

KIC 011751939

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})
011751939-01	OBS	No	3.746953	134.433538	24.9	22.015	8.7	5.7	0.97	5640	0.48	409.53

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011751939-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_KIC_POS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

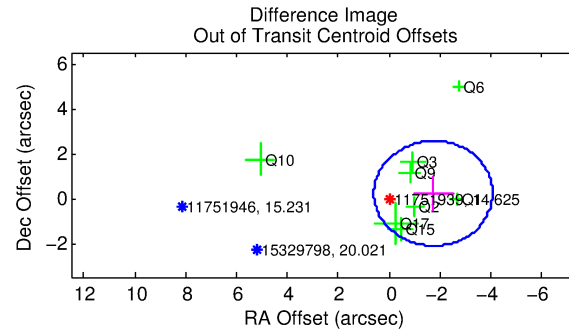
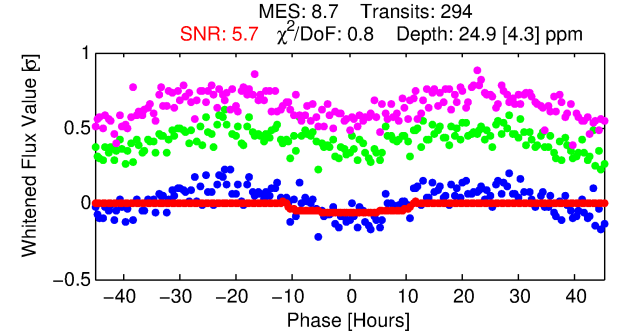
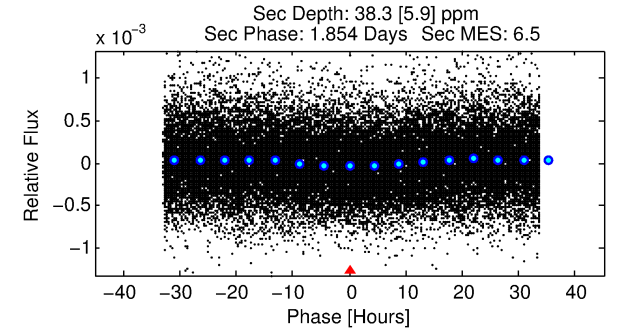
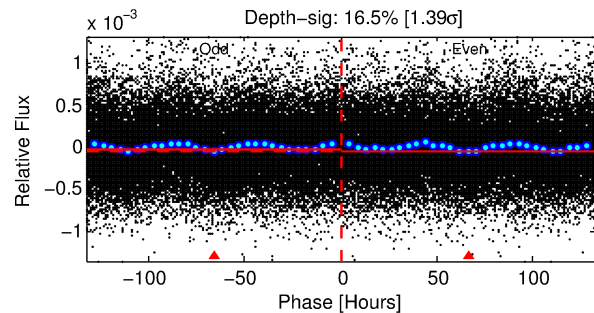
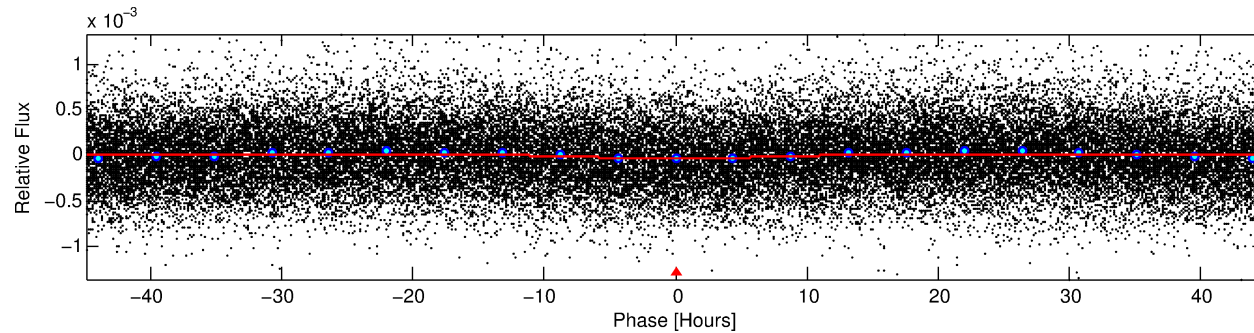
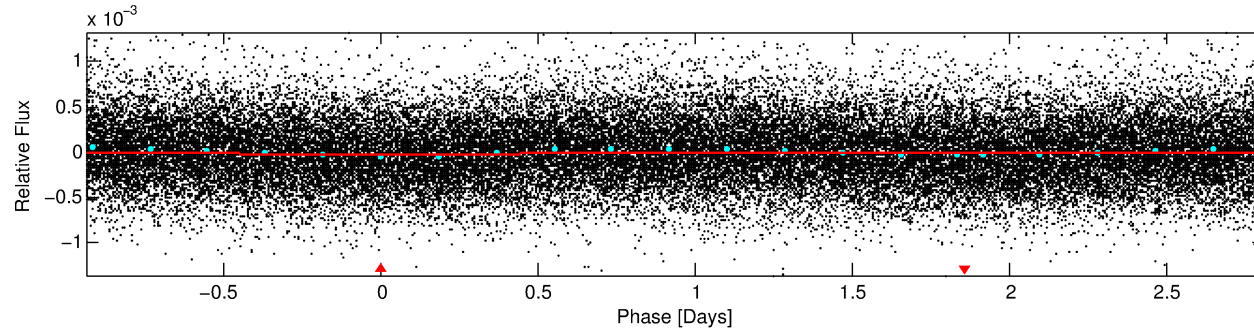
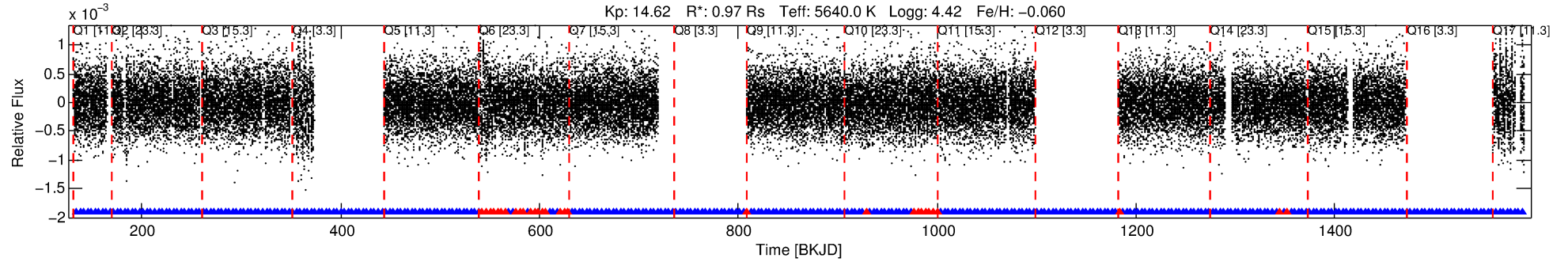
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011751939-01

No Significant Match Found

DV One-Page Summary

KIC: 11751939 Candidate: 1 of 1 Period: 3.747 d



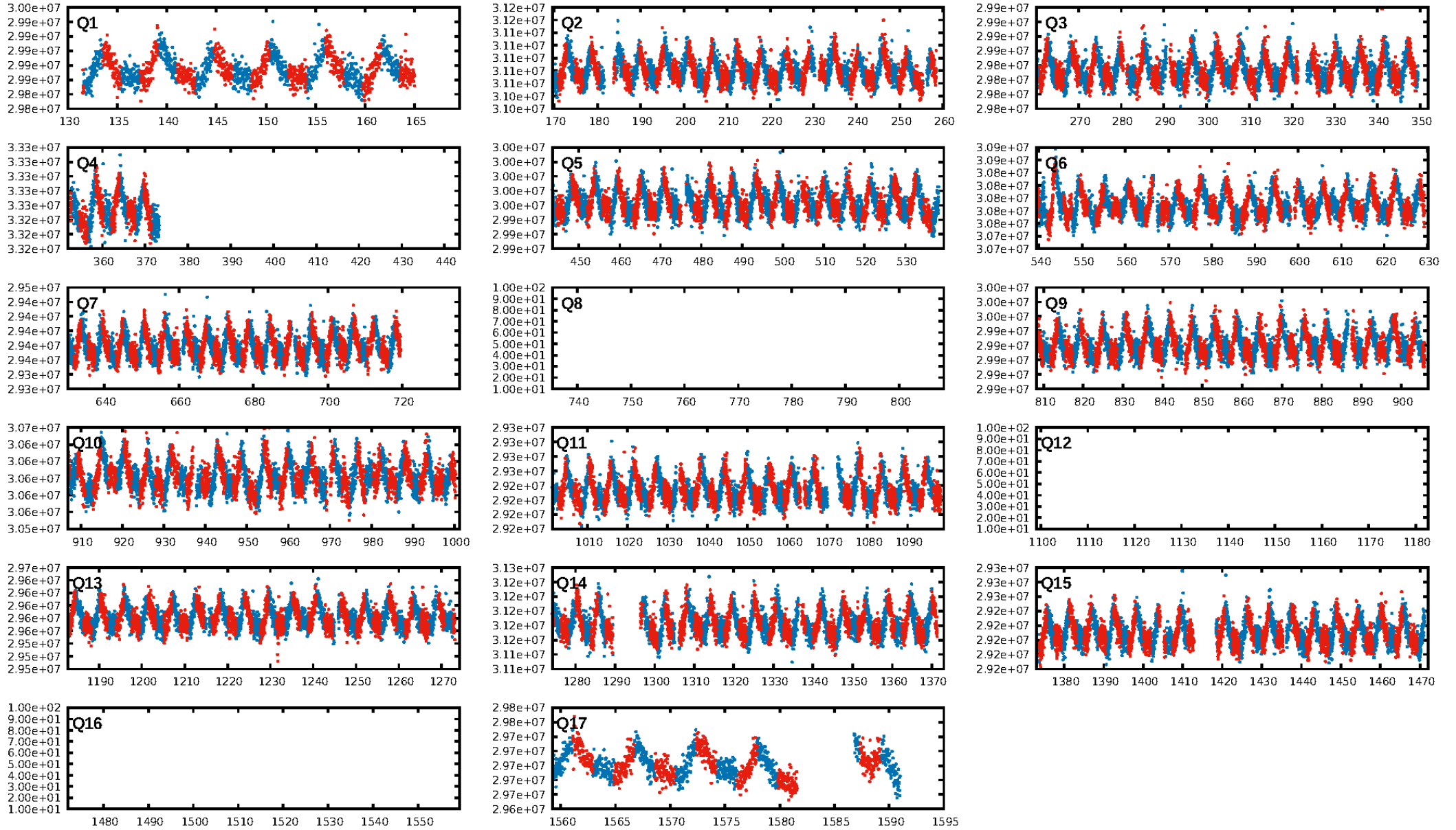
DV Fit Results:

