FCAL-LED vs Raw Data

GlueX calorimeter woking group

Susan Schadmand, Wednesday, May 12, 2021

FCAL-LED vs DATA
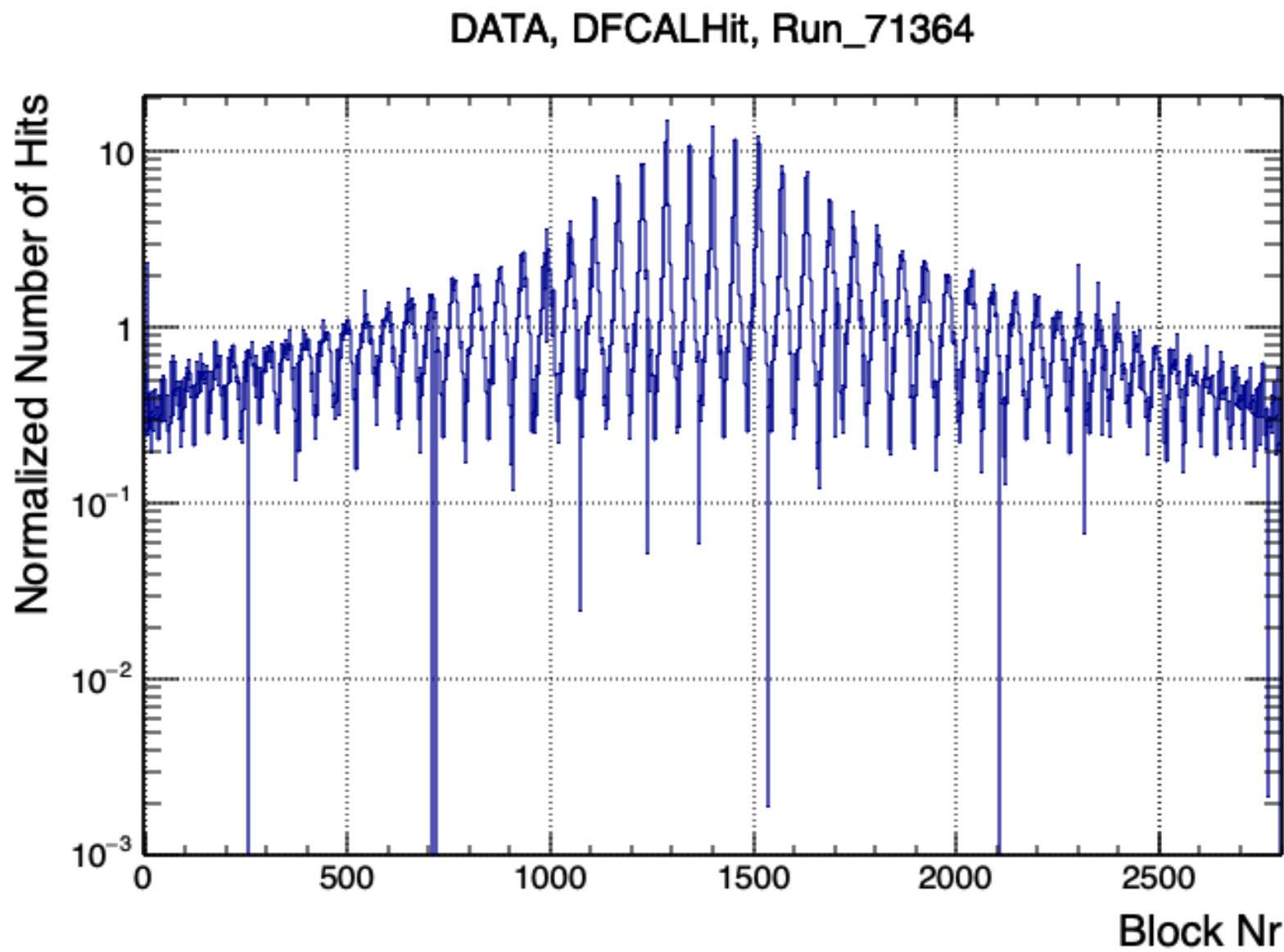