

KIC 010357965

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})
010357965-01	OBS	No	0.792991	132.097464	11.0	8.054	10.2	7.3	1.52	7300	0.51	16254.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010357965-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL — LPP_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.

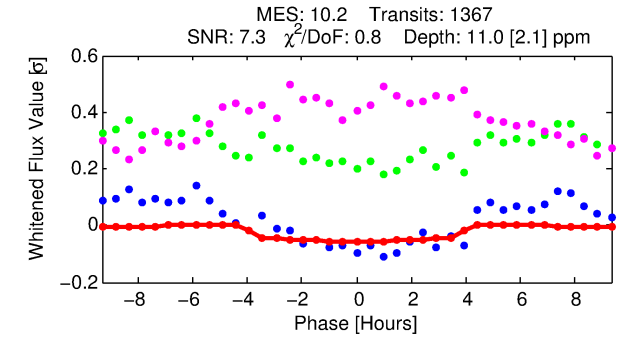
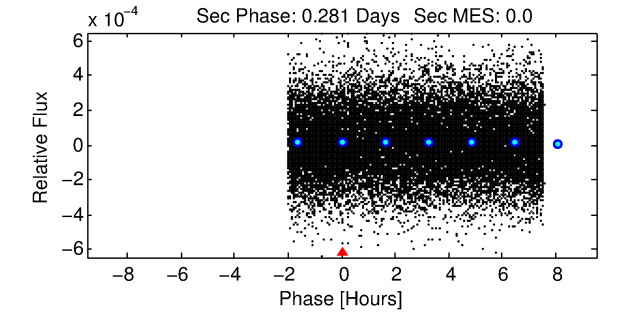
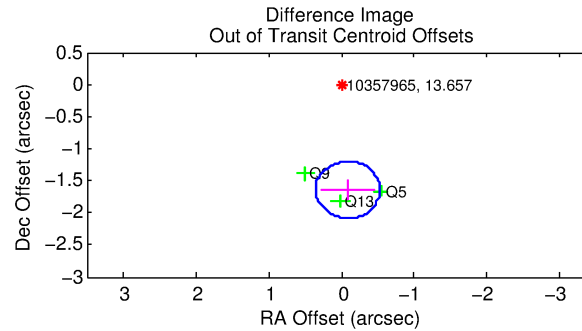
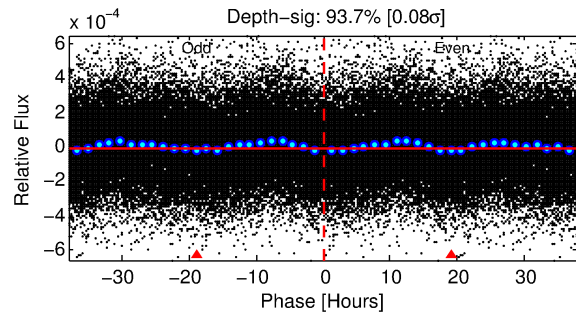
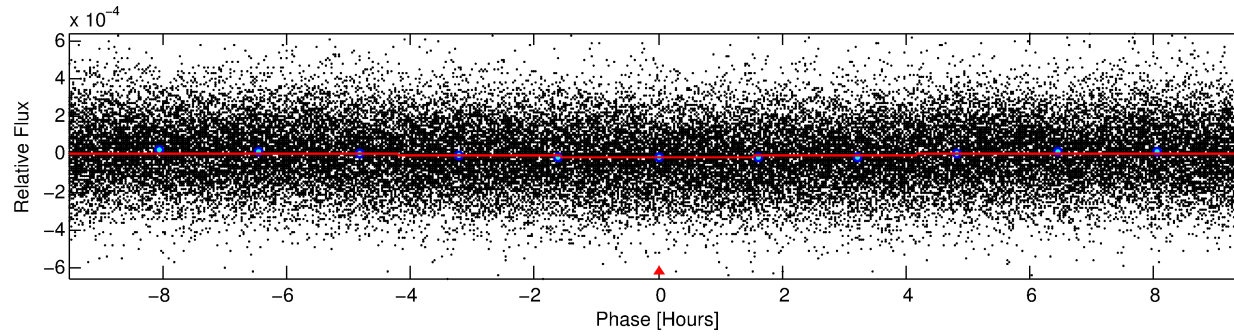
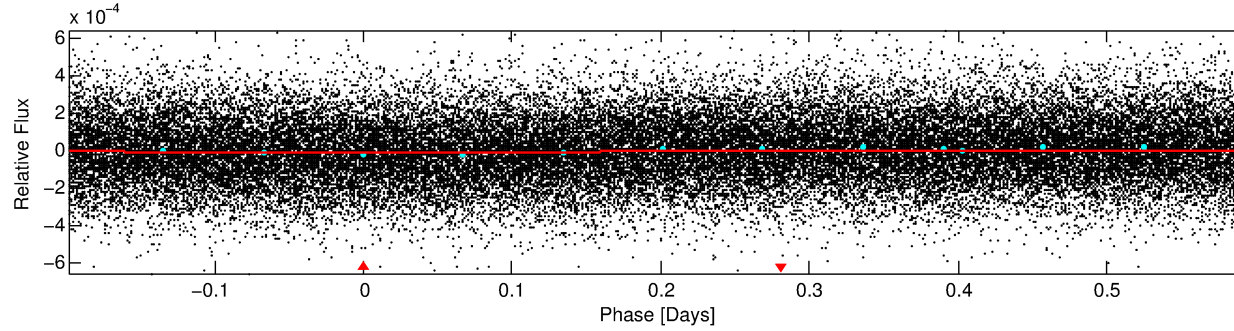
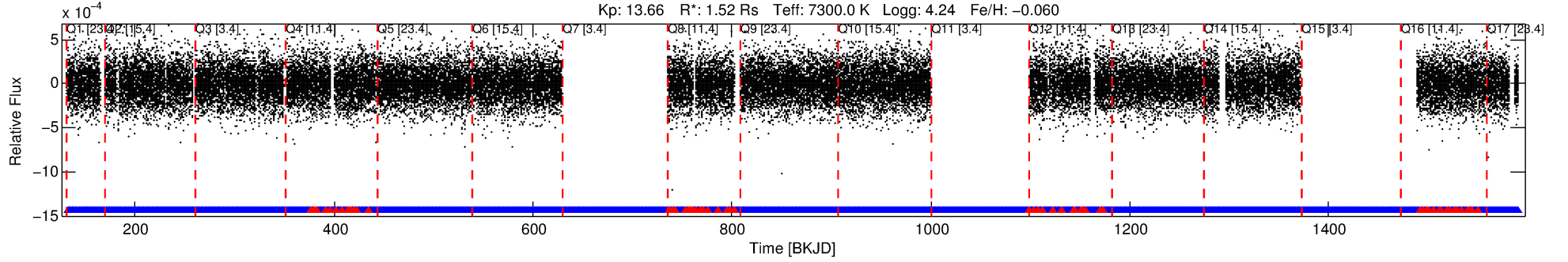
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010357965-01

No Significant Match Found

DV One-Page Summary

KIC: 10357965 Candidate: 1 of 1 Period: 0.793 d



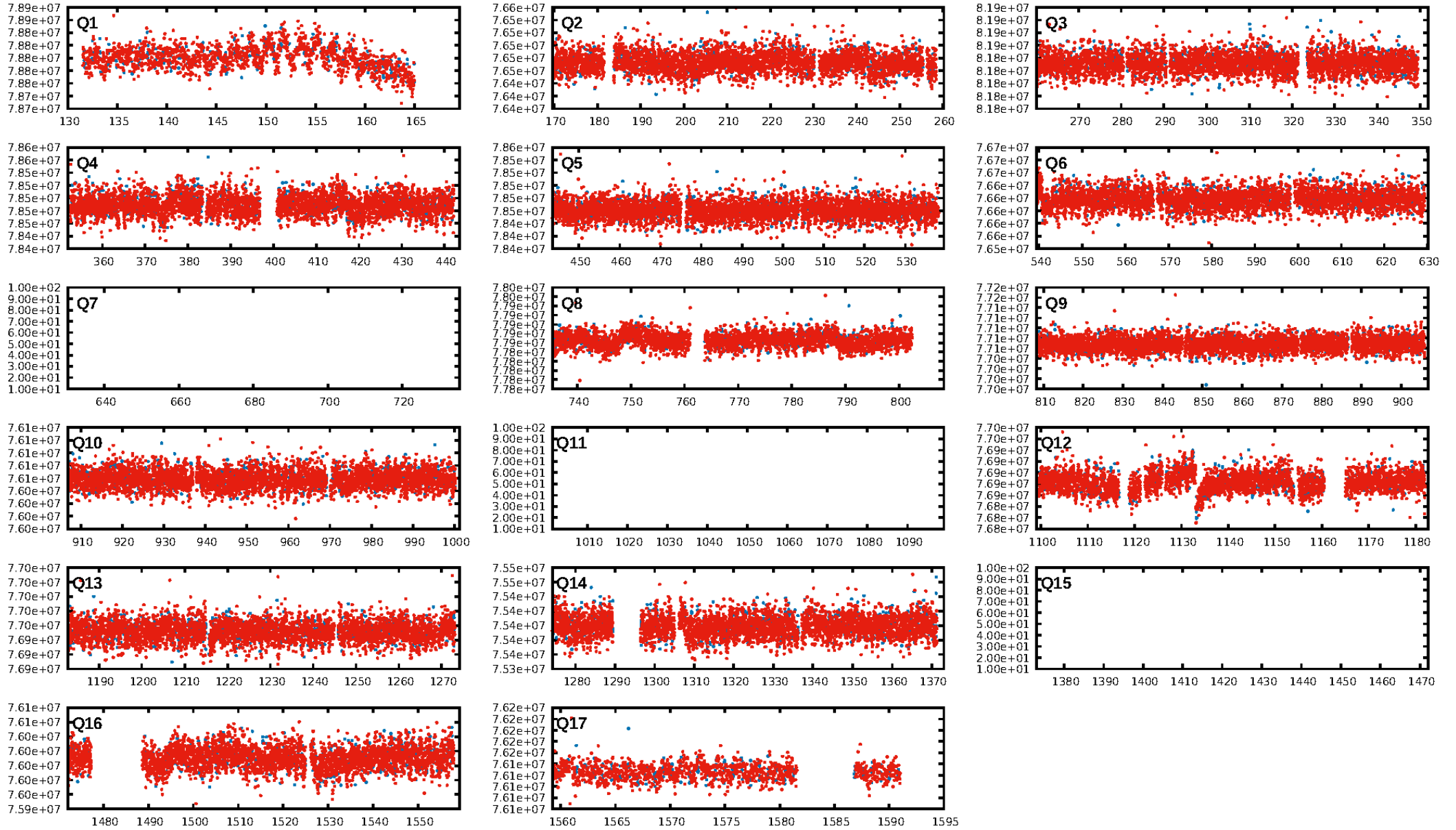
DV Fit Results:

Period = 0.79299 [0.00002] d
Epoch = 132.0975 [0.0104] BKJD
Rp/R* = 0.0031 [0.0043]
a/R* = 1.03 [0.50]
b = 0.23 [34.00]
Seff = 16254.04 [7353.09]
Teq = 2879 [326] K
Rp = 0.51 [0.74] Re
a = 0.0191 [0.0056] AU
Ag = N/A
Teffp = N/A

