

AM-93-538

Fangite, Tl_3AsS_4 , a new thallium arsenic sulfosalt from the Mercur Au deposit,
Utah, and revised optical data for gillulyite

James R. Wilson, Pradip K. Sen Gupta, Paul D. Robinson, Alan J. Criddle

For deposit: Table 6

American Mineralogist, 78, 9-10, 1098-1105.



TABLE 6. Observed and calculated structure factors for fangite

| 10 F _o vs 10 F _c | | | | | | | | | | | | | | |
|--|----|----------------|----------------|--------|----------------------|----|----------------|----------------|------|---|----|----------------|----------------|------|
| k | l | F _o | F _c | sigF | k | l | F _o | F _c | sigF | k | l | F _o | F _c | sigF |
| ^^^^^^ | | h = | 0 | ^^^^^^ | 7 | 9 | 1795 | 1727 | 80 | 1 | 3 | 2579 | 2599 | 43 |
| | | | | | 7 | 11 | 708 | 821 | 0 | 1 | 4 | 504 | 631 | 47 |
| 0 | 2 | 2039 | 1956 | 37 | 8 | 0 | 782 | 595 | 82 | 1 | 5 | 1363 | 1340 | 43 |
| 0 | 4 | 363 | 403 | 72* | 8 | 2 | 2387 | 2499 | 61 | 1 | 6 | 259 | 176 | 0* |
| 0 | 6 | 649 | 637 | 55 | 8 | 4 | 678 | 704 | 90 | 1 | 7 | 637 | 581 | 61 |
| 0 | 8 | 1245 | 1232 | 53 | 8 | 6 | 1329 | 1330 | 67 | 1 | 8 | 383 | 583 | 0* |
| 0 | 10 | 1973 | 1971 | 69 | 8 | 8 | 1688 | 1679 | 85 | 1 | 9 | 887 | 875 | 59 |
| 0 | 12 | 990 | 965 | 79 | 8 | 10 | 713 | 629 | 0 | 1 | 10 | 329 | 424 | 0* |
| 1 | 1 | 38 | 244 | 0* | 9 | 1 | 585 | 715 | 0* | 1 | 11 | 328 | 182 | 0* |
| 1 | 3 | 3719 | 3714 | 58 | 9 | 3 | 988 | 1079 | 64 | 1 | 12 | 869 | 868 | 79 |
| 1 | 5 | 716 | 775 | 40 | 9 | 5 | 797 | 852 | 85 | 2 | 1 | 2151 | 2050 | 38 |
| 1 | 7 | 2315 | 2269 | 51 | 9 | 7 | 1325 | 1334 | 63 | 2 | 2 | 3040 | 3109 | 49 |
| 1 | 9 | 314 | 162 | 0* | 9 | 9 | 394 | 260 | 0* | 2 | 3 | 4344 | 4425 | 67 |
| 1 | 11 | 447 | 37 | 0* | 10 | 0 | 4246 | 3824 | 74 | 2 | 4 | 273 | 171 | 82* |
| 2 | 0 | 0 | 181 | 0* | 10 | 2 | 1702 | 1591 | 69 | 2 | 5 | 1599 | 1536 | 40 |
| 2 | 2 | 4483 | 4405 | 69 | 10 | 4 | 327 | 290 | 0* | 2 | 6 | 598 | 592 | 54 |
| 2 | 4 | 1932 | 1927 | 38 | 10 | 6 | 356 | 531 | 0* | 2 | 7 | 1183 | 1258 | 62 |
| 2 | 6 | 2261 | 2260 | 46 | 10 | 8 | 836 | 827 | 0 | 2 | 8 | 339 | 108 | 0* |
| 2 | 8 | 2720 | 2772 | 55 | 11 | 1 | 514 | 380 | 0* | 2 | 9 | 1094 | 1081 | 48 |
| 2 | 10 | 308 | 695 | 0* | 11 | 3 | 751 | 726 | 84 | 2 | 10 | 352 | 510 | 0* |
| 2 | 12 | 136 | 329 | 0* | 11 | 5 | 362 | 181 | 0* | 2 | 11 | 695 | 666 | 85 |
| 3 | 1 | 4854 | 4997 | 77 | 11 | 7 | 707 | 781 | 0 | 2 | 12 | 919 | 1063 | 72 |
| 3 | 3 | 139 | 140 | 0* | 12 | 0 | 290 | 373 | 0* | 3 | 1 | 700 | 516 | 49 |
| 3 | 5 | 2012 | 2065 | 42 | 12 | 2 | 1859 | 1874 | 68 | 3 | 2 | 1141 | 1122 | 45 |
| 3 | 7 | 463 | 454 | 81* | 12 | 4 | 0 | 134 | 0* | 3 | 3 | 0 | 57 | 0* |
| 3 | 9 | 2562 | 2594 | 57 | 12 | 6 | 659 | 547 | 0* | 3 | 4 | 3073 | 3115 | 51 |
| 3 | 11 | 950 | 933 | 66 | 13 | 1 | 1276 | 1322 | 56 | 3 | 5 | 2390 | 2394 | 45 |
| 4 | 0 | 5154 | 5269 | 84 | 13 | 3 | 0 | 224 | 0* | 3 | 6 | 3298 | 3345 | 56 |
| 4 | 2 | 473 | 419 | 85* | 13 | 5 | 0 | 333 | 0* | 3 | 7 | 0 | 209 | 0* |
| 4 | 4 | 648 | 613 | 53 | 14 | 0 | 930 | 1118 | 53 | 3 | 8 | 370 | 94 | 0* |
| 4 | 6 | 519 | 489 | 72 | 14 | 2 | 321 | 187 | 0* | 3 | 9 | 650 | 616 | 73 |
| 4 | 8 | 326 | 307 | 0* | 14 | 4 | 339 | 231 | 0* | 3 | 10 | 673 | 692 | 81 |
| 4 | 10 | 946 | 989 | 62 | 15 | 1 | 997 | 1170 | 45 | 3 | 11 | 640 | 312 | 93 |
| 4 | 12 | 0 | 347 | 0* | ^^^^^^ h = 1 ^^^^^^^ | | | | | 3 | 12 | 0 | 90 | 0* |
| 5 | 1 | 3294 | 3349 | 60 | 4 | 1 | 0 | 98 | 0* | 4 | 1 | 0 | 98 | 0* |
| 5 | 3 | 4061 | 3969 | 67 | 4 | 2 | 1499 | 1428 | 46 | 4 | 2 | 1499 | 1428 | 46 |
| 5 | 5 | 347 | 352 | 0* | 0 | 1 | 176 | 235 | 0* | 4 | 3 | 0 | 80 | 0* |
| 5 | 7 | 3063 | 2998 | 59 | 0 | 2 | 580 | 414 | 36 | 4 | 4 | 1750 | 1738 | 43 |
| 5 | 9 | 1081 | 1074 | 54 | 0 | 3 | 3072 | 3131 | 50 | 4 | 5 | 2143 | 2131 | 46 |
| 5 | 11 | 780 | 726 | 83 | 0 | 4 | 2460 | 2476 | 44 | 4 | 6 | 596 | 492 | 61 |
| 6 | 0 | 5284 | 4937 | 86 | 0 | 5 | 4727 | 4758 | 74 | 4 | 7 | 809 | 770 | 51 |
| 6 | 2 | 689 | 677 | 72 | 0 | 6 | 2008 | 2053 | 47 | 4 | 8 | 206 | 468 | 0* |
| 6 | 4 | 221 | 136 | 0* | 0 | 7 | 2052 | 2044 | 51 | 4 | 9 | 744 | 744 | 68 |
| 6 | 6 | 0 | 92 | 0* | 0 | 8 | 319 | 232 | 0* | 4 | 10 | 588 | 594 | 93 |
| 6 | 8 | 0 | 85 | 0* | 0 | 9 | 830 | 772 | 64 | 4 | 11 | 73 | 30 | 0* |
| 6 | 10 | 329 | 552 | 0* | 0 | 10 | 443 | 595 | 0* | 4 | 12 | 748 | 646 | 85 |
| 7 | 1 | 3561 | 3523 | 64 | 0 | 11 | 545 | 653 | 0* | 5 | 1 | 270 | 474 | 0* |
| 7 | 3 | 209 | 97 | 0* | 0 | 12 | 708 | 448 | 0 | 5 | 2 | 3704 | 3644 | 62 |
| 7 | 5 | 696 | 742 | 86 | 1 | 1 | 220 | 190 | 56* | 5 | 3 | 2880 | 2782 | 53 |
| 7 | 7 | 663 | 360 | 92 | 1 | 2 | 2711 | 2756 | 44 | 5 | 4 | 2974 | 2889 | 54 |