Period = 3.74695 [0.00018] d
Epoch = 134.4335 [0.0318] BKJD
Rp/R* = 0.0045 [0.0087]
a/R* = 1.44 [6.23]
b = 0.02 [547.48]
Seff = 409.53 [145.57]
Teff = 1147 [102] K
Rp = 0.48 [0.93] Re
a = 0.0456 [0.0104] AU
Ag = 192.43 [748.38] [0.26 σ]
Teffp = 6606 [6400] K [0.85 σ]

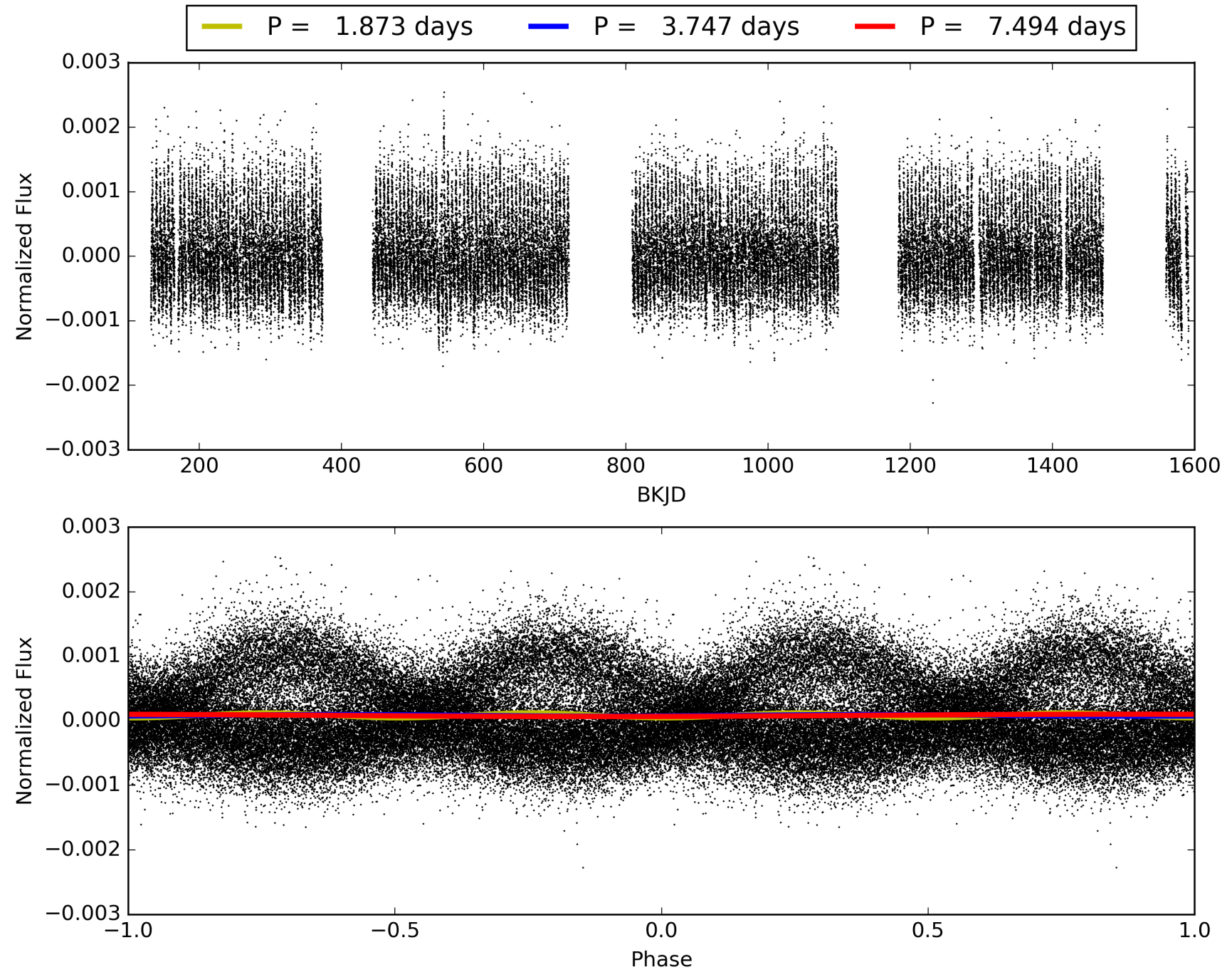
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.65e-16
RollingBand-fgt: 0.89 [243/273]
GhostDiagnostic-chr: 2.38
Centroid-sig: 0.1%
Centroid-so: 3.444 arcsec [1.92 σ]
OotOffset-rm: 1.749 arcsec [2.25 σ]
KicOffset-rm: 1.267 arcsec [1.49 σ]
OotOffset-st: 3/2/0/3 [8]
KicOffset-st: 3/2/0/3 [8]
DiffImageQuality-fgm: 0.50 [4/8]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 011751939-01, PDC Light Curves

