

KIC 006511182

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})
006511182-01	OBS	5288.01	29.563467	158.222988	448.0	1.549	7.9	9.1	0.83	5595	1.74	18.27

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006511182-01	OBS	PC	0.99	0	0	0	0	NO_COMMENT

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 006511182-01

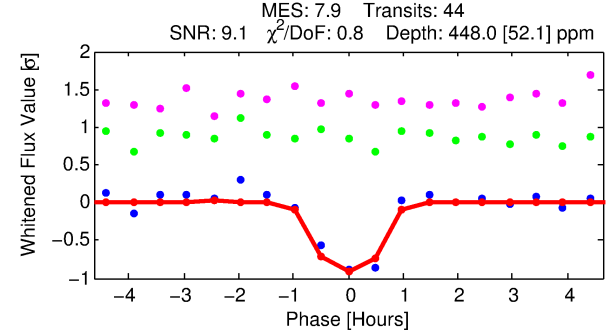
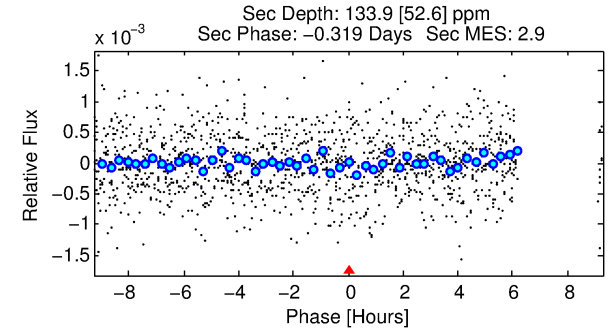
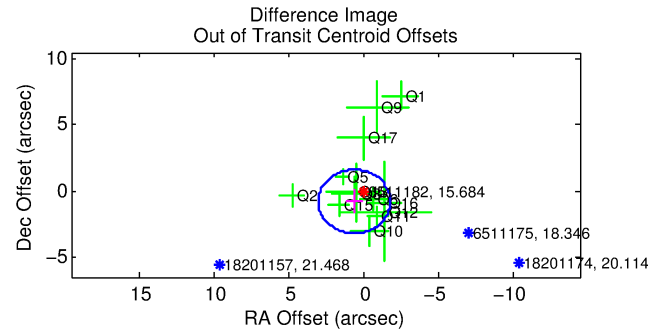
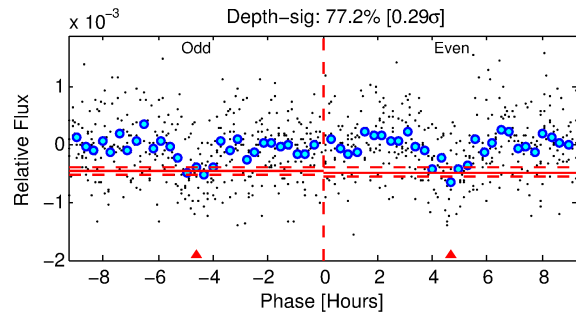
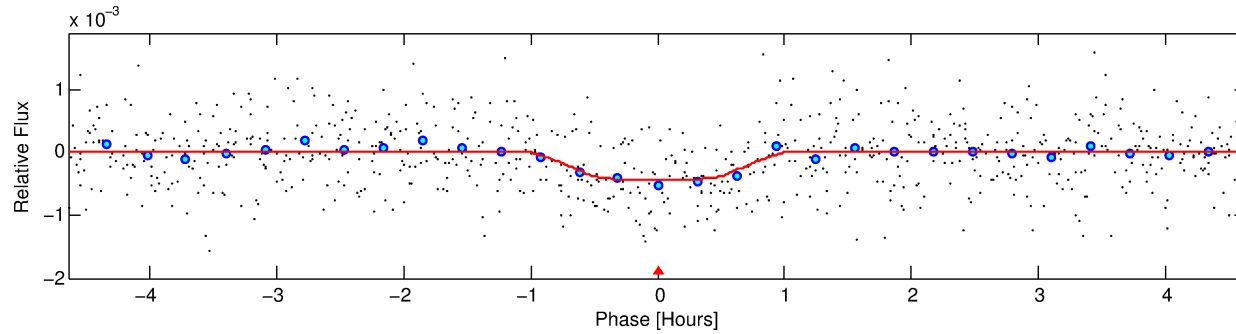
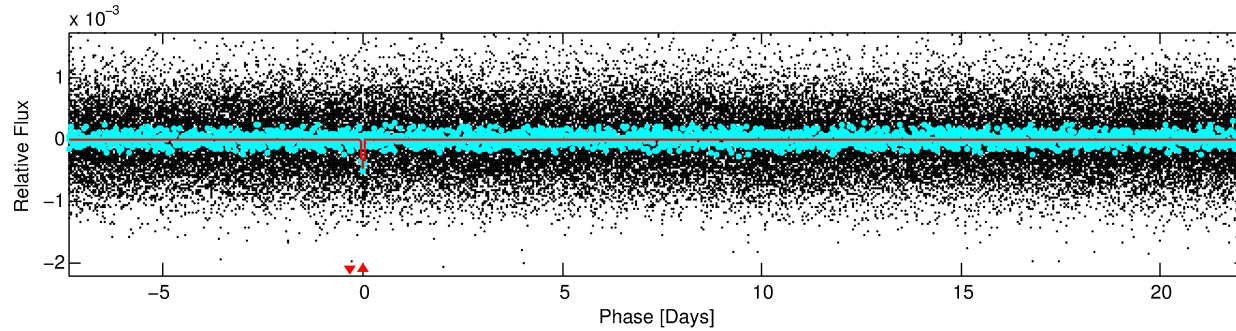
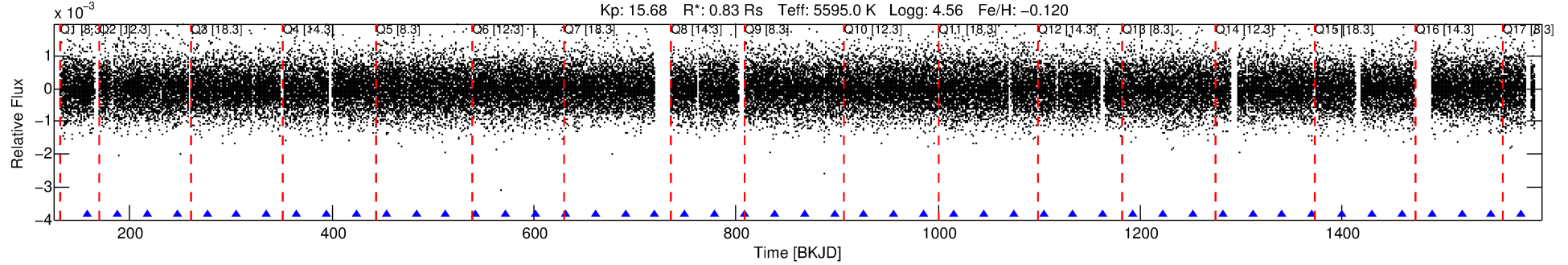
No Significant Match Found

DV One-Page Summary

KIC: 6511182 Candidate: 1 of 1 Period: 29.563 d

KOI: K05288.01 Corr: 0.951

Kp: 15.68 R*: 0.83 Rs Teff: 5595.0 K Logg: 4.56 Fe/H: -0.120



DV Fit Results:

Period = 29.56347 [0.00019] d
Epoch = 158.2230 [0.0053] BKJD
Rp/R* = 0.0192 [0.0324]
a/R* = 147.95 [1055.95]
b = 0.10 [72.82]
Seff = 18.27 [6.14]
Teq = 527 [44] K
Rp = 1.74 [2.96] Re
a = 0.1815 [0.0399] AU
Ag = 804.89 [2741.85] [0.29σ]
Teffp = 4342 [3684] K [1.04σ]

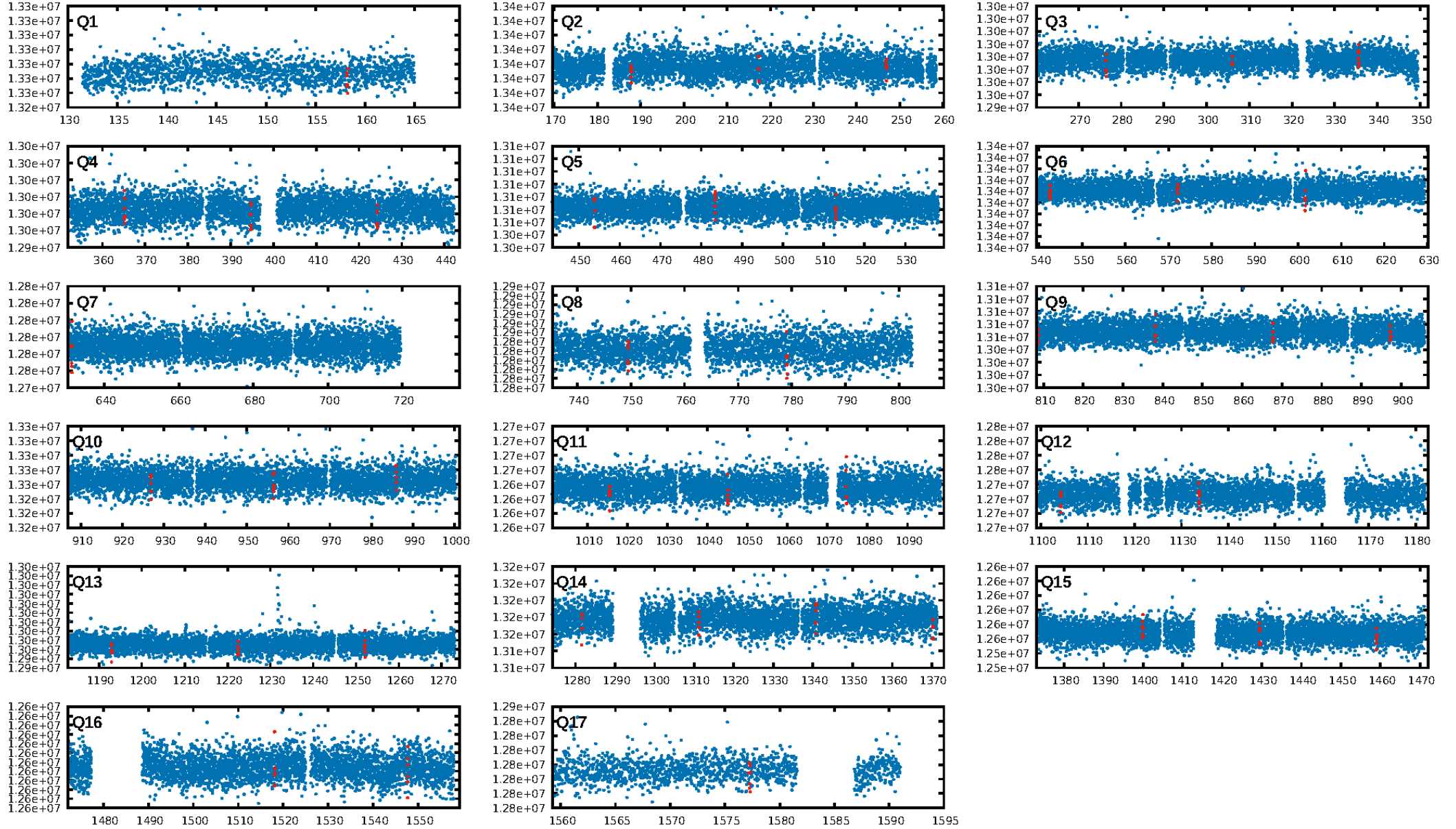
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 96.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.13e-15
RollingBand-fgt: 1.00 [42/42]
GhostDiagnostic-chr: 5.58
Centroid-sig: 68.1%
Centroid-so: 0.941 arcsec [0.59σ]
OotOffset-rm: 0.988 arcsec [1.23σ]
KicOffset-rm: 0.487 arcsec [0.62σ]
OotOffset-st: 3/2/3/5 [13]
KicOffset-st: 3/2/3/5 [13]
DiffImageQuality-fgm: 0.38 [5/13]
DiffImageOverlap-fno: 1.00 [16/16]

