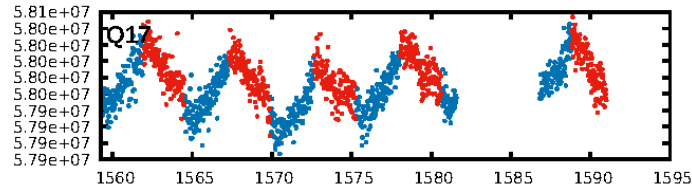
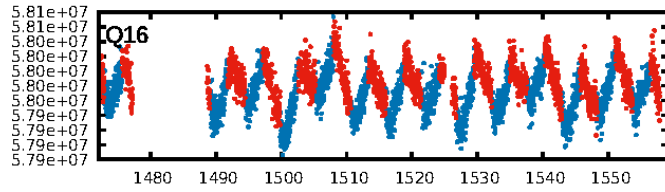
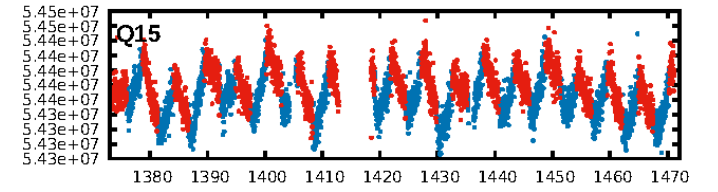
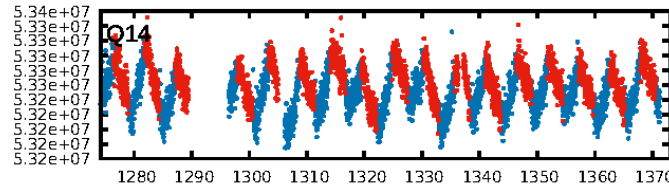
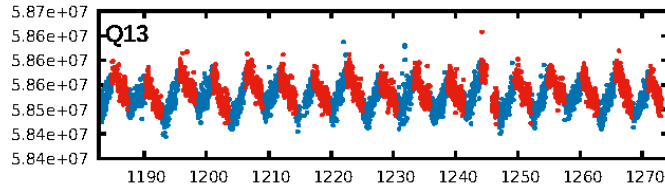
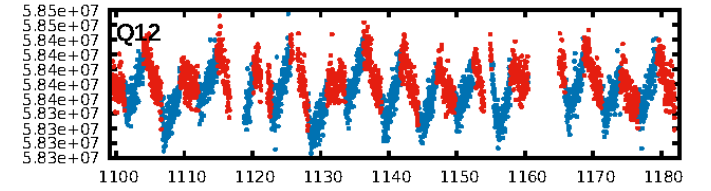
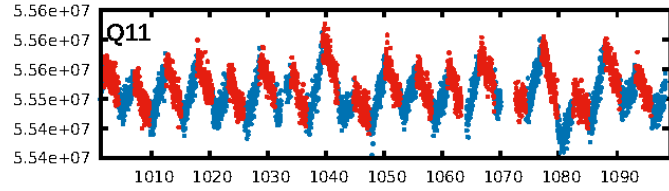
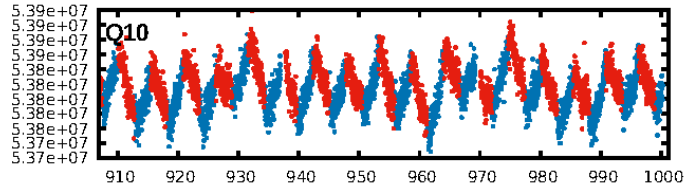
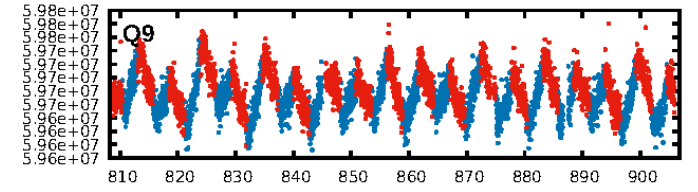
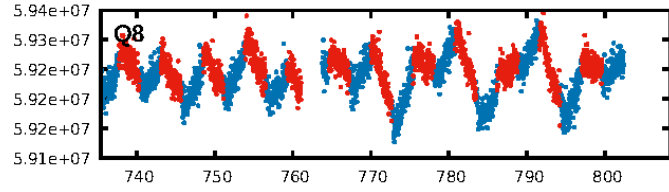
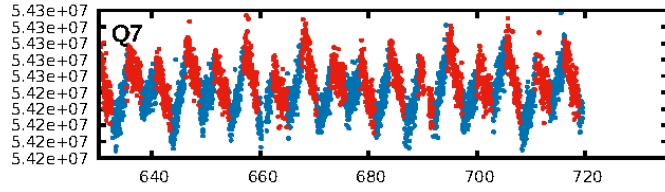
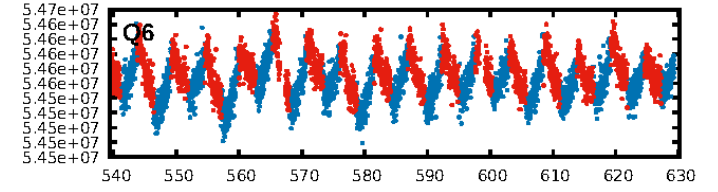
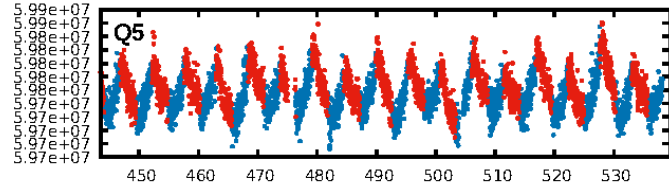
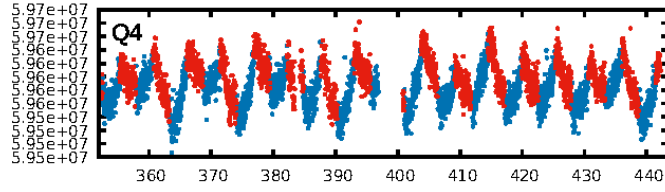
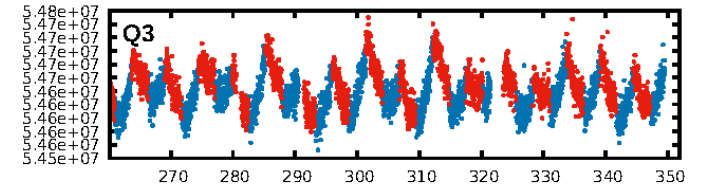
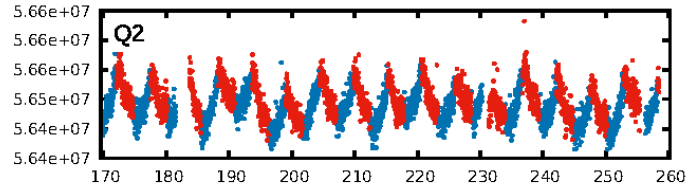
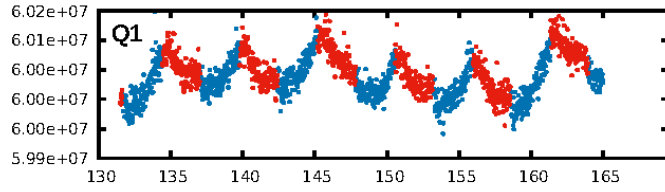
DV Fit Results:

Period = 5.38666 [0.00012] d
Epoch = 135.7164 [0.0158] BKJD
Rp/R* = 0.0060 [0.0029]
a/R* = 1.38 [1.70]
b = 0.44 [4.78]
Seff = 1136.43 [805.76]
Teq = 1481 [262] K
Rp = 1.06 [0.65] Re
a = 0.0597 [0.0247] AU
Ag = 109.77 [129.62] [0.84σ]
Teffp = 7409 [1788] K [3.28σ]

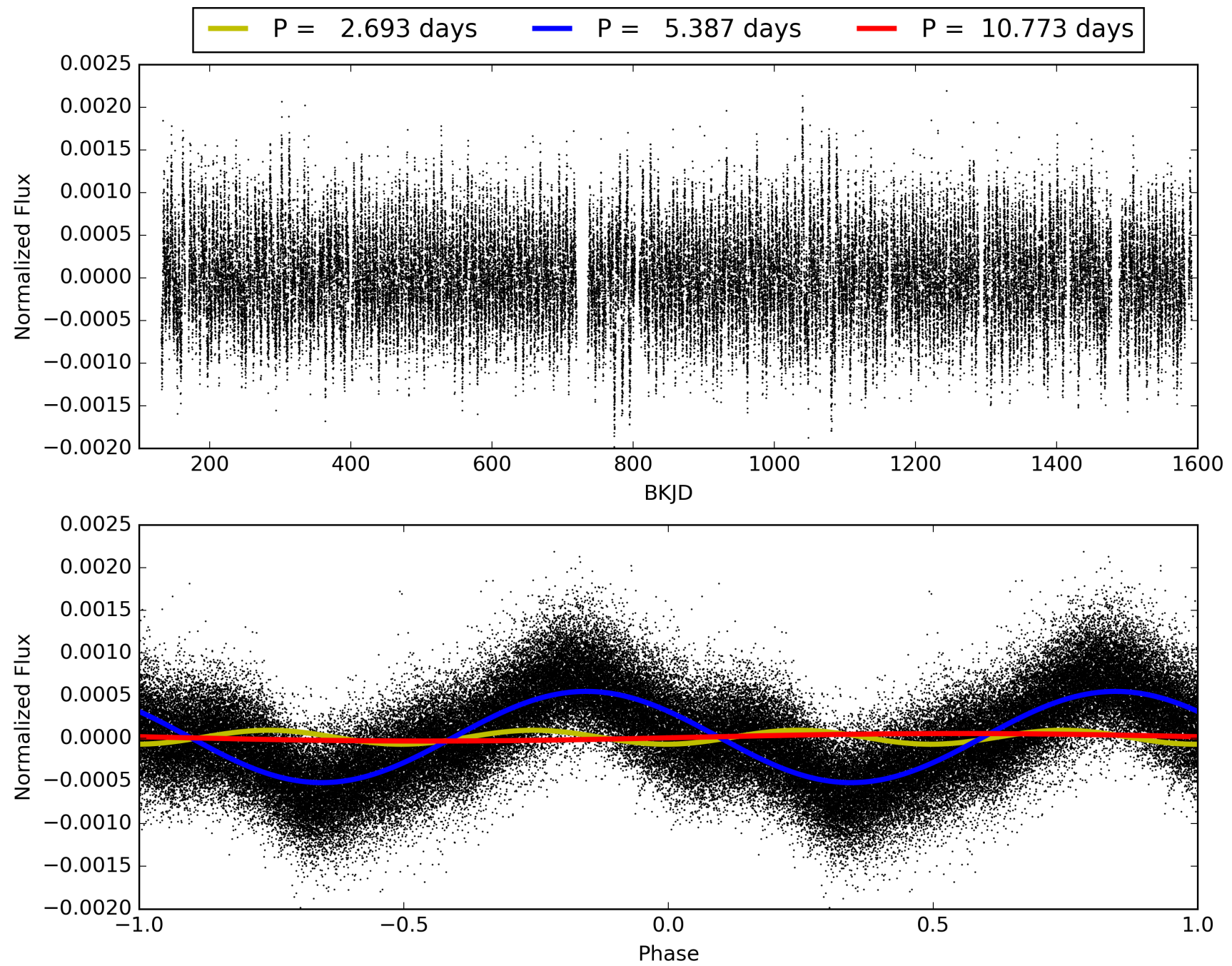
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.68e-31
RollingBand-fgt: 1.00 [247/247]
GhostDiagnostic-chr: 1.636
Centroid-sig: 0.0%
Centroid-so: 3.062 arcsec [1.93σ]
OotOffset-rm: 0.317 arcsec [0.47σ]
KicOffset-rm: 0.225 arcsec [0.31σ]
OotOffset-st: 3/4/3/4 [14]
KicOffset-st: 3/4/3/4 [14]
DiffImageQuality-fgm: 0.00 [0/14]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 004679988-01, PDC Light Curves

