of focus, effects of separation wall, relation between a hole to a hole, and the leakage of gamma rays outside the collimation.

A hexagonal honey cone having 5 cm showed 6 beams of radiation corresponding to the largest gamma ray bundle in the direction of the 6 corners of the hexagonal space consisting of holes.

Angular dependence of the honey cone collimator as pointed out by Honda was found to be a phenomenon induced by the leakage of gamma rays through the separation walls of honey cone collimator.

Such leakage was not marked with hexagonal 10 cm focusing collimator, and the 5 cm collimator filled out it's holes with casted Pb bars.

This method is free from the mechanical condition of a scanner and can be applied for the examination of various types of collimators.

The hexagonal 5 cm honey cone collimator tested was not good for scanning. The round type collimator would have no such unhomogeneous angular leakage of gamma rays.

Stereoscanning for the Measurement of the Depth of Image

H. Saito

Radioisotope Laboratory, Department of Radiology, Nagoya University School of Medicine, Nagoya

It was not always easy to measure the depth of Scan-image so far. The speaker found a method of measuring the depth of image by stereoscanning.

A lead disc with a pinhole at the center was placed between the pinhole collimator and a subject. The pinhole collimator was made to suite the scanning of image through the pinhole disc.

After scanning from the first angle, the pinholed disc was shifted and then scanned again from the second angle. These two scintigrams showed the shift of image in proportion to the shift of the pinholed disc.

The following formula was used to calculate the depth (d) of an image (A) below the surface of the subject's body.

$$d = \frac{ph}{s - p} - g$$

where h = scan level of pinhole
g = pinhole to body surface
p = shift of pinhole
s = shift of image A.

Phantom experiments proved the accuracy of the above method. Therefore, the method was applied for the measurement of the depth of a metastatic spot of thyroid cancer. The spot was 6 cm below the body surface, probably at the anterior margin of vertebra.

If the scintillation camera is used, the stereoscanning will be more effective and much widely applicable.

Multi-Nuclide Scanning with MUHC

K. Hisada, T. Hiraki and M. Matsudaira

Department of Radiology, School of Medicine, Kanazawa University, Kanazawa

Multi-nuclide scintiscanning is one of the important applications of MUHC.

With Alderson's organ scanning phantom which holds a liver, a pair of kidneys, a pancreas and a spleen, simultaneous four nuclides scintiscanning was performed successfully.

Since the depth of positions of the organs