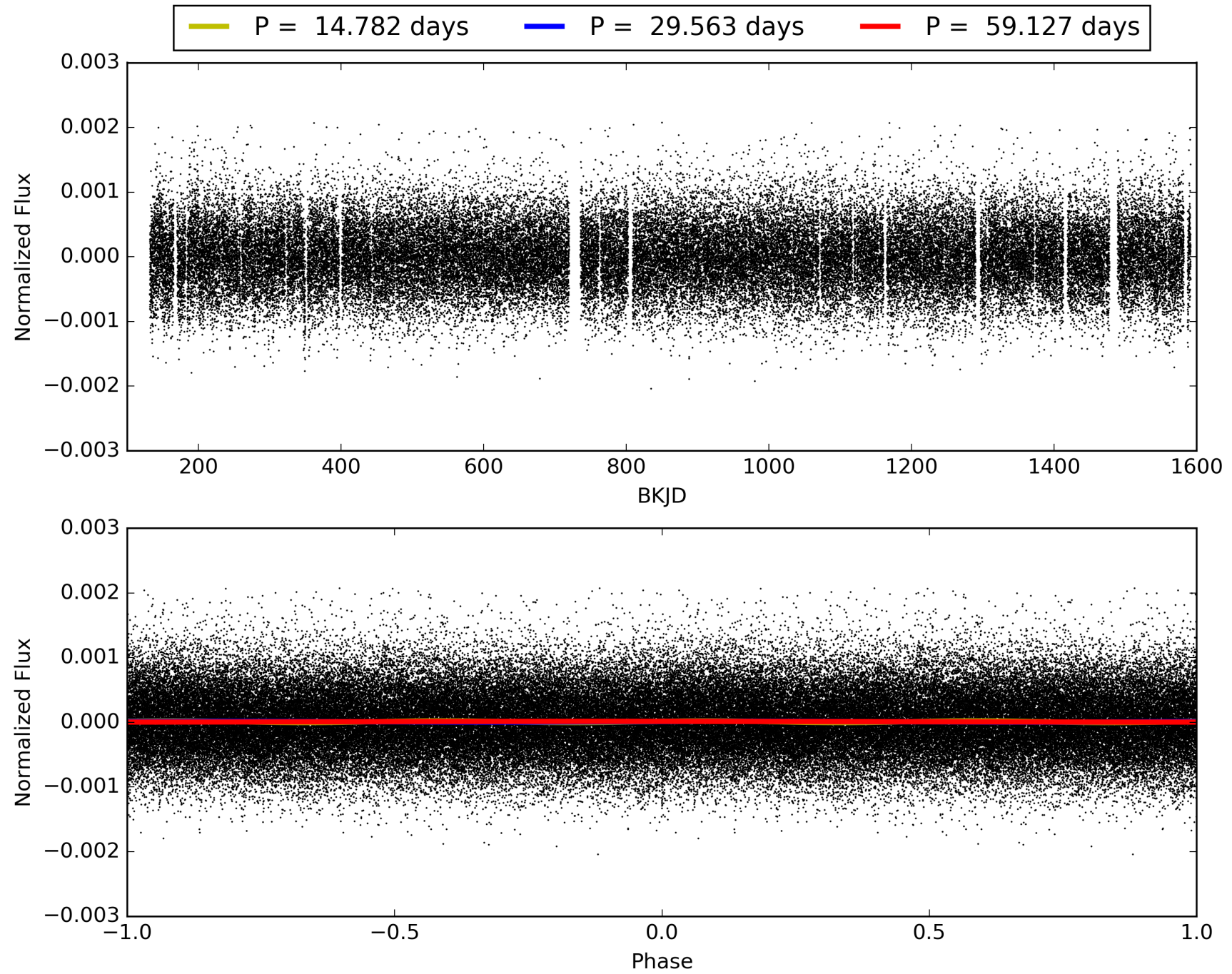
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 14:35:36 Z

