



## NRC Publications Archive Archives des publications du CNRC

### **Recorded roof temperatures: atlantic regional laboratory** Robson, D. R.

For the publisher's version, please access the DOI link below./ Pour consulter la version de l'éditeur, utilisez le lien DOI ci-dessous.

#### **Publisher's version / Version de l'éditeur:**

<https://doi.org/10.4224/20338539>

*Technical Note (National Research Council of Canada. Division of Building Research), 1970-10-01*

#### **NRC Publications Record / Notice d'Archives des publications de CNRC:**

<https://nrc-publications.canada.ca/eng/view/object/?id=3c6fdbb1-eb83-44d6-ae6f-253334d77c02>

<https://publications-cnrc.canada.ca/fra/voir/objet/?id=3c6fdbb1-eb83-44d6-ae6f-253334d77c02>

Access and use of this website and the material on it are subject to the Terms and Conditions set forth at

<https://nrc-publications.canada.ca/eng/copyright>

READ THESE TERMS AND CONDITIONS CAREFULLY BEFORE USING THIS WEBSITE.

L'accès à ce site Web et l'utilisation de son contenu sont assujettis aux conditions présentées dans le site

<https://publications-cnrc.canada.ca/fra/droits>

LISEZ CES CONDITIONS ATTENTIVEMENT AVANT D'UTILISER CE SITE WEB.

#### **Questions?** Contact the NRC Publications Archive team at

PublicationsArchive-ArchivesPublications@nrc-cnrc.gc.ca. If you wish to email the authors directly, please see the first page of the publication for their contact information.

**Vous avez des questions?** Nous pouvons vous aider. Pour communiquer directement avec un auteur, consultez la première page de la revue dans laquelle son article a été publié afin de trouver ses coordonnées. Si vous n'arrivez pas à les repérer, communiquez avec nous à PublicationsArchive-ArchivesPublications@nrc-cnrc.gc.ca.





# NATIONAL RESEARCH COUNCIL OF CANADA

## DIVISION OF BUILDING RESEARCH

No.  
551

# TECHNICAL NOTE

PREPARED BY

D. R. Robson

CHECKED BY

D.C.T.

APPROVED BY

N.B.H.

DATE

October 1970

PREPARED FOR

Inquiry and Record Purposes

SUBJECT

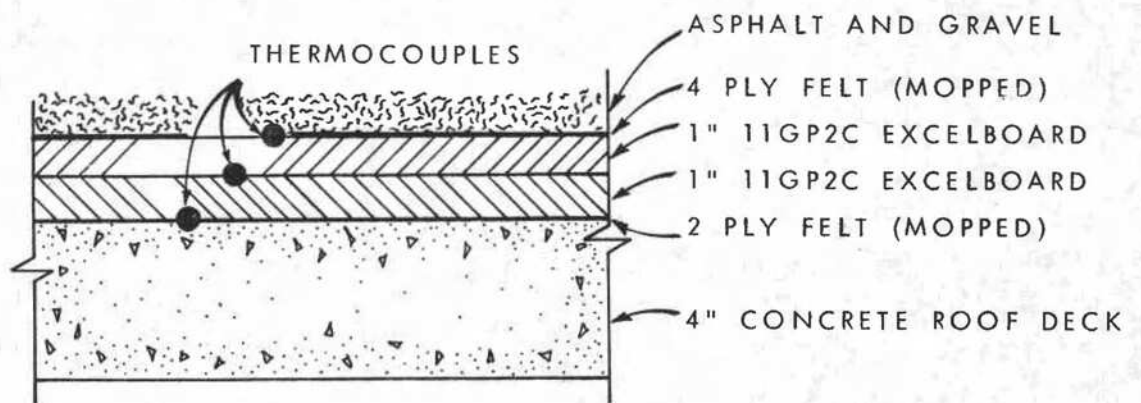
RECORDED ROOF TEMPERATURES - ATLANTIC REGIONAL  
LABORATORY

In January 1967, during construction of an addition to the NRC Atlantic Regional Laboratory in Halifax, an opportunity arose to install thermocouples in a roof system as the insulation and built-up roof were placed on the concrete roof deck. The thermocouples were placed as shown in Figure 1 but were not connected to a temperature recorder until the building was taken over by the owners.

The recorder was adjusted to register a set of temperature readings once every hour. It was started in 1968 and, except for December, recorded temperatures over the whole year. The air temperatures recorded were from a thermocouple placed, in air, near the instrumented roof area. In 1969, the air temperatures were recorded until 23 January and from 7 February to date from a thermocouple placed, in air, in a Stevenson Screen. Between 23 January and 7 February, the air temperatures recorded were from a thermocouple placed, in air, near the instrumented roof area.

