

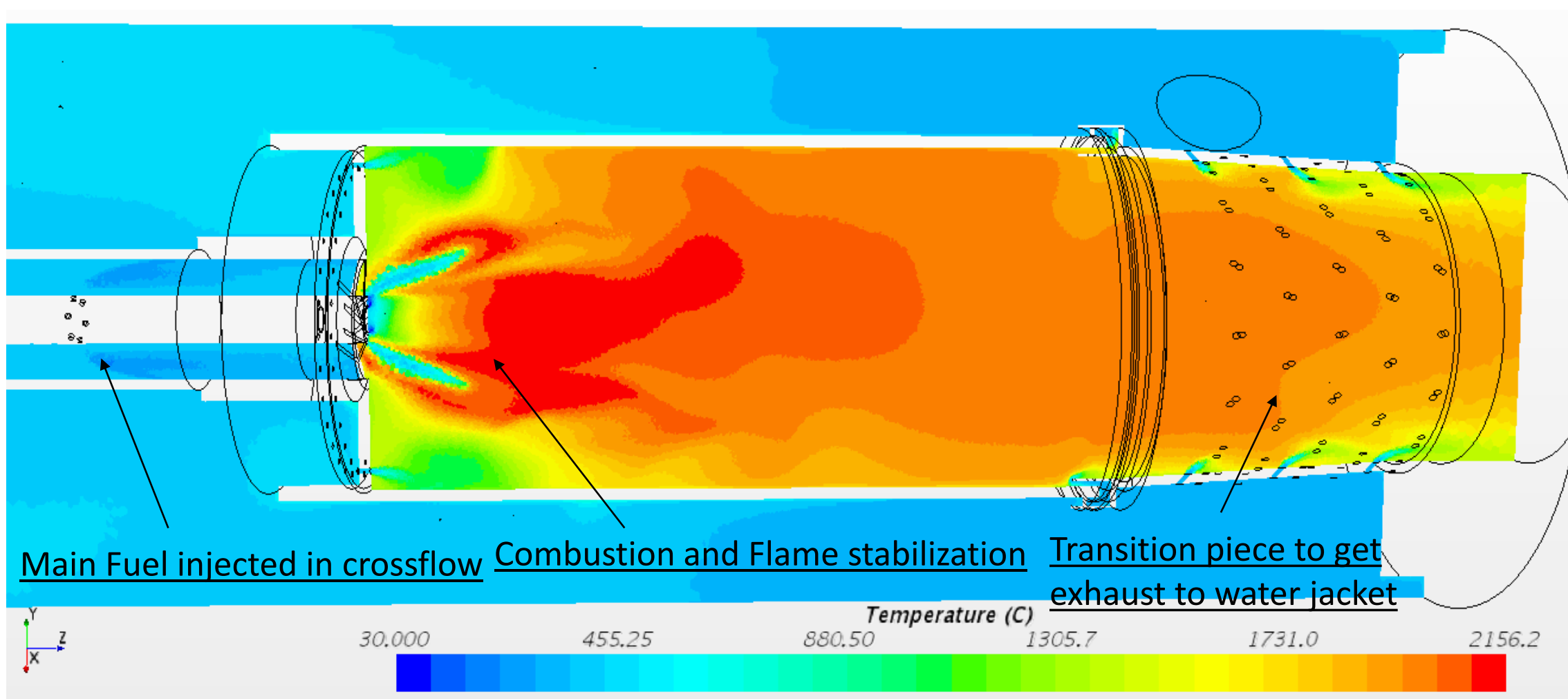
## Rig Capabilities:

- Capable of continuous operation with pressure up to 10 bar at a flow rate up to 1.2 kg/s
- Capable of turbine inlet temperatures of 1700°C
- Water quench system to cool exhaust gas before back pressure valves
- 3 – 5x8” Rectangular optical access windows at dump plane