10|F|o vs 10|F|c for fangite

| k | l | Fo | Fc | sigF | k | l | Fo | Fc | sigF | k | l | Fo | Fc | sigF |
|---|----|------|------|------|--------|-----|------|--------|------|---|----|------|------|------|
| 5 | 5 | 0 | 137 | 0* | 10 | 1 | 824 | 805 | 76 | 0 | 10 | 1163 | 1269 | 56 |
| 5 | 6 | 1608 | 1567 | 56 | 10 | 2 | 0 | 62 | 0* | 0 | 11 | 1310 | 1204 | 65 |
| 5 | 7 | 865 | 954 | 54 | 10 | 3 | 1350 | 1368 | 62 | 0 | 12 | 427 | 292 | 0* |
| 5 | 8 | 993 | 978 | 52 | 10 | 4 | 1551 | 1403 | 79 | 1 | 0 | 1805 | 1826 | 33 |
| 5 | 9 | 788 | 666 | 67 | 10 | 5 | 2043 | 2137 | 73 | 1 | 1 | 335 | 229 | 52 |
| 5 | 10 | 0 | 95 | 0* | 10 | 6 | 0 | 449 | 0* | 1 | 2 | 956 | 1019 | 39 |
| 5 | 11 | 341 | 292 | 0* | 10 | 7 | 1074 | 1049 | 75 | 1 | 3 | 1147 | 1178 | 38 |
| 5 | 12 | 1064 | 1173 | 67 | 10 | 8 | 471 | 516 | 0* | 1 | 4 | 1846 | 1852 | 39 |
| 6 | 1 | 320 | 459 | 0* | 10 | 9 | 471 | 276 | 0* | 1 | 5 | 995 | 1012 | 38 |
| 6 | 2 | 513 | 696 | 88* | 11 | 1 | 191 | 164 | 0* | 1 | 6 | 1296 | 1289 | 52 |
| 6 | 3 | 0 | 358 | 0* | 11 | 2 | 443 | 630 | 0* | 1 | 7 | 0 | 264 | 0* |
| 6 | 4 | 854 | 902 | 55 | 11 | 3 | 749 | 816 | 87 | 1 | 8 | 1521 | 1530 | 59 |
| 6 | 5 | 1464 | 1414 | 64 | 11 | 4 | 445 | 388 | 0* | 1 | 9 | 858 | 797 | 58 |
| 6 | 6 | 790 | 782 | 62 | 11 | 5 | 136 | 312 | 0* | 1 | 10 | 475 | 374 | 0* |
| 6 | 7 | 250 | 491 | 0* | 11 | 6 | 0 | 68 | 0* | 1 | 11 | 166 | 26 | 0* |
| 6 | 8 | 562 | 47 | 95* | 11 | 7 | 319 | 280 | 0* | 1 | 12 | 297 | 46 | 0* |
| 6 | 9 | 697 | 642 | 84 | 11 | 8 | 460 | 44 | 0* | 2 | 0 | 3565 | 3585 | 56 |
| 6 | 10 | 627 | 369 | 99 | 12 | 1 | 741 | 666 | 83 | 2 | 1 | 1504 | 1468 | 34 |
| 6 | 11 | 386 | 213 | 0* | 12 | 2 | 618 | 584 | 0 | 2 | 2 | 2222 | 2185 | 39 |
| 7 | 1 | 723 | 656 | 74 | 12 | 3 | 1352 | 1255 | 65 | 2 | 3 | 3571 | 3590 | 56 |
| 7 | 2 | 844 | 818 | 63 | 12 | 4 | 8 | 317 | 0* | 2 | 4 | 1631 | 1597 | 38 |
| 7 | 3 | 580 | 386 | 88 | 12 | 5 | 1042 | 1041 | 72 | 2 | 5 | 214 | 481 | 0* |
| 7 | 4 | 2574 | 2577 | 59 | 12 | 6 | 326 | 267 | 0* | 2 | 6 | 1274 | 1317 | 51 |
| 7 | 5 | 1806 | 1825 | 64 | 12 | 7 | 777 | 614 | 0 | 2 | 7 | 2382 | 2364 | 50 |
| 7 | 6 | 2191 | 2116 | 60 | 13 | 1 | 594 | 486 | 97 | 2 | 8 | 730 | 799 | 60 |
| 7 | 7 | 324 | 199 | 0* | 13 | 2 | 617 | 569 | 98 | 2 | 9 | 933 | 788 | 52 |
| 7 | 8 | 608 | 501 | 0 | 13 | 3 | 48 | 93 | 0* | 2 | 10 | 840 | 761 | 63 |
| 7 | 9 | 0 | 464 | 0* | 13 | 4 | 1102 | 1110 | 65 | 2 | 11 | 414 | 40 | 0* |
| 7 | 10 | 617 | 545 | 0* | 13 | 5 | 712 | 701 | 99 | 2 | 12 | 82 | 409 | 0* |
| 7 | 11 | 263 | 91 | 0* | 13 | 6 | 450 | 782 | 0* | 3 | 0 | 6873 | 6683 | 0 |
| 8 | 1 | 1095 | 1008 | 56 | 14 | 1 | 0 | 178 | 0* | 3 | 1 | 3589 | 3572 | 57 |
| 8 | 2 | 1464 | 1476 | 74 | 14 | 2 | 0 | 105 | 0* | 3 | 2 | 882 | 879 | 38 |
| 8 | 3 | 2334 | 2442 | 61 | 14 | 3 | 356 | 196 | 0* | 3 | 3 | 336 | 457 | 71* |
| 8 | 4 | 446 | 95 | 0* | 14 | 4 | 0 | 382 | 0* | 3 | 4 | 533 | 510 | 48 |
| 8 | 5 | 1170 | 1196 | 55 | 14 | 5 | 0 | 498 | 0* | 3 | 5 | 887 | 824 | 43 |
| 8 | 6 | 448 | 544 | 0* | 15 | 1 | 0 | 136 | 0* | 3 | 6 | 451 | 92 | 73 |
| 8 | 7 | 801 | 801 | 84 | 15 | 2 | 658 | 704 | 79 | 3 | 7 | 1508 | 1487 | 53 |
| 8 | 8 | 0 | 150 | 0* | | | | | | 3 | 8 | 298 | 241 | 0* |
| 8 | 9 | 438 | 473 | 0* | ^^^^^^ | h = | 2 | ^^^^^^ | | 3 | 9 | 545 | 542 | 87 |
| 8 | 10 | 264 | 269 | 0* | | | | | | 3 | 10 | 1224 | 1239 | 59 |
| 9 | 1 | 69 | 347 | 0* | 0 | 0 | 3072 | 3003 | 48 | 3 | 11 | 783 | 795 | 74 |
| 9 | 2 | 913 | 889 | 67 | 0 | 1 | 4757 | 4758 | 73 | 3 | 12 | 527 | 595 | 0* |
| 9 | 3 | 659 | 762 | 92 | 0 | 2 | 3393 | 3445 | 54 | 4 | 0 | 778 | 708 | 56 |
| 9 | 4 | 708 | 772 | 87 | 0 | 3 | 0 | 42 | 0* | 4 | 1 | 2040 | 2074 | 45 |
| 9 | 5 | 404 | 265 | 0* | 0 | 4 | 732 | 738 | 37 | 4 | 2 | 957 | 954 | 41 |
| 9 | 6 | 347 | 69 | 0* | 0 | 5 | 1780 | 1829 | 43 | 4 | 3 | 1385 | 1404 | 44 |
| 9 | 7 | 47 | 393 | 0* | 0 | 6 | 255 | 483 | 0* | 4 | 4 | 741 | 730 | 42 |
| 9 | 8 | 651 | 497 | 0* | 0 | 7 | 631 | 502 | 64 | 4 | 5 | 679 | 620 | 49 |
| 9 | 9 | 0 | 305 | 0* | 0 | 8 | 1919 | 1881 | 54 | 4 | 6 | 216 | 197 | 0* |
| 9 | 10 | 0 | 158 | 0* | 0 | 9 | 1907 | 1936 | 62 | 4 | 7 | 657 | 673 | 62 |

