Space Weather Prediction Center (SWPC) – March 12, 2013			
Short Range (Recently Completed or Targeted for Completion in FY13) – Completed actions have been moved to table at the end			
CATEGORY	**RECOMMENDATION**	**ACTION**	**STATUS/DUE DATE**
Mission and Vision	**Recommendation MV1:** Activities related to satellite data acquisition, processing, validation, and verification are not aligned with the NWS mission, but are better aligned with the National Environmental Satellite, Data, and Information Service (NESDIS) mission. The NESDIS already carries out these functions for terrestrial weather activities across the NWS. The panel supports the transfer of the satellite data activities from SWPC to NESDIS, which allows SWPC to focus on space weather prediction. (UCACN again highlighted this as a concern in their Dec 19, 2011 report)	MV 1.3 – Establish and support a resident capability at NESDIS to provide science, engineering, and algorithm development and maintenance for space weather instruments and data. A no-cost transfer of the Space Weather Program's Environmental Assessment capability was proposed as part of the FY12-16 NOAA budget planning process.	Ongoing – NOAA satellite science, engineering, and algorithm support and data stewardship has been transitioned to NESDIS/NGDC beginning in late FY11. This transfer of knowledge and personnel will continue into FY14~~3~~.
Mission and Vision	**Recommendation MV2:** (Provided in UCACN report from Dec 19, 2011) – Recent creep into SWPC service mission by elements of the space weather enterprise beyond SWPC needs to be addressed.	MV 2.1 – SWPC continue to work with NCEP, NWS, and NOAA leadership to promote the Unified National Space Weather Operational Capability (UNSWOC) to the other US agencies involved in space weather activities.	~~Ongoing~~ Complete FY13 – In 2012 the OSTP directed NOAA and NASA to develop a governance document that clearly outlines the roles and responsibilities each organization has. This document was ~~signed~~ agreed to~~off~~ by both organizations in November 2012 and ~~is now waiting on~~has been formally accepted~~ance~~ by OSTP. In addition to this governance document, the UNSWOC MOA is complete and has been signed by all members: NOAA, NASA, USGS, USAF, and NSF. Finally, NOAA, NWS, and SWPC continue to foster a constructive relationship with NASA.
Information Systems	**Recommendation IS2:** A catastrophe mitigation and Continuity of Operations (COOP) plan for SWPC should be developed. For example, NCEP could investigate the possibility of using the AFWA as a backup to ensure that products are available to customers.	IS 2.1 - Develop alternate processing site for SWx Data that AFWA can access IS 2.2 - Establish SWx processing outside of Boulder (NESDIS @ Suitland and Wallops) Working with NESDIS for full operations plan. Funding is in presidents FY11 budget before	Ongoing – FY14~~3~~ Q1~~3~~ ~~In late FY11~~ SWPC ~~has~~ procured hardware and services to install a backup processing system at the new NCEP building in College Park which ~~will~~ provides SWPC with a true Alternate Processing Site. We ~~are rapidly finishing this work at this time~~continue to work with NESDIS/SOCC (ongoing for 2.5 years) to establish the flow of GOES-NOP data from Suitland to College Park. Ongoing/FY14~~3~~ Q1~~3~~ – See ~~MV1~~IS2.1 ~~FY10, 11, & 12 budgets did not allow for the transition of SWx satellite data processing to NESDIS. SWPC working to~~