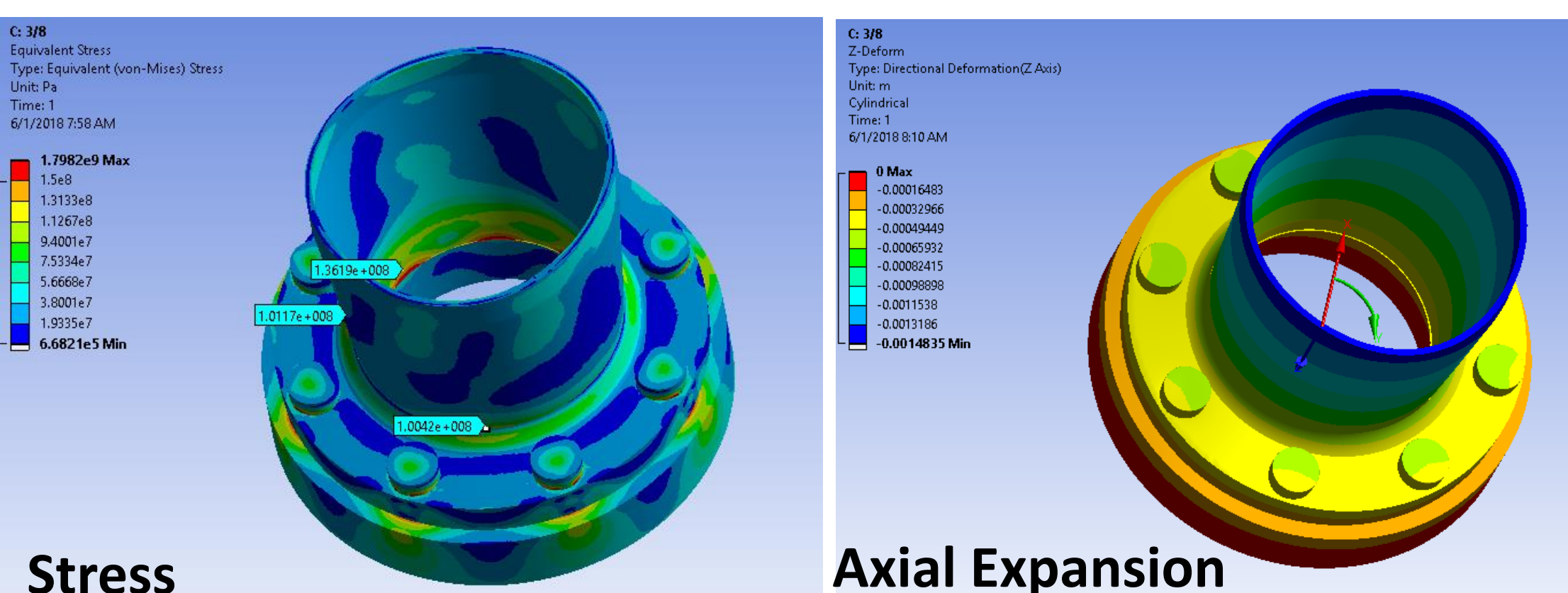
## Design and Analysis:

- Full conjugate heat transfer with reacting flow was conducted to determine metal temperatures
- Using temperatures, structural analysis was conducted on critical components for fabrication
- Water quench simulation to determine evaporated content and temperature approximation

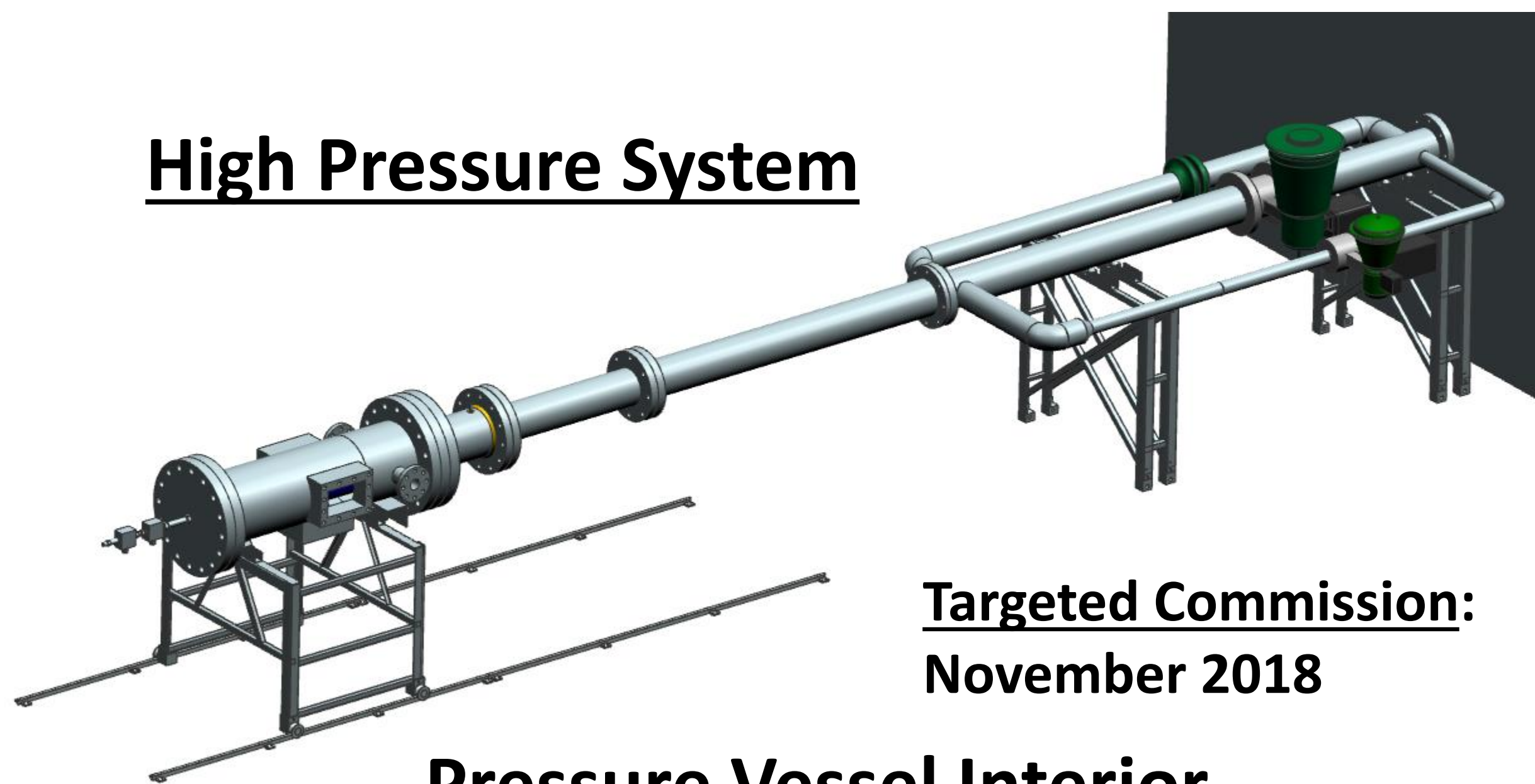
## Conjugate Heat Transfer with Combustion