10|F|o vs 10|F|c for fangite

| k | l | Fo | Fc | sigF | k | l | Fo | Fc | sigF | k | l | Fo | Fc | sigF |
|---|----|------|------|------|----|----|------|------|------|---------------------|----|------|------|------|
| 4 | 8 | 739 | 815 | 62 | 8 | 9 | 553 | 563 | 0* | 14 | 3 | 0 | 35 | 0* |
| 4 | 9 | 637 | 592 | 78 | 8 | 10 | 592 | 518 | 0* | 14 | 4 | 172 | 124 | 0* |
| 4 | 10 | 395 | 418 | 0* | 9 | 0 | 839 | 897 | 88 | 15 | 0 | 421 | 417 | 0* |
| 4 | 11 | 623 | 753 | 97 | 9 | 1 | 366 | 280 | 0* | 15 | 1 | 0 | 656 | 0* |
| 4 | 12 | 0 | 100 | 0* | 9 | 2 | 1086 | 1050 | 57 | | | | | |
| 5 | 0 | 841 | 895 | 63 | 9 | 3 | 807 | 812 | 74 | ^^^^^^ h = 3 ^^^^^^ | | | | |
| 5 | 1 | 2211 | 2262 | 49 | 9 | 4 | 0 | 348 | 0* | | | | | |
| 5 | 2 | 2462 | 2401 | 48 | 9 | 5 | 704 | 653 | 90 | 0 | 1 | 2609 | 2534 | 44 |
| 5 | 3 | 1956 | 1926 | 46 | 9 | 6 | 0 | 361 | 0* | 0 | 2 | 1033 | 1072 | 41 |
| 5 | 4 | 1600 | 1606 | 50 | 9 | 7 | 0 | 53 | 0* | 0 | 3 | 2002 | 2041 | 39 |
| 5 | 5 | 1073 | 1027 | 48 | 9 | 8 | 796 | 643 | 92 | 0 | 4 | 3526 | 3614 | 58 |
| 5 | 6 | 1649 | 1563 | 54 | 9 | 9 | 606 | 627 | 0* | 0 | 5 | 316 | 310 | 0* |
| 5 | 7 | 1006 | 1030 | 48 | 9 | 10 | 0 | 90 | 0* | 0 | 6 | 3902 | 3989 | 65 |
| 5 | 8 | 1942 | 2027 | 59 | 10 | 0 | 1404 | 1488 | 71 | 0 | 7 | 1122 | 1145 | 50 |
| 5 | 9 | 1600 | 1503 | 67 | 10 | 1 | 1608 | 1904 | 78 | 0 | 8 | 556 | 482 | 81 |
| 5 | 10 | 321 | 423 | 0* | 10 | 2 | 1312 | 1426 | 64 | 0 | 9 | 0 | 534 | 0* |
| 5 | 11 | 267 | 483 | 0* | 10 | 3 | 0 | 148 | 0* | 0 | 10 | 230 | 412 | 0* |
| 6 | 0 | 443 | 96 | 0* | 10 | 4 | 0 | 175 | 0* | 0 | 11 | 0 | 142 | 0* |
| 6 | 1 | 1301 | 1352 | 48 | 10 | 5 | 320 | 348 | 0* | 0 | 12 | 0 | 641 | 0* |
| 6 | 2 | 1271 | 990 | 63 | 10 | 6 | 0 | 305 | 0* | 1 | 1 | 2804 | 2812 | 46 |
| 6 | 3 | 637 | 608 | 66 | 10 | 7 | 0 | 444 | 0* | 1 | 2 | 1576 | 1584 | 35 |
| 6 | 4 | 918 | 887 | 50 | 10 | 8 | 950 | 1062 | 89 | 1 | 3 | 1205 | 1193 | 39 |
| 6 | 5 | 1148 | 1149 | 53 | 10 | 9 | 979 | 836 | 85 | 1 | 4 | 1737 | 1864 | 40 |
| 6 | 6 | 428 | 142 | 0* | 11 | 0 | 502 | 218 | 0* | 1 | 5 | 0 | 97 | 0* |
| 6 | 7 | 803 | 878 | 64 | 11 | 1 | 265 | 109 | 0* | 1 | 6 | 610 | 570 | 56 |
| 6 | 8 | 643 | 655 | 85 | 11 | 2 | 0 | 372 | 0* | 1 | 7 | 329 | 104 | 0* |
| 6 | 9 | 767 | 792 | 78 | 11 | 3 | 548 | 362 | 0* | 1 | 8 | 294 | 206 | 0* |
| 6 | 10 | 380 | 363 | 0* | 11 | 4 | 341 | 261 | 0* | 1 | 9 | 786 | 753 | 62 |
| 6 | 11 | 359 | 423 | 0* | 11 | 5 | 581 | 489 | 0* | 1 | 10 | 288 | 350 | 0* |
| 7 | 0 | 3448 | 3374 | 67 | 11 | 6 | 410 | 417 | 0* | 1 | 11 | 257 | 397 | 0* |
| 7 | 1 | 2435 | 2425 | 57 | 11 | 7 | 426 | 86 | 0* | 1 | 12 | 667 | 428 | 93 |
| 7 | 2 | 1438 | 1449 | 68 | 11 | 8 | 327 | 480 | 0* | 2 | 1 | 0 | 59 | 0* |
| 7 | 3 | 550 | 629 | 91 | 12 | 0 | 1469 | 1525 | 66 | 2 | 2 | 3698 | 3758 | 58 |
| 7 | 4 | 518 | 433 | 96* | 12 | 1 | 862 | 931 | 78 | 2 | 3 | 0 | 107 | 0* |
| 7 | 5 | 545 | 438 | 93* | 12 | 2 | 496 | 612 | 0* | 2 | 4 | 2473 | 2582 | 45 |
| 7 | 6 | 0 | 73 | 0* | 12 | 3 | 524 | 682 | 0* | 2 | 5 | 2448 | 2478 | 46 |
| 7 | 7 | 997 | 992 | 61 | 12 | 4 | 367 | 660 | 0* | 2 | 6 | 570 | 602 | 60 |
| 7 | 8 | 212 | 232 | 0* | 12 | 5 | 234 | 331 | 0* | 2 | 7 | 296 | 181 | 0* |
| 7 | 9 | 333 | 556 | 0* | 12 | 6 | 463 | 522 | 0* | 2 | 8 | 1704 | 1779 | 56 |
| 7 | 10 | 1148 | 1061 | 65 | 12 | 7 | 773 | 872 | 0 | 2 | 9 | 391 | 528 | 0* |
| 7 | 11 | 208 | 642 | 0* | 13 | 0 | 1057 | 1155 | 65 | 2 | 10 | 304 | 175 | 0* |
| 8 | 0 | 2165 | 2112 | 71 | 13 | 1 | 918 | 985 | 72 | 2 | 11 | 0 | 174 | 0* |
| 8 | 1 | 1111 | 1142 | 57 | 13 | 2 | 545 | 698 | 0* | 2 | 12 | 637 | 638 | 96 |
| 8 | 2 | 1087 | 1147 | 56 | 13 | 3 | 478 | 258 | 0* | 3 | 1 | 1120 | 1193 | 42 |
| 8 | 3 | 1671 | 1683 | 67 | 13 | 4 | 413 | 25 | 0* | 3 | 2 | 2057 | 2140 | 40 |
| 8 | 4 | 958 | 882 | 61 | 13 | 5 | 244 | 132 | 0* | 3 | 3 | 2645 | 2613 | 46 |
| 8 | 5 | 391 | 186 | 0* | 13 | 6 | 495 | 224 | 0* | 3 | 4 | 581 | 533 | 48 |
| 8 | 6 | 927 | 871 | 67 | 14 | 0 | 427 | 200 | 0* | 3 | 5 | 3128 | 3198 | 54 |
| 8 | 7 | 1362 | 1366 | 63 | 14 | 1 | 0 | 358 | 0* | 3 | 6 | 343 | 47 | 0* |
| 8 | 8 | 572 | 555 | 0* | 14 | 2 | 386 | 395 | 0* | 3 | 7 | 1523 | 1564 | 55 |