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

TCE 006511182-01, PDC Light Curves

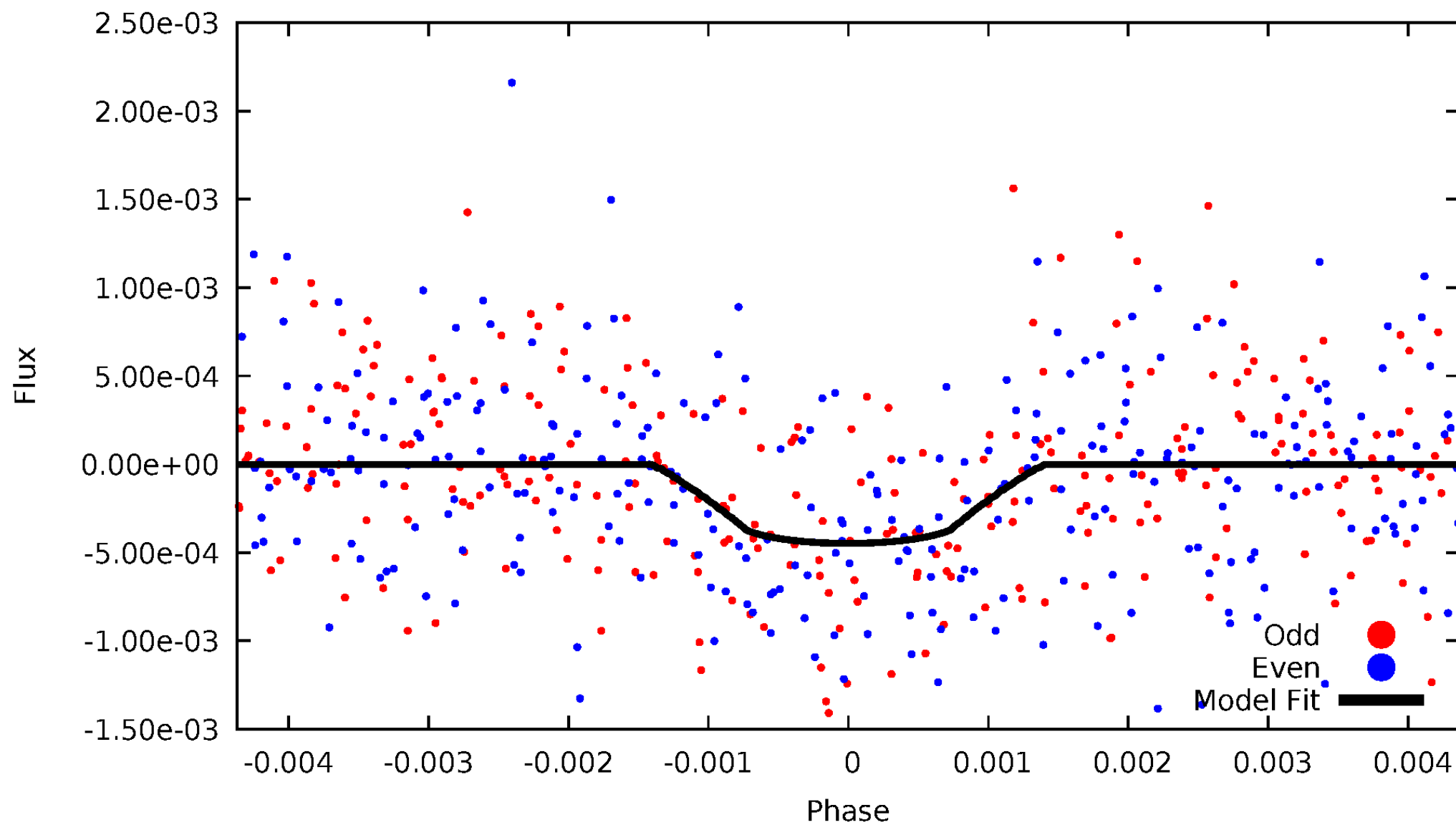


TCE 006511182-01



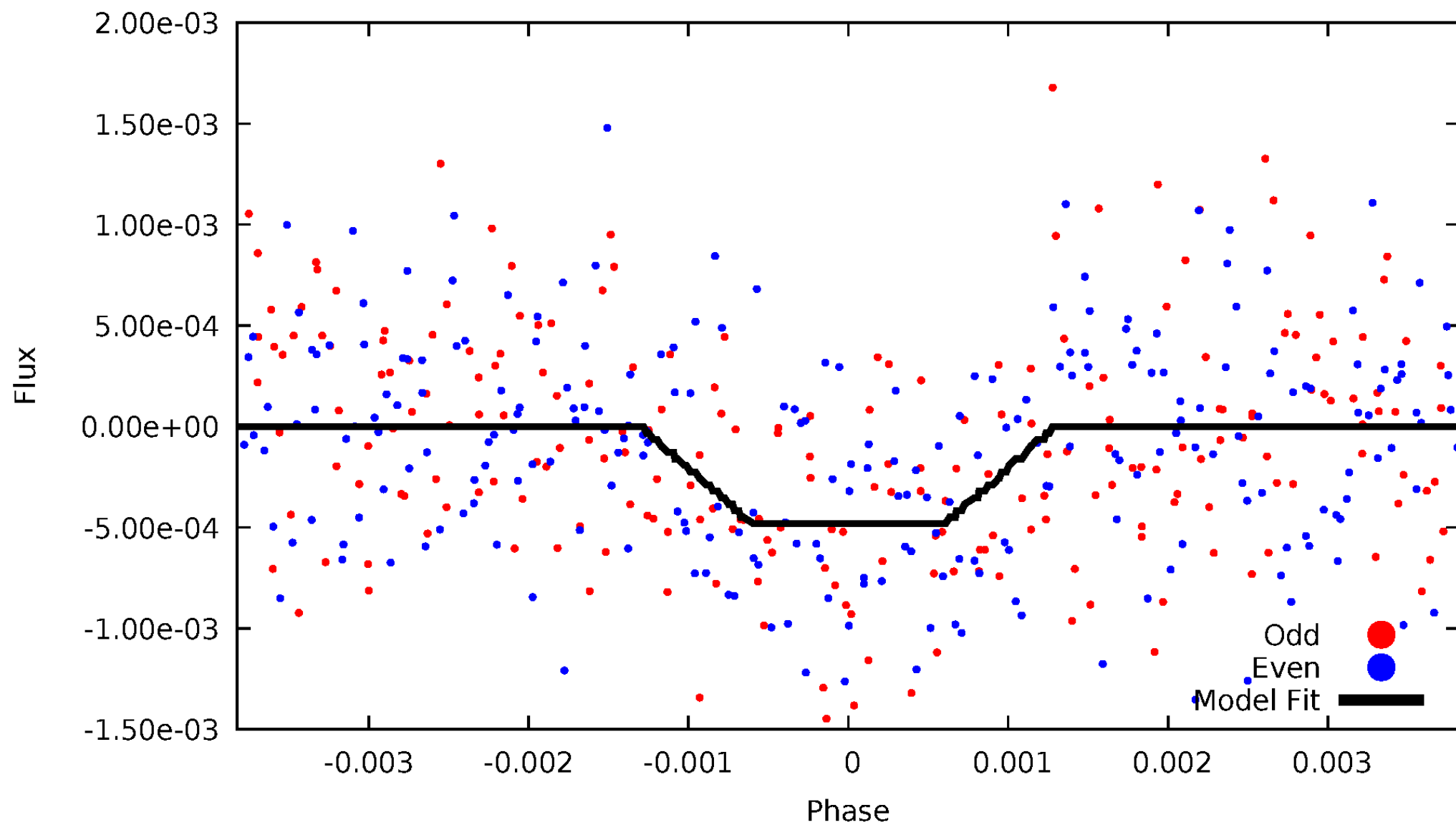
DV Odd/Even

TCE 006511182-01



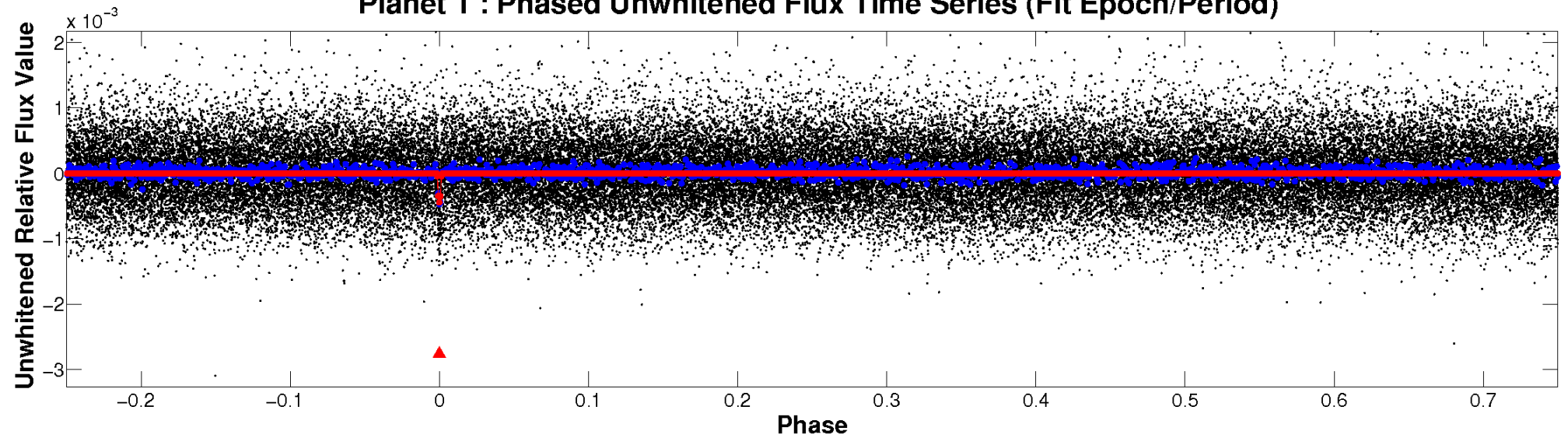
ALT Odd/Even

TCE 006511182-01

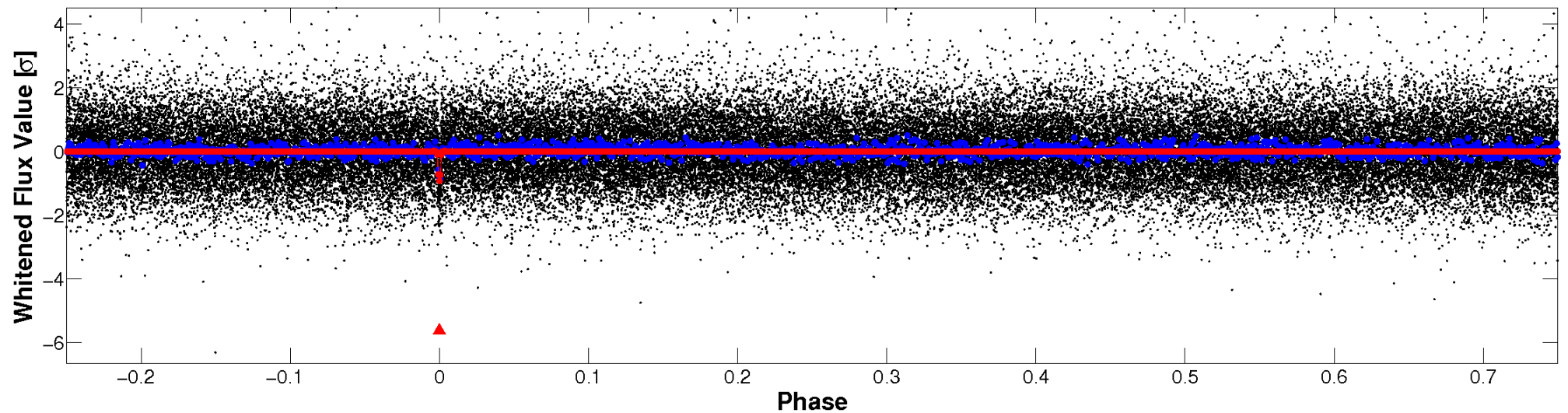


Non-Whitened Vs. Whitened Light Curve

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

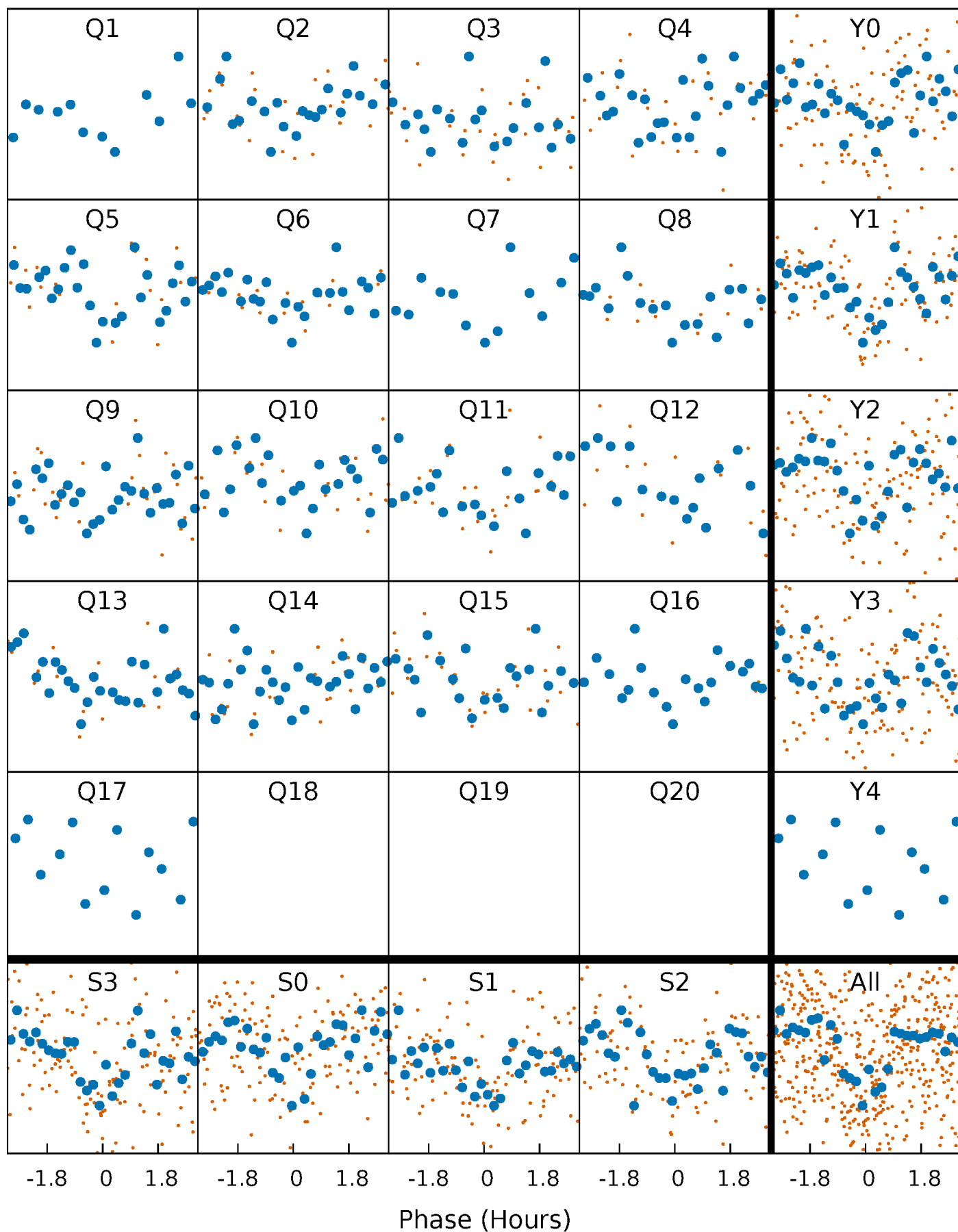


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



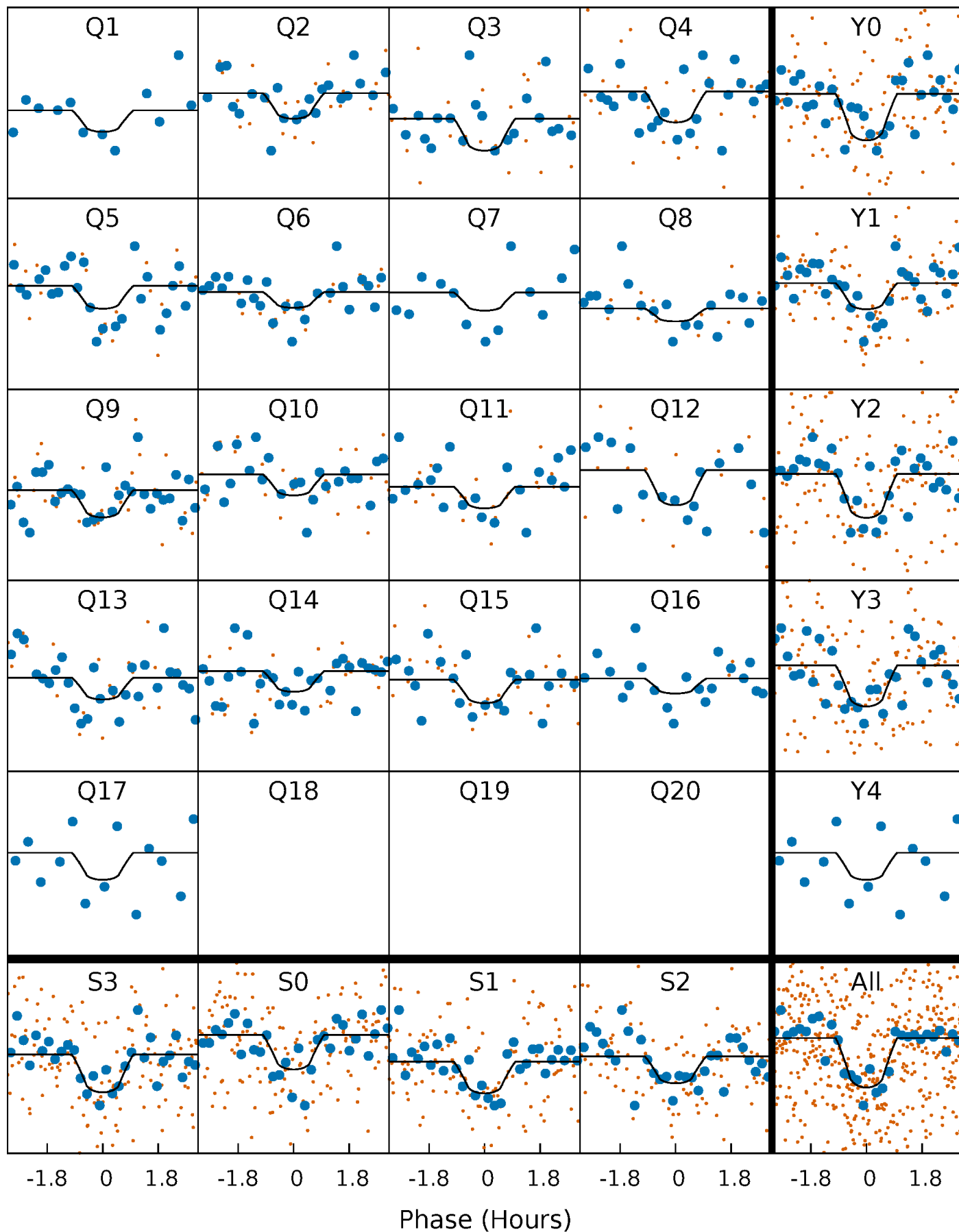
PDC Quarter-Phased Transit Curves

TCE 006511182-01 P= 29.563467 Days $T_0=158.222988$ (BKJD)



