



BAV-Results of observations – transits of exoplanets in 2021

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Abstracts: 70 results of the observation of 57 transit planets are listed, which were obtained by observers of the BAV in 2021.

All results were obtained in 2021 by photometry of CCD images and the subsequent evaluation of the light curves obtained using the ETD algorithm [1]. All times of mid transit are heliocentric UTC, expressed as Heliocentric Julian Date (HJD). The transit duration is given in minutes and the transit depth in mag. The mean errors are tabulated in columns “+/-”.

In those cases in which no values were given for the transit depth or transit duration, these values had to be assumed as given in the evaluation process

Most results listed here have already been sent to the ETD and the project ExoClock [2].

	HJD 24..	+/-	duration	+/-	depth	+/-	Filter	Obs	Rem
GJ-436 b	59280,39365	0,00058	63,5	2,4	0,0081	0,0005	R	RAT	
HAT-P-1 b	59512,43689	0,00061	167,8	2,4	0,0147	0,0004	V	WNZ_5	
HAT-P-5 b	59534,29810	0,00142	188,6	4,2	0,0196	0,0017	Clear	RAT	
HAT-P-6 b	59495,37397	0,00066	211,7	2,2	0,0092	0,0003	R	RAT	
HAT-P-9 b	59270,42539	0,00126	200,0	4,4	0,0155	0,0012	Clear	RAT	
HAT-P-9 b	59274,34897	0,00096	197,9	3,0	0,0126	0,0006	Clear	RAT	
HAT-P-11 b	59459,47614	0,00067	133,0	2,1	0,0046	0,0002	V	RAT	
HAT-P-16 b	59541,31716	0,00044	183,1	1,5	0,0150	0,0003	R	RAT	
HAT-P-22 b	59276,37119	0,00051	172,3	1,7	0,0147	0,0004	I	RAT	
HAT-P-33 b	59266,40069	0,00085	263,0	2,7	0,0138	0,0004	Clear	RAT	
HAT-P-38 b	59496,49602	0,00059	182,6	2,0	0,0118	0,0003	Clear	RAT	
HAT-P-44 b	59275,53075	0,00068	183,9	2,3	0,0261	0,0008	Clear	RAT	
HAT-P-53 b	59511,41334	0,00115	169,7	3,9	0,0178	0,0009	Clear	RAT	
K2-121 b	59259,34182	0,00059	123,7	2,2	0,0146	0,0009	Clear	RAT	1)
Kelt-1 b	59570,29811	0,00053	166,4	1,6	0,0073	0,0002	R	RAT	
Kepler-6 b	59528,34063	0,00128	187,2	4,3	0,0108	0,0006	Clear	RAT	
Kepler-6 b	59460,42020	0,00089	209,1	2,9	0,0113	0,0015	Clear	RAT	
Kepler-41 b	59462,48340	0,00096	139,5	3,4	0,0183	0,0010	Clear	RAT	KOI-196.01 b
Kepler-43b	59365,47012	0,00268	169,7	8,4	0,0063	0,0008	Clear	RAT	KOI-135.01 b
Kepler-76 b	59417,48146	0,00227			0,0083	0,0013	Clear	RAT	KOI-1658.01; 1)
Kepler-76 b	59465,38384	0,00202	79,1	10,9	0,0052	0,0007	Clear	RAT	KOI-1658.01; 1)
Kepler-412 b	59383,46598	0,00111	120,2	4,6	0,0135	0,0008	Clear	RAT	KOI-202 b;
Kepler-412 b	59414,44090	0,00171	107,9	6,4	0,0093	0,0009	Clear	RAT	KOI-202 b;
Kepler-854 b	59466,42067	0,00120	212,9	4,4	0,0133	0,0005	Clear	RAT	KOI-1450.01 b; 1)

	HJD 24..	+/-	duration	+/-	depth	+/-	Filter	Obs	Rem
KOI-1546 b	59379,50640	0,00120	83,5	5,2	0,0152	0,0024	Clear	RAT	
KOI-7415.01	59416,46944	0,00035	111,7	1,3	0,0329	0,0007	Clear	RAT	1)
KPS-1b	59267,59493	0,00102			0,0128	0,0008	Clear	RAT	
Qatar-1b	59298,51608	0,00049	102,7	2,1	0,0251	0,0009	Clear	RAT	
Qatar-9b	59309,38107	0,00035	109,7	1,3	0,0276	0,0012	Clear	RAT	
Qatar-9b	59332,48878	0,00052	111,4	1,9	0,0306	0,0010	Clear	RAT	
TOI-1194.01	59269,51614	0,00082	83,0	2,8	0,0071	0,0006	Clear	RAT	1)
TOI-1355.01	59569,27042	0,00057	135,9	2,5	0,0077	0,0002	I	RAT	
TOI-1728.01	59569,48392	0,00047	119,3	1,6	0,0083	0,0003	Clear	RAT	2)
TOI-1823.01	59258,56536	0,00109	360,4	3,3	0,0093	0,0003	Clear	RAT	1)
TOI-1829.01	59461,40273	0,00082	200,8	3,4	0,0248	0,0007	Clear	RAT	1)
TOI-2046.01	59497,56893	0,00031	137,8	1,1	0,0178	0,0003	Clear	RAT	1)
TOI-2046.01	59512,53838	0,00047	146,1	1,7	0,0174	0,0004	Clear	RAT	1)
TOI-2154.01	59259,50125	0,00060	152,6	3,5	0,0108	0,0004	Clear	RAT	
TOI-3533.01	59530,36187	0,00205	180,8	6,2	0,0059	0,0008	Clear	RAT	1)
TOI-3604.01	59497,41343	0,00033	97,6	1,3	0,0268	0,0006	Clear	RAT	1)
TOI-3646.01	59512,27825	0,00238	172,4	7,6	0,0214	0,0032	Clear	RAT	1)
TOI-3660.01	59465,58405	0,00157	115,0	8,0	0,0075	0,0007	Clear	RAT	1)
TOI-3928.01	59463,36885	0,00168	156,9	5,2	0,0070	0,0007	Clear	RAT	1)
TOI-4059.01	59487,31646	0,00109	122,3	3,6	0,0264	0,0023	Clear	RAT	1)
TOI-4149.01	59574,39761	0,00064	124,4	2,2	0,0179	0,0007	Clear	RAT	1)
TrES-2 b	59432,51383	0,00087	96,4	4,9	0,0169	0,0013	Clear	WNZ_2	
TrES-3 b	59435,47379	0,00136	105,1	7,4	0,0401	0,0033	Clear	WNZ_3	
TrES-3 b	59452,45654	0,00091	74,4	4,6	0,0237	0,0026	Clear	WNZ_4	
TrES-5 b	59433,46036	0,00043	100,5	1,7	0,0238	0,0008	Clear	WNZ_2	
WASP-2 b	59378,52819	0,00055	103,9	2,1	0,0200	0,0010	Clear	RAT	
WASP-2 b	59406,50810	0,00269	146,6	11,6	0,0287	0,0036	Clear	WNZ_1	
WASP-2 b	59419,41693	0,00046	104,8	1,9	0,0207	0,0006	Clear	RAT	
WASP-12 b	59529,50510	0,00040	175,8	1,5	0,0179	0,0004	Clear	RAT	
WASP-35 b	59524,53720	0,00100	182,0	3,6	0,0205	0,0009	Clear	WNZ_3	
WASP-48 b	59480,33475	0,00086	200,0	2,8	0,0098	0,0003	Clear	RAT	
WASP-58 b	59418,46243	0,00079					Clear	RAT	
WASP-58 b	59438,52447	0,00197	211,2	7,0	0,0197	0,0007	Clear	RAT	
WASP-60 b	59436,41686	0,00129	200,4	4,1	0,0093	0,0006	Clear	WNZ_2	
WASP-65 b	59277,33370	0,00073	165,5	2,3	0,0231	0,0009	Clear	RAT	
WASP-84 b	59269,32964	0,00106	157,0	3,9	0,0192	0,0010	Clear	RAT	
WASP-92 b	59384,50435	0,00122	165,3	4,5	0,0141	0,0010	Clear	RAT	
WASP-93 b	59503,42478	0,00127	152,6	6,5	0,0129	0,0007	Clear	RAT	
WASP-93 b	59511,63436	0,00072	126,8	3,6	0,0095	0,0004	Clear	RAT	
WASP-152 b	59495,52039	0,00037	124,7	1,4	0,0200	0,0005	Clear	RAT	K2-29 b
WASP-135 b	59024,51883	0,00059	106,5	2,8	0,0217	0,0009	Clear	RAT	TOI-2130.01 b; 2)
WASP-135 b	59366,45335	0,00038	104,7	1,8	0,0227	0,0006	Clear	RAT	TOI-2130.01 b; 2)
WASP-135 b	59380,46609	0,00062	109,4	2,8	0,0212	0,0008	Clear	RAT	TOI-2130.01 b; 2)
XO-2 b	59298,37794	0,00036	165,0	1,2	0,0168	0,0003	Clear	RAT	
XO-5 b	59255,52240	0,00062	183,7	2,1	0,0125	0,0003	Clear	RAT	
XO-6 b	59570,57997	0,00038	178,0	1,4	0,0163	0,0002	I	RAT	

