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SEMI-ANNUAL STATUS REPORT
to
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Title Seismicity and Active Tectonics of the Andes
and the Origin of the Altiplano

Principal Investigators ✓ Peter Molnar and B. Clark Burchfiel

Grantee Institution Massachusetts Institute of Technology
Cambridge, Massachusetts 02139

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1980 - 28 Feb. 1981 (Massachusetts Inst. of
Tech.) o p HC A02/MF A01

N83-10675

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CSCL 08A G3/46

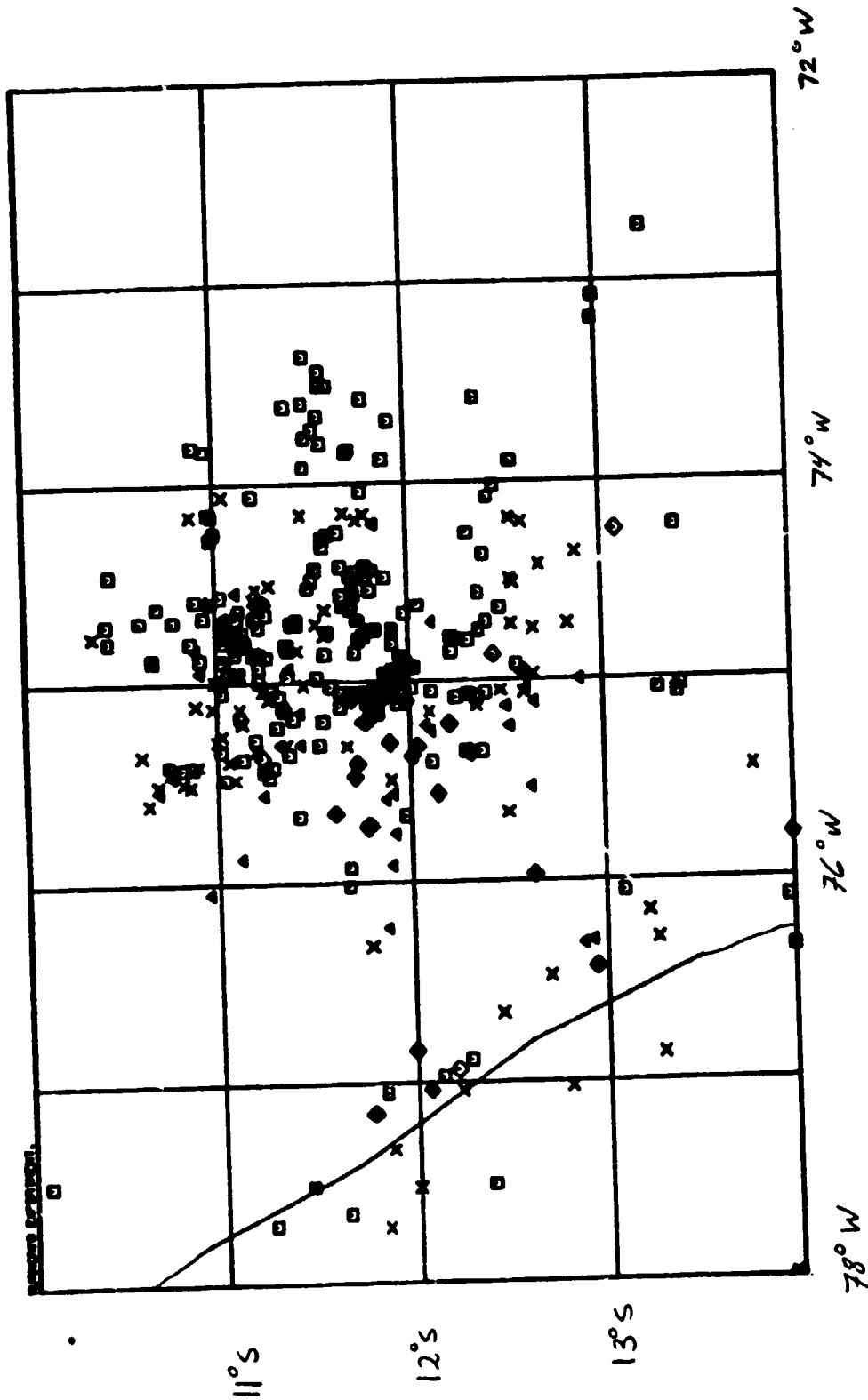
We have nearly completed the analysis of the data obtained in 1980 from the Huancayo region. Except for a cluster of activity near the epicenter of the Huaytapallana earthquake, most of the shallow earthquakes occur beneath the sub-Andes (Figures 1 and 2) because they occur outside of our network. The activity in the high-Andes is considerably lower (Figure 1). Intermediate depth activity indicated a nearly flat plane at a depth of about 100 km (Figure 2). We are still checking the locations in order to decide if the gap between shallow and intermediate depth events is larger and if the intermediate depth zone is narrower.

