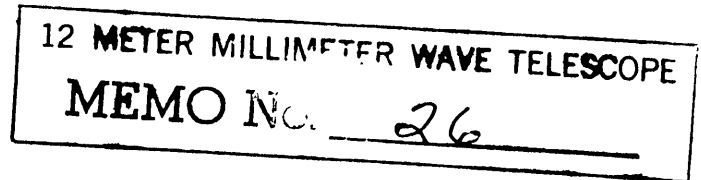


Interoffice

National Radio Astronomy Observatory
Charlottesville, Virginia

April 30, 1981

To: J. Payne
From: W-Y. Wong
Subject: Receivers Installation



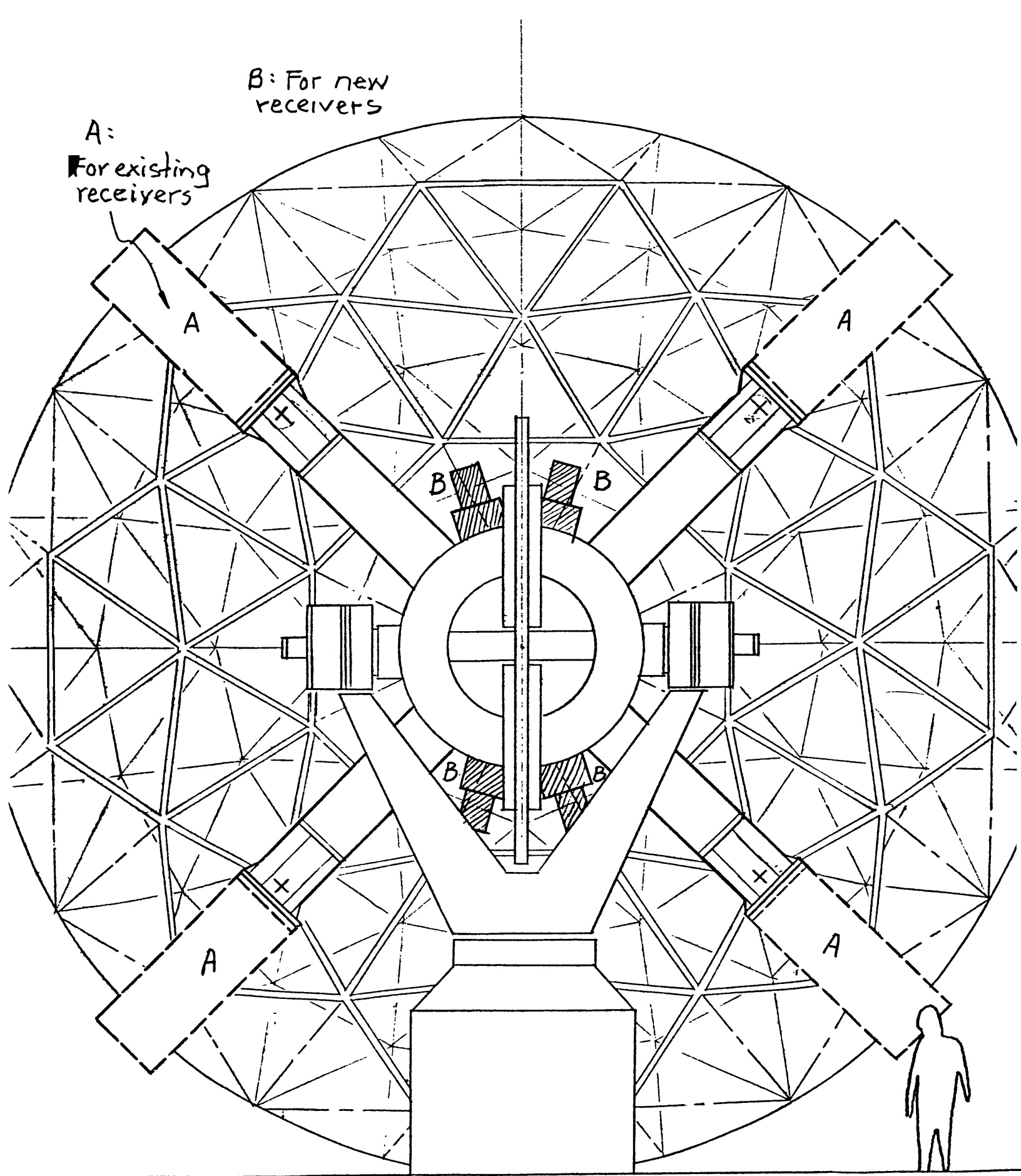
In response to your Memo No. 19, I am suggesting a more detailed receiver arrangement for you to review. This suggestion does not follow strictly to the dimensions given in Memo No. 19, but it fulfills the requirement that all receivers are attached to the antenna in the rear and the service of the receivers are done from the back with the antenna pointing zenith.