Remarks

- 1) not listed in ETD ; Result of the data analysis is shown in appendix
- 2) not listed in ETD ; listed in ExoClock database

Observers and instruments

RAT Raetz, Manfred Herges-Hallenberg;
 SCT 280/1790 + Moravian Instruments G2-1600

WNZ_1 Wenzel, Bernhard Vienna;
 NWT 200 / 900 mm, Canon 200D

WNZ_2 Wenzel, Bernhard Vienna;
 Cass. 600/4800, SBIG STL 6303-3 (Volkssternwarte Kirchheim)

WNZ_3 Wenzel, Bernhard Vienna;
 Newton 300/1200 mm, Canon 200 D

WNZ_4 Wenzel, Bernhard, Markus Rockenbauer Vienna
 Cass. 800/ 6640, Canon 200D (Vienna little telescope (vlt) Department of Astrophysics)

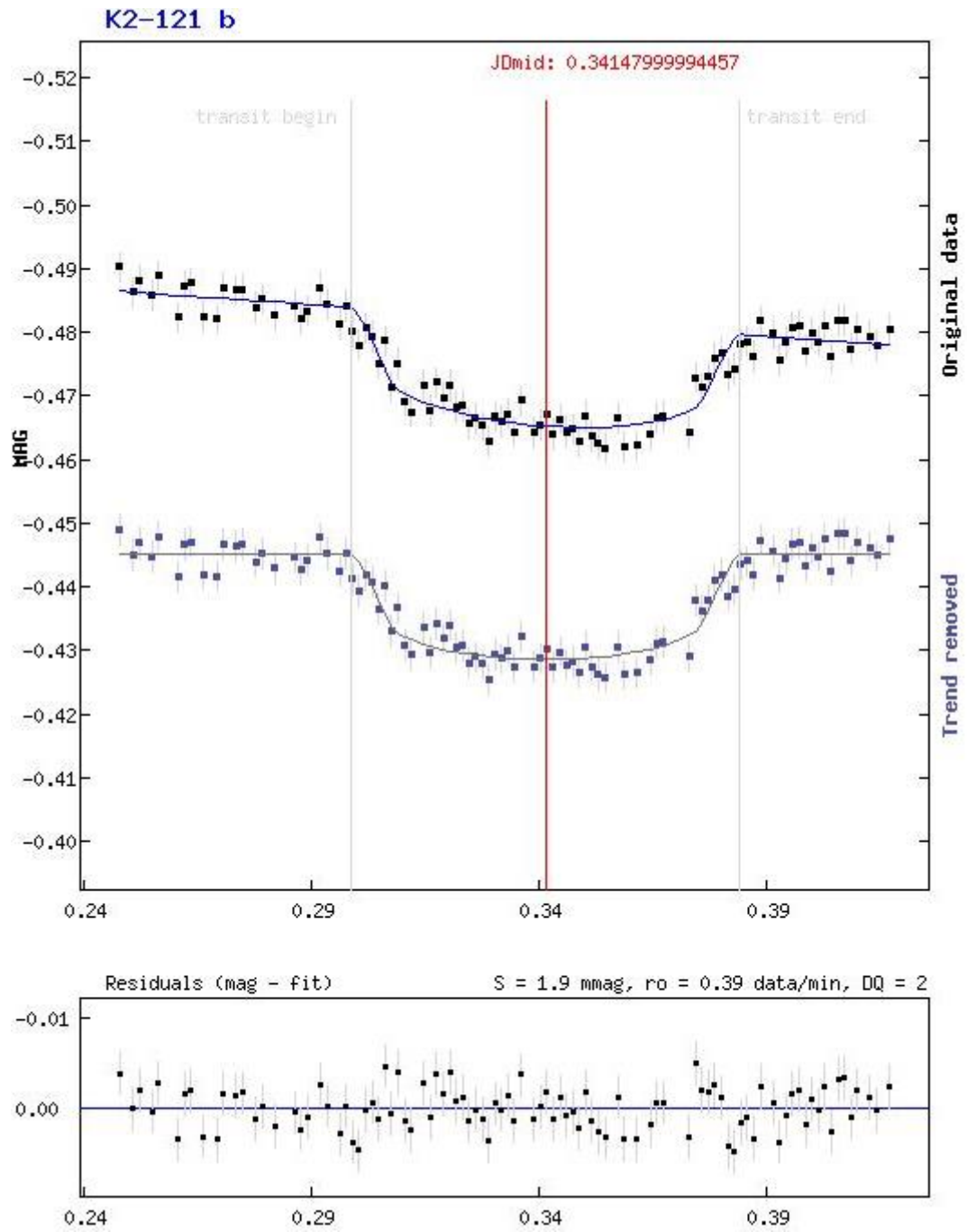
WNZ_5 Wenzel, Bernhard, Markus Rockenbauer Vienna
 Cass. 800/ 6640, FLI PL16803 (Vienna little telescope (vlt) Department of Astrophysics)

