

KIC 008619448

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})
008619448-01	OBS	No	3.133389	132.812676	14.4	22.030	11.1	10.2	2.11	6356	0.81	3162.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008619448-01	OBS	FP	0.00	1	0	1	1	SWEET_NTL—LPP_DV—CENT_RESOLVED_OFFSET—EPHEM_MATCH

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.

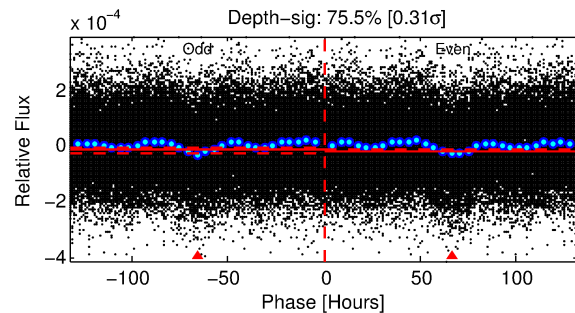
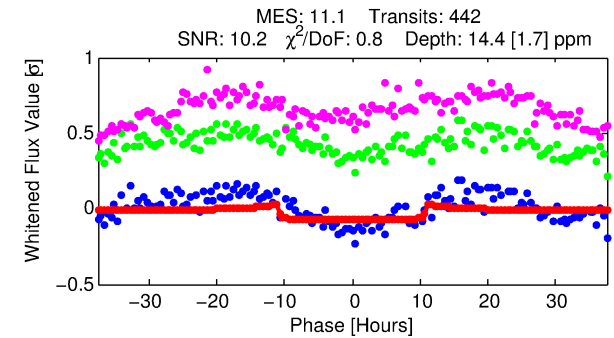
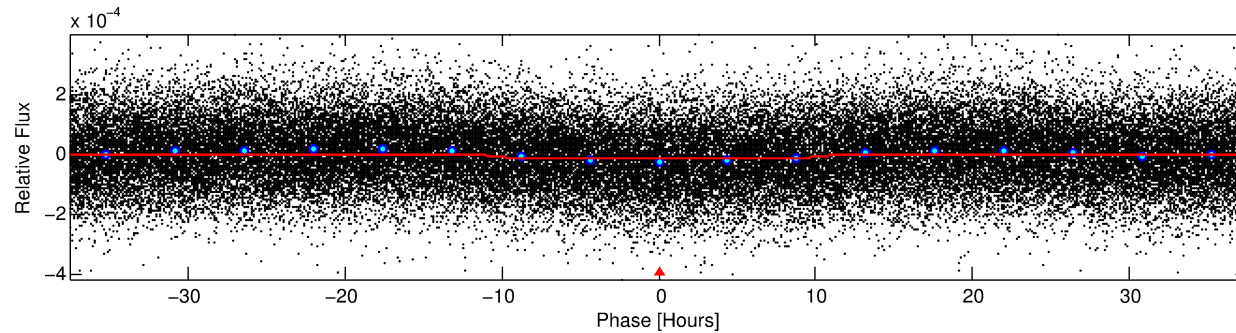
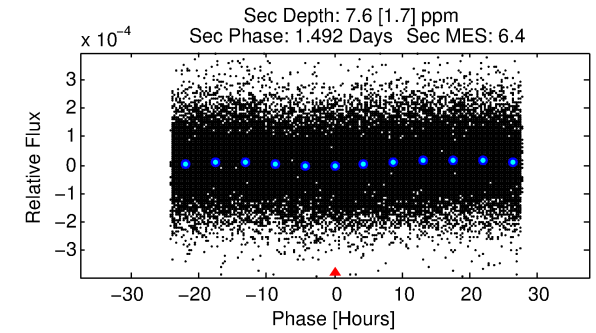
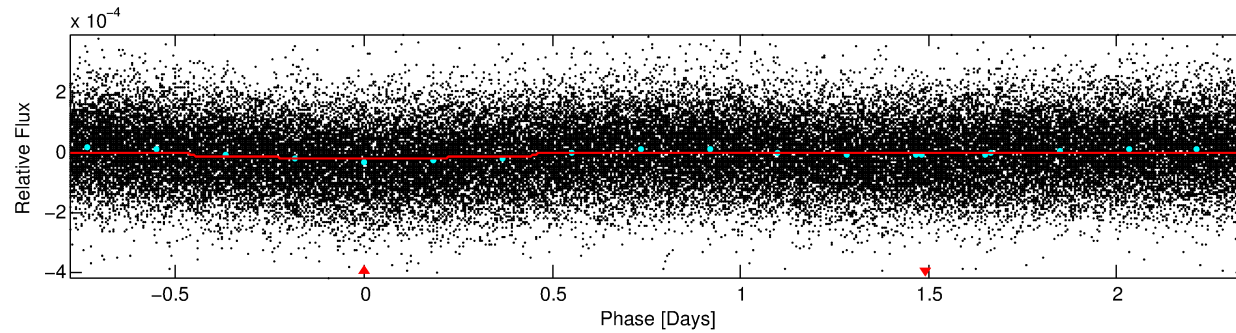
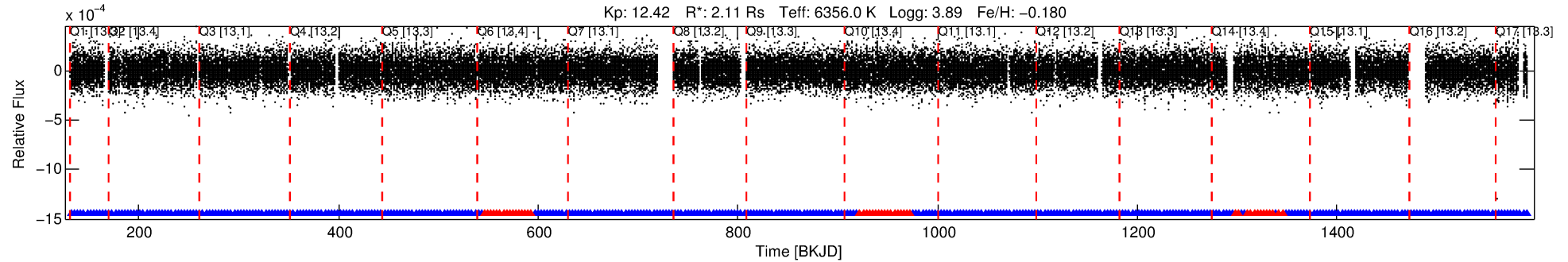
Ephemeris Match Information For 008619448-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
008619448-01	8619448	008619436-01	8619436	2:1	15.5	4	1	11.81	12.42	1.29	Direct-PRF	0	2.30	0.54

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 8619448 Candidate: 1 of 1 Period: 3.133 d



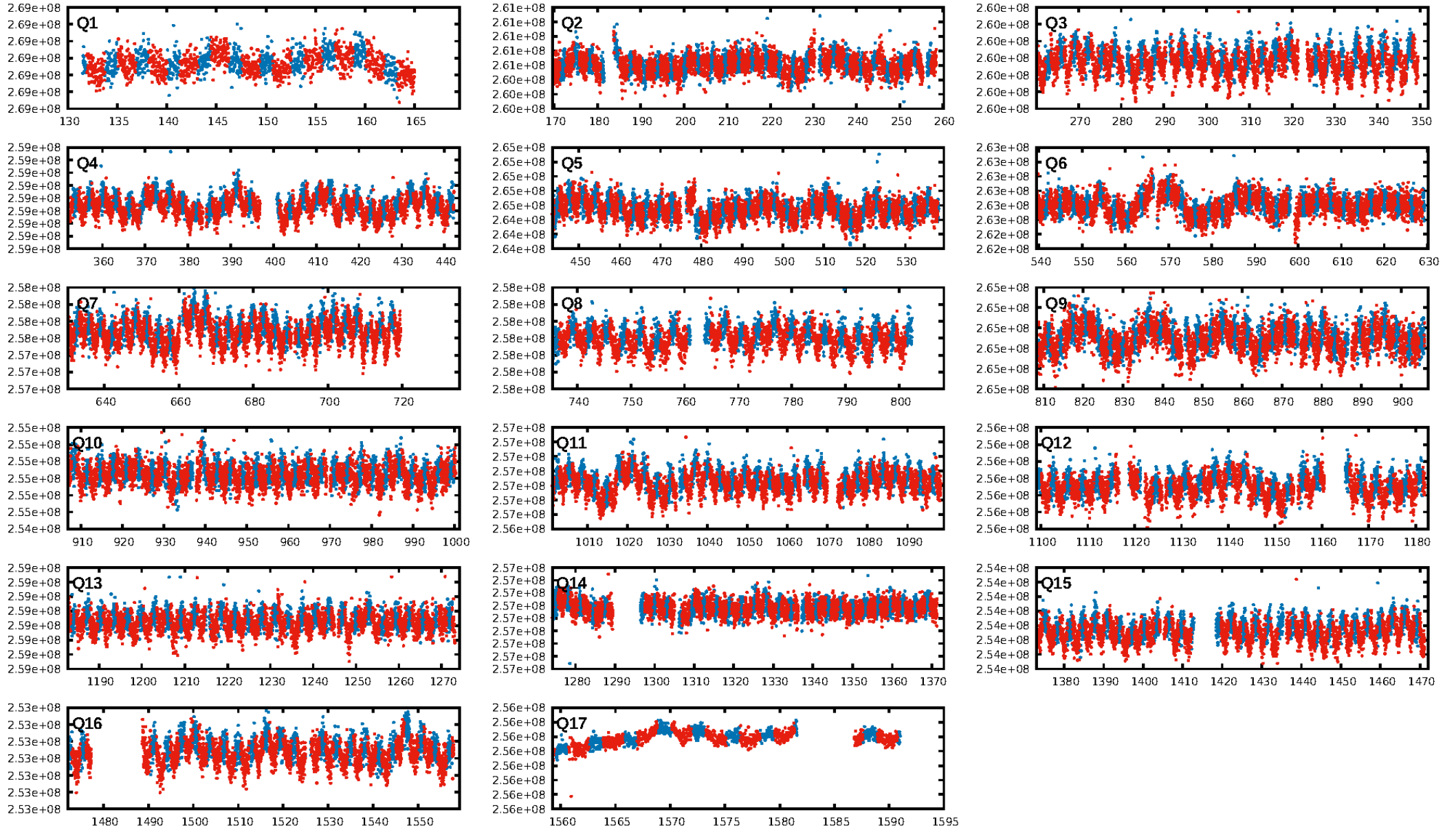
DV Fit Results:

Period = 3.13339 [0.00006] d
Epoch = 132.8127 [0.0114] BKJD
Rp/R* = 0.0035 [0.0027]
a/R* = 1.26 [1.86]
b = 0.10 [40.19]
Seff = 3162.81 [1528.09]
Teff = 1912 [231] K
Rp = 0.81 [0.67] Re
a = 0.0454 [0.0136] AU
Ag = 13.32 [21.70] [0.57σ]
Teffp = 5648 [2208] K [1.68σ]