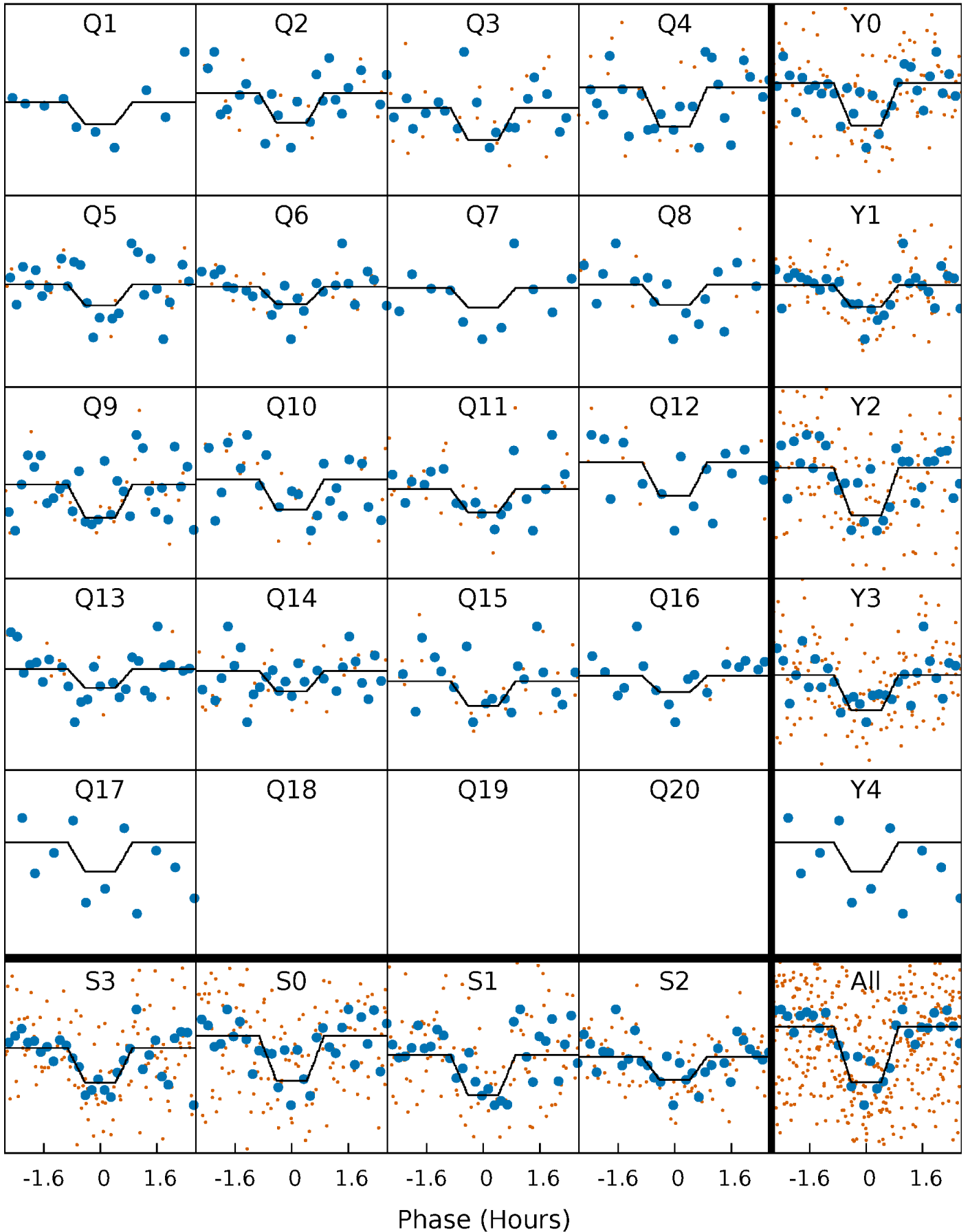
DV Quarter-Phased Transit Curves

TCE 006511182-01 P= 29.563467 Days $T_0=158.222988$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

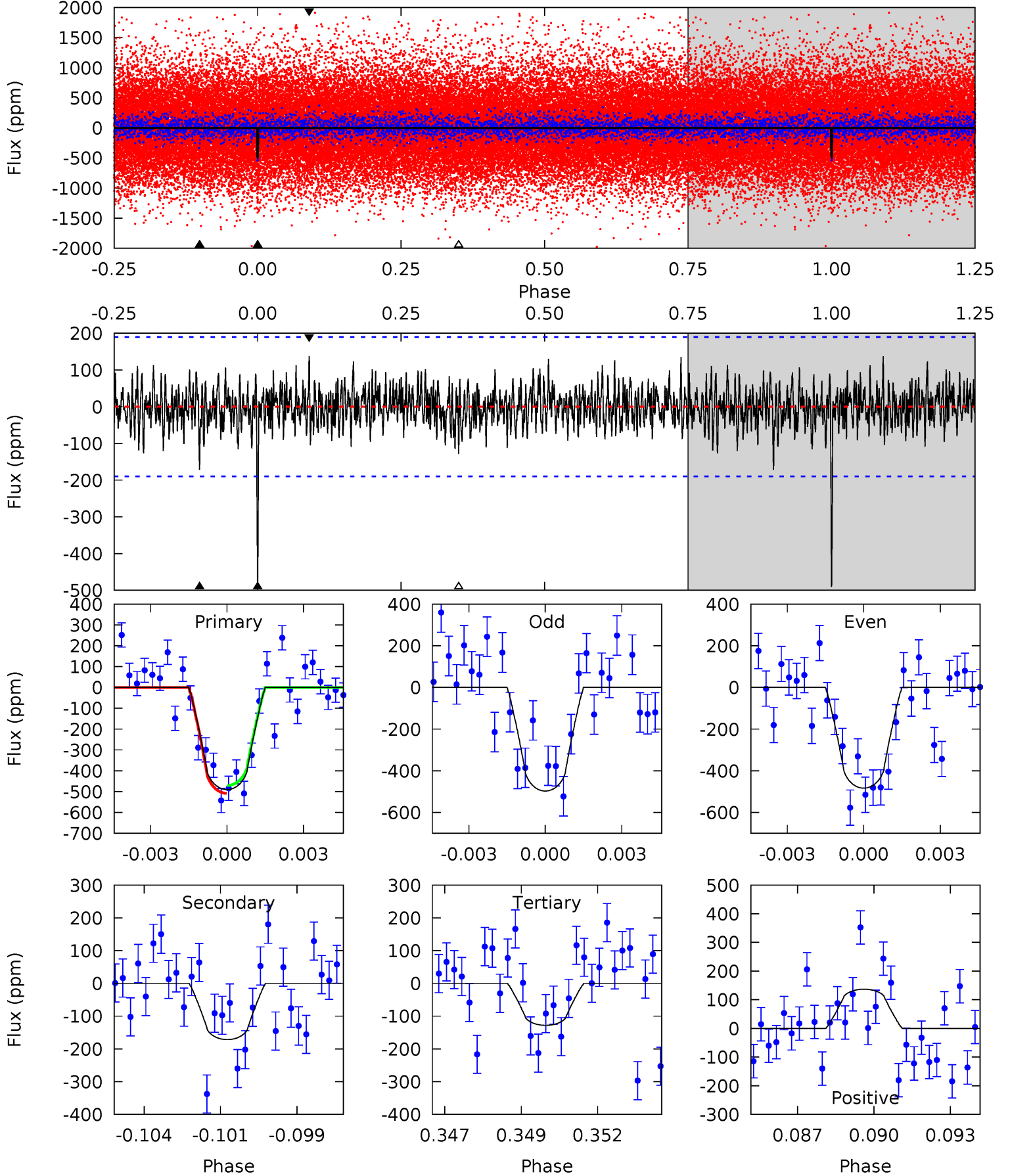
TCE 006511182-01 P= 29.563291 Days $T_0=158.225541$ (BKJD)



DV Model-Shift Uniqueness Test

006511182-01, P = 29.563467 Days, E = 128.659521 Days

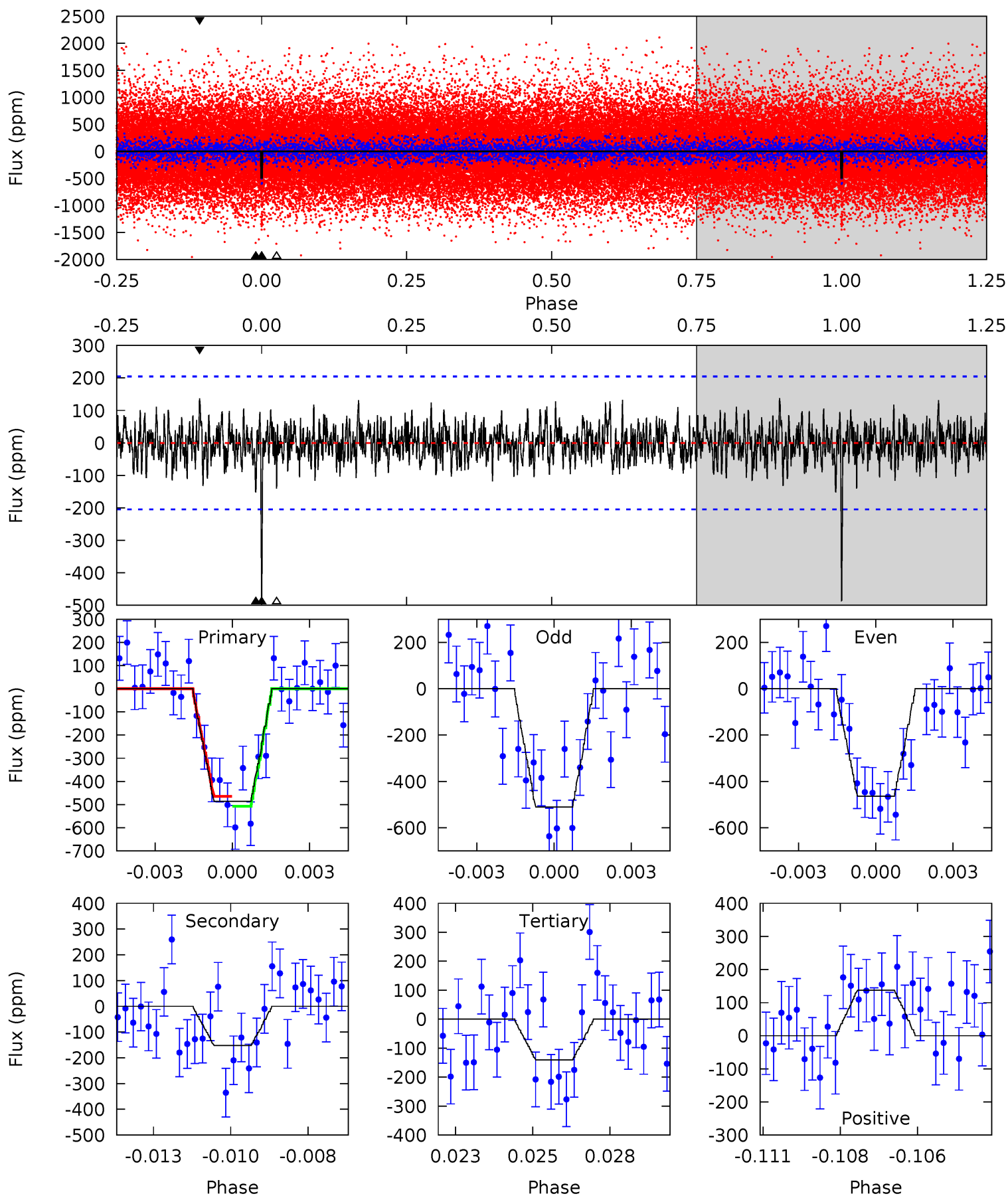
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.6	4.76	3.55	3.79	5.26	2.99	1.19	10.0	9.80	1.21	0.97	0.19	1.10	0.22	0.52



