Requirement Number	Title	Relevant Use-Cases
1) AIV Requirements (ILT, IST, etc) (Ken King; Bruce Swinyard, RAL)		
SPIRE-ICS-PRJ-000543		
UR-AIV-100	**Commanding Capabilities**	UC-AIV010, UC-AIV040, UC-CAL010, UC-CUS010, UC-CUS011
UR-AIV-110	Command Sequences	UC-AIV010, UC-AIV040, UC-CAL010
UR-AIV-120	Command Sequence Scripts	UC-AIV010, UC-AIV040, UC-CAL010
UR-AIV-130	Observations	UC-AIV010, UC-AOP010, UC-CAL010
UR-AIV-140	OBS Maintenance	UC-AIV020, UC-CUS010, UC-OBS010, UC-OBS020
UR-AIV-200	**Storage Capabilities**	UC-AIV030, UC-CAL010, UC-CAL020, UC-ENG030, UC-ICC030
UR-AIV-210	Data storage	UC-AIV030, UC-CAL010, UC-ENG030, UC-ICC030, UC-ICC080
UR-AIV-220	Test Input Data Storage	UC-AIV030, UC-ICC030, UC-ICC080
UR-AIV-230	Telemetry Data Storage	UC-AIV030, UC-AIV040, UC-ICC030, UC-ICC080
UR-AIV-300	**Analysis Capabilities**	UC-CAL010
UR-AIV-310	Data Analysis	UC-CAL010
UR-AIV-320	Real-time processing	
UR-AIV-330	Real-time Display	
UR-AIV-400	**Constraints**	
UR-AIV-410	Test Environment	UC-AIV030, UC-AIV040, UC-ICC010, UC-OBS010
UR-AIV-420	Network Isolation	UC-AIV030
UR-AIV-430	Development tools	UC-AIV010
UR-AIV-440	Hardware	
UR-AIV-500	**Maintenance**	
UR-AIV-510	Test Data and Scripts	UC-AIV010, UC-AIV040, UC-ICC010, UC-ICC050, UC-ICC100
UR-AIV-520	Software	UC-AIV010, UC-AIV020, UC-AIV040, UC-ICC050, UC-ICC100
2) Calibration Requirements (Seb Oliver, Sussex)		
SPIRE-ICS-PRJ-000544		
UR-CAL-100	**Calibration Files**	UC-CAL010
UR-CAL-110	Defining Calibration Files	UC-CAL010

UR-CAL-120	Defining Calibration Procedures	UC-AIV040, UC-CAL010, UC-ICC100
UR-CAL-130	Maintaining Calibration files	UC-AIV030, UC-CAL010
UR-CAL-140	Improving calibration files	UC-AIV030, UC-CAL010
UR-CAL-200	**Calibration observations & Analysis Pre-Launch**	UC-CAL010
UR-CAL-210	Calibration plan	UC-AOP-010, UC-CAL010, UC-CAL020, UC-ICC100
UR-CAL-220	Ground based Laboratory measurements	UC-CAL010, UC-CAL020
UR-CAL-230	Ground based preparatory observations	UC-CAL010, UC-CAL020, UC-CON010
UR-CAL-240	Space based preparatory observations	UC-CAL010, UC-CAL020, UC-CON010
UR-CAL-250	Calibration Analysis	UC-CAL010, UC-CAL020
UR-CAL-300	**Calibration observations & Analysis Post-Launch**	UC-CAL010
UR-CAL-310	Calibration plan.	UC-AOP-010, UC-CAL010, UC-CAL020, UC-ICC100
UR-CAL-320	SPIRE calibration observations	UC-AOP-010, UC-CAL010, UC-CAL020
UR-CAL-330	Calibration Analysis	UC-CAL010
UR-CAL-340	Scientific Assessment of Calibration	UC-CAL010
UR-CAL-350	Repeat Observations (RD-4 2.1.1)	UC-CAL010
UR-CAL-360	Observation Time-scales (RD-4 2.1.2)	UC-CAL010
UR-CAL-370	Observation Day (RD-4 2.1.3)	UC-CAL010
UR-CAL-380	Failed Observations (RD-4 2.1.4)	UC-CAL010
UR-CAL-390	Rejected Observations (RD-4 2.1.5).	UC-CAL010
UR-CAL-400	Removed Observations (RD-4 2.1.5)	UC-CAL010
3) Photometer processing (Walter Gear, Cardiff. Seb Oliver, Sussex)		
SPIRE-ICS-PRJ-000545		
UR-PHT-100	**Instrument Modes**	
UR-PHT-110	Definition of instrument modes	UC-CAL010, UC-CUS011, UC-ENG010
UR-PHT-115	Support specific modes	UC-CAL010, UC-ENG010
UR-PHT-120	Process specific modes	UC-CAL010, UC-ENG010
UR-PHT-130	Define AOTs	UC-CAL010, UC-CUS011, UC-ENG010
UR-PHT-200	**Development**	UC-CAL010, UC-CON020
UR-PHT-210	Design	UC-CAL010, UC-ICC010
UR-PHT-220	Implementation	UC-CAL010, UC-CON020, UC-ICC010
UR-PHT-230	Test	UC-CON020, UC-ICC010
UR-PHT-240	Validation	UC-CON020, UC-ICC010
UR-PHT-250	Improvement	UC-CAL010, UC-CON020,