The suggested scheme also provides a maximum of eight receiver mounts. All these mounts are co-planar normal to the optical axis. The selection of the receiver is done by rotating the selection mirror. I shall describe this in more detail:

- 1) Four receiver mounts are located on the strong central hub, fitting the new 70-120, 130-170, 200-300 GHz receivers plus a dummy or spare, illustrated in Figure 1 as shaded area and Figure 3 in more detail.
- 2) Four receiver mounts are located on the end of the four supporting beams, outlined in Figure 1 and 2 as dotted area and shown in Figure 4 in more detail. These mounts are prepared for the existing receivers (if we have only two, it might need two dummies to balance the structure). The possibility of mounting these receivers there depends on the outcome of the structural analysis (not yet done in detail). For the gravity effect on the structure might cause unacceptable pointing problems. Or, as an alternative, an extra degree of correction might be needed to the selecting mirror to compensate for such systematic error.

Attachments

cc: B. Horne

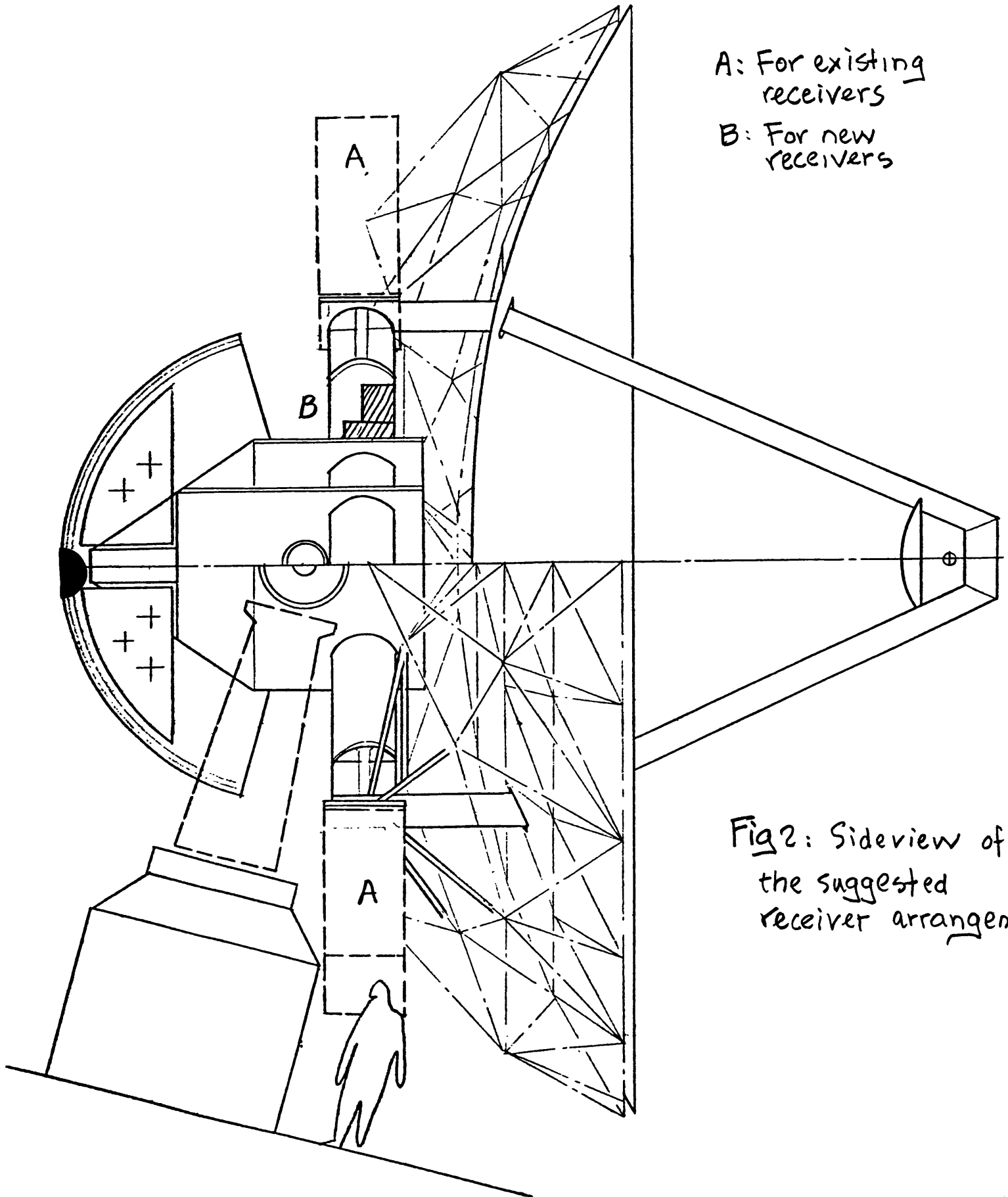


A PROPOSED REPLACEMENT OF THE 12M REFLECTOR

Fig 1: 8 receiver mounts are co-planar Location A is for the existing, & B for the new receivers $\frac{1}{50}$ Scale

