**Punch list for Isotope run**

Oct. 9, 2019 kj

Complete review action items & get beam authorization to 1X

Run CW beam to 1G dump 40 µAmp

HCO instrumentation

Drive laser repairs – run at 4 MHz

Tune all cavities – confirm FL02 tunes work

Finish Isotope cooling connections & instrumentation

Write checkout procedures

Connect 1X instrumentation to HR mirror can (extend cables)

Tie critical interlocks into MPS

Change names in EPICS – reusing IR HR mirror instrumentation

**LCLS-II Items**

Install CM 20 Mid December after isotope run

Testing will continue this spring with a single module

Cooldown in January, commission in Jan/Feb

LLRF development Feb - April

Remove in May 2020

Remove second 8 SSAs - ~January remove (east end) solid state amps, pack & ship back to SLAC

Also circulators & couplers

Cryo racks for module # 1 ???

Testing will resume with LCLS-II HE in ~April 2021