Geochronologie - Laboratory - Heidelberg

sample field number	ALT-35		material:	Polyhalit	
project description	FWF P22,728		grain size:	200-250 µm	
number of measurement	09c0697		number:	5	
number of irradiation	25-141		notes:	Altaussee mine	
J-value of irradiation	0,007883	0,000020	(+/- 1sigma)		
duration of irradiation [hr]	16,0				
year of irradiation	2008				
julian day of irradiation	346				

				+/- 1sigma	
conversion from [V] to [cps] by:		6E+07			
composition of atmospheric argon:	(40Ar/36Ar)atm.	=	295,5		(Steiger & Jäger 1977)
half-life of 37Ar [d]		=	35,1	0,1	(Stoenner et al. 1965)
decay constant of 37Ar [dE-01]		=	1,975E-02		(Stoenner et al. 1965)
decay constant of r 39Ar [dE-1]		=	7,064E-06		(Stoenner et al. 1965)
decay constant of 40K [dE-01]		=	5,543E-10	1,000E-12	(Steiger & Jäger 1977)
correction for Ca-derived Ar:	(36Ar/37Ar)Ca	=	2,2500E-04		Measured
correction for Ca-derived Ar:	(39Ar/37Ar)Ca	=	6,1400E-04		Measured
correction for K-derived Ar:	(40Ar/39Ar)K	=	2,6600E-02		Measured
correction for K-derived Ar:	(38Ar/39Ar)K	=	1,1700E-02		Measured

sample:
blank-corrected intensities:

	36Ar	+/-[%]	37Ar	+/-[%]	38Ar	+/-[%]	39Ar	+/-[%]	40Ar	+/-[%]	date of measurement: year	j-day
09b0697a	1,74015E-06	4,3667	9,57728E-07	2,9525	1,20487E-06	4,9556	2,84324E-06	2,8322	4,59005E-04	0,1475	2009	184
c 3.6%	3,74461E-06	2,8439	1,62866E-06	2,3245	2,28083E-06	2,9781	5,93996E-05	0,3993	1,59886E-03	0,1085	2009	184
09b0762a	1,42425E-06	2,8474	1,42064E-06	1,4312	1,56183E-06	2,5052	4,39552E-06	2,9886	2,76317E-04	0,2623	2009	190
e 3.8%	2,78708E-06	1,9709	2,73132E-05	0,3259	3,92728E-05	0,4513	3,40428E-03	0,0620	4,69421E-02	0,0294	2009	190
09b0697c	1,34618E-06	2,5097	1,42064E-06	1,4312	2,06707E-06	2,8132	6,53527E-06	3,6892	2,70937E-04	0,3789	2009	190
f 3.9%	1,52941E-06	3,4837	1,08000E-05	1,0035	1,47986E-05	1,1229	1,22264E-03	0,0481	1,44772E-02	0,0354	2009	190
	1,34618E-06	2,5097	1,42064E-06	1,4312	2,06707E-06	2,8132	6,53527E-06	3,6892	2,70937E-04	0,3789	2009	190
g 4.0%	1,47517E-06	2,6569	6,83220E-06	1,6483	8,90477E-06	0,8911	7,04198E-04	0,1658	8,50496E-03	0,0439	2009	190
	1,34618E-06	2,5097	1,42064E-06	1,4312	2,06707E-06	2,8132	6,53527E-06	3,6892	2,70937E-04	0,3789	2009	190
h 4.2%	2,16061E-06	1,9249	2,54593E-05	0,4712	3,50376E-05	0,7585	3,03399E-03	0,0681	3,78225E-02	0,0218	2009	190
	1,34618E-06	2,5097	1,42064E-06	1,4312	2,06707E-06	2,8132	6,53527E-06	3,6892	2,70937E-04	0,3789	2009	190
i 4.4%	1,72706E-06	2,6363	2,03209E-05	0,5159	2,87271E-05	0,9166	2,46393E-03	0,0665	3,31266E-02	0,0804	2009	190
09b0697d	9,55684E-07	2,5073	1,16426E-06	4,3021	1,19239E-06	4,4086	4,34932E-06	1,6901	2,11430E-04	0,3819	2009	191
j 4.6%	1,99425E-06	1,9369	2,13634E-05	0,3359	3,04154E-05	0,5298	2,65617E-03	0,0548	3,69711E-02	0,0290	2009	191

	days elapsed	post-irrad. 37Ar decay factor	number of steps	mean of dec.37Ar corr.factor
			7	6,160E+01
	203	5,544E+01		
	209	6,242E+01		
	209	6,242E+01		
	209	6,242E+01		
	209	6,242E+01		
	209	6,242E+01		
	210	6,366E+01		

blank- and background-corrected intensities and absolute errors (1-sigma abs.):

