



MPG activities in 2022:

IBA analysis of JET PFCs – plans and capabilities

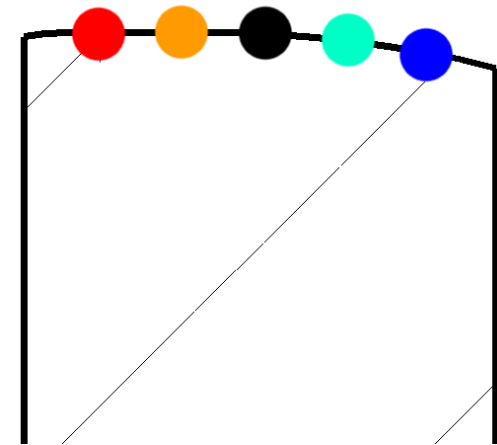
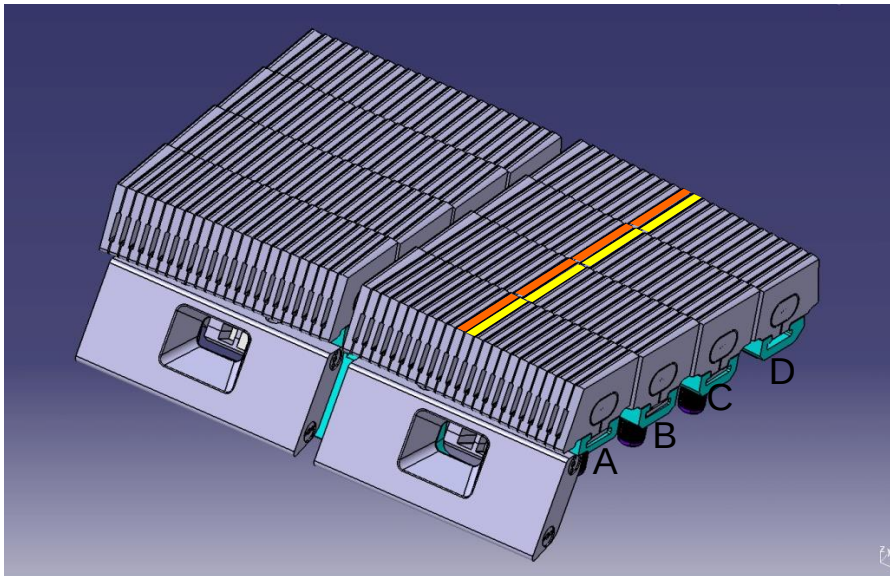
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Analysis of tile 5 lamellae



- Bulk W
- Analysis of whole lamellae is possible
- Analysis of cut-out samples possible
- RBS (H, ^3He , ^4He) for thicker deposits (unlikely) or marker layers (if still available)
- NRA with ^3He : D, Be, C (O if necessary)



