In the main paper, which appears in Volume 1 of
the Proceedings, it was indicated that Section VII
reviewed the position reached in June 1978 when the
paper was completed, and that it was intended to
issue an addendum to update the position at the
time of the Congress.

VII A Current Position at the End of August 1978

Since the first paper was written, some further
measurements of the velocity distribution and
turbulence levels in the working section have been
made. A second series of tests on the \( \frac{1}{13} \) scale
A30082 model has been completed, this time with
high lift devices in the take-off configuration.

Access Arrangements

The automatic sequencer which controls the
sequence of steps required to obtain access to the
working section is working reliably.

Model Mountings and Balances

The mechanical balance has been assembled into
its cart in one of the rigging bays. Following
cabling, completion of the drive and control of the
yaw turntable and site calibration, the balance is
expected to be ready for use for model tests in the
latter half of November.

Flow Uniformity

In the first paper, it was stated that
difficulty had arisen in measuring the spatial
distribution of static pressure owing to boundary
layer transition close to the slots of the pilot-
static heads at the high unit Reynolds numbers in
this tunnel. By interchanging heads and selecting
the best ones, the results shown in Fig 22 have
been obtained. The pressure heads were still
misbehaving in the top 20 per cent of the Reynolds
number range and the results shown are typical of
the lower part of the range. They must still be
regarded as somewhat provisional and further work
is needed to achieve calibration accuracy
particularly at the high Reynolds numbers. The
provisional variation shown is about \( 3\% \) per cent on
kinetic pressure.

Turbulence Measurements

The results of a more comprehensive set of
measurements using the DISA miniature X-probe hot
wires are shown in Fig 23. To date only the rms
levels are available and the analysis to give
spectra has not yet been done. The results show
that the general levels are as anticipated,
0.1 per cent longitudinal turbulence and
0.2 per cent lateral with a small increase as unit
Reynolds number is increased. The higher values,
including those reported in the main paper, appear
to be in local wakes from a set of platinum
resistance thermometers in the settling chamber,
which will be removed.

Tests of \( \frac{1}{13} \) Scale Model of A30082

Some provisional and uncorrected results from
the recent short series of tests with high lift
device in the take-off setting are shown in
Figs 24 and 25. After some initial debugging, the
strain gauge balance package worked very well and
was displaying and recording angles of incidence
derived from accelerometers installed in the model.
Fig 24 shows the variation of the maximum lift
coefficient of the model without tailplane and
clearly demonstrates the importance of both Mach
number and Reynolds number on the results. The
pressure measurement package enabled over 200,000
pressure measurements to be taken and a typical
sample on-line print-out is shown in Fig 25. This
is at one spanwise station at one incidence with a
historical record from a lower incidence for
comparison. These pressure measurements together
with video-recordings of tuft patterns will yield
a very comprehensive understanding of the stalling
behaviour of the model.

General Position

The tunnel is now shut down so that contractors
can complete various items of work including drive
and control of carts and working section rotation,
and final preparation of the mechanical balance for
use. It is expected that all this work will be
completed by the end of November and that the
tunnel will then be ready to launch into a full
programme of work.
Figures are deviations from mean of measured values of kinetic pressure in tunnel working section expressed as percentages of kinetic pressure on tunnel axis.

Fig 22 Distribution of kinetic pressure in working section (provisional)

Fig 23 Rms turbulence components in working section

Datapoint = 97 Historical datapoint = 96
Record No. = 4

Current data

Fig 24 Maximum lift coefficient on A300B model in take-off configuration (provisional)

Fig 25 Typical pressure distribution on A300B model in take-off configuration (provisional)