		UC-ICC010
UR-PHT-260	Archive Tools	UC-CAL010
UR-PHT-300	**Interactive Analysis: General**	UC-CAL010
UR-PHT-310	Platforms	
UR-PHT-320	Modularity	UC-CON020
UR-PHT-330	IA consists of different generic types of modules	
UR-PHT-340	Interfaces	
UR-PHT-350	Data format	
UR-PHT-360	Interfaces to other software	
UR-PHT-370	User Help	
UR-PHT-380	Source code	
UR-PHT-390	History	
UR-PHT-400	**Data Products**	
UR-PHT-410	POF1: Chop Without Jiggling	
UR-PHT-420	POF2: Seven-Point Jiggle Map	
UR-PHT-430	POF3: N-Point Jiggle Map	
UR-PHT-440	POF4: Raster Map	
UR-PHT-450	POF5: Scan Map Without Chopping	
UR-PHT-460	POF6: Scan Map With Chopping	
UR-PHT-470	POF7: Photometer Peak-Up (TBD)	
UR-PHT-480	POF8: Operate photometer internal calibrator	
UR-PHT-490	POF9: Special engineering modes (TBD)	
UR-PHT-500	**Interactive Analysis: Processing of Observing Modes**	UC-CAL010
UR-PHT-510	General	UC-CAL010
UR-PHT-520	POF1: Chop Without Jiggling	UC-CAL010
UR-PHT-530	POF2: Seven-Point Jiggle Map	UC-CAL010
UR-PHT-540	POF3: N-Point Jiggle Map	UC-CAL010
UR-PHT-550	POF4: Raster Map	UC-CAL010
UR-PHT-560	POF5: Scan Map Without Chopping	UC-CAL010
UR-PHT-570	POF6: Scan Map With Chopping	UC-CAL010
UR-PHT-580	POF7: Photometer Peak-Up (TBD)	UC-CAL010
UR-PHT-590	POF8: Operate photometer internal calibrator	UC-CAL010
UR-PHT-600	POF9: Special engineering modes (TBD)	UC-CAL010

4) FTS Processing (Jean-Paul Baluteau, LAM)

SPIRE-ICS-PRJ-000546		
UR-FTS-100	**Instrument Modes**	UC-CAL010
UR-FTS-110	Definition of instrument modes	UC-CAL010, UC-CUS011, UC-ENG010
UR-FTS-115	Support specific modes	UC-CAL010, UC-ENG010
UR-FTS-120	Process specific modes	UC-CAL010, UC-ENG010

