

KIC 005215251

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})
005215251-01	OBS	3903.01	2.553933	131.944988	736.9	7.588	41.1	46.7	0.99	5993	5.24	791.49

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005215251-01	OBS	FP	0.00	0	1	1	0	DEEP_V_SHAPED—CENT_RESOLVED_OFFSET

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.

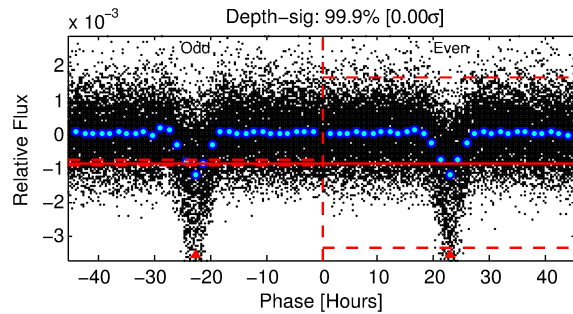
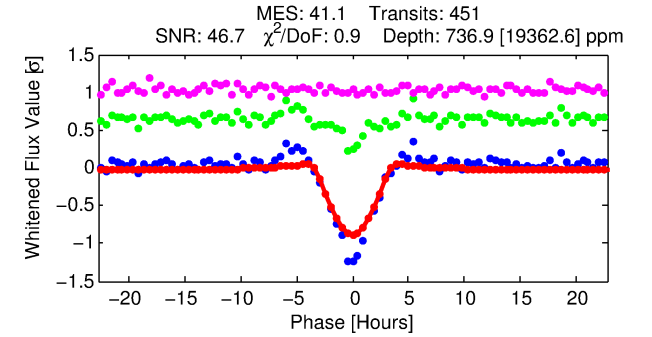
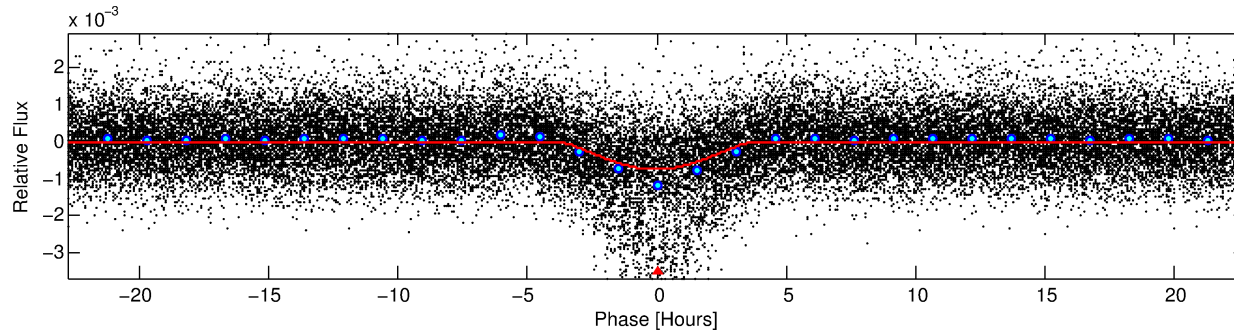
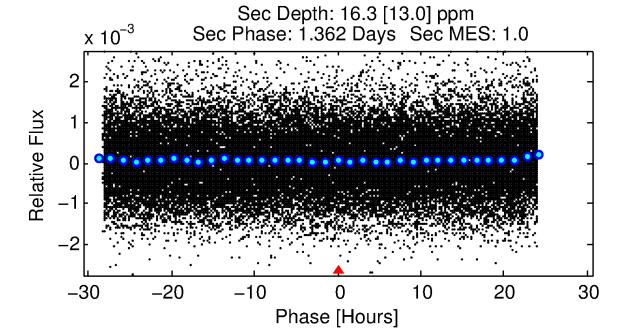
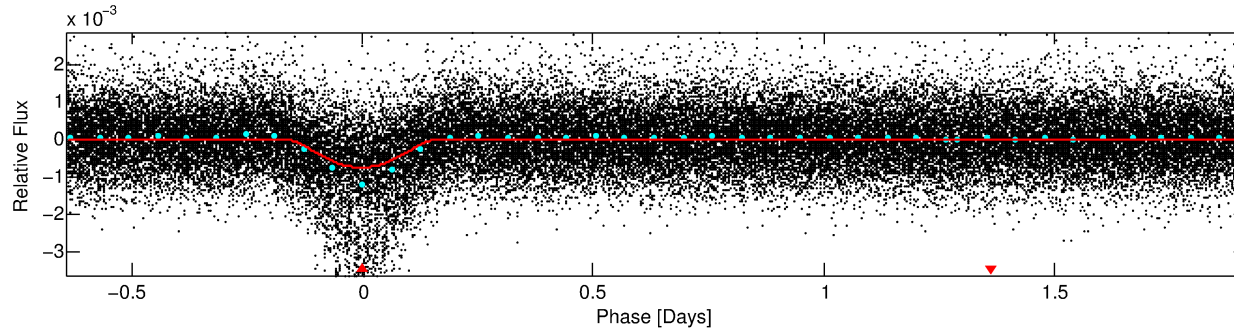
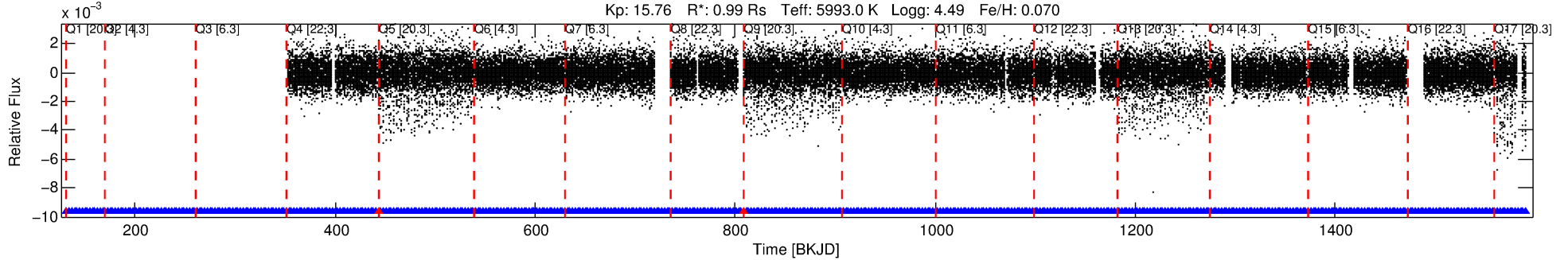
Ephemeris Match Information For 005215251-01

No Significant Match Found

DV One-Page Summary

KIC: 5215251 Candidate: 1 of 1 Period: 2.554 d
KOI: K03903.01 Corr: 0.867

Kp: 15.76 R*: 0.99 Rs Teff: 5993.0 K Logg: 4.49 Fe/H: 0.070



DV Fit Results:

Period = 2.55393 [0.00001] d
Epoch = 131.9450 [0.0042] BKJD
Rp/R* = 0.0487 [0.0398]
a/R* = 1.30 [0.06]
b = 1.00 [0.81]
Seff = 791.49 [298.39]
Teq = 1352 [127] K
Rp = 5.23 [4.51] Re
a = 0.0377 [0.0087] AU
Ag = 0.46 [0.86] [-0.62σ]
Teffp = 1725 [788] K [0.47σ]

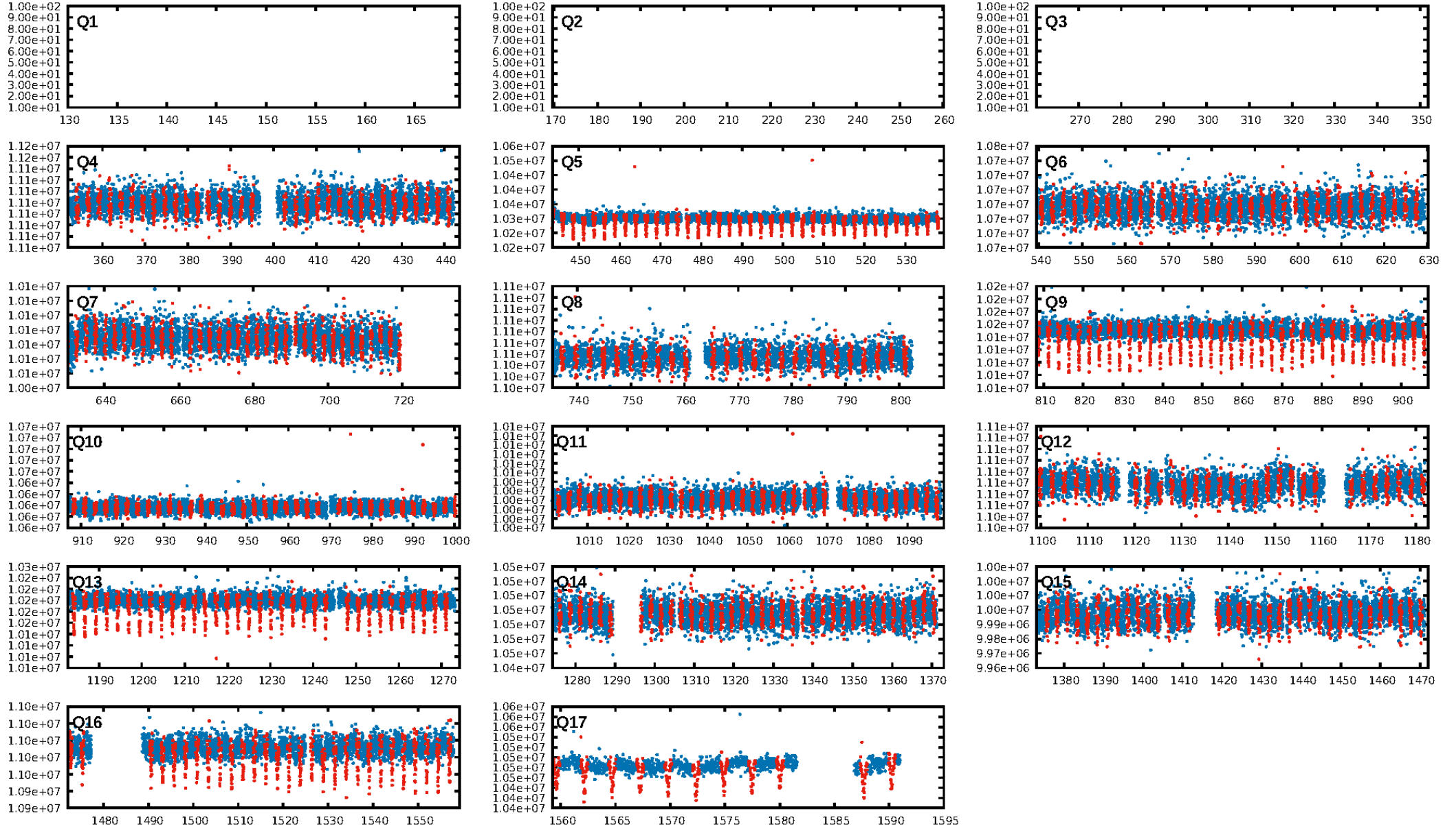
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [438/440]
GhostDiagnostic-chr: -0.5398
Centroid-sig: N/A
Centroid-so: 74.154 arcsec [273.86σ]
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 [14/14]