Analysis of thick deposits from tiles 0 + 1



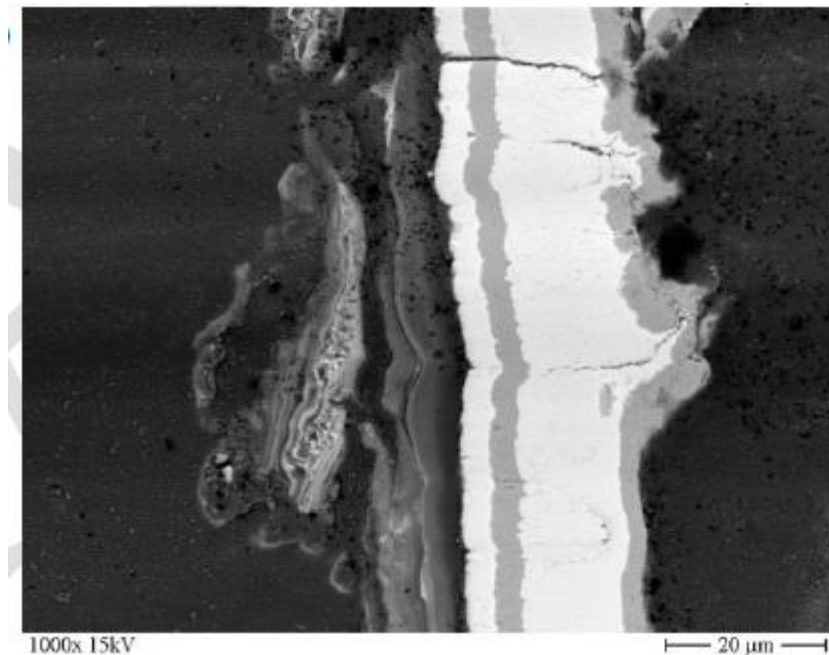
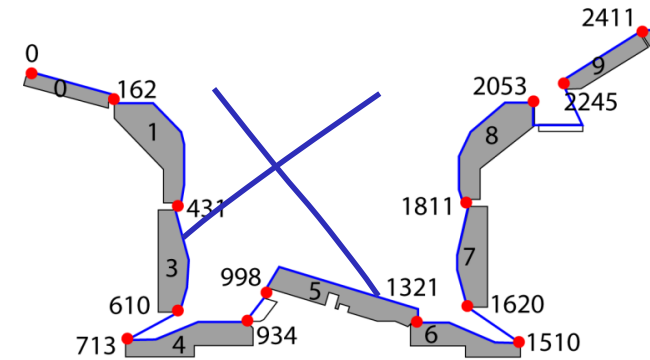
- Thick deposits on inner divertor tiles 0, 1
- Already analysed layer thicknesses up to 30 μm

Rutherford Backscattering (RBS):