Inside air temperatures were recorded on a hygrothermograph for February 1969 only; temperatures for the rest of the period have been estimated.

Samples of the temperatures recorded for three periods are presented in Figures 2, 3 and 4 covering 1-14 February 1968, 1-14 July 1968, and 1-14 February 1969 respectively.



ROOF SECTION (Not to scale)

INSULATION - 11GP2 TYPE C EXCELBOARD, 1" THICK

FELTS - BP ASPHALT FELT-15#, E4 (AIR VENT)

ASPHALT - ESSO OXIDIZED ASPHALT, 1140-150SP

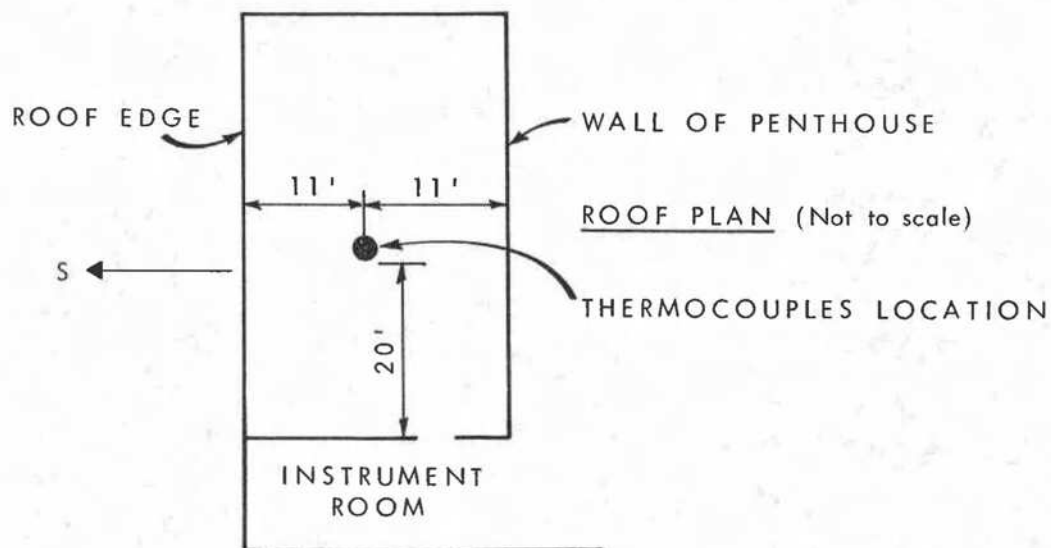


FIGURE 1 ROOF SECTION AND ROOF PLAN

BR 4658-1

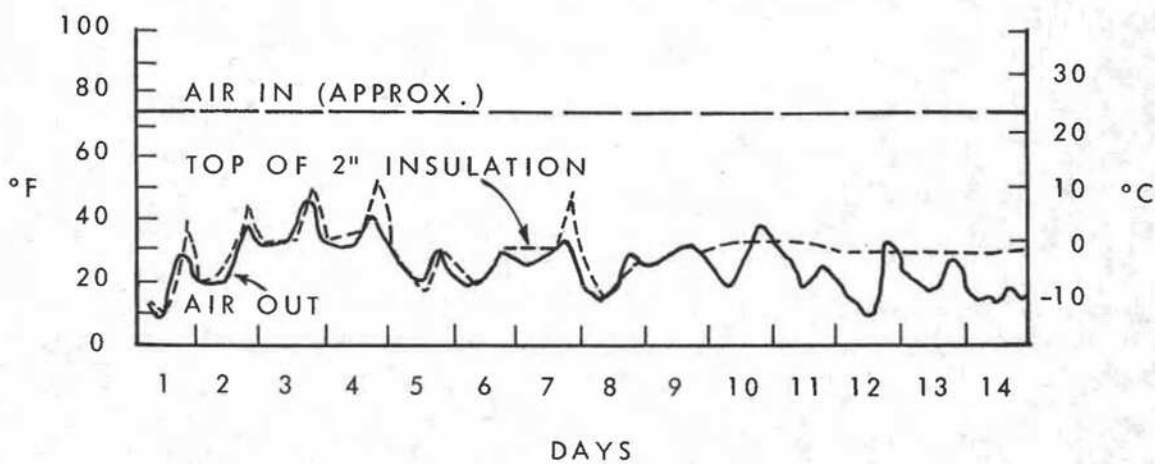
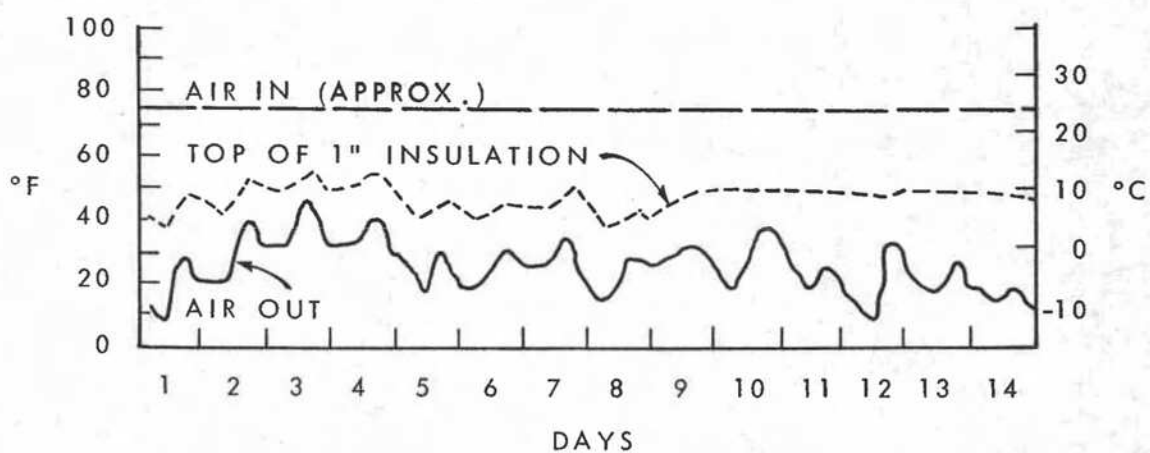
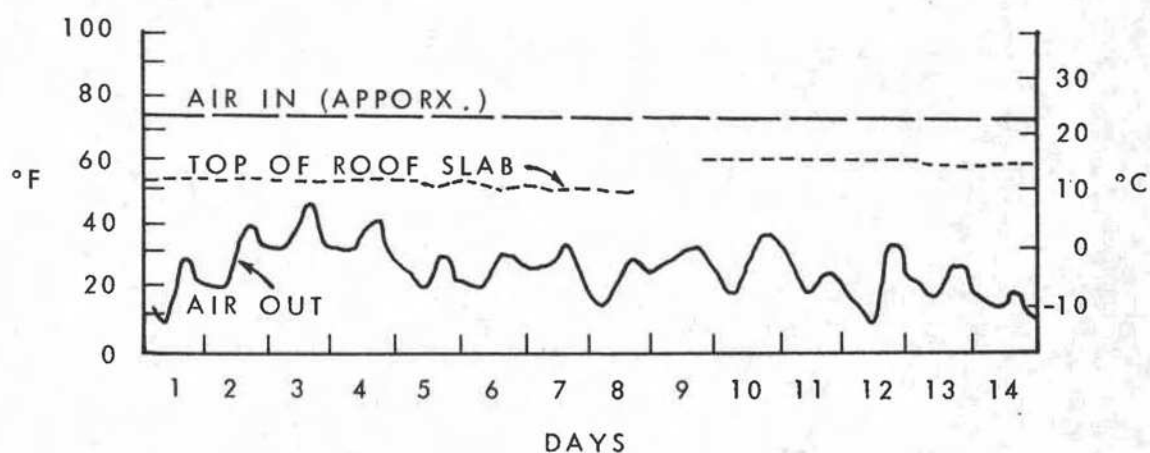