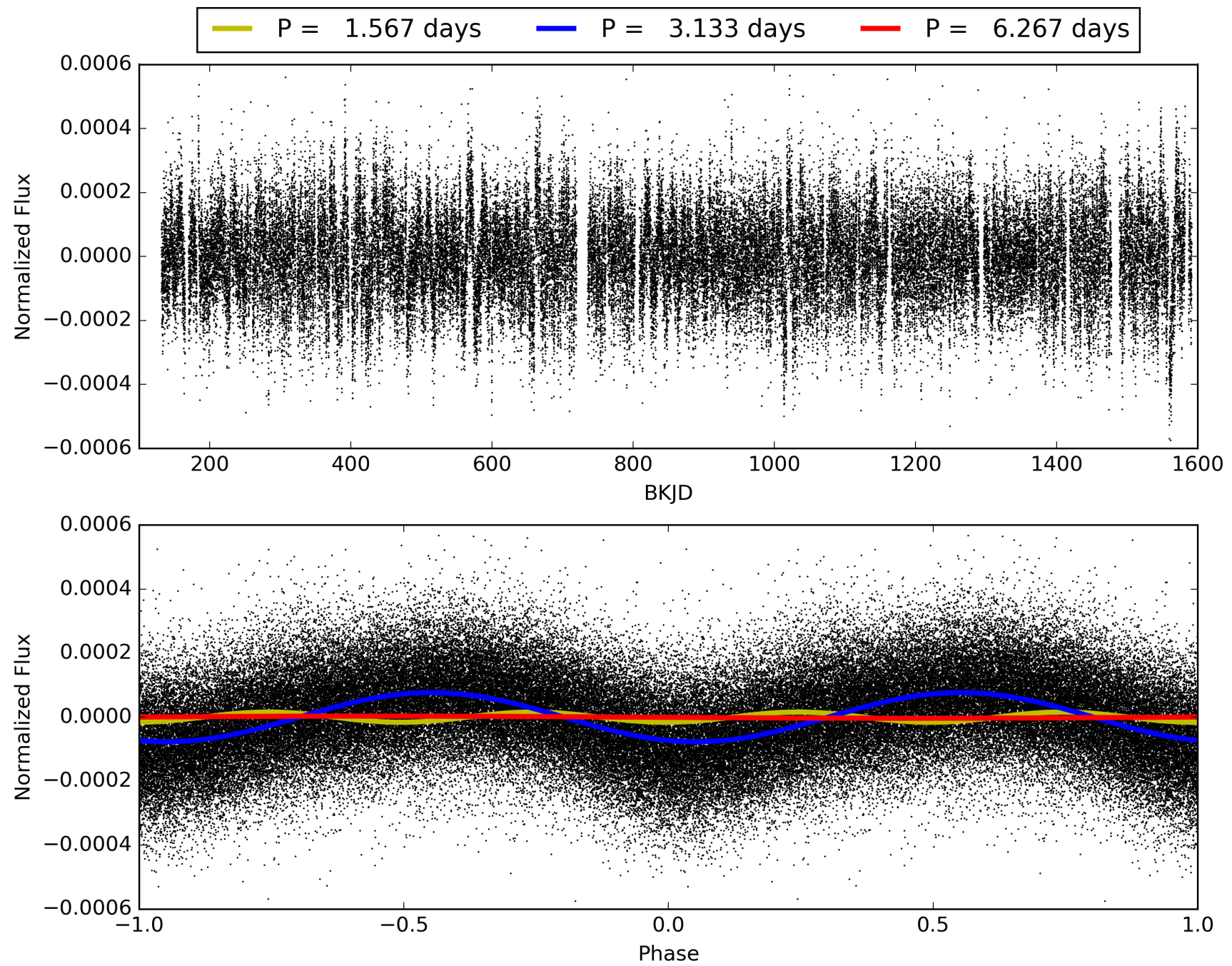
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.89 [376/422]
GhostDiagnostic-chr: -0.9386
Centroid-sig: 0.0%
Centroid-so: 19.239 arcsec [4.78σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0 [0]
KicOffset-st: 0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008619448-01, PDC Light Curves

