

## Compilation of experimental nuclear reaction data measured in Central Asia region

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The Kazakhstan team has been continuing to compile Kazakhstan nuclear reaction experiments to the EXFOR database. Since the previous Technical Meeting on NRDC 2018 (1-4 May 2018, Bahadurgarh, India), our Data Center has compiled 5 entries. The new EXFOR entries are shown in Table below. All experiments are related to charged particles and were performed on the cyclotrons of the Institute of Nuclear Physics. Numerical data for all these entries are received from the authors.

Entry	First author	Article
D0892	A.Duisebayev	J,BAS,81,1170,2017
D0906	N.Burtebayev	J,JP/CS,940,012034,2017
D0907	N.Burtebayev	J,IMP/E,27,1850042,2018
D0911	T.K.Zholdybayev	J,APP/B,49,693,2018
D0938	N.Burtebayev	J,IMP/E,27,1850094,2018

Within Action A33 “Scan domestic publications (e.g., journals, laboratory reports) to identify articles for EXFOR compilation” we continue to find the numerical data which we can include in the new and old EXFOR entries.

After scanning of the domestic journal “Izvestiya of Kazakh Academy of Science” 8 new EXFOR entries were prepared by Dr Otsuka, Dr Selyankina and Dr Zholdybayev on the basis of experimental data received in Institute of Nuclear Physics (Almaty, Kazakhstan). For entries below we prepared numerical data, and the relevant EXFOR entries are ready for transmission from NDS to other centres.

1. Numerical data for elastic and inelastic scattering of  $\alpha$ -particles on  $^{68}\text{Zn}$  were made computer readable and ready for including to new EXFOR entry (EXFOR **D0939**);
2. Numerical data on double-differentials cross-section from interaction of  $^3\text{He}$  ions on  $^{124}\text{Sn}$  were made computer readable and ready for including to new EXFOR entry (EXFOR **D0929**).
3. Numerical data for elastic and inelastic scattering of  $^3\text{He}$  on  $^{28,29,30}\text{Si}$ ,  $^{31}\text{P}$ ,  $^{32}\text{S}$  were made computer readable and ready for including to new EXFOR entry (EXFOR **D0924**).
4. Numerical data for elastic and inelastic scattering of  $\alpha$ -particles on  $^{48,50}\text{Ti}$  were made computer readable and ready for including to new EXFOR entry (EXFOR **D0926**).

After scanning of Institute’s preprints and laboratory logbooks we prepared numerical data listed below. These experimental data are made computer readable, and the relevant EXFOR entries are under revisions by us for transmission through CNPD.

1. Numerical data on elastic and inelastic scattering on nuclei with  $Z=6-50$  from iyfk-p-  
\_1990 (Pavlova preprint) were made computer readable;
2. Numerical data on double-differentials cross-section from interaction of  $^3\text{He}$  ions on  $^{27}\text{Al}$ ,  
 $^{59}\text{Co}$ ,  $^{112}\text{Sn}$  were made computer readable and ready for revising EXFOR entry **F0940** by  
including the restored numerical data;
3. Numerical data on double-differentials cross-section from interaction of deuterons on  $^{60}\text{Ni}$   
were made computer readable and ready for revising EXFOR entry **F0570** by including  
the restored numerical data;
4. Numerical data for elastic and inelastic scattering of  $\alpha$ -particles on Zn isotopes were  
made computer readable and ready for revising EXFOR **F0865** entry by including the  
restored numerical data;
5. Numerical data for elastic and inelastic scattering of  $\alpha$ -particles on  $^{24}\text{Mg}$  and  $^{58}\text{Ni}$  were  
made computer readable and ready for revising EXFOR **F0497** entry by including the  
restored numerical data;
6. Numerical data for elastic and inelastic scattering of  $\alpha$ -particles on  $^{28}\text{Si}$  were made  
computer readable and ready for revising EXFOR **F0668** entry by including the restored  
numerical data;
7. Numerical data for elastic and inelastic scattering of  $\alpha$ -particles on  $^{12}\text{C}$  were made  
computer readable and ready for revising EXFOR **F0672** entry by including the restored  
numerical data;
8. Numerical data for elastic and inelastic scattering of  $\alpha$ -particles on  $^{74}\text{Ge}$  were made  
computer readable and ready for revising EXFOR **F1184** entry by including the restored  
numerical data;
9. Numerical data for elastic and inelastic scattering of  $\alpha$ -particles on  $^{206,207,208}\text{Pb}$  isotopes  
were made computer readable and ready for revising EXFOR **F1168** entry by including  
the restored numerical data;
10. Numerical data for elastic and inelastic scattering of  $\alpha$ -particles on  $^{54}\text{Fe}$  were made  
computer readable and ready for revising EXFOR **F1160** entry by including the restored  
numerical data.