10|F|o vs 10|F|c for fangite

| k | l | Fo | Fc | sigF | k | l | Fo | Fc | sigF | k | l | Fo | Fc | sigF |
|---|----|------|------|------|----|----|------|------|------|--------|-----|------|--------|------|
| 3 | 8 | 682 | 589 | 64 | 8 | 3 | 0 | 76 | 0* | | | | | |
| 3 | 9 | 579 | 577 | 84 | 8 | 4 | 1804 | 1786 | 64 | ^^^^^^ | h = | 4 | ^^^^^^ | |
| 3 | 10 | 0 | 106 | 0* | 8 | 5 | 1482 | 1363 | 75 | | | | | |
| 3 | 11 | 230 | 351 | 0* | 8 | 6 | 634 | 541 | 95 | 0 | 0 | 1533 | 1528 | 38 |
| 3 | 12 | 503 | 642 | 0* | 8 | 7 | 0 | 73 | 0* | 0 | 1 | 5065 | 5044 | 78 |
| 4 | 1 | 573 | 560 | 51 | 8 | 8 | 1096 | 1018 | 65 | 0 | 2 | 0 | 179 | 0* |
| 4 | 2 | 583 | 627 | 49 | 8 | 9 | 517 | 249 | 0* | 0 | 3 | 1416 | 1443 | 40 |
| 4 | 3 | 1584 | 1577 | 43 | 8 | 10 | 464 | 273 | 0* | 0 | 4 | 1907 | 1920 | 43 |
| 4 | 4 | 1095 | 1136 | 56 | 9 | 1 | 1153 | 1249 | 59 | 0 | 5 | 0 | 416 | 0* |
| 4 | 5 | 697 | 743 | 51 | 9 | 2 | 438 | 224 | 0* | 0 | 6 | 822 | 767 | 48 |
| 4 | 6 | 1844 | 1861 | 50 | 9 | 3 | 372 | 389 | 0* | 0 | 7 | 1952 | 1850 | 52 |
| 4 | 7 | 646 | 614 | 64 | 9 | 4 | 608 | 596 | 0 | 0 | 8 | 621 | 812 | 80 |
| 4 | 8 | 698 | 696 | 67 | 9 | 5 | 378 | 395 | 0* | 0 | 9 | 1084 | 1112 | 53 |
| 4 | 9 | 730 | 584 | 70 | 9 | 6 | 738 | 607 | 90 | 0 | 10 | 446 | 574 | 0* |
| 4 | 10 | 375 | 126 | 0* | 9 | 7 | 391 | 182 | 0* | 0 | 11 | 1206 | 1260 | 58 |
| 4 | 11 | 210 | 122 | 0* | 9 | 8 | 0 | 13 | 0* | 0 | 12 | 95 | 224 | 0* |
| 5 | 1 | 2909 | 2931 | 52 | 9 | 9 | 0 | 366 | 0* | 1 | 1 | 1471 | 1490 | 38 |
| 5 | 2 | 216 | 374 | 0* | 10 | 1 | 252 | 253 | 0* | 1 | 2 | 1004 | 1029 | 44 |
| 5 | 3 | 2763 | 2746 | 51 | 10 | 2 | 861 | 886 | 75 | 1 | 3 | 1826 | 1775 | 39 |
| 5 | 4 | 2254 | 2292 | 49 | 10 | 3 | 1015 | 1246 | 67 | 1 | 4 | 1162 | 1178 | 46 |
| 5 | 5 | 1952 | 1921 | 51 | 10 | 4 | 1734 | 1724 | 77 | 1 | 5 | 336 | 117 | 91* |
| 5 | 6 | 1059 | 1068 | 45 | 10 | 5 | 419 | 235 | 0* | 1 | 6 | 576 | 594 | 64 |
| 5 | 7 | 1099 | 1060 | 46 | 10 | 6 | 1666 | 1723 | 86 | 1 | 7 | 831 | 757 | 50 |
| 5 | 8 | 521 | 424 | 94* | 10 | 7 | 0 | 588 | 0* | 1 | 8 | 286 | 440 | 0* |
| 5 | 9 | 384 | 625 | 0* | 10 | 8 | 0 | 25 | 0* | 1 | 9 | 318 | 446 | 0* |
| 5 | 10 | 426 | 362 | 0* | 10 | 9 | 442 | 255 | 0* | 1 | 10 | 0 | 160 | 0* |
| 5 | 11 | 457 | 681 | 0* | 11 | 1 | 696 | 836 | 96 | 1 | 11 | 969 | 959 | 64 |
| 6 | 1 | 1109 | 1177 | 53 | 11 | 2 | 452 | 308 | 0* | 1 | 12 | 0 | 109 | 0* |
| 6 | 2 | 291 | 295 | 0* | 11 | 3 | 0 | 276 | 0* | 2 | 0 | 1019 | 959 | 44 |
| 6 | 3 | 679 | 614 | 62 | 11 | 4 | 480 | 557 | 0* | 2 | 1 | 2586 | 2583 | 45 |
| 6 | 4 | 831 | 759 | 54 | 11 | 5 | 0 | 274 | 0* | 2 | 2 | 607 | 669 | 40 |
| 6 | 5 | 460 | 402 | 98* | 11 | 6 | 21 | 59 | 0* | 2 | 3 | 1780 | 1802 | 40 |
| 6 | 6 | 1550 | 1535 | 62 | 11 | 7 | 0 | 16 | 0* | 2 | 4 | 2161 | 2109 | 43 |
| 6 | 7 | 381 | 450 | 0* | 11 | 8 | 0 | 133 | 0* | 2 | 5 | 672 | 672 | 49 |
| 6 | 8 | 716 | 780 | 78 | 12 | 1 | 19 | 133 | 0* | 2 | 6 | 835 | 792 | 46 |
| 6 | 9 | 0 | 259 | 0* | 12 | 2 | 979 | 960 | 70 | 2 | 7 | 1413 | 1566 | 58 |
| 6 | 10 | 530 | 134 | 0* | 12 | 3 | 396 | 416 | 0* | 2 | 8 | 702 | 716 | 65 |
| 6 | 11 | 0 | 63 | 0* | 12 | 4 | 1179 | 1211 | 65 | 2 | 9 | 1616 | 1626 | 62 |
| 7 | 1 | 0 | 426 | 0* | 12 | 5 | 641 | 664 | 0* | 2 | 10 | 671 | 739 | 80 |
| 7 | 2 | 1663 | 1709 | 61 | 12 | 6 | 311 | 502 | 0* | 2 | 11 | 0 | 485 | 0* |
| 7 | 3 | 1945 | 1901 | 57 | 12 | 7 | 0 | 127 | 0* | 3 | 0 | 2298 | 2298 | 43 |
| 7 | 4 | 0 | 106 | 0* | 13 | 1 | 96 | 21 | 0* | 3 | 1 | 1006 | 1063 | 49 |
| 7 | 5 | 2369 | 2295 | 57 | 13 | 2 | 358 | 600 | 0* | 3 | 2 | 2974 | 2976 | 50 |
| 7 | 6 | 853 | 690 | 64 | 13 | 3 | 983 | 984 | 72 | 3 | 3 | 1278 | 1261 | 45 |
| 7 | 7 | 1441 | 1257 | 56 | 13 | 4 | 399 | 65 | 0* | 3 | 4 | 746 | 706 | 43 |
| 7 | 8 | 0 | 101 | 0* | 13 | 5 | 906 | 889 | 83 | 3 | 5 | 95 | 526 | 0* |
| 7 | 9 | 212 | 281 | 0* | 14 | 1 | 0 | 37 | 0* | 3 | 6 | 784 | 712 | 50 |
| 7 | 10 | 0 | 112 | 0* | 14 | 2 | 627 | 155 | 0 | 3 | 7 | 1103 | 1053 | 50 |
| 8 | 1 | 320 | 146 | 0* | 14 | 3 | 453 | 382 | 0* | 3 | 8 | 1343 | 1442 | 67 |
| 8 | 2 | 1824 | 1925 | 65 | 14 | 4 | 0 | 244 | 0* | 3 | 9 | 0 | 230 | 0* |

10|F|o vs 10|F|c for fangite

| k | l | Fo | Fc | sigF | k | l | Fo | Fc | sigF | k | l | Fo | Fc | sigF |
|---|----|------|------|------|----|----|------|------|------|--------|-----|------|--------|------|
| 3 | 10 | 1369 | 1339 | 54 | 8 | 1 | 1688 | 1634 | 69 | 14 | 0 | 327 | 182 | 0* |
| 3 | 11 | 684 | 749 | 85 | 8 | 2 | 0 | 400 | 0* | 14 | 1 | 729 | 525 | 95 |
| 4 | 0 | 351 | 465 | 93* | 8 | 3 | 995 | 1044 | 59 | 14 | 2 | 0 | 131 | 0* |
| 4 | 1 | 1682 | 1737 | 43 | 8 | 4 | 930 | 1026 | 63 | 14 | 3 | 411 | 235 | 0* |
| 4 | 2 | 532 | 528 | 56 | 8 | 5 | 533 | 526 | 0* | | | | | |
| 4 | 3 | 418 | 488 | 76* | 8 | 6 | 363 | 399 | 0* | ^^^^^^ | h = | 5 | ^^^^^^ | |
| 4 | 4 | 1852 | 1886 | 47 | 8 | 7 | 1042 | 1027 | 66 | | | | | |
| 4 | 5 | 345 | 250 | 0* | 8 | 8 | 655 | 330 | 0 | 0 | 1 | 1748 | 1753 | 40 |
| 4 | 6 | 741 | 716 | 56 | 8 | 9 | 981 | 1129 | 78 | 0 | 2 | 2667 | 2667 | 47 |
| 4 | 7 | 0 | 265 | 0* | 8 | 10 | 406 | 340 | 0* | 0 | 3 | 891 | 944 | 41 |
| 4 | 8 | 737 | 715 | 66 | 9 | 0 | 1391 | 1479 | 58 | 0 | 4 | 3201 | 3222 | 55 |
| 4 | 9 | 317 | 195 | 0* | 9 | 1 | 323 | 493 | 0* | 0 | 5 | 2107 | 2118 | 48 |
| 4 | 10 | 568 | 603 | 98* | 9 | 2 | 263 | 269 | 0* | 0 | 6 | 830 | 795 | 50 |
| 4 | 11 | 468 | 525 | 0* | 9 | 3 | 0 | 359 | 0* | 0 | 7 | 624 | 732 | 72 |
| 5 | 0 | 3951 | 3917 | 65 | 9 | 4 | 947 | 873 | 68 | 0 | 8 | 1591 | 1504 | 64 |
| 5 | 1 | 1124 | 1110 | 44 | 9 | 5 | 0 | 216 | 0* | 0 | 9 | 359 | 514 | 0* |
| 5 | 2 | 2594 | 2633 | 49 | 9 | 6 | 0 | 309 | 0* | 0 | 10 | 230 | 458 | 0* |
| 5 | 3 | 1114 | 1167 | 46 | 9 | 7 | 183 | 349 | 0* | 0 | 11 | 248 | 85 | 0* |
| 5 | 4 | 1437 | 1353 | 55 | 9 | 8 | 366 | 295 | 0* | 1 | 1 | 589 | 509 | 45 |
| 5 | 5 | 85 | 89 | 0* | 9 | 9 | 0 | 100 | 0* | 1 | 2 | 1909 | 1944 | 40 |
| 5 | 6 | 1231 | 1191 | 49 | 10 | 0 | 431 | 224 | 0* | 1 | 3 | 449 | 531 | 61 |
| 5 | 7 | 315 | 501 | 0* | 10 | 1 | 2111 | 2210 | 72 | 1 | 4 | 276 | 14 | 0* |
| 5 | 8 | 1423 | 1464 | 71 | 10 | 2 | 572 | 381 | 0* | 1 | 5 | 1348 | 1268 | 52 |
| 5 | 9 | 0 | 338 | 0* | 10 | 3 | 1061 | 1002 | 64 | 1 | 6 | 822 | 891 | 50 |
| 5 | 10 | 903 | 944 | 68 | 10 | 4 | 181 | 768 | 0* | 1 | 7 | 595 | 615 | 71 |
| 5 | 11 | 721 | 781 | 87 | 10 | 5 | 0 | 59 | 0* | 1 | 8 | 1219 | 1290 | 54 |
| 6 | 0 | 1083 | 912 | 50 | 10 | 6 | 315 | 278 | 0* | 1 | 9 | 586 | 527 | 87 |
| 6 | 1 | 1429 | 1447 | 62 | 10 | 7 | 888 | 886 | 88 | 1 | 10 | 0 | 28 | 0* |
| 6 | 2 | 0 | 52 | 0* | 10 | 8 | 510 | 285 | 0* | 1 | 11 | 0 | 112 | 0* |
| 6 | 3 | 154 | 14 | 0* | 11 | 0 | 825 | 739 | 95 | 2 | 1 | 2592 | 2597 | 46 |
| 6 | 4 | 1174 | 1156 | 53 | 11 | 1 | 485 | 226 | 0* | 2 | 2 | 881 | 902 | 41 |
| 6 | 5 | 525 | 477 | 88* | 11 | 2 | 0 | 299 | 0* | 2 | 3 | 751 | 733 | 40 |
| 6 | 6 | 381 | 441 | 0* | 11 | 3 | 232 | 361 | 0* | 2 | 4 | 2333 | 2447 | 47 |
| 6 | 7 | 598 | 611 | 89 | 11 | 4 | 281 | 333 | 0* | 2 | 5 | 259 | 314 | 0* |
| 6 | 8 | 0 | 462 | 0* | 11 | 5 | 0 | 18 | 0* | 2 | 6 | 2211 | 2341 | 51 |
| 6 | 9 | 264 | 92 | 0* | 11 | 6 | 0 | 282 | 0* | 2 | 7 | 0 | 165 | 0* |
| 6 | 10 | 322 | 408 | 0* | 11 | 7 | 651 | 114 | 0* | 2 | 8 | 153 | 142 | 0* |
| 6 | 11 | 625 | 448 | 0 | 12 | 0 | 0 | 195 | 0* | 2 | 9 | 0 | 492 | 0* |
| 7 | 0 | 2194 | 2203 | 63 | 12 | 1 | 1060 | 1058 | 71 | 2 | 10 | 0 | 274 | 0* |
| 7 | 1 | 717 | 637 | 74 | 12 | 2 | 584 | 132 | 0* | 2 | 11 | 0 | 397 | 0* |
| 7 | 2 | 1903 | 1853 | 57 | 12 | 3 | 680 | 836 | 0 | 3 | 1 | 2525 | 2509 | 46 |
| 7 | 3 | 963 | 1029 | 55 | 12 | 4 | 0 | 310 | 0* | 3 | 2 | 933 | 948 | 43 |
| 7 | 4 | 0 | 144 | 0* | 12 | 5 | 348 | 425 | 0* | 3 | 3 | 1734 | 1725 | 44 |
| 7 | 5 | 348 | 72 | 0* | 12 | 6 | 0 | 95 | 0* | 3 | 4 | 1163 | 1197 | 58 |
| 7 | 6 | 251 | 576 | 0* | 13 | 0 | 905 | 945 | 85 | 3 | 5 | 1892 | 1793 | 49 |
| 7 | 7 | 0 | 330 | 0* | 13 | 1 | 431 | 190 | 0* | 3 | 6 | 1449 | 1499 | 58 |
| 7 | 8 | 1214 | 1225 | 57 | 13 | 2 | 711 | 834 | 99 | 3 | 7 | 792 | 805 | 57 |
| 7 | 9 | 0 | 416 | 0* | 13 | 3 | 0 | 262 | 0* | 3 | 8 | 972 | 893 | 52 |
| 7 | 10 | 863 | 964 | 82 | 13 | 4 | 0 | 76 | 0* | 3 | 9 | 345 | 428 | 0* |
| 8 | 0 | 0 | 211 | 0* | 13 | 5 | 0 | 122 | 0* | 3 | 10 | 409 | 173 | 0* |

