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1 OF 1

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West Europe Report

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WEST EUROPE REPORT

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CONTENTS PAGE

CONTENTS (Continued)

NATO'S AIR DEFENSE STRATEGY REVIEWED

Rome RIVISTA MILITARE in Italian Mar-Apr 79 pp 65-72

[Article by artillery Colonel Salvatore Bellassai, antiaircraft artillery expert, participating in international working group activities and courses in the United States, Great Britain and Canada on air defense means and procedures, formerly head of the Antiaircraft Artillery Bureau in the Inspectorate General, at present in command of the Sabudia Antiaircraft Artillery School: "Air Defense and Antiaircraft Problems at the Beginning of the 1980's"]

[Text] The changes that have taken place in the strategic situation of the Mediterranean zone during the last decade and the lessons learned from the limited conficts that have occurred there entail, in our opinion, a need for a drastic review of the doctrines and defensive equipment of the Atlantic Alliance member countries in this area.

Italy is in the center of these changes and, therefore, extremely concerned by them. Once more, it sees its military choices -- that is to say, in practice, the general concept of defense and the physical nature of the instrument of war intended for implementing it -- conditioned by its position in the area in question.

The factors of imbalance that have contributed to modifying the preexisting situation substantially on the basis of which -- it is important to point out -- the points of reference of the current organization were established in their time may be described in the following political-military terms:

The still unresolved friction between Turkey and Greece has dangerously weakened the southern flank of the Alliance and introduced an umpteenth factor of imbalance in an area already of itself too turbulent.

Many of the nations facing each other on the Mediterranean basin have taken on anti-Western orientations progressively. Soviet military presence in this sea now openly makes use of air and naval bases granted more or less

spontaneously by governments deliberately or casually involved in bloc politics.

Powerful naval air forces of the Soviet Union equal, if not superior, to the allied forces and consistently inclined, in particular, toward conducting amphibious operations, are present in Mediterranean waters.

The tactical air forces, which are closely associated in Soviet military doctrine with land forces "in an efficient binomial under the order of the Armed Forces Group commander," were increased recently quantitatively and qualitatively. At present, they amount to over 5,000 combat aircraft with a very high performance, a sizable part of which are an immanent, very dangerous threat to the entire Italian peninsula.

A well-known, authoritative military writer[1] who realizes what a profound change there has been in our country's strategic situation in compariason with a few years ago has analyzed the possibilities offered to the potential adversary by the very efficient war machine that this adversary has, and he believed it possible for one of the following hypotheses to occur: in case of a general conflict, investment in force of our eastern frontier or limited pressure on it; in case of a local conflict, acquisition -- by the enemy -- of "bases of presence" or of "territorial pledges."

The following is to be foreseen as a common factor in all the hypotheses:

Massive support by the tactical air forces of the ground effort (and, at the same time, conduct of air operations in depth in case the enemy intends to secure possession of bases useful for the continuation of hostilities against the NATO allies).

Carrying out of amphibious operations (probably more extensive, on a larger scale and dangerous, in case of local conflict).

After the terms of the matter have been stated in this way, the author identifies an operational strategy that has, from the ground point of view, as strongly characterizing distinguishing features the area of the reply and, locally, the elasticity of the defensive modulus, to the effect that a reply capability in any direction is opposed to an attack capable of coming from any point of the compass, although not uniformly.

At any rate, it should be pointed out that, because the strategic terms on which our defensive organization was established in its day, it has been absolutely necessary to modify the organization itself thoroughly; in other words, adopt a whole series of measures that will concern "the military division of the national territory, the organized physical nature of the war equipment, the shifting of the battle corps, the defensive modulus."[1]

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[1] Gen L. Salatiello, "Bases for a New Conception of Defense," RIVISTA MILITARE, No 3, 1976.

Activity so vast and complex cannot be improvised, but, because a very thorough process of renovation is in progress, at the completion of which there should be a war instrument consistent, to a considerable degree, with the new general strategic situation, it would be appropriate to single out the possible subsequent modifications required for tackling any emergency situation adequately and with prospects of success.

This activity, and especially activity pertaining to a delineation of the Armed Forces, cannot overlook, moreover, the lessons derived from some of the unexpected, characteristic events of the "Yom Kippur War," including the possibility, even in a modern conflict, of achieving strategic and tactical surprise and effectiveness of antitank and antiaircraft missile systems.

Others, much more capable and competent than we, can and should make an overall examination of the new operational situation. In this article, the intention is merely to make an examination of the repercussions that -- in the framework of the changed general strategic situation -- the impending enemy air threat exercises on the defense possibilities of the field army and of the vital areas of the nation's territory.

Because we are aware that this aspect, believed by some -- wrongly -- to be marginal, has, on the other hand, basic repercussions on operational effectiveness and, therefore, on the credibility of the war equipment, we do not feel that the present shortcomings should be minimized and we shall seek, therefore, to point out the measures that might eliminate or reduce their occurrence.

Air Threat, Air Defense, Antiaircraft Defense

The immanence of the air threat, the enemy's destructive potential, the determining effect exercised by the air forces on the conception, organization and conduct of ground operations, are now realities that are recognized and are present, not only and not so much owing to a positive evolution of national military thinking and doctrine as because of the intrinsic logic of war events that have demonstrated their complete validity.

It is now agreed that the initial phase of a modern "three-dimensional" conflict will be characterized by a massive effort made by the enemy potential for a rapid achievement of air superiority, absolutely required for any subsequent positive development of operations. Therefore, a heavy attack will be launched on the components of the defensive organization that may check or prevent achievement of that preliminary objective, namely air bases and deployment of antiaircraft artillery. Achievement of success in this phase will determine or at least influence the intensity and effectiveness of the attacks that will be launched subsequently against the allied ground forces, the size of the air support with which they can be provided, their maneuvering possibilities, availability and survival of the logistics organization.

The second phase of the battle will be characterized precisely by violent air attacks against field army units and their support. In this phase, the active air defense and antiaircraft facilities that have been able to face up to the first attack will be able to safeguard these units' freedom to maneuver and to ensure their survival and movement capability.

It is intuitive that the above-indicated tasks cannot be assigned to one single weapon system. Instead, in order to attain the desired effectiveness, it is necessary to make massive use of a mix (this is the term adopted by NATO and literally means mixture) of weapon systems supplementing each other, incorporated -- up to the degree regarded as operationally most appropriate -- in a uniform defense system.

The range of active means regarded as most suitable for guaranteeing the requisite degree of protection from air offensive operations to the ground forces and sensitive points on the nation's territory includes the following:

Piloted and radio-guided (surface-to-air missiles) interceptors of the military Air Force.

All-weather, medium-range (for brevity, medium systems) missile systems for overall defense of the combat zone and of rear areas.

Light systems, missiles and conventional weapons, all-weather or fair-weather, self-propelled and wheeled, for direct defense of maneuvering units and other selected objectives.

Self-defense systems, missiles and conventional weapons, generally all of them fair-weather, portable and self-propelled, for specific self-defense of minor units of all arms and services.

Because regardless of their availability in large numbers (and this has not been true up to now of the Italian Army), antiaircraft weapon systems will be unable to meet completely the many defense requirements of the combat zone, it will be necessary to set up specific priorities beforehand.

At any rate, their action will have to be incorporated with the action of individual and unit automatic weapons, even though not specifically organized for antiaircraft firing. Countries that have a very respectable antiaircraft armament, first among which is the United States of America, have officially approved this concept[2] -- which, on the other hand, has given rise in our country to questions and some irony -- emphasizing the importance of using massive firepower, delivered in any way whatsoever from the ground, in order to hit or deter attacking aircraft from continuing their action. In order to put better emphasis on the importance of the firepower

[2] FM 44-1: "U.S. Army Air Defense Artillery Equipment."

of portable weapons in terms of antiaircraft self-defense, the publication cited in Note 2 provides the following data:

In Korea, the United States Air Force lost 544 aircraft owing to the coordinated action of the antiaircraft weapon systems and of the infantry's portable weapons, almost five times the number of aircraft lost in air-to-air combat.

In South Vietnam, losses for the same cause amounted to 410 aircraft and 2,100 helicopters.

In North Vietnam, fire by portable weapons contributed to inflicting very considerable losses (still held secret) on the United States Air Force.

The coordinated use of the active means of antiaircraft defense, on the other hand, generates an "equalizing function," underestimated up to now. In fact, it not only ensures freedom of the ground forces to maneuver and protection of vital objectives for purposes of conducting the operations, but also, together with antitank weapons and ground artillery, it assists in reducing the initial quantitative inferiority of the friendly forces by imposing a high attrition rate on the enemy.

In this connection and especially in the realization that -- as has already been said -- the enemy's air offensive will be unleashed right at the start of hostilities against components that may oppose subsequent action, antiaircraft artillery will be used immediately and directly in the battle. Then, the significance of the new motto chosen by the antiaircraft artillery of the American Army -- "First in Battle" -- is better understood.

Is that role acknowledged for the antiaircraft artillery of the Italian Army? Everyone is aware of the scant specific weight given to that specialty, although we want to believe that it is not yet too late to standardize organization measures, to acquire new means and to adjust technical and logistical measures to the new situation noted by all.

Returning to the main topic of this article, the shortcomings found in the organization of our country's and our Army's air and antiaircraft defense will now be indicated and some proposals will be offered pertaining to their possible reorganization.

