

KIC 011456382

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})
011456382-01	OBS	2771.01	0.814288	131.644058	45.6	1.675	28.8	32.1	1.54	6366	1.23	10222.74

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011456382-01	OBS	FP	0.00	0	0	1	1	CENT_RESOLVED_OFFSET—HALO_GHOST—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 011456382-01

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
011456382-01	11456382	4845.01	11456405	1:1	21.0	0	5	15.37	11.75	1.76	Direct-PRF	1	1.22	0.28

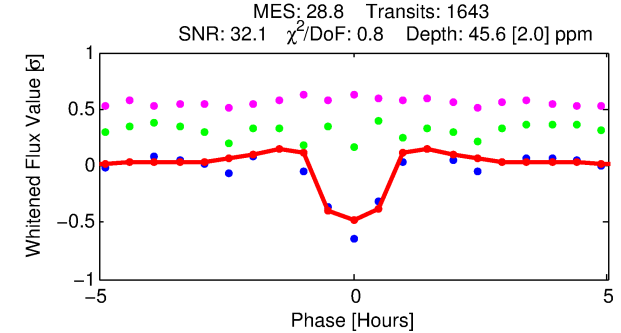
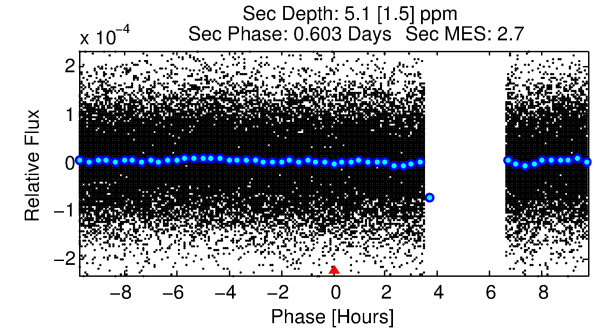
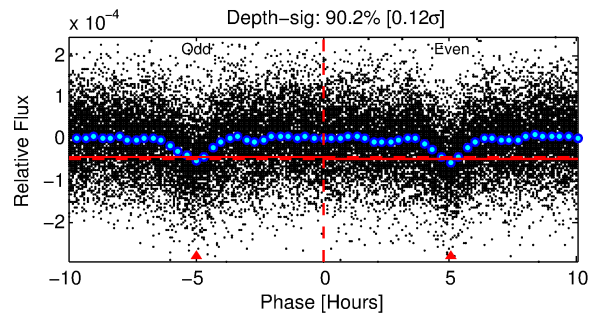
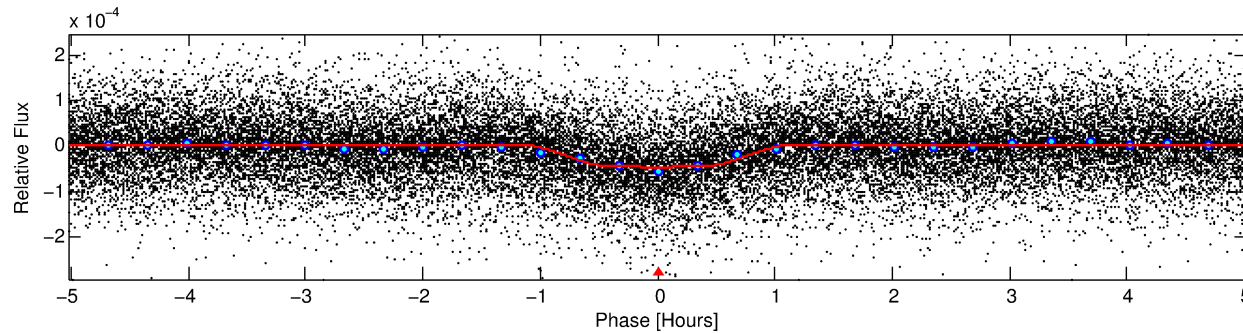
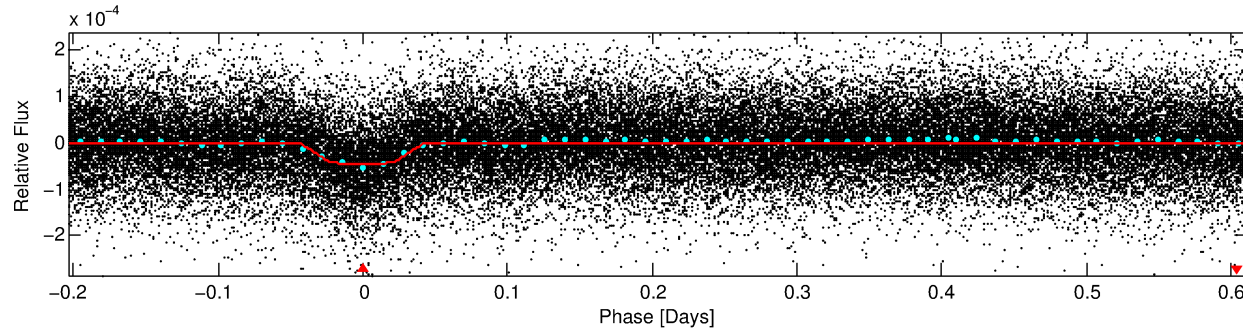
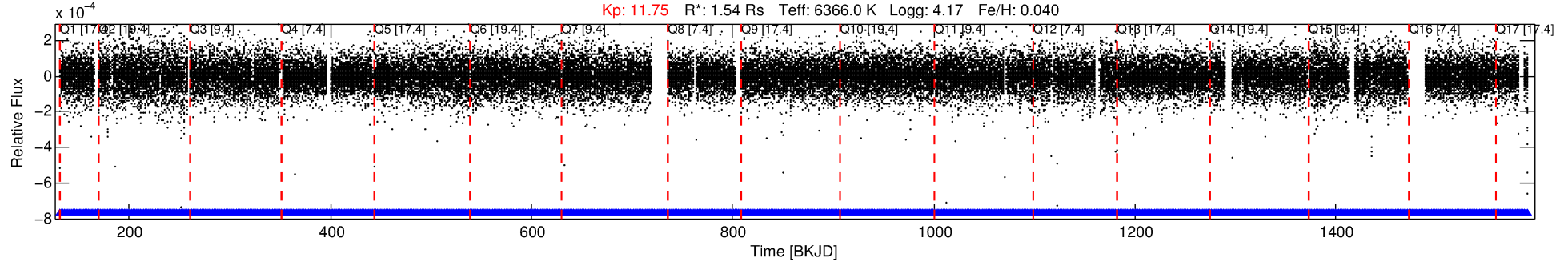
Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match 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: 11456382 Candidate: 1 of 1 Period: 0.814 d

KOI: K02771 Corr: No Ephemeris Match

Kp: 11.75 R*: 1.54 Rs Teff: 6366.0 K Logg: 4.17 Fe/H: 0.040



DV Fit Results:

Period = 0.81429 [0.00000] d
Epoch = 131.6441 [0.0005] BKJD
Rp/R* = 0.0073 [0.0009]
a/R* = 1.88 [0.92]
b = 0.91 [0.14]
Seff = 10222.74 [3998.87]
Teq = 2564 [251] K
Rp = 1.23 [0.42] Re
a = 0.0185 [0.0048] AU
Ag = 0.63 [0.34] [-1.09σ]
Teffp = 3538 [370] K [2.18σ]