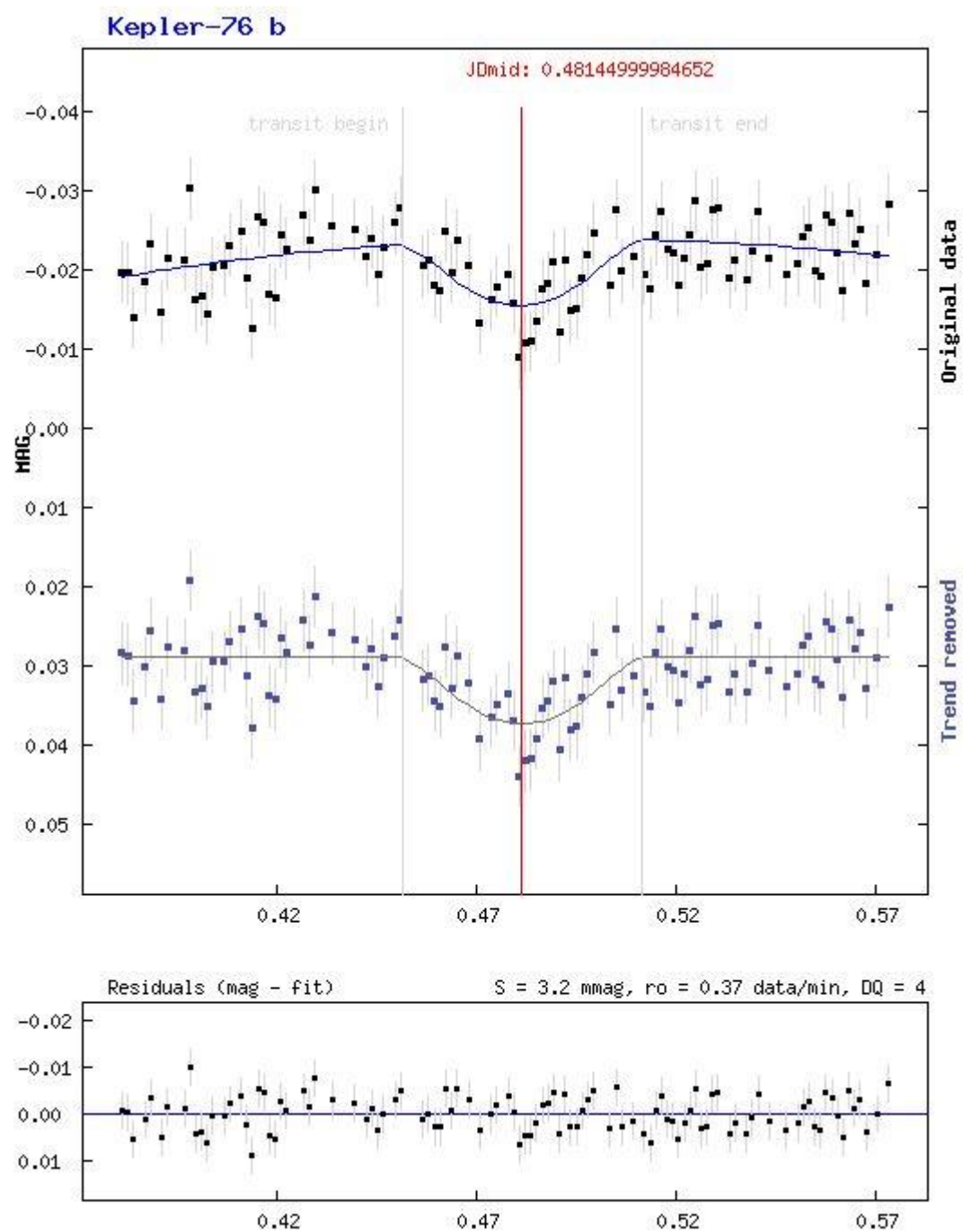
References

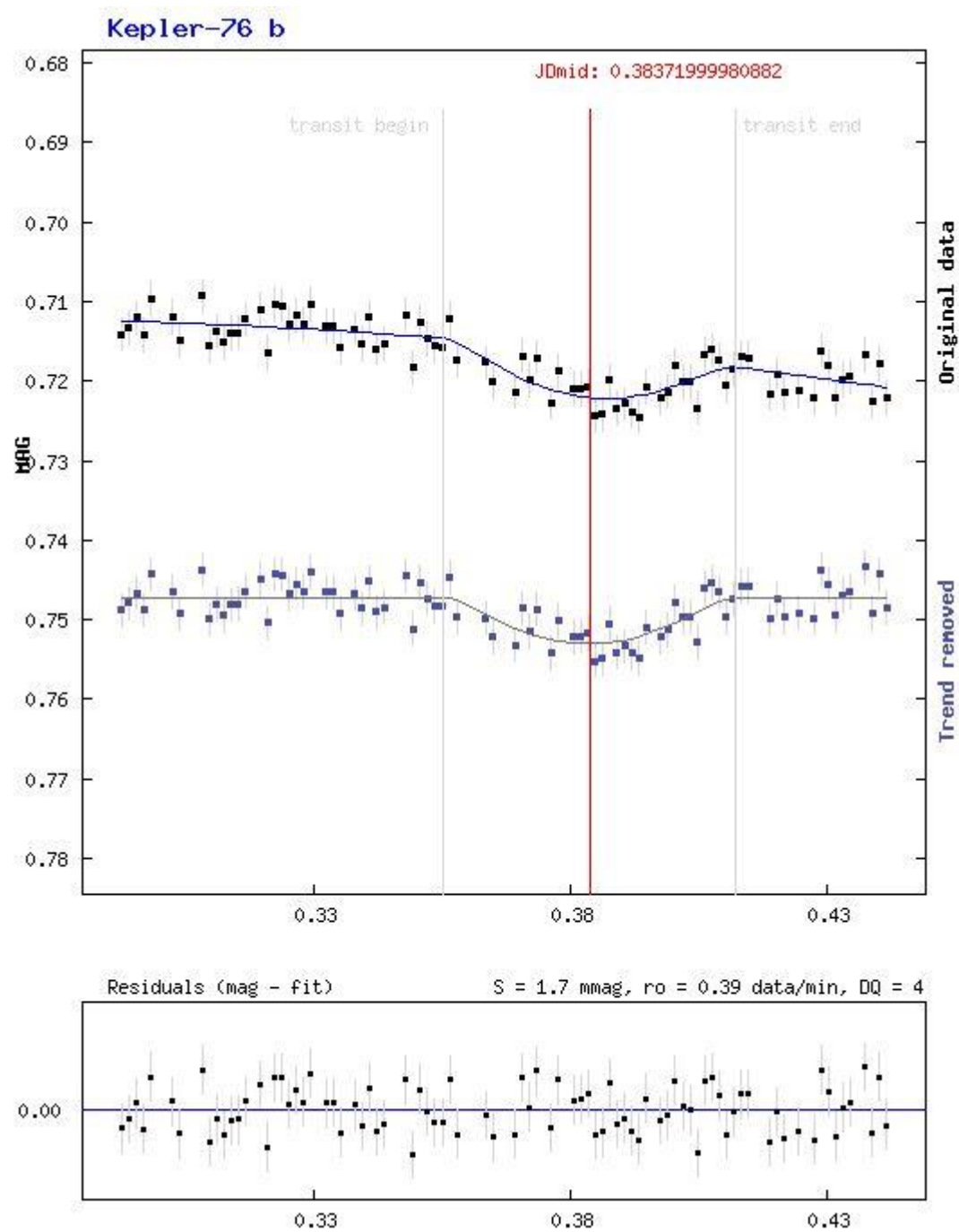
- [1] Poddany S., Brat L., Pejcha O., *New Astronomy* 15 (2010), pp. 297-301,
Exoplanet Transit Database. Reduction and processing of the photometric data of exoplanet transits
<http://arxiv.org/abs/0909.2548>
- [2] Kokori, A., Tsiaras, A., Edwards, B. et al. , *Experimental Astronomy* (2021)
ExoClock project: an open platform for monitoring the ephemerides of Ariel targets with contributions from the public
<https://rdcu.be/cwj6C>

