

ending missile. The surveillance camera can scan a full 360° around the ABL aircraft; the laser gimbal can swing 140° left or right from the nose of the aircraft.

When a target is detected, the aircraft is turned as needed as the laser's optics are rotated to point to the target. A low-power laser, or beacon, is then trained on the target nose cone, and the instantaneous reflection of the beacon back to the ABL is used to quickly measure the atmospheric turbulence. A "deformable," segmented mirror adjusts to compensate for the atmospheric turbulence. The high-powered 4.5 MW laser is then bounced off this mirror and illuminates the target for a few seconds until it is destroyed. The ABL is then ready for another shot.

At the current time, the Air Force's preferred laser for the first operational ABL is the chemical oxygen-iodine laser, first demonstrated at the Air Force Weapons Lab in 1978. The wavelength of its laser light is 1.315 microns, making it the shortest wavelength (highest frequency) high-energy chemical laser currently in existence. Lasing is achieved by injecting electrically heated iodine vapor into a flow stream of hot oxygen molecules produced by a chemical reaction of chlorine, hydrogen peroxide, and an alkali (lithium, sodium, or potassium) hydroxide. These chemicals are contained in special fuel tanks on board the ABL aircraft. A 25-kilowatt oxygen-iodine laser has been built at Phillips Lab. A 4.5 MW laser can be built by straightforward scale-up of the 25 kW device.

Alternative lasers, such as the free electron laser and the diode-pumped solid state laser, may be more attractive in the future. Both of these lasers could be powered by electrical generators driven by an aircraft's engines, removing the need for special fuel tanks and providing potentially more light-weight ABL designs. The ultimate goal is the free electron laser, since its "tunable" wavelength can be set to whatever is most appropriate for a given situation.

About five years of development is required to bring both of these lasers to the same level of maturity as the chemical oxygen-iodine laser. Unfortunately, the Clinton administration does not appear willing to fund a broad spectrum of laser development, relegating the development of these alternative high-powered laser systems to the distant future.

### **Atmospheric propagation: a critical issue**

Perhaps the most critical airborne laser issue yet to be resolved is atmospheric propagation. To put a highly concentrated, high-energy ABL beam on a target through atmospheric turbulence, a coherent "beacon" must be emitted from the target and received at the ABL so that corrections for the turbulence can be imparted to the high-energy ABL beam. Obviously the target will not be carrying a beacon to aid in its own destruction. Therefore, the source of the "beacon" must be supplied by the ABL platform.

The current ABL concept calls for the ABL to have two lasers: a low-power beacon laser and a high-power kill laser. The low-power beacon laser will track the nose cone of the

## **LaRouche: Rejection of SDI spells disaster**

*Lyndon LaRouche, the conceptual author of the Strategic Defense Policy, made the following comments on July 14 as part of the weekly radio broadcast "EIR's Talks with Lyndon LaRouche." He was interviewed by Mel Klenetsky.*

**EIR:** We have a situation at this point in Russia, where there is a debate that's going on. Last week we had a discussion about a policy that appeared in *Nezavisimaya Gazeta*, by an author, Vaganov, who lamented the fact that President Clinton did not accept Russian President Yeltsin's offer to mutually develop ballistic missile defense systems, a particular ballistic missile defense system.

In this week's *Nezavisimaya Gazeta*, you have the same author, Andrei Vaganov, writing an article with a diametrically opposed viewpoint, interviewing Alexei Kuzmin, the head of the missile attack warning and space control systems at Russia's Long-Range Radio Communication Research Institute, and Kuzmin says the exact opposite.

Kuzmin says that there should be no ballistic missile defense, he says that the discussion last week was not really what was going on, that there was no offer to Clinton.

It seems to me that we have a big debate going on in Russia, and it seems to me that we have an emergence of what you yourself called the Third Rome aspect in Russia. Is this what's going on?

**LaRouche:** To a large degree, it is.

The point is, that those who are proposing to take up the SDI on the one hand, are being opposed on the other hand by a group which accepts the Pugwash doctrine, still, of Mutual and Assured Destruction as the opposition to the Trust proposal made clear.

This opposition to the SDI was, in 1983 and today essentially the Russian imperial impulse which wished to use the balance of terror as a policy of long-range Russian

target (or perhaps some other well-defined edge or point on the target).

