## LSNReviews

**From:** James Prikryl
**Sent:** Thursday, April 08, 2004 4:06 PM
**To:** 'Don Bannon'
**Subject:** slope and intercept calculation
**Attachments:** regression_feb2003.xls

Don,

Attached is a file you can use to calculate correction values for the thermocouples.

Jim

Properties Page

Return-path: <ajain@cnwra.swri.edu>
Received: from stu2571 ([129.162.200.105])
 by rogain.cnwra.swri.edu (Sun ONE Messaging Server 6.0 (built Oct 29 2003))
 with ESMTP id <0J3F004IEEYOUW60@rogain.cnwra.swri.edu> for
 dbannon@cnwra.swri.edu; Thu, 03 Aug 2006 09:30:26 -0500 (CDT)
Date: Thu, 03 Aug 2006 09:30:24 -0500
From: Alka Jain <ajain@cnwra.swri.edu>
Subject:
To: Don Bannon <dbannon@cnwra.swri.edu>
Reply-to: ajain@cnwra.swri.edu
Message-id: <000001c6b709$5b8e5100$69c8a281@cnwra.swri.edu>
Organization: CNWRA
MIME-version: 1.0
X-MIMEOLE: Produced By Microsoft MimeOLE V6.00.2900.2670
X-Mailer: Microsoft Outlook, Build 10.0.6626
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Importance: Normal
X-Priority: 3 (Normal)
X-MSMail-priority: Normal
Original-recipient: rfc822;dbannon@cnwra.swri.edu
Microsoft Mail Internet Headers Version 2.0
Received: from viruswall.ccf.swri.edu ([129.162.252.34]) by
adsms01.dyn.datasys.swri.edu with Microsoft SMTPSVC(5.0.2195.6713);
 Fri, 16 Apr 2004 10:20:56 -0500
Received: from bams (localhost [127.0.0.1])
 by viruswall.ccf.swri.edu (8.12.10/8.12.6) with ESMTP id i3GFKrdB017398
 for <DBannon@datasys.swri.edu>; Fri, 16 Apr 2004 10:20:53 -0500 (CDT)
Received: from viruswall.ccf.swri.edu (viruswall.ccf.swri.edu [129.162.252.34])
 by bams.ccf.swri.edu
 (iPlanet Messaging Server 5.2 HotFix 1.17 (built Jun 23 2003))
 with ESMTP id <0HW900C1LRYRPR@bams.ccf.swri.edu> for
DBannon@datasys.swri.edu
 (ORCPT don.bannon@swri.org); Fri, 16 Apr 2004 10:20:52 -0500 (CDT)
Received: from svedeman2k (localhost [127.0.0.1]) by viruswall.ccf.swri.edu
 (8.12.10/8.12.6) with SMTP id i3GFKmdB017390; Fri,
 16 Apr 2004 10:20:48 -0500 (CDT)
Date: Fri, 16 Apr 2004 10:25:27 -0500
From: Steve Svedeman <steven.svedeman@swri.org>
Subject: Temperature Sensor Calibration
To: Randall W Fedors <randall.fedors@swri.org>, david.farrell@swri.org
Cc: Don Bannon <don.bannon@swri.org>
Reply-to: steven.svedeman@swri.org
Message-id: <MOENJFAIHIJDCIEHMOIGGEPACBAA.ssvedeman@swri.org>
MIME-version: 1.0
X-MIMEOLE: Produced By Microsoft MimeOLE V6.00.2800.1106
X-Mailer: Microsoft Outlook IMO, Build 9.0.2416 (9.0.2911.0)

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Importance: Normal
X-Priority: 3 (Normal)
X-MSMail-priority: Normal
Return-Path: steven.svedeman@swri.org
X-OriginalArrivalTime: 16 Apr 2004 15:20:56.0236 (UTC)
FILETIME=[6A03FEC0:01C423C6]

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Received: from viruswall.ccf.swri.edu ([129.162.252.34]) by
adsms01.dyn.datasys.swri.edu with Microsoft SMTPSVC(5.0.2195.6713);
Thu, 8 Apr 2004 15:03:59 -0500
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by viruswall.ccf.swri.edu (8.12.10/8.12.6) with ESMTP id i38K3wdB016846
for <DBannon@datasys.swri.edu>; Thu, 8 Apr 2004 15:03:58 -0500 (CDT)
Received: from rogain.cnwra.swri.edu
(trapdoor.cnwra.swri.edu [129.162.209.254]) by bams.ccf.swri.edu
(iPlanet Messaging Server 5.2 HotFix 1.17 (built Jun 23 2003))
with ESMTP id <0HVV00LPIBQMBR@bams.ccf.swri.edu> for
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(ORCPT dbannon@swri.org); Thu, 08 Apr 2004 15:03:58 -0500 (CDT)
Received: from WYVERN (wyvern.cnwra.swri.edu [129.162.200.32])
by rogain.cnwra.swri.edu (iPlanet Messaging Server 5.2 (built Feb 21 2002))
with ESMTP id <0HVV008GVBQKGW@rogain.cnwra.swri.edu> for dbannon@swri.org;
Thu, 08 Apr 2004 15:03:58 -0500 (CDT)
Date: Thu, 08 Apr 2004 15:06:23 -0500
From: JPrikryl <jprikryl@cnwra.swri.edu>
Subject: slope and intercept calculation
To: "'Don Bannon'" <don.bannon@swri.org>
Message-id: <000701c41da4$f834fa00$20c8a281@WYVERN>
MIME-version: 1.0
X-MIMEOLE: Produced By Microsoft MimeOLE V6.00.2800.1165
X-Mailer: Microsoft Outlook 8.5, Build 4.71.2173.0
Content-type: multipart/mixed; boundary="Boundary_(ID_jay2mO0qnK50YH4uO4xFrw)"
Importance: Normal
X-Priority: 3 (Normal)
X-MSMail-priority: Normal
Return-Path: jprikryl@cnwra.swri.edu
X-OriginalArrivalTime: 08 Apr 2004 20:03:59.0702 (UTC)
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Content-transfer-encoding: 7BIT

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Content-transfer-encoding: 7BIT

--Boundary_(ID_+Perpvf6pcpugMxnM7DgFg)--
--Boundary_(ID_jay2mO0qnK50YH4uO4xFrw)
Content-type: application/vnd.ms-excel; name=regression_feb2003.xls
Content-transfer-encoding: base64
Content-disposition: attachment; filename=regression_feb2003.xls