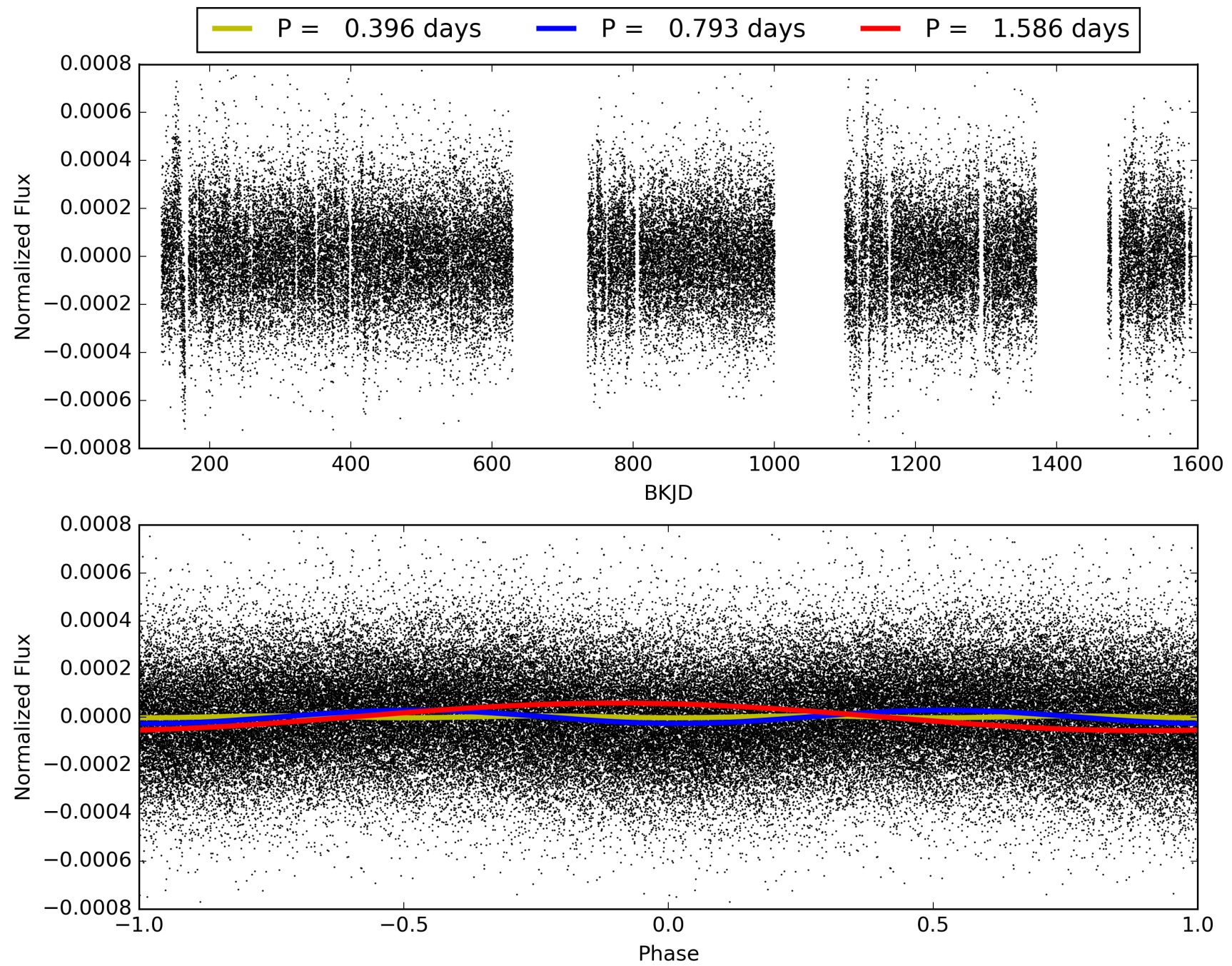
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.95 [1226/1291]
GhostDiagnostic-chr: 4.606
Centroid-sig: 52.1%
Centroid-so: 1.188 arcsec [0.68 σ]
OotOffset-rm: 1.645 arcsec [11.14 σ]
KicOffset-rm: 1.662 arcsec [12.66 σ]
OotOffset-st: 0/0/0/3 [3]
KicOffset-st: 0/0/0/3 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 010357965-01, PDC Light Curves