10|F|o vs 10|F|c for fangite

| k | l | Fo | Fc | sigF | k | l | Fo | Fc | sigF | k | l | Fo | Fc | sigF |
|---|----|------|------|------|--------|-----|------|--------|------|---|----|------|------|------|
| 3 | 11 | 0 | 326 | 0* | 8 | 9 | 258 | 187 | 0* | 1 | 1 | 447 | 364 | 70 |
| 4 | 1 | 1810 | 1815 | 46 | 9 | 1 | 696 | 596 | 96 | 1 | 2 | 689 | 700 | 46 |
| 4 | 2 | 1485 | 1315 | 48 | 9 | 2 | 602 | 700 | 0* | 1 | 3 | 344 | 164 | 90* |
| 4 | 3 | 417 | 325 | 82* | 9 | 3 | 951 | 828 | 67 | 1 | 4 | 1831 | 1885 | 46 |
| 4 | 4 | 862 | 637 | 46 | 9 | 4 | 0 | 29 | 0* | 1 | 5 | 498 | 418 | 76 |
| 4 | 5 | 1196 | 1139 | 47 | 9 | 5 | 596 | 511 | 0* | 1 | 6 | 539 | 548 | 77 |
| 4 | 6 | 0 | 68 | 0* | 9 | 6 | 0 | 270 | 0* | 1 | 7 | 1052 | 1037 | 48 |
| 4 | 7 | 0 | 329 | 0* | 9 | 7 | 542 | 477 | 0* | 1 | 8 | 315 | 50 | 0* |
| 4 | 8 | 586 | 593 | 86 | 9 | 8 | 706 | 603 | 0 | 1 | 9 | 0 | 124 | 0* |
| 4 | 9 | 518 | 369 | 0* | 10 | 1 | 537 | 574 | 0* | 1 | 10 | 624 | 812 | 97 |
| 4 | 10 | 0 | 14 | 0* | 10 | 2 | 1290 | 1329 | 58 | 1 | 11 | 0 | 82 | 0* |
| 4 | 11 | 0 | 171 | 0* | 10 | 3 | 0 | 684 | 0* | 2 | 0 | 1177 | 1091 | 57 |
| 5 | 1 | 455 | 283 | 85* | 10 | 4 | 1462 | 1402 | 65 | 2 | 1 | 3158 | 3174 | 54 |
| 5 | 2 | 1818 | 1839 | 50 | 10 | 5 | 754 | 779 | 96 | 2 | 2 | 1819 | 1827 | 45 |
| 5 | 3 | 2137 | 2112 | 50 | 10 | 6 | 1038 | 918 | 75 | 2 | 3 | 507 | 492 | 65 |
| 5 | 4 | 784 | 704 | 56 | 10 | 7 | 247 | 368 | 0* | 2 | 4 | 311 | 458 | 0* |
| 5 | 5 | 2493 | 2512 | 55 | 10 | 8 | 684 | 509 | 0* | 2 | 5 | 0 | 144 | 0* |
| 5 | 6 | 0 | 230 | 0* | 11 | 1 | 313 | 125 | 0* | 2 | 6 | 282 | 342 | 0* |
| 5 | 7 | 1224 | 1313 | 57 | 11 | 2 | 405 | 467 | 0* | 2 | 7 | 0 | 182 | 0* |
| 5 | 8 | 1225 | 1186 | 59 | 11 | 3 | 307 | 349 | 0* | 2 | 8 | 903 | 1040 | 59 |
| 5 | 9 | 0 | 296 | 0* | 11 | 4 | 0 | 219 | 0* | 2 | 9 | 0 | 378 | 0* |
| 5 | 10 | 187 | 113 | 0* | 11 | 5 | 496 | 352 | 0* | 2 | 10 | 529 | 339 | 0* |
| 6 | 1 | 1337 | 1299 | 68 | 11 | 6 | 0 | 203 | 0* | 2 | 11 | 1023 | 1107 | 63 |
| 6 | 2 | 737 | 717 | 62 | 11 | 7 | 0 | 162 | 0* | 3 | 0 | 995 | 960 | 49 |
| 6 | 3 | 0 | 344 | 0* | 12 | 1 | 342 | 611 | 0* | 3 | 1 | 1911 | 1955 | 47 |
| 6 | 4 | 1032 | 943 | 50 | 12 | 2 | 797 | 716 | 94 | 3 | 2 | 1504 | 1430 | 49 |
| 6 | 5 | 959 | 950 | 55 | 12 | 3 | 381 | 172 | 0* | 3 | 3 | 519 | 576 | 69 |
| 6 | 6 | 0 | 488 | 0* | 12 | 4 | 688 | 779 | 0 | 3 | 4 | 1973 | 1957 | 48 |
| 6 | 7 | 0 | 302 | 0* | 12 | 5 | 0 | 163 | 0* | 3 | 5 | 0 | 205 | 0* |
| 6 | 8 | 704 | 694 | 85 | 12 | 6 | 1015 | 1128 | 83 | 3 | 6 | 1321 | 1188 | 62 |
| 6 | 9 | 630 | 340 | 96 | 13 | 1 | 412 | 399 | 0* | 3 | 7 | 0 | 399 | 0* |
| 6 | 10 | 336 | 293 | 0* | 13 | 2 | 449 | 63 | 0* | 3 | 8 | 1019 | 1105 | 54 |
| 7 | 1 | 1198 | 1099 | 60 | 13 | 3 | 758 | 766 | 99 | 3 | 9 | 703 | 602 | 77 |
| 7 | 2 | 0 | 429 | 0* | 13 | 4 | 383 | 309 | 0* | 3 | 10 | 301 | 108 | 0* |
| 7 | 3 | 1793 | 1739 | 61 | | | | | | 4 | 0 | 1232 | 1184 | 47 |
| 7 | 4 | 703 | 709 | 76 | ^^^^^^ | h = | 6 | ^^^^^^ | | 4 | 1 | 550 | 496 | 72 |
| 7 | 5 | 1300 | 1343 | 60 | | | | | | 4 | 2 | 0 | 83 | 0* |
| 7 | 6 | 1131 | 1063 | 55 | 0 | 0 | 2167 | 2185 | 46 | 4 | 3 | 1655 | 1614 | 51 |
| 7 | 7 | 736 | 716 | 84 | 0 | 1 | 915 | 899 | 44 | 4 | 4 | 282 | 25 | 0* |
| 7 | 8 | 445 | 610 | 0* | 0 | 2 | 1698 | 1681 | 44 | 4 | 5 | 485 | 378 | 88* |
| 7 | 9 | 477 | 458 | 0* | 0 | 3 | 2397 | 2480 | 47 | 4 | 6 | 245 | 324 | 0* |
| 7 | 10 | 301 | 48 | 0* | 0 | 4 | 0 | 186 | 0* | 4 | 7 | 802 | 739 | 64 |
| 8 | 1 | 1413 | 1428 | 59 | 0 | 5 | 0 | 336 | 0* | 4 | 8 | 182 | 39 | 0* |
| 8 | 2 | 870 | 781 | 67 | 0 | 6 | 883 | 746 | 50 | 4 | 9 | 750 | 710 | 76 |
| 8 | 3 | 377 | 360 | 0* | 0 | 7 | 1837 | 1794 | 60 | 4 | 10 | 365 | 379 | 0* |
| 8 | 4 | 1516 | 1475 | 75 | 0 | 8 | 515 | 627 | 0* | 5 | 0 | 2476 | 2445 | 54 |
| 8 | 5 | 228 | 108 | 0* | 0 | 9 | 1243 | 1291 | 64 | 5 | 1 | 1548 | 1521 | 60 |
| 8 | 6 | 1453 | 1441 | 62 | 0 | 10 | 1162 | 1074 | 59 | 5 | 2 | 1665 | 1637 | 56 |
| 8 | 7 | 0 | 130 | 0* | 0 | 11 | 0 | 84 | 0* | 5 | 3 | 282 | 691 | 0* |
| 8 | 8 | 437 | 78 | 0* | 1 | 0 | 1251 | 1397 | 56 | 5 | 4 | 1110 | 1151 | 55 |