--Boundary_(ID_jay2mO0qnK50YH4uO4xFrw)--

| Thermometer reading °C | 23.9 | 26.95 | 32.45 | 38.25 | 46.8 | 52.85 |
|---|---|---|---|---|---|---|

| Thermocouple no. | Thermocouple readings °C | | | | | |
|---|---|---|---|---|---|---|
| 1 | 22.20 | 25.20 | 30.70 | 36.57 | 44.95 | 51.46 |
| 2 | 22.41 | 25.44 | 30.92 | 36.79 | 45.22 | 51.63 |
| 3 | 22.29 | 25.30 | 30.78 | 36.65 | 45.08 | 51.49 |
| 4 | 22.48 | 25.50 | 31.00 | 36.88 | 45.34 | 51.79 |
| 5 | 22.47 | 25.45 | 30.95 | 36.80 | 45.20 | 51.60 |
| 6 | 22.43 | 25.42 | 30.88 | 36.72 | 45.13 | 51.51 |
| 7 | 22.74 | 25.78 | 31.29 | 37.17 | 45.63 | 52.03 |
| 8 | 22.71 | 25.73 | 31.18 | 37.02 | 45.39 | 51.84 |
| 9 | 22.73 | 25.76 | 31.26 | 37.15 | 45.55 | 52.07 |
| 10 | 22.82 | 25.86 | 31.34 | 37.23 | 45.68 | 52.05 |
| 11 | 22.74 | 25.74 | 31.22 | 37.05 | 45.47 | 51.84 |
| 12 | 22.87 | 25.90 | 31.38 | 37.25 | 45.68 | 52.12 |
| 13 | 22.87 | 25.86 | 31.33 | 37.17 | 45.54 | 52.00 |
| 14 | 22.88 | 25.87 | 31.35 | 37.21 | 45.62 | 52.04 |
| 15 | 22.85 | 25.85 | 31.33 | 37.15 | 45.56 | 51.93 |
| 16 | 22.65 | 25.63 | 31.08 | 36.93 | 45.37 | 51.69 |
| 17 | 22.67 | 25.65 | 31.13 | 37.00 | 45.40 | 51.68 |
| 18 | 22.64 | 25.63 | 31.08 | 36.97 | 45.40 | 51.87 |
| 19 | 22.62 | 25.60 | 31.04 | 36.90 | 45.27 | 51.70 |
| 20 | 22.54 | 25.52 | 30.96 | 36.85 | 45.27 | 51.63 |
| 21 | 22.23 | 25.24 | 30.76 | 36.67 | 45.10 | 51.62 |
| 22 | 22.30 | 25.30 | 30.74 | 36.65 | 45.02 | 51.44 |
| 23 | 22.31 | 25.31 | 30.79 | 36.68 | 45.15 | 51.57 |
| 24 | 22.41 | 25.41 | 30.90 | 36.77 | 45.19 | 51.61 |
| 25 | 22.51 | 25.51 | 31.00 | 36.83 | 45.22 | 51.62 |
| 26 | 22.54 | 25.53 | 30.98 | 36.83 | 45.24 | 51.53 |
| 27 | 22.70 | 25.71 | 31.18 | 37.03 | 45.42 | 51.84 |
| 28 | 22.72 | 25.72 | 31.23 | 37.08 | 45.52 | 51.94 |
| 29 | 22.72 | 25.74 | 31.17 | 37.05 | 45.45 | 51.86 |
| 30 | 22.70 | 25.72 | 31.18 | 37.04 | 45.44 | 51.80 |
| 31 | 22.77 | 25.77 | 31.19 | 37.03 | 45.39 | 51.66 |
| 32 | 22.79 | 25.79 | 31.26 | 37.16 | 45.60 | 51.79 |
| 33 | 22.80 | 25.79 | 31.27 | 37.12 | 45.53 | 51.90 |
| 34 | 22.78 | 25.75 | 31.22 | 37.09 | 45.48 | 51.87 |
| 35 | 22.76 | 25.76 | 31.19 | 37.06 | 45.43 | 51.76 |
| 36 | 22.65 | 25.65 | 31.11 | 36.96 | 45.37 | 51.83 |
| 37 | 22.67 | 25.65 | 31.07 | 36.95 | 45.33 | 51.67 |
| 38 | 22.64 | 25.60 | 31.06 | 36.90 | 45.31 | 51.54 |
| 39 | 22.59 | 25.56 | 31.02 | 36.87 | 45.31 | 51.68 |
| 40 | 22.50 | 25.47 | 30.92 | 36.75 | 45.12 | 51.58 |
| 41 | 22.58 | 25.56 | 30.98 | 36.85 | 45.19 | 51.59 |
| 42 | 22.68 | 25.66 | 31.11 | 37.00 | 45.40 | 51.83 |
| 43 | 22.52 | 25.47 | 30.90 | 36.76 | 45.11 | 51.51 |
| 44 | 22.66 | 25.64 | 31.08 | 36.93 | 45.34 | 51.69 |
| 45 | 22.62 | 25.60 | 31.05 | 36.88 | 45.29 | 51.66 |
| 46 | 22.57 | 25.53 | 30.96 | 36.81 | 45.20 | 51.58 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 47 | 22.87 | 25.87 | 31.29 | 37.14 | 45.55 | 51.91 |
| 48 | 22.82 | 25.79 | 31.24 | 37.10 | 45.50 | 51.87 |
| 49 | 22.88 | 25.87 | 31.31 | 37.15 | 45.57 | 51.93 |
| 50 | 22.90 | 25.90 | 31.35 | 37.21 | 45.63 | 52.01 |
| 51 | 22.86 | 25.84 | 31.32 | 37.19 | 45.65 | 52.09 |
| 52 | 23.02 | 25.97 | 31.37 | 37.20 | 45.54 | 51.89 |
| 53 | 22.98 | 25.96 | 31.37 | 37.22 | 45.61 | 52.06 |
| 54 | 22.95 | 25.92 | 31.36 | 37.19 | 45.55 | 51.97 |
| 55 | 22.91 | 25.90 | 31.34 | 37.21 | 45.65 | 52.03 |
| 56 | 22.76 | 25.72 | 31.16 | 37.01 | 45.40 | 51.76 |
| 57 | 22.78 | 25.72 | 31.16 | 37.01 | 45.41 | 51.74 |
| 58 | 22.84 | 25.81 | 31.26 | 37.13 | 45.57 | 51.96 |