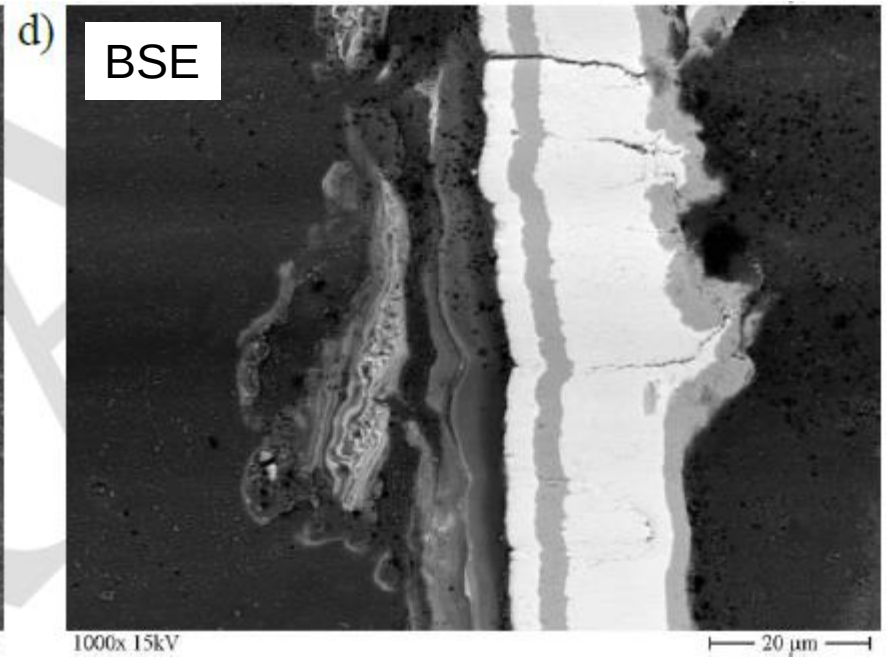
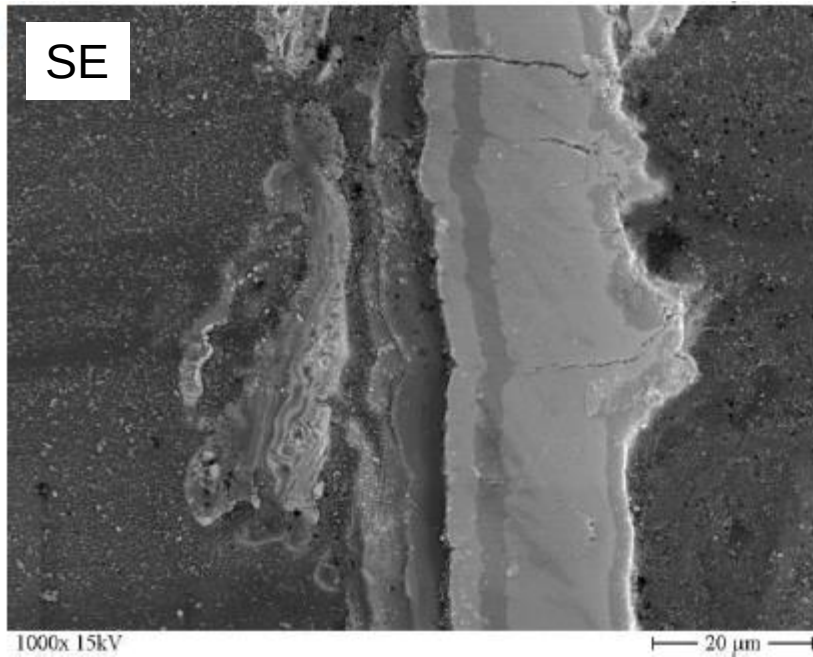
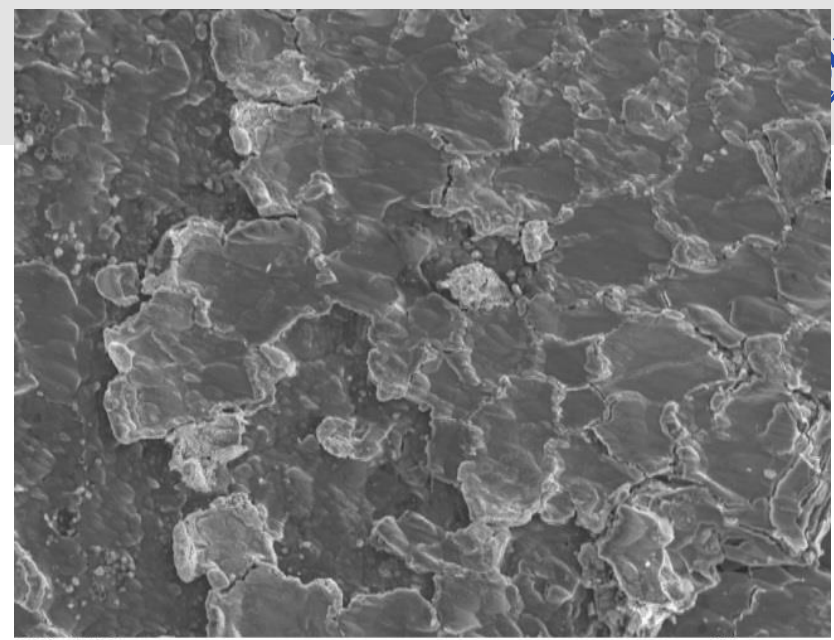
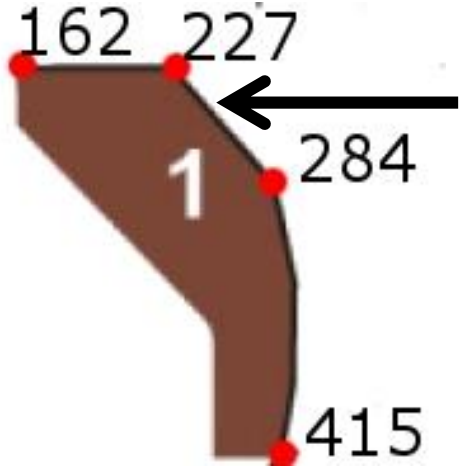
- 4.5 MeV H^+ :
Be layer thicknesses up to $\sim 50 \mu\text{m}$
- Max energy 6 MeV H^+ ,
but potential radiation problems

Nuclear Reaction Analysis (NRA):