The first shortcoming results from the limited extent of the area protected by active means of air defense. That area, coincident roughly with the east-central Po plain, has been regarded traditionally as the probable zone of development of military operations in a possible conflict in which Italy would have to be involved. Actually, in the light of the changes previously discussed, this matter conflicts substantially with the possibilities offered to the adversary by the strategic situation of the Mediterranean and by the intrinsic capabilities of the war equipment that the enemy has.

The second consists in the fact that the Army's antiaircraft artillery -- already excessively reduced in size in comparison with its constitutional tasks -- practically does not exist or, rather, is not sufficiently available for performing those tasks. At any rate, employment of its units seems to be excessively subordinated to air defense requirements, with the exception of a small amount to which very special tasks are assigned, moreover.

Above all, it is a mystery to no one that, at present, the large units of the field army do not have any antiaircraft component of their own, although that paramount requirement has been pointed out in the publications of the most recent doctrinary series (Publication No 900).

Possible Changes in the Air Defense Organization

The remarks made above lead to the belief that it is neither advisable nor rational to oppose the powerful enemy air threat with a "paralyzed" disposition of air and missile bases concentrated to a considerable extent in a limited area, oriented toward opposing attacks coming from a previously determined east-west direction.

It is quite true that, as has been said authoritatively, "we are not alone in the Mediterranean," but -- although without a desire to treat our present companions ironically -- the fact remains that it is not acceptable to delegate provision of our defense solely to the presence in this sea of the formidable United States Sixth Fleet, which might, in turn, be heavily engaged by the opposing naval air force that no longer conceals, but rather displays, its air, naval and amphibious capabilities. Therefore, there still is a need for facing up to the threat by making suitable changes in the present dispositions of the active means in the air defense organization and by making our defensive and counteroffensive capabilities sufficiently more effective.

Of course, with this there is no desire to advocate the establishment of a constant, impenetrable protective umbrella of aircraft and missiles over all the nation's territory (which not even the two superpowers are able to indulge in), but the problem is tackled, all the same, as follows:

By specifying, within the limits of the entire peninsula, vital areas regardless of where located, with a high priority for purposes of survival of the nation's military, industrial and adminsitrative organization.

By singling out the areas most exposed to enemy air threat and, because it may be regarded as likely to come equally from any direction, by providing a 360° reaction capability.

By modifying the position of the air and missile bases according to the results of the analysis made.

By making a qualitative and quantitative increase in the distant detection systems (early warning radar) and the low and very low altitude detection

systems (gap-filler radar), in the data collection, processing and dissemination centers and in the weapons systems themselves.

Repositioning of dispositions is undoubtedly a big problem. This problem, tackled already in principle by the Italian Air Force, also involves a need for revising and making more efficient the air defense detection, report and control organization, which is one of the basic components on which the success of the air battle depends.

Problems of Antiaircraft Artillery

The foregoing remarks likewise justify a substantial revision of the concepts on which the present organization of the Army's antiaircraft artillery was established in its day. That revision must necessarily concern the following: establishment of tasks and of employment dependency, reorganization of the organizational nature of the units, making the present armament more effective, a different allocation of the antiaircraft components of the large units.

With regard to the first point (tasks and employment dependency), once our premises have been accepted, it is unthinkable that the few existing units should continue in defense -- carried out with substantially static criteria and, as such, conflicting thoroughly with the developments of methods of modern military operations -- of a limited area that is not said to be the one in which the decisive battle may be waged. The following should especially be borne in mind with regard to the antiaircraft units:

They may find it necessary to have to confront rapidly an omnidirectional threat by taking appropriate deployment steps in time.

They are not at all sufficient, in the present size, to perform their constitutional task -- direct medium, low and very low-altitude defense of field army units -- providing the units with the requisite freedom to maneuver.

With regard to the second point, while the doctrinary statement of the problem seems now to be fully acceptable, the same cannot be said of its implementation in practice. The organizational structure of the antiaircraft units seems to be only partially adequate for the requirements in some personnel (especially officers with operational tasks) and equipment sectors (transportation and communications). Although the allowance reduction of the organized groups in the large units and others not part of a division is theoretically understandable in the present shortage situation, it represents an unfortunate measure especially disassociated from a long-range view of the employment of these emergency units. In some sectors, the armament that they have is tending to become obsolescent. It does not seem that timely replacement is possible or especially that it can be made adequately effective in the categories of light systems and self-defense weapons.

Remarks on the Lessons of the Yom Kippur War

It must be realized that solution of the problems of antiaircraft defense involves a very heavy organizational and financial effort, perhaps at the limit of the not great possibilities of the state machinery and, especially, of the military apparatus. Therefore, the position of those who assign a rather low priority to those problems may appear to be understandable, if not logical.

On the basis of a deliberately agnostic point of view, we ask ou selves, then, whether there really are concrete factors capable of supporting our views concerning the urgency for an extensive reorganization and revitalization of Italy's antiaircraft defense. Because war represents the proving ground for military doctrines and equipment, we believe that the lessons derived from the most recent and "modern" of the conflicts that have occurred in the Mediterranean area -- the Yom Kippur War -- can provide an objective answer to our query.

We do not believe that it is appropriate to reexamine in detail the series of events -- by now very familiar, scrupulously described and accurately analyzed by students and experts -- that occurred in October 1973 in the Sinai and on Golan Heights, the two main theaters of operations in the war. As we were saying at the beginning, it has, above all, been demonstrated that, in spite of any different expectation, the availability of very sophisticated air and ground means for the surveillance in depth of the rea of a battle that has not yet started (for example, the artificial satellites used by the United States in support of their Israeli allies), the real intentions of the enemy were not made clear to the Israeli in time and did not prevent the Egyptians from carrying an imposing mass of mechanized and armored forces as quick as lightning across the Suez Canal, regarded among other things as a natural obstacle with considerable intrinsic impeditive power.

The erroneous analytical evaluation of the situation attributed to Israel's intelligence service is not the cause of the surprise, but rather the consequence of the surprise itself, which upset every previously established plan precisely because it was regarded a priori as impossible.

The arguments of those who would like to attribute to the specific geographical and operational area of the Middle East peculiarities capable of giving rise to the belief that a similar situation cannot be repeated in the European theater, make one think inevitably of the tragic consequences undergone by the French Army in the spring of 1940, precisely because it was believed that what happened a few months earlier on the plains of Poland could not be repeated on the Rhine.

Only the availability of operationally efficient units with a very high professional level within an extremely limited amount of time (just a few hours) enabled the Israeli Army to put an initially very dangerous situation

in balance again and to go on subsequently to carrying out victorious counter-offensive operations.

An elementary deduction from the above-described events may be as follows: it is necessary to have units with full personnel complement and equipment right from the start of hostilities. This does not mean that they must necessarily be preceded by those "states of increasing tension" on which NATO relies so much for mobilizing and bringing its forces up to full strength. We might dare say that the political and military structure of the Eastern countries, with a very high degree of centralization, makes that eventuality highly probable.

The above-mentioned requirement, valid for all units of all branches and specialities, is indispensable for air defense and antiaircraft artillery units, intended for undergoing the first impact of the enemy air offensive, for carrying out an "equalizing function" of the initial superiority of enemy forces, for safeguarding the freedom of the field army units to maneuver and the integrity of their operational and logistic support.

Because we are aware of these multiple functions, we have taken the liberty of believing that the measure reducing the personnel allowance of the organic antiaircraft groups in the large units is not very farsighted.

The second great lesson of the Yom Kippur War is the demonstrated tactical effectiveness of antitank and antiaircraft missile systems. The figures speak very clearly. In the very hard-fought battles in the first week of the war, Israel lost 850 tanks (about 50 percent of its armored force) and 130 aircraft (25 percent of its Air Force). This second fact is especially significant, if it is realized that, while all types of aircraft, including transport, reconnaissance, liaison and other aircraft, are included in the total number of operational aircraft at the start of hostilities -- 522 -- the aircraft shot down were almost all fighter-bombers, the heart of Israel's military Air Force.

Their heavy losses are to be attributed mostly to the very broad availability and the resultant dissemination, at every level, of technologically very sophisticated but -- at the same time -- structurally simple, crude missile systems, easy to use especially in their portable versions (antiaircraft self-defense weapons and, why not?, antitank weapons).

We should like to point out that the remarks made so far result from events that actually happened, not from hypotheses or arbitrary deductions. The following is particularly well known:

Eighty percent of the losses suffered by the Israeli Air Force were concentrated in the first week of the war, because, in those days, it attempted, without succeeding however, to win air superiority, to prevent supplies from reaching the battle and to annihilate the forces that had landed on the other side of the Suez Canal. The attempt failed, serving only to prove

"the virulence of the Egyptian antiaircraft defense, which cost Israel a very high price in terms of losses right on the first day."[3]

On the Golan front, the Syrians advanced protected by a similar system of antiaircraft defense that deprived Israel's soldiers of a valid air support and at any rate one capable of checking the enemy advance with somewhat effective results.

The first task assigned to the Israeli tactical force ferried across the Suez Canal in the gap carelessly left open between two Egyptian armies was to destroy the surface-to-air missile bases, the command posts and the radar emplacements of the enemy's antiaircraft defense system. Only when this objective had been attained was Israel's tactical air force again able to bring to bear in the battle its potential (in the meantime partially restored with American aid), checking the attempts by the Egyptian Armed Forces to countermaneuver.

By recapitulating in their entirety the facts described up to now and drawing the proper conclusions from them, it does not seem bold to maintain the following:

Effective antiaircraft defense can prevent, even a prestigious, powerful force, from winning air superiority, an indispensable premise for achieving success in ground operations.

