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NBS TECHNICAL NOTE 1185

U.S. DEPARTMENT OF COMMERCE/National Bureau of Standards

Bibliography of Data on Electrical Breakdown in Gases

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Bibliography of Data on Electrical Breakdown in Gases

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Table I. Definition of Category Code 6

BIBLIOGRAPHY OF DATA ON ELECTRICAL BREAKDOWN IN GASES

R. J. Van Brunt and W. E. Anderson

This report consists of a bibliography of currently published data on electrical breakdown in gases. The bibliography contains a list of archival papers and books published since 1950, an index indicating the references that give particular types of data for each gas, an author index, and a list of relevant, regular technical conferences. The citations given in the bibliography contain experimental or theoretical data on breakdown which include:

1) sparking potentials;
2) breakdown voltages;
3) critical fields, or field-to-gas density ratios;
4) corona inception voltages;
5) voltage-time characteristics;
6) relative and absolute dielectric strengths; and
7) breakdown probabilities.

Types of data considered include those which apply to uniform and nonuniform fields; ac, dc, and impulse voltages; and possible effects of particles, surfaces, interfaces, and corona. This bibliography is intended to serve as a guide in locating data on breakdown which are most relevant to particular applications.

Key words: bibliography; critical fields; corona onset; discharge inception; electrical breakdown; gases; sparking potentials.

I. Introduction

This bibliography is intended to serve as a guide to the currently available published data on electrical breakdown for gases and vapors. It is generally recognized that although an enormous quantity of data exists, it is often difficult to locate those most applicable to a given set of conditions. This is due to the complex nature of data on electrical breakdown which depend on a broad range of conditions including widely different gas pressures and temperatures, gas composition, electrode materials, electrode configurations, voltage waveforms, proximity of solid dielectrics, etc. All of these parameters can be expected to have a significant influence on the electrical breakdown characteristics of a system. Thus, for example, data obtained for uniform-electric-field configurations cannot generally give reliable predictions of breakdown in highly nonuniform electric-field configurations. Similarly data found for slowly varying or constant electric fields may not be applicable to situations where there are rapidly varying fields. In general, the breakdown potential of an electrode gap is not solely a property of the insulating gas medium. With this complexity in mind, this bibliography is designed to help simplify the task of finding data which correspond to configurations or operating conditions that most nearly match those for particular applications of interest.

The information contained in this bibliography exists in computerized form which can be easily updated and periodically printed out as additional relevant references are found. Revised and updated versions of this bibliography, either as computer printout or in floppy disk form, will periodically be made available upon request to the National Bureau of Standards, Electrosystems Division, Washington, DC 20234.

The bibliography in its present form is believed to include most of the major archival papers and books published since 1950 which contain data on electrical breakdown for insulating gases. All of the references listed have been examined to determine that they do indeed contain breakdown data. In the category of electrical-breakdown data are included:

1) sparking potentials;
2) breakdown voltages;
3) critical fields, or field-to-gas density ratios;
4) corona inception voltages;
5) voltage-time characteristics;
6) relative and absolute dielectric strengths; and
7) breakdown probabilities.

These are all closely related quantities in the sense that they indicate the applied potential or electric field at which a sufficiently high rate of ionization occurs so that the conductivity of the gas reaches the point where discharge initiation or electrical breakdown will occur with significant probability. There are, however, distinctions among these quantities which are not always clearly defined or discussed in the literature, and no attempt has been made to address these issues in preparing the bibliography.

As an example, corona inception (also called "discharge inception" or "partial discharge inception") usually refers to the onset of a self-sustaining, localized discharge near the most highly stressed electrode in a nonuniform-electric-field gap. Although a corona discharge enhances the conductivity of the gas, it is not usually considered to be a true breakdown because it does not bridge the electrode gap, i.e., it is not associated with ionization of the gas along the entire distance between two electrodes. In most papers, the distinction between corona inceptions and breakdown voltages is made quite clear and, as a general rule, corona inception will occur at a lower voltage than complete breakdown in nonuniform-field gaps.

It is nevertheless evident that in some cases there are disagreements or uncertainties in the definitions of the quantities considered here for inclusion as breakdown data. "Dielectric strength" in most cases, but not always, corresponds to breakdown for uniform, static-electric-field configurations under gap and pressure conditions where the similarity law holds, namely that the breakdown voltage is a function only of the product of gas pressure and electrode gap spacing. Data on critical-field to gas-density ratios also presumably apply only to uniform-electric field situations inasmuch as they are usually derived from measurements or calculations of ionization growth or ionization and attachment coefficients for gases at low pressures in uniform fields. The extent to which these data may be reliably applied to nonuniform-field conditions or to gas pressures different from those at which the coefficients were determined is generally unknown. Caution should be exercised in the application of such data to configurations that deviate even slightly from uniformity such as sphere gaps or as might result from electrode surface irregularities. The effects of minute surface protrusions, small particles, dust, surface charges, etc., which can perturb the electric field in a gas are discussed in a number of references included. Where possible these have been indicated by the code assigned to each reference as discussed below.

II. Criteria for Selection

The references cited in this bibliography were selected according to the following criteria:

a) they correspond to an archival publication;
b) they contain experimental or theoretical data on breakdown or corona inception voltages or fields;
c) they include gases and conditions considered applicable to electrical insulation; and
d) they have been published since 1950.

The list has been restricted to archival publications, i.e., journal publications and books, because: a) these are readily available to almost everyone; and b) data presented in these articles have presumably been subjected to critical review and thus have a greater likelihood of being correct. There are, of course, many conference proceedings and technical reports which may be assumed to contain useful and reliable data on breakdown. On the other hand, data presented at conferences or in reports, unless previously published, are generally considered to be preliminary. Also, there are many conference proceedings and technical reports that are not widely distributed and thus may be difficult to obtain. Some of the major regular technical conferences where data on gas breakdown have been presented and for which proceedings or abstracts were usually published are listed here separately (Section IX). No attempt has been made to identify specific papers or data given at these conferences.

All of the papers listed have been examined to verify that they do indeed contain data on electrical breakdown as defined in the Introduction. No attempt was made to evaluate critically any data given in these references as a basis for selection. It is clear that in some cases there are obvious disagreements and disputes which may or may not have been resolved. Included here are all data independent of their known or assumed reliability. Papers which deal only with the phenomonology or physics of gas breakdown were not included despite their possible importance in adding to our understanding of the mechanisms involved. Again this bibliography is intended to be an aid to those in need of data on breakdown.

The list has been restricted to gases considered relevant to electrical-insulation technology. Gases such as metal vapors which are unlikely components in gaseous insulation have been excluded unless they happen to have been studied along with other gases which are of relevance. There are, however, metal vapors like Hg which might be unavoidable components or important contaminants in gaseous insulation. Serious consideration will be given to including these in future versions of the bibliography.

The data in the bibliography cover a wide range of gas pressures and temperatures, and although in some cases significant and interesting dependences on these parameters are observed, no attempt is made to indicate the ranges considered in each case. Thus, for example, two or more references indicated as having data on static-uniform-field breakdown for N_2 may actually correspond to results obtained at quite different pressures and temperatures.

The electrode and field configurations considered vary over a wide range, e.g., from small uniform field gaps to large, practical electric-power-line simulations. The results for static, uniform field conditions are generally considered to be more fundamental in indicating the dielectric strength for collisional-ionization processes. It is clear, however, that the gas will generally behave quite differently under less uniform-gap and time-varying-voltage conditions and, therefore, because results for these conditions are of considerable importance in the design of the insulating systems, their inclusion was considered imperative.

For alternating voltages, only data on breakdown at the power frequencies of 60 Hz and 50 Hz have been included. It might be argued that measurements or calculations performed for higher frequencies are also relevant to insulation applications. Perhaps these should be included in future versions of this bibliography. They were arbitrarily excluded here because of difficulties in agreeing on an acceptable way of categorizing these data, and because of the limited usefulness of this kind of information for the design and testing of electrical insulation, particularly in electric-power applications.

The exclusion of papers and books published before 1950 should not be interpreted as a denigration of these works. Although it is true that some earlier studies have since been supplanted by more recent works, there certainly remains much valuable information on breakdown from investigations carried out before 1950. It was essential to place some restrictions on the number of references to be included, and it seemed unnecessary to include papers which have already been adequately discussed in the previous reviews listed here. The absence of any publications which might be perceived as meeting the above criteria is most likely due to the fact that they have not been found. Hopefully, such omissions can be corrected in future versions of this bibliography.

III. Arrangement of Bibliography

The report is arranged in four parts: an index to the bibliography which indicates the types of breakdown data available for each gas; an author index; a list of citations with assigned numbers determined by the alphabetical order of principal author; and a list of relevant technical conferences. The index lists the gases and gas mixtures alphabetically according to the stoichiometric chemical formulae. The symbols "x" beside the reference numbers in the index indicate that they contain information on the influences of particles, surfaces, interfaces, or corona on breakdown.

IV. Definitions of Codes and Notations

All references that are cited here were entered into a computer with a corresponding code which gives an indication of the type of data which they contain. The code consists of two parts. The first part gives the gas or gases that have been included according, where possible, to their chemical formulae, and the second part gives the nature of the investigation. Included in the latter are:

a) an identifier indicating that the work is either experimental, theoretical, a review, or some combination of these;
b) an identifier indicating if the electric field configuration is either uniform or nonuniform;
c) an identifier indicating the type of voltages applied, i.e., either dc, ac (at power frequencies of 60 or 50 Hz), or impulse; and
d) an identifier of special effects considered, which was limited to:

    1) surface effects;
    2) particle effects;
    3) interface effects; and
    4) corona.

The computer code used in the categorization of each reference is defined in Table I. The code assigned to each reference consists of at least one entry each from sets 1-3, and one or more possible entries from set 4 as indicated in the Table. These codes do not appear explicitly in the present printed version, although they are implied in the index. The codes do, however, appear in the computer disk file format. It is important to emphasize that the codes have been assigned to references and not to the gases. References which include more than one gas may not necessarily include the same types of data for all gases. This is especially likely in review articles. Therefore, the index should be interpreted only as indicating the possible types of data which might be available for each gas. The actual existence of such data can, of course, only be verified by examination of the references cited.

Table I. Definition of Category Code

Set	Code	Category
1	E	Experimental
	T	Theoretical
	R	Review
2	U	Uniform Field
	N	Nonuniform Field
3	D	Direct Voltage
	A	Alternating Voltage
	I	Impulse
4	S	Surface Effects
	P	Particle Effects
	F	Interface Effects
	C	Corona

It should be noted that special difficulties were often encountered in attempting to decide on the proper code to be entered for each citation. Attention should be drawn to some of these. First it should be clear that all papers fit into one or more of the categories of experimental, theoretical, or review. There are cases where more than one of these applied. For some of these cases, however, only one category may be indicated. This was generally not an oversight, but rather a judgment based upon what appeared to be the predominant emphasis of the work.

There was another difficulty sometimes encountered in attempting to decide if a particular work applied to either uniform or nonuniform fields. Results obtained in weakly nonuniform-field gaps, e.g., sphere-sphere gaps, are often referred to in the literature as "uniform-field breakdown." Some authors, however, would disagree with this inference and prefer a stricter definition of uniformity as applied to gaps used for breakdown measurements. In cases where, despite the claims of the authors, doubt seemed to exist about the appropriateness for inclusion under uniform-field breakdown, both the uniform and nonuniform field categories were assigned even though the results for only one electrode configuration may have been reported.

Data included here under the category of alternating voltage (ac) relate only to the power frequencies of 50 or 60 Hz. Sometimes the references indicated in this category also present data at other frequencies. These, however, were not considered in determining the codes which were assigned.

In considering the category of impulse breakdown, no distinction was made as to the type of impulse voltage used. Thus, data in this category may include standard lightning and switching impulses as well as other non-standard impulse shapes and repetition rates. They may also include impulses superimposed on dc or ac voltages.

In the category of surface effects are included investigations of the dependence of breakdown on properties of the electrode surfaces such as material roughness. All other "surface" effects are placed in the category of interface effects which mainly have to do with breakdown in the gas near or along a solid insulating surface. The category of particle effects includes investigations of the role of both conducting and non-conducting solid particles on breakdown in a gas. The positions of the particles, although significant, have not been specified here. The particles may either be suspended in the gas, attached to electrodes or interface surfaces, or be in random motion in the discharge gap.

If papers are included under the category of corona, this usually means that data on corona inception or onset voltages are given. In a few special cases it may indicate that effects of corona on breakdown have been considered or evaluated. In general, corona-onset voltages give another measure of the dielectric strength of the gas can often be more easily predicted theoretically than the breakdown voltage in nonuniform-electric-field gaps.

The gases are denoted and listed alphabetically according to their presumed stoichiometric formulae with notation given if possible to indicate molecular structure. All isomers are grouped together in the index listing. For some of the more complex molecular species, such as the fluorocarbon and hydrocarbon gases, there is a lack of consistency in denoting these by chemical formulae. In some cases only names of the compounds were given without indication of their molecular structures. In a few cases it was admitted that the correct structure was unknown. Trade names or non-standard terms have also been used to denote the gases studied. Special difficulties appeared in the designations of isomers. Sometimes only the molecular stoichiometry, or relative proportions of the atomic constituents were given without regard to the actual molecular structure. Because of these difficulties, the identities of some of the organic molecular species given here may be questionable. They are listed here according to their presumed stoichiometric formulae with indications given, where possible, about the molecular structure. In some cases the specific isomers considered may not be correctly indicated here, and it may be necessary to examine the original references to determine the possible correct molecular structure. It should also be cautioned that for data obtained at very high temperatures where molecular dissociation can occur, the identity of molecular gases may be brought into question due to the possible presence of atomic species and free radicals.

For gas mixtures, the constituents are listed in alphabetical order independent of their known relative concentrations, e.g., $c\text{-}C_4F_8 + N_2 + SF_6$ and $CO_2 + He + N_2$. Air, however, is treated as a special mixture and is simply denoted here as AIR. The mixture $N_2 + O_2$ which is also listed may or may not contain the proper proportions of N_2 and O_2 to be considered as "air."

In the case of breakdown in air, the effect of humidity can be quite important. When the gas is here denoted by AIR + H_2O, it can be assumed that the data apply to humid air in which the water vapor content is known and specified. If the gas is simply denoted as AIR, then it was either indicated in the paper as being "dry" air, or the moisture content was not explicitly defined. While most authors indicate whether or not the air is "dry," some do not.

For this bibliography electrical-breakdown data in composite insulation have been included only if the gas is a major, distinct, and well-separated component. Thus, for example, breakdown in solids impregnated with gases has not been included. The possible presence of other nongaseous insulating materials has been indicated, if possible, by inclusion in one or more of the categories corresponding to surface, particle, or interface effects.

V. Acknowledgments

This report was prepared at the request and encouragement of the IEEE Insulation Society Technical Committee S-32-11 on Gaseous Dielectrics. We would like to express our appreciation for the valuable suggestions and contributions of the various members of the committee, especially Dr. S. J. Dale, Committee Chairman, Westinghouse Corp.; Dr. R. Hackam, University of Windsor, Canada; Dr. C. Miller, General Electric Company; Dr. W. Pfeiffer, Technische Hochschule, Darmstadt, West Germany; Dr. A. Pedersen, The Technical University, Lyngby, Denmark; Dr. J. K. Nelson, Rensselaer Polytechnic Institute, Troy, NY; and Dr. K. D. Srivastava, University of Waterloo, Canada.