Alt Model-Shift Uniqueness Test

006511182-01, $P = 29.563291$ Days, $E = 128.662250$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.6	3.93	3.63	3.55	5.28	3.02	1.13	8.94	9.01	0.31	0.38	0.61	1.02	0.22	0.56



Stellar Parameters For KIC 006511182

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5595^{+169}_{-152}	$4.562^{+0.042}_{-0.168}$	$-0.120^{+0.300}_{-0.300}$	$0.828^{+0.221}_{-0.069}$	$0.913^{+0.095}_{-0.104}$	$2.268^{+0.395}_{-1.024}$
	+3%/-3%	+1%/-4%	+250%/-250%	+27%/-8%	+10%/-11%	+17%/-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 006511182-01 / KOI 5288.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-172 ± 36	$2.93^{+2.74}_{-2.01}$	752^{+45}_{-34}	3974^{+2330}_{-800}	358^{+2946}_{-268}
Alt.	-152 ± 39	$2.94^{+2.72}_{-1.93}$	753^{+45}_{-33}	3845^{+2257}_{-704}	301^{+2389}_{-219}

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 $A_{obs} \gg 1.0$

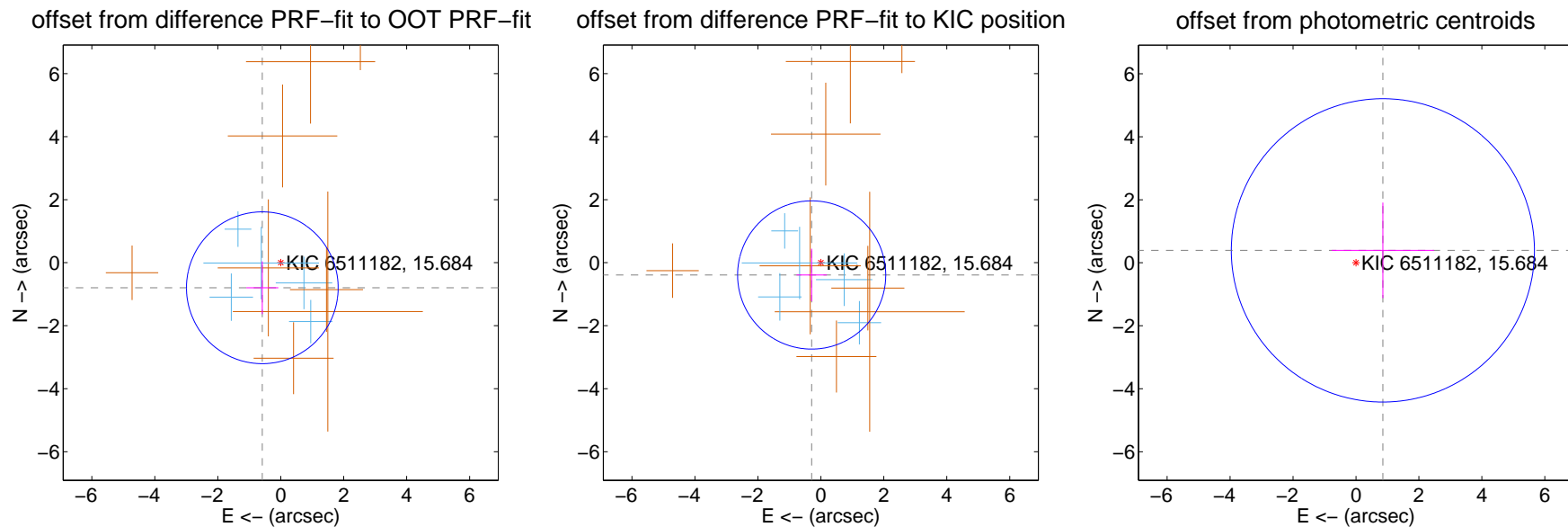
DV Centroid Data

Supplemental centroid analysis for 006511182-01. Kepler magnitude: 15.68. Transit SNR 9.12

There are 5 quarters with good PRF difference image offsets

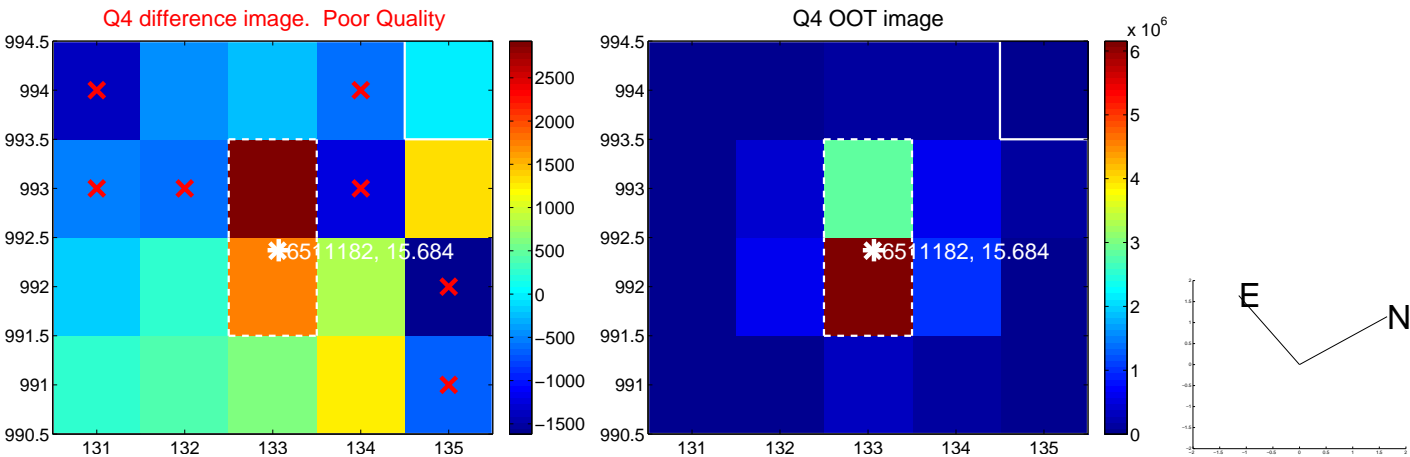
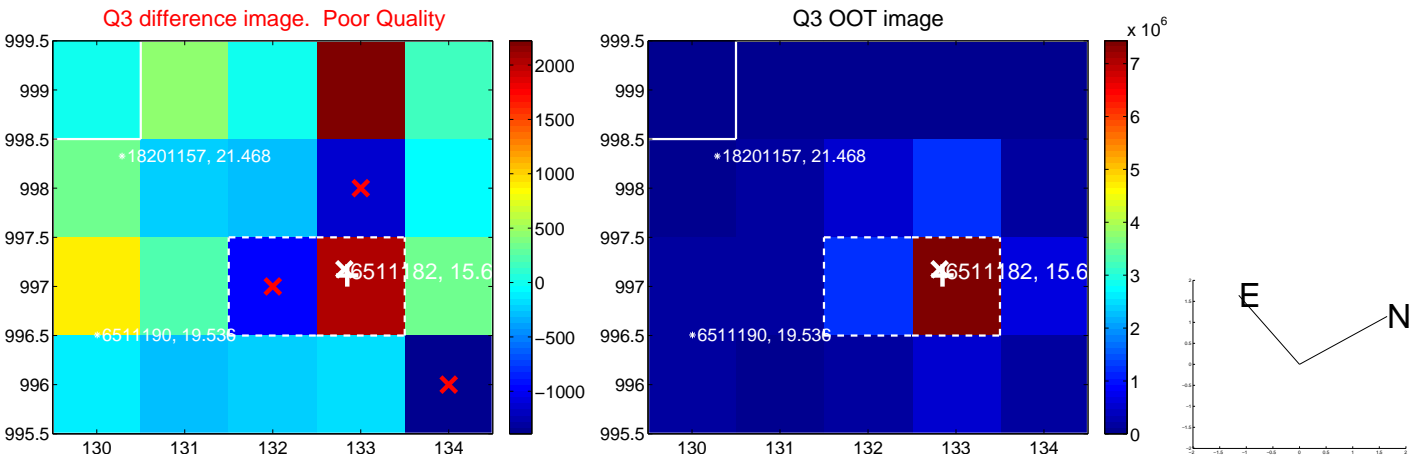
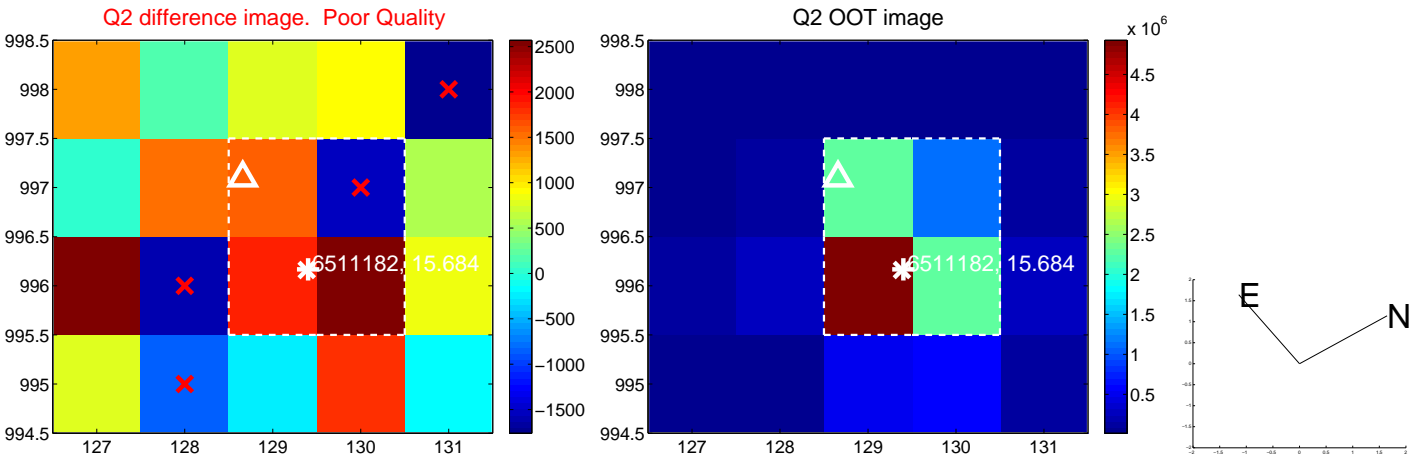
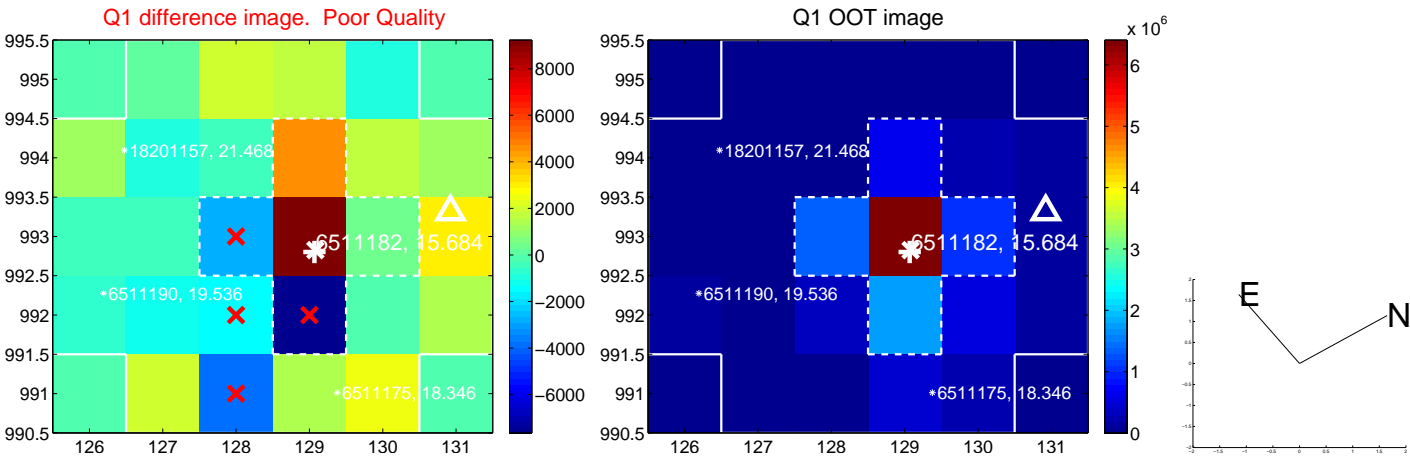
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.988 ± 0.803	1.23	0.585 ± 0.509	-0.796 ± 0.837
PRF-fit source offset from KIC position	0.487 ± 0.784	0.62	0.292 ± 0.480	-0.390 ± 0.833
photometric centroid source offset	0.94 ± 1.61	0.59	-0.85 ± 1.62	0.39 ± 1.52