		congress. IS 2.3 - Establish 0-48 hour forecast capability at AFWA IS 2.4 - Establish 48+ hour forecast capability at NCEP/AWC	~~duplicate its current processing in College Park MD (See IS2.1).~~ Ongoing – FY1~~3~~4 Q4 Currently working with AFWA to negotiate details of a MOU which will provide partial backup capabilities for SWPC high priority customers. Complete – FY13 Q1 SWPC has established agreements with UCAR for local and NWS Cheyenne for longer range backup facilities. These capabilities are tested quarterly.
Science and Technology	**Recommendation ST2:** NOAA should develop a space weather research program internally that is aligned with the SWPC mission. This could be implemented through a partnership between the OAR and SWPC, with a well-defined role for CIRES and a more vigorous effort to entrain university research more broadly. Additionally, a well-trained development staff to ensure successful R2O transition is required. The SWPC should undertake the first steps toward establishing a viable research and development program as follows: • organize a workshop to develop a long-range plan for numerical space weather prediction, and • establish an advisory committee to oversee development and implementation of the long-range plan.	ST 2.3 - Once the path and plans are in place to establish a NOAA Space Weather Research capability in OAR, an advisory committee will be established to evaluate the SWX research strategic plan.	~~Ongoing~~ Complete – FY13 Q4 We have established the Space Weather Prediction Testbed (SWPT) within SWPC. The mission of the SWPT is to provide the scientific and research needs for space weather operations. ~~At this point in time we are defining the membership and mission of the SWPT Advisory Board (SAB). It is our intention to hold a preliminary meeting with potential board members of the SAB during the 2013 Space Weather Workshop in April.~~
Business Processes	**Recommendation BP2:** Develop comprehensive, robust business models for the SWPT and the R2O function. There are a number of successful organizational arrangements (e.g., the Applied Meteorology Unit at Cape Kennedy, FL) and processes that can be adapted or emulated during development of the business models. A well-trained development staff is required to ensure a successful R2O transition.	BP2.2 – Staff SWPT Steering Committee (UCACN highlighted this as an ongoing concern in Q1FY12) BP2.3 – Enhance skill set of development and transition staff	Ongoing – FY1~~3~~4 Q1 – SWPC created an external SWPT Interest Group in 2010. In FY201~~3~~4 we will establish a steering committee consisting of government representatives from NOAA, DOD, NASA, NSF, etc. ~~We had originally delayed formation of this group to wait for the selection of a new SWPC director. We will now move forward without his/her input.~~ Ongoing – SWPC continues to enhance staff by bringing in national and international research partners to help with our ionospheric, geospace, and solar research needs. IN FY2011 positions were

			realigned within SWPC to support the hire of 3-GS13 development staff.
		BP2.4 – Develop proposals through the SEE process to accelerate the transition of mature research projects into operations	Ongoing – FY1~~3~~4 – SWPC is working within the NWS Budget process to identify SWPT funding as a critical gap for the FY1~~4~~5 budget process. In the meantime, SWPC will begin to explore the possibility of federal staff on the SWPT team utilizing grants in an attempt to fill critical R&D positions. SWPC has also applied the limited FY12 plus up for SWPT activities.

Medium Range (Complete in 1-3 years)			
CATEGORY	**RECOMMENDATION**	**ACTION**	**STATUS/DUE DATE**
Mission and Vision	**Recommendation MV1:** Activities related to satellite data acquisition, processing, validation, and verification are not aligned with the NWS mission, but are better aligned with the National Environmental Satellite, Data, and Information Service (NESDIS) mission. The NESDIS already carries out these functions for terrestrial weather activities across the NWS. The panel supports the transfer of the satellite data activities from SWPC to NESDIS, which allows SWPC to focus on space weather prediction. (UCACN again highlighted this as a concern in their Dec 19, 2011 report)	MV 1.2 – Create at NESDIS the capability to produce all GOES-R space weather products. The GOES-R Program (STG) propose a $6.5M augmentation to its base funding to support development of the Space Weather ground processing and product generation system as part of the FY12-16 NOAA budget planning process	Ongoing/FY14-15 SWPC and NWS are actively working this issue with NESDIS. ~~We are working a proposal with NGDC to move this product development and operational processing to NESDIS.~~ In FY13 NESDIS AA made a verbal commitment to NWS AA that NESDIS would pursue funding for this activity in FY16. NESDIS/NGDC has a proposal in front of the GOES-R Readiness project that will provide the critical gap coverage until the FY16 proposal is operational.
		MV 1.4 (NEW) – SWPC to Ensure that the DSCOVR and GOES-R data acquisition and processing systems are adequately funded and developed to meet SWPC's needs.	Ongoing through FY14 – SWPC continues to work closely with NESDIS on the development of these ground systems. In early FY2013 a corporate decision was made develop and operate the DSCOVR ground system at SWPC in Boulder. While it was recognized that this was a step backwards in the overall plan to transition this mission to NESDIS, the cost savings

