HELIELS ARISING

FOR

Bb. SOPRANO SAXOPHONE AND ELECTRONIC SOUNDS

A Thesis
Presented in Partial Fulfillment of the Requirements
for the Degree Master of Music

by

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1980

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INTRODUCTION TO HELIUS ARISING

Helius Arising is a composition for saxophone and electronic sounds. The electronic sounds, which are derived from natural and electronic sources, are recorded on a half-track stereo (3" two-track tape). This tape is mixed down from an eight-channel master according to the following configuration:

8-channel master: 1 2 3 4 5 6 7 8
2-channel master: left right left right left right left right

For calibration purposes, the tape recorder's VU meters should be set to 0 VU using the 1000 Hz sine wave test signal appearing at the beginning of the tape. This signal is also used for setting the playback level for a performance:

0 VU corresponds to 48.44.

Some of the tape's sounds were electronically manipulated by filtering or by processing through a single side-band generator. Many of the taped natural sounds were produced by brass players. On page 7 of the score, channel 4 reflects the improvisation on note pairs by the brass players. All of the pitch material in the score is untransposed except the 3rd soprano saxophone part.

Duration of duration corresponds roughly with traditional mensural notation practice. The following values are used:

\[ \text{J} = 60-70 \text{ beats per minute} \]

- \( \text{J} \) = 4 seconds
- \( \text{J} \) = 2 to 4 seconds
- \( \text{J} \) = 1 to 2 seconds
- \( \text{J} \) = \( \frac{1}{2} \) to 1 second
- \( \text{J} \) = less than \( \frac{1}{2} \) second

The composer's goal in preparing the score was to approximate the position and duration of the taped events in order to aid the saxophone player in performance. Therefore, frequency change is only approximated by arrows which may indicate any of the following:

1) Direction of frequency change
2) Speed of change, shown by the slope of the arrow

The title, Helius Arising, is derived from the Greek myth which describes Helius (also spelled Helios) as the sun god who must turn each day leading the sun across the sky in his chariot. This composition is not programmatic and the allusion to Greek mythology is intended to be evocative in more than one way. The work is in two sections.
SYMBOLS IN HELIX ROLLING

1. = Filtered random noise and bell tones. A small amount of frequency variation occurs in the noise.

2. = Clock chimes. A group of glockenspiel bars are suspended from a beam and rattled.

3. = Four sine waves.

4. = Suspended cymbals.

5. = Timpani.

6. = A timpani with a cymbal placed upside down on the head.

7. = The timpani with cymbal processed through a single side-band generator.

8. = A Tibetan bell.

9. = A Tibetan bell processed through a single side-band generator.

10. = Grottoes.

11. = The continuous sound of crystals.

12. = Any continuous sound.

13. = A change in frequency in a continuous sound. In this case, the sound has increased in frequency, stabilized, and then lowered. An approximation of frequency activity is all that is intended by this symbol.


15. = A percussive occurrence in conjunction with a continuous sound. Once again frequency is approximated by the position of the notes. Rhythmic activity is approximated also.

16. = A pattern to be repeated for a period of time measured by matching the bar line with the time scale. This pattern should be played moderately fast.

17. = The same procedure as in 16, but this time the pattern is played faster.

18. = The same procedure as in 16, only very fast.
29. [Symbol] = The same procedure as in 15 but this time the speed of the pattern is accelerated starting at a moderately fast tempo and lasting for the duration of the event.

20. [Symbol] = An arrow sitting next to a note and pointing up or down indicates respectively, an increase or decrease of a quarter tone.
HELIUS ARISING
for SOPRANO SAXOPHONE and ELECTRONIC SOUNDS
RICHARD SMOOT
1988
SLOWLY

[Music notation and symbols]