

Path and File Name	Type	Instrument	Description
\Figure 2\P1100256.JPG	Photograph	Generic digital camera	Detail of Arkitsa fault surface exposure
\Figure 2\RIMG0072.JPG	Photograph	Generic digital camera	Overview of Arkitsa fault surface exposure
\Figure 2\RIMG0147.JPG	Photograph	Generic digital camera	Arkitsa fault surface exposure showing light reflectiveness
\Figure 2\RIMG0180.JPG	Photograph	Generic digital camera	Schinos fault surface exposure showing clast alignment
\Figure 2\RIMG0183.JPG	Photograph	Generic digital camera	Schinos fault surface exposure showing reflectiveness
\Figure 2\RIMG0203.JPG	Photograph	Generic digital camera	Overview of Schinos fault surface exposure
\Figure 3\001_002.jpg	Backscatter electron image	FEI Helios Nanolab G3	Top view fault surface Schinos w/ deformed calcite single crystals
\Figure 3\001_003.png	Backscatter electron image	FEI Helios Nanolab G3	Top view fault surface Schinos w/ hanging wall contact
\Figure 3\001_011_2.jpg	Backscatter electron image	FEI Helios Nanolab G3	Top view fault surface Schinos triple junctions and cleavage
\Figure 3\AR21_20170708_004.tif	Secondary electron image	FEI Helios Nanolab G3	Overview Arkitsa fault surface
\Figure 3\GR-AR-16-021_20170728_010.png	Secondary electron image	FEI Helios Nanolab G3	Detail view of high deformed layer, Arkitsa
\Figure 3\GR-AR-16-021_20170728_011.png	Secondary electron image	FEI Helios Nanolab G3	Detail view of high deformed layer, Arkitsa
\Figure 3\GR-SCH1-16-003a_20171007_004.tif	Secondary electron image	FEI Helios Nanolab G3	Overview Schinos fault surface with slip grooves and CO2 degassing holes
\Figure 4\Figure 4_ Raman spectroscopy_ Arkitsa.txt	text file	WiTec Alpha 300 R	Raman spectroscopy X-Y raw data, Arkitsa
\Figure 4\20180610_AR21_008.tif	Backscatter electron image	FEI Helios Nanolab G3	Overview location Raman spectroscopy measurement, Arkitsa
\Figure 4\Figure 4_ Raman spectroscopy_ Schinos.txt	text file	WiTec Alpha 300 R	Raman spectroscopy X-Y raw data, Schinos

Path and File Name	Type	Instrument	Description
\Figure 4\A-BSE image_002_Schinos.jpg	Backscatter electron image	FEI Helios Nanolab G3	Overview location Raman spectroscopy measurement, Schinos
\Figure 5\20180203_GR-AR1-021_IV_002.tif	Bright-field TEM image	FEI Talos f200x	1/2 Overview nanostructures hanging wall to footwall, Arkitsa
\Figure 5\20180203_GR-AR1-021_IV_003.tif	Bright-field TEM image	FEI Talos f200x	2/2 Overview nanostructures hanging wall to footwall, Arkitsa
\Figure 5\GR_SCH1_16_010_cutII_001.tif	Bright-field TEM image	FEI Talos f200x	1/2 Overview nanostructures hanging wall to footwall, Schinos
\Figure 5\GR_SCH1_16_010_cutII_002.tif	Bright-field TEM image	FEI Talos f200x	2/2 Overview nanostructures hanging wall to footwall, Schinos
\Figure 6\20180203_GR-AR1-021_IV_012.tif	Bright-field TEM image	FEI Talos f200x	Layer of secondary nanograins on top of principal slip surface, Arkitsa
\Figure 6\20180203_GR-AR1-021_IV_013.tif	Bright-field TEM image	FEI Talos f200x	Detailed view of secondary nanograin layer, Arkitsa
\Figure 6\20180324_AR21cut4_042_SAD_10_Pattern_D410.tif	electron diffraction image	FEI Talos f200x	Selected area electron diffraction image of secondary nanograin layer, Arkitsa
\Figure 6\GR_SCH1_16_010_cutII_003.tif	Bright-field TEM image	FEI Talos f200x	Contact between footwall and hanging wall, Schinos
\Figure 6\GR_SCH1_16_010_cutII_005.tif	Bright-field TEM image	FEI Talos f200x	Detailed view of footwall to hanging wall contact, Schinos
\Figure 7\Arkitsa\Al.png	STEM EDX	FEI Talos f200x	Aluminium STEM EDX
\Figure 7\Arkitsa\C.png	STEM EDX	FEI Talos f200x	Carbon STEM EDX, Arkitsa
\Figure 7\Arkitsa\Ca.png	STEM EDX	FEI Talos f200x	Calcium STEM EDX, Arkitsa
\Figure 7\Arkitsa\Fe.png	STEM EDX	FEI Talos f200x	Iron STEM EDX, Arkitsa
\Figure 7\Arkitsa\HAADF.png	HAADF image	FEI Talos f200x	HAADF image of STEM EDX, Arkitsa

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\Figure 7\Arkitsa\Si.png	STEM EDX	FEI Talos f200x	Silicon STEM EDX, Arkitsa
\Figure 7\Schinos\Al.png	STEM EDX	FEI Talos f200x	Aluminium STEM EDX, Schinos
\Figure 7\Schinos\C.png	STEM EDX	FEI Talos f200x	Carbon STEM EDX, Schinos
\Figure 7\Schinos\Ca.png	STEM EDX	FEI Talos f200x	Calcium STEM EDX, Schinos
\Figure 7\Schinos\Fe.png	STEM EDX	FEI Talos f200x	Iron STEM EDX, Schinos
\Figure 7\Schinos\GR-SCH1-16-010_HAADF_008.tif	HAADF image	FEI Talos f200x	HAADF image of STEM EDX, Schinos
\Figure 7\Schinos\Si.png	STEM EDX	FEI Talos f200x	Silicon STEM EDX, Schinos
\Figure 8\20180107_AR21III_029.tif	Bright-field TEM image	FEI Talos f200x	Detailed view of Arkitsa nanograins
\Figure 8\20180107_AR21III_039.tif	Bright-field TEM image	FEI Talos f200x	Nanostructure with intermixed surface coating of primary and secondary nanograins
\Figure 8\20180210_GR-SCH1-16-010_I_BF_016.tif	Bright-field STEM image	FEI Talos f200x	Bright-field STEM image of dislocation structure close to the Schinos slip surface
\Figure 8\GR-SCH1-16-010_012.tif	Bright-field TEM image	FEI Talos f200x	High-magnification image of partly-hybridised amorphous carbon (PHAC) with clay
\Figure 8\GR-SCH1-16-010_014.tif	Bright-field TEM image	FEI Talos f200x	Secondary nanograins and clay minerals in gap of Schinos slip surface
\Figure 8\GR-SCH1-16-010_BF_005.tif	Bright-field STEM image	FEI Talos f200x	Detailed view of dislocation structure of the Schinos slip surface
\Figure 8\Figure 9_XY Data Carbon k-edge_Arkitsa.txt	text file	Zeiss Libra 200FE	Raw XY data of EELS measurements of partly-hybridised amorphous carbon (PHAC)
\Figure 8\Figure 9_XY Data Carbon k-edge_Schinos.txt	text file	Zeiss Libra 200FE	Raw XY data of EELS measurements of partly-hybridised amorphous carbon (PHAC)