VI. Gas Index

AIR

			PARTICLE	SURFACE	INTERFACE	CORONA
EXPERIMENTAL						
DC	UNIFORM	4				
		37		X		
		42				
		58				
		61		X		
		71				
		88		X		
		106				
		117				X
		126		X		
		138				
		140				
		145				
		148				
		151				
		164				
		168				X
		173		X		
		193				X
		194				X
		243				
		262		X		
		263				
		266				
		273				
		279			X	
		313				X
		326				
		357				X
		360				
		364		X		
		381				
		389				
		390				
		395	X			
		399				
		408				
		442				
DC	NONUNIFORM	19				X
		38			X	X
		50				
		71				
		94	X			
		118				
		141				X
		142				X
		149				X
		160				X

				PARTICLE	SURFACE	INTERFACE	CORONA
AIR (cont.)			162				X
			164				
			168				X
			174				X
			193				X
			194				X
			204				
			219				
			237				
			266				
			279			X	
			288				
			293				X
			307				
			313				X
			325				
			326				
			328				X
			332			X	
			333				
			357				X
			378				X
			379				X
			396				X
			407				X
			415				X
			421				X
			433				
			440				X
	AC	UNIFORM	36		X		
			37		X		
			47				X
			70				X
			71				
			72				X
			168				X
			173		X		
			194				X
			208		X	X	X
			279			X	
			313				X
			326				
			392				
			395	X			
	AC	NONUNIFORM	22			X	
			23			X	
			47				X
			50				
			70				X
			71				
			72				X
			87				
			94	X			
			168				X

		PARTICLE	SURFACE	INTERFACE	CORONA
AIR (cont.)	175				X
	176			X	
	182	X	X		
	194				X
	204				
	208		X	X	X
	219				
	231			X	
	257				
	279			X	
	313				X
	314		X	X	
	325				
	326				
	328				X
	358		X		
	375			X	
	407				X
	440				X
	453				
IMPULSE UNIFORM	47				X
	70				X
	71				
	72				X
	117				X
	139				
	140				
	148				
	187				
	296				
	313				X
	341				
	381				
	391				
	405				
	455				
IMPULSE NONUNIFORM	2				
	5				
	6				
	7				
	11				X
	12				X
	20				X
	26				
	27				X
	31				
	35		X		X
	47				X
	50				
	70				X
	71				
	72				X
	74				
	75				

		PARTICLE	SURFACE	INTERFACE	CORONA
AIR (cont.)	100				
	118				
	146				
	147				
	149				X
	159				
	175				X
	176			X	
	177				
	179	X			
	181				X
	189				
	191				
	210				
	213				
	220				X
	237				
	247				
	248		X	X	
	255				
	256				
	257				
	259				
	286				
	287				
	288				
	289				X
	290				
	291				
	293				X
	307				
	313				X
	327				
	332			X	
	339				
	340				
	341				
	370			X	
	371				X
	375			X	
	380				
	382				X
	388				
	407				X
	409				X
	411				X
	412				
	418		X		
	420				
	427				
	429				
	431				
	441				X
	443				X

			PARTICLE	SURFACE	INTERFACE	CORONA
AIR (cont.)		444			X	
		445				
		448				X
		449				X
		452				
		453				
		455				
		463				
THEORETICAL						
DC	UNIFORM	152				
		163				
		205				
		207				X
		209				
		232				X
		268				
		273				
		374				
		414				X
		442				
DC	NONUNIFORM	1				X
		19				X
		163				
		204				
		207				X
		216				X
		232				X
		281				X
		332			X	
		335				X
		337				X
		346				X
		385				X
		414				X
AC	UNIFORM	36		X		
AC	NONUNIFORM	204				
		257				
IMPULSE	UNIFORM	297				
IMPULSE	NONUNIFORM	5				
		7				
		13				
		147				
		189				
		192				
		210				
		211				
		235				
		255				
		257				
		265				
		332			X	
		383				X
		384				X

				PARTICLE	SURFACE	INTERFACE	CORONA
AIR (cont.)							
REVIEW							
	DC	UNIFORM	45				X
			48				
			66		X		X
			71				
			73		X		
			88		X		
			96	X	X	X	
			105				
			119		X		
			148				
			163				
			209				
			244		X		X
			260		X		
			264				X
			285		X	X	X
			334		X		X
			368				
			422				X
			435				
	DC	NONUNIFORM	45				X
			48				
			66		X		X
			71				
			73		X		
			96	X	X	X	
			158				X
			163				
			204				
			234				
			244		X		X
			260		X		
			264				X
			285		X	X	X
			334		X		X
			422				X
			447				X
	AC	UNIFORM	45				X
			66		X		X
			70				X
			71				
			73		X		
			96	X	X	X	
			105				
			285		X	X	X
			422				X
	AC	NONUNIFORM	45				X
			66		X		X
			70				X
			71				
			73		X		
			96	X	X	X	

		PARTICLE	SURFACE	INTERFACE	CORONA
AIR (cont.)	204				
	212				
	222		X	X	
	234				
	257				
	285		X	X	X
	422				X
	447				X
IMPULSE UNIFORM	45				X
	70				X
	71				
	73		X		
	96	X	X	X	
	148				
	244		X		X
	285		X	X	X
	422				X
IMPULSE NONUNIFORM	35		X		X
	45				X
	70				X
	71				
	73		X		
	96	X	X	X	
	212				
	221				
	222		X	X	
	234				
	244		X		X
	257				
	285		X	X	X
	422				X
	447				X
AIR+CCl_2F_2					
REVIEW					
DC UNIFORM	96	X	X	X	
DC NONUNIFORM	96	X	X	X	
AC UNIFORM	96	X	X	X	
AC NONUNIFORM	96	X	X	X	
IMPULSE UNIFORM	96	X	X	X	
IMPULSE NONUNIFORM	96	X	X	X	
AIR+CO_2					
EXPERIMENTAL					
DC NONUNIFORM	160				X
AIR+H_2					
EXPERIMENTAL					
DC UNIFORM	262		X		
AIR+H_2O					
EXPERIMENTAL					
DC UNIFORM	8				
	58				

			PARTICLE	SURFACE	INTERFACE	CORONA
AIR+H_2O (cont.)		61		X		
		238				
		243				
		357				X
		361				
		381				
		387				
		393				
		394				
DC	NONUNIFORM	160				X
		162				X
		328				X
		357				X
		387				
		433				
AC	NONUNIFORM	176			X	
		328				X
		375			X	
		386				
		453				
IMPULSE	UNIFORM	187				
		381				
		387				
IMPULSE	NONUNIFORM	2				
		9				
		10				
		11				X
		35		X		X
		69				
		176			X	
		177				
		179	X			
		180				
		226				
		240				
		241				
		247				
		248		X	X	
		287				
		318				X
		371				X
		375			X	
		386				
		387				
		388				
		410				
		420				
		426				
		428				
		430				
		431				
		432			X	
		439				
		444			X	

			PARTICLE	SURFACE	INTERFACE	CORONA
AIR+H_2O (cont.)		446				X
		453				
REVIEW						
DC	UNIFORM	45				X
		96	X	X	X	
		244		X		X
		285		X	X	X
		422				X
DC	NONUNIFORM	45				X
		96	X	X	X	
		244		X		X
		285		X	X	X
		422				X
		447				X
AC	UNIFORM	45				X
		96	X	X	X	
		285		X	X	X
		422				X
AC	NONUNIFORM	45				X
		96	X	X	X	
		222		X	X	
		285		X	X	X
		422				X
		447				X
IMPULSE	UNIFORM	45				X
		96	X	X	X	
		244		X		X
		285		X	X	X
		422				X
IMPULSE	NONUNIFORM	35		X		X
		45				X
		96	X	X	X	
		222		X	X	
		244		X		X
		285		X	X	X
		422				X
		447				X
AIR+N_2						
EXPERIMENTAL						
DC	UNIFORM	88		X		
REVIEW						
DC	UNIFORM	88		X		
AIR+NO+NO_2						
EXPERIMENTAL						
DC	NONUNIFORM	160				X
AIR+SF_6						
EXPERIMENTAL						
DC	UNIFORM	88		X		
		245				X
		273				
		276				

				PARTICLE	SURFACE	INTERFACE	CORONA
AIR+SF_6 (cont.)			278				
			399				
	DC	NONUNIFORM	245				X
			274				X
	AC	NONUNIFORM	133				
	IMPULSE	UNIFORM	245				X
	IMPULSE	NONUNIFORM	133				
			245				X
			382				X
			443				X
THEORETICAL							
	DC	UNIFORM	273				
			278				
			316				X
	DC	NONUNIFORM	316				X
REVIEW							
	DC	UNIFORM	88		X		
			251	X	X		X
			270	X	X		
			435				
	DC	NONUNIFORM	251	X	X		X
			270	X	X		
	AC	UNIFORM	251	X	X		X
	AC	NONUNIFORM	251	X	X		X
	IMPULSE	UNIFORM	270	X	X		
	IMPULSE	NONUNIFORM	270	X	X		
Ar							
EXPERIMENTAL							
	DC	UNIFORM	81				
			82				
			157		X		
			164				
			196				
			197				
			198				
			199				
			224		X		
			292				
			329				
			353				
			389				
			390				
	DC	NONUNIFORM	107				X
			149				X
			164				
			170		X		X
			309				
	AC	NONUNIFORM	67			X	
	IMPULSE	UNIFORM	139				
			224		X		
			324	X			
	IMPULSE	NONUNIFORM	149				X
			324	X			

				PARTICLE	SURFACE	INTERFACE	CORONA
Ar (cont.)							
THEORETICAL							
	DC	UNIFORM	163				
	DC	NONUNIFORM	163				
	IMPULSE	UNIFORM	324	X			
	IMPULSE	NONUNIFORM	324	X			
REVIEW							
	DC	UNIFORM	45				X
			64				
			66		X		X
			92	X	X	X	
			163				
			244		X		X
			253				
			260		X		
			261		X		
			264				X
			280		X	X	
			285		X	X	X
			334		X		X
			438				
	DC	NONUNIFORM	45				X
			66		X		X
			163				
			244		X		X
			260		X		
			264				X
			285		X	X	X
			334		X		X
	AC	UNIFORM	45				X
			66		X		X
			285		X	X	X
	AC	NONUNIFORM	45				X
			66		X		X
			285		X	X	X
	IMPULSE	UNIFORM	45				X
			92	X	X	X	
			244		X		X
			285		X	X	X
	IMPULSE	NONUNIFORM	45				X
			244		X		X
			285		X	X	X
$Ar+C_2H_2$							
EXPERIMENTAL							
	DC	UNIFORM	198				
$Ar+C_2H_4$							
EXPERIMENTAL							
	DC	UNIFORM	198				
			199				

				PARTICLE	SURFACE	INTERFACE	CORONA
$Ar+C_2H_6$							
EXPERIMENTAL							
	DC	UNIFORM	197				
$Ar+C_3F_8$							
EXPERIMENTAL							
	DC	UNIFORM	81				
$Ar+C_3H_8$							
EXPERIMENTAL							
	DC	UNIFORM	196				
$Ar+C_4H_8$							
EXPERIMENTAL							
	DC	UNIFORM	199				
$Ar+n-C_5H_{12}$							
EXPERIMENTAL							
	DC	UNIFORM	198				
	DC	UNIFORM	199				
$Ar+C_6H_6$							
EXPERIMENTAL							
	DC	UNIFORM	199				
$Ar+n-C_8H_{18}$							
EXPERIMENTAL							
	DC	UNIFORM	199				
$Ar+CH_4$							
EXPERIMENTAL							
	DC	UNIFORM	196				
$Ar+CO_2$							
EXPERIMENTAL							
	DC	NONUNIFORM	107				X
Ar+Cs							
EXPERIMENTAL							
	DC	UNIFORM	127				
$Ar+H_2$							
REVIEW							
	DC	UNIFORM	264				X
	DC	NONUNIFORM	264				X
$Ar+H_2O$							
REVIEW							
	DC	UNIFORM	244		X		X
			264				X
	DC	NONUNIFORM	244		X		X
			264				X
	IMPULSE	UNIFORM	244		X		X
	IMPULSE	NONUNIFORM	244		X		X

				PARTICLE	SURFACE	INTERFACE	CORONA
Ar+He							
EXPERIMENTAL							
DC	UNIFORM		80		X		
Ar+Hg							
REVIEW							
DC	UNIFORM		264				X
DC	NONUNIFORM		264				X
Ar+Hg+Ne							
EXPERIMENTAL							
DC	UNIFORM		345		X		
Ar+K							
EXPERIMENTAL							
DC	UNIFORM		127				
Ar+N_2							
EXPERIMENTAL							
DC	NONUNIFORM		107				X
REVIEW							
DC	UNIFORM		264				X
DC	NONUNIFORM		264				X
Ar+N_2+SF_6							
EXPERIMENTAL							
DC	UNIFORM		82				
Ar+Na							
EXPERIMENTAL							
DC	UNIFORM		127				
Ar+Ne							
EXPERIMENTAL							
DC	UNIFORM		77				
			345		X		
DC	NONUNIFORM		107				X
REVIEW							
DC	UNIFORM		45				X
			66		X		X
			244		X		X
			280		X	X	
DC	NONUNIFORM		45				X
			66		X		X
			244		X		X
AC	UNIFORM		45				X
			66		X		X
AC	NONUNIFORM		45				X
			66		X		X
IMPULSE	UNIFORM		45				X
			244		X		X
IMPULSE	NONUNIFORM		45				X
			244		X		X

				PARTICLE	SURFACE	INTERFACE	CORONA
$Ar+O_2$							
EXPERIMENTAL							
	DC	NONUNIFORM	107				X
REVIEW							
	DC	UNIFORM	264				X
	DC	NONUNIFORM	264				X
$Ar+SF_6$							
EXPERIMENTAL							
	DC	UNIFORM	82				
BCl_3							
REVIEW							
	DC	UNIFORM	45				X
			285		X	X	X
			438				
	DC	NONUNIFORM	45				X
			285		X	X	X
	AC	UNIFORM	45				X
			285		X	X	X
	AC	NONUNIFORM	45				X
			285		X	X	X
	IMPULSE	UNIFORM	45				X
			285		X	X	X
	IMPULSE	NONUNIFORM	45				X
			285		X	X	X
BF_3							
EXPERIMENTAL							
	DC	UNIFORM	110				
	DC	NONUNIFORM	283				
REVIEW							
	DC	UNIFORM	45				X
			438				
	DC	NONUNIFORM	45				X
	AC	UNIFORM	45				X
	AC	NONUNIFORM	45				X
	IMPULSE	UNIFORM	45				X
	IMPULSE	NONUNIFORM	45				X
Br_2							
EXPERIMENTAL							
	DC	UNIFORM	367				
			373				
THEORETICAL							
	DC	UNIFORM	373				
$C_{10}F_{18}$							
EXPERIMENTAL							
	DC	UNIFORM	315				
$n-C_{10}H_{22}$							
EXPERIMENTAL							
	DC	UNIFORM	301				

				PARTICLE	SURFACE	INTERFACE	CORONA
$C_{11}F_{20}$							
EXPERIMENTAL							
	DC	UNIFORM	315				
$C_{12}F_{27}N$							
EXPERIMENTAL							
	AC	UNIFORM	33				
			70				X
	AC	NONUNIFORM	33				
			70				X
	IMPULSE	UNIFORM	33				
			70				X
	IMPULSE	NONUNIFORM	33				
			70				X
REVIEW							
	DC	UNIFORM	32				
			45				X
			438				
	DC	NONUNIFORM	45				X
	AC	UNIFORM	45				X
			70				X
	AC	NONUNIFORM	45				X
			70				X
	IMPULSE	UNIFORM	45				X
			70				X
	IMPULSE	NONUNIFORM	45				X
			70				X
$C_{14}F_{24}$							
EXPERIMENTAL							
	AC	UNIFORM	70				X
	AC	NONUNIFORM	70				X
	IMPULSE	UNIFORM	70				X
	IMPULSE	NONUNIFORM	70				X
		REVIEW					
	DC	UNIFORM	45				X
			150				
			438				
	DC	NONUNIFORM	45				X
			150				
	AC	UNIFORM	45				X
			70				X
			150				
	AC	NONUNIFORM	45				X
			70				X
			150				
	IMPULSE	UNIFORM	45				X
			70				X
			150				
	IMPULSE	NONUNIFORM	45				X
			70				X
			150				

			PARTICLE	SURFACE	INTERFACE	CORONA
$C_2Cl_2F_4$						
EXPERIMENTAL						
DC	UNIFORM	114				
		203				
DC	NONUNIFORM	114				
AC	UNIFORM	392				
IMPULSE	UNIFORM	139				
REVIEW						
DC	UNIFORM	45				X
		73		X		
		203				
		258				X
		285		X	X	X
		437				
		438				
DC	NONUNIFORM	45				X
		73		X		
		258				X
		285		X	X	X
AC	UNIFORM	45				X
		73		X		
		285		X	X	X
AC	NONUNIFORM	45				X
		73		X		
		285		X	X	X
IMPULSE	UNIFORM	45				X
		73		X		
		258				X
		285		X	X	X
IMPULSE	NONUNIFORM	45				X
		73		X		
		258				X
		285		X	X	X
$C_2Cl_3F_3$						
EXPERIMENTAL						
DC	UNIFORM	114				
		156				
DC	NONUNIFORM	114				
		155				
THEORETICAL						
DC	UNIFORM	156				
REVIEW						
DC	UNIFORM	45				X
		73		X		
		150				
		258				X
		285		X	X	X
		438				
DC	NONUNIFORM	45				X
		73		X		
		150				
		258				X
		285		X	X	X