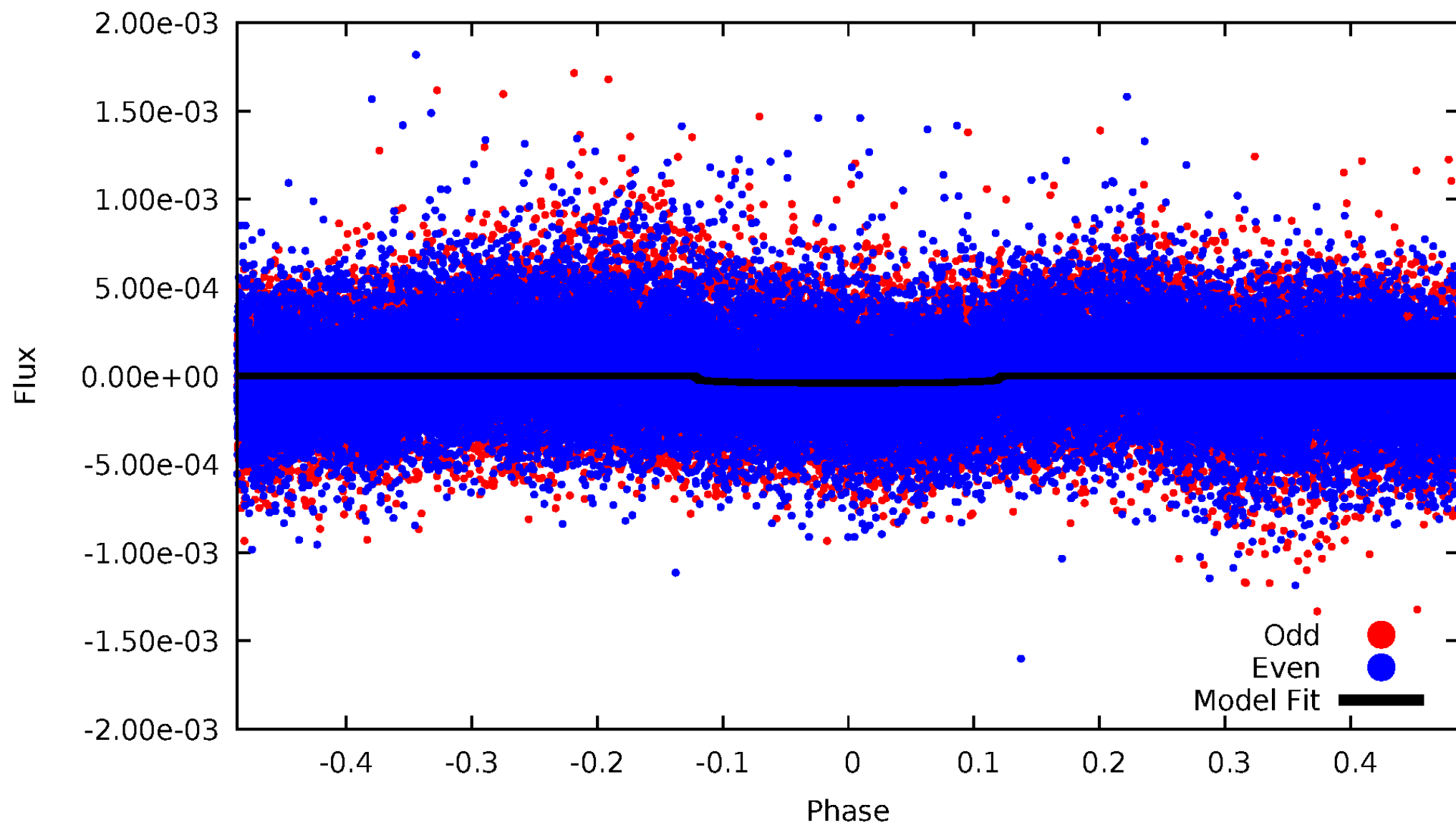


TCE 004679988-01



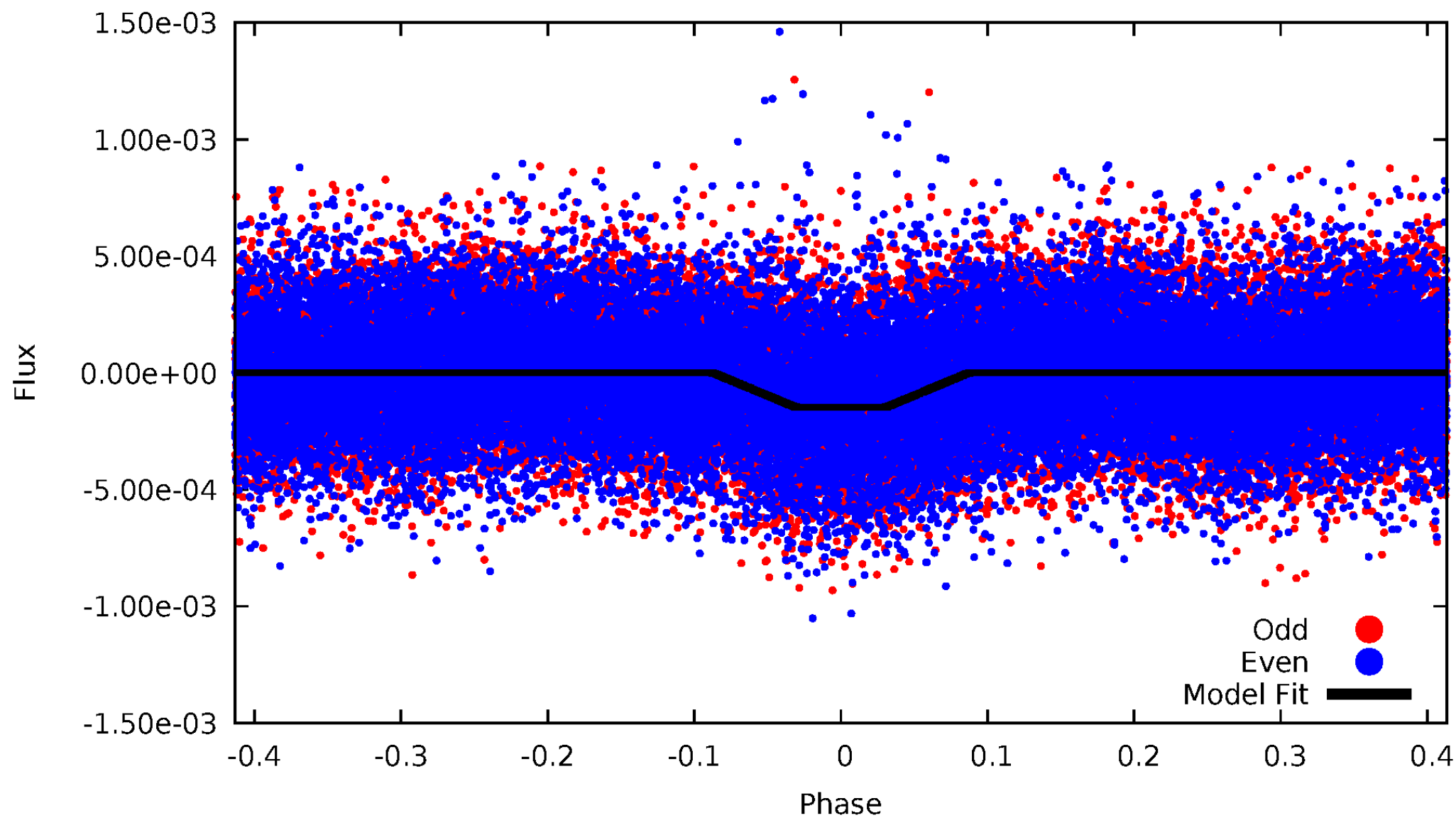
DV Odd/Even

TCE 004679988-01



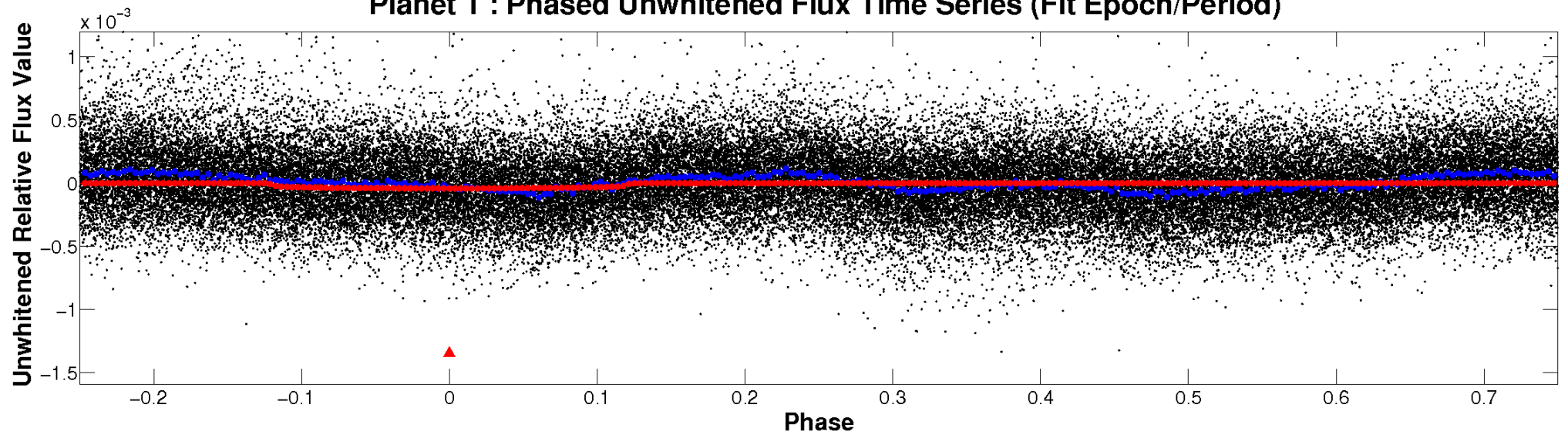
ALT Odd/Even

TCE 004679988-01

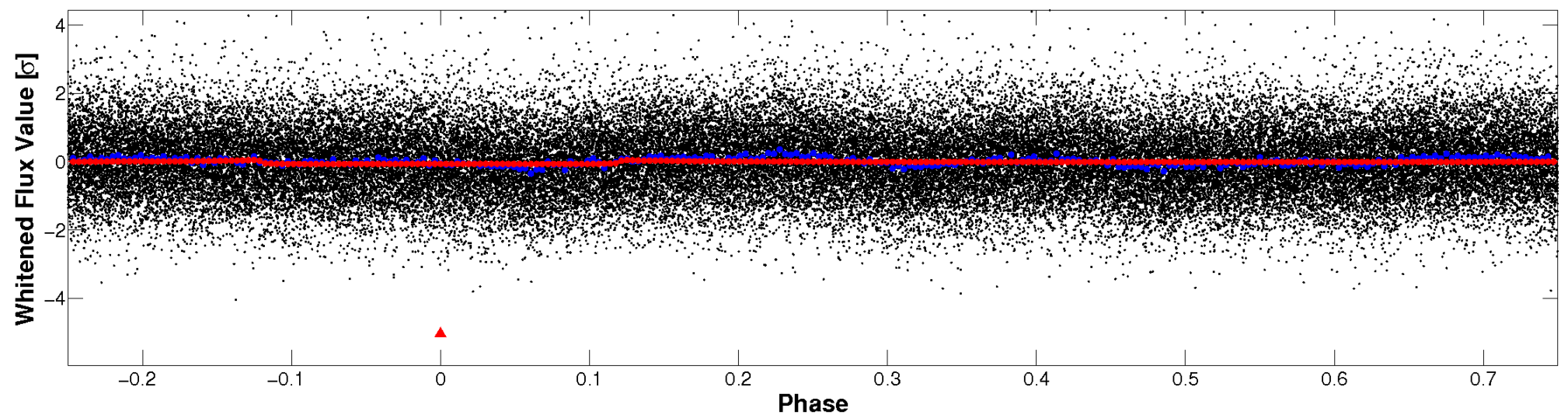


Non-Whitened Vs. Whitened Light Curve

