**Name of the project: ExHAT (WP2)**

**Table 3.1c: List of Deliverables[[1]](#footnote-2)**

Only include deliverables that you consider essential for effective project monitoring.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Number** | **Deliverable name** | **Short description** | **Work package number** | **Short name of lead participant** | **Type** | **Dissemination level** | **Delivery date**  **(in months)** |
| 2.1 | Tcc cross-section | A measurement of relative cross-section of the Tcc tetraquark and the chi\_c1(3872) in pp collisions at the LHCb experiment | 2 | Mikhail | R | PU | 30 |
| 2.2 | HcN correlations | A measurement of two-body correlations in a system of a charmed and light baryons at the ALICE experiment | 2 | Valentina | R | PU | 30 |
| 2.3 | chi\_c1(3872) cross-section | A measurement of chi\_c1(3872) cross-section relative to that of psi(2S) and its dependance on multiplicity in pp (possibly also in pPb/PbPb) collisions at the LHCb experiment | 2 | Giulia | R | PU | 36 |
| 2.4 | Long-lived six-quark state with charm | Search for a long-lived hexaquark state with c-quark in pp collisions at the LHCb experiment | 2 | Ivan | R | PU | 48 |

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| **KEY**  Deliverable numbers in order of delivery dates. Please use the numbering convention <WP number>.<number of deliverable within that WP>.  For example, deliverable 4.2 would be the second deliverable from work package 4.  **Type:**  Use one of the following codes:  R: Document, report (excluding the periodic and final reports)  DEM: Demonstrator, pilot, prototype, plan designs  DEC: Websites, patents filing, press & media actions, videos, etc.  DATA: Data sets, microdata, etc.  DMP: Data management plan  ETHICS: Deliverables related to ethics issues.  SECURITY: Deliverables related to security issues  OTHER: Software, technical diagram, algorithms, models, etc.  **Dissemination level:**  Use one of the following codes:  PU – Public, fully open, e.g. web (Deliverables flagged as public will be automatically published in CORDIS project’s page)  SEN – Sensitive, limited under the conditions of the Grant Agreement  Classified R-UE/EU-R – EU RESTRICTED under the Commission Decision No2015/444  Classified C-UE/EU-C – EU CONFIDENTIAL under the Commission Decision No2015/444  Classified S-UE/EU-S – EU SECRET under the Commission Decision No2015/444  **Delivery date**  Measured in months from the project start date (month 1) |

**Table 3.1d: List of milestones**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Milestone number** | **Milestone name** | **Related work package(s)** | **Due date (in month)** | **Means of verification** |
| 2.1.1 | Tcc-note | WP2: Tcc cross-section | 18 | note passed 1st stage of internal review in LHCb collaboration |
| 2.1.2 | Tcc-paper | WP2: Tcc cross-section | 30 | An official publication draft on the arXiv |
| 2.2.1 | HcN-note | WP2: HcN correlations | 12 | note passed 1st stage of internal review in ALICE collaboration |
| 2.2.2 | HcN-paper | WP2: HcN correlations | 30 | An official publication draft on the arXiv |
| 2.3.1 | chi\_c1(3872)-note | WP2: chi\_c1(3872) cross-section | 24 | note passed 1st stage of internal review in LHCb collaboration |
| 2.3.2 | chi\_c1(3872)-paper | WP2: chi\_c1(3872) cross-section | 36 | An official publication draft on the arXiv |
| 2.4.1 | Long-lived hexaquark-note | WP2: long-lived hexaquark with charm | 36 | note passed 1st stage of internal review in LHCb collaboration |
| 2.4.2 | Long-lived hexaquark-paper | WP2: long-lived hexaquark with charm | 48 | An official publication draft on the arXiv |

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| **KEY**  **Due date**  Measured in months from the project start date (month 1)  **Means of verification**  Show how you will confirm that the milestone has been attained. Refer to indicators if appropriate. For example: a laboratory prototype that is ‘up and running’; software released and validated by a user group; field survey complete and data quality validated. |

**Table 3.1e: Critical risks for implementation** #@RSK-MGT-RM@#

|  |  |  |
| --- | --- | --- |
| **Description of risk (indicate level of (i) likelihood, and (ii) severity: Low/Medium/High)** | **Work package(s) involved** | **Proposed risk-mitigation measures** |
| Low yield of the Tcc in high multiplicity events (likelihood: medium, severity: medium) | WP2: Tcc cross-section | Dividing in coarser multiplicity bins. An integrated cross-section measurement is already a valuable result. |
| High background and suppression of psi(2S) in high-multiplicity events and/or PbPb collisions (likelihood: medium, severity: high) | WP2: chi\_c1(3872) cross-section | Perform the measurement in pp and pPb collisions. Perform analogous measurement in the Y(1S/2S/3S) system. |
| ? | WP2: HcN correlations | ? |
| Long-lived hexaquark with c-quark is not existent or has very small production cross-section  (likelihood: high, severity: low) | WP2: Long-lived hexaquark | An upper limit on production cross-section times branching fraction will be set |

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| **Definition critical risk:**  A critical risk is a plausible event or issue that could have a high adverse impact on the ability of the project to achieve its objectives.  **Level of likelihood to occur: Low/medium/high**  The likelihood is the estimated probability that the risk will materialise even after taking account of the mitigating measures put in place.  **Level of severity: Low/medium/high**  The relative seriousness of the risk and the significance of its effect. |

1. You must include a data management plan (DMP) and a ‘plan for dissemination and exploitation including communication activities as distinct deliverables within the first 6 months of the project. The DMP will evolve during the lifetime of the project in order to present the status of the project's reflections on data management. A template for such a plan is available in the [Online Manual](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/om_en.pdf) on the Funding & Tenders Portal. [↑](#footnote-ref-2)