Broad availability of conventional and missile antiaircraft weapon systems affects the operations themselves to a degree equal to, if not greater than, the availability of "traditional" components: infantry, artillery, armored equipment.

Until antiaircraft defense is quantitatively and qualitatively adjusted to requirements, the friendly forces can use the indispensable air support and achieve their tactical objectives.

Therefore, it can be believed that the critical importance of the stake amply justifies the assignment of maximum priority to a solution of the problems of air and antiaircraft defense and recognition that the antiaircraft specialty has a very high specific weight in the general economy of a battle.

This criterion, undoubtedly very burdensome both from the economic point of view and from the more strictly military point of view, may find a different degree of application depending on the overall potential of the country wanting to carry it out. At present, only the Soviet Union permits itself its total application, because it has acquired an antiaircraft armament capable of making the space above the disposition of the ground forces

[3] A. De Marchi, "Reflections on the Fourth Arab-Israeli War," RIVISTA MILITARE, No 3/1974.

impenetrable, at least theoretically. A Warsaw Pact army (equal to a large army corps in Western armies) is able to deploy the following over a front 50 kilometers wide and 100 deep: 114 ZU-23/2 self-contained twin mounts, 128 ZSU-23/4 self-propelled quadruple mounts, 23 batteries (138 pieces) of S-60 57-millimeter truck-drawn guns. And that is only insofar as conventional weapons are concerned. With regard to medium-range missiles: 18 SA-2 Guideline lanchers and 27 SA-4 Ganef launchers. With regard to light systems: 5 batteries of the very effective SA-6 and an undetermined number of new Gecko SA-8. Finally, concerning self-defense missile systems, about 60 Gaskin SA-9 units mounted on self-propelled amphibious vehicles are deployed alongside the well-known Strela SA-7 capable of being launched from the shoulder (150 launching posts in a single division).

Italy cannot have anything like that, but it is also unthinkable that the Hawk system ("shared" with the Integrated Air Defense, which is a monopoly of the Air Force) and about 20 light 40/70 antiaircraft batteries (which will shortly celebrate their silver wedding anniversary with the Italian Army) can be all that the nation gives its sons (as used to be said) for defense of the field army from low and very low-level attacks.

Conclusions

If there is a desire to avoid falling into immobility, the enemy of efficiency and, therefore, of the military institution, which, by its very nature, tends toward the achievement of the highest possible degree of efficiency, it is necessary to have the courage to take the necessary innovative measures in the face of the new situations.

Once the strategic picture on the basis of which a certain type of defensive organization had been set up is changed, the organizations itself is changed. In the specific case of Italy, it is indispensable to restructure the organization of air and antiaircraft defense, which, in the present state of affairs, are able to carry out concrete, valid action only within limited sectors of the air space concerned, even though it has achieved an appreciable degree of operational effectiveness.

One problem within the problem is the matter of antiaircraft defense of the field army. Availability of weapon systems to an extent suitable for requirements, the need for them to have features capable of making their effective, constant and coordinated employment possible in any operational and environmental situation, an attitude for adjusting their action to the requirements of the other components of thw instrument of war, are the cardinal points on which a determination of the employment doctrines and of the pertinent application procedures, in addition to making the weapons and equipment of the antiaircraft artillery more effective.

At present, and more so in the future, that is an essential component of the Armed Forces, whose existence and maneuvering capability -- and, therefore, in one word, credibility -- will subsist only if and insofar as a balanced,

farsighted policy of support of the spiritual resources and of making the material resources adequate will take proper account of the irreplaceable function of defense against enemy air attack.

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COUNTRY SECTION FEDERAL REPUBLIC OF GERMANY

GOVERNMENT STUDY ON REACTOR SAFETY NOTED

Hamburg STERN in German 17 May 79 pp 216, 219

[Article by Wolfgang Barthel: "Sixteen Thousand Seven Hundred Dead at Once"]

[Text] A government study reveals that the Federal German nuclear power plants are also more dangerous than their managers admit.

After the near catastrophe in Harrisburg, Germany's atomic power supporters are tirelessly giving assurance that an accident like that could not happen in FRG. "German reactors are designed to cope even with serious accidents," said Klaus Barthelt, chairman of the Board of Directors of the largest atomic power producer, the Kraftwerk Union (KWU). An accident like that in Harrisburg is "precluded by the higher German safety requirements," emphasized the Hesse Land government, which has jurisdiction over the Biblis reactor, without being asked. From Federal Minister of Economics Otto Graf Lambsdorf, to the German electrical workers, the advocates of nuclear energy are united: even after Harrisburg, the people of the FRG can sleep peacefully.

They cannot. For the last 2-1/2 years, a study of risks has been in the works in the Federal Ministry for Research, in which the safety of German nuclear power plants is supposed to be closely examined. The study is almost finnished--and is devastating in its findings so far. "The result does not substantiate the previously assumed plant safety of the Germany nuclear power plants," states a ministry summary concisely. It makes clear that a catastrophe like that in Harrisburg can occur here, too, at any time.

The German risk study was commissioned in 1976 as a counterpart to the American "Rasmussen Report" (named after the American physics professor Norman C. Rasmussen). In the American opinion, the probability of the occurrence of an atomic catastrophe was stated as one in a billion reactor-years--about as high as the probability of a large meteor crash on a city. According to the Rasmussen thesis, 3,300 immediate deaths should be expected in such a case. Originally, the scientists had not even examined long-range effects, such as cancer or genetic damages.

An atomic catastrophe in Germany would have far worse consequences. According to the German risk study, up to 16,700 would die immediately in such an accident--people who would receive the deadly radiation dose of about 500 rems or more. The ministry adds; "The number of 16,700 dead is reached particularly by an especially unfavorable combination of weather condition, wind direction, and population distribution, in which fallout of a large part of the radioactive material from the passing clouds over heavily populated areas is assumed."

Such a catastrophe would occur if a melted reactor core were to eat through the reactor pressure vessel into the so-called "sump water." According to the study, the sump water would turn to steam, and 25 hours after the accident the pressure would be so great that an explosion would burst the reactor's concrete shell. Then the way into the atmosphere would be open for the radioactivity.

The consultants' consolation: Such as incident, coupled, moreover, with an extremely unfavorable weather situation, will occur only every 100 billion reactor-years, according to their estimates.

Even greater catastrophes are conceivable to the experts, although with an even lower theoretical probability. The ministry says: "The basic question--at what magnitude of probability do statements about the results of damages become pointless?--requires another careful deliberation for the concluding report." The Bonn officials have obviously recognized that even the most unlikely catastrophe can occur at any time.

The Bonn study discusses only the light-water reactors which have been used up to now in the FRG. A report of the Society for Reactor Safety (GRS) says about the nearly completed fast-breeder reactor in Kalkar on the Lower Rhine: "An independent assessment of the risks of this type of reactor has not yet been undertaken in the FRG, because a definite blueprint for a large-scale installation does not exist as yet." And about a planned high-temperature reactor, the GRS writes: "To calculate the frequency of accidents, one needs to know the probability of failure of all systems which are necessary for controlling the accident; these probability values frequently cannot be determined on the basis of a plant design."

Stated simply, only when the reactors are in operation can one find out how safe they are.

The risk study also does not provide any data about the number of persons who have to suffer the long-term damage after an atomic catastrophe. In this connection, the Institute for Reactor Safety of the Technical Monitoring Association already in 1976 presented a classified study of "radiological effects of massive releases of fission products from pressurized-water reactors." According to this study, up to 150,000 additional cases of cancer must be expected in case of an extreme accident.

Nevertheless, KWU-boss Barthelt persistently hopes "that reason suffices to keep a German nuclear energy industry alive." After the risk study one would prefer to ask, who will keep the people alive in case of a catastrophe?

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CSO: 3103

COUNTRY SECTION FEDERAL REPUBLIC OF GERMANY

NUCLEAR REACTOR TO PRODUCE HEAT FOR HOUSES

Hamburg STERN in German 17 May 79 pp 219-220

[Article by Peter Thomsen: "Heat on a Cold Path"]

[Text] In Juelich, scientists are working on a technique or transporting heat by pipeline into households.

In the 1950's, when the Americans were considering how the powers of the atom could be put to peaceful use, they thought only of electricity. Since then, all nuclear power plants in the world have been working according to the same process: the heat produced by nuclear fission turns water into steam, the steam drives turbines, the turbines drive generators.

This one-sided fixation on electricity has a definite deficiency: our most important energy problem, the need for heating energy, can hardly be solved this way.

"We don't have a particularly urgent need for electricty, but we do for heat," the German atomic physicist Prof Rudolf Schulten recognized year ago.

Since 1957, Schulten has been working on an atomic reactor which can produce not only electricity but also heat at a very high temperature. In August 1966 this "high temperature reactor" began operation in the Juelich nuclear research institute at Aachen. This week, a plant is being opened in Juelich which should prove the significance of the Schulten reactor.

The installation consists of the two parts "Eva" and "Adam," and is to test a completely new process, by which heat will be carried on a cold path to the consumer. "Eva" (an abbreviation for "Individual Fission Line Test Installation), with the help of heat from the reactor, converts a mixture of natural gas and steam into two other, particularly energy-rich gases: hydrogen and carbon monoxide. Although a great deal of heat (over 800°) is required for thier production, these two gases are normally cold. They can be carried to the consumer over oridnary pipelines. There they find the counterpart to "Eva," which the scientists promptly christened "Adam."

"Adam" reverses the chemical reaction of "Eva." With the help of a catalyst, hydrogen and carbon monoxide again become natural gas and water. In this reconversion, all the energy that was put into the process by "Eva" is released as heat.