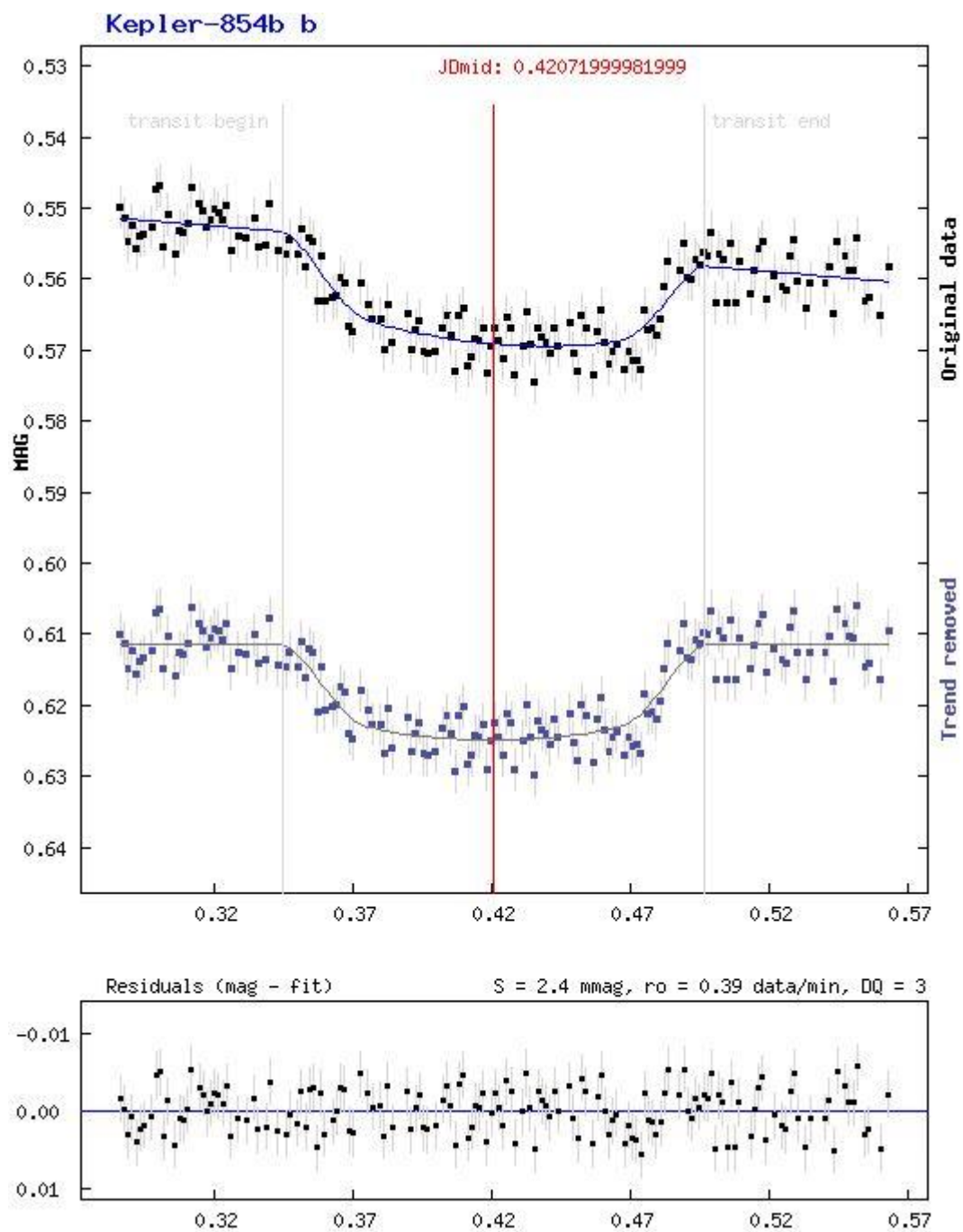
Appendix

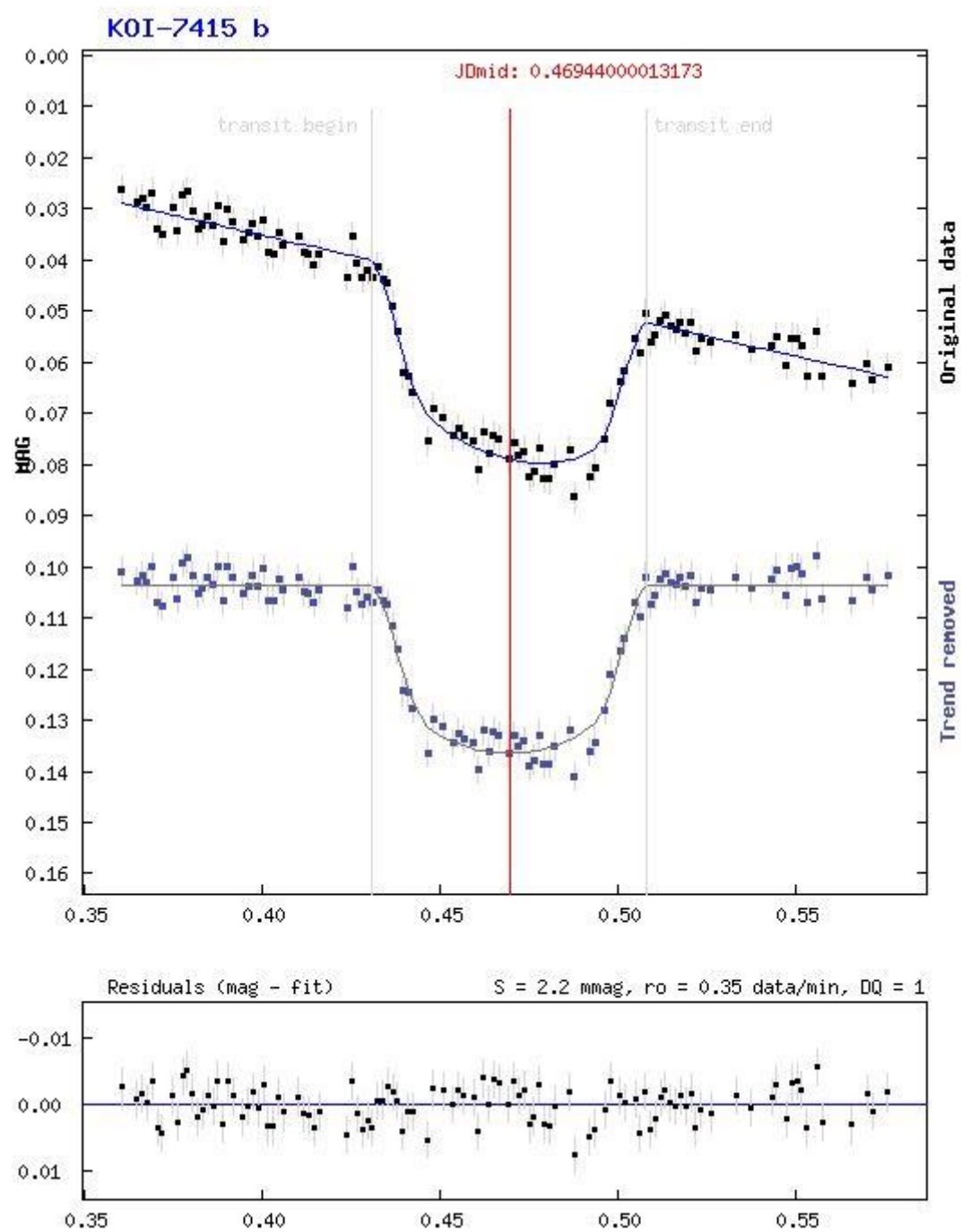
Results of exoplanets not listed in the ETD, analyzed with the algorithm of the ETD