| 59 | 22.76 | 25.73 | 31.18 | 37.04 | 45.49 | 51.86 |
| 60 | 22.71 | 25.68 | 31.12 | 36.96 | 45.39 | 51.75 |
| 61 | 22.57 | 25.54 | 30.99 | 36.84 | 45.22 | 51.63 |
| 62 | 22.55 | 25.52 | 30.97 | 36.84 | 45.21 | 51.61 |
| 63 | 22.53 | 25.47 | 30.88 | 36.72 | 45.06 | 51.40 |
| 64 | 22.57 | 25.54 | 30.99 | 36.85 | 45.19 | 51.57 |
| 65 | 22.59 | 25.58 | 31.03 | 36.92 | 45.30 | 51.68 |
| 66 | 22.69 | 25.65 | 31.10 | 36.96 | 45.31 | 51.69 |
| 67 | 22.80 | 25.78 | 31.22 | 37.06 | 45.40 | 51.81 |
| 68 | 22.80 | 25.79 | 31.22 | 37.06 | 45.42 | 51.81 |
| 69 | 22.88 | 25.85 | 31.30 | 37.17 | 45.51 | 51.93 |
| 70 | 22.81 | 25.81 | 31.26 | 37.13 | 45.52 | 51.93 |
| 71 | 22.90 | 25.86 | 31.28 | 37.11 | 45.42 | 51.75 |
| 72 | 22.93 | 25.90 | 31.35 | 37.18 | 45.54 | 51.93 |
| 73 | 22.94 | 25.91 | 31.36 | 37.20 | 45.66 | 51.99 |
| 74 | 22.91 | 25.87 | 31.32 | 37.20 | 45.55 | 52.03 |
| 75 | 22.83 | 25.80 | 31.21 | 37.04 | 45.42 | 51.80 |
| 76 | 22.73 | 25.68 | 31.10 | 36.94 | 45.31 | 51.67 |
| 77 | 22.80 | 25.75 | 31.21 | 37.10 | 45.46 | 51.90 |
| 78 | 22.74 | 25.70 | 31.17 | 37.06 | 45.45 | 51.87 |
| 79 | 22.70 | 25.66 | 31.11 | 37.01 | 45.42 | 51.90 |
| 80 | 22.66 | 25.62 | 31.08 | 36.96 | 45.35 | 51.80 |
| 81 | 24.61 | 27.55 | 33.04 | 38.83 | 47.23 | 53.76 |
| 82 | 24.55 | 27.52 | 33.03 | 38.86 | 47.29 | 53.73 |
| 83 | 24.40 | 27.32 | 32.80 | 38.63 | 47.01 | 53.58 |
| 84 | 24.31 | 27.24 | 32.74 | 38.57 | 46.98 | 53.51 |
| 85 | 24.22 | 27.16 | 32.66 | 38.48 | 46.91 | 53.45 |
| 86 | 24.11 | 27.04 | 32.52 | 38.35 | 46.80 | 53.29 |
| 87 | 24.13 | 27.11 | 32.59 | 38.47 | 46.91 | 53.40 |
| 88 | 24.19 | 27.16 | 32.66 | 38.47 | 46.97 | 53.46 |
| 89 | 24.12 | 27.08 | 32.56 | 38.42 | 46.91 | 53.41 |
| 90 | 24.01 | 26.98 | 32.47 | 38.33 | 46.80 | 53.31 |
| 91 | 24.23 | 27.17 | 32.63 | 38.46 | 46.92 | 53.40 |
| 92 | 24.20 | 27.17 | 32.64 | 38.51 | 46.94 | 53.39 |
| 93 | 24.13 | 27.09 | 32.53 | 38.36 | 46.83 | 53.30 |
| 94 | 24.08 | 27.04 | 32.51 | 38.37 | 46.82 | 53.30 |
| 95 | 23.84 | 26.79 | 32.24 | 38.11 | 46.58 | 53.05 |
| 96 | 24.02 | 26.99 | 32.43 | 38.27 | 46.71 | 53.20 |
| 97 | 24.08 | 27.00 | 32.45 | 38.32 | 46.74 | 53.23 |
| 98 | 24.14 | 27.08 | 32.54 | 38.38 | 46.77 | 53.30 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 99 | 24.07 | 27.02 | 32.47 | 38.33 | 46.75 | 53.29 |
| 100 | 24.10 | 27.03 | 32.46 | 38.32 | 46.75 | 53.25 |
| 101 | 24.56 | 27.49 | 33.01 | 38.79 | 47.21 | 53.68 |
| 102 | 24.45 | 27.39 | 32.92 | 38.72 | 47.14 | 53.64 |
| 103 | 24.34 | 27.28 | 32.76 | 38.56 | 46.97 | 53.53 |
| 104 | 24.25 | 27.17 | 32.67 | 38.48 | 46.89 | 53.39 |
| 105 | 24.08 | 27.04 | 32.55 | 38.39 | 46.78 | 53.34 |
| 106 | 24.11 | 27.04 | 32.53 | 38.35 | 46.82 | 53.32 |
| 107 | 24.16 | 27.14 | 32.62 | 38.47 | 46.95 | 53.39 |
| 108 | 24.16 | 27.10 | 32.57 | 38.41 | 46.86 | 53.33 |
| 109 | 24.08 | 27.03 | 32.50 | 38.37 | 46.86 | 53.35 |
| 110 | 23.92 | 26.89 | 32.40 | 38.25 | 46.75 | 53.18 |
| 111 | 24.20 | 27.14 | 32.61 | 38.47 | 46.92 | 53.38 |
| 112 | 24.13 | 27.09 | 32.54 | 38.40 | 46.86 | 53.35 |
| 113 | 24.10 | 27.05 | 32.49 | 38.35 | 46.78 | 53.28 |
| 114 | 23.95 | 26.90 | 32.36 | 38.22 | 46.68 | 53.20 |
| 115 | 23.81 | 26.77 | 32.23 | 38.09 | 46.54 | 53.09 |
| 116 | 24.06 | 27.00 | 32.46 | 38.30 | 46.75 | 53.26 |
| 117 | 24.11 | 27.04 | 32.51 | 38.32 | 46.77 | 53.25 |
| 118 | 24.10 | 27.05 | 32.51 | 38.38 | 46.85 | 53.35 |
| 119 | 24.08 | 27.02 | 32.48 | 38.33 | 46.76 | 53.31 |
| 120 | 24.05 | 26.99 | 32.46 | 38.30 | 46.74 | 53.27 |