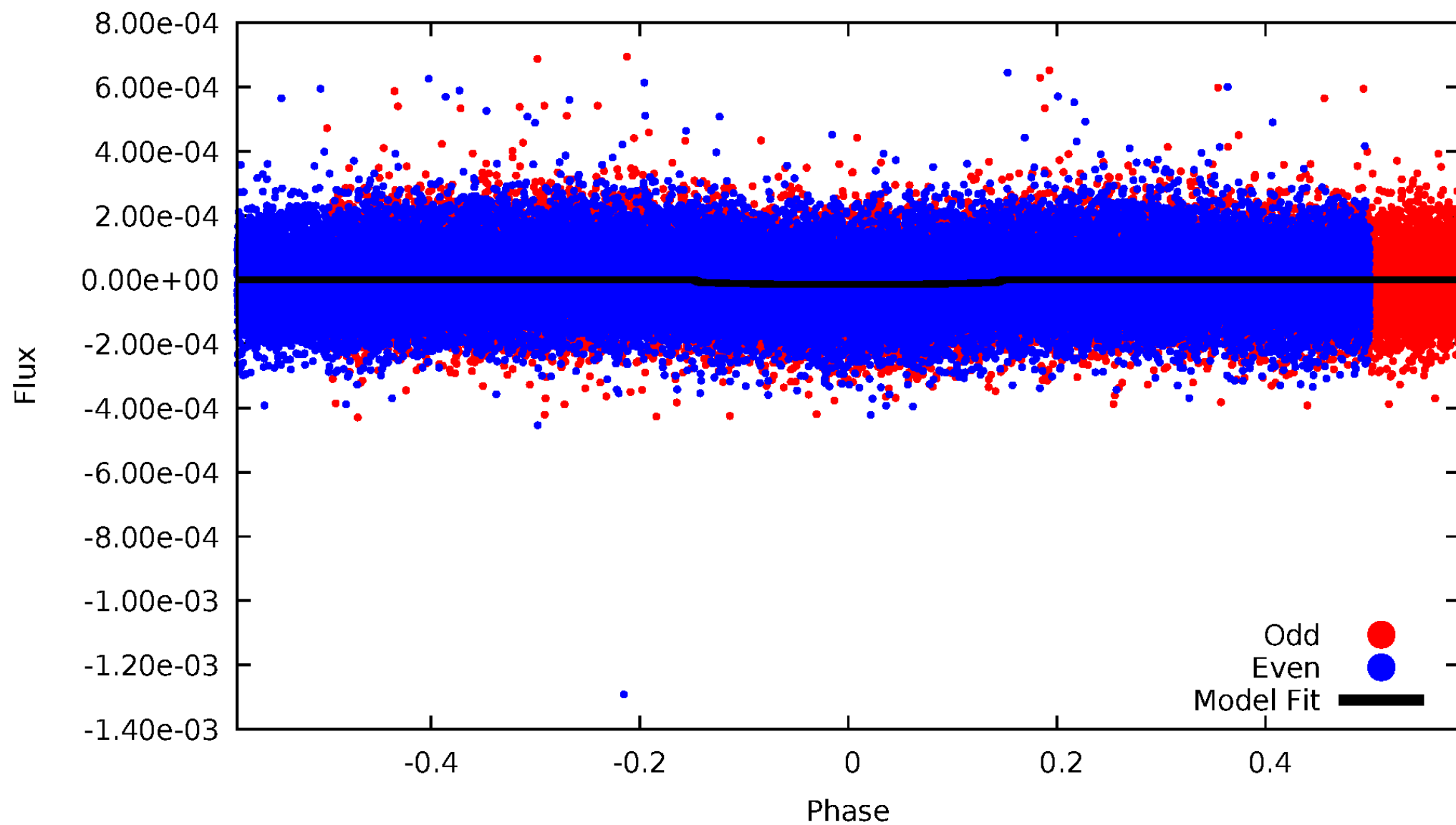


TCE 008619448-01



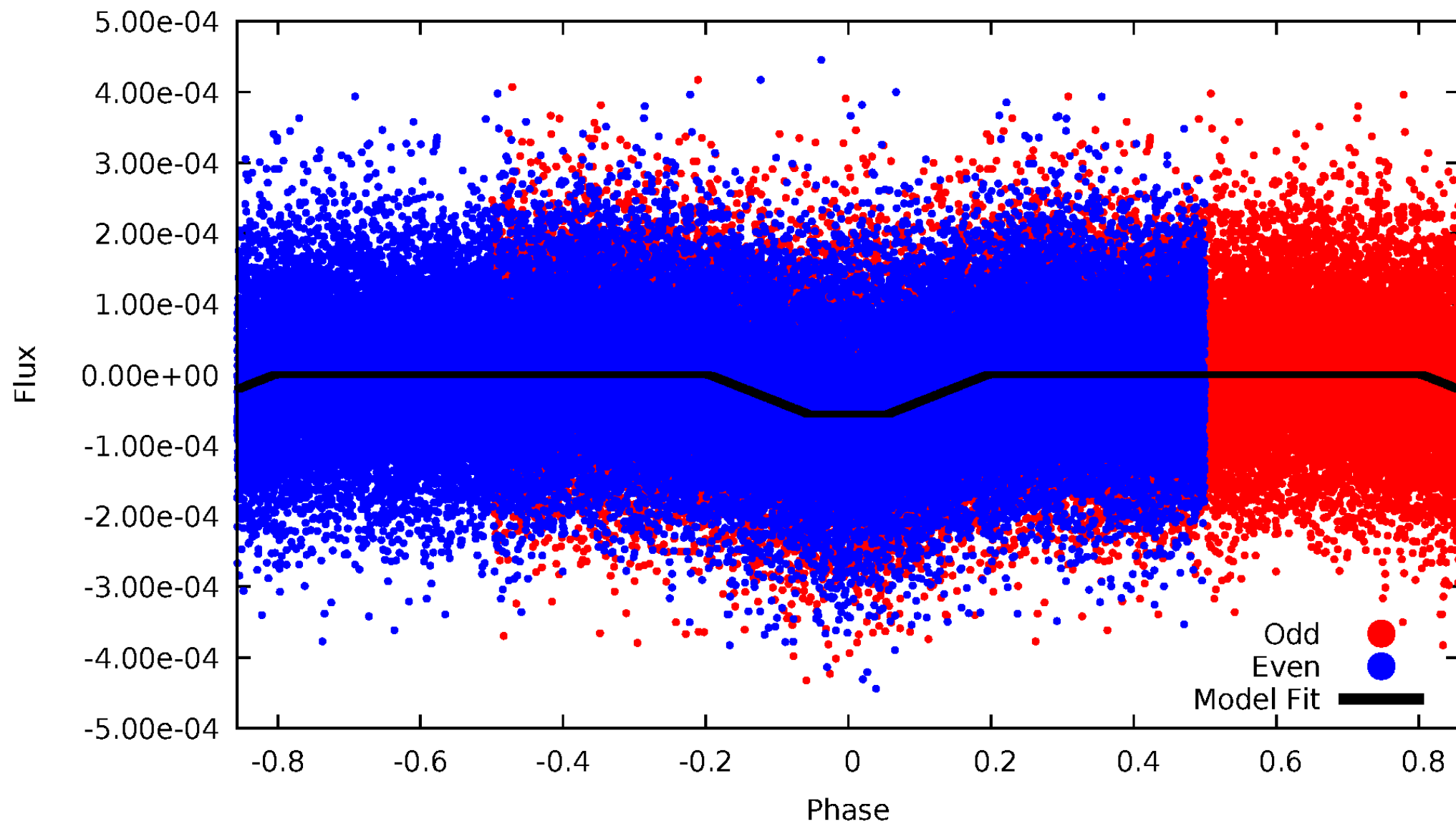
DV Odd/Even

TCE 008619448-01



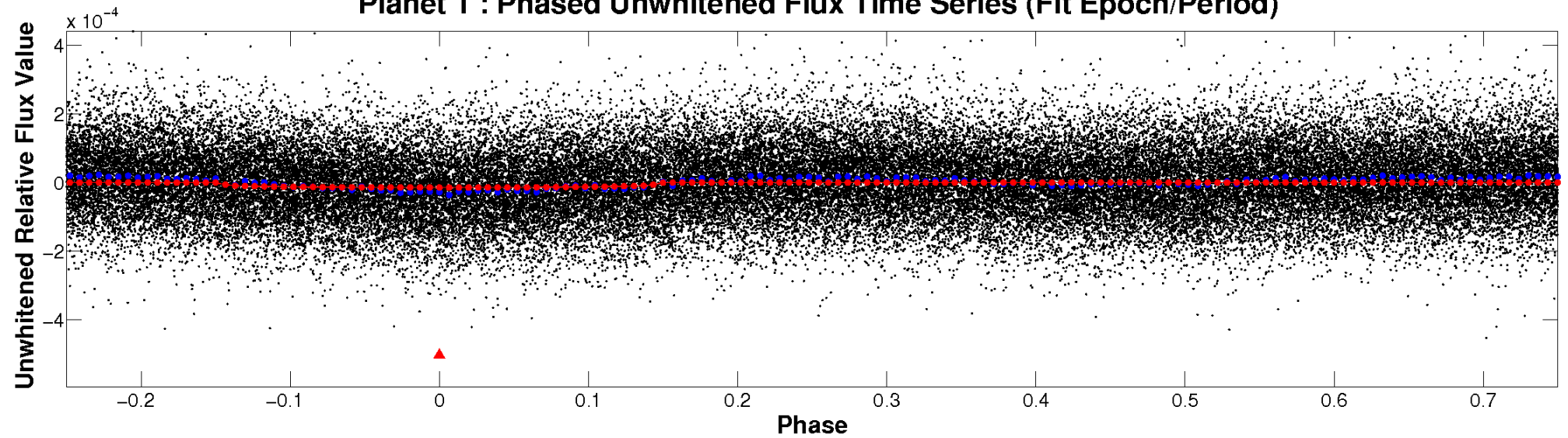
ALT Odd/Even

TCE 008619448-01

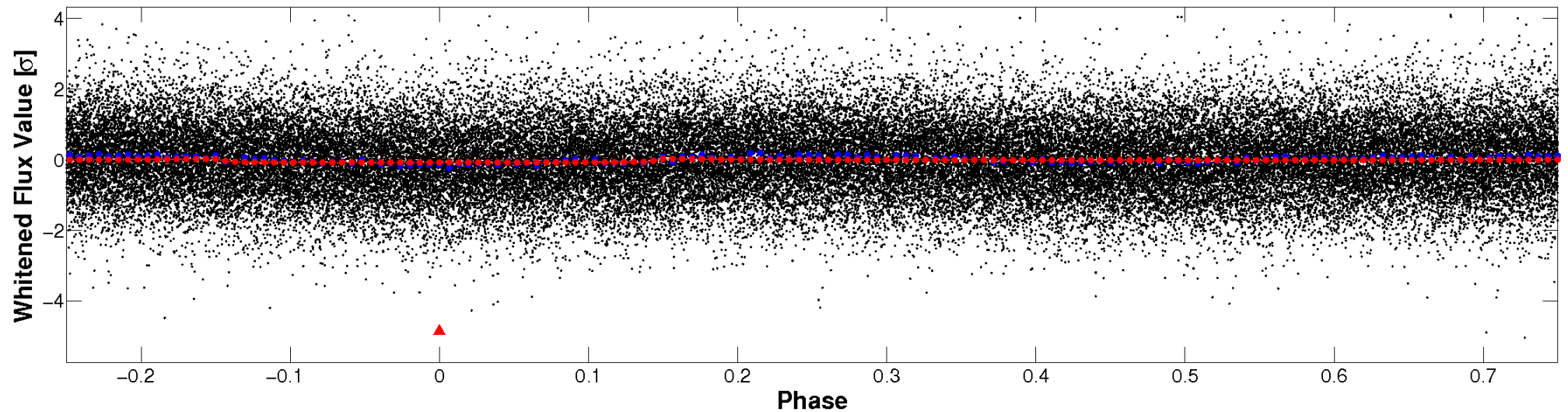


Non-Whitened Vs. Whitened Light Curve

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

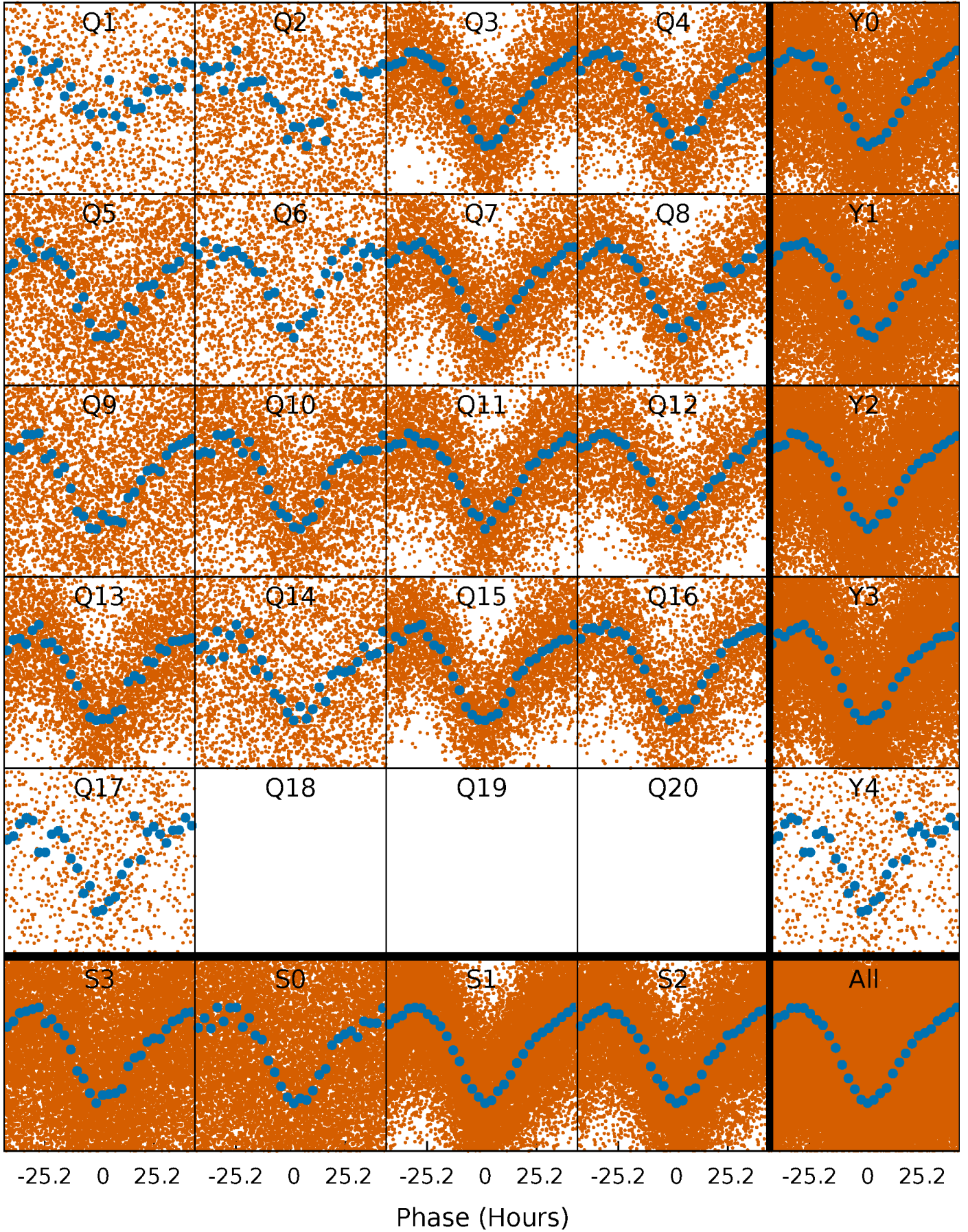


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



