Supplementary figures

Brief Communication: Report on the impact of the 27 February 2010 earthquake (Chile, M_w 8.8) on rockfalls in the Las Cuevas valley, Argentina

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Please note that all figures correspond to the sites described in Fig. 1 of the brief communication. Date of observation and of triggering can be found in Table 1.



Figure 1. Site n° 1. Rockfall on the road to the Cristo Redentor Pass. Blocks were moved.



Figure 2. Site n° 2. A: Block broken by fallen block C. B: Impact craters.



Figure 3. Site n° 3. Trajectory (dashed arrow) and impacts (A) of block B (23.6 m³).



Figure 4. Site $n^\circ 3.$ Trajectory of a block (not visible) that stopped near a house.



Figure 5. Site n° 3. A: broken water spring. B: impact craters (underlined by the reddish color), perfectly visible at far distance (> 2 km).



Figure 6. Comparison between 2006 (A) and 2010 (B) of blocks deposited on a fan at the East of Las Cuevas (site n° 4). Ancient blocks (1, 2), recent blocks linked with the 27 February earthquake or the 28 February aftershock (3) and probable source area (4) are visible.



Figure 7. Site n° 5. Powder cloud at Paramillos Gully (photo: M. Rosas).



Figure 8. Site n° 6. Powder cloud near Horcones Gully.



Figure 9. Site n° 9. Impact craters on the road in Puente del Inca.



Figure 10. Site n° 10. Red arenites of the Tordillo Formation (top of the outcrop), site of frequent rockfalls since 2009.



Figure 11. Site n° 12. Block that stopped just before the road.



Figure 12. Site n° 13. Picture a: impact crater (B) on the road. Picture b: fresh muddy and vegetable material on the block (A). Picture c: impact craters (B) and fallen block (A).



Figure 13. Site n° 16. Recent fallen block (scale given by the hammer).