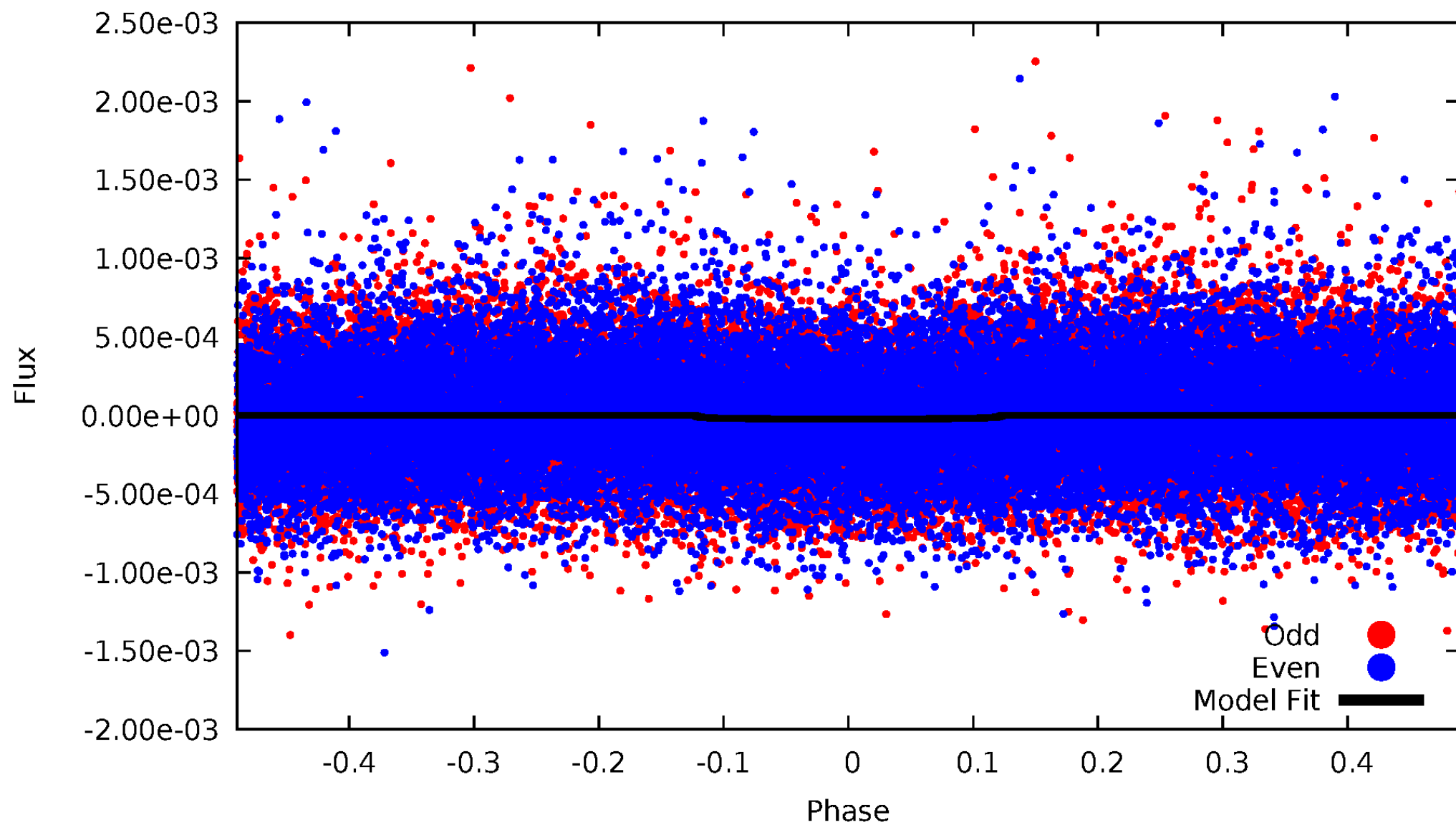


TCE 011751939-01



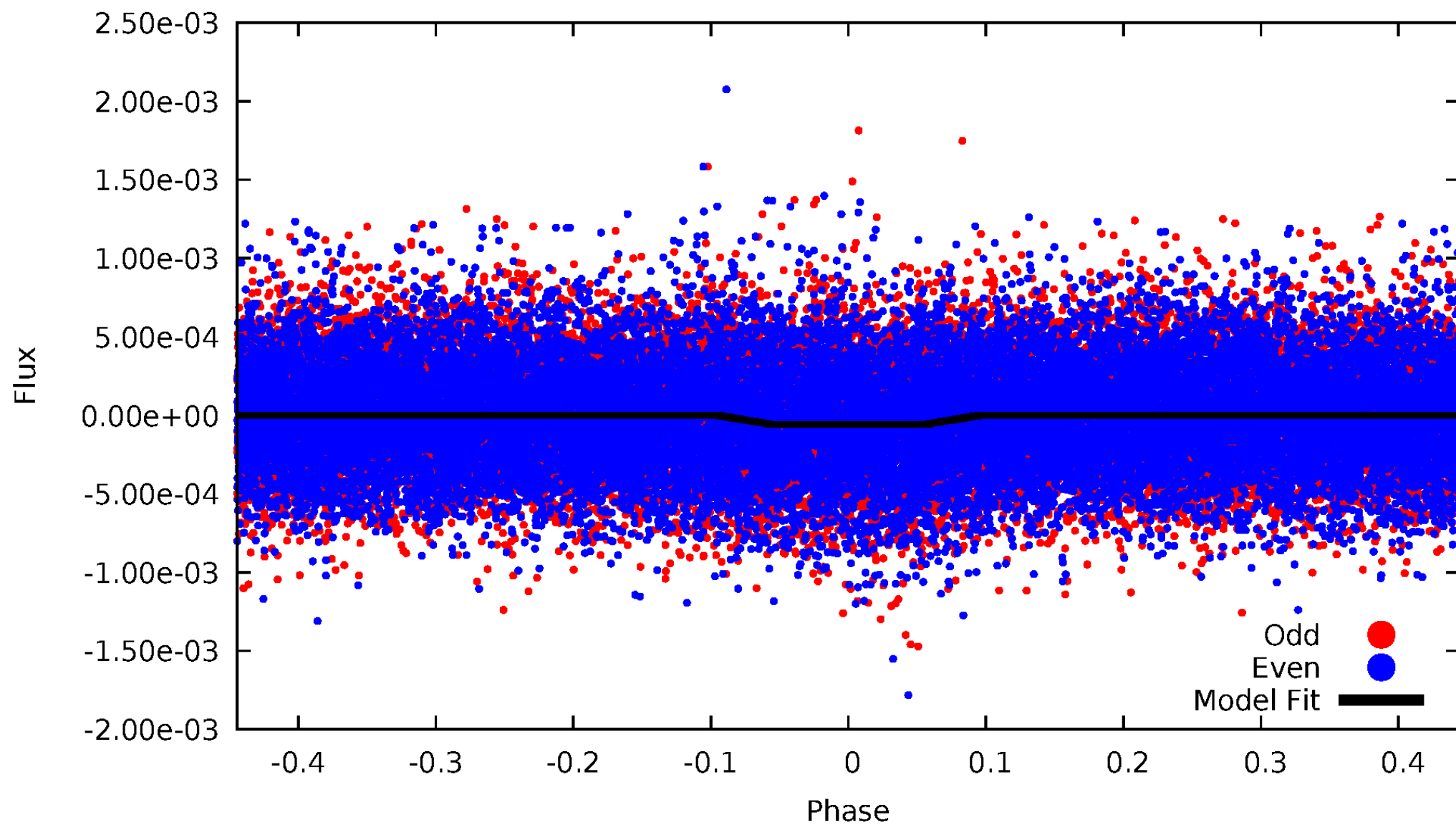
DV Odd/Even

TCE 011751939-01

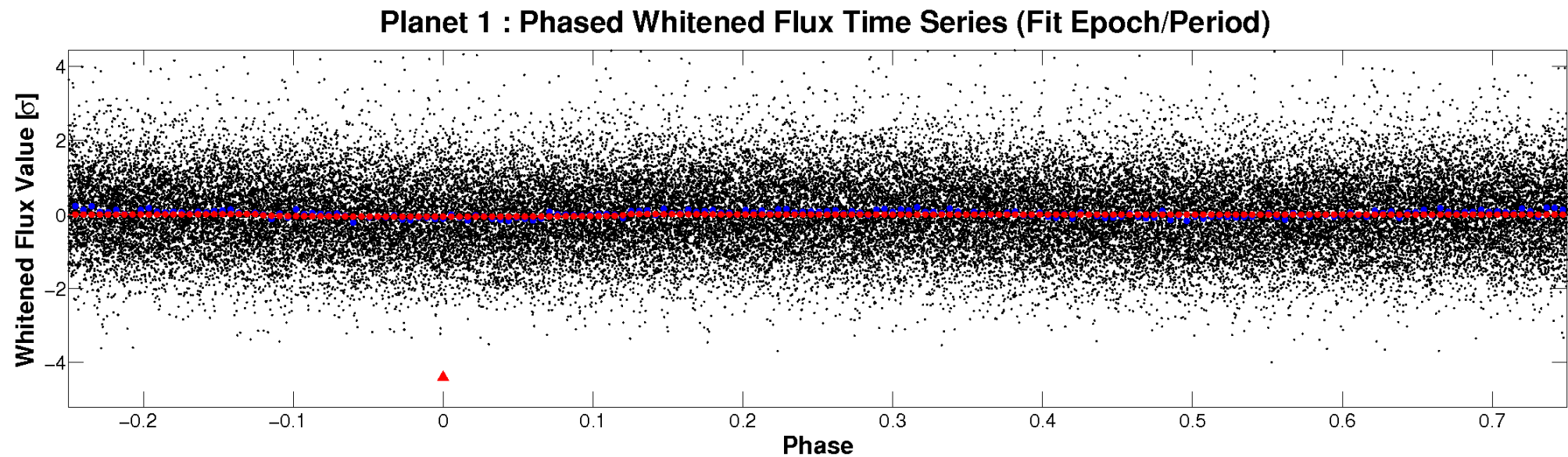
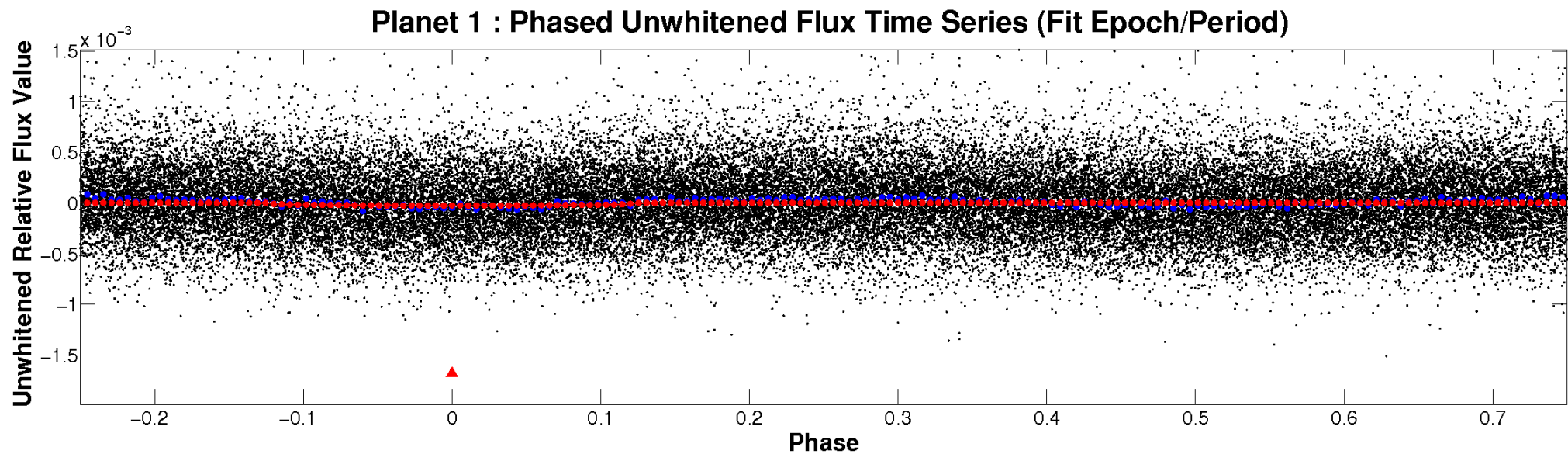