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

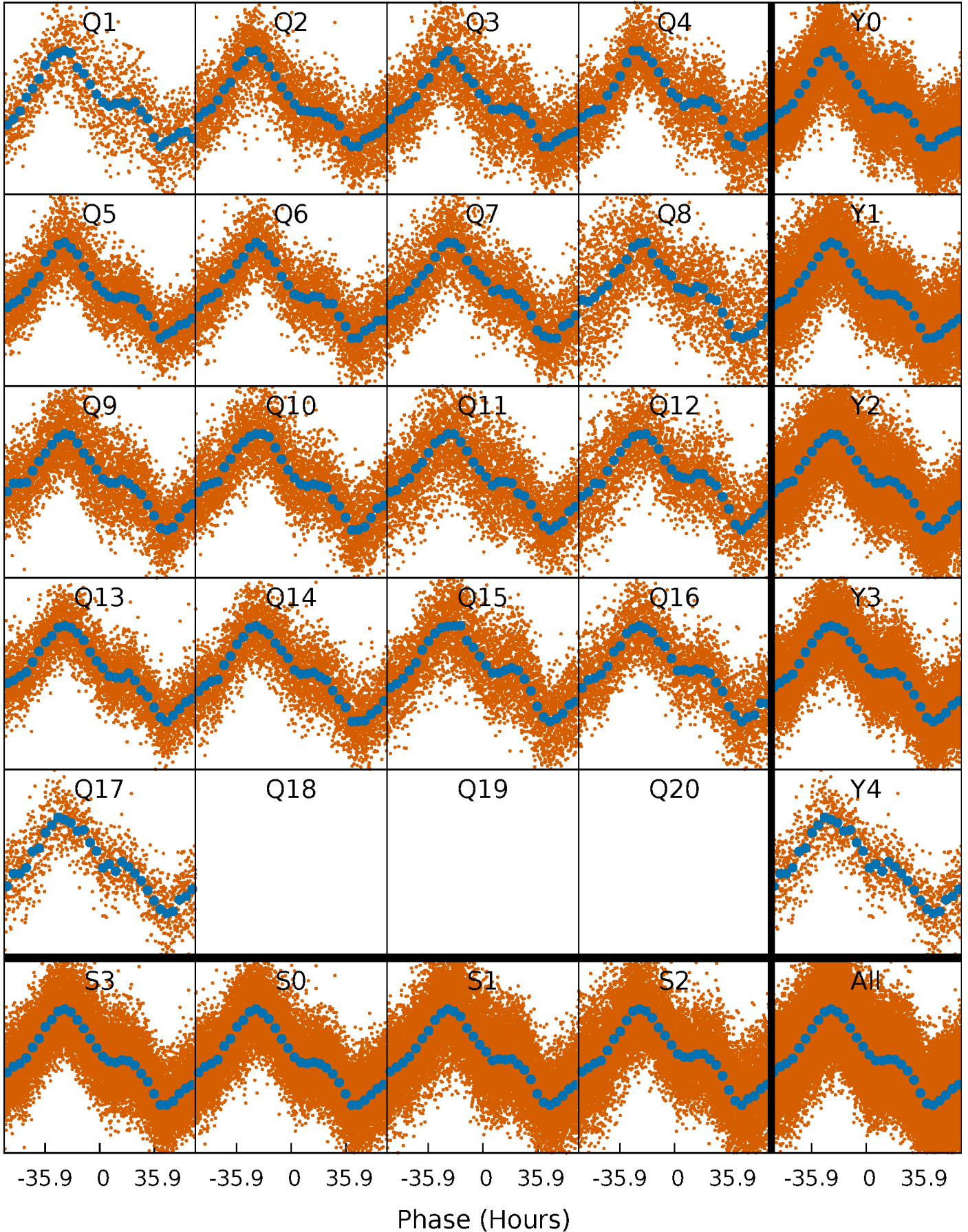


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



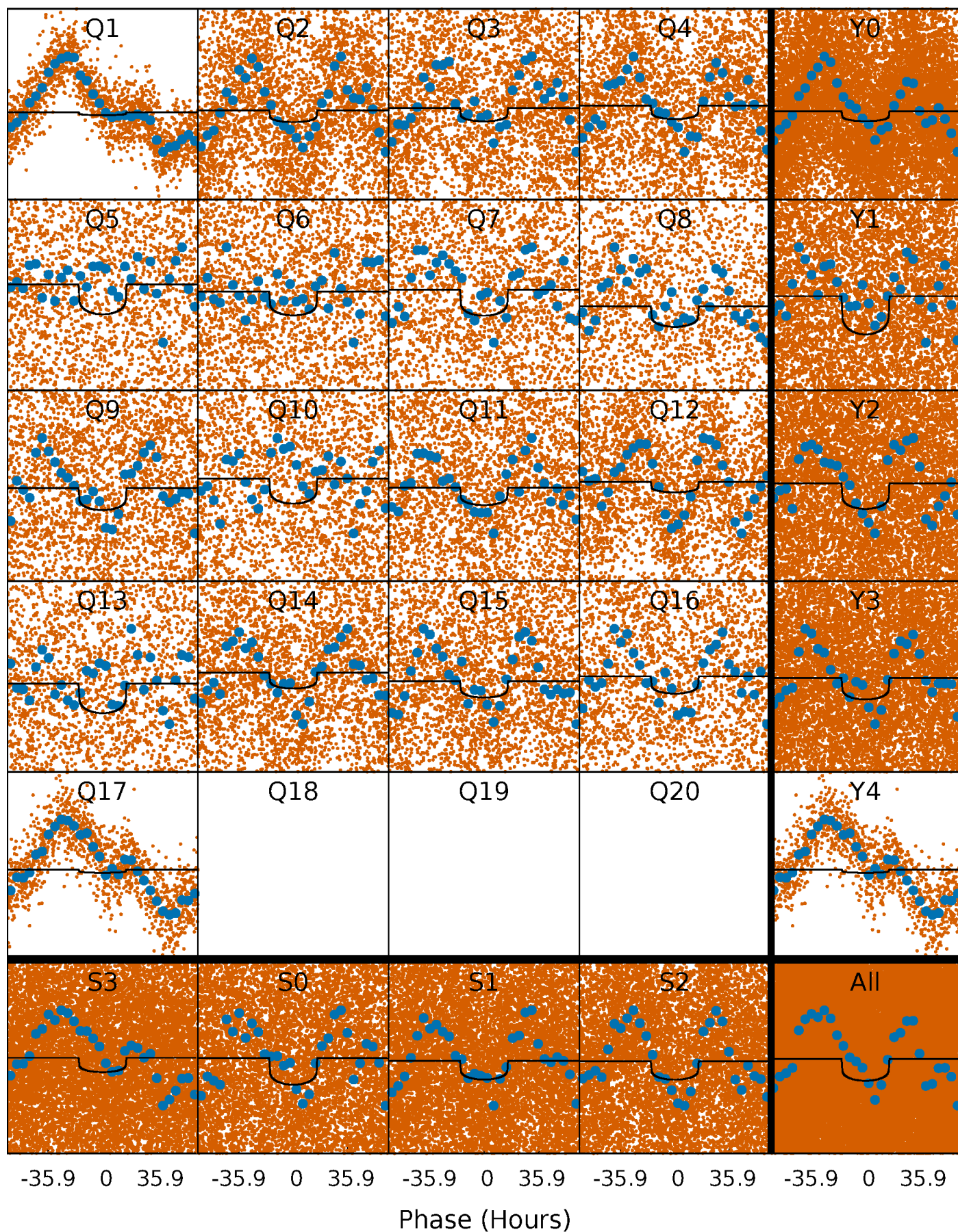
PDC Quarter-Phased Transit Curves

TCE 004679988-01 P= 5.386658 Days $T_0=135.716385$ (BKJD)