Regression coefficients

| Thermocouple No. | b | a |
|---|---|---|
| 1 | 1.9189 | 0.9934 |
| 2 | 1.6793 | 0.9939 |
| 3 | 1.7991 | 0.9944 |
| 4 | 1.6856 | 0.9910 |
| 5 | 1.5733 | 0.9967 |
| 6 | 1.5763 | 0.9983 |
| 7 | 1.3980 | 0.9915 |
| 8 | 1.2945 | 0.9979 |
| 9 | 1.4373 | 0.9909 |
| 10 | 1.2830 | 0.9932 |
| 11 | 1.2719 | 0.9977 |
| 12 | 1.2418 | 0.9933 |
| 13 | 1.1526 | 0.9977 |
| 14 | 1.1862 | 0.9959 |
| 15 | 1.1437 | 0.9985 |
| 16 | 1.3548 | 0.9987 |
| 17 | 1.3072 | 0.9992 |
| 18 | 1.4934 | 0.9936 |
| 19 | 1.3837 | 0.9989 |
| 20 | 1.5025 | 0.9973 |
| 21 | 2.0021 | 0.9885 |
| 22 | 1.7489 | 0.9965 |
| 23 | 1.8497 | 0.9919 |
| 24 | 1.6810 | 0.9944 |
| 25 | 1.4906 | 0.9979 |
| 26 | 1.4058 | 1.0006 |
| 27 | 1.3248 | 0.9971 |
| 28 | 1.3944 | 0.9936 |
| 29 | 1.3281 | 0.9965 |
| 30 | 1.3106 | 0.9975 |
| 31 | 1.0858 | 1.0041 |
| 32 | 1.1804 | 0.9987 |
| 33 | 1.2216 | 0.9975 |
| 34 | 1.2506 | 0.9977 |
| 35 | 1.1782 | 1.0008 |
| 36 | 1.4302 | 0.9956 |
| 37 | 1.2951 | 1.0004 |
| 38 | 1.2599 | 1.0027 |
| 39 | 1.4597 | 0.9973 |
| 40 | 1.5077 | 0.9992 |
| 41 | 1.3659 | 1.0012 |
| 42 | 1.3954 | 0.9960 |
| 43 | 1.4507 | 1.0010 |
| 44 | 1.3223 | 0.9997 |
| 45 | 1.3717 | 0.9994 |
| 46 | 1.4104 | 1.0004 |
| 47 | 1.1060 | 0.9997 |
| 48 | 1.1866 | 0.9989 |
| 49 | 1.1180 | 0.9990 |

| | | |
|---|---|---|
| 50 | 1.1293 | 0.9973 |
| 51 | 1.2920 | 0.9930 |
| 52 | 0.8462 | 1.0052 |
| 53 | 1.0391 | 0.9989 |
| 54 | 1.0184 | 1.0007 |
| 55 | 1.1596 | 0.9963 |
| 56 | 1.2100 | 1.0006 |
| 57 | 1.1826 | 1.0014 |
| 58 | 1.2347 | 0.9964 |
| 59 | 1.2940 | 0.9971 |
| 60 | 1.2940 | 0.9992 |
| 61 | 1.4316 | 0.9992 |
| 62 | 1.4612 | 0.9987 |
| 63 | 1.3543 | 1.0048 |
| 64 | 1.3842 | 1.0009 |
| 65 | 1.4336 | 0.9977 |
| 66 | 1.2770 | 1.0007 |
| 67 | 1.1465 | 1.0012 |
| 68 | 1.1453 | 1.0010 |
| 69 | 1.1165 | 0.9994 |
| 70 | 1.2235 | 0.9972 |
| 71 | 0.9328 | 1.0060 |
| 72 | 1.0130 | 1.0014 |
| 73 | 1.0876 | 0.9982 |
| 74 | 1.1403 | 0.9976 |
| 75 | 1.1131 | 1.0020 |
| 76 | 1.2029 | 1.0026 |
| 77 | 1.2431 | 0.9978 |
| 78 | 1.3388 | 0.9962 |
| 79 | 1.4393 | 0.9942 |
| 80 | 1.4205 | 0.9962 |
| 81 | -0.5268 | 0.9971 |
| 82 | -0.4453 | 0.9951 |
| 83 | -0.2645 | 0.9958 |
| 84 | -0.1684 | 0.9948 |
| 85 | -0.0465 | 0.9937 |
| 86 | 0.0430 | 0.9947 |
| 87 | 0.0588 | 0.9921 |
| 88 | 0.0142 | 0.9920 |
| 89 | 0.1111 | 0.9912 |
| 90 | 0.2160 | 0.9911 |
| 91 | -0.0888 | 0.9951 |
| 92 | -0.0697 | 0.9945 |
| 93 | -0.0088 | 0.9955 |
| 94 | 0.0862 | 0.9935 |
| 95 | 0.3339 | 0.9936 |
| 96 | 0.1015 | 0.9954 |
| 97 | 0.0684 | 0.9953 |
| 98 | -0.0303 | 0.9963 |
| 99 | 0.0996 | 0.9940 |
| 100 | 0.0423 | 0.9957 |
| 101 | -0.4800 | 0.9971 |

| | | |
|---|---|---|
| 102 | -0.3234 | 0.9950 |
| 103 | -0.2144 | 0.9957 |
| 104 | -0.1483 | 0.9965 |
| 105 | 0.0834 | 0.9933 |
| 106 | 0.0655 | 0.9939 |
| 107 | 0.0109 | 0.9929 |
| 108 | -0.0230 | 0.9951 |
| 109 | 0.1523 | 0.9915 |
| 110 | 0.2721 | 0.9918 |
| 111 | -0.0544 | 0.9947 |
| 112 | 0.0390 | 0.9937 |
| 113 | 0.0459 | 0.9949 |
| 114 | 0.2543 | 0.9926 |
| 115 | 0.3954 | 0.9923 |
| 116 | 0.1065 | 0.9943 |
| 117 | 0.0063 | 0.9962 |
| 118 | 0.1073 | 0.9925 |
| 119 | 0.1049 | 0.9936 |
| 120 | 0.1216 | 0.9940 |

Calculation of regression values used to correct themocouple readings for coldtrap experiment.

Conducted on November 19, 2002

| Thermocouple check | Thermocouple no. 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thermometer reading oC | | | | | | | | | | | | | | | | | | | | |
| 23.9 | 22.20 | 22.41 | 22.29 | 22.48 | 22.47 | 22.43 | 22.74 | 22.71 | 22.73 | 22.82 | 22.74 | 22.87 | 22.87 | 22.88 | 22.85 | 22.65 | 22.67 | 22.64 | 22.62 | 22.54 |
| 26.95 | 25.20 | 25.44 | 25.30 | 25.50 | 25.45 | 25.42 | 25.78 | 25.73 | 25.76 | 25.86 | 25.74 | 25.90 | 25.86 | 25.87 | 25.85 | 25.63 | 25.65 | 25.63 | 25.60 | 25.52 |
| 32.45 | 30.70 | 30.92 | 30.78 | 31.00 | 30.95 | 30.88 | 31.29 | 31.18 | 31.26 | 31.34 | 31.22 | 31.38 | 31.33 | 31.35 | 31.33 | 31.08 | 31.13 | 31.08 | 31.04 | 30.96 |
| 38.25 | 36.57 | 36.79 | 36.65 | 36.88 | 36.80 | 36.72 | 37.17 | 37.02 | 37.15 | 37.23 | 37.05 | 37.25 | 37.17 | 37.21 | 37.15 | 36.93 | 37.00 | 36.97 | 36.90 | 36.85 |
| 46.8 | 44.95 | 45.22 | 45.08 | 45.34 | 45.20 | 45.13 | 45.63 | 45.39 | 45.55 | 45.68 | 45.47 | 45.68 | 45.54 | 45.62 | 45.56 | 45.37 | 45.40 | 45.40 | 45.27 | 45.27 |
| 52.85 | 51.46 | 51.63 | 51.49 | 51.79 | 51.60 | 51.51 | 52.03 | 51.84 | 52.07 | 52.05 | 51.84 | 52.12 | 52.00 | 52.04 | 51.93 | 51.69 | 51.68 | 51.87 | 51.70 | 51.63 |
| Intercept | 1.9189 | 1.6793 | 1.7991 | 1.6856 | 1.5733 | 1.5763 | 1.3980 | 1.2945 | 1.4373 | 1.2830 | 1.2719 | 1.2418 | 1.1526 | 1.1862 | 1.1437 | 1.3548 | 1.3072 | 1.4934 | 1.3837 | 1.5025 |
| Slope | 0.9934 | 0.9939 | 0.9944 | 0.9910 | 0.9967 | 0.9983 | 0.9915 | 0.9979 | 0.9909 | 0.9932 | 0.9977 | 0.9933 | 0.9977 | 0.9959 | 0.9985 | 0.9987 | 0.9992 | 0.9936 | 0.9989 | 0.9973 |