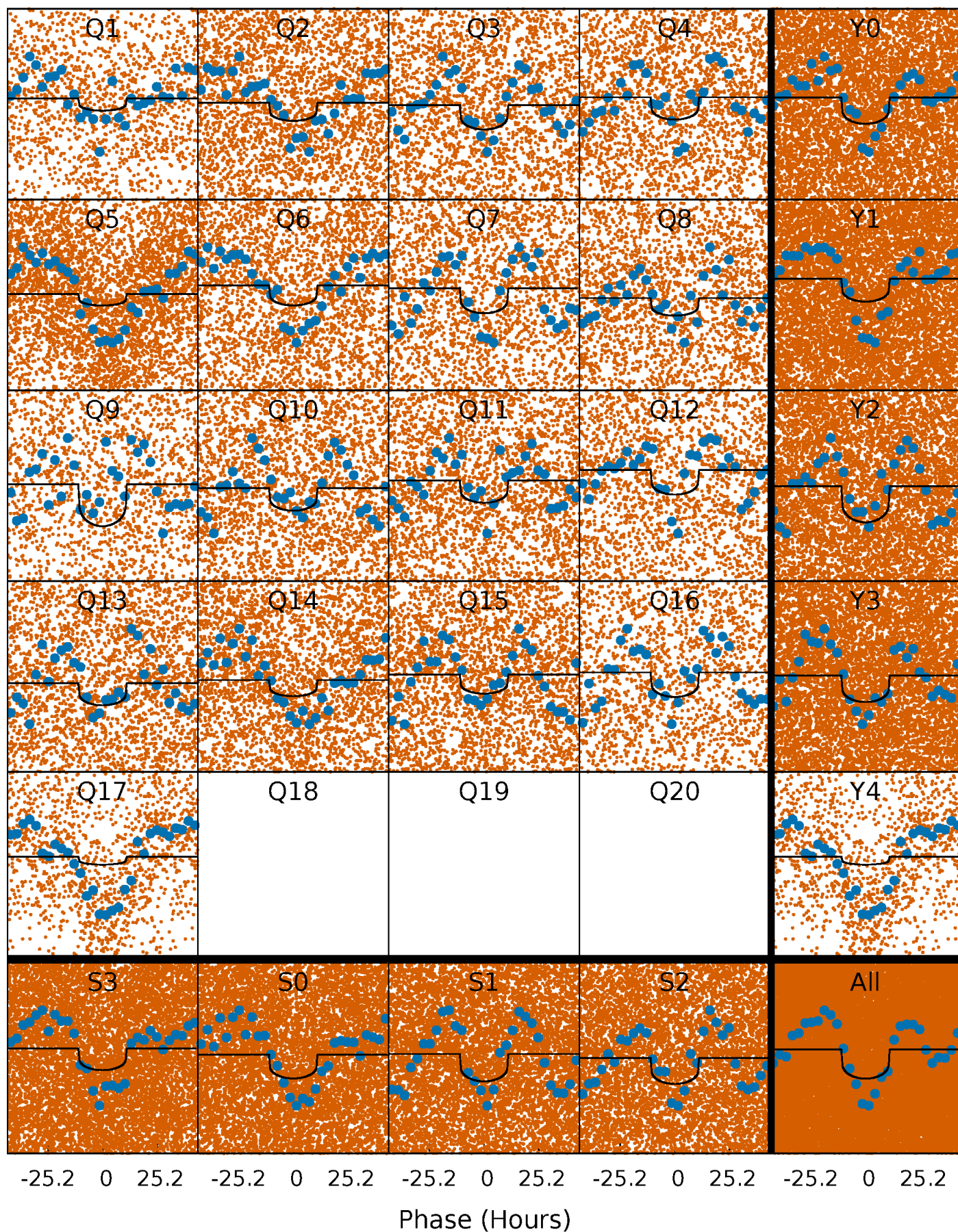
PDC Quarter-Phased Transit Curves

TCE 008619448-01 P= 3.133389 Days $T_0=132.812676$ (BKJD)



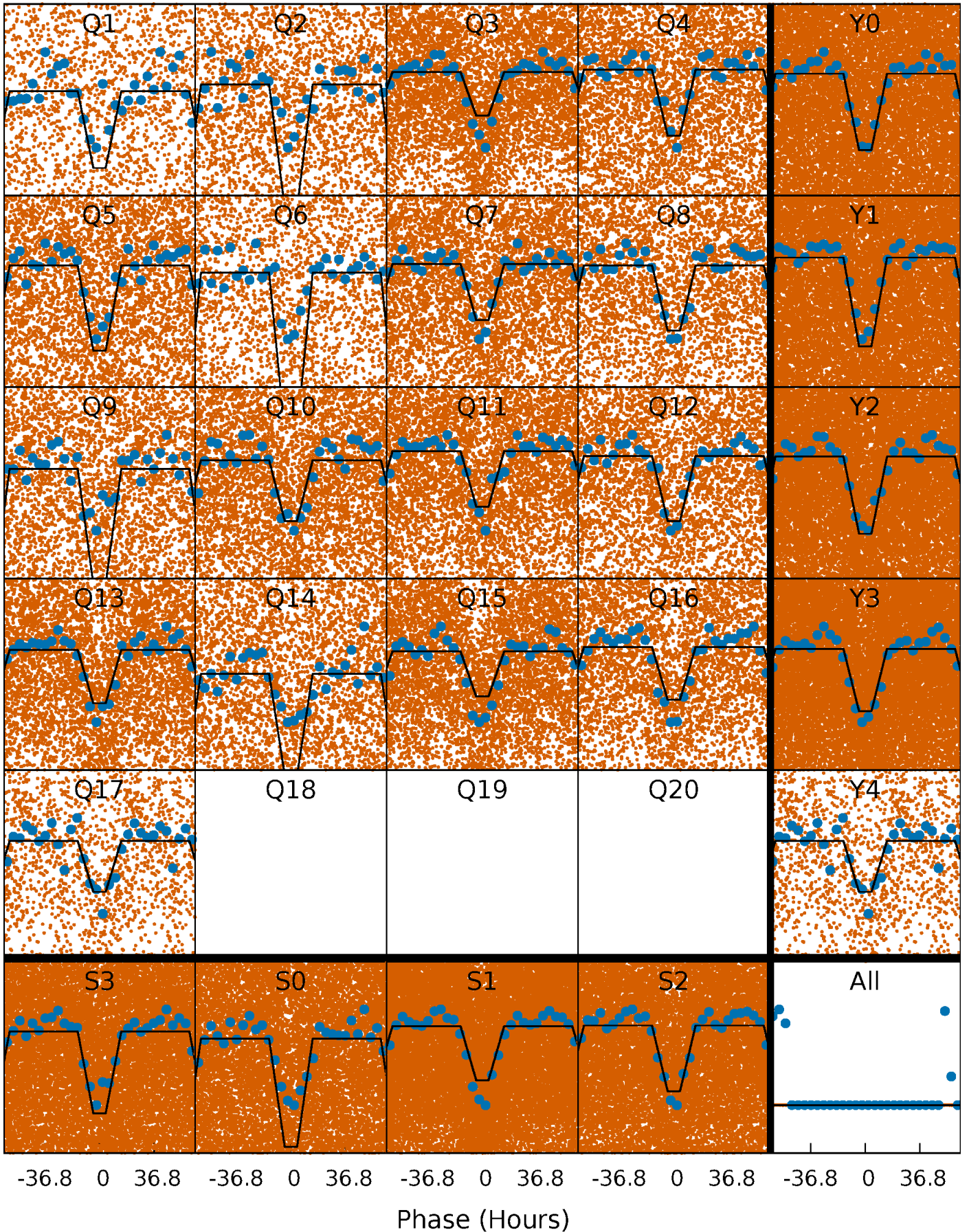
DV Quarter-Phased Transit Curves

TCE 008619448-01 P= 3.133389 Days $T_0=132.812676$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

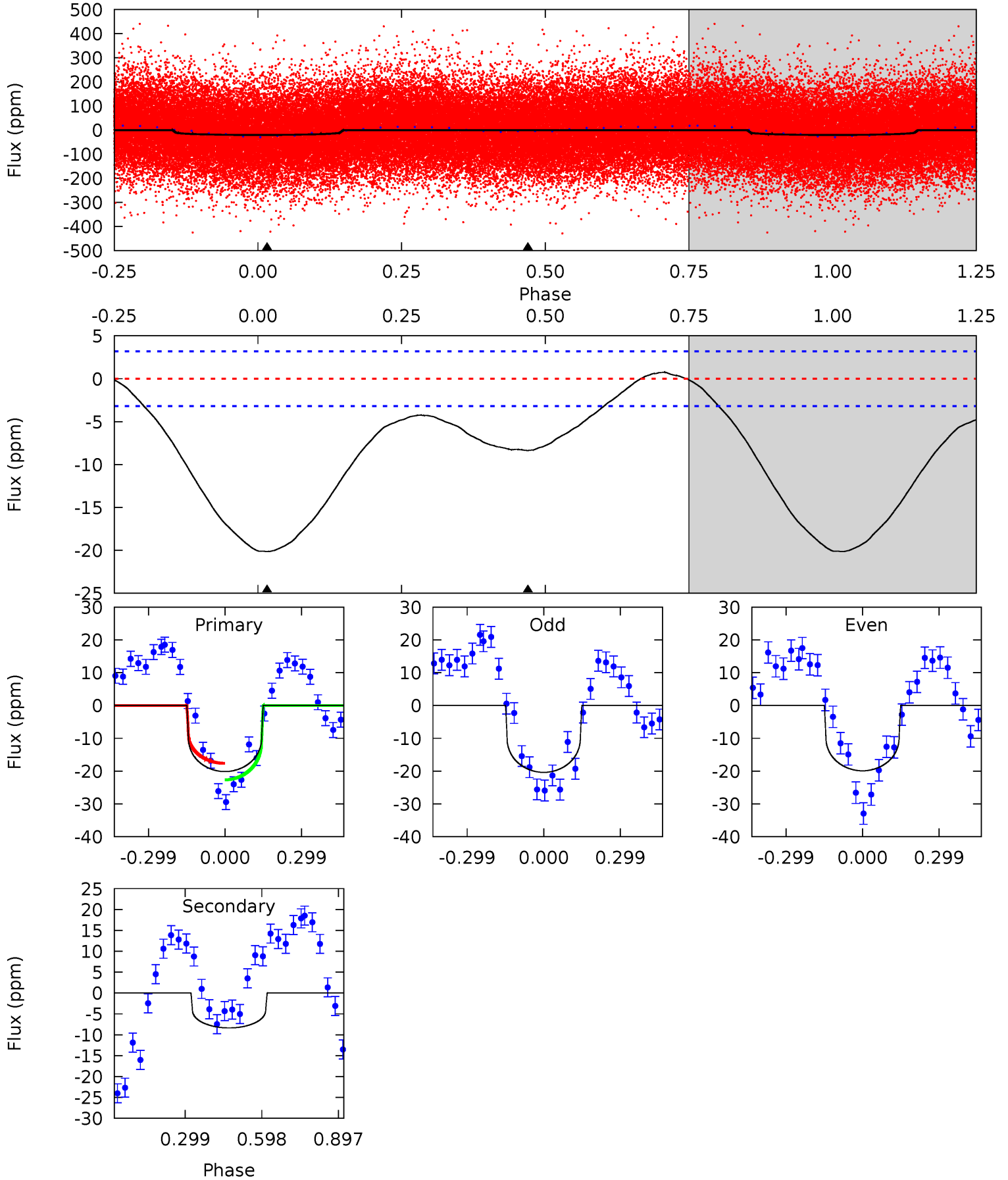
TCE 008619448-01 P= 3.133138 Days $T_0=132.893521$ (BKJD)