			PARTICLE	SURFACE	INTERFACE	CORONA
$C_2Cl_3F_3$ (cont.)						
AC	UNIFORM	45				X
		73		X		
		150				
		285		X	X	X
AC	NONUNIFORM	45				X
		73		X		
		150				
		285		X	X	X
IMPULSE	UNIFORM	45				X
		73		X		
		150				
		258				X
		285		X	X	X
IMPULSE	NONUNIFORM	45				X
		73		X		
		150				
		258				X
		285		X	X	X
1,1,1-$C_2Cl_3F_3$						
REVIEW						
DC	UNIFORM	64				
1,1,2-$C_2Cl_3F_3$						
REVIEW						
DC	UNIFORM	64				
$C_2Cl_3F_3$+SF_6						
EXPERIMENTAL						
DC	UNIFORM	156				
THEORETICAL						
DC	UNIFORM	156				
$C_2Cl_4F_2$						
REVIEW						
DC	UNIFORM	73		X		
DC	NONUNIFORM	73		X		
AC	UNIFORM	73		X		
AC	NONUNIFORM	73		X		
IMPULSE	UNIFORM	73		X		
IMPULSE	NONUNIFORM	73		X		
C_2ClF_3						
EXPERIMENTAL						
DC	UNIFORM	114				
DC	NONUNIFORM	114				
REVIEW						
DC	UNIFORM	64				
		73		X		
		253				
DC	NONUNIFORM	73		X		
AC	UNIFORM	73		X		
AC	NONUNIFORM	73		X		

				PARTICLE	SURFACE	INTERFACE	CORONA
C_2ClF_3 (cont.)							
	IMPULSE	UNIFORM	73		X		
	IMPULSE	NONUNIFORM	73		X		
C_2ClF_5							
EXPERIMENTAL							
	DC	UNIFORM	114				
	DC	NONUNIFORM	114				
	AC	UNIFORM	392				
REVIEW							
	DC	UNIFORM	45				X
			73		X		
			150				
			253				
			437				
			438				
	DC	NONUNIFORM	45				X
			73		X		
			150				
	AC	UNIFORM	45				X
			73		X		
			150				
	AC	NONUNIFORM	45				X
			73		X		
			150				
	IMPULSE	UNIFORM	45				X
			73		X		
			150				
	IMPULSE	NONUNIFORM	45				X
			73		X		
			150				
C_2ClF_6							
REVIEW							
	DC	UNIFORM	258				X
	DC	NONUNIFORM	258				X
	IMPULSE	UNIFORM	258				X
	IMPULSE	NONUNIFORM	258				X
C_2F_2							
REVIEW							
	DC	UNIFORM	253				
C_2F_3N							
EXPERIMENTAL							
	DC	UNIFORM	114				
	DC	NONUNIFORM	114				
REVIEW							
	DC	UNIFORM	45				X
			150				
			280		X	X	
			435				
			436				
			437				

			PARTICLE	SURFACE	INTERFACE	CORONA
C_2F_3N (cont.)		438				
DC	NONUNIFORM	45				X
		150				
AC	UNIFORM	45				X
		150				
AC	NONUNIFORM	45				X
		150				
IMPULSE	UNIFORM	45				X
		150				
IMPULSE	NONUNIFORM	45				X
		150				
C_2F_6						
EXPERIMENTAL						
DC	UNIFORM	55				
		63				
		114				
		310				
DC	NONUNIFORM	114				
AC	UNIFORM	33				
		72				X
		392				
		457				
AC	NONUNIFORM	33				
		72				X
		457				
		460				
IMPULSE	UNIFORM	33				
		72				X
IMPULSE	NONUNIFORM	33				
		72				X
THEORETICAL						
DC	UNIFORM	55				
REVIEW						
DC	UNIFORM	45				X
		64				
		73		X		
		150				
		253				
		258				X
		435				
		436				
		437				
		438				
DC	NONUNIFORM	45				X
		73		X		
		150				
		258				X
AC	UNIFORM	45				X
		73		X		
		150				
AC	NONUNIFORM	45				X
		73		X		
		150				

			PARTICLE	SURFACE	INTERFACE	CORONA
C_2F_6 (cont.)						
IMPULSE	UNIFORM	45				X
		73		X		
		150				
		258				X
IMPULSE	NONUNIFORM	45				X
		73		X		
		150				
		258				X
C_2F_6O						
REVIEW						
DC	UNIFORM	253				
C_2F_6S						
REVIEW						
DC	UNIFORM	253				
C_2H_2						
EXPERIMENTAL						
DC	UNIFORM	198				
		201				
		202				
DC	NONUNIFORM	169				
THEORETICAL						
DC	UNIFORM	342				
		343				
REVIEW						
DC	UNIFORM	64				
		253				
		258				X
		437				
		438				
DC	NONUNIFORM	258				X
IMPULSE	UNIFORM	258				X
IMPULSE	NONUNIFORM	258				X
1,1,1-$C_2H_3F_3$+2-C_4F_6						
EXPERIMENTAL						
DC	UNIFORM	83				
1,1,1-$C_2H_3F_3$+2-C_4F_8						
EXPERIMENTAL						
DC	UNIFORM	85				
DC	NONUNIFORM	85				
THEORETICAL						
DC	UNIFORM	317				
1,1,1-$C_2H_3F_3$+SF_6						
EXPERIMENTAL						
DC	UNIFORM	83				
		85				
DC	NONUNIFORM	85				

			PARTICLE	SURFACE	INTERFACE	CORONA
$1,1,1\text{-}C_2H_3F_3+SF_6$ (cont.)						
THEORETICAL						
DC	UNIFORM	317				
C_2H_3N						
EXPERIMENTAL						
DC	UNIFORM	83				
REVIEW						
DC	UNIFORM	64				
$C_2H_3N+SF_6$						
EXPERIMENTAL						
DC	UNIFORM	83				
C_2H_4						
EXPERIMENTAL						
DC	UNIFORM	104				
		198				
		200				
		201				
		202				
DC	NONUNIFORM	104				
REVIEW						
DC	UNIFORM	45				X
		258				X
		280		X	X	
DC	NONUNIFORM	45				X
		258				X
AC	UNIFORM	45				X
AC	NONUNIFORM	45				X
IMPULSE	UNIFORM	45				X
		258				X
IMPULSE	NONUNIFORM	45				X
		258				X
C_2H_4+Kr						
EXPERIMENTAL						
DC	UNIFORM	200				
REVIEW						
DC	UNIFORM	45				X
DC	NONUNIFORM	45				X
AC	UNIFORM	45				X
AC	NONUNIFORM	45				X
IMPULSE	UNIFORM	45				X
IMPULSE	NONUNIFORM	45				X
$C_2H_4Cl_2$						
REVIEW						
DC	UNIFORM	285		X	X	X
DC	NONUNIFORM	285		X	X	X
AC	UNIFORM	285		X	X	X
AC	NONUNIFORM	285		X	X	X
IMPULSE	UNIFORM	285		X	X	X
IMPULSE	NONUNIFORM	285		X	X	X

				PARTICLE	SURFACE	INTERFACE	CORONA
1,1-$C_2H_4Cl_2$							
REVIEW							
	DC	UNIFORM	64				
C_2H_4O							
REVIEW							
	DC	UNIFORM	437				
			438				
C_2H_5Br							
REVIEW							
	DC	UNIFORM	285		X	X	X
	DC	NONUNIFORM	285		X	X	X
	AC	UNIFORM	285		X	X	X
	AC	NONUNIFORM	285		X	X	X
	IMPULSE	UNIFORM	285		X	X	X
	IMPULSE	NONUNIFORM	285		X	X	X
C_2H_5Cl							
REVIEW							
	DC	UNIFORM	45				X
			285		X	X	X
			437				
			438				
	DC	NONUNIFORM	45				X
			285		X	X	X
	AC	UNIFORM	45				X
			285		X	X	X
	AC	NONUNIFORM	45				X
			285		X	X	X
	IMPULSE	UNIFORM	45				X
			285		X	X	X
	IMPULSE	NONUNIFORM	45				X
			285		X	X	X
C_2H_5I							
REVIEW							
	DC	UNIFORM	285		X	X	X
	DC	NONUNIFORM	285		X	X	X
	AC	UNIFORM	285		X	X	X
	AC	NONUNIFORM	285		X	X	X
	IMPULSE	UNIFORM	285		X	X	X
	IMPULSE	NONUNIFORM	285		X	X	X
C_2H_6							
EXPERIMENTAL							
	DC	UNIFORM	114				
			115				
			197				
			201				
			202				
	DC	NONUNIFORM	114				
			115				

				PARTICLE	SURFACE	INTERFACE	CORONA
n-C_2H_6							
REVIEW							
DC	UNIFORM	258					X
DC	NONUNIFORM	258					X
IMPULSE	UNIFORM	258					X
IMPULSE	NONUNIFORM	258					X
C_2H_7N							
REVIEW							
DC	UNIFORM	437					
		438					
C_2N_2							
EXPERIMENTAL							
DC	NONUNIFORM	283					
C_3F_5N							
EXPERIMENTAL							
DC	UNIFORM	114					
DC	NONUNIFORM	114					
REVIEW							
DC	UNIFORM	45					X
		150					
		280			X	X	
		435					
		436					
		437					
		438					
DC	NONUNIFORM	45					X
		150					
AC	UNIFORM	45					X
		150					
AC	NONUNIFORM	45					X
		150					
IMPULSE	UNIFORM	45					X
		150					
IMPULSE	NONUNIFORM	45					X
		150					
C_3F_6							
EXPERIMENTAL							
DC	UNIFORM	21					
REVIEW							
DC	UNIFORM	64					
		150					
		253					
DC	NONUNIFORM	150					
AC	UNIFORM	150					
AC	NONUNIFORM	150					
IMPULSE	UNIFORM	150					
IMPULSE	NONUNIFORM	150					

					PARTICLE	SURFACE	INTERFACE	CORONA
c-C_3F_6								
	REVIEW							
		DC	UNIFORM	253				
C_3F_6+SF_6								
	THEORETICAL							
		DC	UNIFORM	78				
C_3F_6+SO_2								
	THEORETICAL							
		DC	UNIFORM	78				
C_3F_6O								
	EXPERIMENTAL							
		DC	UNIFORM	114				
		DC	NONUNIFORM	114				
C_3F_8								
	EXPERIMENTAL							
		DC	UNIFORM	81				
				114				
				304				
				310				
		DC	NONUNIFORM	114				
		AC	UNIFORM	33				
				70				X
				72				X
				457				
		AC	NONUNIFORM	33				
				70				X
				72				X
				457				
				460				
		IMPULSE	UNIFORM	33				
				70				X
				72				X
		IMPULSE	NONUNIFORM	33				
				70				X
				72				X
				452				
	THEORETICAL							
		DC	UNIFORM	65				
				103				
				165				
		DC	NONUNIFORM	103				
	REVIEW							
		DC	UNIFORM	32				
				45				X
				64				
				65				
				73		X		
				150				
				165				
				253				

			PARTICLE	SURFACE	INTERFACE	CORONA
C_3F_8 (cont.)		258				X
		436				
		437				
		438				
DC	NONUNIFORM	45				X
		73		X		
		150				
		258				X
AC	UNIFORM	45				X
		70				X
		73		X		
		150				
AC	NONUNIFORM	45				X
		70				X
		73		X		
		150				
IMPULSE	UNIFORM	45				X
		70				X
		73		X		
		150				
		258				X
IMPULSE	NONUNIFORM	45				X
		70				X
		73		X		
		150				
		258				X
c-C_3F_8						
EXPERIMENTAL						
DC	UNIFORM	331				
DC	NONUNIFORM	331				
REVIEW						
DC	UNIFORM	331				
DC	NONUNIFORM	331				
C_3F_8+C_4F_6+N_2+SF_6						
THEORETICAL						
DC	UNIFORM	65				
REVIEW						
DC	UNIFORM	65				
C_3F_8+CO_2						
THEORETICAL						
DC	UNIFORM	65				
REVIEW						
DC	UNIFORM	65				
C_3F_8+CO_2+N_2						
THEORETICAL						
DC	UNIFORM	65				
REVIEW						
DC	UNIFORM	65				

			PARTICLE	SURFACE	INTERFACE	CORONA
$C_3F_8+N_2$						
THEORETICAL						
DC	UNIFORM	65				
REVIEW						
DC	UNIFORM	65				
$C_3F_8+N_2+SF_6$						
THEORETICAL						
DC	UNIFORM	65				
REVIEW						
DC	UNIFORM	65				
C_3F_9N						
REVIEW						
DC	UNIFORM	253				
$C_3H_3F_3$						
REVIEW						
DC	UNIFORM	64				
C_3H_3I						
REVIEW						
DC	UNIFORM	285		X	X	X
DC	NONUNIFORM	285		X	X	X
AC	UNIFORM	285		X	X	X
AC	NONUNIFORM	285		X	X	X
IMPULSE	UNIFORM	285		X	X	X
IMPULSE	NONUNIFORM	285		X	X	X
C_3H_4						
REVIEW						
DC	UNIFORM	253				
C_3H_6						
EXPERIMENTAL						
DC	UNIFORM	104				
		195				
		200				
		201				
		202				
DC	NONUNIFORM	104				
REVIEW						
DC	UNIFORM	45				X
		253				
		258				X
DC	NONUNIFORM	45				X
		258				X
AC	UNIFORM	45				X
AC	NONUNIFORM	45				X
IMPULSE	UNIFORM	45				X
		258				X
IMPULSE	NONUNIFORM	45				X
		258				X

				PARTICLE	SURFACE	INTERFACE	CORONA
$c-C_3H_6$							
EXPERIMENTAL							
	DC	UNIFORM	104				
	DC	NONUNIFORM	104				
REVIEW							
	DC	UNIFORM	253				
C_3H_6+Kr							
EXPERIMENTAL							
	DC	UNIFORM	200				
REVIEW							
	DC	UNIFORM	45				X
	DC	NONUNIFORM	45				X
	AC	UNIFORM	45				X
	AC	NONUNIFORM	45				X
	IMPULSE	UNIFORM	45				X
	IMPULSE	NONUNIFORM	45				X
C_3H_7Cl							
REVIEW							
	DC	UNIFORM	285		X	X	X
	DC	NONUNIFORM	285		X	X	X
	AC	UNIFORM	285		X	X	X
	AC	NONUNIFORM	285		X	X	X
	IMPULSE	UNIFORM	285		X	X	X
	IMPULSE	NONUNIFORM	285		X	X	X
C_3H_8							
EXPERIMENTAL							
	DC	UNIFORM	114				
			115				
			196				
			201				
			202				
	DC	NONUNIFORM	114				
			115				
$n-C_3H_8$							
REVIEW							
	DC	UNIFORM	258				X
	DC	NONUNIFORM	258				X
	IMPULSE	UNIFORM	258				X
	IMPULSE	NONUNIFORM	258				X
C_4F_{10}							
EXPERIMENTAL							
	DC	UNIFORM	114				
			310				
			366				
	DC	NONUNIFORM	114				
	AC	UNIFORM	33				
			72				X
			457				
	AC	NONUNIFORM	33				

				PARTICLE	SURFACE	INTERFACE	CORONA
C_4F_{10} (cont.)			72				X
			457				
			460				
	IMPULSE	UNIFORM	33				
			72				X
	IMPULSE	NONUNIFORM	33				
			72				X
REVIEW							
	DC	UNIFORM	45				X
			73		X		
			150				
			258				X
			436				
			437				
			438				
	DC	NONUNIFORM	45				X
			73		X		
			150				
			258				X
	AC	UNIFORM	45				X
			73		X		
			150				
	AC	NONUNIFORM	45				X
			73		X		
			150				
	IMPULSE	UNIFORM	45				X
			73		X		
			150				
			258				X
	IMPULSE	NONUNIFORM	45				X
			73		X		
			150				
			258				X
$C_4F_{10}+N_2$							
EXPERIMENTAL							
	AC	UNIFORM	72				X
	AC	NONUNIFORM	72				X
	IMPULSE	UNIFORM	72				X
	IMPULSE	NONUNIFORM	72				X
$n\text{-}C_4F_{10}+N_2$							
EXPERIMENTAL							
	AC	UNIFORM	47				X
	AC	NONUNIFORM	47				X
	IMPULSE	UNIFORM	47				X
	IMPULSE	NONUNIFORM	47				X
$C_4F_{10}O$							
REVIEW							
	DC	UNIFORM	73		X		
	DC	NONUNIFORM	73		X		
	AC	UNIFORM	73		X		
	AC	NONUNIFORM	73		X		