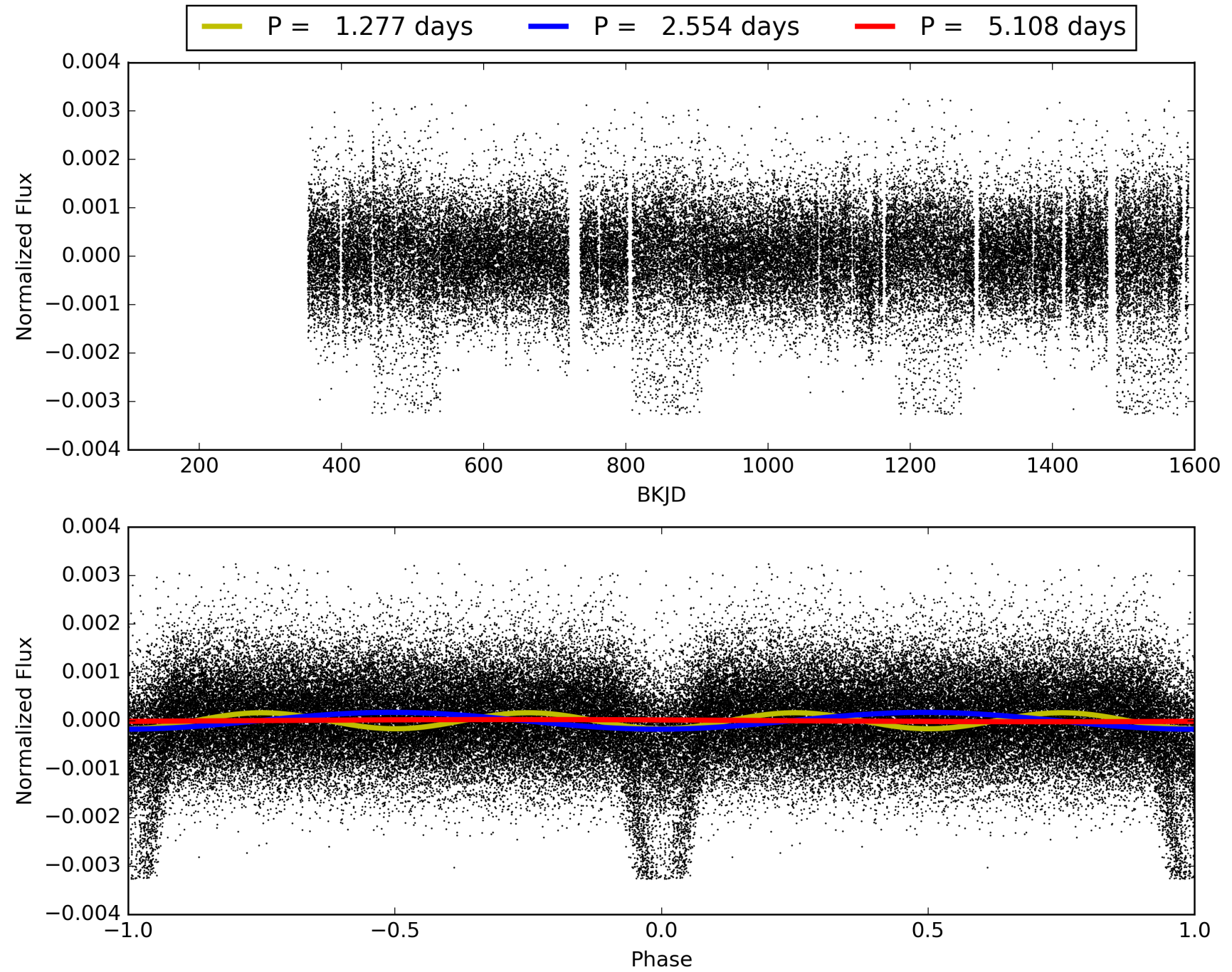
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 19:38:44 Z

