

**SWIM Project Codes to be ported to the SGI and responsible person**

<b>Component</b>	<b>Responsible person</b>	<b>Implementing code</b>	<b>Responsible person</b>
<b>1) Plasma state</b>	McCune	XPLASMA	McCune
<b>2) Energetic neutral source</b>	McCune	NUBEAM	McCune
<b>3) Neutral gas fueling source</b>	McCune	FRANTIC	McCune
<b>4) RF Field source</b>	Batchelor	AORSA	Jaeger
		TORIC	Bonoli
		GENRAY	Harvey
<b>5) Fokker Planck solution</b>	Berry	CQL3D	Harvey
		NUBEAM	McCune
<b>6) Neoclassical and bootstrap</b>	Houlberg	NCLASS	Houlberg
<b>7) Advance profiles</b>	Jardin	TSC-solver	Ku
		GCNM	St. John
<b>8) Advance equilibrium</b>	Jardin	TSC-equilibrium	Ku
		TEQ	Carlson
<b>9) Anomalous transport coeff</b>	Jardin	GLF23	Ku
		MMM95	Ku
<b>10) Linear Stability</b>	Kruger	DCON (low-n)	Kruger
		ELITE (edge)	Snyder
		NOVA-K (kinetic)	Gorelenkov
		PEST-2 (low-n)	Chance
		BALLOON (high-n)	Chance
<b>11) Reduced Sawtooth model</b>	Jardin	Porcelli	Bateman
<b>12) 3D nonlinear MHD</b>	Fu	M3D M3D/K	Breslau Fu
		NIMROD	Schnack

### **Actions required for all codes**

- 0) Make sure all the information needed for the code is in the Component Description Document
- 1) Adopt a version numbering system, preferably a Subversion management system
- 2) Port to PPPL MHD SGI cluster. Provide documented build script.
- 3) Archive a set of code runs for a representative set of physics inputs that span the range of validity for the code. Different codes implementing the same component should endeavor to run the same cases
- 4) Work with component coordinators and CS people to implement the interface of the codes to the components

### **Actions required for all components**

- 0) Make sure all the information needed for the component is in the Component Description Document
- 1) Identify input data that is generic to component (i.e. is the same regardless of what code implements the component functionality). Work with the developers of the plasma state component and CS people to write the wrapper code to access the plasma state data needed by the component (`get_plasma_state` and `put_plasma_state` methods)
- 2) Work with the specific implementing code developers and CS people to merge the code specific inputs with plasma state data and to write the code specific input data files, and similarly for code specific outputs