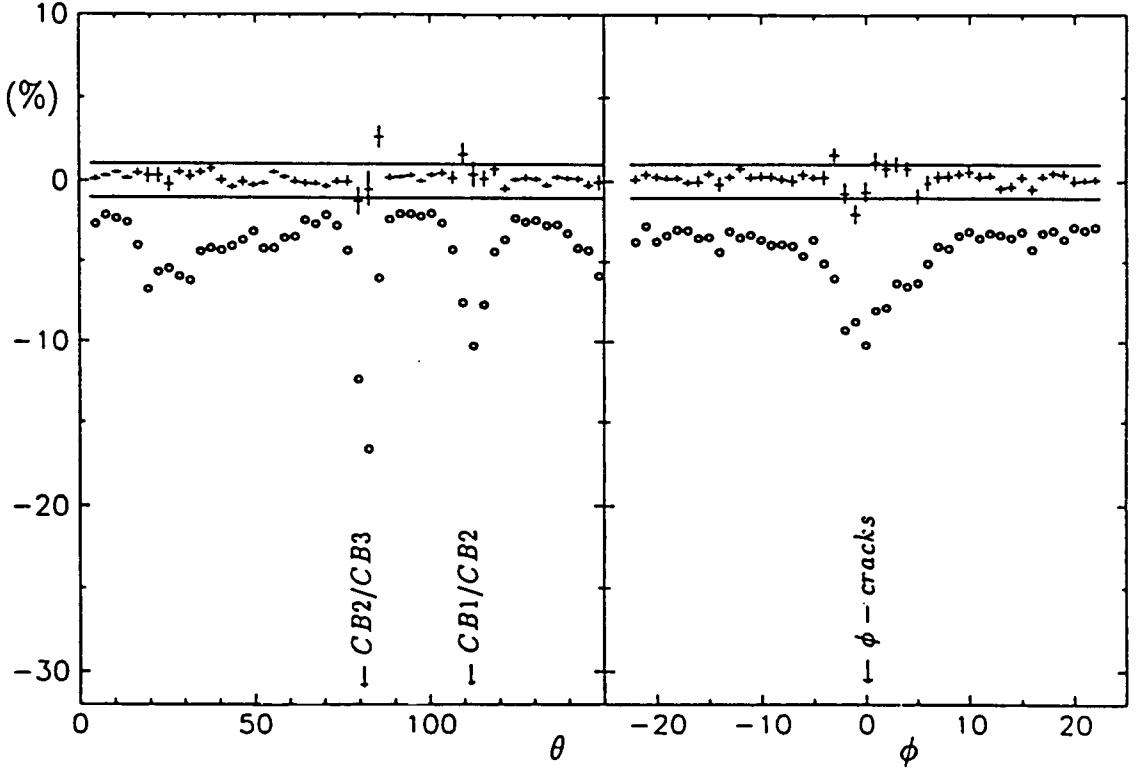
10
(%)
0
−10
−20
−30
0
50
100
θ
CB2/CB3
CB1/CB2
−20
−10
0
10
20
φ
φ − cracks