Abundant activity near the epicenter of the 1970 Huaytapallana earthquakes suggests that aftershocks continue (Figure 3). Stars in Figure 3 show the epicenters of the major events in 1970. The micro-earthquakes are located northeast of the surface rupture, and in cross-section seem to define a plane dipping northeast (Figure 4). These observations are consistent with both the surface faulting and the fault plane solution.

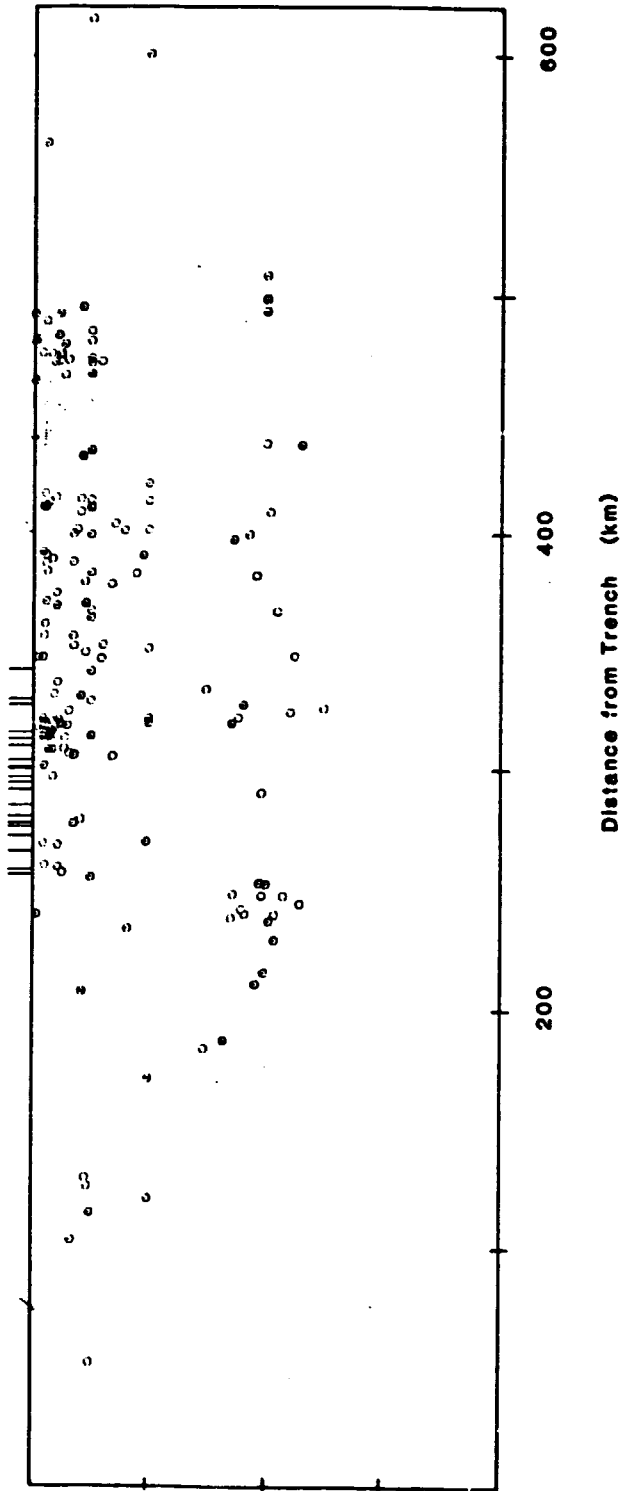
We hope to complete this study in the next couple of months.

