

EWE-1: status, plans, and future prospects



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[https://users.euro-fusion.org/iterphysicswiki/index.php/EWE-](https://users.euro-fusion.org/iterphysicswiki/index.php/EWE-1)

[1 Data access, interfaces and data preparation routines for the initialization of WPCD workflows to enable MST/JET/WPs exploitation](https://users.euro-fusion.org/iterphysicswiki/index.php/EWE-1)

Overall EWE-1 status : data available in IMAS form



- Initial experimental input datasets provided for all machines
- Iterative process with EWE-2-3 is ongoing to test / extend the datasets as required

IDS Name	JET	TCV	AUG	MAST	WEST
iron_core	Green	Grey	Grey	Grey	Red
magnetics	Green	Green	Cyan	Green	Cyan
mse	Cyan	Grey	Red	Cyan	Grey
pf_active	Green	Green	Cyan	Green	Green
tf	Green	Green	Cyan	Green	Green
thomson_scattering	Green	Red	Red	Green	Grey
wall	Green	Green	Green	Green	Green
core_profiles	Green	Green	Green	Green	Green
equilibrium	Green	Green	Green	Green	Green
nbi	Green	Green	Green	Green	Grey
ic_antennnas	Green	Grey	Yellow	Grey	Green
ec_antennnas	Grey	Green	Green	Grey	Grey
core_sources	Yellow	Yellow	Yellow	Yellow	Yellow

Colour	Meaning
Grey	Data not relevant for this machine
Red	Data is missing
Yellow	Data mapping in development
Cyan	Data available
Green	Data validated as input of EWE-2 and EWE-3 workflows



- EWE-3 : core_profiles and equilibrium quantities ok for most machines, validated by ohmic simulations. Simulations with additional heating also available, still in the process of adding H&CD input data.
- EWE-2 :
 - Equilibrium reconstruction from magnetics : validation ongoing, cocos checking, etc ...
 - Addition of HRTS data ongoing for pressure constraint; MSE on the forge (*private PPFs...*)
- Create GIT repos on the Gateway to host data import source code (TRVIEW for AUG, tcv2ids for TCV)
- Provide simpler commands and documentation for user's production
- EWE-2 and EWE-3 data don't always use the same import methods



- Magnetics data for EWE-2 : access to IMAS/UDA, but technical problems with (*gate* checking) at present → private Python IPP script for now (ReadAUG - M. Dunne) under testing stage
- ETS data : a dedicated Python script “TRVIEW” collects experimental data remotely and maps it to IMAS https://users.euro-fusion.org/iterphysicswiki/index.php/AUG_to_ids

JET and MAST data input for ETS/equilibrium workflow



- Magnetics data for EWE-2 : access via IMAS/UDA :
 - https://users.euro-fusion.org/iterphysicswiki/index.php/JET_to_IDS
 - https://users.euro-fusion.org/iterphysicswiki/index.php/MAST_to_IDS
 - HRTS data available since Lisbon cc, to be tested
- ETS data : IMASgo ! <https://users.euro-fusion.org/iterphysicswiki/index.php/IMASgo!>

TCV data input for ETS/equilibrium workflow

- Unique method for ETS and equilibrium workflow. A dedicated Matlab script collects experimental data remotely (via MDSplus) and maps it to IMAS.
 - https://users.euro-fusion.org/iterphysicswiki/index.php/TCV_to_ids
- Addition of pf_passive and HRTS ongoing
- Need to mirror TCV's git repository on the Gateway for tcv2ids



- WEST Plasma Reconstruction Chain provides natively raw and processed data in IMAS format, including some additional specific input data requested by ETS/transport solvers
- COCOS issue in magnetics to be solved by imminent reprocessing → validation by EWE-2
- Remote data access via IMAS/UDA recently debugged → to be released and documented
- Meanwhile :
 - Pulse file on demand to jorge.morales2@cea.fr