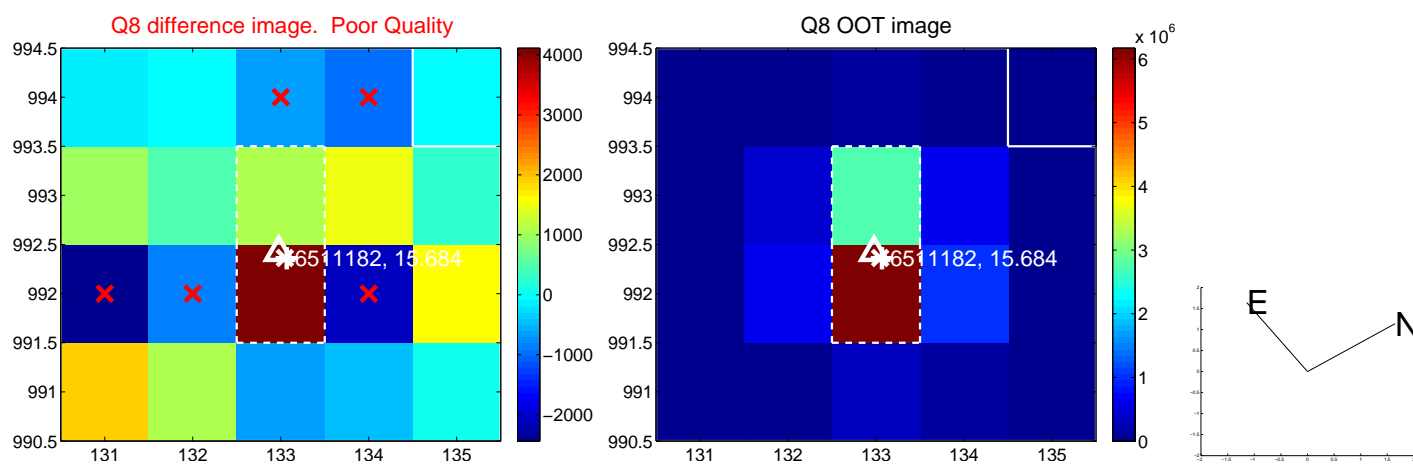
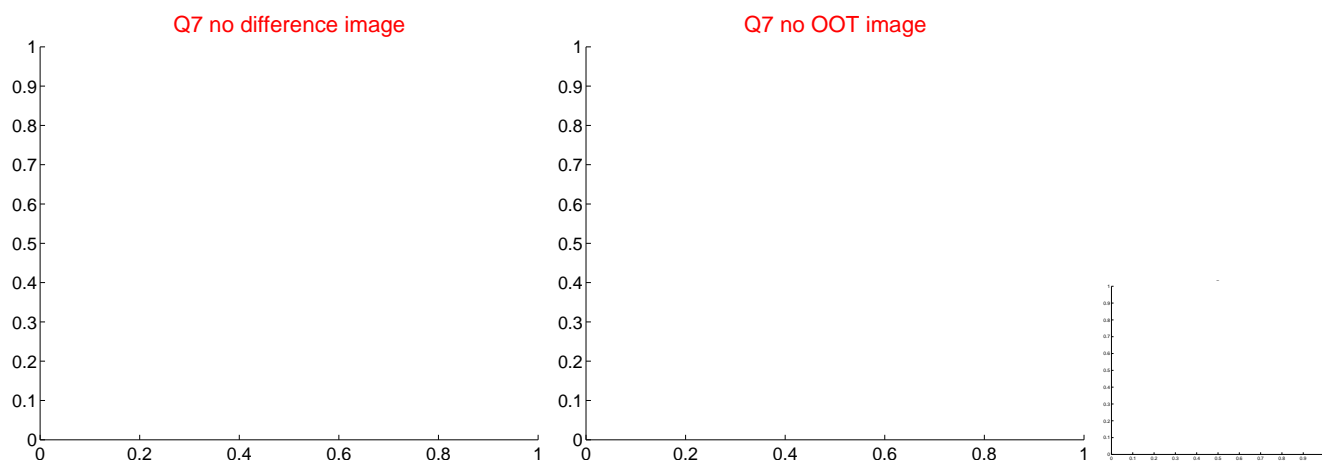
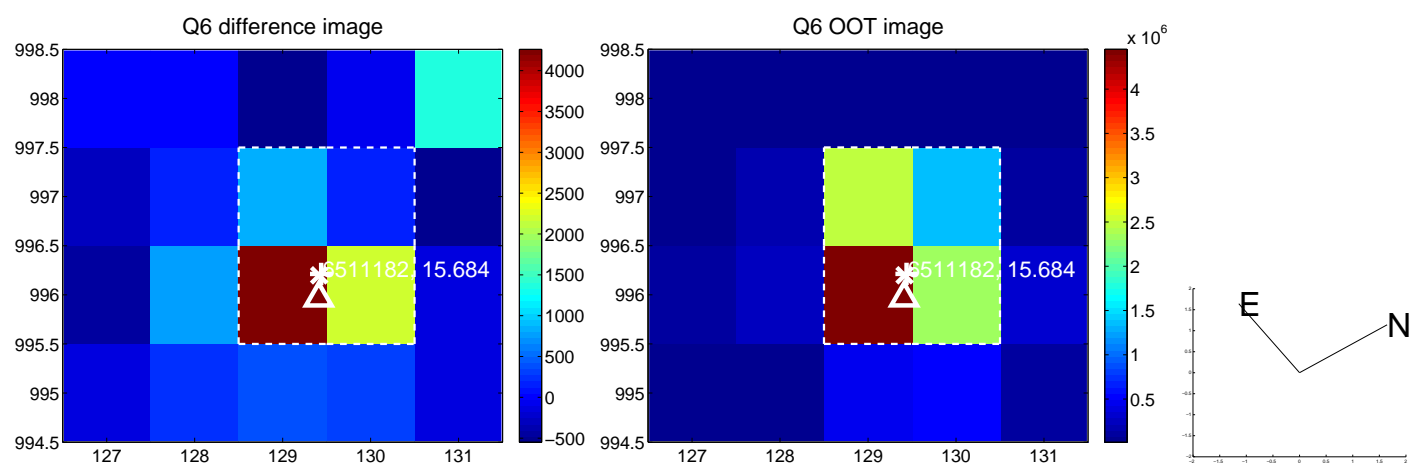
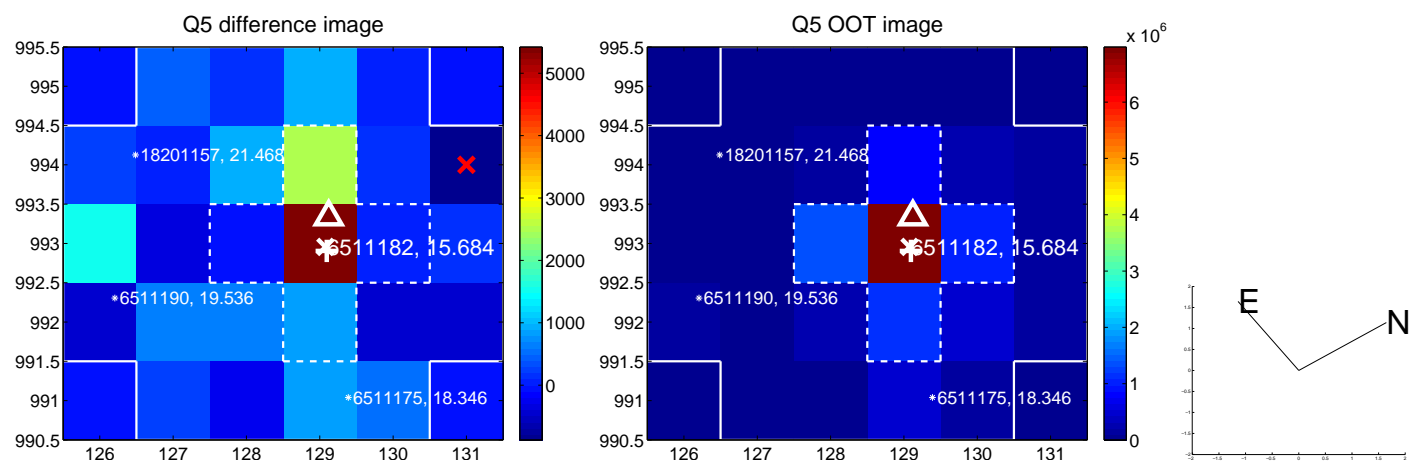