			PARTICLE	SURFACE	INTERFACE	CORONA
$C_4F_{10}O$ (cont.)						
IMPULSE	UNIFORM	73		X		
IMPULSE	NONUNIFORM	73		X		
C_4F_2						
EXPERIMENTAL						
DC	UNIFORM	114				
DC	NONUNIFORM	114				
C_4F_4						
REVIEW						
DC	UNIFORM	438				
C_4F_6						
EXPERIMENTAL						
DC	UNIFORM	114				
		330				
DC	NONUNIFORM	114				
THEORETICAL						
DC	UNIFORM	65				
		165				
		167				
REVIEW						
DC	UNIFORM	45				X
		64				
		65				
		150				
		165				
		253				
		270	X	X		
		438				
DC	NONUNIFORM	45				X
		150				
		270	X	X		
AC	UNIFORM	45				X
		150				
AC	NONUNIFORM	45				X
		150				
IMPULSE	UNIFORM	45				X
		150				
		270	X	X		
IMPULSE	NONUNIFORM	45				X
		150				
		270	X	X		
1,3-C_4F_6						
EXPERIMENTAL						
DC	UNIFORM	331				
DC	NONUNIFORM	331				
REVIEW						
DC	UNIFORM	331				
DC	NONUNIFORM	331				

				PARTICLE	SURFACE	INTERFACE	CORONA
2-C_4F_6							
EXPERIMENTAL							
	DC	UNIFORM	331				
	DC	NONUNIFORM	331				
REVIEW							
	DC	UNIFORM	331				
	DC	NONUNIFORM	331				
c-C_4F_6							
EXPERIMENTAL							
	DC	UNIFORM	331				
	DC	NONUNIFORM	331				
REVIEW							
	DC	UNIFORM	270	X	X		
			331				
	DC	NONUNIFORM	270	X	X		
			331				
	IMPULSE	UNIFORM	270	X	X		
	IMPULSE	NONUNIFORM	270	X	X		
2-C_4F_6+CH_2F_2							
EXPERIMENTAL							
	DC	UNIFORM	83				
2-C_4F_6+CHF_3							
EXPERIMENTAL							
	DC	UNIFORM	83				
C_4F_6+CO_2							
THEORETICAL							
	DC	UNIFORM	65				
REVIEW							
	DC	UNIFORM	65				
C_4F_6+CO_2+N_2							
THEORETICAL							
	DC	UNIFORM	65				
REVIEW							
	DC	UNIFORM	65				
C_4F_6+N_2							
THEORETICAL							
	DC	UNIFORM	65				
REVIEW							
	DC	UNIFORM	65				
C_4F_6+N_2+SF_6							
EXPERIMENTAL							
	DC	UNIFORM	330				
THEORETICAL							
	DC	UNIFORM	65				
REVIEW							
	DC	UNIFORM	65				

				PARTICLE	SURFACE	INTERFACE	CORONA
$C_4F_6+SF_6$							
THEORETICAL							
	DC	UNIFORM	65				
			167				
REVIEW							
	DC	UNIFORM	65				
C_4F_7N							
EXPERIMENTAL							
	DC	UNIFORM	114				
	DC	NONUNIFORM	114				
REVIEW							
	DC	UNIFORM	45				X
			150				
			435				
			436				
			437				
			438				
	DC	NONUNIFORM	45				X
			150				
	AC	UNIFORM	45				X
			150				
	AC	NONUNIFORM	45				X
			150				
	IMPULSE	UNIFORM	45				X
			150				
	IMPULSE	NONUNIFORM	45				X
			150				
C_4F_8							
EXPERIMENTAL							
	DC	UNIFORM	330				
	AC	UNIFORM	72				X
			392				
	AC	NONUNIFORM	72				X
	IMPULSE	UNIFORM	72				X
	IMPULSE	NONUNIFORM	72				X
REVIEW							
	DC	UNIFORM	45				X
			150				
			270	X	X		
			436				
			437				
			438				
	DC	NONUNIFORM	45				X
			150				
			270	X	X		
	AC	UNIFORM	45				X
			150				
	AC	NONUNIFORM	45				X
			150				
	IMPULSE	UNIFORM	45				X
			150				

				PARTICLE	SURFACE	INTERFACE	CORONA
C_4F_8 (cont.)			270	X	X		
	IMPULSE	NONUNIFORM	45				X
			150				
			270	X	X		
$2\text{-}C_4F_8$							
EXPERIMENTAL							
	DC	UNIFORM	331				
	DC	NONUNIFORM	331				
REVIEW							
	DC	UNIFORM	331				
	DC	NONUNIFORM	331				
$c\text{-}C_4F_8$							
EXPERIMENTAL							
	DC	UNIFORM	83				
			114				
			311				
			330				
			331				
	DC	NONUNIFORM	114				
			331				
	AC	UNIFORM	47				X
	AC	NONUNIFORM	47				X
	IMPULSE	UNIFORM	47				X
			139				
	IMPULSE	NONUNIFORM	47				X
THEORETICAL							
	DC	UNIFORM	65				
			165				
			167				
REVIEW							
	DC	UNIFORM	64				
			65				
			150				
			165				
			253				
			258				X
			270	X	X		
			331				
	DC	NONUNIFORM	150				
			258				X
			270	X	X		
			331				
	AC	UNIFORM	150				
	AC	NONUNIFORM	150				
	IMPULSE	UNIFORM	150				
			258				X
			270	X	X		
	IMPULSE	NONUNIFORM	150				
			258				X
			270	X	X		

PARTICLE SURFACE INTERFACE CORONA

iso-C_4F_8

EXPERIMENTAL		
DC	UNIFORM	311
REVIEW		
DC	UNIFORM	150
DC	NONUNIFORM	150
AC	UNIFORM	150
AC	NONUNIFORM	150
IMPULSE	UNIFORM	150
IMPULSE	NONUNIFORM	150

c-C_4F_8+1,1,1-$C_2H_3F_3$

EXPERIMENTAL		
DC	UNIFORM	83
		85
DC	NONUNIFORM	85
THEORETICAL		
DC	UNIFORM	317

c-C_4F_8+1-C_3F_6

EXPERIMENTAL		
DC	UNIFORM	83

c-C_4F_8+C_2H_3N

EXPERIMENTAL		
DC	UNIFORM	83

c-C_4F_8+C_4F_6+N_2+SF_6

EXPERIMENTAL		
DC	UNIFORM	330

c-C_4F_8+CF_4

EXPERIMENTAL		
DC	UNIFORM	83
THEORETICAL		
DC	UNIFORM	317

2-C_4F_8+CHF_3

EXPERIMENTAL		
DC	UNIFORM	85
DC	NONUNIFORM	85

c-C_4F_8+CHF_3

EXPERIMENTAL		
DC	UNIFORM	83
		85
DC	NONUNIFORM	85
THEORETICAL		
DC	UNIFORM	317

c-C_4F_8+CO

EXPERIMENTAL		
AC	NONUNIFORM	363
IMPULSE	NONUNIFORM	363

				PARTICLE	SURFACE	INTERFACE	CORONA
$c-C_4F_8+CO+SF_6$							
EXPERIMENTAL							
AC	NONUNIFORM	363					
IMPULSE	NONUNIFORM	363					
$c-C_4F_8+CO_2$							
THEORETICAL							
DC	UNIFORM	65					
REVIEW							
DC	UNIFORM	65					
$c-C_4F_8+CO_2+N_2$							
THEORETICAL							
DC	UNIFORM	65					
REVIEW							
DC	UNIFORM	65					
$2-C_4F_8+N_2$							
EXPERIMENTAL							
DC	UNIFORM	85					
DC	NONUNIFORM	85					
THEORETICAL							
DC	UNIFORM	317					
$c-C_4F_8+N_2$							
EXPERIMENTAL							
DC	UNIFORM	85					
DC	NONUNIFORM	85					
AC	UNIFORM	47					X
AC	NONUNIFORM	47					X
IMPULSE	UNIFORM	47					X
IMPULSE	NONUNIFORM	47					X
THEORETICAL							
DC	UNIFORM	65					
		317					
REVIEW							
DC	UNIFORM	65					
$c-C_4F_8+N_2+SF_6$							
EXPERIMENTAL							
AC	NONUNIFORM	363					
IMPULSE	NONUNIFORM	363					
$C_4F_8+SF_6$							
REVIEW							
DC	UNIFORM	150					
DC	NONUNIFORM	150					
AC	UNIFORM	150					
AC	NONUNIFORM	150					
IMPULSE	UNIFORM	150					
IMPULSE	NONUNIFORM	150					

				PARTICLE	SURFACE	INTERFACE	CORONA
$c\text{-}C_4F_8+SF_6$							
THEORETICAL							
	DC	UNIFORM	167				
$c\text{-}C_4F_8O$							
REVIEW							
	DC	UNIFORM	73		X		
	DC	NONUNIFORM	73		X		
	AC	UNIFORM	73		X		
	AC	NONUNIFORM	73		X		
	IMPULSE	UNIFORM	73		X		
	IMPULSE	NONUNIFORM	73		X		
C_4H_{10}							
EXPERIMENTAL							
	DC	UNIFORM	115				
	DC	NONUNIFORM	115				
$2\text{-}C_4H_{10}$							
EXPERIMENTAL							
	DC	UNIFORM	115				
	DC	NONUNIFORM	115				
$iso\text{-}C_4H_{10}$							
EXPERIMENTAL							
	DC	UNIFORM	201				
			202				
$n\text{-}C_4H_{10}$							
EXPERIMENTAL							
	DC	UNIFORM	201				
			202				
REVIEW							
	DC	UNIFORM	258				X
	DC	NONUNIFORM	258				X
	IMPULSE	UNIFORM	258				X
	IMPULSE	NONUNIFORM	258				X
$C_4H_{10}O$							
EXPERIMENTAL							
	DC	UNIFORM	372				
C_4H_4							
EXPERIMENTAL							
	DC	UNIFORM	195				
C_4H_6							
REVIEW							
	DC	UNIFORM	258				X
	DC	NONUNIFORM	258				X
	IMPULSE	UNIFORM	258				X
	IMPULSE	NONUNIFORM	258				X

			PARTICLE	SURFACE	INTERFACE	CORONA
1,3-C_4H_6						
EXPERIMENTAL						
DC	UNIFORM	104				
		195				
		201				
		202				
DC	NONUNIFORM	104				
C_4H_8						
EXPERIMENTAL						
DC	UNIFORM	104				
		199				
DC	NONUNIFORM	104				
REVIEW						
DC	UNIFORM	258				X
DC	NONUNIFORM	258				X
IMPULSE	UNIFORM	258				X
IMPULSE	NONUNIFORM	258				X
1-C_4H_8						
EXPERIMENTAL						
DC	UNIFORM	104				
		195				
		201				
		202				
DC	NONUNIFORM	104				
2-C_4H_8						
EXPERIMENTAL						
DC	UNIFORM	104				
DC	NONUNIFORM	104				
cis-C_4H_8						
EXPERIMENTAL						
DC	UNIFORM	195				
iso-C_4H_8						
EXPERIMENTAL						
DC	UNIFORM	195				
trans-C_4H_8						
EXPERIMENTAL						
DC	UNIFORM	195				
C_4H_9Cl						
REVIEW						
DC	UNIFORM	285		X	X	X
DC	NONUNIFORM	285		X	X	X
AC	UNIFORM	285		X	X	X
AC	NONUNIFORM	285		X	X	X
IMPULSE	UNIFORM	285		X	X	X
IMPULSE	NONUNIFORM	285		X	X	X

				PARTICLE	SURFACE	INTERFACE	CORONA
C_5F_{10}							
REVIEW							
DC	UNIFORM	45					X
		438					
DC	NONUNIFORM	45					X
AC	UNIFORM	45					X
AC	NONUNIFORM	45					X
IMPULSE	UNIFORM	45					X
IMPULSE	NONUNIFORM	45					X
C_5F_{12}							
EXPERIMENTAL							
DC	UNIFORM	114					
		315					
DC	NONUNIFORM	114					
AC	UNIFORM	33					
		457					
AC	NONUNIFORM	33					
		457					
		460					
IMPULSE	UNIFORM	33					
IMPULSE	NONUNIFORM	33					
REVIEW							
DC	UNIFORM	45					X
		73			X		
		150					
		258					X
		438					
DC	NONUNIFORM	45					X
		73			X		
		150					
		258					X
AC	UNIFORM	45					X
		73			X		
		150					
AC	NONUNIFORM	45					X
		73			X		
		150					
IMPULSE	UNIFORM	45					X
		73			X		
		150					
		258					X
IMPULSE	NONUNIFORM	45					X
		73			X		
		150					
		258					X
C_5F_8							
REVIEW							
DC	UNIFORM	45					X
		270		X	X		
		435					
		436					
		437					

			PARTICLE	SURFACE	INTERFACE	CORONA
C_5F_8 (cont.)		438				
DC	NONUNIFORM	45				X
		270	X	X		
AC	UNIFORM	45				X
AC	NONUNIFORM	45				X
IMPULSE	UNIFORM	45				X
		270	X	X		
IMPULSE	NONUNIFORM	45				X
		270	X	X		
$c\text{-}C_5F_8$						
EXPERIMENTAL						
DC	UNIFORM	331				
DC	NONUNIFORM	331				
REVIEW						
DC	UNIFORM	331				
DC	NONUNIFORM	331				
$c\text{-}C_5F_8+CHF_3$						
EXPERIMENTAL						
DC	UNIFORM	85				
DC	NONUNIFORM	85				
$c\text{-}C_5F_8+N_2$						
EXPERIMENTAL						
DC	UNIFORM	85				
DC	NONUNIFORM	85				
$1\text{-}C_5H_{10}$						
EXPERIMENTAL						
DC	UNIFORM	104				
DC	NONUNIFORM	104				
$2\text{-}C_5H_{10}$						
EXPERIMENTAL						
DC	UNIFORM	195				
$c\text{-}C_5H_{10}$						
EXPERIMENTAL						
DC	UNIFORM	115				
		202				
DC	NONUNIFORM	115				
$C_5H_{11}Cl$						
REVIEW						
DC	UNIFORM	285		X	X	X
DC	NONUNIFORM	285		X	X	X
AC	UNIFORM	285		X	X	X
AC	NONUNIFORM	285		X	X	X
IMPULSE	UNIFORM	285		X	X	X
IMPULSE	NONUNIFORM	285		X	X	X

				PARTICLE	SURFACE	INTERFACE	CORONA
C_5H_{12}							
EXPERIMENTAL							
DC	UNIFORM	114					
		115					
		202					
DC	NONUNIFORM	114					
		115					
$2\text{-}C_5H_{12}$							
EXPERIMENTAL							
DC	UNIFORM	115					
DC	NONUNIFORM	115					
$2,2\text{-}C_5H_{12}$							
EXPERIMENTAL							
DC	UNIFORM	115					
DC	NONUNIFORM	115					
$n\text{-}C_5H_{12}$							
EXPERIMENTAL							
DC	UNIFORM	198					
		202					
		301					
C_5H_8							
EXPERIMENTAL							
DC	UNIFORM	195					
$c\text{-}C_5H_8$							
EXPERIMENTAL							
DC	UNIFORM	195					
C_6F_{10}							
REVIEW							
DC	UNIFORM	270		X		X	
DC	NONUNIFORM	270		X		X	
IMPULSE	UNIFORM	270		X		X	
IMPULSE	NONUNIFORM	270		X		X	
$c\text{-}C_6F_{10}$							
EXPERIMENTAL							
DC	UNIFORM	331					
DC	NONUNIFORM	331					
REVIEW							
DC	UNIFORM	331					
DC	NONUNIFORM	331					
$c\text{-}C_6F_{10}+CHF_3$							
EXPERIMENTAL							
DC	UNIFORM	85					
DC	NONUNIFORM	85					

					PARTICLE	SURFACE	INTERFACE	CORONA
$c\text{-}C_6F_{10}+N_2$								
	EXPERIMENTAL							
		DC	UNIFORM	85				
		DC	NONUNIFORM	85				
C_6F_{12}								
	REVIEW							
		DC	UNIFORM	150				
				270	X	X		
		DC	NONUNIFORM	150				
				270	X	X		
		AC	UNIFORM	150				
		AC	NONUNIFORM	150				
		IMPULSE	UNIFORM	150				
				270	X	X		
		IMPULSE	NONUNIFORM	150				
				270	X	X		
$c\text{-}C_6F_{12}$								
	EXPERIMENTAL							
		DC	UNIFORM	331				
		DC	NONUNIFORM	331				
	REVIEW							
		DC	UNIFORM	64				
				331				
		DC	NONUNIFORM	331				
C_6F_{14}								
	EXPERIMENTAL							
		DC	UNIFORM	114				
				315				
		DC	NONUNIFORM	114				
	REVIEW							
		DC	UNIFORM	45				X
				150				
				258				X
				438				
		DC	NONUNIFORM	45				X
				150				
				258				X
		AC	UNIFORM	45				X
				150				
		AC	NONUNIFORM	45				X
				150				
		IMPULSE	UNIFORM	45				X
				150				
				258				X
		IMPULSE	NONUNIFORM	45				X
				150				
				258				X
$C_6F_{15}N$								
	EXPERIMENTAL							
		AC	UNIFORM	33				

