

HEBT Momentum Collimator Discussion Summary



- **Present design:**
 - A simplified version of the present HEBT & Ring collimators
 - Base-lined for 2 kW (0.1%), capable of taking 10 – 20 kW (0.5% - 1%) power
- **Discussion:** can we use a simple dump? Is it worth the change?
- **Issues:**
 - This collimator is taking continuous beam, not a regular dump for beam tuning
 - Momentum halo missing HEBT collimator will miss injection dump ending inside ring
 - No quads available to blow up beam spot on a dump
 - Linac phase setting, missing cavity operation, ...
 - Detailed study not yet done

HEBT Momentum Collimator Discussion Summary (2)



- **Comparison:**
 - ISIS: momentum collector used to intercept tail at injection
 - LAMPF/PSR: LAMPH has device to detect beam escaping bucket (Stovall), seeing “plenty” momentum tail; PSR dump designed for 2%
 - ESS: HEBT has 6 collimators including 2 momentum collimators; momentum collimators taking a total of 0.2% (10kW) power
- **Summary**
 - Leave the SNS collimator design as is for now
 - Consider expansion capability beyond 2 kW (0.1%) baseline