UR-FTS-130	Define AOTs	UC-CAL010, UC-CUS011, UC-ENG010
UR-FTS-200	**Development**	UC-CAL010, UC-CON020
UR-FTS-210	Design	UC-CAL010, UC-ICC010
UR-FTS-220	Implementation	UC-CAL010, UC-CON020, UC-ICC010
UR-FTS-230	Test	UC-CON020, UC-ICC010
UR-FTS-240	Validation	UC-CON020, UC-ICC010
UR-FTS-250	Improvement	UC-CAL010, UC-CON020, UC-ICC010
UR-FTS-260	Archive Tools	UC-CAL010
UR-FTS-300	**Interactive Analysis: General**	UC-CAL010
UR-FTS-310	Platforms	
UR-FTS-320	Modularity	UC-CON020
UR-FTS-330	IA consists of different generic types of modules	
UR-FTS-340	Interfaces	
UR-FTS-350	Data formats	
UR-FTS-360	Interfaces to other software	
UR-FTS-370	User Help	
UR-FTS-380	Source code	
UR-FTS-390	History	
UR-FTS-400	**Data Products**	
UR-FTS-500	**Interactive Analysis: Processing of Observing Modes**	UC-CAL010
UR-FTS-510	General	UC-CAL010
UR-FTS-560	Engineering Modes	UC-CAL010

5) Routine Instrument Operation (Gillian Wright, ATC)

SPIRE-ICS-PRJ-000547		
No numbers		
UR-RIO-100		UC-AIV020, UC-AOP-010, UC-CAL010, UC-CAL020, UC-CUS030(?),UC-ENG010, UC-ENG020, UC-ICC070, UC-ICC090, UC-OBS010

6) Instrument Engineering (Gillian Wright, ATC)

SPIRE-ICS-PRJ-000548		
UR-IE-100	Modeling	UC-AOP-010, UC-ENG010
UR-IE-200	Data Acquisition	
UR-IE-210	Command Sequences	UC-AIV010, UC-AIV040, UC-CUS011
UR-IE-220	Preparation tool	UC-AOP010
UR-IE-230	Scheduling	
UR-IE-240	Status Information	UC-CAL020, UC-ENG020,

		UC-OBS010
UR-IE-300	Data Reduction	
UR-IE-310	Analysis	
UR-IE-320	Data storage	UC-AIV030, UC-ICC030, UC-ICC080

7) ICC as a whole system (Neal Todd, ICSTM)

SPIRE-ICS-PRJ-000549

UR-ICC-100	**SPIRE Software**	
UR-ICC-110	Common environment	UC-AOP-010, UC-ICC010, UC-ICC040, UC-ICC050, UC-OBS020
UR-ICC-120	CVS	UC-ICC010, UC-ICC020
UR-ICC-130	Sandbox environment	UC-AIV040, UC-CON020, UC-ICC010, UC-ICC040
UR-ICC-140	Information local to ICC	UC-CON010(?), UC-CON040, UC-ICC080
UR-ICC-150	Common system environment	UC-ICC040
UR-ICC-200	**Documentation**	
UR-ICC-210	Document format	UC-AIV020, UC-AIV040, UC-CAL020, UC-CON030, UC-ICC020, UC-ICC100
UR-ICC-220	Document templates	UC-AIV020, UC-AIV040, UC-CAL020, UC-CON030, UC-ICC020, UC-ICC100
UR-ICC-230	Document formats	UC-CAL020, UC-CON030, UC-ICC020, UC-ICC100
UR-ICC-300	**FINDAS and local computing system**	
UR-ICC-310	Local FINDAS nodes	UC-AIV030, UC-CON010, UC-CON030, UC-CON040, UC-ENG030, UC-ICC020, UC-ICC030
UR-ICC-320	Local FINDAS support	UC-AIV030, UC-CON010, UC-ICC030, UC-ICC050
UR-ICC-330	Local accounts	UC-ICC030, UC-ICC040
UR-ICC-340	Remote connection for ICC actors	UC-ICC030, UC-ICC040
UR-ICC-350	Security	UC-ICC030, UC-ICC040, UC-ICC060
UR-ICC-400	**Communication**	
UR-ICC-410	Contact info for SPIRE members	UC-ICC070, UC-ICC090
UR-ICC-420	Staff on call	UC-ICC070, UC-ICC090
UR-ICC-430	Video link and common desktop	UC-ICC090
UR-ICC-440	Staff availability schedule	UC-ICC070, UC-ICC090
UR-ICC-500	**Management**	
UR-ICC-510	Managing the ICC	UC-ICC090, UC-OBS010, UC-OTH010