The possibilities of this energy-system are extremely attractive. Unlike the "long-distance" hot water heating systems common today, which can be transported a maximum of 10 km because the water cools off by that point, the cool gases can be carried over great distances without problems. Sixty to 100 km are considered the most economical distances for "atomic power from the gas lines," as the people at Juelich call their invention.

This would solve the old problem of economically transporting the heat of an atomic power plant to the consumer, while on the other hand keeping the nuclear power plant far enough away from cities for safety reasons.

The reactor type which the Juelich scientist have in mind for "long-distance nuclear energy" also meets safety requirements. The high-temperature reactor is much less sensitive than a Harrisburg-type water reactor in case of a temporary cooling failure, because it is designed for operating temperatures of approximately 1,000°.

The miracle reactor may face the dreaded "core melt-down" at temperatures of 1,000° because then its metallic innards give way. In the high-temperature reactor, on the other hand, there is no metal. It fuels, uranium and thorium, are embedded in graphite. This coal-like material cannot melt. It converts directly to gas--but only at 3,800°.

At present, however, the long-distance heat from the atomic reactor is still in an experimental stage. The experimental installation "Eva and Adam I" has an output of only 300 kilowatts--just enough to heat one residential block. And the people at Juelich produce the heat for "Eva" at present with electrical heating rods which simulate the high-temperature reactor. They cite safety considerations as the reason for temporarily doing without the reactor: the gas plant is not to be coupled with a working reactor because natural gas and hydrogen are explosive gases.

Even had they wanted to, they would not have been able to. The high-temperature reactor in Juelich has been inoperative for a year because of a malfunction. Water from the steam generator had entered the reactor in May of 1978. The search for the leaks still goes on.

9328

CSO: 3103

COUNTRY SECTION FRANCE

NEW MISSILES DISPLAYED AT 1979 LE BOURGET FAIR

Paris AIR & COSMOS in French 9 Jun 79 p 147

[Excerpts] The General Department for Weaponry (DGA) will bring together, as it usually does, an impressive array of materiel in the Defense pavilion. Among this material will be the new French strategic ballistic missiles MSBS [Sea-to-Ground Strategic Ballistic Missile]/M20, MSBS/M4, and SSBS [Ground-to-Ground Strategic Ballistic Missile]/S3 (1/5-size models), the PLUTON nuclear-payload tactical missile (1/10-size model), and full-size models of the EXOCET (MM 38 and AM 39), ROLAND, CROTALE, MAGIC, SUPER 530 and AS 30 LASER tactical missiles and the C 22 target missile. The DGA is also presenting a mockup of the new SHAHINE ground-to-air weapon system mounted on the AMX 30, and a Gazelle helicopter armed with HOT antitank missiles.

Aerospatiale-Tactical Missiles Division (France) is presenting at its stand (Hall A) and in the static exposition its array of missiles of all kinds, but particularly two new ones: the AS 15 TT (all-weather) light anti-surface-missile missile, by itself and in its lauching container, as well as the EXOCET MM (sea-to-sea) 40 antiship missile, in two-tube and four-tube mountings.

Aerospatiale's Tactical Missiles Division has produced more than 400,000 missiles of all types for 45 countries. As of 1 January 1979, the state of sales was as follows: 139,417 ENTAC missiles for 13 countries; 198,189 SS 10 and SS 11 missiles for 30 countries; 8,309 SS12/AS 12's for 21 countries; 26,088 HOTs for 9 countries; 90,594 MILANs for 17 countries; 5,909 ROLANDs for 5 countries; 5,737 AS 20's for 4 countries; 3,855 AS 30's for 6 countries; 1,069 MM 38's for 20 countries; 103 AM 39's for 2 countries; and 1,800 CT 10 and CT 20 target missiles for 5 countries.

Euromissile GIE, formed by Aerospatiale (France) and Messerschmitt-Bolkow-Blohm (FRG), is presenting at its stand and in the static exposition the three weapons systems which it manufactures and markets, under Franco-German cooperation, for 26 countries (cf AIR & COSMOS, No 764). These are: the MILAN light antitank missile, 90,000 of which are in production for 18 countries, with half of them for France and the FRG; the HOT heavy antitank missile,

14,000 of which are being manufactured for 10 countries, including 35 percent for France and the FRG; and the ROLAND ground-to-air weapon system, ordered by 5 countries (2,200 missiles and 80 launching stations), including the United States, which has acquired a licence to manufacture the all-weather ROLAND. Quite recently, on 31 May, the Defense Systems Acquisition Review Council (DSARC) decided in favor of mass production of the "U.S. ROLAND" by Hughes Aircraft and Boeing. The contract is said to involve 180 launching units and 6,100 missiles mounted on the U.S. M-109 tank, for a total of $2.3 billion. It remains only to obtain from the Congress the appropriations needed for going into production.

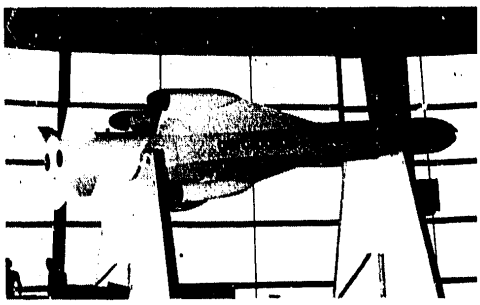
The SEP [European Propellant Co] (France) is presenting at its stand (Hall A) the RITA 2 powder-fuel rocket engine for the French MSBS strategic ballistic missiles, which illustrates the firm's ability to build roving-type rocket-engine structures for space applications. It is also showing Kevlar structures for rocket engines, mainly for the RAFALE artillery rockets. A range of composite materials intended for aerospace applications is also being presented.

At the 1979 Fair, MATRA [General Mechanics, Aviation and Traction Company] (France) is presenting for the first time a 1,000-kg laser-guided bomb (BGL) designed for the ATLIS-2 Jaguars equipped with laser designation pod.

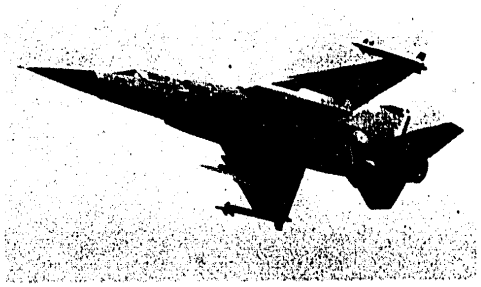
The firm is also showing its array of missiles: the 530 air-to-air missiles, 2,000 of which have been ordered by 12 countries, and its successor, the SUPER 530D, designed for the Mirage F1's and Mirage 2000's of the Air Force, which will receive the first specimens during the third quarter of 1979; the MATRA 500 MAGIC air-combat air-to-air missile, 5,000 of which have already been ordered by 11 countries; the DURANDAL antirunway rocket, more than 4,000 of which have been ordered by 7 countries; the BELUGA antitank grenade launcher (holding 151 grenades), several hundred of which have just been ordered by a foreign country; the CROTALE ground-to-air missile weapon system from Thomson-CSF [General Radio Co], ordered by 9 countries (2,600 missiles); the OTOMAT antiship missile, 400 of which have been ordered by 5 countries; and the MARTEL antiradar rocket, produced solely for the French and British armed forces. This missile has been in service since 1973 on the Mirage IIIE's of the 3rd Squadron (cf AIR & COSMOS, No 765).

MATRA is also having discussions with the American company Raytheon, builder of the PATRIOT ground-to-air missile, with a view to eventual adoption of this missile by the NATO countries.

ELECMA, the electronics division of SNECMA [National Airplane Engine Design and Construction Company] (France), is showing the altimeter for the ASMP air-to-ground tactical nuclear missile, development of which has been assigned to it by the DTE [Missile Technology Directorate] and Aerospatiale.



Model of the AS 15TT air-to-surface missile



MATRA 550 MAGIC and SUPER 530 air-to-air missiles on a Mirage F-1

11267
CSO: 3100

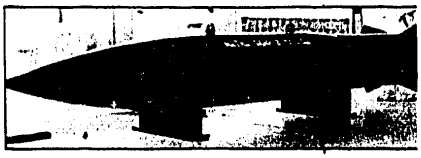
COUNTRY SECTION FRANCE

FIRST FRENCH LASER GUIDED WEAPON NOTED

Paris AIR & COSMOS in French 9 Jun 79 p 151

[Article by Pierre Langereux: "First French Laser-Guided Weapon System"]

[Text] The first launchings of laser-guided missiles and bombs done in France, with materiel of French manufacture, will take place before the end of the year. These will be launchings of Aerospatiale's AS [air-to-ground] 30 LASER missiles and of MATRA's [General Mechanics, Aviation and Traction Company] new 1,000-kg laser-guided bomb (BGL), equipped, respectively, with Ariel and EBLIS self-guiders from Thomson-CSF [General Radio Co]. The launchings will take place at the CEV [Flight Test Center] with the aid of a single-seat Jaguar fighter equipped with the ATLIS 2 laser illumination and target designation pod developed under Franco-American cooperation by Thomson-CSF, prime contractor, and Martin Marietta. This pod is equipped with a laser illuminator built by the CILAS [expansion unknown] (CGE [expansion unknown] group).



MATRA-SAMP [expansion unknown] 1,000-kg laser-guided bombs (BGL)

This set constitutes the first French laser-guided weapon system, development of which was started in 1977 after an operational pre-evaluation which demonstrated the interest of this technology for the launching of precision weapons from a single-seat airplane flying at low altitude--something that had never been done, even in the U.S., where only two-seat planes had been used for laser-guided "smart bombs." The formidable effectiveness of these precision weapons had been demonstrated mainly during the Vietnam war, when two patrols of American A6 and A7 planes succeeded in destroying 17 bridges with 20 laser-guided bombs in a 2-hour mission, without losing a single plane!