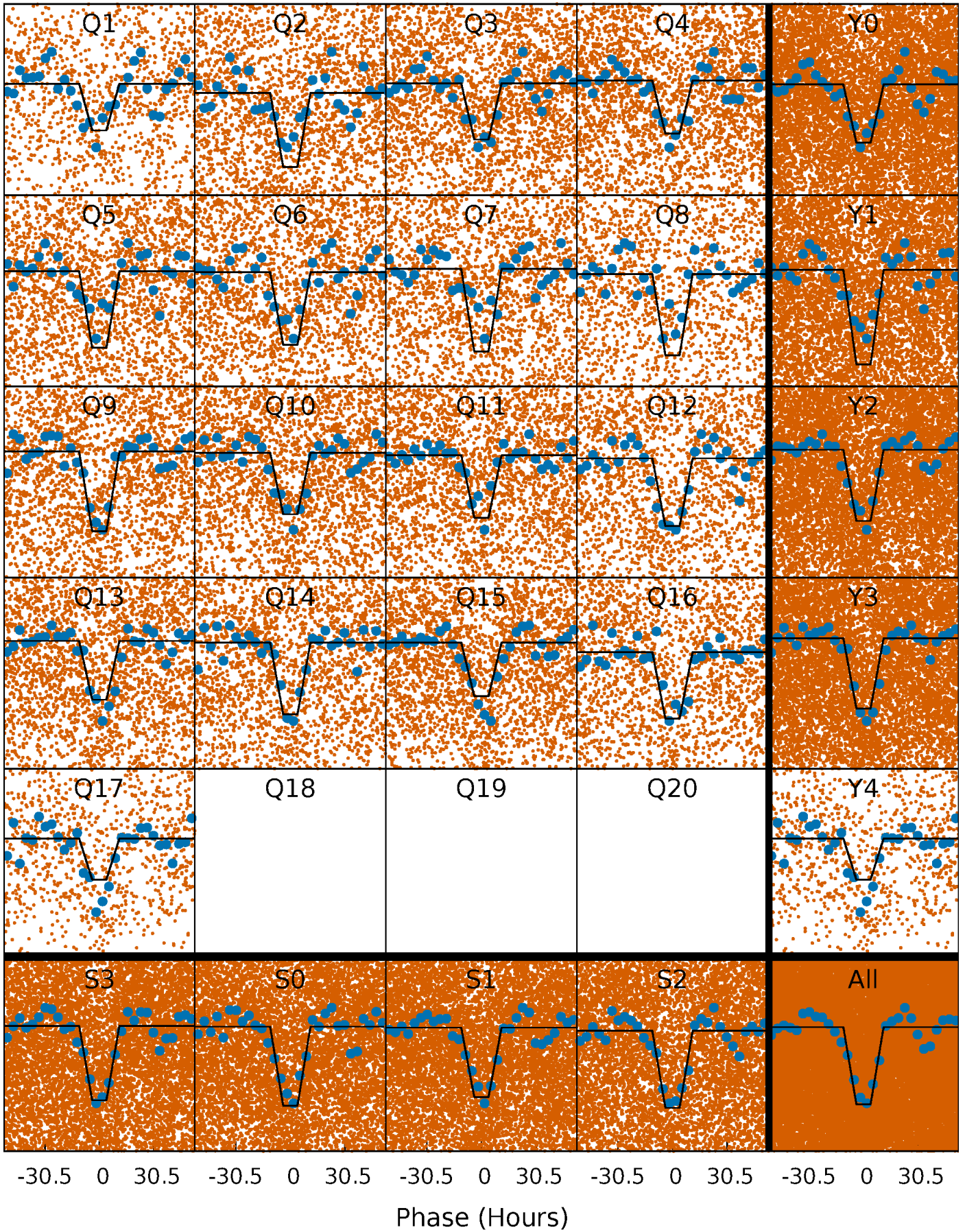
DV Quarter-Phased Transit Curves

TCE 004679988-01 P= 5.386658 Days $T_0=135.716385$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

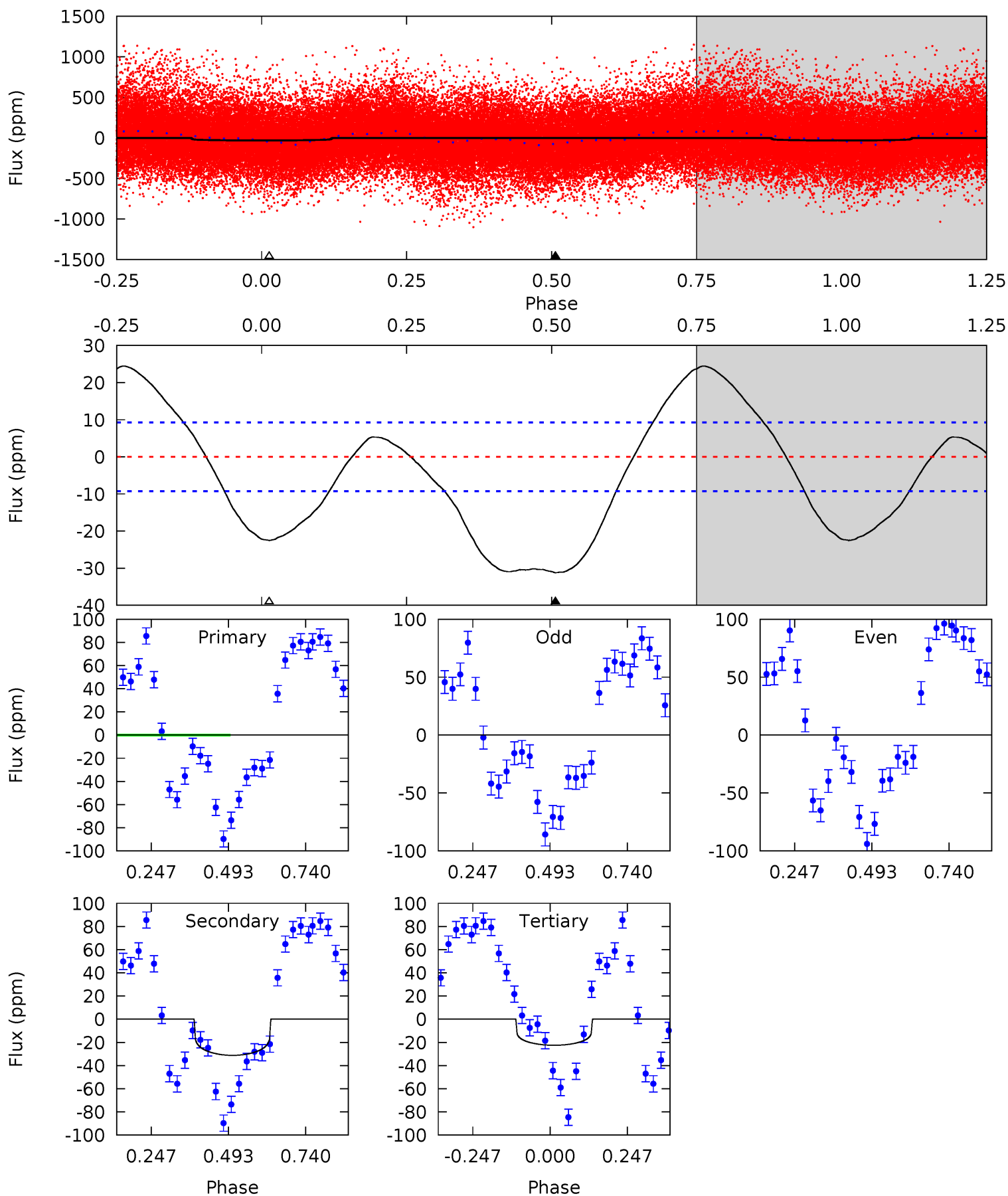
TCE 004679988-01 P= 5.386118 Days $T_0=136.023298$ (BKJD)



DV Model-Shift Uniqueness Test

004679988-01, P = 5.386658 Days, E = 130.329727 Days

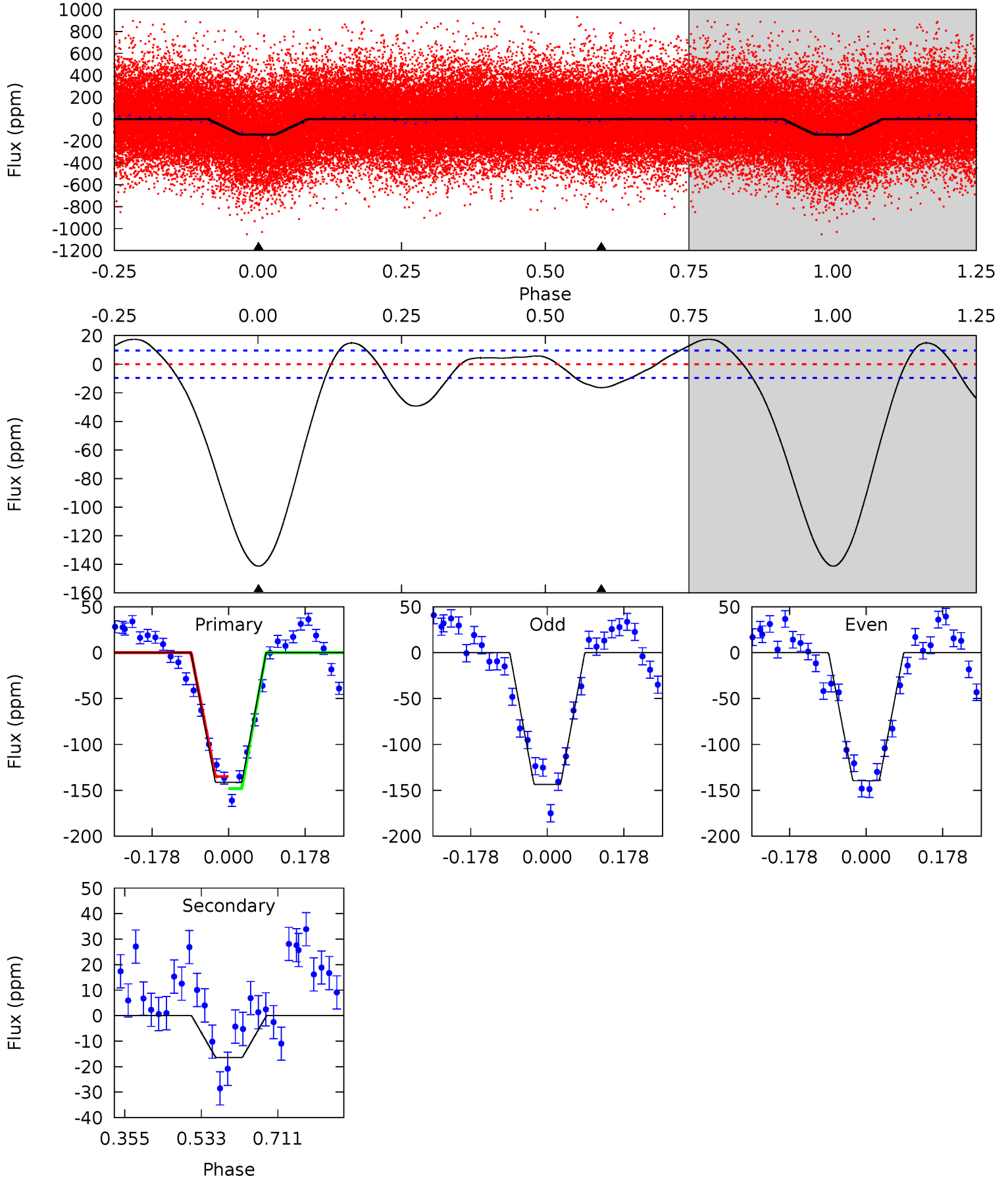
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.7	14.7	10.6	0	4.37	1.16	6.74	4.10	14.7	4.10	14.7	1.47	1.03	0.44	12.5



Alt Model-Shift Uniqueness Test

004679988-01, P = 5.386118 Days, E = 130.637180 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
65.8	7.66	0	0	4.44	1.35	7.05	65.8	65.8	7.66	7.66	0.96	1.00	0.11	3.05