ALT Odd/Even

TCE 011751939-01

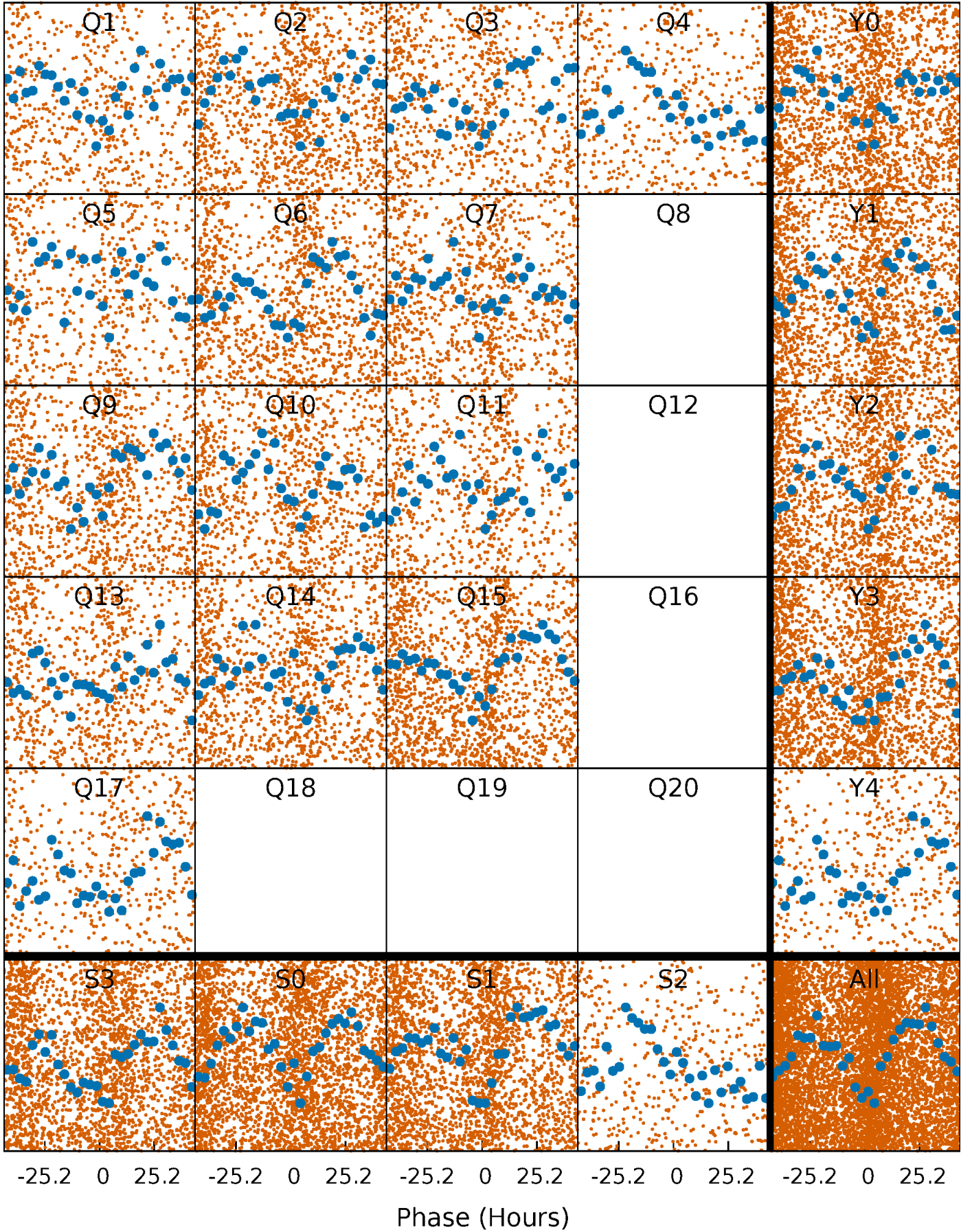


Non-Whitened Vs. Whitened Light Curve



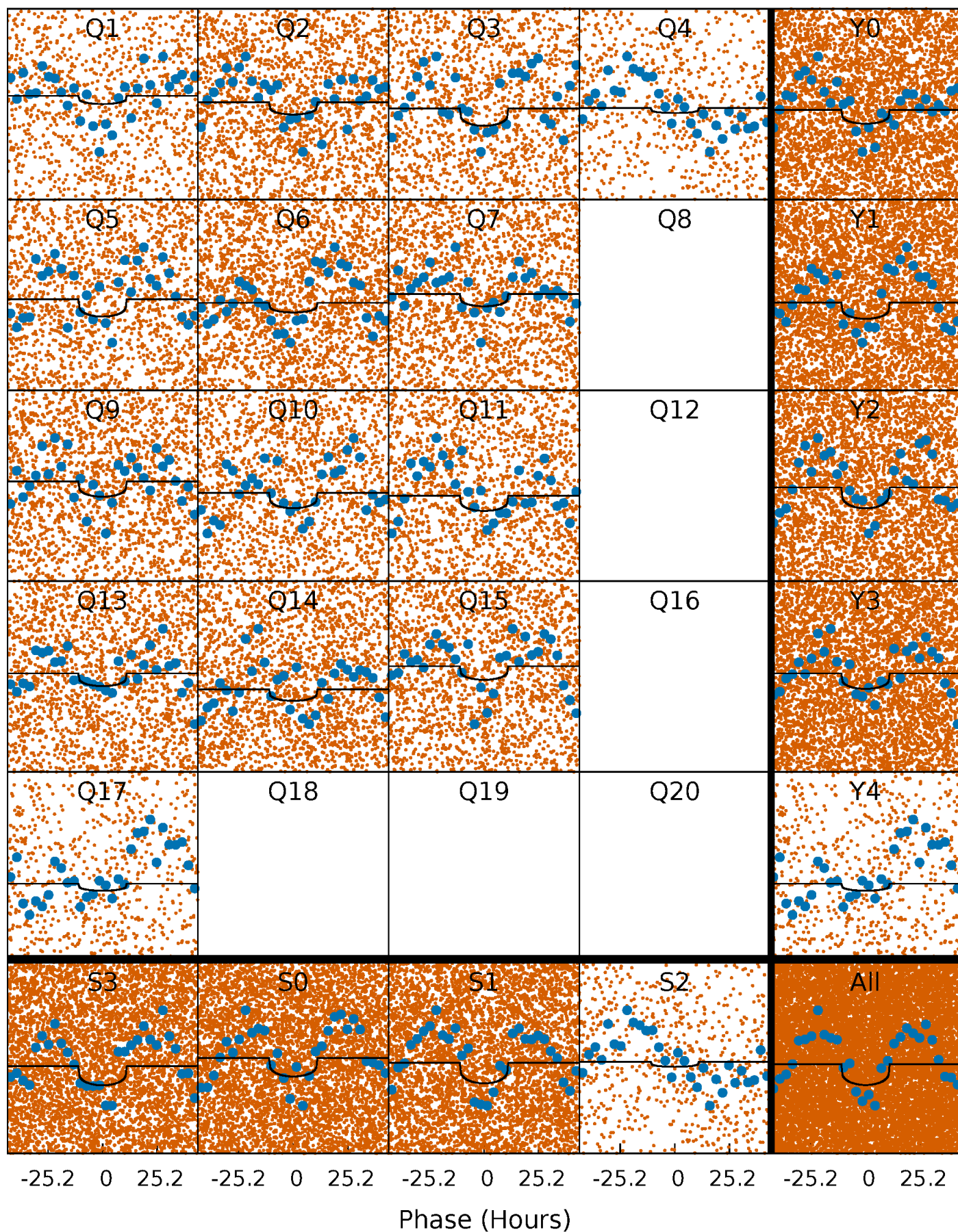
PDC Quarter-Phased Transit Curves

TCE 011751939-01 P= 3.746953 Days $T_0=134.433538$ (BKJD)



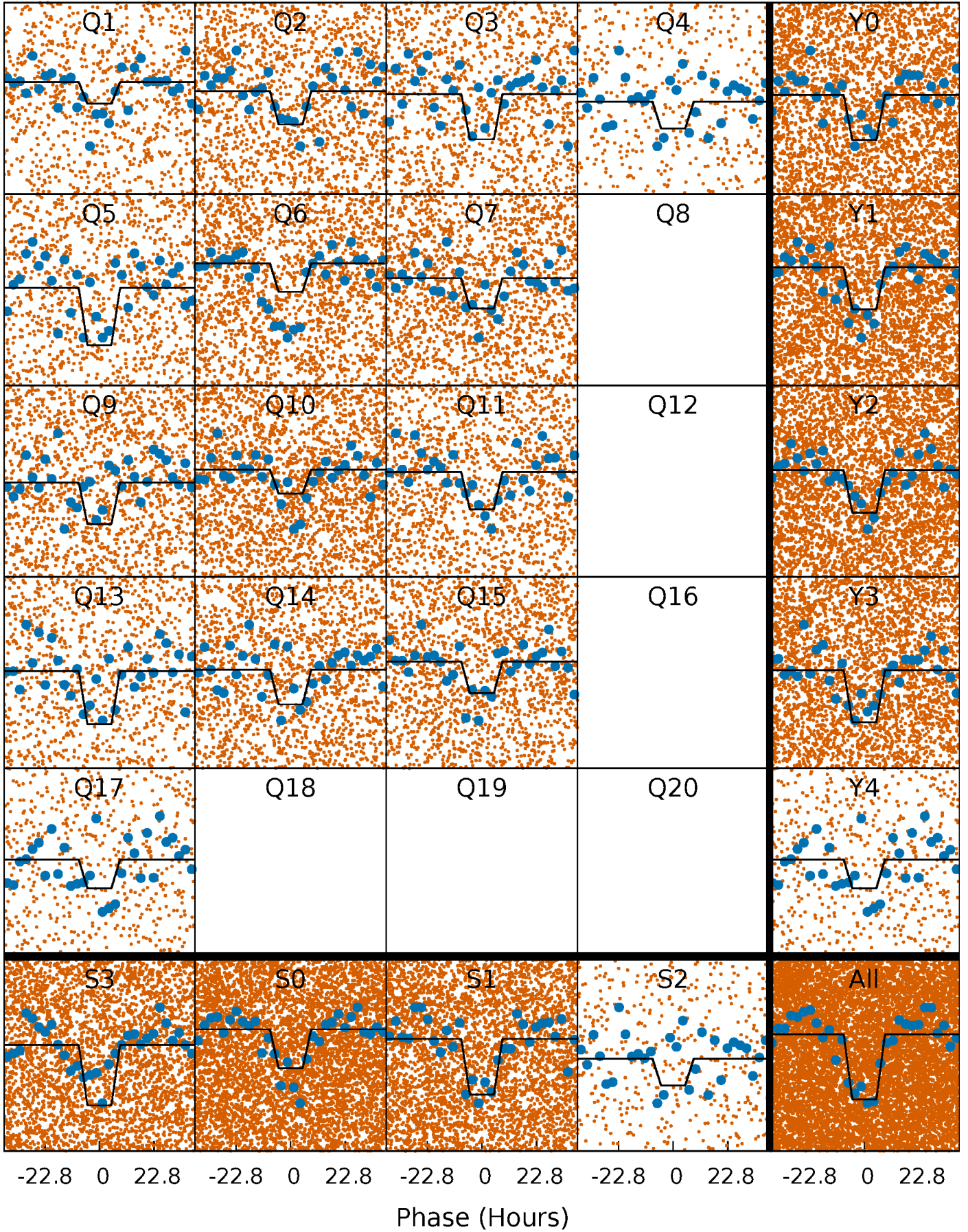
DV Quarter-Phased Transit Curves

TCE 011751939-01 P= 3.746953 Days $T_0=134.433538$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

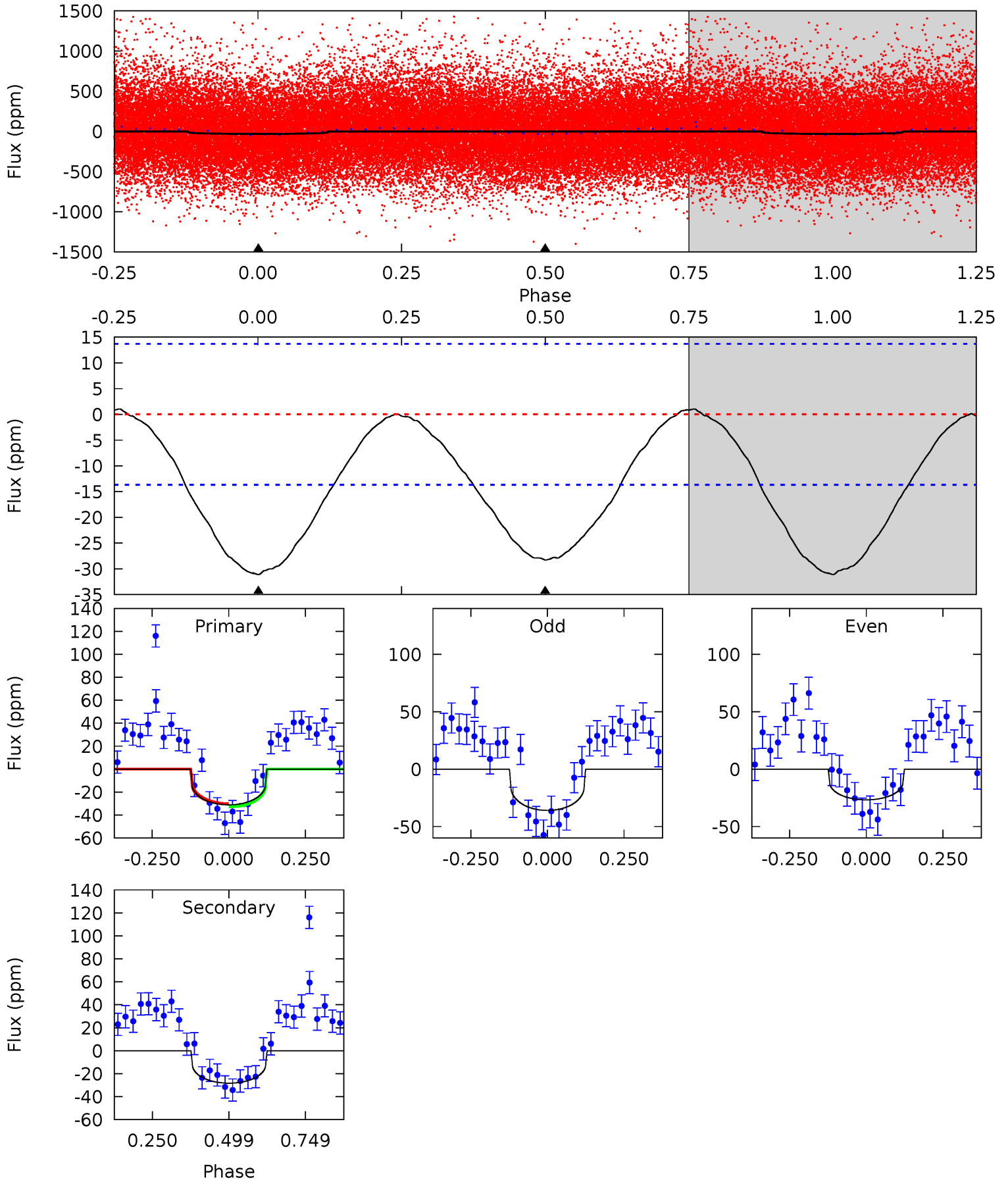
TCE 011751939-01 P= 3.747052 Days $T_0=134.481046$ (BKJD)