While the above beacon concept can theoretically provide one-way atmospheric distortion information to the ABL, the path and time corresponding to these distortions can never coincide with the path and firing time of the high-energy laser. The path of the reflected beacon will always "lead" the

tactics. This is very dangerous; and the problem here, from the U.S. side, is that the United States and Britain and others, very foolishly and rather violently at the time, rejected my theses on the Great Russian Third Rome tendency.

As a result of that, they took a risk. That is, the United States side—and say the British side—should have accepted, back in 1983, my assessment of what the rejection of the SDI would lead to if we let it go that way, that it would lead to precisely this kind of situation.

What they did instead, in order to cause this Great Russian Third Rome tendency to come to the fore, was to allow people like George Soros, the “derivatives king,” with his stooge, Harvard’s Jeffrey Sachs, to impose this shock therapy/IMF conditionalities policy upon eastern Europe and on the former Soviet Union. In so doing, they built up a wave of hatred against the United States, a sense of betrayal, *solely because of* what George Soros represents. Then they activated the full potential of the Great Russian or Third Rome tendency (not immediately, but it was coming out), by their game of saying that Yeltsin is their asset, as earlier they said Gorbachov was their asset; whereas if they had *not* allowed Soros and other carpetbaggers to go into eastern Europe and Russia, but instead had followed my counsel and proceeded with what I call the Triangle program, once the Wall was coming down, then we would not have had this problem.

So the problem here essentially is *gross strategic incompetence* in the thinking of the leading intelligence and policymaking circles in the United States and western Europe, more so outside of Germany. In Germany, Switzerland, Italy, as well as in Austria, there is a little more intelligent current of thinking, but it’s not manifest at the present time in the policy under this so-called EC policy rule.

But those qualifications taken aside, the essential thing is the strategic planning, the strategic thinking, of all of the leading circles in the United States, *has been consistently incompetent* and the rejection of my conception of the SDI, as this emerged over the 1984-1985 period; that rejection of my approach to this, has led to this very dangerous disaster. And these people had better change their ways, and learn that I was right and they are wrong

not merely in a policy choice, but they’re wrong in the way they think about the world.

They are wrong; and if they think that you can mix this idiotic, ideological idea of globalism and free trade of the so-called Project Democracy approach, that you can mix that with U.S. national security—you can’t. We are headed toward a potential of a kind of World War III which parallels but is somewhat different than the previous two world wars of this century.

**EIR:** Can you please explain to people what the Third Rome is, and what the SDI was designed to substitute for, in terms of strategic policy? How is it different from Mutually Assured Destruction?

**LaRouche:** Mutually Assured Destruction was an imperial idea which was developed actually in Britain and imposed upon the United States through vehicles such as Bertrand Russell’s 1955 agreement with the Khrushchov government in the meeting in which four Khrushchov representatives turned up in London for Russell’s organization of world parliamentarians, to announce that they were embracing the Russell thesis. Since that time, the entirety of postwar U.S. and British policy, up through at least the announcement of the SDI, has been based on the Russell thesis.

We broke that with the SDI. That was my purpose, to break that, because there could be no solution to world problems unless we did break it. This is what Kissinger represents, this kind of MAD—Mutually Assured Destruction policy—which was Russell’s idea. It was a British intelligence idea they sold to the Russians.

Now, the British looked at it from the standpoint of setting up a One-World empire. The Russians looked at it from the standpoint of flexibility for their playing their strategic games with a kind of temporary war-avoidance posture; so they bought it. But the Russian thinking was also an imperial thinking. They said, okay, we can be part of the empire, and we can cheat.

This kind of detente was brought to a certain conclusion by the 1958 Quebec Pugwash conference, and then later by the Camp David meeting between Khrushchov and Eisenhower, and the establishment of this two-system world empire, based on Mutual Assured Destruction. . . .

path of the high-energy kill laser by about one-thousandth of a second. Therefore, the atmospheric compensation concept will work only when the atmospheric distortions are relatively constant over the space and time between the path of the beacon and that of the high-power laser beam. The ABL program is in the process of conducting flight tests to verify that the above atmospheric compensation system will work.

The flight tests will also determine the power required in the beacon laser. Because very little of the beacon light hitting the target nose cone is reflected back to the ABL, the beacon must be powerful enough to produce a detectable and measurable reflection. On the other hand, the lower the needed power of the beacon, the more of the ABL’s fuel is available for destroying missiles.