			for keeping this processing at SWPC were too great for NOAA to ignore in the current budget climate. The GOES-R processing continues to be funded for NESDIS through the GOES-R program, however only through level 1. The creation of Level 2 space weather products from the GOES-R program is still undefined at this point. SWPC continues to work this issue with NWS and NESDIS (See MV1.2).
Customers and Partners	**Recommendation CP2:** A formal plan is needed to identify current and new potential customers, and a process should be developed for customer requirements collection, validation, and feedback to ensure the value, usability, and relevance of SWPC products and services.	CP 2.1 - Develop plan for customer identification, requirements solicitation, requirements validation, and periodic evaluation of the efficacy of SWPC's products CP 2.2 - Perform periodic top to bottom inventory of customer requirements and assessment of how well customer needs are being met	Planned – FY14 Q4 This work is ongoing, but on a much smaller scale than originally envisioned in the action item. We are targeting priority customers with immediate needs through Solar Max. It will be readdressed on a larger scale after Solar Max. Planned along with CP 2.1 in FY14 Q4.
Science and Technology	**Recommendation ST2:** NOAA should develop a space weather research program internally that is aligned with the SWPC mission. This could be implemented through a partnership between the OAR and SWPC, with a well-defined role for CIRES and a more vigorous effort to entrain university research more broadly. Additionally, a well-trained development staff to ensure successful R2O transition is required. The SWPC should undertake the first steps toward establishing a viable research and development program as follows: • organize a workshop to develop a long-range plan for numerical space weather prediction, and • establish an advisory committee to oversee development and implementation of the long-range plan.	ST 2.1 – Develop a plan to establish a Space Weather Research capability within OAR.	~~FY14-FY15~~On Hold – Attempts were made to establish a Space Weather Research capability at OAR in FY2010. The OAR reception of this idea was not favorable. The current NOAA budget priorities make this option even less attractive from SWPC perspective. We have therefore placed this task on hold for the foreseeable future. We have instead established the Space Weather Prediction Testbed (SWPT) within SWPC. The mission of the SWPT is to provide the scientific and research needs for space weather operations.

Long Range (Complete in 3-5 years)			
CATEGORY	**RECOMMENDATION**	**ACTION**	**STATUS/DUE DATE**

Space Weather Prediction Center (SWPC)			
Completed Actions			
CATEGORY	**RECOMMENDATION**	**ACTION**	**STATUS/DUE DATE**
Mission and Vision	**Recommendation MV1:** Activities related to satellite data acquisition, processing, validation, and verification are not aligned with the NWS mission, but are better aligned with the National Environmental Satellite, Data, and Information Service (NESDIS) mission. The NESDIS already carries out these functions for terrestrial weather activities across the NWS. The panel supports the transfer of the satellite data activities from SWPC to NESDIS, which allows SWPC to focus on space weather prediction. (UCACN again highlighted this as a concern in their Dec 19, 2011 report)	MV 1.1 – Transition satellite data processing for the GOES-NOP and ACE satellites to NESDIS.	Cancelled – SWPC received inadequate funding in FY10, 11, & 12 to support the transition of this processing to NESDIS. With DSCOVR replacing ACE in FY14 and the GOES-R ground system coming online in FY15, it was determined that the funding SWPC did receive would be better spent on Test Bed activities. Any SWPC funds spent at this point would not have realizable benefits given the short amount of time before GOES-R and DSCOVR are online. New action item to ensure GOES-R and DSCOVR are adequately funded and supported by NESDIS. (See MV1.4 in the medium Range section)
Customers and Partners	**Recommendation CP1:** NOAA should continue leading efforts within OFCM and OSTP in coordinating an inter-agency partnership for continuity of solar wind measurements from L1.	CP 1.1 - Utilize the 4th Annual Space Weather Enterprise Forum to publicize the importance of L1 measurements and the need for their continuity to protect critical infrastructure. SWPC is partnering with NASA, NSF, FEMA and DoD to develop agenda and secure commitments from keynote speakers for the SWEF. Support the President's FY2011 Budget Request for DSCOVR refurbishment via the NASA/DoD/NOAA trilateral partnership.	Complete as of FY12 – In FY12 Congress passed, and the President signed, budget for both NOAA and the DOD to support the DSCOVR mission.
Customers and Partners	**Recommendation CP2:** A formal plan is needed to identify current and new potential customers, and a process should be developed for customer requirements collection, validation, and feedback to ensure the value, usability, and relevance of SWPC products and services.	CP 2.3 - Balance product improvement priorities within the bounds of the identified customer sensitivities and needs	Complete FY11 – Customer feedback and internal feedback have prompted us to make changes to our existing products and service. Outreach activities will continue whereby SWPC will refocus its products and services as needed.