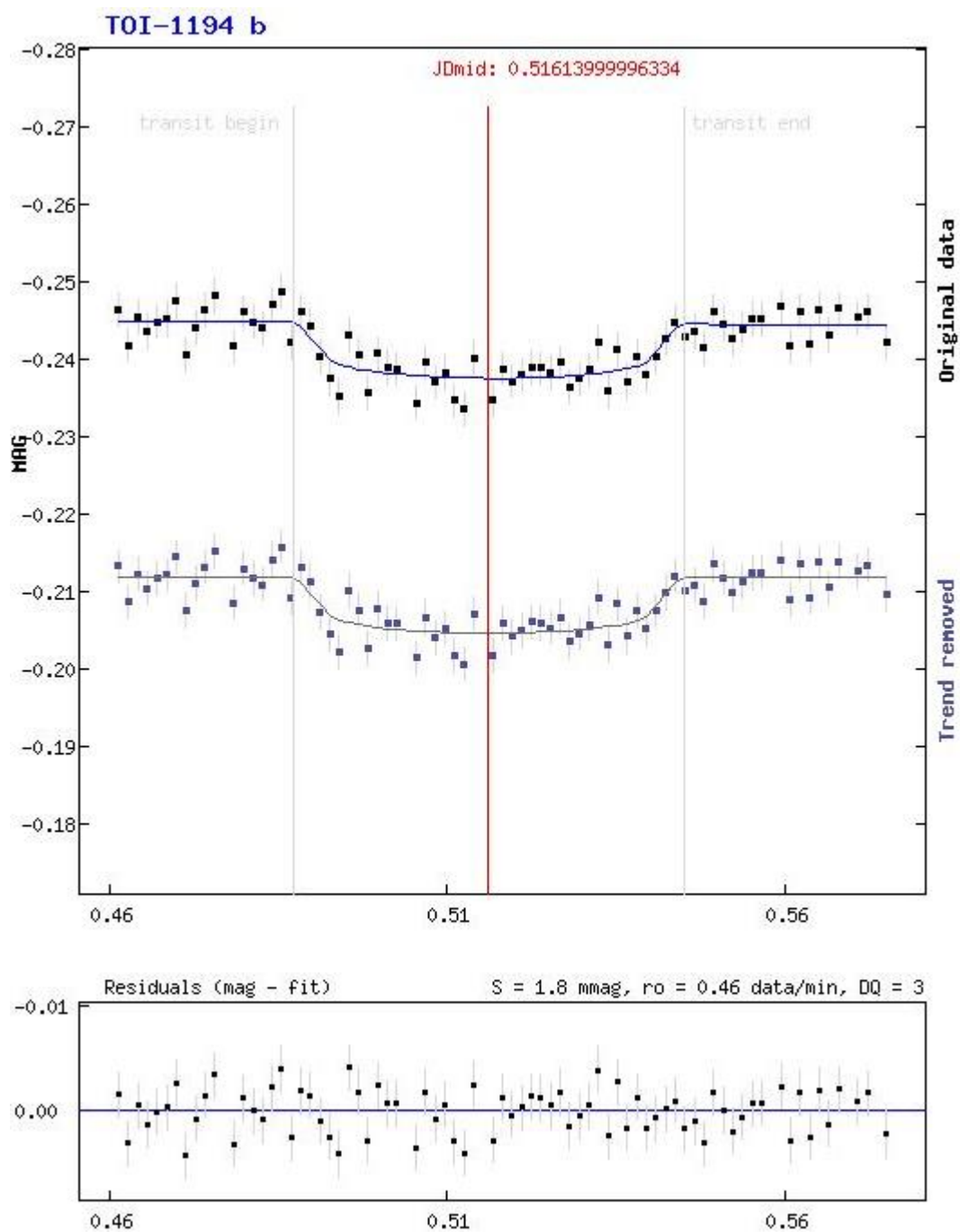


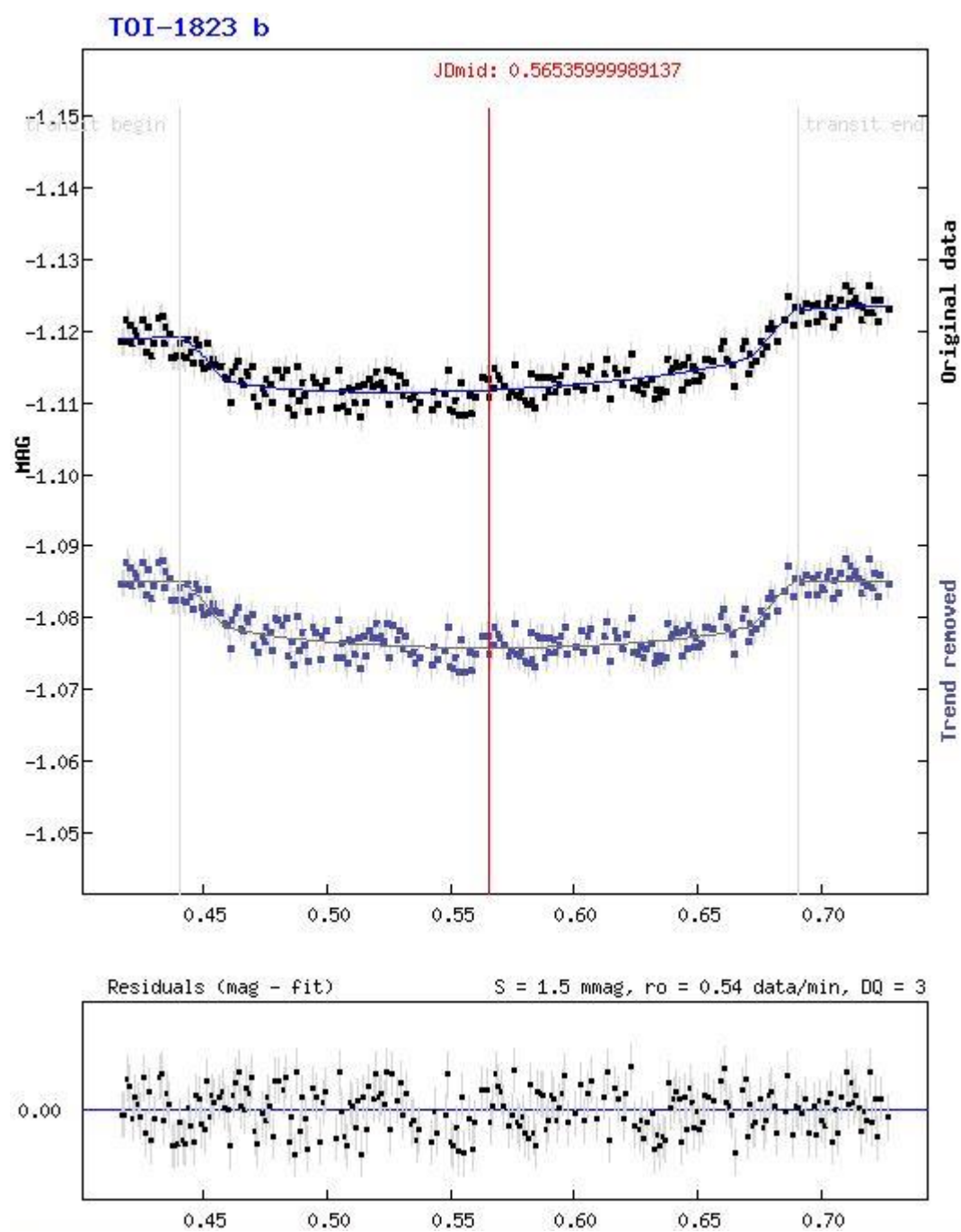


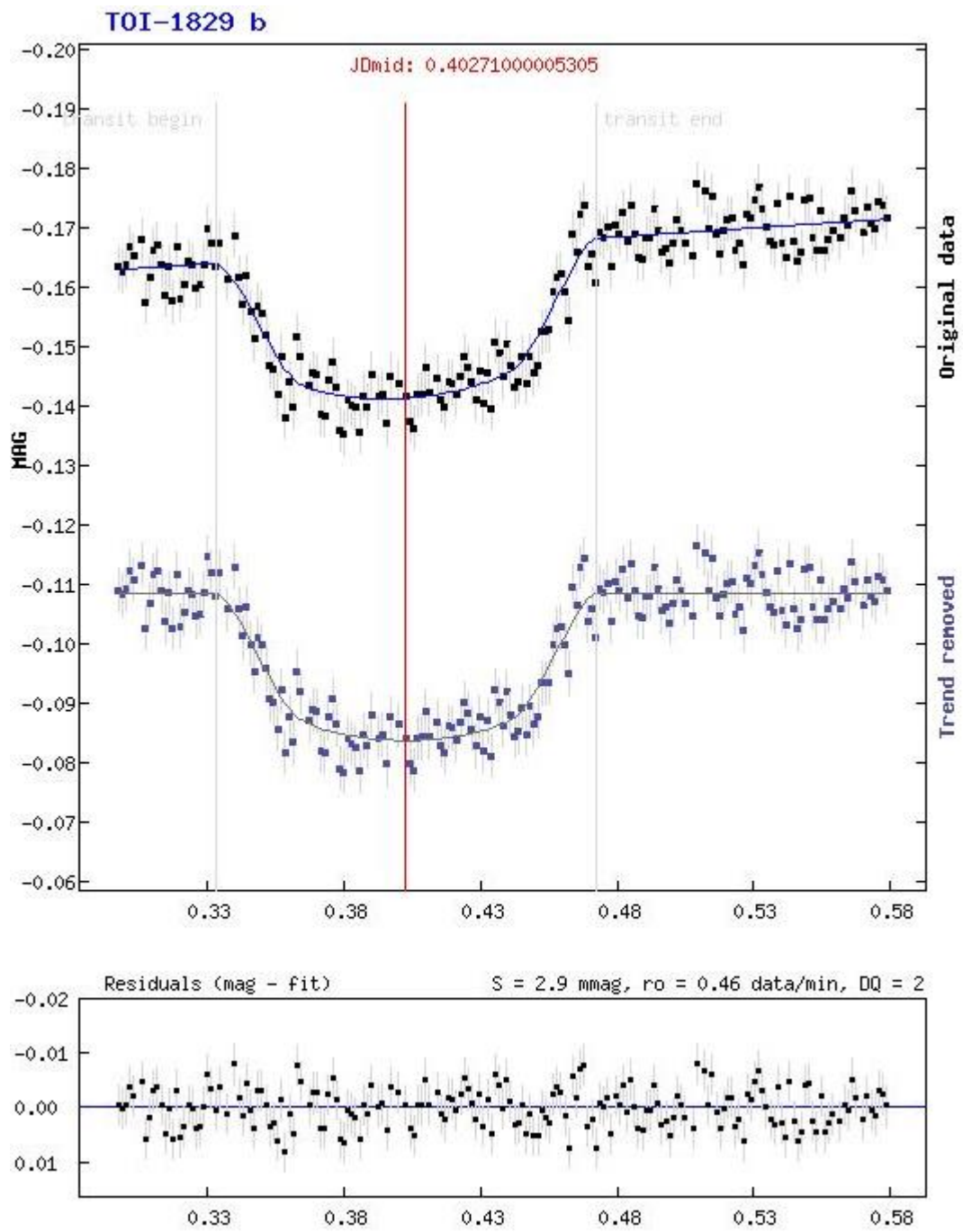