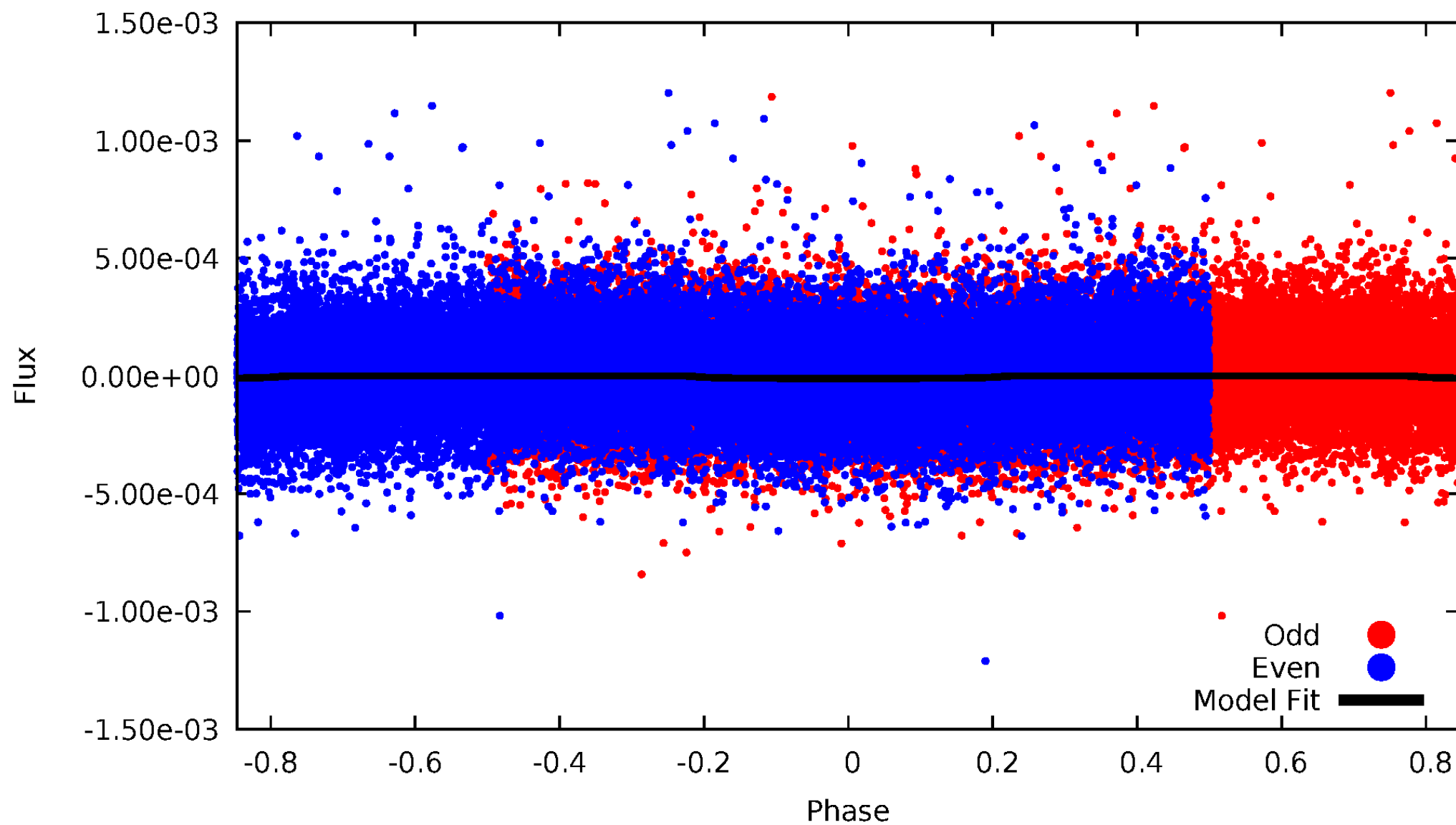


TCE 010357965-01



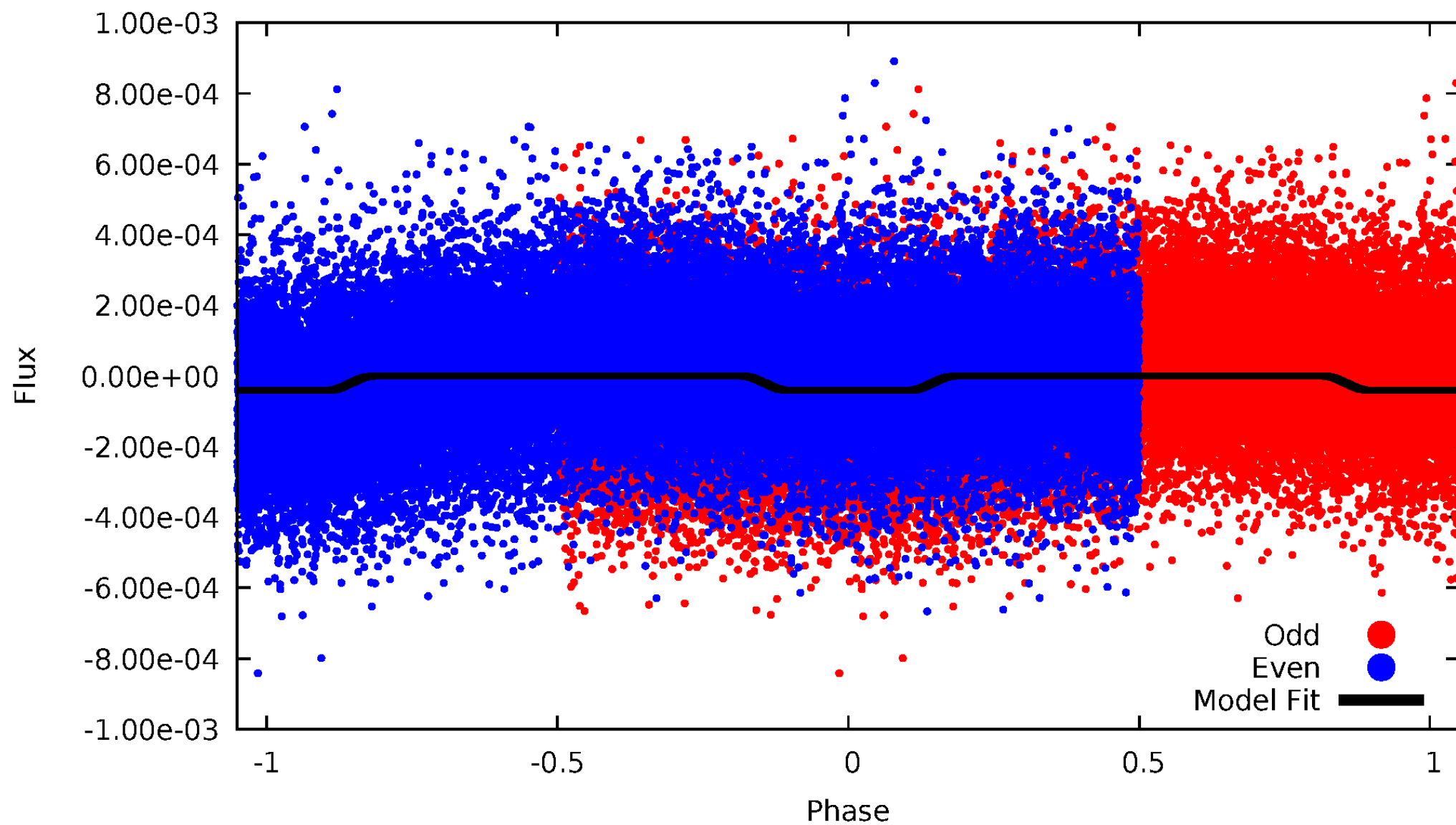
DV Odd/Even

TCE 010357965-01



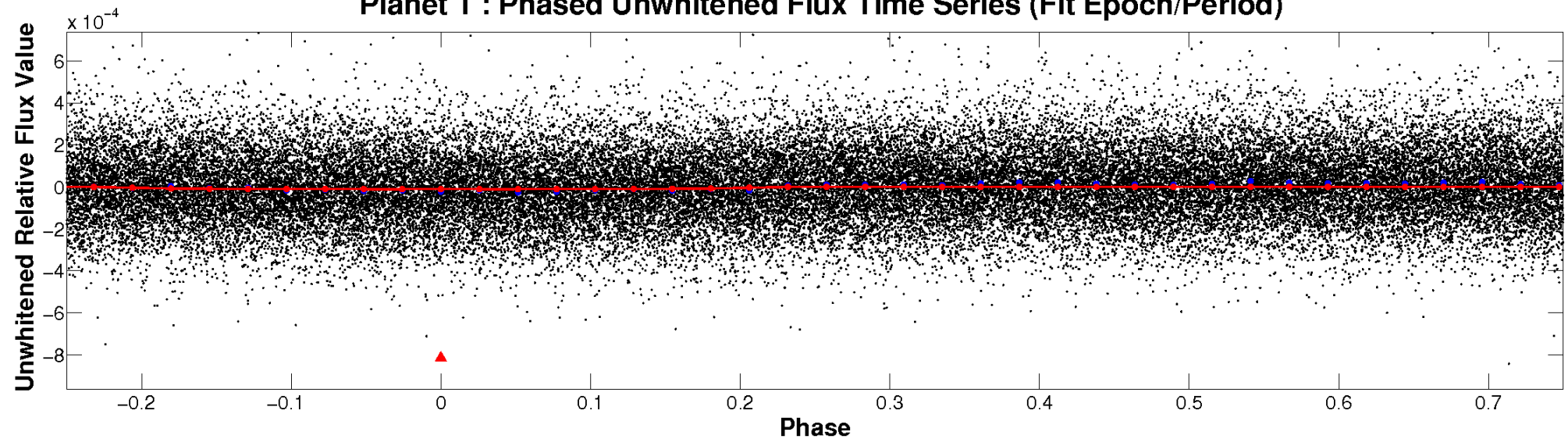
ALT Odd/Even

TCE 010357965-01

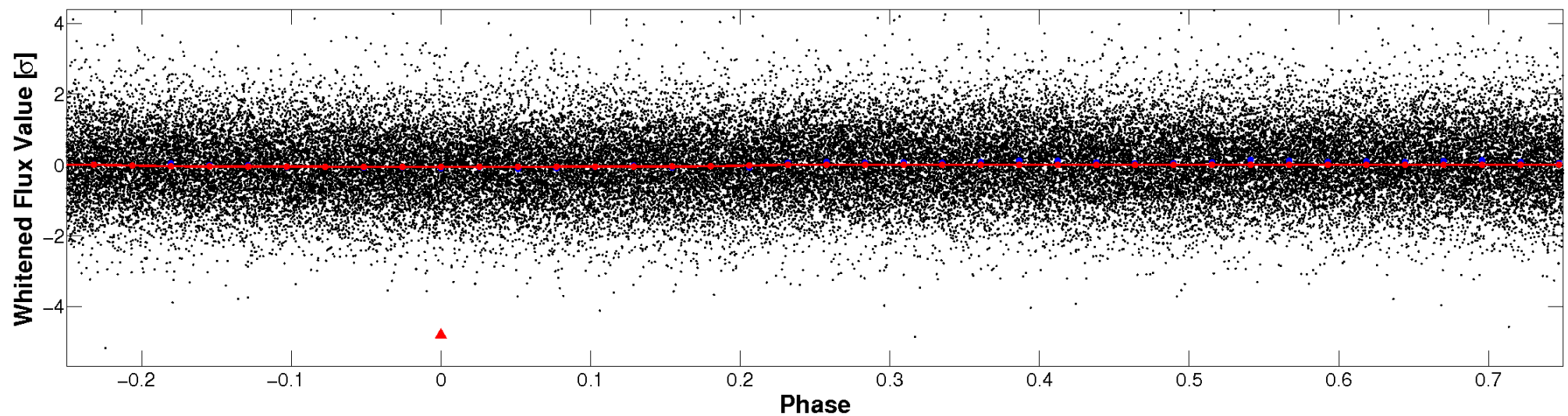


Non-Whitened Vs. Whitened Light Curve

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

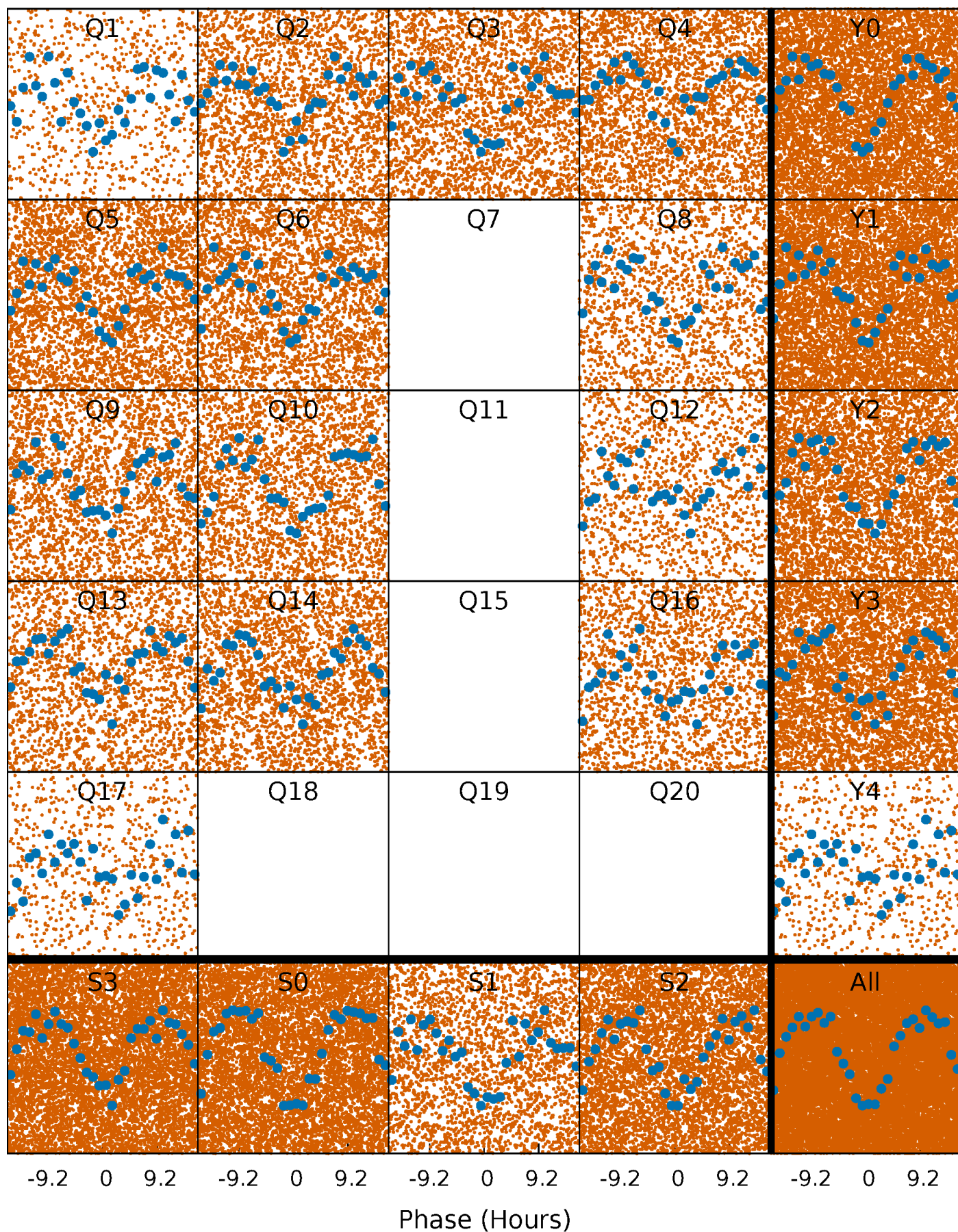


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



