

Country	MIKAS springs	Coordinates	Spring discharge	Criteria* in order / Main	Data
		/ Nearby City	(Q in	justification	collected by
			l/s,min/av/max)	*/ H-historic, A-aesthetic, S-scientific,	
			/ tapped or not	E-Economic, Ec-ecologic	
	1. Source de	N 46° 54′ 41″	300/4,900/55,500	S, H, E, A The Areuse spring is the most important	Romane
Switzerland	l'Areuse	E 6° 32′ 57″	A dam was built	spring in the canton of Neuchâtel: since	Herrisé, Pierre-Yves
		Z = 793 m asl	to derivate up to	the 15th century, it has provided	Jeannin
		Saint-Sulpice	5 m ³ /s to produce	uninterrupted hydraulic power for all the	Jeannin
		(Neuchâtel)	electricity. Spring also enables	factories in its vicinity. The vauclusian	
			drinking water	type spring has formed a cirque and flow out of the Jurassic limestones in a	
			supply of two	concentrated and spectacular way. The	
			villages.	lake at the spring flows over the dam	
				forming an impressive waterfall during high-water conditions. The Areuse spring	
				is of outstanding international scientific	
				interest for its contribution to our	
				understanding of the Jura karst. The use	
				of natural and artificial tracers in the	
				Areuse spring basin has provided crucial data for a better understanding of the	
				complex hydrological processes. Also the	
				Areuse catchment was a milestone in the	
				development of numerical modelling of groundwater flow. Since 2013 the	
				discovery of an extensive cave system in	
				the Grotte des Rutelins gives access to	
				the groundwater feeding the spring. The	
				presence of crustaceans and algae, which form a significant biological	
				reserve, is particularly noteworthy.	
	2. Source de	N 46° 29′ 31″	1,200/6,000/62,000	H, A, E, Ec, S	Amendine
	l'Orbe	E 6° 03′ 33″		The spring (resurgence) of the Orbe, is	Perret,
		(upper spring)	Part of water is used to produce	the most important karstic spring in Swtzerland and Jura Mountain range.	Romane
		Z = 1058 m asl	electricity	The spring's catchment area covers the	Herrisé,
		N 46° 41′ 53″,		entire Vallée de Joux (approx. 200 km²).	Pierre-Yves Jeannin
		E 6° 20' 44"		It is large transboundary system, as the	Jeannin
		(main		source of the upper Orbe is located in France, in the Lac des Rousses. Water of	
		resurgence)		Upper Orbe sunk in several ponors and	
		Z = 776 m asl		then flows as an underground river	
				through Vallorbe cave system towards main resurgence. The system was firstly	
				described by HB. de Saussure between	
		Orbe (Vaud)		1779 and 1799. One of the first	
				groundwater tracing experiment (1893)	
				proving the connexion hypothesized by De Saussure 100 years before. The diving	
				speleologists explored about 6 km of	
				cave tunnels including gigantic siphons.	
				Remarkable presence of troglobites,	
				including the beetle Trichaphaenops sollaudi sermetti and the isopod	
				Proasellus valdensis, The region	
				represents greatest source of attraction	
				since 1974. The Orbe spring and cave	
				welcomes 60,000 visitors a year. The catchment area is part of the Vaud Jura	
				Regional Nature Park and is on the list of	
				national geosites.	

MIKAS - Source de l'Areuse



Areuse spring in high-water conditions



Fault over the Source de l'Areuse, the vauclusian type spring (courtesy of Z. Stevanović)



One of the sumps (left) and one cave passage (right) in the Rutelins cave

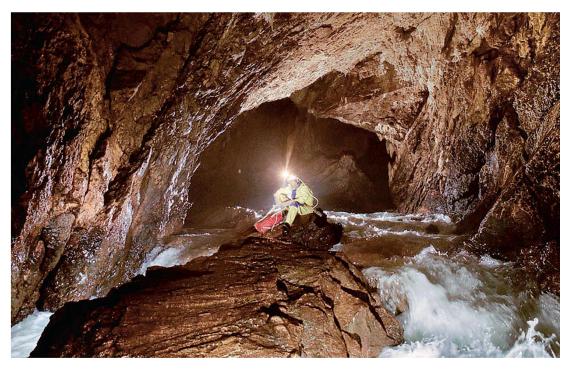


MIKAS - Source de l'Orbe

Picture of the Orbe resurgence. © Rémy Wenger, ISSKA.



The Orbe resurgence; the end of the river's underground journey. © Rémy Wenger, ISSKA.



The subterranean Orbe river. © Rémy Wenger, ISSKA.