Two series-production prototypes of the ATLIS 2 laser pod have already been flight-tested, on the Jaguar in France and on the F-16 in the U.S. More than 20 flights have been done on the Jaguar with designation of various tactical targets at low altitude (sometimes less than 100 meters) and at high speed, to prepare for the launchings of missiles planned for this year. On the F-16, the tests have involved the dropping of bombs equipped with laser self-guiders.

A memorandum of agreement is presently under negotiation between the French and American governments to prepare for adoption of the ATLIS 2 system by the USAF on the F-16 and by the French Air Force on the Jaguar--an operation being carried out within the framework of the standardization of NATO weaponry. This agreement provides for the manufacture of three additional preseries pods, for carrying out flight tests on the Jaguar and the F-16.

Furthermore, integration studies for the ATLIS 2 pod have been carried out by Thomson-CSF and Martin Marietta for the new French airplanes--the Mirage 2000 and the Mirage 4000 in particular--and also for the upgrading of American planes such as the A7, F4 Phantom, etc.

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COUNTRY SECTION FRANCE

DECISION ON OBSERVATION SATELLITE AWAITED

Paris AIR & COSMOS in French 9 Jun 79 p 173

[Article by Pierre Langereux: "Decision in October on the SAMRO Military Observation Satellite"]

[Text] A government decision will be made next October concerning the proposed French SAMRO [expansion unknown] military observation satellite, about which Minister of Defense Yvon Bourges announced recently that it would be included in the fifth military program law, which begins in 1983. Several hypotheses have been advanced concerning the financial modalities for carrying out the project and its technical conception. It should be kept in mind that the setting-up of a reconnaissance staellite system for France is an important matter, since the investment is estimated at about 6 billion francs! (Cf AIR & COSMOS, No 766.)

A Military Telecommunications Satellite

The armed forces are also interested in a military telecommunications satellite, the cost of which would be less than that of the observation satellite. It is even being considered, as a first stage, to simply have reserved channels on public telecommunications satellites such as the "Telecom 1" satellites of Posts and Telecommunications, which the French government has decided to build.

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CSO: 3100

COUNTRY SECTION FRANCE

NEW MISSILES, RADARS PRESENTED AT FAIR

Paris AIR & COSMOS in French 9 Jun 79 p 151

[Article by Pierre Langereux: "Thomson-CSF Missiles, Double-Barrels, Radars and Self-Guiders"]

[Text] Thomson-CSF [General Radio Co] (France) is presenting, at its stand and in the static exposition, various new items in the area of ground-to-air and air-to-ground weapons systems, launching radars, missile self-guiders, etc.

The big new item is the appearance of the SICA [expansion unknown] 10-km ground-to-air weapon system for defense of sensitive points of important units. The SHAHINE is the first version of it (mounted on the AMX 30SA tank), and is intended for Saudi Arabia. The first launchings of SICA missiles have begun successfully: on the third launching, the missile intercepted at 9,940 meters a small target towed by a CT 20 target missile before destroying the missile itself (cf AIR & COSMOS, No 767). The SICA uses the concept of total control of the air situation and of coordination of firing in real time. Moreover, it can automatically exchange data with a control and command system. Each SICA battery comprises four to six launching units, grouped around one or two alert and acquisition units, mounted on tracked or wheeled vehicles or positioned in shelters. Between now and the end of the year, two complete systems will be integrated, one on a vehicle corresponding to a mass-production version (SHAHINE), delivery of which will begin in 1980, and the other in a shelter, for training purposes.

Thomson-CSF will also present for the first time two new double-barrel antiaircraft weapons systems, of 20 and 30 mm, designed to complement the ground-to-air defense systems based on missiles.

The 20 mm double-barrel weapon is mounted on a four-wheeled Hotchkiss-Brandt vehicle derived from the CROTALE vehicle. It uses integrated fire control and can optionally accomodate a surveillance and target-designation radar, an IFF [Identification of Friend or Foe] interrogator, and a laser rangefinder.

The 30 mm double-barrel weapon, christened DRAGON, comprises a turret, developed by Thomson-CSF with the SAMM [expansion unknown] company, which is equipped with two 30-mm HSS 831 cannons and mounted on a chassis of a tank of the new TAM [expansion unknown] family produced by the FRG firm Thyssen-Henschel. Continuous alert, simultaneous tracking of several targets in bearing and distance, and target designation are carried out by a Thomson-CSF "Green Eye" radar identical to that which equips the 30-mm double-barrel weapon system on the AMX 30 SA tank (presently being mass-produced for export).

A new family of active electromagnetic self-guiders, built entirely with solid-state circuits, is being developed by Thomson-CSF for the new generations of air-to-air, ground-to-air and surface-to-air missiles. In addition, Thomson-CSF is continuing to mass-produce the active electromagnetic self-guiders for the KORMORAN air-to-sea missiles of MBB [Messerschmitt-Bolkow-Blohm] (FRG) and for the OTOMAT sea-to-sea missile of MATRA [General Mechanics, Aviation and Traction Co] and OTO Melara. It is also completing development of the new Ariel and EBLIS laser self-guiders. Finally, it is making a proximity fuse for MATRA's SUPER 530 air-to-air missile.

Thomson-CSF is also developing the command electronics for Aerospatiale's AS 15 TT [all weather] air-to-surface missile, designed to be fired from helicopters or from coastal batteries. For the helicopters armed with AS 15 TT missiles, Thomson-CSF has developed the new Agrion 15 radar, characterized by its transhorizon target-designation (range of 60 nautical miles on a patrol craft, no matter what the condition of the sea) and fire-control abilities. The Agrion 15 will be flight-tested in 1981 with guided launchings of AS 15 TT missiles. It may also be used for control of firing from coastal batteries.

20-mm double-barrel weapon on Thomson-CSF CROTALE-type vehicle

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CSO: 3100

COUNTRY SECTION FRANCE

COMMUNIST PARTY CALLED 'ISOLATED'

Paris L'EXPRESS in French 12 May 79 pp 36, 38, 40

/Article by Michel Labro, Jacques Roure, and Vanja Luksic/

[Text] At Madrid airport on 2 March 1977, Eurocommunism was christened in euphoria. Santiago Carrillo, the secretary general of the Spanish Communist Party, who had returned to his country 3 months previously, welcomed his French and Italian comrades, Georges Marchais and Enrico Berlinguer.

Two years later, 1 month before the first European elections, what remains of the holy alliance among the three Communist Parties of southern Europe? Nothing, or almost nothing. They are divided on the question of Europe: the PCF French Communist Party is against it, while the other two are for it. The Italians and Spanish severely criticize the behavior of the French Communists toward the Union of the Left. Among the three of them, the PCF is the one that maintains the most ambiguous relations with the Soviet Union. Finally, still more spectacularly, the Italian and Spanish Communists have opened their party to the outside, while the French were closing theirs, and even forcing their opponents to be silent.

The 23rd Congress of the PCF, which opened on 9 May in Saint Ouen, will confirm these four basic differences between the French party and its two neighbors.

The election campaign for the vote on 10 June might at least have allowed the French and the Italians, who are already members of the European Community, to reach an agreement on the first subject of dissension: Europe. But it is just the opposite. The two joint meetings in Marseilles and Turin, which were decided on after 7 months of hesitation, will not wipe out their disagreement.

Longwy, last winter. The PCF was conducting a campaign in Lorraine against the plan to reorganize the metallurgical industry, and denounced the Brussels "Eurocracy." On 7 February, Giorgio Napolitano, one of the PCI Italian Communist Party leaders, met in Brussels with the creator of this plan, Etienne Davignon, the nemesis of the French Communists. The PCI thinks that it is impossible to face the economic crisis in a national context, and that one must therefore negotiate on a community level.

Monday, 26 February. Measures in accord with the Davignon plan, proposed in the European Parliament, were adopted by the French Socialists, the German Social Democrats, and the Italian Communists. The French Communists voted against them.

Friday, 30 March. L'HUMANITE published a long interview with Marchais, who castigated German domination. On the same day, at the 25th PCI Congress, Berlinguer doffed his hat to Helmut Schmidt's foreign policy. For the Frenchman, European union is equivalent to the liquidation of national sovereignty. For the Italian, it is a precondition for the real independence of the Community countries. He thinks that only a united Europe would permit new relations with the American power. Therefore one must try not to limit the authority of supranational organizations, as the PCF does, but rather to increase it.

While the PCF favors the exchange of communiques with the parties that are hostile to the Common Market -- the small British Communist Party, the minuscule West German Communist Party, the Luxembourg Communist Party, and even the Greek Pasok, the only Socialist Party opposed to the expansion of Europe -- the PCI is increasing its contacts with the Socialists and Social Democrats. Satisfied with his meeting in Bonn with the Social Democratic Party, Sergio Segre, in charge of foreign affairs for the Italian party, landed on 19 February at the Paris home of Francois Mitterrand. The same day, he met with his French counterpart, Maxime Gremetz, at Communist Party headquarters. The next day L'UNITA, the PCI organ, had a three-column headline: "Cordial Discussions in Paris Between Segre and Mitterrand." The interview with Gremetz was announced in a subhead, without adjectives. The Italians' desire to work with the European Socialists is so great that they had considered the creation of a joint group in the European Parliament. The PCF's hostility forced them to give up the idea.