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

TCE 005215251-01, PDC Light Curves

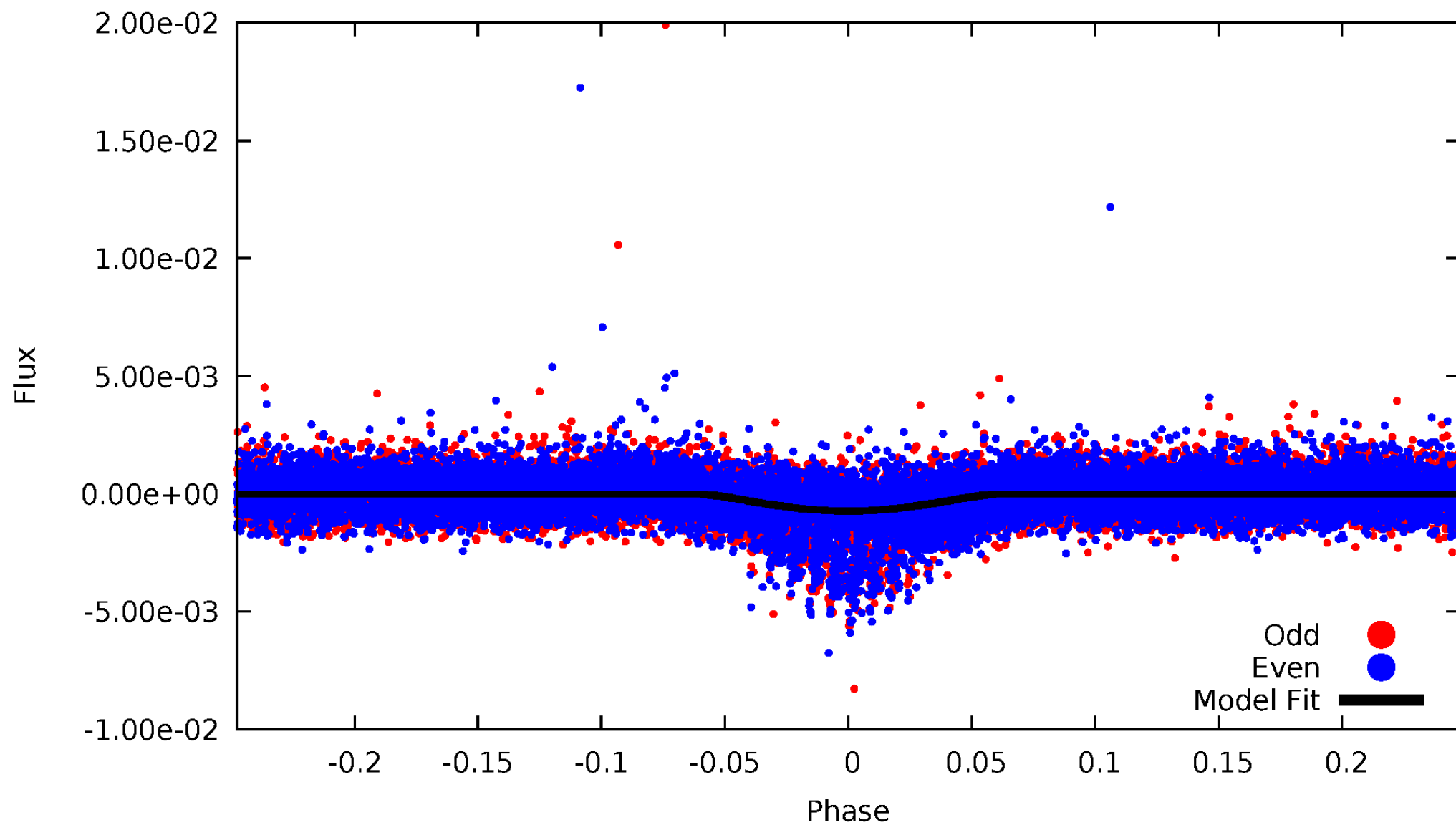


TCE 005215251-01



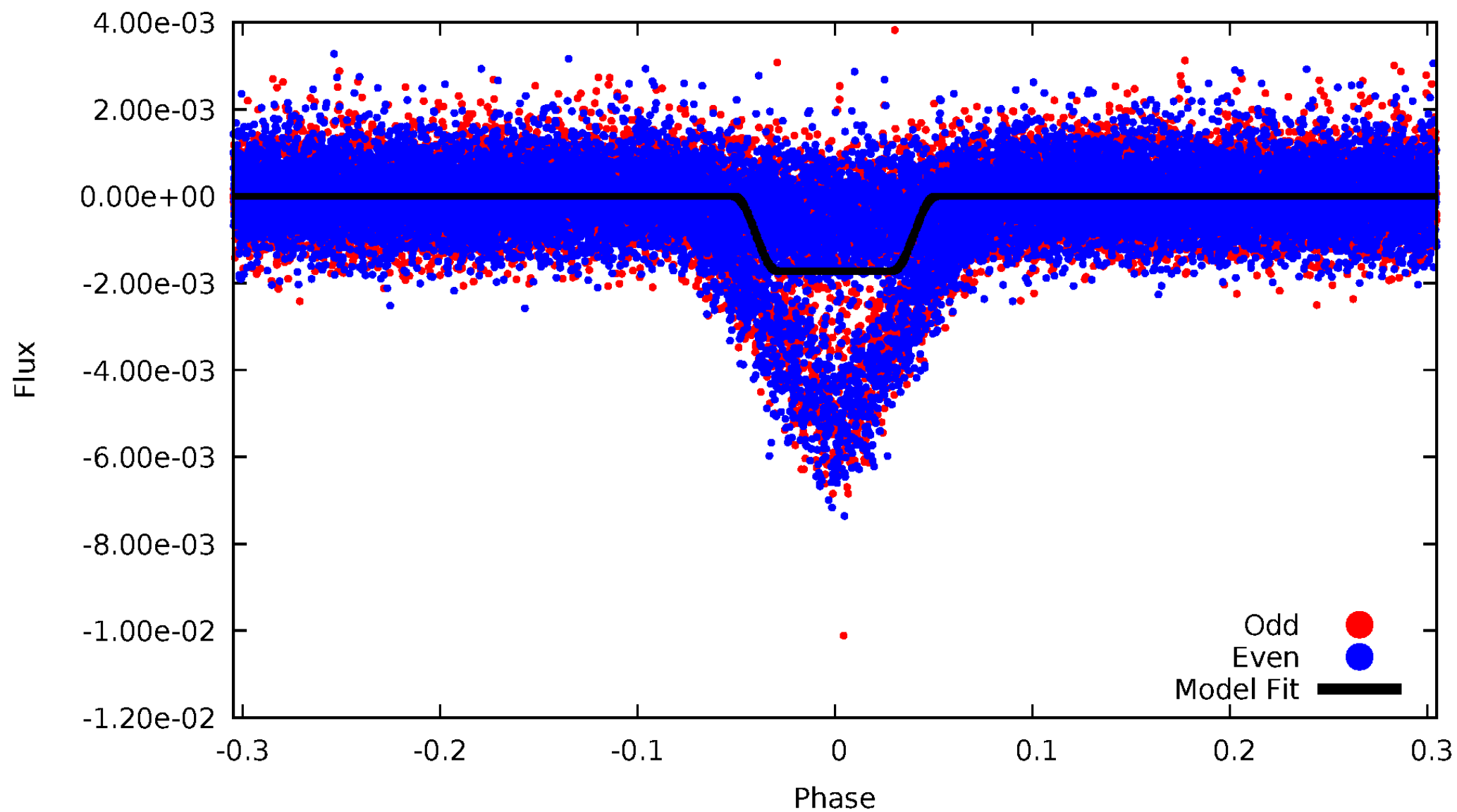
DV Odd/Even

TCE 005215251-01

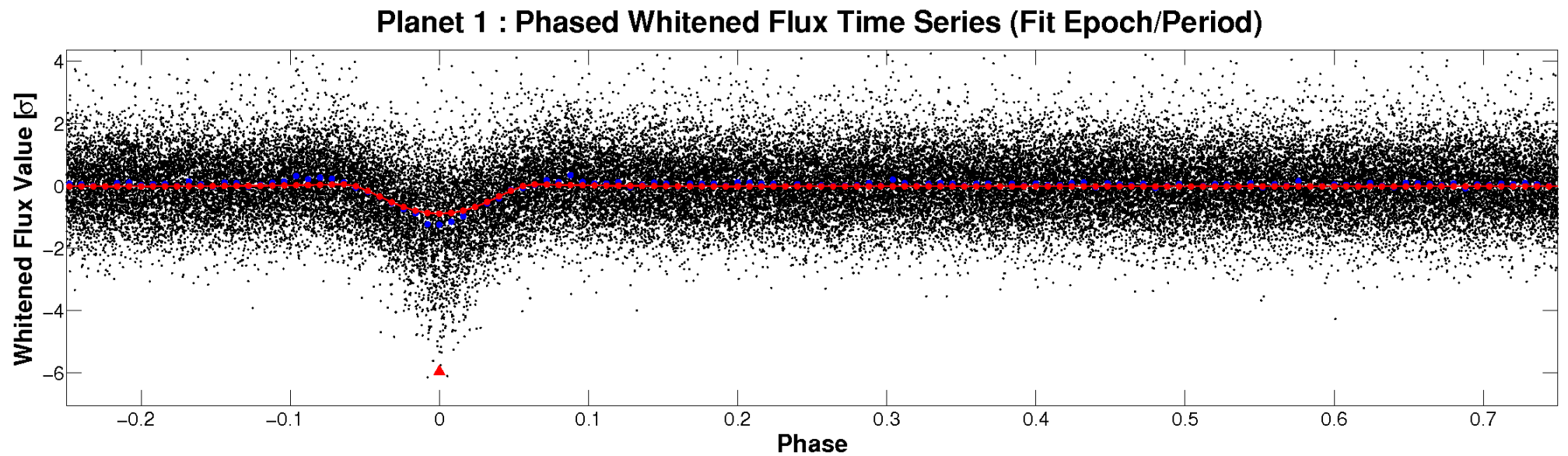
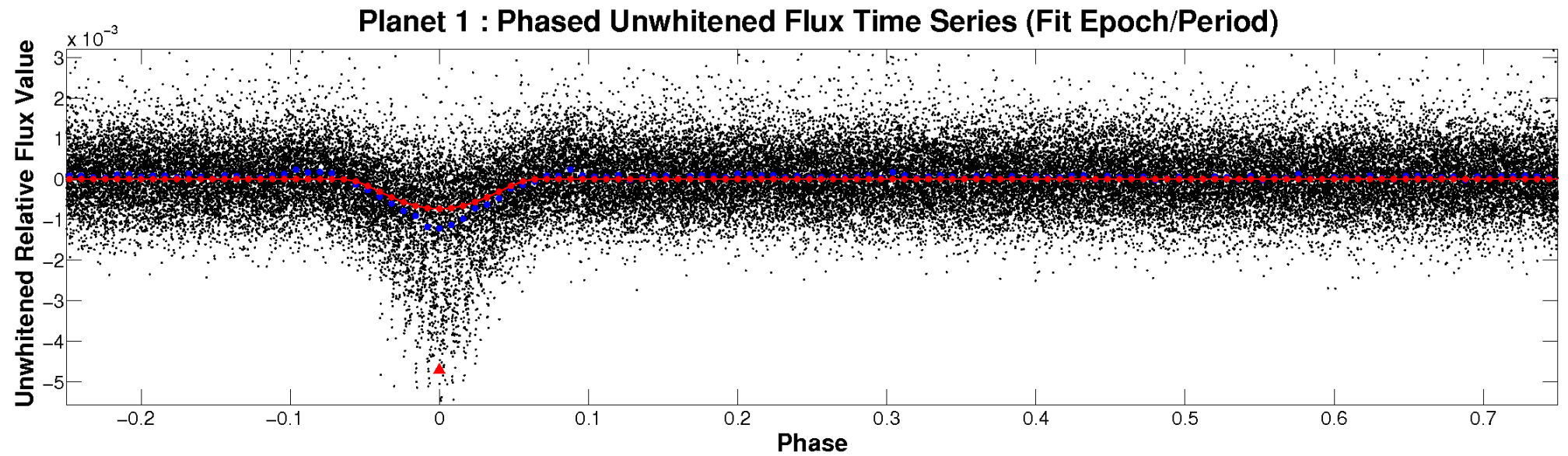


