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NAGOYA, JAPAN

DATA COMPILATION OF ANGULAR DISTRIBUTIONS
OF SPUTTERED ATOMS

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I. INTRODUCTION

Sputtering at a surface is generally caused by a collision cascade developed near the surface. The process is in principle the same as those causing radiation damage in the bulk of a solid. Sputtering has long been regarded as an undesired dirty effect which destroys the cathodes and grids in gas discharge tubes or ion sources and contaminates a plasma and the surrounding walls. However, sputtering is used today for many applications. The removal of atoms from a surface is successfully applied in sputter ion sources, a mass spectrometer and to the deposition of thin films on a large variety of substrates. Plasma contamination and surface erosion of the first wall due to sputtering are still one major problem in fusion research.

From the early 1960's a lot of measured angular distributions of sputtered atoms at normal incidence and oblique incidence have been accumulated. For better understanding of the sputtering phenomena and for the extensive use of the sputtering data for the design of the fusion reactors, we need to compile experimental data of the energy dependent sputtering yields and the differential sputtering yields such as angular distribution and energy distribution of sputtered particles. Concerning the energy-dependent sputtering yields a series of IPPJ-AM reports have been published at the Institute of Plasma Physics, Nagoya University [1,2,3].

The angular distribution of particles sputtered from solid surfaces can possibly provide more detailed informations on the collision cascade in the interior of the target. This report presents a compilation of the angular distribution of sputtered atoms at normal incidence and at oblique incidence for various combinations of incident ions and target atoms. The main concern of this report is the angular distribution of sputtered atoms from monatomic solids at normal incidence and oblique incidence.

II . ANGULAR DISTRIBUTIONS OF SPUTTERED ATOMS FROM MONATOMIC SOLID AT NORMAL INCIDENCE

The collision cascade theory of sputtering [4], which is generally considered to give a good quantitative description of the sputtering process, predicts a cosine distribution of the sputtered atoms. According to the linear collision theory, the recoil flux per incident ion with energy E and angle of incidence θ is the average number of recoils flying at depth x with energy (E_0, dE_0) in the direction $(\Omega_0,$

$d\Omega_0$) per unit time which is given as [5]

$$F(E, \theta : E_0, \Omega_0) dE_0 d\Omega_0 = dE_0 d\Omega_0 \frac{\Gamma F_D(E, \theta ; x)}{4\pi E_0^2}, \quad (1)$$

where $F_D(E, \theta ; x)$ is the average energy deposited into recoils at depth (x, dx) and Γ is a numerical constant. The corresponding angular distributions $Y(E, 0; \theta_2)$ at normal incidence show the cosine distribution, i.e.,

$$Y_2(E, 0; \theta_2) = \frac{\Gamma F_D(E, 0, 0) \cos \theta_2}{8\pi (1-m)(1-2m) U_s^{1-2m}}, \quad (2)$$

where U_s is the surface binding energy, θ_2 is the ejection angle of a sputtered atom, and m is the number between 0 and 1 for the power approximation.

It has long been realized that the expected cosine distribution was not found universally even for the ion energy in the region where cascade theory describes the yields with good accuracy and that the experimental angular distribution varies with energy of incidence [6]. At very low energy - close to the threshold - it is difficult that a low-energy projectile produces a well-developed collision cascade [7,8], and the resulting distributions are heart-shaped in the polar diagram. At higher projectile energies, a cosine distributions is obtained but at even higher energies the distributions becomes over-cosine, i.e., more outward peaked than the cosine.

Now, there are two possible explanations for the over-cosine distributions. The one possibility is that the surface introduces an asymmetry causing the recoil flux in the cascade to be anisotropic at the surface [9]. Another explanation is done by so called "missing-plane model" that the distributions are strongly influenced by outward scattering neighboring atoms at the topmost layer. Within the solid such a scattering does also take place within any plane but is compensated by scattering in the plane at the surface above. The nonexistence of this "-1" plane at the surface makes the angular distributions outward peaked [10].

The over-cosine distributions are well fitted by the fitting formula $\cos^n \theta$, and the exponent n is a good index of the over cosine distribution. The sputtering yields are measured under the rough sur-

face of which the topography is induced by heavy ion-bombardment used for the measurement, mostly larger than 10^{18} ions/cm². The ion-induced surface roughness reduces the degree of the over cosine distribution. Another important factor which affect the angular distribution is a surface contamination. The surface contamination brings the strong outward-peaked distribution.

III . ANGULAR DISTRIBUTIONS OF SPUTTERED ATOMS FROM MONATOMIC SOLID AT OBLIQUE INCIDENCE.

The angular distributions of sputtered atoms at grazing incidence are composed of two parts, i.e., the random part and a few collision process, where the random part means the contribution of well developed collision cascades near the surface. Since the well-developed cascades do not have the memory of the ion-beam direction, the angular distribution of sputtered atoms due to well-developed cascades will obey the cosine distribution. While the angular distributions due to a few-collision process have the explicit preferential angle of ejection.

It is very difficult to estimate analytically the preferential ejection angle due to a few collision process. In place of a few collision process for sputtering, let us consider a single collision process for sputtering, i.e., a direct knock-out process. According to the direct knock-out model [11], the preferential angle β of ejection due to a single collision between an incident ion with energy E and a target atom is roughly given as [11]

$$\beta = \sin^{-1} \{ (\cos \theta + q)(\cos \theta + 2q) \}^{1/2}, \quad (3)$$

where $q = [U_s/\gamma E]^{1/2}$ with $\gamma = 4M_1 M_2 / (M_1 + M_2)^2$, and β is measured from the surface normal. This simple relation tells us that we can get the following scaling rule for the preferential ejection angle

$$\frac{\sin \beta}{\cos \theta} = \{ (1 + X)(1 + 2X) \}^{1/2}, \quad (4)$$

where $X = [U_s/\gamma E]^{1/2}/\cos \theta$.

IV. COMPILATION OF THE DATA OF ANGULAR DISTRIBUTIONS OF SPUTTERED ATOMS

The angular distribution of sputtered atoms for all available combinations of the incident ions and target atoms up to the early 1989 have been compiled and stored in the computer. Table 1 shows a classification of available papers concerning angular distributions of sputtered atoms published for these four decades. Table 2 shows a list of available publications, and we classified these references into four categories, i.e., monatomic target (Table 3), multi-component material (Table 4), theory and computer simulation (Table 5) and review work (Table 6). Table 7 shows brief reviews of experimental works listed in Tables 3 and 4. In order to know the magnitude of the over-cosine distributions of sputtered atoms from monatomic solids we employed the fitting formula $\cos^n\theta$. In Table 8 the best-fit n values of experimental angular distributions at normal incidence are listed for monatomic solids, and these n values are plotted against γE in Fig. 1. Table 9 shows experimental preferential ejection angles, where the ejection angle is measured from the surface normal. Plots of $\sin\beta_{ex}/\cos\theta$ are shown in Fig. 2 for various angles of incidence, various ion-target combinations in monatomic solids. All compiled experimental angular distributions are presented in the polar diagram in Fig. 3, where angular distributions of sputtered atoms from multi-component solids are also included.

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Captions of tables

- Table 1 Classification of papers concerning the angular distribution of sputtered atoms published from 1960 to 1988.
- Table 2 List of publications concerning the angular distribution of sputtered atoms, where the references are numbered in a chronological order, and this numbering of references is used in the following tables and figures.
- Table 3 List of publications of experimental works on the angular distribution of sputtered atoms from a monatomic solid.
- Table 4 List of publications of experimental works on the angular distribution of sputtered atoms form a multi-component solid.
- Table 5 List of theoretical and computational works on the angular distribution of sputtered atoms.
- Table 6 List of review papers.
- Table 7 Brief review of experimental works on the angular distribution of sputtered atoms. A crystal target is denoted by "CRYSTAL" in the column of "STRUCTURE".
- Table 8 The best-fit n values of an empirical fitting formula $\cos^n\theta$ for the angular distribution at normal incidence on a monatomic solid.
- Table 9 The preferential ejection angle β of measured angular distributions at oblique incidence on a monatomic solid.

Table 1 Classification of papers concerning the angular distribution of sputtered atoms
published from 1960 to 1989

	EXPERIMENT				SIMULATION				THEORY		REVIEW	
	Monatomic		Multi-component									
	Polycrystal	Amorphous	Crystal	Amorphous	Polycrystal	Amorphous	Crystal	Amorphous	Normal	Oblique		
1950	1	0	0	0	0	0	0	0	0	0	0	
1960	3	1	0	0	0	0	0	0	0	1	5	
1970	5	7	9	2	2	1	1	2	7	7		
1980	31	16	8	14	6	1	1	11	15	6		
Sum	40	24	17	16	8	2	2	13	23	18		

Table 2 List of publications concerning the angular distribution
of sputtered atoms

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CATHODE SPUTTERING (1968)
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- 87 17 H.H.ANDERSEN
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- 70 4 O.I.KAPUSTA, S.YA.LEBEDEV
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- 73 1 V.M.BUKHANOV, V.G.MOROZOV, V.E.YURASOVA
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NUCL. INSTRUM. AND METHODS 132 (1976) 355-362
- 76 2 S.YA.LEBEDEV, G.V.LYSOVA
SOV. PHYS. SOLID STATE 17 (1976) 2014-2015
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- 78 2 P.ERLENWEIN
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- 78 5 B.EMMOTH, TH.FRIED, M.BRAUN
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- 79 7 R.YAMADA, K.SONE, M.SAIDOH
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- 79 8 D.HILDEBRANDT, R.MANN
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- 80 3 J.L.WHITTON, W.O.HOFER, U.LITTMARK, M.BRAUN, B.EMMOTH
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K.MURAOKA, M.Maeda, M.AKAZAKI
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- 68 1 G.CARTER, T.S.COLLIGON
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- 70 6 R.J.MACDONALD
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- 75 2 H.OECHSNER
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- 75 5 G.M.MACCRAKEN
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- 77 5 P.SIGHUND
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- 81 15 R.BEHRISCH
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- 86 19 K.KANAYA, N.BABA, Y.MURANAKA, K.ADACHI
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- 87 18 P.SIGHUND
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- 88 4 H.H.ANDERSEN
NUCL. INSTRUM. AND METHODS B33 (1988) 466-473

Table 7 Brief review of experimental works on the angular distributions of sputtered atoms

NO.	REFERENCE	ION	ENERGY(KEV)	ANGLE	TARGET	STRUCTURE
57 1	I G.K.WEHNER	I HG	I 0.03-0.4	I 0	I CU, AG, I I AU, V, ZR, I I NB, SI, C, I I PT, AL, FE I I I	I
60 1	I G.K.WEHNER	I HG	I 0.1-1	I 0	I NI, PT, I I GE, FE, MO I I I	I
61 2	I H.PATTERSON	I A	I 5, 8, 10	I 0, 20	I AU	I
69 2	I B.M.GURMIN	I KR	I 5, 10, 19	I 60	I W	I
70 2	I V.E.DUBINSKI	I AR	I 70	I	I TA	I CRYSTAL
70 3	I V.E.DUBINSKII	I AR, N2	I 70	I	I AU, TA, W	I CRYSTAL
70 4	I O.I.KAPUSTA	I	I	I	I	I
70 5	I A.V.VEEN	I KR	I 250	I 70	I AG	I CRYSTAL
73 1	I V.M.BUKHANOV	I NE	I 22	I	I CU(001)	I CRYSTAL
73 4	I J.RICHARDS	I AR	I 15	I 45	I K-BR, I NA-CL	I CRYSTAL
73 5	I V.E.YURASOVA	I IN, CU, NE	I 9, 5	I 0, 45	I CU, IN-SB	I CRYSTAL
74 1	I K.RODELSPERGER	I	I	I	I	I

Table 7 (continued)

NO.	REFERENCE	ION	ENERGY(KEV)	ANGLE	TARGET	STRUCTURE
74 4 1	S.YA.LEBÉDEV	I AR, N	I 70	I	I AU	I CRYs
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
76 1 1	K.RODELSPERGER	I AR	I 130, 300,	I 0, 60	I FE, CU, AU	I
I		I 1000	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
76 2 1	S.YA.LEBEDEV	I	I	I	I	I CRYs
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
77 1 1	D.HILDEBRANDT	I NE, AR, KR	I 5-15	I 0	I CU, ZN, PB	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
77 2 1	R.R.OLSON	I HG, AR	I 1	I	I NI-CU,	I
I		I	I	I	I FE-NI	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
77 3 1	K.RODELSPERGER	I AR	I 130, 300,	I 0, 60	I AU, PT,	I
I		I 1000	I	I	I CU, FE,	I
I		I	I	I	I TA	I
I		I	I	I	I	I
I		I	I	I	I	I
77 4 1	Y.CHOUMAN	I AR	I 1.8	I	I TA	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
78 2 1	P.ERLENWEIN	I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
78 4 1	P.HUCKS	I AR, HE, H	I 15, 30	I 70	I AU, CU	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
78 5 1	B.EMMOTH	I HE, AR	I 20, 40, 65	I 0	I MO, AG	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
79 1 1	J.N.SMITH.JR	I H3	I 5-10	I 30, 45,	I CR	I
I		I	I	I 60, 75	I	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
79 2 1	J.ROTH	I H, HE	I 1, 4	I 0-80	I NJ, W,	I
I		I	I	I	I TA-C	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I

Table 7 (continued)

NO.	REFERENCE	ION	ENERGY(KEV)	ANGLE	TARGET	STRUCTURE
79 3 I	R.R.OLSON	I HG, AR	I 0.3	I	I NI-FE, I AG-AU, I NI-CU	I
I		I	I	I	I	I
I		I	I	I	I NI-CU	I
I		I	I	I	I	I
I		I	I	I	I	I
79 6 I	J.N.SMITH.JR	I H3	I 10	I 30, 45, I 60, 75	I CR	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
79 7 I	R.YAMADA	I NE	I 0.6, 1.5	I 45	I MO	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
79 8 I	D.HILDEBRANDT	I NE, AR, KR	I 10	I 0, 40, 60	I AL, NB, I AG, PB	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
80 1 I	T.OKUTANI	I AR	I 3, 10	I 0, 60	I SI	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
80 3 I	J.L.WHITTON	I AR	I 40	I	I CU	I CRYSTAL
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
80 4 I	V.S.CHERNYSH	I A, H	I 80, 400	I	I CO	I CRYSTAL
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
80 7 I	H.L.BAY	I H, HE	I 1, 4	I 0, 20, 40, I 60, 70, 80	I NI, W	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
81 1 I	H.TSUJGE	I AR	I 0.5, 1.0	I 0	I AU, PT, AL	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
81 2 I	H.H.ANDERSEN	I AR	I 20, 80	I	I AG-AU, I CU-PT	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
81 3 I	J.BOHDANSKY	I H, D	I 0.45, 1.0, I 4.0, 0.4, I 2.0, 8.0	I 0, 20, 40, I 60, 80, 0, I 30, 50, 70	I NI, NB-B2	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
81 5 I	S.YA.LEBEDEV	I	I 70	I 80, 90	I	I CRYSTAL
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I

Table 7 (continued)

NO.	REFERENCE	ION	ENERGY(KEV)	ANGLE	TARGET	STRUCTURE
81 10	I K.SAIKI	I HE	I 0.3, 1, 6	I 0	I MO	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
81 12	I M.MANNAMI	I AR	I 50	I 0, 30, 52, 1 AU	I	I
	I	I	I	I 80	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
81 13	I D.HILDEBRANDT	I KR, NE, I AR, XE	I 10, 20, 30 I	I -40, 0, 45	I AL, NB, AG	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
82 1	I H.H.ANDERSEN	I AR	I 160	I 0	I PT-CU	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
82 2	I J.BOHDANSKY	I D, HE	I 50, 100	I 0, 25, 50, 1 MO	I	I
	I	I	I	I 75	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
82 3	I R.G.ALLAS	I CU, NI, AL	I 60, 90, I 120	I	I CU, NI, AL	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
82 5	I W.SZYMCAK	I NE, XE	I 0.2-30	I 0	I AU	I CRYSTAL
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
82 7	I W.O.HOFER	I HE, H	I 0.5, 4	I 0	I V	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
82 8	I T.MOTOHIRO	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
82 11	I V.ORLINOV	I AR	I 40	I 0	I AL, AL203	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
83 1	I M.F.DUMKE	I AR	I 15	I 0	I GA, I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
83 2	I H.J.KANG	I AR	I 3	I 0	I AU-CU	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I

Table 7 (continued)

NO.	REFERENCE	ION	ENERGY(KEV)	ANGLE	TARGET	STRUCTURE
83 4	I M.R.WELLER	I AR	I 100	I 0	I AU-AG	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
83 5	I J.ROTH	I NI, MO, W	I 0.3-50	I	I NB-B2,	I
	I	I	I	I	I TI-B2,	I
	I	I	I	I	I B4-C,	I
	I	I	I	I	I TA-C, C	I
	I	I	I	I	I	I
83 7	I H.H.ANDERSEN	I BI, AR, O	I 1.25-320	I 0	I CU-PT, CU,	I
	I	I	I	I	I NiS-PD	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
84 1	I S.ICHIMURA	I AR	I 3	I 0	I CU-NI,	I
	I	I	I	I	I CO-NI,	I
	I	I	I	I	I FE-NI	I
	I	I	I	I	I	I
	I	I	I	I	I	I
84 2	I H.H.ANDERSEN	I AR	I 20, 80	I	I CU-PT	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
84 3	I P.R.HALMBERG	I Au	I 125	I 0-60	I Cu	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
84 4	I J.LINDERS	I AR	I 20, 40	I 80	I AG	I CRYST
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
84 5	I R.BECERRA-ACEVEDO	I D	I 4, 1.33	I 80	I Ni, Mo	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
85 2	I G.BRAUER	I AR, XE	I 100-900	I 0, 80, 85	I Cu, Zr, Au	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
85 3	I S.KUNDU	I Ne, Ar,	I 20-30	I 0-40(DEG)	I AG	I
	I	I Kr, Xe	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
85 4	I H.H.ANDERSEN	I AR,	I 1.25-320	I 0-90(DEG)	I Cu, PT, GE	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
85 5	I T.MOTIHIRO	I AR	I 2.35, 5.0,	I 0 (DEG)	I Au	I
	I	I	I 7.8	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I

Table 7 (continued)

NO.	REFERENCE	ION	ENERGY(KEV)	ANGLE	TARGET	STRUCTURE
85 11	I V.A.BURDOVITSIN	I N, N ₂ , AR	I 10	I 0-75	I SI-N	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
85 13	I I.I.BONDAR	I	I	I 30-45	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
86 1	I H.J.KANG	I AR	I 0.8	I 0, 60	I AU-CU	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
86 2	I J.P.O'CONNOR	I BR	I 70, 100	I	I NB	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
86 3	I YASUHIRO NAGAI	I AR	I 1	I 0-60	I NI-FE	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
86 6	I Y.MATSUDA	I AR	I 0.6, 1, 2,	I 0	I FE	I
	I	I	I 3	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
86 7	I M.SZYMONSKI	I AR	I 5	I	I AG	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
86 8	I F.LAMA	I AR	I 5-20	I	I U-02	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
86 9	I M.EROMANN	I AR, O2	I 20, 22,	I	I AG, AU	I CRYs
	I	I	I 24, 40	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
86 12	I M.SAIDOH	I HE, AR	I 2.5-6	I 70	I MO	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
86 14	I J.P.BAXTER	I AR	I 5	I 0	I RH	I AMOR, CRYs
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
86 15	I J.P.BAXTER	I AR	I 5	I 0	I IN, RH	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I

Table 7 (continued)

NO.	REFERENCE	ION	ENERGY(KEV)	ANGLE	TARGET	STRUCTURE
86 16 I	E.TAGLAUER	I AR	I 2	I 0	I CU	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
86 17 I	W.HUANG	I AR N2	I 5	I 0	I AG	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
86 18 I	S.KUNDU	I AR	I 20	I 0 40	I AG	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
87 2 I	C.SCHWEBEL	I XE, AR, KR	I 10-20	I 15, 45	I SI	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
87 3 I	M.SAIDOH	I HE	I 6	I 70	I MO	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
87 5 I	H.SHIMIZU	I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
87 6 I	J.A.SPRAGUE	I CU	I 100	I 0	I CU	I CRYSTAL
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
87 11 I	W.O.HOFER	I AR	I 5	I 0	I CU(111)	I CRYSTAL
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
87 12 I	Y.MATSUDA	I AR	I 1, 2, 3	I 0	I Ti, Fe	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
88 1 I	W.HUANG	I N	I 5	I 0	I AG, AR	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
I		I	I	I	I	I
88 2 I	A.I.DODONOV	I AR	I 30	I 96, 94,	I CU	I
I		I	I	I 92, 88, 85, I	I	I
I		I	I	I 75, 70, 65, I	I	I
I		I	I	I 60, 50, 40, I	I	I
I		I	I	I 0	I	I

Table 8 The best-fit n values of an empirical fitting formula $\cos^n\theta$

ENERGY(KEV)	ION	TARGET	N-VALUE	REF.	NO.
0.30	HG	NI	0.45	60.	1.
0.30	HG	NI	0.48	60.	1.
0.10	HG	PT	0.29	60.	1.
0.25	HG	PT	0.55	60.	1.
0.50	HG	PT	0.54	60.	1.
0.75	HG	PT	0.58	60.	1.
1.00	HG	PT	0.62	60.	1.
0.10	HG	NI	0.02	60.	1.
0.25	HG	NI	0.71	60.	1.
0.50	HG	NI	0.66	60.	1.
0.75	HG	NI	0.85	60.	1.
1.00	HG	NI	1.09	60.	1.
0.15	HG	GE	0.11	60.	1.
0.25	HG	GE	0.43	60.	1.
0.50	HG	GE	0.69	60.	1.
0.75	HG	GE	0.91	60.	1.
1.00	HG	GE	1.06	60.	1.
0.15	HG	MO	0.01	60.	1.
0.25	HG	MO	0.47	60.	1.
0.50	HG	MO	0.29	60.	1.
0.75	HG	MO	0.55	60.	1.
1.00	HG	MO	0.64	60.	1.
0.15	HG	FE	0.03	60.	1.
0.25	HG	FE	0.22	60.	1.
0.50	HG	FE	0.48	60.	1.
0.75	HG	FE	0.54	60.	1.
1.00	HG	FE	0.89	60.	1.
300.00	AR	AU	1.49	76.	1.
300.00	AR	AU	1.17	76.	1.
5.00	KR	CU	0.33	77.	1.
8.00	KR	CU	0.44	77.	1.
14.00	KR	CU	0.46	77.	1.
300.00	AR	PT	2.28	77.	3.
130.00	AR	AU	1.85	77.	3.
130.00	AR	AU	1.44	77.	3.
1000.00	AR	AU	2.28	77.	3.

Table 8 (continued)

ENERGY(KEV)	ION	TARGET	M-VALUE	REF.	NO.
130.00	AR	CU	1.71	77. 3.	10
300.00	AR	CU	1.82	77. 3.	12
300.00	AR	TA	0.99	77. 3.	16
65.00	HE	MO	0.88	78. 5.	1
40.00	HE	AG	1.22	78. 5.	2
40.00	AR	MO	1.08	78. 5.	3
20.00	AR	AG	2.56	78. 5.	4
1.00	H3	Ni	2.09	79. 2.	6
4.00	H2	Ni	1.63	79. 2.	12
4.00	HE	Ni	0.72	79. 2.	16
4.00	H2	W	0.73	79. 2.	19
3.00	AR	SI	1.54	80. 1.	1
10.00	AR	SI	0.87	80. 1.	2
1.00	AR	AU	1.36	81. 1.	1
1.00	AR	AL	0.60	81. 1.	2
1.00	AR	AL	0.44	81. 1.	4
1.00	AR	AU	1.08	81. 1.	5
1.00	AR	PT	0.79	81. 1.	6
1.00	AR	PT	0.76	81. 1.	7
1.00	AR	TA	0.81	81. 1.	8
1.00	AR	SI	0.72	81. 1.	9
0.50	AR	AU	1.19	81. 1.	10
0.50	AR	SI	0.58	81. 1.	14
0.45	H	Ni	1.15	81. 3.	1
0.45	H	Ni	0.75	81. 3.	5
1.00	H	Ni	0.81	81. 3.	6
4.00	H	Ni	1.54	81. 3.	7
50.00	AR	AU	2.27	81.12.	1
100.00	D	MO	1.29	82. 2.	4
100.00	HE	MO	1.11	82. 2.	8
50.00	HE	MO	1.11	82. 2.	12
60.00	CU	CU	1.26	82. 3.	1
90.00	CU	CU	1.35	82. 3.	2
120.00	CU	CU	1.33	82. 3.	3
60.00	Ni	Ni	1.05	82. 3.	4
90.00	Ni	Ni	0.90	82. 3.	5
120.00	Ni	Ni	0.75	82. 3.	6

Table 8 (continued)

ENERGY(KEY)	ION	TARGET	K-VALUE	REF.	NO.
90.00	CU	CU	1.30	82. 3.	7
90.00	CU	CU	1.00	82. 3.	8
90.00	CU	CU	0.77	82. 3.	9
90.00	CU	CU	1.35	82. 3.	10
90.00	CU	CU	0.82	82. 3.	11
90.00	CU	CU	1.07	82. 3.	12
4.00	HE	V	1.19	82. 7.	1
4.00	HE	V	0.93	82. 7.	2
0.50	H	V	1.17	82. 7.	3
40.00	AR	AL	0.96	82.11.	1
40.00	AR	AL	0.86	82.11.	2
125.00	AU	CU	1.99	84. 3.	1
125.00	AU	CU	2.35	84. 3.	2
125.00	AU	CU	2.01	84. 3.	6
125.00	AU	CU	2.14	84. 3.	7
500.00	AR	AU	2.02	85. 2.	1
500.00	AR	CU	1.99	85. 2.	6
500.00	AR	ZR	1.33	85. 2.	12
30.00	NE	AG	0.98	85. 3.	1
20.00	AR	AG	0.84	85. 3.	2
20.00	KR	AG	1.15	85. 3.	3
30.00	XE	AG	1.31	85. 3.	4
80.00	AR	GE	1.17	85. 4.	1
80.00	AR	CU	1.82	85. 4.	2
80.00	AR	PT	1.96	85. 4.	3
2.30	AR	AU	0.54	85. 5.	1
5.00	AR	AU	0.30	85. 5.	2
7.80	AR	AU	1.04	85. 5.	3
100.00	BR	NB	1.36	86. 2.	2
1.00	AR	FE	1.12	86. 6.	1
3.00	AR	FE	1.45	86. 6.	2
2.00	AR	FE	1.31	86. 6.	3
0.60	AR	FE	0.93	86. 6.	4
5.00	AR	AG	1.18	86. 7.	1
5.00	AR	AG	0.20	86. 7.	2
5.00	AR	AG	1.74	86. 7.	3
5.00	AR	RH	1.11	86.14.	1

Table 8 (continued)

ENERGY(KEV)	ION	TARGET	N-VALUE	REF.	NO.
5.00	AR	RH	2.03	86.14.	2
5.00	AR	IN	1.31	86.15.	1
5.00	AR	RH	1.81	86.15.	2
5.00	AR	IN	1.06	86.15.	3
5.00	AR	IN	1.31	86.15.	4
5.00	AR	IN	1.49	86.15.	5
5.00	AR	RH	1.22	86.15.	6
5.00	AR	RH	1.56	86.15.	7
5.00	AR	RH	2.11	86.15.	8
2.00	AR	CU	0.72	86.16.	1
2.00	AR	CU	0.88	86.16.	2
2.00	AR	CU	1.12	86.16.	3
2.00	AR	CU	1.17	86.16.	4
5.00	AR	AG	1.23	86.17.	1
5.00	AR	AG	1.77	86.17.	2
5.00	N2	AG	1.11	86.17.	3
5.00	N2	AG	1.38	86.17.	4
20.00	AR	AG	0.85	86.18.	1
5.00	N	AG	0.88	88. 1.	1
5.00	N	AR	1.13	88. 1.	2
30.00	AR	CU	3.26	88. 2.	12

Table 9 The preferential ejection angle β of measured distributions
at oblique incidence on a monatomic solid.

ENERGY(KEV)	ION	TARGET	θ	β	REF.	NO.
5.00	KR	V	60.0	53.8	69. 2.	1
10.00	KR	V	60.0	50.0	69. 2.	2
19.00	KR	V	60.0	23.0	69. 2.	3
130.00	AR	CU	60.0	0.0	76. 1.	1
300.00	AR	CU	60.0	30.0	76. 1.	2
300.00	AR	CU	60.0	0.0	76. 1.	3
130.00	AR	AU	60.0	0.0	76. 1.	6
130.00	AR	PT	60.0	0.0	76. 1.	7
130.00	AR	CU	60.0	5.0	76. 1.	8
130.00	AR	FE	60.0	5.0	76. 1.	9
130.00	AR	TA	60.0	5.0	76. 1.	10
1000.00	AR	AU	60.0	5.0	76. 1.	11
1000.00	AR	PT	60.0	5.0	76. 1.	12
1000.00	AR	CU	60.0	0.0	76. 1.	13
1000.00	AR	FE	60.0	20.0	76. 1.	14
1000.00	AR	TA	60.0	0.0	76. 1.	15
130.00	AR	PT	60.0	10.0	77. 3.	1
300.00	AR	PT	60.0	10.0	77. 3.	3
130.00	AR	AU	60.0	0.0	77. 3.	6
130.00	AR	AU	60.0	0.0	77. 3.	7
1000.00	AR	AU	60.0	0.0	77. 3.	9
130.00	AR	CU	60.0	0.0	77. 3.	11
300.00	AR	CU	60.0	0.0	77. 3.	13
1000.00	AR	CU	60.0	0.0	77. 3.	14
130.00	AR	TA	60.0	29.0	77. 3.	15
1000.00	AR	TA	60.0	0.0	77. 3.	17
130.00	AR	FE	60.0	20.0	77. 3.	18
130.00	AR	FE	60.0	0.0	77. 3.	19
130.00	AR	FE	60.0	0.0	77. 3.	20
1000.00	AR	FE	60.0	20.0	77. 3.	21
1.00	H3	NI	80.0	45.0	79. 2.	1
1.00	H3	NI	70.0	43.0	79. 2.	2
1.00	H3	CR	60.0	49.0	79. 2.	3
1.00	H3	NI	40.0	50.0	79. 2.	4
1.00	H3	NI	20.0	50.0	79. 2.	5
4.00	H2	NI	80.0	21.0	79. 2.	7

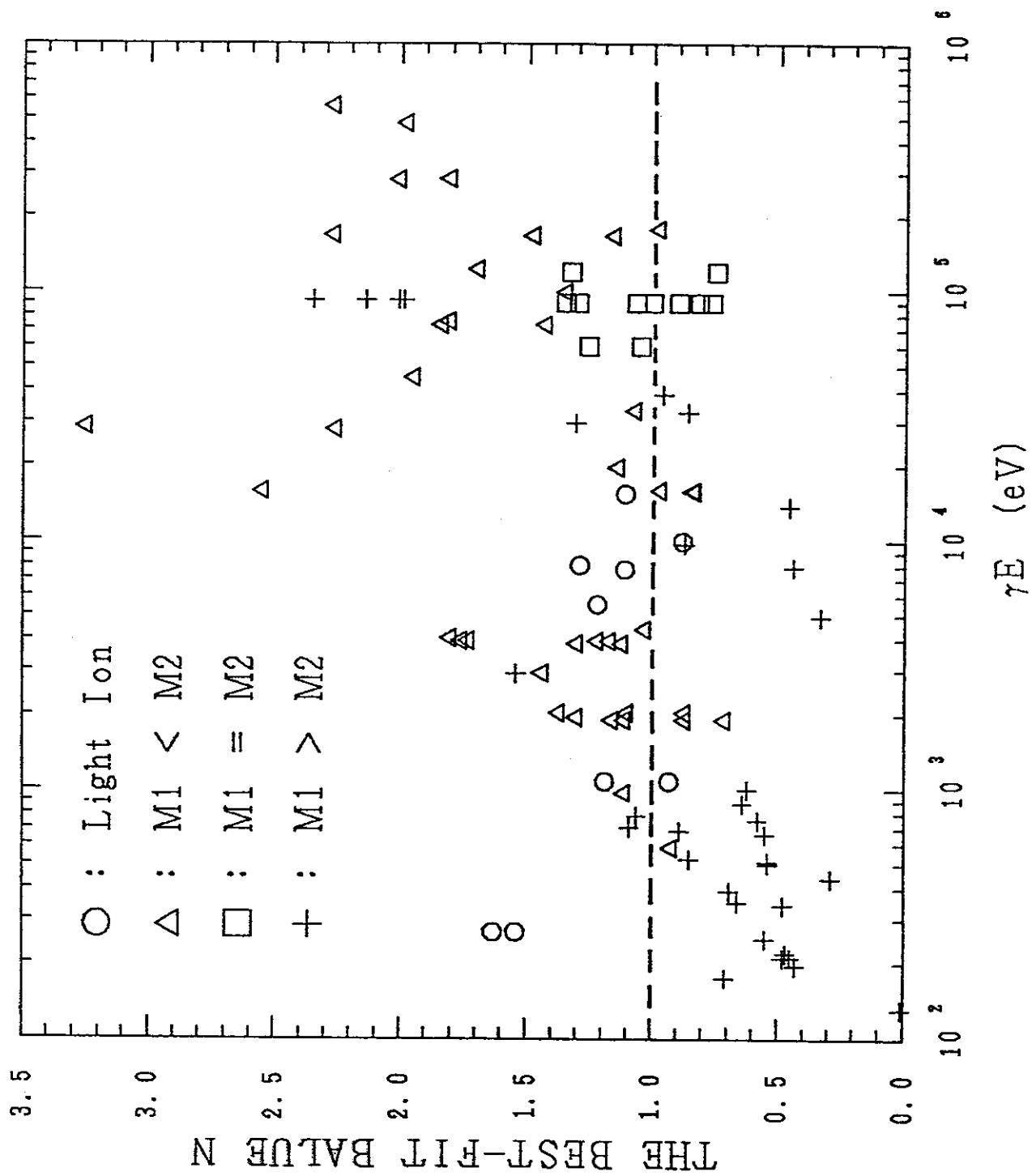
Table 9 (continued)

2		ION	TARGET	θ	β	REF.	NO.
4.00	H2	NI		70.0	33.7	79. 2.	8
4.00	H2	NI		60.0	42.0	79. 2.	9
4.00	H2	NI		40.0	50.0	79. 2.	10
4.00	H2	NI		20.0	50.0	79. 2.	11
4.00	HE	NI		80.0	15.0	79. 2.	13
1.30	H3	NI		60.0	50.0	79. 2.	14
4.00	HE	NI		40.0	55.0	79. 2.	15
4.00	H2	W		80.0	45.0	79. 2.	17
4.00	H2	W		60.0	45.0	79. 2.	18
3.00	AR	SI		60.0	20.0	80. 1.	3
10.00	AR	SI		60.0	15.0	80. 1.	4
0.45	H	NI		40.0	45.9	81. 3.	2
0.45	H	NI		60.0	45.0	81. 3.	3
0.45	H	NI		80.0	49.3	81. 3.	4
100.00	D	MO		75.0	20.0	82. 2.	1
100.00	D	MO		50.0	50.0	82. 2.	2
100.00	D	MO		25.0	50.0	82. 2.	3
50.00	D	MO		75.0	25.0	82. 2.	5
50.00	D	MO		50.0	45.0	82. 2.	6
50.00	D	MO		25.0	45.0	82. 2.	7
100.00	HE	MO		25.0	60.0	82. 2.	9
100.00	HE	MO		50.0	50.0	82. 2.	10
100.00	HE	MO		75.0	5.0	82. 2.	11
50.00	HE	MO		75.0	0.0	82. 2.	13
50.00	HE	MO		50.0	40.0	82. 2.	14
50.00	HE	MO		25.0	40.0	82. 2.	15
2.00	D	MO		80.0	25.0	83. 5.	1
125.00	AU	CU		30.0	0.0	84. 3.	3
125.00	AU	CU		45.0	0.0	84. 3.	4
125.00	AU	CU		60.0	30.0	84. 3.	5
125.00	AU	CU		30.0	0.0	84. 3.	8
125.00	AU	CU		45.0	0.0	84. 3.	9
125.00	AU	CU		60.0	0.0	84. 3.	10
500.00	AR	AU		85.0	10.0	85. 2.	2
150.00	AR	AU		85.0	5.0	85. 2.	3
900.00	AR	AU		85.0	5.0	85. 2.	4
200.00	XE	AU		85.0	5.0	85. 2.	5

Table 9 (continued)

ENERGY(KEV)	ION	TARGET	θ	β	REF.	NO.
500.00	AR	CU	80.0	10.0	85. 2.	7
500.00	AR	CU	85.0	5.0	85. 2.	8
150.00	AR	CU	85.0	5.0	85. 2.	9
900.00	AR	CU	85.0	5.0	85. 2.	10
200.00	XE	CU	85.0	5.0	85. 2.	11
500.00	AR	ZR	80.0	11.0	85. 2.	13
500.00	AR	ZR	85.0	9.0	85. 2.	14
150.00	AR	ZR	85.0	9.0	85. 2.	15
900.00	AR	ZR	85.0	8.0	85. 2.	16
200.00	XE	ZR	85.0	5.0	85. 2.	17
6.00	HE	MO	70.0	35.0	86.12.	1
6.00	HE	MO	70.0	30.0	86.12.	2
6.00	HE	MO	70.0	30.0	86.12.	3
20.00	XE	SI	15.0	13.9	87. 2.	1
20.00	XE	SI	45.0	52.2	87. 2.	2
20.00	XE	SI	45.0	0.0	87. 2.	3
20.00	AR	SI	45.0	0.0	87. 2.	4
20.00	AR	SI	45.0	52.2	87. 2.	5
20.00	KR	SI	45.0	10.0	87. 2.	6
20.00	KR	SI	45.0	45.9	87. 2.	7
20.00	XE	SI	45.0	0.0	87. 2.	8
20.00	XE	SI	45.0	52.2	87. 2.	9
6.00	HE	MO	70.0	29.2	87. 3.	1
6.00	HE	MO	70.0	25.0	87. 3.	2
30.00	AR	CU	86.0	10.0	88. 2.	1
30.00	AR	CU	84.0	15.0	88. 2.	2
30.00	AR	CU	82.0	15.0	88. 2.	3
30.00	AR	CU	78.0	20.0	88. 2.	4
30.00	AR	CU	75.0	25.7	88. 2.	5
30.00	AR	CU	65.0	30.0	88. 2.	6
30.00	AR	CU	60.0	29.7	88. 2.	7
30.00	AR	CU	55.0	30.5	88. 2.	8
30.00	AR	CU	50.0	0.0	88. 2.	9
30.00	AR	CU	40.0	0.0	88. 2.	10
30.00	AR	CU	30.0	0.0	88. 2.	11

Fig. 1



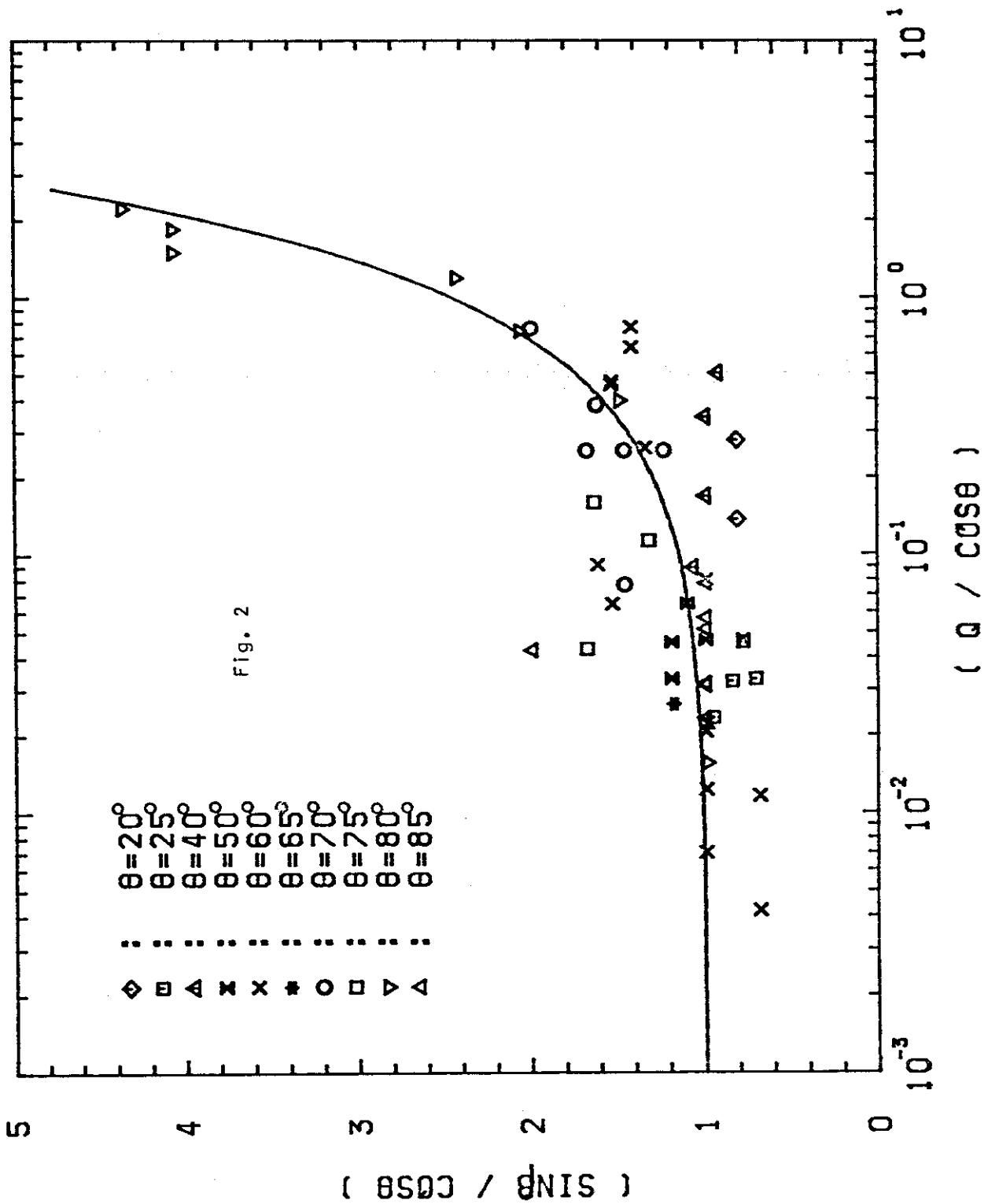


Fig. 2

Captions of figures

Fig. 1 The best-fit n values of the fitting formula $\cos^n \theta$ of angular distributions of sputtered atoms from monatomic solids are plotted as a function of γE for various ion-target combination.

Fig. 2 The scaling rule for the preferential ejection angle β , where the ratio $\sin \beta_{ex}/\cos \theta$ are plotted against X . The solid line is

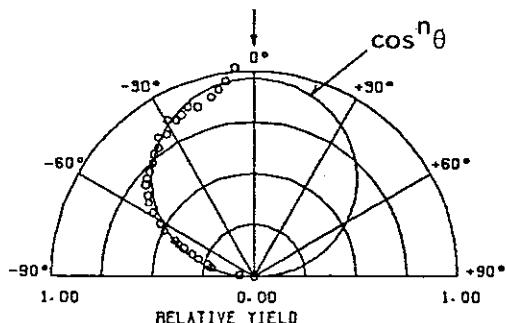
$$\frac{\sin \beta}{\cos \theta} = \{ (1 + X)(1 + 2X) \}^{1/2},$$

$$\text{where } X = [U_s/\gamma E]^{1/2}/\cos \theta.$$

Fig. 3 Plots of all experimental angular distributions reported from 1960 to 1988. The notations used in the figures are indicated below:

INFORMATION	
BB 1	\Rightarrow AG
INCIDENT ANGLE	0°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	AG
ION	N 7 14.0
TARGET	AG 47 108
atomic number	1
mass number	
REFERENCE	BB.1
ENERGY (EV)	5.00×10^3
EPSILON	1.21×10^{-1}
GAMMA	1.02×10^{-1}
θ	3.81×10^{-2}
$\cos \theta$	8.80×10^{-1}

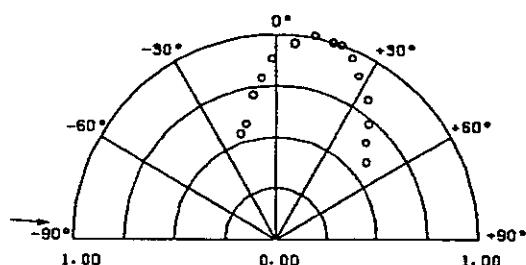
P=3.5E-8 TORR F=2.5E17 ← fluence
IONS/SQ.CM



INFORMATION	
BB 2	\Rightarrow CU
INCIDENT ANGLE	86°
TARGET	POLY
ENVIRONMENT	---
SPUTTERED ATOM(S)	CU
ION	AR 18 39.9
TARGET	CU 29 63.5
EJECTION ANGLE EXP. CAL.	10.8° 4.94°
REFERENCE	BB.2
ENERGY (EV)	3.00×10^4
EPSILON	3.21×10^{-1}
GAMMA	2.37×10^{-1}
θ	1.11×10^{-2}

β_{ex}

β calculated from Eq.(3)



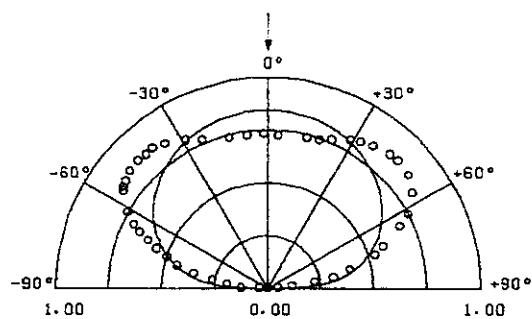
INFORMATION

HG \Rightarrow NI	
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	-----
SPUTTERED ATOM(S)	NI
ION	HG 80 201
TARGET	NI 28 58.7

ENERGY (EV)	3.00 x 10 ²
EPSILON	2.11 x 10 ⁻⁴
GAMMA	7.01 x 10 ⁻¹
O	1.45 x 10 ⁻¹
COS N	4.50 x 10 ⁻¹

REFERENCE 60-1

TRANSVERSE DIRECTION



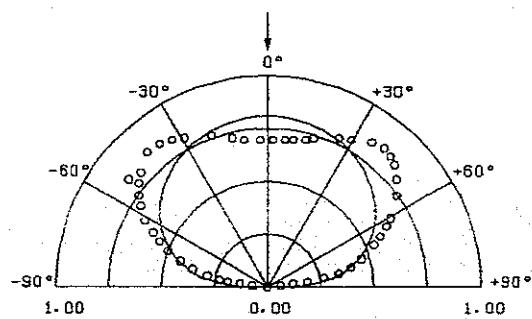
INFORMATION

HG \Rightarrow NI	
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	-----
SPUTTERED ATOM(S)	NI
ION	HG 80 201
TARGET	NI 28 58.7

ENERGY (EV)	3.00 x 10 ²
EPSILON	2.11 x 10 ⁻⁴
GAMMA	7.01 x 10 ⁻¹
O	1.45 x 10 ⁻¹
COS N	4.80 x 10 ⁻¹

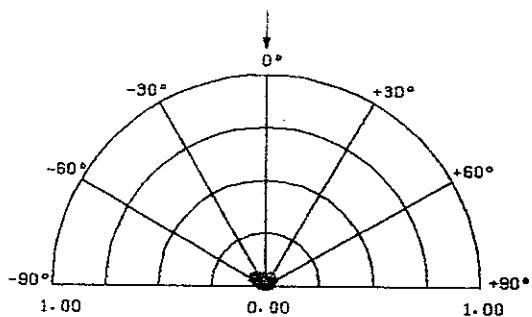
REFERENCE 60-1

ROLLING DIRECTION



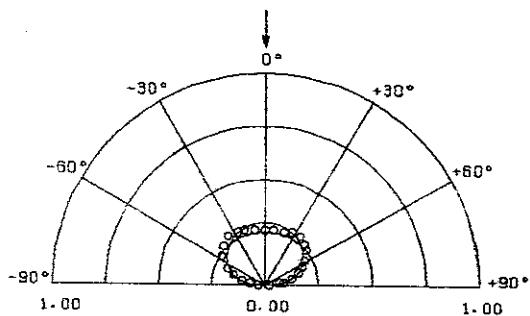
INFORMATION

60 1 3	HG	\Rightarrow	PT
INCIDENT ANGLE	0 °	ENERGY (EV)	1.00×10^2
TARGET	POLY	EPSILON	4.78×10^{-5}
ENVIRONMENT	-----	GAMMA	10.00×10^{-1}
SPUTTERED ATOM(S)	PT	Q	2.42×10^{-1}
		COS *	
		N	2.90×10^{-1}
ION	HG 80 201		
TARGET	PT 78 195	REFERENCE	60.1



INFORMATION

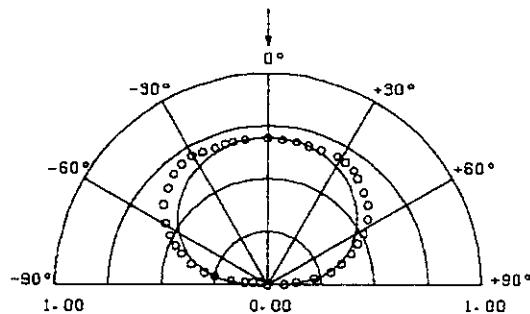
60 1 4	HG	\Rightarrow	PT
INCIDENT ANGLE	0 °	ENERGY (EV)	2.50×10^2
TARGET	POLY	EPSILON	1.20×10^{-4}
ENVIRONMENT	-----	GAMMA	10.00×10^{-1}
SPUTTERED ATOM(S)	PT	Q	1.53×10^{-1}
		COS *	
		N	5.50×10^{-1}
ION	HG 80 201		
TARGET	PT 78 195	REFERENCE	60.1



INFORMATION

60 L 5	HG	\Rightarrow	PT
INCIDENT	0 °	ENERGY	5.00×10^2
ANGLE		(EV)	
TARGET	POLY	EPSILON	2.39×10^{-4}
ENVIRONMENT	-----	GAMMA	10.00×10^{-1}
SPUTTERED	PT	O	1.08×10^{-1}
ATOM(S)		COS *	
		N	5.40×10^{-1}

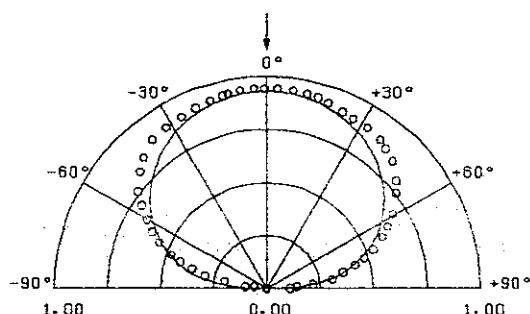
ION	HG	80	201	REFERENCE	60-1
TARGET	PT	78	195		