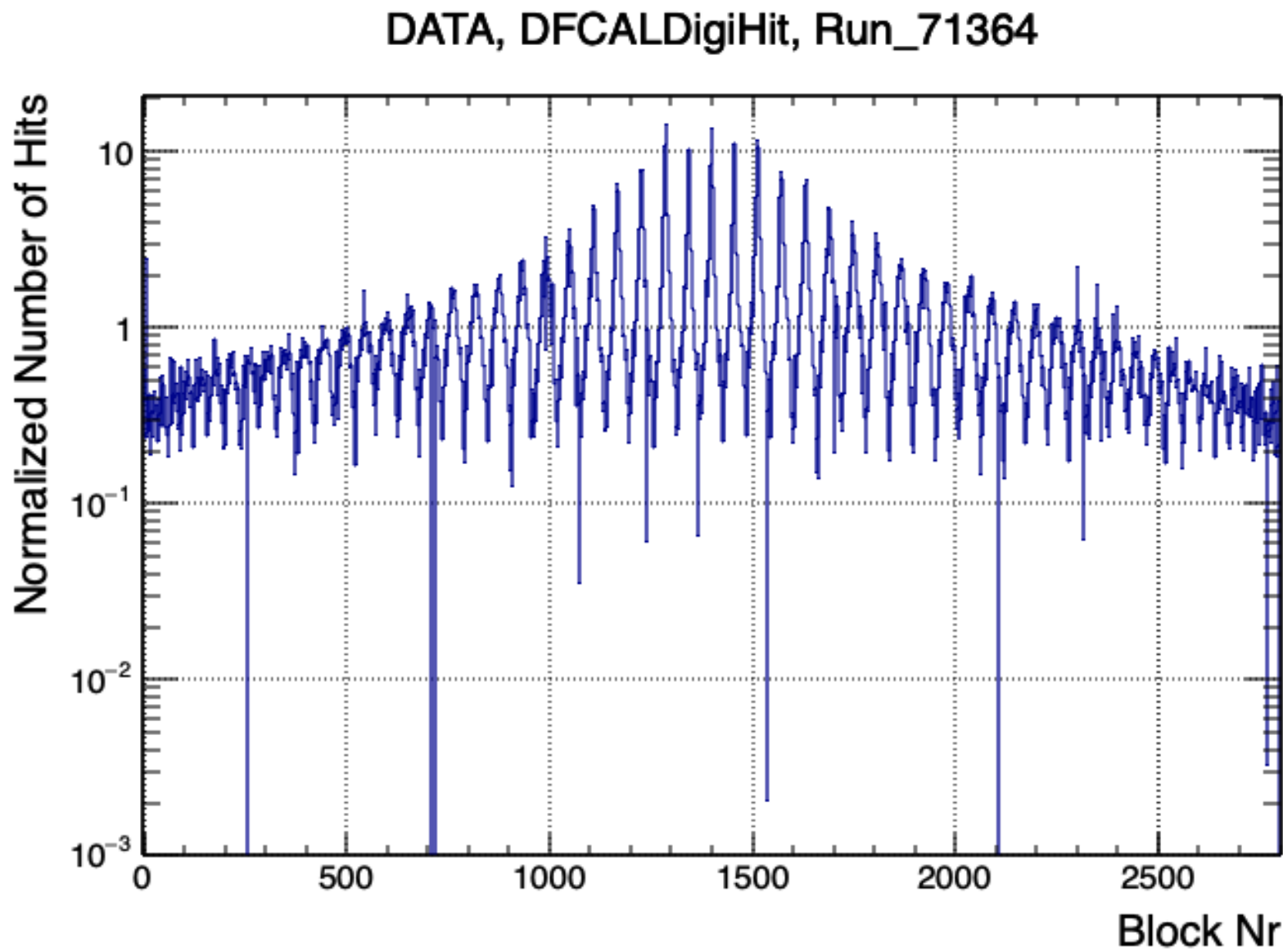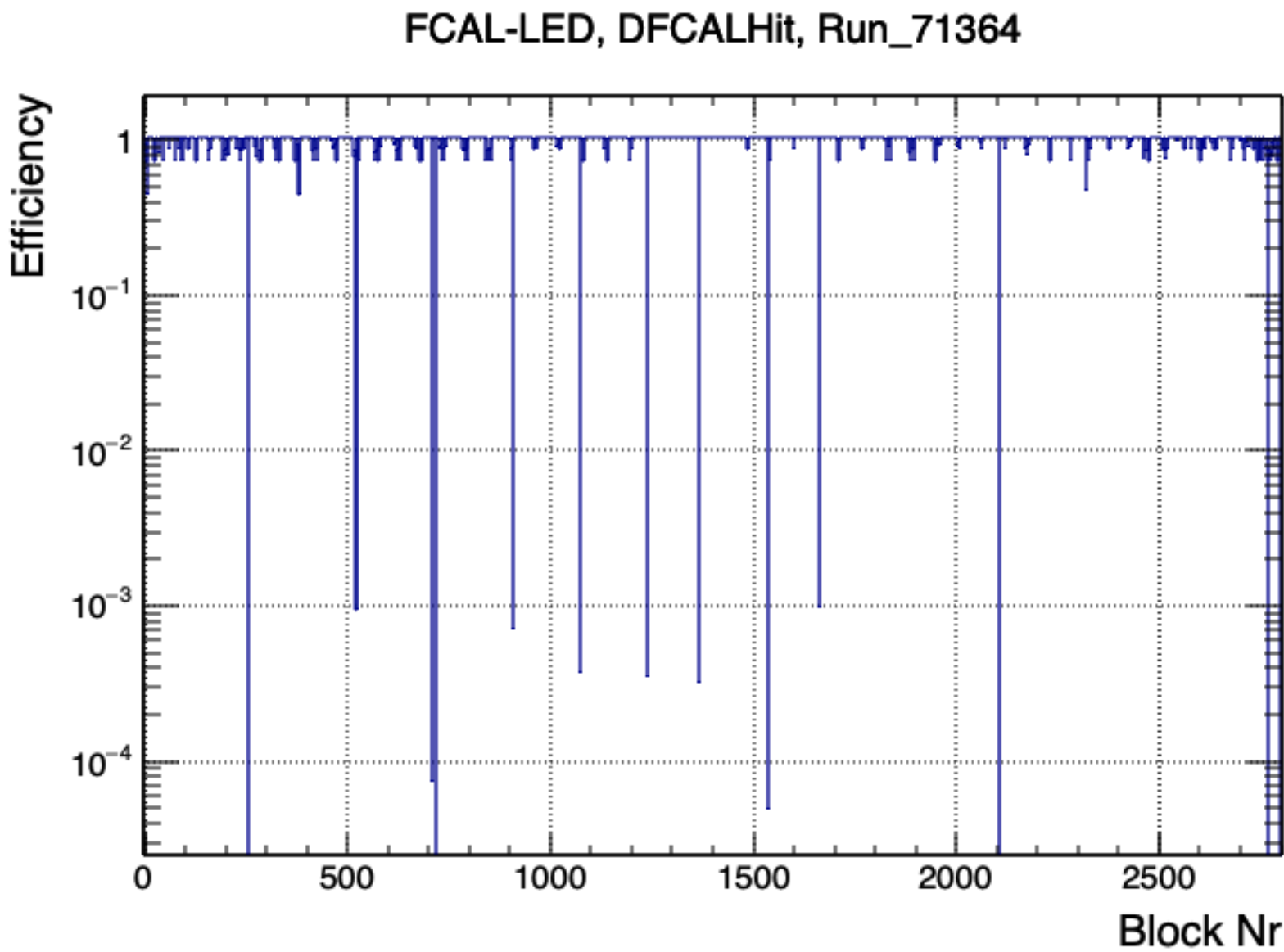