DV Model-Shift Uniqueness Test

008619448-01, P = 3.133389 Days, E = 129.679287 Days

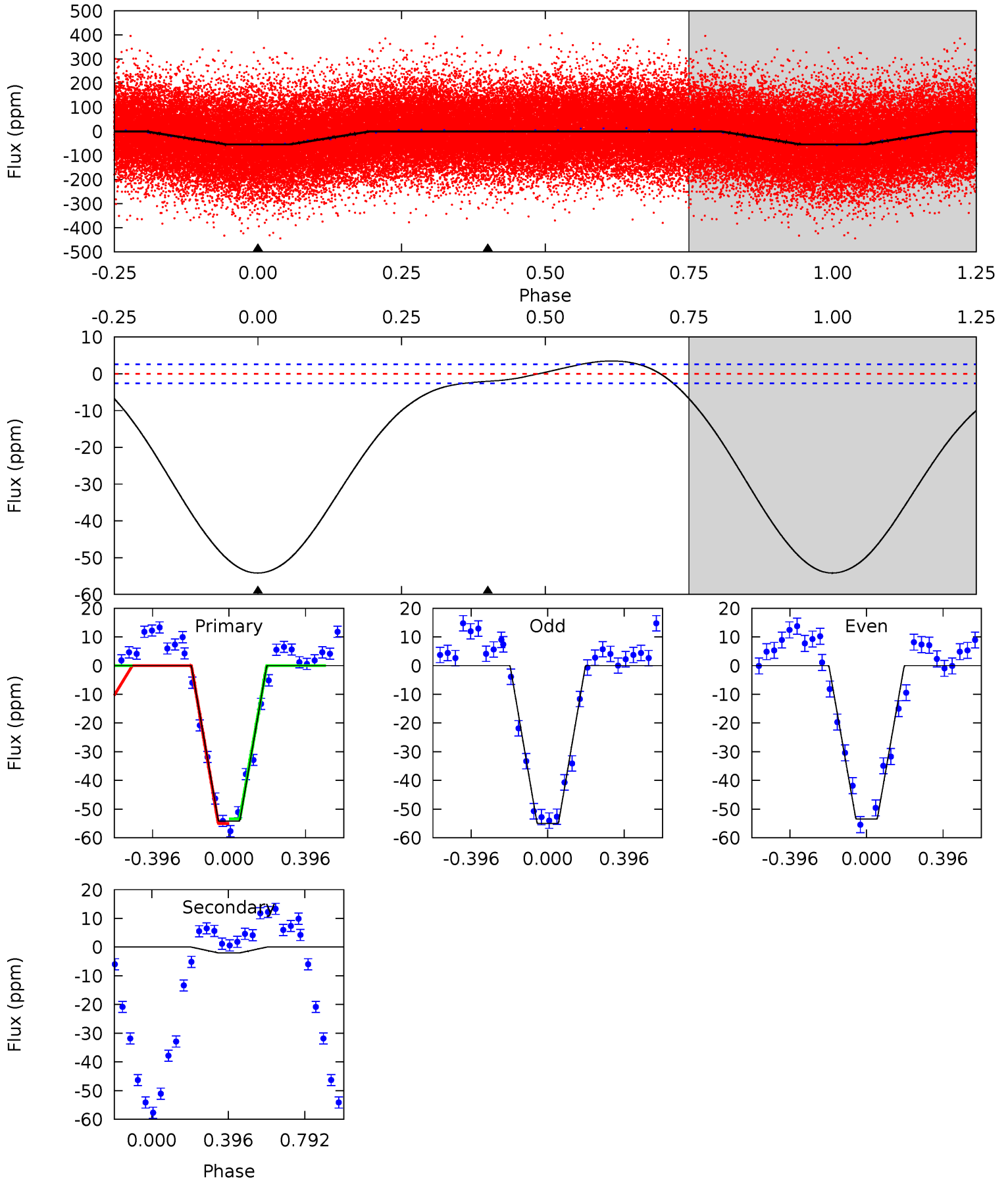
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.2	11.3	0	0	4.33	1.04	1.88	27.2	27.2	11.3	11.3	0.32	1.07	0.04	3.45



Alt Model-Shift Uniqueness Test

008619448-01, P = 3.133138 Days, E = 129.760383 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
89.5	3.34	0	0	4.27	0.85	4.78	89.5	89.5	3.34	3.34	1.24	0.97	0.06	1.27



Stellar Parameters For KIC 008619448

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6356^{+161}_{-177}	$3.893^{+0.273}_{-0.117}$	$-0.180^{+0.300}_{-0.250}$	$2.112^{+0.450}_{-0.675}$	$1.271^{+0.223}_{-0.223}$	$0.190^{+0.353}_{-0.069}$
	+3%/-3%	+7%/-3%	+167%/-139%	+21%/-32%	+18%/-18%	+186%/-36%
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 008619448-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-8 ± 1	$0.85^{+0.58}_{-0.50}$	2631^{+176}_{-214}	5502^{+3291}_{-1071}	14^{+61}_{-9}
Alt.	-2 ± 1	$1.65^{+0.67}_{-0.63}$	2640^{+162}_{-212}	3101^{+630}_{-661}	$0.846^{+1.400}_{-0.464}$

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

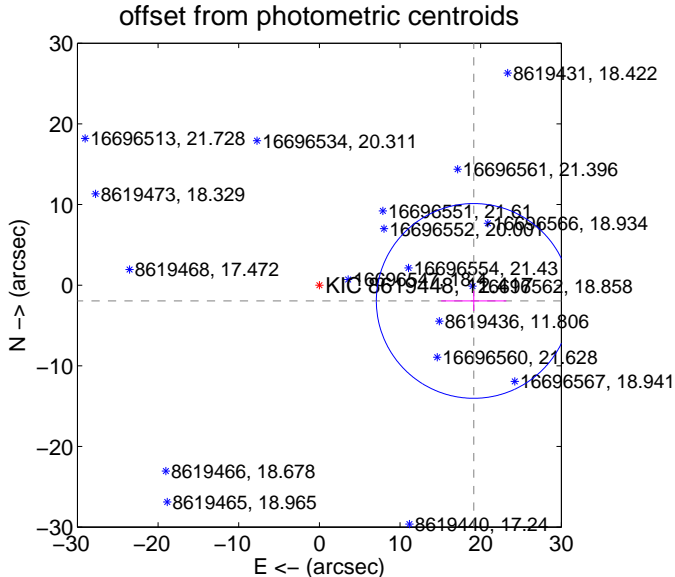
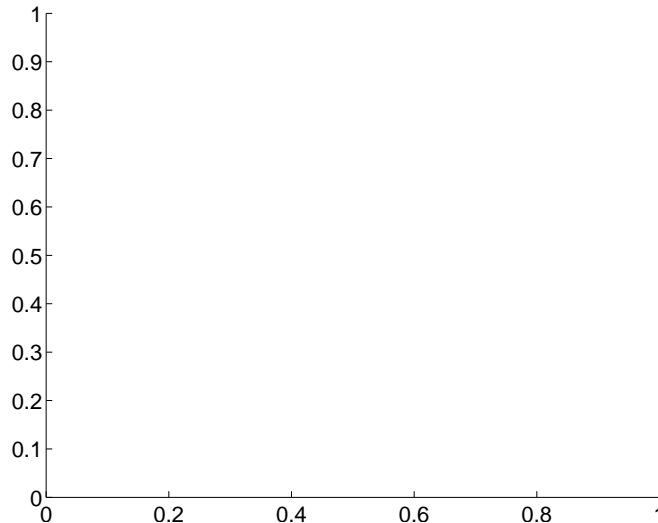
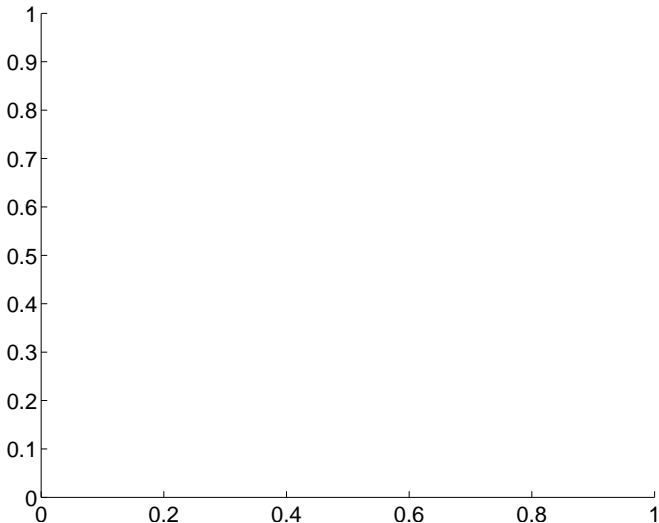
DV Centroid Data

Supplemental centroid analysis for 008619448-01. Kepler magnitude: 12.42. Transit SNR 10.17