			PARTICLE	SURFACE	INTERFACE	CORONA
$C_6F_{15}N$ (cont.)		70				X
AC	NONUNIFORM	33				
		70				X
IMPULSE	UNIFORM	33				
		70				X
IMPULSE	NONUNIFORM	33				
		70				X
REVIEW						
DC	UNIFORM	45				X
		438				
DC	NONUNIFORM	45				X
AC	UNIFORM	45				X
		70				X
AC	NONUNIFORM	45				X
		70				X
IMPULSE	UNIFORM	45				X
		70				X
IMPULSE	NONUNIFORM	45				X
		70				X
$1\text{-}C_6H_{12}$						
EXPERIMENTAL						
DC	UNIFORM	104				
		202				
DC	NONUNIFORM	104				
$c\text{-}C_6H_{12}$						
EXPERIMENTAL						
DC	UNIFORM	115				
		202				
DC	NONUNIFORM	115				
C_6H_{14}						
EXPERIMENTAL						
DC	UNIFORM	114				
		115				
DC	NONUNIFORM	114				
		115				
$2,2\text{-}C_6H_{14}$						
EXPERIMENTAL						
DC	UNIFORM	115				
DC	NONUNIFORM	115				
$n\text{-}C_6H_{14}$						
EXPERIMENTAL						
DC	UNIFORM	202				
		301				
IMPULSE	UNIFORM	398				
C_6H_5Cl						
REVIEW						
DC	UNIFORM	45				X
		438				

				PARTICLE	SURFACE	INTERFACE	CORONA
C_6H_5Cl (cont.)							
	DC	NONUNIFORM	45				X
	AC	UNIFORM	45				X
	AC	NONUNIFORM	45				X
	IMPULSE	UNIFORM	45				X
	IMPULSE	NONUNIFORM	45				X
C_6H_6							
EXPERIMENTAL							
	DC	UNIFORM	104				
			199				
	DC	NONUNIFORM	104				
REVIEW							
	DC	UNIFORM	280		X	X	
$C_7Cl_2F_6$							
REVIEW							
	DC	UNIFORM	45				X
			438				
	DC	NONUNIFORM	45				X
	AC	UNIFORM	45				X
	AC	NONUNIFORM	45				X
	IMPULSE	UNIFORM	45				X
	IMPULSE	NONUNIFORM	45				X
$C_7Cl_3F_5$							
REVIEW							
	DC	UNIFORM	45				X
			438				
	DC	NONUNIFORM	45				X
	AC	UNIFORM	45				X
	AC	NONUNIFORM	45				X
	IMPULSE	UNIFORM	45				X
	IMPULSE	NONUNIFORM	45				X
c-$C_7Cl_3F_5$							
EXPERIMENTAL							
	AC	NONUNIFORM	460				
C_7ClF_7							
REVIEW							
	DC	UNIFORM	45				X
			438				
	DC	NONUNIFORM	45				X
	AC	UNIFORM	45				X
	AC	NONUNIFORM	45				X
	IMPULSE	UNIFORM	45				X
	IMPULSE	NONUNIFORM	45				X
c-C_7ClF_7							
EXPERIMENTAL							
	AC	NONUNIFORM	460				

				PARTICLE	SURFACE	INTERFACE	CORONA
C_7F_{12}							
REVIEW							
	DC	UNIFORM	438				
C_7F_{14}							
EXPERIMENTAL							
	DC	UNIFORM	315				
	AC	UNIFORM	70				X
	AC	NONUNIFORM	70				X
	IMPULSE	UNIFORM	70				X
	IMPULSE	NONUNIFORM	70				X
REVIEW							
	DC	UNIFORM	45				X
			150				
			270	X	X		
			438				
	DC	NONUNIFORM	45				X
			150				
			270	X	X		
	AC	UNIFORM	45				X
			70				X
			150				
	AC	NONUNIFORM	45				X
			70				X
			150				
	IMPULSE	UNIFORM	45				X
			70				X
			150				
			270	X	X		
	IMPULSE	NONUNIFORM	45				X
			70				X
			150				
			270	X	X		
c-C_7F_{14}							
EXPERIMENTAL							
	AC	UNIFORM	33				
	AC	NONUNIFORM	33				
			460				
	IMPULSE	UNIFORM	33				
	IMPULSE	NONUNIFORM	33				
c-C_7F_{14}+N_2							
EXPERIMENTAL							
	AC	UNIFORM	33				
	AC	NONUNIFORM	33				
	IMPULSE	UNIFORM	33				
	IMPULSE	NONUNIFORM	33				
c-C_7F_{14}+SF_6							
EXPERIMENTAL							
	AC	UNIFORM	33				
	AC	NONUNIFORM	33				
	IMPULSE	UNIFORM	33				

				PARTICLE	SURFACE	INTERFACE	CORONA
c-C_7F_{14}+SF_6							
	IMPULSE	NONUNIFORM	33				
C_7F_{16}							
EXPERIMENTAL							
	AC	UNIFORM	33				
			70				X
	AC	NONUNIFORM	33				
			70				X
	IMPULSE	UNIFORM	33				
			70				X
	IMPULSE	NONUNIFORM	33				
			70				X
REVIEW							
	DC	UNIFORM	45				X
			150				
			438				
	DC	NONUNIFORM	45				X
			150				
	AC	UNIFORM	45				X
			70				X
			150				
	AC	NONUNIFORM	45				X
			70				X
			150				
	IMPULSE	UNIFORM	45				X
			70				X
			150				
	IMPULSE	NONUNIFORM	45				X
			70				X
			150				
C_7F_8							
EXPERIMENTAL							
	DC	UNIFORM	331				
	DC	NONUNIFORM	331				
	AC	UNIFORM	70				X
	AC	NONUNIFORM	70				X
	IMPULSE	UNIFORM	70				X
	IMPULSE	NONUNIFORM	70				X
REVIEW							
	DC	UNIFORM	45				X
			150				
			270	X	X		
			331				
			438				
	DC	NONUNIFORM	45				X
			150				
			270	X	X		
			331				
	AC	UNIFORM	45				X
			70				X
			150				
	AC	NONUNIFORM	45				X

			PARTICLE	SURFACE	INTERFACE	CORONA
C_7F_8 (cont.)		70				X
		150				
IMPULSE	UNIFORM	45				X
		70				X
		150				
		270	X	X		
IMPULSE	NONUNIFORM	45				X
		70				X
		150				
		270	X	X		
$c\text{-}C_7F_8$						
EXPERIMENTAL						
AC	UNIFORM	33				
AC	NONUNIFORM	33				
		460				
IMPULSE	UNIFORM	33				
IMPULSE	NONUNIFORM	33				
$n\text{-}C_7H_{16}$						
EXPERIMENTAL						
DC	UNIFORM	301				
$C_7H_3ClF_3$						
REVIEW						
DC	UNIFORM	45				X
DC	NONUNIFORM	45				X
AC	UNIFORM	45				X
AC	NONUNIFORM	45				X
IMPULSE	UNIFORM	45				X
IMPULSE	NONUNIFORM	45				X
$C_7H_4ClF_3$						
REVIEW						
DC	UNIFORM	45				X
		438				
DC	NONUNIFORM	45				X
AC	UNIFORM	45				X
AC	NONUNIFORM	45				X
IMPULSE	UNIFORM	45				X
IMPULSE	NONUNIFORM	45				X
$c\text{-}C_7H_4ClF_3$						
EXPERIMENTAL						
AC	NONUNIFORM	460				
C_8F_{16}						
EXPERIMENTAL						
DC	UNIFORM	315				
		331				
DC	NONUNIFORM	331				
AC	UNIFORM	70				X
AC	NONUNIFORM	70				X
IMPULSE	UNIFORM	70				X

				PARTICLE	SURFACE	INTERFACE	CORONA
C_8F_{16} (cont.)							
	IMPULSE	NONUNIFORM	70				X
REVIEW							
	DC	UNIFORM	45				X
			150				
			270	X	X		
			331				
			438				
	DC	NONUNIFORM	45				X
			150				
			270	X	X		
			331				
	AC	UNIFORM	45				X
			70				X
			150				
	AC	NONUNIFORM	45				X
			70				X
			150				
	IMPULSE	UNIFORM	45				X
			70				X
			150				
			270	X	X		
	IMPULSE	NONUNIFORM	45				X
			70				X
			150				
			270	X	X		
$c-C_8F_{16}$							
EXPERIMENTAL							
	AC	UNIFORM	33				
	AC	NONUNIFORM	33				
			460				
	IMPULSE	UNIFORM	33				
	IMPULSE	NONUNIFORM	33				
$C_8F_{16}O$							
EXPERIMENTAL							
	DC	UNIFORM	397				
	DC	NONUNIFORM	397				
REVIEW							
	DC	UNIFORM	150				
	DC	NONUNIFORM	150				
	AC	UNIFORM	150				
	AC	NONUNIFORM	150				
	IMPULSE	UNIFORM	150				
	IMPULSE	NONUNIFORM	150				
$c-C_8F_{16}O$							
REVIEW							
	DC	UNIFORM	32				
$C_8F_{16}O+SF_6$							
EXPERIMENTAL							
	DC	UNIFORM	397				

			PARTICLE	SURFACE	INTERFACE	CORONA
$C_8F_{16}O+SF_6$ (cont.)						
DC	NONUNIFORM	397				
$C_8F_{18}O$						
EXPERIMENTAL						
AC	UNIFORM	33				
		70				X
AC	NONUNIFORM	33				
		70				X
IMPULSE	UNIFORM	33				
		70				X
IMPULSE	NONUNIFORM	33				
		70				X
REVIEW						
DC	UNIFORM	45				X
		438				
DC	NONUNIFORM	45				X
AC	UNIFORM	45				X
		70				X
AC	NONUNIFORM	45				X
		70				X
IMPULSE	UNIFORM	45				X
		70				X
IMPULSE	NONUNIFORM	45				X
		70				X
$n-C_8H_{18}$						
EXPERIMENTAL						
DC	UNIFORM	199				
		202				
		301				
$c-C_8H_3ClF_6$						
EXPERIMENTAL						
AC	NONUNIFORM	460				
$CBrClF_2$						
EXPERIMENTAL						
DC	UNIFORM	114				
		156				
DC	NONUNIFORM	114				
THEORETICAL						
DC	UNIFORM	65				
		156				
		165				
		167				
REVIEW						
DC	UNIFORM	64				
		65				
		150				
		165				
		258				X
		438				
DC	NONUNIFORM	150				

				PARTICLE	SURFACE	INTERFACE	CORONA
$CBrClF_2$ (cont.)			258				X
	AC	UNIFORM	150				
	AC	NONUNIFORM	150				
	IMPULSE	UNIFORM	150				
			258				X
	IMPULSE	NONUNIFORM	150				
			258				X
$CBrClF_2+N_2$							
EXPERIMENTAL							
	DC	UNIFORM	156				
THEORETICAL							
	DC	UNIFORM	65				
			156				
REVIEW							
	DC	UNIFORM	65				
$CBrClF_2+SF_6$							
EXPERIMENTAL							
	DC	UNIFORM	156				
THEORETICAL							
	DC	UNIFORM	65				
			156				
			167				
REVIEW							
	DC	UNIFORM	65				
$CBrF_3$							
EXPERIMENTAL							
	DC	UNIFORM	114				
	DC	NONUNIFORM	114				
			283				
	AC	UNIFORM	72				X
	AC	NONUNIFORM	72				X
	IMPULSE	UNIFORM	72				X
	IMPULSE	NONUNIFORM	72				X
REVIEW							
	DC	UNIFORM	64				
			73		X		
			150				
			253				
			258				X
			437				
			438				
	DC	NONUNIFORM	73		X		
			150				
			258				X
	AC	UNIFORM	73		X		
			150				
	AC	NONUNIFORM	73		X		
			150				
	IMPULSE	UNIFORM	73		X		
			150				
			258				X

			PARTICLE	SURFACE	INTERFACE	CORONA
$CBrF_3$ (cont.)						
IMPULSE	NONUNIFORM	73		X		
		150				
		258				X
CCl_2F_2						
EXPERIMENTAL						
DC	UNIFORM	76				
		88		X		
		114				
		151				
		203				
		206			X	X
		303				
		313				X
		373				
DC	NONUNIFORM	114				
		141				X
		142				X
		206			X	X
		283				
		313				X
AC	UNIFORM	206			X	X
		313				X
AC	NONUNIFORM	206			X	X
		313				X
		460				
IMPULSE	UNIFORM	139				
		206			X	X
		313				X
IMPULSE	NONUNIFORM	206			X	X
		313				X
THEORETICAL						
DC	UNIFORM	152				
		165				
		167				
		207				X
		373				
		419				
DC	NONUNIFORM	207				X
REVIEW						
DC	UNIFORM	45				X
		64				
		73		X		
		88		X		
		96	X	X	X	
		150				
		165				
		203				
		253				
		258				X
		280		X	X	
		285		X	X	X
		368				

		PARTICLE	SURFACE	INTERFACE	CORONA
CCl_2F_2 (cont.)	435				
	436				
	437				
	438				
DC NONUNIFORM	45				X
	73		X		
	96	X	X	X	
	150				
	258				X
	285		X	X	X
AC UNIFORM	45				X
	73		X		
	96	X	X	X	
	150				
	285		X	X	X
AC NONUNIFORM	45				X
	73		X		
	96	X	X	X	
	150				
	285		X	X	X
IMPULSE UNIFORM	45				X
	73		X		
	96	X	X	X	
	150				
	258				X
	285		X	X	X
IMPULSE NONUNIFORM	45				X
	73		X		
	96	X	X	X	
	150				
	258				X
	285		X	X	X
$CCl_2F_2+CF_4$					
EXPERIMENTAL					
DC UNIFORM	206			X	X
DC NONUNIFORM	206			X	X
AC UNIFORM	206			X	X
AC NONUNIFORM	206			X	X
IMPULSE UNIFORM	206			X	X
IMPULSE NONUNIFORM	206			X	X
$CCl_2F_2+CO_2$					
THEORETICAL					
DC UNIFORM	317				
$CCl_2F_2+N_2$					
EXPERIMENTAL					
DC UNIFORM	88		X		
	206			X	X
	276				
	373				
	402				
	403				

				PARTICLE	SURFACE	INTERFACE	CORONA
$CCl_2F_2+N_2$ (cont.)							
	DC	NONUNIFORM	142				X
			206			X	X
	AC	UNIFORM	206			X	X
	AC	NONUNIFORM	206			X	X
	IMPULSE	UNIFORM	206			X	X
	IMPULSE	NONUNIFORM	206			X	X
THEORETICAL							
	DC	UNIFORM	317				
			373				
			419				
REVIEW							
	DC	UNIFORM	88		X		
$CCl_2F_2+SF_6$							
EXPERIMENTAL							
	DC	UNIFORM	206			X	X
	DC	NONUNIFORM	206			X	X
	AC	UNIFORM	206			X	X
	AC	NONUNIFORM	206			X	X
	IMPULSE	UNIFORM	206			X	X
	IMPULSE	NONUNIFORM	206			X	X
THEORETICAL							
	DC	UNIFORM	167				
CCl_3F							
EXPERIMENTAL							
	DC	UNIFORM	88		X		
			114				
			203				
			206			X	X
	DC	NONUNIFORM	114				
			206			X	X
			283				
	AC	UNIFORM	206			X	X
	AC	NONUNIFORM	206			X	X
			460				
	IMPULSE	UNIFORM	206			X	X
	IMPULSE	NONUNIFORM	206			X	X
REVIEW							
	DC	UNIFORM	45				X
			64				
			73		X		
			88		X		
			150				
			203				
			258				X
			285		X	X	X
			437				
			438				
	DC	NONUNIFORM	45				X
			73		X		
			150				
			258				X