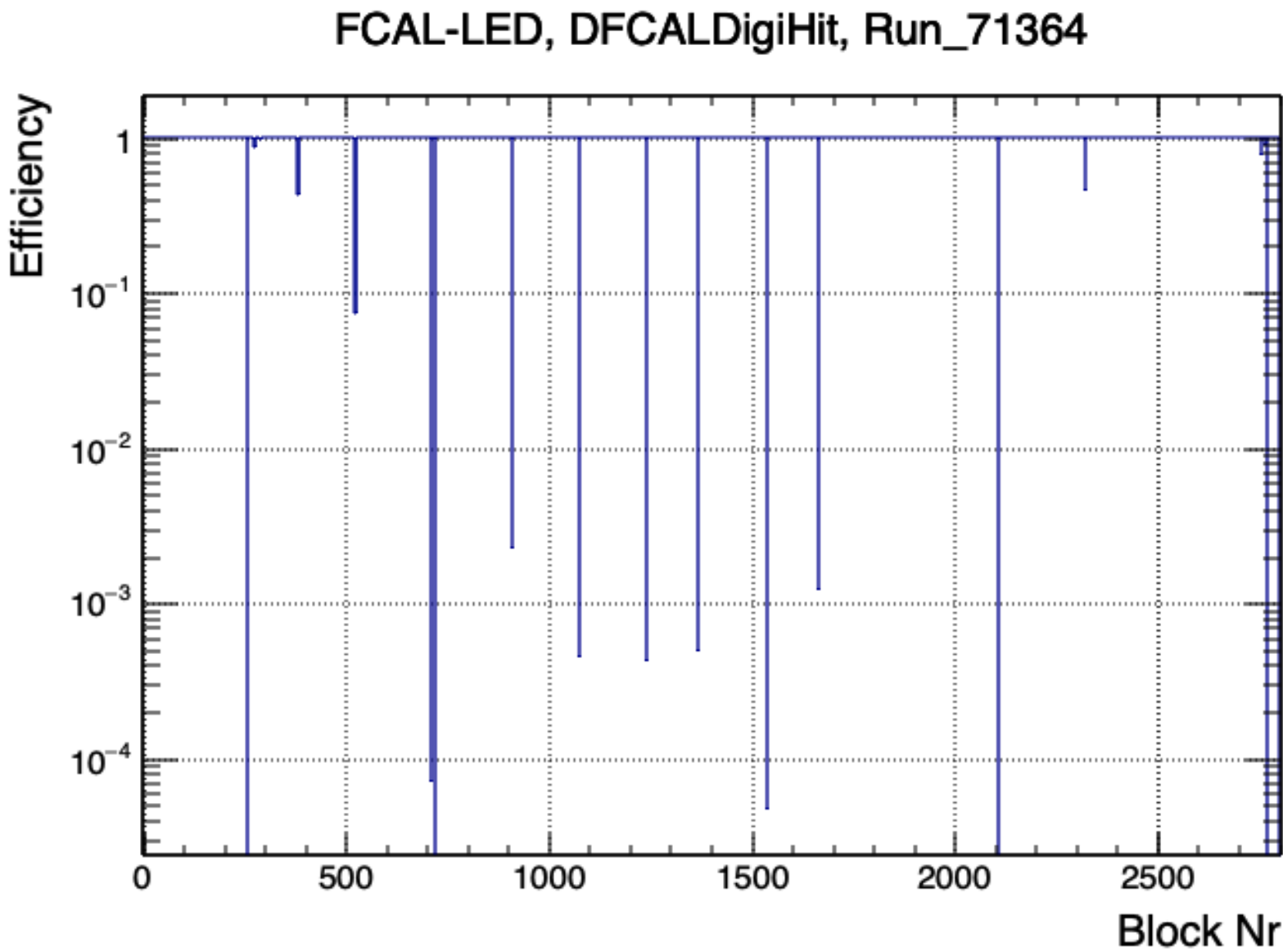
RunPeriod-2019-11 Batch 1
raw data Run071364_026-115