INFORMATION

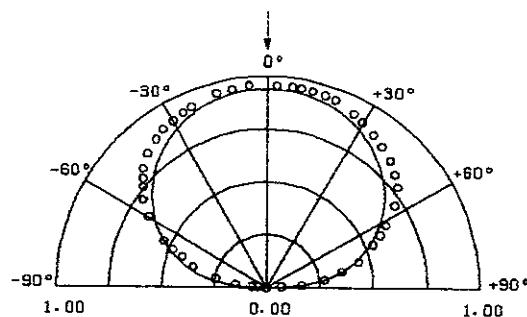
60 L 6	HG	\Rightarrow	PT
INCIDENT	0 °	ENERGY	7.50×10^2
ANGLE		(EV)	
TARGET	POLY	EPSILON	3.59×10^{-4}
ENVIRONMENT	-----	GAMMA	10.00×10^{-1}
SPUTTERED	PT	O	8.83×10^{-2}
ATOM(S)		COS *	
		N	5.80×10^{-1}

ION	HG	80	201	REFERENCE	60-1
TARGET	PT	78	195		



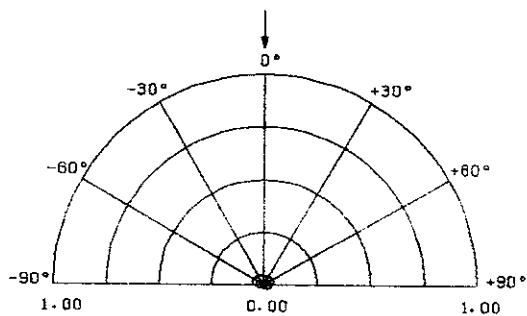
INFORMATION

60 1 7	HG	\Rightarrow	PT
INCIDENT ANGLE	0 °	ENERGY (EV)	1.00×10^3
TARGET	POLY	EPSILON	4.78×10^{-4}
ENVIRONMENT	-----	GAMMA	10.00×10^{-1}
SPUTTERED ATOM(S)	PT	Q	7.64×10^{-2}
		COS θ	6.20×10^{-1}
ION	HG 80 201		
TARGET	PT 78 195	REFERENCE	60.1



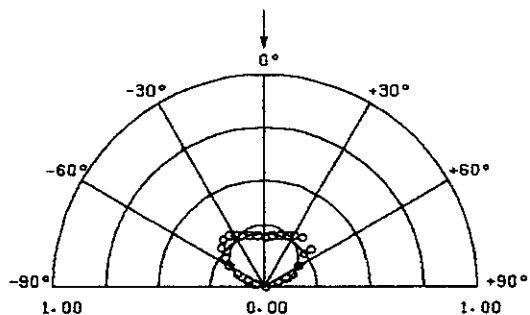
INFORMATION

60 1 8	HG	\Rightarrow	NI
INCIDENT ANGLE	0 °	ENERGY (EV)	1.00×10^2
TARGET	POLY	EPSILON	7.04×10^{-5}
ENVIRONMENT	-----	GAMMA	7.01×10^{-1}
SPUTTERED ATOM(S)	NI	Q	2.52×10^{-1}
		COS θ	2.00×10^{-2}
ION	HG 80 201		
TARGET	NI 28 58.7	REFERENCE	60.1



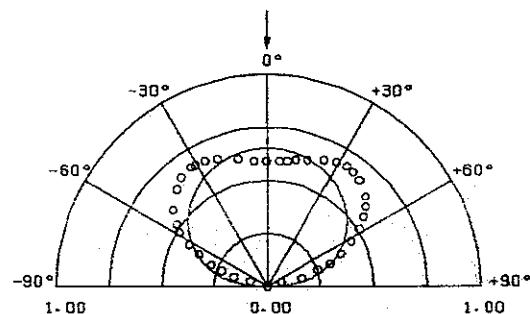
INFORMATION

HG \Rightarrow NI	
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	-----
SPUTTERED ATOM(S)	NI
ION	HG 80 201
TARGET	NI 28 58.7
ENERGY (EV)	2.50×10^2
EPSILON	1.76×10^{-4}
GAMMA	7.01×10^{-1}
Ω	1.59×10^{-1}
\cos^N	7.10×10^{-1}
REFERENCE: 60-1	



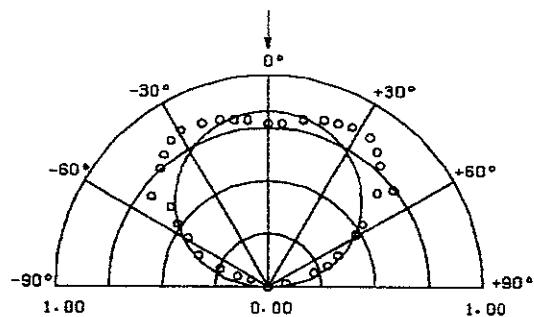
INFORMATION

HG \Rightarrow NI	
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	-----
SPUTTERED ATOM(S)	NI
ION	HG 80 201
TARGET	NI 28 58.7
ENERGY (EV)	5.00×10^2
EPSILON	3.52×10^{-4}
GAMMA	7.01×10^{-1}
Ω	1.13×10^{-1}
\cos^N	6.60×10^{-1}
REFERENCE: 60-1	



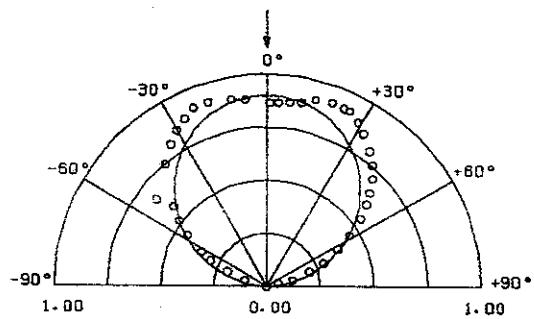
INFORMATION

HG \Rightarrow NI	
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	-----
SPUTTERED ATOM(S)	NI
ION	HG 80 201
TARGET	NI 28 58.7
	REFERENCE 60.1



INFORMATION

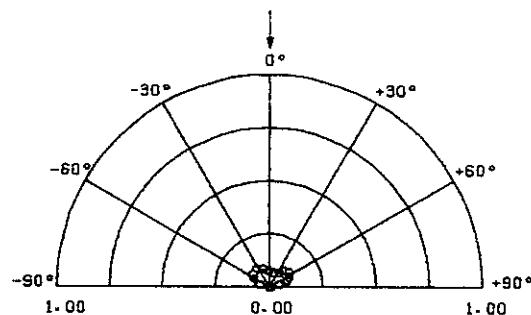
HG \Rightarrow NI	
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	-----
SPUTTERED ATOM(S)	NI
ION	HG 80 201
TARGET	NI 28 58.7
	REFERENCE 60.1



INFORMATION

HG \Rightarrow GE	
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	-----
SPUTTERED ATOM (SI)	GE
ION	HG 80 201
TARGET	GE 32 72.5

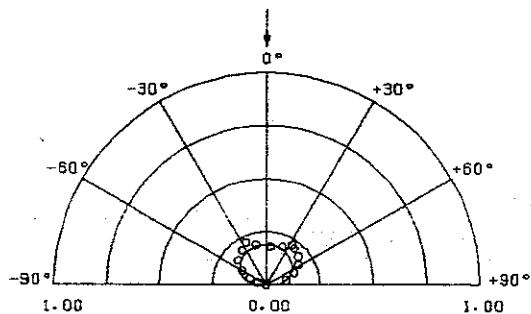
REFERENCE 60.1



INFORMATION

HG \Rightarrow GE	
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	-----
SPUTTERED ATOM (SI)	GE
ION	HG 80 201
TARGET	GE 32 72.5

REFERENCE 60.1

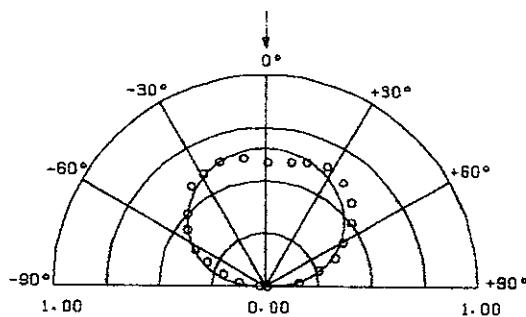


INFORMATION

60 1 15	
HG	\Rightarrow GE
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	-----
SPUTTERED ATOM(S)	GE
ION	HG 80 201
TARGET	GE 32 72.5

ENERGY (EV)	5.00 X10 ²
EPSILON	3.56 X10 ⁻⁴
GAMMA	7.80 X10 ⁻¹
O	9.93 X10 ⁻²
COS *	N 6.90 X10 ⁻¹

REFERENCE 60.1

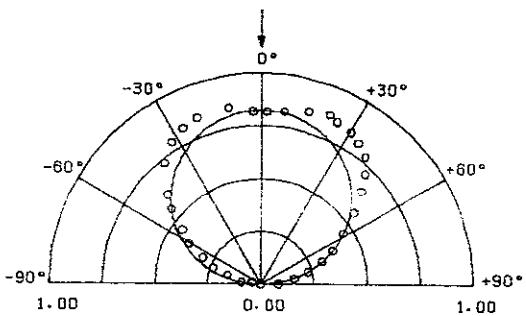


INFORMATION

60 1 18	
HG	\Rightarrow GE
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	-----
SPUTTERED ATOM(S)	GE
ION	HG 80 201
TARGET	GE 32 72.5

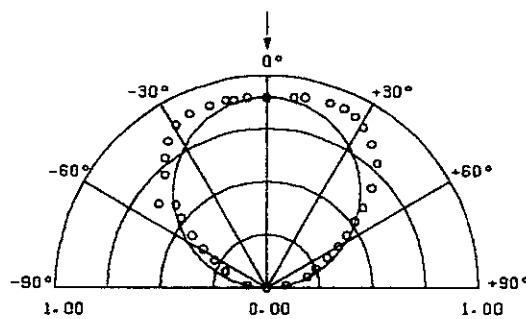
ENERGY (EV)	7.50 X10 ²
EPSILON	5.34 X10 ⁻⁴
GAMMA	7.80 X10 ⁻¹
O	8.11 X10 ⁻²
COS *	N 9.10 X10 ⁻¹

REFERENCE 60.1



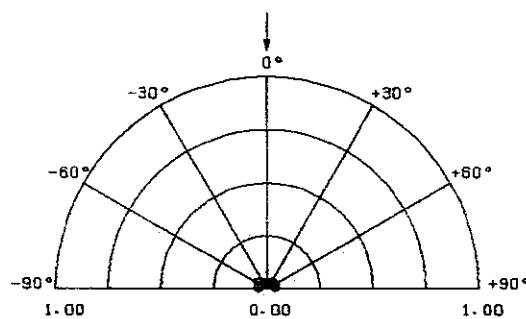
INFORMATION

HG \Rightarrow GE	
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	-----
SPUTTERED ATOM(SI)	GE
ION	HG 80 201
TARGET	GE 32 72.5
ENERGY (EV)	1.00 $\times 10^3$
EPSILON	7.12 $\times 10^{-4}$
GAMMA	7.80 $\times 10^{-1}$
B	7.02 $\times 10^{-2}$
COS " N	1.06
REFERENCE 60.1	



INFORMATION

HG \Rightarrow MO	
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	-----
SPUTTERED ATOM(SI)	MO
ION	HG 80 201
TARGET	MO 42 95.9
ENERGY (EV)	1.50 $\times 10^2$
EPSILON	9.59 $\times 10^{-5}$
GAMMA	8.76 $\times 10^{-1}$
B	2.28 $\times 10^{-1}$
COS " N	10.0 $\times 10^{-3}$
REFERENCE 60.1	

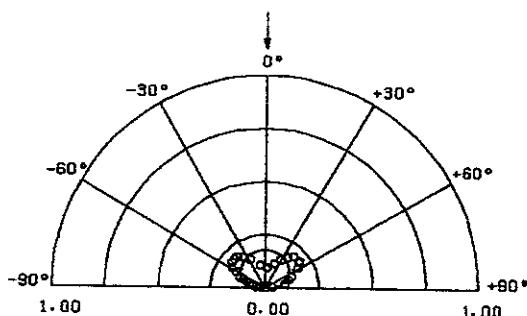


INFORMATION

60 1 10	
HG	\Rightarrow MO
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	-----
SPUTTERED ATOM(S)	MO
ION	HG 80 201
TARGET	MO 42 95.9

ENERGY (EV)	2.50×10^2
EPSILON	1.60×10^{-4}
GAMMA	8.76×10^{-1}
Ω	1.77×10^{-1}
COS " N	4.70×10^{-1}

REFERENCE 60.1

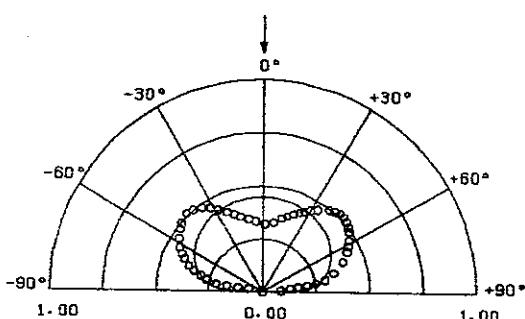


INFORMATION

60 1 20	
HG	\Rightarrow MO
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	-----
SPUTTERED ATOM(S)	MO
ION	HG 80 201
TARGET	MO 42 95.9

ENERGY (EV)	5.00×10^2
EPSILON	3.20×10^{-4}
GAMMA	8.76×10^{-1}
Ω	1.25×10^{-1}
COS " N	2.90×10^{-1}

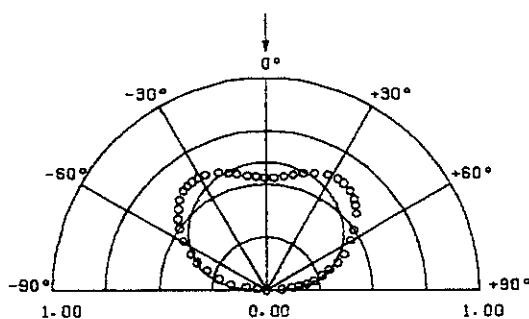
REFERENCE 60.1



INFORMATION

60 1 21	
HG	\Rightarrow MO
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	-----
SPUTTERED ATOM(S)	MO
ION	HG 80 201
TARGET	MO 42 95.9

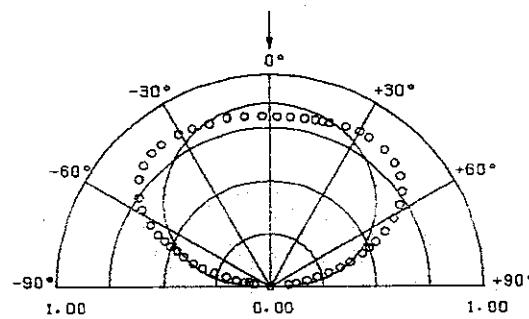
ENERGY (EV)	7.50 X10 ²
EPSILON	4.79 X10 ⁻⁴
GAMMA	8.76 X10 ⁻¹
Q	1.02 X10 ⁻¹
COS " N	5.50 X10 ⁻¹



INFORMATION

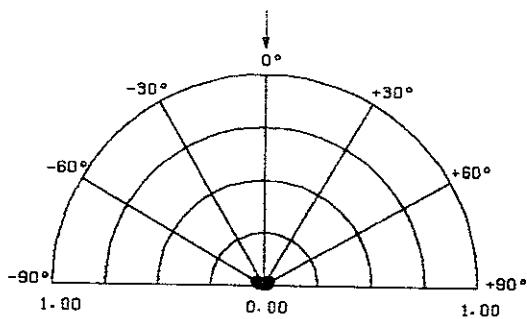
60 1 22	
HG	\Rightarrow MO
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	-----
SPUTTERED ATOM(S)	MO
ION	HG 80 201
TARGET	MO 42 95.9

ENERGY (EV)	1.00 X10 ³
EPSILON	6.39 X10 ⁻⁴
GAMMA	8.76 X10 ⁻¹
Q	9.83 X10 ⁻²
COS " N	6.40 X10 ⁻¹



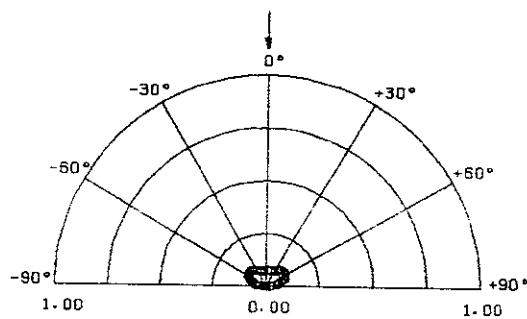
INFORMATION

60 1 29	HG	\Rightarrow	FE
INCIDENT ANGLE	0 °	ENERGY (EV)	1.50×10^2
TARGET	POLY	EPSILON	1.10×10^{-4}
ENVIRONMENT	-----	GAMMA	6.82×10^{-1}
SPUTTERED ATOM(S)	FE	D	2.05×10^{-1}
		COS *	3.00×10^{-2}
ION	HG 80 201		
TARGET	FE 26 55.8	REFERENCE	60.1



INFORMATION

60 1 24	HG	\Rightarrow	FE
INCIDENT ANGLE	0 °	ENERGY (EV)	2.50×10^2
TARGET	POLY	EPSILON	1.84×10^{-4}
ENVIRONMENT	-----	GAMMA	6.82×10^{-1}
SPUTTERED ATOM(S)	FE	D	1.58×10^{-1}
		COS *	2.20×10^{-1}
ION	HG 80 201		
TARGET	FE 26 55.8	REFERENCE	60.1

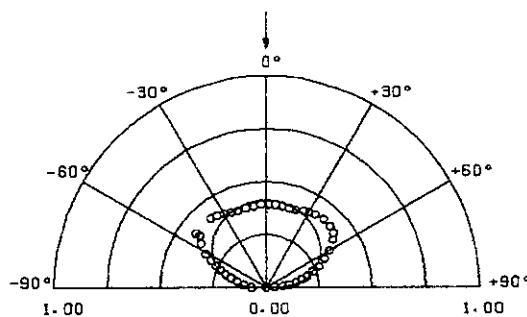


INFORMATION

60 1 25	HG	\Rightarrow	FE
INCIDENT ANGLE	0 °	ENERGY (EV)	5.00×10^2
TARGET	POLY	EPSILON	3.68×10^{-4}
ENVIRONMENT	-----	GAMMA	6.82×10^{-1}
SPUTTERED ATOM (SI)	FE	Q	1.12×10^{-1}
		COS *	4.80×10^{-1}

ION HG 80 201
TARGET FE 26 55.8

REFERENCE 60-1

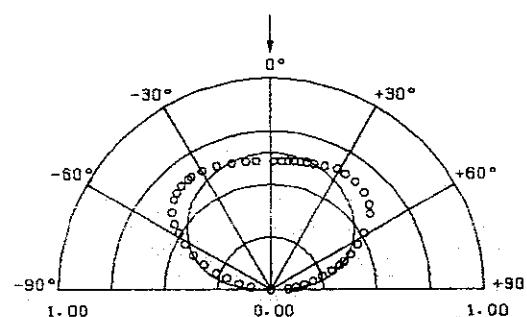


INFORMATION

60 1 26	HG	\Rightarrow	FE
INCIDENT ANGLE	0 °	ENERGY (EV)	7.50×10^2
TARGET	POLY	EPSILON	5.52×10^{-4}
ENVIRONMENT	-----	GAMMA	6.82×10^{-1}
SPUTTERED ATOM (SI)	FE	Q	9.15×10^{-2}
		COS *	5.40×10^{-1}

ION HG 80 201
TARGET FE 26 55.8

REFERENCE 60-1

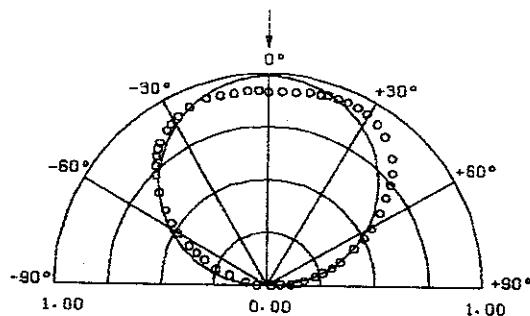


INFORMATION

60 1 27	
HG	\Rightarrow FE
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	-----
SPUTTERED ATOM(S)	FE
ION	HG 80 201
TARGET	FE 26 55.8

ENERGY (EV)	1.00 X10 ³
EPSILON	7.36 X10 ⁻⁴
GAMMA	6.52 X10 ⁻¹
D	7.92 X10 ⁻²
COS N	8.90 X10 ⁻¹

REFERENCE	60 - 1
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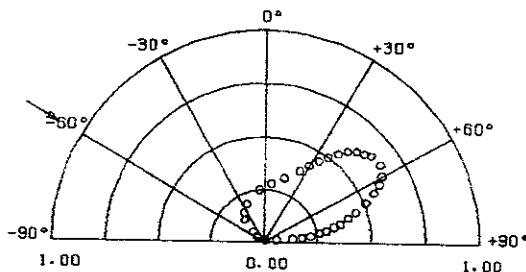


INFORMATION

69 2 1	
KR	\Rightarrow W
INCIDENT ANGLE	60°
TARGET	POLY
ENVIRONMENT	-----
SPUTTERED ATOM(S)	W
ION	KR 36 63.8
TARGET	W 74 184

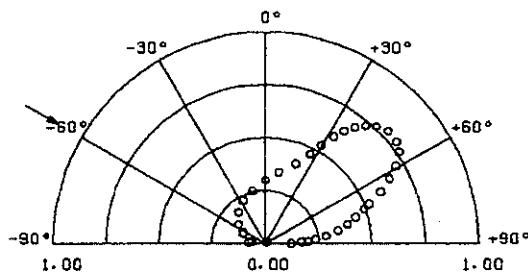
ENERGY (EV)	5.00 X10 ³
EPSILON	8.87 X10 ⁻³
GAMMA	8.60 X10 ⁻¹
D	4.55 X10 ⁻²
EJECTION ANGLE	
EXP.	53.8°
CAL.	34.6°

REFERENCE	69 - 2
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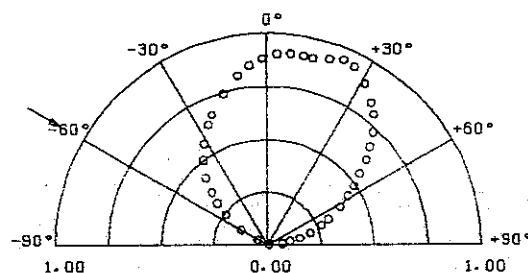
INFORMATION

68 2 2	KR \Rightarrow W
INCIDENT ANGLE	60°
TARGET	POLY
ENVIRONMENT	-----
SPUTTERED ATOM(S)	W
ION	KR 36 83.8
TARGET	W 74 184
ENERGY (EV)	1.00 x 10 ⁴
EPSILON	1.77 x 10 ⁻²
GAMMA	8.60 x 10 ⁻¹
Ω	3.22 x 10 ⁻²
EJECTION ANGLE	
EXP.	50.0°
CAL.	33.2°
REFERENCE	69.2



INFORMATION

68 2 3	KR \Rightarrow W
INCIDENT ANGLE	60°
TARGET	POLY
ENVIRONMENT	-----
SPUTTERED ATOM(S)	W
ION	KR 36 83.8
TARGET	W 74 184
ENERGY (EV)	1.90 x 10 ⁴
EPSILON	3.37 x 10 ⁻²
GAMMA	8.60 x 10 ⁻¹
Ω	2.33 x 10 ⁻²
EJECTION ANGLE	
EXP.	23.0°
CAL.	32.3°
REFERENCE	69.2



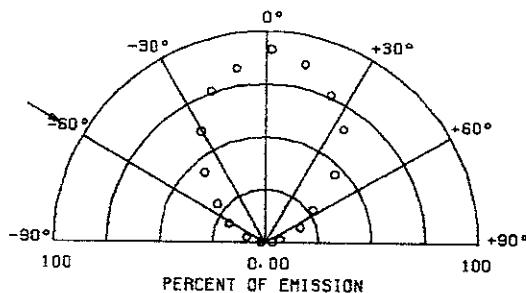
INFORMATION

76 1 1	
AR	⇒ CU
INCIDENT ANGLE	60°
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	CU
ION	AR 18 39.9
TARGET	CU 29 63.5

ENERGY (EV)	1.30 X10 ⁵
EPSILON	1.39
GAMMA	9.48 X10 ⁻¹
O	5.32 X10 ⁻³
EJECTION ANGLE	
EXP.	0.00°
CAL.	30.5°

REFERENCE	76.1
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1.7 MICRO-METER
MAX-EMISSION=88.0



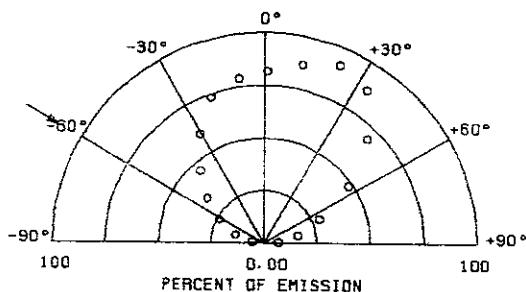
INFORMATION

76 1 2	
AR	⇒ CU
INCIDENT ANGLE	60°
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	CU
ION	AR 18 39.9
TARGET	CU 29 63.5

ENERGY (EV)	3.00 X10 ⁵
EPSILON	3.21
GAMMA	9.48 X10 ⁻¹
O	3.50 X10 ⁻³
EJECTION ANGLE	
EXP.	30.0°
CAL.	30.3°

REFERENCE	76.1
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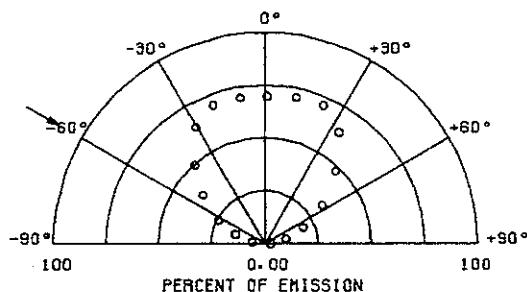
ERODED SURFACE
11.1 MICRO-METER



INFORMATION

78 1 3	AR	\Rightarrow	CU
INCIDENT ANGLE	60°	ENERGY (EV)	3.00×10^5
TARGET	POLY	EPSILON	3.21
ENVIRONMENT	HV	GAMMA	9.48×10^{-1}
SPUTTERED ATOM(S)	CU	O	3.50×10^{-3}
ION	AR 18 39.9	EJECTION ANGLE	
TARGET	CU 29 63.5	EXP.	0.00°
		CAL.	30.3°

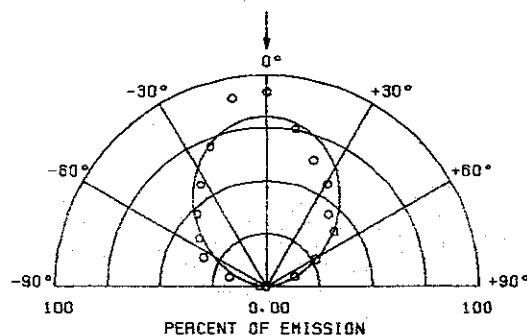
REFERENCE 76.1

SMOOTH SURFACE
11.1 MICRO-METER

INFORMATION

78 1 4	AR	\Rightarrow	AU
INCIDENT ANGLE	0°	ENERGY (EV)	3.00×10^5
TARGET	POLY	EPSILON	1.28
ENVIRONMENT	HV	GAMMA	5.61×10^{-3}
SPUTTERED ATOM(S)	AU	O	4.76×10^{-3}
COS ⁿ		N	1.49
ION	AR 18 39.9	REFERENCE	76.1
TARGET	AU 79 197		

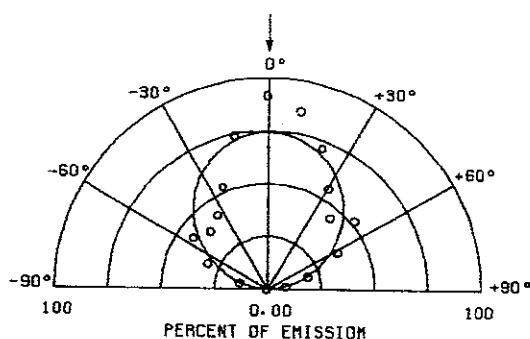
REFERENCE 76.1

MAX. EMISSION=57.0
7.3 MICRO-METER

INFORMATION

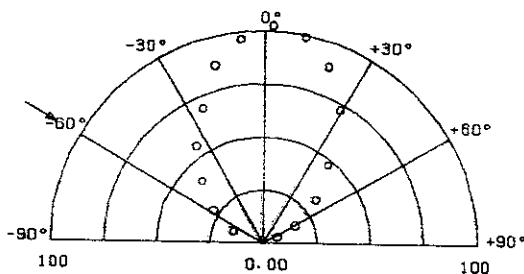
76 1 5	
AR	\Rightarrow AU
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	AU
ION	AR 18 39.9
TARGET	AU 79 197
ENERGY (EV)	3.00×10^5
EPSILON	1.28×10^{-1}
GAMMA	5.61×10^{-1}
O	4.76×10^{-3}
COS N	1.17
REFERENCE	76.1

MAX. EMISSION=69.0
7MICRO-METER



INFORMATION

76 1 6	
AR	\Rightarrow AU
INCIDENT ANGLE	60 °
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	AU
ION	AR 18 39.9
TARGET	AU 79 197
ENERGY (EV)	1.30×10^5
EPSILON	5.55×10^{-1}
GAMMA	5.61×10^{-1}
O	7.23×10^{-3}
EJECTION ANGLE	
EXP.	0.00 °
CAL.	30.7 °
REFERENCE	76.1



INFORMATION

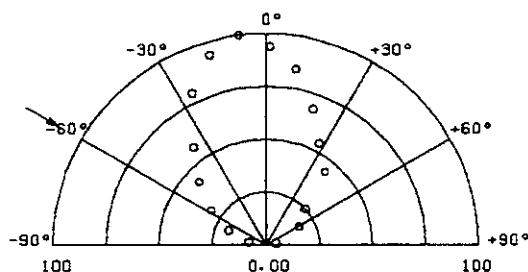
78 i 7
AR \Rightarrow PT

INCIDENT ANGLE	60°
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	PT

ION	AR 18	39.9
TARGET	PT 78	195

ENERGY (EV)	1.30×10^5
EPSILON	5.63×10^{-1}
GAMMA	5.64×10^{-1}
Q	8.92×10^{-3}
EJECTION ANGLE	
EXP.	0.00°
CAL.	30.9°

REFERENCE 76.1



INFORMATION

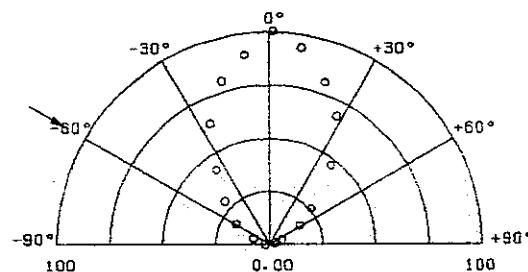
78 i 6
AR \Rightarrow CU

INCIDENT ANGLE	60°
TARGET	POLY
ENVIRONMENT	HY
SPUTTERED ATOM(S)	CU

ION	AR 18	39.9
TARGET	CU 29	63.5

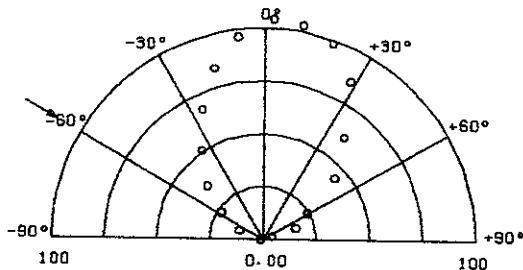
ENERGY (EV)	1.30×10^5
EPSILON	1.39
GAMMA	9.48×10^{-1}
Q	5.32×10^{-3}
EJECTION ANGLE	
EXP.	5.00°
CAL.	30.5°

REFERENCE 76.1



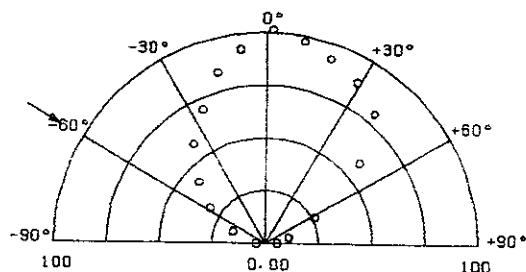
INFORMATION

78 1 8	
AR	\Rightarrow FE
INCIDENT ANGLE	60°
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	FE
ION	AR 18 39.9
TARGET	FE 26 55.8
REFERENCE 76.1	



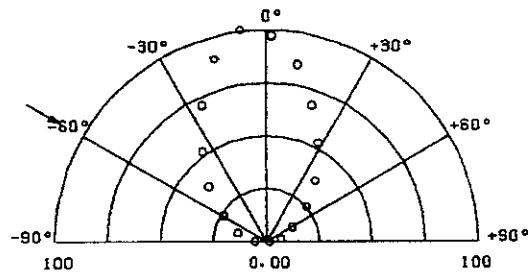
INFORMATION

78 1 10	
AR	\Rightarrow TA
INCIDENT ANGLE	60°
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	TA
ION	AR 18 39.9
TARGET	TA 73 181
REFERENCE 76.1	



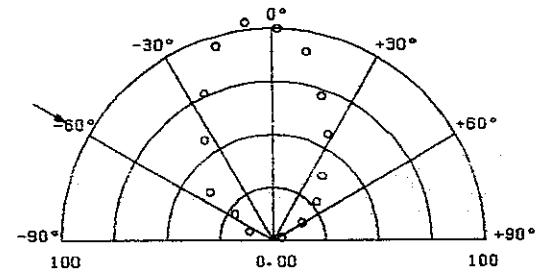
INFORMATION

76 1 11	AR \Rightarrow AU
INCIDENT ANGLE	60°
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	AU
ION	AR 18 39.9
TARGET	AU 79 197
ENERGY (EV)	1.00×10^6
EPSILON	4.27
GAMMA	5.61×10^{-1}
Ω	2.61×10^{-3}
EJECTION ANGLE	
EXP.	5.00°
CAL.	30.3°
REFERENCE	76-1



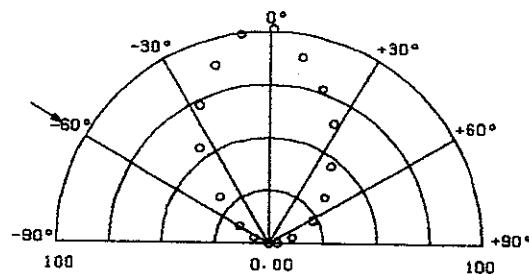
INFORMATION

76 1 12	AR \Rightarrow PT
INCIDENT ANGLE	60°
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	PT
ION	AR 18 39.9
TARGET	PT 78 195
ENERGY (EV)	1.00×10^6
EPSILON	4.33
GAMMA	5.64×10^{-1}
Ω	3.22×10^{-3}
EJECTION ANGLE	
EXP.	5.00°
CAL.	30.3°
REFERENCE	76-1



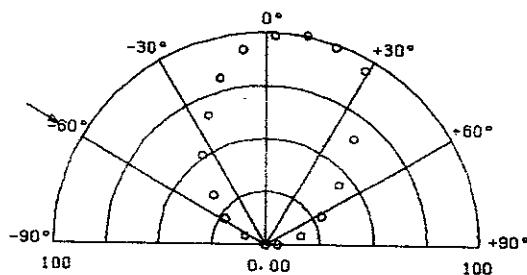
INFORMATION

76 1 19	
AR	\Rightarrow CU
INCIDENT ANGLE	60°
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	CU
ION	AR 18 39.9
TARGET	CU 29 63.5
ENERGY (EV)	1.00×10^6
EPSILON	1.07×10^{-1}
GAMMA	9.48×10^{-1}
O	1.92×10^{-3}
EJECTION ANGLE	
EXP.	0.00°
CAL.	30.2°
REFERENCE	76.1



INFORMATION

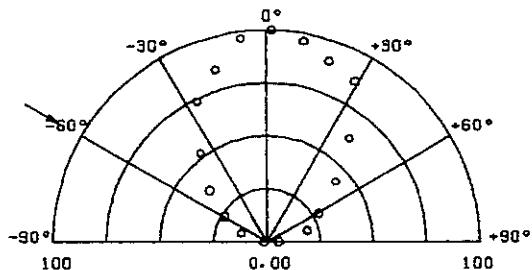
76 1 14	
AR	\Rightarrow FE
INCIDENT ANGLE	60°
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	FE
ION	AR 18 39.9
TARGET	FE 26 55.8
ENERGY (EV)	1.00×10^6
EPSILON	1.16×10^{-1}
GAMMA	9.72×10^{-1}
O	2.10×10^{-3}
EJECTION ANGLE	
EXP.	20.0°
CAL.	30.2°
REFERENCE	76.1



INFORMATION

76 1 15	AR	\Rightarrow	TA
INCIDENT	60°	ENERGY	1.00×10^6
ANGLE		(EV)	
TARGET	POLY	EPSILON	4.64×10^{-1}
ENVIRONMENT	HV	GAMMA	5.93×10^{-1}
SPUTTERED	TA	O	3.70×10^{-3}
ATOM(S)		EJECTION	
		ANGLE	
ION	AR 10 39.9	EXP.	0.00°
TARGET	TA 73 181	CAL.	30.4°

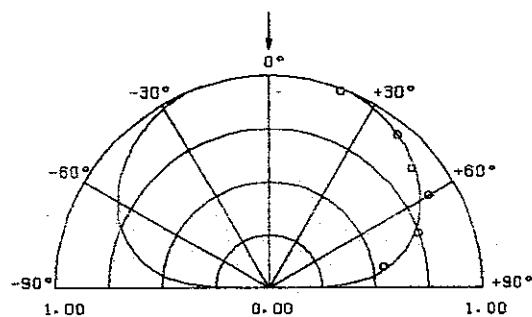
REFERENCE 76-1



INFORMATION

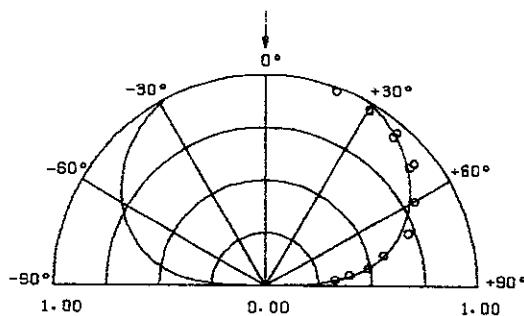
77 1 1	KR	\Rightarrow	CU
INCIDENT	0 °	ENERGY	5.00×10^3
ANGLE		(EV)	
TARGET	POLY	EPSILON	1.68×10^{-2}
ENVIRONMENT	HV	GAMMA	9.81×10^{-2}
SPUTTERED	CU	O	2.67×10^{-2}
ATOM(S)		COS N	3.30×10^{-1}

REFERENCE 77-1



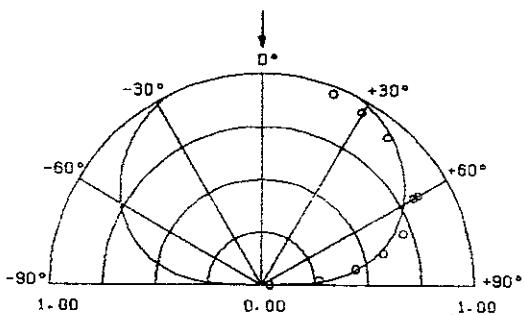
INFORMATION

^{77 L 2} KR \Rightarrow CU	
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	CU
ION	KR 36 83.8
TARGET	CU 29 63.5
ENERGY (EV)	8.00×10^3
EPSILON	2.69×10^{-2}
GAMMA	9.81×10^{-1}
D	2.11×10^{-2}
COS "N"	4.40×10^{-1}
REFERENCE	77.1



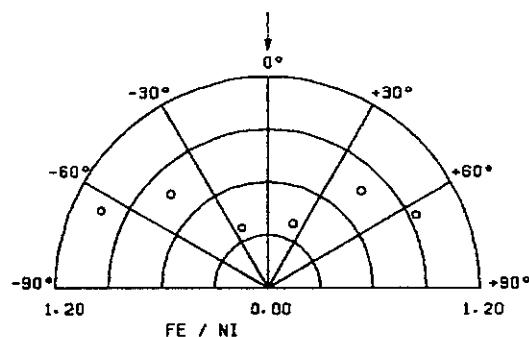
INFORMATION

^{77 L 3} KR \Rightarrow CU	
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	CU
ION	KR 36 83.8
TARGET	CU 29 63.5
ENERGY (EV)	1.40×10^4
EPSILON	4.71×10^{-2}
GAMMA	9.81×10^{-1}
D	1.59×10^{-2}
COS "N"	4.60×10^{-1}
REFERENCE	77.1



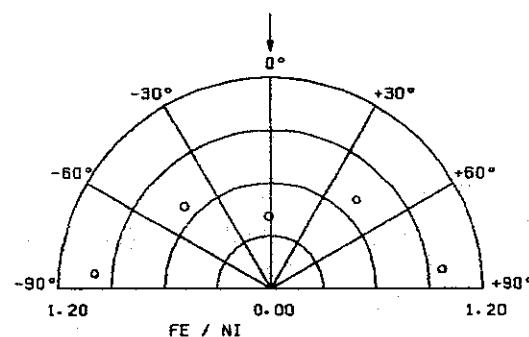
INFORMATION

77 2 1	
HG	\Rightarrow FE-NI
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	-----
SPUTTERED ATOM(S)	FE / NI
ION	HG 80 201
TARGET	FE 26 55.8 NI 28 58.7
ENERGY (EV)	1.40×10^4
REFERENCE	77.2



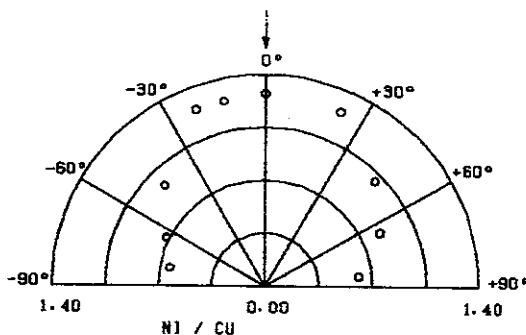
INFORMATION

77 2 2	
HG	\Rightarrow FE-NI
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	-----
SPUTTERED ATOM(S)	FE / NI
ION	HG 80 201
TARGET	FE 26 55.8 NI 28 58.7
ENERGY (EV)	1.40×10^4
REFERENCE	77.2



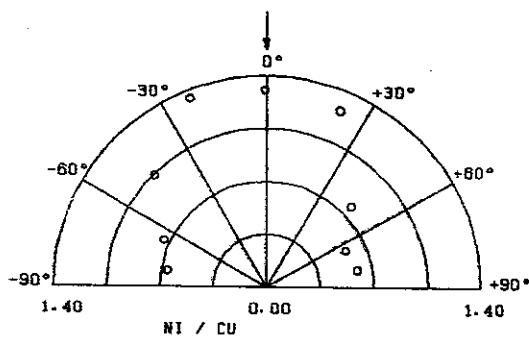
INFORMATION

77 2 3	
HG	\Rightarrow NI-CU
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	---
SPUTTERED ATOM(S)	NI / CU
ION	HG 80 201
TARGET	NI 28 58.7 CU 29 63.5



INFORMATION

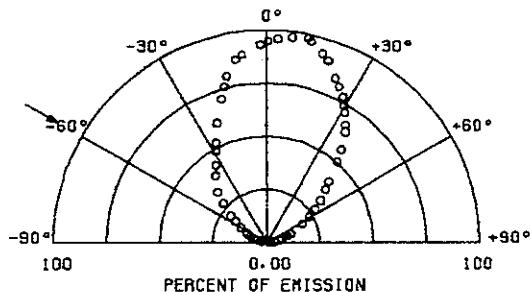
77 2 4	
AR	\Rightarrow NI-CU
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	---
SPUTTERED ATOM(S)	NI / CU
ION	AR 18 39.9
TARGET	NI 28 58.7 CU 29 63.5



INFORMATION

77 3 1	AR	\Rightarrow	PT
INCIDENT ANGLE	60°	ENERGY (EV)	1.30×10^5
TARGET	POLY	EPSILON	5.69×10^{-1}
ENVIRONMENT	HV	GAMMA	5.64×10^{-1}
SPUTTERED ATOM (S)	PT	Q	8.92×10^{-3}
ION	AR 18 39.9	EJECTION ANGLE	
TARGET	PT 78 195	EXP.	10.08
		CAL.	30.9°
		REFERENCE	77 - 3

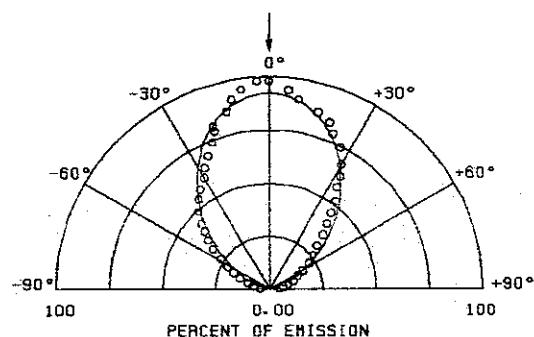
REMOVAL=0.48 MICRO-METER



INFORMATION

77 3 2	AR	\Rightarrow	PT
INCIDENT ANGLE	0 °	ENERGY (EV)	3.00×10^5
TARGET	POLY	EPSILON	1.30
ENVIRONMENT	HV	GAMMA	5.64×10^{-1}
SPUTTERED ATOM (S)	PT	Q	5.87×10^{-3}
		COS N	2.28
ION	AR 18 39.9	REFERENCE	77 - 3
TARGET	PT 78 195		

REMOVAL=1.3 MICRO-METER



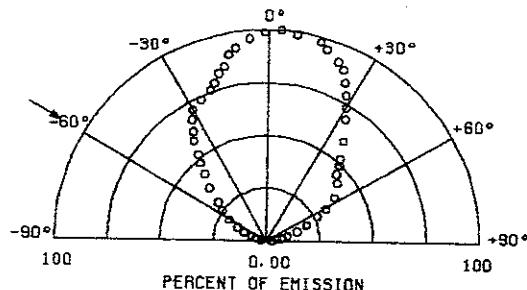
INFORMATION

77 3 3
AR \Rightarrow PT

INCIDENT ANGLE	60°	ENERGY (EV)	3.00×10^5
TARGET	POLY	EPSILON	1.30
ENVIRONMENT	HV	GAMMA	5.64×10^{-1}
SPUTTERED ATOM(S)	PT	Q	5.87×10^{-3}
		EJECTION ANGLE	
ION	AR 18 39.9	EXP.	10.08
TARGET	PT 78 195	CAL.	30.6°

REFERENCE 77.3

REMOVAL=0.44 MICRO-METER



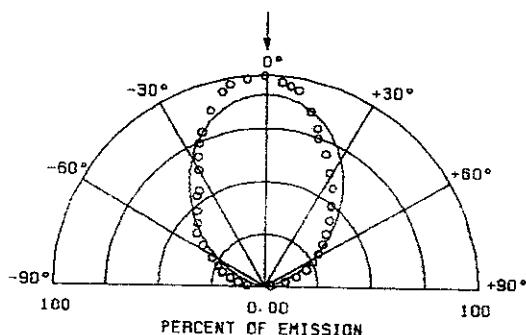
INFORMATION

77 3 4
AR \Rightarrow AU

INCIDENT ANGLE	0°	ENERGY (EV)	1.30×10^5
TARGET	POLY	EPSILON	5.55×10^{-1}
ENVIRONMENT	HV	GAMMA	5.61×10^{-1}
SPUTTERED ATOM(S)	AU	Q	7.23×10^{-3}
		COS N	1.85
ION	AR 18 39.9		
TARGET	AU 79 197		

REFERENCE 77.3

REMOVAL=0.49 MICRO-METER

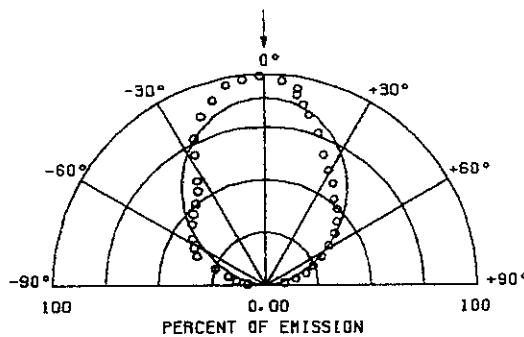


INFORMATION

77 3 5	AR	\Rightarrow	AU
INCIDENT ANGLE	0 °	ENERGY (EV)	1.30×10^5
TARGET	POLY	EPSILON	5.55×10^{-1}
ENVIRONMENT	HV	GAMMA	5.61×10^{-1}
SPUTTERED ATOM(S)	AU	Q	7.23×10^{-3}
		COS N	
		N	1.44

ION AR 18 39.9	REFERENCE 77-3
TARGET AU 79 197	

REMOVAL=4.6 MICRO-METER

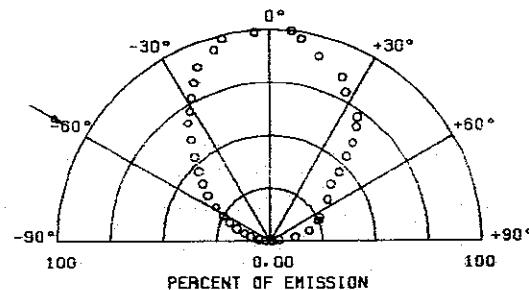


INFORMATION

77 3 6	AR	\Rightarrow	AU
INCIDENT ANGLE	60 °	ENERGY (EV)	1.30×10^5
TARGET	POLY	EPSILON	5.55×10^{-1}
ENVIRONMENT	HV	GAMMA	5.61×10^{-1}
SPUTTERED ATOM(S)	AU	Q	7.23×10^{-3}
		EJECTION ANGLE	
		EXP.	0.00°
		CAL.	30.7°

ION AR 18 39.9	REFERENCE 77-3
TARGET AU 79 197	

REMOVAL=0.096 MICRO-METER



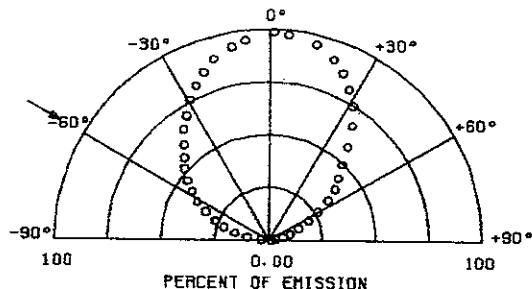
INFORMATION

77 3 7	
AR	\Rightarrow AU
INCIDENT ANGLE	60°
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	AU
ION	AR 18 39.9
TARGET	AU 79 197