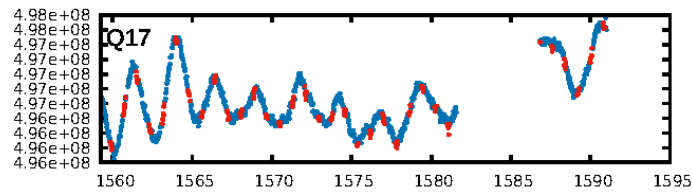
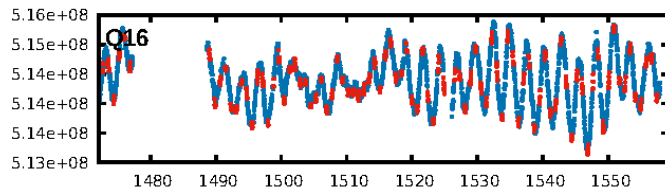
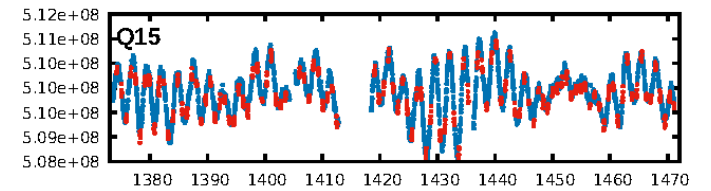
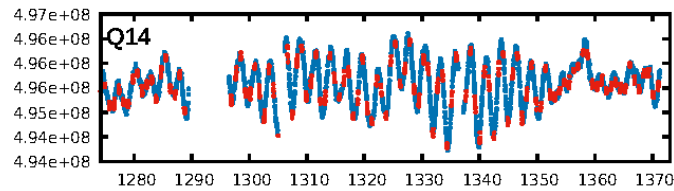
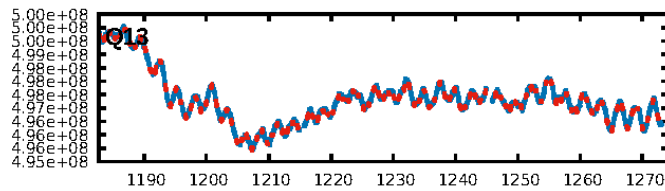
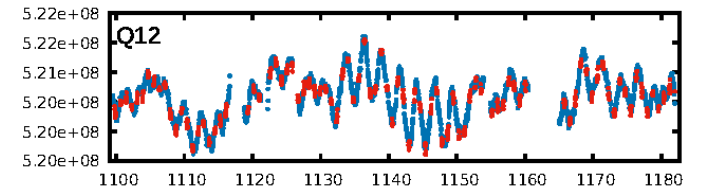
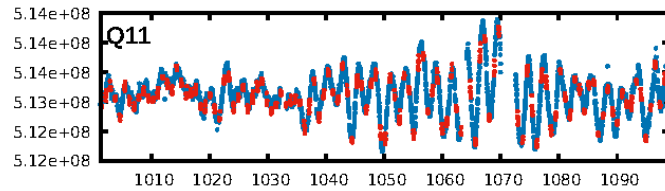
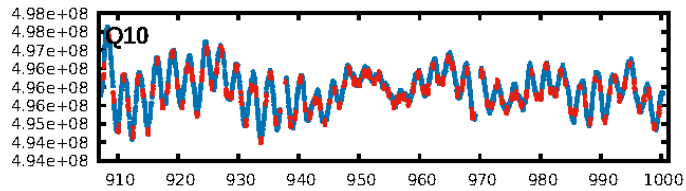
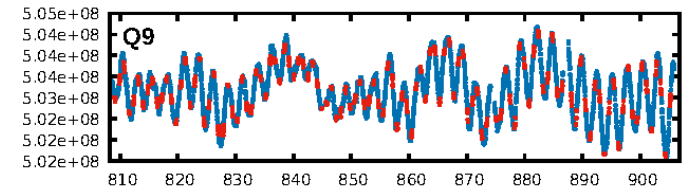
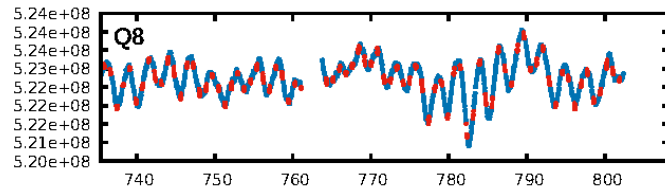
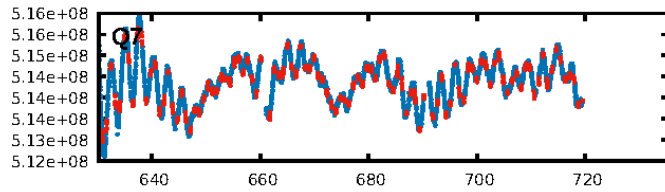
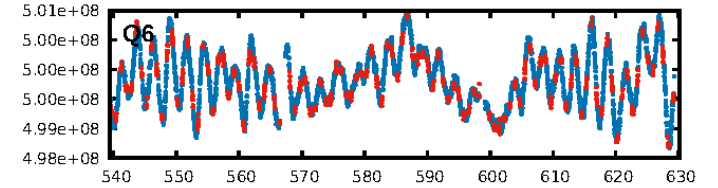
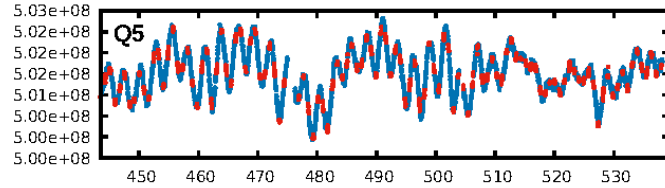
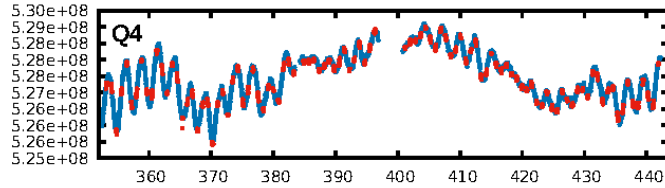
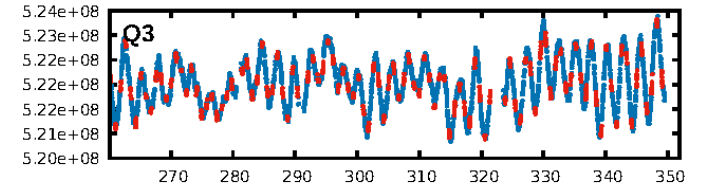
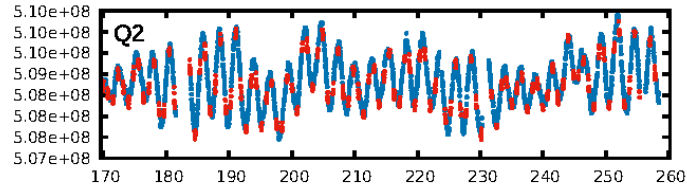
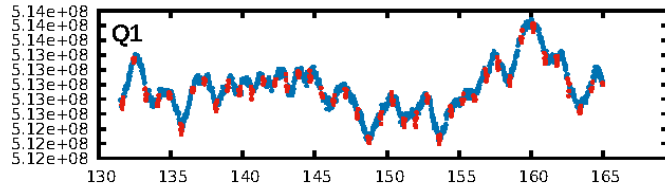
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.12e-165
RollingBand-fgt: 1.00 [1570/1570]
GhostDiagnostic-chr: -0.09146
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [17/17]

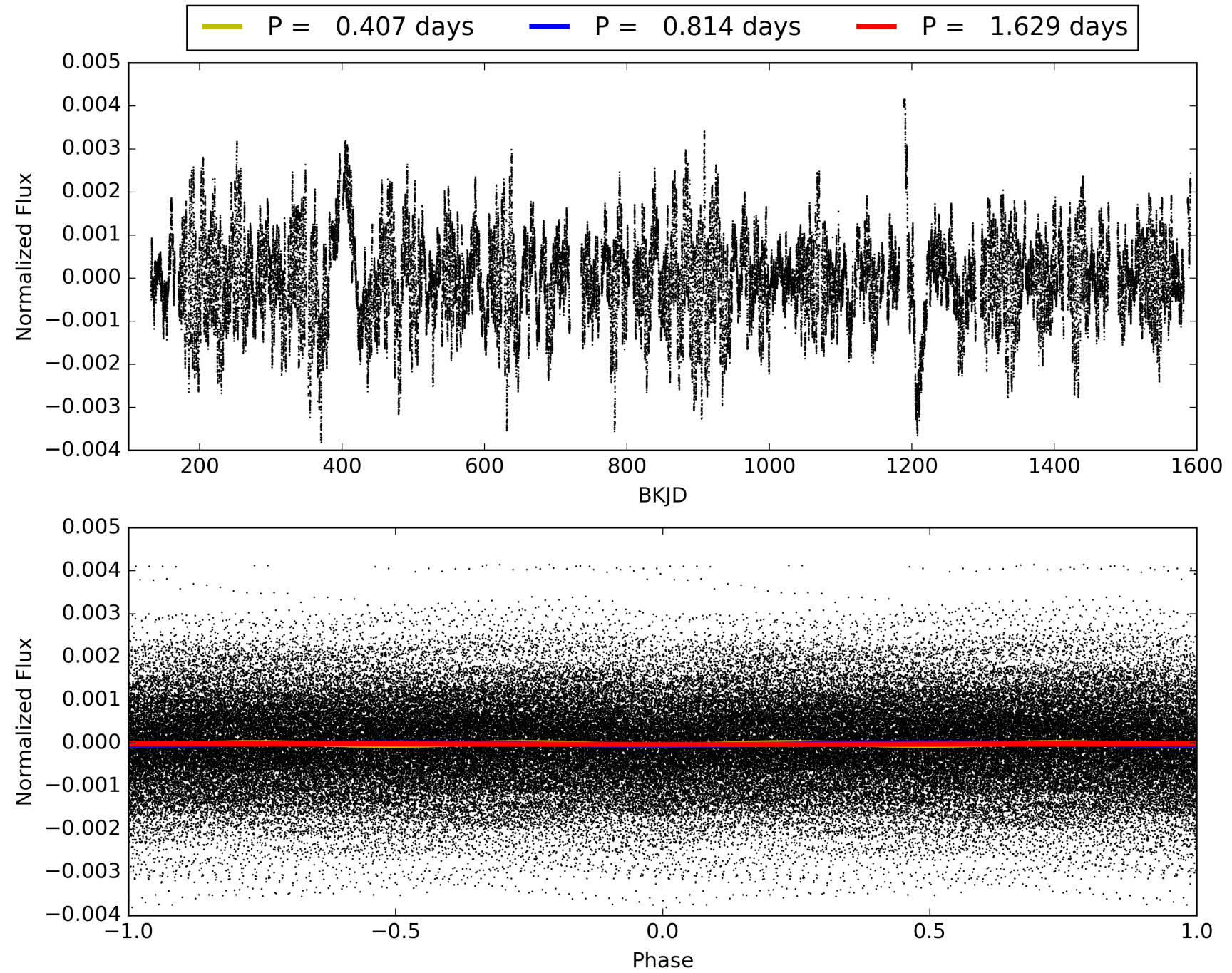
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 08:36:06 Z