ALT Odd/Even

TCE 005215251-01

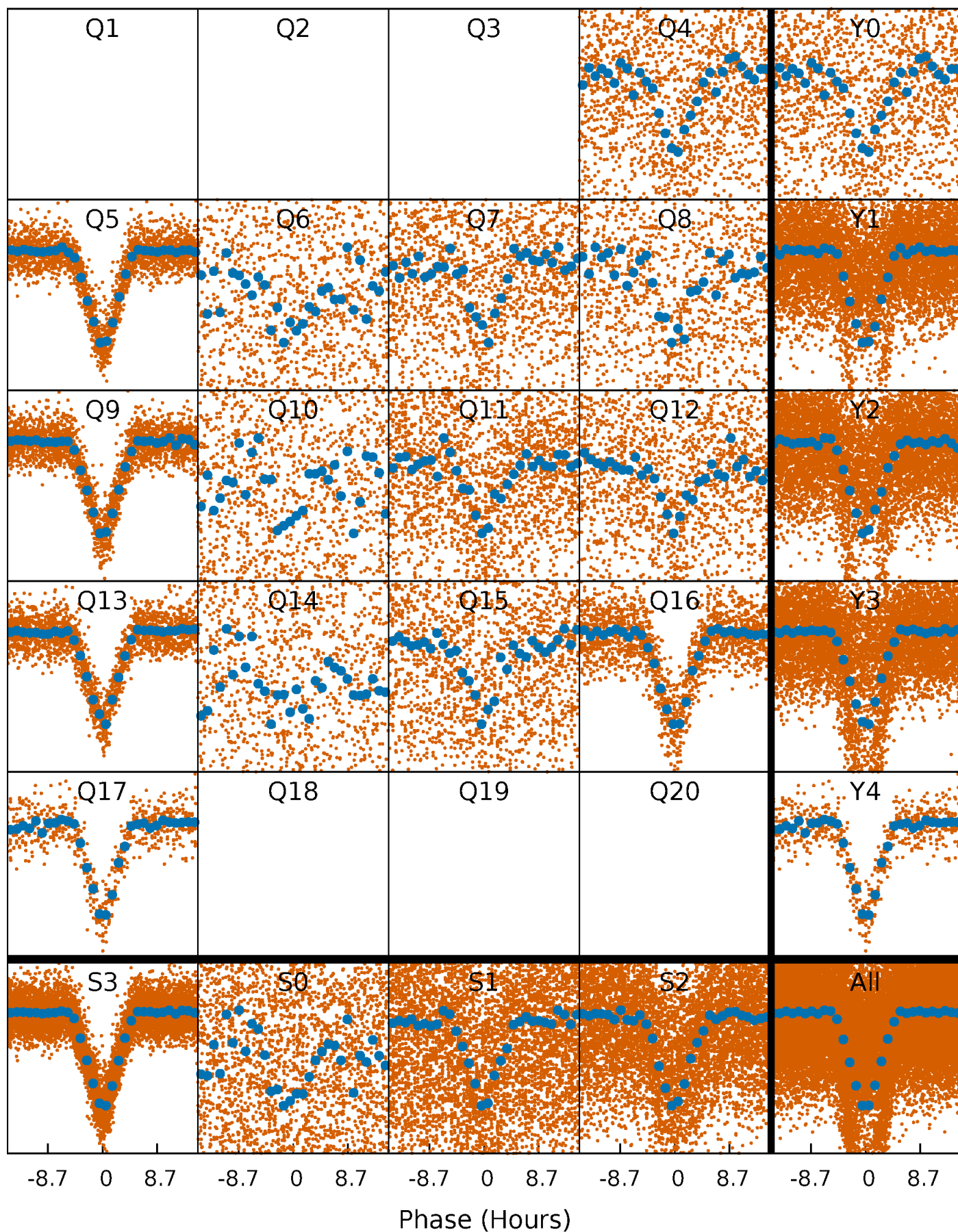


Non-Whitened Vs. Whitened Light Curve



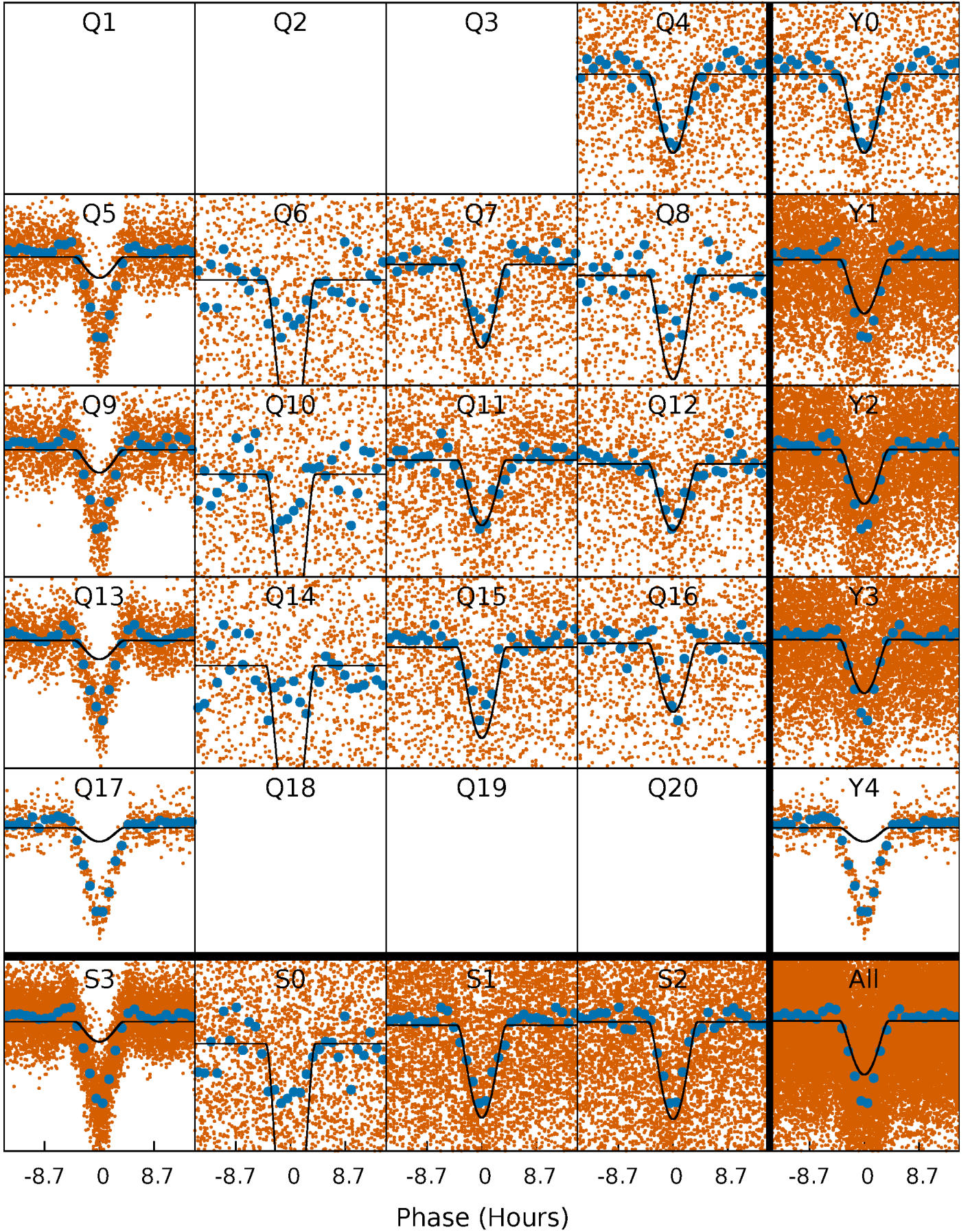
PDC Quarter-Phased Transit Curves

TCE 005215251-01 P= 2.553933 Days $T_0=131.944988$ (BKJD)



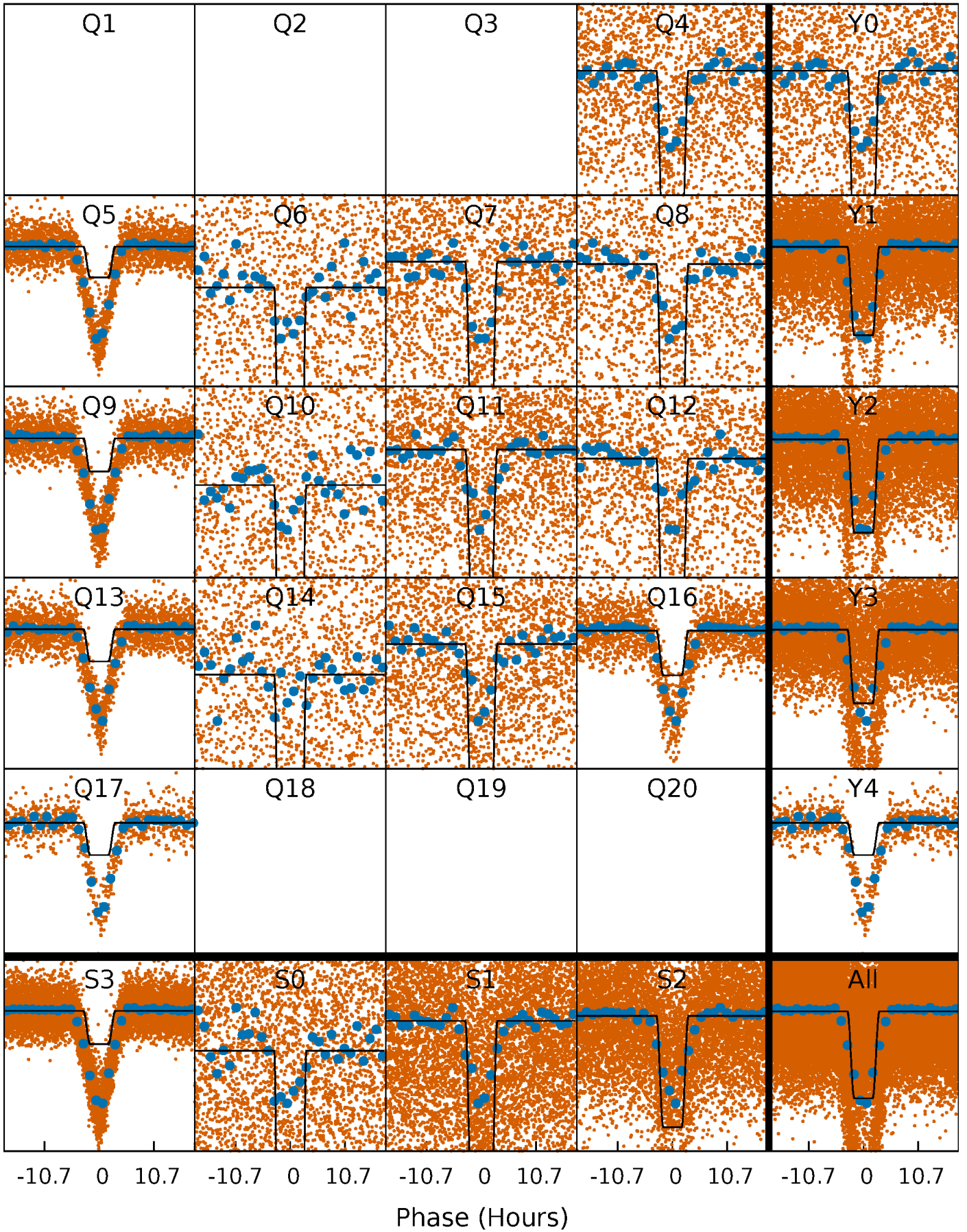
DV Quarter-Phased Transit Curves

TCE 005215251-01 P= 2.553933 Days $T_0=131.944988$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

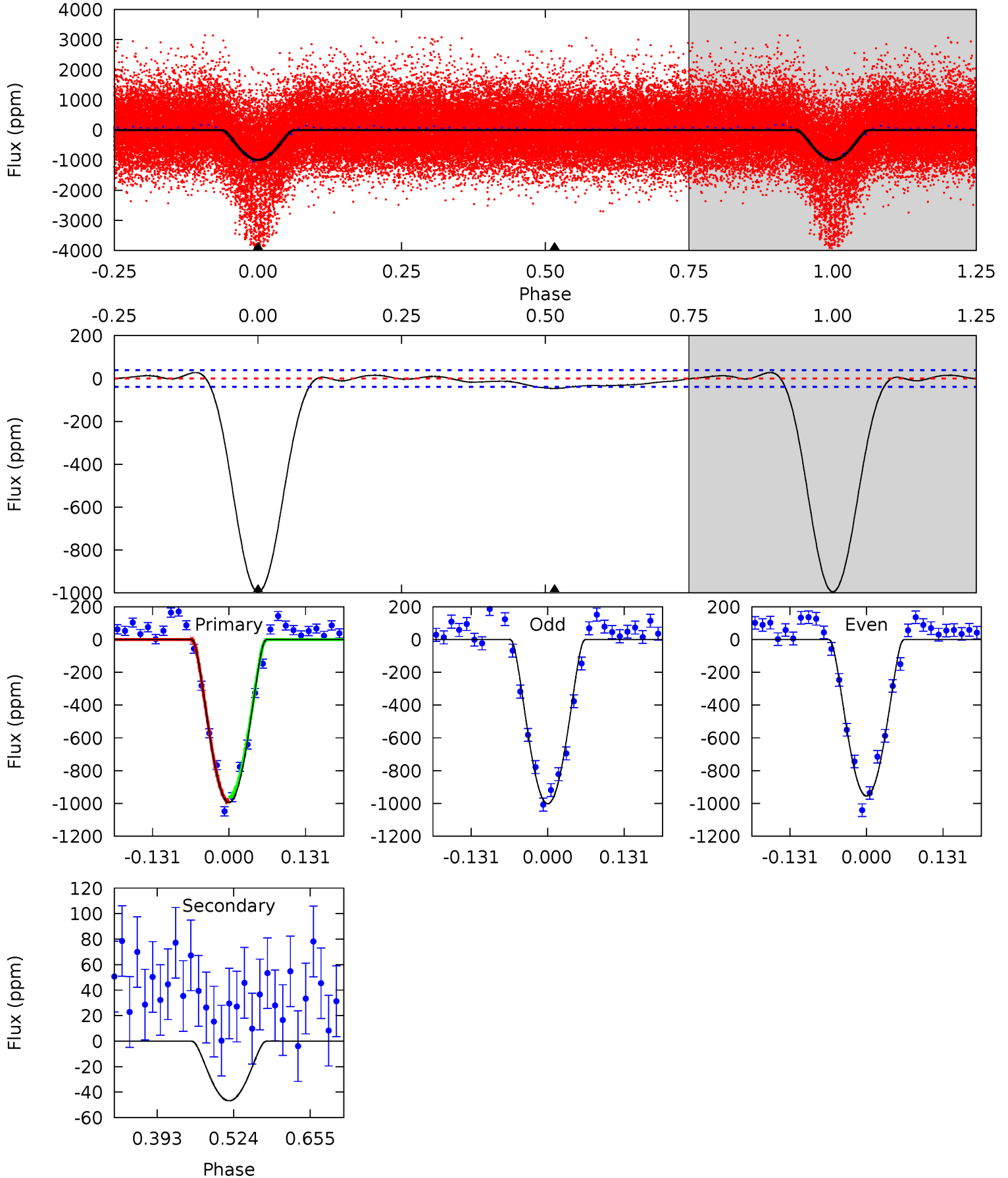
TCE 005215251-01 P= 2.553882 Days $T_0=131.961599$ (BKJD)