ENERGY (EV)	1.30×10^5
EPSILON	5.55×10^{-1}
GAMMA	5.61×10^{-1}
O	7.23×10^{-3}
EJECTION ANGLE	
EXP.	0.00°
CAL.	30.7°

REFERENCE	77.3
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REMOVAL=2.7 MICRO-METER

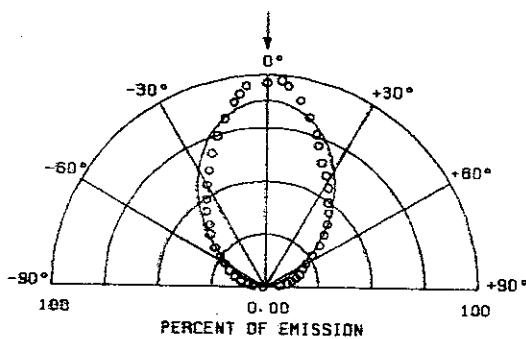


INFORMATION

77 3 8	
AR	\Rightarrow AU
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	AU
ION	AR 18 39.9
TARGET	AU 79 197

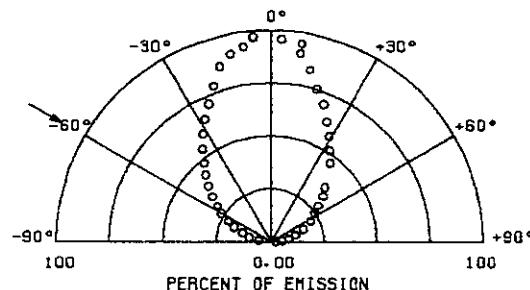
ENERGY (EV)	1.00×10^6
EPSILON	4.27
GAMMA	5.61×10^{-1}
O	2.61×10^{-3}
COS N	2.28

REFERENCE	77.3
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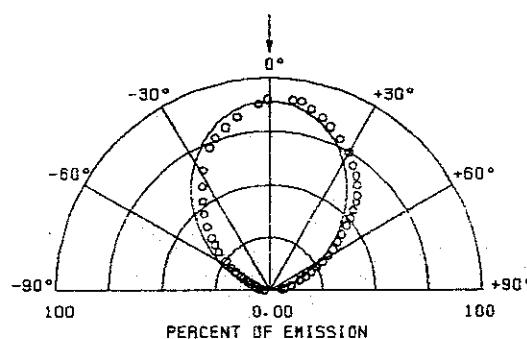
INFORMATION

77 3 9	
AR	\Rightarrow AU
INCIDENT ANGLE	60°
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	AU
ION	AR 18 39.9
TARGET	AU 79 197
ENERGY (EV)	1.00×10^8
EPSILON	4.27
GAMMA	5.61×10^{-1}
Ω	2.61×10^{-3}
EJECTION ANGLE	
EXP.	0.00°
CAL.	30.3°
REFERENCE	77 - 3



INFORMATION

77 3 10	
AR	\Rightarrow CU
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	CU
ION	AR 18 39.9
TARGET	CU 29 63.5
ENERGY (EV)	1.30×10^5
EPSILON	1.39
GAMMA	9.48×10^{-1}
Ω	5.32×10^{-3}
COS θ	1.71
REFERENCE	77 - 3

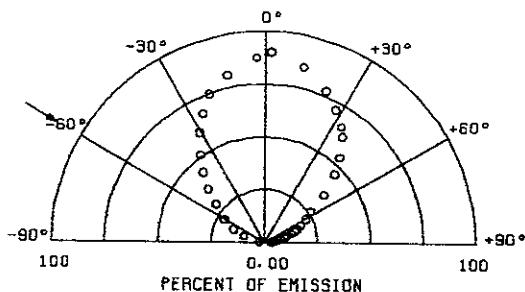


INFORMATION

77 9 11
AR \Rightarrow CU

INCIDENT ANGLE	60°	ENERGY (EV)	1.30×10^5
TARGET	POLY	EPSILON	1.39
ENVIRONMENT	HV	GAMMA	9.48×10^{-1}
SPUTTERED ATOM(S)	CU	Q	5.32×10^{-3}
		EJECTION ANGLE	
ION	AR 18 39.9	EXP.	0.00°
TARGET	CU 29 63.5	CAL.	30.5°

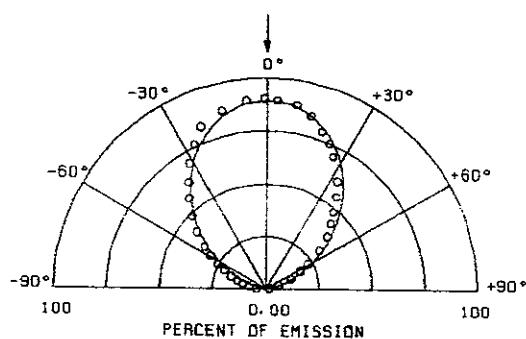
REFERENCE 77-3



INFORMATION

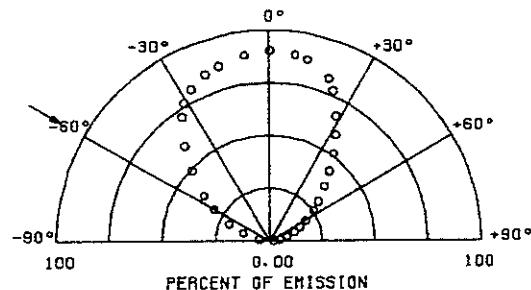
77 9 12
AR \Rightarrow CU

INCIDENT ANGLE	0°	ENERGY (EV)	3.00×10^5
TARGET	POLY	EPSILON	3.21
ENVIRONMENT	HV	GAMMA	9.48×10^{-1}
SPUTTERED ATOM(S)	CU	Q	3.50×10^{-2}
		COS N	1.82
ION	AR 18 39.9		
TARGET	CU 29 63.5	REFERENCE	77-3



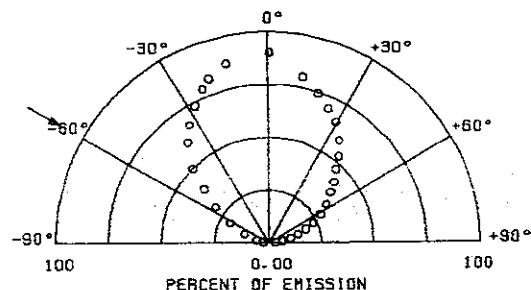
INFORMATION

77 3 19	
AR	\Rightarrow CU
INCIDENT ANGLE	60°
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	CU
<hr/>	
ION	AR 18 39.9
TARGET	CU 29 63.5
ENERGY (EV)	3.00×10^5
EPSILON	3.21
GAMMA	9.48×10^{-1}
Q	3.50×10^{-3}
EJECTION ANGLE	
EXP.	0.00°
CAL.	30.3°
<hr/>	
REFERENCE 77.3	



INFORMATION

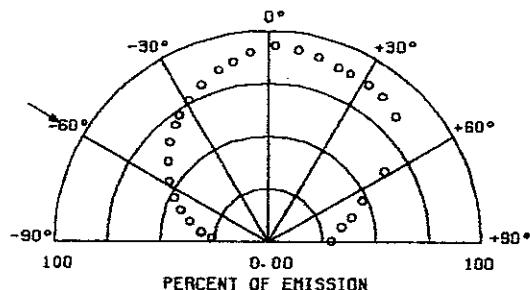
77 3 14	
AR	\Rightarrow CU
INCIDENT ANGLE	60°
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	CU
<hr/>	
ION	AR 18 39.9
TARGET	CU 29 63.5
ENERGY (EV)	1.00×10^6
EPSILON	1.07×10^1
GAMMA	9.48×10^{-3}
Q	1.92×10^{-3}
EJECTION ANGLE	
EXP.	0.00°
CAL.	30.2°
<hr/>	
REFERENCE 77.3	



INFORMATION

77 3 15	
AR \Rightarrow TA	
INCIDENT ANGLE	60°
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	TA
ION	AR 18 39.9
TARGET	TA 73 181

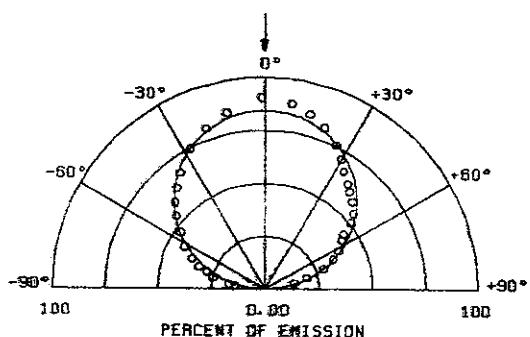
REFERENCE 77.3



INFORMATION

77 3 16	
AR \Rightarrow TA	
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	TA
ION	AR 18 39.9
TARGET	TA 73 181

REFERENCE 77.3



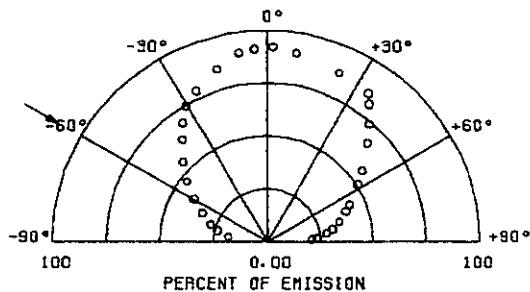
INFORMATION

77 3 17

AR \Rightarrow TA

INCIDENT ANGLE	60°	ENERGY (EV)	1.00×10^6
TARGET	POLY	EPSILON	4.64
ENVIRONMENT	HV	GAMMA	5.93×10^{-1}
SPUTTERED ATOM(S)	TA	O	3.70×10^{-3}
ION	AR 18 39.9	EJECTION ANGLE	
TARGET	TA 73 181	EXP.	0.00°
		CAL.	90.4°

REFERENCE 77-3



INFORMATION

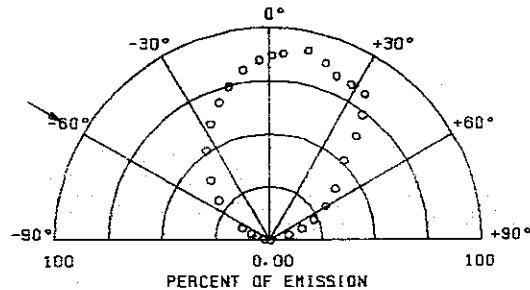
77 3 18

AR \Rightarrow FE

INCIDENT ANGLE	60°	ENERGY (EV)	1.30×10^5
TARGET	POLY	EPSILON	1.50
ENVIRONMENT	HV	GAMMA	9.72×10^{-1}
SPUTTERED ATOM(S)	FE	O	5.82×10^{-3}
ION	AR 18 39.9	EJECTION ANGLE	
TARGET	FE 26 55.8	EXP.	20.0°
		CAL.	30.6°

REFERENCE 77-3

0.22 MICRO-METER



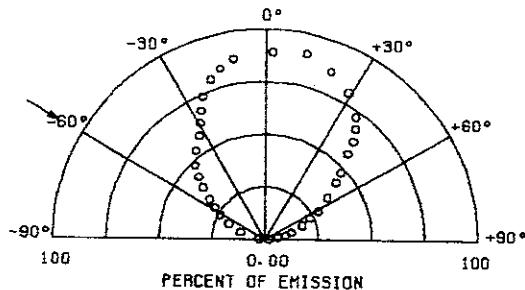
INFORMATION

77 9 18	AR \Rightarrow FE
INCIDENT ANGLE	60°
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	FE
ION	AR 18 39.9
TARGET	FE 26 55.8

ENERGY (EV)	1.30 X10 ⁵
EPSILON	1.50
GAMMA	9.72 X10 ⁻¹
0	5.82 X10 ⁻⁹
EJECTION ANGLE	
EXP.	0.00°
CAL.	30.6°

REFERENCE 77.3

0.94 MICRO-METER



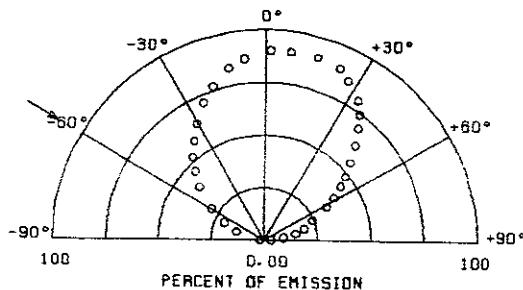
INFORMATION

77 9 20	AR \Rightarrow FE
INCIDENT ANGLE	60°
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	FE
ION	AR 18 39.9
TARGET	FE 26 55.8

ENERGY (EV)	1.30 X10 ⁵
EPSILON	1.50
GAMMA	9.72 X10 ⁻¹
0	5.82 X10 ⁻⁹
EJECTION ANGLE	
EXP.	0.00°
CAL.	30.6°

REFERENCE 77.3

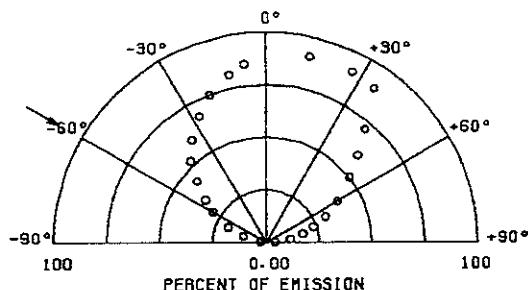
2.00 MICRO-METER



INFORMATION

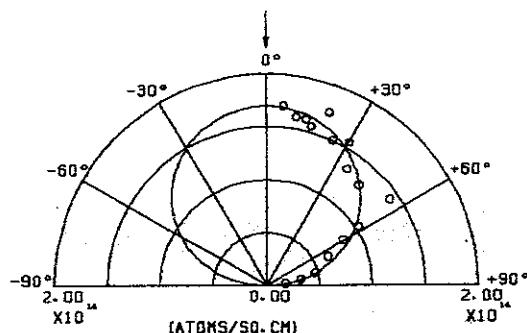
77 9 21	
AR	\Rightarrow FE
INCIDENT ANGLE	60°
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	FE
ION	AR 18 39.9
TARGET	FE 26 55.8
ENERGY (EV)	1.00×10^6
EPSILON	1.16×10^{-1}
GAMMA	9.72×10^{-1}
Q	2.10×10^{-3}
EJECTION ANGLE	
EXP.	20.0°
CAL.	30.2°
REFERENCE	77.3

1.10 MICRO-METER



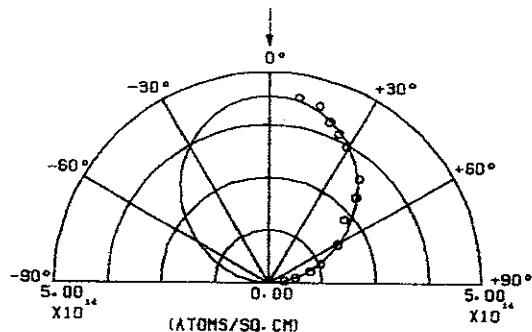
INFORMATION

78 5 1	
HE	\Rightarrow MO
INCIDENT ANGLE	0°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	MO
ION	HE 2 4.00
TARGET	MO 42 95.9
ENERGY (EV)	6.50×10^4
EPSILON	7.38
GAMMA	1.54×10^{-2}
Q	2.61×10^{-1}
COS N	8.80×10^{-1}
REFERENCE	78.5



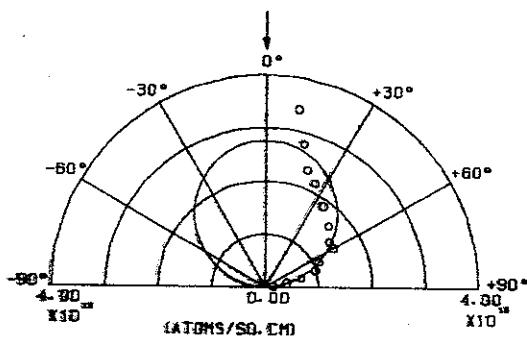
INFORMATION

78 5 2	
HE	\Rightarrow AG
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	AG
ION	HE 2 4.00
TARGET	AG 47 108
ENERGY (EV)	4.00×10^4
EPSILON	3.94^{-1}
GAMMA	1.38×10^{-2}
Ω	2.31×10^{-2}
COS " N	1.22
REFERENCE	78.5



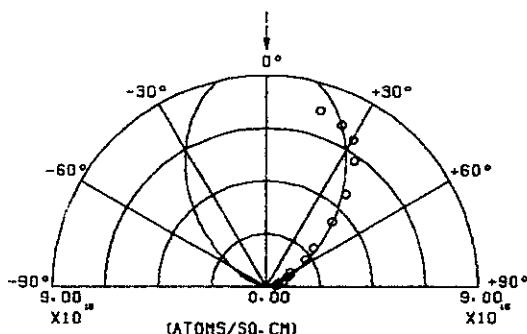
INFORMATION

78 5 3	
AR	\Rightarrow MO
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	MO
ION	AR 18 39.9
TARGET	MO 42 95.9
ENERGY (EV)	4.00×10^4
EPSILON	3.15×10^{-1}
GAMMA	8.30×10^{-2}
Ω	1.43×10^{-2}
COS " N	1.08
REFERENCE	78.5



INFORMATION

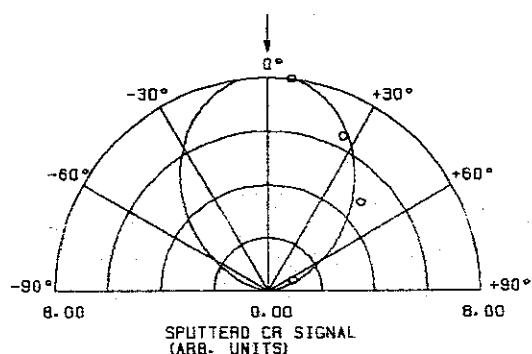
78 S 4	
AR	\Rightarrow AG
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM (SI)	AG
ION	AR 18 39.9
TARGET	AG 47 108
ENERGY (EV)	2.00×10^4
EPSILON	1.42×10^{-1}
GAMMA	7.89×10^{-1}
Q	1.37×10^{-2}
COS " N	2.56
REFERENCE	78-5



INFORMATION

79 L 1	
H3	\Rightarrow 304 S.S.
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED CR	
ATOM (SI)	
ION	H 1 1.01
TARGET	FE 26 55.8 CR 24 52.0
ENERGY (EV)	0.00
EPSILON	0.00
GAMMA	6.97×10^{-2}
Q	0.00
COS " N	1.81
REFERENCE	79-1

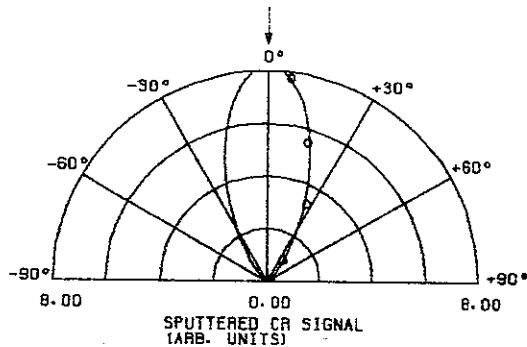
ENERGY RANGE 5-10KEV
TARGET: STAINLESS STEEL



INFORMATION

79 1 2		H3	\Rightarrow	304 S. S.
INCIDENT	ANGLE	0 °	ENERGY	0.00 (EV)
TARGET	POLY		EPSILON	0.00
ENVIRONMENT	UHV		GAMMA	6.97×10^{-2}
SPUTTERED	CR		Q	0.00
ATOM(S)			COS *	
			N	8.97
ION	H 1	1.01		
TARGET	FE 26	55.8	REFERENCE	79.1
	CR 24	52.0		

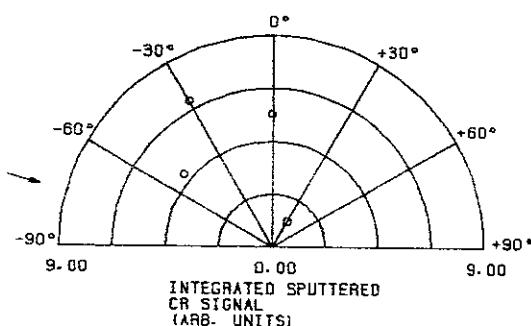
ENERGY RANGE 5-10KEV
TARGET: STAINLESS STEEL



INFORMATION

79 1 3		H3	\Rightarrow	304 S. S.
INCIDENT	ANGLE	75°	ENERGY	0.00 (EV)
TARGET	POLY		EPSILON	0.00
ENVIRONMENT	UHV		GAMMA	6.97×10^{-2}
SPUTTERED	CR		Q	0.00
ATOM(S)			EJECTION ANGLE	
			EXP.	30.0°
			CAL.	0.00°
ION	H 1	1.01		
TARGET	FE 26	55.8	REFERENCE	79.1
	CR 24	52.0		

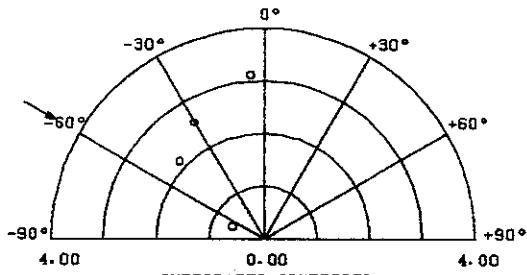
ENERGY RANGE 5-10KEV
TARGET: STAINLESS STEEL



INFORMATION

79 1 4	
H3	\Rightarrow 304 S. S.
INCIDENT ANGLE	60°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	CR
ION	H 1 1.01
TARGET	FE 26 55.8 CR 24 52.0
ENERGY (EV)	0.00
EPSILON	0.00
GAMMA	6.97×10^{-2}
O	0.00
EJECTION ANGLE	
EXP.	4.81°
CAL.	0.00°
REFERENCE	79.1

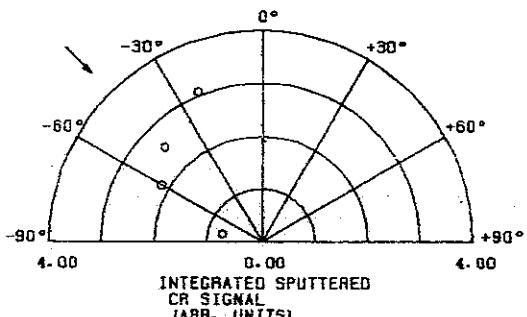
ENERGY RANGE 5-10KEV
TARGET: STAINLESS STEEL



INFORMATION

79 1 5	
H3	\Rightarrow 304 S. S.
INCIDENT ANGLE	45°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	CR
ION	H 1 1.01
TARGET	FE 26 55.8 CR 24 52.0
ENERGY (EV)	0.00
EPSILON	0.00
GAMMA	6.97×10^{-2}
O	0.00
EJECTION ANGLE	
EXP.	22.8°
CAL.	0.00°
REFERENCE	79.1

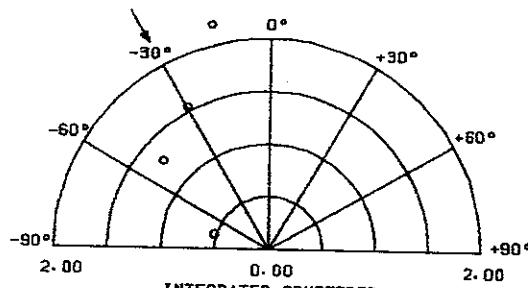
ENERGY RANGE 5-10KEV
TARGET: STAINLESS STEEL



INFORMATION

79 1 6		H3 \Rightarrow 304 S.S.	
INCIDENT ANGLE	30°	ENERGY (EV)	0.00
TARGET	POLY	EPSILON	0.00
ENVIRONMENT	UHV	GAMMA	6.97×10^{-2}
SPUTTERED ATOM(S)	CR	Q	0.00
ION	H 1 1.01	EJECTION ANGLE	
TARGET	FE 26 55.8	EXP.	14.5°
	CR 24 52.0	CAL.	0.00°
REFERENCE 79.1			

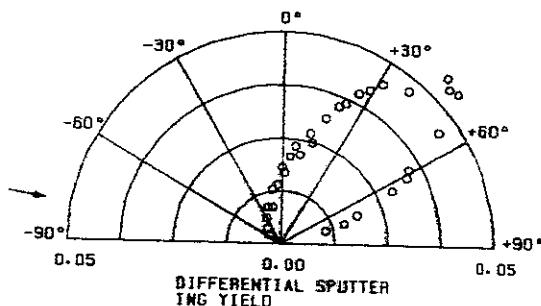
ENERGY RANGE 5-10KEV
TARGET: STAINLESS STEEL



INTEGRATED SPUTTERED
CR SIGNAL
(ARBL. UNITS)

INFORMATION

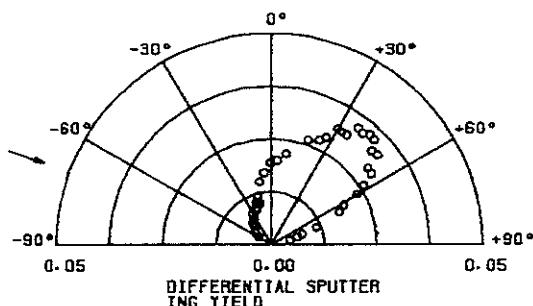
79 2 1		H3 \Rightarrow NI	
INCIDENT ANGLE	80°	ENERGY (EV)	1.00×10^3
TARGET	POLY	EPSILON	4.03×10^{-1}
ENVIRONMENT	UHV	GAMMA	6.64×10^{-2}
SPUTTERED ATOM(S)	NI	Q	2.59×10^{-1}
ION	H 1 1.01	EJECTION ANGLE	
TARGET	NI 28 58.7	EXP.	45.0°
		CAL.	33.1°
REFERENCE 79.2			



DIFFERENTIAL SPUTTER
ING YIELD

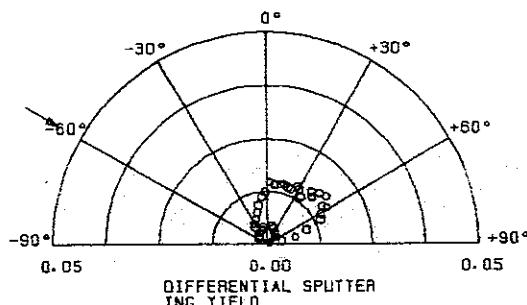
INFORMATION

^{79 2 2} H3 \Rightarrow NI	
INCIDENT ANGLE	70°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	NI
ION	H 1 1.01
TARGET	NI 28 58.7
ENERGY (EV)	1.00×10^3
EPSILON	4.03×10^{-1}
GAMMA	6.64×10^{-2}
G	2.59×10^{-1}
EJECTION ANGLE	
EXP.	43.0°
CAL.	45.9°
REFERENCE	79.2



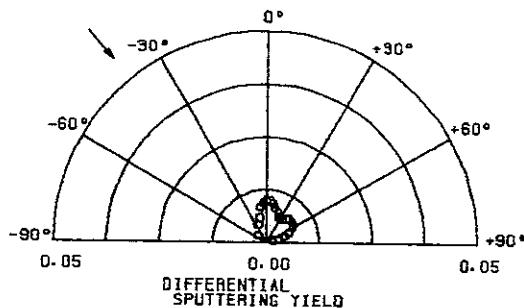
INFORMATION

^{79 2 3} H3 \Rightarrow CR	
INCIDENT ANGLE	60°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	CR
ION	H 1 1.01
TARGET	CR 24 52.0
ENERGY (EV)	1.00×10^3
EPSILON	4.92×10^{-1}
GAMMA	7.46×10^{-2}
G	2.34×10^{-1}
EJECTION ANGLE	
EXP.	49.0°
CAL.	57.5°
REFERENCE	79.2



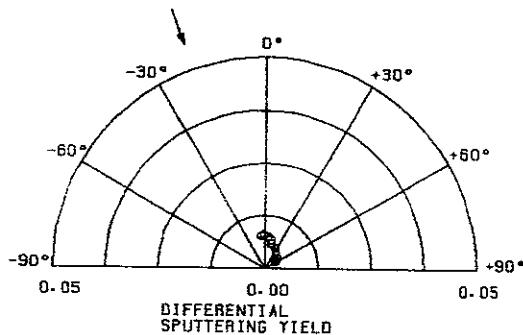
INFORMATION

78 2 4	H3	\Rightarrow	NI
INCIDENT ANGLE	40°	ENERGY (EV)	1.00×10^3
TARGET	POLY	EPSILON	4.03×10^{-1}
ENVIRONMENT	UHV	GAMMA	6.64×10^{-2}
SPUTTERED ATOM(S)	NI	Q	2.59×10^{-1}
ION	H 1 1.01	EJECTION ANGLE	
TARGET	NI 28 58.7	EXP.	50.0°
		CAL.	90.0°
		REFERENCE	79.2



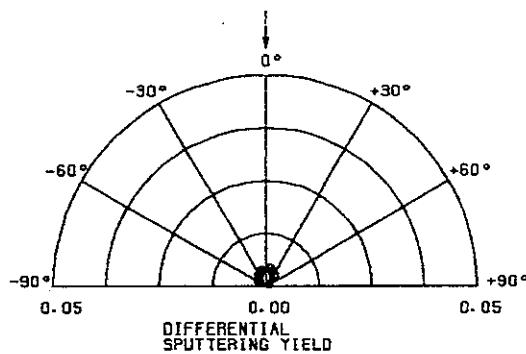
INFORMATION

78 2 5	H3	\Rightarrow	NI
INCIDENT ANGLE	20°	ENERGY (EV)	1.00×10^3
TARGET	POLY	EPSILON	4.03×10^{-1}
ENVIRONMENT	UHV	GAMMA	6.64×10^{-2}
SPUTTERED ATOM(S)	NI	Q	2.59×10^{-1}
ION	H 1 1.01	EJECTION ANGLE	
TARGET	NI 28 58.7	EXP.	50.0°
		CAL.	90.0°
		REFERENCE	79.2



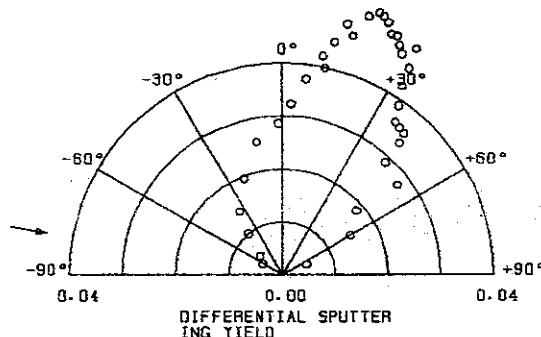
INFORMATION

^{78 2 6} H3 \Rightarrow NI	
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	NI
ION	H 1 1.01
TARGET	NI 28 58.7
ENERGY (EV)	1.00 X10 ³
EPSILON	4.03 X10 ⁻¹
GAMMA	6.64 X10 ⁻²
Q	2.59 X10 ⁻¹
COS "N"	2.09
REFERENCE	79-2



INFORMATION

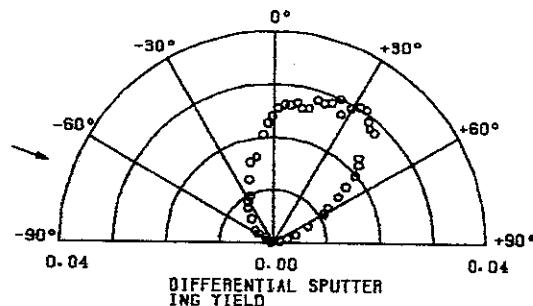
^{79 2 7} H2 \Rightarrow NI	
INCIDENT ANGLE	80°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	NI
ION	H 1 1.01
TARGET	NI 28 58.7
ENERGY (EV)	4.00 X10 ³
EPSILON	1.61
GAMMA	6.64 X10 ⁻²
Q	1.29 X10 ⁻¹
EJECTION ANGLE	
EXP.	21.0°
CAL.	21.2°
REFERENCE	79-2



INFORMATION

79 2 8	H2	\Rightarrow	NI
INCIDENT ANGLE	70°	ENERGY (EV)	4.00×10^3
TARGET	POLY	EPSILON	1.61
ENVIRONMENT	UHV	GAMMA	6.64×10^{-2}
SPUTTERED ATOM(S)	NI	0	1.29×10^{-1}
ION	H 1	EJECTION ANGLE	
TARGET	NI 28	EXP.	33.7°
	58.7	CAL.	32.1°

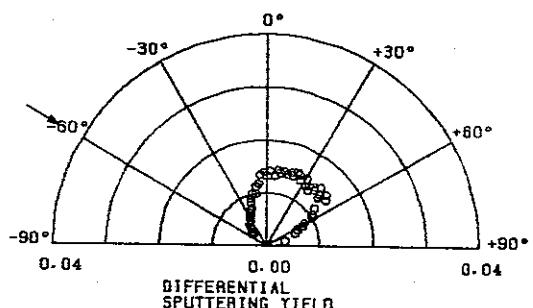
REFERENCE 79-2



INFORMATION

79 2 9	H2	\Rightarrow	NI
INCIDENT ANGLE	60°	ENERGY (EV)	4.00×10^3
TARGET	POLY	EPSILON	1.61
ENVIRONMENT	UHV	GAMMA	6.64×10^{-2}
SPUTTERED ATOM(S)	NI	0	1.29×10^{-1}
ION	H 1	EJECTION ANGLE	
TARGET	NI 28	EXP.	42.0°
58.7	CAL.		43.7°

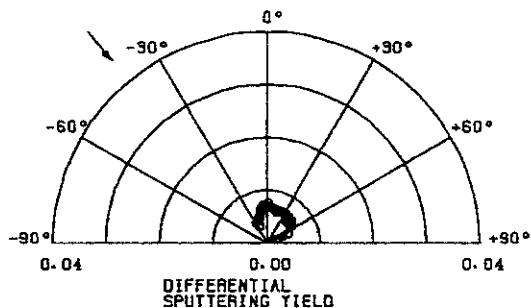
REFERENCE 79-2



INFORMATION

78 2 10	H ₂	\Rightarrow	NI
INCIDENT ANGLE	40°	ENERGY (EV)	4.00×10^3
TARGET	POLY	EPSILON	1.61
ENVIRONMENT	UHV	GAMMA	6.64×10^{-2}
SPUTTERED ATOM(S)	NI	0	1.29×10^{-1}
ION	H 1	EJECTION ANGLE	
TARGET	NI 28	EXP.	50.0°
	58.7	CAL.	75.3°

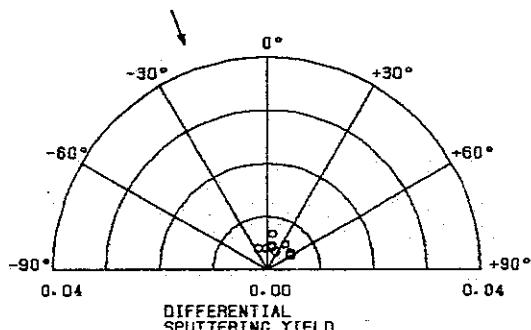
REFERENCE 78-2



INFORMATION

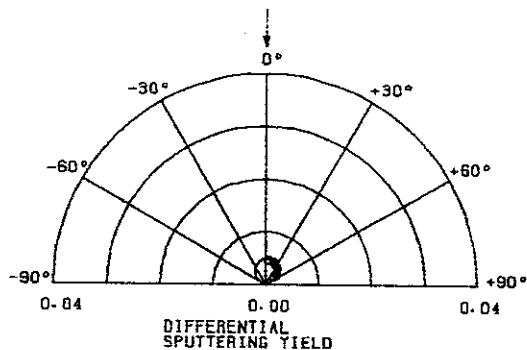
78 2 11	H ₂	\Rightarrow	NI
INCIDENT ANGLE	20°	ENERGY (EV)	4.00×10^3
TARGET	POLY	EPSILON	1.61
ENVIRONMENT	UHV	GAMMA	6.64×10^{-2}
SPUTTERED ATOM(S)	NI	0	1.29×10^{-1}
ION	H 1	EJECTION ANGLE	
TARGET	NI 28	EXP.	50.0°
	58.7	CAL.	90.0°

REFERENCE 78-2



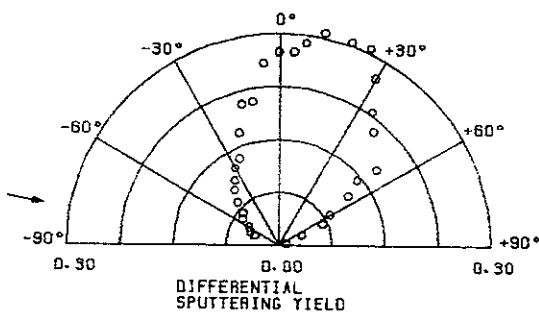
INFORMATION

79 2 12	H2	\Rightarrow	NI
INCIDENT ANGLE	0 °	ENERGY (EV)	4.00×10^3
TARGET	POLY	EPSILON	1.61
ENVIRONMENT	UHV	GAMMA	6.64×10^{-2}
SPUTTERED ATOM(S)	NI	Q	1.29×10^{-1}
		COS *	
		N	1.63
ION	H 1	1.01	
TARGET	NI 28	58.7	REFERENCE 79-2



INFORMATION

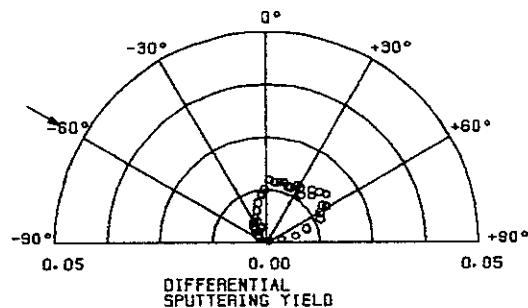
79 2 13	HE	\Rightarrow	NI
INCIDENT ANGLE	80°	ENERGY (EV)	4.00×10^3
TARGET	POLY	EPSILON	7.47×10^{-1}
ENVIRONMENT	UHV	GAMMA	2.39×10^{-1}
SPUTTERED ATOM(S)	NI	Q	6.81×10^{-2}
		EJECTION ANGLE	
		EXP.	15.0°
		CAL.	15.9°
ION	HE 2	4.00	
TARGET	NI 28	58.7	REFERENCE 79-2



INFORMATION

79 2 14	H3	\Rightarrow	NI
INCIDENT ANGLE	60°	ENERGY (EV)	1.30×10^3
TARGET	POLY	EPSILON	5.24×10^{-1}
ENVIRONMENT	UHV	GAMMA	6.64×10^{-2}
SPUTTERED ATOM(S)	NI	Q	2.27×10^{-1}
ION	H 1 1.01	EJECTION ANGLE	
TARGET	NI 28 58.7	EXP.	50.0°
		CAL.	56.4°

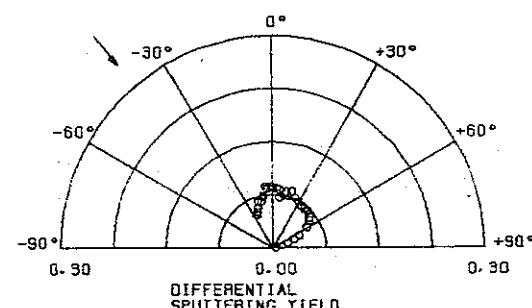
REFERENCE 79-2



INFORMATION

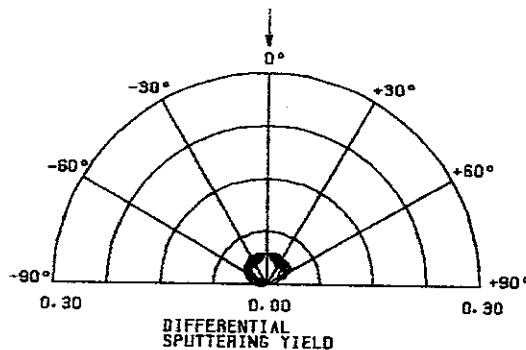
79 2 15	HE	\Rightarrow	NI
INCIDENT ANGLE	40°	ENERGY (EV)	4.00×10^3
TARGET	POLY	EPSILON	7.47×10^{-1}
ENVIRONMENT	UHV	GAMMA	2.39×10^{-1}
SPUTTERED ATOM(S)	NI	Q	6.81×10^{-2}
ION	HE 2 4.00	EJECTION ANGLE	
TARGET	NI 28 58.7	EXP.	55.0°
		CAL.	60.2°

REFERENCE 79-2



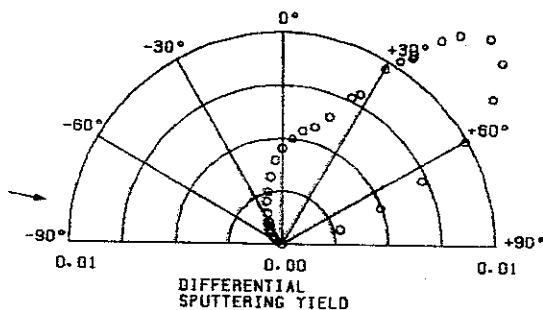
INFORMATION

78 2 16	
HE	\Rightarrow NI
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	NI
ION	HE 2 4.00
TARGET	NI 28 58.7
ENERGY (EV)	4.00×10^3
EPSILON	7.47×10^{-1}
GAMMA	2.39×10^{-1}
O	6.81×10^{-2}
COS N	7.20×10^{-1}
REFERENCE	79.2



INFORMATION

78 2 17	
H2	\Rightarrow W
INCIDENT ANGLE	80°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	W
ION	H 1 1.01
TARGET	W 74 184
ENERGY (EV)	4.00×10^3
EPSILON	4.58×10^{-1}
GAMMA	2.17×10^{-3}
O	3.20×10^{-1}
EJECTION ANGLE	
EXP.	45.0°
CAL.	39.4°
REFERENCE	79.2

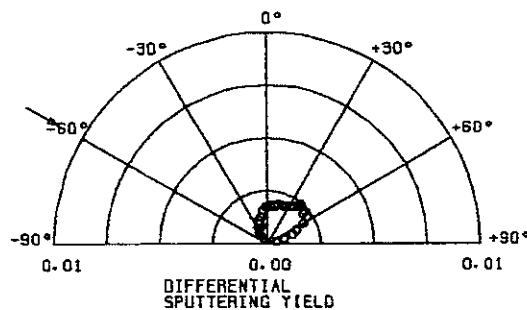


INFORMATION

78 2 18	
H2	\Rightarrow W
INCIDENT ANGLE	60°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	W
ION	H 1 1.01
TARGET	W 74 184

ENERGY (EV)	4.00×10^3
EPSILON	4.58×10^{-1}
GAMMA	2.17×10^{-2}
O	3.20×10^{-1}
EJECTION ANGLE	
EXP.	45.0°
CAL.	75.3°

REFERENCE 79 - 2

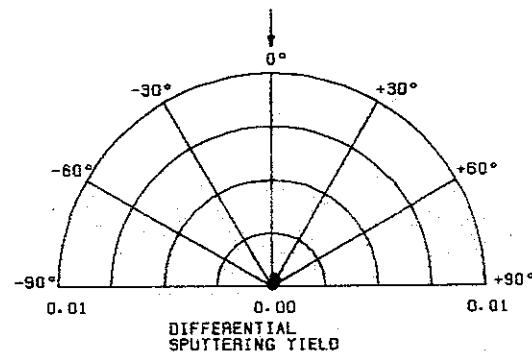


INFORMATION

78 2 18	
H2	\Rightarrow W
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	W
ION	H 1 1.01
TARGET	W 74 184

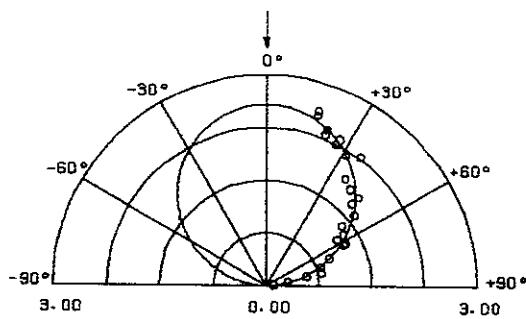
ENERGY (EV)	4.00×10^3
EPSILON	4.58×10^{-1}
GAMMA	2.17×10^{-2}
O	3.20×10^{-1}
COS N	7.30×10^{-1}

REFERENCE 79 - 2



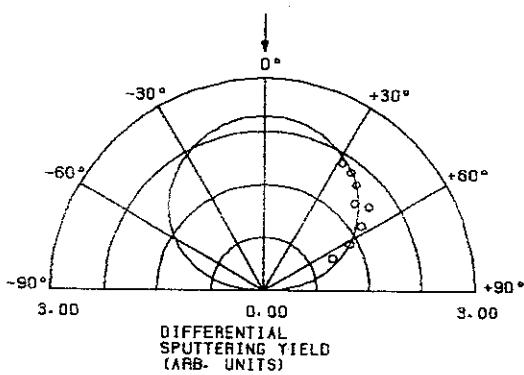
INFORMATION

79 2 20	H2	\Rightarrow	TA-C
INCIDENT ANGLE	0 °	ENERGY (EV)	4.00×10^3
TARGET	POLY	EPSILON	4.66×10^{-1}
ENVIRONMENT	UHV	GAMMA	2.20×10^{-2}
SPUTTERED ATOM (S)	TA	0	3.03×10^{-1}
		COS *	
		N	1.05
ION	H 1	1.01	
TARGET	TA 73	181	REFERENCE 79.2
	C 6	12.0	

NORMALIZED
TA

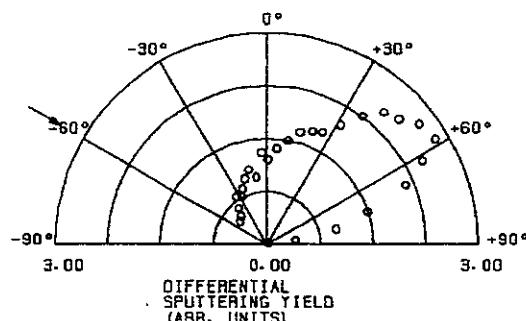
INFORMATION

79 2 21	H2	\Rightarrow	TA-C
INCIDENT ANGLE	0 °	ENERGY (EV)	4.00×10^3
TARGET	POLY	EPSILON	1.09×10^{-1}
ENVIRONMENT	UHV	GAMMA	2.20×10^{-2}
SPUTTERED ATOM (S)	C	0	8.03×10^{-2}
		COS *	
		N	7.70×10^{-1}
ION	H 1	1.01	
TARGET	TA 73	181	REFERENCE 79.2
	C 6	12.0	

NORMALIZED
C

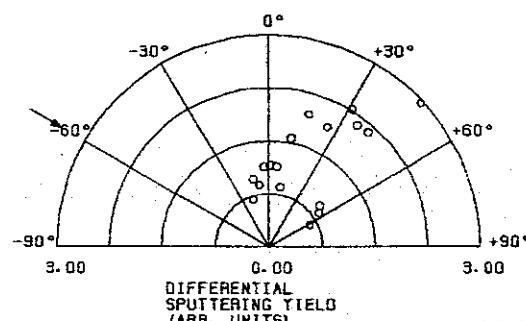
INFORMATION

79 2 22	
H2	\Rightarrow TA-C
INCIDENT ANGLE	60°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	TA
ION	H 1 1.01
TARGET	TA 73 181 C 6 12.0
ENERGY (EV)	4.00×10^3
EPSILON	4.66×10^{-1}
GAMMA	2.20×10^{-2}
O	3.03×10^{-1}
EJECTION ANGLE	
EXP.	58.0°
CAL.	70.5°
REFERENCE	79.2

NORMALIZED
TA

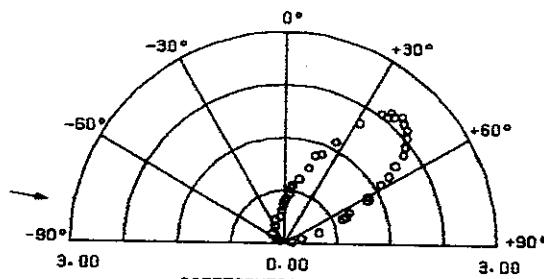
INFORMATION

79 2 23	
H2	\Rightarrow TA-C
INCIDENT ANGLE	60°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	C
ION	H 1 1.01
TARGET	TA 73 181 C 6 12.0
ENERGY (EV)	4.00×10^3
EPSILON	1.09×10^{-1}
GAMMA	2.20×10^{-2}
O	8.03×10^{-2}
EJECTION ANGLE	
EXP.	46.6°
CAL.	38.3°
REFERENCE	79.2

NORMALIZED
C

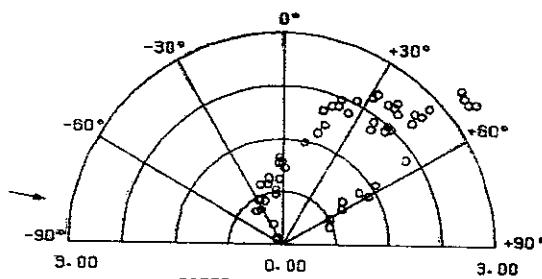
INFORMATION

79 2 24	H2	\Rightarrow	TA-C
INCIDENT ANGLE	80°	ENERGY (EV)	4.00×10^3
TARGET	POLY	EPSILON	4.66×10^{-1}
ENVIRONMENT	UHV	GAMMA	2.20×10^{-2}
SPUTTERED ATOM(S)	TA	Q	3.03×10^{-1}
ION	H 1	EXP. CAL.	42.4° 37.6°
TARGET	TA 73 181	REFERENCE	79.2
	C 6 12.0		

NORMALIZED
TADIFFERENTIAL
SPUTTERING YIELD
(ARB. UNITS)

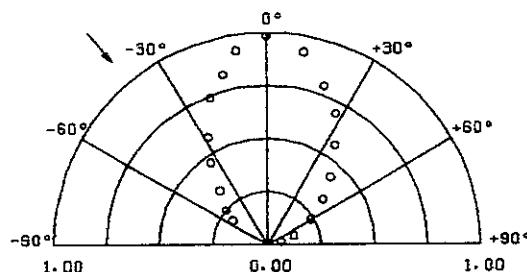
INFORMATION

79 2 25	H2	\Rightarrow	TA-C
INCIDENT ANGLE	80°	ENERGY (EV)	4.00×10^3
TARGET	POLY	EPSILON	1.09×10^{-1}
ENVIRONMENT	UHV	GAMMA	2.20×10^{-2}
SPUTTERED ATOM(S)	C	Q	8.03×10^{-2}
ION	H 1	EXP. CAL.	53.7° 16.8°
TARGET	TA 73 181	REFERENCE	79.2
	C 6 12.0		

NORMALIZED
CDIFFERENTIAL
SPUTTERING YIELD
(ARB. UNITS)

