



№ 153  
Алматы қаласы

№ \_\_\_\_\_  
город Алматы

### Ethical approval

|     |                                                                                                   |                                                                                                                                                                                                                                                                                                                                           |
|-----|---------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.  | Full name of PhD student                                                                          | Valiolda Dinara Salavatkyzy                                                                                                                                                                                                                                                                                                               |
| 2.  | Specialty of PhD Program                                                                          | «6D060500-Nuclear physics»                                                                                                                                                                                                                                                                                                                |
| 3.  | Time period of study at PhD Program                                                               | 2015-2018                                                                                                                                                                                                                                                                                                                                 |
| 4.  | Theme of the thesis, date of approval                                                             | Coulomb breakup of exotic nuclei by quantum-mechanical approach, 21.11.2022 №4340-6/a                                                                                                                                                                                                                                                     |
| 5.  | Information about scientific supervisor (-s) (Name, title, degree, work position and citizenship) | Scientific supervisor: Zhaugasheva Saule Amanbaevna, cand.phys.-math.sc., Assoc.professor of department of theoretical and nuclear physics, al-Farabi Kazakh National University, Kazakhstan;<br>Foreign supervisor: Melezhik Vladimir Stepanovich, doct.phys.-math.sc., professor<br>Joint Institute for Nuclear Research, Dubna, Russia |
| 6.  | Objects of study                                                                                  | halo nucleus, $^{11}\text{Be}$ , low-lying resonances and breakup cross-section                                                                                                                                                                                                                                                           |
| 7.  | Planning, sampling and conducting of study                                                        | Violations are not revealed                                                                                                                                                                                                                                                                                                               |
| 8.  | Dissemination of results or practical implementation                                              | Violations are not revealed                                                                                                                                                                                                                                                                                                               |
| 9.  | Protection of rights, safety and welfare of research objects                                      | There are only theoretical, numerical and analytical methods for studying research objects.                                                                                                                                                                                                                                               |
| 10. | Code of approval                                                                                  | IRB – A533                                                                                                                                                                                                                                                                                                                                |
| 11. | Date of study approval                                                                            | 17.11.2022                                                                                                                                                                                                                                                                                                                                |

Chair of LEC

Ussatayeva G.

Secretary of LEC

Shaukharova M.