8) **FSC** (Neal Todd, ICSTM)		
SPIRE-ICS-PRJ-000550		
UR-HSC-100	**Common Uplink System/ Mission Planning.**	
UR-HSC-110	Repetitive observations	
UR-HSC-120	Time-scale for observation planning	
UR-HSC-130	Mixing calibration and science on OD	UC-CAL010
UR-HSC-140	Re-requesting failed observations	UC-CUS030(?)
UR-HSC-150	Modifying observations	UC-CUS030(?)
UR-HSC-160	Observation rejection by MP	
UR-HSC-170	Replacement of schedule by PS	UC-CUS030(?)
UR-HSC-200	**IA/QCP**	UC-CAL010
UR-HSC-210	Java	UC-CAL010, UC-FSC010
UR-HSC-220	Coding standards	UC-CAL010, UC-FSC010
UR-HSC-230	Provide quality check tools	UC-CAL010
UR-HSC-240	Provide interactive analysis	UC-CAL010
UR-HSC-250	Scope of quality check tools	UC-CAL010
UR-HSC-260	Review Instrument parameters after QCP	UC-CAL010
UR-HSC-270	Calibration reports	UC-CAL010, UC-CAL020, UC-CON030, UC-ICC100
UR-HSC-280	Provide/Update calibration plan	UC-CAL010, UC-CAL020
UR-HSC-300	**FINDAS**	
UR-HSC-310	Support FINDAS at ICC	UC-FSC010, UC-ICC030, UC-ICC050
UR-HSC-400	**FCSS Maintenance/ Configuration Control System**	
UR-HSC-410	Updating the OBS	UC-AIV020, UC-OBS010, UC-OBS020
UR-HSC-420	Using a common CC system	UC-AIV020, UC-CON030, UC-ICC010, UC-ICC020, UC-OBS010, UC-OBS020
UR-HSC-430	Update of calibration/engineering files	UC-AIV040, UC-ICC030
UR-HSC-440	Changing a system artifact	UC-AIV010, UC-AIV020, UC-ICC010, UC-ICC020, UC-ICC030, UC-OBS010, UC-OBS020
UR-HSC-450	Responding to an SCR	UC-AIV010, UC-AIV020, UC-ICC030, UC-ICC070, UC-OBS010, UC-OBS020
UR-HSC-460	Traceability of configuration and inputs	UC-AIV020, UC-AIV030, UC-AIV040
UR-HSC-470	Updating software delivered to HSC	UC-AIV020, UC-CON020, UC-CUS010, UC-CUS011, UC-ICC030, UC-OBS010, UC-OBS020
UR-HSC-500	**Community Support**	UC-CON030, UC-FSC020

UR-HSC-510	Interface with HSC	UC-CON030, UC-FSC020, UC-ICC090
UR-HSC-520	Responding to HSC PR requests	UC-CON030, UC-FSC020, UC-ICC090
UR-HSC-530	Information for PR	UC-FSC020, UC-ICC090
UR-HSC-540	Joint Information Provision	UC-ICC090, UC-ICC100
UR-HSC-550	Instrument Information Provision	UC-ICC090, UC-ICC100
UR-HSC-600	**Training**	
UR-HSC-610	Development Staff Training	ICC-FSC010, UC-ICC090
UR-HSC-620	Operations Staff Training	ICC-FSC010, UC-ICC090
UR-HSC-630	HSC/MOC Staff Training	UC-ICC090
UR-HSC-700	**Archive**	
UR-HSC-710	Archive Support	UC-OTH010

9) Common Uplink System (Sunil Sidher, RAL)