Customers and Partners	**Recommendation CP3:** A formal education and outreach plan for stakeholders and customers is needed to increase understanding of the value and importance of space weather based on SWPC products and services. However, in the current budget climate, the public component of the SWPC education and outreach portfolio should remain dormant.	CP 3.1 – SWPC will conduct an assessment to determine if a Stakeholder and Customer Strategic Plan can be developed in house or contracted out.	Complete FY12 – Assessment complete – The Stakeholder and Customer Strategic Plan will be produced at a high level within SWPC and will be updated annually as requirements change. In addition, SWPC began an aggressive education and outreach plan at the end of FY2011. We are concentrating on updating our external web pages and education modules for NWS, WMO, Aviation, and the general public. - Space Wx Handouts/1-Pagers – now FY2013 Q2? - Web Page – FY2013 Q4 - Space Wx Videos – Ongoing FY2013 - Space Wx Training Modules – COMPLETE FY2012 Q3 – COMET and NWS Training Center have deployed these modules
Products and Services	**Recommendation PS1:** The SWPC should continue with its efforts to address transitioning empirical techniques/models/tools into operational services.	PS 1.1 – Develop consistent project lifecycle management policies and processes reduce resource conflicts and increase reusability PS 1.2 – Assure resources are available through support contracts depending on adequate funding	Complete – New processes in place have allowed for the transition of empirical techniques/models/tools into operations. Models such as WingKP, USTEC, and D-RAP are some examples. Complete – FY10 base plus-up allows for staffing increase.
Products and Services	**Recommendation PS2:** The SWPC should develop a formal project management plan to transition the *Enlil* model into operations. The *Enlil* transition will be the inaugural activity of the new SWPT. It is imperative that the R2O transition is implemented effectively, since it will set a precedent for future transitions.	PS 2.1 – Assign a project manager for Enlil with an appropriate allocation of time to perform the management tasks. PS 2.2 – Develop a project plan for the Enlil project following the NCEP/NCO project management office paradigm PS 2.3 – Routinely monitor the progress of the Enlil project execution against the project plan via quarterly NCEP reviews.	Complete – Steve Hill, SWPC Development and Transition Section Lead, named to this role Complete – NCO style project plan signed by SWPC director in January 2010 Complete FY12 Q4 – NCEP accelerated FOC date on its supercomputers to FY12 Q1 which was met in FY12 Q2. SWPC finished work on training and applications needed for forecast staff and met its target of FY12 Q4 for full implementation. WSA-Enlil output is now being used by SWPC Forecast center for its forecast and watch products.

Information Systems	**Recommendation IS1:** NCEP should ensure the continuation of sufficient funding and SWPC should implement its plan: (1) to complete the migration from legacy hardware/software information systems to modern equipment; and (2) to maintain and upgrade the equipment, as necessary, after the migration is completed.	IS 1.1 -Decommission antiquated HP-UX systems IS 1.2 - Decommission antiquated DEC-Ultrix systems IS 1.3 - Decommission antiquated QNX/386 systems IS 1.4 - Decommission Table Mountain Observatory IS 1.5 - Maintain and Upgrade equipment	Complete FY09 Q4 Complete FY10 Q4 Complete FY11 Q4 Complete TMO Decommission FY11 Q1 Ongoing
Information Systems	**Recommendation IS3:** As part of the modernization of the SWFO, NWS should investigate incorporating space weather information into AWIPS-II.	IS 3.1 – Develop space weather requirements for AWIPS-II IS 3.2 – Secure Resources - Working with PPBES for FY12 submit IS 3.3 – Develop development partnerships - Working with NCO for resources after the NAWIPS conversion IS 3.4 – Transition Terrestrial based products - Rewrite SWPC terrestrial products to build appropriate data sets (GRIB) formats. IS 3.5 – Develop requirements beyond current AWIPS2 terrestrial focus - SWx AWIPS2 strategic vision document	Complete – FY11 Q3 SWPC has delivered its functional requirements to NCO. Complete – FY12 SWPC used a portion of its limited FY12 plus up to support two developers at NCO to accelerate the completion of SWPC AWIPS2 requirements. Complete – FY12 Q4 – SWPC has hired a new developer to work on our requirements with NCO locally, and has also funded ½ FTE in NCO to kick start our development effort in FY12, and two new FTE's for FY12-FY13. Hardware installation was completed in FY12 Q2. Complete – FY12 Q4 – Through FY11 efforts, SWPC now has the capability to produce space weather products in GRIB2 formats for AWIPS-II. The transition of our products into GRIB2 was completed in FY12. Complete – FY11 Q3 SWPC has delivered its functional requirements to NCO.
Information Systems	**Recommendation IS4:** SWPC management, working with NCEP Central Operations, should develop an IT Security Plan that will accommodate the requirements of all components of the Center.	IS 4.1 - Establish SWPC External-Space Weather Data Store (E-SWDS) with requested SWx data. This project is specifically for external customers with an operational need. IS 4.2 - Work on a plan of action and requirements with NGDC to archive all historical	Complete – Users now able to access SWx data without entering SWPC operational network space. Complete – SWx archive agreement with NGDC now complete