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

TCE 011456382-01, PDC Light Curves

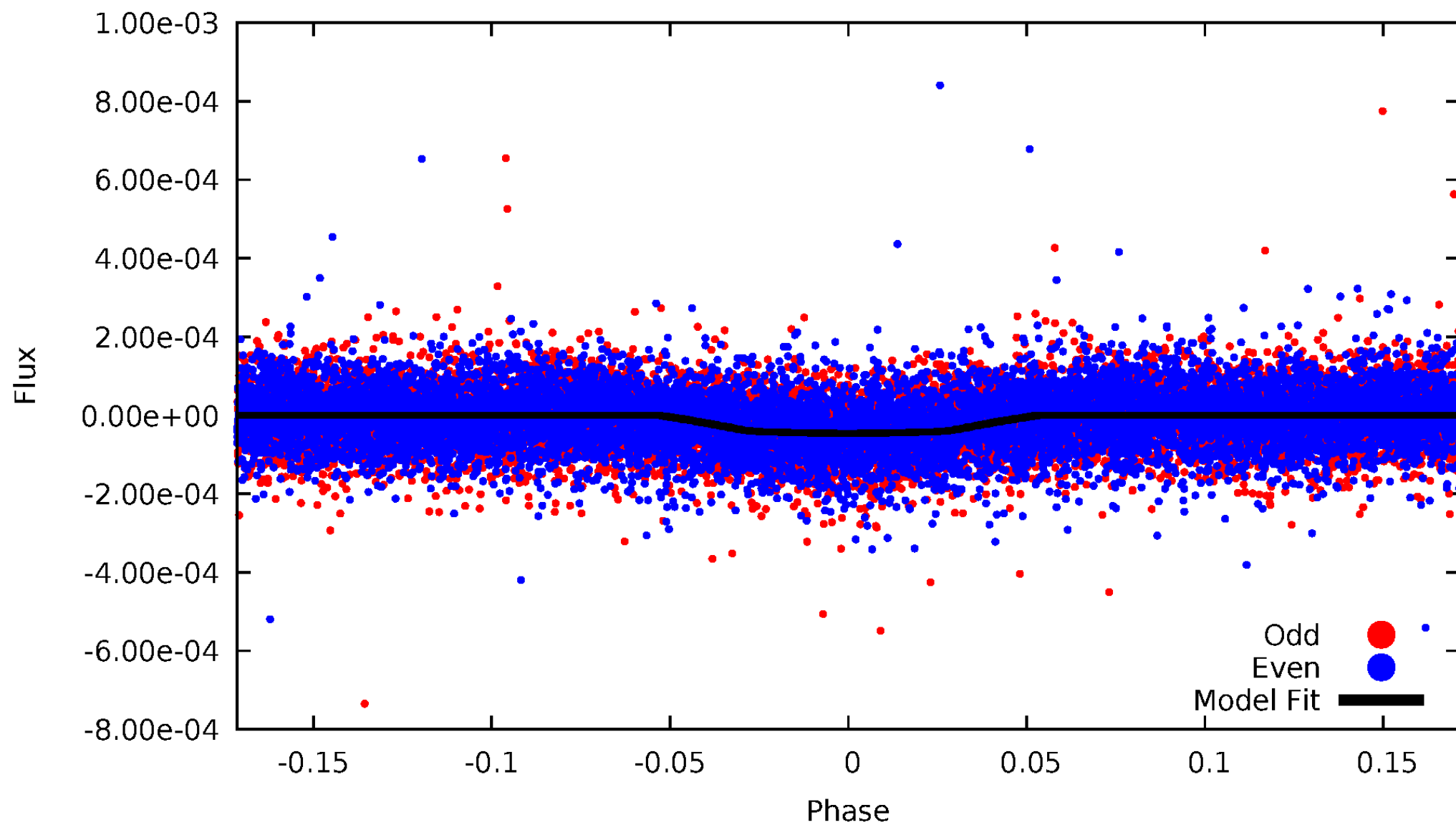


TCE 011456382-01



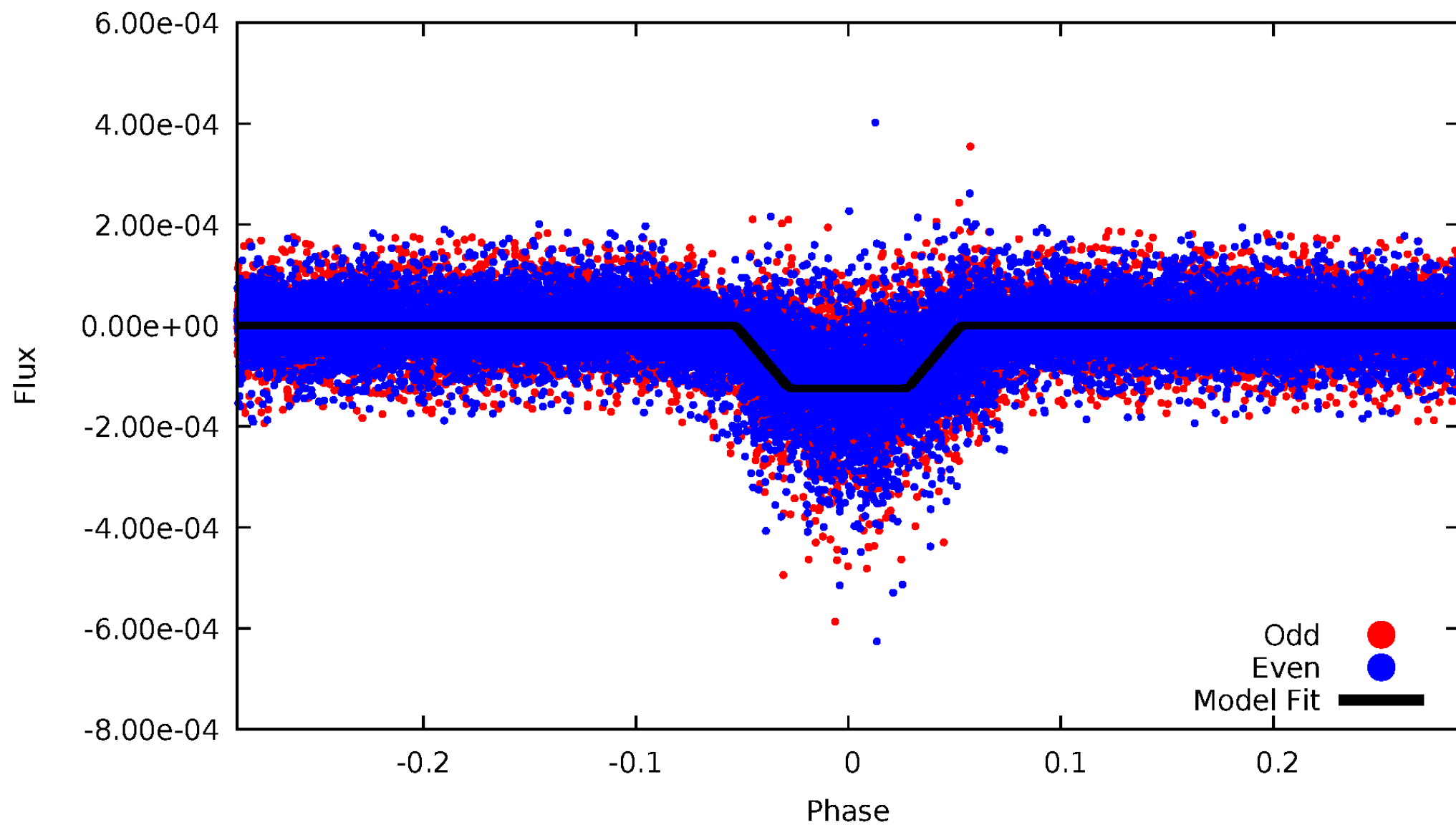
DV Odd/Even

TCE 011456382-01



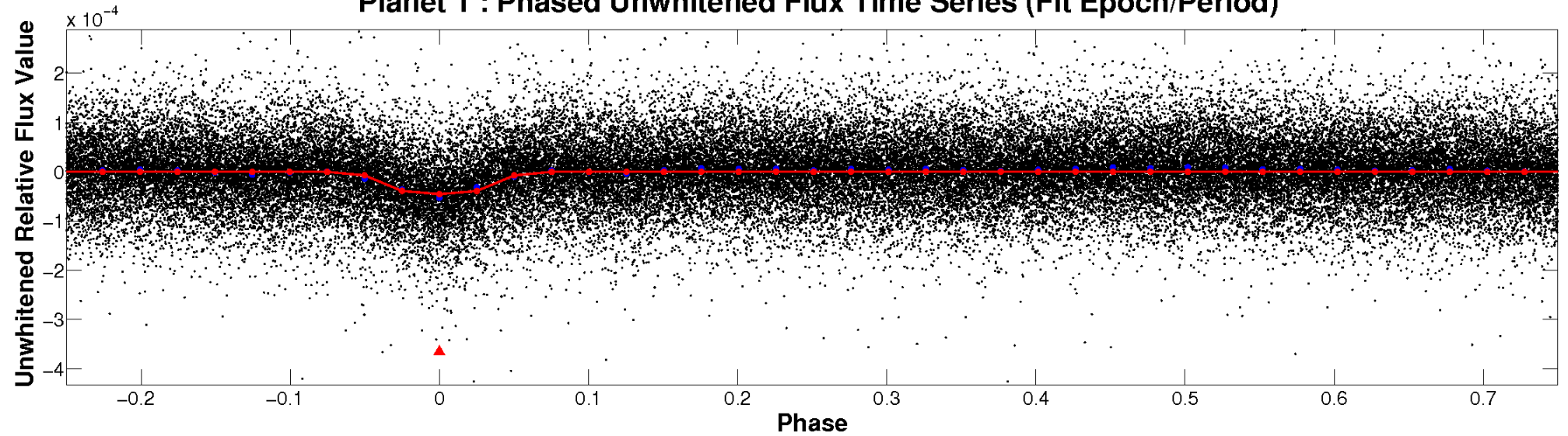
ALT Odd/Even

TCE 011456382-01

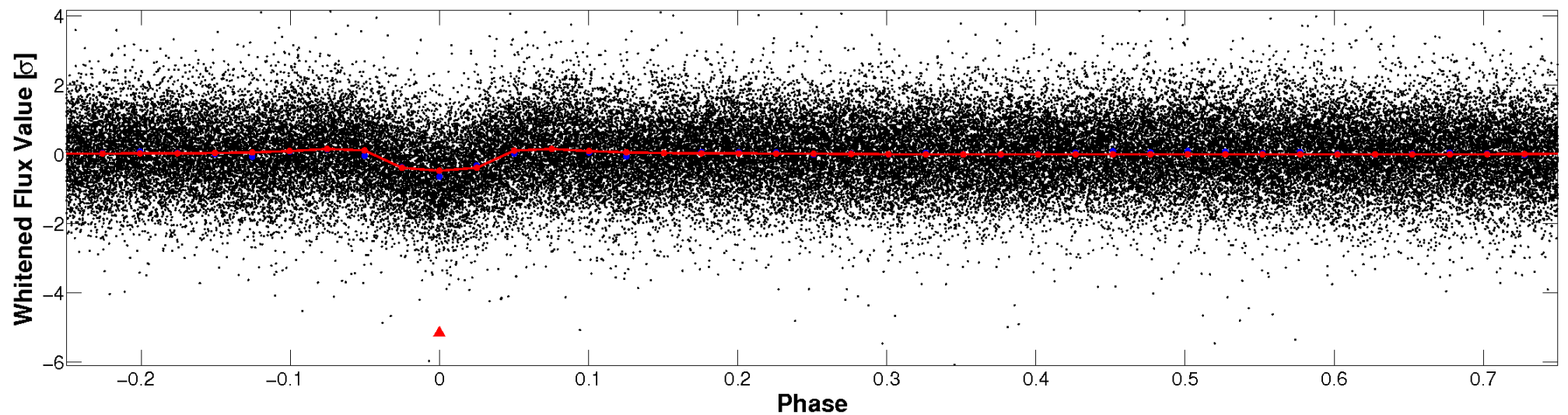


Non-Whitened Vs. Whitened Light Curve

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