Summary and Prospects

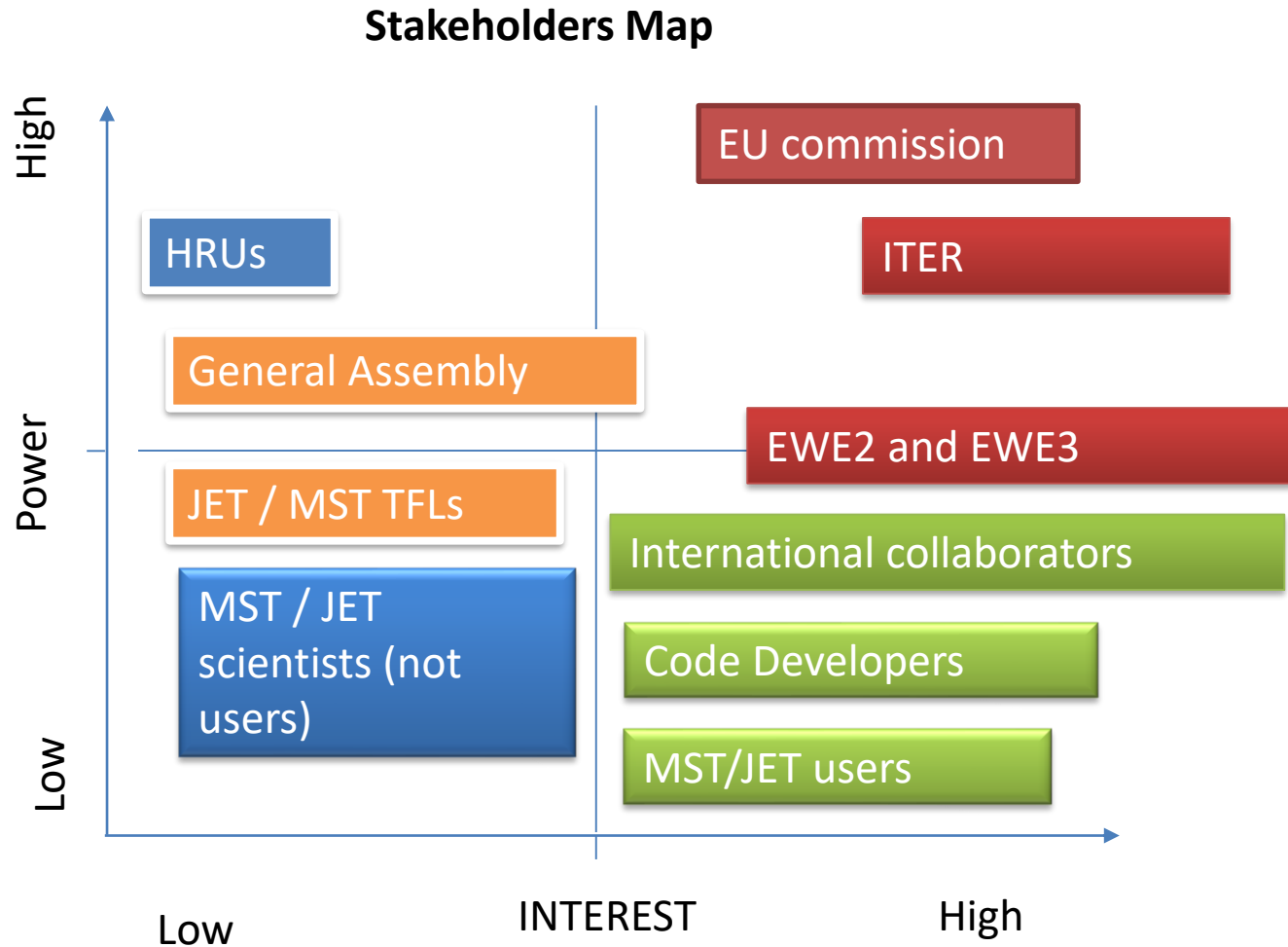


- Iterative process with EWE-2-3 is ongoing to test / extend the datasets as required (“the devil is in the details”)
- Simple, user-oriented commands for data import and workflow execution to be defined in agreement with EWE-2 and EWE-3

Plans for 2020



Identification of Key Stakeholders for Task EWE-1





Requirements of Key Stakeholders for Task EWE-1

- EWE-2 : add pressure and MSE measurements for additional constraints on the equilibrium
- EWE-3 : additional H&CD data
- Data import tools under GIT
- Data import tools documented and easy to use

Developer/User

- Data must be verified with EWE-2/EWE-3

Timeline for 2020



	Jan	Feb	Mar	Apr	May	Jun
Common	Go to Lisbon	...	Agree with EWE-2 & EWE-3 on data import procedure for exploitation	More uniform scripts for executing data import + documentation		
AUG	Work to restore communication via UDA plugin for AUG	...	Validated magnetics data for EWE-2. TRVIEW under GIT	NBI/beamlet data in IMAS	Thoms on scattering data for EWE-2	ICRH and ECRH data in IMAS
JET	Validated magnetics data for EWE-2	...	NBI/beamlet data in IMAS	Validated MSE and Thomson scattering data for W2	ICRH data in IMAS	

Timeline for 2020



	Jan	Feb	Mar	Apr	May	Jun
MAST	Validated magnetics data for EWE-2	...	NBI/beamlet data in IMAS	Validated MSE and Thomson scattering data for W2	ECRH and ICRH data in IMAS	...
TCV	Validated magnetics data for EWE-2	...	NBI/beamlet data in IMAS. GDAT under GIT	ECRH data in IMAS
WEST		Restored remote data access	Validated magnetics data for EWE-2 (COCOS)	Refined ICRH data in IMAS	Polarimetry data in IMAS	...

Timeline for 2020



	Jul	Aug	Sep	Oct	Nov	Dec
AUG	New requests from EWE-2 and EWE-3	Holidays	New requests	New requests	New requests	New requests
JET	New requests from EWE-2 and EWE-3	Holidays	New requests	New requests	New requests	New requests
MAST	New requests from EWE-2 and EWE-3	Holidays	New requests	New requests	New requests	New requests
TCV	New requests from EWE-2 and EWE-3	Holidays	New requests	New requests	New requests	New requests
WEST	New requests from EWE-2 and EWE-3	Holidays	New requests	New requests	New requests	New requests