

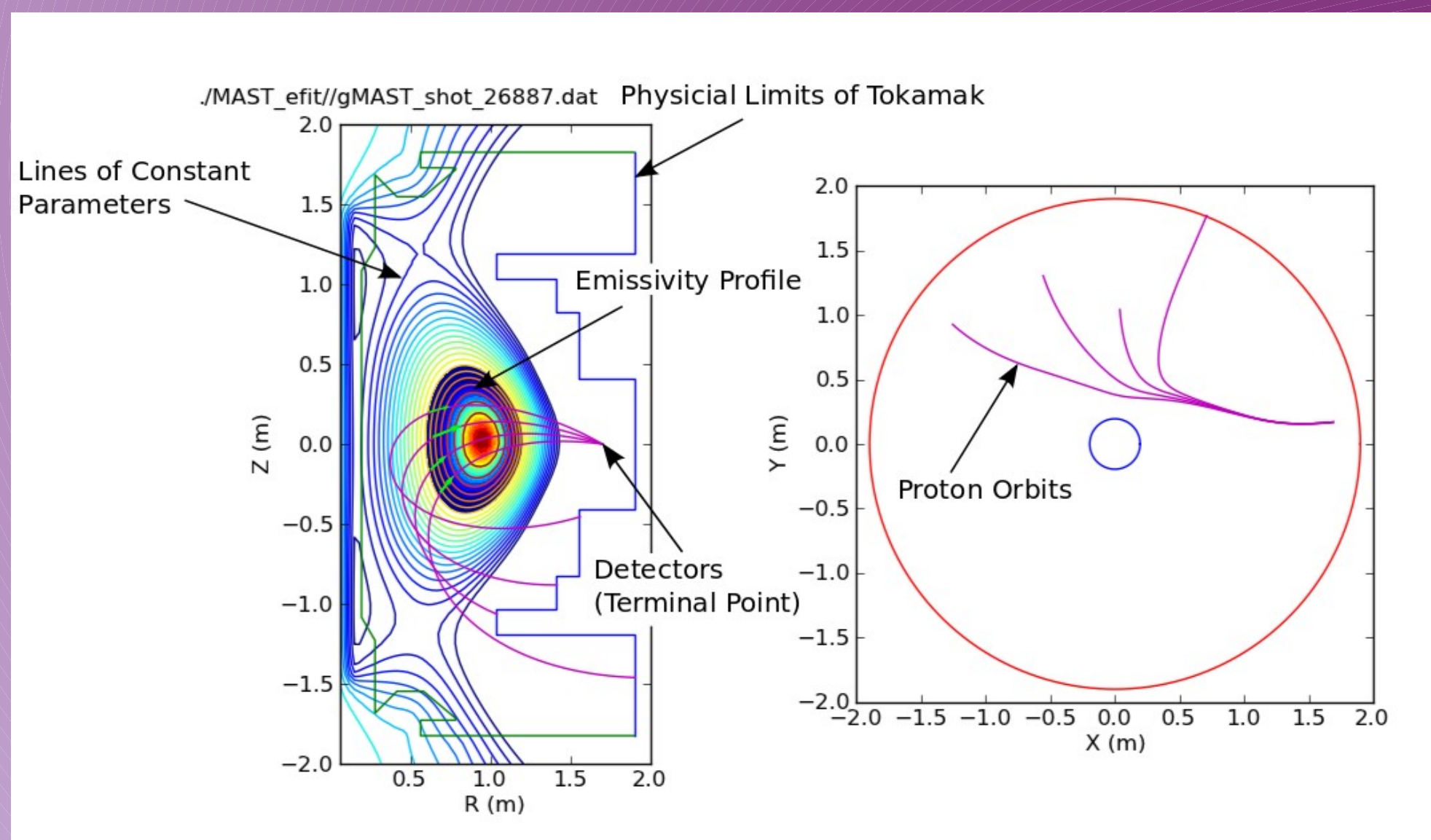