There are 0 quarters with good PRF difference image offsets

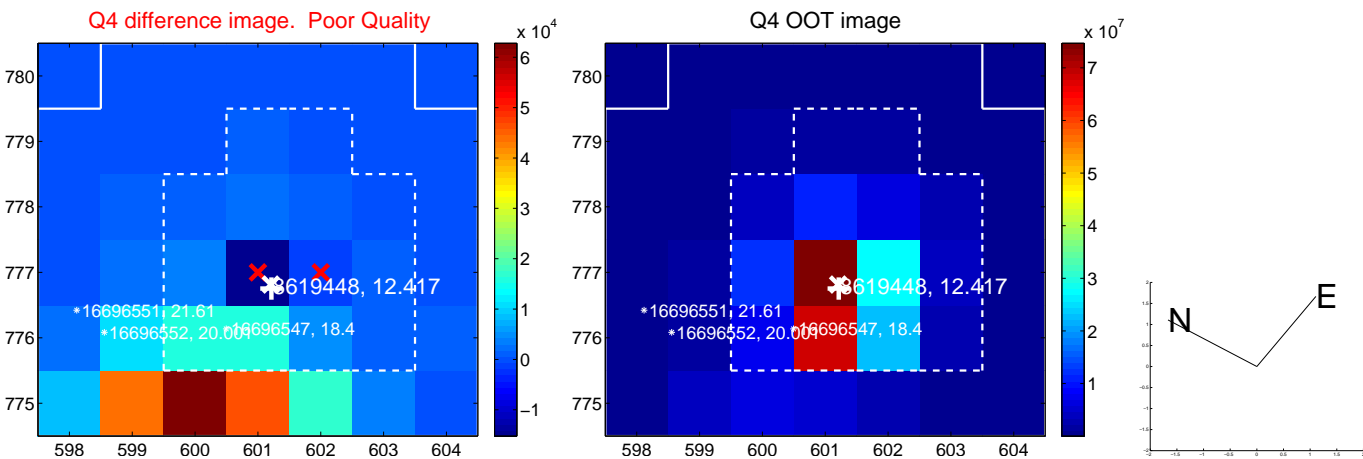
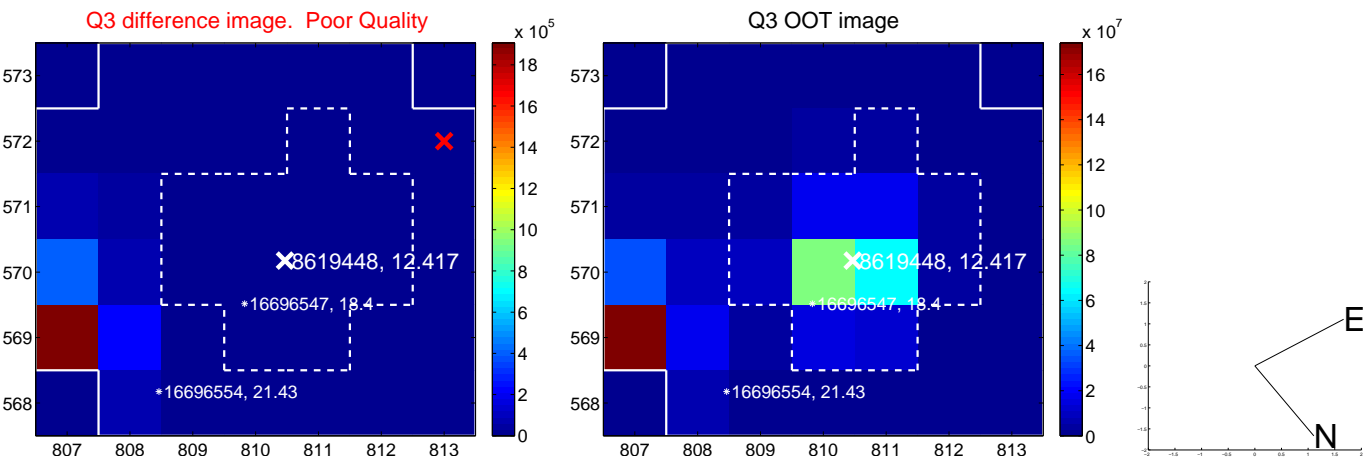
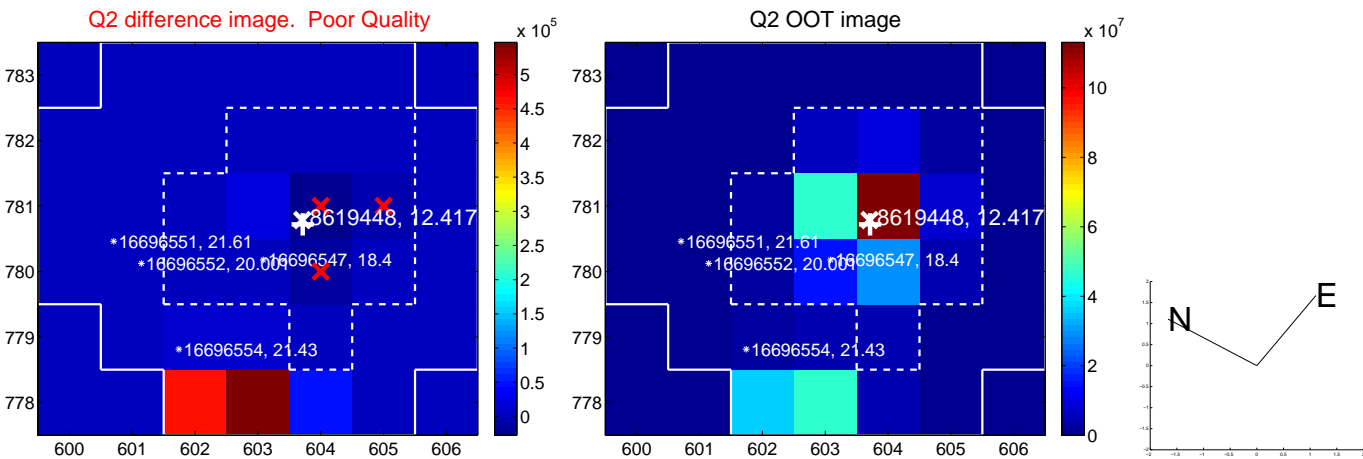
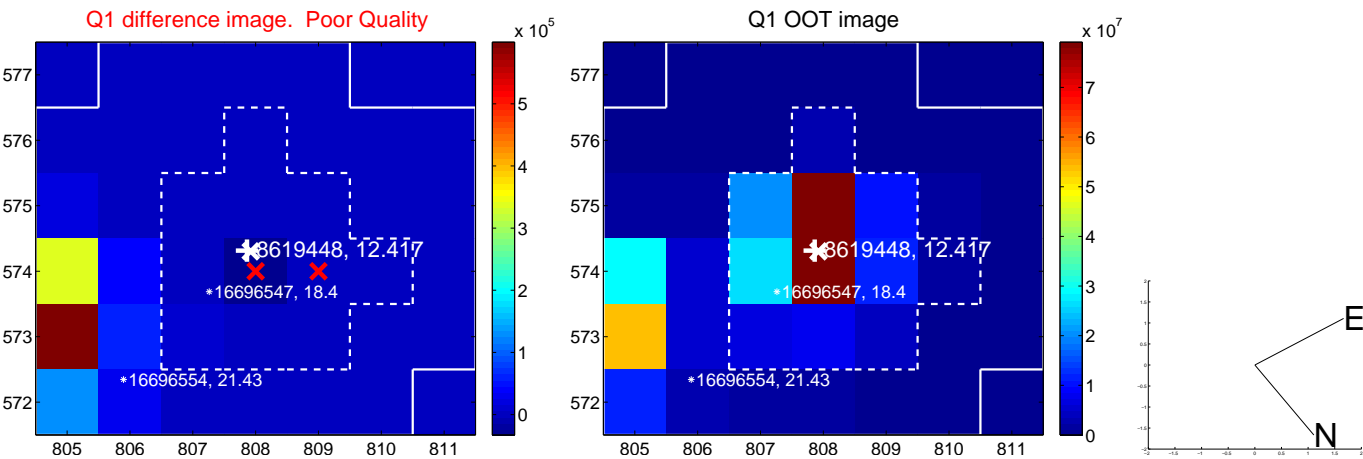
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	19.24 ± 4.02	4.78	-19.14 ± 4.04	-1.95 ± 1.25