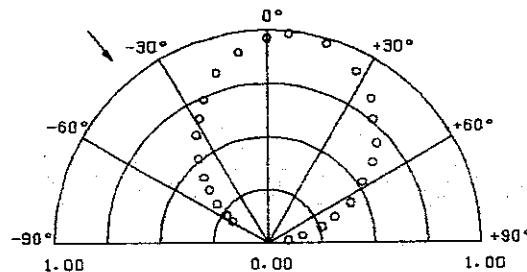
INFORMATION

78 8 1 NEARKR \Rightarrow AG	
INCIDENT ANGLE	40°
TARGET	POLY.
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	AG
ION	KR 86 83.8 NE 10 20.2
TARGET	AG 47 108
ENERGY (EV)	1.00 $\times 10^4$
REFERENCE	79-8



INFORMATION

78 8 2 NEARKR \Rightarrow NB	
INCIDENT ANGLE	40°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	NB
ION	KR 86 83.8 NE 10 20.2
TARGET	NB 41 92.9
ENERGY (EV)	1.00 $\times 10^4$
REFERENCE	79-8

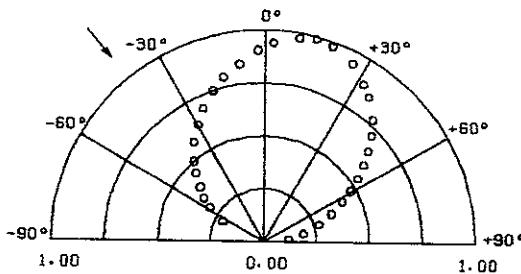


INFORMATION

78 e 9
NEARKR \Rightarrow AL

INCIDENT ANGLE	40°	ENERGY (EV)	1.00 x 10 ⁴
TARGET	POLY	REFERENCE 79.8	
ENVIRONMENT	UHV		
SPUTTERED ATOM(S)	AL		

ION	KR	36	83.8
	NE	10	20.2
TARGET	AL	13	27.0

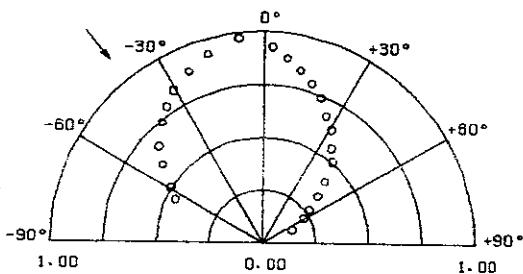


INFORMATION

79 8 4
NEARKR \Rightarrow PB

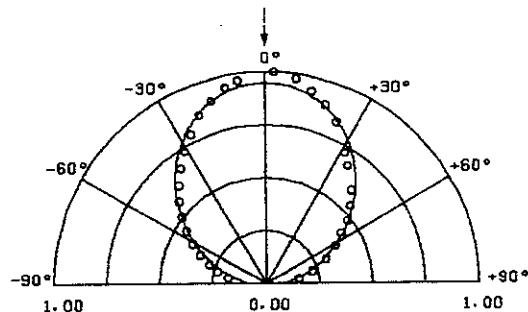
INCIDENT ANGLE	40°	ENERGY (EV)	1.00 x 10 ⁴
TARGET	POLY	REFERENCE 79.8	
ENVIRONMENT	UHV		
SPUTTERED ATOM(S)	PB		

ION	KR	36	83.8
	NE	10	20.2
TARGET	PB	82	207



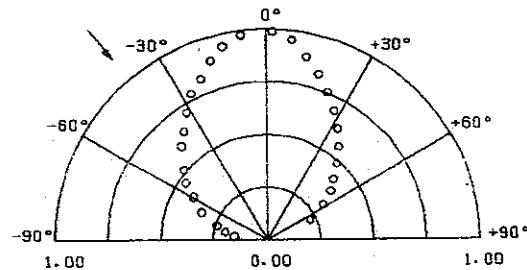
INFORMATION

79 8 S NEARKR \Rightarrow AG	
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	AG
ION KR 36 83.8 NE 10 20.2	
TARGET AG 47 108	
ENERGY (EV)	1.00×10^4
REFERENCE 79 - 8	



INFORMATION

79 8 S NEARKR \Rightarrow AG	
INCIDENT ANGLE	40°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	AG
ION KR 36 83.8 NE 10 20.2	
TARGET AG 47 108	
ENERGY (EV)	1.00×10^4
REFERENCE 79 - 8	

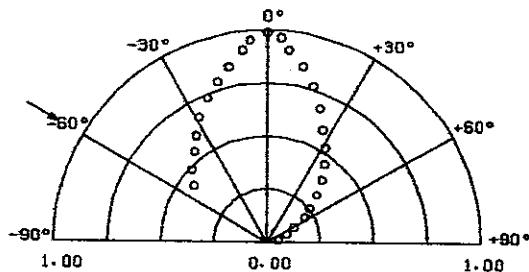


INFORMATION

78 8 7
NEARKR \Rightarrow AG

INCIDENT ANGLE	60°	ENERGY (EV)	1.00×10^4
TARGET	POLY	<hr/>	
ENVIRONMENT	UHV		
SPUTTERED ATOM(S)	AG	REFERENCE	79-8

ION	KR	36	83.8
	NE	10	20.2
TARGET	AG	47	108



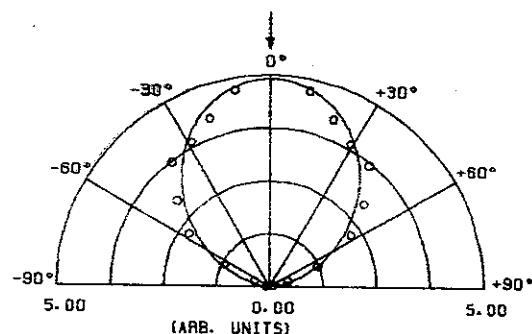
INFORMATION

80 1 1
AR \Rightarrow SI

INCIDENT ANGLE	0 °	ENERGY (EV)	3.00×10^3
TARGET	POLY	EPSILON	5.07×10^{-2}
ENVIRONMENT	UHV	GAMMA	9.70×10^{-1}
SPUTTERED ATOM(S)	SI	σ	3.99×10^{-2}
	ATOM(S)	COS [*]	N

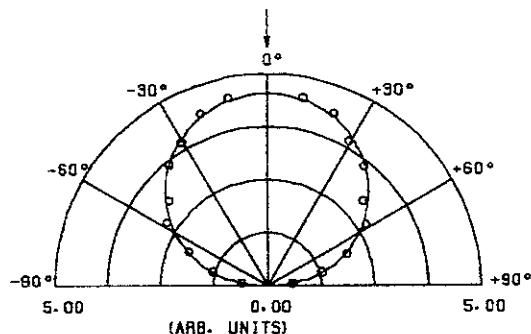
ION	AR	18	39.9
TARGET	SI	14	28.1

REFERENCE 80-1



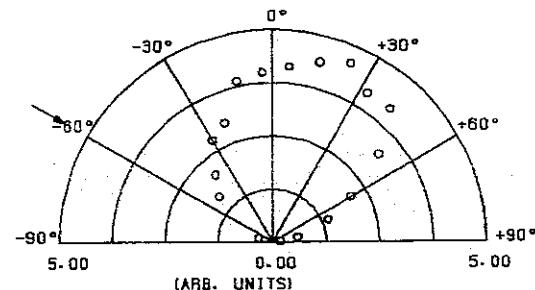
INFORMATION

80 1 2	
AR	\Rightarrow SI
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	SI
ION	AR 18 39.9
TARGET	SI 14 28.1
ENERGY (EV)	1.00×10^4
EPSILON	1.69×10^{-1}
GAMMA	9.70×10^{-1}
Ω	2.19×10^{-2}
COS " N	8.70×10^{-1}
REFERENCE	80.1



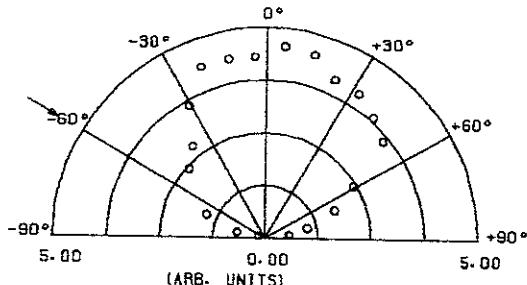
INFORMATION

80 1 3	
AR	\Rightarrow SI
INCIDENT ANGLE	60 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	SI
ION	AR 18 39.9
TARGET	SI 14 28.1
ENERGY (EV)	3.00×10^3
EPSILON	5.07×10^{-2}
GAMMA	9.70×10^{-1}
Ω	3.99×10^{-2}
EJECTION ANGLE	
EXP.	20.0°
CAL.	34.0°
REFERENCE	80.1



INFORMATION

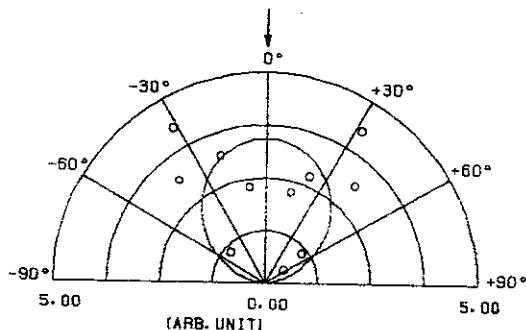
80 1 4	
AR	\Rightarrow SI
INCIDENT ANGLE	60°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	SI
ION	AR 18 39.9
TARGET	SI 14 28.1
ENERGY (EV)	1.00×10^4
EPSILON	1.69×10^{-1}
GAMMA	9.70×10^{-1}
Q	2.19×10^{-2}
EJECTION ANGLE	
EXP.	15.0°
CAL.	32.2°
REFERENCE	80-1



INFORMATION

81 1 1	
AR	\Rightarrow AU
INCIDENT ANGLE	0°
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	AU
ION	AR 18 39.9
TARGET	AU 79 197
ENERGY (EV)	1.00×10^3
EPSILON	4.27×10^{-2}
GAMMA	5.61×10^{-1}
Q	8.24×10^{-2}
CDS	N 1.36
REFERENCE	81-1

TEXTURE



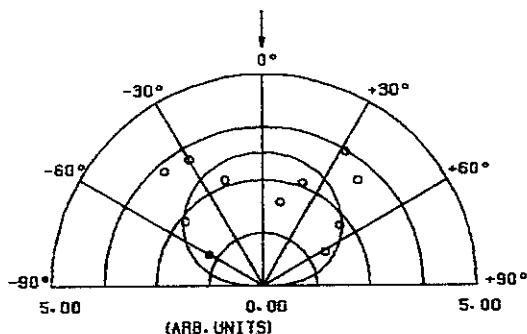
INFORMATION

81 L 2	AR	\Rightarrow	AL
INCIDENT ANGLE	0 °	ENERGY (EV)	1.00×10^3
TARGET	POLY	EPSILON	1.80×10^{-2}
ENVIRONMENT	HV	GAMMA	9.62×10^{-1}
SPUTTERED ATOM(S)	AL	θ	5.99×10^{-2}
		CGS N	6.00×10^{-1}

ION AR 18 39.9
TARGET AL 13 27.0

REFERENCE 81.1

TEXTURE



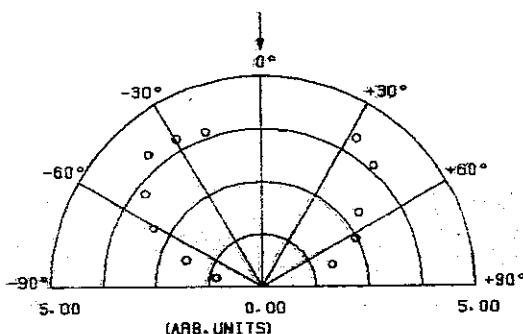
INFORMATION

81 L 3	AR	\Rightarrow	NI-FE
INCIDENT ANGLE	0 °	ENERGY (EV)	1.00×10^3
TARGET	POLY		
ENVIRONMENT	HV		
SPUTTERED ATOM(S)	NI.FE		

ION AR 18 39.9
TARGET NI 28 58.7
FE 26 55.8

REFERENCE 81.1

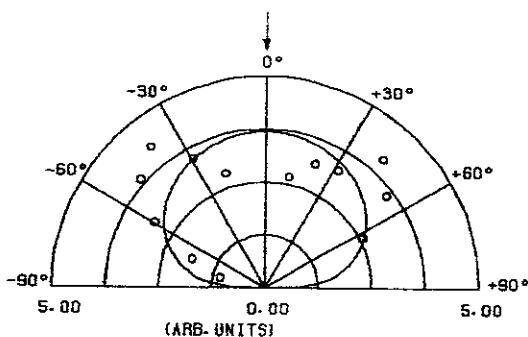
TEXTURE



INFORMATION

81 1 4	
AR	\Rightarrow AL
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	AL
ION	AR 18 39.9
TARGET	AL 13 27.0
ENERGY (EV)	1.00 X10 ³
EPSILON	1.80 X10 ⁻²
GAMMA	9.62 X10 ⁻¹
O	5.93 X10 ⁻²
COS N	4.40 X10 ⁻¹
REFERENCE	81-1

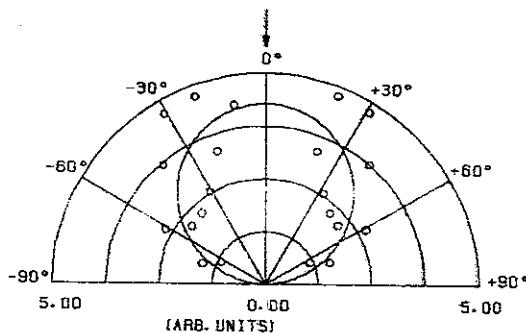
TEXTURE



INFORMATION

81 1 5	
AR	\Rightarrow AU
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	AU
ION	AR 18 39.9
TARGET	AU 79 197
ENERGY (EV)	1.00 X10 ³
EPSILON	4.27 X10 ⁻³
GAMMA	5.61 X10 ⁻¹
O	8.24 X10 ⁻²
COS N	1.08
REFERENCE	81-1

TEXTURE

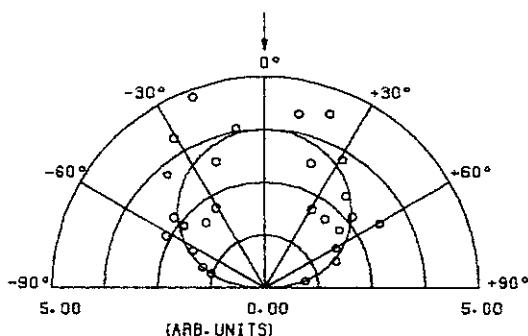


INFORMATION

81 1 6	AR \Rightarrow PT
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	PT
ENERGY (EV)	1.00 $\times 10^3$
EPSILON	4.33 $\times 10^{-3}$
GAMMA	5.64 $\times 10^{-1}$
Q	1.02 $\times 10^{-1}$
COS " N	7.90 $\times 10^{-1}$

ION AR 18 39.9	REFERENCE 81-1
TARGET PT 78 195	

TEXTURE

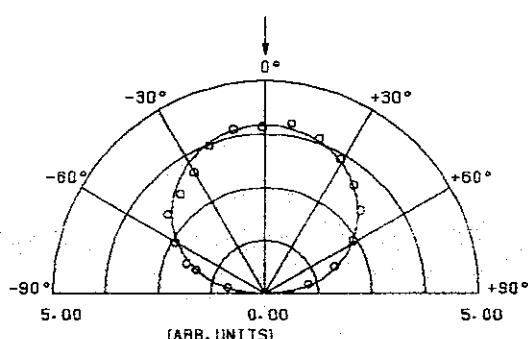


INFORMATION

81 1 7	AR \Rightarrow PT
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	PT
ENERGY (EV)	1.00 $\times 10^3$
EPSILON	4.33 $\times 10^{-3}$
GAMMA	5.64 $\times 10^{-1}$
Q	1.02 $\times 10^{-1}$
COS " N	7.60 $\times 10^{-1}$

ION AR 18 39.9	REFERENCE 81-1
TARGET PT 78 195	

TEXTURE



INFORMATION

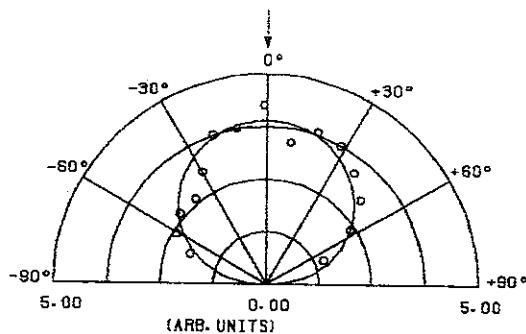
81 1 9
AR \Rightarrow TA

INCIDENT ANGLE	0 °	ENERGY (EV)	1.00×10^3
TARGET	POLY	EPSILON	4.64×10^{-3}
ENVIRONMENT	HV	GAMMA	5.99×10^{-1}
SPUTTERED ATOM(S)	TA	Q	1.17×10^{-1}
		COS *	
		N	8.10×10^{-1}

ION	AR	18	39.9
TARGET	TA	73	181

			REFERENCE 81.1
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TEXTURE



INFORMATION

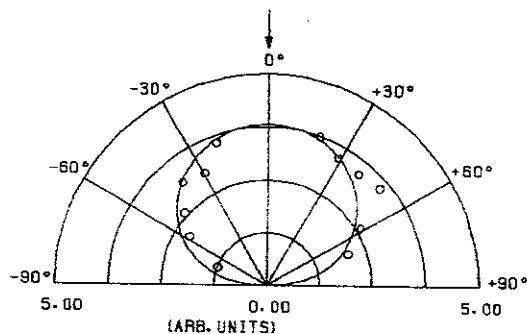
81 1 9
AR \Rightarrow SI

INCIDENT ANGLE	0 °	ENERGY (EV)	1.00×10^3
TARGET	POLY	EPSILON	1.69×10^{-2}
ENVIRONMENT	HV	GAMMA	9.70×10^{-1}
SPUTTERED ATOM(S)	SI	Q	6.92×10^{-2}
		COS *	
		N	7.20×10^{-1}

ION	AR	18	39.9
TARGET	SI	14	28.1

			REFERENCE 81.1
--	--	--	----------------

TEXTURE

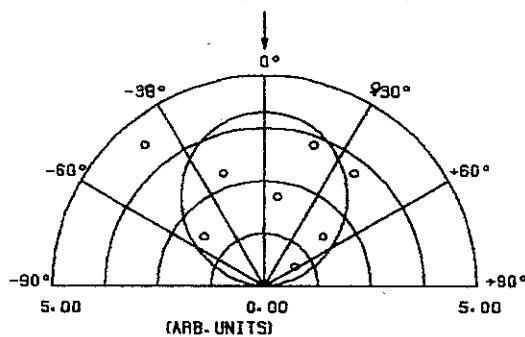


INFORMATION

81 L 10	AR \Rightarrow AU
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	AU
ENERGY (EV)	5.00×10^2
EPSILON	2.14×10^{-3}
GAMMA	5.61×10^{-4}
Ω	1.17×10^{-4}
COS *	N 1.19

ION AR 18 39.9	REFERENCE 81.1
TARGET AU 79 197	

TEXTURE

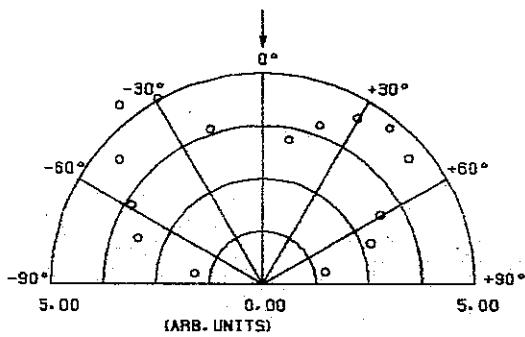


INFORMATION

81 L 12	AR \Rightarrow NI-FE
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	NI.FE
ENERGY (EV)	5.00×10^2
REFERENCE	81.1

ION AR 18 39.9	REFERENCE 81.1
TARGET NI 28 58.7	
FE 26 55.8	

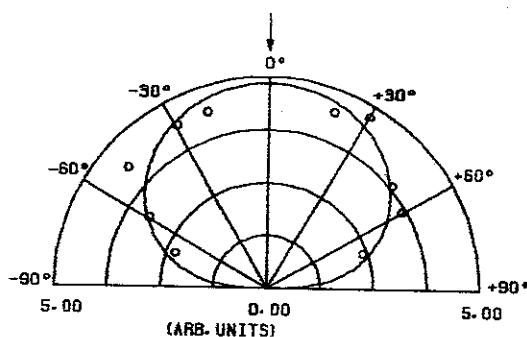
TEXTURE



INFORMATION

81 1 14	
AR	\Rightarrow SI
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	SI
ION	AR 18 39.9
TARGET	SI 14 28.1
ENERGY (EV)	5.00×10^2
EPSILON	8.45×10^{-2}
GAMMA	9.70×10^{-1}
D	9.78×10^{-2}
COS *	$N \times 10^{-1}$
REFERENCE	81.1

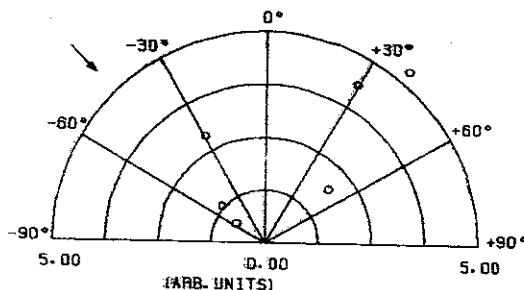
TEXTURE



INFORMATION

81 1 18	
AR	\Rightarrow AU
INCIDENT ANGLE	45°
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	AU
ION	AR 18 39.9
TARGET	AU 79 197
ENERGY (EV)	1.00×10^3
EPSILON	4.27×10^{-2}
GAMMA	5.61×10^{-1}
D	8.24×10^{-2}
EJECTION ANGLE	
EXP.	49.0°
CAL.	56.1°
REFERENCE	81.1

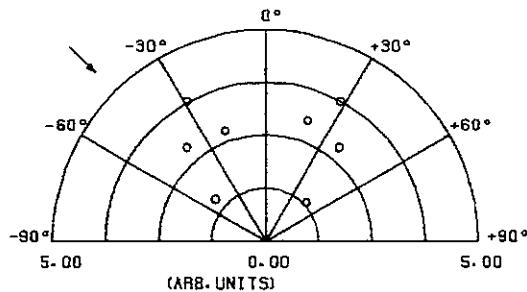
TEXTURE



INFORMATION

81 1 17	AR \Rightarrow AU
INCIDENT ANGLE	45°
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM (SI)	AU
ION	AR 18 39-9
TARGET	AU 79 197
ENERGY (EV)	1.00×10^3
EPSILON	4.27×10^{-2}
GAMMA	5.61×10^{-1}
θ	8.24×10^{-2}
EJECTION ANGLE	
EXP.	46.5°
CAL.	56.1°
REFERENCE	81-1

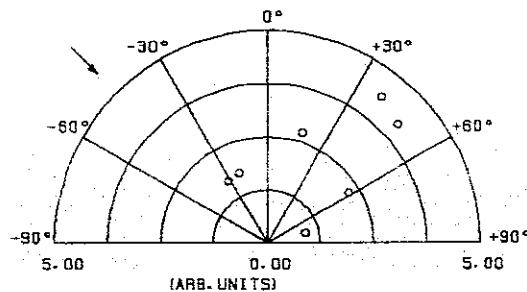
TEXTURE



INFORMATION

81 1 18	AR \Rightarrow AL
INCIDENT ANGLE	45°
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM (SI)	AL
ION	AR 18 39-9
TARGET	AL 13 27-0
ENERGY (EV)	1.00×10^3
EPSILON	1.80×10^{-2}
GAMMA	9.62×10^{-1}
θ	5.99×10^{-2}
EJECTION ANGLE	
EXP.	47.8°
CAL.	52.7°
REFERENCE	81-1

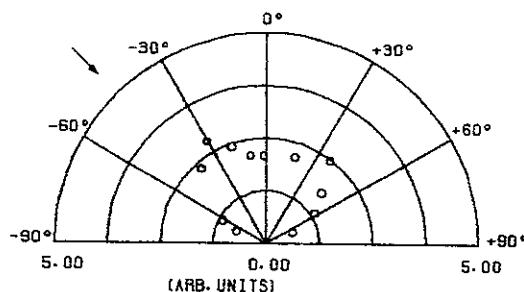
TEXTURE



INFORMATION

81 1 19	
AR	\Rightarrow AL
INCIDENT ANGLE	45°
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	AL
ION	AR 18 39.9
TARGET	AL 13 27.0
ENERGY (EV)	1.00 $\times 10^3$
EPSILON	1.80 $\times 10^{-2}$
GAMMA	9.62 $\times 10^{-1}$
D	5.93 $\times 10^{-2}$
EJECTION ANGLE	
EXP.	47.2°
CAL.	52.7°
REFERENCE	81 . 1

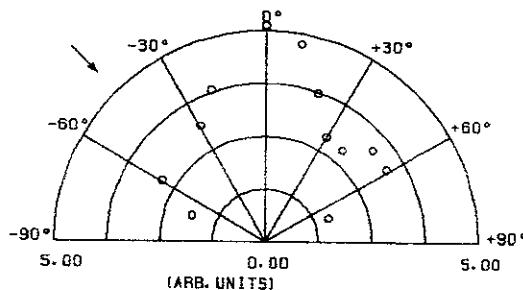
TEXTURE



INFORMATION

81 1 20	
AR	\Rightarrow AU
INCIDENT ANGLE	45°
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	AU
ION	AR 18 39.9
TARGET	AU 79 197
ENERGY (EV)	1.00 $\times 10^3$
EPSILON	4.27 $\times 10^{-3}$
GAMMA	5.61 $\times 10^{-1}$
D	8.24 $\times 10^{-2}$
EJECTION ANGLE	
EXP.	49.3°
CAL.	56.1°
REFERENCE	81 . 1

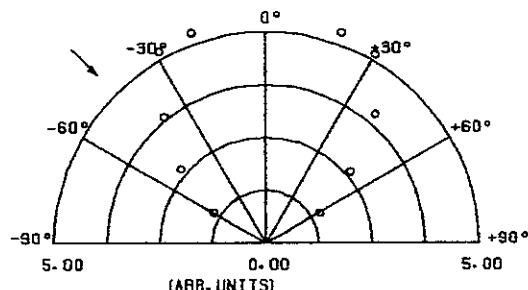
TEXTURE



INFORMATION

81 1 21	
AR	⇒ AU
INCIDENT ANGLE	45°
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM (SI)	AU
ION	AR 18 39.9
TARGET	AU 79 197
ENERGY (EV)	1.00 X10 ³
EPSILON	4.27 X10 ⁻⁹
GAMMA	5.61 X10 ⁻¹
0	8.24 X10 ⁻²
EJECTION ANGLE	
EXP.	49.7°
CAL.	56.1°
REFERENCE	81.1

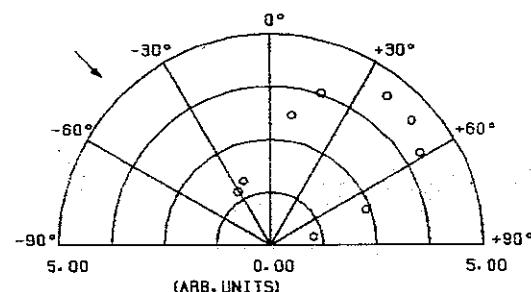
TEXTURE



INFORMATION

81 1 22	
AR	⇒ SI
INCIDENT ANGLE	45°
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM (SI)	SI
ION	AR 18 39.9
TARGET	SI 14 28.1
ENERGY (EV)	1.00 X10 ³
EPSILON	1.69 X10 ⁻²
GAMMA	9.70 X10 ⁻¹
0	6.92 X10 ⁻²
EJECTION ANGLE	
EXP.	48.5°
CAL.	54.1°
REFERENCE	81.1

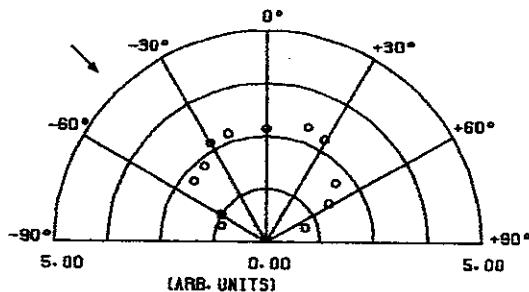
TEXTURE



INFORMATION

81 1 28	
AR	\Rightarrow SI
INCIDENT ANGLE	45°
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	SI
ION	AR 18 39.9
TARGET	SI 14 28.1
ENERGY (EV)	1.00×10^3
EPSILON	1.69×10^{-2}
GAMMA	9.70×10^{-1}
Q	6.92×10^{-2}
EJECTION ANGLE	
EXP.	49.0°
CAL.	54.1°
REFERENCE	81-1

TEXTURE

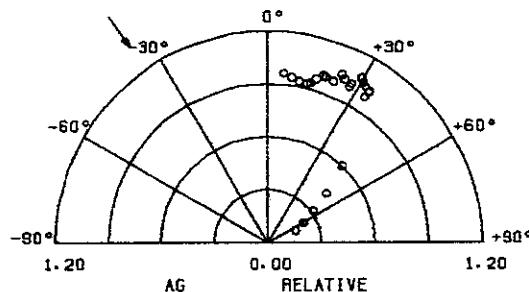


INFORMATION

81 2 1	
AR	\Rightarrow AG-AU
INCIDENT ANGLE	35°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	AU
ION	AR 18 39.9
TARGET	AG 47 108 AU 79 197
ENERGY (EV)	8.00×10^4
EPSILON	3.42×10^{-1}
GAMMA	7.89×10^{-1}
Q	9.22×10^{-3}
EJECTION ANGLE	
EXP.	55.1°
CAL.	56.4°
REFERENCE	81-2

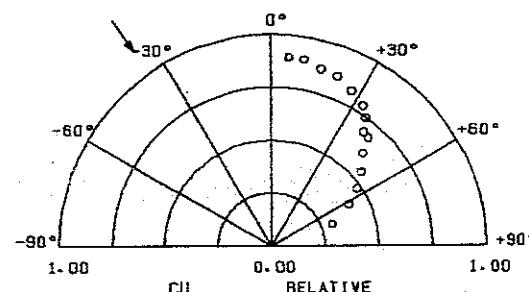
INFORMATION

81 2 2	
AR	\Rightarrow AG-AU
INCIDENT ANGLE	35°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	AG
ION	AR 18 39.9
TARGET	AG 47 108 AU 79 197
ENERGY (EV)	8.00×10^4
EPSILON	5.68×10^{-1}
GAMMA	7.89×10^{-1}
O	6.84×10^{-3}
EJECTION ANGLE	
EXP.	55.2°
CAL.	56.0°
REFERENCE	81-2



INFORMATION

81 2 3	
AR	\Rightarrow CU-PT
INCIDENT ANGLE	35°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	CU
ION	AR 18 39.9
TARGET	CU 29 63.5 PT 78 195
ENERGY (EV)	2.00×10^4
EPSILON	2.14×10^{-1}
GAMMA	9.48×10^{-1}
O	1.36×10^{-2}
EJECTION ANGLE	
EXP.	56.1°
CAL.	57.1°
REFERENCE	81-2

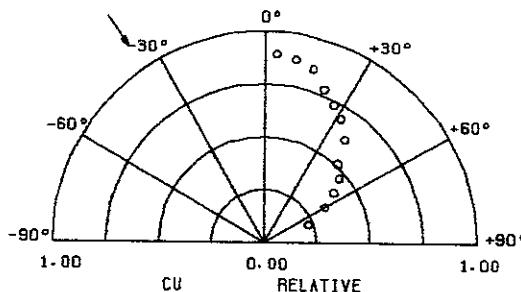


INFORMATION

81 2 4	
AR	\Rightarrow CU-PT
INCIDENT ANGLE	35°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	CU
ION	AR 18 39.9
TARGET	CU 29 63.5
	PT 78 195

ENERGY 8.00×10^4
 (EV)
 EPSILON 8.56×10^{-1}
 GAMMA 9.48×10^{-1}
 O 6.78×10^{-3}
 EJECTION ANGLE
 EXP. 60.0°
 CAL. 56.0°

REFERENCE 81.2

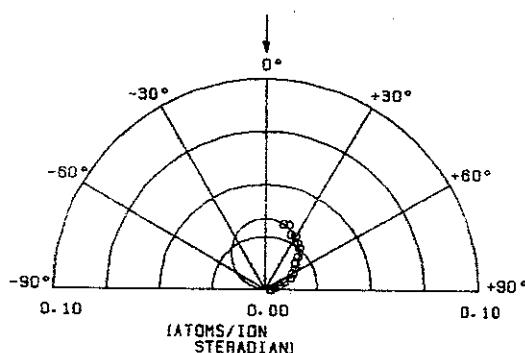


INFORMATION

81 3 1	
H	\Rightarrow NI
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	NI
ION	H 1 1.01
TARGET	NI 28 58.7

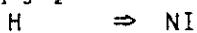
ENERGY 4.50×10^2
 (EV)
 EPSILON 1.82×10^{-1}
 GAMMA 6.64×10^{-2}
 O 3.85×10^{-1}
 $\cos^2 N$ 1.15

REFERENCE 81.3



INFORMATION

81 3 2

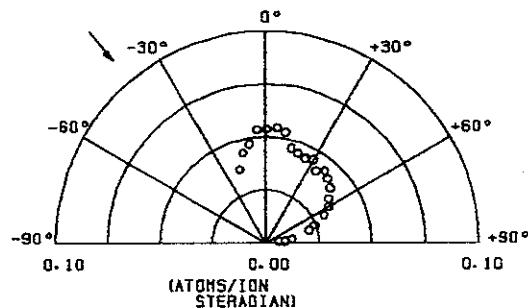


INCIDENT ANGLE 40°
 TARGET POLY
 ENVIRONMENT UHV
 SPUTTERED NI
 ATOM(S)

ION H 1 1.01
 TARGET NI 28 58.7

ENERGY 4.50 X10²
 (EV)
 EPSILON 1.82 X10⁻¹
 GAMMA 6.64 X10⁻²
 Q 3.85 X10⁻¹
 EJECTION ANGLE
 EXP. 45.9°
 CAL. 90.0°

REFERENCE 81-3



INFORMATION

81 3 3

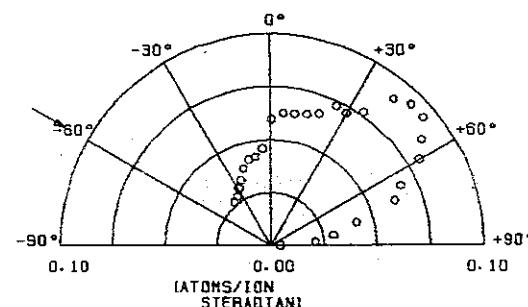


INCIDENT ANGLE 60°
 TARGET POLY
 ENVIRONMENT UHV
 SPUTTERED NI
 ATOM(S)

ION H 1 1.01
 TARGET NI 28 58.7

ENERGY 4.50 X10²
 (EV)
 EPSILON 1.82 X10⁻¹
 GAMMA 6.64 X10⁻²
 Q 3.85 X10⁻¹
 EJECTION ANGLE
 EXP. 45.0°
 CAL. 90.0°

REFERENCE 81-3



INFORMATION

81 9 4

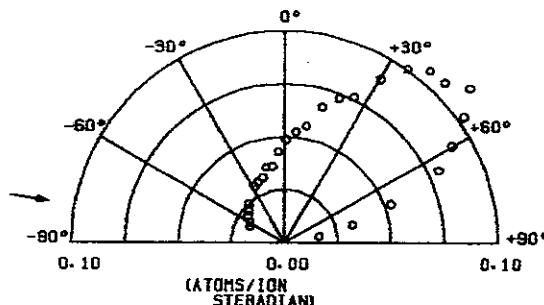


INCIDENT ANGLE 80°
 TARGET POLY
 ENVIRONMENT UHV
 SPUTTERED NI
 ATOM(S)

ION H 1 1.01
 TARGET NI 28 58.7

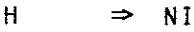
ENERGY 4.50×10^2
 (EV)
 EPSILON 1.82×10^{-1}
 GAMMA 6.64×10^{-2}
 Ω 3.85×10^{-1}
 EJECTION ANGLE
 EXP. 48.3°
 CAL. 46.6°

REFERENCE 81.3



INFORMATION

81 3 5

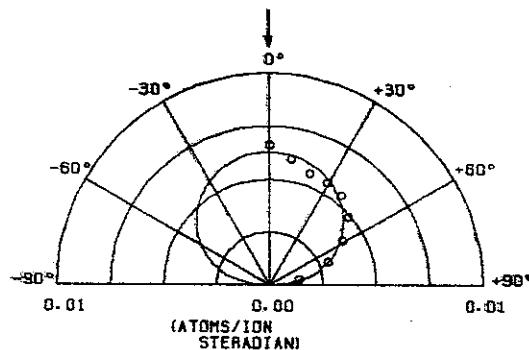


INCIDENT ANGLE 0°
 TARGET POLY
 ENVIRONMENT UHV
 SPUTTERED NI
 ATOM(S)

ION H 1 1.01
 TARGET NI 28 58.7

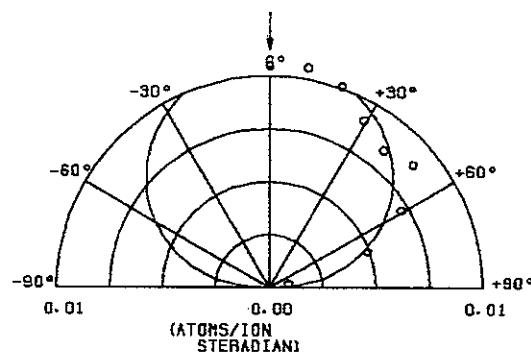
ENERGY 4.50×10^2
 (EV)
 EPSILON 1.82×10^{-1}
 GAMMA 6.64×10^{-2}
 Ω 3.85×10^{-1}
 $\cos \theta / N = 7.50 \times 10^{-1}$

REFERENCE 81.3



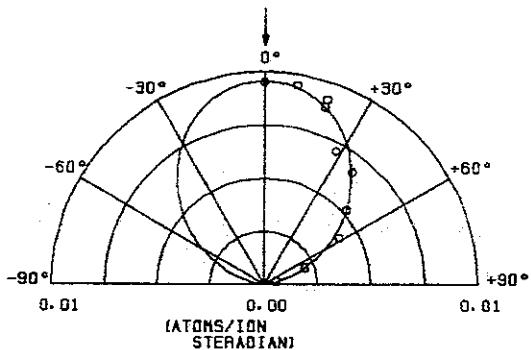
INFORMATION

81 9 6	
H	\Rightarrow NI
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM (SI)	NI
ION	H 1 1.01
TARGET	NI 28 58.7
ENERGY [EV]	1.00×10^3
EPSILON	4.03×10^{-1}
GAMMA	6.64×10^{-2}
Q	2.59×10^{-1}
COS " N	8.10×10^{-1}
REFERENCE	81.3



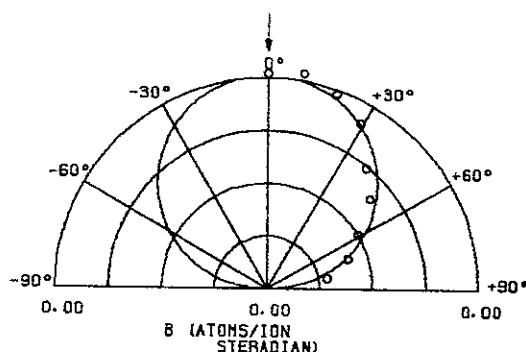
INFORMATION

81 9 7	
H	\Rightarrow NI
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM (SI)	NI
ION	H 1 1.01
TARGET	NI 28 58.7
ENERGY [EV]	4.00×10^3
EPSILON	1.61
GAMMA	6.64×10^{-2}
Q	1.29×10^{-1}
COS " N	1.54
REFERENCE	81.3



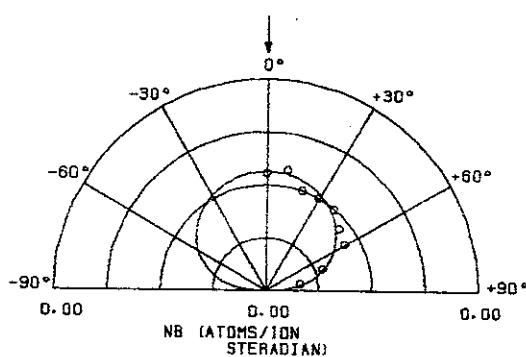
INFORMATION

D ⇒ NB-B2	
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	B
ION	H 1 2.00
TARGET	NB 41 92.9
	B 5 10.8
ENERGY (EV)	4.00 X10 ²
EPSILON	1.25
GAMMA	8.25 X10 ⁻²
Ω	1.65 X10 ⁻¹
COS * N	9.20 X10 ⁻¹
REFERENCE	81.3



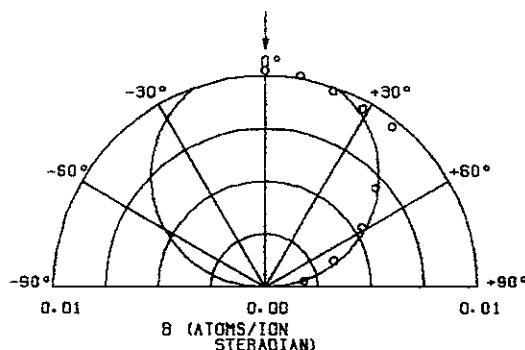
INFORMATION

D ⇒ NB-B2	
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	NB
ION	H 1 2.00
TARGET	NB 41 92.9
	B 5 10.8
ENERGY (EV)	4.00 X10 ²
EPSILON	9.77 X10 ⁻²
GAMMA	8.25 X10 ⁻²
Ω	4.79 X10 ⁻¹
COS * N	6.10 X10 ⁻¹
REFERENCE	81.3



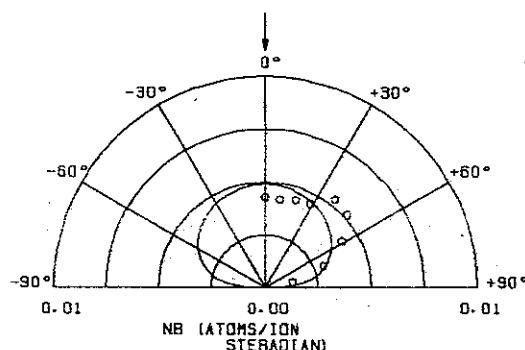
INFORMATION

81 3 10		D \Rightarrow NB-B2
INCIDENT ANGLE	0 °	ENERGY (EV) 2.00×10^3
TARGET	POLY	EPSILON 6.26
ENVIRONMENT	UHV	GAMMA 8.25×10^{-2}
SPUTTERED ATOM(S)	NB	0 7.40×10^{-2}
		COS θ N 9.70×10^{-1}
ION	H 1 2-00	
TARGET	NB 41 92.9	REFERENCE 81-3
	B 5 10.8	



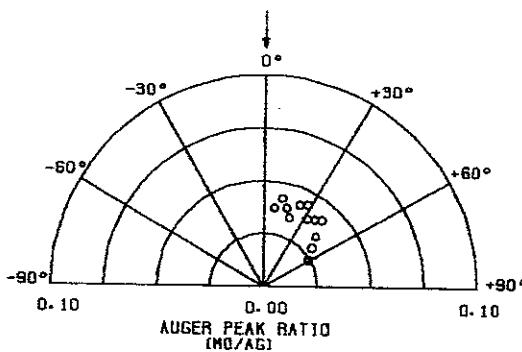
INFORMATION

81 3 11		D \Rightarrow NB-B2
INCIDENT ANGLE	0 °	ENERGY (EV) 2.00×10^3
TARGET	POLY	EPSILON 4.89×10^{-1}
ENVIRONMENT	UHV	GAMMA 8.25×10^{-2}
SPUTTERED ATOM(S)	NB	0 2.14×10^{-1}
		COS θ N 4.40×10^{-1}
ION	H 1 2-00	
TARGET	NB 41 92.9	REFERENCE 81-3
	B 5 10.8	



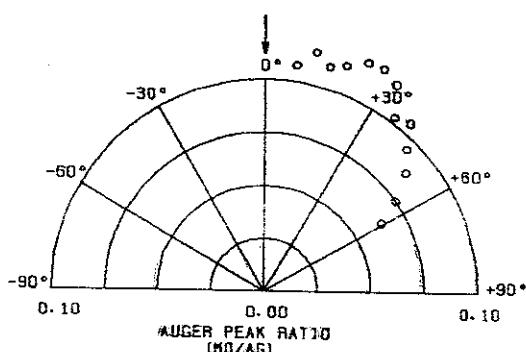
INFORMATION

81 10 1	
HE	\Rightarrow MO-AG
INCIDENT ANGLE	0 °
TARGET	ALLOY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	MO / AG
<hr/>	
ION	HE 2 4.00
TARGET	MO 42 95.9
	AG 47 108



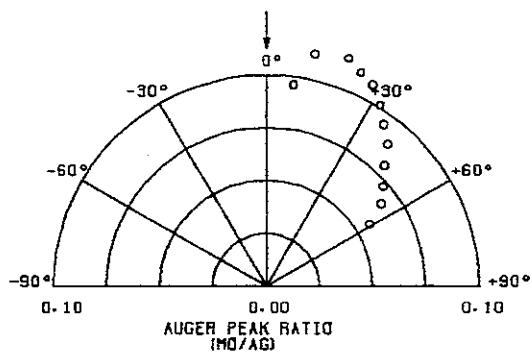
INFORMATION

81 10 2	
HE	\Rightarrow MO-AG
INCIDENT ANGLE	0 °
TARGET	ALLOY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	MO / AG
<hr/>	
ION	HE 2 4.00
TARGET	MO 42 95.9
	AG 47 108



INFORMATION

81 10 9	
HE	\Rightarrow MO-AG
INCIDENT ANGLE	0 °
TARGET	ALLOY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	MO / AG
ION	HE 2 4.00
TARGET	MO 42 95.9
	AG 47 108

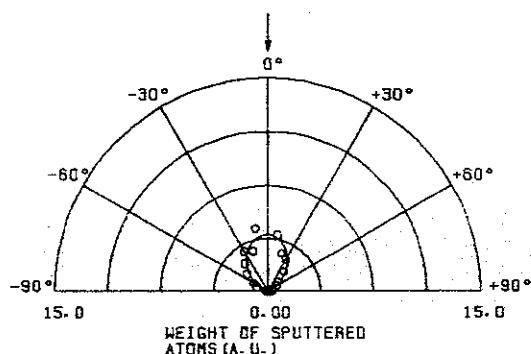


INFORMATION

81 12 1	
AR	\Rightarrow AU
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	AU
ION	AR 18 39.9
TARGET	AU 79 197

REFERENCE 81-12

TEMP-300C



INFORMATION

81 12 2

AR \Rightarrow AU

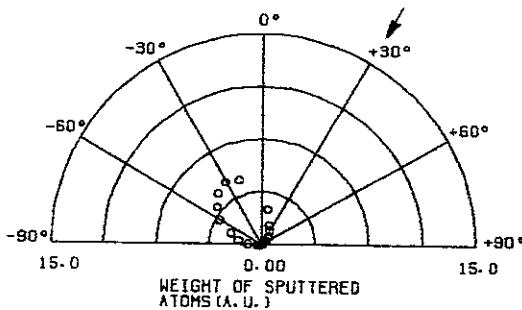
INCIDENT ANGLE	30°	ENERGY (EV)	5.00×10^3
TARGET	POLY	EPSILON	2.14×10^{-2}
ENVIRONMENT	HV	GAMMA	5.61×10^{-1}
SPUTTERED ATOM(S)	AU	Q	3.69×10^{-2}
		EJECTION ANGLE	
		EXP.	70.8°
		CAL.	67.1°

ION AR 18 39.9

TARGET AU 79 197

REFERENCE 81-12

TEMP. 300C



INFORMATION

81 12 3

AR \Rightarrow AU

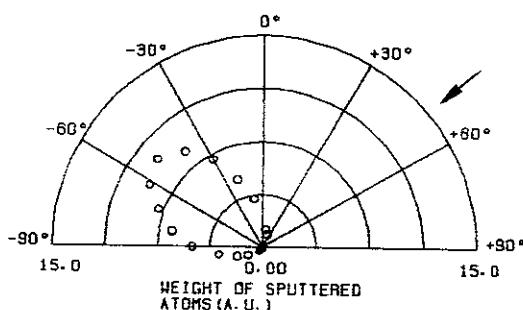
INCIDENT ANGLE	52°	ENERGY (EV)	5.00×10^4
TARGET	POLY	EPSILON	2.14×10^{-1}
ENVIRONMENT	HV	GAMMA	5.61×10^{-1}
SPUTTERED ATOM(S)	AU	Q	1.17×10^{-2}
		EJECTION ANGLE	
		EXP.	49.5°
		CAL.	39.3°

ION AR 18 39.9

TARGET AU 79 197

REFERENCE 81-12

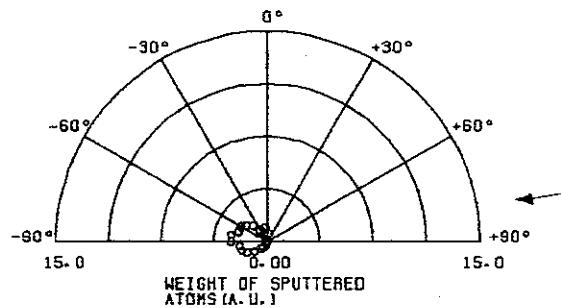
TEMP. 300C



INFORMATION

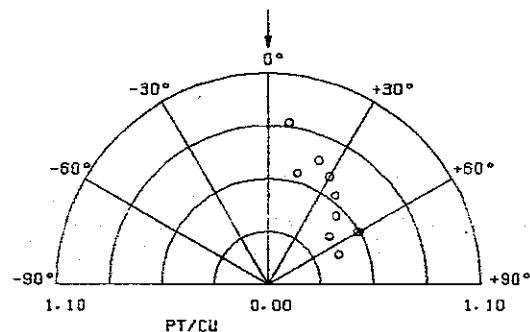
81 12 4	
AR	\Rightarrow AU
INCIDENT ANGLE	80°
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	AU
ION	AR 18 39.9
TARGET	AU 79 197
ENERGY (EV)	5.00×10^4
EPSILON	2.14×10^{-1}
GAMMA	5.61×10^{-2}
O	1.17×10^{-2}
EJECTION ANGLE	
EXP.	60.6°
CAL.	11.0°
REFERENCE	81-12

TEMP. 300C



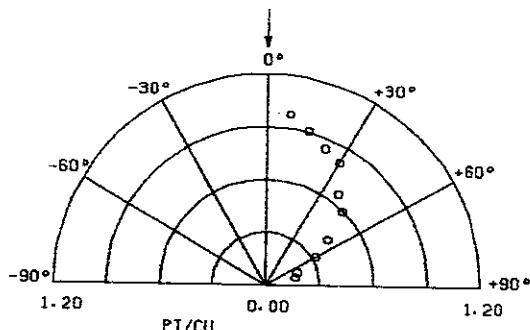
INFORMATION

82 1 1	
AR	\Rightarrow CU-PT
INCIDENT ANGLE	0°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	PT / CU
ION	AR 18 39.9
TARGET	CU 29 63.5 PT 78 195
ENERGY (EV)	5.00×10^4
REFERENCE	82-1