DV Model-Shift Uniqueness Test

005215251-01, P = 2.553933 Days, E = 131.944988 Days

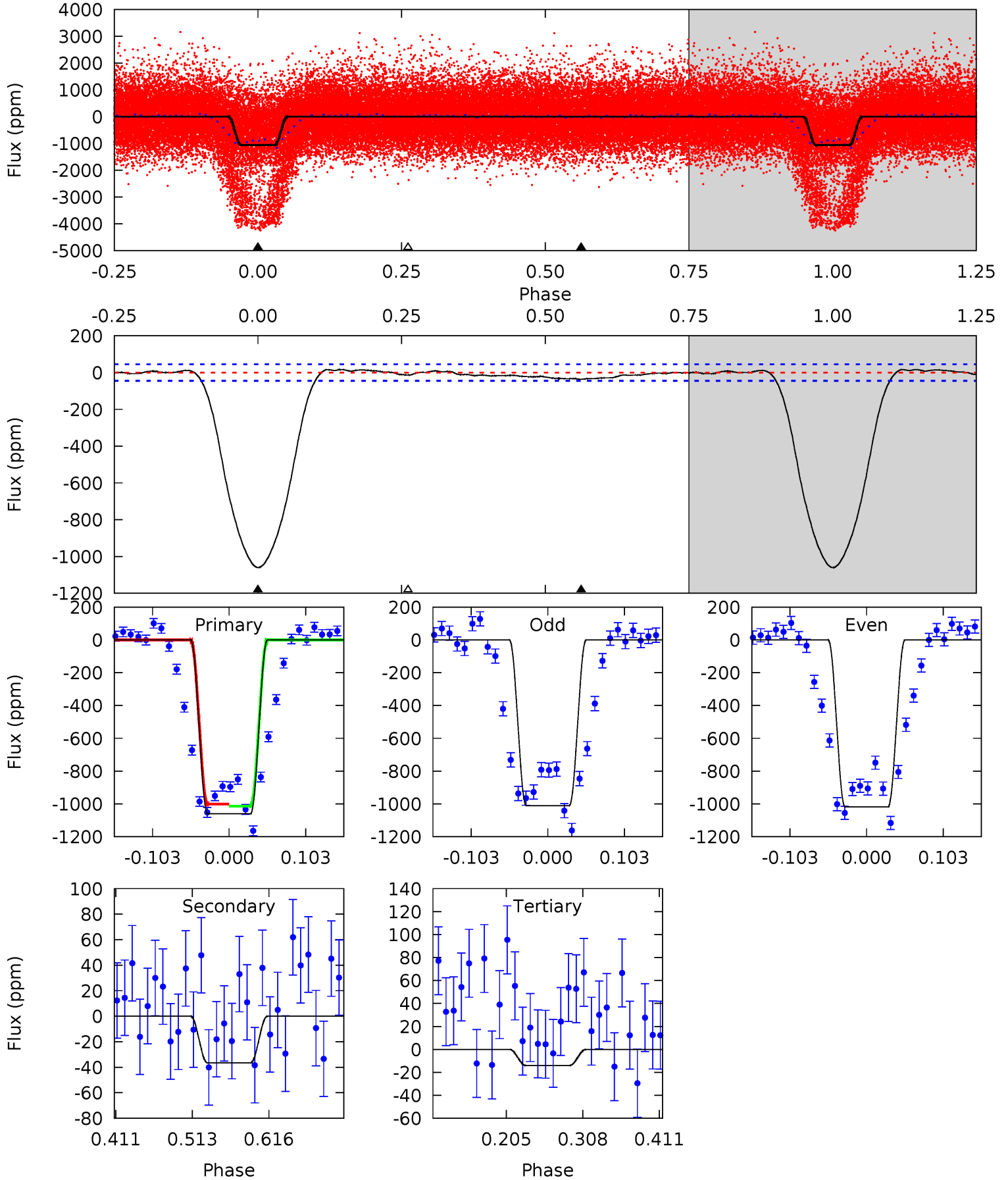
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
116.4	5.47	0	0	4.51	1.51	1.37	116.4	116.4	5.47	5.47	2.76	1.78	0.03	1.62



Alt Model-Shift Uniqueness Test

005215251-01, P = 2.553882 Days, E = 131.961599 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
107.0	3.69	1.42	0	4.56	1.63	0.99	105.6	107.0	2.26	3.69	0.40	2.49	0.02	0.61



Stellar Parameters For KIC 005215251

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5993^{+186}_{-228}	$4.489^{+0.048}_{-0.192}$	$0.070^{+0.250}_{-0.350}$	$0.986^{+0.265}_{-0.113}$	$1.093^{+0.112}_{-0.154}$	$1.607^{+0.406}_{-0.791}$
	+3%/-4%	+1%/-4%	+357%/-500%	+27%/-11%	+10%/-14%	+25%/-49%
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 005215251-01 / KOI 3903.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-47 ± 9	$6.06^{+4.09}_{-3.48}$	1927^{+126}_{-97}	2723^{+887}_{-733}	$0.989^{+4.365}_{-0.649}$
Alt.	-37 ± 10	$5.68^{+4.34}_{-3.43}$	1933^{+125}_{-99}	2653^{+1029}_{-4658}	$0.851^{+5.037}_{-0.602}$

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 $A_{obs} \gg 1.0$

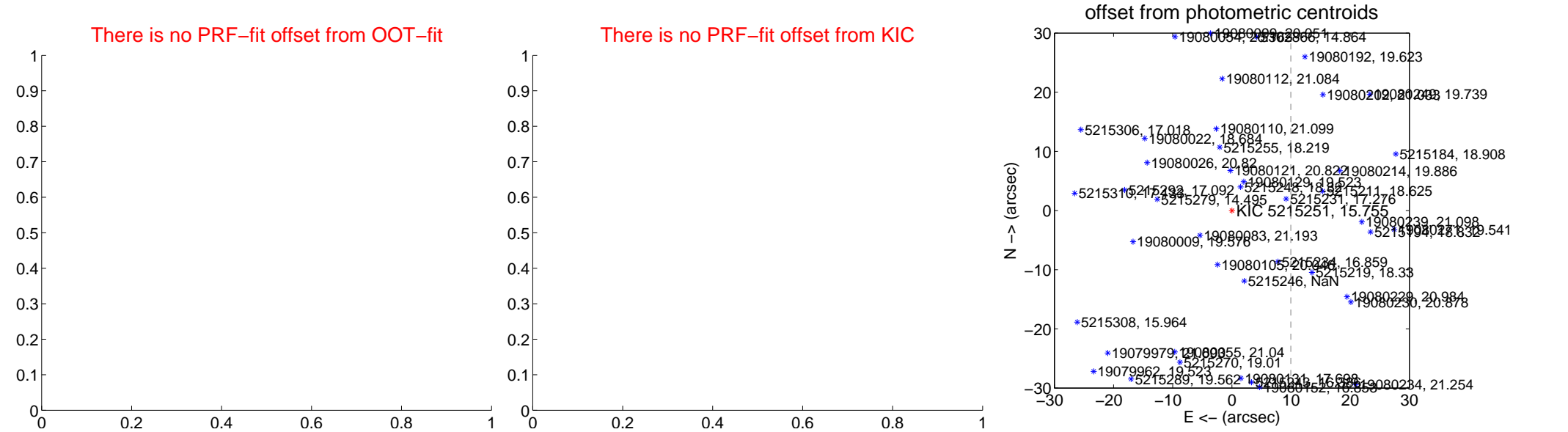
DV Centroid Data

Supplemental centroid analysis for 005215251-01. Kepler magnitude: 15.76. Transit SNR 46.66