Stellar Parameters For KIC 004679988

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6435^{+182}_{-228}	$4.007^{+0.420}_{-0.140}$	$-0.740^{+0.300}_{-0.300}$	$1.623^{+0.420}_{-0.630}$	$0.977^{+0.122}_{-0.134}$	$0.322^{+0.998}_{-0.145}$
	+3%/-4%	+10%/-3%	+41%/-41%	+26%/-39%	+12%/-14%	+310%/-45%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 004679988-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-31 ± 2	$0.96^{+0.54}_{-0.43}$	2025^{+161}_{-242}	6219^{+2309}_{-1030}	65^{+140}_{-39}
Alt.	-16 ± 2	$2.00^{+0.67}_{-0.60}$	2021^{+167}_{-218}	4014^{+432}_{-313}	$8.220^{+8.225}_{-3.618}$

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 $A_{obs} \gg 1.0$

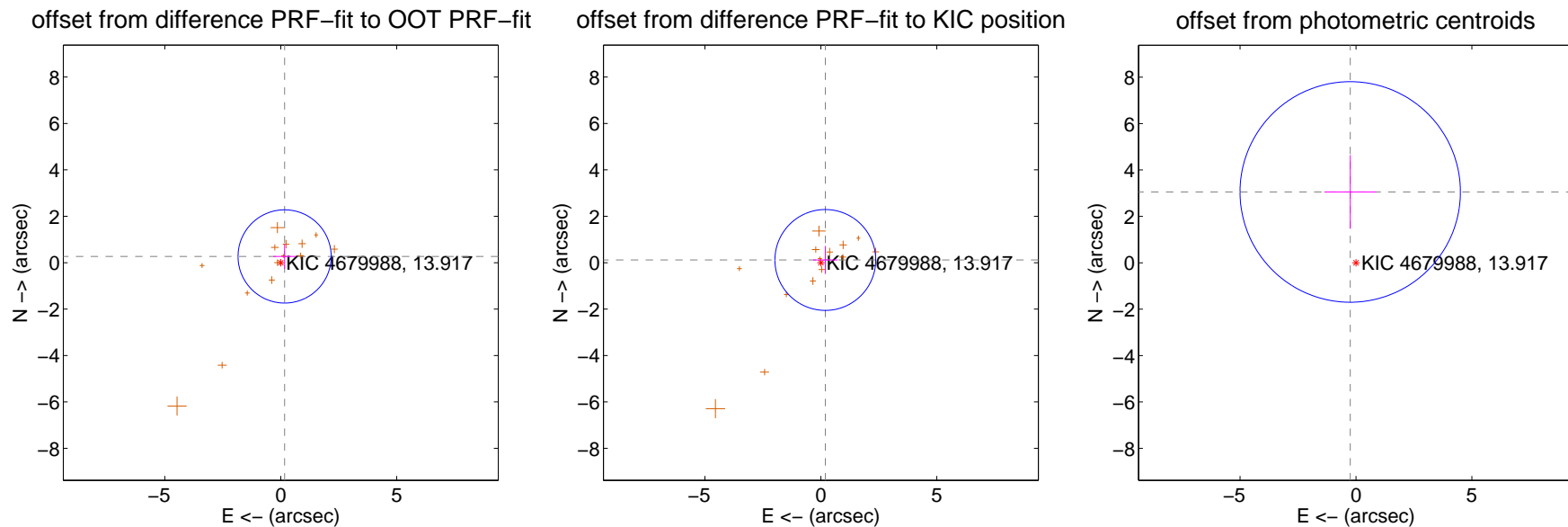
DV Centroid Data

Supplemental centroid analysis for 004679988-01. Kepler magnitude: 13.92. Transit SNR 8.93

There are 0 quarters with good PRF difference image offsets

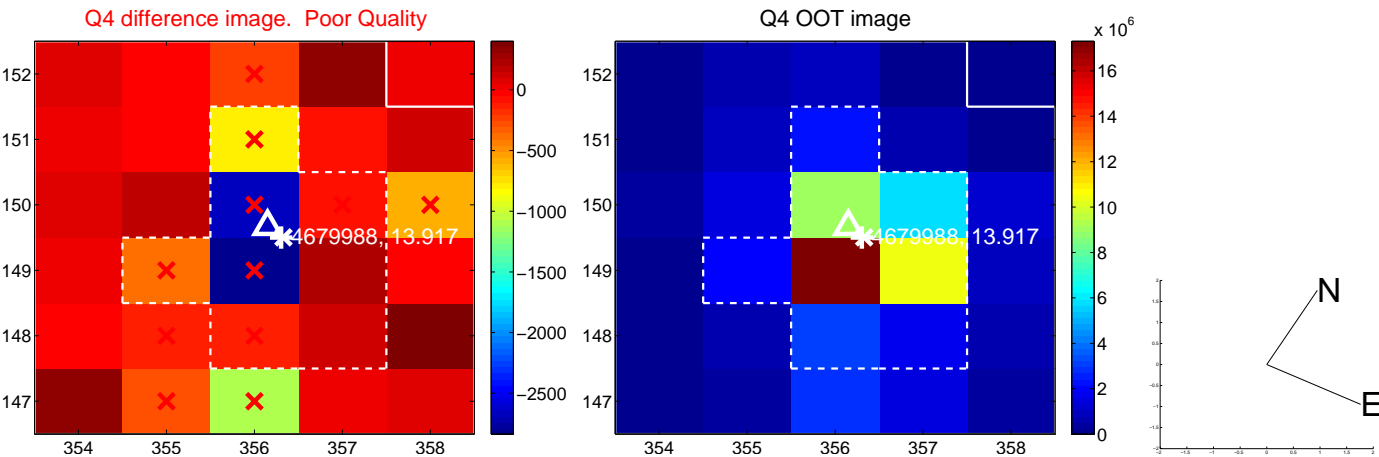
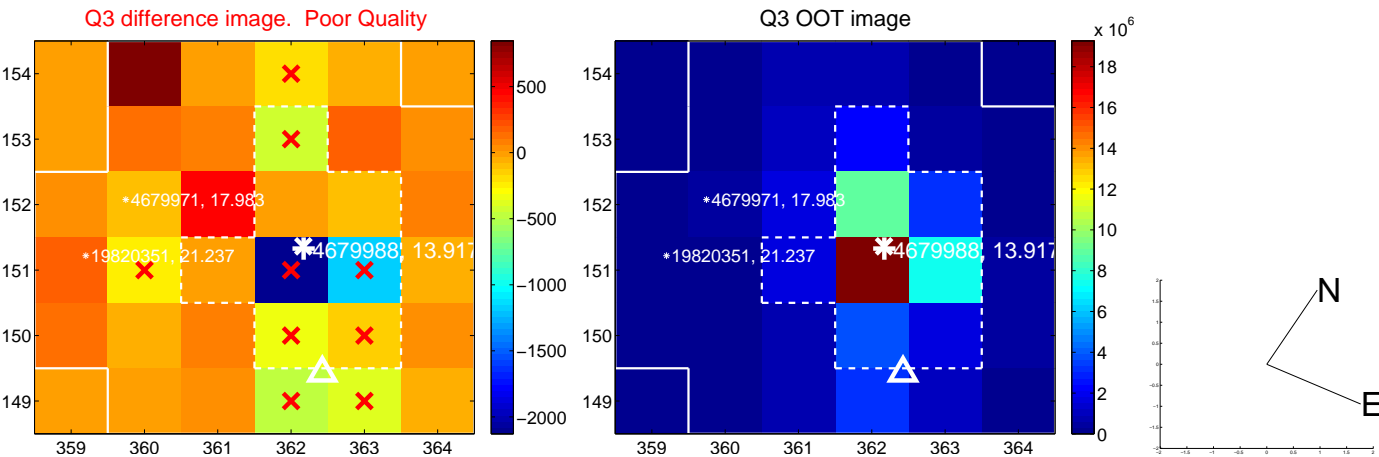
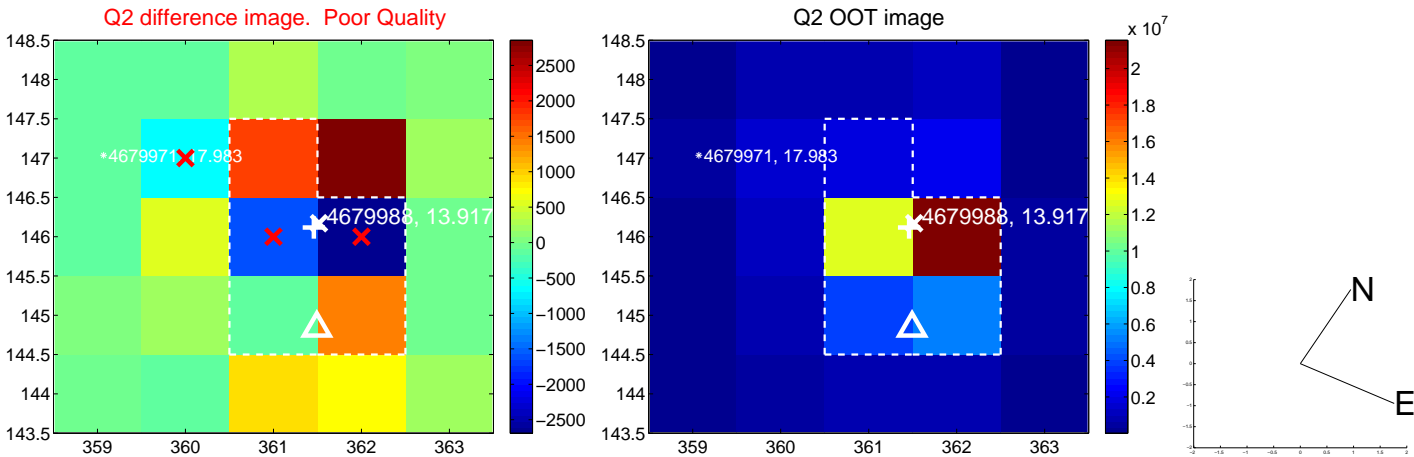
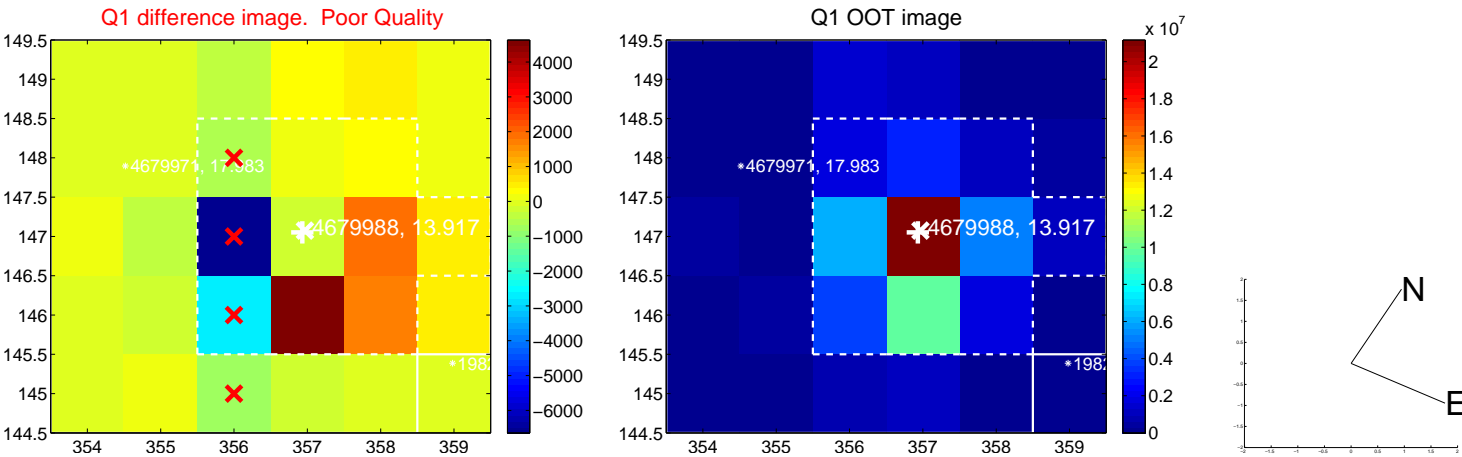
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.317 ± 0.670	0.47	-0.167 ± 0.485	0.270 ± 0.540
PRF-fit source offset from KIC position	0.225 ± 0.725	0.31	-0.192 ± 0.527	0.117 ± 0.598
photometric centroid source offset	3.06 ± 1.58	1.93	0.25 ± 1.12	3.05 ± 1.59