		data of interest to SWx researchers (non-real time). IS 4.3 - Establish an automatic near-real-time data store for SWx data (real-time replication of SWDS: R-SWDS Project) that can be used for research. IS 4.4 – SWPC continue self monitoring, C&A auditing, and Plan of Action and Milestone mitigation of its IT security system.	 Complete – SWPC has developed a process by which research quality data are available on the non-operational side of its network, which contains data as needed from the operational side of its network. Complete/Ongoing – No end
Science and Technology	**Recommendation ST1:** Given the need for partnerships between SWPC and the research community, SWPC should establish a scientific partnership with CIRES that is consistent with SWPC's mission, and stronger and formal partnerships with the broader space weather research community for the successful implementation of its plan.	ST 1.1 – Strengthen the relationship with CIRES and ensure both continued funding for CIRES activities and accountability by CIRES for the funding.	Complete – FY12 Q4 The CIRES/SWPC relationship has greatly improved over the past three years. SWPC has ensured reoccurring funding for the WSA-Enlil, IDEA/WAM, DSCOVR, and general IT projects. SWPC also holds monthly meetings with CIRES to track all expenditures to the cooperative agreement.
Science and Technology	**Recommendation ST2:** NOAA should develop a space weather research program internally that is aligned with the SWPC mission. This could be implemented through a partnership between the OAR and SWPC, with a well-defined role for CIRES and a more vigorous effort to entrain university research more broadly. Additionally, a well-trained development staff to ensure successful R2O transition is required. The SWPC should undertake the first steps toward establishing a viable research and development program as follows: • organize a workshop to develop a long-range plan for numerical space weather prediction, and • establish an advisory committee to oversee development and implementation of the long-range plan.	ST 2.2 - SWPC will determine the future for numerical modeling within the NWS suite of space weather products and services. ST 2.4 – SWPC will organize a workshop to develop a long-range plan for numerical space weather prediction	Complete – WSA-Enlil on track to be implemented into SWPC operations by Q4FY2012. SWPC is pushing forward with efforts to bring IDEA/WAM into operations by the start of FY17. SWPC is also awaiting a report from CCMC to determine the best Geospace model to transition to operations. Complete – In FY2011 SWPC hosted a space weather model workshop with the UKMO and the US Space weather community to discuss potential areas of collaboration and to lay out a path for success. Areas of initial collaboration that are currently being worked on include the WSA-Enlil and Geospace activities.

People and Organizational Culture	**Recommendation POC1:** Clearly define the roles and responsibilities in the current SWPC organization. This should be done by reviewing employee job descriptions currently being utilized at the Center, assessing their clarity, and evaluating specifics of the objectives, definitions, duties, responsibilities contained in the descriptions. This will be critical for updating the current organization and R2O. As a follow-on, incorporate these updated descriptions into a user-friendly business manual that reflects the current directives and reporting structure of the organization. The manual should also include appropriate skill sets for all positions within the organization, and be aligned with objectives, directives and the overall mission.	POC 1.1 Assess overall SWPC organizational structure and complete a plan for implementation (with NWSEO) POC 1.2 Complete review of existing PDs and performance plans and align to new structure POC 1.3 Provide employees with copies of their pds during their annual performance reviews.	Complete – Minor reorganization completed in FY10 Q4. Personnel and functions were moved across sections and branches to better align with responsibilities. Larger reorganization balancing branches and supervisory workload under consideration. Complete. This action will be repeated every year. Complete. This action will be repeated every year.
People and Organizational Culture	**Recommendation POC2:** Evaluate the accessibility and continuity of current formal and informal internal communication modes and methods. Communications should reach all employees in a timely fashion with a well-understood prioritization. A standard procedure for employees to routinely 'check into' communications should be established in order to ensure relevant notifications, directives and information are received and understood by staff.	POC 2.1 Ensure quarterly All Hands and monthly Branch meetings are conducted POC 2.2 Hold monthly brown bag for employees with senior management POC 2.3 Implement NWSEO Employee Feedback System modeled after AWC POC 2.4 Take advantage of management hiring opportunities to bring in managers that will help foster communication	Complete FY10 Q1 – These meetings have been established and are occurring regularly – In addition, SWPC is using monthly, internal publication (Sol Source) to disseminate information on key happenings and events. Branch Chiefs are presenting the SWPC Annual Operating Plan, as well as progress towards its completion, at their monthly meetings. Complete FY10 Q1 – These meetings are ongoing Complete FY10 Q3 – Feedback system implemented into OnTime® system at SWPC and rolled out during a recent All Hands meeting. The system is easy to use, but so far use has been very light. Complete FY11 Q2 – New branch chiefs for the Space Weather Services Branch and Administration and Technical Support Branch have had a positive impact on communication of news, directives, and ideas from the SWPC office of the director.
People and Organizational Culture	**Recommendation POC3:** Upon completion of a thorough review of staff roles and responsibilities, the SWPC management team should review the current personnel qualifications and assignments to assess any possible gaps. This process may reveal individual shortfalls that may be filled by providing additional training, direction or detailed guidance to employees tasked with new or different	See POC 1.1, 1.2, 1.3 POC 3.1 Incorporate training needs into formal budget process to ensure funds are available to support critical needs	 Complete FY10 Q4 – For FY11 all training was given a high priority by SWPC management, despite uncertain budget outlook, and employees were encouraged and directed to take advantage of this.