There are 0 quarters with good PRF difference image offsets

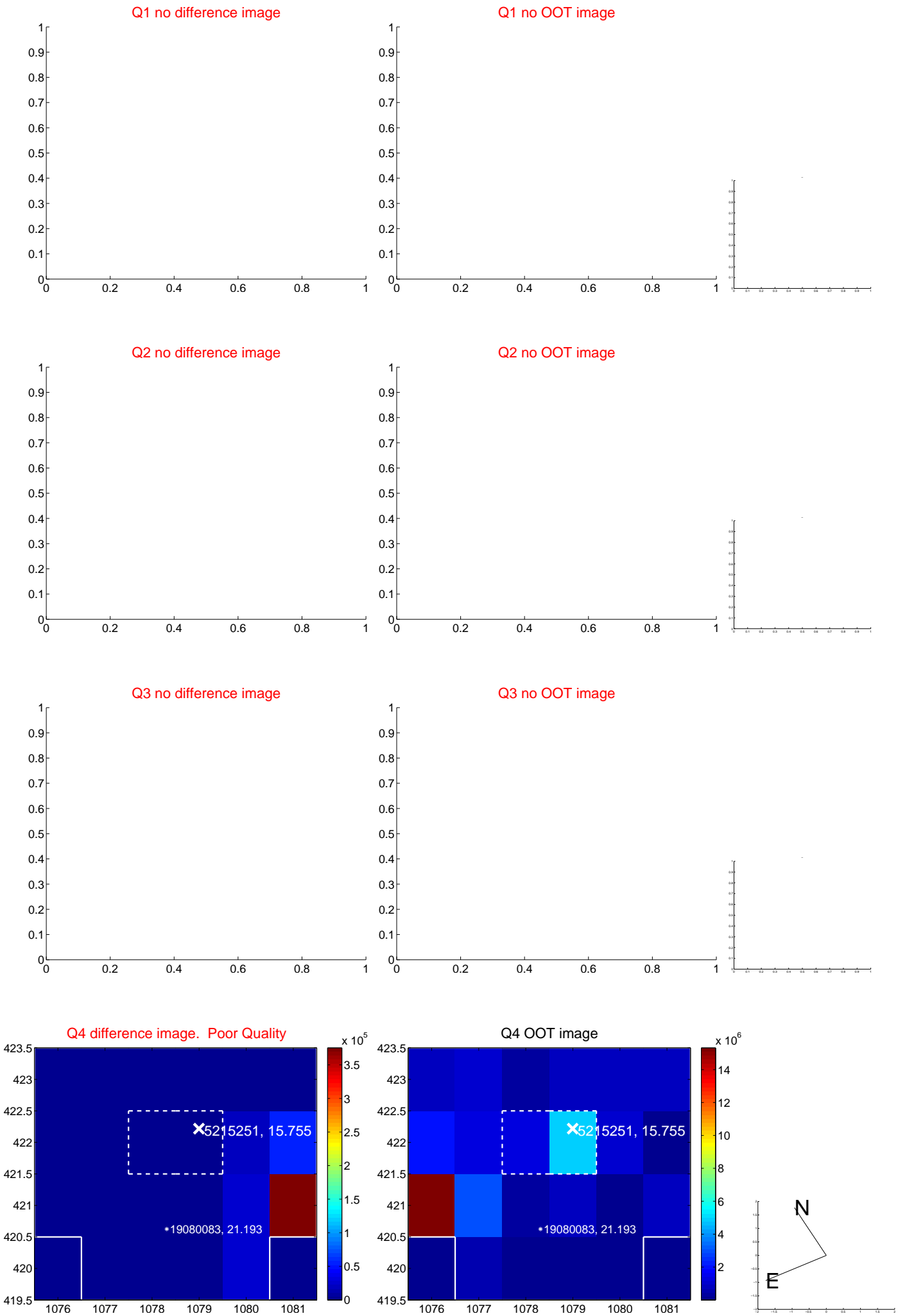
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	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	74.15 ± 0.27	273.86	-9.96 ± 0.35	-73.48 ± 0.27

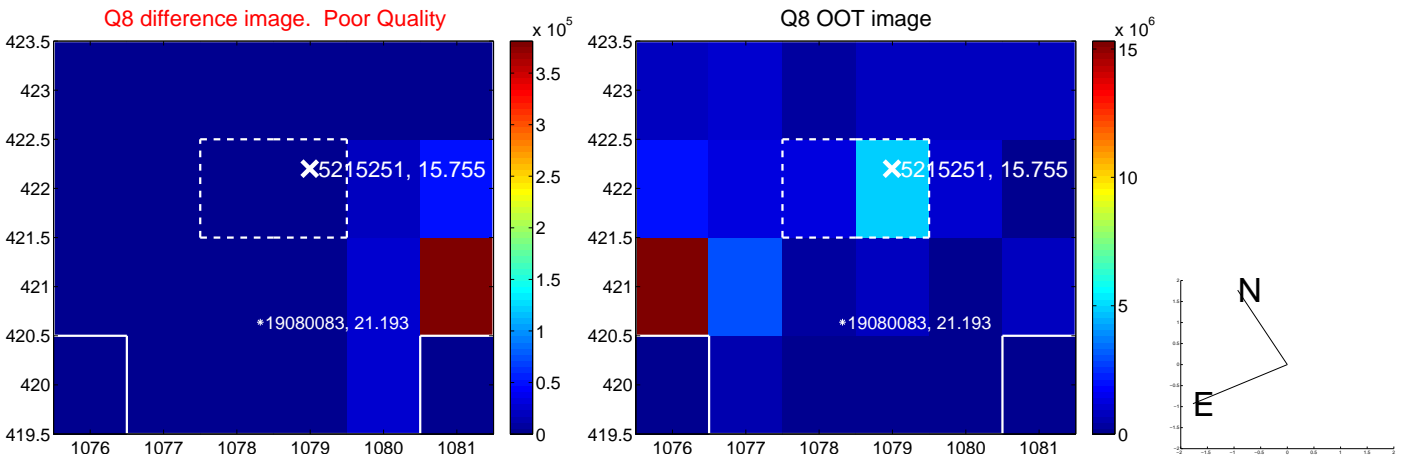
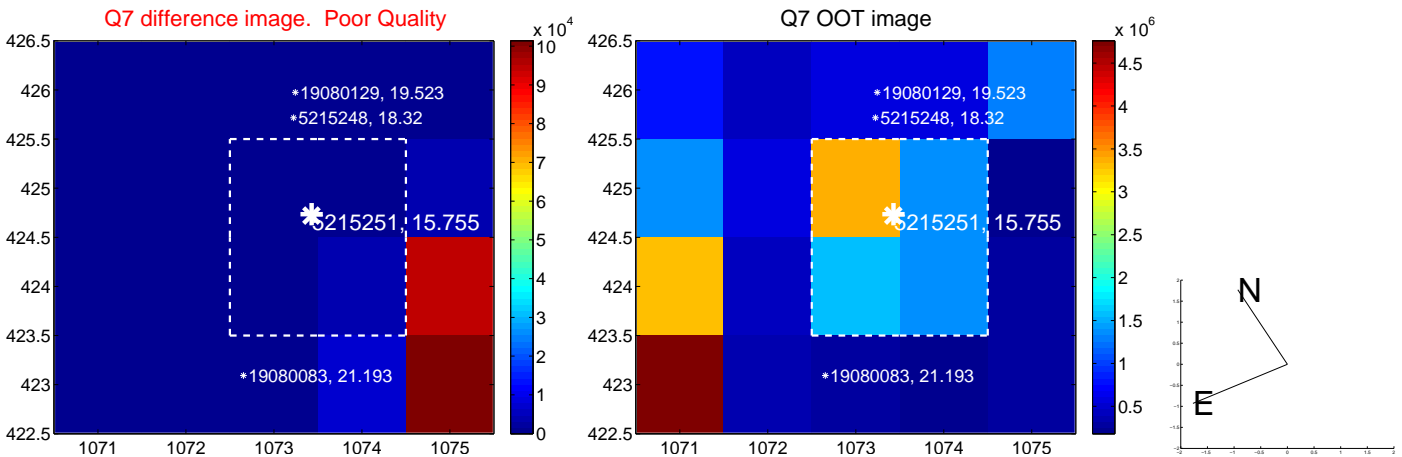
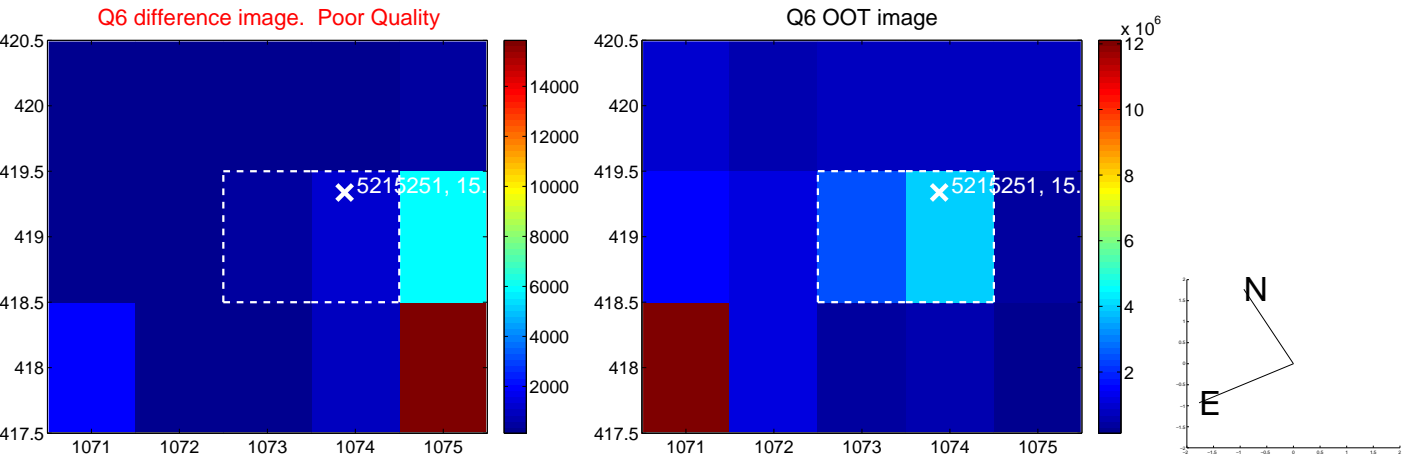
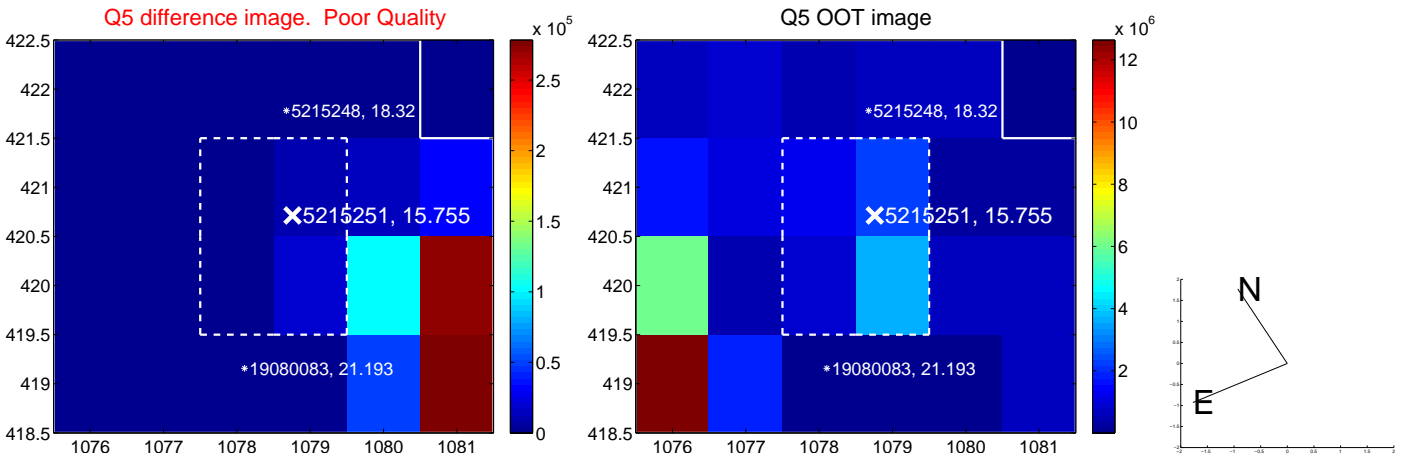