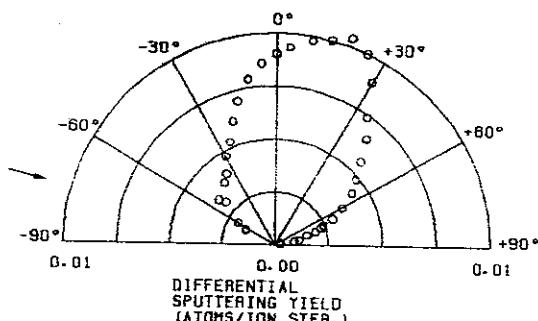
INFORMATION

82 1 2	AR	\Rightarrow	CU-PT
INCIDENT ANGLE	0 °	ENERGY (EV)	5.00×10^4
TARGET	POLY		
ENVIRONMENT	UHV		
SPUTTERED ATOM(S)	NI / CU	REFERENCE	82.1
ION	AR 18 39.9		
TARGET	CU 29 63.5		
	NI 28 58.7		



INFORMATION

82 2 1	D	\Rightarrow	MO
INCIDENT ANGLE	75°	ENERGY (EV)	1.00×10^5
TARGET	POLY	EPSILON	2.37×10^{-1}
ENVIRONMENT	UHV	GAMMA	8.00×10^{-2}
SPUTTERED ATOM(S)	MO	Q	2.92×10^{-3}
ION	H 1 2.00	EJECTION ANGLE	EXP. 20.0°
TARGET	MO 42 95.9		CAL. 17.6°
		REFERENCE	82.2



INFORMATION

82 2 2

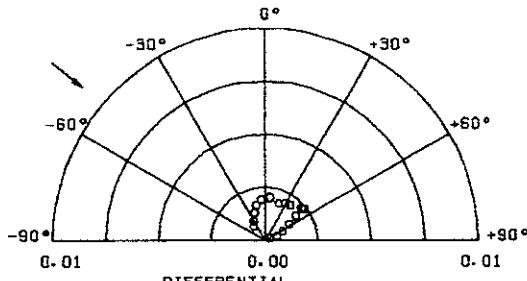
 $D \Rightarrow Mo$

INCIDENT ANGLE 50°
 TARGET POLY
 ENVIRONMENT UHV
 SPUTTERED ATOM(S) Mo

ION H 1 2.00
 TARGET Mo 42 95.9

ENERGY 1.00×10^5
 (EV)
 EPSILON 2.37×10^{-1}
 GAMMA 8.00×10^{-2}
 O 2.92×10^{-2}
 EJECTION ANGLE
 EXP. 50.0°
 CAL. 43.3°

REFERENCE 82-2



INFORMATION

82 2 3

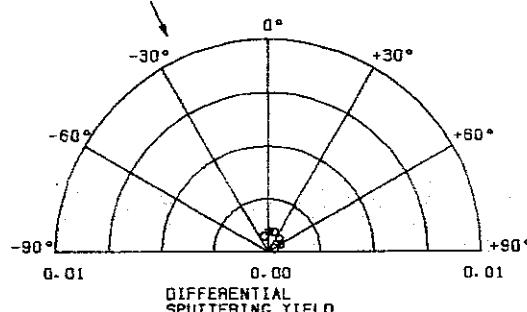
 $D \Rightarrow Mo$

INCIDENT ANGLE 25°
 TARGET POLY
 ENVIRONMENT UHV
 SPUTTERED ATOM(S) Mo

ION H 1 2.00
 TARGET Mo 42 95.9

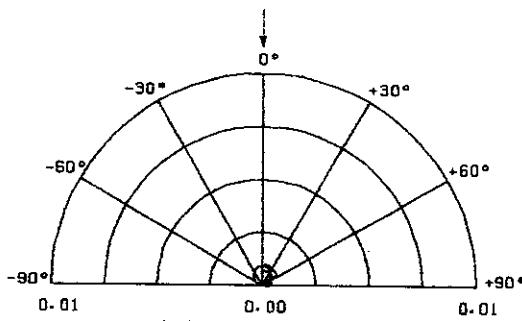
ENERGY 1.00×10^5
 (EV)
 EPSILON 2.37×10^{-1}
 GAMMA 8.00×10^{-2}
 O 2.92×10^{-2}
 EJECTION ANGLE
 EXP. 50.0°
 CAL. 71.8°

REFERENCE 82-2



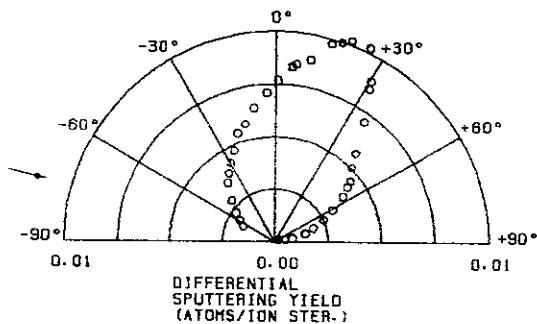
INFORMATION

82 2 4	D \Rightarrow Mo
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	Mo
ION	H 1 2.00
TARGET	Mo 42 95.9
ENERGY (EV)	1.00 x 10 ⁵
EPSILON	2.37 x 10 ⁻¹
GAMMA	8.00 x 10 ⁻²
O	2.92 x 10 ⁻²
COS N	1.29
REFERENCE	82.2



INFORMATION

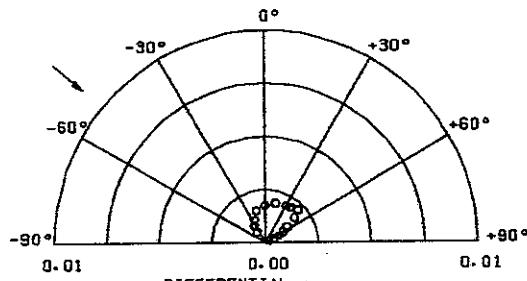
82 2 5	D \Rightarrow Mo
INCIDENT ANGLE	75 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	Mo
ION	H 1 2.00
TARGET	Mo 42 95.9
ENERGY (EV)	5.00 x 10 ⁴
EPSILON	1.18 x 10 ⁻¹
GAMMA	8.00 x 10 ⁻²
O	4.13 x 10 ⁻²
EJECTION ANGLE	
EXP.	25.0 °
CAL.	18.7 °
REFERENCE	82.2



INFORMATION

82 2 6	D	\Rightarrow	Mo
INCIDENT ANGLE	50°	ENERGY (EV)	5.00×10^4
TARGET	POLY	EPSILON	1.18×10^{-4}
ENVIRONMENT	UHV	GAMMA	8.00×10^{-2}
SPUTTERED ATOM(S)	Mo	Q	4.13×10^{-2}
ION	H 1	EJECTION ANGLE	
TARGET	Mo 42	EXP.	45.0°
		CAL.	44.8°

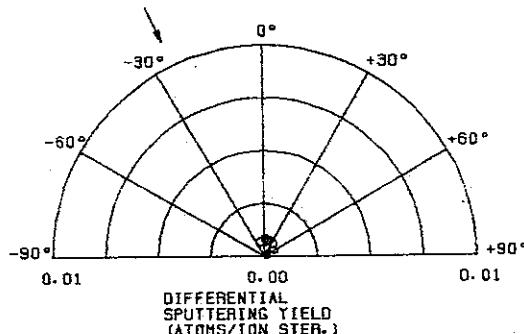
REFERENCE 82-2



INFORMATION

82 2 7	D	\Rightarrow	Mo
INCIDENT ANGLE	25°	ENERGY (EV)	5.00×10^4
TARGET	POLY	EPSILON	1.18×10^{-4}
ENVIRONMENT	UHV	GAMMA	8.00×10^{-2}
SPUTTERED ATOM(S)	Mo	Q	4.13×10^{-2}
ION	H 1	EJECTION ANGLE	
TARGET	Mo 42	EXP.	45.0°
		CAL.	75.5°

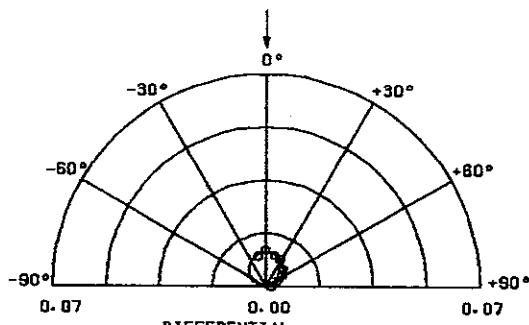
REFERENCE 82-2



INFORMATION

HE \Rightarrow Mo	
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	Mo
ION	He 2 4.00
TARGET	Mo 42 95.9

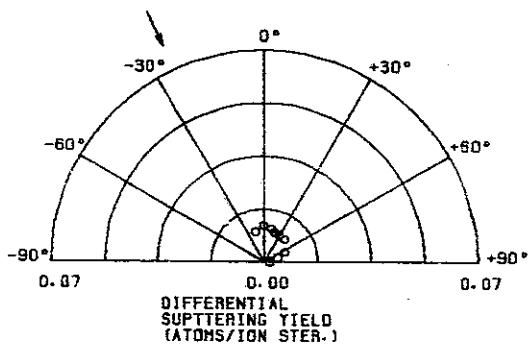
REFERENCE 82-2



INFORMATION

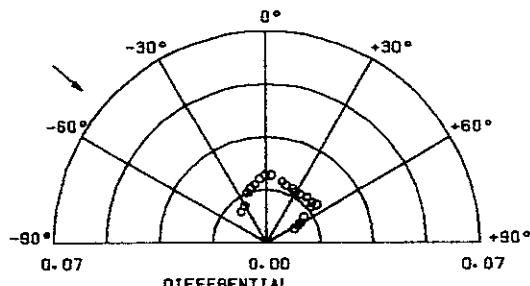
HE \Rightarrow Mo	
INCIDENT ANGLE	25°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	Mo
ION	He 2 4.00
TARGET	Mo 42 95.9

REFERENCE 82-2



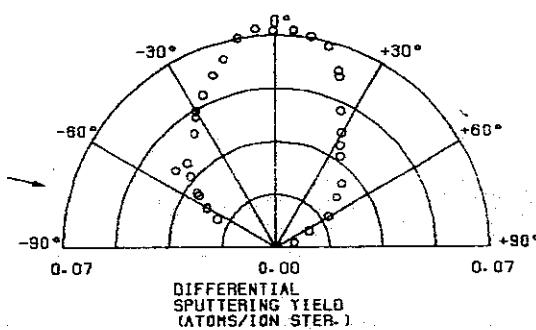
INFORMATION

62 2 10	HE \Rightarrow Mo	
INCIDENT ANGLE	50°	ENERGY (EV) 1.00×10^5
TARGET	POLY	EPSILON 1.14×10^{-1}
ENVIRONMENT	UHV	GAMMA 1.54×10^{-1}
SPUTTERED ATOM(S)	Mo	O 2.11×10^{-2}
ION	He 2 4.00	EJECTION ANGLE EXP. 50.0° CAL. 42.4°
TARGET	Mo 42 95.9	REFERENCE 82-2



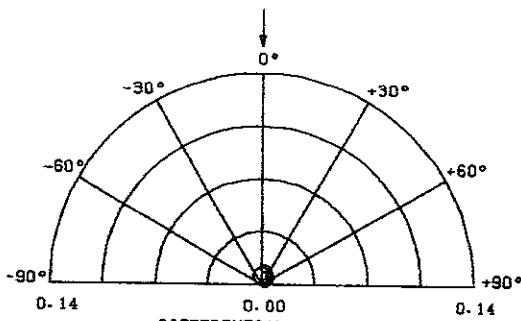
INFORMATION

62 2 11	HE \Rightarrow Mo	
INCIDENT ANGLE	75°	ENERGY (EV) 1.00×10^5
TARGET	POLY	EPSILON 1.14×10^{-1}
ENVIRONMENT	UHV	GAMMA 1.54×10^{-1}
SPUTTERED ATOM(S)	Mo	O 2.11×10^{-2}
ION	He 2 4.00	EJECTION ANGLE EXP. 5.00° CAL. 16.9°
TARGET	Mo 42 95.9	REFERENCE 82-2



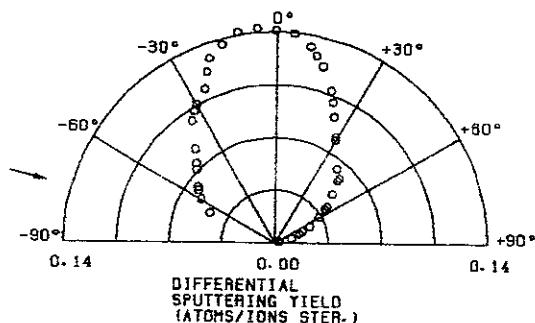
INFORMATION

82 2 12	
HE	\Rightarrow MO
INCIDENT ANGLE	0°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	MO
ION	HE 2 4.00
TARGET	MO 42 95.9
ENERGY (EV)	5.00×10^4
EPSILON	5.68
GAMMA	1.54×10^{-1}
Q	2.98×10^{-2}
COS N	1.11
REFERENCE	82 - 2



INFORMATION

82 2 13	
HE	\Rightarrow MO
INCIDENT ANGLE	75°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	MO
ION	HE 2 4.00
TARGET	MO 42 95.9
ENERGY (EV)	5.00×10^4
EPSILON	5.68
GAMMA	1.54×10^{-1}
Q	2.98×10^{-2}
EJECTION ANGLE	
EXP.	0.00°
CAL.	17.6°
REFERENCE	82 - 2



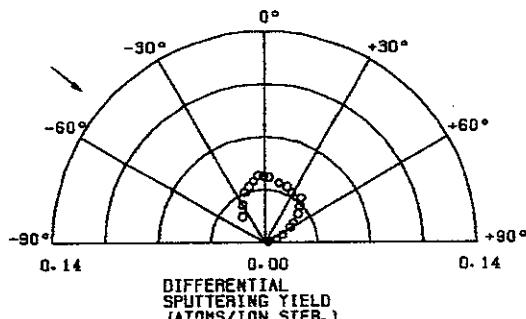
INFORMATION

82 2 14

HE \Rightarrow MO

INCIDENT ANGLE	50°	ENERGY (EV)	5.00×10^4
TARGET	POLY	EPSILON	5.68
ENVIRONMENT	UHV	GAMMA	1.54×10^{-1}
SPUTTERED ATOM(S)	MO	Q	2.98×10^{-2}
ION	HE 2 4.00	EJECTION ANGLE	
TARGET	MO 42 95.9	EXP.	40.0°
		CAL.	43.4°

REFERENCE 82-2



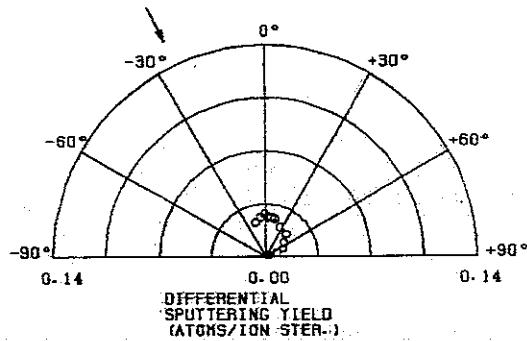
INFORMATION

82 2 15

HE \Rightarrow MO

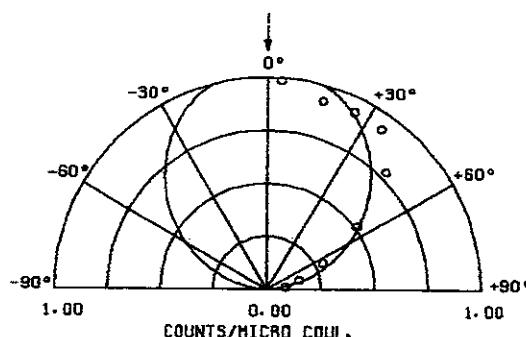
INCIDENT ANGLE	25°	ENERGY (EV)	5.00×10^4
TARGET	POLY	EPSILON	5.68
ENVIRONMENT	UHV	GAMMA	1.54×10^{-1}
SPUTTERED ATOM(S)	MO	Q	2.98×10^{-2}
ION	HE 2 4.00	EJECTION ANGLE	
TARGET	MO 42 95.9	EXP.	40.0°
		CAL.	72.0°

REFERENCE 82-2



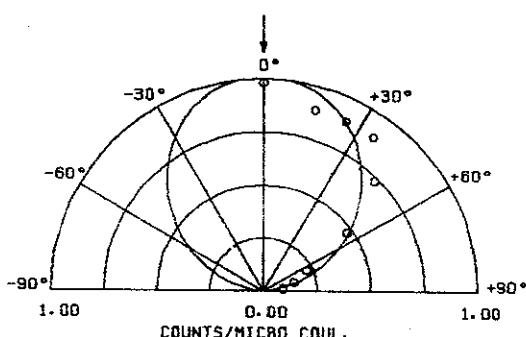
INFORMATION

62 3 1	
CU	\Rightarrow CU
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	CU
ION	CU 29 63.5
TARGET	CU 29 63.5
ENERGY (EV)	6.00×10^4
EPSILON	3.02×10^{-1}
GAMMA	10.00×10^{-1}
Q	7.63×10^{-3}
COS N	1.26
REFERENCE	82.3



INFORMATION

62 3 2	
CU	\Rightarrow CU
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	CU
ION	CU 29 63.5
TARGET	CU 29 63.5
ENERGY (EV)	9.00×10^4
EPSILON	4.52×10^{-1}
GAMMA	10.00×10^{-1}
Q	8.29×10^{-3}
COS N	1.35
REFERENCE	82.3

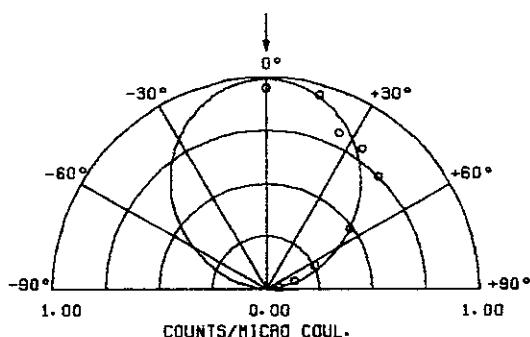


INFORMATION

82 3 3	
CU	\Rightarrow CU
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	CU
ION	CU 29 63.5
TARGET	CU 29 63.5

ENERGY 1.20×10^5
 (EV)
 EPSILON 6.03×10^{-1}
 GAMMA 10.00×10^{-3}
 O 5.36×10^{-3}
 COS N
 N 1.33

REFERENCE 82-3

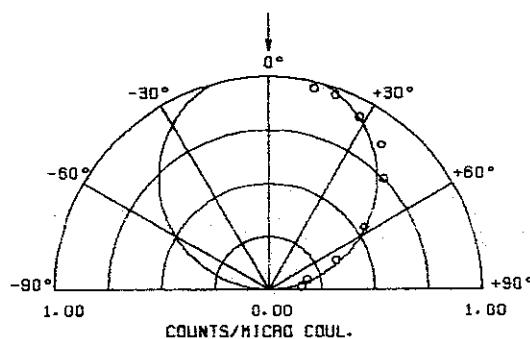


INFORMATION

82 3 4	
NI	\Rightarrow NI
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	NI
ION	NI 28 58.7
TARGET	NI 28 58.7

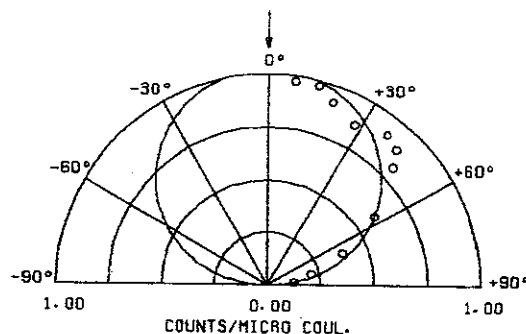
ENERGY 6.00×10^4
 (EV)
 EPSILON 3.27×10^{-1}
 GAMMA 10.00×10^{-3}
 O 8.60×10^{-3}
 COS N
 N 1.05

REFERENCE 82-3



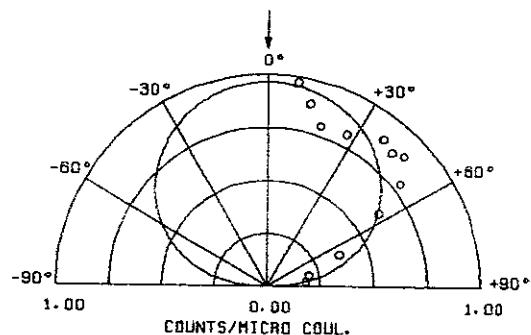
INFORMATION

82 s 5	
NI	\Rightarrow NI
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	NI
ION	NI 28 58.7
TARGET	NI 28 58.7
ENERGY (EV)	9.00×10^4
EPSILON	4.91×10^{-1}
GAMMA	10.00×10^{-3}
Q	7.02×10^{-3}
COS * N	9.00×10^{-1}
REFERENCE	82.3



INFORMATION

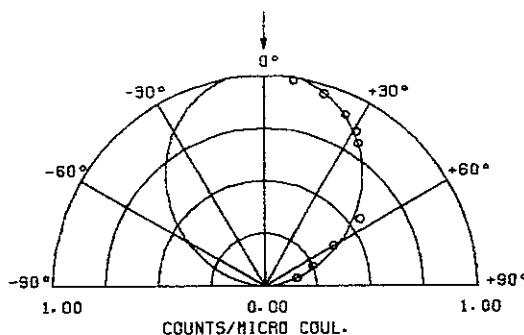
82 s 6	
NI	\Rightarrow NI
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	NI
ION	NI 28 58.7
TARGET	NI 28 58.7
ENERGY (EV)	1.20×10^5
EPSILON	6.55×10^{-1}
GAMMA	10.00×10^{-3}
Q	6.08×10^{-3}
COS * N	7.50×10^{-1}
REFERENCE	82.3



INFORMATION

82 3 7	CU	\Rightarrow	CU
INCIDENT ANGLE	0 °	ENERGY (EV)	9.00×10^4
TARGET	POLY	EPSILON	4.52×10^{-1}
ENVIRONMENT	UHV	GAMMA	10.00×10^{-1}
SPUTTERED ATOM(S)	CU	D	6.23×10^{-3}
		COS N	
		N	1.30
ION	CU 29 63.5	REFERENCE	82 - 3
TARGET	CU 29 63.5		

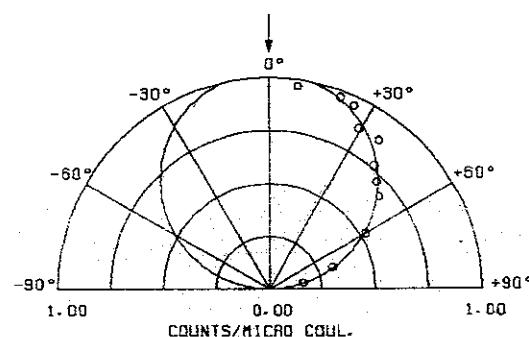
(RBS) FOIL II
FLUENCE = $12E+17$ CU/SQ-CENTI-M



INFORMATION

82 3 8	CU	\Rightarrow	CU
INCIDENT ANGLE	0 °	ENERGY (EV)	9.00×10^4
TARGET	POLY	EPSILON	4.52×10^{-1}
ENVIRONMENT	UHV	GAMMA	10.00×10^{-1}
SPUTTERED ATOM(S)	CU	D	6.23×10^{-3}
		COS N	
		N	1.00
ION	CU 29 63.5	REFERENCE	82 - 3
TARGET	CU 29 63.5		

(RBS) FOIL III
FLUENCE = $5.2E+17$ CU/SQ-CENTI-M

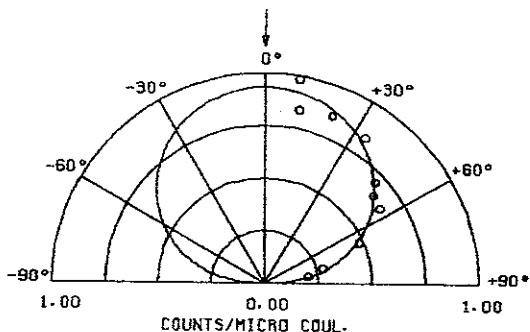


INFORMATION

82 3 9	
CU	\Rightarrow CU
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	CU
ION	CU 29 63.5
TARGET	CU 29 63.5

ENERGY (EV)	9.00 X10 ⁴
EPSILON	4.52 X10 ⁻¹
GAMMA	10.00 X10 ⁻¹
Q	6.23 X10 ⁻³
COS N	7.70 X10 ⁻²

(RBS) FOIL V
FLUENCE = 1.3E+17 CU/SQ-CENTI-M

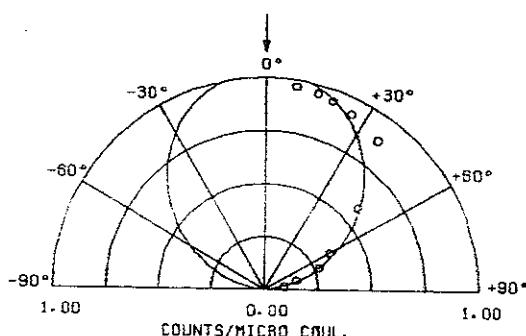


INFORMATION

82 3 10	
CU	\Rightarrow CU
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	CU
ION	CU 29 63.5
TARGET	CU 29 63.5

ENERGY (EV)	9.00 X10 ⁴
EPSILON	4.52 X10 ⁻¹
GAMMA	10.00 X10 ⁻¹
Q	6.23 X10 ⁻³
COS N	1.35

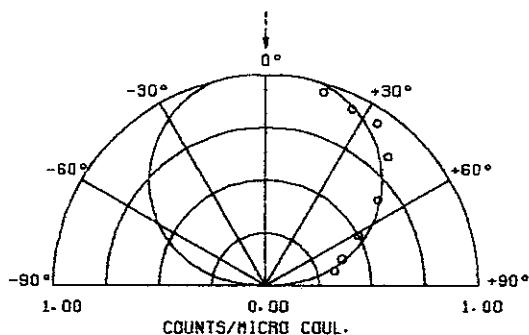
(PIXE) FOIL II
FLUENCE = 12E+17 CU/SQ-CENTI-M



INFORMATION

82 3 11	CU	\Rightarrow	CU
INCIDENT ANGLE	0 °	ENERGY (EV)	9.00×10^4
TARGET	POLY	EPSILON	4.52×10^{-1}
ENVIRONMENT	UHV	GAMMA	10.00×10^{-3}
SPUTTERED ATOM(S)	CU	O	6.23×10^{-3}
		COS N	8.20×10^{-1}
ION	CU 29 63.5		
TARGET	CU 29 63.5	REFERENCE	82.3

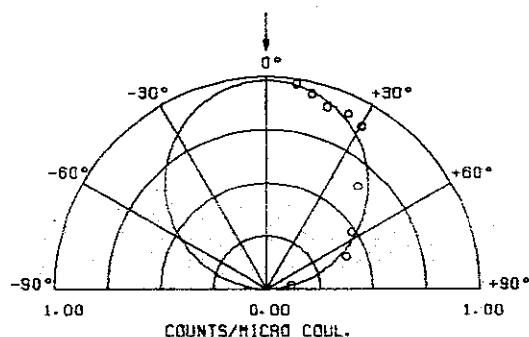
(PIXE) FOIL III
FLUENCE = 5.2×10^{17} CU/SQ. CENTI-M



INFORMATION

82 3 12	CU	\Rightarrow	CU
INCIDENT ANGLE	0 °	ENERGY (EV)	9.00×10^4
TARGET	POLY	EPSILON	4.52×10^{-1}
ENVIRONMENT	UHV	GAMMA	10.00×10^{-3}
SPUTTERED ATOM(S)	CU	O	6.23×10^{-3}
		COS N	1.07
ION	CU 29 63.5		
TARGET	CU 29 63.5	REFERENCE	82.3

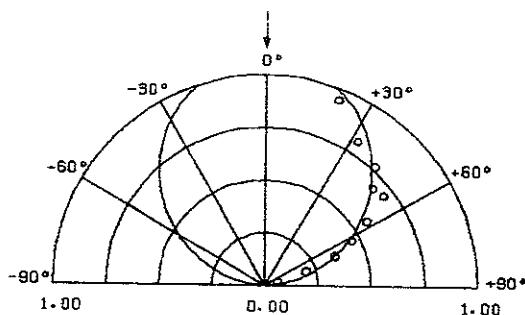
(PIXE) FOIL V
FLUENCE = 1.3×10^{17} CU/SQ. CENTI-M



INFORMATION

82 7 1	HE	\Rightarrow	V
INCIDENT ANGLE	0 °	ENERGY (EV)	4.00×10^3
TARGET	POLY	EPSILON	9.52×10^{-1}
ENVIRONMENT	-- --	GAMMA	2.70×10^{-1}
SPUTTERED ATOM(S)	V	O	7.01×10^{-2}
		COS N	1.19
ION	HE 2	4.00	
TARGET	V	23	50.9
			REFERENCE 82 - 7

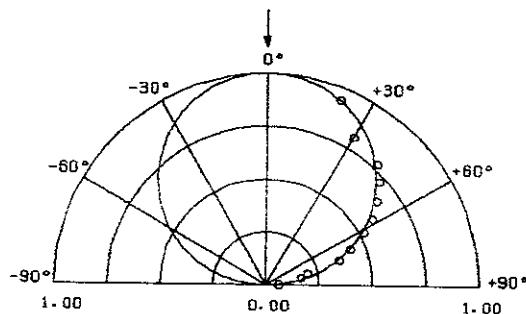
OXYGEN EXPOSED



INFORMATION

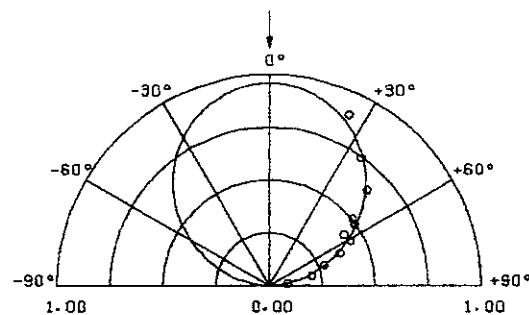
82 7 2	HE	\Rightarrow	V
INCIDENT ANGLE	0 °	ENERGY (EV)	4.00×10^3
TARGET	POLY	EPSILON	9.52×10^{-1}
ENVIRONMENT	UHV	GAMMA	2.70×10^{-1}
SPUTTERED ATOM(S)	V	O	7.01×10^{-2}
		COS N	9.30×10^{-1}
ION	HE 2	4.00	
TARGET	V	23	50.9
			REFERENCE 82 - 7

CLEAN METAL



INFORMATION

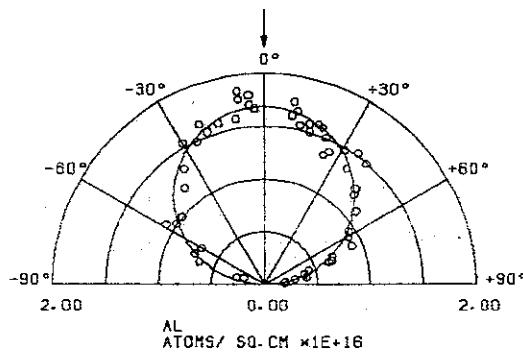
82 7 3	H \Rightarrow V	
INCIDENT ANGLE	0 °	ENERGY (EV) 5.00×10^2
TARGET	POLY	EPSILON 2.60×10^{-1}
ENVIRONMENT	UHV	GAMMA 7.61×10^{-2}
SPUTTERED ATOM(S)	V	O 3.74×10^{-1}
		COS " N 1.17
ION	H 1 1.01	
TARGET	V 23 50.9	REFERENCE 82.7



INFORMATION

82 11 1	AR \Rightarrow AL	
INCIDENT ANGLE	0 °	ENERGY (EV) 4.00×10^4
TARGET	POLY	EPSILON 7.19×10^{-1}
ENVIRONMENT	HV	GAMMA 9.62×10^{-3}
SPUTTERED ATOM(S)	AL	O 9.38×10^{-1}
		COS " N 9.60×10^{-1}
ION	AR 18 39.9	
TARGET	AL 13 27.0	REFERENCE 82.11
	0 8 16.0	

1-4E-4 PA

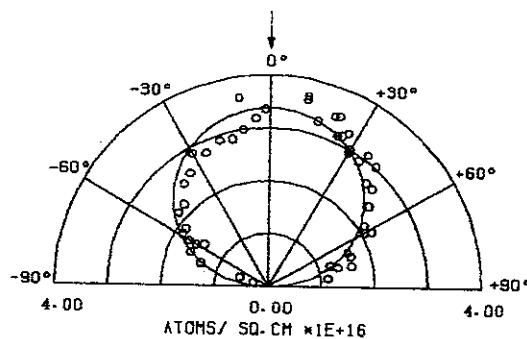


INFORMATION

82 11 2	
AR	\Rightarrow AL
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	O

ION	AR 18	39.9	ENERGY (EV)	4.00×10^4
TARGET	AL 13	27.0	EPSILON	8.85×10^{-1}
	O 8	16.0	GAMMA	9.62×10^{-1}

REFERENCE 82-11

OXYGEN
1-4E-4 PA.

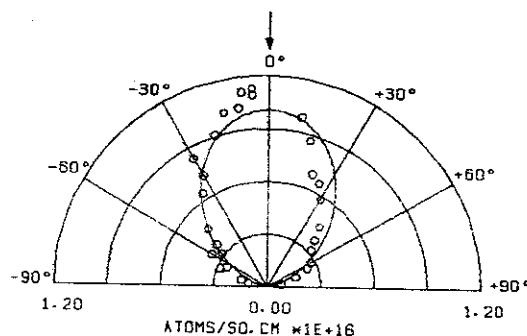
INFORMATION

82 11 9	
AR	\Rightarrow AL ₂ -03
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	AL

ION	AR 18	39.9	ENERGY (EV)	4.00×10^4
TARGET	AL 13	27.0	EPSILON	7.19×10^{-1}
	O 8	16.0	GAMMA	9.62×10^{-1}

REFERENCE 82.11

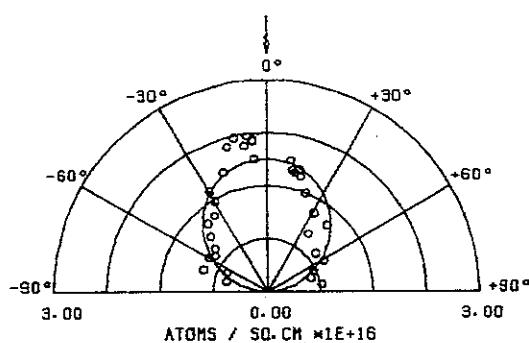
AL 1 - 4E-4 PA



INFORMATION

82 11 4	
AR	\Rightarrow AL2-03
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	0
ION	AR 18 39.9
TARGET	AL 13 27.0
	0 8 16.0
ENERGY (EV)	4.00×10^4
EPSILON	8.85×10^{-1}
GAMMA	9.62×10^{-1}
O	8.92×10^{-3}
COS " N	1.12
REFERENCE	82.11

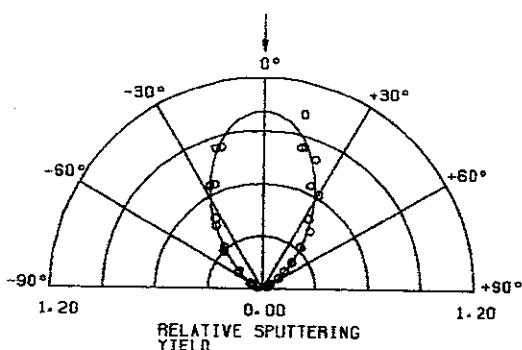
OXYGEN 1 - 4E-4 PA



INFORMATION

83 1 1	AR	\Rightarrow	GA-I
INCIDENT ANGLE	0 °	ENERGY (EV)	1.50×10^4
TARGET	POLY	EPSILON	9.59×10^{-2}
ENVIRONMENT	UHV	GAMMA	9.26×10^{-1}
SPUTTERED ATOM (S)	GA	Q	1.42×10^{-2}
		COS *	
		N	3.84
ION	AR 18 39.9		
TARGET	GA 31 69.7		REFERENCE 83.1
I	53 127		

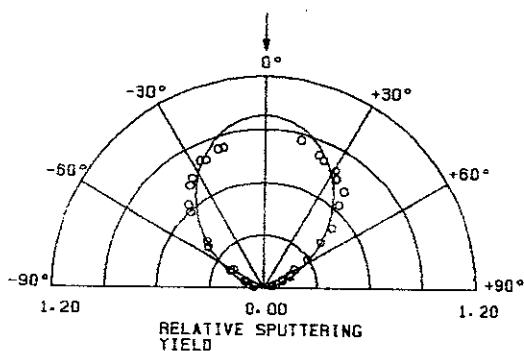
GA



INFORMATION

83 1 2	AR	\Rightarrow	GA-I
INCIDENT ANGLE	0 °	ENERGY (EV)	1.50×10^4
TARGET	POLY	EPSILON	9.59×10^{-2}
ENVIRONMENT	UHV	GAMMA	9.26×10^{-1}
SPUTTERED ATOM (S)	I	Q	1.01×10^{-2}
		COS *	
		N	1.85
ION	AR 18 39.9		
TARGET	GA 31 69.7		REFERENCE 83.1
I	53 127		

I

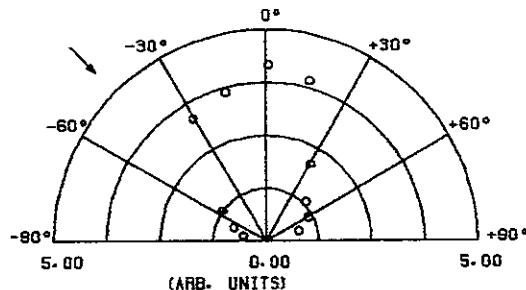


INFORMATION

69 2 1	
AR	\Rightarrow AU-CU
INCIDENT ANGLE	45°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	CU
ION	AR 18 39.9
TARGET	AU 79 197 CU 29 63.5

REFERENCE 83-2

CU 43 ATZ

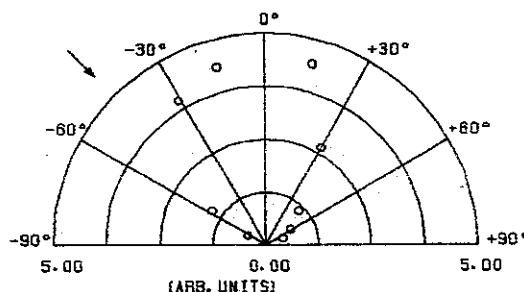


INFORMATION

69 2 2	
AR	\Rightarrow AU-CU
INCIDENT ANGLE	45°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	AU
ION	AR 18 39.9
TARGET	AU 79 197 CU 29 63.5

REFERENCE 83-2

AU 43 ATZ



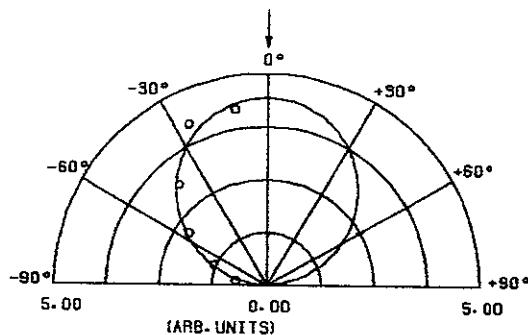
INFORMATION

89 2 3	
AR	\Rightarrow AU-CU
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	CU
ION	AR 18 39.9
TARGET	AU 79 197
	CU 29 63.5

ENERGY (EV)	3.00×10^3
EPSILON	3.21×10^{-2}
GAMMA	5.61×10^{-1}
0	3.50×10^{-2}
COS N	
N	1.15

REFERENCE	83 - 2
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CU 43 AT%



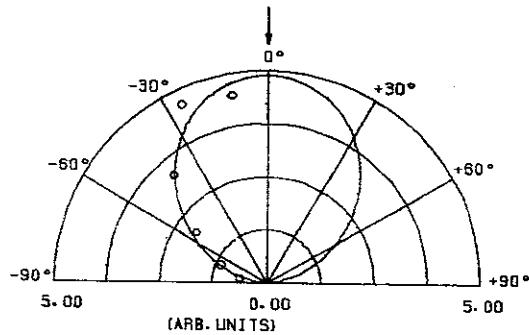
INFORMATION

89 2 4	
AR	\Rightarrow AU-CU
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	AU
ION	AR 18 39.9
TARGET	AU 79 197
	CU 29 63.5

ENERGY (EV)	3.00×10^3
EPSILON	1.28×10^{-2}
GAMMA	5.61×10^{-1}
0	4.76×10^{-2}
COS N	
N	1.42

REFERENCE	83 - 2
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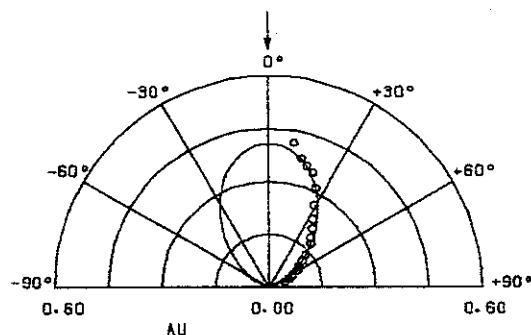
AU 43 AT%



INFORMATION

89 4 1	
AR	\Rightarrow AG-AU
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	AU
ION	AR 18 39.9
TARGET	AG 47 108 AU 79 197
ENERGY (EV)	1.00 X10 ⁵
EPSILON	4.27 X10 ⁻¹
GAMMA	7.89 X10 ⁻¹
Q	8.24 X10 ⁻³
COS ⁻¹ N	2.70
REFERENCE 83.4	

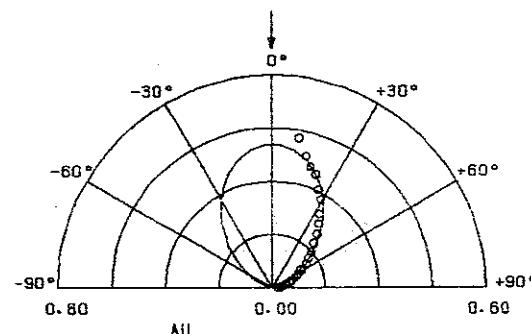
STRIP 1



INFORMATION

89 4 2	
AR	\Rightarrow AG-AU
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	AU
ION	AR 18 39.9
TARGET	AG 47 108 AU 79 197
ENERGY (EV)	1.00 X10 ⁵
EPSILON	4.27 X10 ⁻¹
GAMMA	7.89 X10 ⁻¹
Q	8.24 X10 ⁻³
COS ⁻¹ N	2.40
REFERENCE 83.4	

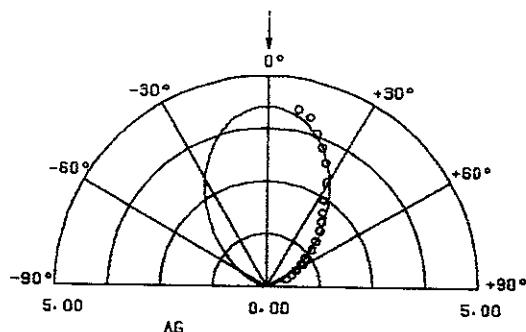
STRIP 4



INFORMATION

83 4 3	AR	\Rightarrow	AG-AU
INCIDENT ANGLE	0 °	ENERGY (EV)	1.00×10^5
TARGET	POLY	EPSILON	7.10×10^{-1}
ENVIRONMENT	UHV	GAMMA	7.89×10^{-1}
SPUTTERED ATOM(S)	AG	Ω	6.12×10^{-3}
		COS θ	N
ION	AR 18 39.9		2.60
TARGET	AG 47 108 AU 79 197	REFERENCE	83.4

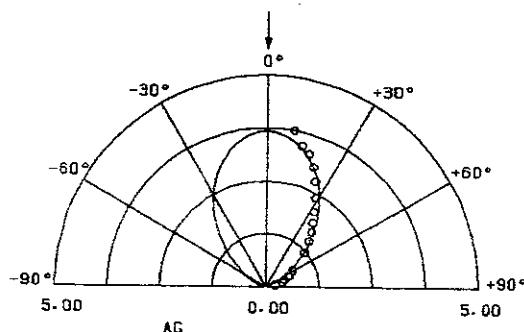
STRIP 1



INFORMATION

83 4 4	AR	\Rightarrow	AG-AU
INCIDENT ANGLE	0 °	ENERGY (EV)	1.00×10^5
TARGET	POLY	EPSILON	7.10×10^{-1}
ENVIRONMENT	UHV	GAMMA	7.89×10^{-1}
SPUTTERED ATOM(S)	AG	Ω	6.12×10^{-3}
		COS θ	N
ION	AR 18 39.9		2.74
TARGET	AG 47 108 AU 79 197	REFERENCE	83.4

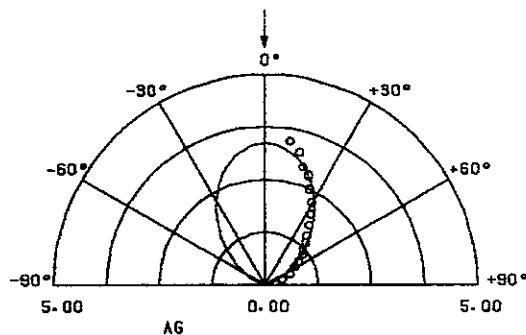
STRIP 3



INFORMATION

89 4 5	
AR	\Rightarrow AG-AU
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	AG
ION	AR 18 39.9
TARGET	AG 47 108 AU 79 197
ENERGY (EV)	1.00×10^5
EPSILON	7.10×10^{-1}
GANMA	7.89×10^{-3}
O	6.12×10^{-3}
COS N	2.59
REFERENCE	83 - 4

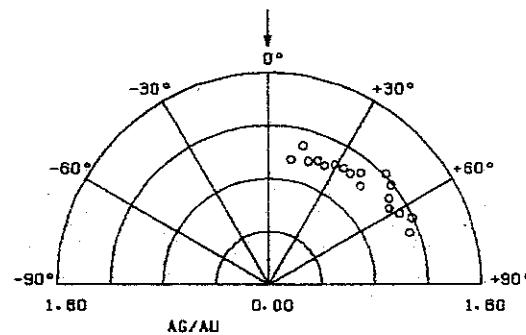
STRIP 5



INFORMATION

89 4 6	
AR	\Rightarrow AU-AG
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	AG / AU
ION	AR 18 39.9
TARGET	AU 79 197 AG 47 108
ENERGY (EV)	1.00×10^5
REFERENCE	83 - 4

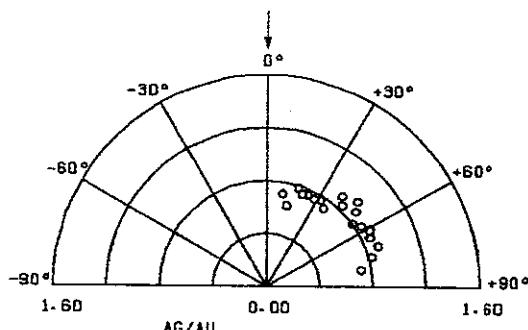
STRIP 1 R=1.26



INFORMATION

89 4 7	AR	\Rightarrow	AU-AG	
INCIDENT ANGLE	0 °		ENERGY (EV)	1.00×10^5
TARGET	POLY			
ENVIRONMENT	UHV			
SPUTTERED ATOM(S)	AG / AU		REFERENCE	83-4
ION	AR 18 39.9			
TARGET	AU 79 197			
	AG 47 108			

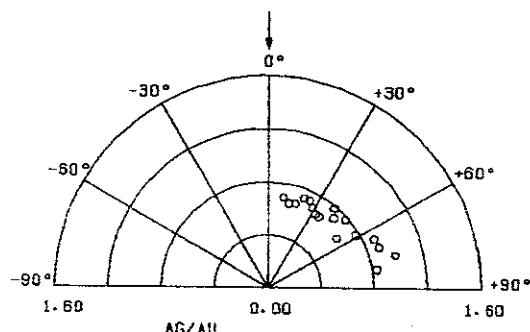
STRIP 2 R=1.1



INFORMATION

89 4 8	AR	\Rightarrow	AU-AG	
INCIDENT ANGLE	0 °		ENERGY (EV)	1.00×10^5
TARGET	POLY			
ENVIRONMENT	UHV			
SPUTTERED ATOM(S)	AG / AU		REFERENCE	83-4
ION	AR 18 39.9			
TARGET	AU 79 197			
	AG 47 108			

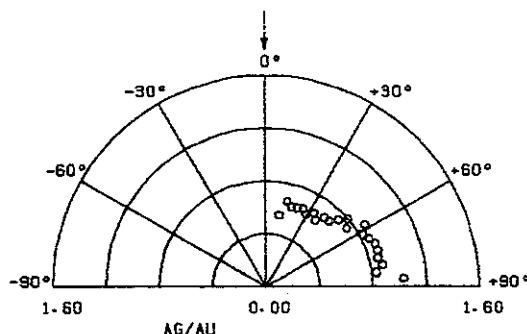
STRIP 3 R=1.05



INFORMATION

89 4 8	AR \Rightarrow AU-AG
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	AG / AU
ION	AR 18 39.9
TARGET	AU 79 197
	AG 47 108

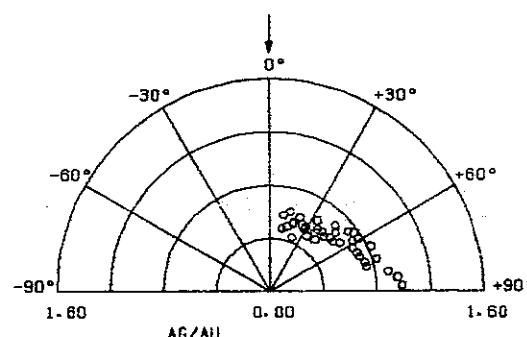
STRIP 4 R=1.03



INFORMATION

89 4 10	AR \Rightarrow AU-AG
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	AG / AU
ION	AR 18 39.9
TARGET	AU 79 197
	AG 47 108

STRIP 5 R=1.01



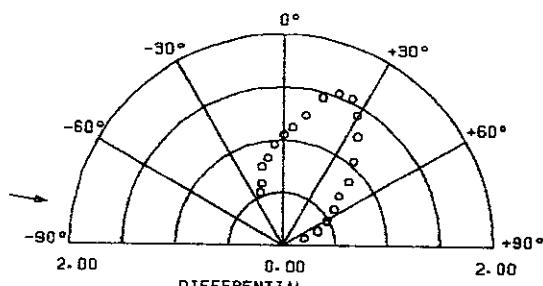
INFORMATION

89 5 1

D \Rightarrow Mo

INCIDENT ANGLE	80°	ENERGY (EV)	2.00×10^3
TARGET	POLY	EPSILON	4.74×10^{-1}
ENVIRONMENT	UHV	GAMMA	8.00×10^{-2}
SPUTTERED ATOM (SI)	Mo	Ω	2.06×10^{-1}
ION	H 1 2.00	EJECTION ANGLE	
TARGET	Mo 42 95.9	EXP.	25.0°
		CAL.	26.2°