SPIRE-ICS-PRJ-000551

UR-CUS-100	**Instrument Information**	
UR-CUS-110	Provision Of CUS DB Information	UC-AIV010, UC-CUS010, UC-ICC100
UR-CUS-120	CUS & Instrument Command Database	UC-AIV010, UC-AIV040, UC-CUS010
UR-CUS-130	Telemetry Contents	
UR-CUS-140	Configuration Control	UC-AIV010, UC-CUS010
UR-CUS-200	**Installation & Testing**	
UR-CUS-210	Installation	UC-AIV010, UC-CUS010, UC-CUS011
UR-CUS-220	Test facility	UC-AIV010, UC-AIV040, UC-CUS010, UC-CUS011, UC-OBS010
UR-CUS-230	Testing of observation modes	UC-AIV010, UC-AIV040, UC-CUS010, UC-CUS011
UR-CUS-300	**Problem reporting**	
UR-CUS-310	Problem reporting	UC-AIV010, UC-ICC070, UC-OBS010
UR-CUS-400	**Access to the HSC system**	
UR-CUS-410	Access to the HSC system	UC-AIV010, UC-CUS010, UC-ICC030

10) Astronomical Observation Preparation (Marc Sauvage, CEA)

SPIRE-ICS-PRJ-000552

	SYSTEM REQUIREMENTS	
UR-AOP-100	development	UC-AOP010
UR-AOP-110	Readiness	UC-AOP010
UR-AOP-120	Flexibility	UC-AOP010
UR-AOP-130	Supported AOTs	UC-AOP010
UR-AOP-140	Files for instrument parameters	UC-AIV030, UC-AOP010
UR-AOP-150	Values of instrument parameters	UC-AIV030, UC-AOP010

UR-AOP-160	Instrument's logic	UC-AOP010, UC-OBS020
UR-AOP-170	Outputs	UC-AOP010
UR-AOP-200	Maintenance	UC-AOP010, UC-ICC050
UR-AOP-210	Documentation	UC-AOP010, UC-ICC020, UC-ICC050, UC-ICC100
UR-AOP-220	Versions	UC-AOP010, UC-ICC050
UR-AOP-230	Evolving calibration	UC-AIV030, UC-AOP010
UR-AOP-300	**OBSERVER REQUIREMENTS.**	
UR-AOP-300	Inputs	UC-AOP010
UR-AOP-310	Minimal input	UC-AOP010
UR-AOP-320	Sources	UC-AOP010
UR-AOP-330	Backgrounds	UC-AOP010
UR-AOP-340	Spectral energy distribution	UC-AOP010
UR-AOP-350	Noises	UC-AOP010
UR-AOP-400	Outputs	UC-AOP010
UR-AOP-410	Synthetic output formats	UC-AOP010
UR-AOP-420	Easy replay	UC-AOP010
UR-AOP-500	Interaction with the tool	UC-AOP010
UR-AOP-510	Main command mode	UC-AOP010
UR-AOP-520	Replay mode	UC-AOP010
UR-AOP-600	**HOST REQUIREMENTS**	
UR-AOP-610	Common elements	UC-AOP010
UR-AOP-620	Overview	UC-AOP010
UR-AOP-630	User's training	UC-AOP010, UC-ICC090
UR-AOP-640	Interface with the FIRST Science Center - Development.	UC-AOP010, UC-ICC090
UR-AOP-650	Interface with the FIRST Science Center Delivery	UC-AOP010, UC-ICC090
UR-AOP-660	Interface with the FIRST Science Center _ Person	UC-AOP010, UC-ICC090

11)Digital Processing Unit On-board Software (Sunil Sidher, RAL)

SPIRE-ICS-PRJ-000553

UR-OBS-100	Provision of OBS information	UC-ICC100, UC-OBS020
UR-OBS-110	Provision of OBS maintenance facility	UC-AIV020, UC-OBS010, UC-OBS020
UR-OBS-120	Testing of OBS	UC-AIV020, UC-OBS010, UC-OBS020
UR-OBS-130	Configuration control	UC-AIV020, UC-OBS010, UC-OBS020
UR-OBS-140	Installation	UC-AIV020
UR-OBS-150	Problem reporting and resolving	UC-AIV020, UC-ICC070, UC-OBS010, UC-OBS020