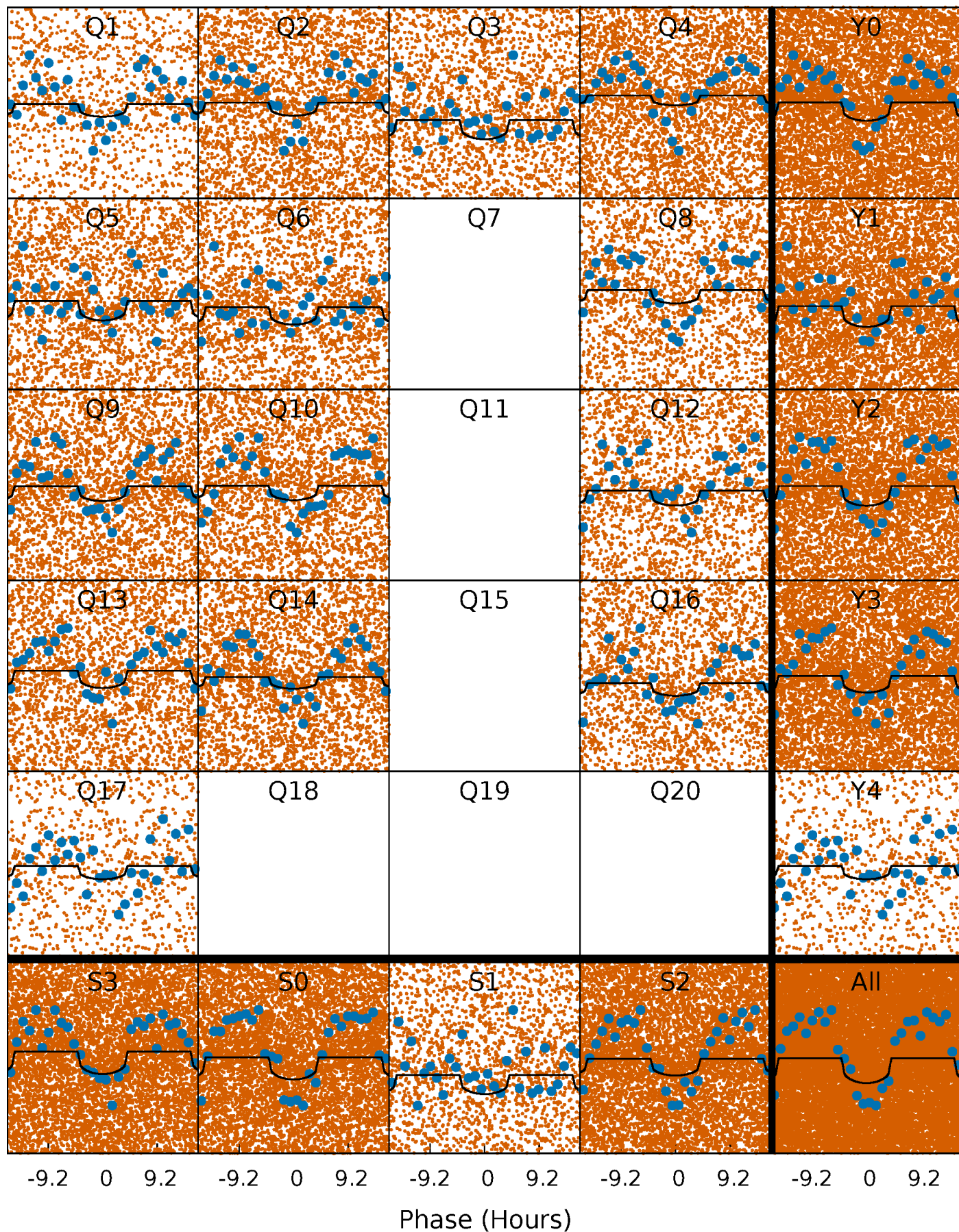
PDC Quarter-Phased Transit Curves

TCE 010357965-01 P= 0.792991 Days $T_0=132.097464$ (BKJD)



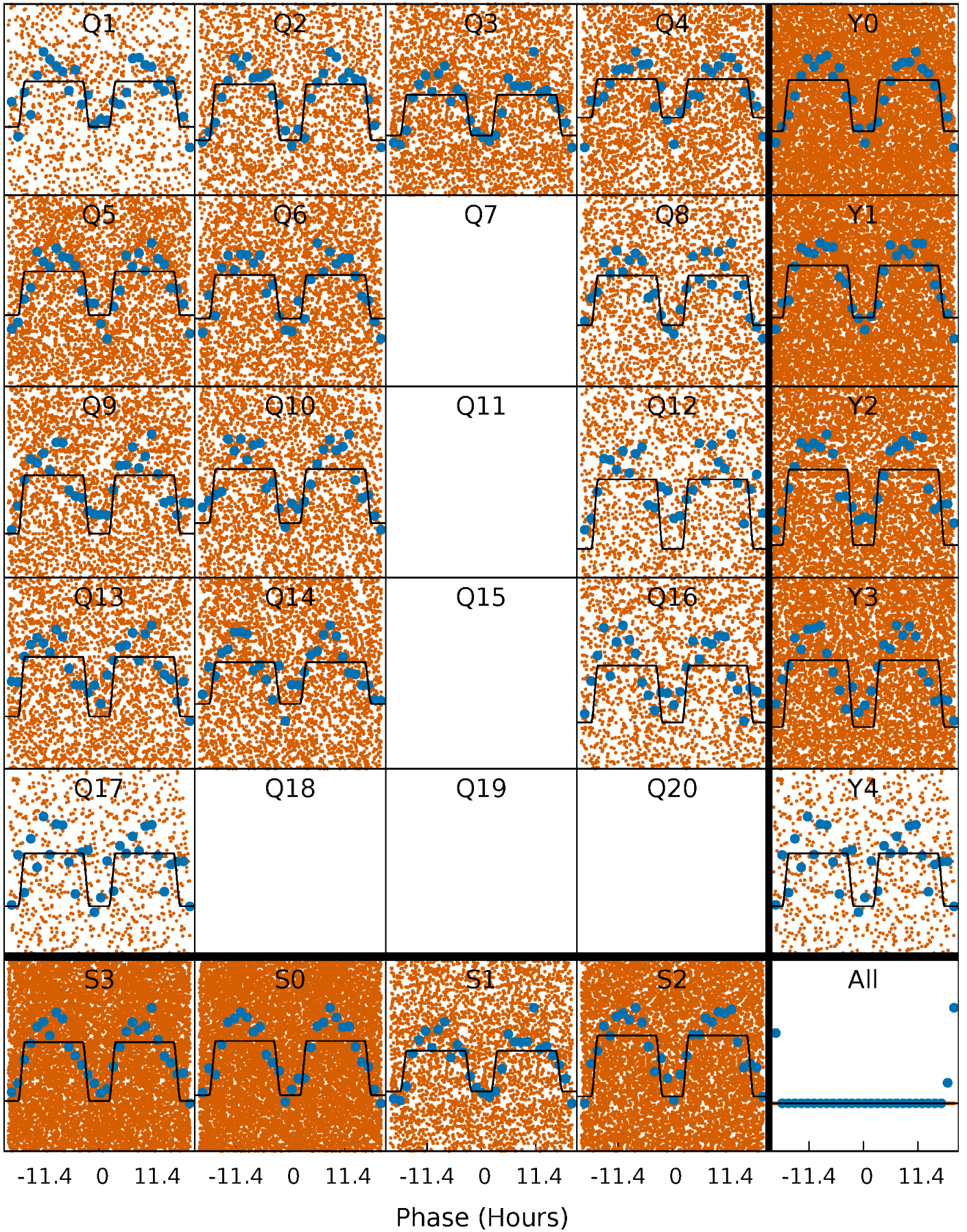
DV Quarter-Phased Transit Curves

TCE 010357965-01 P= 0.792991 Days $T_0=132.097464$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

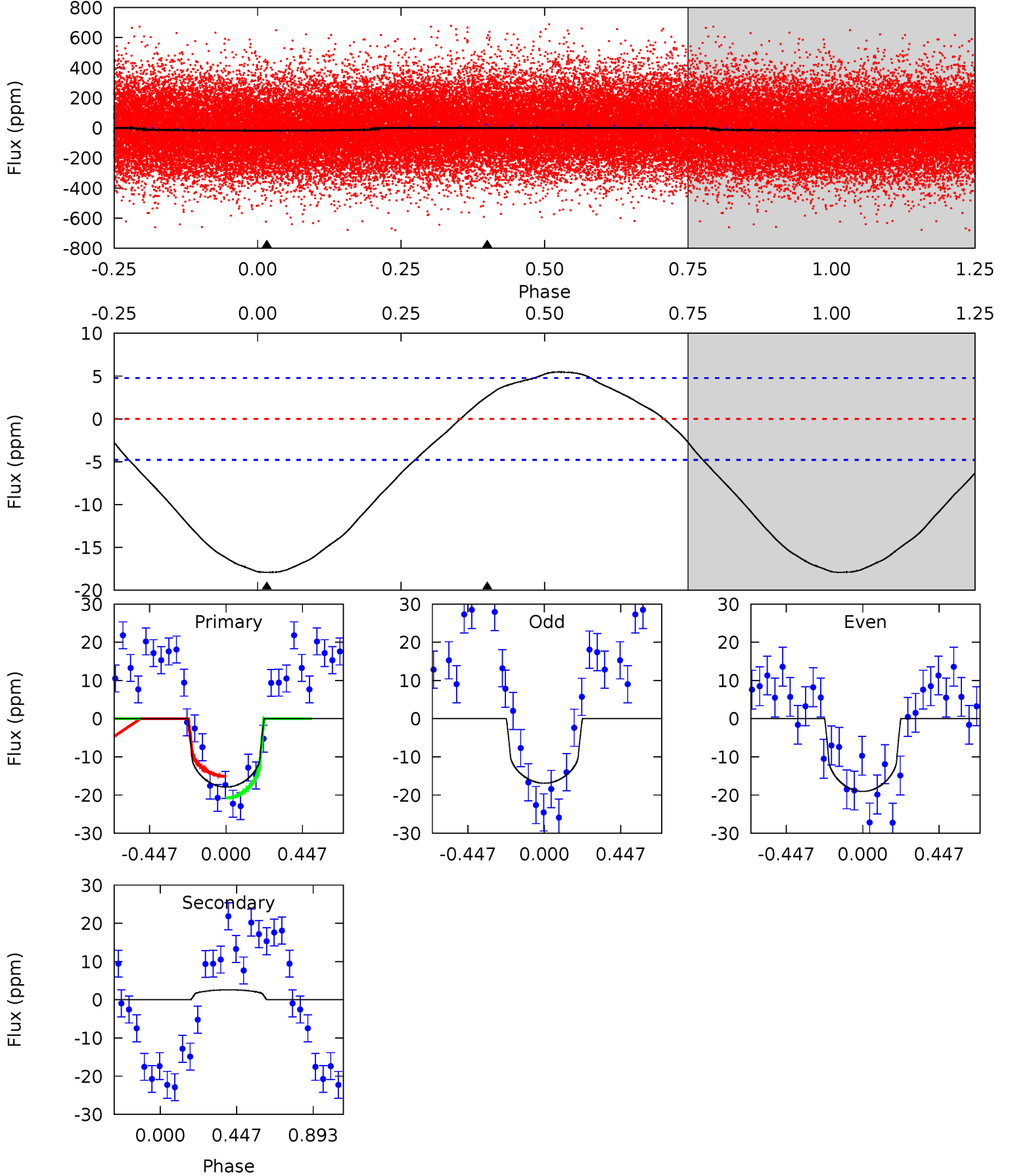
TCE 010357965-01 P= 0.793085 Days $T_0=132.049250$ (BKJD)



