Table 1: Parameters for several LIGO interferometers: the 40m in 1998 (recycling experiment), the Initial LIGO 4K interferometers, the 40m in 2002 (dual recycling for Advanced LIGO), and Advanced LIGO 4K. All lengths are *optical* path lengths. Physical path lengths are shorter due to extra path through optics. The Advanced LIGO numbers are not at all official; they're just our strawman design to complement the 40m design. All these optical parameters need to be carefully reviewed!

Parameter	40m (1998)	LIGO 4K	40m(2002)	Adv LIGO	units
Carrier λ	514.5	1064.	1064.	1064.	nm
Transmissivity T(ETM)	1.2E-5	1.5E-5	1.0E-5	1.0E-5	
Transmissivity T(ITM)	0.00565	0.02995	0.005	0.005	
Transmissivity T(RM)	0.1375	0.0244	0.07	0.07	
Mode cleaner length	1.0	12.255	13.542	16.655	m
FSR_{MC}	150.	12.23	11.07	9.00	MHz
RF freq1 $f_1 = n_1 fsr_{mc}$	32.7	24.46	33.207	9.00	MHz
Arm Cavity L_{arm}	38.25	3999.	38.55	3999.	m
PR Cavity L_{PRC}	2.294	9.191	2.257	8.328	m
PRM–BS length	0.25	4.396	0.30	4.000	m
BS–ITMinline length	2.315	4.877	2.183	4.536	m
BS–ITMperpin length	1.773	4.599	1.731	4.119	m
Schnupp Asymmetry length	0.542	0.278	0.451	0.416	m
Arm cavity pole freq	1814	91	1578	15	Hz
Arm Cavity Finesse	1080	205	1235	1235	
Rec Cavity Finesse	24	138	47	47	
Arm Cavity power gain	670	130	775	775	
Rec Cavity power gain	9	48	16.5	16.5	
mirror diameter	10.16	25.0	12.5	31.4	cm
mirror length	8.89	10.0	5.0	13.0	cm
mirror mass	1.58	10.8	1.35	40.0	kg
PRM ROC	flat	8700	348	8700	m
ITM ROC	flat	14540	flat	14540	m
ETM ROC	61	7400	57.375	7400	m
n_1	-	3	3	1	
n_2	0	1	0	0	
n_3	7.84	652.13	8.05	239.61	
n_4			0	0	
n_5			5	21	
RF freq2 $f_2 = n_4 f_1$			166.033	180.0	MHz
SR Cavity L_{SRC}			2.151	9.148	m
SRM–BS length			0.200	3.821	m
RSE peak frequency			4000	300	Hz
Signal Cavity tune			0.235	0.038	rad/(π/2)
SRM ROC			365	9000	m