

TETRAHEDRAL MANIFOLDS AND LINKS

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We call a cusped hyperbolic 3-manifold *tetrahedral* if it can be decomposed into regular ideal tetrahedra. Simplest examples of tetrahedral manifolds are the Gieseking manifold [1] and the figure-eight knot complement. A census of all orientable tetrahedral manifolds with at most 9 tetrahedra can be found in [2].

We provide a census of all tetrahedral manifolds with at most 25 (orientable case) and 21 (non-orientable case) tetrahedra [3]. The following statement gives a number of tetrahedral manifolds with a fixed number of tetrahedra.

Theorem. [3] *The number of tetrahedral manifolds up to 25 tetrahedra for orientable manifolds and up to 21 tetrahedra for non-orientable manifolds are listed in the following table.*

Tet.	Or. mfls	Non-or. mfls	Tet.	Or. mfls	Non-or. mfls
1	0	1	14	58	113
2	2	1	15	81	822
3	0	1	16	96	142
4	4	2	17	8	52
5	2	8	18	199	810
6	7	10	19	25	326
7	1	1	20	1684	22340
8	13	6	21	31	251
9	1	6	22	381	-
10	47	197	23	58	-
11	0	17	24	1465	-
12	47	80	25	7367	-
13	3	8	Total	11580	25194

A link is said to be *tetrahedral* if its complement is a hyperbolic tetrahedral 3-manifold. We will present tetrahedral links which appear in the census. Remark that some examples of tetrahedral links can be found in the recent preprint [4].

REFERENCES

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