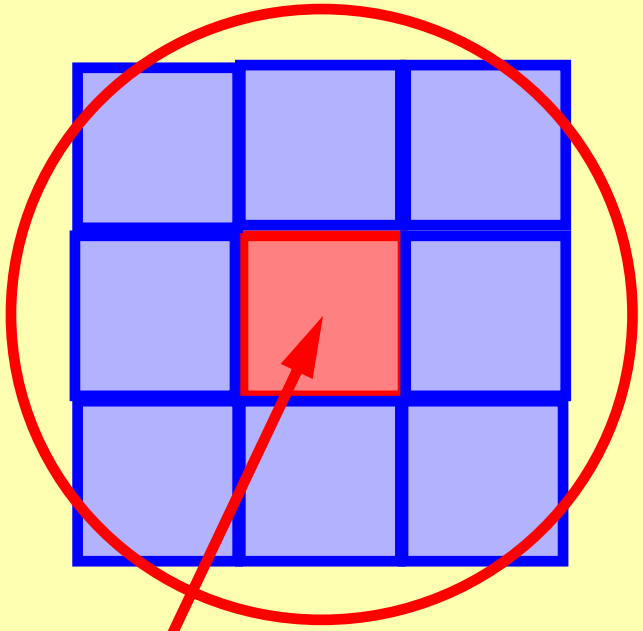
A. Nikitenko CERN and ITEP/Moscow

Test of L1 and L2.0 Tau ID with ORCA4 susy H(200)->$\tau\tau$->2jet sample

Jet/Met meeting. 20 June 2000

L1 - L2.x chain for H->ττ->2jet channel



η, ϕ of L1 Tau

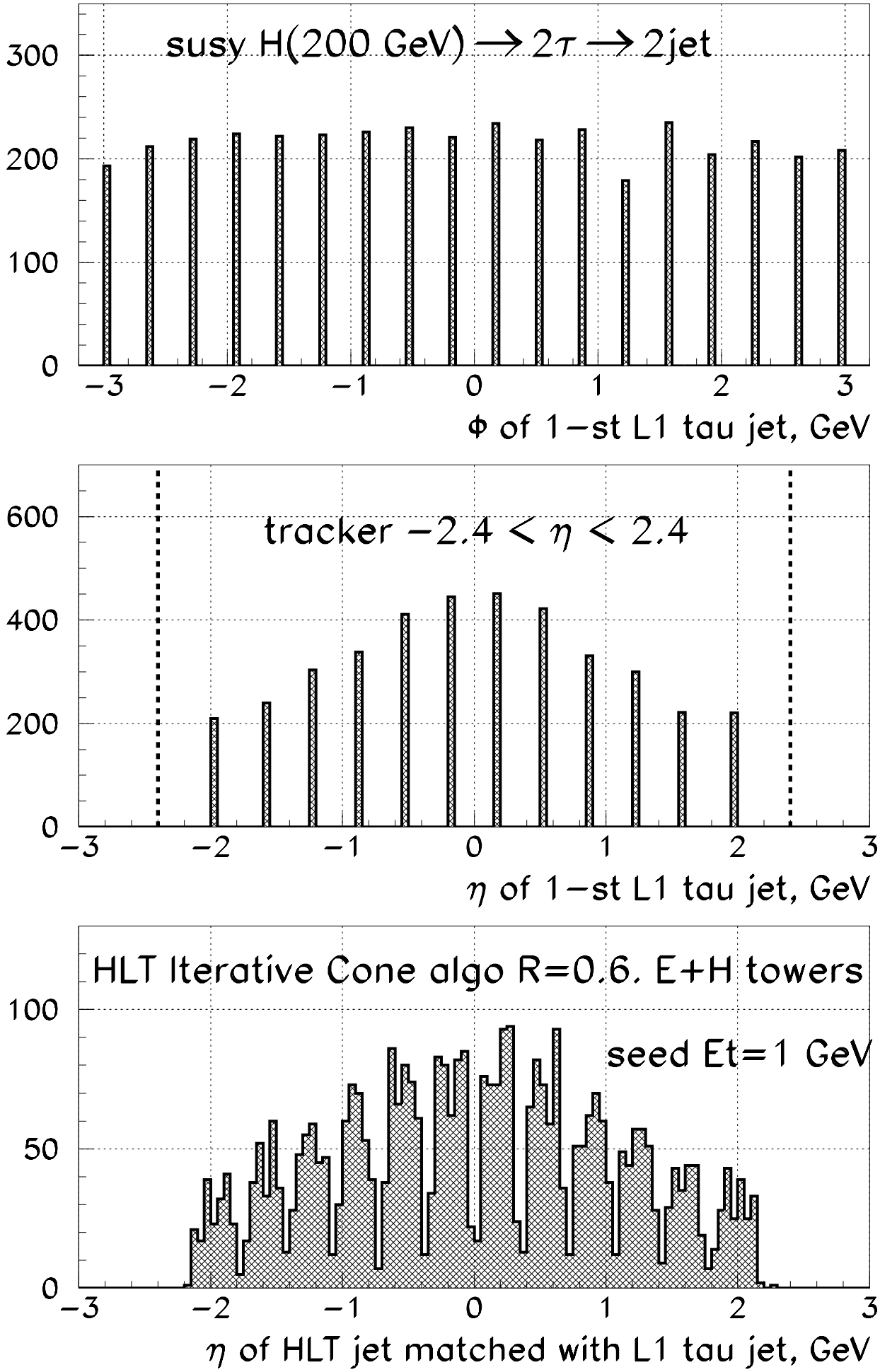
1. 1L1 Tau + 2L1 Tau
2. 1 L2.0 Tau Jet
   - reconstruct jet*
   - shape analysis