10|F|o vs 10|F|c for fangite

| k | l | Fo | Fc | sigF | k | l | Fo | Fc | sigF | k | l | Fo | Fc | sigF |
|----|----|------|------|------|----------------------|----|------|------|------|---|----|------|------|------|
| 5 | 5 | 341 | 192 | 0* | 10 | 5 | 359 | 414 | 0* | 2 | 9 | 216 | 254 | 0* |
| 5 | 6 | 88 | 24 | 0* | 10 | 6 | 314 | 496 | 0* | 2 | 10 | 676 | 486 | 87 |
| 5 | 7 | 1320 | 1370 | 58 | 10 | 7 | 670 | 606 | 0* | 3 | 1 | 899 | 831 | 49 |
| 5 | 8 | 768 | 703 | 75 | 11 | 0 | 0 | 218 | 0* | 3 | 2 | 1164 | 1180 | 47 |
| 5 | 9 | 590 | 647 | 0* | 11 | 1 | 0 | 258 | 0* | 3 | 3 | 1347 | 1431 | 58 |
| 5 | 10 | 1134 | 1107 | 58 | 11 | 2 | 388 | 274 | 0* | 3 | 4 | 2128 | 2182 | 51 |
| 6 | 0 | 608 | 450 | 88 | 11 | 3 | 0 | 49 | 0* | 3 | 5 | 575 | 475 | 76 |
| 6 | 1 | 559 | 429 | 88 | 11 | 4 | 490 | 566 | 0* | 3 | 6 | 0 | 195 | 0* |
| 6 | 2 | 363 | 451 | 0* | 11 | 5 | 400 | 98 | 0* | 3 | 7 | 0 | 207 | 0* |
| 6 | 3 | 1137 | 1030 | 56 | 11 | 6 | 0 | 97 | 0* | 3 | 8 | 1049 | 1084 | 56 |
| 6 | 4 | 0 | 301 | 0* | 12 | 0 | 845 | 832 | 0 | 3 | 9 | 505 | 553 | 0* |
| 6 | 5 | 0 | 238 | 0* | 12 | 1 | 880 | 1062 | 98 | 3 | 10 | 335 | 274 | 0* |
| 6 | 6 | 238 | 301 | 0* | 12 | 2 | 319 | 485 | 0* | 4 | 1 | 747 | 742 | 62 |
| 6 | 7 | 424 | 711 | 0* | 12 | 3 | 570 | 188 | 0* | 4 | 2 | 1329 | 1291 | 62 |
| 6 | 8 | 200 | 34 | 0* | 12 | 4 | 0 | 258 | 0* | 4 | 3 | 357 | 437 | 0* |
| 6 | 9 | 374 | 470 | 0* | 12 | 5 | 635 | 78 | 0* | 4 | 4 | 0 | 58 | 0* |
| 6 | 10 | 0 | 435 | 0* | 13 | 0 | 795 | 806 | 0 | 4 | 5 | 590 | 481 | 80 |
| 7 | 0 | 1425 | 1348 | 59 | 13 | 1 | 608 | 593 | 0* | 4 | 6 | 62 | 327 | 0* |
| 7 | 1 | 1292 | 1285 | 60 | 13 | 2 | 0 | 279 | 0* | 4 | 7 | 0 | 143 | 0* |
| 7 | 2 | 812 | 864 | 69 | | | | | | 4 | 8 | 384 | 604 | 0* |
| 7 | 3 | 779 | 835 | 71 | ^^^^^^ h = 7 ^^^^^^^ | | | | | 4 | 9 | 497 | 360 | 0* |
| 7 | 4 | 1461 | 1492 | 56 | | | | | | 4 | 10 | 401 | 358 | 0* |
| 7 | 5 | 70 | 476 | 0* | 0 | 1 | 2024 | 2046 | 47 | 5 | 1 | 0 | 374 | 0* |
| 7 | 6 | 956 | 875 | 67 | 0 | 2 | 2195 | 2188 | 47 | 5 | 2 | 1245 | 1114 | 52 |
| 7 | 7 | 481 | 63 | 0* | 0 | 3 | 1397 | 1414 | 53 | 5 | 3 | 515 | 361 | 91* |
| 7 | 8 | 789 | 826 | 86 | 0 | 4 | 386 | 386 | 94* | 5 | 4 | 1329 | 1398 | 52 |
| 7 | 9 | 0 | 656 | 0* | 0 | 5 | 1955 | 1956 | 52 | 5 | 5 | 1693 | 1595 | 65 |
| 8 | 0 | 751 | 855 | 94 | 0 | 6 | 0 | 234 | 0* | 5 | 6 | 1819 | 1809 | 65 |
| 8 | 1 | 1806 | 1770 | 72 | 0 | 7 | 683 | 485 | 78 | 5 | 7 | 369 | 543 | 0* |
| 8 | 2 | 1114 | 1174 | 60 | 0 | 8 | 0 | 707 | 0* | 5 | 8 | 391 | 29 | 0* |
| 8 | 3 | 374 | 91 | 0* | 0 | 9 | 393 | 331 | 0* | 5 | 9 | 0 | 327 | 0* |
| 8 | 4 | 0 | 189 | 0* | 0 | 10 | 479 | 423 | 0* | 6 | 1 | 1075 | 1092 | 55 |
| 8 | 5 | 0 | 93 | 0* | 1 | 1 | 900 | 855 | 44 | 6 | 2 | 1132 | 1064 | 51 |
| 8 | 6 | 0 | 228 | 0* | 1 | 2 | 482 | 170 | 73 | 6 | 3 | 155 | 86 | 0* |
| 8 | 7 | 139 | 316 | 0* | 1 | 3 | 189 | 320 | 0* | 6 | 4 | 0 | 225 | 0* |
| 8 | 8 | 870 | 735 | 84 | 1 | 4 | 133 | 320 | 0* | 6 | 5 | 614 | 603 | 95 |
| 9 | 0 | 488 | 720 | 0* | 1 | 5 | 1412 | 1402 | 58 | 6 | 6 | 0 | 150 | 0* |
| 9 | 1 | 287 | 189 | 0* | 1 | 6 | 1134 | 1086 | 55 | 6 | 7 | 302 | 189 | 0* |
| 9 | 2 | 259 | 442 | 0* | 1 | 7 | 395 | 283 | 0* | 6 | 8 | 0 | 290 | 0* |
| 9 | 3 | 355 | 250 | 0* | 1 | 8 | 243 | 363 | 0* | 6 | 9 | 372 | 139 | 0* |
| 9 | 4 | 667 | 619 | 0 | 1 | 9 | 249 | 494 | 0* | 7 | 1 | 791 | 731 | 80 |
| 9 | 5 | 250 | 26 | 0* | 1 | 10 | 377 | 157 | 0* | 7 | 2 | 991 | 1006 | 64 |
| 9 | 6 | 0 | 164 | 0* | 2 | 1 | 0 | 19 | 0* | 7 | 3 | 974 | 902 | 64 |
| 9 | 7 | 617 | 257 | 0* | 2 | 2 | 670 | 674 | 57 | 7 | 4 | 1582 | 1406 | 73 |
| 9 | 8 | 0 | 163 | 0* | 2 | 3 | 1582 | 1619 | 51 | 7 | 5 | 0 | 70 | 0* |
| 10 | 0 | 1287 | 1410 | 70 | 2 | 4 | 1132 | 1105 | 46 | 7 | 6 | 510 | 536 | 0* |
| 10 | 1 | 664 | 700 | 0* | 2 | 5 | 1543 | 1531 | 56 | 7 | 7 | 339 | 255 | 0* |
| 10 | 2 | 788 | 562 | 92 | 2 | 6 | 1242 | 1264 | 52 | 7 | 8 | 592 | 650 | 0* |
| 10 | 3 | 946 | 1085 | 79 | 2 | 7 | 1273 | 1249 | 54 | 8 | 1 | 0 | 39 | 0* |
| 10 | 4 | 0 | 219 | 0* | 2 | 8 | 0 | 378 | 0* | 8 | 2 | 328 | 212 | 0* |

