Notes on the Fusiondiag CPO

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The Fusiondiag CPO was divised to store diagnostic data that has a direct relation to fusion products namely neutrons and gamma rays. It is tentatively optimized to store 2D camera derived emissivity for particular energies of the emitted detected particle flux. Since we might have multiple detected energies with the same camera settings and one might have more than one camera at a given poloidal cross section, the best strategy was to use arrays of structures. There is also a ***codeparam*** element on the schema since this CPO might also be used in the future to store synthetic data from synthetic modules to be integrated by EDRG.

Each "*source*" structure in the array contains *fus_product* and *reaction* elements to store information on the type of particle detected and the nuclear reaction involved. The ***counts*** stores the actual raw experimental data (on the *measure* element), the geometry settings of the lines of sight (same as for interfdiag) and the intregrand expression.

The post-processed data, either 1D (mid-plane presumably) or 2D are accommodated in ***emissivity1d*** and ***emissivity2d***.