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

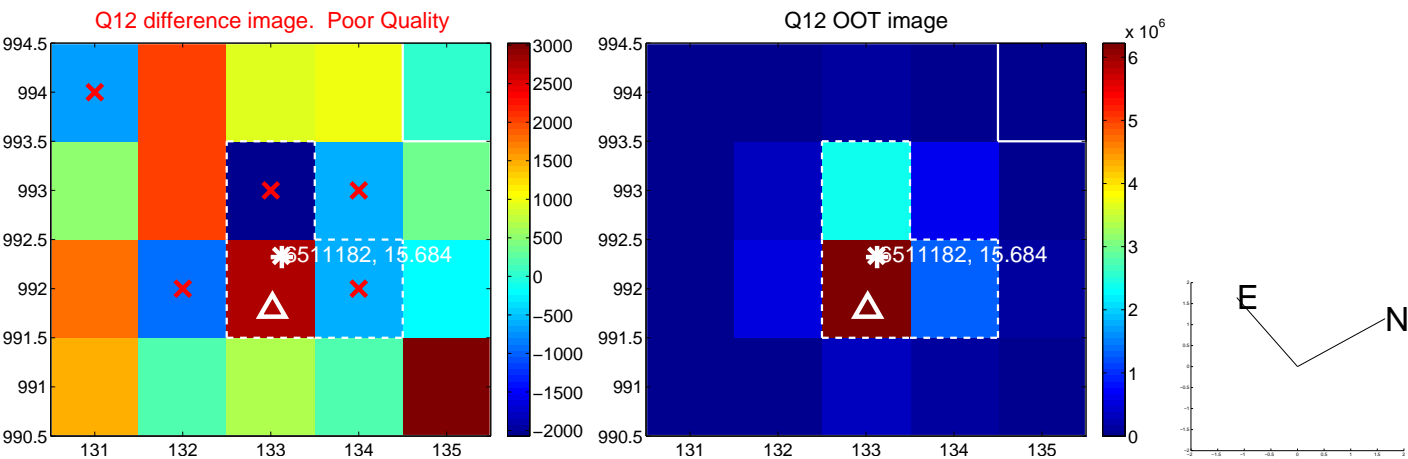
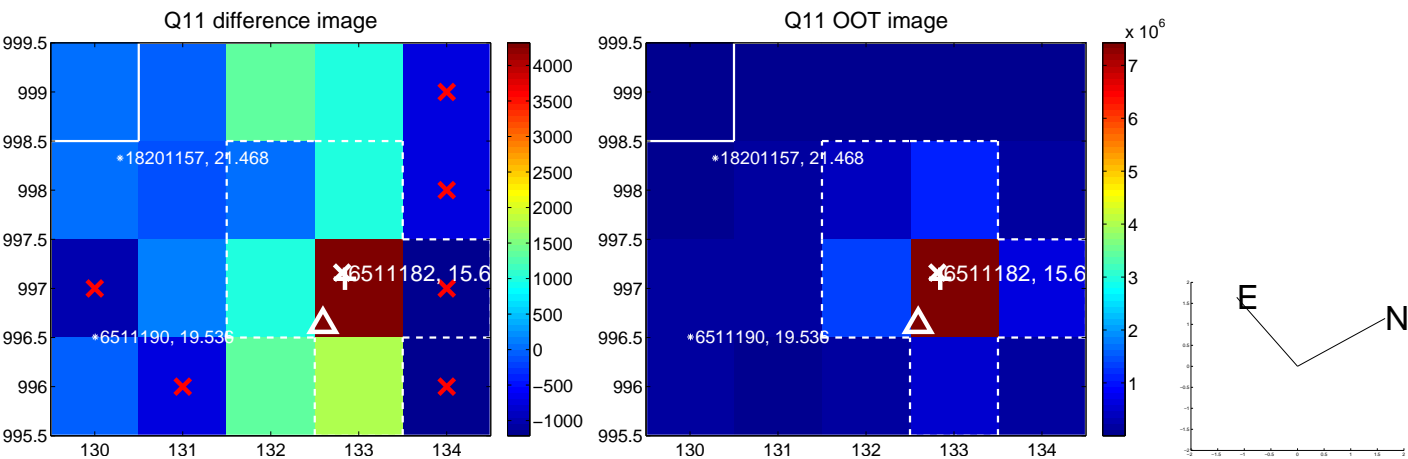
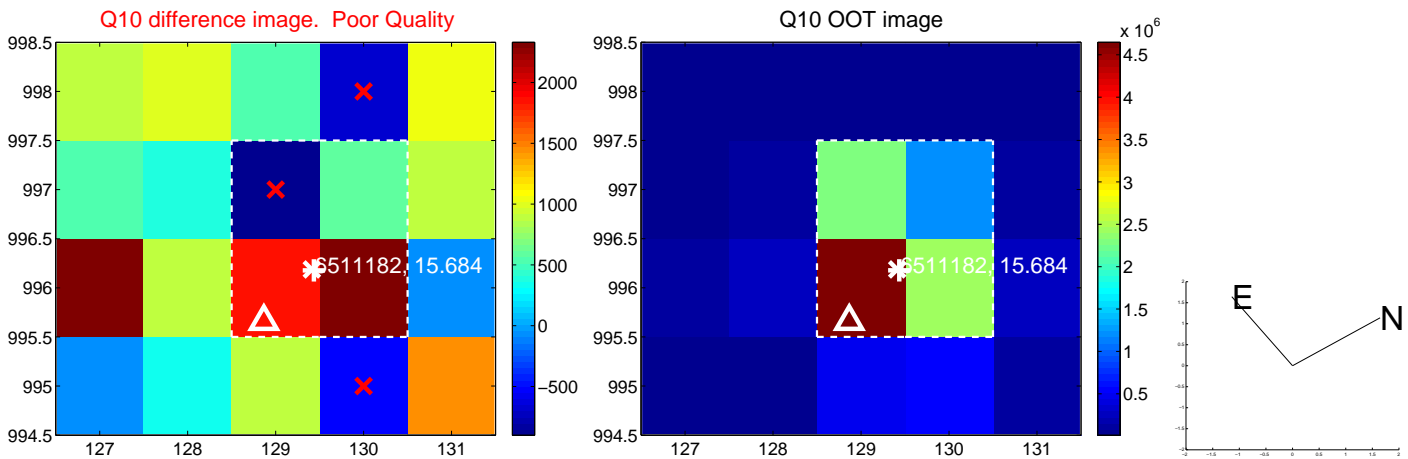
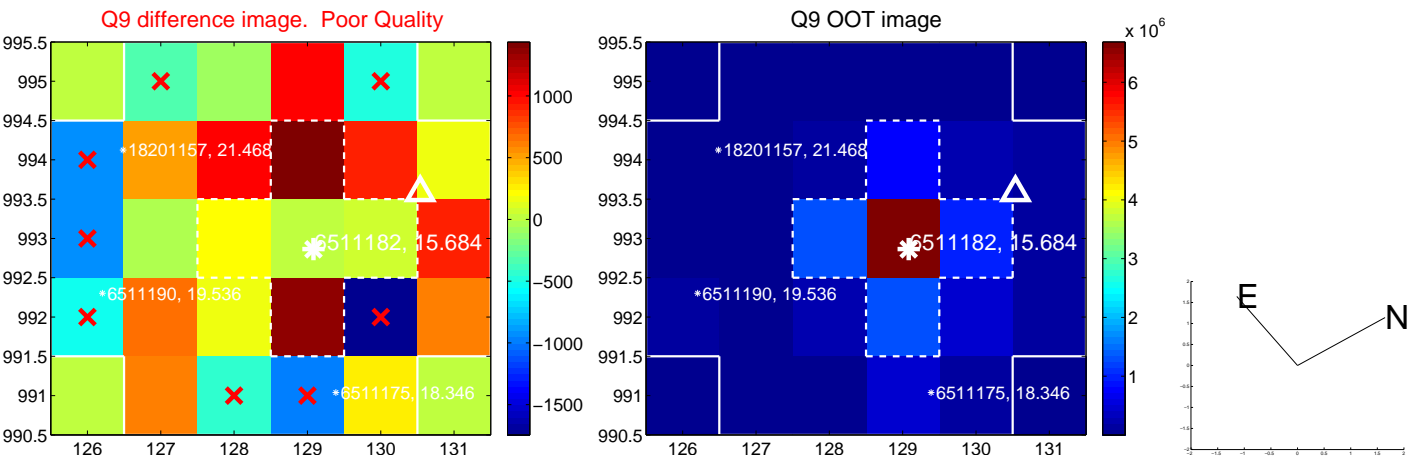
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