DV Model-Shift Uniqueness Test

011751939-01, P = 3.746953 Days, E = 130.686585 Days

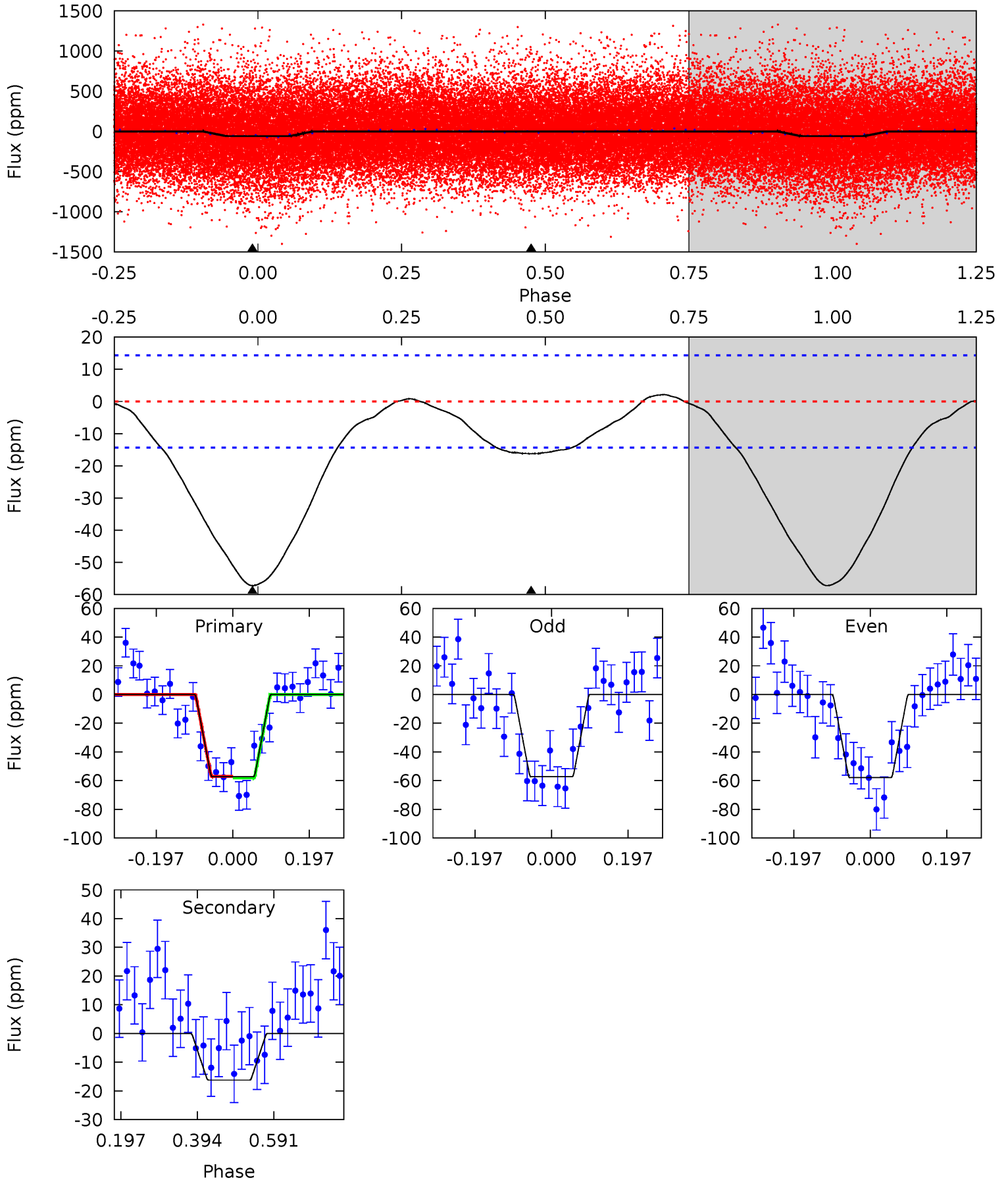
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.92	9.02	0	0	4.37	1.15	0.20	9.92	9.92	9.02	9.02	1.48	1.25	0.03	0.43



Alt Model-Shift Uniqueness Test

011751939-01, P = 3.747052 Days, E = 130.733994 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.7	5.01	0	0	4.42	1.29	0.71	17.7	17.7	5.01	5.01	0.10	1.27	0.04	0.18



Stellar Parameters For KIC 011751939

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5640^{+152}_{-152}	$4.420^{+0.101}_{-0.188}$	$-0.060^{+0.300}_{-0.300}$	$0.970^{+0.258}_{-0.139}$	$0.901^{+0.114}_{-0.076}$	$1.392^{+0.743}_{-0.655}$
	+3%/-3%	+2%/-4%	+500%/-500%	+27%/-14%	+13%/-8%	+53%/-47%
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 011751939-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-28 ± 3	$0.87^{+0.80}_{-0.59}$	1614^{+112}_{-78}	4706^{+3883}_{-1022}	43^{+397}_{-32}
Alt.	-16 ± 3	$1.07^{+0.85}_{-0.67}$	1622^{+109}_{-86}	3914^{+1992}_{-678}	16^{+91}_{-11}

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 $A_{obs} \gg 1.0$

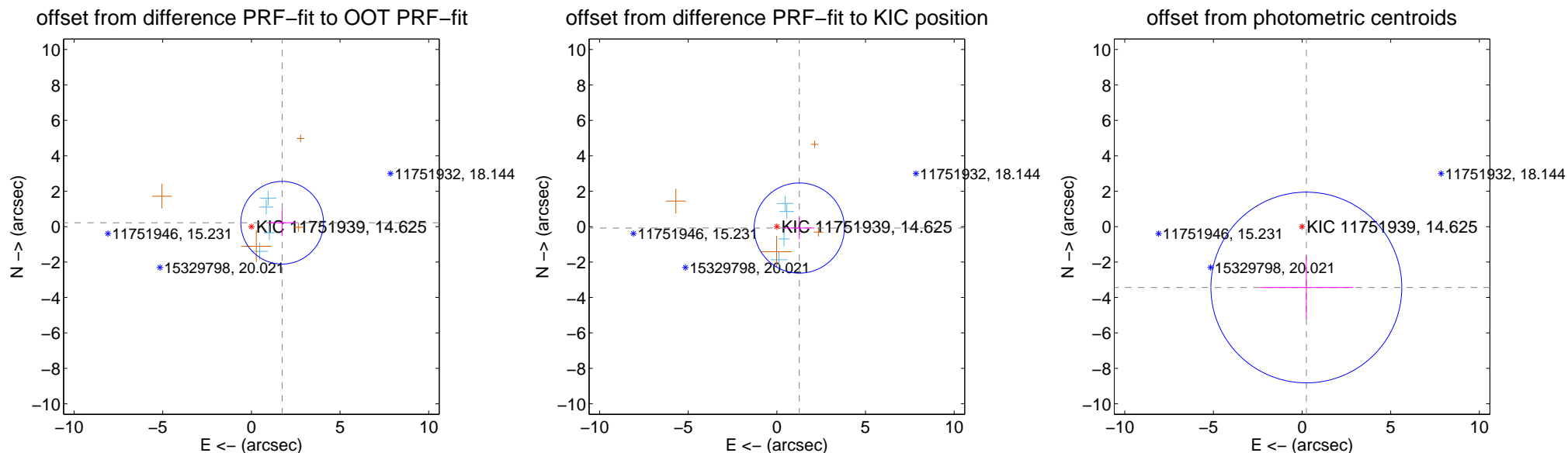
DV Centroid Data

Supplemental centroid analysis for 011751939-01. Kepler magnitude: 14.62. Transit SNR 5.65

There are 4 quarters with good PRF difference image offsets

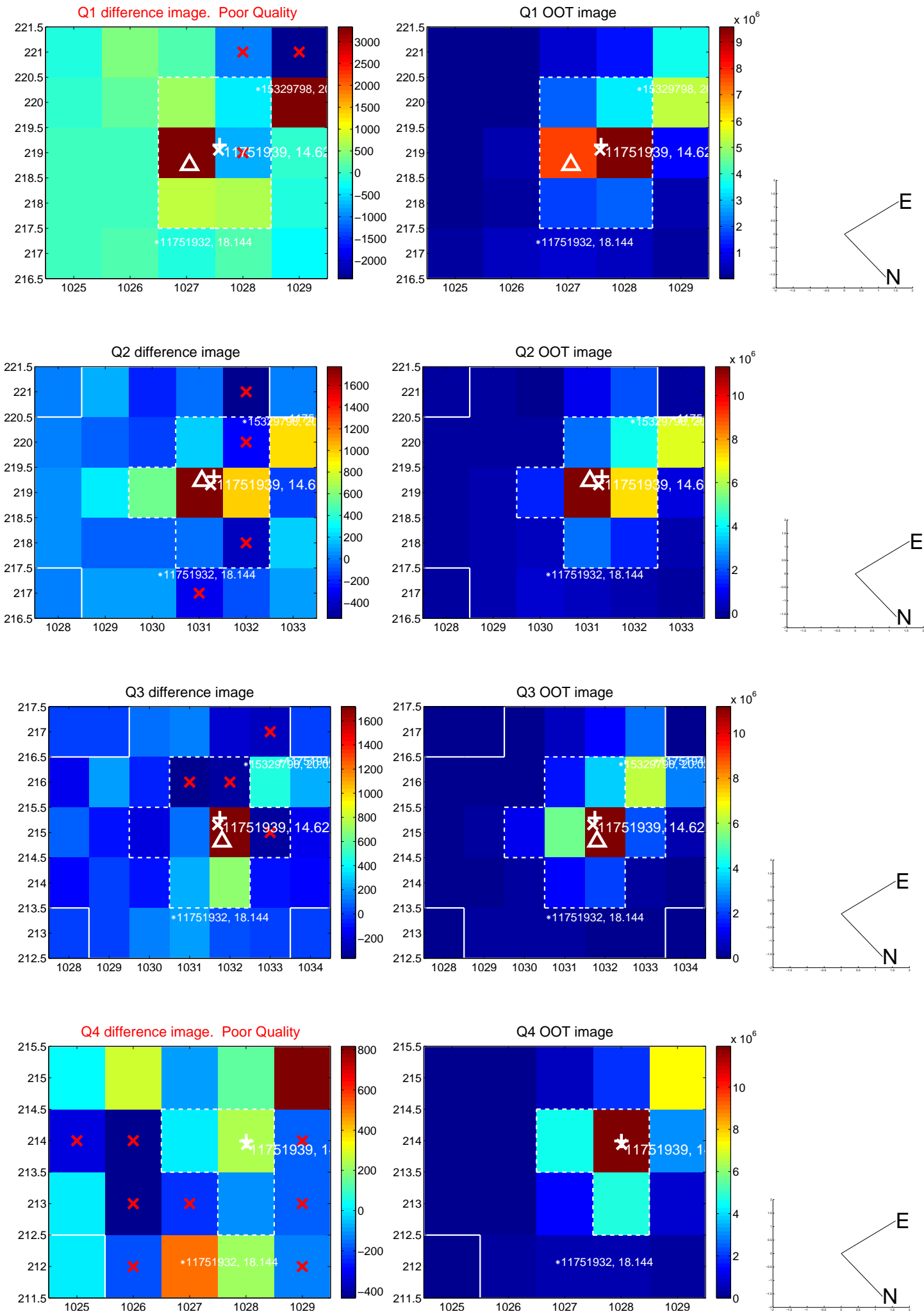
The direct PRF centroid is offset from the target star catalog position by about 0.42 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.749 ± 0.777	2.25	-1.735 ± 0.765	0.220 ± 0.745
PRF-fit source offset from KIC position	1.267 ± 0.848	1.49	-1.265 ± 0.849	-0.079 ± 0.631
photometric centroid source offset	3.44 ± 1.79	1.92	-0.24 ± 2.63	-3.44 ± 1.79