	responsibilities as a result of the reorganization. This recommendation is an example of one that impacts the others. If the team does not have the proper training or tools, they will not be able to address and correct deficiencies in the organization.	POC 3.2 Take advantage of vacancies to hire new talent into SWPC staff	Complete and Ongoing – Several new hires with the SWPC Forecast Office, Technology Support Branch, and the Development and Transition Section have invigorated the center with highly capably and motivated staff.
People and Organizational Culture	**Recommendation POC4:** As we near Solar Maximum, the number of forecasters may not be sufficient to provide consistently accurate products and services to the user community. Evaluate the manpower needs for forecaster capability as it relates to increasing future demand for services as Solar Maximum approaches.	POC 4.1 Shift resources within the Center to create two new GS-12 promotion potential SWx forecaster positions.	Complete – FY11 Q3 Positions were reallocated from within SWPC to the forecast office. We are working through the hiring process now to fill the last of these two positions.
People and Organizational Culture	**Recommendation POC5:** Create a small team to evaluate and formulate a structured plan to mitigate the current NOAA HR hiring process, which is impeding SWPC's ability to achieve its mission objectives. It is possible that this team could work closely with other NCEP or NWS teams that are addressing the same issues.	POC5.1 – Work with NCEP, NWS, NOAA leadership to determine better approaches by which SWPC can hire personnel with the right qualifications in a timely manner	Complete – SWPC has worked with both NCEP and NOAA HR to get qualified candidates into vacant positions as quickly as possible given the restrictions of the new hiring process.
People and Organizational Culture	**Recommendation POC6:** SWPC should reconsider the organizational chart to create more efficient communication and best utilize the staff's capabilities.	See POC 1.1	Complete
Business Processes	**Recommendation BP1:** Establish a permanent space weather liaison in the Washington, D.C. area. SWPC and NCEP leadership should determine the appropriate location and level for the position to reside.	BP 1.1 Position has been established within OCWWS, hiring action underway.	Complete, Genene Fisher has been selected for this position.
Business Processes	**Recommendation BP2:** Develop comprehensive, robust business models for the SWPT and the R2O function. There are a number of successful organizational arrangements (e.g., the Applied Meteorology Unit at Cape Kennedy, FL) and processes that can be adapted or emulated during development of the business models. A well-trained development staff is required to ensure a successful R2O transition.	BP2.1 – Develop Space Weather Prediction Test Bed CONOPS	Complete – FY11

Business Processes	**Recommendation BP3:** The SWPC should define its expectations and requirements for the function currently being performed by CIRES researchers in preparation for the upcoming contractual competition. Possible options include a Memorandum of Understanding/Agreement that spells out the working relationship between the two staffs, which can be developed either as part of the request for proposals or negotiated upon contract award. This would be most helpful to both sides.	BP 3.1 Assess role of SWPC's four CIRES projects and determine the appropriate fit within the Space Weather Program structure. BP 3.2 Reassign CIRES project to appropriate Space Weather Program organizations. BP 3.3 SWPC to participate with NOAA/OAR in the CIRES contract recompete.	Complete – Item rescoped now that the Space Weather Program no longer exists. SWPC is holding monthly meetings with the CIRES project leads to discuss work efforts and expenditures. Complete – SWPC has aligned CIRES efforts into two groups, research and IT. NOAA satellite support and data stewardship has been transitioned to NGDC. Complete – FY11 Q2 – new contract to be in place by FY12 Q3