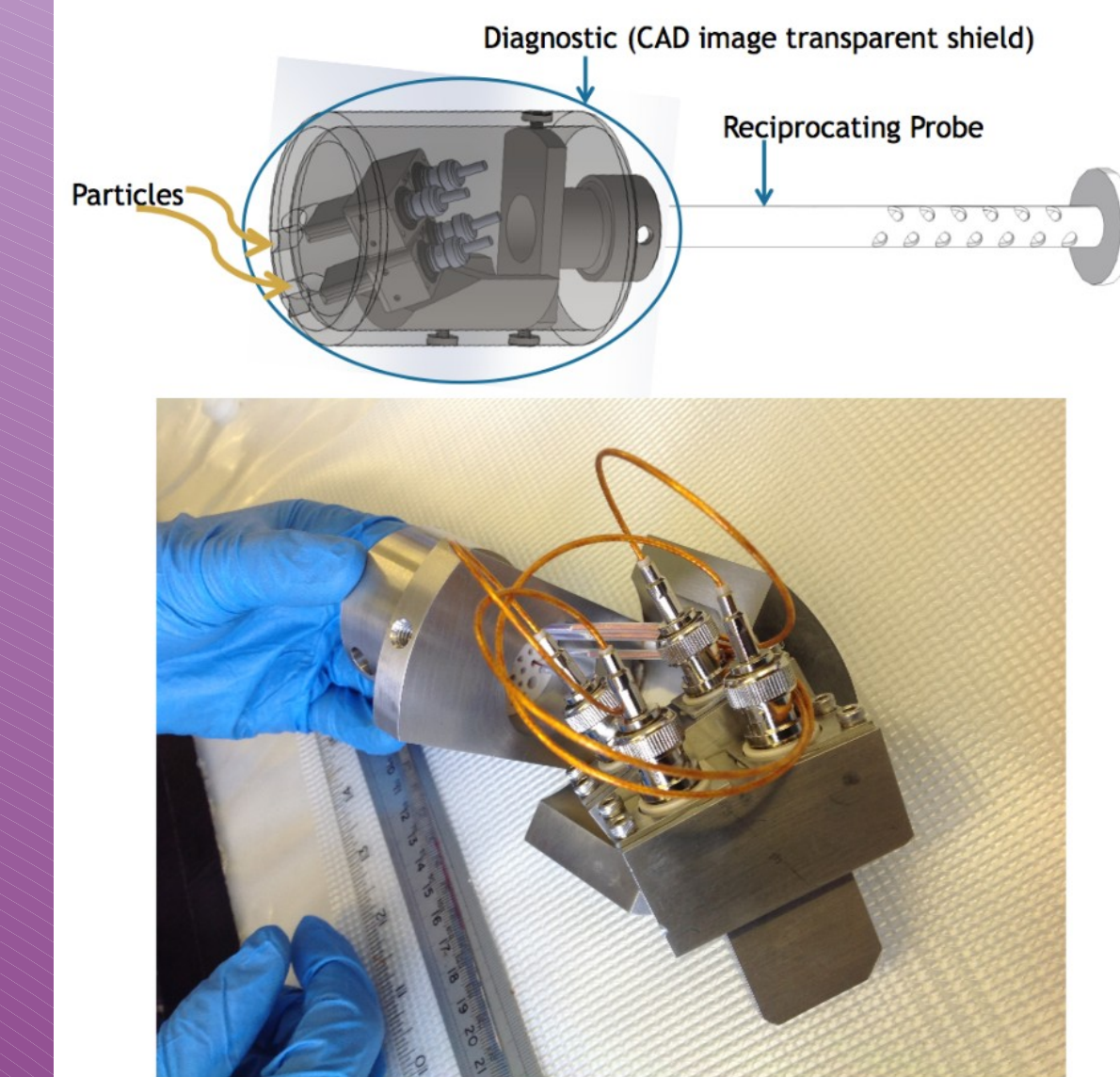
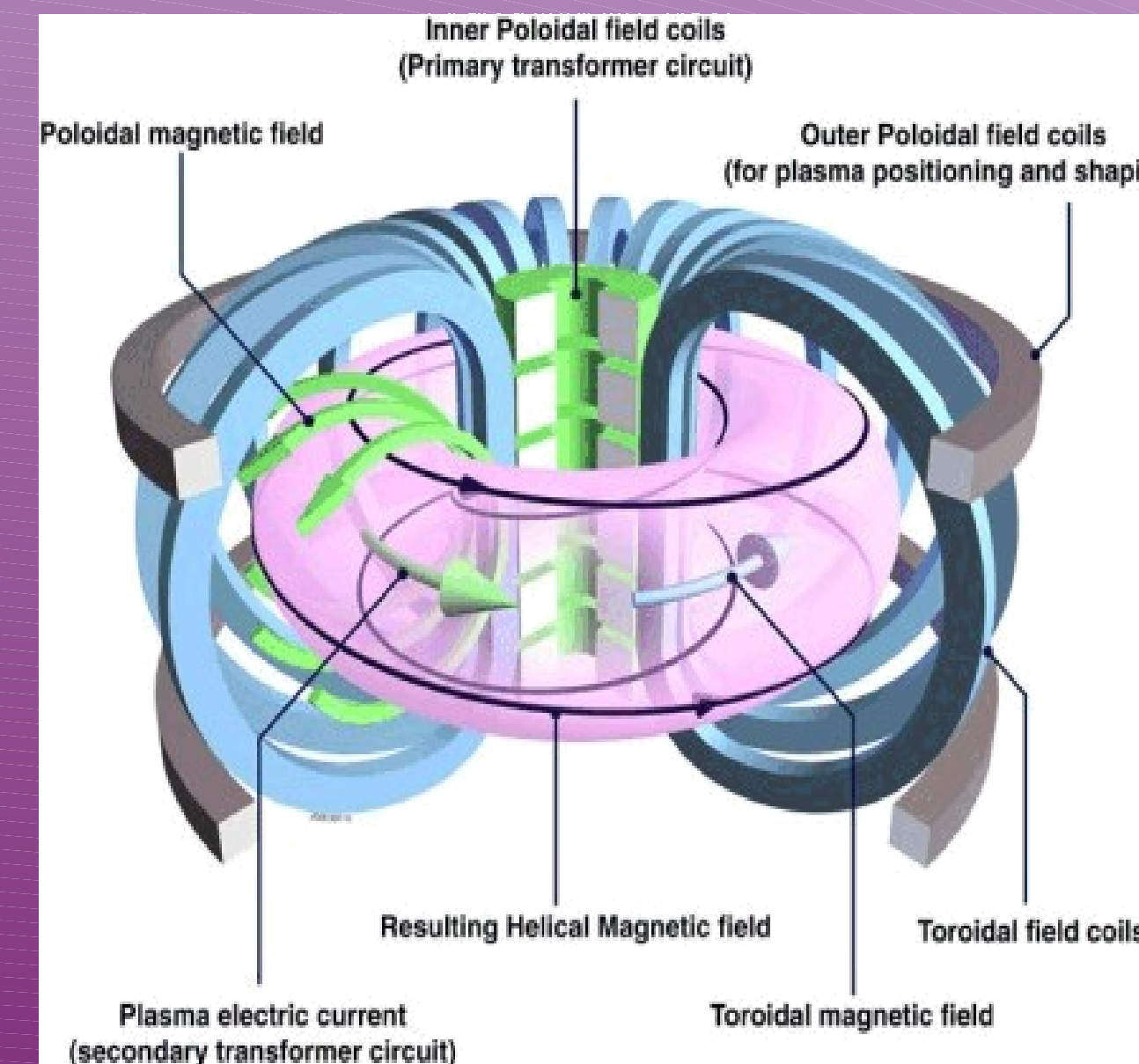
CHARGED FUSION PRODUCT TRAJECTORY SIMULATIONS

