

File S3

Coefficients for Calculating Stress in Glass Panes.

Stress from supporting moments

$$(\sigma_{x,ed})_{x=\pm a/2, y=0} = k_{x,ed} \cdot \frac{6 \cdot q \cdot a^2}{d^2} \quad (\sigma_{y,ed})_{x=0, y=\pm b/2} = k_{y,ed} \cdot \frac{6 \cdot q \cdot a^2}{d^2} \quad (C1)$$

Stress in the glass pane center

$$(\sigma_{x,ed})_{x=0, y=0} = k_{x,ed} \cdot \frac{6 \cdot q \cdot a^2}{d^2} \quad (\sigma_{y,ed})_{x=0, y=0} = k_{y,ed} \cdot \frac{6 \cdot q \cdot a^2}{d^2} \quad (C2)$$

Table S3-1. Coefficients for calculating stress in IGUs for $R_c \rightarrow \infty$ (simply support)

$\varepsilon =$ b/a	$\mu = 0.2$		$\mu = 0.23$	
	$k_{x, cen}$	$k_{y, cen}$	$k_{x, cen}$	$k_{y, cen}$
1.0	0.04426385	0.04421502	0.04536892	0.04532192
1.1	0.05195518	0.04485843	0.05303229	0.04620166
1.2	0.05930589	0.04485606	0.06033698	0.04642902
1.3	0.06620238	0.04438420	0.06717562	0.04617562
1.4	0.07258194	0.04358741	0.07349041	0.04558318
1.5	0.07841951	0.04257939	0.07926000	0.04476388
1.6	0.08371643	0.04144679	0.08448841	0.04380389
1.7	0.08849134	0.04025401	0.08919620	0.04276778
1.8	0.09277354	0.03904776	0.09341395	0.04170289
1.9	0.09659817	0.03786108	0.09717759	0.04064314
2.0	0.10000287	0.03671657	0.10052524	0.03961218
3.0	0.11837558	0.02891654	0.11853937	0.03243505
5.0	0.12464621	0.02530684	0.12465801	0.02904387

Table S3-2. Coefficients for calculating stress in IGUs for $R_c = 100$

$\varepsilon =$ b/a	$\mu = 0.2$		$\mu = 0.23$	
	$k_{x, cen}$	$k_{y, cen}$	$k_{x, cen}$	$k_{y, cen}$
1.0	0.04385955	0.04381072	0.04495451	0.04490752
1.1	0.05145934	0.04442309	0.05252594	0.04575355
1.2	0.05871228	0.04439260	0.05973259	0.04594991
1.3	0.06550645	0.04389536	0.06646877	0.04566809
1.4	0.07178090	0.04307590	0.07267840	0.04504983
1.5	0.07751231	0.04204789	0.07834185	0.04420735
1.6	0.08270352	0.04089797	0.08346468	0.04322684
1.7	0.08737450	0.03969045	0.08806874	0.04217284
1.8	0.09155562	0.03847193	0.09218565	0.04109259
1.9	0.09528280	0.03727528	0.09585213	0.04001990
2.0	0.09859427	0.03612294	0.09910690	0.03897824
3.0	0.11629736	0.02832055	0.11645552	0.03177784
5.0	0.12216201	0.02477834	0.12217282	0.02844104

Table S3-3. Coefficients for calculating stress in IGUs for $R_c = 10$

$\varepsilon =$ b/a	$\mu = 0.2$		$\mu = 0.23$	
	$k_{x,cen}$	$k_{y,cen}$	$k_{x,cen}$	$k_{y,cen}$
1.0	0.04077639	0.04072756	0.04179427	0.04174727
1.1	0.04770672	0.04112601	0.04869374	0.04235981
1.2	0.05425069	0.04090449	0.05518989	0.04234417
1.3	0.06030864	0.04023753	0.06118914	0.04187069
1.4	0.06583243	0.03926917	0.06664813	0.04108100
1.5	0.07081093	0.03811282	0.07155939	0.04008745
1.6	0.07525778	0.03685464	0.07593913	0.03897611
1.7	0.07920188	0.03555818	0.07981806	0.03781100
1.8	0.08268057	0.03426894	0.08323472	0.03663852
1.9	0.08573498	0.03301843	0.08623096	0.03549129
2.0	0.08840692	0.03182761	0.08884899	0.03439141
3.0	0.10165402	0.02415471	0.10177352	0.02718043
5.0	0.10504598	0.02116898	0.10505097	0.02431936