DV Model-Shift Uniqueness Test

010357965-01, P = 0.792991 Days, E = 131.304473 Days

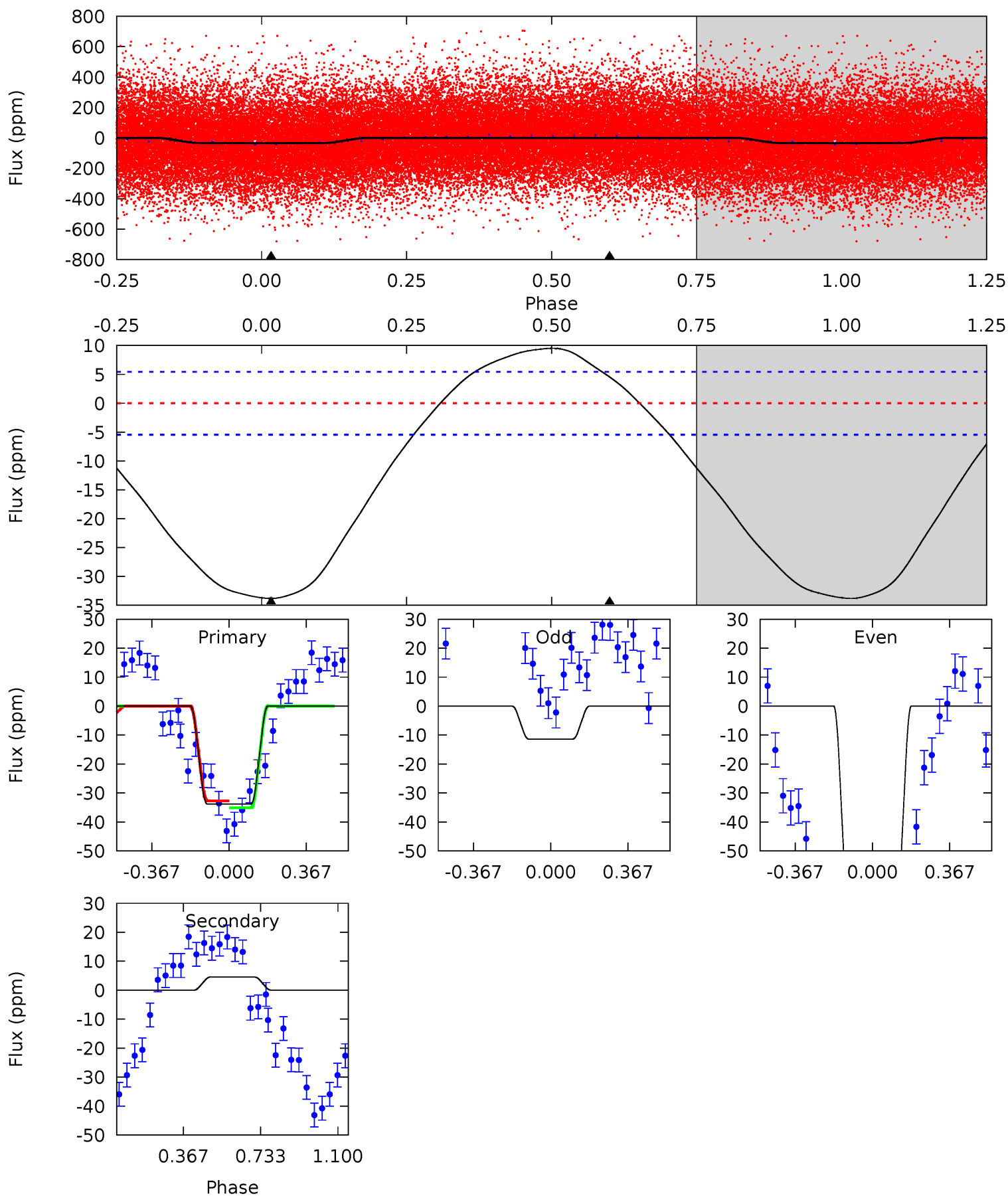
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.9	-2.31	0	0	4.24	0.76	1.43	15.9	15.9	-2.31	-2.31	0.95	1.20	0.23	2.54



Alt Model-Shift Uniqueness Test

010357965-01, P = 0.793085 Days, E = 131.256165 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.6	-3.57	0	0	4.28	0.90	2.54	26.6	26.6	-3.57	-3.57	27.0	1.05	0.22	0.96



Stellar Parameters For KIC 010357965

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7300^{+203}_{-348}	$4.239^{+0.087}_{-0.217}$	$-0.060^{+0.200}_{-0.350}$	$1.523^{+0.547}_{-0.235}$	$1.466^{+0.219}_{-0.219}$	$0.585^{+0.241}_{-0.327}$
	+3%/-5%	+2%/-5%	+333%/-583%	+36%/-15%	+15%/-15%	+41%/-56%
Source	KIC0	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 010357965-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	3 ± 1	$0.76^{+0.65}_{-0.50}$	4070^{+361}_{-248}	-4770^{+650}_{-2862}	$-0.808^{+0.605}_{-7.094}$
Alt.	5 ± 1	$1.09^{+0.76}_{-0.61}$	4070^{+320}_{-270}	-4675^{+551}_{-1695}	$-0.724^{+0.482}_{-3.033}$

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 $A_{obs} \gg 1.0$

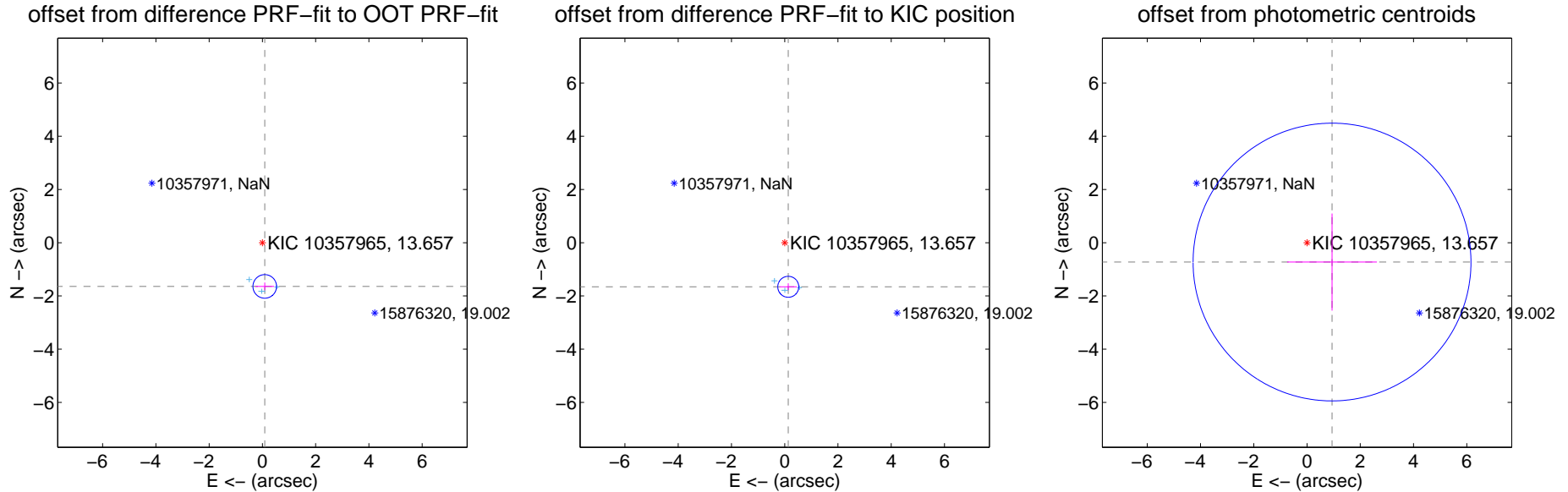
DV Centroid Data

Supplemental centroid analysis for 010357965-01. Kepler magnitude: 13.66. Transit SNR 7.31

There are 3 quarters with good PRF difference image offsets

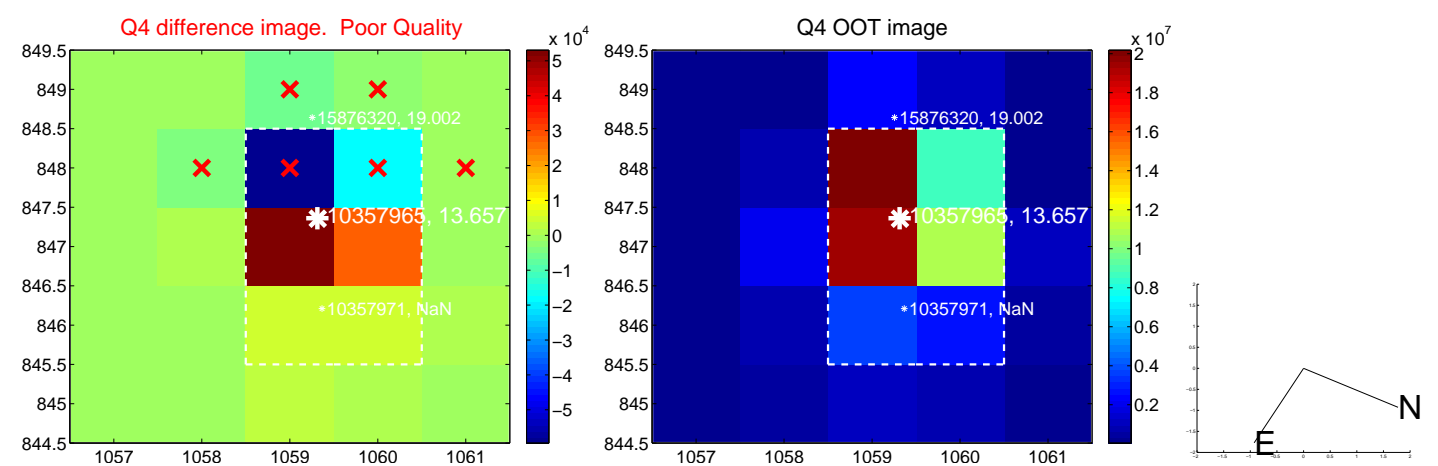
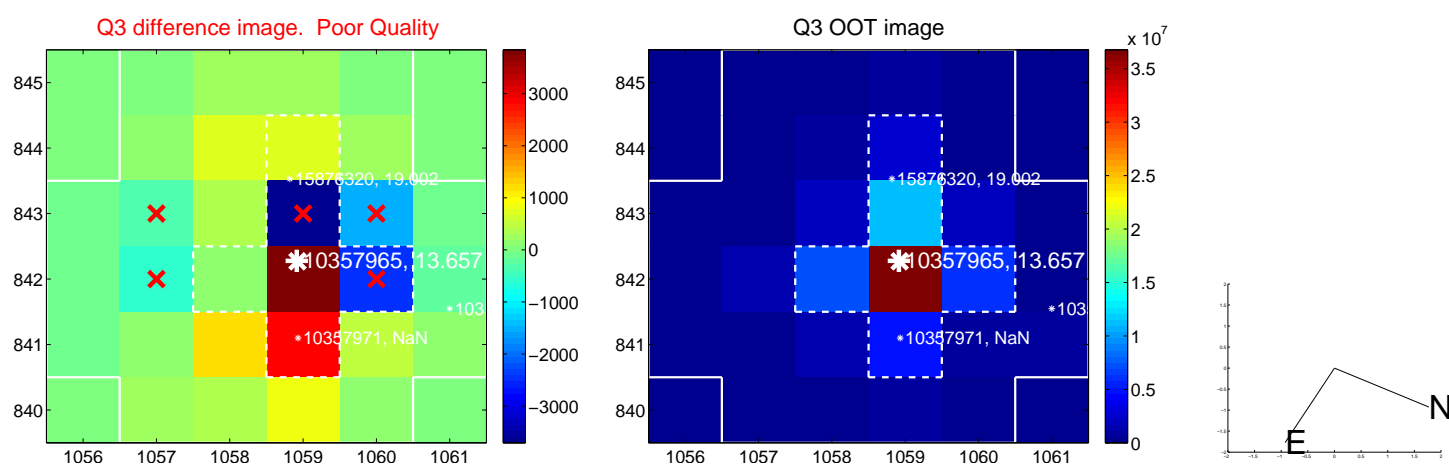
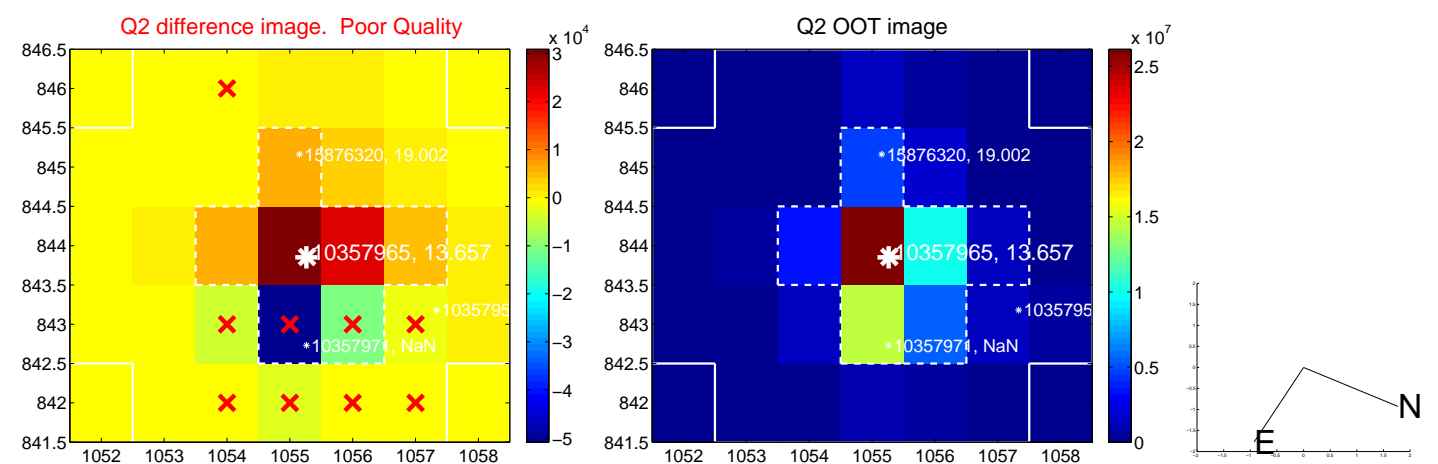
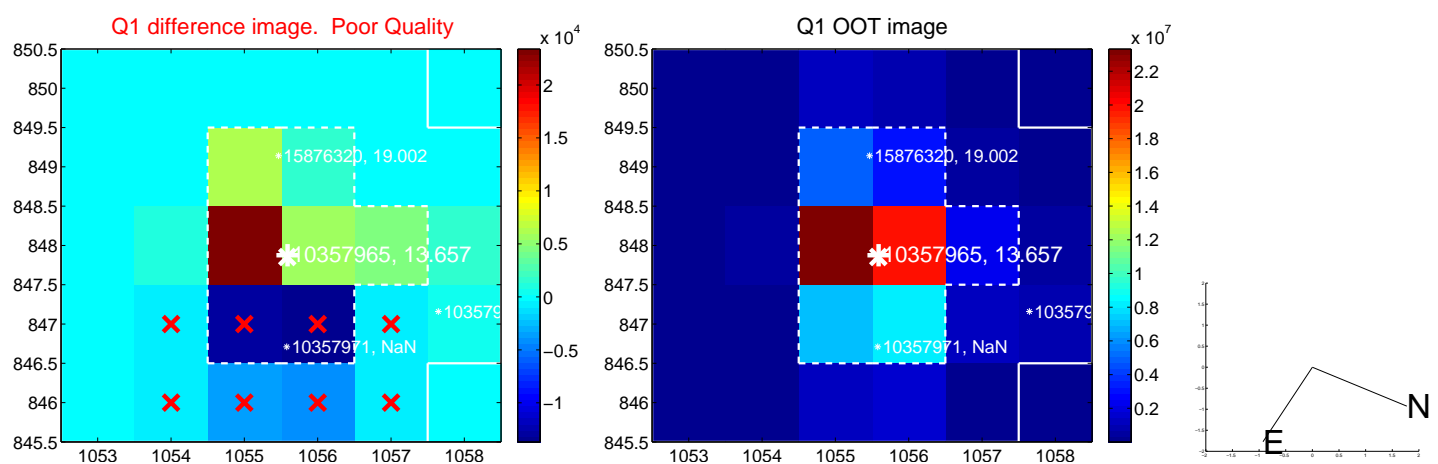
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.645 ± 0.148	11.14	-0.088 ± 0.351	-1.642 ± 0.147
PRF-fit source offset from KIC position	1.662 ± 0.131	12.66	-0.134 ± 0.323	-1.657 ± 0.129
photometric centroid source offset	1.19 ± 1.74	0.68	-0.94 ± 1.69	-0.73 ± 1.82