Marchais' nationalist crusade affronts the Spanish even more. Especially since the PCF puts a categoric veto on their country's entry into the Common Market. "We knew that Mr Chauvin was French, but we didn't know that he was also a Communist," said an old activist in Ciempozuelos, an agricultural village in the Madrid region. For the Spanish party, the enlargement of the Community satisfies a double need: stowing Spain in the camp of the Western democracies, and rebalancing the Common Market toward the South. "There are contradictory economic interests in the process of European unification," admitted Manuel Azcarate, the number 2 man in Spain. "The Europe of today is a Europe of capitalism. So what? That doesn't prevent the French Communists from remaining there. Why should it prevent us from entering?"

A second subject for disagreement is the way in which that PCF shot an arrow at the Union of the Left.

Cordoba, Thursday 19 April. The crowd squeezed inside the City Hall. With a crucifix on his left and a portrait of the young Franco still hanging on the wall at his right, the new Communist mayor, Julio Anguita, received the congratulations of the governor, the archbishop's representative, and the local leader of the Center Party -- which, as a sign of national reconciliation, did not field an opponent aginst him. Anguita had just been elected thanks to

a municipal pact signed the day before in Madrid by the PCE Spanish Communist Party and the Socialists, after several weeks of polemics. But this was simply an election agreement. The PCE does not want a "union of the left," much less a Joint Program. "That would restore the image of a Spain cut in two, and thus revive the memory of the civil war," says a leader. Realism has obligations. Similarly, the PCI chose the historic compromise with the Christian Democratic Party, even though it has now returned to the opposition.

This refusal to apply the policy of a unified left at home does not prevent the Spanish and the Italians from criticizing the abandonment of this strategy in France. The hardening of the PCF stands in the way of the open image they want to give in their own country.

The sympathy shown for Francois Mitterrand's Socialist Party in Rome and Madrid is symptomatic of this illness. "The Socialist Party Congress left us with a favorable impression," said Manuel Azcarate. "Mitterrand courageously defended the unity of the left." On 8 April in Rome, L'UNITA had a five-column headline: "Mitterrand's Unified Lines Wins, Choice of the Left confirmed." The next day, in Paris, L'HUMANITE had a two-column headline: "PS Congress: Still to the Right."

The difference in attitude with respect to the USSR -- the third shift -- was evident at the celebration of the 60th anniversary of the Soviet revolution, in 1977 in Moscow.Berlinguer's speech was critical.Carrillo was forbidden to speak. Marchais was not there. The incident is very significant of the different behaviors.

The realism and competency of the Italians. As early as 1956 Palmiro Togliatti, then the boss of the PCI, published the Krushchev report, whose authenticity was denied by the French and Spanish. Since then, the Italians have relations of equal powers with Moscow, which allow them a more independent policy. Berlinguer is the only one who, while keeping his distance, is regularly received by Brezhnev.

The brutality of the Spanish. Carrillo, the ex-Stalinist, criticized the Soviet system in a book; he said "a bureaucratic class wields excessive political power."

The incoherence of the French. They denounced Stalinism too late and too superficially. At the same time, they fell out with the USSR without, for all that, convincing the French voters of their good faith. Moreover, this daring was short-lived (see Branko Lazitch's article). The 23rd Congress marks a return to orthodoxy. "The net result for the socialist countries is, on the whole, positive," we read in the introduction.

But it is mainly in their internal life that the three parties differ most clearly.

Madrid, Saturday 21 April, in working class neighborhood of Hortaleza. A "group" meeting -- the Spanish have abolished the word "cell" -- open to all

the residents of the neighborhood, whether or not they are Communists. That evening, the discussion concerned the result of the municipal elections. Many criticisms were made, especially on the poor results in the Basque country. Luis Lara, a Madrid leader who attended the meeting, explained: "The image we want to give is that of a hospitable, open movement."

Last year, the PCE Congress voted to abandon the reference to Lenin. Not unanimously, but by 968 votes to 248. After several months of impassioned debate in the sections. As for the PCF activists, they learned that their party would make no further reference to the dictatorship of the proletariat from hearing Georges Marchais on television.

Rome, the same Saturday. The meeting room of the Cinecitta Communist section, near the movie studios, in the middle of horrible low-cost housing units. In the room were workers, adolescents with "Afro" hair-dos, elegant young women. On the agenda was European unity. The discussion was contentious. The older people had trouble understanding why their party is pro-European. Lina Fibbi, the specialist in international relations among the party's leaders, explained the advantages of the political strengthening of Europe. Without gaining unanimous approval -- far from it.

The Italian sections, like the Spanish ones, are "open." Mere sympathizers, and even active members of other parties, can attend them. During preparations for the Congress, the Socialist delegates attended 3,021 Communist section meetings. The Christian Democratic delegates attended 1,194. "This practice prevents our members from saying deceitful things," explains a party leader. But internal democracy has its limitations. "In the party, you can say anything, but you can't do anything," states a former leftist who is now a PCI theorist.

You can say anything? Naples, Saturday 3 March, the party regional Congress. "We have knelt before the tabernacle of the historic compromise," lamented a student. "We are water-boys for the Christian Democrats," a worker complained. Berlinguer praised them for their critical attitude. A comment by Paola, a Roman Communist doctor: "Self-criticism is becoming our ideology. We are the party of flagellation."

You can't do anything? Milan, Tuesday 13 March. In order not to cut themselves off from the Christian Democrats, the PCI regional councilors voted not to reopen the Seveso file, as had been demanded by their own local authorities.

Freedom of expression at the base is mainly used as a weather-vane by the leadership. The political line remains its exclusive perquisite. And democratic centralism is exercised from the top down. Nevertheless, "the existence of streams of thought is the proof of an obvious democratic development," thinks Giorgio Dominese, the spokesman of the Venetian Christian Democrats.

The Paris Purge

These streams of thought are expressed during the Congresses. At the beginning of April, in Rome, Giorgio Amandola and Pietro Ingrao, who represent two

factions in the party leadership, confronted each other on the rostrum over the seriousness of the economic slump. Can you imagine Roland Leroy and Charles Fiterman expressing very divergent views from the rostrum of the 23rd Congress in Saint Ouen? Can you imagine cell meetings in the Red suburbs open to active members of the Socialist Party or the RPR Rally for the Republic , when the PCF leadership would like to silence even its opponents at these meetings?

The symbol of this desire to present the image of a party without any false notes is Paul Laurent, formerly an advocate of opening up the Communist Party, who was charged on 29 April at the PLM-Saint-Jacques house with purging the leadership of the Paris Federation, which he had actually set up himself.

The peculiarity of the PCF does not seem to be about to disappear: the Spanish and Italian Communists have succeeded in integrating their party into the domestic political situation. The first in a constructive opposition in Madrid, the second as candidates for power in Rome. Since then, they have been led to present themselves as "just another party."

For 17 years, the French party has been trying to get out of the ghetto. With more or less luck. And for the greater benefit of its Socialist ally-opponents. All at once, the reintegration process has been interrupted, discipline has been reinforced, and orthodoxy has returned. Once more, isolation cannot be far behind.

Statistics of the 3 Communist Parties

France: 700,000 declared members, 5,787,436 voters (20.6 percent); Italy: 1, 1,800,000 declared members, 12,620,509 voters (34.4 percent); Spain: 300,000 declared members, 1,915,000 voters (10.9 percent).

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CSO: 8019/1336

COUNTRY SECTION FRANCE

COMMUNIST VOTERS POLLED ON ATTITUDE TOWARD PARTY

Paris L'EXPRESS in French 12 May 79 pp 38-39

[Article by Albert du Roy]

[Text] This survey was made for L'EXPRESS by IFOP French Public Opinion Institute from 20 to 25 April 1979, on a sample of 1,004 persons who stated that they were personally close to the Communist Party.

The strong reputation for discipline of the Communist voters will be severely tested in the coming months, if one can believe the IFOP-L'EXPRESS survey published below.

Four general subjects currently enliven the discussions within and around the Communist Party. On one of them -- European union -- a clear majority of Communist voters approve of the party leadership. So Georges Marchais is right not too be too worried about the vote on 10 June. Especially since the Communist campaign was designed to make up for all dissatisfactions, insofar as possible.

But in the long run, disappointments are predictable. On the other three basic subjects, there is a considerable gap between the party apparatus and a part of the electorate: 37 percent of the Communist voters think that the internal operation of the party is not democratic; 31 percent consider the overall net result of the Soviet regime to be negative; 38 percent do not think that the Socialist Party has "turned to the right."

This gap is concerned with three issues on which the Communist Party has changed direction recently: abrupt cessation of the opening of the party and disciplining of opponents; disappearance, in the press and in speeches, of criticisms of the Eastern countries; breakup of the Union of the Left and denunciation of their Socialist ally. The good election results that have been regularly achieved by the Communist Party since 1973 were mainly due to this new characterisitc image, willed by Marchais, which Marchais is now abandoning. What will be the long-term consequences of this about-face in the elections?

The drift is obvious in the replies to question No. 5. The Communist Party has praised the merits of leftist unity too much to be able to break it up without feeling the consequences: 58 percent of the voters are in favor of a single candidate on the very first round of the 1981 presidential election, contrary to the party's official position. At the present time, such a candidate could only be a Socialist. This obvious lack of understanding of the official position will be corrected only at the cost of strengthening the anti-Socialist campaign.

The 23rd Congress must therefore initiate a strategy of withdrawal.

Is the PC Democratic?