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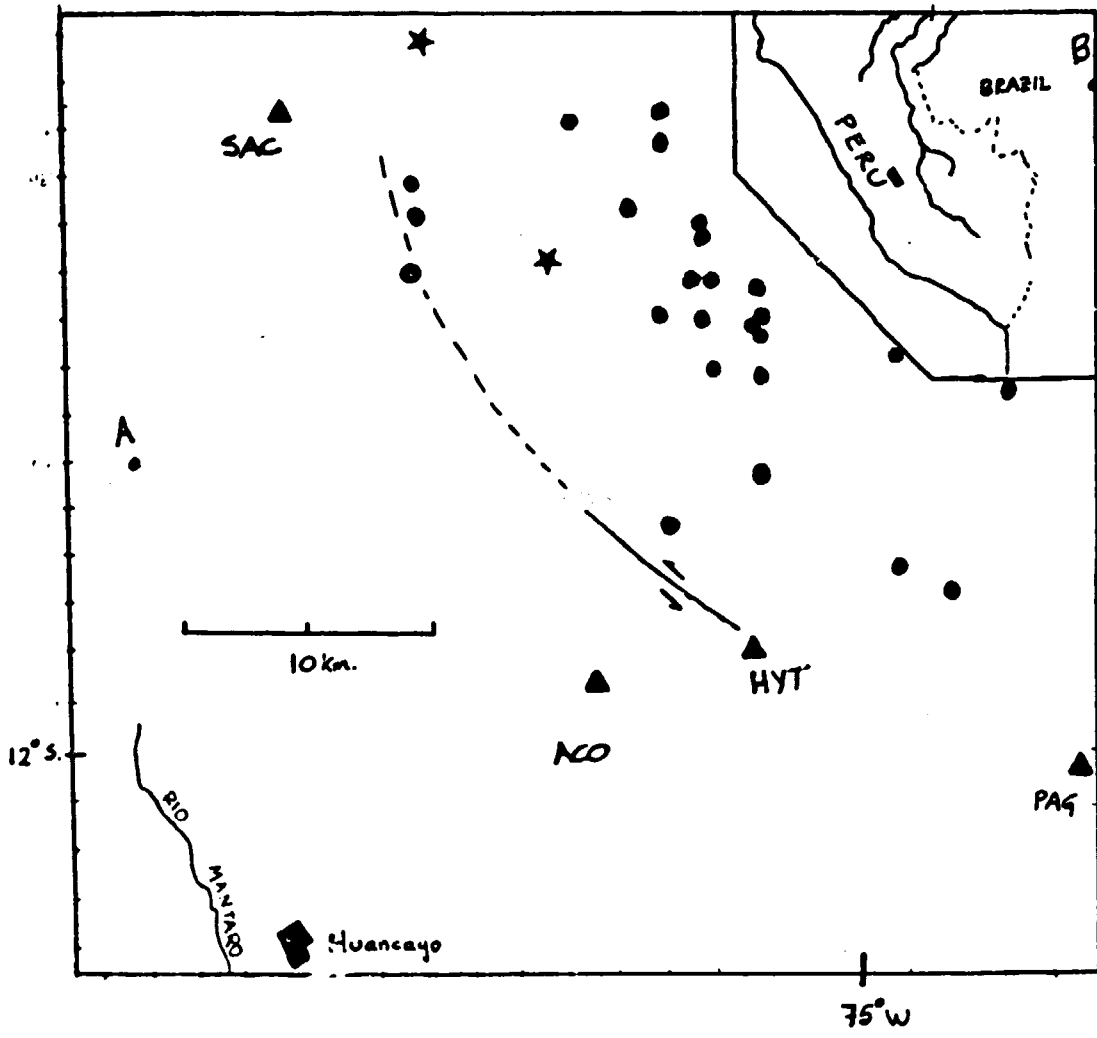
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