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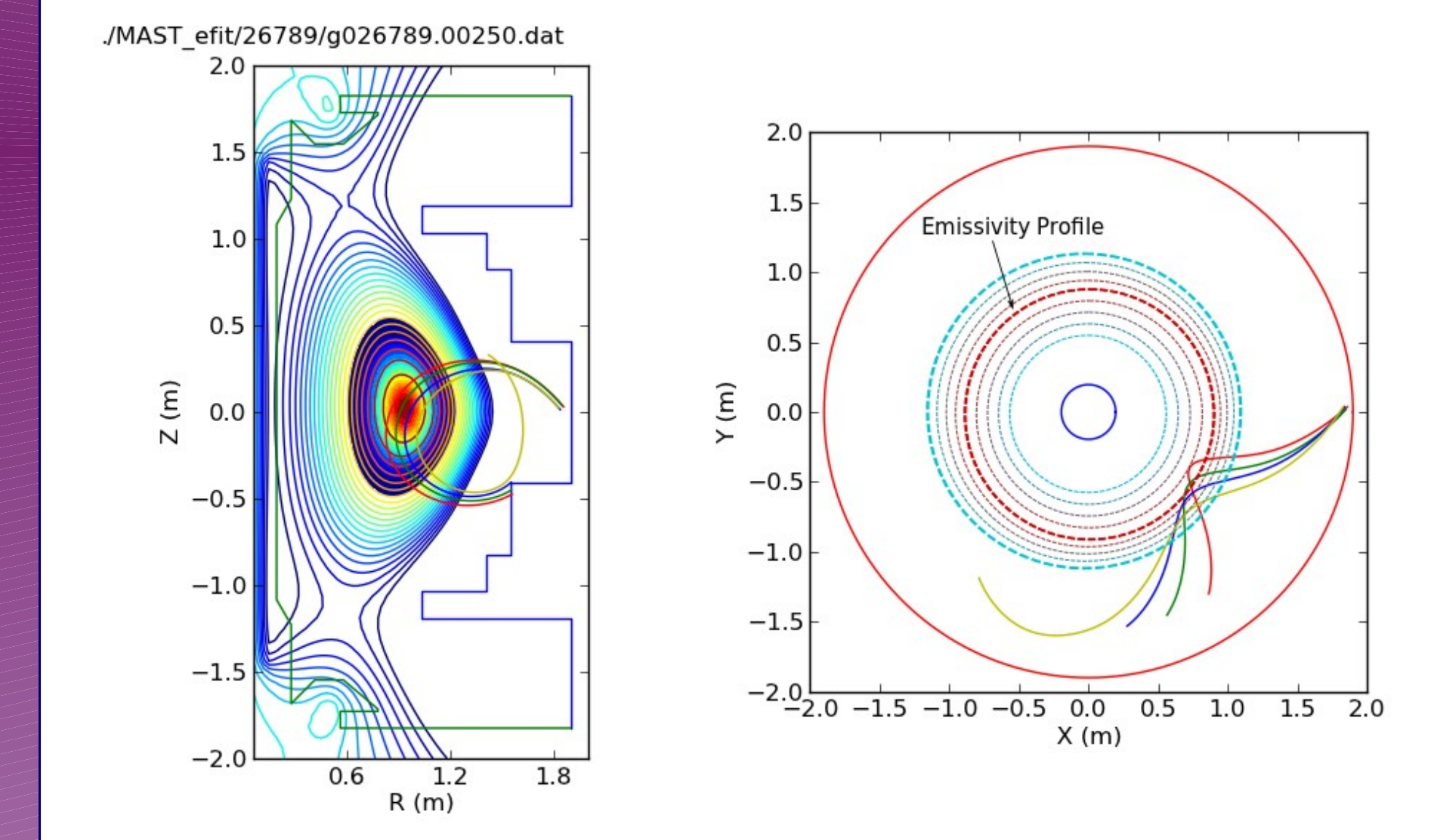
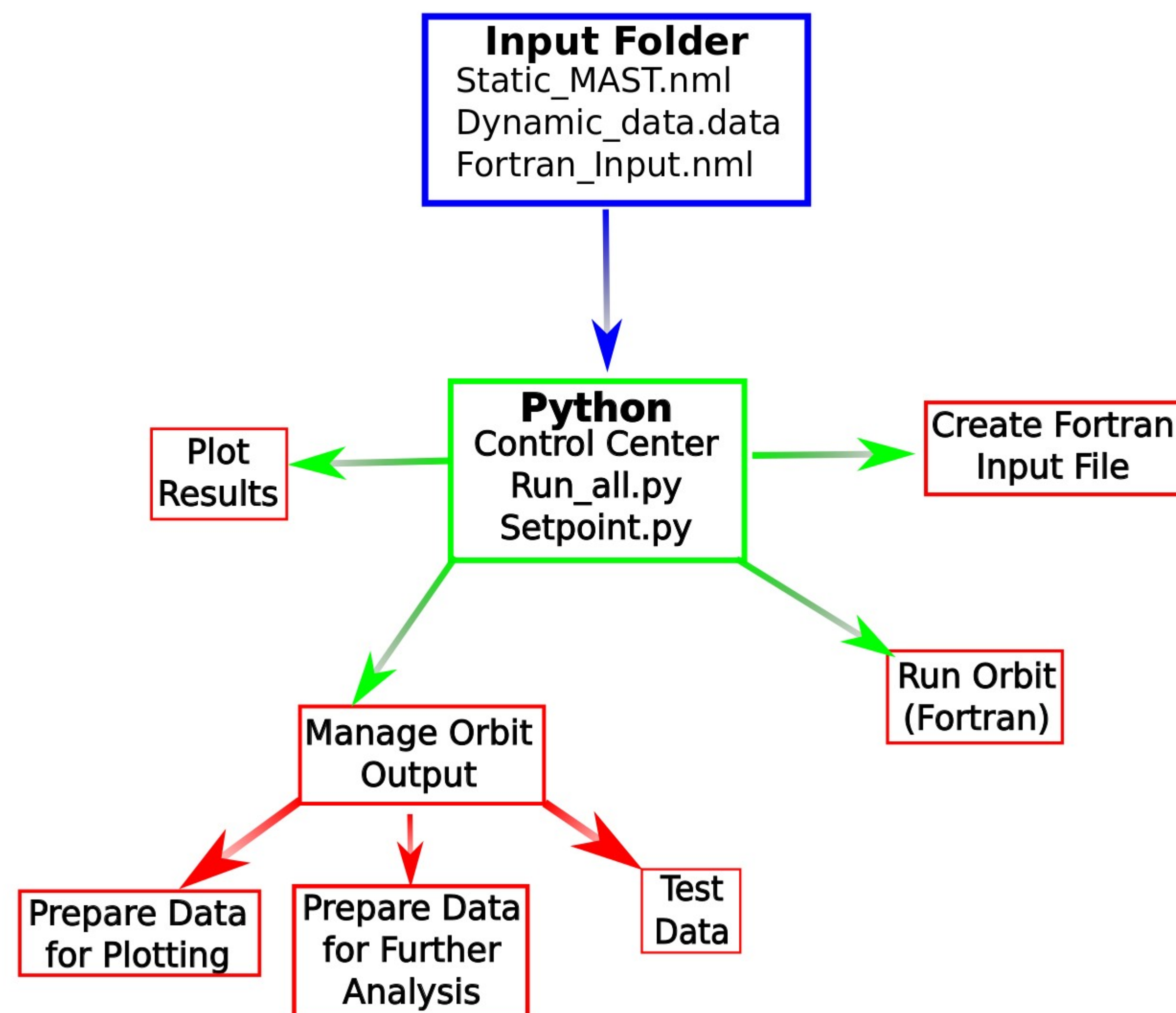


Background

- Plasmas are hot, ionized gases which conduct electricity.
- Tokamaks use magnetic fields to confine plasmas.
- Diagnostics are devices used to study plasmas. Traditionally they detect neutral particles.
- A new charged fusion product diagnostic was developed, and tested in the Mega Amp Spherical Tokamak, to detect charged particles emitted during fusion reactions.
- The goal is to expand the methods of investigating plasmas; particularly, plasma instabilities and the plasma's fusion reaction rates.



Orbit Code Development



Conclusion

- An integral component of the CFPD
- Used to determine the regions of the plasma sampled by the detectors.
- This new version presents a more accurate model of the particle trajectories.
- Further improvements will be altering the simulation of the detectors to represent the circular entrances.

References

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