One of the criticisms often made of the Communist Party is that its internal operation is not democratic. Do you personally agree with this criticism of the Communist Party, or not?

	Percent	
Agree completely	12	37
Agree somewhat	25	
Disagree somewhat	23	44
Disagree completely	21	
No opinion	19	

On the democratic operation of the Communist Party, or the lack of it, three categories of Communist voters stand out. Those 50-64 years old are markedly less critical than the younger people: only 27 percent agree with the stated criticism, and 51 percent disagree. This is the age group that discovered the "Communist vote" between 1936 and 1950, the height of the Stalinist era.

Senior managers, professionals, and small businessmen most frequently criticize the undemocratic nature of the Communist Party: 48 percent -- a majority -- to 40 percent. The farmers, whose Communist vote is often a kind of expression of their dissatisfaction, include a particularly large number of respondents with no opinion (34 percent).

As for the Communist Party's working-class voters, they are in agreement with the average position of the Communist voters, on this question and the others.

The Communists and Europe

The Communist Party is not in favor either of extending the European Community to new countries or of strengthening the powers of its institutions. Do you personally approve or disapprove of the Communist Party's positions on Europe?

	Percent	
Approve completely	23	53
Approve somewhat	30	
Disapprove somewhat	18	27
Disapprove completely	9	
No opinion	20	
	32	

There is clear approval, in all categories,of the Communist Party's anti-European position. It is a little clearer among retired people (57 percent approval) and farmers (56 percent). It is a little less clear among senior managers, professionals, and small businessmen (34 percent disapproval) and employees and middle managers (31 percent).

The Communists and the USSR

In your view, is the overall net result of the Communist government in the Soviet Union...

	Percent	
Very positive	6	39
Somewhat positive	33	
Somewhat negative	22	31
Very negative	9	
No opinion	30	

The cleavages are very clear: dispute with the Soviet result is inversely proportional to age. While it is strong at 18-34 (37 percent consider the result negative, as opposed to 39 percent who consider it positive), it decreases up to age 65 and older (only 23 percent consider it negative).

Negative judgments are as frequent as positive ones among senior managers, professionals, and small businessmen (36 percent on each side), and almost as frequent among middle managers and employees (39 percent to 37 percent). Among the farmers who vote Communist, 41 percent have no opinion on the Soviet Union.

The PS "Turn to the Right"

The Communist Party often criticizes the Socialist Party for "turning to the right." Do you agree with this criticism of the Socialist Party, or not?

	Percent	
Agree completely	20	48
Agree somewhat	28	
Disagree somewhat	19	38
Disagree strongly	19	
No opinion	14	

It is mainly among the young Communist voters (age 18-34) that the accusation made against the Socialist Party has trouble "getting through": 41 percent do not agree. Similarly, among the employees and middle managers, from whom the Socialist Party recruits a large share of its voters, 47 percent do not agree.

On the other hand, the Communist argument is widely approved in the Paris region (50 percent agreement), where the party apparatus is powerful, and among farmers (56 percent), a class in which the Socialist Party has never been well established.

Presidential Election: A Single Leftist Candidate

On the first round of the 1981 presidential election, would you like...

For there to be a single leftist candidate	58 percent
For the PC to put up its own candidate	32 percent
No opinion	10 percent

The "unionists" win everywhere. But more clearly among the senior managers and professional (60 percent) and employees (61 percent) than among the workers (56 percent).

Marchais or Seguy

If the Communist Party were to put up its own candidate on the first round of the 1981 presidential elections, whom would you prefer -- Georges Marchais or Georges Seguy?

Georges Marchais	55 percent
Georges Seguy	14 percent
No opinion	31 percent

Georges Seguy, the head of the CGT [General Confederation of Labor does not get a higher score among the workers (13 percent) than in the other categories.

Georges Marchais gets his worst score among the senior managers and professionals (42 percent) and among the employees and middle managers (41 percent), who most frequentlytake refuge in abstaining (42 and 36 percent).

8429
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COUNTRY SECTION FRANCE

COMMUNIST PARTY'S RELATIONS WITH MOSCOW DISCUSSED

Paris L'EXPRESS in French 12 May 79 pp 40-41

[Article by Branko Lazitch]

[Text] There are two gauges for estimating the political line of the PCF French Communist Party and its changes: the party's attitude with regard to the Socialists, and its relations with its Soviet counterpart. On the first point, we are submerged in daily information. On the second, secrecy is now the rule of the day, among the Communists themselves and among the commentators.

Paradoxically, this happens every time the PCF'srelations with Moscow improve. When they worsen, as was the case beginning in 1975, the differences are brought to the front of the stage. On the other hand, the present reconciliation, which began in 1978, is taking place in secret. But, on the part of the commentators, remaining silent on this subject results in preventing a search for any correlation between these two complementary procedures: normalization with Moscow and war against the Social Democrats.

But that is the situation: the preparatory documents for the 23rd Congress, the forum for open discussion in the press and in the party organizations juggle away the Moscow-PCF file.

Instead of opening it, the opponents themselves have directed their thoughts to the criticism of the "real socialism" in the East. But in the PCF, the USSR is never judged in terms of realities -- whose structure has not changed for a quarter of a century -- but in terms of the state of the relations between the two "sister parties," and their fluctuations.

A recent indicator of the freeze and thaw is the PCF's change of heart with regard to Leonid Pliushch. October 1976: Pierre Juquin, in the name of the party, attends a meeting in honor of Pliushch and against human rights violations. He shakes the dissident's hand in public.

This gesture, translated into political terms, does not mean that the party has undergone a conversion to dissidence, but simply that its relations with Moscow are at their lowest point. It is not this handshake that brings on

a quarrel with Moscow. It is because there is discord with Moscow that this public handshake has taken place.

Early 1978: the party pulps an election brochure (of which more than 1 million copies have already been printed) for the simple reason that there appears on the cover a photo of this same handshake with Pliushch, a photo taken in 1976. The conclusion to be drawn is clear: at this time, the party is no longer seeking to provoke Moscow, it wants to appease them.

April 1979: a great leap forward in the direction of the USSR. L'HUMANITE treats Pliushch as a simple opponent and puts him in the same bag as Solzhenytsin. Now, the author of this attack against the dissident, a contribution to the Congress discussion forum, is none other than Fernand Grenier. A former member of the Central Committee and a former minister, Grenier was for 30 years in charge of the France-USSR association. He was decorated in December 1978 by the Soviet government.

Czechoslovakia -- Land of Contrasts

So in the absence of documents, Communist society provides signs that make it possible to decode the political enigmas. Concretely, contacts with Moscow are increasing. In April, two meetings took place in Paris: under the aegis of France-USSR, and then on the occasion of the (unprecedented) visit to the CGT by the chairman of the Soviet trade-unions, Alexis Shibaev. In the last 6 months, many members of the Political Committee -- Charles Fiterman, Roland Leroy, Maxime Gremetz, Jacques Chambaz, Georges Seguy, and Guy Hermier -- have had contacts with Soviet leaders. But, oddly enough, not Georges Marchais, unless he did so by the intermediary of the East German leaders, to whom he paid a long visit in December 1978.

Logically, the news -- and, a fortiori, the commentaries -- on repression in the East are becoming rare, if not nonexistent, in the Communist newspapers. In less than 1 year, the change is striking. In May 1978, Yuri Orlov's sentencing to 7 years in prison gave rise to an editorial protest in L'HUMANITE. In March 1979, Mustafa Jemilev's sentencing to 4 years of exile did not inspire a single line. Even the news was censored.

Another example: in the last few days of April, the international press was talking about the persecution in East Germany of Professor Robert Havemann, a member of the German Communist Party since 1932. Not a word in L'HUMANITE. And what can be said of the PCF's opinion of the situation in Czechoslovakia? It has markedly changed. All the news on Jaroslav Sabata, the spokesman (in prison) for Charter 77, have been suppressed for 3 months. But L'HUMANITE does not hesitate to advertise for tourism in Czechoslovakia, a "land of charm and contrasts."

The polemics with the Soviet press have disappeared, as well as the denunciations of the "negative aspects" of Soviet society. Two months before the 22nd Congress, which was held in February 1976, the PCF Political Committee published a statement expressing "its deep surprise and formal reprobation"

on the subject of the Gulag system, and -- the height of audacity -- demanded an explanation from the Soviet authorities. In 1979, 3 months before the 23rd Congress, which opened on 9 May, the preparatory document decreed in advance: "The net result of the socialist countries is, on the whole, positive."

The Normalization of Billancourt

Going into detail, the French Communist press states that "even the net result of the socialist countries in agriculture is positive." That the prerogatives of the Supreme Soviet (which is actually a cheering section) are expanding. That the participation of the workers and unions in the management of businesses and of the economy as a whole is growing.

So it is not surprising that the active members of the French Communist Party -- according to the official version -- have also been won over by this renewed enthusiasm for the Soviet Union. At the meeting of the Communist section of Renault-Billancourt, the statement of the "generally positive net result of the socialist countries"was unanimously approved, with one abstention.

Billancourt has not lost hope. It is being normalized, like the whole Communist Party.