DFCALDigiHit (**lhs**) and DFCALHit banks (**rhs**) with
LED (**top**) and DATA (**middle**) triggers

• LED:
   sum of ADC integrals, range corresponding
   to the 5 LED settings

• DATA: sum of ADC integrals > 0

hit patterns:
histogram at most one entry per block per event

• small differences between hit banks

• overall agreement LED and data

FCAL-LED vs Raw Data

RunPeriod-2019-11 Batch 1
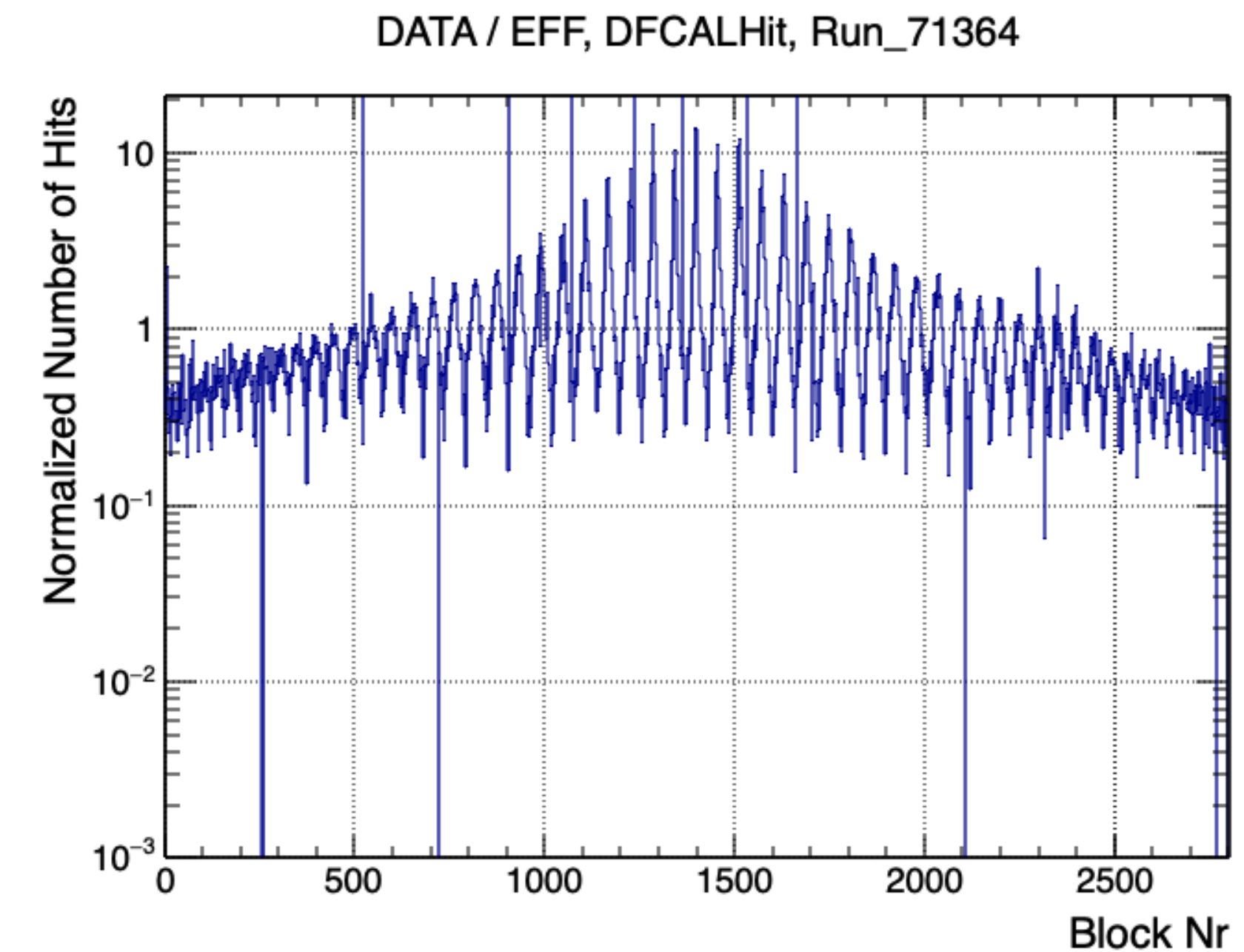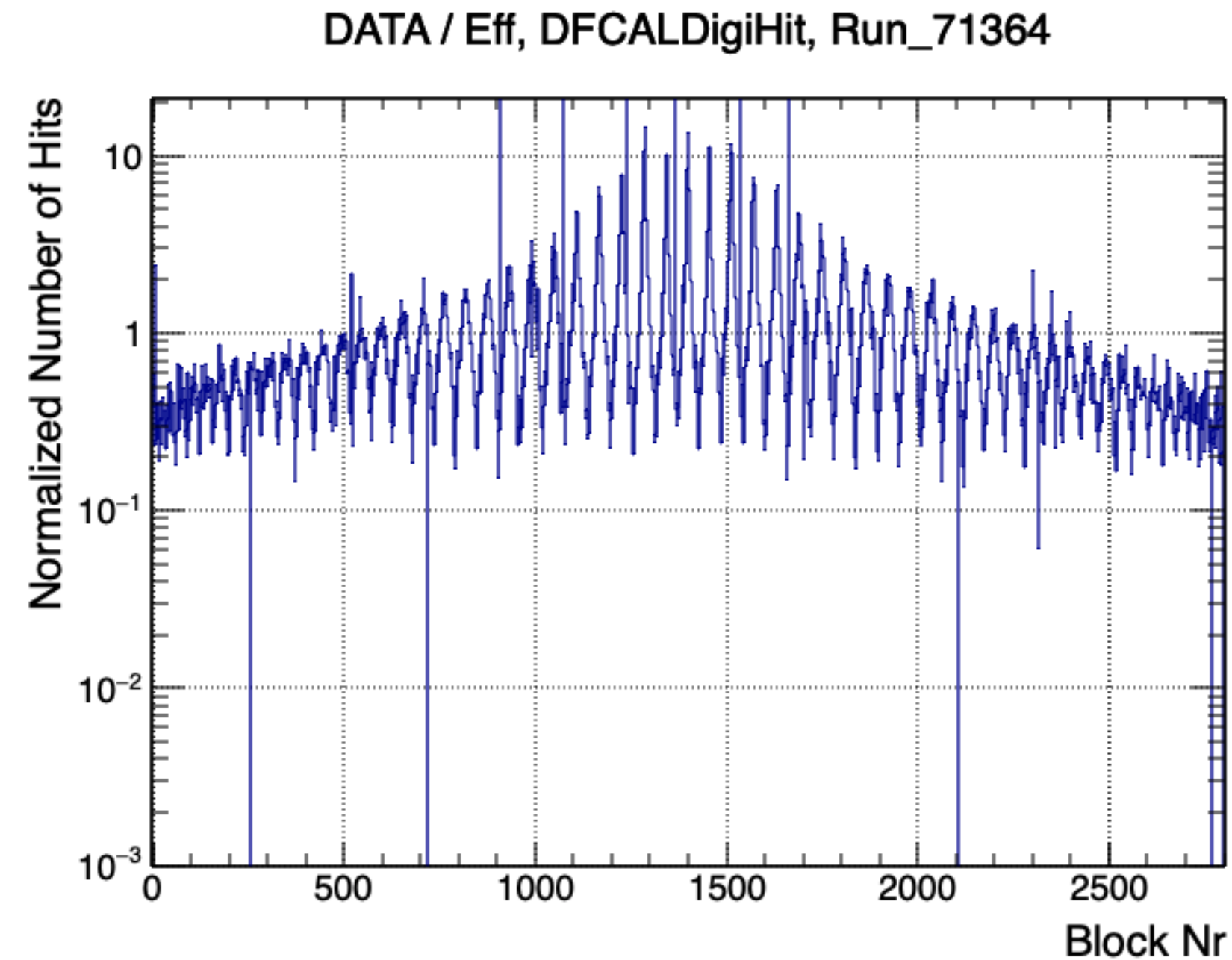raw data Run071364_026-115

reminder: problematic FCAL blocks have fluctuating or no high voltage

zero efficiencies: consistent (dead channels)

finite efficiencies:

• consistent as in problematic blocks

• inconsistent when used as efficiency

reason:
unstable HV situation combined with the rate difference of LED vs data events

LED block efficiencies, average per run used in simulations

• presently for knocking out blocks

• use as average efficiency seems difficult