ERRATUM: “SFI++ II. A NEW I-BAND TULLY–FISHER CATALOG, DERIVATION OF PECULIAR VELOCITIES 
AND DATA SET PROPERTIES” (2007, ApJS, 172, 599)

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Online-only material: machine-readable tables

We were alerted by various investigators (Luis Varga, Hume Feldman, Azalee Bostroem, and Caihong Wang) that the morphological-type correction for the peculiar velocity calculation was not properly applied in the published tables. We have investigated this, and discovered that both the corrected magnitude and peculiar velocities for galaxies with a morphological-type correction (those of type Sb and earlier) were erroneously reported in our tables. The actual calculation of morphological corrections for the construction of the template in Masters et al. (2006) was done correctly, but the processing of parameters into data tables done for this paper included an error in this correction.

This error only directly affects the peculiar velocity calculations of the galaxies of type Sb and earlier. However, it indirectly affects the peculiar velocity calculations of the later type galaxies in that the Malmquist bias correction depends on the overall magnitude distribution of the sample. With a slightly different magnitude distribution, the Malmquist bias correction will be slightly different as well. Thus, after fixing the corrected magnitudes, we redid the Malmquist bias correction, and so the later type galaxies also have slightly revised Malmquist bias corrected distances and peculiar velocities now.

We were separately alerted by Azalee Bostroem that the correction for standardizing optical rotation curve (ORC) widths to $H_i$ widths was incorrectly applied in the template cluster table. Again, the correction was applied correctly in the actual derivation of the template relation, so the peculiar velocities are unaffected by this. However, incorrect values were included in Table 4 for the galaxies with ORC widths.

We therefore present revised versions of Tables 2, 3, and 4 in the online version of the journal for which these errors have been corrected. These should replace the originally published tables. Most of the published parameters remain unchanged. The parameters that have been updated are as follows.

Table 1. No changes, as only observed magnitudes, not corrected magnitudes, are included in this table.

Table 2. For galaxies of type Sb and earlier, the following parameters have been revised: corrected apparent magnitude $m_I$, corrected absolute magnitude $M_I$, error on the absolute magnitude $\epsilon_m$, extinction coefficient $\gamma$, peculiar velocity uncorrected for Malmquist bias $v_{gal}$, the error (uncorrected for Malmquist bias) on the peculiar velocity error $\epsilon_v$, the (uncorrected for Malmquist bias) group peculiar velocity $v_{group}$, peculiar velocity error $\epsilon_v$, error on the Malmquist bias corrected peculiar velocity $\epsilon_v$, and distance $r_{gal-malm}$ have been revised.

Table 3. If a group only includes galaxies later than type Sb, then only the (corrected for Malmquist bias) group peculiar velocity $v_{group-malm}$, error on the (corrected for Malmquist bias) group peculiar velocity $\epsilon_v$, and the (corrected for Malmquist bias) group distance $r_{gal-malm}$ have been altered. If a group includes any earlier type galaxies, then the respective counterparts to these parameters that are uncorrected for Malmquist bias, $v_{group}$, $\epsilon_v$, and $r_{group}$ have been altered as well.