| Thermometer reading °C | 23.9 | 26.95 | 32.45 | 38.25 | 46.8 | 52.85 |
|---|---|---|---|---|---|---|
| Thermocouple No. | Thermocouple readings °C | | | | | |
| 1 | 22.20 | 25.20 | 30.70 | 36.57 | 44.95 | 51.46 |
| 2 | 22.41 | 25.44 | 30.92 | 36.79 | 45.22 | 51.63 |
| 3 | 22.29 | 25.30 | 30.78 | 36.65 | 45.08 | 51.49 |
| 4 | 22.48 | 25.50 | 31.00 | 36.88 | 45.34 | 51.79 |
| 5 | 22.47 | 25.45 | 30.95 | 36.80 | 45.20 | 51.60 |
| 6 | 22.43 | 25.42 | 30.88 | 36.72 | 45.13 | 51.51 |
| 7 | 22.74 | 25.78 | 31.29 | 37.17 | 45.63 | 52.03 |
| 8 | 22.71 | 25.73 | 31.18 | 37.02 | 45.39 | 51.84 |
| 9 | 22.73 | 25.76 | 31.26 | 37.15 | 45.55 | 52.07 |
| 10 | 22.82 | 25.86 | 31.34 | 37.23 | 45.68 | 52.05 |
| 11 | 22.74 | 25.74 | 31.22 | 37.05 | 45.47 | 51.84 |
| 12 | 22.87 | 25.90 | 31.38 | 37.25 | 45.68 | 52.12 |
| 13 | 22.87 | 25.86 | 31.33 | 37.17 | 45.54 | 52.00 |
| 14 | 22.88 | 25.87 | 31.35 | 37.21 | 45.62 | 52.04 |
| 15 | 22.85 | 25.85 | 31.33 | 37.15 | 45.56 | 51.93 |
| 16 | 22.65 | 25.63 | 31.08 | 36.93 | 45.37 | 51.69 |
| 17 | 22.67 | 25.65 | 31.13 | 37.00 | 45.40 | 51.68 |
| 18 | 22.64 | 25.63 | 31.08 | 36.97 | 45.40 | 51.87 |
| 19 | 22.62 | 25.60 | 31.04 | 36.90 | 45.27 | 51.70 |
| 20 | 22.54 | 25.52 | 30.96 | 36.85 | 45.27 | 51.63 |
| 21 | 22.23 | 25.24 | 30.76 | 36.67 | 45.10 | 51.62 |
| 22 | 22.30 | 25.30 | 30.74 | 36.65 | 45.02 | 51.44 |
| 23 | 22.31 | 25.31 | 30.79 | 36.68 | 45.15 | 51.57 |
| 24 | 22.41 | 25.41 | 30.90 | 36.77 | 45.19 | 51.61 |
| 25 | 22.51 | 25.51 | 31.00 | 36.83 | 45.22 | 51.62 |
| 26 | 22.54 | 25.53 | 30.98 | 36.83 | 45.24 | 51.53 |
| 27 | 22.70 | 25.71 | 31.18 | 37.03 | 45.42 | 51.84 |
| 28 | 22.72 | 25.72 | 31.23 | 37.08 | 45.52 | 51.94 |
| 29 | 22.72 | 25.74 | 31.17 | 37.05 | 45.45 | 51.86 |
| 30 | 22.70 | 25.72 | 31.18 | 37.04 | 45.44 | 51.80 |
| 31 | 22.77 | 25.77 | 31.19 | 37.03 | 45.39 | 51.66 |
| 32 | 22.79 | 25.79 | 31.26 | 37.16 | 45.60 | 51.79 |
| 33 | 22.80 | 25.79 | 31.27 | 37.12 | 45.53 | 51.90 |
| 34 | 22.78 | 25.75 | 31.22 | 37.09 | 45.48 | 51.87 |
| 35 | 22.76 | 25.76 | 31.19 | 37.06 | 45.43 | 51.76 |
| 36 | 22.65 | 25.65 | 31.11 | 36.96 | 45.37 | 51.83 |
| 37 | 22.67 | 25.65 | 31.07 | 36.95 | 45.33 | 51.67 |
| 38 | 22.64 | 25.60 | 31.06 | 36.90 | 45.31 | 51.54 |
| 39 | 22.59 | 25.56 | 31.02 | 36.87 | 45.31 | 51.68 |
| 40 | 22.50 | 25.47 | 30.92 | 36.75 | 45.12 | 51.58 |
| 41 | 22.58 | 25.56 | 30.98 | 36.85 | 45.19 | 51.59 |
| 42 | 22.68 | 25.66 | 31.11 | 37.00 | 45.40 | 51.83 |
| 43 | 22.52 | 25.47 | 30.90 | 36.76 | 45.11 | 51.51 |
| 44 | 22.66 | 25.64 | 31.08 | 36.93 | 45.34 | 51.69 |
| 45 | 22.62 | 25.60 | 31.05 | 36.88 | 45.29 | 51.66 |
| 46 | 22.57 | 25.53 | 30.96 | 36.81 | 45.20 | 51.58 |
| 47 | 22.87 | 25.87 | 31.29 | 37.14 | 45.55 | 51.91 |
| 48 | 22.82 | 25.79 | 31.24 | 37.10 | 45.50 | 51.87 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 49 | 22.88 | 25.87 | 31.31 | 37.15 | 45.57 | 51.93 |
| 50 | 22.90 | 25.90 | 31.35 | 37.21 | 45.63 | 52.01 |
| 51 | 22.86 | 25.84 | 31.32 | 37.19 | 45.65 | 52.09 |
| 52 | 23.02 | 25.97 | 31.37 | 37.20 | 45.54 | 51.89 |
| 53 | 22.98 | 25.96 | 31.37 | 37.22 | 45.61 | 52.06 |
| 54 | 22.95 | 25.92 | 31.36 | 37.19 | 45.55 | 51.97 |
| 55 | 22.91 | 25.90 | 31.34 | 37.21 | 45.65 | 52.03 |
| 56 | 22.76 | 25.72 | 31.16 | 37.01 | 45.40 | 51.76 |
| 57 | 22.78 | 25.72 | 31.16 | 37.01 | 45.41 | 51.74 |
| 58 | 22.84 | 25.81 | 31.26 | 37.13 | 45.57 | 51.96 |
| 59 | 22.76 | 25.73 | 31.18 | 37.04 | 45.49 | 51.86 |
| 60 | 22.71 | 25.68 | 31.12 | 36.96 | 45.39 | 51.75 |
| 61 | 22.57 | 25.54 | 30.99 | 36.84 | 45.22 | 51.63 |
| 62 | 22.55 | 25.52 | 30.97 | 36.84 | 45.21 | 51.61 |
| 63 | 22.53 | 25.47 | 30.88 | 36.72 | 45.06 | 51.40 |
| 64 | 22.57 | 25.54 | 30.99 | 36.85 | 45.19 | 51.57 |
| 65 | 22.59 | 25.58 | 31.03 | 36.92 | 45.30 | 51.68 |
| 66 | 22.69 | 25.65 | 31.10 | 36.96 | 45.31 | 51.69 |
| 67 | 22.80 | 25.78 | 31.22 | 37.06 | 45.40 | 51.81 |
| 68 | 22.80 | 25.79 | 31.22 | 37.06 | 45.42 | 51.81 |
| 69 | 22.88 | 25.85 | 31.30 | 37.17 | 45.51 | 51.93 |
| 70 | 22.81 | 25.81 | 31.26 | 37.13 | 45.52 | 51.93 |
| 71 | 22.90 | 25.86 | 31.28 | 37.11 | 45.42 | 51.75 |
| 72 | 22.93 | 25.90 | 31.35 | 37.18 | 45.54 | 51.93 |
| 73 | 22.94 | 25.91 | 31.36 | 37.20 | 45.66 | 51.99 |
| 74 | 22.91 | 25.87 | 31.32 | 37.20 | 45.55 | 52.03 |
| 75 | 22.83 | 25.80 | 31.21 | 37.04 | 45.42 | 51.80 |
| 76 | 22.73 | 25.68 | 31.10 | 36.94 | 45.31 | 51.67 |
| 77 | 22.80 | 25.75 | 31.21 | 37.10 | 45.46 | 51.90 |
| 78 | 22.74 | 25.70 | 31.17 | 37.06 | 45.45 | 51.87 |
| 79 | 22.70 | 25.66 | 31.11 | 37.01 | 45.42 | 51.90 |
| 80 | 22.66 | 25.62 | 31.08 | 36.96 | 45.35 | 51.80 |
| 81 | 24.61 | 27.55 | 33.04 | 38.83 | 47.23 | 53.76 |
| 82 | 24.55 | 27.52 | 33.03 | 38.86 | 47.29 | 53.73 |
| 83 | 24.40 | 27.32 | 32.80 | 38.63 | 47.01 | 53.58 |
| 84 | 24.31 | 27.24 | 32.74 | 38.57 | 46.98 | 53.51 |
| 85 | 24.22 | 27.16 | 32.66 | 38.48 | 46.91 | 53.45 |
| 86 | 24.11 | 27.04 | 32.52 | 38.35 | 46.80 | 53.29 |
| 87 | 24.13 | 27.11 | 32.59 | 38.47 | 46.91 | 53.40 |
| 88 | 24.19 | 27.16 | 32.66 | 38.47 | 46.97 | 53.46 |
| 89 | 24.12 | 27.08 | 32.56 | 38.42 | 46.91 | 53.41 |
| 90 | 24.01 | 26.98 | 32.47 | 38.33 | 46.80 | 53.31 |
| 91 | 24.23 | 27.17 | 32.63 | 38.46 | 46.92 | 53.40 |
| 92 | 24.20 | 27.17 | 32.64 | 38.51 | 46.94 | 53.39 |
| 93 | 24.13 | 27.09 | 32.53 | 38.36 | 46.83 | 53.30 |
| 94 | 24.08 | 27.04 | 32.51 | 38.37 | 46.82 | 53.30 |
| 95 | 23.84 | 26.79 | 32.24 | 38.11 | 46.58 | 53.05 |
| 96 | 24.02 | 26.99 | 32.43 | 38.27 | 46.71 | 53.20 |
| 97 | 24.08 | 27.00 | 32.45 | 38.32 | 46.74 | 53.23 |
| 98 | 24.14 | 27.08 | 32.54 | 38.38 | 46.77 | 53.30 |
| 99 | 24.07 | 27.02 | 32.47 | 38.33 | 46.75 | 53.29 |
| 100 | 24.10 | 27.03 | 32.46 | 38.32 | 46.75 | 53.25 |
| 101 | 24.56 | 27.49 | 33.01 | 38.79 | 47.21 | 53.68 |
| 102 | 24.45 | 27.39 | 32.92 | 38.72 | 47.14 | 53.64 |
| 103 | 24.34 | 27.28 | 32.76 | 38.56 | 46.97 | 53.53 |
| 104 | 24.25 | 27.17 | 32.67 | 38.48 | 46.89 | 53.39 |
| 105 | 24.08 | 27.04 | 32.55 | 38.39 | 46.78 | 53.34 |
| 106 | 24.11 | 27.04 | 32.53 | 38.35 | 46.82 | 53.32 |
| 107 | 24.16 | 27.14 | 32.62 | 38.47 | 46.95 | 53.39 |
| 108 | 24.16 | 27.10 | 32.57 | 38.41 | 46.86 | 53.33 |
| 109 | 24.08 | 27.03 | 32.50 | 38.37 | 46.86 | 53.35 |
| 110 | 23.92 | 26.89 | 32.40 | 38.25 | 46.75 | 53.18 |
| 111 | 24.20 | 27.14 | 32.61 | 38.47 | 46.92 | 53.38 |
| 112 | 24.13 | 27.09 | 32.54 | 38.40 | 46.86 | 53.35 |
| 113 | 24.10 | 27.05 | 32.49 | 38.35 | 46.78 | 53.28 |
| 114 | 23.95 | 26.90 | 32.36 | 38.22 | 46.68 | 53.20 |
| 115 | 23.81 | 26.77 | 32.23 | 38.09 | 46.54 | 53.09 |
| 116 | 24.06 | 27.00 | 32.46 | 38.30 | 46.75 | 53.26 |
| 117 | 24.11 | 27.04 | 32.51 | 38.32 | 46.77 | 53.25 |
| 118 | 24.10 | 27.05 | 32.51 | 38.38 | 46.85 | 53.35 |
| 119 | 24.08 | 27.02 | 32.48 | 38.33 | 46.76 | 53.31 |
| 120 | 24.05 | 26.99 | 32.46 | 38.30 | 46.74 | 53.27 |

| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 22.23 | 22.30 | 22.31 | 22.41 | 22.51 | 22.54 | 22.70 | 22.72 | 22.72 | 22.70 | 22.77 | 22.79 | 22.80 | 22.78 | 22.76 | 22.65 | 22.67 | 22.64 | 22.59 | 22.50 | 22.58 | 22.68 | 22.52 | 22.66 |
| 25.24 | 25.30 | 25.31 | 25.41 | 25.51 | 25.53 | 25.71 | 25.72 | 25.74 | 25.72 | 25.77 | 25.79 | 25.79 | 25.75 | 25.76 | 25.65 | 25.65 | 25.60 | 25.56 | 25.47 | 25.56 | 25.66 | 25.47 | 25.64 |
| 30.76 | 30.74 | 30.79 | 30.90 | 31.00 | 30.98 | 31.18 | 31.23 | 31.17 | 31.18 | 31.19 | 31.26 | 31.27 | 31.22 | 31.19 | 31.11 | 31.07 | 31.06 | 31.02 | 30.92 | 30.98 | 31.11 | 30.90 | 31.08 |
| 36.67 | 36.65 | 36.68 | 36.77 | 36.83 | 36.83 | 37.03 | 37.08 | 37.05 | 37.04 | 37.03 | 37.16 | 37.12 | 37.09 | 37.06 | 36.96 | 36.95 | 36.90 | 36.87 | 36.75 | 36.85 | 37.00 | 36.76 | 36.93 |
| 45.10 | 45.02 | 45.15 | 45.19 | 45.22 | 45.24 | 45.42 | 45.52 | 45.45 | 45.44 | 45.39 | 45.60 | 45.53 | 45.48 | 45.43 | 45.37 | 45.33 | 45.31 | 45.31 | 45.12 | 45.19 | 45.40 | 45.11 | 45.34 |
| 51.62 | 51.44 | 51.57 | 51.61 | 51.62 | 51.53 | 51.84 | 51.94 | 51.86 | 51.80 | 51.66 | 51.79 | 51.90 | 51.87 | 51.76 | 51.83 | 51.67 | 51.54 | 51.68 | 51.58 | 51.59 | 51.83 | 51.51 | 51.69 |
| 2.0021 | 1.7489 | 1.8497 | 1.6810 | 1.4906 | 1.4058 | 1.3248 | 1.3944 | 1.3281 | 1.3106 | 1.0858 | 1.1804 | 1.2216 | 1.2506 | 1.1782 | 1.4302 | 1.2951 | 1.2599 | 1.4597 | 1.5077 | 1.3659 | 1.3954 | 1.4507 | 1.3223 |
| 0.9885 | 0.9965 | 0.9919 | 0.9944 | 0.9979 | 1.0006 | 0.9971 | 0.9936 | 0.9965 | 0.9975 | 1.0041 | 0.9987 | 0.9975 | 0.9977 | 1.0008 | 0.9956 | 1.0004 | 1.0027 | 0.9973 | 0.9992 | 1.0012 | 0.9960 | 1.0010 | 0.9997 |