REFERENCE 83.5



INFORMATION

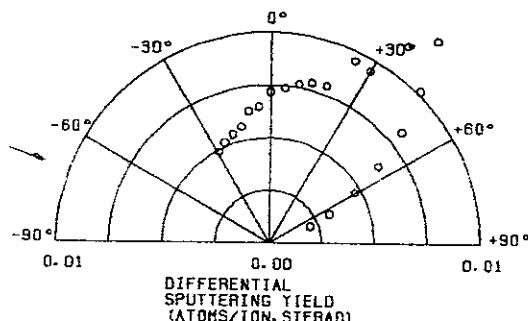
89 5 2

D \Rightarrow Nb-B2

INCIDENT ANGLE	70°	ENERGY (EV)	2.00×10^3
TARGET	POLY	EPSILON	6.26
ENVIRONMENT	UHV	GAMMA	8.25×10^{-2}
SPUTTERED ATOM (SI)	B	Ω	7.40×10^{-2}
ION	H 1 2.00	EJECTION ANGLE	
TARGET	NB 41 92.9	EXP.	39.8°
	B 5 10.8	CAL.	26.8°

REFERENCE 83.5

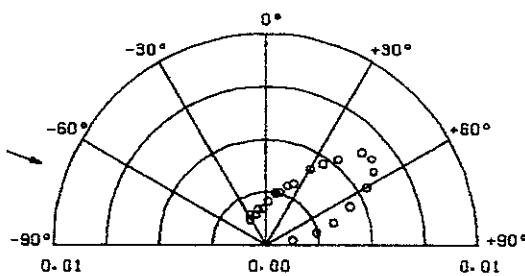
B DISTRIBUTION



INFORMATION

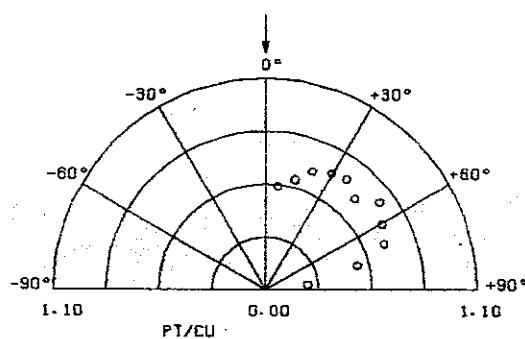
68 5 9	
D	⇒ NB-B2
INCIDENT ANGLE	70°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	NB
ION	H 1 2.00
TARGET	NB 41 92.9
	B 5 10.8
	REFERENCE 83.5

NB DISTRIBUTION



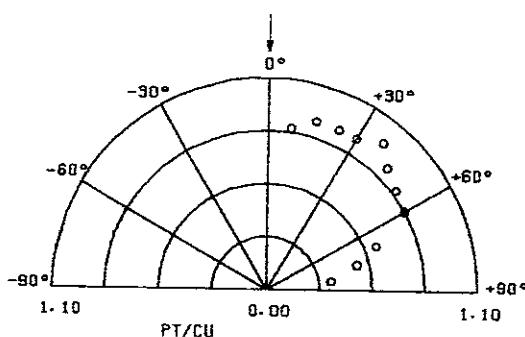
INFORMATION

68 7 1	
AR	⇒ CU-PT
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	PT / CU
ION	AR 18 39.9
TARGET	CU 29 63.5
	PT 78 195
	REFERENCE 83.7



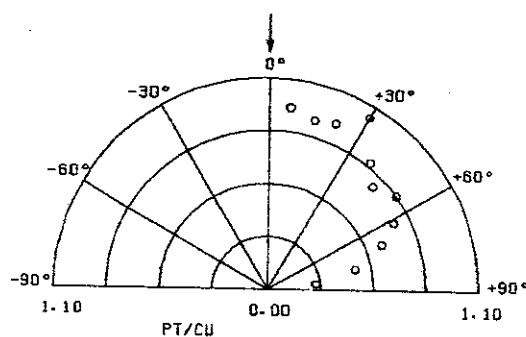
INFORMATION

89 7 2	
AR	\Rightarrow CU-PT
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	PT / CU
REFERENCE 89-7	
ION	AR 18 39.9
TARGET	CU 29 63.5
	PT 78 195



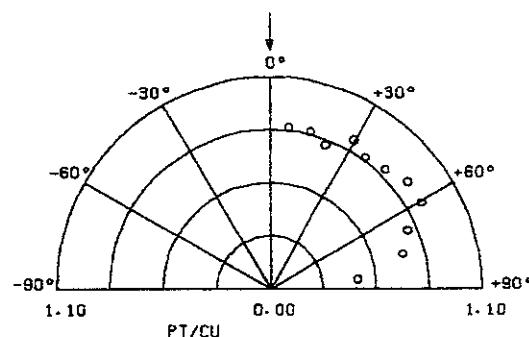
INFORMATION

89 7 3	
AR	\Rightarrow CU-PT
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	PT / CU
REFERENCE 89.7	
ION	AR 18 39.9
TARGET	CU 29 63.5
	PT 78 195



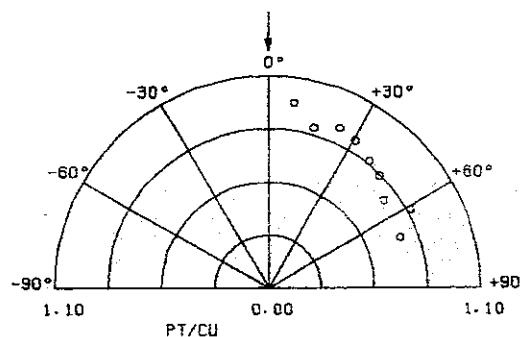
INFORMATION

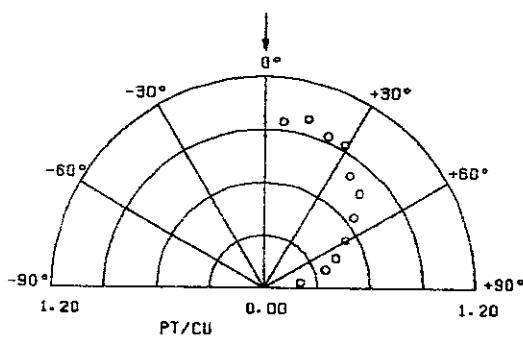
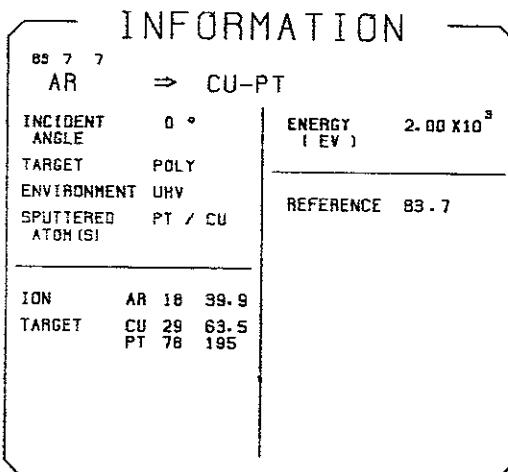
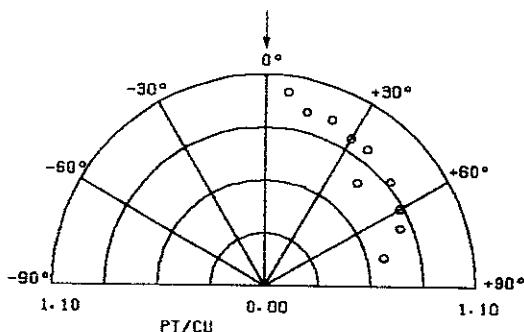
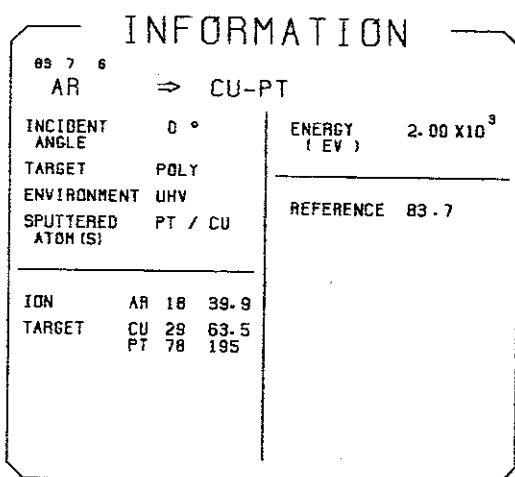
69 7 4	AR	\Rightarrow	CU-PT
INCIDENT ANGLE	0 °	ENERGY (EV)	2.00×10^3
TARGET	POLY		
ENVIRONMENT	UHV		
SPUTTERED ATOM(S)	PT / CU	REFERENCE	69.7
ION	AR 18 39.9		
TARGET	CU 29 63.5		
	PT 78 195		



INFORMATION

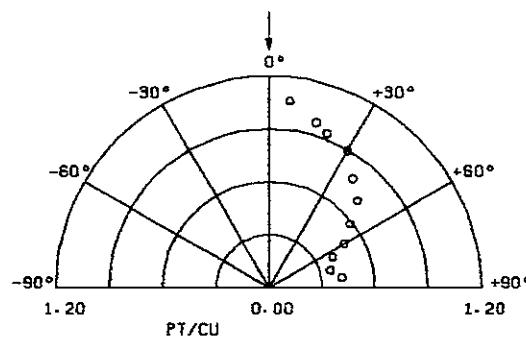
69 7 5	AR	\Rightarrow	CU-PT
INCIDENT ANGLE	0 °	ENERGY (EV)	2.00×10^3
TARGET	POLY		
ENVIRONMENT	UHV		
SPUTTERED ATOM(S)	PT / CU	REFERENCE	69.7
ION	AR 18 39.9		
TARGET	CU 29 63.5		
	PT 78 195		





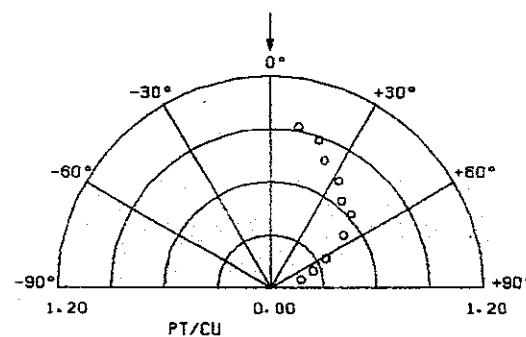
INFORMATION

63 7 8	AR \Rightarrow CU-PT
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	PT / CU
	REFERENCE 63.7
ION	AR 18 39.9
TARGET	CU 29 63.5
	PT 78 195



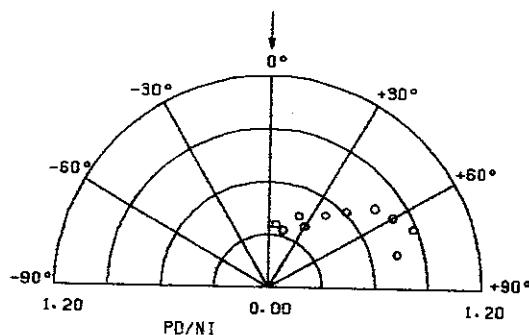
INFORMATION

63 7 9	AR \Rightarrow CU-PT
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	PT / CU
	REFERENCE 63.7
ION	AR 18 39.9
TARGET	CU 29 63.5
	PT 78 195



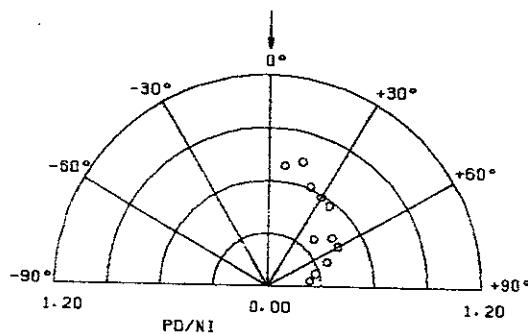
INFORMATION

83 7 10	AR	\Rightarrow	Ni5-PD
INCIDENT ANGLE	0 °	ENERGY	2.00×10^3 (EV)
TARGET	POLY		
ENVIRONMENT	UHV		
SPUTTERED ATOM(SI)		REFERENCE	83-7
ION	AR 18 38.9		
TARGET	NI 28 58.7		
	PD 46 106		



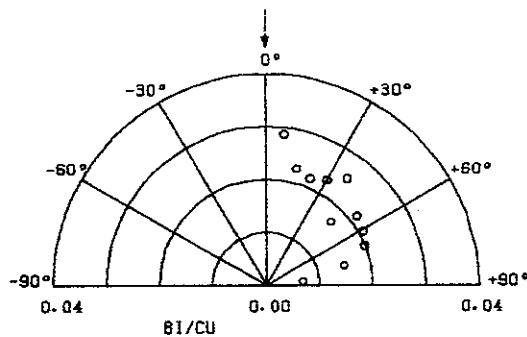
INFORMATION

83 7 11	0	\Rightarrow	Ni5-PD
INCIDENT ANGLE	0 °	ENERGY	2.00×10^3 (EV)
TARGET	POLY		
ENVIRONMENT	UHV		
SPUTTERED ATOM(SI)		REFERENCE	83-7
ION	O 8 16.0		
TARGET	NI 28 58.7		
	PD 46 106		



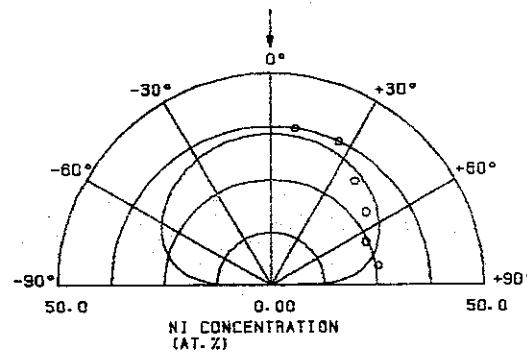
INFORMATION

89 7 12	
BI	\Rightarrow CU
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	BI / CU
ION	BI 83 209
TARGET	CU 29 63.5
ENERGY (EV)	2.00×10^3
REFERENCE	89.7



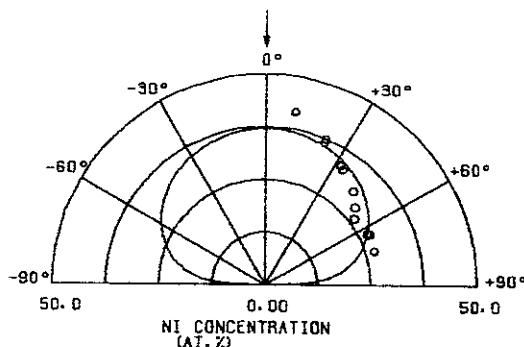
INFORMATION

84 1 1	
AR	\Rightarrow NI-CU
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	NI
ION	AR 18 39.9
TARGET	NI 28 58.7 CU 29 63.5
ENERGY (EV)	3.00×10^3
EPSILON	3.24×10^{-2}
GAMMA	9.64×10^{-1}
Q	3.92×10^{-2}
COS N	2.80×10^{-1}
REFERENCE	84.1



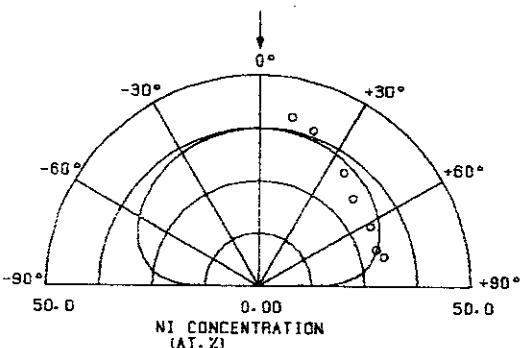
INFORMATION

84 1 2	
AR	\Rightarrow NI-CU
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	NI
ION	AR 18 39.9
TARGET	NI 28 58.7 CU 29 63.5
	REFERENCE 84-1



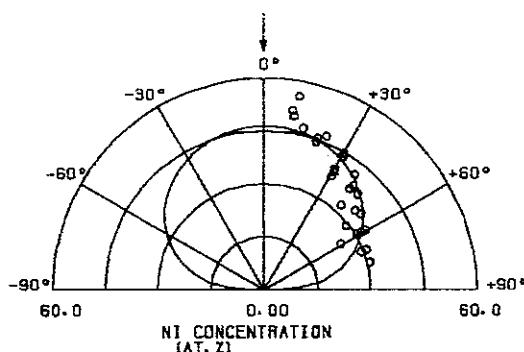
INFORMATION

84 1 3	
AR	\Rightarrow NI-CU
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	NI
ION	AR 18 39.9
TARGET	NI 28 58.7 CU 29 63.5
	REFERENCE 84-1



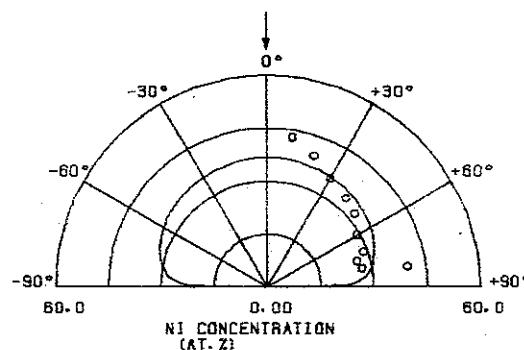
INFORMATION

84 1 4		AR \Rightarrow NI-CU
INCIDENT ANGLE	0 °	ENERGY (EV) 3.00×10^3
TARGET	POLY	EPSILON 3.24×10^{-2}
ENVIRONMENT	UHV	GAMMA 9.64×10^{-1}
SPUTTERED ATOM(S)	NI	O 3.92×10^{-2}
		COS [*] N 5.60×10^{-1}
ION	AR 18 39.9	
TARGET	NI 28 58.7	REFERENCE 84.1
	CU 29 63.5	



INFORMATION

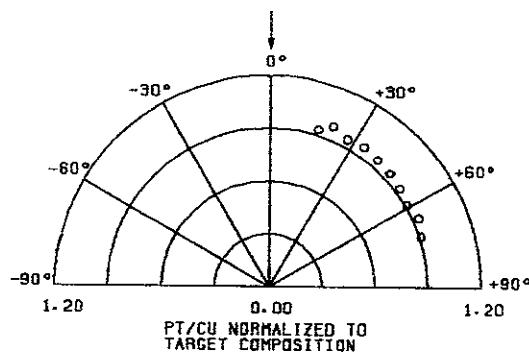
84 1 5		AR \Rightarrow NI-CU
INCIDENT ANGLE	0 °	ENERGY (EV) 3.00×10^3
TARGET	POLY	EPSILON 3.24×10^{-2}
ENVIRONMENT	UHV	GAMMA 9.64×10^{-1}
SPUTTERED ATOM(S)	NI	O 3.92×10^{-2}
		COS [*] N 1.20×10^{-1}
ION	AR 18 39.9	
TARGET	NI 28 58.7	REFERENCE 84.1
	CU 29 63.5	



INFORMATION

84 2 1	AR	\Rightarrow	CU-PT
INCIDENT ANGLE	0 °	ENERGY	3.00×10^3 (EV)
TARGET	POLY		
ENVIRONMENT	UHV		
SPUTTERED ATOM(S)	PT / CU	REFERENCE	84-2
ION	AR 18 39.9		
TARGET	CU 29 63.5		
	PT 78 195		

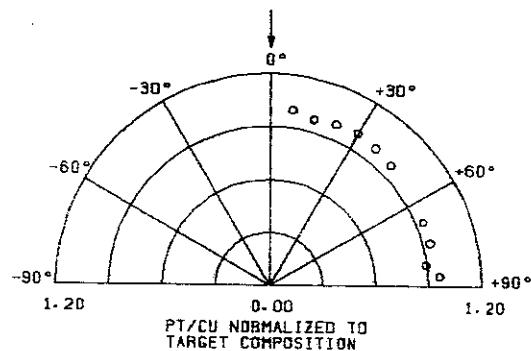
-196C



INFORMATION

84 2 2	AR	\Rightarrow	CU-PT
INCIDENT ANGLE	0 °	ENERGY	3.00×10^3 (EV)
TARGET	POLY		
ENVIRONMENT	UHV		
SPUTTERED ATOM(S)	PT / CU	REFERENCE	84-2
ION	AR 18 39.9		
TARGET	CU 29 63.5		
	PT 78 195		

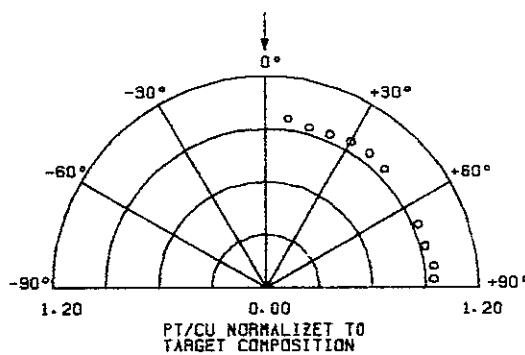
200C



INFORMATION

84 2 9	
AR	\Rightarrow CU-PT
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	PT / CU
<hr/>	
ION	AR 18 39.9
TARGET	CU 29 63.5
	PT 78 195

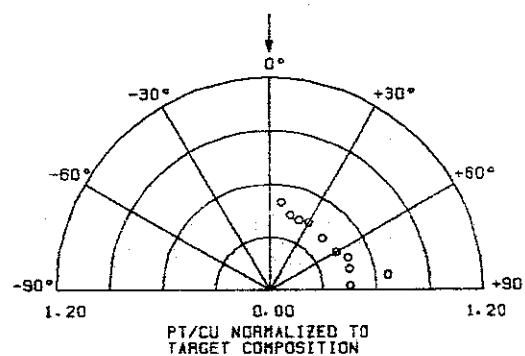
300C



INFORMATION

84 2 4	
AR	\Rightarrow CU-PT
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	PT / CU
<hr/>	
ION	AR 18 39.9
TARGET	CU 29 63.5
	PT 78 195

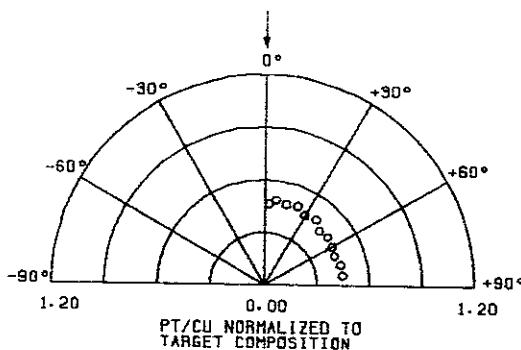
400C



INFORMATION

84 2 5	
AR	\Rightarrow CU-PT
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM (S)	PT / CU
	REFERENCE 84-2
ION	AR 18 39.9
TARGET	CU 29 63.5
	PT 78 195

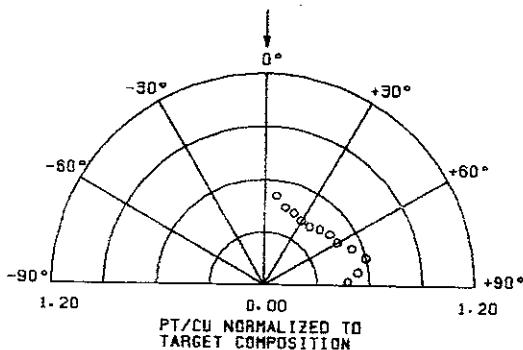
450C

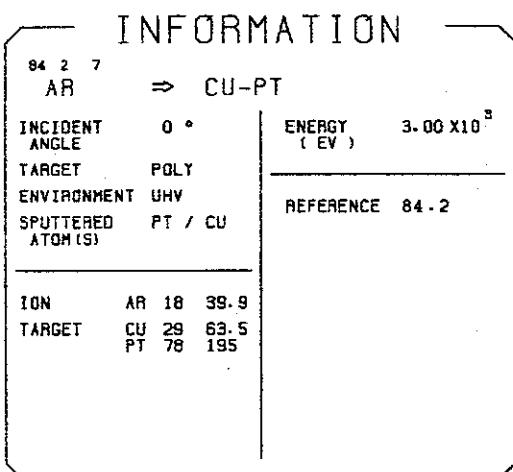


INFORMATION

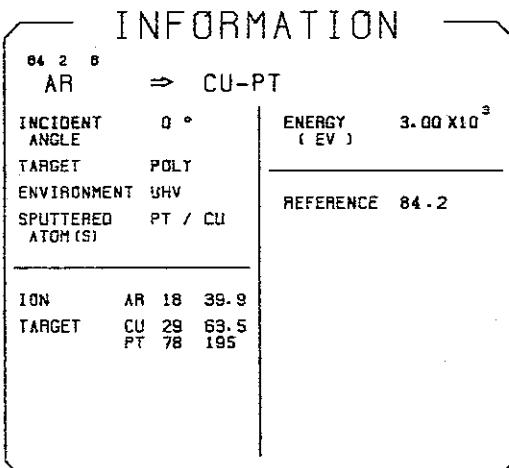
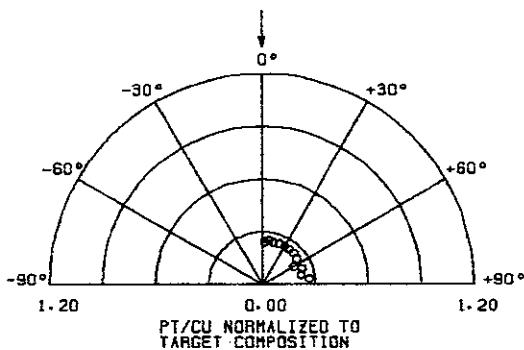
84 2 8	
AR	\Rightarrow CU-PT
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM (S)	PT / CU
	REFERENCE 84-2
ION	AR 18 39.9
TARGET	CU 29 63.5
	PT 78 195

500C

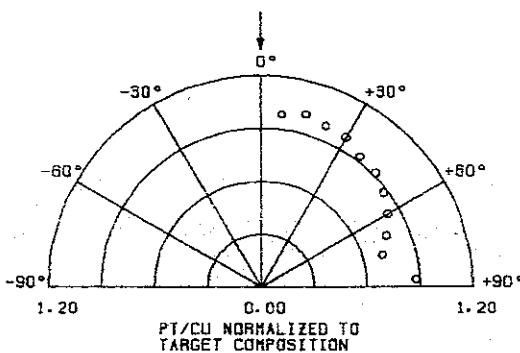




550C



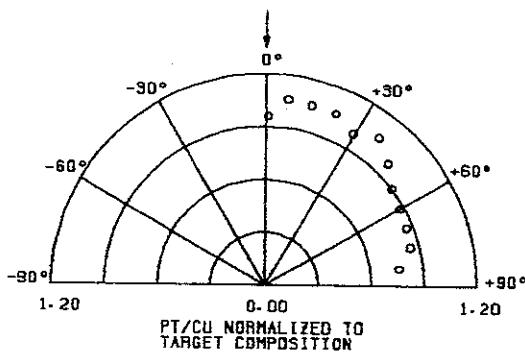
-196C



INFORMATION

84 2 9	
AR	\Rightarrow CU-PT
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	PT / CU
	REFERENCE 84.2
ION	AR 18 39.9
TARGET	CU 29 63.5
	PT 78 195

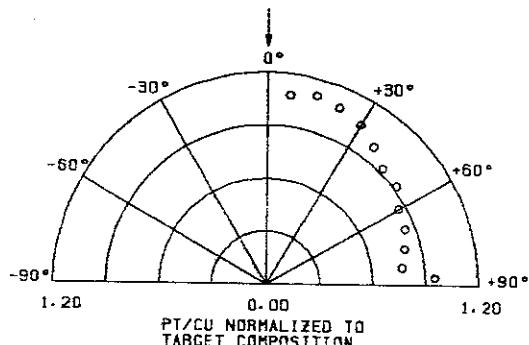
200C

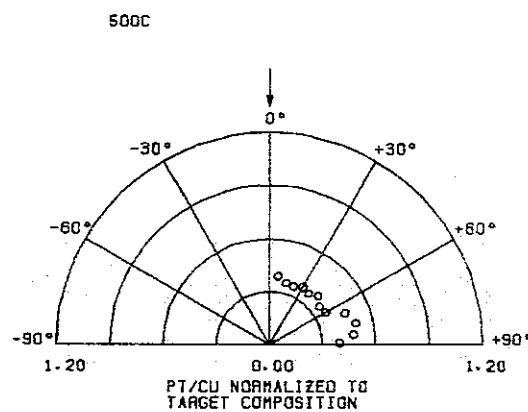
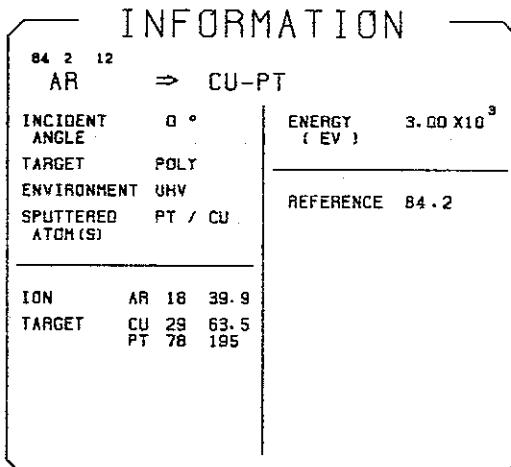
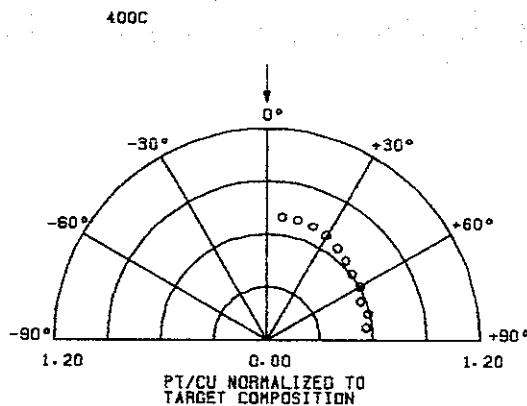
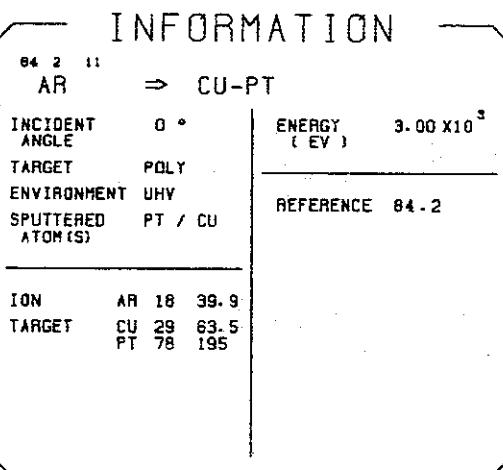


INFORMATION

84 2 10	
AR	\Rightarrow CU-PT
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	PT / CU
	REFERENCE 84.2
ION	AR 18 39.9
TARGET	CU 29 63.5
	PT 78 195

300C

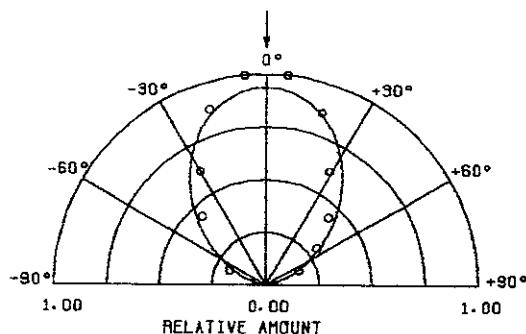




INFORMATION

84 3 1	
AU	\Rightarrow CU
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM (IS)	CU
ION	AU 79 197
TARGET	CU 29 63.5
ENERGY (EV)	1.25×10^5
EPSILON	9.26×10^{-2}
GAMMA	7.38×10^{-1}
O	6.15×10^{-3}
COS " N	1.99
REFERENCE	84 . 3

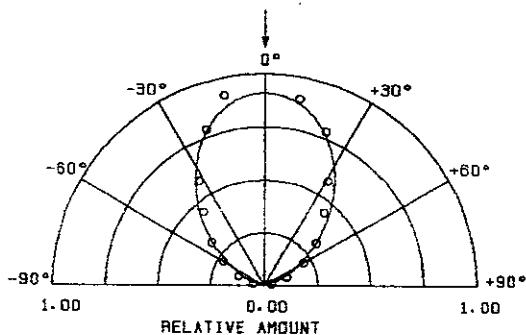
PIXE



INFORMATION

84 3 2	
AU	\Rightarrow CU
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM (IS)	CU
ION	AU 79 197
TARGET	CU 29 63.5
ENERGY (EV)	1.25×10^5
EPSILON	9.26×10^{-2}
GAMMA	7.38×10^{-1}
O	6.15×10^{-3}
COS " N	2.35
REFERENCE	84 . 3

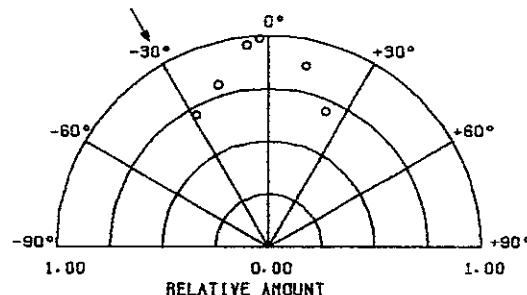
RBS



INFORMATION

84 3 3	AU \Rightarrow CU	
INCIDENT ANGLE	30°	ENERGY (EV) 1.25×10^5
TARGET	POLY	EPSILON 9.26×10^{-2}
ENVIRONMENT	UHV	GAMMA 7.38×10^{-1}
SPUTTERED ATOM(S)	CU	Q 6.15×10^{-3}
ION	AU 79 197	EJECTION ANGLE
TARGET	CU 29 63.5	EXP. 0.00° CAL. 61.1°
		REFERENCE 84 .3

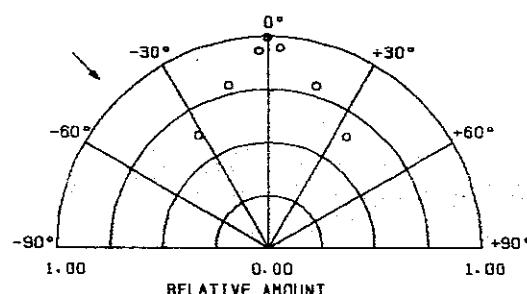
PIXE



INFORMATION

84 3 4	AU \Rightarrow CU	
INCIDENT ANGLE	45°	ENERGY (EV) 1.25×10^5
TARGET	POLY	EPSILON 9.26×10^{-2}
ENVIRONMENT	UHV	GAMMA 7.38×10^{-1}
SPUTTERED ATOM(S)	CU	Q 6.15×10^{-3}
ION	AU 79 197	EJECTION ANGLE
TARGET	CU 29 63.5	EXP. 0.00° CAL. 45.8°
		REFERENCE 84 .3

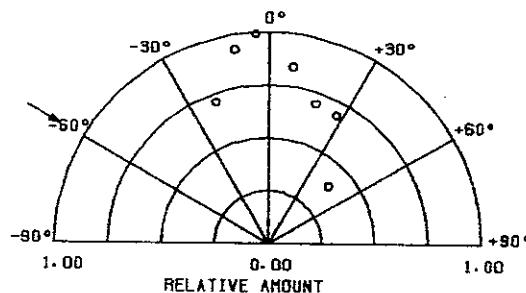
PIXE



INFORMATION

84 3 5	AU	\Rightarrow	CU
INCIDENT ANGLE	60°	ENERGY (EV)	1.25×10^5
TARGET	POLY	EPSILON	9.26×10^{-2}
ENVIRONMENT	UHV	GAMMA	7.38×10^{-1}
SPUTTERED ATOM(S)	CU	Ω	6.15×10^{-3}
ION	AU 79 197	EJECTION ANGLE	
TARGET	CU 29 63.5	EXP.	30.0°
		CAL.	30.6°
		REFERENCE	84 . 3

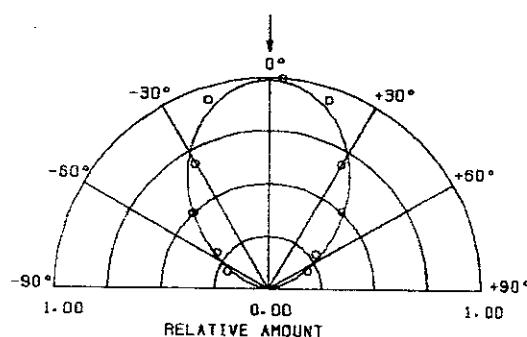
PIXE



INFORMATION

84 3 6	AU	\Rightarrow	CU
INCIDENT ANGLE	0 °	ENERGY (EV)	1.25×10^5
TARGET	POLY	EPSILON	9.26×10^{-2}
ENVIRONMENT	UHV	GAMMA	7.38×10^{-1}
SPUTTERED ATOM(S)	CU	Ω	6.15×10^{-3}
COS N		N	2.01
ION	AU 79 197	REFERENCE	84 . 3
TARGET	CU 29 63.5		

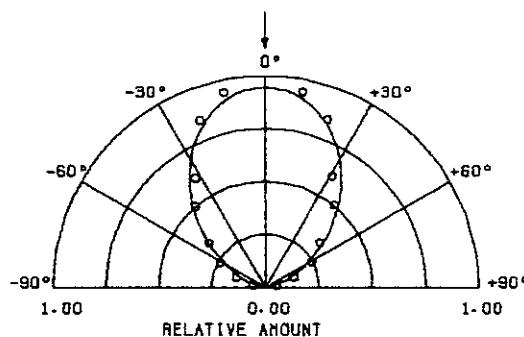
PIXE



INFORMATION

84 9 7	AU	\Rightarrow	CU	
INCIDENT ANGLE	0 °		ENERGY (EV)	1.25×10^5
TARGET	POLY		EPSILON	9.26×10^{-2}
ENVIRONMENT	UHV		GAMMA	7.38×10^{-1}
SPUTTERED ATOM(S)	CU		Q	6.15×10^{-3}
			COS N	2.14
ION	AU 79 197		REFERENCE	84.3
TARGET	CU 29 63.5			

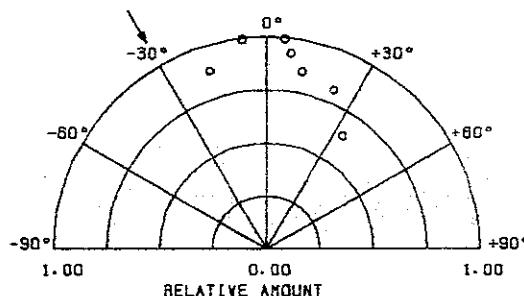
RBS



INFORMATION

84 9 8	AU	\Rightarrow	CU	
INCIDENT ANGLE	30 °		ENERGY (EV)	1.25×10^5
TARGET	POLY		EPSILON	9.26×10^{-2}
ENVIRONMENT	UHV		GAMMA	7.38×10^{-1}
SPUTTERED ATOM(S)	CU		Q	6.15×10^{-3}
			EJECTION ANGLE	
ION	AU 79 197		EXP.	0.00°
TARGET	CU 29 63.5		CAL.	61.1°
			REFERENCE	84.3

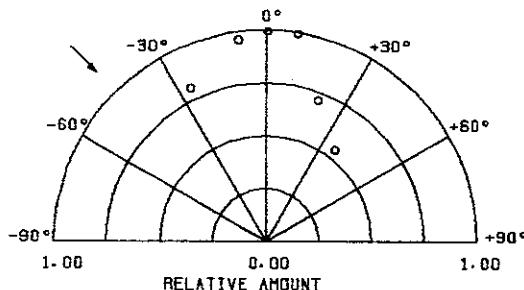
PIXE



INFORMATION

84 3 9	
AU	\Rightarrow CU
INCIDENT ANGLE	45°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	CU
ION	AU 79 197
TARGET	CU 29 63.5
ENERGY (EV)	1.25×10^5
EPSILON	9.26×10^{-2}
GAMMA	7.38×10^{-1}
Q	6.15×10^{-3}
EJECTION ANGLE	
EXP.	0.00°
CAL.	45.8°
REFERENCE	84 . 3

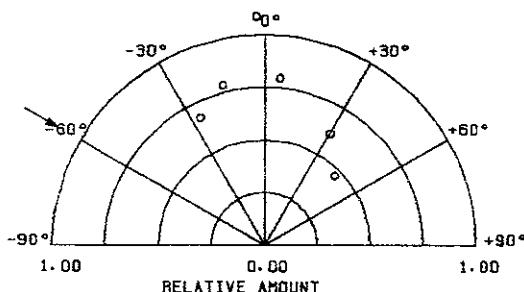
PIXE



INFORMATION

84 3 10	
AU	\Rightarrow CU
INCIDENT ANGLE	60°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	CU
ION	AU 79 197
TARGET	CU 29 63.5
ENERGY (EV)	1.25×10^5
EPSILON	9.26×10^{-2}
GAMMA	7.38×10^{-1}
Q	6.15×10^{-3}
EJECTION ANGLE	
EXP.	0.00°
CAL.	30.6°
REFERENCE	84 . 3

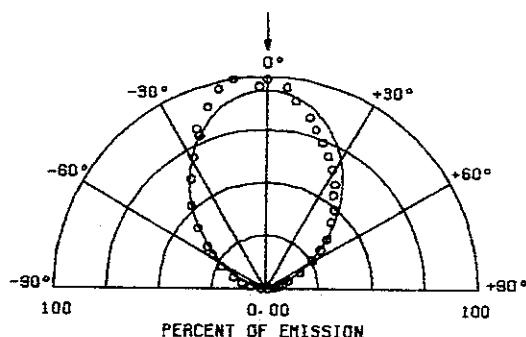
PIXE



INFORMATION

85 2 1	
AR	\Rightarrow AU
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	AU
ENERGY (EV)	5.00×10^5
EPSILON	2.14
GAMMA	5.61×10^{-1}
Ω	3.69×10^{-3}
COS N	2.02
ION	AR 18 39.9
TARGET	AU 79 197
REFERENCE	85-2

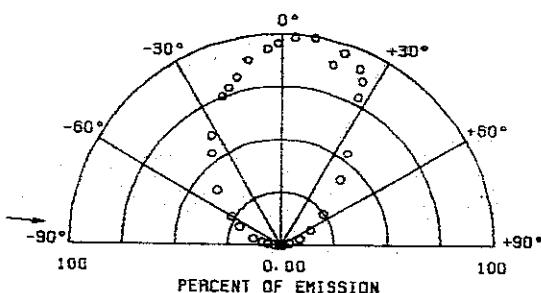
D=1.3 N=3.3 F=1.4E+18 ION/SQ-CM



INFORMATION

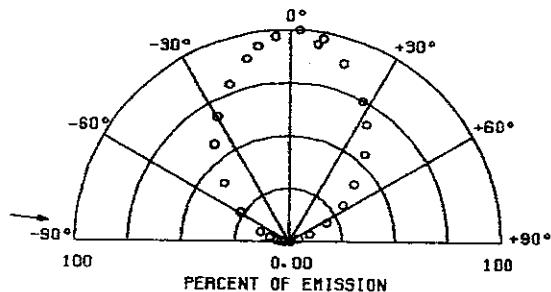
85 2 2	
AR	\Rightarrow AU
INCIDENT ANGLE	85°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	AU
ENERGY (EV)	5.00×10^5
EPSILON	2.14
GAMMA	5.61×10^{-1}
Ω	3.69×10^{-3}
EJECTION ANGLE	
EXP.	10.08
CAL.	5.32°
ION	AR 18 39.9
TARGET	AU 79 197
REFERENCE	85-2

D=0.5 N=1.4 F=5.4E+18 ION/SQ-CM



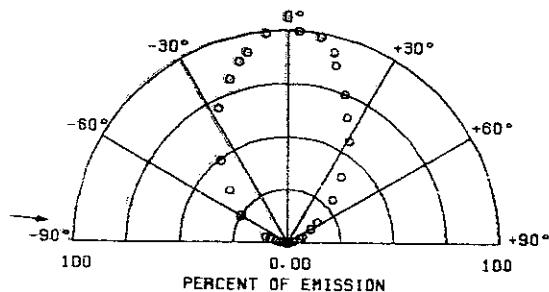
INFORMATION	
65 2 3 AR \Rightarrow AU	
INCIDENT ANGLE	85°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM (S)	AU
ION	AR 18 39.9
TARGET	AU 79 197
ENERGY (EV)	1.50×10^5
EPSILON	6.41×10^{-1}
GAMMA	5.61×10^{-1}
Q	6.73×10^{-3}
EJECTION ANGLE	
EXP.	5.00°
CAL.	5.58°
REFERENCE	85 - 2

D=0.5 F=2.6E+16 ION/SQ.CM



INFORMATION	
65 2 4 AR \Rightarrow AU	
INCIDENT ANGLE	85°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM (S)	AU
ION	AR 18 39.9
TARGET	AU 79 197
ENERGY (EV)	9.00×10^5
EPSILON	3.84
GAMMA	5.61×10^{-1}
Q	2.75×10^{-3}
EJECTION ANGLE	
EXP.	5.00°
CAL.	5.24°
REFERENCE	85 - 2

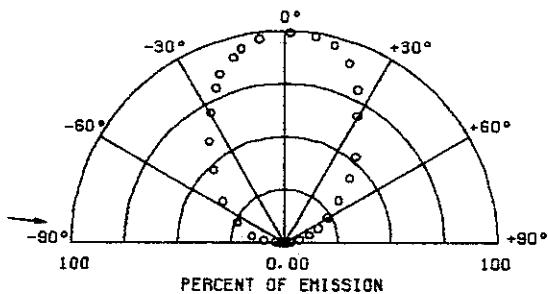
D=0.5 N=1.3 F=5.7E+16 ION/SQ.CM



INFORMATION

85 2 5		XE \Rightarrow AU	
INCIDENT	85°	ENERGY	2.00×10^5
ANGLE		(EV)	
TARGET	POLY	EPSILON	1.81×10^{-1}
ENVIRONMENT	UHV	GAMMA	9.60×10^{-4}
SPUTTERED	AU	Q	4.45×10^{-3}
ATOM(S)		EJECTION	
ION	XE 54 131	ANGLE	
TARGET	AU 79 197	EXP.	5.00°
		CAL.	5.38°
REFERENCE 85.2			

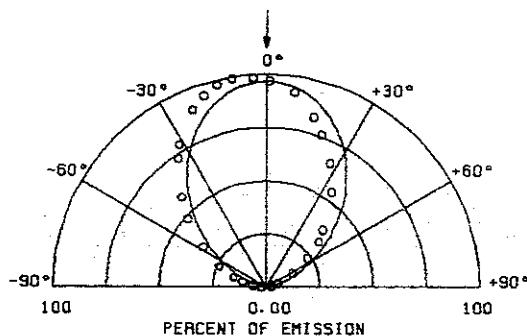
D=0.5 N=1.4 F=1.6E+16 IONS/SQ.CM



INFORMATION

85 2 6		AR \Rightarrow CU	
INCIDENT	0°	ENERGY	5.00×10^5
ANGLE		(EV)	
TARGET	POLY	EPSILON	5.35
ENVIRONMENT	UHV	GAMMA	9.48×10^{-4}
SPUTTERED	CU	Q	2.71×10^{-3}
ATOM(S)		COS	
ION	AR 18 39.9	N	1.89
TARGET	CU 29 63.5	REFERENCE	85.2

D=4.4 N=1.6 F=7.4E+16 IONS/SQ.CM



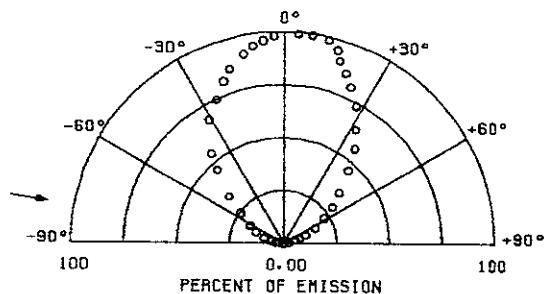
INFORMATION

85 2 7
AR \Rightarrow CU

INCIDENT ANGLE	80°	ENERGY (EV)	5.00×10^5
TARGET	POLY	EPSILON	5.35
ENVIRONMENT	UHV	GAMMA	9.48×10^{-1}
SPUTTERED ATOM(S)	CU	Q	2.71×10^{-9}
ION	AR 18 39.9	EJECTION ANGLE	
TARGET	CU 29 63.5	EXP.	10.08
		CAL.	10.2°

REFERENCE 85 - 2

D=3.2 N=1.7 F=1.0E+18 IONS/SQ.CM



INFORMATION

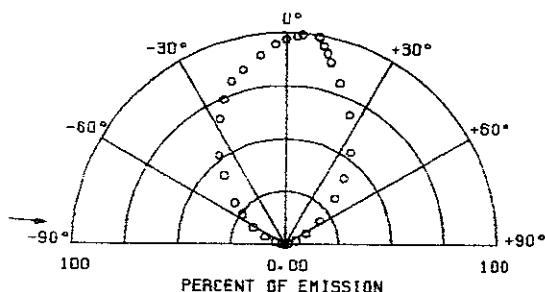
85 2 6

AR \Rightarrow CU

INCIDENT ANGLE	85°	ENERGY (EV)	5.00×10^5
TARGET	POLY	EPSILON	5.35
ENVIRONMENT	UHV	GAMMA	9.48×10^{-1}
SPUTTERED ATOM(S)	CU	Q	2.71×10^{-9}
ION	AR 18 39.9	EJECTION ANGLE	
TARGET	CU 29 63.5	EXP.	5.00°
		CAL.	5.23°

REFERENCE 85 - 2

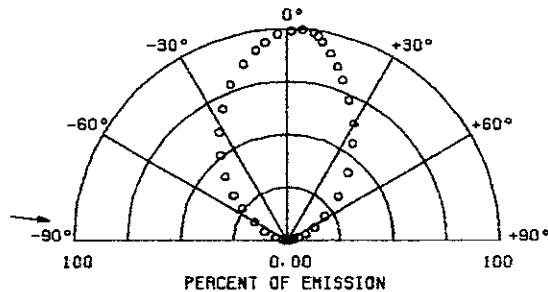
D=0.2 N=0.6 F=5.8E+16 IONS/SQ.CM



INFORMATION

85 2 9		AR \Rightarrow CU
INCIDENT ANGLE	85°	ENERGY (EV) 1.50×10^5
TARGET	POLY	EPSILON 1.61
ENVIRONMENT	UHV	GAMMA 9.48×10^{-1}
SPUTTERED ATOM(S)	CU	Q 4.95×10^{-3}
ION	AR 18 39.9	EJECTION ANGLE
TARGET	CU 29 63.5	EXP. 5.00° CAL. 5.49°
		REFERENCE 85.2