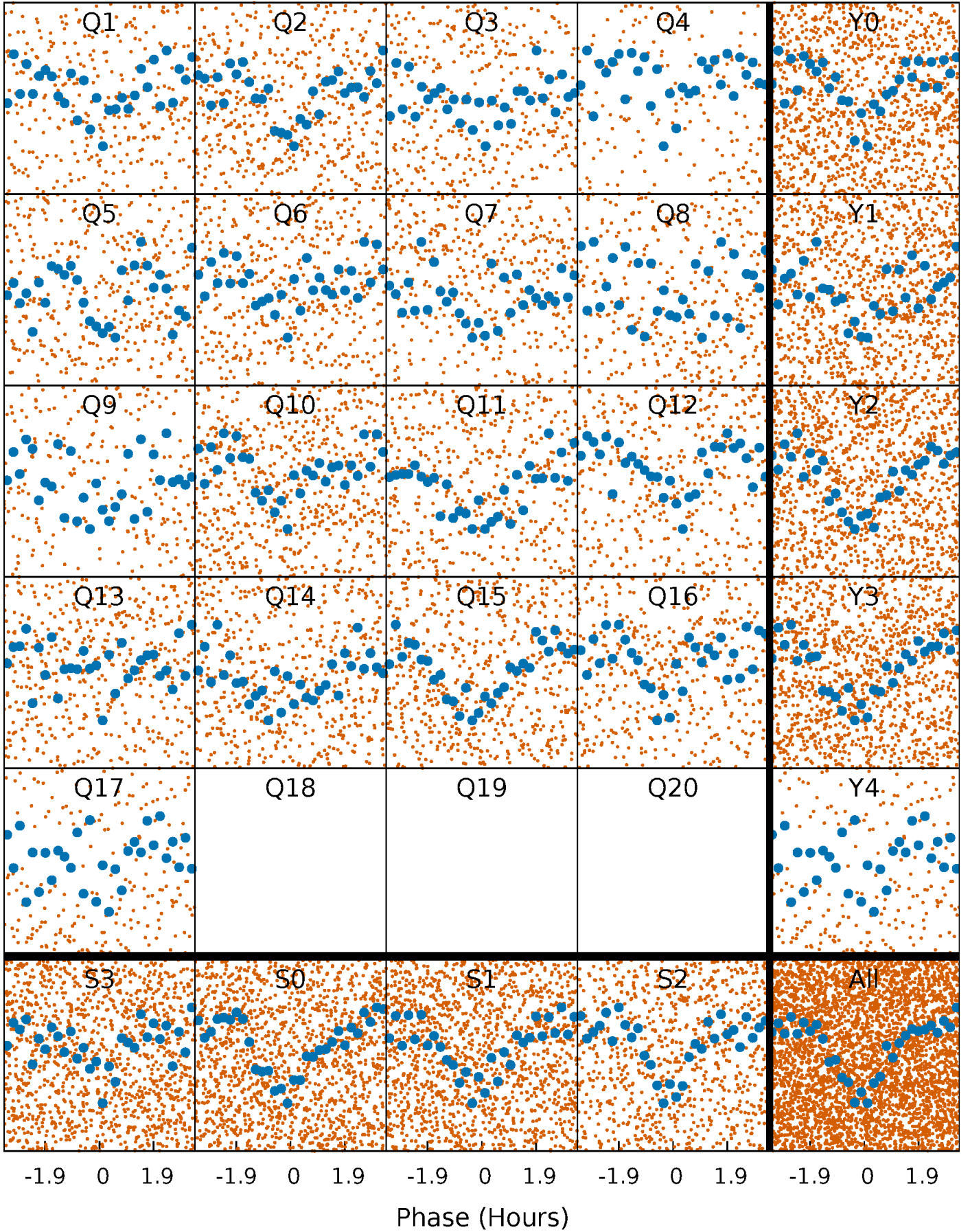


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



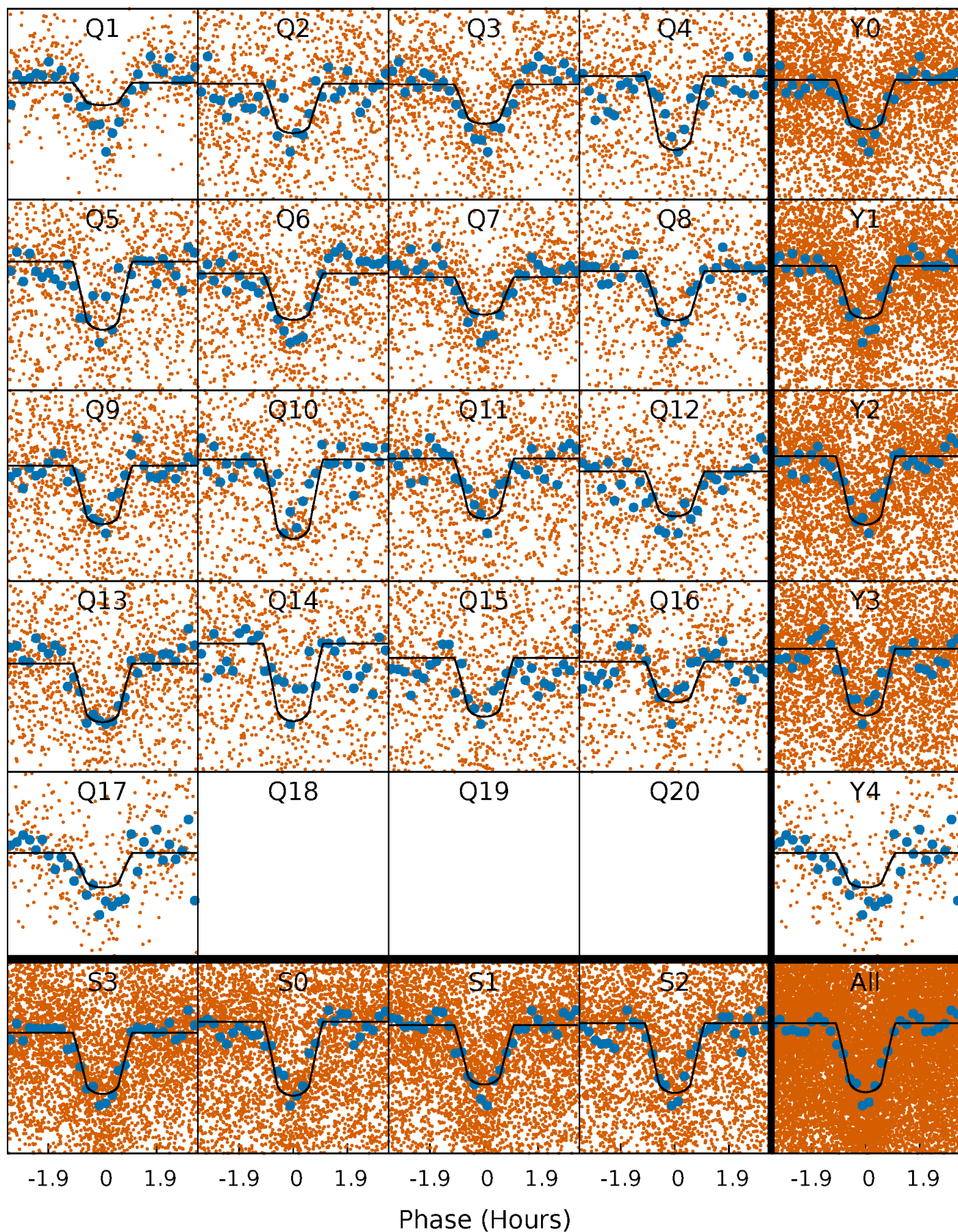
PDC Quarter-Phased Transit Curves

TCE 011456382-01 P= 0.814288 Days $T_0=131.644058$ (BKJD)



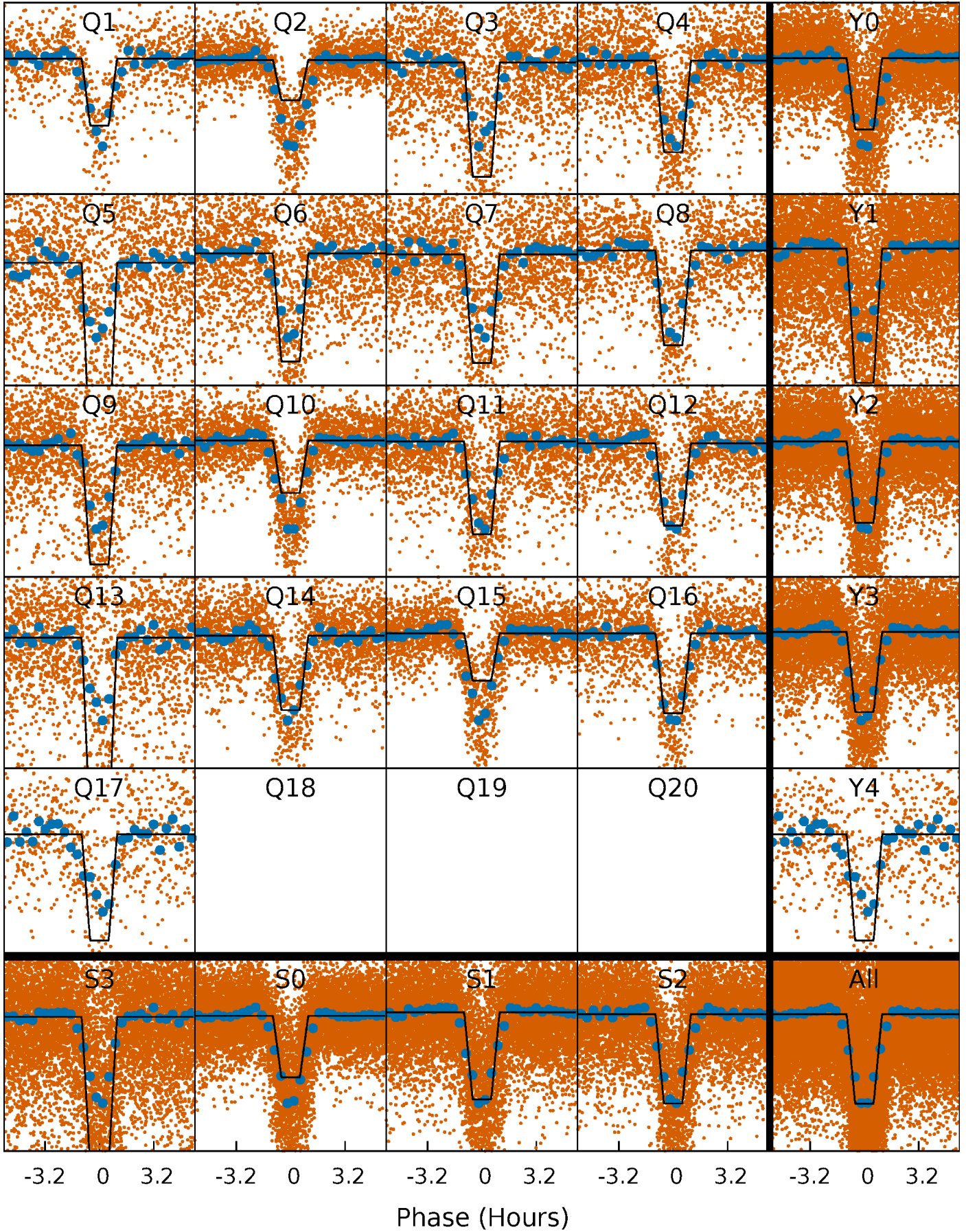
DV Quarter-Phased Transit Curves

TCE 011456382-01 P= 0.814288 Days $T_0=131.644058$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

