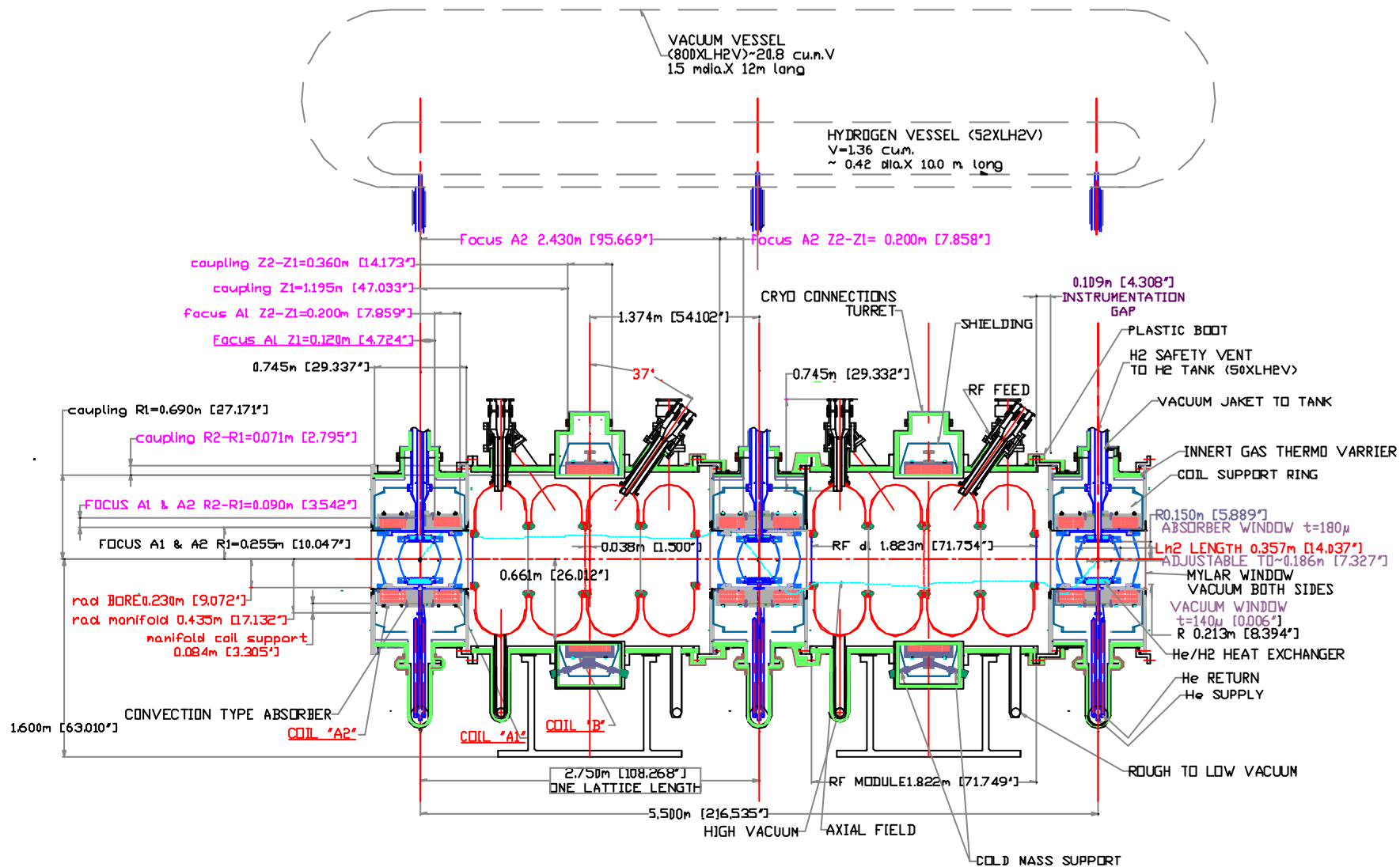


MICE Video Conference

November 11, 2002

Safety Scheme on the Facility
Integration
Edgar Black
IIT

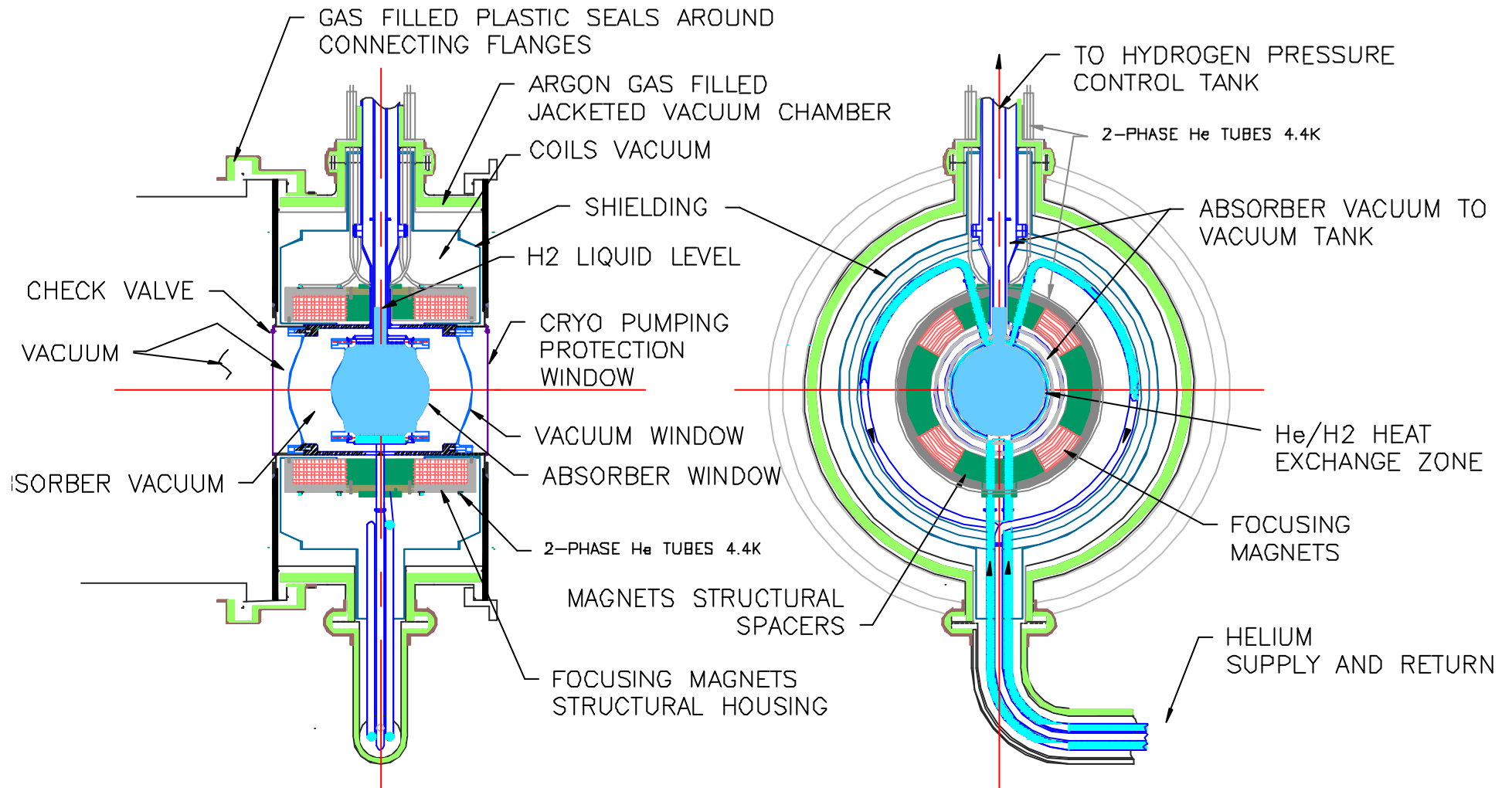


200 MHz MICE COOLING EXPERIMENT DESIGN

R. B. Palmer 10/17/02 Version

E.L.Black IIT
GEN. REV. 11/8/02

FOCUSING MAGNETS HYDROGEN ABSORBER INTEGRATION DETAIL



Safety with Cryogenic Systems

- Experience has shown that cryogenic fluids can be used safely in industry as well as in sophisticated laboratories. The safety aspects of handling this fluids can be divided into four main categories.
 - 1 Physiological (personnel exposure)
 - 2 Suitability of materials and construction
 - 3 Explosions and flammability
 - 4 Excessive pressure

Physiological Hazards

A. Frostbite

B. Asphyxiation

Suitability of materials and construction techniques

- Brittle Fracture
- Thermal Stress
- Overpressure
- Vapor Pressure
- Secondary Accidents
- Oxygen Compatibility

Explosions and Flammability

- Flammability and Detonability Data

Excessive Pressure Gas

- Special considerations for Hydrogen
 - A- Fire and explosion Hazards
 - B- Safety Procedures
 - C- Equipment
 - D- Building Areas
 - E- Liquid Hydrogen Systems and Equipment Cleaning
 - F- Transfer Operations
 - G- Emergency Procedures
 - H- Disposal of Liquid Hydrogen