八、安多盆北边界活动断裂

安多盆北边界活动断裂是由 3~4 条次级正断层断续连接而成，北东向延长约 50km（吴珍汉等，2004，2005）。断裂整体走向北东 40~50°，倾向南东。断裂错动盆—山边界不同类型基岩和晚更新世—全新世冲洪积扇，形成多期断层三角面、断层陡坎和多级断崖，发育线性分布的低温温泉和 4-5 级地震，说明断裂晚更新世—全新世具有显著活动性。晚更新世—全新世断裂活动形成的垂直位移由老到新分别为 45m、23m、16m、7~9m 和 1.6m；在 45m 断层崖之上还发育高出盆地面 80m、160~180m、300~500m 的多级断层三角面，估算安多盆北活动断裂第四纪平均垂直运动速率大于 0.24mm/a，晚更新世—全新世平均垂直运动速率为 0.46-0.67mm/a。

PART 8 NORTH BOUNDARY FAULT OF AMDO BASIN

North boundary fault zone of Amdo basin is consisting of 3~4 normal faults and extends for ~50km northeastward (Wu et al., 2004, 2005). It dips southeastward, dislocated a variety of bedrocks and Late Pleistocene-Holocene alluvial and fluvial fans and formed multi-phase terminal facets and different level of fault scarps. It also controls epicenters of Ms 4.0-5.0 earthquakes and linear-distributed hotsprings of low temperature. Vertical displacements along north boundary fault of Amdo basin in Late Pleistocene-Holocene are 45m, 23m, 16m, 7~9m, and 1.6m from earlier stage to present respectively. And triangular cliffs reach 80m, 160-180m and 300-500m from lower to upper levels. Vertical slip rate in average of north boundary fault of Amdo basin is estimated as 0.24mm/a in Quaternary and 0.46-0.67mm/a in Late Pleistocene-Holocene.



图 70 安多盆北垂直铁路线的主边界断裂陡坎

（镜头向东，摄于 2002 年 6 月）

Fig.70 View eastward in June of 2002 at boundary fault scarps in north of Amdo basin near railway line



图 71 安多盆西错那湖北侧活动断裂切割 II 级河流阶地

（镜头方向 40°，摄于 2003 年 8 月）

Fig.71 View northeastward in August of 2003 at north boundary fault cutting T_2 terrace in west Amdo basin



图 72 安多盆西错那湖北侧活动断裂错断基岩和晚更新世洪积扇

（镜头方向 60°，摄于 2003 年 8 月）

Fig.72 View northeastward in August of 2003 at breccia of north boundary fault cutting Late Pleistocene fluvial fan in west Amdo basin



图 73 安多盆北主边界断裂切割第三纪早期火山岩

（镜头向北，摄于 2003 年 8 月）

Fig.73 View northward in August of 2003 at north boundary fault cutting Early Tertiary volcanic rocks in Amdo basin



图 74 安多盆北铁路线西侧垂直主边界断裂的探槽位置

（镜头向北，摄于 2002 年 7 月）

Fig.74 View northward in July of 2002 at trench across north boundary fault of Amdo basin in west of railway line



图 75 安多盆北铁路线西侧主边界断裂探槽剖面

安多盆北主边界断裂切割侏罗纪蛇绿岩，形成向东南方向倾斜的高角度断裂破碎带，在断裂破碎带上部发育晚更新世崩积楔；镜头向北西，摄于 2002 年 7 月。

Fig.75 View northwestward in July of 2002 at trench cross-section of north boundary fault of southeastward dipping between Jurassic ophiolite and Late Pleistocene deposits with seismic wedge filled in the fault