$P_{isol}=E_t^{ECAL}(R<0.4) - E_t^{ECAL}(R<0.13) < cut$

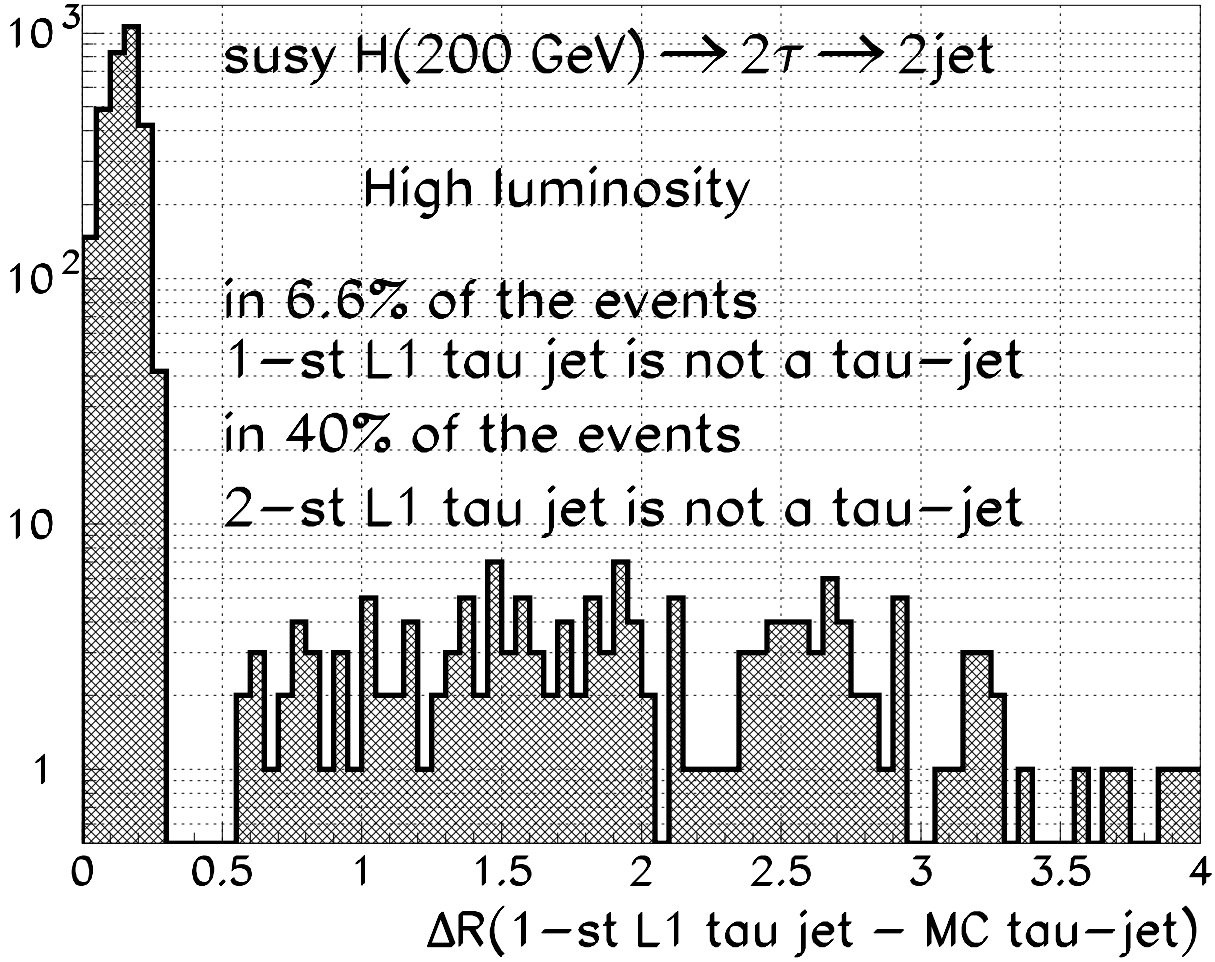
3. 1 L2.x Tau : 1 track