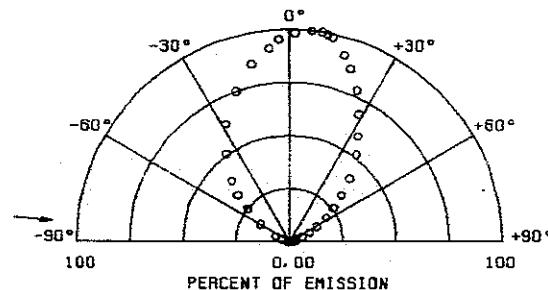
D=0.1 N=1.3 F=2.3E+16 IONS/SQ-CM



INFORMATION

85 2 10		AR \Rightarrow CU
INCIDENT ANGLE	85°	ENERGY (EV) 9.00×10^5
TARGET	POLY	EPSILON 9.63
ENVIRONMENT	UHV	GAMMA 9.48×10^{-1}
SPUTTERED ATOM(S)	CU	Q 2.02×10^{-3}
ION	AR 18 39.9	EJECTION ANGLE
TARGET	CU 29 63.5	EXP. 5.00° CAL. 5.17°
		REFERENCE 85.2

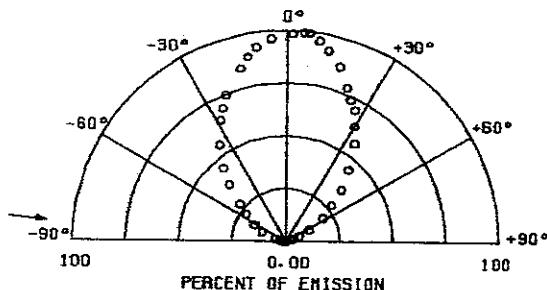
D=0.3 N=0.8 F=9.3E+16 IONS/SQ-CM



INFORMATION

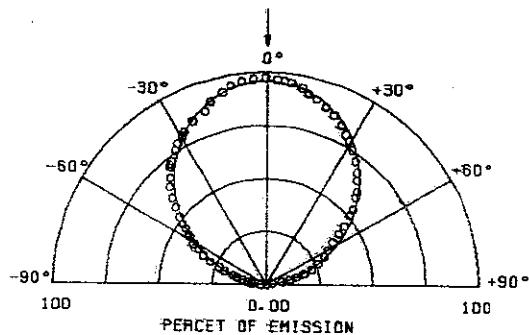
85 2 11	
XE	\Rightarrow CU
INCIDENT ANGLE	85°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM (S)	CU
ION	XE 54 131
TARGET	CU 29 63.5
ENERGY (EV)	2.00×10^5
EPSILON	3.14×10^{-1}
GAMMA	8.79×10^{-1}
0	4.46×10^{-3}
EJECTION ANGLE	
EXP.	5.00°
CAL.	5.38°
REFERENCE	85.2

D=0.5 N=1.4 F=4.4E+16 IONS/SQ.CM



INFORMATION

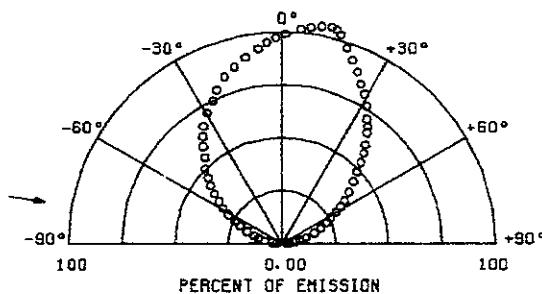
85 2 12	
AR	\Rightarrow ZR
INCIDENT ANGLE	0°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM (S)	ZR
ATOM (S)	
ION	AR 18 39.9
TARGET	ZR 40 91.2
ENERGY (EV)	5.00×10^5
EPSILON	4.12
GAMMA	8.47×10^{-1}
0	3.84×10^{-3}
COS N	
N	1.33
REFERENCE	85.2

D=0.3 MICRO-METER N=3.5
F=6.0E+16 IONS/SQ.CM

INFORMATION

85 2 13	AR \Rightarrow ZR
INCIDENT ANGLE	80°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	ZR
ION	AR 18 39.9
TARGET	ZR 40 91.2
ENERGY (EV)	5.00×10^5
EPSILON	4.12
GAMMA	8.47×10^{-1}
Q	3.84×10^{-3}
EJECTION ANGLE	
EXP.	11.0°
CAL.	10.3°
REFERENCE	85.2

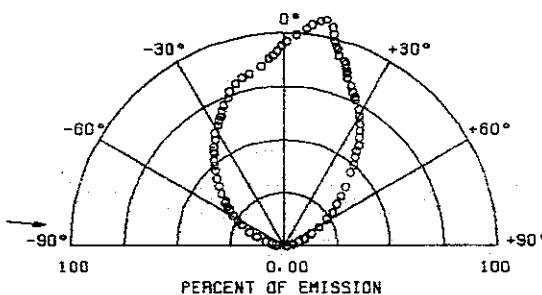
D=4.2 MICRO-METER N=1.7
F=2.8E+18 IONS/SQ.CM



INFORMATION

85 2 14	AR \Rightarrow ZR
INCIDENT ANGLE	85°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	ZR
ION	AR 18 39.9
TARGET	ZR 40 91.2
ENERGY (EV)	5.00×10^5
EPSILON	4.12
GAMMA	8.47×10^{-1}
Q	3.84×10^{-3}
EJECTION ANGLE	
EXP.	9.00°
CAL.	5.33°
REFERENCE	85.2

D=0.1 MICRO-METER N=3.5
F=6.0E+18 IONS/SQ.CM

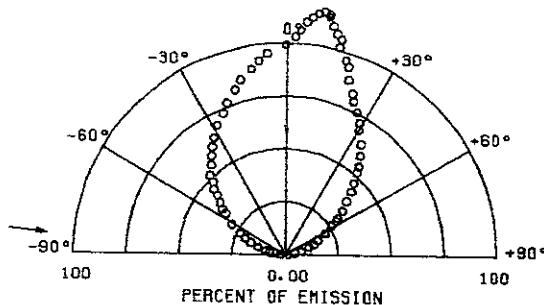


INFORMATION

85 2 15	
AR	\Rightarrow ZR
INCIDENT ANGLE	85°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	ZR
ION	AR 18 39.9
TARGET	ZR 40 91.2

ENERGY (EV)	1.50×10^5
EPSILON	1.24
GAMMA	8.47×10^{-1}
Ω	7.01×10^{-3}
EJECTION ANGLE	
EXP.	9.00°
CAL.	5.60°

REFERENCE 85-2

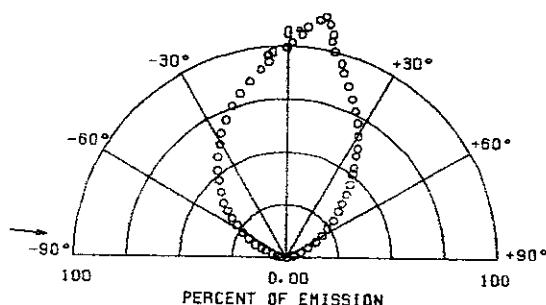
D=0.08 MICRO-METER N=2.2
F=4.1E+16 IONS/SQ.CM

INFORMATION

85 2 16	
AR	\Rightarrow ZR
INCIDENT ANGLE	85°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	ZR
ION	AR 18 39.9
TARGET	ZR 40 91.2

ENERGY (EV)	9.00×10^5
EPSILON	7.41
GAMMA	8.47×10^{-1}
Ω	2.86×10^{-3}
EJECTION ANGLE	
EXP.	8.00°
CAL.	5.25°

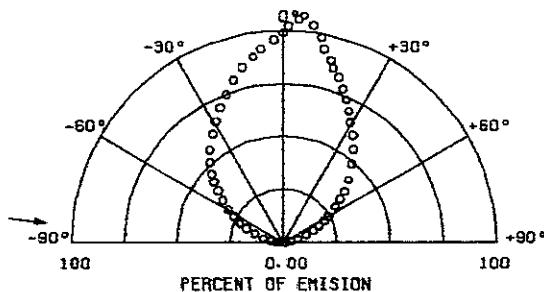
REFERENCE 85-2

D=0.1 MICRO-METER N=3.3
F=7.0E+16 IONS/SQ.CM

INFORMATION

85 2 17	
XE	\Rightarrow ZR
INCIDENT ANGLE	85°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	ZR
ION	XE 54 131
TARGET	ZR 40 91.2
ENERGY (EV)	2.00×10^5
EPSILON	2.74×10^{-1}
GAMMA	9.68×10^{-1}
Ω	5.68×10^{-9}
EJECTION ANGLE	
EXP.	5.00°
CAL.	5.49°
REFERENCE	85.2

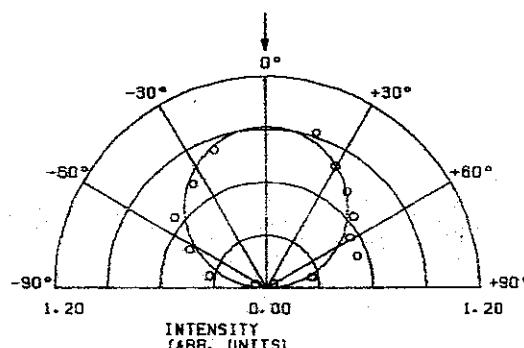
D=0.05 MICRO-METER N=1.1
 F=6.6E+15 IONS/SQ-CM



INFORMATION

85 3 1	
NE	\Rightarrow AG
INCIDENT ANGLE	0°
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	AG
ION	NE 10 20.2
TARGET	AG 47 108
ENERGY (EV)	3.00×10^4
EPSILON	4.70×10^{-1}
GAMMA	5.31×10^{-2}
Ω	1.36×10^{-2}
COS ⁻¹ N	8.80×10^{-1}
REFERENCE	85.3

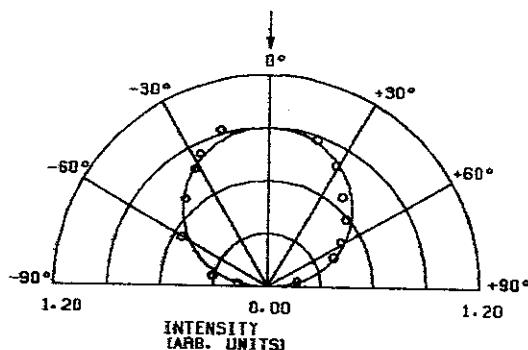
10E-5 TORR 1.0E+19 IONS/SQ-CM



INFORMATION

85 3 2	AR	\Rightarrow	AG
INCIDENT ANGLE	0 °	ENERGY (EV)	2.00×10^4
TARGET	POLY	EPSILON	1.42×10^{-1}
ENVIRONMENT	HV	GAMMA	7.89×10^{-1}
SPUTTERED ATOM ISI	AG	θ	1.37×10^{-2}
		COS [*] N	8.40×10^{-1}
ION	AR 18 89.9		
TARGET	AG 47 108	REFERENCE	85 . 3

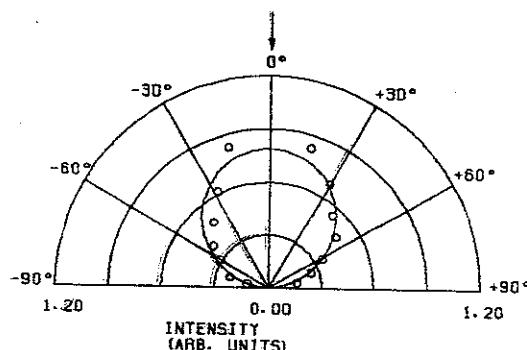
2.0E+19 IONS/SQ-CM



INFORMATION

85 3 3	KR	\Rightarrow	AG
INCIDENT ANGLE	0 °	ENERGY (EV)	2.00×10^4
TARGET	POLY	EPSILON	5.00×10^{-2}
ENVIRONMENT	HV	GAMMA	9.84×10^{-1}
SPUTTERED ATOM ISI	AG	θ	1.22×10^{-2}
		COS [*] N	1.15
ION	KR 36 83.8		
TARGET	AG 47 108	REFERENCE	85 . 3

1.0E+19 IONS/SQ-CM

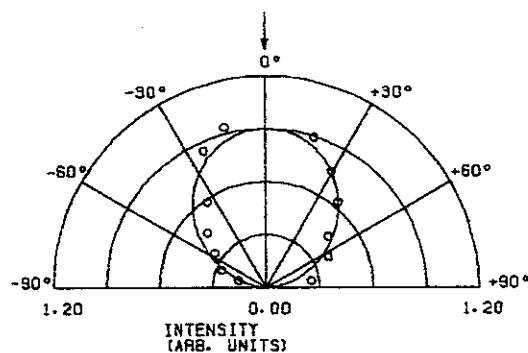


INFORMATION

65 9 4 XE \Rightarrow AG	
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	AG
ENERGY (EV)	3.00×10^4
EPSILON	3.75×10^{-2}
GAMMA	9.90×10^{-1}
Q	9.96×10^{-3}
COS N	
N	1.31

ION	XE	54	131	REFERENCE	85.3
TARGET	AG	47	108		

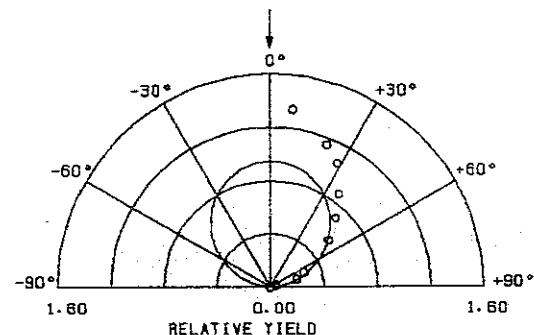
7.8E+18 IONS/SQ-CM



INFORMATION

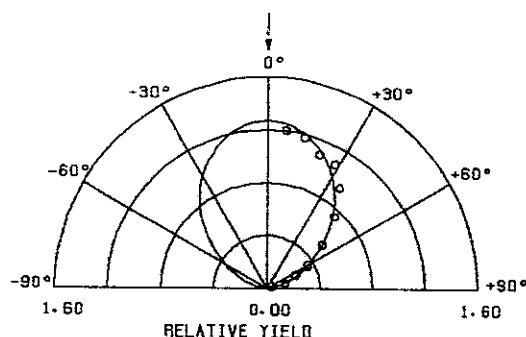
65 4 1 AR \Rightarrow GE	
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	GE
ENERGY (EV)	8.00×10^4
EPSILON	7.99×10^{-1}
GAMMA	9.16×10^{-1}
Q	7.25×10^{-3}
COS N	
N	1.17

ION	AR	18	39.9	REFERENCE	85.4
TARGET	GE	32	72.5		



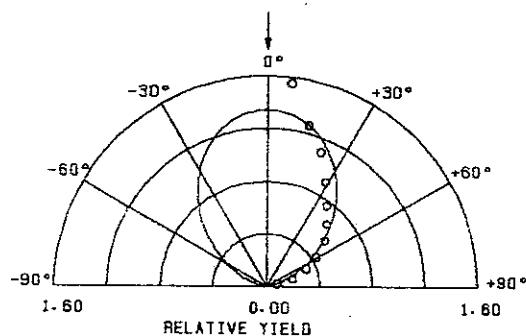
INFORMATION

65 4 2	
AR	\Rightarrow CU
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	CU
ION	AR 18 39.9
TARGET	CU 29 63.5
ENERGY (EV)	8.00×10^4
EPSILON	8.56×10^{-1}
GAMMA	9.48×10^{-3}
Ω	6.78×10^{-3}
COS [*] N	1.82
REFERENCE	85.4



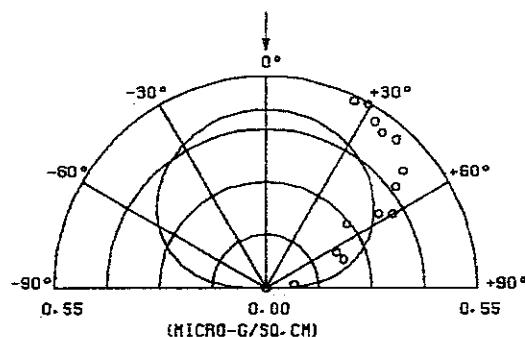
INFORMATION

65 4 3	
AR	\Rightarrow PT
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	PT
ION	AR 18 39.9
TARGET	PT 78 195
ENERGY (EV)	8.00×10^4
EPSILON	3.47×10^{-1}
GAMMA	5.64×10^{-1}
Ω	1.14×10^{-2}
COS [*] N	1.96
REFERENCE	85.4



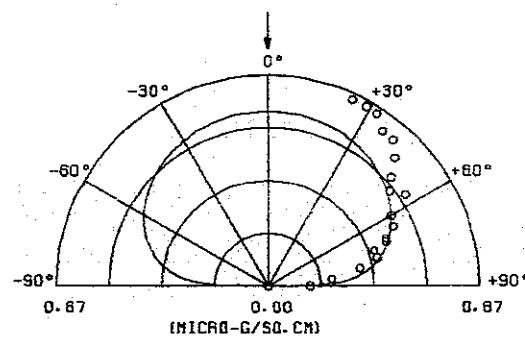
INFORMATION

85 5 1	
AR	\Rightarrow AU
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	AU
ION	AR 18 39.9
TARGET	AU 79 197
ENERGY (EV)	2.30×10^3
EPSILON	9.83×10^{-3}
GAMMA	5.61×10^{-1}
Q	5.44×10^{-2}
COS N	5.40×10^{-1}
REFERENCE	85.5



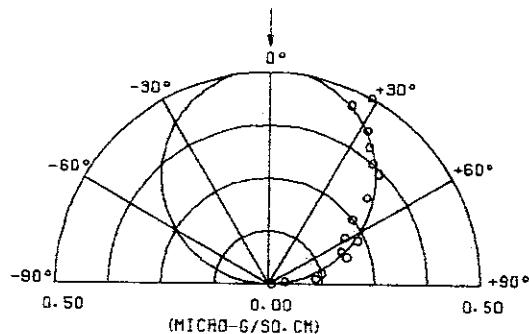
INFORMATION

85 5 2	
AR	\Rightarrow AU
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	AU
ION	AR 18 39.9
TARGET	AU 79 197
ENERGY (EV)	5.00×10^3
EPSILON	2.14×10^{-2}
GAMMA	5.61×10^{-1}
Q	3.69×10^{-2}
COS N	3.00×10^{-1}
REFERENCE	85.5



INFORMATION

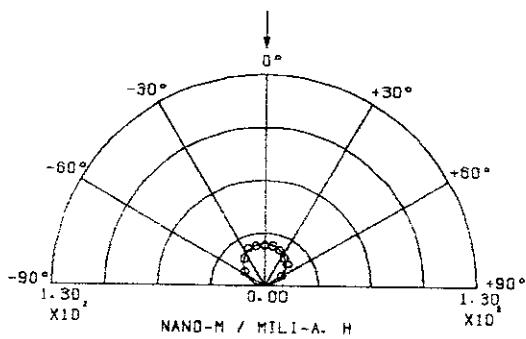
85 5 3	
AR	⇒ AU
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	AU
ION	AR 18 39.9
TARGET	AU 79 197
ENERGY (EV)	7.80 X10 ³
EPSILON	3.33 X10 ⁻²
GAMMA	5.61 X10 ⁻¹
Q	2.95 X10 ⁻²
COS N	1.04
REFERENCE	85.5



INFORMATION

85 11 1	
N	⇒ SI-N
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	SI
ION	N 7 14.0
TARGET	SI 14 28.1
ENERGY (EV)	1.00 X10 ⁴
EPSILON	8.13 X10 ⁻¹
GAMMA	8.88 X10 ⁻¹
Q	2.29 X10 ⁻²
COS N	1.03
REFERENCE	85.11

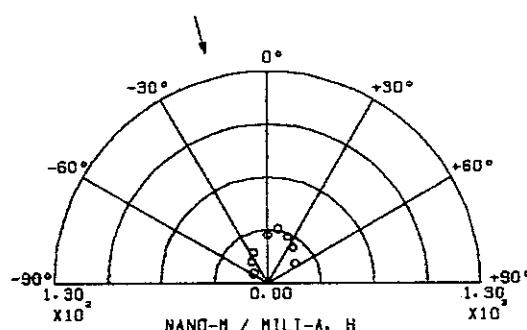
SI



INFORMATION

65 11 2	
N	\Rightarrow SI-N
INCIDENT ANGLE	15°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	SI
ION	N 7 14.0
TARGET	SI 14 28.1
	N 7 14.0
ENERGY (EV)	1.00×10^4
EPSILON	8.13×10^{-1}
GAMMA	8.88×10^{-2}
Q	2.29×10^{-2}
EJECTION ANGLE	
EXP.	83.7°
CAL.	90.0°
REFERENCE	85.11

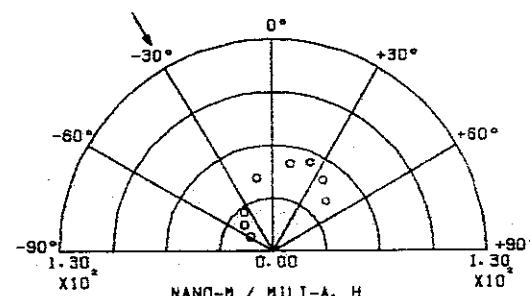
SI



INFORMATION

65 11 3	
N	\Rightarrow SI-N
INCIDENT ANGLE	90°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	SI
ION	N 7 14.0
TARGET	SI 14 28.1
	N 7 14.0
ENERGY (EV)	1.00×10^4
EPSILON	8.13×10^{-1}
GAMMA	8.88×10^{-2}
Q	2.29×10^{-2}
EJECTION ANGLE	
EXP.	83.7°
CAL.	64.2°
REFERENCE	85.11

SI

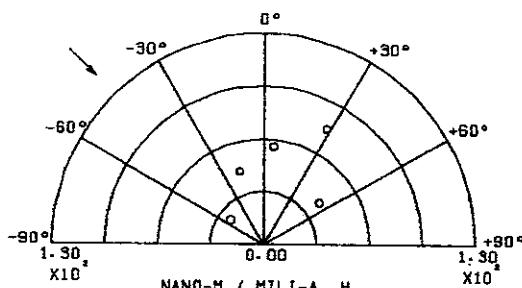


INFORMATION

85 11 4	N	\Rightarrow	SI-N
INCIDENT ANGLE	45°	ENERGY (EV)	1.00×10^4
TARGET	POLY	EPSILON	8.13×10^{-1}
ENVIRONMENT	UHV	GAMMA	8.88×10^{-1}
SPUTTERED ATOM(S)	SI	0	2.29×10^{-2}
ION	N 7 14.0	EJECTION ANGLE	
TARGET	SI 14 28.1	EXP.	53.3°
	N 7 14.0	CAL.	47.8°

REFERENCE 85-11

SI

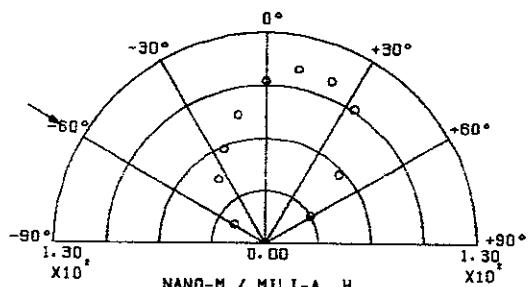


INFORMATION

85 11 5	N	\Rightarrow	SI-N
INCIDENT ANGLE	60°	ENERGY (EV)	1.00×10^4
TARGET	POLY	EPSILON	8.13×10^{-1}
ENVIRONMENT	UHV	GAMMA	8.88×10^{-1}
SPUTTERED ATOM(S)	SI	0	2.29×10^{-2}
ION	N 7 14.0	EJECTION ANGLE	
TARGET	SI 14 28.1	EXP.	33.9°
N 7 14.0		CAL.	32.3°

REFERENCE 85-11

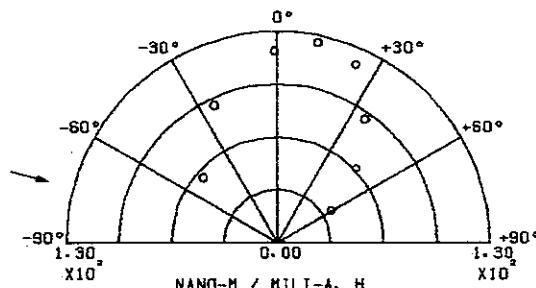
SI



INFORMATION

65 11 6	
N	\Rightarrow SI-N
INCIDENT ANGLE	75°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	SI
ION	N 7 14.0
TARGET	SI 14 28.1
	N 7 14.0
ENERGY (EV)	1.00 X10 ⁴
EPSILON	8.13 X10 ⁻¹
GAMMA	8.88 X10 ⁻²
O	2.29 X10 ⁻²
EJECTION ANGLE	
EXP.	23.8°
CAL.	17.0°
REFERENCE	85.11

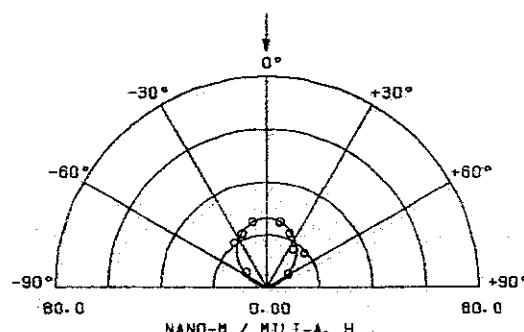
SI



INFORMATION

65 11 7	
N	\Rightarrow SI-N
INCIDENT ANGLE	0°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	N
ION	N 7 14.0
TARGET	SI 14 28.1
	N 7 14.0
ENERGY (EV)	1.00 X10 ⁴
EPSILON	1.39
GAMMA	8.88 X10 ⁻²
O	2.22 X10 ⁻²
COS [*]	N 1.57
REFERENCE	85.11

N

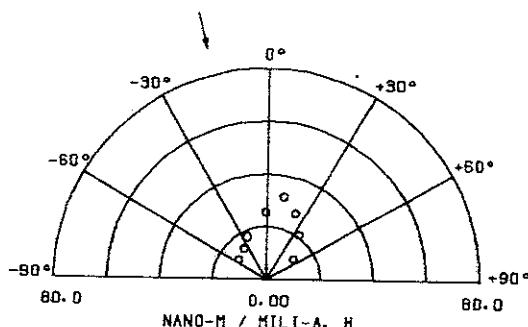


INFORMATION

85 11 8	
N	\Rightarrow SI-N
INCIDENT ANGLE	15°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM (SI)	N
ION	N 7 14.0
TARGET	SI 14 28.1
	N 7 14.0

REFERENCE 85.11

N

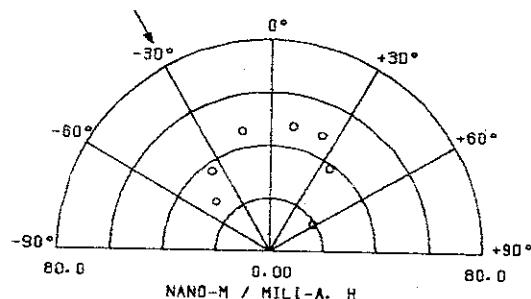


INFORMATION

85 11 9	
N	\Rightarrow SI-N
INCIDENT ANGLE	30°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM (SI)	N
ION	N 7 14.0
TARGET	SI 14 28.1
	N 7 14.0

REFERENCE 85.11

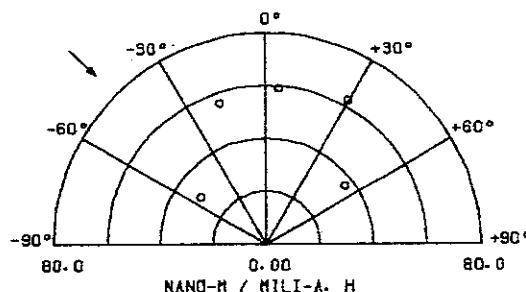
N



INFORMATION

85 11 10		N \Rightarrow SI-N
INCIDENT ANGLE	45°	ENERGY (EV) 1.00×10^4
TARGET	POLY	EPSILON 1.39
ENVIRONMENT	UHV	GAMMA 8.88×10^{-1}
SPUTTERED ATOM(S)	N	G 2.22×10^{-2}
ION	N 7 14.0	EJECTION ANGLE
TARGET	SI 14 28.1	EXP. 53.3°
	N 7 14.0	CAL. 47.6°
REFERENCE 85.11		

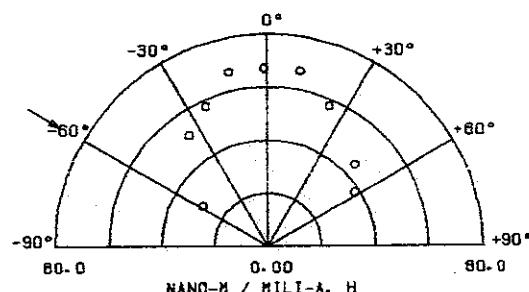
N



INFORMATION

85 11 11		N \Rightarrow SI-N
INCIDENT ANGLE	60°	ENERGY (EV) 1.00×10^4
TARGET	POLY	EPSILON 1.39
ENVIRONMENT	UHV	GAMMA 8.88×10^{-1}
SPUTTERED ATOM(S)	N	G 2.22×10^{-2}
ION	N 7 14.0	EJECTION ANGLE
TARGET	SI 14 28.1	EXP. 46.7°
	N 7 14.0	CAL. 32.2°
REFERENCE 85.11		

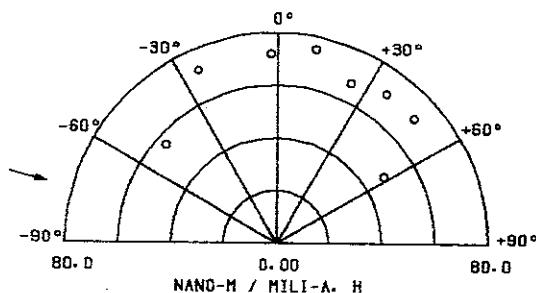
N



INFORMATION

85 11 12	N	\Rightarrow	SI-N
INCIDENT ANGLE	75°	ENERGY (EV)	1.00×10^4
TARGET	POLY	EPSILON	1.39
ENVIRONMENT	UHV	GAMMA	8.88×10^{-1}
SPUTTERED ATOM(SI)	N	Ω	2.22×10^{-2}
ION	N 7 14.0	EJECTION ANGLE	
TARGET	SI 14 28.1	EXP.	36.2°
	N 7 14.0	CAL.	17.0°
		REFERENCE	85-11

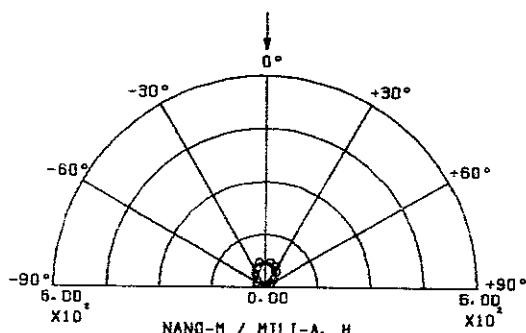
N



INFORMATION

85 11 19	AR	\Rightarrow	SI-N
INCIDENT ANGLE	0°	ENERGY (EV)	1.00×10^4
TARGET	POLY	EPSILON	1.68×10^{-1}
ENVIRONMENT	UHV	GAMMA	9.70×10^{-1}
SPUTTERED ATOM(SI)	SI	Ω	2.19×10^{-2}
	COS ⁿ	N	5.18×10^{-1}
ION	AR 18 39.9	REFERENCE	85-11
TARGET	SI 14 28.1		
N 7 14.0			

SI

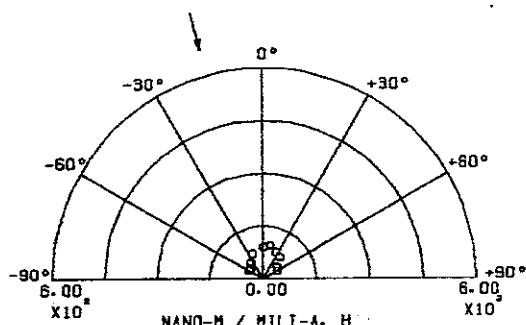


INFORMATION

05 11 14	AR	\Rightarrow	SI-N
INCIDENT ANGLE	15°	ENERGY (EV)	1.00×10^4
TARGET	POLY	EPSILON	1.69×10^{-1}
ENVIRONMENT	UHV	GAMMA	9.70×10^{-2}
SPUTTERED ATOM(S)	SI	Q	2.19×10^{-2}
ION	AR 18	39.9	EJECTION ANGLE
TARGET	SI 14	28.1	EXP. 12.6°
	N 7	14.0	CAL. 67.1°

REFERENCE 85-11

SI

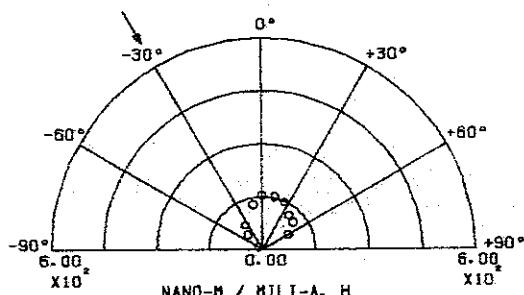


INFORMATION

05 11 15	AR	\Rightarrow	SI-N
INCIDENT ANGLE	30°	ENERGY (EV)	1.00×10^4
TARGET	POLY	EPSILON	1.69×10^{-1}
ENVIRONMENT	UHV	GAMMA	9.70×10^{-2}
SPUTTERED ATOM(S)	SI	Q	2.19×10^{-2}
ION	AR 18	39.9	EJECTION ANGLE
TARGET	SI 14	28.1	EXP. 60.0°
	N 7	14.0	CAL. 64.0°

REFERENCE 85-11

SI



INFORMATION

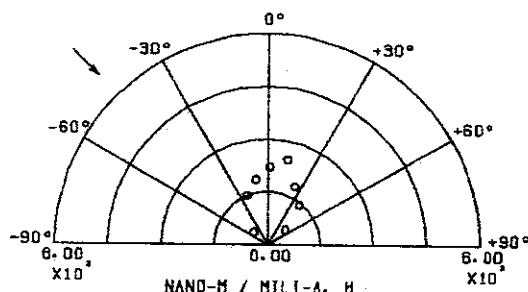
85 11 16

AR \Rightarrow SI-N

INCIDENT ANGLE	45°	ENERGY (EV)	1.00×10^4
TARGET	POLY	EPSILON	1.69×10^{-1}
ENVIRONMENT	UHV	GAMMA	9.70×10^{-1}
SPUTTERED ATOM(S)	SI	O	2.19×10^{-2}
ION	AR 18 39.9	EJECTION ANGLE	
TARGET	SI 14 28.1	EXP.	50.2°
	N 7 14.0	CAL.	47.7°

REFERENCE 85.11

SI



INFORMATION

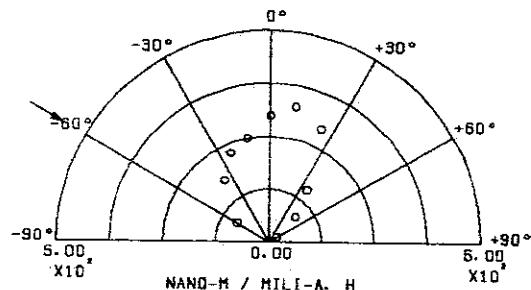
85 11 17

AR \Rightarrow SI-N

INCIDENT ANGLE	60°	ENERGY (EV)	1.00×10^4
TARGET	POLY	EPSILON	1.69×10^{-1}
ENVIRONMENT	UHV	GAMMA	9.70×10^{-1}
SPUTTERED ATOM(S)	SI	O	2.19×10^{-2}
ION	AR 18 39.9	EJECTION ANGLE	
TARGET	SI 14 28.1	EXP.	36.0°
	N 7 14.0	CAL.	32.2°

REFERENCE 85.11

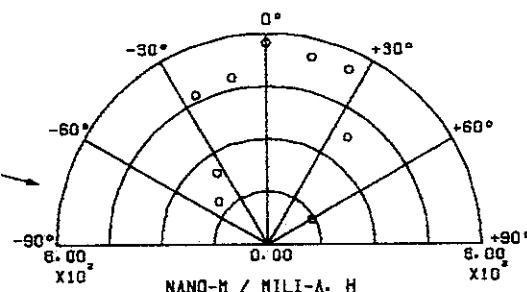
SI



INFORMATION

85 11 16	
AR	\Rightarrow SI-N
INCIDENT ANGLE	75°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	SI
ION	AR 18 39.9
TARGET	SI 14 28.1
	N 7 14.0
ENERGY (EV)	1.00 $\times 10^4$
EPSILON	1.69 $\times 10^{-1}$
GAMMA	9.70 $\times 10^{-1}$
O	2.19 $\times 10^{-2}$
EJECTION ANGLE	
EXP.	25.2°
CAL.	16.9°
REFERENCE	85.11

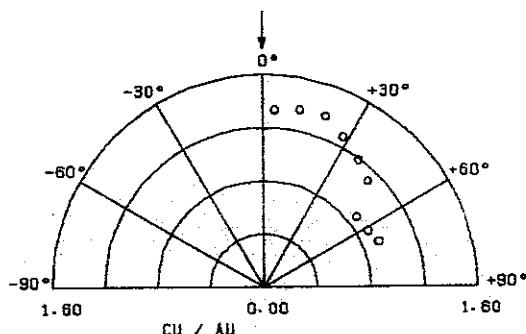
SI



INFORMATION

86 1 1	
AR	\Rightarrow AU-CU
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	CU / AU
ENERGY (EV)	1.00 $\times 10^4$
REFERENCE	86.1
ION	AR 18 39.9
TARGET	AU 79 197
	CU 29 63.5

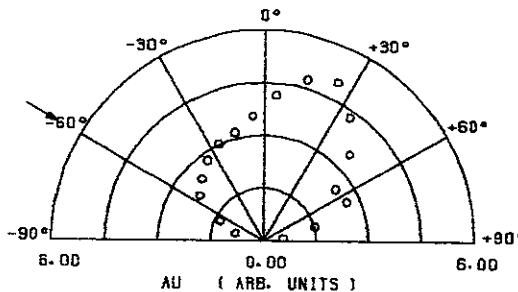
AU-CU (49 AT %)



INFORMATION

86 1 2	
AR	\Rightarrow AU-CU
INCIDENT ANGLE	60°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM (S)	AU
ION	AR 18 39.9
TARGET	AU 79 197 CU 29 63.5
ENERGY (EV)	8.00×10^2
EPSILON	3.42×10^{-3}
GAMMA	5.61×10^{-1}
Q	9.22×10^{-2}
EJECTION ANGLE	
EXP.	34.8°
CAL.	39.5°
REFERENCE	86.1

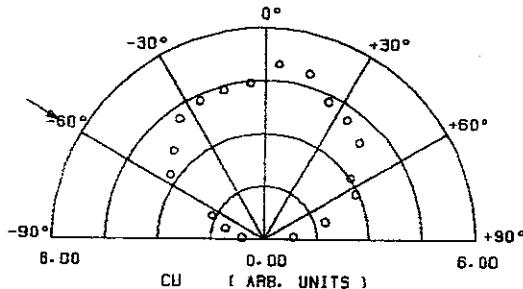
OBLIQUE INCIDENCE



INFORMATION

86 1 3	
AR	\Rightarrow AU-CU
INCIDENT ANGLE	60°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM (S)	CU
ION	AR 18 39.9
TARGET	AU 79 197 CU 29 63.5
ENERGY (EV)	8.00×10^2
EPSILON	8.56×10^{-3}
GAMMA	5.61×10^{-1}
Q	6.78×10^{-2}
EJECTION ANGLE	
EXP.	34.8°
CAL.	36.9°
REFERENCE	86.1

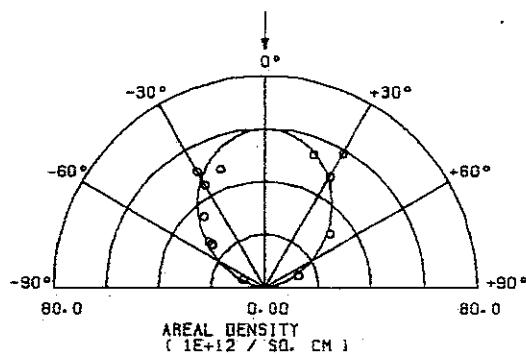
OBLIQUE INCIDENCE



INFORMATION

66 2 1	BR	\Rightarrow	NB
INCIDENT ANGLE	0 °	ENERGY (EV)	0.00
TARGET	POLY	EPSILON	0.00
ENVIRONMENT	UHV	GAMMA	9.94×10^{-1}
SPUTTERED ATOM(S)	NB	Q	0.00
		COS *	
		N	1.61

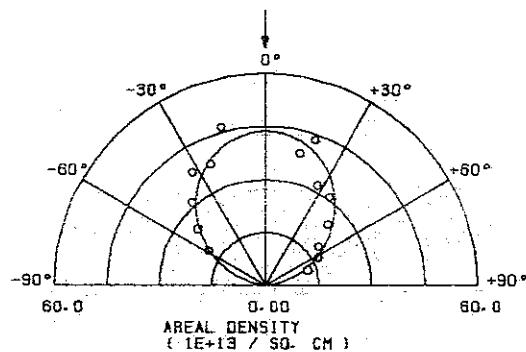
ION	BR 35 79.9	REFERENCE	86.2
TARGET	NB 41 92.9		



INFORMATION

66 2 2	BR	\Rightarrow	NB
INCIDENT ANGLE	0 °	ENERGY (EV)	1.00×10^5
TARGET	POLY	EPSILON	2.90×10^{-1}
ENVIRONMENT	UHV	GAMMA	9.94×10^{-3}
SPUTTERED ATOM(S)	NB	Q	8.73×10^{-3}
		COS *	
		N	1.36

ION	BR 35 79.9	REFERENCE	86.2
TARGET	NB 41 92.9		

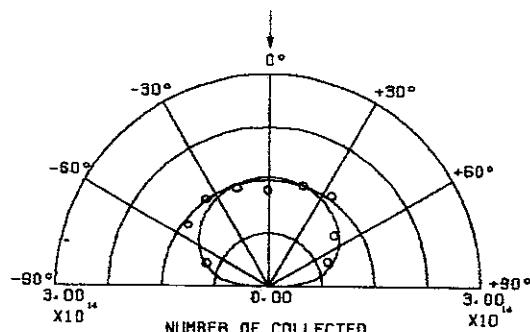


INFORMATION

66 9 1	
AR	\Rightarrow NI-FE
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	NI
ION	AR 18 39.9
TARGET	NI 28 58.7
	FE 26 55.8

ENERGY (EV)	1.00×10^3
EPSILON	1.08×10^{-2}
GAMMA	9.64×10^{-1}
O	6.79×10^{-2}
COS N	4.50×10^{-1}

REFERENCE	66.9
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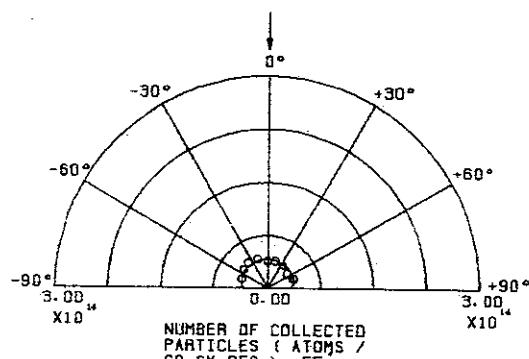


INFORMATION

66 9 2	
AR	\Rightarrow NI-FE
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	FE
ION	AR 18 39.9
TARGET	NI 28 58.7
	FE 26 55.8

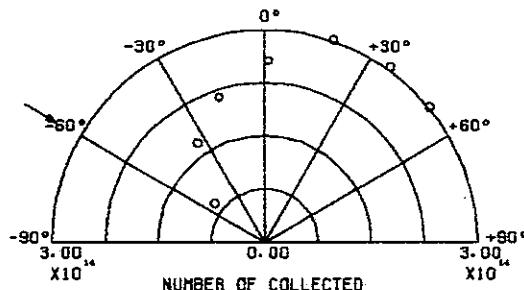
ENERGY (EV)	1.00×10^3
EPSILON	1.16×10^{-2}
GAMMA	9.64×10^{-1}
O	6.63×10^{-2}
COS N	6.00×10^{-2}

REFERENCE	66.9
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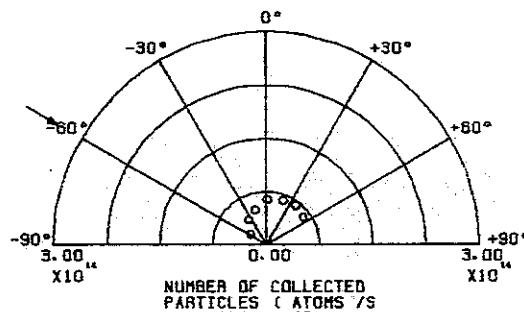
INFORMATION

86 3 3	
AR	\Rightarrow NI-FE
INCIDENT ANGLE	60°
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	NI
ION	AR 18 39.9
TARGET	NI 28 58.7 FE 26 55.8
ENERGY (EV)	1.00×10^3
EPSILON	1.08×10^{-2}
GAMMA	9.64×10^{-1}
G	6.79×10^{-2}
EJECTION ANGLE	
EXP.	35.6°
CAL.	36.9°
REFERENCE	86.3



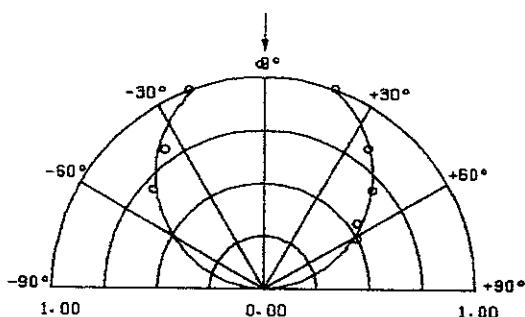
INFORMATION

86 3 4	
AR	\Rightarrow NI-FE
INCIDENT ANGLE	60°
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	FE
ION	AR 18 39.9
TARGET	NI 28 58.7 FE 26 55.8
ENERGY (EV)	1.00×10^3
EPSILON	1.16×10^{-2}
GAMMA	9.64×10^{-1}
G	6.63×10^{-2}
EJECTION ANGLE	
EXP.	36.7°
CAL.	36.8°
REFERENCE	86.3



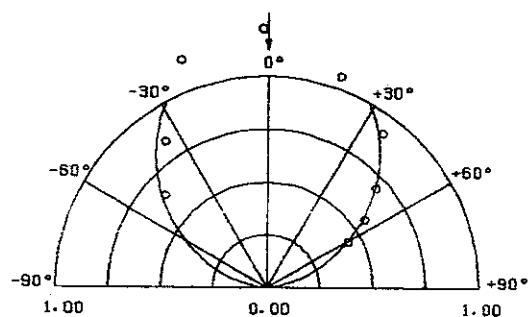
INFORMATION

86 6 1	
AR	\Rightarrow FE
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	FE
ION	AR 18 39.9
TARGET	FE 26 55.8
ENERGY (EV)	1.00×10^3
EPSILON	1.16×10^{-2}
GAMMA	9.72×10^{-1}
Q	6.63×10^{-2}
COS N	
N	1.12
REFERENCE	86 - 6



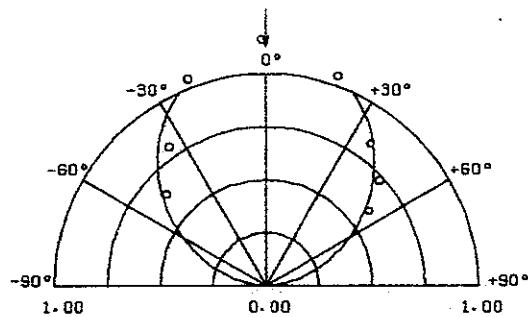
INFORMATION

86 6 2	
AR	\Rightarrow FE
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	FE
ION	AR 18 39.9
TARGET	FE 26 55.8
ENERGY (EV)	3.00×10^3
EPSILON	3.47×10^{-2}
GAMMA	9.72×10^{-1}
Q	3.83×10^{-2}
COS N	
N	1.45
REFERENCE	86 - 6



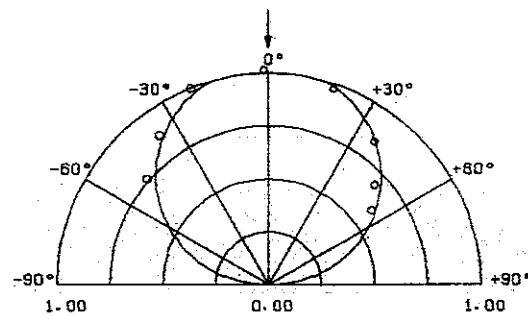
INFORMATION

86 6 3	AR \Rightarrow FE	
INCIDENT ANGLE	0 °	ENERGY (EV) 2.00×10^3
TARGET	POLY	EPSILON 2.31×10^{-2}
ENVIRONMENT	HV	GAMMA 9.72×10^{-1}
SPUTTERED ATOM(S)	FE	Q 4.69×10^{-2}
		COS N 1.31
ION	AR 18 39.9	
TARGET	FE 26 55.8	REFERENCE 86.6



INFORMATION

86 6 4	AR \Rightarrow FE	
INCIDENT ANGLE	0 °	ENERGY (EV) 6.00×10^2
TARGET	POLY	EPSILON 6.94×10^{-3}
ENVIRONMENT	HV	GAMMA 9.72×10^{-1}
SPUTTERED ATOM(S)	FE	Q 8.56×10^{-2}
		COS N 9.30×10^{-1}
ION	AR 18 39.9	
TARGET	FE 26 55.8	REFERENCE 86.6



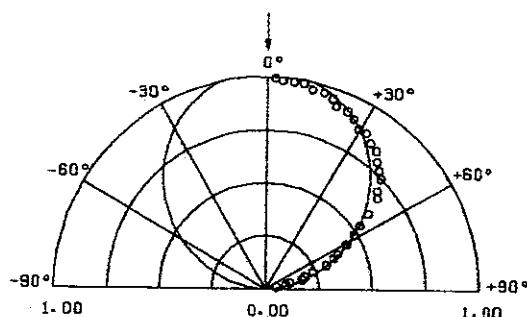
INFORMATION

86 7 1

AR \Rightarrow AG

INCIDENT ANGLE	0 °	ENERGY (EV)	5.00×10^3
TARGET	POLY	EPSILON	3.55×10^{-2}
ENVIRONMENT	UHV	GAMMA	7.89×10^{-1}
SPUTTERED ATOM(S)	AG	0	2.73×10^{-2}
		COS " N	1.18