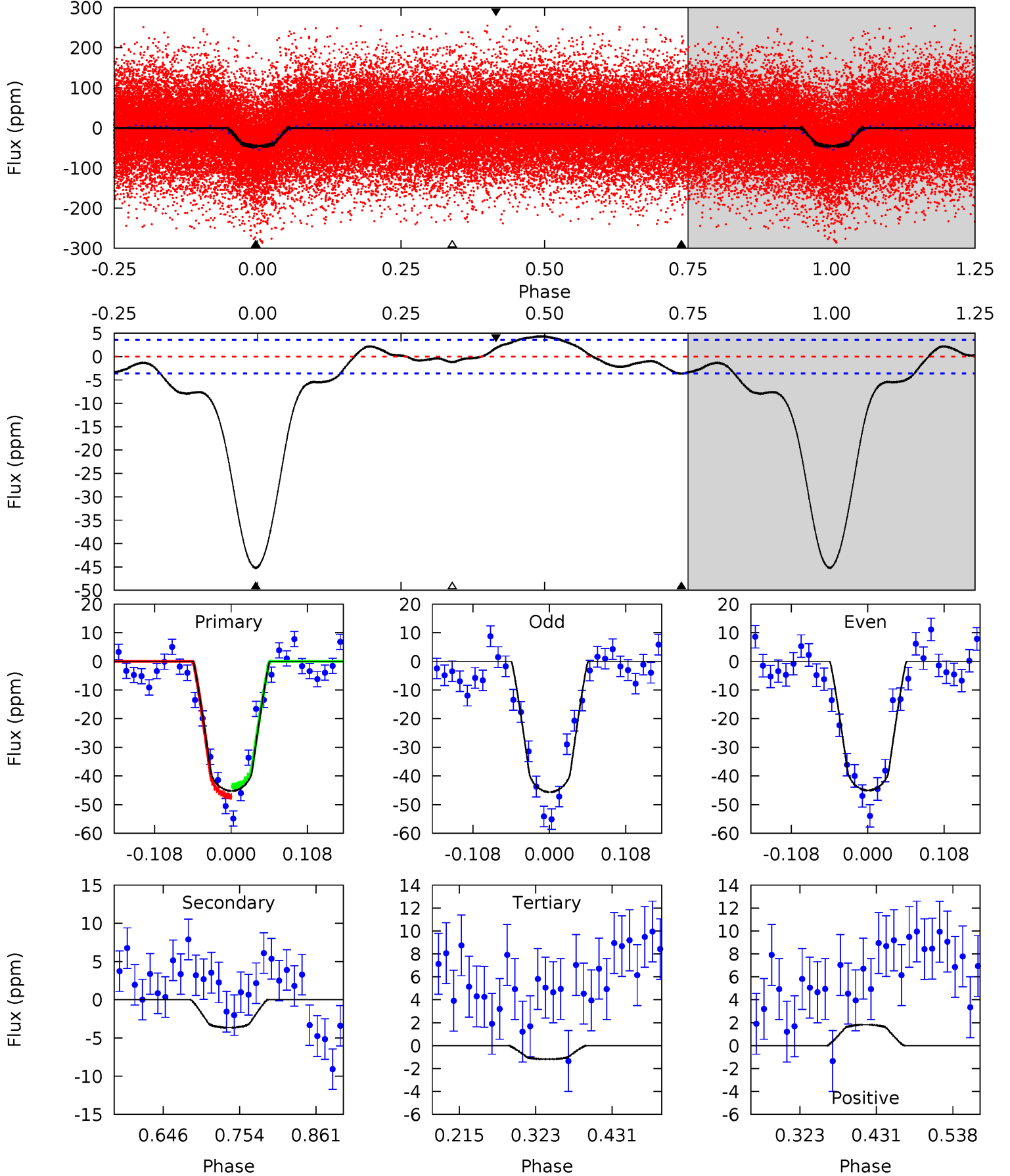
TCE 011456382-01 P= 0.814283 Days $T_0=131.647346$ (BKJD)



DV Model-Shift Uniqueness Test

011456382-01, P = 0.814288 Days, E = 130.829770 Days

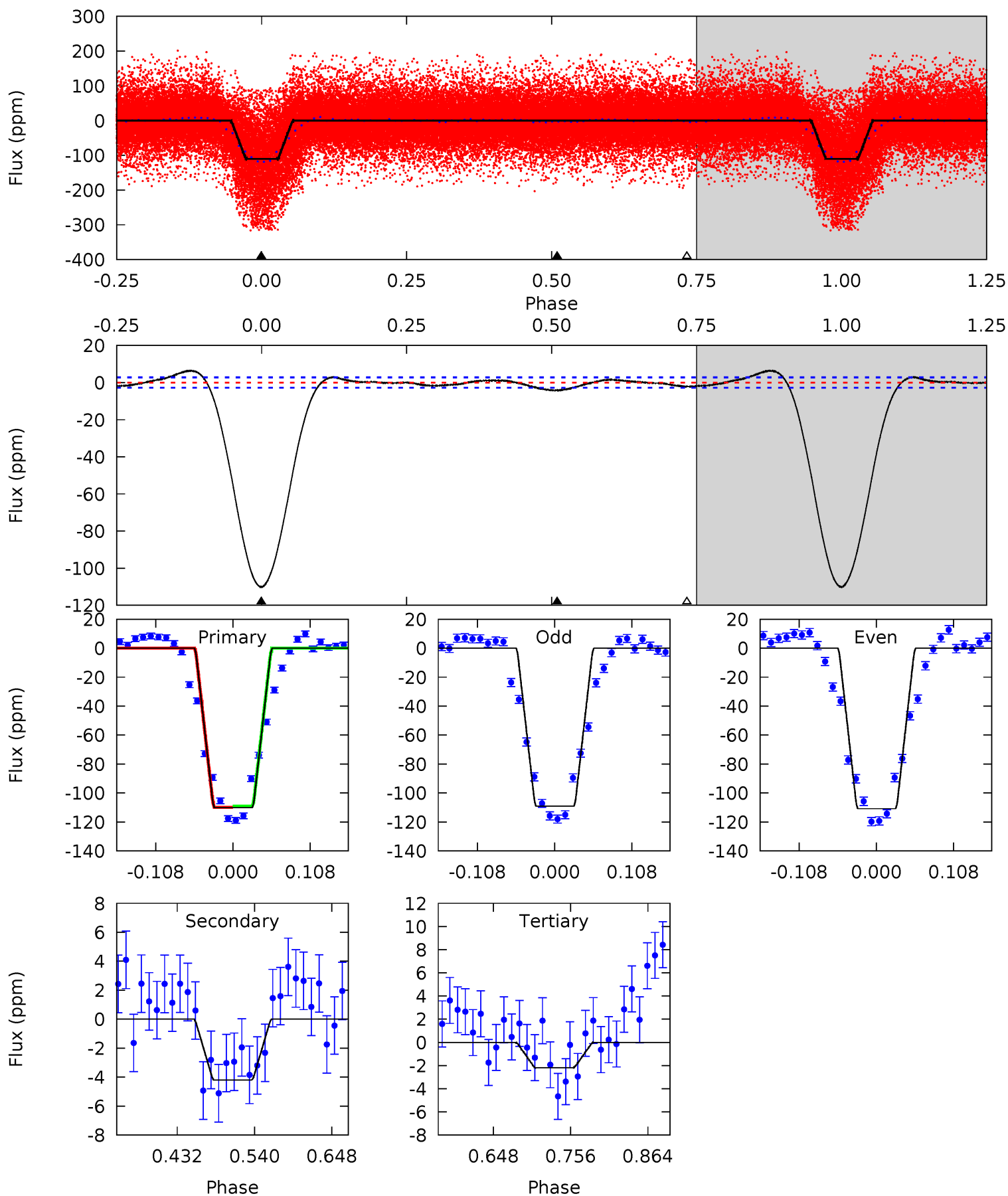
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
57.2	4.62	1.49	2.30	4.55	1.61	3.98	55.7	54.9	3.13	2.32	0.38	1.01	0.09	2.21



Alt Model-Shift Uniqueness Test

011456382-01, P = 0.814283 Days, E = 130.833063 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
181.4	6.91	3.59	0	4.55	1.61	3.19	177.8	181.4	3.32	6.91	1.41	1.07	0.05	0.78



Stellar Parameters For KIC 011456382

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6366^{+177}_{-243}	$4.167^{+0.190}_{-0.190}$	$0.040^{+0.250}_{-0.300}$	$1.543^{+0.489}_{-0.400}$	$1.273^{+0.182}_{-0.222}$	$0.488^{+0.562}_{-0.243}$
	+3%/-4%	+5%/-5%	+625%/-750%	+32%/-26%	+14%/-17%	+115%/-50%
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 011456382-01 / KOI 2771.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-4 ± 1	$1.25^{+0.26}_{-0.25}$	3573^{+315}_{-258}	3038^{+441}_{-5421}	$0.433^{+0.255}_{-0.151}$
Alt.	-4 ± 1	$1.87^{+0.37}_{-0.28}$	3584^{+288}_{-274}	-2819^{+4981}_{-384}	$0.221^{+0.090}_{-0.066}$

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 011456382-01. **Kepler magnitude: 11.75.** Transit SNR 32.13