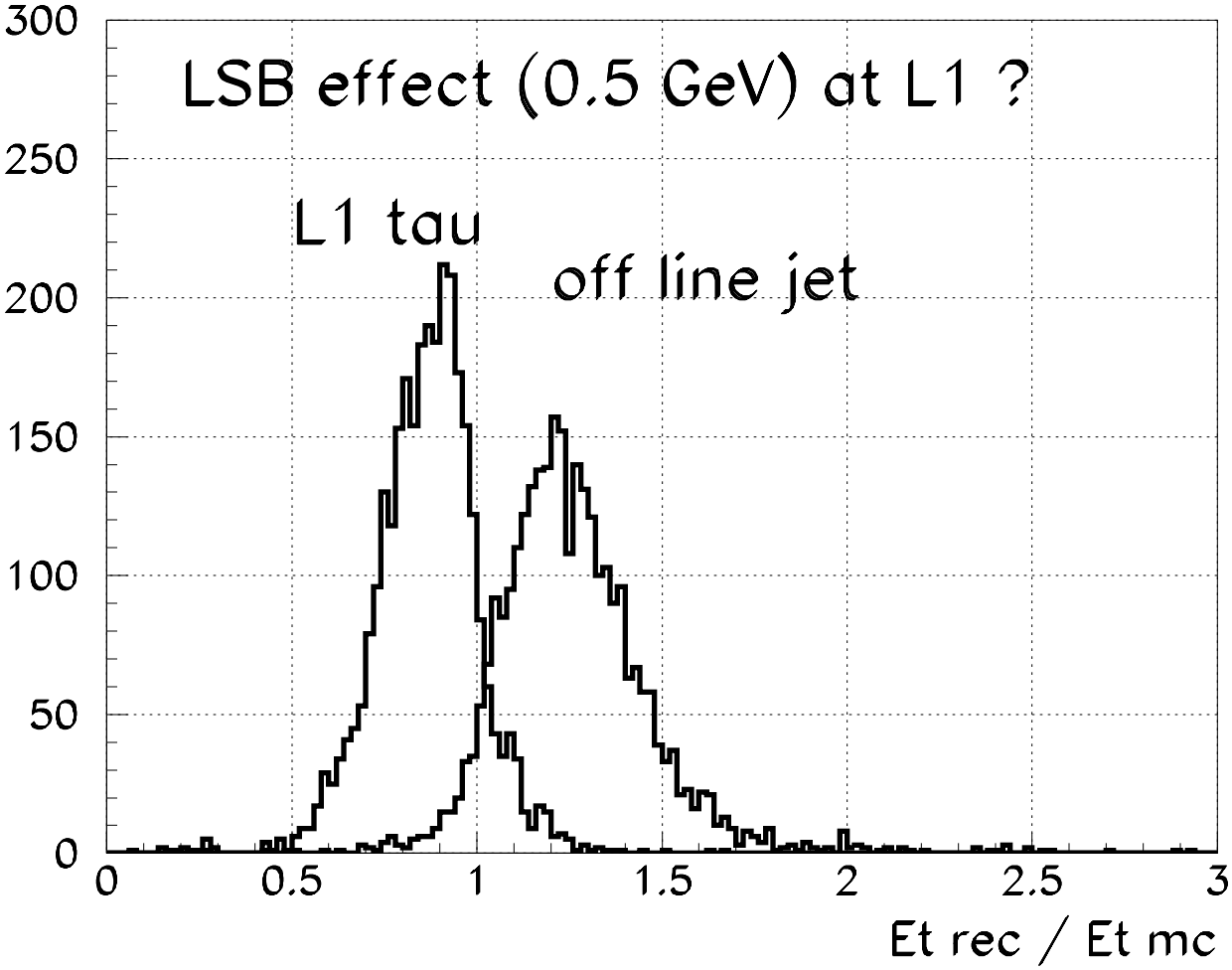
* L2.0 Tau reconstructs a Jet in the location of the highest E_t L1 Tau candidate.