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Table 2

| Number | Other | R.A. (2000) | Decl. (2000) | T | log(T/yr) | $\epsilon_m$ | $m_{obs}$ | $m_I$ | $\epsilon_m$ | $\gamma$ | $\epsilon_v$ | $v_{gal}$ | $r_{gal-malm}$ | $v_{group}$ | $\epsilon_v$ | $r_{group}$ | Group Code |
|--------|-------|------------|-------------|---|----------|-------------|-----------|------|-------------|------|-------------|---------|---------------|-----------|-------------|-----------|------------|
| 331060 | 478-009b | 00 00 03.4 | +23 05 15 | 5 | 2.182 | 0.011 | 15.20 | 14.63 | $-18.44$ | 0.10 | 0.50 | 78.4 | 4113 | 160 | 951 | 3909 | 1522 | 40353 | H |
| 12898 | 00 00 37.4 | +33 36 02 | 5 | 2.270 | 0.011 | 15.23 | 14.81 | $-18.49$ | 0.09 | 0.50 | 70.6 | 4456 | 1310 | 1348 | 5848 | 1347 | 1376 | 5885 | 40612 | H |
| 12900 | 456-015 | 00 00 55.9 | +20 20 17 | 5 | 2.618 | 0.004 | 13.73 | 12.90 | $-21.16$ | 0.14 | 1.00 | 82.8 | 6452 | 2104 | 1585 | 8528 | 1376 | 1657 | 7800 | 41035 | H |
| 36544 | 349 G 17 | 00 00 57.7 | $-33.36.47$ | 5 | 2.236 | 0.097 | 12.91 | 12.79 | $-21.35$ | 0.08 | 1.00 | 39.0 | 6639 | 3720 | 1240 | 2919 | 3991 | 1689 | 2648 | 0 | H |
| 12901 | 499-035 | 00 00 58.9 | +28 54 41 | 3 | 2.611 | 0.011 | 12.84 | 12.56 | $-21.59$ | 0.06 | 1.00 | 67.1 | 6559 | 219 | 1174 | 6462 | 304 | 1448 | 6373 | 40690 | H |
| 12913 | M+001018 | 00 00 36.7 | +30 30 21 | 5 | 2.384 | 0.008 | 14.62 | 13.93 | $-19.97$ | 0.15 | 0.86 | 82.5 | 5979 | 89 | 1298 | 5890 | 125 | 1302 | 5854 | 0 | H |
| 36558 | 409 G 4 | 00 01 57.6 | $-27.59.53$ | 3 | 2.584 | 0.015 | 13.78 | 13.53 | $-21.38$ | 0.08 | 1.00 | 70.3 | 9427 | 195 | 1763 | 9232 | 470 | 1440 | 8590 | 0 | O |
| 12920 | 478-014 | 00 02 23.0 | +27 12 38 | 4 | 2.449 | 0.124 | 14.36 | 13.61 | $-20.72$ | 0.12 | 1.00 | 76.7 | 7271 | 860 | 1346 | 6411 | 851 | 1477 | 6420 | 0 | H |
| 400001 | M-101024 | 00 02 34.7 | $-03.42.37$ | 4 | 2.598 | 0.034 | 12.90 | 12.67 | $-21.29$ | 0.06 | 1.00 | 86.6 | 6110 | $-988$ | 1545 | 7098 | $-357$ | 1339 | 6467 | 0 | H |
| 100002 | 408-013 | 00 02 39.8 | +08 44 13 | 3 | 2.474 | 0.021 | 13.61 | 13.06 | $-20.53$ | 0.11 | 1.00 | 79.7 | 5178 | $-96$ | 1138 | 5274 | $-140$ | 1072 | 5318 | 0 | H |

(This table is available in its entirety in a machine-readable form in the online journal. A portion is shown here for guidance regarding its form and content.)
Table 3
Parameters of Nontemplate Groups

| Number | R.A. (2000) | Decl. (2000) | $cz_{\text{group}}$ | $\epsilon_{cz}$ | $N_{\text{fiducial}}$ | $N_{\text{GC}}$ | $V_{\text{group}}$ | $V_{\text{group}}$ | $V_{\text{group-main}}$ | $V_{\text{group-main}}$ |
|--------|-------------|--------------|---------------------|----------------|----------------------|-----------------|-----------------|-----------------|----------------------|----------------------|
| 40220  | 00 00 25.8  | +31 28 32    | 4551                | 1              | 2                    | 6               | 149             | 676             | 4402                 | −464                 |
| 41035  | 00 00 47.2  | +20 11 54    | 6424                | 2              | 1                    | 2               | −2104           | 1585            | 8528                 | −1376                |
| 40612  | 00 02 09.9  | +33 53 43    | 4538                | 2              | 1                    | 3               | −1310           | 1348            | 5848                 | −1347                |
| 40353  | 00 02 12.0  | +22 57 04    | 4069                | 1              | 2                    | 5               | 187             | 697             | 3882                 | −614                 |
| 40454  | 00 04 31.5  | +05 25 30    | 4962                | 3              | 1                    | 4               | −2141           | 1357            | 7103                 | −1544                |
| 40948  | 00 04 43.0  | +05 46 05    | 2737                | 2              | 1                    | 3               | −471            | 710             | 3208                 | −707                 |
| 40564  | 00 05 25.3  | +07 39 46    | 4840                | 1              | 1                    | 4               | −794            | 1214            | 5634                 | −752                 |
| 40808  | 00 05 31.6  | +27 29 33    | 7262                | 2              | 2                    | 3               | 976             | 821             | 6286                 | 1068                 |
| 41014  | 00 05 38.9  | +07 41 49    | 5905                | 1              | 2                    | 4               | −399            | 822             | 6504                 | 173                  |
| 40309  | 00 08 04.1  | +32 49 51    | 4804                | 3              | 1                    | 3               | −631            | 937             | 5435                 | −565                 |