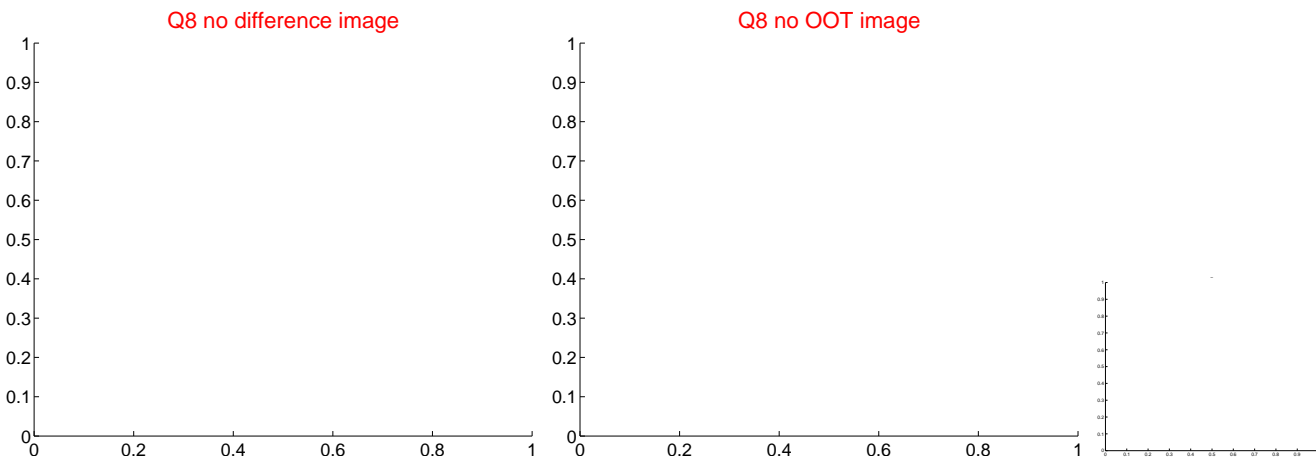
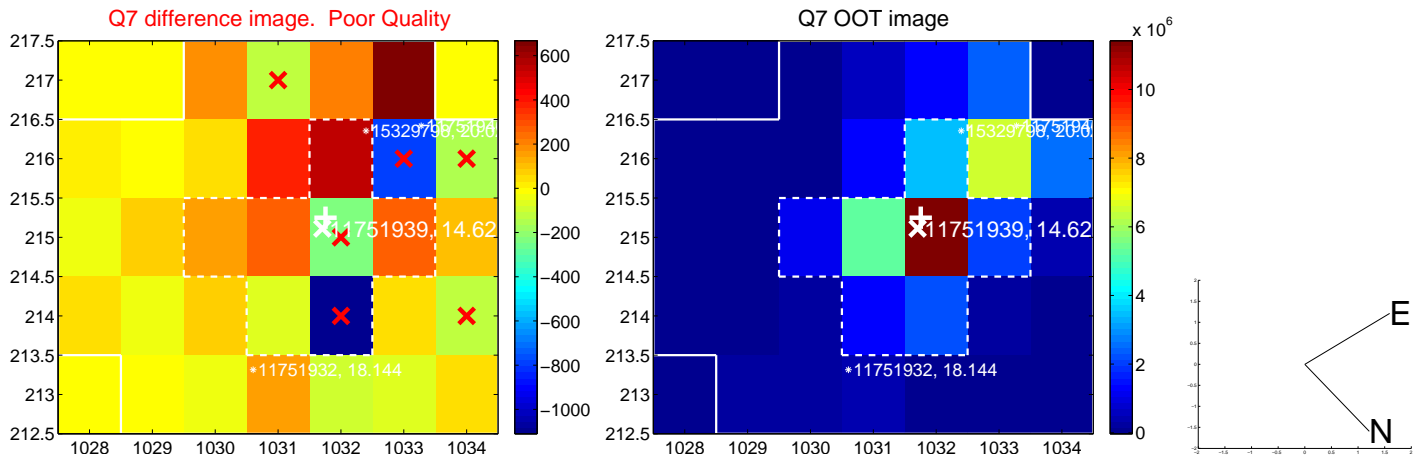
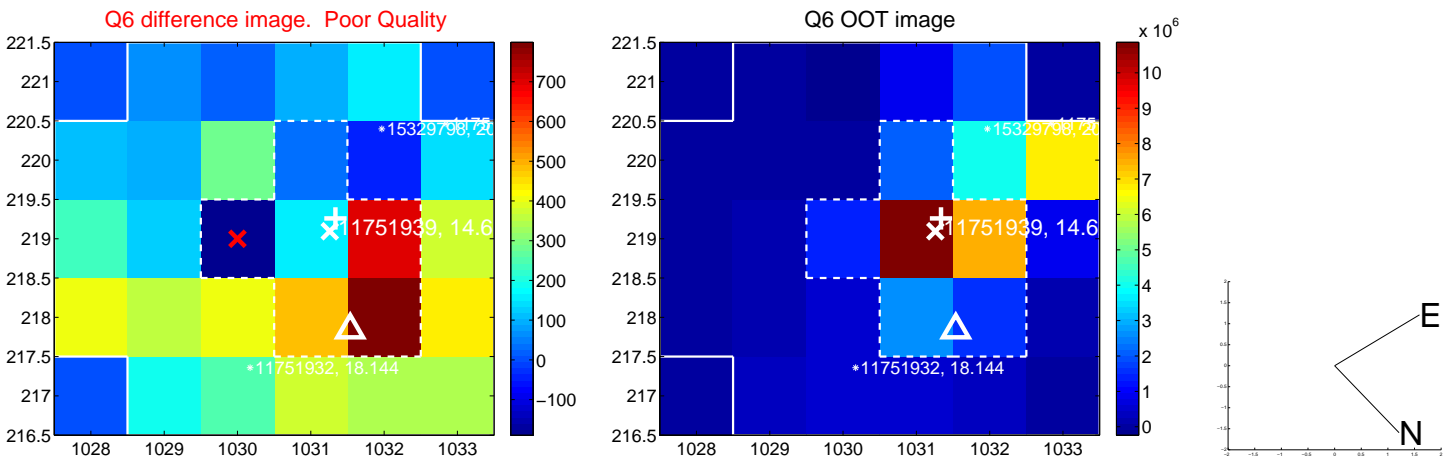
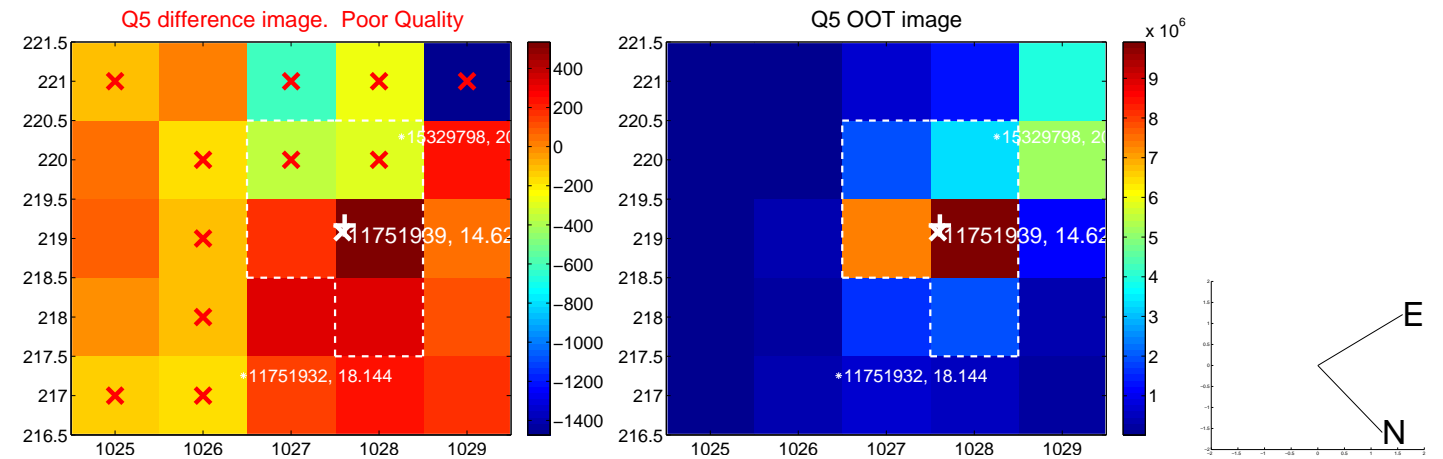