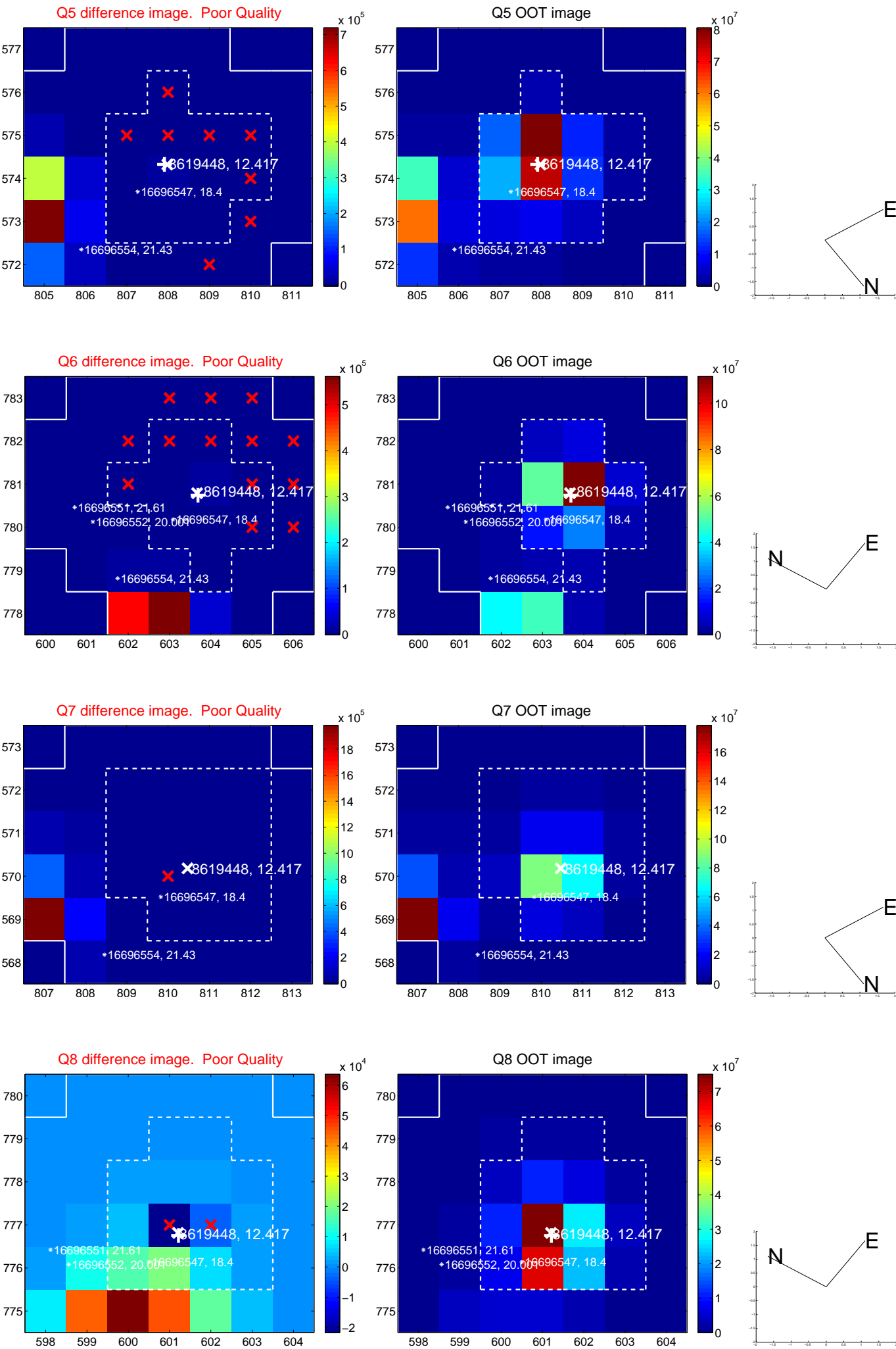


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

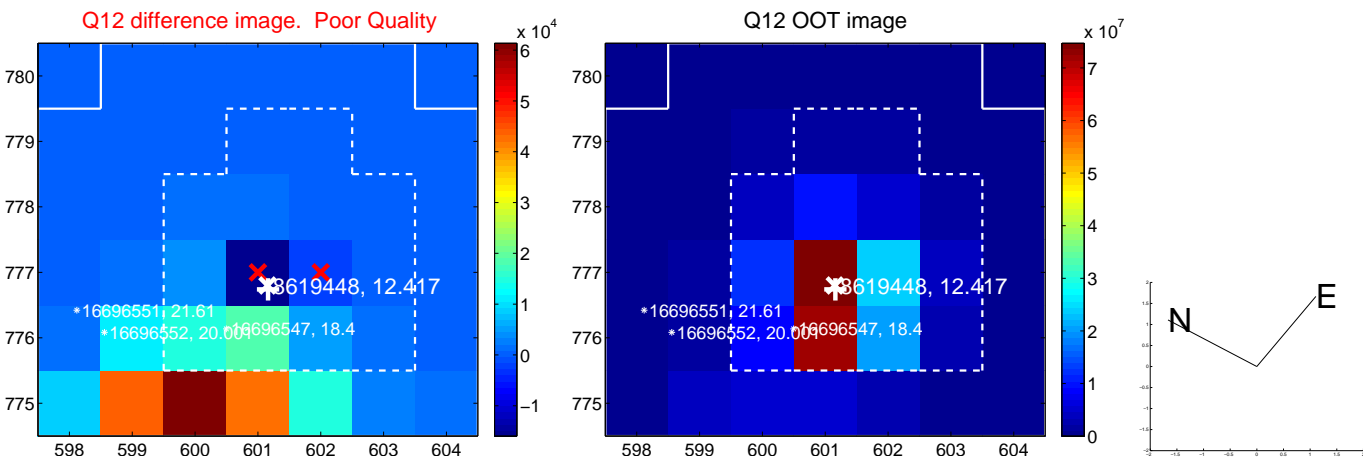
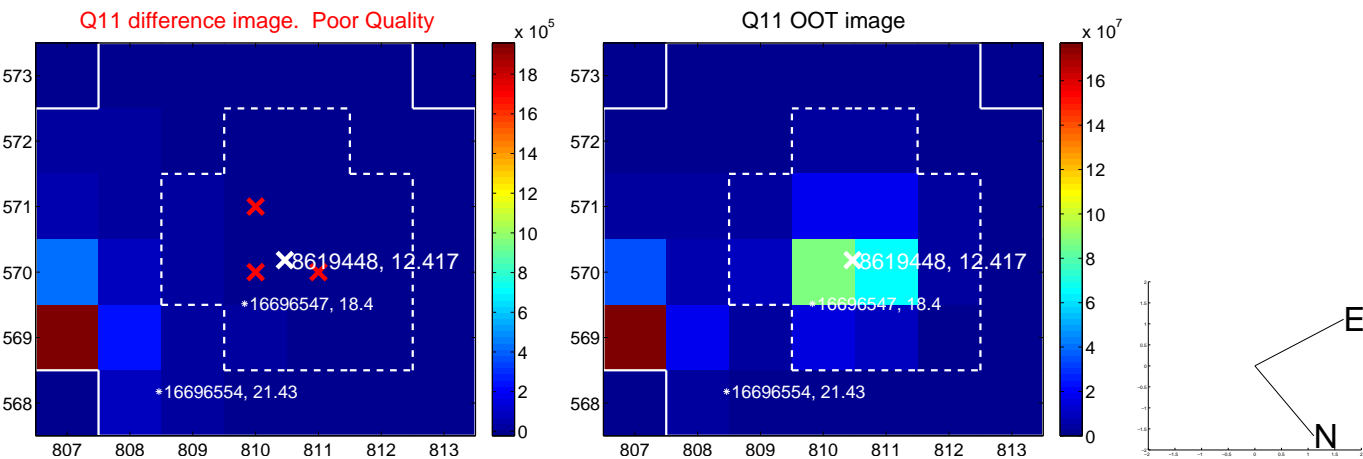
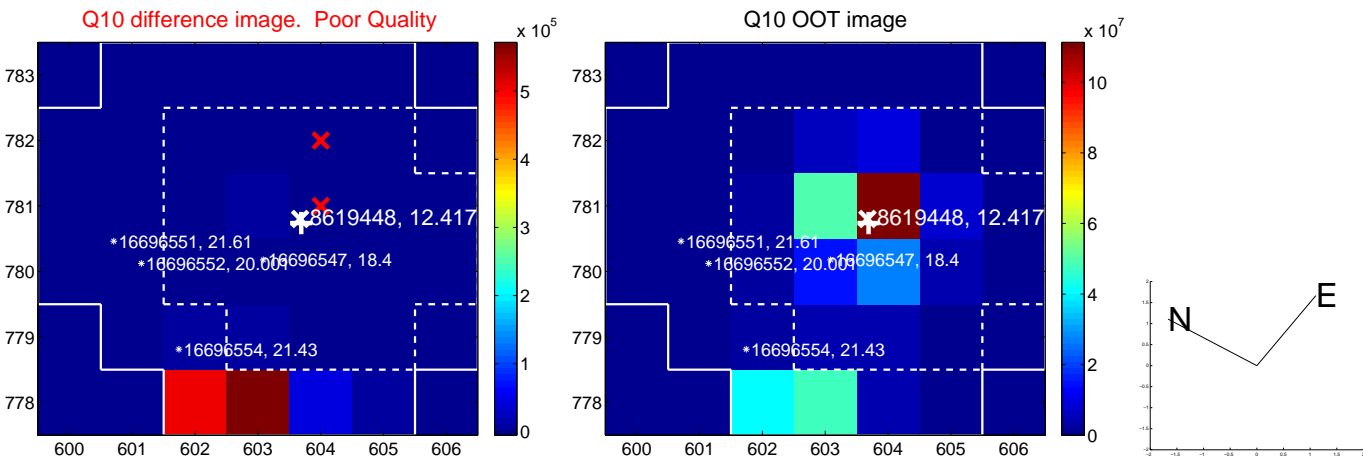
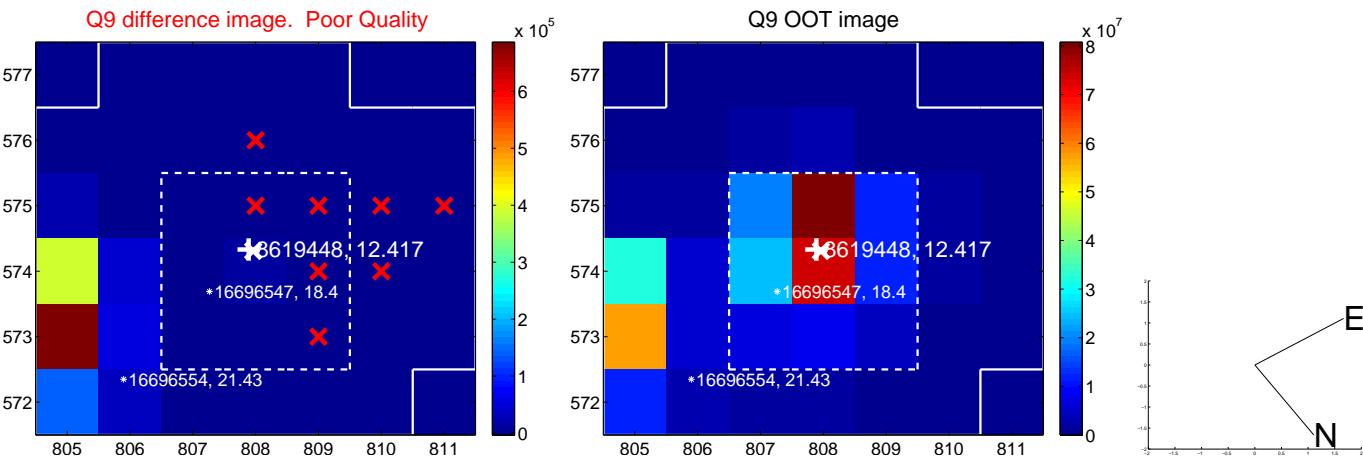
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