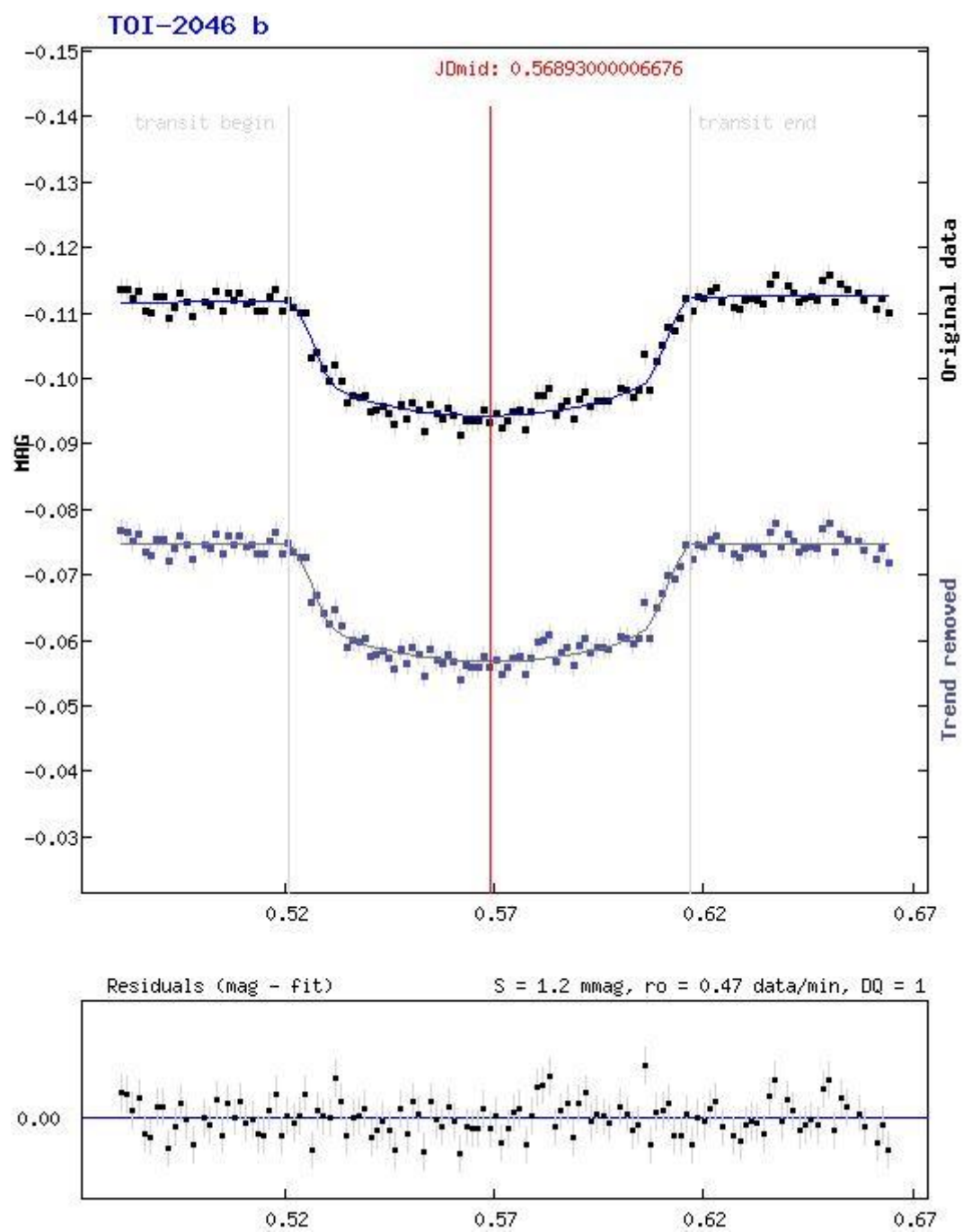


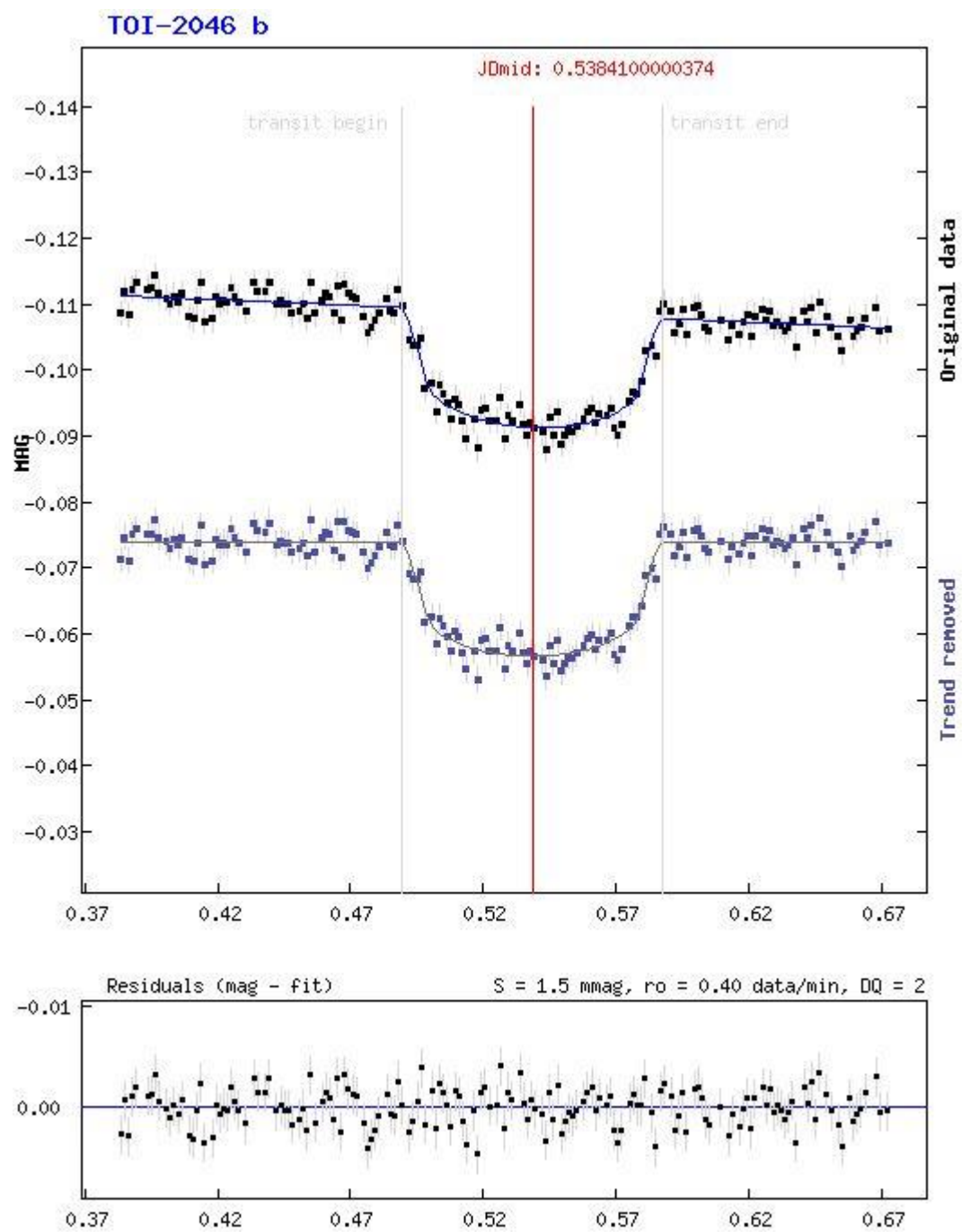


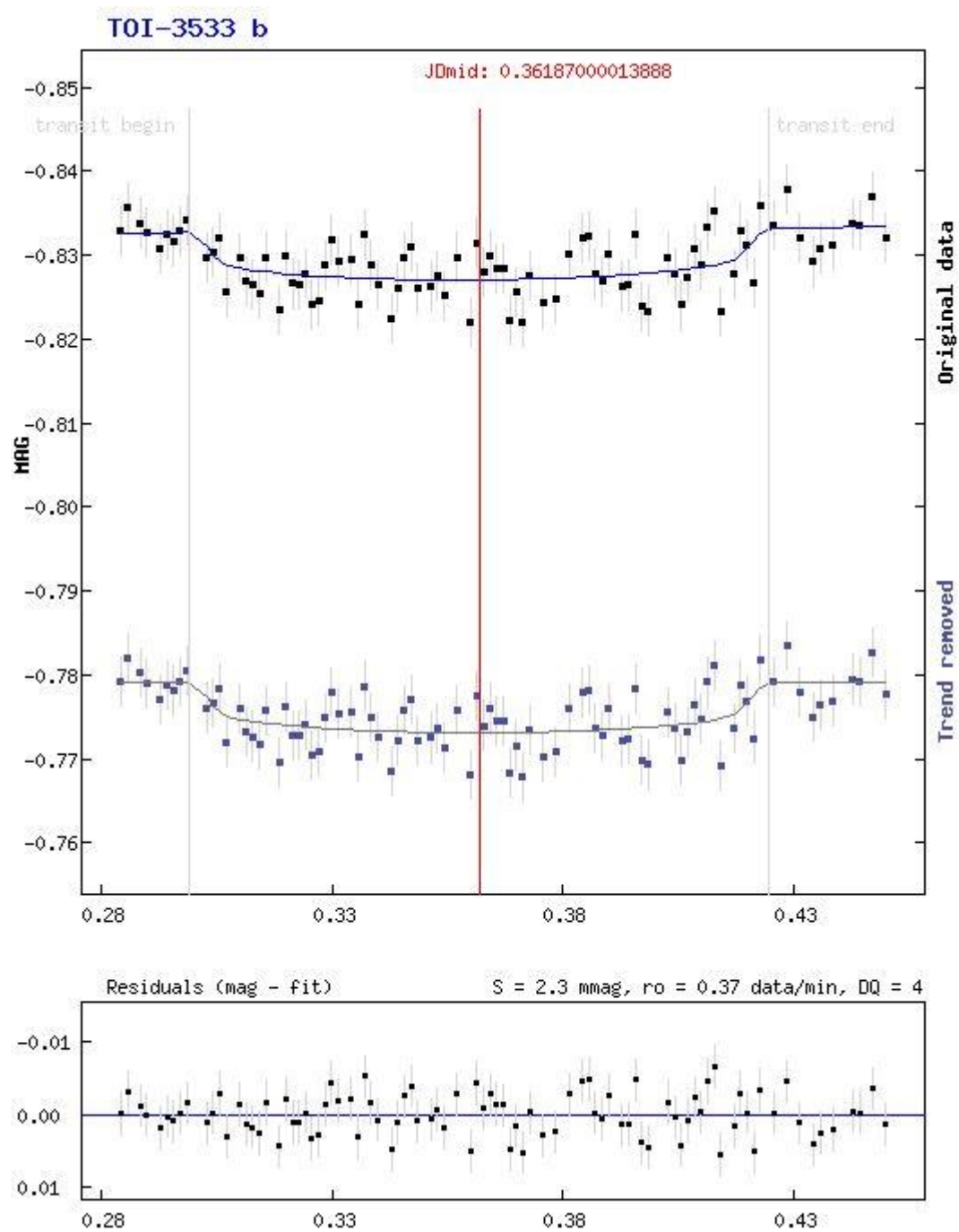