W. Wong
4/10/21

A PROPOSED REPLACEMENT OF THE 12-M REFLECTOR



A: For existing receivers

B: For new receivers

Fig 2: Sideview of the suggested receiver arrangement

$\frac{1}{50}$ Scale

W. Wong
4/9/81

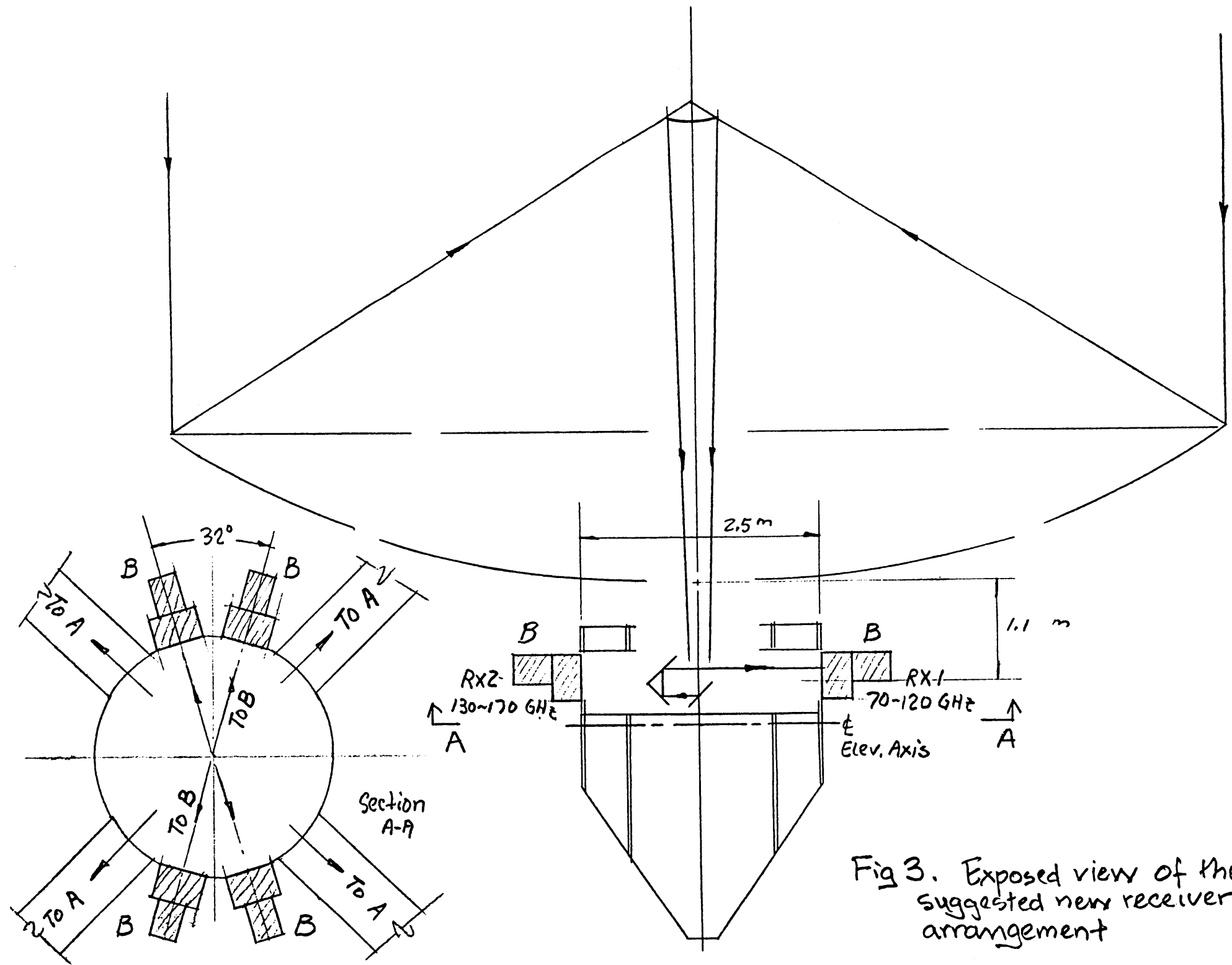


Fig 3. Exposed view of the suggested new receiver arrangement

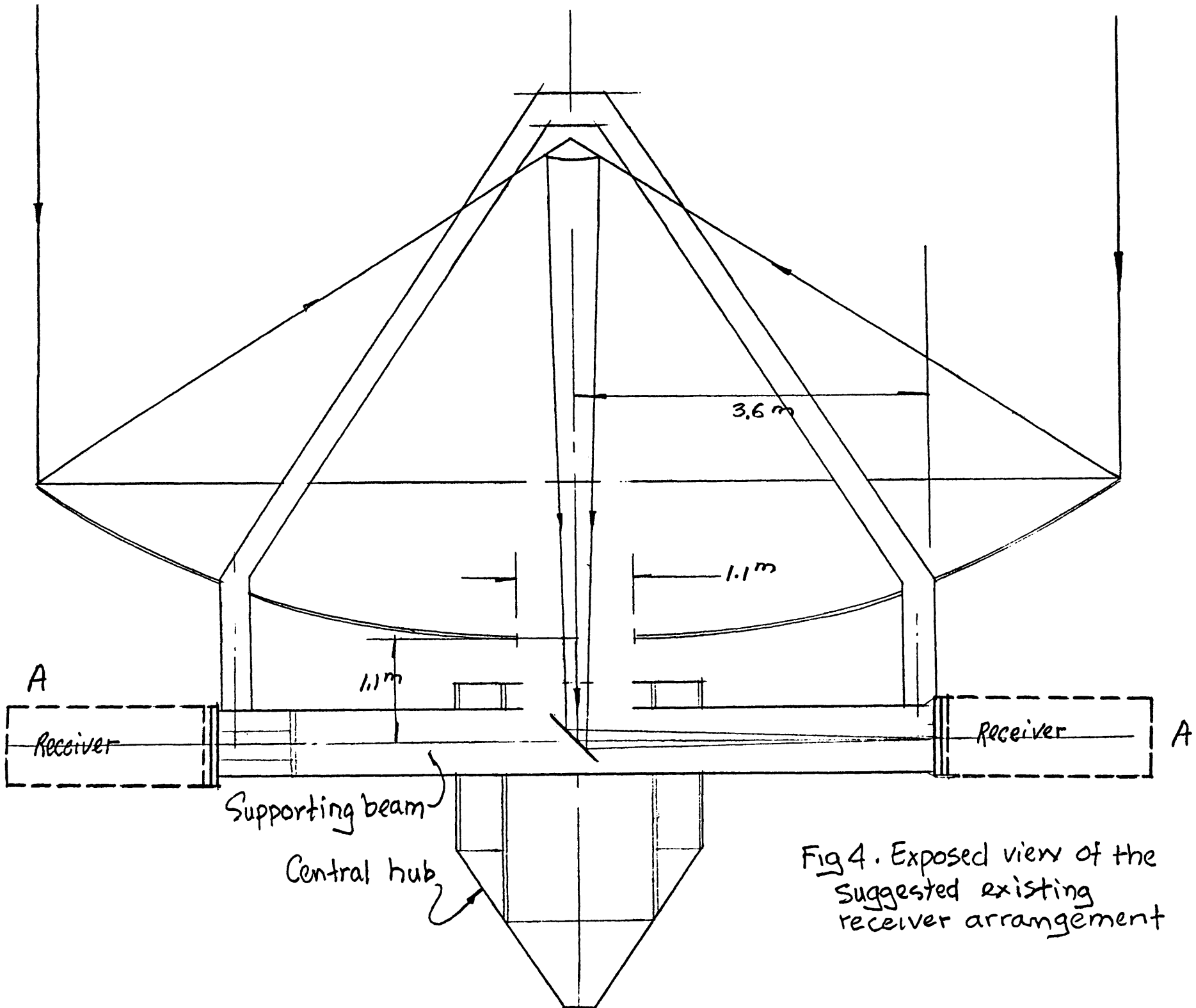


Fig 4. Exposed view of the suggested existing receiver arrangement