Table S3-4. Coefficients for calculating stress in IGUs for $R_c = 5$

$\varepsilon =$ b/a	$\mu = 0.2$		$\mu = 0.23$	
	$k_{x,cen}$	$k_{y,cen}$	$k_{x,cen}$	$k_{y,cen}$
1.0	0.03821216	0.03816334	0.03916594	0.03911895
1.1	0.04462415	0.03841376	0.04554568	0.03956818
1.2	0.05062633	0.03806331	0.05149939	0.03940749
1.3	0.05612842	0.03728510	0.05694277	0.03880608
1.4	0.06109195	0.03622264	0.06184208	0.03790537
1.5	0.06551480	0.03498900	0.06619874	0.03681766
1.6	0.06941829	0.03366980	0.07003661	0.03562869
1.7	0.07283748	0.03232773	0.07339248	0.03440185
1.8	0.07581430	0.03100716	0.07630943	0.03318256
1.9	0.07839306	0.02973830	0.07883243	0.03200222
2.0	0.08061757	0.02854068	0.08100561	0.03088160
3.0	0.09090530	0.02114317	0.09099787	0.02385182
5.0	0.09290616	0.01864576	0.09290818	0.02143254

Table S3-5. Coefficients for calculating stress in IGUs for $R_c = 2$

$\varepsilon =$ b/a	$k_{x,ed}$	$k_{y,ed}$	$\mu = 0.2$		$\mu = 0.23$	
			$k_{x,cen}$	$k_{y,cen}$	$k_{x,cen}$	$k_{y,cen}$
1.0	-0.00720327	-0.00720327	0.03343112	0.03338229	0.03426537	0.03421838
1.1	-0.00850604	-0.00786786	0.03896939	0.03342501	0.03977037	0.03443390
1.2	-0.00974969	-0.00840599	0.04407195	0.03289974	0.04482462	0.03407136
1.3	-0.01091219	-0.00883272	0.04866350	0.03197760	0.04935865	0.03329847
1.4	-0.01198143	-0.00916546	0.05272109	0.03080177	0.05335413	0.03225680
1.5	-0.01295275	-0.00942139	0.05625683	0.02948494	0.05682662	0.03105868
1.6	-0.01382662	-0.00961598	0.05930387	0.02811160	0.05981171	0.02978915
1.7	-0.01460689	-0.00976252	0.06190629	0.02674256	0.06235508	0.02850999
1.8	-0.01529940	-0.00987194	0.06411231	0.02541967	0.06450597	0.02726431
1.9	-0.01591104	-0.00995303	0.06597013	0.02417027	0.06631314	0.02608077
2.0	-0.01644909	-0.01001272	0.06752550	0.02301080	0.06782255	0.02497715
3.0	-0.01917650	-0.01016254	0.07368899	0.01643771	0.07374212	0.01863776
5.0	-0.01994851	-0.01016739	0.07418183	0.01482034	0.07418133	0.01704590

Table S3-6. Coefficients for calculating stress in IGUs for $R_c = 1$

$\varepsilon =$ b/a	$k_{x,ed}$	$k_{y,ed}$	$\mu = 0.2$		$\mu = 0.23$	
			$k_{x,cen}$	$k_{y,cen}$	$k_{x,cen}$	$k_{y,cen}$
1.0	-0.02263009	-0.02263009	0.02955021	0.02950139	0.03028744	0.03024045
1.1	-0.02634863	-0.02432188	0.03446881	0.02943497	0.03517323	0.03032815
1.2	-0.02979562	-0.02559896	0.03894250	0.02882229	0.03959981	0.02985911
1.3	-0.03291671	-0.02653413	0.04290554	0.02783502	0.04350722	0.02900185
1.4	-0.03569182	-0.02720071	0.04634555	0.02661761	0.04688769	0.02789955
1.5	-0.03812457	-0.02766413	0.04928442	0.02528313	0.04976649	0.02666525
1.6	-0.04023342	-0.02797853	0.05176324	0.02391526	0.05218707	0.02538339
1.7	-0.04204497	-0.02818650	0.05383178	0.02257290	0.05420073	0.02411406
1.8	-0.04358937	-0.02832027	0.05554188	0.02129532	0.05586022	0.02289791
1.9	-0.04489741	-0.02840351	0.05694355	0.02010690	0.05721599	0.02176072
2.0	-0.04599878	-0.02845314	0.05808293	0.01902103	0.05831432	0.02071724
3.0	-0.05047892	-0.02848925	0.06192749	0.01334810	0.06195757	0.01519991
5.0	-0.05100993	-0.02848474	0.06187251	0.01235191	0.06187180	0.01420822