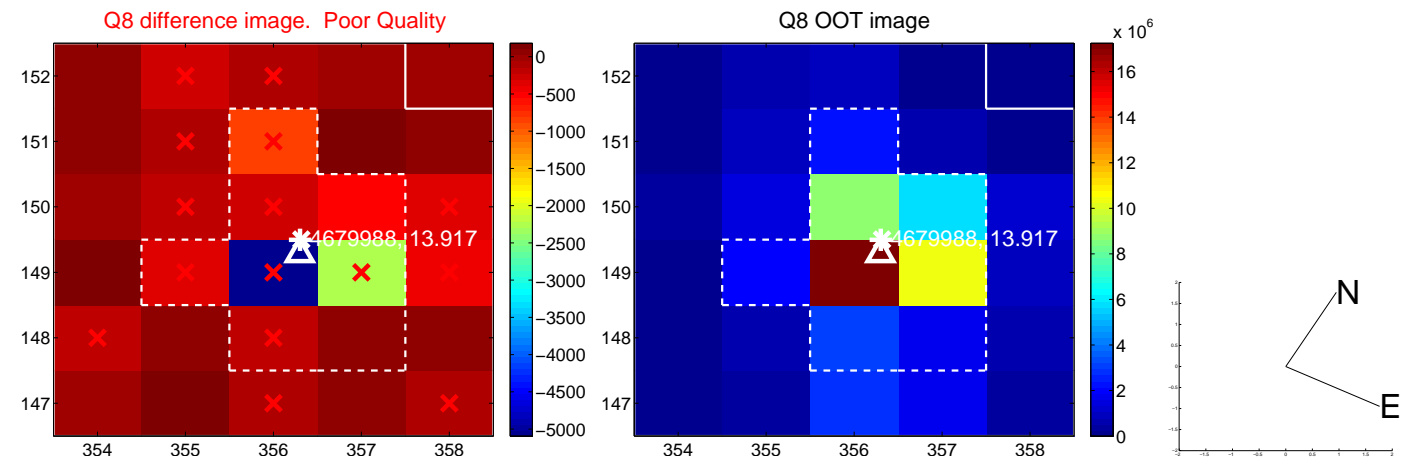
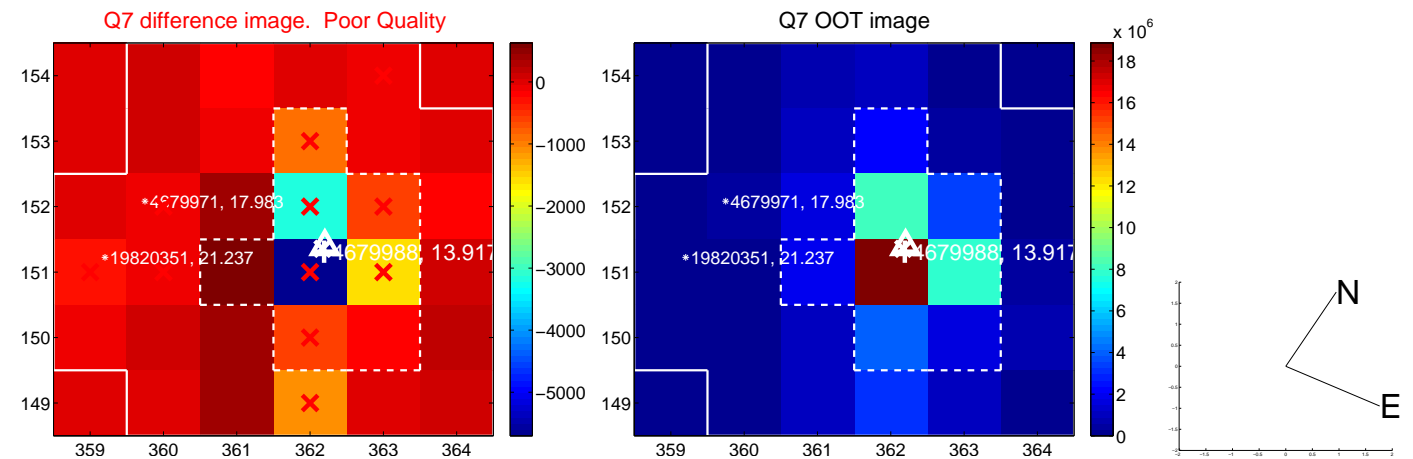
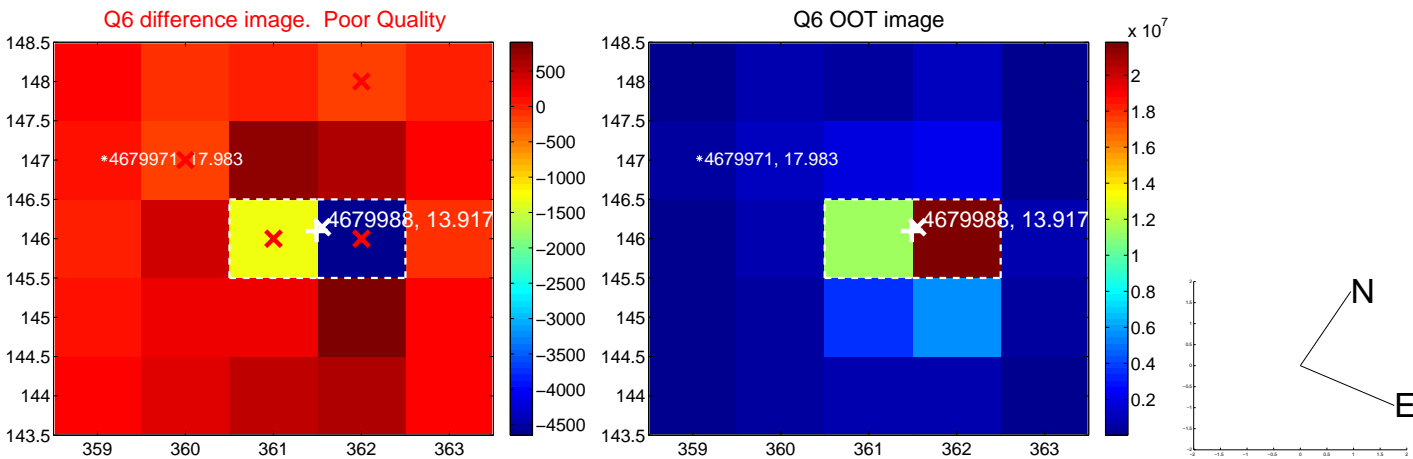
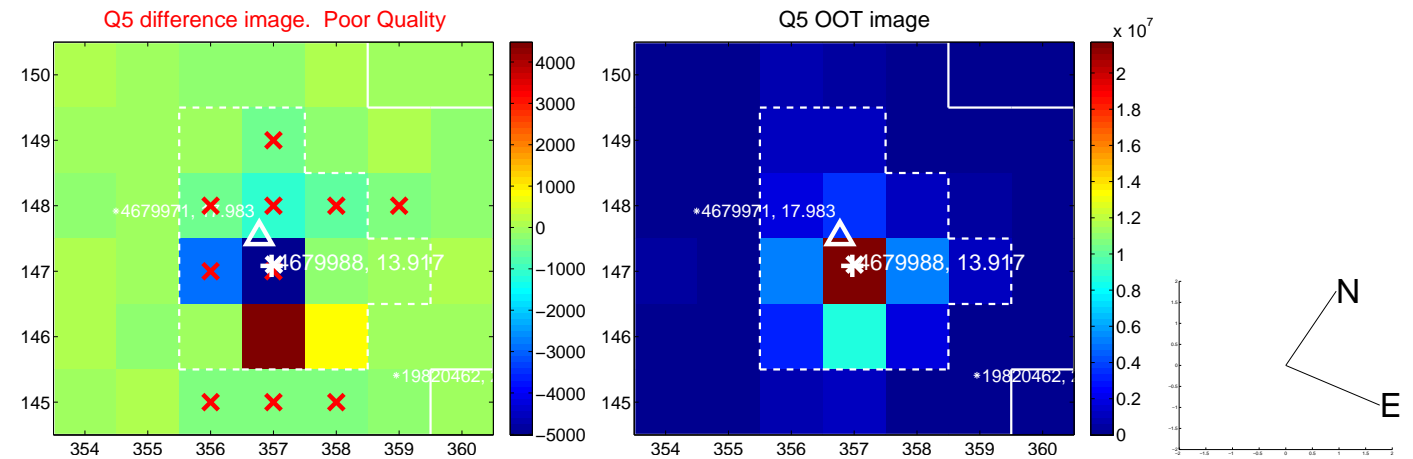


