**Laser-Induced Desorption (LID) at JET**

# Minutes of Meeting #4 (5.3.2020)

1. Summary of JET4 project board meeting
   * PMP of LID project was approved
   * FP9 timeline update to come
   * Requirement from ITER: desorb multiple spots on PFC to increase LID signal in RGA
2. Presentation by Ionut Jepu on QMS sensitivity tests at JET (“KT5-LIDS QMS\_KT5 sensitivity tests.pptx”)
   * for normal KT5 operation the pinhole valve bypass is used
   * for LID gas puffing tests this bypass was not used
   * please review it and comment
   * masses 0-50 recorded in RGA
   * for details see presentation, conclusion: 1E18 D atoms from GIM injection can be detected, probably even lower values possible for better conditions, to be tested
   * in discussion afterwards: different D concentrations should be deposited on a part of the LID target plate to test RGA sensitivity with laser desorption
3. Presentation by Mikhail Maslov on the GIM gas injection used for the QMS sensitivity tests (“small gas injections - LIDS\_v2.pptx”)
   * turbo pumps were on during these tests, further conditions specified in the ppt.
   * LID should be performed in cryo warm mode
4. Laser tests of QMS sensitivity
   * KZ3 test planned for the week before Easter
   * TS laser test shots yield no signal in RGA, shall be repeated with optimised QMS settings also with special observation of mass 4 and 28
5. Laser procurement
   * Duration of tender at JET: 3-4 months
   * no need/possibility to specify design specifications of laser to laser supplier as the candidate lasers are not custom made
   * if Coherent laser is chosen which is known by Juelich, then acceptance test at factory and direct delivery to JET, further laser tests at JET in lab (not in torus hall)
   * angle of laser incidence has to be determined from CAT model
6. Risk register: L.N. will provide an example on next meeting
7. Establishment of technical meetings lead by C.R. to clarify technical questions, regularly (weekly)
8. A document about technical control process shall be send to FZJ, but there is only an old official version, while some parts were updated recently. Maybe a combined document will be generated. This document shall be amended to the PMP.
9. SharePoint shall be used for common exchange of documents and files
10. Visits at JET:
    * recent visit of G.S. to JET to with opportunity to see roof lab, which has considerably changed since last visit. FZJ has now better insight in the present situation here.
    * future visit time window at JET: week before Easter/beginning of April or May (next 2-3 months is a good period for visits)
11. M.Z. has an invited talk on the SOFT conference in September also presenting parts of this project with the title “Development of a Laser-based Diagnostic for in situ Monitoring of Fuel Retention: from Laboratory via JET towards ITER”. Abstract is on pinboard, please check

minutes by M.Z.