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## 6.46 Results of commissioning experiments using the NIF Optical Thomson Scattering VUV Spectrometer

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A time-resolved, vacuum-ultra-violet (VUV) spectrometer diagnostic has been implemented on the National Ignition Facility (NIF). This spectrometer is designed to make Optical Thomson Scattering (OTS) measurements of the key plasma parameters in under-dense Inertial Confinement Fusion Hohlraum plasmas. We present the results of the initial commissioning experiments which were carried out in 2016/2017. These experiments include  $3\omega$  (351nm) Thomson scattering measurements of the plasma parameters of plasma plumes launched via laser-heating a plastic disc, and background VUV emission measurements in ICF relevant hohlraum target configurations. We will discuss the results, as well as ongoing work to improve the diagnostic performance in preparation for commissioning of the forthcoming  $5\omega$  (211nm) OTS probe laser, which is scheduled for commissioning in late 2018.

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