FIGURE 2  
ROOF TEMPERATURES A. R. L. - FEBRUARY 1968

AR 4658-2

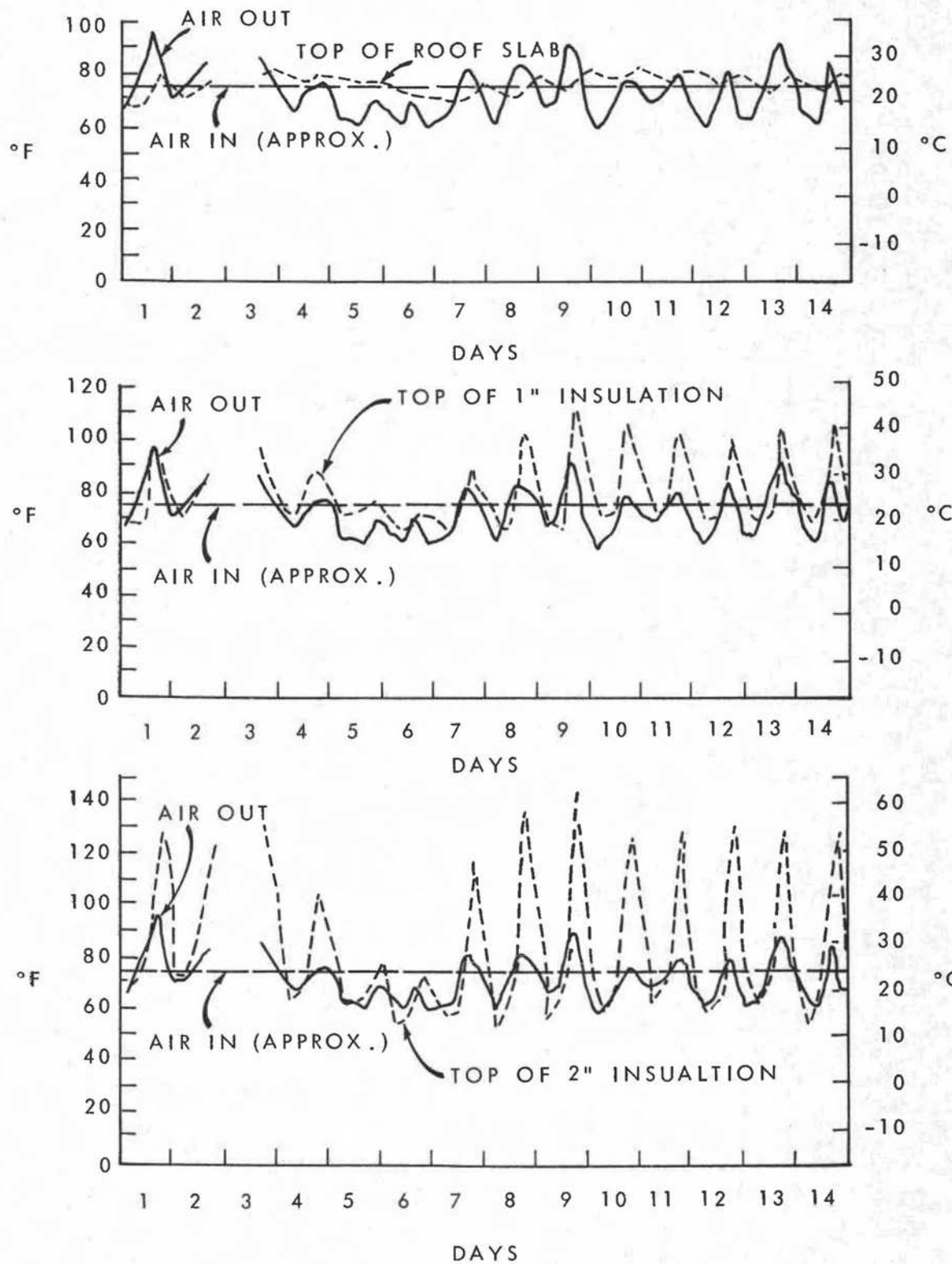


FIGURE 3

ROOF TEMPERATURES A.R.L.- JULY 1968

AR 4658-3