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

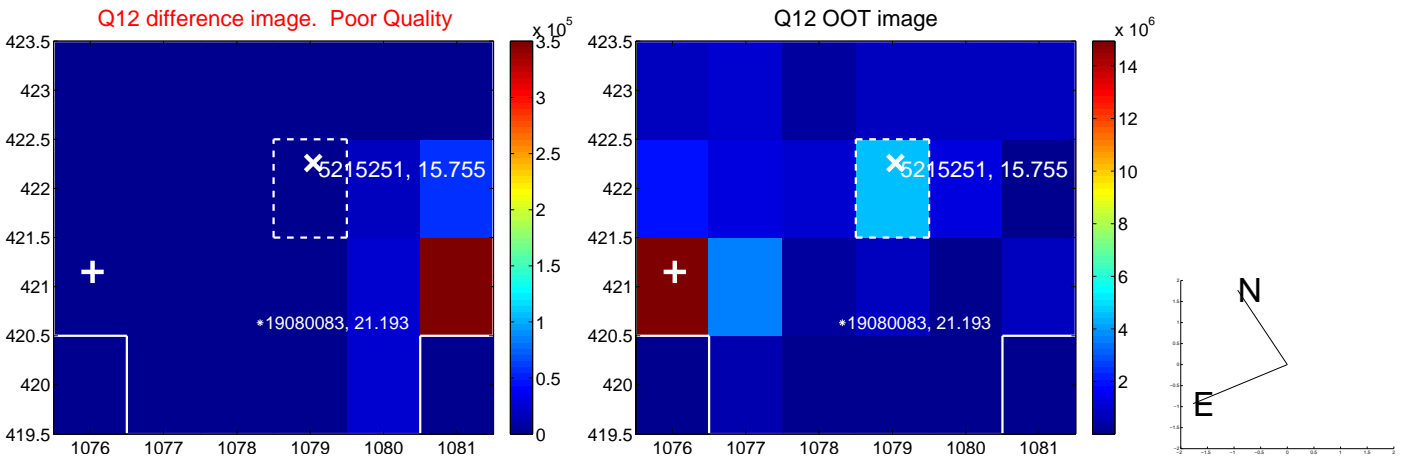
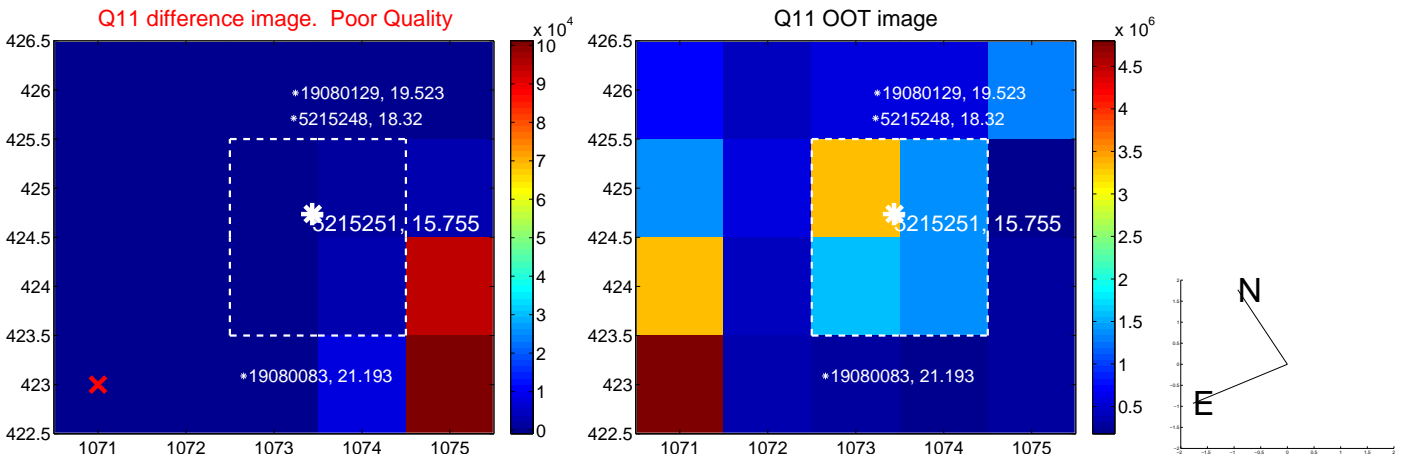
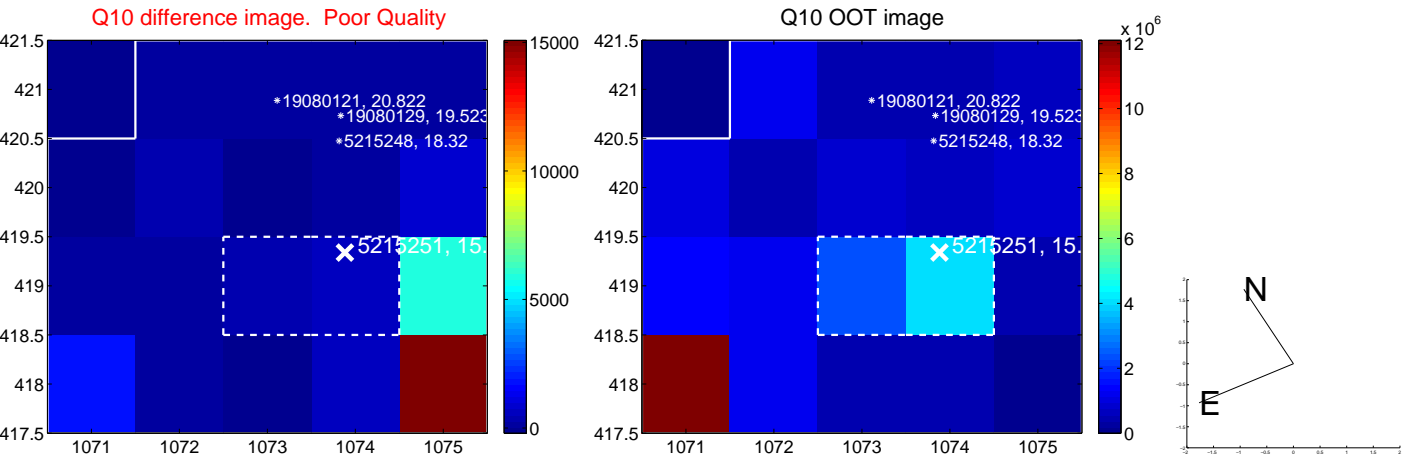
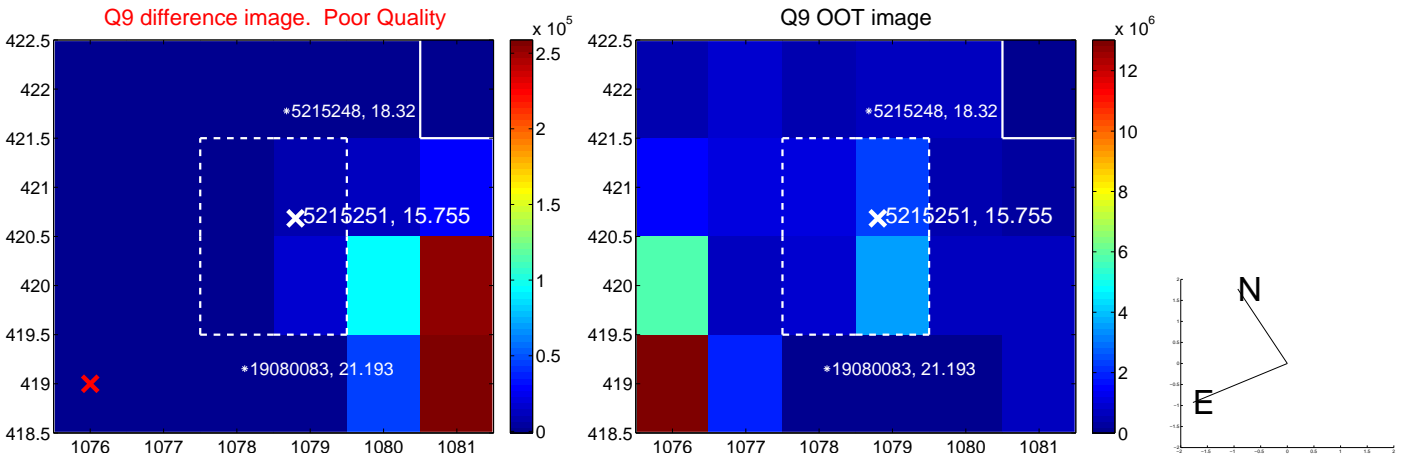
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