There are 0 quarters with good PRF difference image offsets

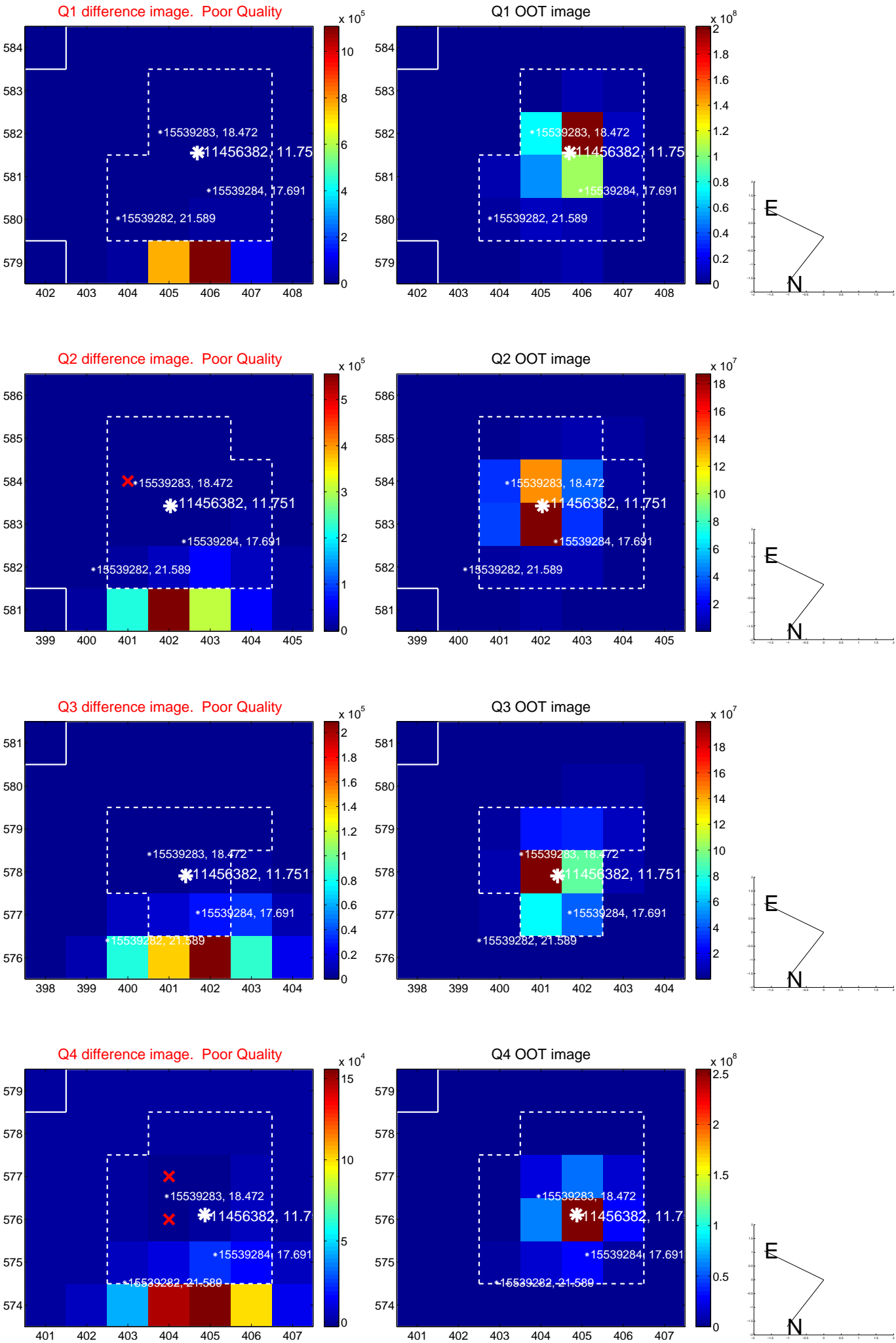
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	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	—	—	—	—

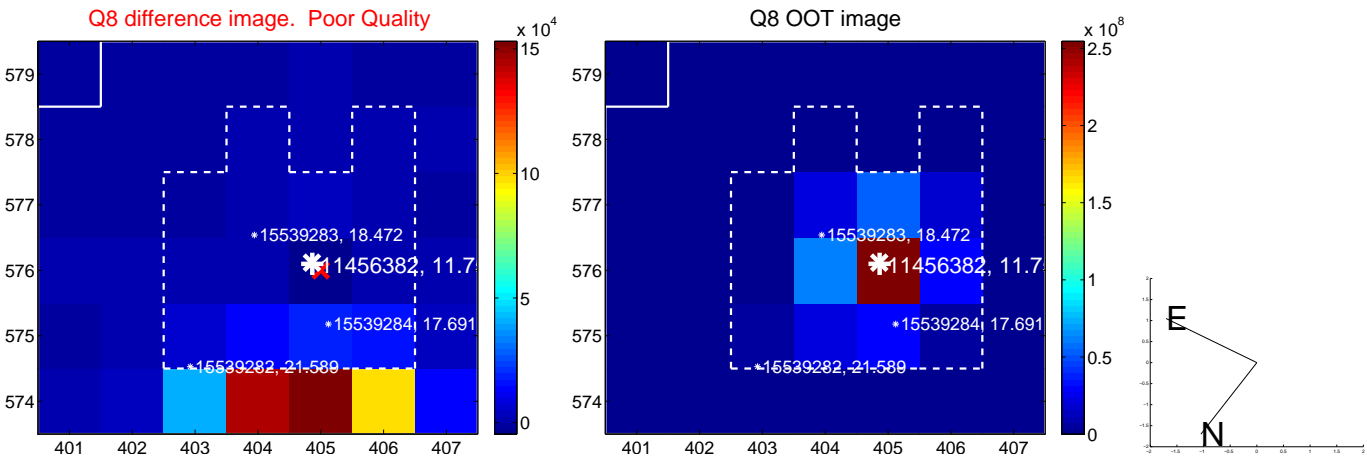
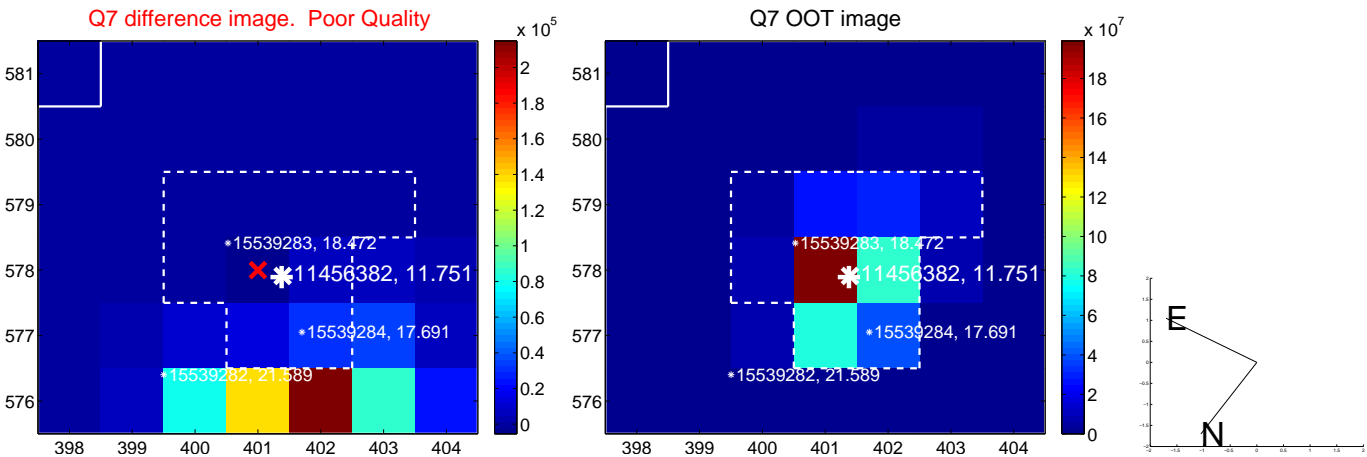
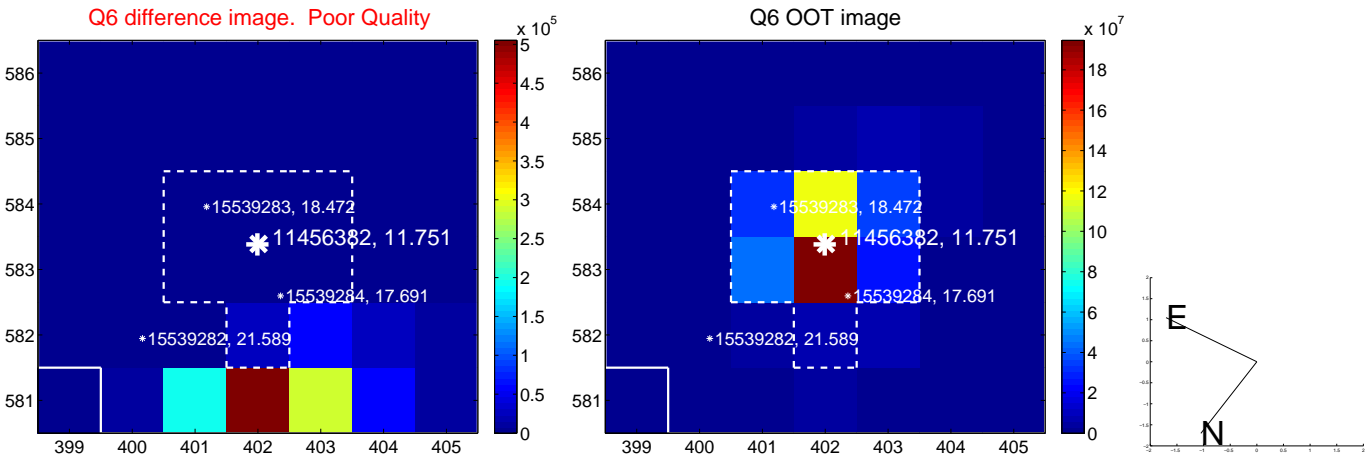
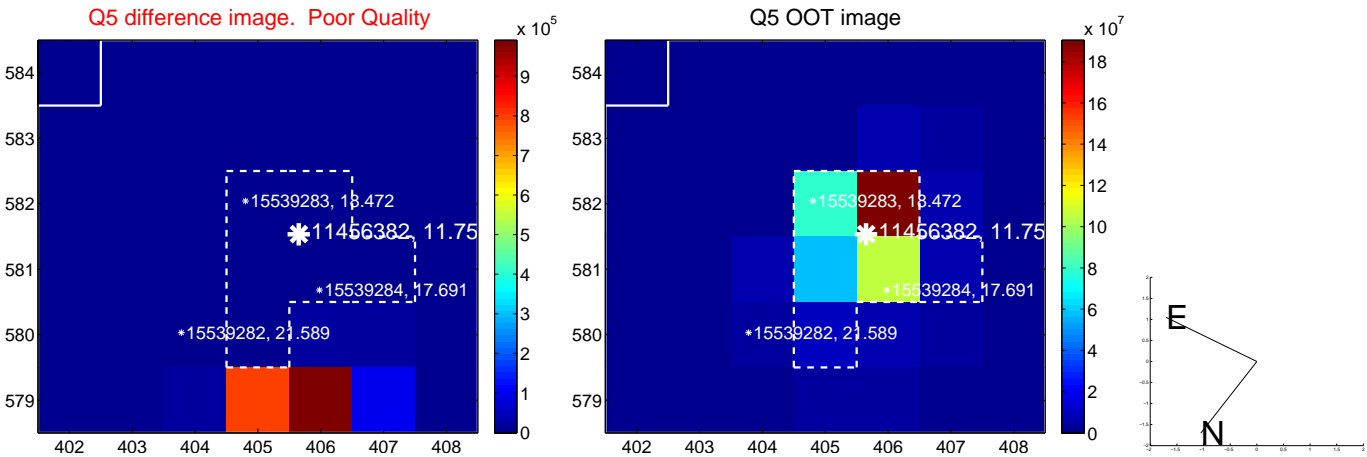


