

Contrary to some depictions in the popular media of 6-foot-long metal x-ray lasing rods, the H-bomb pumped x-raser (x-ray laser) has dimensions of a hair when lasing. Actually, the x-raser is first in the form of a series of hollow cylindrical metal foils which are imploded and pumped by the x-rays from the nuclear explosion. In any case, tens of thousands of these hair-like xrasers can be pumped by a single bomb. But given the assumption that there are no optical means of focusing high energy x-raser beams, many of these beams would have to be directed to the same target in order to produce a combined pulse with sufficient intensity to be lethal to a missile in the boost phase. Therefore, as previously projected based on this assumption, only a few score missiles could be destroyed over a distance of a few thousand miles by the x-raser bomb. The recent Livermore x-raser lens breakthrough has changed all of this.

### The plasma lens

As reported in the May 15 *New York Times*, in early May Livermore scientists demonstrated a magnetic plasma lens for focusing the output of xrasers. The result is truly dramatic. The focused x-raser beam is a trillion times brighter than a hydrogen bomb, and a million times brighter than the sun. This means that extremely small x-raser pulses can be focused to lethal intensities over ranges of thousands of miles. It therefore means that instead of combining pulses, individual pulses can be used to kill missiles in their boost phase. The result is that hundreds of lethal x-raser pulses could be produced by a single x-raser bomb.

When combined with the breaking Rhodes development, this capability could theoretically be extended to develop millions of lethal pulses. But practical limitations should limit this to only a few tens of thousands.

### How it would work

Once an offensive missile launch was detected, x-raser bombs would be popped up into near space, as close to the missile fields as possible. While hypervelocity rockets could be used for this, Dr. F. Winterberg of the University of Nevada has suggested that electromagnetic railguns could achieve a faster deployment than this pop-up defense.

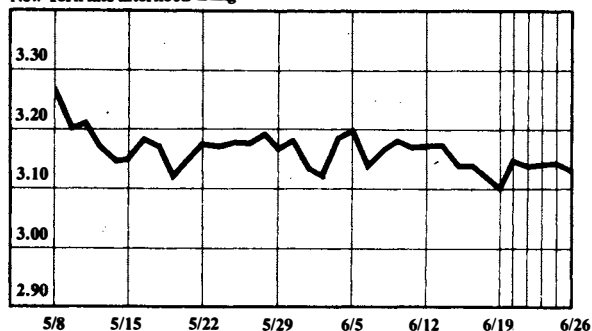
Once in near-space, the x-raser bomb would be ignited. The x-rays from the nuclear explosion would pump excimer-lasing. This excimer-laser output would then pump xrasers in turn. The x-raser pulse outputs would then be focused by magnetic plasma lenses. By simply aiming the entire x-raser salvo in the general direction of the offensive missiles, the entire volume of space occupied by the offensive missiles would be filled with tens of thousands of lethal x-raser pulses.

By using several x-raser bombs from several directions, the missiles would be caught in a devastating crossfire. This buckshot approach immediately overcomes the difficulties of pointing xrasers and plasma lenses. It would do to missiles what Carnot's gunshot cannons did to massed infantry.

## Currency Rates

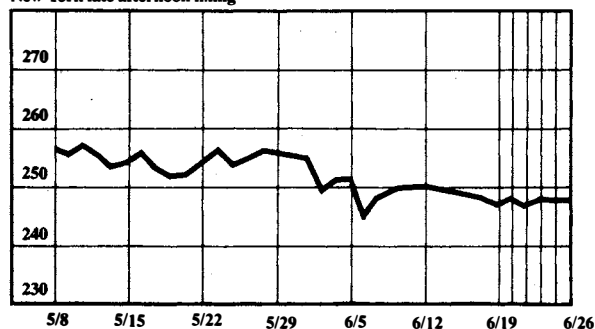
### The dollar in deutschemarks

New York late afternoon fixing



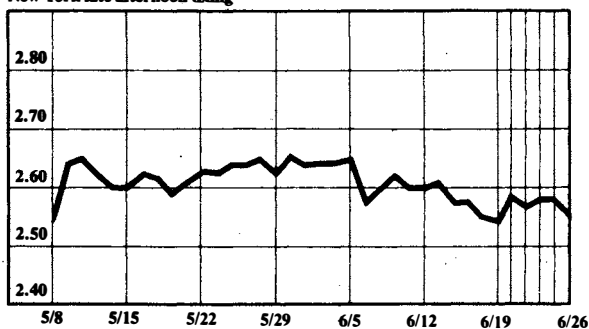
### The dollar in yen

New York late afternoon fixing



### The dollar in Swiss francs

New York late afternoon fixing



### The British pound in dollars

New York late afternoon fixing