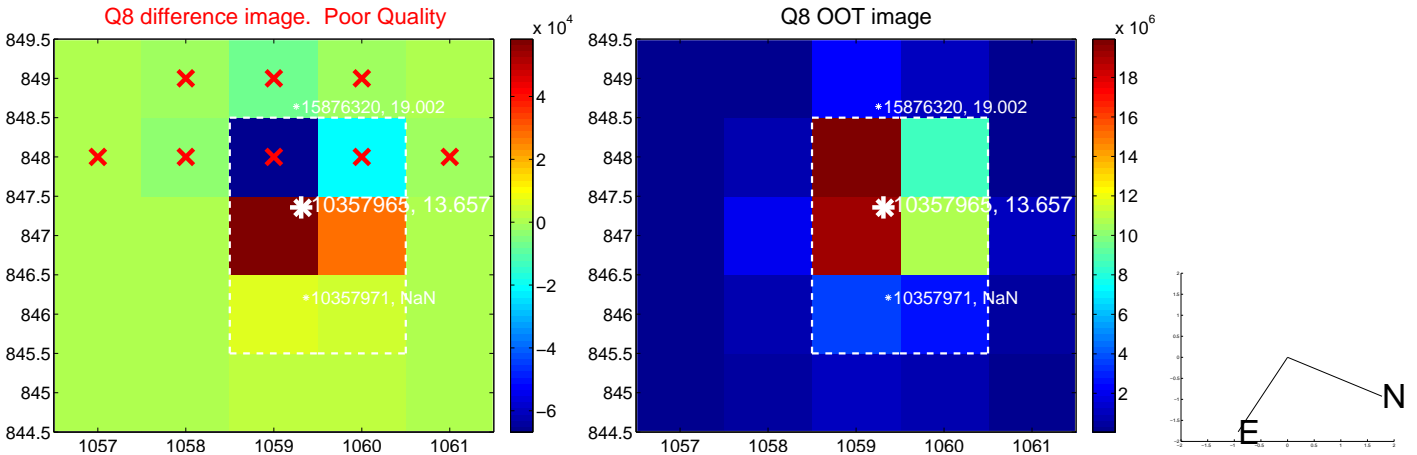
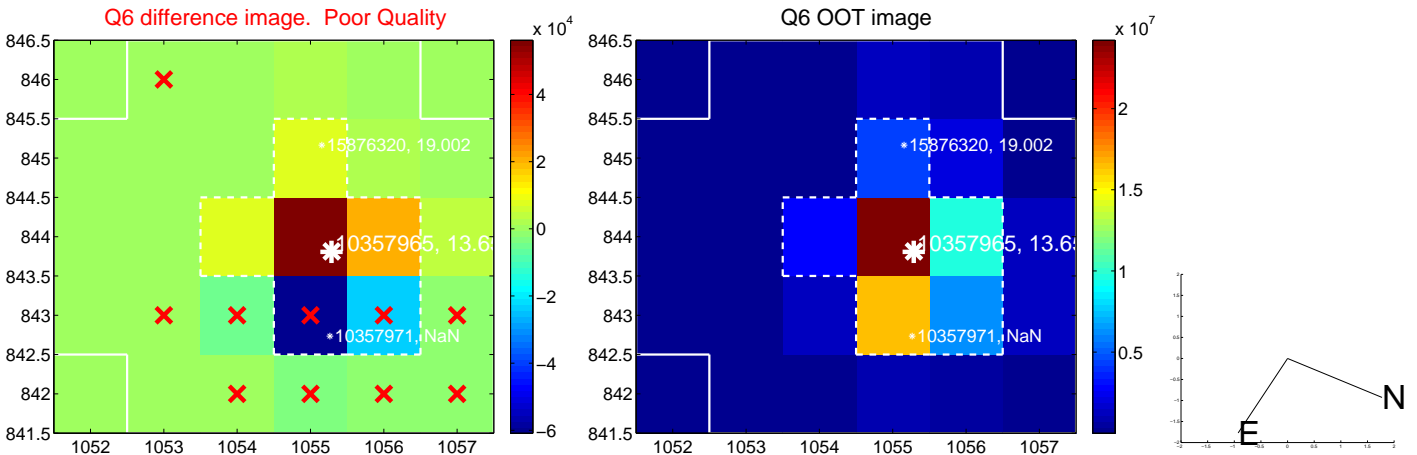
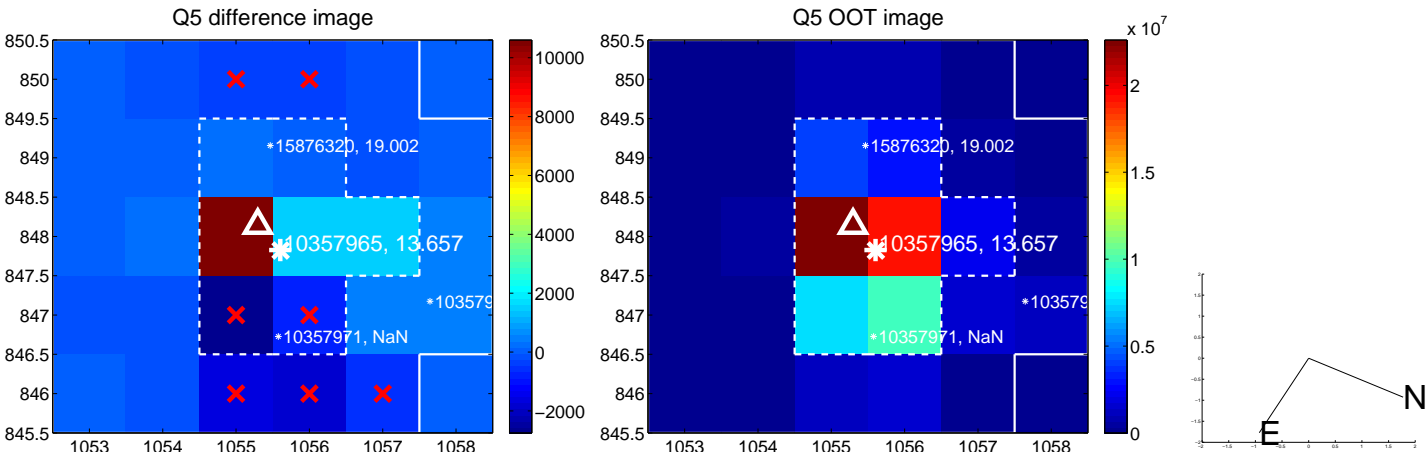