			PARTICLE	SURFACE	INTERFACE	CORONA
CCl_3F (cont.)		285		X	X	X
AC	UNIFORM	45				X
		73		X		
		150				
		285		X	X	X
AC	NONUNIFORM	45				X
		73		X		
		150				
		285		X	X	X
IMPULSE	UNIFORM	45				X
		73		X		
		150				
		258				X
		285		X	X	X
IMPULSE	NONUNIFORM	45				X
		73		X		
		150				
		258				X
		285		X	X	X
CCl_4						
EXPERIMENTAL						
DC	UNIFORM	88		X		
		114				
		203				
DC	NONUNIFORM	114				
AC	NONUNIFORM	460				
THEORETICAL						
DC	UNIFORM	152				
REVIEW						
DC	UNIFORM	45				X
		64				
		88		X		
		203				
		285		X	X	X
		436				
		437				
		438				
DC	NONUNIFORM	45				X
		285		X	X	X
AC	UNIFORM	45				X
		285		X	X	X
AC	NONUNIFORM	45				X
		285		X	X	X
IMPULSE	UNIFORM	45				X
		285		X	X	X
IMPULSE	NONUNIFORM	45				X
		285		X	X	X
$CClF_3$						
EXPERIMENTAL						
DC	UNIFORM	88		X		
		114				
		203				

			PARTICLE	SURFACE	INTERFACE	CORONA
$CClF_3$ (cont.)		206			X	X
DC	NONUNIFORM	38			X	X
		114				
		206			X	X
		283				
AC	UNIFORM	206			X	X
AC	NONUNIFORM	206			X	X
		460				
IMPULSE	UNIFORM	206			X	X
IMPULSE	NONUNIFORM	206			X	X
REVIEW						
DC	UNIFORM	45				X
		64				
		73		X		
		88		X		
		150				
		203				
		253				
		258				X
		436				
		437				
		438				
DC	NONUNIFORM	45				X
		73		X		
		150				
		258				X
AC	UNIFORM	45				X
		73		X		
		150				
AC	NONUNIFORM	45				X
		73		X		
		150				
IMPULSE	UNIFORM	45				X
		73		X		
		150				
		258				X
IMPULSE	NONUNIFORM	45				X
		73		X		
		150				
		258				X
$CClF_3+N_2$						
EXPERIMENTAL						
DC	UNIFORM	88		X		
REVIEW						
DC	UNIFORM	88		X		
CD_4						
EXPERIMENTAL						
DC	UNIFORM	84				
DC	NONUNIFORM	84				

			PARTICLE	SURFACE	INTERFACE	CORONA
CF_3I						
EXPERIMENTAL						
DC	NONUNIFORM	283				
REVIEW						
DC	UNIFORM	45				X
		438				
DC	NONUNIFORM	45				X
AC	UNIFORM	45				X
AC	NONUNIFORM	45				X
IMPULSE	UNIFORM	45				X
IMPULSE	NONUNIFORM	45				X
CF_3NO						
EXPERIMENTAL						
DC	UNIFORM	114				
DC	NONUNIFORM	114				
REVIEW						
DC	UNIFORM	438				
CF_3NO_2						
REVIEW						
DC	UNIFORM	150				
		253				
DC	NONUNIFORM	150				
AC	UNIFORM	150				
AC	NONUNIFORM	150				
IMPULSE	UNIFORM	150				
IMPULSE	NONUNIFORM	150				
CF_4						
EXPERIMENTAL						
DC	UNIFORM	55				
		63				
		114				
		203				
		206			X	X
		252				
		310				
		401				
DC	NONUNIFORM	114				
		206			X	X
		283				
AC	UNIFORM	33				
		70				X
		72				X
		206			X	X
		392				
AC	NONUNIFORM	33				
		70				X
		72				X
		206			X	X
		460				
IMPULSE	UNIFORM	33				
		70				X

	Ref	PARTICLE	SURFACE	INTERFACE	CORONA
CF_4 (cont.)	72				X
	206			X	X
IMPULSE NONUNIFORM	33				
	70				X
	72				X
	206			X	X
THEORETICAL					
DC UNIFORM	55				
	207				X
DC NONUNIFORM	207				X
REVIEW					
DC UNIFORM	45				X
	64				
	73		X		
	203				
	253				
	258				X
	436				
	437				
	438				
DC NONUNIFORM	45				X
	73		X		
	258				X
AC UNIFORM	45				X
	70				X
	73		X		
AC NONUNIFORM	45				X
	70				X
	73		X		
IMPULSE UNIFORM	45				X
	70				X
	73		X		
	258				X
IMPULSE NONUNIFORM	45				X
	70				X
	73		X		
	258				X
CF_4+SF_6					
EXPERIMENTAL					
DC UNIFORM	83				
THEORETICAL					
DC UNIFORM	317				
CF_4SO_2					
REVIEW					
DC UNIFORM	253				
CF_5NS					
EXPERIMENTAL					
DC UNIFORM	114				
DC NONUNIFORM	114				
REVIEW					
DC UNIFORM	438				

				PARTICLE	SURFACE	INTERFACE	CORONA
CF_8S							
EXPERIMENTAL							
	DC	UNIFORM	114				
			151				
			203				
	DC	NONUNIFORM	114				
THEORETICAL							
	DC	UNIFORM	152				
REVIEW							
	DC	UNIFORM	150				
			203				
			253				
			280		X	X	
			285		X	X	X
			438				
	DC	NONUNIFORM	150				
			285		X	X	X
	AC	UNIFORM	150				
			285		X	X	X
	AC	NONUNIFORM	150				
			285		X	X	X
	IMPULSE	UNIFORM	150				
			285		X	X	X
	IMPULSE	NONUNIFORM	150				
			285		X	X	X
CF_8SO							
REVIEW							
	DC	UNIFORM	253				
CH_2Cl_2							
EXPERIMENTAL							
	DC	UNIFORM	114				
	DC	NONUNIFORM	114				
	AC	NONUNIFORM	460				
REVIEW							
	DC	UNIFORM	45				X
			64				
			258				X
			285		X	X	X
			438				
	DC	NONUNIFORM	45				X
			258				X
			285		X	X	X
	AC	UNIFORM	45				X
			285		X	X	X
	AC	NONUNIFORM	45				X
			285		X	X	X
	IMPULSE	UNIFORM	45				X
			258				X
			285		X	X	X
	IMPULSE	NONUNIFORM	45				X
			258				X
			285		X	X	X

				PARTICLE	SURFACE	INTERFACE	CORONA
CH_2ClF							
EXPERIMENTAL							
	DC	UNIFORM	88		X		
			114				
	DC	NONUNIFORM	114				
	AC	NONUNIFORM	460				
REVIEW							
	DC	UNIFORM	45				X
			88		X		
			258				X
			437				
			438				
	DC	NONUNIFORM	45				X
			258				X
	AC	UNIFORM	45				X
	AC	NONUNIFORM	45				X
	IMPULSE	UNIFORM	45				X
			258				X
	IMPULSE	NONUNIFORM	45				X
			258				X
CH_2F_2							
REVIEW							
	DC	UNIFORM	45				X
			64				
			258				X
			438				
	DC	NONUNIFORM	45				X
			258				X
	AC	UNIFORM	45				X
	AC	NONUNIFORM	45				X
	IMPULSE	UNIFORM	45				X
			258				X
	IMPULSE	NONUNIFORM	45				X
			258				X
$CH_2F_2+SF_6$							
EXPERIMENTAL							
	DC	UNIFORM	83				
CH_3Br							
EXPERIMENTAL							
	DC	UNIFORM	114				
	DC	NONUNIFORM	114				
REVIEW							
	DC	UNIFORM	64				
			258				X
			285		X	X	X
			438				
	DC	NONUNIFORM	258				X
			285		X	X	X
	AC	UNIFORM	285		X	X	X
	AC	NONUNIFORM	285		X	X	X
	IMPULSE	UNIFORM	258				X

			PARTICLE	SURFACE	INTERFACE	CORONA
CH_3Br (cont.)		285		X	X	X
IMPULSE	NONUNIFORM	258				X
		285		X	X	X
CH_3Cl						
EXPERIMENTAL						
DC	UNIFORM	88		X		
		114				
DC	NONUNIFORM	114				
AC	NONUNIFORM	460				
REVIEW						
DC	UNIFORM	45				X
		64				
		88		X		
		258				X
		285		X	X	X
		438				
DC	NONUNIFORM	45				X
		258				X
		285		X	X	X
AC	UNIFORM	45				X
		285		X	X	X
AC	NONUNIFORM	45				X
		285		X	X	X
IMPULSE	UNIFORM	45				X
		258				X
		285		X	X	X
IMPULSE	NONUNIFORM	45				X
		258				X
		285		X	X	X
CH_3F						
REVIEW						
DC	UNIFORM	45				X
DC	NONUNIFORM	45				X
AC	UNIFORM	45				X
AC	NONUNIFORM	45				X
IMPULSE	UNIFORM	45				X
IMPULSE	NONUNIFORM	45				X
CH_3I						
EXPERIMENTAL						
DC	UNIFORM	114				
DC	NONUNIFORM	114				
REVIEW						
DC	UNIFORM	64				
		258				X
		285		X	X	X
		437				
		438				
DC	NONUNIFORM	258				X
		285		X	X	X
AC	UNIFORM	285		X	X	X
AC	NONUNIFORM	285		X	X	X

			PARTICLE	SURFACE	INTERFACE	CORONA
CH_3I (cont.)						
IMPULSE	UNIFORM	258				X
		285		X	X	X
IMPULSE	NONUNIFORM	258				X
		285		X	X	X
CH_4						
EXPERIMENTAL						
DC	UNIFORM	84				
		88		X		
		114				
		115				
		196				
		201				
		202				
DC	NONUNIFORM	84				
		114				
		115				
		169				
AC	NONUNIFORM	460				
REVIEW						
DC	UNIFORM	45				X
		64				
		88		X		
		253				
		285		X	X	X
		437				
		438				
DC	NONUNIFORM	45				X
		285		X	X	X
AC	UNIFORM	45				X
		285		X	X	X
AC	NONUNIFORM	45				X
		285		X	X	X
IMPULSE	UNIFORM	45				X
		285		X	X	X
IMPULSE	NONUNIFORM	45				X
		285		X	X	X
n-CH_4						
REVIEW						
DC	UNIFORM	258				X
DC	NONUNIFORM	258				X
IMPULSE	UNIFORM	258				X
IMPULSE	NONUNIFORM	258				X
CH_5N						
REVIEW						
DC	UNIFORM	437				
		438				
$CHCl_2F$						
EXPERIMENTAL						
DC	UNIFORM	88		X		

			PARTICLE	SURFACE	INTERFACE	CORONA
$CHCl_2F$ (cont.)		114				
		203				
		206			X	X
DC	NONUNIFORM	114				
		206			X	X
AC	UNIFORM	206			X	X
AC	NONUNIFORM	206			X	X
		460				
IMPULSE	UNIFORM	206			X	X
IMPULSE	NONUNIFORM	206			X	X
REVIEW						
DC	UNIFORM	45				X
		64				
		88		X		
		150				
		203				
		258				X
		437				
		438				
DC	NONUNIFORM	45				X
		150				
		258				X
AC	UNIFORM	45				X
		150				
AC	NONUNIFORM	45				X
		150				
IMPULSE	UNIFORM	45				X
		150				
		258				X
IMPULSE	NONUNIFORM	45				X
		150				
		258				X
$CHCl_3$						
EXPERIMENTAL						
DC	UNIFORM	88		X		
		114				
DC	NONUNIFORM	114				
AC	NONUNIFORM	460				
REVIEW						
DC	UNIFORM	45				X
		64				
		88		X		
		150				
		258				X
		285		X	X	X
		437				
		438				
DC	NONUNIFORM	45				X
		150				
		258				X
		285		X	X	X
AC	UNIFORM	45				X
		150				

			PARTICLE	SURFACE	INTERFACE	CORONA
$CHCl_3$ (cont.)		285		X	X	X
AC	NONUNIFORM	45				X
		150				
		285		X	X	X
IMPULSE	UNIFORM	45				X
		150				
		258				X
		285		X	X	X
IMPULSE	NONUNIFORM	45				X
		150				
		258				X
		285		X	X	X
$CHClF_2$						
EXPERIMENTAL						
DC	UNIFORM	88		X		
		114				
		206			X	X
DC	NONUNIFORM	114				
		206			X	X
AC	UNIFORM	206			X	X
AC	NONUNIFORM	206			X	X
		460				
IMPULSE	UNIFORM	206			X	X
IMPULSE	NONUNIFORM	206			X	X
REVIEW						
DC	UNIFORM	45				X
		64				
		73		X		
		88		X		
		150				
		253				
		258				X
		437				
		438				
DC	NONUNIFORM	45				X
		73		X		
		150				
		258				X
AC	UNIFORM	45				X
		73		X		
		150				
AC	NONUNIFORM	45				X
		73		X		
		150				
IMPULSE	UNIFORM	45				X
		73		X		
		150				
		258				X
IMPULSE	NONUNIFORM	45				X
		73		X		
		150				
		258				X

				PARTICLE	SURFACE	INTERFACE	CORONA
CHF_3							
EXPERIMENTAL							
	DC	UNIFORM	88		X		
			114				
			206			X	X
	DC	NONUNIFORM	114				
			206			X	X
	AC	UNIFORM	206			X	X
	AC	NONUNIFORM	206			X	X
	IMPULSE	UNIFORM	206			X	X
	IMPULSE	NONUNIFORM	206			X	X
REVIEW							
	DC	UNIFORM	45				X
			64				
			73		X		
			88		X		
			150				
			258				X
			438				
	DC	NONUNIFORM	45				X
			73		X		
			150				
			258				X
	AC	UNIFORM	45				X
			73		X		
			150				
	AC	NONUNIFORM	45				X
			73		X		
			150				
	IMPULSE	UNIFORM	45				X
			73		X		
			150				
			258				X
	IMPULSE	NONUNIFORM	45				X
			73		X		
			150				
			258				X
CHF_3+SF_6							
EXPERIMENTAL							
	DC	UNIFORM	83				
			85				
	DC	NONUNIFORM	85				
THEORETICAL							
	DC	UNIFORM	317				
CO							
EXPERIMENTAL							
	DC	UNIFORM	112				
	DC	NONUNIFORM	169				
	AC	NONUNIFORM	363				
	IMPULSE	NONUNIFORM	363				
THEORETICAL							
	DC	UNIFORM	342				

				PARTICLE	SURFACE	INTERFACE	CORONA
CO (cont.)			343				
REVIEW							
	DC	UNIFORM	45				X
			64				
			285		X	X	X
			437				
			438				
	DC	NONUNIFORM	45				X
			285		X	X	X
	AC	UNIFORM	45				X
			285		X	X	X
	AC	NONUNIFORM	45				X
			285		X	X	X
	IMPULSE	UNIFORM	45				X
			285		X	X	X
	IMPULSE	NONUNIFORM	45				X
			285		X	X	X
$CO+SF_6$							
EXPERIMENTAL							
	AC	NONUNIFORM	363				
	IMPULSE	NONUNIFORM	363				
CO_2							
EXPERIMENTAL							
	DC	UNIFORM	40				
			88		X		
			89				
			111				
			273				
			326				
			353				
			373				
			389				
			390				
	DC	NONUNIFORM	107				X
			169				
			326				
			462		X		
	AC	UNIFORM	326				
			351				
	AC	NONUNIFORM	326				
			351				
	IMPULSE	NONUNIFORM	25				
			382				X
THEORETICAL							
	DC	UNIFORM	65				
			78				
			273				
			342				
			343				
			373				
			374				

			PARTICLE	SURFACE	INTERFACE	CORONA
CO_2 (cont.)						
REVIEW						
DC	UNIFORM	45				X
		64				
		65				
		66		X		X
		88		X		
		92	X	X	X	
		96	X	X	X	
		119		X		
		150				
		244		X		X
		253				
		270	X	X		
		285		X	X	X
		334		X		X
		368				
		437				
		438				
DC	NONUNIFORM	45				X
		66		X		X
		96	X	X	X	
		150				
		244		X		X
		270	X	X		
		285		X	X	X
		334		X		X
AC	UNIFORM	45				X
		66		X		X
		96	X	X	X	
		150				
		285		X	X	X
AC	NONUNIFORM	45				X
		66		X		X
		96	X	X	X	
		150				
		285		X	X	X
IMPULSE	UNIFORM	45				X
		92	X	X	X	
		96	X	X	X	
		150				
		244		X		X
		270	X	X		
		285		X	X	X
IMPULSE	NONUNIFORM	45				X
		96	X	X	X	
		150				
		244		X		X
		270	X	X		
		285		X	X	X
CO_2+He+N_2						
EXPERIMENTAL						
DC	UNIFORM	111				