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

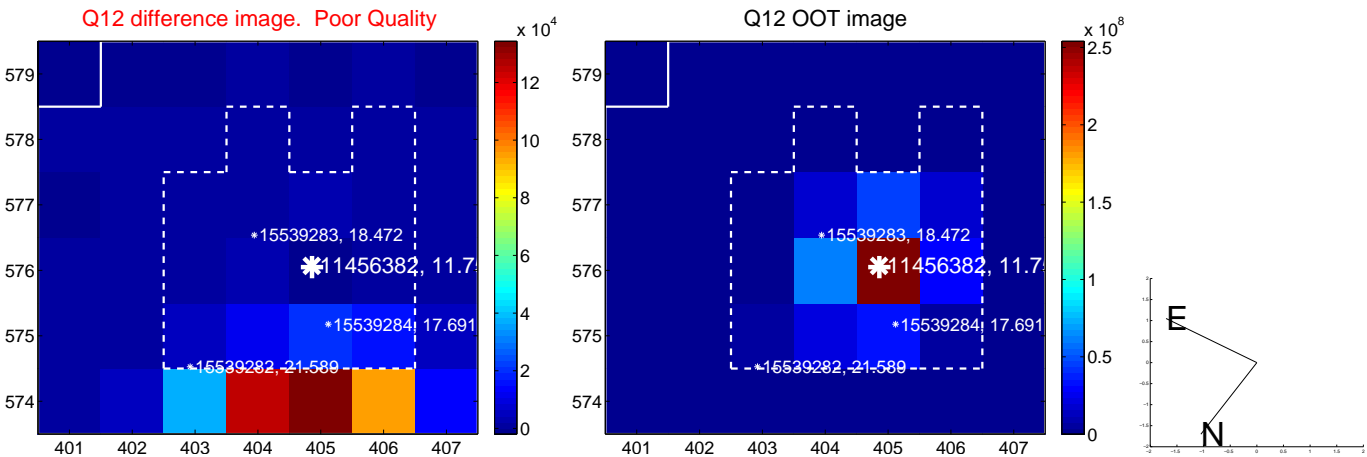
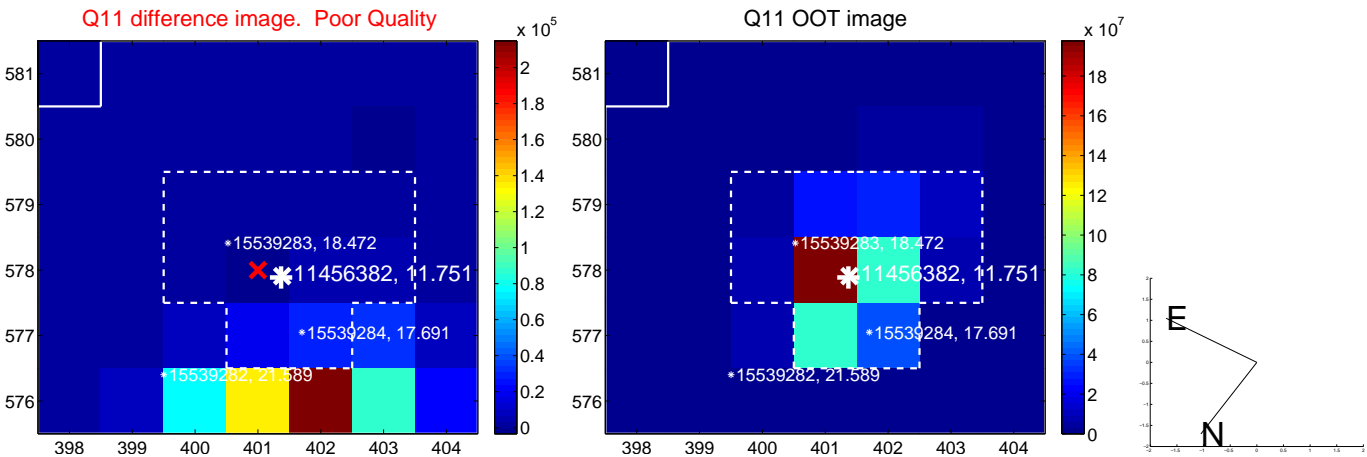
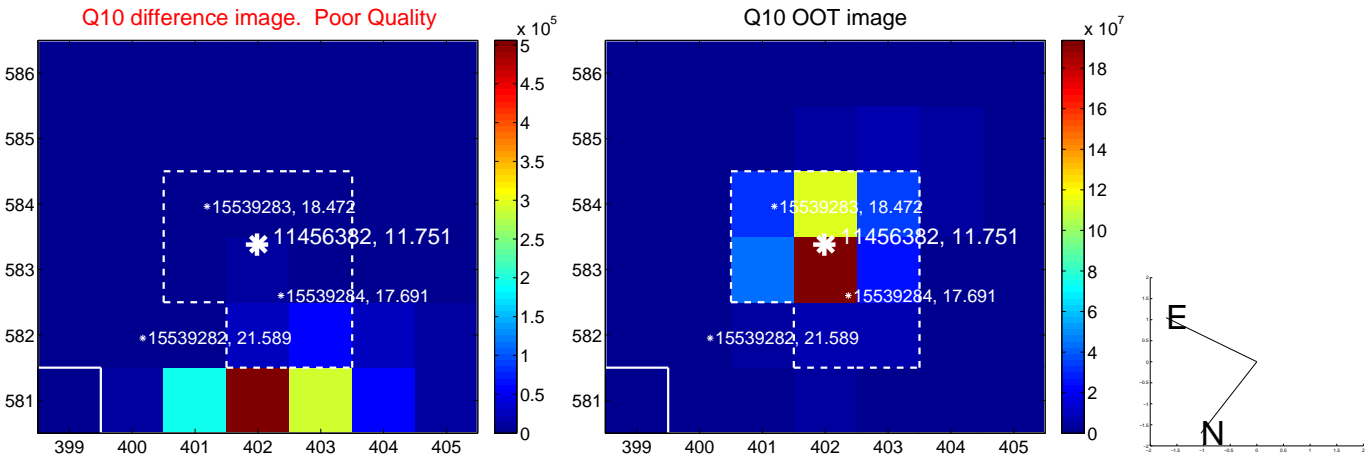
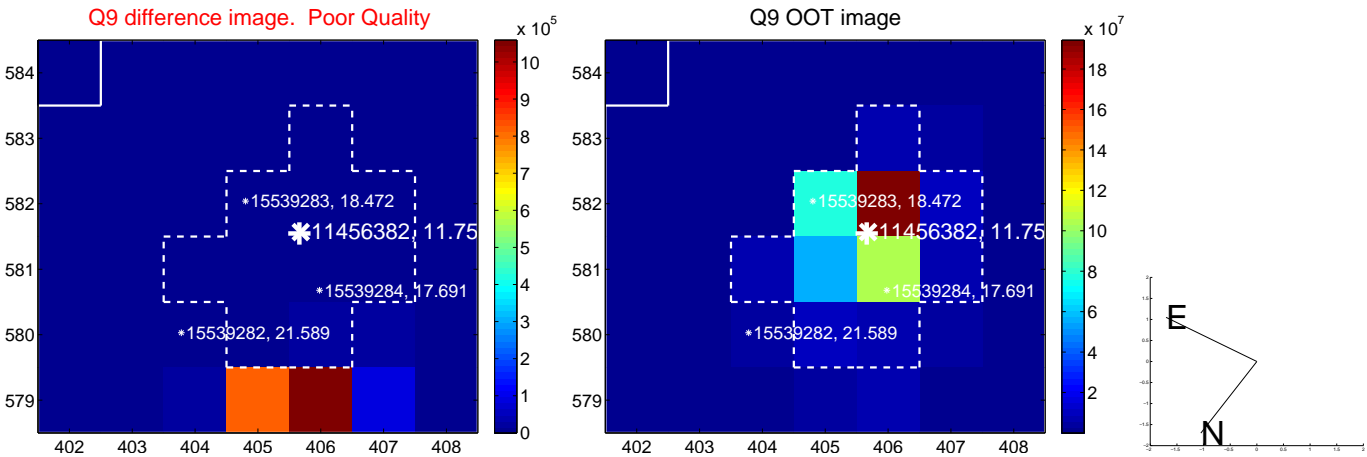
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