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

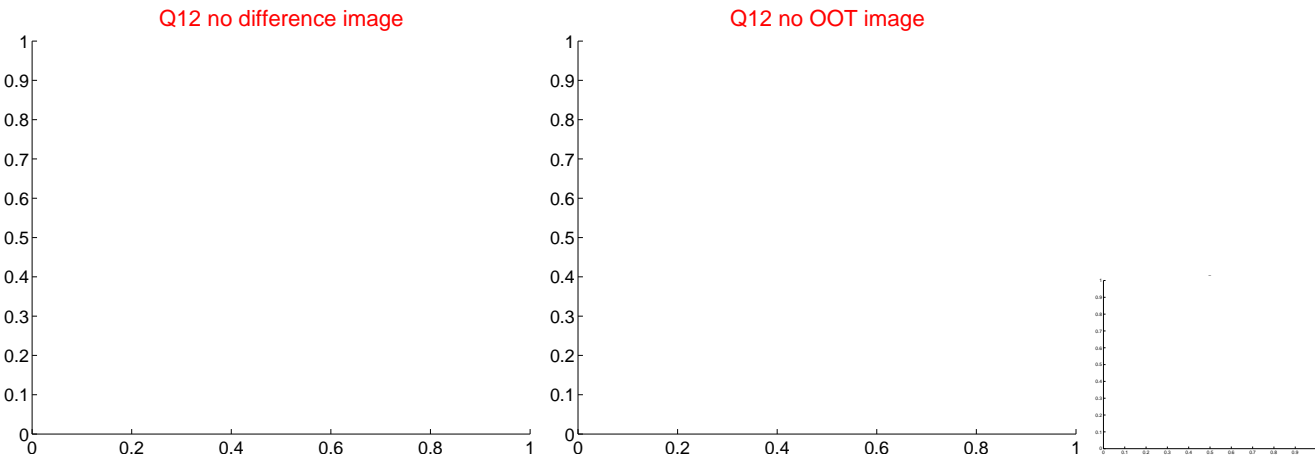
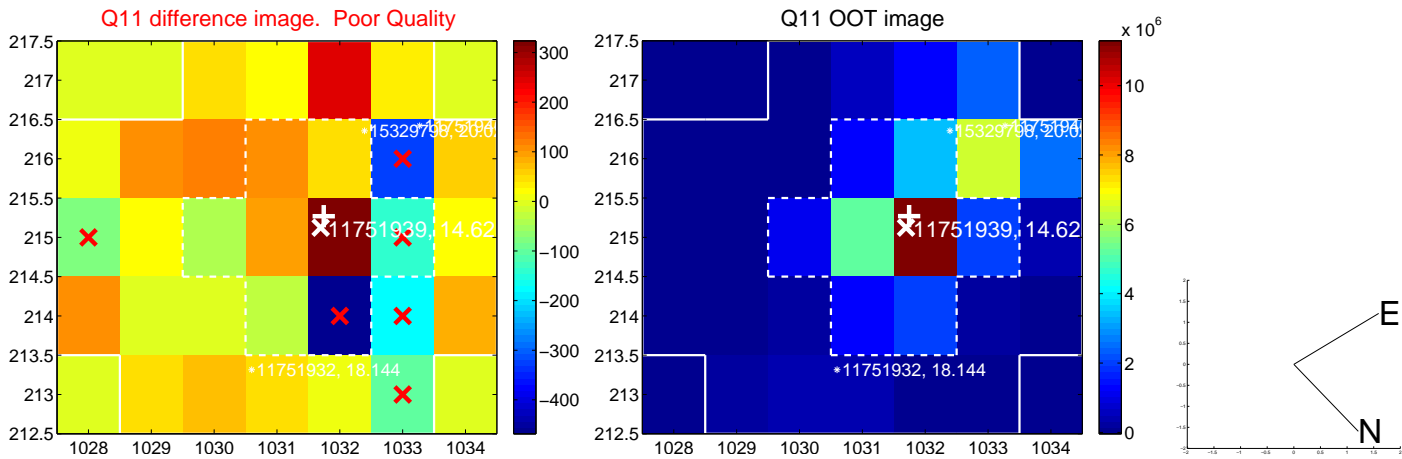
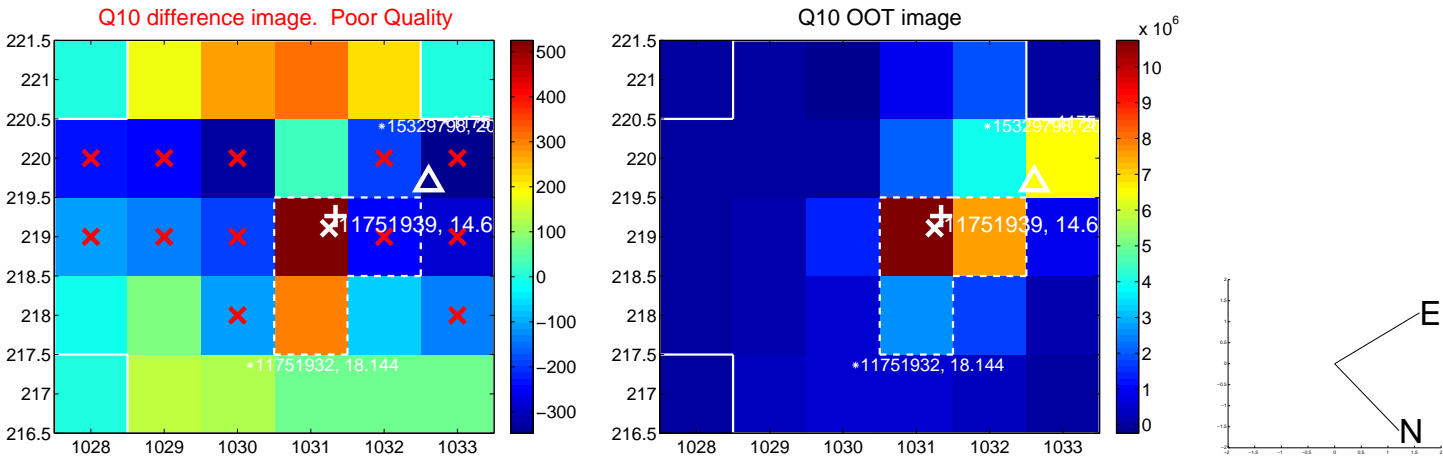
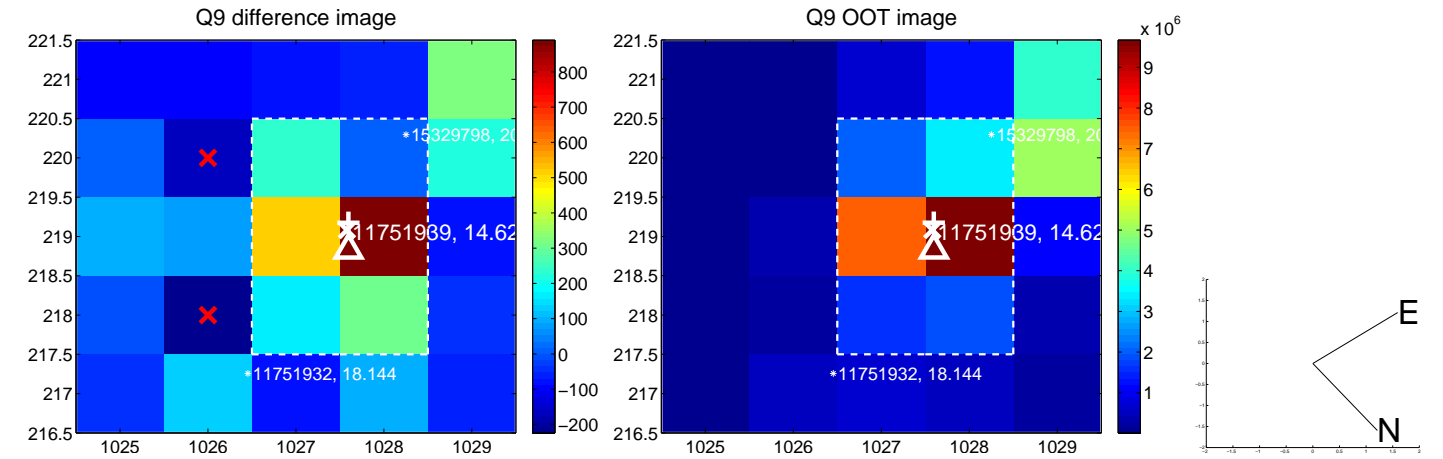
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