			PARTICLE	SURFACE	INTERFACE	CORONA
CO_2+N_2						
EXPERIMENTAL						
DC	UNIFORM	88		X		
REVIEW						
DC	UNIFORM	88		X		
		96	X	X	X	
		285		X	X	X
DC	NONUNIFORM	96	X	X	X	
		285		X	X	X
AC	UNIFORM	96	X	X	X	
		285		X	X	X
AC	NONUNIFORM	96	X	X	X	
		285		X	X	X
IMPULSE	UNIFORM	96	X	X	X	
		285		X	X	X
IMPULSE	NONUNIFORM	96	X	X	X	
		285		X	X	X
$CO_2+N_2+SF_6$						
THEORETICAL						
DC	UNIFORM	65				
REVIEW						
DC	UNIFORM	65				
CO_2+Ne						
EXPERIMENTAL						
DC	NONUNIFORM	107				X
CO_2+SF_6						
EXPERIMENTAL						
DC	UNIFORM	254				
		273				
DC	NONUNIFORM	254				
		274				X
AC	UNIFORM	351				
AC	NONUNIFORM	351				
IMPULSE	NONUNIFORM	382				X
THEORETICAL						
DC	UNIFORM	273				
		316				X
		317				
DC	NONUNIFORM	316				X
REVIEW						
DC	UNIFORM	270	X	X		
DC	NONUNIFORM	270	X	X		
IMPULSE	UNIFORM	270	X	X		
IMPULSE	NONUNIFORM	270	X	X		
CS_2						
REVIEW						
DC	UNIFORM	285		X	X	X
DC	NONUNIFORM	285		X	X	X
AC	UNIFORM	285		X	X	X
AC	NONUNIFORM	285		X	X	X

			PARTICLE	SURFACE	INTERFACE	CORONA
CS_2 (cont.)						
IMPULSE	UNIFORM	285		X	X	X
IMPULSE	NONUNIFORM	285		X	X	X
CSO						
REVIEW						
DC	UNIFORM	64				
		253				
Cl_2						
EXPERIMENTAL						
DC	UNIFORM	62				
		373				
DC	NONUNIFORM	283				
THEORETICAL						
DC	UNIFORM	373				
REVIEW						
DC	UNIFORM	285		X	X	X
		437				
		438				
DC	NONUNIFORM	285		X	X	X
AC	UNIFORM	285		X	X	X
AC	NONUNIFORM	285		X	X	X
IMPULSE	UNIFORM	285		X	X	X
IMPULSE	NONUNIFORM	285		X	X	X
Cl_2S_2						
REVIEW						
DC	UNIFORM	437				
		438				
ClF_5S						
REVIEW						
DC	UNIFORM	253				
$ClFO_3$						
EXPERIMENTAL						
DC	UNIFORM	203				
REVIEW						
DC	UNIFORM	45				X
		203				
		437				
		438				
DC	NONUNIFORM	45				X
AC	UNIFORM	45				X
AC	NONUNIFORM	45				X
IMPULSE	UNIFORM	45				X
IMPULSE	NONUNIFORM	45				X
Cs+He						
EXPERIMENTAL						
DC	UNIFORM	127				

			PARTICLE	SURFACE	INTERFACE	CORONA
D_2						
EXPERIMENTAL						
DC	UNIFORM	84				
DC	NONUNIFORM	84				
		282		X		
F_2SO						
REVIEW						
DC	UNIFORM	150				
		253				
		285		X	X	X
		437				
		438				
DC	NONUNIFORM	150				
		285		X	X	X
AC	UNIFORM	150				
		285		X	X	X
AC	NONUNIFORM	150				
		285		X	X	X
IMPULSE	UNIFORM	150				
		285		X	X	X
IMPULSE	NONUNIFORM	150				
		285		X	X	X
F_2SO_2						
REVIEW						
DC	UNIFORM	253				
F_7NS						
REVIEW						
DC	UNIFORM	253				
H_2						
EXPERIMENTAL						
DC	UNIFORM	4				
		56				
		84				
		108		X		
		109		X		
		148				
		151				
		262		X		
		266				
		308		X		
		389				
		390				
DC	NONUNIFORM	56				
		84				
		169				
		266				
		282		X		
		283				
AC	NONUNIFORM	87				
		99				X

			PARTICLE	SURFACE	INTERFACE	CORONA
H_2 (cont.)						
IMPULSE	UNIFORM	148				
IMPULSE	NONUNIFORM	135				X
		136				
THEORETICAL						
DC	UNIFORM	163				
		190				
		343				
		374				
DC	NONUNIFORM	163				
REVIEW						
DC	UNIFORM	45				X
		64				
		66		X		X
		96	X	X	X	
		119		X		
		148				
		163				
		244		X		X
		253				
		260		X		
		261		X		
		264				X
		280		X	X	
		285		X	X	X
		334		X		X
		435				
		436				
		437				
		438				
DC	NONUNIFORM	45				X
		66		X		X
		96	X	X	X	
		163				
		244		X		X
		260		X		
		264				X
		285		X	X	X
		334		X		X
AC	UNIFORM	45				X
		66		X		X
		96	X	X	X	
		285		X	X	X
AC	NONUNIFORM	45				X
		66		X		X
		96	X	X	X	
		285		X	X	X
IMPULSE	UNIFORM	45				X
		96	X	X	X	
		148				
		244		X		X
		285		X	X	X
IMPULSE	NONUNIFORM	45				X
		96	X	X	X	

				PARTICLE	SURFACE	INTERFACE	CORONA
H_2 (cont.)			244		X		X
			285		X	X	X
H_2+He							
EXPERIMENTAL							
	DC	UNIFORM	77				
H_2+Ne							
EXPERIMENTAL							
	DC	UNIFORM	77				
H_2+O_2							
REVIEW							
	DC	UNIFORM	264				X
	DC	NONUNIFORM	264				X
H_2+SF_6							
EXPERIMENTAL							
	AC	NONUNIFORM	99				X
	IMPULSE	NONUNIFORM	135				X
			136				
H_2O							
EXPERIMENTAL							
	DC	UNIFORM	171		X		
			172				
			361				
	DC	NONUNIFORM	162				X
H_2S							
REVIEW							
	DC	UNIFORM	244		X		X
			285		X	X	X
	DC	NONUNIFORM	244		X		X
			285		X	X	X
	AC	UNIFORM	285		X	X	X
	AC	NONUNIFORM	285		X	X	X
	IMPULSE	UNIFORM	244		X		X
			285		X	X	X
	IMPULSE	NONUNIFORM	244		X		X
			285		X	X	X
HBr							
REVIEW							
	DC	UNIFORM	285		X	X	X
	DC	NONUNIFORM	285		X	X	X
	AC	UNIFORM	285		X	X	X
	AC	NONUNIFORM	285		X	X	X
	IMPULSE	UNIFORM	285		X	X	X
	IMPULSE	NONUNIFORM	285		X	X	X
HCl							
REVIEW							
	DC	UNIFORM	285		X	X	X

			PARTICLE	SURFACE	INTERFACE	CORONA
HCl (cont.)						
DC	NONUNIFORM	285		X	X	X
AC	UNIFORM	285		X	X	X
AC	NONUNIFORM	285		X	X	X
IMPULSE	UNIFORM	285		X	X	X
IMPULSE	NONUNIFORM	285		X	X	X
HI						
REVIEW						
DC	UNIFORM	285		X	X	X
DC	NONUNIFORM	285		X	X	X
AC	UNIFORM	285		X	X	X
AC	NONUNIFORM	285		X	X	X
IMPULSE	UNIFORM	285		X	X	X
IMPULSE	NONUNIFORM	285		X	X	X
He						
EXPERIMENTAL						
DC	UNIFORM	4				
		80		X		
		125		X		
		154				
		164				
		242				
		284				
		326				
		389				
		390				
		400				
		451				
DC	NONUNIFORM	164				
		170		X		X
		326				
AC	UNIFORM	326				
		351				
AC	NONUNIFORM	87				
		134				
		326				
		351				
		423				
IMPULSE	UNIFORM	51		X		
		139				
		456				
IMPULSE	NONUNIFORM	52		X		
THEORETICAL						
DC	UNIFORM	163				
DC	NONUNIFORM	163				
IMPULSE	UNIFORM	51		X		
IMPULSE	NONUNIFORM	52		X		
REVIEW						
DC	UNIFORM	45				X
		66		X		X
		92	X	X	X	
		119		X		

				PARTICLE	SURFACE	INTERFACE	CORONA
He (cont.)			163				
			244		X		X
			253				
			260		X		
			264				X
			280		X	X	
			285		X	X	X
			436				
			437				
			438				
	DC	NONUNIFORM	45				X
			66		X		X
			163				
			244		X		X
			260		X		
			264				X
			285		X	X	X
	AC	UNIFORM	45				X
			66		X		X
			285		X	X	X
	AC	NONUNIFORM	45				X
			66		X		X
			285		X	X	X
	IMPULSE	UNIFORM	45				X
			92	X	X	X	
			244		X		X
			285		X	X	X
	IMPULSE	NONUNIFORM	45				X
			244		X		X
			285		X	X	X
He+K							
EXPERIMENTAL							
	DC	UNIFORM	127				
$He+N_2$							
EXPERIMENTAL							
	AC	UNIFORM	351				
	AC	NONUNIFORM	351				
He+Ne							
EXPERIMENTAL							
	DC	UNIFORM	125		X		
			451				
$He+O_2$							
REVIEW							
	DC	UNIFORM	285		X	X	X
	DC	NONUNIFORM	285		X	X	X
	AC	UNIFORM	285		X	X	X
	AC	NONUNIFORM	285		X	X	X
	IMPULSE	UNIFORM	285		X	X	X
	IMPULSE	NONUNIFORM	285		X	X	X

			PARTICLE	SURFACE	INTERFACE	CORONA
$He+SF_6$						
EXPERIMENTAL						
DC	UNIFORM	400				
AC	NONUNIFORM	87				
THEORETICAL						
DC	UNIFORM	78				
		236				
REVIEW						
DC	UNIFORM	45				X
DC	NONUNIFORM	45				X
AC	UNIFORM	45				X
AC	NONUNIFORM	45				X
IMPULSE	UNIFORM	45				X
IMPULSE	NONUNIFORM	45				X
Hg						
EXPERIMENTAL						
DC	UNIFORM	4				
		390				
REVIEW						
DC	UNIFORM	119		X		
		260		X		
		334		X		X
DC	NONUNIFORM	260		X		
		334		X		X
Hg+Ne						
EXPERIMENTAL						
DC	UNIFORM	344		X		
K+Ne						
EXPERIMENTAL						
DC	UNIFORM	127				
Kr						
EXPERIMENTAL						
DC	UNIFORM	200				
		389				
		390				
DC	NONUNIFORM	170		X		X
THEORETICAL						
DC	UNIFORM	163				
DC	NONUNIFORM	163				
REVIEW						
DC	UNIFORM	45				X
		66		X		X
		163				
		260		X		
		261		X		
		285		X	X	X
		438				
DC	NONUNIFORM	45				X
		66		X		X
		163				

				PARTICLE	SURFACE	INTERFACE	CORONA
Kr (cont.)			260		X		
			285		X	X	X
	AC	UNIFORM	45				X
			66		X		X
			285		X	X	X
	AC	NONUNIFORM	45				X
			66		X		X
			285		X	X	X
	IMPULSE	UNIFORM	45				X
			285		X	X	X
	IMPULSE	NONUNIFORM	45				X
			285		X	X	X
N_2							
EXPERIMENTAL							
	DC	UNIFORM	29				
			43		X		
			55				
			56				
			71				
			86		X		
			88		X		
			106				
			114				
			121				
			138				
			145				
			148				
			156				
			161				
			164				
			201				
			206			X	X
			218				
			223				
			225				
			266				
			273				
			299				
			308		X		
			326				
			330				
			353				
			377	X			
			389				
			390				
			450				
	DC	NONUNIFORM	34				X
			38			X	X
			44				
			56				
			71				
			94	X			
			95	X		X	

			PARTICLE	SURFACE	INTERFACE	CORONA
N_2 (cont.)		107				X
		114				
		141				X
		142				X
		164				
		169				
		206			X	X
		266				
		275				
		283				
		298				X
		309				
		325				
		326				
		332			X	
		377	X			
		459				X
AC	UNIFORM	33				
		70				X
		71				
		130				
		137		X		
		206			X	X
		326				
		351				
		377	X			
		457				
AC	NONUNIFORM	33				
		34				X
		44				
		70				X
		71				
		94	X			
		95	X		X	
		206			X	X
		323				X
		325				
		326				
		336	X			
		351				
		363				
		377	X			
		453				
		457				
		459				X
IMPULSE	UNIFORM	33				
		43		X		
		70				X
		71				
		137		X		
		139				
		148				
		206			X	X
		225				

			PARTICLE	SURFACE	INTERFACE	CORONA
N_2 (cont.)		267	X	X		
		324	X			
		356				
		404		X		
IMPULSE	NONUNIFORM	33				
		34				X
		70				X
		71				
		206			X	X
		246				X
		324	X			
		332			X	
		355			X	
		363				
		380				
		382				X
		404		X		
		443				X
		453				
		459				X
		461				X
THEORETICAL						
DC	UNIFORM	55				
		65				
		103				
		156				
		163				
		209				
		217				
		268				
		271				
		273				
		342				
		343				
		352				
		374				
		377	X			
		419				
DC	NONUNIFORM	103				
		163				
		271				
		332			X	
		377	X			
AC	UNIFORM	137		X		
		377	X			
AC	NONUNIFORM	336	X			
		377	X			
IMPULSE	UNIFORM	137		X		
		297				
		324	X			
IMPULSE	NONUNIFORM	324	X			
		332			X	
REVIEW						
DC	UNIFORM	32				

			PARTICLE	SURFACE	INTERFACE	CORONA
N_2 (cont.)		45				X
		64				
		65				
		66		X		X
		71				
		73		X		
		88		X		
		92	X	X	X	
		96	X	X	X	
		105				
		119		X		
		148				
		150				
		163				
		209				
		244		X		X
		253				
		264				X
		270	X	X		
		280		X	X	
		285		X	X	X
		368				
		435				
		436				
		437				
		438				
DC	NONUNIFORM	45				X
		66		X		X
		71				
		73		X		
		96	X	X	X	
		150				
		163				
		244		X		X
		264				X
		270	X	X		
		285		X	X	X
		447				X
AC	UNIFORM	45				X
		66		X		X
		70				X
		71				
		73		X		
		96	X	X	X	
		105				
		150				
		285		X	X	X
AC	NONUNIFORM	45				X
		66		X		X
		70				X
		71				
		73		X		
		96	X	X	X	
		150				

			PARTICLE	SURFACE	INTERFACE	CORONA
N_2 (cont.)		285		X	X	X
		447				X
IMPULSE	UNIFORM	45				X
		70				X
		71				
		73		X		
		91	X	X	X	
		92	X	X	X	
		96	X	X	X	
		148				
		150				
		244		X		X
		270	X	X		
		285		X	X	X
IMPULSE	NONUNIFORM	45				X
		70				X
		71				
		73		X		
		96	X	X	X	
		150				
		244		X		X
		270	X	X		
		285		X	X	X
		447				X
N_2+Ne						
EXPERIMENTAL						
DC	NONUNIFORM	107				X
N_2+Ne+SF_6						
EXPERIMENTAL						
DC	UNIFORM	82				
N_2+O_2						
EXPERIMENTAL						
DC	NONUNIFORM	298				X
REVIEW						
DC	UNIFORM	264				X
		285		X	X	X
		435				
DC	NONUNIFORM	264				X
		285		X	X	X
AC	UNIFORM	285		X	X	X
AC	NONUNIFORM	285		X	X	X
IMPULSE	UNIFORM	285		X	X	X
IMPULSE	NONUNIFORM	285		X	X	X
N_2+SF_6						
EXPERIMENTAL						
DC	UNIFORM	85				
		88		X		
		161				
		206			X	X

			PARTICLE	SURFACE	INTERFACE	CORONA
N_2+SF_6 (cont.)		218				
		273				
		402				
		403				
DC	NONUNIFORM	44				
		85				
		142				X
		206			X	X
		275				
AC	UNIFORM	130				
		137		X		
		206			X	X
		351				
AC	NONUNIFORM	44				
		206			X	X
		351				
		363				
IMPULSE	UNIFORM	137		X		
		206			X	X
IMPULSE	NONUNIFORM	132	X			
		206			X	X
		246				X
		363				
		376				
		382				X
		443				X
		461				X
THEORETICAL						
DC	UNIFORM	65				
		78				
		166				
		217				
		236				
		271				
		273				
		316				X
		419				
		454				
DC	NONUNIFORM	271				
		316				X
		454				
AC	UNIFORM	137		X		
IMPULSE	UNIFORM	137		X		
IMPULSE	NONUNIFORM	132	X			
		376				
REVIEW						
DC	UNIFORM	45				X
		65				
		88		X		
		96	X	X	X	
		150				
		250			X	
		251	X	X		X
		270	X	X		