10|F|o vs 10|F|c for fangite

| k | l | Fo | Fc | sigF | k | l | Fo | Fc | sigF | k | l | Fo | Fc | sigF |
|----|---|------|------|------|---|---|------|------|------|----------------------|---|------|------|------|
| 8 | 3 | 1211 | 1202 | 60 | 2 | 0 | 2940 | 2958 | 57 | 7 | 2 | 740 | 686 | 90 |
| 8 | 4 | 673 | 602 | 99 | 2 | 1 | 139 | 276 | 0* | 7 | 3 | 1180 | 1189 | 59 |
| 8 | 5 | 900 | 960 | 79 | 2 | 2 | 709 | 807 | 59 | 7 | 4 | 0 | 177 | 0* |
| 8 | 6 | 694 | 665 | 0 | 2 | 3 | 256 | 124 | 0* | 7 | 5 | 221 | 192 | 0* |
| 8 | 7 | 741 | 801 | 0 | 2 | 4 | 708 | 743 | 59 | 7 | 6 | 281 | 20 | 0* |
| 8 | 8 | 0 | 190 | 0* | 2 | 5 | 232 | 543 | 0* | 7 | 7 | 970 | 1038 | 77 |
| 9 | 1 | 0 | 48 | 0* | 2 | 6 | 0 | 140 | 0* | 8 | 0 | 1800 | 1788 | 65 |
| 9 | 2 | 390 | 353 | 0* | 2 | 7 | 574 | 660 | 97* | 8 | 1 | 0 | 68 | 0* |
| 9 | 3 | 0 | 126 | 0* | 2 | 8 | 683 | 615 | 86 | 8 | 2 | 779 | 558 | 93 |
| 9 | 4 | 386 | 91 | 0* | 2 | 9 | 458 | 518 | 0* | 8 | 3 | 343 | 42 | 0* |
| 9 | 5 | 581 | 752 | 0* | 3 | 0 | 711 | 695 | 69 | 8 | 4 | 0 | 322 | 0* |
| 9 | 6 | 782 | 842 | 99 | 3 | 1 | 768 | 682 | 60 | 8 | 5 | 366 | 330 | 0* |
| 9 | 7 | 0 | 232 | 0* | 3 | 2 | 0 | 336 | 0* | 8 | 6 | 0 | 231 | 0* |
| 10 | 1 | 774 | 632 | 0 | 3 | 3 | 1546 | 1638 | 59 | 8 | 7 | 0 | 404 | 0* |
| 10 | 2 | 885 | 737 | 90 | 3 | 4 | 193 | 144 | 0* | 9 | 0 | 626 | 483 | 0* |
| 10 | 3 | 1074 | 949 | 75 | 3 | 5 | 0 | 215 | 0* | 9 | 1 | 924 | 861 | 91 |
| 10 | 4 | 477 | 456 | 0* | 3 | 6 | 0 | 120 | 0* | 9 | 2 | 0 | 63 | 0* |
| 10 | 5 | 1103 | 1075 | 76 | 3 | 7 | 1474 | 1516 | 76 | 9 | 3 | 0 | 88 | 0* |
| 10 | 6 | 209 | 209 | 0* | 3 | 8 | 0 | 330 | 0* | 9 | 4 | 0 | 31 | 0* |
| 11 | 1 | 0 | 174 | 0* | 3 | 9 | 829 | 711 | 75 | 9 | 5 | 288 | 73 | 0* |
| 11 | 2 | 0 | 265 | 0* | 4 | 0 | 0 | 279 | 0* | 9 | 6 | 388 | 17 | 0* |
| 11 | 3 | 230 | 46 | 0* | 4 | 1 | 0 | 28 | 0* | 10 | 0 | 1032 | 946 | 94 |
| 11 | 4 | 483 | 89 | 0* | 4 | 2 | 910 | 944 | 56 | 10 | 1 | 259 | 86 | 0* |
| 11 | 5 | 268 | 317 | 0* | 4 | 3 | 0 | 169 | 0* | 10 | 2 | 1082 | 1109 | 84 |
| 12 | 1 | 0 | 126 | 0* | 4 | 4 | 1129 | 1087 | 56 | 10 | 3 | 0 | 25 | 0* |
| 12 | 2 | 440 | 15 | 0* | 4 | 5 | 382 | 528 | 0* | 10 | 4 | 511 | 596 | 0* |
| 12 | 3 | 961 | 926 | 90 | 4 | 6 | 0 | 535 | 0* | 10 | 5 | 511 | 322 | 0* |
| | | | | | 4 | 7 | 341 | 696 | 0* | 11 | 0 | 383 | 429 | 0* |
| | | | | | 4 | 8 | 434 | 487 | 0* | 11 | 1 | 0 | 539 | 0* |
| | | | | | 4 | 9 | 0 | 393 | 0* | 11 | 2 | 548 | 366 | 0* |
| | | | | | 5 | 0 | 1238 | 1236 | 63 | 11 | 3 | 0 | 63 | 0* |
| | | | | | 5 | 1 | 2644 | 2567 | 60 | | | | | |
| | | | | | 5 | 2 | 610 | 537 | 87 | ^^^^^^ h = 9 ^^^^^^^ | | | | |
| | | | | | 5 | 3 | 207 | 262 | 0* | | | | | |
| | | | | | 5 | 4 | 315 | 214 | 0* | 0 | 1 | 429 | 514 | 0* |
| | | | | | 5 | 5 | 0 | 199 | 0* | 0 | 2 | 642 | 631 | 69 |
| | | | | | 5 | 6 | 0 | 40 | 0* | 0 | 3 | 2383 | 2439 | 54 |
| | | | | | 5 | 7 | 0 | 211 | 0* | 0 | 4 | 578 | 595 | 80 |
| | | | | | 5 | 8 | 433 | 170 | 0* | 0 | 5 | 142 | 272 | 0* |
| | | | | | 6 | 0 | 0 | 233 | 0* | 0 | 6 | 233 | 95 | 0* |
| | | | | | 6 | 1 | 0 | 204 | 0* | 0 | 7 | 702 | 698 | 94 |
| | | | | | 6 | 2 | 777 | 771 | 78 | 0 | 8 | 453 | 434 | 0* |
| | | | | | 6 | 3 | 323 | 314 | 0* | 1 | 1 | 313 | 176 | 0* |
| | | | | | 6 | 4 | 874 | 770 | 67 | 1 | 2 | 639 | 619 | 69 |
| | | | | | 6 | 5 | 177 | 140 | 0* | 1 | 3 | 0 | 61 | 0* |
| | | | | | 6 | 6 | 305 | 464 | 0* | 1 | 4 | 844 | 803 | 55 |
| | | | | | 6 | 7 | 544 | 266 | 0* | 1 | 5 | 479 | 447 | 96* |
| | | | | | 6 | 8 | 546 | 419 | 0* | 1 | 6 | 421 | 766 | 0* |
| | | | | | 7 | 0 | 978 | 834 | 76 | 1 | 7 | 0 | 219 | 0* |
| | | | | | 7 | 1 | 784 | 695 | 87 | 1 | 8 | 0 | 50 | 0* |