ION	AR 18 39.9	REFERENCE	86.7
TARGET	AG 47 108		

TOTAL FLUENCE $1.5E+17$ UHV

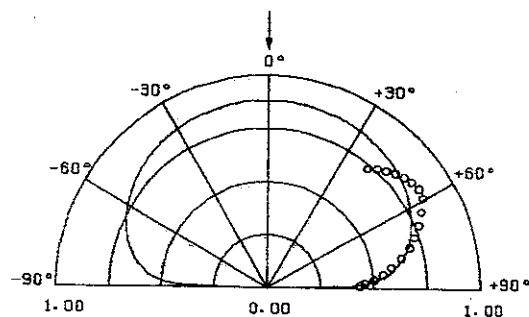
INFORMATION

86 7 2

AR \Rightarrow AG

INCIDENT ANGLE	0 °	ENERGY (EV)	5.00×10^3
TARGET	POLY	EPSILON	3.55×10^{-2}
ENVIRONMENT	UHV	GAMMA	7.89×10^{-1}
SPUTTERED ATOM(S)	AG	0	2.73×10^{-2}
		COS " N	2.00×10^{-1}

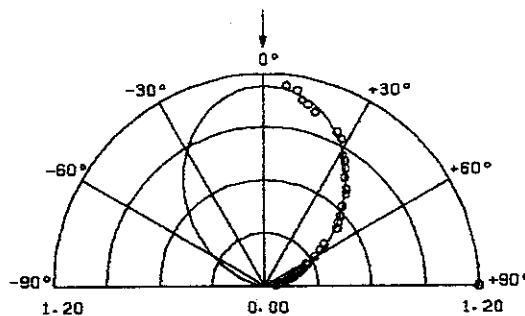
ION	AR 18 39.9	REFERENCE	86.7
TARGET	AG 47 108		

TOTAL FLUENCE $5E+17$ HIGH DOSE

INFORMATION

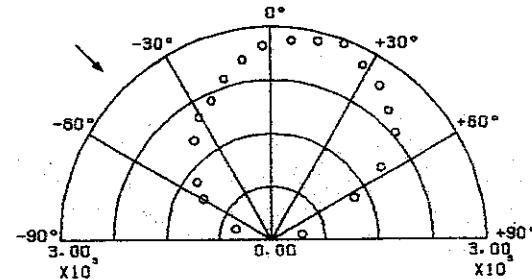
86 7 3	
AR	\Rightarrow AG
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	AG
ION	AR 18 39.9
TARGET	AG 47 108
ENERGY (EV)	5.00×10^3
EPSILON	3.55×10^{-2}
GAMMA	7.89×10^{-1}
Q	2.73×10^{-2}
COS N	1.74
REFERENCE	86.7

TOTAL FLUENCE (IONS / SQ. CM)
 2×10^{-5} TORR



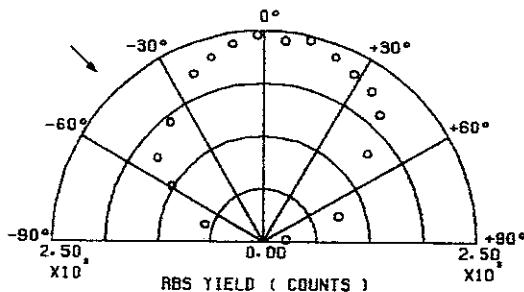
INFORMATION

86 8 1	
XE	\Rightarrow U-02
INCIDENT ANGLE	45°
TARGET	POLY
ENVIRONMENT	-----
SPUTTERED ATOM(S)	U
ION	XE 54 131
TARGET	U 92 238
ENERGY (EV)	8.00×10^3
EPSILON	6.48×10^{-3}
GAMMA	9.16×10^{-2}
Q	2.75×10^{-2}
EJECTION ANGLE EXP. CAL.	49.2° 48.4°
REFERENCE	86.8



INFORMATION

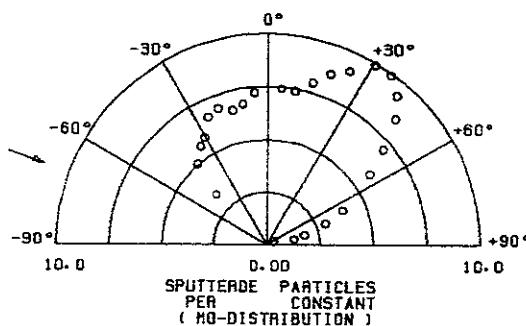
86 8 2	
AR	⇒ U-02
INCIDENT ANGLE	45°
TARGET	POLY
ENVIRONMENT	-----
SPUTTERED ATOM(S)	U
ION	XE 54 131
TARGET	U 92 238
	0 8 16.0
ENERGY (EV)	1.00 X10 ⁴
EPSILON	8.09 X10 ⁻³
GAMMA	9.16 X10 ⁻¹
O	2.46 X10 ⁻²
EJECTION ANGLE	
EXP.	49.3°
CAL.	48.1°
REFERENCE	86-8



INFORMATION

86 12 1	
HE	⇒ MO
INCIDENT ANGLE	70°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	MO
ION	HE 2 4.00
TARGET	MO 42 95.9
ENERGY (EV)	6.00 X10 ³
EPSILON	6.81 X10 ⁻¹
GAMMA	1.54 X10 ⁻¹
O	8.60 X10 ⁻²
EJECTION ANGLE	
EXP.	35.0°
CAL.	28.0°
REFERENCE	86-12

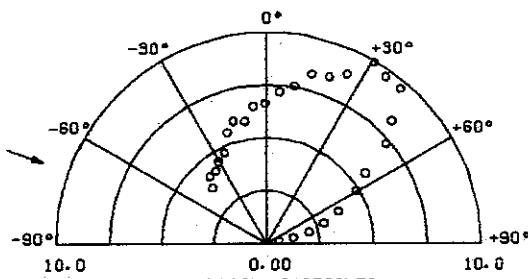
5E-8 TORR



INFORMATION

HE	\Rightarrow	Mo	
INCIDENT ANGLE	70°	ENERGY (EV)	6.00 X 10 ³
TARGET	POLY	EPSILON	6.81 X 10 ⁻¹
ENVIRONMENT	HV	GAMMA	1.54 X 10 ⁻¹
SPUTTERED ATOM(S)	Mo	O	8.60 X 10 ⁻²
ION	He 2	4.00	EJECTION ANGLE
TARGET	Mo 42	95.9	EXP. 30.0°
			CAL. 28.0°
			REFERENCE 86.12

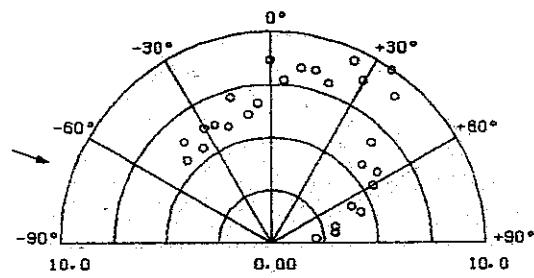
2E-5 TORR



INFORMATION

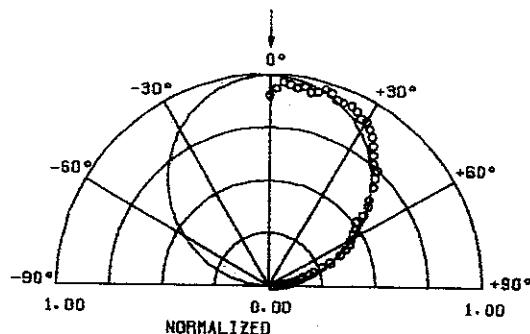
HE	\Rightarrow	Mo	
INCIDENT ANGLE	70°	ENERGY (EV)	6.00 X 10 ³
TARGET	POLY	EPSILON	4.66
ENVIRONMENT	HV	GAMMA	1.54 X 10 ⁻¹
SPUTTERED ATOM(S)	O	O	2.60 X 10 ⁻²
ION	He 2	4.00	EJECTION ANGLE
TARGET	Mo 42	95.9	EXP. 30.0°
O	8	16.0	CAL. 22.4°
			REFERENCE 86.12

2E-5 TORR



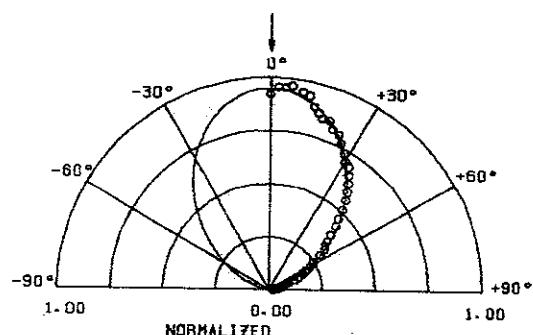
INFORMATION

66 14 1	
AR	\Rightarrow RH
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	RH
ION	AR 18 39.9
TARGET	RH 45 103
	REFERENCE 86.14

ENERGY-RESOLVED DISTRIBUTION
2EV

INFORMATION

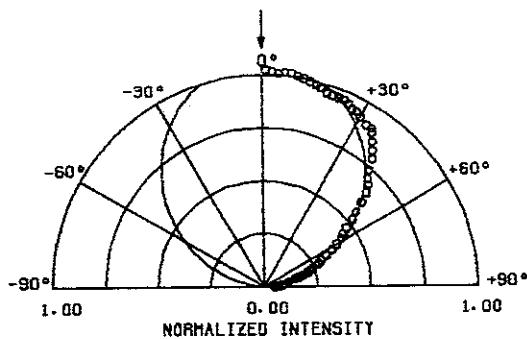
66 14 2	
AR	\Rightarrow RH
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	RH
ION	AR 18 39.9
TARGET	RH 45 103
	REFERENCE 86.14

ENERGY-RESOLVED DISTRIBUTION
12EV

INFORMATION

86 15 1	AR \Rightarrow IN	
INCIDENT ANGLE	0 °	ENERGY (EV) 5.00×10^3
TARGET	POLY	EPSILON 3.43×10^{-2}
ENVIRONMENT	UHV	GAMMA 7.66×10^{-1}
SPUTTERED ATOM(S)	IN	Ω 2.57×10^{-2}
		COS N 1.31
ION	AR 18 39.9	
TARGET	IN 49 115	REFERENCE 86.15

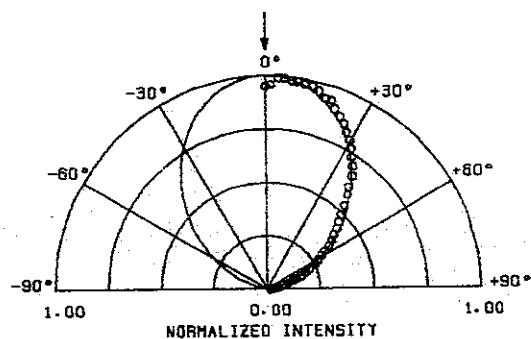
ENERGY-INTEGRATED POLAR ANGLE DISTRIBUTION



INFORMATION

86 15 2	AR \Rightarrow RH	
INCIDENT ANGLE	0 °	ENERGY (EV) 5.00×10^3
TARGET	POLY	EPSILON 3.70×10^{-2}
ENVIRONMENT	UHV	GAMMA 8.06×10^{-1}
SPUTTERED ATOM(S)	RH	Ω 3.78×10^{-2}
		COS N 1.81
ION	AR 18 39.9	
TARGET	RH 45 103	REFERENCE 86.15

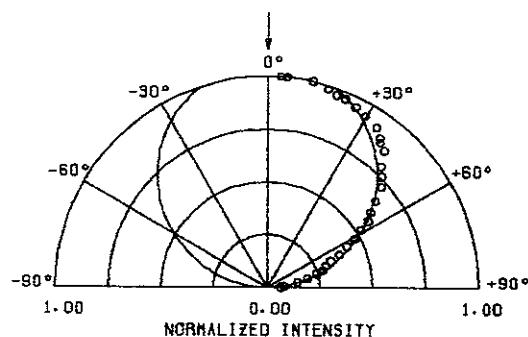
ENERGY-INTEGRATED POLAR ANGLE DISTRIBUTION



INFORMATION

86 15 3	
AR	⇒ IN
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(SI)	IN
ION	AR 18 39.9
TARGET	IN 49 115
ENERGY (EV)	5.00 X10 ³
EPSILON	3.43 X10 ⁻²
GAMMA	7.66 X10 ⁻¹
Q	2.57 X10 ⁻²
COS N	1.06
REFERENCE	86 - 15

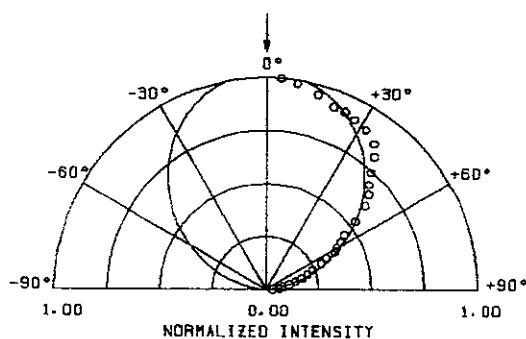
ENERGY-RESOLVED POLAR ANGLE DISTRIBUTION 2-4EV



INFORMATION

86 15 4	
AR	⇒ IN
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(SI)	IN
ION	AR 18 39.9
TARGET	IN 49 115
ENERGY (EV)	5.00 X10 ³
EPSILON	3.43 X10 ⁻²
GAMMA	7.66 X10 ⁻¹
Q	2.57 X10 ⁻²
COS N	1.31
REFERENCE	86 - 15

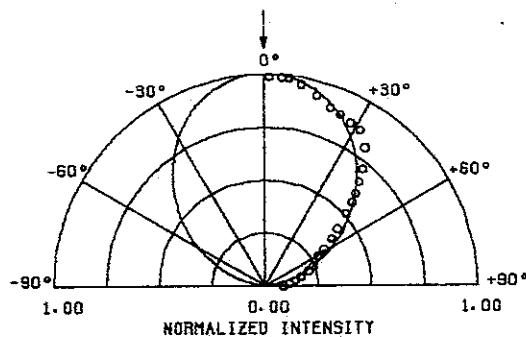
ENERGY-RESOLVED POLAR ANGLE DISTRIBUTION 4-6EV



INFORMATION

86 15 5	
AR	⇒ IN
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	IN
ENERGY (EV)	5.00 X10 ³
EPSILON	3.43 X10 ⁻²
GAMMA	7.66 X10 ⁻¹
Ω	2.57 X10 ⁻²
COS [*] N	1.49
ION TARGET	AR 18 99.9 IN 49 115
REFERENCE	86-15

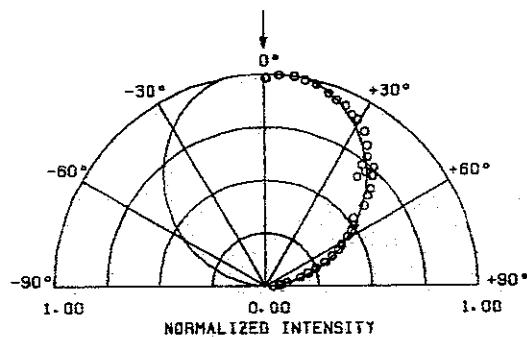
ENERGY-RESOLVED POLAR ANGLE DISTRIBUTION 14-16EV



INFORMATION

86 15 6	
AR	⇒ RH
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	RH
ENERGY (EV)	5.00 X10 ³
EPSILON	3.70 X10 ⁻²
GAMMA	8.05 X10 ⁻¹
Ω	3.78 X10 ⁻²
COS [*] N	1.22
ION TARGET	AR 18 39.9 RH 45 103
REFERENCE	86-15

ENERGY-RESOLVED POLAR ANGLE DISTRIBUTION 2-4EV

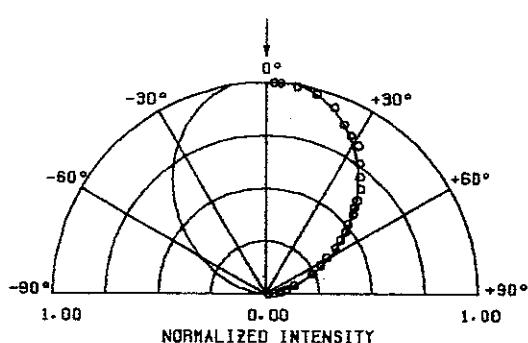


INFORMATION

86 15 7

AR \Rightarrow RH

INCIDENT ANGLE	0 °	ENERGY (EV)	5.00×10^3
TARGET	POLY	EPSILON	3.70×10^{-2}
ENVIRONMENT	UHV	GAMMA	8.06×10^{-1}
SPUTTERED ATOM(S)	RH	0	3.78×10^{-2}
		COS N	1.56
ION	AR 18 39.9		
TARGET	RH 45 103	REFERENCE	86-15

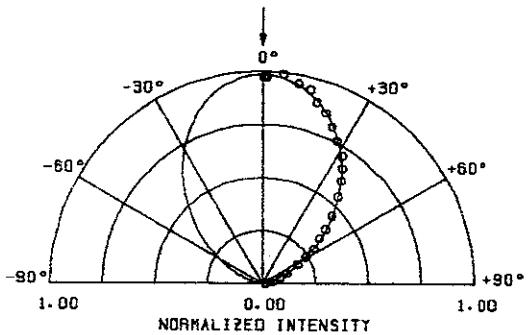
ENERGY-RESOLVED POLAR ANGLE
DISTRIBUTION 4-6EV

INFORMATION

86 15 8

AR \Rightarrow RH

INCIDENT ANGLE	0 °	ENERGY (EV)	5.00×10^3
TARGET	POLY	EPSILON	3.70×10^{-2}
ENVIRONMENT	UHV	GAMMA	8.06×10^{-1}
SPUTTERED ATOM(S)	RH	0	3.78×10^{-2}
		COS N	2.11
ION	AR 18 39.9		
TARGET	RH 45 103	REFERENCE	86-15

ENERGY-RESOLVED POLAR ANGLE
DISTRIBUTION 14-16EV

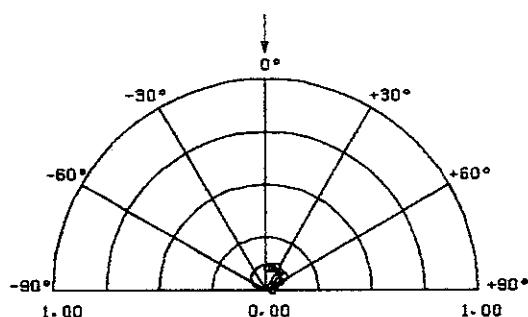
INFORMATION

86 16 1	AR	\Rightarrow	CU
INCIDENT ANGLE	0 °	ENERGY (EV)	2.00×10^3
TARGET	POLY	EPSILON	2.14×10^{-2}
ENVIRONMENT	UHV	GAMMA	9.48×10^{-1}
SPUTTERED ATOM(S)	CU	Ω	4.29×10^{-2}
		COS Θ	7.20×10^{-1}

ION	AR	18	39.9
TARGET	CU	29	63.5

REFERENCE 86.16

F=1.9E+17 IONS/SQ.CM



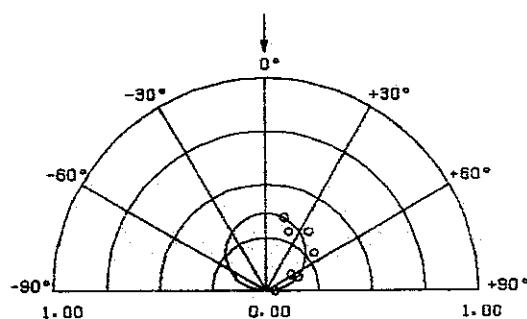
INFORMATION

86 16 2	AR	\Rightarrow	CU
INCIDENT ANGLE	0 °	ENERGY (EV)	2.00×10^3
TARGET	POLY	EPSILON	2.14×10^{-2}
ENVIRONMENT	UHV	GAMMA	9.48×10^{-1}
SPUTTERED ATOM(S)	CU	Ω	4.29×10^{-2}
		COS Θ	8.80×10^{-1}

ION	AR	18	39.9
TARGET	CU	29	63.5

REFERENCE 86.16

F=4.8E+17 IONS/SQ.CM



INFORMATION

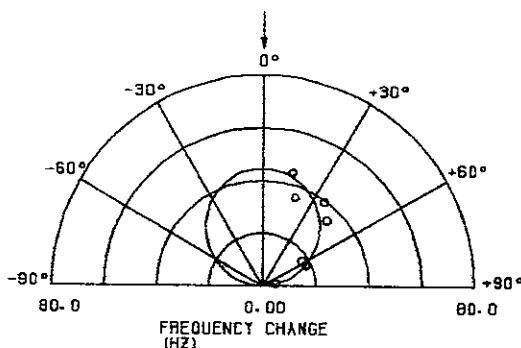
86 16 3

AR \Rightarrow CU

INCIDENT ANGLE	0 °	ENERGY (EV)	2.00×10^3
TARGET	POLY	EPSILON	2.14×10^{-2}
ENVIRONMENT	UHV	GAMMA	9.48×10^{-1}
SPUTTERED ATOM(S)	CU	Q	4.29×10^{-2}
		COS N	1.12

ION AR 18 39.9
TARGET CU 29 63.5

REFERENCE 86.16

 $F = 7.4 \times 10^{17}$ IONS/SQ-CM

INFORMATION

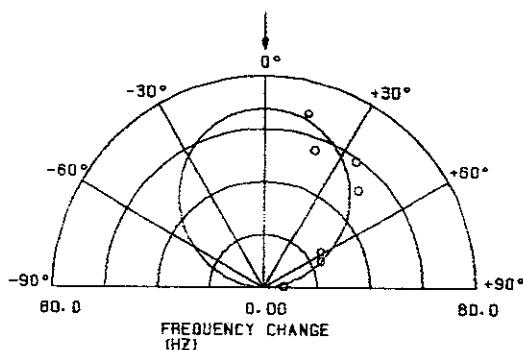
86 16 4

AR \Rightarrow CU

INCIDENT ANGLE	0 °	ENERGY (EV)	2.00×10^3
TARGET	POLY	EPSILON	2.14×10^{-2}
ENVIRONMENT	UHV	GAMMA	9.48×10^{-1}
SPUTTERED ATOM(S)	CU	Q	4.29×10^{-2}
		COS N	1.17

ION AR 18 39.9
TARGET CU 29 63.5

REFERENCE 86.16

 $F = 1.1 \times 10^{18}$ IONS/SQ-CM

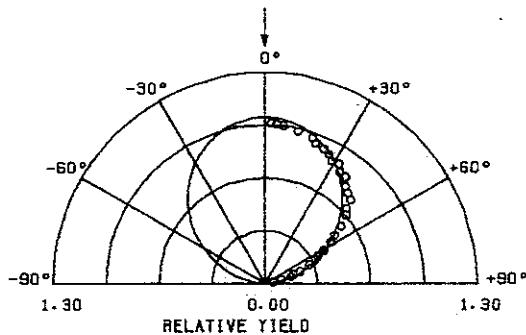
INFORMATION

86 17 1	AR \Rightarrow AG
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	AG
ENERGY (EV)	5.00 X10 ³
EPSILON	3.55 X10 ⁻²
GAMMA	7.89 X10 ⁻¹
Q	2.73 X10 ⁻²
COS ⁿ	N 1.23

ION AR 18 39.9
TARGET AG 47 108

REFERENCE 86.17

P=6.8E-8 TORR
F=1.5E+17 IONS/SQ-CM



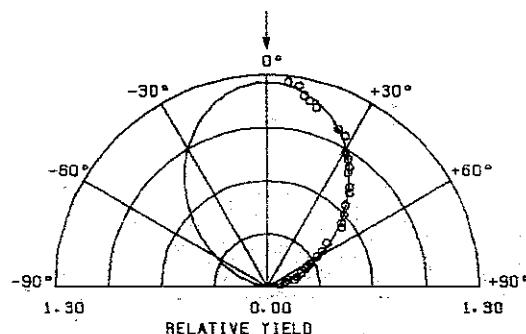
INFORMATION

86 17 2	AR \Rightarrow AG
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	AG
ENERGY (EV)	5.00 X10 ³
EPSILON	3.55 X10 ⁻²
GAMMA	7.89 X10 ⁻¹
Q	2.73 X10 ⁻²
COS ⁿ	N 1.77

ION AR 18 39.9
TARGET AG 47 108

REFERENCE 86.17

P=4E-5 TORR
F=2E+17 IONS/SQ-CM



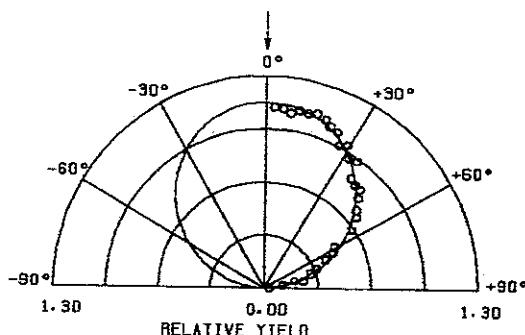
INFORMATION

86 17 3	
N2	\Rightarrow AG
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	H.V.
SPUTTERED ATOM(S)	AG
ION	N 7 14.0
TARGET	AG 47 108

ENERGY 5.00×10^3
 (EV)
 EPSILON 1.21×10^{-1}
 GAMMA 4.07×10^{-1}
 D 3.81×10^{-2}
 COS N 1.11

REFERENCE 86-17

P=1.2E-7 TORR
 F=3E+17 IONS/SQ-CM



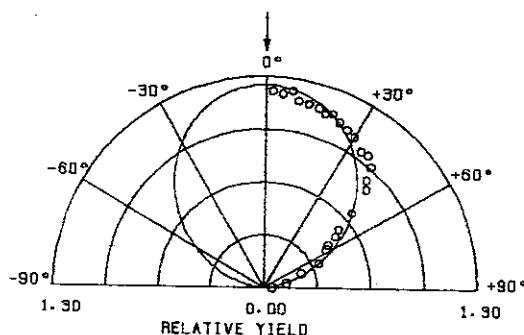
INFORMATION

86 17 4	
N2	\Rightarrow AG
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	H.V.
SPUTTERED ATOM(S)	AG
ION	N 7 14.0
TARGET	AG 47 108

ENERGY 5.00×10^3
 (EV)
 EPSILON 1.21×10^{-1}
 GAMMA 4.07×10^{-1}
 D 3.81×10^{-2}
 COS N 1.38

REFERENCE 86-17

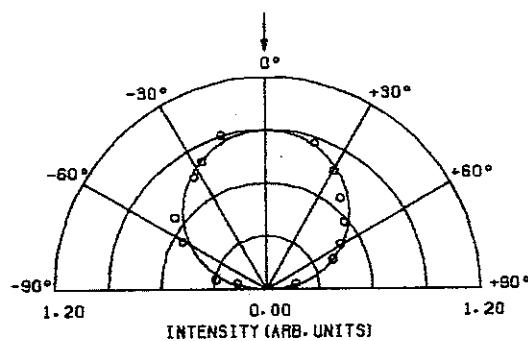
P=4E-5 TORR
 F=3E+17 IONS/SQ-CM



INFORMATION

86 18 1	AR	\Rightarrow	AG
INCIDENT ANGLE	0 °	ENERGY (EV)	2.00×10^4
TARGET	POLY	EPSILON	1.42×10^{-1}
ENVIRONMENT	HV	GAMMA	7.89×10^{-2}
SPUTTERED ATOM(S)	AG	Q	1.37×10^{-2}
		COS N	8.50×10^{-1}

ION AR 18 39.9	REFERENCE 86-18
TARGET AG 47 108	

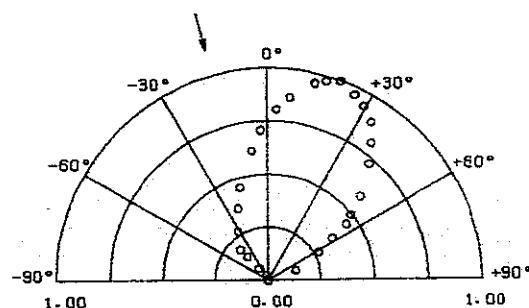


INFORMATION

87 2 1	XE	\Rightarrow	SI
INCIDENT ANGLE	15°	ENERGY (EV)	2.00×10^4
TARGET	POLY	EPSILON	3.82×10^{-2}
ENVIRONMENT	UHV	GAMMA	5.81×10^{-2}
SPUTTERED ATOM(S)	SI	Q	2.00×10^{-2}
		EJECTION ANGLE	
ION XE 54 131		EXP.	13.9°
TARGET SI 14 28.1		CAL.	84.8°

REFERENCE 87-2

TRAPPED XE



INFORMATION

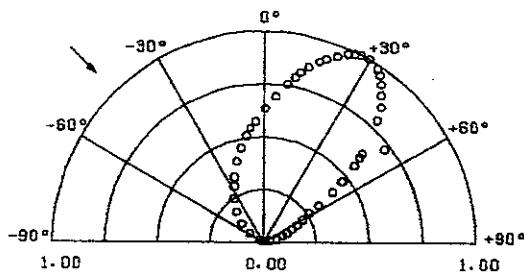
87 2 2

XE → SI

INCIDENT ANGLE	45°	ENERGY (EV)	2.00 X10 ⁴
TARGET	POLY	EPSILON	3.82 X10 ⁻²
ENVIRONMENT	UHV	GAMMA	5.81 X10 ⁻¹
SPUTTERED ATOM(S)	SI	Q	2.00 X10 ⁻²
ION	XE 54 131	EJECTION ANGLE	
TARGET	SI 14 28-1	EXP.	52.2°
		CAL.	47.5°

REFERENCE 87.2

TRAPPED XE



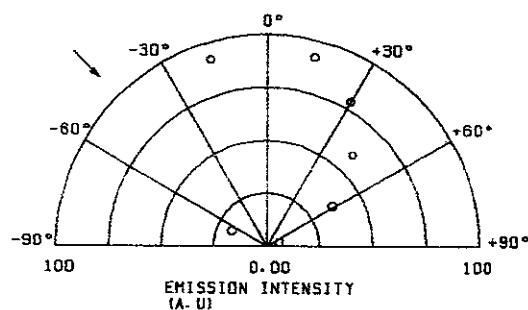
INFORMATION

87 2 3

XE → SI

INCIDENT ANGLE	45°	ENERGY (EV)	2.00 X10 ⁴
TARGET	POLY	EPSILON	3.82 X10 ⁻²
ENVIRONMENT	UHV	GAMMA	5.81 X10 ⁻¹
SPUTTERED ATOM(S)	SI	Q	2.00 X10 ⁻²
ION	XE 54 131	EJECTION ANGLE	
TARGET	SI 14 28-1	EXP.	0.00°
		CAL.	47.5°

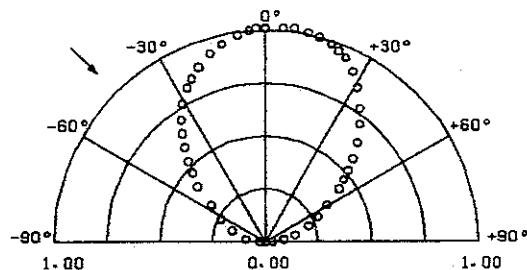
REFERENCE 87.2



INFORMATION

87 2 4	
AR \Rightarrow SI	
INCIDENT ANGLE	45°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	SI
<hr/>	
ION	AR 18 39.9
TARGET	SI 14 28.1
<hr/>	
REFERENCE 87-2	

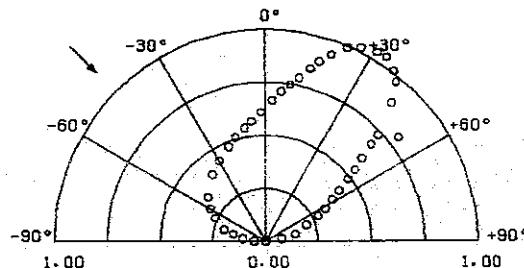
SI



INFORMATION

87 2 5	
AR \Rightarrow SI	
INCIDENT ANGLE	45°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	SI
<hr/>	
ION	AR 18 39.9
TARGET	SI 14 28.1
<hr/>	
REFERENCE 87-2	

TRAPPED AR



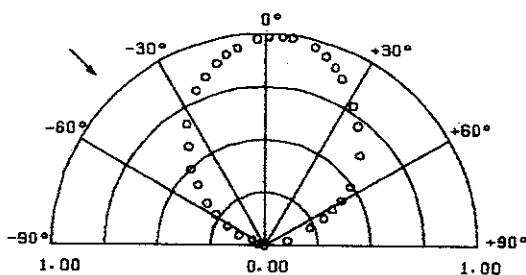
INFORMATION

87 2 6
KR \Rightarrow SI

INCIDENT ANGLE	45°	ENERGY (EV)	2.00×10^4
TARGET	POLY	EPSILON	8.95×10^{-2}
ENVIRONMENT	UHV	GAMMA	7.52×10^{-1}
SPUTTERED ATOM (SI)	SI	0	1.76×10^{-2}
ION	KR 36	EJECTION ANGLE EXP.	10.08
TARGET	SI 14	EJECTION ANGLE CAL.	47.2°

REFERENCE 87.2

SI



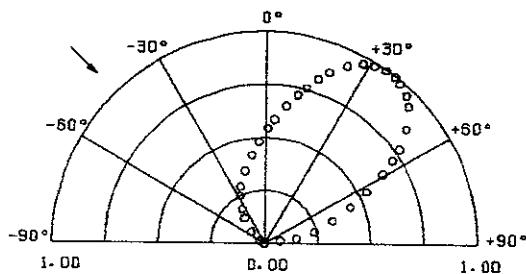
INFORMATION

87 2 7
KR \Rightarrow SI

INCIDENT ANGLE	45°	ENERGY (EV)	2.00×10^4
TARGET	POLY	EPSILON	8.95×10^{-2}
ENVIRONMENT	UHV	GAMMA	7.52×10^{-1}
SPUTTERED ATOM (SI)	SI	0	1.76×10^{-2}
ION	KR 36	EJECTION ANGLE EXP.	45.8°
TARGET	SI 14	EJECTION ANGLE CAL.	47.2°

REFERENCE 87.2

TRAPPED KR



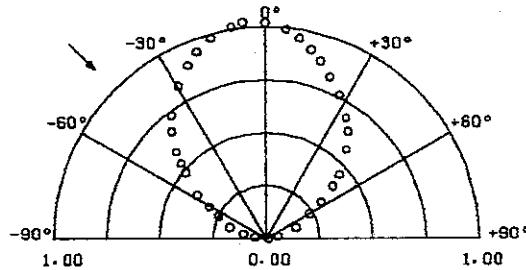
INFORMATION

87 2 8	
XE	\Rightarrow SI
INCIDENT ANGLE	45°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	SI
ION	XE 54 131
TARGET	SI 14 28.1

ENERGY (EV)	2.00 X10 ⁴
EPSILON	3.82 X10 ⁻²
GAMMA	5.81 X10 ⁻¹
Q	2.00 X10 ⁻²
EJECTION ANGLE	
EXP.	0.00°
CAL.	47.5°

REFERENCE 87.2

SI



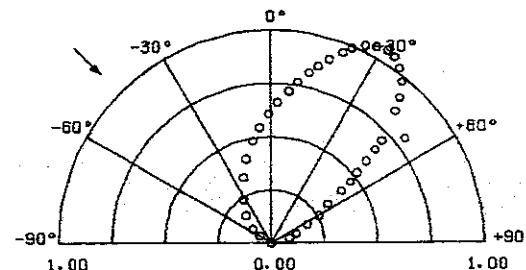
INFORMATION

87 2 9	
XE	\Rightarrow SI
INCIDENT ANGLE	45°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	SI
ION	XE 54 131
TARGET	SI 14 28.1

ENERGY (EV)	2.00 X10 ⁴
EPSILON	3.82 X10 ⁻²
GAMMA	5.81 X10 ⁻¹
Q	2.00 X10 ⁻²
EJECTION ANGLE	
EXP.	52.2°
CAL.	47.5°

REFERENCE 87.2

TRAPPED XE



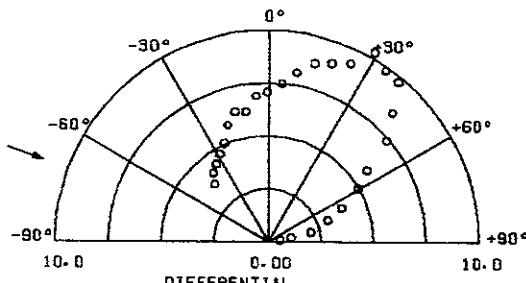
INFORMATION

87 3 1	
HE	\Rightarrow Mo
INCIDENT ANGLE	70°
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	Mo
ION	He 2 4.00
TARGET	Mo 42 95.9

ENERGY (EV)	6.00×10^3
EPSILON	6.81×10^{-1}
GAMMA	1.54×10^{-1}
Q	8.60×10^{-2}
EJECTION ANGLE	
EXP.	29.2°
CAL.	28.0°

REFERENCE 87.3

2.5E-5 MBAR 02



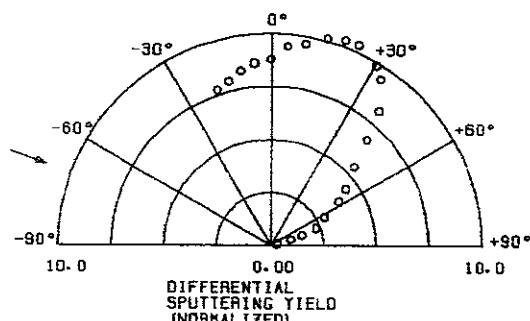
INFORMATION

87 3 2	
HE	\Rightarrow Mo
INCIDENT ANGLE	70°
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	Mo
ION	He 2 4.00
TARGET	Mo 42 95.9

ENERGY (EV)	6.00×10^3
EPSILON	6.81×10^{-1}
GAMMA	1.54×10^{-1}
Q	8.60×10^{-2}
EJECTION ANGLE	
EXP.	25.0°
CAL.	28.0°

REFERENCE 87.3

640C AND 1.0E-5 MBAR 02



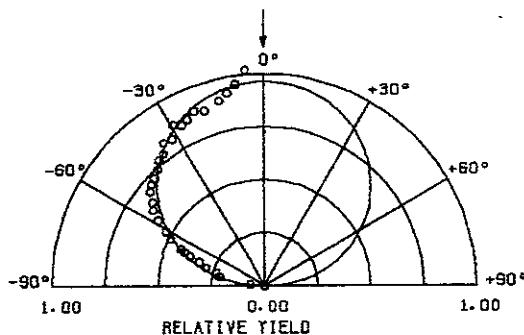
INFORMATION

88 1 1	N \Rightarrow AG
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	UHV
SPUTTERED ATOM(S)	AG
ENERGY (EV)	5.00 X10 ³
EPSILON	1.21 X10 ⁻¹
GAMMA	4.07 X10 ⁻¹
Q	3.81 X10 ⁻²
COS N	8.80 X10 ⁻¹

ION N 7 14.0
TARGET AG 47 108

REFERENCE 88.1

P=3.5E-8 TORR F=2.5E17
IONS/SQ.CM



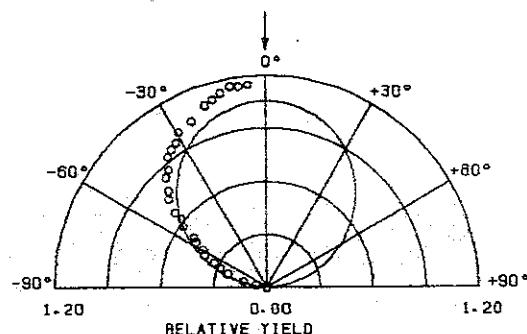
INFORMATION

88 1 2	N \Rightarrow AR
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	HV
SPUTTERED ATOM(S)	AR
ENERGY (EV)	5.00 X10 ³
EPSILON	3.33 X10 ⁻¹
GAMMA	7.69 X10 ⁻³
Q	4.56 X10 ⁻³
COS N	1.13

ION N 7 14.0
TARGET AR 18 39.9

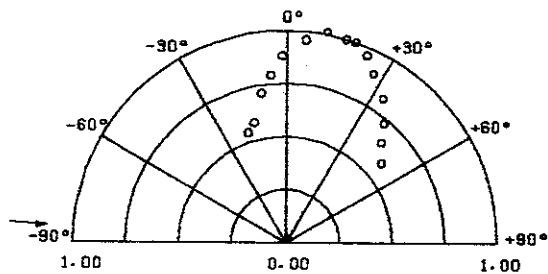
REFERENCE 88.1

P=2E-5 TORR F=1.7E+17
IONS/SQ.CM



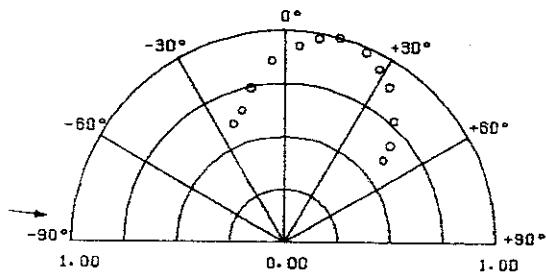
INFORMATION

88 2 1	AR	\Rightarrow	CU
INCIDENT ANGLE	86°	ENERGY (EV)	3.00×10^4
TARGET	POLY	EPSILON	3.21×10^{-1}
ENVIRONMENT	-----	GAMMA	9.48×10^{-1}
SPUTTERED ATOM(S)	CU	Q	1.11×10^{-2}
ION	AR 18 39.9	EJECTION ANGLE	
TARGET	CU 29 63.5	EXP.	10.08
		CAL.	4.94°
		REFERENCE	88 - 2



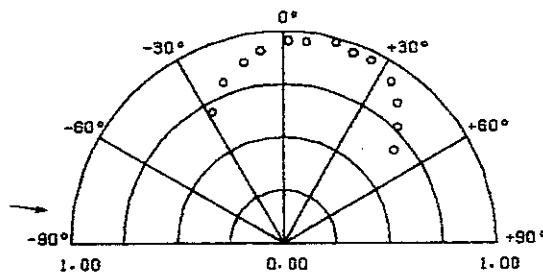
INFORMATION

88 2 2	AR	\Rightarrow	CU
INCIDENT ANGLE	84°	ENERGY (EV)	3.00×10^4
TARGET	POLY	EPSILON	3.21×10^{-1}
ENVIRONMENT	-----	GAMMA	9.48×10^{-1}
SPUTTERED ATOM(S)	CU	Q	1.11×10^{-2}
ION	AR 18 39.9	EJECTION ANGLE	
TARGET	CU 29 63.5	EXP.	15.0°
		CAL.	6.95°
		REFERENCE	88 - 2



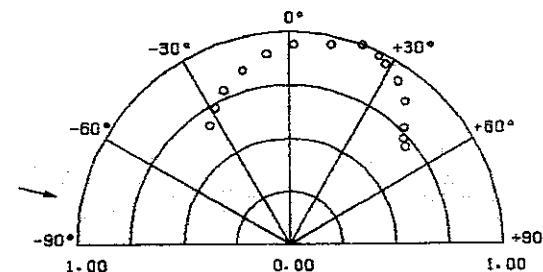
INFORMATION

88 2 3	AR	\Rightarrow	CU	
INCIDENT ANGLE	82°		ENERGY (EV)	3.00×10^4
TARGET	POLY		EPSILON	3.21×10^{-1}
ENVIRONMENT	-----		GAMMA	9.48×10^{-1}
SPUTTERED ATOM(S)	CU		Q	1.11×10^{-2}
ION	AR 18	39.9	EJECTION ANGLE	
TARGET	CU 29	63.5	EXP.	15.0°
			CAL.	8.96°
			REFERENCE	88.2



INFORMATION

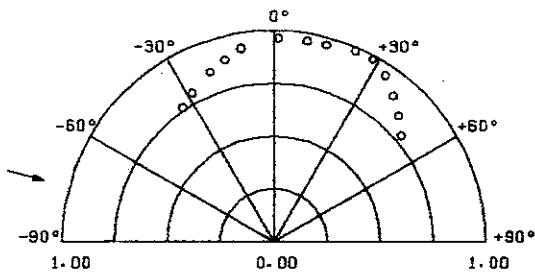
88 2 4	AR	\Rightarrow	CU	
INCIDENT ANGLE	78°		ENERGY (EV)	3.00×10^4
TARGET	POLY		EPSILON	3.21×10^{-1}
ENVIRONMENT	-----		GAMMA	9.48×10^{-1}
SPUTTERED ATOM(S)	CU		Q	1.11×10^{-2}
ION	AR 18	39.9	EJECTION ANGLE	
TARGET	CU 29	63.5	EXP.	20.0°
			CAL.	13.0°
			REFERENCE	88.2



INFORMATION

88 2 5	
AR	\Rightarrow CU
INCIDENT ANGLE	75°
TARGET	POLY
ENVIRONMENT	-----
SPUTTERED ATOM(S)	CU
ION	AR 18 39.9
TARGET	CU 29 63.5

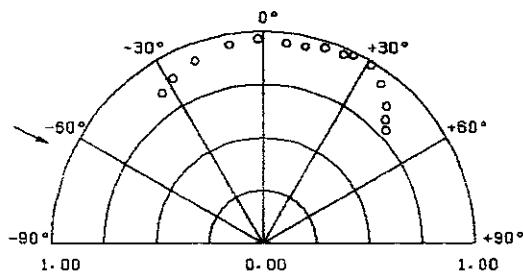
REFERENCE 88-2



INFORMATION

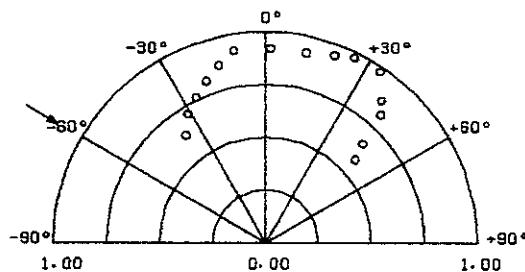
88 2 8	
AR	\Rightarrow CU
INCIDENT ANGLE	65°
TARGET	POLY
ENVIRONMENT	-----
SPUTTERED ATOM(S)	CU
ION	AR 18 39.9
TARGET	CU 29 63.5

REFERENCE 88-2



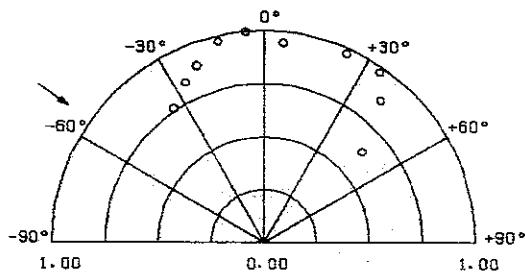
INFORMATION

68 2 7	AR \Rightarrow CU	
INCIDENT ANGLE	60°	ENERGY (EV) 3.00×10^4
TARGET	POLY	EPSILON 3.21×10^{-1}
ENVIRONMENT	-----	GAMMA 9.48×10^{-1}
SPUTTERED ATOM(S)	CU	O 1.11×10^{-2}
ION	AR 18 39.9	EJECTION ANGLE
TARGET	CU 29 63.5	EXP. 29.7° CAL. 31.1°
		REFERENCE 88.2



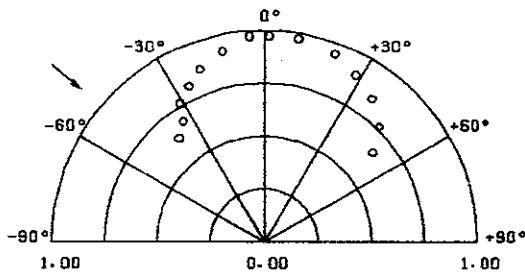
INFORMATION

68 2 8	AR \Rightarrow CU	
INCIDENT ANGLE	55°	ENERGY (EV) 3.00×10^4
TARGET	POLY	EPSILON 3.21×10^{-1}
ENVIRONMENT	-----	GAMMA 9.48×10^{-1}
SPUTTERED ATOM(S)	CU	O 1.11×10^{-2}
ION	AR 18 39.9	EJECTION ANGLE
TARGET	CU 29 63.5	EXP. 30.5° CAL. 36.2°
		REFERENCE 88.2



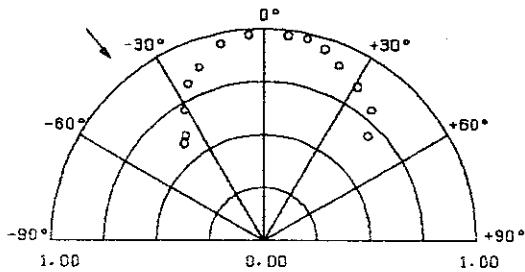
INFORMATION

88 2 9	
AR	⇒ CU
INCIDENT ANGLE	50°
TARGET	POLY
ENVIRONMENT	-----
SPUTTERED ATOM(S)	CU
ION	AR 18 39.9
TARGET	CU 29 63.5
ENERGY (EV)	3.00 X10 ⁴
EPSILON	3.21 X10 ⁻¹
GAMMA	9.48 X10 ⁻²
Q	1.11 X10 ⁻²
EJECTION ANGLE	
EXP.	0.00°
CAL.	41.3°
REFERENCE	88 - 2



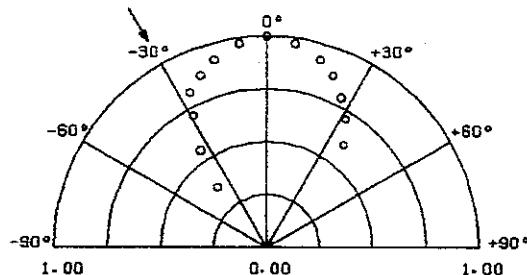
INFORMATION

88 2 10	
AR	⇒ CU
INCIDENT ANGLE	40°
TARGET	POLY
ENVIRONMENT	-----
SPUTTERED ATOM(S)	CU
ION	AR 18 39.9
TARGET	CU 29 63.5
ENERGY (EV)	3.00 X10 ⁴
EPSILON	3.21 X10 ⁻¹
GAMMA	9.48 X10 ⁻²
Q	1.11 X10 ⁻²
EJECTION ANGLE	
EXP.	0.00°
CAL.	51.5°
REFERENCE	88 - 2



INFORMATION

88 2 11	
AR	\Rightarrow CU
INCIDENT ANGLE	30°
TARGET	POLY
ENVIRONMENT	-----
SPUTTERED ATOM(S)	CU
<hr/>	
ION	AR 18 39.9
TARGET	CU 29 63.5
<hr/>	
ENERGY (EV)	3.00×10^4
EPSILON	3.21×10^{-1}
GAMMA	9.48×10^{-1}
Q	1.11×10^{-2}
EJECTION ANGLE	
EXP.	0.00°
CAL.	62.0°
<hr/>	
REFERENCE 88.2	



INFORMATION

88 2 12	
AR	\Rightarrow CU
INCIDENT ANGLE	0 °
TARGET	POLY
ENVIRONMENT	-----
SPUTTERED ATOM(S)	CU
<hr/>	
ION	AR 18 39.9
TARGET	CU 29 63.5
<hr/>	
ENERGY (EV)	3.00×10^4
EPSILON	3.21×10^{-1}
GAMMA	9.48×10^{-1}
Q	1.11×10^{-2}
COS [*] N	3.26
<hr/>	
REFERENCE 88.2	