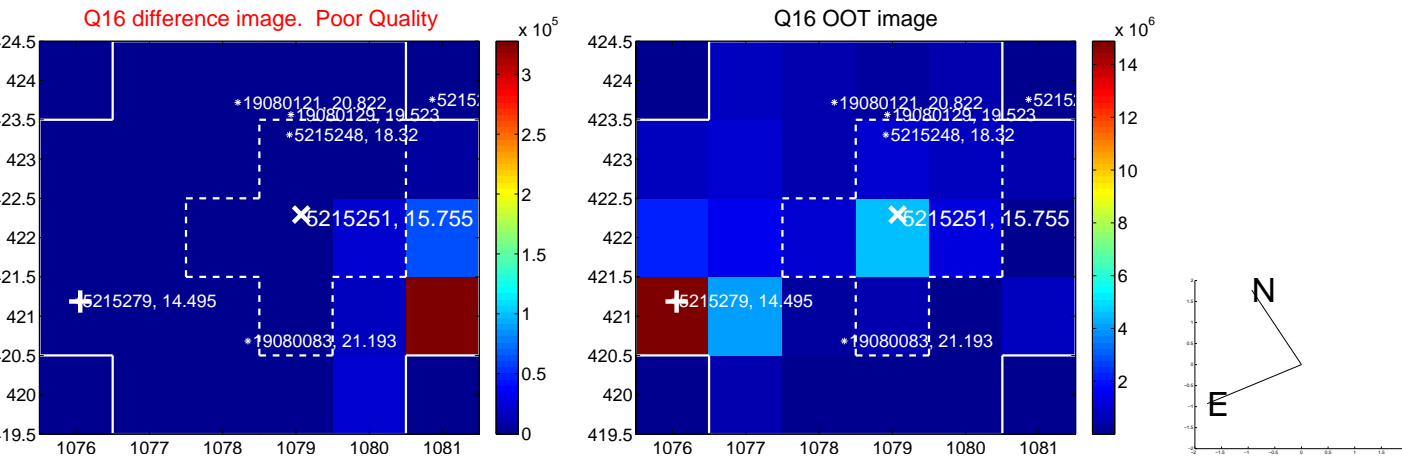
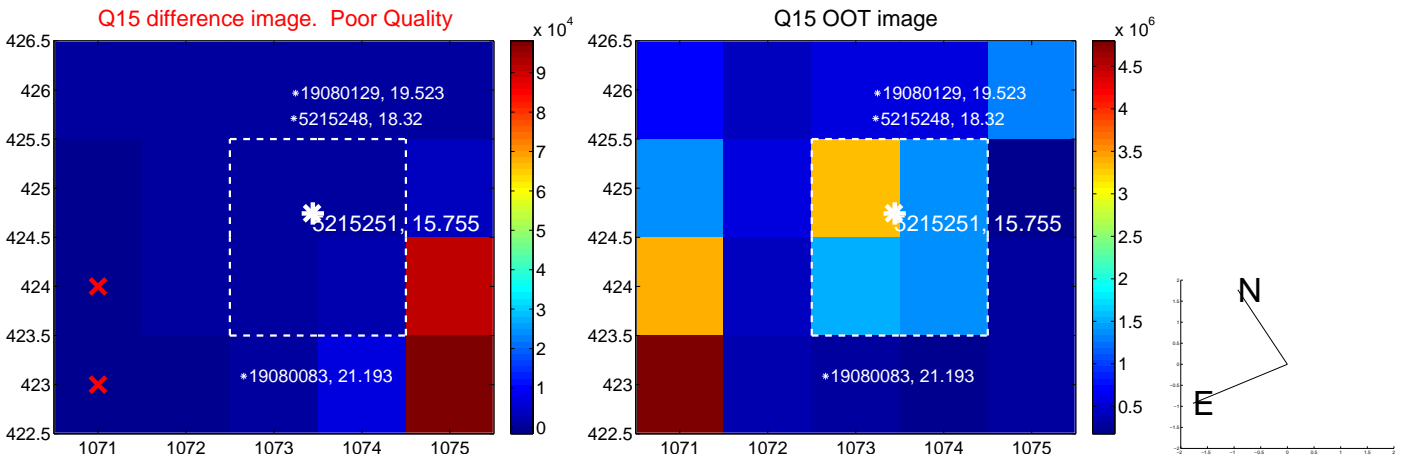
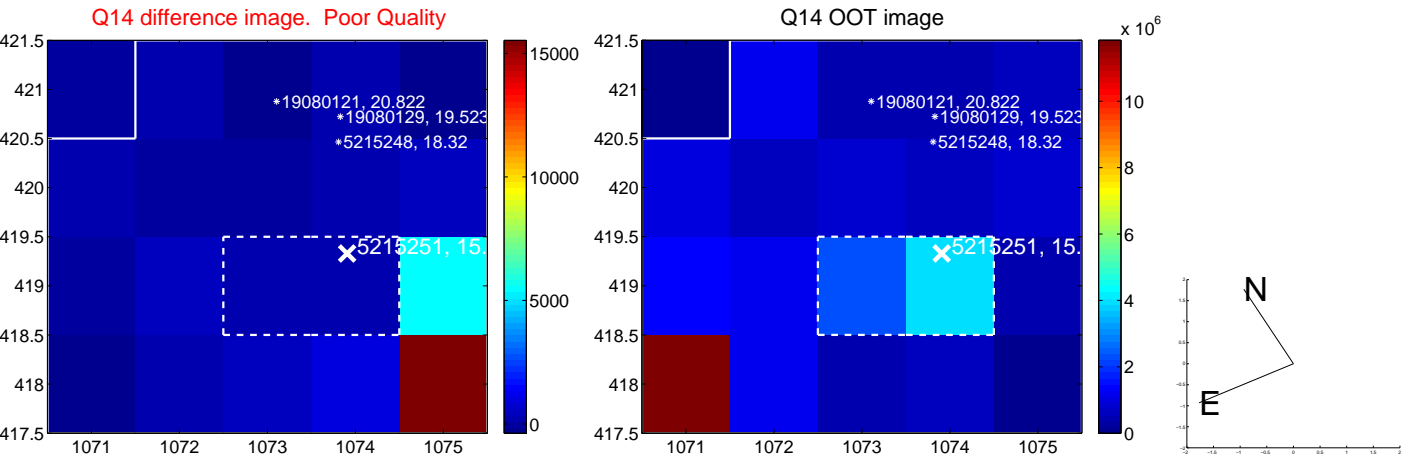
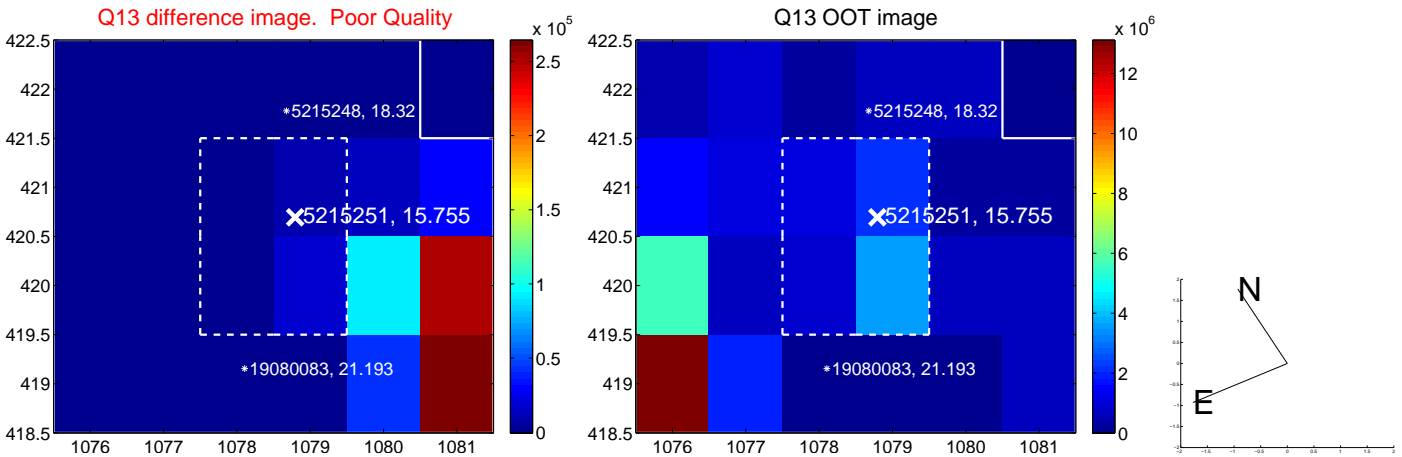
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



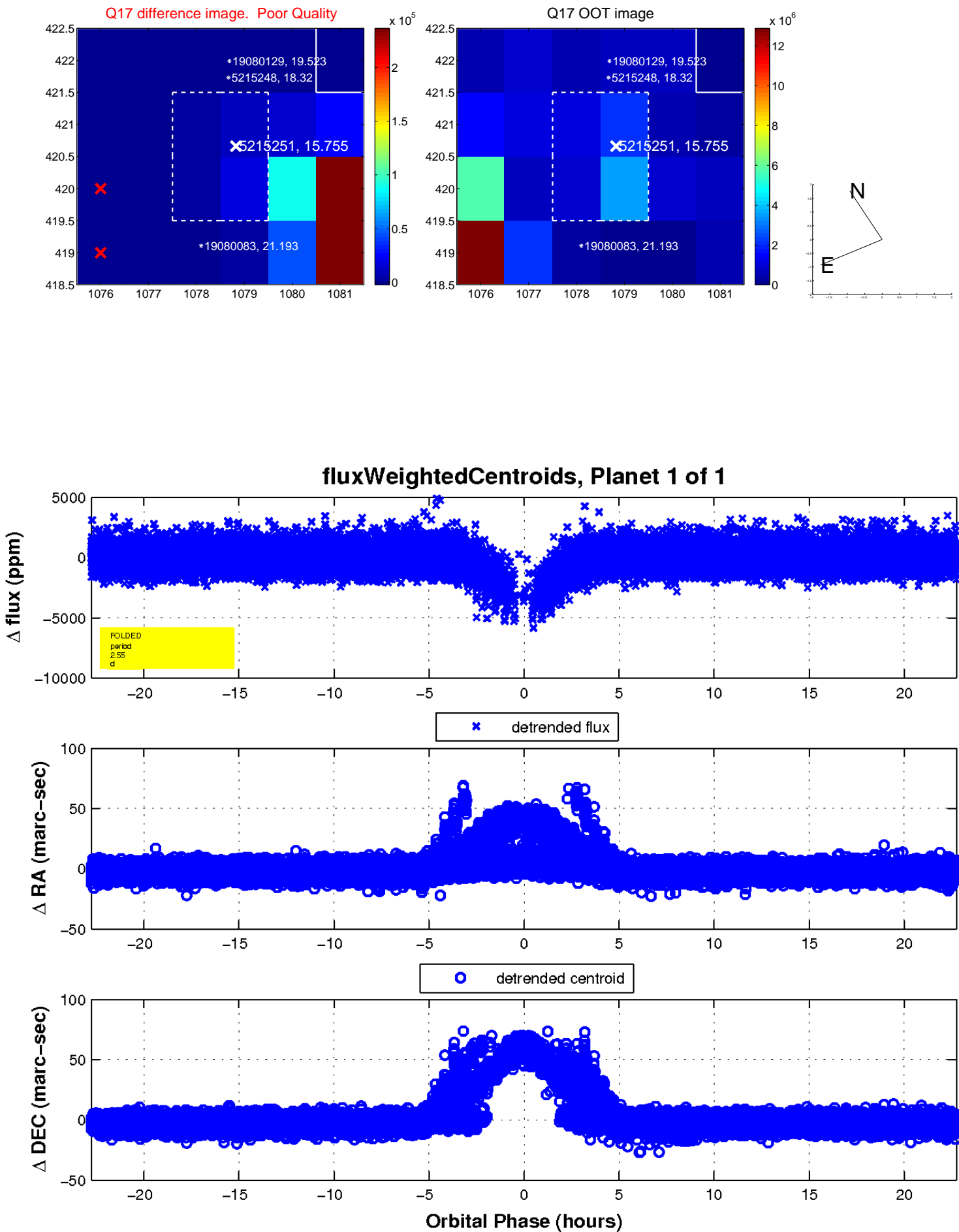
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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.



UKIRT Image

Declination

