

# That Triangle Man Began It

It probably won't soothe the disappointed Americans to be reminded that long, long before the bright new Russian moon was just a twinkle in a Soviet's scientist's eye, Pythagoras had propounded some ideas about the sounds of satellites. In addition to knowing certain cheerful facts about the square on the hypotenuse and the transmigration of souls, he suggested that as the pitch of notes depends on the rapidity of vibration and as the planets move at different rates, they must make sounds in doing so, and that as all things in nature are harmonious, the sounds must harmonise. As an unknown follower phrased it, "there is one harmony of all things singing and quiring together in the heavens." Plato, who could not let well alone, imagined a siren sitting on each planet and uttering a single sweet note, the whole eight of them making a heavenly harmony. These were Milton's "celestial syrens' harmony that sit upon the nine enfolded spheres."

Most prophetic of all the dreaming philosophers was Cicero with his account of the dream of Scipio the Younger that he saw the bright circle of the Milky Way and the earth, the merest speck, far below. "What is the sound so loud and sweet that fills my ears?" asked the dreamer. "It is the sound made by the impulse and motions of the spheres, a sound compact of various unequal intervals which keep distinction in proportion." The various unequal intervals we now know to be the coded messages broadcast by the man-made sphere about the proportions of the atmosphere 200 miles up.

Strangely enough, the final adjustments to the new Red moon were made 23 years to the day after the first broadcast from the old moon. It was on October 3, 1934, that BBC listeners heard moon music and a stellar symphony when the light of the moon and of Vega, one of the brightest stars, was focused on a photo-electric cell and transmuted into sound. The moon's rays sounded like the tolling of large bells deprived of resonance, while Vega's varied from subdued shouting as of a crowd to the galloping of distant horses.

That could have been Nemesis, the hoofbeats echoing H. G. Wells, who, years after writing *The First Men in the Moon*, declared: "The world is at the end of its tether. The end of everything we call life is at hand and cannot be evaded. I am convinced there is no way out or around or through the impasse. It is the end." To him the war-time announcement of the BBC, "That is the end of the world news" had become "That is the end-of-the-world news." For other scientists the music of the spheres opened up new worlds to conquer, so that their cataloguing of the distinctive sounds of many of the stars has now enabled radio telescopes in Cheshire and New South Wales to identify the circumnavigation of the satellite and its launching rocket.

New Zealanders did not hear that historic broadcast, but it was New Zealanders at a radar station on Norfolk Island who first proved that a certain phenomenon at dawn and dusk was due to electrical waves generated by the tremendous heat on the surface of the sun. First noticed in Britain in 1942, the solar sounds were identified by New Zealand scientists and R.N.Z.A.F. radar men commanded by Flying Officer Hepburn.

However, the Dominion's contribution was more positive than that. The head N.Z. LISTENER, NOVEMBER 8, 1957.

of the Soviet Aeronautics Committee which has been closely associated with the satellite project is Peter Kapitza, who was a student and colleague of Lord Rutherford for about 10 years. When he arrived in England as a research student in 1921 he was too poor to take a degree, but his outstanding ability was soon recognised, and in 1929 the Royal Society gave £15,000 to build a laboratory for his researches at Cambridge. He was regarded as practically a British scientist when he returned to Russia for a conference in 1935. His detention there was described by Lord Rutherford as "a severe shock to the scientific world."

Russia claimed a scientist then; will it be first to the moon and claim that next? A United States lawyer has said that Russia would have the right to claim the moon if Russians were the first to land a missile or space-ship there. According to Sir Hartley Shawcross, Q.C., that's all moonshine. "I don't think international law applies to the moon," he said cautiously. "To claim a right to territory you have to be in effective control of it."

As for effective control, the Conservative Party leader, Lord Hailsham, quipped: "Russia's earth satellite is the only one they've invented so far which does not require a squad of secret police and tanks to keep it in order." It's no joking matter for jurists who find their definitions time-honoured perhaps, but out-dated. Wharton's *Law-Lexicon* or *Dictionary of Jurisprudence* states: "Whose is the soil? His it is even to heaven and to the middle of the earth."

Not until the Versailles peace conference did nations begin to agree on aerial frontiers, but there was no adequate concept until the United States reaffirmed that principle: "Every State has complete and exclusive sovereignty over the air-space above its territory." But what is air-space? Is it air and the space beyond? The satellite and its rocket penetrated the troposphere for some 10 miles, then the stratosphere for 20 miles, the chemosphere for another 20, the ionosphere for 200, and finally travelled in the exosphere where, according to the National Geographical Society, the last vestiges of atmospheric gases thin out into space proper.

Lawyers trying to keep up with it get lost in the larger lunacy; even the earth-bound planes have left them up in the air, as was shown last year when an international law committee at Geneva tried to resolve such problems as: Who takes charge of the criminal if a Chinese kills a Spaniard in a Dutch aircraft flying over France and landing in England? What nationality is a child born to a German mother in an American plane flying over Greece?

An English judge recently quashed the conviction of a man charged with carrying opium on a British plane because he found the law to be meaningless. The prosecution had relied on the Civil Aviation Act, 1949, which says: "Any offence whatever committed on a British aircraft shall, for the purpose of jurisdiction, be deemed to have been committed in any place where the offender may for the time being be." If the lawyers crash so badly with aircraft, can they be meaningful with moons, specific about space? His it is even to heaven . . . the sky's the limit!

—J. W. GOODWIN (London)

**NEW MEDICATED Gum Massager**  
**PROTECTS TEETH & GUMS**

Inter-Dens thoroughly cleans those surfaces between your teeth not reached by the toothbrush. Your gums will be firmer and healthier. Teeth whiter and breath sweeter because food particles are removed from between teeth. Simple to use. Slip into any pocket or handbag. They leave a clean refreshing taste in the mouth. 1/- each or 4/6 per book of 5 packets.

Distributors: Early Bros., Dental & Surgical Supplies, Ltd., Box 411, Christchurch.

**Ask your Chemist for**

**INTER-DENS**

## HIGH FIDELITY THIS YEAR



**UNBEATABLE VALUE IN HI-FI SPEAKERS**  
 Accredited by experts as a better speaker than others costing up to twice the price.



### L.P. 312-2 SOUND SYSTEM UNIT

Full musical range with no harsh resonances. Full range at 20 to 22,500 cps. Power rating 25 watts. Intermodulation under .5%.

Don't buy a high-fidelity speaker until you have seen and heard this amazing unit. Complete with crossover, £25/17/6.

FROM HIGH-CLASS RADIO DEALERS

Sole N.Z. Agents:  
**SONOPHONE DISTRIBUTORS LTD**  
 114-121 NIMU INSURANCE BLDG  
 (formerly Chancery Chambers),  
 O'CONNELL ST, AUCKLAND, C.J.

*Plan now to visit*

- Trotting Carnival,
- Motor Show,
- National Orchestra,
- Sports Meetings,
- Floral Procession,
- Dancing in the Streets,
- Veteran Car Rally
- Summer Show & Carnival

**DUNEDIN**  
*Festival Week* JAN 25 to FEB 2

for a spectacle-packed holiday!

Further details from Public Relations Office, Box 1028, Dunedin.