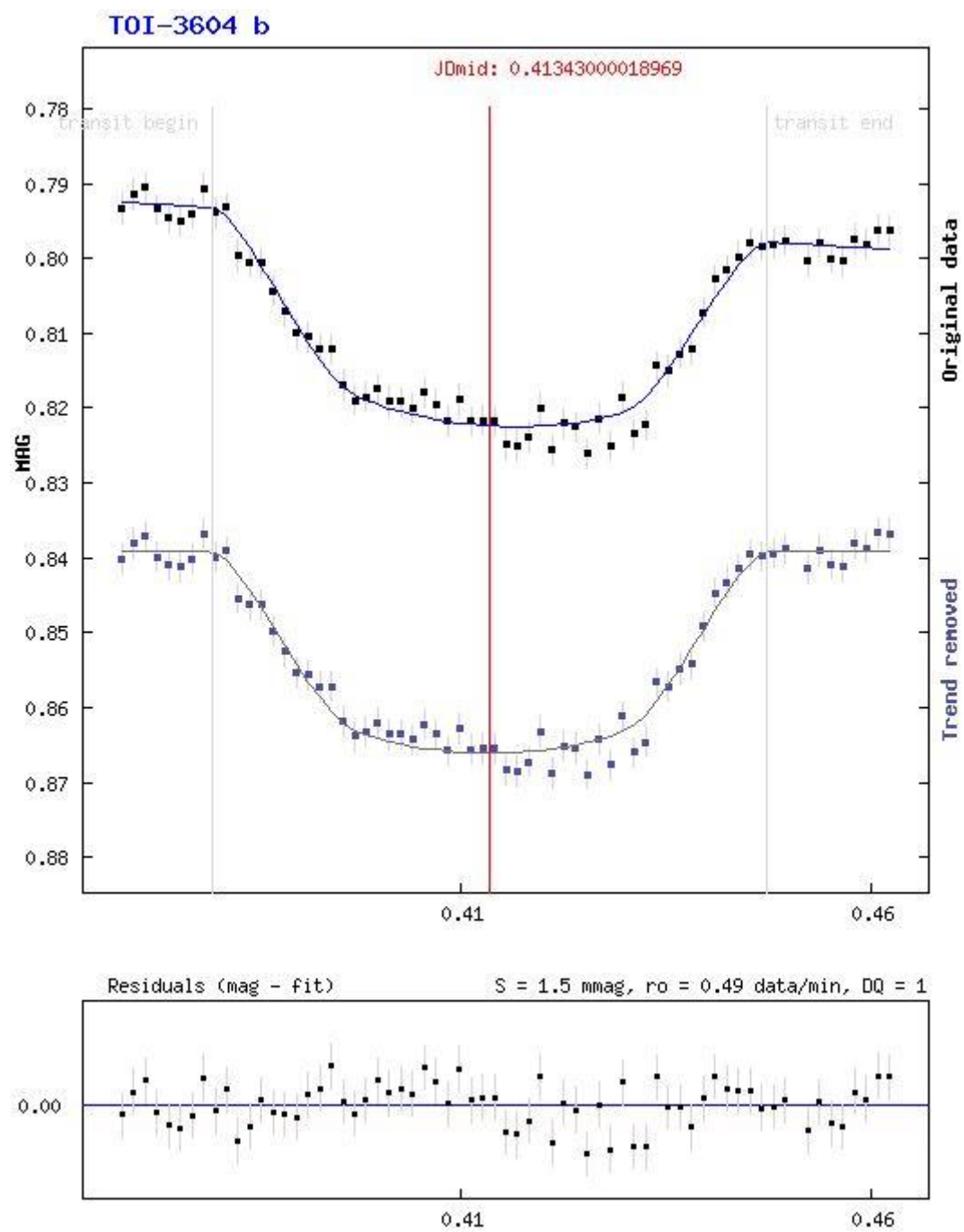


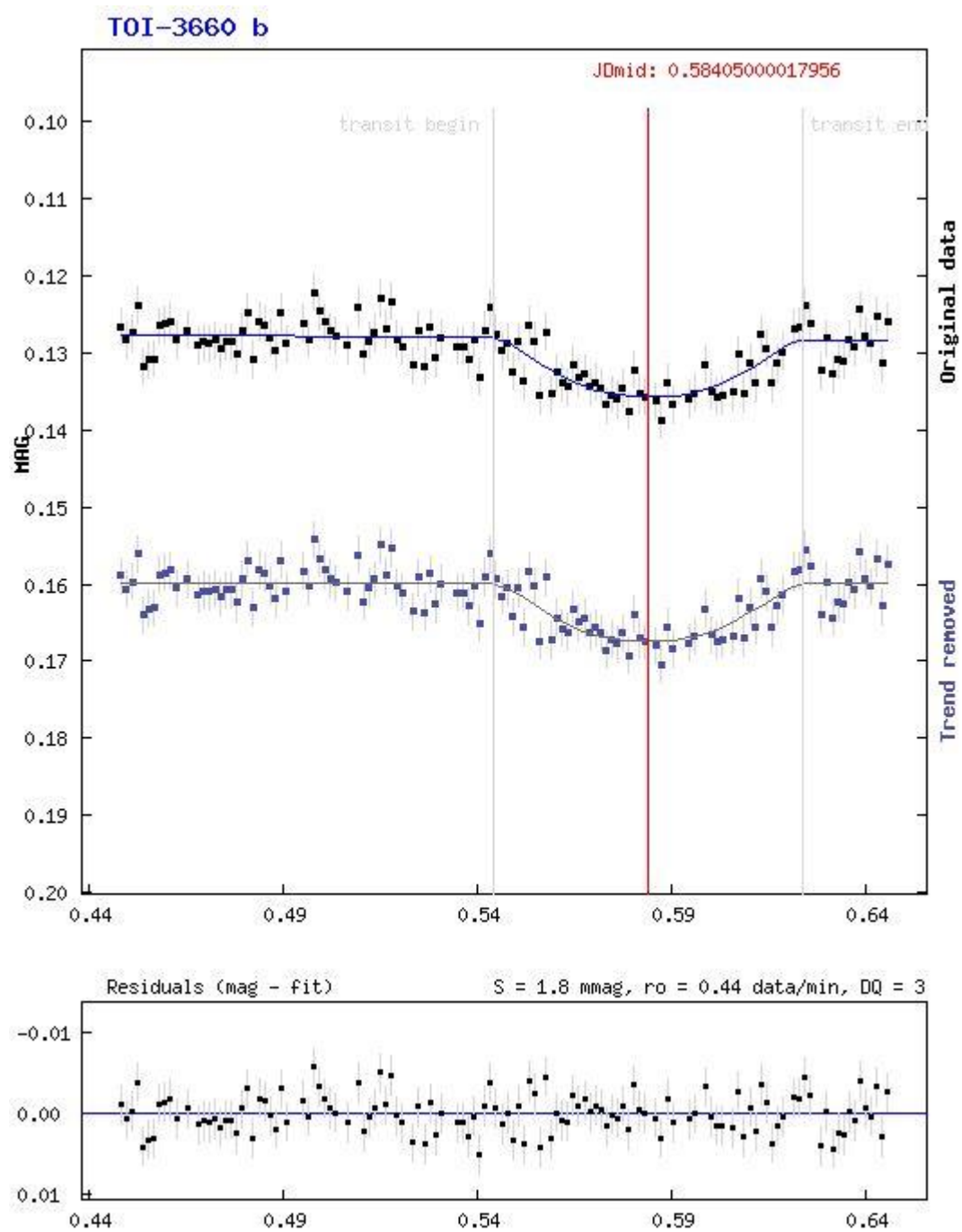


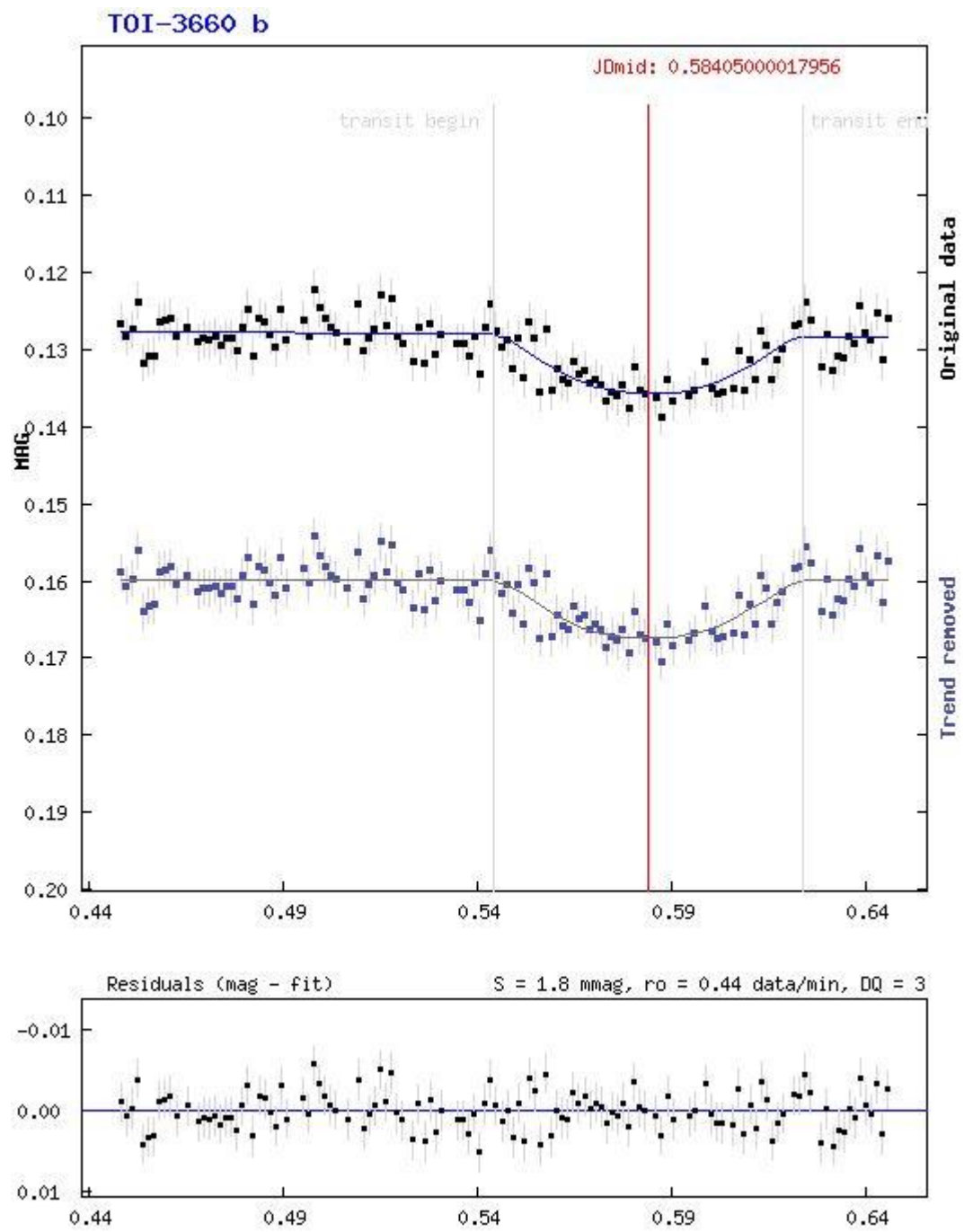