				PARTICLE	SURFACE	INTERFACE	CORONA
N_2+SF_6 (cont.)							
	DC	NONUNIFORM	45				X
			96	X	X	X	
			150				
			250			X	
			251	X	X		X
			270	X	X		
	AC	UNIFORM	45				X
			96	X	X	X	
			150				
			250			X	
			251	X	X		X
	AC	NONUNIFORM	45				X
			96	X	X	X	
			150				
			250			X	
			251	X	X		X
	IMPULSE	UNIFORM	45				X
			96	X	X	X	
			150				
			250			X	
			270	X	X		
	IMPULSE	NONUNIFORM	45				X
			96	X	X	X	
			150				
			250			X	
			270	X	X		
N_2O							
EXPERIMENTAL							
	DC	UNIFORM	121				
			122				
	DC	NONUNIFORM	365				
THEORETICAL							
	DC	UNIFORM	166				
			342				
			343				
REVIEW							
	DC	UNIFORM	64				
			150				
			244		X		X
			253				
			285		X	X	X
			438				
	DC	NONUNIFORM	150				
			244		X		X
			285		X	X	X
	AC	UNIFORM	150				
			285		X	X	X
	AC	NONUNIFORM	150				
			285		X	X	X
	IMPULSE	UNIFORM	150				
			244		X		X
			285		X	X	X

				PARTICLE	SURFACE	INTERFACE	CORONA
N_2O (cont.)							
	IMPULSE	NONUNIFORM	150				
			244		X		X
			285		X	X	X
N_2O+O_2							
EXPERIMENTAL							
	DC	UNIFORM	123				
N_2O+SF_6							
EXPERIMENTAL							
	DC	UNIFORM	122				
THEORETICAL							
	DC	UNIFORM	166				
			316				X
	DC	NONUNIFORM	316				X
REVIEW							
	DC	UNIFORM	270	X	X		
	DC	NONUNIFORM	270	X	X		
	IMPULSE	UNIFORM	270	X	X		
	IMPULSE	NONUNIFORM	270	X	X		
NH_3							
EXPERIMENTAL							
	DC	UNIFORM	389				
			390				
REVIEW							
	DC	UNIFORM	285		X	X	X
	DC	NONUNIFORM	285		X	X	X
	AC	UNIFORM	285		X	X	X
	AC	NONUNIFORM	285		X	X	X
	IMPULSE	UNIFORM	285		X	X	X
	IMPULSE	NONUNIFORM	285		X	X	X
NO							
REVIEW							
	DC	UNIFORM	66		X		X
			285		X	X	X
	DC	NONUNIFORM	66		X		X
			285		X	X	X
	AC	UNIFORM	66		X		X
			285		X	X	X
	AC	NONUNIFORM	66		X		X
			285		X	X	X
	IMPULSE	UNIFORM	285		X	X	X
	IMPULSE	NONUNIFORM	285		X	X	X
Ne							
EXPERIMENTAL							
	DC	UNIFORM	82				
			125		X		
			242				
			300				
			344		X		

			PARTICLE	SURFACE	INTERFACE	CORONA
Ne (cont.)		389				
		390				
		451				
DC	NONUNIFORM	107				X
		149				X
		170		X		X
IMPULSE	NONUNIFORM	149				X
THEORETICAL						
DC	UNIFORM	163				
DC	NONUNIFORM	163				
REVIEW						
DC	UNIFORM	45				X
		64				
		66		X		X
		163				
		260		X		
		261		X		
		264				X
		280		X	X	
		285		X	X	X
		334		X		X
		435				
		436				
		437				
		438				
DC	NONUNIFORM	45				X
		66		X		X
		163				
		260		X		
		264				X
		285		X	X	X
		334		X		X
AC	UNIFORM	45				X
		66		X		X
		285		X	X	X
AC	NONUNIFORM	45				X
		66		X		X
		285		X	X	X
IMPULSE	UNIFORM	45				X
		285		X	X	X
IMPULSE	NONUNIFORM	45				X
		285		X	X	X
$Ne+O_2$						
EXPERIMENTAL						
DC	NONUNIFORM	107				X
$Ne+SF_6$						
EXPERIMENTAL						
DC	UNIFORM	82				
O_2						
EXPERIMENTAL						
DC	UNIFORM	46				

			PARTICLE	SURFACE	INTERFACE	CORONA
O_2 (cont.)		113				
		120		X		
		143				
		362				
		389				
		390				
		442				
DC	NONUNIFORM	38			X	X
		107				X
		169				
		298				X
IMPULSE	UNIFORM	139				
THEORETICAL						
DC	UNIFORM	152				
		163				
		343				
		374				
		442				
		465				
DC	NONUNIFORM	163				
REVIEW						
DC	UNIFORM	45				X
		64				
		163				
		244		X		X
		253				
		264				X
		285		X	X	X
DC	NONUNIFORM	45				X
		163				
		244		X		X
		264				X
		285		X	X	X
AC	UNIFORM	45				X
		285		X	X	X
AC	NONUNIFORM	45				X
		285		X	X	X
IMPULSE	UNIFORM	45				X
		244		X		X
		285		X	X	X
IMPULSE	NONUNIFORM	45				X
		244		X		X
		285		X	X	X
SF_6						
EXPERIMENTAL						
DC	UNIFORM	42				
		43		X		
		53		X		
		55				
		59				
		60				
		71				
		76				

				PARTICLE	SURFACE	INTERFACE	CORONA
SF_6 (cont.)			79		X		
			82				
			83				
			88		X		
			101				
			114				
			121				
			122				
			124				
			128		X		
			129	X	X		
			153				
			156				
			161				
			164				
			203				
			206			X	X
			218				
			245				X
			254				
			266				
			273				
			277				
			278				
			295		X	X	
			313				X
			319				X
			326				
			330				
			349				
			350				
			354				
			373				
			377	X			
			397				
			399				
			400				
			402				
			403				
	DC	NONUNIFORM	30				
			34				X
			38			X	X
			39	X			
			44				
			50				
			53		X		
			54		X		
			57				X
			71				
			90		X		
			93			X	
			94	X			
			95	X		X	
			114				

			PARTICLE	SURFACE	INTERFACE	CORONA
SF_6 (cont.)		116	X			X
		118				
		128		X		
		129	X	X		
		131				
		141				X
		142				X
		149				X
		164				
		188				X
		206			X	X
		245				X
		254				
		266				
		272				X
		274				X
		275				
		283				
		295		X	X	
		302			X	
		305				
		313				X
		319				X
		326				
		349				
		377	X			
		397				
		407				X
		434				X
		459				X
AC	UNIFORM	15	X			
		33				
		36		X		
		47				X
		70				X
		71				
		72				X
		98	X			X
		130				
		137		X		
		206			X	X
		229		X		
		295		X	X	
		313				X
		319				X
		322		X		
		326				
		351				
		377	X			
		392				
		424			X	
		457				
AC	NONUNIFORM	15	X			
		16				X

		PARTICLE	SURFACE	INTERFACE	CORONA
SF_6 (cont.)	24				
	28	X	X		X
	33				
	34				X
	39	X			
	44				
	47				X
	50				
	68	X		X	
	70				X
	71				
	72				X
	87				
	94	X			
	95	X		X	
	97	X			X
	98	X			X
	99				X
	102			X	
	133				
	182	X	X		
	183	X			
	206			X	X
	214	X	X		
	228		X		
	229		X		
	230				
	233				
	239			X	
	249	X			
	294				
	295		X	X	
	302			X	
	305				
	312		X	X	
	313				X
	319				X
	322		X		
	326				
	336	X			
	351				
	363				
	377	X			
	407				X
	424			X	
	425		X		X
	434				X
	457				
	459				X
IMPULSE UNIFORM	15	X			
	33				
	43		X		
	47				X
	70				X

		PARTICLE	SURFACE	INTERFACE	CORONA
SF_6 (cont.)	71				
	72				X
	79		X		
	137		X		
	139				
	206			X	X
	229		X		
	245				X
	267	X	X		
	295		X	X	
	313				X
	320		X		X
	324	X			
	356				
	404		X		
	413				
	424			X	
IMPULSE NONUNIFORM	14				X
	15	X			
	16				X
	18				X
	28	X	X		X
	33				
	34				X
	39	X			
	47				X
	50				
	70				X
	71				
	72				X
	97	X			X
	102			X	
	118				
	132	X			
	133				
	135				X
	144				X
	149				X
	178	X			
	185	X			
	206			X	X
	214	X	X		
	228		X		
	229		X		
	230				
	233				
	239			X	
	245				X
	246				X
	249	X			
	294				
	295		X	X	
	302			X	
	305				

			PARTICLE	SURFACE	INTERFACE	CORONA
SF_6 (cont.)		312		X	X	
		313				X
		320		X		X
		324	X			
		355			X	
		363				
		369		X		
		376				
		382				X
		404		X		
		407				X
		413				
		416				X
		418		X		
		424			X	
		443				X
		459				X
THEORETICAL						
DC	UNIFORM	55				
		65				
		78				
		101				
		152				
		156				
		165				
		166				
		167				
		184		X		
		186				
		207				X
		209				
		217				
		227				
		236				
		268				
		271				
		273				
		278				
		316				X
		319				X
		348		X		
		349				
		352				
		373				
		377	X			
		406				
		414				X
		417				
		419				
		454				
		464		X		X
DC	NONUNIFORM	188				X
		207				X
		271				

			PARTICLE	SURFACE	INTERFACE	CORONA
SF_6 (cont.)		306				
		316				X
		319				X
		337				X
		338				X
		348		X		
		349				
		359				X
		377	X			
		406				
		414				X
		417				
		434				X
		454				
		464		X		X
AC	UNIFORM	15	X			
		36		X		
		137		X		
		184		X		
		319				X
		348		X		
		377	X			
		406				
AC	NONUNIFORM	15	X			
		230				
		319				X
		336	X			
		348		X		
		377	X			
		406				
		434				X
IMPULSE	UNIFORM	15	X			
		137		X		
		184		X		
		324	X			
		417				
IMPULSE	NONUNIFORM	15	X			
		132	X			
		230				
		324	X			
		347				
		359				X
		376				
		417				
REVIEW						
DC	UNIFORM	45				X
		48				
		64				
		65				
		71				
		73		X		
		88		X		
		92	X	X	X	
		96	X	X	X	

			PARTICLE	SURFACE	INTERFACE	CORONA
SF_6 (cont.)		105				
		119		X		
		150				
		165				
		184		X		
		203				
		209				
		244		X		X
		250			X	
		251	X	X		X
		253				
		258				X
		269	X	X		
		270	X	X		
		280		X	X	
		285		X	X	X
		368				
		435				
		436				
		437				
		438				
DC	NONUNIFORM	17				X
		45				X
		48				
		71				
		73		X		
		96	X	X	X	
		150				
		234				
		244		X		X
		250			X	
		251	X	X		X
		258				X
		270	X	X		
		285		X	X	X
		447				X
AC	UNIFORM	45				X
		70				X
		71				
		73		X		
		96	X	X	X	
		105				
		150				
		184		X		
		250			X	
		251	X	X		X
		269	X	X		
		285		X	X	X
AC	NONUNIFORM	45				X
		70				X
		71				
		73		X		
		96	X	X	X	
		150				

		PARTICLE	SURFACE	INTERFACE	CORONA
SF_6 (cont.)	183	X			
	215		X		X
	234				
	250			X	
	251	X	X		X
	285		X	X	X
	321	X	X		
	447				X
	458	X			X
IMPULSE UNIFORM	45				X
	70				X
	71				
	73		X		
	91	X	X	X	
	92	X	X	X	
	96	X	X	X	
	150				
	184		X		
	244		X		X
	250			X	
	258				X
	270	X	X		
	285		X	X	X
IMPULSE NONUNIFORM	17				X
	45				X
	49		X		
	70				X
	71				
	73		X		
	96	X	X	X	
	150				
	215		X		X
	234				
	244		X		X
	250			X	
	258				X
	270	X	X		
	285		X	X	X
	321	X	X		
	447				X
	458	X			X
SF_6+SO_2					
THEORETICAL					
DC UNIFORM	78				
SO_2					
EXPERIMENTAL					
DC UNIFORM	203				
REVIEW					
DC UNIFORM	64				
	66		X		X
	203				
	244		X		X

			PARTICLE	SURFACE	INTERFACE	CORONA
SO_2 (cont.)		253				
		285		X	X	X
		334		X		X
		435				
		436				
		437				
		438				
DC	NONUNIFORM	66		X		X
		244		X		X
		285		X	X	X
		334		X		X
AC	UNIFORM	66		X		X
		285		X	X	X
AC	NONUNIFORM	66		X		X
		285		X	X	X
IMPULSE	UNIFORM	244		X		X
		285		X	X	X
IMPULSE	NONUNIFORM	244		X		X
		285		X	X	X
SeF_6						
EXPERIMENTAL						
DC	UNIFORM	203				
DC	NONUNIFORM	30				
REVIEW						
DC	UNIFORM	150				
		203				
		285		X	X	X
		438				
DC	NONUNIFORM	150				
		285		X	X	X
AC	UNIFORM	150				
		285		X	X	X
AC	NONUNIFORM	150				
		285		X	X	X
IMPULSE	UNIFORM	150				
		285		X	X	X
IMPULSE	NONUNIFORM	150				
		285		X	X	X
TeF_6						
REVIEW						
DC	UNIFORM	438				
$TiCl_4$						
REVIEW						
DC	UNIFORM	285		X	X	X
DC	NONUNIFORM	285		X	X	X
AC	UNIFORM	285		X	X	X
AC	NONUNIFORM	285		X	X	X
IMPULSE	UNIFORM	285		X	X	X
IMPULSE	NONUNIFORM	285		X	X	X

				PARTICLE	SURFACE	INTERFACE	CORONA
Xe							
EXPERIMENTAL							
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			390				
	DC	NONUNIFORM	170		X		X
THEORETICAL							
	DC	UNIFORM	163				
	DC	NONUNIFORM	163				
REVIEW							
	DC	UNIFORM	45				X
			66		X		X
			163				
			438				
	DC	NONUNIFORM	45				X
			66		X		X
			163				
	AC	UNIFORM	45				X
			66		X		X
	AC	NONUNIFORM	45				X
			66		X		X
	IMPULSE	UNIFORM	45				X
	IMPULSE	NONUNIFORM	45				X

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IX. Technical Conference Proceedings

1. International Symposium on Gaseous Dielectrics.
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   a) Gaseous Dielectrics III, ed. by L. G. Christophorou, Pergamon Press, New York (1982).
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2. Gaseous Electronics Conference.
   Proceedings:

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3. IEEE International Symposium on Electrical Insulation.
   Proceedings:

   Conference records for 1982, -80, -78, -76 published by the Institute for Electrical and Electronics Engineers, Inc., New York.

4. Conference on Electrical Insulation and Dielectric Phenomena (CEIDP).
   Proceedings:

   a) Annual reports for 1981-3 CEIDP published by Institute for Electrical and Electronics Engineers, Inc., New York.
   b) Annual reports for CEIDP before 1981 published by National Academy Press, Washington, DC.

5. International Coference on Gas Discharges and Their Applications (CGA).
   Proceedings:

   a) Proceedings of Seventh ICGA, 1982 published by Peter Peregrinus Ltd., London.
   b) Proceedings of Sixth-First ICGA (1980-70) published by Institution of Electrical Engineers, London.

6. International Symposium on High Voltage Engineering.
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   Four conferences from 1977-83, papers distributed but proceedings not published.

7. International Conferences on Phenomena in Ionized Gases.
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This report consists of a bibliography of currently published data on electrical breakdown in gases. The bibliography contains a list of archival papers and books published since 1950, an index indicating the references that give particular types of data for each gas, an author index, and a list of relevant, regular technical conferences. The citations given in the bibliography contain experimental or theoretical data on breakdown which include: 1) sparking potentials; 2) breakdown voltages; 3) critical fields, or field-to-gas density ratios; 4) corona inception voltages; 5) voltage-time characteristics; 6) relative and absolute dielectric strengths; and 7) breakdown probabilities. Types of data considered include those which apply to uniform and nonuniform fields; ac, dc, and impulse voltages; and possible effects of particles, surfaces, interfaces, and corona. This bibliography is intended to serve as a guide in locating data on breakdown which are most relevant to particular applications.

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