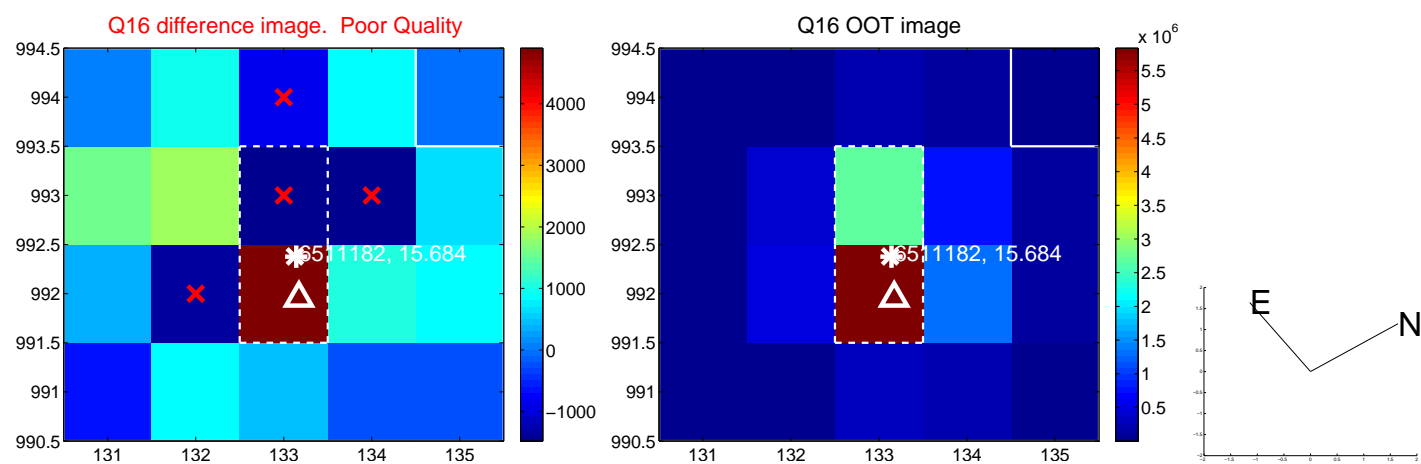
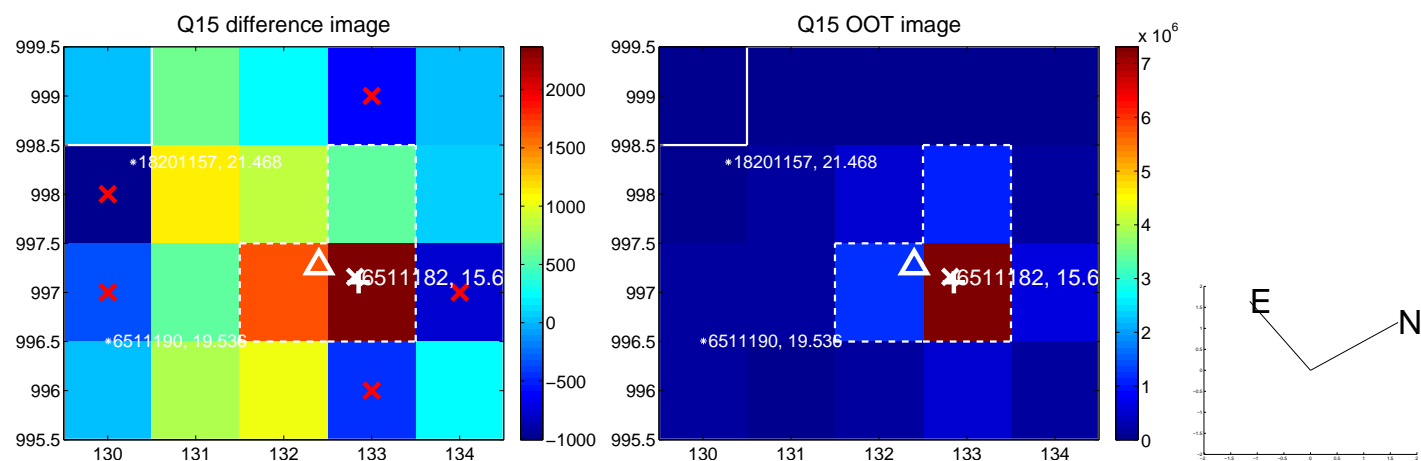
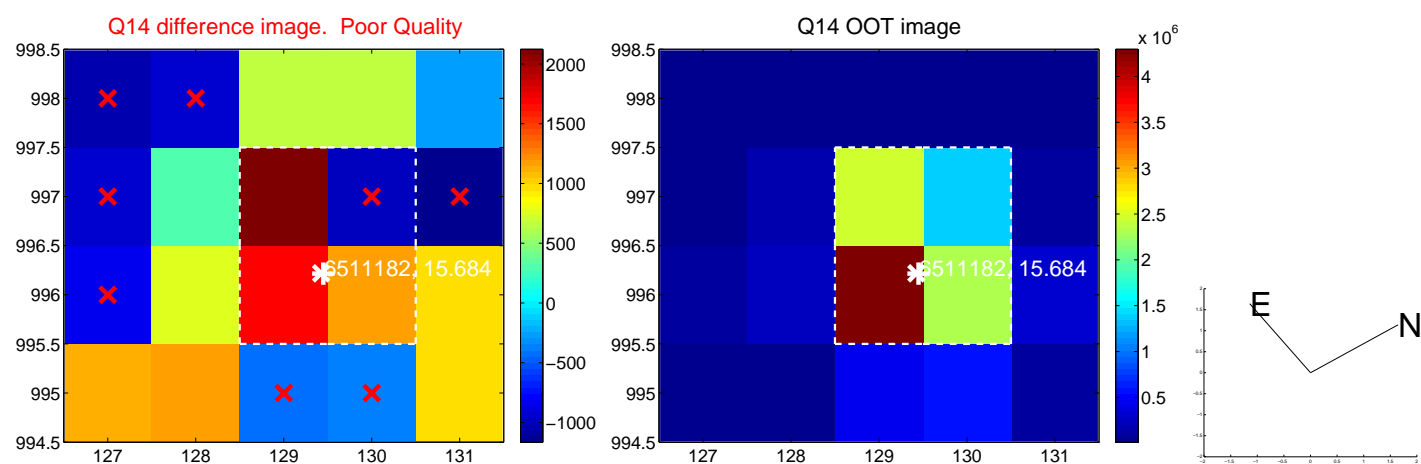
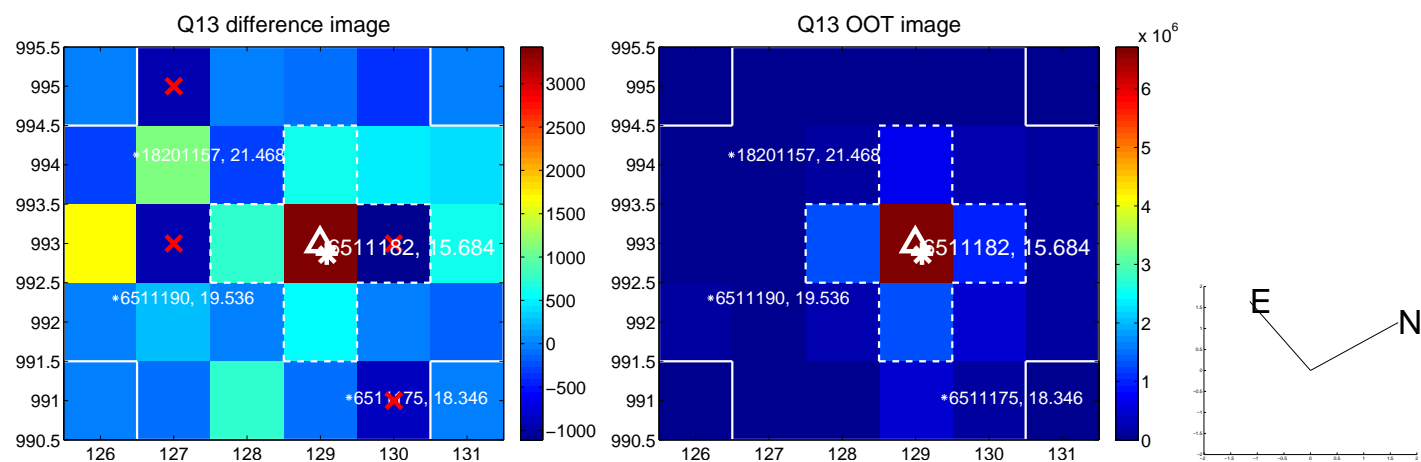
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



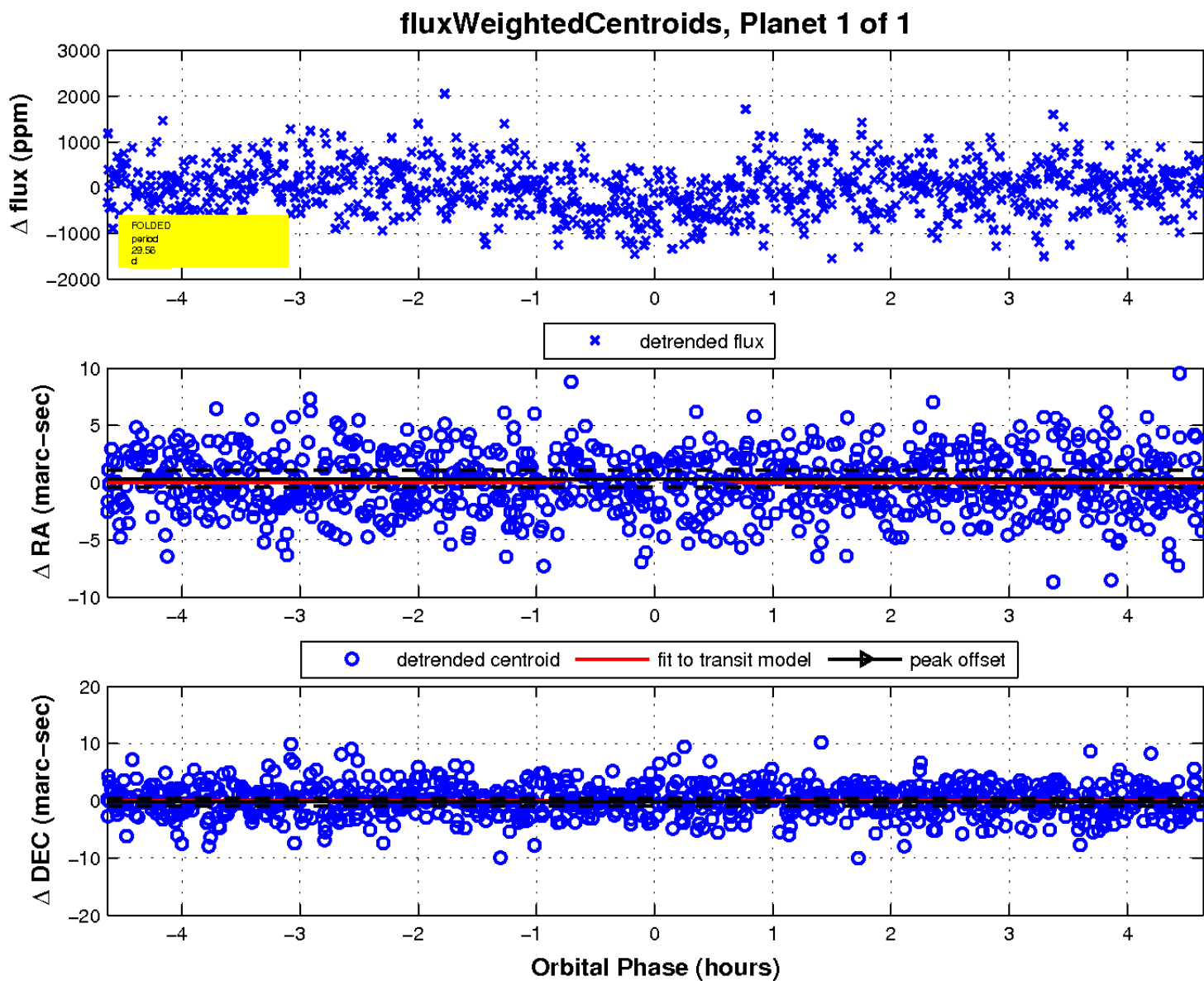
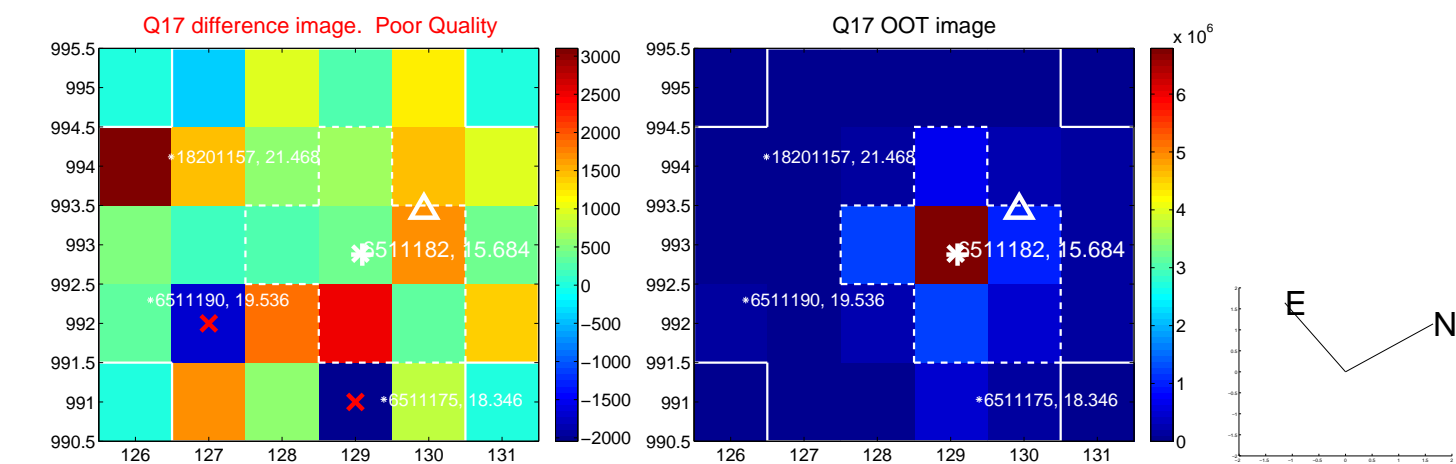
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UKIRT Image