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

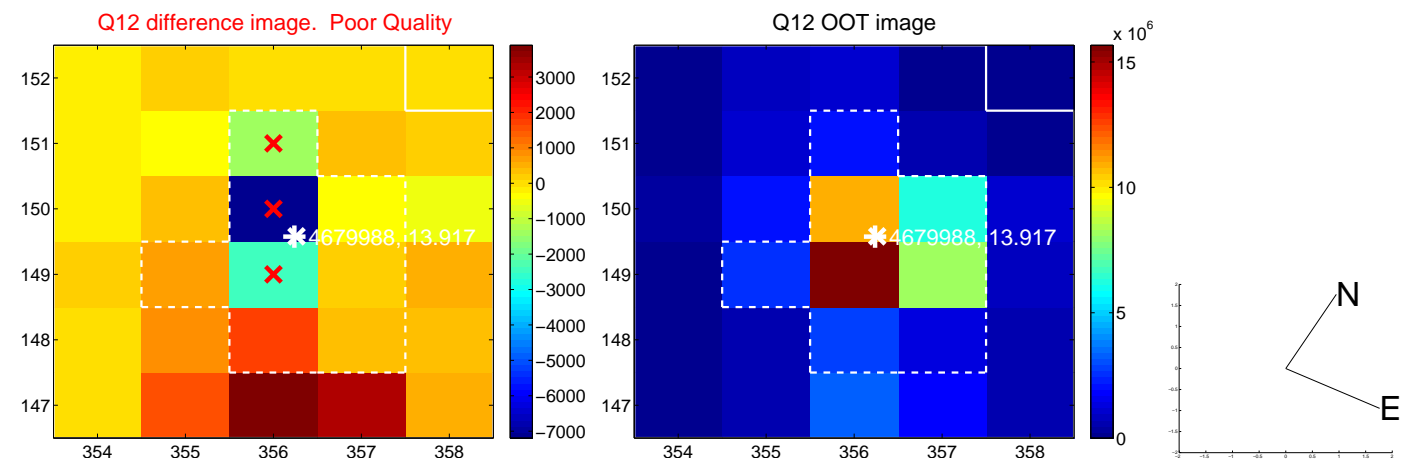
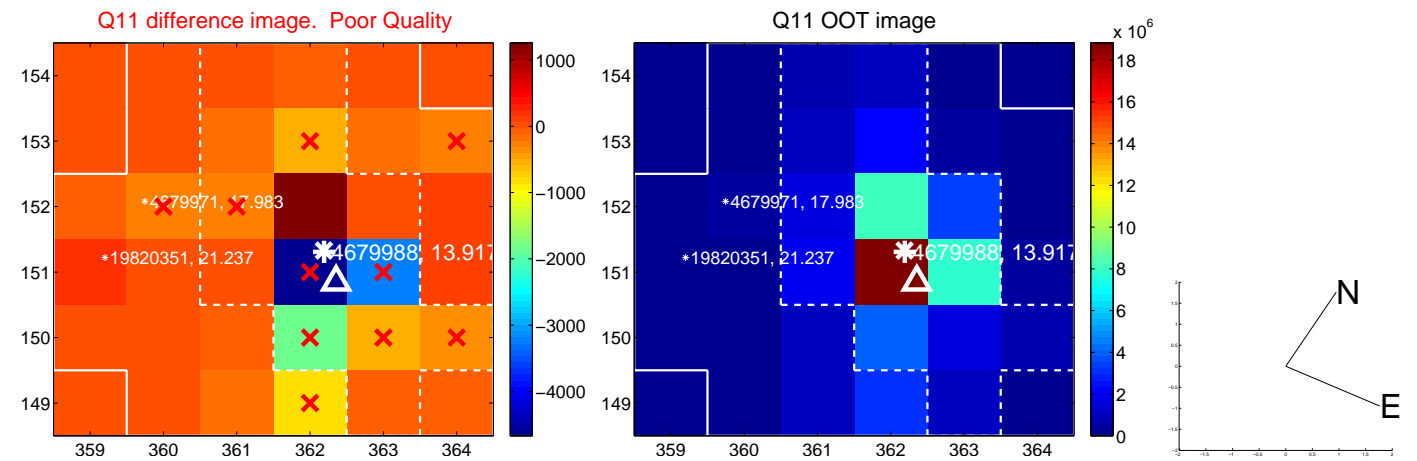
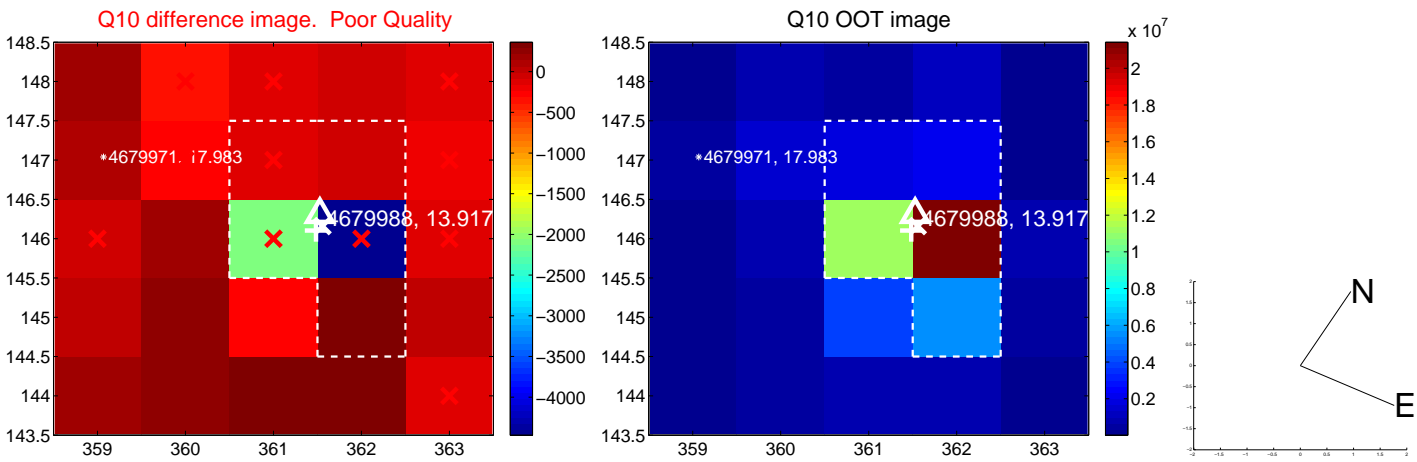
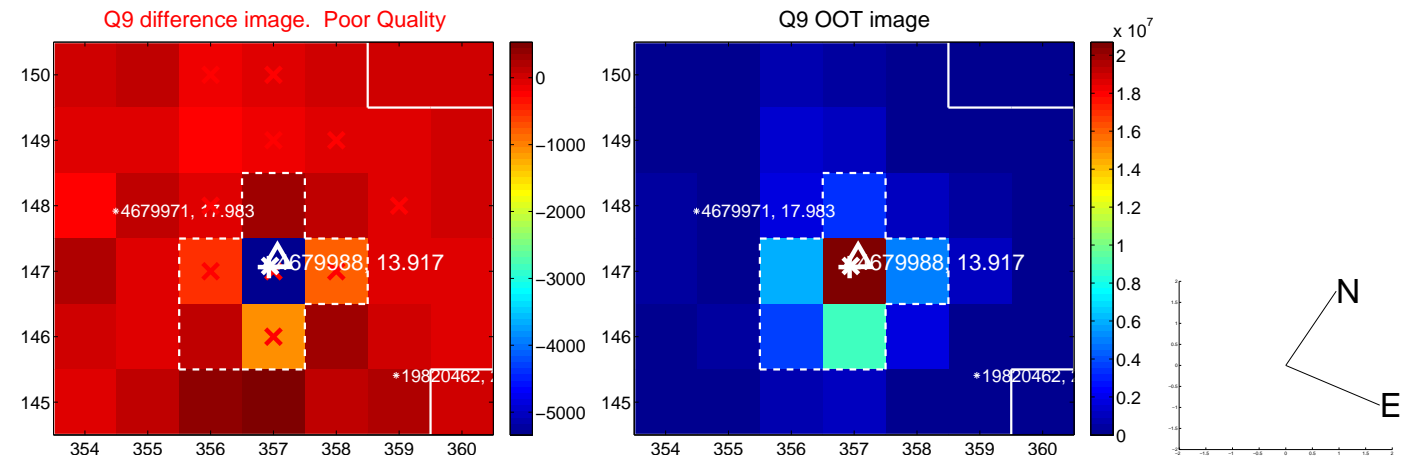
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