10|Flo vs 10|F|c for fangite

| k | l | Fo | Fc | sigF | k | l | Fo | Fc | sigF | k | l | Fo | Fc | sigF |
|---|---|------|------|------|--------|--------|--------|------|------|--------|--------|--------|------|------|
| 2 | 1 | 0 | 210 | 0* | 9 | 2 | 122 | 220 | 0* | 5 | 3 | 0 | 65 | 0* |
| 2 | 2 | 0 | 78 | 0* | 9 | 3 | 0 | 144 | 0* | 5 | 4 | 284 | 94 | 0* |
| 2 | 3 | 0 | 319 | 0* | 9 | 4 | 439 | 640 | 0* | 5 | 5 | 374 | 287 | 0* |
| 2 | 4 | 541 | 418 | 83 | 10 | 1 | 502 | 292 | 0* | 5 | 6 | 0 | 270 | 0* |
| 2 | 5 | 1952 | 1984 | 57 | 10 | 2 | 434 | 348 | 0* | 6 | 0 | 462 | 228 | 0* |
| 2 | 6 | 373 | 361 | 0* | | | | | | 6 | 1 | 0 | 65 | 0* |
| 2 | 7 | 754 | 623 | 79 | ^^^^^^ | h = 10 | ^^^^^^ | | | 6 | 2 | 0 | 141 | 0* |
| 2 | 8 | 118 | 107 | 0* | | | | | | 6 | 3 | 398 | 360 | 0* |
| 3 | 1 | 560 | 638 | 91 | 0 | 0 | 344 | 463 | 0* | 6 | 4 | 115 | 203 | 0* |
| 3 | 2 | 1814 | 1813 | 58 | 0 | 1 | 338 | 406 | 0* | 6 | 5 | 334 | 208 | 0* |
| 3 | 3 | 0 | 255 | 0* | 0 | 2 | 823 | 839 | 61 | 7 | 0 | 306 | 90 | 0* |
| 3 | 4 | 332 | 530 | 0* | 0 | 3 | 871 | 877 | 59 | 7 | 1 | 0 | 630 | 0* |
| 3 | 5 | 340 | 182 | 0* | 0 | 4 | 486 | 501 | 0* | 7 | 2 | 806 | 805 | 97 |
| 3 | 6 | 379 | 661 | 0* | 0 | 5 | 123 | 253 | 0* | 7 | 3 | 598 | 638 | 0* |
| 3 | 7 | 325 | 37 | 0* | 0 | 6 | 722 | 745 | 85 | 7 | 4 | 400 | 277 | 0* |
| 3 | 8 | 0 | 234 | 0* | 0 | 7 | 1196 | 1191 | 62 | 8 | 0 | 1120 | 1140 | 88 |
| 4 | 1 | 376 | 365 | 0* | 1 | 0 | 1457 | 1412 | 70 | 8 | 1 | 523 | 721 | 0* |
| 4 | 2 | 514 | 403 | 0* | 1 | 1 | 375 | 476 | 0* | 8 | 2 | 0 | 287 | 0* |
| 4 | 3 | 1068 | 1091 | 53 | 1 | 2 | 457 | 337 | 0* | 8 | 3 | 649 | 185 | 0* |
| 4 | 4 | 350 | 28 | 0* | 1 | 3 | 272 | 362 | 0* | 9 | 0 | 516 | 570 | 0* |
| 4 | 5 | 411 | 392 | 0* | 1 | 4 | 260 | 332 | 0* | 9 | 1 | 507 | 357 | 0* |
| 4 | 6 | 0 | 58 | 0* | 1 | 5 | 402 | 305 | 0* | | | | | |
| 4 | 7 | 0 | 236 | 0* | 1 | 6 | 0 | 53 | 0* | ^^^^^^ | h = 11 | ^^^^^^ | | |
| 4 | 8 | 440 | 178 | 0* | 1 | 7 | 0 | 222 | 0* | | | | | |
| 5 | 1 | 184 | 57 | 0* | 2 | 0 | 1908 | 1908 | 62 | 0 | 1 | 358 | 226 | 0* |
| 5 | 2 | 0 | 218 | 0* | 2 | 1 | 1147 | 1147 | 60 | 0 | 2 | 1523 | 1494 | 70 |
| 5 | 3 | 167 | 370 | 0* | 2 | 2 | 270 | 404 | 0* | 0 | 3 | 0 | 185 | 0* |
| 5 | 4 | 1470 | 1538 | 77 | 2 | 3 | 0 | 65 | 0* | 0 | 4 | 321 | 327 | 0* |
| 5 | 5 | 0 | 605 | 0* | 2 | 4 | 0 | 92 | 0* | 0 | 5 | 705 | 777 | 88 |
| 5 | 6 | 1221 | 1242 | 56 | 2 | 5 | 575 | 536 | 90 | 0 | 6 | 432 | 447 | 0* |
| 5 | 7 | 0 | 310 | 0* | 2 | 6 | 0 | 47 | 0* | 1 | 1 | 452 | 419 | 0* |
| 6 | 1 | 0 | 127 | 0* | 2 | 7 | 357 | 463 | 0* | 1 | 2 | 355 | 445 | 0* |
| 6 | 2 | 409 | 293 | 0* | 3 | 0 | 0 | 138 | 0* | 1 | 3 | 0 | 152 | 0* |
| 6 | 3 | 1138 | 1099 | 60 | 3 | 1 | 669 | 579 | 82 | 1 | 4 | 309 | 150 | 0* |
| 6 | 4 | 270 | 263 | 0* | 3 | 2 | 989 | 977 | 57 | 1 | 5 | 893 | 859 | 66 |
| 6 | 5 | 359 | 446 | 0* | 3 | 3 | 1095 | 1075 | 51 | 1 | 6 | 420 | 306 | 0* |
| 6 | 6 | 312 | 58 | 0* | 3 | 4 | 649 | 504 | 78 | 2 | 1 | 169 | 40 | 0* |
| 6 | 7 | 294 | 122 | 0* | 3 | 5 | 368 | 79 | 0* | 2 | 2 | 139 | 194 | 0* |
| 7 | 1 | 97 | 198 | 0* | 3 | 6 | 387 | 304 | 0* | 2 | 3 | 673 | 625 | 78 |
| 7 | 2 | 1153 | 1160 | 67 | 3 | 7 | 335 | 526 | 0* | 2 | 4 | 961 | 1041 | 59 |
| 7 | 3 | 0 | 316 | 0* | 4 | 0 | 449 | 566 | 0* | 2 | 5 | 252 | 49 | 0* |
| 7 | 4 | 777 | 712 | 90 | 4 | 1 | 0 | 143 | 0* | 3 | 1 | 356 | 467 | 0* |
| 7 | 5 | 344 | 63 | 0* | 4 | 2 | 212 | 567 | 0* | 3 | 2 | 123 | 66 | 0* |
| 7 | 6 | 658 | 484 | 0 | 4 | 3 | 500 | 388 | 0* | 3 | 3 | 1292 | 1218 | 57 |
| 8 | 1 | 635 | 301 | 0* | 4 | 4 | 0 | 138 | 0* | 3 | 4 | 543 | 556 | 0* |
| 8 | 2 | 0 | 72 | 0* | 4 | 5 | 292 | 380 | 0* | 3 | 5 | 379 | 28 | 0* |
| 8 | 3 | 176 | 310 | 0* | 4 | 6 | 277 | 377 | 0* | 4 | 1 | 364 | 207 | 0* |
| 8 | 4 | 0 | 292 | 0* | 5 | 0 | 1639 | 1729 | 63 | 4 | 2 | 542 | 764 | 0* |
| 8 | 5 | 1092 | 1189 | 73 | 5 | 1 | 1000 | 1035 | 69 | 4 | 3 | 0 | 134 | 0* |
| 9 | 1 | 0 | 238 | 0* | 5 | 2 | 294 | 143 | 0* | 4 | 4 | 0 | 49 | 0* |

10|F|o vs 10|F|c for fangite

| k | l | Fo | Fc | sigF | k | l | Fo | Fc | sigF | k | l | Fo | Fc | sigF |
|---|---|-----|-----|------|---|---|----|----|------|---|---|----|----|------|
| 4 | 5 | 447 | 507 | 0* | | | | | | | | | | |
| 5 | 1 | 357 | 71 | 0* | | | | | | | | | | |
| 5 | 2 | 299 | 552 | 0* | | | | | | | | | | |
| 5 | 3 | 238 | 398 | 0* | | | | | | | | | | |
| 5 | 4 | 0 | 189 | 0* | | | | | | | | | | |
| 6 | 1 | 0 | 93 | 0* | | | | | | | | | | |
| 6 | 2 | 746 | 748 | 98 | | | | | | | | | | |
| 6 | 3 | 66 | 120 | 0* | | | | | | | | | | |
| 7 | 1 | 452 | 504 | 0* | | | | | | | | | | |

^^^^^^ h = 12 ^^^^^^^

| | | | | | | | | | | | | | | |
|---|---|-----|-----|----|--|--|--|--|--|--|--|--|--|--|
| 0 | 0 | 617 | 620 | 94 | | | | | | | | | | |
| 0 | 1 | 360 | 673 | 0* | | | | | | | | | | |
| 0 | 2 | 374 | 31 | 0* | | | | | | | | | | |
| 0 | 3 | 947 | 976 | 67 | | | | | | | | | | |
| 1 | 0 | 413 | 558 | 0* | | | | | | | | | | |
| 1 | 1 | 426 | 158 | 0* | | | | | | | | | | |
| 1 | 2 | 0 | 393 | 0* | | | | | | | | | | |
| 1 | 3 | 405 | 232 | 0* | | | | | | | | | | |
| 2 | 0 | 560 | 594 | 0* | | | | | | | | | | |
| 2 | 1 | 806 | 830 | 72 | | | | | | | | | | |
| 2 | 2 | 0 | 272 | 0* | | | | | | | | | | |
| 2 | 3 | 0 | 77 | 0* | | | | | | | | | | |
| 3 | 0 | 558 | 641 | 0* | | | | | | | | | | |
| 3 | 1 | 318 | 237 | 0* | | | | | | | | | | |
| 3 | 2 | 0 | 204 | 0* | | | | | | | | | | |
| 4 | 0 | 735 | 650 | 91 | | | | | | | | | | |
| 4 | 1 | 0 | 142 | 0* | | | | | | | | | | |

*Reflection considered unobserved [$I < 3\sigma(I)$].

Note: Calculation of σ_F for reflections with $F^2 < \sigma F^2$ done according to the method proposed by Rees, 1978 (*Acta Cryst.* **A32**, 483), i.e., $\sigma(F) = [\sigma(F^2)/2]^{1/2}$.

CK