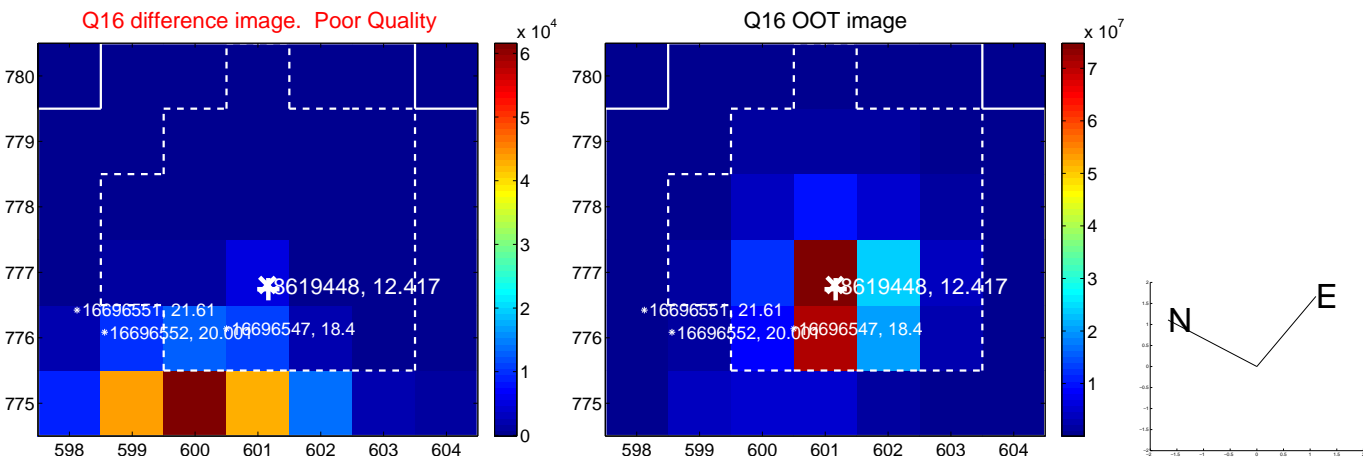
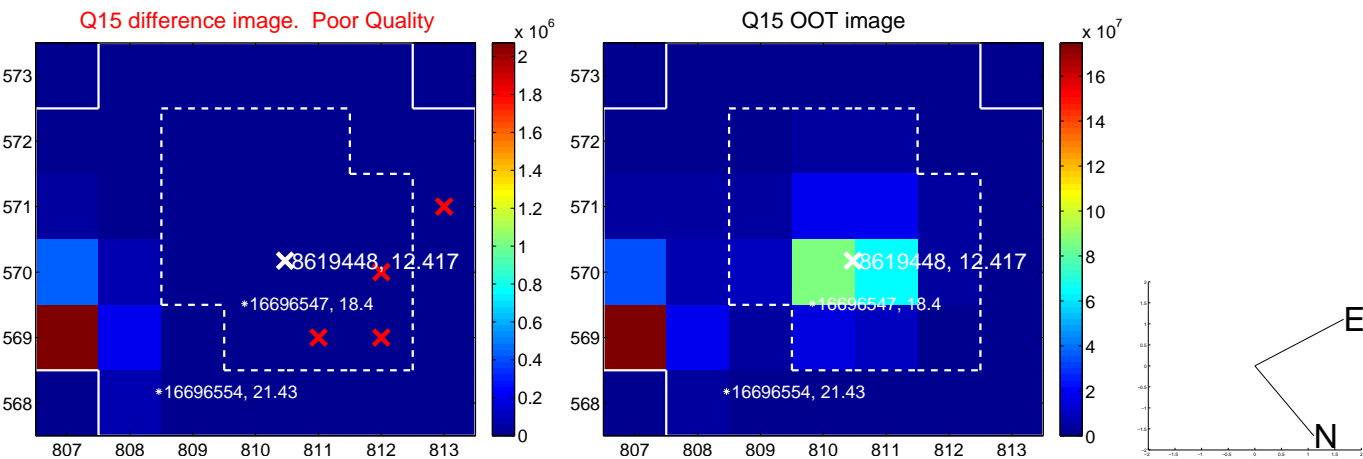
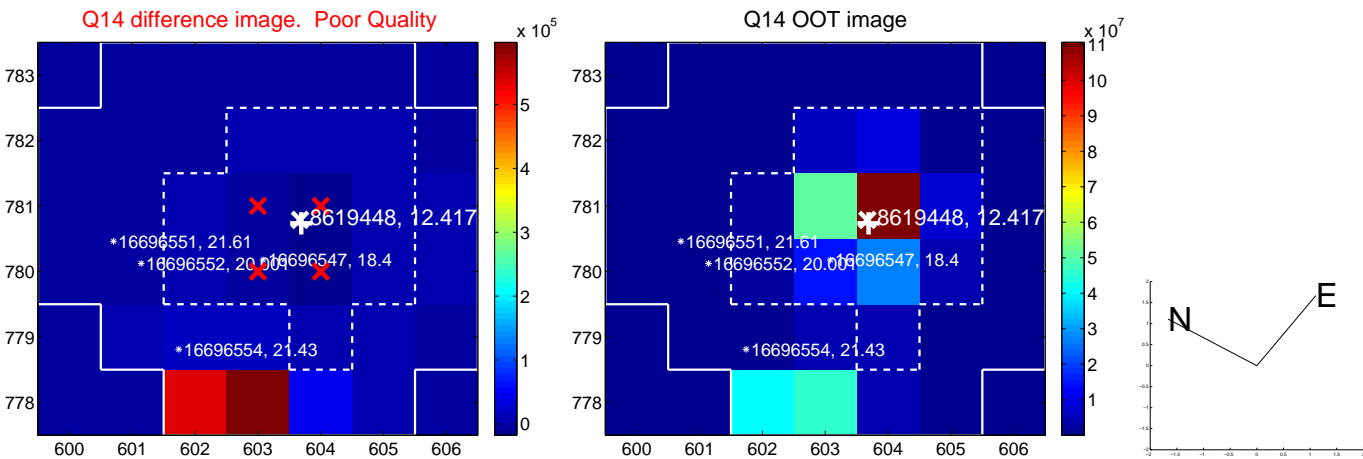
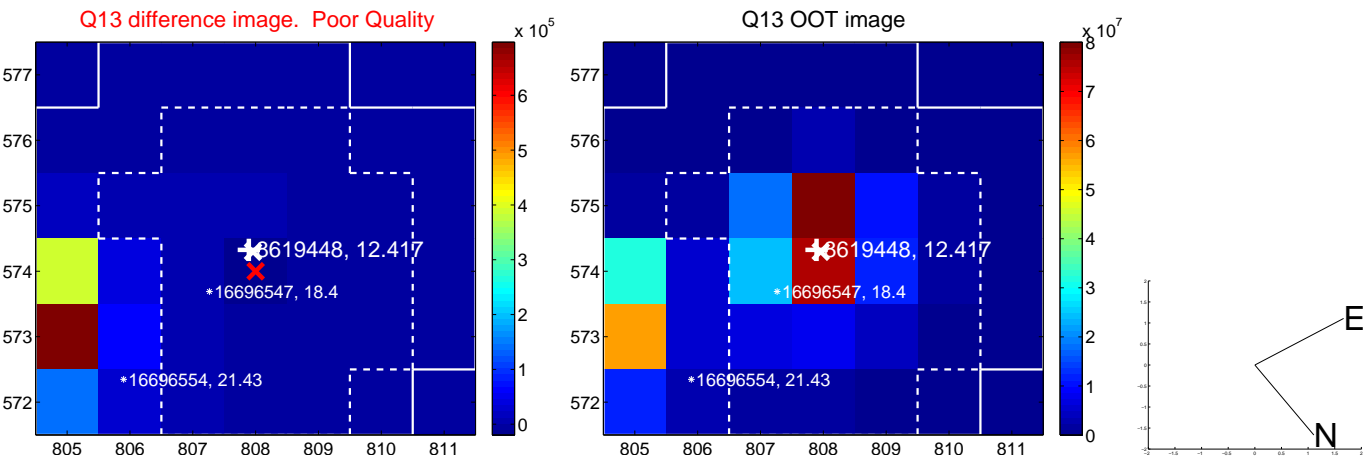
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



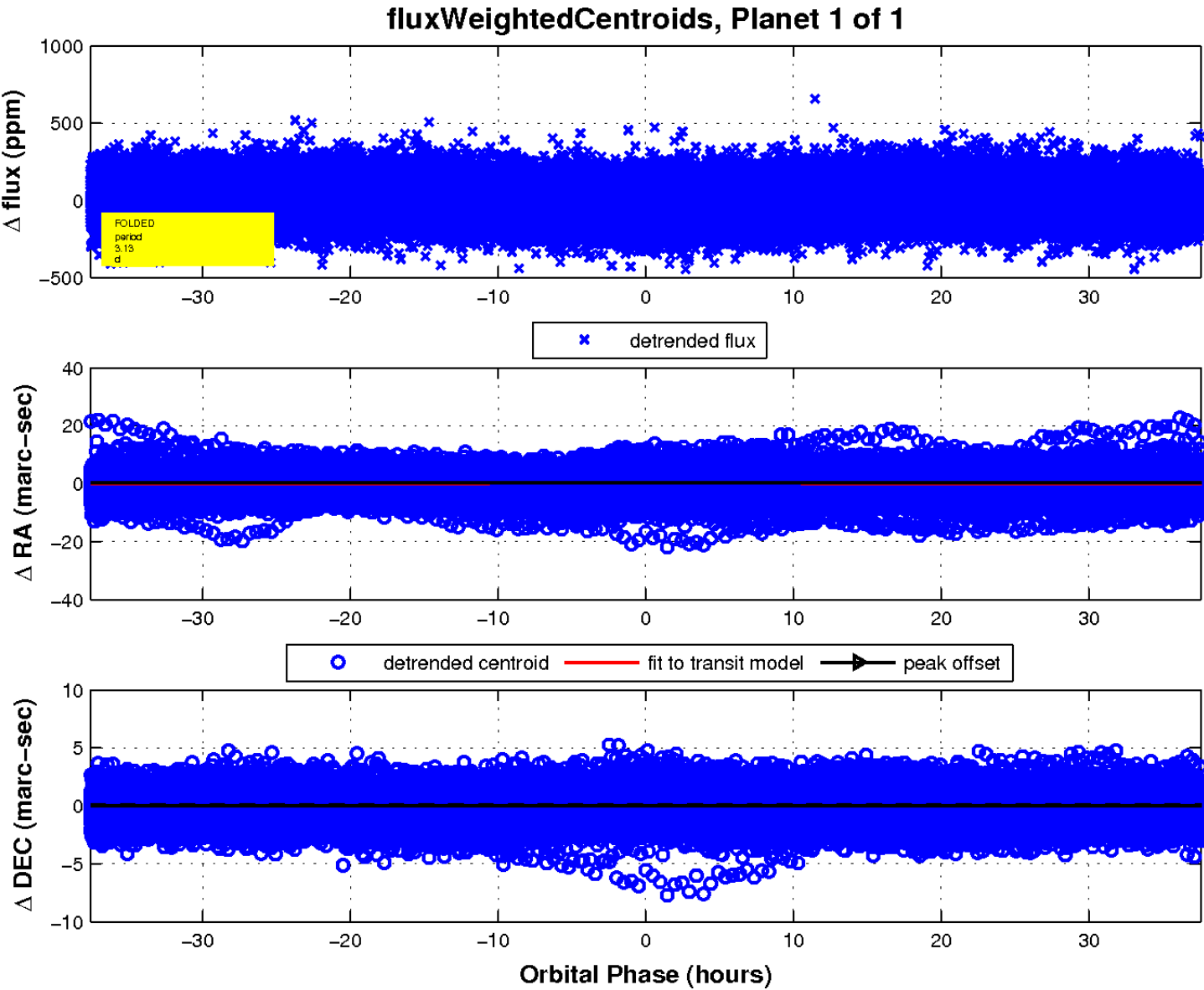
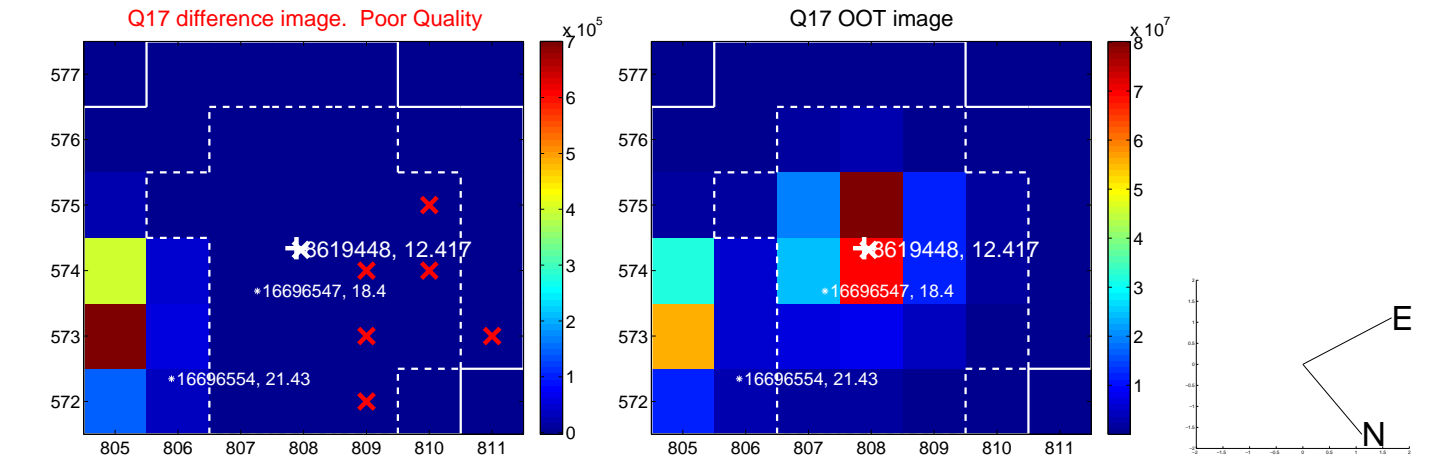
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UKIRT Image

Declination

