

DMX

Broad-band X-ray Spectrometer

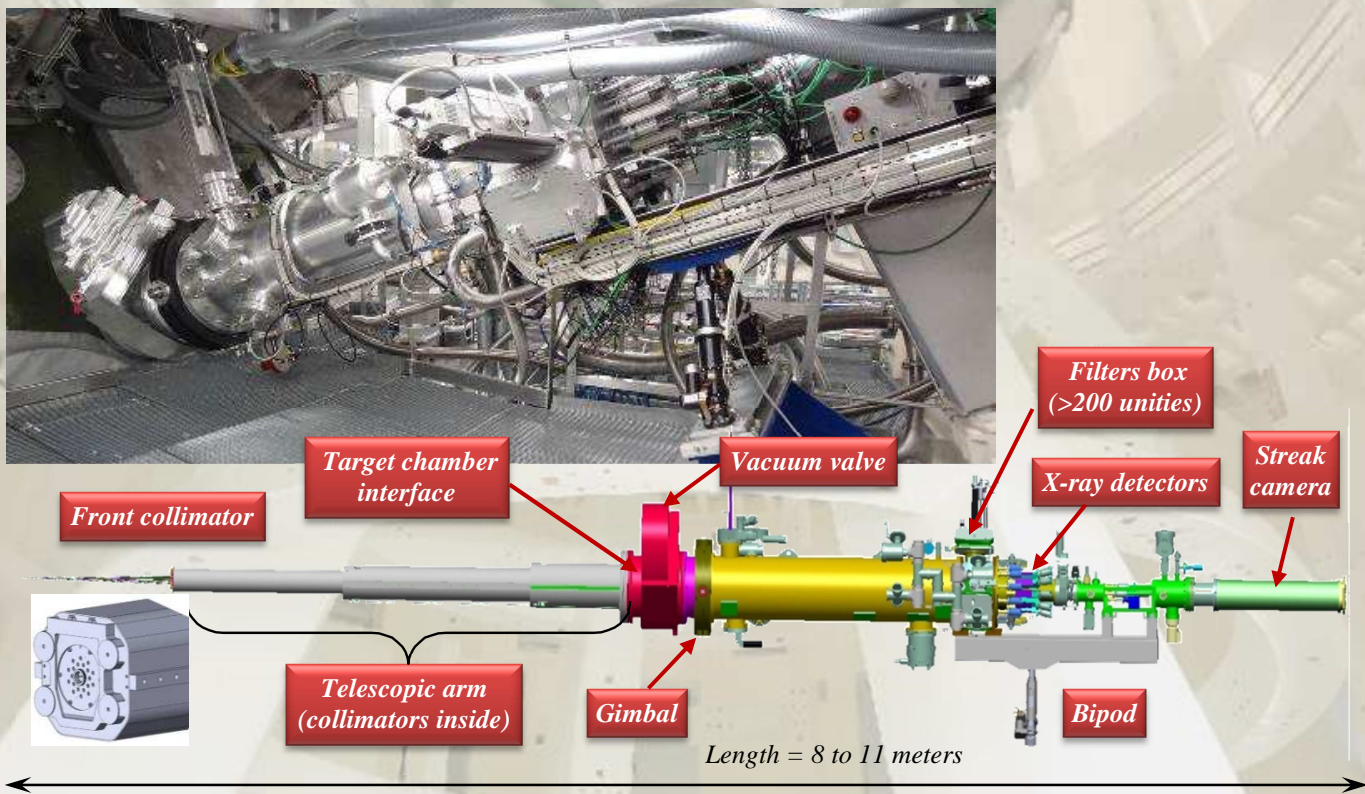
DMX is a primordial diagnostic for hohlraum energetic performance measurements. It is composed of a set of four diagnostics:

- a time resolved soft X-ray large band spectrometer made of 20 measurement channels combining mirror, filters and X-ray diodes,
- a time resolved soft X-ray spectrometer with gratings and streak camera,
- a time resolved soft X-ray laser entrance hole imaging with X-ray diodes array,
- a time resolved X-ray power measurement spectrally integrated.

Beside standard soft X-ray measurements devoted to hohlraum energetics, the filtration of the channels could be adapted for specific purpose, such as conversion efficiency characterization of backlighters.

Multilayer mirrors with adjusted spectral bandwidth are included for flat-response X-ray channels.

DMX is set up in the target chamber at fixed place, with specific mechanics.



Characteristics	Spectral range (resol. E/ ΔE)	Spatial resol. (μm) / Field of view (mm)	Time resolution (ps) / Dynamic (ns)	Setting/Operational
20 time-resolved broad-band channels	0.03 - 20 keV (5)	- / 5	150 / 10^5	Specific mechanics
Grating X-ray spectrometer $\Delta\lambda < 1 \text{ \AA}$	0.1 - 1.5 keV 1.5 - 4 keV		17 / 2 to 120 / 25	
Laser Entrance Hole Imager	0.5 - 2 keV	100 / 5	500 / 20	2015
X-ray Power	0.1 - 2 keV 2 - 4 keV 4 - 6 keV	- / 5	150 / 10^5	