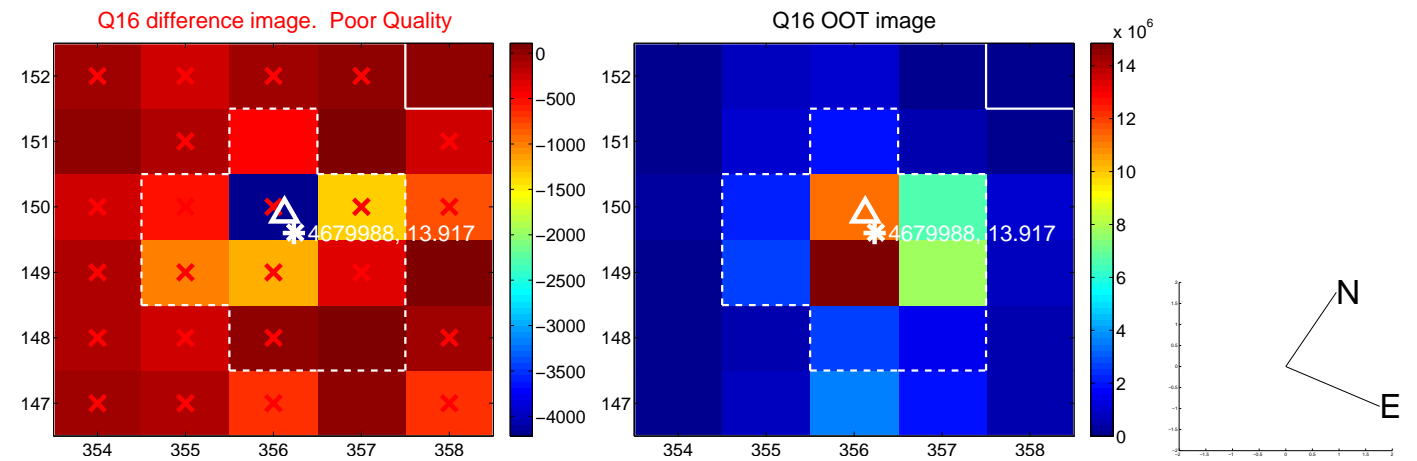
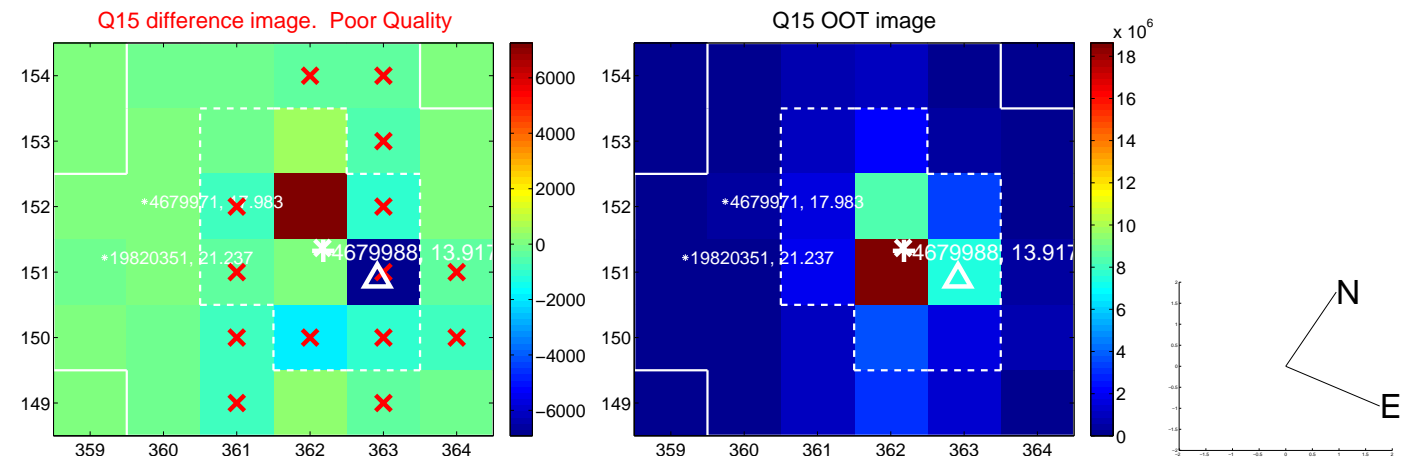
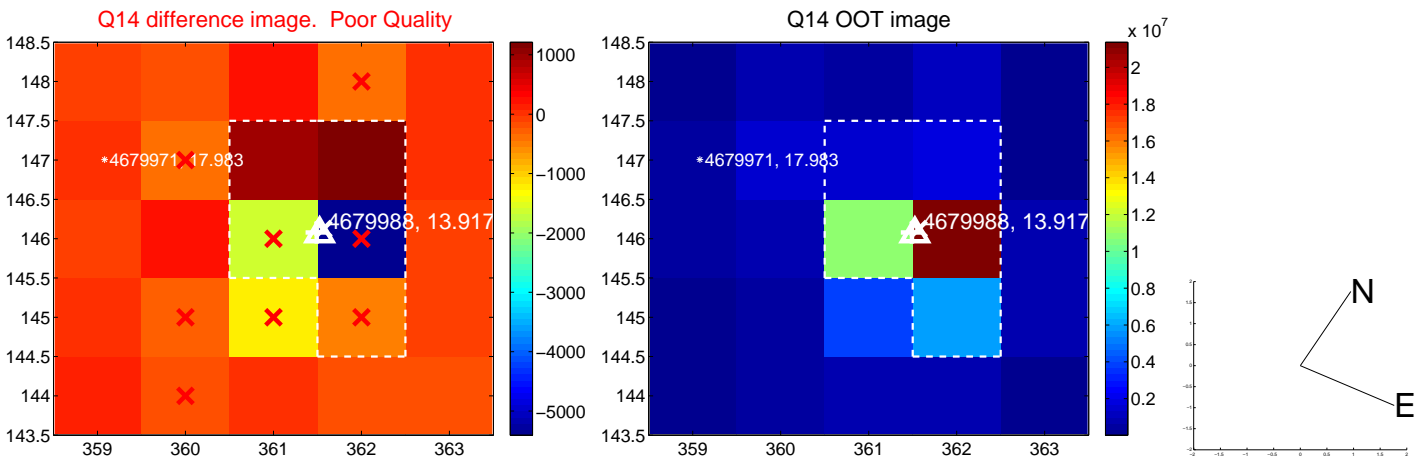
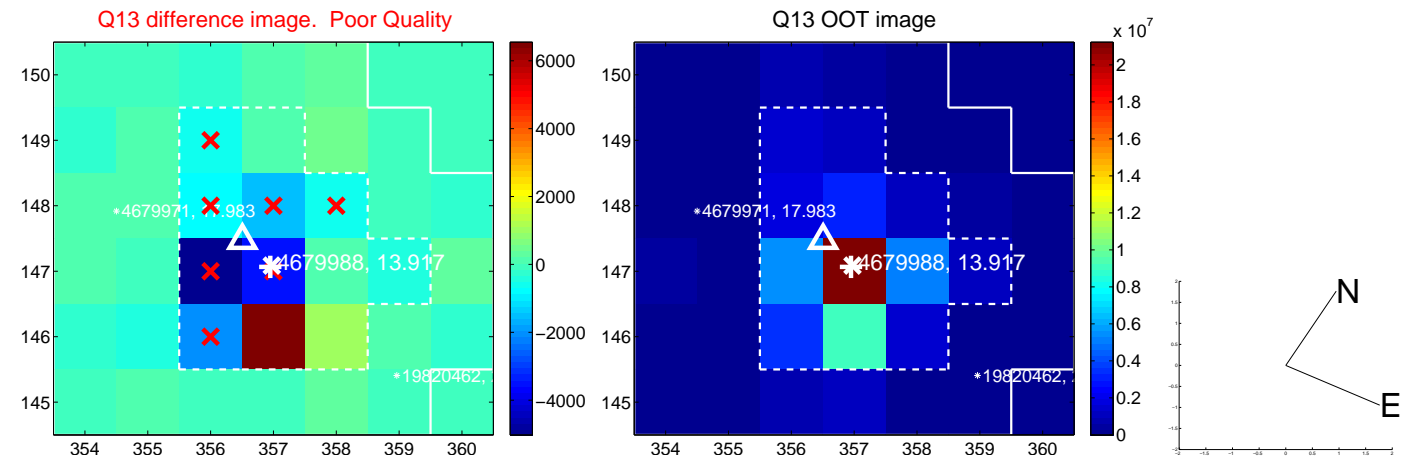
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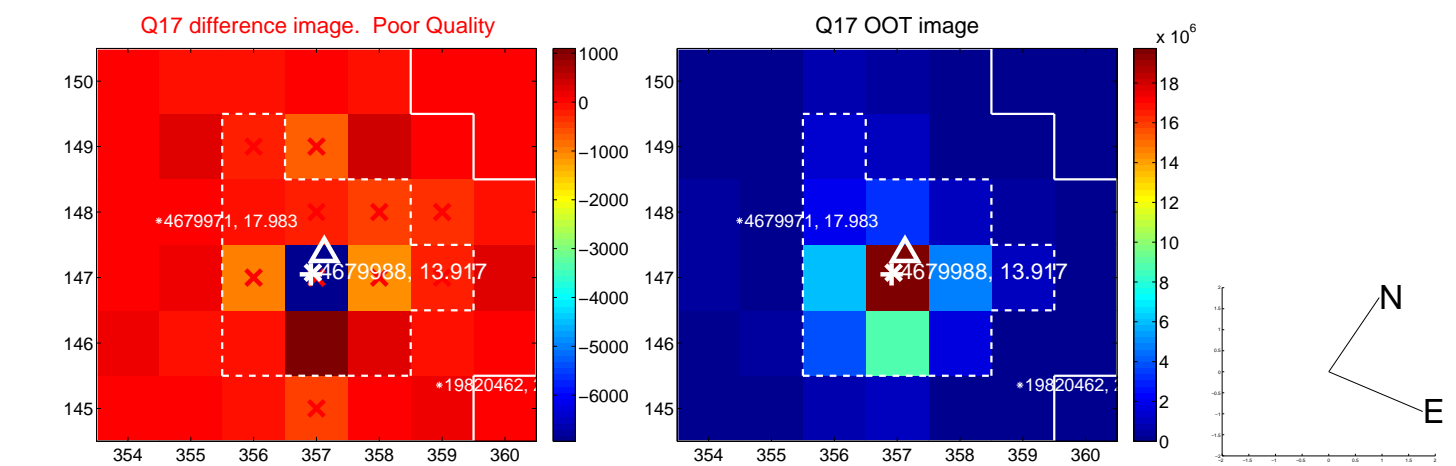
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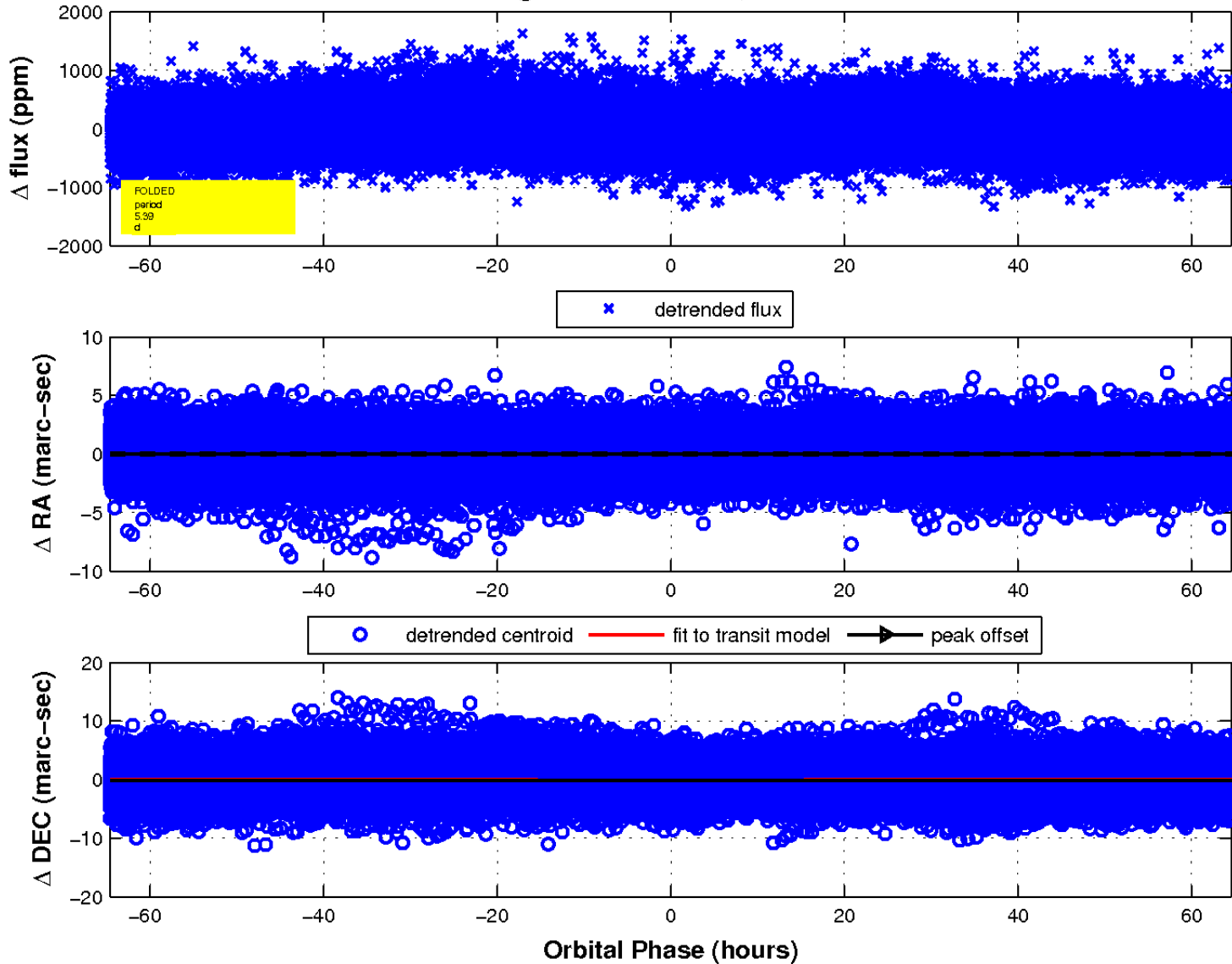
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