| 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 22.62 | 22.57 | 22.87 | 22.82 | 22.88 | 22.90 | 22.86 | 23.02 | 22.98 | 22.95 | 22.91 | 22.76 | 22.78 | 22.84 | 22.76 | 22.71 | 22.57 | 22.55 | 22.53 | 22.57 | 22.59 | 22.69 | 22.80 |
| 25.60 | 25.53 | 25.87 | 25.79 | 25.87 | 25.90 | 25.84 | 25.97 | 25.96 | 25.92 | 25.90 | 25.72 | 25.72 | 25.81 | 25.73 | 25.68 | 25.54 | 25.52 | 25.47 | 25.54 | 25.58 | 25.65 | 25.78 |
| 31.05 | 30.96 | 31.29 | 31.24 | 31.31 | 31.35 | 31.32 | 31.37 | 31.37 | 31.36 | 31.34 | 31.16 | 31.16 | 31.26 | 31.18 | 31.12 | 30.99 | 30.97 | 30.88 | 30.99 | 31.03 | 31.10 | 31.22 |
| 36.88 | 36.81 | 37.14 | 37.10 | 37.15 | 37.21 | 37.19 | 37.20 | 37.22 | 37.19 | 37.21 | 37.01 | 37.01 | 37.13 | 37.04 | 36.96 | 36.84 | 36.84 | 36.72 | 36.85 | 36.92 | 36.96 | 37.06 |
| 45.29 | 45.20 | 45.55 | 45.50 | 45.57 | 45.63 | 45.65 | 45.54 | 45.61 | 45.55 | 45.65 | 45.40 | 45.41 | 45.57 | 45.49 | 45.39 | 45.22 | 45.21 | 45.06 | 45.19 | 45.30 | 45.31 | 45.40 |
| 51.66 | 51.58 | 51.91 | 51.87 | 51.93 | 52.01 | 52.09 | 51.89 | 52.06 | 51.97 | 52.03 | 51.76 | 51.74 | 51.96 | 51.86 | 51.75 | 51.63 | 51.61 | 51.40 | 51.57 | 51.68 | 51.69 | 51.81 |
| 1.3717 | 1.4104 | 1.1060 | 1.1866 | 1.1180 | 1.1293 | 1.2920 | 0.8462 | 1.0391 | 1.0184 | 1.1596 | 1.2100 | 1.1826 | 1.2347 | 1.2940 | 1.2940 | 1.4316 | 1.4612 | 1.3543 | 1.3842 | 1.4336 | 1.2770 | 1.1465 |
| 0.9994 | 1.0004 | 0.9997 | 0.9989 | 0.9990 | 0.9973 | 0.9930 | 1.0052 | 0.9989 | 1.0007 | 0.9963 | 1.0006 | 1.0014 | 0.9964 | 0.9971 | 0.9992 | 0.9992 | 0.9987 | 1.0048 | 1.0009 | 0.9977 | 1.0007 | 1.0012 |