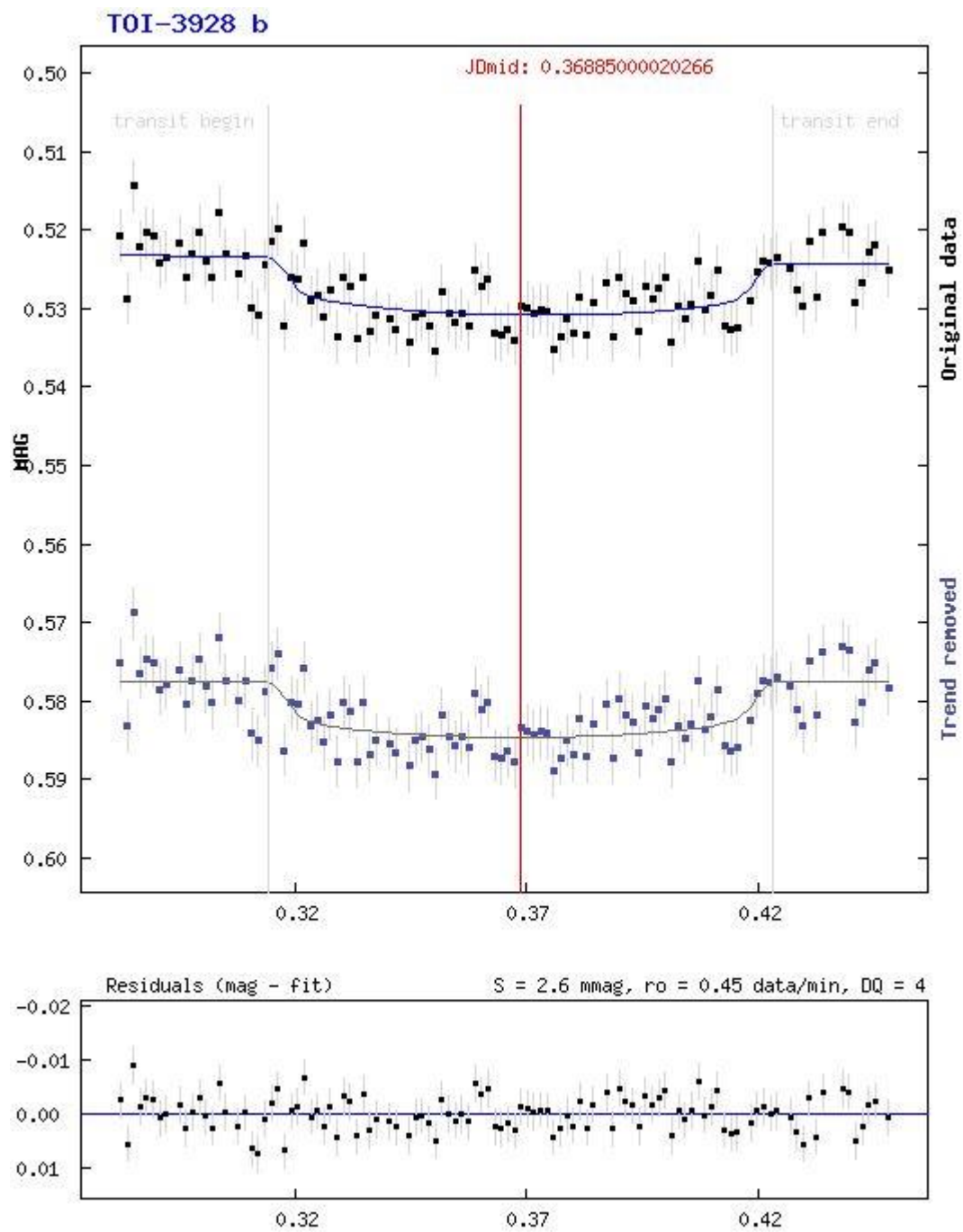


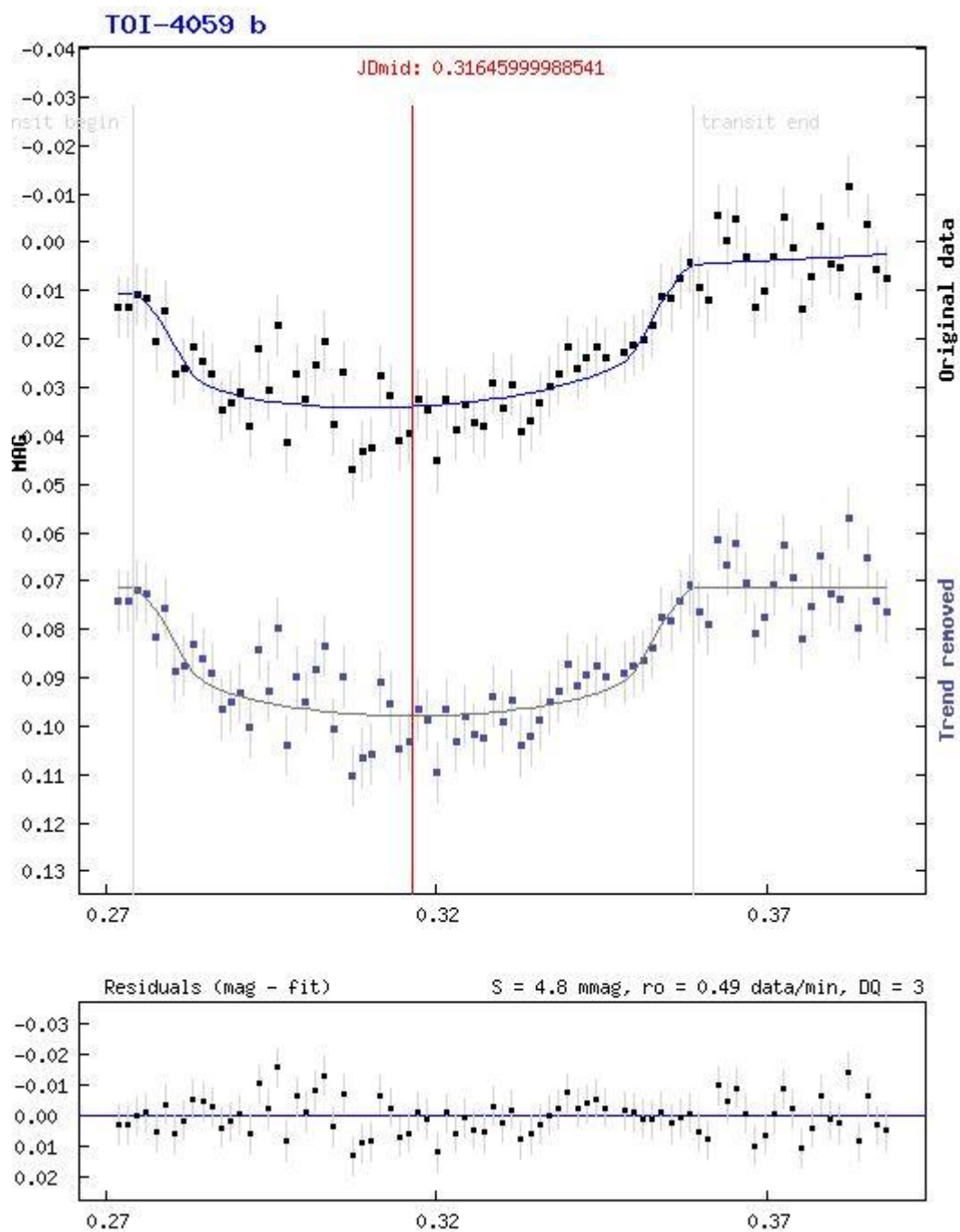












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