Table S3-7. Coefficients for calculating stress in IGUs for $R_c = 0.5$

$\varepsilon =$ b/a	$k_{x,ed}$	$k_{y,ed}$	$\mu = 0.2$		$\mu = 0.23$	
			$k_{x,cen}$	$k_{y,cen}$	$k_{x,cen}$	$k_{y,cen}$
1.0	-0.03834013	-0.03834013	0.02632570	0.02627687	0.02698231	0.02693532
1.1	-0.04401897	-0.04058152	0.03079269	0.02615405	0.03141755	0.02695286
1.2	-0.04909681	-0.04211964	0.03481118	0.02549888	0.03539045	0.02642736
1.3	-0.05351045	-0.04312302	0.03832173	0.02448641	0.03884742	0.02553093
1.4	-0.05726228	-0.04374378	0.04131999	0.02326387	0.04178873	0.02440972
1.5	-0.06039520	-0.04410477	0.04383548	0.02194524	0.04424730	0.02317794
1.6	-0.06297291	-0.04429782	0.04591540	0.02061330	0.04627260	0.02191932
1.7	-0.06506659	-0.04438775	0.04761374	0.01932475	0.04792005	0.02069190
1.8	-0.06674694	-0.04441808	0.04898473	0.01811594	0.04924470	0.01953349
1.9	-0.06807983	-0.04441673	0.05007932	0.01700804	0.05029783	0.01846672
2.0	-0.06912431	-0.04440075	0.05094344	0.01601123	0.05112540	0.01750314
3.0	-0.07196308	-0.04429483	0.05340726	0.01120812	0.05342372	0.01280705
5.0	-0.07181037	-0.04426692	0.05317762	0.01063090	0.05317748	0.01222626

Table S3-8. Coefficients for calculating stress in IGUs for $R_c = 0.1$

$\varepsilon =$ b/a	$k_{x,ed}$	$k_{y,ed}$	$\mu = 0.2$		$\mu = 0.23$	
			$k_{x,cen}$	$k_{y,cen}$	$k_{x,cen}$	$k_{y,cen}$
1.0	-0.04777463	-0.04777463	0.02246681	0.02241798	0.02302695	0.02297996
1.1	-0.05430740	-0.05019925	0.02647571	0.02225854	0.02700581	0.02294679
1.2	-0.05997660	-0.05175351	0.03003167	0.02158074	0.03051837	0.02238435
1.3	-0.06473860	-0.05268215	0.03308143	0.02056882	0.03351744	0.02147406
1.4	-0.06863643	-0.05319249	0.03563042	0.01937536	0.03601321	0.02036771
1.5	-0.07175982	-0.05344108	0.03771786	0.01811517	0.03804822	0.01918064
1.6	-0.07421664	-0.05353688	0.03939852	0.01686847	0.03967942	0.01799425
1.7	-0.07611570	-0.05355078	0.04073134	0.01568740	0.04096700	0.01686221
1.8	-0.07755764	-0.05352614	0.04177312	0.01460293	0.04196837	0.01581707
1.9	-0.07863117	-0.05348772	0.04257540	0.01363080	0.04273526	0.01487609
2.0	-0.07941213	-0.05344849	0.04318335	0.01277619	0.04331271	0.01404582
3.0	-0.08062995	-0.05332545	0.04453610	0.00911289	0.04454253	0.01044769
5.0	-0.08044773	-0.05325221	0.04429256	0.00889277	0.04429363	0.01022133

Table S3-9. Coefficients for calculating stress in IGUs for $R_c = 0$ (clamped fixity)

$\varepsilon =$ b/a	$k_{x,ed}$	$k_{y,ed}$	$\mu = 0.2$		$\mu = 0.23$	
			$k_{x,cen}$	$k_{y,cen}$	$k_{x,cen}$	$k_{y,cen}$
1.0	-0.05112198	-0.05112198	0.02120417	0.02115534	0.02173275	0.02168575
1.1	-0.05785047	-0.05361700	0.02508502	0.02099016	0.02558418	0.02164287
1.2	-0.06361582	-0.05517823	0.02851077	0.02031197	0.02896733	0.02107598
1.3	-0.06838983	-0.05608107	0.03142986	0.01930919	0.03183684	0.02017069
1.4	-0.07223673	-0.05655382	0.03385121	0.01813618	0.03420639	0.01908068
1.5	-0.07526713	-0.05676500	0.03581747	0.01690745	0.03612197	0.01792107
1.6	-0.07760652	-0.05682893	0.03738608	0.01570152	0.03764309	0.01677170
1.7	-0.07937722	-0.05681794	0.03861764	0.01456824	0.03883154	0.01568399
1.8	-0.08068964	-0.05677480	0.03956970	0.01353619	0.03974540	0.01468815
1.9	-0.08163910	-0.05672291	0.04029392	0.01261886	0.04043642	0.01379918
2.0	-0.08230558	-0.05667378	0.04083506	0.01181948	0.04094920	0.01302171
3.0	-0.08301133	-0.05650192	0.04194068	0.00853475	0.04194526	0.00979205
5.0	-0.08292742	-0.05637414	0.04171856	0.00839235	0.04172008	0.00964360