| 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 22.80 | 22.88 | 22.81 | 22.90 | 22.93 | 22.94 | 22.91 | 22.83 | 22.73 | 22.80 | 22.74 | 22.70 | 22.66 | 24.61 | 24.55 | 24.40 | 24.31 | 24.22 | 24.11 | 24.13 | 24.19 | 24.12 | 24.01 | 24.23 |
| 25.79 | 25.85 | 25.81 | 25.86 | 25.90 | 25.91 | 25.87 | 25.80 | 25.68 | 25.75 | 25.70 | 25.66 | 25.62 | 27.55 | 27.52 | 27.32 | 27.24 | 27.16 | 27.04 | 27.11 | 27.16 | 27.08 | 26.98 | 27.17 |
| 31.22 | 31.30 | 31.26 | 31.28 | 31.35 | 31.36 | 31.32 | 31.21 | 31.10 | 31.21 | 31.17 | 31.11 | 31.08 | 33.04 | 33.03 | 32.80 | 32.74 | 32.66 | 32.52 | 32.59 | 32.66 | 32.56 | 32.47 | 32.63 |
| 37.06 | 37.17 | 37.13 | 37.11 | 37.18 | 37.20 | 37.20 | 37.04 | 36.94 | 37.10 | 37.06 | 37.01 | 36.96 | 38.83 | 38.86 | 38.63 | 38.57 | 38.48 | 38.35 | 38.47 | 38.47 | 38.42 | 38.33 | 38.46 |
| 45.42 | 45.51 | 45.52 | 45.42 | 45.54 | 45.66 | 45.55 | 45.42 | 45.31 | 45.46 | 45.45 | 45.42 | 45.35 | 47.23 | 47.29 | 47.01 | 46.98 | 46.91 | 46.80 | 46.91 | 46.97 | 46.91 | 46.80 | 46.92 |
| 51.81 | 51.93 | 51.93 | 51.75 | 51.93 | 51.99 | 52.03 | 51.80 | 51.67 | 51.90 | 51.87 | 51.90 | 51.80 | 53.76 | 53.73 | 53.58 | 53.51 | 53.45 | 53.29 | 53.40 | 53.46 | 53.41 | 53.31 | 53.40 |
| 1.1453 | 1.1165 | 1.2235 | 0.9328 | 1.0130 | 1.0876 | 1.1403 | 1.1131 | 1.2029 | 1.2431 | 1.3388 | 1.4393 | 1.4205 | -0.5268 | -0.4453 | -0.2645 | -0.1684 | -0.0465 | 0.0430 | 0.0588 | 0.0142 | 0.1111 | 0.2160 | -0.0888 |
| 1.0010 | 0.9994 | 0.9972 | 1.0060 | 1.0014 | 0.9982 | 0.9976 | 1.0020 | 1.0026 | 0.9978 | 0.9962 | 0.9942 | 0.9962 | 0.9971 | 0.9951 | 0.9958 | 0.9948 | 0.9937 | 0.9947 | 0.9921 | 0.9920 | 0.9912 | 0.9911 | 0.9951 |

| 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 | 114 | 115 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24.20 | 24.13 | 24.08 | 23.84 | 24.02 | 24.08 | 24.14 | 24.07 | 24.10 | 24.56 | 24.45 | 24.34 | 24.25 | 24.08 | 24.11 | 24.16 | 24.16 | 24.08 | 23.92 | 24.20 | 24.13 | 24.10 | 23.95 | 23.81 |
| 27.17 | 27.09 | 27.04 | 26.79 | 26.99 | 27.00 | 27.08 | 27.02 | 27.03 | 27.49 | 27.39 | 27.28 | 27.17 | 27.04 | 27.04 | 27.14 | 27.10 | 27.03 | 26.89 | 27.14 | 27.09 | 27.05 | 26.90 | 26.77 |
| 32.64 | 32.53 | 32.51 | 32.24 | 32.43 | 32.45 | 32.54 | 32.47 | 32.46 | 33.01 | 32.92 | 32.76 | 32.67 | 32.55 | 32.53 | 32.62 | 32.57 | 32.50 | 32.40 | 32.61 | 32.54 | 32.49 | 32.36 | 32.23 |
| 38.51 | 38.36 | 38.37 | 38.11 | 38.27 | 38.32 | 38.38 | 38.33 | 38.32 | 38.79 | 38.72 | 38.56 | 38.48 | 38.39 | 38.35 | 38.47 | 38.41 | 38.37 | 38.25 | 38.47 | 38.40 | 38.35 | 38.22 | 38.09 |
| 46.94 | 46.83 | 46.82 | 46.58 | 46.71 | 46.74 | 46.77 | 46.75 | 46.75 | 47.21 | 47.14 | 46.97 | 46.89 | 46.78 | 46.82 | 46.95 | 46.86 | 46.86 | 46.75 | 46.92 | 46.86 | 46.78 | 46.68 | 46.54 |
| 53.39 | 53.30 | 53.30 | 53.05 | 53.20 | 53.23 | 53.30 | 53.29 | 53.25 | 53.68 | 53.64 | 53.53 | 53.39 | 53.34 | 53.32 | 53.39 | 53.33 | 53.35 | 53.18 | 53.38 | 53.35 | 53.28 | 53.20 | 53.09 |
| -0.0697 | -0.0088 | 0.0862 | 0.3339 | 0.1015 | 0.0684 | -0.0303 | 0.0996 | 0.0423 | -0.4800 | -0.3234 | -0.2144 | -0.1483 | 0.0834 | 0.0655 | 0.0109 | -0.0230 | 0.1523 | 0.2721 | -0.0544 | 0.0390 | 0.0459 | 0.2543 | 0.3954 |
| 0.9945 | 0.9955 | 0.9935 | 0.9936 | 0.9954 | 0.9953 | 0.9963 | 0.9940 | 0.9957 | 0.9971 | 0.9950 | 0.9957 | 0.9965 | 0.9933 | 0.9939 | 0.9929 | 0.9951 | 0.9915 | 0.9918 | 0.9947 | 0.9937 | 0.9949 | 0.9926 | 0.9923 |

| 116 | 117 | 118 | 119 | 120 |
|---|---|---|---|---|
| 24.06 | 24.11 | 24.10 | 24.08 | 24.05 |
| 27.00 | 27.04 | 27.05 | 27.02 | 26.99 |
| 32.46 | 32.51 | 32.51 | 32.48 | 32.46 |
| 38.30 | 38.32 | 38.38 | 38.33 | 38.30 |
| 46.75 | 46.77 | 46.85 | 46.76 | 46.74 |
| 53.26 | 53.25 | 53.35 | 53.31 | 53.27 |
| | | | | |
| 0.1065 | 0.0063 | 0.1073 | 0.1049 | 0.1216 |
| 0.9943 | 0.9962 | 0.9925 | 0.9936 | 0.9940 |