

Shear2F models parameters	Model corresponding to the Roux cross-section					Model corresponding to the Arpillés cross-section							
Horizontal layers input thicknesses	Brown: infinite; grey: 250 px; red: 20 px; yellow: 20 px; blue: infinite					Grey: infinite; yellow: 100 px; pale blue: 20 px; dark blue: 230 px; light blue: infinite							
Modeled geological deformation events	Normal fault	Pro vergent folds	Retro vergent folds			Normal fault	Pro vergent folds					Retro vergent folds	
			1st order folds	2nd order folds	3rd order folds		1st order folds	2nd order folds (1 bis)	3rd order folds	4th order folds	5th order folds	1st order folds	2nd order folds
Phase Id	3b	5b	free_3a	6a	3a	6a	8a	5a	4a	1a	2a	4b	3a
Shear type	Heterogen. simple shear	Heterogen. simple shear	Heterogen. simple shear	Heterogen. simple shear	Heterogen. simple shear	Heterogen. simple shear	Heterogen. simple shear	Heterogen. simple shear	Heterogen. simple shear	Heterogen. simple shear	Heterogen. simple shear	Heterogen. simple shear	Heterogen. simple shear
Function type	Step function	Sine function	Free profile*	Sine function	Sine function	Step function	Sine function	Sine function	Sine function	Sine function	Sine function	Sine function	Sine function
Amplitude [px]	2000	1800	900	40	27	2000	200	200	400	80	60	200	120
Shift [px]	200	1600	-3390	350	14	200	450	450	50	82	34	0	15
Wavelength [px]	-	4000	-	300	30	-	700	700	400	120	80	800	300
Axial plane dip direction [deg]	135	135	315	315	315	050	210	210	210	210	210	310	310
Axial plane dip [deg]	60	30	10	10	10	65	30	30	30	30	30	10	10
Trend of the flow direction ("vector a"/"shear displacement" in Ramsay 1967) [deg]	135	135	315	315	315	050	210	210	210	210	210	310	310
Plunge of the flow direction ("vector a"/"shear displacement" in Ramsay 1967) [deg]	60	30	10	10	10	65	30	30	30	30	30	10	10
Dip direction of the 2D cross-section through the 3D model [deg]	225	225	225	225	225	180	180	180	180	180	180	180	180
Dip of the 2D cross-section through the 3D model [deg]	90	90	90	90	90	90	90	90	90	90	90	90	90

Additional file 1: Shear2F models parameters . Shear2F software version 1.1.28 F (Rey 2002). Data of the free profile function used in the Roux model (*) are given in the Additional file 2.