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

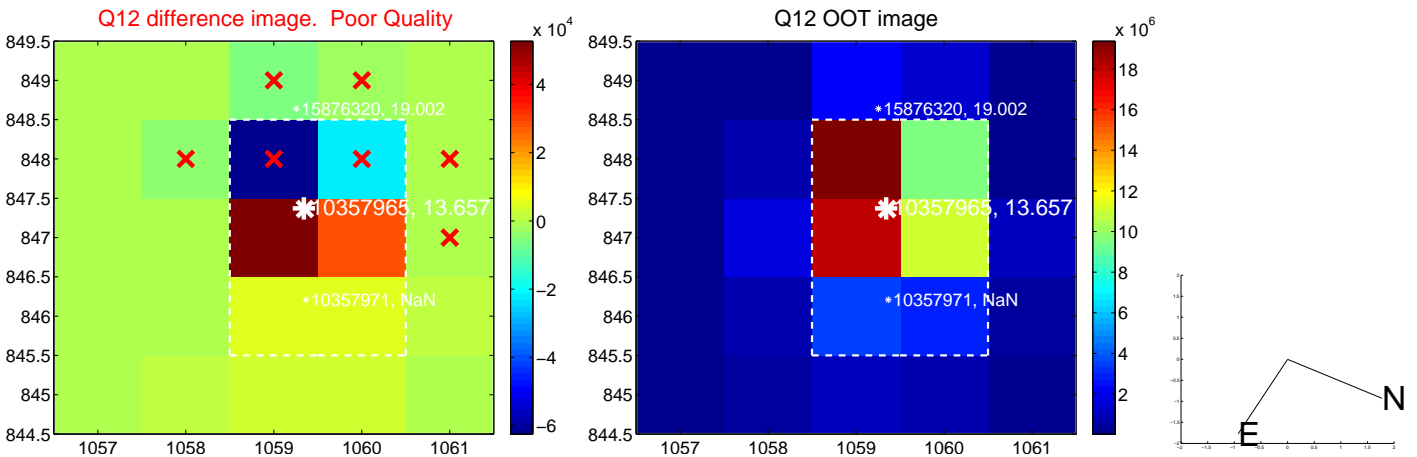
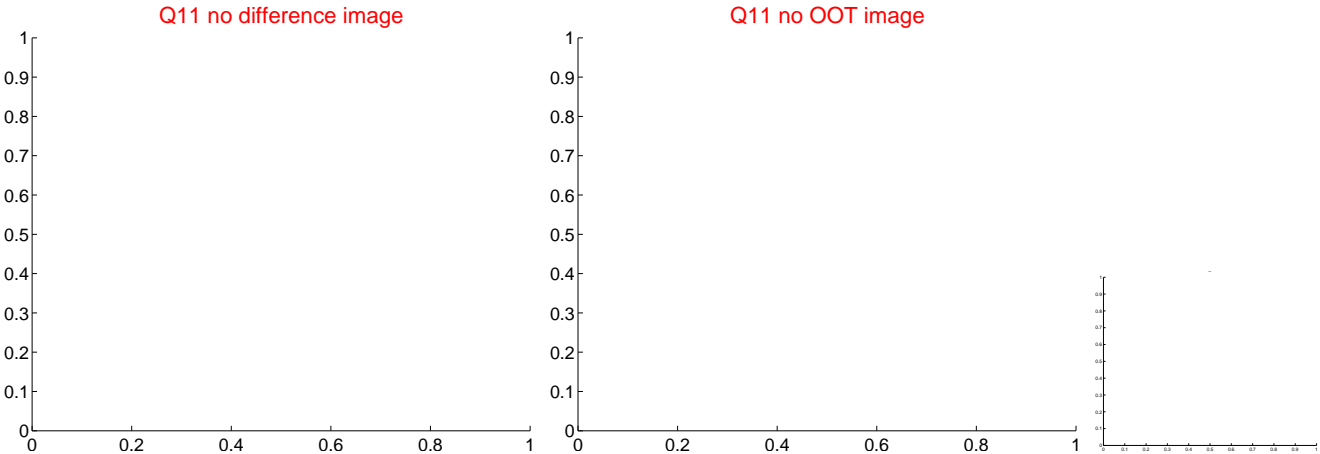
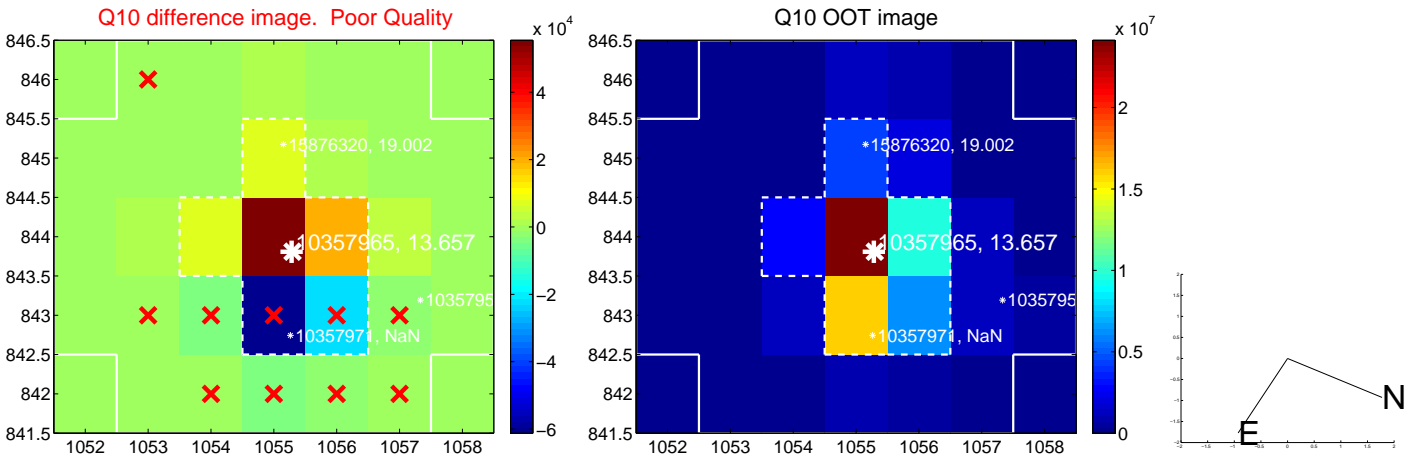
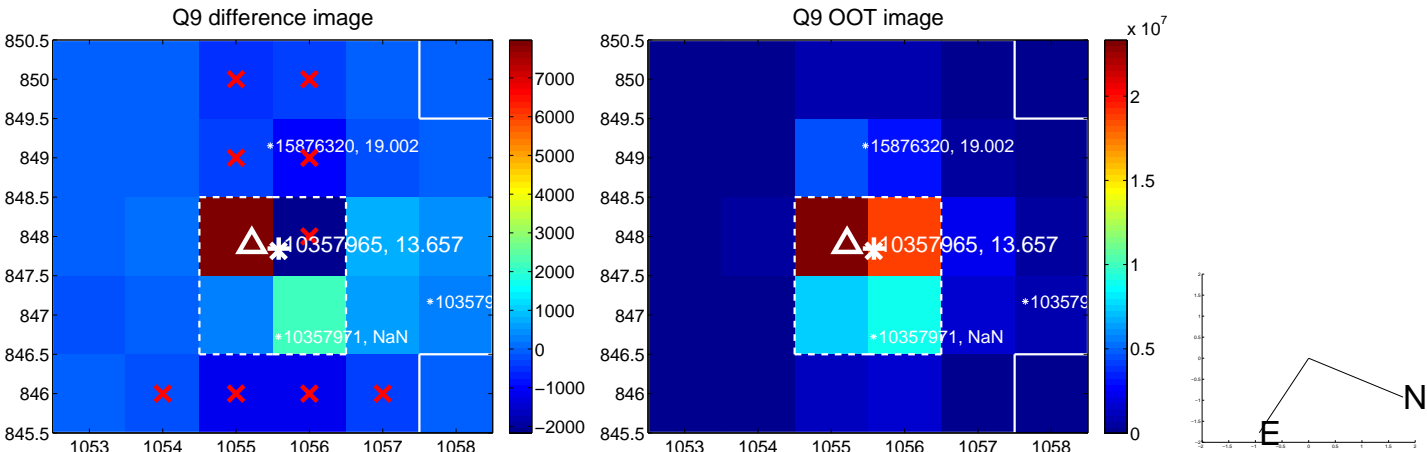
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