## Structural Analysis

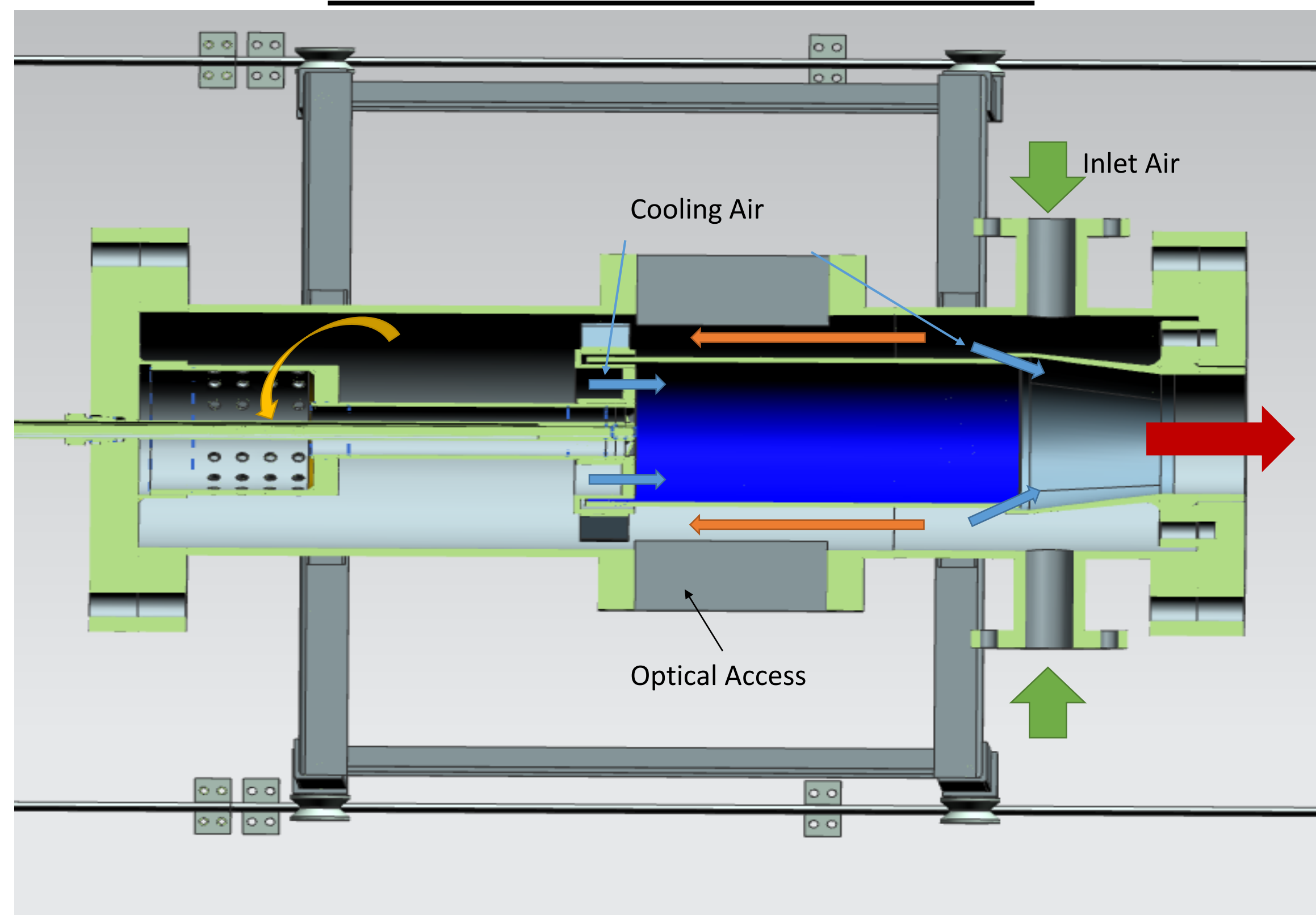


## High Pressure System

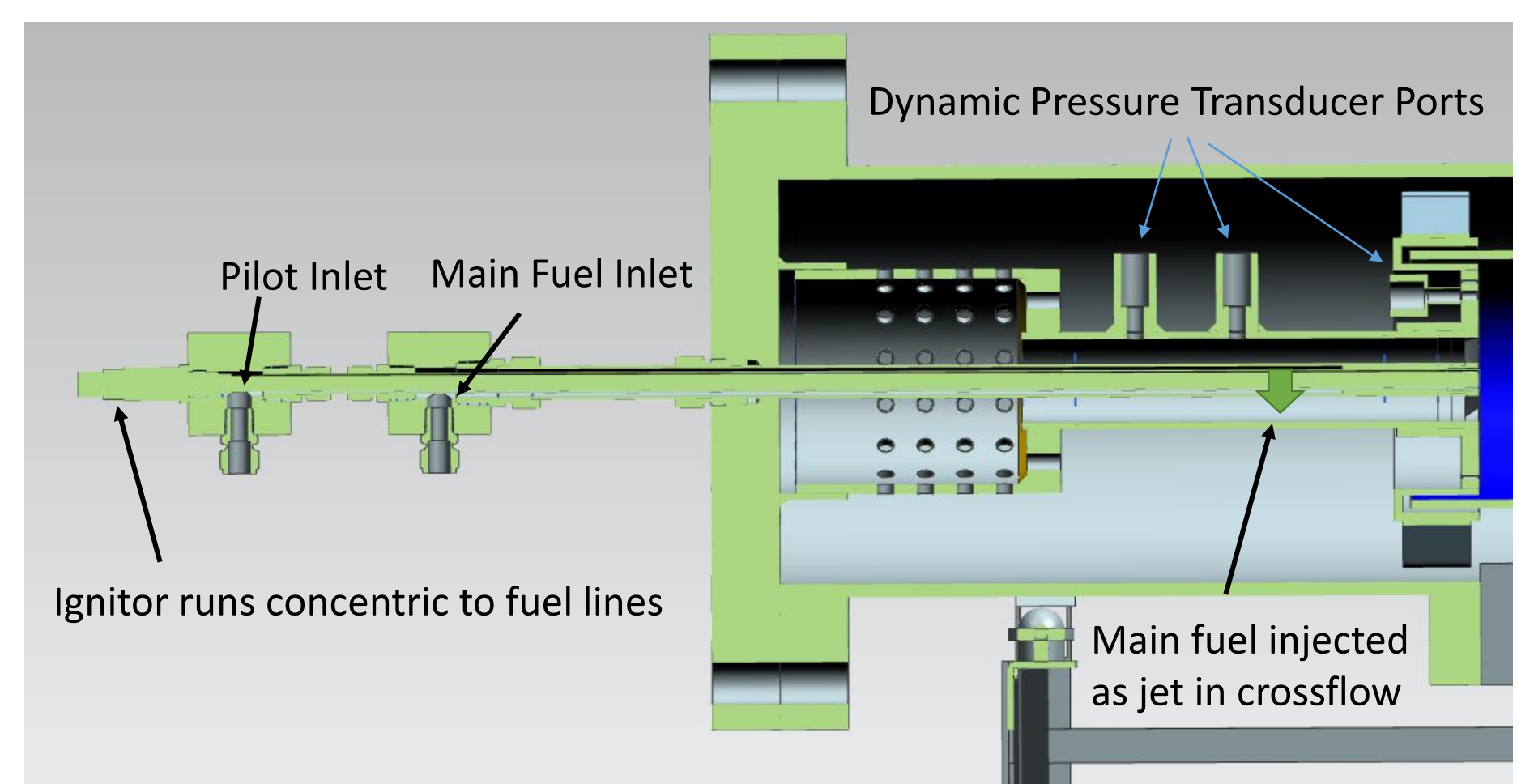


**Targeted Commission:**  
November 2018

## Pressure Vessel Interior



## Ignitor / Fuel Injection Assembly



## Water Quench System