12)SPIRE Consortium (Seb Oliver, Sussex)

SPIRE-ICS-PRJ-000554

UR-CONS-100	**Information Input**	

UR-CONS-110	Solicited Information Retrieval	UC-CON010
UR-CONS-120	Unsolicited Information Collection	UC-CON010
UR-CONS-130	Information Storage and Retrieval	UC-AIV030, UC-CON010, UC-CON040
UR-CONS-200	**Information Output & Feedback**	UC-CAL010, UC-CAL020, UC-CON030, UC-CON040, UC-ICC100
UR-CONS-210	Beta Testing	UC-CON020

13)MOC (Seb Oliver, Sussex)

SPIRE-ICS-PRJ-000555

UR-MOC-100	**Functional Requirements**	
UR-MOC-110	Definition of Interfaces	UC-ICC090, UC-OBS010
UR-MOC-120	Delivery of Hardware	UC-ICC090
UR-MOC-200	**Operational Requirements**	
UR-MOC-210	Provision of Staff	UC-ICC090
UR-MOC-220	Provision of Training	UC-ICC090
UR-MOC-230	Update of Instrument Databases	UC-AIV010, UC-CAL010, UC-CAL020, UC-CUS010 UC-CUS011

14)Other ICCs (PACs and HIFI) (Marc Sauvage, CEA)

SPIRE-ICS-PRJ-000556

UR-OTHER-100	**DEVELOPMENT OF ICC SYSTEMS.**	
UR-OTHER-110	Commonality	UC-OTH010
UR-OTHER-120	Visibility	UC-ICC090, UC-OTH010
UR-OTHER-130	Notification	UC-ICC090, UC-OTH010
UR-OTHER-200	**INSTRUMENT CONTROL AND MONITORING**	
UR-OTHER-210	Preparatory program	UC-CAL010, UC-CAL020 UC-OTH010
UR-OTHER-220	Calibration sources	UC-CAL010, UC-OTH010
UR-OTHER-230	Calibration models	UC-CAL010, UC-OTH010
UR-OTHER-240	Publication of calibration sources and models	UC-CAL010, UC-CON030, UC-ICC020, UC-ICC100, UC-OTH010
UR-OTHER-250	Instrument status	UC-CAL010, UC-CAL020, UC-CON030, UC-CON040, UC-ENG020, UC-OTH010
UR-OTHER-260	Satellite status	UC-CAL010, UC-CAL020, UC-CON030, UC-CON040, UC-ENG020, UC-OTH010
UR-OTHER-270	Observing expertise	UC-CON030, UC-CON040, UC-OTH010
UR-OTHER-280	Instrumental effects	UC-CAL010, UC-CAL020 UC-OTH010

UR-OTHER-290	PACS and HIFI expertise	UC-OTH010
UR-OTHER-300	External SPIRE expertise - resources	UC-OTH010
UR-OTHER-310	External SPIRE expertise - persons	UC-OTH010

15)Public (Seb Oliver, Sussex)

SPIRE-ICS-PRJ-000557

UR-PUS-100	**Reactive Requirements**	
UR-PUS-110	Press Releases	UC-CON030, UC-ICC090, UC-OTH010
UR-PUS-120	Public WWW pages	UC-CON030, UC-ICC060, UC-ICC090
UR-PUS-130	Other Public Relations	UC-CON030, UC-ICC090
UR-PUS-140	Visits	UC-ICC090
UR-PUS-200	**Proactive Requirements**	
UR-PUS-210	Press Releases	UC-CON030, UC-ICC090, UC-OTH010
UR-PUS-220	Public WWW pages	UC-CON030, UC-ICC060, UC-ICC090
UR-PUS-230	Other Public Relations	UC-CON030, UC-ICC090
UR-PUS-240	Access to Herschel PR	UC-CON030, UC-ICC090, UC-OTH010