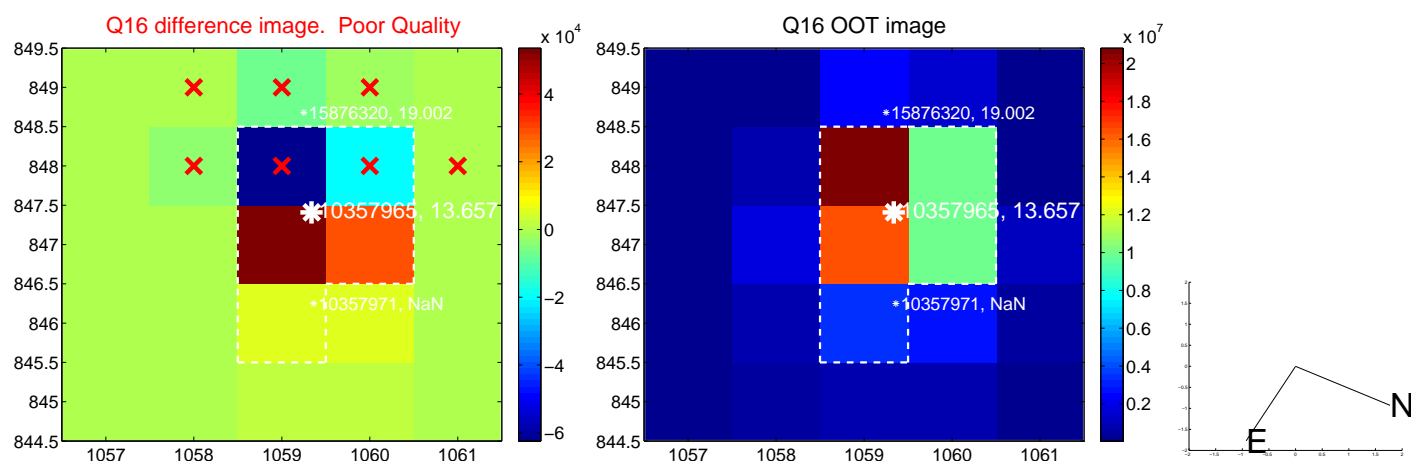
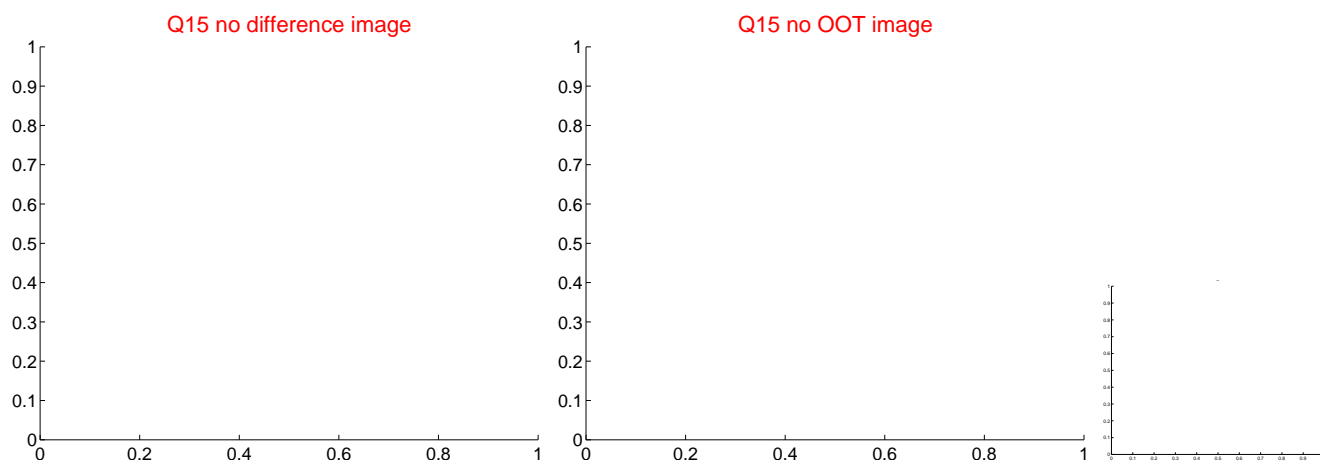
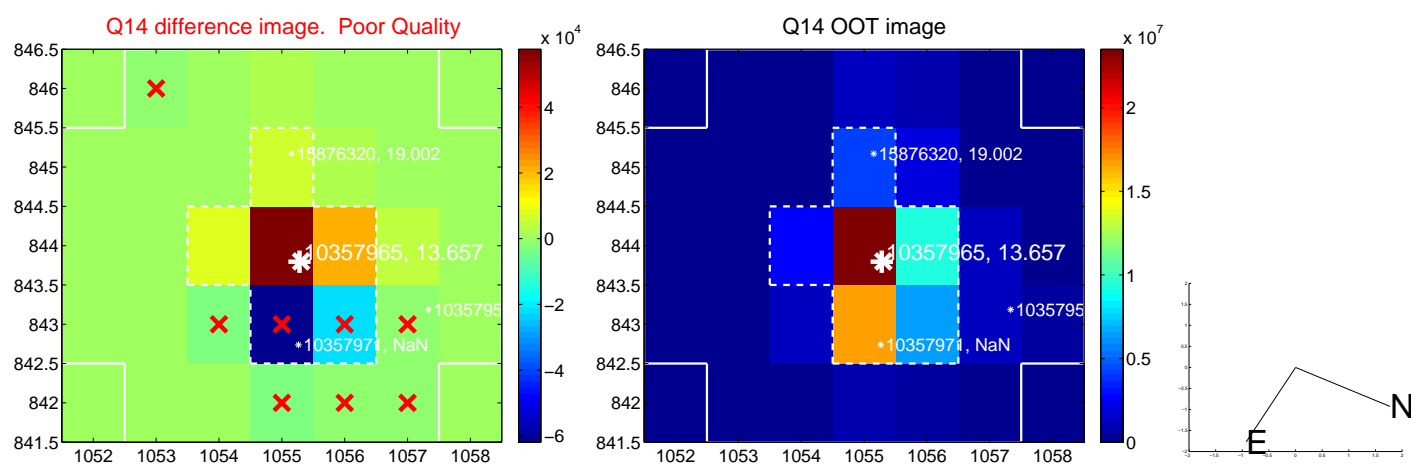
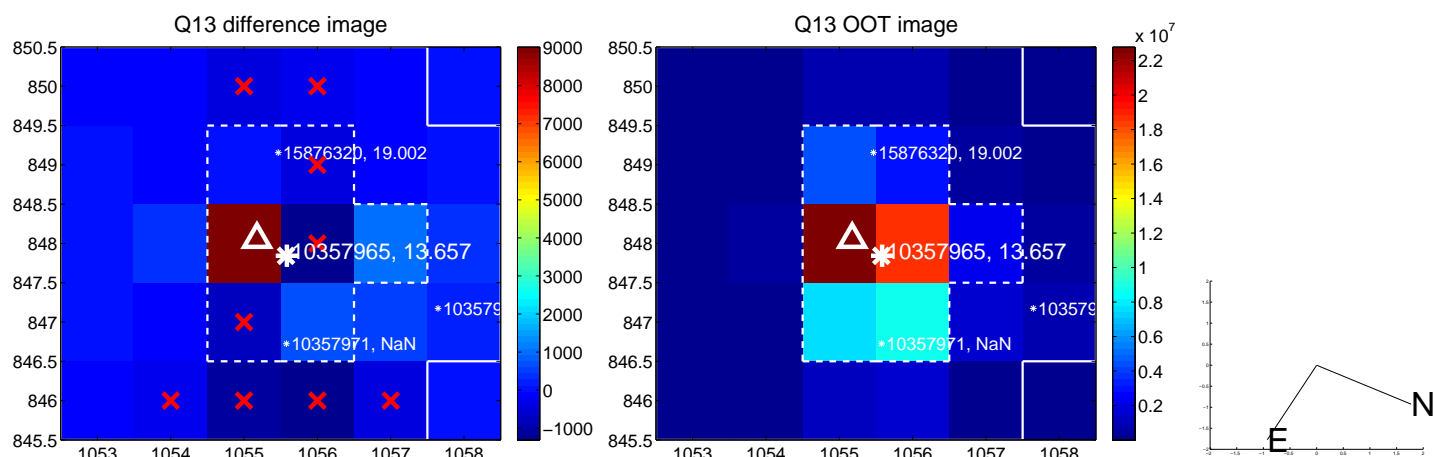
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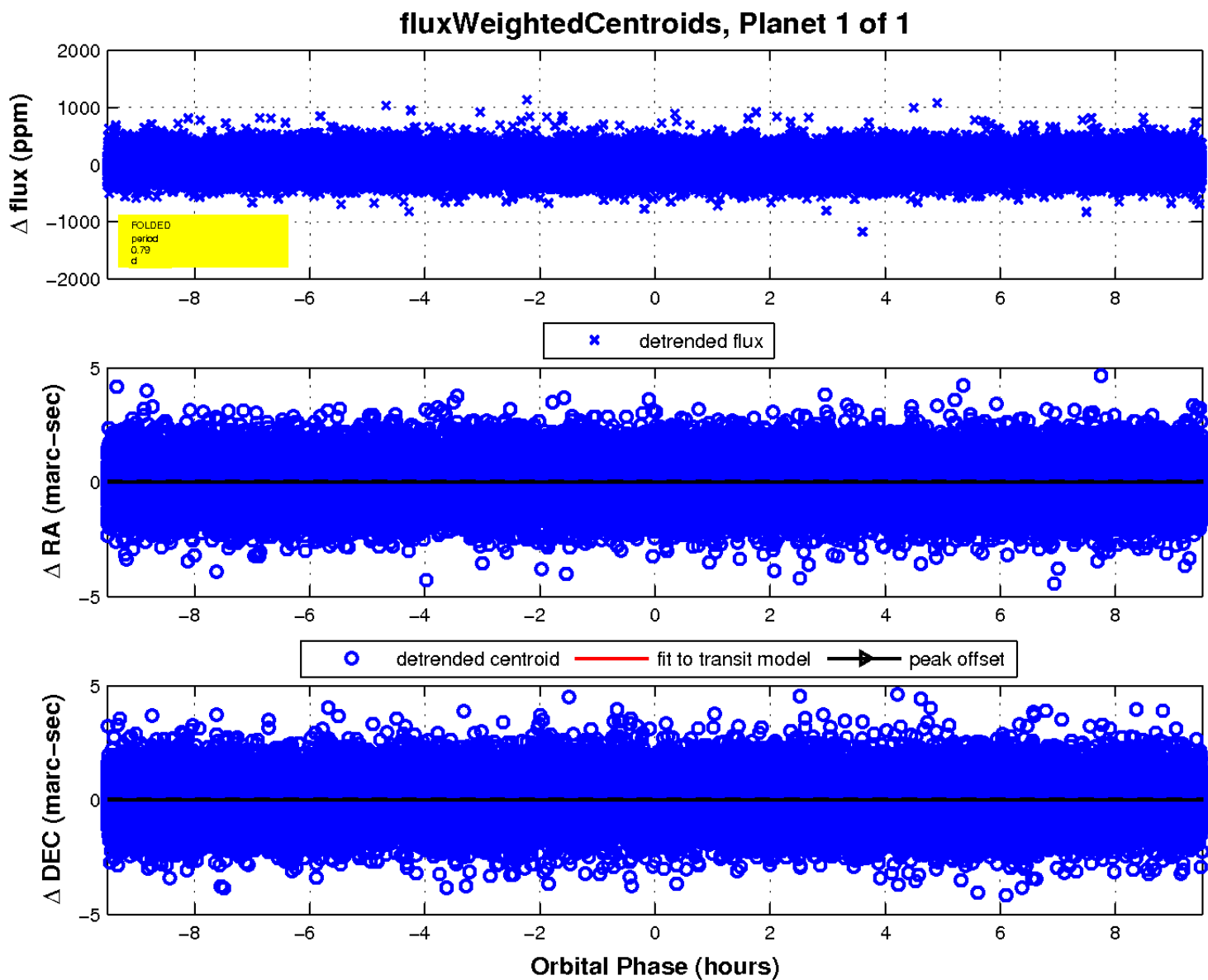
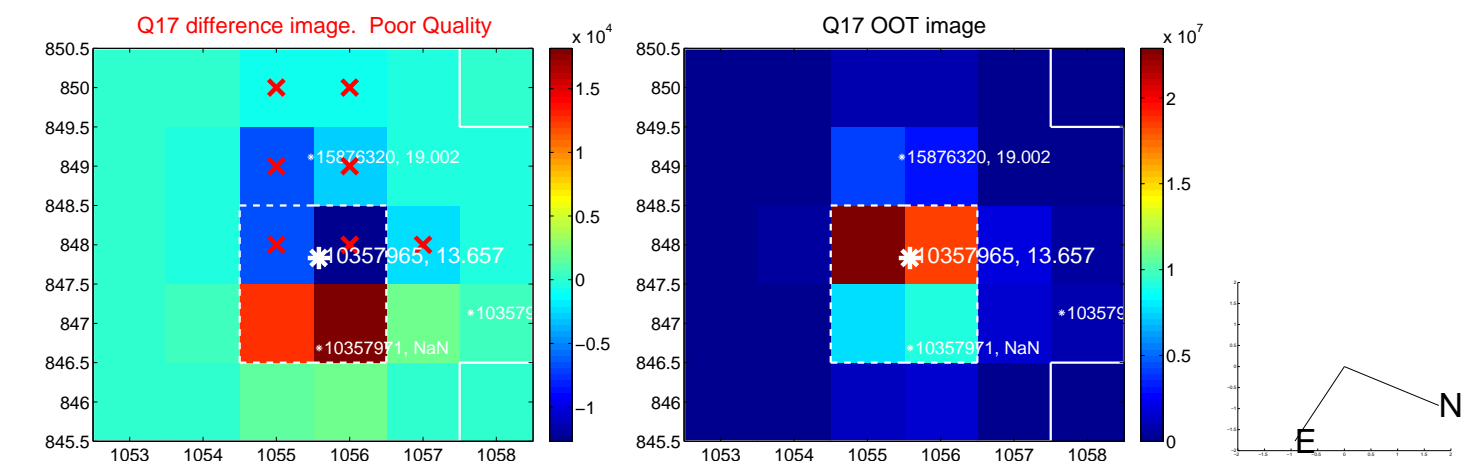
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UKIRT Image

Declination