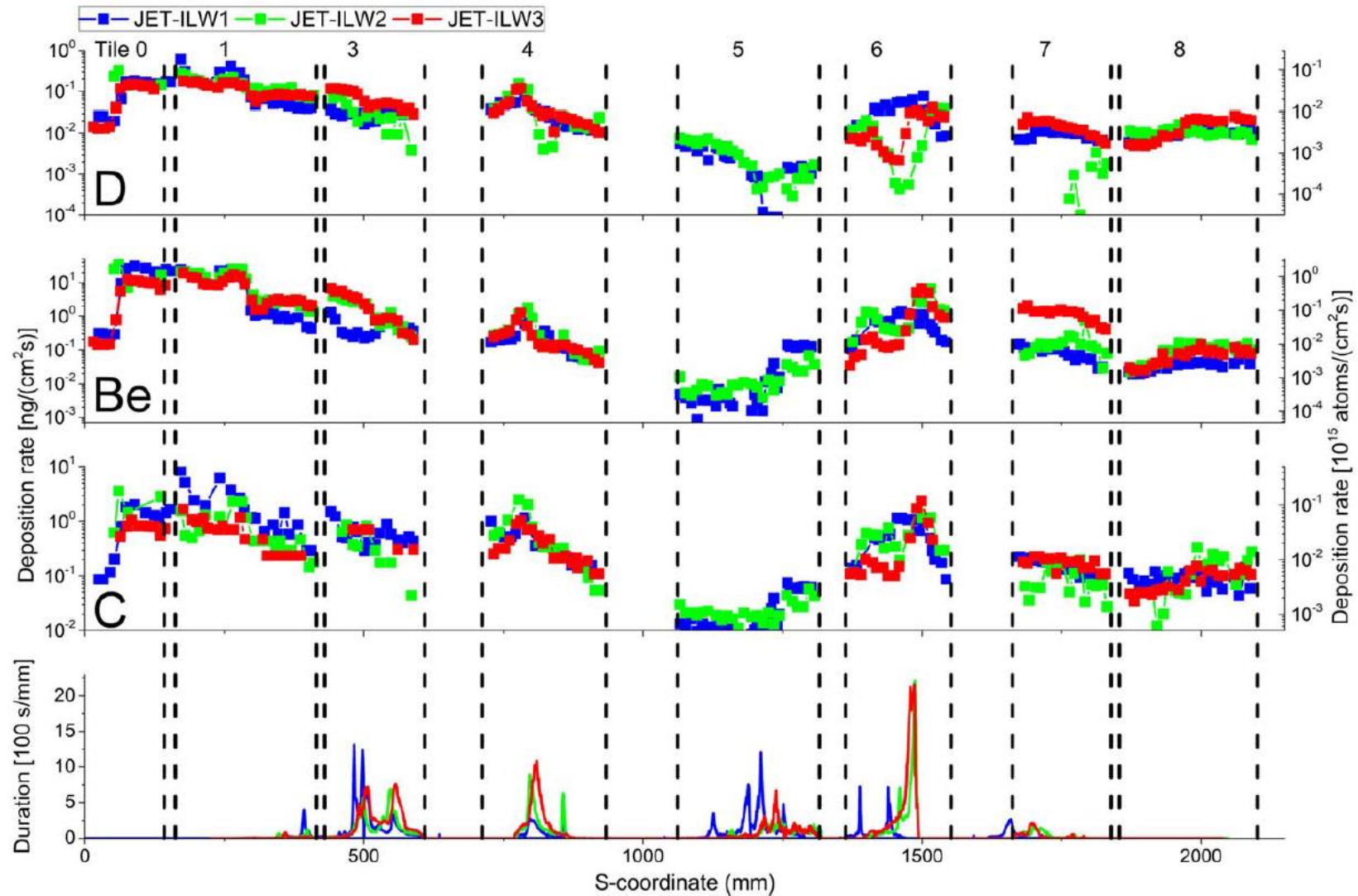
- 6 MeV ^3He :
Be layer thicknesses up to $\sim 45 \mu\text{m}$
- Max energy 9 MeV ^3He ,
but lack of cross-section data and potential radiation problems



Tile 1: Deposits



Deposition in JET-ILW1 to 3



S. Krat et al., Phys. Scr. T171 (2020) 014059



- IBA analyses of lamellae from tile 5
- IBA analyses of thick deposits from tiles 0, 1

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Nuclear Reaction Analysis (NRA):

- 6 MeV ^3He : Be layer thicknesses up to $\sim 45 \mu\text{m}$
- Max energy 9 MeV ^3He , but lack of cross-section data and potential radiation problems