8429
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COUNTRY SECTION FRANCE

BRIEFS

OCTOBER ARMORED MANEUVERS--Giscard will attend, in October, the most extensive military maneuvers of the armored forces since World War II. They will be held in Saone and Doubs Departments [in northwestern France]. [Text] [Paris PARIS MATCH in French 22 Jun 79 p 51]

MILITARY WEAKNESS HINTED--The government has refused to permit the military equipment law to be submitted to the Parliament during the June session. This is being done to avoid difficulties with the RPR, which wanted to make a point of the matter, so the discussion will be put off until the fall. An explosive report on the question nevertheless risks being made public in mid-June; in it it is revealed that the French Army, in case of war, would today be in the same situation as it was in 1939, all other things being equal. [Text] [Paris LA LETTRE DE L'EXPANSION in French 4 Jun 79 p 3]

ATOMIC SHELTER CENSUS--The cost of making basements and underground garage into atomic attack shelters would probably come to from 2 to 10 percent of the cost of new buildings, according to a study done at the request of /Prime Minister/ Raymond Barre. A systematic check on existing shelters and on the infrastructure components that can be used to protect the population is already underway. /Excerpt/ /Paris VALEURS ACTUELLES in French 12 Jun 79 p 17/

PIRATE TELEPHONE NETWORK--About 30 farms belonging to farmers opposed to the expansion of the Larzac military camp are said to be interconnected by a pirate telephone network. This will enable the farmers and their leftist sympathizers to coordinate their various actions and counteractions during the summer in spite of surveillance by the police. /Text/ /Paris VALEURS ACTUELLES in French 12 Jun 79 p 17/

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COUNTRY SECTION SPAIN

POPULAR RESISTANCE TO NUCLEAR PLANTS DEMONSTRATED

Madrid CAMBIO 16 in Spanish 27 May 79 pp 72, 75, 77

[Text] The nuclear power plant designed by Westinghouse, which Spanish technicians are building in Lemoniz (Vizcaya), could turn out, after all, to be the first "casualty" of the crisis which the atomic energy program has been going through since the accident at Three Mile Island in Pennsylvania a month and a half ago.

"At the moment, it is true that we are not playing any part in it, except morally. But there is no doubt that in the future the matter will be our responsibility," Javier Olaverri from the Euskadiko Esquerra said in Washington last week. He was one of the four members of the delegation sent to the United States from the Basque General Council to study the causes, problems and consequences of the Harrisburg accident.

Despite their different preconceived ideas on nuclear energy, and specifically on the construction of the Lemoniz plant, the four men, who represent the PNV [Basque Nationalist Party], Euskadiko Esquerra, PSOE [Spanish Socialist Workers Party], and UCD [Democratic Center Union], managed to agree enough to write a long technical report to the General Council before leaving Washington.

In this capital, they met with experts from the Nuclear Regulatory Commission and the atomic "forum" and with scientists opposed to and organized against nuclear energy. Also, they traveled to Harrisburg, where besides visiting the damaged plant, they discovered--to their surprise and admiration--how the "independent" state of Pennsylvania has almost complete control over the construction, functioning, risks and civil emergency plans related to the nuclear plants going up in the state.

In the next few weeks representatives of the Catalan Generalitat are expected to make a similar trip to the United States. And while the time is coming when the regions will at least partially control their atomic plants it is plain, according to the law, that the municipal councils where they are being constructed or are going to be constructed have veto power over them and can refuse to give permission to begin, continue, or complete the projects.

Serious Doubts

Even the ex-Minister of the Interior and next president of the Industry and Energy Committee of the Cortes, Rodolfo Martin Villa, expressed serious doubts about the advisability of locating nuclear plants near cities. In his recent working-vacation stay in Washington, which coincided with the holding of the first large-scale demonstration in this capital since the Vietnam era and the largest ever held in the world in protest against the use of nuclear energy, Martin Villa said: "Although nuclear energy is the only recourse for Spain, thought must be given to new safety guarantees. Perhaps the most appropriate thing to do would be to build the plants in rural areas far from the large urban centers; and if these are lacking, the nearby population could even be moved away to live in another place before the plant began to function." The ex-minister, an industrial engineer by profession, who hopes soon to be appointed president of the committee of the Cortes which will regulate industrial and energy matters, will have more to say, and do, on the subject in the near future. It appears certain that the government has decided to divide the nuclear responsibility, which up to now has fallen mainly on the shoulders of the Cortes, and secondarily on the autonomous institutions in every region where a plant is being or will be constructed.

The decision would immediately affect the Lemoniz plant, which the Iberduero company is building and which is turning into yet another problem for the difficult relations between the Basque country and Madrid.

In the case of Lemoniz, the subject is important: the mayor of this Guipuzcoa town and the majority of the municipal corporation belong to the PNV. What will they do?

Last week Iberduero told CAMBIO 16 in Bilbao that no more plants will be built in the Basque country by their company if the Madrid government or the Basque General Council so decide, after a referendum, to bring the present Lemoniz plant to a standstill.

The company added that, so far, the possibility of compensation in case the work was halted had not been considered.

Ulises Ruiz, a PSOE member who was part of the committee that traveled to Harrisburg at the request of the CGV [Basque General Council], told this magazine that he knew nothing about the possibility that the UCE government would delegate the responsibility for taking charge of the Lemoniz affair to the Basque General Council, both with regard to the calling for the referendum approved by the CGV, and for the final decision on compensating Iberduero. Both the UCD and the PNV, says Ruiz, agree that Lemoniz should go forward. "They are trying to minimize the problem so as not to come to a standstill," he said. "On our part, we need a prudent waiting period so as to first study the definitive report which will be made public within 6 months, and also to find out what new steps the Iberduero company has taken."

The committee from the International Atomic Energy Agency, which visited Lemoniz and its plant last Thursday at the request of the Basque General Council, asserted that the plant is viable, but that however much care is taken in the construction and functioning of the plants, the possibility of an accident always exists. The atomic experts of the OIEA also commented that the communications in the area are not adequate in case of an emergency.

Meanwhile a committee of experts from Iberduero quietly visited Washington and the Harrisburg plant last month, without telling the press. Their directors and stockholders could be concerned by the way the situation is developing. But it is not as bad as all that. To move the Lemoniz plant to another site outside of Lemoniz would cost some 10 billion pesetas, which seems a great deal, but which involves less than 10 percent of the total value of their operations. Even that would raise another topic with a political coloration: the locating of the plants which supply the Basques with electric power within a stone's throw (and radiation range) of the Castilian towns. Even Martin Villa, who happens to be from Leon, admits slyly that "we people from Leon would always have the opportunity to leave Bilbao in the dark."

Three of the four persons sent from the Basque General Council, all but the one from the PNV, participated, although only as observers, in the demonstration on Sunday, 6 May, when Washington heard the street protests of tens of thousands of people, something unknown since the Vietnam era. "We won't go," the angry youths had shouted 10 years ago along their traditional march between the White House and Congress. "We won't glow," proclaimed the 75,000 people who took part in the antinuclear demonstration.

Election Issue

Beyond the limited effect of the demonstration itself, the protest served to make it clear that the nuclear issue will be one of the ones most discussed during the presidential election campaign which is already beginning in this country and which will culminate in the presidential election in November 1980. Carter, who inevitably had to hear the shouts of the demonstrators passing in front of the White House, commented that he understood their concern, although his viewpoint is that the nuclear industry is necessary, and no nuclear plant should be closed down unless it is shown that it represents a real danger to the neighboring population.

More than 20 million North Americans live less than 50 kilometers from a nuclear plant, and precisely for that reason, the controversy arising from the Harrisburg accident not only is not ending, but is growing daily in this country, where its repercussions have been much greater than in Spain.

The news items which the leading North American newspapers uncover every day are not encouraging. Although the damaged Three Mile Island reactor is already out of danger--it was finally cooled down exactly a month after the accident occurred--the Department of Health admitted at the beginning of this month that the radioactive contamination undergone by the people living in the surrounding area was double that which was previously announced; as a result,

1-10 persons in that area of Pennsylvania may be expected to show symptoms of cancer in the next few years.

These estimates are based, however, on scientific reports about the effects of radioactivity on the human body which very few consider to be valid today. A report published by the National Academy of Sciences on 2 May stated, for example, that: "No minimum level of radioactive contamination exists at which it can be stated for certain that there is no danger to health." Women and children have twice the chance of men of contracting cancer because of that radiation, added the report, which was ambiguous about exact statistics because, it pointed out, 30 years of waiting are needed before cancer or leukemia derived from low-level radiation contamination arises.

Burial of Wastes

In the state of South Carolina, which derives half of its electricity from atomic reactors and which to date has had the only "cemetery" for nuclear waste in the eastern United States, the dangerous burials have been ended. Last week, trucks transporting the contaminated wastes collected at Three Mile Island were halted when they entered that state's highways. State police, under orders from the governor, forced the trucks to turn around. The Nuclear Regulatory Commission, after many doubts and pressures from industry, decided at the end of April to close the other nine plants operating with Babcock and Wilcox reactors, similar to the one at Harrisburg. Another two plants, one in New Jersey and the other in Michigan, have closed on their own in the last 2 weeks. The Oyster Creek plant built in New Jersey by Westinghouse--the license holder for the majority of the plants with construction permits in Spain--was ordered to stop operating by the Nuclear Regulatory Commission after its experts confirmed that at the beginning of May the cooling valves of the reactor had been damaged and that there was a potential for the same danger which at one time had caused the panic at Three Mile Island.

Nuclear Insecurity

Committees of the House and Senate are successfully investigating and uncovering new aspects of nuclear danger. On 9 May a congressional committee approved a bill to suspend work for 6 months on all nuclear plants under construction while their risks are reevaluated. It is true that no plant has been planned in this country since 1975, the year when the last of them was given its license. And the lack of demand is not due to worry about their safety, which 2 months ago was not in question; but simply because nuclear energy in the United States is not considered to be cheaper than that produced by other methods, which, by the way, destroys the arguments of the defenders of this type of energy in Spain.

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END