	36Ar	+/-	37Ar	+/-	38Ar	+/-	39Ar	+/-	40Ar	+/-	%39Ar	cum%39Ar	%40Ar*	36Ar/39Ar meas.	+/- [1-sigma abs.]	36Ar/39Ar meas.	+/- [1-sigma abs.]	37Ar/39Ar meas.	+/- [1-sigma abs.]	37Ar/39Ar meas.	+/- [1-sigma abs.]	38Ar/39Ar meas.	+/- [1-sigma abs.]	40Ar/39Ar meas.	+/- [1-sigma abs.]	40Ar/39Ar meas.	+/- [1-sigma abs.]	37Ar/39Ar cor r ect ed	+/- [1-sigma abs.]	39ArK cor r ect ed	+/- [1-sigma abs.]	40Ar* cor r ect ed	+/- [1-sigma abs.]	40Ar*/39ArK cal cul at ed	+/- [1-sigma abs.]	40Ar*/39ArK	age	+/- 1sigma	+/- 1sigma +/- [Ma]
c 3.6%	1,25122E+02	8,17E+00	4,18809E+01	2,95E+00	6,71635E+01	5,65E+00	3,53036E+03	1,56E+01	7,11520E+04	1,16E+02	0,42	0,42	48,18	0,035441814	0,002318473	0,011863	0,00083715	0,019025	0,00160143	20,154320	0,095139786	0,657737183	0,046415014	3528,933813	15,635757	3,423891E+04	2415,953210	9,702325	0,685961	133,0	[Ma]	9,1	9,072E+00
e 3.8%	8,50705E+01	4,26E+00	1,61626E+03	5,70E+00	2,35399E+03	1,13E+01	2,12227E+05	1,32E+02	2,91297E+06	8,63E+02	25,17	25,59	99,37	0,000401	2,00842E-05	0,007616	2,72703E-05	0,011092	5,38298E-05	13,725697	0,009455713	0,475361809	0,00170217	212165,5523	132,006275	2888895,859	1526,757896	13,616234	0,011116	184,0	0,5	5,636E-01
f 3.9%	1,14376E+01	3,94E+00	5,85478E+02	6,88E+00	7,94727E+02	1,10E+01	7,59117E+04	3,97E+01	8,86783E+05	3,26E+02	9,00	34,59	99,89	0,000151	5,18778E-05	0,007713	9,07633E-05	0,010469	0,00014872	11,681776	0,0074665	0,48141064	0,005665308	75889,21762	39,675846	883814,2656	1208,925510	11,646111	0,017054	158,5	0,4	5,215E-01
g 4.0%	8,05181E+00	3,23E+00	3,37800E+02	7,14E+00	4,26823E+02	6,14E+00	4,35495E+04	7,44E+01	5,13984E+05	2,42E+02	5,17	39,76	99,81	0,000185	7,41703E-05	0,007757	0,000164562	0,009801	0,0001442	11,802297	0,020918017	0,484161678	0,010271729	43536,53759	74,419586	511848,4641	985,057784	11,756756	0,030262	159,9	0,5	6,178E-01
h 4.2%	5,08383E+01	3,34E+00	1,50054E+03	7,60E+00	2,05809E+03	1,70E+01	1,88980E+05	1,30E+02	2,34404E+06	5,19E+02	22,41	62,17	99,62	0,000269	1,77E-05	0,007940	4,05591E-05	0,010891	9,01713E-05	12,403674	0,00895359	0,49561684	0,002531642	188922,1878	129,848428	2330221,899	1116,645713	12,334294	0,010335	167,4	0,4	5,153E-01
i 4.4%	2,37753E+01	3,54E+00	1,17979E+03	6,67E+00	1,66417E+03	1,68E+01	1,53395E+05	1,03E+02	2,05092E+06	1,66E+03	18,19	80,37	99,90	0,000155	2,30719E-05	0,007691	4,37642E-05	0,010849	0,000109976	13,370120	0,014100904	0,48007193	0,002731698	153350,2109	103,380886	2044706,778	1965,348579	13,333577	0,015654	180,3	0,5	5,715E-01
j 4.6%	6,48293E+01	2,84E+00	1,26087E+03	5,46E+00	1,82416E+03	1,06E+01	1,65532E+05	9,10E+01	2,29461E+06	6,71E+02	19,63	100,00	99,40	0,000392	1,71425E-05	0,007617	3,32649E-05	0,011020	6,42041E-05	13,862050	0,008630292	0,484929424	0,002117757	165482,5911	90,976285	2276389,241	1074,245338	13,756065	0,009967	185,7	0,5	5,650E-01
total	3,69125E+02	1,19E+01	6,52263E+03	1,65E+01	9,18912E+03	3,17E+01	8,43126E+05	2,46E+02	1,10745E+07	2,10E+03	100,00	99,0150624	0,000437806	1,41619E-05	0,007736	1,9675E-05	0,010899	3,76859E-05	13,134998	0,004573129	0,476553	0,001211983	8,42879E+05	246,185861	10969675,36	4105,463698	13,014527	0,006179	176,2	0,4	5,290E-01