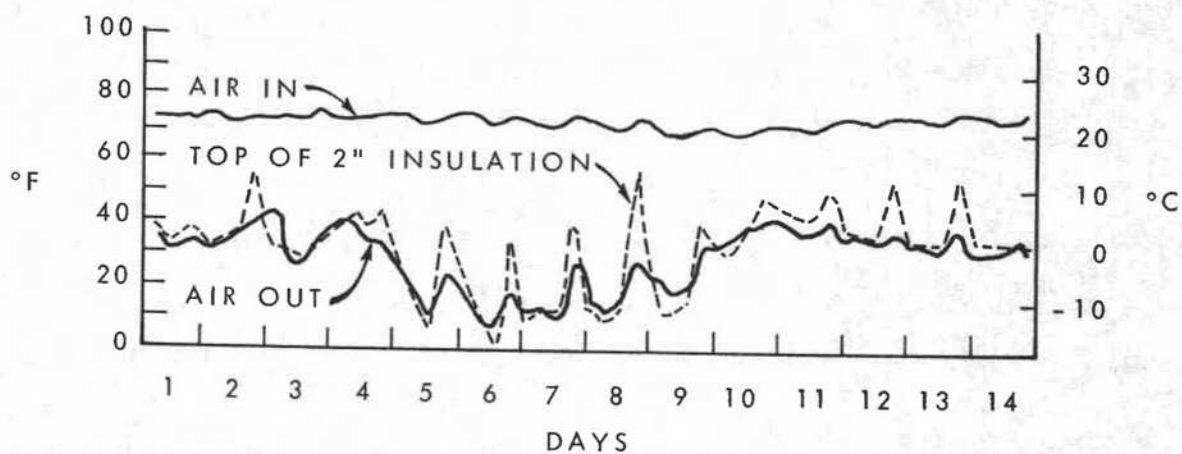
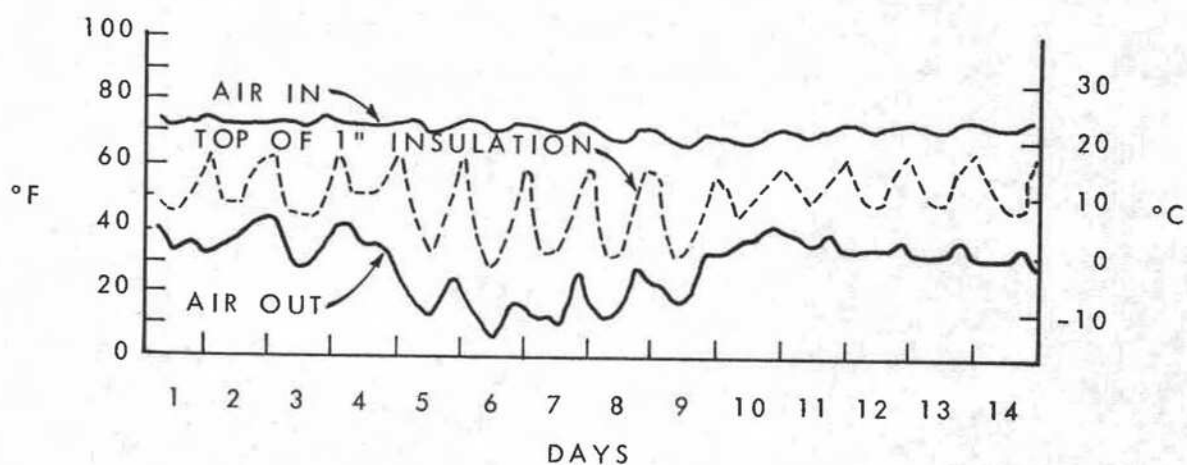
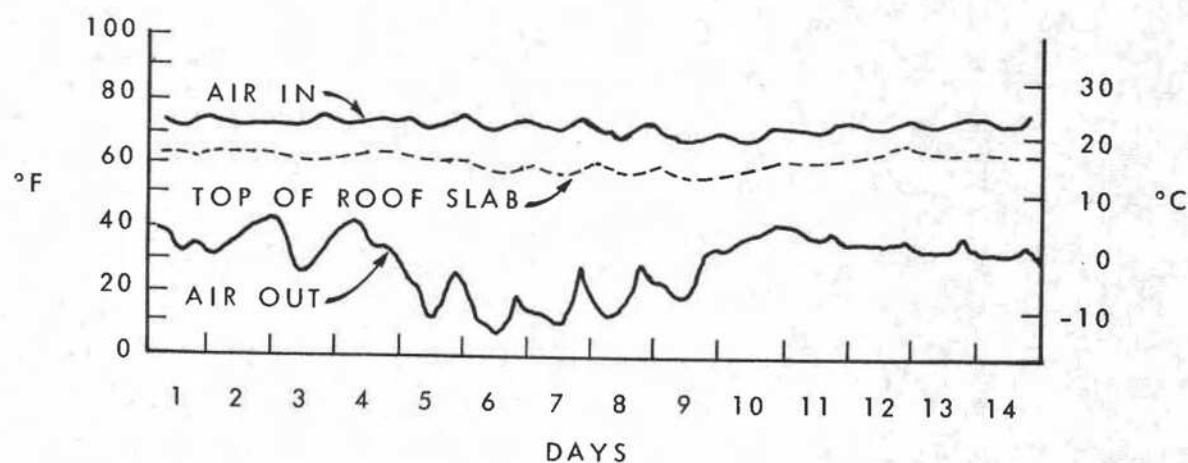


FIGURE 4

ROOF TEMPERATURES A.R.L.- FEBRUARY 1969

BR4658-4