

WPSA General Meeting. Summary and Conclusions

4-6 May 2022

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Output of the meeting



- Good progress in most of the tasks
- Good progresses in the design/procurement of the approved enhancements (despite tough boundary conditions)
- Some of the analysis tools are mature enough to be used on regular basis => opportunity to widen the group of the users
- Extended and lively participation in most of the sessions, with suggestions of new ideas, directions of work etc
- Good start for constructive interaction between the WPSA contributors and the rising Experiment Team (at least part of it) => build on it and extend to all the ET though the suitable channels (WG, e.g.)
- PLEASE consider your own contribution in the framework of a complex project. Lively interaction is essential for a productive work.



- To help capitalizing the work done please
- upload your presentations on indico <u>https://indico.euro-fusion.org/event/1996/</u> (several still missing)
- Update the WPSA wiki with the information useful to track the steps done and develop the new ones, in view of extending the scientific support for JT-60SA <u>https://wiki.euro-</u> <u>fusion.org/wiki/WPSA_wikipages: JT-60SA_Work_Package</u>
- Add your email for regular contacts

Timeline for Experiment Team



| we a | re | ne | ere | • ₁ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | , , | | | | |
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| | | 1 : | 2 3 | 4 | 56 | 7 | 89 | 10 1 | 1 12 | 1 | 2 3 | 3 4 | 5 | 6 | 7 8 | 9 | 10 1 | 1 12 | 1 | 2 3 | 4 | 5 6 | 5 7 | 8 | 9 1 | 0 11 | 12 | 1 | 2 3 | 4 | 5 | 6 7 | / 8 | 9 | 10 11 | 12 | 1 2 | 2 3 | 4 | 5 6 | 6 7 |
| JT-60SA schedule | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Operation | | | | | vv | , Coil co | ool <mark>i Co</mark> | il test a | nd Pla | sma | | | | | | | | | | | | | | | | | | | | Ope | ratio | n-2 (8N | A) | | | | | | Oper | ation- | 3 (8M) |
| Machine Enhancement | | | | | Gr | obal Pa | schen | | | | | Ма | chine | enhar | nceen | t (24N | 1) | | | | | | | | | | | | | | | | | | | M/E2 | (4M) | | | | |
| Major conferences | | | ITP | A | EP | 5 | | ITPA | | | Syno IT | PA | | EPS | | | IAEA | | | Syno ITP/ | A | EP | •s | | | | | | | | 1 | EPS | | F | IAEA | | | | | EP | *5 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Experimental Team | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Experiment Team Meeting (ETM) | | | | ЕТСМ | | | | E | M | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Experiment Team Coordination Meeting (ET | CM) | | | Foll | ow up | | reç | jular n | neetir | ng (e | very · | ~2 m | onth | s) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Machine enhancement | | Prior | itizat | ion => | Prop | osal t | o PL | BASC | | Des | ign s | tudy | => D | RMs | & PA | ۱. | | | Man | ufact | ure ar | nd de | liver | y (in: | stitut | e) / Ir | nstall | ing d | lesgi | in (QS | ST) | | | | | Insta | all | | | | |
| SPI and disruption diagnostics | | | | м | тG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Disruption and RE diagnostics | | | | | мт | G | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Prioritization and enhancement requ | est | | | | | M | ГG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Plasma modeling | | Т | G | Lw | ill | ord | lan | ize | th | iei | r o | wr | ו n | nee | etii | na | s v | vitł | n m | nen | nbe | ers | ; fr | on | n V | ٧P | SA | \ a | nd | I Q | ST | ſ († | Fui | niv | ers | sitie | es) | | | | |
| Code/Model validation procedure | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | · | | | |
| User kind (manual, connected to DB, e | tc) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Plasma operation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Plasma control system | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Integrated data analysis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| C plasma analyses | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Participation in IC | | | | | | | Pa | rticipa | te in | IC M | TGs | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Data assessment for OP2 | | | | | | | | | | | | An | alyz | e data | a for | OP2 | (plasi | ma br | reakd | own, | equili | ibriun | n cor | ntrol, | conf | inem | ent, | wall o | clean | ing, l | Disru | ptior | n, etc | :.) | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Experiment Planing | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Major objectives defining | | | | | | | | | | | | | | | | | | | deci | ide ma | ajor o | bjecti | ives | | | | | | | | | | | | | | | | | | |
| Call for experiment proposal | | | | | | | | | | | | | | | | | | | | | call | for p | ropo | sals | | | | | | | | | | | | | | | | | |
| Proposal integration | | | | | | | | | | | | | | | | | | | | | | | org | ganis | e pro | pos | als | | | | | | | | | | | | | | |
| Experiment plan documentation | | | | | | | | | | | | | | | | | | | | | | | | | | | prov | /al | | | \square | | | | | \square | | | | | |
| Experiment preparation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ar ex | perin | nent | | - | | | \square | | | | | |
| Run experiments | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | - | | | |
| Review the results | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Objectives for 2022 and next steps

- Advance with the Remote Access (SA.M.02 Grant Milestone in 2022) => exploit the opportunity to test RA during IC
- Complete the procurements of FP8 projects and prepare installation in 2023-2024 => plan remote/on site support to the systems, tools for exploitation (synthetic diagnostics, procedures and tools for validation...)
- Contribute to the Integrated Commissioning II (SA.D.02 Grant Deliverable 2022)
- Support the IC analysis
- => dedicated participation during IC, keep interacting with ET for the following analysis
- Progress towards the deployment of validated modelling and analysis tools for operation and scientific exploitation => interact with the Topical Groups, organize training session for scientific users
- Prepare the Enhancement program after 2025, in interaction with the ET and F4E (SA.D.04 Grant Deliverable 2022) => conclude the ongoing feasibility, interact with ET about scientific priorities



- Planning meeting in September
 - IC not done yet, but perhaps time plan more precise
 - Scientific priorities on the enhancements available
 - Opportunity to interact more extensively on the scientific topics for modeling and code management
 - Plan contribution to IC analysis (WPSA tasks?)
- 2023 planning due in October
 - Definition of the tasks with the attached resources

Announcement: in person WPSA Planning Meeting in September





- 5 9 September 2022 Budapest
- Main Building of the Hungarian Academy of Sciences (Széchenyi István sqr. 9)
- Local Organizer: Plasma Physics Department, Centre for Energy Research
- Zoom questionnaire >50% positive about in person participation

• More on this in by the local committee