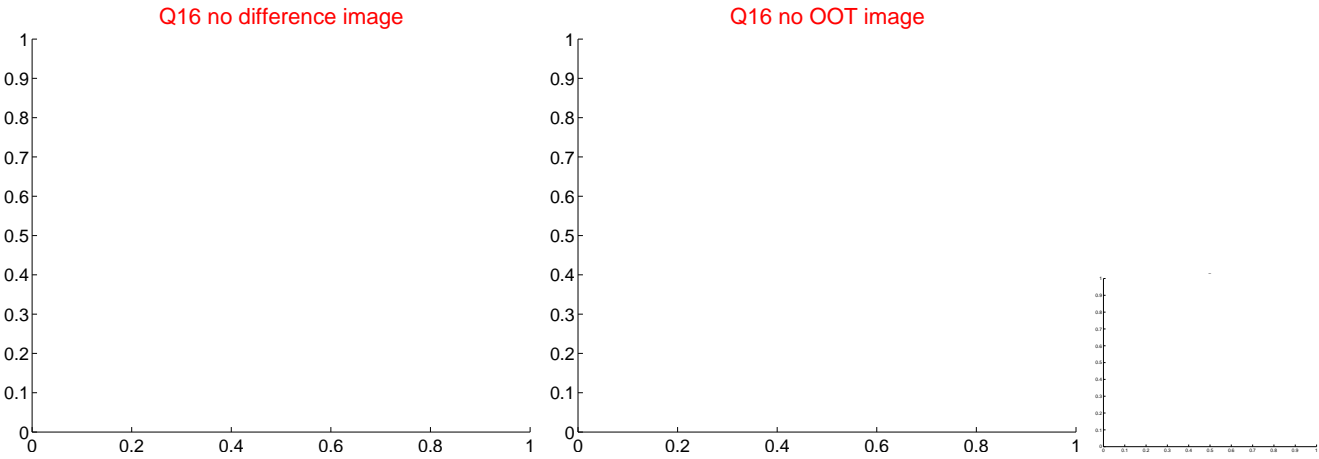
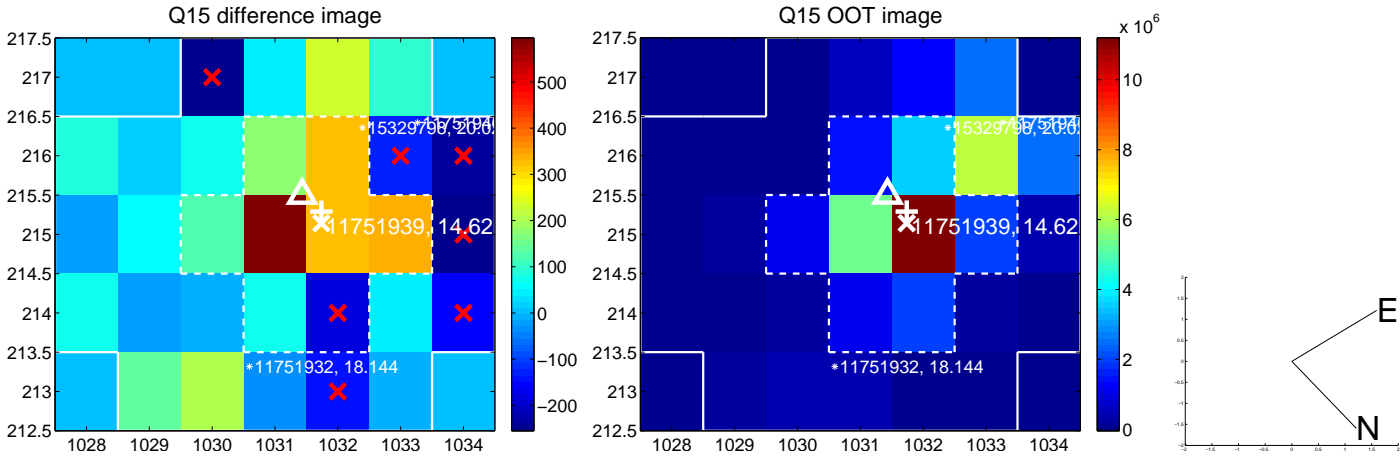
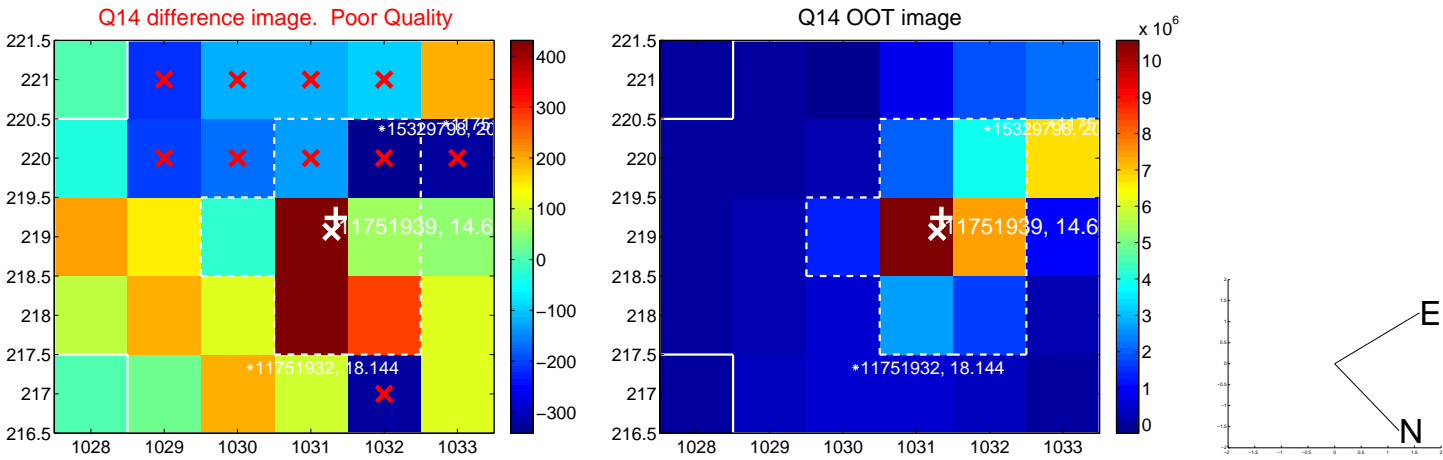
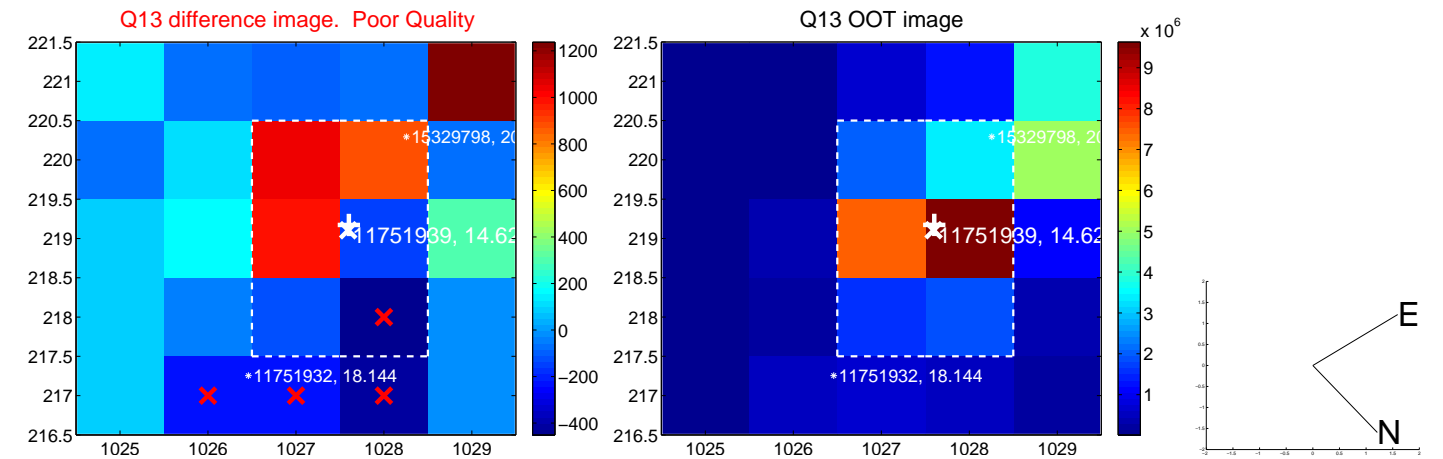
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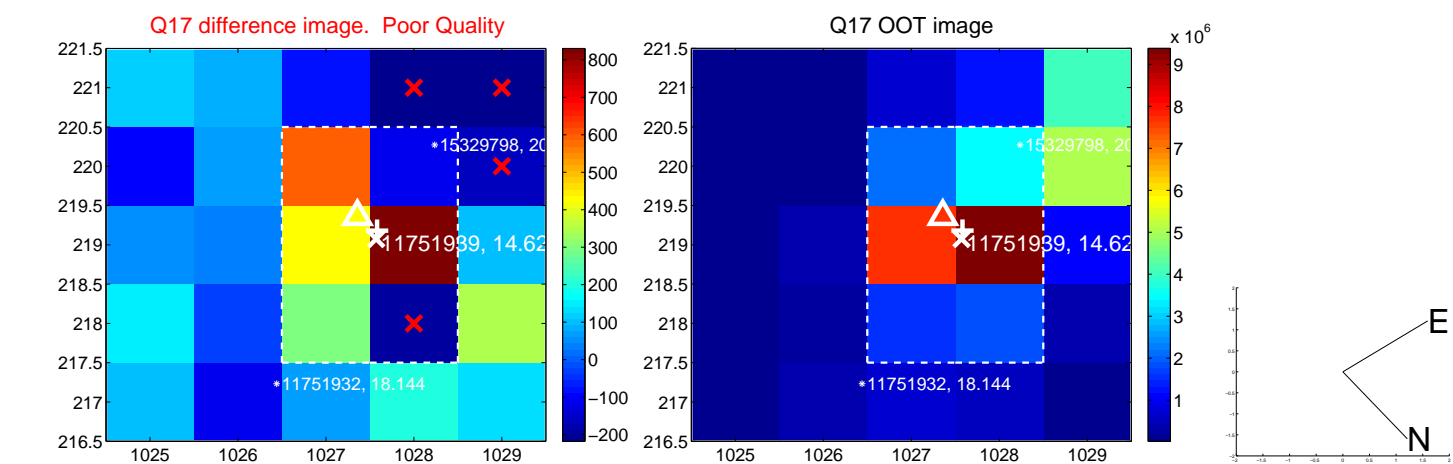
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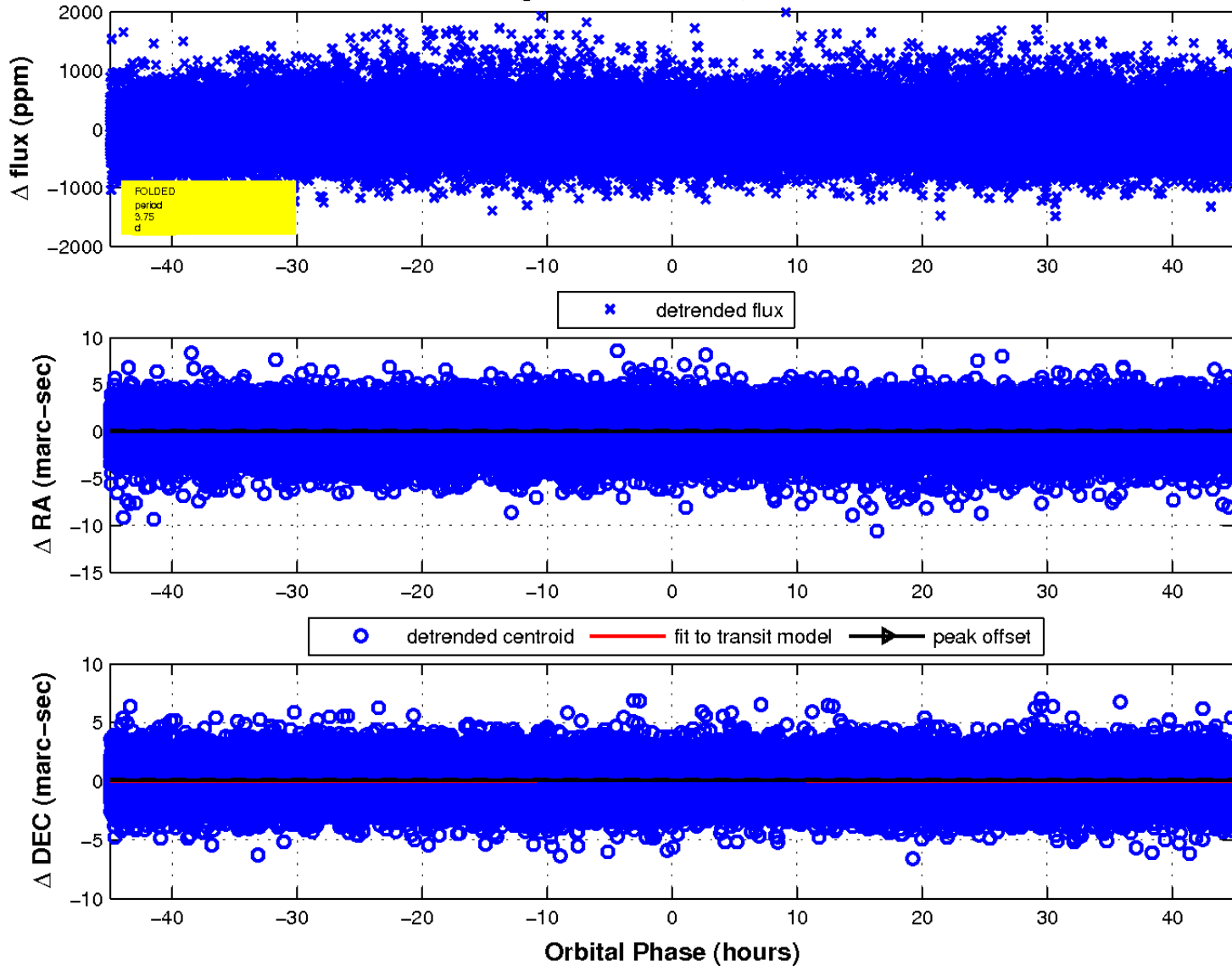
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