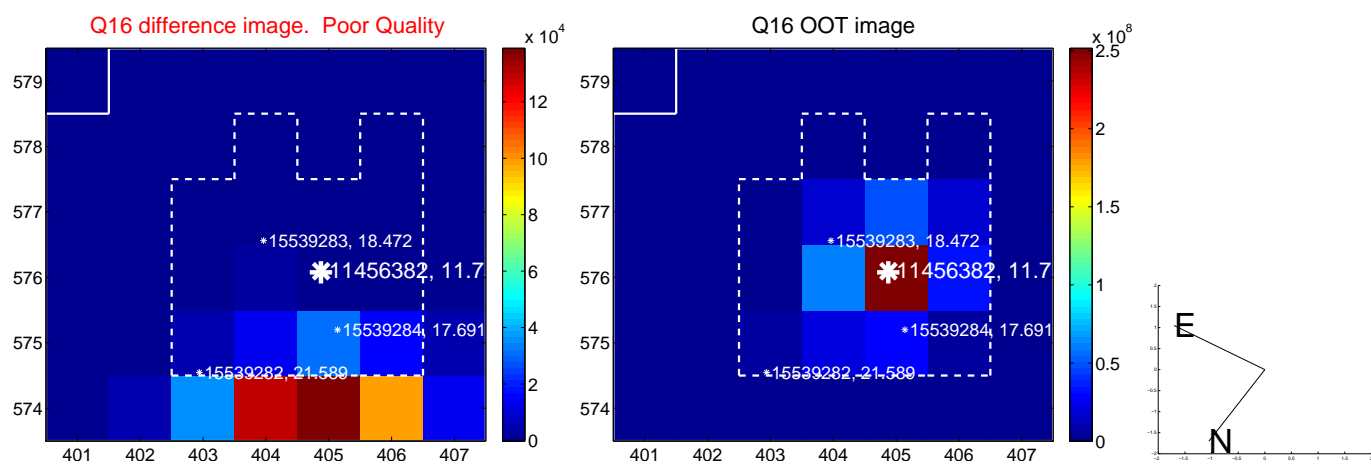
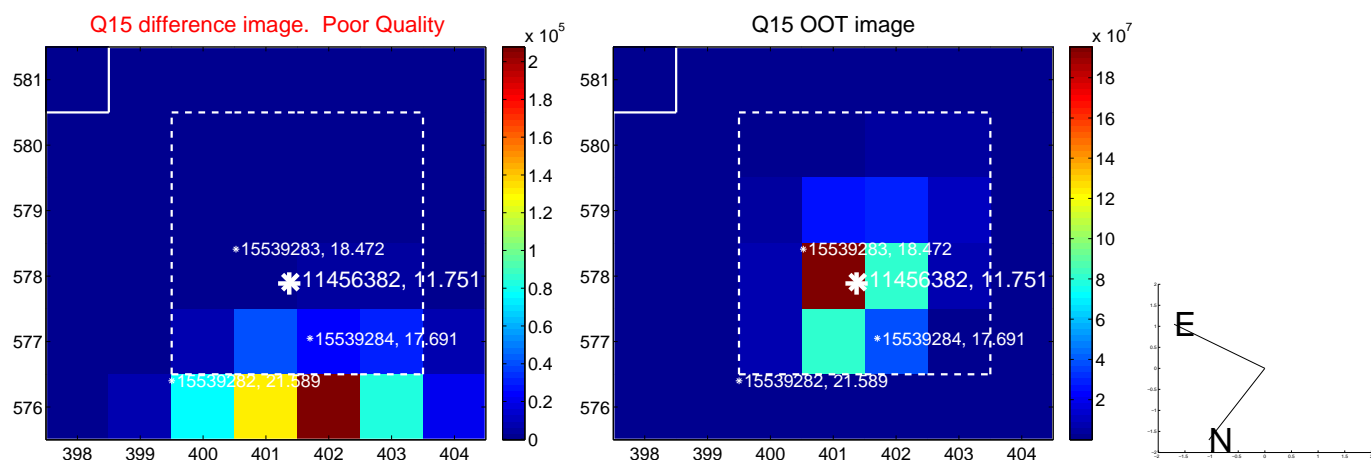
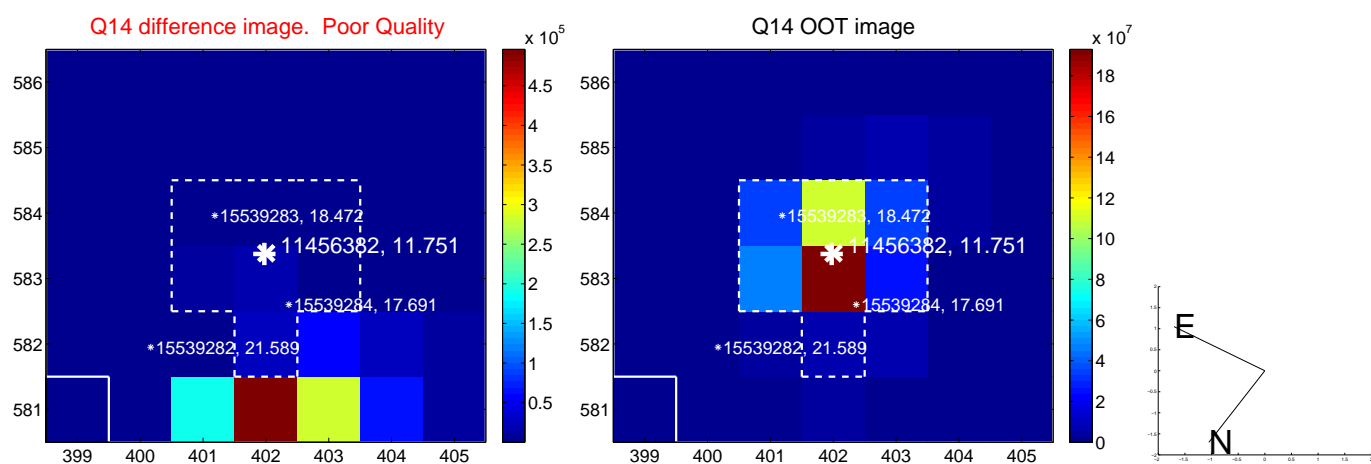
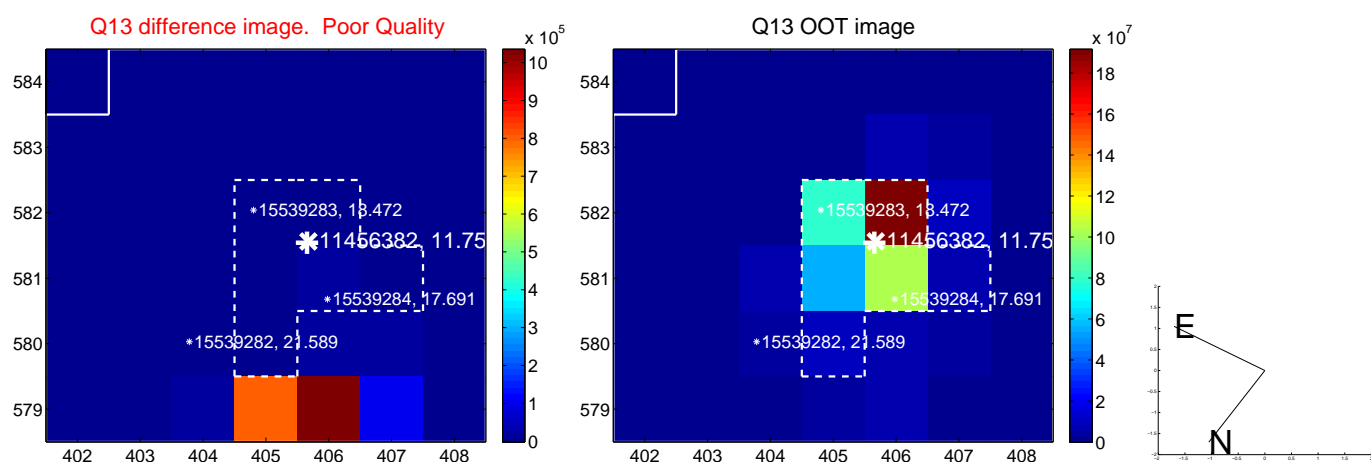
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



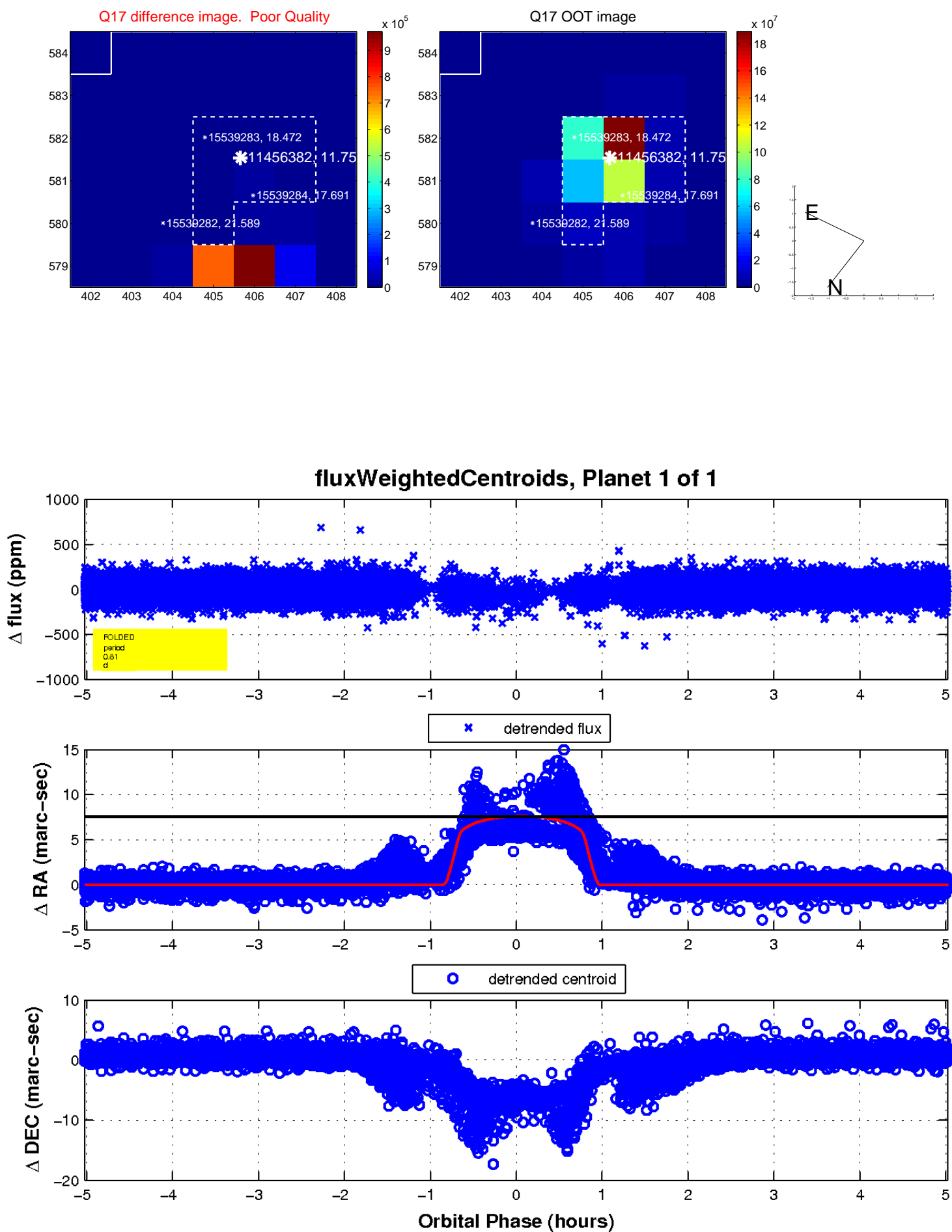
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UKIRT Image

Declination