ORCA4. Matching of 1−st L1 tau and off line Jet. Test 1



ORCA4. Matching of 1−st L1 tau and off line Jet. Test 2



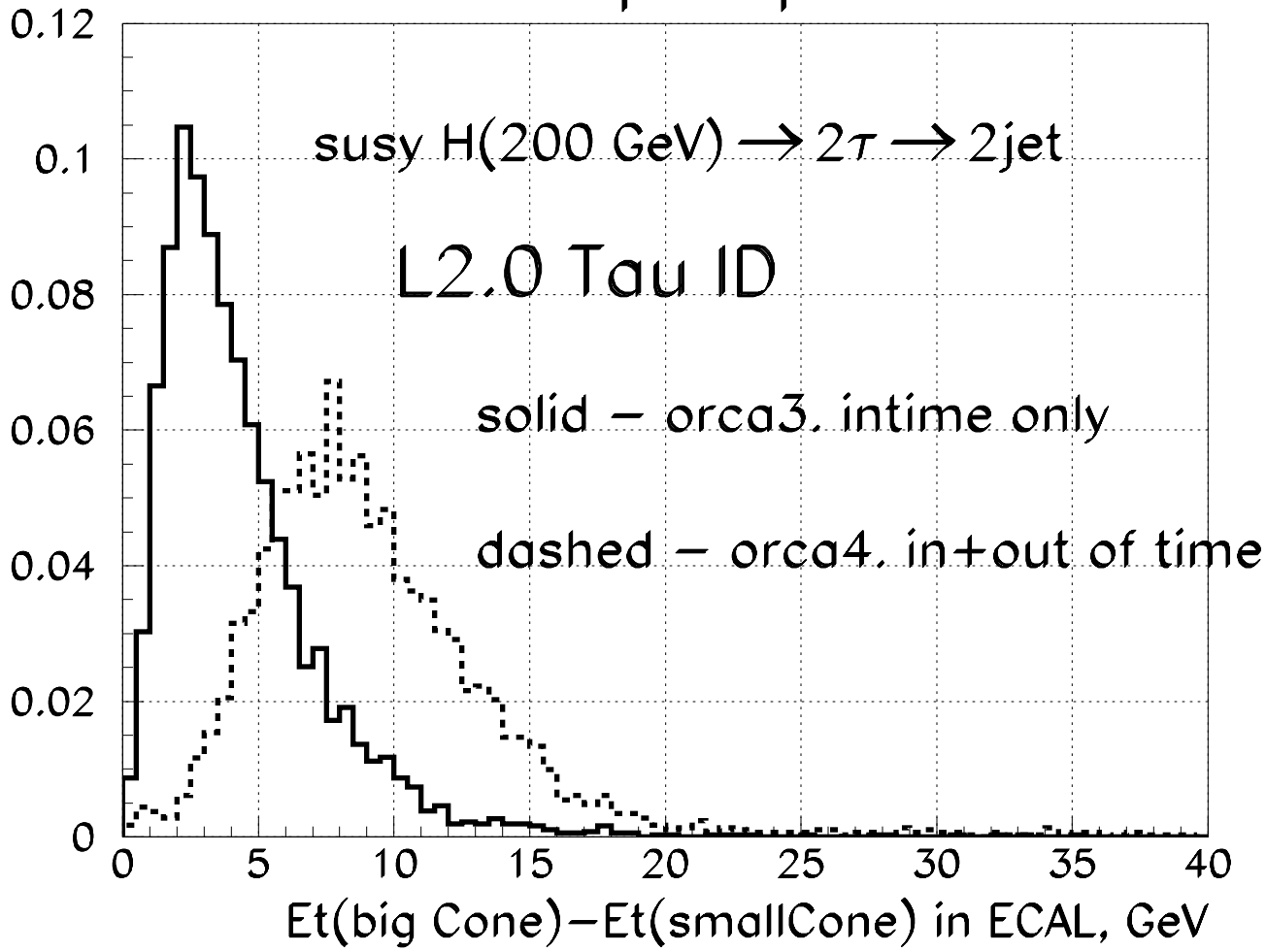
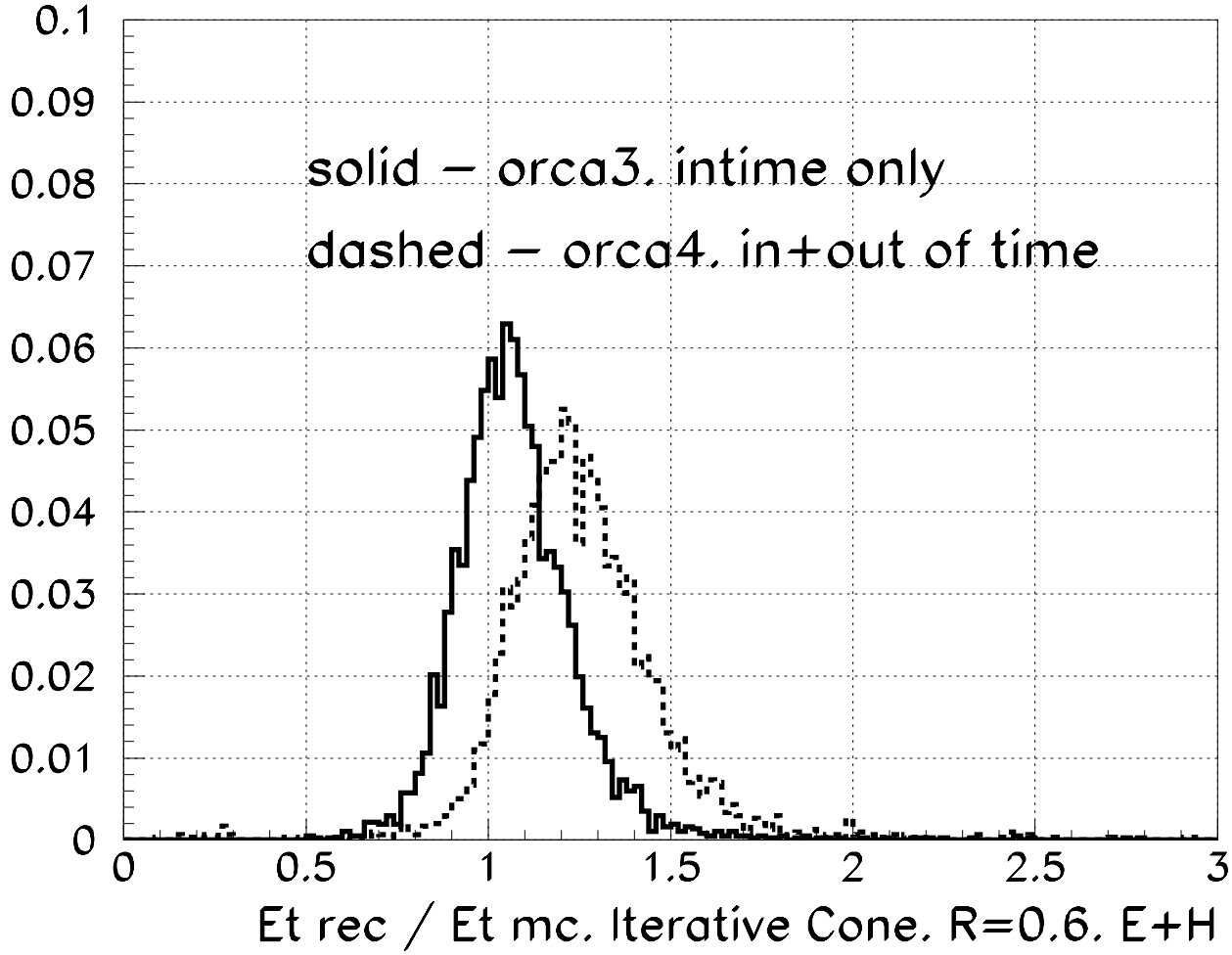


SUSY gg->bbH, H(200 GeV) -> $\tau\tau$ -> 2 jets

Efficiency comparison of the old and new L1 jet trigger for "off line" events ($E_t^{\tau\text{-jet}}$>60 GeV)

High Luminosity

	old L1 jet trigger ORCA3	new L1 jet trigger ORCA4
Efficiency	**29 %**	**56 %**

Algorithm cutoffs (preliminary, from S. Dasu) : single τ E_t > 80 GeV, double τ E_t> 50 GeV

out of time pile up effect ?