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Table 4
Parameters of Template Galaxies

| Number | Other R.A. | Decl. (2000) | $T$ | $\log(W_{\text{TF}})$ | $\epsilon_{w}$ | $m_{\text{obs}}$ | $m_{I}$ | $M_{I}$ | $\epsilon_{M}$ | $\gamma$ | $i$ | $cz_{\text{gal}}$ | $\theta$ | Cluster Codes |
|--------|------------|--------------|-----|----------------------|----------------|-----------------|--------|--------|---------------|---------|-----|-----------------|---------|---------------|
| 20391  | N 159      | 00 34 36.3   | −55 47 22 | 1                    | 2.707          | 0.034           | 12.69  | 12.10  | −22.60        | 0.07    | 1.28 | 76.6           | 8204    | 51.8          |
| 400698 |            |              |       |                      |                |                 |        |        |               |         |      |                 |         |               |
| 400703 |            |              |       |                      |                |                 |        |        |               |         |      |                 |         |               |
| 400704 |            |              |       |                      |                |                 |        |        |               |         |      |                 |         |               |
| 400706 |            |              |       |                      |                |                 |        |        |               |         |      |                 |         |               |
| 400713 |            |              |       |                      |                |                 |        |        |               |         |      |                 |         |               |
| 20487  | 150 G 20   | 00 43 20.9   | −55 19 39 | 5                    | 2.638          | 0.013           | 12.63  | 12.31  | −22.19        | 0.06    | 1.14 | 70.7           | 7786    | 56.6          |
| 400727 |            |              |       |                      |                |                 |        |        |               |         |      |                 |         |               |
| 20512  | 150 G 22   | 00 46 09.0   | −55 34 07 | 1                    | 2.629          | 0.027           | 13.01  | 12.43  | −22.08        | 0.07    | 1.10 | 73.6           | 7513    | 61.5          |
| 20587  | 150 G 24   | 00 50 46.9   | −55 36 28 | 3                    | 2.640          | 0.012           | 13.37  | 12.96  | −21.68        | 0.07    | 1.00 | 76.8           | 7773    | 95.1          |

(This table is available in its entirety in a machine-readable form in the online journal. A portion is shown here for guidance regarding its form and content.)

Table 4. For galaxies of type Sb and earlier, $m_{I}$, $M_{I}$, $\epsilon_{M}$, and $\gamma$ have been updated. For galaxies with ORC widths, the logarithm of the corrected rotational velocity width, $\log(W_{\text{TF}})$, has been updated.

For the vast majority of galaxies, even those of earlier type, the distances/peculiar velocities have changed by much less than $1\sigma$. For the total sample of 4054 nontemplate galaxies, the mean fractional change in Malmquist bias corrected TF distance is $\sim 2\%$, with a very slight tendency toward the new distances being smaller (peculiar velocities being more positive) than the previously reported values. For the 1610 earlier type galaxies, the average change in distance is $\sim 4\%$. The shifts are small enough that the change should only minimally affect most analyses using the totality of the data, though the change may be more significant for certain specific objects.

We regret the error.

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